

# Lakeland Industry & Community Association

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

Prepared By:



July 30, 2010

# Lakeland Industry & Community Association

## Cold Lake Monitoring Site

### Ambient Air Monitoring

<b>Table of Contents</b>	<b>Page</b>		<b>Page</b>
<b>Introduction</b>	<b>3</b>	<b>Calibration Reports</b>	<b>108</b>
<b>Calibration Procedure</b>	<b>4</b>	• <b>Sulphur Dioxide</b>	<b>109</b>
<b>Monthly Continuous Summary</b>	<b>5</b>	• <b>Total Reduced Sulphur</b>	<b>112</b>
<b>Monthly Non-Continuous Summary</b>	<b>6</b>	• <b>Total Hydrocarbons</b>	<b>115</b>
<b>Polycyclic Aromatic Hydrocarbons Data Summary</b>	<b>7</b>	• <b>Particulate Matter 2.5</b>	<b>118</b>
<b>General Monthly Summary</b>	<b>9</b>	• <b>Nitrogen Dioxide</b>	<b>120</b>
<b>Continuous Monitoring</b>	<b>13</b>	• <b>Ozone</b>	<b>124</b>
• <b>Monthly Summaries, Graphs &amp; Wind Roses</b>	<b>14</b>	<b>Passive Bubble Maps</b>	<b>127</b>
○ <b>Air Quality Index</b>	<b>15</b>	<b>Passive Field Data</b>	<b>132</b>
○ <b>Sulphur Dioxide</b>	<b>17</b>	• <b>Field Notes</b>	<b>133</b>
○ <b>Total Reduced Sulphur</b>	<b>25</b>	<b>Passive Monitoring Laboratory Analysis</b>	<b>135</b>
○ <b>Total Hydrocarbons</b>	<b>33</b>	<b>Polycyclic Aromatic Hydrocarbons Laboratory Analysis</b>	<b>144</b>
○ <b>Particulate Matter 2.5</b>	<b>41</b>		
○ <b>Nitrogen Dioxide</b>	<b>46</b>		
○ <b>Nitric Oxide</b>	<b>54</b>		
○ <b>Oxides of Nitrogen</b>	<b>61</b>		
○ <b>Ozone</b>	<b>69</b>		
○ <b>Ambient Temperature</b>	<b>77</b>		
○ <b>Relative Humidity</b>	<b>80</b>		
○ <b>Vector Wind Speed</b>	<b>83</b>		
○ <b>Vector Wind Direction</b>	<b>90</b>		
○ <b>Standard Deviation Wind Direction</b>	<b>93</b>		
<b>Non-Continuous Monitoring</b>	<b>96</b>		
<b>Polycyclic Aromatic Hydrocarbons</b>	<b>101</b>		

# Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Cold Lake  
Data Period: June 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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

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

## Calibration Procedure

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

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

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

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

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



# MONTHLY CONTINUOUS DATA SUMMARY

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

### Continuous Ambient Monitoring – June 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION COLD LAKE SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO <sub>2</sub> (PPB)	172	57	0	0	0.02	2	7	14	5	335(NNW)	0.2	7	100.0
TRS (PPB)	-	-	-	-	0.00	0	ALL	ALL	VAR	VAR	0.0	ALL	100.0
NO <sub>2</sub> (PPB)	212	106	0	0	1.28	7	7	9	2	290(WNW)	2.2	7	100.0
NO (PPB)	-	-	-	-	0.21	10	9	5	0.7	262(W)	1.0	9	100.0
NO <sub>x</sub> (PPB)	-	-	-	-	1.61	16	28	21	0.9	186(S)	2.9	7	100.0
O <sub>3</sub> (PPB)	82	-	0	-	26.50	61	21	12, 13	4.4, 9.5	227(SW), 311(NW)	42.4	13	100.0
THC (PPM)	-	-	-	-	1.88	2.7	2, 16	4, 5	9.6, 2.2	225(SW), 229(SW)	2.1	1	96.8
PM 2.5 (UG/M <sup>3</sup> )	-	30	-	0	6.85	25.9	17, 19	9, 11	13, 13.6	15(NNE), 235(SW)	16.8	19	97.5
TEMPERATURE (DEG C)	-	-	-	-	15.36	27.4	29	16	4	184(S)	20.9	29	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	65.95	99.0	VAR	VAR	VAR	VAR	94.5	4	100.0
VECTOR WS (KPH)	-	-	-	-	5.13	15.8	19	8	-	235(SW)	8.1	30	100.0
VECTOR WD (DEGREES)	-	-	-	-	186(S)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

# Monthly Non-Continuous Data Summary

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

### Passive Ambient Monitoring Network – June 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
SO <sub>2</sub>	#14	1.0	0.3
H <sub>2</sub> S	#5	0.41	0.14
NO <sub>2</sub>	#28	1.6	0.7
O <sub>3</sub>	#32	31.3	25.2

# Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

### PUF cartridge – May 20, 2010

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

### PUF cartridge – May 26, 2010

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

# Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

### PUF cartridge – June 01, 2010

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

### PUF cartridge – June 07, 2010

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

### PUF cartridge – June 13, 2010

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

### PUF cartridge – June 19, 2010

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

### PUF cartridge – June 25, 2010

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

# General Monthly Summary - Cold Lake

## Equipment Operation

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

## AQM STATION – LICA – COLD LAKE

### Sulphur Dioxide (PPB)

- Analyzer make / model – Thermo 43i, S/N: 806528242

No operational issues observed during the month. The permeation tube was replaced following the as found points on June 2<sup>nd</sup>. The inlet filter was changed before the monthly calibration was started. One hour of maximum concentration value was invalidated due to a small power failure this month. Data was corrected using daily zero information.

### Total Reduced Sulphur (PPB)

- Analyzer make / model –TEI 450i, S/N: 812728560
- Converter - CD NOVA CDN 101, S/N: 250

No operational issues observed during the month. The permeation tube was replaced following the as found points on June 2<sup>nd</sup>. When the permeation tube was changed, the bottom of the glass permeation chamber was broken off. The permeation system is still working, but low. The system will be repaired as soon as the parts is available. The inlet filter was changed before the monthly calibration was started. One hour of maximum concentration value was invalidated due to a small power failure this month. Data was corrected using daily zero information.

### Total Hydrocarbon (PPM)

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

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started. One hour of maximum concentration value was invalidated due to a small power failure this month. The analyzer flamed out on June 20<sup>th</sup>, hour of 15, and was re-lit on June 21<sup>st</sup>, hour of 13. 23 hours of data was invalidated due to this issue. Data was corrected using daily zero information.

# General Monthly Summary - Cold Lake

## AQM STATION – LICA – COLD LAKE

### Nitrogen Dioxide (PPB)

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

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started. One hour of maximum concentration value was invalidated due to a small power failure this month. Data was corrected using daily zero information.

### Ozone (PPB)

- Analyzer make / model - TECO 49i, S/N: 700419951

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started. One hour of maximum concentration value was invalidated due to a small power failure this month.

### Particulate Matter 2.5 (ug/m<sup>3</sup>)

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

No operational issues observed during the month. A Teom audit was performed and the inlet was cleaned on June 3<sup>rd</sup>. The Teom filter and FDMS filter were also replaced on the same day. 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. 18 hours of data were invalidated as the data were below –3.0 ug/m<sup>3</sup>.

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

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

No operational issues observed during the month. The wind system is reported as vector wind speed and vector wind direction. One hour of maximum wind speed value was invalidated due to a small power failure this month.

# General Monthly Summary - Cold Lake

## AQM STATION – LICA – COLD LAKE

### Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3
- No operational issues observed during the month.

### Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3
- No operational issues observed during the month.

### Trailer Temperature (DEGC)

- System make / model - R&R 61
- No operational issues observed during the month.

### Datalogger

- System make / model - ESC 8832, S/N: 263
  - Software make / version - ESC v 5.51a
- The ESC 8832 is connected to a modem with DSL for continuous connection with the base computer.

### Trailer

No issue was observed during this month. The manifold was cleaned on June 3rd.

# General Monthly Summary - Cold Lake

## AQM STATION – LICA – COLD LAKE

### Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. Eleven hours of data were within the Fair range, and all were due to O3. The highest AQI value of O3 was 34 on June 21<sup>st</sup>, hour of 112 and 13. The highest AQI value of PM2.5 was 22 on June 17<sup>th</sup>, hour of 9.

### Passive Network

No issue was observed during this month.

### Volatile Organics (VOCs)

The volatile organics were sampled on June 1<sup>st</sup>, 7<sup>th</sup>, 13<sup>th</sup>, 19<sup>th</sup> and 25<sup>th</sup>. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle.

No VOCs lab result is included in this report as the data is not available at the time when the monthly report is completed.

The VOCs results for June 2010 will be included in the monthly report next month.

### Polycyclic Aromatic Hydrocarbons (PAHs)

The PAHs were sampled on June 1<sup>st</sup>, 7<sup>th</sup>, 13<sup>th</sup>, 19<sup>th</sup> and 25<sup>th</sup>. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle.

The values for the PAHs in this report were reported as ng/m3.

The lab result for May 20<sup>th</sup> and 26<sup>th</sup> are also included in this report.



# Continuous Monitoring

# Monthly Summaries, Graphs & Wind Roses

# Air Quality Index



# Sulphur Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## SULPHUR DIOXIDE (SO<sub>2</sub>) 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	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	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	IZS	0	0	0	0	0	0	0	0	0	2	0.2	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	0.0	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	0.0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
13	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	1	0.1	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	0.0	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	1	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	0.0	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	1	0.1	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	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	0.0	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	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	0	0	0	0	0	1	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	0.0	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	0.0	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	0.0	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	0.0	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	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	0.0	24
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	0.0	24
HOURLY MAX	0	1	1	0	0	0	0	0	1	0	0	1	1	1	2	1	0	0	0	1	1	0	0	0	1	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	0.1	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	

**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

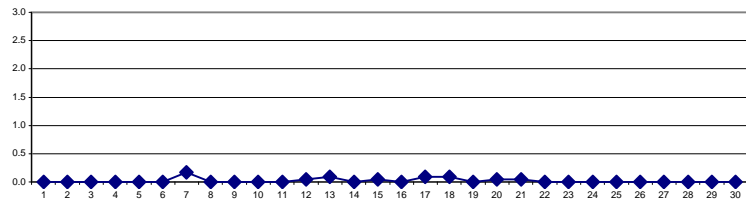
OBJECTIVE LIMIT:

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

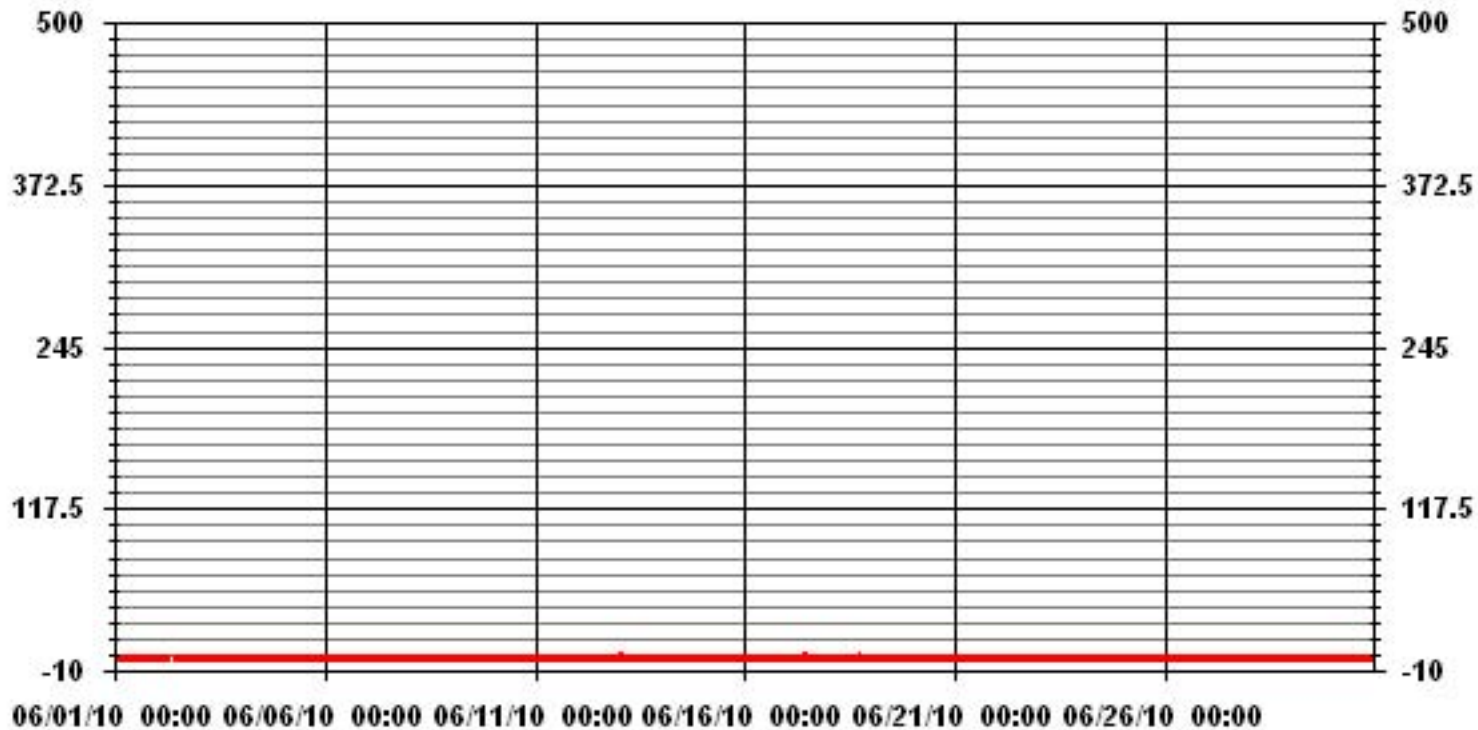
**MONTHLY SUMMARY**

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	13					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	14	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	0.2	PPB			ON DAY(S)	7
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.15		MONTHLY AVERAGE:	0.02	PPB	

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA SO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## 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		
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	C	C	C	C	C	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7		0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2	0	0	0	0	0	0	0	0	0	3	0.3	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	3	0.1	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	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
12		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.2	24
13		1	2	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
14		0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
15		1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
16		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
17		0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
18		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	1	0	0	0	0	2	0.3	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	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	23
21		0	0	0	0	0	0	0	0	0	0	0	0	1	1	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	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	1	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	
27		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
HOURLY MAX		1	2	1	1	0	1	1	1	2	1	1	1	1	2	3	2	2	2	3	1	1	2	1	1				
HOURLY AVG		0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0				

**STATUS FLAG CODES**

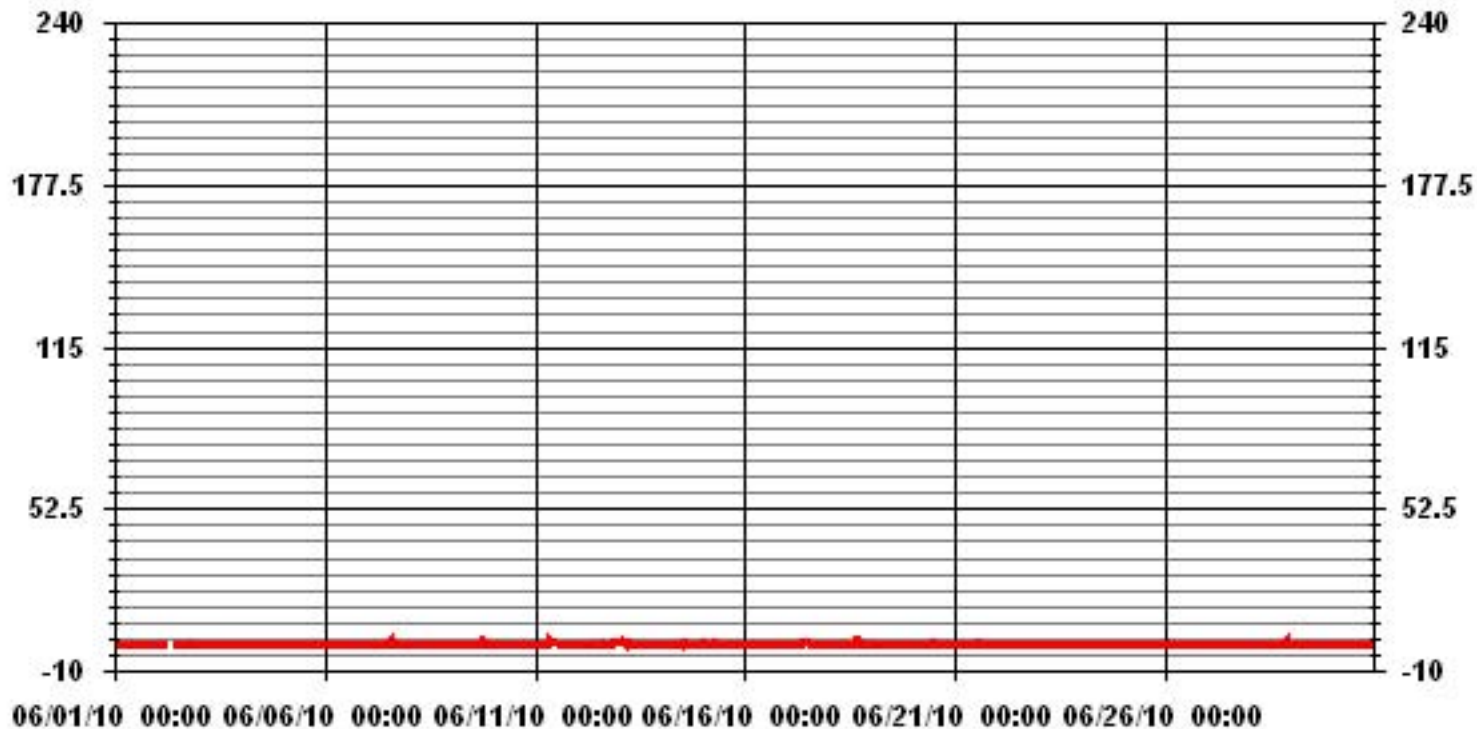
S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	42
MAXIMUM INSTANTANEOUS VALUE:	3 PPB @ HOUR(S) 14, 18 ON DAY(S) 7, 9
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	6 HRS
STANDARD DEVIATION:	0.33
OPERATIONAL TIME:	719 HRS



### 01 Hour Averages



— LICA SO2MAX PPB

LICA  
 SO2\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : SO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	4.38	6.43	5.26	3.80	6.14	8.18	8.77	5.11	3.65	5.99	12.86	11.40	6.57	3.94	3.80	3.65	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	4.38	6.43	5.26	3.80	6.14	8.18	8.77	5.11	3.65	5.99	12.86	11.40	6.57	3.94	3.80	3.65	

Calm : .00 %

Total # Operational Hours : 684

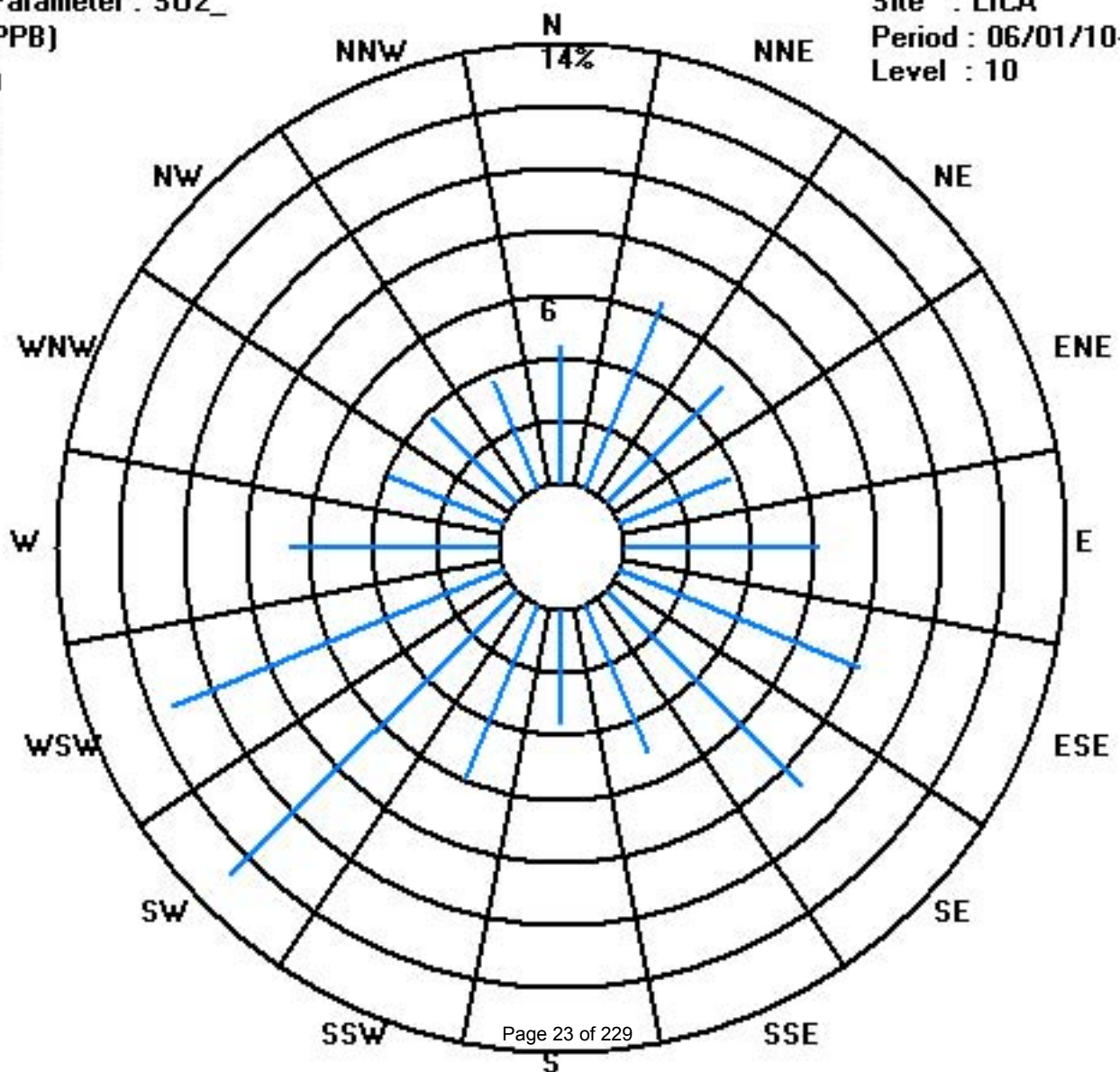
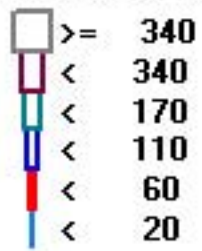
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	30	44	36	26	42	56	60	35	25	41	88	78	45	27	26	25	684
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	30	44	36	26	42	56	60	35	25	41	88	78	45	27	26	25	

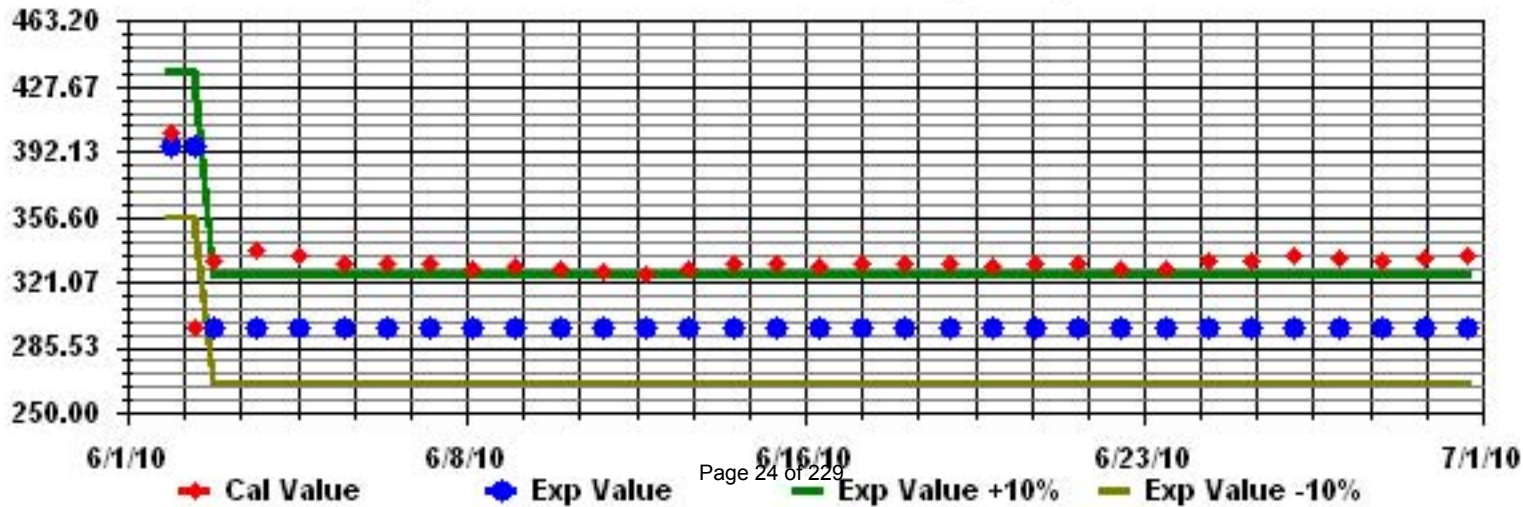
Calm : .00 %

Total # Operational Hours : 684

Class Limits (PPB)



Calibration Graph for Site: LICA Parameter: SO2\_ Sequence: SO2 Phase: SPAN



# Total Reduced Sulphur

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## TOTAL REDUCED SULPHUR (TRS) 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 MAX.	24-HOUR AVG.	RDGS.	
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				
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	0	0	0	0.0	24
2	2	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	0.0	24
3	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	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	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	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8	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	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	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	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	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	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	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	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	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	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	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	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	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	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	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	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	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	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	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	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	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
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		
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		

### STATUS FLAG CODES

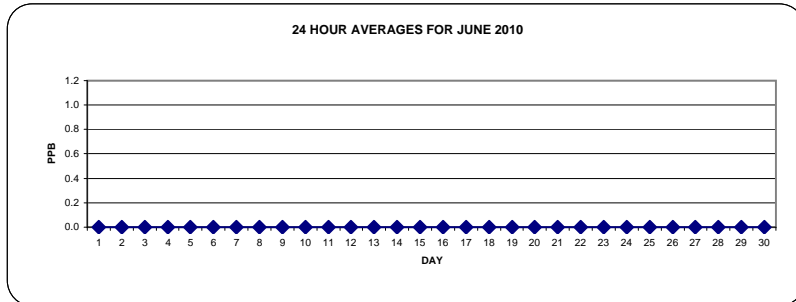
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

### OBJECTIVE LIMIT:

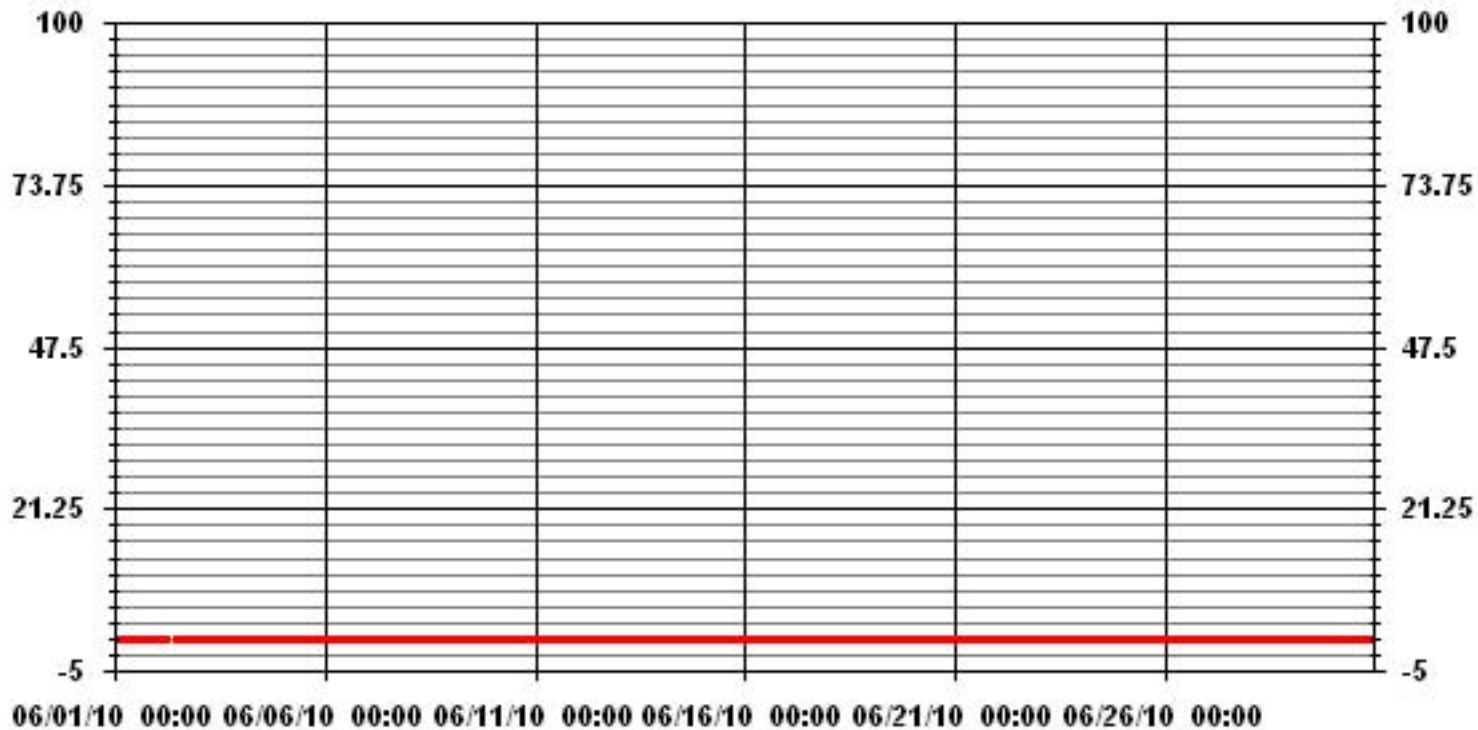
ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
----------------------	------	-----	-----	-------	----	-----

### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	0		
MAXIMUM 1-HR AVERAGE:	0 PPB @ HOUR(S) ALL ON DAY(S) ALL		
MAXIMUM 24-HR AVERAGE:	0.0 PPB VAR-VARIOUS ON DAY(S) ALL		
IZS CALIBRATION TIME:	31 HRS	OPERATIONAL TIME:	720 HRS
MONTHLY CALIBRATION TIME:	5 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION	0.00	MONTHLY AVERAGE	0.00 PPB



### 01 Hour Averages



— LICA TRS\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## 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	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	0.0	24
2		0	0	0	0	0	0	C	C	C	C	C	C	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	0.0	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	0.0	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	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	0.0	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	0.0	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	0.0	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	0.0	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	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	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	0.0	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	0.0	23
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	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	0.0	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	0.0	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	0.0	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	0.0	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	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	0.0	24
28		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	0.0	24
HOURLY MAX		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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

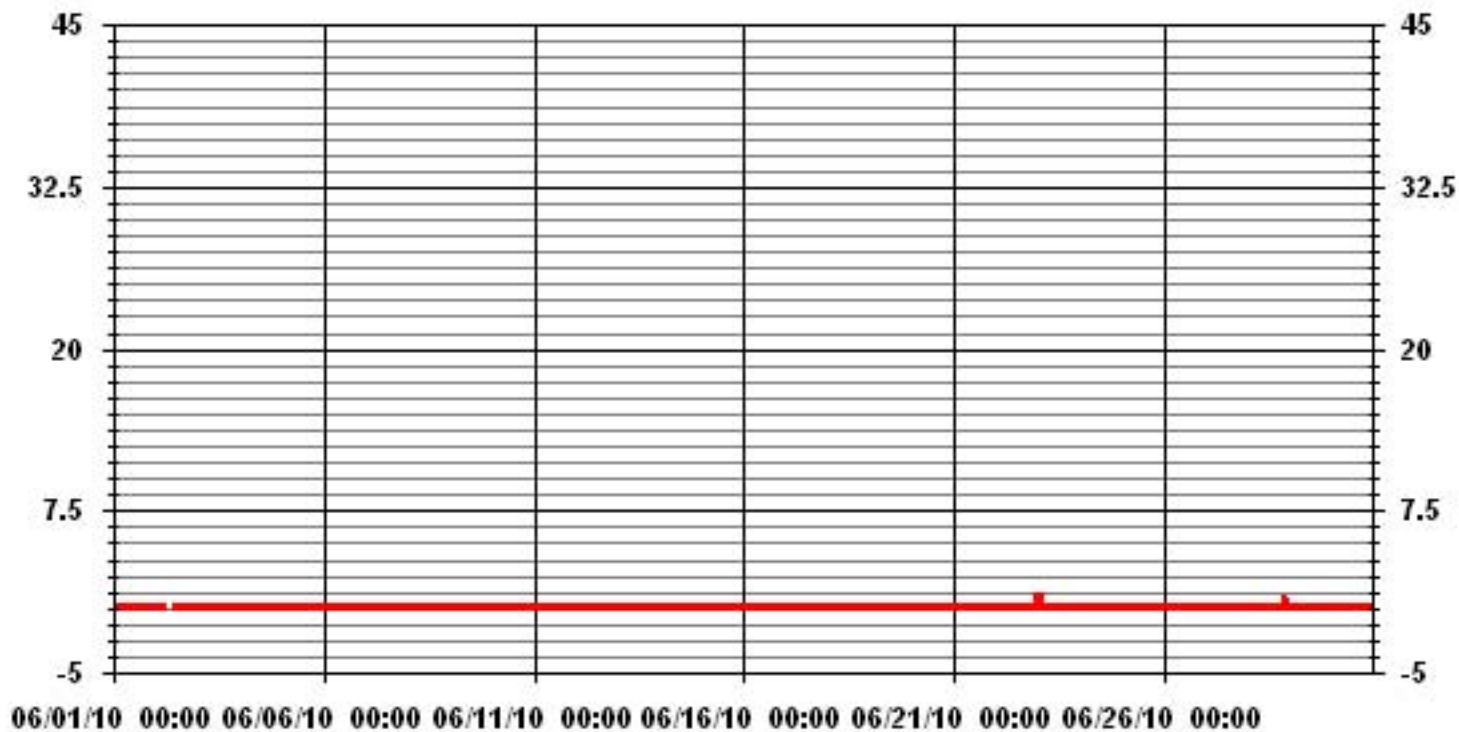
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	3					
MAXIMUM INSTANTANEOUS VALUE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
				VAR - VARIOUS		
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS	
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	0.07					



### 01 Hour Averages



— LICA TRSMAX PPB

LICA  
 TRS\_ / WD Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : TRS\_  
 Units : PPB

Wind Parameter : WD  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	4.38	6.43	5.26	3.80	6.14	8.18	8.77	5.11	3.65	5.99	12.86	11.40	6.57	3.94	3.80	3.65	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	4.38	6.43	5.26	3.80	6.14	8.18	8.77	5.11	3.65	5.99	12.86	11.40	6.57	3.94	3.80	3.65	

Calm : .00 %

Total # Operational Hours : 684

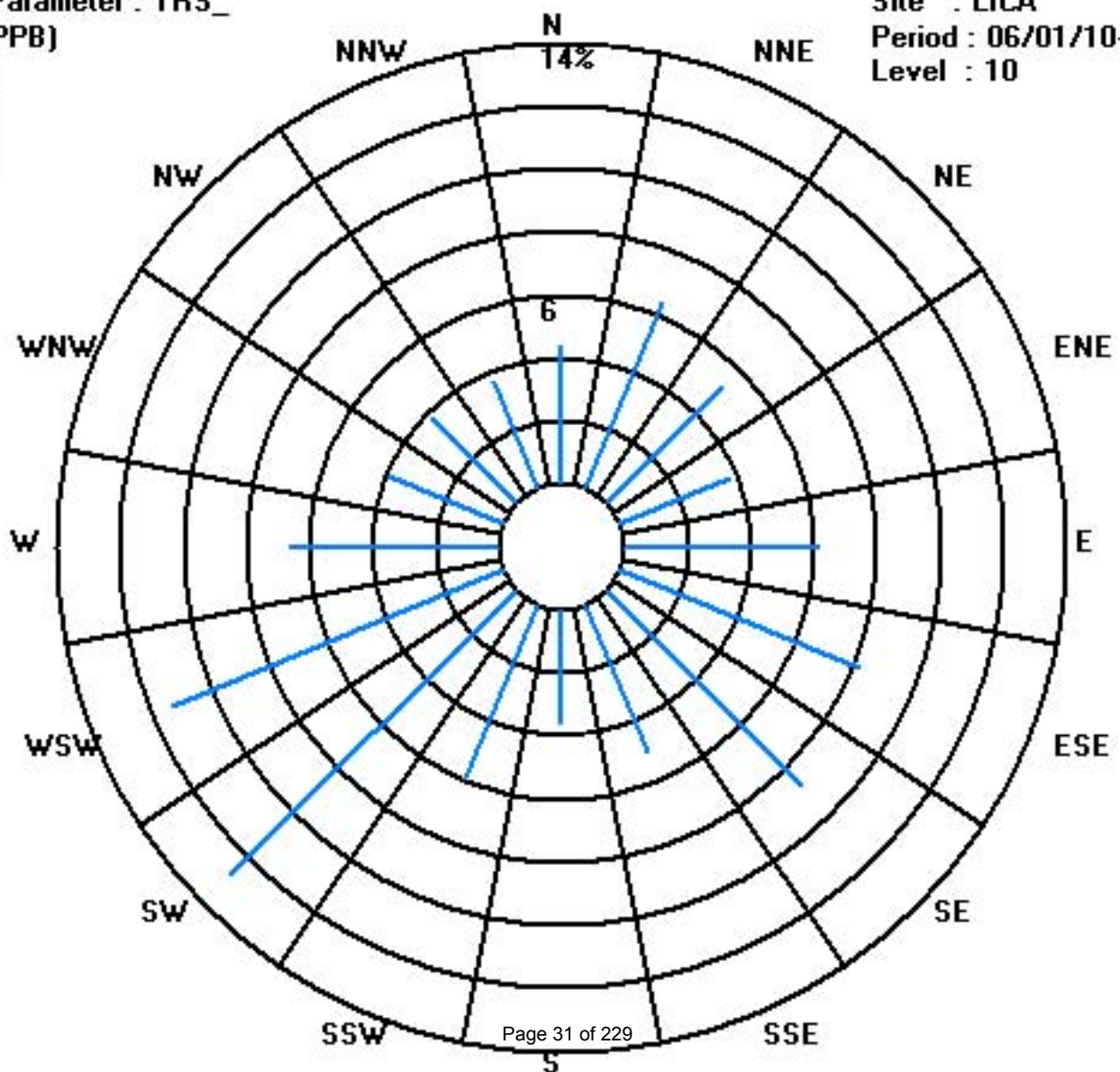
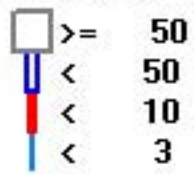
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	30	44	36	26	42	56	60	35	25	41	88	78	45	27	26	25	684
< 10																	
< 50																	
>= 50																	
Totals	30	44	36	26	42	56	60	35	25	41	88	78	45	27	26	25	

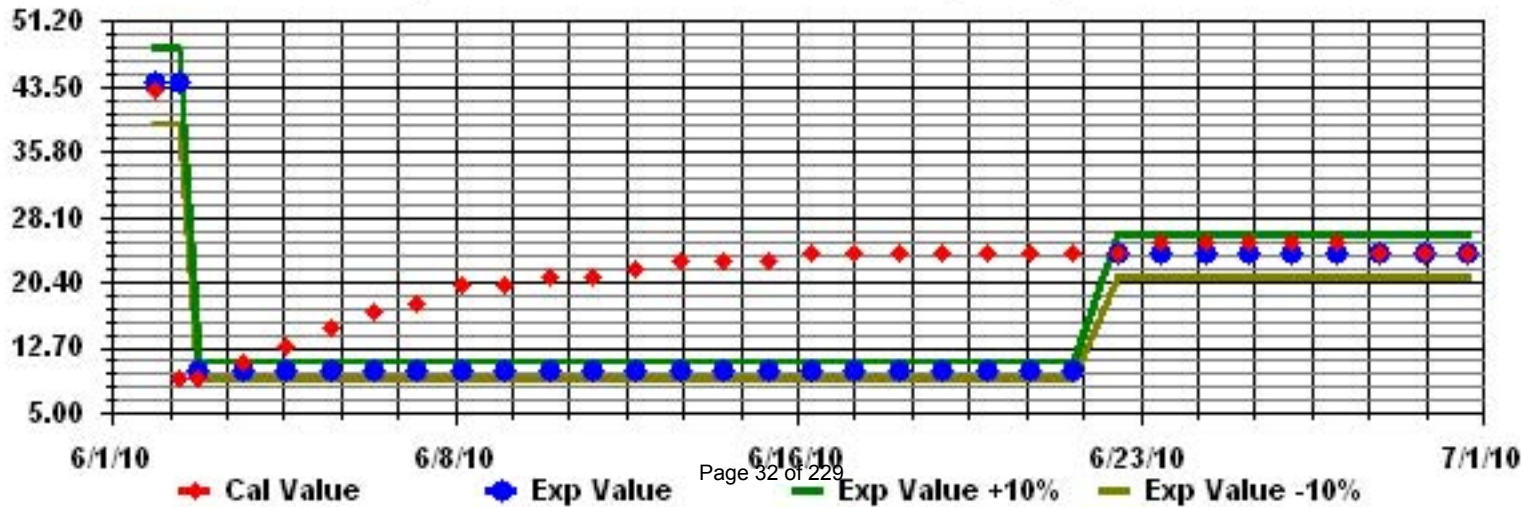
Calm : .00 %

Total # Operational Hours : 684

Class Limits (PPB)



Calibration Graph for Site: LICA Parameter: TRS\_ Sequence: TRS Phase: SPAN



# Total Hydrocarbons

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

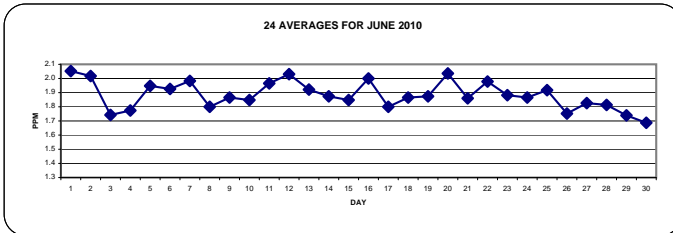
JUNE 2010

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

### STATUS FLAG CODES

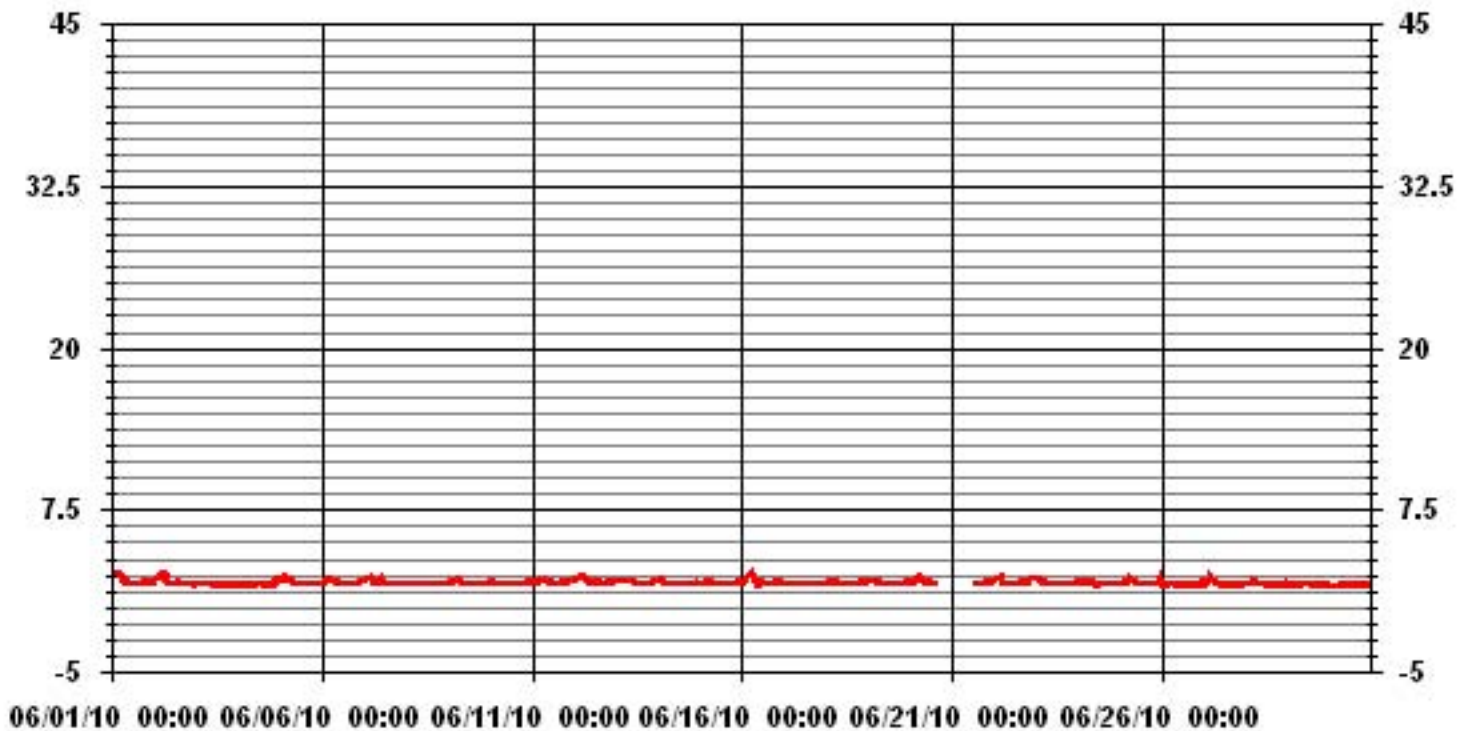
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	663					
MAXIMUM 1-HR AVERAGE:	2.7	PPM	@ HOUR(S)	4, 5	ON DAY(S)	2, 16
MAXIMUM 24-HR AVERAGE:	2.1	PPM			ON DAY(S)	1
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	697	HRS	
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	96.8	%	
STANDARD DEVIATION:	0.17		MONTHLY AVERAGE:	1.88	PPM	

### 01 Hour Averages



— LICA    — THC    — PPM

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

### TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

MST																										DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG	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.
DAY																													
1		2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	IZS	2.3	2.6	2.1	24
2		2.2	2.5	2.5	2.6	2.8	2.9	2.8	2.5	2.1	1.9	1.9	1.8	2	2	2.1	2	1.9	2	2	2	1.9	IZS	1.8	2.1	2.9	2.2	24	
3		1.8	1.9	1.8	1.9	1.8	1.9	1.8	C	C	C	C	1.7	1.8	1.8	1.8	2.2	1.8	2.1	1.7	1.7	IZS	1.7	1.7	1.8	2.2	1.8	24	
4		2.2	1.8	1.8	1.8	1.7	1.8	1.7	1.8	2.2	3.4	2	2.2	2.3	1.9	2.1	1.8	1.7	1.8	1.8	IZS	1.9	2.1	2.2	2.4	3.4	2.0	24	
5		2.4	2.3	2.2	2.6	2.5	2.3	2.4	2.3	2.1	2.3	1.8	1.8	1.8	2.1	1.9	1.8	1.8	IZS	1.9	2.3	2.2	2.3	1.8	2.6	2.1	24		
6		1.8	2	2.2	2.4	2.4	2.9	2.6	2.1	2.3	2.5	2.1	1.9	2	2.1	1.9	1.9	1.9	IZS	2.1	1.9	2	2	2.1	2.2	2.9	2.1	24	
7		2.3	2.3	2.4	2.3	2.5	2.4	2.2	2.1	2.1	2.3	2.9	2.2	1.9	1.9	1.9	1.9	IZS	1.8	1.9	1.8	1.9	1.9	1.8	1.8	2.9	2.1	24	
8		1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2	IZS	1.8	1.9	1.9	1.9	1.8	1.9	2	1.9	2	1.9	24	
9		1.9	1.9	1.9	2	2.1	2.2	2.3	2.2	2	1.9	1.8	1.9	1.8	1.9	IZS	1.8	2	1.9	1.9	2.1	1.8	1.9	1.9	2	2.3	2.0	24	
10		2	2	2	2.1	2	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	IZS	1.9	1.9	2.2	2.1	1.9	1.9	1.9	2.1	2.3	2.1	2.3	2.0	24	
11		2	2.1	2.2	2.2	2.5	2.2	2.2	2.4	4.5	2.1	2	2.1	IZS	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	2.1	2	2	4.5	2.2	24	
12		2.1	2.5	2.4	2.5	2.4	2.4	2.4	2.3	2.2	2.1	2.1	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2.5	2.1	24	
13		2	2	2.1	2	2.1	2.1	2.1	2.1	2.1	2.1	IZS	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.1	2.1	2.0	24	
14		2.2	2.2	2.2	2.3	2.1	1.8	2.6	1.9	1.9	IZS	1.8	1.8	1.8	1.8	2	1.8	1.9	1.9	1.9	1.9	1.9	2	2	2.6	2.0	24		
15		1.9	1.9	1.9	2.1	2.1	2.1	2.1	2	IZS	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	2.2	1.9	2.2	1.9	24		
16		2.1	2.1	2.2	2.4	2.7	2.8	2.5	IZS	2.3	2	2	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	2.3	2.2	2.1	2.2	1.9	2.8	2.1	24	
17		1.8	1.8	1.9	1.9	1.9	1.9	IZS	1.9	1.9	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.9	1.9	24		
18		1.9	2	2	2	2.2	IZS	2.4	2.1	1.9	1.9	1.9	1.8	1.8	1.8	2	1.9	1.9	2	1.9	2	1.9	2	1.9	2	2.4	2.0	24	
19		2	2.2	2	2	IZS	2.1	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.3	1.9	1.8	1.8	1.8	1.9	2.3	2.2	2.1	2.3	2.0	24	
20		2.2	2.6	2.1	IZS	2.4	2.5	2.4	2.3	2.2	2	2	2	1.9	2.8	1.9	N	N	N	N	N	N	N	N	N	2.8	2.2	15	
21		N	N	N	N	N	N	N	N	N	N	N	N	N	M	2	1.9	1.9	1.9	1.9	2.2	2.3	2.7	2.2	2.4	2.7	2.1	10	
22		2.4	IZS	2.6	2.4	2.6	2.4	2.1	2	1.9	2	2	2	2.1	2.1	2	2.2	2.2	2.3	2.4	2.2	2.2	2.4	2.4	2.6	2.6	2.2	24	
23		IZS	2.6	2.5	2.3	2.2	2.5	2.4	2.2	2	2	2	2.1	2.1	1.9	2	1.9	2	2.1	2	2	2.2	2.2	IZS	2.6	2.2	24		
24		2.2	2.2	2.2	2.1	2.2	2.2	2.4	2.1	2	2	1.9	1.9	3.1	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	2.4	IZS	1.8	3.1	2.1	24	
25		1.8	1.9	2.1	2	2.3	2.6	2.5	2.3	2	2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.9	IZS	2.2	2.6	2.0	24	
26		2.1	1.7	1.8	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.8	IZS	2	2.2	1.9	2.2	1.8	24	
27		1.8	1.9	2.4	2.5	2.4	2.1	2	1.9	1.9	1.8	1.8	1.8	1.8	1.7	2	1.8	1.8	1.7	1.8	IZS	1.9	1.7	1.8	1.8	2.5	1.9	24	
28		1.9	2	2.1	2.2	2	1.9	2	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.8	1.9	1.7	IZS	1.8	2.2	2	1.9	2.2	2.2	1.9	24		
29		2.1	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.9	1.8	2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	IZS	1.7	1.8	1.7	1.7	1.7	1.7	2.1	1.8	24
30		1.7	1.7	1.7	1.7	1.6	1.7	1.8	1.7	1.7	1.8	1.9	1.8	1.8	1.8	1.7	1.7	IZS	1.7	1.7	1.7	2	2	2.1	2.2	2.2	1.8	24	
HOURLY MAX		3	3	3	3	3	3	3	3	5	3	3	2	3	3	2	2	2	2	2	2	2	2	3	2	3			
HOURLY AVG		2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1			

**STATUS FLAG CODES**

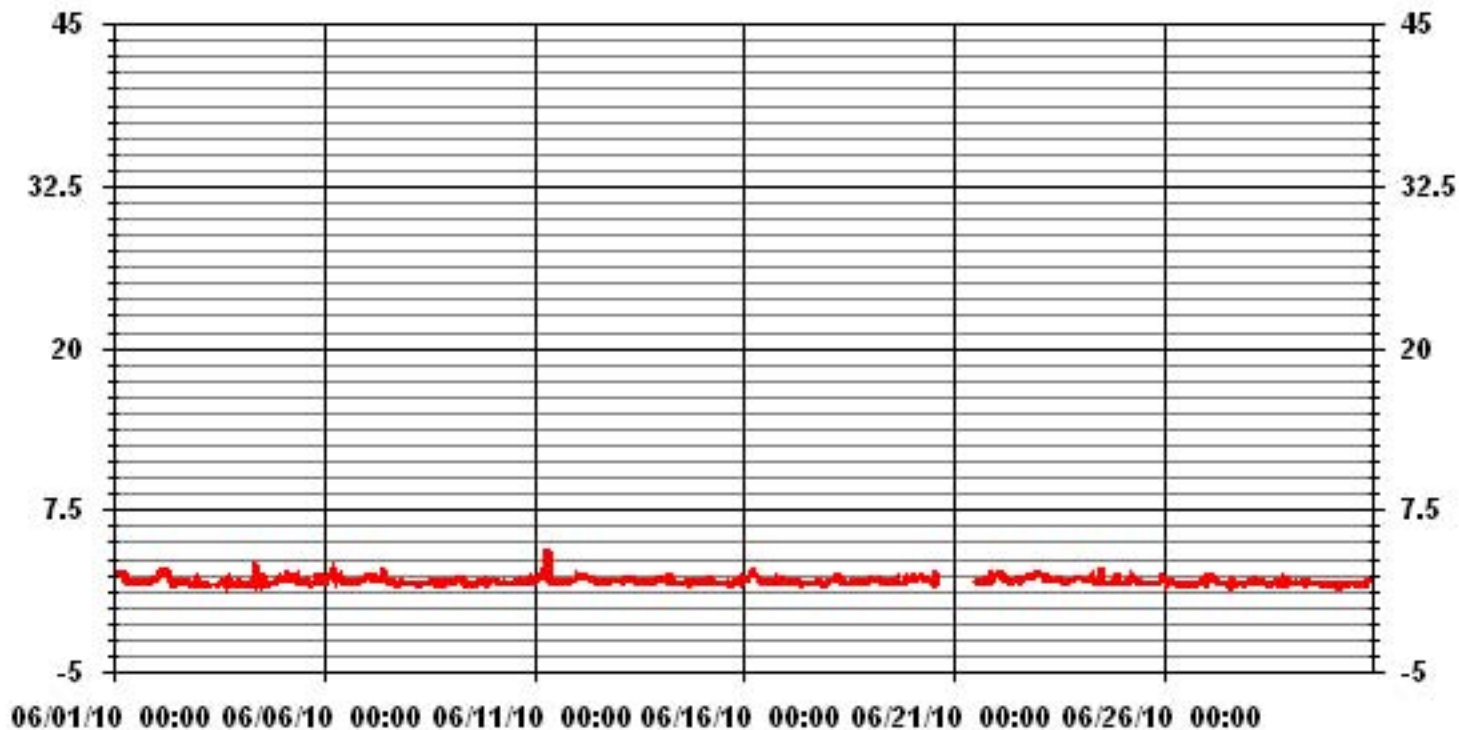
S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE
BB - BELOW BACKGROUND OF 1.5 PPM	

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	663
MAXIMUM INSTANTANEOUS VALUE:	4.5 PPM @ HOUR(S) 8 ON DAY(S) 11
IZS CALIBRATION TIME:	30 HRS
MONTHLY CALIBRATION TIME:	4 HRS
STANDARD DEVIATION:	0.26
OPERATIONAL TIME:	697 HRS



### 01 Hour Averages



— LICA THCMAX PPM

LICA  
 THC / WD Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

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

Wind Parameter : WD  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	4.37	6.63	5.27	3.61	5.73	8.44	8.89	4.97	3.77	6.03	12.82	11.31	6.63	3.92	3.77	3.77	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	4.37	6.63	5.27	3.61	5.73	8.44	8.89	4.97	3.77	6.03	12.82	11.31	6.63	3.92	3.77	3.77	

Calm : .00 %

Total # Operational Hours : 663

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	29	44	35	24	38	56	59	33	25	40	85	75	44	26	25	25	663
< 10.0																	
< 50.0																	
>= 50.0																	
Totals	29	44	35	24	38	56	59	33	25	40	85	75	44	26	25	25	

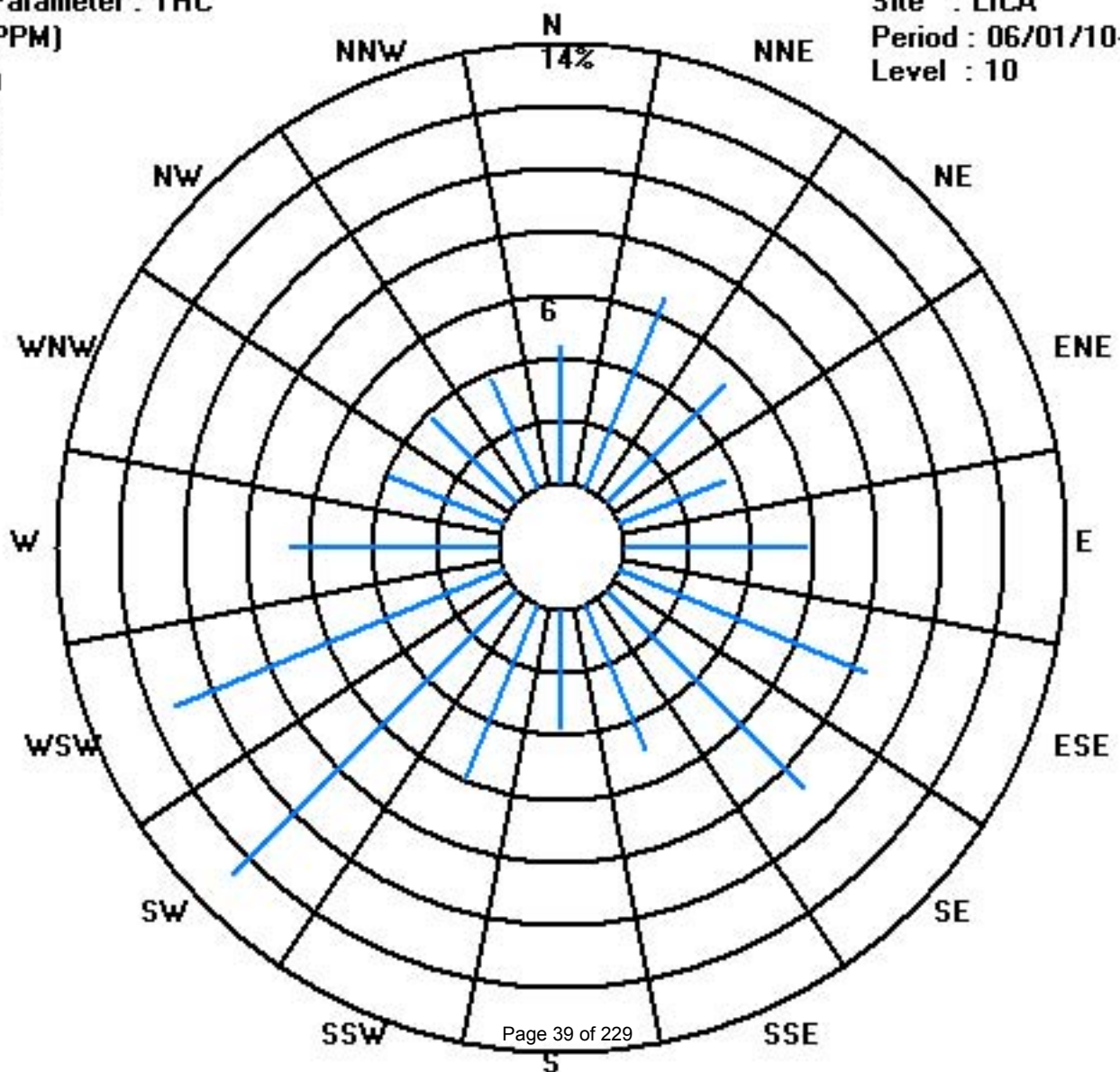
Calm : .00 %

Total # Operational Hours : 663

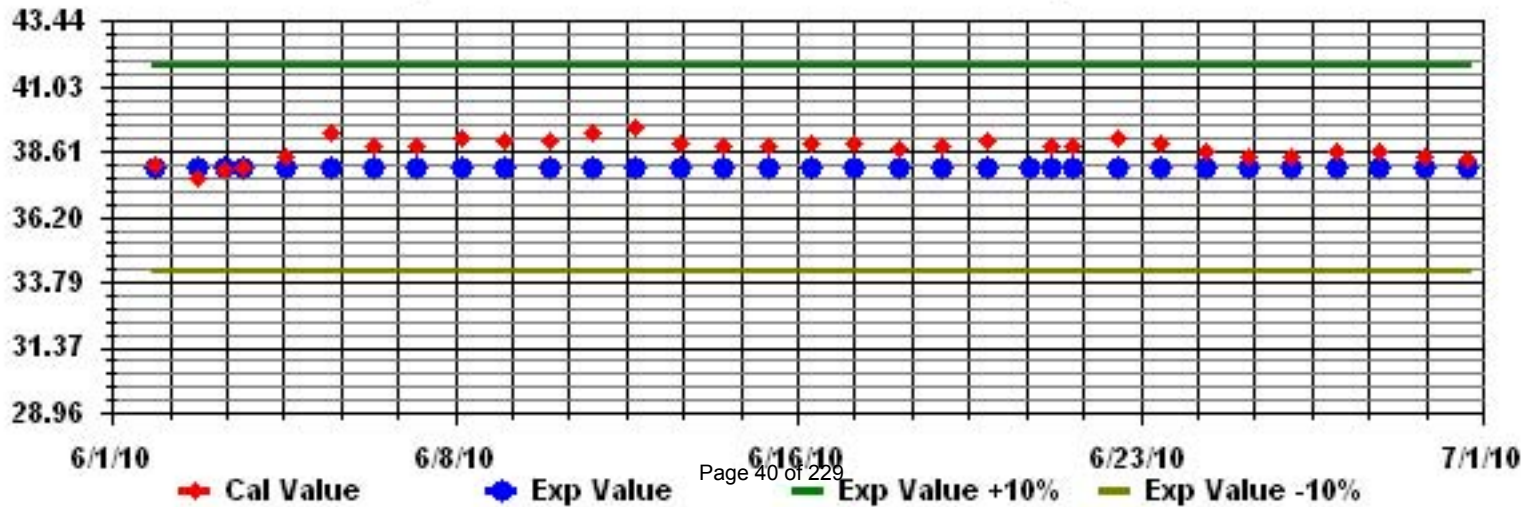
Class Limits (PPM)

Period : 06/01/10-06/30/10

Level : 10



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



# Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m<sup>3</sup>

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.9	5.9	8.4	5.4	6.4	6.9	5.4	7.9	10.4	5.4	2.9	0	11.4	15.4	7.4	0	8.4	8.4	3.9	5.4	5.4	4.9	9.4	10.9	15.4	6.7	24
2	5.9	7.4	9.4	6.4	11.4	10.9	8.4	3.4	1.9	11.4	5.4	3.9	6.4	4.9	0	5.9	5.9	3.9	8.4	4.9	1.4	0	8.4	N	11.4	5.9	23
3	2.4	N	7.4	2.9	6.9	3.4	N	8.4	7.9	2.9	2.9	6.9	C	7.9	5.9	7.9	12.4	0.9	13.4	0.4	4.9	0.4	4.9	4.9	13.4	5.5	22
4	0	0.9	7.9	1.9	2.4	0	6.9	N	4.9	4.4	3.4	3.4	3.4	2.9	4.9	5.9	4.9	6.4	3.9	2.4	4.9	1.9	5.9	5.9	7.9	3.9	23
5	6.9	6.4	6.9	8.9	7.4	8.9	6.9	5.4	4.4	7.9	1.9	3.4	2.4	2.4	4.4	2.9	2.9	3.4	1.4	4.4	4.4	1.9	1.4	2.9	8.9	4.6	24
6	2.4	2.4	1.9	4.9	1.4	3.9	3.4	4.9	4.9	3.4	2.4	1.4	4.4	6.4	6.4	4.9	3.9	4.9	4.9	5.4	0	8.4	8.9	2.9	8.9	0.0	24
7	8.9	0	5.9	2.4	8.4	10.9	2.9	6.4	8.4	11.9	8.4	10.9	5.9	9.4	7.9	7.4	7.4	5.9	9.4	3.9	7.4	9.9	4.4	2.9	11.9	7.0	24
8	4.9	4.4	N	1.9	0	10.9	0	N	N	6.9	0	7.4	N	0	0	N	4.9	1.4	6.9	5.4	N	1.4	N	11.4	11.4	4.0	17
9	4.4	N	2.4	3.9	1.4	N	0	7.4	11.4	4.4	0	5.4	0.4	3.4	1.4	1.4	3.4	4.4	2.4	8.4	3.4	8.9	7.9	4.9	11.4	4.1	22
10	2.4	9.4	4.9	5.9	N	9.4	4.4	2.4	5.4	N	4.9	9.4	1.4	0.4	4.4	1.4	2.4	12.9	8.4	5.9	8.4	5.4	4.9	7.4	12.9	5.5	22
11	4.4	5.4	1.4	5.4	3.9	6.9	3.4	4.4	2.9	1.9	7.4	9.4	0.9	7.9	9.4	6.9	7.4	7.9	9.9	11.4	0	10.4	6.9	4.9	11.4	5.9	24
12	5.4	2.9	2.9	5.9	2.9	23.4	6.9	13.4	14.4	6.9	11.9	12.4	14.4	18.4	8.9	14.9	8.9	10.4	9.9	10.4	8.9	11.4	14.4	7.9	23.4	10.3	24
13	12.4	12.4	7.4	9.9	15.4	7.9	8.4	6.4	4.9	4.4	8.4	7.4	8.9	2.4	10.4	7.4	1.9	3.9	5.9	0	7.4	6.4	6.4	9.9	15.4	7.3	24
14	6.9	3.4	0	12.9	0	7.4	0	0	1.4	7.9	6.4	0	2.9	2.9	2.9	6.9	0	3.4	5.4	1.4	3.4	4.9	4.9	4.9	12.9	3.6	24
15	0	2.9	0.4	1.4	6.4	5.9	21.4	5.4	6.4	1.9	5.4	0	2.4	10.9	1.4	0.4	5.9	2.4	8.4	4.9	1.4	9.9	2.9	7.9	21.4	4.8	24
16	4.4	3.4	5.4	0	3.9	5.4	8.4	4.9	7.4	3.9	4.4	0.9	6.4	9.9	5.9	2.4	3.4	9.4	11.4	5.4	15.9	6.9	7.4	3.9	15.9	5.9	24
17	3.4	6.9	5.4	7.9	4.9	8.4	4.4	15.9	12.4	25.9	8.9	7.4	6.9	9.9	4.9	8.4	6.9	3.4	1.4	9.9	12.4	11.9	2.4	7.4	25.9	8.2	24
18	3.9	7.9	6.9	4.9	4.4	7.9	12.4	18.4	14.4	20.4	19.9	8.4	6.4	14.4	25.4	11.4	9.4	14.4	9.4	19.9	19.4	13.9	17.4	17.9	25.4	12.9	24
19	24.4	24.4	17.9	20.9	17.9	19.9	23.4	18.5	23.9	20.9	18.9	25.9	22.4	21.4	17.9	17.9	13.4	6.4	4.9	9.4	7.4	7.4	8.4	8.9	25.9	16.8	24
20	9.4	12.4	11.9	9.9	10.4	13.9	12.9	12.5	14.5	9	13.2	23.8	13.7	0	15.4	0	9.4	12.9	5.4	10.4	13.4	13.4	8.4	11.9	23.8	11.2	24
21	13.9	5.9	8.9	8.4	4.9	7.9	10.9	15.4	9.9	10.4	15.4	19.4	16.4	19.9	6.4	17	18.9	14.9	13.9	15.4	15.5	14.9	10.4	11.4	19.9	12.8	24
22	12.9	13.9	12.9	15.4	9.9	4.9	10.4	7.9	0	3.9	1.4	5.4	0.4	0	5.9	7.9	8.4	3.4	7.4	8.4	9.9	6.9	8.4	3.9	15.4	7.1	24
23	10.9	4.9	5.4	5.9	5.4	6.9	6.9	5.4	3.9	2.9	8.4	0	1.9	1.4	9.4	6.9	11.4	6.4	6.4	14.9	12.4	5.9	6.9	6.9	14.9	6.6	24
24	7.9	8.4	8.4	9.4	10.9	10.4	10.9	9.4	13.4	14.4	0.9	7.9	2.9	5.4	5.4	6.9	7.4	10.9	4.9	N	4.4	6.9	11.9	3.4	14.4	7.9	23
25	5.9	0	4.4	5.4	1.4	7.9	6.9	2.9	17.9	7.4	3.9	3.9	0	5.4	7.9	0	0	4.4	N	0	8.9	7.9	8.4	5.9	17.9	5.1	23
26	5.4	0.9	0.9	0.9	1.9	4.4	3.4	0.9	3.9	0	0.9	4.4	1.4	7.4	2.4	6.4	5.4	6.9	0	3.9	7.4	1.9	2.9	2.9	7.4	3.2	24
27	1.9	0.9	5.9	2.4	5.9	1.4	4.4	0	1.4	6.4	5.4	4.9	1.9	6.9	7.9	5.4	5.4	5.9	5.4	5.4	2.4	6.4	3.9	3.9	7.9	4.2	24
28	1.4	1.9	0	7.4	0.4	8.4	4.9	N	0.4	2.9	9.9	5.4	9.4	3.9	3.9	9.9	11.9	7.9	6.9	3.9	0.9	8.4	1.9	0.4	11.9	4.9	23
29	7.9	4.9	14.9	19.4	7.4	8.9	9.4	7.9	9.9	8.4	3.4	11.4	14.4	8.4	9.4	17	0	13.4	11.9	14.4	4.4	5.4	14.9	15.4	19.4	10.1	24
30	7.4	3.9	4.9	1.4	0	2.4	3.9	3.4	5.4	7.9	5.9	8.9	6.4	3.4	3.9	3.4	11.4	0.4	4.4	0	0	0.9	3.9	0	11.4	3.9	24
HOURLY MAX	24	24	18	21	18	23	23	19	24	26	20	26	22	21	25	18	19	15	14	20	19	15	17	18			
HOURLY AVG	6.4	5.9	6.3	6.7	5.7	8.1	7.3	7.4	7.8	7.6	6.5	7.5	6.2	7.1	6.9	6.6	7.0	6.6	6.7	6.9	6.7	6.8	7.2	6.7			

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

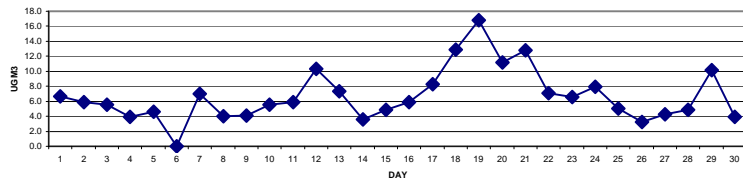
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	-	ug/m <sup>3</sup>	24-HR	30	ug/m <sup>3</sup>
----------------------	------	---	-------------------	-------	----	-------------------

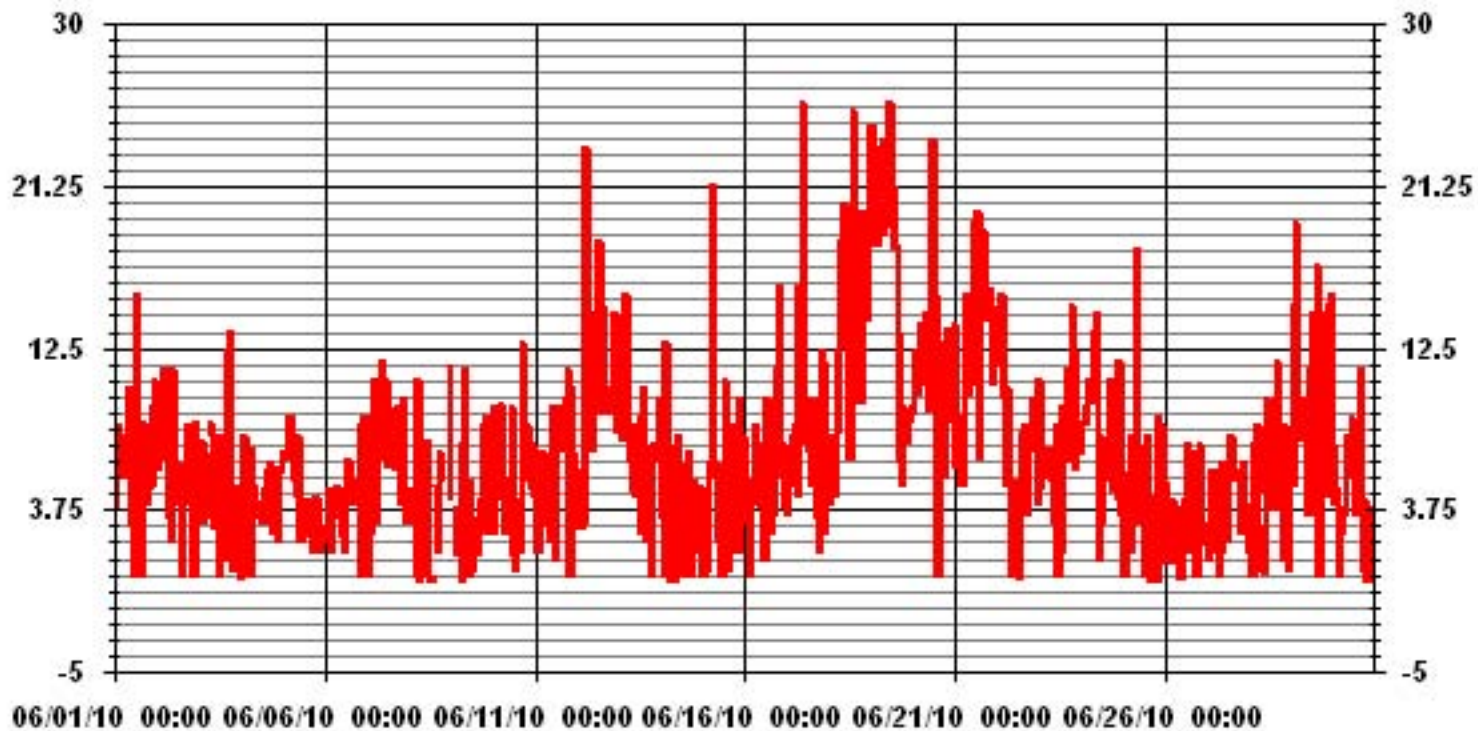
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-		
NUMBER OF 24-HR EXCEEDENCES:	0 PROPOSED CANADA WIDE GUIDELINE		
NUMBER OF NON-ZERO READINGS:	655		
MAXIMUM 1-HR AVERAGE:	25.9 UG/M <sup>3</sup> @ HOUR(S) 9, 11 ON DAY(S) 17, 19		
MAXIMUM 24-HR AVERAGE:	16.8 UG/M <sup>3</sup> ON DAY(S) 19		
IZS CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	702 HRS
MONTHLY CALIBRATION TIME:	1 HRS	AMD OPERATION UPTIME:	97.5 %
STANDARD DEVIATION:	4.99	MONTHLY AVERAGE:	6.85 UG/M <sup>3</sup>

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA PM2 UG/M3

LICA  
PM2 / WD Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

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

Wind Parameter : WD  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	3.98	6.55	5.27	3.56	5.98	7.97	9.40	5.27	3.70	6.12	13.10	11.11	6.41	4.13	3.70	3.70	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	3.98	6.55	5.27	3.56	5.98	7.97	9.40	5.27	3.70	6.12	13.10	11.11	6.41	4.13	3.70	3.70	

Calm : .00 %

Total # Operational Hours : 702

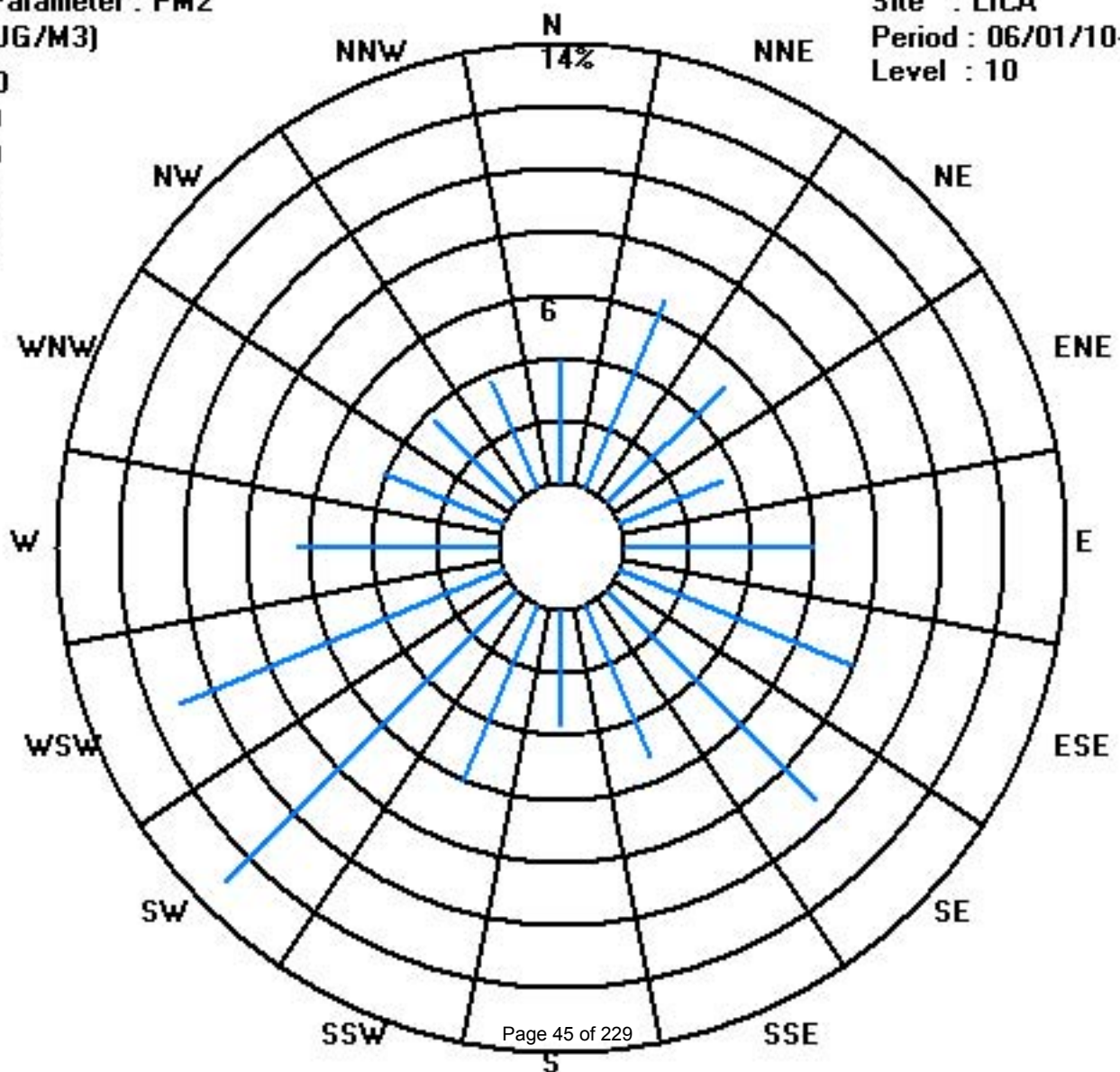
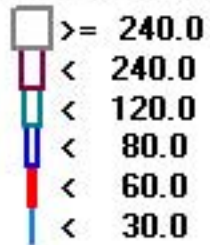
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	28	46	37	25	42	56	66	37	26	43	92	78	45	29	26	26	702
< 60.0																	
< 80.0																	
< 120.0																	
< 240.0																	
>= 240.0																	
Totals	28	46	37	25	42	56	66	37	26	43	92	78	45	29	26	26	

Calm : .00 %

Total # Operational Hours : 702





# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## 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		
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	MAX.	AVG.	RDGS.	
DAY																												
1	3	2	1	1	1	3	4	5	5	1	1	0	0	0	0	0	0	0	0	0	2	3	IZS	3	5	1.5	24	
2	3	3	3	3	2	4	3	2	1	0	0	0	1	0	0	0	0	0	1	2	2	IZS	2	0	4	1.4	24	
3	1	0	1	1	1	2	2	C	C	C	C	C	C	1	2	1	1	2	2	1	IZS	1	1	0	2	1.2	24	
4	1	1	1	1	1	2	2	2	3	1	1	2	1	1	1	0	0	0	0	0	IZS	2	1	2	3	3	1.3	24
5	3	2	2	3	3	3	3	2	1	0	0	0	0	0	0	1	1	IZS	0	1	1	2	1	3	3	1.3	24	
6	0	1	2	3	3	2	3	3	2	1	1	0	0	1	1	0	0	IZS	1	1	3	3	3	3	3	1.6	24	
7	3	3	1	1	1	3	3	3	5	7	4	3	2	2	3	2	IZS	1	1	1	1	1	0	0	7	2.2	24	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	IZS	0	0	1	0	0	0	1	1	1	1	0.2	24
9	0	0	0	0	1	2	4	2	0	0	0	0	0	0	IZS	0	1	1	1	1	1	2	1	2	4	0.8	24	
10	1	1	1	1	1	1	1	0	1	1	1	0	0	IZS	1	0	1	1	1	0	0	0	1	1	1	1	0.7	24
11	1	1	2	2	3	2	4	4	5	2	1	0	IZS	1	1	0	0	2	0	1	3	2	1	2	5	1.7	24	
12	2	3	2	3	1	3	3	2	1	1	1	1	IZS	0	0	0	0	0	0	1	1	1	2	1	1	3	1.3	24
13	1	2	2	2	2	2	2	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	1	1	1	1	2	0.9	24
14	1	1	2	2	2	1	1	1	2	IZS	1	0	1	1	1	0	0	0	0	1	1	1	2	2	2	2	1.0	24
15	2	1	1	2	4	4	6	4	IZS	0	1	0	0	0	0	0	0	0	0	0	1	3	4	2	6	1.5	24	
16	2	2	2	2	2	2	3	IZS	2	1	0	0	0	0	1	0	1	4	2	3	4	2	0	4	1.6	24		
17	0	0	0	0	0	1	IZS	1	1	2	1	0	0	0	0	2	1	1	1	2	1	0	0	2	0.6	24		
18	0	0	1	1	2	IZS	5	2	1	1	1	0	0	1	1	1	2	2	2	3	2	2	1	2	5	1.4	24	
19	2	2	2	2	IZS	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.5	24	
20	1	2	2	IZS	1	2	5	3	3	2	1	1	1	2	2	1	1	2	2	2	4	2	1	5	1.9	24		
21	1	1	IZS	2	2	4	4	4	4	3	2	2	2	1	1	1	2	2	2	1	1	2	4	3	4	2.2	24	
22	3	IZS	3	3	1	2	1	0	0	0	0	0	0	1	0	1	1	1	2	2	2	2	2	2	3	1.3	24	
23	IZS	1	1	1	1	1	3	2	1	0	0	0	0	0	0	0	0	0	0	1	3	2	2	IZS	3	0.9	24	
24	0	0	0	1	3	2	2	4	2	1	1	2	1	1	1	1	2	3	2	1	3	3	IZS	2	4	1.7	24	
25	1	1	1	1	2	2	3	4	2	2	1	1	1	1	1	0	0	0	0	0	2	IZS	3	2	4	1.3	24	
26	1	2	1	2	2	1	1	1	1	1	1	1	0	0	0	1	1	1	0	1	IZS	2	2	2	2	1.1	24	
27	2	1	3	4	4	3	2	1	1	1	1	0	0	0	0	0	0	0	0	IZS	1	1	0	0	4	1.1	24	
28	0	0	1	1	2	3	3	2	1	1	1	1	0	0	1	1	1	0	IZS	1	3	6	3	5	6	1.6	24	
29	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	IZS	1	1	0	0	1	1	1	0.8	24	
30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	1	1	0	1	1	1	0.9	24	
HOURLY MAX	3	3	3	4	4	4	6	5	5	7	4	3	2	2	3	2	2	3	4	3	4	6	4	5				
HOURLY AVG	1.3	1.2	1.4	1.6	1.7	2.1	2.7	2.1	1.8	1.2	0.9	0.6	0.5	0.6	0.8	0.6	0.6	0.8	0.9	1.0	1.6	1.8	1.6	1.5				

### STATUS FLAG CODES

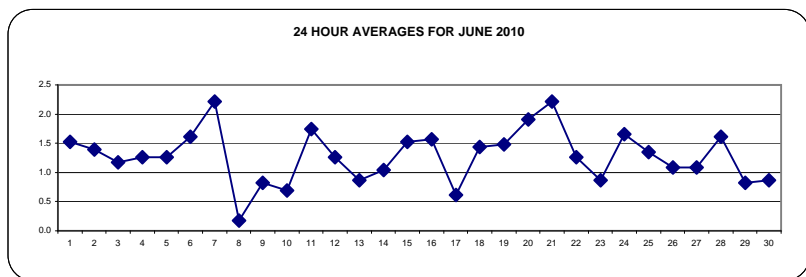
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

### OBJECTIVE LIMIT:

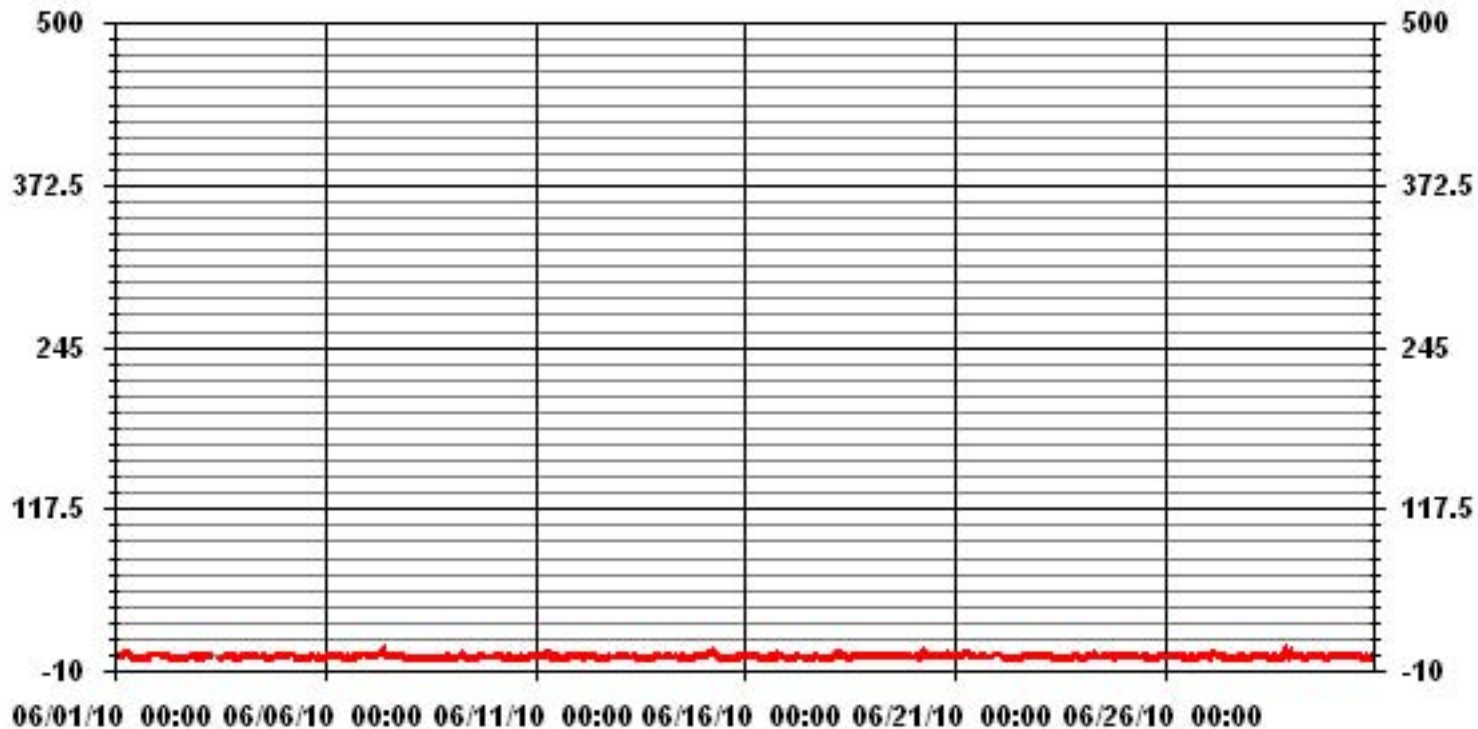
ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
----------------------	------	-----	-----	-------	-----	-----

### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	500		
MAXIMUM 1-HR AVERAGE:	7 PPB @ HOUR(S) 9 ON DAY(S) 7		
MAXIMUM 24-HR AVERAGE:	2.2 PPB ON DAY(S) 7		
IZS CALIBRATION TIME:	31 HRS	OPERATIONAL TIME:	720 HRS
MONTHLY CALIBRATION TIME:	6 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION	1.16	MONTHLY AVERAGE	1.28 PPB



### 01 Hour Averages



— LICA H02\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	4	3	3	2	2	8	6	8	8	2	3	1	1	1	1	2	2	1	1	1	4	5	<b>IZS</b>	4	8	3.2	24	
2	4	5	5	4	5	7	5	5	3	1	1	3	8	1	3	2	2	1	6	14	5	<b>IZS</b>	10	1	14	4.4	24	
3	1	1	1	2	3	7	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	4	14	4	4	11	4	6	<b>IZS</b>	7	1	1	14	4.4	24	
4	2	2	2	2	9	19	3	9	9	2	3	4	2	2	1	1	1	0	<b>IZS</b>	3	2	3	4	19	3.8	24		
5	4	2	4	4	4	4	5	4	2	1	0	0	0	0	1	1	2	2	<b>IZS</b>	1	2	2	3	1	5	2.1	24	
6	2	3	3	6	6	3	4	4	2	2	3	2	1	3	3	2	6	<b>IZS</b>	2	2	6	5	5	4	6	3.4	24	
7	5	4	3	1	4	8	5	5	7	14	7	10	17	5	4	5	<b>IZS</b>	2	2	4	3	2	0	1	17	5.1	24	
8	0	0	0	0	0	2	0	2	3	0	1	2	0	1	4	<b>IZS</b>	1	1	4	1	3	0	1	2	4	1.2	24	
9	1	1	0	0	3	4	6	8	7	3	0	2	1	1	<b>IZS</b>	2	14	7	2	3	3	3	3	3	14	3.3	24	
10	2	2	2	3	10	3	1	4	4	5	8	1	2	<b>IZS</b>	7	1	13	4	4	0	2	2	2	2	13	3.7	24	
11	2	2	3	3	5	3	0	11	8	11	12	6	<b>IZS</b>	10	10	6	5	11	3	5	9	8	5	14	14	6.6	24	
12	18	28	25	14	9	11	10	4	2	1	2	<b>IZS</b>	1	3	1	1	2	1	1	2	2	2	2	2	28	6.3	24	
13	2	2	2	2	2	2	2	2	3	2	<b>IZS</b>	1	1	1	1	0	2	1	1	1	7	3	2	2	7	1.9	24	
14	2	3	2	3	5	2	4	24	6	<b>IZS</b>	5	1	3	5	9	1	1	1	2	2	2	2	6	4	24	4.1	24	
15	4	2	2	5	7	10	7	11	<b>IZS</b>	4	5	1	2	4	2	0	1	1	0	1	2	7	8	4	11	3.9	24	
16	2	2	2	3	3	3	4	<b>IZS</b>	4	2	1	1	1	1	1	2	2	33	21	4	7	4	1	33	4.6	24		
17	2	1	0	2	1	5	<b>IZS</b>	11	2	28	8	1	7	1	4	47	2	2	5	4	2	1	0	1	47	6.0	24	
18	1	1	2	2	4	<b>IZS</b>	12	9	10	3	11	1	3	7	8	5	3	3	3	6	3	4	2	3	12	4.6	24	
19	3	3	3	2	<b>IZS</b>	3	3	3	2	5	3	3	8	5	1	3	2	1	1	1	1	2	2	2	8	2.7	24	
20	2	9	2	<b>IZS</b>	2	5	8	3	6	2	3	2	2	18	4	<b>P</b>	4	4	4	7	6	4	3	1	18	4.6	23	
21	1	2	<b>IZS</b>	4	3	6	7	5	5	3	3	3	2	1	3	4	4	2	3	2	6	5	4	7	3.6	24		
22	3	<b>IZS</b>	4	3	2	5	3	2	8	3	2	1	4	6	2	4	2	1	2	3	10	4	4	3	10	3.5	24	
23	<b>IZS</b>	2	2	2	1	2	5	20	3	4	1	2	2	5	1	2	2	2	4	4	26	5	4	<b>IZS</b>	26	4.6	24	
24	1	1	1	2	4	4	6	11	7	7	3	9	1	4	10	4	9	6	5	2	19	5	<b>IZS</b>	3	19	5.4	24	
25	2	1	2	2	2	4	6	7	21	4	1	21	1	2	3	1	1	3	1	1	4	<b>IZS</b>	6	3	21	4.3	24	
26	3	3	2	3	3	3	2	2	1	1	2	1	1	1	1	2	2	1	1	3	<b>IZS</b>	4	3	3	4	2.1	24	
27	3	2	4	6	5	4	4	2	1	2	1	1	1	1	1	0	1	1	0	<b>IZS</b>	4	2	1	1	6	2.1	24	
28	1	1	1	1	3	4	5	6	4	2	5	1	1	2	4	1	1	2	<b>IZS</b>	3	51	<b>59</b>	6	7	<b>59</b>	7.4	24	
29	5	1	1	1	1	2	3	2	5	6	2	3	2	3	1	1	1	<b>IZS</b>	3	2	3	1	1	1	6	2.2	24	
30	2	1	1	1	1	1	2	1	2	2	2	1	2	1	3	2	<b>IZS</b>	1	1	1	2	1	1	2	3	1.5	24	
HOURLY MAX	18	28	25	14	10	19	12	24	21	28	12	21	17	18	14	47	14	11	33	21	51	59	10	14				
HOURLY AVG	2.9	3.1	2.9	2.9	3.8	5.0	4.6	6.6	5.2	4.4	3.5	3.0	2.8	3.4	3.7	3.7	3.3	2.8	3.5	3.7	6.8	5.5	3.3	2.9				

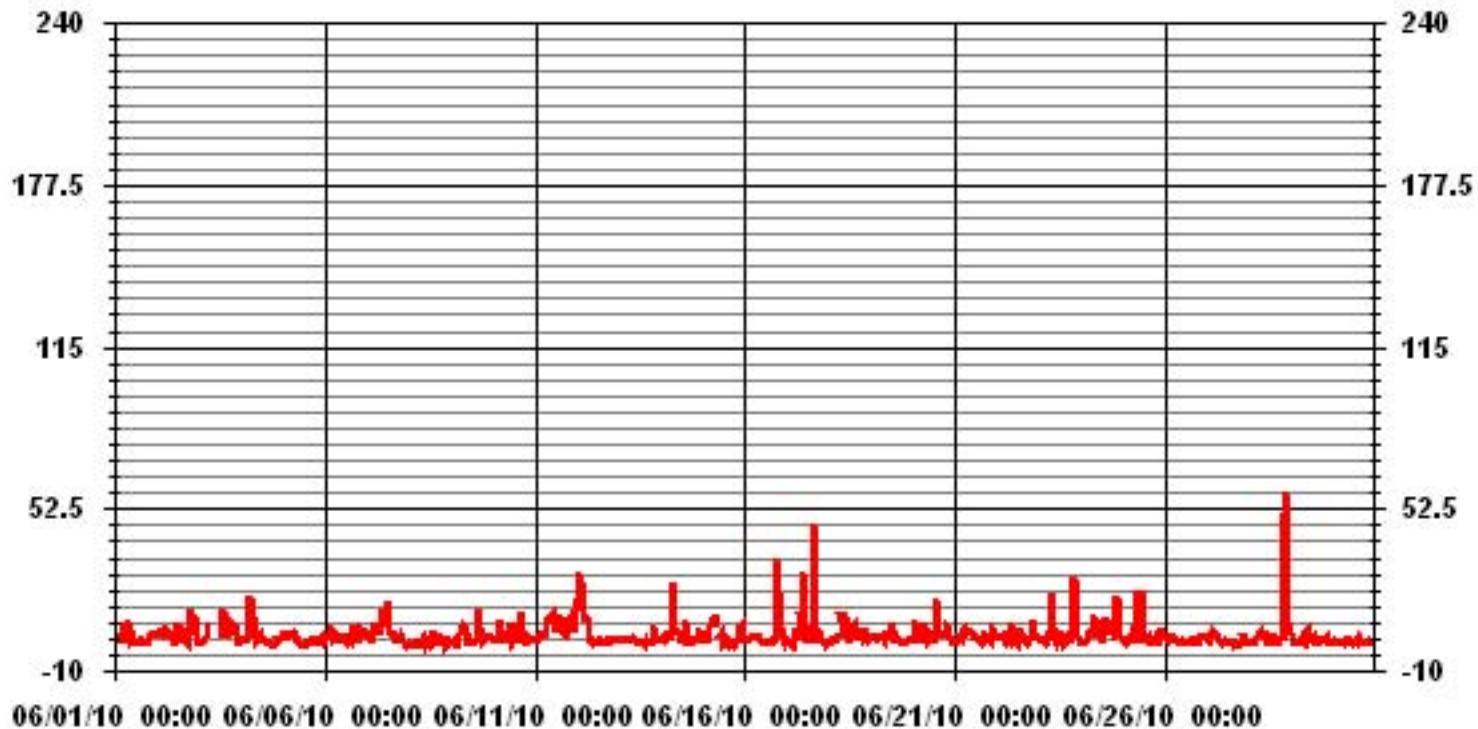
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	654					
MAXIMUM INSTANTANEOUS VALUE:	59	PPB	@ HOUR(S)	21	ON DAY(S)	28
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	5.07					

### 01 Hour Averages



— LICA NO2MAX PPB

LICA  
 NO2\_ / WD Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : NO2\_  
 Units : PPB

Wind Parameter : WD  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.39	6.44	5.27	3.80	5.27	8.34	9.37	5.12	3.66	6.00	12.88	11.42	6.58	3.95	3.80	3.66	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	4.39	6.44	5.27	3.80	5.27	8.34	9.37	5.12	3.66	6.00	12.88	11.42	6.58	3.95	3.80	3.66	

Calm : .00 %

Total # Operational Hours : 683

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	30	44	36	26	36	57	64	35	25	41	88	78	45	27	26	25	683
< 110																	
< 210																	
>= 210																	
Totals	30	44	36	26	36	57	64	35	25	41	88	78	45	27	26	25	

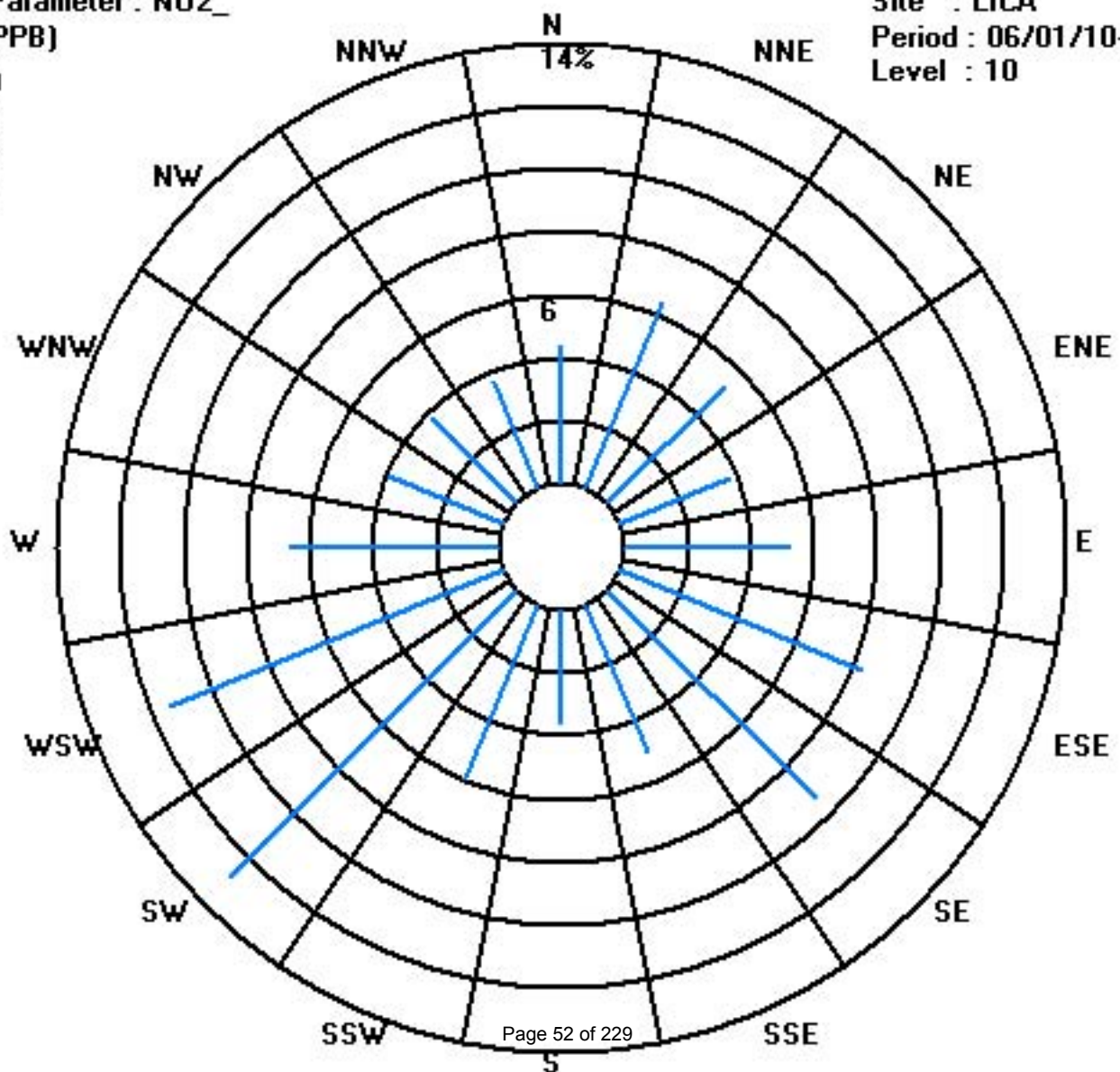
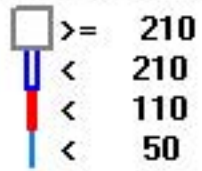
Calm : .00 %

Total # Operational Hours : 683

Class Limits (PPB)

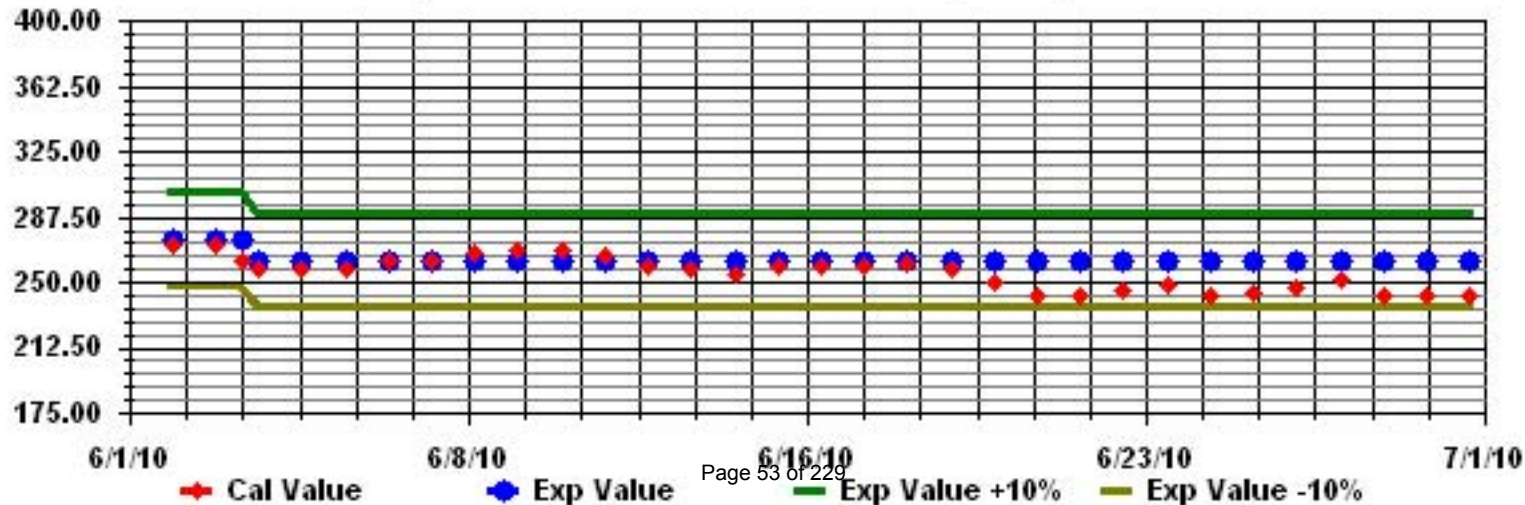
Period : 06/01/10-06/30/10

Level : 10





Calibration Graph for Site: LICA Parameter: H02\_ Sequence: H02 Phase: SPAN



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 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	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
2	0	0	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24	
3	0	0	0	0	0	0	0	C	C	C	C	C	C	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	1	0	0	0	0	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	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	3	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0.5	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	3	10	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1.0	24	
10	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	
11	0	0	0	0	0	0	1	5	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.8	24	
12	1	1	7	2	3	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1.0	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	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
16	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	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	1	0.1	24	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0.0	24	
20	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
21	0	0	0	0	0	1	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.3	24	
22	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
23	0	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
24	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
25	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	
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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0.6	24	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	
HOURLY MAX	1	2	7	2	3	10	8	5	3	2	1	1	1	1	1	0	0	1	2	0	4	10	0	2					
HOURLY AVG	0.0	0.1	0.2	0.1	0.3	1.2	0.8	0.7	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.4	0.0	0.1					

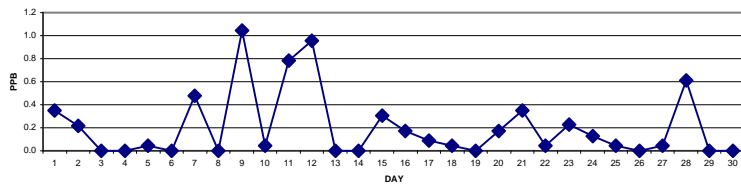
**STATUS FLAG CODES**

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

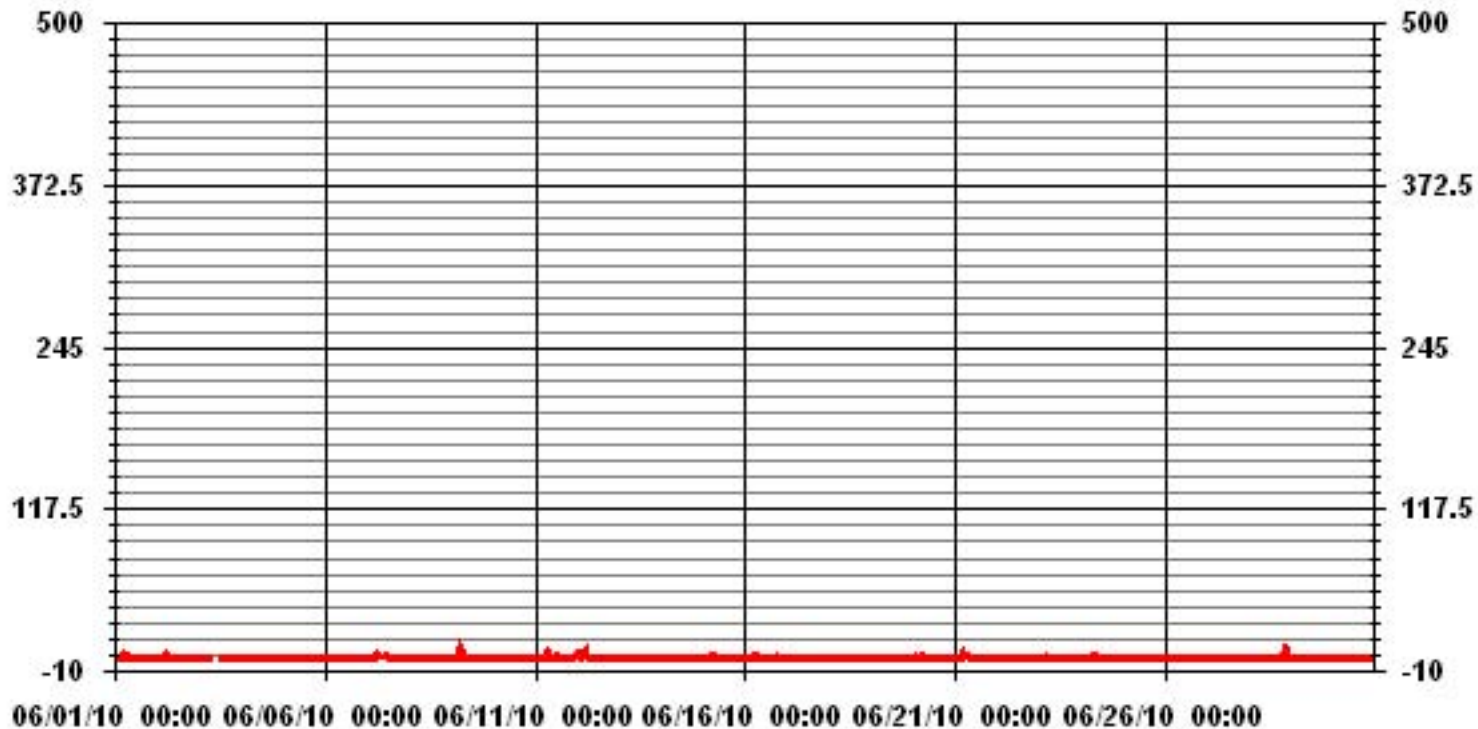
**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	67
MAXIMUM 1-HR AVERAGE:	10 PPB @ HOUR(S) 5 ON DAY(S) 9
MAXIMUM 24-HR AVERAGE:	1.0 PPB ON DAY(S) 9
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	6 HRS
OPERATIONAL TIME:	720 HRS
AMT OPERATION UPTIME:	100.0 %
STANDARD DEVIATION	0.89
MONTHLY AVERAGE	0.21 PPB

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA NO\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	0	0	1	9	2	2	4	0	1	0	0	1	0	1	0	0	0	0	0	1	IZS	0	9	1.0	24	
2	0	0	0	0	4	7	2	21	5	0	0	1	8	2	0	0	1	0	2	3	4	IZS	2	0	21	2.7	24	
3	0	0	0	0	0	10	C	C	C	C	C	C	C	4	3	9	4	4	3	2	IZS	2	0	0	10	2.6	24	
4	0	0	0	0	20	17	0	17	2	1	4	1	0	0	0	0	0	0	0	IZS	0	0	0	0	20	2.7	24	
5	0	0	0	0	2	0	1	1	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	2	0.2	24	
6	1	0	0	0	1	1	1	1	0	1	4	1	0	8	1	1	14	IZS	0	0	0	0	0	0	14	1.5	24	
7	0	0	0	0	5	10	2	3	2	10	3	10	14	2	0	2	IZS	1	2	0	0	0	0	0	14	2.9	24	
8	0	0	0	0	2	11	0	6	3	0	0	1	0	0	3	IZS	1	1	2	0	6	0	0	0	11	1.6	24	
9	0	0	0	0	8	13	14	25	15	9	0	1	2	3	IZS	3	12	10	1	5	0	0	0	0	25	5.3	24	
10	0	0	0	0	20	11	1	4	3	1	15	3	2	IZS	1	2	7	3	0	0	0	1	1	0	20	3.3	24	
11	0	0	0	1	0	0	2	53	8	16	19	5	IZS	15	11	1	1	15	0	3	5	7	4	12	53	7.7	24	
12	24	22	38	22	29	27	7	3	0	0	0	IZS	0	1	0	1	1	0	0	0	0	0	0	0	38	7.6	24	
13	0	0	0	0	0	0	0	0	0	2	IZS	1	0	4	0	0	0	0	0	0	3	1	0	1	4	0.5	24	
14	0	0	0	0	0	0	0	7	2	IZS	3	0	1	2	4	0	0	0	0	0	0	0	0	0	7	0.8	24	
15	0	0	0	0	0	22	4	12	IZS	1	2	0	0	2	2	0	0	0	0	0	0	0	0	0	22	2.0	24	
16	0	0	0	0	0	1	1	IZS	1	0	0	0	1	0	0	0	0	0	26	20	0	2	0	1	26	2.3	24	
17	0	0	0	0	0	1	IZS	24	1	13	5	0	5	0	9	7	0	1	0	0	0	0	0	0	24	2.9	24	
18	0	0	0	0	0	IZS	6	4	14	0	1	0	2	4	3	2	0	0	0	1	0	0	0	0	14	1.6	24	
19	0	0	0	0	IZS	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
20	0	35	0	IZS	0	1	3	0	1	0	1	0	0	3	0	P	0	0	1	2	1	1	2	0	35	2.3	23	
21	0	0	IZS	0	6	7	2	1	1	1	0	0	0	0	0	2	1	0	0	2	1	1	1	0	7	1.1	24	
22	0	IZS	0	0	1	9	8	6	8	0	1	0	1	2	1	2	0	0	0	0	20	6	0	1	20	2.9	24	
23	IZS	1	1	1	2	1	4	21	1	4	5	4	2	7	0	1	1	0	3	2	22	1	0	IZS	22	3.8	24	
24	0	0	0	0	1	0	11	4	10	28	1	6	0	4	7	0	3	3	1	0	15	0	IZS	0	28	4.1	24	
25	0	0	0	0	0	0	2	2	2	2	0	14	0	0	0	0	1	1	0	0	0	IZS	4	0	14	1.2	24	
26	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	IZS	0	0	0	2	0.2	24	
27	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	IZS	2	0	0	0	2	0.2	24	
28	0	0	0	0	0	1	1	4	5	0	1	0	0	2	1	0	0	0	IZS	0	82	229	0	0	229	14.2	24	
29	0	0	0	0	0	0	0	7	10	6	0	1	7	0	0	0	0	0	IZS	0	0	2	7	0	0	10	1.7	24
30	0	0	0	0	0	1	2	1	0	0	0	0	0	0	1	0	IZS	0	0	0	0	0	0	0	2	0.2	24	
HOURLY MAX	24	35	38	22	29	27	14	53	15	28	19	14	14	15	11	9	14	15	26	20	82	229	4	12				
HOURLY AVG	0.9	2.0	1.3	0.8	3.5	5.6	2.8	8.2	3.5	3.4	2.4	1.8	1.6	2.3	1.6	1.3	1.7	1.4	1.5	1.4	5.8	9.3	0.5	0.5				

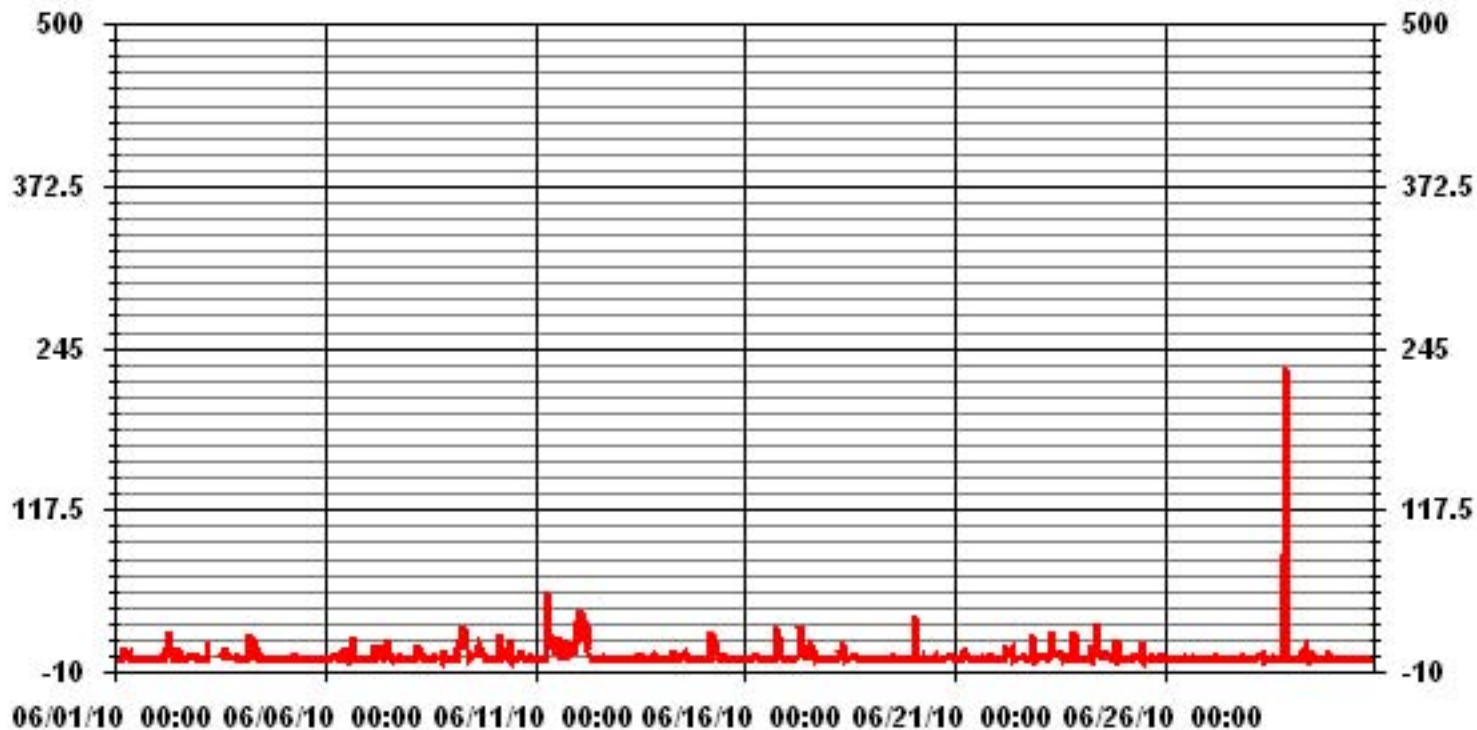
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	284				
MAXIMUM INSTANTANEOUS VALUE:	229	PPB	@ HOUR(S)	21	ON DAY(S) 28
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS
MONTHLY CALIBRATION TIME:	7	HRS			
STANDARD DEVIATION:	10.62				

### 01 Hour Averages



— LICA NOMAX PPB

LICA  
NO\_ / WD Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 01  
Site Name : LICA  
Parameter : NO\_  
Units : PPB

Wind Parameter : WD  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.39	6.44	5.27	3.80	5.27	8.34	9.37	5.12	3.66	6.00	12.88	11.42	6.58	3.95	3.80	3.66	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	4.39	6.44	5.27	3.80	5.27	8.34	9.37	5.12	3.66	6.00	12.88	11.42	6.58	3.95	3.80	3.66	

Calm : .00 %

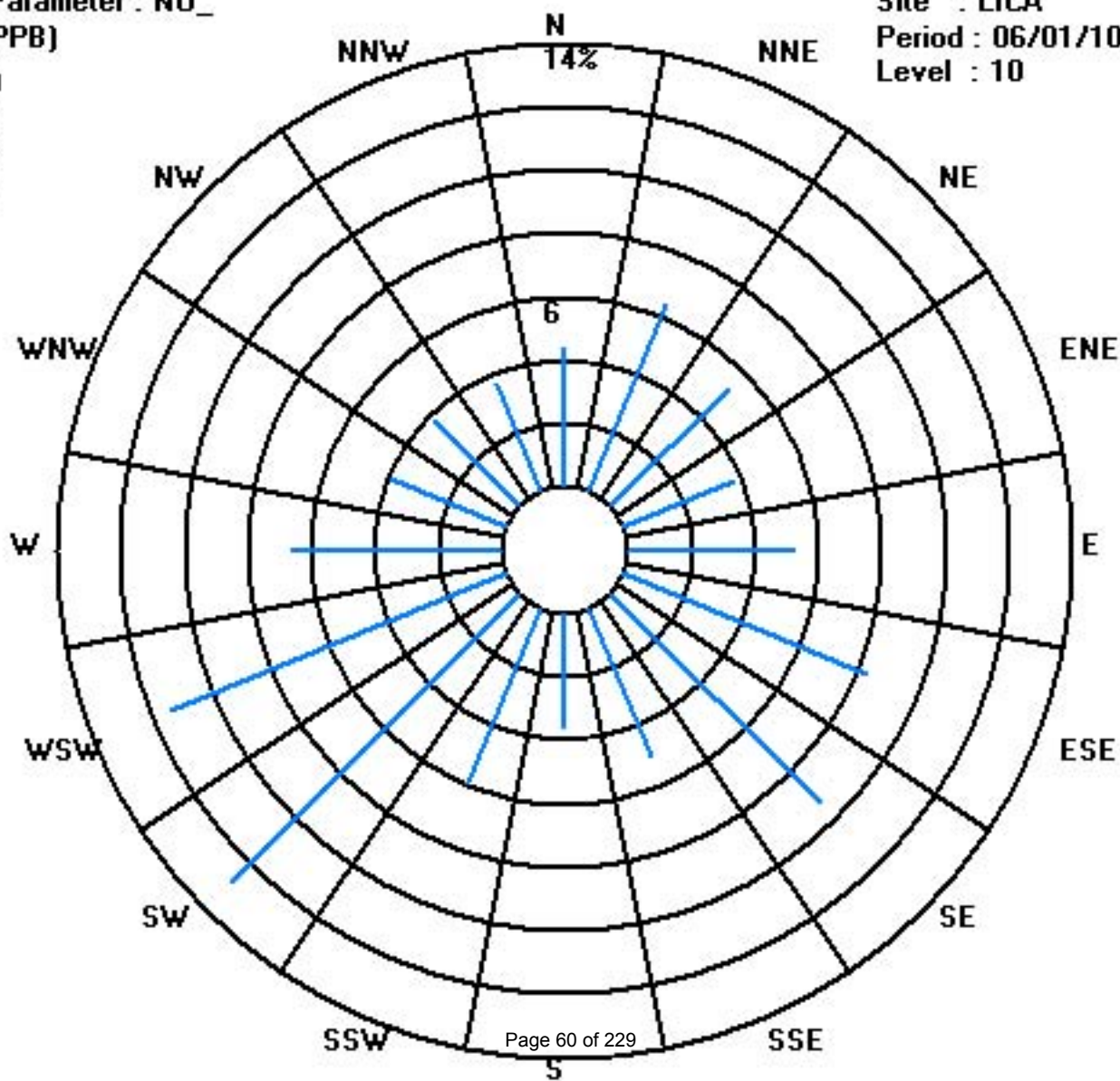
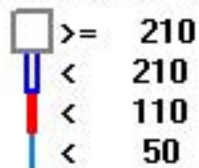
Total # Operational Hours : 683

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	30	44	36	26	36	57	64	35	25	41	88	78	45	27	26	25	683
< 110																	
< 210																	
>= 210																	
Totals	30	44	36	26	36	57	64	35	25	41	88	78	45	27	26	25	

Calm : .00 %

Total # Operational Hours : 683





# Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

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	0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
1	3	2	1	1	2	6	6	7	7	2	1	0	0	0	0	0	0	0	0	0	2	3	IZS	3	7	2.0	24	
2	3	3	3	3	3	7	4	3	2	0	0	0	1	0	0	0	0	0	1	2	2	IZS	3	0	7	1.7	24	
3	0	0	0	1	1	3	2	C	C	C	C	C	C	2	2	2	2	2	2	1	IZS	1	1	0	3	1.3	24	
4	0	1	1	1	2	3	2	3	4	2	2	2	1	1	1	0	0	0	0	0	IZS	2	1	2	3	4	1.5	24
5	3	2	2	3	3	3	4	4	1	0	0	0	0	0	0	0	1	1	IZS	0	1	1	2	0	4	1.3	24	
6	0	1	2	3	3	2	3	4	2	2	2	0	0	1	2	1	1	IZS	1	1	3	3	3	3	3	4	1.9	24
7	3	3	1	1	2	7	4	4	7	9	5	4	3	3	3	2	IZS	1	1	1	1	1	0	0	9	2.9	24	
8	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	IZS	0	0	1	0	1	0	0	1	1	0.3	24	
9	0	0	0	0	5	13	12	6	1	1	0	0	0	0	IZS	0	2	2	1	1	1	2	1	2	13	2.2	24	
10	1	1	1	1	2	1	1	1	1	1	2	0	0	IZS	1	1	1	1	0	0	0	1	1	1	1	2	0.9	24
11	1	1	2	2	3	3	5	9	8	5	2	1	IZS	3	2	0	0	3	0	2	3	4	2	4	9	2.8	24	
12	3	4	9	5	5	9	5	3	2	1	1	IZS	0	0	0	0	0	0	0	1	1	1	1	1	9	2.3	24	
13	1	1	2	2	2	2	2	2	1	1	IZS	0	0	0	0	0	0	0	0	0	1	1	1	1	2	0.9	24	
14	1	1	2	2	2	1	1	2	2	IZS	1	0	1	1	2	0	0	0	0	1	1	1	2	2	2	1.1	24	
15	1	1	1	2	5	6	9	6	IZS	0	1	0	0	1	0	0	0	0	0	0	0	3	4	2	9	1.8	24	
16	2	2	1	2	3	3	4	IZS	3	1	0	0	0	0	0	0	0	1	7	2	3	4	2	0	7	1.7	24	
17	0	0	0	0	0	1	IZS	3	1	3	1	0	1	0	1	2	1	1	1	2	1	0	0	0	3	0.8	24	
18	0	0	1	1	2	IZS	7	3	1	1	1	0	0	1	1	1	2	2	2	3	2	2	1	2	7	1.6	24	
19	2	2	2	2	IZS	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.5	24	
20	1	4	2	IZS	2	3	7	3	3	2	1	1	1	2	2	1	1	2	2	2	4	2	1	1	7	2.2	24	
21	1	1	IZS	2	4	8	5	6	5	4	3	2	2	1	1	1	2	2	2	1	1	2	4	3	8	2.7	24	
22	3	IZS	3	3	2	3	2	1	1	0	1	0	0	1	0	1	1	1	2	2	3	2	2	2	3	1.6	24	
23	IZS	2	2	2	2	5	4	1	1	0	0	0	1	0	0	0	0	0	1	4	2	1	IZS	5	1.4	24		
24	0	0	0	1	3	2	3	5	3	2	2	2	1	1	1	1	3	3	2	1	4	3	IZS	2	5	2.0	24	
25	1	1	1	1	1	3	4	5	3	2	1	2	1	1	1	0	0	0	0	2	IZS	3	2	5	1.5	24		
26	1	2	1	2	2	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	IZS	2	2	2	2	1.1	24	
27	1	1	2	4	4	3	3	2	1	1	1	0	0	0	0	0	0	0	0	IZS	1	1	0	0	4	1.1	24	
28	0	0	1	1	2	3	3	3	2	1	1	1	0	1	1	1	1	0	IZS	1	8	16	3	5	16	2.4	24	
29	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	IZS	1	1	0	0	1	1	2	1.0	24	
30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	1	1	0	1	1	1	0.9	24	
HOURLY MAX	3	4	9	5	5	13	12	9	8	9	5	4	3	3	3	2	3	3	7	3	8	16	4	5				
HOURLY AVG	1.2	1.3	1.6	1.7	2.4	3.6	3.8	3.4	2.4	1.7	1.2	0.7	0.6	0.8	0.9	0.6	0.8	0.8	1.0	1.0	1.9	2.1	1.6	1.6				

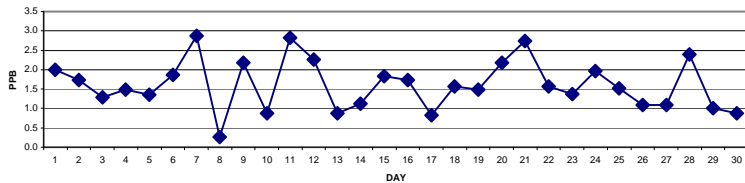
STATUS FLAG CODES

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

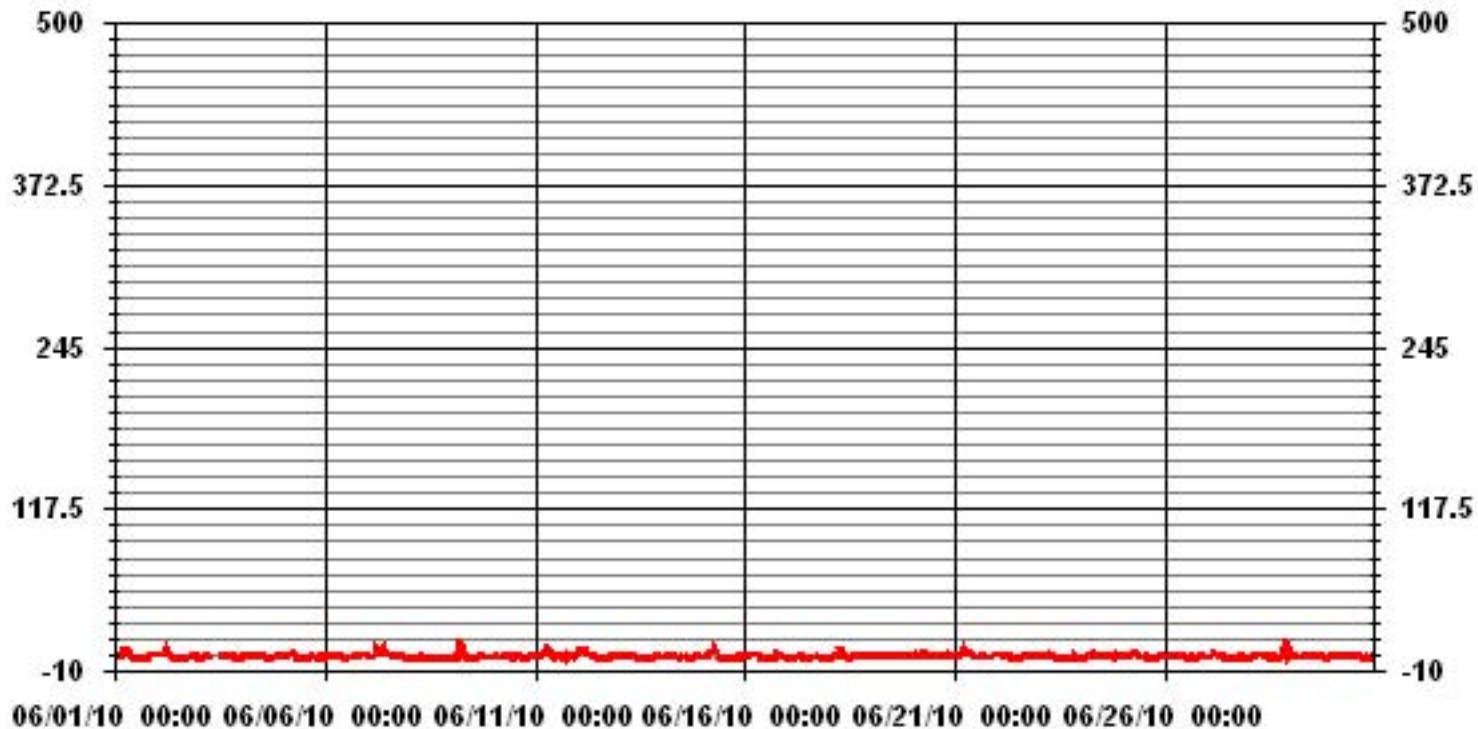
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	512
MAXIMUM 1-HR AVERAGE:	16 PPB @ HOUR(S) 21 ON DAY(S) 28
MAXIMUM 24-HR AVERAGE:	2.9 PPB ON DAY(S) 7
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	6 HRS
STANDARD DEVIATION	1.79
OPERATIONAL TIME:	720 HRS
AMD OPERATION UPTIME	100.0 %
MONTHLY AVERAGE	1.61 PPB

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA NOX\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	5	4	4	2	3	17	8	11	12	3	5	1	1	2	1	4	3	1	1	1	4	6	<b>IZS</b>	4	17	4.5	24	
2	4	5	5	4	7	15	7	21	7	2	2	3	16	2	3	2	3	2	7	17	8	<b>IZS</b>	12	1	21	6.7	24	
3	2	1	1	2	3	10	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	5	15	11	9	15	5	9	<b>IZS</b>	9	1	1	15	6.2	24	
4	2	3	2	2	26	35	4	25	11	3	6	5	3	3	2	1	1	1	<b>IZS</b>	3	2	3	4	35	6.5	24		
5	4	2	5	4	6	5	6	5	3	1	1	0	0	0	1	1	2	2	<b>IZS</b>	1	2	2	3	1	6	2.5	24	
6	4	4	4	6	6	5	6	5	3	4	7	3	1	6	5	4	8	<b>IZS</b>	2	2	6	5	5	5	8	4.6	24	
7	6	4	3	2	9	16	8	8	9	20	10	20	31	7	5	7	<b>IZS</b>	2	3	5	3	2	0	1	31	7.9	24	
8	0	0	0	0	2	9	1	6	4	1	1	3	1	1	5	<b>IZS</b>	2	2	6	1	8	0	1	2	9	2.4	24	
9	1	1	1	1	10	18	20	20	14	10	1	4	2	3	<b>IZS</b>	5	26	18	4	9	3	3	4	4	26	7.9	24	
10	2	2	2	3	30	11	2	8	7	6	17	2	3	<b>IZS</b>	9	4	21	8	5	0	4	4	2	3	30	6.7	24	
11	2	2	4	5	6	4	7	36	14	20	21	7	<b>IZS</b>	17	17	8	6	20	3	7	11	10	9	14	36	10.9	24	
12	23	40	50	30	33	28	13	6	3	2	3	<b>IZS</b>	1	4	1	3	4	1	1	3	3	2	2	2	50	11.2	24	
13	2	2	2	2	2	2	3	2	3	3	<b>IZS</b>	1	1	2	2	0	3	1	1	1	11	3	2	2	11	2.3	24	
14	2	3	3	3	6	3	4	31	9	<b>IZS</b>	8	1	5	7	12	1	1	1	2	2	2	2	5	4	31	5.1	24	
15	3	2	2	5	8	18	12	22	<b>IZS</b>	5	7	1	3	6	5	1	1	1	0	1	2	7	8	4	22	5.4	24	
16	3	2	2	3	4	5	5	<b>IZS</b>	6	3	1	1	2	1	1	1	2	2	49	41	4	10	4	2	49	6.7	24	
17	2	1	0	2	1	7	<b>IZS</b>	31	3	31	13	1	8	2	8	54	2	3	6	5	2	1	0	1	54	8.0	24	
18	1	1	2	2	4	<b>IZS</b>	17	13	24	4	13	1	5	12	12	7	3	4	3	9	3	4	2	3	24	6.5	24	
19	3	3	3	2	<b>IZS</b>	4	3	3	2	7	4	4	10	5	1	3	3	2	2	1	1	2	3	2	10	3.2	24	
20	2	45	3	<b>IZS</b>	3	6	11	4	7	3	5	3	2	22	4	<b>P</b>	5	4	6	10	6	5	5	1	45	7.4	23	
21	1	3	<b>IZS</b>	4	9	12	10	7	7	6	3	3	3	2	2	5	5	4	2	5	4	7	6	4	12	5.0	24	
22	3	<b>IZS</b>	5	4	3	11	9	4	8	3	4	1	5	7	3	6	3	1	3	3	24	10	4	5	24	5.6	24	
23	<b>IZS</b>	3	2	3	4	4	10	43	5	8	3	6	4	6	2	3	3	3	5	7	49	5	5	<b>IZS</b>	49	8.3	24	
24	1	1	1	2	5	4	11	15	16	10	4	15	2	7	17	5	10	7	6	2	33	5	<b>IZS</b>	3	33	7.9	24	
25	2	1	2	2	2	5	8	9	23	7	2	36	2	3	4	2	1	5	1	1	4	<b>IZS</b>	10	4	36	5.9	24	
26	3	3	2	3	4	3	2	2	1	1	3	3	1	1	1	2	3	1	1	3	<b>IZS</b>	4	3	3	4	2.3	24	
27	3	2	4	6	5	5	5	3	2	2	1	1	1	1	1	1	2	1	0	<b>IZS</b>	7	3	1	1	7	2.5	24	
28	0	1	1	1	4	5	7	9	10	2	6	2	1	5	5	1	1	3	<b>IZS</b>	4	105	<b>217</b>	7	7	<b>217</b>	17.6	24	
29	5	1	1	1	2	3	4	6	10	11	2	5	3	3	2	2	1	<b>IZS</b>	4	2	3	4	1	1	11	3.3	24	
30	2	1	1	1	1	3	3	3	2	2	3	2	2	1	4	3	<b>IZS</b>	1	1	2	2	1	1	2	4	1.9	24	
HOURLY MAX	23	45	50	30	33	35	20	43	24	31	21	36	31	22	17	54	26	20	49	41	105	217	12	14				
HOURLY AVG	3.2	4.9	4.0	3.7	7.2	9.4	7.4	12.8	8.0	6.4	5.6	4.8	4.3	4.9	5.2	5.3	4.8	4.1	4.6	5.5	11.3	12.0	3.9	3.1				

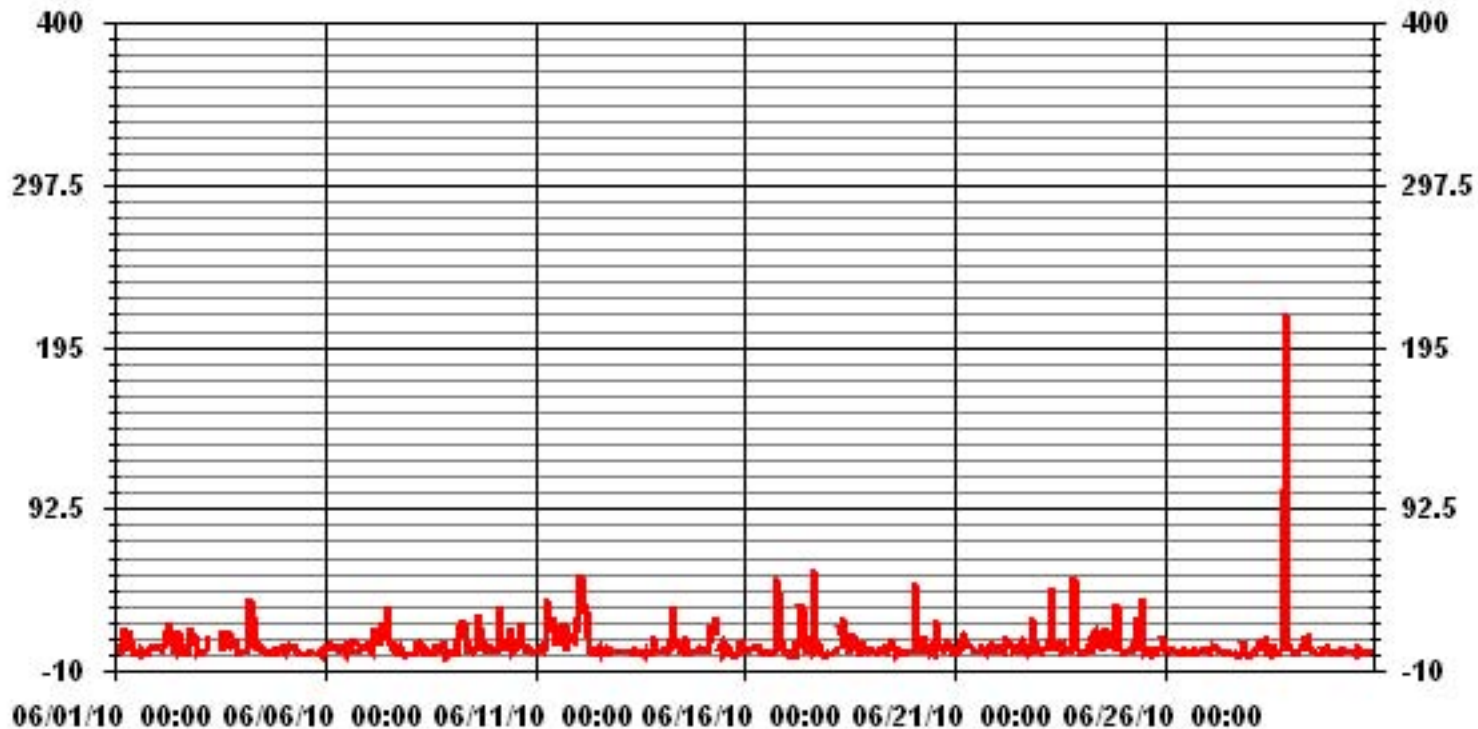
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	665				
MAXIMUM INSTANTANEOUS VALUE:	217	PPB	@ HOUR(S)	21	ON DAY(S) 28
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS
MONTHLY CALIBRATION TIME:	7	HRS			
STANDARD DEVIATION:	11.53				

### 01 Hour Averages



— LICA NOXMAX PPB

LICA  
 NOX\_ / WD Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 01  
 Site Name : LICA  
 Parameter : NOX\_  
 Units : PPB

Wind Parameter : WD  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.39	6.44	5.27	3.80	5.27	8.34	9.37	5.12	3.66	6.00	12.88	11.42	6.58	3.95	3.80	3.66	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	4.39	6.44	5.27	3.80	5.27	8.34	9.37	5.12	3.66	6.00	12.88	11.42	6.58	3.95	3.80	3.66	

Calm : .00 %

Total # Operational Hours : 683

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	30	44	36	26	36	57	64	35	25	41	88	78	45	27	26	25	683
< 110																	
< 210																	
>= 210																	
Totals	30	44	36	26	36	57	64	35	25	41	88	78	45	27	26	25	

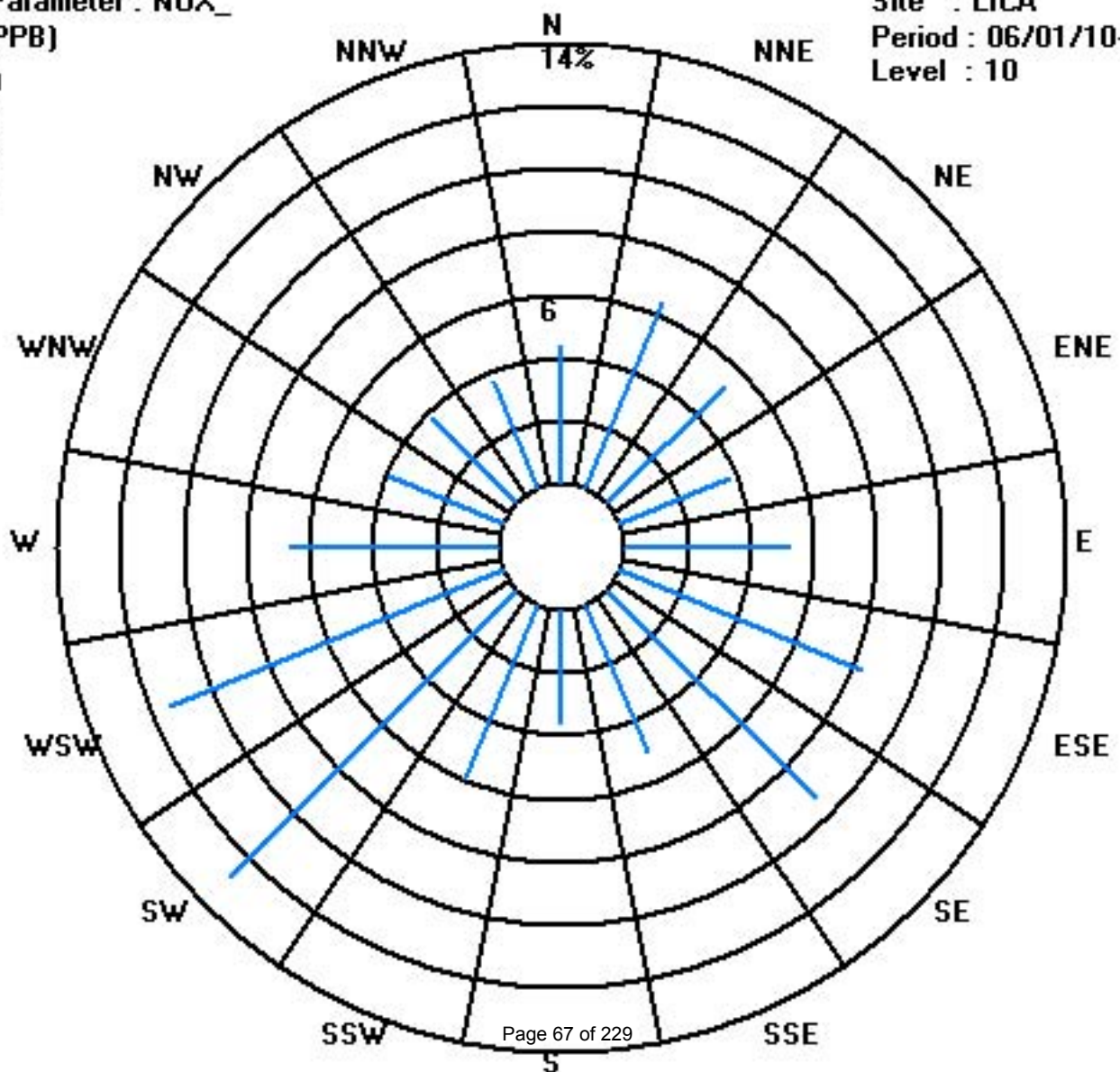
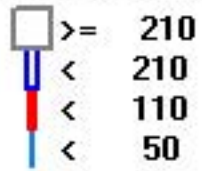
Calm : .00 %

Total # Operational Hours : 683

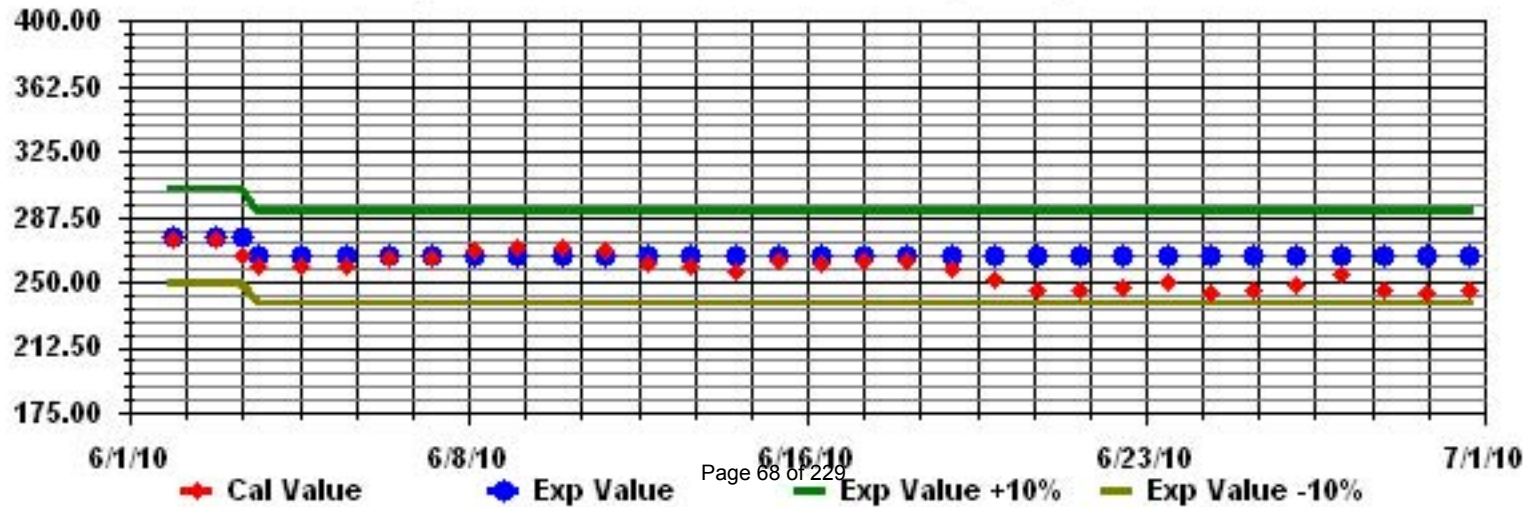
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA Parameter: NOX\_ Sequence: NO2 Phase: SPAN





# Ozone

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

### OZONE (O<sub>3</sub>) 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.
	HOUR START	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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	10	8	4	3	1	6	20	26	30	36	40	43	44	45	45	44	44	45	44	41	30	19	<b>IZS</b>	14	45	27.9	24
2	12	9	4	4	4	7	21	30	38	43	44	44	47	49	49	49	49	48	46	43	39	<b>IZS</b>	38	40	49	32.9	24
3	35	34	33	33	31	29	29	27	27	28	28	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	27	26	25	27	27	<b>IZS</b>	25	24	25	35	28.4	24
4	22	17	14	20	25	24	24	18	12	13	14	18	20	19	21	21	20	21	17	<b>IZS</b>	7	10	10	9	25	17.2	24
5	11	11	11	8	7	8	9	10	14	17	19	18	22	22	22	21	20	19	<b>IZS</b>	19	18	18	17	21	22	15.7	24
6	22	20	20	16	13	16	16	17	20	25	26	32	32	33	34	35	35	<b>IZS</b>	33	30	22	12	9	9	35	22.9	24
7	5	4	3	3	3	4	11	13	14	12	16	25	33	37	43	45	<b>IZS</b>	33	33	31	28	24	26	21	45	20.3	24
8	18	17	16	16	16	17	19	19	18	19	19	21	24	27	21	<b>IZS</b>	19	14	14	13	13	11	6	3	27	16.5	24
9	2	2	1	1	0	0	2	11	20	23	28	31	31	30	<b>IZS</b>	31	30	30	29	29	27	24	19	18	31	18.2	24
10	16	14	14	14	17	22	24	24	26	29	29	29	31	<b>IZS</b>	33	34	34	33	31	29	27	24	23	26	34	25.3	24
11	24	22	23	20	13	16	15	15	17	24	32	35	<b>IZS</b>	36	38	40	40	38	39	33	22	24	28	25	40	26.9	24
12	25	17	10	7	5	7	20	28	36	44	47	<b>IZS</b>	48	48	49	50	48	47	44	41	39	40	41	42	50	34.0	24
13	42	42	41	40	38	36	36	37	40	43	<b>IZS</b>	48	49	48	48	48	47	47	46	46	42	41	36	34	49	<b>42.4</b>	24
14	36	31	29	28	29	34	34	34	35	<b>IZS</b>	43	44	42	43	44	37	33	34	33	32	32	31	28	27	44	34.5	24
15	32	33	29	23	17	11	13	24	<b>IZS</b>	37	40	42	42	41	40	39	37	34	34	30	28	19	14	14	42	29.3	24
16	12	10	10	9	6	10	18	<b>IZS</b>	26	33	37	43	47	48	48	48	48	47	38	31	19	16	19	31	48	28.4	24
17	32	32	32	34	36	35	<b>IZS</b>	37	38	38	40	41	40	39	38	38	38	38	37	36	32	33	34	27	41	35.9	24
18	20	19	17	16	13	<b>IZS</b>	10	24	30	34	36	36	37	41	40	36	36	36	33	28	29	32	37	35	41	29.3	24
19	34	37	38	40	<b>IZS</b>	34	33	37	41	45	50	52	52	52	53	45	37	36	39	37	37	29	25	20	53	39.3	24
20	13	5	4	<b>IZS</b>	3	6	17	27	28	35	45	51	58	53	48	46	42	32	29	21	18	30	32	32	58	29.3	24
21	31	16	<b>IZS</b>	2	2	4	19	25	31	40	49	56	<b>61</b>	<b>61</b>	52	34	32	40	33	25	19	9	8	6	<b>61</b>	28.5	24
22	9	<b>IZS</b>	3	3	2	17	23	26	26	30	28	29	29	27	25	16	22	23	22	18	14	9	4	2	30	17.7	24
23	<b>IZS</b>	0	0	0	1	4	13	21	27	26	28	29	30	29	30	31	31	31	29	25	19	14	15	<b>IZS</b>	31	19.7	24
24	26	25	22	19	13	15	18	19	20	18	21	31	38	41	44	40	37	30	33	39	31	22	<b>IZS</b>	36	44	27.7	24
25	38	33	21	15	17	13	20	26	27	34	40	38	39	38	36	32	29	28	28	26	13	<b>IZS</b>	4	7	40	26.2	24
26	24	26	14	21	17	18	21	16	19	18	20	19	19	21	23	25	25	23	20	16	<b>IZS</b>	9	11	17	26	19.2	24
27	18	17	10	6	9	11	12	16	20	24	25	26	27	30	33	36	38	38	36	<b>IZS</b>	20	18	17	16	38	21.9	24
28	17	15	12	12	13	17	18	19	22	21	23	23	25	26	30	33	37	44	<b>IZS</b>	42	34	18	15	13	44	22.5	24
29	20	21	19	18	16	16	16	16	20	23	24	24	35	34	34	36	37	<b>IZS</b>	37	36	35	33	39	34	39	27.1	24
30	32	34	30	32	33	27	21	22	21	19	24	30	35	37	40	37	<b>IZS</b>	37	35	32	30	31	25	19	40	29.7	24
HOURLY MAX	42	42	41	40	38	36	36	37	41	45	50	56	61	61	53	50	49	48	46	46	42	41	41	42			
HOURLY AVG	22.0	19.7	16.7	16.0	13.8	15.9	19.0	22.9	25.5	28.7	31.5	34.2	37.0	37.7	37.9	36.3	34.7	34.0	32.8	30.6	25.9	22.3	21.6	21.5			

#### STATUS FLAG CODES

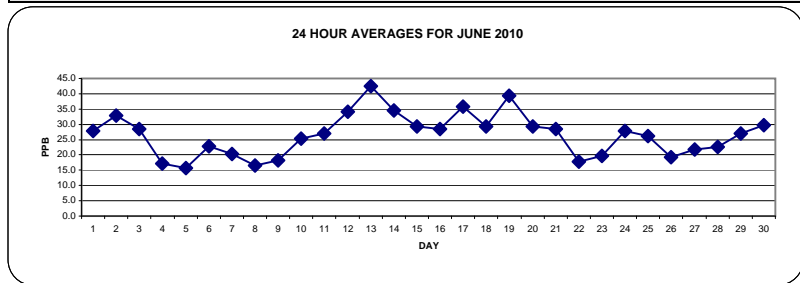
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

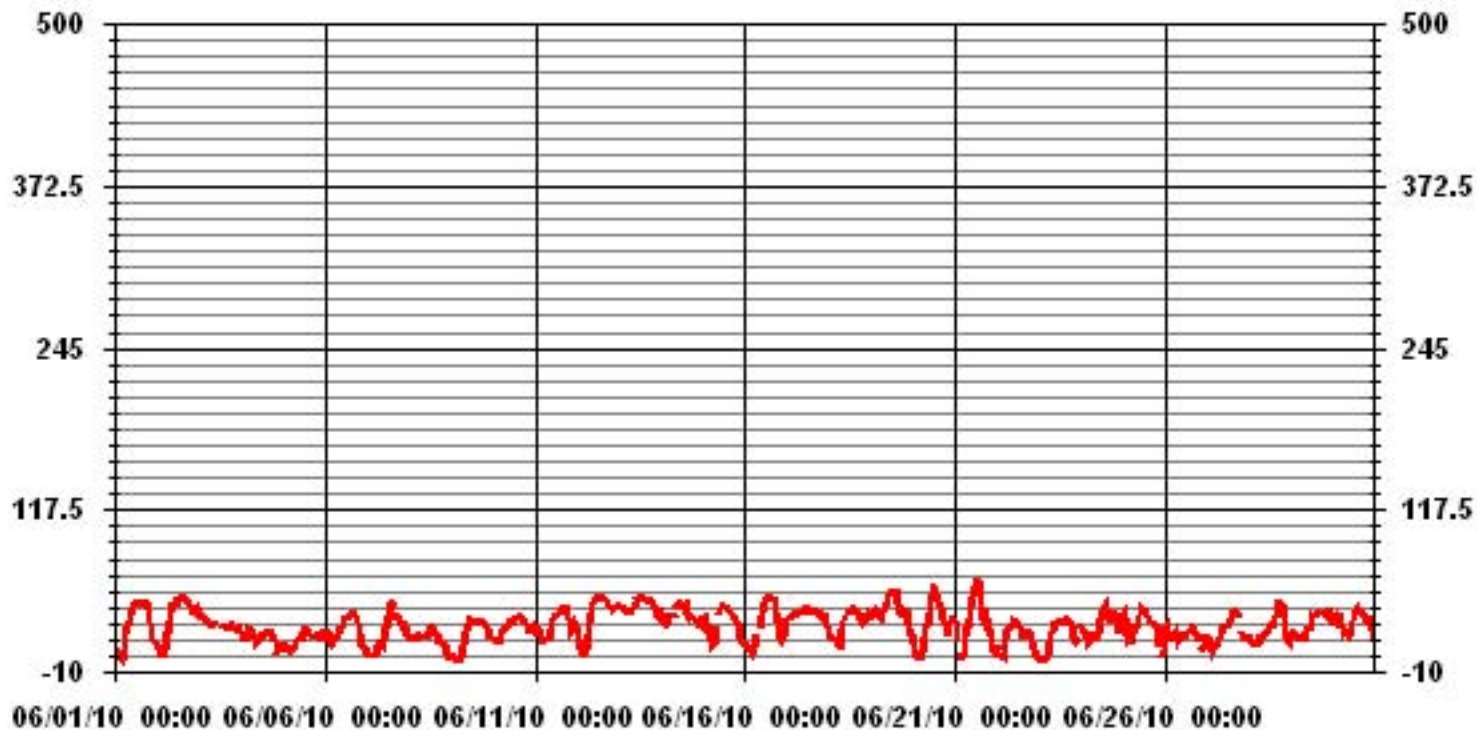
ALBERTA ENVIRONMENT: 1-HR 82 PPB

#### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	680					
MAXIMUM 1-HR AVERAGE:	61	PPB	@ HOUR(S)	12, 13	ON DAY(S)	21
MAXIMUM 24-HR AVERAGE:	42.4	PPB			ON DAY(S)	13
					VAR-VARIOUS	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION	12.43		MONTHLY AVERAGE	26.50	PPB	



### 01 Hour Averages



— LICA 03\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## OZONE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	18	17	7	6	2	18	23	32	34	40	43	45	46	46	46	46	46	46	46	45	40	23	<b>IZS</b>	17	46	31.8	24	
2	15	11	7	6	6	16	29	34	42	45	45	46	50	50	50	51	50	49	48	45	42	<b>IZS</b>	40	42	51	35.6	24	
3	38	35	34	33	32	31	31	29	30	30	30	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	28	26	30	31	<b>IZS</b>	27	27	26	38	30.4	24	
4	25	19	20	28	27	26	26	24	14	14	16	20	21	20	22	23	22	22	20	<b>IZS</b>	12	11	12	10	28	19.7	24	
5	13	13	13	10	8	9	10	12	16	19	20	20	24	23	23	23	22	23	<b>IZS</b>	20	19	19	21	23	24	17.5	24	
6	23	21	21	18	15	18	17	19	25	26	29	35	36	37	36	37	37	<b>IZS</b>	38	34	29	17	15	14	38	26.0	24	
7	10	6	5	5	7	5	17	17	16	16	21	31	37	41	47	49	<b>IZS</b>	38	35	33	30	30	27	26	49	23.9	24	
8	19	19	17	17	17	19	20	20	19	20	20	23	27	29	26	<b>IZS</b>	20	16	17	14	14	14	10	5	29	18.3	24	
9	4	3	2	2	0	1	4	15	24	26	30	33	33	32	<b>IZS</b>	32	32	32	32	31	30	29	27	22	21	33	20.2	24
10	19	18	19	18	20	24	25	26	29	30	31	30	32	<b>IZS</b>	35	36	37	35	34	30	29	25	25	28	37	27.6	24	
11	27	24	24	22	17	19	18	17	23	29	35	37	<b>IZS</b>	39	40	41	41	41	41	40	32	28	29	28	41	30.1	24	
12	27	24	16	13	10	17	24	32	40	49	48	<b>IZS</b>	49	49	50	51	49	49	46	43	41	41	43	43	51	37.1	24	
13	43	42	42	41	39	37	37	40	42	45	<b>IZS</b>	50	50	50	49	49	49	48	47	47	45	42	38	36	50	43.8	24	
14	37	35	32	30	34	37	37	37	37	<b>IZS</b>	46	45	44	47	46	41	35	36	35	33	34	33	30	28	47	36.9	24	
15	40	38	33	26	20	16	21	28	<b>IZS</b>	40	42	43	43	44	42	41	38	36	36	32	30	26	17	19	44	32.7	24	
16	15	12	13	11	10	16	20	<b>IZS</b>	32	36	41	47	48	50	50	50	50	50	48	37	24	21	27	33	50	32.2	24	
17	33	33	33	36	37	37	<b>IZS</b>	39	39	41	42	42	41	40	39	39	40	40	39	37	41	36	36	33	42	38.0	24	
18	25	22	22	18	17	<b>IZS</b>	15	29	33	37	39	37	41	44	41	40	38	38	38	32	31	37	38	36	44	32.5	24	
19	36	38	40	41	<b>IZS</b>	36	34	39	44	49	52	53	54	54	54	54	43	41	42	41	40	37	32	35	54	43.0	24	
20	18	12	10	<b>IZS</b>	7	14	23	31	33	40	49	57	60	61	53	<b>P</b>	49	39	36	30	23	35	34	33	61	34.0	23	
21	33	28	<b>IZS</b>	8	4	16	22	29	38	45	54	59	<b>66</b>	64	64	37	37	43	42	30	25	14	13	13	<b>66</b>	34.1	24	
22	12	<b>IZS</b>	5	5	3	22	27	28	28	31	29	31	32	28	27	22	30	25	26	21	17	18	6	4	32	20.7	24	
23	<b>IZS</b>	2	1	1	4	7	18	26	29	28	30	31	31	32	31	32	33	32	31	28	23	18	21	<b>IZS</b>	33	22.2	24	
24	27	27	23	22	16	19	20	22	23	23	26	41	42	44	48	46	43	34	42	42	38	41	<b>IZS</b>	39	48	32.5	24	
25	41	38	30	20	20	17	24	32	34	40	45	41	42	41	41	34	31	30	29	28	24	<b>IZS</b>	8	15	45	30.7	24	
26	32	30	23	23	19	20	23	20	21	20	22	20	21	22	24	26	27	26	22	20	<b>IZS</b>	12	16	20	32	22.1	24	
27	20	20	15	7	12	12	14	18	23	26	26	29	30	33	36	38	40	40	39	<b>IZS</b>	29	20	18	17	40	24.4	24	
28	18	17	15	13	13	15	21	21	23	23	23	26	24	31	34	35	43	46	<b>IZS</b>	43	42	26	20	17	46	25.6	24	
29	22	22	20	20	18	17	17	19	22	24	25	29	37	36	36	38	40	<b>IZS</b>	38	39	37	34	43	37	43	29.1	24	
30	35	36	32	34	34	33	22	24	23	23	27	35	39	41	43	41	<b>IZS</b>	41	37	34	33	33	28	23	43	32.7	24	
HOURLY MAX	43	42	42	41	39	37	37	40	44	49	54	59	66	64	64	54	50	50	48	47	45	42	43	43				
HOURLY AVG	25.0	22.8	19.8	18.4	16.1	19.8	22.0	26.2	28.8	31.6	34.0	37.0	39.3	40.3	40.5	39.0	37.5	36.5	36.2	33.5	30.5	26.6	24.9	24.9				

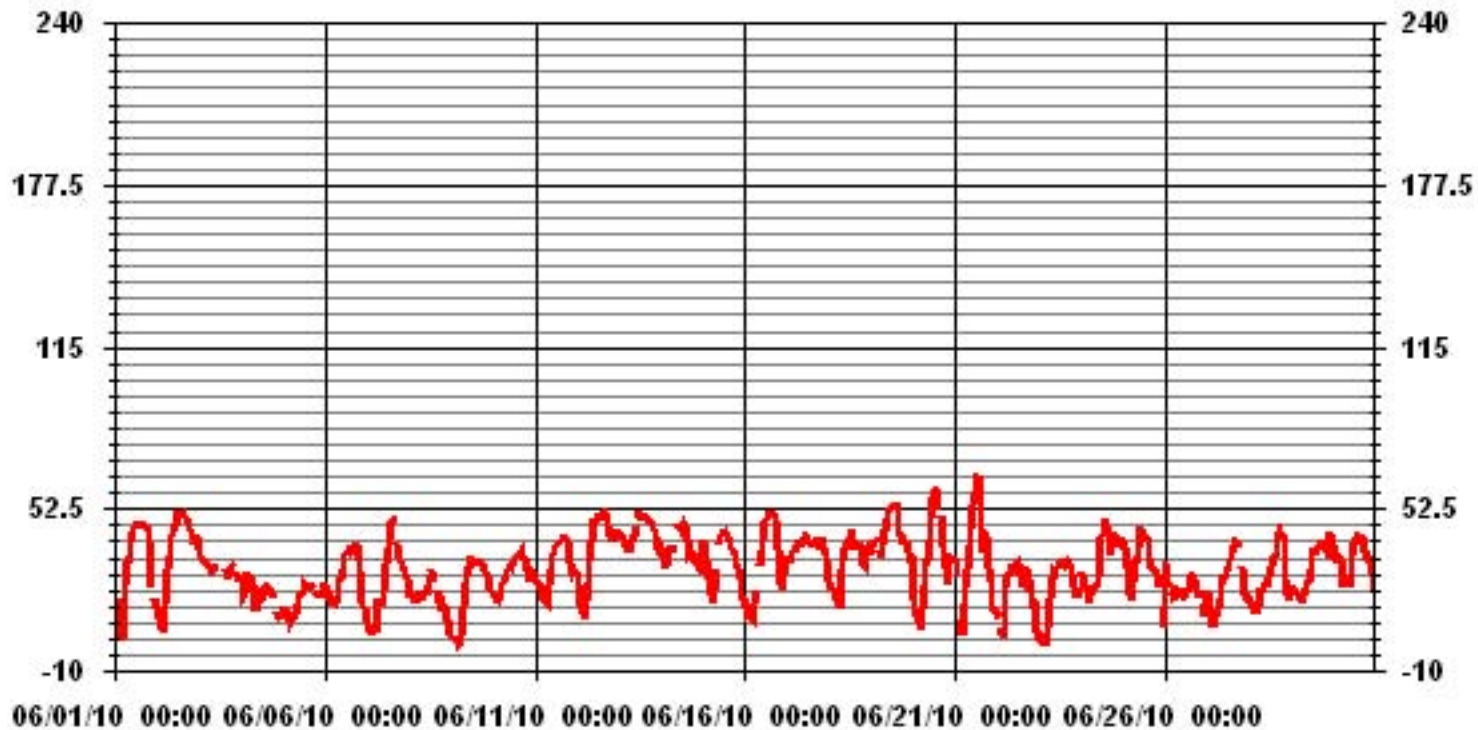
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	682					
MAXIMUM INSTANTANEOUS VALUE:	66	PPB	@ HOUR(S)	12	ON DAY(S)	21
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	719	HRS	
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	12.30					

### 01 Hour Averages



— LICA O3MAX PPB

LICA  
O3\_ / WD Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 01  
Site Name : LICA  
Parameter : O3\_  
Units : PPB

Wind Parameter : WD  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.23	6.42	5.25	3.79	5.54	8.32	9.34	5.10	3.50	5.98	11.82	10.94	6.56	3.94	3.64	3.64	98.10
< 110	.14	.00	.00	.00	.00	.00	.00	.00	.14	.00	1.02	.43	.00	.00	.14	.00	1.89
< 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	4.37	6.42	5.25	3.79	5.54	8.32	9.34	5.10	3.64	5.98	12.84	11.38	6.56	3.94	3.79	3.64	

Calm : .00 %

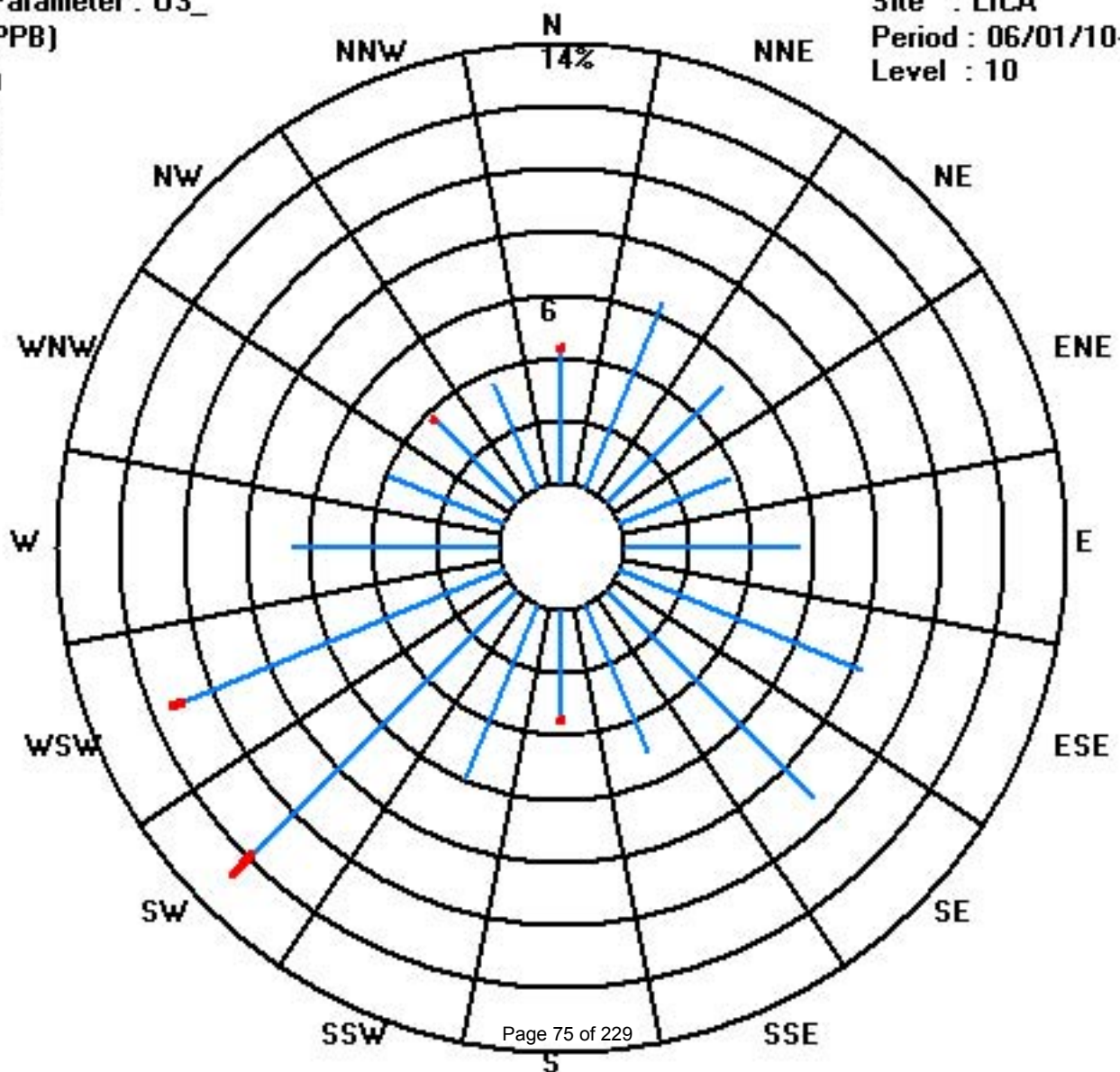
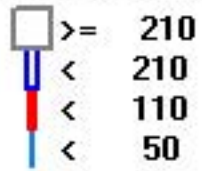
Total # Operational Hours : 685

Distribution By Samples

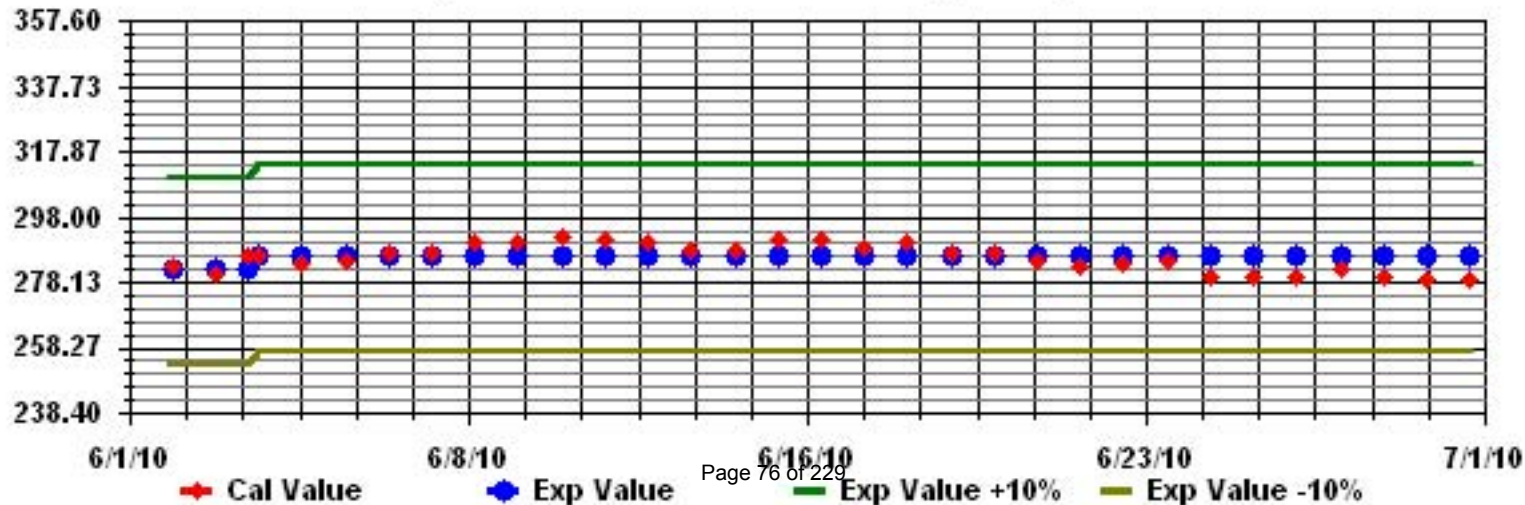
	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	29	44	36	26	38	57	64	35	24	41	81	75	45	27	25	25	672
< 110	1								1		7	3			1		13
< 210																	
>= 210																	
Totals	30	44	36	26	38	57	64	35	25	41	88	78	45	27	26	25	

Calm : .00 %

Total # Operational Hours : 685



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





# Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

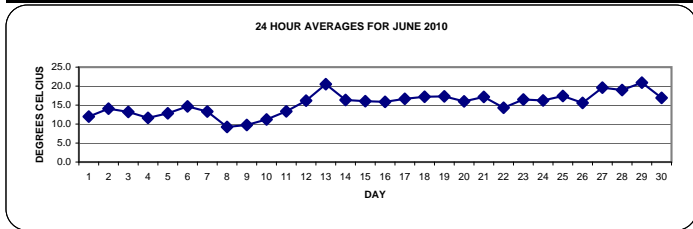
JUNE 2010

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	23:00	DAILY MAX.	24-HOUR AVG.	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	3.2	2.8	1.8	1.2	1.1	3.5	7.1	10.5	13.8	16.9	17.5	18.1	18.5	18.9	19.6	19.5	18.9	19.1	18.8	17.3	14.4	10.4	8	6.4	19.6	12.0	24		
2	5	4.1	3.2	2.3	2.1	6.2	10.3	13.5	15.6	16.7	17.7	18.5	19.2	19.6	20.1	20.2	20.3	20.1	19.9	19.2	17.2	15.7	15	15.7	20.3	14.1	24		
3	14.2	12.8	12.6	12.4	12.2	12	12.8	12.6	11.4	12.2	14.1	14.9	14.6	14.5	14.8	15	14.9	14.5	14	13.2	12.4	11.8	11.6	11.4	15.0	13.2	24		
4	11.4	11.6	11.7	11.8	11.6	11.5	11.4	11.4	11.1	11.4	10.9	10.3	10.9	11.2	11.9	12.7	12.9	13.2	12.7	12.2	11.8	11.4	11.1	11	13.2	11.6	24		
5	10.9	10.9	11	10.8	10.8	10.8	11	11.6	12.5	13.6	13.9	13.9	14.9	14.9	15.3	13.6	13.4	14.8	14.7	14.1	13.5	12.8	12.3	11.9	15.3	12.8	24		
6	11.3	11	10.9	10.6	10.3	10.5	11	12.5	13.7	15	17.3	19.4	20	19.7	17.5	20	18.7	19.2	18.5	18.9	15.7	11.8	9.6	8.6	20.0	14.7	24		
7	7.8	7.4	6.9	5.8	6.7	8.2	10.9	12.6	13.7	14.5	15.7	17.6	18.6	19.7	20.4	20.4	19	16.9	15.1	14.7	13.3	11.4	11	11.1	20.4	13.3	24		
8	11.1	10.2	9.4	8.7	7.9	7.5	7.6	8	9.1	9.8	10.2	10.8	10.8	11.8	10.6	10.1	10.7	10.2	9.4	9.2	8.6	7.7	6.4	6.1	11.8	9.2	24		
9	6	5.2	3.3	2	2.3	4.8	6.9	8.5	10.1	11.2	12.3	12.8	12.8	13.6	13.3	13.7	13.8	13.4	13.3	12.6	11.6	10.8	10.1	9.9	13.8	9.8	24		
10	9.2	7.9	6.4	5.8	6	8	8.7	10.1	11.4	12.3	13.1	13.5	13.5	13.9	14.3	14.9	15.3	15.3	14.4	13.6	12.6	10.7	9.5	8.8	15.3	11.2	24		
11	7.9	7	7	6.1	5	6.2	8	10.2	13.2	14.9	16.6	17.6	18.3	18.4	19.3	19.4	19.5	19.4	19.9	18.4	13.7	12.1	11.7	10.7	19.9	13.4	24		
12	10.1	7.5	5.7	4.7	4.4	7.9	11.6	14.4	17.1	18.9	20.1	20.9	21.9	22.6	22.9	23	22.9	22.5	21.2	20.2	18	16.7	15.9	17.1	23.0	16.2	24		
13	16.9	16.1	15.7	14.7	13.9	14.6	16.1	17.9	20	21.3	22.7	24.3	25.2	25.7	26.2	26.3	26.4	26.3	25.6	24	21.6	19	16.4	15.4	26.4	20.5	24		
14	16	14.1	14.4	13.1	12.9	14.5	14.3	14.8	16.1	17.6	18.9	18.9	18.8	19.2	19.5	19.2	19.2	18.6	17.1	16.5	15.9	15	14.1	13.7	19.5	16.4	24		
15	14.2	14.6	13.9	11.9	10.1	7.9	10.7	15.7	17.8	18.9	19.7	20.1	20.7	21.2	21.7	20.9	19.9	18.6	17.9	17.3	16.3	13.8	11.8	9.3	21.7	16.0	24		
16	7.3	6.2	5.8	6.6	7.1	9.6	12.2	14.7	17.7	19.7	20.4	21	21.8	22.1	21.9	21.8	22.6	22.3	21.3	20.2	16.8	14.2	13.2	14.2	22.6	15.9	24		
17	13.6	13	12.5	12	12.4	13.1	14	15.7	17.4	18.5	19.1	19.8	20.8	21.2	21.1	20.3	20	19.8	19.2	18.2	15.8	14.7	14.6	13	21.2	16.7	24		
18	11.2	10.1	9.2	9.1	9.4	10.5	12.4	15.5	17.7	20.8	22.7	24	23.7	22.6	21.9	20.7	20.7	21.4	21.4	19.2	18.1	17.5	17	15.9	24.0	17.2	24		
19	15.5	16.3	16	15.5	14.4	14.7	15.9	17.2	18.5	19.6	21.2	22	23	23.4	22.4	16.7	14.7	17.7	18.1	16.9	15.5	13.7	13.4	13	23.4	17.3	24		
20	11	10	8.9	7.9	7.9	9.3	13.9	16.2	16.8	19.2	21.5	22.8	24.4	23.2	22	17.5	16.5	16.5	17.9	18.1	16.6	16.2	15.2	14.1	24.4	16.0	24		
21	13.3	11.2	9.9	9.1	9	12	15.7	18	20.7	22.4	23.9	25.1	25.9	26.1	25.4	22.3	20.3	16.4	15.6	15.5	15	13.7	13.1	12.2	26.1	17.2	24		
22	12.4	11.4	10.9	11	10.1	12.1	14.2	14	14.2	14.7	15	15.8	17.3	17.9	17.6	16	16.3	15.9	15.9	15.6	15.1	14.2	13.6	11.9	17.9	14.3	24		
23	10.3	9.2	8.2	7.2	7	10.3	13.5	15.3	17	18.2	19.2	20.3	21	21.5	21.3	22.3	22.4	22.4	21.7	20.8	19	16.2	15.2	16	22.4	16.5	24		
24	16.4	15	13.8	12.8	11.7	12.8	14.2	15.9	16.5	16.7	17.4	18.1	18.9	20.4	22.5	21	18	18.5	16.6	15.6	15.7	15.1	13	12.8	22.5	16.2	24		
25	13	12.4	12	11.9	11.7	12.1	13.2	14.9	16.6	18	20.2	21.1	22	21.9	21.8	22.1	22.8	22.5	22	19	15.5	14.1	14.2	22.8	17.4	24			
26	15.5	14.3	11.7	12.4	12.3	13.7	14.3	14.3	13.4	12.4	12.5	12.8	15.1	17.4	18.8	18.6	19.3	20.3	20.4	19.6	17.3	16.1	15.9	15.6	20.4	15.6	24		
27	15.1	14.7	14	13.5	14.1	14.5	15.3	17.9	19.9	21.7	22.9	23.1	22.9	23.5	24.8	24.8	25.2	25.3	24.8	23	19.2	17.8	16.5	15.8	25.3	19.6	24		
28	15.9	15.1	14.6	14	14.6	15.2	16.5	17.5	18	19	19.6	21.5	22.4	22.8	23.6	24.2	24.7	24.8	24.2	23	20	16.3	14.2	13.6	24.8	19.0	24		
29	14.8	15	14.8	14.9	15.2	15.7	16.2	16.9	19.1	21.2	23.1	24.9	26.4	26.5	26.1	26.5	27.4	27.3	26.3	25.1	23.3	22.4	17.5	15.4	27.4	20.9	24		
30	15.4	15.5	15.3	15.6	15.5	16	17.1	18.3	19	19.4	19.5	20.4	21.7	22.1	22.6	22.3	22.2	18.4	13.4	13.8	12.4	11.3	10	8.5	22.6	16.9	24		
HOURLY MAX	16.9	16.3	16.0	15.6	15.5	16.0	17.1	18.3	20.7	22.4	23.9	25.1	26.4	26.5	26.2	26.5	27.4	27.3	26.3	25.1	23.3	22.4	17.5	17.1					
HOURLY AVG	11.9	11.1	10.4	9.8	9.7	10.9	12.6	14.2	15.6	16.9	18.0	18.8	19.5	19.9	20.0	19.5	19.3	19.1	18.4	17.6	15.8	14.2	13.0	12.4					

STATUS FLAG CODES

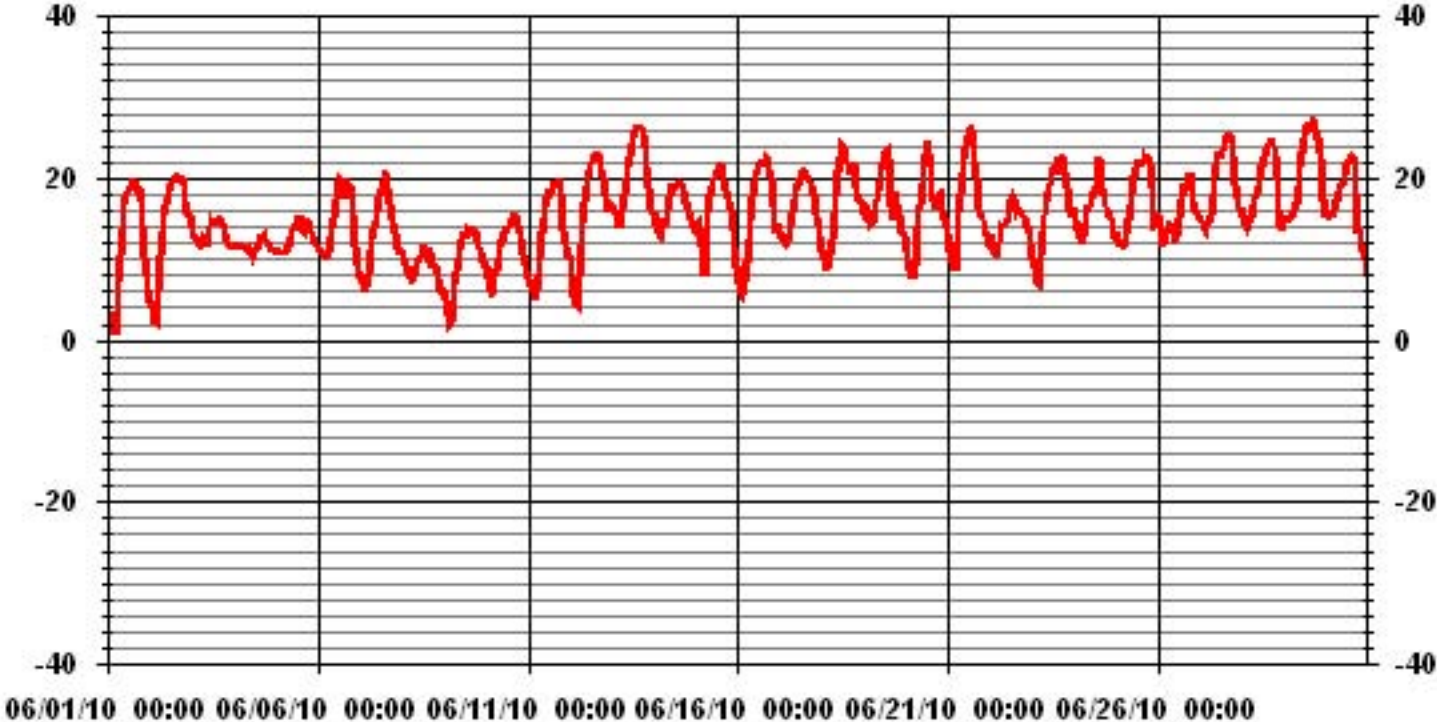
S	- OUT OF SERVICE	OD	- OUTSIDE DETECTION LIMITS
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	1.1 °C	@ HOUR(S)	4	ON DAY(S)	1
MAXIMUM 1-HR AVERAGE:	27.4 °C	@ HOUR(S)	16	ON DAY(S)	29
MAXIMUM 24-HR AVERAGE:	20.9 °C			ON DAY(S)	29
				VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	5.09		MONTHLY AVERAGE:	15.36	°C

01 Hour Averages



# Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

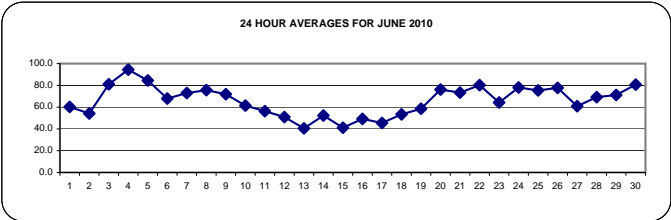
JUNE 2010

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
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	94.0	94.0	94.0	94.0	94.0	91.0	83.0	72.0	59.0	47.0	42.0	31.0	32.0	31.0	30.0	30.0	32.0	31.0	32.0	38.0	56.0	72.0	80.0	85.0	94.0	60.2	24	
2	2	89.0	91.0	92.0	93.0	93.0	81.0	70.0	59.0	49.0	43.0	39.0	36.0	31.0	29.0	31.0	31.0	32.0	34.0	36.0	40.0	46.0	51.0	53.0	52.0	93.0	54.2	24	
3	3	60.0	63.0	64.0	64.0	67.0	71.0	69.0	75.0	91.0	90.0	84.0	80.0	80.0	80.0	81.0	81.0	85.0	87.0	88.0	93.0	96.0	98.0	98.0	99.0	99.0	81.0	24	
4	4	99.0	99.0	99.0	99.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	92.0	90.0	85.0	82.0	84.0	83.0	89.0	94.0	96.0	97.0	98.0	98.0	99.0	94.5	24	
5	5	99.0	99.0	99.0	99.0	98.0	97.0	96.0	93.0	88.0	81.0	77.0	76.0	69.0	69.0	69.0	82.0	82.0	76.0	75.0	77.0	80.0	82.0	83.0	81.0	99.0	84.5	24	
6	6	83.0	85.0	87.0	90.0	92.0	91.0	90.0	82.0	74.0	65.0	60.0	46.0	45.0	44.0	48.0	40.0	43.0	43.0	48.0	48.0	64.0	82.0	89.0	91.0	92.0	67.9	24	
7	7	92.0	94.0	94.0	95.0	95.0	91.0	86.0	80.0	77.0	77.0	73.0	61.0	53.0	50.0	41.0	40.0	47.0	56.0	62.0	67.0	74.0	81.0	81.0	83.0	95.0	72.9	24	
8	8	77.0	77.0	80.0	81.0	83.0	81.0	79.0	75.0	72.0	68.0	67.0	62.0	60.0	57.0	65.0	70.0	69.0	72.0	81.0	82.0	84.0	88.0	92.0	93.0	93.0	75.6	24	
9	9	93.0	94.0	94.0	94.0	94.0	94.0	93.0	84.0	72.0	65.0	57.0	54.0	53.0	52.0	55.0	53.0	53.0	54.0	57.0	61.0	69.0	75.0	79.0	76.0	94.0	71.9	24	
10	10	80.0	86.0	88.0	88.0	83.0	78.0	72.0	64.0	57.0	52.0	48.0	51.0	50.0	47.0	44.0	41.0	38.0	40.0	45.0	51.0	56.0	67.0	73.0	75.0	88.0	61.4	24	
11	11	79.0	83.0	83.0	86.0	91.0	87.0	81.0	72.0	62.0	53.0	44.0	36.0	33.0	32.0	28.0	26.0	26.0	27.0	36.0	58.0	61.0	67.0	73.0	91.0	56.3	24		
12	12	74.0	85.0	90.0	91.0	91.0	80.0	69.0	59.0	50.0	41.0	33.0	29.0	28.0	26.0	26.0	26.0	28.0	30.0	35.0	39.0	44.0	48.0	51.0	48.0	91.0	50.9	24	
13	13	50.0	52.0	53.0	56.0	59.0	58.0	53.0	48.0	43.0	39.0	34.0	30.0	26.0	23.0	23.0	24.0	25.0	26.0	29.0	31.0	37.0	45.0	53.0	55.0	59.0	40.5	24	
14	14	50.0	58.0	60.0	64.0	67.0	66.0	70.0	70.0	66.0	56.0	47.0	45.0	46.0	43.0	41.0	43.0	39.0	40.0	43.0	44.0	44.0	48.0	51.0	54.0	70.0	52.3	24	
15	15	47.0	39.0	44.0	57.0	66.0	78.0	66.0	45.0	33.0	26.0	24.0	21.0	20.0	20.0	21.0	23.0	27.0	30.0	32.0	35.0	40.0	55.0	65.0	72.0	78.0	41.1	24	
16	16	79.0	82.0	83.0	82.0	82.0	73.0	63.0	55.0	43.0	30.0	27.0	27.0	26.0	24.0	25.0	25.0	23.0	23.0	29.0	37.0	59.0	67.0	64.0	53.0	83.0	49.2	24	
17	17	60.0	65.0	69.0	69.0	65.0	64.0	62.0	50.0	43.0	39.0	35.0	34.0	32.0	30.0	28.0	29.0	30.0	30.0	31.0	35.0	48.0	46.0	44.0	53.0	69.0	45.5	24	
18	18	64.0	67.0	72.0	74.0	78.0	81.0	75.0	59.0	50.0	42.0	35.0	29.0	28.0	31.0	33.0	40.0	43.0	42.0	48.0	60.0	62.0	56.0	54.0	57.0	81.0	53.3	24	
19	19	57.0	51.0	52.0	53.0	57.0	59.0	59.0	52.0	45.0	43.0	39.0	37.0	35.0	35.0	38.0	74.0	85.0	73.0	66.0	66.0	70.0	81.0	88.0	89.0	89.0	58.5	24	
20	20	94.0	95.0	96.0	96.0	96.0	95.0	81.0	72.0	70.0	59.0	53.0	50.0	43.0	51.0	57.0	68.0	75.0	86.0	80.0	83.0	87.0	77.0	81.0	83.0	96.0	76.2	24	
21	21	84.0	92.0	95.0	95.0	95.0	86.0	76.0	67.0	61.0	56.0	49.0	42.0	37.0	34.0	37.0	50.0	65.0	77.0	84.0	91.0	94.0	97.0	98.0	98.0	98.0	73.3	24	
22	22	98.0	98.0	98.0	98.0	98.0	87.0	68.0	62.0	65.0	71.0	71.0	68.0	62.0	59.0	60.0	83.0	77.0	80.0	79.0	83.0	84.0	89.0	93.0	94.0	98.0	80.2	24	
23	23	96.0	96.0	96.0	96.0	95.0	88.0	70.0	58.0	50.0	52.0	51.0	46.0	45.0	45.0	46.0	44.0	43.0	43.0	47.0	54.0	63.0	74.0	75.0	69.0	96.0	64.3	24	
24	24	65.0	70.0	75.0	79.0	84.0	81.0	76.0	72.0	72.0	80.0	81.0	75.0	69.0	63.0	55.0	62.0	75.0	81.0	90.0	89.0	93.0	95.0	94.0	97.0	97.0	78.0	24	
25	25	95.0	96.0	97.0	98.0	98.0	98.0	97.0	87.0	83.0	76.0	65.0	58.0	55.0	56.0	55.0	54.0	49.0	50.0	49.0	52.0	72.0	87.0	90.0	91.0	98.0	75.3	24	
26	26	73.0	73.0	88.0	87.0	90.0	87.0	84.0	87.0	87.0	93.0	92.0	92.0	82.0	70.0	65.0	67.0	68.0	63.0	55.0	58.0	73.0	79.0	78.0	74.0	93.0	77.7	24	
27	27	75.0	78.0	85.0	90.0	87.0	85.0	81.0	70.0	63.0	57.0	52.0	49.0	47.0	40.0	33.0	31.0	29.0	28.0	33.0	42.0	64.0	77.0	81.0	84.0	90.0	60.9	24	
28	28	83.0	86.0	87.0	88.0	86.0	83.0	78.0	74.0	72.0	71.0	72.0	67.0	63.0	63.0	57.0	56.0	53.0	42.0	37.0	42.0	57.0	75.0	83.0	85.0	88.0	69.2	24	
29	29	91.0	92.0	93.0	90.0	94.0	92.0	87.0	83.0	74.0	68.0	65.0	62.0	51.0	51.0	52.0	52.0	51.0	49.0	53.0	57.0	57.0	66.0	82.0	96.0	96.0	71.2	24	
30	30	98.0	97.0	96.0	93.0	92.0	91.0	92.0	88.0	86.0	86.0	85.0	78.0	71.0	67.0	61.0	61.0	59.0	67.0	79.0	71.0	74.0	74.0	82.0	89.0	98.0	80.7	24	
HOURLY MAX		99.0	99.0	99.0	99.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	92.0	90.0	85.0	83.0	85.0	87.0	90.0	94.0	96.0	98.0	98.0	99.0				
HOURLY AVG		79.3	81.2	83.4	84.6	85.6	83.1	77.5	70.4	65.2	60.8	56.6	52.3	48.8	47.1	46.3	49.6	51.2	52.1	54.6	58.5	66.7	73.0	76.7	78.2				

STATUS FLAG CODES

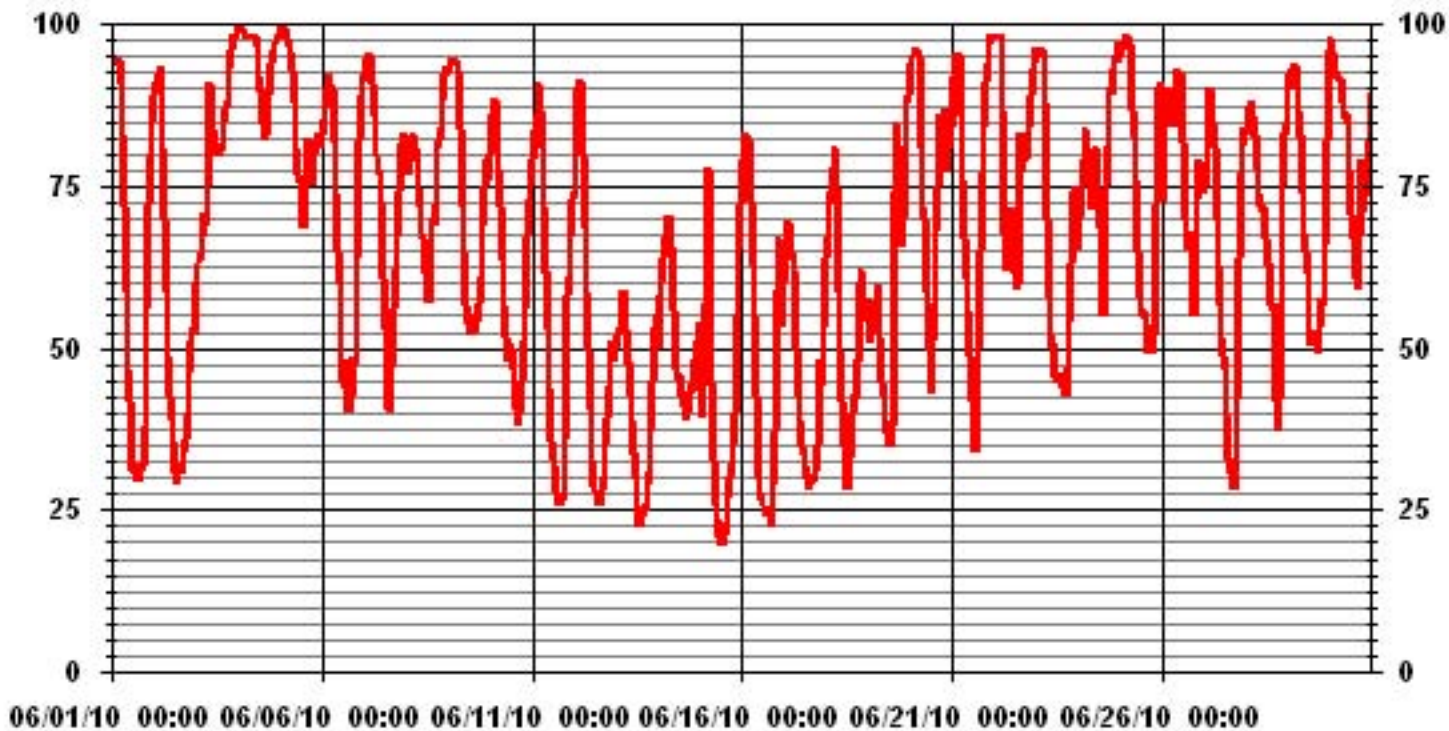
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	99.0	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	94.5	%			ON DAY(S)	4
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS	
STANDARD DEVIATION:	21.74		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	65.95	%	

### 01 Hour Averages



# Vector Wind Speed

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## 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	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																												
1		3.1	2.6	1.1	0.1	0.2	1	5	4.2	3.2	2	4.3	3.8	3.4	3.1	5.3	4.7	2.7	4.8	5.3	4.1	1.7	0.9	0.5	0.4	5.3	2.6	24
2		0.4	0.3	0.7	1	0.9	0.7	1.4	2.7	5.1	8.8	12.6	14.4	14.4	13.6	8.9	7.2	9.6	10.5	10.1	6.5	5.5	6.3	9.9	9.8	14.4	6.4	24
3		6.8	7	7.3	6.7	7.2	4.5	7.9	11.5	9.1	10.3	12.2	12.1	12	12.7	11.5	11.9	9.2	7.2	5.7	5.2	4.4	3.3	3.7	3.6	12.7	7.4	24
4		2.8	1.8	1.1	4.9	6	5.9	5.7	2.5	3.8	2.8	5.8	7.8	9.6	8.2	8	7.8	5.2	5.6	2.6	1.9	1.8	2.5	2.7	2.8	9.6	2	24
5		2.2	2.9	2.7	2.9	3.5	4.9	5.7	6.8	6.5	8.1	9.9	9.8	11.5	9.8	8.2	8.1	8.7	7.2	7.4	5.3	3.9	2.8	3.4	4	11.5	6.1	24
6		3.7	5.8	6.8	5.9	4.3	4.4	4	4	4.3	5.4	4.7	5.8	3.7	6.1	10.1	5.6	4.3	2.9	2.5	1.2	1.1	0.2	0.3	0.5	10.1	4.1	24
7		0.8	0.8	0.3	1	0.2	2	3.1	1.1	0.7	2	3.4	4.3	3.8	5.2	5	3.9	6.5	12.3	8.1	3.3	3	2	5.1	6.2	12.3	3.5	24
8		8.8	9.2	8.3	8.1	9.4	9.4	10.2	7.6	7.2	8.3	7.9	10.7	9	7.1	5.6	7.1	7.8	8.6	6.3	3.7	2.9	2	0.4	0.1	10.7	6.9	24
9		0.5	0.5	1.1	0.5	0.7	0.7	0.9	4	6.5	6.2	7.1	7	7.7	6.9	6.5	6.5	5.5	5.5	4.9	5.5	3.7	1.9	1.3	2	7.7	3.9	24
10		1.6	0.8	1.5	1	1.7	4.9	6.4	7.3	8.8	9.3	7.7	9	6.9	5.6	6.8	7.7	7.1	5.9	6	2.7	3.6	4.5	4.7	6.2	9.3	5.3	24
11		2.8	4.3	4.8	3.5	2.3	3	1.9	0.5	1.4	4.2	5.5	4.1	3.4	4.9	2.8	5.2	5	4.2	1.5	1.7	1.6	2.8	3.8	2.8	5.5	3.3	24
12		2	1.1	0.3	0.4	0.6	0.3	2.3	5.6	6.3	8.6	9.8	11.3	10.2	10.8	12.1	12.6	10.7	8.9	4.1	3.2	4	3.7	2.7	5.6	12.6	5.7	24
13		5.2	5.5	6.7	4.8	5.3	3.1	4.5	3.4	5.1	6.2	6.6	7.4	9.1	9.1	9.1	9.3	9.3	7.3	6.9	7.3	5.1	5.5	3.9	4	9.3	6.2	24
14		7.6	1.5	1.8	4.1	3.2	5.2	3.7	5.1	7.9	10.1	10.6	8.3	12.8	9.7	7.8	7.6	8.7	8	5.6	5	5.2	3.6	3.5	4.5	12.8	6.3	24
15		4	3.4	1.4	3.4	2.2	1.7	2.3	1.4	4.9	6.4	8.7	9.9	6	7.4	8.3	8.4	7.8	9.9	8.6	5.3	3.2	2.6	1.4	1.3	9.9	5.0	24
16		1.9	0.8	0.5	0.9	0.4	2.2	3.7	2.8	3.5	3.4	6.4	4.3	5.5	3.5	4.3	1.3	2.2	0.7	3.3	2.6	0.6	0.6	2.8	5.3	6.4	2.6	24
17		5.5	4.1	4.7	4.6	5.9	6.9	8.5	11.4	11.9	13	12.6	13.2	11.3	11.4	10.6	9.9	8.4	7.4	5.2	3.7	3.2	5.3	4.2	2.1	13.2	7.7	24
18		0.4	0.1	0.8	0.9	0.8	1	0.8	2.8	3.2	1	1	3.9	6.8	11.7	4.9	2.4	6	2	2	2.8	2.2	5.6	3.7	2.6	11.7	2.9	24
19		3.7	6	7	7	5.2	6.7	7.6	12.1	15.8	14.3	14.9	13.6	12.7	10.9	8.9	0.2	3.4	3.9	5	3.2	3.6	2.1	1.8	0.6	15.8	7.1	24
20		1.3	0.2	0.9	0.2	0.2	0.5	2	1.5	2.5	6.4	3.7	2.9	7.7	4.2	4.4	2.2	4.7	1.2	2.1	1.6	3.2	7.2	9.9	8.4	9.9	3.3	24
21		4.7	0.1	0.3	0.5	0.5	0.7	2.2	2.4	2.4	5.3	6.1	4.5	4.4	9.5	9.2	9.2	5.1	9.2	2.8	2.1	1.4	0.2	1.1	1.5	9.5	3.6	24
22		1.9	1.5	0.9	0.2	1.1	4.7	6.3	9.4	8.8	7.4	8.2	7.2	4.9	5	4.8	1.2	4.8	4	3.2	2.3	1	0.9	0.6	0.5	9.4	3.8	24
23		0.4	0.2	0.3	0.4	0.4	0.9	1.3	4	5.5	4.8	4	3.5	4.9	1.8	4.2	4.7	5.2	5.9	5.7	4.7	3.2	3	3.8	5.7	5.9	3.3	24
24		9	5.7	4.2	3	2.3	1.4	2.6	2.6	3.4	1.1	1.7	7.2	6.7	6.9	8.1	5	4.9	3.8	10.4	10.1	4.4	4.3	5	2.2	10.4	4.8	24
25		4.1	2.1	0	1.1	1.6	0.6	0.7	1	2.2	3.1	2.3	3.8	6.3	6.7	8.2	8.4	8.4	6.3	6.8	3.9	1.3	1	1.8	2.7	8.4	3.5	24
26		10.6	1.7	2.5	7.9	5.7	7.1	4.9	4.6	8.5	7.4	7.2	7.2	8.4	10.6	11	10.8	8.7	6.4	6.3	3.4	2.3	2.8	3.9	3.3	11.0	6.4	24
27		3.7	4.3	1.8	3.2	5.9	3.3	3.5	4.3	3.9	4.4	4.8	6.2	5.8	9.1	10.1	8.7	6.9	6.2	3.4	1.7	2.6	4.6	5.7	5.7	10.1	5.0	24
28		7.7	2.6	1.6	4.6	2.9	3.9	4.1	3.4	6.1	7.5	7.2	8.2	9.6	10.5	10.4	5.4	7.2	9	8.8	5.8	3.2	0.9	1.1	1.9	10.5	5.6	24
29		3.8	5.5	5.3	4.4	4.2	6.5	6.8	9.2	9.1	11	10.6	7.8	6.8	5.9	5.7	5	4	14.7	13.7	10.2	13.2	14.1	9.4	1.2	14.7	7.8	24
30		4.4	6.8	5.7	8.5	10.2	11.6	8.1	11.2	6.9	4.3	6.5	7.1	5.6	8.3	8.3	10.1	8.5	14.3	10.7	8.6	7.5	10.1	6.7	3.4	14.3	8.1	24
HOURLY MAX		10.6	9.2	8.3	8.5	10.2	11.6	10.2	12.1	15.8	14.3	14.9	14.4	14.4	13.6	12.1	12.6	10.7	14.7	13.7	10.2	13.2	14.1	9.9	9.8			
HOURLY AVG		3.8	3.0	2.7	3.2	3.2	3.7	4.3	5.0	5.8	6.4	7.1	7.5	7.7	7.9	7.6	6.6	6.6	6.8	5.8	4.3	3.5	3.6	3.6	3.4			

### STATUS FLAG CODES

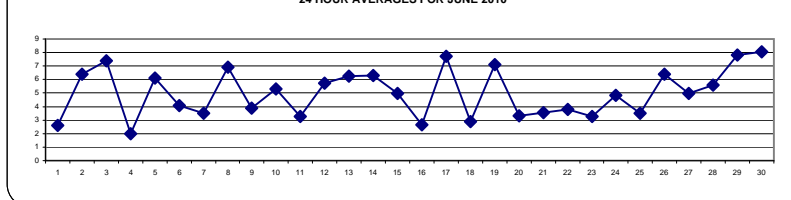
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: November 5, 2008

### MONTHLY SUMMARY

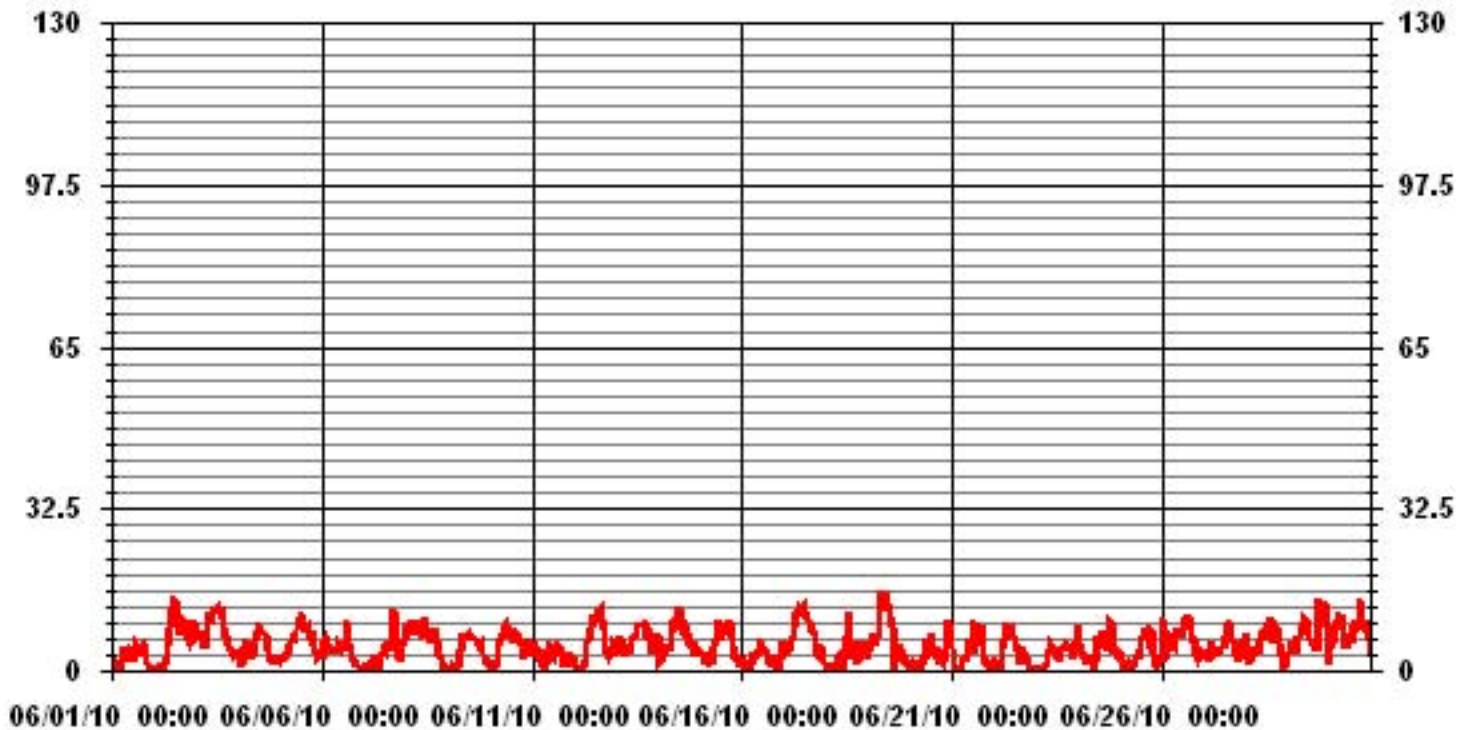
MAXIMUM 1-HR AVERAGE:	15.8	KPH	@ HOUR(S)	8	ON DAY(S)	19
MAXIMUM 24-HR AVERAGE:	8.1	KPH			ON DAY(S)	30
CALMS (≤ 0 KPH)	2.96	%				
MONTHLY CALIBRATION TIME:	0	HRS				
STANDARD DEVIATION:	3.34					
OPERATIONAL TIME:	720	HRS				
AMD OPERATION UPTIME:	100.0	%				
MONTHLY AVERAGE:	5.13	KPH				

24 HOUR AVERAGES FOR JUNE 2010





### 01 Hour Averages



— LICA WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

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	4.8	4.9	3.6	2.4	1.4	3.9	8.1	8.2	6.2	7.2	10.7	11.6	12.5	12	11.2	11.4	8.9	11.7	10.3	8.6	3.9	1.9	1.6	1.9	12.5
2	2	2.2	2.6	3.6	2.7	2.6	4.4	5.9	10.2	16.7	20.8	21.7	25.6	21.4	20.2	16	18	19.6	15.2	12.6	7.5	9.8	16.5	16.1	25.6	
3	3	12.7	9.7	10.2	9.7	10.7	11	13.9	17.9	16.3	17.6	20.1	18.9	19.2	19.9	0	20.2	14.7	13.5	11.4	10.5	7.5	6.1	6.7	5.8	20.2
4	4	5.9	3.3	3.3	14.4	10.2	9.4	9.3	7.2	6.8	5.5	10	12.5	14.6	15.2	13.7	14.4	10.3	12.6	5.2	3.3	3.9	4.4	5.2	4.8	15.2
5	5	4.4	5.2	4.2	6.2	5.9	8	9.5	11.7	10.4	12.9	16.1	15.7	19.4	14.4	16.3	15.7	17.2	13.4	11.9	8.5	7.5	4.3	5.8	6.4	19.4
6	6	5.5	8.8	9.6	9.1	8.2	6.8	6.8	8	7.4	8.1	8.1	14.6	10.3	14.2	15.4	12.9	11.7	9	6.3	6	3.8	2.5	2.6	11	15.4
7	7	4.2	6.2	3.3	5	3.7	5.4	6.4	8.2	4.2	4.7	6.3	8.9	8.6	8.9	10	10	11.8	19.5	16.3	6.8	5.8	5.3	7.3	10.3	19.5
8	8	14.4	15.4	13.4	14.2	14.7	14.1	15.3	13.2	13.2	13.8	15.1	17.7	16.5	17.3	11.3	11.3	14.3	13.4	11.2	7.4	4.7	3.4	2.3	2	17.7
9	9	2.1	1.9	4.5	3.5	1.8	2.2	3.1	8.1	14.3	10.6	14.2	13.2	13.1	14.3	11.6	10.8	10.5	9.5	8.7	8.8	8	4.2	2.7	3.3	14.3
10	10	3.2	2.2	3.2	2.8	4	9.4	12.5	12.6	14.3	15.9	13.7	13.6	13.7	9.9	12.1	15.2	13.9	12.6	12.4	6.7	5.8	6.5	7.8	11.5	15.9
11	11	5.1	9.8	7.3	5.3	3.9	5.9	4.8	3.3	5.3	9.7	10.9	12.1	12	12.1	11.9	12.8	12.1	9.6	6.2	3.4	3.6	6.1	6.5	5.1	12.8
12	12	6.2	3.4	1.5	2.4	3.6	3.4	5.2	10.5	11.1	16.4	16.7	23.5	18.8	24	19.5	20	16.4	20.2	10.8	6.3	6	5.4	6.4	10.4	24
13	13	9.6	9.2	11.6	8.2	10.6	7.2	9.2	8.4	14.6	12.6	12.7	15.1	17	16.4	16.4	16.9	20	12.5	11.1	11	7	7.2	5.3	5.8	20
14	14	10.4	16.4	9.5	8.6	9.1	8.9	10.8	11.2	13.5	19.1	19.8	17.5	17.9	14.5	13.7	14.3	14	15.2	11.9	9.5	9.9	6.3	6.5	10.7	19.8
15	15	10.2	8.6	5.7	6.9	5	4.8	4.5	4.1	13.6	13.4	17.9	18.5	17.3	13.8	21	17.3	14.8	17.3	13	8.1	5.5	4.8	4.5	5.9	21
16	16	3.6	3	3.1	3	2.8	4	7.4	6.4	8.4	10.6	14.7	12.7	15.1	10.1	10.6	6.8	7	6.4	7	5.6	1.9	2.9	8.4	9.6	15.1
17	17	8.4	7.4	8.1	9.1	10	11.7	14.1	18.2	22.3	21.3	19.5	18.8	16.6	16.7	15.3	13.7	13.9	12	9	6.7	5.1	7.8	5.8	5.8	22.3
18	18	2.7	3.3	3.4	2.8	2.9	3.9	3.3	6.1	7.7	5.5	10.3	9.6	15	20	12.1	8.5	11.8	7.1	8.2	4.6	6.3	7.8	6.5	5.6	20
19	19	7.4	8.8	12.4	9.8	7.9	9.5	14	18.8	25.4	20.8	22.8	20.2	19.9	19.5	20.5	15.4	8.7	8.1	9.3	8	6.6	14.1	5.9	7.6	25.4
20	20	3.8	2.1	2.3	2.5	2.8	4.1	5.7	5.6	6.2	12.1	10.6	14.4	12.9	13.8	22.2	<b>P</b>	16.8	4.2	4.1	7.4	6.3	12.2	12.7	11.1	22.2
21	21	10.1	2	1.5	2.1	1.8	2	6.4	8	4.9	11.8	11.1	11.2	11.4	18.8	19.4	14.4	11.3	15.6	9	10	9.7	3.7	4	8.8	19.4
22	22	8.6	4.2	3.8	7.6	4.2	7.9	13.2	18.1	13.7	12.2	13.4	12	9	9.1	9.1	3.9	9.5	6.7	6.3	4.2	2.8	4.2	1.5	3.1	18.1
23	23	2.6	2.5	1.6	1.3	2.7	3	3.9	7	10	11.4	9.7	10	10.8	9.1	9.7	13.1	11.6	11.2	8.9	8.6	4.5	4	5.6	12.1	13.1
24	24	13.3	10.3	6.9	6.1	4	9.8	6.6	6.4	7.4	5.3	7.6	15	14	11.8	14.5	12.1	8.4	8	<b>34.6</b>	19	13.6	24.2	15.4	6.7	<b>34.6</b>
25	25	7.5	5.2	2.1	5.2	4.7	2.4	2.7	3.1	4.8	7.4	7	16	12.4	14.2	15.7	15.9	14.9	11	11.7	7.5	2.8	2.3	3	8.6	16
26	26	18.5	13	14.9	14.4	8.9	10.6	10.4	12.2	13.2	12.6	13.5	11.8	15.2	15.3	19.4	17.6	14.4	11.1	11	8.7	4	4.7	6.1	6.6	19.4
27	27	6	7.1	4.2	6.8	9.7	5.8	8.2	8.8	8.4	10.5	9.9	15.8	11	17.5	16.9	14	14.1	11.5	7.3	3.6	7.9	7.1	9.2	8	17.5
28	28	9.7	7.5	5.9	8.2	6.8	7.6	6.7	9.9	12.4	12.3	14.1	15.5	18.3	18.4	14.9	11.6	14	13.4	9.6	7.7	3.3	3.1	3.9	18.4	18.4
29	29	7.2	8.7	9.7	23.4	8.5	9.3	15.1	14.3	17.3	17.5	19.1	15.1	14.4	12.1	10.4	12.1	14.3	25.5	24.9	17.7	20	21.1	23.9	11.3	25.5
30	30	10.8	11.5	9.2	14.8	15.7	18.5	14	19.1	13.5	10.8	11.5	15	14.1	15.4	13.8	14.9	19.3	34.5	18.5	14.6	11.3	15.6	13.3	6.3	34.5
PEAK		18.5	16.4	14.9	23.4	15.7	18.5	15.3	19.1	25.4	21.3	22.8	23.5	25.6	24.0	22.2	20.2	20.0	34.5	34.6	19.0	20.0	24.2	23.9	16.1	

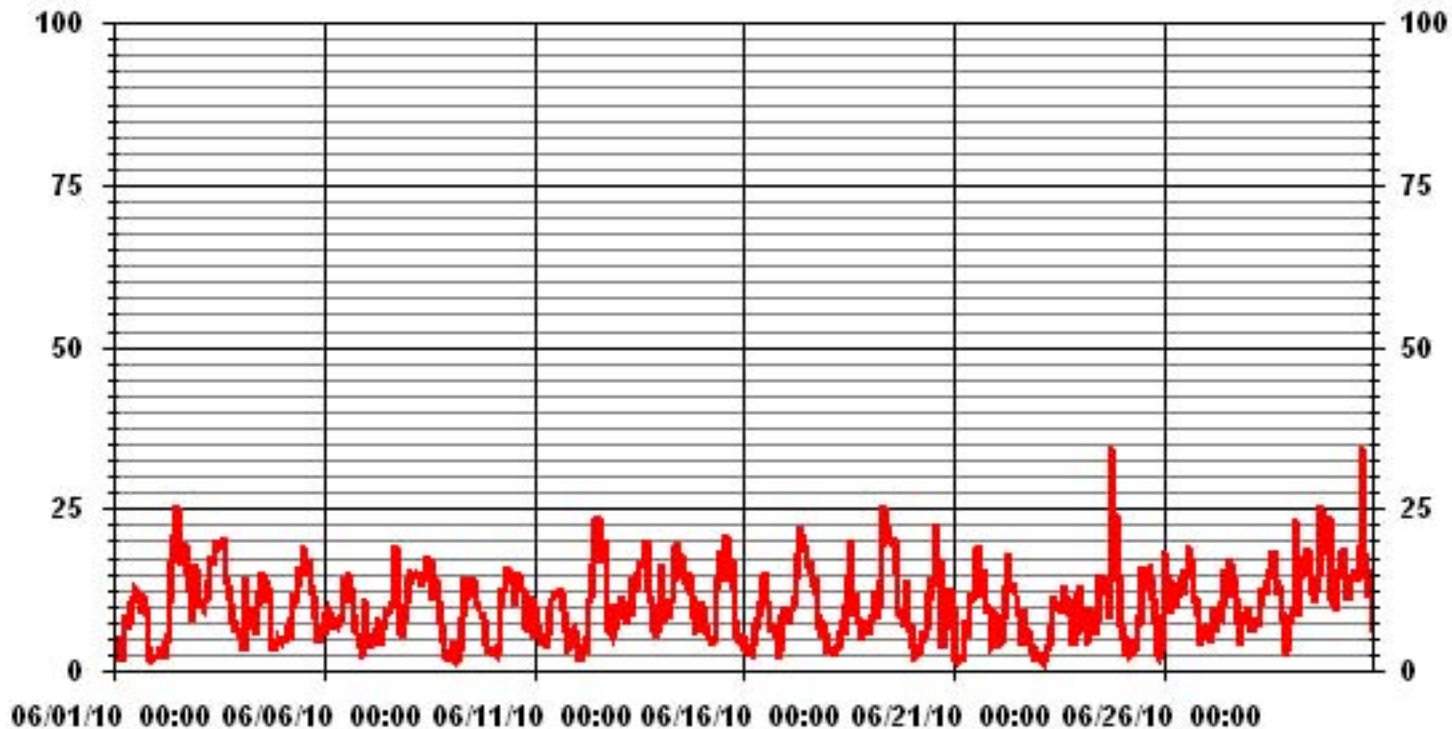
STATUS FLAG CODES

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

MAXIMUM INSTANTANEOUS READING	34.6	KPH	@ HOUR(S)	18
			ON DAY(S)	24

### 01 Hour Averages



— LICA WSMAX KPH

LICA  
WSP / WD Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

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

Wind Parameter : WD  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	2.36	4.02	2.91	2.22	3.05	4.02	4.72	3.19	3.33	5.27	7.22	7.63	4.16	2.50	1.38	2.63	60.69
< 12.0	1.66	1.94	2.36	1.11	2.36	3.88	3.19	1.38	.27	.41	4.30	3.47	1.80	1.52	1.94	.97	32.63
< 20.0	.00	.55	.00	.00	.55	.00	1.11	.00	.00	.00	1.11	.00	.13	.00	.13	.00	3.61
< 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	4.02	6.52	5.27	3.33	5.97	7.91	9.02	4.58	3.61	5.69	12.63	11.11	6.11	4.02	3.47	3.61	

Calm : 3.05 %

Total # Operational Hours : 720

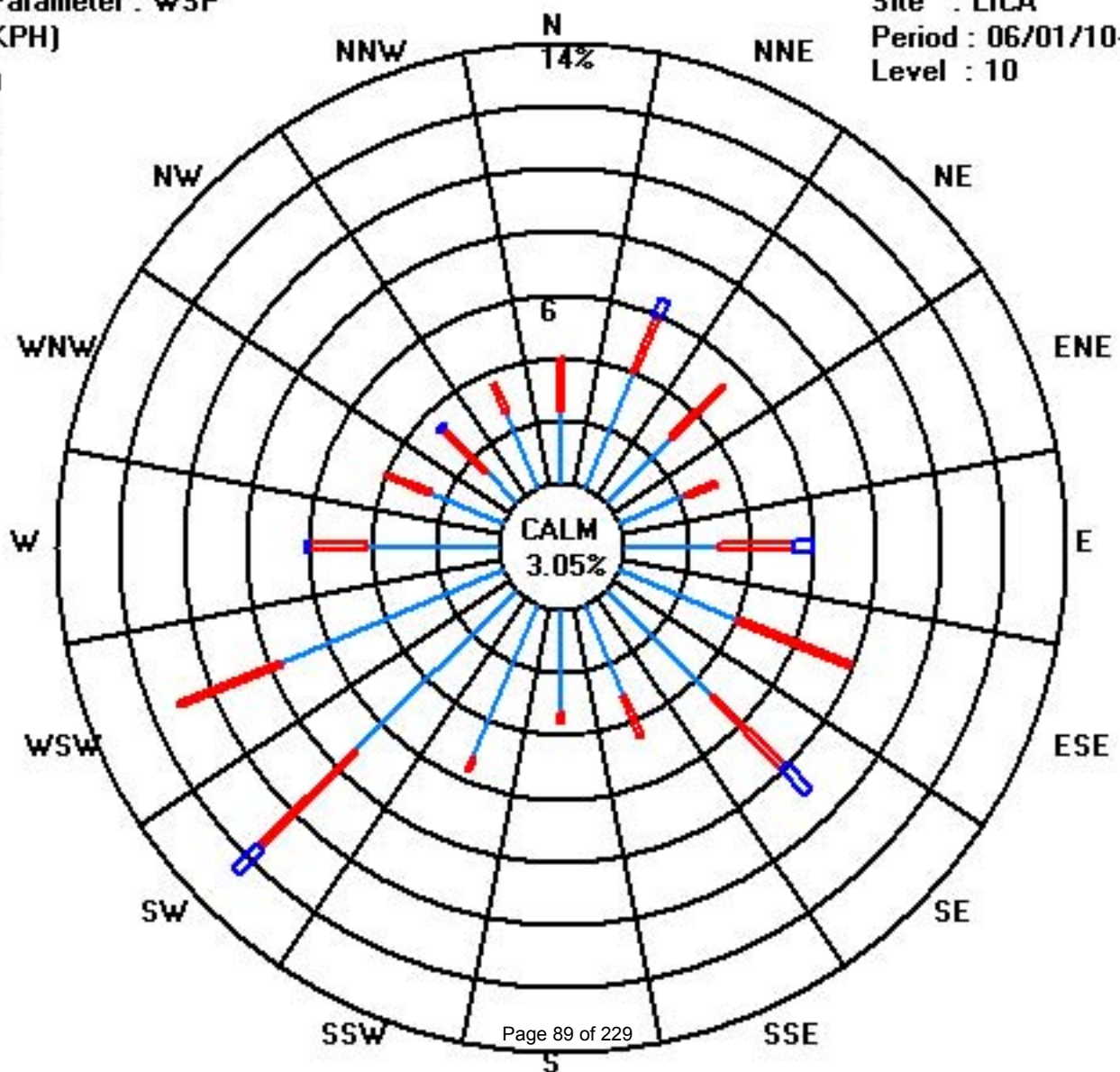
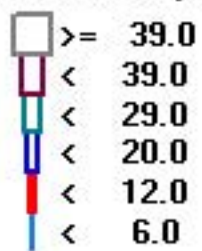
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	17	29	21	16	22	29	34	23	24	38	52	55	30	18	10	19	437
< 12.0	12	14	17	8	17	28	23	10	2	3	31	25	13	11	14	7	235
< 20.0		4			4		8				8		1		1		26
< 29.0																	
< 39.0																	
>= 39.0																	
Totals	29	47	38	24	43	57	65	33	26	41	91	80	44	29	25	26	

Calm : 3.05 %

Total # Operational Hours : 720

Class Limits (KPH)



# Vector Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	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		
DAY																												
1	224	220	213	88	129	228	239	231	246	261	240	220	209	256	219	229	192	209	222	213	208	127	163	126	223	SW	24	
2	182	148	124	219	225	89	186	135	112	126	130	129	134	133	154	150	131	129	122	112	98	98	116	116	127	SE	24	
3	102	105	108	104	110	105	93	97	91	83	84	90	86	85	82	84	79	62	64	42	20	30	23	25	83	E	24	
4	34	44	43	90	101	99	95	131	225	245	229	237	254	248	263	276	276	281	286	272	224	226	244	238	244	WSW	24	
5	213	219	219	241	236	253	255	252	274	268	271	292	299	307	306	296	305	307	300	290	283	287	262	260	280	W	24	
6	254	251	249	254	238	244	235	238	238	242	229	284	252	54	45	45	28	117	135	191	133	110	164	210	252	WSW	24	
7	65	208	212	167	281	28	39	243	140	290	359	2	22	358	335	15	20	15	45	346	339	317	327	351	5	N	24	
8	12	12	0	8	358	7	0	25	26	31	359	335	337	316	16	34	37	16	28	4	353	310	248	267	6	N	24	
9	224	181	215	161	94	262	26	111	116	106	115	103	119	83	46	40	50	57	28	41	34	29	28	44	76	ENE	24	
10	39	56	33	40	8	14	38	40	61	74	77	116	107	81	82	76	85	108	127	187	224	229	238	247	83	E	24	
11	217	219	238	240	265	286	278	180	97	101	121	104	29	70	15	1	22	36	30	166	155	156	203	194	130	SE	24	
12	209	229	69	340	176	132	208	225	227	212	221	218	216	215	224	223	228	221	200	148	135	141	155	204	212	SSW	24	
13	204	208	214	210	210	201	212	184	163	159	189	162	150	170	155	157	151	161	144	136	131	130	123	135	166	SSE	24	
14	129	131	239	313	350	2	10	330	311	329	329	330	314	313	306	283	294	297	280	278	278	271	292	251	307	NW	24	
15	292	341	58	261	229	234	249	206	344	358	312	310	331	317	298	273	276	284	296	293	273	241	235	202	296	WNW	24	
16	239	210	191	119	156	229	222	230	272	249	298	291	262	257	17	240	277	98	318	305	228	265	342	16	278	W	24	
17	18	33	30	25	27	15	11	15	20	15	19	20	31	46	36	43	41	34	22	29	318	321	328	325	21	NNE	24	
18	138	72	168	218	231	254	335	354	342	344	349	336	14	334	242	279	309	295	178	183	189	213	206	174	292	WNW	24	
19	194	218	212	214	211	210	215	231	235	236	233	235	236	244	231	329	160	174	173	160	205	338	180	196	222	SW	24	
20	203	167	136	175	212	79	159	250	139	126	131	180	235	241	88	157	200	153	145	49	122	125	131	133	149	SSE	24	
21	137	234	30	78	75	3	288	262	243	223	250	252	227	311	359	60	85	128	157	221	336	349	70	266	261	W	24	
22	243	117	251	314	239	48	49	47	37	26	6	4	46	6	351	239	317	306	300	285	273	267	210	8	11	NNE	24	
23	215	110	147	184	210	296	39	108	106	123	103	158	127	121	31	107	128	135	134	131	118	125	124	124	119	ESE	24	
24	124	122	120	67	60	257	58	61	118	136	82	108	133	125	125	82	49	57	96	95	96	257	287	88	102	E	24	
25	102	251	9	343	261	244	40	103	198	222	170	224	223	233	239	246	264	251	252	233	166	143	119	177	231	SW	24	
26	312	358	219	250	248	259	238	221	230	229	235	214	235	235	236	239	230	233	250	242	212	228	272	290	242	WSW	24	
27	252	243	222	230	246	237	235	274	258	264	265	250	268	257	259	271	249	242	230	157	113	118	132	131	241	WSW	24	
28	131	172	129	133	73	86	72	111	87	115	128	105	124	122	128	162	222	233	230	224	198	186	119	80	139	SE	24	
29	101	105	96	327	45	63	85	91	119	120	118	120	159	157	185	165	184	131	131	129	127	126	255	327	124	ESE	24	
30	73	77	88	103	112	118	117	126	138	213	228	231	238	266	236	233	241	259	264	245	239	247	248	232	208	SSW	24	
HOURLY AVG	312	358	251	343	358	296	335	354	344	358	359	336	337	358	359	329	317	307	318	346	353	349	342	351				

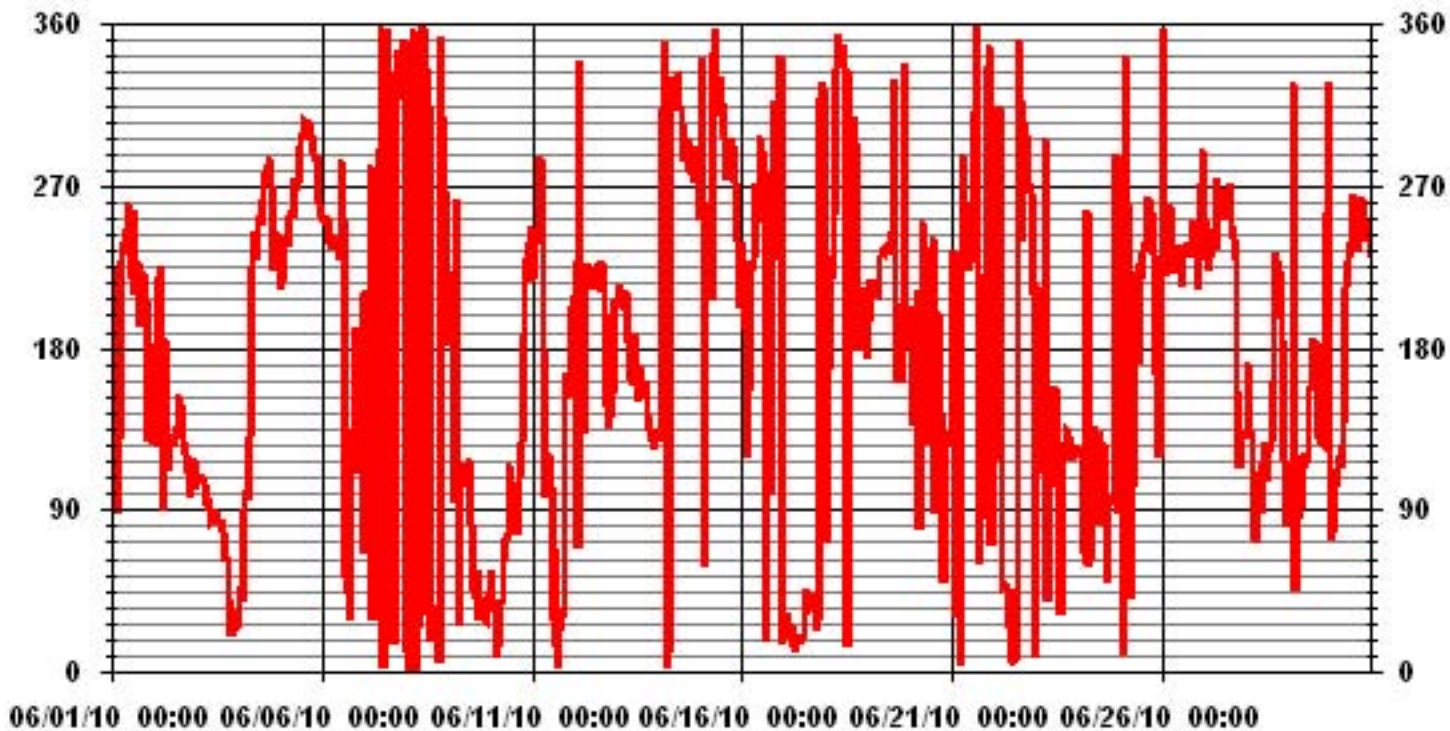
### STATUS FLAG CODES

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:	720 HRS
STANDARD DEVIATION	94.34	AMD OPERATION UPTIME	100.0 %
		MONTHLY AVERAGE	186 DEG

### 01 Hour Averages



— LICA WDR DEG



# Standard Deviation Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

JUNE 2010

## STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	15	17	41	53	63	42	21	32	38	67	48	58	63	64	47	46	44	40	29	22	36	24	41	66
2	42	71	35	36	34	67	43	45	32	26	19	20	21	22	43	42	24	17	18	20	19	20	18	19
3	21	22	21	21	20	22	23	19	21	21	22	22	20	21	22	20	22	19	22	23	21	23	23	24
4	18	18	38	29	20	23	22	29	24	28	24	23	21	22	23	23	25	21	25	21	18	21	16	18
5	34	23	25	24	19	17	18	20	23	23	22	21	18	16	20	19	15	19	15	18	18	16	17	16
6	15	15	15	16	16	16	20	22	24	21	33	34	49	38	20	35	29	43	22	46	38	55	55	46
7	47	63	56	52	47	32	28	61	62	40	33	29	33	28	31	47	22	23	22	22	27	46	13	18
8	23	19	20	21	19	22	22	22	26	24	31	22	31	30	24	20	25	21	21	20	18	17	62	68
9	52	57	37	40	43	34	44	32	23	28	32	30	24	30	25	26	28	21	23	19	21	27	23	18
10	21	36	34	46	32	25	24	22	20	22	25	22	29	32	28	26	26	27	21	31	21	19	19	19
11	24	21	18	16	14	18	45	66	68	37	43	49	53	42	74	48	47	36	50	26	17	35	28	38
12	48	52	67	55	56	69	30	26	28	30	33	29	33	31	27	25	27	26	30	30	19	26	40	31
13	32	32	25	23	29	39	34	39	37	39	39	41	41	40	40	39	35	38	29	17	13	12	12	15
14	13	37	60	22	24	25	31	25	25	30	28	25	20	22	23	23	20	19	20	18	19	20	22	18
15	35	33	51	22	46	55	24	66	40	36	32	32	48	41	35	25	22	20	17	16	14	19	53	34
16	23	57	40	45	66	20	22	36	36	51	38	58	45	53	40	56	47	49	44	17	34	44	26	21
17	20	23	23	25	28	31	21	21	22	23	22	20	24	20	21	20	21	22	23	17	10	12	33	33
18	42	48	59	34	33	35	37	27	30	55	62	47	37	22	35	37	22	39	49	28	39	21	29	31
19	32	22	24	21	22	22	24	24	22	22	24	25	25	27	30	63	37	34	33	39	27	67	46	32
20	53	64	52	59	55	50	34	48	38	26	60	52	31	48	49	52	58	50	42	58	26	15	11	11
21	36	60	62	73	45	33	38	50	45	30	28	37	45	22	25	21	36	16	42	48	70	61	43	53
22	50	48	49	63	60	17	18	20	20	23	23	26	35	34	22	39	38	15	22	18	55	65	45	37
23	46	60	66	63	54	40	39	28	28	41	55	57	46	76	47	43	35	28	14	10	12	8	10	12
24	14	19	16	23	21	63	43	46	30	53	45	31	23	26	25	40	20	30	22	27	24	25	31	31
25	23	40	74	57	32	54	48	38	37	43	60	42	33	30	27	28	26	25	21	20	15	33	17	23
26	20	34	24	14	17	20	28	28	24	24	23	26	26	25	22	25	24	20	21	23	19	19	26	26
27	13	14	54	19	17	19	26	27	39	44	35	36	26	24	24	24	32	23	25	21	20	14	11	11
28	10	37	48	14	25	19	18	22	23	21	23	26	19	19	20	39	28	23	23	22	25	40	54	24
29	21	21	20	36	22	18	21	22	23	20	22	23	36	41	39	40	44	16	14	15	13	15	39	77
30	37	20	21	22	21	20	23	15	19	30	30	27	35	25	31	23	25	21	22	19	19	19	20	21

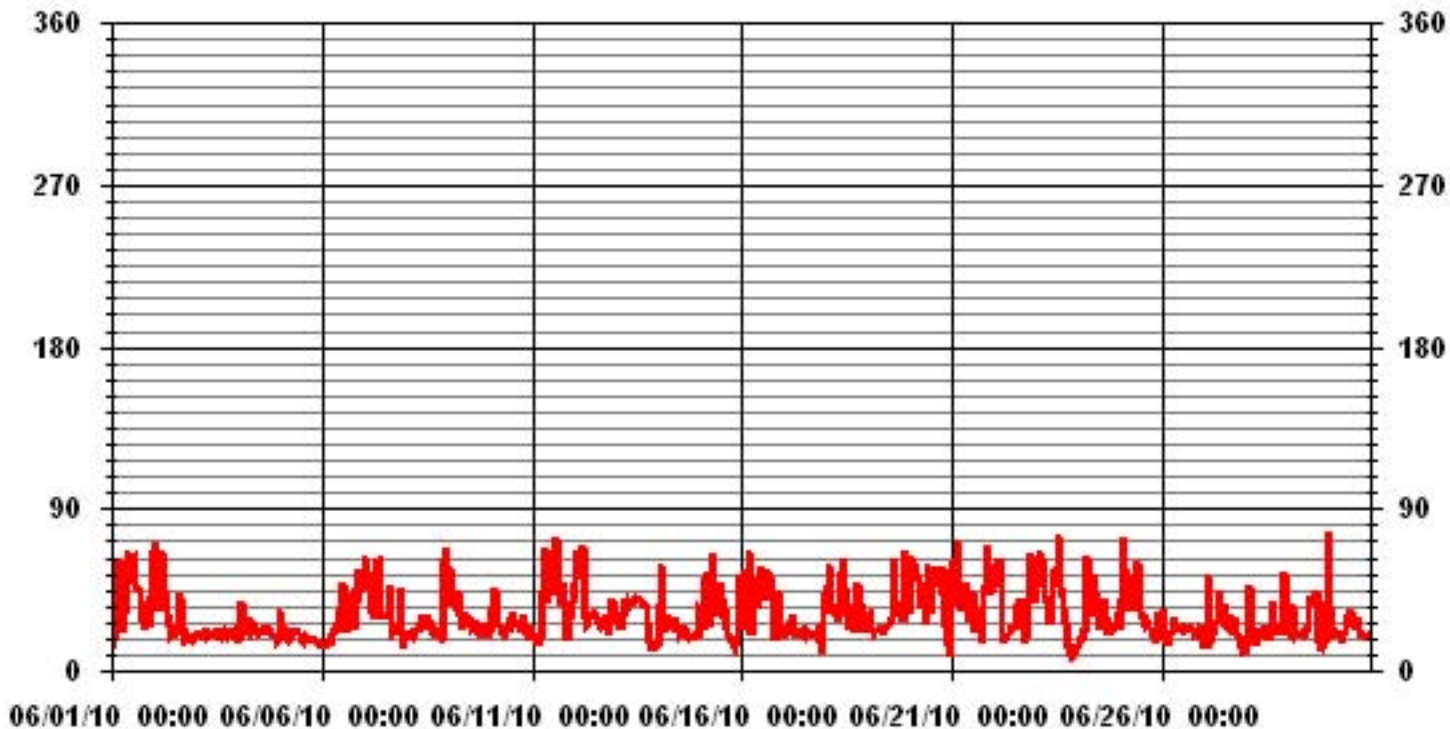
### STATUS FLAG CODES

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

LAST CALIBRATION: November 5, 2008

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 720 HRS

### 01 Hour Averages



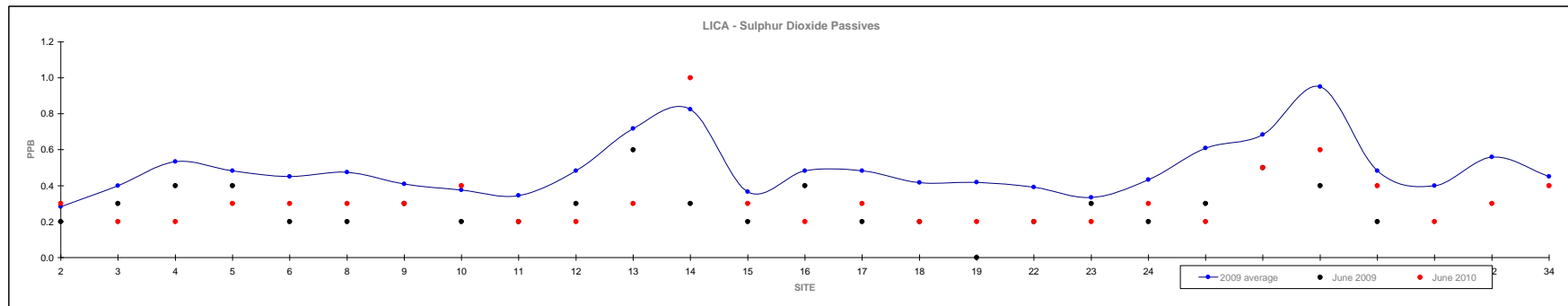
— LICA STDWDIR DEG

# Non-Continuous Monitoring

### Passive Summary Results for June 2010

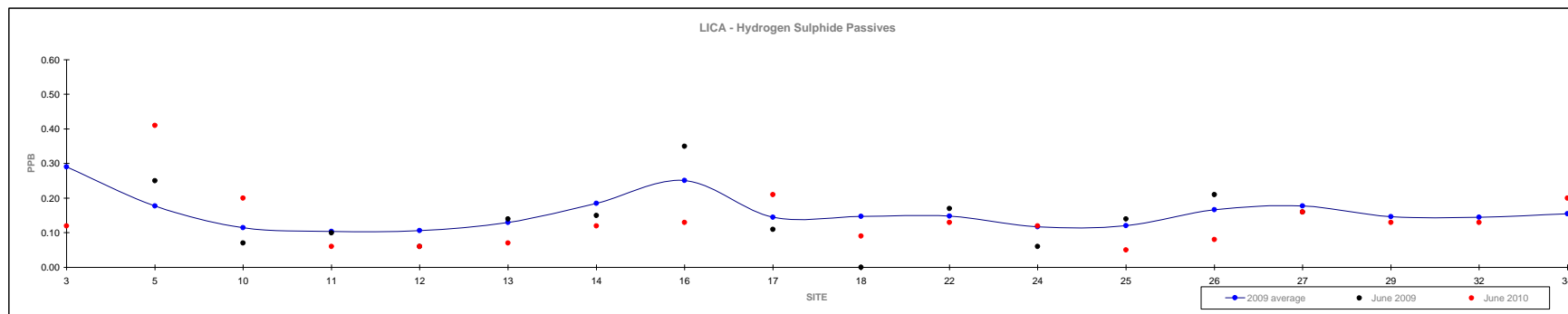
Lakeland Industry & Community Association

	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	32	34	0.3	-	
Mean	0.3	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.5	0.7	0.8	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.6	0.7	1.0	0.5	0.4	0.6	0.5	0.3	-	
Minimum	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.2	VARIOUS	
Maximum	0.9	0.9	1.3	1.1	1.2	0.9	1.0	0.9	0.8	1.1	1.2	2.2	0.9	1.1	1.0	1.3	0.8	0.9	0.8	1.1	1.4	1.4	2.6	0.9	0.8	1.2	0.5	1.0	#14	



### Passive Summary Results for June 2010 Lakeland Industry & Community Association

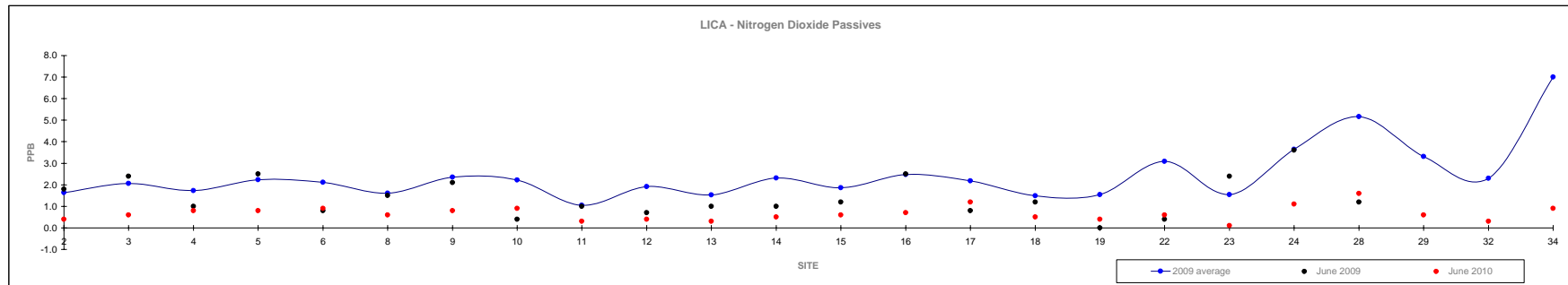
	Hydrogen Sulphide ppb																June 2010			
	3	5	10	11	12	13	14	16	17	18	22	24	25	26	27	29	32	34	Reading	Site
Mean	0.29	0.18	0.12	0.10	0.11	0.13	0.19	0.25	0.15	0.15	0.15	0.12	0.12	0.17	0.18	0.15	0.15	0.16	0.14	-
Minimum	0.05	0.09	0.03	0.03	0.05	0.03	0.11	0.07	0.08	0.05	0.04	0.06	0.03	0.06	0.07	0.04	0.10	0.10	0.05	#25
Maximum	0.80	0.29	0.20	0.16	0.21	0.20	0.30	0.54	0.26	0.29	0.24	0.24	0.18	0.28	0.35	0.28	0.19	0.21	0.41	#5



### Passive Summary Results for June 2010

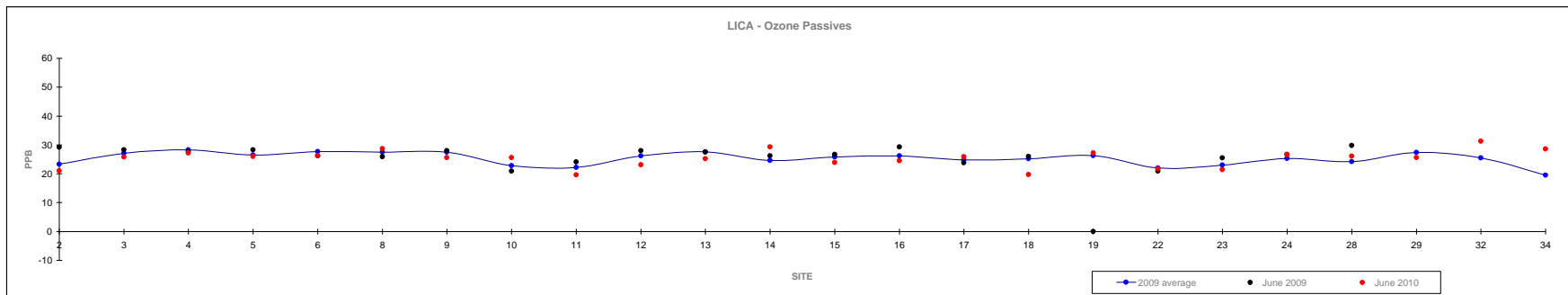
Lakeland Industry & Community Association

	Nitrogen Dioxide ppb																												June 2010	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	29	32	34	Reading	Site				
Mean	1.6	2.1	1.7	2.2	2.1	1.6	2.4	2.2	1.0	1.9	1.5	2.3	1.9	2.5	2.2	1.5	1.5	3.1	1.5	3.6	5.2	3.3	2.3	7.0	0.7	-				
Minimum	0.9	0.8	0.8	1.0	0.8	0.9	1.5	0.4	0.5	0.5	0.9	0.9	1.0	1.7	0.7	0.7	0.9	0.2	0.4	2.7	1.0	0.5	1.2	5.6	<0.1	#23				
Maximum	2.9	4.6	3.7	5.0	4.4	3.0	4.0	5.0	2.0	6.4	2.9	6.1	3.6	3.9	4.1	3.5	2.4	7.2	2.6	5.6	10.6	7.0	3.0	8.4	1.6	#28				



### Passive Summary Results for June 2010 Lakeland Industry & Community Association

	Ozone ppb																												June 2010	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	29	32	34	Reading	Site				
Mean	23.3	27.1	28.3	26.5	27.7	27.5	27.5	22.8	22.2	26.2	27.6	24.6	25.8	26.2	24.8	25.2	26.3	22.0	23.0	25.3	24.2	27.3	25.5	19.6	25.2	-				
Minimum	13.3	17.9	17.3	16.0	17.7	15.4	14.9	12.0	14.6	17.3	15.5	14.8	15.5	15.1	13.8	17.7	14.7	13.6	15.3	12.5	14.8	17.8	24.7	18.5	19.6	#11				
Maximum	32.3	38.6	47.5	37.9	43.6	38.6	42.6	38.2	30.2	46.0	36.5	35.4	42.3	36.7	46.5	36.2	41.7	32.6	32.6	40.5	37.7	40.0	26.3	20.6	31.3	#32				





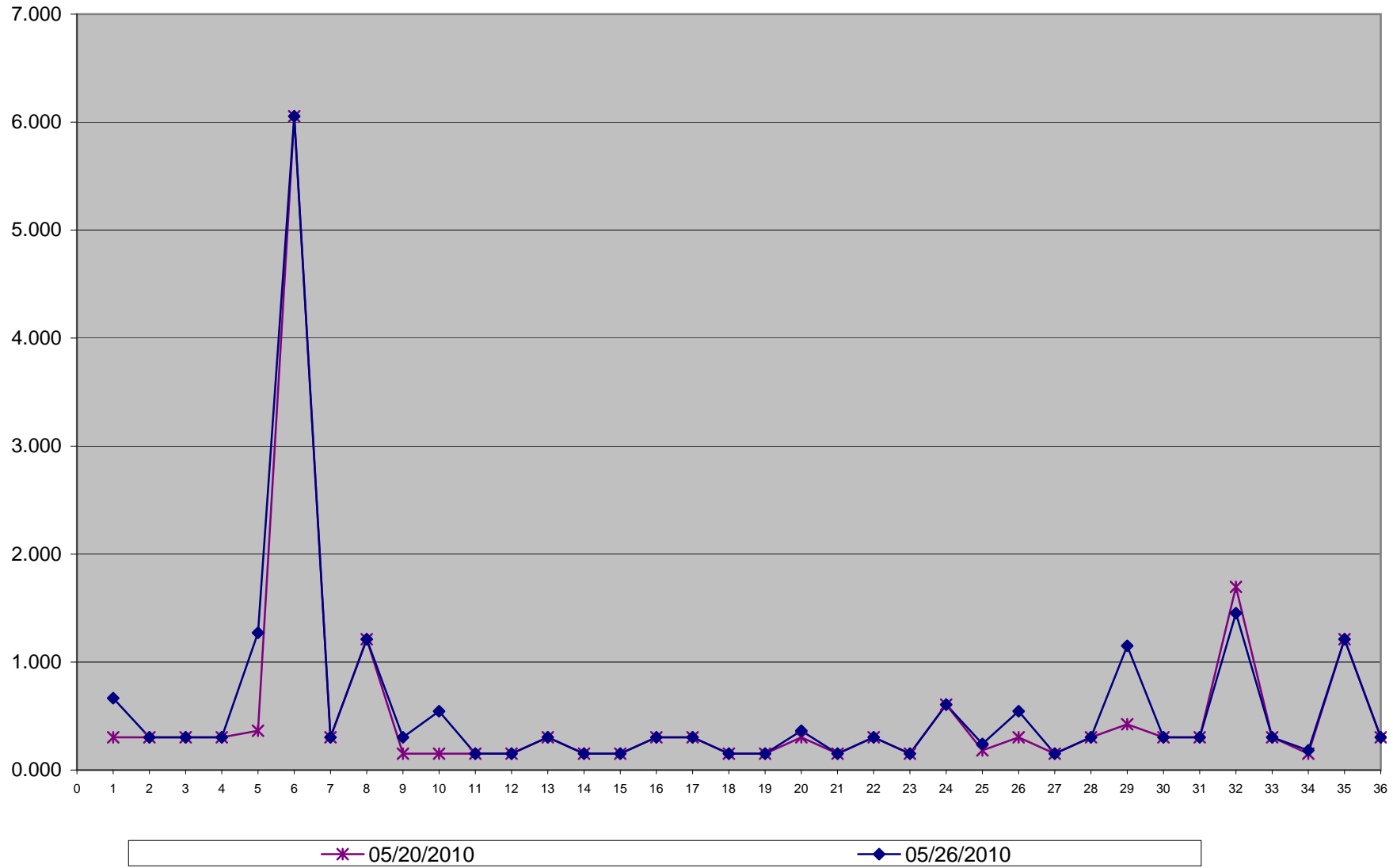
# Polycyclic Aromatic Hydrocarbons

**Polycyclic Aromatic Hydrocarbons (PAHs) Results for May 2010**  
**LICA- Cold Lake South Site**  
**Unit: ng/m3**

	PAHs	05/20/2010	05/26/2010
	Sample Volume (unit: m3)	330.33	330.36
1	1-Methylnaphthalene	0.303	0.666
2	1-Methylphenanthrene	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303
4	2-Methylantracene	0.303	0.303
5	2-Methylnaphthalene	0.363	1.271
6	3-Methylcholanthrene	6.055	6.054
7	7,12-Dimethylbenzo(a)anthracene	0.303	0.303
8	9,10-Dimethylanthracene	1.211	1.211
9	Acenaphthene	0.151	0.303
10	Acenaphthylene	0.151	0.545
11	Anthracene	0.151	0.151
12	Benzo(a)anthracene	0.151	0.151
13	Benzo(a)fluorene	0.303	0.303
14	Benzo(a)pyrene	0.151	0.151
15	Benzo(b)fluoranthene	0.151	0.151
16	Benzo(b)fluorene	0.303	0.303
17	Benzo(e)pyrene	0.303	0.303
18	Benzo(g,h,i)perylene	0.151	0.151
19	Benzo(k)fluoranthene	0.151	0.151
20	Biphenyl	0.303	0.363
21	Chrysene	0.151	0.151
22	Coronene	0.303	0.303
23	Dibenz(a,h)anthracene	0.151	0.151
24	Dibenzo(a,e)pyrene	0.605	0.605
25	Fluoranthene	0.182	0.242
26	Fluorene	0.303	0.545
27	Indeno(1,2,3-cd)pyrene	0.151	0.151
28	m-Terphenyl	0.303	0.303
29	Naphthalene	0.424	1.150
30	o-Terphenyl	0.303	0.303
31	Perylene	0.303	0.303
32	Phenanthrene	1.695	1.453
33	p-Terphenyl	0.303	0.303
34	Pyrene	0.151	0.182
35	Quinoline	1.211	1.211
36	Tetralin	0.303	0.303

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

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



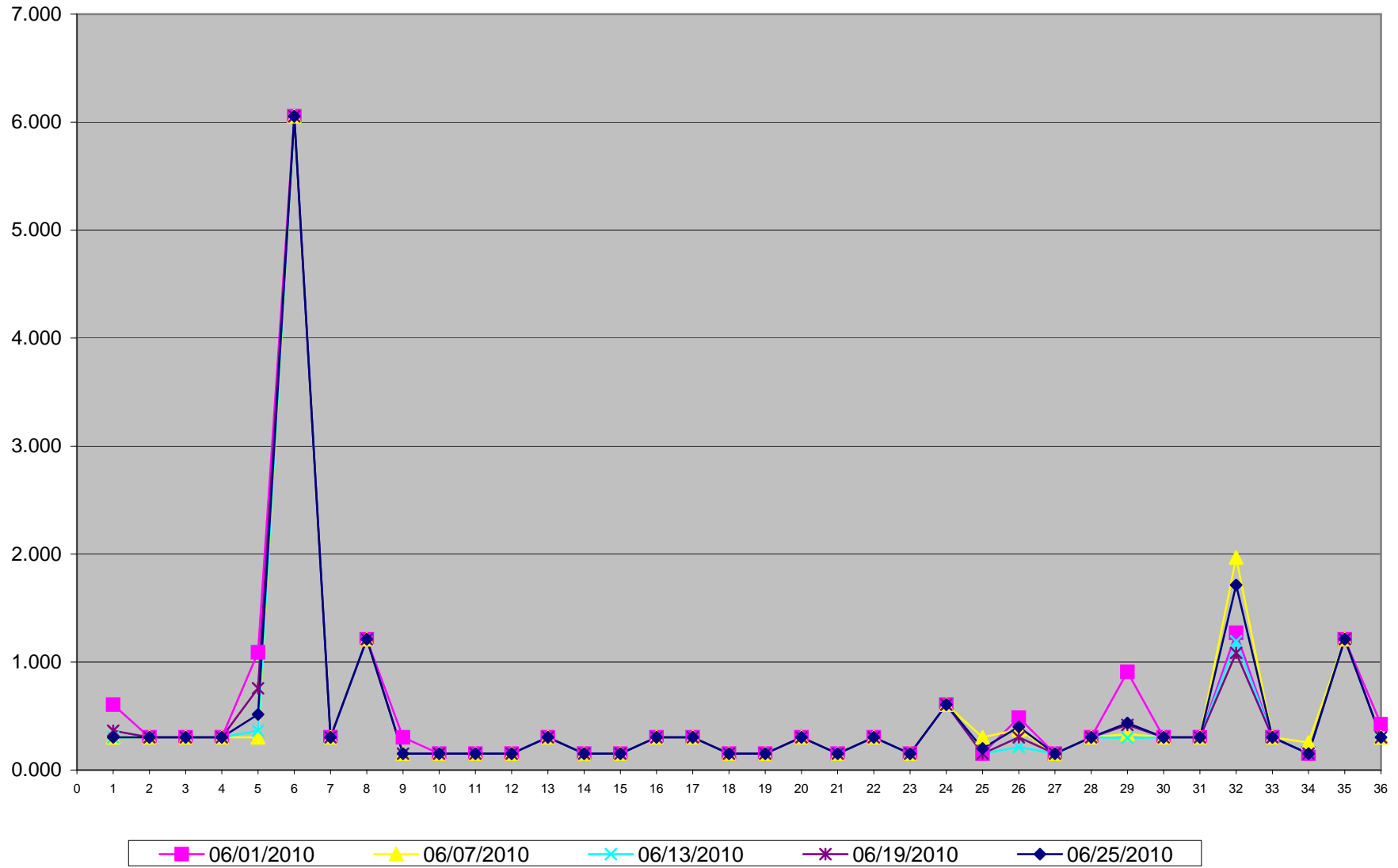
1	1-Methylnaphthalene
2	1-Methylphenanthrene
3	2-Chloronaphthalene
4	2-Methlyanthracene
5	2-Methylnaphthalene
6	3-Methylcholanthrene
7	7,12-Dimethylbenzo(a)anthracene
8	9,10-Dimethylanthracene
9	Acenaphthene
10	Acenaphthylene
11	Anthracene
12	Benzo(a)anthracene
13	Benzo(a)fluorene
14	Benzo(a)pyrene
15	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

**Polycyclic Aromatic Hydrocarbons (PAHs) Results for June 2010**  
**LICA- Cold Lake South Site**  
**Unit: ng/m3**

PAHs	06/01/2010	06/07/2010	06/13/2010	06/19/2010	06/25/2010
Sample Volume (unit: m3)	330.33	330.34	330.38	330.33	330.33
1 1-Methylnaphthalene	0.605	0.303	0.303	0.363	0.303
2 1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303
3 2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303
4 2-Methylantracene	0.303	0.303	0.303	0.303	0.303
5 2-Methylnaphthalene	1.090	0.303	0.363	0.757	0.515
6 3-Methylcholanthrene	6.055	6.054	6.054	6.055	6.055
7 7,12-Dimethylbenzo(a)anthracene	0.303	0.303	0.303	0.303	0.303
8 9,10-Dimethylantracene	1.211	1.211	1.211	1.211	1.211
9 Acenaphthene	0.303	0.151	0.151	0.151	0.151
10 Acenaphthylene	0.151	0.151	0.151	0.151	0.151
11 Anthracene	0.151	0.151	0.151	0.151	0.151
12 Benzo(a)anthracene	0.151	0.151	0.151	0.151	0.151
13 Benzo(a)fluorene	0.303	0.303	0.303	0.303	0.303
14 Benzo(a)pyrene	0.151	0.151	0.151	0.151	0.151
15 Benzo(b)fluoranthene	0.151	0.151	0.151	0.151	0.151
16 Benzo(b)fluorene	0.303	0.303	0.303	0.303	0.303
17 Benzo(e)pyrene	0.303	0.303	0.303	0.303	0.303
18 Benzo(g,h,i)perylene	0.151	0.151	0.151	0.151	0.151
19 Benzo(k)fluoranthene	0.151	0.151	0.151	0.151	0.151
20 Biphenyl	0.303	0.303	0.303	0.303	0.303
21 Chrysene	0.151	0.151	0.151	0.151	0.151
22 Coronene	0.303	0.303	0.303	0.303	0.303
23 Dibenz(a,h)anthracene	0.151	0.151	0.151	0.151	0.151
24 Dibenzo(a,e)pyrene	0.605	0.605	0.605	0.605	0.605
25 Fluoranthene	0.151	0.303	0.151	0.151	0.200
26 Fluorene	0.484	0.375	0.212	0.303	0.400
27 Indeno(1,2,3-cd)pyrene	0.151	0.151	0.151	0.151	0.151
28 m-Terphenyl	0.303	0.303	0.303	0.303	0.303
29 Naphthalene	0.908	0.333	0.297	0.418	0.436
30 o-Terphenyl	0.303	0.303	0.303	0.303	0.303
31 Perylene	0.303	0.303	0.303	0.303	0.303
32 Phenanthrene	1.271	1.968	1.193	1.084	1.713
33 p-Terphenyl	0.303	0.303	0.303	0.303	0.303
34 Pyrene	0.151	0.254	0.151	0.151	0.151
35 Quinoline	1.211	1.211	1.211	1.211	1.211
36 Tetralin	0.424	0.303	0.303	0.303	0.303

Note: - values were calculated by the formula of [reading (ug) x 1000 / sample volume (m3)].  
- Where the analytical results are less than the minimum detection limit (MDL), the MDL has been used in calculations.  
- Data for May 20th and 26th are not available at the time the monthly report is completed. The result will be

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



1	1-Methylnaphthalene
2	1-Methylphenanthrene
3	2-Chloronaphthalene
4	2-Methlyanthracene
5	2-Methylnaphthalene
6	3-Methylcholanthrene
7	7,12-Dimethylbenzo(a)anthracene
8	9,10-Dimethylanthracene
9	Acenaphthene
10	Acenaphthylene
11	Anthracene
12	Benzo(a)anthracene
13	Benzo(a)fluorene
14	Benzo(a)pyrene
15	Benzo(b)fluoranthene
16	Benzo(b)fluorene
17	Benzo(e)pyrene
18	Benzo(g,h,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

### SO<sub>2</sub> Calibration Report

#### Station Information

Calibration Date	June 2, 2010	Previous Calibration	May 5, 2010
Company	Lakeland Community and Industry Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	6:55	End Time (MST)	11:25
Reason:	Monthly Calibration		
Barometric Pressure	708 mmHg	Station Temperature	23 Deg C
Cal Gas	51.4 ppm	Cal Gas Expiry date	8/2/2012
DAS Output Voltage	0 - 1 Volts		

#### Equipment Information

Analyzer Make / Model:	Thermon 43i	S/N :	806528242	Method:	UV absorbtion
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	3485		
Flow Meter:	API 700	S/N :	690		

#### Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb		
Sample Flow / Box Temp	446 ccm, 28.5 Deg C	445 ccm, 26.5 Deg C	
HVPS / Lamp Setting	-631.6, 746	-631.6, 746	
PMT / RxCell Temp	OK Deg C, 44.9 Deg C	OK Deg C, 44.9 Deg C	
Converter / IZS Temp	NA Deg C, 45.0 Deg C	NA Deg C, 45.0 Deg C	
Offset / Slope	5.4, 1.015	5.3, 0.987	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4996	0	0	0	N/A
4955	38.9	400	411	0.9742
4996	0	0	0	N/A
4955	38.9	400	402	0.9960
4977	19.4	200	207	0.9641
4982	14.6	150	157	0.9566
4992	0	0	0	N/A
Sum of Least Squares				0.2762
New Correction Factor				0.9960

#### Before Calibration

#### After Calibration

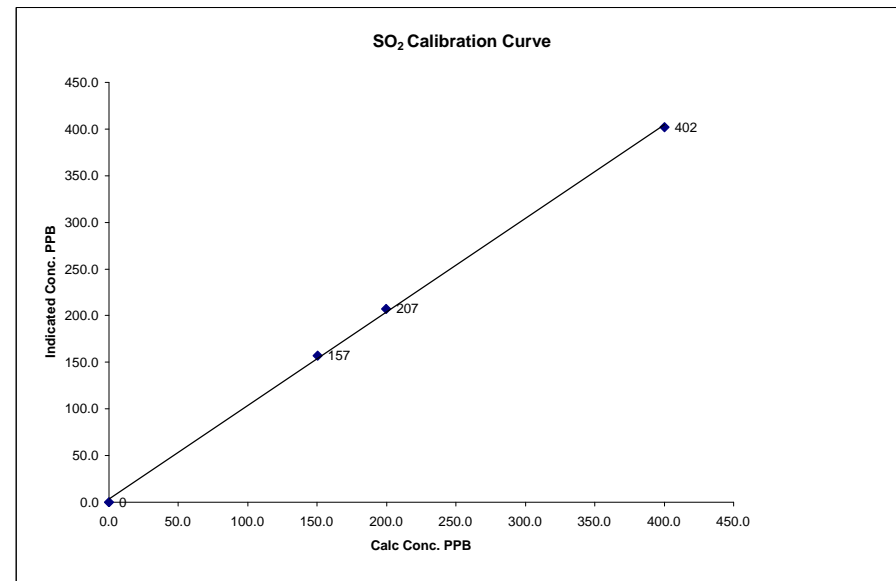
Auto Zero	0.1	0.0
Auto Span	403	296
Sample Lines Connected	YES	
Percent Change from Previous Calibration	2.4%	

Calibration Performed by: Shea Beaton

### SO<sub>2</sub> Calibration Curve

Calibration Date	June 2, 2010
Company	Lakeland Community and Industry Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	6:55
End Time (MST)	11:25

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	0.999504	1.002192
150	157	0.9566		
200	207	0.9641		
400	402	0.9960		3.552359



Notes:

---



---

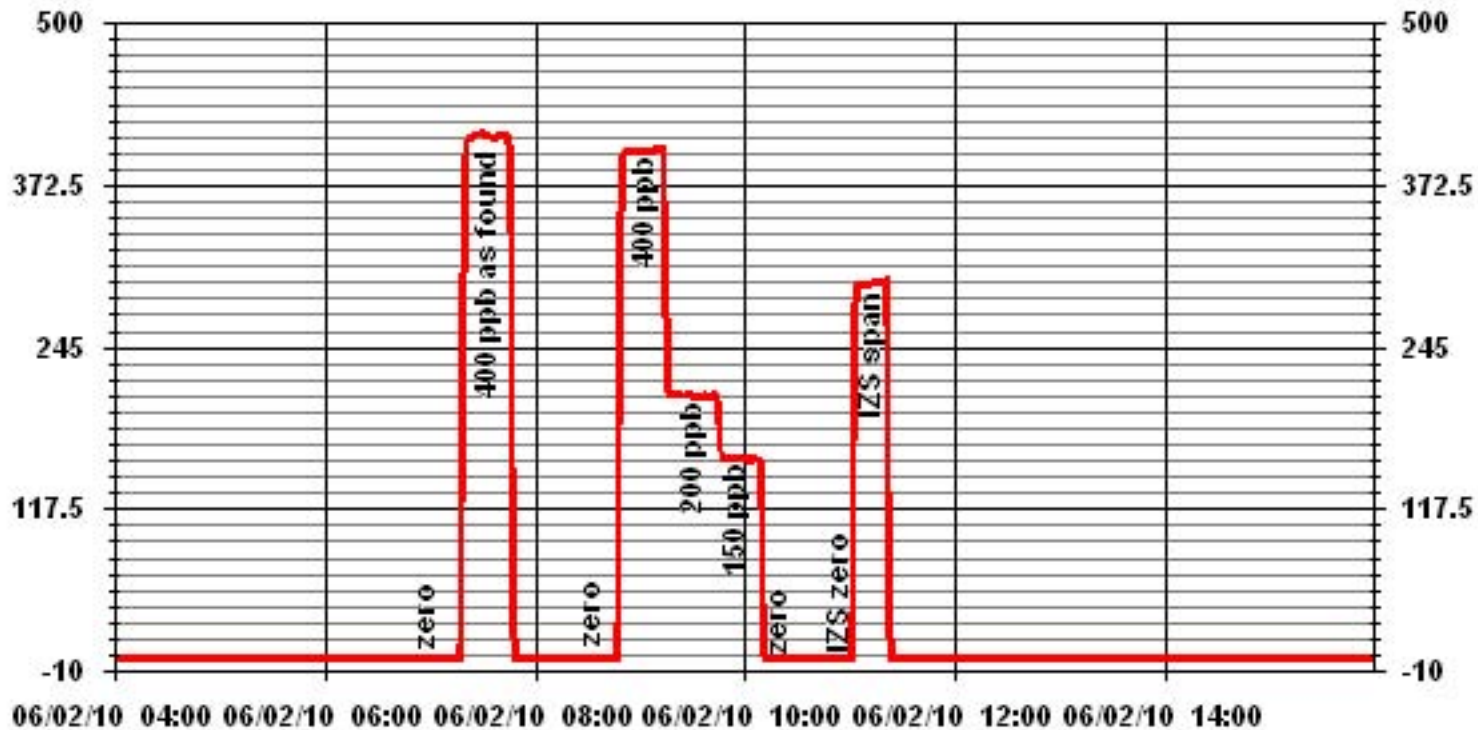


---



---

### 01 Minute Averages



# Total Reduced Sulphur

**TRS Calibration Report  
Station Information**

Calibration Date	June 2, 2010	Previous Calibration	May 4, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	6:55	End Time (MST)	11:25
Reason:	Monthly Calibration		
Barometric Pressure	708 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 :	3485		
Flow Meter:	API 700	S/N :	831		

**Analyzer Settings**

Before Calibration			After Calibration		
Concentration Range	0 - 100 ppb				
Sample Flow / Box Temp	355 ccm	31.3 Deg C	355 ccm	29.6 Deg C	
HVPS / Lamp Setting	-622.7	761	-623.1	756	
PMT / RxCell Temp	OK Deg C	45.0 Deg C	OK Deg C	45.2 Deg C	
Converter / IZS Temp	850 Deg C	45.0 Deg C	850 Deg C	45.0 Deg C	
Offset / Slope	11.4	1.184	11.4	1.184	

**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
4996	0	0	0	N/A
4960	37	80	81	0.9873
4980	18.5	40	41	0.9749
4986	10.6	23	23	0.9962
4998	0	0	0	N/A
Sum of Least Squares				0.9855
New Correction Factor				0.9873

**Before Calibration**

**After Calibration**

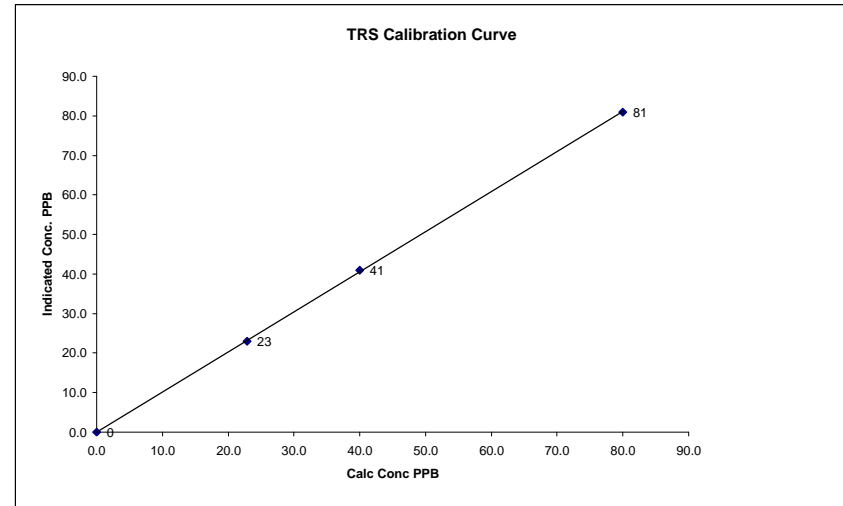
Auto Zero	0.0	0.0
Auto Span	43	10
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.0%

Calibration Performed by: Shea Beaton

**TRS Calibration Curve**

Calibration Date	June 2, 2010
Company	Lakeland Industry & Community Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	6:55
End Time (MST)	11:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999922
0	0	n/a	Intercept	(± 3% F.S.)	1.014321
23	23	0.9962			
40	41	0.9749			
80	81	0.9873			



Notes: Following the as found oints, the permeation tube was changed.

---

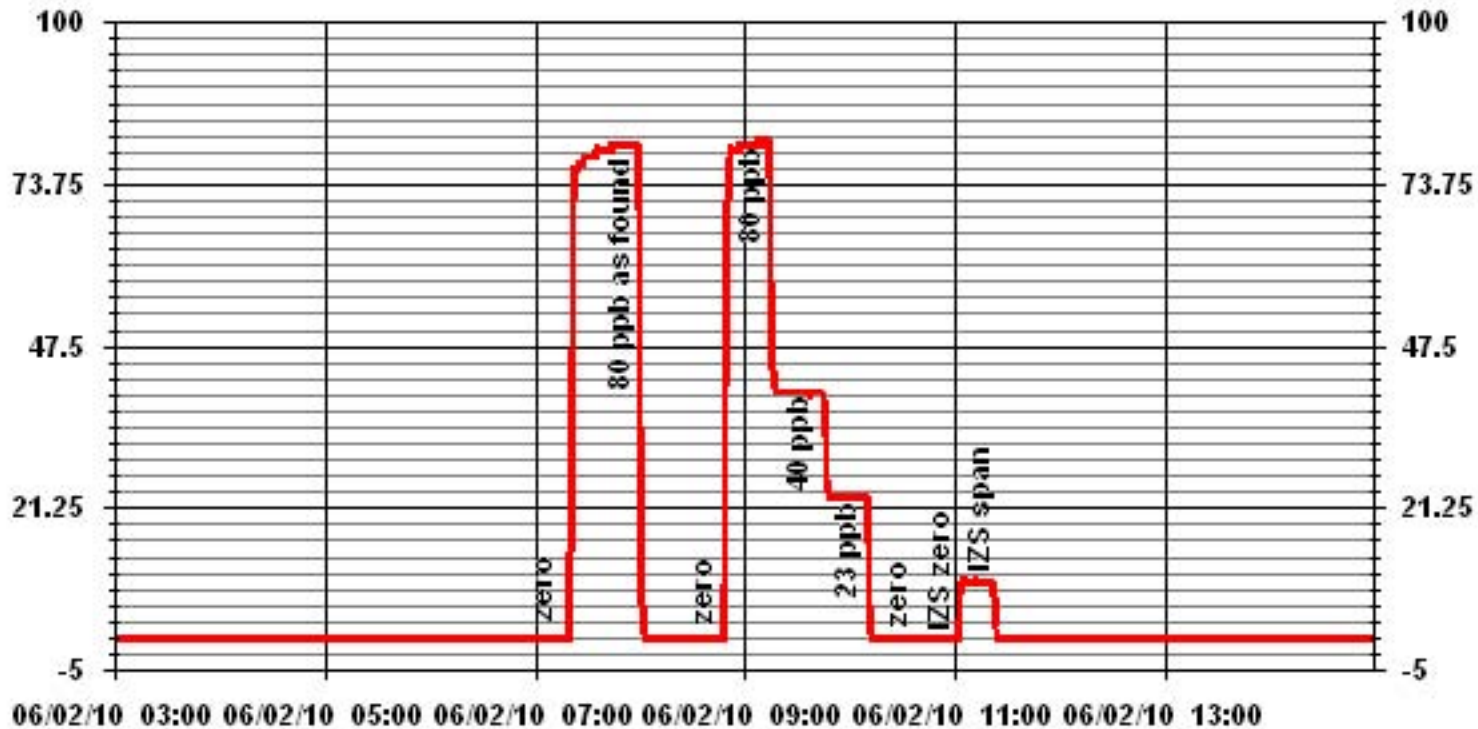


---



---

### 01 Minute Averages



# Total Hydrocarbons

### THC Calibration Report

#### Station Information

Calibration Date:	June 3, 2010	Previous Calibration	May 4, 2010
Company:	Lakeland Industry and Community Association		
Plant / Location:	LICA1/Cold Lake		
Start Time (MST)	7:24	End Time (MST)	10:51
Reason:	Monthly Calibration		
Barometric Pressure:	701 mmHg	Station Temperature:	23 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207Prop/602Meth	ppm	Cal Gas Expiry Date: 8/21/2011
DAS make & Model:	ESC 8832	S/N :	3485
Output Voltage Range:	0 - 10 VDC		

#### Analyzer Information

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

#### Analyzer Settings

	Before Calibration	After Calibration
Concentration Range	0 - 50 ppm	0 - 50 ppm
Sample Pressure	6.5 psi	6.5 psi
Hydrogen Pressure	8 psi	8 psi
Air Pressure	19 psi	20 psi

#### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0	0.0	0.1	N/A
1999	0	0.0	0.0	N/A
2000	70	39.6	39.3	1.0078
2000	70	39.6	39.9	0.9927
2001	35	20.1	19.9	1.0118
2001	20	11.6	11.2	1.0349
2000	0	0.0	0.0	N/A
			Correction Factor:	0.9927

#### Percent Change

Previous Calibration Correction Factor:	0.9927
Current Correction Factor Before Span Adjust:	1.0078
Percent Change:	-1.5%

#### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	37.7	38.0
Sample Lines Connected		YES

#### Cylinder Pressures

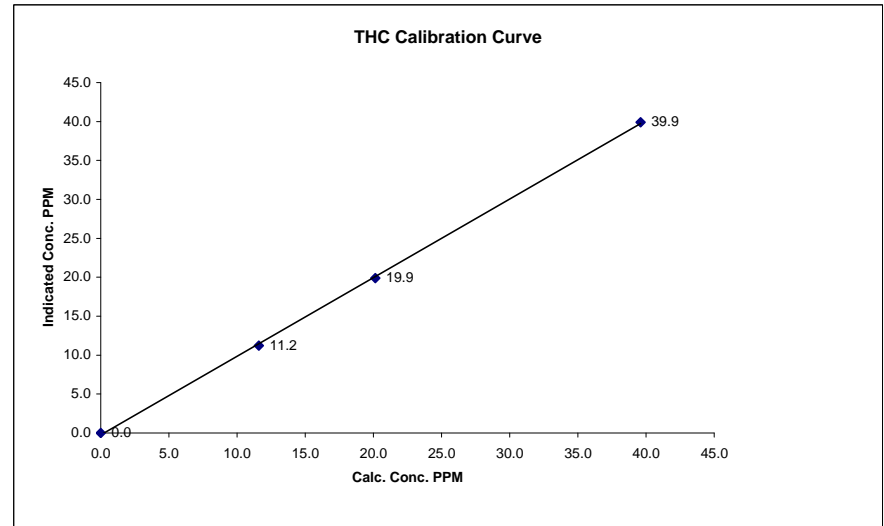
Span	1700 psi
Hydrogen	1400 psi
Zero Air	32 psi Maxxam-owned API 701 zero air supply with catalytic oxidizer

Calibration Performed by: Shea Beaton

### THC Calibration Curve

Calibration Date	June 3, 2010
Company	Lakeland Industry and Community Association
Plant / Location	LICA1/Cold Lake
Start Time (MST)	7:24
End Time (MST)	10:51

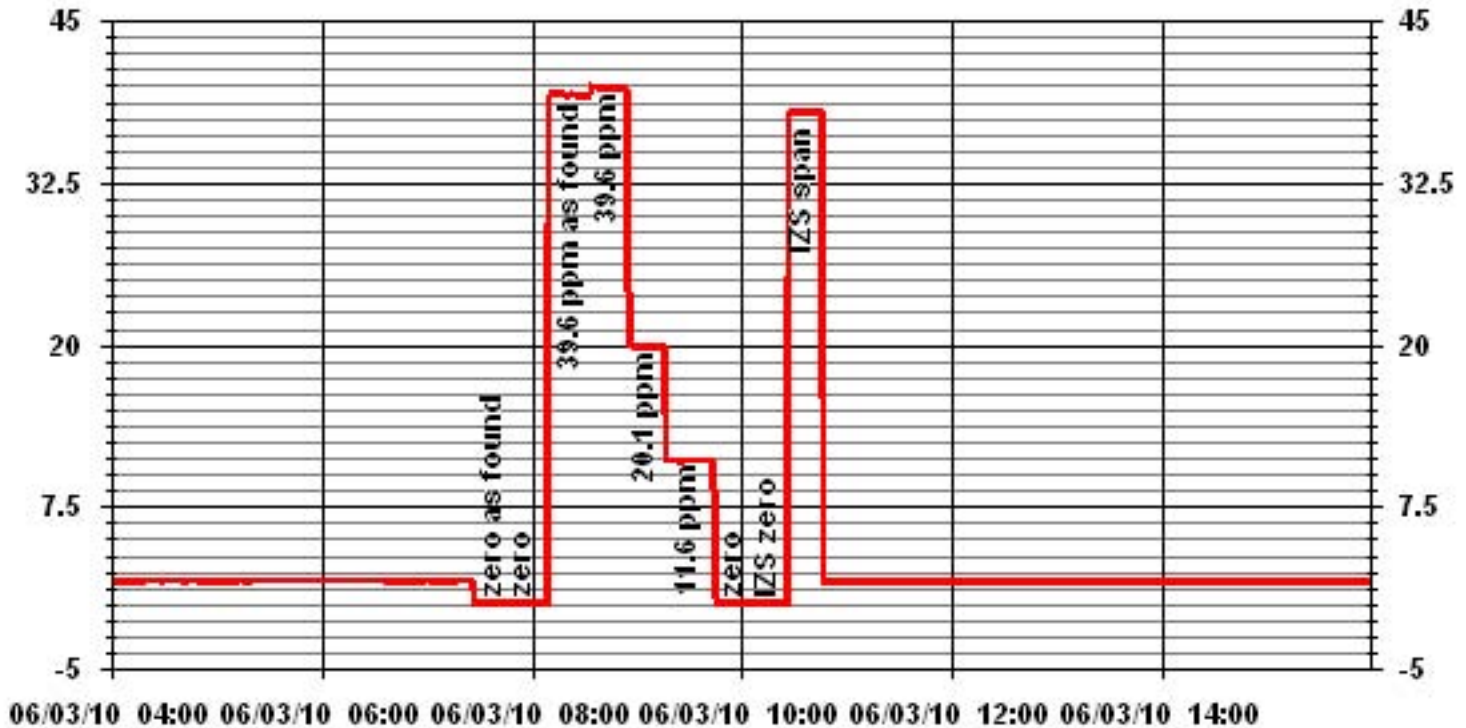
Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999785
0.0	0.0		Intercept	(± 3% F.S.)	-0.259494
11.6	11.2	1.0349			
20.1	19.9	1.0118			
39.6	39.9	0.9927			



Notes:



### 01 Minute Averages



# Particulate Matter 2.5

**TEOM 1405F Audit**

	<b><u>Station</u></b>		<b><u>Audit Transfer Standard</u></b>
Date:	June 3, 2010	Make/Model:	Bios DC-2
Station Name:	LICA 1	Serial Number:	1193
Location:	Cold Lake South	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	Hg Thermometer 990

	<b><u>Sampler</u></b>		<b><u>Set-up and current Sampler readings</u></b>
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 (%)	25.1%
Firmware Ver.	1.52	K <sub>o</sub> Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	14.9
		Press (ATM)	0.922

**Conversion from mmHg or "Hg to ATM (Atmospheres)**

ATM = (mmHg) X (1.316 X 10<sup>-3</sup>)    or    ATM = ("Hg) X (3.34207 X 10<sup>-2</sup>)

**Note: Tolerances are noted as BOLD in Brackets**

**Audit**

<b>Status</b>			
Noise <b>&lt;0.10ug</b>	0.008	Warnings	None
Pump Vacuum <b>&lt;0.40atm</b>	0.35		
<b>Temperature/Pressure</b>			
Measured Temp ( <b>± 2 °C</b> )	14.8	D °C	0.1
Measured Press ( <b>± 0.01atm</b> )	0.923	DATM	-0.001
<b>Flow Audit</b>			
Indicated Main Flow (l/min)	3.00	Main Flow Drift ( <b>±10.0%</b> )	NA
Measured Main Flow (l/min)	3.07	Flow Adjusted to Measured?	No
Indicated Bypass Flow (l/min)	13.68	Bypass Flow Drift ( <b>±10.0%</b> )	NA
Measured Bypass Flow (l/min)	13.63	Flow Adjusted to Measured?	No
<b>Leak Check</b>		<b>Instrument Setup</b>	
Main ( <b>&lt; 0.15 l/min</b> )	NA	Flow Control = Active	
Aux ( <b>&lt; 0.6 l/min</b> )	NA	Report Conditions = Standard (25.0 C and 1atm)	
<b>K<sub>o</sub> Factor</b>			
Measured	NA		
K <sub>o</sub> Difference ( <b>± 2.5%</b> )	NA		

**Start Time:** 12:13      **Finish Time:** 13:44

**Sample Inlet Cleaned:** Yes      **New Filters Installed:** Yes  
**New Filter Loading %:** 16.8%

**Comments:** \_\_\_\_\_

**Auditor/s:** Shea Beaton

# Nitrogen Dioxide

**NOx - NO- NO2 Calibration Report**

**Station Information**

Calibration Date	June 3, 2010	Previous Calibration	May 4, 2010
Company	LICA	Plant/Location	LICA 1 - Cold Lake South
Start Time (MST)	7:00	End Time (MST)	12:22
Reason:	Monthly Calibration	Other	
Barometric Pressure	701 mmHg	Station Temperature	22 Deg C
Cal Gas Concentration	NOx 50.9 ppm	NO 50.8 ppm	Cal Gas Expiry date 08-Feb-12
DAS Output Voltage	0 - 10	Volts	Chart Rec. Output NA

**Equipment Information**

Analyzer Make / Model:	TECO 42C	S/N :	427408716	Method:	Chemiluminescent
Calibrator Make / Model:	Envionics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	3485		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Envionics 2000	S/N :	1991		

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range	0 - 500			ppb			
Sample Flow/Conv. Temp	728 ccm	317 Deg C		729 ccm	317.0 Deg C		
Ozone Flow / Vacuum	OK ccm	172.1 "Hg-A		OK ccm	170.1 "Hg-A		
HVPS / A ZERO	-821 Volts	NA MV		-821 Volts	NA MV		
Rx/ Temp / PMT Temp	49.9 Deg C	-2.5 Deg C		49.8 Deg C	-2.5 Deg C		
Box Temp / IZS Temp	27.5 Deg C	OK Deg C		26.4 Deg C	OK Deg C		
Offset	3.7 NOx	3.4 NO		3.7 NOx	3.4 NO		
Slope	1.003 NOx	0.881 NO		1.003 NOx	0.873 NO		
NO2 COEF / Conv Efficiency	0.998 NO2	NA		0.998 NO2	NA		

**Dilution Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
3010	0.0	----	0	0	0	0	0	0	----	----
2984	23.7	----	401	400	----	404	403	1	0.9928	0.9933
2984	23.7	----	401	400	----	401	400	1	1.0002	1.0007
2997	11.9	----	201	201	----	201	200	1	1.0015	1.0046
3000	5.9	----	100	100	----	100	99	1	0.9991	1.0072
3011	0.0	----	0	0	0	1	0	0	----	----

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		
2981	23.7	----	401	401	----	401	400	1	----	----
2981	23.7	300	401	----	300	400	101	300	1.0000	100.00%
2981	23.7	150	401	----	131	400	270	130	1.0077	99.23%
2987	23.7	75	401	----	55	400	346	55	1.0000	100.00%

Linearity	Sum of Least Squares	NOx= 1.000	NO= 1.002	NO2= 1.001	
OK?	Yes No	Correction Factors:	NOx= 1.0002	NO= 1.0007	NO2= 1.0000
			Average Converter Efficiency= 99.74%		

	Before Calibration				After Calibration			
Auto Zero	0.1	NOx	0.1	NO2	0.1	NOx	0.1	NO2
Auto Span	275	NOx	263	NO2	265	NOx	263	NO2
	Sample Lines Connected				YES			

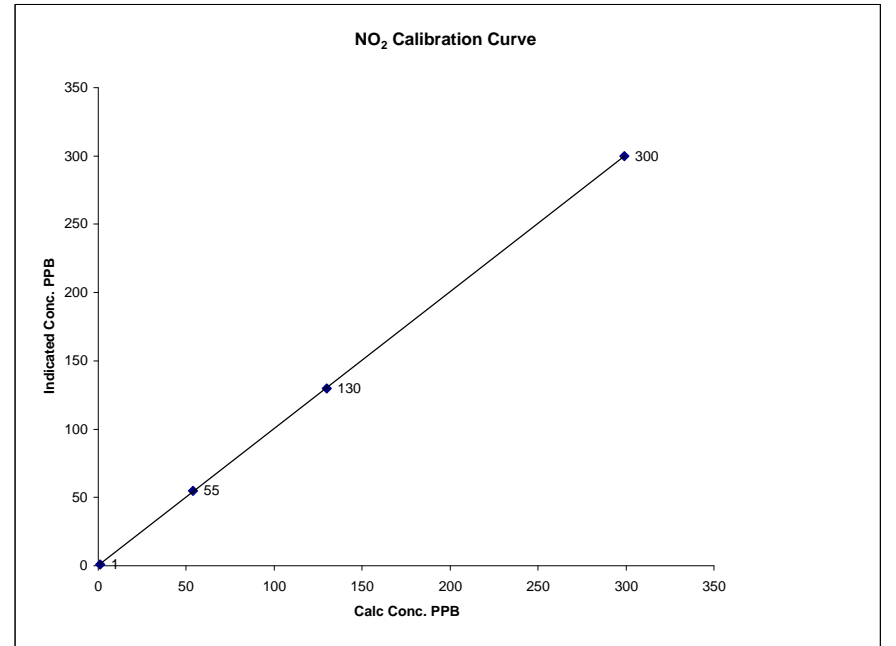
Notes

Calibration Performed by: Shea Beaton

**NO2 Calibration Curve**

Calibration Date	June 3, 2010	LICA	
Company		LICA 1 - Cold Lake South	
Plant / Location		LICA 1 - Cold Lake South	
Start Time (MST)	7:00	End Time (MST)	12:22

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	(0.85 to 1.15)	
1	1	N/A	Slope	(± 3% F.S.)	0.999985
54	55	0.9818	Intercept		1.002191
130	130	1.0000			0.23485
299	300	0.9967			

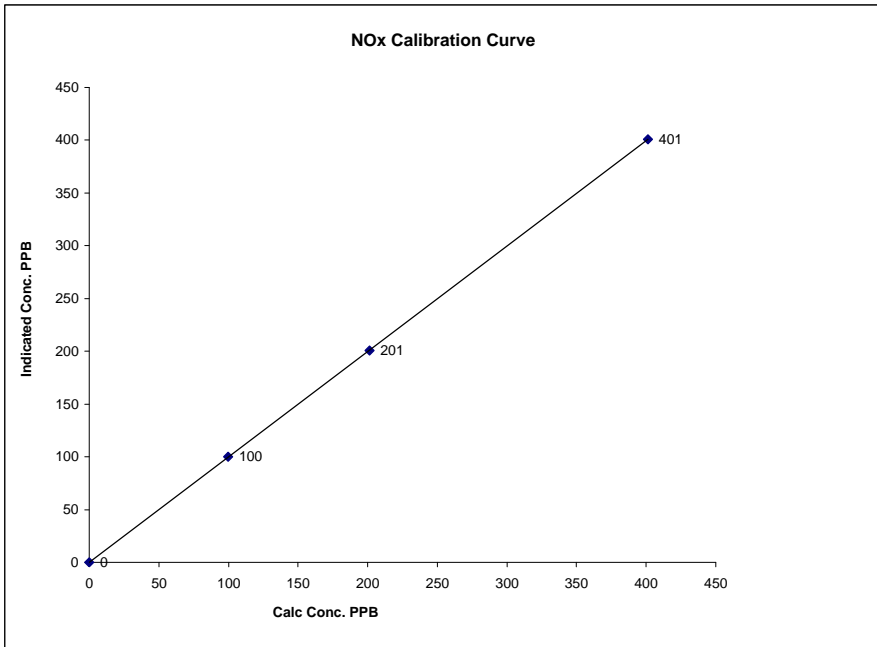


Notes:

### NOx Calibration Curve

Calibration Date June 3, 2010  
 Company LICA  
 Plant / Location LICA 1 - Cold Lake South  
 Start Time (MST) 7:00 End Time (MST) 12:22

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999999
0	0	N/A	Slope (0.85 to 1.15)	0.999624
100	100	0.9991	Intercept (± 3% F.S.)	-0.00741
201	201	1.0015		
401	401	1.0002		

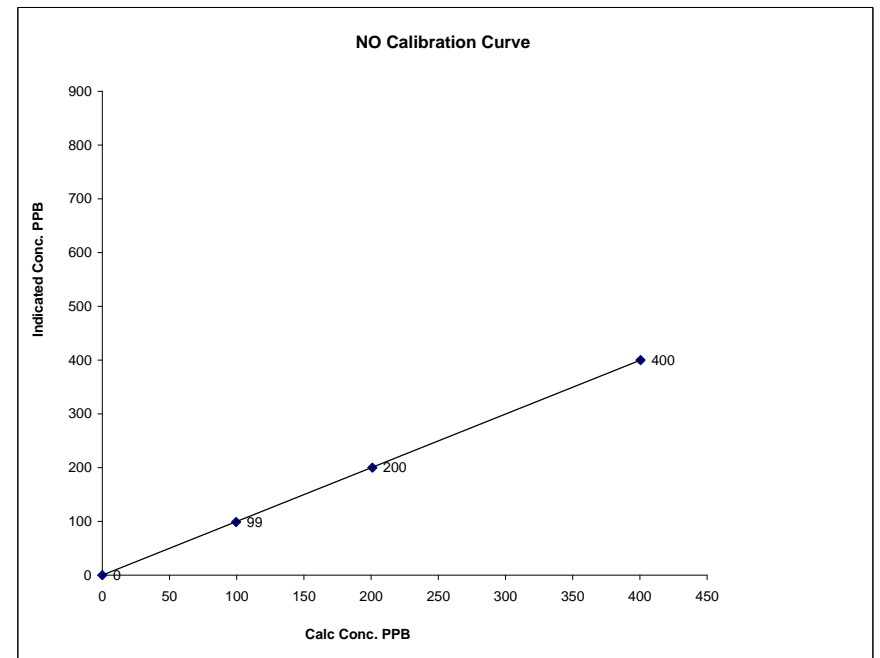


Notes:

### NO Calibration Curve

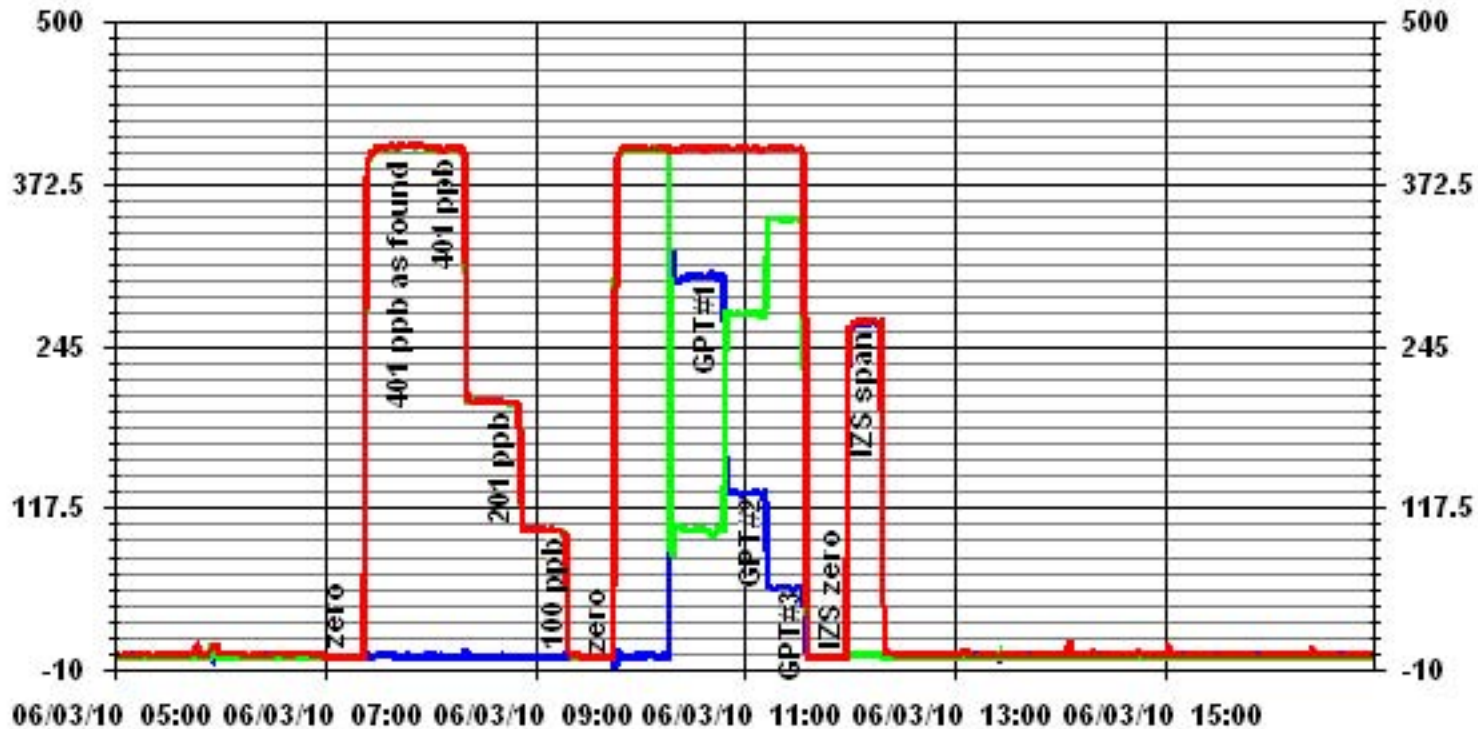
Calibration Date June 3, 2010  
 Company LICA  
 Plant / Location LICA 1 - Cold Lake South  
 Start Time (MST) 7:00 End Time (MST) 12:22

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999994
0	0	N/A	Slope (0.85 to 1.15)	1.001629
100	99	1.0072	Intercept (± 3% F.S.)	-1.5334
201	200	1.0046		
400	400	1.0007		



Notes:

### 01 Minute Averages



# Ozone



### O<sub>3</sub> Calibration Report

#### Station Information

Calibration Date	June 3, 2010	Previous Calibration	May 4, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	11:40	End Time (MST)	15:05
Reason:	Monthly Calibration		
Barometric Pressure	701 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:	Enviroics 2000	S/N :	1991	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	3485		

#### Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500			
Cell A Flow/ Cell B Flow	730 ccm	745 ccm	730 ccm	745 ccm
Pressure	691.7 mmHg		691.1 mmHg	
Bench Lamp Temp	53.5 Deg C		53.5 Deg C	
O <sub>3</sub> Lamp/Box Temp	67.6 Deg C	27.7 Deg C	67.6 Deg C	27.7 Deg C
Offset / Slope	0.7	1.002	0.7	1.01

#### Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
3002	0	0	0	N/A
3003	350	299	296	1.0101
3003	350	299	300	0.9967
3005	150	130	127	1.0236
3008	75	54	53	1.0189
3007	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				0.9967

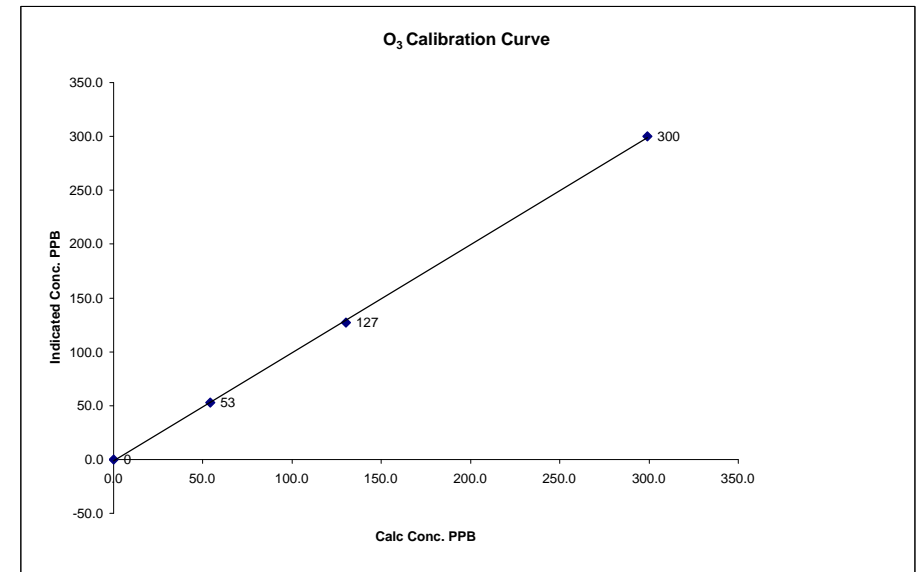
	Before Calibration	After Calibration
Auto Zero	-0.3	0.2
Auto Span	282	287
Sample Lines Connected		YES
Percent Change from Previous Calibration		-1.0%

Calibration Performed by: Shea Beaton

### O<sub>3</sub> Calibration Curve

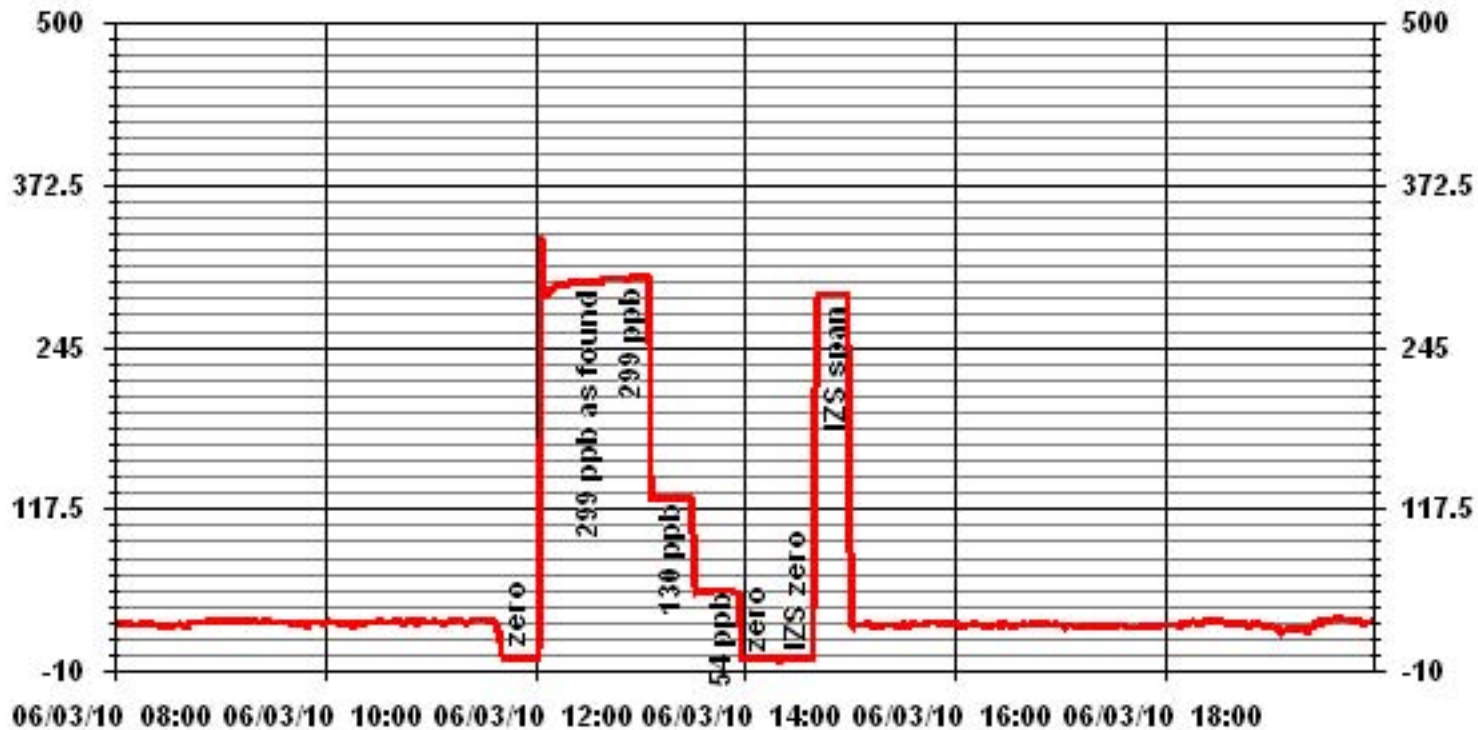
Calibration Date	June 3, 2010
Company	Lakeland Industry & Community Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	11:40
End Time (MST)	15:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999848
0	0	n/a	Intercept	(± 3% F.S.)	-1.265435
54	53	1.0189			
130	127	1.0236			
299	300	0.9967			



Notes:

### 01 Minute Averages



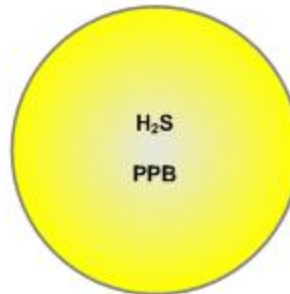
# Passive Bubble Maps

# Lakeland Industry & Community Association H<sub>2</sub>S Passive Bubble Map

JUNE 2010

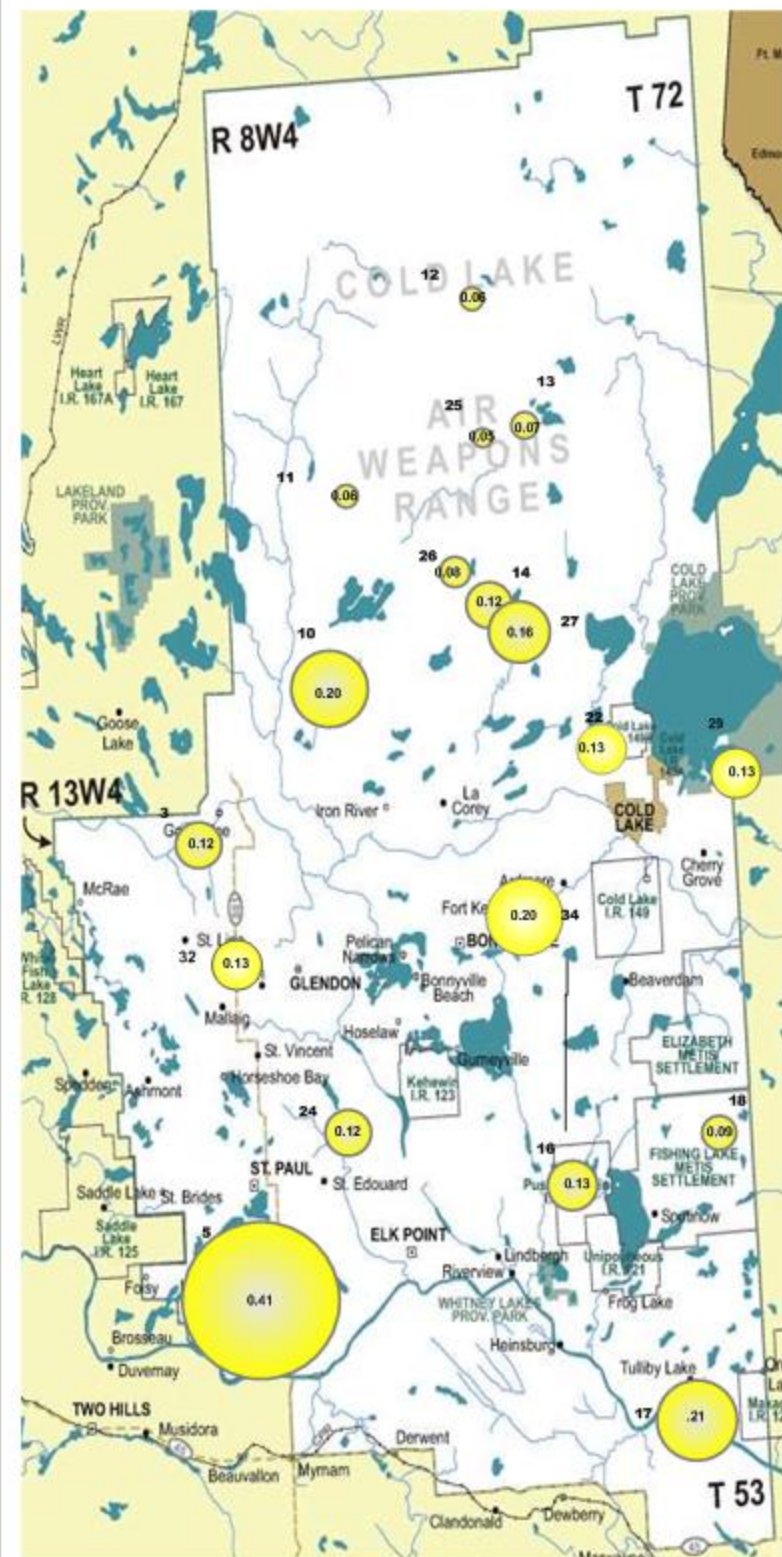
## PASSIVE STATIONS

		DUPLICATE
3 – Therien	0.12 PPB	0.11 PPB
5 – Lake Eliza	0.41 PPB	NA
10 – La Corey	0.20 PPB	NA
11 – Wolf Lake	0.06 PPB	0.05 PPB
12 – Foster Creek	0.06 PPB	NA
13 – Primrose	0.06 PPB	0.07 PPB
14 – Maskwa	0.12 PPB	NA
16 – Frog Lake	0.13 PPB	0.12 PPB
17 – Clear Range	0.21 PPB	NA
18 – Fishing Lake	0.09 PPB	0.08 PPB
22 – Cold Lake South	0.13 PPB	NA
24 – Fort George	0.12 PPB	NA
25 – Burnt Lake	0.05 PPB	0.05 PPB
26 – Mahihkan	0.08 PPB	NA
27 – Mahkeses	0.15 PPB	0.17 PPB
29 – Cold Lake South 2	0.13 PPB	NA
32 – St. Lina	0.13 PPB	NA
34 – Portable	0.20 PPB	NA



## Summary

Minimum : 0.05 PPB – Burnt Lake  
Maximum: 0.41 PPB – Lake Eliza  
Average: 0.14 PPB \*Includes Duplicates



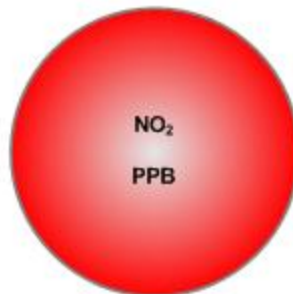


# Lakeland Industry & Community Association NO<sub>2</sub> Passive Bubble Map

JUNE 2010

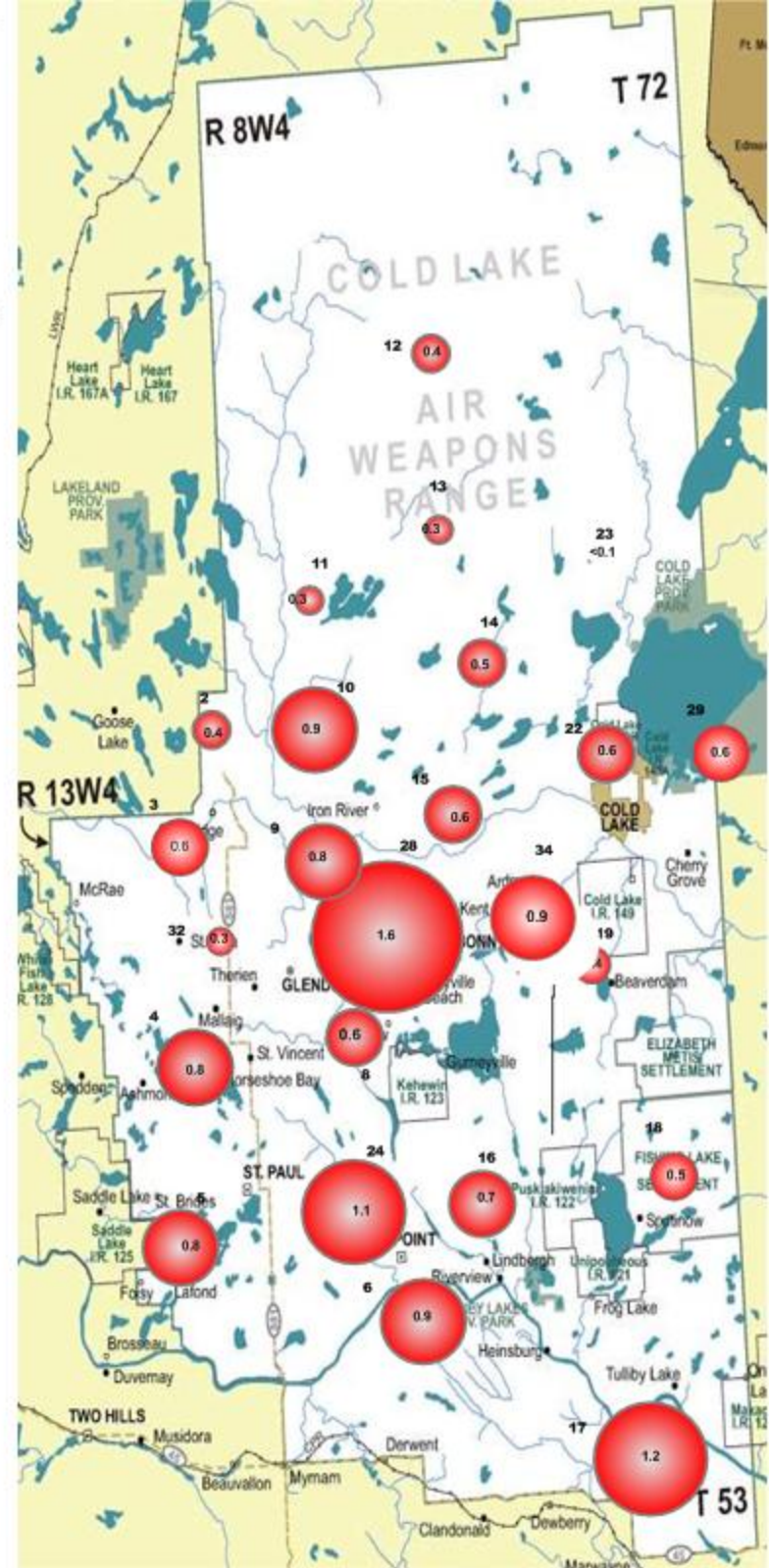
## PASSIVE STATIONS

		DUPLICATE
2 – Sand River	0.4 PPB	0.4 PPB
3 – Therien	0.6 PPB	NA
4 – Flat Lake	0.8 PPB	0.8 PPB
5 – Lake Eliza	0.8 PPB	NA
6 – Telegraph Creek	0.8 PPB	0.9 PPB
8 – Muriel-Kehewin	0.6 PPB	NA
9 – Dupre	0.7 PPB	0.8 PPB
10 – La Corey	0.9 PPB	NA
11 – Wolf Lake	0.3 PPB	0.3 PPB
12 – Foster Creek	0.4 PPB	NA
13 – Primrose	0.3 PPB	0.3 PPB
14 – Maskwa	0.5 PPB	NA
15 – Ardmore	0.7 PPB	0.6 PPB
16 – Frog Lake	0.7 PPB	NA
17 – Clear Range	1.2 PPB	1.1 PPB
18 – Fishing Lake	0.5 PPB	NA
19 – Beaverdam	0.4 PPB	0.4 PPB
22 – Cold Lake South	0.6 PPB	NA
23 – Medley-Martineau	<0.1 PPB	NA
24 – Fort George	1.0 PPB	1.1 PPB
28 – Town of Bonnyville	1.6 PPB	NA
29 – Cold Lake South 2	0.6 PPB	0.5 PPB
32 – St. Lina	0.3 PPB	NA
34 – Portable	0.9 PPB	NA



## Summary

Minimum :< 0.1 PPB – Medley-Martineau  
Maximum: 1.6 PPB – Town of Bonnyville  
Average: 0.7 PPB \*Includes Duplicates

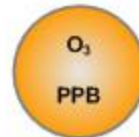


# Lakeland Industry & Community Association O<sub>3</sub> Passive Bubble Map

JUNE 2010

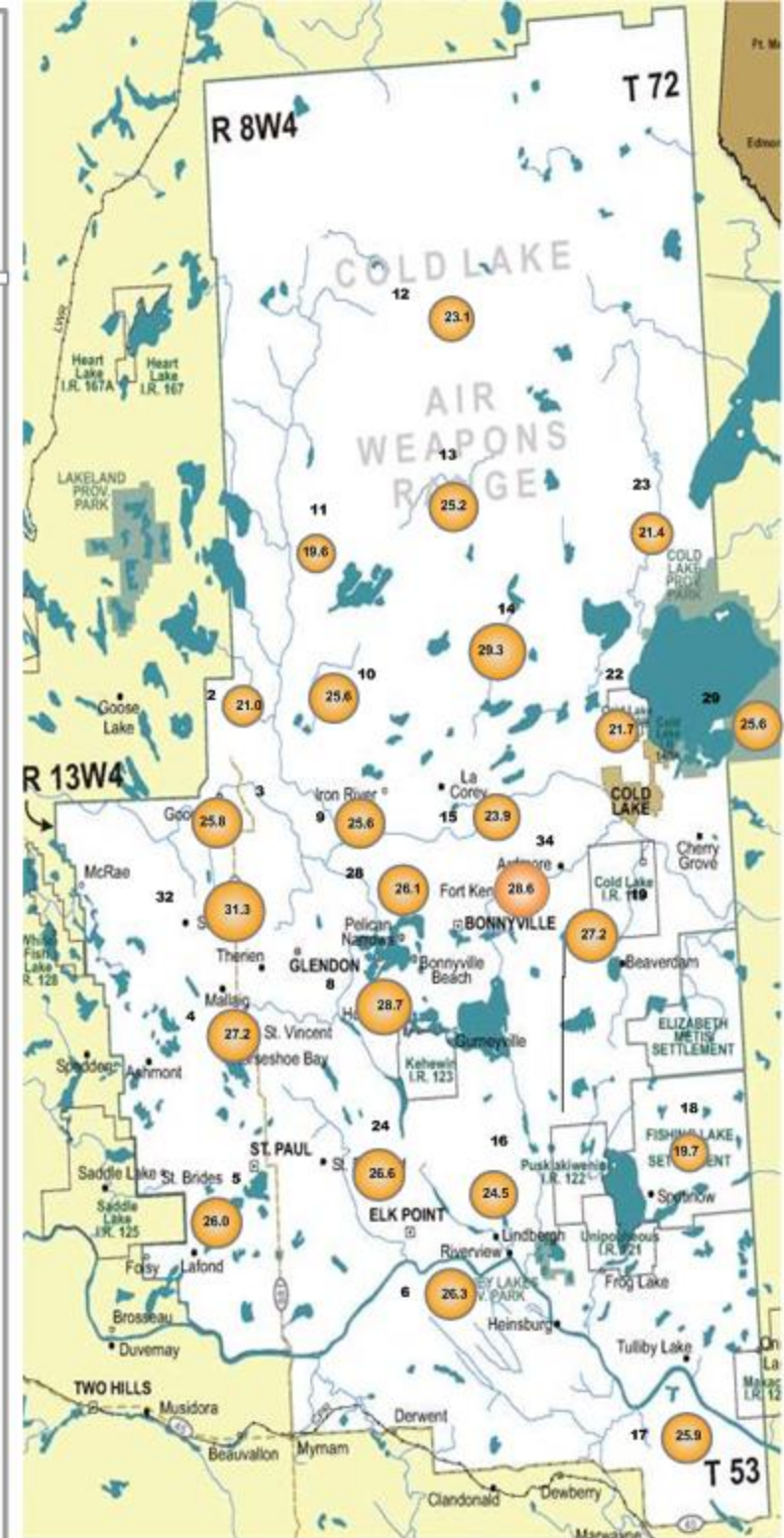
## PASSIVE STATIONS

		DUPLICATE
2 – Sand River	21.4 PPB	20.6 PPB
3 – Therien	25.8 PPB	NA
4 – Flat Lake	26.3 PPB	28.1 PPB
5 – Lake Eliza	26.0 PPB	NA
6 – Telegraph Creek	27.5 PPB	25.0 PPB
8 – Muriel-Kehewin	28.7 PPB	NA
9 – Dupre	25.6 PPB	25.6 PPB
10 – La Corey	25.6 PPB	NA
11 – Wolf Lake	19.0 PPB	20.1 PPB
12 – Foster Creek	23.1 PPB	NA
13 – Primrose	25.8 PPB	24.5 PPB
14 – Maskwa	29.3 PPB	NA
15 – Ardmore	25.3 PPB	22.5 PPB
16 – Frog Lake	24.5 PPB	NA
17 – Clear Range	25.9 PPB	25.8 PPB
18 – Fishing Lake	19.7 PPB	NA
19 – Beaverdam	28.9 PPB	25.8 PPB
22 – Cold Lake South	21.7 PPB	NA
23 – Medley-Martineau	21.4 PPB	NA
24 – Fort George	26.8 PPB	26.3 PPB
28 – Town of Bonnyville	26.1 PPB	NA
29 – Cold Lake South 2	25.0 PPB	26.1 PPB
32 – St. Lina	31.3 PPB	NA
34 – Portable	28.6 PPB	NA



## Summary

Minimum : 19.6 PPB –Wolf Lake  
 Maximum: 31.3 PPB –St. Lina  
 Average: 25.2 PPB \*Includes Duplicates





# Lakeland Industry & Community Association SO<sub>2</sub> Passive Bubble Map

JUNE 2010

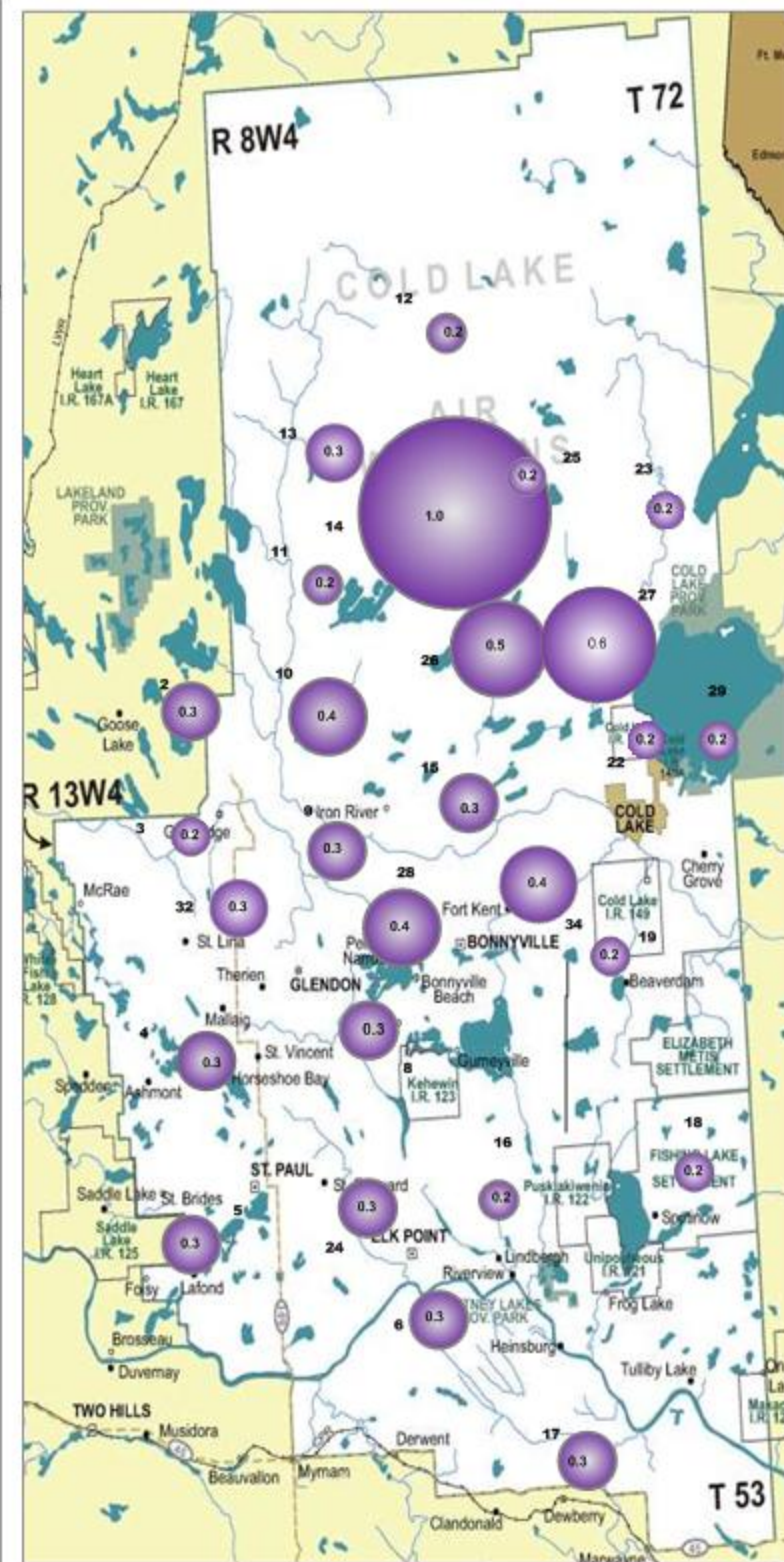
## PASSIVE STATIONS

		DUPLICATE
2 – Sand River	0.3 PPB	0.2 PPB
3 – Therien	0.2 PPB	NA
4 – Flat Lake	0.3 PPB	0.3 PPB
5 – Lake Eliza	0.3 PPB	NA
6 – Telegraph Creek	0.3 PPB	0.3 PPB
8 – Muriel-Kehewin	0.3 PPB	NA
9 – Dupre	0.2 PPB	0.3 PPB
10 – La Corey	0.4 PPB	NA
11 – Wolf Lake	0.2 PPB	0.2 PPB
12 – Foster Creek	0.2 PPB	NA
13 – Primrose	0.3 PPB	0.2 PPB
14 – Maskwa	1.0 PPB	NA
15 – Ardmore	0.3 PPB	0.3 PPB
16 – Frog Lake	0.2 PPB	NA
17 – Clear Range	0.3 PPB	0.2 PPB
18 – Fishing Lake	0.2 PPB	NA
19 – Beaverdam	0.2 PPB	0.2 PPB
22 – Cold Lake South	0.2 PPB	NA
23 – Medley-Martineau	0.2 PPB	NA
24 – Fort George	0.2 PPB	0.3 PPB
25 – Burnt Lake	0.2 PPB	NA
26 – Mahikan	0.5 PPB	0.5 PPB
27 – Mahkeses	0.6 PPB	NA
28 – Town of Bonnyville	0.4 PPB	0.4 PPB
29 – Cold Lake South 2	0.2 PPB	NA
32 – St. Lina	0.3 PPB	NA
34 – Portable	0.4 PPB	NA



## Summary

Minimum : 0.2 PPB – Various Stations  
 Maximum: 1.0 PPB –Maskwa  
 Average: 0.3 PPB \*Includes Duplicates



# Passive Field Data



# Field Notes

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
2	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	07:40	06/30/10	07:55	
2A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	07:40	06/30/10	07:55	
3	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	07:00	06/30/10	07:15	
3A (Dup)	H <sub>2</sub> S	06/01/10	07:00	06/30/10	07:15	
4	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	11:45	07/01/10	11:55	
4A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	11:45	07/01/10	11:55	
5	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	11:05	07/01/10	10:20	
5A (Dup)	NA	NA	NA	NA	NA	
6	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	09:45	07/01/10	09:40	
6A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	09:45	07/01/10	09:40	
8	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	12:35	07/01/10	12:50	
8A (Dup)	NA	NA	NA	NA	NA	
9	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	16:50	06/30/10	17:30	
9A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	16:50	06/30/10	17:30	
10	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	08:30	06/30/10	08:45	
10A (Dup)	NA	NA	NA	NA	NA	
11	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	09:20	06/30/10	09:35	
11A (Dup)	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	09:20	06/30/10	09:35	
12	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	10:45	06/30/10	11:00	
12A (Dup)	NA	N	NA	NA	NA	
13	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	12:15	06/30/10	12:35	
13A (Dup)	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	12:15	06/30/10	12:35	
14	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	13:10	06/30/10	13:50	
14A (Dup)	NA	NA	NA	NA	NA	
15	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	16:15	06/30/10	16:50	
15A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	16:15	06/30/10	16:50	
16	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	08:15	07/01/10	08:00	
16A (Dup)	H <sub>2</sub> S	06/02/10	08:15	07/01/10	08:00	

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
17	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	09:00	07/01/10	08:50	
17A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	09:00	07/01/10	08:50	
18	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	07:30	07/01/10	07:15	
18A (Dup)	H <sub>2</sub> S	06/02/10	07:30	07/01/10	07:15	
19	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	06:35	07/01/10	06:20	
19A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	06:35	07/01/10	06:20	
22	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	15:20	06/30/10	15:55	
22A (Dup)	NA	NA	NA	NA	NA	
23	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	14:30	06/30/10	10:05	
23A (Dup)	NA	NA	NA	NA	NA	
24	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	10:25	07/01/10	10:40	
24A (Dup)	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	10:25	07/01/10	10:40	
25	H <sub>2</sub> S/SO <sub>2</sub>	06/01/10	11:55	06/30/10	12:15	
25A (Dup)	H <sub>2</sub> S	06/01/10	11:55	06/30/10	12:15	
26	H <sub>2</sub> S/SO <sub>2</sub>	06/01/10	12:55	06/30/10	13:25	
26A (Dup)	SO <sub>2</sub>	06/01/10	12:55	06/30/10	13:25	
27	H <sub>2</sub> S/SO <sub>2</sub>	06/01/10	13:35	06/30/10	14:10	
27A (Dup)	H <sub>2</sub> S	06/01/10	13:35	06/30/10	14:10	
28	SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	13:10	07/01/10	13:20	
28A (Dup)	SO <sub>2</sub>	06/02/10	13:10	07/01/10	13:20	
29	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	15:25	06/30/10	15:55	
29A (Dup)	NO <sub>2</sub> /O <sub>3</sub>	06/01/10	15:25	06/30/10	15:55	
32	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/01/10	06:20	06/30/10	06:30	
32A (Dup)	NA	NA	NA	NA	NA	
34	H <sub>2</sub> S/SO <sub>2</sub> /NO <sub>2</sub> /O <sub>3</sub>	06/02/10	15:40	06/28/10	10:00	
34A (Dup)	NA	NA	NA	NA	NA	

# Passive Network Laboratory Analysis



Your Project #: 2010/06/01 - 2010/06/30  
Site: LICA

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

**Report Date: 2010/07/20**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B053595**  
**Received: 2010/07/06, 11:57**

Sample Matrix: Air  
# Samples Received: 45

Analyses	Quantity	Date Extracted	Date Analyzed	LaboratoryMethod	AnalyticalMethod
H2S Passive Analysis 0	25	2010/07/16	2010/07/20	EINDSOP-00150	Tang.Passive H2S in
NO2 Passive Analysis 0	13	2010/07/15	2010/07/20	EINDSOP-00148	Tang Passive NO2 in
NO2 Passive Analysis 0	22	2010/07/16	2010/07/20	EINDSOP-00148	Tang Passive NO2 in
O3 Passive Analysis 0	35	2010/07/19	2010/07/20	EINDSOP-00197	EPA 300 R2.1
SO2 Passive Analysis 0	39	2010/07/16	2010/07/20	EINDSOP-00149	Tang Passive SO2 in

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

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

**Encryption Key**

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

LEVI MANCHAK,  
Email:  
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. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

**RESULTS OF CHEMICAL ANALYSES OF AIR**

MaxxamID		V23604	V23607	V23608	V23609	V23621		
SamplingDate		2010/06/01 07:40	2010/06/01 07:40	2010/06/01 07:00	2010/06/01 07:00	2010/06/02 11:45		
	<b>Units</b>	<b>2</b>	<b>2A (DUP)</b>	<b>3</b>	<b>3A (DUP)</b>	<b>4</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb			0.12	0.11		0.02	4107062
CalculatedNO2	ppb	0.4	0.4	0.6		0.8	0.1	4106387
CalculatedO3	ppb	21.4	20.6	25.8		26.3	0.1	4111375
CalculatedSO2	ppb	0.3	0.2	0.2		0.3	0.1	4107947
RDL = Reportable Detection Limit								

MaxxamID		V23622	V23623	V23624	V23625	V23626		
SamplingDate		2010/06/02 11:45	2010/06/02 11:05	2010/06/02 09:45	2010/06/02 09:45	2010/06/01 16:50		
	<b>Units</b>	<b>4A (DUP)</b>	<b>5</b>	<b>6</b>	<b>6A (DUP)</b>	<b>9</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb		0.41				0.02	4107062
CalculatedNO2	ppb	0.8	0.8	0.8	0.9	0.7	0.1	4106387
CalculatedO3	ppb	28.1	26.0	27.5	25.0	25.6	0.1	4111375
CalculatedSO2	ppb	0.3	0.3	0.3	0.3	0.2	0.1	4107947
RDL = Reportable Detection Limit								

MaxxamID		V23627	V23628	V23629	V23630		
SamplingDate		2010/06/01 16:50	2010/06/01 08:30	2010/06/01 09:20	2010/06/01 09:20		
	<b>Units</b>	<b>9A (DUP)</b>	<b>10</b>	<b>11</b>	<b>11A (DUP)</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb		0.20	0.06	0.05	0.02	4107062	
CalculatedNO2	ppb	0.8	0.9	0.3	0.3	0.1	4106387	
CalculatedO3	ppb	25.6	25.6	19.0	20.1	0.1	4111375	
CalculatedSO2	ppb	0.3	0.4	0.2	0.2	0.1	4107947	
RDL = Reportable Detection Limit								

**RESULTS OF CHEMICAL ANALYSES OF AIR**

MaxxamID		V23631	V23632	V23633	V23634	V23635		
SamplingDate		2010/06/01 10:45	2010/06/01 12:15	2010/06/01 12:15	2010/06/01 13:10	2010/06/01 16:15		
	<b>Units</b>	<b>12</b>	<b>13</b>	<b>13A(DUP)</b>	<b>14</b>	<b>15</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb	0.06	0.06	0.07	0.12		0.02	4107062
CalculatedNO2	ppb	0.4	0.3	0.3	0.5	0.7	0.1	4107607
CalculatedO3	ppb	23.1	25.8	24.5	29.3	25.3	0.1	4111375
CalculatedSO2	ppb	0.2	0.3	0.2	1.0	0.3	0.1	4107947

RDL = Reportable Detection Limit

MaxxamID		V23636	V23638	V23639		V23640		
SamplingDate		2010/06/01 16:15	2010/06/02 08:15	2010/06/02 08:15		2010/06/02 09:00		
	<b>Units</b>	<b>15A(DUP)</b>	<b>16</b>	<b>16A(DUP)</b>	<b>QC Batch</b>	<b>17</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb		0.13	0.12	4107062	0.21	0.02	4107062
CalculatedNO2	ppb	0.6	0.7		4107607	1.2	0.1	4107607
CalculatedO3	ppb	22.5	24.5		4111375	25.9	0.1	4111398
CalculatedSO2	ppb	0.3	0.2		4107947	0.3	0.1	4107951

RDL = Reportable Detection Limit

MaxxamID		V23641	V23642	V23643	V23644	V23645		
SamplingDate		2010/06/02 09:00	2010/06/02 07:30	2010/06/02 07:30	2010/06/02 06:35	2010/06/02 06:35		
	<b>Units</b>	<b>17A(DUP)</b>	<b>18</b>	<b>18A(DUP)</b>	<b>19</b>	<b>19A(DUP)</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb		0.09	0.08			0.02	4107062
CalculatedNO2	ppb	1.1	0.5		0.4	0.4	0.1	4107607
CalculatedO3	ppb	25.8	19.7		28.9	25.8	0.1	4111398
CalculatedSO2	ppb	0.2	0.2		0.2	0.2	0.1	4107951

RDL = Reportable Detection Limit

**RESULTS OF CHEMICAL ANALYSES OF AIR**

MaxxamID		V23646	V23647	V23648	V23649	V23650		
SamplingDate		2010/06/01 15:20	2010/06/01 14:30	2010/06/02 10:25	2010/06/02 10:25	2010/06/01 11:55		
	<b>Units</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>24A(DUP)</b>	<b>25</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb	0.13		0.12		0.05	0.02	4107062
CalculatedNO2	ppb	0.6	<0.1	1.0	1.1		0.1	4107607
CalculatedO3	ppb	21.7	21.4	26.8	26.3		0.1	4111398
CalculatedSO2	ppb	0.2	0.2	0.2	0.3	0.2	0.1	4107951

RDL = Reportable Detection Limit

MaxxamID		V23651	V23652	V23653	V23654	V23655		
SamplingDate		2010/06/01 11:55	2010/06/01 12:55	2010/06/01 12:55	2010/06/01 13:35	2010/06/01 13:35		
	<b>Units</b>	<b>25A(DUP)</b>	<b>26</b>	<b>26A(DUP)</b>	<b>27</b>	<b>27A(DUP)</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb	0.05	0.08		0.15	0.17	0.02	4107062
CalculatedSO2	ppb		0.5	0.5	0.6		0.1	4107951

RDL = Reportable Detection Limit

MaxxamID		V23656	V23657	V23658	V23659	V23662		
SamplingDate		2010/06/02 13:10	2010/06/02 13:10	2010/06/01 15:25	2010/06/01 15:25	2010/06/01 06:20		
	<b>Units</b>	<b>28</b>	<b>28A(DUP)</b>	<b>29</b>	<b>29A(DUP)</b>	<b>32</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>								
CalculatedH2S	ppb			0.13		0.13	0.02	4107062
CalculatedNO2	ppb	1.6		0.6	0.5	0.3	0.1	4107607
CalculatedO3	ppb	26.1		25.0	26.1	31.3	0.1	4111398
CalculatedSO2	ppb	0.4	0.4	0.2		0.3	0.1	4107951

RDL = Reportable Detection Limit

**RESULTS OF CHEMICAL ANALYSES OF AIR**

MaxxamID		V23814	V23815		
SamplingDate		2010/06/02 15:40	2010/06/02 12:35		
	<b>Units</b>	<b>34</b>	<b>8</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Passive Monitoring</b>					
CalculatedH2S	ppb	0.20		0.02	4107062
CalculatedNO2	ppb	0.9	0.6	0.1	4107607
CalculatedO3	ppb	28.6	28.7	0.1	4111398
CalculatedSO2	ppb	0.4	0.3	0.1	4107951
RDL = Reportable Detection Limit					





Maxxam Job #: B053595  
Report Date: 2010/07/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION  
Client Project #: 2010/06/01 - 2010/06/30  
Site Reference: LICA  
Sampler Initials: SB

**General Comments**

**Results relate only to the items tested.**

Quality Assurance Report

Maxxam Job Number: PB053595

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
4106387 DF4	CalibrationCheck	CalculatedNO2	2010/07/15		99	%	76 - 118
	SpikedBlank	CalculatedNO2	2010/07/15		100	%	N/A
	MethodBlank	CalculatedNO2	2010/07/15	<0.1		ppb	
4107062 TM5	CalibrationCheck	CalculatedH2S	2010/07/16		102	%	80 - 120
	SpikedBlank	CalculatedH2S	2010/07/16		100	%	N/A
4107607 DF4	CalibrationCheck	CalculatedNO2	2010/07/16		100	%	76 - 118
	SpikedBlank	CalculatedNO2	2010/07/16		97	%	N/A
	MethodBlank	CalculatedNO2	2010/07/16	<0.1		ppb	
4107947 DF4	CalibrationCheck	CalculatedSO2	2010/07/20		101	%	95 - 105
	SpikedBlank	CalculatedSO2	2010/07/20		103	%	N/A
	MethodBlank	CalculatedSO2	2010/07/20	<0.1		ppb	
4107951 DF4	CalibrationCheck	CalculatedSO2	2010/07/20		100	%	95 - 105
	SpikedBlank	CalculatedSO2	2010/07/20		104	%	N/A
	MethodBlank	CalculatedSO2	2010/07/20	<0.1		ppb	
4111375 OZ	CalibrationCheck	CalculatedO3	2010/07/19		100	%	91 - 107
	SpikedBlank	CalculatedO3	2010/07/19		101	%	N/A
	MethodBlank	CalculatedO3	2010/07/19	<0.1		ppb	
4111398 OZ	CalibrationCheck	CalculatedO3	2010/07/19		98	%	91 - 107
	SpikedBlank	CalculatedO3	2010/07/19		103	%	N/A
	MethodBlank	CalculatedO3	2010/07/19	<0.1		ppb	

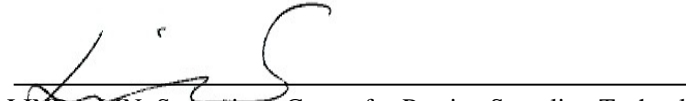
Calibration Check: A calibration standard analyzed at different times to evaluate on-going calibration accuracy.  
 Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.  
 Method Blank: A blank matrix containing all reagents used in the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

**Validation Signature Page**

**Maxxam Job #: B053595**

---

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

# **Polycyclic Aromatic Hydrocarbons Laboratory Analysis**

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: Cold Lake South  
 Station ID: Lica1  
 Field Sample ID: LICA PUF/CLS/May 20, 10

Puf+ s/n: 100-1020  
 Motor s/n: 1138  
 Installation Date/Time: May 19, 10 @ 07:00 mst  
 Removal Date/Time: May 21, 10 @

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
20-May-10	05/20/2010 0:00	05/21/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
18-May-10	25-May-10	27-May-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
701	229	17.9	330.33

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

Comments: COC #No Number, Source COC

GB050778 PUFF#1

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/May 20, 10

Technician Signature: \_\_\_\_\_



Your C.O.C. #: n/a

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/06**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B067668**

**Received: 2010/05/28, 10:17**

Sample Matrix: PUF AND FILTER

# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/15	2010/07/01	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

=====

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

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 #: B067668  
 Report Date: 2010/07/06

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

Maxxam ID		FZ9881	FZ9882		
Sampling Date		2010/05/20	2010/05/20		
COC Number		n/a	n/a		
	<b>Units</b>	<b>LICA</b>	<b>LICA</b>	<b>RDL</b>	<b>QC Batch</b>
		<b>PUF/QFF/CLS/MAY20,10</b>	<b>PUF/QFF/PORT/MAY20,10</b>		

<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2179963
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2179963
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2179963
2-Methylantracene	ug	<0.10	<0.10	0.10	2179963
2-Methylnaphthalene	ug	0.12	<0.10	0.10	2179963
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2179963
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2179963
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2179963
Acenaphthene	ug	<0.050	<0.050	0.050	2179963
Acenaphthylene	ug	<0.050	<0.050	0.050	2179963
Anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2179963
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2179963
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Biphenyl	ug	<0.10	<0.10	0.10	2179963
Chrysene	ug	<0.050	<0.050	0.050	2179963
Coronene	ug	<0.10	<0.10	0.10	2179963
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2179963
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2179963
Fluoranthene	ug	0.060	<0.050	0.050	2179963
Fluorene	ug	0.100	<0.050	0.050	2179963
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2179963
m-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Naphthalene	ug	0.140	0.080	0.072	2179963
o-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Perylene	ug	<0.10	<0.10	0.10	2179963

N/A = Not Applicable  
 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B067668  
 Report Date: 2010/07/06

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

Maxxam ID		FZ9881	FZ9882		
Sampling Date		2010/05/20	2010/05/20		
COC Number		n/a	n/a		
	Units	LICA PUF/QFF/CLS/MAY20,10	LICA PUF/QFF/PORT/MAY20,10	RDL	QC Batch
Phenanthrene	ug	0.560	0.240	0.050	2179963
p-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Pyrene	ug	<0.050	<0.050	0.050	2179963
Quinoline	ug	<0.40	<0.40	0.40	2179963
Tetralin	ug	<0.10	<0.10	0.10	2179963
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	70	72		2179963
D10-Fluoranthene	%	96	100		2179963
D10-Fluorene (FS)	%	56	56		2179963
D10-Phenanthrene	%	88	92		2179963
D12-Benzo(a)anthracene	%	110	118		2179963
D12-Benzo(a)pyrene	%	86	90		2179963
D12-Benzo(b)fluoranthene	%	90	96		2179963
D12-Benzo(ghi)perylene	%	90	94		2179963
D12-Benzo(k)fluoranthene	%	90	92		2179963
D12-Chrysene	%	94	96		2179963
D12-Indeno(1,2,3-cd)pyrene	%	90	94		2179963
D12-Perylene	%	88	94		2179963
D14-Dibenzo(a,h)anthracene	%	82	86		2179963
D14-Terphenyl (FS)	%	86	90		2179963
D8-Acenaphthylene	%	82	84		2179963
D8-Naphthalene	%	78	80		2179963
N/A = Not Applicable QC Batch = Quality Control Batch					



Maxxam Job #: B067668  
 Report Date: 2010/07/06

**Test Summary**

**Maxxam ID** FZ9881 **Collected** 2010/05/20  
**Sample ID** LICA PUF/QFF/CLS/MAY20,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/05/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

**Maxxam ID** FZ9882 **Collected** 2010/05/20  
**Sample ID** LICA PUF/QFF/PORT/MAY20,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/05/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

Maxxam Job #: B067668  
Report Date: 2010/07/06

**GENERAL COMMENTS**

PAHMS-F

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

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene 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: GB067668

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/06/30		78	%	50 - 150
		D10-Fluoranthene	2010/06/30		94	%	50 - 150
		D10-Phenanthrene	2010/06/30		86	%	50 - 150
		D12-Benzo(a)anthracene	2010/06/30		118	%	50 - 150
		D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/06/30		90	%	50 - 150
		D12-Benzo(ghi)perylene	2010/06/30		92	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/06/30		94	%	50 - 150
		D12-Chrysene	2010/06/30		104	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/06/30		90	%	50 - 150
		D12-Perylene	2010/06/30		90	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		84	%	50 - 150
		RPD	D8-Acenaphthylene	2010/06/30		90	%
	D8-Naphthalene		2010/06/30		94	%	50 - 150
	Spiked Blank	Acenaphthene	2010/06/30		85	%	60 - 130
		Acenaphthene	2010/06/30	2.9		%	50
	RPD	Acenaphthylene	2010/06/30		93	%	60 - 130
		Acenaphthylene	2010/06/30	2.7		%	50
	Spiked Blank	Anthracene	2010/06/30		90	%	60 - 130
		Anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Benzo(a)anthracene	2010/06/30		100	%	60 - 130
		Benzo(a)anthracene	2010/06/30	2.5		%	50
	Spiked Blank	Benzo(a)pyrene	2010/06/30		80	%	60 - 130
		Benzo(a)pyrene	2010/06/30	6.1		%	50
	Spiked Blank	Benzo(b)fluoranthene	2010/06/30		83	%	60 - 130
		Benzo(b)fluoranthene	2010/06/30	8.7		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2010/06/30		85	%	60 - 130
		Benzo(g,h,i)perylene	2010/06/30	5.7		%	50
	Spiked Blank	Benzo(k)fluoranthene	2010/06/30		103	%	60 - 130
		Benzo(k)fluoranthene	2010/06/30	2.4		%	50
	Spiked Blank	Chrysene	2010/06/30		105	%	60 - 130
		Chrysene	2010/06/30	2.4		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2010/06/30		88	%	60 - 130
		Dibenz(a,h)anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Fluoranthene	2010/06/30		90	%	60 - 130
		Fluoranthene	2010/06/30	2.7		%	50
	Spiked Blank	Fluorene	2010/06/30		88	%	60 - 130
		Fluorene	2010/06/30	0		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/06/30		85	%	60 - 130
		Indeno(1,2,3-cd)pyrene	2010/06/30	2.9		%	50
Spiked Blank	Naphthalene	2010/06/30		85	%	60 - 130	
	Naphthalene	2010/06/30	2.9		%	50	
Spiked Blank	Phenanthrene	2010/06/30		80	%	60 - 130	
	Phenanthrene	2010/06/30	3.1		%	50	
Spiked Blank	Pyrene	2010/06/30		83	%	60 - 130	
	Pyrene	2010/06/30	3.0		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/06/30		74	%	50 - 150	
	D10-Fluoranthene	2010/06/30		88	%	50 - 150	
	D10-Phenanthrene	2010/06/30		78	%	50 - 150	
	D12-Benzo(a)anthracene	2010/06/30		108	%	50 - 150	
	D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150	
	D12-Benzo(b)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Benzo(ghi)perylene	2010/06/30		88	%	50 - 150	
	D12-Benzo(k)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Chrysene	2010/06/30		94	%	50 - 150	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB067668

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/06/30		88	%	50 - 150
		D12-Perylene	2010/06/30		92	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		80	%	50 - 150
		D8-Acenaphthylene	2010/06/30		84	%	50 - 150
		D8-Naphthalene	2010/06/30		88	%	50 - 150
		1-Methylnaphthalene	2010/06/30	<0.10		ug	
		1-Methylphenanthrene	2010/06/30	<0.10		ug	
		2-Chloronaphthalene	2010/06/30	<0.10		ug	
		2-Methylantracene	2010/06/30	<0.10		ug	
		2-Methylnaphthalene	2010/06/30	<0.10		ug	
		3-Methylcholanthrene	2010/06/30	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/06/30	<0.10		ug	
		9,10-Dimethylantracene	2010/06/30	<0.40		ug	
		Acenaphthene	2010/06/30	<0.050		ug	
		Acenaphthylene	2010/06/30	<0.050		ug	
		Anthracene	2010/06/30	<0.050		ug	
		Benzo(a)anthracene	2010/06/30	<0.050		ug	
		Benzo(a)fluorene	2010/06/30	<0.10		ug	
		Benzo(a)pyrene	2010/06/30	<0.050		ug	
		Benzo(b)fluoranthene	2010/06/30	<0.050		ug	
		Benzo(b)fluorene	2010/06/30	<0.10		ug	
		Benzo(e)pyrene	2010/06/30	<0.10		ug	
		Benzo(g,h,i)perylene	2010/06/30	<0.050		ug	
		Benzo(k)fluoranthene	2010/06/30	<0.050		ug	
		Biphenyl	2010/06/30	<0.10		ug	
		Chrysene	2010/06/30	<0.050		ug	
		Coronene	2010/06/30	<0.10		ug	
		Dibenz(a,h)anthracene	2010/06/30	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/06/30	<0.20		ug	
		Fluoranthene	2010/06/30	<0.050		ug	
		Fluorene	2010/06/30	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/06/30	<0.050		ug	
		m-Terphenyl	2010/06/30	<0.10		ug	
		Naphthalene	2010/06/30	<0.072		ug	
		o-Terphenyl	2010/06/30	<0.10		ug	
		Perylene	2010/06/30	<0.10		ug	
		Phenanthrene	2010/06/30	<0.050		ug	
		p-Terphenyl	2010/06/30	<0.10		ug	
		Pyrene	2010/06/30	<0.050		ug	
		Quinoline	2010/06/30	<0.40		ug	
		Tetralin	2010/06/30	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: Cold Lake South  
 Station ID: Lica1  
 Field Sample ID: LICA PUF/CLS/May 26, 10

Puf+ s/n: 100-1020  
 Motor s/n: 1138  
 Installation Date/Time: May 25, 10 @ 06:45 mst  
 Removal Date/Time: May 27, 10 @ 15:35 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
26-May-10	05/26/2010 0:00	05/27/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
21-May-10	31-May-10	02-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
708	229	11.0	330.36

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

Comments: COC #No Number, Source COC

GB050787 PUFF#1

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/May 26, 10

Technician Signature: \_\_\_\_\_



Your C.O.C. #: N/A

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/06**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B069887**

**Received: 2010/06/02, 09:10**

Sample Matrix: PUF AND FILTER

# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/15	2010/07/01	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

=====

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

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 #: B069887  
 Report Date: 2010/07/06

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

Maxxam ID		GB1256	GB1257		
Sampling Date		2010/05/26	2010/05/26		
COC Number		N/A	N/A		
	<b>Units</b>	<b>LICA PUF/QFF/CLS/MAY 26,10</b>	<b>LICA PUF/QFF/PORT/MAY 26,10</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Semivolatiles Organics</b>					
1-Methylnaphthalene	ug	0.22	<0.10	0.10	2179963
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2179963
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2179963
2-Methylantracene	ug	<0.10	<0.10	0.10	2179963
2-Methylnaphthalene	ug	0.42	<0.10	0.10	2179963
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2179963
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2179963
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2179963
Acenaphthene	ug	0.100	<0.050	0.050	2179963
Acenaphthylene	ug	0.180	<0.050	0.050	2179963
Anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2179963
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2179963
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Biphenyl	ug	0.12	<0.10	0.10	2179963
Chrysene	ug	<0.050	<0.050	0.050	2179963
Coronene	ug	<0.10	<0.10	0.10	2179963
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2179963
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2179963
Fluoranthene	ug	0.080	<0.050	0.050	2179963
Fluorene	ug	0.180	<0.050	0.050	2179963
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2179963
m-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Naphthalene	ug	0.380	0.100	0.072	2179963
o-Terphenyl	ug	<0.10	<0.10	0.10	2179963

N/A = Not Applicable  
 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B069887  
 Report Date: 2010/07/06

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

Maxxam ID		GB1256	GB1257		
Sampling Date		2010/05/26	2010/05/26		
COC Number		N/A	N/A		
	Units	LICA PUF/QFF/CLS/MAY 26,10	LICA PUF/QFF/PORT/MAY 26,10	RDL	QC Batch
Perylene	ug	<0.10	<0.10	0.10	2179963
Phenanthrene	ug	0.480	0.100	0.050	2179963
p-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Pyrene	ug	0.060	<0.050	0.050	2179963
Quinoline	ug	<0.40	<0.40	0.40	2179963
Tetralin	ug	<0.10	<0.10	0.10	2179963
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	68	66		2179963
D10-Fluoranthene	%	92	92		2179963
D10-Fluorene (FS)	%	56	58		2179963
D10-Phenanthrene	%	84	84		2179963
D12-Benzo(a)anthracene	%	102	104		2179963
D12-Benzo(a)pyrene	%	84	82		2179963
D12-Benzo(b)fluoranthene	%	88	88		2179963
D12-Benzo(ghi)perylene	%	88	90		2179963
D12-Benzo(k)fluoranthene	%	86	88		2179963
D12-Chrysene	%	90	92		2179963
D12-Indeno(1,2,3-cd)pyrene	%	88	88		2179963
D12-Perylene	%	84	84		2179963
D14-Dibenzo(a,h)anthracene	%	82	82		2179963
D14-Terphenyl (FS)	%	84	88		2179963
D8-Acenaphthylene	%	78	78		2179963
D8-Naphthalene	%	74	74		2179963
N/A = Not Applicable QC Batch = Quality Control Batch					



Maxxam Job #: B069887  
 Report Date: 2010/07/06

### Test Summary

**Maxxam ID** GB1256 **Collected** 2010/05/26  
**Sample ID** LICA PUF/QFF/CLS/MAY 26,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

**Maxxam ID** GB1257 **Collected** 2010/05/26  
**Sample ID** LICA PUF/QFF/PORT/MAY 26,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

Maxxam Job #: B069887  
Report Date: 2010/07/06

**GENERAL COMMENTS**

**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: GB069887

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/06/30		78	%	50 - 150
		D10-Fluoranthene	2010/06/30		94	%	50 - 150
		D10-Phenanthrene	2010/06/30		86	%	50 - 150
		D12-Benzo(a)anthracene	2010/06/30		118	%	50 - 150
		D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/06/30		90	%	50 - 150
		D12-Benzo(ghi)perylene	2010/06/30		92	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/06/30		94	%	50 - 150
		D12-Chrysene	2010/06/30		104	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/06/30		90	%	50 - 150
		D12-Perylene	2010/06/30		90	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		84	%	50 - 150
		RPD	D8-Acenaphthylene	2010/06/30		90	%
	D8-Naphthalene		2010/06/30		94	%	50 - 150
	Spiked Blank	Acenaphthene	2010/06/30		85	%	60 - 130
		Acenaphthene	2010/06/30	2.9		%	50
	RPD	Acenaphthylene	2010/06/30		93	%	60 - 130
		Acenaphthylene	2010/06/30	2.7		%	50
	Spiked Blank	Anthracene	2010/06/30		90	%	60 - 130
		Anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Benzo(a)anthracene	2010/06/30		100	%	60 - 130
		Benzo(a)anthracene	2010/06/30	2.5		%	50
	Spiked Blank	Benzo(a)pyrene	2010/06/30		80	%	60 - 130
		Benzo(a)pyrene	2010/06/30	6.1		%	50
	Spiked Blank	Benzo(b)fluoranthene	2010/06/30		83	%	60 - 130
		Benzo(b)fluoranthene	2010/06/30	8.7		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2010/06/30		85	%	60 - 130
		Benzo(g,h,i)perylene	2010/06/30	5.7		%	50
	Spiked Blank	Benzo(k)fluoranthene	2010/06/30		103	%	60 - 130
		Benzo(k)fluoranthene	2010/06/30	2.4		%	50
	Spiked Blank	Chrysene	2010/06/30		105	%	60 - 130
		Chrysene	2010/06/30	2.4		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2010/06/30		88	%	60 - 130
		Dibenz(a,h)anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Fluoranthene	2010/06/30		90	%	60 - 130
		Fluoranthene	2010/06/30	2.7		%	50
	Spiked Blank	Fluorene	2010/06/30		88	%	60 - 130
		Fluorene	2010/06/30	0		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/06/30		85	%	60 - 130
		Indeno(1,2,3-cd)pyrene	2010/06/30	2.9		%	50
Spiked Blank	Naphthalene	2010/06/30		85	%	60 - 130	
	Naphthalene	2010/06/30	2.9		%	50	
Spiked Blank	Phenanthrene	2010/06/30		80	%	60 - 130	
	Phenanthrene	2010/06/30	3.1		%	50	
Spiked Blank	Pyrene	2010/06/30		83	%	60 - 130	
	Pyrene	2010/06/30	3.0		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/06/30		74	%	50 - 150	
	D10-Fluoranthene	2010/06/30		88	%	50 - 150	
	D10-Phenanthrene	2010/06/30		78	%	50 - 150	
	D12-Benzo(a)anthracene	2010/06/30		108	%	50 - 150	
	D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150	
	D12-Benzo(b)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Benzo(ghi)perylene	2010/06/30		88	%	50 - 150	
	D12-Benzo(k)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Chrysene	2010/06/30		94	%	50 - 150	

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

## Quality Assurance Report (Continued)

Maxxam Job Number: GB069887

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/06/30		88	%	50 - 150
		D12-Perylene	2010/06/30		92	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		80	%	50 - 150
		D8-Acenaphthylene	2010/06/30		84	%	50 - 150
		D8-Naphthalene	2010/06/30		88	%	50 - 150
		1-Methylnaphthalene	2010/06/30	<0.10		ug	
		1-Methylphenanthrene	2010/06/30	<0.10		ug	
		2-Chloronaphthalene	2010/06/30	<0.10		ug	
		2-Methylanthracene	2010/06/30	<0.10		ug	
		2-Methylnaphthalene	2010/06/30	<0.10		ug	
		3-Methylcholanthrene	2010/06/30	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/06/30	<0.10		ug	
		9,10-Dimethylanthracene	2010/06/30	<0.40		ug	
		Acenaphthene	2010/06/30	<0.050		ug	
		Acenaphthylene	2010/06/30	<0.050		ug	
		Anthracene	2010/06/30	<0.050		ug	
		Benzo(a)anthracene	2010/06/30	<0.050		ug	
		Benzo(a)fluorene	2010/06/30	<0.10		ug	
		Benzo(a)pyrene	2010/06/30	<0.050		ug	
		Benzo(b)fluoranthene	2010/06/30	<0.050		ug	
		Benzo(b)fluorene	2010/06/30	<0.10		ug	
		Benzo(e)pyrene	2010/06/30	<0.10		ug	
		Benzo(g,h,i)perylene	2010/06/30	<0.050		ug	
		Benzo(k)fluoranthene	2010/06/30	<0.050		ug	
		Biphenyl	2010/06/30	<0.10		ug	
		Chrysene	2010/06/30	<0.050		ug	
		Coronene	2010/06/30	<0.10		ug	
		Dibenz(a,h)anthracene	2010/06/30	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/06/30	<0.20		ug	
		Fluoranthene	2010/06/30	<0.050		ug	
		Fluorene	2010/06/30	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/06/30	<0.050		ug	
		m-Terphenyl	2010/06/30	<0.10		ug	
		Naphthalene	2010/06/30	<0.072		ug	
		o-Terphenyl	2010/06/30	<0.10		ug	
		Perylene	2010/06/30	<0.10		ug	
		Phenanthrene	2010/06/30	<0.050		ug	
		p-Terphenyl	2010/06/30	<0.10		ug	
		Pyrene	2010/06/30	<0.050		ug	
		Quinoline	2010/06/30	<0.40		ug	
		Tetralin	2010/06/30	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: Cold Lake South  
 Station ID: Lica1  
 Field Sample ID: LICA PUF/CLS/June 1, 10

Puf+ s/n: 100-1020  
 Motor s/n: 1138  
 Installation Date/Time: May 31, 10 @ 09:50 mst  
 Removal Date/Time: June 2, 10 @ 10:00 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
01-Jun-10	06/01/2010 0:00	06/02/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
28-May-10	03-Jun-10	09-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
709	229	14.0	330.33

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

Comments: COC #No Number, Source COC

GB050789 PUFF#1

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/June 1, 10

Technician Signature: \_\_\_\_\_



Your C.O.C. #: N/A

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/06**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B072158**

**Received: 2010/06/05, 13:34**

Sample Matrix: Filter  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/15	2010/07/01	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

=====

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

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 #: B072158  
 Report Date: 2010/07/06

**SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)**

Maxxam ID		GC1813	GC1814		
Sampling Date		2010/06/01	2010/06/01		
COC Number		N/A	N/A		
	<b>Units</b>	<b>LICA PUF/CLS/JUNE 1,10</b>	<b>LICA PUF/PORT/JUNE 1,10</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	0.20	<0.10	0.10	2179963
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2179963
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2179963
2-Methylantracene	ug	<0.10	<0.10	0.10	2179963
2-Methylnaphthalene	ug	0.36	<0.10	0.10	2179963
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2179963
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2179963
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2179963
Acenaphthene	ug	0.100	<0.050	0.050	2179963
Acenaphthylene	ug	<0.050	<0.050	0.050	2179963
Anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2179963
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2179963
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Biphenyl	ug	<0.10	<0.10	0.10	2179963
Chrysene	ug	<0.050	<0.050	0.050	2179963
Coronene	ug	<0.10	<0.10	0.10	2179963
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2179963
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2179963
Fluoranthene	ug	<0.050	<0.050	0.050	2179963
Fluorene	ug	0.160	<0.050	0.050	2179963
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2179963
m-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Naphthalene	ug	0.300	0.100	0.072	2179963
o-Terphenyl	ug	<0.10	<0.10	0.10	2179963

N/A = Not Applicable  
 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B072158  
 Report Date: 2010/07/06

**SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)**

Maxxam ID		GC1813	GC1814		
Sampling Date		2010/06/01	2010/06/01		
COC Number		N/A	N/A		
	Units	LICA PUF/CLS/JUNE 1,10	LICA PUF/PORT/JUNE 1,10	RDL	QC Batch
Perylene	ug	<0.10	<0.10	0.10	2179963
Phenanthrene	ug	0.420	0.100	0.050	2179963
p-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Pyrene	ug	<0.050	<0.050	0.050	2179963
Quinoline	ug	<0.40	<0.40	0.40	2179963
Tetralin	ug	0.14	<0.10	0.10	2179963
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	70	72		2179963
D10-Fluoranthene	%	90	86		2179963
D10-Fluorene (FS)	%	62	60		2179963
D10-Phenanthrene	%	86	82		2179963
D12-Benzo(a)anthracene	%	106	106		2179963
D12-Benzo(a)pyrene	%	82	80		2179963
D12-Benzo(b)fluoranthene	%	88	84		2179963
D12-Benzo(ghi)perylene	%	88	82		2179963
D12-Benzo(k)fluoranthene	%	92	88		2179963
D12-Chrysene	%	96	94		2179963
D12-Indeno(1,2,3-cd)pyrene	%	86	82		2179963
D12-Perylene	%	82	82		2179963
D14-Dibenzo(a,h)anthracene	%	78	74		2179963
D14-Terphenyl (FS)	%	92	90		2179963
D8-Acenaphthylene	%	82	82		2179963
D8-Naphthalene	%	78	80		2179963
N/A = Not Applicable QC Batch = Quality Control Batch					



Maxxam Job #: B072158  
 Report Date: 2010/07/06

**Test Summary**

**Maxxam ID** GC1813 **Collected** 2010/06/01  
**Sample ID** LICA PUF/CLS/JUNE 1,10 **Shipped**  
**Matrix** Filter **Received** 2010/06/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

**Maxxam ID** GC1814 **Collected** 2010/06/01  
**Sample ID** LICA PUF/PORT/JUNE 1,10 **Shipped**  
**Matrix** Filter **Received** 2010/06/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

Maxxam Job #: B072158  
Report Date: 2010/07/06

**GENERAL COMMENTS**

**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: GB072158

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/06/30		78	%	50 - 150
		D10-Fluoranthene	2010/06/30		94	%	50 - 150
		D10-Phenanthrene	2010/06/30		86	%	50 - 150
		D12-Benzo(a)anthracene	2010/06/30		118	%	50 - 150
		D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/06/30		90	%	50 - 150
		D12-Benzo(ghi)perylene	2010/06/30		92	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/06/30		94	%	50 - 150
		D12-Chrysene	2010/06/30		104	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/06/30		90	%	50 - 150
		D12-Perylene	2010/06/30		90	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		84	%	50 - 150
		RPD	D8-Acenaphthylene	2010/06/30		90	%
	D8-Naphthalene		2010/06/30		94	%	50 - 150
	RPD	Acenaphthene	2010/06/30		85	%	60 - 130
		Acenaphthene	2010/06/30	2.9		%	50
	Spiked Blank	Acenaphthylene	2010/06/30		93	%	60 - 130
		Acenaphthylene	2010/06/30	2.7		%	50
	Spiked Blank	Anthracene	2010/06/30		90	%	60 - 130
		Anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Benzo(a)anthracene	2010/06/30		100	%	60 - 130
		Benzo(a)anthracene	2010/06/30	2.5		%	50
	Spiked Blank	Benzo(a)pyrene	2010/06/30		80	%	60 - 130
		Benzo(a)pyrene	2010/06/30	6.1		%	50
	Spiked Blank	Benzo(b)fluoranthene	2010/06/30		83	%	60 - 130
		Benzo(b)fluoranthene	2010/06/30	8.7		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2010/06/30		85	%	60 - 130
		Benzo(g,h,i)perylene	2010/06/30	5.7		%	50
	Spiked Blank	Benzo(k)fluoranthene	2010/06/30		103	%	60 - 130
		Benzo(k)fluoranthene	2010/06/30	2.4		%	50
	Spiked Blank	Chrysene	2010/06/30		105	%	60 - 130
		Chrysene	2010/06/30	2.4		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2010/06/30		88	%	60 - 130
		Dibenz(a,h)anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Fluoranthene	2010/06/30		90	%	60 - 130
		Fluoranthene	2010/06/30	2.7		%	50
	Spiked Blank	Fluorene	2010/06/30		88	%	60 - 130
		Fluorene	2010/06/30	0		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/06/30		85	%	60 - 130
		Indeno(1,2,3-cd)pyrene	2010/06/30	2.9		%	50
Spiked Blank	Naphthalene	2010/06/30		85	%	60 - 130	
	Naphthalene	2010/06/30	2.9		%	50	
Spiked Blank	Phenanthrene	2010/06/30		80	%	60 - 130	
	Phenanthrene	2010/06/30	3.1		%	50	
Spiked Blank	Pyrene	2010/06/30		83	%	60 - 130	
	Pyrene	2010/06/30	3.0		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/06/30		74	%	50 - 150	
	D10-Fluoranthene	2010/06/30		88	%	50 - 150	
	D10-Phenanthrene	2010/06/30		78	%	50 - 150	
	D12-Benzo(a)anthracene	2010/06/30		108	%	50 - 150	
	D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150	
	D12-Benzo(b)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Benzo(ghi)perylene	2010/06/30		88	%	50 - 150	
	D12-Benzo(k)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Chrysene	2010/06/30		94	%	50 - 150	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB072158

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/06/30		88	%	50 - 150
		D12-Perylene	2010/06/30		92	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		80	%	50 - 150
		D8-Acenaphthylene	2010/06/30		84	%	50 - 150
		D8-Naphthalene	2010/06/30		88	%	50 - 150
		1-Methylnaphthalene	2010/06/30	<0.10		ug	
		1-Methylphenanthrene	2010/06/30	<0.10		ug	
		2-Chloronaphthalene	2010/06/30	<0.10		ug	
		2-Methylanthracene	2010/06/30	<0.10		ug	
		2-Methylnaphthalene	2010/06/30	<0.10		ug	
		3-Methylcholanthrene	2010/06/30	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/06/30	<0.10		ug	
		9,10-Dimethylanthracene	2010/06/30	<0.40		ug	
		Acenaphthene	2010/06/30	<0.050		ug	
		Acenaphthylene	2010/06/30	<0.050		ug	
		Anthracene	2010/06/30	<0.050		ug	
		Benzo(a)anthracene	2010/06/30	<0.050		ug	
		Benzo(a)fluorene	2010/06/30	<0.10		ug	
		Benzo(a)pyrene	2010/06/30	<0.050		ug	
		Benzo(b)fluoranthene	2010/06/30	<0.050		ug	
		Benzo(b)fluorene	2010/06/30	<0.10		ug	
		Benzo(e)pyrene	2010/06/30	<0.10		ug	
		Benzo(g,h,i)perylene	2010/06/30	<0.050		ug	
		Benzo(k)fluoranthene	2010/06/30	<0.050		ug	
		Biphenyl	2010/06/30	<0.10		ug	
		Chrysene	2010/06/30	<0.050		ug	
		Coronene	2010/06/30	<0.10		ug	
		Dibenz(a,h)anthracene	2010/06/30	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/06/30	<0.20		ug	
		Fluoranthene	2010/06/30	<0.050		ug	
		Fluorene	2010/06/30	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/06/30	<0.050		ug	
		m-Terphenyl	2010/06/30	<0.10		ug	
		Naphthalene	2010/06/30	<0.072		ug	
		o-Terphenyl	2010/06/30	<0.10		ug	
		Perylene	2010/06/30	<0.10		ug	
		Phenanthrene	2010/06/30	<0.050		ug	
		p-Terphenyl	2010/06/30	<0.10		ug	
		Pyrene	2010/06/30	<0.050		ug	
		Quinoline	2010/06/30	<0.40		ug	
		Tetralin	2010/06/30	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: Cold Lake South  
 Station ID: Lica1  
 Field Sample ID: LICA PUF/CLS/June 7, 10

Puf+ s/n: 100-1020  
 Motor s/n: 1138  
 Installation Date/Time: June 6, 10 @ 11:23mst  
 Removal Date/Time: June 10, 10 @ 11:25 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
07-Jun-10	06/07/2010 0:00	06/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
03-Jun-10	10-Jun-10	15-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
709	229	14.7	330.34

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

Comments: COC #No Number, Source COC

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/June 7, 10

\_\_\_\_\_

\_\_\_\_\_

Technician Signature: \_\_\_\_\_



Your C.O.C. #: na

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/28**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B076772**

**Received: 2010/06/15, 08:44**

Sample Matrix: PUF AND FILTER

# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/18	2010/07/23	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

=====

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

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 #: B076772  
 Report Date: 2010/07/28

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

Maxxam ID		GE5452	GE5453		
Sampling Date		2010/06/07	2010/06/07		
COC Number		na	na		
	<b>Units</b>	<b>LICA</b>	<b>LICA</b>	<b>RDL</b>	<b>QC Batch</b>
		<b>PUF/QFF/CLS/JUNE7,10</b>	<b>PUF/QFF/PORT/JUNE7,10</b>		

<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2183826
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2183826
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2183826
2-Methylantracene	ug	<0.10	<0.10	0.10	2183826
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2183826
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2183826
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2183826
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2183826
Acenaphthene	ug	<0.050	<0.050	0.050	2183826
Acenaphthylene	ug	<0.050	<0.050	0.050	2183826
Anthracene	ug	<0.050	<0.050	0.050	2183826
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2183826
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2183826
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2183826
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2183826
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2183826
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2183826
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2183826
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2183826
Biphenyl	ug	<0.10	<0.10	0.10	2183826
Chrysene	ug	<0.050	<0.050	0.050	2183826
Coronene	ug	<0.10	<0.10	0.10	2183826
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2183826
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2183826
Fluoranthene	ug	0.100	<0.050	0.050	2183826
Fluorene	ug	0.124	<0.050	0.050	2183826
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2183826
m-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Naphthalene	ug	0.110	0.098	0.072	2183826
o-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Perylene	ug	<0.10	<0.10	0.10	2183826
Phenanthrene	ug	0.650	0.158	0.050	2183826

RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B076772  
 Report Date: 2010/07/28

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

Maxxam ID		GE5452	GE5453		
Sampling Date		2010/06/07	2010/06/07		
COC Number		na	na		
	<b>Units</b>	<b>LICA</b>	<b>LICA</b>	<b>RDL</b>	<b>QC Batch</b>
		<b>PUF/QFF/CLS/JUNE7,10</b>	<b>PUF/QFF/PORT/JUNE7,10</b>		

p-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Pyrene	ug	0.084	<0.050	0.050	2183826
Quinoline	ug	<0.40	<0.40	0.40	2183826
Tetralin	ug	<0.10	<0.10	0.10	2183826
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	56	64		2183826
D10-Fluoranthene	%	98	96		2183826
D10-Fluorene (FS)	%	39 (1)	45 (1)		2183826
D10-Phenanthrene	%	84	82		2183826
D12-Benzo(a)anthracene	%	102	108		2183826
D12-Benzo(a)pyrene	%	82	82		2183826
D12-Benzo(b)fluoranthene	%	86	92		2183826
D12-Benzo(ghi)perylene	%	88	88		2183826
D12-Benzo(k)fluoranthene	%	82	84		2183826
D12-Chrysene	%	80	84		2183826
D12-Indeno(1,2,3-cd)pyrene	%	86	86		2183826
D12-Perylene	%	82	82		2183826
D14-Dibenzo(a,h)anthracene	%	76	76		2183826
D14-Terphenyl (FS)	%	74	79		2183826
D8-Acenaphthylene	%	66	72		2183826
D8-Naphthalene	%	62	72		2183826

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 #: B076772  
 Report Date: 2010/07/28

**Test Summary**

**Maxxam ID** GE5452 **Collected** 2010/06/07  
**Sample ID** LICA PUF/QFF/CLS/JUNE7,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2183826	2010/06/18	2010/07/23	JIW

**Maxxam ID** GE5453 **Collected** 2010/06/07  
**Sample ID** LICA PUF/QFF/PORT/JUNE7,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2183826	2010/06/18	2010/07/23	JIW

Maxxam Job #: B076772  
Report Date: 2010/07/28

**GENERAL COMMENTS**

PAHMS-F(WS:2183826)

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

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene or Triphenylene. An estimated mdl for each of these compounds is 0.10ug .

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 GE5452-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample GE5453-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

**Results relate only to the items tested.**

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

Quality Assurance Report  
 Maxxam Job Number: GB076772

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2183826 JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/07/23		70	%	50 - 150
		D10-Fluoranthene	2010/07/23		86	%	50 - 150
		D10-Phenanthrene	2010/07/23		78	%	50 - 150
		D12-Benzo(a)anthracene	2010/07/23		96	%	50 - 150
		D12-Benzo(a)pyrene	2010/07/23		80	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/07/23		88	%	50 - 150
		D12-Benzo(ghi)perylene	2010/07/23		84	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/07/23		84	%	50 - 150
		D12-Chrysene	2010/07/23		90	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/07/23		80	%	50 - 150
		D12-Perylene	2010/07/23		82	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/23		70	%	50 - 150
		RPD	D8-Acenaphthylene	2010/07/23		74	%
	D8-Naphthalene		2010/07/23		88	%	50 - 150
	RPD	Acenaphthene	2010/07/23		82	%	60 - 130
	Spiked Blank	Acenaphthene	2010/07/23	8.3		%	50
	RPD	Acenaphthylene	2010/07/23		80	%	60 - 130
	RPD	Acenaphthylene	2010/07/23	7.4		%	50
	Spiked Blank	Anthracene	2010/07/23		71	%	60 - 130
	RPD	Anthracene	2010/07/23	3.1		%	50
	Spiked Blank	Benzo(a)anthracene	2010/07/23		79	%	60 - 130
	RPD	Benzo(a)anthracene	2010/07/23	3.9		%	50
	Spiked Blank	Benzo(a)pyrene	2010/07/23		74	%	60 - 130
	RPD	Benzo(a)pyrene	2010/07/23	3.3		%	50
	Spiked Blank	Benzo(b)fluoranthene	2010/07/23		81	%	60 - 130
	RPD	Benzo(b)fluoranthene	2010/07/23	0.9		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2010/07/23		79	%	60 - 130
	RPD	Benzo(g,h,i)perylene	2010/07/23	3.1		%	50
	Spiked Blank	Benzo(k)fluoranthene	2010/07/23		85	%	60 - 130
	RPD	Benzo(k)fluoranthene	2010/07/23	3.8		%	50
	Spiked Blank	Chrysene	2010/07/23		89	%	60 - 130
	RPD	Chrysene	2010/07/23	7.0		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2010/07/23		71	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2010/07/23	7.1		%	50
	Spiked Blank	Fluoranthene	2010/07/23		87	%	60 - 130
	RPD	Fluoranthene	2010/07/23	0.3		%	50
	Spiked Blank	Fluorene	2010/07/23		79	%	60 - 130
	RPD	Fluorene	2010/07/23	6.2		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/07/23		73	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2010/07/23	4.4		%	50
Spiked Blank	Naphthalene	2010/07/23		86	%	60 - 130	
RPD	Naphthalene	2010/07/23	10.0		%	50	
Spiked Blank	Phenanthrene	2010/07/23		76	%	60 - 130	
RPD	Phenanthrene	2010/07/23	3.0		%	50	
Spiked Blank	Pyrene	2010/07/23		82	%	60 - 130	
RPD	Pyrene	2010/07/23	0.6		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/07/23			70	%	50 - 150
	D10-Fluoranthene	2010/07/23			90	%	50 - 150
	D10-Phenanthrene	2010/07/23			78	%	50 - 150
	D12-Benzo(a)anthracene	2010/07/23			96	%	50 - 150
	D12-Benzo(a)pyrene	2010/07/23			82	%	50 - 150
	D12-Benzo(b)fluoranthene	2010/07/23			88	%	50 - 150
	D12-Benzo(ghi)perylene	2010/07/23			84	%	50 - 150
	D12-Benzo(k)fluoranthene	2010/07/23			84	%	50 - 150
	D12-Chrysene	2010/07/23			90	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB076772

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2183826 JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/07/23		80	%	50 - 150
		D12-Perylene	2010/07/23		84	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/23		72	%	50 - 150
		D8-Acenaphthylene	2010/07/23		72	%	50 - 150
		D8-Naphthalene	2010/07/23		84	%	50 - 150
		1-Methylnaphthalene	2010/07/23	<0.10		ug	
		1-Methylphenanthrene	2010/07/23	<0.10		ug	
		2-Chloronaphthalene	2010/07/23	<0.10		ug	
		2-Methylanthracene	2010/07/23	<0.10		ug	
		2-Methylnaphthalene	2010/07/23	<0.10		ug	
		3-Methylcholanthrene	2010/07/23	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/07/23	<0.10		ug	
		9,10-Dimethylanthracene	2010/07/23	<0.40		ug	
		Acenaphthene	2010/07/23	<0.050		ug	
		Acenaphthylene	2010/07/23	<0.050		ug	
		Anthracene	2010/07/23	<0.050		ug	
		Benzo(a)anthracene	2010/07/23	<0.050		ug	
		Benzo(a)fluorene	2010/07/23	<0.10		ug	
		Benzo(a)pyrene	2010/07/23	<0.050		ug	
		Benzo(b)fluoranthene	2010/07/23	<0.050		ug	
		Benzo(b)fluorene	2010/07/23	<0.10		ug	
		Benzo(e)pyrene	2010/07/23	<0.10		ug	
		Benzo(g,h,i)perylene	2010/07/23	<0.050		ug	
		Benzo(k)fluoranthene	2010/07/23	<0.050		ug	
		Biphenyl	2010/07/23	<0.10		ug	
		Chrysene	2010/07/23	<0.050		ug	
		Coronene	2010/07/23	<0.10		ug	
		Dibenz(a,h)anthracene	2010/07/23	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/07/23	<0.20		ug	
		Fluoranthene	2010/07/23	<0.050		ug	
		Fluorene	2010/07/23	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/07/23	<0.050		ug	
		m-Terphenyl	2010/07/23	<0.10		ug	
		Naphthalene	2010/07/23	<0.072		ug	
		o-Terphenyl	2010/07/23	<0.10		ug	
		Perylene	2010/07/23	<0.10		ug	
		Phenanthrene	2010/07/23	<0.050		ug	
		p-Terphenyl	2010/07/23	<0.10		ug	
		Pyrene	2010/07/23	<0.050		ug	
		Quinoline	2010/07/23	<0.40		ug	
		Tetralin	2010/07/23	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: Cold Lake South  
 Station ID: Lica1  
 Field Sample ID: LICA PUF/CLS/June 13, 10

Puf+ s/n: 100-1020  
 Motor s/n: 1138  
 Installation Date/Time: June 11, 10 @ 09:50 mst  
 Removal Date/Time: June 14, 10 @ 07:25 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
13-Jun-10	06/13/2010 0:00	06/14/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
10-Jun-10	15-Jun-10	18-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
711	229	21.5	330.38

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

Comments: COC #No Number, Source COC  
GB067917 PUFF # 1  
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/June 13, 10  
 \_\_\_\_\_  
 \_\_\_\_\_

Technician Signature: \_\_\_\_\_



Your C.O.C. #: 4706

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/29**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B078354**

**Received: 2010/06/17, 08:37**

Sample Matrix: AIR  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/06/21	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/07/29	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) ¶	2	N/A	2010/06/21	BRL SOP-00304	EPA TO-15

Sample Matrix: PUF AND FILTER  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/18	2010/07/23	BRL SOP-00201	CARB429(ARBM1,M2)mod

(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



Your C.O.C. #: 4706

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/29**

**CERTIFICATE OF ANALYSIS**

-2-

=====

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

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: 2

Page 2 of 18

Page 179 of 229

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**RESULTS OF ANALYSES OF AIR**

Maxxam ID		GF2209	GF2210	
Sampling Date		2010/06/13 00:00	2010/06/13 00:00	
COC Number		4706	4706	
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 -S2241</b>	<b>QC Batch</b>
<b>Volatile Organics</b>				
Pressure on Receipt	psig	18	20	2185777
QC Batch = Quality Control Batch				



Maxxam Job #: B078354  
 Report Date: 2010/07/29

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 -S2241</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Calculated Parameters</b>					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2220750
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2220750
Propene	ug/m3	<0.52	<0.52	0.52	2220750
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2220750
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2220750
Dichlorodifluoromethane (FREON 12)	ug/m3	<0.99	<0.99	0.99	2220750
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2220750
Chloromethane	ug/m3	1.25	1.21	0.62	2220750
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2220750
Chloroethane	ug/m3	<0.79	<0.79	0.79	2220750
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2220750
Trichlorofluoromethane (FREON 11)	ug/m3	2.2	2.2	1.1	2220750
Ethanol	ug/m3	<4.3	<4.3	4.3	2220750
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2220750
2-propanol	ug/m3	<7.4	<7.4	7.4	2220750
2-Propanone	ug/m3	11.1	8.3	1.9	2220750
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2220750
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2220750
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2220750
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2220750
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2220750
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2220750
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2220750
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2220750
Methylene Chloride(Dichloromethane)	ug/m3	2.0	2.1	1.0	2220750
Chloroform	ug/m3	<0.73	<0.73	0.73	2220750
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2220750
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2220750
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2220750
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2220750
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	Units	LICA VOC/CLS/JUNE 13,10 - 7791	LICA VOC/PORT/JUNE 13,10 - S2241	RDL	QC Batch
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2220750
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2220750
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2220750
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2220750
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2220750
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2220750
Bromomethane	ug/m3	<0.70	<0.70	0.70	2220750
Bromoform	ug/m3	<2.1	<2.1	2.1	2220750
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2220750
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2220750
Trichloroethylene	ug/m3	1.8	<1.6	1.6	2220750
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2220750
Benzene	ug/m3	<0.58	<0.58	0.58	2220750
Toluene	ug/m3	<0.75	<0.75	0.75	2220750
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2220750
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2220750
o-Xylene	ug/m3	<0.87	<0.87	0.87	2220750
Styrene	ug/m3	<0.85	<0.85	0.85	2220750
4-ethyltoluene	ug/m3	<11	<11	11	2220750
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2220750
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2220750
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2220750
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2220750
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220750
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220750
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220750
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2220750
Hexachlorobutadiene	ug/m3	<32	<32	32	2220750
Hexane	ug/m3	<1.1	<1.1	1.1	2220750
Heptane	ug/m3	<1.2	<1.2	1.2	2220750
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2220750
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2220750
QC Batch = Quality Control Batch					

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 - S2241</b>	<b>RDL</b>	<b>QC Batch</b>
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2220750
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2220750
QC Batch = Quality Control Batch					

Maxxam Job #: B078354  
 Report Date: 2010/07/29

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

Maxxam ID		GF2211	GF2212		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA PUF/CLS/JUNE 13,10</b>	<b>LICA PUF/PORT/JUNE 13,10</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2183826
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2183826
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2183826
2-Methylantracene	ug	<0.10	<0.10	0.10	2183826
2-Methylnaphthalene	ug	0.12	0.16	0.10	2183826
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2183826
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2183826
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2183826
Acenaphthene	ug	<0.050	<0.050	0.050	2183826
Acenaphthylene	ug	<0.050	<0.050	0.050	2183826
Anthracene	ug	<0.050	<0.050	0.050	2183826
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2183826
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2183826
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2183826
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2183826
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2183826
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2183826
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2183826
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2183826
Biphenyl	ug	<0.10	<0.10	0.10	2183826
Chrysene	ug	<0.050	<0.050	0.050	2183826
Coronene	ug	<0.10	<0.10	0.10	2183826
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2183826
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2183826
Fluoranthene	ug	<0.050	<0.050	0.050	2183826
Fluorene	ug	0.070	<0.050	0.050	2183826
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2183826
m-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Naphthalene	ug	0.098	0.108	0.072	2183826
o-Terphenyl	ug	<0.10	<0.10	0.10	2183826
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: B078354  
 Report Date: 2010/07/29

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

Maxxam ID		GF2211	GF2212		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA PUF/CLS/JUNE 13,10</b>	<b>LICA PUF/PORT/JUNE 13,10</b>	<b>RDL</b>	<b>QC Batch</b>

Perylene	ug	<0.10	<0.10	0.10	2183826
Phenanthrene	ug	0.394	0.158	0.050	2183826
p-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Pyrene	ug	<0.050	<0.050	0.050	2183826
Quinoline	ug	<0.40	<0.40	0.40	2183826
Tetralin	ug	<0.10	<0.10	0.10	2183826
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	58	60		2183826
D10-Fluoranthene	%	102	102		2183826
D10-Fluorene (FS)	%	44 (1)	40 (1)		2183826
D10-Phenanthrene	%	86	86		2183826
D12-Benzo(a)anthracene	%	116	112		2183826
D12-Benzo(a)pyrene	%	88	84		2183826
D12-Benzo(b)fluoranthene	%	92	92		2183826
D12-Benzo(ghi)perylene	%	90	92		2183826
D12-Benzo(k)fluoranthene	%	84	84		2183826
D12-Chrysene	%	86	84		2183826
D12-Indeno(1,2,3-cd)pyrene	%	88	90		2183826
D12-Perylene	%	84	82		2183826
D14-Dibenzo(a,h)anthracene	%	80	80		2183826
D14-Terphenyl (FS)	%	83	79		2183826
D8-Acenaphthylene	%	70	72		2183826
D8-Naphthalene	%	64	66		2183826

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 #: B078354  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 -S2241</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Volatile Organics</b>					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2185831
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2185831
Propene	ppbv	<0.30	<0.30	0.30	2185831
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2185831
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2185831
Dichlorodifluoromethane (FREON 12)	ppbv	<0.20	<0.20	0.20	2185831
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2185831
Chloromethane	ppbv	0.60	0.58	0.30	2185831
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2185831
Chloroethane	ppbv	<0.30	<0.30	0.30	2185831
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2185831
Trichlorofluoromethane (FREON 11)	ppbv	0.39	0.38	0.20	2185831
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2185831
Ethanol	ppbv	<2.3	<2.3	2.3	2185831
2-propanol	ppbv	<3.0	<3.0	3.0	2185831
2-Propanone	ppbv	4.66	3.50	0.80	2185831
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2185831
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2185831
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2185831
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2185831
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2185831
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2185831
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2185831
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2185831
Methylene Chloride(Dichloromethane)	ppbv	0.57	0.62	0.30	2185831
Chloroform	ppbv	<0.15	<0.15	0.15	2185831
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2185831
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2185831
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2185831
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2185831

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 -S2241</b>	<b>RDL</b>	<b>QC Batch</b>

1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2185831
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2185831
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2185831
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2185831
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2185831
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2185831
Bromomethane	ppbv	<0.18	<0.18	0.18	2185831
Bromoform	ppbv	<0.20	<0.20	0.20	2185831
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2185831
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2185831
Heptane	ppbv	<0.30	<0.30	0.30	2185831
Trichloroethylene	ppbv	0.33	<0.30	0.30	2185831
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2185831
Benzene	ppbv	<0.18	<0.18	0.18	2185831
Toluene	ppbv	<0.20	<0.20	0.20	2185831
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2185831
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2185831
o-Xylene	ppbv	<0.20	<0.20	0.20	2185831
Styrene	ppbv	<0.20	<0.20	0.20	2185831
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2185831
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2185831
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2185831
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2185831
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2185831
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2185831
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2185831
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2185831
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2185831
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2185831
Hexane	ppbv	<0.30	<0.30	0.30	2185831
Cyclohexane	ppbv	<0.20	<0.20	0.20	2185831
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2185831
QC Batch = Quality Control Batch					

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 -S2241</b>	<b>RDL</b>	<b>QC Batch</b>

1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2185831
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2185831
<b>Surrogate Recovery (%)</b>					
Bromochloromethane	%	77	77		2185831
D5-Chlorobenzene	%	74	75		2185831
Difluorobenzene	%	78	79		2185831

QC Batch = Quality Control Batch



Maxxam Job #: B078354  
 Report Date: 2010/07/29

### Test Summary

**Maxxam ID** GF2209  
**Sample ID** LICA VOC/CLS/JUNE 13,10 - 7791  
**Matrix** AIR  
**Collected** 2010/06/13  
**Shipped**  
**Received** 2010/06/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2185777	N/A	2010/06/21	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2220750	N/A	2010/07/29	
Volatile Organics in Air (TO-15)	GC/MS	2185831	N/A	2010/06/21	LSY

**Maxxam ID** GF2210  
**Sample ID** LICA VOC/PORT/JUNE 13,10 -S2241  
**Matrix** AIR  
**Collected** 2010/06/13  
**Shipped**  
**Received** 2010/06/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2185777	N/A	2010/06/21	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2220750	N/A	2010/07/29	
Volatile Organics in Air (TO-15)	GC/MS	2185831	N/A	2010/06/21	LSY

**Maxxam ID** GF2211  
**Sample ID** LICA PUF/CLS/JUNE 13,10  
**Matrix** PUF AND FILTER  
**Collected** 2010/06/13  
**Shipped**  
**Received** 2010/06/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2183826	2010/07/23	2010/07/23	JIW

**Maxxam ID** GF2212  
**Sample ID** LICA PUF/PORT/JUNE 13,10  
**Matrix** PUF AND FILTER  
**Collected** 2010/06/13  
**Shipped**  
**Received** 2010/06/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2183826	2010/06/18	2010/07/23	JIW

Maxxam Job #: B078354  
Report Date: 2010/07/29

**GENERAL COMMENTS**

Sample GF2211-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample GF2212-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

**Results relate only to the items tested.**

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

Quality Assurance Report  
 Maxxam Job Number: GB078354

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2183826 JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/07/23		70	%	50 - 150
		D10-Fluoranthene	2010/07/23		86	%	50 - 150
		D10-Phenanthrene	2010/07/23		78	%	50 - 150
		D12-Benzo(a)anthracene	2010/07/23		96	%	50 - 150
		D12-Benzo(a)pyrene	2010/07/23		80	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/07/23		88	%	50 - 150
		D12-Benzo(ghi)perylene	2010/07/23		84	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/07/23		84	%	50 - 150
		D12-Chrysene	2010/07/23		90	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/07/23		80	%	50 - 150
		D12-Perylene	2010/07/23		82	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/23		70	%	50 - 150
		RPD	Acenaphthylene	2010/07/23		74	%
	D8-Naphthalene		2010/07/23		88	%	50 - 150
	Acenaphthene		2010/07/23		82	%	60 - 130
	Acenaphthene		2010/07/23	8.3		%	50
	Acenaphthylene		2010/07/23		80	%	60 - 130
	Acenaphthylene		2010/07/23	7.4		%	50
	Anthracene		2010/07/23		71	%	60 - 130
	Anthracene		2010/07/23	3.1		%	50
	Benzo(a)anthracene		2010/07/23		79	%	60 - 130
	Benzo(a)anthracene		2010/07/23	3.9		%	50
	Benzo(a)pyrene		2010/07/23		74	%	60 - 130
	Benzo(a)pyrene		2010/07/23	3.3		%	50
	Benzo(b)fluoranthene		2010/07/23		81	%	60 - 130
	Benzo(b)fluoranthene		2010/07/23	0.9		%	50
	Benzo(g,h,i)perylene		2010/07/23		79	%	60 - 130
	Benzo(g,h,i)perylene		2010/07/23	3.1		%	50
	Benzo(k)fluoranthene		2010/07/23		85	%	60 - 130
	Benzo(k)fluoranthene	2010/07/23	3.8		%	50	
	Spiked Blank	Chrysene	2010/07/23		89	%	60 - 130
		Chrysene	2010/07/23	7.0		%	50
		Dibenz(a,h)anthracene	2010/07/23		71	%	60 - 130
		Dibenz(a,h)anthracene	2010/07/23	7.1		%	50
		Fluoranthene	2010/07/23		87	%	60 - 130
		Fluoranthene	2010/07/23	0.3		%	50
		Fluorene	2010/07/23		79	%	60 - 130
		Fluorene	2010/07/23	6.2		%	50
		Indeno(1,2,3-cd)pyrene	2010/07/23		73	%	60 - 130
		Indeno(1,2,3-cd)pyrene	2010/07/23	4.4		%	50
Naphthalene		2010/07/23		86	%	60 - 130	
Naphthalene		2010/07/23	10.0		%	50	
Phenanthrene		2010/07/23		76	%	60 - 130	
Phenanthrene		2010/07/23	3.0		%	50	
Pyrene		2010/07/23		82	%	60 - 130	
Pyrene		2010/07/23	0.6		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/07/23		70	%	50 - 150	
	D10-Fluoranthene	2010/07/23		90	%	50 - 150	
	D10-Phenanthrene	2010/07/23		78	%	50 - 150	
	D12-Benzo(a)anthracene	2010/07/23		96	%	50 - 150	
	D12-Benzo(a)pyrene	2010/07/23		82	%	50 - 150	
	D12-Benzo(b)fluoranthene	2010/07/23		88	%	50 - 150	
	D12-Benzo(ghi)perylene	2010/07/23		84	%	50 - 150	
	D12-Benzo(k)fluoranthene	2010/07/23		84	%	50 - 150	
D12-Chrysene	2010/07/23		90	%	50 - 150		

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

## Quality Assurance Report (Continued)

Maxxam Job Number: GB078354

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
2183826 JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/07/23		80	%	50 - 150	
		D12-Perylene	2010/07/23		84	%	50 - 150	
		D14-Dibenzo(a,h)anthracene	2010/07/23		72	%	50 - 150	
		D8-Acenaphthylene	2010/07/23		72	%	50 - 150	
		D8-Naphthalene	2010/07/23		84	%	50 - 150	
		1-Methylnaphthalene	2010/07/23	<0.10			ug	
		1-Methylphenanthrene	2010/07/23	<0.10			ug	
		2-Chloronaphthalene	2010/07/23	<0.10			ug	
		2-Methylantracene	2010/07/23	<0.10			ug	
		2-Methylnaphthalene	2010/07/23	<0.10			ug	
		3-Methylcholanthrene	2010/07/23	<2.0			ug	
		7,12-Dimethylbenzo(a)anthracene	2010/07/23	<0.10			ug	
		9,10-Dimethylantracene	2010/07/23	<0.40			ug	
		Acenaphthene	2010/07/23	<0.050			ug	
		Acenaphthylene	2010/07/23	<0.050			ug	
		Anthracene	2010/07/23	<0.050			ug	
		Benzo(a)anthracene	2010/07/23	<0.050			ug	
		Benzo(a)fluorene	2010/07/23	<0.10			ug	
		Benzo(a)pyrene	2010/07/23	<0.050			ug	
		Benzo(b)fluoranthene	2010/07/23	<0.050			ug	
		Benzo(b)fluorene	2010/07/23	<0.10			ug	
		Benzo(e)pyrene	2010/07/23	<0.10			ug	
		Benzo(g,h,i)perylene	2010/07/23	<0.050			ug	
		Benzo(k)fluoranthene	2010/07/23	<0.050			ug	
		Biphenyl	2010/07/23	<0.10			ug	
		Chrysene	2010/07/23	<0.050			ug	
		Coronene	2010/07/23	<0.10			ug	
		Dibenz(a,h)anthracene	2010/07/23	<0.050			ug	
		Dibenzo(a,e)pyrene	2010/07/23	<0.20			ug	
		Fluoranthene	2010/07/23	<0.050			ug	
		Fluorene	2010/07/23	<0.050			ug	
		Indeno(1,2,3-cd)pyrene	2010/07/23	<0.050			ug	
		m-Terphenyl	2010/07/23	<0.10			ug	
		Naphthalene	2010/07/23	<0.072			ug	
		o-Terphenyl	2010/07/23	<0.10			ug	
		Perylene	2010/07/23	<0.10			ug	
		Phenanthrene	2010/07/23	<0.050			ug	
		p-Terphenyl	2010/07/23	<0.10			ug	
		Pyrene	2010/07/23	<0.050			ug	
		Quinoline	2010/07/23	<0.40			ug	
Tetralin	2010/07/23	<0.10			ug			
2185831 LSY	Spiked Blank	Bromochloromethane	2010/06/21		107	%	60 - 140	
		D5-Chlorobenzene	2010/06/21		107	%	60 - 140	
		Difluorobenzene	2010/06/21		109	%	60 - 140	
		2,2,4-Trimethylpentane	2010/06/21		93	%	70 - 130	
		Carbon Disulfide	2010/06/21		94	%	70 - 130	
		Propene	2010/06/21		95	%	70 - 130	
		Vinyl Acetate	2010/06/21		108	%	70 - 130	
		Vinyl Bromide	2010/06/21		95	%	70 - 130	
		Dichlorodifluoromethane (FREON 12)	2010/06/21		87	%	70 - 130	
		1,2-Dichlorotetrafluoroethane	2010/06/21		86	%	70 - 130	
		Chloromethane	2010/06/21		93	%	70 - 130	
		Vinyl Chloride	2010/06/21		99	%	70 - 130	
		Chloroethane	2010/06/21		99	%	70 - 130	
		1,3-Butadiene	2010/06/21		82	%	70 - 130	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB078354

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2185831 LSY	Spiked Blank	Trichlorofluoromethane (FREON 11)	2010/06/21		98	%	70 - 130
		Trichlorotrifluoroethane	2010/06/21		97	%	70 - 130
		Ethanol	2010/06/21		112	%	70 - 130
		2-propanol	2010/06/21		96	%	70 - 130
		2-Propanone	2010/06/21		101	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2010/06/21		97	%	70 - 130
		Methyl Isobutyl Ketone	2010/06/21		87	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2010/06/21		85	%	70 - 130
		Methyl t-butyl ether (MTBE)	2010/06/21		99	%	70 - 130
		Ethyl Acetate	2010/06/21		94	%	70 - 130
		1,1-Dichloroethylene	2010/06/21		97	%	70 - 130
		cis-1,2-Dichloroethylene	2010/06/21		97	%	70 - 130
		trans-1,2-Dichloroethylene	2010/06/21		97	%	70 - 130
		Methylene Chloride(Dichloromethane)	2010/06/21		86	%	70 - 130
		Chloroform	2010/06/21		97	%	70 - 130
		Carbon Tetrachloride	2010/06/21		109	%	70 - 130
		1,1-Dichloroethane	2010/06/21		96	%	70 - 130
		1,2-Dichloroethane	2010/06/21		97	%	70 - 130
		Ethylene Dibromide	2010/06/21		95	%	70 - 130
		1,1,1-Trichloroethane	2010/06/21		102	%	70 - 130
		1,1,2-Trichloroethane	2010/06/21		97	%	70 - 130
		1,1,2,2-Tetrachloroethane	2010/06/21		89	%	70 - 130
		cis-1,3-Dichloropropene	2010/06/21		106	%	70 - 130
		trans-1,3-Dichloropropene	2010/06/21		110	%	70 - 130
		1,2-Dichloropropane	2010/06/21		92	%	70 - 130
		Bromomethane	2010/06/21		91	%	70 - 130
		Bromoform	2010/06/21		105	%	70 - 130
		Bromodichloromethane	2010/06/21		101	%	70 - 130
		Dibromochloromethane	2010/06/21		102	%	70 - 130
		Heptane	2010/06/21		94	%	70 - 130
		Trichloroethylene	2010/06/21		94	%	70 - 130
		Tetrachloroethylene	2010/06/21		96	%	70 - 130
		Benzene	2010/06/21		94	%	70 - 130
		Toluene	2010/06/21		96	%	70 - 130
		Ethylbenzene	2010/06/21		92	%	70 - 130
		p+m-Xylene	2010/06/21		93	%	70 - 130
		o-Xylene	2010/06/21		94	%	70 - 130
		Styrene	2010/06/21		83	%	70 - 130
		1,3,5-Trimethylbenzene	2010/06/21		85	%	70 - 130
		1,2,4-Trimethylbenzene	2010/06/21		83	%	70 - 130
		4-ethyltoluene	2010/06/21		89	%	70 - 130
		Chlorobenzene	2010/06/21		92	%	70 - 130
		Benzyl chloride	2010/06/21		115	%	70 - 130
		1,3-Dichlorobenzene	2010/06/21		87	%	70 - 130
		1,4-Dichlorobenzene	2010/06/21		85	%	70 - 130
		1,2-Dichlorobenzene	2010/06/21		81	%	70 - 130
		1,2,4-Trichlorobenzene	2010/06/21		83	%	70 - 130
		Hexachlorobutadiene	2010/06/21		82	%	70 - 130
		Hexane	2010/06/21		94	%	70 - 130
		Cyclohexane	2010/06/21		94	%	70 - 130
		Tetrahydrofuran	2010/06/21		93	%	70 - 130
		1,4-Dioxane	2010/06/21		84	%	70 - 130
	Method Blank	Bromochloromethane	2010/06/21		91	%	60 - 140
		D5-Chlorobenzene	2010/06/21		86	%	60 - 140
		Difluorobenzene	2010/06/21		93	%	60 - 140

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

## Quality Assurance Report (Continued)

Maxxam Job Number: GB078354

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2185831 LSY	Method Blank	2,2,4-Trimethylpentane	2010/06/21	<0.20		ppbv	
		Carbon Disulfide	2010/06/21	<0.50		ppbv	
		Propene	2010/06/21	<0.30		ppbv	
		Vinyl Acetate	2010/06/21	<0.20		ppbv	
		Vinyl Bromide	2010/06/21	<0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2010/06/21	<0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2010/06/21	<0.17		ppbv	
		Chloromethane	2010/06/21	<0.30		ppbv	
		Vinyl Chloride	2010/06/21	<0.18		ppbv	
		Chloroethane	2010/06/21	<0.30		ppbv	
		1,3-Butadiene	2010/06/21	<0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2010/06/21	<0.20		ppbv	
		Trichlorotrifluoroethane	2010/06/21	<0.15		ppbv	
		Ethanol	2010/06/21	<2.3		ppbv	
		2-propanol	2010/06/21	<3.0		ppbv	
		2-Propanone	2010/06/21	<0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2010/06/21	<3.0		ppbv	
		Methyl Isobutyl Ketone	2010/06/21	<3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2010/06/21	<2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2010/06/21	<0.20		ppbv	
		Ethyl Acetate	2010/06/21	<2.2		ppbv	
		1,1-Dichloroethylene	2010/06/21	<0.25		ppbv	
		cis-1,2-Dichloroethylene	2010/06/21	<0.19		ppbv	
		trans-1,2-Dichloroethylene	2010/06/21	<0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2010/06/21	0.49, RDL=0.30		ppbv	
		Chloroform	2010/06/21	<0.15		ppbv	
		Carbon Tetrachloride	2010/06/21	<0.30		ppbv	
		1,1-Dichloroethane	2010/06/21	<0.20		ppbv	
		1,2-Dichloroethane	2010/06/21	<0.20		ppbv	
		Ethylene Dibromide	2010/06/21	<0.17		ppbv	
		1,1,1-Trichloroethane	2010/06/21	<0.30		ppbv	
		1,1,2-Trichloroethane	2010/06/21	<0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2010/06/21	<0.20		ppbv	
		cis-1,3-Dichloropropene	2010/06/21	<0.18		ppbv	
		trans-1,3-Dichloropropene	2010/06/21	<0.17		ppbv	
		1,2-Dichloropropane	2010/06/21	<0.40		ppbv	
		Bromomethane	2010/06/21	<0.18		ppbv	
		Bromoform	2010/06/21	<0.20		ppbv	
		Bromodichloromethane	2010/06/21	<0.20		ppbv	
		Dibromochloromethane	2010/06/21	<0.20		ppbv	
		Heptane	2010/06/21	<0.30		ppbv	
		Trichloroethylene	2010/06/21	<0.30		ppbv	
		Tetrachloroethylene	2010/06/21	<0.20		ppbv	
		Benzene	2010/06/21	<0.18		ppbv	
		Toluene	2010/06/21	<0.20		ppbv	
		Ethylbenzene	2010/06/21	<0.20		ppbv	
		p+m-Xylene	2010/06/21	<0.37		ppbv	
		o-Xylene	2010/06/21	<0.20		ppbv	
		Styrene	2010/06/21	<0.20		ppbv	
		1,3,5-Trimethylbenzene	2010/06/21	<0.50		ppbv	
		1,2,4-Trimethylbenzene	2010/06/21	<0.50		ppbv	
		4-ethyltoluene	2010/06/21	<2.2		ppbv	
		Chlorobenzene	2010/06/21	<0.20		ppbv	
		Benzyl chloride	2010/06/21	<1.0		ppbv	
		1,3-Dichlorobenzene	2010/06/21	<0.40		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB078354

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2185831 LSY	Method Blank	1,4-Dichlorobenzene	2010/06/21	<0.40		ppbv	
		1,2-Dichlorobenzene	2010/06/21	<0.40		ppbv	
		1,2,4-Trichlorobenzene	2010/06/21	<2.0		ppbv	
		Hexachlorobutadiene	2010/06/21	<3.0		ppbv	
		Hexane	2010/06/21	<0.30		ppbv	
		Cyclohexane	2010/06/21	<0.20		ppbv	
		Tetrahydrofuran	2010/06/21	<0.40		ppbv	
		1,4-Dioxane	2010/06/21	<2.0		ppbv	
		Xylene (Total)	2010/06/21	<0.60		ppbv	

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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: Cold Lake South  
 Station ID: Lica1  
 Field Sample ID: LICA PUF/CLS/June 19, 10

Puf+ s/n: 100-1020  
 Motor s/n: 1138  
 Installation Date/Time: June 17, 2010 @ 15:02 mst  
 Removal Date/Time: June 21, 2010 @ 12:15 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
19-Jun-10	06/19/2010 0:00	06/20/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
16-Jun-10	21-Jun-10	28-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
711	229	18.2	330.33

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

Comments: COC #No Number, COC#2309

GB069313 PUFF # 1

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/June 19, 10

- Noticed condensation on the PUFF glass holder

Technician Signature: \_\_\_\_\_





Your C.O.C. #: 2309

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

Report Date: 2010/07/29

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B083433**  
**Received: 2010/06/25, 09:18**

Sample Matrix: AIR  
 # Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/06/28	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/07/29	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) ¶	2	N/A	2010/06/28	BRL SOP-00304	EPA TO-15

Sample Matrix: PUF AND FILTER  
 # Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/29	2010/07/23	BRL SOP-00201	CARB429(ARBM1,M2)mod

(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



Your C.O.C. #: 2309

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/29**

**CERTIFICATE OF ANALYSIS**

-2-

=====

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

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: 2

Page 2 of 17

Page 198 of 229

Maxxam Job #: B083433  
 Report Date: 2010/07/29

**RESULTS OF ANALYSES OF AIR**

Maxxam ID		GH8491	GH8492	
Sampling Date		2010/06/19	2010/06/19	
COC Number		2309	2309	
	<b>Units</b>	<b>LICA VOC/CLS/JUN 19,10 - 7813</b>	<b>LICAVOC/PORT/JUN 19,10 - 7809</b>	<b>QC Batch</b>

<b>Volatile Organics</b>				
Pressure on Receipt	psig	18	21	2192691

QC Batch = Quality Control Batch

Maxxam Job #: B083433  
 Report Date: 2010/07/29

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	<b>Units</b>	<b>LICA VOC/CLS/JUN 19,10 - 7813</b>	<b>LICAVOC/PORT/JUN 19,10 - 7809</b>	<b>RDL</b>	<b>QC Batch</b>

Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2220828
Carbon Disulfide	ug/m3	1.7	<1.6	1.6	2220828
Propene	ug/m3	<0.52	<0.52	0.52	2220828
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2220828
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2220828
Dichlorodifluoromethane (FREON 12)	ug/m3	3.91	4.10	0.99	2220828
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2220828
Chloromethane	ug/m3	1.25	1.22	0.62	2220828
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2220828
Chloroethane	ug/m3	<0.79	<0.79	0.79	2220828
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2220828
Trichlorofluoromethane (FREON 11)	ug/m3	2.2	2.1	1.1	2220828
Ethanol	ug/m3	<4.3	<4.3	4.3	2220828
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2220828
2-propanol	ug/m3	<7.4	<7.4	7.4	2220828
2-Propanone	ug/m3	13.8	12.2	1.9	2220828
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2220828
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2220828
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2220828
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2220828
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2220828
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2220828
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2220828
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2220828
Methylene Chloride(Dichloromethane)	ug/m3	2.6	2.0	1.0	2220828
Chloroform	ug/m3	<0.73	<0.73	0.73	2220828
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2220828
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2220828
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2220828
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2220828
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2220828
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: B083433  
 Report Date: 2010/07/29

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	Units	LICA VOC/CLS/JUN 19,10 - 7813	LICAVOC/PORT/JUN 19,10 - 7809	RDL	QC Batch
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2220828
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2220828
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2220828
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2220828
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2220828
Bromomethane	ug/m3	<0.70	<0.70	0.70	2220828
Bromoform	ug/m3	<2.1	<2.1	2.1	2220828
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2220828
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2220828
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2220828
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2220828
Benzene	ug/m3	<0.58	<0.58	0.58	2220828
Toluene	ug/m3	1.08	<0.75	0.75	2220828
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2220828
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2220828
o-Xylene	ug/m3	<0.87	<0.87	0.87	2220828
Styrene	ug/m3	<0.85	<0.85	0.85	2220828
4-ethyltoluene	ug/m3	<11	<11	11	2220828
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2220828
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2220828
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2220828
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2220828
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220828
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220828
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220828
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2220828
Hexachlorobutadiene	ug/m3	<32	<32	32	2220828
Hexane	ug/m3	<1.1	<1.1	1.1	2220828
Heptane	ug/m3	<1.2	<1.2	1.2	2220828
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2220828
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2220828
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2220828
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2220828
QC Batch = Quality Control Batch					

Maxxam Job #: B083433  
 Report Date: 2010/07/29

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

Maxxam ID		GH8493	GH8494		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	Units	LICA PUF/QFF/CLS/JUN 19, 10	LICA PUF/QFF/PORT/JUN 19, 10	RDL	QC Batch
<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	0.12	0.11	0.10	2193362
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2193362
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2193362
2-Methylantracene	ug	<0.10	<0.10	0.10	2193362
2-Methylnaphthalene	ug	0.25	0.27	0.10	2193362
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2193362
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2193362
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2193362
Acenaphthene	ug	<0.050	<0.050	0.050	2193362
Acenaphthylene	ug	<0.050	<0.050	0.050	2193362
Anthracene	ug	<0.050	<0.050	0.050	2193362
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2193362
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2193362
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2193362
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2193362
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2193362
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2193362
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2193362
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2193362
Biphenyl	ug	<0.10	<0.10	0.10	2193362
Chrysene	ug	<0.050	<0.050	0.050	2193362
Coronene	ug	<0.10	<0.10	0.10	2193362
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2193362
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2193362
Fluoranthene	ug	<0.050	<0.050	0.050	2193362
Fluorene	ug	0.100	0.082	0.050	2193362
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2193362
m-Terphenyl	ug	<0.10	<0.10	0.10	2193362
Naphthalene	ug	0.138	0.110	0.072	2193362
o-Terphenyl	ug	<0.10	<0.10	0.10	2193362
Perylene	ug	<0.10	<0.10	0.10	2193362
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: B083433  
 Report Date: 2010/07/29

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

Maxxam ID		GH8493	GH8494		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	Units	LICA PUF/QFF/CLS/JUN 19, 10	LICA PUF/QFF/PORT/JUN 19, 10	RDL	QC Batch
Phenanthrene	ug	0.358	0.172	0.050	2193362
p-Terphenyl	ug	<0.10	<0.10	0.10	2193362
Pyrene	ug	<0.050	<0.050	0.050	2193362
Quinoline	ug	<0.40	<0.40	0.40	2193362
Tetralin	ug	<0.10	<0.10	0.10	2193362
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	58	62		2193362
D10-Fluoranthene	%	98	100		2193362
D10-Fluorene (FS)	%	48 (1)	48 (1)		2193362
D10-Phenanthrene	%	84	84		2193362
D12-Benzo(a)anthracene	%	112	116		2193362
D12-Benzo(a)pyrene	%	90	90		2193362
D12-Benzo(b)fluoranthene	%	90	90		2193362
D12-Benzo(ghi)perylene	%	88	90		2193362
D12-Benzo(k)fluoranthene	%	84	84		2193362
D12-Chrysene	%	84	84		2193362
D12-Indeno(1,2,3-cd)pyrene	%	88	90		2193362
D12-Perylene	%	86	86		2193362
D14-Dibenzo(a,h)anthracene	%	76	78		2193362
D14-Terphenyl (FS)	%	81	81		2193362
D8-Acenaphthylene	%	68	72		2193362
D8-Naphthalene	%	64	70		2193362
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 #: B083433  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	<b>Units</b>	<b>LICA VOC/CLS/JUN 19,10 - 7813</b>	<b>LICAVOC/PORT/JUN 19,10 - 7809</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Volatile Organics</b>					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2193201
Carbon Disulfide	ppbv	0.56	<0.50	0.50	2193201
Propene	ppbv	<0.30	<0.30	0.30	2193201
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2193201
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2193201
Dichlorodifluoromethane (FREON 12)	ppbv	0.79	0.83	0.20	2193201
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2193201
Chloromethane	ppbv	0.60	0.59	0.30	2193201
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2193201
Chloroethane	ppbv	<0.30	<0.30	0.30	2193201
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2193201
Trichlorofluoromethane (FREON 11)	ppbv	0.38	0.37	0.20	2193201
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2193201
Ethanol	ppbv	<2.3	<2.3	2.3	2193201
2-propanol	ppbv	<3.0	<3.0	3.0	2193201
2-Propanone	ppbv	5.80	5.12	0.80	2193201
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2193201
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2193201
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2193201
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2193201
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2193201
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2193201
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2193201
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2193201
Methylene Chloride(Dichloromethane)	ppbv	0.75	0.56	0.30	2193201
Chloroform	ppbv	<0.15	<0.15	0.15	2193201
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2193201
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2193201
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2193201
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2193201
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2193201
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



Maxxam Job #: B083433  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	Units	LICA VOC/CLS/JUN 19,10 - 7813	LICAVOC/PORT/JUN 19,10 - 7809	RDL	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2193201
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2193201
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2193201
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2193201
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2193201
Bromomethane	ppbv	<0.18	<0.18	0.18	2193201
Bromoform	ppbv	<0.20	<0.20	0.20	2193201
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2193201
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2193201
Heptane	ppbv	<0.30	<0.30	0.30	2193201
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2193201
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2193201
Benzene	ppbv	<0.18	<0.18	0.18	2193201
Toluene	ppbv	0.29	<0.20	0.20	2193201
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2193201
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2193201
o-Xylene	ppbv	<0.20	<0.20	0.20	2193201
Styrene	ppbv	<0.20	<0.20	0.20	2193201
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2193201
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2193201
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2193201
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2193201
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2193201
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2193201
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2193201
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2193201
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2193201
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2193201
Hexane	ppbv	<0.30	<0.30	0.30	2193201
Cyclohexane	ppbv	<0.20	<0.20	0.20	2193201
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2193201
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2193201
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2193201
QC Batch = Quality Control Batch					

Maxxam Job #: B083433  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	<b>Units</b>	<b>LICA VOC/CLS/JUN 19,10 - 7813</b>	<b>LICAVOC/PORT/JUN 19,10 - 7809</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Surrogate Recovery (%)</b>					
Bromochloromethane	%	87	83		2193201
D5-Chlorobenzene	%	85	82		2193201
Difluorobenzene	%	90	86		2193201

QC Batch = Quality Control Batch

Maxxam Job #: B083433  
Report Date: 2010/07/29

### Test Summary

**Maxxam ID** GH8491  
**Sample ID** LICA VOC/CLS/JUN 19,10 - 7813  
**Matrix** AIR  
**Collected** 2010/06/19  
**Shipped**  
**Received** 2010/06/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2192691	N/A	2010/06/28	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2220828	N/A	2010/07/29	
Volatile Organics in Air (TO-15)	GC/MS	2193201	N/A	2010/06/28	LSY

**Maxxam ID** GH8492  
**Sample ID** LICAVOC/PORT/JUN 19,10 - 7809  
**Matrix** AIR  
**Collected** 2010/06/19  
**Shipped**  
**Received** 2010/06/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2192691	N/A	2010/06/28	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2220828	N/A	2010/07/29	
Volatile Organics in Air (TO-15)	GC/MS	2193201	N/A	2010/06/28	LSY

**Maxxam ID** GH8493  
**Sample ID** LICA PUF/QFF/CLS/JUN 19, 10  
**Matrix** PUF AND FILTER  
**Collected** 2010/06/19  
**Shipped**  
**Received** 2010/06/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2193362	2010/06/29	2010/07/23	JIW

**Maxxam ID** GH8494  
**Sample ID** LICA PUF/QFF/PORT/JUN 19, 10  
**Matrix** PUF AND FILTER  
**Collected** 2010/06/19  
**Shipped**  
**Received** 2010/06/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2193362	2010/06/29	2010/07/23	JIW

Maxxam Job #: B083433  
Report Date: 2010/07/29

**GENERAL COMMENTS**

Continuing calibration Standard

Worksheet #2193201: 3 compounds exceed 130%RSD criteria. Compounds meet criteria in the reference standard. These 3 compounds are not found in the job. The failure of these 3 compounds is not believed to have an effect on the integrity of the results, therefore the data was accepted.

PAHMS-F(WS:2193362)

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

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene or Triphenylene. An estimated mdl for each of these compounds is 0.10ug.

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 GH8493-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample GH8494-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

**Results relate only to the items tested.**

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

Quality Assurance Report  
 Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2193201 LSY	Spiked Blank	Bromochloromethane	2010/06/28		112	%	60 - 140
		D5-Chlorobenzene	2010/06/28		115	%	60 - 140
		Difluorobenzene	2010/06/28		116	%	60 - 140
		2,2,4-Trimethylpentane	2010/06/28		94	%	70 - 130
		Carbon Disulfide	2010/06/28		95	%	70 - 130
		Propene	2010/06/28		97	%	70 - 130
		Vinyl Acetate	2010/06/28		111	%	70 - 130
		Vinyl Bromide	2010/06/28		96	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2010/06/28		89	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2010/06/28		88	%	70 - 130
		Chloromethane	2010/06/28		95	%	70 - 130
		Vinyl Chloride	2010/06/28		99	%	70 - 130
		Chloroethane	2010/06/28		102	%	70 - 130
		1,3-Butadiene	2010/06/28		84	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2010/06/28		103	%	70 - 130
		Trichlorotrifluoroethane	2010/06/28		99	%	70 - 130
		Ethanol	2010/06/28		119	%	70 - 130
		2-propanol	2010/06/28		99	%	70 - 130
		2-Propanone	2010/06/28		109	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2010/06/28		99	%	70 - 130
		Methyl Isobutyl Ketone	2010/06/28		88	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2010/06/28		85	%	70 - 130
		Methyl t-butyl ether (MTBE)	2010/06/28		103	%	70 - 130
		Ethyl Acetate	2010/06/28		97	%	70 - 130
		1,1-Dichloroethylene	2010/06/28		101	%	70 - 130
		cis-1,2-Dichloroethylene	2010/06/28		100	%	70 - 130
		trans-1,2-Dichloroethylene	2010/06/28		100	%	70 - 130
		Methylene Chloride(Dichloromethane)	2010/06/28		88	%	70 - 130
		Chloroform	2010/06/28		101	%	70 - 130
		Carbon Tetrachloride	2010/06/28		115	%	70 - 130
		1,1-Dichloroethane	2010/06/28		97	%	70 - 130
		1,2-Dichloroethane	2010/06/28		103	%	70 - 130
		Ethylene Dibromide	2010/06/28		97	%	70 - 130
		1,1,1-Trichloroethane	2010/06/28		108	%	70 - 130
		1,1,2-Trichloroethane	2010/06/28		99	%	70 - 130
		1,1,2,2-Tetrachloroethane	2010/06/28		92	%	70 - 130
		cis-1,3-Dichloropropene	2010/06/28		107	%	70 - 130
		trans-1,3-Dichloropropene	2010/06/28		115	%	70 - 130
		1,2-Dichloropropane	2010/06/28		94	%	70 - 130
		Bromomethane	2010/06/28		92	%	70 - 130
		Bromoform	2010/06/28		109	%	70 - 130
		Bromodichloromethane	2010/06/28		105	%	70 - 130
		Dibromochloromethane	2010/06/28		107	%	70 - 130
		Heptane	2010/06/28		96	%	70 - 130
		Trichloroethylene	2010/06/28		94	%	70 - 130
		Tetrachloroethylene	2010/06/28		99	%	70 - 130
		Benzene	2010/06/28		94	%	70 - 130
		Toluene	2010/06/28		97	%	70 - 130
		Ethylbenzene	2010/06/28		95	%	70 - 130
		p+m-Xylene	2010/06/28		95	%	70 - 130
		o-Xylene	2010/06/28		97	%	70 - 130
		Styrene	2010/06/28		78	%	70 - 130
		1,3,5-Trimethylbenzene	2010/06/28		87	%	70 - 130
		1,2,4-Trimethylbenzene	2010/06/28		84	%	70 - 130
		4-ethyltoluene	2010/06/28		92	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2193201 LSY	Spiked Blank	Chlorobenzene	2010/06/28		93	%	70 - 130
		Benzyl chloride	2010/06/28		119	%	70 - 130
		1,3-Dichlorobenzene	2010/06/28		91	%	70 - 130
		1,4-Dichlorobenzene	2010/06/28		86	%	70 - 130
		1,2-Dichlorobenzene	2010/06/28		84	%	70 - 130
		1,2,4-Trichlorobenzene	2010/06/28		84	%	70 - 130
		Hexachlorobutadiene	2010/06/28		85	%	70 - 130
		Hexane	2010/06/28		94	%	70 - 130
		Cyclohexane	2010/06/28		95	%	70 - 130
		Tetrahydrofuran	2010/06/28		94	%	70 - 130
		1,4-Dioxane	2010/06/28		84	%	70 - 130
	Method Blank	Bromochloromethane	2010/06/28		94	%	60 - 140
		D5-Chlorobenzene	2010/06/28		92	%	60 - 140
		Difluorobenzene	2010/06/28		97	%	60 - 140
		2,2,4-Trimethylpentane	2010/06/28	<0.20		ppbv	
		Carbon Disulfide	2010/06/28	<0.50		ppbv	
		Propene	2010/06/28	<0.30		ppbv	
		Vinyl Acetate	2010/06/28	<0.20		ppbv	
		Vinyl Bromide	2010/06/28	<0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2010/06/28	<0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2010/06/28	<0.17		ppbv	
		Chloromethane	2010/06/28	<0.30		ppbv	
		Vinyl Chloride	2010/06/28	<0.18		ppbv	
		Chloroethane	2010/06/28	<0.30		ppbv	
		1,3-Butadiene	2010/06/28	<0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2010/06/28	<0.20		ppbv	
		Trichlorotrifluoroethane	2010/06/28	<0.15		ppbv	
		Ethanol	2010/06/28	<2.3		ppbv	
		2-propanol	2010/06/28	<3.0		ppbv	
		2-Propanone	2010/06/28	<0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2010/06/28	<3.0		ppbv	
		Methyl Isobutyl Ketone	2010/06/28	<3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2010/06/28	<2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2010/06/28	<0.20		ppbv	
		Ethyl Acetate	2010/06/28	<2.2		ppbv	
		1,1-Dichloroethylene	2010/06/28	<0.25		ppbv	
		cis-1,2-Dichloroethylene	2010/06/28	<0.19		ppbv	
		trans-1,2-Dichloroethylene	2010/06/28	<0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2010/06/28	0.43, RDL=0.30		ppbv	
		Chloroform	2010/06/28	<0.15		ppbv	
		Carbon Tetrachloride	2010/06/28	<0.30		ppbv	
		1,1-Dichloroethane	2010/06/28	<0.20		ppbv	
		1,2-Dichloroethane	2010/06/28	<0.20		ppbv	
		Ethylene Dibromide	2010/06/28	<0.17		ppbv	
		1,1,1-Trichloroethane	2010/06/28	<0.30		ppbv	
		1,1,2-Trichloroethane	2010/06/28	<0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2010/06/28	<0.20		ppbv	
		cis-1,3-Dichloropropene	2010/06/28	<0.18		ppbv	
		trans-1,3-Dichloropropene	2010/06/28	<0.17		ppbv	
		1,2-Dichloropropane	2010/06/28	<0.40		ppbv	
		Bromomethane	2010/06/28	<0.18		ppbv	
		Bromoform	2010/06/28	<0.20		ppbv	
		Bromodichloromethane	2010/06/28	<0.20		ppbv	
		Dibromochloromethane	2010/06/28	<0.20		ppbv	
		Heptane	2010/06/28	<0.30		ppbv	

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

Quality Assurance Report (Continued)  
 Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
2193201 LSY	Method Blank	Trichloroethylene	2010/06/28	<0.30		ppbv		
		Tetrachloroethylene	2010/06/28	<0.20		ppbv		
		Benzene	2010/06/28	<0.18		ppbv		
		Toluene	2010/06/28	<0.20		ppbv		
		Ethylbenzene	2010/06/28	<0.20		ppbv		
		p+m-Xylene	2010/06/28	<0.37		ppbv		
		o-Xylene	2010/06/28	<0.20		ppbv		
		Styrene	2010/06/28	<0.20		ppbv		
		1,3,5-Trimethylbenzene	2010/06/28	<0.50		ppbv		
		1,2,4-Trimethylbenzene	2010/06/28	<0.50		ppbv		
		4-ethyltoluene	2010/06/28	<2.2		ppbv		
		Chlorobenzene	2010/06/28	<0.20		ppbv		
		Benzyl chloride	2010/06/28	<1.0		ppbv		
		1,3-Dichlorobenzene	2010/06/28	<0.40		ppbv		
		1,4-Dichlorobenzene	2010/06/28	<0.40		ppbv		
		1,2-Dichlorobenzene	2010/06/28	<0.40		ppbv		
		1,2,4-Trichlorobenzene	2010/06/28	<2.0		ppbv		
		Hexachlorobutadiene	2010/06/28	<3.0		ppbv		
		Hexane	2010/06/28	<0.30		ppbv		
		Cyclohexane	2010/06/28	<0.20		ppbv		
		Tetrahydrofuran	2010/06/28	<0.40		ppbv		
1,4-Dioxane	2010/06/28	<2.0		ppbv				
Xylene (Total)	2010/06/28	<0.60		ppbv				
2193362 JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/07/23		58	%	50 - 150	
		D10-Fluoranthene	2010/07/23		88	%	50 - 150	
		D10-Phenanthrene	2010/07/23		74	%	50 - 150	
		D12-Benzo(a)anthracene	2010/07/23		100	%	50 - 150	
		D12-Benzo(a)pyrene	2010/07/23		86	%	50 - 150	
		D12-Benzo(b)fluoranthene	2010/07/23		84	%	50 - 150	
		D12-Benzo(ghi)perylene	2010/07/23		86	%	50 - 150	
		D12-Benzo(k)fluoranthene	2010/07/23		82	%	50 - 150	
		D12-Chrysene	2010/07/23		84	%	50 - 150	
		D12-Indeno(1,2,3-cd)pyrene	2010/07/23		84	%	50 - 150	
		D12-Perylene	2010/07/23		84	%	50 - 150	
		D14-Dibenzo(a,h)anthracene	2010/07/23		74	%	50 - 150	
		D8-Acenaphthylene	2010/07/23		62	%	50 - 150	
		D8-Naphthalene	2010/07/23		66	%	50 - 150	
		Acenaphthene	2010/07/23		70	%	60 - 130	
		RPD	Acenaphthene	2010/07/23	17.2		%	50
		Spiked Blank	Acenaphthylene	2010/07/23		69	%	60 - 130
		RPD	Acenaphthylene	2010/07/23	20.1		%	50
		Spiked Blank	Anthracene	2010/07/23		74	%	60 - 130
		RPD	Anthracene	2010/07/23	6.6		%	50
		Spiked Blank	Benzo(a)anthracene	2010/07/23		80	%	60 - 130
		RPD	Benzo(a)anthracene	2010/07/23	2.2		%	50
		Spiked Blank	Benzo(a)pyrene	2010/07/23		72	%	60 - 130
		RPD	Benzo(a)pyrene	2010/07/23	5.8		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/07/23		72	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/07/23	7.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/07/23		77	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/07/23	5.7		%	50
Spiked Blank	Benzo(k)fluoranthene	2010/07/23		84	%	60 - 130		
RPD	Benzo(k)fluoranthene	2010/07/23	2.7		%	50		
Spiked Blank	Chrysene	2010/07/23		84	%	60 - 130		
RPD	Chrysene	2010/07/23	3.2		%	50		

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

Quality Assurance Report (Continued)  
 Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2193362 JIW	Spiked Blank	Dibenz(a,h)anthracene	2010/07/23		71	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2010/07/23	6.5		%	50
	Spiked Blank	Fluoranthene	2010/07/23		88	%	60 - 130
	RPD	Fluoranthene	2010/07/23	2.8		%	50
	Spiked Blank	Fluorene	2010/07/23		71	%	60 - 130
	RPD	Fluorene	2010/07/23	13.4		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/07/23		72	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2010/07/23	5.8		%	50
	Spiked Blank	Naphthalene	2010/07/23		65	%	60 - 130
	RPD	Naphthalene	2010/07/23	21.8		%	50
	Spiked Blank	Phenanthrene	2010/07/23		71	%	60 - 130
	RPD	Phenanthrene	2010/07/23	9.0		%	50
	Spiked Blank	Pyrene	2010/07/23		83	%	60 - 130
	RPD	Pyrene	2010/07/23	3.3		%	50
	Method Blank	D10-2-Methylnaphthalene	2010/07/23		68	%	50 - 150
		D10-Fluoranthene	2010/07/23		86	%	50 - 150
		D10-Phenanthrene	2010/07/23		72	%	50 - 150
		D12-Benzo(a)anthracene	2010/07/23		98	%	50 - 150
		D12-Benzo(a)pyrene	2010/07/23		84	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/07/23		84	%	50 - 150
		D12-Benzo(ghi)perylene	2010/07/23		84	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/07/23		82	%	50 - 150
		D12-Chrysene	2010/07/23		88	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/07/23		82	%	50 - 150
		D12-Perylene	2010/07/23		86	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/23		70	%	50 - 150
		D8-Acenaphthylene	2010/07/23		72	%	50 - 150
		D8-Naphthalene	2010/07/23		80	%	50 - 150
		1-Methylnaphthalene	2010/07/23	<0.10		ug	
		1-Methylphenanthrene	2010/07/23	<0.10		ug	
		2-Chloronaphthalene	2010/07/23	<0.10		ug	
		2-Methylantracene	2010/07/23	<0.10		ug	
		2-Methylnaphthalene	2010/07/23	<0.10		ug	
		3-Methylcholanthrene	2010/07/23	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/07/23	<0.10		ug	
		9,10-Dimethylantracene	2010/07/23	<0.40		ug	
		Acenaphthene	2010/07/23	<0.050		ug	
		Acenaphthylene	2010/07/23	<0.050		ug	
		Anthracene	2010/07/23	<0.050		ug	
		Benzo(a)anthracene	2010/07/23	<0.050		ug	
		Benzo(a)fluorene	2010/07/23	<0.10		ug	
		Benzo(a)pyrene	2010/07/23	<0.050		ug	
		Benzo(b)fluoranthene	2010/07/23	<0.050		ug	
		Benzo(b)fluorene	2010/07/23	<0.10		ug	
		Benzo(e)pyrene	2010/07/23	<0.10		ug	
		Benzo(g,h,i)perylene	2010/07/23	<0.050		ug	
		Benzo(k)fluoranthene	2010/07/23	<0.050		ug	
		Biphenyl	2010/07/23	<0.10		ug	
		Chrysene	2010/07/23	<0.050		ug	
		Coronene	2010/07/23	<0.10		ug	
		Dibenz(a,h)anthracene	2010/07/23	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/07/23	<0.20		ug	
		Fluoranthene	2010/07/23	<0.050		ug	
		Fluorene	2010/07/23	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/07/23	<0.050		ug	



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

Quality Assurance Report (Continued)

Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2193362 JIW	Method Blank	m-Terphenyl	2010/07/23	<0.10		ug	
		Naphthalene	2010/07/23	<0.072		ug	
		o-Terphenyl	2010/07/23	<0.10		ug	
		Perylene	2010/07/23	<0.10		ug	
		Phenanthrene	2010/07/23	<0.050		ug	
		p-Terphenyl	2010/07/23	<0.10		ug	
		Pyrene	2010/07/23	<0.050		ug	
		Quinoline	2010/07/23	<0.40		ug	
		Tetralin	2010/07/23	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: Cold Lake South  
 Station ID: Lica1  
 Field Sample ID: LICA PUF/CLS/June 25, 10

Puf+ s/n: 100-1020  
 Motor s/n: 1138  
 Installation Date/Time: June 24, 2010 @ 16:40 mst  
 Removal Date/Time: June 28, 2010 @ 7:17 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
25-Jun-10	06/25/2010 0:00	06/26/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
24-Jun-10	28-Jun-10	05-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
706	229	19.6	330.33

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

Comments: COC # 0563

GB079091 PUFF # 1

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/June 25, 10

- Noticed condensation on the PUFF glass holder

Technician Signature: \_\_\_\_\_



Your C.O.C. #: 0563

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/28**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B085824**

**Received: 2010/06/30, 09:09**

Sample Matrix: AIR  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/05	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2010/07/05	BRL SOP-00304	EPA TO-15

Sample Matrix: PUF AND FILTER  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/07/09	2010/07/24	BRL SOP-00201	CARB429(ARBM1,M2)mod

(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

=====



Your C.O.C. #: 0563

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/28**

**CERTIFICATE OF ANALYSIS**

-2-

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

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: 2

Page 2 of 15

Page 216 of 229

Maxxam Job #: B085824  
 Report Date: 2010/07/28

**RESULTS OF ANALYSES OF AIR**

Maxxam ID		GJ6735	GJ6736	
Sampling Date		2010/06/25	2010/06/25	
COC Number		0563	0563	
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 25,10</b>	<b>LICA VOC/PORT/JUNE 25,10</b>	<b>QC Batch</b>

<b>Volatile Organics</b>				
Pressure on Receipt	psig	20	21	2197951

QC Batch = Quality Control Batch

Maxxam Job #: B085824  
 Report Date: 2010/07/28

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

Maxxam ID		GJ0752	GJ0753		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	<b>Units</b>	<b>LICAPUF/QFF/CLS/JUNE25,10</b>	<b>LICAPUF/QFF/PORT/JUNE25,10</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2202480
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2202480
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2202480
2-Methylantracene	ug	<0.10	<0.10	0.10	2202480
2-Methylnaphthalene	ug	0.17	0.12	0.10	2202480
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2202480
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2202480
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2202480
Acenaphthene	ug	0.050	<0.050	0.050	2202480
Acenaphthylene	ug	<0.050	0.092	0.050	2202480
Anthracene	ug	<0.050	<0.050	0.050	2202480
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2202480
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2202480
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2202480
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2202480
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2202480
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2202480
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2202480
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2202480
Biphenyl	ug	<0.10	<0.10	0.10	2202480
Chrysene	ug	<0.050	<0.050	0.050	2202480
Coronene	ug	<0.10	<0.10	0.10	2202480
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2202480
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2202480
Fluoranthene	ug	0.066	0.162	0.050	2202480
Fluorene	ug	0.132	0.100	0.050	2202480
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2202480
m-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Naphthalene	ug	0.144	0.090	0.072	2202480
o-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Perylene	ug	<0.10	<0.10	0.10	2202480
Phenanthrene	ug	0.566	0.562	0.050	2202480

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B085824  
 Report Date: 2010/07/28

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

Maxxam ID		GJ0752	GJ0753		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	Units	LICAPUF/QFF/CLS/JUNE25,10	LICAPUF/QFF/PORT/JUNE25,10	RDL	QC Batch
p-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Pyrene	ug	<0.050	0.136	0.050	2202480
Quinoline	ug	<0.40	<0.40	0.40	2202480
Tetralin	ug	<0.10	<0.10	0.10	2202480
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	62	60		2202480
D10-Fluoranthene	%	106	100		2202480
D10-Fluorene (FS)	%	51	46 (1)		2202480
D10-Phenanthrene	%	92	86		2202480
D12-Benzo(a)anthracene	%	124	114		2202480
D12-Benzo(a)pyrene	%	100	92		2202480
D12-Benzo(b)fluoranthene	%	98	90		2202480
D12-Benzo(ghi)perylene	%	98	92		2202480
D12-Benzo(k)fluoranthene	%	90	80		2202480
D12-Chrysene	%	90	80		2202480
D12-Indeno(1,2,3-cd)pyrene	%	96	90		2202480
D12-Perylene	%	94	88		2202480
D14-Dibenzo(a,h)anthracene	%	84	82		2202480
D14-Terphenyl (FS)	%	87	78		2202480
D8-Acenaphthylene	%	82	76		2202480
D8-Naphthalene	%	68	64		2202480
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 #: B085824  
 Report Date: 2010/07/28

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GJ6735	GJ6736		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 25,10</b>	<b>LICA VOC/PORT/JUNE 25,10</b>	<b>RDL</b>	<b>QC Batch</b>

Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2197955
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2197955
Propene	ppbv	<0.30	<0.30	0.30	2197955
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2197955
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2197955
Dichlorodifluoromethane (FREON 12)	ppbv	0.71	0.83	0.20	2197955
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2197955
Chloromethane	ppbv	0.64	0.65	0.30	2197955
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2197955
Chloroethane	ppbv	<0.30	<0.30	0.30	2197955
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2197955
Trichlorofluoromethane (FREON 11)	ppbv	0.33	0.37	0.20	2197955
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2197955
Ethanol	ppbv	2.9	<2.3	2.3	2197955
2-propanol	ppbv	<3.0	<3.0	3.0	2197955
2-Propanone	ppbv	4.47	4.63	0.80	2197955
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2197955
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2197955
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2197955
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2197955
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2197955
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2197955
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2197955
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2197955
Methylene Chloride(Dichloromethane)	ppbv	0.59	0.48	0.30	2197955
Chloroform	ppbv	<0.15	<0.15	0.15	2197955
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2197955
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2197955
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2197955
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2197955
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2197955

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch



Maxxam Job #: B085824  
 Report Date: 2010/07/28

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GJ6735	GJ6736		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	Units	LICA VOC/CLS/JUNE 25,10	LICA VOC/PORT/JUNE 25,10	RDL	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2197955
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2197955
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2197955
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2197955
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2197955
Bromomethane	ppbv	<0.18	<0.18	0.18	2197955
Bromoform	ppbv	<0.20	<0.20	0.20	2197955
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2197955
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2197955
Heptane	ppbv	<0.30	<0.30	0.30	2197955
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2197955
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2197955
Benzene	ppbv	<0.18	<0.18	0.18	2197955
Toluene	ppbv	0.26	<0.20	0.20	2197955
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2197955
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2197955
o-Xylene	ppbv	<0.20	<0.20	0.20	2197955
Styrene	ppbv	<0.20	<0.20	0.20	2197955
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2197955
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2197955
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2197955
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2197955
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2197955
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2197955
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2197955
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2197955
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2197955
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2197955
Hexane	ppbv	<0.30	<0.30	0.30	2197955
Cyclohexane	ppbv	<0.20	0.21	0.20	2197955
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2197955
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2197955
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2197955
QC Batch = Quality Control Batch					

Maxxam Job #: B085824  
 Report Date: 2010/07/28

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GJ6735	GJ6736		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 25,10</b>	<b>LICA VOC/PORT/JUNE 25,10</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Surrogate Recovery (%)</b>					
Bromochloromethane	%	99	79		2197955
D5-Chlorobenzene	%	99	77		2197955
Difluorobenzene	%	103	81		2197955

QC Batch = Quality Control Batch

Maxxam Job #: B085824  
 Report Date: 2010/07/28

### Test Summary

**Maxxam ID** GJ0752 **Collected** 2010/06/25  
**Sample ID** LICAPUF/QFF/CLS/JUNE25,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2202480	2010/07/09	2010/07/24	JIW

**Maxxam ID** GJ0753 **Collected** 2010/06/25  
**Sample ID** LICAPUF/QFF/PORT/JUNE25,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2202480	2010/07/09	2010/07/24	JIW

**Maxxam ID** GJ6735 **Collected** 2010/06/25  
**Sample ID** LICA VOC/CLS/JUNE 25,10 **Shipped**  
**Matrix** AIR **Received** 2010/06/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2197951	N/A	2010/07/05	LSY
Volatile Organics in Air (TO-15)	GC/MS	2197955	N/A	2010/07/05	LSY

**Maxxam ID** GJ6736 **Collected** 2010/06/25  
**Sample ID** LICA VOC/PORT/JUNE 25,10 **Shipped**  
**Matrix** AIR **Received** 2010/06/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2197951	N/A	2010/07/05	LSY
Volatile Organics in Air (TO-15)	GC/MS	2197955	N/A	2010/07/05	LSY

Maxxam Job #: B085824  
Report Date: 2010/07/28

**GENERAL COMMENTS**

PAHMS-F

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

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene or Triphenylene. An estimated mdl for each of these compounds is 0.10ug.

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 GJ0753-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

**Results relate only to the items tested.**

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

Quality Assurance Report  
 Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2197955 LSY	Spiked Blank	Bromochloromethane	2010/07/05		100	%	60 - 140
		D5-Chlorobenzene	2010/07/05		103	%	60 - 140
		Difluorobenzene	2010/07/05		104	%	60 - 140
		2,2,4-Trimethylpentane	2010/07/05		91	%	70 - 130
		Carbon Disulfide	2010/07/05		94	%	70 - 130
		Propene	2010/07/05		94	%	70 - 130
		Vinyl Acetate	2010/07/05		106	%	70 - 130
		Vinyl Bromide	2010/07/05		95	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2010/07/05		99	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2010/07/05		85	%	70 - 130
		Chloromethane	2010/07/05		92	%	70 - 130
		Vinyl Chloride	2010/07/05		97	%	70 - 130
		Chloroethane	2010/07/05		97	%	70 - 130
		1,3-Butadiene	2010/07/05		80	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2010/07/05		98	%	70 - 130
		Trichlorotrifluoroethane	2010/07/05		97	%	70 - 130
		Ethanol	2010/07/05		112	%	70 - 130
		2-propanol	2010/07/05		94	%	70 - 130
		2-Propanone	2010/07/05		109	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2010/07/05		97	%	70 - 130
		Methyl Isobutyl Ketone	2010/07/05		82	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2010/07/05		77	%	70 - 130
		Methyl t-butyl ether (MTBE)	2010/07/05		101	%	70 - 130
		Ethyl Acetate	2010/07/05		93	%	70 - 130
		1,1-Dichloroethylene	2010/07/05		96	%	70 - 130
		cis-1,2-Dichloroethylene	2010/07/05		96	%	70 - 130
		trans-1,2-Dichloroethylene	2010/07/05		97	%	70 - 130
		Methylene Chloride(Dichloromethane)	2010/07/05		85	%	70 - 130
		Chloroform	2010/07/05		97	%	70 - 130
		Carbon Tetrachloride	2010/07/05		110	%	70 - 130
		1,1-Dichloroethane	2010/07/05		96	%	70 - 130
		1,2-Dichloroethane	2010/07/05		97	%	70 - 130
		Ethylene Dibromide	2010/07/05		96	%	70 - 130
		1,1,1-Trichloroethane	2010/07/05		103	%	70 - 130
		1,1,2-Trichloroethane	2010/07/05		98	%	70 - 130
		1,1,2,2-Tetrachloroethane	2010/07/05		90	%	70 - 130
		cis-1,3-Dichloropropene	2010/07/05		106	%	70 - 130
		trans-1,3-Dichloropropene	2010/07/05		111	%	70 - 130
		1,2-Dichloropropane	2010/07/05		92	%	70 - 130
		Bromomethane	2010/07/05		90	%	70 - 130
		Bromoform	2010/07/05		108	%	70 - 130
		Bromodichloromethane	2010/07/05		101	%	70 - 130
		Dibromochloromethane	2010/07/05		104	%	70 - 130
		Heptane	2010/07/05		91	%	70 - 130
		Trichloroethylene	2010/07/05		95	%	70 - 130
		Tetrachloroethylene	2010/07/05		99	%	70 - 130
		Benzene	2010/07/05		93	%	70 - 130
		Toluene	2010/07/05		97	%	70 - 130
		Ethylbenzene	2010/07/05		93	%	70 - 130
		p+m-Xylene	2010/07/05		93	%	70 - 130
		o-Xylene	2010/07/05		94	%	70 - 130
		Styrene	2010/07/05		70	%	70 - 130
		1,3,5-Trimethylbenzene	2010/07/05		82	%	70 - 130
		1,2,4-Trimethylbenzene	2010/07/05		81	%	70 - 130
		4-ethyltoluene	2010/07/05		90	%	70 - 130

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

## Quality Assurance Report (Continued)

Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2197955 LSY	Spiked Blank	Chlorobenzene	2010/07/05		92	%	70 - 130
		Benzyl chloride	2010/07/05		118	%	70 - 130
		1,3-Dichlorobenzene	2010/07/05		90	%	70 - 130
		1,4-Dichlorobenzene	2010/07/05		88	%	70 - 130
		1,2-Dichlorobenzene	2010/07/05		83	%	70 - 130
		1,2,4-Trichlorobenzene	2010/07/05		81	%	70 - 130
		Hexachlorobutadiene	2010/07/05		82	%	70 - 130
		Hexane	2010/07/05		93	%	70 - 130
		Cyclohexane	2010/07/05		93	%	70 - 130
		Tetrahydrofuran	2010/07/05		89	%	70 - 130
		1,4-Dioxane	2010/07/05		82	%	70 - 130
	Method Blank	Bromochloromethane	2010/07/05		83	%	60 - 140
		D5-Chlorobenzene	2010/07/05		83	%	60 - 140
		Difluorobenzene	2010/07/05		86	%	60 - 140
		2,2,4-Trimethylpentane	2010/07/05	<0.20		ppbv	
		Carbon Disulfide	2010/07/05	<0.50		ppbv	
		Propene	2010/07/05	<0.30		ppbv	
		Vinyl Acetate	2010/07/05	<0.20		ppbv	
		Vinyl Bromide	2010/07/05	<0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2010/07/05	<0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2010/07/05	<0.17		ppbv	
		Chloromethane	2010/07/05	<0.30		ppbv	
		Vinyl Chloride	2010/07/05	<0.18		ppbv	
		Chloroethane	2010/07/05	<0.30		ppbv	
		1,3-Butadiene	2010/07/05	<0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2010/07/05	<0.20		ppbv	
		Trichlorotrifluoroethane	2010/07/05	<0.15		ppbv	
		Ethanol	2010/07/05	<2.3		ppbv	
		2-propanol	2010/07/05	<3.0		ppbv	
		2-Propanone	2010/07/05	<0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2010/07/05	<3.0		ppbv	
		Methyl Isobutyl Ketone	2010/07/05	<3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2010/07/05	<2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2010/07/05	<0.20		ppbv	
		Ethyl Acetate	2010/07/05	<2.2		ppbv	
		1,1-Dichloroethylene	2010/07/05	<0.25		ppbv	
		cis-1,2-Dichloroethylene	2010/07/05	<0.19		ppbv	
		trans-1,2-Dichloroethylene	2010/07/05	<0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2010/07/05	0.43, RDL=0.30		ppbv	
		Chloroform	2010/07/05	<0.15		ppbv	
		Carbon Tetrachloride	2010/07/05	<0.30		ppbv	
		1,1-Dichloroethane	2010/07/05	<0.20		ppbv	
		1,2-Dichloroethane	2010/07/05	<0.20		ppbv	
		Ethylene Dibromide	2010/07/05	<0.17		ppbv	
		1,1,1-Trichloroethane	2010/07/05	<0.30		ppbv	
		1,1,2-Trichloroethane	2010/07/05	<0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2010/07/05	<0.20		ppbv	
		cis-1,3-Dichloropropene	2010/07/05	<0.18		ppbv	
		trans-1,3-Dichloropropene	2010/07/05	<0.17		ppbv	
		1,2-Dichloropropane	2010/07/05	<0.40		ppbv	
		Bromomethane	2010/07/05	<0.18		ppbv	
		Bromoform	2010/07/05	<0.20		ppbv	
		Bromodichloromethane	2010/07/05	<0.20		ppbv	
		Dibromochloromethane	2010/07/05	<0.20		ppbv	
		Heptane	2010/07/05	<0.30		ppbv	

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

Quality Assurance Report (Continued)  
 Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
2197955 LSY	Method Blank	Trichloroethylene	2010/07/05	<0.30		ppbv		
		Tetrachloroethylene	2010/07/05	<0.20		ppbv		
		Benzene	2010/07/05	<0.18		ppbv		
		Toluene	2010/07/05	<0.20		ppbv		
		Ethylbenzene	2010/07/05	<0.20		ppbv		
		p+m-Xylene	2010/07/05	<0.37		ppbv		
		o-Xylene	2010/07/05	<0.20		ppbv		
		Styrene	2010/07/05	<0.20		ppbv		
		1,3,5-Trimethylbenzene	2010/07/05	<0.50		ppbv		
		1,2,4-Trimethylbenzene	2010/07/05	<0.50		ppbv		
		4-ethyltoluene	2010/07/05	<2.2		ppbv		
		Chlorobenzene	2010/07/05	<0.20		ppbv		
		Benzyl chloride	2010/07/05	<1.0		ppbv		
		1,3-Dichlorobenzene	2010/07/05	<0.40		ppbv		
		1,4-Dichlorobenzene	2010/07/05	<0.40		ppbv		
		1,2-Dichlorobenzene	2010/07/05	<0.40		ppbv		
		1,2,4-Trichlorobenzene	2010/07/05	<2.0		ppbv		
		Hexachlorobutadiene	2010/07/05	<3.0		ppbv		
		Hexane	2010/07/05	<0.30		ppbv		
		Cyclohexane	2010/07/05	<0.20		ppbv		
		Tetrahydrofuran	2010/07/05	<0.40		ppbv		
1,4-Dioxane	2010/07/05	<2.0		ppbv				
Xylene (Total)	2010/07/05	<0.60		ppbv				
2202480 JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/07/24		72	%	50 - 150	
		D10-Fluoranthene	2010/07/24		96	%	50 - 150	
		D10-Phenanthrene	2010/07/24		88	%	50 - 150	
		D12-Benzo(a)anthracene	2010/07/24		108	%	50 - 150	
		D12-Benzo(a)pyrene	2010/07/24		92	%	50 - 150	
		D12-Benzo(b)fluoranthene	2010/07/24		94	%	50 - 150	
		D12-Benzo(ghi)perylene	2010/07/24		94	%	50 - 150	
		D12-Benzo(k)fluoranthene	2010/07/24		86	%	50 - 150	
		D12-Chrysene	2010/07/24		86	%	50 - 150	
		D12-Indeno(1,2,3-cd)pyrene	2010/07/24		94	%	50 - 150	
		D12-Perylene	2010/07/24		92	%	50 - 150	
		D14-Dibenzo(a,h)anthracene	2010/07/24		84	%	50 - 150	
		D8-Acenaphthylene	2010/07/24		82	%	50 - 150	
		D8-Naphthalene	2010/07/24		82	%	50 - 150	
		Acenaphthene	2010/07/24		89	%	60 - 130	
		RPD	Acenaphthene	2010/07/24	2.9		%	50
		Spiked Blank	Acenaphthylene	2010/07/24		93	%	60 - 130
		RPD	Acenaphthylene	2010/07/24	1.4		%	50
		Spiked Blank	Anthracene	2010/07/24		88	%	60 - 130
		RPD	Anthracene	2010/07/24	1.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/07/24		90	%	60 - 130
		RPD	Benzo(a)anthracene	2010/07/24	2.3		%	50
		Spiked Blank	Benzo(a)pyrene	2010/07/24		82	%	60 - 130
		RPD	Benzo(a)pyrene	2010/07/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/07/24		83	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/07/24	1.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/07/24		89	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/07/24	2.3		%	50
Spiked Blank	Benzo(k)fluoranthene	2010/07/24		89	%	60 - 130		
RPD	Benzo(k)fluoranthene	2010/07/24	1.4		%	50		
Spiked Blank	Chrysene	2010/07/24		90	%	60 - 130		
RPD	Chrysene	2010/07/24	0.8		%	50		

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2202480 JIW	Spiked Blank	Dibenz(a,h)anthracene	2010/07/24		83	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2010/07/24	1.8		%	50
	Spiked Blank	Fluoranthene	2010/07/24		99	%	60 - 130
	RPD	Fluoranthene	2010/07/24	0.3		%	50
	Spiked Blank	Fluorene	2010/07/24		90	%	60 - 130
	RPD	Fluorene	2010/07/24	2.5		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/07/24		83	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2010/07/24	2.4		%	50
	Spiked Blank	Naphthalene	2010/07/24		84	%	60 - 130
	RPD	Naphthalene	2010/07/24	3.3		%	50
	Spiked Blank	Phenanthrene	2010/07/24		87	%	60 - 130
	RPD	Phenanthrene	2010/07/24	2.0		%	50
	Spiked Blank	Pyrene	2010/07/24		92	%	60 - 130
	RPD	Pyrene	2010/07/24	1.9		%	50
	Method Blank	D10-2-Methylnaphthalene	2010/07/24		76	%	50 - 150
		D10-Fluoranthene	2010/07/24		104	%	50 - 150
		D10-Phenanthrene	2010/07/24		88	%	50 - 150
		D12-Benzo(a)anthracene	2010/07/24		124	%	50 - 150
		D12-Benzo(a)pyrene	2010/07/24		100	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/07/24		100	%	50 - 150
		D12-Benzo(ghi)perylene	2010/07/24		102	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/07/24		92	%	50 - 150
		D12-Chrysene	2010/07/24		92	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/07/24		100	%	50 - 150
		D12-Perylene	2010/07/24		100	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/24		90	%	50 - 150
		D8-Acenaphthylene	2010/07/24		92	%	50 - 150
		D8-Naphthalene	2010/07/24		84	%	50 - 150
		1-Methylnaphthalene	2010/07/24	<0.10		ug	
		1-Methylphenanthrene	2010/07/24	<0.10		ug	
		2-Chloronaphthalene	2010/07/24	<0.10		ug	
		2-Methylantracene	2010/07/24	<0.10		ug	
		2-Methylnaphthalene	2010/07/24	<0.10		ug	
		3-Methylcholanthrene	2010/07/24	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/07/24	<0.10		ug	
		9,10-Dimethylantracene	2010/07/24	<0.40		ug	
		Acenaphthene	2010/07/24	<0.050		ug	
		Acenaphthylene	2010/07/24	<0.050		ug	
		Anthracene	2010/07/24	<0.050		ug	
		Benzo(a)anthracene	2010/07/24	<0.050		ug	
		Benzo(a)fluorene	2010/07/24	<0.10		ug	
		Benzo(a)pyrene	2010/07/24	<0.050		ug	
		Benzo(b)fluoranthene	2010/07/24	<0.050		ug	
		Benzo(b)fluorene	2010/07/24	<0.10		ug	
		Benzo(e)pyrene	2010/07/24	<0.10		ug	
		Benzo(g,h,i)perylene	2010/07/24	<0.050		ug	
		Benzo(k)fluoranthene	2010/07/24	<0.050		ug	
		Biphenyl	2010/07/24	<0.10		ug	
		Chrysene	2010/07/24	<0.050		ug	
		Coronene	2010/07/24	<0.10		ug	
		Dibenz(a,h)anthracene	2010/07/24	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/07/24	<0.20		ug	
		Fluoranthene	2010/07/24	<0.050		ug	
		Fluorene	2010/07/24	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/07/24	<0.050		ug	



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

Quality Assurance Report (Continued)

Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2202480 JIW	Method Blank	m-Terphenyl	2010/07/24	<0.10		ug	
		Naphthalene	2010/07/24	<0.072		ug	
		o-Terphenyl	2010/07/24	<0.10		ug	
		Perylene	2010/07/24	<0.10		ug	
		Phenanthrene	2010/07/24	<0.050		ug	
		p-Terphenyl	2010/07/24	<0.10		ug	
		Pyrene	2010/07/24	<0.050		ug	
		Quinoline	2010/07/24	<0.40		ug	
		Tetralin	2010/07/24	<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  
June 2010

Prepared By:



July 14, 2010

# Lakeland Industry & Community Association

## Ambient Air Monitoring

### Maskwa

## Table of Contents

	Page		Page
Introduction	3	Calibration Reports	84
Calibration Procedure	4	• Sulphur Dioxide	85
Monthly Continuous Summary	5	• Hydrogen Sulphide	88
General Monthly Summary	6	• Total Hydrocarbons	91
Continuous Monitoring	10	• Nitrogen Dioxide	94
• Monthly Summaries, Graphs & Wind Roses	11		
• Sulphur Dioxide	12		
• Hydrogen Sulphide	20		
• Total Hydrocarbons	28		
• Nitrogen Dioxide	36		
• Nitric Oxide	44		
• Oxides of Nitrogen	51		
• Temperature	59		
• Precipitation	62		
• Relative Humidity	65		
• Barometric Pressure	68		
• Vector Wind Speed	71		
• Vector Wind Direction	78		
• Standard Deviation Wind Direction	81		

## 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: June 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

# Calibration Procedure

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

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

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

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

The calibrations conducted at the LICA - Maskwa Air Monitoring Stations conform to the following Maxxam 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 – June 2010

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	0.56	21	15	5	2.6	288(WNW)	3.1	15	100.0
H2S (PPB)	10	3	0	0	0.06	2	7	6	1.2	31(NNE)	0.4	28	100.0
THC (PPM)	-	-	-	-	2.01	2.8	7, 29	VAR	VAR	VAR	2.2	12	100.0
NOx (PPB)	-	-	-	-	1.28	26	16	3	2.4	245(WSW)	5.5	16	100.0
NO (PPB)	-	-	-	-	0.21	9	1	7	2.2	262(W)	1.3	16	100.0
NO <sub>2</sub> (PPB)	212	106	0	0	1.00	21	16	3	2.4	245(WSW)	4.1	16	100.0
VECTOR WS (KPH)	-	-	-	-	4.94	14.9	12	12	-	199(SSW)	9.0	12	100.0
VECTOR WD (DEGREES)	-	-	-	-	162(SSE)	-	-	-	-	-	-	-	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	62.76	93	21, 22	VAR	VAR	VAR	89.3	4	100.0
TEMPERATURE (DEG C)	-	-	-	-	15.40	27.7	21	11	5.8	300(WNW)	20.7	29	100.0
BAROMETRIC PRESSURE (MILIBAR)	-	-	-	-	940	953	12	VAR	VAR	VAR	950.0	12	100.0
PRECIPITATION (MM)	-	-	-	-	0.10	8.1	24	21	3.7	250(WSW)	16.5	24	88.6

VAR-VARIOUS

# General Monthly Summary

## Equipment Operation

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

### AQM STATION – LICA – Maskwa

#### Sulphur Dioxide (PPB)

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

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

#### Hydrogen Sulphide (PPB)

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

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

#### Total HydroCarbon (PPM)

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

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

# General Monthly Summary

## AQM STATION – LICA – Maskwa

### Nitrogen Dioxide (PPB)

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

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

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

- System make / model - Climatronics MIII replaced to Met One 50.5H, S/N: H10703

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

### Relative Humidity (PERCENT)

- System make / model - Met One 083

No operational issues observed during the month. One hour of data is missing this month.

### Precipitation (MM)

- System make / model - Met One 387

It was noticed that the tipping bucket was not recording any rainfall even though it was raining during the trip on June 4<sup>th</sup>. After testing the unit, it was found that it would not tip when water was poured into it. Removed the funnel, the tipping mechanism began to operate. It indicates that the tipping mechanism was impeded by the heater cord. As a result, data from the last tipping bucket check, which was May 18<sup>th</sup>, to June 4<sup>th</sup> is questionable. Because we cannot determine when the issue occurred, we have to invalidate the data back to May 18<sup>th</sup>. Due to this issue, 81 hours of data were invalidated this month. The tipping bucket operation was verified on June 14<sup>th</sup>; the result was correct. The AMD operational uptime was 88.8%.



# General Monthly Summary

## AQM STATION – LICA – Maskwa

### Barometric Pressure (MILLIBAR)

- System make / model - Met One 092
- No operation issue was observed during the month.

### Ambient Temperature (DEGC)

- System make / model - Met One 060
- No operational issue was observed during the month.

### Trailer Temperature (DEG C)

- System make / model – R&R 61
- No operational issue was observed during the month.

### Standard Deviation Wind Direction (DEG)

- System make / model – Climatronics MIII replaced to Met One 50.5H
- No operational issue was observed during the month.

# General Monthly Summary

## AQM STATION – LICA – Maskwa

### Datalogger

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

No operational issue was observed during the month.

### Trailer

The manifold and inlet pipe were cleaned on June 14<sup>th</sup>. The throw-away filter in the Bard was replaced and the other filters with compressed air were also replaced on June 14<sup>th</sup>.

# Continuous Monitoring

# Monthly Summaries, Graphs & Wind Roses

# Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

SULPHUR DIOXIDE (SO<sub>2</sub>) 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	2	4	8	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0.6	24	
2	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	3	5	3	2	1	5	0.6	24	
3	5	6	6	7	6	2	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1.4	24	
4	0	0	0	0	0	0	IZS	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	24	
5	0	0	0	0	1	IZS	0	1	1	0	0	0	1	0	2	4	13	1	2	7	3	1	1	1	13	1.7	24	
6	5	3	0	0	IZS	0	0	0	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0	5	0.5	24	
7	0	0	0	IZS	0	0	1	2	2	0	2	8	5	1	0	0	0	0	0	0	0	0	0	0	8	0.9	24	
8	0	0	IZS	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	2	0.1	24	
9	0	IZS	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1	24	
10	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	IZS	1	0.0	24	
11	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24
12	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
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	24	
14	0	0	0	0	0	0	0	0	4	0	0	4	0	C	C	3	3	3	1	IZS	0	0	3	12	12	1.6	24	
15	12	0	0	1	1	21	6	1	0	0	2	3	2	0	2	0	1	0	IZS	5	9	0	1	5	21	3.1	24	
16	15	8	2	3	3	10	11	4	1	0	0	0	2	0	0	0	0	IZS	0	2	1	0	0	0	15	2.7	24	
17	0	0	0	0	0	0	0	0	0	2	4	2	0	0	0	0	IZS	0	0	0	0	0	0	0	4	0.3	24	
18	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	IZS	0	0	1	0	0	0	0	0	3	0.3	24	
19	0	0	0	0	0	0	0	0	0	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	0.0	24
20	0	0	0	0	0	0	0	0	1	3	0	0	1	IZS	1	1	0	0	0	0	0	0	0	0	3	0.3	24	
21	0	0	0	0	0	0	0	2	1	4	4	0	IZS	0	1	0	0	0	0	0	0	0	0	0	4	0.5	24	
22	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
23	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
24	0	0	0	0	0	0	1	0	1	IZS	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0.2	24	
25	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
26	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	3	0.2	24	
27	2	1	0	0	0	0	IZS	10	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0.9	24	
28	0	0	0	0	0	IZS	0	0	0	1	2	2	2	0	1	0	0	0	0	0	0	0	0	0	2	0.3	24	
29	0	0	0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
30	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
HOURLY MAX	15	8	6	7	6	21	11	10	8	4	4	8	5	2	2	4	13	3	2	7	9	3	3	12				
HOURLY AVG	1.3	0.6	0.3	0.4	0.5	1.3	0.8	0.9	0.9	0.6	0.6	0.7	0.5	0.1	0.3	0.3	0.6	0.1	0.1	0.6	0.6	0.2	0.3	0.8				

STATUS FLAG CODES

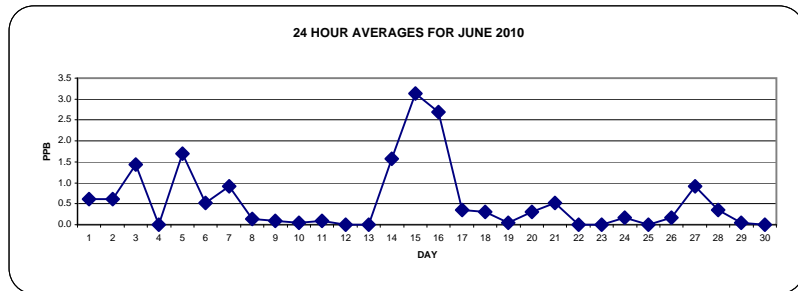
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

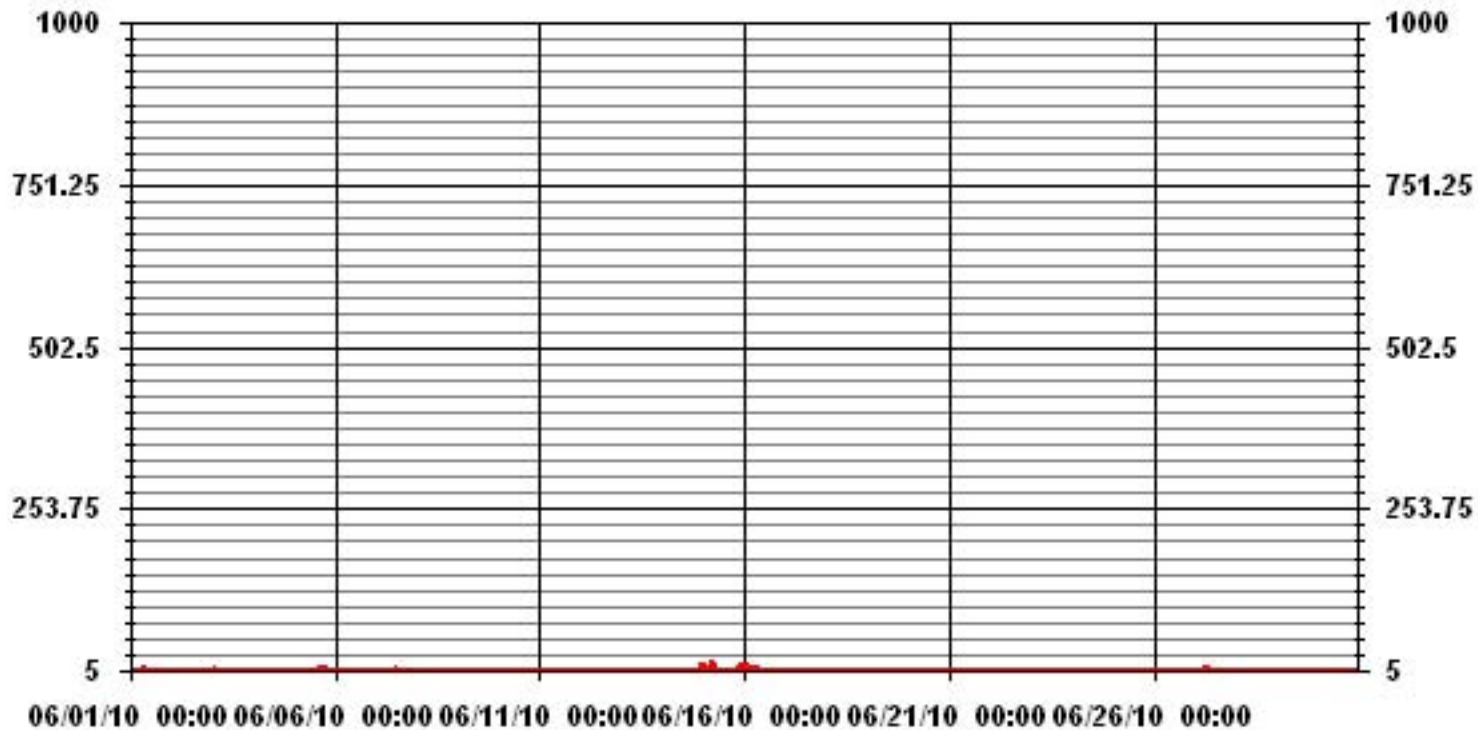
ALBERTA ENVIRONMENT:	1-HR	172	PPB	24-HR	57	PPB
----------------------	------	-----	-----	-------	----	-----

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0		
NUMBER OF 24-HR EXCEEDENCES:	0		
NUMBER OF NON-ZERO READINGS:	119		
MAXIMUM 1-HR AVERAGE:	21 PPB @ HOUR(S) 5 ON DAY(S) 15		
MAXIMUM 24-HR AVERAGE:	3.1 PPB ON DAY(S) 15		
IZS CALIBRATION TIME:	31 HRS	OPERATIONAL TIME:	720 HRS
MONTHLY CALIBRATION TIME:	6 HRS	AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	1.84	MONTHLY AVERAGE:	0.56 PPB



### 01 Hour Averages



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

JUNE 2010

## 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		
		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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	DAY																												
1	1	0	0	0	0	0	4	8	7	15	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	1.5	24
2	2	0	0	0	0	0	0	0	0	IZS	0	0	1	0	0	0	0	0	0	3	5	8	8	3	4	8	8	1.4	24
3	3	10	10	9	9	8	5	0	IZS	3	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	10	2.6	24	
4	4	0	0	0	0	1	1	IZS	1	1	1	1	C	C	C	C	1	1	1	1	1	2	1	0	0	2	0.7	24	
5	5	0	0	0	1	2	IZS	2	3	1	1	0	0	7	2	8	18	24	7	10	19	16	13	4	4	24	6.2	24	
6	6	23	7	3	0	IZS	0	0	0	0	9	11	1	3	2	4	1	0	2	1	0	0	0	0	0	23	2.9	24	
7	7	0	0	0	IZS	0	0	2	4	6	1	16	31	12	6	1	1	1	0	0	0	0	0	0	0	31	3.5	24	
8	8	0	0	IZS	0	0	0	0	0	0	0	0	0	12	14	5	0	4	0	0	0	0	0	0	0	14	1.5	24	
9	9	0	IZS	0	0	0	0	0	0	2	2	1	1	0	2	1	1	4	2	2	0	0	0	0	0	4	0.8	24	
10	10	IZS	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	2	1	1	0	0	0	0	0	IZS	3	0.5	24
11	11	0	0	0	0	0	0	0	0	1	2	2	2	0	0	0	1	0	0	0	0	0	0	0	IZS	0	2	0.3	24
12	12	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
13	13	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	2	1	0	2	0.2	24
14	14	0	0	7	0	0	0	0	1	19	14	6	15	C	C	C	15	18	11	11	IZS	1	3	10	53	53	9.2	24	
15	15	31	1	0	3	5	41	23	2	0	2	14	13	10	4	16	3	16	0	IZS	13	16	3	5	17	41	10.3	24	
16	16	39	25	4	5	5	46	34	9	4	0	0	1	5	7	4	0	0	IZS	0	10	11	0	0	0	46	9.1	24	
17	17	0	0	0	0	0	0	0	0	1	3	4	3	1	0	0	0	IZS	0	0	0	0	0	0	0	0	4	0.5	24
18	18	1	1	1	2	5	4	2	0	2	1	1	1	0	0	0	IZS	0	0	1	1	0	0	0	0	5	1.0	24	
19	19	0	0	0	0	0	0	0	1	1	1	1	1	1	1	IZS	2	0	0	0	0	0	0	0	0	2	0.4	24	
20	20	0	0	0	0	0	0	0	1	4	6	1	1	1	IZS	1	2	2	0	0	0	0	0	0	0	0	6	0.8	24
21	21	0	0	0	0	0	0	0	10	8	20	13	1	IZS	2	7	1	1	1	0	0	0	0	0	0	20	2.8	24	
22	22	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	1	0	0	0	0	0	0	0	0	1	0.1	24	
23	23	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
24	24	1	1	0	0	0	0	3	2	4	IZS	0	0	0	0	1	2	0	2	2	2	0	0	5	0	5	1.1	24	
25	25	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0.3	24	
26	26	9	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	10	10	1.2	24	
27	27	5	3	0	0	0	0	IZS	21	12	13	10	1	3	1	1	0	1	0	0	0	0	0	0	0	21	3.1	24	
28	28	0	0	0	0	0	IZS	0	0	2	3	5	4	4	1	3	0	0	0	0	0	0	0	0	0	5	1.0	24	
29	29	0	0	0	0	IZS	0	0	0	2	2	0	1	1	0	1	1	1	1	0	1	0	0	2	1	2	0.6	24	
30	30	0	0	0	IZS	1	1	1	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	2	0.3	24	
HOURLY MAX		39	25	9	9	8	46	34	21	19	20	16	31	12	14	16	18	24	11	11	19	16	13	10	53				
HOURLY AVG		4.1	1.7	0.8	0.7	1.0	3.6	2.7	2.3	3.1	3.0	3.0	2.8	2.3	1.7	2.1	1.8	2.6	1.0	1.1	1.8	1.9	1.3	1.1	3.3				

**STATUS FLAG CODES**

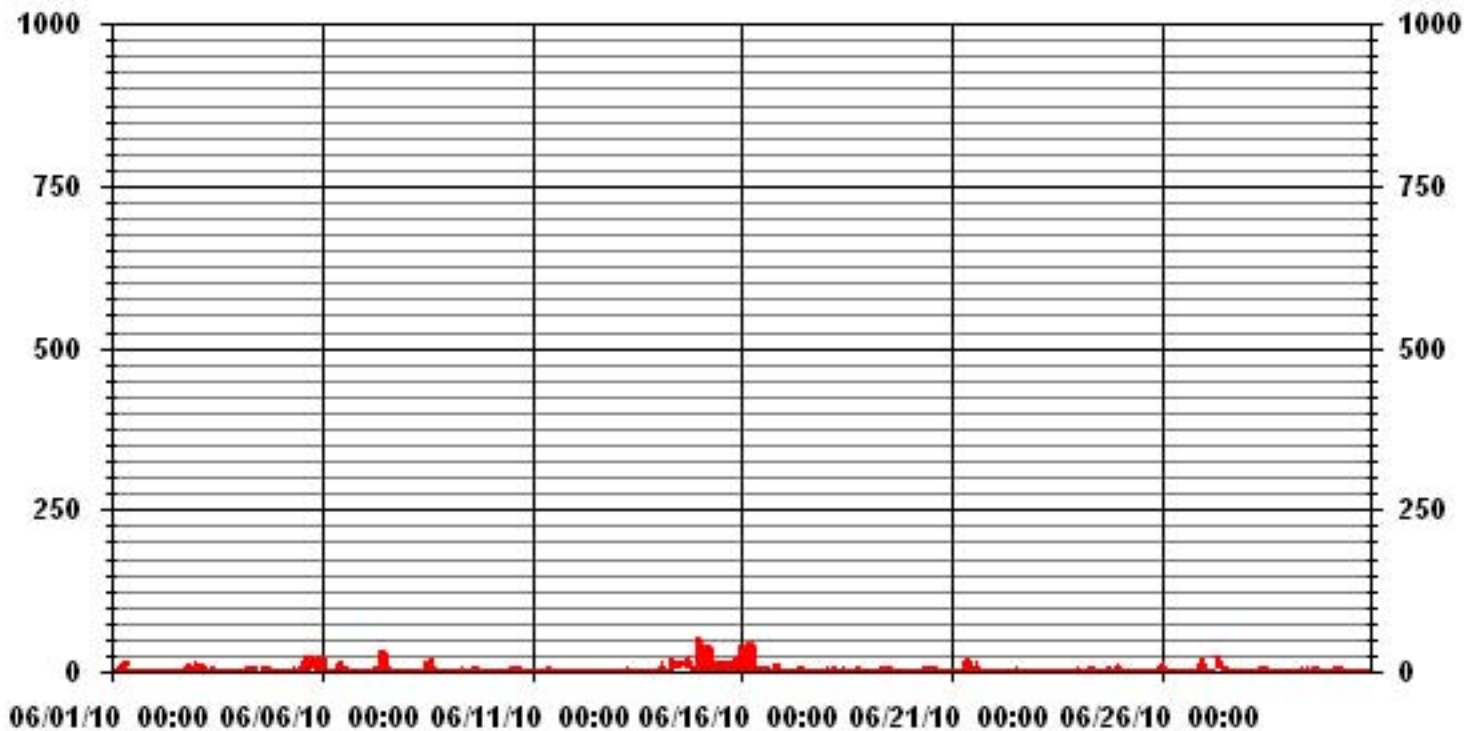
S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	253					
MAXIMUM INSTANTANEOUS VALUE:	53	PPB	@ HOUR(S)	23	ON DAY(S)	14
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	5.48					



### 01 Hour Averages



— LICA30 SO2MAX PPB

LICA30  
 SO2\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 30  
 Site Name : LICA30  
 Parameter : SO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	2.92	6.00	8.05	5.56	5.27	6.00	7.32	6.14	7.17	14.78	6.58	5.85	5.71	3.95	5.56	2.92	99.85
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.14
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.92	6.00	8.05	5.56	5.27	6.00	7.32	6.14	7.17	14.78	6.58	5.85	5.71	4.09	5.56	2.92	

Calm : .00 %

Total # Operational Hours : 683

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	20	41	55	38	36	41	50	42	49	101	45	40	39	27	38	20	682
< 60														1			1
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	20	41	55	38	36	41	50	42	49	101	45	40	39	28	38	20	

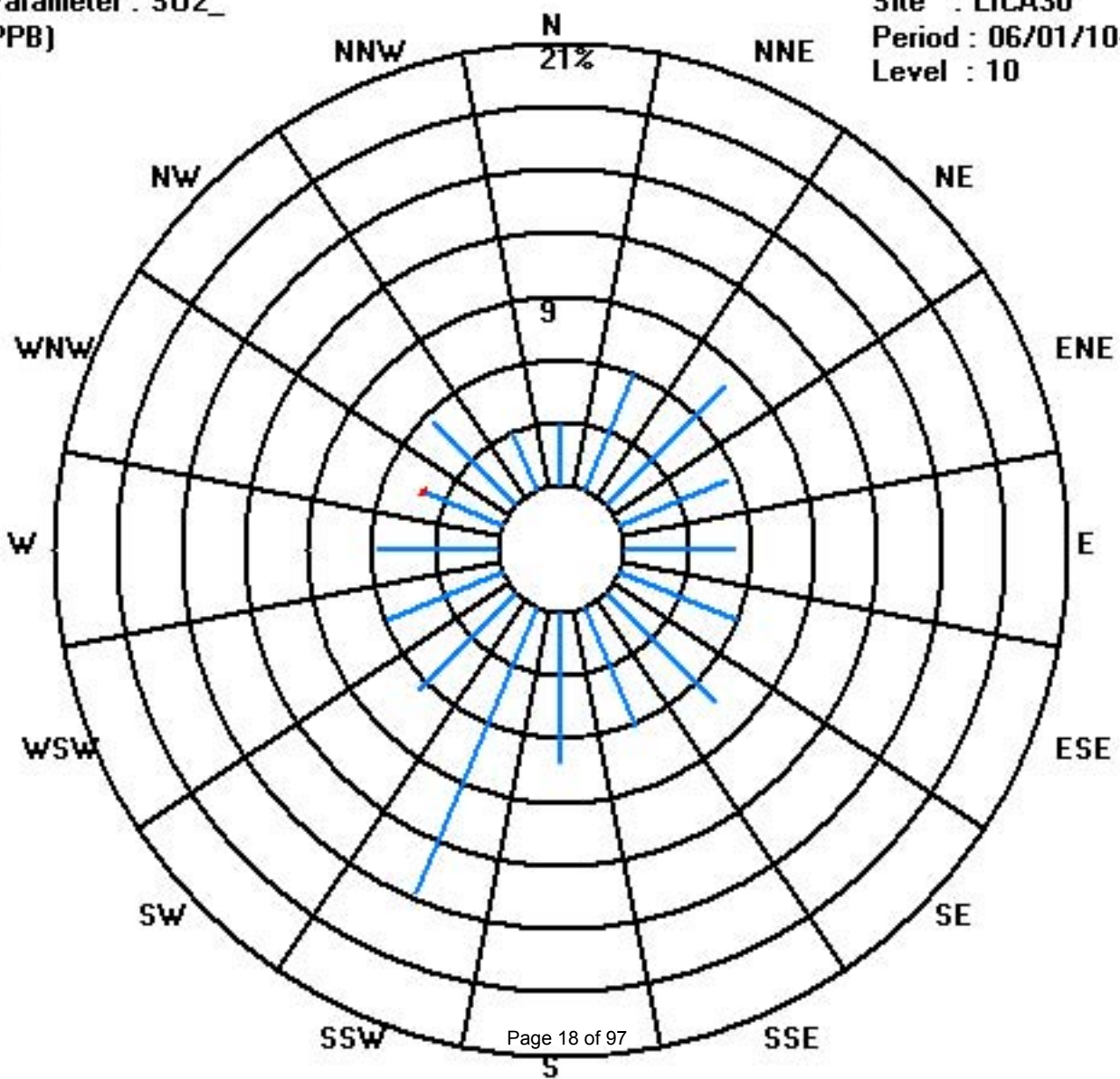
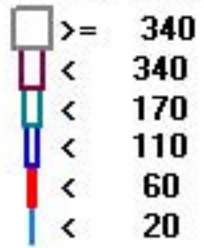
Calm : .00 %

Total # Operational Hours : 683

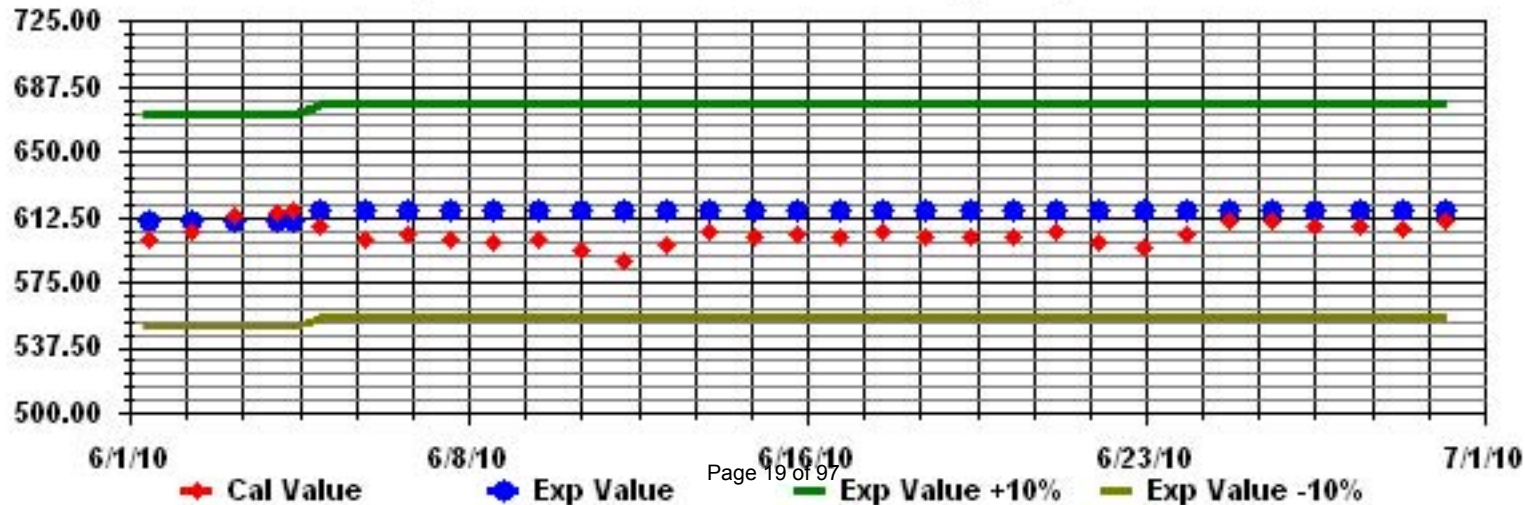
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA30 Parameter: S02\_ Sequence: S02 Phase: SPAll



# Hydrogen Sulphide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

HYDROGEN SULPHIDE (H<sub>2</sub>S) 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	24:00	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	IZS	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	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.0	24	
3	0	0	1	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24	
4	0	0	0	0	0	0	0	IZS	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
5	0	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
6	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
7	0	0	0	IZS	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
8	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
9	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
10	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	
11	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	
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	IZS	0	0	0	0.0	24	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	0	0	0	0	0	IZS	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	IZS	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	IZS	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	IZS	0	0	0	0	0	0	0	0	0	0	0.0	24	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	1	0	0	0	1	0.1	24	
21	0	0	0	0	0	0	0	1	1	1	0	0	0	0	IZS	0	0	0	0	1	0	0	0	0	0	1	0.2	24	
22	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	1	0.1	24	
23	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.0	24	
24	1	1	0	1	0	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
25	0	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.1	24	
26	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	
27	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	
28	1	1	1	0	1	IZS	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.4	24	
29	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
30	0	0	0	IZS	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2	24	
HOURLY MAX		1	1	1	1	1	1	2	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0	1				
HOURLY AVG		0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0				

**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

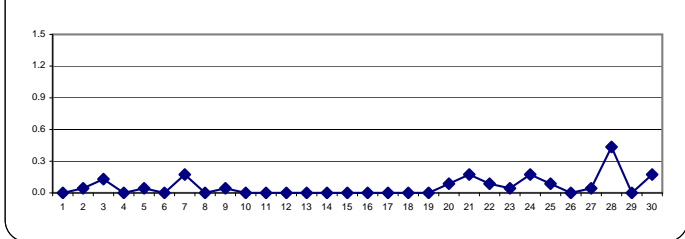
OBJECTIVE LIMIT:

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

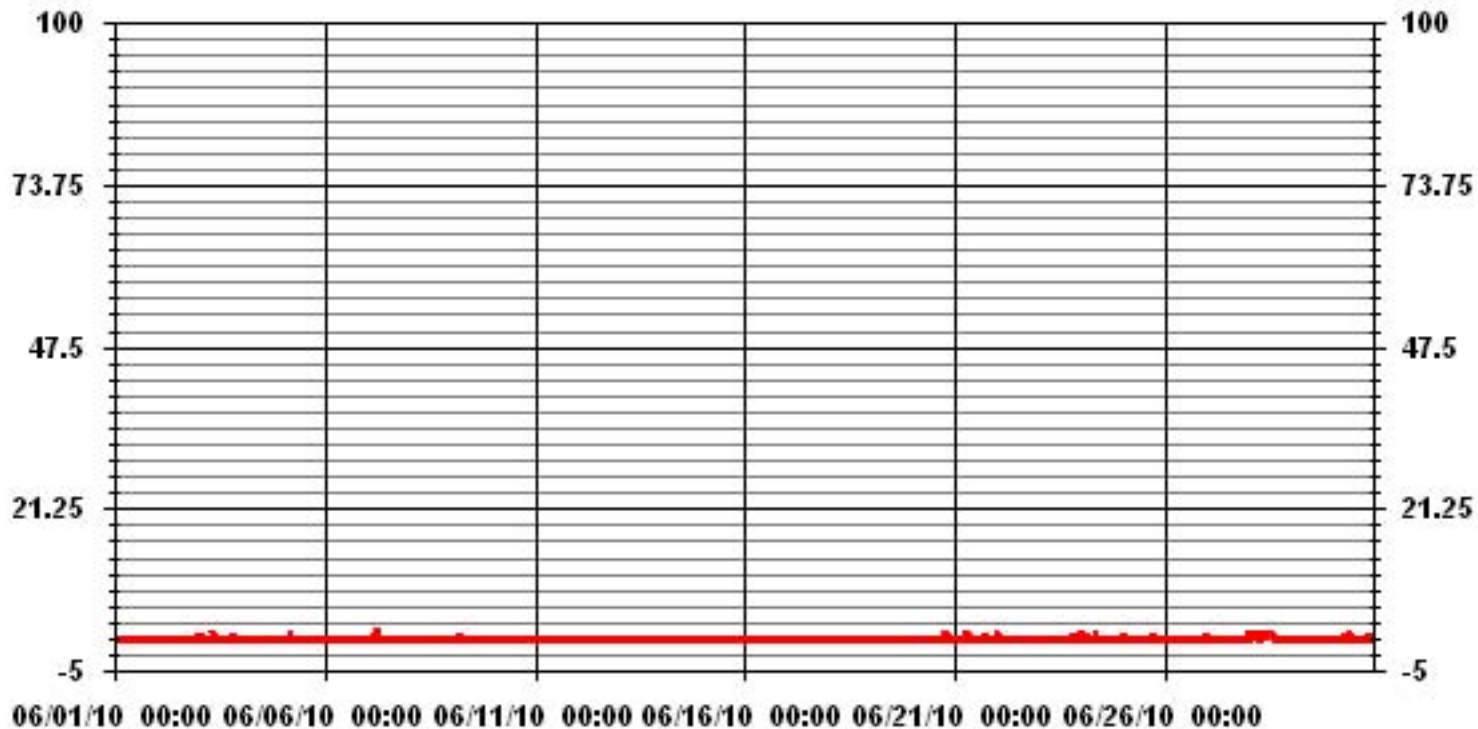
**MONTHLY SUMMARY**

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	39
MAXIMUM 1-HR AVERAGE:	2 PPB @ HOUR(S) 6 ON DAY(S) 7
MAXIMUM 24-HR AVERAGE:	0.4 PPB ON DAY(S) 28
	VAR-VARIOUS
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	6 HRS
OPERATIONAL TIME:	720 HRS
AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	0.24
MONTHLY AVERAGE:	0.06 PPB

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA30 H2S\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

## HYDROGEN SULPHIDE 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		
HOUR START	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.	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	0	0	0	0	0	0	0	1	0	IZS	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	1	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	0.2	24	
3	0	1	1	1	1	1	0	IZS	1	1	0	1	1	0	0	0	1	1	0	1	1	0	1	0	1	0.6	24	
4	0	0	0	1	1	0	IZS	1	C	C	C	C	C	1	1	1	1	1	1	0	0	1	1	0	1	0.6	24	
5	0	0	1	1	1	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.3	24	
6	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0.1	24	
7	0	0	1	IZS	1	1	4	1	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	4	0.5	24
8	0	1	IZS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
9	0	IZS	0	0	2	4	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0.3	24
10	IZS	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.0	24
11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.0	24
12	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	0.2	24
13	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	IZS	1	0	0	1	0.3	24
14	0	0	1	0	0	0	0	0	0	0	0	0	C	C	C	0	0	1	1	IZS	0	0	0	0	1	0.2	24	
15	1	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	1	1	IZS	0	1	0	0	0	1	0.3	24	
16	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	IZS	0	0	1	0	0	0	1	0.3	24	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	1	0	0	1	1	1	0.2	24	
18	0	1	0	0	0	0	1	1	0	0	0	0	1	1	0	IZS	0	1	1	1	0	1	1	1	1	0.5	24	
19	1	0	1	1	0	0	1	1	1	0	1	1	0	1	IZS	0	0	0	0	0	0	0	0	0	1	0.4	24	
20	0	0	0	0	1	1	0	0	0	0	0	0	0	IZS	0	1	1	1	1	1	1	0	0	0	1	0.3	24	
21	0	0	0	0	0	1	2	2	2	0	0	0	IZS	0	1	0	1	1	1	0	0	0	0	0	2	0.5	24	
22	1	1	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	1	0	0	0	0	0	1	0.2	24	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2	0	0	2	0.2	24	
24	4	4	0	2	1	0	1	2	2	IZS	1	0	0	0	0	3	1	0	0	1	1	1	0	1	4	1.1	24	
25	1	1	0	0	0	0	1	0	IZS	1	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	0.7	24	
26	1	0	0	0	0	0	0	IZS	1	1	0	0	0	1	1	0	1	0	0	1	1	0	0	2	2	0.4	24	
27	2	1	1	0	0	1	IZS	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	1	1	2	0.6	24	
28	1	1	2	1	2	IZS	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	0	0	2	0.8	24	
29	1	1	0	0	IZS	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	1	0.7	24	
30	0	0	0	IZS	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	3	1	3	0.8	24	
HOURLY MAX	4	4	2	2	2	4	4	2	2	1	1	1	1	1	1	3	1	1	1	1	2	2	3	2				
HOURLY AVG	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.5	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.4				

**STATUS FLAG CODES**

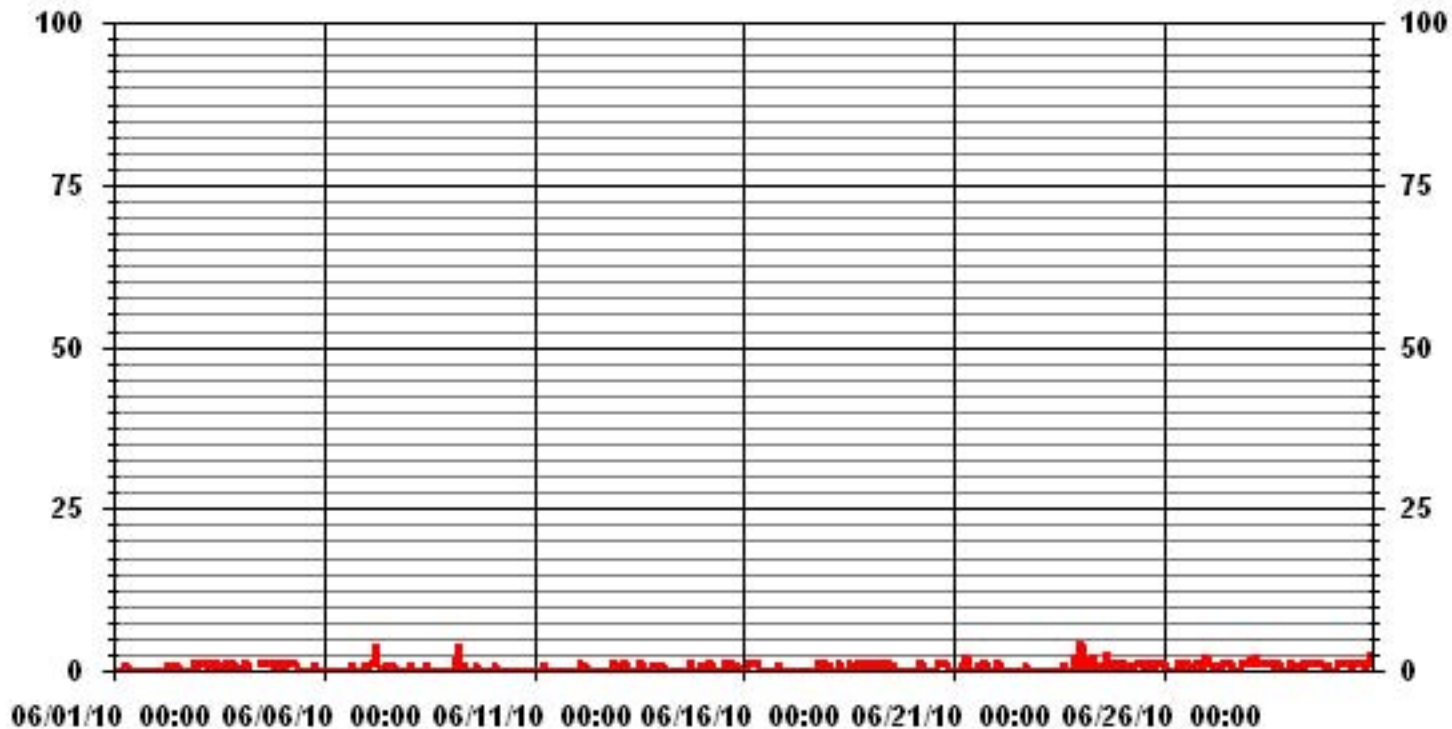
S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	232					
MAXIMUM INSTANTANEOUS VALUE:	4	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	0.60					



### 01 Hour Averages



— LICA30 H2S MAX PPB

LICA30  
H2S\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 30  
Site Name : LICA30  
Parameter : H2S\_  
Units : PPB

Wind Parameter : WDR  
Instrument Height : 10 Meters

		Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq	
< 3	2.92	6.00	8.05	5.56	5.27	5.71	7.32	6.14	7.17	14.78	6.58	5.85	6.00	4.09	5.56	2.92	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	2.92	6.00	8.05	5.56	5.27	5.71	7.32	6.14	7.17	14.78	6.58	5.85	6.00	4.09	5.56	2.92		

Calm : .00 %

Total # Operational Hours : 683

Distribution By Samples

		Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq	
< 3	20	41	55	38	36	39	50	42	49	101	45	40	41	28	38	20	683	
< 10																		
< 50																		
>= 50																		
Totals	20	41	55	38	36	39	50	42	49	101	45	40	41	28	38	20		

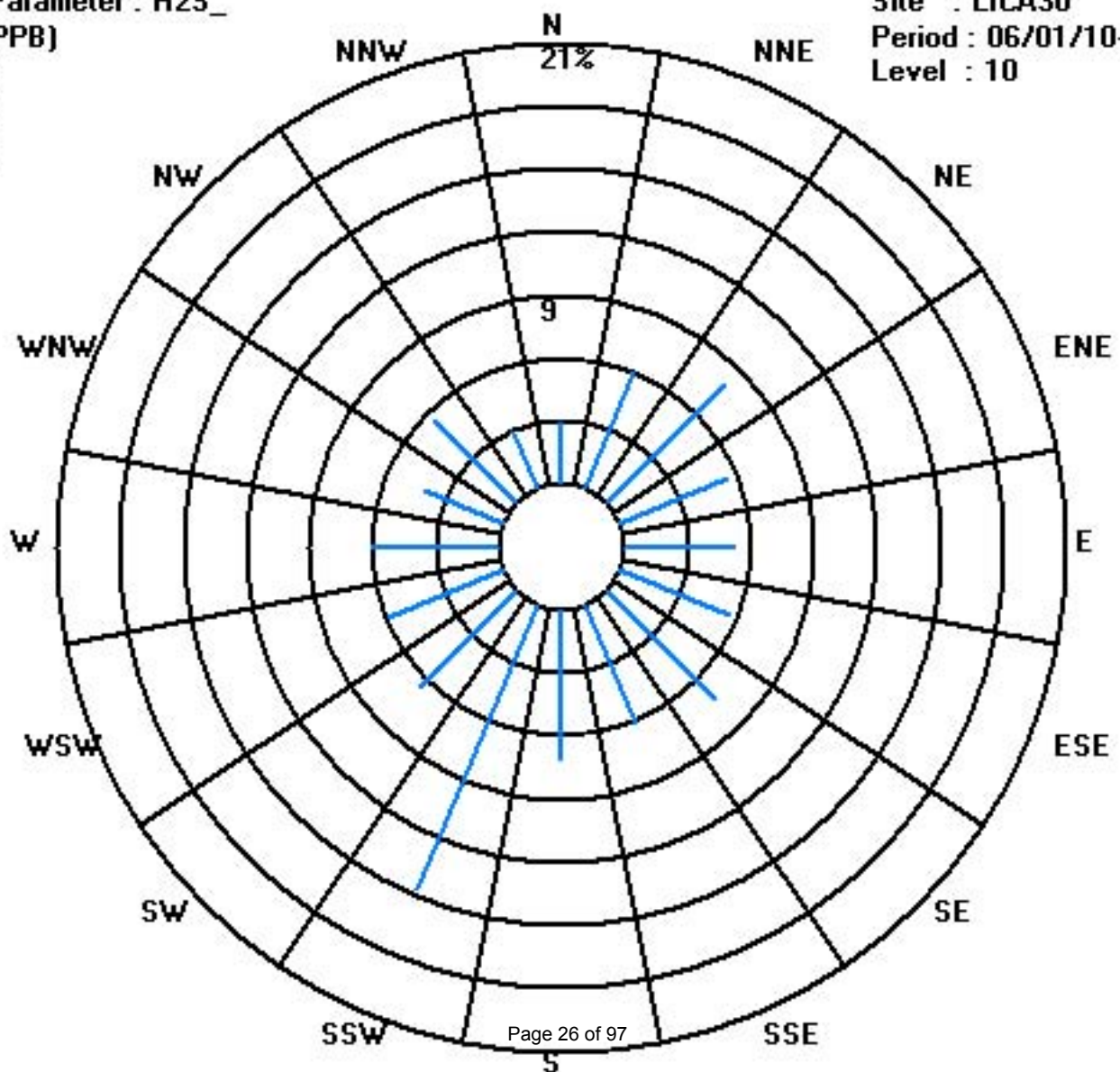
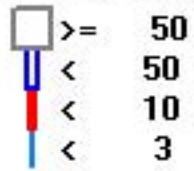
Calm : .00 %

Total # Operational Hours : 683

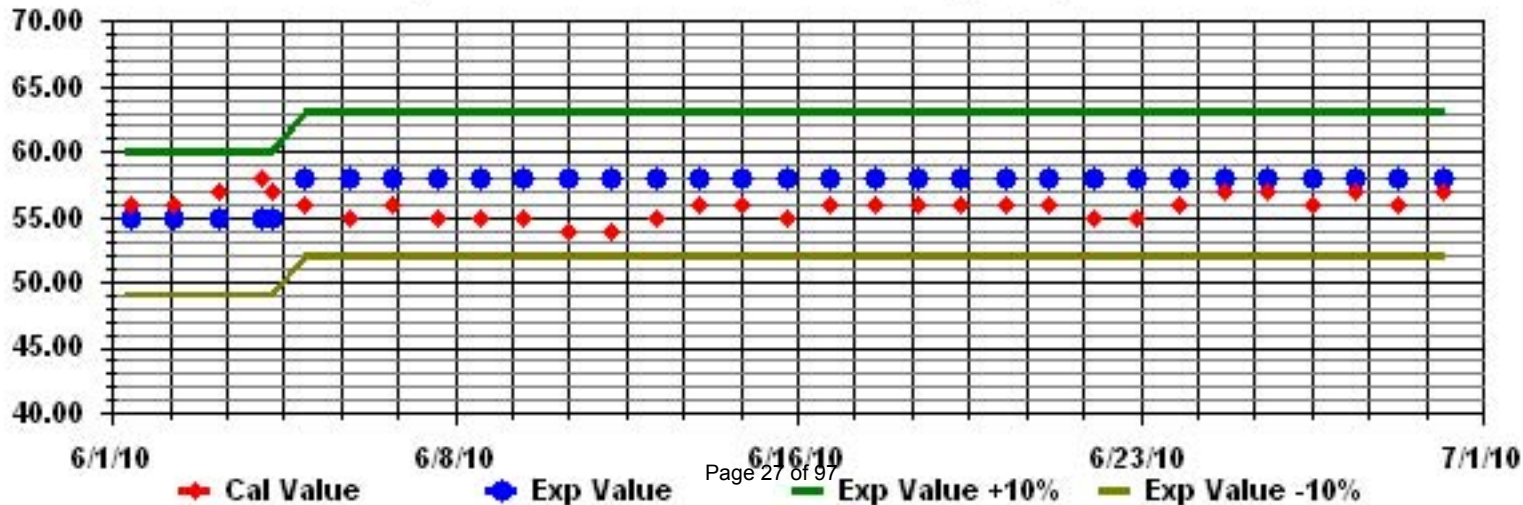
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA30 Parameter: H2S\_ Sequence: H2S Phase: SPAll



# Total Hydrocarbons

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

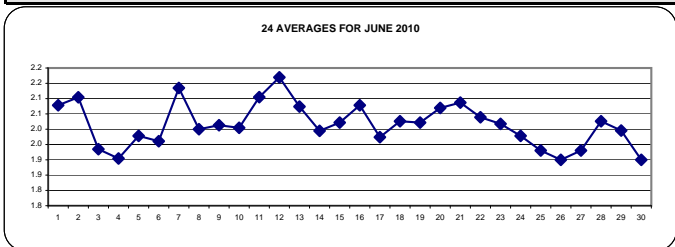
JUNE 2010

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

### STATUS FLAG CODES

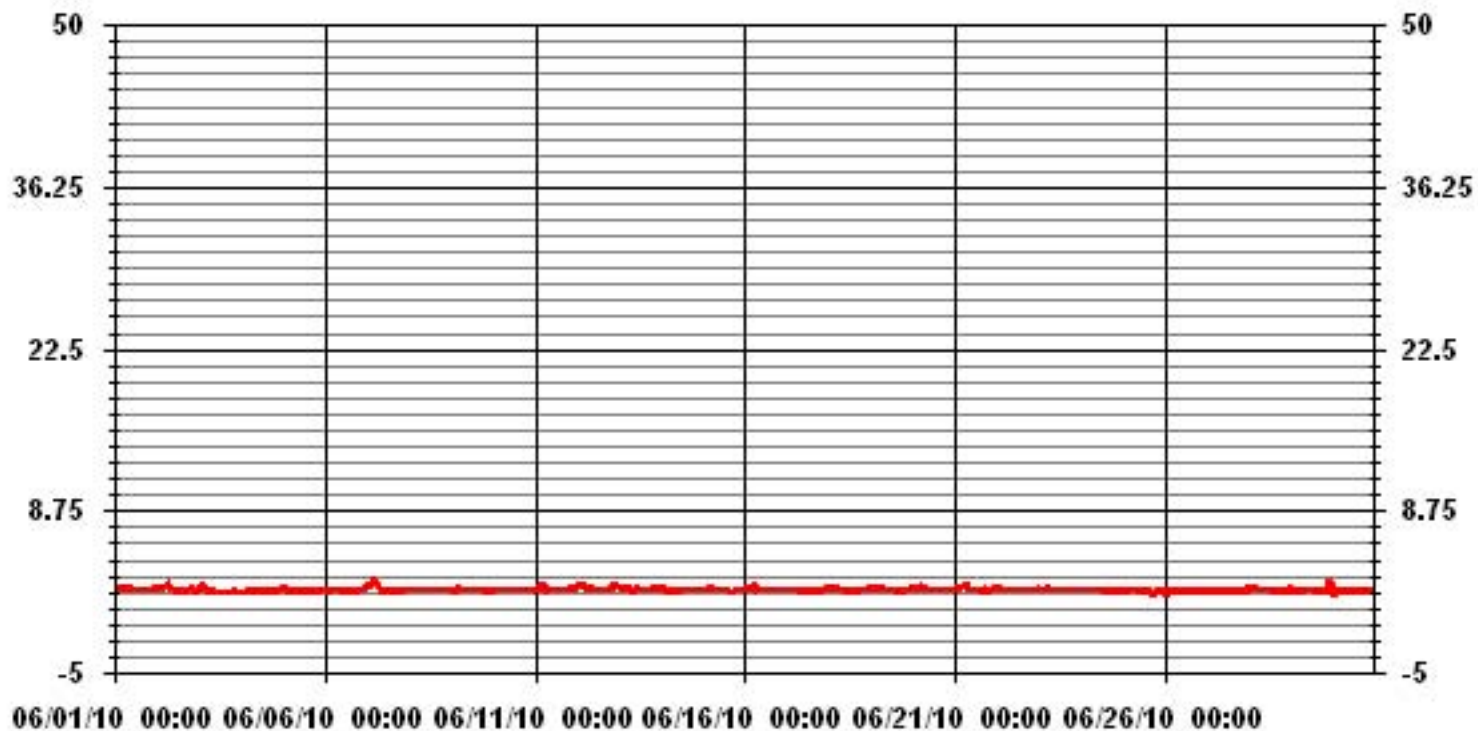
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	683
MAXIMUM 1-HR AVERAGE:	2.8 PPM @ HOUR(S) VAR ON DAY(S) 7, 29
MAXIMUM 24-HR AVERAGE:	2.2 PPM ON DAY(S) 12
	VAR- VARIOUS
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	6 HRS
STANDARD DEVIATION:	0.13
OPERATIONAL TIME:	720 HRS
AMD OPERATION UPTIME:	100.0 %
MONTHLY AVERAGE:	2.01 PPM

### 01 Hour Averages



— LICA30 THC PPM

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

## TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

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	24:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
1	2.1	2.1	2.1	2.2	2.2	2.4	2.4	2.2	2.5	IZS	2.1	2	2	2	2	2	2	2	2	2	2	2	2.1	2.2	2.2	2.5	2.1	24	
2	2.3	2.3	2.3	2.2	2.5	2.5	2.8	2.8	IZS	2	2	2	2	2	2	2.1	2	2	2	2.1	2.1	2.4	2.3	2	2.1	2.8	2.2	24	
3	2.4	2.4	2.4	2.4	2.3	2.2	1.9	IZS	2.2	2.2	1.9	1.9	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.0	24	
4	1.9	1.9	1.9	1.9	2	2.1	IZS	2	2.2	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2.2	2.0	24	
5	2.3	2.4	2.4	2.2	2	IZS	2	2	2	2.1	1.9	1.9	2	1.9	2	2	2	1.9	1.9	2	2	2	2	2	2	2.4	2.0	24	
6	2.1	2	2	2	IZS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.2	2.2	2.2	2.0	24	
7	2.7	2.7	2.5	IZS	3	2.9	3	2.6	2.5	2.1	2.4	2.1	2	2	2	2	2	2	1.9	2	2	2	2	2	3	2.3	24		
8	2	2	IZS	2	2	2	2	2	2	2	2	2	2	2.1	2	2	2	2	2	2	2	2	2	2	2	2.1	2.0	24	
9	2	IZS	2.1	2.2	2.4	2.4	2.1	2	2	2.1	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2.4	2.1	24	
10	IZS	2.2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.2	2.1	2	2.1	2	2	2.1	2.1	IZS	2.2	2.1	24		
11	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.3	C	C	2.1	2.1	C	2	2	2	2	2	2	2	2.1	2.1	2.1	IZS	2.2	2.4	24		
12	2.3	2.3	2.4	2.4	2.5	2.5	2.4	2.2	2.3	2.3	2	2	2	2	2	2	2	2	2	2	2.2	2.2	IZS	2.4	2.4	2.5	2.2	24	
13	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2	2	2	2	2	2	2	2	IZS	2.1	2.1	2.2	2.3	2.1	24	
14	2.2	2.4	2.3	2	2	1.9	2	2	3	2	2	C	C	C	C	2	2	2.1	2	IZS	2	2	2.1	2.2	3	2.1	24		
15	2.4	2	2	2.2	2.2	2.5	2.1	2	2	2	2	2.2	2.1	2	2	2	2	2	2	IZS	2.1	2.1	2	2.2	2.2	2.5	2.1	24	
16	2.3	2.3	2.3	2.4	2.5	2.5	2.5	3.8	2.6	2.4	2	2	2.2	2	2.1	2	2	IZS	2	2.3	2	2.1	2	2	3.8	2.3	24		
17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.9	IZS	2	2	2	2	2	2.1	2.1	2.1	2.1	2.0	24	
18	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.1	2	2	2	2	2	1.9	2	2	IZS	2	2	2	2	2	2.1	2.1	2.1	2.3	2.1	24	
19	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2	IZS	2.2	2	2	2	2	2	2	2.1	2.1	2.1	2.2	2.1	24
20	2.1	2.2	2.2	2.3	2.4	2.3	2.2	2.2	2.2	2.3	2	2	2	IZS	2	2.2	2	2	2	2	2	2	2	2.1	2.1	2	2.4	2.1	24
21	2.1	2.1	2.1	2.2	2.2	2.6	2.6	2.5	2.5	2.1	2	2	2	IZS	2	2	2	2.4	2	2	2	2	2	2	2.1	2.2	2.6	2.2	24
22	2.2	2.2	2.2	2.3	2.1	2	2	2	2	2	2	2	IZS	2	2	2	2	2.1	2	2	2	2	2	2.1	2.1	2.3	2.1	24	
23	2.1	2.1	2	2	2.2	2.3	2.2	2.1	2	2	IZS	2	2.1	2	2	2	2	2	2	2	2	2	2	2	2.1	2	2.3	2.1	24
24	2	2	2	2.1	2.1	2.1	2.2	2.1	2.1	IZS	2	2	2	2	2	2	1.9	2.1	2.1	2.1	1.9	1.9	1.9	2	2.3	2.3	2.0	24	
25	2.3	2	2	2.1	2.1	2.1	2.1	2.2	IZS	2	1.9	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.4	2.4	2.0	24	
26	1.9	1.9	2	1.9	1.9	1.9	1.9	IZS	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	2.1	2.1	1.9	24	
27	2.1	2.1	2	2	1.9	1.9	IZS	2.1	2	1.9	1.9	2	2	2	2	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2.1	2.1	2.0	24	
28	2.2	2.2	2.1	2.5	2.2	IZS	2.1	2	2.2	2.2	2.2	2.1	2.1	2	2	2	2	1.9	1.9	1.9	1.9	2	2	2.3	2.3	2.5	2.1	24	
29	2.2	2.2	2	2.1	IZS	2	2.1	2	2.1	2	2	2	2	2.1	2	2	1.9	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.5	24
30	2.1	1.9	1.9	IZS	2.2	2.1	2.1	2	1.9	1.9	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	24
HOURLY MAX	3	3	3	3	3	3	3	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	11	4			
HOURLY AVG	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.2				

**STATUS FLAG CODES**

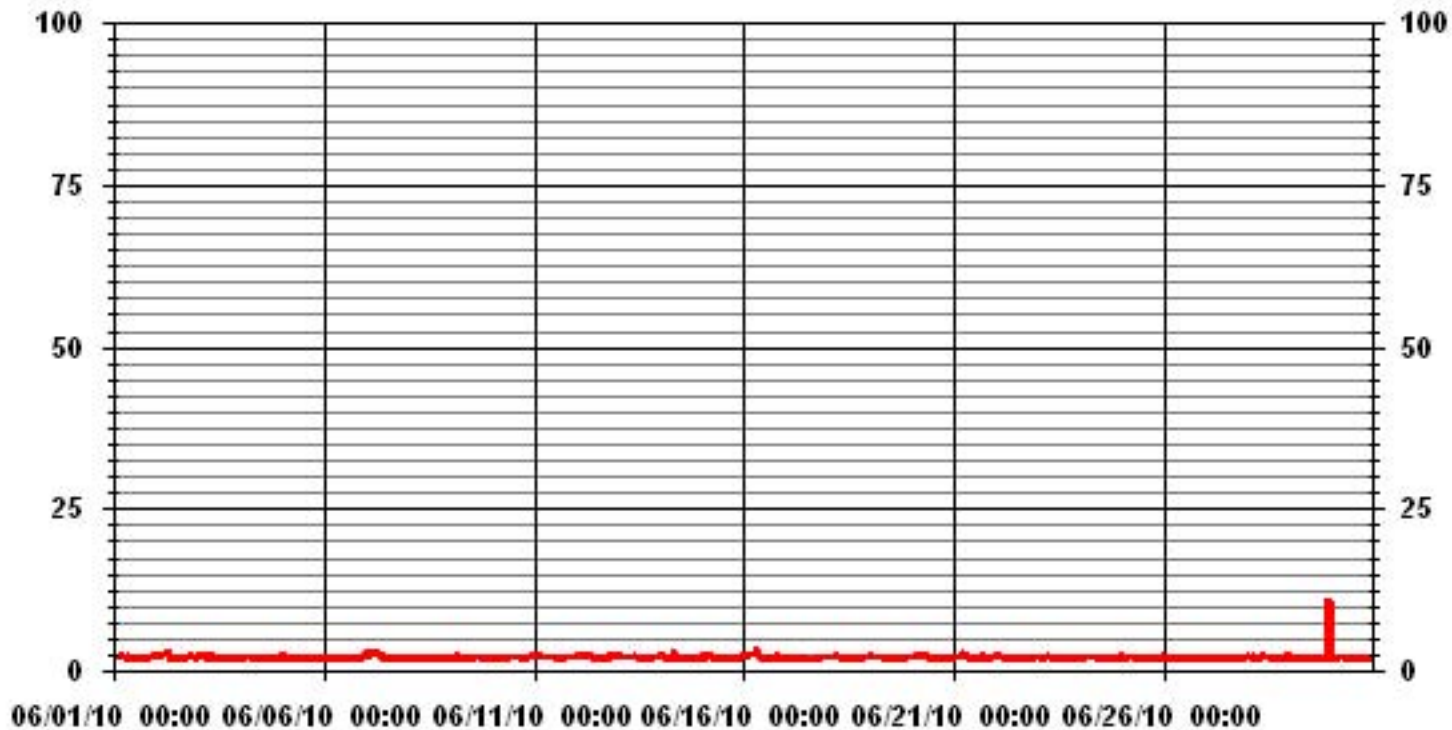
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	682					
MAXIMUM INSTANTANEOUS VALUE:	11.2	PPM	@ HOUR(S)	22	ON DAY(S)	29
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	0.40					



### 01 Hour Averages



— LICA30 THCMAX PPM

LICA30  
 THC / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

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

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	2.92	6.00	7.90	5.41	5.27	6.00	7.32	6.14	7.17	14.78	6.58	5.85	6.14	4.24	5.27	2.92	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	2.92	6.00	7.90	5.41	5.27	6.00	7.32	6.14	7.17	14.78	6.58	5.85	6.14	4.24	5.27	2.92	

Calm : .00 %

Total # Operational Hours : 683

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	20	41	54	37	36	41	50	42	49	101	45	40	42	29	36	20	683
< 10.0																	
< 50.0																	
>= 50.0																	
Totals	20	41	54	37	36	41	50	42	49	101	45	40	42	29	36	20	

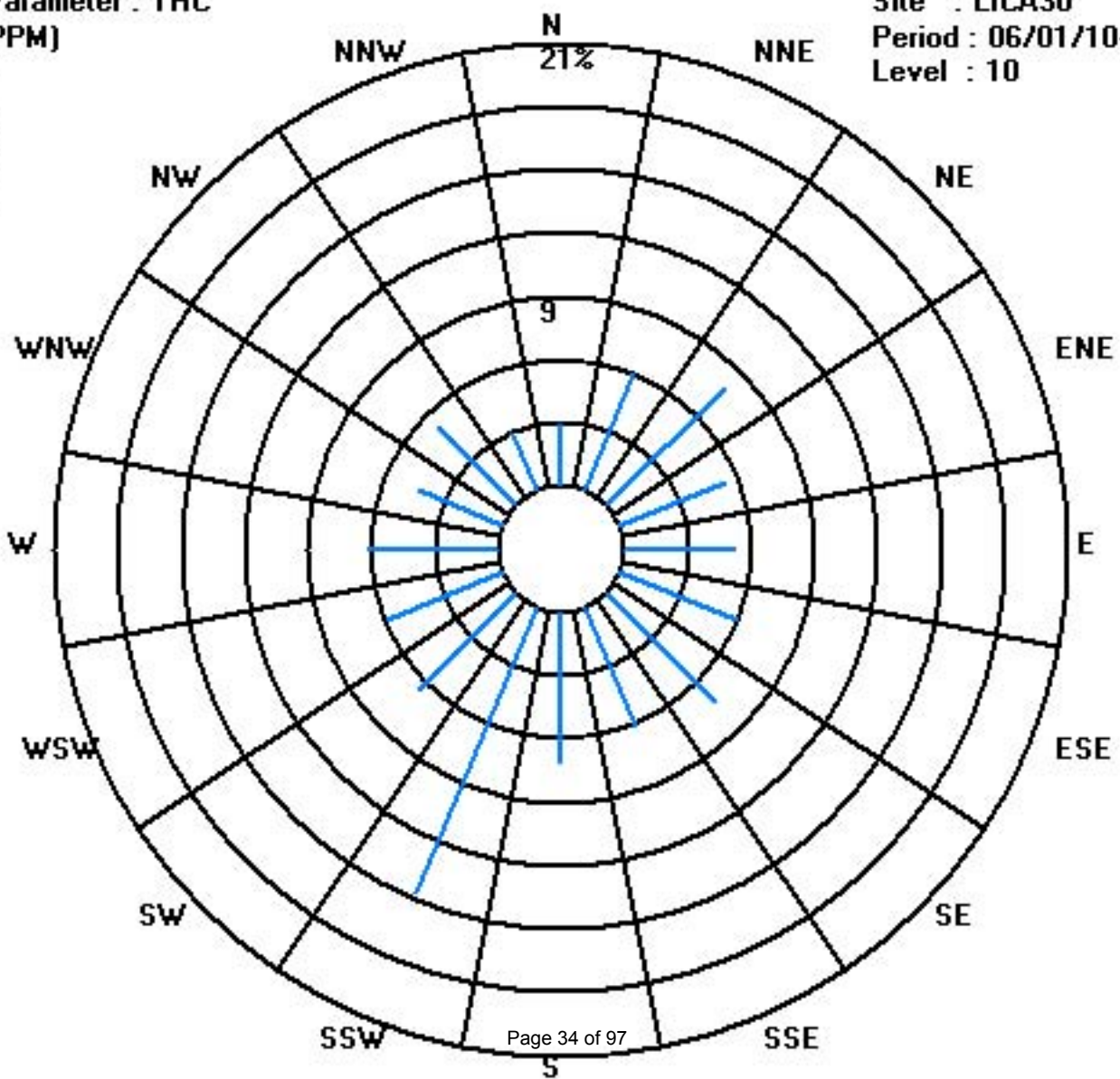
Calm : .00 %

Total # Operational Hours : 683

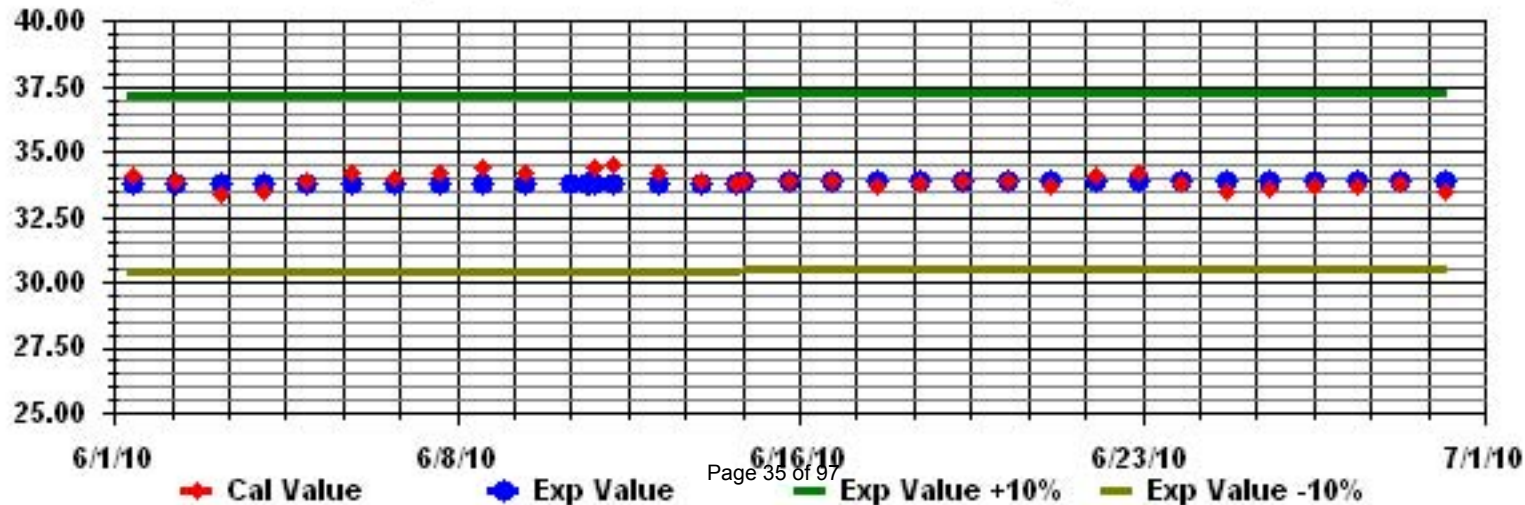
Class Limits (PPM)

Period : 06/01/10-06/30/10

Level : 10



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



# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

## NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR				
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.			
DAY																														
1	3	1	1	1	1	3	8	9	9	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0	0	9	1.6	24			
2	2	1	1	1	1	1	2	4	IZS	0	0	0	0	0	0	0	0	0	0	5	11	6	3	5	11	1.9	24			
3	12	12	13	15	11	5	0	IZS	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	3.1	24			
4	0	0	0	0	1	3	IZS	0	2	C	C	C	C	C	0	2	2	1	1	1	1	1	1	1	3	0.9	24			
5	1	2	3	5	6	IZS	2	4	2	0	0	0	0	0	3	4	0	0	1	0	0	2	2	6	1.6	24				
6	7	7	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0.8	24			
7	0	1	0	IZS	0	0	1	3	4	2	2	6	3	0	0	0	0	0	0	0	0	0	0	0	6	1.0	24			
8	0	0	IZS	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24			
9	0	IZS	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.1	24			
10	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	IZS	1	0.0	24		
11	1	2	2	3	2	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	3	0.7	24	
12	1	1	1	1	2	2	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	3	0.8	24
13	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	0	1	0.4	24		
14	0	1	2	0	0	0	0	1	2	0	0	2	0	C	C	1	1	3	1	IZS	2	1	4	4	4	4	1.2	24		
15	6	0	0	3	3	9	4	2	0	0	1	1	0	0	1	0	1	0	IZS	11	16	9	4	6	16	3.3	24			
16	14	11	8	21	13	9	5	5	7	0	0	0	1	0	0	0	0	IZS	0	0	0	0	0	0	21	4.1	24			
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24		
18	1	2	3	2	5	7	4	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	1	7	1.2	24		
19	1	2	2	1	1	2	2	2	2	1	1	0	0	0	IZS	1	0	0	0	0	0	0	1	1	1	2	1.0	24		
20	1	1	1	0	0	0	0	1	2	3	0	0	1	IZS	0	1	0	0	0	0	0	1	0	1	0	1	3	0.6	24	
21	1	1	0	0	0	1	3	5	3	4	2	0	IZS	0	1	0	3	0	0	1	0	1	0	0	5	1.1	24			
22	1	1	1	0	0	0	0	0	0	0	0	IZS	0	0	0	1	1	0	0	0	1	1	1	0	1	0.3	24			
23	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			
24	0	0	0	0	0	0	2	1	1	IZS	0	0	1	0	0	0	0	2	2	2	0	0	8	7	8	1.1	24			
25	3	2	1	0	0	1	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0.4	24			
26	0	0	0	0	0	0	0	IZS	1	1	0	0	0	0	0	0	0	0	0	0	1	0	3	3	0.3	24				
27	6	9	1	0	0	0	IZS	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1.0	24			
28	0	0	0	1	1	IZS	0	0	0	3	1	2	1	0	0	0	0	0	0	0	0	0	0	0	3	0.4	24			
29	0	0	0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.1	24			
30	1	0	0	IZS	6	4	5	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0.8	24			
HOURLY MAX	14	12	13	21	13	9	8	9	9	4	2	6	3	1	1	3	4	3	2	11	16	9	8	7						
HOURLY AVG	2.2	2.0	1.4	2.0	1.9	1.8	1.6	1.8	1.5	0.8	0.3	0.4	0.3	0.0	0.1	0.3	0.4	0.2	0.1	0.7	1.1	0.8	1.0	1.2						

### STATUS FLAG CODES

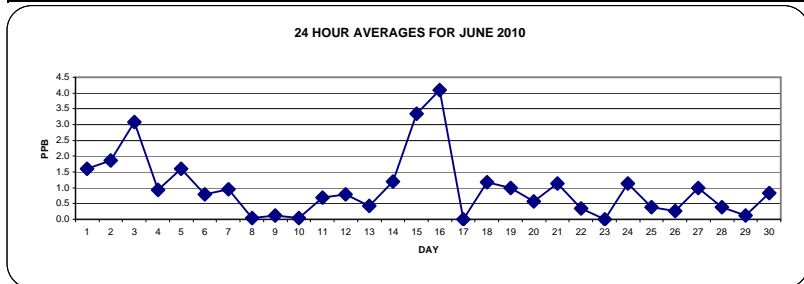
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

### OBJECTIVE LIMIT:

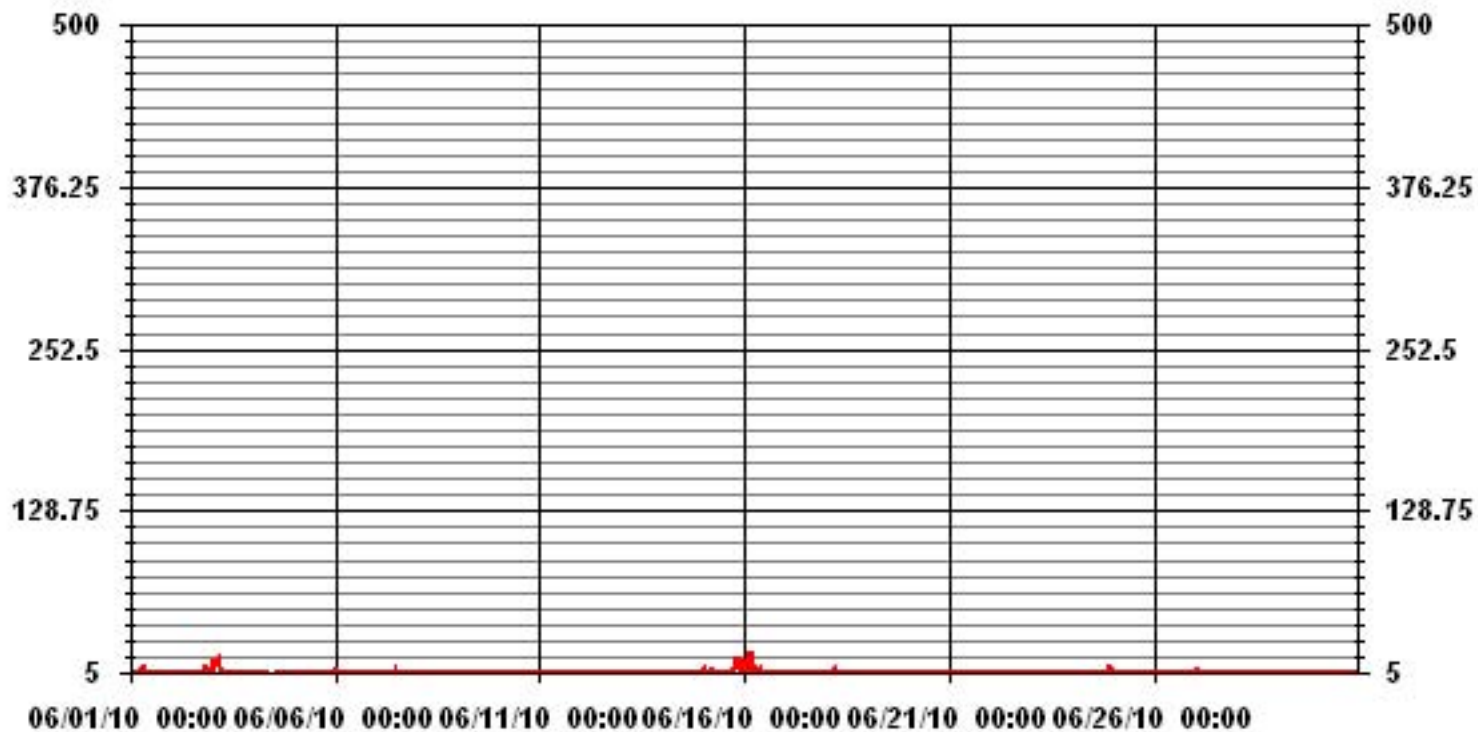
ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
----------------------	------	-----	-----	-------	-----	-----

### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	240
MAXIMUM 1-HR AVERAGE:	21 PPB @ HOUR(S) 3 ON DAY(S) 16
MAXIMUM 24-HR AVERAGE:	4.1 PPB ON DAY(S) 16
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	8 HRS
STANDARD DEVIATION:	2.31
OPERATIONAL TIME:	720 HRS
AMD OPERATION UPTIME:	100.0 %
MONTHLY AVERAGE:	1.00 PPB



### 01 Hour Averages



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

## NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	6	1	2	2	2	6	11	12	12	IZS	1	2	1	0	0	0	0	0	1	0	0	0	7	2	12	3.0	24	
2	7	2	2	2	2	5	6	10	IZS	1	0	1	0	0	0	0	0	5	8	16	15	6	11	16	16	4.3	24	
3	17	19	19	19	15	11	0	IZS	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	5.0	24
4	0	0	0	0	6	6	IZS	5	C	C	C	C	C	C	C	5	4	3	2	3	5	3	2	2	6	2.9	24	
5	2	3	4	11	11	IZS	6	6	4	1	0	0	3	0	3	7	8	1	3	6	6	6	5	6	11	4.4	24	
6	15	11	6	0	IZS	2	3	2	2	1	3	1	1	1	3	2	1	1	1	0	0	0	0	1	15	2.5	24	
7	1	2	2	IZS	1	1	3	6	6	4	8	18	6	2	0	0	1	0	0	0	0	0	0	0	18	2.7	24	
8	0	0	IZS	0	0	0	0	0	0	1	1	1	3	3	2	1	1	0	0	1	0	2	0	0	3	0.7	24	
9	0	IZS	0	0	1	1	1	1	3	3	1	1	0	2	1	2	5	2	4	0	0	0	0	1	5	1.3	24	
10	IZS	0	0	0	0	0	0	0	0	0	0	1	1	1	3	4	2	1	1	0	1	0	0	IZS	4	0.7	24	
11	2	3	3	4	4	4	1	3	4	4	2	1	0	1	2	1	1	0	0	0	3	1	IZS	1	4	2.0	24	
12	1	2	2	2	3	3	4	3	2	2	1	1	1	0	0	0	0	0	0	1	1	IZS	2	2	4	1.4	24	
13	2	2	1	1	2	2	13	3	1	1	1	0	0	0	0	0	0	0	0	0	0	IZS	2	2	1	13	1.5	24
14	1	1	12	1	1	0	1	2	9	7	2	7	C	C	C	13	11	8	5	IZS	4	4	9	16	16	5.7	24	
15	14	3	1	5	7	14	10	4	1	1	7	7	6	2	7	3	11	0	IZS	15	22	22	10	13	22	8.0	24	
16	21	17	18	23	22	14	12	10	17	1	0	1	3	2	3	8	3	IZS	0	5	5	1	0	0	23	8.1	24	
17	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0.2	24	
18	2	3	3	3	8	9	8	2	1	1	0	1	1	1	1	IZS	0	0	1	1	1	1	1	2	9	2.2	24	
19	2	3	3	2	2	2	3	3	3	3	2	1	1	1	IZS	8	1	0	0	0	2	3	1	1	8	2.0	24	
20	2	2	1	1	1	1	1	4	7	7	1	1	1	IZS	1	7	2	0	1	1	2	2	1	1	7	2.1	24	
21	2	1	1	0	0	5	5	12	11	10	9	1	IZS	2	3	0	10	2	1	2	1	2	1	1	12	3.6	24	
22	2	2	2	1	0	0	0	0	0	0	0	IZS	1	1	2	10	3	1	0	3	2	1	2	2	10	1.5	24	
23	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	
24	1	1	0	2	0	1	6	4	5	IZS	2	0	4	2	2	4	0	4	7	7	0	0	24	9	24	3.7	24	
25	10	4	2	1	1	5	2	3	IZS	1	1	1	0	2	9	0	0	0	0	0	0	0	0	6	10	2.1	24	
26	10	0	0	1	0	1	2	IZS	3	3	2	1	0	0	1	0	0	0	0	0	0	5	0	8	10	1.6	24	
27	13	12	4	0	0	0	IZS	9	5	5	3	0	2	1	0	0	0	0	0	0	1	0	0	0	13	2.4	24	
28	1	2	1	3	3	IZS	0	0	2	9	4	5	4	0	2	0	0	0	0	0	0	0	0	1	9	1.6	24	
29	0	2	0	5	IZS	0	1	0	4	1	0	1	1	1	0	0	0	1	0	0	0	0	8	4	8	1.3	24	
30	4	2	1	IZS	14	12	9	6	1	2	1	1	1	1	1	0	0	0	0	0	1	0	0	0	14	2.5	24	
HOURLY MAX	21	19	19	23	22	14	13	12	17	10	9	18	6	3	9	13	11	8	7	15	22	22	24	16				
HOURLY AVG	4.8	3.5	3.1	3.2	3.8	3.8	3.9	4.0	4.1	2.9	1.9	2.0	1.5	1.0	1.7	2.6	2.2	0.8	1.1	1.8	2.5	2.4	2.8	3.1				

**STATUS FLAG CODES**

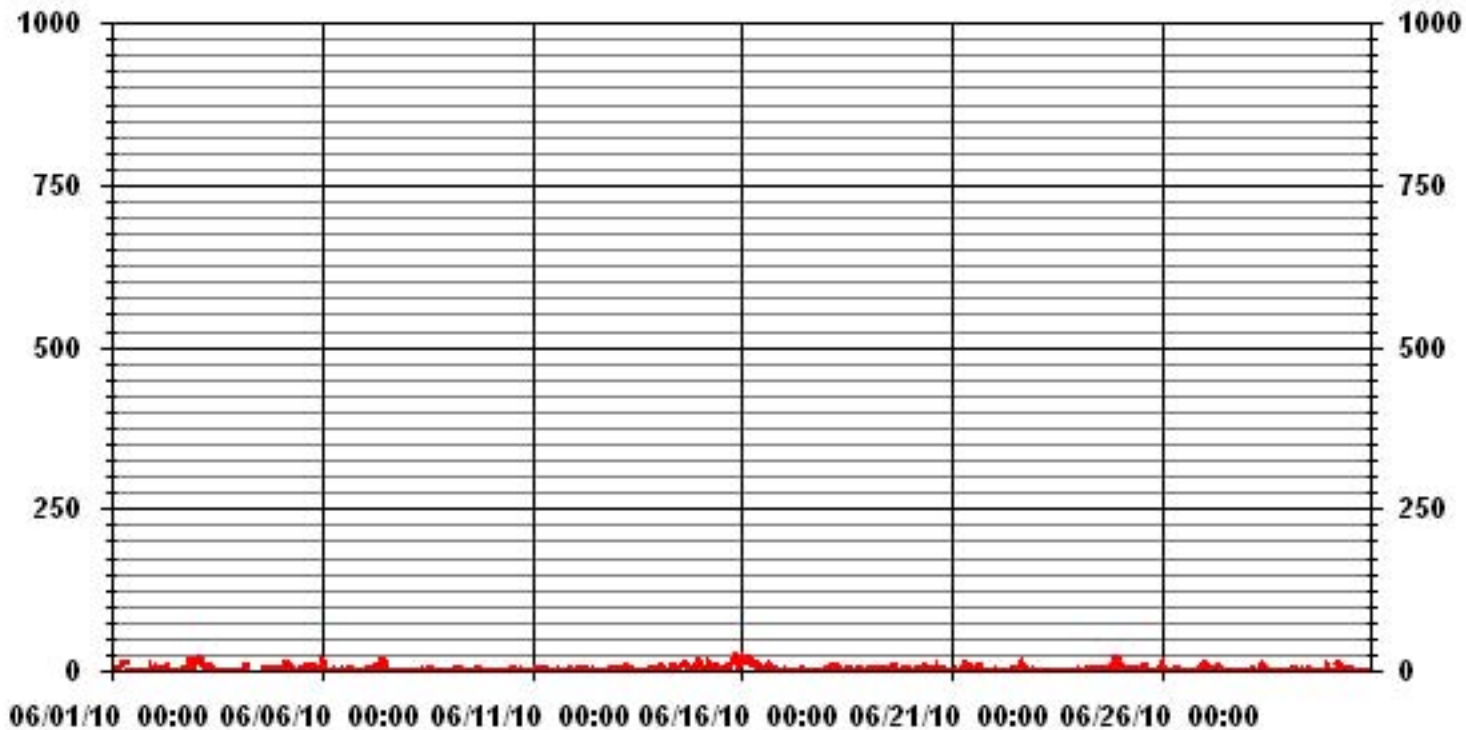
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	440					
MAXIMUM INSTANTANEOUS VALUE:	24	PPB	@ HOUR(S)	22	ON DAY(S)	24
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	4.08					



### 01 Hour Averages



— LICA30 NO2MAX PPB

LICA30  
 NO2\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 30  
 Site Name : LICA30  
 Parameter : NO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.93	6.02	8.07	5.58	5.28	5.72	7.34	6.16	7.19	14.83	6.60	5.87	5.72	4.11	5.58	2.93	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	2.93	6.02	8.07	5.58	5.28	5.72	7.34	6.16	7.19	14.83	6.60	5.87	5.72	4.11	5.58	2.93	

Calm : .00 %

Total # Operational Hours : 681

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	20	41	55	38	36	39	50	42	49	101	45	40	39	28	38	20	681
< 110																	
< 210																	
>= 210																	
Totals	20	41	55	38	36	39	50	42	49	101	45	40	39	28	38	20	

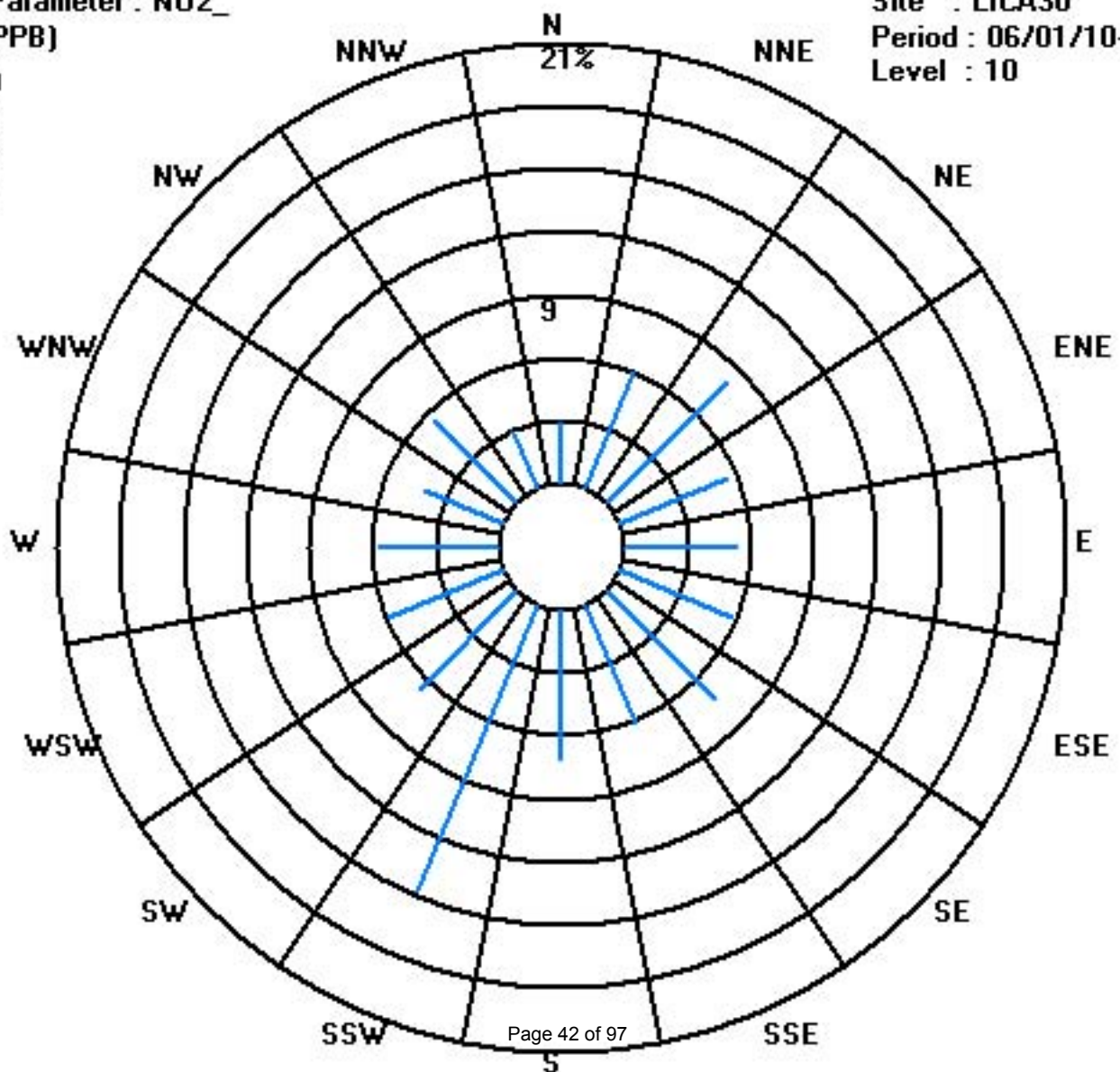
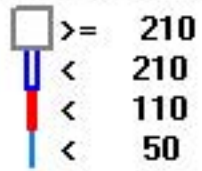
Calm : .00 %

Total # Operational Hours : 681

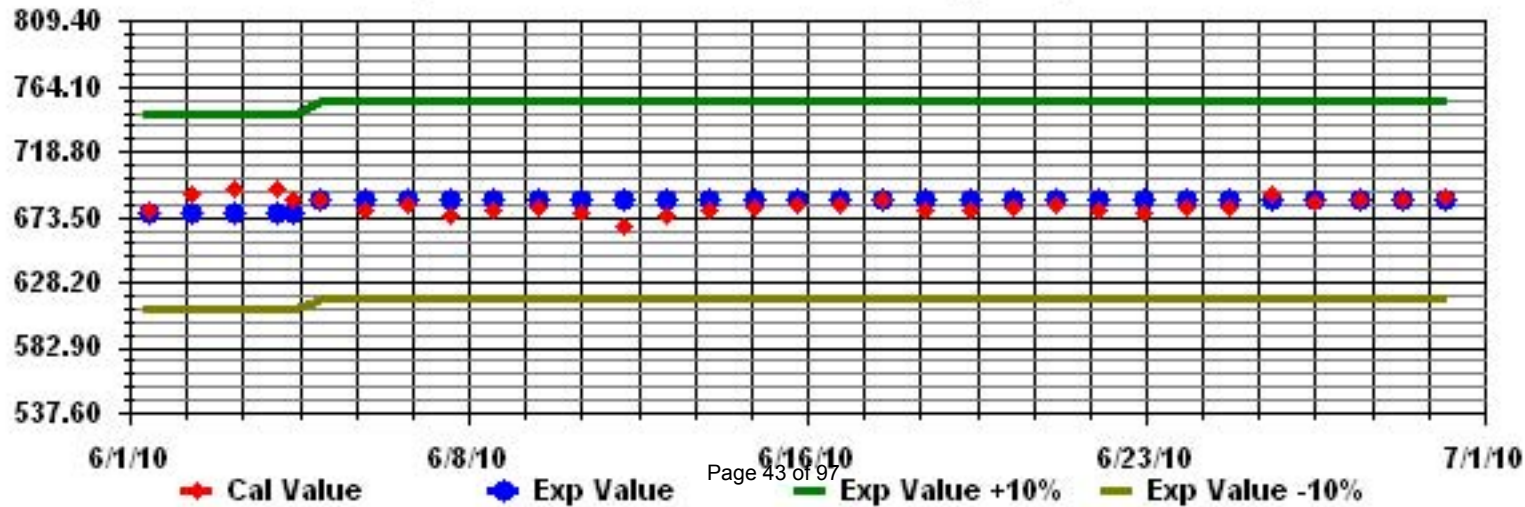
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA30 Parameter: NO2\_ Sequence: NO2 Phase: SPAN



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOICATION - MASKWA

JUNE 2010

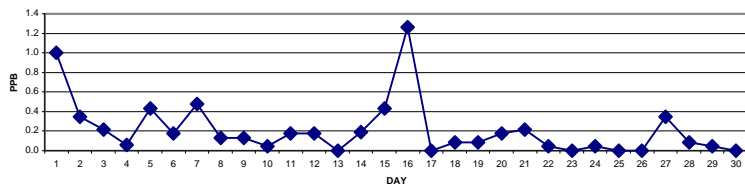
NITRIC OXIDE hourly averages in ppb

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	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	MAX.	AVG.	RDGS.	
1	0	0.1	0	0	0	0	1	7	9	6	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1.0	24	
2	0	0.1	0	0	0	0	2	2	3	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
3	0	0.0	1	1	1	1	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
4	0	0.0	0	0	0	0	0	IZS	0	1	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	1	0.1	24	
5	0	0.0	0	0	0	0	IZS	1	2	1	0	0	0	1	0	0	1	4	0	0	0	0	0	0	0	4	0.4	24	
6	1	0.1	0	0	0	IZS	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
7	0	0.0	0	IZS	0	0	1	1	2	2	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	3	0.5	24	
8	0	0.0	IZS	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0.1	24	
9	0	0.0	IZS	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1	24	
10	IZS	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	IZS	1	0.0	24
11	0	0.0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
12	0	0.0	0	0	0	0	1	1	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	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	1	0	0	1	0	C	C	0	1	1	0	IZS	0	0	0	0	1	0.2	24	
15	0	0.0	0	0	0	0	4	2	1	0	0	1	0	0	0	0	0	0	0	0	IZS	1	1	0	0	4	0.4	24	
16	2	0.2	2	0	5	2	4	3	4	7	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	7	1.3	24	
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	0.0	0.0	24
18	0	0.0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	0.1	24
19	0	0.0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	0.1	24
20	0	0.0	0	0	0	0	0	0	1	1	2	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
21	0	0.0	0	0	0	0	0	1	1	1	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
22	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	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	0.0	0.0	24
24	0	0.0	0	0	0	0	0	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
25	0	0.0	0	0	0	0	0	0	0	0	IZS	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	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
27	0	0.0	0	0	0	0	0	IZS	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0.3	24	
28	0	0.0	0	0	0	0	IZS	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
29	0	0.0	0	0	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
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	0.0	0.0	24
HOURLY MAX	2	2	1	5	2	4	7	9	7	2	1	3	1	1	1	1	1	4	1	0	1	1	0	0	0				
HOURLY AVG	0.1	0.1	0.0	0.2	0.1	0.5	0.8	1.2	1.0	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	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

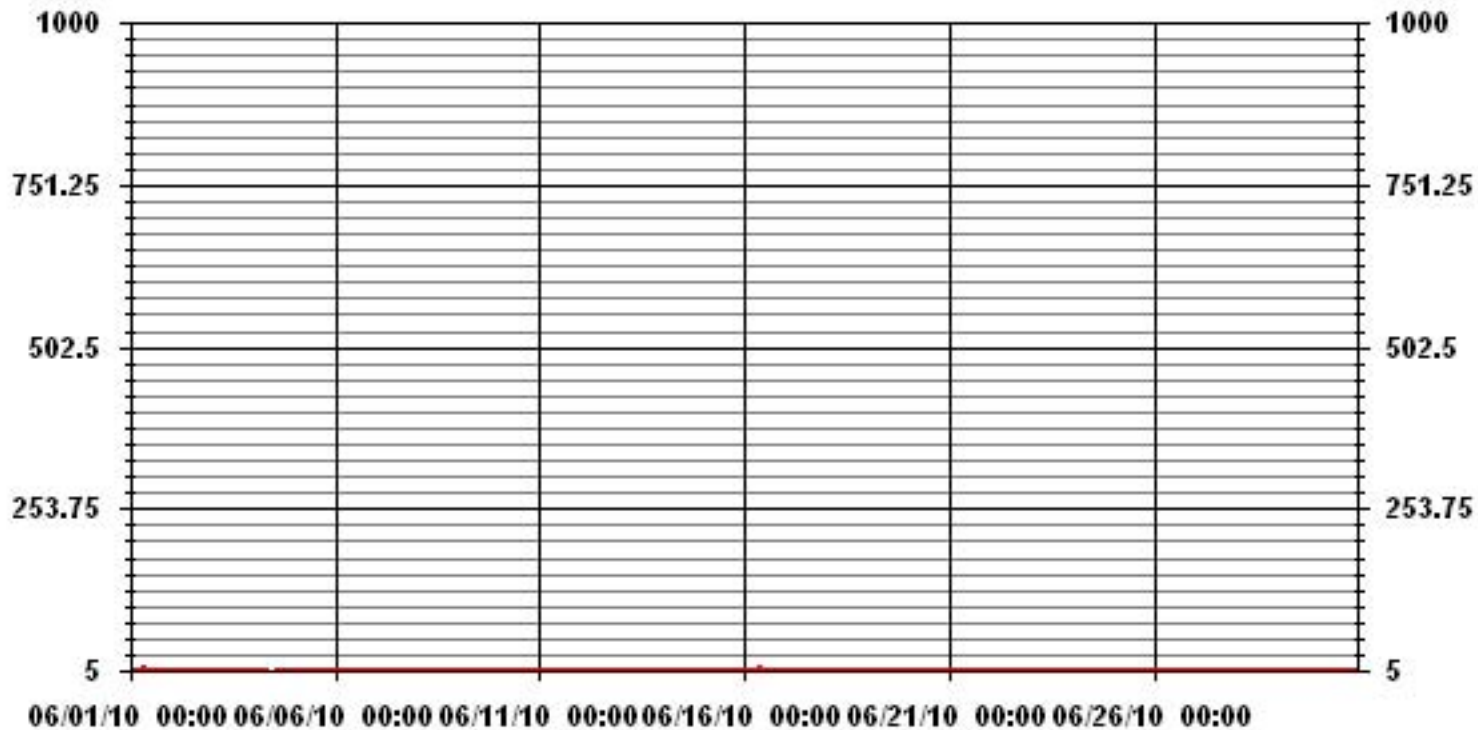
24 HOUR AVERAGES FOR JUNE 2010



**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	84					
MAXIMUM 1-HR AVERAGE:	9	PPB	@ HOUR(S)	7	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	1.3	PPB			ON DAY(S)	16
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.80		MONTHLY AVERAGE:	0.21	PPB	

### 01 Hour Averages



— LICA30 NO\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

**NITRIC OXIDE MAX** instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	1	1	1	1	4	12	15	10	IZS	1	1	1	0	0	0	0	0	0	0	0	0	1	1	15	2.2	24	
2	2	1	1	1	1	6	4	11	IZS	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	11	1.4	24	
3	2	1	2	2	2	1	1	IZS	3	2	0	0	1	0	0	0	0	1	0	0	1	0	0	0	3	0.8	24	
4	0	0	0	0	0	1	IZS	1	C	C	C	C	C	C	C	8	2	1	1	1	4	0	0	0	8	1.2	24	
5	0	0	0	1	1	IZS	4	4	3	2	2	1	3	1	2	4	8	1	1	2	2	2	1	1	8	2.0	24	
6	6	1	0	1	IZS	1	3	2	4	2	2	0	0	1	1	0	0	0	0	0	0	0	0	0	6	1.0	24	
7	0	1	0	IZS	1	1	2	5	6	2	4	11	2	0	0	0	0	0	0	0	0	0	0	1	11	1.6	24	
8	0	0	IZS	1	1	1	1	1	1	2	1	1	3	3	2	1	1	1	1	1	0	3	0	1	3	1.2	24	
9	1	IZS	1	1	2	1	1	1	3	2	1	1	1	2	1	2	2	1	1	0	1	1	1	0	3	1.2	24	
10	IZS	1	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	0	1	0	0	1	0	IZS	2	0.8	24	
11	1	1	1	1	1	3	3	2	2	3	1	1	0	0	1	0	0	0	0	0	1	1	IZS	1	3	1.0	24	
12	1	0	1	1	1	1	2	2	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0.6	24	
13	0	0	0	0	0	1	8	2	1	1	0	0	1	0	0	0	0	1	0	0	IZS	0	0	0	8	0.7	24	
14	0	0	2	0	1	0	1	2	4	3	9	3	C	C	C	13	7	2	2	IZS	0	0	0	4	13	2.7	24	
15	2	0	0	1	1	9	6	2	1	1	5	5	4	1	3	1	5	0	IZS	2	2	1	1	2	9	2.4	24	
16	6	6	2	7	5	10	8	9	20	1	0	0	2	1	1	12	1	IZS	0	0	0	0	0	0	20	4.0	24	
17	1	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
18	1	1	1	1	1	2	2	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	2	0.4	24	
19	0	0	0	0	1	0	1	1	1	1	1	0	0	0	IZS	3	0	0	0	0	0	0	0	0	3	0.4	24	
20	0	0	0	0	0	1	1	3	5	4	0	0	0	IZS	0	1	0	0	0	0	0	0	0	0	5	0.7	24	
21	0	0	0	0	0	3	2	5	5	4	3	1	IZS	1	1	0	2	0	0	0	0	0	0	0	5	1.2	24	
22	0	0	0	1	0	0	0	0	0	0	0	0	IZS	1	1	1	23	0	0	0	3	1	0	0	23	1.3	24	
23	0	0	0	0	0	0	1	1	1	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.2	24	
24	0	0	0	0	0	1	3	1	2	IZS	1	0	1	0	1	1	0	1	1	1	1	0	0	1	0	3	0.7	24
25	0	0	0	0	0	1	1	1	IZS	0	2	1	0	1	10	0	0	0	0	0	0	0	0	0	2	10	0.8	24
26	3	0	0	0	0	1	3	IZS	5	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	5	0.7	24
27	0	0	0	0	0	0	IZS	11	4	6	4	0	1	1	0	0	0	0	0	0	0	0	0	0	11	1.2	24	
28	0	0	0	0	0	IZS	0	0	2	4	3	4	2	0	0	0	0	0	0	0	0	0	0	0	4	0.7	24	
29	0	0	0	0	IZS	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.2	24	
30	0	0	0	IZS	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24	
HOURLY MAX	6	6	2	7	5	10	12	15	20	6	9	11	4	3	10	23	8	2	2	3	4	3	1	4				
HOURLY AVG	0.9	0.5	0.4	0.8	0.8	1.8	2.6	3.0	3.4	1.7	1.6	1.2	0.9	0.5	1.0	2.4	1.0	0.3	0.3	0.4	0.4	0.3	0.2	0.5				

**STATUS FLAG CODES**

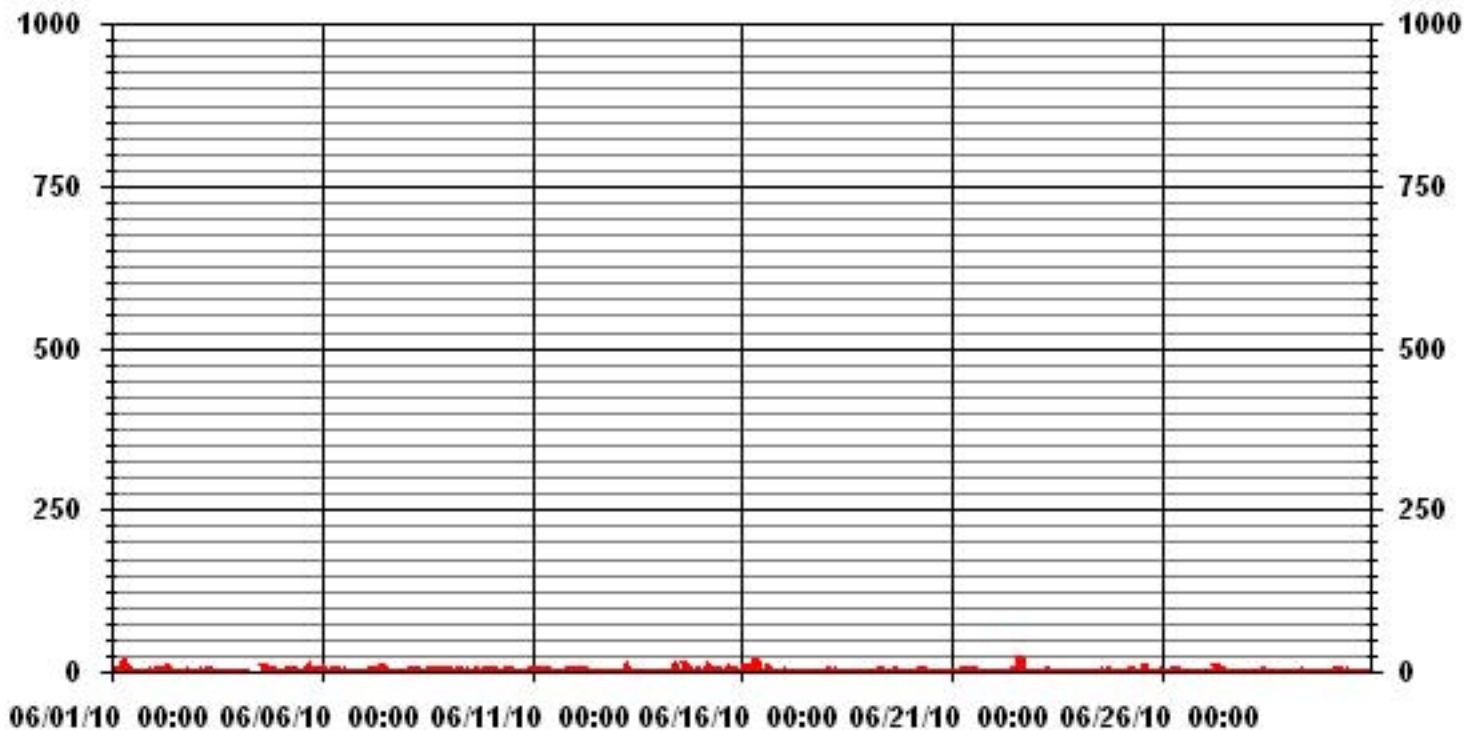
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	321
MAXIMUM INSTANTANEOUS VALUE:	23 PPB @ HOUR(S) 15 ON DAY(S) 22
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	10 HRS
STANDARD DEVIATION:	2.24
OPERATIONAL TIME:	720 HRS



### 01 Hour Averages



LICA30  
 NO\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 30  
 Site Name : LICA30  
 Parameter : NO\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.93	6.02	8.07	5.58	5.28	5.72	7.34	6.16	7.19	14.83	6.60	5.87	5.72	4.11	5.58	2.93	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	2.93	6.02	8.07	5.58	5.28	5.72	7.34	6.16	7.19	14.83	6.60	5.87	5.72	4.11	5.58	2.93	

Calm : .00 %

Total # Operational Hours : 681

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	20	41	55	38	36	39	50	42	49	101	45	40	39	28	38	20	681
< 110																	
< 210																	
>= 210																	
Totals	20	41	55	38	36	39	50	42	49	101	45	40	39	28	38	20	

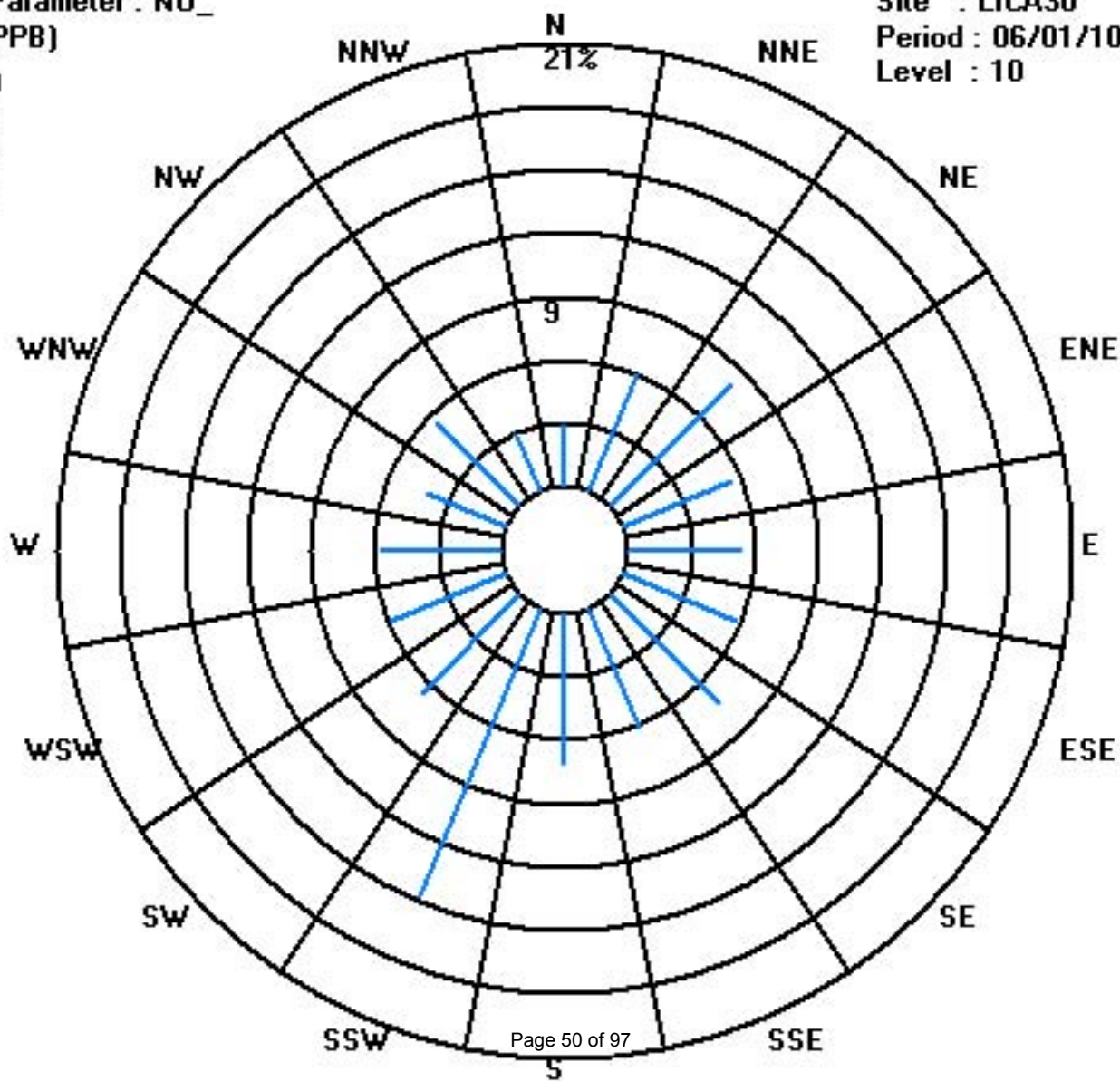
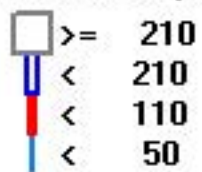
Calm : .00 %

Total # Operational Hours : 681

Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



# Oxides of Nitrogen

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

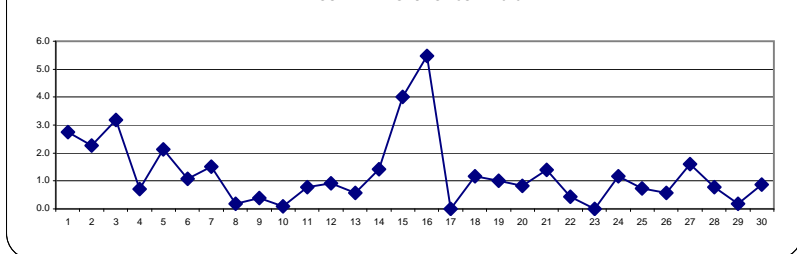
## OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	DAILY 24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
DAY																													
1	3	1	1	1	2	4	16	18	15	IZS	1	0	0	0	0	0	0	0	0	0	0	0	1	0	18	2.7	24		
2	2	1	1	1	1	3	4	8	IZS	0	0	0	0	0	0	0	0	0	0	0	5	12	6	3	5	12	2.3	24	
3	12	12	13	15	12	5	0	IZS	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	3.2	24	
4	0	0	0	0	1	3	IZS	1	3	C	C	C	C	C	C	0	2	1	0	0	1	0	0	0	0	3	0.7	24	
5	0	1	2	4	6	IZS	4	7	3	0	0	0	1	0	0	4	8	0	0	2	1	1	2	3	8	2.1	24		
6	8	7	0	0	IZS	1	2	2	2	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	8	1.1	24	
7	0	0	0	IZS	1	1	2	6	6	3	3	9	4	0	0	0	0	0	0	0	0	0	0	0	0	9	1.5	24	
8	0	0	IZS	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
9	0	IZS	0	0	0	1	0	0	2	2	0	0	0	1	0	0	2	0	1	0	0	0	0	0	0	2	0.4	24	
10	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	IZS	2	0.1	24	
11	0	2	2	3	2	3	2	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	3	0.8	24
12	1	1	1	1	2	3	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	4	0.9	24
13	1	1	1	1	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	0	2	0.6	24	
14	0	0	2	0	0	0	0	1	3	0	0	3	0	C	C	2	3	4	1	IZS	2	1	4	4	4	1.4	24		
15	6	0	0	3	3	13	6	4	0	0	2	2	1	0	1	0	2	0	IZS	12	17	9	4	7	17	4.0	24		
16	16	13	8	26	16	13	8	10	14	0	0	0	1	0	1	0	0	IZS	0	0	0	0	0	0	0	26	5.5	24	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	24	
18	1	2	2	2	5	8	5	1	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	8	1.2	24	
19	1	2	2	1	1	1	2	3	3	2	2	1	0	0	IZS	1	0	0	0	0	0	0	1	0	0	3	1.0	24	
20	1	1	1	0	0	1	0	2	4	5	0	0	1	IZS	0	2	0	0	0	0	0	0	1	0	0	5	0.8	24	
21	1	1	0	0	0	1	4	6	4	5	3	0	IZS	1	1	0	4	0	0	1	0	0	0	0	0	6	1.4	24	
22	1	1	1	0	0	0	0	0	0	0	0	IZS	0	0	0	2	1	0	0	1	1	1	1	1	0	2	0.4	24	
23	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	
24	0	0	0	0	0	0	3	1	2	IZS	0	0	1	0	0	0	0	2	2	2	2	0	0	8	6	8	1.2	24	
25	3	2	1	0	0	1	1	1	IZS	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	2	3	0.7	24	
26	1	0	0	1	0	1	1	IZS	1	2	1	1	0	0	0	0	0	0	0	0	0	1	0	3	3	0.6	24		
27	6	9	0	0	0	0	IZS	12	3	4	1	0	1	0	0	0	0	0	0	0	0	0	0	1	12	1.6	24		
28	1	1	1	2	1	IZS	0	0	0	4	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0.8	24	
29	0	0	0	0	IZS	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0.2	24		
30	1	0	0	0	IZS	6	5	5	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0.9	24		
HOURLY MAX	16	13	13	26	16	13	16	18	15	5	3	9	4	2	1	4	8	4	2	12	17	9	8	7					
HOURLY AVG	2.3	2.0	1.3	2.2	2.1	2.5	2.5	3.3	2.6	1.3	0.6	0.7	0.5	0.2	0.2	0.4	0.8	0.2	0.1	0.8	1.2	0.8	0.9	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

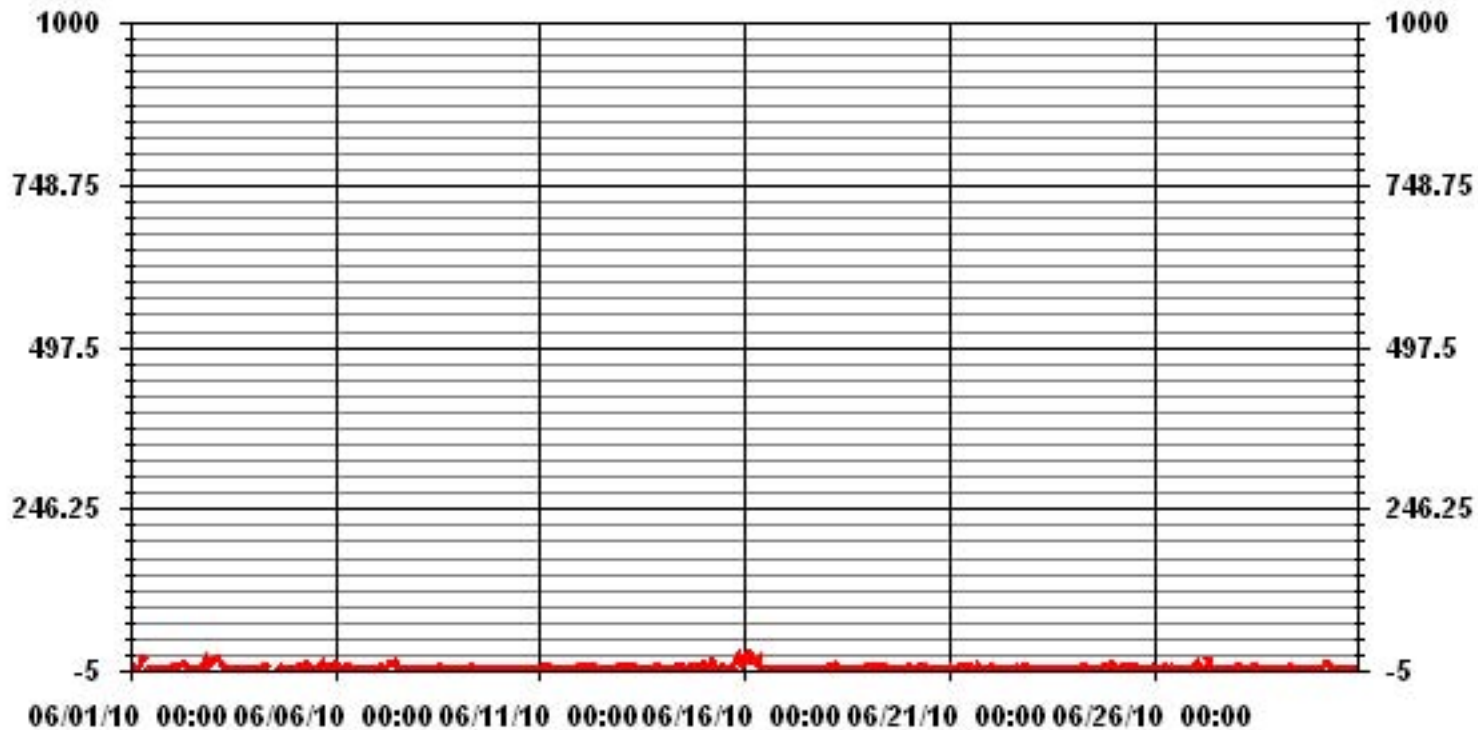
24 HOUR AVERAGES FOR JUNE 2010



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	264					
MAXIMUM 1-HR AVERAGE:	26	PPB	@ HOUR(S)	3	ON DAY(S)	16
MAXIMUM 24-HR AVERAGE:	5.5	PPB			ON DAY(S)	16
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION	2.85		MONTHLY AVERAGE	1.28	PPB	

### 01 Hour Averages



— LICA30 NOX\_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

OXIDES OF NITROGEN MAX hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	6	1	2	2	2	9	21	27	21	IZS	2	2	1	0	0	0	0	0	1	0	0	0	8	3	27	4.7	24	
2	8	2	2	2	2	10	10	21	IZS	1	1	1	0	0	0	0	0	0	6	9	17	15	6	11	21	5.4	24	
3	18	20	20	19	16	12	0	IZS	9	9	0	0	0	0	0	0	0	1	0	0	0	0	0	0	20	5.4	24	
4	0	0	0	0	6	7	IZS	6	C	C	C	C	C	C	C	8	5	3	2	2	8	2	1	1	8	3.2	24	
5	1	2	3	12	12	IZS	9	10	6	3	2	0	5	1	4	11	16	2	4	8	7	8	5	7	16	6.0	24	
6	21	13	6	0	IZS	2	6	3	6	3	6	1	1	1	4	2	1	1	0	0	0	0	0	0	21	3.3	24	
7	1	2	1	IZS	2	2	5	11	12	5	13	29	8	2	0	0	1	0	0	0	0	0	0	0	29	4.1	24	
8	0	0	IZS	0	0	0	0	0	0	2	2	1	5	6	4	1	2	0	0	1	0	5	0	0	6	1.3	24	
9	0	IZS	0	0	3	2	2	2	6	4	2	1	1	3	2	4	7	3	4	0	0	0	0	1	7	2.0	24	
10	IZS	0	0	0	0	0	0	0	0	0	0	1	2	2	4	6	3	0	1	1	1	0	0	IZS	6	1.0	24	
11	2	3	3	4	4	6	5	4	6	7	3	2	0	0	2	1	0	0	0	0	3	0	IZS	1	7	2.4	24	
12	1	2	2	2	4	4	5	5	4	2	1	1	1	0	0	0	0	0	0	1	1	IZS	2	2	5	1.7	24	
13	1	1	1	1	1	2	21	5	1	1	1	0	1	0	0	0	0	0	0	0	IZS	2	2	0	21	1.8	24	
14	1	1	14	0	0	0	1	3	13	10	10	10	C	C	C	22	18	10	6	IZS	4	5	9	19	22	7.8	24	
15	15	2	1	5	8	23	15	6	1	2	11	12	10	3	10	4	16	0	IZS	18	23	22	10	14	23	10.0	24	
16	26	23	20	30	27	23	20	19	37	1	0	1	5	3	4	14	3	IZS	0	5	5	0	0	0	37	11.6	24	
17	1	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0.2	24	
18	3	3	3	3	8	10	10	3	1	1	0	1	1	1	1	IZS	0	0	1	1	0	1	1	1	10	2.3	24	
19	2	3	3	2	2	2	4	4	4	3	3	1	1	1	IZS	12	1	0	0	0	2	3	1	1	12	2.4	24	
20	2	1	1	1	1	1	1	6	12	12	1	1	1	IZS	1	8	2	0	1	1	1	1	1	1	12	2.5	24	
21	1	1	0	0	0	7	6	17	15	14	13	1	IZS	3	4	0	13	2	1	2	0	1	1	1	17	4.5	24	
22	2	2	2	1	0	0	0	0	0	0	0	0	IZS	1	1	3	31	3	1	0	6	2	1	2	1	31	2.6	24
23	0	0	0	0	0	0	1	2	1	0	IZS	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0.2	24	
24	0	1	0	2	0	1	9	5	7	IZS	2	0	6	2	3	5	0	6	8	8	0	0	25	9	25	4.3	24	
25	10	4	2	1	1	6	2	4	IZS	2	3	3	1	4	20	1	1	0	0	0	0	1	1	10	20	3.3	24	
26	15	0	1	2	1	2	6	IZS	7	4	3	1	1	1	1	0	0	0	0	0	0	6	0	9	15	2.7	24	
27	14	12	4	0	1	0	IZS	22	10	12	8	1	4	3	1	0	1	0	0	0	1	1	1	1	22	4.2	24	
28	2	2	2	4	4	IZS	0	0	4	14	8	9	6	1	2	0	0	0	0	0	0	0	0	1	14	2.6	24	
29	0	2	0	5	IZS	0	2	0	8	2	0	1	1	1	0	0	0	0	0	0	0	0	8	4	8	1.5	24	
30	4	2	1	IZS	15	13	10	7	1	2	3	1	1	2	2	0	0	0	0	0	0	0	0	0	15	2.8	24	
HOURLY MAX	26	23	20	30	27	23	21	27	37	14	13	29	10	6	20	31	18	10	8	18	23	22	25	19				
HOURLY AVG	5.4	3.7	3.2	3.5	4.3	5.1	6.1	6.9	7.1	4.3	3.5	3.0	2.4	1.5	2.7	4.5	3.2	1.0	1.2	2.2	2.6	2.6	2.9	3.4				

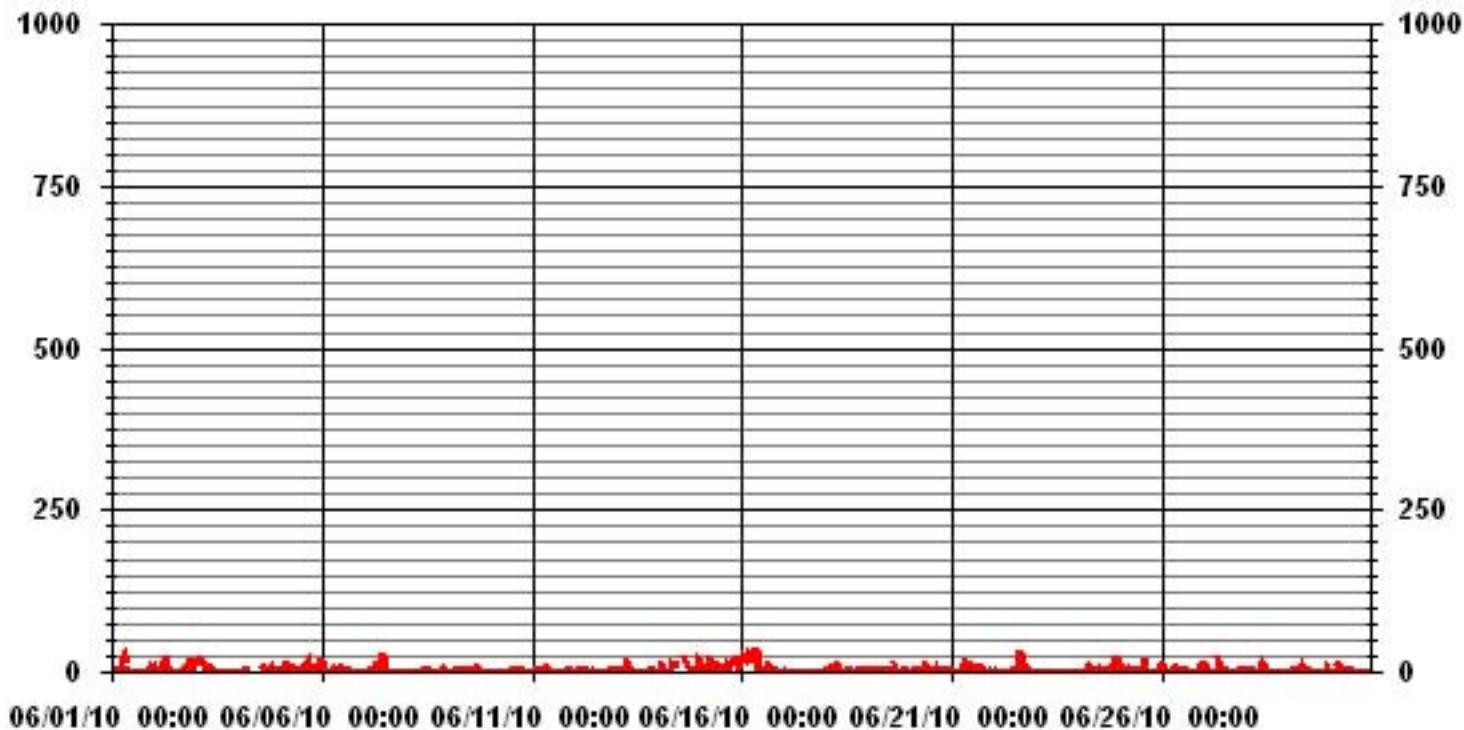
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	451		
MAXIMUM INSTANTANEOUS VALUE:	37 PPB @ HOUR(S) 8 ON DAY(S) 16		
IZS CALIBRATION TIME:	31 HRS	OPERATIONAL TIME:	720 HRS
MONTHLY CALIBRATION TIME:	10 HRS		
STANDARD DEVIATION:	5.61		

### 01 Hour Averages



— LICA30 NOxMAX PPB



LICA30  
 NOX\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 30  
 Site Name : LICA30  
 Parameter : NOX\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	2.93	6.02	8.07	5.58	5.28	5.72	7.34	6.16	7.19	14.83	6.60	5.87	5.72	4.11	5.58	2.93	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	2.93	6.02	8.07	5.58	5.28	5.72	7.34	6.16	7.19	14.83	6.60	5.87	5.72	4.11	5.58	2.93	

Calm : .00 %

Total # Operational Hours : 681

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	20	41	55	38	36	39	50	42	49	101	45	40	39	28	38	20	681
< 110																	
< 210																	
>= 210																	
Totals	20	41	55	38	36	39	50	42	49	101	45	40	39	28	38	20	

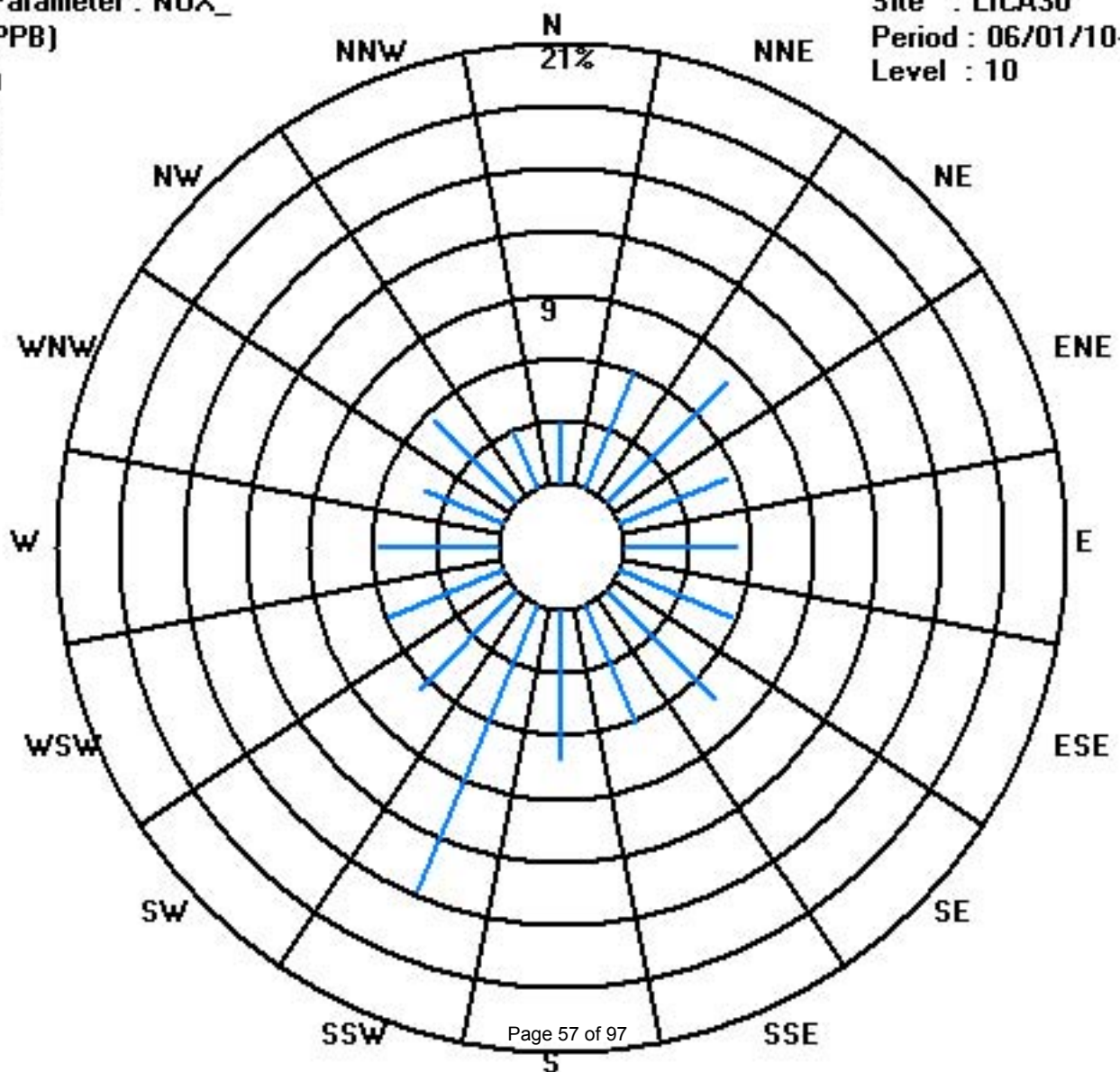
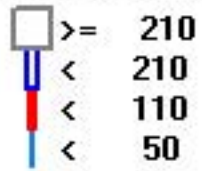
Calm : .00 %

Total # Operational Hours : 681

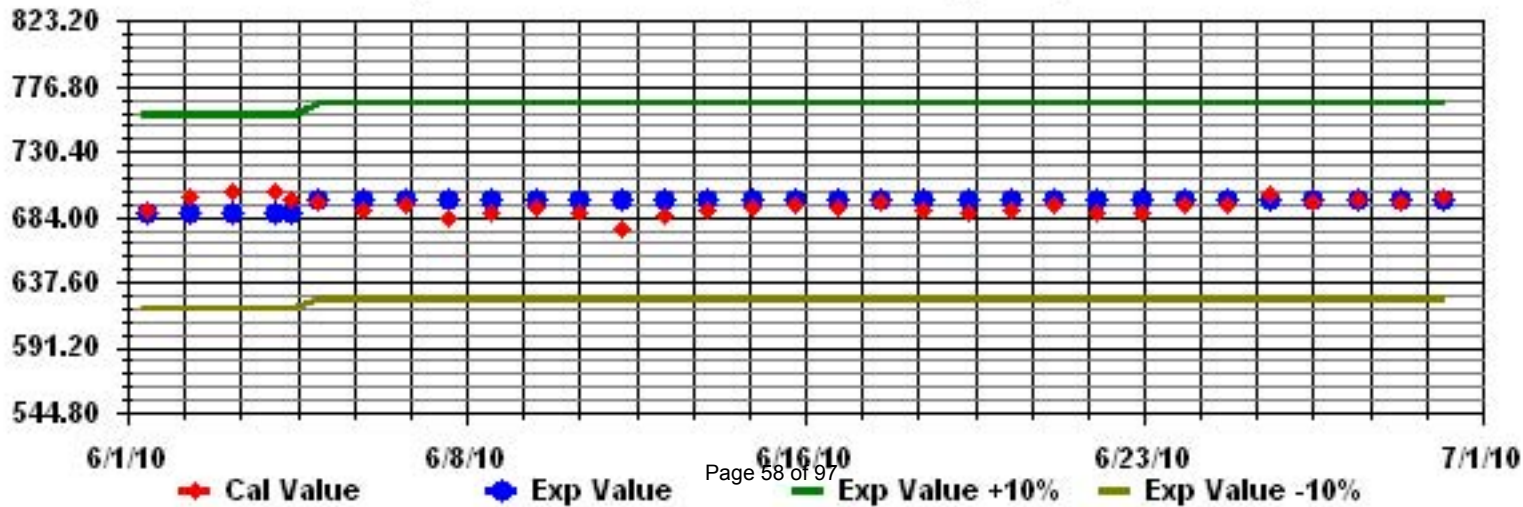
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA30 Parameter: NOX\_ Sequence: NO2 Phase: SPAN



# Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

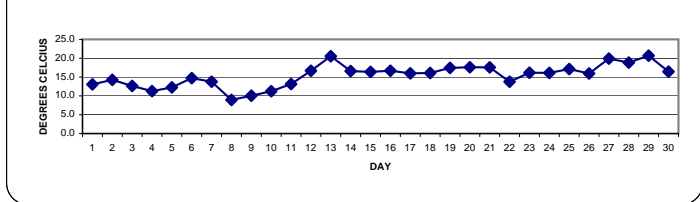
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	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		4.9	4.4	3.6	2.9	2.9	5	8.3	12.7	17.1	18.8	19.3	19.5	19.7	20.4	20.7	20.3	19.8	18.8	18.3	16.9	13.6	10.3	8.2	7	20.7	13.1	24	
2		5.2	4	3.1	2.4	1.7	5.6	11.1	16	17.4	18	18.9	20	20.4	21	20.9	21.1	21.1	20.8	20.3	18.2	15	13.7	13.3	13	21.1	14.3	24	
3		12.4	12.2	11.3	11.6	11.8	11.8	11.3	12.5	12.8	11.1	12.3	14.2	15.4	14.2	13.4	14.1	14.5	14.3	13	12.6	12	11.9	11.4	11.3	15.4	12.6	24	
4		11.2	11.2	11.3	11.3	11.2	10.9	10.9	11.1	11.5	11.4	11.5	10.9	10.9	11.5	11.6	12.2	12	11.7	11.7	11.6	11.1	10.7	10.5	10.5	12.2	11.3	24	
5		10.6	10.6	10.7	10.5	10.3	10.4	10.9	11.3	12.3	12.6	12	12.7	13.6	14.8	15.2	13.1	14.1	14.3	13.9	13.4	12.7	12	11.3	10.9	15.2	12.3	24	
6		10.6	10.4	10.1	9.9	9.6	9.7	10.2	12.2	16.3	18.4	19.6	20.6	20.5	17.4	21.2	19.3	19.9	21.1	18.5	17.4	13	10.6	9.3	7.4	21.2	14.7	24	
7		6.3	6.1	7	6.9	7	8.5	11.5	16.3	17.9	16.5	19	19.9	21.6	20.7	21	19.6	17.8	16.4	15.5	14.4	12.2	9.4	8.5	10.4	21.6	13.8	24	
8		10.3	9.2	7.9	6.7	6.5	6.6	7.9	9.3	10.4	10.1	9.7	9.9	11.2	12.7	11.7	11.3	11.2	10	9.5	8.4	7.2	5.9	5.7	5.2	12.7	8.9	24	
9		5.3	5.1	4.5	3.3	3.6	5.1	6	7.6	10.5	12.1	12.1	13.2	14.4	15.6	14.7	14.2	14.6	14.7	13.6	12.4	10.9	10.2	9.5	8.2	15.6	10.1	24	
10		7.4	5.7	4.5	3	3.3	5.8	9.8	12.8	14	14.4	15	13.9	14.9	15.8	16.4	16	15.7	15.5	14.7	13.5	11.6	9.6	8.6	7.8	16.4	11.2	24	
11		6.4	5.3	4.8	4.4	3.6	4.2	7.1	11.6	15.9	18.7	19.4	19.8	17.8	20.2	18.8	19.9	19.4	19.9	18.7	15.9	12.2	10.4	10.6	10.6	20.2	13.2	24	
12		9.6	8.9	8.4	7.7	7.9	10	11.9	14.6	16.8	19.2	20.6	21.5	22.2	22.8	23.1	23.2	22.7	21.3	20.5	19.5	18.1	16.9	16.4	16.3	23.2	16.7	24	
13		15.6	14.5	13.9	13.1	12.6	14.7	16	18.1	19.9	22.1	23.2	24.8	25.9	26.4	26.7	26.8	26.7	26.6	25.8	23.9	21.1	18.9	18	17.3	26.8	20.5	24	
14		16.6	15.1	14.5	14.2	13.4	13.4	12.9	14.5	17.4	17.8	19.7	18.4	19.5	19.8	19.9	19.6	19.7	19	18.2	16.8	15.5	14.4	13.7	14.1	19.9	16.6	24	
15		13.3	12.3	10.8	9.1	6.5	11.4	14.6	17.2	18.9	20.3	21.2	21.8	22.4	22.3	21.8	20.3	19.7	18.3	17.8	17.2	16.7	14.3	12.5	12.4	22.4	16.4	24	
16		12.3	10.5	8.7	9	8	11.3	14.7	18.2	20.5	21.3	21.4	20.4	22.5	22.8	23.4	22	20.5	20	20.4	20.4	17.3	13.5	11.7	9.4	23.4	16.7	24	
17		8.2	6.7	8.3	8.9	8.7	10.8	14	16.9	18.8	19.9	21	21.7	22	22.5	21.6	21.2	21	20.3	19.4	18.3	15	13.2	12.8	12.7	22.5	16.0	24	
18		11.3	9.9	8.6	8.5	9.4	9.7	12.2	16.6	21.9	24.3	24.3	20.5	15.8	17.7	18.3	19.4	18.3	18.5	19.8	17.8	17	16.6	15.1	14.4	24.3	16.1	24	
19		14.1	13.1	12.6	12.3	13	13.8	14.5	16.5	18.5	20.4	21.5	23.4	23.8	20.7	20	20.9	20	21.9	20.3	18.2	16.2	15.7	14.7	12.2	23.8	17.4	24	
20		11.5	11.3	9.4	8.1	8.1	11.1	14.1	16.2	18.1	21.2	22.6	23.4	25.1	25.9	26.6	24.5	22.9	20.8	20.4	19.2	17.2	14.8	15.5	14.7	26.6	17.6	24	
21		12.4	10	9	8.3	7.9	11.6	16.9	20.7	23.7	26.2	26.6	27.7	26.8	26.6	27.3	23.8	17.8	16.9	16.2	15.2	14	12.5	11.8	11.8	27.7	17.6	24	
22		11.8	11.4	11	10.6	10.6	11.1	11.9	11.7	12.6	14.2	16.9	18.4	21.1	20	18.3	15.1	14.7	14.9	15.3	14.4	13.7	11.6	10.2	8.9	21.1	13.8	24	
23		8.2	7	5.9	5.4	5.4	9	12.4	16.3	18.3	19.6	20.9	21.9	21.8	22.5	22.9	23.1	22.5	22.8	22.2	20.6	16.9	15	12.6	14.7	23.1	16.2	24	
24		15.5	14.7	13.5	11.5	11.1	12.6	16	16.2	17	15.3	15.4	16.8	16.1	16.7	19.5	20.1	21.3	22.1	20.7	18.4	16.6	14.6	12.5	12.3	22.1	16.1	24	
25		12.1	11	10.5	10.4	10.8	11.5	12.6	16.7	17.5	18.5	20.8	21.1	22	20.9	22.7	23	22.9	23.3	22.8	21.4	17	14.2	13.4	13.9	23.3	17.1	24	
26		12.9	11.8	10.5	11.4	11.8	14	13.9	14.2	13.9	13.7	13.7	15.2	18.3	19.7	19.5	20.8	20.1	21	21.8	19.6	17.7	16.5	16.4	14.6	21.8	16.0	24	
27		13.8	13.4	13.2	13.3	13.5	14.3	17.7	20.6	22.1	23.4	23.9	23.6	25.7	25.8	25.8	25.8	26.2	25.6	24.7	22.9	17.3	16.1	16	13	26.2	19.9	24	
28		12.9	14.8	14.3	13	13.5	14	14.9	15.7	18.5	19.7	21.5	22.9	24.1	24.4	24.8	25.4	25.3	24.7	23.3	22.9	19.3	16.2	13.7	12.5	25.4	18.8	24	
29		12.1	12.9	13.8	14.5	13.9	14.4	15.5	16.7	19	22.7	24.5	25.8	27.2	27.1	27.4	27.1	27	27.6	26.3	24.4	22.7	22.1	16.1	15.4	27.6	20.7	24	
30		14.9	14.7	14.6	14.5	14.9	15.2	15.9	16.8	17.7	17.8	19.1	20	21.8	23	22.7	22.4	22.4	17.5	15	13.8	12.1	10.5	9.1	8.2	23.0	16.4	24	
HOURLY MAX		16.6	15.1	14.6	14.5	14.9	15.2	17.7	20.7	23.7	26.2	26.6	27.7	27.2	27.1	27.4	27.1	27.0	27.6	26.3	24.4	22.7	22.1	18.0	17.3				
HOURLY AVG		11.0	10.3	9.7	9.2	9.1	10.6	12.6	14.9	16.9	18.0	18.9	19.5	20.2	20.4	20.6	20.2	19.7	19.4	18.6	17.3	15.1	13.4	12.3	11.7				

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

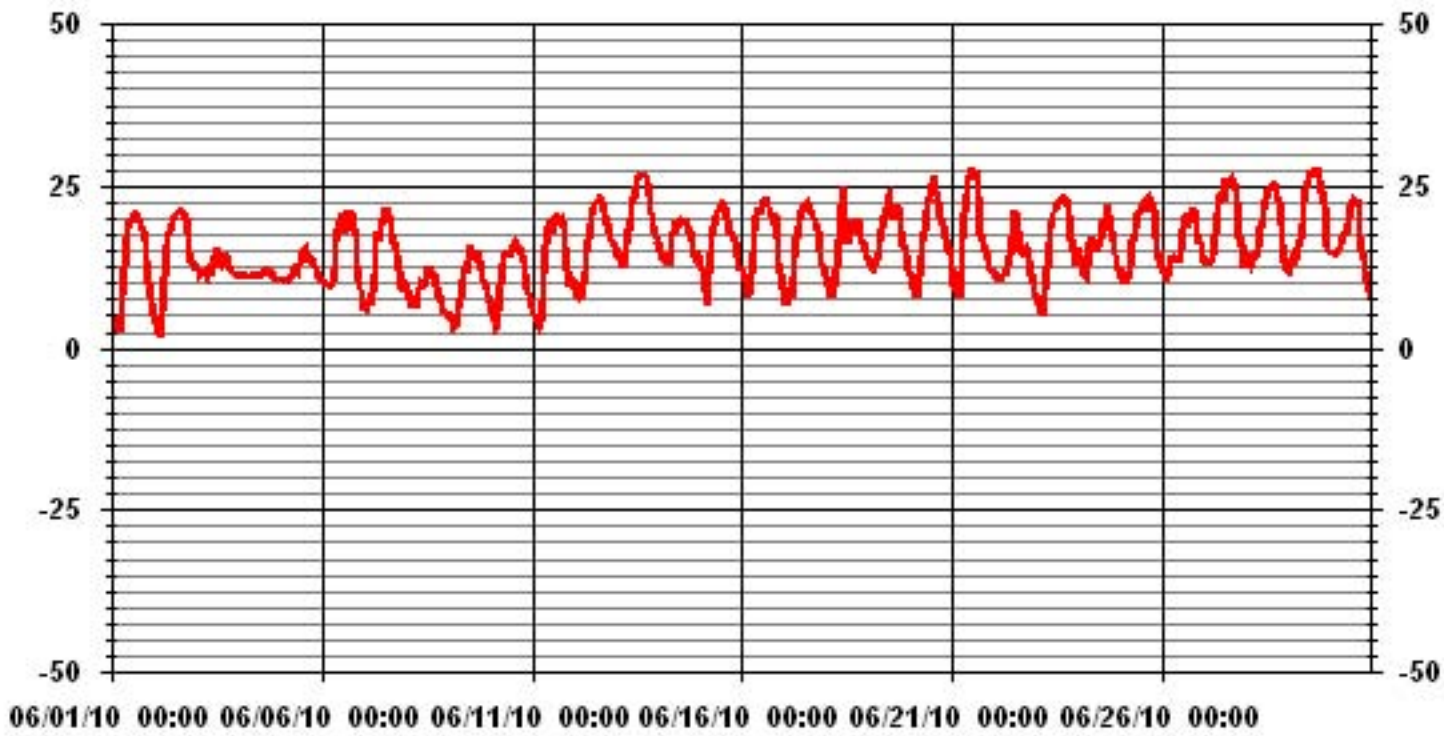
24 HOUR AVERAGES FOR JUNE 2010



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	1.7 °C	@ HOUR(S)	4	ON DAY(S)	2
MAXIMUM 1-HR AVERAGE:	27.7 °C	@ HOUR(S)	11	ON DAY(S)	21
MAXIMUM 24-HR AVERAGE:	20.7 °C			ON DAY(S)	29
CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	720 HRS		
STANDARD DEVIATION:	5.49	AMD OPERATION UPTIME:	100.0 %		
		MONTHLY AVERAGE:	15.40 °C		

### 01 Hour Averages



# Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

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	DAILY	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.	TOTAL	RDGS.	
DAY																													
1		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N				0
2		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N				0
3		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N				0
4		N	N	N	N	N	N	N	M	M	0.8	0.4	1.4	1.3	0.3	0.2	0	0.1	0.1	0.2	0.2	0.1	0.7	0.5	0.4	1.4	6.7	15	
5		1.3	1.3	0.1	0	0.4	0.1	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	3.6	24	
6		0	0	0	0	0.2	0.1	0	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0.6	0.9	24	
7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
8		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	1.2	0	0	0	0	1.2	1.7	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	0.1	0	0	0	0	0	0	M	0	0	0	0	0	0	0	0	0	0	0.1	0.1	23	
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	2.3	0.5	0	0	0	0	0	0	0	0	0	0	0	2.3	2.8	24	
19		0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.9	0	0	0	0	0	0	0	0	0	2.0	2.9	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	0.3	5.9	0.4	0.3	4.6	0	0	0	0.1	5.9	11.6	24	
22		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	0	0.2	0	0	0	0	0	0	0	1.1	1.3	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	2.9	0.3	0.5	1.2	0	0	0	0	0	0	0	0.1	8.1	2.1	1.3	8.1	16.5	24	
25		0.5	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.6	24	
26		3.1	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.1	3.2	24	
27		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
28		0	0	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	0.2	0.4	24	
29		0	0	0	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1.5	8.0	10.9	24	
30		0.3	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.2	0	0	0	0	0	0	2.2	2.6	24	
HOURLY MAX		3.1	1.3	0.2	1.4	0.4	0.1	0.1	0.0	0.0	2.9	0.4	2.3	1.3	2.0	0.9	1.1	5.9	2.2	0.4	4.6	0.1	8.1	8.0	1.5				

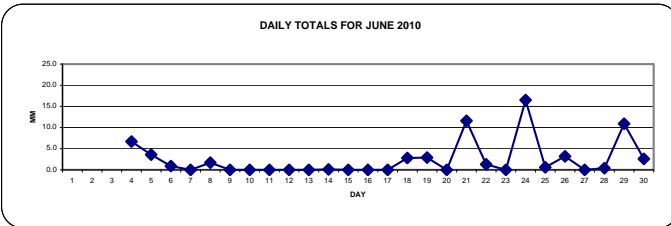
STATUS FLAG CODES

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

MONTHLY SUMMARY

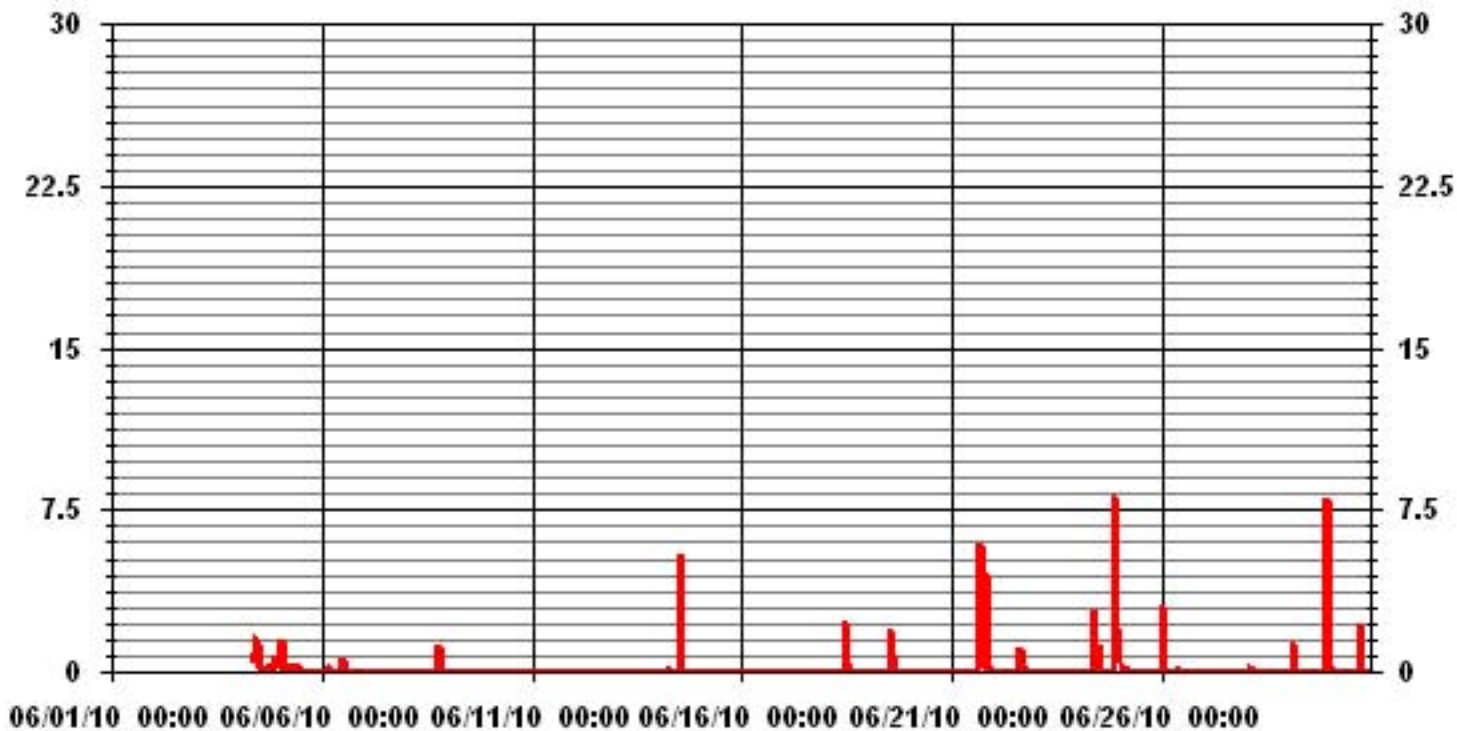
MAXIMUM 1-HR AVERAGE:	8.1	MM	HOUR(S)	21	ON DAY(S)	24
MAXIMUM DAILY TOTAL	16.5	MM			ON DAY(S)	24
MONTHLY TOTAL	65.8	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	638	HRS	
STANDARD DEVIATION:	0.61		AMD OPERATION UPTIME:	88.6	%	
			MONTHLY AVERAGE:	0.10	MM	

DAILY TOTALS FOR JUNE 2010





### 01 Hour Averages



# Relative Humidity

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

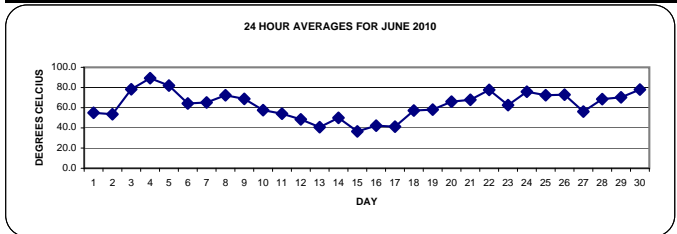
JUNE 2010

## 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		
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		87	88	90	91	91	89	78	64	49	35	32	29	29	26	24	26	27	31	33	38	51	62	71	78	91	55.0	24	
2		85	88	90	91	91	83	66	52	42	41	39	35	32	29	29	30	30	32	35	42	51	55	57	60	91	53.5	24	
3		62	63	66	66	65	67	76	71	74	86	86	82	75	77	81	80	79	79	88	90	91	91	91	92	92	92	78.3	24
4		92	92	92	92	92	91	91	90	89	89	89	89	88	86	85	83	85	87	87	88	90	91	92	92	92	92	89.3	24
5		92	92	92	90	89	89	88	87	83	82	85	81	77	72	69	78	75	74	75	75	77	81	82	81	92	81.9	24	
6		82	83	83	85	87	88	86	78	63	52	47	41	44	59	38	43	40	38	45	49	69	74	80	87	88	64.2	24	
7		90	91	90	90	90	87	77	63	55	60	47	41	36	35	37	42	52	52	55	60	71	82	85	77	91	65.2	24	
8		75	74	77	81	80	78	73	67	63	64	65	64	60	54	57	59	60	69	76	83	85	90	91	91	91	72.3	24	
9		91	91	91	91	91	90	88	85	72	62	60	54	49	46	47	47	46	48	52	57	66	71	75	80	91	68.8	24	
10		81	85	87	89	88	80	67	50	39	37	39	42	37	36	37	39	38	40	44	53	59	68	72	75	89	57.6	24	
11		81	86	88	89	90	90	79	58	40	34	31	29	29	27	32	29	30	29	33	44	58	63	62	67	90	54.1	24	
12		74	79	80	82	77	69	63	56	50	43	33	29	27	26	26	26	28	31	34	39	44	47	49	51	82	48.5	24	
13		53	57	60	61	62	55	52	47	43	41	37	30	26	22	22	23	24	25	28	33	39	45	46	46	62	40.7	24	
14		48	54	58	59	69	71	77	71	57	51	43	47	43	42	40	36	35	38	38	39	43	48	50	43	77	50.0	24	
15		44	46	53	61	71	55	45	36	27	23	20	18	17	18	19	23	26	31	33	31	34	43	51	52	71	36.5	24	
16		52	59	68	68	72	60	50	41	29	25	26	29	24	23	23	26	30	34	33	31	41	52	55	62	72	42.2	24	
17		66	72	66	64	66	60	47	37	33	30	29	26	24	20	22	25	27	26	26	28	42	49	51	53	72	41.2	24	
18		57	63	68	70	69	71	67	53	39	31	27	47	63	64	58	50	50	57	57	60	59	62	65	66	71	57.2	24	
19		66	65	66	63	60	62	63	59	53	47	44	38	36	53	67	58	53	44	51	57	65	68	73	84	84	58.1	24	
20		85	85	90	91	92	87	75	70	66	53	48	49	44	40	35	45	52	54	59	66	73	78	72	75	92	66.0	24	
21		82	90	92	92	92	83	67	53	46	36	32	30	33	34	34	46	75	80	83	83	89	92	92	93	93	67.9	24	
22		93	93	93	93	92	84	75	75	75	67	59	56	48	49	59	77	82	78	74	83	85	90	92	92	93	77.7	24	
23		92	91	90	91	92	83	70	57	46	48	47	43	44	45	44	44	46	45	48	53	64	69	80	70	92	62.6	24	
24		67	68	73	80	83	80	70	71	67	79	84	80	86	84	73	70	64	61	65	71	77	87	89	91	91	75.8	24	
25		91	92	92	93	93	91	77	74	69	60	59	58	60	54	50	49	47	48	54	73	86	90	85	93	93	72.4	24	
26		84	88	91	91	90	83	83	83	83	84	84	80	67	63	63	60	54	50	45	55	64	69	64	72	91	72.9	24	
27		76	79	82	84	84	81	70	61	53	47	46	45	36	33	30	29	26	30	33	41	61	66	71	84	84	56.2	24	
28		86	78	80	88	86	84	84	84	73	64	61	59	58	58	59	52	43	42	47	50	64	74	84	87	88	68.5	24	
29		90	91	91	91	91	90	87	84	75	64	60	58	56	53	50	48	49	51	53	58	59	63	87	88	91	70.3	24	
30		91	91	91	90	90	89	89	88	86	88	81	77	69	59	58	58	54	67	71	67	72	78	83	85	91	78.0	24	
HOURLY MAX		93	93	93	93	93	91	90	89	89	89	89	89	88	86	85	83	85	87	88	90	91	92	92	93				
HOURLY AVG		77.2	79.1	81.0	82.2	82.8	79.1	73.1	65.6	58.1	54.4	51.4	49.6	47.2	46.4	45.7	46.7	47.6	49.0	51.6	55.9	63.9	69.8	73.4	75.3				

### STATUS FLAG CODES

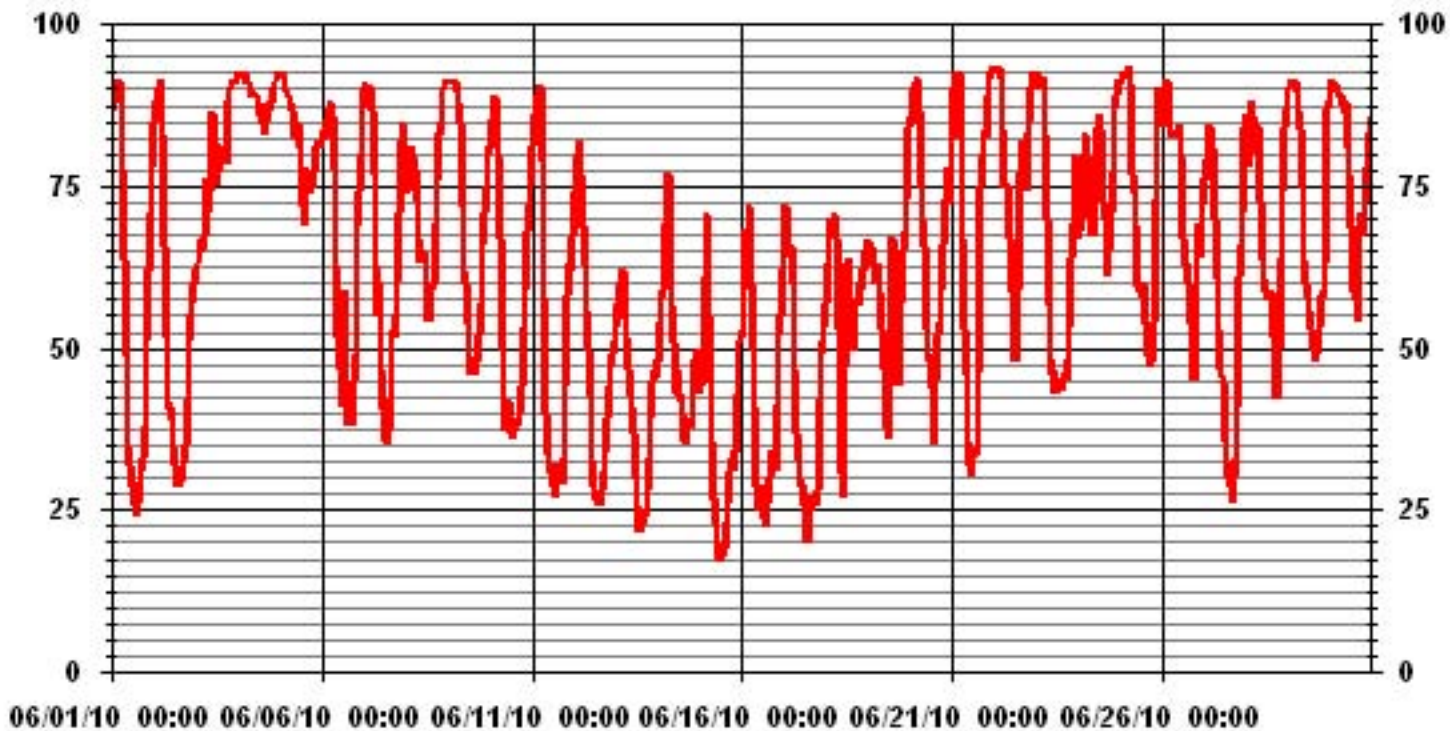
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	93	%	@ HOUR(S)	VAR	ON DAY(S)	21, 22
MAXIMUM 24-HR AVERAGE:	89.3	%			ON DAY(S)	4
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS	
STANDARD DEVIATION:	21.10		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	62.76	%	

### 01 Hour Averages



— LICA30 RH %FS

# Barometric Pressure

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

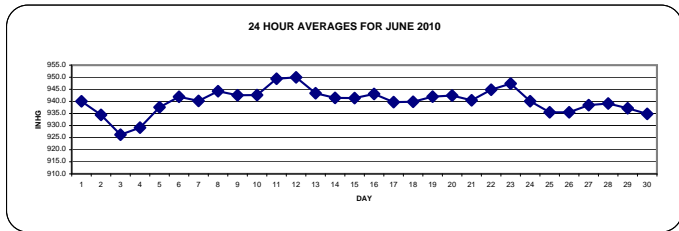
JUNE 2010

## 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	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	940	940	940	940	940	940	941	941	942	942	942	942	941	941	941	940	940	940	939	939	938	938	937	937	942	940.0	24	
2	2	937	937	937	936	936	937	937	938	938	937	937	936	935	935	934	934	933	932	931	931	930	930	929	929	928	938	934.4	24
3	3	928	928	927	927	926	926	926	926	926	926	925	926	926	926	926	926	926	926	926	926	926	926	926	926	926	928	926.2	24
4	4	926	926	926	926	927	927	927	927	928	928	928	929	929	930	930	930	931	931	931	932	932	932	932	933	933	933	929.1	24
5	5	933	933	932	932	934	935	935	936	937	937	938	938	939	939	939	940	940	940	940	941	941	941	941	941	941	941	937.6	24
6	6	941	941	942	942	942	942	943	943	943	944	944	943	943	942	942	942	942	942	941	941	941	940	940	940	944	941.9	24	
7	7	940	939	939	939	939	939	940	940	941	941	941	941	940	940	940	940	940	940	941	941	941	941	941	942	942	940.2	24	
8	8	942	942	942	943	943	944	944	944	945	945	945	945	945	945	945	945	944	944	945	945	945	945	945	945	945	944.2	24	
9	9	944	944	943	943	943	943	943	943	944	944	944	943	943	943	942	942	942	942	941	941	941	941	941	941	941	944	942.5	24
10	10	940	940	940	940	940	941	941	942	942	942	942	942	943	943	943	944	944	944	944	944	944	945	945	946	946	946	942.6	24
11	11	946	946	946	946	946	947	948	949	950	950	950	950	950	951	951	951	951	951	951	951	951	951	951	951	952	952	949.4	24
12	12	951	951	951	951	951	952	952	953	953	953	953	952	951	950	950	949	949	948	948	947	946	946	946	946	953	950.0	24	
13	13	946	946	945	945	945	945	946	945	945	945	945	945	944	944	943	943	942	942	941	941	940	940	939	939	946	943.4	24	
14	14	939	939	939	940	941	941	941	942	943	943	943	943	943	943	942	942	942	942	942	941	941	941	941	941	941	943	941.5	24
15	15	942	941	941	941	940	941	941	942	942	942	942	941	941	941	941	941	941	941	942	941	941	942	942	942	942	942	941.4	24
16	16	942	942	942	943	943	943	944	944	945	945	944	944	944	943	943	943	943	943	943	943	943	942	942	941	945	943.1	24	
17	17	941	941	941	941	941	941	941	942	941	941	941	940	940	939	939	939	938	938	938	938	938	938	938	938	938	942	939.7	24
18	18	937	937	937	937	938	938	939	940	941	941	941	941	941	941	941	941	941	941	941	941	941	940	941	941	941	941	939.8	24
19	19	940	940	941	941	941	941	941	942	942	943	943	943	943	942	942	942	942	942	942	942	943	943	943	943	943	943	942.0	24
20	20	943	943	943	943	943	943	943	944	944	944	944	944	943	943	942	941	941	941	941	941	941	941	941	941	941	944	942.4	24
21	21	941	940	940	940	940	940	941	940	940	941	941	941	941	940	940	940	940	940	941	940	941	941	941	941	941	941	940.5	24
22	22	941	941	941	942	942	943	944	945	945	945	946	946	946	946	946	946	946	945	946	947	947	947	946	946	947	947	944.8	24
23	23	947	947	947	947	947	949	949	950	950	950	950	949	949	948	948	947	947	946	946	946	945	945	944	944	950	947.4	24	
24	24	944	943	943	942	942	942	942	942	942	941	941	941	940	940	938	938	938	938	937	937	937	938	938	937	944	940.1	24	
25	25	935	936	935	935	936	936	936	936	936	936	936	936	936	936	936	936	936	935	935	935	935	935	935	934	935	936	935.5	24
26	26	935	934	934	935	935	934	935	936	936	936	936	936	936	936	936	936	936	935	936	935	935	936	936	937	937	935.5	24	
27	27	937	937	937	937	937	937	938	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	938.5	24
28	28	939	939	939	939	938	938	938	938	938	939	939	940	940	939	940	940	939	939	939	939	939	940	940	940	939	940	939.1	24
29	29	939	939	939	940	940	939	938	938	938	938	938	938	937	937	937	936	935	936	935	934	934	935	935	940	937.2	24		
30	30	935	933	933	933	933	933	933	933	933	932	932	933	933	934	934	935	935	936	937	938	938	938	939	939	940	940	934.8	24
HOURLY MAX		951	951	951	951	951	952	952	953	953	953	953	952	951	950	951	951	951	951	951	951	951	951	951	951	952			
HOURLY AVG		939.7	939.5	939.4	939.53	939.63	939.9	940.23	940.67	941	941	941.03	940.9	940.7	940.53	940.37	940.27	940.13	939.97	939.93	939.93	939.87	939.93	939.8	939.87				

### STATUS FLAG CODES

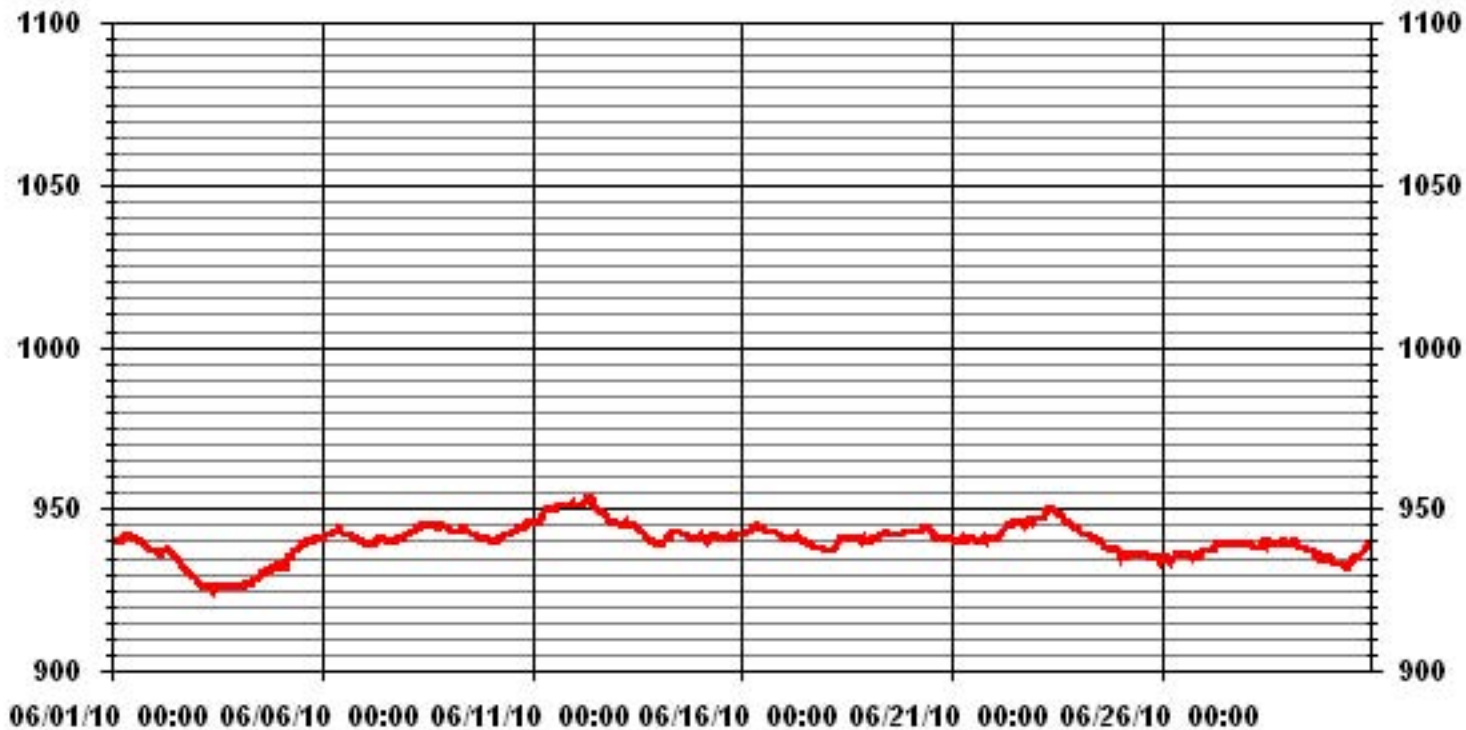
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	953	MB	@ HOUR(S)	VAR	ON DAY(S)	12
MAXIMUM 24-HR AVERAGE:	950.0	MB			ON DAY(S)	12
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS	
			AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	5.29		MONTHLY AVERAGE:	940	MB	

### 01 Hour Averages



— LICA30 BP MB

# Vector Wind Speed



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

## WIND SPEED hourly averages (km/hr)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.6	3.1	2.9	3.4	1.1	0.8	2.1	2.2	2.8	2.5	5.6	6.3	7.8	6.1	2.9	5.9	6.9	4.6	4.4	3.5	3.6	3.9	3.9	2.6	7.8	3.4	24
2	0.1	1.5	1.4	0.8	0.9	1	0.6	1.8	6.9	8.6	8.1	10	10.1	9.7	10	9.2	8.6	8.4	6.5	5.7	5	6.5	6.4	6.4	10.1	5.1	24
3	6.4	5.9	6.1	6.1	5.5	4.3	4.3	6.9	8.3	6	9.2	9.3	12	11.2	8.5	9.6	8.9	7.3	3.5	3.8	3.9	6.9	6.6	4.7	12	6.3	24
4	3.4	2.4	2	2.9	4	6	5.5	5.1	8	6.7	3.8	2.3	4.4	4.4	5.2	4	2.5	2.6	2.5	1.5	0.6	2.2	1.8	3.5	8	0.6	24
5	5.2	4.7	3.4	4.3	3.7	4.5	4.5	4.4	5.1	6.2	5.9	6.2	5.9	5.8	6.3	5.3	6	4.8	5	6.2	5	3.3	3.5	4	6.3	4.1	24
6	3.8	4	3.5	2.7	3.6	3.2	3.2	3.2	5	4.4	4.4	3.1	2.3	3.3	2.7	3.5	5.1	4.6	6.9	2.8	3.1	4	0.6	2.5	6.9	1.5	24
7	1.4	1.2	1.4	1.2	0.4	1.1	1.2	1.6	2.7	3.2	1.5	2.6	4	3.9	7.4	6.2	10.9	12.8	8.7	1.7	2.5	0.8	2.9	8.3	12.8	2.2	24
8	11.4	10.2	9.8	7.4	8.7	8.9	6.9	7.9	6.6	7	7.3	6.5	6.3	5.6	6	6.6	6.8	2.4	1	2	0.8	0.4	0.7	1.6	11.4	5.1	24
9	1.8	1	1.2	1.4	0.7	1.7	2.9	2.4	4	3.9	6.7	6.2	5.9	5.7	5	3.6	5.6	5.4	4.7	4.8	4.1	2.8	2.8	1.3	6.7	2.9	24
10	1.6	2.4	2.2	1.4	2.6	3.4	6.8	11.3	12.9	11.8	9.5	9.1	9.1	7.7	8	7.5	5.6	3.6	1.9	1.8	5.3	6.4	5.9	5	12.9	3.7	24
11	3.3	2.4	2.1	2.1	1.4	0.7	1.9	4.3	4.5	5.4	4.4	3.4	5	1.1	3.5	3.2	2.6	4.1	3.2	4	3.6	4.2	6.9	7.4	7.4	1.9	24
12	6.9	6.6	6.8	5	6	6.9	7.3	6.8	8	8.8	14	13.7	<b>14.9</b>	13.7	14.7	12.5	11.2	10.2	8.9	7.5	7.3	7.3	6.8	8.3	<b>14.9</b>	<b>9</b>	24
13	7.5	8.3	7.7	7.8	7	9.5	9.3	7.7	8.7	7.7	8.1	11.5	11.2	12	12.9	13.2	13	11.2	9.4	8.6	7.8	7.7	8	8.6	13.2	8.9	24
14	7.8	4.2	2.9	7.4	8	7.2	3.4	4.9	6.2	8.3	7.4	7.4	6.8	5.9	6.2	5.8	5	6	5	4.5	3	2.9	2	4.8	8.3	4	24
15	2.5	2	0.7	0.7	0.9	2.6	3.3	4	5.9	5.3	5.6	6.3	5.7	5.9	5.4	4.5	8.5	6.7	4.7	5.4	3.7	1.4	1.7	1.8	8.5	3.4	24
16	3.9	3.3	2.1	2.4	1	2.7	2.8	1.6	2.9	5.4	3.1	0.1	2	2.3	3.6	4.2	6.6	3.8	4.4	3.2	2.2	2.2	2.4	1.5	6.6	1.7	24
17	1.7	2.3	4.2	4.2	4.2	7.1	10.6	11.7	12.4	13.5	12.7	11.3	12	11.7	10.1	10	8.5	7.5	7	5	1.3	1.7	2	2.2	13.5	6.9	24
18	2	0.2	0.7	1.6	1.8	2	1.1	3.4	2.3	2.7	3.3	3.6	8.5	2.7	4.6	5	5.1	1.8	2.5	3.9	4.8	6.1	6.4	6.8	8.5	0.9	24
19	8.4	8.8	8.1	6.5	6.6	5.8	9.4	9.1	8.1	6.9	8	7.5	7.5	2.8	1.3	4.3	6	5.5	10	7.7	4	2.7	2.8	2.1	10	5.8	24
20	6.2	4.3	1.1	1.1	0.3	1.1	2.1	2.1	4.5	5	5.7	5.6	4.7	5.4	3.8	7.6	8.1	6.8	1.9	2.6	2.1	2.9	6.4	4.7	8.1	3.2	24
21	0.7	0.5	0.3	0.4	1	1.1	3.7	1.6	3.9	5.4	5.6	5.8	4.6	6.2	6.2	7.3	5	6.4	4.4	3.4	0.7	1.6	0.2	1.5	7.3	0.4	24
22	1.2	1.3	1.8	3.2	3.4	6.7	8.5	7	8.9	7.1	6	5.2	4.1	2.6	6.1	4.7	1.3	4.9	1.6	1.5	1.1	1.8	1.4	1.3	8.9	2.1	24
23	2.1	2	1	0.6	1.5	1.4	3.2	2.2	5.3	3.3	2.8	3.7	3.2	6.2	6.1	6.1	6.7	6.8	6.1	4.2	3.3	3.8	2.9	5.6	6.8	3.1	24
24	6.1	5.7	3.9	2.7	3	1.7	5.4	4	4.5	2.5	4.7	3.9	1.3	2.5	4	3.7	4.6	7.4	8.3	7.9	8.1	3.7	1.9	2.9	8.3	3.1	24
25	2.6	2	0.6	0.6	2.2	1	3.1	4.1	5.4	4.4	6	5.9	6.3	4.7	5.8	5.7	5.1	4.6	4	3	2.7	1.9	2.1	4.7	6.3	2.5	24
26	4.9	1.4	0.7	3.1	3.2	3.7	3.7	3.6	3.8	5.3	6.8	7.3	6.8	6	7.4	8.1	5.5	4.3	5.3	3.5	3.2	2.7	4.4	2.7	8.1	3.7	24
27	2.5	1.7	2.5	1.9	2.2	1	1.8	1.8	4.4	5.3	4.8	4.4	6.5	6.8	6.4	6.2	3.8	4.6	3.7	3.5	3.4	4.7	4.3	1.4	6.8	2.3	24
28	1	5.6	1.2	3.4	1.4	2.6	4.5	5.8	5.5	5.1	7.1	6.3	9.6	9.1	9.1	7.5	8.4	7.2	5.8	3.9	4.3	4.1	1.7	2.6	9.6	3.3	24
29	3.5	3.7	4.3	4.8	2.6	4.5	7	8	6.3	7.6	7.5	8.5	9.5	8.7	12.7	11.4	11.1	10.2	10.5	10.2	11.9	12.5	5.7	3.1	12.7	5.8	24
30	5.2	7.2	7.5	6.8	6	4.2	4	5.2	4.6	5	5.3	5	5.5	5.8	4.2	5.4	4.9	6.8	8.7	4.8	5.2	4.6	3.2	3.3	8.7	1.5	24
HOURLY MAX	11.4	10.2	9.8	7.8	8.7	9.5	10.6	11.7	12.9	13.5	14.0	13.7	14.9	13.7	14.7	13.2	13.0	12.8	10.5	10.2	11.9	12.5	8.0	8.6			
HOURLY AVG	3.9	3.7	3.1	3.3	3.2	3.6	4.5	4.9	5.9	6.0	6.4	6.3	6.8	6.2	6.5	6.6	6.6	6.1	5.4	4.4	3.9	3.9	3.6	3.9			

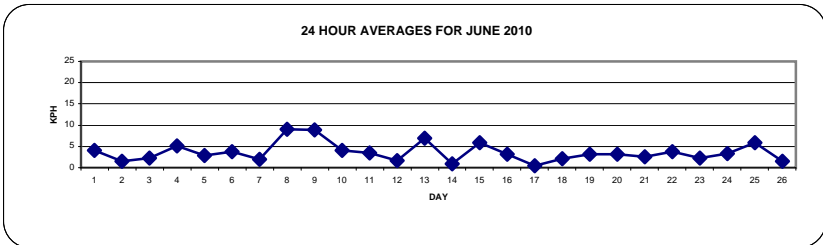
### STATUS FLAG CODES

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

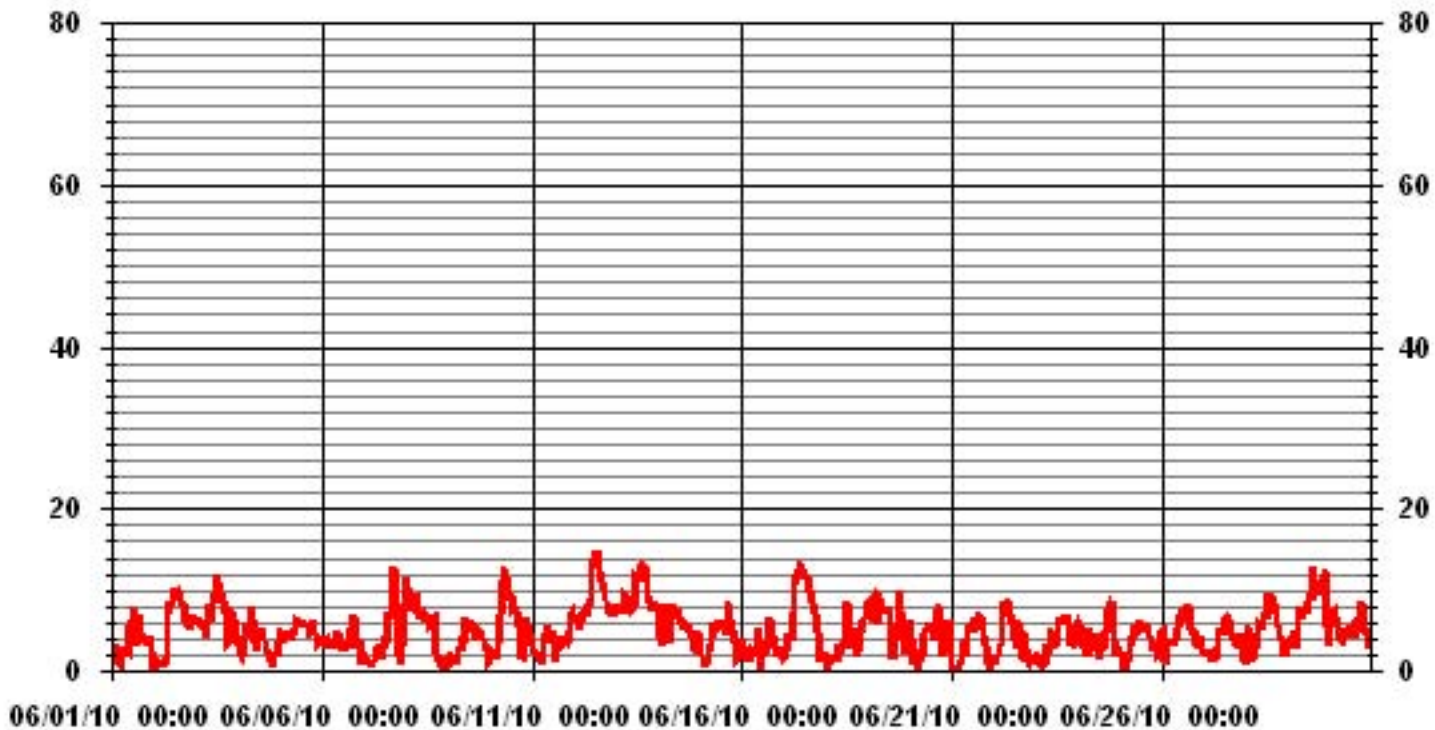
LAST CALIBRATION: February 4, 2009

### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	14.9	KPH	@ HOUR(S)	12	ON DAY(S)	12
MAXIMUM 24-HR AVERAGE:	9.0	KPH			ON DAY(S)	12
CALMS (≤ 1 KPH)	3.90	%	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION	2.90		MONTHLY AVERAGE	4.94	KPH	



### 01 Hour Averages



— LICA30 WSP KPH

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

### 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
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	11	7.5	8.2	8	9	9.9	14.2	12.5	17.4	15.5	21.7	25.2	24.5	21.5	18.7	24.3	22.1	16.8	18.1	16.4	13.8	6.9	7.1	8.4	25.2	
2	13.4	3	8.8	9.7	9.7	7.1	13.1	20.5	24.3	24.9	41.9	48.1	37.4	36.5	26.7	33.3	40.6	28.2	28.8	24.9	23.7	24.3	28	27.1	48.1	
3	27.7	26	24.3	25	24.9	21.1	22.4	29	35.5	28.6	39.6	40.4	45.8	43.4	32.5	31.4	32.5	29	23.4	30.1	9.1	16.5	15.4	17	45.8	
4	13.3	11.4	13.8	12.1	22.8	25.6	22.4	22.6	23.9	21.7	19.6	16.6	18.7	17.2	20.7	21.1	12.1	11.2	10.1	8.4	9.7	8.2	6.3	10.5	25.6	
5	11.4	10.9	9.5	20.2	20	20	20.2	21.3	21.9	23.9	27.5	28.8	24.5	22.6	26	27.7	23.2	22.8	23.4	27.5	18.7	15.9	17.6	18.3	28.8	
6	17.2	23.4	11.8	18.2	10.5	9	10.3	13.6	21.9	24.7	19.6	19.1	29.5	23.4	36.8	25.6	26.7	18.5	20.4	15.5	13.6	11.2	10.8	5.8	36.8	
7	6.3	5.8	11	7.1	10.6	7.8	14	12.9	13.3	12	14	12.8	19.4	16.5	31.3	27.7	34.8	30.6	22.4	13.6	11.2	3.7	15.5	19.6	34.8	
8	26	25.6	25	19	24.3	19.6	21.5	24.5	20.2	20.9	22.2	22.2	25.2	26.9	26.2	23.7	20.6	19.6	17.2	12.3	12.9	3.2	2.6	12.7	26.9	
9	6.7	4.1	3.7	9.7	3.5	5.6	12.5	12.9	17.2	17.9	25.5	19.8	19.8	22.6	27.5	19.6	24.5	25.2	23.2	20.5	21.5	12.9	15.1	4.5	27.5	
10	5.6	6.7	11.6	5.4	11	11.4	20	29.9	36.8	37.8	31.1	31.4	35.2	35.3	34.2	26.5	26.2	26.7	10.3	5.4	13.8	14	13.6	12.1	37.8	
11	11.4	9.5	8.4	5.4	4.5	2.6	5.2	14.4	17.9	23.2	24.1	25.7	24.7	19.1	21.7	18.2	15.5	16.8	14.6	14.2	14	9.3	20.9	17.6	25.7	
12	15.1	14.2	13.6	14	12.5	19.2	21.5	18.9	22.2	28.6	44.1	40.6	45.8	39.1	41.9	43.2	36.1	36.5	23	23.4	18.9	22.2	16.8	20.4	45.8	
13	17.6	18.3	18.6	18.5	16.9	23.7	22.6	26.2	21.5	21.9	27.1	33.1	36.3	33.3	41.7	39.1	38.5	32.9	30.1	29.7	26	18.3	22.6	22.4	41.7	
14	20.2	25.8	26.9	29	28.2	22.2	15.5	18.9	31.8	32.3	29.5	28.6	32.5	26.2	28.2	32.7	27.5	27.1	24.5	27.1	16.4	14.8	14.2	17.4	32.7	
15	20.1	13.7	11.4	15.5	5.4	15.1	15.5	17.4	21.9	21.3	26.4	35.7	25.8	32.7	28.2	21.7	35.3	30.1	23.6	22.4	20	15.1	11	9.9	35.7	
16	12.9	17.6	17.7	13.1	10.6	17.4	12.7	13.5	18.9	26.9	21.3	14	20.6	23.6	25.1	15.9	15.4	9.5	10.3	18.9	16.5	9	13.1	6.5	26.9	
17	14	7.3	18.7	17.2	13.8	17	21.5	28.4	32.5	33.3	34.6	34	34.6	30.5	30.1	32.9	<b>72.2</b>	25.6	25.2	20.8	8.2	6	9.5	8.4	<b>72.2</b>	
18	6.9	4.7	4.3	14.6	5.6	8.8	9.7	15.5	18.3	21.5	20.8	29.2	28.6	16.1	18.1	27.5	22.2	13.8	14.6	8.6	10.3	17.6	15.3	15.5	29.2	
19	18.5	18.1	23.2	18.9	16.4	20.2	24.3	26	28.2	33.8	29.7	34.8	31.6	26.7	11.8	19.1	23.7	23	26.4	19.8	17.4	16.8	11.6	13.1	34.8	
20	14.7	13.7	5.2	5.2	5.2	12.1	14.2	13.5	20.6	19.8	18.9	23.6	24.3	23.8	26	26.9	24.9	19.6	14.4	15.1	15.7	18.1	24.3	23.4	26.9	
21	12.5	9.7	7.8	8.8	5.4	14.8	17.6	14.4	12.9	26.6	31.6	31.2	21.5	22.3	27.7	27.7	24.4	26.2	20.6	29.8	10.7	11.8	4.1	5.2	31.6	
22	8.2	3.7	6.3	10.3	17	17.6	25	25	28.2	29.3	23.9	23.6	25.8	19.1	16.1	18.5	15.5	16.6	9.3	5.8	5.4	4.3	4.1	10.1	29.3	
23	6.2	13.5	4.3	3	11	12.3	6.3	17.9	23	19.2	19.4	18.5	25.6	20.2	21.5	22.6	21	25.1	22.8	17.6	12.7	13.6	12.7	17.9	25.6	
24	24.3	18.7	17.7	20	13.6	15.3	22.6	22.4	21.3	16.1	24.7	17.4	11.9	12.2	19.1	17.4	22.3	24.5	32.5	32.7	29.9	35.5	18.3	19.4	35.5	
25	19.2	8	3.9	3.7	5.4	4.3	12.1	11.8	14.4	14	19.8	21.7	23.4	23.4	28.6	25.1	28.4	23.8	24.3	21.3	7.1	9.3	3.9	47.1	47.1	
26	38.7	9	18.7	15.3	17.6	22.8	23.2	23.8	20	21.5	23.9	20.7	25.2	21.3	32.1	27.9	29.2	24.5	27.1	18.7	21.3	17.2	18.9	17	38.7	
27	17.9	5.8	14.6	9.3	11.8	14.6	13.3	18.7	22.4	20.4	23.4	28.8	32.5	31.2	29.4	31.4	25.4	20.4	14.8	13.1	10.8	13.1	15.5	7.1	32.5	
28	6.9	21.3	11	16.4	15.9	13.5	18.9	20.4	23	23.2	25.2	26	32.3	28.1	29.2	27.1	26	27.7	23.4	20.2	9.7	7.1	12.5	15.3	32.3	
29	16.1	16.2	17	31.6	11	22.8	25.8	29	24.5	30.5	29.7	30.3	26.8	35	33.7	31.8	43.4	37	33.5	31.8	37.4	40.6	69.4	20.9	69.4	
30	28.2	27.7	31.8	34.4	32.3	21.1	29.8	21	18.5	22.7	22.1	15	30.1	26.7	21.7	34.8	29.7	40.4	41.3	30.3	24.5	26.3	23.2	17.9	41.3	
PEAK	38.7	27.7	31.8	34.4	32.3	25.6	29.8	29.9	36.8	37.8	44.1	48.1	45.8	43.4	41.9	43.2	72.2	40.4	41.3	32.7	37.4	40.6	69.4	47.1		

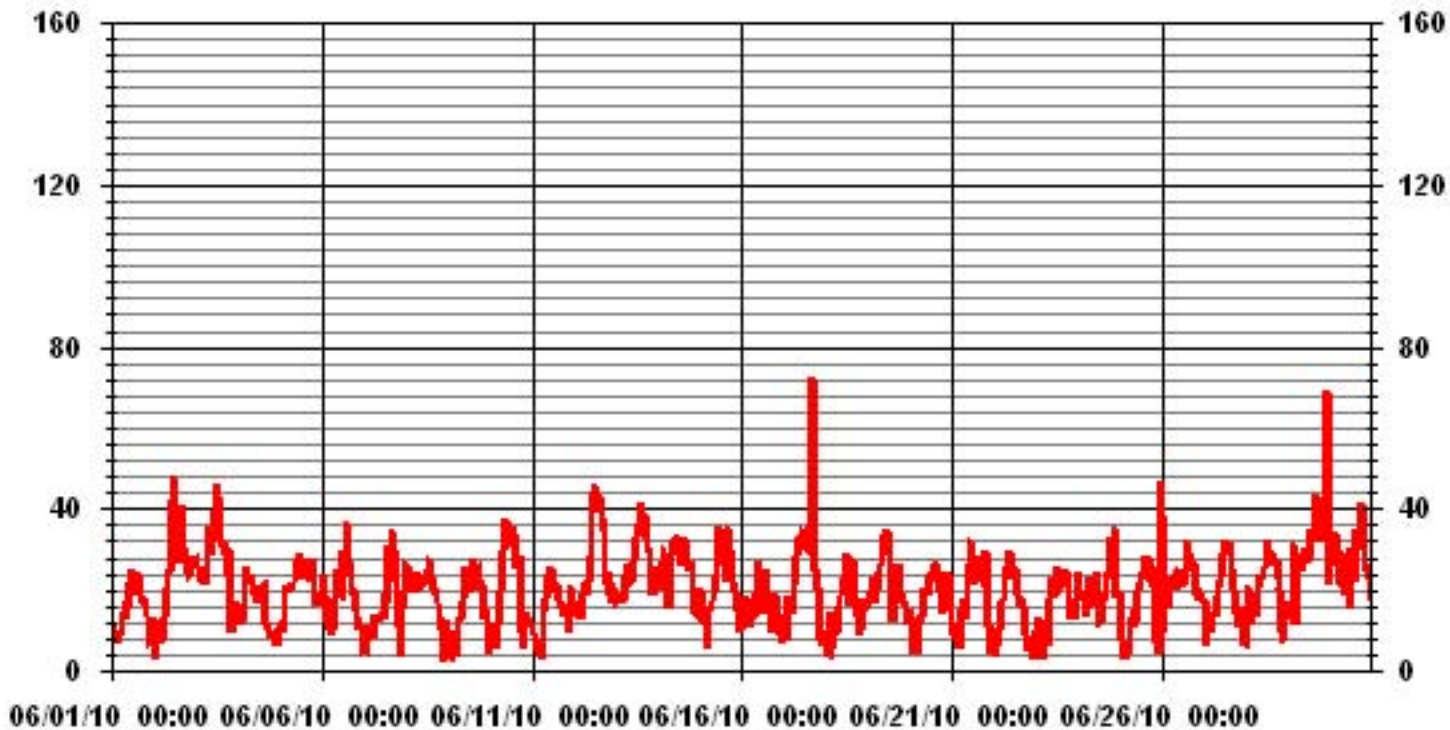
**STATUS FLAG CODES**

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**

MAXIMUM INSTANTANEOUS READING	72.2	KPH	@ HOUR(S)	16
			ON DAY(S)	17

### 01 Hour Averages



— LICA30 WSMAX KPH

LICA30  
WSP / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

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

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	1.38	2.77	5.69	3.88	3.33	3.75	4.58	3.05	4.16	7.22	5.00	5.27	5.27	3.75	4.30	2.63	66.11
< 12.0	1.52	2.36	2.36	1.38	2.22	2.08	2.63	2.91	2.63	6.25	1.38	.41	.97	.27	1.38	.41	31.25
< 20.0	.00	.69	.13	.00	.13	.00	.27	.00	.55	.83	.00	.00	.00	.00	.00	.00	2.63
< 29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.91	5.83	8.19	5.27	5.69	5.83	7.50	5.97	7.36	14.30	6.38	5.69	6.25	4.02	5.69	3.05	

Calm : .00 %

Total # Operational Hours : 720

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	10	20	41	28	24	27	33	22	30	52	36	38	38	27	31	19	476
< 12.0	11	17	17	10	16	15	19	21	19	45	10	3	7	2	10	3	225
< 20.0		5	1		1		2		4	6							19
< 29.0																	
< 39.0																	
>= 39.0																	
Totals	21	42	59	38	41	42	54	43	53	103	46	41	45	29	41	22	

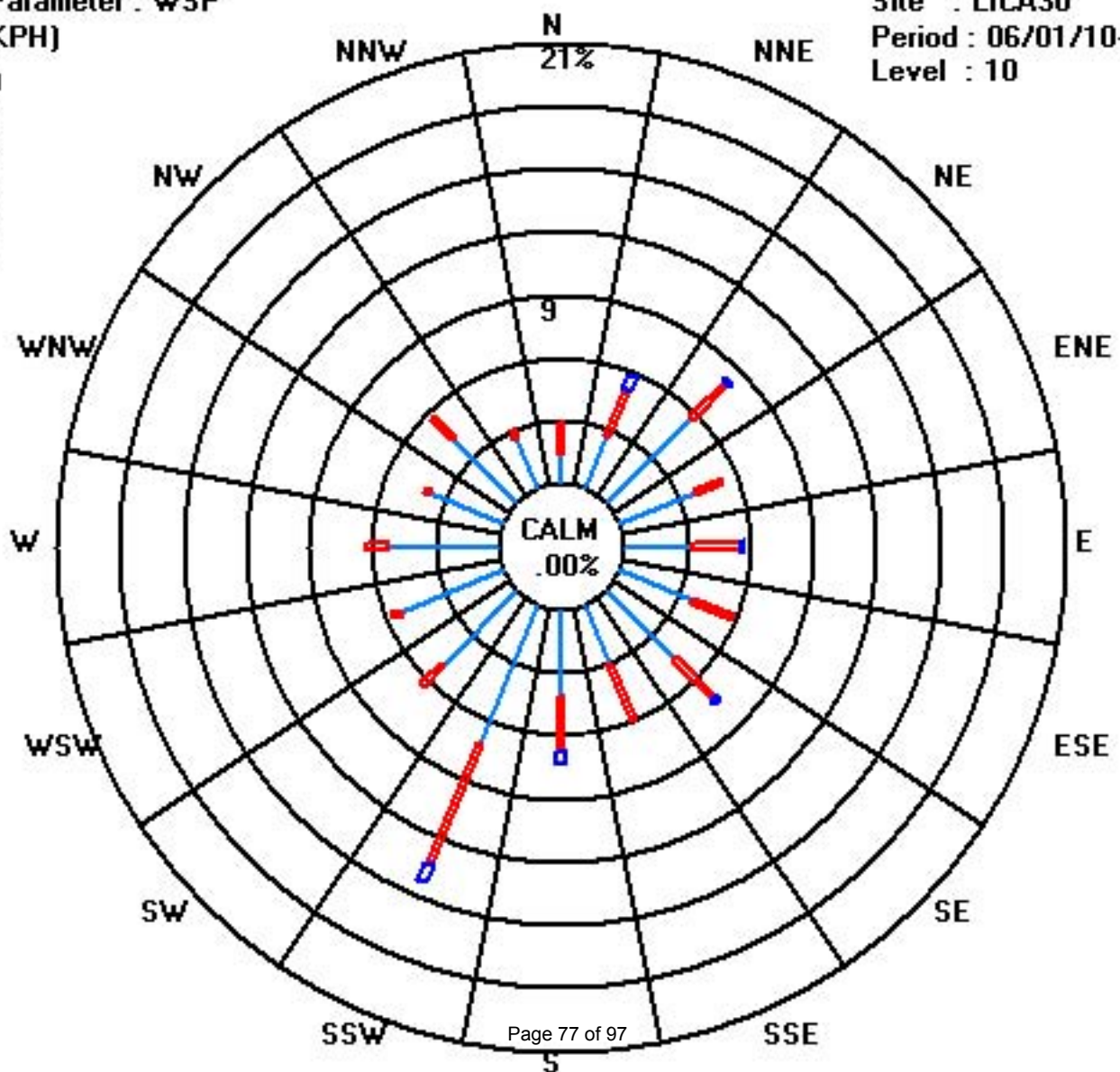
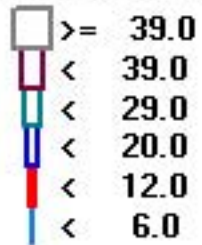
Calm : .00 %

Total # Operational Hours : 720

Class Limits (KPH)

Period : 06/01/10-06/30/10

Level : 10



# Vector Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

## WIND DIRECTION hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	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	231	214	210	211	206	261	212	262	287	336	191	210	194	208	176	195	193	203	225	182	199	196	200	209	206	SSW	24	
2	15	144	175	205	128	20	348	127	140	153	152	125	153	148	174	155	143	151	122	114	105	112	113	114	139	SE	24	
3	107	108	99	95	94	88	57	93	97	65	75	77	79	82	70	68	81	69	54	42	34	27	24	28	73	ENE	24	
4	50	52	49	58	89	103	98	90	94	106	121	272	282	281	275	278	282	290	333	300	275	213	205	206	88	E	24	
5	203	205	215	264	258	268	269	275	280	278	275	281	306	333	316	300	306	339	323	314	318	321	280	286	288	WNW	24	
6	280	269	241	241	227	217	216	221	221	300	302	317	239	69	71	40	9	188	194	197	150	190	170	151	227	SW	24	
7	160	113	244	125	318	91	31	258	199	216	279	310	300	342	3	358	11	29	32	74	131	34	19	34	13	NNE	24	
8	32	29	22	22	27	29	12	12	1	355	0	323	319	333	335	6	13	25	57	31	32	268	159	127	10	N	24	
9	75	80	100	117	42	59	54	69	119	131	135	143	144	150	139	103	120	102	88	67	63	59	46	31	106	ESE	24	
10	42	64	57	46	54	39	36	36	41	46	54	57	55	60	91	115	92	113	143	175	181	202	208	213	69	ENE	24	
11	223	225	217	204	179	229	37	34	53	132	131	136	64	126	221	154	236	220	211	155	186	197	186	198	174	S	24	
12	201	197	192	205	203	204	207	217	207	205	201	199	199	198	200	203	200	201	191	179	173	176	184	190	197	SSW	24	
13	193	193	201	204	207	211	212	199	197	167	175	173	182	187	191	185	187	179	160	160	156	149	166	168	183	S	24	
14	170	202	309	354	10	26	340	326	321	347	330	307	324	314	317	310	308	289	282	273	261	283	307	312	317	NW	24	
15	313	21	241	175	195	288	319	337	356	326	302	308	314	304	321	333	291	265	279	291	292	241	272	261	303	WNW	24	
16	286	280	247	245	257	294	319	290	267	234	237	254	354	268	271	211	197	183	202	307	331	347	33	32	259	WSW	24	
17	66	48	51	47	39	35	33	34	30	30	19	16	25	22	28	46	49	53	55	45	328	324	320	322	31	NNE	24	
18	343	38	256	240	243	211	19	26	5	349	25	152	184	129	40	307	4	172	206	177	193	195	188	191	193	S	24	
19	200	197	198	202	205	211	210	210	221	226	224	246	232	194	144	160	194	176	196	195	183	171	232	110	205	SSW	24	
20	221	206	192	138	242	102	59	149	157	115	170	180	185	180	233	147	156	193	139	56	165	144	145	154	165	SSE	24	
21	110	134	359	210	60	216	227	287	235	291	303	300	328	9	356	55	136	135	183	164	14	88	194	202	312	NW	24	
22	184	114	87	40	44	35	37	47	50	63	79	101	87	42	197	221	341	16	337	236	220	184	188	37	59	ENE	24	
23	35	61	70	132	117	69	32	103	125	151	136	158	158	178	172	153	150	148	141	131	124	139	114	134	138	SE	24	
24	131	133	117	79	67	56	92	92	120	110	62	43	326	22	35	49	66	101	99	122	142	250	265	118	97	E	24	
25	84	161	187	36	197	185	117	181	201	204	197	209	201	248	258	243	258	265	262	261	196	131	144	287	219	SW	24	
26	332	9	225	229	248	265	249	249	223	217	209	212	225	223	213	217	248	247	266	248	238	291	321	277	240	WSW	24	
27	256	204	229	243	231	220	10	309	312	322	291	262	272	248	278	246	274	217	194	193	161	149	141	20	248	WSW	24	
28	41	178	130	123	105	42	61	47	60	94	123	122	121	135	123	155	185	215	208	225	193	200	157	80	136	SE	24	
29	80	65	40	5	52	79	80	71	106	126	125	129	118	154	143	144	163	131	136	138	132	129	285	343	121	ESE	24	
30	78	85	87	94	85	84	99	118	155	207	212	211	267	278	256	240	257	261	274	254	228	248	253	248	212	SSW	24	
HOURLY AVG	343	280	359	354	318	294	348	337	356	355	330	323	354	342	356	358	341	339	337	314	331	347	321	343				

**STATUS FLAG CODES**

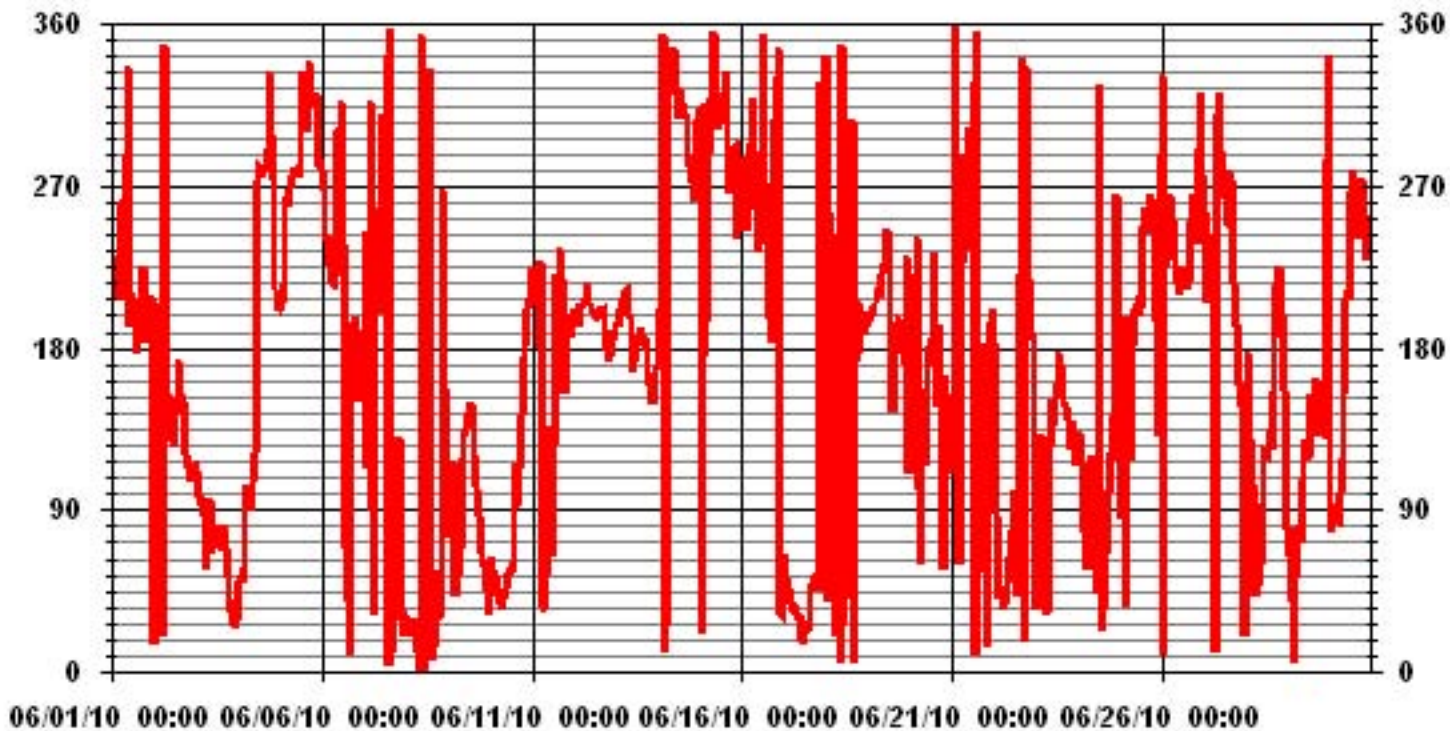
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

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

MONTHLY CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	720 HRS
STANDARD DEVIATION	93.03	AMD OPERATION UPTIME	100.0 %
		MONTHLY AVERAGE	162 DEG



### 01 Hour Averages



— LICA30 WDR DEG

# Standard Deviation Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JUNE 2010

## STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	28	19	14	17	52	40	33	41	46	60	40	40	40	47	75	47	36	39	35	45	13	7	9	14
2	51	29	34	39	38	42	51	56	29	28	34	39	35	36	28	34	31	31	38	35	30	23	27	30
3	31	30	26	30	32	35	22	30	33	30	28	33	31	31	29	26	32	34	24	27	16	33	22	27
4	22	25	31	27	42	31	30	34	32	25	35	59	38	39	37	39	44	42	38	43	47	24	20	15
5	13	16	21	37	34	39	37	37	38	33	34	37	39	42	36	38	37	36	38	35	38	41	36	35
6	40	37	29	35	16	19	16	24	28	41	40	43	58	52	49	37	50	43	19	27	15	17	43	23
7	36	51	50	49	50	40	55	39	42	30	54	47	43	48	41	34	29	15	15	27	37	44	24	14
8	14	13	16	14	17	17	26	29	37	34	33	39	41	45	42	34	33	46	44	62	69	65	33	17
9	19	28	23	20	39	29	23	31	37	42	29	34	36	39	45	48	31	36	35	28	25	22	16	31
10	37	17	20	35	20	17	19	19	22	24	31	28	34	37	35	30	38	35	30	39	14	13	15	17
11	24	26	24	22	35	51	19	18	38	39	51	66	39	75	38	52	44	37	29	33	11	12	13	18
12	15	11	12	14	13	15	18	22	24	28	25	25	25	25	25	25	24	20	19	21	20	20	19	17
13	18	17	16	15	16	19	20	23	25	31	28	28	33	26	25	26	24	26	29	28	18	15	19	20
14	19	36	41	34	26	27	39	42	44	39	40	42	40	43	39	44	40	39	42	36	41	36	46	38
15	49	50	32	57	46	39	45	43	37	45	47	47	50	46	42	41	36	33	37	30	46	57	42	38
16	32	37	46	42	57	30	31	56	56	39	58	57	77	56	47	27	15	20	16	46	37	35	26	40
17	28	23	20	21	20	15	13	17	17	20	24	29	26	21	24	25	28	26	24	20	23	26	31	32
18	26	54	51	24	25	27	48	25	47	46	67	49	21	43	24	41	32	31	24	11	11	14	14	14
19	13	13	15	17	17	22	19	24	35	44	36	45	38	59	54	35	31	30	20	20	31	30	46	47
20	47	19	59	23	69	47	52	40	29	36	41	44	54	41	56	32	28	16	42	34	51	39	27	49
21	57	42	44	49	59	35	38	61	35	41	46	47	53	38	46	27	32	23	56	42	54	35	53	50
22	37	40	39	18	23	17	16	21	24	29	36	38	58	46	19	28	38	29	37	31	37	14	48	53
23	29	21	30	55	27	40	11	38	30	54	65	54	50	33	38	38	29	27	25	20	15	15	22	18
24	23	22	23	20	22	56	29	32	31	32	23	26	69	39	42	37	26	30	31	30	24	40	44	34
25	34	38	65	37	26	37	15	23	27	31	32	31	37	37	46	42	45	46	45	37	14	16	16	42
26	42	51	72	38	32	41	41	39	35	28	23	24	34	39	29	27	38	42	41	37	30	40	37	35
27	38	29	28	38	27	32	57	60	43	40	44	39	42	40	46	38	55	33	31	16	24	16	33	54
28	67	36	53	36	36	28	22	20	30	36	36	39	32	32	31	35	33	32	23	31	13	8	48	40
29	21	25	15	38	32	25	27	29	32	36	40	33	35	33	26	26	29	27	28	25	23	25	42	58
30	31	31	31	33	30	35	44	31	26	26	30	34	36	43	43	49	45	39	34	36	30	43	39	36

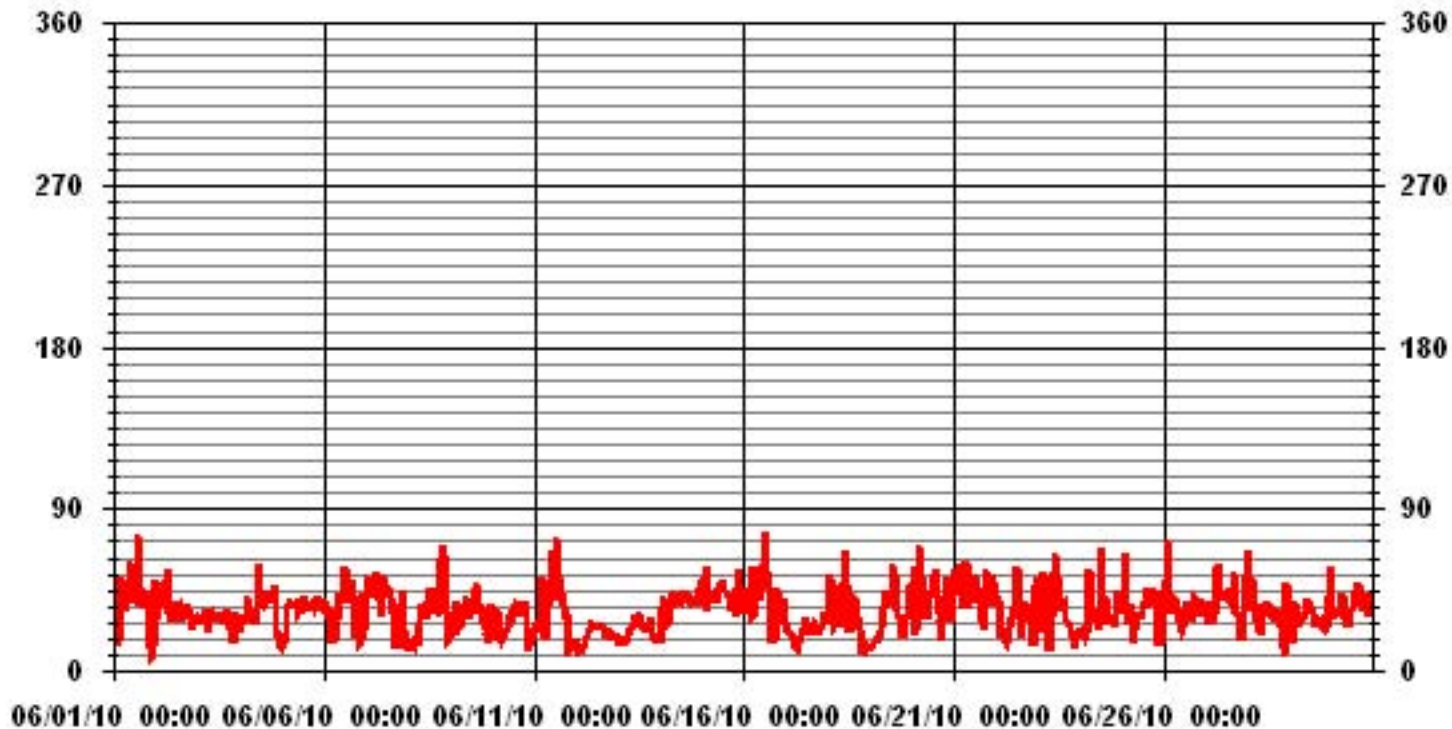
### STATUS FLAG CODES

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

LAST CALIBRATION: February 4, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 720 HRS

### 01 Hour Averages



— LICA30 STDWDIR DEG

# Calibration Reports

# Sulphur Dioxide

### SO<sub>2</sub> Calibration Report

#### Station Information

Calibration Date	June 4, 2010	Previous Calibration	May 17, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	11:35	End Time (MST)	14:40
Reason:	Monthly Calibration		
Barometric Pressure	929 mBar	Station Temperature	25 Deg C
Cal Gas	51.4 ppm	Cal Gas Expiry date	08/02/2012
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	0 - 1 Volts

#### Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	Enviroics 2000		1991	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	Enviroics 2000	S/N :	1991		

#### Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 1000 ppb		
Sample Flow / Box Temp	896 ccm 33.4 Deg C	597 ccm 33.5 Deg C	
HVPS / Lamp Setting	494 3411	494 3408	
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	34.4 0.966	34.4 0.966	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4920	77.8	800	799	1.0014
4967	34	349	348	1.0042
4983	14.6	150	148	1.0146
4999	0	0	0	N/A
Sum of Least Squares				1.0022
New Correction Factor				1.0014

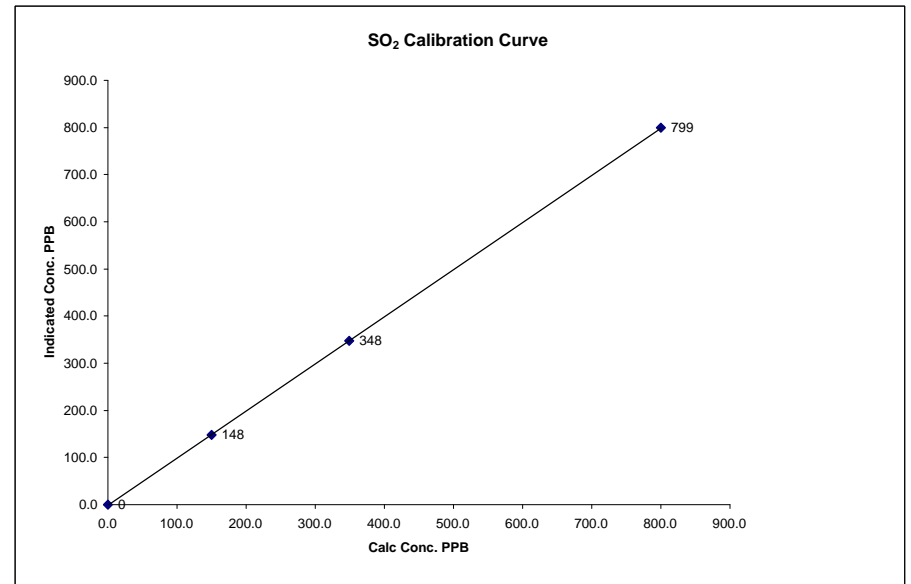
	Before Calibration	After Calibration
Auto Zero	0.4	0.0
Auto Span	615	616
Sample Lines Connected		YES
Percent Change from Previous Calibration		-0.1%

Calibration Performed by: Shea Beaton

### SO<sub>2</sub> Calibration Curve

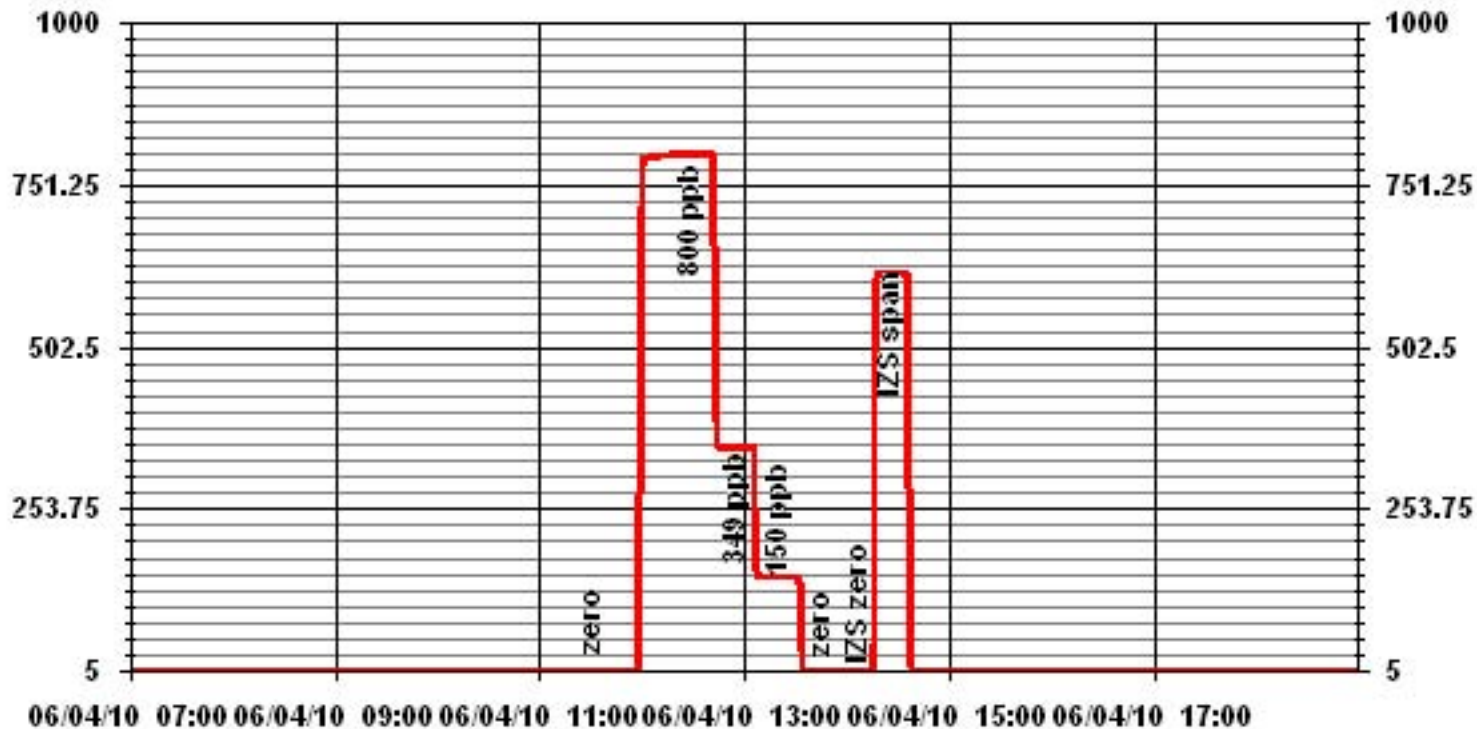
Calibration Date	June 4, 2010
Company	Lakeland Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	11:35
End Time (MST)	14:40

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	
0	0	n/a	Intercept	(± 3% F.S.)	-1.009217
150	148	1.0146			
349	348	1.0042			
800	799	1.0014			



Notes:

### 01 Minute Averages



— LICA30 SO2\_ PPB



# Hydrogen Sulphide

## H<sub>2</sub>S Calibration Report

### Station Information

Calibration Date	June 4, 2010	Previous Calibration	May 18, 2010
Company	Lakelnad Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	8:59	End Time (MST)	12:17
Reason:	Monthly Calibration		
Barometric Pressure	929 mBar	Station Temperature	24 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	531 ccm	31.5 Deg C	528	33.1	Deg C
HVPS / Lamp Setting	552	2243	552	2240	
PMT / RxCell Temp	7.9 Deg C	50 Deg C	7.8 Deg C	50 Deg C	
Converter / IZS Temp	315.7 Deg C	45 Deg C	315.6 Deg C	45 Deg C	
Offset / Slope	28.6	0.978	28.6	0.973	

### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4997	0	0	0	N/A
4961	37	80	81	0.9871
4959	37	80	80	0.9998
4983	18.5	40	40	0.9987
4986	10.6	23	23	0.9962
4997	0	0	1	N/A
Sum of Least Squares				0.9994
New Correction Factor				0.9998

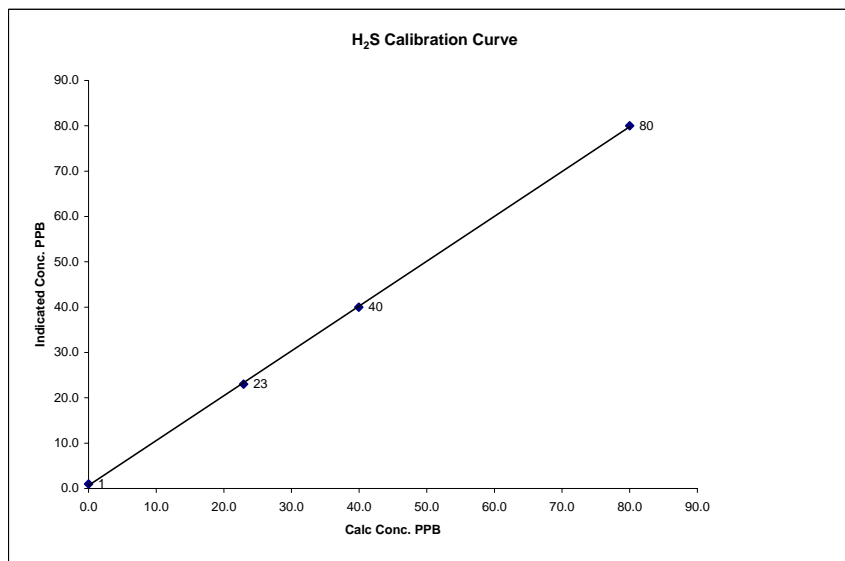
		Before Calibration	After Calibration
Auto Zero		0.6	0.9
Auto Span		58	58
Sample Lines Connected			YES
Percent Change from Previous Calibration			1.3%

Calibration Performed by: Shea Beaton

## H<sub>2</sub>S Calibration Curve

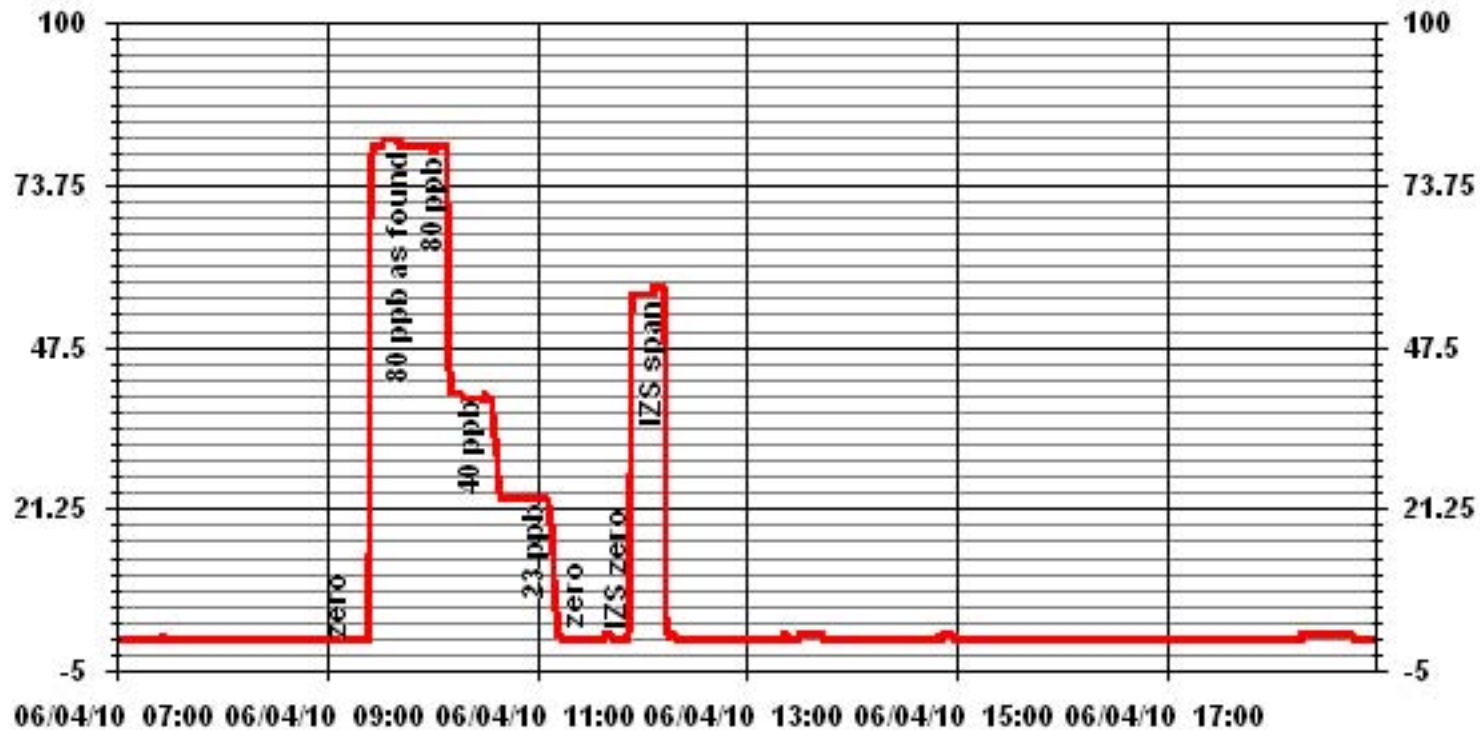
Calibration Date	June 4, 2010
Company	Lakelnad Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	8:59
End Time (MST)	12:17

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999911
0	1	n/a	Intercept	(± 3% F.S.)	0.664417
23	23	0.9962			
40	40	0.9987			
80	80	0.9998			



Notes:

### 01 Minute Averages



# Total Hydrocarbons

### THC Calibration Report

Station Information			
Calibration Date:	June 14, 2010	Previous Calibration	May 14, 2010
Company:	Lakeland Industry & Community Association		
Plant / Location:	Cold Lake - Maskwa		
:	(MST) 11:19	End Time	(MST) 14:48
Reason:	Monthly Calibration		
Barometric Pressure:	943 mBar	Station Temperature:	25 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207 Prop/ 602 Meth/1171.25THC	ppm	Cal Gas Expiry Date: August 21, 2011
DAS make & Model:	ESC 8832	S/N :	AO 791
Output Voltage Range:	0 - 10	VDC	

### Analyzer Information

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

### Analyzer Settings

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

### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1998	0.0	0.0	0.0	N/A
1999	70.0	39.6	40.2	0.9857
1999	70.0	39.6	40.0	0.9907
1998	35.0	20.2	20.3	0.9933
1998	20.0	11.6	11.6	1.0007
1998	0	0.0	0.0	N/A
Correction Factor:				0.9907

Previous Calibration Correction Factor:	0.9907
Current Correction Factor Before Span Adjust:	0.9857
Percent Change:	0.50%

### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	33.9	33.9
Sample Lines Connected		YES

### Cylinder Pressures

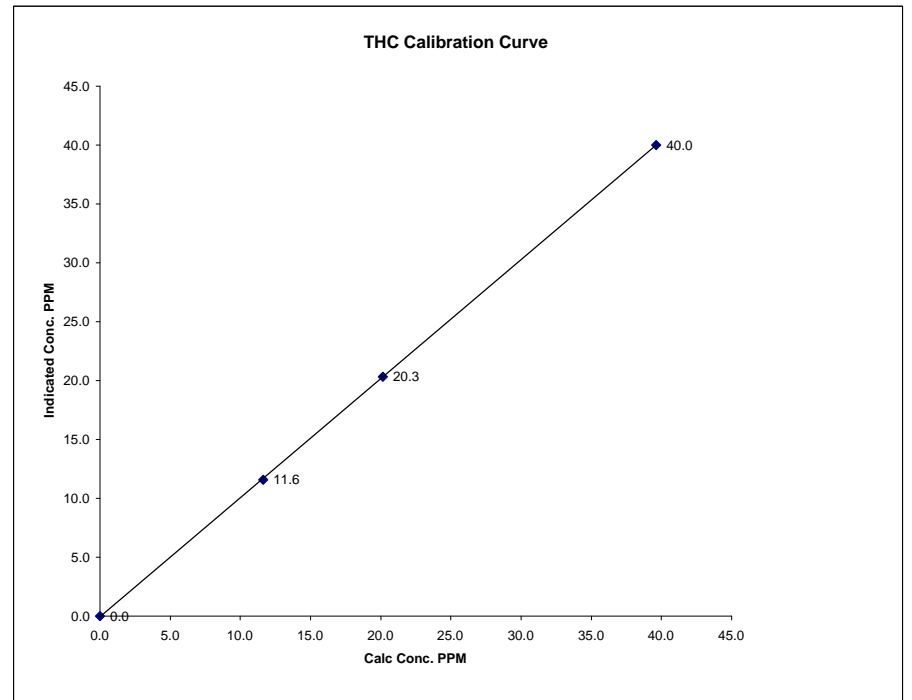
Span	2100	psi
Hydrogen	1100	psi
Zero Air	33	psi

Calibration Performed by: Shea Beaton

### THC Calibration Curve

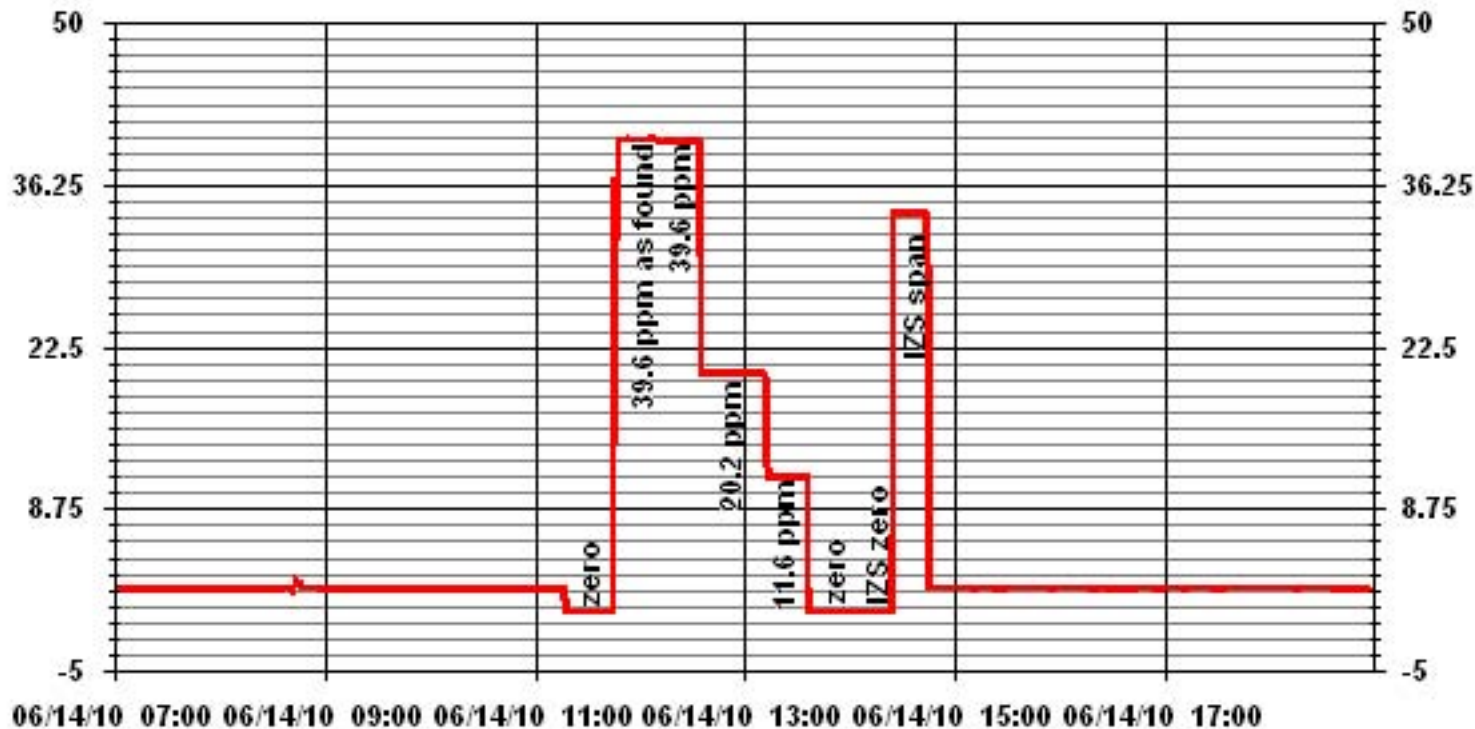
Calibration Date	June 14, 2010		
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	11:19	End Time (MST)	14:48

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999990
0.0	0.0		Intercept	(± 3% F.S.)	-0.055841
11.6	11.6	1.0007			
20.2	20.3	0.9933			
39.6	40.0	0.9907			



Notes:

### 01 Minute Averages



# Nitrogen Dioxide

**NOx - NO- NO2 Calibration Report**

**Station Information**

Calibration Date	June 4, 2010	Previous Calibration	May 18, 2010
Company	LICA	Plant/Location	Maskwa
Start Time (MST)	8:59	End Time (MST)	14:42
Reason:	Monthly Calibration	Other	
Barometric Pressure	929 mmHg	Station Temperature	24 Deg C
Cal Gas Concentration	NOx 50.9 ppm	NO 50.8 ppm	Cal Gas Expiry date 08-Feb-12
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA Volts

**Equipment Information**

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

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range			0-1000	ppb			
Sample Flow/Conv. Temp	453 ccm	316.2 Deg C		454 ccm	315.6 Deg C		
Ozone Flow / Vacuum	78 ccm	4.5 "Hg-A		78 ccm	4.5 "Hg-A		
HVPS / A ZERO	767 Volts	17.0 MV		767 Volts	17.1 MV		
Rx/ Temp / PMT Temp	50.0 Deg C	6.6 Deg C		50.0 Deg C	6.6 Deg C		
Box Temp / IZS Temp	31.5 Deg C	45.3 Deg C		33.3 Deg C	45.3 Deg C		
Offset	2.2 NOx	0.2 NO		2.2 NOx	0.2 NO		
Slope	1.125 NOx	1.125 NO		1.125 NOx	1.125 NO		
NO2 COEF / Conv Efficiency	NA	0.994		NA	0.994		

**Dilution Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
3004	0.0	----	0	0	1	-1	0	-1	----	----
2964	44.4	----	751	750	----	751	750	1	0.9990	0.9997
2984	20.7	----	351	350	----	346	346	0	1.0105	1.0115
2996	11.8	----	200	199	----	198	198	-1	1.0035	1.0065
3010	0.0	----	0	0	0	-1	0	-1	----	----

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		
2964	44.4	----	751	750	----	752	754	-2	----	
2964	44.4	600	751	----	522	752	230	522	0.9981	100.00%
2964	44.4	300	751	----	264	753	488	265	0.9925	100.38%
2964	44.4	150	751	----	128	755	624	130	0.9771	101.54%

Linearity	Sum of Least Squares	NOx= 1.003	NO= 1.002	NO2= 0.999
OK?	Yes No	Correction Factors:	NOx= 0.9990	NO= 0.9997
			Average Converter Efficiency= 100.64%	

	Before Calibration				After Calibration			
Auto Zero	-0.3	NOx	-0.5	NO2	-0.7	NOx	-1.3	NO2
Auto Span	704	NOx	694	NO2	696	NOx	685	NO2
	Sample Lines Connected				YES			

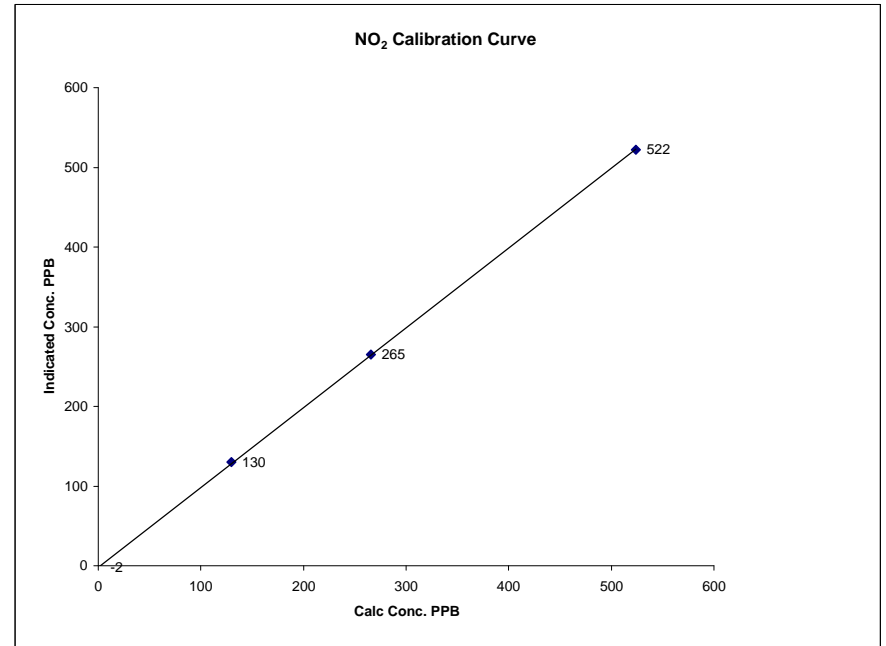
Notes

Calibration Performed by: Shea Beaton

**NO2 Calibration Curve**

Calibration Date	June 4, 2010	<b>LICA</b>	
Company		<b>Maskwa</b>	
Plant / Location		End Time (MST)	14:42
Start Time (MST)	8:59		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	Slope (0.85 to 1.15)	Intercept (± 3% F.S.)
1	-2	N/A	0.999967	1.000430	-1.59889
130	130	1.0000			
266	265	1.0038			
524	522	1.0038			



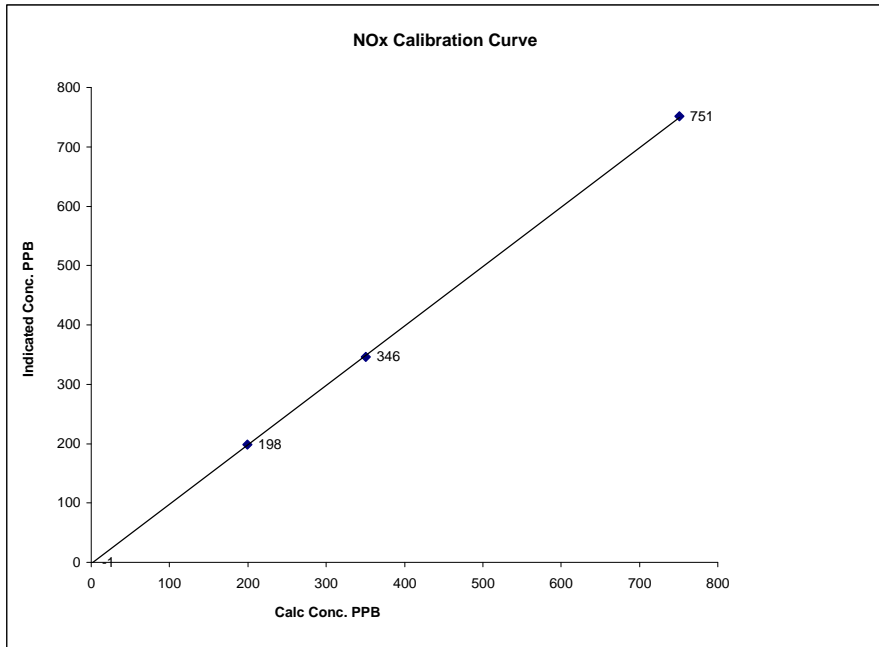
Notes: No CE gain adjustment.



### NOx Calibration Curve

Calibration Date June 4, 2010  
 Company LICA  
 Plant / Location Maskwa  
 Start Time (MST) 8:59 End Time (MST) 14:42

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999964
0	-1	N/A	Slope (0.85 to 1.15)	1.001079
200	198	1.0085	Intercept (± 3% F.S.)	-2.24214
351	346	1.0135		
751	751	1.0003		

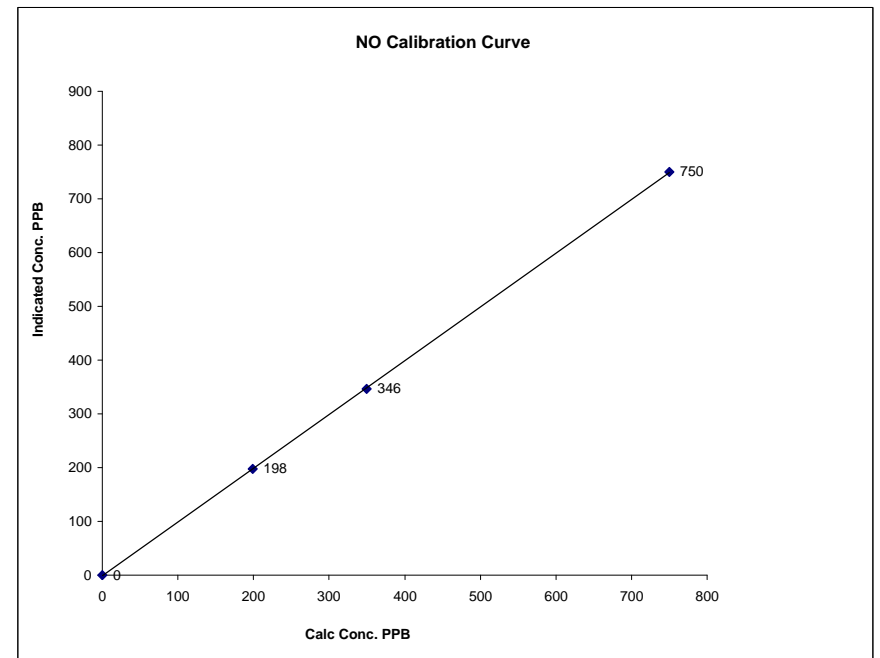


Notes:

### NO Calibration Curve

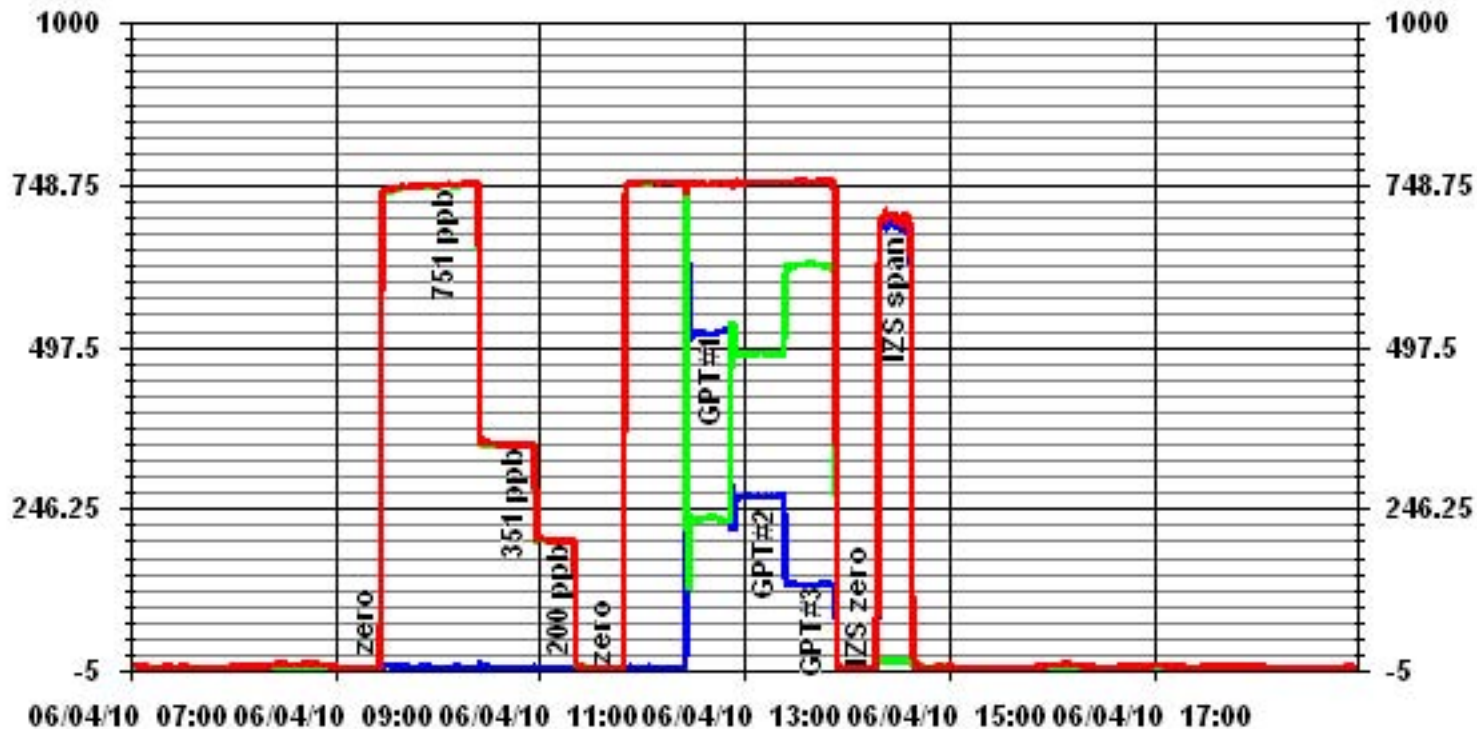
Calibration Date June 4, 2010  
 Company LICA  
 Plant / Location Maskwa  
 Start Time (MST) 8:59 End Time (MST) 14:42

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999963
0	0	N/A	Slope (0.85 to 1.15)	1.004415
199	198	1.0065	Intercept (± 3% F.S.)	-7.6757
350	346	1.0115		
750	750	0.9997		



Notes:

### 01 Minute Averages



— LICA30 HNOX\_ PPB    
 — LICA30 HNO\_ PPB    
 — LICA30 HNO2\_ PPB

# Lakeland Industry & Community Association

St. Lina Monitoring Site  
Ambient Air Monitoring  
Data Report  
For  
June 2010

Prepared By:



July 13, 2010

# Lakeland Industry & Community Association

## St. Lina

### Ambient Air Monitoring

<b>Table of Contents</b>	<b>Page</b>		<b>Page</b>
Introduction	3	• Standard Deviation Wind Direction	76
Calibration Procedure	4	Calibration Reports	79
Monthly Continuous Summary	5	• Sulphur Dioxide	80
General Monthly Summary	6	• Hydrogen Sulphide	83
Continuous Monitoring	9	• Total Hydrocarbons	86
• Monthly Summaries, Graphs & Wind Roses	10	• Nitrogen Dioxide	89
• Sulphur Dioxide	11	• Ozone	93
• Hydrogen Sulphide	19		
• Total Hydrocarbons	27		
• Ozone	35		
• Nitrogen Dioxide	43		
• Nitric Oxide	51		
• Oxides of Nitrogen	58		
• Vector Wind Speed	66		
• Vector Wind Direction	73		

## 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: June 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

# Calibration Procedure

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

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

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

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

The calibrations conducted at the LICA – St. Lina Air Monitoring Stations conform to the following Maxxam 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 – June 2010

LICA ST. LINA SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO <sub>2</sub> (PPB)	172	57	0	0	0.07	3	20, 21	VAR	VAR	VAR	0.5	21	100.0
H <sub>2</sub> S (PPB)	10	3	0	0	0.07	2	9	1	7.6	95(E)	0.4	3, 24	100.0
THC (PPM)	-	-	-	-	1.98	3.0	15	22	9.1	304(WNW)	2.2	24	94.3
OZONE (PPB)	82	-	0	-	32.76	64	21	13	7	284(WNW)	44.0	20	100.0
NO <sub>x</sub> (PPB)	-	-	-	-	0.58	7	21	5	5.6	206(SSW)	2.6	21	100.0
NO (PPB)	-	-	-	-	0.01	1	VAR	VAR	VAR	VAR	0.1	9, 23	100.0
NO <sub>2</sub> (PPB)	212	106	0	0	0.61	6	21	5	5.6	206(SSW)	2.6	21	100.0
VECTOR WS (KPH)	-	-	-	-	9.34	29.1	30	16	-	272(W)	14.2	13	100.0
VECTOR WD (DEGREES)	-	-	-	-	263(W)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

# General Monthly Summary

## Equipment Operation

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

### AQM STATION – LICA – St. Lina

#### Sulphur Dioxide (PPB)

- Analyzer make / model - API 100E, S/N: 468

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started. 4 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.

#### Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E, S/N: 510

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started. 4 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.

#### Ozone (PPB)

- Analyzer make / model –Thermo 49i, S/N: 1002240371

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started on June 23<sup>rd</sup>. during the final span point of the monthly calibration, the analog output began fluctuate, DAS read 79ppb and the analyzer read 122 ppb. Tightened wiring, problem corrected; the wires were accidentally loosened while working at the read of the analyzer and the rear of logger. Once the automatic zero/span check was completed, the zero was recorded as 3.8. Re-check the wires again; retightened the wires at the rear of the logger. Ran zero phase of the daily calibration again; no issues occurred on the second time. 4 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.



# General Monthly Summary

## AQM STATION – LICA – St. Lina

### Total HydroCarbon (PPM)

- Analyzer make / model –TECO 51C, S/N: 77021-384

No operational issue was observed during this month. A power failure occurred on June 19<sup>th</sup>, which caused the analyzer to flame out. The analyzer was relit on June 21<sup>st</sup>. 41 hours of data were invalidated due to this issue. The inlet filter was changed before the monthly calibration was started on June 23<sup>rd</sup>. 4 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.

### Nitrogen Dioxide (PPB)

- Analyzer make / model - API 200E, S/N: 592

No operational issue was observed during this month. The inlet filter was changed before the monthly calibration was started on June 22<sup>nd</sup>. During the as found span point of the monthly calibration, it was noticed that the analyzer responded 11% high for NO and NOx. Performed troubleshooting by checking the flows through the calibrator, the results were corrected; checking the analyzer test parameters, the results were all OK; cross-checking the analyzer with the other calibrator, same response; performing a leak check, no leaks. Returned analyzer to high span point and adjusted. Reason for high response is unknowns; will monitor analyzer performance. The analyzer daily calibration values have been OK. An extra GPT point was done for the O3 calibration (O3 set point =450). 4 hours of maximum concentration were invalidated due to small power failures this month. Data was corrected using daily zero information.

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

- System make / model – Met 50.5, S/N: H12635

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

No operational issue was observed during this month. 4 hours of maximum wind speed were invalidated due to small power failures.

# General Monthly Summary

## AQM STATION – LICA – St. Lina

### Datalogger

- System make / model - ESC 8832, S/N: AO717
- Software make/version - ESC v 5.51a

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

### Trailer

No issue was observed this month. The manifold and inlet pipes were cleaned on June 23<sup>rd</sup>. The Bard filter was also replaced on the same day.

# Continuous Monitoring

# Monthly Summaries, Graphs & Wind Roses

# Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

SULPHUR DIOXIDE (SO<sub>2</sub>) 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.	
DAY 1	0	0	0	0	0	0	1	1	0	0	0	IZS	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	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
3	0	0	0	0	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	IZS	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	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	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	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	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	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	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	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	
13	1	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	IZS	0	1	0.4	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	0.0	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	24	
16	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	
17	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	IZS	0	0	0	0	0	1	1	0.2	24
18	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	1	1	1	0.4	24
19	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	1	0.2	24
20	0	0	0	0	0	0	0	1	2	3	2	0	0	0	0	IZS	0	0	0	0	0	0	0	0	3	0.3	24	
21	0	0	0	0	0	0	0	0	1	1	3	3	2	2	IZS	0	0	0	0	0	0	0	0	0	3	0.5	24	
22	0	0	0	0	0	0	0	C	C	C	C	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	1	0	0	0	C	C	IZS	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
24	0	0	0	0	0	0	C	IZS	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	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	24	
27	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	
28	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	24	
30	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	1	1	1	1	1	1	1	1	2	3	3	3	2	2	1	1	1	1	1	0	0	1	1	1				
HOURLY AVG	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1				

STATUS FLAG CODES

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

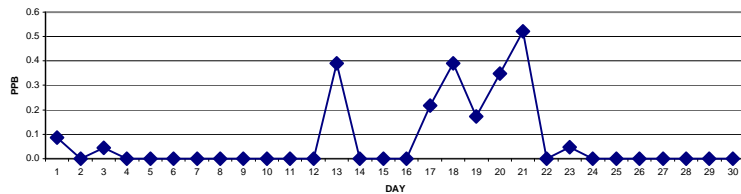
OBJECTIVE LIMIT:

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

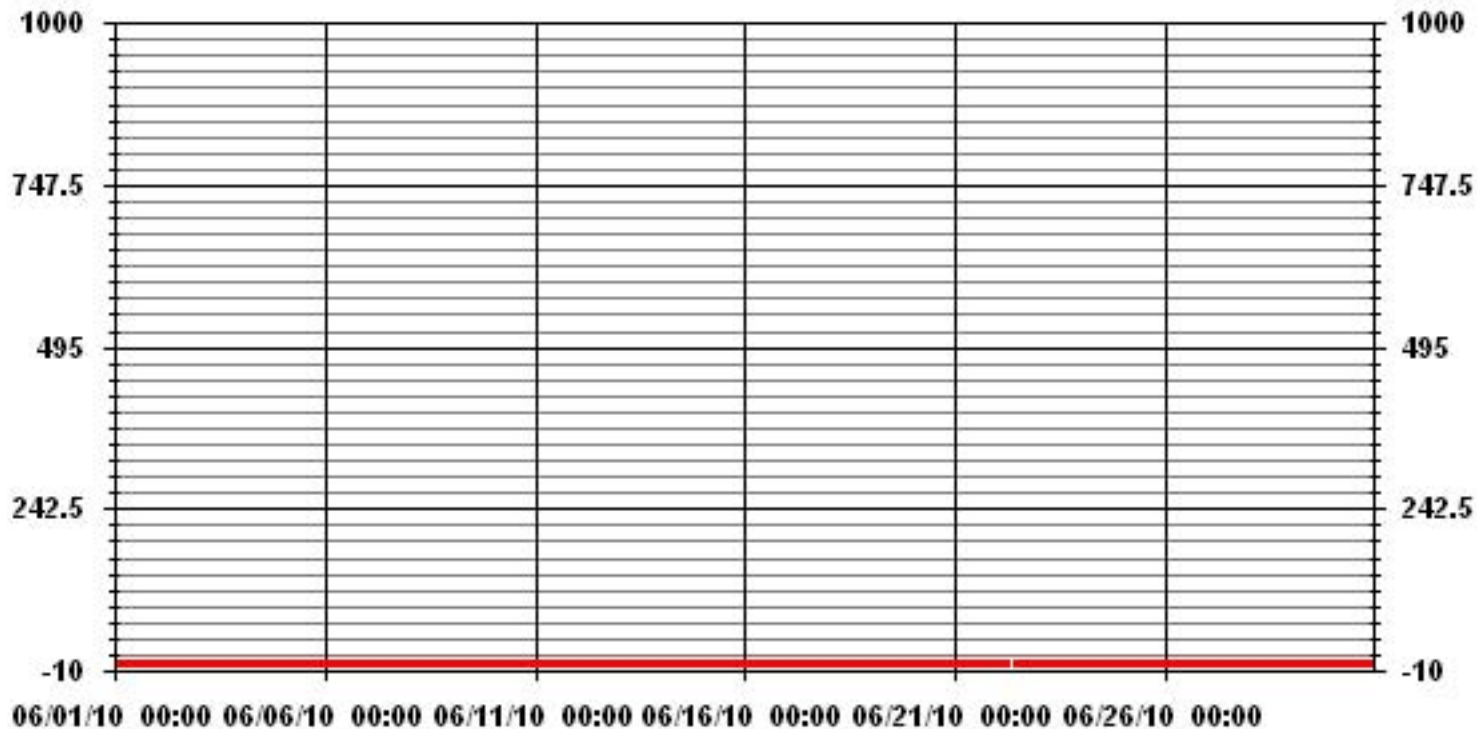
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	41					
MAXIMUM 1-HR AVERAGE:	3	PPB	@ HOUR(S)	VAR	ON DAY(S)	20, 21
MAXIMUM 24-HR AVERAGE:	0.5	PPB			ON DAY(S)	21
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	720 HRS		
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0 %		
STANDARD DEVIATION:	0.33		MONTHLY AVERAGE:	0.07 PPB		

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA31 SO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

## 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		
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		1	1	1	1	1	1	2	3	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.1	24
2		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	1	1.0	24
3		1	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	0.4	24
4		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
5		0	0	0	0	0	0	0	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	24
6		1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
7		1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
8		1	1	1	1	IZS	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	1.0	24
9		1	0	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
10		1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
11		1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	1	1	1	0.7	24
12		IZS	0	0	0	0	0	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	IZS	1	0.6	24	
13		2	1	1	1	2	3	2	1	3	2	1	1	1	2	1	1	2	2	2	2	1	1	1	IZS	0	3	1.5	24
14		0	0	0	0	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	0.1	23	
15		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1.0	24
16		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1.0	24
17		1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	IZS	1	1	1	1	1	2	1.1	24
18		1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	2	1.1	24
19		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	P	1	1	1	1	1	1	1	1	1	1.0	23
20		1	1	1	1	1	1	2	2	3	5	4	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	5	1.5	24
21		1	1	1	1	1	1	1	1	1	2	4	4	3	3	IZS	1	1	0	0	0	1	0	0	0	0	4	1.2	24
22		0	0	0	0	0	0	C	C	C	C	C	C	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	0.6	24
23		1	1	1	1	1	1	1	2	2	1	C	C	C	IZS	1	1	1	1	1	1	1	1	1	1	1	2	1.1	24
24		1	1	1	1	1	1	IZS	IZS	1	1	1	IZS	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.5	24
25		0	0	0	0	0	0	0	1	1	0	IZS	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0.2	24	
26		0	0	0	0	0	0	0	0	0	IZS	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.2	24	
27		0	0	0	0	0	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
28		0	0	0	0	0	0	0	IZS	1	1	0	0	1	0	0	0	0	0	1	0	1	1	0	0	1	0.3	24	
29		1	1	0	0	0	P	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	1	1	1	0.9	22	
30		1	1	1	1	1	IZS	1	1	1	1	0	0	1	1	1	0	0	0	0	1	1	0	0	0	1	0.6	24	
HOURLY MAX		2	2	1	2	2	3	2	3	3	5	4	4	3	3	2	2	2	2	2	2	1	1	1	1	1			
HOURLY AVG		0.8	0.7	0.7	0.7	0.7	0.8	0.9	1.0	1.1	1.1	0.9	0.8	0.9	0.8	0.8	0.7	0.8	0.6	0.7	0.7	0.7	0.8	0.7	0.7				

**STATUS FLAG CODES**

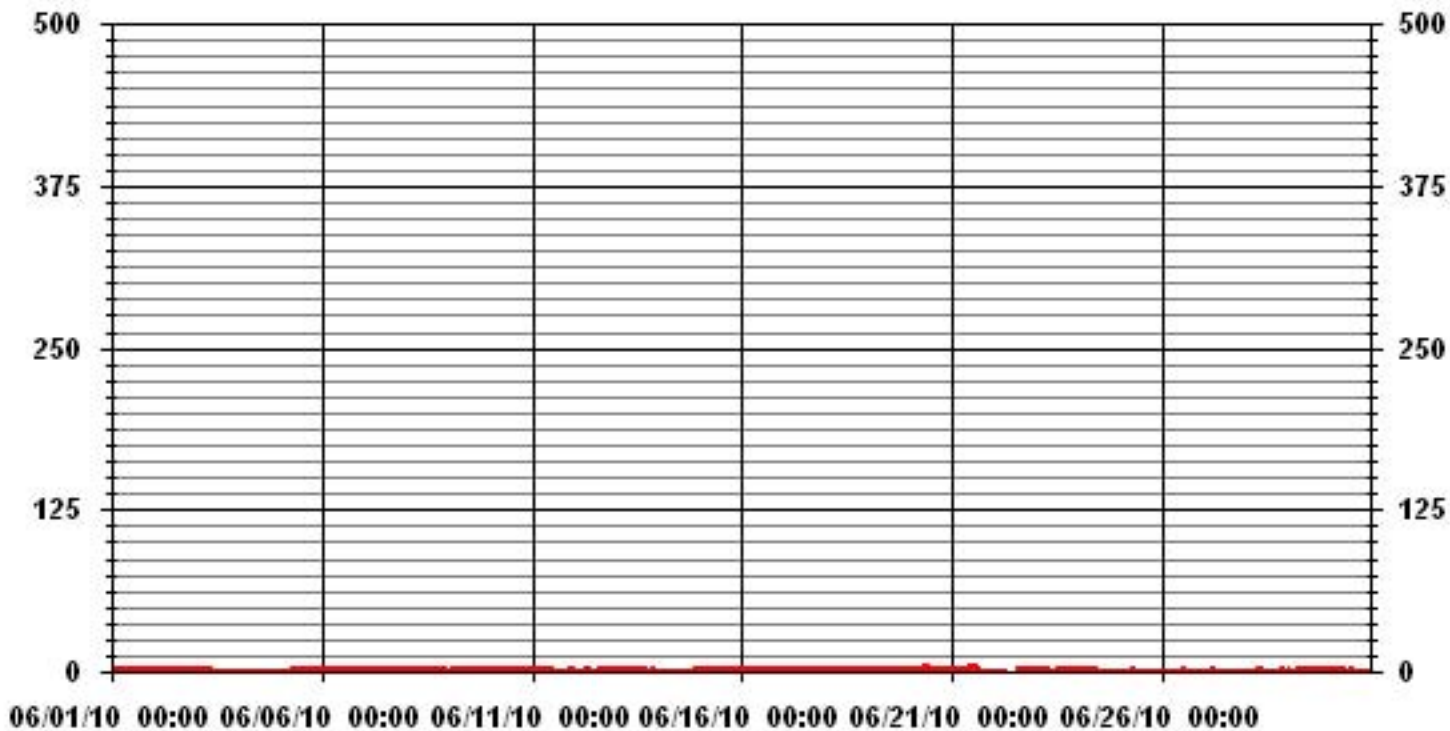
S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	481
MAXIMUM INSTANTANEOUS VALUE:	5 PPB @ HOUR(S) 9 ON DAY(S) 20
IZS CALIBRATION TIME:	33 HRS
MONTHLY CALIBRATION TIME:	8 HRS
STANDARD DEVIATION:	0.61
OPERATIONAL TIME:	716 HRS



### 01 Hour Averages



— LICA31 SO2MAX PPB

LICA31  
 SO2\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : SO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	4.69	4.69	5.13	4.40	7.34	5.43	4.25	2.79	4.69	9.69	7.19	7.78	7.34	6.60	9.83	8.07	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	4.69	4.69	5.13	4.40	7.34	5.43	4.25	2.79	4.69	9.69	7.19	7.78	7.34	6.60	9.83	8.07	

Calm : .00 %

Total # Operational Hours : 681

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	32	32	35	30	50	37	29	19	32	66	49	53	50	45	67	55	681
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	32	32	35	30	50	37	29	19	32	66	49	53	50	45	67	55	

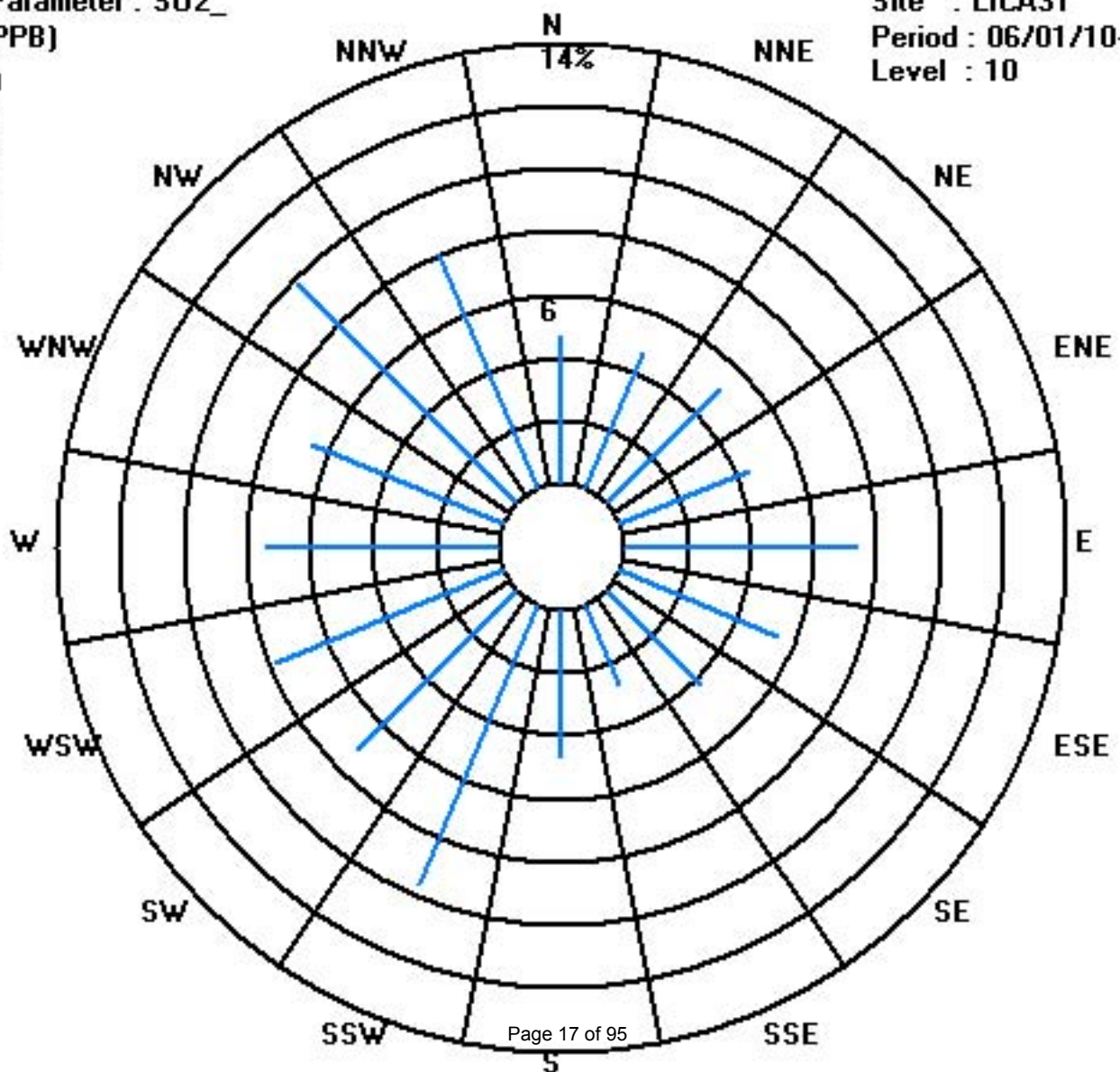
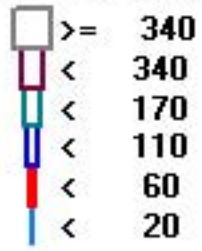
Calm : .00 %

Total # Operational Hours : 681

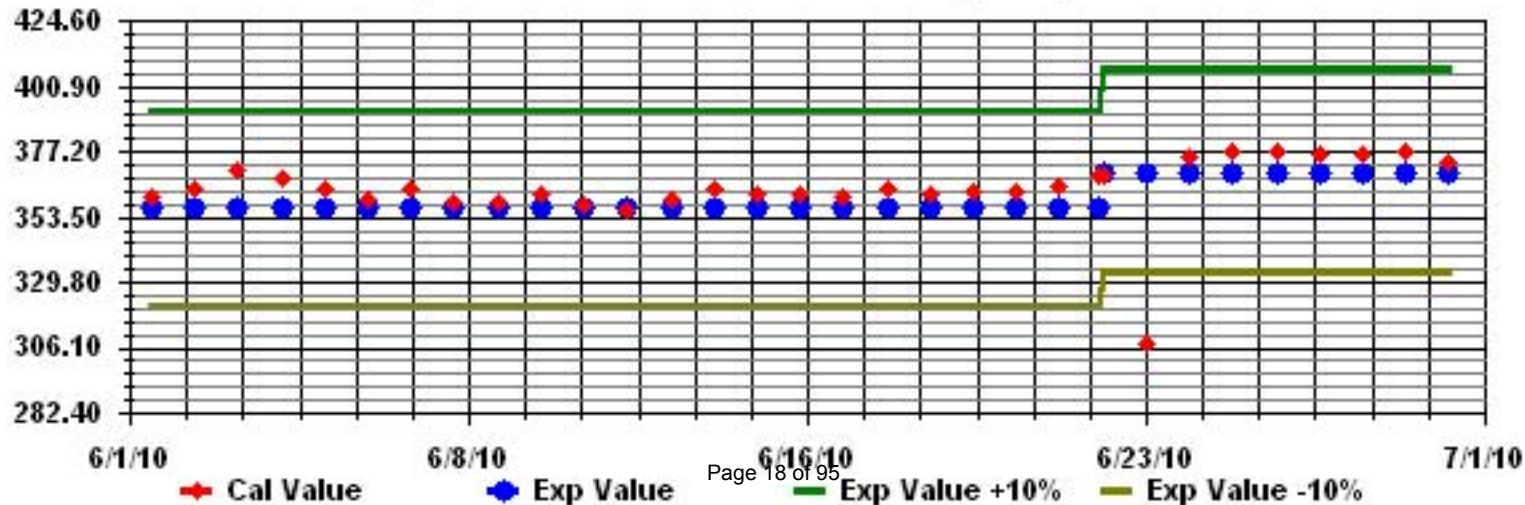
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA31 Parameter: S02\_ Sequence: S02 Phase: SPAll



# Hydrogen Sulphide

# LAKELAND INDUSTRY & COMMUNITY ASSCOIATION - ST. LINA

JUNE 2010

## HYDROGEN SULPHIDE (H<sub>2</sub>S) 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		
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	1	0	0	0	0	0	0	0	IZS	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	IZS	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.2	24
3	1	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	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	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
6	0	0	1	0	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	24
7	0	0	0	0	0	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
8	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
9	0	2	1	IZS	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
10	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
11	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
12	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
13	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	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	0.0	24
15	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
16	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
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	0	IZS	0	0	0	0	0	0	0	0.0	24
19	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0.3	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	0.0	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	C	C	C	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	C	IZS	0	0	0	0	0	0	0	0	0	1	1	1	1	0.1	24
24	1	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	24
25	0	0	0	1	1	0	0	0	0	0	0	IZS	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	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	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
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	1	1	0.0	24
29	1	0	0	0	0	0	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
30	0	0	0	0	0	IZS	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
HOURLY MAX		1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1			
HOURLY AVG		0.1	0.1	0.2	0.2	0.2	0.2	0.1	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	0.0	0.1	0.1	0.1			

### STATUS FLAG CODES

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

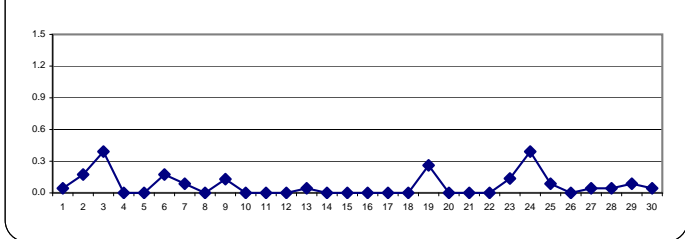
OBJECTIVE LIMIT:

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

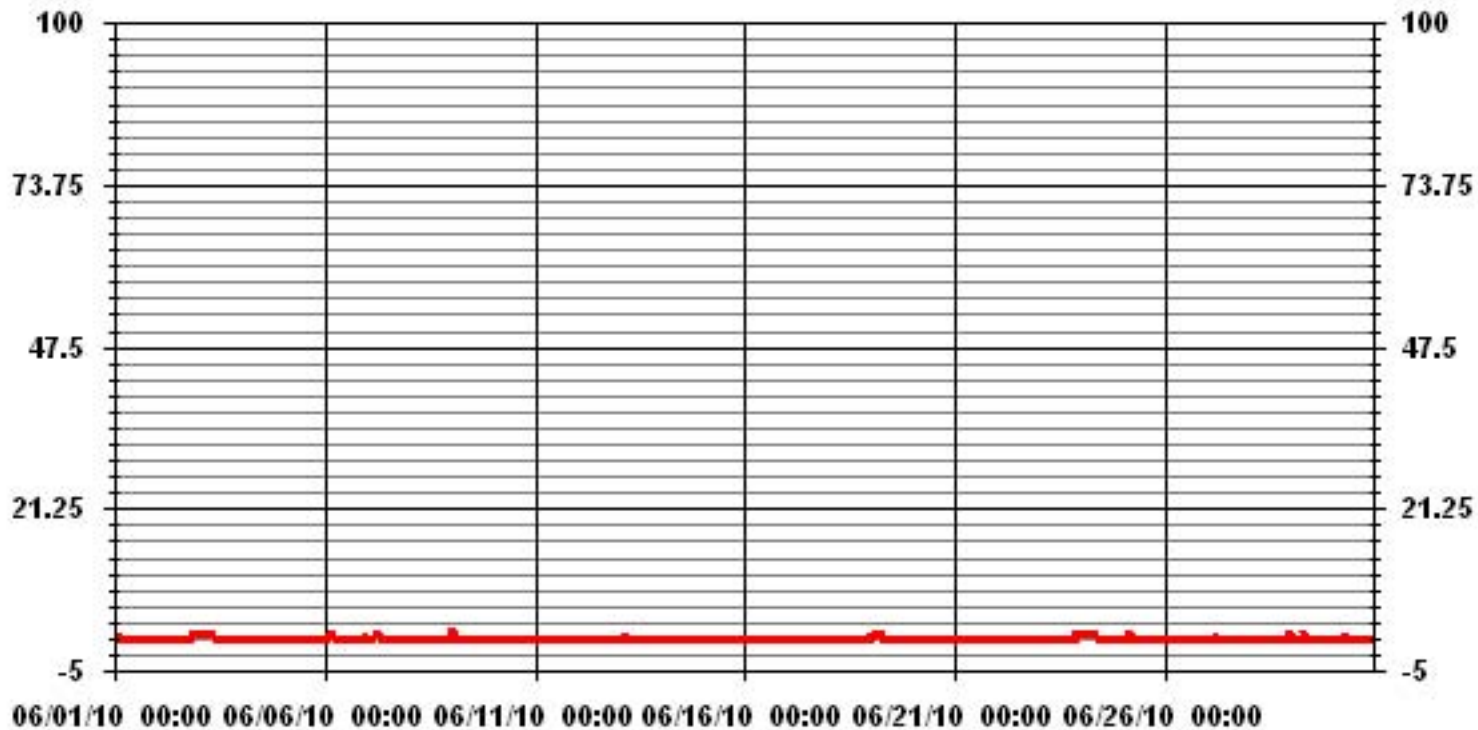
### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	48					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	1	ON DAY(S)	9
MAXIMUM 24-HR AVERAGE:	0.4	PPB			ON DAY(S)	3, 24
					VAR-VARIOUS	
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.26		MONTHLY AVERAGE:	0.07	PPB	

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA31 H2S\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

## HYDROGEN SULPHIDE 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		
HOUR START	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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.	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	1	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
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0.4	24
3	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.1	24
6	0	3	3	0	1	2	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	3	0.6	24	
7	1	0	1	1	1	IZS	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0.5	24
8	0	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
9	1	3	3	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.4	24
10	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
11	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
12	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	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	IZS	1	1	0.3	24
14	1	0	0	1	0	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	23
15	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
16	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	IZS	0	0	0	0	0	0	1	0.1	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	IZS	1	0	1	1	1	1	1	0.3	24
19	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	1	0.4	23
20	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
21	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	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	1	0.5	24
24	1	1	1	1	2	1	2	2	2	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.6	24
25	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27	0	2	1	0	1	2	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0.3	24
28	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.1	24
29	1	1	0	0	0	P	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	0	1	0.2	22
30	1	1	1	1	1	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24	
HOURLY MAX	1	3	3	1	2	2	2	2	2	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2			
HOURLY AVG	0.4	0.6	0.5	0.3	0.5	0.5	0.3	0.3	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.5			

**STATUS FLAG CODES**

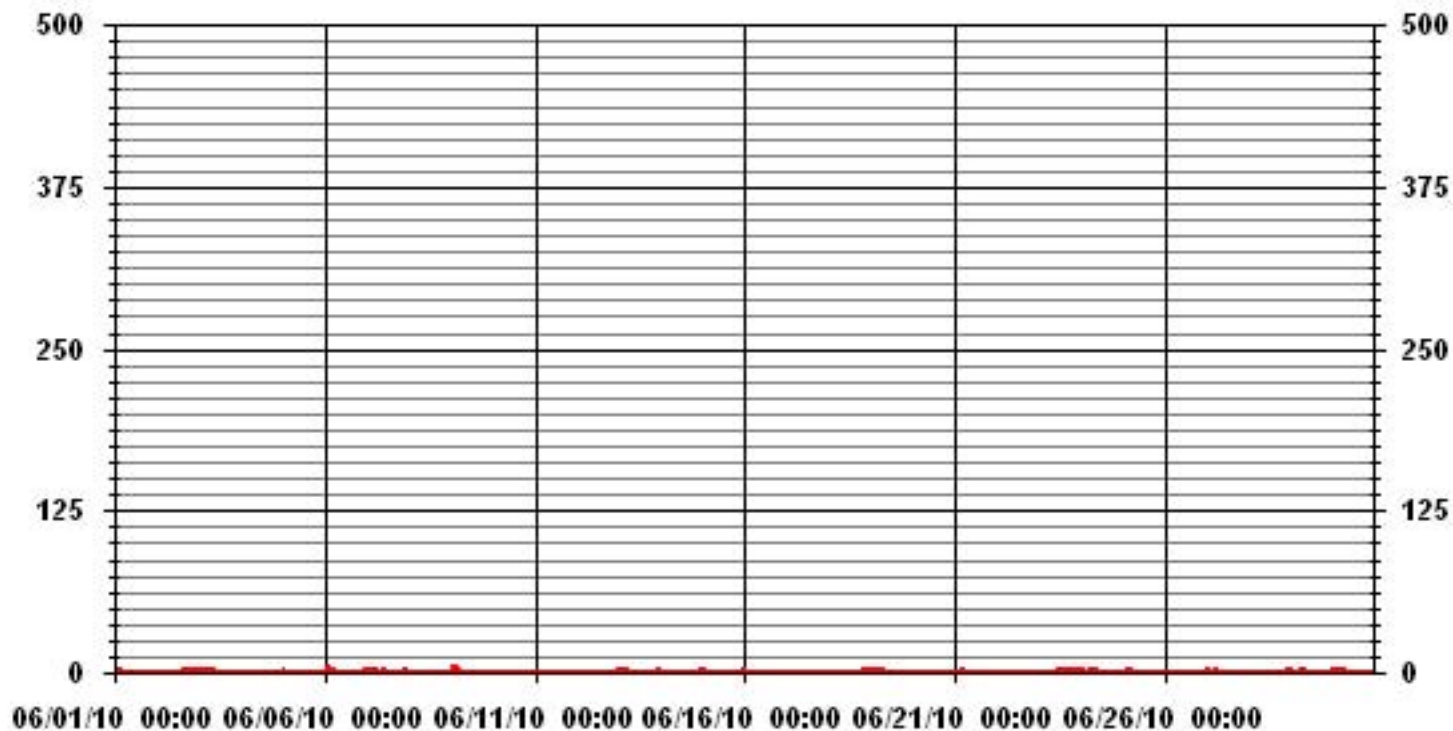
S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MISSING DATA
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	135					
MAXIMUM INSTANTANEOUS VALUE:	3	PPB	@ HOUR(S)	1,2 1,2	ON DAY(S)	6,9
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	716	HRS	
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	0.48					



### 01 Hour Averages



— LICA31 H2S MAX PPB

LICA31  
H2S\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 31  
Site Name : LICA31  
Parameter : H2S\_  
Units : PPB

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	4.52	4.67	4.96	4.67	7.59	5.40	4.37	2.91	4.67	9.63	7.15	7.73	7.29	6.56	9.78	8.02	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	4.52	4.67	4.96	4.67	7.59	5.40	4.37	2.91	4.67	9.63	7.15	7.73	7.29	6.56	9.78	8.02	

Calm : .00 %

Total # Operational Hours : 685

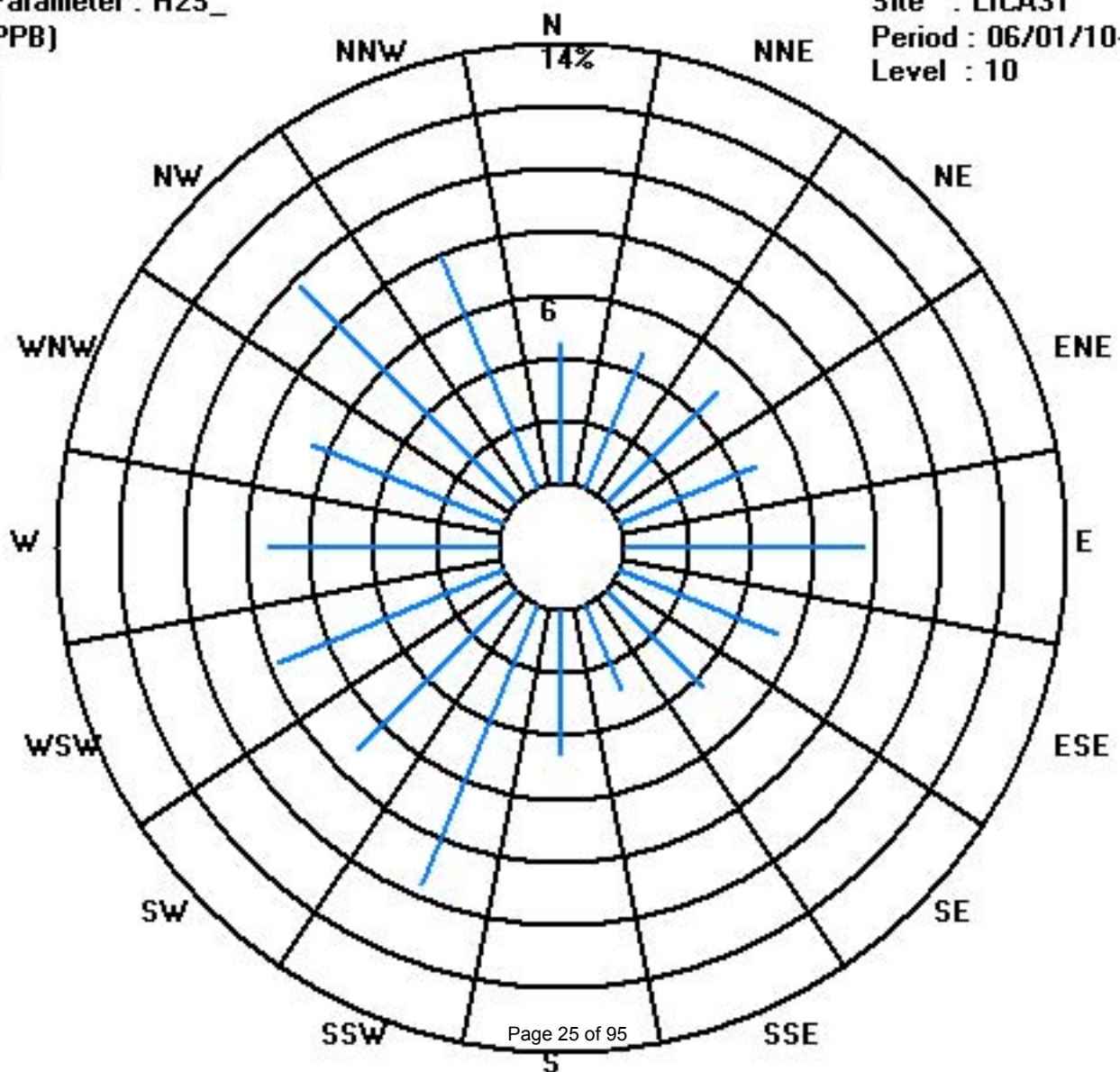
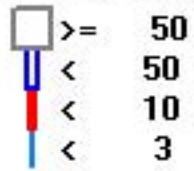
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	31	32	34	32	52	37	30	20	32	66	49	53	50	45	67	55	685
< 10																	
< 50																	
>= 50																	
Totals	31	32	34	32	52	37	30	20	32	66	49	53	50	45	67	55	

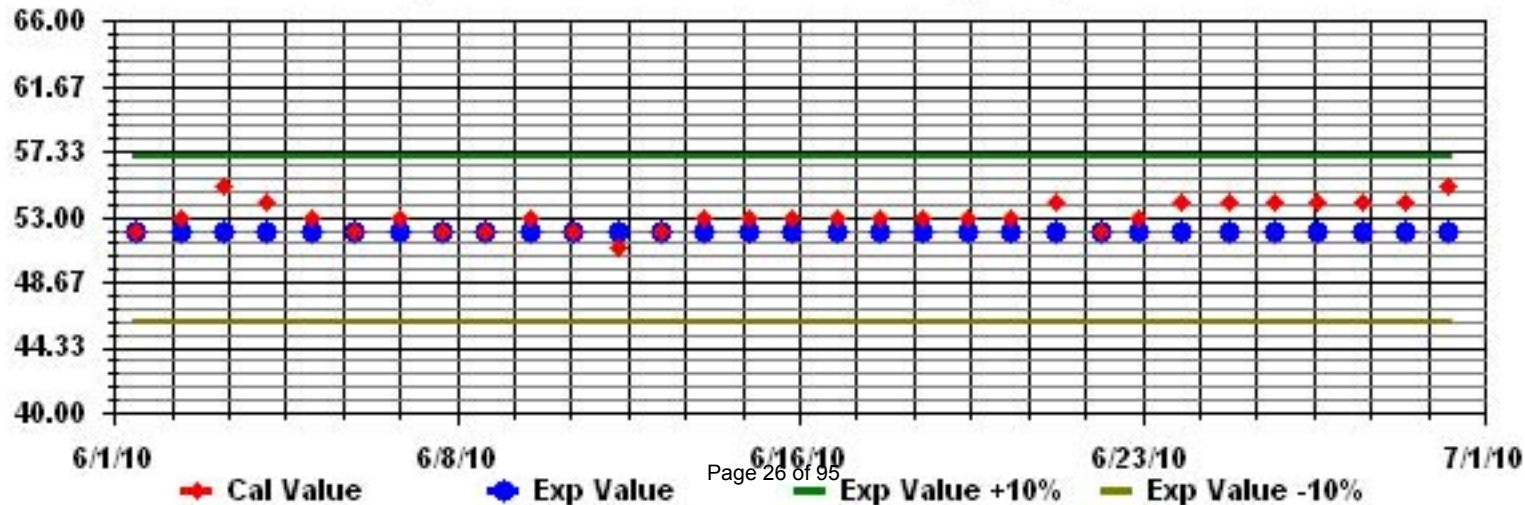
Calm : .00 %

Total # Operational Hours : 685

Class Limits (PPB)



Calibration Graph for Site: LICA31 Parameter: H2S\_ Sequence: H2S Phase: SPAll



# Total Hydrocarbons

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

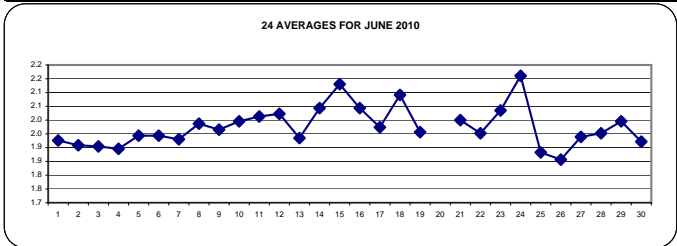
JUNE 2010

## 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			
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		1.9	1.9	2	2	2	2	1.9	2	2	1.9	1.9	<b>IZS</b>	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
2		1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	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	1.9	24	
3		2	2	2	2.1	2	2	2	1.9	1.9	<b>IZS</b>	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	1.9	2	2.1	1.9	24		
4		1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	<b>IZS</b>	1.9	1.9	1.9	2	1.9	1.8	1.9	1.9	1.8	1.9	2.1	1.9	1.9	1.9	1.9	2.1	1.9	24	
5		1.9	2	1.9	2	1.9	1.9	1.9	<b>IZS</b>	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	2.3	2.1	2	2.3	1.9	24	
6		1.9	2	2	1.9	2	<b>IZS</b>	<b>IZS</b>	2	2	2	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	1.9	2.2	1.9	24
7		1.9	1.9	1.9	1.9	2	<b>IZS</b>	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.3	1.9	24
8		2	2.3	2.1	2	<b>IZS</b>	1.9	1.9	1.9	1.9	2	1.9	2	2	2	2	1.9	1.9	2	2.1	2	1.9	2	2	2	2	2.3	2.0	24
9		2	2.1	2	<b>IZS</b>	2	2	2	2.1	2	1.9	1.9	1.9	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2.1	2.0	24
10		2	2.1	<b>IZS</b>	2.1	2.2	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	2.1	2	2	2	2	2.2	2.0	24
11		2	<b>IZS</b>	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	2.0	24
12		<b>IZS</b>	2	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	<b>IZS</b>	2.1	2.0	24
13		2	2	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	2.0	1.9	24	
14		1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	1.9	1.9	2	1.9	2	2.1	2.1	1.9	2	2.6	2.1	<b>IZS</b>	2.2	2.8	2.8	2.0	24	
15		2.8	2.1	2.7	2	2.3	2	2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	<b>IZS</b>	2.6	3	2.2	3.0	2.1	24	
16		2.1	2.2	2.2	2.1	2	2.1	2.1	2.1	2	1.9	2	2	2	2	2.4	2	2	2.1	<b>IZS</b>	1.9	1.9	2	1.9	2.4	2.0	24		
17		1.9	1.9	1.9	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	<b>IZS</b>	1.9	1.9	2.9	2.1	2	2.9	2.0	24	
18		2	2.1	2	2.1	2.4	2.4	2.4	2.2	2	2	2.5	2.1	2.8	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	1.9	1.9	2	1.9	1.9	2.8	2.1	24	
19		2	2	2	2	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	N	N	N	N	N	N	N	N	2.0	2.0	17	
20		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			0
21		N	N	N	N	N	N	N	N	N	N	<b>IZS</b>	2.1	2	2	<b>IZS</b>	2	2	2	2	2	2	1.9	2.1	1.9	2.1	2.0	14	
22		1.9	1.9	1.9	2.3	2.3	2.1	2	2.2	2	2	2	2	2	<b>IZS</b>	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.3	2.0	24	
23		2	2	2	2	2	2.2	2.3	2.1	1.9	C	C	C	C	2	2	2	2	1.9	2	2	2	2.1	2.1	2.1	2.3	2.0	24	
24		2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	<b>IZS</b>	2.1	2.1	2	2.1	2	2	1.9	2	2	1.9	1.9	1.9	2.4	2.2	24	
25		1.9	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.2	1.9	24	
26		1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	<b>IZS</b>	1.8	1.8	1.8	1.8	1.8	2.1	2	1.9	1.8	1.8	1.9	1.9	2.2	2.2	1.9	24	
27		2.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	1.9	1.9	2.5	1.9	24	
28		1.9	1.9	1.9	1.9	1.9	2	<b>IZS</b>	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2	2.1	2.1	2.0	24	
29		2	2	1.9	1.9	2	2.1	<b>IZS</b>	2.1	2.2	2.2	2.2	2.1	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	24	
30		1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.2	1.9	2.2	1.9	24	
HOURLY MAX		2.8	2.3	2.7	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.1	2.8	2.1	2.0	2.4	2.1	2.0	2.1	2.6	2.1	2.9	3.0	2.8				
HOURLY AVG		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0				

### STATUS FLAG CODES

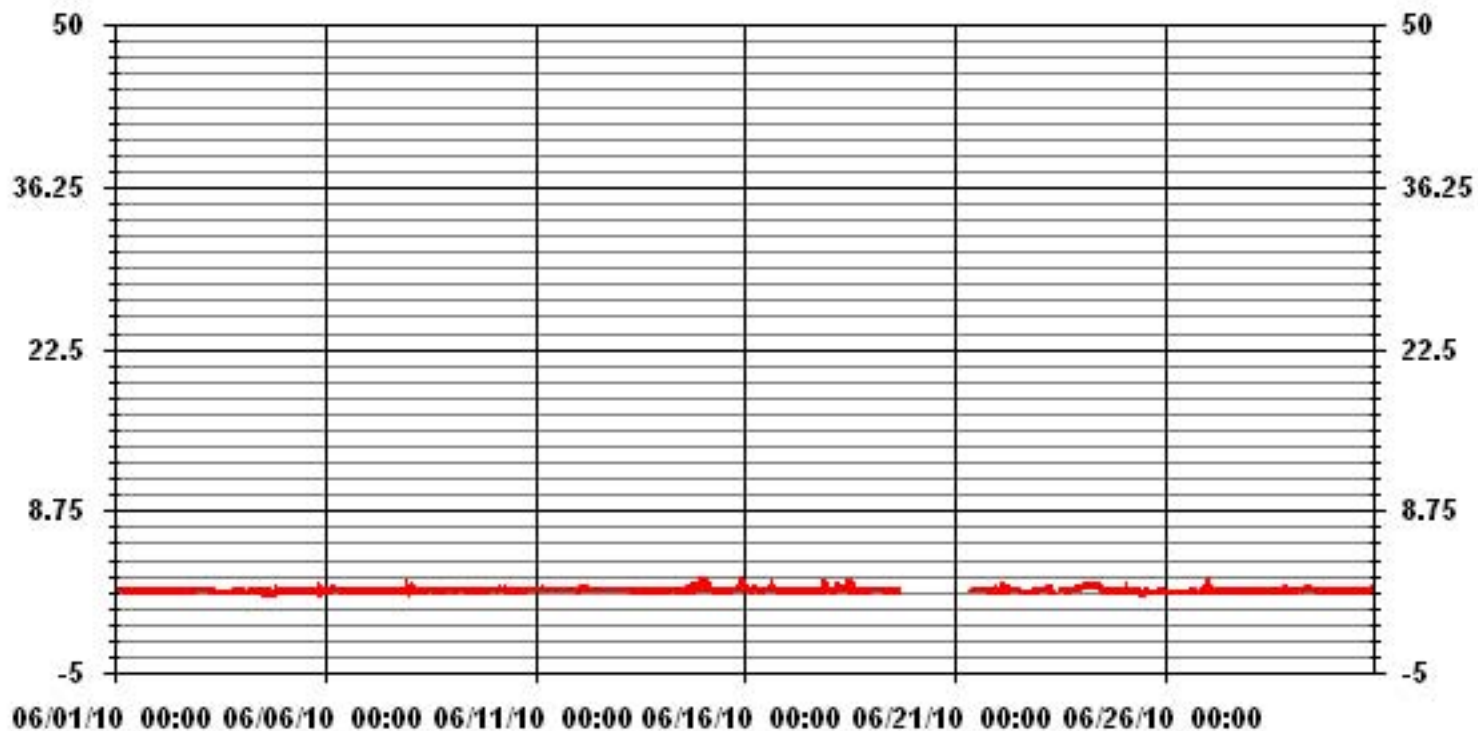
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	645
MAXIMUM 1-HR AVERAGE:	3.0 PPM @ HOUR(S) 22 ON DAY(S) 15
MAXIMUM 24-HR AVERAGE:	2.2 PPM ON DAY(S) 24
	VAR- VARIOUS
IZS CALIBRATION TIME:	30 HRS
MONTHLY CALIBRATION TIME:	4 HRS
STANDARD DEVIATION:	0.15
OPERATIONAL TIME:	679 HRS
AMD OPERATION UPTIME:	94.3 %
MONTHLY AVERAGE:	1.98 PPM

### 01 Hour Averages



— LICA31 THC PPM

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

## TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

MST																										DAILY	24-HOUR	
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	23:00	0:00	MAX.	AVG.	RDGS.
DAY																												
1	2	2	2	2	2.1	2	2	2.3	3.1	1.9	1.9	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	2	1.9	1.9	1.9	3.1	2.0	24
2	1.9	2	2	1.9	1.9	1.9	1.9	1.9	2	<b>IZS</b>	2	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	1.9	24
3	2	2	2.1	2.1	2.1	2	1.9	1.9	<b>IZS</b>	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	2.1	2.5	2.4	2.7	2.5	2.8	2.8	2.1	24		
4	2.5	2.2	2.2	2	2.1	2.3	2.4	2.5	<b>IZS</b>	2.8	3.6	2.4	2.8	2.5	2.4	2.6	3.3	2.4	1.9	3.1	7.3	1.9	2	2	7.3	2.7	24	
5	1.9	2.1	2.2	4.2	2	2.1	2.2	<b>IZS</b>	2.7	2.6	2.7	2.2	2.1	2.1	2.1	1.9	2.1	2.2	3.1	2.8	4.3	4.6	4.5	4.6	2.6	24		
6	1.9	3.8	2.1	1.9	2.1	13.7	<b>IZS</b>	3.5	2.4	3.3	2.6	2.4	3.1	2.5	1.9	1.9	1.9	2.5	3.1	1.9	2.7	7.2	2	2.1	13.7	3.2	24	
7	2	2	2.4	2	2	<b>IZS</b>	2.2	2.7	2.2	1.9	2	1.9	2.4	2.3	2.1	1.9	1.9	1.9	1.9	2	2	1.9	1.9	3.5	3.5	2.1	24	
8	2.4	2.4	2.2	2.1	<b>IZS</b>	1.9	1.9	1.9	2	2.7	2.3	2.6	2.7	2.8	3.1	2.4	2	2.4	4.1	3.8	2	2	2	2	4.1	2.4	24	
9	2.1	2.2	2.1	<b>IZS</b>	2	2.1	2.1	2.2	2.1	2	2	2	2	2	2	2	2	1.9	2	2	2	2	2	2	2.2	2.0	24	
10	2	2.1	<b>IZS</b>	2.1	2.4	2.4	2.1	2.1	2.1	2	1.9	2	1.9	1.9	1.9	1.9	2	2	2.4	5.4	2	2	2	5.4	2.2	24		
11	2	<b>IZS</b>	2	2	2.4	3	2.3	2	2	2	2	2.1	2	2.6	2.5	2	2	2	2	2	2	2	2	2	3	2.1	24	
12	<b>IZS</b>	2	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	<b>IZS</b>	2.1	2.0	24
13	2	2	2	2	2	2	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	2	1.9	24	
14	2.6	2	2.1	2.5	2.8	P	2.6	2.8	2.5	2.6	2.2	2.4	2.7	2.7	2.8	4.4	3.8	3.3	2.9	8.3	6.3	<b>IZS</b>	5.8	8.4	8.4	3.6	23	
15	13.3	6.6	8.5	2.4	6.7	3	2.4	4.5	1.9	2	2.1	2.1	2	2.1	2.1	2.3	2.3	2.6	4.5	<b>IZS</b>	6.1	6.2	3.5	13.3	4.0	24		
16	2.7	3.2	4.2	4	2.8	3.9	2.8	3.6	3.1	2.8	2.2	2.6	2.6	3.6	4.1	10	2.7	3.4	3.4	<b>IZS</b>	1.9	2	2	2	10	3.3	24	
17	1.9	1.9	2	2	2	2	2	2	1.9	1.9	1.9	1.9	2	1.9	1.9	2	1.9	<b>IZS</b>	1.9	1.9	27.1	8.7	2	27.1	3.3	24		
18	2.4	5.2	2.5	3.3	4.3	3.6	3.6	4.4	2.9	2.7	10.6	5.4	<b>27.3</b>	2.4	1.9	2	2.1	<b>IZS</b>	1.9	1.9	1.9	2	2	2	<b>27.3</b>	4.3	24	
19	2	2	2	2	2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	N	N	N	N	N	N	N	N	2	2.0	17	
20	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0		
21	N	N	N	N	N	N	N	N	N	N	N	C	2.1	2	<b>IZS</b>	2	2	2	2	2	2.1	2	4.8	2.1	4.8	2.3	14	
22	2.1	2.4	2.4	6.3	7.1	3.3	2.2	2.3	2.2	2	2	2.1	2	<b>IZS</b>	1.9	1.9	1.9	1.8	1.8	1.9	1.9	2	2	2	7.1	2.5	24	
23	2.1	2.1	2.2	2	2.1	2.3	2.4	2.2	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>IZS</b>	2	2	2.1	2	2	2	2	2	2	2.2	2.1	2.1	2.4	2.1	24
24	2.2	2.8	3.4	2.7	2.5	2.5	2.6	2.5	2.5	2.5	2.5	<b>IZS</b>	2.3	2.1	2.1	2.2	2.1	2	2	7.7	3.5	2	1.9	1.9	7.7	2.6	24	
25	1.9	1.9	10.1	1.9	1.9	2	1.9	1.9	1.9	1.9	<b>IZS</b>	2.3	2.8	2.7	3.5	2.6	2	2	2.1	1.8	1.9	2.1	2	2.4	10.1	2.5	24	
26	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	1.8	1.9	1.9	1.9	2.1	4.2	2.7	2.3	2.2	1.9	2.5	2.4	4.1	4.2	2.2	24	
27	5.7	1.9	1.9	1.9	2	2	2	2.2	<b>IZS</b>	2.8	2.6	2.6	2.6	2.4	2.4	2.3	2.4	1.9	2	2	2.1	2.1	2	2	5.7	2.3	24	
28	1.9	2.1	1.9	1.9	1.9	2	2	<b>IZS</b>	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	10.5	6.4	2.2	2.3	10.5	2.5	24	
29	2.1	3.6	2	2	2.1	<b>P</b>	<b>IZS</b>	2.1	2.2	2.3	2.7	2.2	2.1	2.1	2	2	1.9	1.9	2.2	2.1	2	<b>P</b>	2.1	2.1	3.6	2.2	22	
30	1.9	2	1.9	1.9	2	<b>IZS</b>	4.1	2.8	2.7	2.3	2.3	2.4	2.7	2.5	2.5	2.4	2	2.1	2	2	2.6	6.9	7.4	2.7	7.4	2.8	24	
HOURLY MAX	13	7	10	6	7	14	4	5	3	3	11	5	27	4	4	10	4	3	4	8	11	27	9	8				
HOURLY AVG	2.7	2.5	2.8	2.4	2.6	2.8	2.3	2.5	2.2	2.3	2.6	2.3	3.1	2.2	2.2	2.4	2.2	2.1	2.2	2.7	2.9	3.8	3.0	2.6				

**STATUS FLAG CODES**

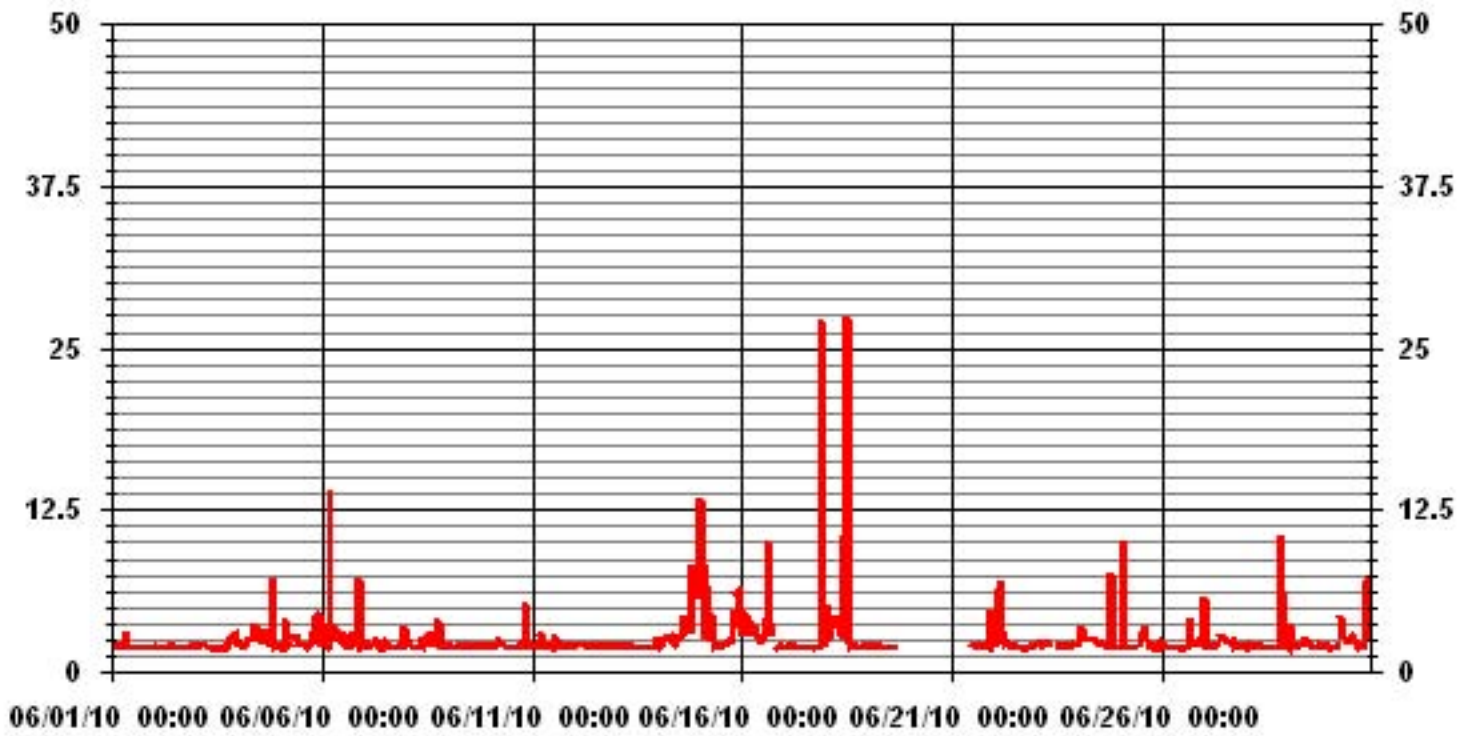
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	640					
MAXIMUM INSTANTANEOUS VALUE:	27.3	PPM	@ HOUR(S)	12	ON DAY(S)	18
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	676 HRS		
MONTHLY CALIBRATION TIME:	6 HRS					
STANDARD DEVIATION:	1.91					



### 01 Hour Averages



— LICA31 THCMAX PPM

LICA31  
 THC / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : THC  
 Units : PPM

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	4.96	4.96	5.42	5.11	8.06	5.89	4.34	2.63	4.03	8.21	6.04	6.97	7.44	6.97	10.23	8.52	99.84
< 10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.00	.15
< 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	4.96	4.96	5.42	5.11	8.06	5.89	4.34	2.63	4.03	8.21	6.04	6.97	7.44	6.97	10.38	8.52	

Calm : .00 %

Total # Operational Hours : 645

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	32	32	35	33	52	38	28	17	26	53	39	45	48	45	66	55	644
< 10.0															1		1
< 50.0																	
>= 50.0																	
Totals	32	32	35	33	52	38	28	17	26	53	39	45	48	45	67	55	

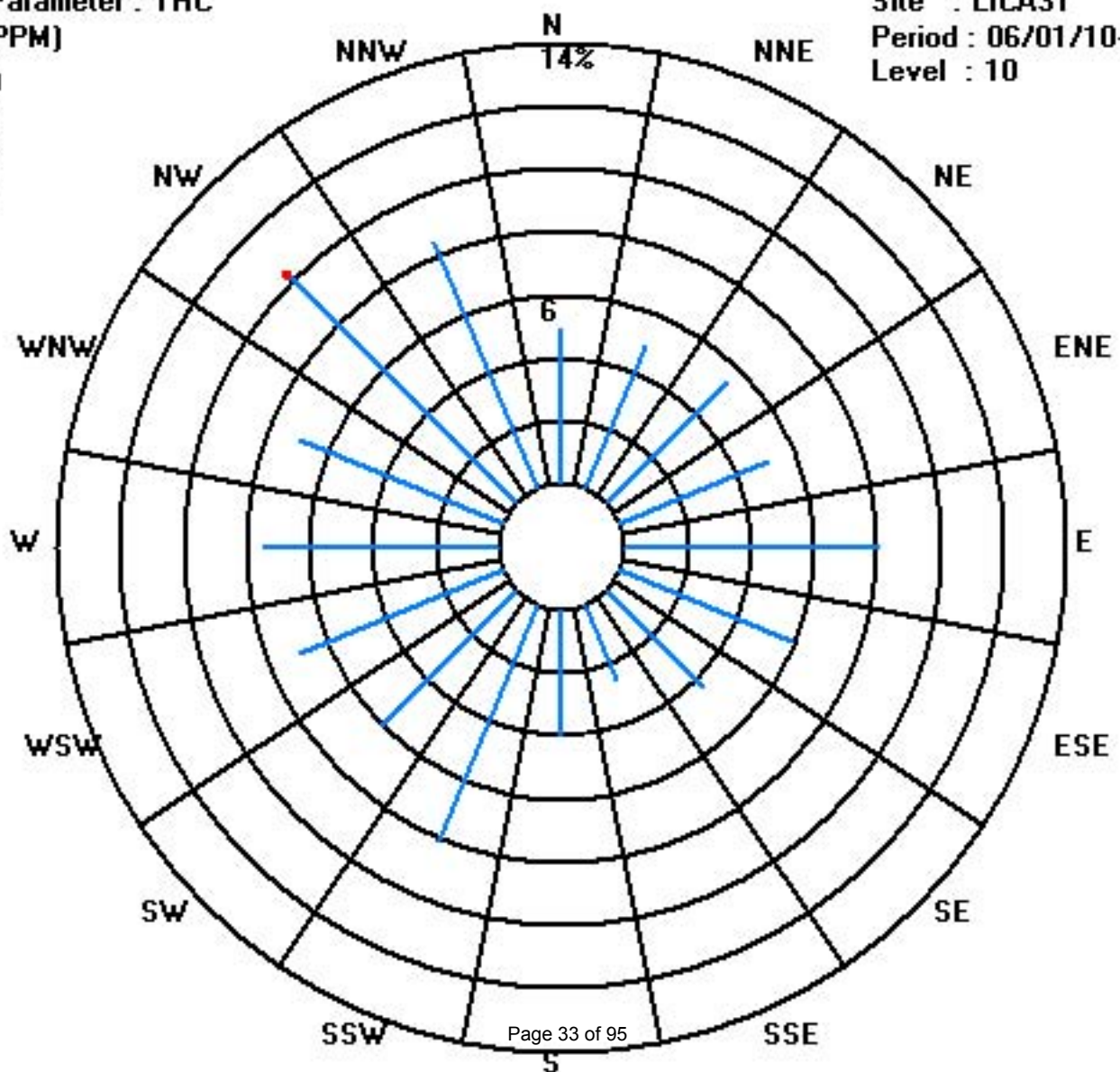
Calm : .00 %

Total # Operational Hours : 645

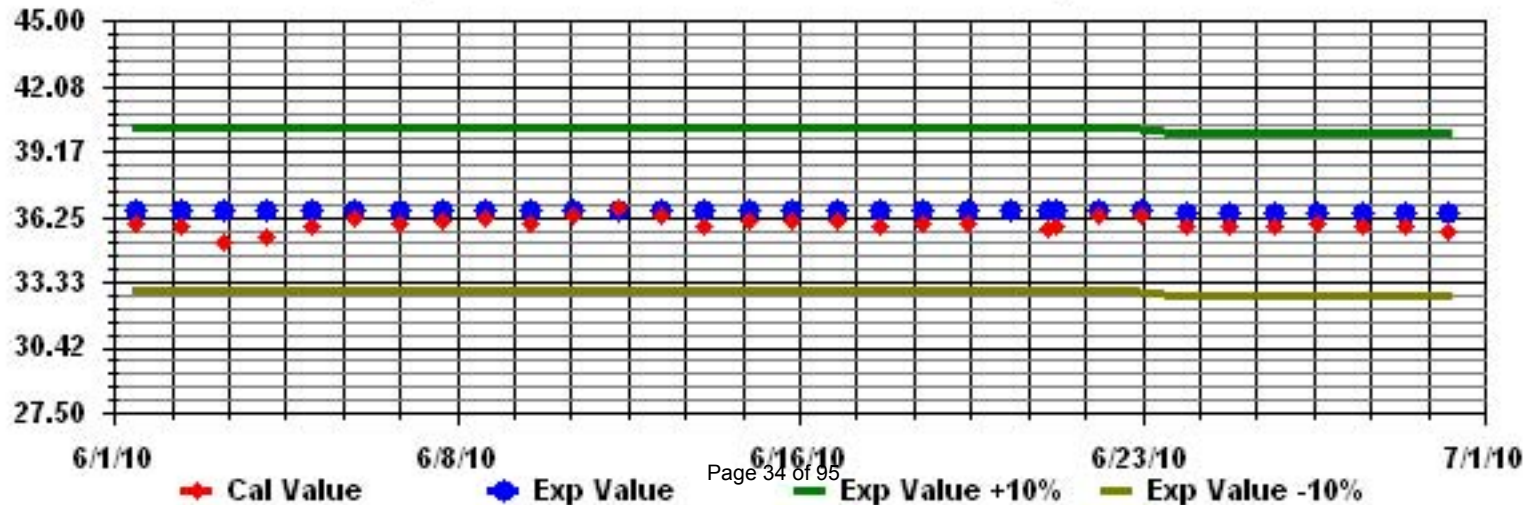
Class Limits (PPM)

Period : 06/01/10-06/30/10

Level : 10



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



# Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

OZONE (O<sub>3</sub>) 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	34	33	29	21	28	32	31	34	37	42	44	IZS	46	46	47	47	47	47	47	46	44	42	39	36	47	39.1	24	
2	35	37	41	42	40	41	40	42	46	48	IZS	50	49	49	48	47	46	44	42	41	38	35	34	36	50	42.2	24	
3	34	31	28	26	25	24	24	26	26	IZS	28	30	31	31	28	28	28	27	25	26	25	23	24	22	34	27.0	24	
4	25	23	24	25	25	25	23	23	IZS	24	25	26	25	27	27	27	27	27	24	24	23	21	17	16	27	24.0	24	
5	17	15	18	18	19	20	19	IZS	23	27	28	30	29	30	31	30	29	29	29	29	29	30	32	30	30	32	25.7	24
6	30	29	24	27	22	16	IZS	23	29	32	35	36	37	36	37	38	38	38	35	39	37	40	39	37	40	32.8	24	
7	38	38	37	37	37	IZS	31	31	35	29	31	33	34	40	41	41	41	36	36	33	37	36	33	30	41	35.4	24	
8	25	22	15	14	IZS	16	15	16	16	18	21	23	20	20	20	21	22	23	24	23	25	25	24	25	24	20.6	24	
9	21	14	13	IZS	15	11	10	13	19	25	26	26	25	27	29	29	29	28	26	25	24	22	20	23	29	21.7	24	
10	23	21	IZS	19	17	16	20	25	28	31	34	33	33	34	34	34	33	34	34	34	34	30	26	28	26	34	28.1	24
11	25	IZS	26	26	25	23	21	24	27	33	37	39	40	41	42	41	40	42	41	38	40	39	36	35	42	34.0	24	
12	IZS	35	31	26	25	24	25	32	38	46	48	49	50	51	52	52	52	52	52	49	45	43	41	IZS	52	41.7	24	
13	39	37	37	37	36	36	35	35	37	42	46	48	49	50	48	48	48	49	47	46	43	40	IZS	39	50	42.3	24	
14	37	34	38	34	32	30	31	33	36	37	34	33	33	34	35	36	33	33	36	35	33	IZS	33	30	38	33.9	24	
15	28	30	29	29	26	24	23	24	31	35	36	37	38	37	35	34	33	33	32	29	IZS	29	29	29	38	30.9	24	
16	28	28	30	30	30	30	30	29	30	32	37	39	38	36	37	38	38	38	36	IZS	36	35	32	31	39	33.4	24	
17	30	31	31	30	30	31	32	32	35	36	38	40	42	43	44	45	42	39	IZS	35	36	36	34	36	45	36.0	24	
18	38	36	33	31	31	27	26	27	28	30	34	37	37	37	36	36	38	IZS	32	31	33	38	39	38	39	33.6	24	
19	34	34	35	33	31	30	29	31	37	43	47	49	51	52	53	54	IZS	52	54	50	46	45	45	47	54	42.7	24	
20	47	48	45	39	31	28	29	34	36	43	50	54	55	52	49	IZS	47	51	37	42	45	48	50	52	55	44.0	24	
21	41	43	38	33	30	25	26	32	37	46	51	56	58	64	IZS	52	50	48	49	47	44	45	42	39	64	43.3	24	
22	33	33	33	32	34	24	20	20	22	24	C	28	29	IZS	25	28	28	27	21	21	19	19	21	23	34	25.6	24	
23	24	23	19	17	17	12	12	17	C	C	C	C	IZS	36	36	37	38	40	38	37	36	33	32	35	40	28.4	24	
24	34	30	29	27	26	22	C	19	19	17	24	IZS	39	44	46	44	45	47	44	41	42	38	36	34	47	34.0	24	
25	34	34	32	26	27	24	25	29	28	27	IZS	29	26	26	26	26	29	30	32	30	29	28	27	26	34	28.3	24	
26	25	21	21	22	21	22	22	21	23	IZS	22	21	22	24	23	22	21	21	20	19	17	16	16	17	25	20.8	24	
27	18	13	15	15	12	11	16	22	IZS	25	28	30	33	35	36	37	37	37	37	35	31	30	34	35	37	27.0	24	
28	40	37	42	39	34	33	27	IZS	29	33	35	37	40	43	40	42	43	44	45	43	39	40	38	36	45	38.2	24	
29	37	35	34	27	25	24	IZS	24	28	35	38	40	40	44	46	47	47	48	43	36	36	42	38	33	48	36.8	24	
30	33	34	35	34	31	IZS	25	25	26	30	30	30	32	35	31	34	38	36	34	36	31	26	22	17	38	30.7	24	
HOURLY MAX	47	48	45	42	40	41	40	42	46	48	51	56	58	64	53	54	52	52	54	50	46	48	50	52				
HOURLY AVG	31.3	30.3	29.7	28.1	27.0	24.3	24.7	26.5	29.9	33.0	34.9	36.4	37.3	38.8	37.3	37.8	37.5	37.9	36.3	35.2	34.3	33.5	32.2	31.4				

STATUS FLAG CODES

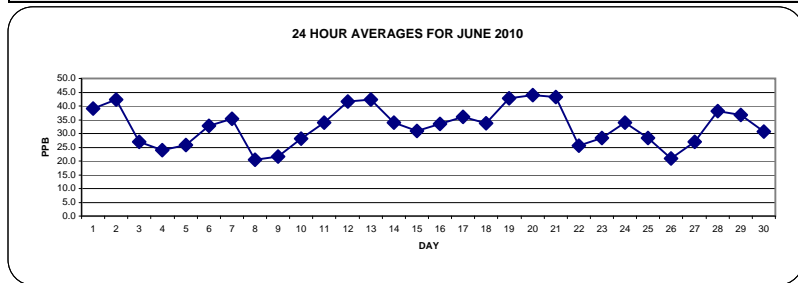
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT:

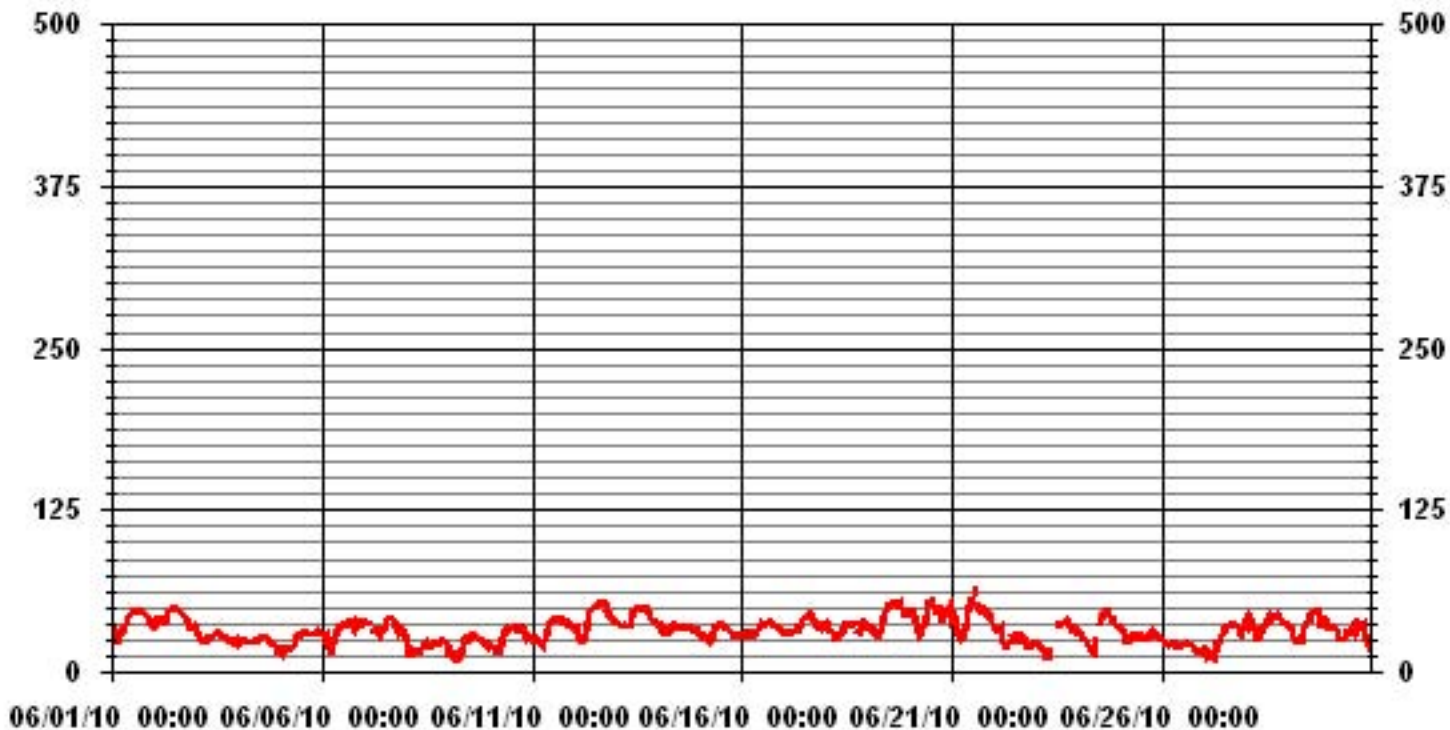
ALBERTA ENVIRONMENT: 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	683					
MAXIMUM 1-HR AVERAGE:	64	PPB	@ HOUR(S)	13	ON DAY(S)	21
MAXIMUM 24-HR AVERAGE:	44.0	PPB			ON DAY(S)	20
					VAR-VARIOUS	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION	9.29		MONTHLY AVERAGE	32.76	PPB	



### 01 Hour Averages



— LICA31 03\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

## OZONE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	42	35	34	23	33	35	35	36	40	44	45	<b>IZS</b>	47	47	48	56	51	50	49	48	60	47	41	37	60	42.7	24	
2	36	44	46	49	42	41	42	45	48	50	<b>IZS</b>	51	50	50	58	49	56	46	44	42	40	37	36	50	58	45.7	24	
3	36	33	32	41	36	46	44	41	28	<b>IZS</b>	45	45	35	35	32	36	29	29	27	29	29	27	34	26	46	34.6	24	
4	27	37	41	43	44	48	26	30	<b>IZS</b>	31	27	45	28	29	30	30	31	32	29	28	26	23	20	20	48	31.5	24	
5	20	20	23	21	20	20	21	<b>IZS</b>	26	28	30	31	30	33	34	34	33	32	33	31	33	53	33	31	53	29.1	24	
6	32	33	27	29	28	18	<b>IZS</b>	28	31	34	37	38	38	38	39	39	51	53	41	41	53	44	44	39	53	37.2	24	
7	41	41	40	40	39	<b>IZS</b>	35	57	45	37	36	46	37	43	44	43	44	40	37	42	40	45	50	31	57	41.4	24	
8	28	24	20	15	<b>IZS</b>	17	17	17	18	19	24	25	22	23	22	23	24	26	26	26	27	27	27	26	28	22.7	24	
9	24	22	14	<b>IZS</b>	17	13	11	14	25	29	27	29	28	29	30	31	30	30	29	27	27	23	21	24	31	24.1	24	
10	24	22	<b>IZS</b>	20	18	18	23	28	31	34	38	34	38	35	37	36	35	36	36	35	34	28	29	27	38	30.3	24	
11	26	<b>IZS</b>	27	27	26	24	22	29	30	37	39	40	42	42	43	62	49	44	44	40	41	40	38	36	62	36.9	24	
12	<b>IZS</b>	36	34	29	26	25	29	36	44	48	49	50	51	52	53	53	54	53	53	51	47	45	42	<b>IZS</b>	54	43.6	24	
13	40	38	38	38	37	37	36	43	39	52	48	49	50	51	49	48	49	50	48	47	46	41	<b>IZS</b>	40	52	44.1	24	
14	39	38	39	36	34	P	32	35	40	39	35	35	34	35	37	37	35	37	37	37	34	<b>IZS</b>	41	33	41	36.3	23	
15	30	38	30	31	31	27	24	30	33	43	38	39	50	44	37	35	38	40	33	33	<b>IZS</b>	30	30	30	50	34.5	24	
16	28	29	31	31	31	31	32	37	31	35	39	40	40	37	38	39	42	39	39	<b>IZS</b>	37	37	34	32	42	35.2	24	
17	31	31	31	31	31	32	33	34	37	38	39	42	51	45	45	46	44	41	<b>IZS</b>	36	37	38	36	38	51	37.7	24	
18	39	37	36	33	39	31	34	30	30	34	36	38	38	39	38	38	40	<b>IZS</b>	34	33	37	42	42	45	45	36.7	24	
19	36	39	43	42	34	31	30	34	41	52	49	51	53	54	54	56	<b>IZS</b>	P	55	54	53	52	53	54	56	46.4	23	
20	49	50	47	43	40	34	33	42	40	48	52	57	56	56	50	<b>IZS</b>	59	57	42	47	47	51	52	60	60	48.3	24	
21	52	46	43	35	32	28	36	42	46	50	55	59	63	67	<b>IZS</b>	57	54	51	53	49	46	47	45	48	67	48.0	24	
22	41	40	38	40	41	34	30	25	26	27	C	C	31	<b>IZS</b>	27	30	29	30	27	25	27	27	23	28	41	30.8	24	
23	26	24	32	20	21	14	13	20	C	C	C	C	C	C	C	43	47	41	42	39	42	38	42	34	36	47	31.9	24
24	39	33	30	30	31	27	C	C	21	25	32	<b>IZS</b>	47	50	54	52	48	50	48	43	44	39	37	36	54	38.9	24	
25	35	49	37	32	30	27	30	31	30	29	<b>IZS</b>	31	34	31	28	29	31	33	34	33	31	31	27	27	49	31.7	24	
26	27	23	29	29	22	25	24	23	25	<b>IZS</b>	31	28	24	25	24	30	24	21	20	18	17	29	18	31	24.3	24		
27	21	19	16	17	14	13	19	25	<b>IZS</b>	26	30	33	34	37	38	39	38	38	51	38	33	33	36	42	51	30.0	24	
28	42	40	45	59	51	41	38	<b>IZS</b>	43	41	38	39	24	50	44	45	45	50	47	47	41	45	42	44	59	43.5	24	
29	43	42	54	40	26	P	<b>IZS</b>	26	36	53	40	43	44	47	49	50	55	49	48	41	44	P	65	41	65	44.6	22	
30	41	39	41	37	37	<b>IZS</b>	30	27	47	59	42	54	68	54	53	50	58	53	48	77	44	50	49	44	77	47.9	24	
HOURLY MAX	52	50	54	59	51	48	44	57	48	59	55	59	68	67	58	62	59	57	55	77	60	53	65	60				
HOURLY AVG	34.3	34.6	34.4	33.1	31.4	28.3	28.9	32.0	34.5	38.6	38.5	41.2	40.9	42.1	40.6	41.9	42.2	41.3	39.7	39.4	38.4	37.9	37.6	36.0				

**STATUS FLAG CODES**

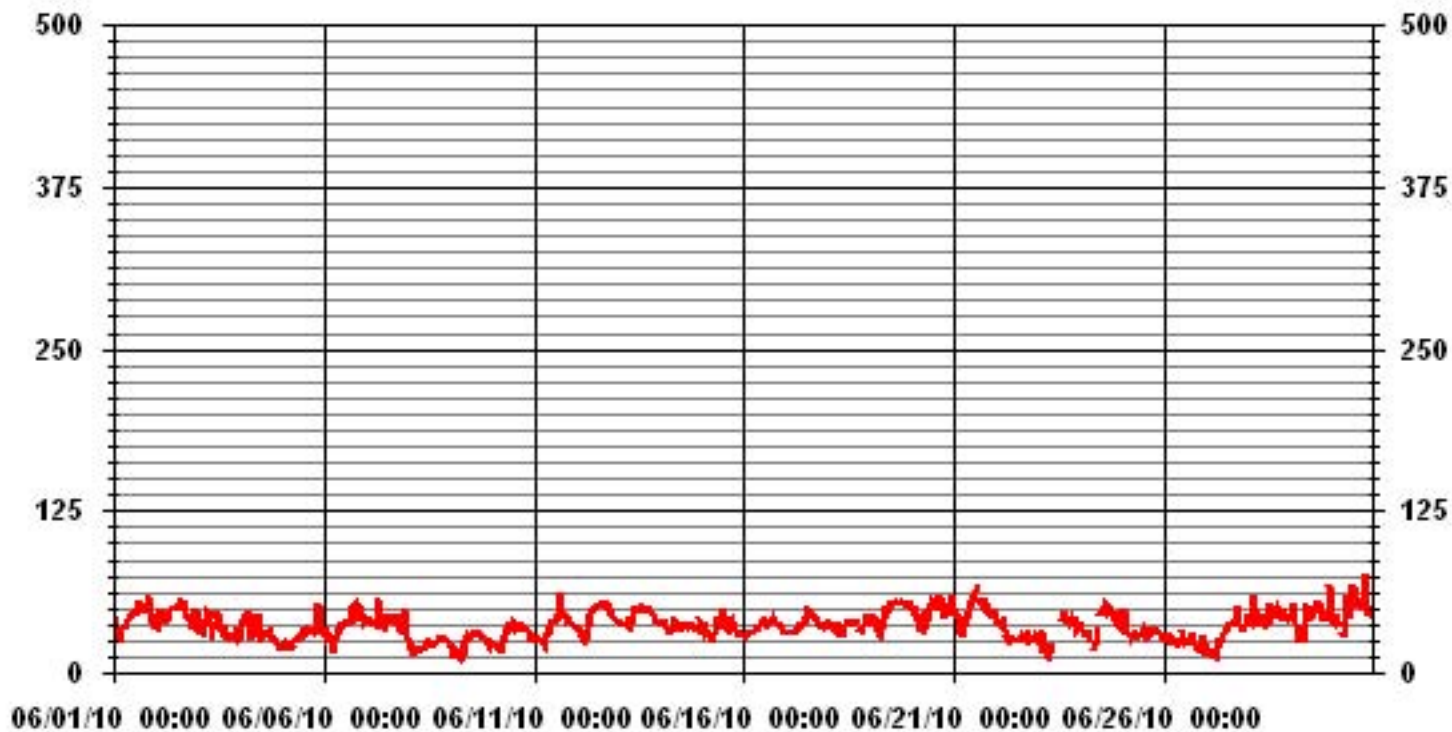
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	676					
MAXIMUM INSTANTANEOUS VALUE:	77	PPB	@ HOUR(S)	19	ON DAY(S)	30
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	716	HRS	
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	10.30					



### 01 Hour Averages



LICA31  
 O3\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : O3\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.68	4.68	5.12	4.68	7.61	5.41	3.95	2.63	4.53	8.34	6.88	6.00	7.17	6.44	9.51	8.05	95.75
< 110	.00	.00	.00	.00	.00	.00	.00	.14	.14	1.31	.29	1.75	.14	.14	.29	.00	4.24
< 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	4.68	4.68	5.12	4.68	7.61	5.41	3.95	2.78	4.68	9.66	7.17	7.75	7.32	6.58	9.80	8.05	

Calm : .00 %

Total # Operational Hours : 683

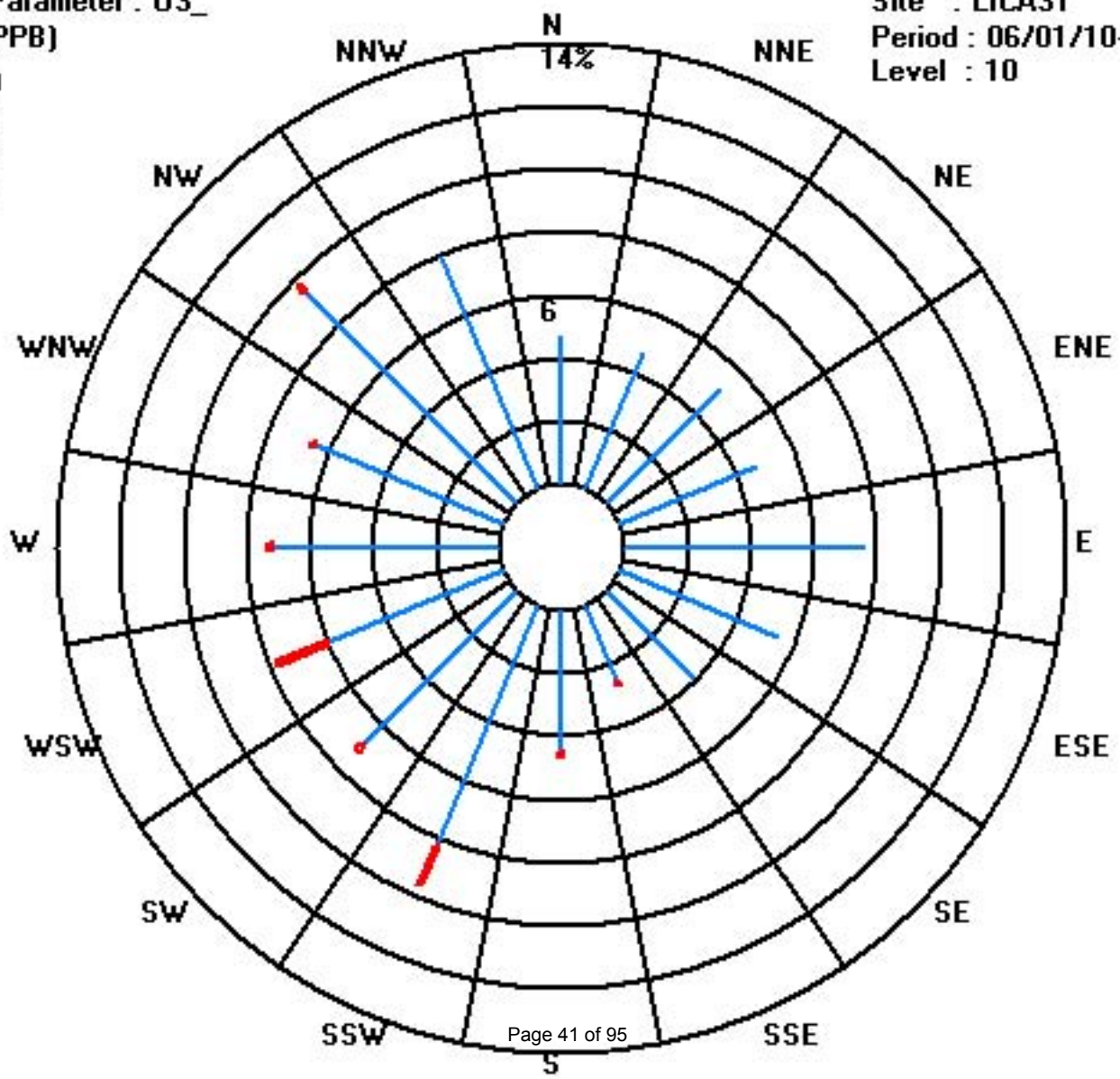
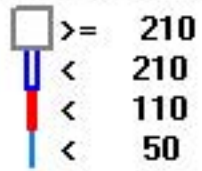
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	32	32	35	32	52	37	27	18	31	57	47	41	49	44	65	55	654
< 110								1	1	9	2	12	1	1	2		29
< 210																	
>= 210																	
Totals	32	32	35	32	52	37	27	19	32	66	49	53	50	45	67	55	

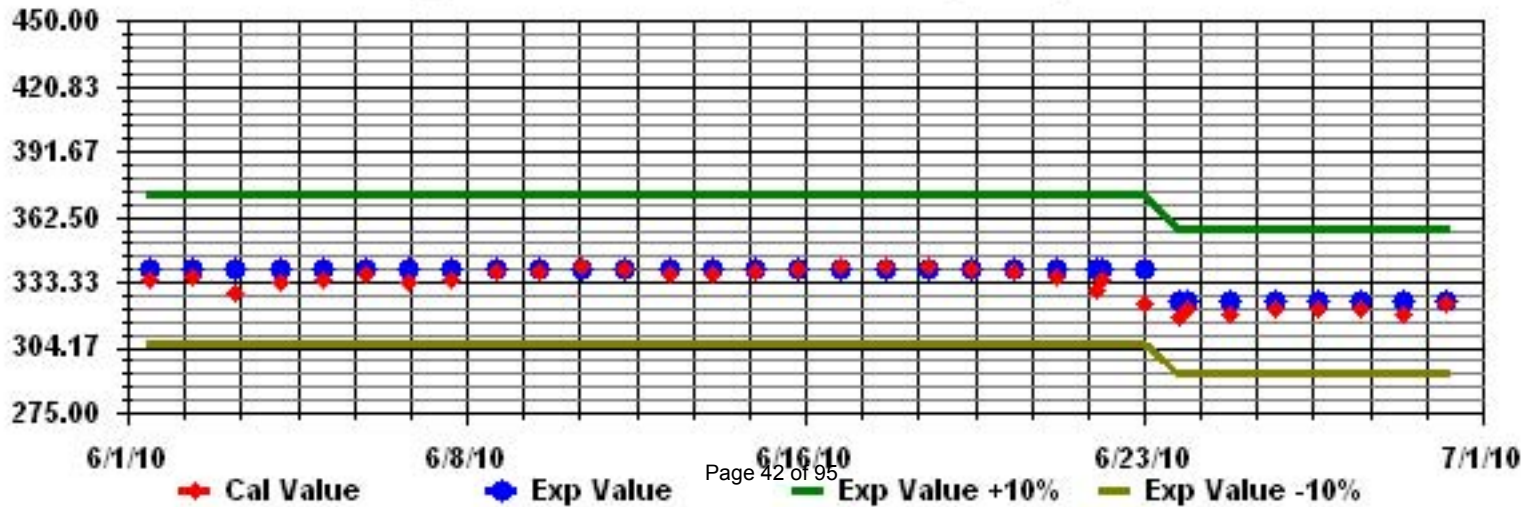
Calm : .00 %

Total # Operational Hours : 683

Class Limits (PPB)



Calibration Graph for Site: LICA31 Parameter: 03\_ Sequence: 03 Phase: SPAN



# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

## 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	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	1	1	1	2	2	2	2	2	1	0	0	IZS	0	0	0	0	0	0	0	0	1	1	1	1	1	2	0.8	24	
2	1	2	1	1	1	1	1	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	0.5	24	
3	1	1	1	1	2	2	1	1	1	1	IZS	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.6	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	1	1	1	0.1	24	
5	1	1	1	1	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
6	0	0	0	0	1	1	IZS	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	0.3	24	
7	0	0	0	0	0	0	IZS	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.5	24	
8	1	2	2	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	1	2	0.5	24	
9	1	1	1	1	IZS	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	0.5	24	
10	1	1	IZS	1	2	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0.6	24	
11	1	IZS	1	1	2	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	3	0.8	24	
12	IZS	2	3	3	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	IZS	4	1.6	24		
13	2	2	2	2	2	2	2	1	1	1	1	0	0	1	0	0	0	0	0	1	0	1	1	1	IZS	1	2	1.0	24	
14	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24		
15	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24
16	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	1	0	1	0.3	24	
17	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	1	1	1	0.3	24	
18	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	IZS	1	2	2	3	4	3	4	4	1.2	24	
19	3	3	3	3	4	4	4	4	3	2	1	1	1	1	1	1	1	1	IZS	1	1	1	1	2	1	1	4	1.9	24	
20	1	1	1	1	3	4	4	3	3	3	2	1	1	1	1	1	IZS	1	1	2	2	2	2	2	2	1	4	1.9	24	
21	2	3	4	4	5	6	4	3	3	2	3	3	3	2	IZS	1	2	1	1	1	2	2	1	1	1	6	2.6	24		
22	1	1	1	1	1	2	1	C	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	2	0.5	24		
23	0	0	0	0	1	2	2	1	0	0	C	IZS	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0.3	24		
24	0	1	1	1	0	1	2	2	1	IZS	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0.5	24		
25	0	0	0	0	1	1	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	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	0.0	24		
27	0	0	0	0	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
28	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	
29	0	0	0	0	0	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24		
30	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	0.0	24	
HOURLY MAX		3	3	4	4	5	6	4	3	3	3	3	3	3	2	1	1	2	1	2	2	2	3	4	3					
HOURLY AVG		0.7	0.8	0.9	0.9	1.3	1.6	1.4	1.0	0.7	0.4	0.5	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.7	0.7	0.6					

### 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

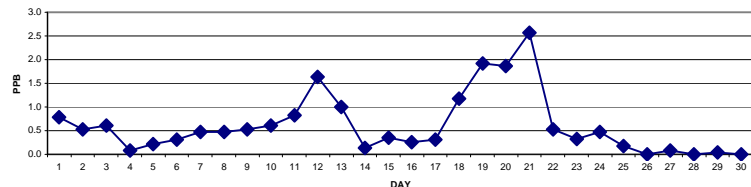
### OBJECTIVE LIMIT:

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

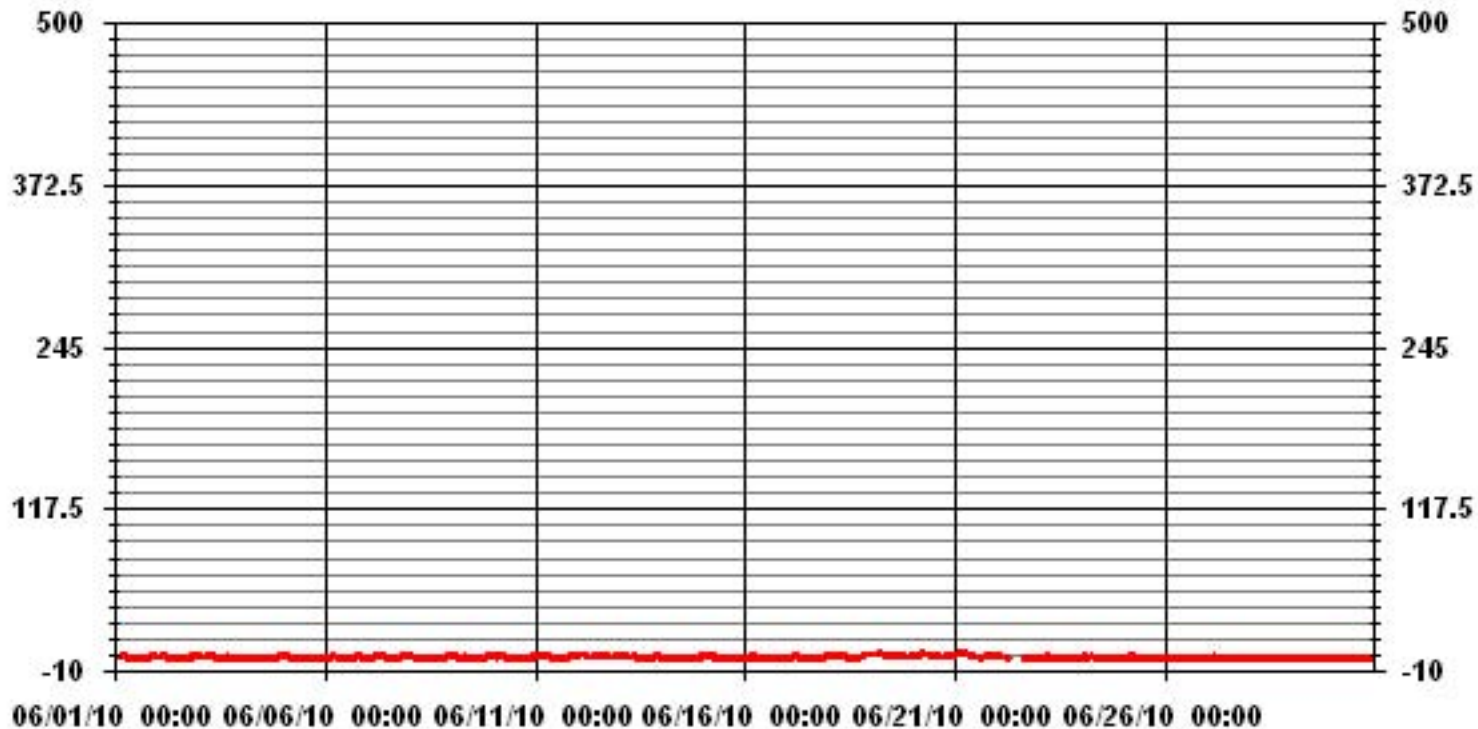
### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	282					
MAXIMUM 1-HR AVERAGE:	6	PPB	@ HOUR(S)	5	ON DAY(S)	21
MAXIMUM 24-HR AVERAGE:	2.6	PPB			ON DAY(S)	21
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.91		MONTHLY AVERAGE:	0.61	PPB	

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA31 NO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

JUNE 2010

## NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	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	2	2	2	3	3	3	3	4	2	1	0	IZS	1	1	1	1	1	1	1	1	1	3	2	2	2	4	1.8	24
2	2	2	2	1	2	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1.3	24
3	1	2	2	2	2	2	2	2	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.3	24
4	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	0	1	1	1	1	1	3	1	1	2	2	3	1.1	24
5	1	1	1	1	1	1	1	IZS	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	0.8	24
6	1	1	1	1	2	2	IZS	1	1	1	1	1	0	0	1	1	1	1	1	3	2	1	1	1	1	3	1.1	24
7	1	1	1	1	1	IZS	1	2	2	2	1	1	1	1	2	1	1	1	1	22	1	2	2	1	22	2.2	24	
8	3	3	3	2	IZS	1	1	0	1	1	1	1	1	1	1	1	1	2	1	2	1	2	1	1	1	3	1.4	24
9	2	2	2	IZS	1	1	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	1.4	24
10	1	2	IZS	2	4	4	3	2	1	1	1	1	1	0	1	1	1	1	1	1	1	1	2	1	1	4	1.5	24
11	1	IZS	1	1	3	4	3	2	2	2	1	1	1	1	1	1	1	2	1	2	2	1	2	3	4	1.7	24	
12	IZS	3	4	4	4	4	3	3	2	2	1	1	1	1	1	1	1	2	2	2	2	3	2	IZS	4	2.2	24	
13	3	3	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	IZS	3	1.8	24	
14	2	1	1	1	1	P	1	1	1	9	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1	9	1.4	23
15	1	1	1	1	2	3	1	2	1	1	1	1	1	2	1	1	1	1	2	2	IZS	1	2	1	3	1.3	24	
16	1	1	1	1	1	2	3	2	2	2	1	1	1	0	1	1	2	1	2	1	IZS	1	1	2	1	3	1.3	24
17	1	1	1	1	2	2	1	1	1	1	0	1	1	1	1	1	1	1	IZS	2	1	1	1	2	2	1.1	24	
18	1	2	2	2	2	2	1	2	4	2	1	1	1	1	3	1	1	IZS	4	5	3	4	5	4	5	2.3	24	
19	4	4	4	4	5	5	4	4	3	2	2	1	1	1	2	1	IZS	P	2	2	2	2	2	2	2	5	2.7	23
20	1	2	2	2	4	4	4	4	4	4	4	2	2	1	2	IZS	3	3	5	3	2	3	2	2	5	2.8	24	
21	3	4	5	5	6	10	6	5	4	3	14	4	4	3	IZS	4	4	2	2	2	2	2	1	14	4.2	24		
22	1	1	2	2	2	3	2	C	C	C	C	C	C	C	C	C	C	C	0	0	0	0	0	0	3	0.9	24	
23	2	2	1	1	2	2	2	2	1	1	C	IZS	0	0	0	0	0	0	0	0	0	1	1	1	1	2	0.9	24
24	1	1	1	1	1	2	3	4	2	IZS	1	1	1	1	1	1	1	0	1	1	2	1	1	1	4	1.3	24	
25	1	1	1	1	1	3	2	2	1	1	IZS	0	0	0	0	1	0	0	0	1	2	1	0	0	3	0.8	24	
26	0	1	1	1	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2	24	
27	0	1	1	1	1	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24	
28	1	0	0	0	0	0	0	IZS	1	1	2	1	1	2	1	1	0	0	0	0	2	2	0	1	2	0.7	24	
29	1	1	1	1	1	P	IZS	0	1	1	1	1	1	1	0	2	0	1	1	1	1	P	0	0	2	0.8	22	
30	0	0	1	1	1	IZS	1	1	1	1	1	0	0	0	0	5	0	1	0	0	0	1	2	1	5	0.8	24	
HOURLY MAX	4	4	5	5	6	10	6	5	4	9	14	4	4	3	3	5	4	3	5	22	3	4	5	4				
HOURLY AVG	1.4	1.6	1.7	1.7	2.0	2.5	2.0	1.9	1.7	1.7	1.5	1.0	0.9	0.9	0.9	1.2	0.9	1.0	1.2	2.1	1.3	1.5	1.3	1.3				

**STATUS FLAG CODES**

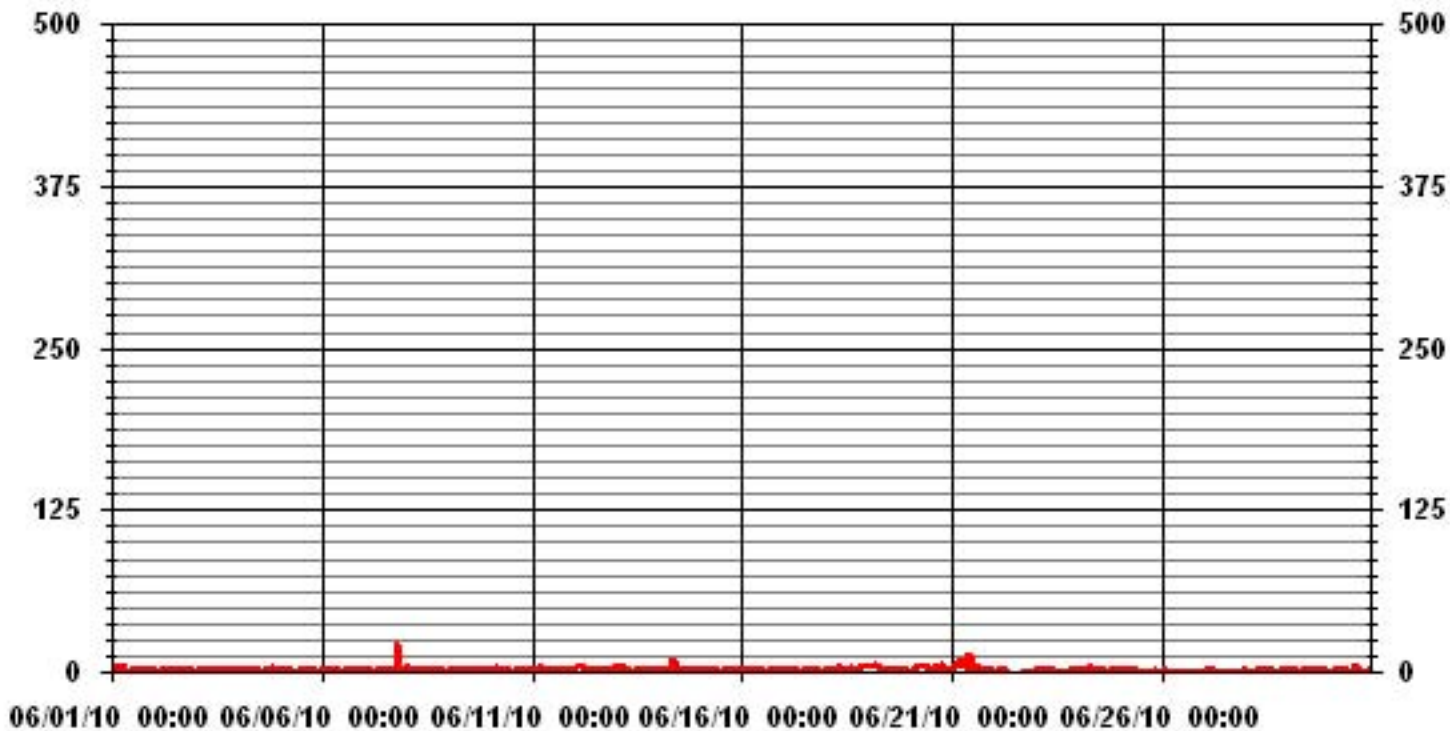
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	577					
MAXIMUM INSTANTANEOUS VALUE:	22	PPB	@ HOUR(S)	19	ON DAY(S)	7
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	716	HRS	
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	1.48					



### 01 Hour Averages



— LICA31 NO2MAX PPB

LICA31  
 NO2\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : NO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.41	4.70	5.00	4.26	7.50	5.44	4.41	2.94	4.70	9.70	7.20	7.79	7.35	6.61	9.85	8.08	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	4.41	4.70	5.00	4.26	7.50	5.44	4.41	2.94	4.70	9.70	7.20	7.79	7.35	6.61	9.85	8.08	

Calm : .00 %

Total # Operational Hours : 680

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	30	32	34	29	51	37	30	20	32	66	49	53	50	45	67	55	680
< 110																	
< 210																	
>= 210																	
Totals	30	32	34	29	51	37	30	20	32	66	49	53	50	45	67	55	

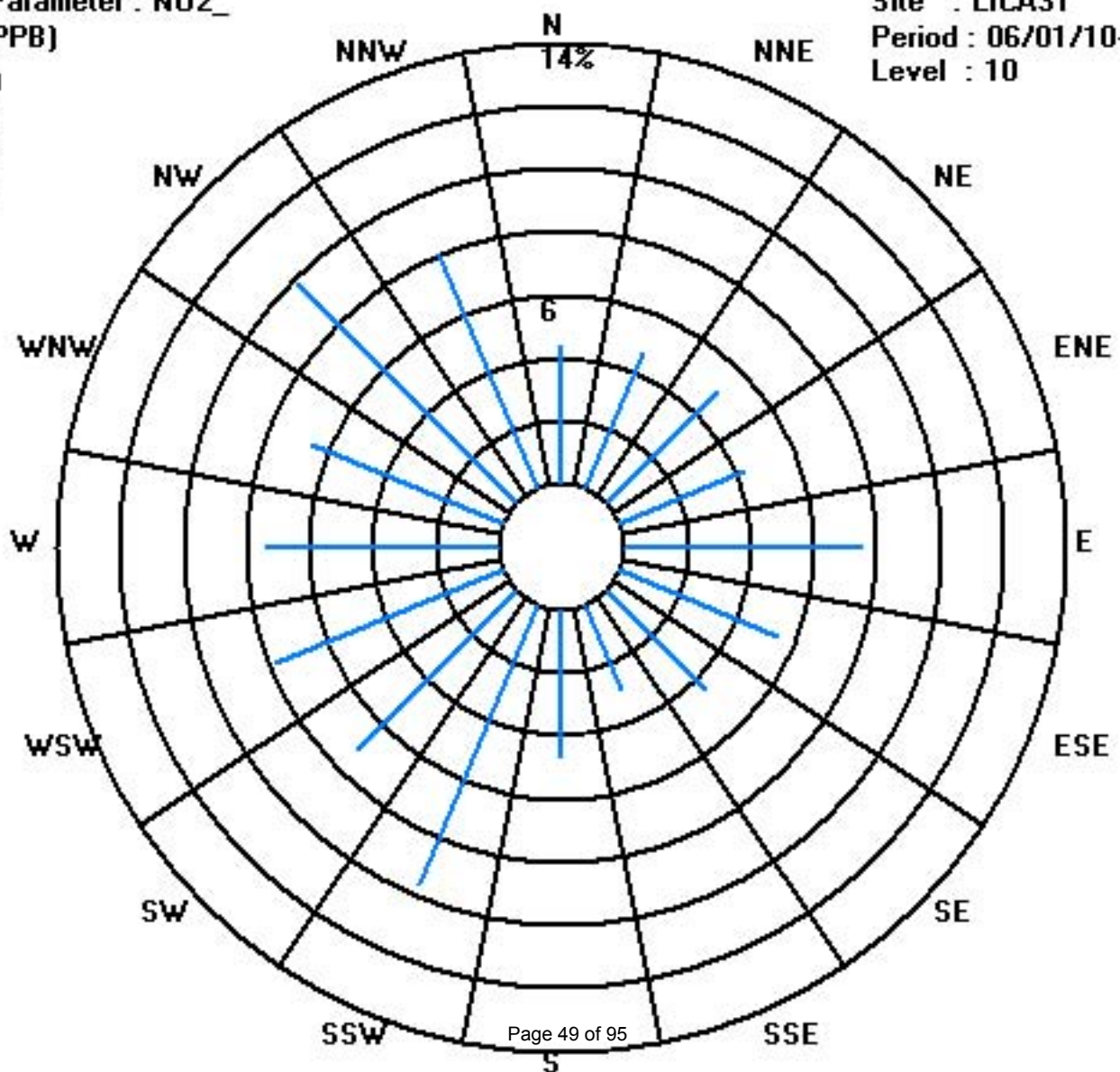
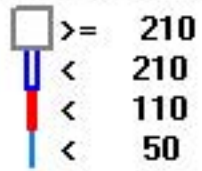
Calm : .00 %

Total # Operational Hours : 680

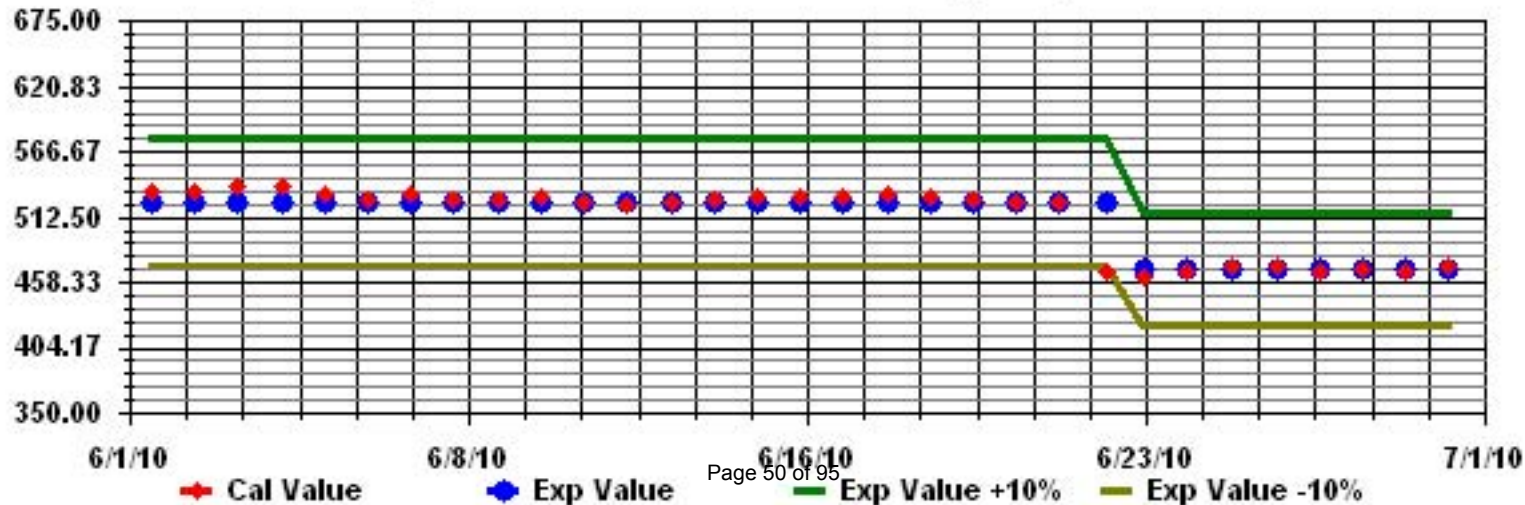
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA31 Parameter: NO2\_ Sequence: NO2 Phase: SPAN



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

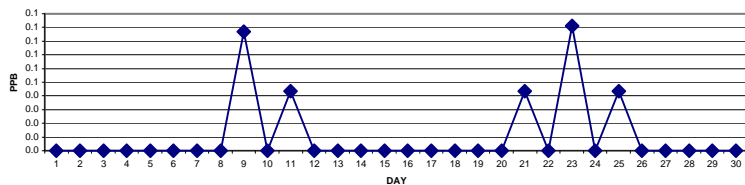
NITRIC OXIDE hourly averages in ppb

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	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	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	0.0	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	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	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	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	0.0	24	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	0.0	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	0.0	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	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	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	0.0	24	
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	0.0	0.0	24	
HOURLY MAX	0	0	0	0	0	0	1	1	1	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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

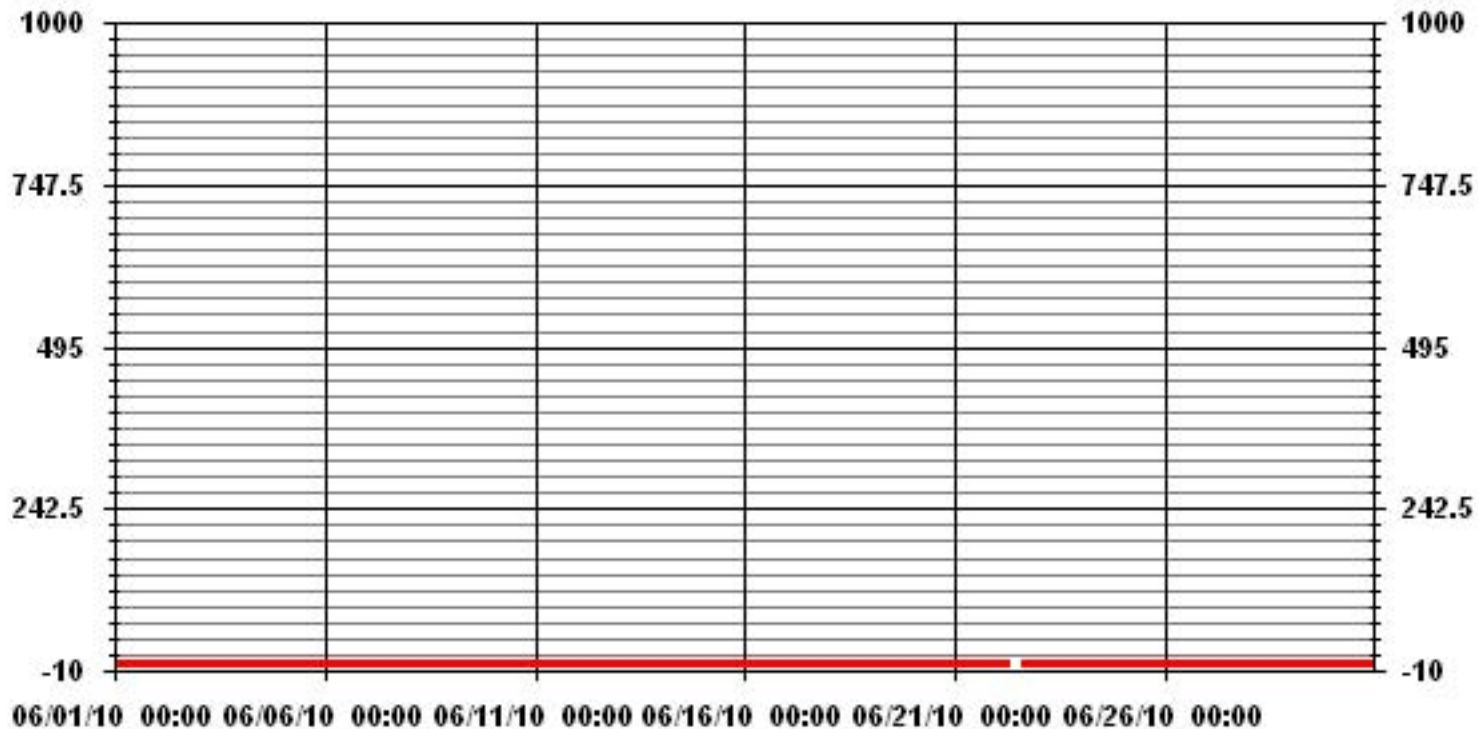
24 HOUR AVERAGES FOR JUNE 2009



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	7					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.1	PPB			ON DAY(S)	9, 23
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.10		MONTHLY AVERAGE:	0.01	PPB	

### 01 Hour Averages



— LICA31 NO\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

## NITRIC OXIDE MAX instantaneous maximum 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	24:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
1	0	0	0	0	1	0	2	2	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24	
2	0	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	
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	1	1	0.0	24	
4	0	0	0	0	0	0	0	0	IZS	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2	24	
5	0	0	0	0	0	0	0	IZS	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1	24	
6	0	0	0	0	0	1	IZS	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
7	0	0	0	0	0	IZS	0	1	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	18	0.8	24	
8	0	0	0	0	IZS	0	0	0	0	0	1	0	1	1	2	0	0	1	0	1	0	0	0	0	0	2	0.3	24	
9	0	0	0	IZS	1	0	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
10	0	0	IZS	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2	24	
11	0	IZS	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.3	24	
12	IZS	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0.3	24	
13	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	1	0.1	24
14	0	0	0	0	0	P	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	14	0.6	23
15	0	0	0	0	1	3	0	1	0	0	1	0	0	2	1	0	0	0	2	1	IZS	0	1	0	3	0.6	24		
16	0	0	0	0	0	1	2	1	1	2	1	0	1	1	0	0	1	0	1	0	IZS	0	0	0	2	0.5	24		
17	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	
18	0	0	0	0	0	3	1	1	3	1	0	0	0	1	2	0	0	IZS	1	2	1	0	0	0	3	0.7	24		
19	0	0	0	0	0	1	1	1	1	1	1	1	0	0	1	0	IZS	P	1	0	0	0	0	0	0	1	0.4	23	
20	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	IZS	1	1	1	1	0	0	0	0	0	1	0.4	24	
21	0	0	0	0	0	3	2	1	1	1	4	1	0	0	0	IZS	1	1	0	0	0	0	0	0	0	4	0.7	24	
22	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0.0	24	
23	0	0	0	0	0	1	2	1	1	0	C	IZS	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0.3	24	
24	0	0	0	0	0	0	1	2	1	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24	
25	0	0	0	0	1	2	3	1	1	1	IZS	1	0	0	0	2	1	1	1	1	1	0	0	0	3	0.7	24		
26	0	0	0	0	0	1	0	0	0	IZS	1	0	1	0	0	1	0	1	1	0	1	1	0	0	1	1	0.3	24	
27	0	0	0	0	0	1	1	0	IZS	1	0	1	0	1	1	1	1	0	0	0	0	0	0	0	1	0.3	24		
28	0	0	0	0	0	0	0	IZS	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	1	0.4	24		
29	0	0	0	0	0	P	IZS	1	1	0	1	1	0	1	0	1	0	1	0	0	0	0	P	0	0	1	0.3	22	
30	0	0	0	1	0	IZS	1	1	1	1	1	2	0	0	1	0	13	1	1	1	1	1	0	1	0	13	1.2	24	
HOURLY MAX	1	1	0	1	1	3	3	2	3	14	4	1	1	2	2	13	1	1	2	18	1	1	1	1	1				
HOURLY AVG	0.0	0.0	0.0	0.0	0.2	0.8	0.8	0.8	0.8	1.0	0.7	0.4	0.2	0.3	0.3	0.7	0.2	0.3	0.3	0.9	0.1	0.1	0.1	0.1	0.1				

### STATUS FLAG CODES

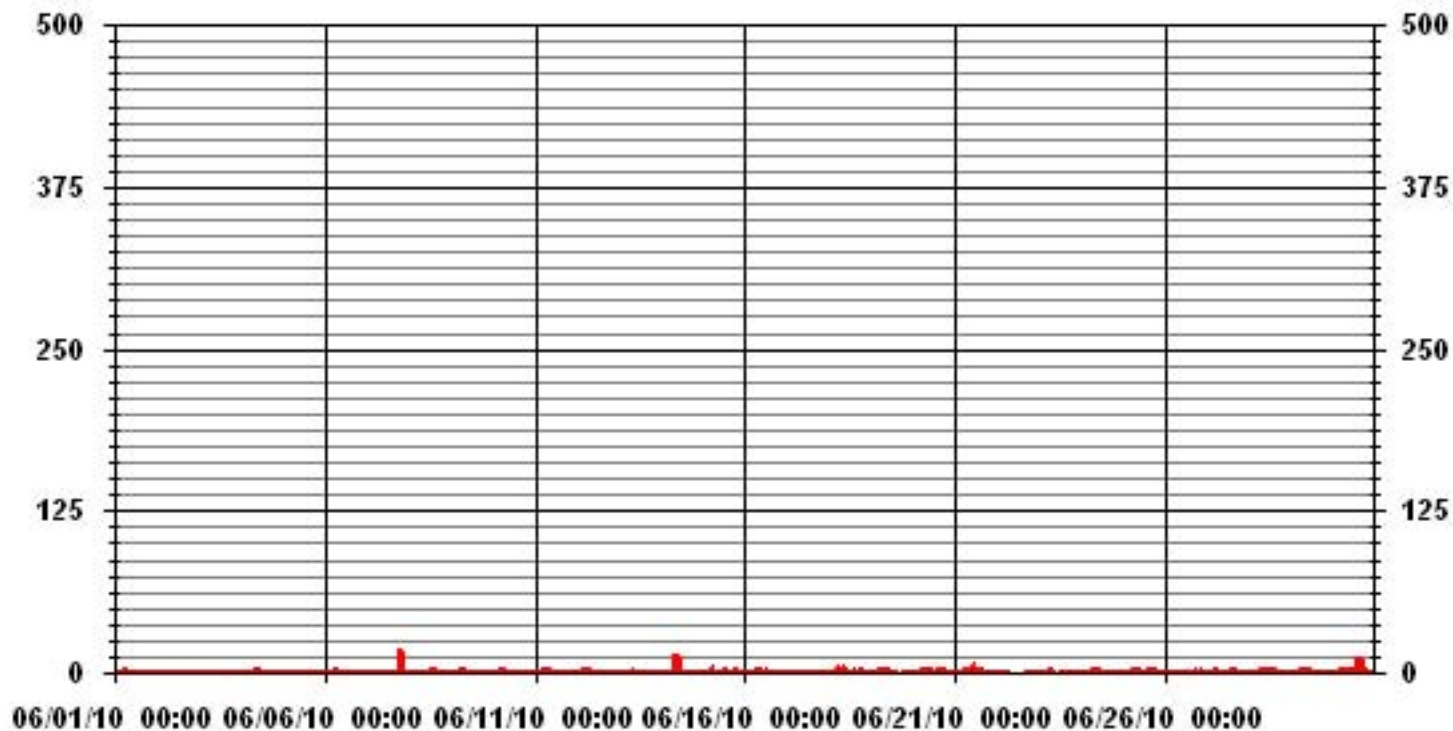
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	176
MAXIMUM INSTANTANEOUS VALUE:	18 PPB @ HOUR(S) 19 ON DAY(S) 7
IZS CALIBRATION TIME:	30 HRS
MONTHLY CALIBRATION TIME:	11 HRS
STANDARD DEVIATION:	1.14
OPERATIONAL TIME:	716 HRS



### 01 Hour Averages



LICA31  
 NO\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 31  
 Site Name : LICA31  
 Parameter : NO\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.41	4.70	5.00	4.26	7.50	5.44	4.41	2.94	4.70	9.70	7.20	7.79	7.35	6.61	9.85	8.08	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	4.41	4.70	5.00	4.26	7.50	5.44	4.41	2.94	4.70	9.70	7.20	7.79	7.35	6.61	9.85	8.08	

Calm : .00 %

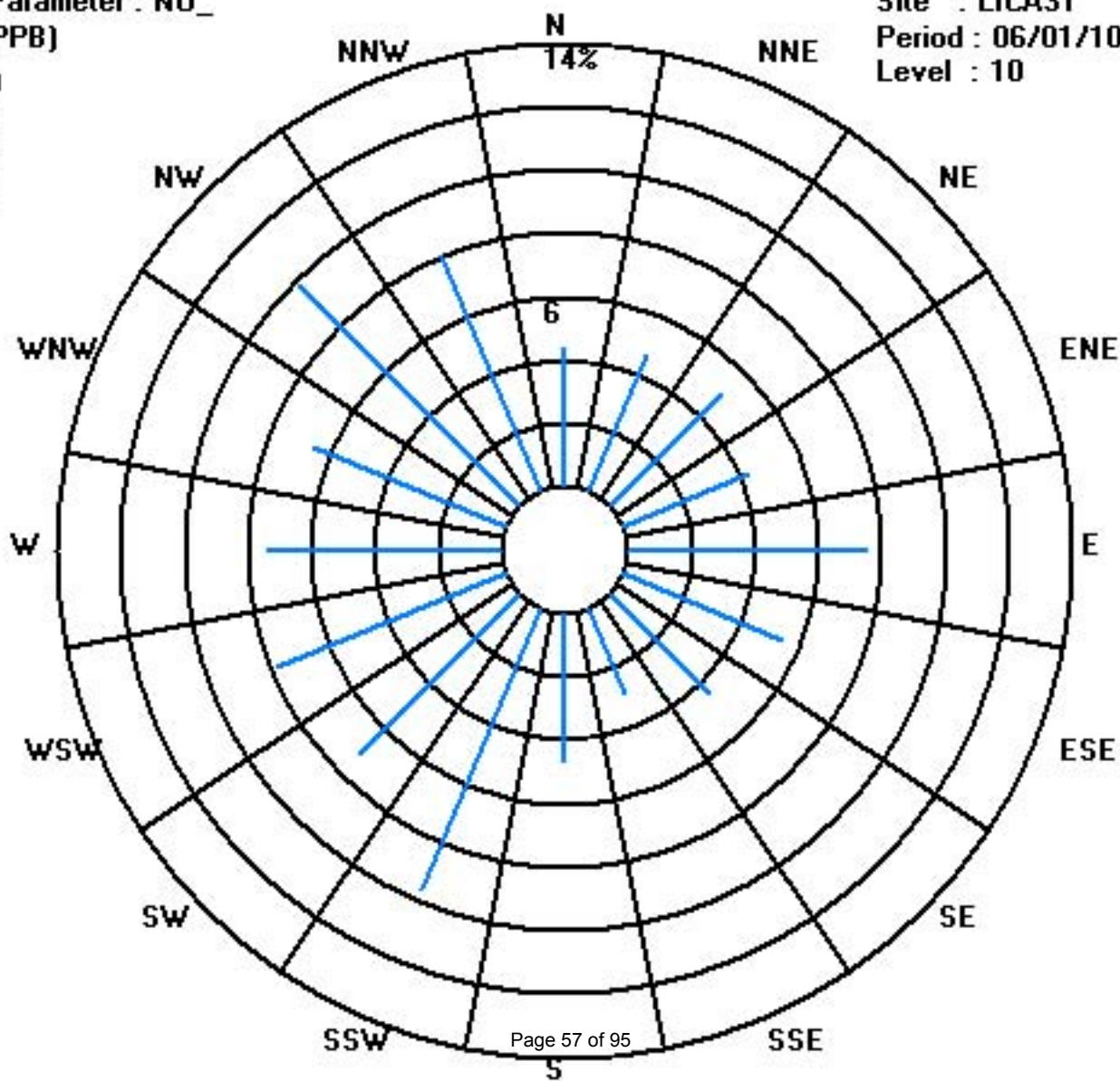
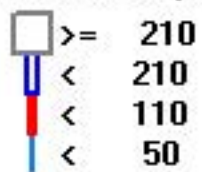
Total # Operational Hours : 680

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	30	32	34	29	51	37	30	20	32	66	49	53	50	45	67	55	680
< 110																	
< 210																	
>= 210																	
Totals	30	32	34	29	51	37	30	20	32	66	49	53	50	45	67	55	

Calm : .00 %

Total # Operational Hours : 680



# Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	1	1	2	2	1	3	3	1	0	0	IZS	0	0	0	0	0	0	0	0	1	1	1	1	3	0.8	24	
2	1	1	1	0	1	0	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.4	24
3	1	1	1	1	1	1	1	1	1	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	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	1	1	1	0.1	24
5	1	1	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
6	0	0	0	0	1	1	IZS	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0.2	24	
7	0	0	0	0	0	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0.3	24	
8	1	2	2	0	IZS	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0.3	24
9	1	1	1	IZS	0	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3	0.6	24	
10	1	1	IZS	1	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0.7	24	
11	0	IZS	1	1	2	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	0.8	24	
12	IZS	2	3	3	4	4	3	2	1	1	1	0	0	0	0	0	0	0	0	1	1	2	2	IZS	4	1.4	24	
13	2	2	2	2	2	2	2	1	2	1	0	0	0	0	0	0	0	0	0	1	1	IZS	1	2	0.9	24		
14	1	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
15	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	0.2	24
16	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	0.2	24
17	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	1	0.2	24
18	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	IZS	1	2	2	3	3	3	3	1.1	24	
19	3	3	3	3	4	4	4	4	2	1	1	1	1	1	1	0	IZS	2	1	1	1	1	1	1	1	4	2.0	24
20	1	1	1	1	2	4	4	4	4	4	2	1	1	1	1	IZS	1	1	2	2	1	1	1	1	4	1.8	24	
21	2	2	3	4	5	7	5	4	3	2	4	4	3	2	IZS	1	2	2	1	1	1	1	1	0	7	2.6	24	
22	0	0	1	1	1	2	1	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	2	0.4	24	
23	0	0	0	0	1	2	3	2	1	0	C	IZS	0	0	0	0	0	0	0	0	0	0	1	1	3	0.5	24	
24	0	1	1	1	0	1	2	2	2	IZS	1	1	0	0	0	0	0	0	0	0	1	1	0	0	2	0.6	24	
25	0	0	0	0	1	1	2	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	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	0.0	24
27	0	0	0	0	1	2	1	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
28	0	0	0	0	0	0	0	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
29	0	0	0	0	0	1	IZS	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
30	0	0	0	0	0	IZS	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
HOURLY MAX	NA	3	3	4	5	7	5	4	4	4	4	4	3	2	1	1	2	2	2	2	2	3	3	3				
HOURLY AVG	NA	0.7	0.8	0.7	1.1	1.6	1.6	1.3	1.0	0.6	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.5	0.5				

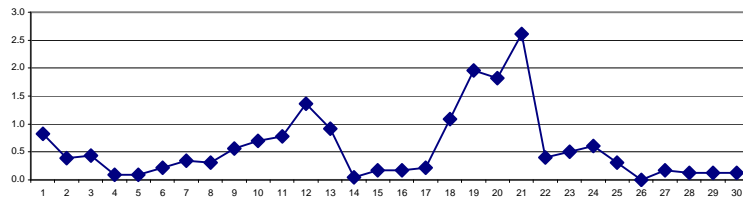
STATUS FLAG CODES

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

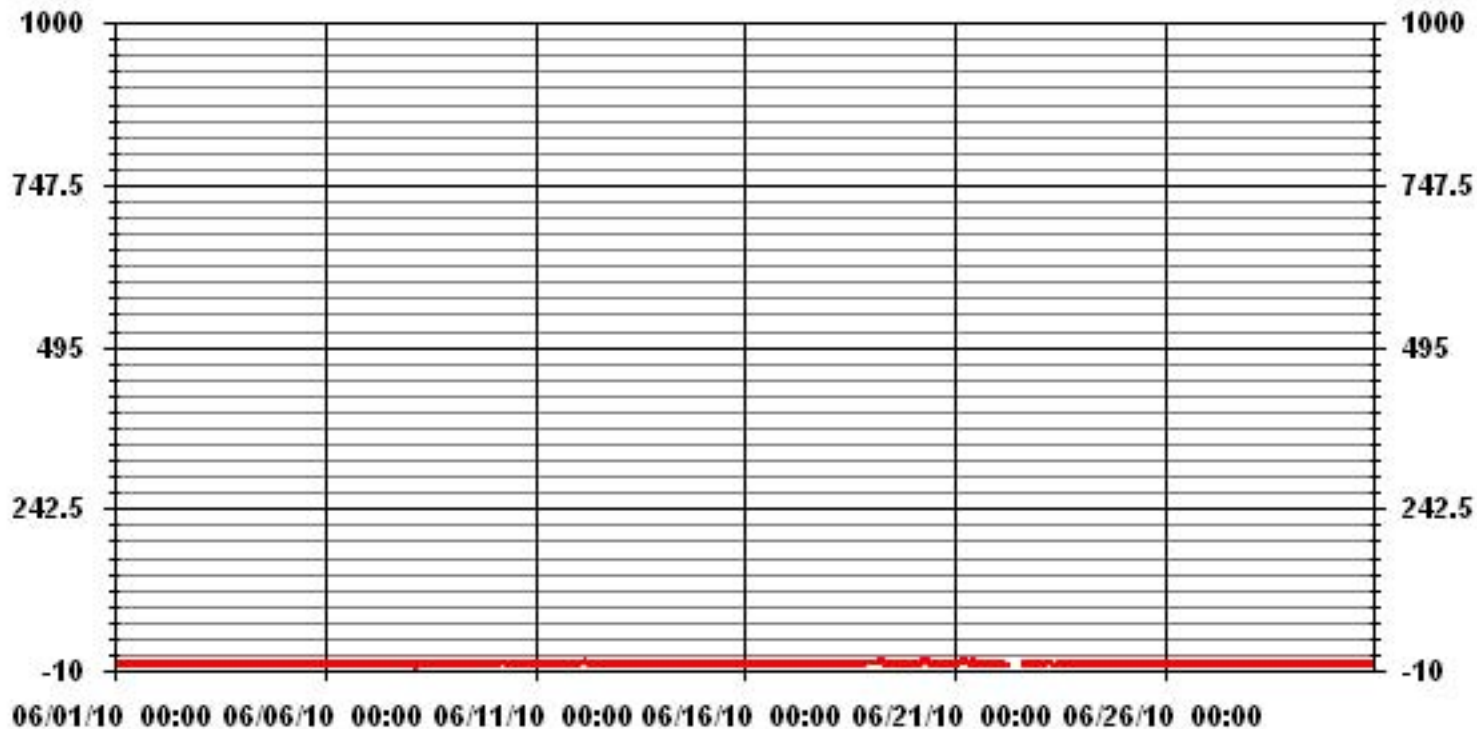
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	253					
MAXIMUM 1-HR AVERAGE:	7	PPB	@ HOUR(S)	5	ON DAY(S)	21
MAXIMUM 24-HR AVERAGE:	2.6	PPB			ON DAY(S)	21
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION	0.97		MONTHLY AVERAGE	0.58	PPB	

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA31 NOX\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

## OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	1	1	3	3	2	4	5	2	1	0	IZS	1	1	1	1	1	1	1	1	2	1	2	2	5	1.7	24	
2	2	2	2	1	1	1	1	1	1	1	1	IZS	1	1	1	1	1	0	1	1	1	2	2	1	2	1.2	24	
3	1	1	2	2	2	2	2	2	1	IZS	1	1	1	1	1	1	1	1	1	0	1	1	1	1	2	1.2	24	
4	1	1	1	1	1	0	1	1	IZS	1	2	1	1	1	0	0	0	0	1	3	1	1	1	2	3	1.0	24	
5	1	2	1	1	1	1	1	IZS	1	1	0	1	1	0	0	1	0	1	1	1	2	1	0	0	2	0.8	24	
6	0	1	1	1	2	2	IZS	2	1	1	1	0	0	0	0	1	1	1	3	2	1	1	1	1	3	1.0	24	
7	1	1	1	1	1	IZS	1	2	2	2	1	1	1	2	1	1	1	1	33	1	1	1	1	1	33	2.6	24	
8	3	3	2	2	IZS	1	0	0	0	1	2	1	2	2	2	1	1	3	1	2	1	2	1	1	3	1.5	24	
9	2	1	1	IZS	1	1	6	3	3	0	1	0	1	0	0	1	0	1	1	0	1	1	2	1	6	1.2	24	
10	1	2	IZS	2	5	4	3	3	2	1	1	1	0	0	0	0	1	0	0	1	1	3	1	1	5	1.4	24	
11	1	IZS	2	1	3	4	4	3	2	2	1	1	1	1	0	1	1	2	1	2	1	1	2	2	4	1.7	24	
12	IZS	3	3	4	4	5	4	3	2	1	1	1	1	1	1	1	1	2	2	1	2	3	2	IZS	5	2.2	24	
13	2	3	3	3	3	3	2	2	3	2	1	1	1	1	1	1	1	1	1	1	1	2	IZS	2	3	1.8	24	
14	2	1	1	1	1	P	1	1	1	20	1	1	1	1	0	1	1	0	1	0	0	IZS	1	1	20	1.7	23	
15	1	1	1	1	3	6	1	2	1	0	1	1	0	3	1	1	1	1	4	3	IZS	1	2	1	6	1.6	24	
16	1	1	1	1	1	3	5	3	3	3	1	1	2	2	0	1	0	2	1	IZS	1	1	2	1	5	1.6	24	
17	1	1	1	1	2	2	2	1	1	0	0	1	1	1	0	1	1	1	IZS	2	1	1	1	1	1	2	1.0	24
18	1	2	2	1	1	5	2	3	6	2	1	1	1	2	5	1	1	IZS	5	7	4	4	5	4	7	2.9	24	
19	4	4	4	4	5	5	5	5	4	3	2	2	1	1	3	1	IZS	P	2	2	2	2	2	1	5	2.9	23	
20	1	1	1	2	3	5	5	5	6	5	4	2	2	1	2	IZS	3	4	6	3	2	3	2	2	6	3.0	24	
21	3	3	4	5	6	12	8	6	5	3	17	5	4	2	IZS	5	4	2	2	2	2	1	1	1	17	4.5	24	
22	1	1	2	2	1	3	2	C	C	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	3	0.9	24	
23	2	1	1	1	2	3	4	3	2	1	C	IZS	1	1	0	0	0	0	0	0	1	1	1	1	4	1.2	24	
24	1	1	1	1	1	3	3	6	3	IZS	2	1	1	1	1	1	1	1	0	1	2	1	1	1	6	1.5	24	
25	1	1	1	1	2	4	4	3	2	2	IZS	0	0	0	1	3	1	1	1	2	2	1	0	0	4	1.4	24	
26	0	1	1	1	1	1	0	0	0	IZS	0	0	1	1	0	1	0	1	0	0	0	2	0	0	2	0.5	24	
27	0	1	1	1	2	3	2	1	IZS	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	3	0.7	24	
28	1	0	0	0	0	0	1	IZS	3	2	3	1	2	2	2	1	0	0	0	1	3	2	0	1	3	1.1	24	
29	1	1	1	0	1	P	IZS	1	1	1	2	1	1	1	0	3	0	1	1	1	1	P	0	0	3	0.9	22	
30	0	1	1	1	1	IZS	1	2	2	1	1	0	0	1	0	18	0	1	1	1	1	3	1	18	1.7	24		
HOURLY MAX	4	4	4	5	6	12	8	6	6	20	17	5	4	3	5	18	4	4	6	33	4	4	5	4				
HOURLY AVG	1.3	1.5	1.5	1.6	2.1	3.1	2.7	2.6	2.2	2.2	1.8	1.0	1.0	1.0	0.9	1.8	0.9	1.0	1.3	2.6	1.3	1.5	1.3	1.1				

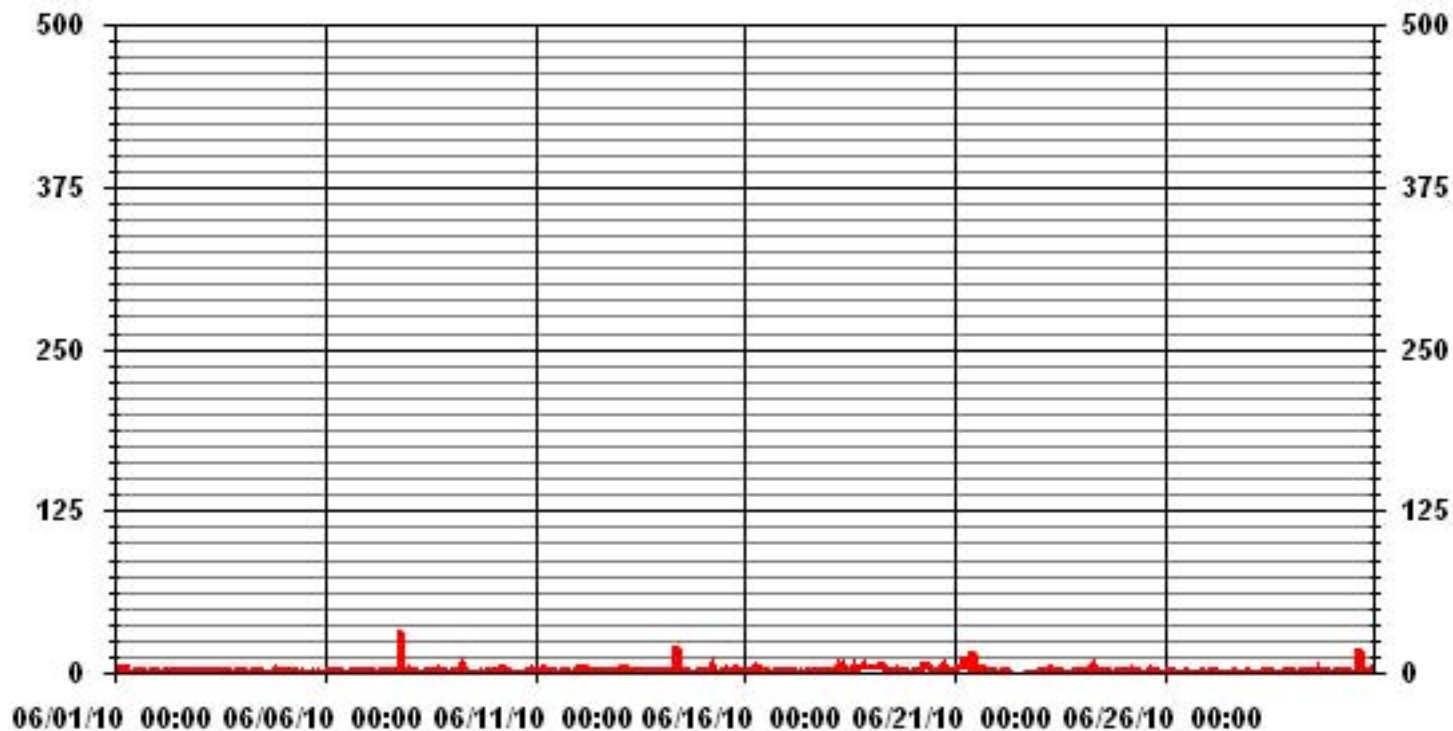
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	566					
MAXIMUM INSTANTANEOUS VALUE:	33	PPB	@ HOUR(S)	19	ON DAY(S)	7
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	716	HRS	
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	2.13					

### 01 Hour Averages



— LICA31 NOXMAX PPB



LICA31  
NOX\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 31  
Site Name : LICA31  
Parameter : NOX\_  
Units : PPB

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.41	4.70	5.00	4.26	7.50	5.44	4.41	2.94	4.70	9.70	7.20	7.79	7.35	6.61	9.85	8.08	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	4.41	4.70	5.00	4.26	7.50	5.44	4.41	2.94	4.70	9.70	7.20	7.79	7.35	6.61	9.85	8.08	

Calm : .00 %

Total # Operational Hours : 680

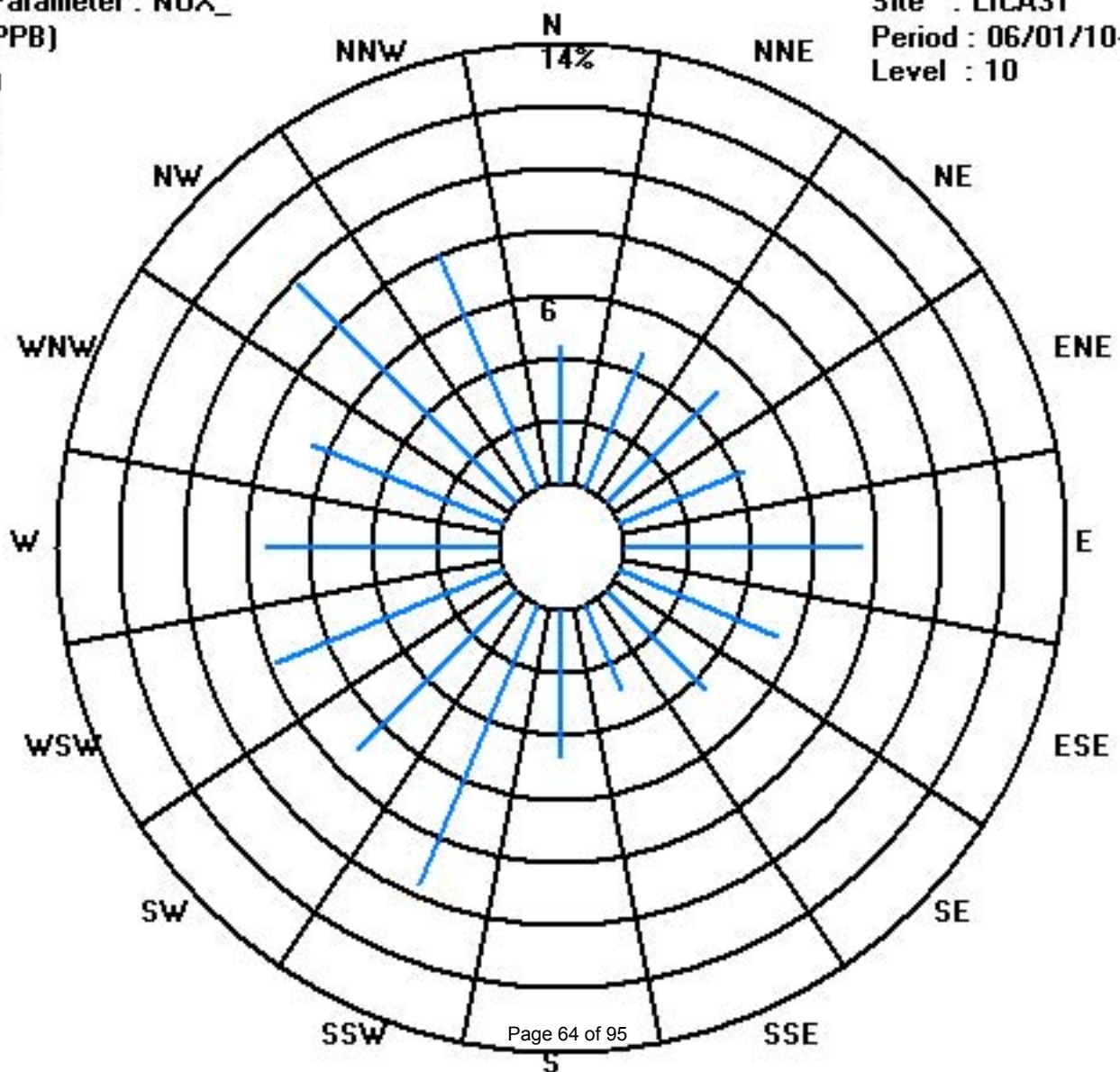
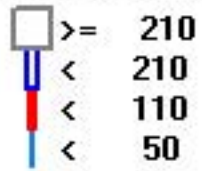
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	30	32	34	29	51	37	30	20	32	66	49	53	50	45	67	55	680
< 110																	
< 210																	
>= 210																	
Totals	30	32	34	29	51	37	30	20	32	66	49	53	50	45	67	55	

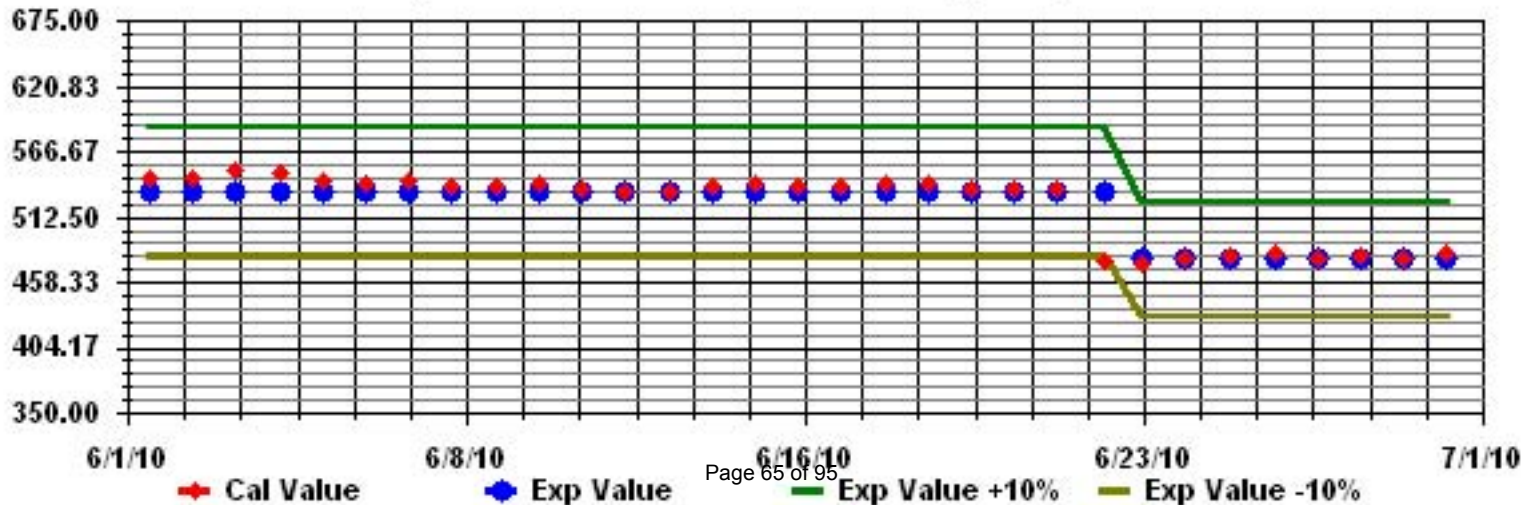
Calm : .00 %

Total # Operational Hours : 680

Class Limits (PPB)



Calibration Graph for Site: LICA31 Parameter: NOX\_ Sequence: NO2 Phase: SPAN



# Vector Wind Speed

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

## WIND SPEED hourly averages (km/hr)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	9.9	9.3	8.3	9.4	9.3	8.8	8.4	7.6	5.1	4.9	4.7	5.7	9.8	8.6	7	9.8	7.5	7.5	5	6.3	5.9	7.5	6.3	6.9	9.9	5.4	24
2	7.1	6.6	7.8	8.9	8.8	8.4	6.6	10.4	14.5	13.4	13.9	15.8	16.4	14.9	17.5	16.1	17.1	15.6	16.6	16.6	14	14.3	15.1	16.7	17.5	11.9	24
3	16.7	15.3	14.5	12.6	11.9	13.4	14.5	14.7	16.7	15.1	14.4	12.6	12.1	11.2	14.4	13.2	10.9	7.9	6.3	19	16.7	16.5	16.3	15.3	19	7.5	24
4	18.2	14.7	16.4	15.5	16.9	16.4	13.8	13.6	13.9	12.3	12.5	12.6	8.9	10.2	8.5	3.5	4.1	5.5	3.7	4.1	4.7	3.6	3.1	4.7	18.2	8.9	24
5	6.2	6.8	10	9.9	8.7	7.7	8.2	9.7	13.2	15.2	14.2	16.1	14.3	13.1	14	12.8	12.2	10.2	11.8	7.4	6.2	7.5	6.8	6.5	16.1	9.4	24
6	7.4	6.2	7.4	7.8	8	5.8	7.7	5.1	5	4.3	3.6	9.3	9	12.9	12.2	10.8	7	4.7	0.9	7.2	4.5	5.2	7.4	7.6	12.9	4.2	24
7	7.1	5.1	3	8.3	8.4	3.8	2.2	11.6	5.3	2.1	10.1	9.7	6.7	7.1	8.2	9	12.8	13.9	8.9	4.8	11	9.3	9.2	4.8	13.9	3.5	24
8	7	9.3	10.7	10.7	10.3	8	7.1	8.4	8	9.9	12.5	12.8	10.5	10.5	8.9	9.1	7.9	7.2	5.8	6.5	6.1	6.2	5.9	5.2	12.8	7.3	24
9	6.5	7.6	4.8	7.9	8.3	6.7	4.6	7.9	7.3	9.1	8.8	8.4	9.9	8.1	6.8	7.3	8	9.4	8	6.2	6.2	6.5	7.4	8.6	9.9	7	24
10	8	7.7	6.7	6	7.4	7	9	10.4	12	13	13.9	13.3	11.7	10.3	8.3	10.4	7.8	7.8	4.4	1.6	6.7	8.4	10	12.5	13.9	5.4	24
11	13.4	12.7	12.7	12.5	11.2	7.3	6.2	4.5	5.4	4.3	3.6	4.7	3.5	2.9	0.2	0.9	2.8	2.5	3.8	3.4	7.1	8.6	8.3	10.3	13.4	2.6	24
12	8.7	7.4	8.2	6.7	8.5	6.4	7.1	12	11.7	18.4	18.7	19.3	20.3	18.7	20.1	17.4	16.9	15.9	15.1	10.9	10.9	12.5	11.8	11.4	20.3	12.9	24
13	12.4	13.3	13.4	14.2	13.6	14	11.7	11.8	11.3	11.5	18.1	19.1	18.2	20.7	20.7	17.1	13.8	13.8	13.7	15	12.7	12.5	15.8	13.4	20.7	14.2	24
14	9.8	14.5	15.6	15.1	8.9	10.1	10.5	11.1	13.7	11.6	12.9	13.9	12.6	11	9.3	8.9	5.8	5.1	9.1	6.1	4.2	5.8	6.4	6.3	15.6	9.5	24
15	5.6	6.6	7.3	8.4	7.7	6.9	7.5	4.6	7.1	8.8	7.1	9.6	9.7	10.3	11.9	8.5	6.1	6	5.2	5.4	6.5	8.4	9.1	9.5	11.9	7.2	24
16	10.3	10.5	10.5	7	8.8	9.4	8.2	5	6.9	7.6	7.7	7.3	6.7	5.3	4.9	3.1	4.4	5.6	5.3	6.2	6.3	7.6	8.2	10.5	10.5	6.5	24
17	11.2	11.2	11.4	10.3	11.1	11.3	11.5	10.8	13.4	13.6	14.2	14.4	13.6	14	10.8	10.5	10.7	8.6	7.7	8.2	9.2	6.3	5.3	8.3	14.4	10.2	24
18	8.9	8.7	10.5	9.3	9.4	11.6	10.6	7	6.2	3	1.9	1.2	0.7	2.5	7.2	8.1	1.3	4.8	5.4	6.5	10	9	10.3	9.6	11.6	4.1	24
19	12.3	11.8	10.1	10.7	10	12.3	15	17.1	20.7	21.5	21.9	20.1	14.6	12.5	9.1	11.5	11.6	12	15.1	2.4	5.7	8	8.1	1.4	21.9	11.7	24
20	4.3	8.9	9.2	8.1	7.2	8.2	3.9	2.3	4.2	9.1	15.1	14.6	12.9	14.6	10.1	1.4	7	5	5.6	7.6	5.8	7.1	6.9	7.5	15.1	6.9	24
21	6.5	5.6	7	5.9	6.5	5.6	7.5	7.6	8.5	13.9	9.4	4.7	5.8	7	8.4	4.4	6.3	10.7	5.2	9.5	10.9	6.6	12.3	9.1	13.9	3.7	24
22	6.7	3	7.7	5.6	4.1	5.4	8.6	11.8	13.7	10.6	8.7	6	3.6	6	7.4	8.9	8.2	6.1	6.3	4.5	4.1	5.8	6.3	4.6	13.7	4.9	24
23	3.6	4.6	6.1	6.6	6.5	6.1	4.2	6.3	8	8.5	8.6	8.2	6.2	4.7	4.8	6.8	7	9.1	8.3	9.4	10.4	9.6	11	11.8	11.8	6.1	24
24	10.8	4.1	1.4	3.6	11.6	12.9	7.8	6.1	7.4	5.9	5.3	4.5	4.2	4.7	6.5	8.7	9.6	10.6	10.2	2.2	7.9	13.2	12.4	11.3	13.2	6.1	24
25	7.6	6.2	4.8	6.1	6.3	5.3	5.9	6.8	12.1	14.3	15.4	12.1	7.8	7.1	5.9	6.1	6.4	5.9	9.9	6.7	5.4	13.5	14.6	10.8	15.4	6	24
26	2	12.5	16.3	13.6	11.8	13.6	14.8	12.8	12.5	18.5	20.2	19.5	23.8	21.4	20	10.7	9.1	11.4	10.5	9.9	8.6	8.3	8.2	8	23.8	12.4	24
27	4.5	9.1	11.2	10.2	8.7	8.2	9	8	9.6	8.2	8.9	11.6	9.5	13.6	12.6	10.3	7.2	5.1	1.7	4.4	6.7	8.8	9.4	14.5	14.5	5.7	24
28	17.1	2.8	12.5	13.4	15.5	13.4	6.3	5.1	6.7	3.1	4.7	8.4	8.7	9.7	8.8	11.5	15	16.2	12.7	10.1	6.7	2.6	8.5	9.7	17.1	4	24
29	13.1	11.6	12.6	10.4	13.8	16.1	14.7	7.8	5.1	4.8	2	3.7	3.8	2.2	3.7	2.6	7.5	10.1	8.1	11.7	8	16.9	8.1	3.5	16.9	5.4	24
30	13.6	13.8	14.4	15.5	10.3	2.8	2.5	6	9.7	13.4	16.8	15	10	9	9.1	8.9	29.1	17.2	14.1	13.7	12.5	3.6	5.9	6.7	29.1	5.3	24
HOURLY MAX	18.2	15.3	16.4	15.5	16.9	16.4	15.0	17.1	20.7	21.5	21.9	20.1	23.8	21.4	20.7	17.4	29.1	17.2	16.6	19.0	16.7	16.9	16.3	16.7			
HOURLY AVG	9.2	8.9	9.8	9.7	9.7	9.1	8.5	8.8	9.8	10.3	11.0	11.1	10.2	10.2	9.9	8.9	9.4	9.0	8.1	7.8	8.1	8.7	9.1	8.9			

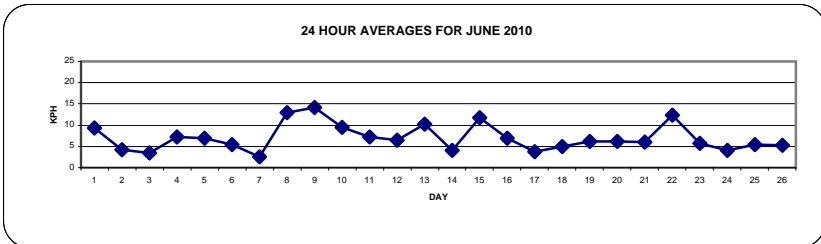
### STATUS FLAG CODES

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

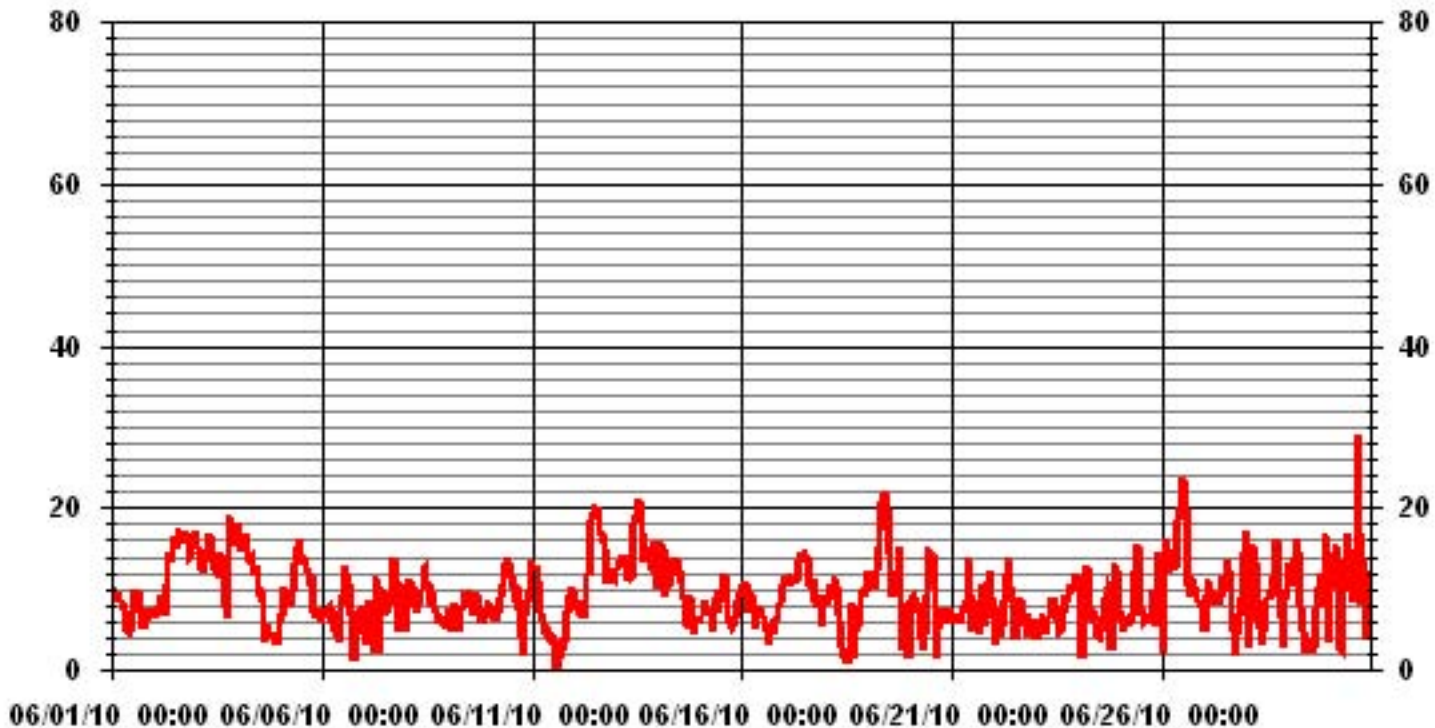
LAST CALIBRATION: February 3, 2009

### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	29.1 KPH	@ HOUR(S)	16	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	14.2 KPH			ON DAY(S)	13
CALMS (≤ 0 KPH)	0.27 %	OPERATIONAL TIME:		720 HRS	
MONTHLY CALIBRATION TIME:	0 HRS	AMD OPERATION UPTIME		100.0 %	
STANDARD DEVIATION	4.18	MONTHLY AVERAGE		9.34 KPH	



### 01 Hour Averages



— LICA31 WSP KPH

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JUNE 2010

### 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	0:00	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	MAX.	
DAY																											
1		15.7	12.1	9.7	12.1	13.1	16.8	18.3	16.5	15.2	14.9	20.7	22.4	27.8	31.5	21	29.8	23.8	19.2	13.8	14.6	9.3	11	10.2	10.4	31.5	
2		9.9	8.7	9.5	11.7	11.9	13	15.3	24	28.3	29.5	32.9	35.3	40.3	35.1	40.5	33.6	35.9	30.5	34.5	40	27.5	26.6	30	29.7	40.5	
3		34.2	28.1	31.5	24.3	23.3	26.7	29	28.4	34.2	36.6	31.6	30	27	27.1	34.8	32	24.3	21.8	30.7	44.7	36.7	35.2	37.5	32.6	44.7	
4		41.6	31.6	42	30.4	33.9	33.8	32.4	32.2	27.5	30.8	30.8	30.8	21.3	24.5	19.1	18.3	17.1	21	12.6	12	9.9	9.4	6.4	7.2	42	
5		8.4	16	19.7	17.4	15.7	12.7	17.7	24.9	32.5	34.3	35	44.5	37.6	31.1	37	33.1	30.8	26.7	35.7	23.7	13.7	15.4	11.7	10.7	44.5	
6		14	11.6	10.5	10.7	11.5	8.8	10.8	16.3	13.2	15.6	20.6	22.6	26.7	38.4	30	27.8	18.8	18.2	15.1	21.4	22.1	19.1	15.2	15.5	38.4	
7		12.1	10	10.8	11.1	11.8	18	35	21.7	18.5	10.6	24.6	21.6	17.5	17.1	18.1	20.8	31.3	32.8	27.9	25	25.5	21.9	14.9	10.7	35	
8		20.3	20.1	23.1	26.5	29.3	21.6	22.1	19.2	23.1	25.8	30.8	29	27.4	24	23.4	22.3	18.4	17.3	14.7	15.2	12.6	9.9	8.4	8.7	30.8	
9		12.8	10.6	7.6	10.5	10.6	9.9	13.5	17	17.7	25	18.4	22.6	21.9	19.3	17.4	21.2	17.2	19.7	18.3	15.6	15.8	12.4	13.1	16.7	25	
10		15.2	14.7	12.5	11.3	15.3	14.7	21.4	26.7	28.6	30.7	33.2	30.2	32.1	26.6	24.3	22.4	19.3	19	14	5.4	19.4	18.9	16.1	18.4	33.2	
11		18.8	19.6	24.2	24.4	18.8	15.5	13.8	13.9	15.1	14.8	21.8	15	20	13	13.9	22.2	19.7	13	10.7	6.9	10	12.8	13.6	17.1	24.4	
12		15	14	12	10.5	13.1	11	16.1	24	31.3	40.7	39.4	41.2	41.6	46	41.9	40.8	49.3	40.9	37.1	23	22.7	26.4	21.6	21.7	49.3	
13		27.4	25.1	26.1	29.5	28	31.7	25.9	26.3	26.6	33.7	37	39.6	41	40.5	44.4	37.6	33.8	31.5	27.6	31.6	25.4	22.9	31.2	26.8	44.4	
14		37.7	35.9	36.8	39	22.7	<b>P</b>	27.9	25.5	30.8	27.7	34.2	34.8	32.8	26.8	26.2	21.9	18.5	20.4	23.4	22.2	11.6	9.4	10.5	11.5	39	
15		10.7	12	14.8	15.6	14.8	13.5	15.1	14.4	19.2	20.4	22.2	26.6	32.1	29.7	34.4	23.9	17.6	16.4	9.9	13.8	11.4	14	16.5	19.2	34.4	
16		19.2	21.2	21.6	16.1	17.1	19.2	21.8	12.1	15.7	19.4	26.5	25.7	24.6	21.2	19.5	15.8	13.7	15.7	15.6	16.7	11	12.8	15.6	21.8	26.5	
17		20.8	20.6	21.8	19.7	21.1	23.9	25.9	24.5	33.6	36.2	32.9	37.6	37	35.2	31.6	31.1	27.8	25.1	16.3	16.8	18.1	17.2	12.2	15.9	37.6	
18		17.9	17.3	18	17.2	18.4	20.4	19.9	14.3	15.2	8.7	8.3	10.9	14.3	10.1	30.8	39.7	12.2	11.4	11.4	13.1	19.3	19.4	23.2	21.5	39.7	
19		25.8	20.8	20.7	22.2	22.4	28.3	29.8	30.8	36.5	42.4	40	36.1	34.7	27.8	25.1	27.9	24.6	<b>P</b>	28.8	20.4	17.9	23.7	20.4	21.6	42.4	
20		10.3	13.5	14.9	15.6	11.3	11.8	11.4	7.3	12	21.6	28.8	29.4	30.8	36.2	23.3	20.3	35.2	10.4	15.2	16	10.4	11.6	9.4	9.8	36.2	
21		12	10.1	13.4	11.7	13.3	13.2	13.8	14.1	19.6	26	23.6	12.6	13.5	21.4	24.7	13.4	18.6	21.6	35.6	25.1	30.8	20.6	37	27.8	37	
22		20.7	20.1	20.3	15.4	12.6	17.9	21.8	25.1	30.2	26.3	18.6	17.4	13.7	14.6	19.7	24.7	24.1	18.1	19.3	13	8	7.9	7.6	7.5	30.2	
23		5.7	6.4	14.1	9.6	9	11.9	10.2	13.7	17.7	18.7	18.6	24.1	19.2	13.8	13	16.3	17	18.9	18.3	17.4	18	18.7	21.4	23.2	24.1	
24		22	18.4	11.8	20.3	27.3	25.7	28.2	13.9	16.6	14.7	14.4	14	15.9	17.5	18.2	20.3	19.3	21.6	21.3	28.5	39.5	30.1	24.8	24.3	39.5	
25		17.3	10.3	8.4	11.3	13.1	11.4	13.8	15.9	21.2	28.1	28.3	26.7	20.6	18.2	18.6	13.7	17.9	19.3	20.9	13.1	8.1	35.2	27.8	24.7	35.2	
26		22.8	24.7	25.4	23.3	20.7	35.8	30	27.3	25.9	31.5	38	39.8	42.1	36.6	35	28.5	26.7	26.6	29	20.3	15.2	13.9	14.5	16.2	42.1	
27		10.3	15.3	17.3	13.8	13.6	13.6	17.3	17	21.2	19.3	21	30.7	26.1	33.3	33.8	25.8	22.7	19.2	7.9	6.7	8.8	11.5	14.2	42.5	42.5	
28		35	25.7	26	26.6	29.7	26.7	17.7	14.2	21.4	12.7	14.3	24.2	20.7	21.5	18.8	25.8	28.2	29	22.6	18.4	11	7.9	11.4	15	35	
29		25.4	36	56.2	24.3	29	<b>P</b>	31.1	27.4	17.7	16.2	12.7	14.3	12.8	12.3	13.9	16.2	22.2	21.9	22.4	33.1	66.3	<b>P</b>	34.1	28.7	66.3	
30		31.7	26	30.3	30.9	23.8	12.2	15.2	12.2	21.7	30	36.1	33.1	24.2	25.3	25	26.5	<b>69.9</b>	52	35.7	30.6	33.1	14.3	10.9	11.6	<b>69.9</b>	
PEAK		41.6	36.0	56.2	39.0	33.9	35.8	35.0	32.2	36.5	42.4	40.0	44.5	42.1	46.0	44.4	40.8	69.9	52.0	37.1	44.7	66.3	35.2	37.5	42.5		

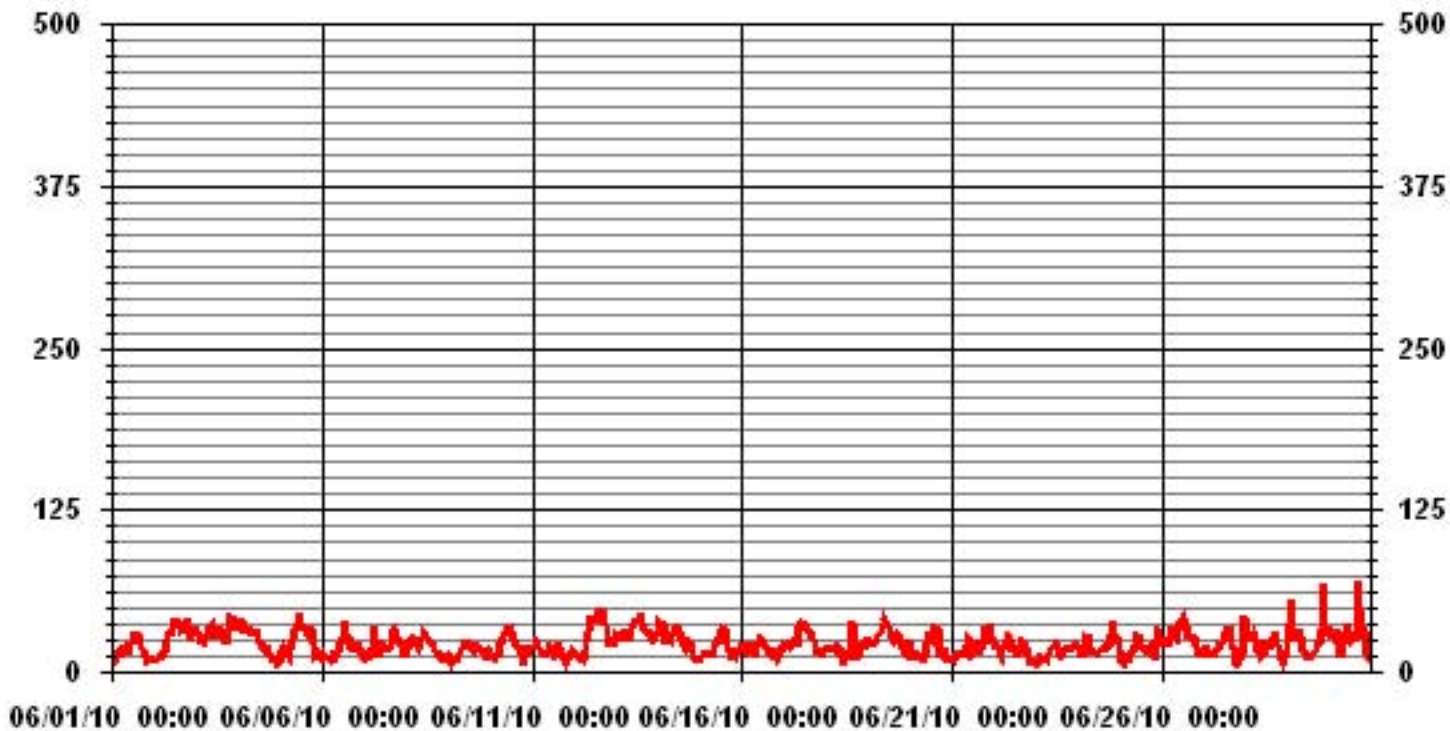
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

MAXIMUM INSTANTANEOUS READING	69.9	KPH	@ HOUR(S)	16
			ON DAY(S)	30

### 01 Hour Averages



— LICA31 WSMAX KPH



LICA31  
WSP / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 31  
Site Name : LICA31  
Parameter : WSP  
Units : KPH

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	1.38	.97	1.80	1.25	.55	1.66	.97	.83	.83	2.08	1.80	.83	.83	.97	1.11	2.08	20.00
< 12.0	2.50	3.19	3.05	1.80	4.44	2.36	2.50	1.52	2.50	4.86	3.19	2.91	4.16	3.61	6.52	4.72	53.88
< 20.0	.69	.27	.27	1.66	2.50	1.52	.69	.97	.83	2.22	1.52	3.19	2.08	2.22	1.94	1.38	24.02
< 29.0	.00	.00	.00	.00	.00	.00	.00	.00	.27	.27	.41	.69	.00	.00	.00	.00	1.66
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00	.13
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	4.58	4.44	5.13	4.72	7.50	5.55	4.16	3.33	4.44	9.44	6.94	7.63	7.22	6.80	9.58	8.19	

Calm : .27 %

Total # Operational Hours : 720

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	10	7	13	9	4	12	7	6	6	15	13	6	6	7	8	15	144
< 12.0	18	23	22	13	32	17	18	11	18	35	23	21	30	26	47	34	388
< 20.0	5	2	2	12	18	11	5	7	6	16	11	23	15	16	14	10	173
< 29.0									2	2	3	5					12
< 39.0													1				1
>= 39.0																	
Totals	33	32	37	34	54	40	30	24	32	68	50	55	52	49	69	59	

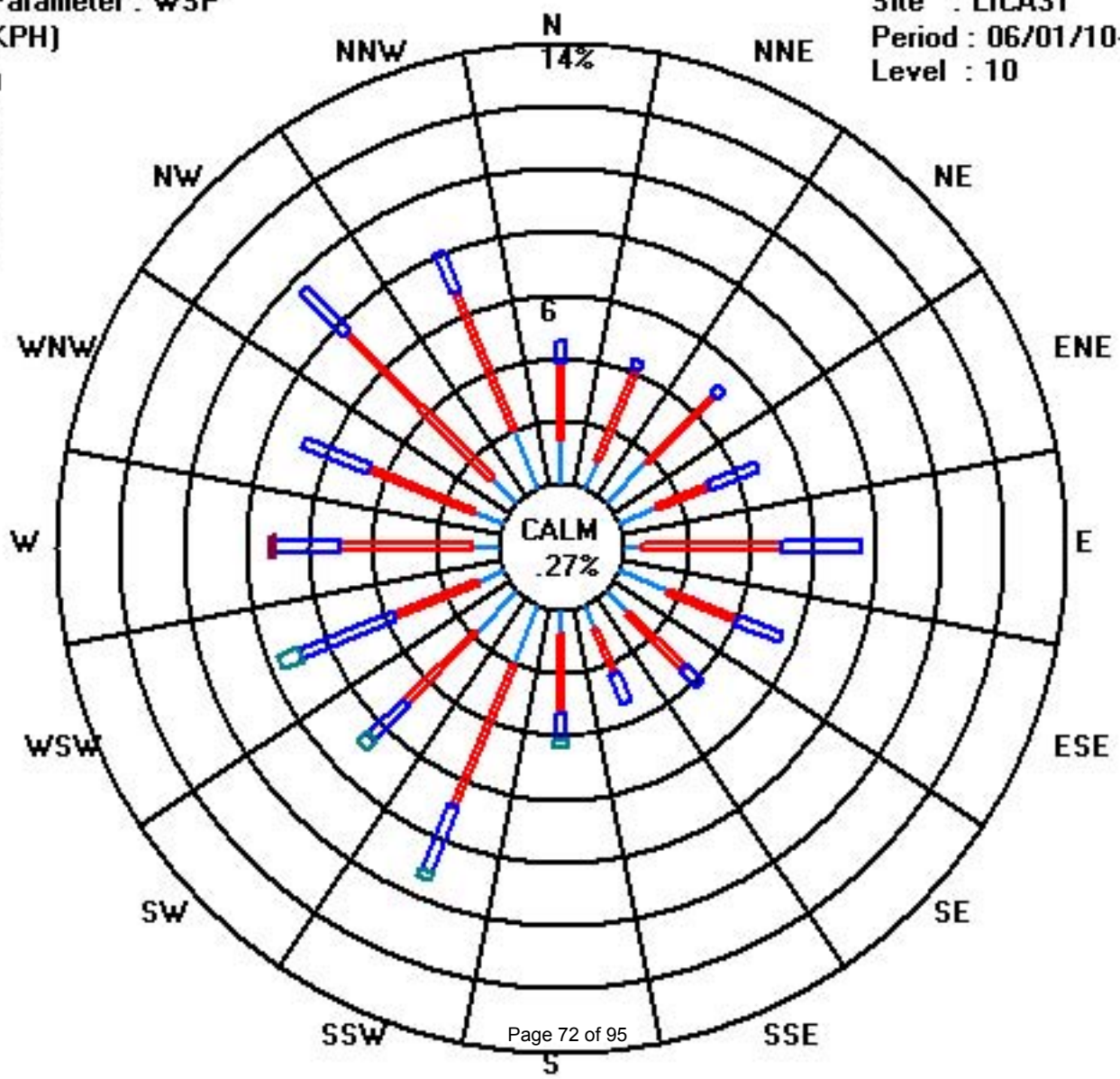
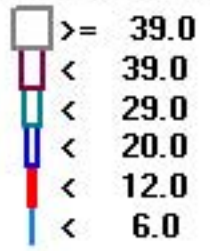
Calm : .27 %

Total # Operational Hours : 720

Class Limits (KPH)

Period : 06/01/10-06/30/10

Level : 10



# Vector Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA

JUNE 2010

## 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			
DAY	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	QUADRANT	RDGS.	
1	259	246	241	235	261	281	268	297	290	233	206	152	154	162	160	177	183	192	195	202	194	186	205	208	215	215	SSW	24		
2	194	175	162	164	169	168	149	140	128	151	156	157	146	132	122	123	122	124	115	107	99	96	101	109	131	109	SE	24		
3	107	103	111	100	100	85	80	81	67	68	77	72	59	61	68	59	55	43	346	310	307	306	300	299	58	299	ENE	24		
4	298	289	286	280	285	287	292	291	292	294	277	287	306	319	342	352	346	340	356	332	337	29	149	231	297	297	WNW	24		
5	259	248	278	282	279	283	287	296	298	297	309	319	326	324	324	346	346	339	335	319	330	307	292	336	310	310	NW	24		
6	342	284	261	268	248	232	251	271	298	304	274	265	256	248	233	227	212	260	260	183	145	112	92	36	250	250	WSW	24		
7	27	63	139	103	106	351	75	307	341	175	12	17	355	358	345	357	356	14	357	37	146	202	243	293	7	N	24			
8	8	44	45	49	37	39	33	15	1	338	336	324	322	326	332	347	357	336	320	335	9	2	19	40	0	N	24			
9	72	95	147	122	93	68	78	98	90	89	118	113	96	99	95	80	90	100	100	74	58	59	54	56	89	E	24			
10	54	54	46	42	33	32	41	39	54	57	67	92	87	80	67	108	108	91	71	20	197	214	224	235	72	ENE	24			
11	244	260	267	260	276	293	327	26	56	71	71	21	122	48	243	118	44	213	222	205	181	185	196	190	244	WSW	24			
12	196	200	186	197	182	194	220	228	213	215	211	200	202	200	198	200	203	209	202	191	194	198	200	197	202	202	SSW	24		
13	197	193	196	196	196	199	199	193	194	184	179	173	178	178	177	182	196	195	177	164	158	158	165	172	182	182	S	24		
14	268	336	341	340	341	321	321	317	319	315	336	334	326	324	328	322	325	343	326	324	334	339	301	304	325	325	NW	24		
15	330	347	333	343	325	330	339	347	7	0	339	320	321	309	303	306	303	297	294	319	308	309	304	308	322	322	NW	24		
16	313	316	312	323	331	318	316	290	283	291	280	324	327	353	17	9	337	330	314	333	342	353	3	13	325	325	NW	24		
17	19	25	26	30	26	27	35	33	34	22	2	1	359	1	18	24	23	359	340	339	344	13	37	359	14	NNE	24			
18	337	330	321	321	314	307	312	317	315	4	38	36	134	279	242	276	337	216	198	196	222	213	221	206	280	280	W	24		
19	219	226	218	208	205	216	220	227	232	227	236	241	239	244	239	251	266	270	250	245	185	202	216	227	231	231	SW	24		
20	155	184	187	200	216	231	223	173	198	223	232	236	244	243	167	282	268	201	224	202	209	230	242	248	220	220	SW	24		
21	187	195	197	196	208	206	191	202	202	238	256	249	304	284	323	320	209	218	183	113	75	147	307	340	223	223	SW	24		
22	233	4	354	345	351	356	44	59	74	85	72	70	49	331	350	9	23	25	21	35	37	71	91	114	39	39	NE	24		
23	95	53	32	34	52	61	102	136	127	138	156	145	148	167	109	89	99	130	128	131	126	106	124	137	115	115	ESE	24		
24	145	220	242	129	81	81	112	87	88	110	131	133	116	123	129	98	112	116	129	105	299	68	84	106	105	105	ESE	24		
25	112	145	208	217	202	185	216	235	254	249	252	264	316	324	303	277	233	243	255	246	212	252	277	341	252	252	WSW	24		
26	350	233	244	255	264	270	271	246	242	240	247	247	251	252	271	297	293	281	271	271	284	289	306	259	259	WSW	24			
27	312	257	265	262	249	262	271	278	287	304	309	287	301	295	313	317	313	330	14	58	82	105	130	242	286	286	WNW	24		
28	247	231	127	117	106	89	58	116	204	195	219	234	245	249	254	240	250	247	249	234	227	133	101	91	204	204	SSW	24		
29	96	85	344	40	69	79	85	94	149	188	224	106	131	86	86	74	108	124	98	112	172	337	40	46	82	82	E	24		
30	84	88	85	83	80	85	278	272	274	277	286	304	298	293	291	261	272	273	271	269	277	249	246	234	282	282	W	24		
HOURLY AVG	350	347	354	345	351	356	339	347	341	338	339	334	359	358	350	357	357	357	359	357	339	344	353	307	359					

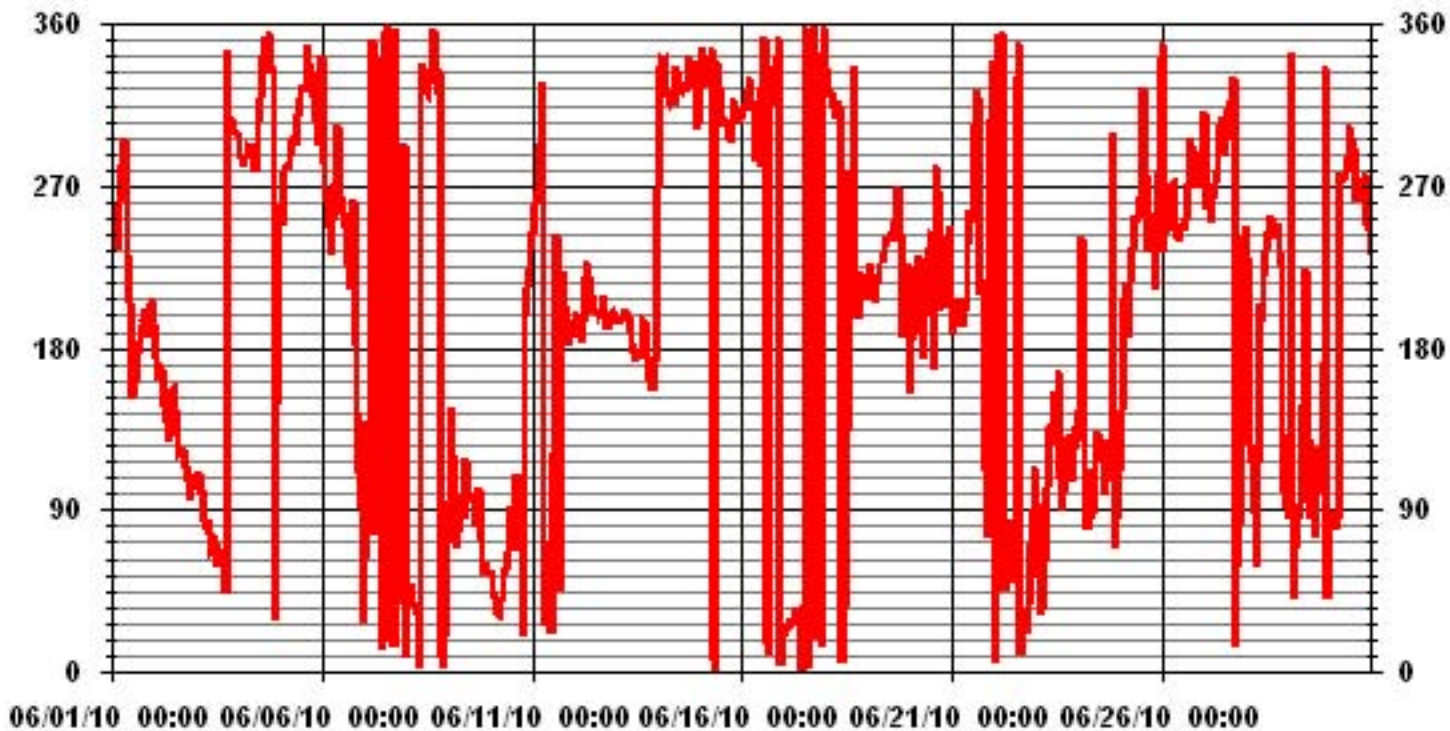
**STATUS FLAG CODES**

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

LAST CALIBRATION:	February 3, 2009
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS
STANDARD DEVIATION	102.40		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	263	DEG

### 01 Hour Averages



— LICA31 WDR DEG

# Standard Deviation Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

JUNE 2010

## STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

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

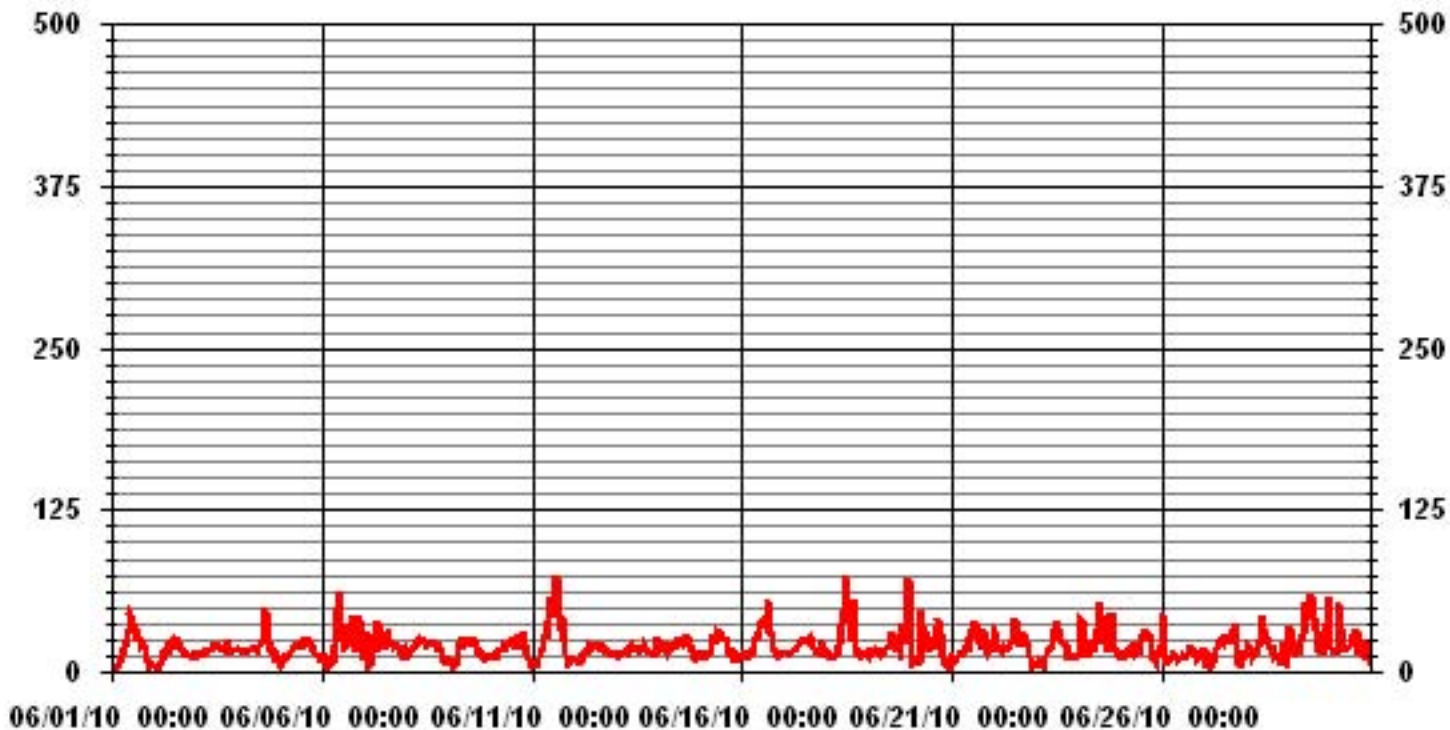
### STATUS FLAG CODES

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

LAST CALIBRATION: February-2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 719 HRS

### 01 Hour Averages



— LICA31 STDWDIR DEG



# Calibration Reports

# Sulphur Dioxide

### SO<sub>2</sub> Calibration Report

#### Station Information

Calibration Date	June 22, 2010	Previous Calibration	May 26, 2010
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	7:32	End Time (MST)	11:11
Reason:	Monthly Calibration		
Barometric Pressure	702 mmHg	Station Temperature	24 Deg C
Cal Gas	51.4 ppm	Cal Gas Expiry date	08/02/2012
DAS Output Voltage	0 - 1 Volts		

#### Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	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 - 1000 ppb		
Sample Flow / Box Temp	550 ccm 32.2 Deg C	543 ccm 33.3 Deg C	
HVPS / Lamp Setting	529 2549	529 2550	
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	58.6 1.129	58.6 1.152	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4920	77.8	800	782	1.0232
4920	77.8	800	800	1.0002
4960	38.9	400	399	1.0025
4982	15.6	160	160	1.0028
4998	0	0	0	N/A
Sum of Least Squares				1.0007
New Correction Factor				1.0002

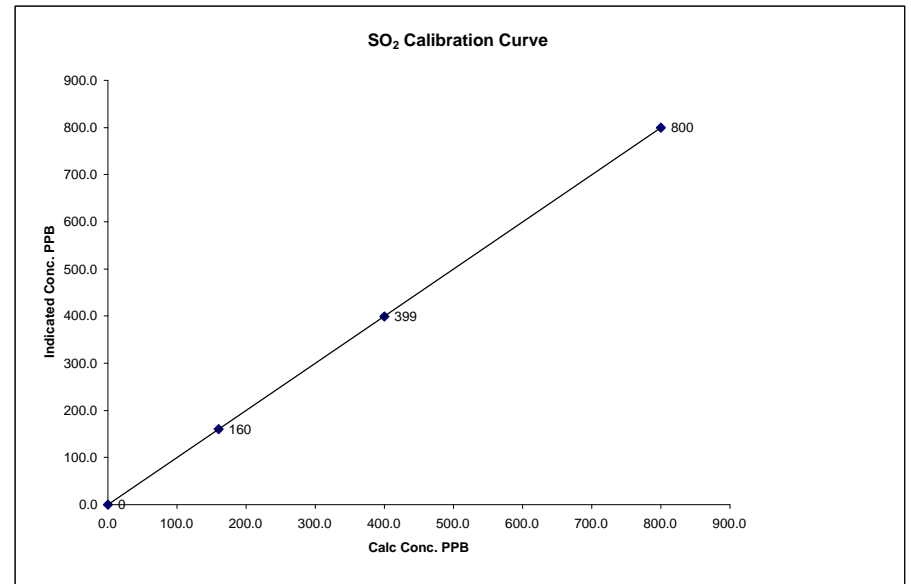
	Before Calibration	After Calibration
Auto Zero	1.2	0.8
Auto Span	365	370
Sample Lines Connected		YES
Percent Change from Previous Calibration		-2.4%

Calibration Performed by: Shea Beaton

### SO<sub>2</sub> Calibration Curve

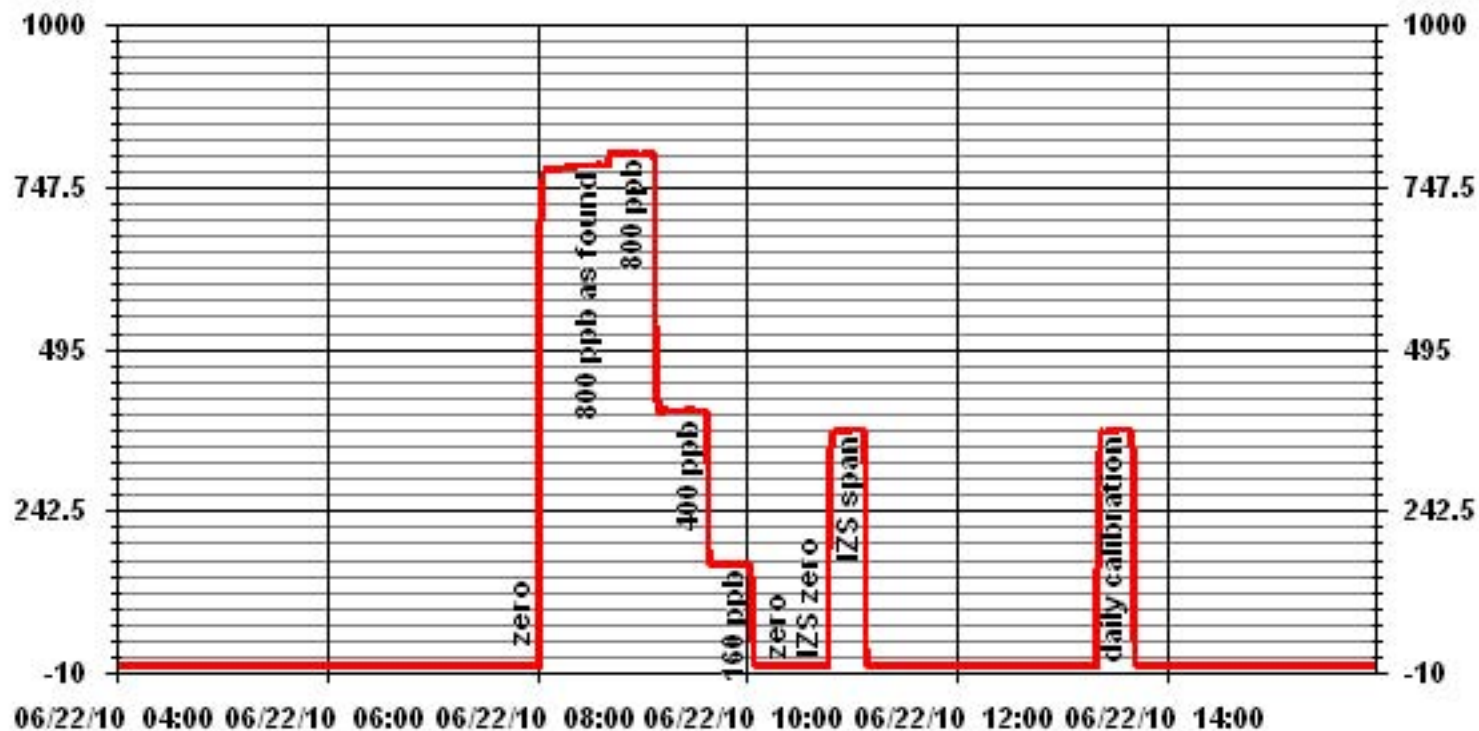
Calibration Date	June 22, 2010
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST. LINA
Start Time (MST)	7:32
End Time (MST)	11:11

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999998
0	0	n/a	Intercept	(± 3% F.S.)	-0.351620
160	160	1.0028			
400	399	1.0025			
800	800	1.0002			



Notes:

### 01 Minute Averages



# Hydrogen Sulphide

## H<sub>2</sub>S Calibration Report

### Station Information

Calibration Date	June 22, 2010		Previous Calibration	May 26, 2010	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	11:00	End Time (MST)	14:24		
Reason:	Monthly Calibration				
Barometric Pressure	702	mmHg	Station Temperature	24	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	547	ccm	35.7	Deg C	545
HVPS / Lamp Setting	534		2495		534
PMT / RxCell Temp	8.4	Deg C	50	Deg C	8.4
Converter / IZS Temp	315.5	Deg C	45	Deg C	315
Offset / Slope	58.5		0.876		58.5
					0.876

### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4962	37	80	80	0.9992
4982	18.5	40	40	0.9989
4987	10.7	23	23	1.0053
4998	0	0	1	N/A
Sum of Least Squares				0.9995
New Correction Factor				0.9992

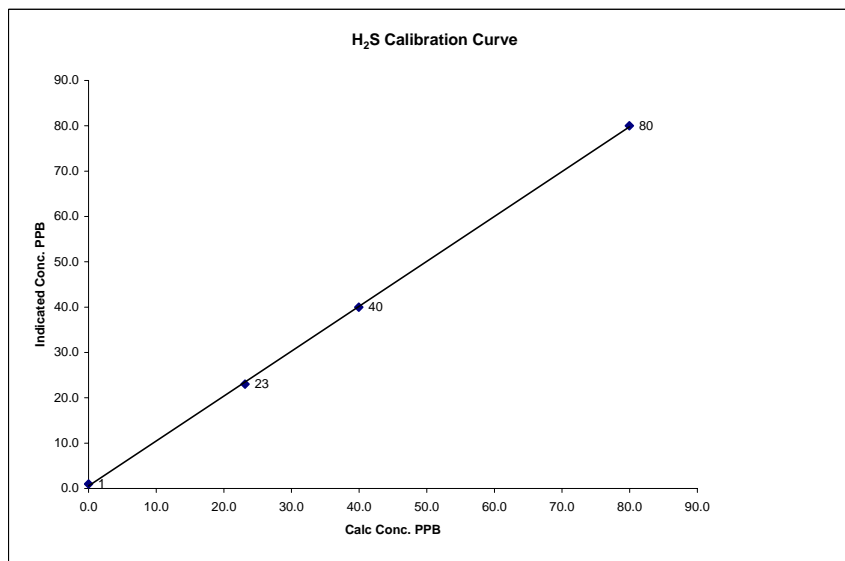
		Before Calibration	After Calibration
Auto Zero		1.1	1.1
Auto Span		54	52
Sample Lines Connected			YES
Percent Change from Previous Calibration			0.0%

Calibration Performed by: Shea Beaton

## H<sub>2</sub>S Calibration Curve

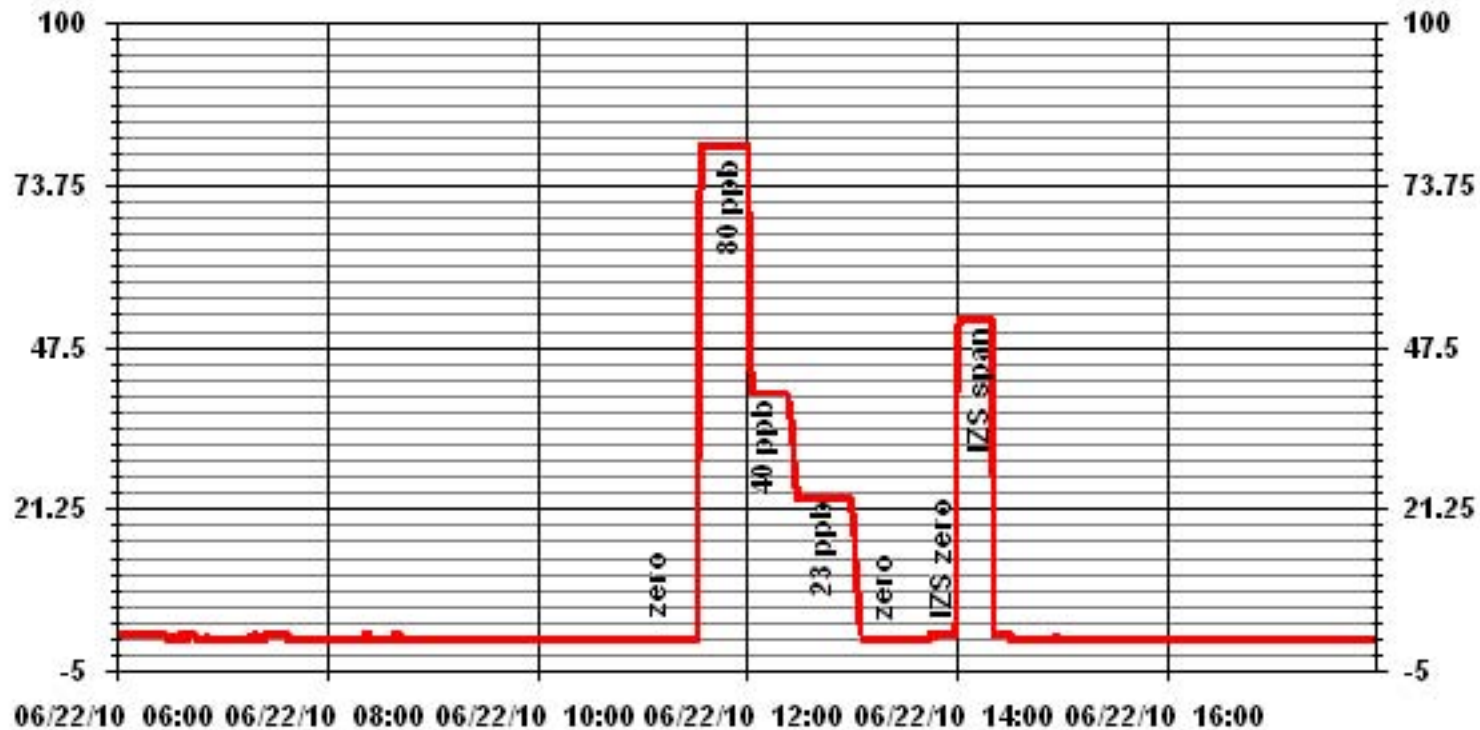
Calibration Date	June 22, 2010	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION	
Plant / Location	ST.LINA	
Start Time (MST)	11:00	End Time (MST) 14:24

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999853
0	1	n/a	Intercept	(± 3% F.S.)	0.573614
23	23	1.0053			
40	40	0.9989			
80	80	0.9992			



Notes:

### 01 Minute Averages



# Total Hydrocarbons



### THC Calibration Report

Station Information			
Calibration Date:	June 23, 2010	Previous Calibration	May 27, 2010
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location:	ST. LINA		
:	(MST) 9:08	End Time	(MST) 12:28
Reason:	Monthly Calibration		
Barometric Pressure:	705 mmHg	Station Temperature:	25 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207 Prop/ 602 Meth/1171.25 THC	ppm	Cal Gas Expiry Date: August 21, 2011
DAS make & Model:	ESC 8832	S/N :	AO717
Output Voltage Range:	0 - 10	VDC	

### Analyzer Information

Make / Model	TECO 51C	S/N :	77021-384	Method	Flame Ionization
--------------	----------	-------	-----------	--------	------------------

### Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 -50	ppm	0 - 50	ppm
Sample Pressure	6.9	psi	6.9	psi
Hydrogen Pressure	8	psi	8	psi
Air Pressure	21	psi	21	psi

### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0.0	0.0	0.0	N/A
1999	70.0	39.6	39.9	0.9931
1999	35.0	20.2	20.1	1.0027
1999	20.0	11.6	11.4	1.0177
1999	0	0.0	0.0	N/A
Correction Factor:				0.9931

Previous Calibration Correction Factor:	0.9877
Current Correction Factor Before Span Adjust:	0.9931
Percent Change:	-0.55%

### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	36.4	36.4
Sample Lines Connected		YES

### Cylinder Pressures

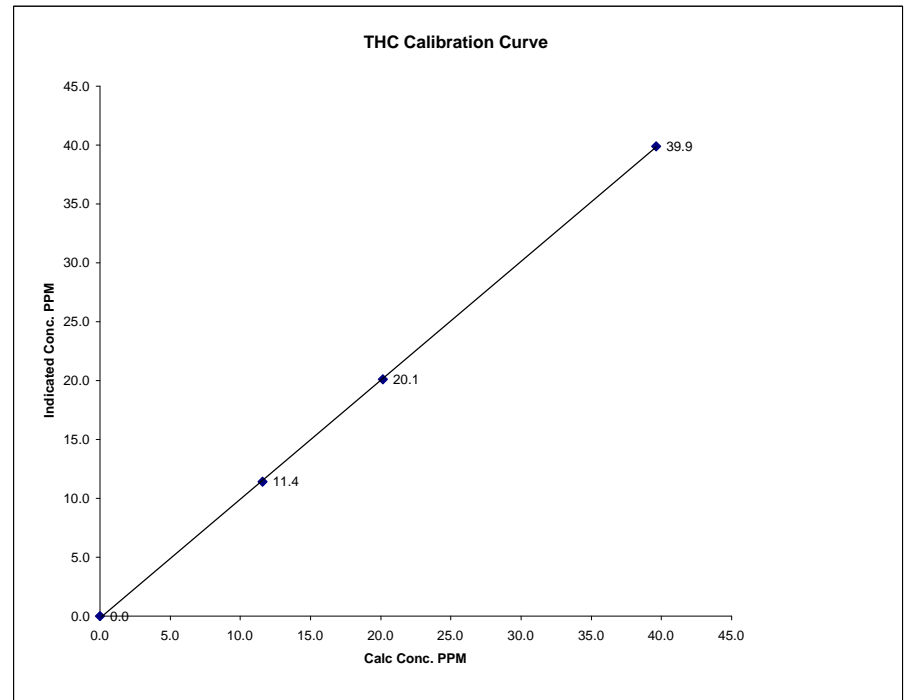
Span	1600	psi	
Hydrogen	1100	psi	
Zero Air	32	psi	Unlimited API 701

Calibration Performed by: Shea Beaton

### THC Calibration Curve

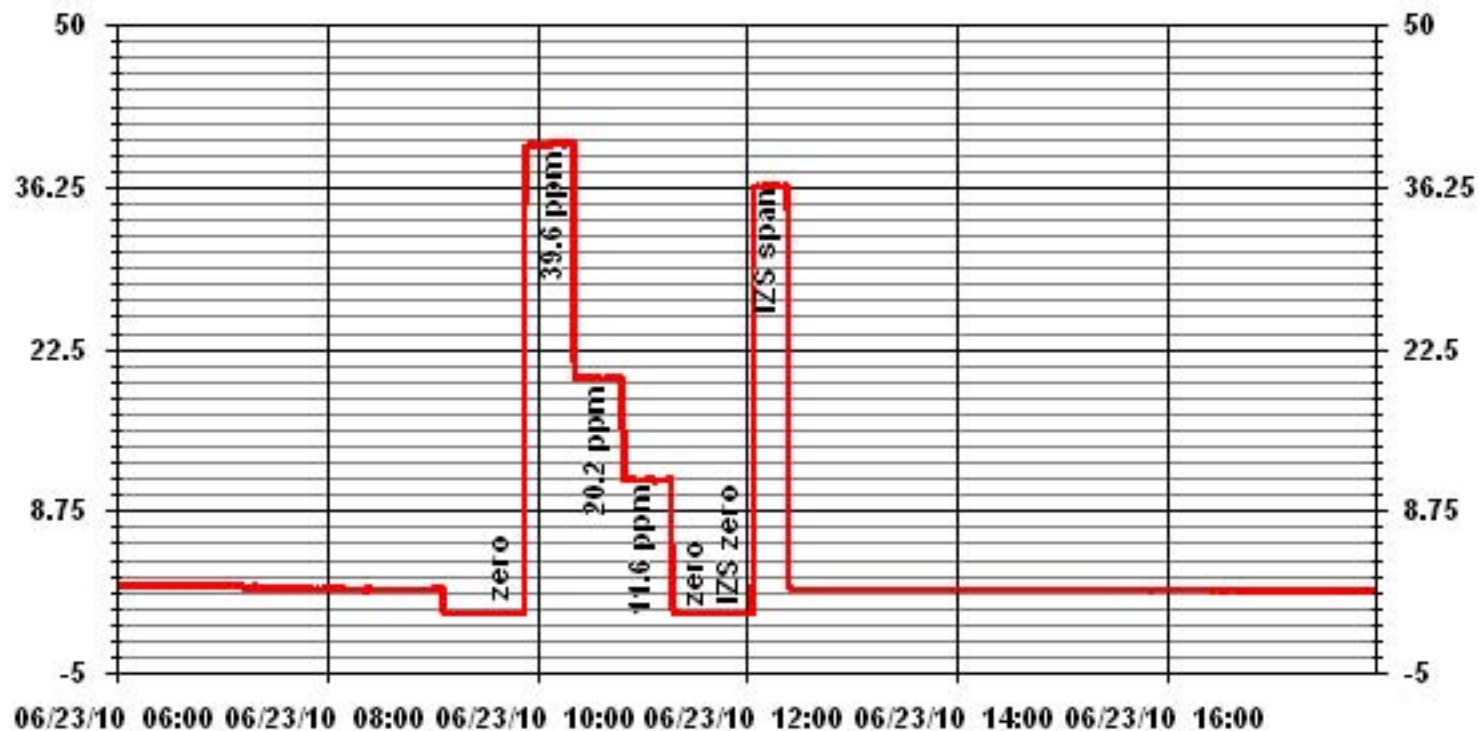
Calibration Date	June 23, 2010		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:08	End Time (MST)	12:28

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		0.999931	1.008471	-0.146964
11.6	11.4	1.0177			
20.2	20.1	1.0027			
39.6	39.9	0.9931			



Notes: Flame temp 175.

### 01 Minute Averages



# Nitrogen Dioxide

## NOx - NO- NO2 Calibration Report

### Station Information

Calibration Date	June 22, 2010	Previous Calibration	May 26, 2010
Company	LICA	Plant/Location	St. Lina
Start Time (MST)	7:32	End Time (MST)	16:10
Reason:	Monthly Calibration		Other
Barometric Pressure	702 mmHg	Station Temperature	24 Deg C
Cal Gas Concentration	NOx 50.9 ppm	NO 50.8 ppm	Cal Gas Expiry date 02/08/2012
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA Volts

### Equipment Information

Analyzer Make / Model:	API 100E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	EnviroNics 2000	S/N :	1991		

### Analyzer Settings

Before Calibration				After Calibration			
Concentration Range	0-1000			ppb			
Sample Flow/Conv. Temp	476 ccm	316.3 Deg C		471 ccm	316.2 Deg C		
Ozone Flow / Vacuum	73 ccm	3.9 "Hg-A		73 ccm	3.9 "Hg-A		
HVPS / A ZERO	646 Volts	18.8 MV		646 Volts	18.7 MV		
Rx/ Temp / PMT Temp	50.0 Deg C	6.9 Deg C		50.0 Deg C	6.9 Deg C		
Box Temp / IZS Temp	32.1 Deg C	45.2 Deg C		32.8 Deg C	45 Deg C		
Offset	1.6 NOx	0.4 NO		2.5 NOx	-0.2 NO		
Slope	1.100 NOx	1.094 NO		0.992 NOx	0.983 NO		
NO2 COEF / Conv Efficiency	NA NO2	0.993		NA NO2	0.993		

### Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
3006	0.0	----	0	0	0	1	0	1	----	----
3006	0.0	----	0	0	0	0	0	0	----	----
2966	44.4	----	751	749	----	832	831	2	0.9023	0.9016
2962	44.3	----	750	749	----	752	748	4	0.9974	1.0008
2983	23.6	----	400	399	----	398	396	2	1.0039	1.0069
2992	11.8	----	200	200	----	199	199	0	1.0048	1.0028
3005	0.0	----	0	0	0	0	1	-1	----	----

### Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		
2962	44.3	----	750	749	----	754	751	4	----	----
2962	44.3	550	750	----	432	754	323	431	1.0023	99.77%
2962	44.3	300	750	----	240	754	515	239	1.0042	99.58%
2962	44.3	100	750	----	76	755	679	76	1.0000	100.00%

Linearity	Sum of Least Squares		NOx= 0.999	NO= 1.002	NO2= 1.003
OK?	Yes	No	Correction Factors: NOx= 0.9974	NO= 1.0008	NO2= 1.0023
			Average Converter Efficiency= 99.78%		

Before Calibration				After Calibration			
Auto Zero	0.0 NOx	0.2 NO2		-0.7 NOx	-0.9 NO2		
Auto Span	536 NOx	526 NO2		478 NOx	469 NO2		
Sample Lines Connected				YES			

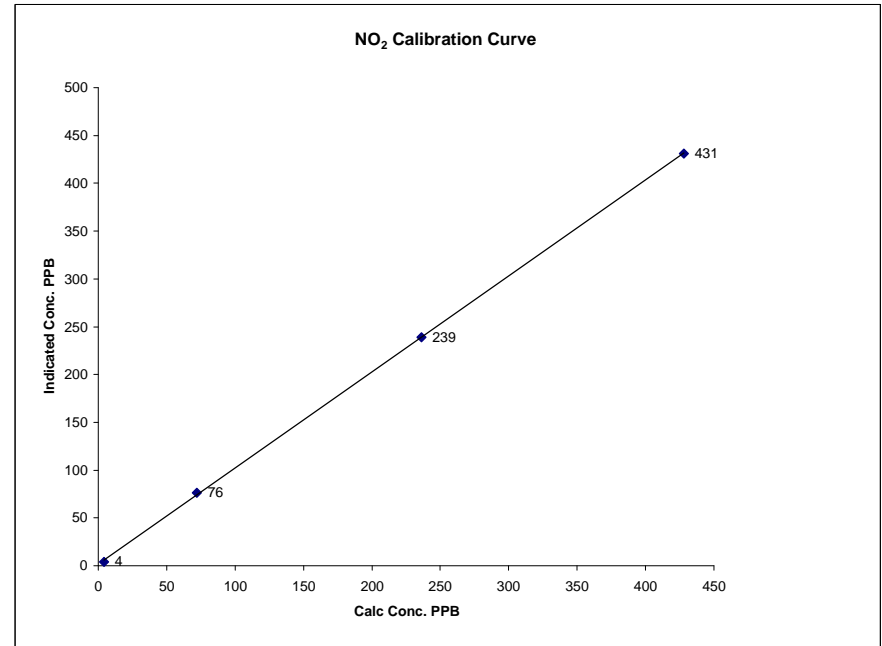
Notes Additional GPT point done for ozone calibration. O3 set point 450, NO=401, NO2=352

Calibration Performed by: Shea Beaton

## NO2 Calibration Curve

Calibration Date	June 22, 2010	<b>LICA</b>	
Company		<b>St. Lina</b>	
Plant / Location		End Time (MST)	16:10
Start Time (MST)	7:32		

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999933
ppb	ppb		Slope	(0.85 to 1.15)	1.004012
4	4	N/A	Intercept	(± 3% F.S.)	1.75779
72	76	0.9474			
236	239	0.9874			
428	431	0.9930			

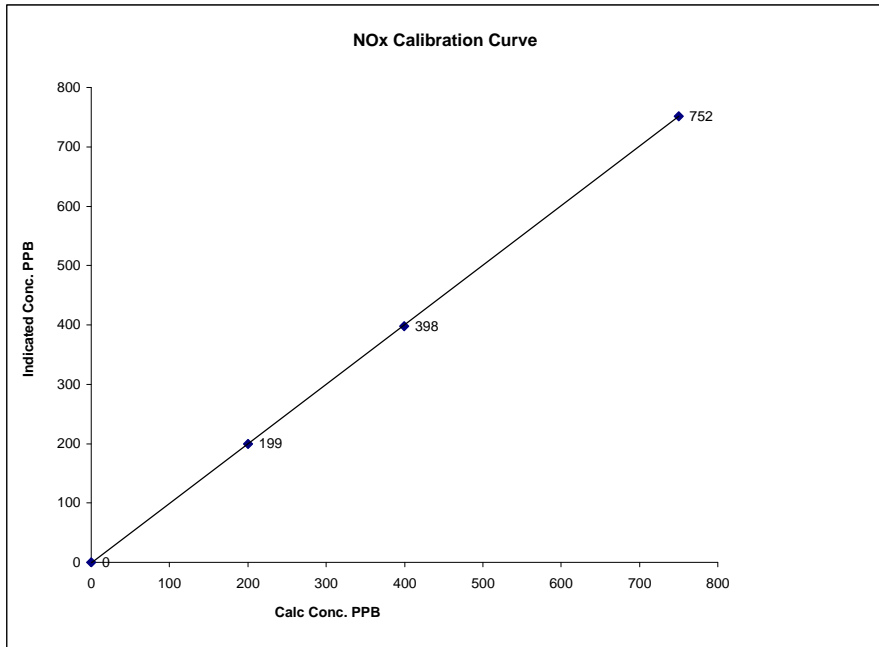


Notes:

### NOx Calibration Curve

Calibration Date June 22, 2010  
 Company LICA  
 Plant / Location St. Lina  
 Start Time (MST) 7:32 End Time (MST) 16:10

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999985
0	0	N/A	Slope (0.85 to 1.15)	1.002741
200	199	1.0048	Intercept (± 3% F.S.)	-1.05872
400	398	1.0039		
750	752	0.9974		

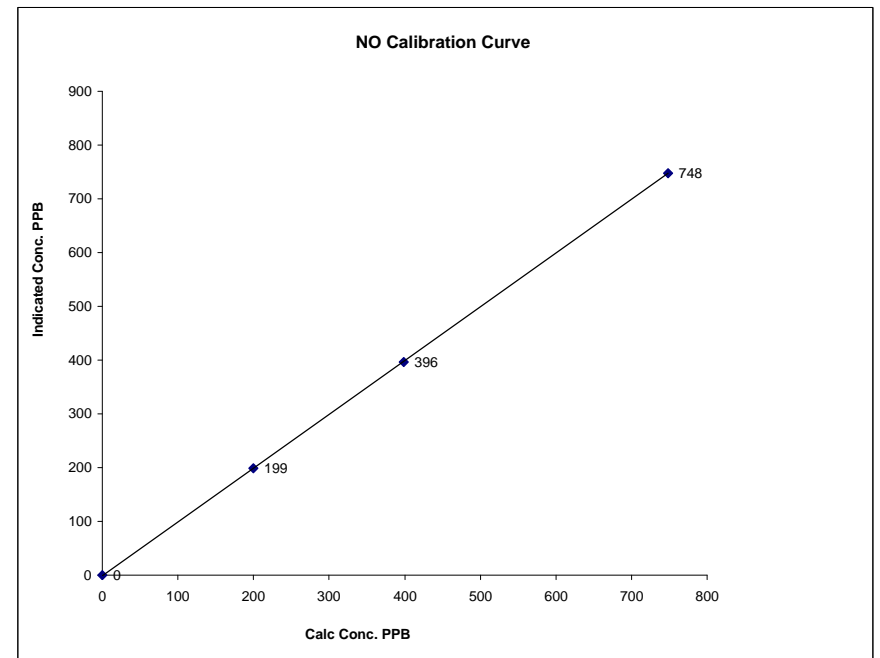


Notes:

### NO Calibration Curve

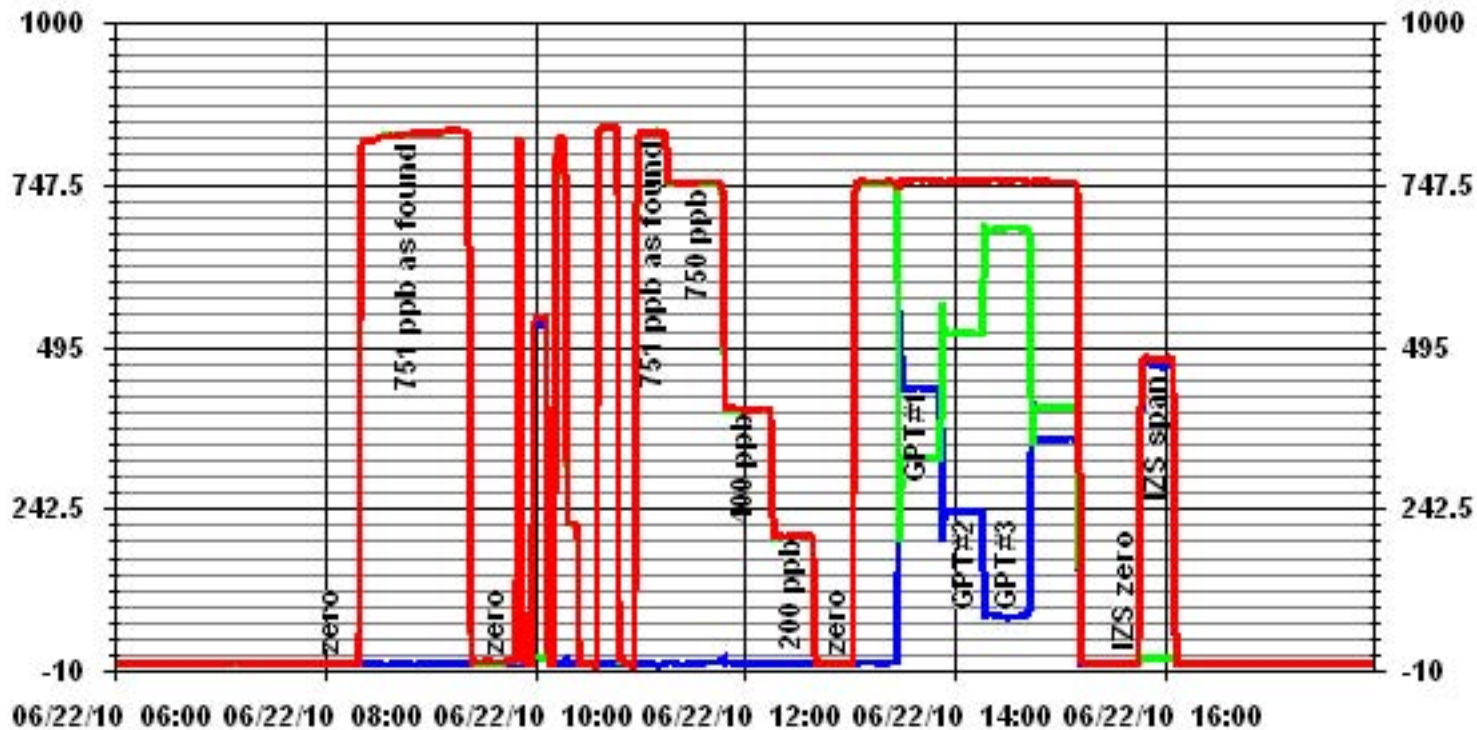
Calibration Date June 22, 2010  
 Company LICA  
 Plant / Location St. Lina  
 Start Time (MST) 7:32 End Time (MST) 16:10

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999987
0	0	N/A	Slope (0.85 to 1.15)	1.000684
200	199	1.0028	Intercept (± 3% F.S.)	-5.2283
399	396	1.0069		
749	748	1.0008		



Notes:

### 01 Minute Averages



# Ozone

### O<sub>3</sub> Calibration Report

#### Station Information

Calibration Date	June 23, 2010	Previous Calibration	May 26, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	St. Lina		
Start Time (MST)	8:43	End Time (MST)	13:05
Reason:	Monthly Calibration		
Barometric Pressure	705 mm Hg	Station Temperature	27 Deg C
DAS Output Voltage	0 - 10 Volts		

#### Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240371	Method:	Fluorescent
Calibrator Make / Model:	EnviroNics 2000	S/N :	1991	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO 717		

#### Analyzer Settings

	Before Calibration		After Calibration	
	0 - 500 ccm		ppb	
Concentration Range	739 ccm	731 ccm	743 ccm	732 ccm
Cell A Flow / Cell B Flow	696.3 mmHg		701 mmHg	
Pressure	53.8 Deg C		53.8 Deg C	
Bench Temp	68 Deg C	32.8 Deg C	68 Deg C	31.2 Deg C
O3 Lamp / Box Temp	-0.2	1.013	-0.2	0.991
Offset / Slope				

#### Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
3005	0	0	0	N/A
3003	450	395	404	0.9777
3003	450	395	395	1.0000
3003	275	247	246	1.0041
3303	140	119	122	0.9754
3003	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				1.0000

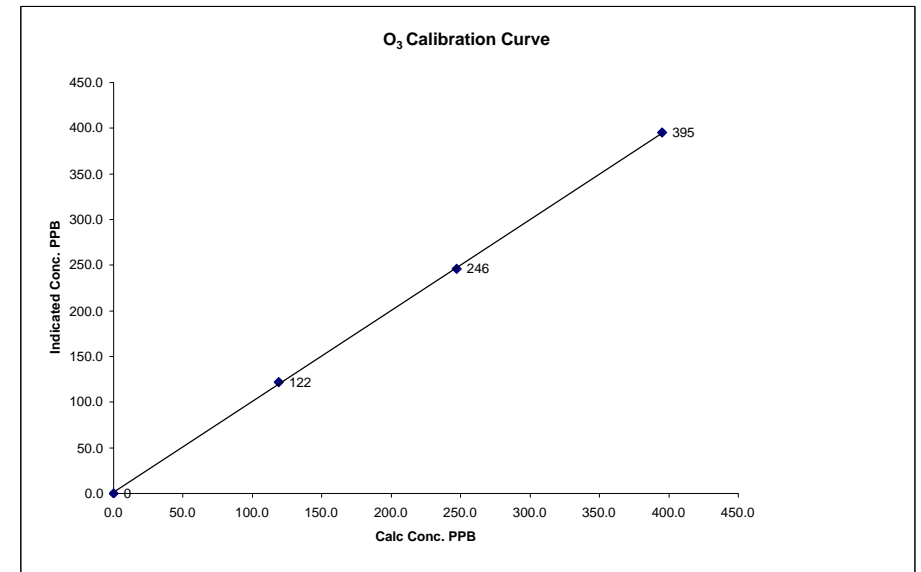
	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	335	325
Sample Lines Connected		YES
Percent Change from Previous Calibration		2.3%

Calibration Performed by: Shea Beaton

### O<sub>3</sub> Calibration Curve

Calibration Date	June 23, 2010
Company	Lakeland Industry & Community Association
Plant / Location	St. Lina
Start Time (MST)	8:43
End Time (MST)	13:05

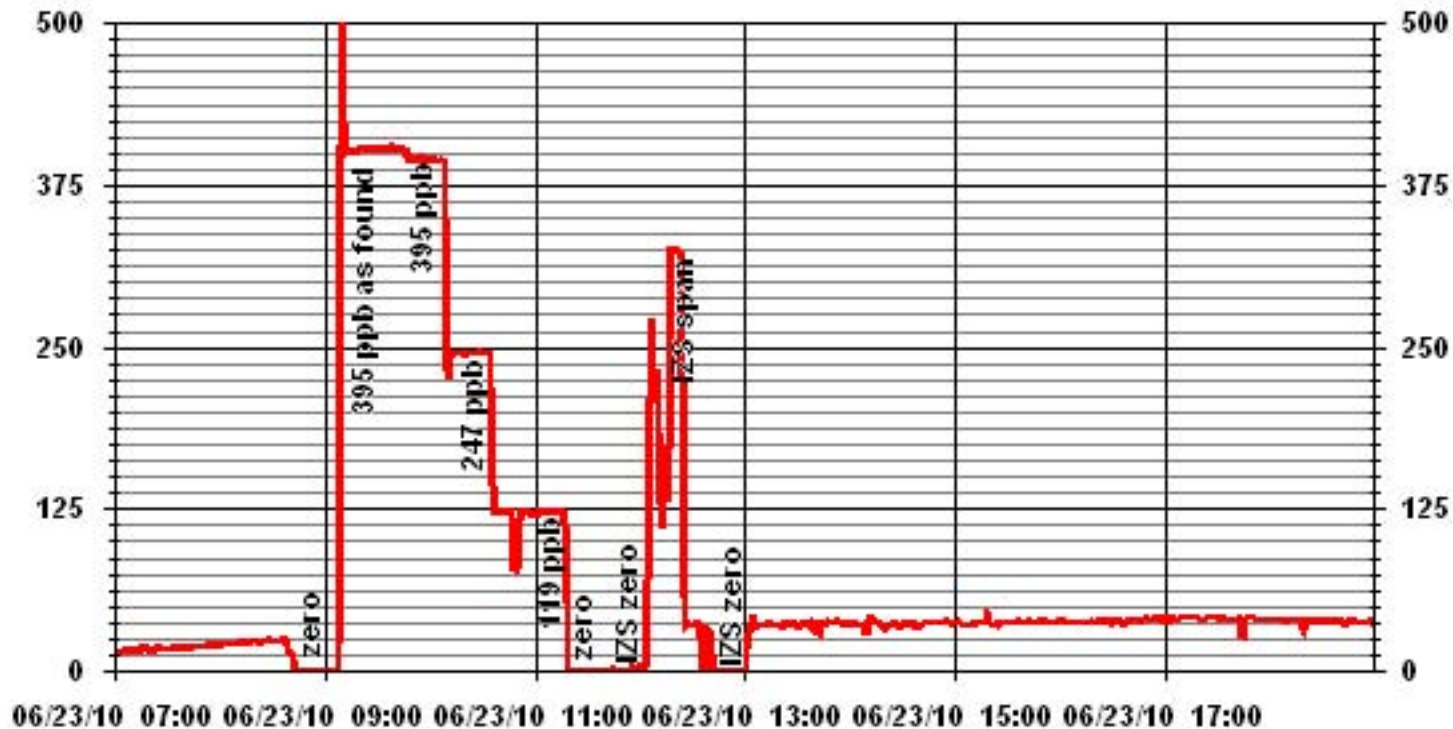
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995) (0.85 to 1.15)	Intercept (± 3% F.S.)	
0	0	n/a			0.999905
119	122	0.9754			0.996870
247	246	1.0041			
395	395	1.0000			1.095531



Notes:



### 01 Minute Averages



# Lakeland Industry & Community Association

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

Ambient Air Monitoring Data Report

For

June 2010

Prepared By:



*Driven by Service and Science*

July 30, 2010

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

## Table of Contents

	Page		Page
Introduction	3	Polycyclic Aromatic Hydrocarbons	89
Calibration Procedure	4	Calibration Reports	93
Monthly Continuous Summary	5	• Sulphur Dioxide	94
Polycyclic Aromatic Hydrocarbons Data Summary	6	• Hydrogen Sulphide	102
General Monthly Summary	8	• Particulate Matter 2.5	105
Continuous Monitoring	12	• Nitrogen Dioxide	107
• Monthly Summaries, Graphs & Wind Roses	13	• Ozone	111
○ Air Quality Index	14	• Total Hydrocarbons	114
○ Sulphur Dioxide	16	Polycyclic Aromatic Hydrocarbons Laboratory	
○ Hydrogen Sulphide	24	Analysis	117
○ Particulate Matter 2.5	32		
○ Nitrogen Dioxide	37		
○ Nitric Oxide	45		
○ Oxides of Nitrogen	52		
○ Ozone	60		
○ Total Hydrocarbons	68		
○ Vector Wind Speed	76		
○ Vector Wind Direction	83		
○ Standard Deviation Wind Direction	86		

# 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: June 2010

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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

## Calibration Procedure

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

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

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

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

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

# MONTHLY CONTINUOUS DATA SUMMARY

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

### Continuous Ambient Monitoring – June 2010

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 <sub>2</sub> (PPB)	172	57	0	0	0.07	3	17	11	17.6	6(N)	0.4	12, 18	100.0
H <sub>2</sub> S (PPB)	10	3	-	-	0.09	3	VAR	VAR	VAR	VAR	0.6	28	100.0
THC (PPM)	-	-	-	-	2.15	5.5	3	20	8.9	28(NNE)	2.7	7	100.0
NO <sub>2</sub> (PPB)	212	106	0	0	1.20	9	15	3	5.1	243(WSW)	2.6	7	100.0
NO (PPB)	-	-	-	-	0.12	8	22	23	2.7	275(W)	0.7	22, 23	100.0
NO <sub>x</sub> (PPB)	-	-	-	-	1.37	12	22	23	2.7	275(W)	3.1	7	100.0
O <sub>3</sub> (PPB)	82	-	0	-	27.20	59	21	11, 12	5.9, 7.4	305(WN), 311(NW)	40.7	13	100.0
PM 2.5 (UG/M <sup>3</sup> )	-	30	-	0	5.71	48.1	15	21	2.5	293(WNW)	15.9	18	98.5
VECTOR WS (KPH)	-	-	-	-	8.73	24.5	30	17	-	270(W)	13.6	3	100.0
VECTOR WD (DEGREES)	-	-	-	-	233(SW)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

# Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

### PUF cartridge – May 20, 2010

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

### PUF cartridge – May 26, 2010

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

# Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

### PUF cartridge – June 01, 2010

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

### PUF cartridge – June 07, 2010

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

### PUF cartridge – June 13, 2010

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

### PUF cartridge – June 19, 2010

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

### PUF cartridge – June 25, 2010

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



# General Monthly Summary

## Equipment Operation

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

### AQM STATION – LICA – PORTABLE

#### Sulphur Dioxide (PPB)

- Analyzer make / model – API 100E, S/N: 467

No operational issues observed during the month. The inlet filter was replaced before the monthly calibration was started. 3 hours of maximum concentration values were invalidated due to small power outages this month. Data was corrected using daily zero information.

#### Hydrogen Sulphide (PPB)

- Analyzer make / model – API 101E, S/N: 509
- Converter - Internal

No operational issues observed during the month. The inlet filter was replaced before the monthly calibration was started. 3 hours of maximum concentration values were invalidated due to small power outages this month. Data was corrected using daily zero information.

#### Nitrogen Dioxide (PPB)

- Analyzer make / model – API 200E, S/N: 593

No operational issues observed during the month. The inlet filter was replaced before the monthly calibration was started. Additional NO<sub>2</sub> point was performed after calibration for ozone. 3 hours of maximum concentration values were invalidated due to small power outages this month. Data was corrected using daily zero information.

# General Monthly Summary

## AQM STATION – LICA – PORTABLE

### Ozone (PPB)

- Analyzer make / model – API 700, S/N: 446 replaced to Thermo 49i, S/N: 1002240372

No operational issues observed during the month. The inlet filter was replaced before the monthly calibration was started. Some span values went outside of –10% limited range because the expected span value was setup too high last month. 3 hours of maximum concentration values were invalidated due to small power outages this month. Data was corrected using daily zero information.

### THC (PPM)

- Analyzer make / model – TECO 51C, S/N: 04366-09739

No operational issues observed during the month. The inlet filter was replaced before the monthly calibration was started. 3 hours of maximum concentration values were invalidated due to small power outages this month. Data was corrected using daily zero information.

### Particulate Matter 2.5 ( $\mu\text{g}/\text{m}^3$ )

- Analyzer make / model –TEOM 1405F, S/N: 1405A207691003

The Teom unit was working well throughout the month. A routine Teom audit was performed on June 17<sup>th</sup>. The Teom filters were replaced and the Teom inlet was cleaned on June 17<sup>th</sup>. 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. 11 hours of data were invalidated as they were below –3.0  $\mu\text{g}/\text{m}^3$ . The new Teom 1405F unit output provides hourly average, but no instantaneous output. As a result, no hourly maximum value is recorded, and no wind speed maximum value will be included in the report.

# General Monthly Summary

## AQM STATION – LICA – PORTABLE

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

- System make / model – RM Young 5103VK, S/N: 41334

No operational issues observed during the month. The wind system is reported as vector wind speed and vector wind direction. 1 hour of data for the standard deviation wind direction was invalidated due to a small power outages this month.

### Datalogger

- System make / model - ESC 8832, S/N: AO717
- Software make / version - ESC v 5.51a

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

### Trailer

No issue was observed this month.

# General Monthly Summary

## AQM STATION – LICA – PORTABLE

### **Air Quality Index (AQI)**

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. 12 hours of fair AQI values recorded in June 2010; 10 hours are due to Ozone and 2 hours are due to PM2.5. The highest hourly concentration of Ozone was 59 ppb and an AQI value of 33 on June 21<sup>st</sup>, hour 11 and 12. The highest hourly concentration of PM2.5 was 48.1 ug/m<sup>3</sup> and an AQI value of 35, hour 21 on June 15<sup>th</sup>.

### **Volatile Organics (VOCs)**

The volatile organics were sampled from June 1<sup>st</sup> to June 25<sup>th</sup>. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle.

No VOCs lab result is included in this report as the data is not available when the monthly report is completed. The results for June will be included in the monthly report next month.

### **Polycyclic Aromatic Hydrocarbons (PAHs)**

The PAHs were sampled from June 1<sup>st</sup> to June 25<sup>th</sup>. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the PAHs in this report were reported as ng/m<sup>3</sup>.

The lab result for May 20<sup>th</sup> and 26<sup>th</sup> are also included in this report.

# Continuous Monitoring

# Monthly Summaries, Graphs & Wind Roses

# Air Quality Index





# Sulphur Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

## SULPHUR DIOXIDE (SO<sub>2</sub>) 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	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	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	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1	0.2	24	
3	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	
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	0	IZS	0	0	0	0.0	24	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0.0	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	1	1	1	1	1	1	1	1	1	1	1	1	0.4	24
13	0	0	1	1	0	1	1	1	1	1	1	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24	
14	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	1	C	C	C	C	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
17	0	0	0	0	0	0	0	0	0	IZS	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
18	0	0	0	0	1	1	1	2	IZS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4	24	
19	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
20	0	0	0	0	0	0	0	IZS	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24	
21	0	0	0	0	0	IZS	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.3	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	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	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	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	
26	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	
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	IZS	0	0.0	24	
28	0	0	0	0	0	0	0	0	0	C	C	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	IZS	0	0	0	0	0	0.0	24	
HOURLY MAX	0	0	1	1	1	1	1	2	1	1	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.3	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1				

**STATUS FLAG CODES**

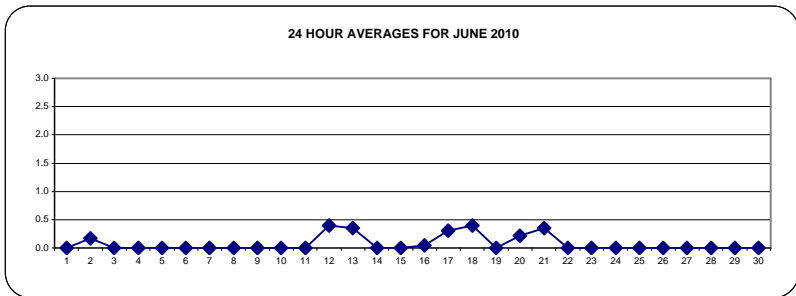
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**OBJECTIVE LIMIT:**

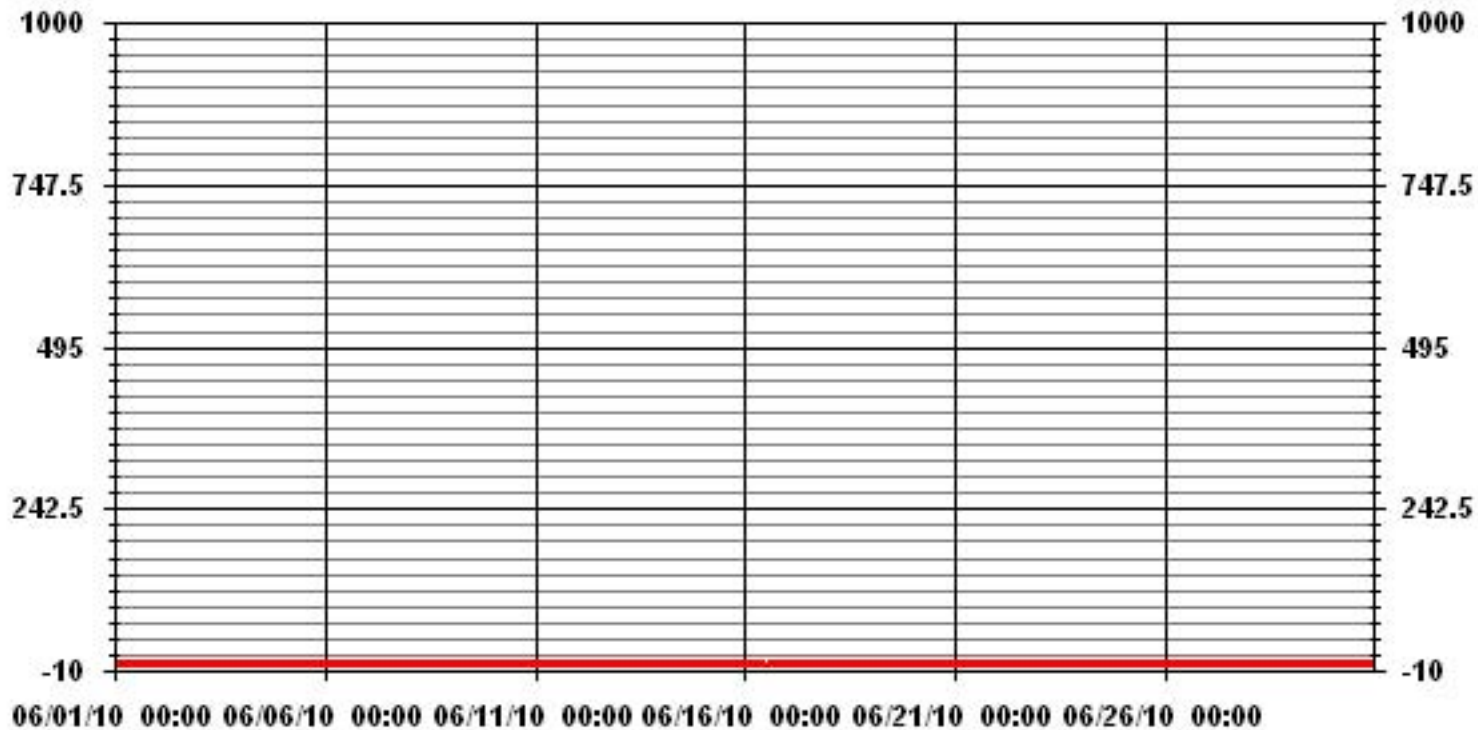
<b>ALBERTA ENVIRONMENT:</b>	1-HR	172	PPB	24-HR	57	PPB
-----------------------------	------	-----	-----	-------	----	-----

**MONTHLY SUMMARY**

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	45					
MAXIMUM 1-HR AVERAGE:	3	PPB	@ HOUR(S)	11	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:	0.4	PPB			ON DAY(S)	12, 18
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.30		MONTHLY AVERAGE:	0.07	PPB	



### 01 Hour Averages



— LICA33 SO2\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -PORTABLE SITE

JUNE 2010

## 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		
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	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	24
2		1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	1	1	2	1	2	1	2	1.2	24
3		IZS	0	1	1	0	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	IZS	1	0.8	24
4		1	1	1	0	1	1	1	0	0	1	1	0	0	0	0	1	1	0	0	1	0	0	0	IZS	0	1	0.5	24
5		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.0	24
6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0.0	24
7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	IZS	0	0	0	0	0	1	0.2	24
8		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	1	1	1	1	1	1	0.2	24
9		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	1	0.7	24
10		0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	IZS	0	0	0	1	0	0	0	0	1	0.1	24
11		0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	0.7	24
12		1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	2	2	2	2	2	1	1	1	2	2	2	1.3	24
13		1	1	2	2	1	3	2	2	2	2	2	1	1	IZS	0	1	0	0	0	0	1	1	1	0	1	3	1.2	24
14		1	1	1	0	0	0	0	0	0	0	1	1	1	IZS	0	0	0	0	0	0	0	0	1	0	0	1	0.3	24
15		0	0	0	0	0	1	1	0	0	1	0	IZS	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2	24
16		0	0	0	0	0	3	0	0	0	1	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	3	0.2	24
17		1	1	1	1	1	1	1	1	1	1	IZS	3	4	3	2	1	1	1	1	1	1	1	1	1	1	4	1.3	24
18		1	1	1	2	2	2	2	3	IZS	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	3	1.5	24
19		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	1.0	24
20		1	1	1	1	1	1	1	IZS	1	1	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	3	1.3	24
21		1	1	1	1	1	1	IZS	1	1	1	2	2	3	3	2	2	2	P	1	1	1	1	1	1	1	3	1.4	23
22		1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
23		1	1	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
24		1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0.3	24
25		0	IZS	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	1	0	0	1	0	0	1	0.3	24	
26		IZS	0	1	0	1	0	0	0	1	0	0	0	0	1	1	1	0	1	0	0	0	1	1	1	IZS	1	0.5	24
27		1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	IZS	0	1	0.2	24
28		0	1	0	0	0	1	1	1	1	C	C	1	1	0	0	1	1	0	0	0	1	IZS	0	0	1	0.5	24	
29		0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	1	1	0.9	23
30		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	P	1	1	IZS	1	0	0	1	0.9	23	
HOURLY MAX		1	1	2	2	2	3	2	3	2	2	3	4	3	3	2	2	2	2	2	2	2	1	1	2	2			
HOURLY AVG		0.6	0.6	0.7	0.6	0.6	0.8	0.7	0.6	0.6	0.8	0.9	0.9	0.9	0.8	0.7	0.8	0.9	0.5	0.7	0.6	0.6	0.6	0.6	0.5				

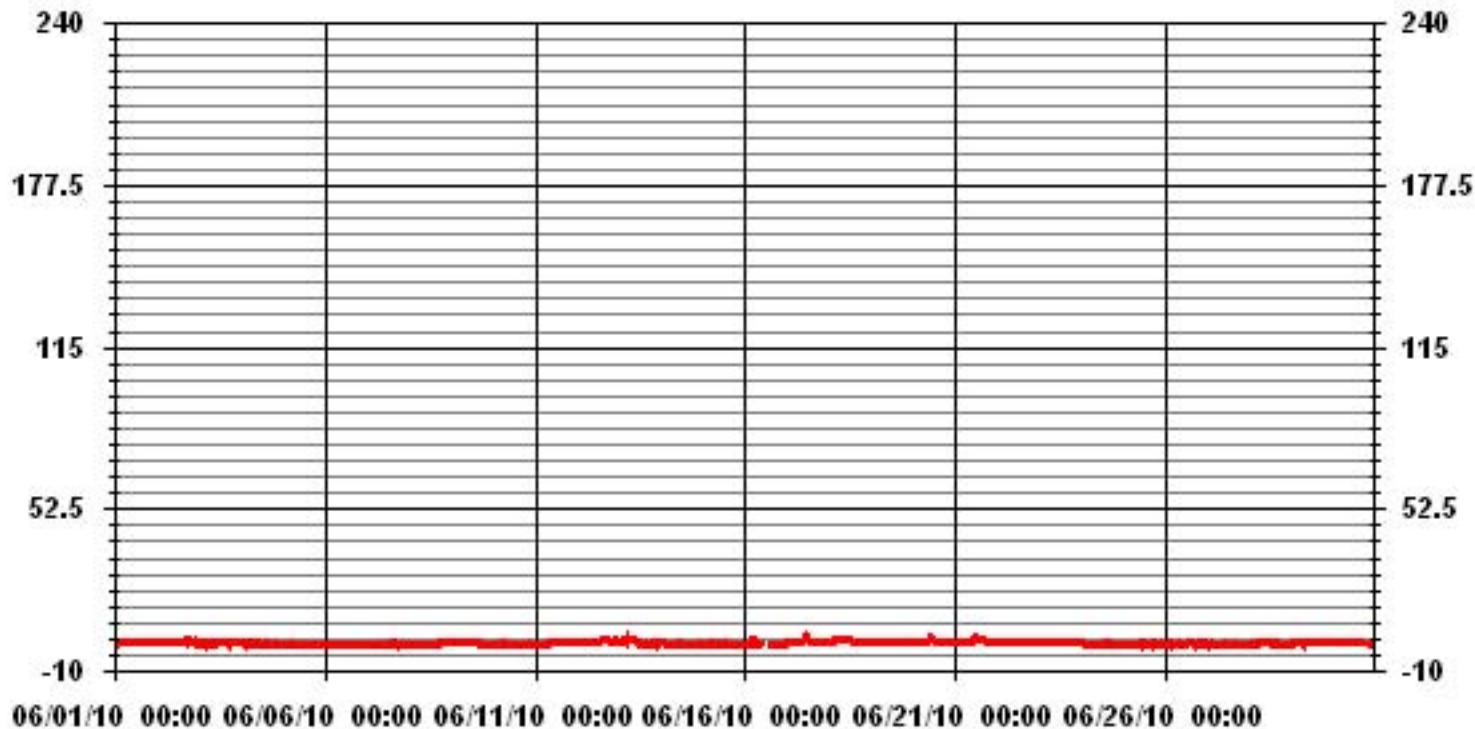
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	406
MAXIMUM INSTANTANEOUS VALUE:	4 PPB @ HOUR(S) 11 ON DAY(S) 17
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	8 HRS
STANDARD DEVIATION:	0.64
OPERATIONAL TIME:	717 HRS

### 01 Hour Averages



— LICA33 SO2MAX PPB

LICA33  
 SO2\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : SO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	4.83	4.09	5.12	5.41	6.88	7.32	4.24	4.97	5.71	6.14	10.39	6.14	8.93	8.19	7.61	3.95	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	4.83	4.09	5.12	5.41	6.88	7.32	4.24	4.97	5.71	6.14	10.39	6.14	8.93	8.19	7.61	3.95	

Calm : .00 %

Total # Operational Hours : 683

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	33	28	35	37	47	50	29	34	39	42	71	42	61	56	52	27	683
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	33	28	35	37	47	50	29	34	39	42	71	42	61	56	52	27	

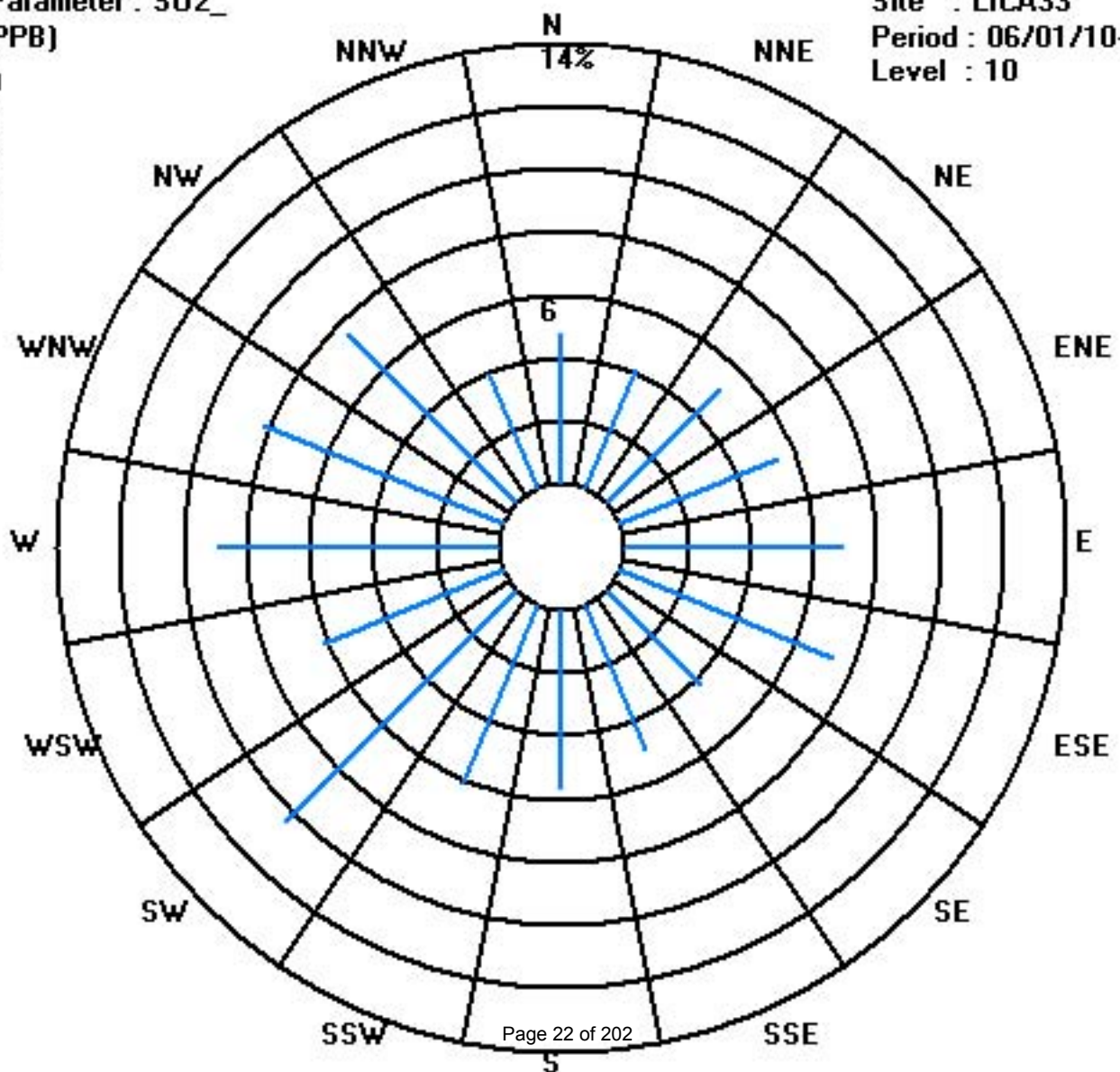
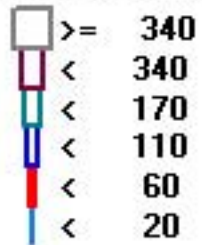
Calm : .00 %

Total # Operational Hours : 683

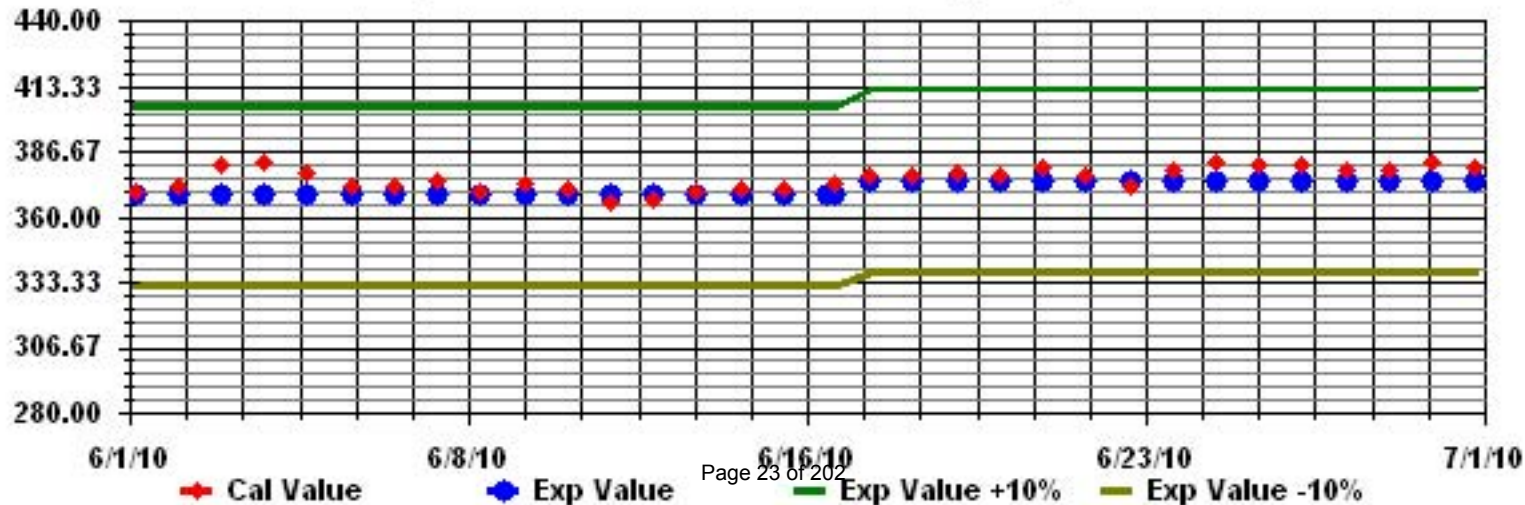
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA33 Parameter: S02\_ Sequence: S02 Phase: SPAll





# Hydrogen Sulphide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

JUNE 2010

HYDROGEN SULPHIDE (H<sub>2</sub>S) 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			
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	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	
2	0	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	0.0	24	
3	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	IZS	1	0.1	24	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	IZS	0	0	0.0	24		
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	1	0.0	24	
7	1	1	1	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	3	0.4	24	
8	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	
9	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	
10	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	
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	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
14	1	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	1	0.0	24
15	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	
16	0	0	0	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	24	
17	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	
18	0	1	0	1	1	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	24	
19	0	0	1	0	1	1	0	IZS	0	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	3	1	IZS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0.3	24		
21	0	0	2	3	1	IZS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24	
22	1	1	1	0	IZS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
23	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
24	0	0	IZS	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.4	24	
25	0	IZS	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
26	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	IZS	1	1	0.0	24
28	2	1	1	1	2	1	1	1	1	C	C	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	2	0.6	24
29	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	1	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	
HOURLY MAX	NA	1	2	3	3	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	1	0	1	1				
HOURLY AVG	NA	0.1	0.3	0.2	0.4	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1				

**STATUS FLAG CODES**

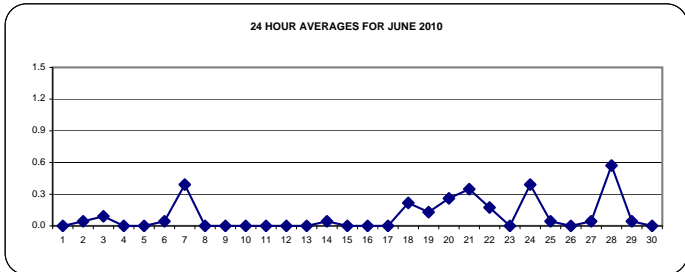
S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MAINTENANCE
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

OBJECTIVE LIMIT:

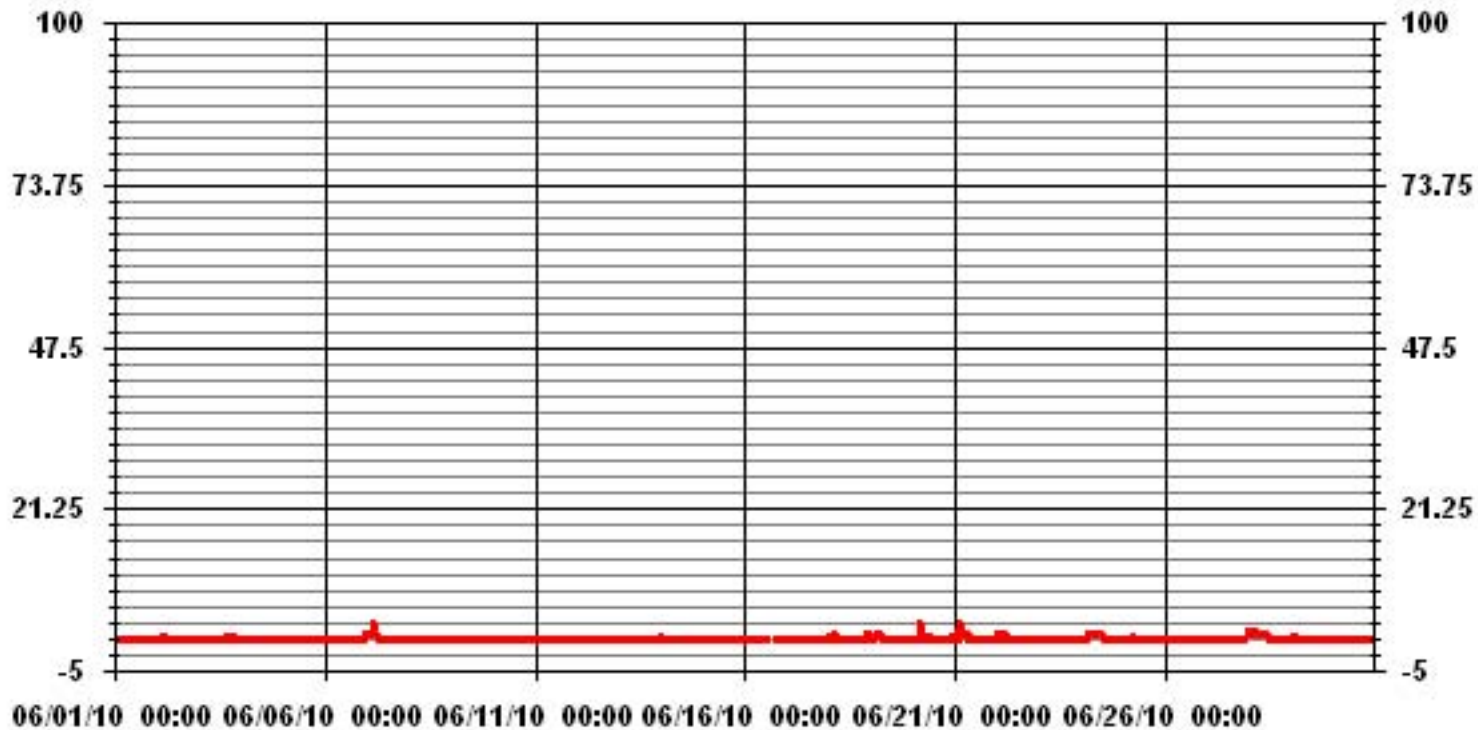
ALBERTA ENVIRONMENT: 1-HR 10 PPB 24-HR 3 PPB

**MONTHLY SUMMARY**

NUMBER OF 1-HR EXCEEDENCES:	0				
NUMBER OF 24-HR EXCEEDENCES:	0				
NUMBER OF NON-ZERO READINGS:	55				
MAXIMUM 1-HR AVERAGE:	3	PPB	@ HOUR(S)	VAR	ON DAY(S)
MAXIMUM 24-HR AVERAGE:	0.6	PPB			ON DAY(S) 28
				VAR-VARIOUS	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720 HRS	
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	100.0 %	
STANDARD DEVIATION:	0.35		MONTHLY AVERAGE:	0.09 PPB	



### 01 Hour Averages



— LICA33 H2S\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

## HYDROGEN SULPHIDE MAX    instantaneous maximum in ppb

MST

DAY	HOUR START																								DAILY 24-HOUR			
	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.
1	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
2	0	IZS	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0.2	24
3	IZS	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	IZS	1	1.0	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	1	1	0.0	24
5	1	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	0.1	24
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	3	3	0.1	24
7	4	2	2	2	5	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	5	0.9	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	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	1	0.0	24
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0.0	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	1	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	1	0.1	24
13	1	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	1	1	1	0.1	24
14	1	1	0	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
15	0	1	0	0	0	0	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
16	1	0	0	1	1	1	0	0	0	0	IZS	0	0	0	C	C	C	C	0	0	0	0	0	0	0	1	0.2	24
17	0	1	0	0	1	0	0	0	0	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	24
18	1	1	1	1	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.5	24
19	0	2	2	1	1	1	1	IZS	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	2	0.5	24	
20	0	0	1	2	7	3	IZS	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	2	7	0.9	24	
21	1	2	4	4	2	IZS	1	1	1	1	0	0	0	0	0	0	0	P	0	0	0	1	1	1	4	0.9	23	
22	3	3	2	1	IZS	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.5	24	
23	0	0	1	IZS	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0.3	24	
24	1	1	IZS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1.0	24
25	1	IZS	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0.3	24	
26	IZS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0.0	24
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.1	24
28	3	1	4	2	4	1	1	1	2	C	C	1	1	1	1	1	1	1	1	1	1	1	IZS	0	1	4	1.4	24
29	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	P	1	1	0.1	23
30	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	P	0	0	0	0	1	0.1	23	
HOURLY MAX	4	3	4	4	7	3	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3				
HOURLY AVG	0.6	0.6	0.7	0.7	0.9	0.6	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.6				

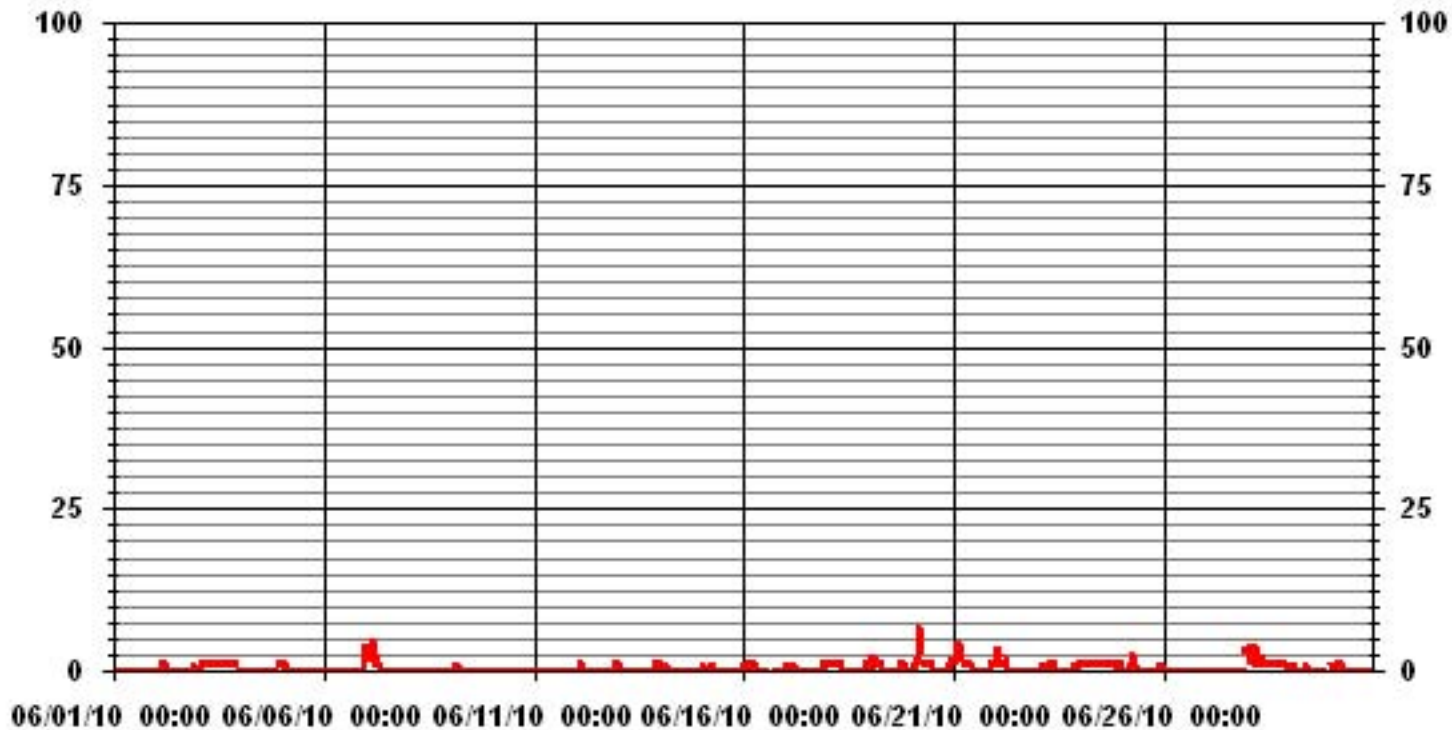
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	164					
MAXIMUM INSTANTANEOUS VALUE:	7	PPB	@ HOUR(S)	4	ON DAY(S)	20
	VAR - VARIOUS					
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	717 HRS		
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	0.71					

### 01 Hour Averages



— LICA33 H2S MAX PPB

LICA33  
H2S\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 33  
Site Name : LICA33  
Parameter : H2S\_  
Units : PPB

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	4.68	4.09	5.12	5.41	6.73	7.17	4.24	4.97	5.71	6.00	10.39	6.14	8.93	8.05	7.75	4.09	99.56
< 10	.00	.00	.00	.00	.14	.14	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.43
< 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	4.68	4.09	5.12	5.41	6.88	7.32	4.24	4.97	5.71	6.14	10.39	6.14	8.93	8.05	7.75	4.09	

Calm : .00 %

Total # Operational Hours : 683

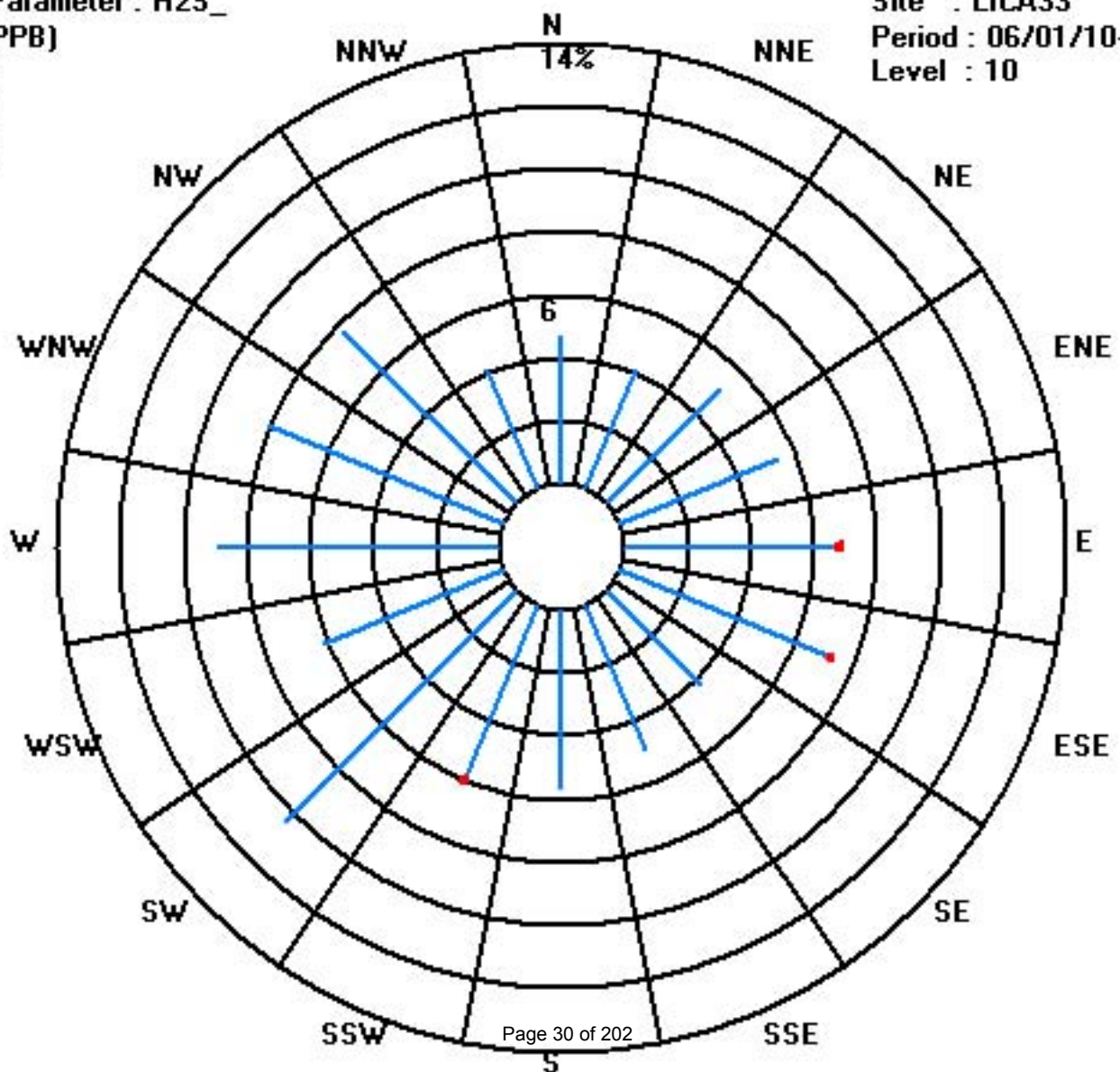
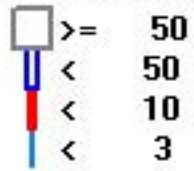
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	32	28	35	37	46	49	29	34	39	41	71	42	61	55	53	28	680
< 10					1	1				1							3
< 50																	
>= 50																	
Totals	32	28	35	37	47	50	29	34	39	42	71	42	61	55	53	28	

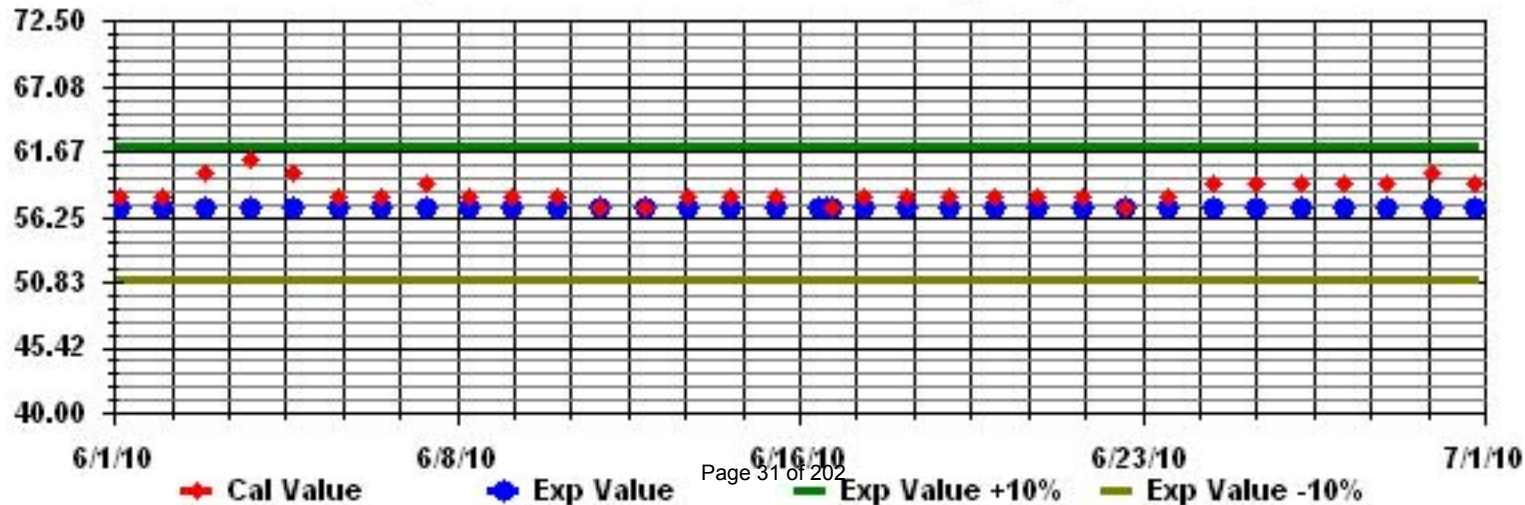
Calm : .00 %

Total # Operational Hours : 683

Class Limits (PPB)



Calibration Graph for Site: LICA33 Parameter: H2S\_ Sequence: H2S Phase: SPAll





# Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m<sup>3</sup>

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	6.1	3.6	7.1	4.1	8.6	4.1	5.1	6.6	7.1	6.1	3.6	13.1	0	13.6	N	11.6	0.6	2.6	2.1	3.6	4.1	4.1	4.1	13.6	5.3	23
2	8.1	10.6	12.1	3.1	10.6	8.6	6.6	4.6	3.6	0.1	2.6	7.1	N	6.6	1.1	N	8.1	6.6	1.1	4.7	1.1	1.6	2.1	2.1	12.1	5.1	22
3	1.6	2.1	1.6	2.6	3.6	0	2.1	5.1	4.1	4.1	2.1	0	7.6	7.1	5.1	5.6	3.1	6.1	4.1	4.6	7.1	6.6	7.1	3.6	7.6	4.0	24
4	3.1	5.1	5.1	3.1	5.1	2.6	2.1	4.1	3.1	2.6	0.1	0.6	3.6	1.6	5.1	7.1	0.6	3.6	4.1	3.1	2.1	3.6	3.1	6.1	7.1	3.4	24
5	7.6	7.6	7.6	8.1	4.6	5.6	6.1	4.6	2.1	2.1	0.6	0	6.6	4.6	0.1	2.1	1.6	0	0.6	0	2.6	3.6	2.6	3.6	8.1	3.5	24
6	0	2.6	2.6	3.6	2.6	1.1	3.1	1.1	3.1	0	1.1	6.6	0.6	0	8.6	0.6	4.1	2.6	2.1	2.6	3.1	4.1	3.1	2.1	8.6	0.0	24
7	5.1	3.1	5.1	9.6	6.6	3.1	6.6	8.6	4.6	5.6	5.6	2.6	5.1	8.6	5.1	2.6	5.1	7.6	2.6	0.6	2.6	3.1	2.1	3.6	9.6	4.8	24
8	0	2.1	1.6	0	0.1	0.6	0.6	0	2.6	0	0.6	0	2.1	2.1	2.6	0	1.1	0	3.1	1.6	0	0.1	1.1	0	3.1	0.9	24
9	3.1	0	1.1	4.1	0	2.1	2.1	0	1.1	0.6	1.6	0	1.1	0	0.7	0.1	2.6	1.6	3.1	1.1	2.1	2.1	0	2.1	4.1	1.4	24
10	3.1	3.1	1.1	0.6	0	1.6	4.1	4.6	3.1	2.6	1.6	0	2.6	5.6	5.1	7.6	5.1	2.6	6.1	8.1	3.6	2.1	2.1	4.1	8.1	3.3	24
11	2.1	3.6	5.1	4.1	3.6	5.1	2.1	4.1	1.6	6.1	8.6	0	20.1	0	12.6	10.1	9.1	13.6	2.1	11.6	14.1	10.6	11.1	7.6	20.1	7.0	24
12	5.6	5.1	13.6	3.1	7.6	8.1	5.6	7.6	9.1	19.6	4.6	11.1	22.6	3.6	7.1	18.6	5.1	7.1	9.1	9.1	8.1	9.6	4.1	5.6	22.6	8.8	24
13	4.6	7.6	5.1	2.1	5.6	7.1	2.2	6.6	0.6	8.1	2.1	16.1	14.6	15.6	N	10.6	0	9.6	8.1	5.6	4.6	2.6	5.6	N	16.1	6.6	22
14	0	10.1	6.6	2.6	4.1	0.6	0.1	3.1	3.6	7.6	2.1	8.1	6.6	3.1	2.1	7.1	1.6	1.6	3.1	4.6	7.1	6.6	3.1	0.6	10.1	4.0	24
15	0	1.1	3.1	9.6	5.6	4.6	4.1	3.1	0.1	N	8.6	0.1	9.6	5.1	0.1	1.6	10.1	5.6	2.1	4.6	4.6	<b>48.1</b>	4.1	4.6	<b>48.1</b>	6.1	23
16	1.6	12.6	5.1	2.6	9.6	3.1	6.1	5.1	0.6	18.6	N	6.1	0.6	11.1	0.1	0	0.1	0	0	4.6	5.1	6.6	2.6	7.6	18.6	4.8	23
17	5.1	3.6	6.6	5.1	5.6	7.6	7.6	10.1	13.6	C	C	C	6.1	10.6	12.6	12.1	5.6	3.6	5.1	6.1	5.6	7.1	5.1	4.1	13.6	7.1	24
18	3.1	2.1	5.1	4.6	10.1	9.6	13.6	13.6	10.1	33.1	C	C	6.1	8.6	22.1	14.6	20.1	8.1	20.6	18.6	14.6	20.1	15.6	16.1	45.1	<b>15.9</b>	24
19	22.6	22.1	21.6	19.1	20.1	15.6	13.6	14.6	14.1	22.6	14.6	28.1	7.6	17.6	3.1	12.6	24.1	9.1	11.6	14.6	15.1	8.6	11.6	11.6	28.1	15.7	24
20	11.6	11.1	9.6	11.6	8.6	12.6	11.6	15.1	5.1	11.6	16.6	24.6	15.1	9.6	4.1	0	14.6	13.1	5.6	10.6	7.7	8.1	8.6	9.1	24.6	10.7	24
21	10.6	9.6	8.6	10.1	9.1	10.6	13.1	12.6	10.6	7.1	8.1	9.6	13.6	9.6	11.6	6.1	15.1	0	3.1	14.4	13.6	16.1	10.1	16.1	16.1	10.4	24
22	14.1	14.6	17.7	17	16.1	12.7	3.6	0.1	0	1.1	0.1	3.1	1.8	2.5	7.2	13.2	9.6	9.5	6.3	4.2	7.6	0	5.5	4.1	17.7	7.2	24
23	6.1	4.2	1.4	3.1	0	3.6	3.1	2.2	9.7	7.4	6.5	2.5	2.1	4.9	6.3	6.5	6.4	7.5	5.7	3.2	7.7	6.7	4.6	4.4	9.7	4.8	24
24	4.4	6.7	6.6	5	1.1	2.1	5.6	9.9	3.4	10.8	7.6	5.8	7.4	7	5.3	8	7.2	8.3	5.1	7.7	9.2	8.8	1.8	N	10.8	6.3	23
25	0	1.6	4.2	2.6	4.7	3.8	5.8	0	4.8	1.6	6.1	4.6	4.6	6.2	1.8	1.6	4.1	0	3.4	2.1	3.1	5.3	6.4	3.5	6.4	3.4	24
26	1.6	0	0	0.9	0.9	2.1	0.6	0.1	0	1.1	0.1	1.8	2	0.1	1.1	2.8	1.1	1.6	0.7	3	0.1	6.2	1.8	6.8	6.8	1.5	24
27	1.2	2.9	2.3	2.7	1.1	0	3.6	8.3	1.2	7.8	6.5	4.5	1	3.2	3.1	2	3.4	1.3	N	10.1	5.5	3.5	4.4	3.7	10.1	3.6	23
28	1.4	7.3	8.6	2.4	6.3	2.4	0.1	N	6	5.8	7	5.4	3.5	3.4	4.1	5.8	3.8	2.2	4.2	2.8	4.2	8.1	3.6	10	10.0	4.7	23
29	8.2	1.6	11.5	8	3	3	4.9	7.8	7.6	8	5.1	4.7	8.1	10.1	2.4	5.1	6.5	7.1	3.6	9.5	14.1	1.8	0	N	14.1	6.2	23
30	1.1	3.1	1.1	7.7	0.6	4.1	2.1	0	0	2.2	3.1	0.1	8.1	8.6	7.6	3.1	2.1	0	0	0	2.6	0	0	0	8.6	2.4	24
HOURLY MAX	23	22	22	19	20	16	14	15	14	33	31	28	45	18	22	19	24	14	21	19	15	48	16	16			
HOURLY AVG	4.6	5.8	6.2	5.5	5.4	5.1	4.9	5.6	4.5	7.3	5.7	6.2	8.4	5.9	5.6	6.0	6.4	4.7	4.4	5.9	6.1	7.2	4.6	5.4			

STATUS FLAG CODES

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

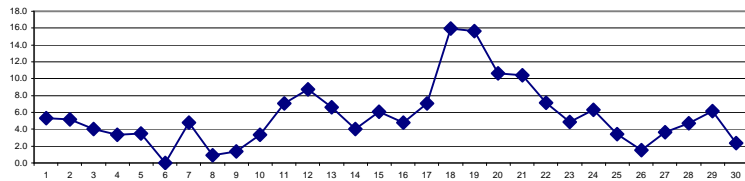
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT:	1-HR	-	PPB	24-HR	30	PPB
----------------------	------	---	-----	-------	----	-----

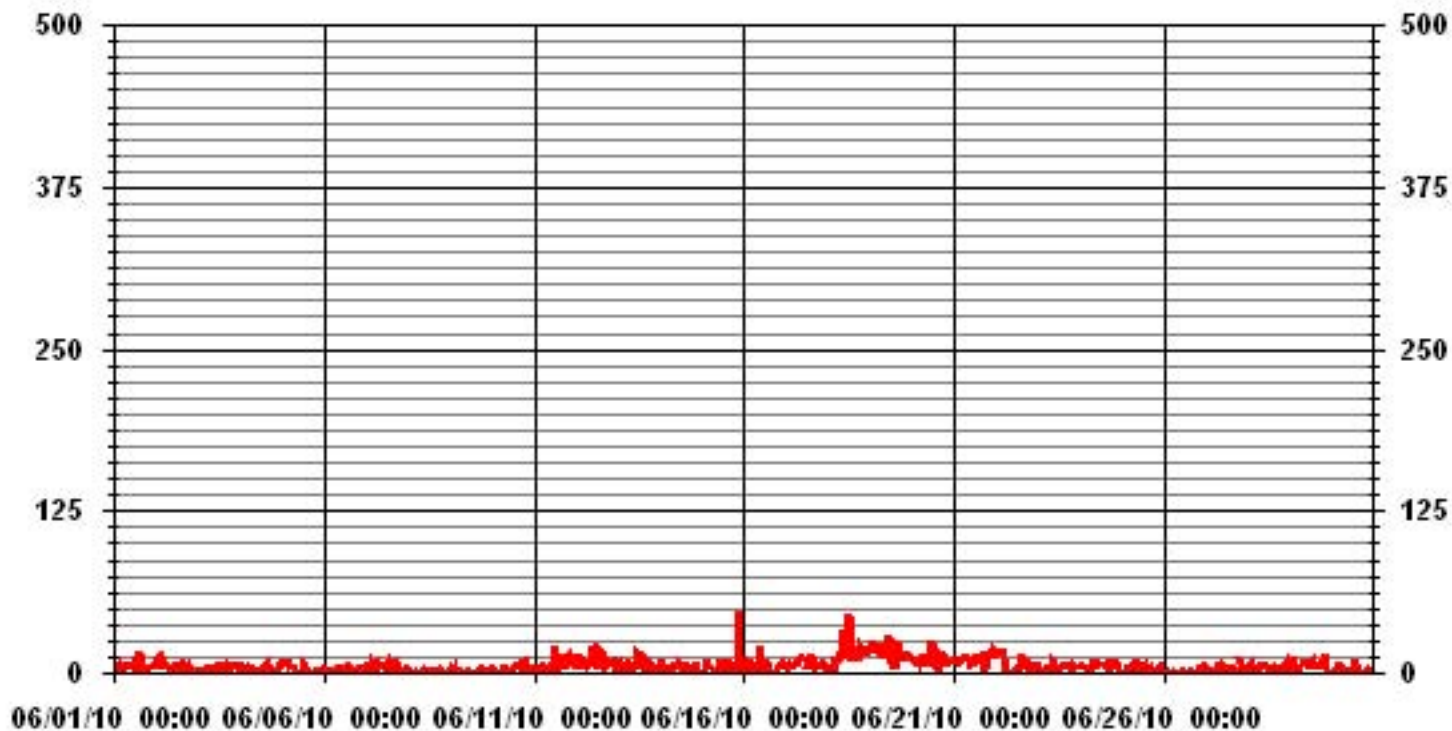
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-		
NUMBER OF 24-HR EXCEEDENCES:	0 PROPOSED CANADA WIDE GUIDELINE		
NUMBER OF NON-ZERO READINGS:	650		
MAXIMUM 1-HR AVERAGE:	48.1 UG/M <sup>3</sup> @ HOUR(S) 21 ON DAY(S) 15		
MAXIMUM 24-HR AVERAGE:	15.9 UG/M <sup>3</sup> ON DAY(S) 18		
IZS CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	709 HRS
MONTHLY CALIBRATION TIME:	3 HRS	AMD OPERATION UPTIME:	98.5 %
STANDARD DEVIATION:	5.46	MONTHLY AVERAGE:	5.71 UG/M <sup>3</sup>

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA33 PM2 UG/M3

LICA33  
 PM2 / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : PM2  
 Units : UG/M3

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	4.53	3.96	4.95	5.24	6.79	7.79	4.10	4.81	5.66	5.94	10.33	5.80	8.92	8.07	7.93	4.53	99.43
< 60.0	.00	.00	.14	.00	.00	.00	.00	.00	.00	.14	.14	.00	.00	.14	.00	.00	.56
< 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	4.53	3.96	5.09	5.24	6.79	7.79	4.10	4.81	5.66	6.09	10.48	5.80	8.92	8.21	7.93	4.53	

Calm : .00 %

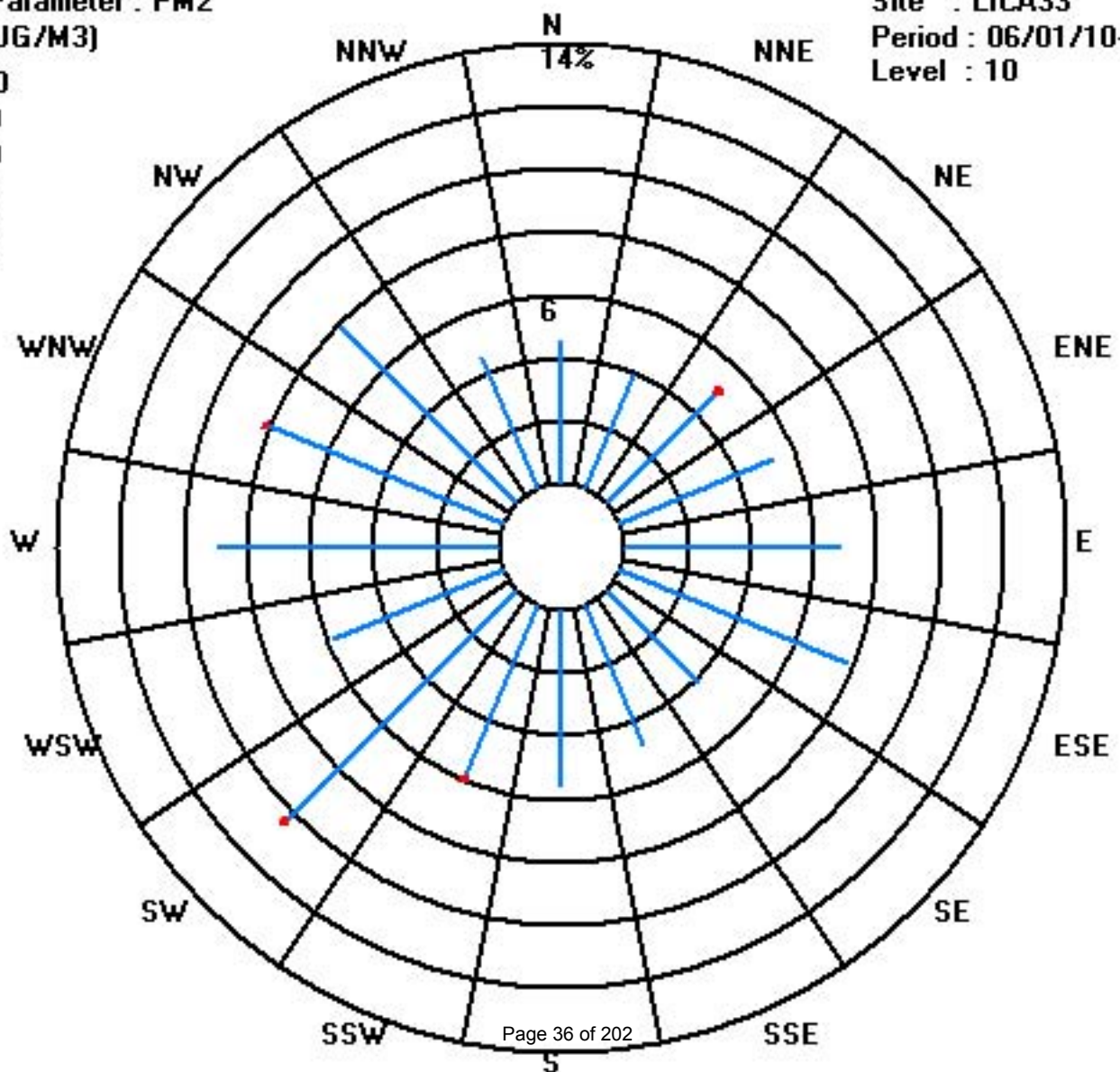
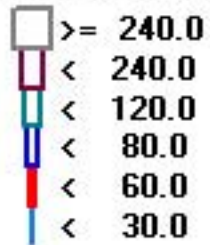
Total # Operational Hours : 706

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30.0	32	28	35	37	48	55	29	34	40	42	73	41	63	57	56	32	702
< 60.0			1							1	1			1			4
< 80.0																	
< 120.0																	
< 240.0																	
>= 240.0																	
Totals	32	28	36	37	48	55	29	34	40	43	74	41	63	58	56	32	

Calm : .00 %

Total # Operational Hours : 706



# Nitrogen Dioxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

## 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	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	IZS	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	2	3	2	3	3	0.7	24	
2	2	4	IZS	4	3	4	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	4	1.0	24	
3	3	IZS	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	IZS	2	0.3	24	
4	4	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	IZS	1	2	0.3	24	
5	5	2	2	2	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	3	0.7	24
6	6	3	3	3	1	2	2	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	IZS	1	2	1	3	1.1	24
7	7	5	4	3	4	4	5	3	5	3	4	5	3	0	0	0	0	0	0	0	IZS	1	4	5	2	5	2.6	24	
8	8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	1	1	0.1	24	
9	9	1	2	1	2	2	2	2	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	3	1	3	0.7	24	
10	10	4	3	1	1	1	2	2	1	0	0	0	0	0	0	0	0	IZS	0	0	0	1	1	0	0	4	0.7	24	
11	11	0	1	1	1	2	2	2	3	3	1	0	0	0	0	0	IZS	0	0	0	1	3	3	3	2	3	1.2	24	
12	12	2	2	3	2	2	3	2	1	1	0	0	0	0	IZS	0	0	0	0	0	1	1	1	1	2	3	1.0	24	
13	13	2	1	2	2	2	2	1	1	1	1	0	0	0	IZS	0	0	0	0	0	0	1	1	1	2	2	2	0.9	24
14	14	2	2	2	0	0	0	1	0	0	0	0	1	IZS	0	0	1	0	0	0	0	1	2	3	5	5	0.9	24	
15	15	5	7	5	9	8	5	5	3	1	0	0	IZS	0	0	0	0	0	0	0	0	1	3	2	3	9	2.5	24	
16	16	4	4	3	5	5	5	3	2	1	2	0	C	C	C	C	C	C	C	0	0	1	2	2	2	5	2.4	24	
17	17	5	7	4	2	3	2	1	1	0	IZS	0	0	0	0	0	0	0	0	0	1	3	3	2	2	7	1.6	24	
18	18	2	3	3	2	2	4	6	4	IZS	2	2	1	0	0	0	0	0	0	1	2	2	2	3	3	6	1.9	24	
19	19	2	3	2	2	2	3	2	IZS	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	2	3	1.1	24	
20	20	3	3	3	3	4	6	IZS	2	1	2	2	1	1	0	0	0	1	1	1	1	4	4	3	3	6	2.1	24	
21	21	3	4	3	4	4	IZS	3	3	2	2	1	1	1	1	3	1	1	1	1	1	3	5	7	4	7	2.6	24	
22	22	5	5	7	5	IZS	4	1	0	0	0	0	0	0	1	1	1	1	1	2	2	5	4	4	7	2.1	24		
23	23	5	4	4	IZS	4	3	2	1	0	0	0	0	0	0	0	0	0	0	1	1	2	1	2	5	1.3	24		
24	24	1	2	IZS	4	6	3	2	1	2	1	1	1	1	0	0	1	1	1	1	1	1	2	2	6	1.6	24		
25	25	2	IZS	3	3	4	3	2	2	2	1	0	0	0	0	0	0	0	0	0	0	1	2	3	2	4	1.3	24	
26	26	IZS	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1	IZS	2	0.4	24		
27	27	1	3	3	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	3	IZS	4	0.8	24		
28	28	3	1	1	1	2	3	2	1	0	C	C	0	0	0	0	0	0	0	0	1	IZS	2	3	3	1.0	24		
29	29	7	3	1	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	7	0.8	24	
30	30	1	1	2	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	2	2	0.4	24	
HOURLY MAX		7	7	7	9	8	6	6	5	3	4	5	3	1	1	1	3	1	1	1	2	4	5	7	5				
HOURLY AVG		2.7	2.6	2.5	2.2	2.5	2.4	1.7	1.3	0.8	0.7	0.4	0.3	0.1	0.0	0.1	0.2	0.1	0.2	0.2	0.5	1.2	1.9	2.1	2.1				

### STATUS FLAG CODES

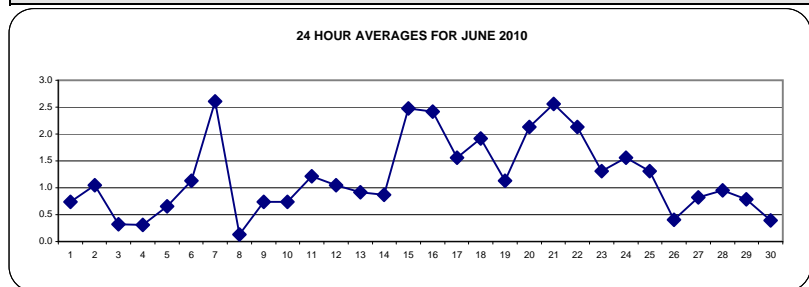
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

### OBJECTIVE LIMIT:

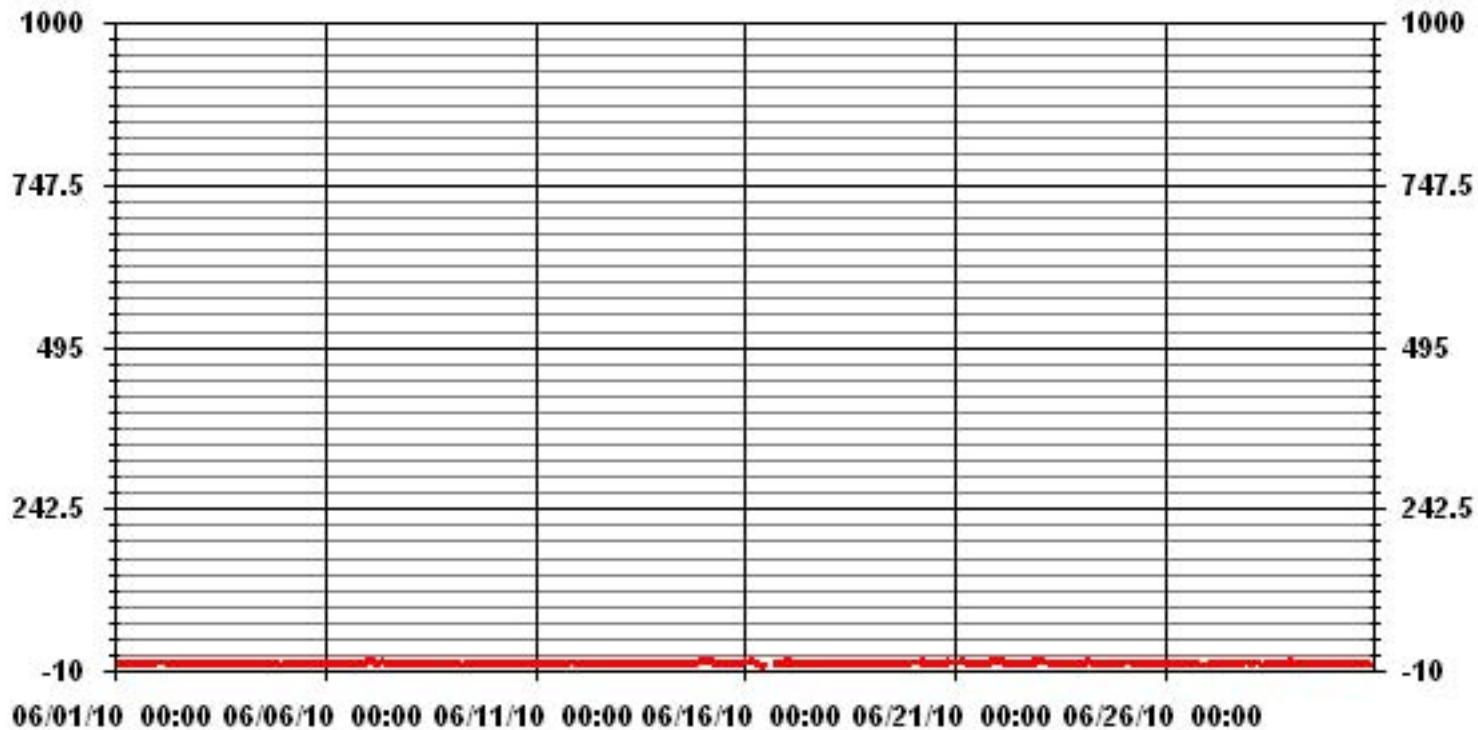
ALBERTA ENVIRONMENT:	1-HR	212	PPB	24-HR	106	PPB
----------------------	------	-----	-----	-------	-----	-----

### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	363					
MAXIMUM 1-HR AVERAGE:	9	PPB	@ HOUR(S)	3	ON DAY(S)	15
MAXIMUM 24-HR AVERAGE:	2.6	PPB			ON DAY(S)	7
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	1.53		MONTHLY AVERAGE:	1.20	PPB	



### 01 Hour Averages



— LICA33 IIO2\_ PPB



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

## NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	1	IZS	1	2	3	3	1	1	1	0	0	0	0	0	0	0	0	0	1	4	4	3	4	4	1.3	24	
2	6	IZS	6	5	5	4	5	3	1	0	0	0	0	0	0	0	0	0	1	4	3	3	0	6	2.0	24		
3	IZS	0	0	2	3	2	2	2	1	1	0	0	0	0	1	1	1	2	2	0	1	4	IZS	4	4	1.1	24	
4	4	2	3	1	0	0	1	1	1	1	9	0	0	1	1	0	0	0	2	1	1	1	IZS	3	9	1.4	24	
5	3	3	3	4	4	4	2	1	0	0	0	0	0	0	0	0	0	0	2	1	1	IZS	2	3	4	1.4	24	
6	4	5	6	2	3	3	4	6	4	2	0	0	0	0	1	1	0	1	1	IZS	2	4	2	6	2.2	24		
7	9	8	4	5	5	8	5	8	4	8	7	4	1	1	1	1	1	2	IZS	2	14	12	6	14	5.1	24		
8	4	1	1	1	3	1	1	1	0	0	0	0	0	0	0	0	0	IZS	1	1	2	2	2	2	4	0.9	24	
9	2	6	6	4	6	4	3	2	0	0	0	0	0	0	0	0	0	IZS	0	1	2	5	8	5	8	2.3	24	
10	8	12	6	4	7	3	3	3	0	0	0	0	0	0	0	0	IZS	0	0	1	1	2	1	2	12	2.3	24	
11	1	2	2	2	3	4	5	5	4	3	0	0	0	1	IZS	0	1	0	3	6	6	5	3	6	2.4	24		
12	3	3	3	3	3	5	3	2	2	1	0	0	0	IZS	1	2	1	1	1	1	1	1	2	2	5	1.7	24	
13	2	2	2	2	2	2	2	1	1	1	1	0	0	IZS	0	0	0	0	0	1	1	2	2	3	3	1.2	24	
14	3	3	3	3	2	1	2	2	0	0	0	22	IZS	0	11	11	1	0	0	1	1	4	4	7	22	3.5	24	
15	7	13	7	11	12	18	11	13	3	0	0	IZS	0	0	0	0	1	0	1	1	2	7	4	5	18	5.0	24	
16	5	5	4	6	7	7	4	2	2	73	C	C	C	C	C	C	C	C	0	1	2	4	6	3	73	8.2	24	
17	6	12	6	3	4	2	1	1	0	IZS	1	1	0	0	1	0	0	0	6	4	4	7	3	3	12	2.8	24	
18	2	5	8	2	3	7	7	5	IZS	3	2	1	1	1	1	21	1	1	2	3	3	3	4	4	21	3.9	24	
19	3	3	3	3	3	3	3	IZS	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	7	7	2.1	24	
20	4	3	4	4	6	8	IZS	3	2	2	2	2	1	1	1	2	2	2	2	3	10	9	5	3	10	3.5	24	
21	4	6	4	7	6	IZS	4	3	3	3	2	1	2	2	3	4	3	P	2	2	8	9	12	6	12	4.4	23	
22	6	7	8	7	IZS	7	3	1	0	0	0	0	0	2	2	2	2	2	2	3	4	8	6	6	8	3.3	24	
23	7	5	6	IZS	6	5	2	2	1	1	0	0	1	0	0	0	0	0	1	1	2	2	2	3	7	2.0	24	
24	3	3	IZS	8	10	5	3	2	6	3	2	2	1	1	1	2	1	1	2	2	2	3	4	3	10	3.0	24	
25	3	IZS	6	6	5	4	3	3	3	2	1	1	1	1	0	0	0	0	1	3	4	4	4	6	2.4	24		
26	IZS	3	2	2	2	2	1	1	2	1	0	0	0	1	1	0	0	1	1	2	4	2	IZS	4	4	1.3	24	
27	3	4	6	4	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	3	2	6	IZS	5	6	1.8	24	
28	4	2	3	3	3	7	3	2	1	C	C	1	1	1	1	0	0	0	0	1	2	IZS	4	5	7	2.1	24	
29	11	5	3	2	4	6	1	1	0	1	1	1	1	1	1	1	1	1	0	1	IZS	1	P	2	11	2.1	23	
30	2	2	3	3	1	0	1	2	1	1	1	1	1	1	1	0	0	P	0	IZS	0	0	1	5	5	1.2	23	
HOURLY MAX	11	13	8	11	12	18	11	13	6	73	9	22	2	2	11	21	3	2	6	4	10	14	12	7				
HOURLY AVG	4.3	4.5	4.2	3.8	4.2	4.3	3.1	2.8	1.6	3.9	1.1	1.4	0.4	0.5	1.0	1.8	0.6	0.5	1.0	1.6	2.6	4.1	4.1	3.8				

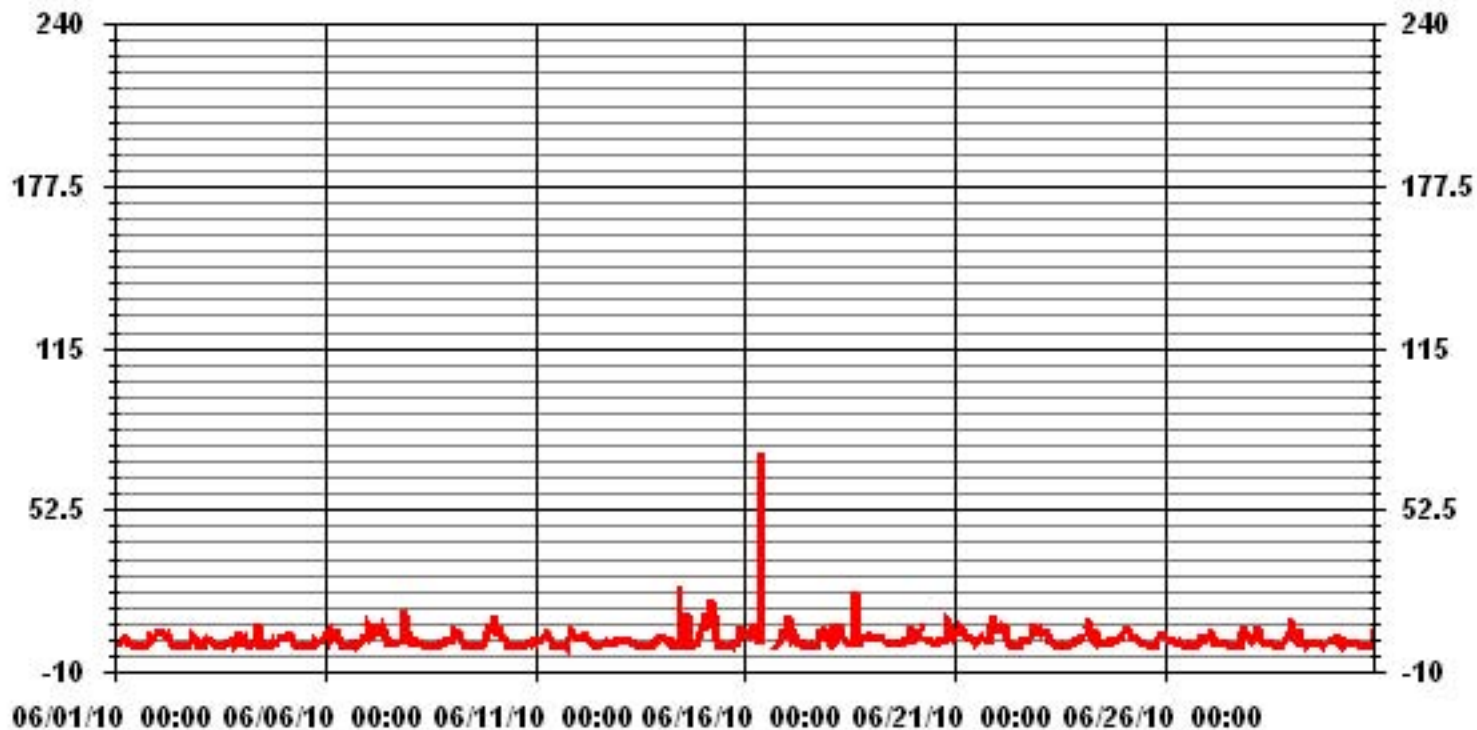
### STATUS FLAG CODES

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:	515
MAXIMUM INSTANTANEOUS VALUE:	73 PPB @ HOUR(S) 9 ON DAY(S) 16
IZS CALIBRATION TIME:	31 HRS
MONTHLY CALIBRATION TIME:	10 HRS
STANDARD DEVIATION:	3.88
OPERATIONAL TIME:	717 HRS

### 01 Hour Averages



— LICA33 IIO2MAX PPB

LICA33  
 NO2\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : NO2\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.70	4.11	5.14	5.44	6.91	7.35	4.26	5.00	5.73	6.17	10.44	6.17	8.97	7.94	7.64	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	4.70	4.11	5.14	5.44	6.91	7.35	4.26	5.00	5.73	6.17	10.44	6.17	8.97	7.94	7.64	3.97	

Calm : .00 %

Total # Operational Hours : 680

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	32	28	35	37	47	50	29	34	39	42	71	42	61	54	52	27	680
< 110																	
< 210																	
>= 210																	
Totals	32	28	35	37	47	50	29	34	39	42	71	42	61	54	52	27	

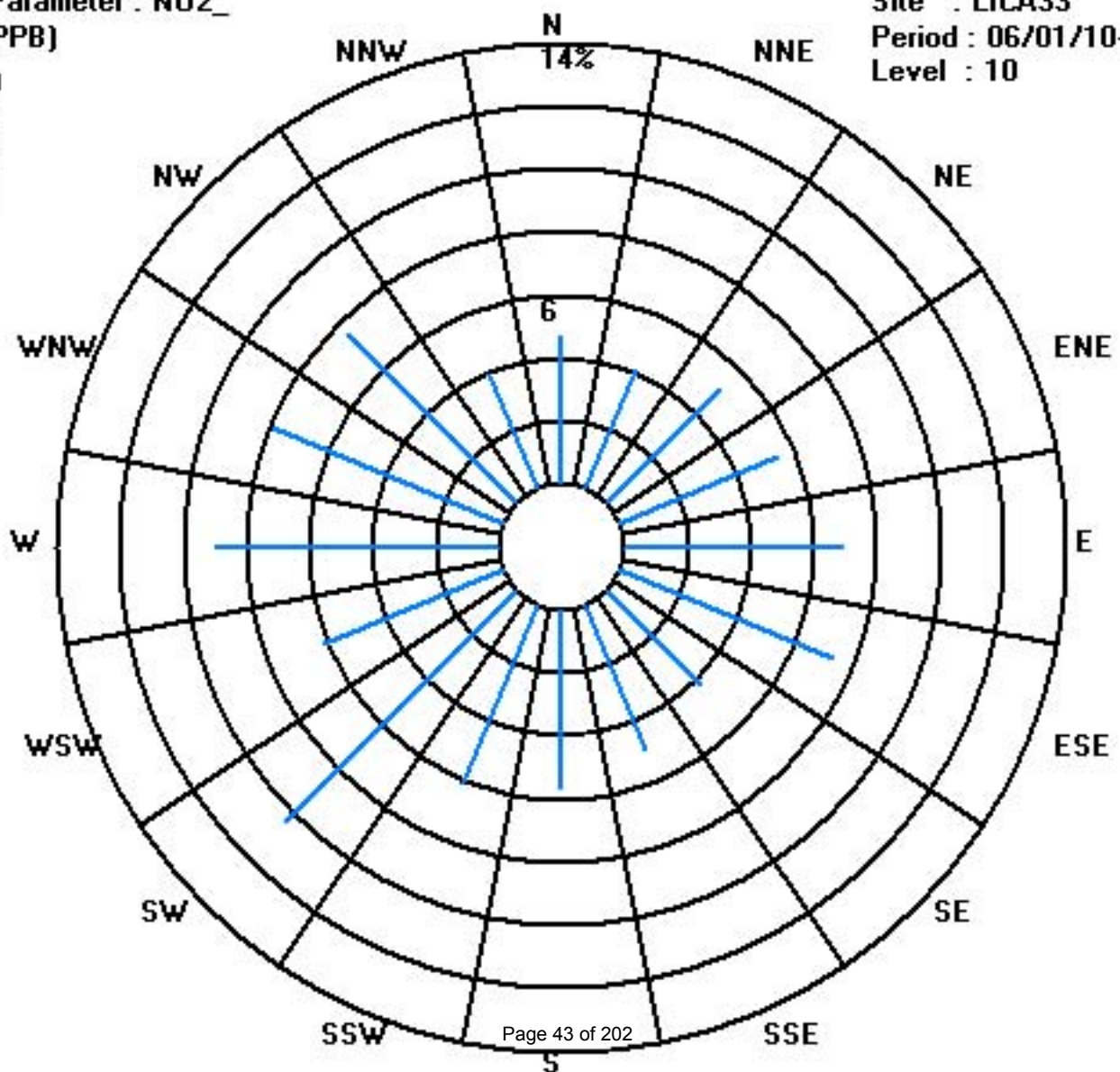
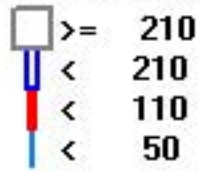
Calm : .00 %

Total # Operational Hours : 680

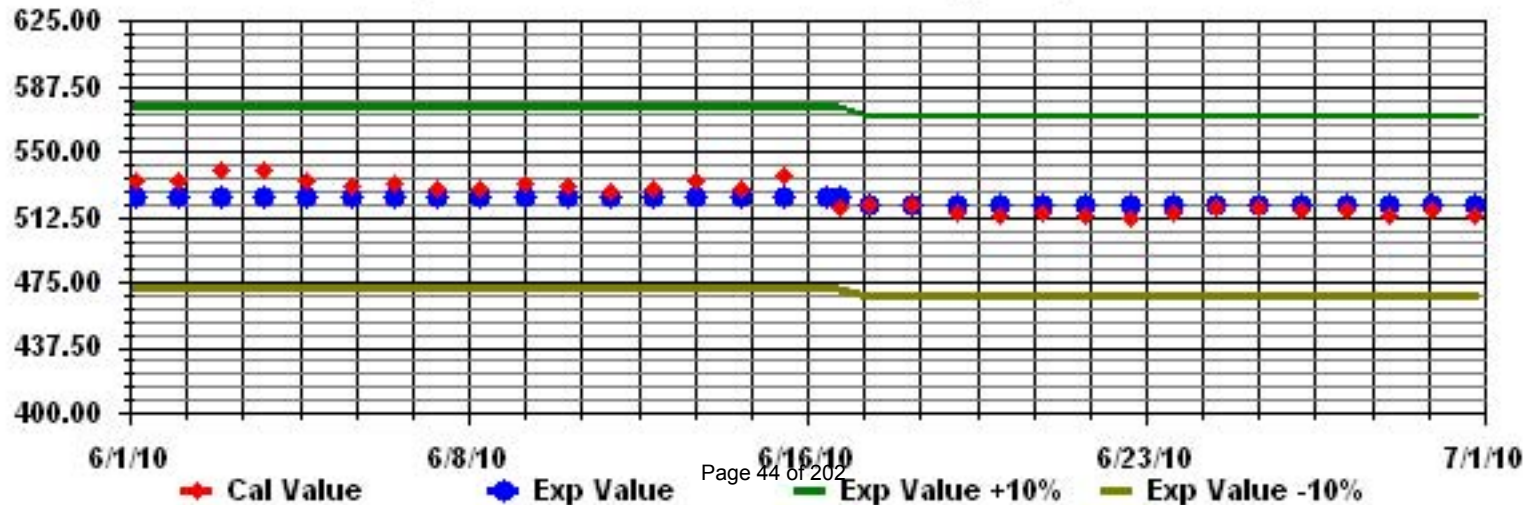
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA33 Parameter: NO2\_ Sequence: NO2 Phase: SPAN



# Nitric Oxide

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

NITRIC OXIDE hourly averages in ppb

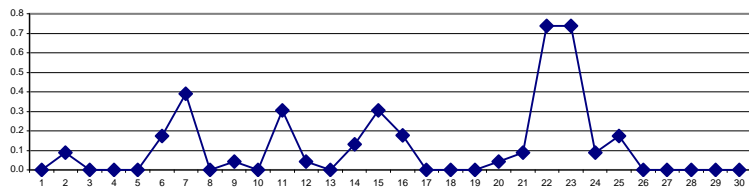
MST

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

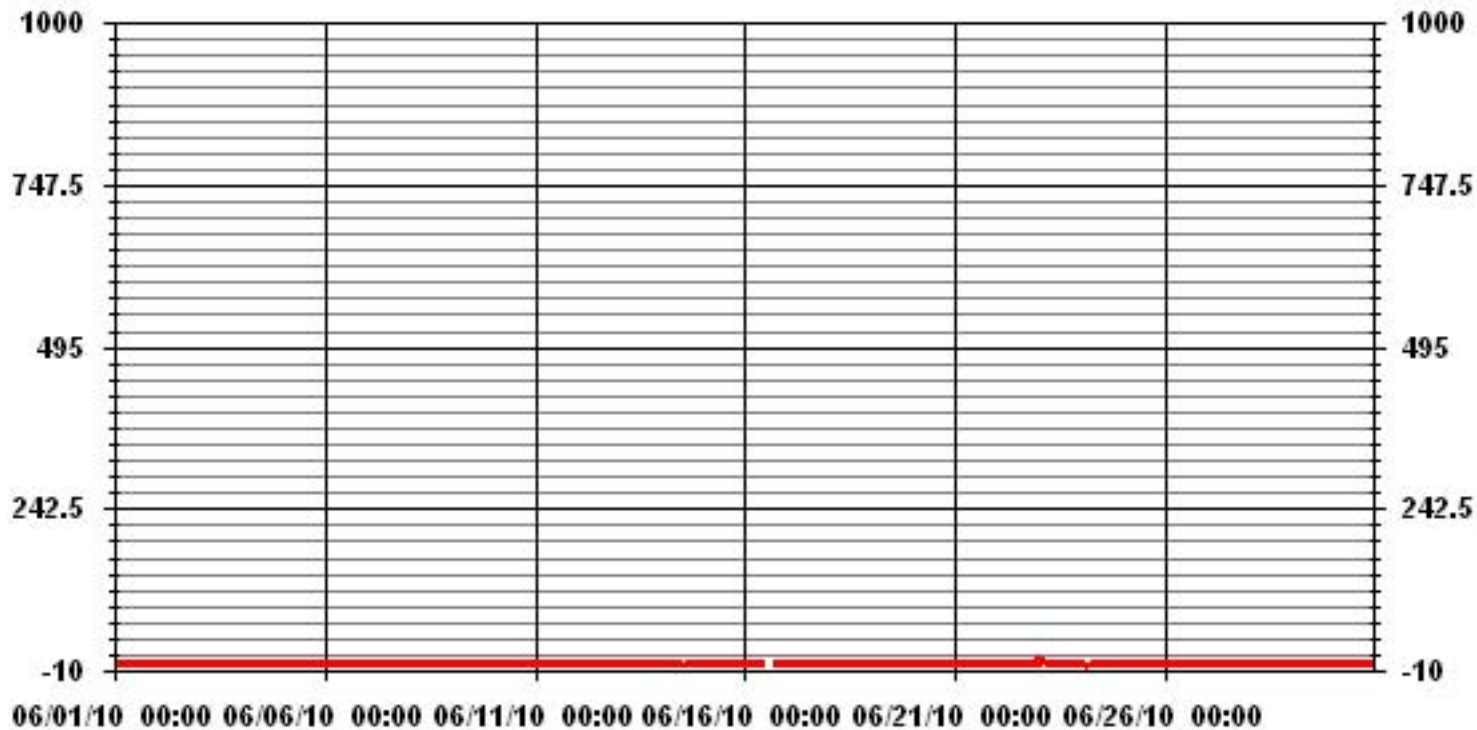
24 HOUR AVERAGES FOR JUNE 2010



### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	50					
MAXIMUM 1-HR AVERAGE:	8	PPB	@ HOUR(S)	23	ON DAY(S)	22
MAXIMUM 24-HR AVERAGE:	0.7	PPB			ON DAY(S)	22, 23
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.53		MONTHLY AVERAGE:	0.12	PPB	

### 01 Hour Averages



— LICA33 NO\_ PPB



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

**NITRIC OXIDE MAX** instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.		
DAY																													
1	0	0	IZS	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
2	1	IZS	1	0	1	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.5	24	
3	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	
4	0	0	0	0	0	0	0	0	0	1	11	0	0	1	1	0	0	0	0	0	0	0	0	IZS	0	11	0.6	24	
5	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	1	0.1	24	
6	0	0	0	0	0	1	2	3	4	1	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	4	0.5	24	
7	0	0	0	0	1	7	3	2	1	3	3	2	0	0	0	0	0	0	0	0	IZS	0	1	1	0	7	1.0	24	
8	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	1	0.1	24	
9	0	6	6	0	2	1	2	1	1	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	6	0.8	24	
10	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	IZS	0	0	0	0	0	0	0	0	1	0.3	24	
11	0	0	0	0	0	1	3	4	4	2	0	0	0	0	0	IZS	0	0	0	0	0	1	0	0	0	4	0.7	24	
12	0	0	0	0	2	7	1	1	1	0	0	0	0	0	0	IZS	0	1	0	0	0	0	0	0	0	7	0.6	24	
13	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
14	0	0	0	0	0	0	1	3	0	0	1	16	IZS	0	28	18	1	0	0	0	0	0	0	0	0	28	3.0	24	
15	0	0	0	0	2	14	16	37	1	0	0	IZS	0	0	0	1	0	0	0	0	0	0	1	0	0	37	3.1	24	
16	0	0	0	0	1	2	2	1	1	29	C	C	C	C	C	C	C	C	1	0	0	0	0	0	0	29	2.3	24	
17	0	0	0	0	0	0	0	1	0	IZS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.1	24	
18	0	0	0	0	0	1	1	1	IZS	1	1	0	0	0	0	19	0	0	0	0	0	0	0	0	0	19	1.0	24	
19	0	0	0	0	0	0	1	IZS	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	1	5	IZS	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.4	24	
21	0	0	0	1	1	IZS	2	1	1	1	0	0	0	0	1	1	0	P	1	0	1	2	4	1	4	0.8	23		
22	2	2	5	6	IZS	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	6	19	19	2.1	24	
23	8	10	7	IZS	6	5	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1.8	24	
24	0	0	IZS	2	6	2	1	0	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	6	0.7	24	
25	0	IZS	0	0	1	1	2	2	2	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2	0.5	24		
26	IZS	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	IZS	1	0.2	24	
27	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	IZS	0	2	0.3	24	
28	1	0	1	0	0	1	1	1	1	C	C	0	0	0	0	0	0	0	0	0	0	0	IZS	1	0	1	0.3	24	
29	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	P	0	1	0.1	23
30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	P	0	IZS	0	0	0	0	1	0.0	23		
HOURLY MAX	8	10	7	6	6	14	16	37	4	29	11	16	1	1	28	19	1	0	1	0	1	4	6	19					
HOURLY AVG	0.5	0.7	0.8	0.3	0.9	2.0	1.7	2.3	0.8	1.5	0.6	0.7	0.0	0.1	1.1	1.4	0.1	0.0	0.1	0.0	0.1	0.4	0.4	0.7					

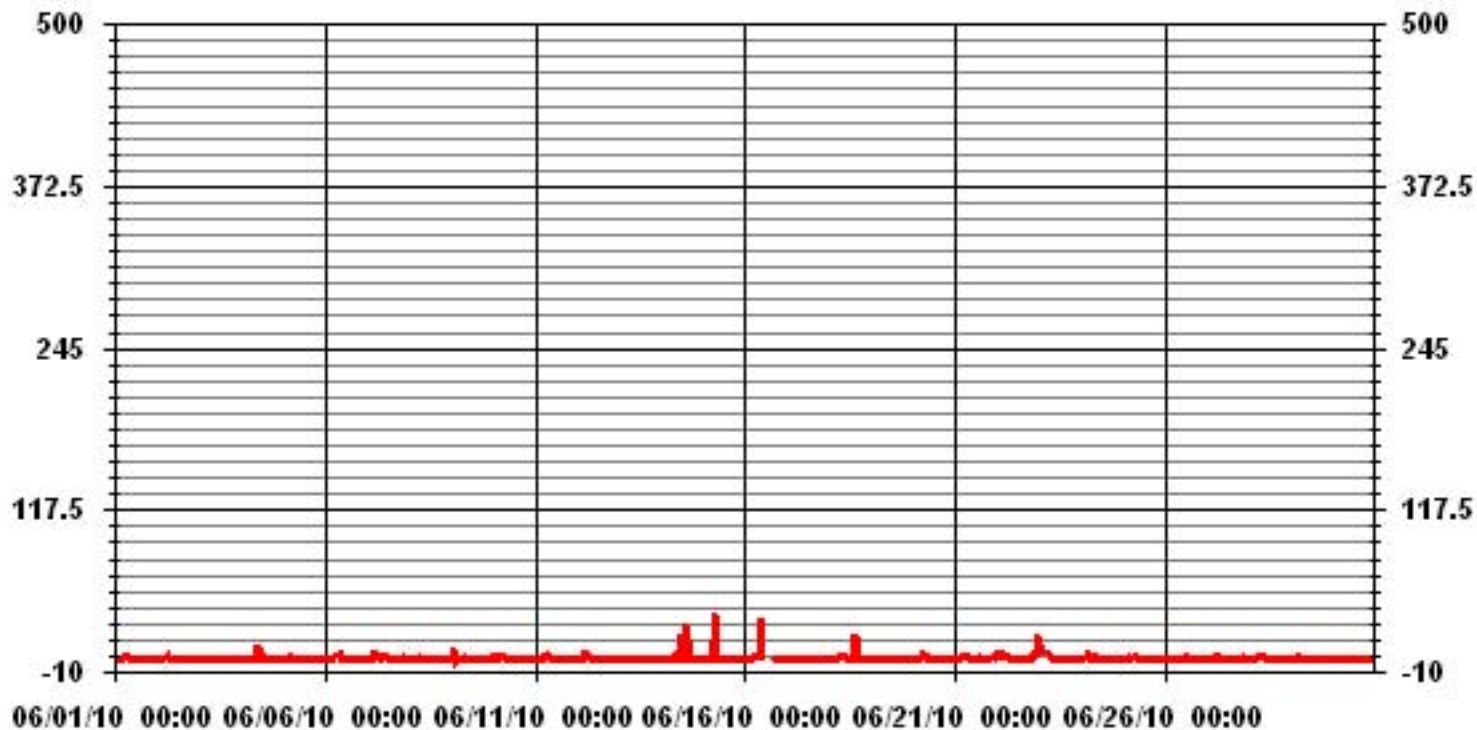
**STATUS FLAG CODES**

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

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	165					
MAXIMUM INSTANTANEOUS VALUE:	37	PPB	@ HOUR(S)	7	ON DAY(S)	15
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	717	HRS	
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	2.84					

### 01 Hour Averages



LICA33  
 NO\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : NO\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.70	4.11	5.14	5.44	6.91	7.35	4.26	5.00	5.73	6.17	10.44	6.17	8.97	7.94	7.64	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	4.70	4.11	5.14	5.44	6.91	7.35	4.26	5.00	5.73	6.17	10.44	6.17	8.97	7.94	7.64	3.97	

Calm : .00 %

Total # Operational Hours : 680

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	32	28	35	37	47	50	29	34	39	42	71	42	61	54	52	27	680
< 110																	
< 210																	
>= 210																	
Totals	32	28	35	37	47	50	29	34	39	42	71	42	61	54	52	27	

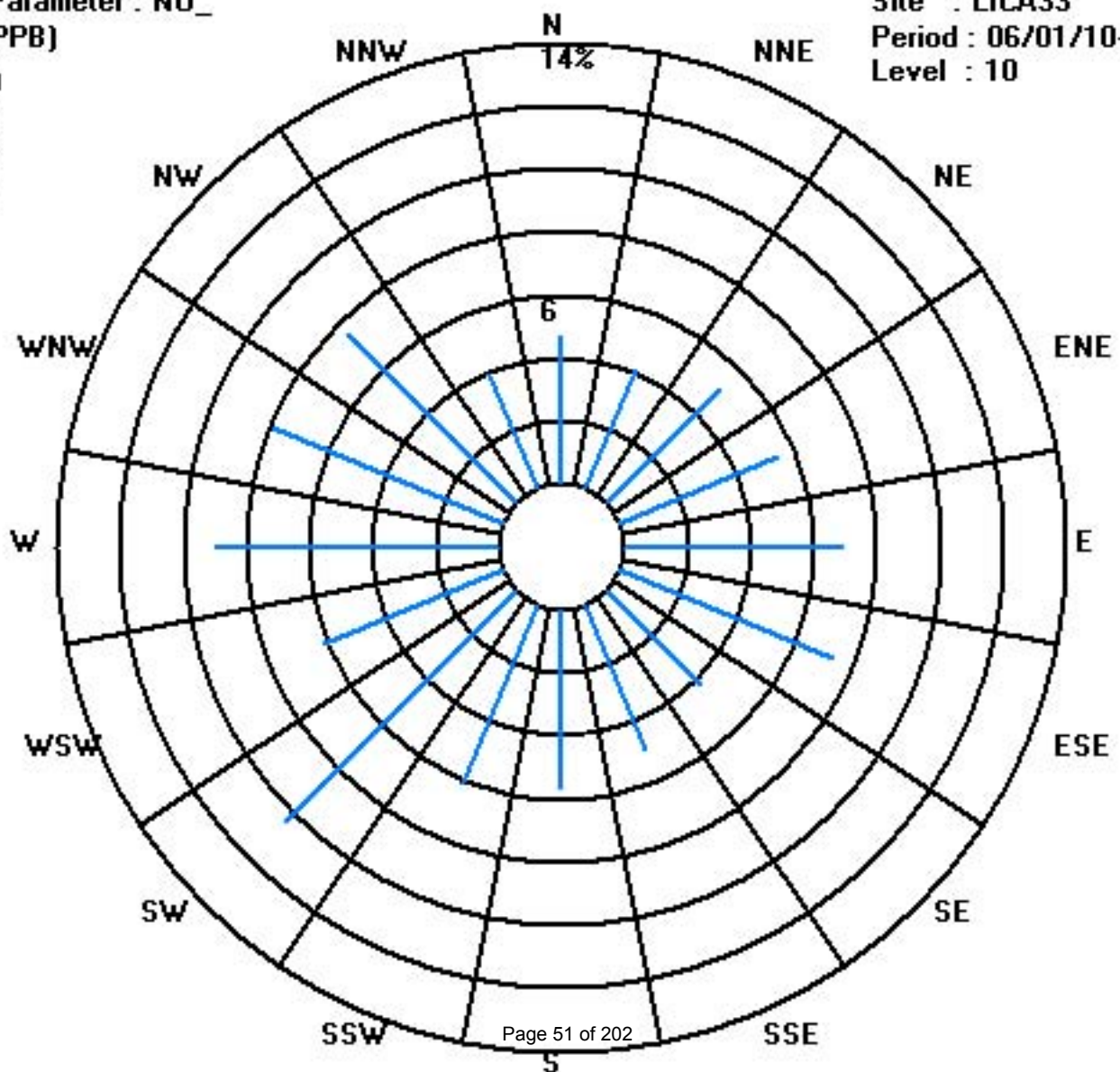
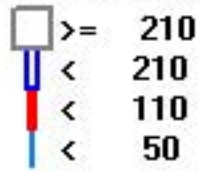
Calm : .00 %

Total # Operational Hours : 680

Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



# Oxides of Nitrogen

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

### OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	IZS	1	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	2	3	2	3	3	0.8	24	
2	4	IZS	4	4	4	5	4	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	5	1.3	24	
3	IZS	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	IZS	2	0.3	24	
4	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	1	2	0.3	24
5	2	2	1	2	3	3	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	IZS	1	0	3	0.7	24	
6	3	3	3	1	2	2	3	5	4	1	0	0	0	0	0	0	0	0	0	0	IZS	1	2	1	5	1.3	24	
7	5	4	3	4	4	7	5	7	4	6	6	4	0	0	0	0	0	0	0	0	IZS	1	4	5	2	7	3.1	24
8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	0.0	24	
9	1	2	2	2	2	2	3	1	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	1	3	1	3	0.9	24
10	4	3	1	1	1	2	2	1	0	0	0	0	0	0	0	0	0	IZS	0	0	0	0	1	0	0	4	0.7	24
11	0	1	1	1	2	3	4	6	6	2	0	0	0	0	0	IZS	0	0	0	0	1	4	3	3	2	6	1.7	24
12	2	2	3	2	3	5	3	1	1	0	0	0	0	0	IZS	0	0	0	0	0	1	1	1	1	1	5	1.2	24
13	1	1	1	1	2	2	1	1	1	1	0	0	0	IZS	0	0	0	0	0	0	1	1	1	1	2	2	0.7	24
14	2	2	2	0	0	0	1	1	0	0	0	1	IZS	0	1	2	0	0	0	0	1	2	3	5	5	1.0	24	
15	5	7	5	9	9	7	7	6	1	0	0	IZS	0	0	0	0	0	0	0	0	0	1	3	2	3	9	2.8	24
16	4	4	3	5	5	7	4	3	2	2	0	C	C	C	C	C	C	C	C	0	1	2	2	2	2	7	2.7	24
17	5	7	4	2	2	2	1	1	0	IZS	0	0	0	0	0	0	0	0	0	0	1	3	3	2	2	7	1.5	24
18	1	3	3	2	2	4	7	5	IZS	3	2	1	0	0	0	1	0	0	1	2	2	1	3	3	7	2.0	24	
19	2	2	1	2	2	3	3	IZS	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	2	3	1.1	24
20	3	2	3	3	4	8	IZS	3	2	2	2	1	1	0	0	0	1	1	1	1	1	4	4	3	2	8	2.2	24
21	3	4	3	4	5	IZS	5	3	3	2	1	1	1	1	1	3	1	1	1	1	3	6	9	4	9	2.9	24	
22	7	7	8	6	IZS	6	1	0	0	0	0	0	0	1	1	1	1	1	1	2	2	7	6	12	12	3.0	24	
23	8	9	9	IZS	8	5	3	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	9	2.2	24	
24	1	2	IZS	4	8	3	3	1	3	2	1	1	1	0	0	1	1	1	1	1	1	1	2	1	8	1.7	24	
25	2	IZS	3	3	4	4	4	3	3	1	0	0	0	0	0	0	0	0	0	0	1	2	3	2	4	1.5	24	
26	IZS	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1	IZS	3	0.5	24	
27	1	3	4	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	3	IZS	4	4	1.0	24	
28	3	1	1	1	2	3	2	2	1	C	C	0	0	0	0	0	0	0	0	0	1	IZS	3	3	3	1.1	24	
29	7	3	1	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	IZS	0	0	0	7	0.7	24
30	1	1	2	1	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	IZS	0	0	0	2	0.5	24	
HOURLY MAX	NA	9	9	9	9	8	7	7	6	6	6	4	1	1	1	3	1	1	1	1	2	4	7	9	12			
HOURLY AVG	NA	2.8	2.6	2.2	2.8	3.1	2.4	2.0	1.2	0.9	0.4	0.4	0.1	0.0	0.1	0.3	0.1	0.2	0.3	0.5	1.2	2.0	2.2	2.2				

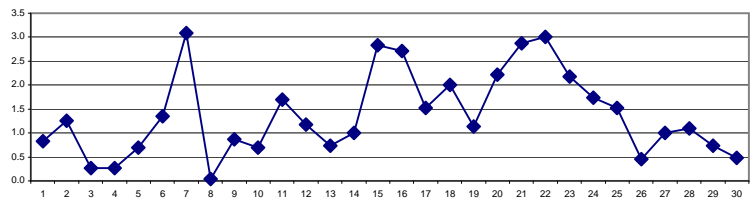
#### STATUS FLAG CODES

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

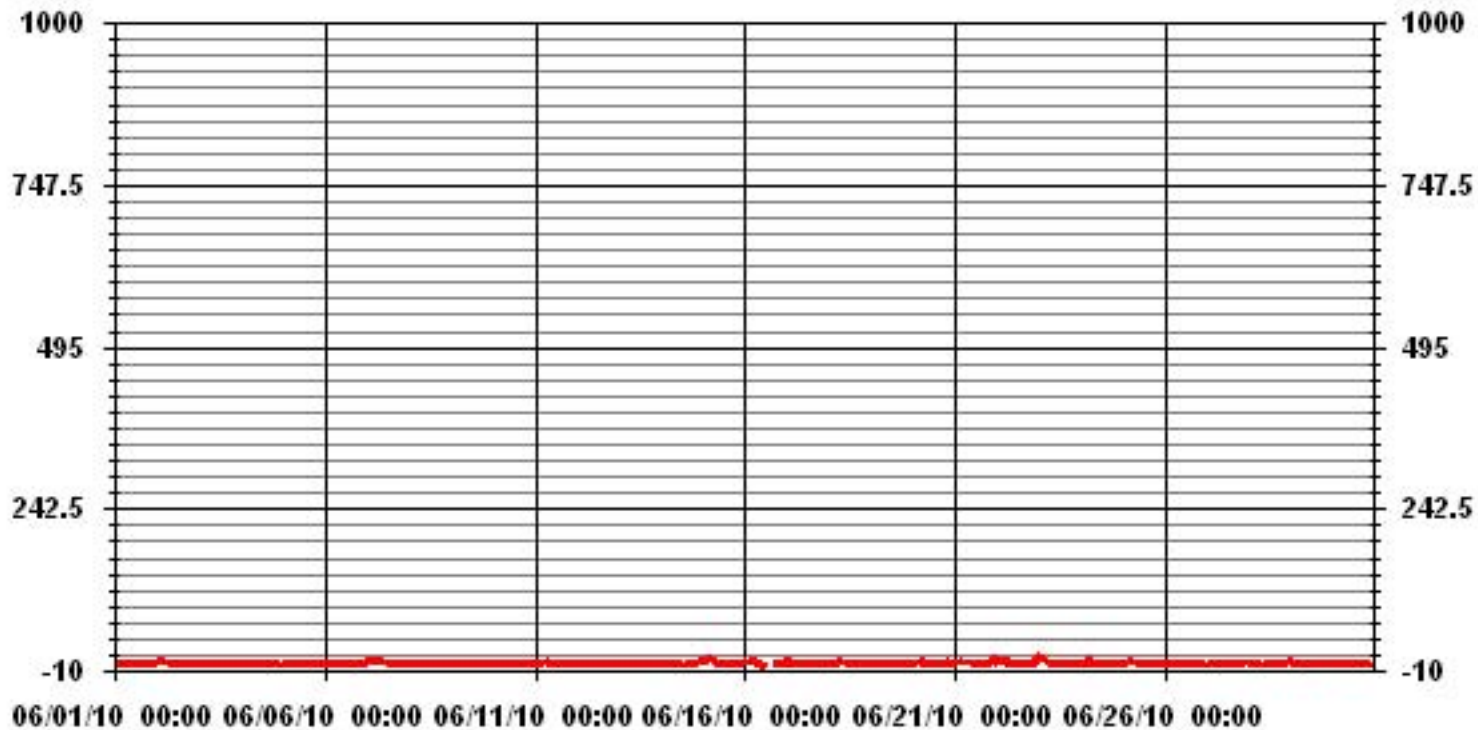
#### MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	371		
MAXIMUM 1-HR AVERAGE:	12	PPB @ HOUR(S)	23 ON DAY(S) 22
MAXIMUM 24-HR AVERAGE:	3.1	PPB	ON DAY(S) 7
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME: 720 HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME 100.0 %
STANDARD DEVIATION	1.89		MONTHLY AVERAGE 1.37 PPB

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA33 NOX\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

**OXIDES OF NITROGEN MAX** instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	0	IZS	1	2	3	3	2	2	2	0	0	0	0	0	0	0	0	0	2	4	4	3	4	4	1.4	24	
2	6	IZS	6	6	5	5	9	5	1	0	0	0	0	0	0	0	0	0	0	4	3	2	0	9	2.3	24		
3	IZS	0	1	2	3	2	2	2	1	1	0	0	0	0	0	1	1	0	2	2	0	1	4	IZS	4	1.1	24	
4	4	2	3	1	0	0	1	1	1	2	21	0	1	2	2	1	0	1	2	1	1	1	IZS	3	21	2.2	24	
5	3	3	3	4	5	5	2	1	1	0	0	0	0	0	0	0	0	0	3	1	1	IZS	2	2	5	1.6	24	
6	4	5	6	2	3	4	6	10	8	3	0	0	1	0	0	1	1	0	2	1	IZS	2	4	2	10	2.8	24	
7	9	8	4	5	5	15	7	11	5	12	10	5	1	1	1	1	1	1	2	IZS	2	16	13	6	16	6.1	24	
8	4	2	1	1	3	1	1	2	1	0	0	0	0	0	0	0	0	0	IZS	1	2	2	2	2	4	1.1	24	
9	2	12	12	5	7	5	4	3	1	0	0	0	0	0	0	0	0	IZS	0	1	2	5	9	6	12	3.2	24	
10	8	12	7	4	7	4	4	4	0	0	0	0	0	0	0	0	IZS	0	0	1	1	2	1	2	12	2.5	24	
11	1	2	2	2	3	5	8	7	8	5	1	0	0	0	1	IZS	0	2	0	4	6	6	5	3	8	3.1	24	
12	3	2	3	3	5	12	5	2	2	1	1	0	0	0	0	IZS	1	2	1	1	1	1	1	2	12	2.2	24	
13	2	2	2	2	2	3	2	2	1	2	1	0	0	0	IZS	0	0	0	0	0	1	1	2	2	3	3	1.3	24
14	3	3	3	3	2	1	3	4	0	0	1	33	IZS	0	38	30	2	0	0	1	1	4	4	6	38	6.2	24	
15	7	14	7	11	12	32	28	47	4	0	0	IZS	0	0	0	1	1	0	1	1	2	8	4	5	47	8.0	24	
16	5	5	4	6	8	9	6	3	3	103	C	C	C	C	C	C	C	C	0	1	3	4	6	3	103	10.6	24	
17	6	13	6	3	4	3	2	2	0	IZS	1	1	1	1	1	0	0	0	6	4	4	7	2	3	13	3.0	24	
18	2	5	8	2	3	8	8	7	IZS	4	3	1	1	1	1	33	0	1	2	3	3	2	4	4	33	4.6	24	
19	3	3	3	2	3	3	3	IZS	2	1	1	1	2	1	1	1	1	1	1	2	2	2	2	7	7	2.1	24	
20	4	3	4	4	8	14	IZS	4	2	3	3	2	1	1	1	2	2	3	2	3	10	9	5	4	14	4.1	24	
21	4	6	4	7	7	IZS	6	4	4	4	2	1	2	2	3	4	3	P	2	3	9	11	16	7	16	5.0	23	
22	9	8	12	12	IZS	9	4	2	0	0	0	0	0	0	2	2	2	2	2	4	4	11	11	21	21	5.1	24	
23	12	15	12	IZS	12	10	4	3	1	1	0	0	0	1	0	0	0	0	1	1	2	3	1	3	15	3.6	24	
24	3	3	IZS	10	17	7	4	3	7	4	2	2	2	1	2	2	2	1	3	2	2	3	3	3	17	3.8	24	
25	3	IZS	6	6	5	6	5	5	5	2	1	1	1	1	0	0	0	0	1	1	4	5	4	4	6	2.9	24	
26	IZS	3	2	2	3	2	1	1	2	1	1	1	1	1	1	1	0	0	0	1	2	4	2	IZS	4	1.5	24	
27	3	4	6	4	1	2	1	1	2	1	1	1	0	0	0	0	0	0	0	3	2	7	IZS	5	7	1.9	24	
28	4	2	3	3	3	8	3	3	2	C	C	1	1	0	1	0	0	0	0	1	2	IZS	5	5	8	2.2	24	
29	12	5	3	2	5	7	1	1	1	1	1	1	1	1	1	1	1	1	0	1	IZS	1	P	2	12	2.3	23	
30	1	2	3	3	1	0	1	2	1	2	1	2	1	0	1	0	1	P	0	IZS	1	0	1	5	5	1.3	23	
HOURLY MAX	12	15	12	12	17	32	28	47	8	103	21	33	2	2	38	33	3	3	6	4	10	16	16	21				
HOURLY AVG	4.6	5.1	4.9	4.1	5.0	6.4	4.6	5.0	2.3	5.5	1.9	1.9	0.6	0.5	2.0	2.9	0.7	0.5	1.1	1.7	2.8	4.5	4.4	4.4				

**STATUS FLAG CODES**

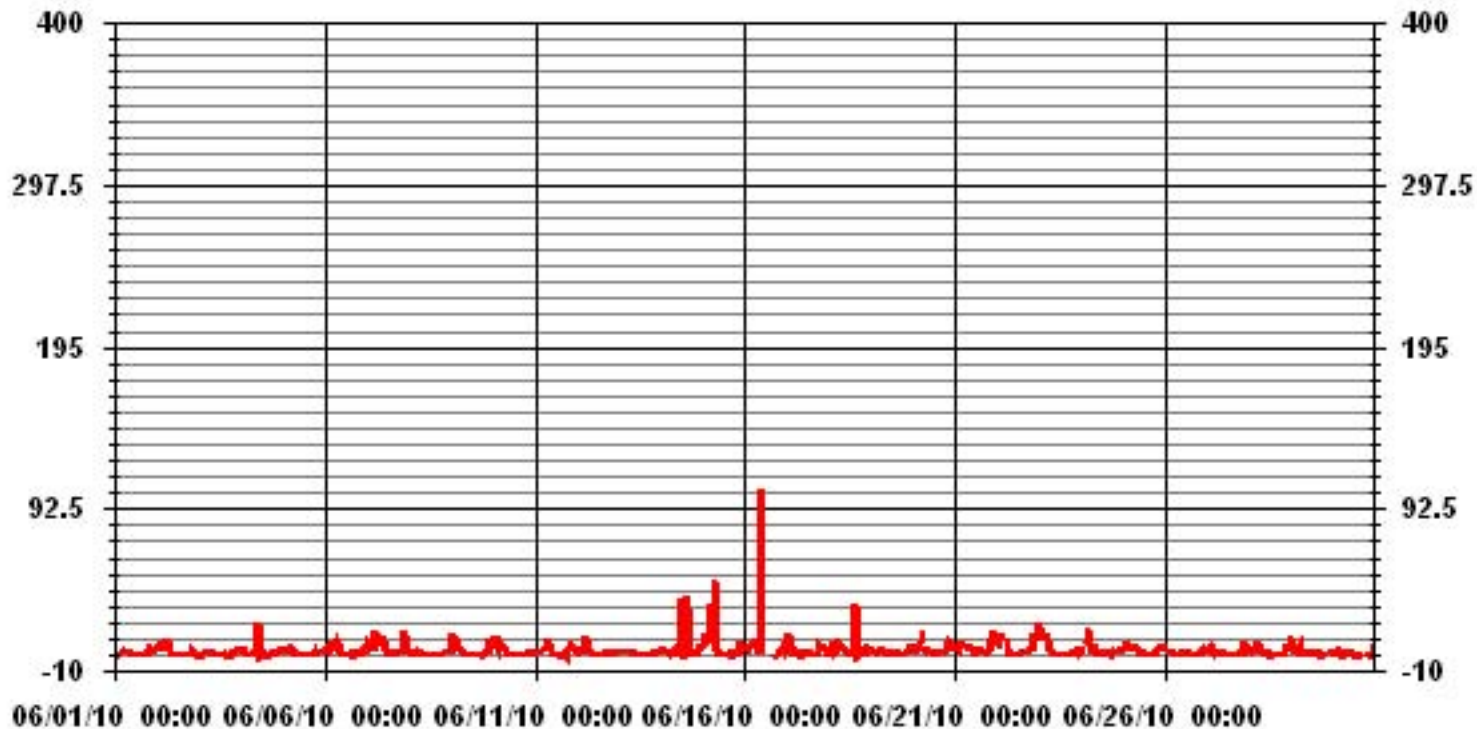
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	530					
MAXIMUM INSTANTANEOUS VALUE:	103	PPB	@ HOUR(S)	9	ON DAY(S)	16
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	717	HRS	
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	5.94					



### 01 Hour Averages



— LICA33 NOXMAX PPB

LICA33  
 NOX\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : NOX\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	4.70	4.11	5.14	5.44	6.91	7.35	4.26	5.00	5.73	6.17	10.44	6.17	8.97	7.94	7.64	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	4.70	4.11	5.14	5.44	6.91	7.35	4.26	5.00	5.73	6.17	10.44	6.17	8.97	7.94	7.64	3.97	

Calm : .00 %

Total # Operational Hours : 680

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	32	28	35	37	47	50	29	34	39	42	71	42	61	54	52	27	680
< 110																	
< 210																	
>= 210																	
Totals	32	28	35	37	47	50	29	34	39	42	71	42	61	54	52	27	

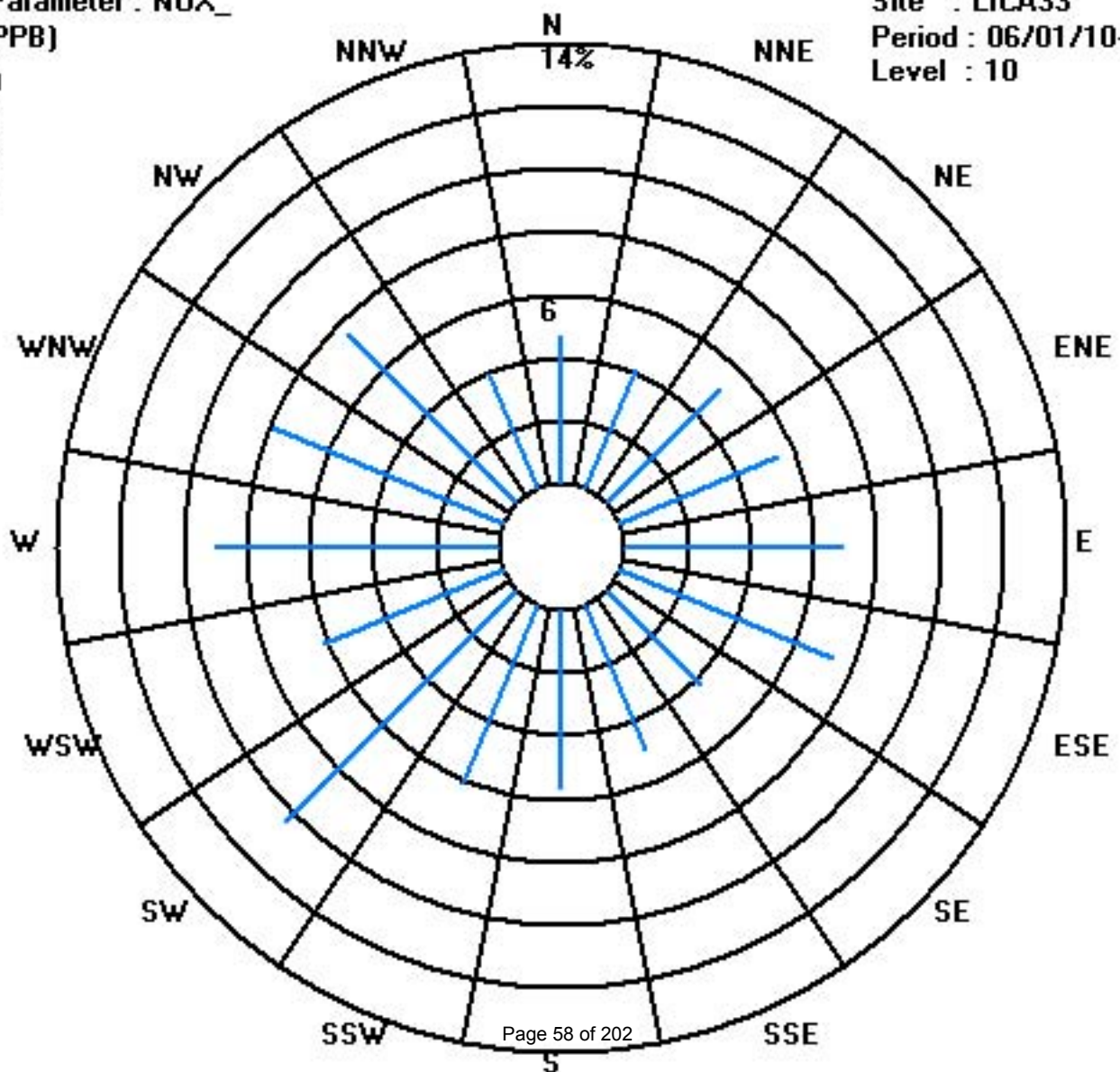
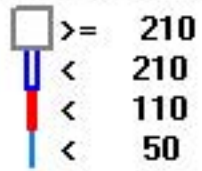
Calm : .00 %

Total # Operational Hours : 680

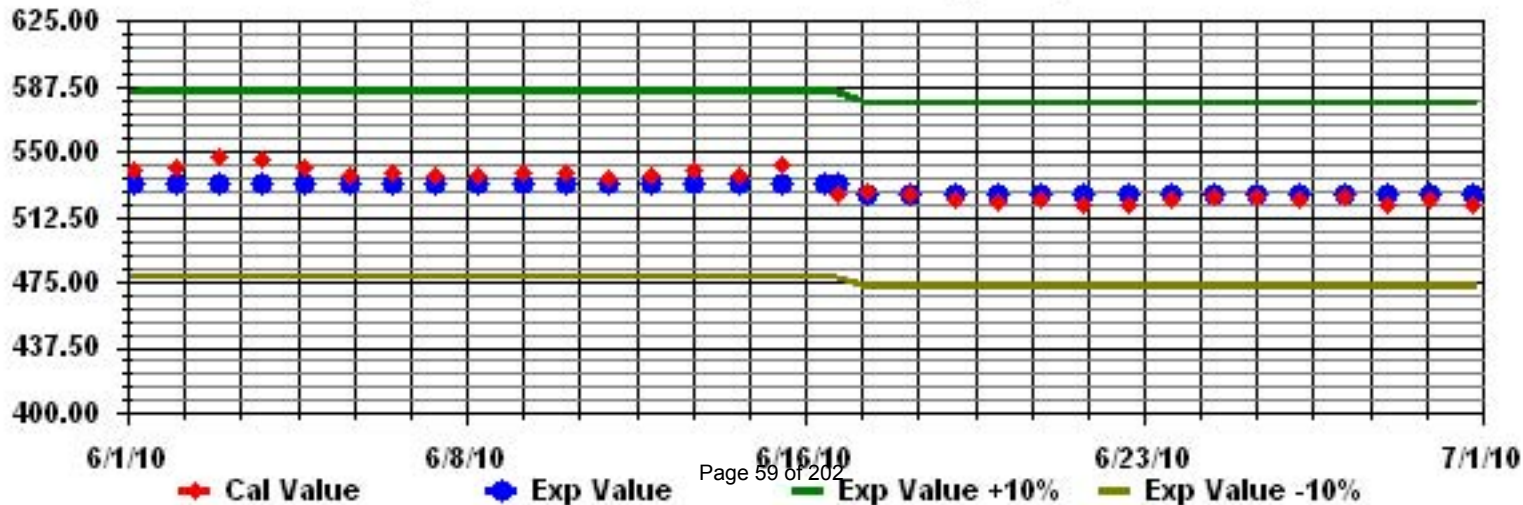
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA33 Parameter: NOX\_ Sequence: NO2 Phase: SPAll



# Ozone

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

### OZONE (O<sub>3</sub>) hourly averages in ppb

MST

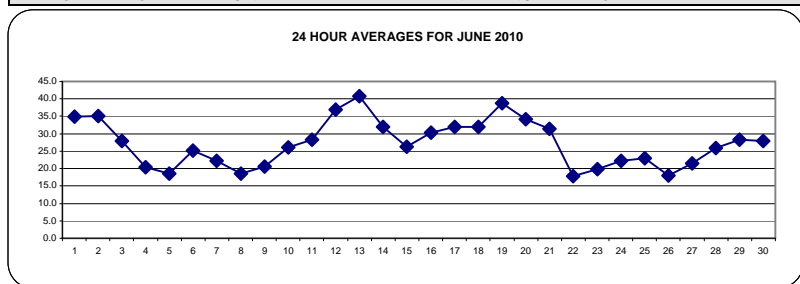
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	25	25	<b>IZS</b>	22	19	22	25	29	30	34	41	45	46	46	46	46	47	46	42	34	30	34	21	47	34.8	24		
2	14	<b>IZS</b>	9	11	11	15	19	33	43	44	45	47	50	50	50	50	49	48	45	40	35	34	34	32	50	35.1	24	
3	<b>IZS</b>	32	30	28	29	35	24	25	28	30	30	32	30	29	29	28	26	27	25	25	25	26	21	<b>IZS</b>	35	27.9	24	
4	24	21	19	22	21	20	20	21	21	22	21	22	22	23	23	24	25	22	18	19	15	13	<b>IZS</b>	10	25	20.3	24	
5	10	7	8	8	7	9	12	16	20	21	22	25	26	27	28	27	26	24	21	21	17	<b>IZS</b>	22	21	28	18.5	24	
6	16	17	18	19	14	14	14	12	15	24	33	35	35	36	38	35	33	35	38	32	<b>IZS</b>	25	19	21	38	25.1	24	
7	14	13	13	10	9	7	10	11	15	16	17	26	42	44	44	43	34	33	34	<b>IZS</b>	23	20	16	19	44	22.3	24	
8	17	15	16	15	13	15	17	16	18	20	21	22	24	26	28	28	28	25	<b>IZS</b>	13	12	13	13	10	28	18.5	24	
9	8	7	10	10	9	8	8	15	18	22	26	30	30	31	31	32	30	<b>IZS</b>	28	26	26	25	22	23	32	20.7	24	
10	19	19	18	18	16	18	19	23	27	28	29	33	32	32	34	34	<b>IZS</b>	34	33	28	28	25	25	26	34	26.0	24	
11	25	22	17	15	13	17	15	14	19	28	34	37	40	41	41	<b>IZS</b>	43	45	46	39	28	26	23	23	46	28.3	24	
12	23	24	20	21	15	15	24	32	37	45	47	47	47	48	<b>IZS</b>	50	50	48	48	46	44	43	39	37	50	37.0	24	
13	36	36	36	36	36	35	35	37	40	42	47	49	48	<b>IZS</b>	48	49	48	47	45	43	37	38	35	33	49	40.7	24	
14	31	31	28	35	36	33	28	33	37	40	40	39	<b>IZS</b>	36	34	33	35	36	34	31	27	22	20	18	40	32.0	24	
15	18	12	12	11	9	13	21	24	31	36	39	<b>IZS</b>	39	39	38	38	38	35	29	29	28	23	23	19	39	26.3	24	
16	20	18	18	16	15	17	21	24	28	38	42	41	42	41	42	40	39	40	39	36	29	26	27	27	42	30.3	24	
17	26	24	26	28	29	30	33	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	42	40	36	35	33	33	30	31	30	30	29	43	32.0	24	
18	25	25	24	23	26	26	21	26	<b>IZS</b>	35	39	43	45	42	37	41	39	37	36	30	30	30	27	27	45	31.9	24	
19	30	28	33	33	32	30	30	<b>IZS</b>	37	42	45	48	48	49	50	50	47	43	41	39	39	37	31	28	50	38.7	24	
20	26	28	18	16	11	14	<b>IZS</b>	36	38	42	48	53	55	55	51	47	44	41	40	37	27	23	17	19	55	34.2	24	
21	20	15	19	19	14	<b>IZS</b>	19	29	36	43	52	59	59	57	50	42	40	31	33	28	24	14	7	11	59	31.3	24	
22	6	4	3	6	<b>IZS</b>	10	20	23	25	26	29	30	31	31	25	26	27	24	22	19	15	5	3	1	31	17.9	24	
23	2	1	0	<b>IZS</b>	3	8	14	19	21	25	28	30	30	31	33	34	34	33	31	23	15	13	14	14	34	19.8	24	
24	13	11	<b>IZS</b>	9	7	12	15	15	12	15	17	17	22	28	28	26	32	33	33	31	30	35	35	36	36	22.3	24	
25	32	<b>IZS</b>	20	13	10	8	13	24	29	35	35	34	33	28	29	26	25	26	26	24	19	12	8	19	35	23.0	24	
26	<b>IZS</b>	23	17	17	15	17	19	19	16	18	19	18	19	22	23	24	21	21	19	18	13	8	11	<b>IZS</b>	24	18.0	24	
27	15	8	6	12	11	11	13	17	22	26	28	26	27	30	33	35	36	37	35	26	19	9	<b>IZS</b>	12	37	21.5	24	
28	10	19	17	20	18	17	16	16	22	<b>C</b>	28	32	38	40	40	40	39	38	32	28	<b>IZS</b>	16	16	40	25.8	24		
29	12	17	15	23	17	14	15	16	19	25	36	37	38	39	39	37	37	35	34	<b>IZS</b>	35	38	34	39	28.2	24		
30	31	30	28	27	30	28	24	21	21	24	28	31	33	32	33	34	32	33	33	<b>IZS</b>	31	26	20	13	34	28.0	24	
HOURLY MAX	36	36	36	36	36	35	35	37	43	45	52	59	59	57	51	50	50	48	48	46	44	43	39	37				
HOURLY AVG	19.6	19.0	17.8	18.7	17.1	17.9	19.4	22.4	25.9	30.2	33.5	35.1	36.8	37.0	36.7	36.4	35.8	35.0	33.9	30.0	26.0	23.8	22.5	21.4				

#### STATUS FLAG CODES

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

OBJECTIVE LIMIT:

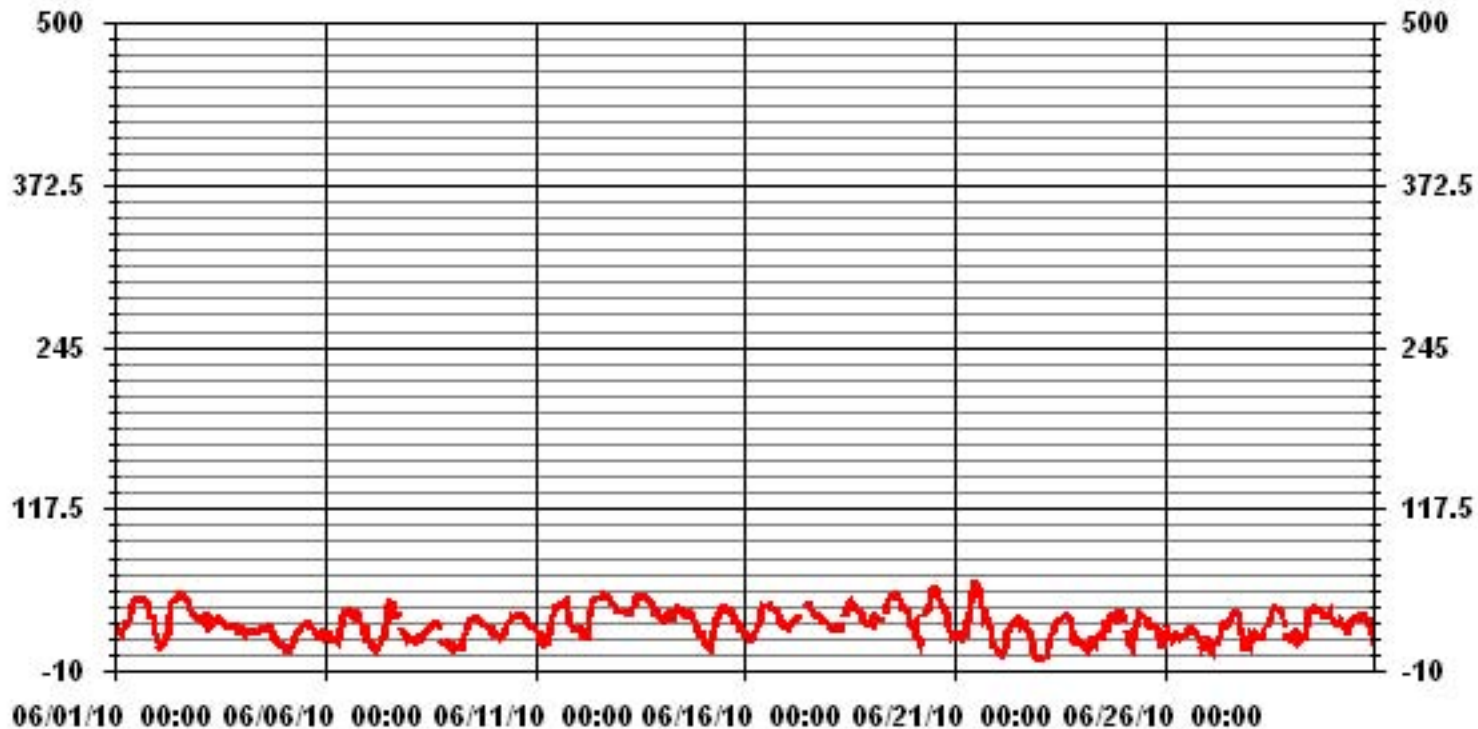
ALBERTA ENVIRONMENT: 1-HR 82 PPB



#### MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	682					
MAXIMUM 1-HR AVERAGE:	59	PPB	@ HOUR(S)	11, 12	ON DAY(S)	21
MAXIMUM 24-HR AVERAGE:	40.7	PPB			ON DAY(S)	13
					VAR-VARIOUS	
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION	11.37		MONTHLY AVERAGE	27.20	PPB	

### 01 Hour Averages



— LICA33\_03\_ PPB

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

**OZONE MAX** instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	28	27	<b>IZS</b>	25	23	23	28	31	32	40	45	46	47	47	47	47	48	48	48	46	39	36	36	32	48	37.8	24
2	21	<b>IZS</b>	17	19	14	19	25	43	45	45	47	50	51	51	51	51	50	49	47	44	38	36	35	34	51	38.3	24
3	<b>IZS</b>	34	32	30	46	46	26	27	31	31	33	35	31	31	30	29	27	28	27	28	28	25	<b>IZS</b>	<b>IZS</b>	46	31.0	24
4	59	23	21	24	23	21	21	22	22	23	23	22	24	24	24	25	26	25	21	20	17	15	<b>IZS</b>	14	59	23.4	24
5	11	8	10	10	8	12	13	18	22	22	24	27	28	29	29	29	29	25	24	22	20	<b>IZS</b>	24	24	29	20.3	24
6	17	19	21	20	16	16	16	15	18	31	35	37	37	38	39	39	35	37	40	39	<b>IZS</b>	29	27	30	40	28.3	24
7	20	21	16	17	15	12	13	13	19	19	22	38	44	46	45	44	34	36	<b>IZS</b>	<b>IZS</b>	28	28	21	21	46	26.8	24
8	19	17	18	17	15	16	18	18	19	23	23	24	27	27	29	31	30	27	<b>IZS</b>	16	13	15	14	13	31	20.4	24
9	12	9	14	12	12	10	10	18	20	25	29	32	31	32	33	33	32	<b>IZS</b>	29	29	27	27	26	26	33	23.0	24
10	24	22	21	20	19	20	22	27	29	29	32	34	33	34	37	36	<b>IZS</b>	36	35	31	29	27	27	29	37	28.4	24
11	27	24	21	17	16	21	18	16	22	34	36	38	42	42	42	<b>IZS</b>	45	47	47	46	32	32	26	25	47	31.1	24
12	25	25	23	23	21	22	30	35	42	47	48	48	48	49	<b>IZS</b>	52	51	50	50	48	45	44	42	40	52	39.5	24
13	45	37	37	37	37	35	36	39	43	44	49	50	50	<b>IZS</b>	49	50	50	49	46	45	41	39	37	34	50	42.6	24
14	33	34	30	37	37	36	31	35	40	41	42	41	<b>IZS</b>	38	36	35	38	37	35	34	30	28	23	21	42	34.4	24
15	23	21	15	16	13	22	24	25	36	39	40	<b>IZS</b>	41	40	40	39	41	41	32	31	29	27	27	25	41	29.9	24
16	22	19	20	17	17	21	24	26	32	43	<b>IZS</b>	42	43	43	43	42	41	41	41	39	34	29	29	28	43	32.0	24
17	27	28	29	29	30	32	35	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	45	43	41	39	36	35	36	33	34	33	31	31	31	45	34.1	24
18	27	27	26	25	27	31	25	28	<b>IZS</b>	39	41	47	47	46	40	44	43	39	39	37	34	34	29	30	47	35.0	24
19	32	33	35	36	33	32	31	<b>IZS</b>	41	44	47	49	50	51	51	52	51	47	43	43	42	39	37	34	52	41.4	24
20	31	31	29	22	14	19	<b>IZS</b>	38	40	48	50	56	57	57	54	51	46	46	43	42	35	29	23	23	57	38.4	24
21	24	20	24	26	21	<b>IZS</b>	29	34	39	47	57	<b>62</b>	61	61	59	48	49	<b>P</b>	37	32	35	21	13	14	<b>62</b>	37.0	23
22	12	5	5	8	<b>IZS</b>	17	22	26	26	32	31	33	32	32	29	29	29	26	23	21	18	12	7	5	33	20.9	24
23	5	3	2	<b>IZS</b>	5	13	16	20	22	27	30	30	31	32	35	36	36	35	34	29	20	18	16	18	36	22.3	24
24	15	13	<b>IZS</b>	11	12	15	16	16	15	18	18	19	28	30	30	28	39	35	36	35	32	40	37	40	40	25.1	24
25	40	<b>IZS</b>	25	18	18	12	19	27	35	37	37	36	37	31	30	27	26	27	27	28	25	17	12	25	40	26.8	24
26	<b>IZS</b>	25	20	20	17	19	22	22	17	19	20	19	21	23	25	26	23	23	20	20	16	11	13	<b>IZS</b>	26	20.0	24
27	17	11	8	13	13	12	15	19	25	28	29	28	31	32	35	37	37	38	36	34	22	16	<b>IZS</b>	15	38	24.0	24
28	15	28	28	23	22	21	17	20	24	<b>C</b>	<b>C</b>	31	25	40	41	42	42	42	42	38	33	<b>IZS</b>	29	21	42	29.7	24
29	18	19	33	34	20	15	16	17	21	35	38	39	40	41	41	41	40	40	36	36	<b>IZS</b>	40	<b>P</b>	37	41	31.7	23
30	32	32	31	29	31	29	27	23	22	25	30	35	38	35	35	36	36	<b>P</b>	35	<b>IZS</b>	32	30	23	18	38	30.2	23
HOURLY MAX	59	37	37	37	46	46	36	43	45	48	57	62	61	61	59	52	51	50	50	48	45	44	42	40			
HOURLY AVG	24.3	22.0	21.8	21.9	20.5	21.3	22.2	24.9	28.5	33.4	35.4	37.4	38.6	38.8	38.6	38.6	38.6	37.3	36.0	33.8	29.6	27.9	25.5	25.3			

**STATUS FLAG CODES**

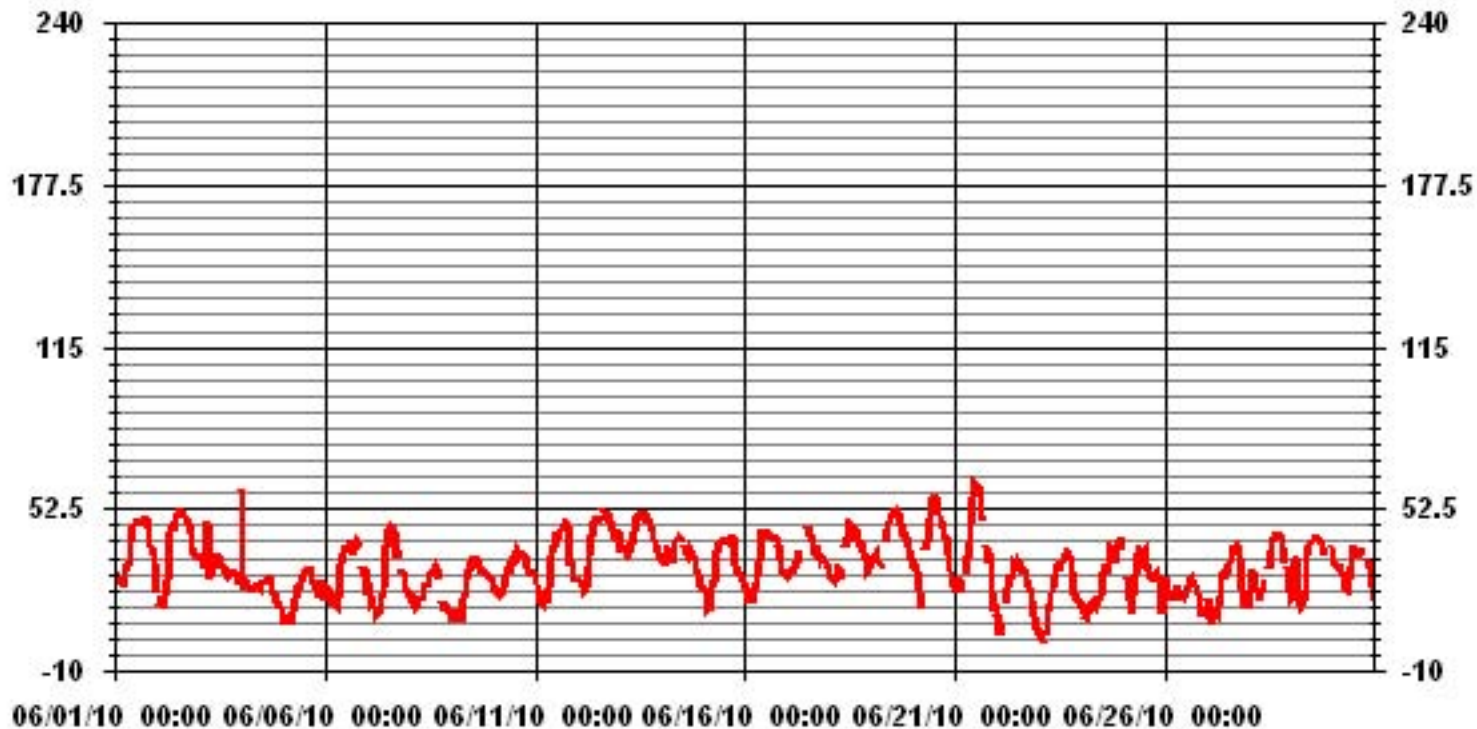
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	679				
MAXIMUM INSTANTANEOUS VALUE:	62	PPB	@ HOUR(S)	11	ON DAY(S) 21
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	717	HRS
MONTHLY CALIBRATION TIME:	7	HRS			
STANDARD DEVIATION:	11.21				



### 01 Hour Averages



— LICA33 O3MAX PPB

LICA33  
 O3\_ / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : O3\_  
 Units : PPB

Wind Parameter : WDR  
 Instrument Height : 10 Meters

		Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq	
< 50	4.68	3.66	5.12	5.41	6.88	7.32	3.95	4.68	5.71	6.00	9.37	6.00	8.93	8.34	7.32	4.09	97.51	
< 110	.00	.00	.00	.00	.00	.00	.29	.29	.00	.14	1.02	.14	.00	.00	.58	.00	2.48	
< 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	4.68	3.66	5.12	5.41	6.88	7.32	4.24	4.97	5.71	6.14	10.39	6.14	8.93	8.34	7.90	4.09		

Calm : .00 %

Total # Operational Hours : 683

Distribution By Samples

		Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq	
< 50	32	25	35	37	47	50	27	32	39	41	64	41	61	57	50	28	666	
< 110							2	2		1	7	1			4		17	
< 210																		
>= 210																		
Totals	32	25	35	37	47	50	29	34	39	42	71	42	61	57	54	28		

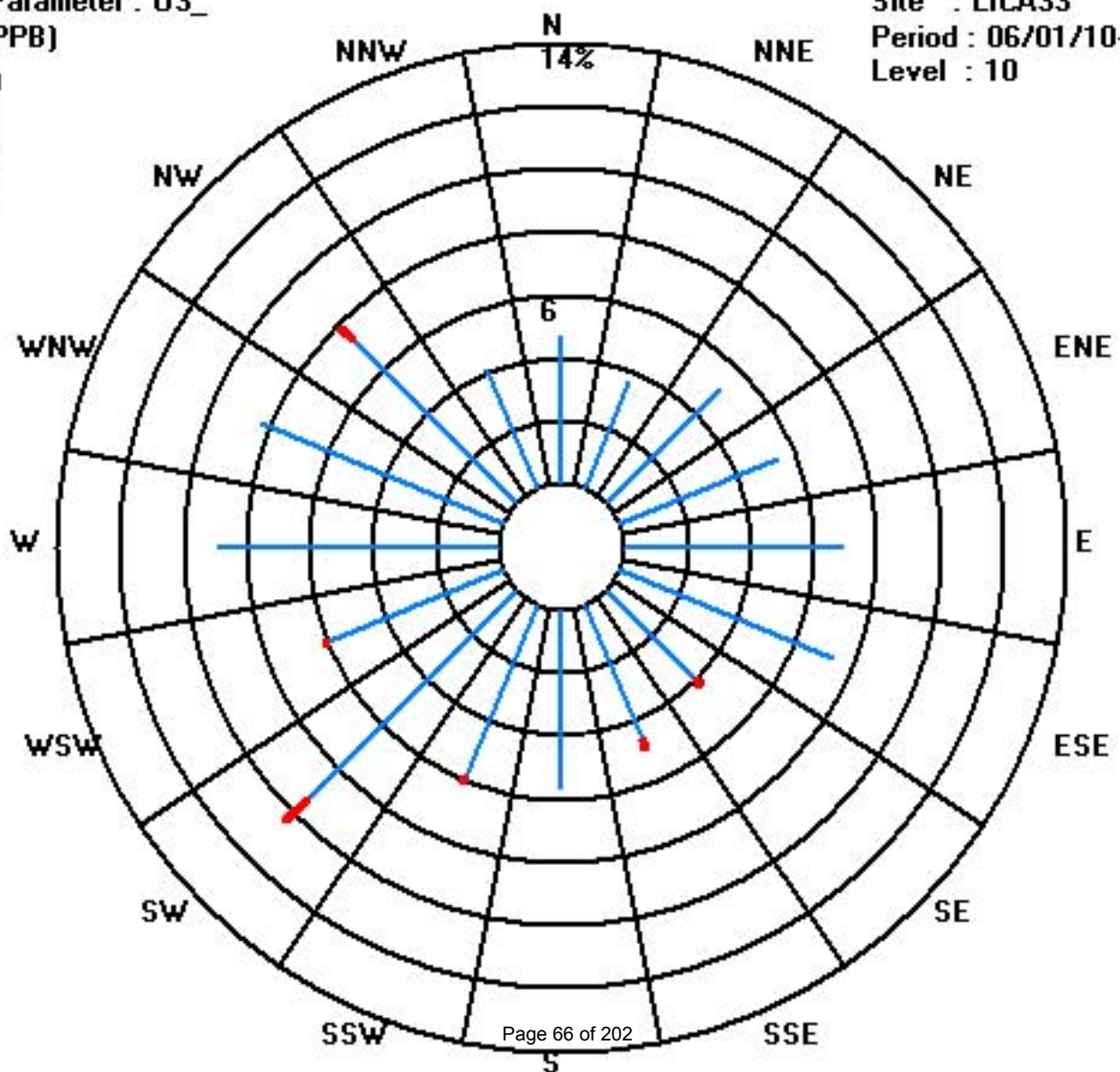
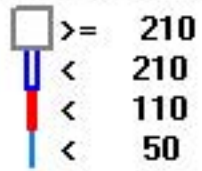
Calm : .00 %

Total # Operational Hours : 683

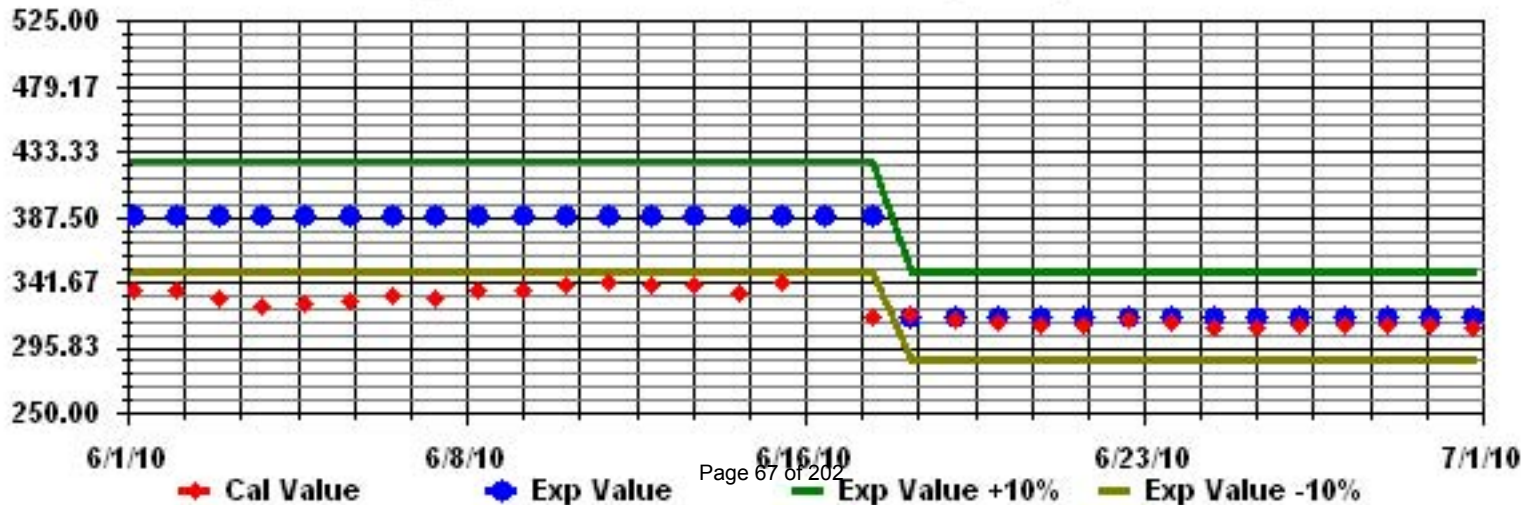
Class Limits (PPB)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA33 Parameter: 03\_ Sequence: 03 Phase: SPAN



# Total Hydrocarbons

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

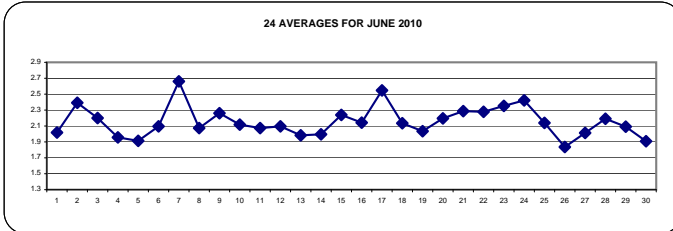
## TOTAL HYDROCARBONS (THC) hourly averages in ppm

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		1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	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	2.1	2.2	IZS	2.3	2.1	2.1	2.1	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.7	2.7	2.0	24		
2	2.6	IZS	2.7	3.8	4.2	3.7	3.3	2.5	2	1.9	1.9	1.9	2	2	1.9	1.9	1.9	1.8	1.8	2.2	2.4	2.4	2.1	2.1	4.2	2.4	24		
3	IZS	2	2.1	2	2	2.1	2.7	2.3	2	2	1.8	1.8	1.9	1.9	2	1.9	1.8	2.1	1.9	2.4	5.5	1.9	2.2	IZS	5.5	2.2	24		
4	1.9	1.9	2	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3	2.1	2.4	2.6	1.9	IZS	1.9	3.0	24		
5	2	2	2	2	2	2.1	2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2	1.9	1.9	IZS	2	2	2.1	1.9	24		
6	2.2	2.2	2.1	2.2	2	2	2	2.3	2.3	2	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.3	2	2	IZS	2.1	2.6	2.4	2.6	2.1	24		
7	2.7	4.1	2.9	3	3.5	3.8	3.8	3.8	2.6	2.7	2.9	2.4	1.9	1.9	1.9	1.9	1.9	1.9	2.1	IZS	1.8	2.7	2.7	2.3	4.1	2.7	24		
8	2	2	2	2.2	2.2	2.3	2.1	2.1	2	2.2	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	IZS	2.3	2.7	2.1	2	2	2.7	2.1	24		
9	2.4	3	2.3	2.2	2.4	2.4	2.7	2.4	2.1	2	2	2	2	2	2	2.1	2.1	IZS	2	2.3	2.8	2.6	1.9	2.3	3.0	2.3	24		
10	2.1	2	2.3	2	2.2	3.3	2.5	2.2	2	2	2	2.1	2.1	2	2.1	2	IZS	2	1.9	1.9	2	2	2	2	3.3	2.1	24		
11	1.9	2	2	2	2	2.1	2.1	2.3	2.5	2.1	2.1	2.1	2	2.1	2	IZS	2	2	2	2	2	2	2	2.2	2.2	2.5	2.1	24	
12	2.2	2.3	2.3	2.3	3.1	2.6	2.1	2	2	2	2	2	2	2	2	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	3.1	2.1	24	
13	2	2	2	2.1	2.1	2	2	2	2	2.1	2	2	2	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.1	2.0	24	
14	2.2	2.2	2.1	1.9	2	2	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	2.1	2.4	2.4	2.4	2.0	24	
15	2.4	3.7	2.8	3	2.8	2.6	2.3	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	2	2.1	2.2	2.2	3.7	2.2	2.4	24	
16	2.4	2.3	2.3	2.5	2.5	2.4	2.4	2.3	2.2	2	1.9	1.9	1.9	2	2	2	1.9	1.9	1.9	2	2	2.1	2.3	2.3	2.5	2.1	2.4	24	
17	2.7	2.7	3.2	3.7	2.6	2.2	2	C	C	C	C	C	C	1.9	1.9	2	2.2	2	2.2	2.6	4.5	2.7	2.7	2.3	2.3	4.5	2.5	24	
18	2.3	2.3	2.1	2.1	2.2	2.4	2.6	2.4	IZS	2.1	2	2	1.9	2.2	2.1	2	1.9	2	2.2	2.2	2	2	2	2.1	2	2.6	2.1	24	
19	1.9	1.9	2	2.1	2	2	1.9	IZS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	4.3	4.3	2.0	24	
20	2	2	3	2.1	3.2	3.2	IZS	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	2.3	2.5	2.7	2.3	3.2	2.2	24	
21	2.5	2.7	2.7	2.5	2.8	IZS	2.7	2.1	2.1	2	2	2	2	2	1.9	1.9	2.1	2	2	2.2	2	2.2	3.6	2.6	3.6	3.6	2.3	24	
22	2.6	3.1	2.7	2.6	IZS	3.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	1.9	2.2	2.2	2.2	2.3	2.1	2	2.1	2.1	3.1	2.3	24	
23	2.4	2.5	4.1	IZS	3.4	2.8	2.6	2.3	2.2	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2.2	2.3	2.4	2.3	4.1	2.4	2.4	24	
24	2.6	2.3	IZS	2.9	3	2.6	2.5	2.4	2.7	2.5	2.6	3.4	2.9	2	2	2.1	2.1	2.2	2.5	2	2.1	1.9	2.3	2.1	3.4	2.4	2.4	24	
25	2	IZS	2.4	2.7	2.8	3	2.9	2.2	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.5	2.7	2	3.0	2.1	24	
26	IZS	2	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2	2	IZS	2.0	1.8	24	
27	2	2.2	2.1	2	1.9	1.9	1.9	2	2.1	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	IZS	3	3.0	2.0	24	
28	2.7	2.2	2.4	2.1	2.4	2.8	2.7	2.4	2.2	C	C	2.2	2	2	2	1.9	1.9	1.9	1.9	1.8	1.8	1.8	IZS	2.3	2.5	2.8	2.2	24	
29	3.7	2.6	2.1	2.3	2.2	2.1	2	2	2.1	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	IZS	1.8	1.8	2.1	3.7	2.1	24
30	2.1	2.1	2.1	2	2	2.1	1.9	2	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	IZS	1.8	1.9	2	2.1	1.9	24	
HOURLY MAX	3.7	4.1	4.1	3.8	4.2	3.8	3.8	3.8	2.7	2.7	2.9	3.4	2.9	2.2	2.2	2.2	2.2	3.0	2.6	4.5	5.5	5.5	2.7	3.6	4.3				
HOURLY AVG	2.3	2.4	2.4	2.4	2.5	2.5	2.3	2.2	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.1	2.2	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
BB - BELOW BACKGROUND OF 1.5 PPM	

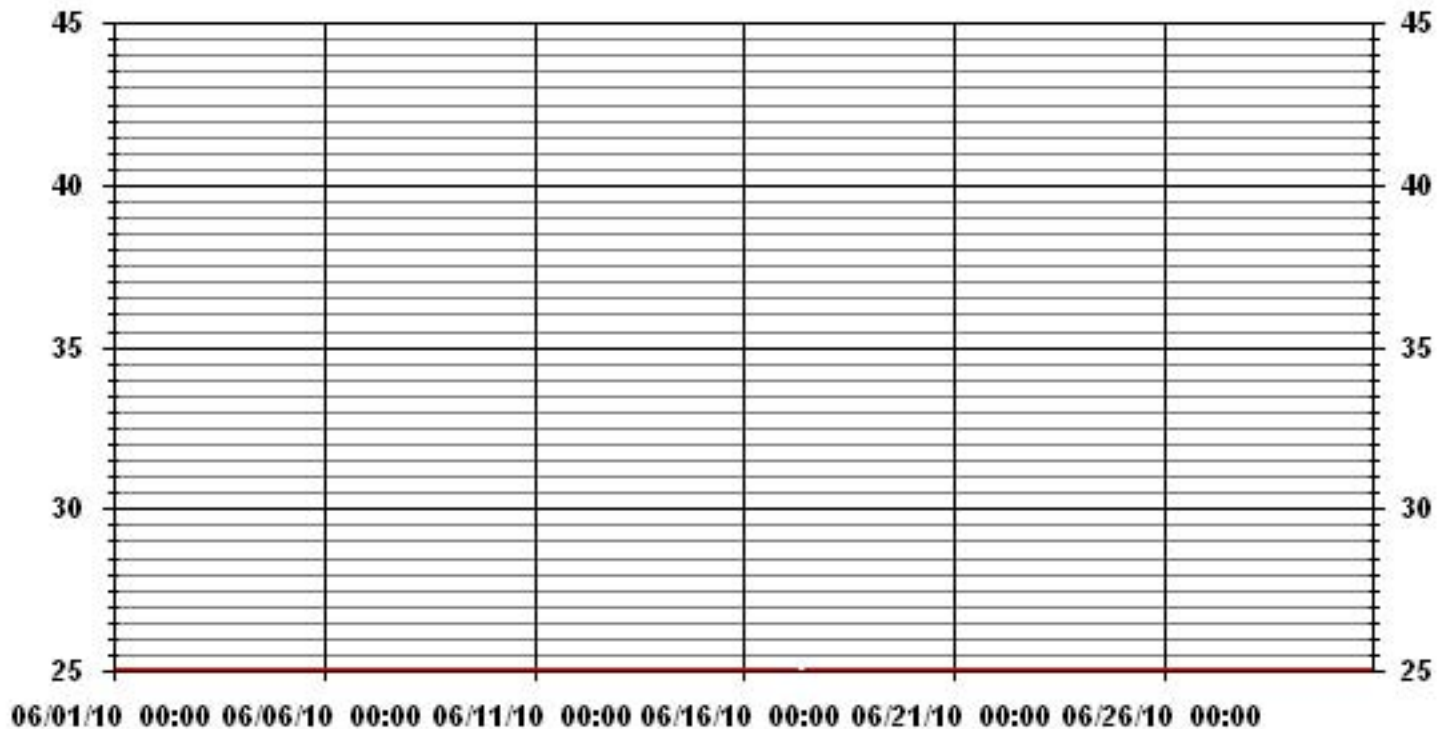
**24 AVERAGES FOR JUNE 2010**



**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	683					
MAXIMUM 1-HR AVERAGE:	5.5	PPM	@ HOUR(S)	20	ON DAY(S)	3
MAXIMUM 24-HR AVERAGE:	2.7	PPM			ON DAY(S)	7
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.42		MONTHLY AVERAGE:	2.15	PPM	

### 01 Hour Averages



— LICA33 THC PPM

## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

### TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.	
DAY																												
1	2.4	2.5	<b>IZS</b>	2.8	2.8	2.4	2.5	2	2	2.1	3.8	2.7	2	2.1	2	2.2	2.5	2.5	1.9	1.9	1.9	2	2	9.6	9.6	2.6	24	
2	15	<b>IZS</b>	4	12.5	11.1	8.1	6.7	4.1	2.9	2.1	2	2	2	2.1	2.3	2.2	2.2	2.1	2	3.1	3.2	2.9	2.7	2.8	15	4.4	24	
3	<b>IZS</b>	2.8	2.5	2.7	2.5	6.6	4.9	4.3	3.4	3.3	2.6	2.5	2.9	2.7	2.9	3.2	4.3	4.1	3.6	11.2	33	6.4	2.6	<b>IZS</b>	33	5.2	24	
4	2.3	2.1	2.1	2	1.8	1.8	1.9	2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	9.3	23.6	5.2	8.2	6.2	2.1	<b>IZS</b>	2.1	23.6	3.8	24		
5	2.1	2.1	2.1	2	2.1	2.1	2.1	2	1.9	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	2.1	2.4	2	2	<b>IZS</b>	2.1	2.2	2.4	2.0	24	
6	2.4	2.3	2.2	2.2	2.1	2	2	12.3	6.7	3.1	2	2	1.9	1.9	1.9	4.3	4	4	5.5	3.5	<b>IZS</b>	9.3	20.8	9.2	20.8	4.7	24	
7	7.2	<b>54.1</b>	9.9	10.1	12.3	9.2	9.5	10.6	3	7.1	5.6	2.7	2	2.2	2	1.9	2.1	2	4	<b>IZS</b>	1.9	6.9	4.7	3.5	<b>54.1</b>	7.6	24	
8	2.9	3.9	2.7	3	3.1	3.7	3	3.5	3.4	13.7	19.5	2	1.9	2	2	2	2.1	2.1	<b>IZS</b>	4.6	6.3	6.4	2.7	2.2	19.5	4.3	24	
9	2.8	8.9	3.5	3.9	8.6	2.4	5.9	5.8	2.8	2.5	3.2	2.7	3.6	2.9	4.2	3.6	3.7	<b>IZS</b>	4.4	6	5.2	4.5	2.6	5	8.9	4.3	24	
10	4.4	3.9	7	7.9	9	4.9	3.9	4.2	3.3	2.3	3.1	3.6	4.7	3	3.3	3.7	<b>IZS</b>	5.5	2.9	2	2	2	2	2.1	9	3.9	24	
11	2	2	2	2	2.1	2.1	2.2	2.9	3.6	2.7	4.1	3.1	3.5	3.3	2.9	<b>IZS</b>	2.3	2.7	2	2.1	2	2.2	2.3	2.2	4.1	2.5	24	
12	2.4	2.4	2.4	2.4	13	8.8	2.2	2	2	2.1	2	2	2	2	<b>IZS</b>	2	2	2	2	1.9	1.9	2	2.1	2.1	13	2.9	24	
13	2	2	2.1	2.1	2.1	2.1	2	2	2.1	2.2	2.1	2	2	<b>IZS</b>	2	2	1.9	1.9	2	1.9	2	2	2.1	2.2	2.2	2.0	24	
14	2.3	2.4	2.3	2.4	2.4	2.8	2	1.9	1.9	1.9	1.9	2.1	<b>IZS</b>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.5	2.5	2.8	2.1	24
15	2.6	16.2	3	3.6	3	2.9	2.3	2.4	2.3	2	2	<b>IZS</b>	2	1.9	2.3	1.9	1.9	1.9	2	1.9	2.4	2.2	3.9	2.3	16.2	3.0	24	
16	2.5	2.4	2.4	2.6	5.3	2.6	2.4	2.4	2.4	2.8	<b>IZS</b>	2	2.1	3.6	3.3	3.3	2	2	2.1	2	2.1	2.3	3.1	2.6	5.3	2.6	24	
17	3.2	3.5	7.8	19.6	2.9	2.4	2.1	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	2.2	2.1	3.7	3.4	3.3	4.4	6.8	40.7	3.2	3.7	2.4	2.5	40.7	6.3	24	
18	2.4	2.9	2.2	2.2	2.3	2.8	2.9	2.7	<b>IZS</b>	3.1	2.1	2	2.4	3.5	4.2	2.8	2.3	5.3	6.4	7.4	2	2.1	2.2	2.1	7.4	3.1	24	
19	1.9	2	2.1	2.2	2.1	2	2	<b>IZS</b>	2	1.9	1.9	1.9	1.9	1.9	1.9	2.9	2.3	2	2	1.9	1.9	1.9	2.6	31.6	31.6	3.3	24	
20	2.1	2	11.6	3.5	12.3	4.1	<b>IZS</b>	2.2	3.7	2.3	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	9.9	5.1	11.5	2.6	12.3	4.0	24	
21	7.1	7.9	3.9	3.5	10.5	<b>IZS</b>	4.7	2.6	2.2	2.2	2	3.1	3.3	2.1	2	2	3.3	<b>P</b>	3.2	4.9	3.5	8.1	5.8	4.7	10.5	4.2	23	
22	5.5	9.2	2.8	2.9	<b>IZS</b>	3.9	4.7	3.2	3.2	3.2	3.2	3.1	2.9	3.7	5.6	2.7	5.4	5.7	2.6	2.6	2.6	2.1	2.1	2.2	9.2	3.7	24	
23	2.9	4.4	10.4	<b>IZS</b>	13.1	5.7	5.3	4	3.5	3.9	3.2	3.2	2.7	3.5	2.2	2	2.4	2.5	2.2	3.9	4.4	3.1	4	4.5	13.1	4.2	24	
24	5.1	3.8	<b>IZS</b>	6.6	7.4	8.1	4.7	4	8.4	4.3	6.6	31.7	23.2	2.2	2.3	2.3	4	4.3	4.9	3.1	3.8	2.3	6.3	3.2	31.7	6.6	24	
25	2.9	<b>IZS</b>	8.2	7.1	6.1	17.2	4.4	2.4	2.3	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	9.7	11	3.2	2.3	17.2	4.2	24	
26	<b>IZS</b>	6.2	2	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2.1	<b>IZS</b>	6.2	2.1	24	
27	2.3	2.3	2.2	2.1	1.9	1.9	1.9	1.9	2.1	2.1	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	6.7	6.1	<b>IZS</b>	7.2	7.2	2.6	24
28	3.3	2.4	7.9	4.3	4.3	5.2	5.6	3.8	2.8	<b>C</b>	<b>C</b>	3.3	2.6	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	5.2	6.2	7.9	3.5	24
29	9.2	5.2	3.7	5.7	3.4	3.2	2.4	2.5	2.6	3.2	2.1	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	<b>IZS</b>	1.9	<b>P</b>	3.8	9.2	3.0	23
30	3.5	2.9	2.7	2.7	2.6	3.1	2.5	3.4	4.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	<b>P</b>	1.9	<b>IZS</b>	1.9	1.9	1.9	2.1	4.9	2.4	23	
HOURLY MAX	15	54	12	20	13	17	10	12	8	14	20	32	23	4	6	4	9	24	7	41	33	11	21	32				
HOURLY AVG	3.8	5.9	4.2	4.4	5.3	4.3	3.5	3.5	3.0	3.1	3.3	3.4	3.1	2.3	2.5	2.4	2.8	3.5	2.9	4.6	4.6	3.8	4.0	4.6				

**STATUS FLAG CODES**

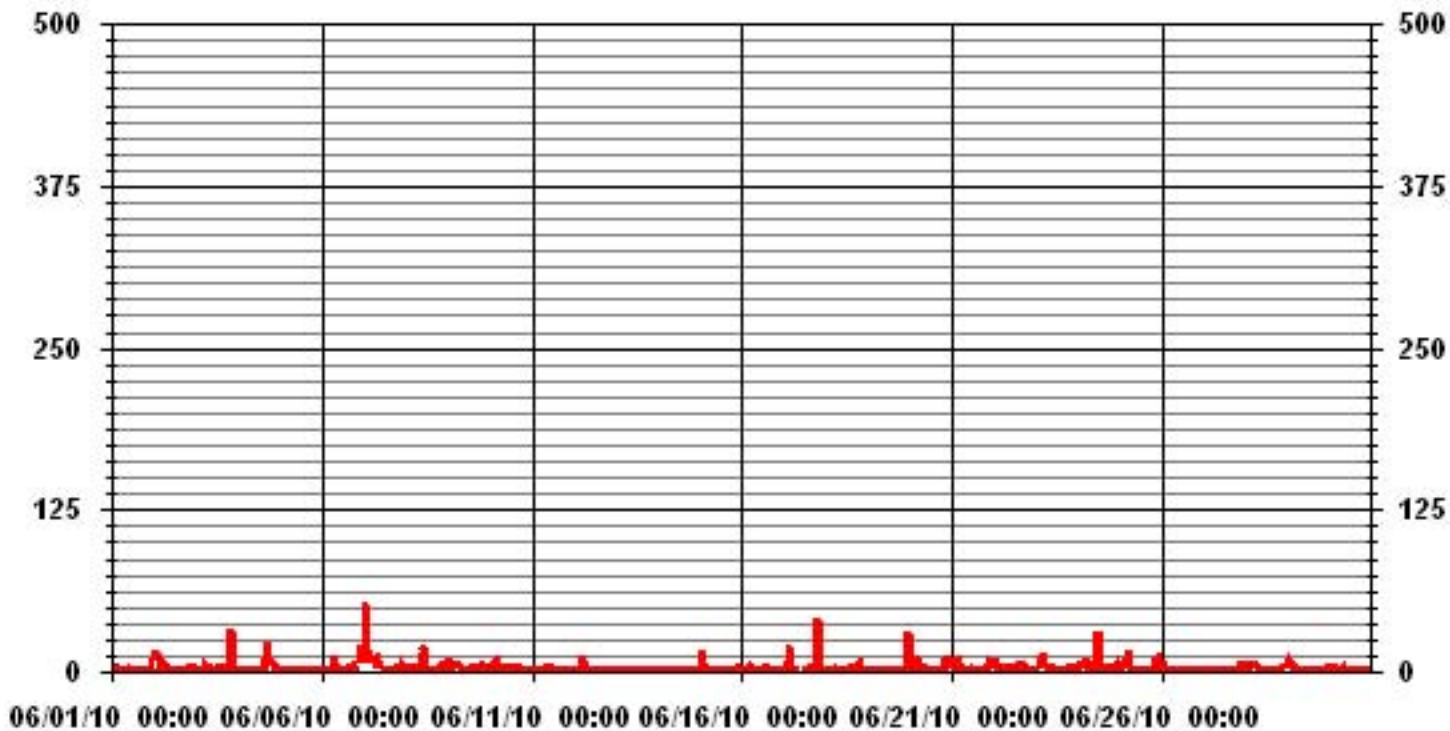
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE
BB	- BELOW BACKGROUND OF 1.5 PPM		

**MONTHLY SUMMARY**

NUMBER OF NON-ZERO READINGS:	679					
MAXIMUM INSTANTANEOUS VALUE:	54.1	PPM	@ HOUR(S)	1	ON DAY(S)	7
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	717	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	4.12					



### 01 Hour Averages



— LICA33 THCMAX PPM

LICA33  
 THC / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 33  
 Site Name : LICA33  
 Parameter : THC  
 Units : PPM

Wind Parameter : WDR  
 Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	3.66	2.78	4.68	5.12	6.58	6.58	3.51	4.97	5.71	6.14	10.39	6.00	8.78	8.19	7.90	3.95	95.02
< 10.0	1.02	.87	.43	.29	.29	.73	.73	.00	.00	.00	.00	.14	.14	.14	.00	.14	4.97
< 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	4.68	3.66	5.12	5.41	6.88	7.32	4.24	4.97	5.71	6.14	10.39	6.14	8.93	8.34	7.90	4.09	

Calm : .00 %

Total # Operational Hours : 683

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3.0	25	19	32	35	45	45	24	34	39	42	71	41	60	56	54	27	649
< 10.0	7	6	3	2	2	5	5					1	1	1		1	34
< 50.0																	
>= 50.0																	
Totals	32	25	35	37	47	50	29	34	39	42	71	42	61	57	54	28	

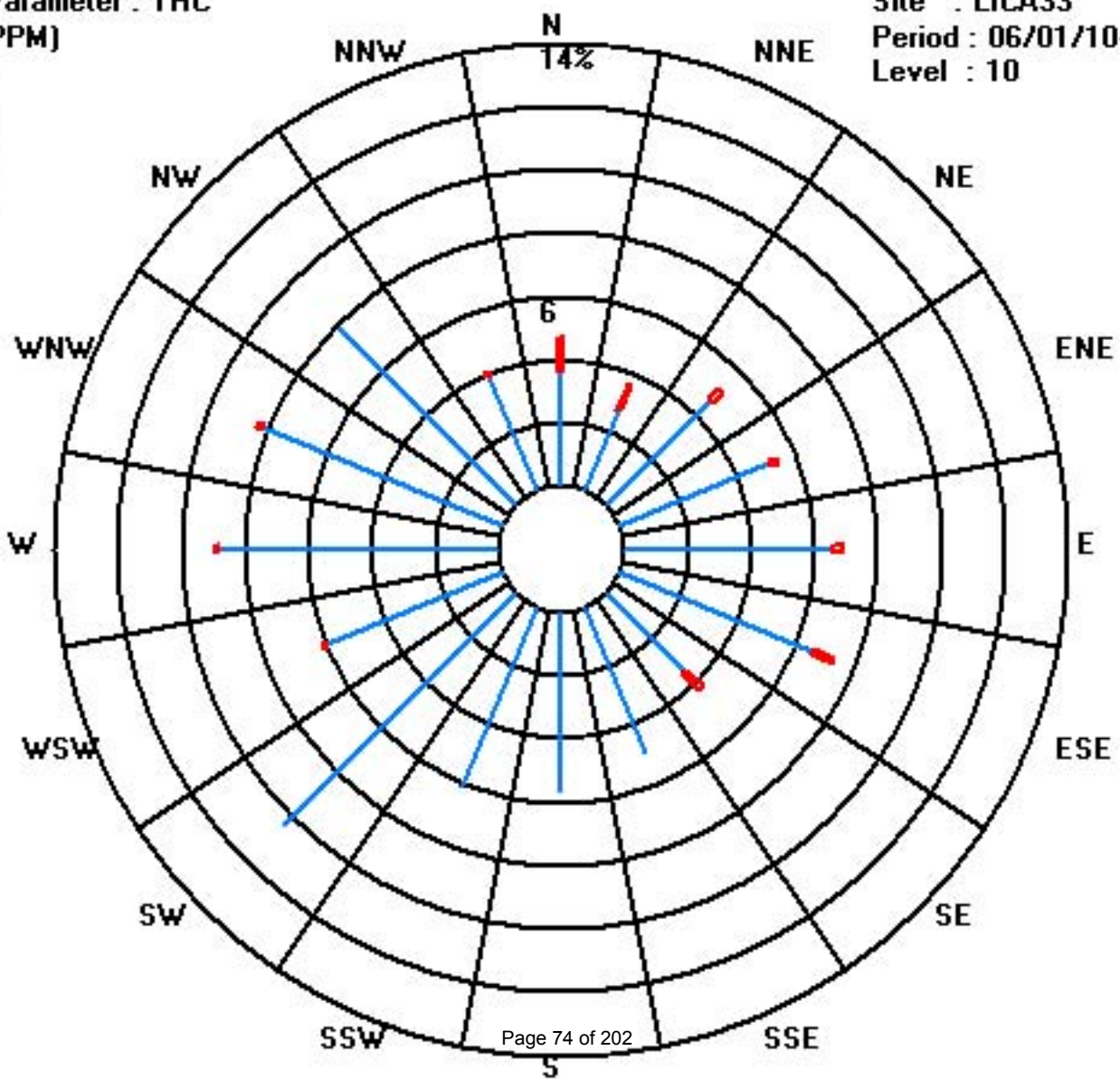
Calm : .00 %

Total # Operational Hours : 683

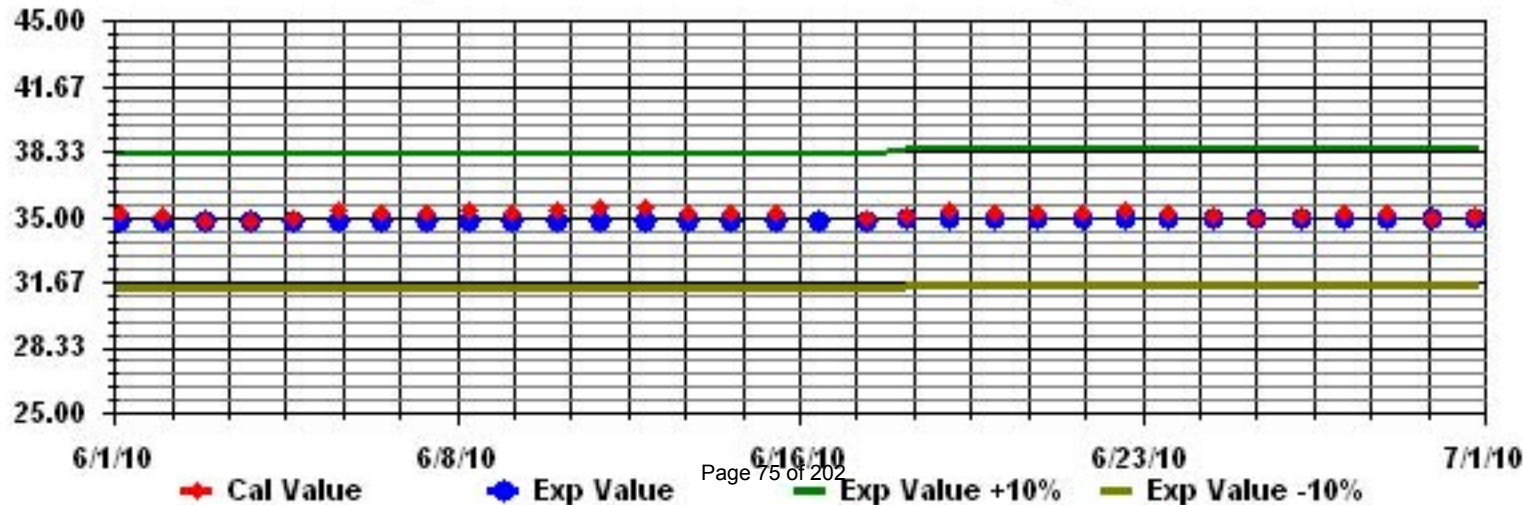
Class Limits (PPM)

Period : 06/01/10-06/30/10

Level : 10



Calibration Graph for Site: LICA33 Parameter: THC Sequence: THC Phase: SPAll



# Vector Wind Speed

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

## 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	HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																												
1		6.1	6.2	7.1	6.2	3	5.8	6.1	4.5	6.8	7.8	4.5	2.5	5.9	6.8	8.1	6.6	5.7	7.1	5.6	5.5	3.9	4.9	5.2	1.2	8.1	5	24
2		0.5	0.3	1.8	2.1	1.7	0.8	2.9	7.7	10.8	15.2	16.8	17.1	17.1	15.8	13	17.2	15.7	16.2	16.4	14.2	13.7	15.9	17.8	14.9	17.8	10.2	24
3		14.3	16	17	15.3	17.8	12.4	9.9	13.5	16	18.7	22	23.9	23.7	24.1	23.3	17.3	15	15.3	12.4	9.7	8.9	6.6	5.4	6.6	24.1	13.6	24
4		6	8.6	9.7	16.2	17.5	18.6	16.6	15.9	15.8	16.4	12.9	13	14	13.2	7.4	6.1	9.6	7.8	6.1	3.2	3.8	3.5	3	2.6	18.6	8.5	24
5		3.6	5.5	4.7	6.3	7.7	10.9	8.3	9.3	14.6	16.4	15.6	17	15.5	16.9	15.1	13.9	12.6	9.8	6.5	4.5	4.1	5.3	6.9	6.9	17.0	9.9	24
6		6.7	7.3	8.9	6.4	5.8	5.3	3.4	0.9	0.4	3.3	4.9	8.3	7.2	8.7	11.3	1.1	15.9	12.7	10.1	6.8	4.6	4.3	2.7	2.4	15.9	6.2	24
7		1.1	3.3	4	3.9	2.9	3.6	4	0.3	1.1	3.9	3.7	7.7	12.5	11.1	8.4	8.8	14.7	14.6	12.5	7.9	2.4	3.4	3.5	9.2	14.7	6.2	24
8		8.1	12.1	12.6	11.3	7.2	9.9	11.3	9.1	10.2	12.8	12.5	13	14.4	13	12.8	10.7	9.9	9.2	7.4	10.2	8.9	6.2	1.1	1.1	14.4	9.8	24
9		1.3	3	8	4.5	4.7	3.6	3.4	9.3	11.8	10.9	12.5	13.6	10.7	9.5	10.5	11.9	11.6	12.2	10.2	9.5	9.7	10.1	9.2	9.4	13.6	8.8	24
10		8.3	8.3	6.6	7.1	5.2	5.5	7.7	10.7	15.9	20.1	14.7	15.6	12.7	12.7	14.4	10.2	11	9.3	3.5	6.7	5.2	9.8	9.6	8.8	20.1	10.0	24
11		4.5	3.2	5.9	5	5.3	4.8	6.1	3.1	1.4	5.7	5.8	6.5	4.8	1.7	3	2.3	2.6	4.7	3.8	4	5.6	3.7	10.4	5.4	10.4	4.6	24
12		4.6	6.6	4.6	4	1.1	1.5	5.6	11	12.3	16.4	20.2	17.2	16.4	16.6	16.4	19.1	20.3	10.4	9.9	9.2	8.5	9.7	7.7	7	20.3	10.7	24
13		7	6	7.6	6	6.5	8.4	8.8	9.5	9.2	12.3	15.2	19.2	18.7	18.1	17.8	19.9	19.2	17.3	15.7	12.3	10.8	11	10.1	9.9	19.9	12.4	24
14		8.6	6	8.5	14.5	12.4	5.8	7.6	11.1	15.5	14.2	15.8	14.3	12.5	11.7	12.1	14.2	13.2	11.9	8.6	6.4	6.1	5.7	5.3	6	15.8	10.3	24
15		4.6	2.7	4.8	5.1	5.5	4.4	4.8	4.7	5.5	8.5	10.2	11.9	12.6	12	12.9	15.2	14.4	10.5	7.6	7.4	2.2	2.5	3.5	4.8	15.2	7.4	24
16		9.3	8.3	8.4	5.4	4.1	7	6	3.7	4.4	4.5	5.9	8	5.4	6.2	1.9	5.3	4.1	5.2	5.5	8.7	6.4	6.8	7.4	6.9	9.3	6.0	24
17		5.9	6.5	9.4	6.4	8	9.3	10.4	16.2	20.5	17.4	17.4	17.6	17.6	16.2	15.3	14.5	13.4	10.2	7.5	4.6	5.2	4.6	7.3	6.7	20.5	11.2	24
18		6.3	6.2	5.3	8.4	8.7	9.1	4.9	2.8	0.9	0.8	2.2	4.3	4.9	7.2	10.2	3.8	9.7	5.5	2.5	4.6	8.3	5.4	3.7	5.3	10.2	5.5	24
19		11.5	6.9	7.7	5	8.2	11.5	18.3	21.9	20.6	18	19.3	17.4	14.7	16	16.3	4.5	11.7	11.7	12	5.8	5.6	3.1	4.7	0.8	21.9	11.4	24
20		5.1	6.4	0.4	1.1	2.2	2.8	4.6	2.8	5.7	8	5.7	8.3	13.3	15.7	14.9	9.9	12	9.4	9.9	9.1	1.4	4.6	6.2	6.1	15.7	6.9	24
21		4.5	3.2	4.1	1.9	2.3	3.3	1.7	2.9	6.9	5.2	8.1	5.9	7.4	7	7.7	7.6	14.5	15.6	14.1	14.4	3	2.6	5.4	4.9	15.6	6.4	24
22		4.4	5.7	1.5	8.1	6.5	7.5	12.4	17.9	17.8	15.5	13.5	10.7	7.2	6.5	1.1	3.3	7.9	6.2	6.9	4.6	2.1	2.3	4	2.7	17.9	7.3	24
23		2.9	3.2	2.7	4	2	3.6	5.9	8.8	6.5	4.6	4.5	5.4	5.3	4.6	5.5	6.2	7.6	9.9	10.3	8.3	7.8	7.4	8.6	9	10.3	6.0	24
24		7.6	8.6	7.7	6.7	3.5	8.7	9.7	10.2	4.7	11	7.4	6.2	7.7	8.6	8.6	7.9	8.2	12.2	9.5	16.6	9	12.1	5.7	14.6	16.6	8.9	24
25		2.6	2.5	1.4	2.6	1.8	2.6	6.1	4.6	2.9	3.6	8	6.9	7.5	10.6	11.1	9.5	8.4	7.3	5.9	4.5	2.1	4.2	3.6	9.7	11.1	5.4	24
26		10.4	0.1	9	6.4	10.4	9.6	9.3	12	13	12.4	16.9	13.7	15.2	16.2	12.1	11.9	10.9	12.2	9.1	5.7	6.4	7.3	7.3	7.3	16.9	10.2	24
27		5.1	5.1	5.6	7.4	4.8	5.1	5.3	7.8	8.1	4.6	6	6	11.6	13.4	13.8	11.8	10.3	7.4	4.7	4.9	4.6	2.1	3.8	5.2	13.8	6.9	24
28		4.2	3.3	3.4	6.3	8	8.1	7.8	8	11.8	8	7.7	11.7	11.3	7	9.6	11.3	12.2	14.8	13.1	8.3	4.7	3.6	3.7	4.6	14.8	8.0	24
29		6.8	11	8.5	6.9	10.3	13.7	17.9	16.1	16.5	10.5	10.2	8.7	10.8	9.4	14	13.5	12	11	17.3	17.8	24.3	10.1	10.8	4.2	24.3	12.2	24
30		12.8	15.9	16.1	18	15.4	9.7	10.9	4.9	1.3	6.9	6.8	11.8	14.9	8.4	8.6	11.9	7.2	24.5	20.3	14.2	12.8	8.8	3.8	7.3	24.5	11.4	24
HOURLY MAX		14.3	16.0	17.0	18.0	17.8	18.6	18.3	21.9	20.6	20.1	22.0	23.9	23.7	24.1	23.3	19.9	20.3	24.5	20.3	17.8	24.3	15.9	17.8	14.9			
HOURLY AVG		6.2	6.3	6.8	7.0	6.7	7.1	7.9	8.7	9.6	10.5	10.9	11.4	11.8	11.5	11.2	10.2	11.4	11.1	9.5	8.3	6.7	6.3	6.2	6.4			

### STATUS FLAG CODES

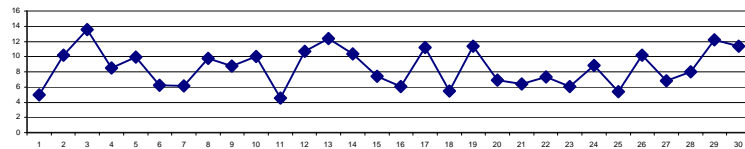
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

LAST CALIBRATION: September 24, 2009

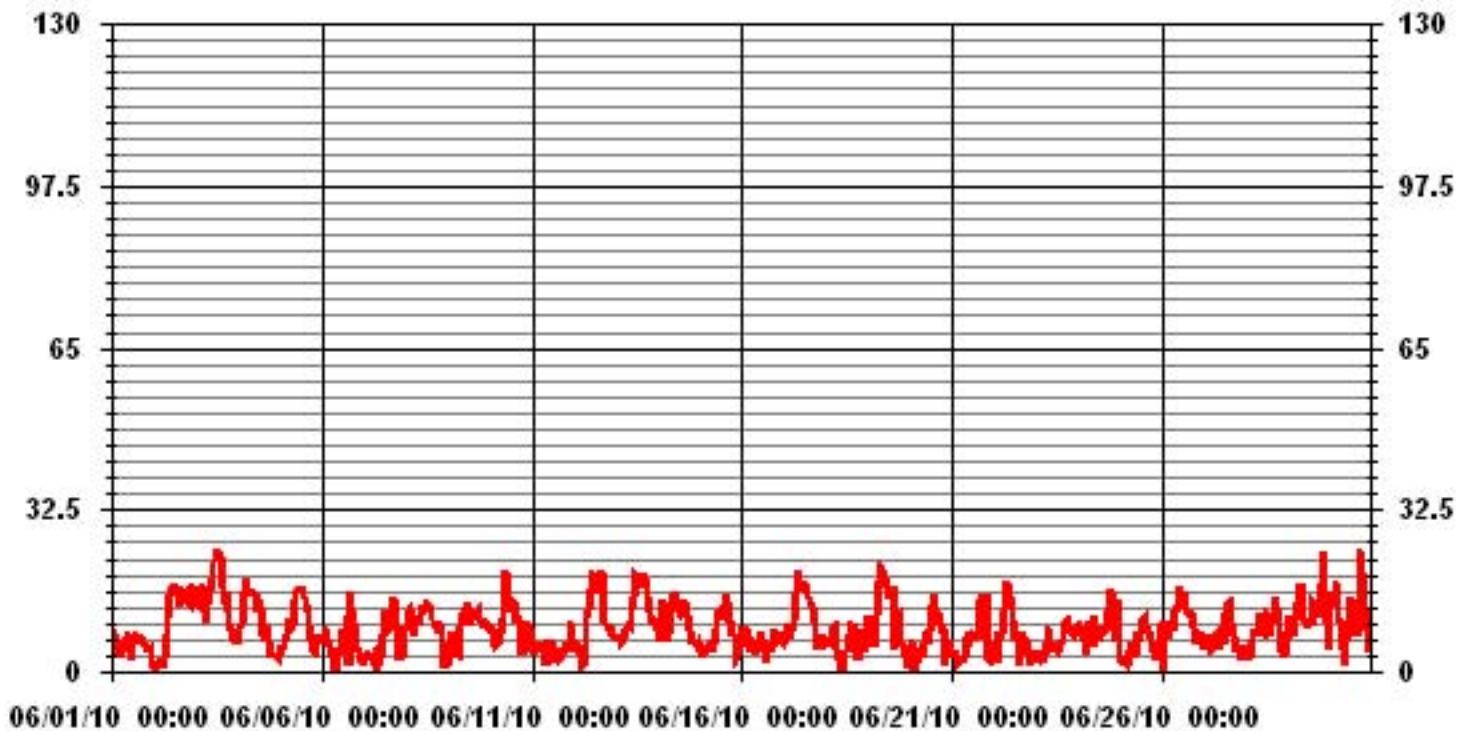
### MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	24.5	KPH	@ HOUR(S)	17	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	13.6	KPH			ON DAY(S)	3
CALMS (≤ 1 KPH)	0.40	%	OPERATIONAL TIME:	720	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	100.0	%	
STANDARD DEVIATION:	4.88		MONTHLY AVERAGE	8.73	KPH	

24 HOUR AVERAGES FOR JUNE 2010



### 01 Hour Averages



— LICA33 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

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	10	9.5	9.9	8.6	7.5	9.9	11.6	9.7	15.7	15.4	15	14.7	21.9	18.9	27.7	19.7	20.4	16.5	16.2	12.5	8.4	7.5	6.9	6	27.7
2	3.4	4.8	5.5	7.1	4.2	2.9	10.4	16	21.8	29.7	34.7	34.3	32.6	31.8	28.3	32.9	40.6	31.9	26.6	21.4	19	21.6	27.1	22.4	40.6	
3	21.5	22.7	24.4	21.9	31.1	25.4	17.6	22	25.3	28.5	33.3	37	35.7	36.5	33.6	27.3	23.9	22.5	18.7	17.1	17.7	11.1	9.7	11.9	37	
4	10.7	14	20.9	27.5	31.7	30.8	26.6	25.3	26	28.2	24.8	24.5	27.8	24.3	17.4	15.2	21.8	14.6	10.6	6.1	5.7	6	4.7	6.5	31.7	
5	7.5	10.2	9.3	11.3	14.7	17.6	15.6	18	25.2	26.5	27.9	33.3	30.3	36.2	34.9	34.2	32.2	20.5	12.9	8.2	7.6	12.3	14.5	13.1	36.2	
6	11.1	12.1	14.9	15.8	9.8	8.7	6.1	4.6	4.8	10.9	14.6	23.2	26.5	20.2	24.9	19.3	30.3	21.3	28.8	10.3	10.7	11.8	9.1	9.4	30.3	
7	6.2	9.9	7.1	8.8	7.6	16.6	10.8	6.1	12.4	7.5	10.7	20.4	23	20.4	16.4	16.9	29.6	28.2	28.4	15	6.3	6.7	7.1	20.9	29.6	
8	17.7	21.2	23.1	23	12.6	18.5	19.1	17.1	20	26.1	25.4	26.2	31.9	29.9	28	21.3	21.2	22.6	16.5	16.3	14	12.2	4.7	4	31.9	
9	4	7.2	13	9.4	8.4	6.4	9.5	16.2	19.2	19.9	25.5	23.2	20.9	21.9	20.4	21	20	18	16.9	16	14	15.1	13.6	13.3	25.5	
10	11	11.8	9.6	10.7	9.4	11.4	14.3	19.2	28.4	28.3	27.1	26.1	28.5	27.2	25.6	24.2	19.9	16.7	8.3	16.2	15.8	16.8	16.2	19	28.5	
11	14	8.4	8.9	7.6	8.7	10.5	10.9	7.9	6.7	15.4	17.3	23.7	19	15.2	18.9	15.1	13	15.4	12	9	9.9	14.3	18.2	14.6	23.7	
12	12.5	16.1	10.2	11.1	3.6	7	13.3	17.5	24.1	36.1	36.2	37.2	38	37.8	37.6	35.8	32.5	27.5	22	18.7	17	18.3	16.2	15.5	38	
13	17.7	16.7	18.5	15.6	19.6	22.1	19.7	22.6	21.2	21.9	31.2	34.1	35.6	33.2	39	40	33.6	31.7	29	26.3	16.6	18.9	17.1	16.5	40	
14	16	31.4	17.2	31.4	26.1	15.7	14.9	24.4	30.3	28.4	33.3	27.1	28.1	23	24.4	28.9	25	21.9	18	12.1	9.1	11.6	7.8	11.5	33.3	
15	7.6	11.3	9.2	9	7.6	8.5	11.3	10.2	14.5	22	23.1	28.5	28.1	29.5	30.7	29	25.8	25.2	19.7	15.6	7.7	9.7	7.6	13.5	30.7	
16	14	11.5	12.5	9.4	8.7	13.1	11.4	9.2	10.5	22.1	20	22.7	21.2	19.1	15.1	16	13.5	13.5	11.4	18.7	12.6	15	16	12.7	22.7	
17	9.6	10.7	14	10.9	13.6	14.7	16.6	29.2	33.3	30	30.3	29.8	33.2	31.4	29	22.7	22.3	17.3	15.3	8.7	8.2	9.9	11.4	11.7	33.3	
18	10.3	13.6	8.8	10.4	11.4	13	10.3	6.3	6.6	8.5	9.2	14.3	16.1	24.5	21.9	10.5	22.7	15.2	8.7	10.6	18	14.2	8	13.2	24.5	
19	19.3	17.7	20.8	12.9	18.4	28.5	31.4	34.5	37.2	35.6	36.2	35.9	31.8	32.1	32	28.2	20.5	22.6	20.8	14	13.5	7.9	14	7.3	37.2	
20	8.9	9.9	3.4	6.5	5.7	9.6	12.4	9.9	14.2	17.8	18.1	22.1	29.4	30.5	30.7	30.8	32.1	19.3	15.5	15.2	10.7	9	9.8	12.8	32.1	
21	12.5	8.4	9.1	10.1	7	12.8	8.8	14.4	17.3	12.6	19.6	20.5	20.6	21.5	20.3	17.5	30.4	0	29.2	25.2	12.6	7.9	11.3	19.5	30.4	
22	8.2	9.4	8.4	13.1	11.2	15.2	21.2	29.2	29.7	26.9	20.5	20	16.9	16.9	10.4	13.5	15.3	11.8	15	7.9	6.2	4.4	6	5	29.7	
23	9.4	5.9	5.2	6.5	4.6	6.5	9.9	13	12.1	14.9	15.6	16.4	18.8	17.7	14.9	16	17.7	16.8	17.4	12.4	10.5	10	11.7	13.3	18.8	
24	11.8	12.1	10.1	9.9	13.8	15.8	15.3	18.2	12.1	17.4	14.6	14.2	13.2	16.4	13.7	13.6	15.5	18.2	14.1	34.6	24.4	44.5	17.2	24.9	44.5	
25	8	7.8	5.9	6.3	6.2	5.9	10.3	11.3	10.4	13.7	21.4	17.4	17.1	27.9	23.1	22.7	19.5	18.8	18.2	7.1	5.5	7.5	15.7	26.3	27.9	
26	23.5	10.1	20.6	16.5	19.3	19.7	25.3	25.8	24.1	23.7	27.3	27.8	29	30.6	26.3	26.4	23.8	25.6	16.2	13.8	10.7	11.1	14.2	11.5	30.6	
27	9.8	9.7	13.6	14.2	13.5	10.3	14.3	17.5	15	12.6	15.9	17.8	25	28.3	26.1	24.9	18.9	16.7	10.5	7.5	7.2	5.8	13.8	7.9	28.3	
28	21.4	13.6	12.8	12.5	15	14.2	13.2	19	20.5	13.3	18.4	21.7	21.4	17.6	19.1	21.1	25.6	28.5	24.2	15	9.8	5.6	9.6	8.6	28.5	
29	12.8	18.4	86.4	19.1	17.5	21.1	27.5	26.6	24.6	22.7	20.1	24.1	22.3	22.6	26.8	24	24	34.2	36.5	37	40.1	83.9	0	58.4	86.4	
30	21.8	24.9	28.5	28	24.7	16.3	15.8	12.5	7.1	17.8	14.4	29	29.6	20.3	19.4	23	18.2	0	39.3	30.7	30.3	26	8.4	11	39.3	
PEAK		23.5	31.4	86.4	31.4	31.7	30.8	31.4	34.5	37.2	36.1	36.2	37.2	38.0	37.8	39.0	40.0	40.6	34.2	39.3	37.0	40.1	83.9	27.1	58.4	

STATUS FLAG CODES

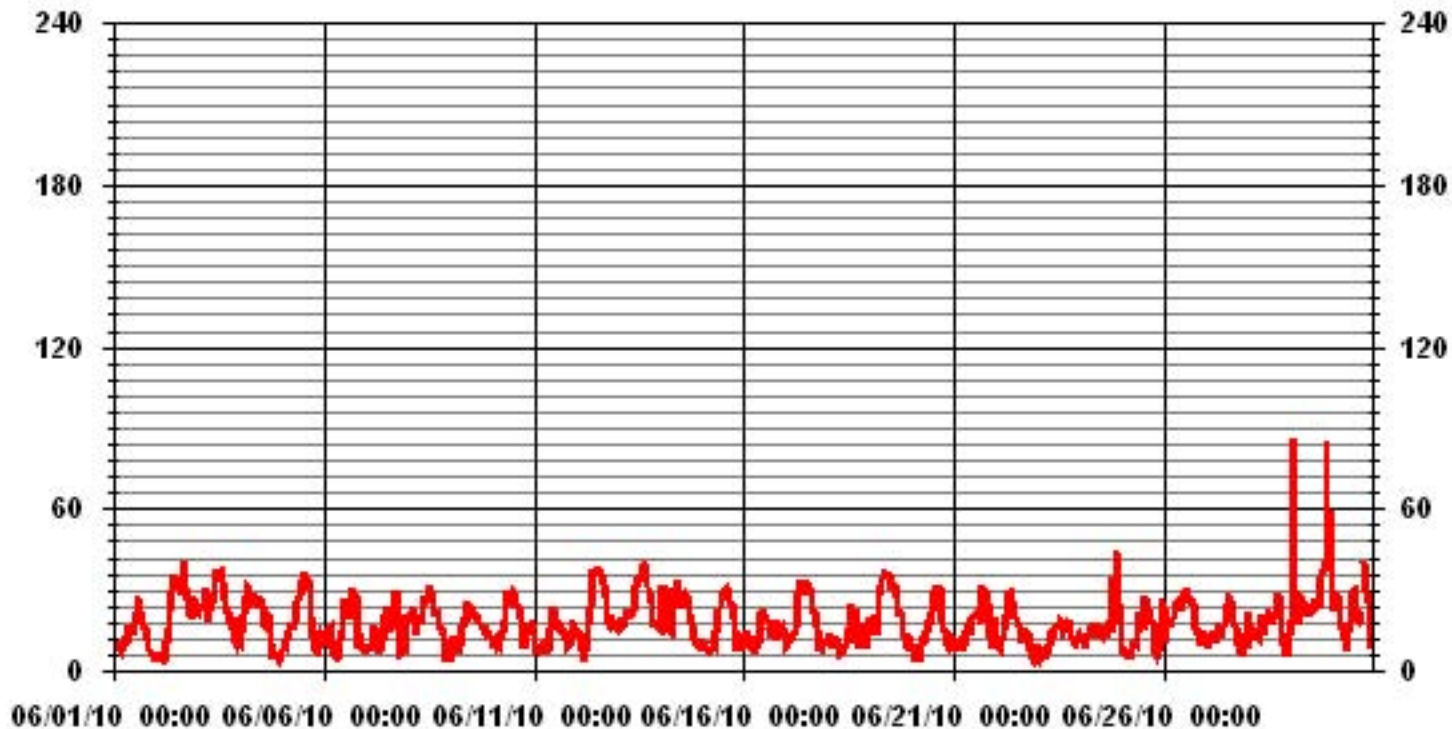
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	86.4	KPH	@ HOUR(S)	2
			ON DAY(S)	29



### 01 Hour Averages



— LICA33 WSMAX KPH

LICA33  
WSP / WDR Joint Frequency Distribution (Percent)

June 2010

Distribution By % Of Samples

Logger Id : 33  
Site Name : LICA33  
Parameter : WSP  
Units : KPH

Wind Parameter : WDR  
Instrument Height : 10 Meters

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	1.94	.97	1.38	.69	1.52	2.22	1.80	1.52	2.22	3.88	4.30	2.63	2.91	2.08	2.22	1.25	33.61
< 12.0	1.80	2.22	2.36	2.50	2.22	3.61	1.25	1.38	2.77	1.66	3.61	1.52	4.44	3.88	3.47	2.22	40.97
< 20.0	.83	.83	1.25	1.66	2.63	1.94	.97	2.08	.69	.55	1.80	1.66	1.25	2.08	2.22	.97	23.47
< 29.0	.00	.13	.00	.41	.41	.00	.13	.00	.00	.00	.55	.00	.27	.00	.00	.00	1.94
< 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	4.58	4.16	5.00	5.27	6.80	7.77	4.16	5.00	5.69	6.11	10.27	5.83	8.88	8.05	7.91	4.44	

Calm : .00 %

Total # Operational Hours : 720

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 6.0	14	7	10	5	11	16	13	11	16	28	31	19	21	15	16	9	242
< 12.0	13	16	17	18	16	26	9	10	20	12	26	11	32	28	25	16	295
< 20.0	6	6	9	12	19	14	7	15	5	4	13	12	9	15	16	7	169
< 29.0		1		3	3		1				4		2				14
< 39.0																	
>= 39.0																	
Totals	33	30	36	38	49	56	30	36	41	44	74	42	64	58	57	32	

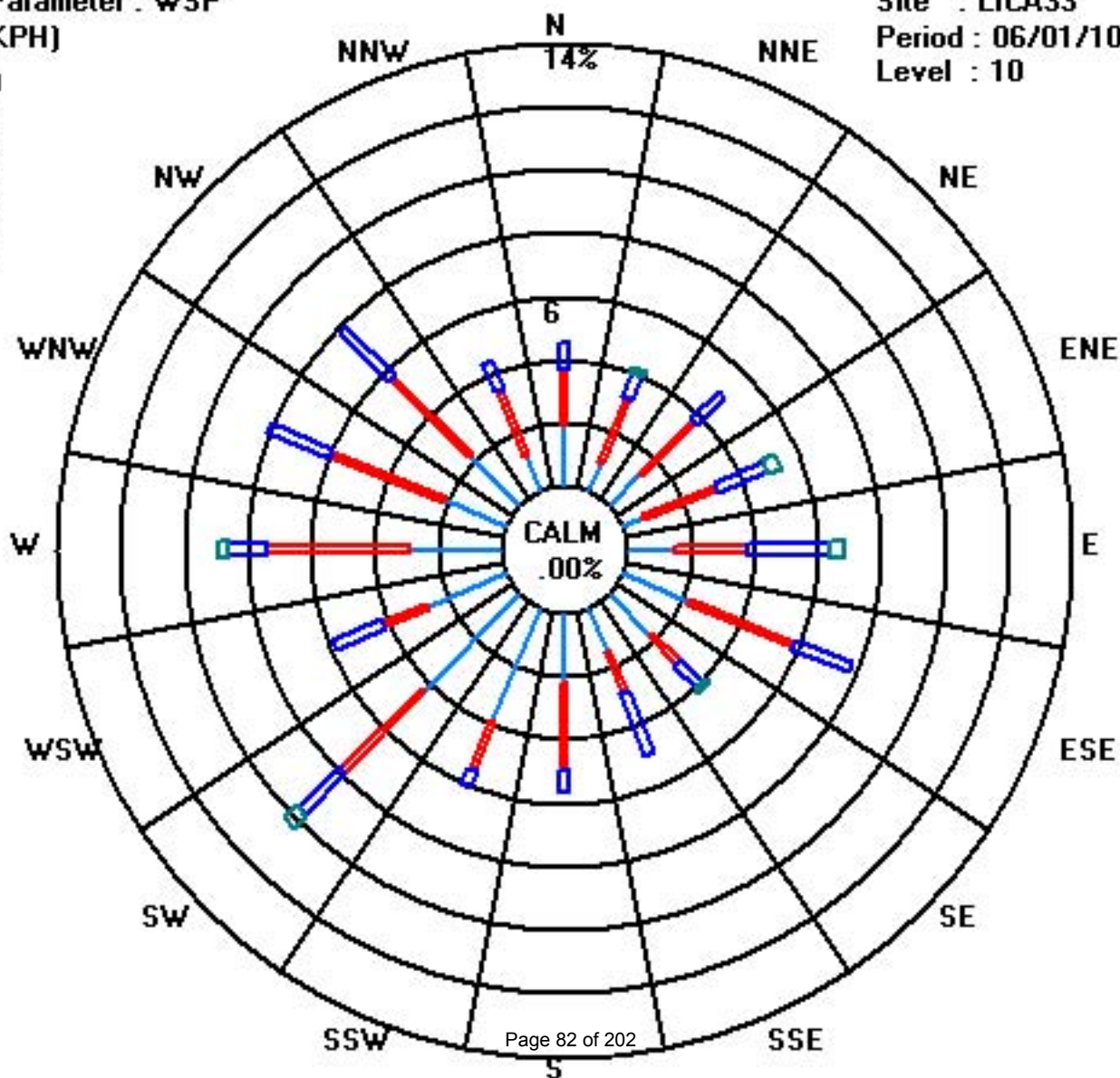
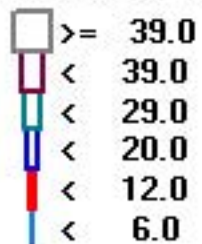
Calm : .00 %

Total # Operational Hours : 720

Class Limits (KPH)

Period : 06/01/10-06/30/10

Level : 10



# Vector Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

## VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	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		
DAY																												
1	233	226	226	228	254	230	234	268	228	226	218	174	201	216	181	198	176	171	187	194	213	219	224	211	213	SSW	24	
2	179	178	206	108	144	94	76	110	119	144	152	155	153	150	146	136	139	137	127	102	93	99	104	103	128	SE	24	
3	113	106	103	94	91	91	67	73	83	72	82	88	77	76	69	49	48	71	48	35	28	14	340	343	73	ENE	24	
4	321	293	281	281	277	277	283	292	297	288	275	272	281	293	303	313	310	353	41	84	110	147	211	180	288	WNW	24	
5	197	223	243	271	272	279	271	271	285	283	293	301	308	297	310	316	313	339	344	324	287	298	291	283	293	WNW	24	
6	280	276	275	271	224	228	230	4	68	328	303	296	284	288	295	41	68	67	36	132	158	207	246	153	291	WNW	24	
7	41	125	126	143	117	342	358	137	211	18	351	3	345	343	325	317	343	12	45	122	172	333	319	31	5	N	24	
8	28	39	25	4	355	13	5	354	345	338	333	347	3	350	336	330	335	348	16	68	60	56	1	329	2	N	24	
9	311	41	92	139	86	358	44	103	108	120	104	104	109	99	98	78	82	103	87	80	60	56	46	49	87	E	24	
10	51	46	46	40	22	355	17	57	102	92	73	66	92	89	86	104	73	103	138	180	198	218	221	235	83	E	24	
11	254	227	219	225	231	260	280	292	107	131	118	112	82	42	300	338	277	280	297	238	219	196	174	196	218	SW	24	
12	204	184	179	211	273	195	222	224	226	217	225	213	205	208	207	220	221	209	188	183	184	180	179	182	207	SSW	24	
13	187	197	187	191	195	208	214	207	200	159	167	169	167	169	172	171	168	169	166	156	143	151	152	152	172	S	24	
14	172	242	298	328	350	353	299	311	310	325	309	317	325	319	306	304	304	302	306	291	282	272	280	264	307	NW	24	
15	273	30	249	243	259	258	277	296	321	316	329	309	313	319	311	297	288	315	303	305	304	293	293	243	299	WNW	24	
16	290	293	290	274	272	280	291	274	296	274	256	289	308	341	310	357	296	293	315	307	300	310	335	13	300	WNW	24	
17	4	358	8	13	358	20	25	30	29	17	21	6	11	9	29	53	43	52	55	355	359	335	320	321	18	NNE	24	
18	308	330	311	298	309	314	305	305	315	49	235	255	197	63	105	141	35	33	358	149	179	194	198	211	306	NW	24	
19	228	181	197	193	213	214	222	226	236	248	240	243	246	234	229	234	145	161	147	171	212	203	245	297	219	SW	24	
20	224	223	134	168	96	14	167	175	116	156	214	220	219	226	237	229	246	230	228	226	202	118	112	138	210	SSW	24	
21	158	85	178	203	200	261	323	211	268	223	318	305	311	310	193	165	77	111	118	105	221	22	2	302	137	SE	24	
22	135	104	181	297	338	12	46	61	64	64	37	54	76	47	100	268	346	349	340	340	304	266	236	275	35	NE	24	
23	243	311	359	40	55	82	92	97	107	119	134	114	157	154	173	168	145	127	129	115	108	107	106	103	118	ESE	24	
24	104	100	86	72	51	71	80	83	65	62	61	19	23	12	356	352	31	64	63	95	85	305	67	91	61	ENE	24	
25	216	89	34	32	239	114	117	200	178	211	213	237	259	264	264	260	263	256	244	228	189	115	166	293	239	WSW	24	
26	330	343	238	267	274	272	250	241	238	228	230	237	237	237	237	239	264	276	278	260	240	241	285	280	251	WSW	24	
27	279	230	228	250	249	242	257	298	277	297	278	285	273	286	295	304	306	302	275	225	220	147	110	118	274	W	24	
28	174	257	138	133	102	69	77	110	112	116	102	97	131	168	220	218	221	224	224	222	216	222	112	115	158	SSE	24	
29	65	88	78	1	39	79	88	96	110	114	168	187	175	174	149	149	164	155	150	145	133	204	311	68	126	SE	24	
30	91	92	97	95	93	97	89	95	236	238	223	266	285	290	267	280	258	270	280	273	269	261	236	235	256	WSW	24	
HOURLY AVG	330	358	359	328	358	358	358	354	345	338	351	347	345	350	356	357	346	353	358	355	359	335	340	343				

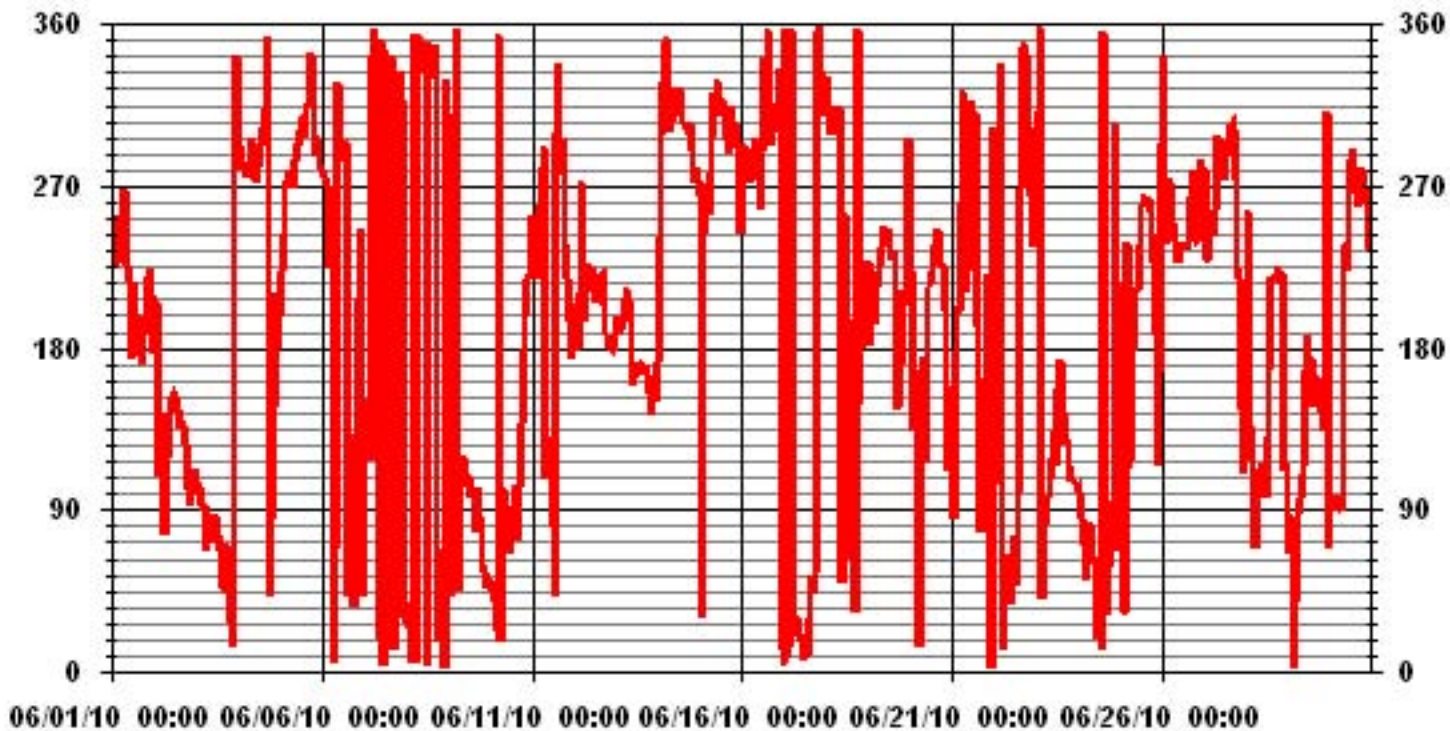
**STATUS FLAG CODES**

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:	720 HRS
STANDARD DEVIATION	98.48	AMD OPERATION UPTIME	100.0 %
		MONTHLY AVERAGE	233 DEG

### 01 Hour Averages



— LICA33 WDR DEG

# Standard Deviation Wind Direction

# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JUNE 2010

## STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	9	6	6	6	22	7	16	21	22	19	44	63	44	38	33	32	33	28	23	17	13	11	7	41
2	41	44	23	40	29	25	42	12	16	15	16	18	20	19	22	16	17	13	9	5	5	5	5	5
3	5	5	5	6	7	11	8	8	9	8	9	9	9	9	9	8	10	9	10	8	9	9	12	13
4	12	8	10	10	11	10	10	9	10	10	15	16	12	13	16	17	17	15	12	11	6	11	16	11
5	16	12	15	13	12	8	17	19	12	13	13	15	14	14	14	15	14	16	12	13	10	11	13	13
6	10	10	10	17	11	7	14	29	32	30	32	35	28	22	16	28	15	9	12	10	18	16	15	32
7	60	53	19	17	29	34	47	74	50	20	19	26	17	14	15	15	14	13	12	7	16	18	12	11
8	12	9	10	13	12	11	13	17	18	20	17	19	21	21	19	23	19	17	17	10	8	8	18	28
9	17	35	6	33	13	11	18	13	13	17	13	16	20	25	14	12	12	7	8	8	6	6	5	6
10	5	5	5	6	12	12	10	12	12	8	14	13	20	22	16	20	16	20	17	17	25	14	7	13
11	26	22	8	13	10	12	11	33	55	29	38	42	53	47	52	74	55	34	28	21	10	26	11	16
12	20	16	18	25	20	30	16	10	15	19	14	21	24	23	23	18	14	22	19	16	16	15	15	15
13	20	25	20	23	26	23	19	22	24	16	16	14	16	15	16	16	14	14	14	14	8	12	12	11
14	14	29	12	15	19	27	13	17	16	17	17	17	19	16	16	15	14	14	13	9	10	14	13	12
15	10	33	13	15	9	16	22	20	23	25	24	23	23	21	23	16	15	13	10	11	36	22	17	17
16	6	5	5	11	12	14	15	31	29	45	41	36	50	41	55	38	39	38	16	12	9	8	12	11
17	10	10	8	7	8	8	10	12	11	15	16	15	15	18	17	10	9	9	8	14	8	10	9	9
18	8	13	10	3	5	7	13	27	48	74	53	33	38	34	16	47	19	26	20	17	15	15	19	22
19	8	16	19	22	19	17	9	9	13	18	18	19	20	18	17	33	14	15	14	15	19	22	15	37
20	12	10	46	38	19	35	19	38	26	20	35	25	22	14	18	20	19	11	9	5	30	21	10	19
21	29	28	16	48	38	22	46	29	21	28	27	58	22	26	20	18	26	19	13	14	39	43	30	30
22	17	12	28	8	12	11	9	9	12	14	15	22	31	24	23	36	18	14	14	11	21	25	13	13
23	31	12	8	7	17	14	12	12	22	42	38	50	35	48	27	29	18	14	11	6	5	6	6	8
24	10	4	7	6	61	11	9	8	21	8	11	20	11	14	12	10	14	11	9	14	33	16	20	10
25	35	42	38	16	38	22	8	20	32	36	26	26	22	22	21	24	23	21	23	11	17	8	16	18
26	15	23	16	19	12	19	22	18	14	12	9	14	16	15	18	17	21	16	12	20	11	10	11	9
27	12	12	7	19	17	18	20	14	18	30	31	36	19	18	20	20	16	16	17	7	11	34	20	12
28	21	40	36	10	8	15	9	12	9	12	20	15	16	29	21	20	16	11	9	6	14	17	25	25
29	9	9	41	21	7	8	7	9	9	17	18	24	19	22	16	15	15	15	13	11	8	31	P	55
30	11	7	7	7	7	8	7	15	41	22	22	15	16	20	28	17	20	14	11	15	17	18	18	9

**STATUS FLAG CODES**

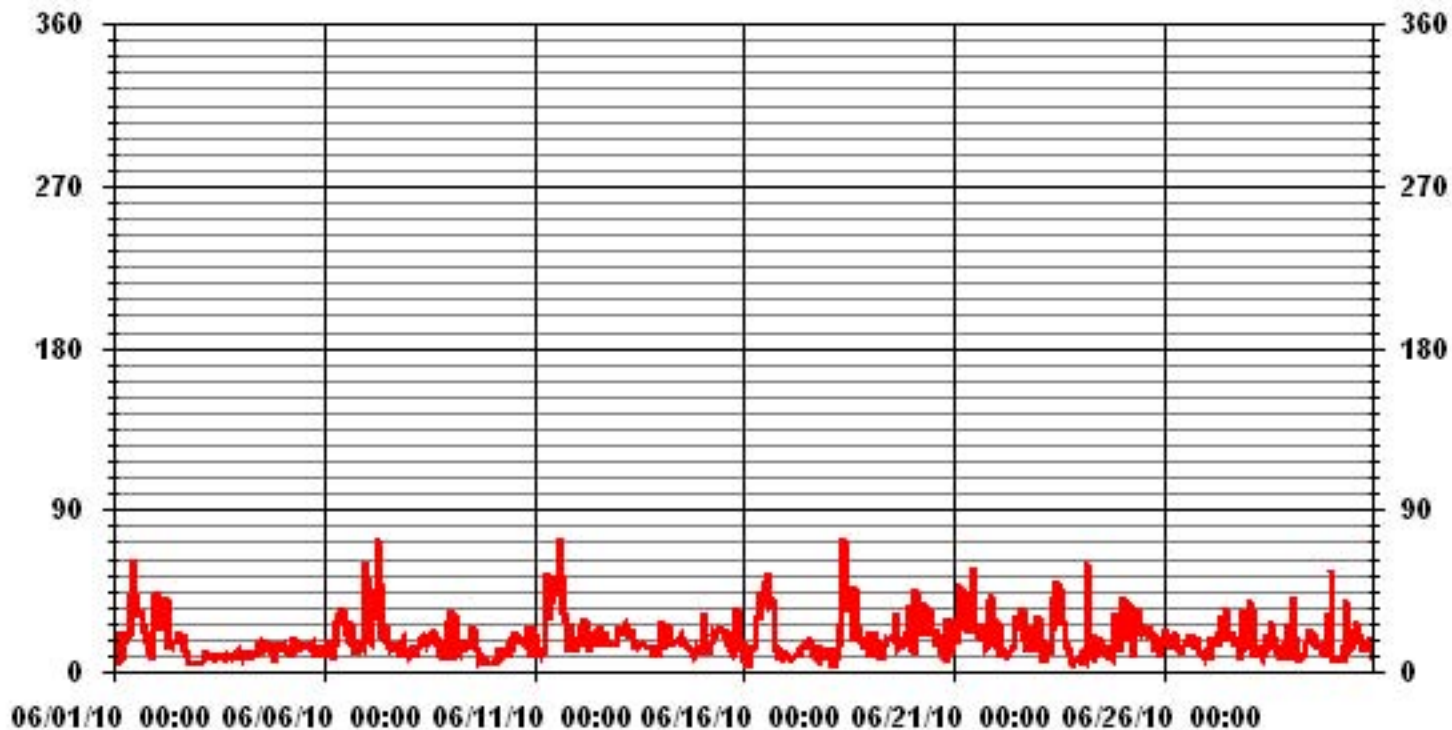
S - OUT OF SERVICE	IZS - IZS - DAILY ZERO/SPAN CHECK
N - INVALID DATA	M - MAINTENANCE
D - INSTRUMENT DRIFT	P - POWER FAILURE
C - CALIBRATION	NA - NOT APPLICABLE

LAST CALIBRATION:	September 24, 2009
-------------------	--------------------

CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	719 HRS
-------------------	-------	-------------------	---------



### 01 Hour Averages



— LICA33 STDWDIR DEG

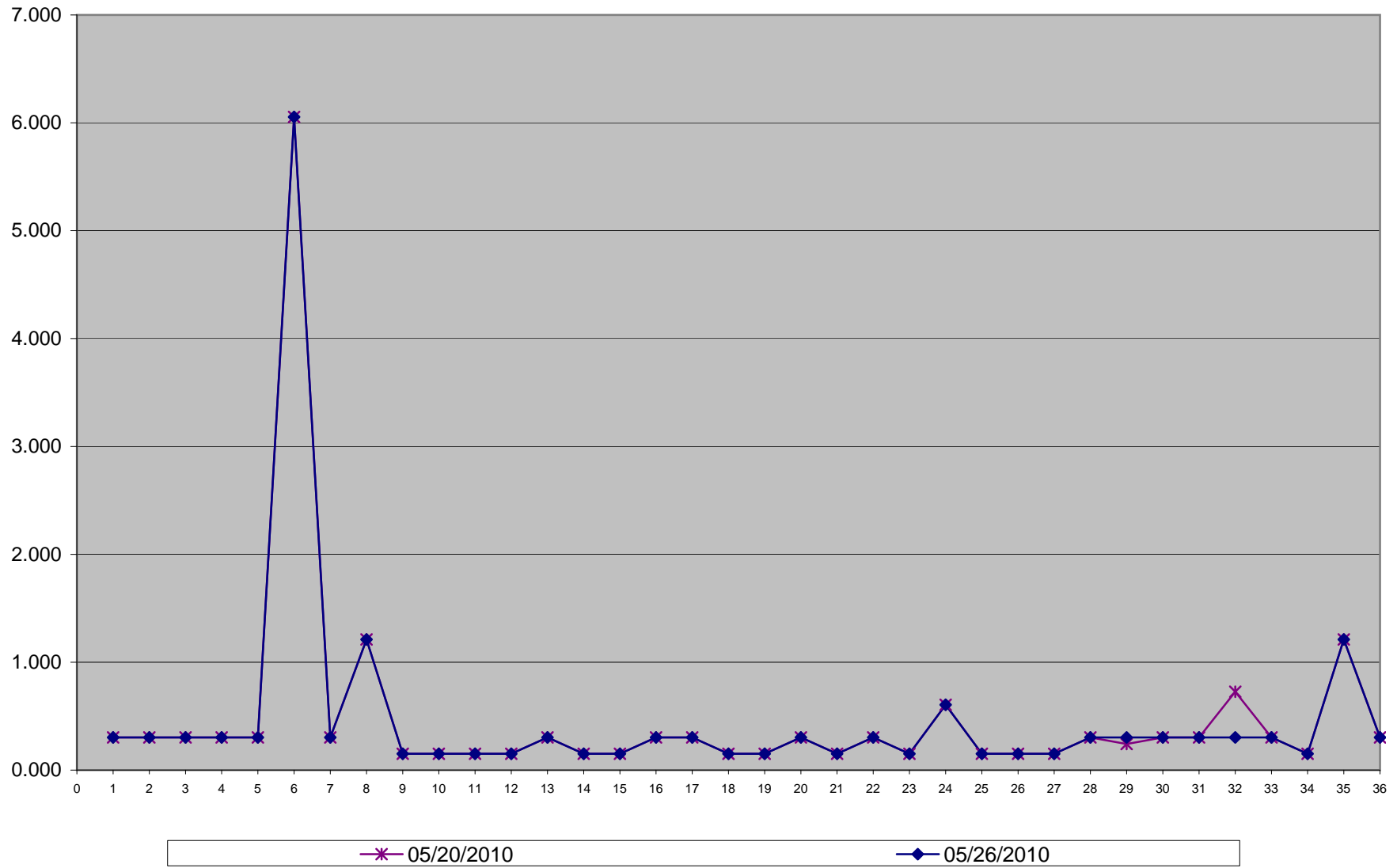
# Polycyclic Aromatic Hydrocarbons

**Polycyclic Aromatic Hydrocarbons (PAHs) Results for May 2010**  
**LICA- Portable Site**  
**Unit: ng/m3**

	PAHs	05/20/2010	05/26/2010
	Sample Volume (unit: m3)	330.34	330.37
1	1-Methylnaphthalene	0.303	0.303
2	1-Methylphenanthrene	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303
4	2-Methylantracene	0.303	0.303
5	2-Methylnaphthalene	0.303	0.303
6	3-Methylcholanthrene	6.054	6.054
7	7,12-Dimethylbenzo(a)anthracene	0.303	0.303
8	9,10-Dimethylantracene	1.211	1.211
9	Acenaphthene	0.151	0.151
10	Acenaphthylene	0.151	0.151
11	Anthracene	0.151	0.151
12	Benzo(a)anthracene	0.151	0.151
13	Benzo(a)fluorene	0.303	0.303
14	Benzo(a)pyrene	0.151	0.151
15	Benzo(b)fluoranthene	0.151	0.151
16	Benzo(b)fluorene	0.303	0.303
17	Benzo(e)pyrene	0.303	0.303
18	Benzo(g,h,l)perylene	0.151	0.151
19	Benzo(k)fluoranthene	0.151	0.151
20	Biphenyl	0.303	0.303
21	Chrysene	0.151	0.151
22	Coronene	0.303	0.303
23	Dibenz(a,h)anthracene	0.151	0.151
24	Dibenzo(a,e)pyrene	0.605	0.605
25	Fluoranthene	0.151	0.151
26	Fluorene	0.151	0.151
27	Indeno(1,2,3-cd)pyrene	0.151	0.151
28	m-Terphenyl	0.303	0.303
29	Naphthalene	0.242	0.303
30	o-Terphenyl	0.303	0.303
31	Perylene	0.303	0.303
32	Phenanthrene	0.727	0.303
33	p-Terphenyl	0.303	0.303
34	Pyrene	0.151	0.151
35	Quinoline	1.211	1.211
36	Tetralin	0.303	0.303

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

PAHs in ng/m3 Site: LICA - Portable Site



1	1-Methylnaphthalene
2	1-Methylphenanthrene
3	2-Chloronaphthalene
4	2-Methlyanthracene
5	2-Methylnaphthalene
6	3-Methylcholanthrene
7	7,12-Dimethylbenzo(a)anthracene
8	9,10-Dimethylanthracene
9	Acenaphthene
10	Acenaphthylene
11	Anthracene
12	Benzo(a)anthracene
13	Benzo(a)fluorene
14	Benzo(a)pyrene
15	Benzo(b)fluoranthene
16	Benzo(b)fluorene
17	Benzo(e)pyrene
18	Benzo(g,h,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

## Polycyclic Aromatic Hydrocarbons (PAHs) Results for June 2010

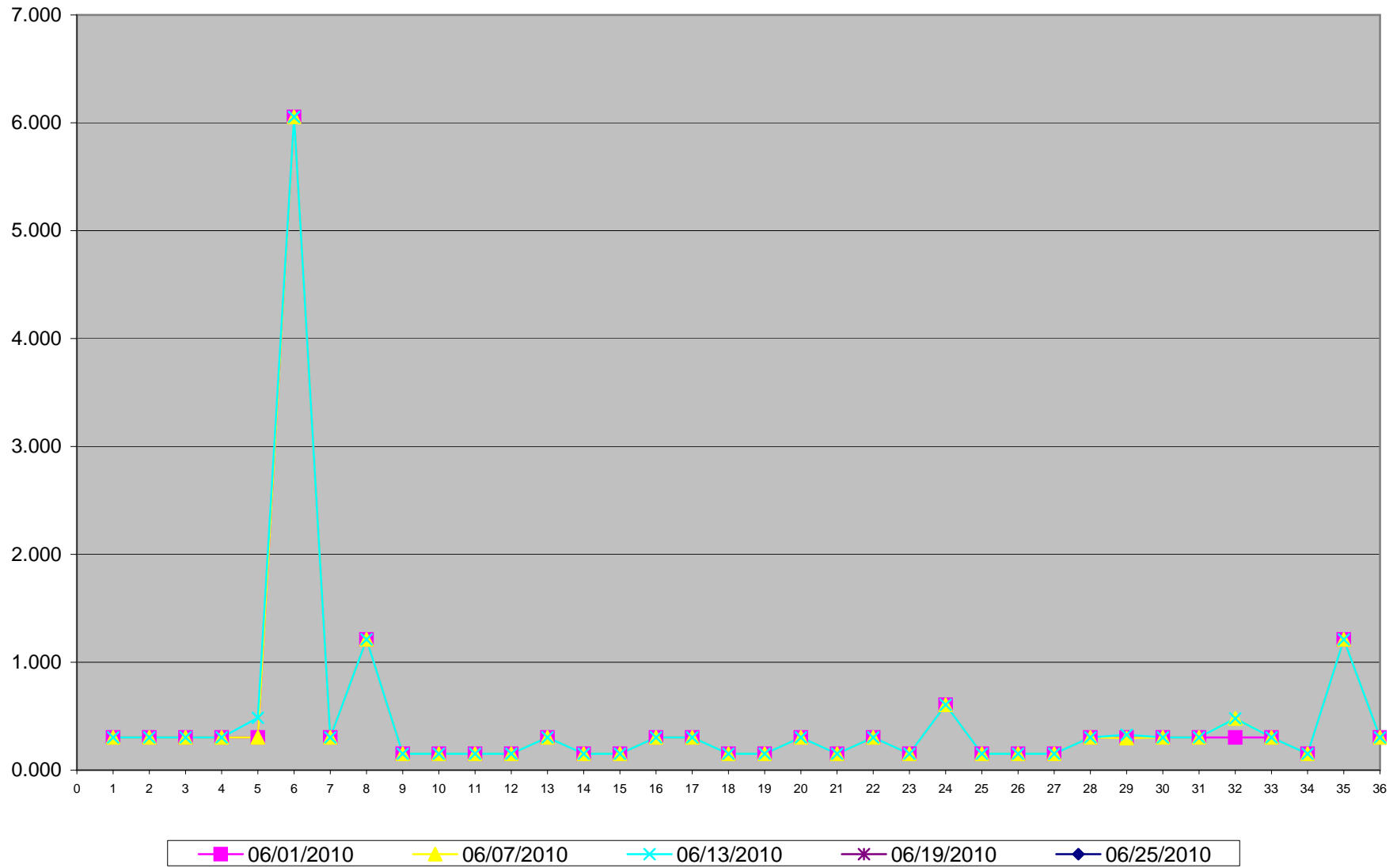
LICA- Portable Site

Unit: ng/m<sup>3</sup>

PAHs	06/01/2010	06/07/2010	06/13/2010	06/19/2010	06/25/2010
Sample Volume (unit: m3)	330.34	330.34	330.34	330.34	330.33
1 1-Methylnaphthalene	0.303	0.303	0.303	0.333	0.303
2 1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303
3 2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303
4 2-Methylantracene	0.303	0.303	0.303	0.303	0.303
5 2-Methylnaphthalene	0.303	0.303	0.484	0.817	0.363
6 3-Methylcholanthrene	6.054	6.054	6.054	6.054	6.055
7 7,12-Dimethylbenzo(a)anthracene	0.303	0.303	0.303	0.303	0.303
8 9,10-Dimethylantracene	1.211	1.211	1.211	1.211	1.211
9 Acenaphthene	0.151	0.151	0.151	0.151	0.151
10 Acenaphthylene	0.151	0.151	0.151	0.151	0.279
11 Anthracene	0.151	0.151	0.151	0.151	0.151
12 Benzo(a)anthracene	0.151	0.151	0.151	0.151	0.151
13 Benzo(a)fluorene	0.303	0.303	0.303	0.303	0.303
14 Benzo(a)pyrene	0.151	0.151	0.151	0.151	0.151
15 Benzo(b)fluoranthene	0.151	0.151	0.151	0.151	0.151
16 Benzo(b)fluorene	0.303	0.303	0.303	0.303	0.303
17 Benzo(e)pyrene	0.303	0.303	0.303	0.303	0.303
18 Benzo(g,h,i)perylene	0.151	0.151	0.151	0.151	0.151
19 Benzo(k)fluoranthene	0.151	0.151	0.151	0.151	0.151
20 Biphenyl	0.303	0.303	0.303	0.303	0.303
21 Chrysene	0.151	0.151	0.151	0.151	0.151
22 Coronene	0.303	0.303	0.303	0.303	0.303
23 Dibenz(a,h)anthracene	0.151	0.151	0.151	0.151	0.151
24 Dibenzo(a,e)pyrene	0.605	0.605	0.605	0.605	0.605
25 Fluoranthene	0.151	0.151	0.151	0.151	0.490
26 Fluorene	0.151	0.151	0.151	0.248	0.303
27 Indeno(1,2,3-cd)pyrene	0.151	0.151	0.151	0.151	0.151
28 m-Terphenyl	0.303	0.303	0.303	0.303	0.303
29 Naphthalene	0.303	0.297	0.327	0.333	0.272
30 o-Terphenyl	0.303	0.303	0.303	0.303	0.303
31 Perylene	0.303	0.303	0.303	0.303	0.303
32 Phenanthrene	0.303	0.478	0.478	0.521	1.701
33 p-Terphenyl	0.303	0.303	0.303	0.303	0.303
34 Pyrene	0.151	0.151	0.151	0.151	0.412
35 Quinoline	1.211	1.211	1.211	1.211	1.211
36 Tetralin	0.303	0.303	0.303	0.303	0.303

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

PAHs in ng/m3 Site: LICA - Portable Site



1	1-Methylnaphthalene
2	1-Methylphenanthrene
3	2-Chloronaphthalene
4	2-Methlyanthracene
5	2-Methylnaphthalene
6	3-Methylcholanthrene
7	7,12-Dimethylbenzo(a)anthracene
8	9,10-Dimethylanthracene
9	Acenaphthene
10	Acenaphthylene
11	Anthracene
12	Benzo(a)anthracene
13	Benzo(a)fluorene
14	Benzo(a)pyrene
15	Benzo(b)fluoranthene
16	Benzo(b)fluorene
17	Benzo(e)pyrene
18	Benzo(g,h,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

SO<sub>2</sub> Calibration Report

Station Information

Calibration Date	July 6, 2010	Previous Calibration	June 16, 2010
Company	Lakeland Community and Industry Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	12:17	End Time (MST)	16:21
Reason:	As Found		
Barometric Pressure	712 mmHg	Station Temperature	24 Deg C
Cal Gas	51.4 ppm	Cal Gas Expiry date	2/8/2012
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 - 1000			ppb		
Sample Flow / Box Temp	589 ccm	32.8 Deg C		589 ccm	32.6 Deg C	
HVPS / Lamp Setting	580	2809		604	2811	
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	52.1	1.061		58.8	1	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
3000	0	0	1	N/A
2965	43.9	750	721	1.0401
			Sum of Least Squares	#DIV/0!
			New Correction Factor	0.0000

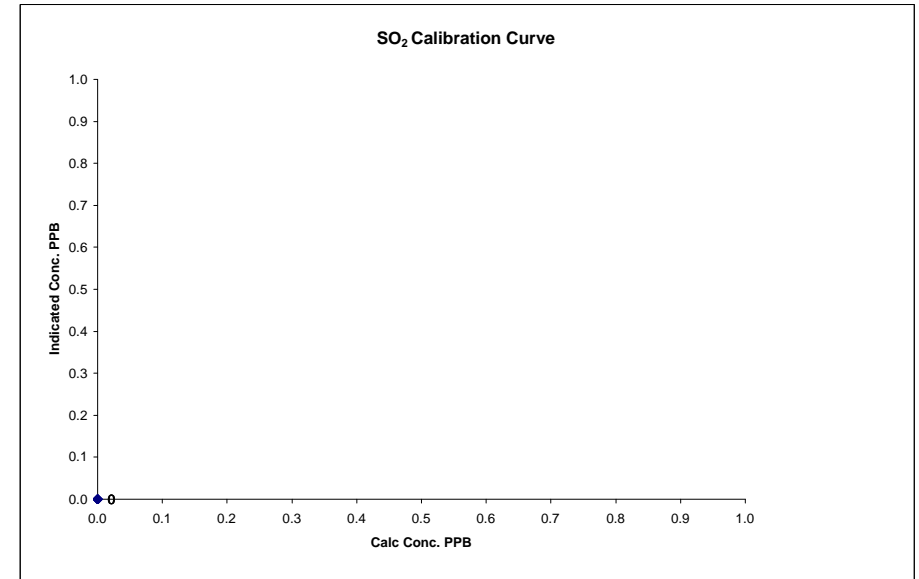
	Before Calibration	After Calibration
Auto Zero	1.6	0.7
Auto Span	379	387
Sample Lines Connected		YES
Percent Change from Previous Calibration		-4.2%

Calibration Performed by: Shea Beaton / Ting Xu

SO<sub>2</sub> Calibration Curve

Calibration Date	July 6, 2010
Company	Lakeland Community and Industry Association
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M
Start Time (MST)	12:17
End Time (MST)	16:21

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	#DIV/0!
0	0	n/a	Intercept	(0.85 to 1.15)	#DIV/0!
0	0	#DIV/0!		(± 3% F.S.)	#DIV/0!
0	0	#DIV/0!			#DIV/0!
0	0	#DIV/0!			#DIV/0!



Notes: following the as found points, UV lamp and factory calibration was done.

### SO<sub>2</sub> Calibration Report

#### Station Information

Calibration Date	July 7, 2010	Previous Calibration	June 16, 2010
Company	Lakeland Community and Industry Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	7:38	End Time (MST)	11:17
Reason:	Monthly Calibration		
Barometric Pressure	716 mmHg	Station Temperature	24 Deg C
Cal Gas	51.4 ppm	Cal Gas Expiry date	2/8/2012
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	592 ccm, 32.8 Deg C	586 ccm, 32.3 Deg C	
HVPS / Lamp Setting	604, 2810	604, 2809	
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	58.8, 1	58.8, 0.983	

#### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4925	73	751	764	0.9826
4925	73	751	751	0.9997
4962	38.9	400	399	1.0021
4983	16.5	170	169	1.0038
4998	0	0	0	N/A
Sum of Least Squares				1.0003
New Correction Factor				0.9997

#### Before Calibration

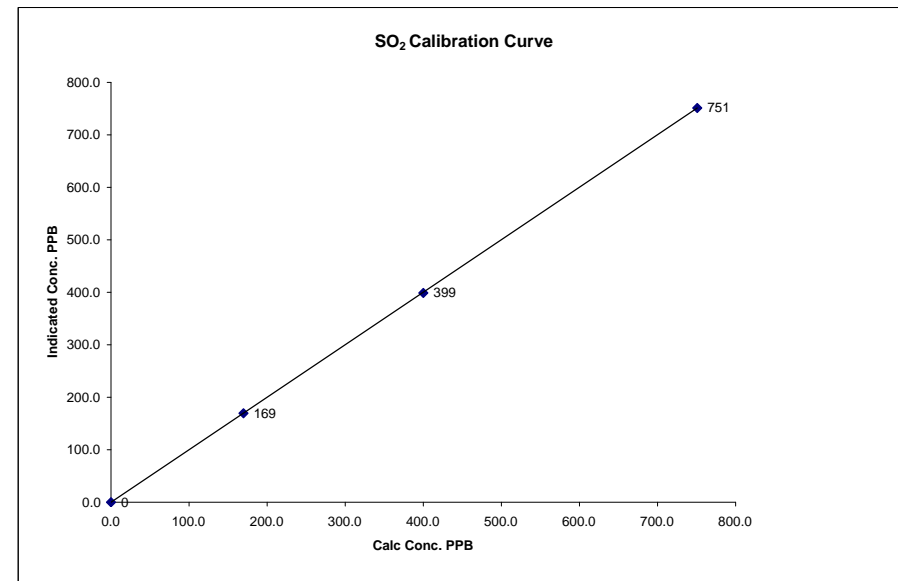
Auto Zero	0.7	After Calibration	0.5
Auto Span	387		377
Sample Lines Connected			YES
Percent Change from Previous Calibration			-

Calibration Performed by: Shea Beaton / Ting Xu

### SO<sub>2</sub> Calibration Curve

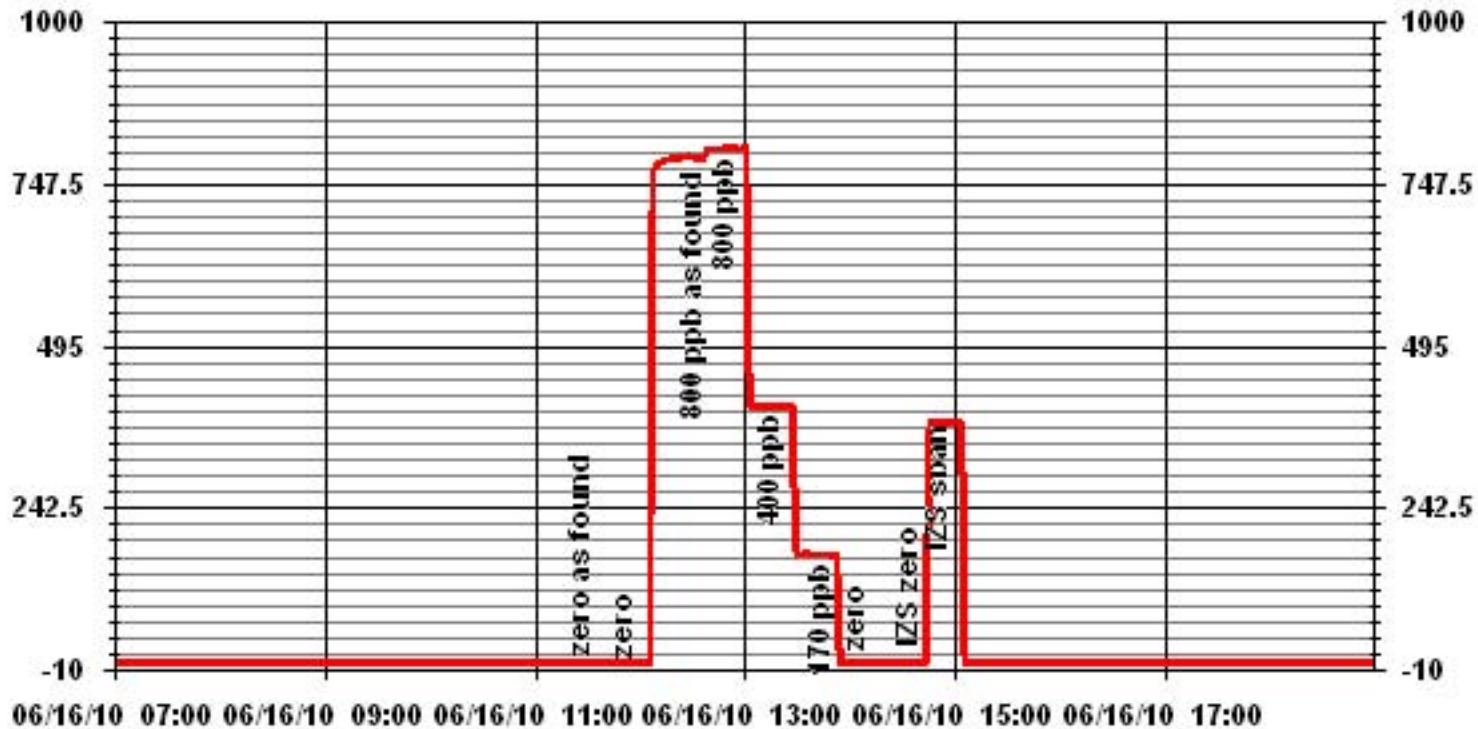
Calibration Date	July 7, 2010
Company	Lakeland Community and Industry Association
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M
Start Time (MST)	7:38
End Time (MST)	11:17

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999998
0	0	n/a	Intercept	(0.85 to 1.15)	1.000487
170	169	1.0038		(± 3% F.S.)	-0.460136
400	399	1.0021			
751	751	0.9997			



Notes:

### 01 Minute Averages





# Hydrogen Sulphide

## H<sub>2</sub>S Calibration Report

### Station Information

Calibration Date	July 6, 2010	Previous Calibration	June 16, 2010
Company	<b>LAKELAND INDUSTRY &amp; COMMUNITY ASSOCIATION</b>		
Plant / Location	<b>Portable/ Devon Wellsite 13-16-62-5-W4M</b>		
Start Time (MST)	12:17	End Time (MST)	16:16
Reason:	Monthly Calibration		
Barometric Pressure	712 mmHg	Station Temperature	24 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	548 ccm	32.5 Deg C	548 ccm	32.2 Deg C	
HVPS / Lamp Setting	528	2522	528	2523	
PMT / RxCell Temp	7.9 Deg C	50 Deg C	7.9 Deg C	50 Deg C	
Converter / IZS Temp	314.4 Deg C	45 Deg C	313.9 Deg C	45 Deg C	
Offset / Slope	46.4	0.991	47.5	1.006	

### Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	1	N/A
4998	0	0	0	N/A
4960	37	80	79	1.0123
4960	37	80	80	1.0000
4983	18.5	40	40	0.9987
4988	10.6	23	23	0.9958
4998	0	0	0	N/A
Sum of Least Squares				0.9992
New Correction Factor				1.0000

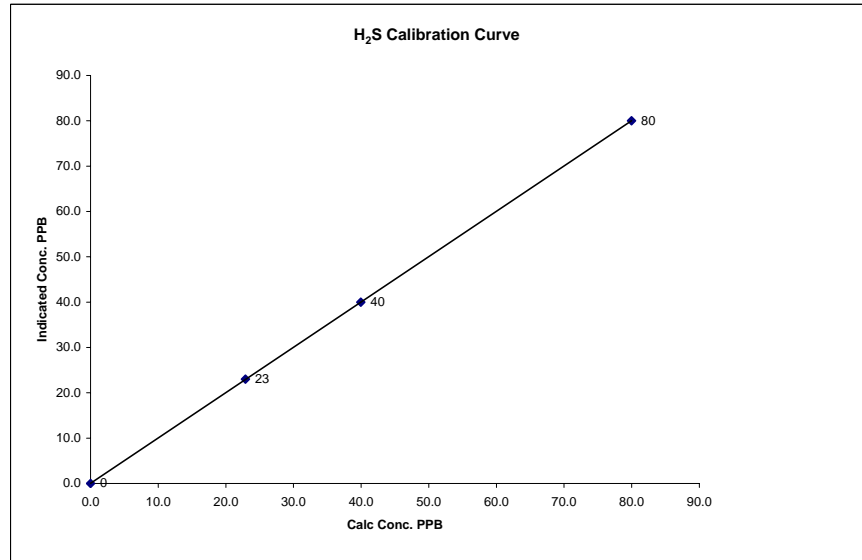
		Before Calibration	After Calibration
Auto Zero		1.0	0.7
Auto Span		59	58
Sample Lines Connected			YES
Percent Change from Previous Calibration			-1.3%

Calibration Performed by: Shea Beaton / Ting Xu

## H<sub>2</sub>S Calibration Curve

Calibration Date	July 6, 2010
Company	<b>LAKELAND INDUSTRY &amp; COMMUNITY ASSOCIATION</b>
Plant / Location	<b>Portable/ Devon Wellsite 13-16-62-5-W4M</b>
Start Time (MST)	12:17
End Time (MST)	16:16

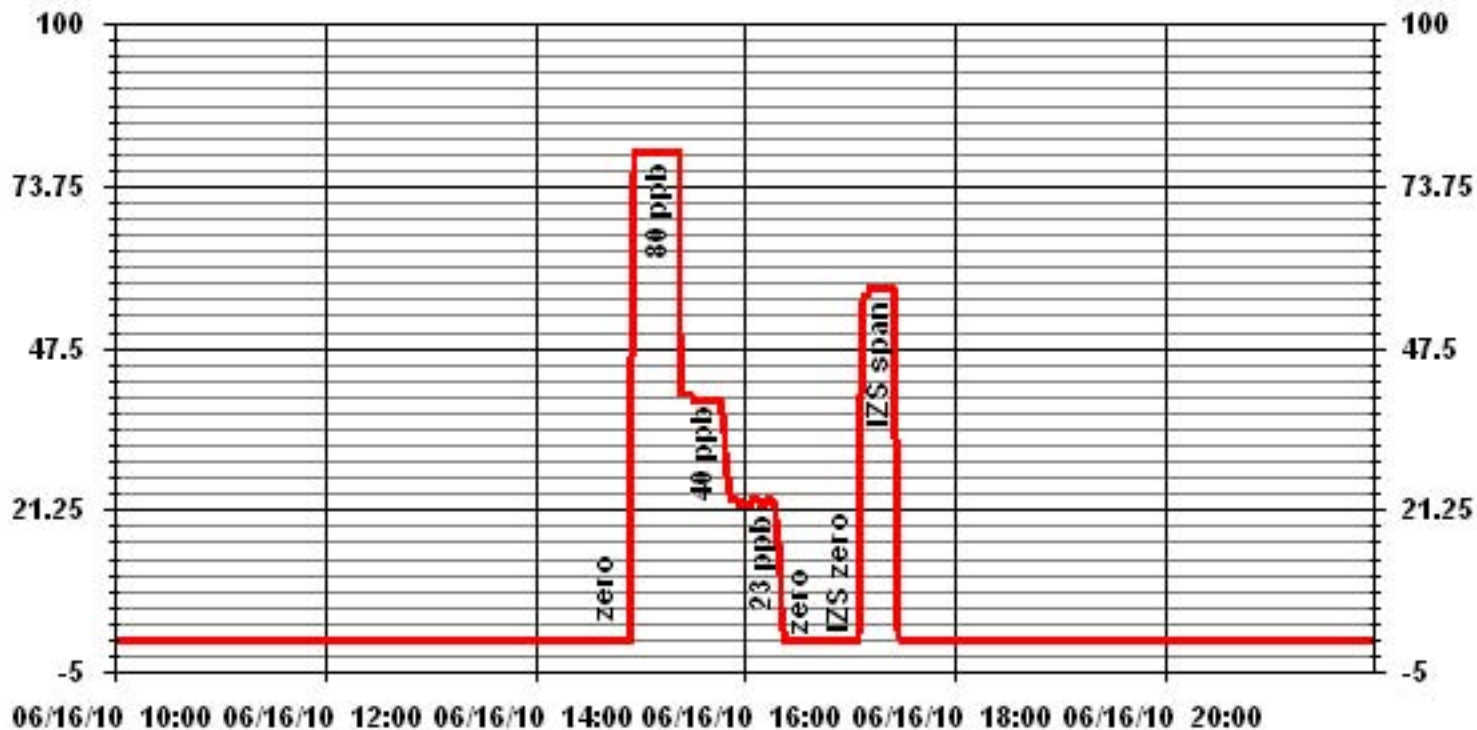
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)	
0	0	n/a	Intercept		0.999999
23	23	0.9958			1.000114
40	40	0.9987			
80	80	0.9996			



Notes:



### 01 Minute Averages



# Particulate Matter 2.5

**TEOM 1405F Audit**

	<b><u>Station</u></b>		<b><u>Audit Transfer Standard</u></b>
Date:	July 8, 2010	Make/Model:	Bios DC-2
Station Name:	Lica Portable (CASA # 33)	Serial Number:	1193
Location:	Devon Wellsite 13-16-62-5 W4M	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	TOTAL IMM 96-3470

	<b><u>Sampler</u></b>		<b><u>Set-up and current Sampler readings</u></b>
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A207691003	Filter Load (%)	24.9%
Firmware Ver.	1.51	K <sub>o</sub> Factor	15634.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	21.6
		Press (ATM)	0.937

**Conversion from mmHg or "Hg to ATM (Atmospheres)**

ATM = (mmHg) X (1.316 X 10<sup>-3</sup>)    or    ATM = ("Hg) X (3.34207 X 10<sup>-2</sup>)

**Note: Tolerances are noted as BOLD in Brackets**

**Audit**

<b>Status</b>			
Noise <b>&lt;0.10ug</b>	0.002	Warnings	None
Pump Vacuum <b>&lt;0.40atm</b>	0.31	Pump Gauge (inHg)	-20
<b>Temperature/Pressure</b>			
Measured Temp ( <b>± 2 °C</b> )	21.6	D °C	0.0
Measured Press ( <b>± 0.01atm</b> )	0.940	DATM	-0.003
<b>Flow Audit</b>			
Indicated Main Flow (l/min)	3.00	Main Flow Drift ( <b>±10.0%</b> )	0.79%
Measured Main Flow (l/min)	2.99	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift ( <b>±10.0%</b> )	0.35%
Measured Bypass Flow (l/min)	13.70	Flow Adjusted to Measured?	Yes
<b>Leak Check</b>		<b>Instrument Setup</b>	
Main ( <b>&lt; 0.15 l/min</b> )	NA	Flow Control = Active	
Aux ( <b>&lt; 0.6 l/min</b> )	NA	Report Conditions = Standard (25.0 C and 1atm)	
<b>K<sub>o</sub> Factor</b>			
Measured	NA		
K <sub>o</sub> Difference ( <b>± 2.5%</b> )	NA		

**Start Time:** 9:10      **Finish Time:** 10:45

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

**New Filter Loading %:** NA

**Comments:** replaced FDMS filter, didn't replace the Teom filter.

**Auditor/s:** Shea Beaton / Ting Xu

# Nitrogen Dioxide

**NOx - NO- NO<sub>2</sub> Calibration Report**

**Station Information**

Calibration Date	July 2, 2010	Previous Calibration	June 16, 2010
Company	LICA	Plant/Location	Portable/ 13-16-62-5W4M
Start Time (MST)	11:45	End Time (MST)	17:58
Reason:	Monthly Calibration	Other	
Barometric Pressure	697 mmHg	Station Temperature	25 Deg C
Cal Gas Concentration	NOx 51.8 ppm	NO 51.6 ppm	Cal Gas Expiry date 19-Dec-10
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA Volts

**Equipment Information**

Analyzer Make / Model:	API 200E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	EnviroNics 2000	S/N:	1991		
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	EnviroNics 2000	S/N :	1991		

**Analyzer Settings**

Before Calibration				After Calibration			
Concentration Range			0-1000	ppb			
Sample Flow/Conv. Temp	463 ccm	314.1 Deg C		466 ccm	314.7 Deg C		
Ozone Flow / Vacuum	77 ccm	4.7 "Hg-A		77 ccm	4.7 "Hg-A		
HVPS / A ZERO	634 Volts	5.7 MV		634 Volts	5.7 MV		
Rx/ Temp / PMT Temp	50.0 Deg C	6.7 Deg C		50.0 Deg C	6.7 Deg C		
Box Temp / IZS Temp	33.4 Deg C	45.3 Deg C		33.7 Deg C	45.1 Deg C		
Offset	0.9 NOx	-0.2 NO		0.9 NOx	-0.2 NO		
Slope	1.031 NOx	1.027 NO		1.107 NOx	1.092 NO		
NO <sub>2</sub> COEF / Conv Efficiency	NA	0.996		NA	0.996		

**Dilution Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO <sub>2</sub>	NOx	NO	NO <sub>2</sub>	NOx	NO
3004	0.0	----	0	0	0	0	0	0	----	----
2961	43.7	----	753	750	----	703	705	-2	1.0717	1.0645
2961	43.7	----	753	750	----	755	750	4	0.9978	1.0006
2982	23.3	----	402	400	----	398	396	2	1.0091	1.0102
2996	11.7	----	202	201	----	198	197	1	1.0177	1.0189
3004	0.0	----	0	0	0	0	1	0	----	----

**Gas Phase Titration Calibration Data**

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO <sub>2</sub> Correction Factor	NO <sub>2</sub> Conv Efficiency
			NOx	NO	NO <sub>2</sub>	NOx	NO	NO <sub>2</sub>		
2961	43.7	----	753	750	----	756	751	5	----	----
2966	43.7	600	752	----	559	754	197	557	1.0036	99.64%
2961	43.7	250	753	----	239	757	517	240	0.9958	100.43%
2962	43.7	140	753	----	132	757	624	133	0.9925	100.79%

Linearity	Sum of Least Squares	NOx= 1.001	NO= 1.004	NO <sub>2</sub> = 1.002
OK?	Correction Factors:	NOx= 0.9978	NO= 1.0006	NO <sub>2</sub> = 1.0036
	Average Converter Efficiency=	100.28%		

	Before Calibration				After Calibration			
Auto Zero	-0.5	NOx	0.3	NO <sub>2</sub>	-0.3	NOx	0.0	NO <sub>2</sub>
Auto Span	511	NOx	504	NO <sub>2</sub>	569	NOx	560	NO <sub>2</sub>
	Sample Lines Connected				YES			

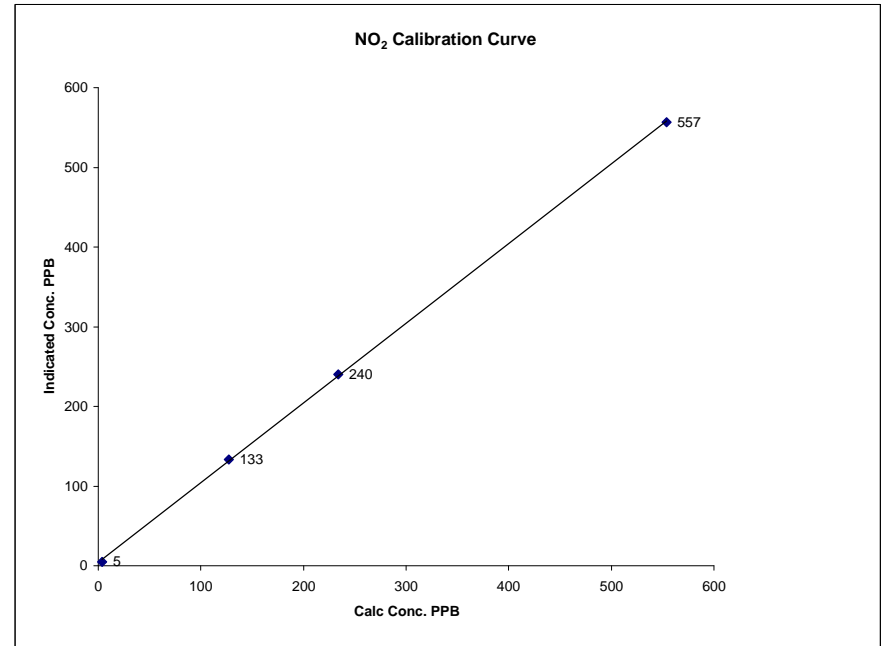
Notes Additional point done for ozone cal (O3 set point= 420), NOx=756, NO=365, NO<sub>2</sub>=391.

Calibration Performed by: Shea Beaton / Ting Xu

**NO<sub>2</sub> Calibration Curve**

Calibration Date	July 2, 2010	Company	LICA
Plant / Location	Portable/ 13-16-62-5W4M	Start Time (MST)	11:45
End Time (MST)	17:58		

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999893
ppb	ppb		Slope	(0.85 to 1.15)	1.000936
4	5	N/A	Intercept	(± 3% F.S.)	3.78497
127	133	0.9549			
234	240	0.9750			
554	557	0.9946			

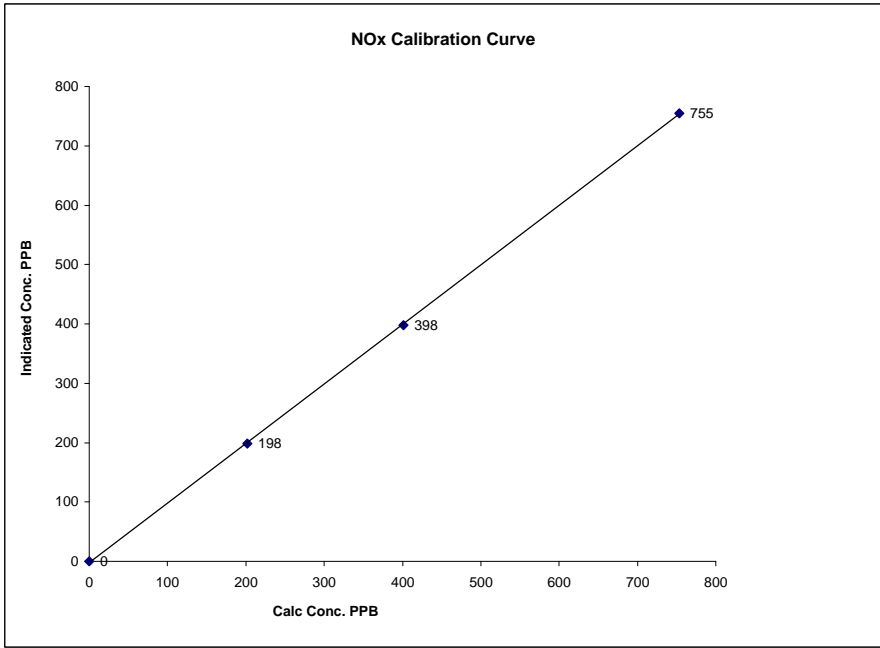


Notes:

### NOx Calibration Curve

Calibration Date July 2, 2010  
 Company LICA  
 Plant / Location Portable/ 13-16-62-5W4M  
 Start Time (MST) 11:45 End Time (MST) 17:58

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999943
0	0	N/A	Slope (0.85 to 1.15)	1.003008
202	198	1.0177	Intercept (± 3% F.S.)	-2.39000
402	398	1.0091		
753	755	0.9978		

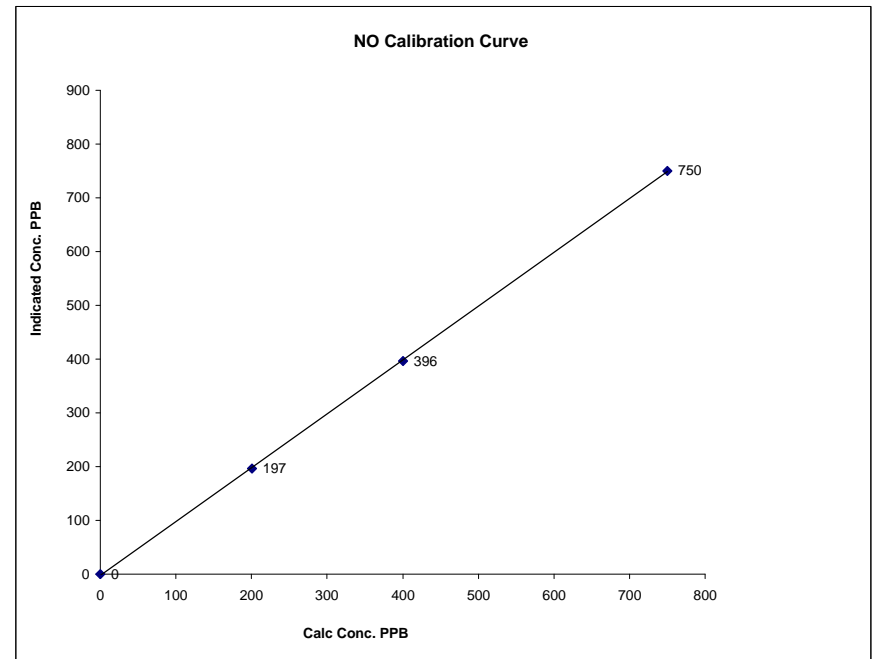


Notes:

### NO Calibration Curve

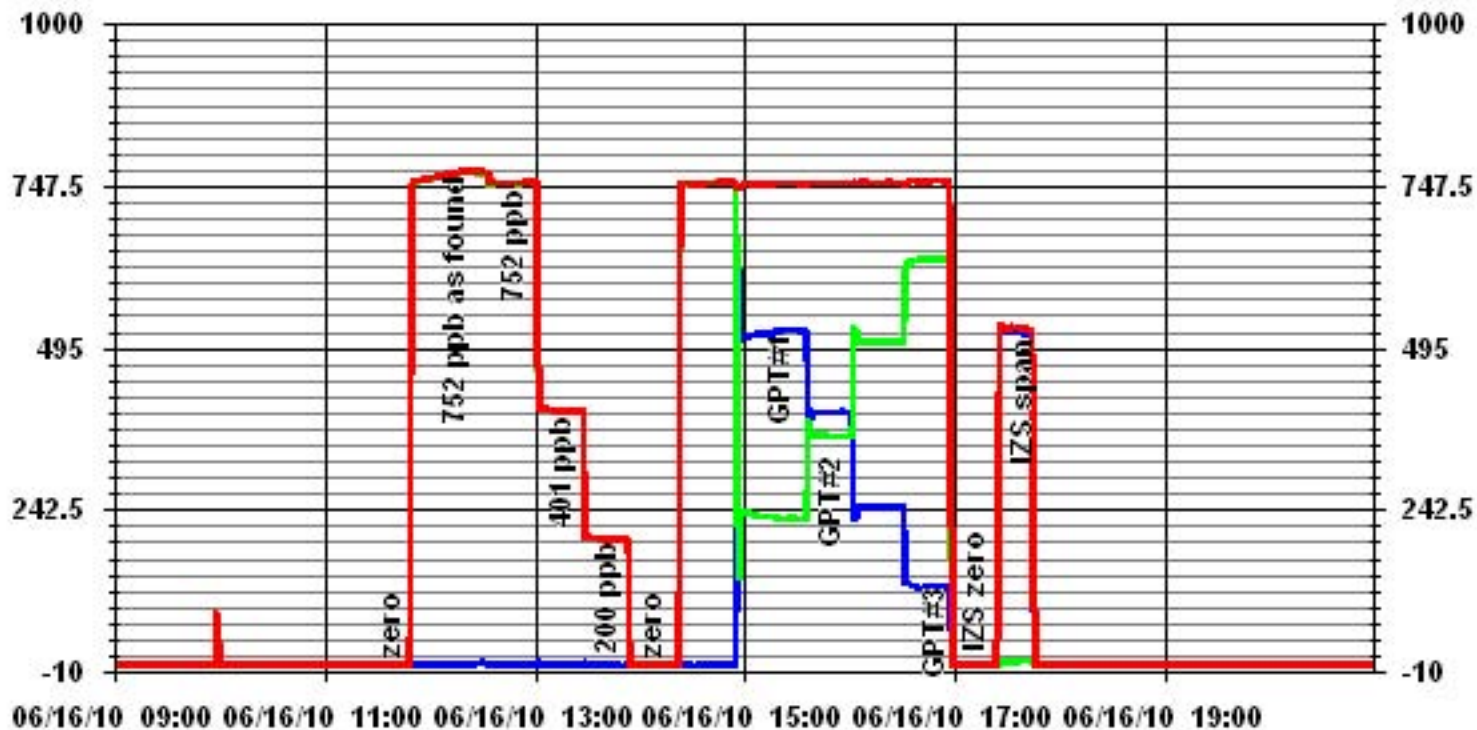
Calibration Date July 2, 2010  
 Company LICA  
 Plant / Location Portable/ 13-16-62-5W4M  
 Start Time (MST) 11:45 End Time (MST) 17:58

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999956
0	0	N/A	Slope (0.85 to 1.15)	1.006422
201	197	1.0189	Intercept (± 3% F.S.)	-8.1506
400	396	1.0102		
750	750	1.0006		



Notes:

### 01 Minute Averages



# Ozone



### O<sub>3</sub> Calibration Report

#### Station Information

Calibration Date	July 13, 2010	Previous Calibration	June 17, 2010
Company	Lakeland Industry & Community Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	7:31	End Time (MST)	10:49
Reason:	Monthly Calibration		
Barometric Pressure	698 mm Hg	Station Temperature	24 Deg C
DAS Output Voltage	0 - 10 Volts		

#### Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240372	Method:	Photometric
Calibrator Make / Model:	EnviroNics 2000	S/N :	1991	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO717		

#### Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Cell A Flow / Cell B Flow	752 ccm	751 ccm	752 ccm	751 Deg C
Pressure	687 mmHg		687 mmHg	
Bench Lamp Temp	54.1 Deg C		54.1 Deg C	
O3 Lamp / Box Temp	68.2 Deg C	32.8 Deg C	68.3 Deg C	32.7 Deg C
Offset/Slop	0	0.943	0	1.038

#### Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
2997	0	0	0	N/A
3000	420	386	351	1.0997
3002	420	386	388	0.9948
3002	250	234	235	0.9957
3002	140	127	127	1.0000
3002	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				0.9948

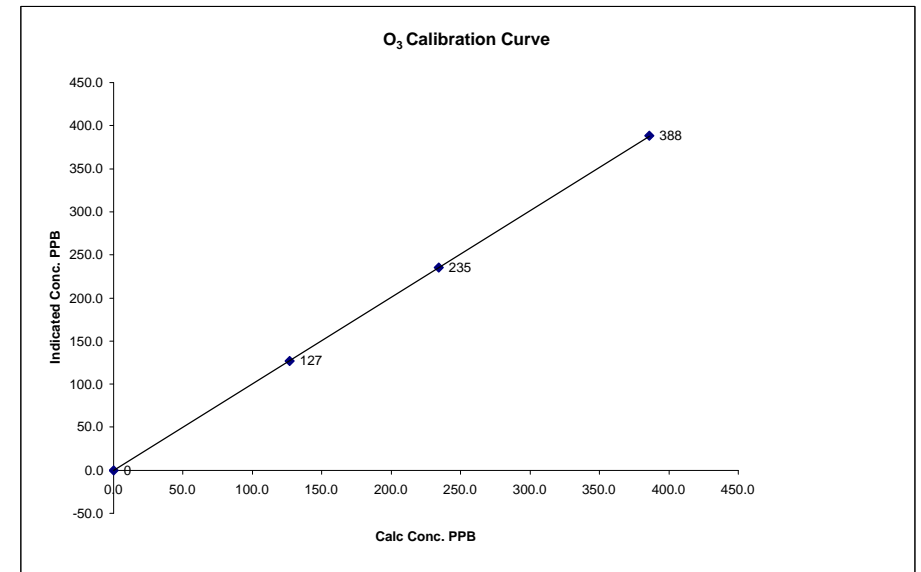
	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	306	340
Sample Lines Connected		YES
Percent Change from Previous Calibration		-9.1%

Calibration Performed by: Shea Beaton / Ting Xu

### O<sub>3</sub> Calibration Curve

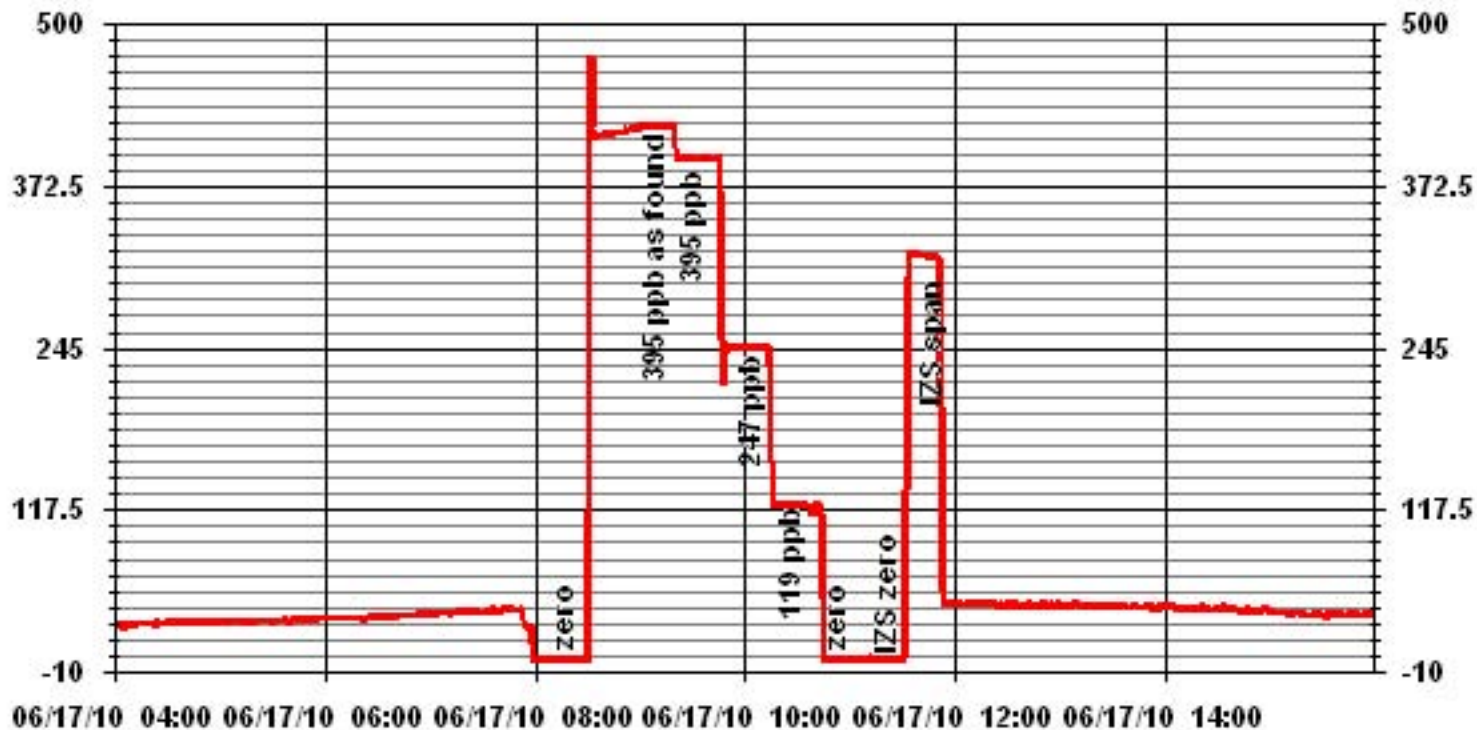
Calibration Date	July 13, 2010		
Company	Lakeland Industry & Community Association		
Plant / Location	Portable / Devon Wellsite 13-16-62-5 W4M		
Start Time (MST)	7:31	End Time (MST)	10:49

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope (≥ 0.995)	Intercept (± 3% F.S.)	
0	0	n/a			0.999997
127	127	1.0000			1.005546
234	235	0.9957			
386	388	0.9948			-0.285645



Notes:

### 01 Minute Averages



# Total Hydrocarbons

### THC Calibration Report

#### Station Information

Calibration Date:	July 7, 2010	Previous Calibration	June 17, 2010
Company:	Lakeland Industry and Community Association		
Plant / Location:	Portable Station Devon Wellsite 13-16-62-5W4M		
Start Time (MST)	10:20	End Time (MST)	14:59
Reason:	Monthly Calibration		
Barometric Pressure:	716 mmHg	Station Temperature:	24 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207Prop/602Meth/1171.25THC ppm	Cal Gas Expiry Date:	9/21/2011
DAS make & Model:	ESC 8832	S/N :	AO717
Output Voltage Range:	0 - 10 VDC		

#### Analyzer Information

Make / Model	TECO 51C	S/N :	04366-09739	Method	Flame Ionization
--------------	----------	-------	-------------	--------	------------------

#### Analyzer Settings

	Before Calibration	After Calibration
Concentration Range	0 - 50 ppm	0 - 50 ppm
Sample Pressure	6.8 psi	6.8 psi
Hydrogen Pressure	8 psi	8 psi
Air Pressure	21 psi	21 psi

#### Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2023	0	0.0	0.1	N/A
2023	0	0.0	0.0	N/A
2017	69.4	39.0	39.9	0.9764
2017	69.4	39.0	39.5	0.9863
2023	34.9	19.9	19.8	1.0032
2011	19.9	11.5	11.3	1.0156
2013	0	0.0	0.0	N/A
			Correction Factor:	0.9863

#### Percent Change

Previous Calibration Correction Factor:	0.9936
Current Correction Factor Before Span Adjust:	0.9764
Percent Change:	1.8%

#### IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.1	0.0
Auto Span	35.2	34.8
Sample Lines Connected		YES

#### Cylinder Pressures

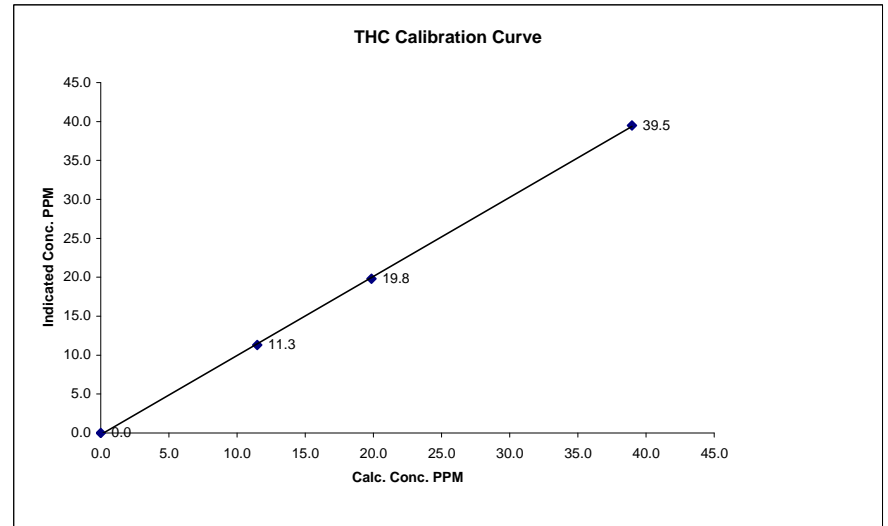
Span	1000 psi
Hydrogen	600 psi
Zero Air	30 psi Using API 700

Calibration Performed by: Ting Xu / Shea Beaton

### THC Calibration Curve

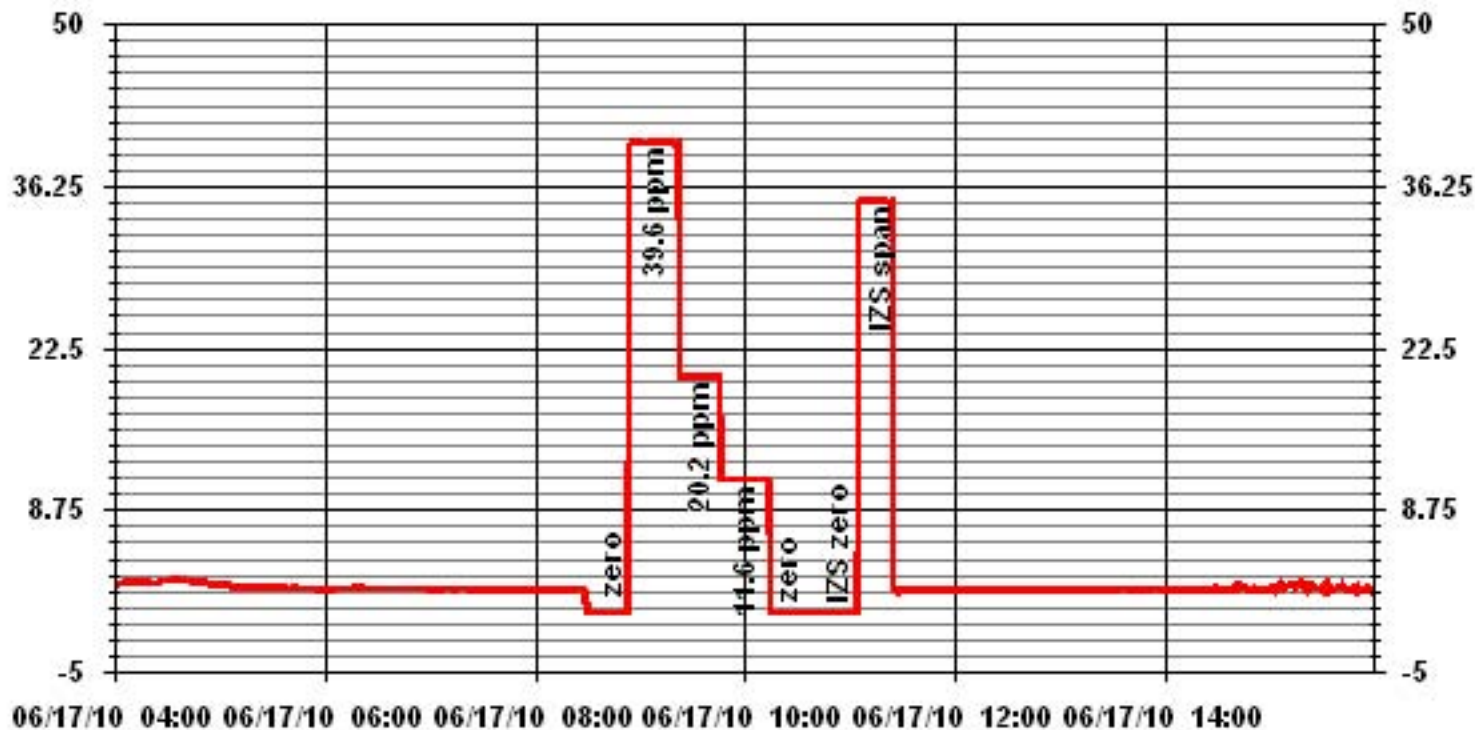
Calibration Date	July 7, 2010
Company	Lakeland Industry and Community Association
Plant / Location	Portable Station Devon Wellsite 13-16-62-5W4M
Start Time (MST)	10:20
End Time (MST)	14:59

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	0.999866
0.0	0.0		Intercept	(0.85 to 1.15)	1.015452
11.5	11.3	1.0156		(± 3% F.S.)	-0.196368
19.9	19.8	1.0032			
39.0	39.5	0.9863			



Notes:

### 01 Minute Averages



— LICA33 THC PPM

# **Polycyclic Aromatic Hydrocarbons Laboratory Analysis**

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: 13-16-62-5 W4M  
 Station ID: Lica 33 (Portable)  
 Field Sample ID: LICA PUF/PORT/May 20, 10

Puf+ s/n: 100-1015  
 Motor s/n: 1139  
 Installation Date/Time: May 19, 10 @ 08:05 mst  
 Removal Date/Time: May 21, 10 @ 12:10 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
20-May-10	05/20/2010 0:00	05/21/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
18-May-10	25-May-10	27-May-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
700	229	16.2	330.34

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

Comments: COC # Source Form, no number

GB050778 PUFF#2

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/May 20, 10

Technician Signature: \_\_\_\_\_



Your C.O.C. #: n/a

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/06**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B067668**

**Received: 2010/05/28, 10:17**

Sample Matrix: PUF AND FILTER

# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/15	2010/07/01	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

=====

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

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 #: B067668  
 Report Date: 2010/07/06

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

Maxxam ID		FZ9881	FZ9882		
Sampling Date		2010/05/20	2010/05/20		
COC Number		n/a	n/a		
	<b>Units</b>	<b>LICA</b>	<b>LICA</b>	<b>RDL</b>	<b>QC Batch</b>
		<b>PUF/QFF/CLS/MAY20,10</b>	<b>PUF/QFF/PORT/MAY20,10</b>		

<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2179963
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2179963
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2179963
2-Methylantracene	ug	<0.10	<0.10	0.10	2179963
2-Methylnaphthalene	ug	0.12	<0.10	0.10	2179963
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2179963
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2179963
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2179963
Acenaphthene	ug	<0.050	<0.050	0.050	2179963
Acenaphthylene	ug	<0.050	<0.050	0.050	2179963
Anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2179963
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2179963
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Biphenyl	ug	<0.10	<0.10	0.10	2179963
Chrysene	ug	<0.050	<0.050	0.050	2179963
Coronene	ug	<0.10	<0.10	0.10	2179963
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2179963
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2179963
Fluoranthene	ug	0.060	<0.050	0.050	2179963
Fluorene	ug	0.100	<0.050	0.050	2179963
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2179963
m-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Naphthalene	ug	0.140	0.080	0.072	2179963
o-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Perylene	ug	<0.10	<0.10	0.10	2179963

N/A = Not Applicable  
 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B067668  
 Report Date: 2010/07/06

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

Maxxam ID		FZ9881	FZ9882		
Sampling Date		2010/05/20	2010/05/20		
COC Number		n/a	n/a		
	Units	LICA PUF/QFF/CLS/MAY20,10	LICA PUF/QFF/PORT/MAY20,10	RDL	QC Batch
Phenanthrene	ug	0.560	0.240	0.050	2179963
p-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Pyrene	ug	<0.050	<0.050	0.050	2179963
Quinoline	ug	<0.40	<0.40	0.40	2179963
Tetralin	ug	<0.10	<0.10	0.10	2179963
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	70	72		2179963
D10-Fluoranthene	%	96	100		2179963
D10-Fluorene (FS)	%	56	56		2179963
D10-Phenanthrene	%	88	92		2179963
D12-Benzo(a)anthracene	%	110	118		2179963
D12-Benzo(a)pyrene	%	86	90		2179963
D12-Benzo(b)fluoranthene	%	90	96		2179963
D12-Benzo(ghi)perylene	%	90	94		2179963
D12-Benzo(k)fluoranthene	%	90	92		2179963
D12-Chrysene	%	94	96		2179963
D12-Indeno(1,2,3-cd)pyrene	%	90	94		2179963
D12-Perylene	%	88	94		2179963
D14-Dibenzo(a,h)anthracene	%	82	86		2179963
D14-Terphenyl (FS)	%	86	90		2179963
D8-Acenaphthylene	%	82	84		2179963
D8-Naphthalene	%	78	80		2179963
N/A = Not Applicable QC Batch = Quality Control Batch					

Maxxam Job #: B067668  
 Report Date: 2010/07/06

### Test Summary

<b>Maxxam ID</b>	FZ9881	<b>Collected</b>	2010/05/20
<b>Sample ID</b>	LICA PUF/QFF/CLS/MAY20,10	<b>Shipped</b>	
<b>Matrix</b>	PUF AND FILTER	<b>Received</b>	2010/05/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

<b>Maxxam ID</b>	FZ9882	<b>Collected</b>	2010/05/20
<b>Sample ID</b>	LICA PUF/QFF/PORT/MAY20,10	<b>Shipped</b>	
<b>Matrix</b>	PUF AND FILTER	<b>Received</b>	2010/05/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

Maxxam Job #: B067668  
Report Date: 2010/07/06

**GENERAL COMMENTS**

PAHMS-F

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

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene 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: GB067668

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/06/30		78	%	50 - 150
		D10-Fluoranthene	2010/06/30		94	%	50 - 150
		D10-Phenanthrene	2010/06/30		86	%	50 - 150
		D12-Benzo(a)anthracene	2010/06/30		118	%	50 - 150
		D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/06/30		90	%	50 - 150
		D12-Benzo(ghi)perylene	2010/06/30		92	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/06/30		94	%	50 - 150
		D12-Chrysene	2010/06/30		104	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/06/30		90	%	50 - 150
		D12-Perylene	2010/06/30		90	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		84	%	50 - 150
		RPD	D8-Acenaphthylene	2010/06/30		90	%
	D8-Naphthalene		2010/06/30		94	%	50 - 150
	Spiked Blank	Acenaphthene	2010/06/30		85	%	60 - 130
		Acenaphthene	2010/06/30	2.9		%	50
	RPD	Acenaphthylene	2010/06/30		93	%	60 - 130
		Acenaphthylene	2010/06/30	2.7		%	50
	Spiked Blank	Anthracene	2010/06/30		90	%	60 - 130
		Anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Benzo(a)anthracene	2010/06/30		100	%	60 - 130
		Benzo(a)anthracene	2010/06/30	2.5		%	50
	Spiked Blank	Benzo(a)pyrene	2010/06/30		80	%	60 - 130
		Benzo(a)pyrene	2010/06/30	6.1		%	50
	Spiked Blank	Benzo(b)fluoranthene	2010/06/30		83	%	60 - 130
		Benzo(b)fluoranthene	2010/06/30	8.7		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2010/06/30		85	%	60 - 130
		Benzo(g,h,i)perylene	2010/06/30	5.7		%	50
	Spiked Blank	Benzo(k)fluoranthene	2010/06/30		103	%	60 - 130
		Benzo(k)fluoranthene	2010/06/30	2.4		%	50
	Spiked Blank	Chrysene	2010/06/30		105	%	60 - 130
		Chrysene	2010/06/30	2.4		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2010/06/30		88	%	60 - 130
		Dibenz(a,h)anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Fluoranthene	2010/06/30		90	%	60 - 130
		Fluoranthene	2010/06/30	2.7		%	50
	Spiked Blank	Fluorene	2010/06/30		88	%	60 - 130
		Fluorene	2010/06/30	0		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/06/30		85	%	60 - 130
		Indeno(1,2,3-cd)pyrene	2010/06/30	2.9		%	50
Spiked Blank	Naphthalene	2010/06/30		85	%	60 - 130	
	Naphthalene	2010/06/30	2.9		%	50	
Spiked Blank	Phenanthrene	2010/06/30		80	%	60 - 130	
	Phenanthrene	2010/06/30	3.1		%	50	
Spiked Blank	Pyrene	2010/06/30		83	%	60 - 130	
	Pyrene	2010/06/30	3.0		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/06/30		74	%	50 - 150	
	D10-Fluoranthene	2010/06/30		88	%	50 - 150	
	D10-Phenanthrene	2010/06/30		78	%	50 - 150	
	D12-Benzo(a)anthracene	2010/06/30		108	%	50 - 150	
	D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150	
	D12-Benzo(b)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Benzo(ghi)perylene	2010/06/30		88	%	50 - 150	
	D12-Benzo(k)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Chrysene	2010/06/30		94	%	50 - 150	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB067668

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/06/30		88	%	50 - 150
		D12-Perylene	2010/06/30		92	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		80	%	50 - 150
		D8-Acenaphthylene	2010/06/30		84	%	50 - 150
		D8-Naphthalene	2010/06/30		88	%	50 - 150
		1-Methylnaphthalene	2010/06/30	<0.10		ug	
		1-Methylphenanthrene	2010/06/30	<0.10		ug	
		2-Chloronaphthalene	2010/06/30	<0.10		ug	
		2-Methylantracene	2010/06/30	<0.10		ug	
		2-Methylnaphthalene	2010/06/30	<0.10		ug	
		3-Methylcholanthrene	2010/06/30	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/06/30	<0.10		ug	
		9,10-Dimethylantracene	2010/06/30	<0.40		ug	
		Acenaphthene	2010/06/30	<0.050		ug	
		Acenaphthylene	2010/06/30	<0.050		ug	
		Anthracene	2010/06/30	<0.050		ug	
		Benzo(a)anthracene	2010/06/30	<0.050		ug	
		Benzo(a)fluorene	2010/06/30	<0.10		ug	
		Benzo(a)pyrene	2010/06/30	<0.050		ug	
		Benzo(b)fluoranthene	2010/06/30	<0.050		ug	
		Benzo(b)fluorene	2010/06/30	<0.10		ug	
		Benzo(e)pyrene	2010/06/30	<0.10		ug	
		Benzo(g,h,i)perylene	2010/06/30	<0.050		ug	
		Benzo(k)fluoranthene	2010/06/30	<0.050		ug	
		Biphenyl	2010/06/30	<0.10		ug	
		Chrysene	2010/06/30	<0.050		ug	
		Coronene	2010/06/30	<0.10		ug	
		Dibenz(a,h)anthracene	2010/06/30	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/06/30	<0.20		ug	
		Fluoranthene	2010/06/30	<0.050		ug	
		Fluorene	2010/06/30	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/06/30	<0.050		ug	
		m-Terphenyl	2010/06/30	<0.10		ug	
		Naphthalene	2010/06/30	<0.072		ug	
		o-Terphenyl	2010/06/30	<0.10		ug	
		Perylene	2010/06/30	<0.10		ug	
		Phenanthrene	2010/06/30	<0.050		ug	
		p-Terphenyl	2010/06/30	<0.10		ug	
		Pyrene	2010/06/30	<0.050		ug	
		Quinoline	2010/06/30	<0.40		ug	
		Tetralin	2010/06/30	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: 13-16-62-5 W4M  
 Station ID: Lica 33 (Portable)  
 Field Sample ID: LICA PUF/PORT/May 26, 10

Puf+ s/n: 100-1015  
 Motor s/n: 1139  
 Installation Date/Time: May 25, 10 @ 10:15 mst  
 Removal Date/Time: May 28, 10 @ 17:50 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
26-May-10	05/26/2010 0:00	05/27/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
21-May-10	31-May-10	02-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
714	229	10.8	330.37

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

Comments: COC # Source Form, no number

GB050787 PUFF#2

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/May 26, 10

Technician Signature: \_\_\_\_\_



Your C.O.C. #: N/A

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/06**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B069887**

**Received: 2010/06/02, 09:10**

Sample Matrix: PUF AND FILTER

# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/15	2010/07/01	BRL SOP-00201	CARB429(ARBM1,M2)mod

**Encryption Key**

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

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

=====

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

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 #: B069887  
 Report Date: 2010/07/06

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

Maxxam ID		GB1256	GB1257		
Sampling Date		2010/05/26	2010/05/26		
COC Number		N/A	N/A		
	<b>Units</b>	<b>LICA PUF/QFF/CLS/MAY 26,10</b>	<b>LICA PUF/QFF/PORT/MAY 26,10</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	0.22	<0.10	0.10	2179963
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2179963
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2179963
2-Methylantracene	ug	<0.10	<0.10	0.10	2179963
2-Methylnaphthalene	ug	0.42	<0.10	0.10	2179963
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2179963
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2179963
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2179963
Acenaphthene	ug	0.100	<0.050	0.050	2179963
Acenaphthylene	ug	0.180	<0.050	0.050	2179963
Anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2179963
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2179963
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Biphenyl	ug	0.12	<0.10	0.10	2179963
Chrysene	ug	<0.050	<0.050	0.050	2179963
Coronene	ug	<0.10	<0.10	0.10	2179963
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2179963
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2179963
Fluoranthene	ug	0.080	<0.050	0.050	2179963
Fluorene	ug	0.180	<0.050	0.050	2179963
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2179963
m-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Naphthalene	ug	0.380	0.100	0.072	2179963
o-Terphenyl	ug	<0.10	<0.10	0.10	2179963

N/A = Not Applicable  
 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B069887  
 Report Date: 2010/07/06

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

Maxxam ID		GB1256	GB1257		
Sampling Date		2010/05/26	2010/05/26		
COC Number		N/A	N/A		
	Units	LICA PUF/QFF/CLS/MAY 26,10	LICA PUF/QFF/PORT/MAY 26,10	RDL	QC Batch
Perylene	ug	<0.10	<0.10	0.10	2179963
Phenanthrene	ug	0.480	0.100	0.050	2179963
p-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Pyrene	ug	0.060	<0.050	0.050	2179963
Quinoline	ug	<0.40	<0.40	0.40	2179963
Tetralin	ug	<0.10	<0.10	0.10	2179963
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	68	66		2179963
D10-Fluoranthene	%	92	92		2179963
D10-Fluorene (FS)	%	56	58		2179963
D10-Phenanthrene	%	84	84		2179963
D12-Benzo(a)anthracene	%	102	104		2179963
D12-Benzo(a)pyrene	%	84	82		2179963
D12-Benzo(b)fluoranthene	%	88	88		2179963
D12-Benzo(ghi)perylene	%	88	90		2179963
D12-Benzo(k)fluoranthene	%	86	88		2179963
D12-Chrysene	%	90	92		2179963
D12-Indeno(1,2,3-cd)pyrene	%	88	88		2179963
D12-Perylene	%	84	84		2179963
D14-Dibenzo(a,h)anthracene	%	82	82		2179963
D14-Terphenyl (FS)	%	84	88		2179963
D8-Acenaphthylene	%	78	78		2179963
D8-Naphthalene	%	74	74		2179963
N/A = Not Applicable QC Batch = Quality Control Batch					

Maxxam Job #: B069887  
 Report Date: 2010/07/06

**Test Summary**

**Maxxam ID** GB1256 **Collected** 2010/05/26  
**Sample ID** LICA PUF/QFF/CLS/MAY 26,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

**Maxxam ID** GB1257 **Collected** 2010/05/26  
**Sample ID** LICA PUF/QFF/PORT/MAY 26,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

Maxxam Job #: B069887  
Report Date: 2010/07/06

**GENERAL COMMENTS**

**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: GB069887

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/06/30		78	%	50 - 150
		D10-Fluoranthene	2010/06/30		94	%	50 - 150
		D10-Phenanthrene	2010/06/30		86	%	50 - 150
		D12-Benzo(a)anthracene	2010/06/30		118	%	50 - 150
		D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/06/30		90	%	50 - 150
		D12-Benzo(ghi)perylene	2010/06/30		92	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/06/30		94	%	50 - 150
		D12-Chrysene	2010/06/30		104	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/06/30		90	%	50 - 150
		D12-Perylene	2010/06/30		90	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		84	%	50 - 150
		RPD	D8-Acenaphthylene	2010/06/30		90	%
	D8-Naphthalene		2010/06/30		94	%	50 - 150
	RPD	Acenaphthene	2010/06/30		85	%	60 - 130
		Acenaphthene	2010/06/30	2.9		%	50
	Spiked Blank	Acenaphthylene	2010/06/30		93	%	60 - 130
		Acenaphthylene	2010/06/30	2.7		%	50
	Spiked Blank	Anthracene	2010/06/30		90	%	60 - 130
		Anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Benzo(a)anthracene	2010/06/30		100	%	60 - 130
		Benzo(a)anthracene	2010/06/30	2.5		%	50
	Spiked Blank	Benzo(a)pyrene	2010/06/30		80	%	60 - 130
		Benzo(a)pyrene	2010/06/30	6.1		%	50
	Spiked Blank	Benzo(b)fluoranthene	2010/06/30		83	%	60 - 130
		Benzo(b)fluoranthene	2010/06/30	8.7		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2010/06/30		85	%	60 - 130
		Benzo(g,h,i)perylene	2010/06/30	5.7		%	50
	Spiked Blank	Benzo(k)fluoranthene	2010/06/30		103	%	60 - 130
		Benzo(k)fluoranthene	2010/06/30	2.4		%	50
	Spiked Blank	Chrysene	2010/06/30		105	%	60 - 130
		Chrysene	2010/06/30	2.4		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2010/06/30		88	%	60 - 130
		Dibenz(a,h)anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Fluoranthene	2010/06/30		90	%	60 - 130
		Fluoranthene	2010/06/30	2.7		%	50
	Spiked Blank	Fluorene	2010/06/30		88	%	60 - 130
		Fluorene	2010/06/30	0		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/06/30		85	%	60 - 130
		Indeno(1,2,3-cd)pyrene	2010/06/30	2.9		%	50
Spiked Blank	Naphthalene	2010/06/30		85	%	60 - 130	
	Naphthalene	2010/06/30	2.9		%	50	
Spiked Blank	Phenanthrene	2010/06/30		80	%	60 - 130	
	Phenanthrene	2010/06/30	3.1		%	50	
Spiked Blank	Pyrene	2010/06/30		83	%	60 - 130	
	Pyrene	2010/06/30	3.0		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/06/30		74	%	50 - 150	
	D10-Fluoranthene	2010/06/30		88	%	50 - 150	
	D10-Phenanthrene	2010/06/30		78	%	50 - 150	
	D12-Benzo(a)anthracene	2010/06/30		108	%	50 - 150	
	D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150	
	D12-Benzo(b)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Benzo(ghi)perylene	2010/06/30		88	%	50 - 150	
	D12-Benzo(k)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Chrysene	2010/06/30		94	%	50 - 150	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB069887

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/06/30		88	%	50 - 150
		D12-Perylene	2010/06/30		92	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		80	%	50 - 150
		D8-Acenaphthylene	2010/06/30		84	%	50 - 150
		D8-Naphthalene	2010/06/30		88	%	50 - 150
		1-Methylnaphthalene	2010/06/30	<0.10		ug	
		1-Methylphenanthrene	2010/06/30	<0.10		ug	
		2-Chloronaphthalene	2010/06/30	<0.10		ug	
		2-Methylanthracene	2010/06/30	<0.10		ug	
		2-Methylnaphthalene	2010/06/30	<0.10		ug	
		3-Methylcholanthrene	2010/06/30	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/06/30	<0.10		ug	
		9,10-Dimethylanthracene	2010/06/30	<0.40		ug	
		Acenaphthene	2010/06/30	<0.050		ug	
		Acenaphthylene	2010/06/30	<0.050		ug	
		Anthracene	2010/06/30	<0.050		ug	
		Benzo(a)anthracene	2010/06/30	<0.050		ug	
		Benzo(a)fluorene	2010/06/30	<0.10		ug	
		Benzo(a)pyrene	2010/06/30	<0.050		ug	
		Benzo(b)fluoranthene	2010/06/30	<0.050		ug	
		Benzo(b)fluorene	2010/06/30	<0.10		ug	
		Benzo(e)pyrene	2010/06/30	<0.10		ug	
		Benzo(g,h,i)perylene	2010/06/30	<0.050		ug	
		Benzo(k)fluoranthene	2010/06/30	<0.050		ug	
		Biphenyl	2010/06/30	<0.10		ug	
		Chrysene	2010/06/30	<0.050		ug	
		Coronene	2010/06/30	<0.10		ug	
		Dibenz(a,h)anthracene	2010/06/30	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/06/30	<0.20		ug	
		Fluoranthene	2010/06/30	<0.050		ug	
		Fluorene	2010/06/30	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/06/30	<0.050		ug	
		m-Terphenyl	2010/06/30	<0.10		ug	
		Naphthalene	2010/06/30	<0.072		ug	
		o-Terphenyl	2010/06/30	<0.10		ug	
		Perylene	2010/06/30	<0.10		ug	
		Phenanthrene	2010/06/30	<0.050		ug	
		p-Terphenyl	2010/06/30	<0.10		ug	
		Pyrene	2010/06/30	<0.050		ug	
		Quinoline	2010/06/30	<0.40		ug	
		Tetralin	2010/06/30	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: 13-16-62-5 W4M  
 Station ID: Lica 33 (Portable)  
 Field Sample ID: LICA PUF/PORT/June 1, 10

Puf+ s/n: 100-1015  
 Motor s/n: 1139  
 Installation Date/Time: May 31, 10 @ 13:45 mst  
 Removal Date/Time: June 2, 10 @ 14:25 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
01-Jun-10	06/01/2010 0:00	06/02/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
28-May-10	03-Jun-10	09-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
708	229	12.5	330.34

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

Comments: COC # Source Form, no number

GB050789 PUFF#2

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/June 1, 10

Technician Signature: \_\_\_\_\_



Your C.O.C. #: N/A

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/06**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B072158**

**Received: 2010/06/05, 13:34**

Sample Matrix: Filter  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/15	2010/07/01	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

=====

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

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 #: B072158  
 Report Date: 2010/07/06

**SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)**

Maxxam ID		GC1813	GC1814		
Sampling Date		2010/06/01	2010/06/01		
COC Number		N/A	N/A		
	Units	LICA PUF/CLS/JUNE 1,10	LICA PUF/PORT/JUNE 1,10	RDL	QC Batch
<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	0.20	<0.10	0.10	2179963
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2179963
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2179963
2-Methylantracene	ug	<0.10	<0.10	0.10	2179963
2-Methylnaphthalene	ug	0.36	<0.10	0.10	2179963
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2179963
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2179963
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2179963
Acenaphthene	ug	0.100	<0.050	0.050	2179963
Acenaphthylene	ug	<0.050	<0.050	0.050	2179963
Anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2179963
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2179963
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2179963
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2179963
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2179963
Biphenyl	ug	<0.10	<0.10	0.10	2179963
Chrysene	ug	<0.050	<0.050	0.050	2179963
Coronene	ug	<0.10	<0.10	0.10	2179963
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2179963
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2179963
Fluoranthene	ug	<0.050	<0.050	0.050	2179963
Fluorene	ug	0.160	<0.050	0.050	2179963
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2179963
m-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Naphthalene	ug	0.300	0.100	0.072	2179963
o-Terphenyl	ug	<0.10	<0.10	0.10	2179963
N/A = Not Applicable RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: B072158  
 Report Date: 2010/07/06

**SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)**

Maxxam ID		GC1813	GC1814		
Sampling Date		2010/06/01	2010/06/01		
COC Number		N/A	N/A		
	Units	LICA PUF/CLS/JUNE 1,10	LICA PUF/PORT/JUNE 1,10	RDL	QC Batch
Perylene	ug	<0.10	<0.10	0.10	2179963
Phenanthrene	ug	0.420	0.100	0.050	2179963
p-Terphenyl	ug	<0.10	<0.10	0.10	2179963
Pyrene	ug	<0.050	<0.050	0.050	2179963
Quinoline	ug	<0.40	<0.40	0.40	2179963
Tetralin	ug	0.14	<0.10	0.10	2179963
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	70	72		2179963
D10-Fluoranthene	%	90	86		2179963
D10-Fluorene (FS)	%	62	60		2179963
D10-Phenanthrene	%	86	82		2179963
D12-Benzo(a)anthracene	%	106	106		2179963
D12-Benzo(a)pyrene	%	82	80		2179963
D12-Benzo(b)fluoranthene	%	88	84		2179963
D12-Benzo(ghi)perylene	%	88	82		2179963
D12-Benzo(k)fluoranthene	%	92	88		2179963
D12-Chrysene	%	96	94		2179963
D12-Indeno(1,2,3-cd)pyrene	%	86	82		2179963
D12-Perylene	%	82	82		2179963
D14-Dibenzo(a,h)anthracene	%	78	74		2179963
D14-Terphenyl (FS)	%	92	90		2179963
D8-Acenaphthylene	%	82	82		2179963
D8-Naphthalene	%	78	80		2179963
N/A = Not Applicable QC Batch = Quality Control Batch					

Maxxam Job #: B072158  
 Report Date: 2010/07/06

**Test Summary**

**Maxxam ID** GC1813 **Collected** 2010/06/01  
**Sample ID** LICA PUF/CLS/JUNE 1,10 **Shipped**  
**Matrix** Filter **Received** 2010/06/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

**Maxxam ID** GC1814 **Collected** 2010/06/01  
**Sample ID** LICA PUF/PORT/JUNE 1,10 **Shipped**  
**Matrix** Filter **Received** 2010/06/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2179963	2010/06/15	2010/07/01	WZ

Maxxam Job #: B072158  
Report Date: 2010/07/06

**GENERAL COMMENTS**

**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: GB072158

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/06/30		78	%	50 - 150
		D10-Fluoranthene	2010/06/30		94	%	50 - 150
		D10-Phenanthrene	2010/06/30		86	%	50 - 150
		D12-Benzo(a)anthracene	2010/06/30		118	%	50 - 150
		D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/06/30		90	%	50 - 150
		D12-Benzo(ghi)perylene	2010/06/30		92	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/06/30		94	%	50 - 150
		D12-Chrysene	2010/06/30		104	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/06/30		90	%	50 - 150
		D12-Perylene	2010/06/30		90	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		84	%	50 - 150
		RPD	D8-Acenaphthylene	2010/06/30		90	%
	D8-Naphthalene		2010/06/30		94	%	50 - 150
	RPD	Acenaphthene	2010/06/30		85	%	60 - 130
		Acenaphthene	2010/06/30	2.9		%	50
	Spiked Blank	Acenaphthylene	2010/06/30		93	%	60 - 130
		Acenaphthylene	2010/06/30	2.7		%	50
	Spiked Blank	Anthracene	2010/06/30		90	%	60 - 130
		Anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Benzo(a)anthracene	2010/06/30		100	%	60 - 130
		Benzo(a)anthracene	2010/06/30	2.5		%	50
	Spiked Blank	Benzo(a)pyrene	2010/06/30		80	%	60 - 130
		Benzo(a)pyrene	2010/06/30	6.1		%	50
	Spiked Blank	Benzo(b)fluoranthene	2010/06/30		83	%	60 - 130
		Benzo(b)fluoranthene	2010/06/30	8.7		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2010/06/30		85	%	60 - 130
		Benzo(g,h,i)perylene	2010/06/30	5.7		%	50
	Spiked Blank	Benzo(k)fluoranthene	2010/06/30		103	%	60 - 130
		Benzo(k)fluoranthene	2010/06/30	2.4		%	50
	Spiked Blank	Chrysene	2010/06/30		105	%	60 - 130
		Chrysene	2010/06/30	2.4		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2010/06/30		88	%	60 - 130
		Dibenz(a,h)anthracene	2010/06/30	2.8		%	50
	Spiked Blank	Fluoranthene	2010/06/30		90	%	60 - 130
		Fluoranthene	2010/06/30	2.7		%	50
	Spiked Blank	Fluorene	2010/06/30		88	%	60 - 130
		Fluorene	2010/06/30	0		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/06/30		85	%	60 - 130
		Indeno(1,2,3-cd)pyrene	2010/06/30	2.9		%	50
Spiked Blank	Naphthalene	2010/06/30		85	%	60 - 130	
	Naphthalene	2010/06/30	2.9		%	50	
Spiked Blank	Phenanthrene	2010/06/30		80	%	60 - 130	
	Phenanthrene	2010/06/30	3.1		%	50	
Spiked Blank	Pyrene	2010/06/30		83	%	60 - 130	
	Pyrene	2010/06/30	3.0		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/06/30		74	%	50 - 150	
	D10-Fluoranthene	2010/06/30		88	%	50 - 150	
	D10-Phenanthrene	2010/06/30		78	%	50 - 150	
	D12-Benzo(a)anthracene	2010/06/30		108	%	50 - 150	
	D12-Benzo(a)pyrene	2010/06/30		88	%	50 - 150	
	D12-Benzo(b)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Benzo(ghi)perylene	2010/06/30		88	%	50 - 150	
	D12-Benzo(k)fluoranthene	2010/06/30		88	%	50 - 150	
	D12-Chrysene	2010/06/30		94	%	50 - 150	

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

Quality Assurance Report (Continued)  
 Maxxam Job Number: GB072158

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2179963 WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/06/30		88	%	50 - 150
		D12-Perylene	2010/06/30		92	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/06/30		80	%	50 - 150
		D8-Acenaphthylene	2010/06/30		84	%	50 - 150
		D8-Naphthalene	2010/06/30		88	%	50 - 150
		1-Methylnaphthalene	2010/06/30	<0.10		ug	
		1-Methylphenanthrene	2010/06/30	<0.10		ug	
		2-Chloronaphthalene	2010/06/30	<0.10		ug	
		2-Methylanthracene	2010/06/30	<0.10		ug	
		2-Methylnaphthalene	2010/06/30	<0.10		ug	
		3-Methylcholanthrene	2010/06/30	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/06/30	<0.10		ug	
		9,10-Dimethylanthracene	2010/06/30	<0.40		ug	
		Acenaphthene	2010/06/30	<0.050		ug	
		Acenaphthylene	2010/06/30	<0.050		ug	
		Anthracene	2010/06/30	<0.050		ug	
		Benzo(a)anthracene	2010/06/30	<0.050		ug	
		Benzo(a)fluorene	2010/06/30	<0.10		ug	
		Benzo(a)pyrene	2010/06/30	<0.050		ug	
		Benzo(b)fluoranthene	2010/06/30	<0.050		ug	
		Benzo(b)fluorene	2010/06/30	<0.10		ug	
		Benzo(e)pyrene	2010/06/30	<0.10		ug	
		Benzo(g,h,i)perylene	2010/06/30	<0.050		ug	
		Benzo(k)fluoranthene	2010/06/30	<0.050		ug	
		Biphenyl	2010/06/30	<0.10		ug	
		Chrysene	2010/06/30	<0.050		ug	
		Coronene	2010/06/30	<0.10		ug	
		Dibenz(a,h)anthracene	2010/06/30	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/06/30	<0.20		ug	
		Fluoranthene	2010/06/30	<0.050		ug	
		Fluorene	2010/06/30	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/06/30	<0.050		ug	
		m-Terphenyl	2010/06/30	<0.10		ug	
		Naphthalene	2010/06/30	<0.072		ug	
		o-Terphenyl	2010/06/30	<0.10		ug	
		Perylene	2010/06/30	<0.10		ug	
		Phenanthrene	2010/06/30	<0.050		ug	
		p-Terphenyl	2010/06/30	<0.10		ug	
		Pyrene	2010/06/30	<0.050		ug	
		Quinoline	2010/06/30	<0.40		ug	
		Tetralin	2010/06/30	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: 13-16-62-5 W4M  
 Station ID: Lica 33 (Portable)  
 Field Sample ID: LICA PUF/PORT/June 7, 10

Puf+ s/n: 100-1015  
 Motor s/n: 1139  
 Installation Date/Time: June 6, 10 @ 14:10 mst  
 Removal Date/Time: June 10, 10 @ 10:10 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
07-Jun-10	06/07/2010 0:00	06/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
03-Jun-10	10-Jun-10	15-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
708	229	13.7	330.34

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

Comments: COC # Source Form, no number

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/June 7, 10

\_\_\_\_\_

\_\_\_\_\_

Technician Signature: \_\_\_\_\_



Your C.O.C. #: na

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/28**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B076772**

**Received: 2010/06/15, 08:44**

Sample Matrix: PUF AND FILTER

# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/18	2010/07/23	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

=====

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

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 #: B076772  
 Report Date: 2010/07/28

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

Maxxam ID		GE5452	GE5453		
Sampling Date		2010/06/07	2010/06/07		
COC Number		na	na		
	<b>Units</b>	<b>LICA</b>	<b>LICA</b>	<b>RDL</b>	<b>QC Batch</b>
		<b>PUF/QFF/CLS/JUNE7,10</b>	<b>PUF/QFF/PORT/JUNE7,10</b>		

<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2183826
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2183826
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2183826
2-Methylantracene	ug	<0.10	<0.10	0.10	2183826
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2183826
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2183826
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2183826
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2183826
Acenaphthene	ug	<0.050	<0.050	0.050	2183826
Acenaphthylene	ug	<0.050	<0.050	0.050	2183826
Anthracene	ug	<0.050	<0.050	0.050	2183826
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2183826
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2183826
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2183826
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2183826
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2183826
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2183826
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2183826
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2183826
Biphenyl	ug	<0.10	<0.10	0.10	2183826
Chrysene	ug	<0.050	<0.050	0.050	2183826
Coronene	ug	<0.10	<0.10	0.10	2183826
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2183826
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2183826
Fluoranthene	ug	0.100	<0.050	0.050	2183826
Fluorene	ug	0.124	<0.050	0.050	2183826
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2183826
m-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Naphthalene	ug	0.110	0.098	0.072	2183826
o-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Perylene	ug	<0.10	<0.10	0.10	2183826
Phenanthrene	ug	0.650	0.158	0.050	2183826

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B076772  
 Report Date: 2010/07/28

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

Maxxam ID		GE5452	GE5453		
Sampling Date		2010/06/07	2010/06/07		
COC Number		na	na		
	<b>Units</b>	<b>LICA</b>	<b>LICA</b>	<b>RDL</b>	<b>QC Batch</b>
		<b>PUF/QFF/CLS/JUNE7,10</b>	<b>PUF/QFF/PORT/JUNE7,10</b>		

p-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Pyrene	ug	0.084	<0.050	0.050	2183826
Quinoline	ug	<0.40	<0.40	0.40	2183826
Tetralin	ug	<0.10	<0.10	0.10	2183826
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	56	64		2183826
D10-Fluoranthene	%	98	96		2183826
D10-Fluorene (FS)	%	39 (1)	45 (1)		2183826
D10-Phenanthrene	%	84	82		2183826
D12-Benzo(a)anthracene	%	102	108		2183826
D12-Benzo(a)pyrene	%	82	82		2183826
D12-Benzo(b)fluoranthene	%	86	92		2183826
D12-Benzo(ghi)perylene	%	88	88		2183826
D12-Benzo(k)fluoranthene	%	82	84		2183826
D12-Chrysene	%	80	84		2183826
D12-Indeno(1,2,3-cd)pyrene	%	86	86		2183826
D12-Perylene	%	82	82		2183826
D14-Dibenzo(a,h)anthracene	%	76	76		2183826
D14-Terphenyl (FS)	%	74	79		2183826
D8-Acenaphthylene	%	66	72		2183826
D8-Naphthalene	%	62	72		2183826

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 #: B076772  
 Report Date: 2010/07/28

### Test Summary

<b>Maxxam ID</b>	GE5452	<b>Collected</b>	2010/06/07
<b>Sample ID</b>	LICA PUF/QFF/CLS/JUNE7,10	<b>Shipped</b>	
<b>Matrix</b>	PUF AND FILTER	<b>Received</b>	2010/06/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2183826	2010/06/18	2010/07/23	JIW

<b>Maxxam ID</b>	GE5453	<b>Collected</b>	2010/06/07
<b>Sample ID</b>	LICA PUF/QFF/PORT/JUNE7,10	<b>Shipped</b>	
<b>Matrix</b>	PUF AND FILTER	<b>Received</b>	2010/06/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2183826	2010/06/18	2010/07/23	JIW

Maxxam Job #: B076772  
Report Date: 2010/07/28

**GENERAL COMMENTS**

PAHMS-F(WS:2183826)

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

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene or Triphenylene. An estimated mdl for each of these compounds is 0.10ug .

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 GE5452-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample GE5453-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

**Results relate only to the items tested.**

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

Quality Assurance Report  
 Maxxam Job Number: GB076772

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2183826 JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/07/23		70	%	50 - 150
		D10-Fluoranthene	2010/07/23		86	%	50 - 150
		D10-Phenanthrene	2010/07/23		78	%	50 - 150
		D12-Benzo(a)anthracene	2010/07/23		96	%	50 - 150
		D12-Benzo(a)pyrene	2010/07/23		80	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/07/23		88	%	50 - 150
		D12-Benzo(ghi)perylene	2010/07/23		84	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/07/23		84	%	50 - 150
		D12-Chrysene	2010/07/23		90	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/07/23		80	%	50 - 150
		D12-Perylene	2010/07/23		82	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/23		70	%	50 - 150
		RPD	D8-Acenaphthylene	2010/07/23		74	%
	D8-Naphthalene		2010/07/23		88	%	50 - 150
	RPD	Acenaphthene	2010/07/23		82	%	60 - 130
		Acenaphthene	2010/07/23	8.3		%	50
	Spiked Blank	Acenaphthylene	2010/07/23		80	%	60 - 130
		Acenaphthylene	2010/07/23	7.4		%	50
	Spiked Blank	Anthracene	2010/07/23		71	%	60 - 130
		Anthracene	2010/07/23	3.1		%	50
	Spiked Blank	Benzo(a)anthracene	2010/07/23		79	%	60 - 130
		Benzo(a)anthracene	2010/07/23	3.9		%	50
	Spiked Blank	Benzo(a)pyrene	2010/07/23		74	%	60 - 130
		Benzo(a)pyrene	2010/07/23	3.3		%	50
	Spiked Blank	Benzo(b)fluoranthene	2010/07/23		81	%	60 - 130
		Benzo(b)fluoranthene	2010/07/23	0.9		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2010/07/23		79	%	60 - 130
		Benzo(g,h,i)perylene	2010/07/23	3.1		%	50
	Spiked Blank	Benzo(k)fluoranthene	2010/07/23		85	%	60 - 130
		Benzo(k)fluoranthene	2010/07/23	3.8		%	50
	Spiked Blank	Chrysene	2010/07/23		89	%	60 - 130
		Chrysene	2010/07/23	7.0		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2010/07/23		71	%	60 - 130
		Dibenz(a,h)anthracene	2010/07/23	7.1		%	50
	Spiked Blank	Fluoranthene	2010/07/23		87	%	60 - 130
		Fluoranthene	2010/07/23	0.3		%	50
	Spiked Blank	Fluorene	2010/07/23		79	%	60 - 130
		Fluorene	2010/07/23	6.2		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/07/23		73	%	60 - 130
		Indeno(1,2,3-cd)pyrene	2010/07/23	4.4		%	50
Spiked Blank	Naphthalene	2010/07/23		86	%	60 - 130	
	Naphthalene	2010/07/23	10.0		%	50	
Spiked Blank	Phenanthrene	2010/07/23		76	%	60 - 130	
	Phenanthrene	2010/07/23	3.0		%	50	
Spiked Blank	Pyrene	2010/07/23		82	%	60 - 130	
	Pyrene	2010/07/23	0.6		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/07/23		70	%	50 - 150	
	D10-Fluoranthene	2010/07/23		90	%	50 - 150	
	D10-Phenanthrene	2010/07/23		78	%	50 - 150	
	D12-Benzo(a)anthracene	2010/07/23		96	%	50 - 150	
	D12-Benzo(a)pyrene	2010/07/23		82	%	50 - 150	
	D12-Benzo(b)fluoranthene	2010/07/23		88	%	50 - 150	
	D12-Benzo(ghi)perylene	2010/07/23		84	%	50 - 150	
	D12-Benzo(k)fluoranthene	2010/07/23		84	%	50 - 150	
	D12-Chrysene	2010/07/23		90	%	50 - 150	

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

Quality Assurance Report (Continued)  
 Maxxam Job Number: GB076772

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2183826 JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/07/23		80	%	50 - 150
		D12-Perylene	2010/07/23		84	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/23		72	%	50 - 150
		D8-Acenaphthylene	2010/07/23		72	%	50 - 150
		D8-Naphthalene	2010/07/23		84	%	50 - 150
		1-Methylnaphthalene	2010/07/23	<0.10		ug	
		1-Methylphenanthrene	2010/07/23	<0.10		ug	
		2-Chloronaphthalene	2010/07/23	<0.10		ug	
		2-Methylantracene	2010/07/23	<0.10		ug	
		2-Methylnaphthalene	2010/07/23	<0.10		ug	
		3-Methylcholanthrene	2010/07/23	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/07/23	<0.10		ug	
		9,10-Dimethylantracene	2010/07/23	<0.40		ug	
		Acenaphthene	2010/07/23	<0.050		ug	
		Acenaphthylene	2010/07/23	<0.050		ug	
		Anthracene	2010/07/23	<0.050		ug	
		Benzo(a)anthracene	2010/07/23	<0.050		ug	
		Benzo(a)fluorene	2010/07/23	<0.10		ug	
		Benzo(a)pyrene	2010/07/23	<0.050		ug	
		Benzo(b)fluoranthene	2010/07/23	<0.050		ug	
		Benzo(b)fluorene	2010/07/23	<0.10		ug	
		Benzo(e)pyrene	2010/07/23	<0.10		ug	
		Benzo(g,h,i)perylene	2010/07/23	<0.050		ug	
		Benzo(k)fluoranthene	2010/07/23	<0.050		ug	
		Biphenyl	2010/07/23	<0.10		ug	
		Chrysene	2010/07/23	<0.050		ug	
		Coronene	2010/07/23	<0.10		ug	
		Dibenz(a,h)anthracene	2010/07/23	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/07/23	<0.20		ug	
		Fluoranthene	2010/07/23	<0.050		ug	
		Fluorene	2010/07/23	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/07/23	<0.050		ug	
		m-Terphenyl	2010/07/23	<0.10		ug	
		Naphthalene	2010/07/23	<0.072		ug	
		o-Terphenyl	2010/07/23	<0.10		ug	
		Perylene	2010/07/23	<0.10		ug	
		Phenanthrene	2010/07/23	<0.050		ug	
		p-Terphenyl	2010/07/23	<0.10		ug	
		Pyrene	2010/07/23	<0.050		ug	
		Quinoline	2010/07/23	<0.40		ug	
		Tetralin	2010/07/23	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: 13-16-62-5 W4M  
 Station ID: Lica 33 (Portable)  
 Field Sample ID: LICA PUF/PORT/June 13, 10

Puf+ s/n: 100-1015  
 Motor s/n: 1139  
 Installation Date/Time: June 11, 10 @ 11:15 mst  
 Removal Date/Time: June 14, 10 @ 09:25 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
13-Jun-10	06/13/2010 0:00	06/14/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
10-Jun-10	15-Jun-10	18-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
710	229	20.2	330.34

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

Comments: COC # Source Form, no number

GB096917 Puff #2

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/June 13, 10

Technician Signature: \_\_\_\_\_



Your C.O.C. #: 4706

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/29**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B078354**

**Received: 2010/06/17, 08:37**

Sample Matrix: AIR  
 # Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/06/21	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/07/29	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) ¶	2	N/A	2010/06/21	BRL SOP-00304	EPA TO-15

Sample Matrix: PUF AND FILTER

# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/18	2010/07/23	BRL SOP-00201	CARB429(ARBM1,M2)mod

(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





Your C.O.C. #: 4706

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/29**

**CERTIFICATE OF ANALYSIS**

-2-

=====

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

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: 2

Page 2 of 18

Page 152 of 202

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**RESULTS OF ANALYSES OF AIR**

Maxxam ID		GF2209	GF2210	
Sampling Date		2010/06/13 00:00	2010/06/13 00:00	
COC Number		4706	4706	
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 -S2241</b>	<b>QC Batch</b>
<b>Volatile Organics</b>				
Pressure on Receipt	psig	18	20	2185777
QC Batch = Quality Control Batch				

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 -S2241</b>	<b>RDL</b>	<b>QC Batch</b>

Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2220750
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2220750
Propene	ug/m3	<0.52	<0.52	0.52	2220750
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2220750
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2220750
Dichlorodifluoromethane (FREON 12)	ug/m3	<0.99	<0.99	0.99	2220750
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2220750
Chloromethane	ug/m3	1.25	1.21	0.62	2220750
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2220750
Chloroethane	ug/m3	<0.79	<0.79	0.79	2220750
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2220750
Trichlorofluoromethane (FREON 11)	ug/m3	2.2	2.2	1.1	2220750
Ethanol	ug/m3	<4.3	<4.3	4.3	2220750
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2220750
2-propanol	ug/m3	<7.4	<7.4	7.4	2220750
2-Propanone	ug/m3	11.1	8.3	1.9	2220750
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2220750
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2220750
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2220750
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2220750
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2220750
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2220750
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2220750
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2220750
Methylene Chloride(Dichloromethane)	ug/m3	2.0	2.1	1.0	2220750
Chloroform	ug/m3	<0.73	<0.73	0.73	2220750
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2220750
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2220750
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2220750
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2220750

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	Units	LICA VOC/CLS/JUNE 13,10 - 7791	LICA VOC/PORT/JUNE 13,10 - S2241	RDL	QC Batch
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2220750
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2220750
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2220750
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2220750
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2220750
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2220750
Bromomethane	ug/m3	<0.70	<0.70	0.70	2220750
Bromoform	ug/m3	<2.1	<2.1	2.1	2220750
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2220750
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2220750
Trichloroethylene	ug/m3	1.8	<1.6	1.6	2220750
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2220750
Benzene	ug/m3	<0.58	<0.58	0.58	2220750
Toluene	ug/m3	<0.75	<0.75	0.75	2220750
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2220750
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2220750
o-Xylene	ug/m3	<0.87	<0.87	0.87	2220750
Styrene	ug/m3	<0.85	<0.85	0.85	2220750
4-ethyltoluene	ug/m3	<11	<11	11	2220750
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2220750
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2220750
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2220750
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2220750
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220750
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220750
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220750
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2220750
Hexachlorobutadiene	ug/m3	<32	<32	32	2220750
Hexane	ug/m3	<1.1	<1.1	1.1	2220750
Heptane	ug/m3	<1.2	<1.2	1.2	2220750
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2220750
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2220750
QC Batch = Quality Control Batch					

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 - S2241</b>	<b>RDL</b>	<b>QC Batch</b>
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2220750
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2220750
QC Batch = Quality Control Batch					

Maxxam Job #: B078354  
 Report Date: 2010/07/29

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

Maxxam ID		GF2211	GF2212		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA PUF/CLS/JUNE 13,10</b>	<b>LICA PUF/PORT/JUNE 13,10</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2183826
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2183826
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2183826
2-Methylantracene	ug	<0.10	<0.10	0.10	2183826
2-Methylnaphthalene	ug	0.12	0.16	0.10	2183826
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2183826
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2183826
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2183826
Acenaphthene	ug	<0.050	<0.050	0.050	2183826
Acenaphthylene	ug	<0.050	<0.050	0.050	2183826
Anthracene	ug	<0.050	<0.050	0.050	2183826
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2183826
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2183826
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2183826
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2183826
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2183826
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2183826
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2183826
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2183826
Biphenyl	ug	<0.10	<0.10	0.10	2183826
Chrysene	ug	<0.050	<0.050	0.050	2183826
Coronene	ug	<0.10	<0.10	0.10	2183826
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2183826
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2183826
Fluoranthene	ug	<0.050	<0.050	0.050	2183826
Fluorene	ug	0.070	<0.050	0.050	2183826
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2183826
m-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Naphthalene	ug	0.098	0.108	0.072	2183826
o-Terphenyl	ug	<0.10	<0.10	0.10	2183826
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: B078354  
 Report Date: 2010/07/29

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

Maxxam ID		GF2211	GF2212		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA PUF/CLS/JUNE 13,10</b>	<b>LICA PUF/PORT/JUNE 13,10</b>	<b>RDL</b>	<b>QC Batch</b>

Perylene	ug	<0.10	<0.10	0.10	2183826
Phenanthrene	ug	0.394	0.158	0.050	2183826
p-Terphenyl	ug	<0.10	<0.10	0.10	2183826
Pyrene	ug	<0.050	<0.050	0.050	2183826
Quinoline	ug	<0.40	<0.40	0.40	2183826
Tetralin	ug	<0.10	<0.10	0.10	2183826
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	58	60		2183826
D10-Fluoranthene	%	102	102		2183826
D10-Fluorene (FS)	%	44 (1)	40 (1)		2183826
D10-Phenanthrene	%	86	86		2183826
D12-Benzo(a)anthracene	%	116	112		2183826
D12-Benzo(a)pyrene	%	88	84		2183826
D12-Benzo(b)fluoranthene	%	92	92		2183826
D12-Benzo(ghi)perylene	%	90	92		2183826
D12-Benzo(k)fluoranthene	%	84	84		2183826
D12-Chrysene	%	86	84		2183826
D12-Indeno(1,2,3-cd)pyrene	%	88	90		2183826
D12-Perylene	%	84	82		2183826
D14-Dibenzo(a,h)anthracene	%	80	80		2183826
D14-Terphenyl (FS)	%	83	79		2183826
D8-Acenaphthylene	%	70	72		2183826
D8-Naphthalene	%	64	66		2183826

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 #: B078354  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 13,10 - 7791</b>	<b>LICA VOC/PORT/JUNE 13,10 -S2241</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Volatile Organics</b>					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2185831
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2185831
Propene	ppbv	<0.30	<0.30	0.30	2185831
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2185831
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2185831
Dichlorodifluoromethane (FREON 12)	ppbv	<0.20	<0.20	0.20	2185831
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2185831
Chloromethane	ppbv	0.60	0.58	0.30	2185831
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2185831
Chloroethane	ppbv	<0.30	<0.30	0.30	2185831
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2185831
Trichlorofluoromethane (FREON 11)	ppbv	0.39	0.38	0.20	2185831
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2185831
Ethanol	ppbv	<2.3	<2.3	2.3	2185831
2-propanol	ppbv	<3.0	<3.0	3.0	2185831
2-Propanone	ppbv	4.66	3.50	0.80	2185831
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2185831
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2185831
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2185831
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2185831
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2185831
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2185831
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2185831
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2185831
Methylene Chloride(Dichloromethane)	ppbv	0.57	0.62	0.30	2185831
Chloroform	ppbv	<0.15	<0.15	0.15	2185831
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2185831
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2185831
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2185831
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2185831

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch



Maxxam Job #: B078354  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13 00:00	2010/06/13 00:00		
COC Number		4706	4706		
	Units	LICA VOC/CLS/JUNE 13,10 - 7791	LICA VOC/PORT/JUNE 13,10 -S2241	RDL	QC Batch
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2185831
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2185831
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2185831
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2185831
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2185831
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2185831
Bromomethane	ppbv	<0.18	<0.18	0.18	2185831
Bromoform	ppbv	<0.20	<0.20	0.20	2185831
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2185831
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2185831
Heptane	ppbv	<0.30	<0.30	0.30	2185831
Trichloroethylene	ppbv	0.33	<0.30	0.30	2185831
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2185831
Benzene	ppbv	<0.18	<0.18	0.18	2185831
Toluene	ppbv	<0.20	<0.20	0.20	2185831
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2185831
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2185831
o-Xylene	ppbv	<0.20	<0.20	0.20	2185831
Styrene	ppbv	<0.20	<0.20	0.20	2185831
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2185831
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2185831
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2185831
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2185831
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2185831
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2185831
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2185831
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2185831
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2185831
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2185831
Hexane	ppbv	<0.30	<0.30	0.30	2185831
Cyclohexane	ppbv	<0.20	<0.20	0.20	2185831
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2185831
QC Batch = Quality Control Batch					

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GF2209	GF2210		
Sampling Date		2010/06/13	2010/06/13		
		00:00	00:00		
COC Number		4706	4706		
	<b>Units</b>	<b>LICA</b>	<b>LICA</b>	<b>RDL</b>	<b>QC Batch</b>
		<b>VOC/CLS/JUNE</b>	<b>VOC/PORT/JUNE</b>		
		<b>13,10 - 7791</b>	<b>13,10 - S2241</b>		

1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2185831
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2185831
<b>Surrogate Recovery (%)</b>					
Bromochloromethane	%	77	77		2185831
D5-Chlorobenzene	%	74	75		2185831
Difluorobenzene	%	78	79		2185831

QC Batch = Quality Control Batch

Maxxam Job #: B078354  
 Report Date: 2010/07/29

**Test Summary**

**Maxxam ID** GF2209 **Collected** 2010/06/13  
**Sample ID** LICA VOC/CLS/JUNE 13,10 - 7791 **Shipped**  
**Matrix** AIR **Received** 2010/06/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2185777	N/A	2010/06/21	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2220750	N/A	2010/07/29	
Volatile Organics in Air (TO-15)	GC/MS	2185831	N/A	2010/06/21	LSY

**Maxxam ID** GF2210 **Collected** 2010/06/13  
**Sample ID** LICA VOC/PORT/JUNE 13,10 -S2241 **Shipped**  
**Matrix** AIR **Received** 2010/06/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2185777	N/A	2010/06/21	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2220750	N/A	2010/07/29	
Volatile Organics in Air (TO-15)	GC/MS	2185831	N/A	2010/06/21	LSY

**Maxxam ID** GF2211 **Collected** 2010/06/13  
**Sample ID** LICA PUF/CLS/JUNE 13,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2183826	2010/07/23	2010/07/23	JIW

**Maxxam ID** GF2212 **Collected** 2010/06/13  
**Sample ID** LICA PUF/PORT/JUNE 13,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2183826	2010/06/18	2010/07/23	JIW

Maxxam Job #: B078354  
Report Date: 2010/07/29

**GENERAL COMMENTS**

Sample GF2211-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample GF2212-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

**Results relate only to the items tested.**

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

Quality Assurance Report  
 Maxxam Job Number: GB078354

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2183826 JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/07/23		70	%	50 - 150
		D10-Fluoranthene	2010/07/23		86	%	50 - 150
		D10-Phenanthrene	2010/07/23		78	%	50 - 150
		D12-Benzo(a)anthracene	2010/07/23		96	%	50 - 150
		D12-Benzo(a)pyrene	2010/07/23		80	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/07/23		88	%	50 - 150
		D12-Benzo(ghi)perylene	2010/07/23		84	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/07/23		84	%	50 - 150
		D12-Chrysene	2010/07/23		90	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/07/23		80	%	50 - 150
		D12-Perylene	2010/07/23		82	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/23		70	%	50 - 150
		D8-Acenaphthylene	2010/07/23		74	%	50 - 150
		D8-Naphthalene	2010/07/23		88	%	50 - 150
		RPD	Acenaphthene	2010/07/23		82	%
	RPD	Acenaphthene	2010/07/23	8.3		%	50
	Spiked Blank	Acenaphthylene	2010/07/23		80	%	60 - 130
	RPD	Acenaphthylene	2010/07/23	7.4		%	50
	Spiked Blank	Anthracene	2010/07/23		71	%	60 - 130
	RPD	Anthracene	2010/07/23	3.1		%	50
	Spiked Blank	Benzo(a)anthracene	2010/07/23		79	%	60 - 130
	RPD	Benzo(a)anthracene	2010/07/23	3.9		%	50
	Spiked Blank	Benzo(a)pyrene	2010/07/23		74	%	60 - 130
	RPD	Benzo(a)pyrene	2010/07/23	3.3		%	50
	Spiked Blank	Benzo(b)fluoranthene	2010/07/23		81	%	60 - 130
	RPD	Benzo(b)fluoranthene	2010/07/23	0.9		%	50
	Spiked Blank	Benzo(g,h,i)perylene	2010/07/23		79	%	60 - 130
	RPD	Benzo(g,h,i)perylene	2010/07/23	3.1		%	50
	Spiked Blank	Benzo(k)fluoranthene	2010/07/23		85	%	60 - 130
	RPD	Benzo(k)fluoranthene	2010/07/23	3.8		%	50
	Spiked Blank	Chrysene	2010/07/23		89	%	60 - 130
	RPD	Chrysene	2010/07/23	7.0		%	50
	Spiked Blank	Dibenz(a,h)anthracene	2010/07/23		71	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2010/07/23	7.1		%	50
	Spiked Blank	Fluoranthene	2010/07/23		87	%	60 - 130
	RPD	Fluoranthene	2010/07/23	0.3		%	50
	Spiked Blank	Fluorene	2010/07/23		79	%	60 - 130
	RPD	Fluorene	2010/07/23	6.2		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/07/23		73	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2010/07/23	4.4		%	50
	Spiked Blank	Naphthalene	2010/07/23		86	%	60 - 130
	RPD	Naphthalene	2010/07/23	10.0		%	50
	Spiked Blank	Phenanthrene	2010/07/23		76	%	60 - 130
	RPD	Phenanthrene	2010/07/23	3.0		%	50
	Spiked Blank	Pyrene	2010/07/23		82	%	60 - 130
RPD	Pyrene	2010/07/23	0.6		%	50	
Method Blank	D10-2-Methylnaphthalene	2010/07/23		70	%	50 - 150	
	D10-Fluoranthene	2010/07/23		90	%	50 - 150	
	D10-Phenanthrene	2010/07/23		78	%	50 - 150	
	D12-Benzo(a)anthracene	2010/07/23		96	%	50 - 150	
	D12-Benzo(a)pyrene	2010/07/23		82	%	50 - 150	
	D12-Benzo(b)fluoranthene	2010/07/23		88	%	50 - 150	
	D12-Benzo(ghi)perylene	2010/07/23		84	%	50 - 150	
	D12-Benzo(k)fluoranthene	2010/07/23		84	%	50 - 150	
	D12-Chrysene	2010/07/23		90	%	50 - 150	

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

Quality Assurance Report (Continued)  
 Maxxam Job Number: GB078354

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
2183826 JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/07/23		80	%	50 - 150	
		D12-Perylene	2010/07/23		84	%	50 - 150	
		D14-Dibenzo(a,h)anthracene	2010/07/23		72	%	50 - 150	
		D8-Acenaphthylene	2010/07/23		72	%	50 - 150	
		D8-Naphthalene	2010/07/23		84	%	50 - 150	
		1-Methylnaphthalene	2010/07/23	<0.10			ug	
		1-Methylphenanthrene	2010/07/23	<0.10			ug	
		2-Chloronaphthalene	2010/07/23	<0.10			ug	
		2-Methylantracene	2010/07/23	<0.10			ug	
		2-Methylnaphthalene	2010/07/23	<0.10			ug	
		3-Methylcholanthrene	2010/07/23	<2.0			ug	
		7,12-Dimethylbenzo(a)anthracene	2010/07/23	<0.10			ug	
		9,10-Dimethylantracene	2010/07/23	<0.40			ug	
		Acenaphthene	2010/07/23	<0.050			ug	
		Acenaphthylene	2010/07/23	<0.050			ug	
		Anthracene	2010/07/23	<0.050			ug	
		Benzo(a)anthracene	2010/07/23	<0.050			ug	
		Benzo(a)fluorene	2010/07/23	<0.10			ug	
		Benzo(a)pyrene	2010/07/23	<0.050			ug	
		Benzo(b)fluoranthene	2010/07/23	<0.050			ug	
		Benzo(b)fluorene	2010/07/23	<0.10			ug	
		Benzo(e)pyrene	2010/07/23	<0.10			ug	
		Benzo(g,h,i)perylene	2010/07/23	<0.050			ug	
		Benzo(k)fluoranthene	2010/07/23	<0.050			ug	
		Biphenyl	2010/07/23	<0.10			ug	
		Chrysene	2010/07/23	<0.050			ug	
		Coronene	2010/07/23	<0.10			ug	
		Dibenz(a,h)anthracene	2010/07/23	<0.050			ug	
		Dibenzo(a,e)pyrene	2010/07/23	<0.20			ug	
		Fluoranthene	2010/07/23	<0.050			ug	
		Fluorene	2010/07/23	<0.050			ug	
		Indeno(1,2,3-cd)pyrene	2010/07/23	<0.050			ug	
		m-Terphenyl	2010/07/23	<0.10			ug	
		Naphthalene	2010/07/23	<0.072			ug	
		o-Terphenyl	2010/07/23	<0.10			ug	
		Perylene	2010/07/23	<0.10			ug	
		Phenanthrene	2010/07/23	<0.050			ug	
		p-Terphenyl	2010/07/23	<0.10			ug	
		Pyrene	2010/07/23	<0.050			ug	
		Quinoline	2010/07/23	<0.40			ug	
Tetralin	2010/07/23	<0.10			ug			
2185831 LSY	Spiked Blank	Bromochloromethane	2010/06/21		107	%	60 - 140	
		D5-Chlorobenzene	2010/06/21		107	%	60 - 140	
		Difluorobenzene	2010/06/21		109	%	60 - 140	
		2,2,4-Trimethylpentane	2010/06/21		93	%	70 - 130	
		Carbon Disulfide	2010/06/21		94	%	70 - 130	
		Propene	2010/06/21		95	%	70 - 130	
		Vinyl Acetate	2010/06/21		108	%	70 - 130	
		Vinyl Bromide	2010/06/21		95	%	70 - 130	
		Dichlorodifluoromethane (FREON 12)	2010/06/21		87	%	70 - 130	
		1,2-Dichlorotetrafluoroethane	2010/06/21		86	%	70 - 130	
		Chloromethane	2010/06/21		93	%	70 - 130	
		Vinyl Chloride	2010/06/21		99	%	70 - 130	
		Chloroethane	2010/06/21		99	%	70 - 130	
		1,3-Butadiene	2010/06/21		82	%	70 - 130	

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

Quality Assurance Report (Continued)  
 Maxxam Job Number: GB078354

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2185831 LSY	Spiked Blank	Trichlorofluoromethane (FREON 11)	2010/06/21		98	%	70 - 130
		Trichlorotrifluoroethane	2010/06/21		97	%	70 - 130
		Ethanol	2010/06/21		112	%	70 - 130
		2-propanol	2010/06/21		96	%	70 - 130
		2-Propanone	2010/06/21		101	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2010/06/21		97	%	70 - 130
		Methyl Isobutyl Ketone	2010/06/21		87	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2010/06/21		85	%	70 - 130
		Methyl t-butyl ether (MTBE)	2010/06/21		99	%	70 - 130
		Ethyl Acetate	2010/06/21		94	%	70 - 130
		1,1-Dichloroethylene	2010/06/21		97	%	70 - 130
		cis-1,2-Dichloroethylene	2010/06/21		97	%	70 - 130
		trans-1,2-Dichloroethylene	2010/06/21		97	%	70 - 130
		Methylene Chloride(Dichloromethane)	2010/06/21		86	%	70 - 130
		Chloroform	2010/06/21		97	%	70 - 130
		Carbon Tetrachloride	2010/06/21		109	%	70 - 130
		1,1-Dichloroethane	2010/06/21		96	%	70 - 130
		1,2-Dichloroethane	2010/06/21		97	%	70 - 130
		Ethylene Dibromide	2010/06/21		95	%	70 - 130
		1,1,1-Trichloroethane	2010/06/21		102	%	70 - 130
		1,1,2-Trichloroethane	2010/06/21		97	%	70 - 130
		1,1,2,2-Tetrachloroethane	2010/06/21		89	%	70 - 130
		cis-1,3-Dichloropropene	2010/06/21		106	%	70 - 130
		trans-1,3-Dichloropropene	2010/06/21		110	%	70 - 130
		1,2-Dichloropropane	2010/06/21		92	%	70 - 130
		Bromomethane	2010/06/21		91	%	70 - 130
		Bromoform	2010/06/21		105	%	70 - 130
		Bromodichloromethane	2010/06/21		101	%	70 - 130
		Dibromochloromethane	2010/06/21		102	%	70 - 130
		Heptane	2010/06/21		94	%	70 - 130
		Trichloroethylene	2010/06/21		94	%	70 - 130
		Tetrachloroethylene	2010/06/21		96	%	70 - 130
		Benzene	2010/06/21		94	%	70 - 130
		Toluene	2010/06/21		96	%	70 - 130
		Ethylbenzene	2010/06/21		92	%	70 - 130
		p+m-Xylene	2010/06/21		93	%	70 - 130
		o-Xylene	2010/06/21		94	%	70 - 130
		Styrene	2010/06/21		83	%	70 - 130
		1,3,5-Trimethylbenzene	2010/06/21		85	%	70 - 130
		1,2,4-Trimethylbenzene	2010/06/21		83	%	70 - 130
		4-ethyltoluene	2010/06/21		89	%	70 - 130
		Chlorobenzene	2010/06/21		92	%	70 - 130
		Benzyl chloride	2010/06/21		115	%	70 - 130
		1,3-Dichlorobenzene	2010/06/21		87	%	70 - 130
		1,4-Dichlorobenzene	2010/06/21		85	%	70 - 130
		1,2-Dichlorobenzene	2010/06/21		81	%	70 - 130
		1,2,4-Trichlorobenzene	2010/06/21		83	%	70 - 130
		Hexachlorobutadiene	2010/06/21		82	%	70 - 130
		Hexane	2010/06/21		94	%	70 - 130
		Cyclohexane	2010/06/21		94	%	70 - 130
		Tetrahydrofuran	2010/06/21		93	%	70 - 130
		1,4-Dioxane	2010/06/21		84	%	70 - 130
	Method Blank	Bromochloromethane	2010/06/21		91	%	60 - 140
		D5-Chlorobenzene	2010/06/21		86	%	60 - 140
		Difluorobenzene	2010/06/21		93	%	60 - 140

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

## Quality Assurance Report (Continued)

Maxxam Job Number: GB078354

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2185831 LSY	Method Blank	2,2,4-Trimethylpentane	2010/06/21	<0.20		ppbv	
		Carbon Disulfide	2010/06/21	<0.50		ppbv	
		Propene	2010/06/21	<0.30		ppbv	
		Vinyl Acetate	2010/06/21	<0.20		ppbv	
		Vinyl Bromide	2010/06/21	<0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2010/06/21	<0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2010/06/21	<0.17		ppbv	
		Chloromethane	2010/06/21	<0.30		ppbv	
		Vinyl Chloride	2010/06/21	<0.18		ppbv	
		Chloroethane	2010/06/21	<0.30		ppbv	
		1,3-Butadiene	2010/06/21	<0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2010/06/21	<0.20		ppbv	
		Trichlorotrifluoroethane	2010/06/21	<0.15		ppbv	
		Ethanol	2010/06/21	<2.3		ppbv	
		2-propanol	2010/06/21	<3.0		ppbv	
		2-Propanone	2010/06/21	<0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2010/06/21	<3.0		ppbv	
		Methyl Isobutyl Ketone	2010/06/21	<3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2010/06/21	<2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2010/06/21	<0.20		ppbv	
		Ethyl Acetate	2010/06/21	<2.2		ppbv	
		1,1-Dichloroethylene	2010/06/21	<0.25		ppbv	
		cis-1,2-Dichloroethylene	2010/06/21	<0.19		ppbv	
		trans-1,2-Dichloroethylene	2010/06/21	<0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2010/06/21	0.49, RDL=0.30		ppbv	
		Chloroform	2010/06/21	<0.15		ppbv	
		Carbon Tetrachloride	2010/06/21	<0.30		ppbv	
		1,1-Dichloroethane	2010/06/21	<0.20		ppbv	
		1,2-Dichloroethane	2010/06/21	<0.20		ppbv	
		Ethylene Dibromide	2010/06/21	<0.17		ppbv	
		1,1,1-Trichloroethane	2010/06/21	<0.30		ppbv	
		1,1,2-Trichloroethane	2010/06/21	<0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2010/06/21	<0.20		ppbv	
		cis-1,3-Dichloropropene	2010/06/21	<0.18		ppbv	
		trans-1,3-Dichloropropene	2010/06/21	<0.17		ppbv	
		1,2-Dichloropropane	2010/06/21	<0.40		ppbv	
		Bromomethane	2010/06/21	<0.18		ppbv	
		Bromoform	2010/06/21	<0.20		ppbv	
		Bromodichloromethane	2010/06/21	<0.20		ppbv	
		Dibromochloromethane	2010/06/21	<0.20		ppbv	
		Heptane	2010/06/21	<0.30		ppbv	
		Trichloroethylene	2010/06/21	<0.30		ppbv	
		Tetrachloroethylene	2010/06/21	<0.20		ppbv	
		Benzene	2010/06/21	<0.18		ppbv	
		Toluene	2010/06/21	<0.20		ppbv	
		Ethylbenzene	2010/06/21	<0.20		ppbv	
		p+m-Xylene	2010/06/21	<0.37		ppbv	
		o-Xylene	2010/06/21	<0.20		ppbv	
		Styrene	2010/06/21	<0.20		ppbv	
		1,3,5-Trimethylbenzene	2010/06/21	<0.50		ppbv	
		1,2,4-Trimethylbenzene	2010/06/21	<0.50		ppbv	
		4-ethyltoluene	2010/06/21	<2.2		ppbv	
		Chlorobenzene	2010/06/21	<0.20		ppbv	
		Benzyl chloride	2010/06/21	<1.0		ppbv	
		1,3-Dichlorobenzene	2010/06/21	<0.40		ppbv	



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

Quality Assurance Report (Continued)

Maxxam Job Number: GB078354

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2185831 LSY	Method Blank	1,4-Dichlorobenzene	2010/06/21	<0.40		ppbv	
		1,2-Dichlorobenzene	2010/06/21	<0.40		ppbv	
		1,2,4-Trichlorobenzene	2010/06/21	<2.0		ppbv	
		Hexachlorobutadiene	2010/06/21	<3.0		ppbv	
		Hexane	2010/06/21	<0.30		ppbv	
		Cyclohexane	2010/06/21	<0.20		ppbv	
		Tetrahydrofuran	2010/06/21	<0.40		ppbv	
		1,4-Dioxane	2010/06/21	<2.0		ppbv	
		Xylene (Total)	2010/06/21	<0.60		ppbv	

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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: 13-16-62-5 W4M  
 Station ID: Lica 33 (Portable)  
 Field Sample ID: LICA PUF/PORT/June 19, 10

Puf+ s/n: 100-1015  
 Motor s/n: 1139  
 Installation Date/Time: June 17, 10 @ 12:30 mst  
 Removal Date/Time: June 21, 10 @ 14:43 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
19-Jun-10	06/19/2010 0:00	06/20/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
16-Jun-10	21-Jun-10	28-Jun-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
779	229	17.9	330.34

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

Comments: COC # 2309

GB069313 Puff #2

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/June 19, 10

Technician Signature: \_\_\_\_\_



Your C.O.C. #: 2309

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/29**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B083433**

**Received: 2010/06/25, 09:18**

Sample Matrix: AIR  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/06/28	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/07/29	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) ¶	2	N/A	2010/06/28	BRL SOP-00304	EPA TO-15

**Sample Matrix: PUF AND FILTER**

**# Samples Received: 2**

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/06/29	2010/07/23	BRL SOP-00201	CARB429(ARBM1,M2)mod

(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



Your C.O.C. #: 2309

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/29**

**CERTIFICATE OF ANALYSIS**

-2-

=====

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

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: 2

Page 2 of 17

Page 171 of 202

Maxxam Job #: B083433  
 Report Date: 2010/07/29

**RESULTS OF ANALYSES OF AIR**

Maxxam ID		GH8491	GH8492	
Sampling Date		2010/06/19	2010/06/19	
COC Number		2309	2309	
	<b>Units</b>	<b>LICA VOC/CLS/JUN 19,10 - 7813</b>	<b>LICAVOC/PORT/JUN 19,10 - 7809</b>	<b>QC Batch</b>

<b>Volatile Organics</b>				
Pressure on Receipt	psig	18	21	2192691

QC Batch = Quality Control Batch

Maxxam Job #: B083433  
 Report Date: 2010/07/29

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	<b>Units</b>	<b>LICA VOC/CLS/JUN 19,10 - 7813</b>	<b>LICAVOC/PORT/JUN 19,10 - 7809</b>	<b>RDL</b>	<b>QC Batch</b>

Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2220828
Carbon Disulfide	ug/m3	1.7	<1.6	1.6	2220828
Propene	ug/m3	<0.52	<0.52	0.52	2220828
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2220828
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2220828
Dichlorodifluoromethane (FREON 12)	ug/m3	3.91	4.10	0.99	2220828
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2220828
Chloromethane	ug/m3	1.25	1.22	0.62	2220828
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2220828
Chloroethane	ug/m3	<0.79	<0.79	0.79	2220828
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2220828
Trichlorofluoromethane (FREON 11)	ug/m3	2.2	2.1	1.1	2220828
Ethanol	ug/m3	<4.3	<4.3	4.3	2220828
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2220828
2-propanol	ug/m3	<7.4	<7.4	7.4	2220828
2-Propanone	ug/m3	13.8	12.2	1.9	2220828
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2220828
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2220828
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2220828
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2220828
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2220828
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2220828
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2220828
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2220828
Methylene Chloride(Dichloromethane)	ug/m3	2.6	2.0	1.0	2220828
Chloroform	ug/m3	<0.73	<0.73	0.73	2220828
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2220828
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2220828
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2220828
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2220828
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2220828

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

**CALCULATED VOLATILE ORGANICS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	Units	LICA VOC/CLS/JUN 19,10 - 7813	LICAVOC/PORT/JUN 19,10 - 7809	RDL	QC Batch
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2220828
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2220828
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2220828
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2220828
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2220828
Bromomethane	ug/m3	<0.70	<0.70	0.70	2220828
Bromoform	ug/m3	<2.1	<2.1	2.1	2220828
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2220828
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2220828
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2220828
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2220828
Benzene	ug/m3	<0.58	<0.58	0.58	2220828
Toluene	ug/m3	1.08	<0.75	0.75	2220828
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2220828
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2220828
o-Xylene	ug/m3	<0.87	<0.87	0.87	2220828
Styrene	ug/m3	<0.85	<0.85	0.85	2220828
4-ethyltoluene	ug/m3	<11	<11	11	2220828
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2220828
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2220828
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2220828
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2220828
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220828
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220828
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2220828
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2220828
Hexachlorobutadiene	ug/m3	<32	<32	32	2220828
Hexane	ug/m3	<1.1	<1.1	1.1	2220828
Heptane	ug/m3	<1.2	<1.2	1.2	2220828
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2220828
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2220828
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2220828
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2220828
QC Batch = Quality Control Batch					

Maxxam Job #: B083433  
 Report Date: 2010/07/29

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

Maxxam ID		GH8493	GH8494		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	Units	LICA PUF/QFF/CLS/JUN 19, 10	LICA PUF/QFF/PORT/JUN 19, 10	RDL	QC Batch
<b>Semivolatile Organics</b>					
1-Methylnaphthalene	ug	0.12	0.11	0.10	2193362
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2193362
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2193362
2-Methylantracene	ug	<0.10	<0.10	0.10	2193362
2-Methylnaphthalene	ug	0.25	0.27	0.10	2193362
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2193362
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2193362
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2193362
Acenaphthene	ug	<0.050	<0.050	0.050	2193362
Acenaphthylene	ug	<0.050	<0.050	0.050	2193362
Anthracene	ug	<0.050	<0.050	0.050	2193362
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2193362
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2193362
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2193362
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2193362
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2193362
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2193362
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2193362
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2193362
Biphenyl	ug	<0.10	<0.10	0.10	2193362
Chrysene	ug	<0.050	<0.050	0.050	2193362
Coronene	ug	<0.10	<0.10	0.10	2193362
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2193362
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2193362
Fluoranthene	ug	<0.050	<0.050	0.050	2193362
Fluorene	ug	0.100	0.082	0.050	2193362
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2193362
m-Terphenyl	ug	<0.10	<0.10	0.10	2193362
Naphthalene	ug	0.138	0.110	0.072	2193362
o-Terphenyl	ug	<0.10	<0.10	0.10	2193362
Perylene	ug	<0.10	<0.10	0.10	2193362
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



Maxxam Job #: B083433  
 Report Date: 2010/07/29

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

Maxxam ID		GH8493	GH8494		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	Units	LICA PUF/QFF/CLS/JUN 19, 10	LICA PUF/QFF/PORT/JUN 19, 10	RDL	QC Batch
Phenanthrene	ug	0.358	0.172	0.050	2193362
p-Terphenyl	ug	<0.10	<0.10	0.10	2193362
Pyrene	ug	<0.050	<0.050	0.050	2193362
Quinoline	ug	<0.40	<0.40	0.40	2193362
Tetralin	ug	<0.10	<0.10	0.10	2193362
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	58	62		2193362
D10-Fluoranthene	%	98	100		2193362
D10-Fluorene (FS)	%	48 (1)	48 (1)		2193362
D10-Phenanthrene	%	84	84		2193362
D12-Benzo(a)anthracene	%	112	116		2193362
D12-Benzo(a)pyrene	%	90	90		2193362
D12-Benzo(b)fluoranthene	%	90	90		2193362
D12-Benzo(ghi)perylene	%	88	90		2193362
D12-Benzo(k)fluoranthene	%	84	84		2193362
D12-Chrysene	%	84	84		2193362
D12-Indeno(1,2,3-cd)pyrene	%	88	90		2193362
D12-Perylene	%	86	86		2193362
D14-Dibenzo(a,h)anthracene	%	76	78		2193362
D14-Terphenyl (FS)	%	81	81		2193362
D8-Acenaphthylene	%	68	72		2193362
D8-Naphthalene	%	64	70		2193362
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 #: B083433  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	<b>Units</b>	<b>LICA VOC/CLS/JUN 19,10 - 7813</b>	<b>LICAVOC/PORT/JUN 19,10 - 7809</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Volatile Organics</b>					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2193201
Carbon Disulfide	ppbv	0.56	<0.50	0.50	2193201
Propene	ppbv	<0.30	<0.30	0.30	2193201
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2193201
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2193201
Dichlorodifluoromethane (FREON 12)	ppbv	0.79	0.83	0.20	2193201
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2193201
Chloromethane	ppbv	0.60	0.59	0.30	2193201
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2193201
Chloroethane	ppbv	<0.30	<0.30	0.30	2193201
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2193201
Trichlorofluoromethane (FREON 11)	ppbv	0.38	0.37	0.20	2193201
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2193201
Ethanol	ppbv	<2.3	<2.3	2.3	2193201
2-propanol	ppbv	<3.0	<3.0	3.0	2193201
2-Propanone	ppbv	5.80	5.12	0.80	2193201
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2193201
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2193201
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2193201
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2193201
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2193201
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2193201
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2193201
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2193201
Methylene Chloride(Dichloromethane)	ppbv	0.75	0.56	0.30	2193201
Chloroform	ppbv	<0.15	<0.15	0.15	2193201
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2193201
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2193201
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2193201
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2193201
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2193201

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B083433  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	Units	LICA VOC/CLS/JUN 19,10 - 7813	LICAVOC/PORT/JUN 19,10 - 7809	RDL	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2193201
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2193201
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2193201
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2193201
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2193201
Bromomethane	ppbv	<0.18	<0.18	0.18	2193201
Bromoform	ppbv	<0.20	<0.20	0.20	2193201
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2193201
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2193201
Heptane	ppbv	<0.30	<0.30	0.30	2193201
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2193201
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2193201
Benzene	ppbv	<0.18	<0.18	0.18	2193201
Toluene	ppbv	0.29	<0.20	0.20	2193201
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2193201
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2193201
o-Xylene	ppbv	<0.20	<0.20	0.20	2193201
Styrene	ppbv	<0.20	<0.20	0.20	2193201
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2193201
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2193201
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2193201
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2193201
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2193201
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2193201
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2193201
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2193201
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2193201
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2193201
Hexane	ppbv	<0.30	<0.30	0.30	2193201
Cyclohexane	ppbv	<0.20	<0.20	0.20	2193201
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2193201
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2193201
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2193201
QC Batch = Quality Control Batch					

Maxxam Job #: B083433  
 Report Date: 2010/07/29

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GH8491	GH8492		
Sampling Date		2010/06/19	2010/06/19		
COC Number		2309	2309		
	<b>Units</b>	<b>LICA VOC/CLS/JUN 19,10 - 7813</b>	<b>LICAVOC/PORT/JUN 19,10 - 7809</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Surrogate Recovery (%)</b>					
Bromochloromethane	%	87	83		2193201
D5-Chlorobenzene	%	85	82		2193201
Difluorobenzene	%	90	86		2193201

QC Batch = Quality Control Batch

Maxxam Job #: B083433  
 Report Date: 2010/07/29

**Test Summary**

**Maxxam ID** GH8491 **Collected** 2010/06/19  
**Sample ID** LICA VOC/CLS/JUN 19,10 - 7813 **Shipped**  
**Matrix** AIR **Received** 2010/06/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2192691	N/A	2010/06/28	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2220828	N/A	2010/07/29	
Volatile Organics in Air (TO-15)	GC/MS	2193201	N/A	2010/06/28	LSY

**Maxxam ID** GH8492 **Collected** 2010/06/19  
**Sample ID** LICAVOC/PORT/JUN 19,10 - 7809 **Shipped**  
**Matrix** AIR **Received** 2010/06/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2192691	N/A	2010/06/28	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2220828	N/A	2010/07/29	
Volatile Organics in Air (TO-15)	GC/MS	2193201	N/A	2010/06/28	LSY

**Maxxam ID** GH8493 **Collected** 2010/06/19  
**Sample ID** LICA PUF/QFF/CLS/JUN 19, 10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2193362	2010/06/29	2010/07/23	JIW

**Maxxam ID** GH8494 **Collected** 2010/06/19  
**Sample ID** LICA PUF/QFF/PORT/JUN 19, 10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/25

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2193362	2010/06/29	2010/07/23	JIW

Maxxam Job #: B083433  
Report Date: 2010/07/29

**GENERAL COMMENTS**

Continuing calibration Standard

Worksheet #2193201: 3 compounds exceed 130%RSD criteria. Compounds meet criteria in the reference standard. These 3 compounds are not found in the job. The failure of these 3 compounds is not believed to have an effect on the integrity of the results, therefore the data was accepted.

PAHMS-F(WS:2193362)

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

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene or Triphenylene. An estimated mdl for each of these compounds is 0.10ug.

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 GH8493-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample GH8494-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

**Results relate only to the items tested.**

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

Quality Assurance Report  
 Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2193201 LSY	Spiked Blank	Bromochloromethane	2010/06/28		112	%	60 - 140
		D5-Chlorobenzene	2010/06/28		115	%	60 - 140
		Difluorobenzene	2010/06/28		116	%	60 - 140
		2,2,4-Trimethylpentane	2010/06/28		94	%	70 - 130
		Carbon Disulfide	2010/06/28		95	%	70 - 130
		Propene	2010/06/28		97	%	70 - 130
		Vinyl Acetate	2010/06/28		111	%	70 - 130
		Vinyl Bromide	2010/06/28		96	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2010/06/28		89	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2010/06/28		88	%	70 - 130
		Chloromethane	2010/06/28		95	%	70 - 130
		Vinyl Chloride	2010/06/28		99	%	70 - 130
		Chloroethane	2010/06/28		102	%	70 - 130
		1,3-Butadiene	2010/06/28		84	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2010/06/28		103	%	70 - 130
		Trichlorotrifluoroethane	2010/06/28		99	%	70 - 130
		Ethanol	2010/06/28		119	%	70 - 130
		2-propanol	2010/06/28		99	%	70 - 130
		2-Propanone	2010/06/28		109	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2010/06/28		99	%	70 - 130
		Methyl Isobutyl Ketone	2010/06/28		88	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2010/06/28		85	%	70 - 130
		Methyl t-butyl ether (MTBE)	2010/06/28		103	%	70 - 130
		Ethyl Acetate	2010/06/28		97	%	70 - 130
		1,1-Dichloroethylene	2010/06/28		101	%	70 - 130
		cis-1,2-Dichloroethylene	2010/06/28		100	%	70 - 130
		trans-1,2-Dichloroethylene	2010/06/28		100	%	70 - 130
		Methylene Chloride(Dichloromethane)	2010/06/28		88	%	70 - 130
		Chloroform	2010/06/28		101	%	70 - 130
		Carbon Tetrachloride	2010/06/28		115	%	70 - 130
		1,1-Dichloroethane	2010/06/28		97	%	70 - 130
		1,2-Dichloroethane	2010/06/28		103	%	70 - 130
		Ethylene Dibromide	2010/06/28		97	%	70 - 130
		1,1,1-Trichloroethane	2010/06/28		108	%	70 - 130
		1,1,2-Trichloroethane	2010/06/28		99	%	70 - 130
		1,1,2,2-Tetrachloroethane	2010/06/28		92	%	70 - 130
		cis-1,3-Dichloropropene	2010/06/28		107	%	70 - 130
		trans-1,3-Dichloropropene	2010/06/28		115	%	70 - 130
		1,2-Dichloropropane	2010/06/28		94	%	70 - 130
		Bromomethane	2010/06/28		92	%	70 - 130
		Bromoform	2010/06/28		109	%	70 - 130
		Bromodichloromethane	2010/06/28		105	%	70 - 130
		Dibromochloromethane	2010/06/28		107	%	70 - 130
		Heptane	2010/06/28		96	%	70 - 130
		Trichloroethylene	2010/06/28		94	%	70 - 130
		Tetrachloroethylene	2010/06/28		99	%	70 - 130
		Benzene	2010/06/28		94	%	70 - 130
		Toluene	2010/06/28		97	%	70 - 130
		Ethylbenzene	2010/06/28		95	%	70 - 130
		p+m-Xylene	2010/06/28		95	%	70 - 130
		o-Xylene	2010/06/28		97	%	70 - 130
		Styrene	2010/06/28		78	%	70 - 130
		1,3,5-Trimethylbenzene	2010/06/28		87	%	70 - 130
		1,2,4-Trimethylbenzene	2010/06/28		84	%	70 - 130
		4-ethyltoluene	2010/06/28		92	%	70 - 130

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

## Quality Assurance Report (Continued)

Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2193201 LSY	Spiked Blank	Chlorobenzene	2010/06/28		93	%	70 - 130
		Benzyl chloride	2010/06/28		119	%	70 - 130
		1,3-Dichlorobenzene	2010/06/28		91	%	70 - 130
		1,4-Dichlorobenzene	2010/06/28		86	%	70 - 130
		1,2-Dichlorobenzene	2010/06/28		84	%	70 - 130
		1,2,4-Trichlorobenzene	2010/06/28		84	%	70 - 130
		Hexachlorobutadiene	2010/06/28		85	%	70 - 130
		Hexane	2010/06/28		94	%	70 - 130
		Cyclohexane	2010/06/28		95	%	70 - 130
		Tetrahydrofuran	2010/06/28		94	%	70 - 130
		1,4-Dioxane	2010/06/28		84	%	70 - 130
	Method Blank	Bromochloromethane	2010/06/28		94	%	60 - 140
		D5-Chlorobenzene	2010/06/28		92	%	60 - 140
		Difluorobenzene	2010/06/28		97	%	60 - 140
		2,2,4-Trimethylpentane	2010/06/28	<0.20		ppbv	
		Carbon Disulfide	2010/06/28	<0.50		ppbv	
		Propene	2010/06/28	<0.30		ppbv	
		Vinyl Acetate	2010/06/28	<0.20		ppbv	
		Vinyl Bromide	2010/06/28	<0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2010/06/28	<0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2010/06/28	<0.17		ppbv	
		Chloromethane	2010/06/28	<0.30		ppbv	
		Vinyl Chloride	2010/06/28	<0.18		ppbv	
		Chloroethane	2010/06/28	<0.30		ppbv	
		1,3-Butadiene	2010/06/28	<0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2010/06/28	<0.20		ppbv	
		Trichlorotrifluoroethane	2010/06/28	<0.15		ppbv	
		Ethanol	2010/06/28	<2.3		ppbv	
		2-propanol	2010/06/28	<3.0		ppbv	
		2-Propanone	2010/06/28	<0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2010/06/28	<3.0		ppbv	
		Methyl Isobutyl Ketone	2010/06/28	<3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2010/06/28	<2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2010/06/28	<0.20		ppbv	
		Ethyl Acetate	2010/06/28	<2.2		ppbv	
		1,1-Dichloroethylene	2010/06/28	<0.25		ppbv	
		cis-1,2-Dichloroethylene	2010/06/28	<0.19		ppbv	
		trans-1,2-Dichloroethylene	2010/06/28	<0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2010/06/28	0.43, RDL=0.30		ppbv	
		Chloroform	2010/06/28	<0.15		ppbv	
		Carbon Tetrachloride	2010/06/28	<0.30		ppbv	
		1,1-Dichloroethane	2010/06/28	<0.20		ppbv	
		1,2-Dichloroethane	2010/06/28	<0.20		ppbv	
		Ethylene Dibromide	2010/06/28	<0.17		ppbv	
		1,1,1-Trichloroethane	2010/06/28	<0.30		ppbv	
		1,1,2-Trichloroethane	2010/06/28	<0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2010/06/28	<0.20		ppbv	
		cis-1,3-Dichloropropene	2010/06/28	<0.18		ppbv	
		trans-1,3-Dichloropropene	2010/06/28	<0.17		ppbv	
		1,2-Dichloropropane	2010/06/28	<0.40		ppbv	
		Bromomethane	2010/06/28	<0.18		ppbv	
		Bromoform	2010/06/28	<0.20		ppbv	
		Bromodichloromethane	2010/06/28	<0.20		ppbv	
		Dibromochloromethane	2010/06/28	<0.20		ppbv	
		Heptane	2010/06/28	<0.30		ppbv	



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

Quality Assurance Report (Continued)

Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
2193201 LSY	Method Blank	Trichloroethylene	2010/06/28	<0.30		ppbv		
		Tetrachloroethylene	2010/06/28	<0.20		ppbv		
		Benzene	2010/06/28	<0.18		ppbv		
		Toluene	2010/06/28	<0.20		ppbv		
		Ethylbenzene	2010/06/28	<0.20		ppbv		
		p+m-Xylene	2010/06/28	<0.37		ppbv		
		o-Xylene	2010/06/28	<0.20		ppbv		
		Styrene	2010/06/28	<0.20		ppbv		
		1,3,5-Trimethylbenzene	2010/06/28	<0.50		ppbv		
		1,2,4-Trimethylbenzene	2010/06/28	<0.50		ppbv		
		4-ethyltoluene	2010/06/28	<2.2		ppbv		
		Chlorobenzene	2010/06/28	<0.20		ppbv		
		Benzyl chloride	2010/06/28	<1.0		ppbv		
		1,3-Dichlorobenzene	2010/06/28	<0.40		ppbv		
		1,4-Dichlorobenzene	2010/06/28	<0.40		ppbv		
		1,2-Dichlorobenzene	2010/06/28	<0.40		ppbv		
		1,2,4-Trichlorobenzene	2010/06/28	<2.0		ppbv		
		Hexachlorobutadiene	2010/06/28	<3.0		ppbv		
		Hexane	2010/06/28	<0.30		ppbv		
		Cyclohexane	2010/06/28	<0.20		ppbv		
Tetrahydrofuran	2010/06/28	<0.40		ppbv				
1,4-Dioxane	2010/06/28	<2.0		ppbv				
Xylene (Total)	2010/06/28	<0.60		ppbv				
2193362 JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/07/23		58	%	50 - 150	
		D10-Fluoranthene	2010/07/23		88	%	50 - 150	
		D10-Phenanthrene	2010/07/23		74	%	50 - 150	
		D12-Benzo(a)anthracene	2010/07/23		100	%	50 - 150	
		D12-Benzo(a)pyrene	2010/07/23		86	%	50 - 150	
		D12-Benzo(b)fluoranthene	2010/07/23		84	%	50 - 150	
		D12-Benzo(ghi)perylene	2010/07/23		86	%	50 - 150	
		D12-Benzo(k)fluoranthene	2010/07/23		82	%	50 - 150	
		D12-Chrysene	2010/07/23		84	%	50 - 150	
		D12-Indeno(1,2,3-cd)pyrene	2010/07/23		84	%	50 - 150	
		D12-Perylene	2010/07/23		84	%	50 - 150	
		D14-Dibenzo(a,h)anthracene	2010/07/23		74	%	50 - 150	
		D8-Acenaphthylene	2010/07/23		62	%	50 - 150	
		D8-Naphthalene	2010/07/23		66	%	50 - 150	
		Acenaphthene	2010/07/23		70	%	60 - 130	
		RPD	Acenaphthene	2010/07/23	17.2		%	50
		Spiked Blank	Acenaphthylene	2010/07/23		69	%	60 - 130
		RPD	Acenaphthylene	2010/07/23	20.1		%	50
		Spiked Blank	Anthracene	2010/07/23		74	%	60 - 130
		RPD	Anthracene	2010/07/23	6.6		%	50
		Spiked Blank	Benzo(a)anthracene	2010/07/23		80	%	60 - 130
		RPD	Benzo(a)anthracene	2010/07/23	2.2		%	50
		Spiked Blank	Benzo(a)pyrene	2010/07/23		72	%	60 - 130
		RPD	Benzo(a)pyrene	2010/07/23	5.8		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/07/23		72	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/07/23	7.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/07/23		77	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/07/23	5.7		%	50
Spiked Blank	Benzo(k)fluoranthene	2010/07/23		84	%	60 - 130		
RPD	Benzo(k)fluoranthene	2010/07/23	2.7		%	50		
Spiked Blank	Chrysene	2010/07/23		84	%	60 - 130		
RPD	Chrysene	2010/07/23	3.2		%	50		

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

Quality Assurance Report (Continued)  
 Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2193362 JIW	Spiked Blank	Dibenz(a,h)anthracene	2010/07/23		71	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2010/07/23	6.5		%	50
	Spiked Blank	Fluoranthene	2010/07/23		88	%	60 - 130
	RPD	Fluoranthene	2010/07/23	2.8		%	50
	Spiked Blank	Fluorene	2010/07/23		71	%	60 - 130
	RPD	Fluorene	2010/07/23	13.4		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/07/23		72	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2010/07/23	5.8		%	50
	Spiked Blank	Naphthalene	2010/07/23		65	%	60 - 130
	RPD	Naphthalene	2010/07/23	21.8		%	50
	Spiked Blank	Phenanthrene	2010/07/23		71	%	60 - 130
	RPD	Phenanthrene	2010/07/23	9.0		%	50
	Spiked Blank	Pyrene	2010/07/23		83	%	60 - 130
	RPD	Pyrene	2010/07/23	3.3		%	50
	Method Blank	D10-2-Methylnaphthalene	2010/07/23		68	%	50 - 150
		D10-Fluoranthene	2010/07/23		86	%	50 - 150
		D10-Phenanthrene	2010/07/23		72	%	50 - 150
		D12-Benzo(a)anthracene	2010/07/23		98	%	50 - 150
		D12-Benzo(a)pyrene	2010/07/23		84	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/07/23		84	%	50 - 150
		D12-Benzo(ghi)perylene	2010/07/23		84	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/07/23		82	%	50 - 150
		D12-Chrysene	2010/07/23		88	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/07/23		82	%	50 - 150
		D12-Perylene	2010/07/23		86	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/23		70	%	50 - 150
		D8-Acenaphthylene	2010/07/23		72	%	50 - 150
		D8-Naphthalene	2010/07/23		80	%	50 - 150
		1-Methylnaphthalene	2010/07/23	<0.10		ug	
		1-Methylphenanthrene	2010/07/23	<0.10		ug	
		2-Chloronaphthalene	2010/07/23	<0.10		ug	
		2-Methylantracene	2010/07/23	<0.10		ug	
		2-Methylnaphthalene	2010/07/23	<0.10		ug	
		3-Methylcholanthrene	2010/07/23	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/07/23	<0.10		ug	
		9,10-Dimethylantracene	2010/07/23	<0.40		ug	
		Acenaphthene	2010/07/23	<0.050		ug	
		Acenaphthylene	2010/07/23	<0.050		ug	
		Anthracene	2010/07/23	<0.050		ug	
		Benzo(a)anthracene	2010/07/23	<0.050		ug	
		Benzo(a)fluorene	2010/07/23	<0.10		ug	
		Benzo(a)pyrene	2010/07/23	<0.050		ug	
		Benzo(b)fluoranthene	2010/07/23	<0.050		ug	
		Benzo(b)fluorene	2010/07/23	<0.10		ug	
		Benzo(e)pyrene	2010/07/23	<0.10		ug	
		Benzo(g,h,i)perylene	2010/07/23	<0.050		ug	
		Benzo(k)fluoranthene	2010/07/23	<0.050		ug	
		Biphenyl	2010/07/23	<0.10		ug	
		Chrysene	2010/07/23	<0.050		ug	
		Coronene	2010/07/23	<0.10		ug	
		Dibenz(a,h)anthracene	2010/07/23	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/07/23	<0.20		ug	
		Fluoranthene	2010/07/23	<0.050		ug	
		Fluorene	2010/07/23	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/07/23	<0.050		ug	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB083433

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2193362 JIW	Method Blank	m-Terphenyl	2010/07/23	<0.10		ug	
		Naphthalene	2010/07/23	<0.072		ug	
		o-Terphenyl	2010/07/23	<0.10		ug	
		Perylene	2010/07/23	<0.10		ug	
		Phenanthrene	2010/07/23	<0.050		ug	
		p-Terphenyl	2010/07/23	<0.10		ug	
		Pyrene	2010/07/23	<0.050		ug	
		Quinoline	2010/07/23	<0.40		ug	
		Tetralin	2010/07/23	<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.

# Maxxam Analytics Inc.

## Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica  
 Location: 13-16-62-5 W4M  
 Station ID: Lica 33 (Portable)  
 Field Sample ID: LICA PUF/PORT/June 25, 10

Puf+ s/n: 100-1015  
 Motor s/n: 1139  
 Installation Date/Time: June 24, 10 @ 15:50 mst  
 Removal Date/Time: June 28, 10 @ 8:42 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
25-Jun-10	06/25/2010 0:00	06/26/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
24-Jun-10	28-Jun-10	05-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature ( C)	Volume (Vstd m <sup>3</sup> )
704	229	17.5	330.33

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

Comments: COC # 0563

GB079091 Puff #2

Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/June 25, 10

Technician Signature: \_\_\_\_\_



Your C.O.C. #: 0563

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/28**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B085824**

**Received: 2010/06/30, 09:09**

Sample Matrix: AIR  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/05	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) ¶	2	N/A	2010/07/05	BRL SOP-00304	EPA TO-15

Sample Matrix: PUF AND FILTER  
# Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/07/09	2010/07/24	BRL SOP-00201	CARB429(ARBM1,M2)mod

(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

=====



Your C.O.C. #: 0563

**Attention: Michael Bisaga**

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

**Report Date: 2010/07/28**

**CERTIFICATE OF ANALYSIS**

-2-

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

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: 2

Page 2 of 15

Page 189 of 202

Maxxam Job #: B085824  
Report Date: 2010/07/28

**RESULTS OF ANALYSES OF AIR**

Maxxam ID		GJ6735	GJ6736	
Sampling Date		2010/06/25	2010/06/25	
COC Number		0563	0563	
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 25,10</b>	<b>LICA VOC/PORT/JUNE 25,10</b>	<b>QC Batch</b>

<b>Volatile Organics</b>				
Pressure on Receipt	psig	20	21	2197951

QC Batch = Quality Control Batch

Maxxam Job #: B085824  
 Report Date: 2010/07/28

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

Maxxam ID		GJ0752	GJ0753		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	<b>Units</b>	<b>LICAPUF/QFF/CLS/JUNE25,10</b>	<b>LICAPUF/QFF/PORT/JUNE25,10</b>	<b>RDL</b>	<b>QC Batch</b>

Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2202480
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2202480
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2202480
2-Methylantracene	ug	<0.10	<0.10	0.10	2202480
2-Methylnaphthalene	ug	0.17	0.12	0.10	2202480
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2202480
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2202480
9,10-Dimethylantracene	ug	<0.40	<0.40	0.40	2202480
Acenaphthene	ug	0.050	<0.050	0.050	2202480
Acenaphthylene	ug	<0.050	0.092	0.050	2202480
Anthracene	ug	<0.050	<0.050	0.050	2202480
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2202480
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2202480
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2202480
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2202480
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2202480
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2202480
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2202480
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2202480
Biphenyl	ug	<0.10	<0.10	0.10	2202480
Chrysene	ug	<0.050	<0.050	0.050	2202480
Coronene	ug	<0.10	<0.10	0.10	2202480
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2202480
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2202480
Fluoranthene	ug	0.066	0.162	0.050	2202480
Fluorene	ug	0.132	0.100	0.050	2202480
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2202480
m-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Naphthalene	ug	0.144	0.090	0.072	2202480
o-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Perylene	ug	<0.10	<0.10	0.10	2202480
Phenanthrene	ug	0.566	0.562	0.050	2202480

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch



Maxxam Job #: B085824  
 Report Date: 2010/07/28

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

Maxxam ID		GJ0752	GJ0753		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	<b>Units</b>	<b>LICAPUF/QFF/CLS/JUNE25,10</b>	<b>LICAPUF/QFF/PORT/JUNE25,10</b>	<b>RDL</b>	<b>QC Batch</b>

p-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Pyrene	ug	<0.050	0.136	0.050	2202480
Quinoline	ug	<0.40	<0.40	0.40	2202480
Tetralin	ug	<0.10	<0.10	0.10	2202480
<b>Surrogate Recovery (%)</b>					
D10-2-Methylnaphthalene	%	62	60		2202480
D10-Fluoranthene	%	106	100		2202480
D10-Fluorene (FS)	%	51	46 (1)		2202480
D10-Phenanthrene	%	92	86		2202480
D12-Benzo(a)anthracene	%	124	114		2202480
D12-Benzo(a)pyrene	%	100	92		2202480
D12-Benzo(b)fluoranthene	%	98	90		2202480
D12-Benzo(ghi)perylene	%	98	92		2202480
D12-Benzo(k)fluoranthene	%	90	80		2202480
D12-Chrysene	%	90	80		2202480
D12-Indeno(1,2,3-cd)pyrene	%	96	90		2202480
D12-Perylene	%	94	88		2202480
D14-Dibenzo(a,h)anthracene	%	84	82		2202480
D14-Terphenyl (FS)	%	87	78		2202480
D8-Acenaphthylene	%	82	76		2202480
D8-Naphthalene	%	68	64		2202480

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 #: B085824  
 Report Date: 2010/07/28

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GJ6735	GJ6736		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 25,10</b>	<b>LICA VOC/PORT/JUNE 25,10</b>	<b>RDL</b>	<b>QC Batch</b>

Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2197955
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2197955
Propene	ppbv	<0.30	<0.30	0.30	2197955
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2197955
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2197955
Dichlorodifluoromethane (FREON 12)	ppbv	0.71	0.83	0.20	2197955
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2197955
Chloromethane	ppbv	0.64	0.65	0.30	2197955
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2197955
Chloroethane	ppbv	<0.30	<0.30	0.30	2197955
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2197955
Trichlorofluoromethane (FREON 11)	ppbv	0.33	0.37	0.20	2197955
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2197955
Ethanol	ppbv	2.9	<2.3	2.3	2197955
2-propanol	ppbv	<3.0	<3.0	3.0	2197955
2-Propanone	ppbv	4.47	4.63	0.80	2197955
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2197955
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2197955
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2197955
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2197955
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2197955
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2197955
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2197955
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2197955
Methylene Chloride(Dichloromethane)	ppbv	0.59	0.48	0.30	2197955
Chloroform	ppbv	<0.15	<0.15	0.15	2197955
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2197955
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2197955
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2197955
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2197955
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2197955

 RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch

Maxxam Job #: B085824  
 Report Date: 2010/07/28

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GJ6735	GJ6736		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	Units	LICA VOC/CLS/JUNE 25,10	LICA VOC/PORT/JUNE 25,10	RDL	QC Batch
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2197955
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2197955
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2197955
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2197955
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2197955
Bromomethane	ppbv	<0.18	<0.18	0.18	2197955
Bromoform	ppbv	<0.20	<0.20	0.20	2197955
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2197955
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2197955
Heptane	ppbv	<0.30	<0.30	0.30	2197955
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2197955
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2197955
Benzene	ppbv	<0.18	<0.18	0.18	2197955
Toluene	ppbv	0.26	<0.20	0.20	2197955
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2197955
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2197955
o-Xylene	ppbv	<0.20	<0.20	0.20	2197955
Styrene	ppbv	<0.20	<0.20	0.20	2197955
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2197955
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2197955
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2197955
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2197955
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2197955
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2197955
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2197955
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2197955
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2197955
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2197955
Hexane	ppbv	<0.30	<0.30	0.30	2197955
Cyclohexane	ppbv	<0.20	0.21	0.20	2197955
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2197955
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2197955
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2197955
QC Batch = Quality Control Batch					

Maxxam Job #: B085824  
 Report Date: 2010/07/28

**VOLATILE ORGANICS BY GC/MS (AIR)**

Maxxam ID		GJ6735	GJ6736		
Sampling Date		2010/06/25	2010/06/25		
COC Number		0563	0563		
	<b>Units</b>	<b>LICA VOC/CLS/JUNE 25,10</b>	<b>LICA VOC/PORT/JUNE 25,10</b>	<b>RDL</b>	<b>QC Batch</b>

<b>Surrogate Recovery (%)</b>					
Bromochloromethane	%	99	79		2197955
D5-Chlorobenzene	%	99	77		2197955
Difluorobenzene	%	103	81		2197955

QC Batch = Quality Control Batch

Maxxam Job #: B085824  
 Report Date: 2010/07/28

### Test Summary

**Maxxam ID** GJ0752 **Collected** 2010/06/25  
**Sample ID** LICAPUF/QFF/CLS/JUNE25,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2202480	2010/07/09	2010/07/24	JIW

**Maxxam ID** GJ0753 **Collected** 2010/06/25  
**Sample ID** LICAPUF/QFF/PORT/JUNE25,10 **Shipped**  
**Matrix** PUF AND FILTER **Received** 2010/06/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2202480	2010/07/09	2010/07/24	JIW

**Maxxam ID** GJ6735 **Collected** 2010/06/25  
**Sample ID** LICA VOC/CLS/JUNE 25,10 **Shipped**  
**Matrix** AIR **Received** 2010/06/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2197951	N/A	2010/07/05	LSY
Volatile Organics in Air (TO-15)	GC/MS	2197955	N/A	2010/07/05	LSY

**Maxxam ID** GJ6736 **Collected** 2010/06/25  
**Sample ID** LICA VOC/PORT/JUNE 25,10 **Shipped**  
**Matrix** AIR **Received** 2010/06/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2197951	N/A	2010/07/05	LSY
Volatile Organics in Air (TO-15)	GC/MS	2197955	N/A	2010/07/05	LSY

Maxxam Job #: B085824  
Report Date: 2010/07/28

**GENERAL COMMENTS**

PAHMS-F

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

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene or Triphenylene. An estimated mdl for each of these compounds is 0.10ug.

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 GJ0753-01: PAHMS-F

Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

**Results relate only to the items tested.**

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

Quality Assurance Report  
 Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2197955 LSY	Spiked Blank	Bromochloromethane	2010/07/05		100	%	60 - 140
		D5-Chlorobenzene	2010/07/05		103	%	60 - 140
		Difluorobenzene	2010/07/05		104	%	60 - 140
		2,2,4-Trimethylpentane	2010/07/05		91	%	70 - 130
		Carbon Disulfide	2010/07/05		94	%	70 - 130
		Propene	2010/07/05		94	%	70 - 130
		Vinyl Acetate	2010/07/05		106	%	70 - 130
		Vinyl Bromide	2010/07/05		95	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2010/07/05		99	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2010/07/05		85	%	70 - 130
		Chloromethane	2010/07/05		92	%	70 - 130
		Vinyl Chloride	2010/07/05		97	%	70 - 130
		Chloroethane	2010/07/05		97	%	70 - 130
		1,3-Butadiene	2010/07/05		80	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2010/07/05		98	%	70 - 130
		Trichlorotrifluoroethane	2010/07/05		97	%	70 - 130
		Ethanol	2010/07/05		112	%	70 - 130
		2-propanol	2010/07/05		94	%	70 - 130
		2-Propanone	2010/07/05		109	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2010/07/05		97	%	70 - 130
		Methyl Isobutyl Ketone	2010/07/05		82	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2010/07/05		77	%	70 - 130
		Methyl t-butyl ether (MTBE)	2010/07/05		101	%	70 - 130
		Ethyl Acetate	2010/07/05		93	%	70 - 130
		1,1-Dichloroethylene	2010/07/05		96	%	70 - 130
		cis-1,2-Dichloroethylene	2010/07/05		96	%	70 - 130
		trans-1,2-Dichloroethylene	2010/07/05		97	%	70 - 130
		Methylene Chloride(Dichloromethane)	2010/07/05		85	%	70 - 130
		Chloroform	2010/07/05		97	%	70 - 130
		Carbon Tetrachloride	2010/07/05		110	%	70 - 130
		1,1-Dichloroethane	2010/07/05		96	%	70 - 130
		1,2-Dichloroethane	2010/07/05		97	%	70 - 130
		Ethylene Dibromide	2010/07/05		96	%	70 - 130
		1,1,1-Trichloroethane	2010/07/05		103	%	70 - 130
		1,1,2-Trichloroethane	2010/07/05		98	%	70 - 130
		1,1,2,2-Tetrachloroethane	2010/07/05		90	%	70 - 130
		cis-1,3-Dichloropropene	2010/07/05		106	%	70 - 130
		trans-1,3-Dichloropropene	2010/07/05		111	%	70 - 130
		1,2-Dichloropropane	2010/07/05		92	%	70 - 130
		Bromomethane	2010/07/05		90	%	70 - 130
		Bromoform	2010/07/05		108	%	70 - 130
		Bromodichloromethane	2010/07/05		101	%	70 - 130
		Dibromochloromethane	2010/07/05		104	%	70 - 130
		Heptane	2010/07/05		91	%	70 - 130
		Trichloroethylene	2010/07/05		95	%	70 - 130
		Tetrachloroethylene	2010/07/05		99	%	70 - 130
		Benzene	2010/07/05		93	%	70 - 130
		Toluene	2010/07/05		97	%	70 - 130
		Ethylbenzene	2010/07/05		93	%	70 - 130
		p+m-Xylene	2010/07/05		93	%	70 - 130
		o-Xylene	2010/07/05		94	%	70 - 130
		Styrene	2010/07/05		70	%	70 - 130
		1,3,5-Trimethylbenzene	2010/07/05		82	%	70 - 130
		1,2,4-Trimethylbenzene	2010/07/05		81	%	70 - 130
		4-ethyltoluene	2010/07/05		90	%	70 - 130

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

## Quality Assurance Report (Continued)

Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2197955 LSY	Spiked Blank	Chlorobenzene	2010/07/05		92	%	70 - 130
		Benzyl chloride	2010/07/05		118	%	70 - 130
		1,3-Dichlorobenzene	2010/07/05		90	%	70 - 130
		1,4-Dichlorobenzene	2010/07/05		88	%	70 - 130
		1,2-Dichlorobenzene	2010/07/05		83	%	70 - 130
		1,2,4-Trichlorobenzene	2010/07/05		81	%	70 - 130
		Hexachlorobutadiene	2010/07/05		82	%	70 - 130
		Hexane	2010/07/05		93	%	70 - 130
		Cyclohexane	2010/07/05		93	%	70 - 130
		Tetrahydrofuran	2010/07/05		89	%	70 - 130
		1,4-Dioxane	2010/07/05		82	%	70 - 130
	Method Blank	Bromochloromethane	2010/07/05		83	%	60 - 140
		D5-Chlorobenzene	2010/07/05		83	%	60 - 140
		Difluorobenzene	2010/07/05		86	%	60 - 140
		2,2,4-Trimethylpentane	2010/07/05	<0.20		ppbv	
		Carbon Disulfide	2010/07/05	<0.50		ppbv	
		Propene	2010/07/05	<0.30		ppbv	
		Vinyl Acetate	2010/07/05	<0.20		ppbv	
		Vinyl Bromide	2010/07/05	<0.20		ppbv	
		Dichlorodifluoromethane (FREON 12)	2010/07/05	<0.20		ppbv	
		1,2-Dichlorotetrafluoroethane	2010/07/05	<0.17		ppbv	
		Chloromethane	2010/07/05	<0.30		ppbv	
		Vinyl Chloride	2010/07/05	<0.18		ppbv	
		Chloroethane	2010/07/05	<0.30		ppbv	
		1,3-Butadiene	2010/07/05	<0.50		ppbv	
		Trichlorofluoromethane (FREON 11)	2010/07/05	<0.20		ppbv	
		Trichlorotrifluoroethane	2010/07/05	<0.15		ppbv	
		Ethanol	2010/07/05	<2.3		ppbv	
		2-propanol	2010/07/05	<3.0		ppbv	
		2-Propanone	2010/07/05	<0.80		ppbv	
		Methyl Ethyl Ketone (2-Butanone)	2010/07/05	<3.0		ppbv	
		Methyl Isobutyl Ketone	2010/07/05	<3.2		ppbv	
		Methyl Butyl Ketone (2-Hexanone)	2010/07/05	<2.0		ppbv	
		Methyl t-butyl ether (MTBE)	2010/07/05	<0.20		ppbv	
		Ethyl Acetate	2010/07/05	<2.2		ppbv	
		1,1-Dichloroethylene	2010/07/05	<0.25		ppbv	
		cis-1,2-Dichloroethylene	2010/07/05	<0.19		ppbv	
		trans-1,2-Dichloroethylene	2010/07/05	<0.20		ppbv	
		Methylene Chloride(Dichloromethane)	2010/07/05	0.43, RDL=0.30		ppbv	
		Chloroform	2010/07/05	<0.15		ppbv	
		Carbon Tetrachloride	2010/07/05	<0.30		ppbv	
		1,1-Dichloroethane	2010/07/05	<0.20		ppbv	
		1,2-Dichloroethane	2010/07/05	<0.20		ppbv	
		Ethylene Dibromide	2010/07/05	<0.17		ppbv	
		1,1,1-Trichloroethane	2010/07/05	<0.30		ppbv	
		1,1,2-Trichloroethane	2010/07/05	<0.15		ppbv	
		1,1,2,2-Tetrachloroethane	2010/07/05	<0.20		ppbv	
		cis-1,3-Dichloropropene	2010/07/05	<0.18		ppbv	
		trans-1,3-Dichloropropene	2010/07/05	<0.17		ppbv	
		1,2-Dichloropropane	2010/07/05	<0.40		ppbv	
		Bromomethane	2010/07/05	<0.18		ppbv	
		Bromoform	2010/07/05	<0.20		ppbv	
		Bromodichloromethane	2010/07/05	<0.20		ppbv	
		Dibromochloromethane	2010/07/05	<0.20		ppbv	
		Heptane	2010/07/05	<0.30		ppbv	



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

Quality Assurance Report (Continued)

Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
2197955 LSY	Method Blank	Trichloroethylene	2010/07/05	<0.30		ppbv		
		Tetrachloroethylene	2010/07/05	<0.20		ppbv		
		Benzene	2010/07/05	<0.18		ppbv		
		Toluene	2010/07/05	<0.20		ppbv		
		Ethylbenzene	2010/07/05	<0.20		ppbv		
		p+m-Xylene	2010/07/05	<0.37		ppbv		
		o-Xylene	2010/07/05	<0.20		ppbv		
		Styrene	2010/07/05	<0.20		ppbv		
		1,3,5-Trimethylbenzene	2010/07/05	<0.50		ppbv		
		1,2,4-Trimethylbenzene	2010/07/05	<0.50		ppbv		
		4-ethyltoluene	2010/07/05	<2.2		ppbv		
		Chlorobenzene	2010/07/05	<0.20		ppbv		
		Benzyl chloride	2010/07/05	<1.0		ppbv		
		1,3-Dichlorobenzene	2010/07/05	<0.40		ppbv		
		1,4-Dichlorobenzene	2010/07/05	<0.40		ppbv		
		1,2-Dichlorobenzene	2010/07/05	<0.40		ppbv		
		1,2,4-Trichlorobenzene	2010/07/05	<2.0		ppbv		
		Hexachlorobutadiene	2010/07/05	<3.0		ppbv		
		Hexane	2010/07/05	<0.30		ppbv		
		Cyclohexane	2010/07/05	<0.20		ppbv		
		Tetrahydrofuran	2010/07/05	<0.40		ppbv		
1,4-Dioxane	2010/07/05	<2.0		ppbv				
Xylene (Total)	2010/07/05	<0.60		ppbv				
2202480 JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/07/24		72	%	50 - 150	
		D10-Fluoranthene	2010/07/24		96	%	50 - 150	
		D10-Phenanthrene	2010/07/24		88	%	50 - 150	
		D12-Benzo(a)anthracene	2010/07/24		108	%	50 - 150	
		D12-Benzo(a)pyrene	2010/07/24		92	%	50 - 150	
		D12-Benzo(b)fluoranthene	2010/07/24		94	%	50 - 150	
		D12-Benzo(ghi)perylene	2010/07/24		94	%	50 - 150	
		D12-Benzo(k)fluoranthene	2010/07/24		86	%	50 - 150	
		D12-Chrysene	2010/07/24		86	%	50 - 150	
		D12-Indeno(1,2,3-cd)pyrene	2010/07/24		94	%	50 - 150	
		D12-Perylene	2010/07/24		92	%	50 - 150	
		D14-Dibenzo(a,h)anthracene	2010/07/24		84	%	50 - 150	
		D8-Acenaphthylene	2010/07/24		82	%	50 - 150	
		D8-Naphthalene	2010/07/24		82	%	50 - 150	
		Acenaphthene	2010/07/24		89	%	60 - 130	
		RPD	Acenaphthene	2010/07/24	2.9		%	50
		Spiked Blank	Acenaphthylene	2010/07/24		93	%	60 - 130
		RPD	Acenaphthylene	2010/07/24	1.4		%	50
		Spiked Blank	Anthracene	2010/07/24		88	%	60 - 130
		RPD	Anthracene	2010/07/24	1.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/07/24		90	%	60 - 130
		RPD	Benzo(a)anthracene	2010/07/24	2.3		%	50
		Spiked Blank	Benzo(a)pyrene	2010/07/24		82	%	60 - 130
		RPD	Benzo(a)pyrene	2010/07/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/07/24		83	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/07/24	1.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/07/24		89	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/07/24	2.3		%	50
Spiked Blank	Benzo(k)fluoranthene	2010/07/24		89	%	60 - 130		
RPD	Benzo(k)fluoranthene	2010/07/24	1.4		%	50		
Spiked Blank	Chrysene	2010/07/24		90	%	60 - 130		
RPD	Chrysene	2010/07/24	0.8		%	50		

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

Quality Assurance Report (Continued)  
 Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2202480 JIW	Spiked Blank	Dibenz(a,h)anthracene	2010/07/24		83	%	60 - 130
	RPD	Dibenz(a,h)anthracene	2010/07/24	1.8		%	50
	Spiked Blank	Fluoranthene	2010/07/24		99	%	60 - 130
	RPD	Fluoranthene	2010/07/24	0.3		%	50
	Spiked Blank	Fluorene	2010/07/24		90	%	60 - 130
	RPD	Fluorene	2010/07/24	2.5		%	50
	Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/07/24		83	%	60 - 130
	RPD	Indeno(1,2,3-cd)pyrene	2010/07/24	2.4		%	50
	Spiked Blank	Naphthalene	2010/07/24		84	%	60 - 130
	RPD	Naphthalene	2010/07/24	3.3		%	50
	Spiked Blank	Phenanthrene	2010/07/24		87	%	60 - 130
	RPD	Phenanthrene	2010/07/24	2.0		%	50
	Spiked Blank	Pyrene	2010/07/24		92	%	60 - 130
	RPD	Pyrene	2010/07/24	1.9		%	50
	Method Blank	D10-2-Methylnaphthalene	2010/07/24		76	%	50 - 150
		D10-Fluoranthene	2010/07/24		104	%	50 - 150
		D10-Phenanthrene	2010/07/24		88	%	50 - 150
		D12-Benzo(a)anthracene	2010/07/24		124	%	50 - 150
		D12-Benzo(a)pyrene	2010/07/24		100	%	50 - 150
		D12-Benzo(b)fluoranthene	2010/07/24		100	%	50 - 150
		D12-Benzo(ghi)perylene	2010/07/24		102	%	50 - 150
		D12-Benzo(k)fluoranthene	2010/07/24		92	%	50 - 150
		D12-Chrysene	2010/07/24		92	%	50 - 150
		D12-Indeno(1,2,3-cd)pyrene	2010/07/24		100	%	50 - 150
		D12-Perylene	2010/07/24		100	%	50 - 150
		D14-Dibenzo(a,h)anthracene	2010/07/24		90	%	50 - 150
		D8-Acenaphthylene	2010/07/24		92	%	50 - 150
		D8-Naphthalene	2010/07/24		84	%	50 - 150
		1-Methylnaphthalene	2010/07/24	<0.10		ug	
		1-Methylphenanthrene	2010/07/24	<0.10		ug	
		2-Chloronaphthalene	2010/07/24	<0.10		ug	
		2-Methylantracene	2010/07/24	<0.10		ug	
		2-Methylnaphthalene	2010/07/24	<0.10		ug	
		3-Methylcholanthrene	2010/07/24	<2.0		ug	
		7,12-Dimethylbenzo(a)anthracene	2010/07/24	<0.10		ug	
		9,10-Dimethylantracene	2010/07/24	<0.40		ug	
		Acenaphthene	2010/07/24	<0.050		ug	
		Acenaphthylene	2010/07/24	<0.050		ug	
		Anthracene	2010/07/24	<0.050		ug	
		Benzo(a)anthracene	2010/07/24	<0.050		ug	
		Benzo(a)fluorene	2010/07/24	<0.10		ug	
		Benzo(a)pyrene	2010/07/24	<0.050		ug	
		Benzo(b)fluoranthene	2010/07/24	<0.050		ug	
		Benzo(b)fluorene	2010/07/24	<0.10		ug	
		Benzo(e)pyrene	2010/07/24	<0.10		ug	
		Benzo(g,h,i)perylene	2010/07/24	<0.050		ug	
		Benzo(k)fluoranthene	2010/07/24	<0.050		ug	
		Biphenyl	2010/07/24	<0.10		ug	
		Chrysene	2010/07/24	<0.050		ug	
		Coronene	2010/07/24	<0.10		ug	
		Dibenz(a,h)anthracene	2010/07/24	<0.050		ug	
		Dibenzo(a,e)pyrene	2010/07/24	<0.20		ug	
		Fluoranthene	2010/07/24	<0.050		ug	
		Fluorene	2010/07/24	<0.050		ug	
		Indeno(1,2,3-cd)pyrene	2010/07/24	<0.050		ug	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB085824

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2202480 JIW	Method Blank	m-Terphenyl	2010/07/24	<0.10		ug	
		Naphthalene	2010/07/24	<0.072		ug	
		o-Terphenyl	2010/07/24	<0.10		ug	
		Perylene	2010/07/24	<0.10		ug	
		Phenanthrene	2010/07/24	<0.050		ug	
		p-Terphenyl	2010/07/24	<0.10		ug	
		Pyrene	2010/07/24	<0.050		ug	
		Quinoline	2010/07/24	<0.40		ug	
		Tetralin	2010/07/24	<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.