Lakeland Industry & Community Association

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

Prepared By:

Maxxam Analytics

Driven by Service and Science

October 27, 2010

Lakeland Industry & Community Association
Cold Lake Monitoring Site
Ambient Air Monitoring

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Introduction

The following Ambient Air Monitoring report was prepared for:

Mr. Mike Bisaga
Lakeland Industry & Community Association
Box 8237
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Bonnyville, Alberta
T9N 2J5

Monitoring Location: Cold Lake
Data Period: September 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 – September 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION COLD LAKE SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO_2 (PPB)	172	57	0	0	0.02	1	VAR	VAR	VAR	VAR	0.3	5	100.0
TRS (PPB)	-	-	-	-	0.00	0	ALL	ALL	VAR	VAR	0.0	ALL	100.0
NO_2 (PPB)	212	106	0	0	1.81	15	30	19	0.4	130(SE)	5.5	30	100.0
NO (PPB)	-	-	-	-	0.39	20	27	7	0.8	114(ESE)	2.0	27	100.0
NOx (PPB)	-	-	-	-	2.42	29	30	7	3.9	235(SW)	7.6	30	100.0
O_3 (PPB)	82	-	0	-	19.59	41	27	15	11.1	143(SE)	31.3	28	100.0
THC (PPM)	-	-	-	-	2.05	3.5	2	5	0.3	226(SW)	2.4	2	100.0
PM 2.5 (UG/M^3)	-	30	-	2	3.60	15.9	1	6	1.2	290(WNW)	5.6	3	62.9
TEMPERATURE (DEG C)	-	-	-	-	8.74	23.0	25	16	4.8	182(S)	13.6	25	53.3
RELATIVE HUMIDITY (%)	-	-	-	-	70.50	99	24	8, 9	3.3, 3	189(S), 201(SSW)	86.8	21	53.3
VECTOR WS (KPH)	-	-	-	-	5.55	17.2	28	14	-	247WSW)	9.6	16	100.0
VECTOR WD (DEGREES)	-	-	-	-	268(W)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

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

Passive Ambient Monitoring Network – September 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
SO_2	#14	0.9	0.3
H_2S	#27	0.36	0.11
NO_2	#28	2.9	1.0
O_3	#32	20.5	16.9

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

Xontech Model 910A – July 01, 2010

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

Xontech Model 910A – July 07, 2010

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

Xontech Model 910A – July 13, 2010

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

Xontech Model 910A – July 19, 2010

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

Xontech Model 910A – July 25, 2010

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

Xontech Model 910A – July 31, 2010

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

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

Xontech Model 910A – August 06, 2010

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

Xontech Model 910A –August 12, 2010

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

Xontech Model 910A – August 18, 2010

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

Xontech Model 910A – August 24, 2010

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

Xontech Model 910A – August 30, 2010

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

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

Xontech Model 910A – September 5, 2010

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

Xontech Model 910A – September 11, 2010

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

Xontech Model 910A – September 17, 2010

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

Xontech Model 910A – September 23, 2010

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

Xontech Model 910A – September 29, 2010

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

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

PUF cartridge – July 01, 2010

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

PUF cartridge – July 07, 2010

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

PUF cartridge – July 13, 2010

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

PUF cartridge – July 19, 2010

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

PUF cartridge – July 25, 2010

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

PUF cartridge – July 31, 2010

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

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

PUF cartridge – August 6, 2010

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

PUF cartridge – August 12, 2010

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

PUF cartridge – August 18, 2010

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

PUF cartridge – August 24, 2010

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

PUF cartridge – August 30, 2010

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

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

PUF cartridge – September 5, 2010

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

PUF cartridge – September 11, 2010

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

PUF cartridge – September 17, 2010

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

PUF cartridge – September 23, 2010

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

PUF cartridge – September 29, 2010

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

General Monthly Summary - Cold Lake

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

AQM STATION – LICA – COLD LAKE

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

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

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

No operational issues observed during the month. It was noticed that the span drift had been above 10% of limited range since August 28th. It was possibly due to the permeation tube fluctuation. The as found points was performed on September 3rd; the analyzer responded 3.5% low. Adjusted the analyzer and performed a multi-point calibration. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

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

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

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Total Hydrocarbon (PPM)

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

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

Nitrogen Dioxide (PPB)

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

No operational issues observed during the month. It was noticed that the analyzer spanned high starting from September 3rd. It was likely because one of the knobs on the zero/span devise that controls air flow was bumped. The analyzer did not have any issue. The inlet filter was changed before the calibration was started. A single point calibration check was performed using a new calibration gas on September 11th. Data was corrected using daily zero information.

Particulate Matter 2.5 (ug/m^3)

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

A Teom audit attempted to be performed on September 17th. However, it was found that the ambient temp/RH sensor for the Teom had malfunctioned and was reading around minus 41 degree Celsius (actual temperature was –1.8 degree Celsius). Checked flows – both main flow and bypass flow were low. Determined that the Temp/RH sensor was a fault; ordered replacement. Set the flow control to passive; adjusted the average temperature to 5 degree Celsius and average pressure to 0.940atm. Re-measured flows to ensure they were within the control range. After an investigation of the data stored internally in the Teom, the sensor failed at 19:50(MST) on September 6th. Due to this issue, 253 hours of PM2.5 data between September 6th and September 17th were invalidated. A temporary temp/RH sensor without the cover sealed was installed on September 22nd. As data between September 17th and September 22nd were calculated using average temperature and average pressure, which was setup on September 17th, data sent to the CASA Data Warehouse was flagged as “Questionable”. A new temp/RH sensor was installed on the Teom on September 27th. Data was corrected using Alberta air quality guideline for PM2.5 analyzer. If the data was between 0 to –3, the data was corrected to 0. If the data was below –3, the data was invalidated. 13 hours of data were invalidated as the data were below –3.0 ug/m^3. The AMD operational uptime was 62.9%.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

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

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

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

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

The RH sensor was removed for a factory calibration on September 3rd as the result of AE audit indicated the RH sensor was out by 10%. The sensor was put back to service on September 17th. 335 hours of data were invalidated due to this issue. The AMD operational uptime was 53.3%.

Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3

The RH sensor was removed for a factory calibration on September 3rd as the result of AE audit indicated the RH sensor was out by 10%. The sensor was put back to service on September 17th. 335 hours of data were invalidated due to this issue. The AMD operational uptime was 53.3%.

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.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Trailer
No issue was observed during this month.

Air Quality Index (AQI)
The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. All AQI values recorded in September 2010 were within the Good range. The highest hourly concentration of PM2.5 was 15.9ug/m3 and an AQI value of 13, hour 6 on September 1st. The highest hourly concentration of Ozone was 41 ppb and an AQI value of 21 on September 27h, hour 15.

Passive Network
No issue was observed during this month.

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

Polycyclic Aromatic Hydrocarbons (PAHs)
The PAHs were sampled from September 5th to September 29th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the PAHs in this report were reported as ng/m3.
The lab result for July and August are also included in this monthly report.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

AIR QUALITY INDEX (AQI)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	3	2	1	1	3	4	**13**	7	12	13	14	15	16	16	16	16	17	16	13	10	4	2	-	1	17
	O3_	O3_	O3_	O3_	O3_	O3_	**PM2**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_
2	4	6	2	2	-	-	1	4	6	8	11	14	17	17	18	19	19	18	9	4	3	-	2	7	19
	PM2	PM2	PM2	PM2	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	**NA**	PM2	PM2	O3_
3	2	1	5	6	3	5	9	7	9	10	13	16	19	19	19	18	16	15	13	14	-	15	15	14	19
	PM2	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
4	13	14	14	14	13	13	12	13	13	13	14	15	15	16	15	16	17	15	13	-	13	13	15	15	17
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_
5	18	18	16	12	11	10	11	9	8	9	10	11	13	13	13	13	14	15	-	10	9	9	9	8	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
6	7	6	6	6	6	6	5	5	8	7	7	7	6	6	7	13	14	-	-	-	-	-	-	-	14
	O3_	O3_	O3_	O3_	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_
17	-	-	-	-	-	-	-	-	-	-	-	14	14	15	15	15	15	15	13	8	8	4	2	3	15
	NA	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_
18	6	2	2	1	1	-	-	2	7	11	13	16	17	18	18	18	18	17	11	7	7	7	7	9	18
	PM2	O3_	PM2	O3_	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_
19	7	6	4	4	-	7	3	9	13	13	15	17	15	15	15	16	16	16	16	17	16	15	15	15	17
	O3_	O3_	O3_	O3_	**NA**	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
20	14	14	14	-	13	13	13	12	12	12	12	12	12	12	12	12	12	13	13	10	8	7	8	7	14
	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
21	3	3	-	3	2	5	5	7	6	8	9	9	10	11	12	10	10	9	7	2	5	2	5	3	12
	PM2	PM2	**NA**	O3_	PM2	PM2	PM2	PM2	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	O3_	O3_
22	2	-	5	5	4	5	3	4	-	10	14	15	16	16	16	16	16	16	15	14	14	13	13	11	16
	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
23	-	8	7	7	7	6	6	6	7	7	9	14	15	16	17	18	18	17	15	12	13	12	10	-	18
	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
24	9	9	8	7	4	3	5	4	5	5	6	7	9	13	19	19	19	17	7	8	3	4	-	11	19
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	PM2	**NA**	O3_	O3_
25	13	13	13	14	13	12	12	11	-	12	13	13	13	15	16	17	19	18	15	15	15	-	9	9	19
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	PM2	O3_	O3_
26	11	7	7	5	7	4	4	5	6	6	8	11	18	18	19	19	18	17	14	13	-	8	5	7	19
	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
27	8	5	3	4	1	1	4	5	-	-	10	18	20	19	20	**21**	20	19	15	-	9	9	8	13	21
	O3_	PM2	O3_	PM2	O3_	O3_	PM2	PM2	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	**O3_**	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_
28	11	-	19	20	19	19	-	-	17	16	17	16	15	17	18	17	16	15	-	13	15	15	11	13	20
	O3_	**NA**	O3_	O3_	O3_	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
29	12	10	11	11	12	10	9	9	11	14	15	16	17	18	18	18	18	-	11	7	5	5	7	2	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	PM2	PM2	O3_	O3_
30	3	5	2	5	4	4	2	-	10	13	13	16	18	19	19	20	-	17	7	7	4	7	7	5	20
	O3_	PM2	PM2	PM2	PM2	PM2	PM2	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	PM2	PM2	PM2	PM2	PM2	O3_
PEAK	18	18	19	20	19	19	13	13	17	16	17	18	20	19	20	21	20	19	16	17	16	15	15	15	
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	

STATUS FLAG CODES	NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O_3)					PARTICULATE MATTER 2.5 (PM2)					NITROGEN DIOXIDE (NO_2)					SULPHUR DIOXIDE (SO_2)					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
POOR (51-100)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
FAIR (26-50)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
GOOD (1-25)	371	51.5%	21	15	27	61	8.5%	13	6	1	0	0.0%	-	-	-	0	0.0%	-	-	-	432	60.0%
OVERALL	371	51.5%	-	-	-	61	8.5%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	432	60.0%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	288	40.0%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

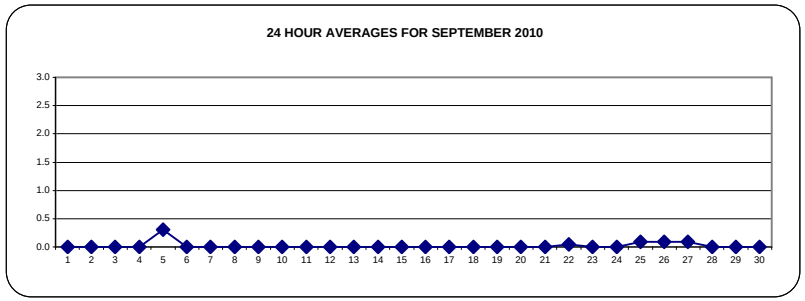
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

MST

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

STATUS FLAG CODES

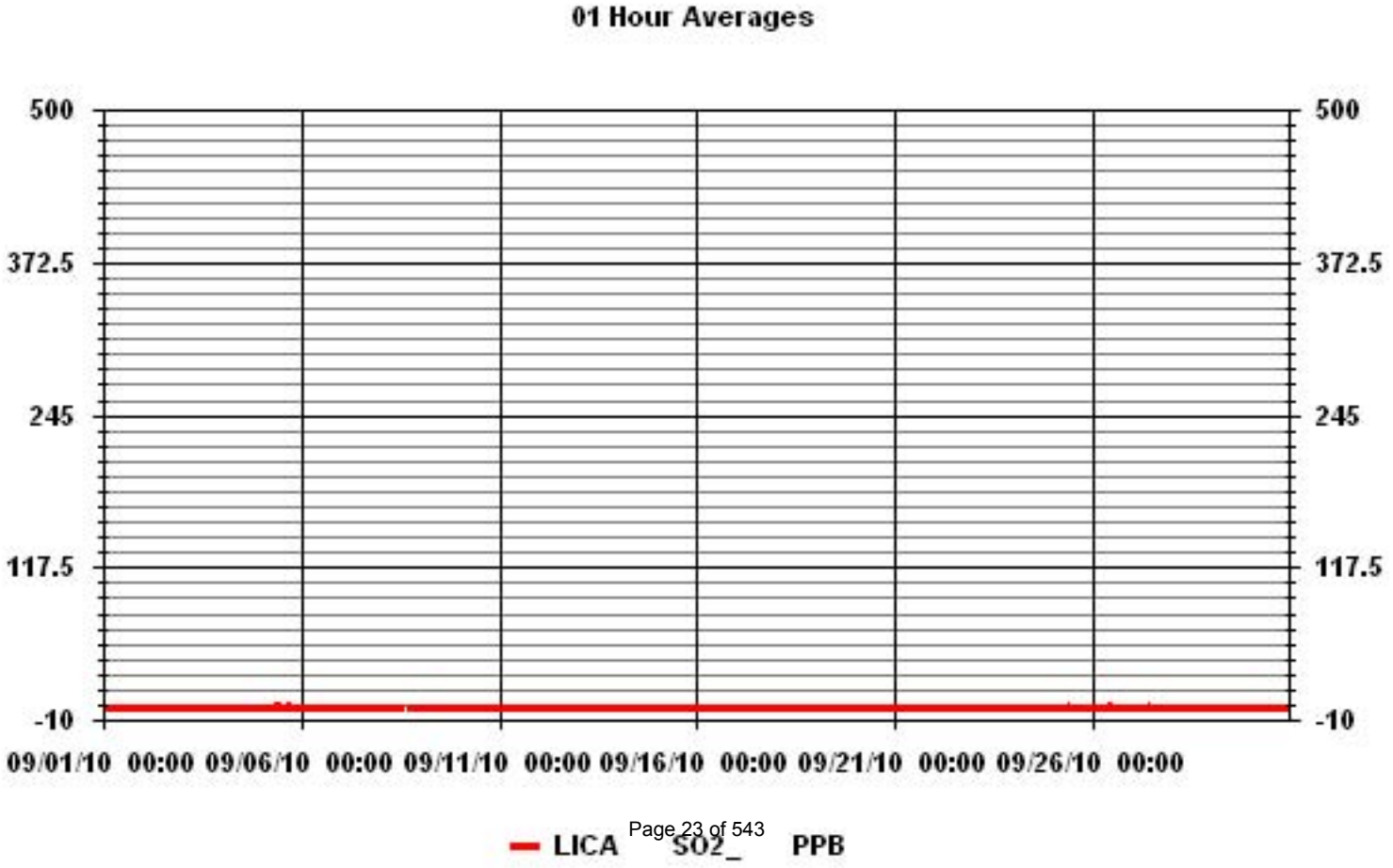
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	14					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.3	PPB			ON DAY(S)	5
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.14		MONTHLY AVERAGE:		0.02	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

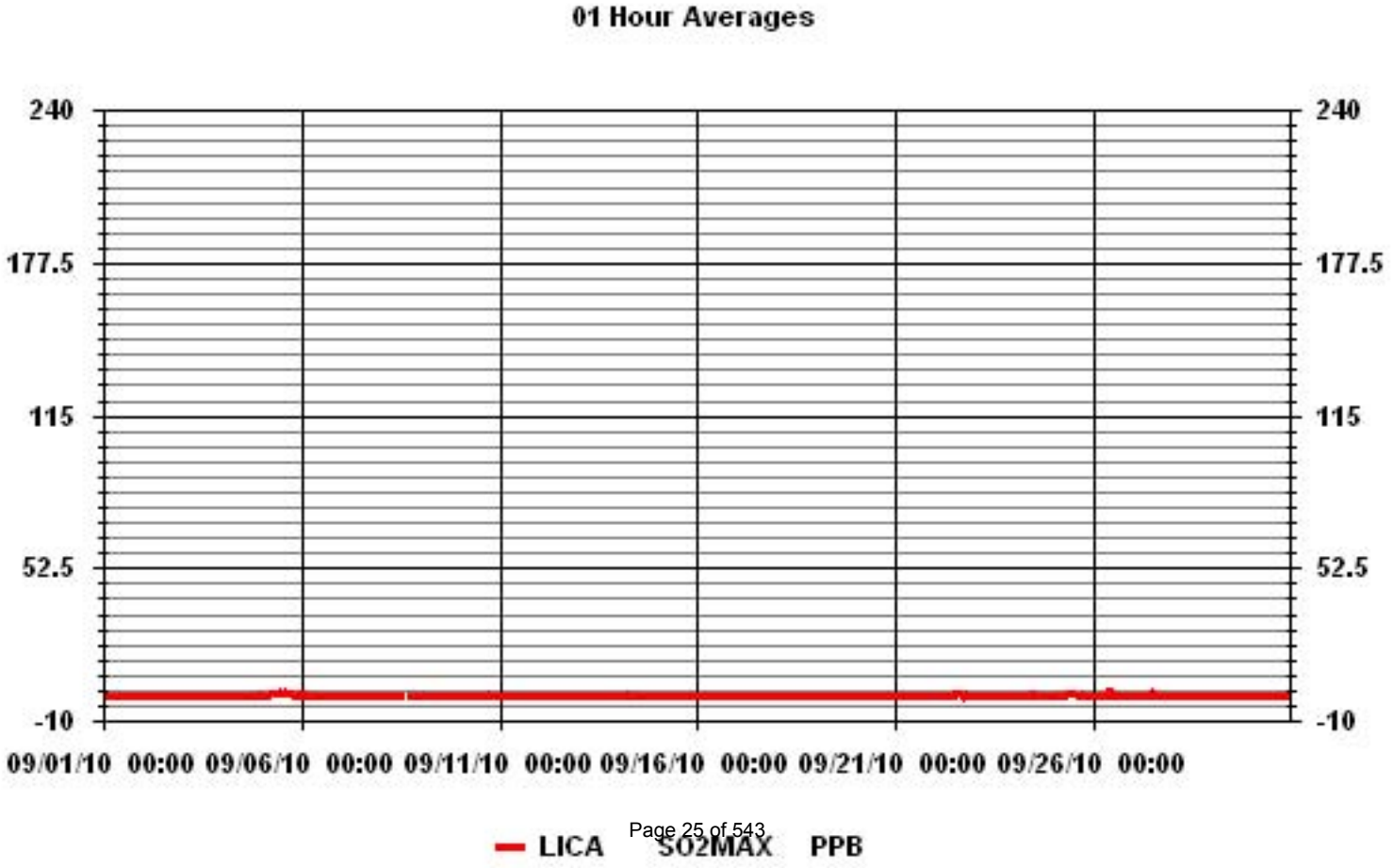
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	0	0	1	0	1	0.0	24
5	0	0	0	0	0	1	1	1	1	1	2	1	1	2	1	1	1	2	**IZS**	1	0	0	1	1	**2**	0.8	24
6	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	1	0.1	24
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0.0	24
9	0	0	0	0	0	0	0	0	0	0	0	0	**C**	**C**	**IZS**	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	**IZS**	0	0	0	1	0	0	0	0	0	0	1	0.0	24
11	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
12	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
14	0	0	0	0	0	1	0	0	0	**IZS**	0	0	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	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	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	**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
21	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
22	0	**IZS**	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	0	0	1	0.3	24
23	**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
24	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	**IZS**	0	1	0.1	24
25	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	0	0	0	**IZS**	0	0	1	0.3	24
26	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	**IZS**	0	0	0	2	0.2	24
27	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	**IZS**	0	0	0	0	2	0.2	24
28	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
29	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
30	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
HOURLY MAX	0	0	1	1	0	1	1	1	1	1	2	2	1	2	1	1	1	2	1	1	0	0	1	1			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	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:	41					
MAXIMUM INSTANTANEOUS VALUE:	2	PPB	@ HOUR(S)	VAR	ON DAY(S)	5
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	0.29					


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

LICA
SO2_ / WDR Joint Frequency Distribution (Percent)

September 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	3.06	3.35	2.33	4.08	10.80	6.13	12.84	3.50	3.50	4.08	7.29	10.80	10.07	10.21	4.08	3.79	100.00
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.06	3.35	2.33	4.08	10.80	6.13	12.84	3.50	3.50	4.08	7.29	10.80	10.07	10.21	4.08	3.79	

Calm : .00 %

Total # Operational Hours : 685

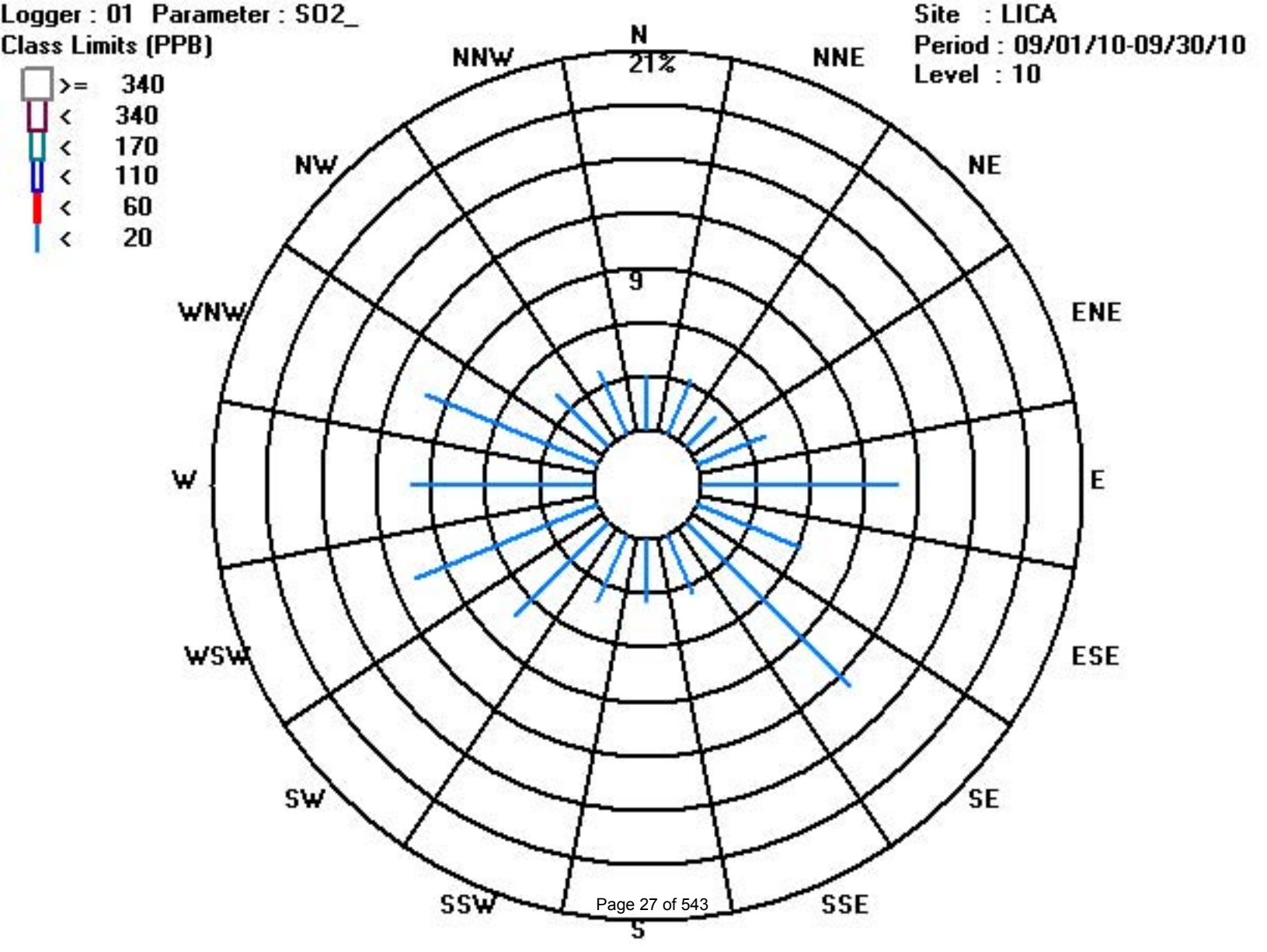
Distribution By Samples

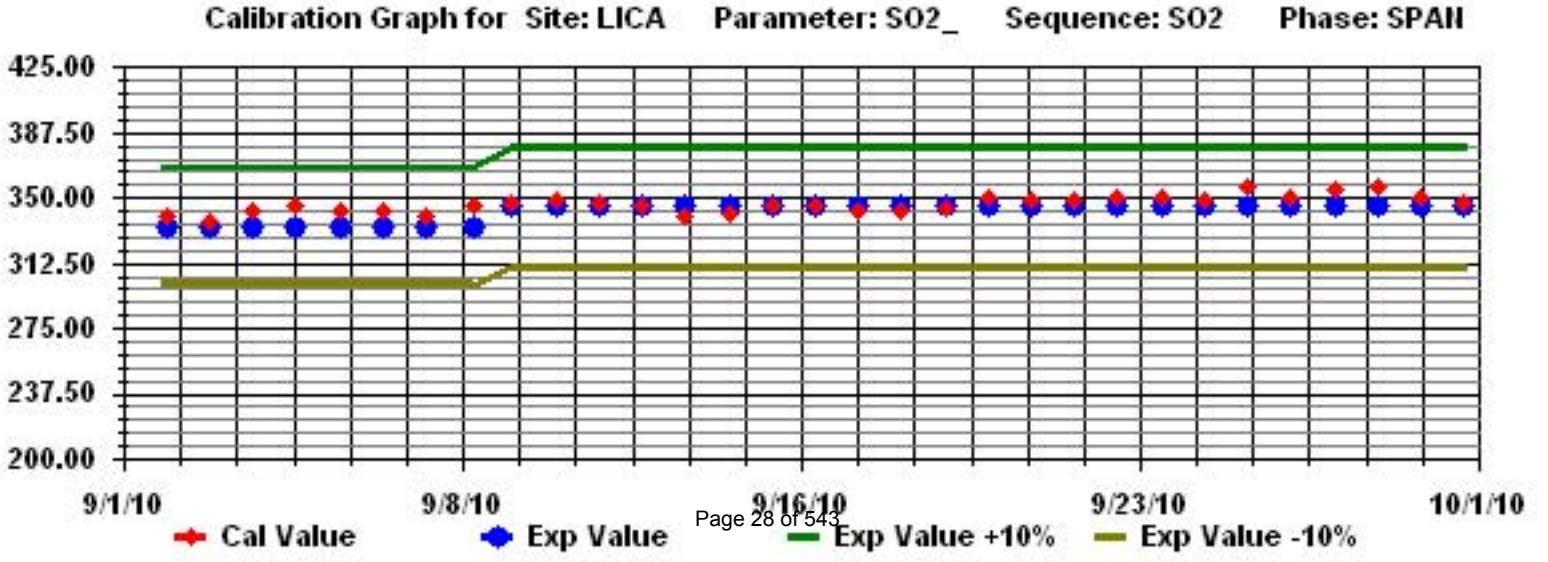
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	21	23	16	28	74	42	88	24	24	28	50	74	69	70	28	26	685
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	21	23	16	28	74	42	88	24	24	28	50	74	69	70	28	26	

Calm : .00 %

Total # Operational Hours : 685


Logger : 01 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN
425.00
387.50
350.00
312.50
275.00
237.50
200.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

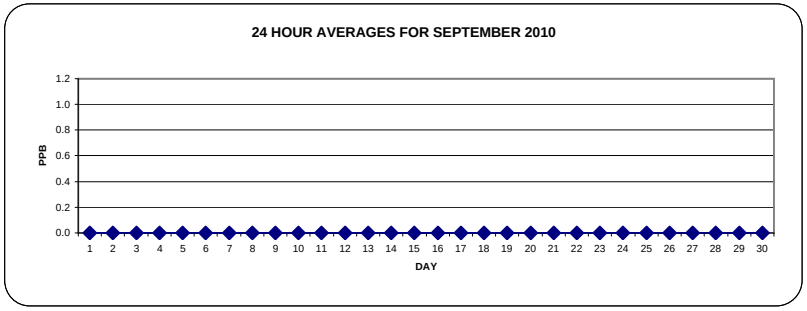
TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

MST

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

STATUS FLAG CODES

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

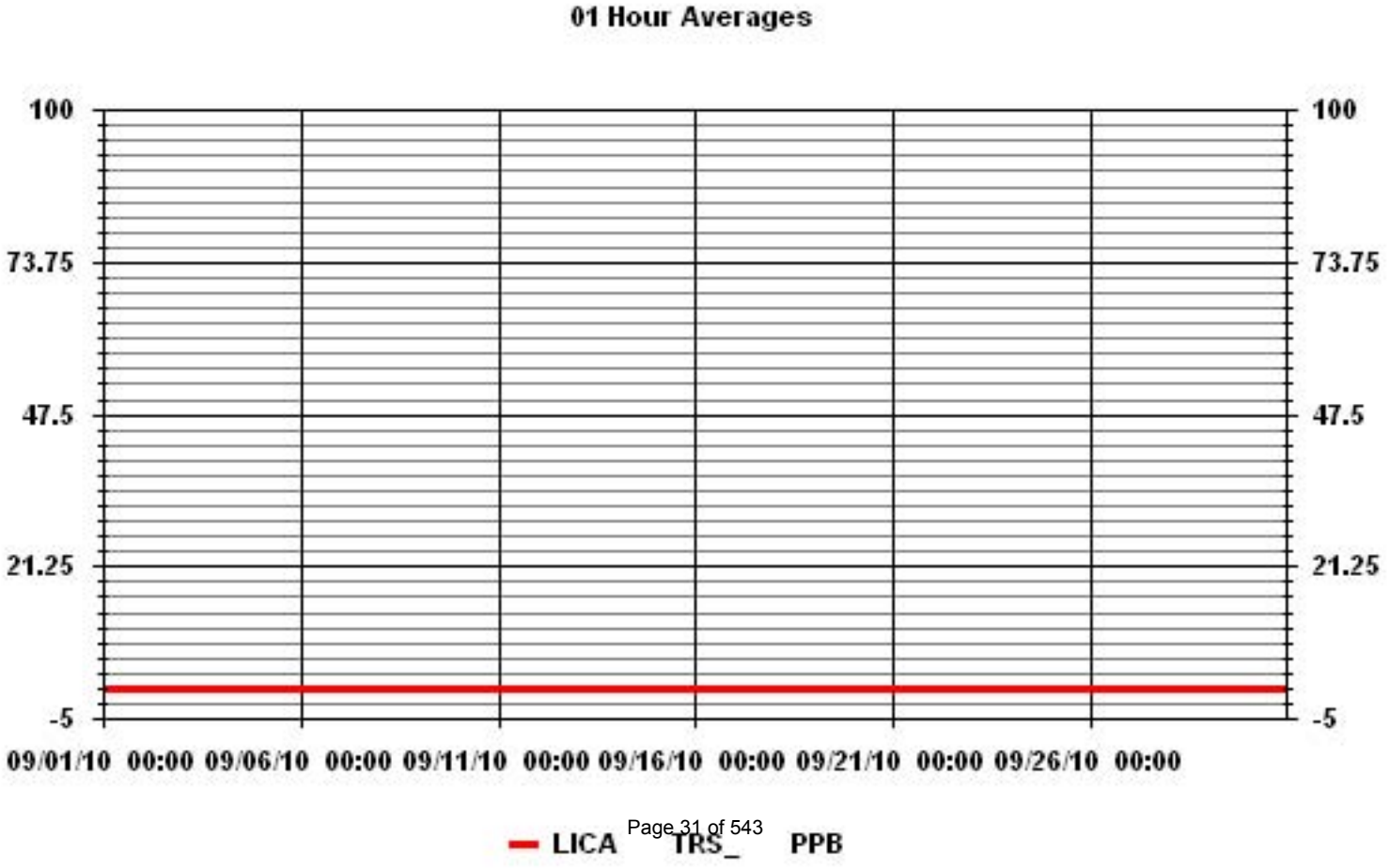


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB

MONTHLY SUMMARY

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

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME	100.0	%
STANDARD DEVIATION	0.00		MONTHLY AVERAGE	0.00	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA TRS_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

TOTAL REDUCED SULPHUR MAX instantaneous maximum in ppb

MST

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

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS: 2

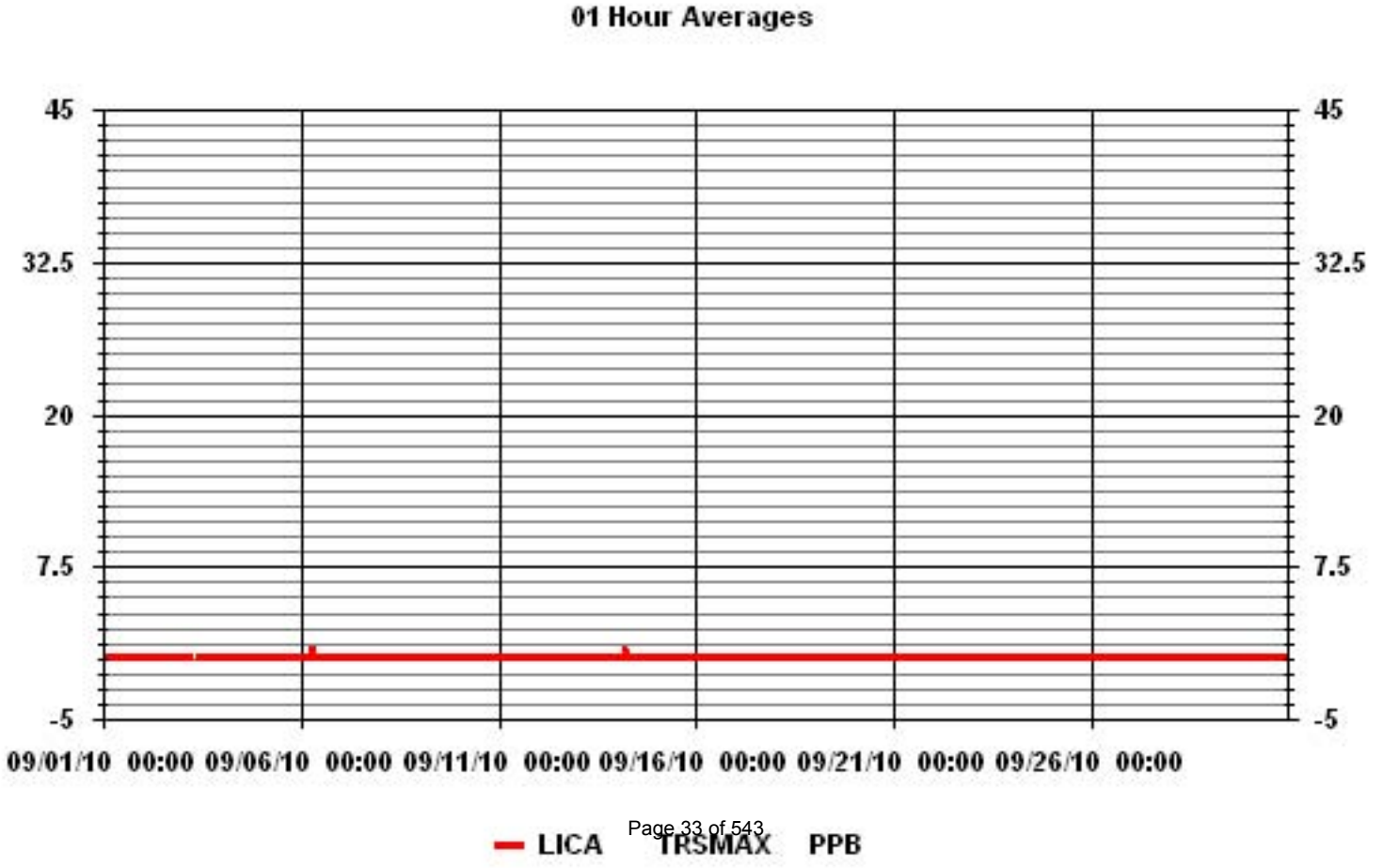
MAXIMUM INSTANTANEOUS VALUE: 1 PPB @ HOUR(S) 7, 5 ON DAY(S) 6, 14

VAR - VARIOUS

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 720 HRS

MONTHLY CALIBRATION TIME: 7 HRS

STANDARD DEVIATION: 0.05


01 Hour Averages
45
32.5
20
7.5
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA
TRSMAX
PPB

LICA
TRS_ / WD Joint Frequency Distribution (Percent)

September 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	3.07	3.65	2.48	4.09	10.81	6.14	12.28	3.50	3.50	4.09	7.30	10.81	10.08	10.23	4.09	3.80	100.00
<	10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.07	3.65	2.48	4.09	10.81	6.14	12.28	3.50	3.50	4.09	7.30	10.81	10.08	10.23	4.09	3.80	

Calm : .00 %

Total # Operational Hours : 684

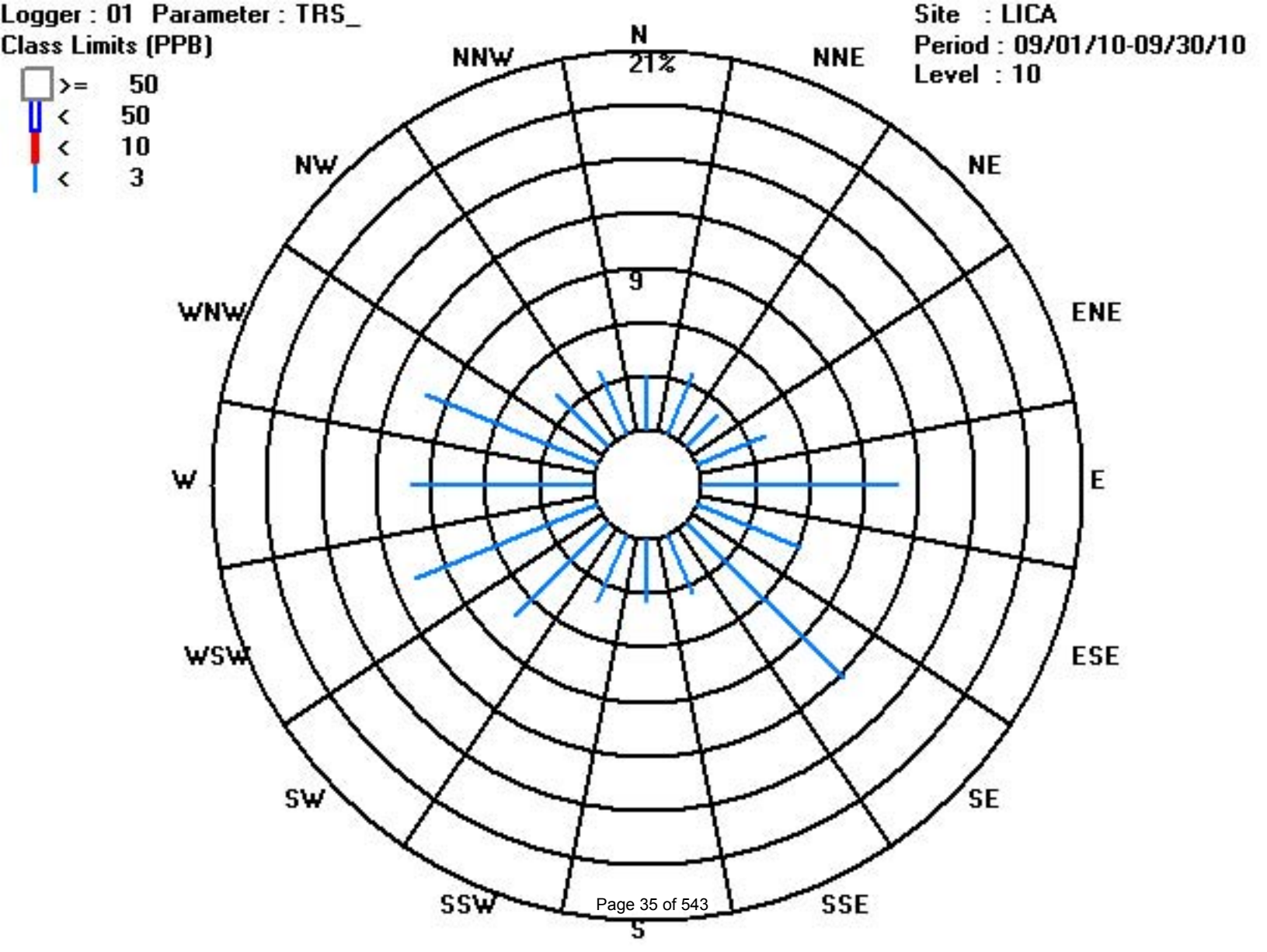
Distribution By Samples

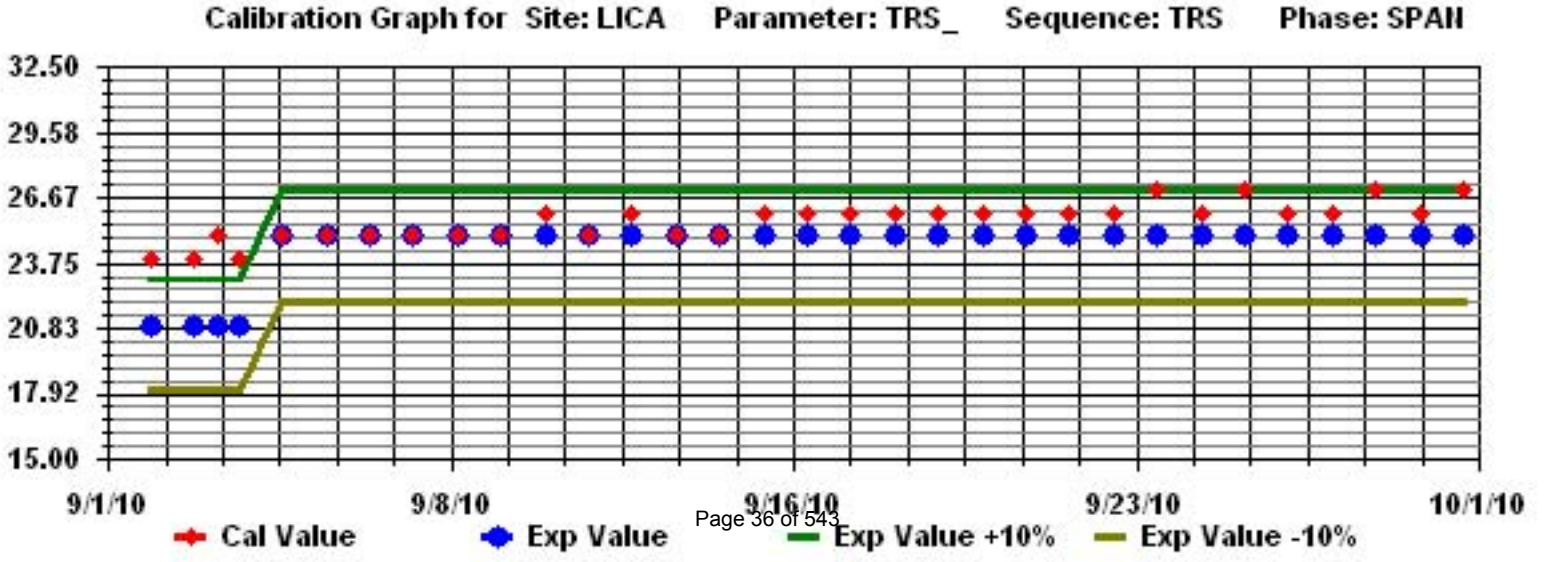
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	21	25	17	28	74	42	84	24	24	28	50	74	69	70	28	26	684
<	10																	
<	50																	
>=	50																	
	Totals	21	25	17	28	74	42	84	24	24	28	50	74	69	70	28	26	

Calm : .00 %

Total # Operational Hours : 684


Logger : 01 Parameter : TRS_
Class Limits (PPB)
>= 50
< 50
< 10
< 3
Site : LICA
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN
32.50
29.58
26.67
23.75
20.83
17.92
15.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

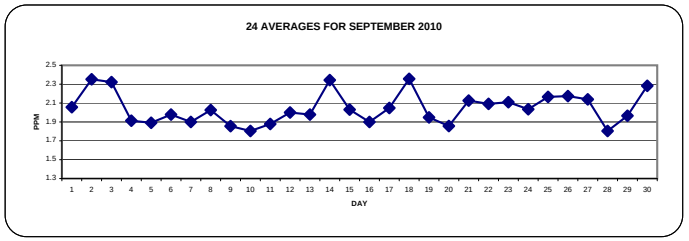
TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.1	2.2	2.2	2.2	2.4	2.2	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.2	2.2	**IZS**	2.3	2.4	2.1	24
2	2.3	2.3	2.5	2.8	3.2	**3.5**	3.3	2.6	2.3	2.2	2.1	2	2	2	2	2	2	2	2	2	2.1	**IZS**	2.4	2.5	**3.5**	**2.4**	24
3	2.5	2.5	2.7	2.8	2.9	2.9	2.7	2.5	2.5	2.4	2.4	2.2	2.1	2	2	2	2.1	2	2.1	2.1	**IZS**	2	2	2	2.9	2.3	24
4	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	**IZS**	1.8	1.8	1.9	1.9	2.1	1.9	24
5	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.9	2	2.1	2.1	2	2.1	1.9	24
6	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	24
7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	24
8	1.9	2	2	2	2	2	2	1.9	2	2	2	2	2	2	2	**IZS**	1.9	1.9	3	2	2	2	2	2	3.0	2.0	24
9	2	1.9	1.9	1.9	1.9	1.9	1.9	2	**C**	**C**	**C**	**C**	**C**	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	1.9	24
10	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	24
11	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.8	**IZS**	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	2.2	2.2	2.1	2.2	1.9	24
12	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.2	2.0	24
13	2	2	2	2	2	2.1	2.1	2	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2.1	2.1	2.1	2.0	24
14	2.3	2.9	3.5	2.8	2.7	2.7	2.9	2.8	2.5	**IZS**	2.1	2	1.9	1.9	1.9	2	2	2	2.1	2.1	2.1	2.4	2.2	2.1	3.5	2.3	24
15	2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	**IZS**	2.2	2.2	2	2	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	2	2.2	2.0	24
16	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	24
17	2	2	2	1.9	2	2.2	**IZS**	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.2	2.5	2.5	2.5	2.5	2.0	24
18	2.7	2.8	2.8	3	3	**IZS**	3.2	3.3	2.9	2.4	2.1	2.1	2	1.9	1.9	1.9	1.9	2	2	2.1	2.1	2	2	2.1	3.3	2.4	24
19	2.1	2.1	2.2	2.1	**IZS**	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	1.8	1.8	1.8	2.2	1.9	24
20	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	2.1	2.4	2	2	2.4	1.9	24
21	2.1	2.1	**IZS**	2.1	2.4	2.3	2.4	2.8	2.6	2.1	2	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.1	2.1	2.3	2.8	2.1	24
22	2.2	**IZS**	2.3	2.6	2.4	2.3	2.3	2.3	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	2	2.1	2.1	2.2	2.6	2.1	24
23	**IZS**	2.2	2.3	2.4	2.4	2.4	2.4	2.5	2.3	2.3	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	**IZS**	2.5	2.1	24
24	1.9	1.9	1.9	2	2	2	2	2	2.1	2.2	2.3	2.3	2.2	2.1	1.8	1.8	1.8	1.8	1.9	1.9	2	2.6	**IZS**	2.3	2.6	2.0	24
25	2.1	2.1	2.2	2.3	2.5	2.6	2.6	2.6	2.5	2.2	2	2	2	1.9	1.9	1.9	1.9	1.9	2	2.1	2	**IZS**	2.3	2.2	2.6	2.2	24
26	2.1	2.4	2.6	2.4	2.4	2.5	2.5	2.5	2.6	2.5	2.2	2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2	**IZS**	2.1	2.2	2.4	2.6	2.2	24
27	2.3	2.3	2.4	2.4	2.3	2.4	2.5	2.9	2.5	2.2	2.1	1.8	1.9	2	1.8	1.8	1.8	1.8	1.9	**IZS**	2.1	2.1	2	1.9	2.9	2.1	24
28	1.9	2	1.7	1.7	1.8	1.8	1.9	1.8	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.9	1.9	2.0	1.8	24
29	2.1	2	2	1.9	1.9	2	1.9	2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	1.9	2	2.2	2.2	2.3	2.4	2.4	2.0	24
30	2.5	2.6	2.7	2.8	2.8	3	3	3	2.5	2.1	2.2	1.9	1.8	1.8	1.8	1.8	**IZS**	1.9	2	2	2	2.1	2.1	2.1	3.0	2.3	24
HOURLY MAX	2.7	2.9	3.5	3.0	3.2	3.5	3.3	3.3	2.9	2.5	2.4	2.3	2.2	2.1	2.0	2.0	2.1	2.0	3.0	2.2	2.2	2.6	2.5	2.5			
HOURLY AVG	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.0	2.1			

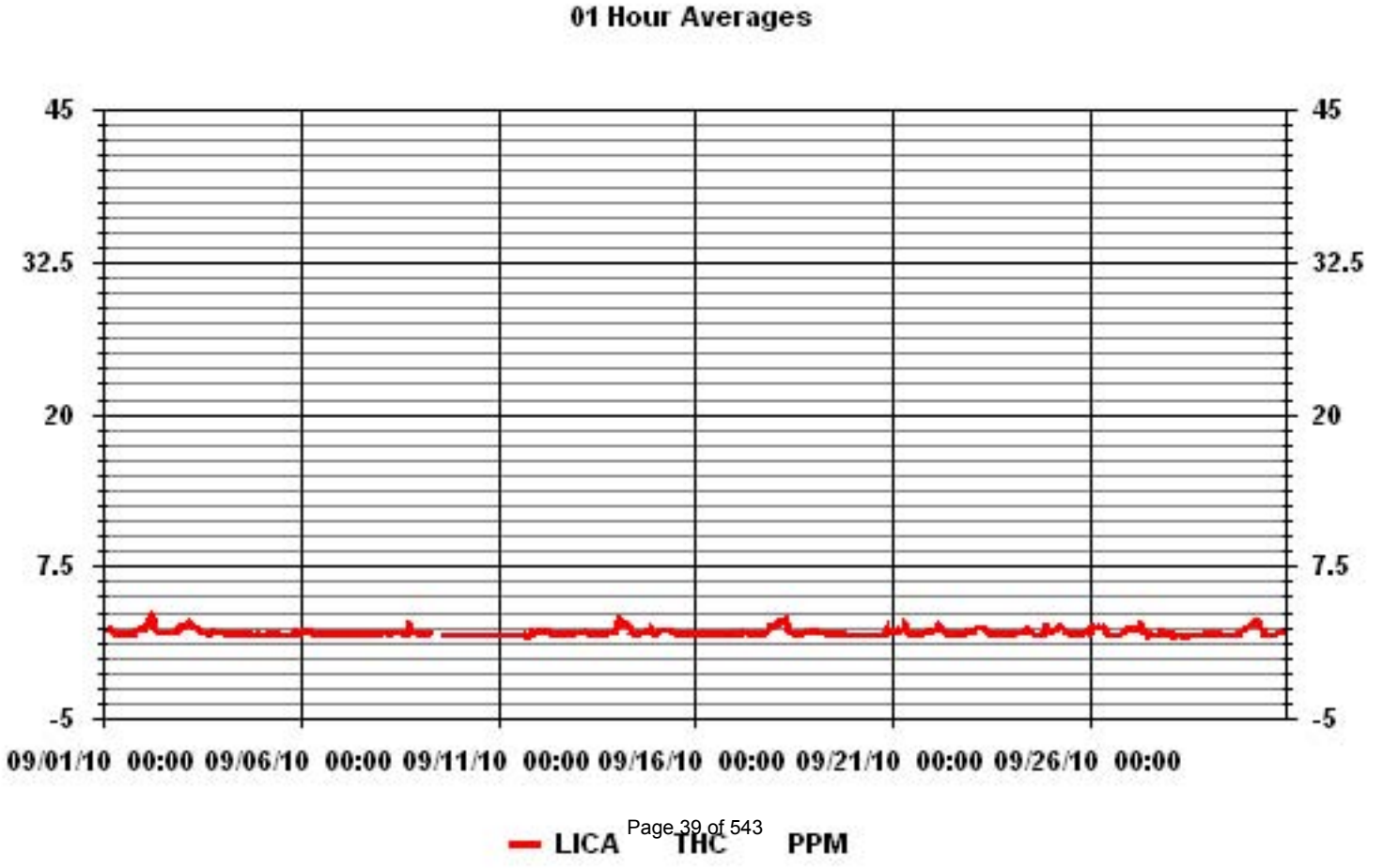
STATUS FLAG CODES

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
BB	- BELOW BACKGROUND OF 1.5 PPM		



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	684						
MAXIMUM 1-HR AVERAGE:	3.5	PPM	@ HOUR(S)	5	ON DAY(S)	2	
MAXIMUM 24-HR AVERAGE:	2.4	PPM			ON DAY(S)	2	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS	
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	0.28		MONTHLY AVERAGE:		2.05	PPM	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32.5
20
7.5
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

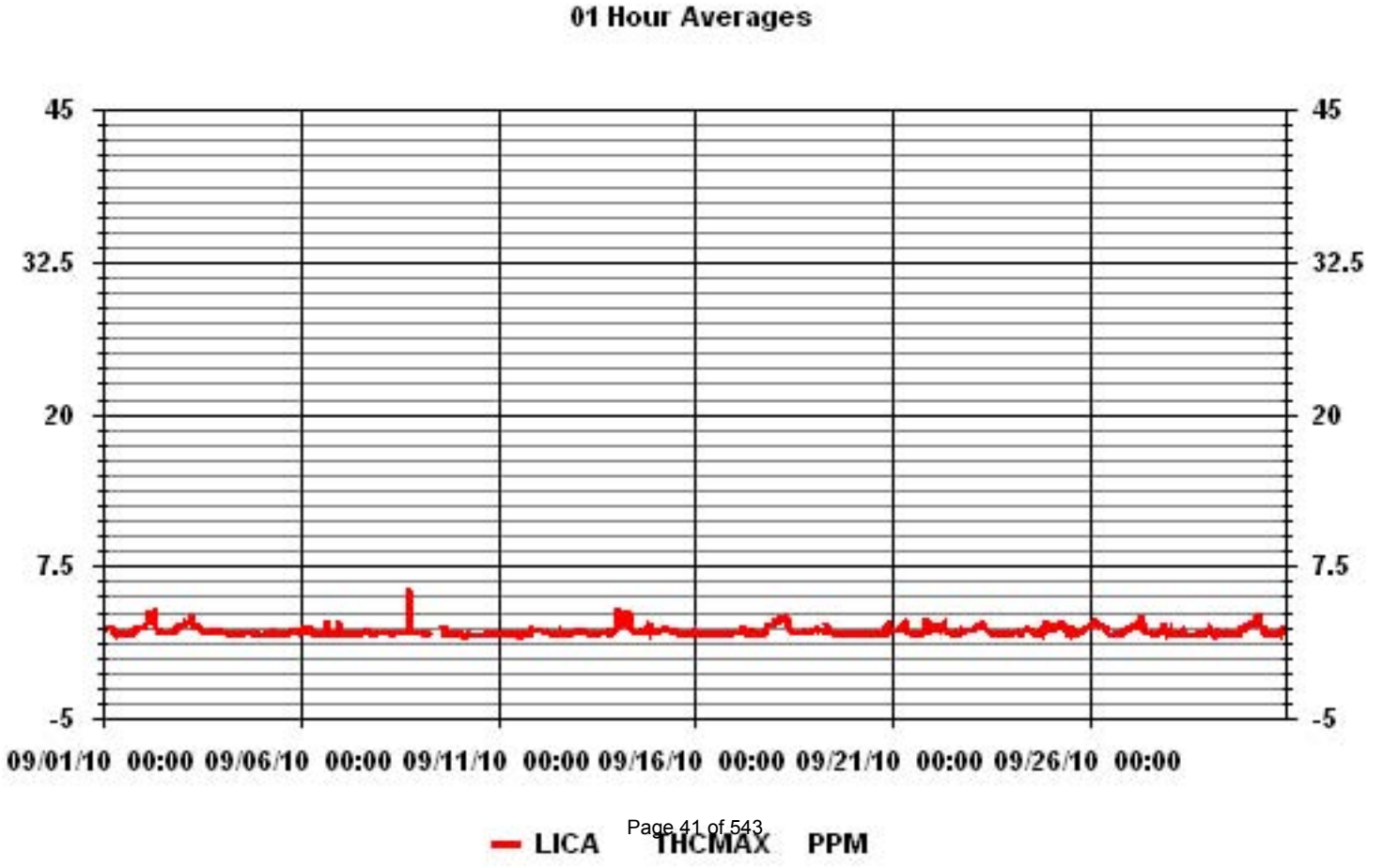
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.2	2.4	2.4	2.4	2.5	2.4	2.4	2.2	1.9	2	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	2	2.3	2.4	2.3	**IZS**	2.4	2.5	2.2	24
2	2.4	2.5	2.8	3.6	3.6	3.7	3.8	2.9	2.5	2.3	2.2	2.1	2.1	2	2	2	2	2	2.1	2.1	2.3	**IZS**	2.6	2.5	3.8	2.5	24
3	2.6	2.7	3	2.9	3	3.3	3.1	2.5	2.5	2.5	2.5	2.3	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.2	**IZS**	2.1	2.1	2.1	3.3	2.5	24
4	2.1	2.1	2	2	2	1.9	2	1.9	1.9	1.9	2	1.9	1.9	1.9	2	2	2	2	2	**IZS**	1.9	1.9	1.9	1.9	2.1	2.0	24
5	1.8	1.8	1.9	2	2	2	2.1	2	2.2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	2.1	2.1	2.2	2.3	2.1	2.3	2.0	24
6	2.3	2.4	2.2	2.3	2.3	2.2	2.3	2.3	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	2.8	**IZS**	2	1.9	1.9	1.9	1.9	3	3	2.1	24
7	1.9	1.9	1.9	1.9	1.9	1.9	2	2	1.9	1.9	1.9	2	2	1.9	2	2.1	**IZS**	2.3	2	2	1.9	1.9	1.9	2	2.3	2.0	24
8	2	2	2	2	2	2	2	2.1	2	2.1	2	2	2	2	2	**IZS**	2.1	2.2	**5.8**	2.1	2	2	2	2	**5.8**	2.2	24
9	2	2	2	1.9	1.9	1.9	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	2.4	1.9	1.9	2	1.9	1.9	1.9	1.9	1.9	2.4	2.0	24
10	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	**IZS**	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	24
11	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.3	2.2	2.2	2.3	2.0	24
12	2.2	2.2	2.3	2.2	2.2	2.1	2.2	2.2	2.1	2	1.9	**IZS**	1.9	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.3	2.0	24
13	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2	1.9	**IZS**	1.9	1.9	1.9	2	2	2	2	2	2.2	2	2.1	2.1	2.2	2.2	2.1	24
14	2.4	3.9	3.9	3.2	2.8	2.9	3.1	3.8	2.8	**IZS**	2.3	2.1	2	2	2	2.1	2.1	2.1	2.1	2.5	2.2	2.7	2.3	2.2	3.9	2.6	24
15	2.1	2.1	2.1	2.2	2.2	2.4	2.4	2.4	**IZS**	2.2	2.3	2.2	2.1	2.1	1.9	1.9	1.9	2	2.1	2	1.9	2	2	2.2	2.4	2.1	24
16	1.9	1.9	1.9	1.9	2.1	2	2	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	2	2.1	1.9	24
17	2	2.1	2	2	2	2.4	**IZS**	2.3	2.1	2	2.2	2	2.2	2.1	1.9	1.9	1.9	1.9	2.1	2.1	2.6	2.6	2.6	2.6	2.6	2.2	24
18	2.9	2.9	2.9	3.1	3.1	**IZS**	3.3	3.5	3.4	2.6	2.2	2.2	2.1	2	2	2	2	2	2.2	2.2	2.2	2.1	2.1	2.2	3.5	2.5	24
19	2.2	2.3	2.4	2.2	**IZS**	2.3	2.1	2.1	2.8	2	2	2	2	1.9	2	1.9	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	2.8	2.1	24
20	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	2.5	2.7	2.2	2.3	2.7	2.0	24
21	2.2	2.2	**IZS**	2.3	2.5	2.4	2.8	3	2.8	2.2	2.1	2	2	1.9	1.9	2	2	1.9	2	2.1	3.2	2.3	2.2	2.9	3.2	2.3	24
22	2.5	**IZS**	2.4	2.7	2.6	2.3	2.5	2.8	2.4	2.2	2	2	2	1.9	2.1	1.9	1.9	2	2.3	2.1	2.1	2.2	2.2	2.3	2.8	2.2	24
23	**IZS**	2.3	2.4	2.4	2.6	2.5	2.5	2.9	2.4	2.4	2.3	2.1	2	2	1.9	2	1.9	2.1	2	2.1	2	1.9	1.9	**IZS**	2.9	2.2	24
24	1.9	1.9	2	2	2.1	2.1	2	2.1	2.2	2.3	2.4	2.3	2.2	2.2	2	1.9	1.9	1.9	2.2	2	2.5	2.9	**IZS**	2.8	2.9	2.2	24
25	2.2	2.2	2.3	2.5	2.5	2.8	2.7	2.7	2.7	2.4	2.1	2.3	2.1	2.5	2	2	1.9	2	2.1	2.2	2.1	**IZS**	2.4	2.4	2.8	2.3	24
26	2.6	2.8	2.8	2.9	2.9	2.7	2.8	2.7	2.6	2.6	2.4	2.1	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.2	**IZS**	2.2	2.3	2.5	2.9	2.4	24
27	2.4	2.5	2.5	2.7	2.5	2.5	2.7	3.5	2.9	2.4	2.1	2	2	2	2	1.9	1.9	2	2.2	**IZS**	2.4	2.8	2.2	1.9	3.5	2.3	24
28	2	2.3	1.8	1.8	1.9	1.9	2	2	2.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	**IZS**	1.9	1.9	1.9	2	2	2.3	1.9	24
29	2.4	2.2	2	2	1.9	2.2	2.1	2.1	2	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.9	**IZS**	2	2.3	2.3	2.3	2.5	2.5	2.5	2.1	24
30	2.6	2.8	2.9	3	2.9	3.2	3.3	3.3	2.7	2.3	2.4	2	1.9	1.9	1.9	1.9	**IZS**	1.9	2.1	2.3	2	2.3	2.3	2.2	3.3	2.4	24
HOURLY MAX	3	4	4	4	4	4	4	4	3	3	3	2	2	3	2	2	3	2	6	3	3	3	3	3			
HOURLY AVG	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.2	2.2	2.1	2.2			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		682					
MAXIMUM INSTANTANEOUS VALUE:		5.8	PPM	@ HOUR(S)	18	ON DAY(S)	8
IZS CALIBRATION TIME:	31	HRS		OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	7	HRS					
STANDARD DEVIATION:	0.38						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32.5
20
7.5
-5
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09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA THCMAX PPM

LICA
THC / WD Joint Frequency Distribution (Percent)

September 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	3.07	3.65	2.48	3.94	10.23	5.99	12.86	3.50	3.07	3.94	6.72	10.52	10.08	10.23	4.09	3.80	98.24
<	10.0	.00	.00	.00	.14	.00	.14	.00	.00	.43	.14	.58	.29	.00	.00	.00	.00	1.75
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.07	3.65	2.48	4.09	10.23	6.14	12.86	3.50	3.50	4.09	7.30	10.81	10.08	10.23	4.09	3.80	

Calm : .00 %

Total # Operational Hours : 684

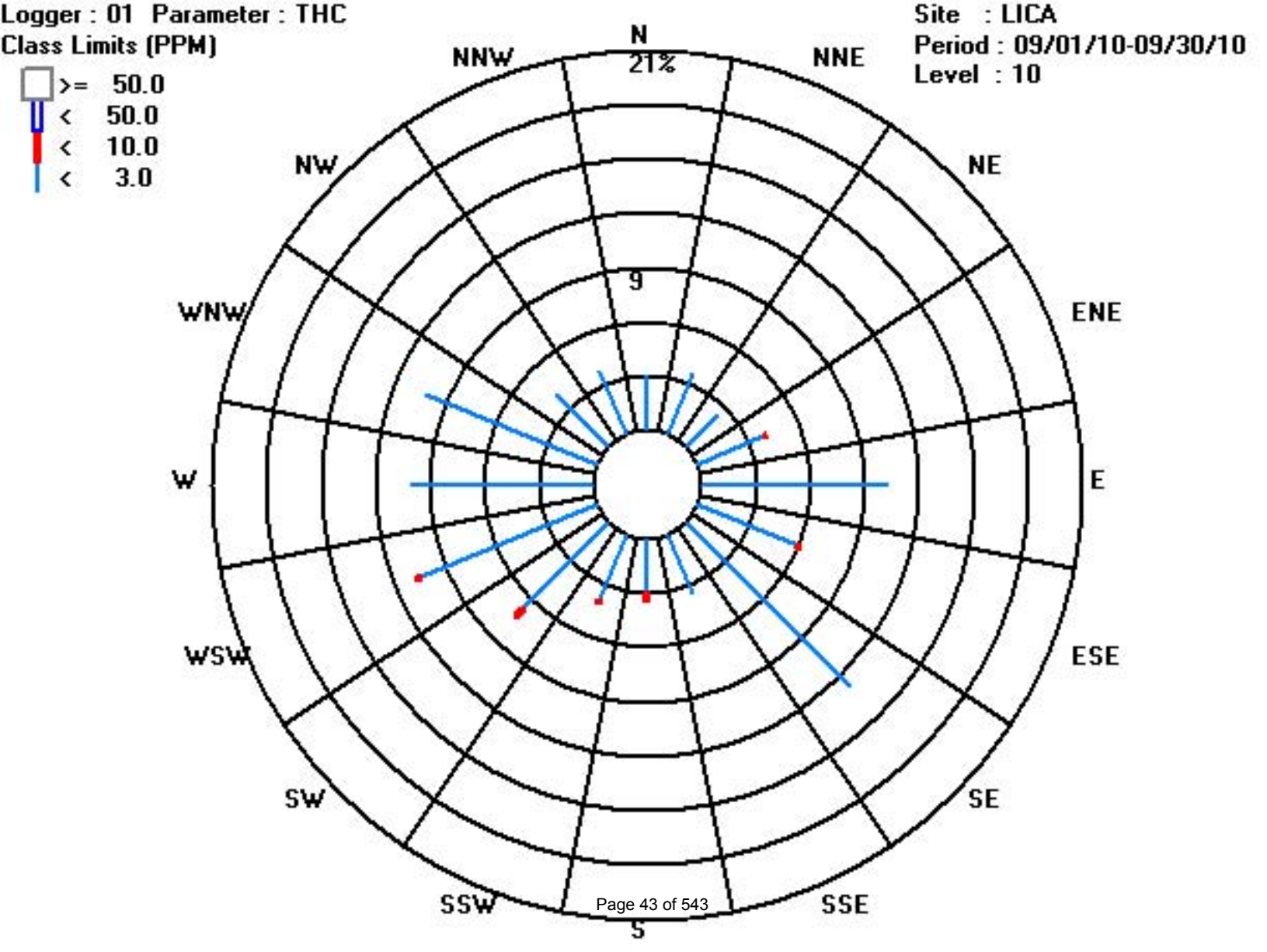
Distribution By Samples

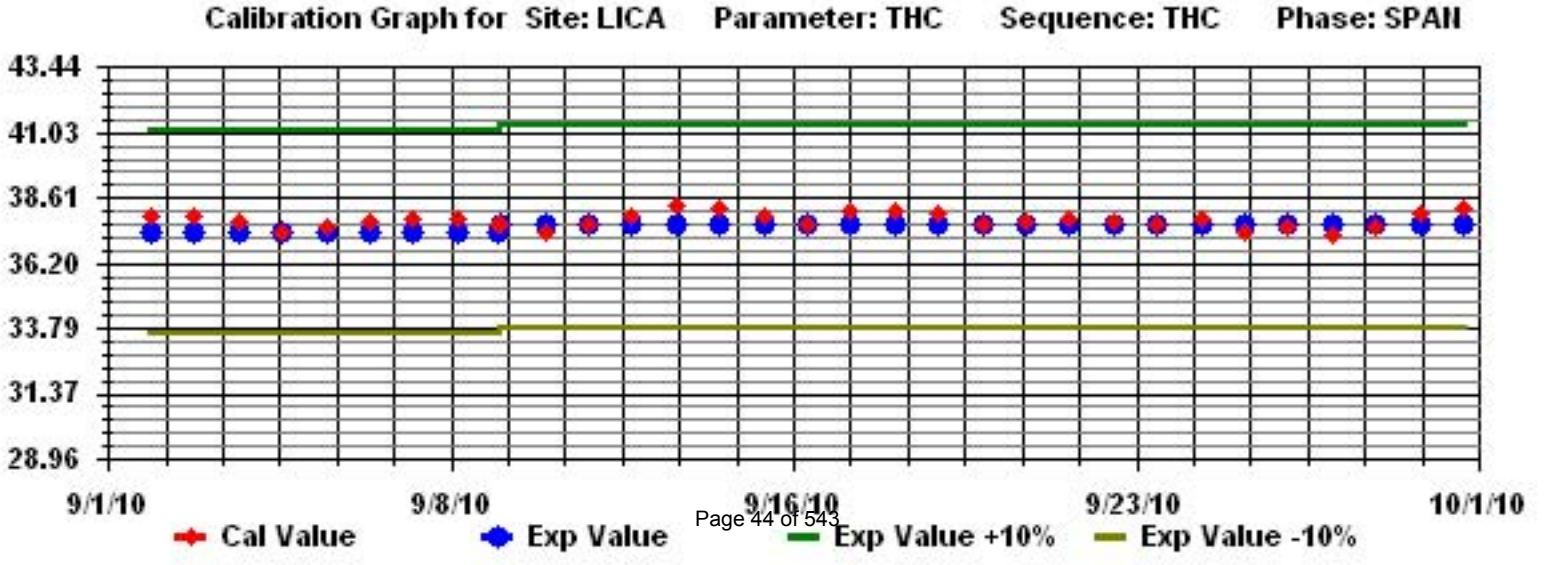
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	21	25	17	27	70	41	88	24	21	27	46	72	69	70	28	26	672
<	10.0				1		1			3	1	4	2					12
<	50.0																	
>=	50.0																	
	Totals	21	25	17	28	70	42	88	24	24	28	50	74	69	70	28	26	

Calm : .00 %

Total # Operational Hours : 684


Logger : 01 Parameter : THC
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0
Site : LICA
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN
43.44
41.03
38.61
36.20
33.79
31.37
28.96
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

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

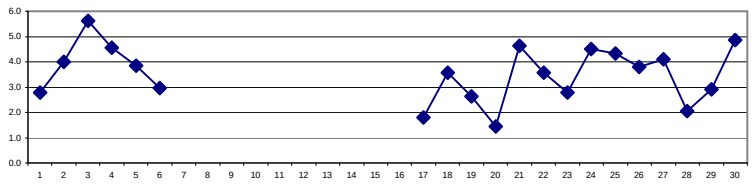
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.6	0	0	0.2	3	1.9	**15.9**	4.6	0.4	1.9	5.7	3.4	0	5.1	2.3	1.9	2.8	4.8	5.9	2.4	1.9	0	1.9	0	**15.9**	2.8	24
2	4.5	6.9	2.9	2.1	0	**N**	0	3.9	6.5	5.9	5.2	5.3	3.3	6.5	3.8	1.5	3.9	2.9	5.9	4.8	1	5.2	2	7.9	7.9	4.0	23
3	2.4	1.5	5.4	7.1	3	6.5	11.4	6.7	1.9	3.9	3.3	6	2.9	5.7	8.5	2.4	5.9	6.8	8.5	8.4	7.4	6.4	8.4	4.4	11.4	**5.6**	24
4	4.9	2.9	1.9	2.9	4.9	1.4	4.4	6.4	2.9	7.4	5.4	7.4	1.9	6.4	5.9	12.9	8.4	6.9	3.4	2.4	3.4	3.4	0.4	0.9	12.9	4.5	24
5	4.9	3.4	5.4	1.9	0	6.9	2.9	0.4	4.4	5.9	5.4	0.4	1.9	5.9	3.4	3.4	6.4	0.9	4.9	9.9	4.4	3.4	2.9	2.9	9.9	3.8	24
6	4.9	3.9	3.9	3.4	6.9	6.9	5.4	0.9	3.9	2.9	4.9	0	0	1.4	0.4	0.4	0.4	**N**	**N**	**N**	**N**	**N**	**N**	**N**	6.9	3.0	17
7	**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
8	**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
9	**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
10	**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
11	**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
12	**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
13	**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
14	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
15	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
16	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
17	**N**	**N**	**N**	**N**	**N**	**N**	**C**	**C**	**C**	**C**	**M**	0	0	1.4	1.4	1.9	0.4	1.4	1.9	4.9	0	4.4	1.9	3.9	4.9	1.8	17
18	7.4	0	2.4	0	0	8.4	**N**	0.9	0	3.4	4.4	7.4	1.9	2.9	2.4	0.9	1.4	2.4	4.4	7.9	8.4	4.9	5.4	4.9	8.4	3.6	23
19	2.9	0	2.4	0	**N**	7.9	0	0.4	3.9	0.9	0	2.4	1.9	2.4	4.9	4.4	4.4	4.4	3.4	2.9	3.4	1.4	4.4	1.9	7.9	2.6	23
20	2.4	3.9	0	0	1.4	2.9	2.9	0	0	0.9	1.4	1.4	0.4	0	0.4	0	0	0.9	3.4	4.9	0.9	1.9	1.9	2.9	4.9	1.5	24
21	3.4	3.9	0	1.9	2.9	5.4	5.9	8.9	6.4	9.4	5.9	4.9	4.9	6.4	3.4	4.4	3.9	7.9	1.9	2.4	5.4	1.9	6.4	3.4	9.4	4.6	24
22	1.9	1.4	3.9	1.9	0	0	2.4	2.4	**N**	7.4	3.9	2.4	3.4	6.9	5.4	7.4	3.4	5.9	3.4	3.4	4.4	1.9	4.4	4.4	7.4	3.6	23
23	0.9	2.9	1.4	0	0	5.9	0	3.9	2.9	3.4	1.9	0.4	0	2.9	2.4	5.4	4.9	2.9	5.4	4.4	3.9	2.9	5.9	2.4	5.9	2.8	24
24	3.4	2.9	4.9	2.9	4.4	2.9	0.9	4.9	2.9	4.9	3.9	8.9	6.9	4.9	5.9	3.9	0.9	4.4	3.9	9.9	1.4	4.9	4.9	8.4	9.9	4.5	24
25	2.9	2.4	5.4	0.9	1.4	1.9	4.9	2.4	**N**	1.9	4.9	5.4	0	9.4	4.4	3.9	3.4	3.4	2.9	6.4	5.4	5.9	10.4	9.9	10.4	4.3	23
26	4.9	8.4	8.4	6.4	7.9	0.4	0	4.4	6.4	5.4	4.4	9.4	0	0.4	1.4	1.4	0.4	4.9	1.4	0.9	**N**	5.4	4.9	0	9.4	3.8	23
27	2.9	5.9	2.9	4.4	0.4	0	4.4	5.4	**N**	**N**	0	0.9	3.4	0	0.9	2.9	9.9	4.4	4.9	15.9	5.4	6.4	4.4	4.4	15.9	4.1	22
28	0.9	**N**	3.4	5.4	1.9	0	**N**	**N**	2.9	2.4	3.4	3.9	2.4	0.9	0	1.4	2.4	1.4	**N**	1.4	0	2.9	3.9	0	5.4	2.0	20
29	0	1.9	4.4	2.4	0	7.9	0	1.9	4.4	0	2.9	7.4	1.4	1.4	1.4	0.4	4.9	2.4	2.4	4.4	3.9	5.9	8.4	0	8.4	2.9	24
30	0	5.4	1.9	5.9	4.4	4.4	2.9	**N**	5.4	3.4	6.4	8.4	3.9	3.4	2.4	1.9	5.9	3.9	7.4	7.9	4.9	7.9	7.9	5.9	8.4	4.9	23
HOURLY MAX	7	8	8	7	8	8	16	9	7	9	6	9	7	9	9	13	10	8	9	16	8	8	10	10			
HOURLY AVG	3.0	3.2	3.2	2.6	2.4	4.0	3.8	3.4	3.5	4.0	3.9	4.3	2.0	3.7	3.1	3.1	3.7	3.8	4.2	5.6	3.6	4.1	4.8	3.6			

STATUS FLAG CODES

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

24 HOUR AVERAGES FOR SEPTEMBER 2010

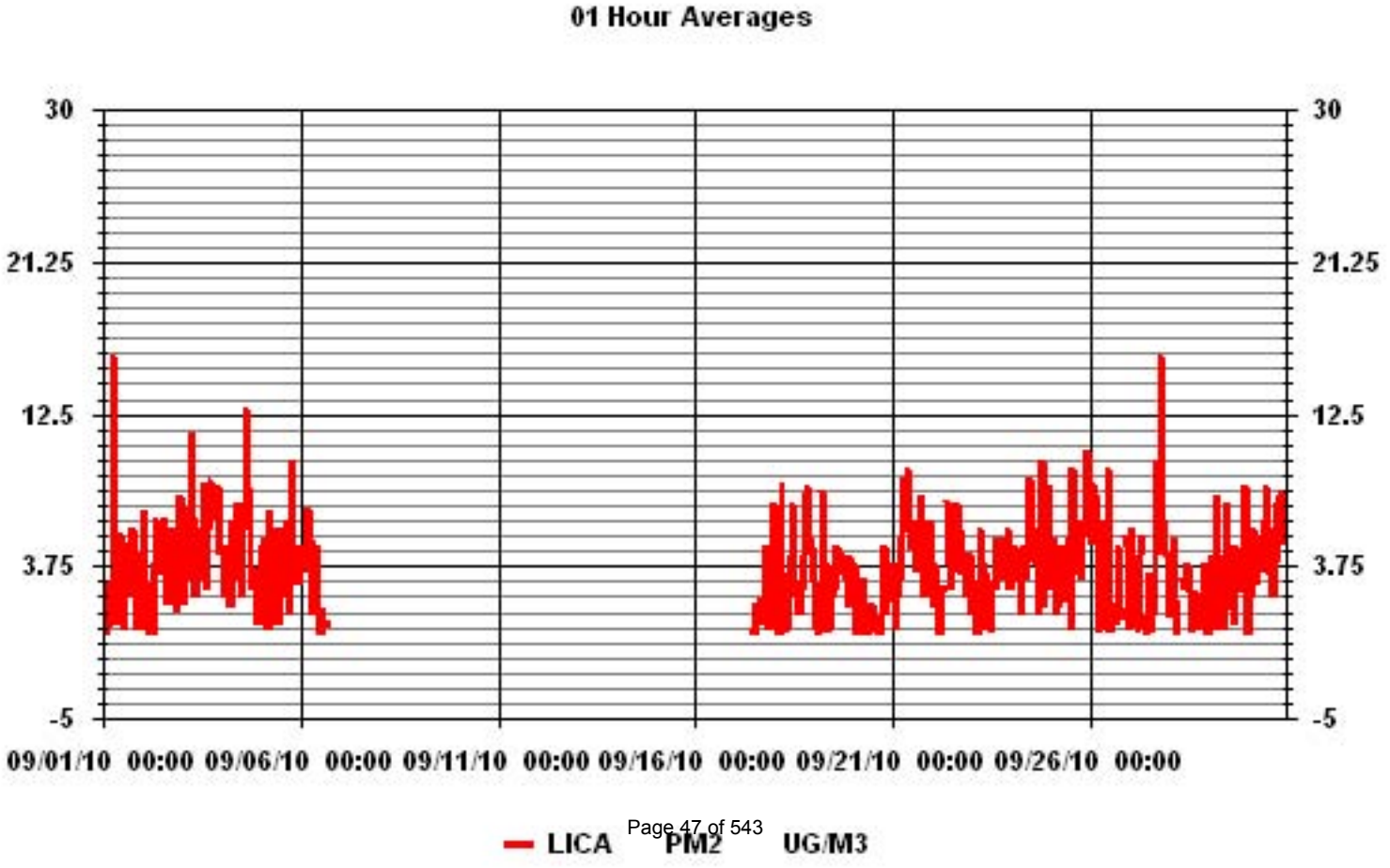


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - ug/m3 | 24-HR 30 ug/m3

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	397					
MAXIMUM 1-HR AVERAGE:	15.9	UG/M^3	@ HOUR(S)	6	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	5.6	UG/M^3			ON DAY(S)	3

IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	453	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	62.9	%
STANDARD DEVIATION:	2.65		MONTHLY AVERAGE:	3.60	UG/M^3


01 Hour Averages
30
21.25
12.5
3.75
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA PM2 UG/M3

LICA
PM2 / WD Joint Frequency Distribution (Percent)

September 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	2.00	3.11	2.22	3.56	6.68	8.68	17.81	4.45	4.67	3.34	7.34	12.02	9.57	8.01	3.34	3.11	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	2.00	3.11	2.22	3.56	6.68	8.68	17.81	4.45	4.67	3.34	7.34	12.02	9.57	8.01	3.34	3.11	

Calm : .00 %

Total # Operational Hours : 449

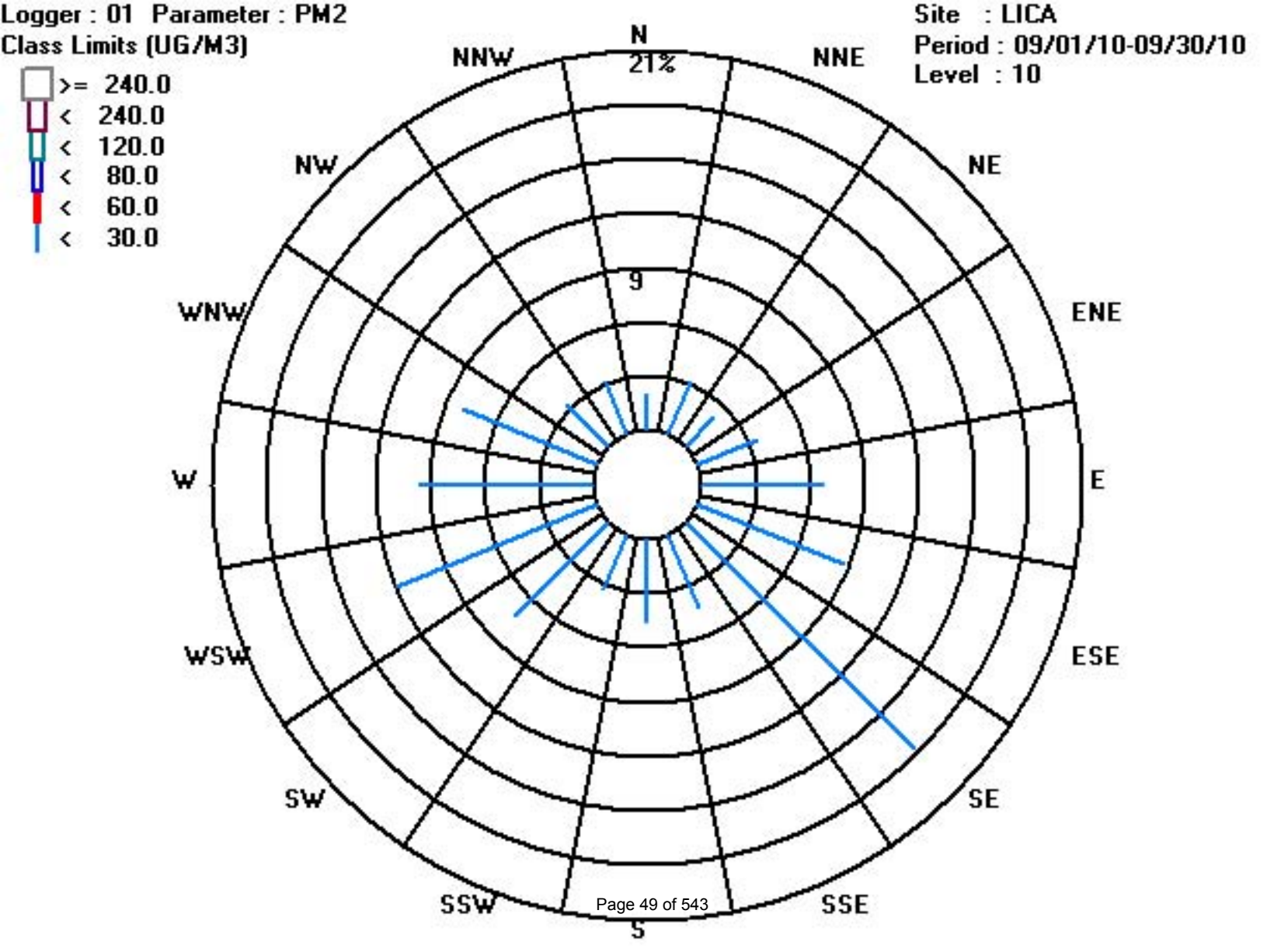
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	9	14	10	16	30	39	80	20	21	15	33	54	43	36	15	14	449
<	60.0																	
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	9	14	10	16	30	39	80	20	21	15	33	54	43	36	15	14	

Calm : .00 %

Total # Operational Hours : 449


Logger : 01 Parameter : PM2
Class Limits (UG/M3)
>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0
Site : LICA
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

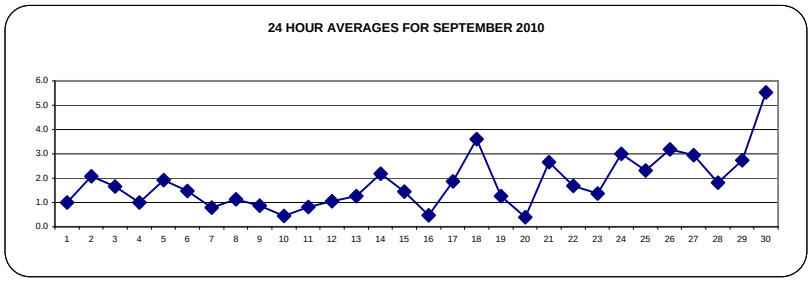
NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	0	0	1	1	1	1	2	0	0	0	0	0	0	1	0	0	0	3	1	4	4	**IZS**	3	4	1.0	24
2	2	2	1	2	3	3	4	5	4	2	2	1	1	0	1	0	0	0	3	3	4	**IZS**	3	2	5	2.1	24
3	1	1	1	1	2	5	4	2	3	2	1	1	0	0	0	1	1	2	4	3	**IZS**	1	1	1	5	1.7	24
4	1	1	1	0	1	2	1	1	1	0	0	0	0	1	1	1	1	1	2	**IZS**	1	2	2	2	2	1.0	24
5	0	0	0	2	2	4	3	4	4	4	4	2	0	1	1	1	0	0	**IZS**	1	1	2	4	4	4	1.9	24
6	4	5	4	4	2	2	2	4	0	0	1	0	0	1	1	1	1	**IZS**	1	1	0	0	0	0	5	1.5	24
7	0	0	0	0	0	2	1	2	1	1	1	1	1	1	1	1	**IZS**	1	2	1	1	0	0	0	2	0.8	24
8	0	1	0	0	0	0	0	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	1	3	4	4	2	1	1	0	4	1.1	24
9	0	0	0	0	1	1	2	2	1	2	1	1	**C**	1	**IZS**	2	1	1	1	1	1	0	0	0	2	0.9	24
10	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	1	1	1	0	1	2	1	1	1	2	0.4	24
11	1	1	1	1	1	1	1	1	0	0	0	0	**IZS**	0	0	0	0	0	0	1	2	3	3	2	3	0.8	24
12	1	2	3	2	2	2	2	3	1	1	0	**IZS**	0	1	0	0	0	0	0	1	1	1	1	0	3	1.0	24
13	0	0	0	0	1	1	4	3	0	0	**IZS**	0	0	0	0	0	0	1	2	4	4	4	3	2	4	1.3	24
14	3	3	3	2	2	6	3	4	3	**IZS**	1	1	1	2	2	1	1	2	1	3	2	2	1	1	6	2.2	24
15	1	1	1	2	1	2	2	2	**IZS**	1	1	1	2	1	1	2	1	1	2	1	1	2	2	2	2	1.4	24
16	0	0	0	0	2	2	3	**IZS**	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	3	0.5	24
17	1	2	2	1	1	2	**IZS**	4	1	1	0	0	2	0	0	0	0	0	2	6	4	5	5	4	6	1.9	24
18	7	3	4	3	3	**IZS**	3	5	4	4	3	2	1	1	0	0	1	2	5	12	9	4	4	3	12	3.6	24
19	3	3	1	1	**IZS**	4	3	2	1	1	1	1	1	1	1	1	1	2	1	0	0	0	0	0	4	1.3	24
20	0	0	0	**IZS**	1	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0.4	24
21	2	3	**IZS**	3	3	3	4	4	5	3	2	2	1	1	1	3	2	2	3	5	3	3	2	1	5	2.7	24
22	1	**IZS**	2	2	2	2	5	3	2	1	1	0	1	1	1	1	1	1	2	2	2	2	2	2	5	1.7	24
23	**IZS**	2	1	1	2	3	3	2	2	1	1	0	0	0	0	0	0	1	3	6	1	1	0	**IZS**	6	1.4	24
24	1	1	1	2	4	5	2	2	1	2	2	2	3	3	1	1	1	2	9	9	6	7	**IZS**	2	9	3.0	24
25	1	1	2	2	2	3	3	3	2	3	1	1	1	1	1	1	1	2	4	3	2	**IZS**	9	4	9	2.3	24
26	2	2	2	1	3	5	4	7	7	7	6	3	0	1	1	1	1	2	2	3	**IZS**	5	4	4	7	3.2	24
27	5	3	2	2	3	3	4	6	5	4	3	1	1	1	1	0	1	1	6	**IZS**	5	5	5	1	6	3.0	24
28	1	2	0	0	1	1	1	1	3	2	1	2	2	3	3	2	2	2	**IZS**	4	1	2	4	2	4	1.8	24
29	3	3	2	1	2	4	3	5	2	1	0	1	0	0	1	1	0	**IZS**	7	6	6	6	5	4	7	2.7	24
30	3	4	5	4	3	6	5	11	6	3	3	1	0	0	0	0	**IZS**	2	13	**15**	13	11	11	8	**15**	**5.5**	24
HOURLY MAX	7	5	5	4	4	6	5	11	7	7	6	3	3	3	3	3	2	3	13	15	13	11	11	8			
HOURLY AVG	1.6	1.6	1.3	1.4	1.8	2.7	2.6	3.2	2.1	1.6	1.3	0.9	0.7	0.8	0.8	0.8	0.7	1.1	3.0	3.5	2.8	2.7	2.6	1.9			

STATUS FLAG CODES

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

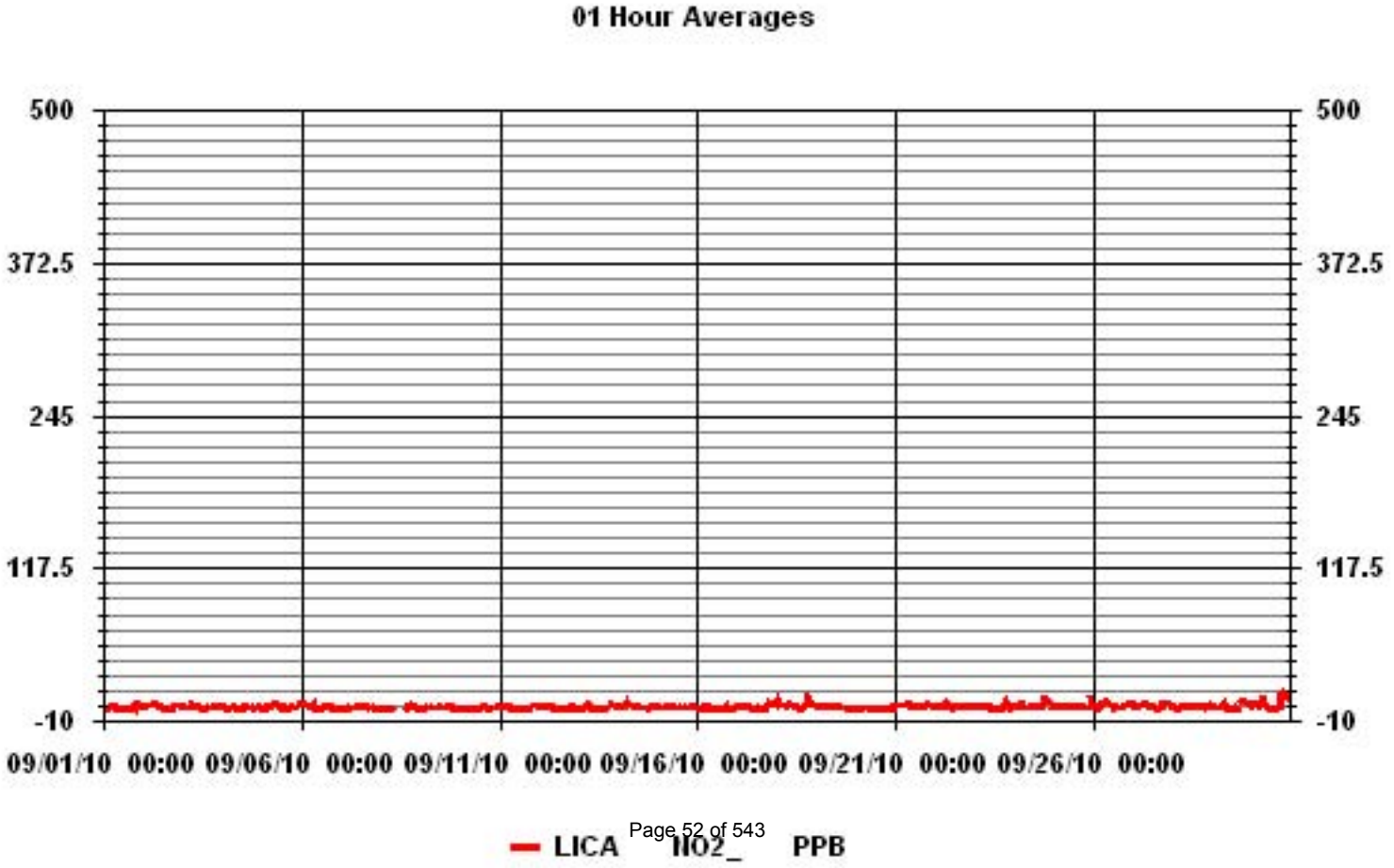


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 212 PPB | 24-HR 106 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	510					
MAXIMUM 1-HR AVERAGE:	15	PPB	@ HOUR(S)	19	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	5.5	PPB			ON DAY(S)	30

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME	100.0	%
STANDARD DEVIATION	1.98		MONTHLY AVERAGE	1.81	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

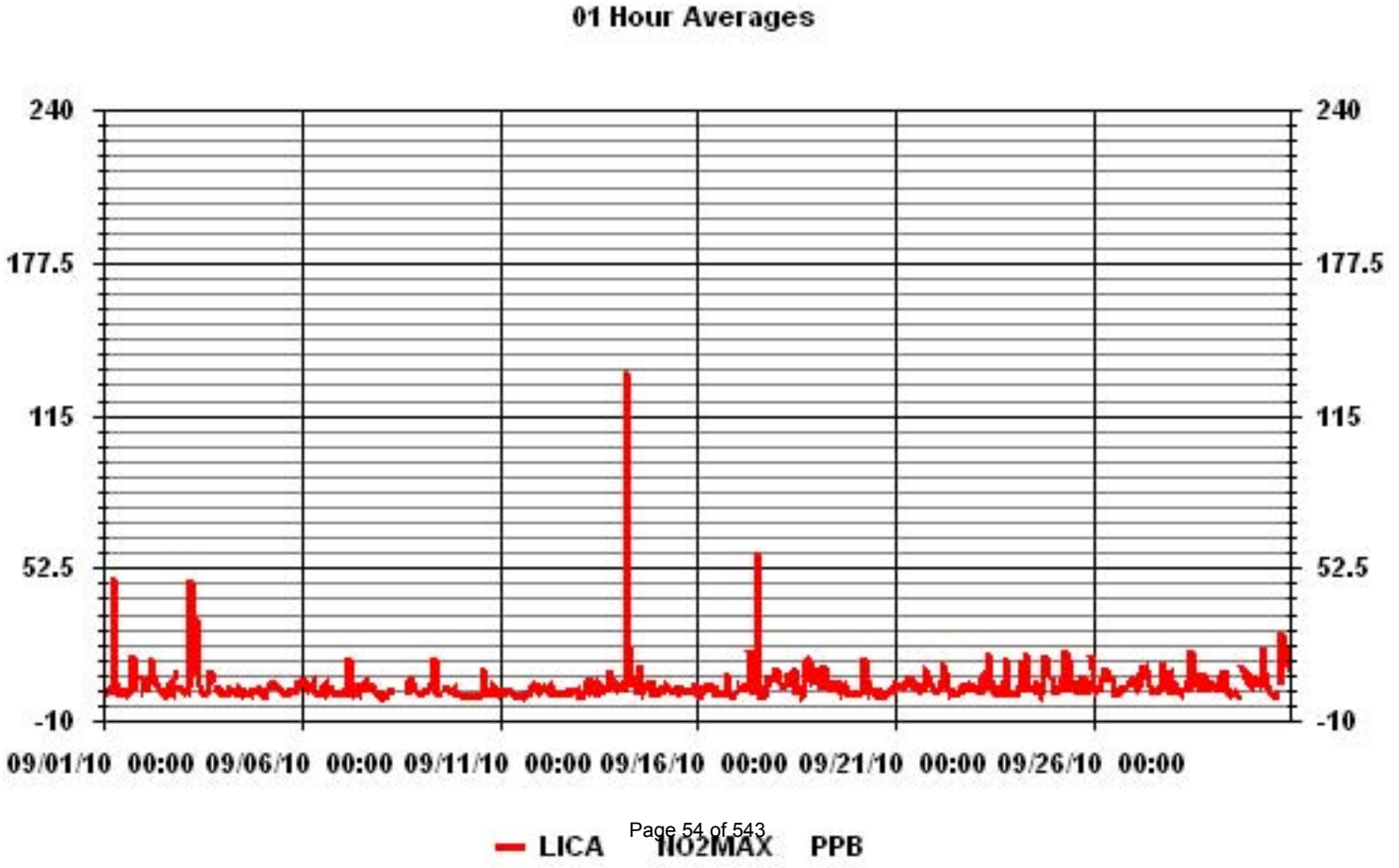
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	2	2	2	4	49	3	2	3	1	1	1	3	1	2	3	1	17	3	7	8	IZS	7	49	5.4	24
2	3	4	2	6	5	16	9	8	5	5	4	2	2	1	3	2	3	2	6	7	10	IZS	4	3	16	4.9	24
3	3	2	3	2	4	48	10	9	32	10	5	2	2	1	1	2	5	10	7	7	IZS	3	3	2	48	7.5	24
4	1	1	1	1	3	3	2	2	1	1	3	2	1	2	1	1	2	1	3	IZS	2	2	3	3	3	1.8	24
5	1	0	0	3	4	4	5	5	5	4	4	3	2	2	1	1	2	2	IZS	2	2	3	5	5	5	2.8	24
6	5	7	5	5	3	4	5	6	2	1	1	1	1	4	5	2	3	IZS	4	2	1	1	1	1	7	3.0	24
7	1	1	3	1	1	16	2	5	2	3	2	5	3	3	5	7	IZS	3	3	5	2	2	1	1	16	3.3	24
8	0	2	0	0	1	2	2	C	C	C	C	C	C	C	C	IZS	2	6	7	6	4	3	2	1	7	2.5	24
9	1	1	2	2	2	3	5	4	15	16	2	1	C	C	IZS	3	3	3	2	2	3	1	1	1	16	3.5	24
10	1	0	0	0	0	0	0	0	0	0	0	0	1	IZS	10	1	1	2	1	1	4	3	2	1	10	1.2	24
11	2	2	1	1	2	2	C	2	1	1	0	0	IZS	0	1	0	1	1	1	2	4	5	4	4	5	1.7	24
12	2	3	4	3	3	2	3	4	2	1	1	IZS	1	1	1	1	2	1	1	2	2	2	2	1	4	2.0	24
13	2	0	0	1	4	3	6	6	1	3	IZS	1	5	4	1	4	2	4	5	11	5	6	5	3	11	3.6	24
14	4	4	4	5	2	133	4	20	7	IZS	7	1	4	13	5	2	3	4	4	6	3	4	1	1	133	10.5	24
15	1	2	2	4	2	4	3	3	IZS	2	3	2	4	2	3	3	2	2	2	2	3	2	4	4	4	2.7	24
16	1	0	0	1	3	3	5	IZS	4	4	2	0	2	1	1	1	1	1	9	1	1	0	0	1	9	1.8	24
17	2	4	3	3	4	4	IZS	18	3	2	2	1	59	5	0	0	1	1	4	8	6	8	9	7	59	6.7	24
18	11	7	6	4	4	IZS	5	8	8	9	5	12	1	2	4	1	2	6	14	15	14	7	8	5	15	6.9	24
19	7	12	3	4	IZS	11	5	4	4	2	5	5	4	5	5	2	3	4	2	1	1	1	1	1	12	4.0	24
20	1	1	1	IZS	2	16	3	7	2	3	2	1	2	1	2	2	0	0	1	1	2	3	2	2	16	2.5	24
21	6	4	IZS	4	5	4	5	7	7	5	6	3	6	4	3	5	3	3	10	9	5	5	5	3	10	5.1	24
22	2	IZS	2	3	6	14	8	8	3	1	2	2	1	1	2	3	1	4	4	5	3	3	5	3	14	3.7	24
23	IZS	4	2	2	7	8	5	3	18	3	7	2	1	1	1	4	1	1	6	16	3	2	1	IZS	18	4.5	24
24	1	1	2	4	12	15	4	18	2	4	3	3	4	6	2	2	1	4	16	17	9	9	IZS	6	18	6.3	24
25	2	2	2	3	3	7	10	19	8	16	2	3	3	6	2	2	2	8	6	6	2	IZS	16	12	19	6.2	24
26	4	2	3	3	4	6	7	10	10	9	7	7	1	1	1	2	2	3	3	4	IZS	5	6	7	10	4.7	24
27	6	5	3	4	9	12	10	11	7	11	5	2	2	2	2	2	4	2	12	IZS	10	8	9	2	12	6.1	24
28	2	6	1	3	2	1	2	3	5	4	2	19	5	7	6	9	3	3	IZS	8	2	4	6	4	19	4.7	24
29	5	5	4	3	3	8	4	11	6	2	1	2	1	1	2	1	0	IZS	12	11	7	10	6	5	12	4.8	24
30	4	6	8	6	5	7	10	20	10	5	4	2	1	0	0	2	IZS	6	26	22	21	15	13	11	26	8.9	24
HOURLY MAX	11	12	8	6	12	133	49	20	32	16	7	19	59	13	10	9	5	10	26	22	21	15	16	12			
HOURLY AVG	2.8	3.1	2.4	2.9	3.7	12.4	6.7	8.0	6.1	4.6	3.1	3.0	4.4	2.9	2.5	2.4	2.1	3.1	6.7	6.5	4.9	4.5	4.5	3.7			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	644					
MAXIMUM INSTANTANEOUS VALUE:	133	PPB	@ HOUR(S)	5	ON DAY(S)	14
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	7.08					


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

LICA
NO2_ / WD Joint Frequency Distribution (Percent)

September 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	3.08	3.37	2.34	3.96	10.71	6.02	12.77	3.52	3.52	4.11	7.34	10.86	10.13	10.27	4.11	3.81	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.08	3.37	2.34	3.96	10.71	6.02	12.77	3.52	3.52	4.11	7.34	10.86	10.13	10.27	4.11	3.81	

Calm : .00 %

Total # Operational Hours : 681

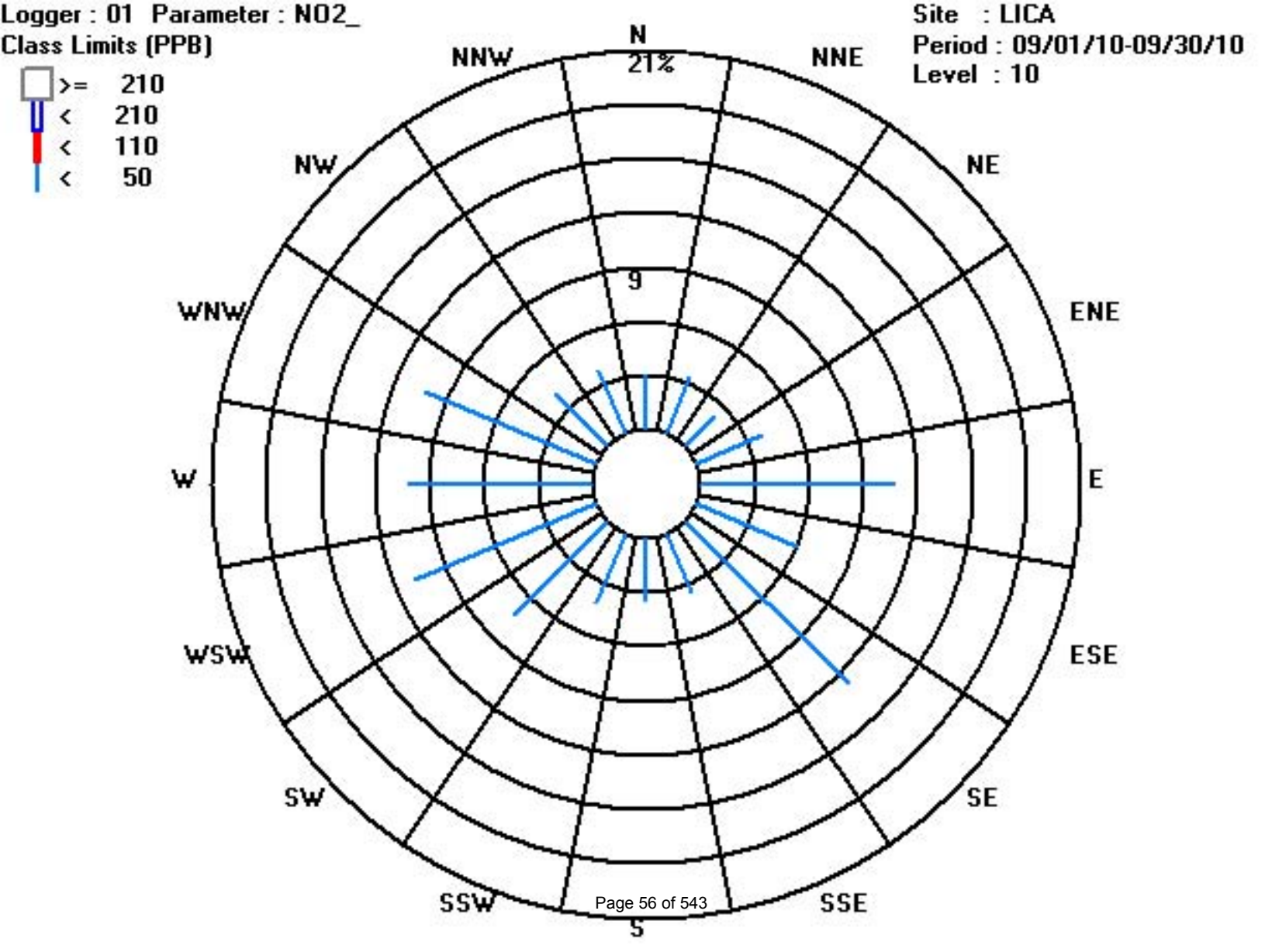
Distribution By Samples

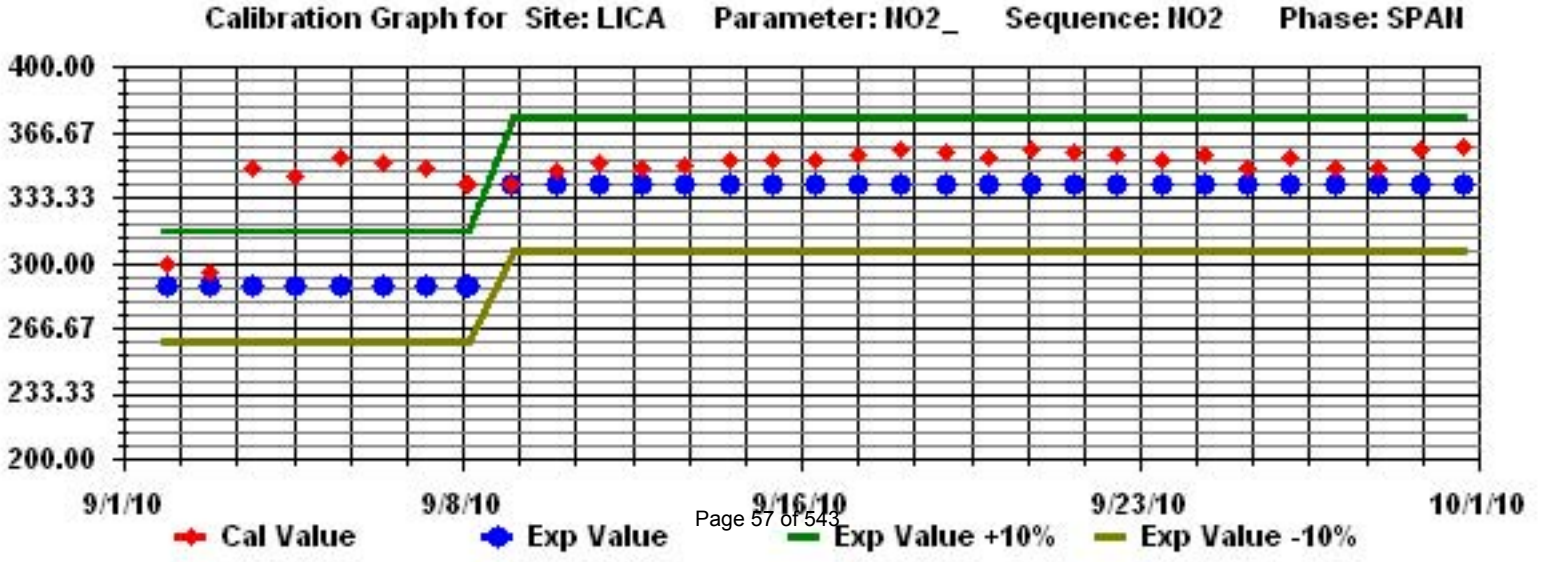
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	21	23	16	27	73	41	87	24	24	28	50	74	69	70	28	26	681
< 110																	
< 210																	
>= 210																	
Totals	21	23	16	27	73	41	87	24	24	28	50	74	69	70	28	26	

Calm : .00 %

Total # Operational Hours : 681


Logger : 01 Parameter : NO2_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAN
400.00
366.67
333.33
300.00
266.67
233.33
200.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

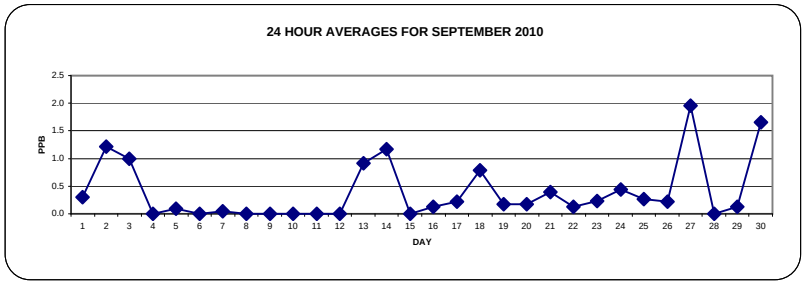
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	**IZS**	1	5	0.3	24
2	0	0	0	0	1	4	11	5	3	2	1	0	0	0	0	0	0	0	0	0	1	**IZS**	0	0	11	1.2	24
3	0	0	0	0	1	11	7	2	1	1	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	11	1.0	24
4	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
5	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	1	0.1	24
6	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
7	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	1	0.0	24
8	0	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	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	**C**	0	**IZS**	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
12	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
13	0	0	0	0	0	2	9	2	0	0	**IZS**	0	0	0	0	0	0	0	0	1	1	2	2	2	9	0.9	24
14	1	0	0	0	0	14	5	4	3	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	1.2	24
15	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
16	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0.1	24
17	0	0	0	0	0	0	**IZS**	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	0.2	24
18	1	0	0	0	0	**IZS**	1	8	4	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	8	0.8	24
19	0	0	0	0	**IZS**	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24
20	0	0	0	**IZS**	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24
21	0	0	**IZS**	0	0	0	2	3	2	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0.4	24
22	0	**IZS**	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
23	**IZS**	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	0.2	24
24	0	0	0	0	0	1	0	1	0	1	1	2	2	1	0	0	0	0	0	1	0	0	**IZS**	0	2	0.4	24
25	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	0	4	0.3	24
26	0	0	0	0	0	0	0	1	1	1	2	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	2	0.2	24
27	0	0	0	0	1	3	17	**20**	2	1	1	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	**20**	**2.0**	24
28	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
29	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	**IZS**	0	1	0	0	0	0	1	0.1	24
30	0	0	0	0	0	2	4	17	2	1	1	0	0	0	0	0	**IZS**	0	2	4	1	2	2	0	17	1.7	24
HOURLY MAX	1	0	0	0	1	14	17	20	4	2	2	2	2	1	0	0	0	0	3	4	1	2	2	2			
HOURLY AVG	0.1	0.0	0.0	0.0	0.1	1.5	2.2	2.4	0.9	0.5	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.3	0.1	0.1	0.2	0.1			

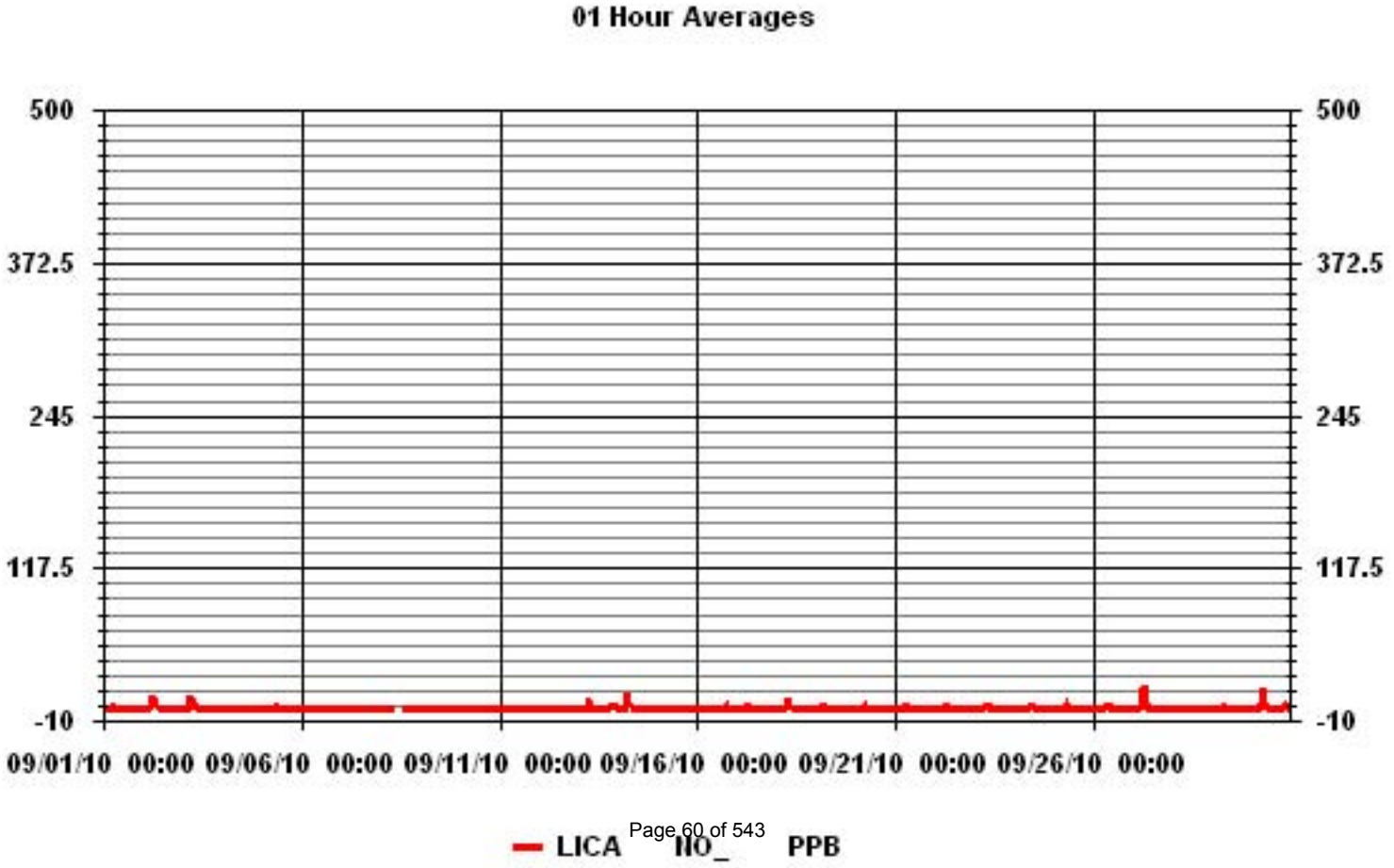
STATUS FLAG CODES

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:			96				
MAXIMUM 1-HR AVERAGE:			20	PPB	@ HOUR(S) 7	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:			2.0	PPB		ON DAY(S)	27
IZS CALIBRATION TIME:	31	HRS		OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	8	HRS		AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	1.66			MONTHLY AVERAGE		0.39	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

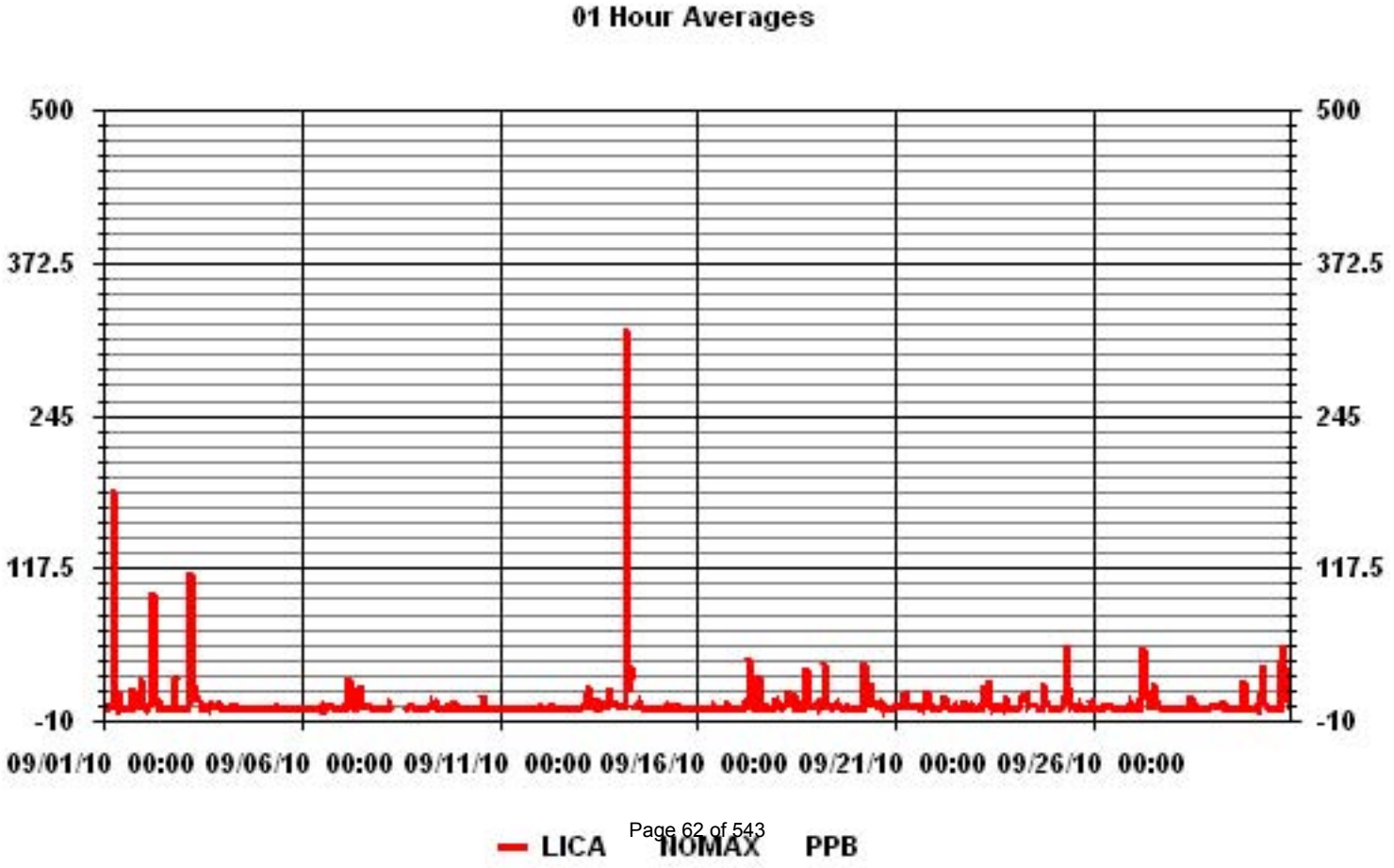
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	2	0	1	1	184	1	4	16	0	1	0	0	0	0	0	0	18	0	6	1	**IZS**	23	184	11.2	24
2	0	3	0	2	5	65	97	8	4	9	1	0	1	0	0	0	0	0	0	25	26	**IZS**	1	0	97	10.7	24
3	1	0	0	0	4	115	18	21	6	9	7	0	0	3	2	4	1	4	4	2	**IZS**	1	6	0	115	9.0	24
4	0	0	0	0	2	1	0	4	0	1	1	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	4	0.4	24
5	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	1	0	**IZS**	0	0	0	0	0	1	0.2	24
6	0	0	0	0	0	0	0	0	0	0	0	1	0	5	4	0	2	**IZS**	2	0	0	0	0	**P**	5	0.6	23
7	0	0	4	0	1	25	0	4	1	0	1	17	19	0	3	4	**IZS**	2	0	1	0	0	0	0	25	3.6	24
8	0	0	0	0	0	4	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	1	3	2	3	2	0	0	0	4	1.1	24
9	0	0	1	0	0	1	1	6	4	6	4	0	**C**	**C**	**IZS**	0	1	1	0	0	1	7	1	0	7	1.6	24
10	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	9	0	0	0	0	0	0	0	0	0	9	0.4	24
11	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
12	0	1	1	0	1	0	1	1	1	1	0	**IZS**	0	0	0	0	0	1	0	0	0	0	1	0	1	0.4	24
13	0	0	1	1	1	13	19	10	0	3	**IZS**	0	7	6	3	5	6	5	0	18	5	5	4	4	19	5.0	24
14	3	1	1	2	0	**317**	14	37	26	**IZS**	3	1	1	5	2	0	0	1	0	1	0	0	0	0	**317**	18.0	24
15	0	0	0	1	0	3	0	1	**IZS**	1	1	0	0	2	2	0	0	1	0	0	0	0	0	0	3	0.5	24
16	0	0	0	0	0	0	0	**IZS**	0	3	1	0	0	0	0	0	0	0	7	0	0	0	0	0	7	0.5	24
17	0	0	0	1	4	1	**IZS**	39	1	1	1	0	4	28	0	0	0	0	1	1	0	1	5	3	39	4.0	24
18	6	2	2	1	3	**IZS**	3	12	12	5	2	12	0	0	3	0	0	2	34	4	3	1	1	1	34	4.7	24
19	3	5	0	1	**IZS**	35	1	1	3	3	1	3	5	1	1	1	0	2	0	1	1	0	0	0	35	3.0	24
20	0	0	0	**IZS**	0	38	1	14	4	21	1	4	5	1	1	4	0	3	0	0	0	0	0	1	38	4.3	24
21	1	1	**IZS**	1	1	11	12	5	3	3	2	3	3	3	1	3	3	0	3	15	6	1	1	1	15	3.6	24
22	0	**IZS**	0	0	2	4	10	7	2	1	0	1	3	0	0	0	0	2	7	0	0	0	3	0	10	1.8	24
23	**IZS**	1	0	0	4	20	11	5	4	24	5	0	2	0	0	2	3	0	2	10	0	0	0	**IZS**	24	4.2	24
24	0	0	0	2	10	11	9	11	2	3	3	3	3	3	0	0	0	0	21	9	3	3	**IZS**	0	21	4.2	24
25	0	0	0	0	0	1	3	11	53	19	1	2	1	3	1	0	4	2	1	0	0	**IZS**	6	7	53	5.0	24
26	0	0	0	0	1	0	3	2	2	2	3	2	0	0	0	0	0	0	1	0	**IZS**	0	5	2	5	1.0	24
27	1	2	0	0	9	13	50	44	8	12	12	0	6	22	1	5	2	0	0	**IZS**	0	0	0	0	50	8.1	24
28	0	1	0	0	0	0	0	0	0	0	0	10	2	2	1	1	0	0	**IZS**	0	0	0	0	1	10	0.8	24
29	1	1	1	1	1	1	1	5	1	0	0	1	0	0	0	0	0	**IZS**	0	23	0	0	0	0	23	1.6	24
30	0	0	1	1	0	6	14	37	5	3	2	0	0	0	0	1	**IZS**	0	40	53	8	34	8	2	53	9.3	24
HOURLY MAX	6	5	4	2	10	317	184	44	53	24	12	17	19	28	9	5	6	5	40	53	26	34	8	23			
HOURLY AVG	0.6	0.6	0.5	0.5	1.7	23.7	15.6	10.2	5.3	5.3	1.9	2.2	2.3	3.1	1.2	1.0	0.9	1.0	5.1	5.9	2.2	1.9	1.5	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:	338					
MAXIMUM INSTANTANEOUS VALUE:	317	PPB	@ HOUR(S)	5	ON DAY(S)	14
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		719	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	16.62					


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

LICA
NO_ / WD Joint Frequency Distribution (Percent)

September 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	3.08	3.37	2.34	3.96	10.71	6.02	12.77	3.52	3.52	4.11	7.34	10.86	10.13	10.27	4.11	3.81	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.08	3.37	2.34	3.96	10.71	6.02	12.77	3.52	3.52	4.11	7.34	10.86	10.13	10.27	4.11	3.81	

Calm : .00 %

Total # Operational Hours : 681

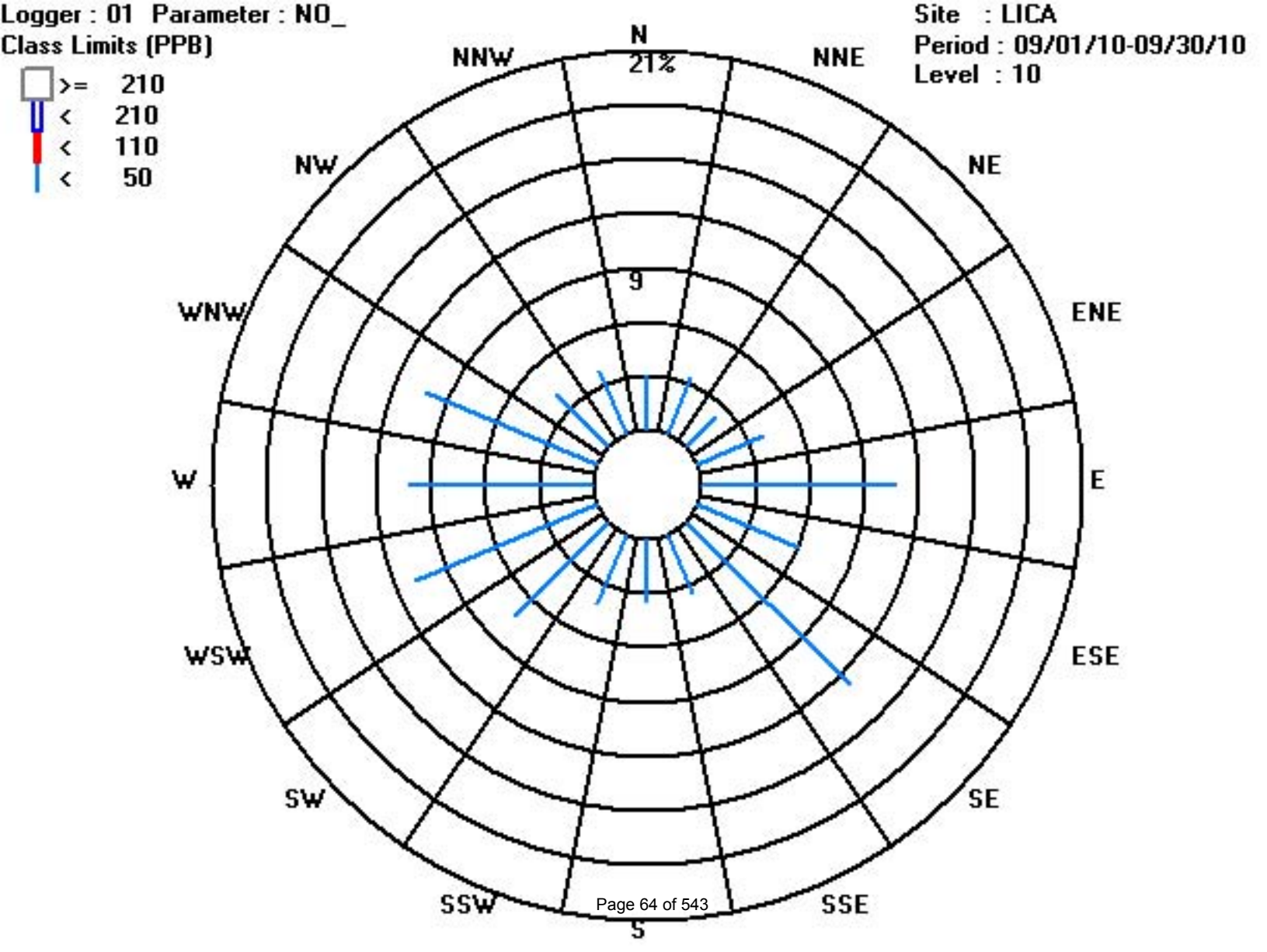
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	21	23	16	27	73	41	87	24	24	28	50	74	69	70	28	26	681
< 110																	
< 210																	
>= 210																	
Totals	21	23	16	27	73	41	87	24	24	28	50	74	69	70	28	26	

Calm : .00 %

Total # Operational Hours : 681


Logger : 01 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

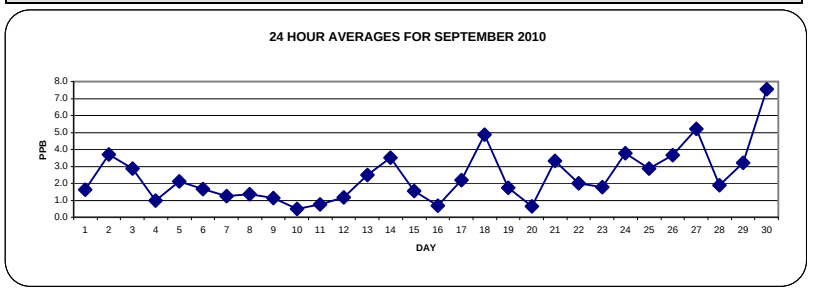
OXIDES OF NITROGEN hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	0	1	1	1	1	6	3	1	1	0	0	0	0	1	1	0	0	4	1	5	5	**IZS**	4	6	1.6	24
2	2	2	1	3	4	7	16	11	8	4	3	1	1	0	1	0	1	1	3	4	6	**IZS**	3	3	16	3.7	24
3	2	2	1	1	3	16	12	4	4	3	2	1	0	0	0	1	2	2	4	3	**IZS**	1	1	1	16	2.9	24
4	1	1	0	0	1	2	1	1	1	1	1	0	1	1	0	1	1	1	2	**IZS**	1	1	2	2	2	1.0	24
5	0	0	0	2	2	4	3	4	5	5	5	3	0	1	1	1	1	0	**IZS**	1	1	2	4	4	5	2.1	24
6	4	5	4	4	2	2	3	5	1	1	1	0	0	1	1	1	1	**IZS**	1	1	0	0	0	0	5	1.7	24
7	0	0	0	0	1	3	2	3	1	2	1	2	2	1	2	2	**IZS**	2	2	2	1	0	0	0	3	1.3	24
8	0	1	0	0	0	0	1	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	1	3	4	5	3	1	1	0	5	1.4	24
9	0	0	1	1	1	2	2	2	2	2	1	1	**C**	1	**IZS**	2	1	2	1	1	1	1	0	0	2	1.1	24
10	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	2	1	1	1	0	1	2	1	1	1	2	0.5	24
11	1	1	0	0	1	1	1	1	0	0	0	0	**IZS**	0	0	0	0	0	0	1	2	3	3	2	3	0.7	24
12	1	2	3	2	2	2	2	3	2	1	1	**IZS**	1	1	0	0	0	0	0	1	1	1	1	0	3	1.2	24
13	0	0	0	0	1	3	14	5	1	1	**IZS**	0	0	0	0	0	0	1	2	6	5	7	6	5	14	2.5	24
14	4	3	3	2	2	20	8	9	7	**IZS**	2	1	1	3	2	1	1	2	1	3	2	2	1	1	20	3.5	24
15	1	1	1	2	1	2	2	3	**IZS**	2	2	1	2	1	1	2	1	2	2	1	1	1	2	2	3	1.6	24
16	0	0	0	0	1	2	4	**IZS**	1	1	0	0	0	0	0	0	0	0	6	0	0	0	0	1	6	0.7	24
17	1	2	2	1	1	2	**IZS**	8	2	1	1	0	2	1	0	0	0	0	2	6	4	5	5	4	8	2.2	24
18	9	4	5	3	4	**IZS**	5	14	9	7	5	3	1	1	0	0	1	2	7	12	9	4	4	3	14	4.9	24
19	3	4	1	2	**IZS**	8	4	3	2	1	1	1	1	2	2	1	1	2	1	0	0	0	0	0	8	1.7	24
20	0	0	0	**IZS**	1	5	1	3	1	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	5	0.7	24
21	2	3	**IZS**	3	3	3	6	7	7	4	3	2	2	2	2	3	2	2	4	7	3	3	2	1	7	3.3	24
22	1	**IZS**	2	2	3	3	6	5	3	2	1	1	1	1	1	1	1	1	2	2	2	1	2	2	6	2.0	24
23	**IZS**	2	1	1	2	4	4	3	3	3	2	1	1	0	0	1	0	1	3	6	1	0	0	**IZS**	6	1.8	24
24	1	1	1	2	5	7	2	4	2	3	4	5	5	4	1	1	1	2	10	10	6	8	**IZS**	2	10	3.8	24
25	1	1	2	2	2	3	3	4	6	4	2	2	2	2	1	1	1	2	4	3	2	**IZS**	11	5	11	2.9	24
26	2	2	2	2	3	5	4	9	8	9	9	4	0	1	1	1	1	2	2	3	**IZS**	5	4	5	9	3.7	24
27	5	3	2	2	4	7	22	27	8	6	4	2	1	1	1	1	1	1	6	**IZS**	5	5	5	1	27	5.2	24
28	1	2	0	0	1	1	1	1	3	2	1	3	2	3	3	3	2	2	**IZS**	3	1	2	4	2	4	1.9	24
29	3	3	2	2	2	4	4	7	3	2	1	1	1	1	1	1	0	**IZS**	7	7	6	7	5	4	7	3.2	24
30	3	4	5	5	4	8	9	**29**	8	5	5	1	1	0	0	0	**IZS**	2	15	20	14	14	13	9	**29**	**7.6**	24
HOURLY MAX	9	5	5	5	5	20	22	29	9	9	9	5	5	4	3	3	2	3	15	20	14	14	13	9			
HOURLY AVG	1.7	1.7	1.4	1.6	2.0	4.4	5.1	6.2	3.5	2.7	2.1	1.3	1.0	1.0	0.9	0.9	0.8	1.3	3.4	3.9	3.0	2.9	2.9	2.2			

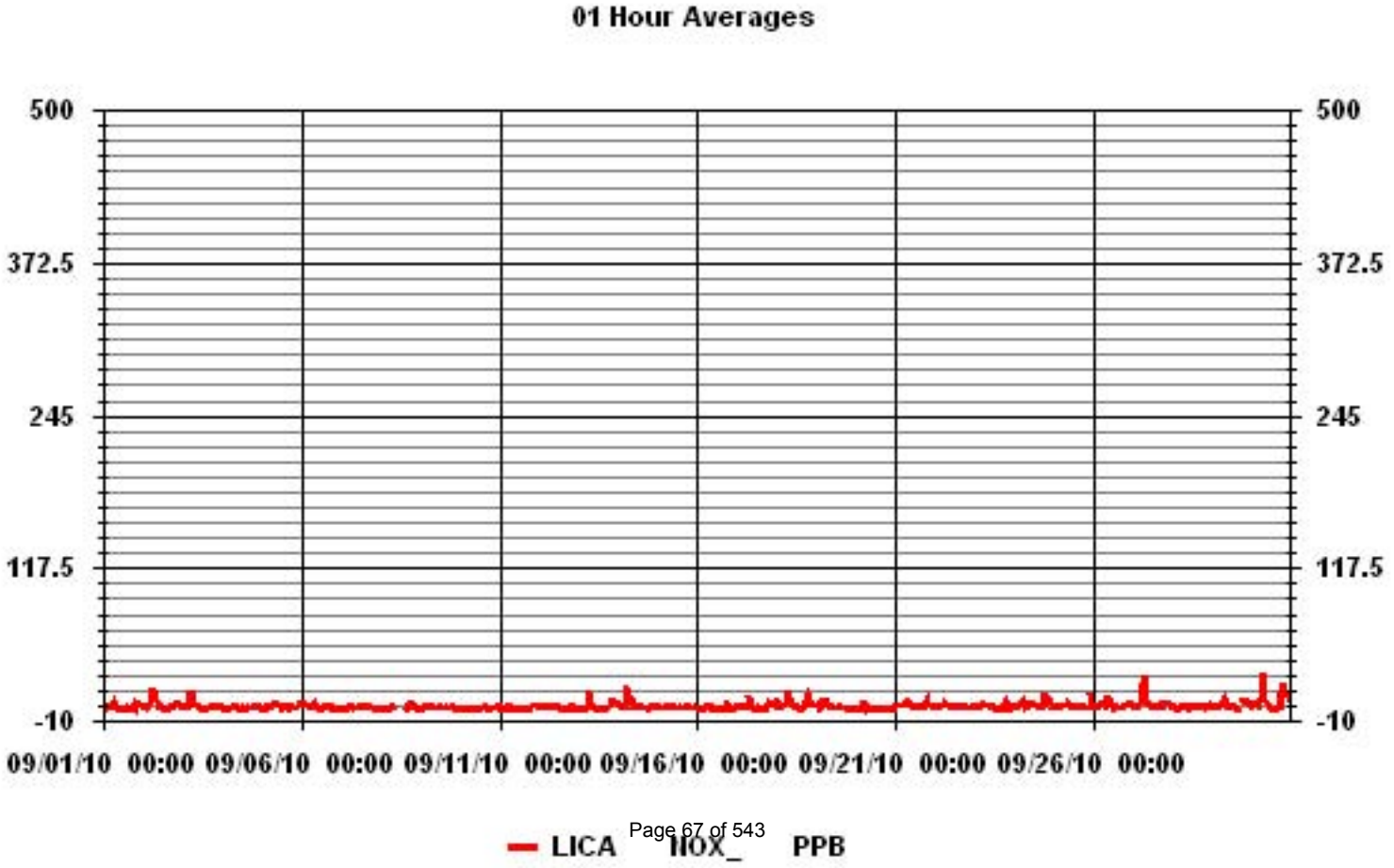
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	540					
MAXIMUM 1-HR AVERAGE:	29	PPB	@ HOUR(S)	7	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	7.6	PPB			ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	3.14		MONTHLY AVERAGE		2.42	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

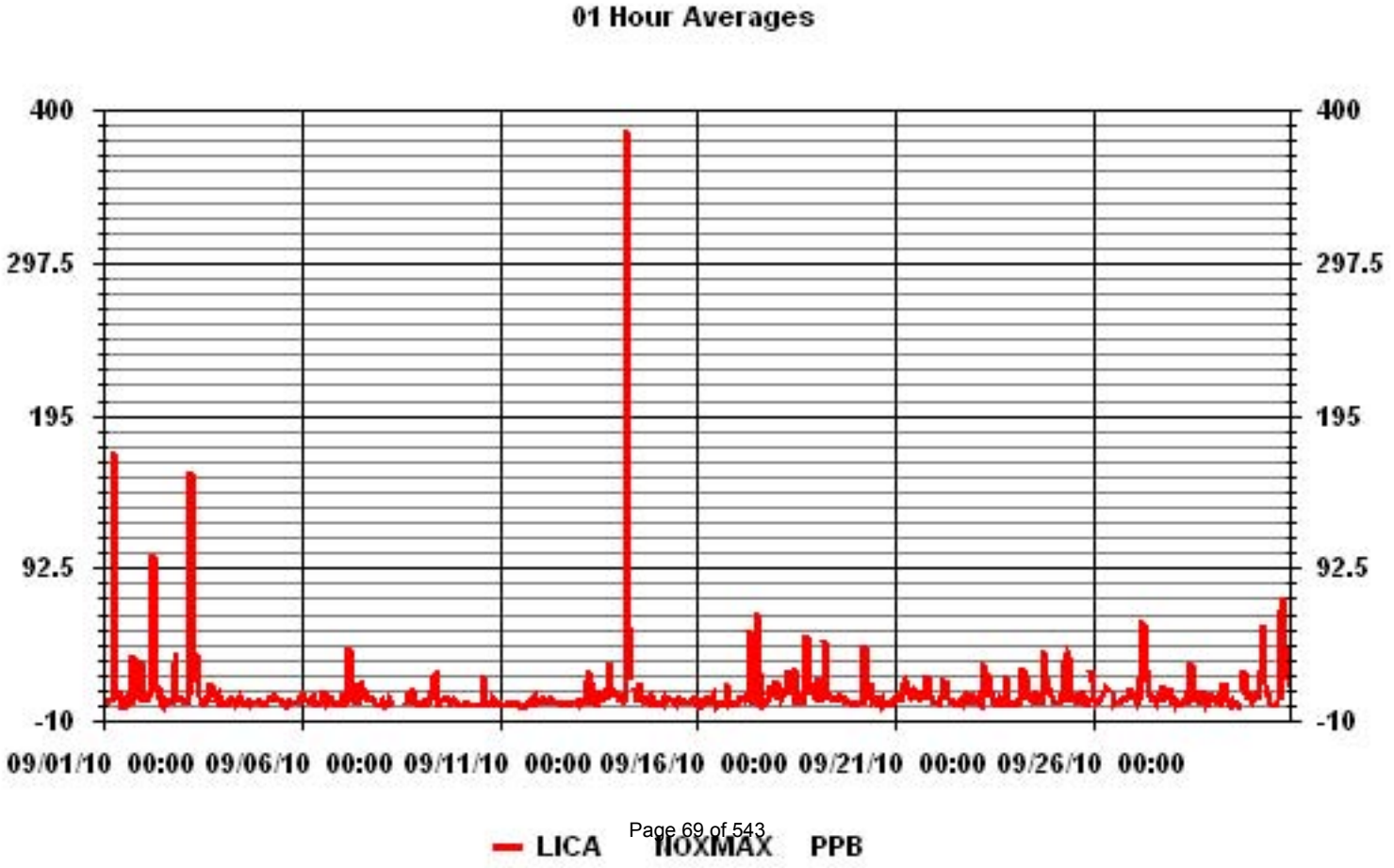
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	2	3	3	4	5	171	5	7	8	1	2	1	4	1	2	4	1	34	3	14	9	**IZS**	28	171	13.6	24
2	3	7	2	7	9	70	101	16	9	14	5	2	3	1	4	3	3	3	6	29	34	**IZS**	4	4	101	14.7	24
3	4	3	3	3	8	157	27	30	35	18	7	3	2	4	2	3	6	15	11	9	**IZS**	5	7	2	157	15.8	24
4	1	1	1	1	4	5	3	3	1	2	5	2	2	2	1	2	3	1	3	**IZS**	2	2	3	3	5	2.3	24
5	1	0	0	3	4	4	6	5	6	6	5	4	3	2	2	1	3	3	**IZS**	2	2	3	5	5	6	3.3	24
6	4	7	5	5	3	4	5	6	2	1	1	2	2	8	8	3	5	**IZS**	5	3	2	1	1	1	8	3.7	24
7	1	1	8	1	3	39	3	8	3	3	3	14	15	4	8	10	**IZS**	4	4	7	2	2	2	1	39	6.3	24
8	1	3	0	1	1	5	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**IZS**	3	8	9	9	6	3	2	1	9	3.7	24
9	1	1	3	3	2	4	7	10	20	21	6	2	**C**	**C**	**IZS**	4	4	4	2	3	5	4	3	1	21	5.2	24
10	1	0	0	1	1	1	0	0	0	0	0	0	1	**IZS**	18	1	1	2	1	1	5	3	2	1	18	1.7	24
11	2	2	1	1	2	2	2	2	1	1	1	1	**IZS**	0	1	0	1	1	1	2	4	6	3	4	6	1.8	24
12	3	3	5	4	4	3	4	5	3	2	2	**IZS**	2	2	1	1	2	2	1	2	2	2	3	2	5	2.6	24
13	3	1	2	2	5	17	24	17	1	6	**IZS**	2	7	10	3	5	9	9	5	29	11	10	10	8	29	8.5	24
14	7	5	4	8	3	**386**	18	53	32	**IZS**	10	2	5	16	8	3	3	5	4	6	3	4	1	1	**386**	25.5	24
15	1	2	2	5	2	4	4	4	**IZS**	3	4	2	4	4	4	3	3	3	2	2	4	3	4	4	5	3.2	24
16	1	0	1	1	3	3	6	**IZS**	5	7	3	0	2	1	1	1	1	1	15	1	2	0	0	1	15	2.4	24
17	2	5	4	4	6	4	**IZS**	48	5	3	3	1	63	23	1	0	1	2	5	9	7	9	13	9	63	9.9	24
18	17	8	9	5	7	**IZS**	9	21	21	15	8	25	2	2	8	1	3	8	48	21	16	8	10	7	48	12.1	24
19	9	18	3	5	**IZS**	42	6	6	7	5	5	5	6	7	7	4	4	5	3	2	2	2	2	1	42	6.8	24
20	1	2	2	**IZS**	3	41	4	14	4	15	3	4	5	2	3	5	1	3	1	1	2	3	2	4	41	5.4	24
21	7	6	**IZS**	5	7	15	17	13	10	7	9	4	8	6	5	8	7	4	13	21	11	6	6	4	21	8.7	24
22	3	**IZS**	2	4	7	18	15	15	6	3	3	3	1	1	3	4	2	6	8	6	3	3	9	3	18	5.6	24
23	**IZS**	6	3	2	11	28	15	6	22	9	11	3	2	1	1	5	3	2	7	21	3	2	1	**IZS**	28	7.5	24
24	1	1	2	6	23	25	14	21	4	7	5	7	7	10	3	2	2	5	37	20	13	10	**IZS**	6	37	10.0	24
25	3	2	2	2	3	8	13	31	36	34	3	5	5	9	2	2	2	10	7	6	2	**IZS**	23	18	36	9.9	24
26	5	2	4	3	5	7	10	13	12	12	11	10	1	2	2	2	2	3	4	4	**IZS**	6	12	8	13	6.1	24
27	7	7	3	5	18	26	55	54	15	23	8	3	6	5	3	7	6	2	12	**IZS**	10	8	9	2	55	12.8	24
28	2	6	1	3	2	1	2	3	6	4	2	29	7	10	7	10	3	3	**IZS**	8	2	4	6	4	29	5.4	24
29	6	6	5	4	3	9	5	16	8	4	2	4	1	2	3	2	0	**IZS**	12	23	8	12	6	6	23	6.4	24
30	4	7	8	8	5	14	23	55	15	8	7	3	1	0	0	3	**IZS**	6	65	73	29	39	19	14	73	17.7	24
HOURLY MAX	17	18	9	8	23	386	171	55	36	34	11	29	63	23	18	10	9	15	65	73	34	39	23	28			
HOURLY AVG	3.5	3.9	3.0	3.6	5.4	32.7	19.7	17.1	10.6	8.6	4.8	5.1	6.1	5.1	3.9	3.3	3.1	4.3	11.6	11.5	7.4	6.0	6.0	5.3			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	658					
MAXIMUM INSTANTANEOUS VALUE:	386	PPB	@ HOUR(S)	5	ON DAY(S)	14
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	19.57					


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

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

September 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	3.08	3.37	2.34	3.96	10.71	6.02	12.77	3.52	3.52	4.11	7.34	10.86	10.13	10.27	4.11	3.81	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.08	3.37	2.34	3.96	10.71	6.02	12.77	3.52	3.52	4.11	7.34	10.86	10.13	10.27	4.11	3.81	

Calm : .00 %

Total # Operational Hours : 681

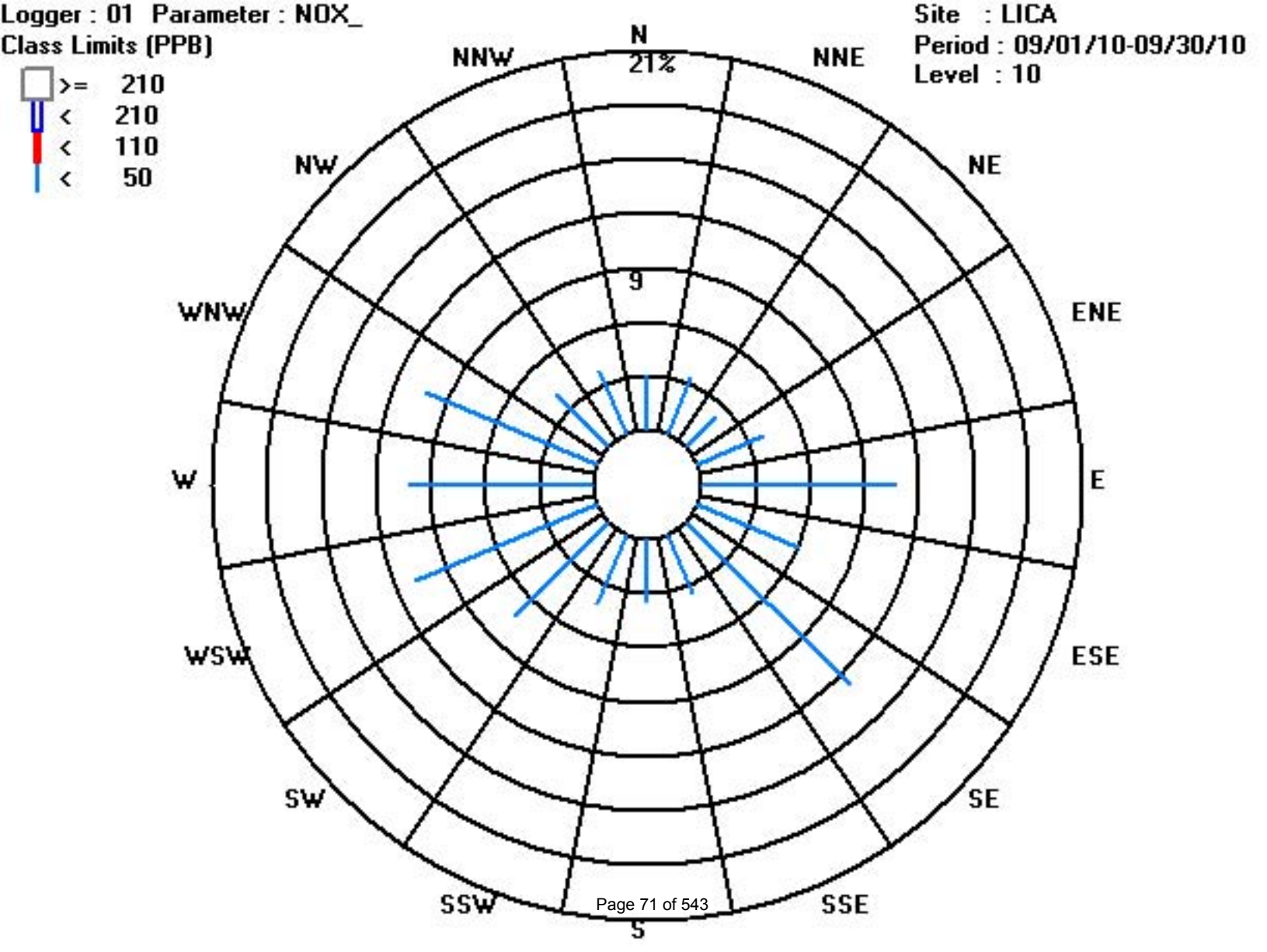
Distribution By Samples

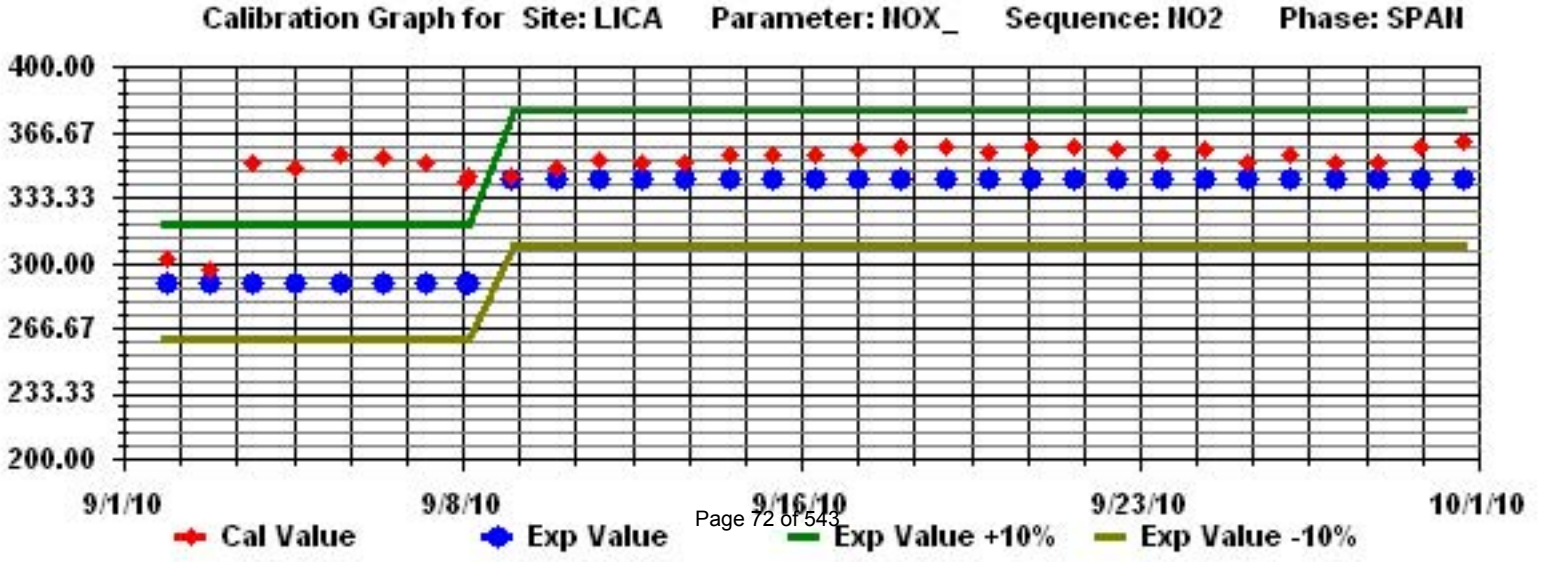
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	21	23	16	27	73	41	87	24	24	28	50	74	69	70	28	26	681
< 110																	
< 210																	
>= 210																	
Totals	21	23	16	27	73	41	87	24	24	28	50	74	69	70	28	26	

Calm : .00 %

Total # Operational Hours : 681


Logger : 01 Parameter : NOX_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN
400.00
366.67
333.33
300.00
266.67
233.33
200.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

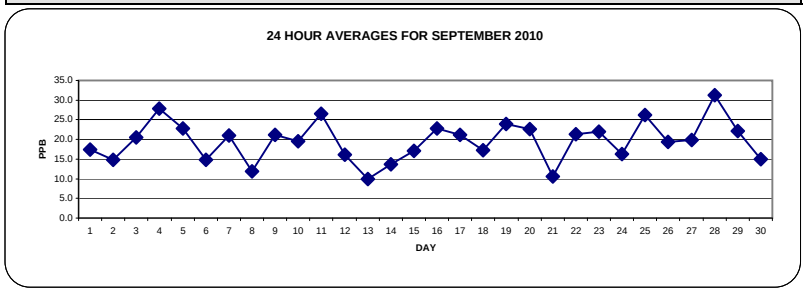
OZONE (O_3) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	5	3	2	2	6	8	7	13	23	26	27	30	31	31	31	31	34	32	26	20	8	4	**IZS**	2	34	17.5	24
2	1	2	3	1	0	0	2	7	11	15	21	28	33	34	36	37	38	36	18	8	5	**IZS**	2	1	38	14.7	24
3	1	1	5	2	1	0	5	14	18	20	26	32	37	37	38	36	32	30	25	27	**IZS**	29	29	27	38	20.5	24
4	26	27	28	28	26	25	24	25	26	26	27	29	30	31	29	31	34	30	26	**IZS**	26	26	30	30	34	27.8	24
5	35	36	32	24	22	20	21	17	16	17	19	22	26	26	26	25	27	30	**IZS**	19	17	17	17	15	36	22.9	24
6	13	11	12	11	6	3	9	10	15	14	14	13	12	11	14	25	27	**IZS**	21	18	19	20	21	22	27	14.8	24
7	21	20	20	19	18	18	19	21	27	29	27	25	24	21	21	21	**IZS**	20	18	20	20	20	18	16	29	21.0	24
8	14	11	12	12	11	10	11	10	11	12	14	16	17	**C**	**C**	**C**	**C**	**C**	10	8	10	12	12	13	17	11.9	24
9	13	14	16	17	18	20	20	18	18	19	21	25	**C**	23	**IZS**	30	25	27	26	25	24	23	22	20	30	21.1	24
10	20	20	18	17	17	14	15	15	16	18	18	20	23	**IZS**	23	24	24	23	22	21	17	18	22	24	24	19.5	24
11	28	34	33	32	29	28	29	30	32	30	31	32	**IZS**	27	27	29	28	26	26	24	18	14	13	12	34	26.6	24
12	12	9	7	7	8	8	7	5	9	19	25	**IZS**	26	26	30	31	33	32	29	18	7	6	6	12	33	16.2	24
13	13	6	4	3	2	1	1	6	14	19	**IZS**	18	23	23	23	23	22	16	7	2	1	0	0	0	23	9.9	24
14	0	0	1	2	1	1	1	4	6	**IZS**	17	20	24	25	26	28	29	25	25	16	12	15	16	19	29	13.6	24
15	19	16	13	13	9	8	10	10	**IZS**	14	17	21	20	21	25	24	22	15	13	24	25	20	17	16	25	17.0	24
16	17	17	18	17	17	15	13	**IZS**	18	19	23	26	27	27	30	29	26	28	26	28	27	26	26	25	30	22.8	24
17	23	22	19	20	19	16	**IZS**	18	22	26	27	28	28	29	29	29	29	29	26	15	15	8	4	4	29	21.1	24
18	3	4	2	2	1	**IZS**	2	3	13	21	26	31	33	35	36	36	36	33	21	7	8	14	14	17	36	17.3	24
19	14	11	8	8	**IZS**	5	5	17	25	26	29	33	30	30	30	32	32	31	31	33	31	30	29	29	33	23.9	24
20	28	28	27	**IZS**	26	25	26	23	23	23	23	23	23	23	23	24	24	25	25	20	16	13	15	13	28	22.6	24
21	4	2	**IZS**	5	4	2	3	7	11	14	17	18	19	22	23	20	19	18	13	4	3	3	7	6	23	10.6	24
22	4	**IZS**	9	9	8	10	6	8	13	19	27	30	31	31	31	32	32	32	30	28	27	26	25	22	32	21.3	24
23	**IZS**	16	13	13	14	12	11	12	13	14	18	27	29	31	34	35	35	34	29	23	26	23	20	**IZS**	35	21.9	24
24	18	17	15	13	8	6	9	8	9	9	12	13	17	25	37	38	38	33	14	7	5	3	**IZS**	21	38	16.3	24
25	25	26	26	27	26	24	23	22	21	23	25	25	26	30	31	34	37	35	30	29	29	**IZS**	11	17	37	26.2	24
26	21	11	5	4	12	8	7	10	12	12	15	21	35	35	37	38	35	33	28	26	**IZS**	15	10	14	38	19.3	24
27	15	9	5	2	1	1	0	2	11	15	20	35	39	38	40	**41**	39	38	30	**IZS**	18	17	16	25	**41**	19.9	24
28	22	16	38	39	38	38	34	36	34	32	33	32	30	33	35	34	32	30	**IZS**	26	30	30	22	26	39	**31.3**	24
29	23	20	21	22	23	19	18	17	22	27	30	32	34	35	36	36	35	**IZS**	22	13	9	5	6	4	36	22.1	24
30	6	3	2	2	2	1	1	5	19	26	26	32	36	38	38	39	**IZS**	34	14	6	6	4	2	2	39	15.0	24
HOURLY MAX	35	36	38	39	38	38	34	36	34	32	33	35	39	38	40	41	39	38	31	33	31	30	30	30			
HOURLY AVG	15.3	14.2	14.3	12.9	12.9	11.9	11.7	13.6	17.5	20.1	22.6	25.4	27.3	28.5	30.0	30.8	30.5	28.7	22.5	18.4	16.4	15.8	15.4	15.7			

STATUS FLAG CODES

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

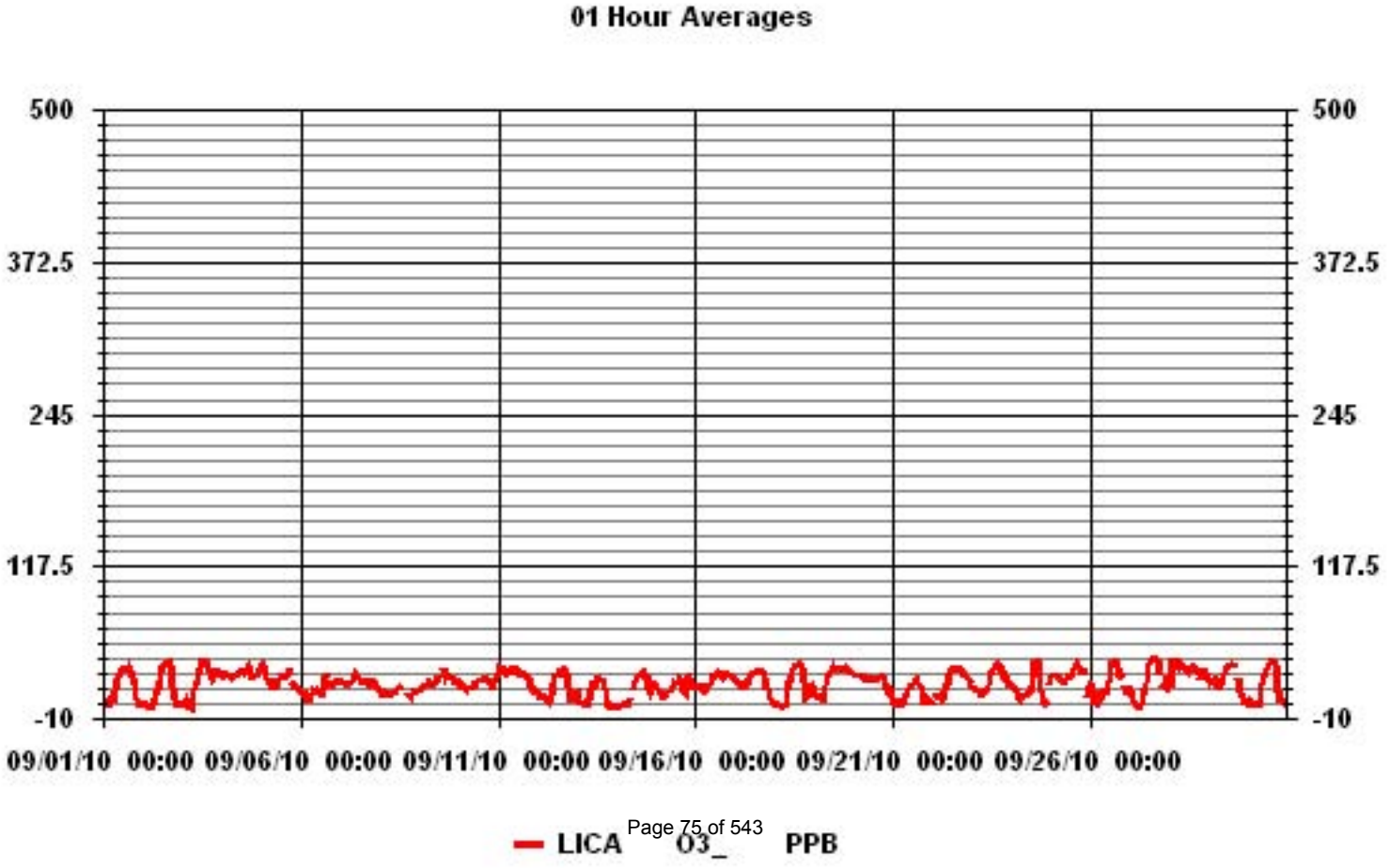


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	675					
MAXIMUM 1-HR AVERAGE:	41	PPB	@ HOUR(S)	15	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	31.3	PPB			ON DAY(S)	28
					VAR-VARIOUS	

IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	720	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME	100.0	%
STANDARD DEVIATION	10.29		MONTHLY AVERAGE	19.59	PPB


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

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

OZONE MAX instantaneous maximum in ppb

MST

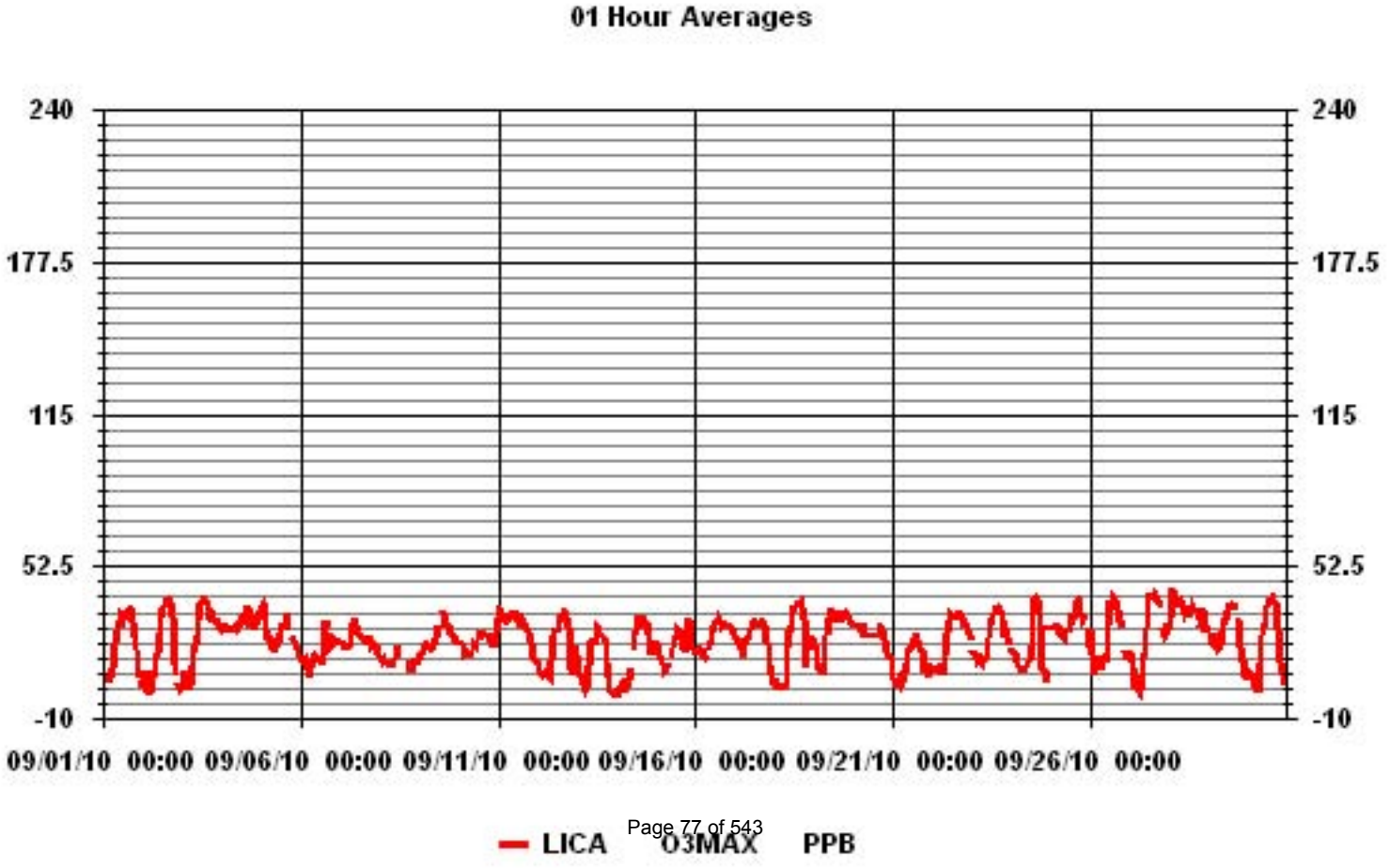
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	8	6	6	6	7	10	11	21	26	29	29	33	32	33	34	33	35	35	30	24	19	8	**IZS**	4	35	20.8	24
2	4	8	8	2	1	0	8	8	15	17	25	32	35	36	38	38	39	38	32	13	9	**IZS**	4	2	39	17.9	24
3	3	2	10	4	2	4	12	17	20	24	30	37	38	39	39	38	36	32	29	33	**IZS**	30	29	28	39	23.3	24
4	27	28	28	28	27	26	26	27	28	27	28	30	31	32	31	34	36	33	29	**IZS**	28	29	31	34	36	29.5	24
5	36	37	35	27	23	21	24	19	17	20	21	25	28	28	27	27	32	32	**IZS**	23	22	20	19	16	37	25.2	24
6	15	14	13	14	11	7	11	14	16	15	15	14	14	12	16	29	29	**IZS**	24	20	21	21	22	22	29	16.9	24
7	22	21	21	20	19	19	20	24	29	31	29	26	25	24	23	22	**IZS**	23	20	21	21	21	20	17	31	22.5	24
8	16	14	15	14	13	12	12	12	12	14	15	19	19	**C**	**C**	**C**	**C**	**C**	13	9	12	13	13	13	19	13.7	24
9	14	16	17	18	20	21	20	20	19	20	23	27	**C**	**C**	**IZS**	33	29	28	28	25	25	24	23	22	33	22.5	24
10	21	21	21	17	18	18	16	16	18	21	20	22	25	**IZS**	24	25	25	24	24	22	20	20	25	26	26	21.3	24
11	31	36	34	33	31	29	32	32	33	33	32	33	**IZS**	29	29	31	30	28	27	26	22	15	14	13	36	28.4	24
12	13	10	9	8	9	8	8	7	14	24	26	**IZS**	27	30	32	33	35	33	32	28	10	12	8	20	35	19.0	24
13	17	9	8	6	5	2	3	12	21	22	**IZS**	21	27	26	25	24	24	22	14	8	2	1	0	0	27	13.0	24
14	0	2	3	4	2	2	3	6	10	**IZS**	19	24	26	32	28	30	32	29	29	25	17	18	19	21	32	16.6	24
15	21	17	16	15	13	10	11	12	**IZS**	16	19	23	23	27	26	26	24	19	17	30	30	23	19	17	30	19.7	24
16	17	18	19	19	18	16	15	**IZS**	20	22	26	28	29	30	32	31	28	29	29	29	28	28	27	26	32	24.5	24
17	24	23	21	22	22	16	**IZS**	22	24	27	28	29	30	29	29	29	30	30	29	22	21	13	9	5	30	23.2	24
18	4	6	4	3	3	**IZS**	3	4	19	26	28	35	35	36	37	37	38	36	31	11	18	20	18	24	38	20.7	24
19	20	19	10	12	**IZS**	9	8	24	29	28	32	35	33	31	31	33	33	32	33	34	33	32	30	29	35	26.5	24
20	29	28	28	**IZS**	28	26	27	25	24	24	24	24	24	24	24	25	28	28	27	23	18	16	16	15	29	24.1	24
21	7	4	**IZS**	6	7	4	5	9	13	18	19	19	21	23	25	23	20	19	18	9	12	7	11	11	25	13.5	24
22	10	**IZS**	10	11	10	11	8	11	16	25	30	33	32	32	32	33	33	33	32	29	29	26	26	24	33	23.3	24
23	**IZS**	17	16	14	15	13	12	13	14	16	23	30	30	33	35	35	36	35	33	27	28	24	22	**IZS**	36	23.7	24
24	18	18	17	14	12	10	10	10	10	11	13	14	20	32	39	40	39	37	29	11	10	6	**IZS**	27	40	19.4	24
25	27	27	27	28	28	26	24	24	23	26	26	26	28	32	32	38	39	38	34	31	32	**IZS**	20	26	39	28.8	24
26	26	17	8	10	16	14	10	12	14	14	17	28	37	37	40	39	36	35	31	29	**IZS**	17	14	17	40	22.5	24
27	17	14	11	4	3	2	1	7	15	17	27	40	40	40	41	42	41	39	37	**IZS**	26	24	25	29	**42**	23.6	24
28	27	31	42	42	40	39	36	38	37	33	34	34	40	35	37	36	35	32	**IZS**	29	34	34	26	28	**42**	34.7	24
29	26	22	21	23	24	23	19	20	26	29	31	34	36	36	37	36	36	**IZS**	30	20	14	10	11	6	37	24.8	24
30	10	6	9	7	4	2	2	13	24	28	29	36	38	38	39	41	**IZS**	37	27	14	13	9	4	6	41	19.0	24
HOURLY MAX	36	37	42	42	40	39	36	38	37	33	34	40	40	40	41	42	41	39	37	34	34	34	31	34			
HOURLY AVG	17.6	16.9	16.8	14.9	14.9	13.8	13.7	16.5	20.2	22.7	24.8	28.0	29.4	31.0	31.5	32.4	32.5	31.0	27.4	22.3	20.5	18.6	18.0	18.2			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	679					
MAXIMUM INSTANTANEOUS VALUE:	42	PPB	@ HOUR(S)	VAR	ON DAY(S)	27, 28
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	10.06					


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

LICA
O3_ / WD Joint Frequency Distribution (Percent)

September 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	3.07	3.21	2.33	4.09	10.81	6.14	12.86	3.50	3.50	4.09	7.30	10.81	10.08	10.23	4.09	3.80	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.07	3.21	2.33	4.09	10.81	6.14	12.86	3.50	3.50	4.09	7.30	10.81	10.08	10.23	4.09	3.80	

Calm : .00 %

Total # Operational Hours : 684

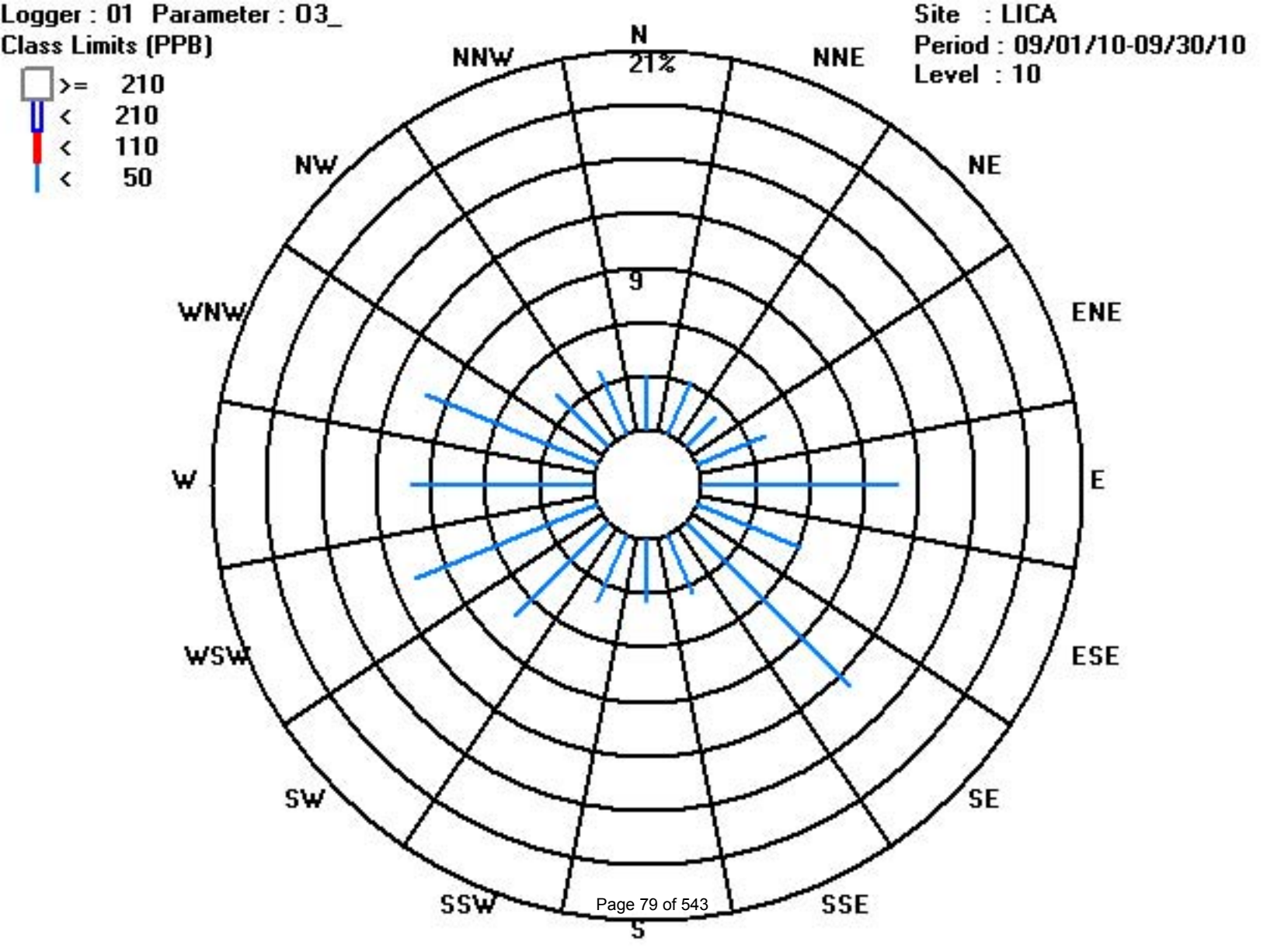
Distribution By Samples

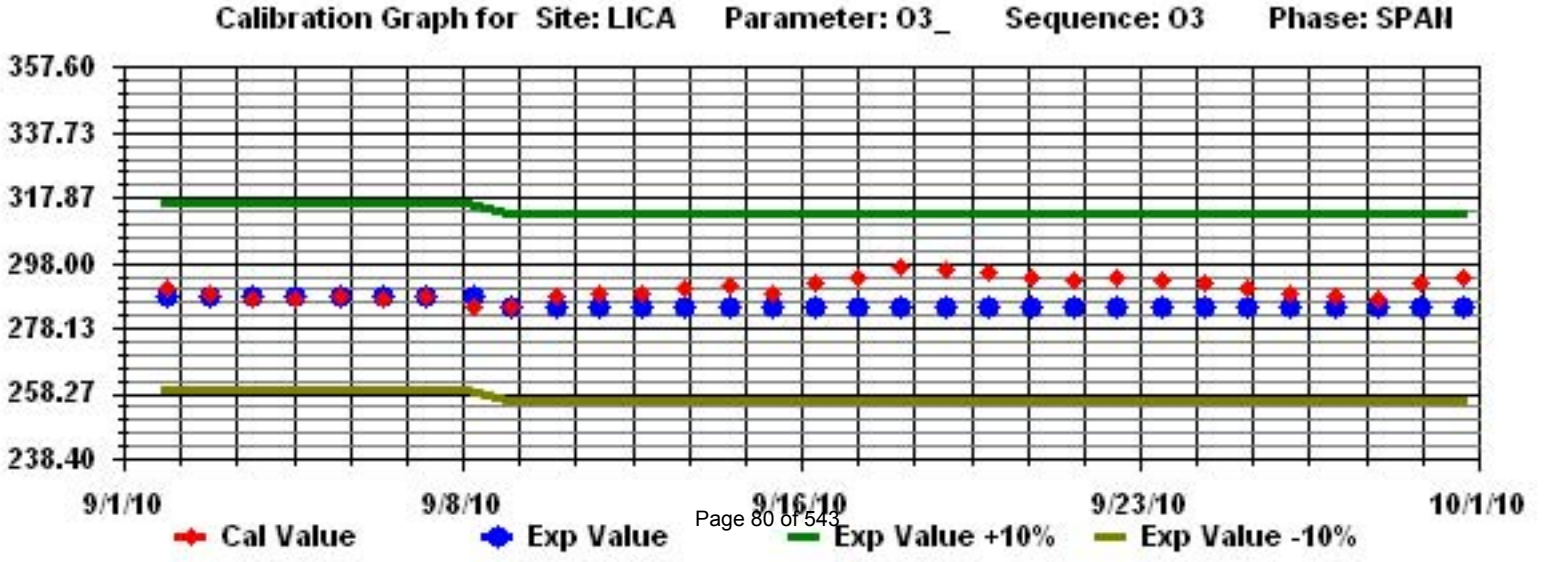
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	21	22	16	28	74	42	88	24	24	28	50	74	69	70	28	26	684
<	110																	
<	210																	
>=	210																	
	Totals	21	22	16	28	74	42	88	24	24	28	50	74	69	70	28	26	

Calm : .00 %

Total # Operational Hours : 684


Logger : 01 Parameter : 03_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA Parameter: O3_ Sequence: O3 Phase: SPAN
357.60
337.73
317.87
298.00
278.13
258.27
238.40
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

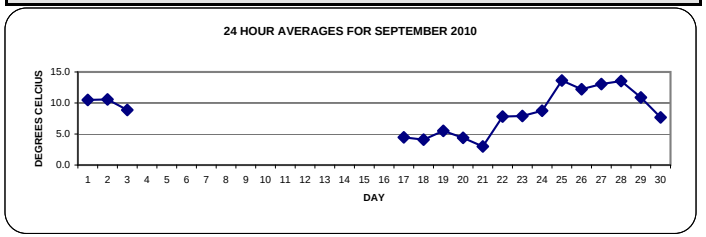
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6.4	5.5	5.5	6.6	7.2	7.9	7.7	9.9	10.5	11.5	12.7	14.2	14.9	15	15.8	15.8	16.1	16.1	14.6	11.2	8.9	6.9	5.8	5	16.1	10.5	24
2	3.9	3.5	3.5	2.7	2	1.4	3.4	7.4	10.5	13.1	15.3	16.4	17.3	17.8	18.4	18.9	19.2	19	15.8	11.6	9.7	8.6	7.6	6.8	19.2	10.6	24
3	6.3	7.3	7.4	6	5.9	5.9	7.9	11.7	14	16.3	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	16.3	8.9	10
4	**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
5	**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
6	**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
7	**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
8	**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
9	**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
10	**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
11	**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
12	**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
13	**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
14	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
15	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
16	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
17	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**M**	4.1	5.2	6.1	7.3	7.7	8.6	8.3	8	6.1	3	1.5	-0.1	-1.3	-2	8.6	4.5	14
18	-2.4	-2.9	-3.3	-3.8	-4.2	**-4.4**	-3.8	0.1	3.3	5.8	8.6	10.3	11.5	12.3	12.7	12.6	12.3	11.2	8.1	4.1	2.8	3	2.3	2.1	12.7	4.1	24
19	1.2	0.5	-0.8	-0.9	-0.9	-1.3	-1.2	3.1	5.7	7.6	9.3	10.3	10.5	10.4	10.3	10.2	9.9	9.5	8.9	8	6.7	5.6	5	4.5	10.5	5.5	24
20	4.4	4.1	3.9	3.9	3.6	3.5	3.6	3.8	4.2	4.6	4.8	5.4	6.5	6.5	6.5	6.4	6.4	6	5	3.6	2.8	2.2	2.1	1.5	6.5	4.4	24
21	-0.1	-0.9	-1.2	0	0	-0.8	-0.7	0.7	2.6	3.9	4.8	5.1	5.7	6.3	6.1	6.2	6.4	6.4	4.7	3.1	3.2	3.2	3.4	3.7	6.4	3.0	24
22	3.7	3.9	4.1	4.4	4	4.1	4.1	4.8	6.6	9.5	10.9	11.7	11.6	12	12.7	12.6	12.4	11.1	9.4	8	7.5	7	6.5	5	12.7	7.8	24
23	4	2.9	1.9	1.5	1.7	1.7	2	3.5	5.7	7.6	10.7	12.5	13.3	13.7	14.6	14.9	14.5	13.2	10.7	8.5	8.5	8.1	7.3	6.7	14.9	7.9	24
24	6.6	6.7	6.3	5.5	4.4	3.5	3.5	4	4.9	5.7	7.7	10.8	12.9	15.9	17.5	17.7	17.4	15.2	10.8	7.9	6.5	6	5.5	7.1	17.7	8.8	24
25	7.5	7.1	7.2	7.8	7.6	6.9	6.6	7.4	9.6	12.9	15.5	16.8	18.4	20.9	21.2	22.6	**23**	21.4	18.5	16.3	15.7	12.9	11.6	11.6	**23.0**	**13.6**	24
26	11.6	8.7	8.2	7.6	9.2	8.7	8.4	11	12.4	13.1	15.2	17.2	18.7	18.3	17.7	17.2	16.8	15.9	13.9	12.6	9.9	7.8	6.4	6.6	18.7	12.2	24
27	6.6	4.9	3.4	2.2	2.4	3	3.8	7.1	9.9	12.3	15.3	18.9	20	20.7	22.1	22.4	22.6	21.8	19	16.4	15.5	14.8	14.3	13.8	22.6	13.1	24
28	13.1	12.4	14.7	13.4	12.9	12.5	12.3	13	13.2	13.3	14	14.3	14.4	15.4	16.8	17	16.3	16.5	13.1	12.2	13.3	11.6	9.5	9.7	17.0	13.5	24
29	9.3	8.9	8.6	8.5	8.6	7.3	6.7	8	10.8	13	14.6	16	16.9	17.6	18	18	17.3	16	12.1	8.2	6.4	4.7	3.5	2.5	18.0	10.9	24
30	2.3	3	2	0.8	0	-0.5	-0.6	2.7	7.3	10.5	12.3	14.5	16.1	16.7	17.1	17.2	16.8	15.4	10.6	7.3	4.9	3.6	2.5	1.6	17.2	7.7	24
HOURLY MAX	13.1	12.4	14.7	13.4	12.9	12.5	12.3	13.0	14.0	16.3	15.5	18.9	20.0	20.9	22.1	22.6	23.0	21.8	19.0	16.4	15.7	14.8	14.3	13.8			
HOURLY AVG	5.3	4.7	4.5	4.1	4.0	3.7	4.0	6.1	8.2	10.0	11.0	12.5	13.4	14.2	14.7	14.9	14.7	13.9	11.3	8.9	7.7	6.6	5.8	5.4			

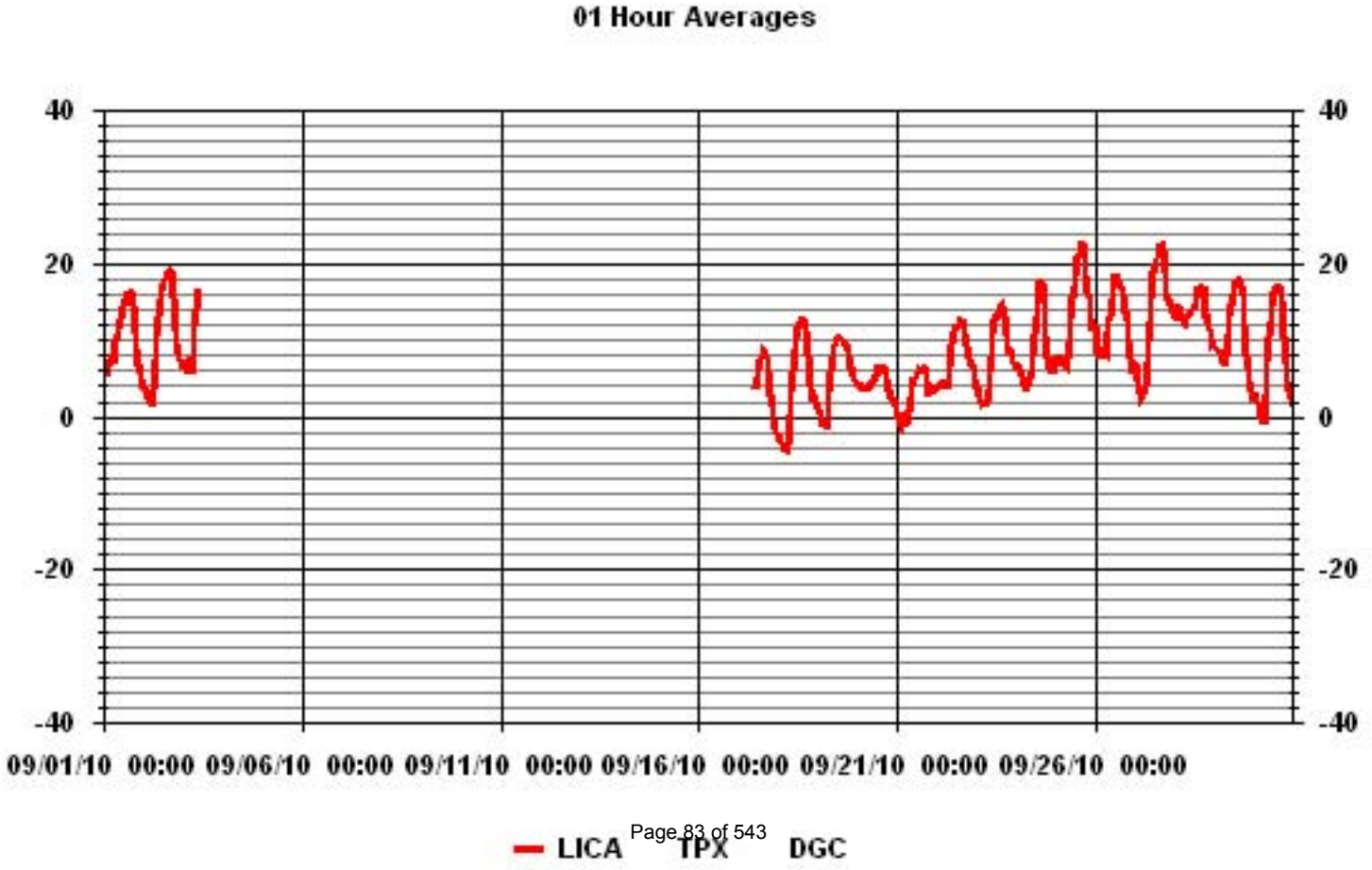
STATUS FLAG CODES

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



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-4.4	^{O}C	@ HOUR(S)	5	ON DAY(S)	18	
MAXIMUM 1-HR AVERAGE:	23.0	^{O}C	@ HOUR(S)	16	ON DAY(S)	25	
MAXIMUM 24-HR AVERAGE:	13.6	^{O}C			ON DAY(S)	25	
					VAR-VARIOUS		
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		384	HRS	
			AMD OPERATION UPTIME:		53.3	%	
STANDARD DEVIATION:	5.80		MONTHLY AVERAGE:		8.74	^{O}C	


01 Hour Averages
40
20
0
-20
-40
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA
TPX
DGC

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

RELATIVE HUMIDITY hourly averages (%)

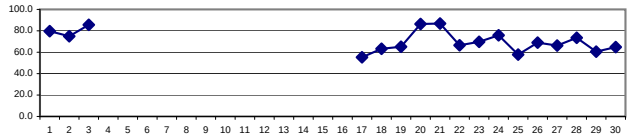
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	96	96	97	97	98	98	97	95	92	83	75	66	62	60	57	56	50	50	56	71	83	91	93	94	98	79.7	24
2	94	95	95	94	94	94	94	90	81	73	64	55	49	46	42	41	41	43	67	84	88	90	92	92	95	74.9	24
3	93	93	92	94	94	94	88	76	69	63	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	94	85.6	10
4	**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
5	**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
6	**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
7	**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
8	**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
9	**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
10	**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
11	**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
12	**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
13	**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
14	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
15	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
16	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**			0
17	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**M**	49	46	43	40	40	39	38	40	48	65	71	82	86	87	87	55.3	14
18	87	89	89	90	90	89	88	79	68	55	44	37	33	30	27	28	32	38	56	74	78	72	73	71	90	63.2	24
19	76	81	89	87	86	87	87	70	60	53	47	43	40	41	43	43	44	46	50	58	72	82	87	91	91	65.1	24
20	91	90	91	91	90	91	90	89	86	86	87	83	77	77	81	79	80	78	79	87	91	93	93	93	93	86.4	24
21	94	94	94	94	94	94	93	91	89	86	81	80	77	73	77	79	80	78	81	90	91	92	91	91	94	**86.8**	24
22	92	89	88	86	88	87	89	86	78	65	50	44	44	44	43	44	45	49	55	59	62	66	68	75	92	66.5	24
23	81	85	89	90	89	90	89	84	79	75	65	53	50	47	43	41	42	46	55	65	70	77	83	86	90	69.8	24
24	87	87	89	92	94	95	96	98	**99**	**99**	87	73	62	48	36	35	36	44	65	77	82	82	83	74	**99**	75.8	24
25	71	71	70	65	65	69	71	69	63	55	47	46	44	39	39	37	37	41	51	57	59	71	75	75	75	57.8	24
26	74	86	86	88	81	84	86	75	71	72	67	61	46	45	44	45	49	52	60	62	72	81	86	82	88	69.0	24
27	82	88	90	91	91	91	89	81	80	72	64	47	42	41	37	35	36	41	50	60	65	70	71	76	91	66.3	24
28	81	86	77	84	85	85	84	77	76	77	75	76	77	72	61	58	64	59	68	63	58	70	77	74	86	73.5	24
29	74	74	74	74	72	76	78	73	62	54	47	42	37	35	33	34	35	39	53	68	76	79	81	83	83	60.5	24
30	84	84	88	89	91	91	91	81	67	54	50	43	35	32	31	30	33	37	57	68	75	79	82	83	91	64.8	24
HOURLY MAX	96	96	97	97	98	98	97	98	99	99	87	83	77	77	81	79	80	78	81	90	91	93	93	94			
HOURLY AVG	84.8	86.8	87.4	87.9	87.6	88.4	88.1	82.1	76.3	70.1	62.4	55.9	51.1	48.1	45.9	45.3	46.4	48.8	59.4	69.3	74.6	79.8	82.6	82.9			

STATUS FLAG CODES

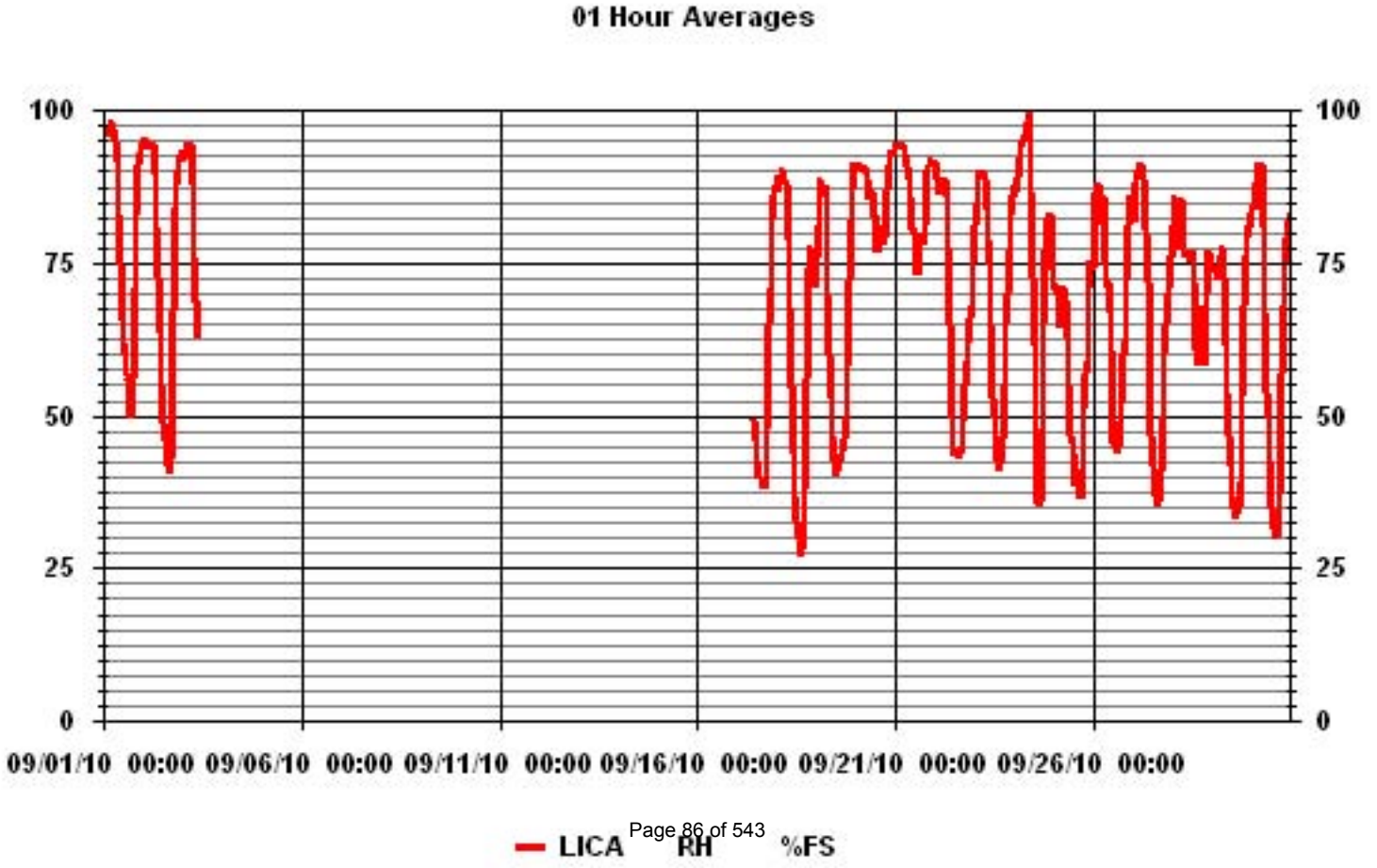
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

24 HOUR AVERAGES FOR SEPTEMBER 2010



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	99	%	@ HOUR(S)	8, 9	ON DAY(S)	24	
MAXIMUM 24-HR AVERAGE:	86.8	%			ON DAY(S)	21	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		384	HRS	
			AMD OPERATION UPTIME:		53.3	%	
STANDARD DEVIATION:	19.41		MONTHLY AVERAGE:		70.50	%	


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA RH %FS

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

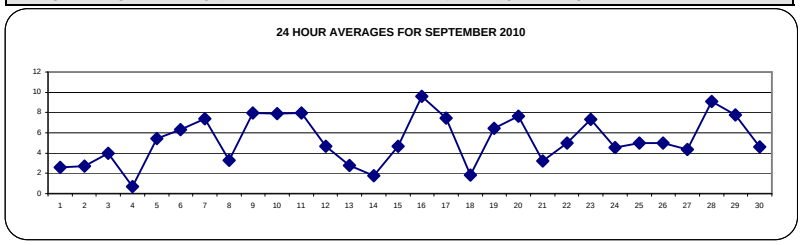
VECTOR WIND SPEED (WS) hourly averages (km/hr)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.1	0.3	0.3	0.6	0.8	1.6	1.2	2.2	7.8	8.2	7.4	6	5.9	2.1	2.5	6	10.1	7	5.3	3.9	1	1.3	1.4	1.3	10.1	2.6	24
2	1.7	1.9	2.1	1.2	0.1	0.3	2	4.2	3.4	3.7	3.8	5.6	7.1	5.9	7.9	6.7	6.3	4.4	1.2	1.2	1	0.5	0.1	0.3	7.9	2.7	24
3	0.1	0.5	0.6	0.4	0.7	1	2.9	3.7	4.4	5.3	5.4	3.8	5.2	5.7	5.8	6.1	5.7	5	3.5	5	6.1	9.8	9.2	9	9.8	4	24
4	9.8	11.9	12.6	11.4	6.3	5.2	5.1	5.4	6	7.2	2.8	2.9	3.1	3.1	7.2	5.5	6.9	3.8	6.2	9.1	6.3	8.2	8.1	8	12.6	0.7	24
5	11.5	9.6	5.5	6.6	6.3	4.9	3.2	3.3	6.9	8.7	8.6	6	5.4	6	5.9	4	6	5.2	2.6	2.6	1.8	2.9	3.9	2.5	11.5	5.4	24
6	3.3	4.6	4.2	2.5	1.1	0.8	4.4	4.7	7	7.9	7.1	5.7	5.8	4.5	9.2	11.5	9.1	9.3	5.2	5.9	9.5	10.2	9.4	9.3	11.5	6.3	24
7	8.5	7.3	7.5	7.8	6.5	7.3	8.8	9.8	11.4	10	8.7	8.1	7.3	6.1	8.2	8.5	8.1	7.3	5.5	6.1	5.5	5.2	4.7	3.9	11.4	7.4	24
8	2.9	0.6	2.7	1.4	2	2.8	1.5	2.9	1.8	1.5	2.7	5	4	5.8	5.7	5.9	4.2	3.1	2.6	3	3.8	3.4	3.4	5.5	5.9	3.3	24
9	5.6	6.8	5.5	5.8	5.5	7	7.4	9.4	10.1	9.4	10.3	12	11	11.2	10	9.8	9	8.8	7.4	7.3	5.5	5.9	5	4.8	12.0	7.9	24
10	4.7	5.8	5.7	6.5	7.6	5.8	8.3	7.9	9.4	10	9.8	10.7	10.6	12.2	10.2	9.6	10.8	9.9	7.4	4.8	3.9	5	5.8	7.4	12.2	7.9	24
11	9.4	10.6	7.3	8.3	8.1	7.1	7.1	6.9	8.3	7.6	8.1	11.1	11.3	8.9	8.1	10.8	10.8	9.4	7.1	4.8	4.2	5.3	5.1	4.9	11.3	7.9	24
12	4.5	4	4.3	5	5	3.5	3.3	2.9	2.8	4.4	7.2	8	8.4	7.6	7.6	6.6	7.3	6.9	4.8	1.6	0.6	2.4	1.1	2.6	8.4	4.7	24
13	2	1.6	2	1	0.4	1.4	1.8	1.9	2.4	5.8	3.9	6.3	7.2	7.7	6.5	6.5	3.7	1.3	0.7	0.3	1.4	0.4	0.2	0.4	7.7	2.8	24
14	0.3	0.5	0.5	0.5	0.7	0.6	0.7	2.5	1.2	3.8	1	1.6	2.1	1.5	2.1	0.7	2.2	3.1	4.1	1	1.6	2.8	3.3	4.7	4.7	1.8	24
15	4.4	2.9	2.5	2.4	1.3	2.8	2.4	2.5	3.1	5	2.9	6.2	6.9	4.9	10.5	7.5	6.9	4.9	4.2	6.6	3.4	3.6	5.4	8.3	10.5	4.6	24
16	8.2	6.3	6	6.6	6.1	4.2	4.5	5.2	10.3	8.9	8.6	10.5	10.4	10.3	13.5	14.8	12.5	16.6	12.9	10.6	8.6	13.8	10.7	10.8	16.6	**9.6**	24
17	7.8	4.8	3.6	3.9	3	5.1	6.8	9.4	10.6	12.9	13	13.1	13.3	13.4	12.3	11.6	11.1	7.5	5.1	3.7	3.8	1.8	0.3	0.5	13.4	7.4	24
18	0.9	0.9	0.3	0.6	0.3	0.4	0.2	0.7	1.2	1.5	0.9	2.2	2.1	3.8	2.1	2.8	3.8	3.9	1	1	2.7	3.3	3.5	3.7	3.9	1.8	24
19	3.6	1.2	0.1	1.6	1.2	1.5	0.2	4.9	6.5	7.1	7.1	8.6	8.3	9.4	10.2	11.2	11.2	10.3	8.3	10.4	8.3	7	7.4	9.3	11.2	6.5	24
20	9.5	9.6	8.2	7.1	8	8	7	8.1	9.5	8.1	8.2	9.3	11	10.6	9.2	9.6	9.6	7.4	6.2	3.6	4.1	4.4	4.1	2.9	11.0	7.6	24
21	2.1	0.9	2.4	2.5	0.4	1	1.6	4	4.3	4.6	3.6	7.2	7.3	9	8.1	5.4	4.3	3.6	2	0.6	0.3	1	1.1	0.4	9.0	3.2	24
22	0.9	2.1	1.6	1.3	2.7	3.4	1.6	3.1	4.3	4.9	9.8	8.5	7.9	7.3	7.2	7.2	6.5	5.2	4.7	6.9	6.4	5.7	5.9	4.1	9.8	5.0	24
23	3.8	2.5	2.7	4.5	6.6	5.8	7.6	9.1	10.5	10.1	9.6	8	6.9	9.9	9.6	9.8	7.8	7.5	4	4.2	7.6	9.9	9	8.1	10.5	7.3	24
24	8.1	9.3	4.2	3.3	1.8	3.1	4.5	4.5	3.3	3	3.5	4.1	5.4	6.4	11.6	10.6	9.4	3.7	0.9	0.6	0.8	0.4	1.7	5.1	11.6	4.6	24
25	5.2	7	7.6	8.7	7.4	3.5	4.2	4.5	5.3	5.2	6.1	5.6	5.2	6.2	6.1	4.8	4.8	3.8	3.8	5	4.6	1.7	2.2	2	8.7	5.0	24
26	1	0.6	0.3	1.3	3.3	1.3	2.1	4.7	5.1	5.3	4.3	5.6	10.8	10.6	11	11	8	5.9	4.7	6	3.9	3.7	3.5	5	11.0	5.0	24
27	4.3	3.9	1.1	0.5	0.9	0.7	0.2	0.8	2.8	5.9	7.4	8.1	10.6	12.9	9.2	11.1	6.6	5.3	2.6	2.3	0.9	1.4	1.4	3.3	12.9	4.3	24
28	0.5	4	11.8	8.1	7.4	8.8	7.2	9.7	10.5	10.5	13	14.1	13.1	12.7	**17.2**	14.8	10.7	8.3	3.7	6.6	9.9	4.3	4.3	7.3	**17.2**	9.1	24
29	5.2	6.5	7.6	9	8	7.2	6.6	8.1	10.3	12.4	13.3	13.9	15	13.2	13.9	11	11.3	5.7	3.7	2.4	1.2	0.5	0.2	0.5	15.0	7.8	24
30	0.3	0.2	0.2	1	0.5	0.9	0.2	3.9	6.6	9.8	9.2	10.9	14.4	15.9	14.2	10.6	6.2	2	0.4	0.4	0.8	0.1	0.5	0.7	15.9	4.6	24
HOURLY MAX	11.5	11.9	12.6	11.4	8.1	8.8	8.8	9.8	11.4	12.9	13.3	14.1	15.0	15.9	17.2	14.8	12.5	16.6	12.9	10.6	9.9	13.8	10.7	10.8			
HOURLY AVG	4.3	4.3	4.0	4.0	3.7	3.6	3.8	5.0	6.2	7.0	6.9	7.6	8.1	8.2	8.8	8.4	7.7	6.2	4.4	4.3	4.0	4.2	4.1	4.6			

STATUS FLAG CODES

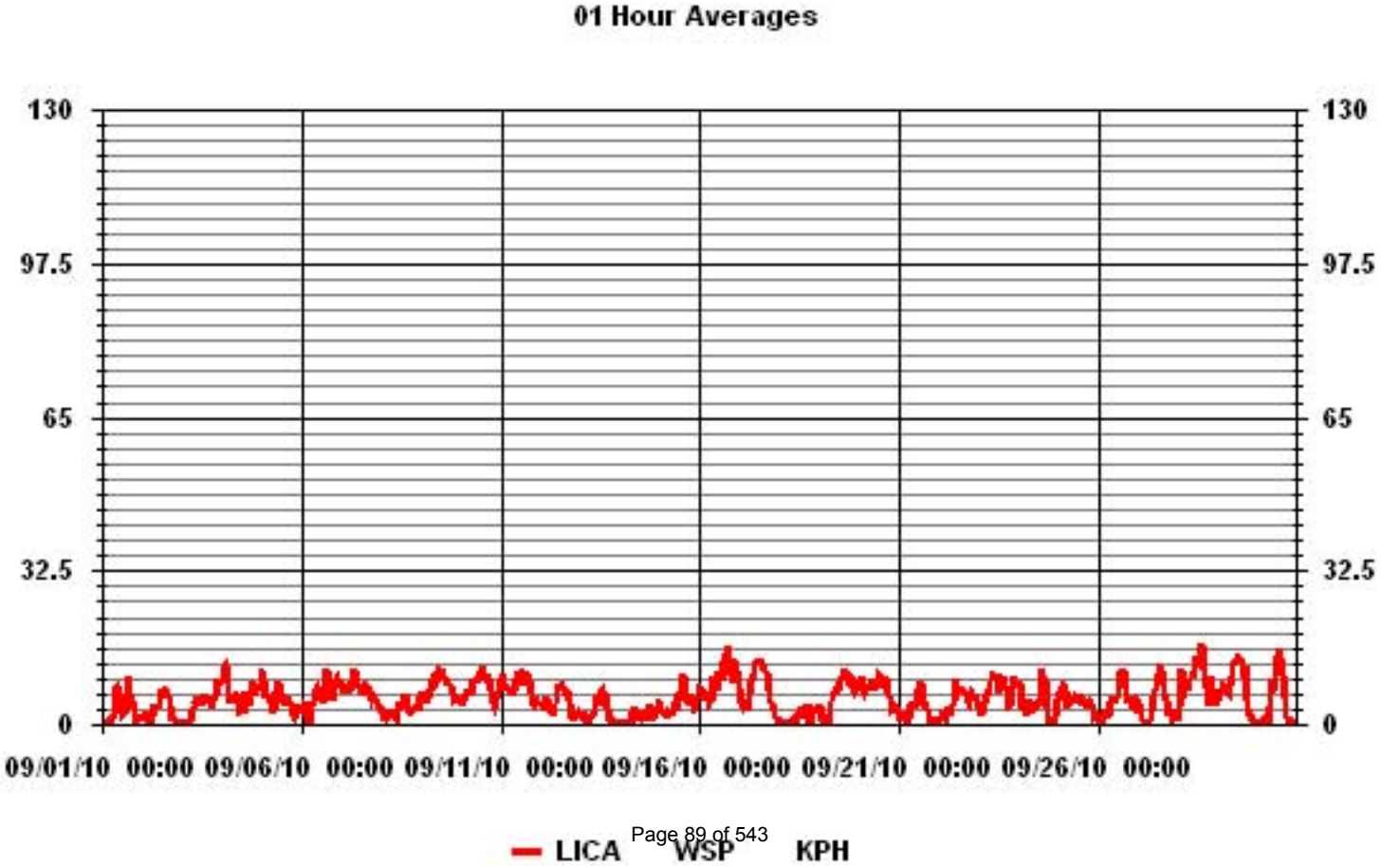
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION:	November 5, 2008

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:			17.2	KPH	@ HOUR(S)	14	ON DAY(S) 28
MAXIMUM 24-HR AVERAGE:			9.6	KPH			ON DAY(S) 16
CALMS (≤ 0 KPH)	3.49	%			OPERATIONAL TIME:		720 HRS
MONTHLY CALIBRATION TIME:	0	HRS			AMD OPERATION UPTIME		100.0 %
STANDARD DEVIATION:	3.58				MONTHLY AVERAGE:		5.55 KPH


01 Hour Averages
130
97.5
65
32.5
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

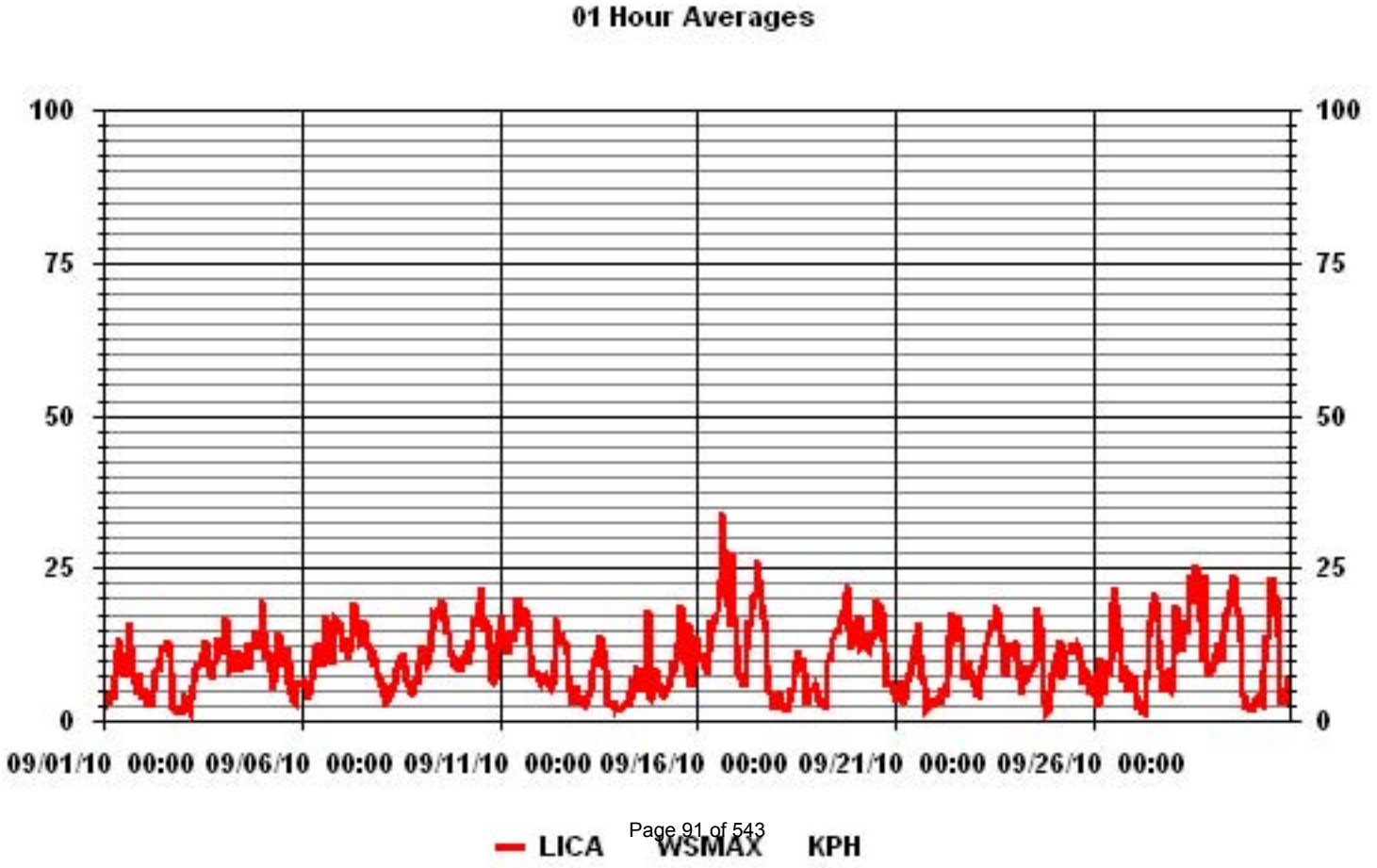
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	2.3	2.6	2.9	2.9	4.7	4.8	3.4	7.4	11.7	13.4	11.9	11.2	10.2	7.2	8.9	11.3	15.9	12.4	7.7	6.3	5	5.1	7.8	3.7	15.9
2	4.1	4.8	4.8	2.9	2.6	2.6	5.1	8.1	8.3	8.4	10.2	11.1	12.4	11.5	12.8	13.3	10.9	8.4	2.4	2	2.2	1.7	1.5	2	13.3
3	1.8	4.1	3.9	2.3	1.8	3.2	5.6	6.4	8.6	9.1	9.3	9.3	10.9	12.5	13	11	9.2	7.6	6.7	9.3	9.9	13.4	12	11.8	13.4
4	13.7	15.6	16.7	15.2	12	8.2	8.4	10.3	11	11.1	8.1	9.3	8.7	8.7	11.1	9.1	12.7	8.2	11.5	14.1	14.1	12.5	11.9	15	16.7
5	19.7	14.9	9.9	10.7	11.7	8.2	5.1	6.3	10.6	12.5	14.3	10.4	8.6	11.6	9.7	6	11.8	9.9	4.7	3.7	3.3	5.5	6.7	6	19.7
6	6	6.4	6.4	5.8	3.3	4.1	6.5	10	11.5	12.1	12.9	9.8	10.1	8.7	14.7	16.8	16.7	15.2	9.3	10.2	17	16.8	14.1	15.4	17
7	15.6	13.9	11.3	12	10	11.1	13.4	13.9	19.2	16.6	16.5	13	13.3	11.9	16.4	12.7	12.6	11.9	9.8	12	8.7	9.3	8.3	7.3	19.2
8	5.7	3.7	6.1	3.2	3.4	4.9	3.7	6	5.2	5.9	8.4	9.7	10.6	9.3	10.9	9.5	6.9	5.8	4.7	4.2	6.1	6.4	6.4	9.1	10.9
9	9.3	12.3	10	10.8	9.6	10.1	11.4	15	17.4	17	18	18.2	16.5	19.6	16	17.4	14.2	14.7	12	10.9	9.3	9	10	9.6	19.6
10	8.1	9.7	9.8	10.6	11.6	9	13.1	11.3	15.8	16.8	15.2	19.3	16.7	22	17.1	14.6	16.4	15.9	12.1	6.7	6.3	6.7	12.6	14.1	22
11	14.1	17.4	11.9	12.6	14.3	10.9	13.4	14.4	14.5	12.8	14.6	20.2	19.6	15.3	18.2	17.2	18.4	16.7	12.7	11	7	7.9	7.2	8.3	20.2
12	6.9	6.4	7.1	6.8	7.5	7	6	5.4	5.8	10	16.7	14.6	14	12.3	14.3	12.6	13.3	11.3	7.6	5.1	2.8	3.7	2.5	5.6	16.7
13	3.9	2.8	4	2.9	2.6	3.4	4.1	5.1	8.2	10.4	8.8	11.2	11.3	14.1	10.4	11.8	8.6	3	2.5	2.5	2.8	2.7	2	2.6	14.1
14	2	2.2	2	2.4	2.7	3.3	2.2	4.5	4.3	7	4.7	9.1	7	7.4	4.8	7.7	6.4	4.9	18	4.1	3.7	4.8	5.9	8.6	18
15	7.4	6.4	5.2	4.4	3.6	5.8	5.3	5.7	7	9.8	8.1	9.8	12.6	14.2	19	12.8	11.2	9.4	6.9	15.9	5.4	6.5	8.6	14.1	19
16	12.7	10.4	9.7	10.9	8.9	8.1	8	11.1	16.3	15.9	17.4	15.8	17.7	20.2	23.2	**34.2**	21.1	27.9	21.4	19	15.3	27.6	17.1	16.1	**34.2**
17	12.8	7.8	7.1	6.5	5.4	7.7	11.5	16.3	15.2	18.2	20.3	21.1	26.2	21	23.1	19.5	16.8	14.8	9.5	5.2	5	4.6	1.7	3.4	26.2
18	2.7	2.6	4.7	3	2.2	1.9	2.2	1.6	3	5.1	5.4	7.6	10	11.3	8.9	8.6	10.4	8.3	2.8	3.3	4.6	4.8	5.1	5.8	11.3
19	5.1	3.6	2.2	3.5	3.4	2.8	1.8	9.8	10	11.2	13.5	14.5	14.7	14.7	16.7	16.8	16.6	18.1	21.1	22.2	15.1	11.6	12.5	14.9	22.2
20	16	15.8	17.1	12.1	12.4	13.2	12.3	11.9	14.2	13	13.5	13.7	19.8	19.1	15.1	19.2	17.9	13.2	11.5	5.7	6.3	6.4	5.8	5	19.8
21	4.7	3	3.8	4.4	6.5	2.9	3.6	6.4	7.4	7.6	9.3	12.3	11.5	14	16.1	10.9	7.3	6.4	5.8	1.6	1.9	2.3	3.8	2.3	16.1
22	3.3	3.7	3.3	2.6	4.9	5	3.8	6.1	7.4	14.1	17.6	14.7	13.6	13.9	17.2	13	15.1	9.4	6.8	9	9.3	8.4	7.8	5.8	17.6
23	6.3	4.5	4.3	7.2	9.2	8.2	10.6	12.5	13.9	14.5	15.9	16	14.8	19.1	15.6	17.8	14.3	12.4	8.1	7.2	10.7	12.9	11.3	12.3	19.1
24	10.6	13	10.4	7.2	4.3	6.3	8.3	9.1	7	7.3	8	9.1	9.7	12.2	18.4	17.5	15.8	10	2.9	1.6	2.1	1.3	4.8	7.9	18.4
25	6.9	9.6	11	12	13.1	6.9	7.4	10.6	11	11.3	12.3	12.4	10.9	11.9	12.6	12.1	10.3	6.4	6.4	8	7.8	4.3	6.1	6.5	13.1
26	3.9	4.9	2.2	2.8	10.1	5.4	5.2	6.7	9.8	8.4	8.1	10	19.5	21.9	19.2	15.8	11.8	8.7	6.3	9	7.5	5.5	5.4	7.2	21.9
27	6.8	7	4.6	1.8	2.3	1.5	1.3	3.1	6.5	8.2	13.6	16.3	19.5	21	18	19.4	13.5	8.7	5	5	5.9	5.9	5.5	8.5	21
28	4.6	10.8	18.8	12.1	12	12.6	11.1	16.5	15.1	14.2	23.9	19.7	21.7	19	25.4	22.9	16.1	18.6	19	9.7	23.8	7.8	7.3	9.6	25.4
29	8	9.2	11.1	12.5	11.2	10.6	9.5	14.3	17.4	17.7	18.6	21.2	23	23.8	20.7	18.8	17.7	13.4	4.8	4.4	2.6	2.8	2.3	1.8	23.8
30	1.8	2.5	3.5	3.9	2	3.3	3	8.3	9.5	13.6	13.9	16.9	23.1	23.2	21.1	20	13.9	5.6	2.4	3.9	3.1	4.6	6.9	2.9	23.2
PEAK	19.7	17.4	18.8	15.2	14.3	13.2	13.4	16.5	19.2	18.2	23.9	21.2	26.2	23.8	25.4	34.2	21.1	27.9	21.4	22.2	23.8	27.6	17.1	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	34.2	KPH	@ HOUR(S)	15
			ON DAY(S)	16


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA WSMAX KPH

LICA
WSP / WD Joint Frequency Distribution (Percent)

September 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	1.25	2.08	1.25	2.36	3.47	4.72	7.63	2.50	2.36	2.77	5.55	6.11	3.88	4.44	1.11	1.66	53.19
<	12.0	1.94	1.52	.97	1.52	6.80	1.11	4.58	.55	.55	.97	1.25	3.33	4.16	5.00	2.50	2.08	38.88
<	20.0	.00	.00	.00	.00	.13	.00	.27	.00	.00	.00	.13	.69	1.66	.83	.41	.13	4.30
<	29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.19	3.61	2.22	3.88	10.41	5.83	12.50	3.05	2.91	3.75	6.94	10.13	9.72	10.27	4.02	3.88	

Calm : 3.61 %

Total # Operational Hours : 720

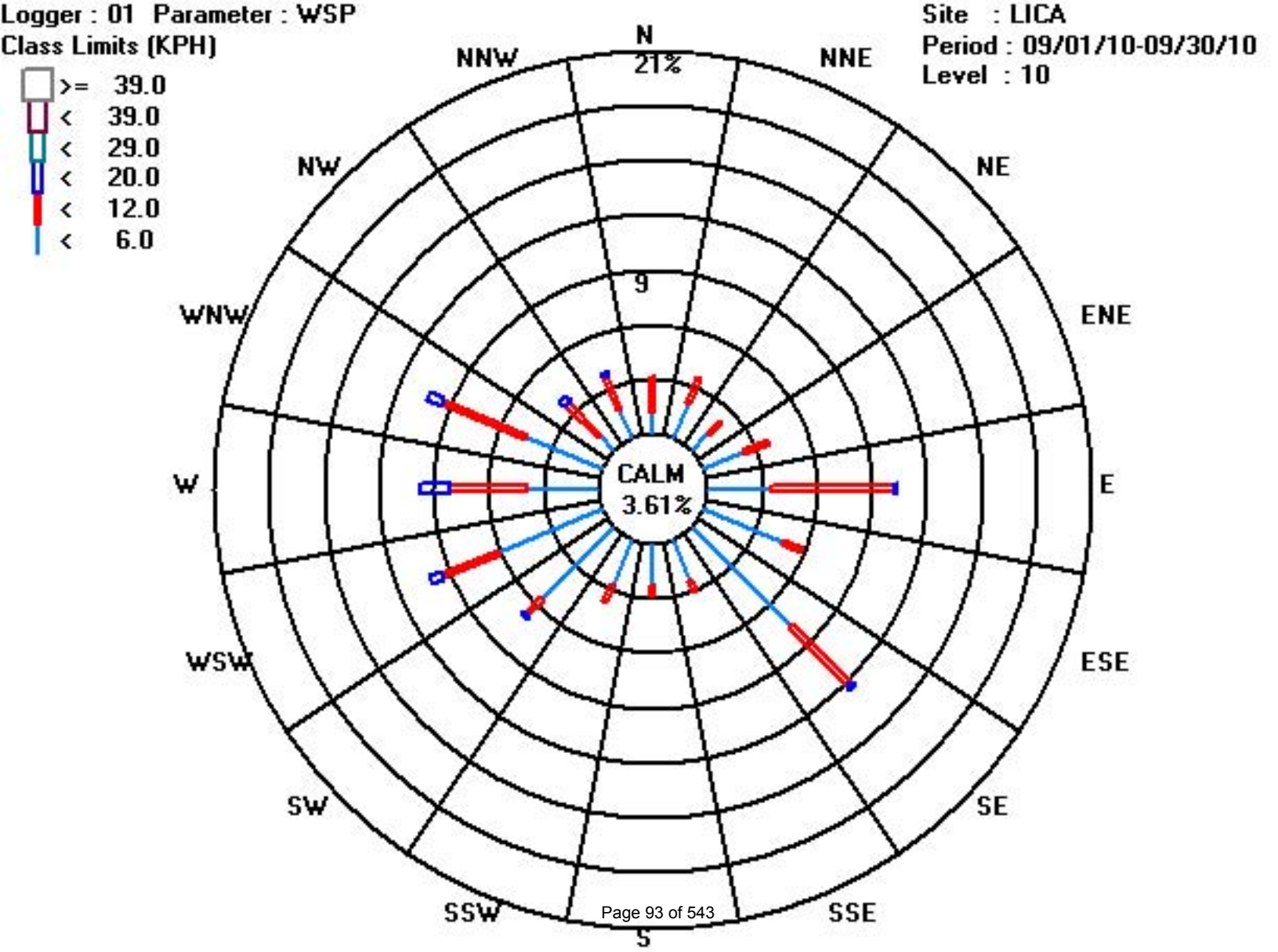
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	9	15	9	17	25	34	55	18	17	20	40	44	28	32	8	12	383
<	12.0	14	11	7	11	49	8	33	4	4	7	9	24	30	36	18	15	280
<	20.0					1		2				1	5	12	6	3	1	31
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	23	26	16	28	75	42	90	22	21	27	50	73	70	74	29	28	

Calm : 3.61 %

Total # Operational Hours : 720


Logger : 01 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9
CALM
3.61%

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

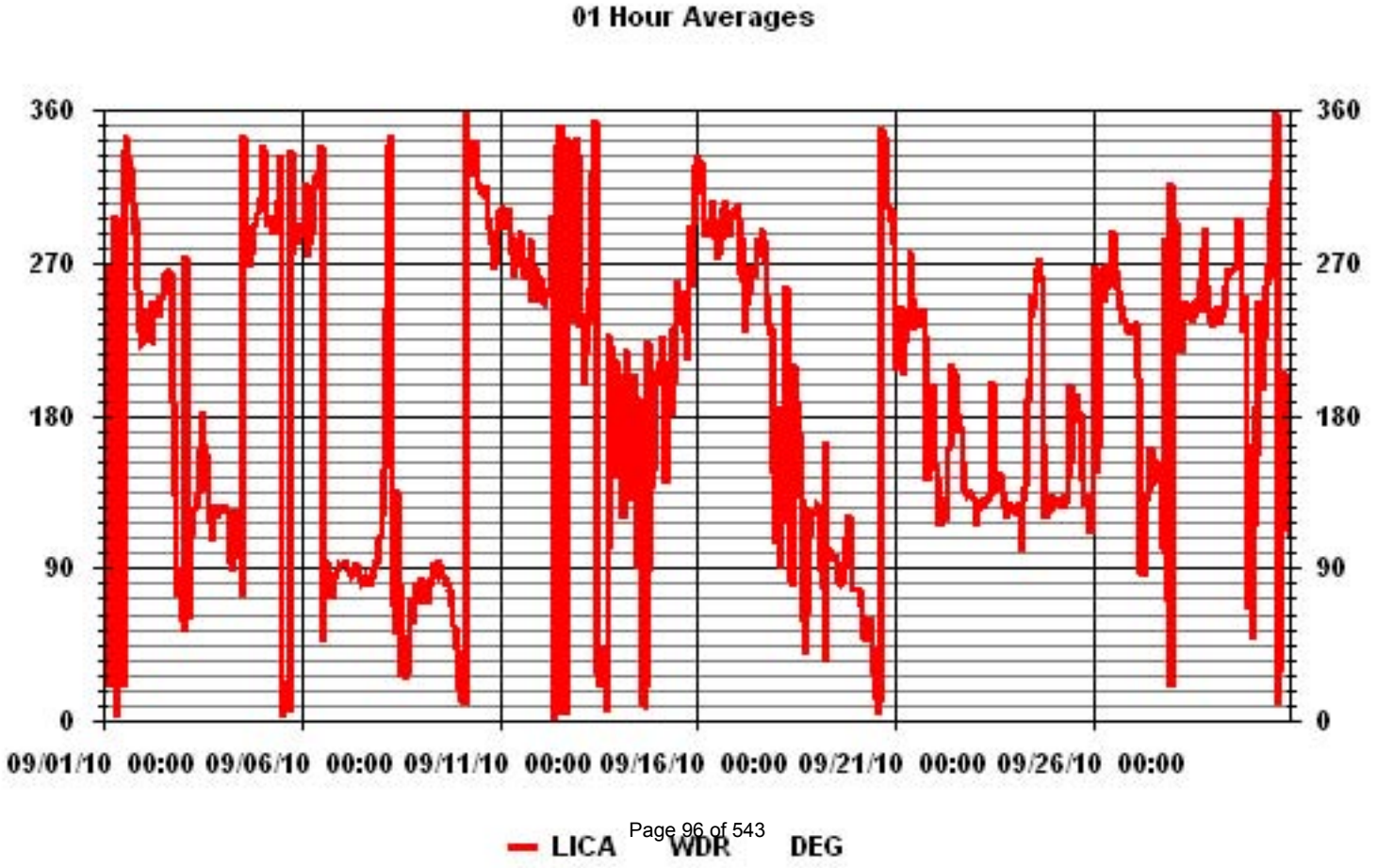
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	238	228	186	268	20	260	290	298	1	26	22	33	19	337	346	334	324	328	307	291	292	255	230	223	343	NNW	24
2	224	243	234	239	227	226	248	241	240	238	251	249	251	263	264	259	263	266	188	133	92	73	79	80	250	WSW	24
3	60	52	274	157	60	108	123	125	126	133	134	160	183	165	159	136	129	118	105	120	120	125	125	125	132	SE	24
4	125	124	125	123	113	94	88	104	124	115	96	100	73	346	305	280	267	271	275	291	293	299	300	308	121	ESE	24
5	340	338	311	291	296	298	290	287	298	305	307	334	1	20	21	17	7	7	337	274	295	282	282	294	323	NW	24
6	288	289	300	317	273	281	287	313	321	319	323	333	339	46	89	94	91	86	72	74	83	87	88	93	46	NE	24
7	92	92	92	95	92	89	85	86	91	91	91	86	84	81	82	85	83	81	79	84	90	95	92	108	88	E	24
8	109	121	149	243	302	339	346	121	68	50	137	118	82	25	32	24	27	51	72	65	57	81	69	80	62	ENE	24
9	80	84	79	77	69	75	79	84	92	93	89	91	87	89	87	85	79	81	78	69	57	56	44	42	79	ENE	24
10	19	11	18	9	359	328	321	325	333	343	330	319	315	312	311	316	314	298	291	282	266	269	280	291	320	NW	24
11	300	301	289	294	299	291	302	288	276	261	272	267	285	289	269	263	260	269	273	284	247	252	268	254	278	W	24
12	257	263	249	248	253	254	253	276	298	1	3	340	351	27	351	341	3	9	344	308	283	234	245	344	325	NW	24
13	335	232	240	197	220	217	234	255	323	351	354	27	45	22	22	44	33	4	229	101	223	145	165	213	11	NNE	24
14	143	201	187	119	204	219	183	129	141	133	205	89	192	145	64	11	10	20	224	88	136	147	193	198	156	SSE	24
15	206	210	209	227	214	139	168	189	180	231	199	233	260	237	247	254	238	230	212	292	255	268	292	328	242	WSW	24
16	334	319	330	312	293	285	289	286	295	307	296	285	272	276	277	284	302	307	301	296	285	301	296	301	296	WNW	24
17	302	296	263	286	260	228	245	251	268	266	261	267	273	284	279	290	284	272	252	235	227	233	147	109	269	W	24
18	104	185	89	186	179	119	257	116	126	83	79	211	176	188	171	132	60	39	63	94	109	123	122	122	120	ESE	24
19	128	127	114	89	79	34	165	94	102	94	99	95	98	95	82	80	81	89	108	120	120	96	78	78	94	E	24
20	77	77	77	68	64	50	46	56	52	61	44	29	14	3	11	12	350	343	343	304	302	294	302	282	29	NNE	24
21	227	206	228	230	244	204	222	237	235	277	250	230	234	238	243	241	231	243	229	141	183	175	189	199	235	SW	24
22	147	151	143	114	122	131	118	132	159	162	211	208	206	194	183	170	173	154	137	133	134	135	135	133	163	SSE	24
23	131	115	124	126	129	131	126	128	130	132	133	200	166	137	138	139	146	137	126	119	124	126	127	125	134	SE	24
24	124	126	123	122	99	129	137	139	189	201	237	249	248	262	267	273	263	259	165	119	129	123	124	134	201	SSW	24
25	131	130	129	130	131	125	130	129	132	142	199	151	182	175	193	176	182	143	128	128	134	122	110	131	145	SE	24
26	228	269	145	160	253	266	267	247	257	255	264	265	289	265	267	255	244	244	237	236	232	231	227	231	253	WSW	24
27	234	231	235	203	86	128	85	114	135	130	135	161	142	139	154	143	153	145	103	99	285	71	19	317	147	SE	24
28	19	259	295	279	248	216	227	236	247	245	242	238	235	238	247	249	254	260	278	241	291	258	239	240	249	WSW	24
29	232	242	237	245	243	234	237	243	257	266	262	263	265	266	268	273	296	284	239	228	250	165	66	138	257	WSW	24
30	47	115	185	156	247	235	194	235	226	256	267	266	303	319	338	359	9	29	148	130	206	111	143	111	299	WNW	24
HOURLY AVG	340	338	330	317	359	339	346	325	333	351	354	340	351	346	351	359	350	343	344	308	302	301	302	344			

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	93.21		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	268	DEG


01 Hour Averages
360
270
180
90
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

SEPTEMBER 2010

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

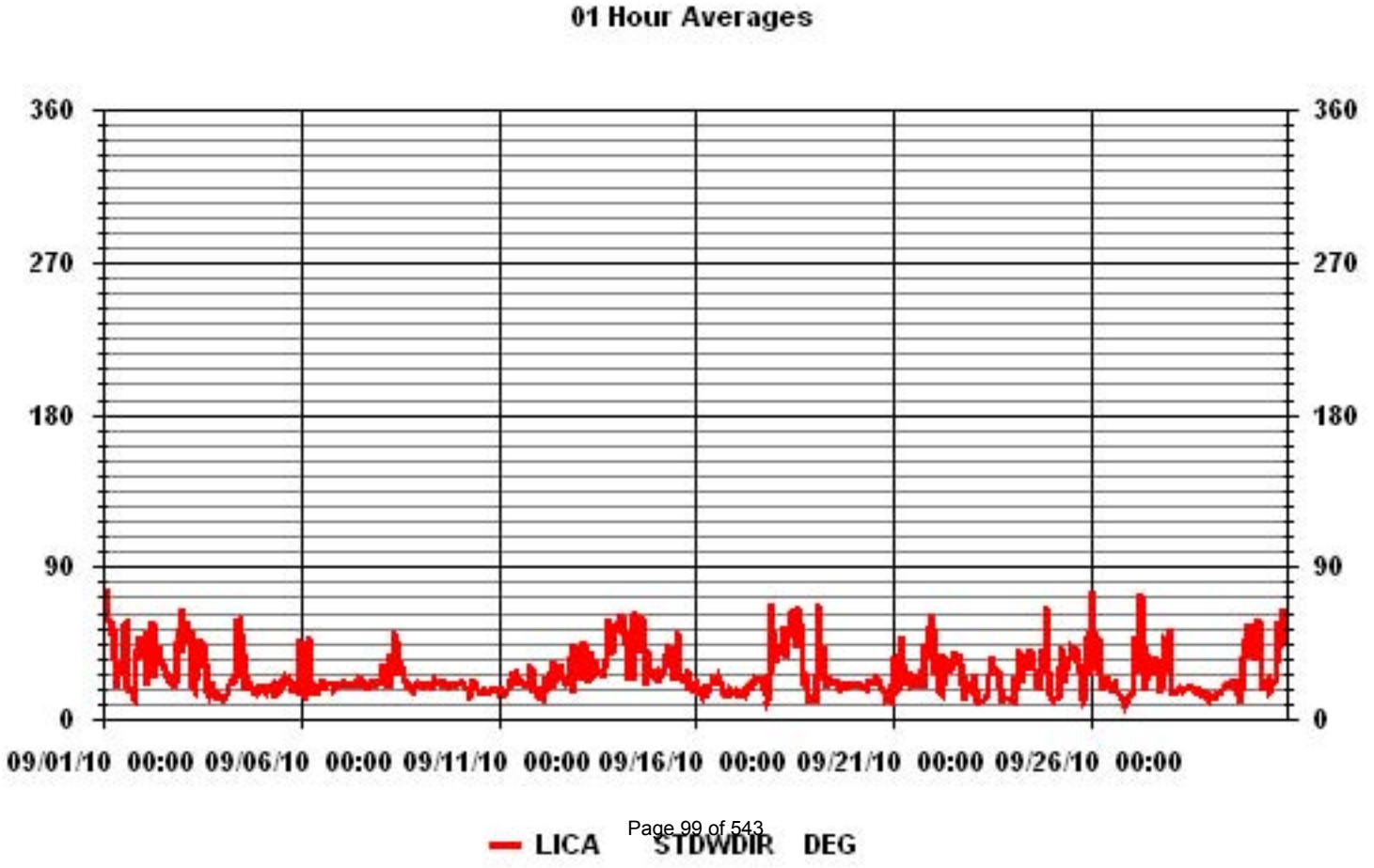
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	58	66	78	58	58	50	55	36	18	26	27	33	33	55	56	20	18	17	12	12	42	35	49	46
2	40	45	19	52	45	43	58	23	44	36	42	36	34	30	25	27	23	20	25	19	22	46	54	39
3	65	59	54	59	45	53	19	18	23	29	30	47	42	43	35	17	14	17	22	16	16	12	14	14
4	13	12	13	14	20	21	22	22	25	26	59	59	52	40	16	24	23	19	19	17	18	16	15	16
5	19	20	18	16	20	16	18	20	15	14	15	22	24	22	25	22	23	20	24	16	21	17	17	47
6	15	15	14	28	45	48	14	22	18	18	17	18	19	24	21	20	21	21	22	21	18	19	20	21
7	21	21	22	20	21	20	20	20	20	20	23	21	22	25	23	20	21	20	22	21	21	22	21	22
8	24	33	31	24	25	18	39	25	36	52	48	32	36	26	27	23	23	19	20	18	17	20	21	20
9	20	21	21	20	20	21	20	20	21	24	22	23	23	21	21	22	22	21	20	21	20	20	20	21
10	22	22	22	21	20	19	14	15	18	24	21	19	16	16	16	17	17	17	16	18	18	18	19	18
11	15	17	18	17	16	17	19	19	23	27	28	22	22	23	22	21	21	21	19	31	30	16	19	16
12	18	18	13	12	16	24	18	19	28	33	25	23	25	23	33	26	25	21	22	23	37	16	45	27
13	41	28	23	31	47	28	21	29	41	29	36	27	29	27	27	25	29	35	43	59	37	40	54	55
14	51	55	61	61	51	44	47	23	52	22	61	64	49	41	40	60	50	20	41	40	26	26	27	24
15	23	23	27	26	27	32	38	45	37	30	43	23	25	51	23	26	24	23	22	29	17	19	15	19
16	20	15	19	16	14	18	16	21	16	20	24	22	23	25	22	22	17	17	16	15	18	17	17	16
17	15	18	17	16	15	17	15	18	20	22	21	24	23	24	25	23	21	22	15	10	12	27	68	54
18	40	33	45	39	39	47	55	36	50	48	62	62	66	42	66	58	46	19	27	19	12	9	13	12
19	12	27	68	24	26	28	43	19	22	24	23	23	22	23	20	20	19	20	23	19	19	21	20	20
20	20	21	21	21	21	19	19	20	18	22	21	22	21	26	22	25	20	19	17	13	15	13	12	18
21	17	37	17	17	39	49	34	19	24	23	28	21	23	21	24	26	23	20	18	44	39	36	55	62
22	55	27	31	28	17	16	39	20	31	35	29	29	32	40	38	39	38	33	21	11	16	20	18	18
23	17	27	19	11	10	11	11	11	13	15	27	35	36	32	26	28	30	19	12	12	12	13	12	12
24	12	12	25	16	42	23	22	28	39	33	40	40	31	30	22	23	21	17	28	41	36	67	29	16
25	13	11	12	12	13	31	44	21	25	29	35	36	42	40	36	43	34	29	14	12	13	50	26	52
26	62	76	53	28	31	49	27	17	23	18	25	23	19	21	21	18	17	15	12	13	9	12	9	14
27	15	17	46	46	32	26	74	34	44	16	22	38	29	25	37	28	37	27	16	18	26	47	46	34
28	53	19	15	17	16	16	19	18	16	18	18	18	20	19	18	18	17	19	18	12	16	16	14	12
29	15	14	13	13	15	15	15	17	17	19	20	20	21	22	20	21	15	15	9	17	37	40	47	57
30	36	54	57	34	56	53	60	37	17	19	21	23	17	18	21	22	24	33	58	43	45	65	49	52

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
360
270
180
90
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA STDWDIR DEG

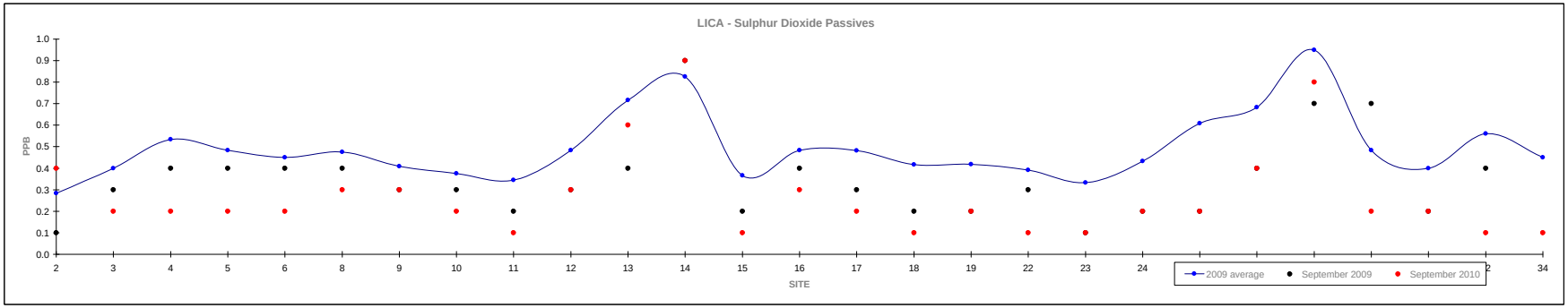
Non-Continuous Monitoring

Passive Summary Results for September 2010

Lakeland Industry & Community Association

Sulphur Dioxide
ppb

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

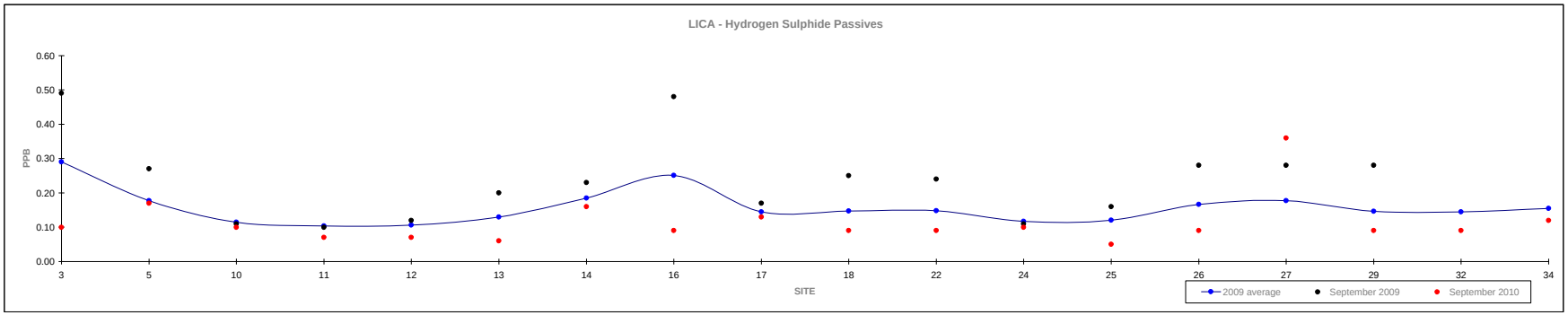


Passive Summary Results for September 2010

Lakeland Industry & Community Association

Hydrogen Sulphide
ppb

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

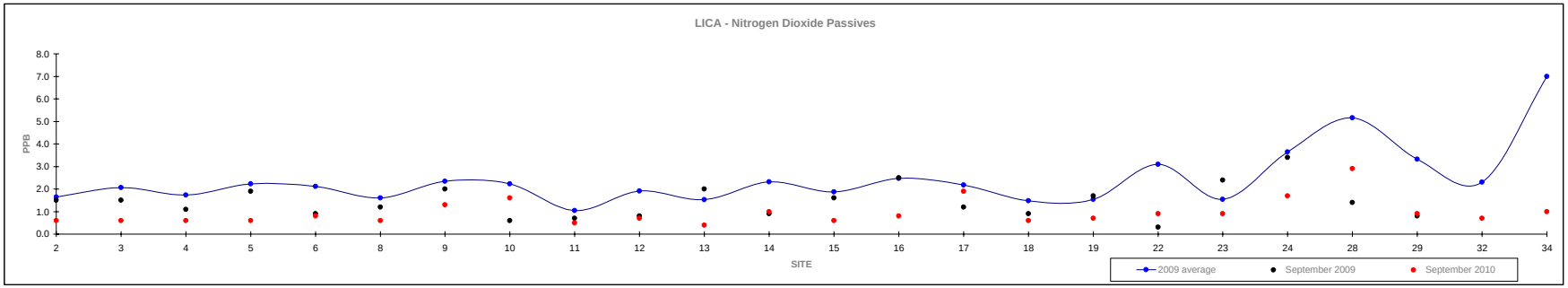


Passive Summary Results for September 2010

Lakeland Industry & Community Association

Nitrogen Dioxide
ppb

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



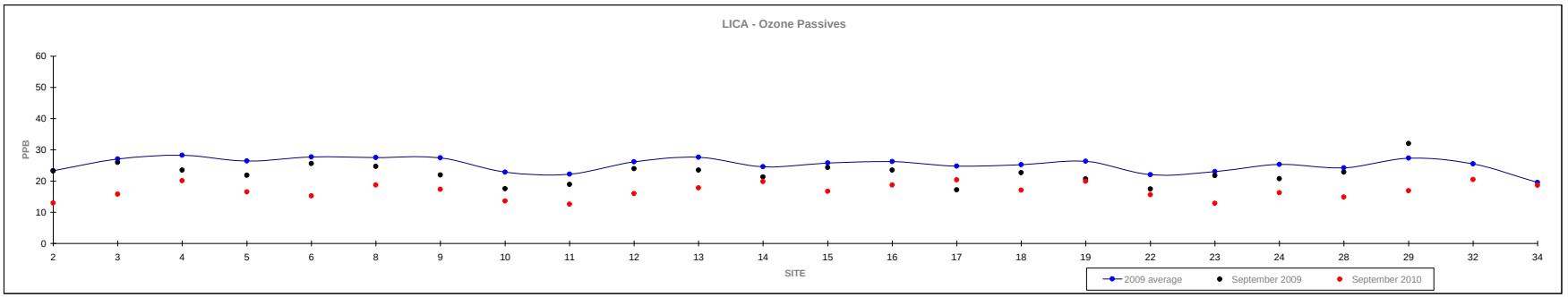
Passive Summary Results for September 2010

Lakeland Industry & Community Association

Ozone
ppb

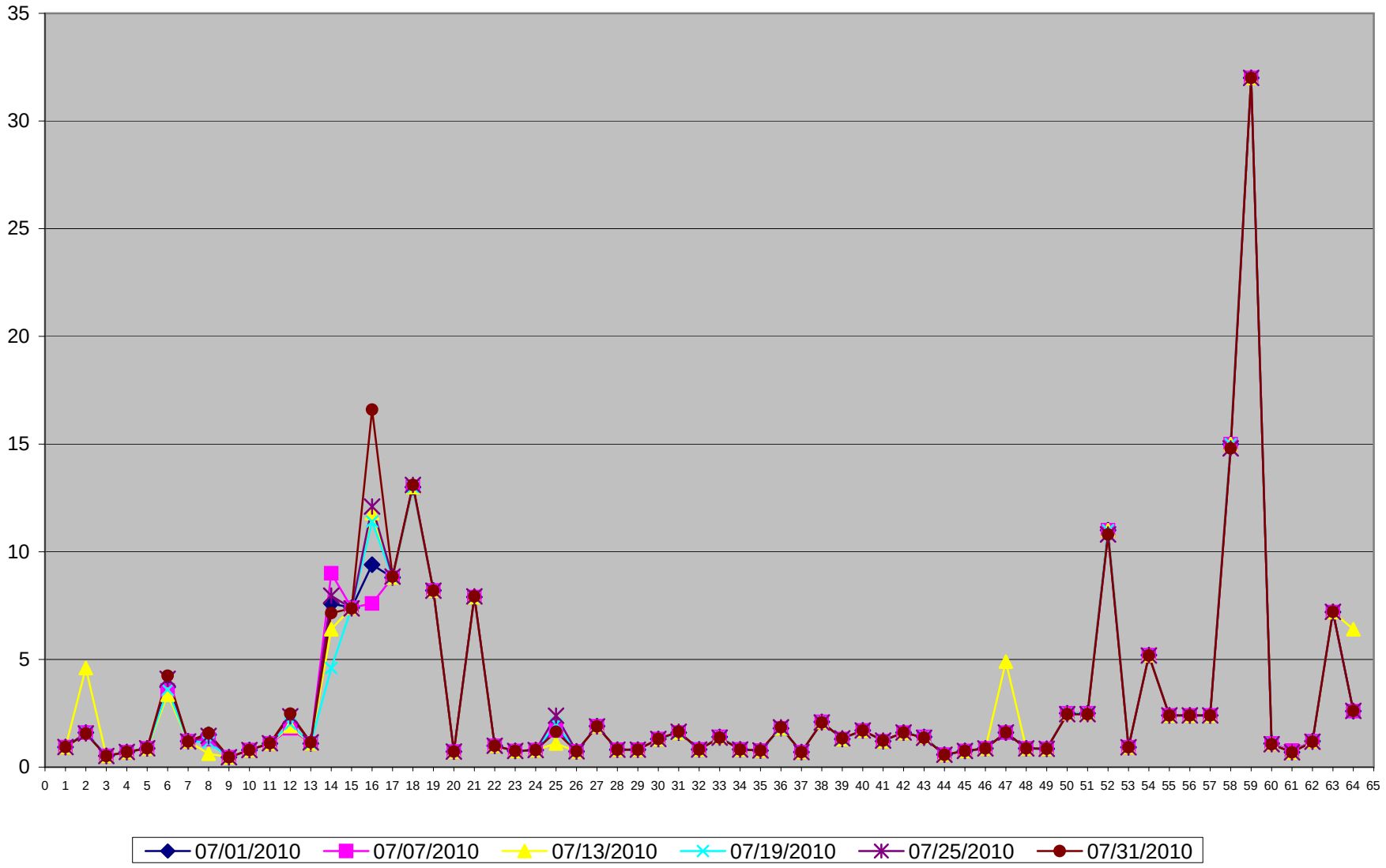
	2009																								
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	29	32	34	
Mean	23.3	27.1	28.3	26.5	27.7	27.5	27.5	22.8	22.2	26.2	27.6	24.6	25.8	26.2	24.8	25.2	26.3	22.0	23.0	25.3	24.2	27.3	25.5	19.6	
Minimum	13.3	17.9	17.3	16.0	17.7	15.4	14.9	12.0	14.6	17.3	15.5	14.8	15.5	15.1	13.8	17.7	14.7	13.6	15.3	12.5	14.8	17.8	24.7	18.5	
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	

September 2010	
Reading	Site
16.9	-
12.6	#11
20.5	#32



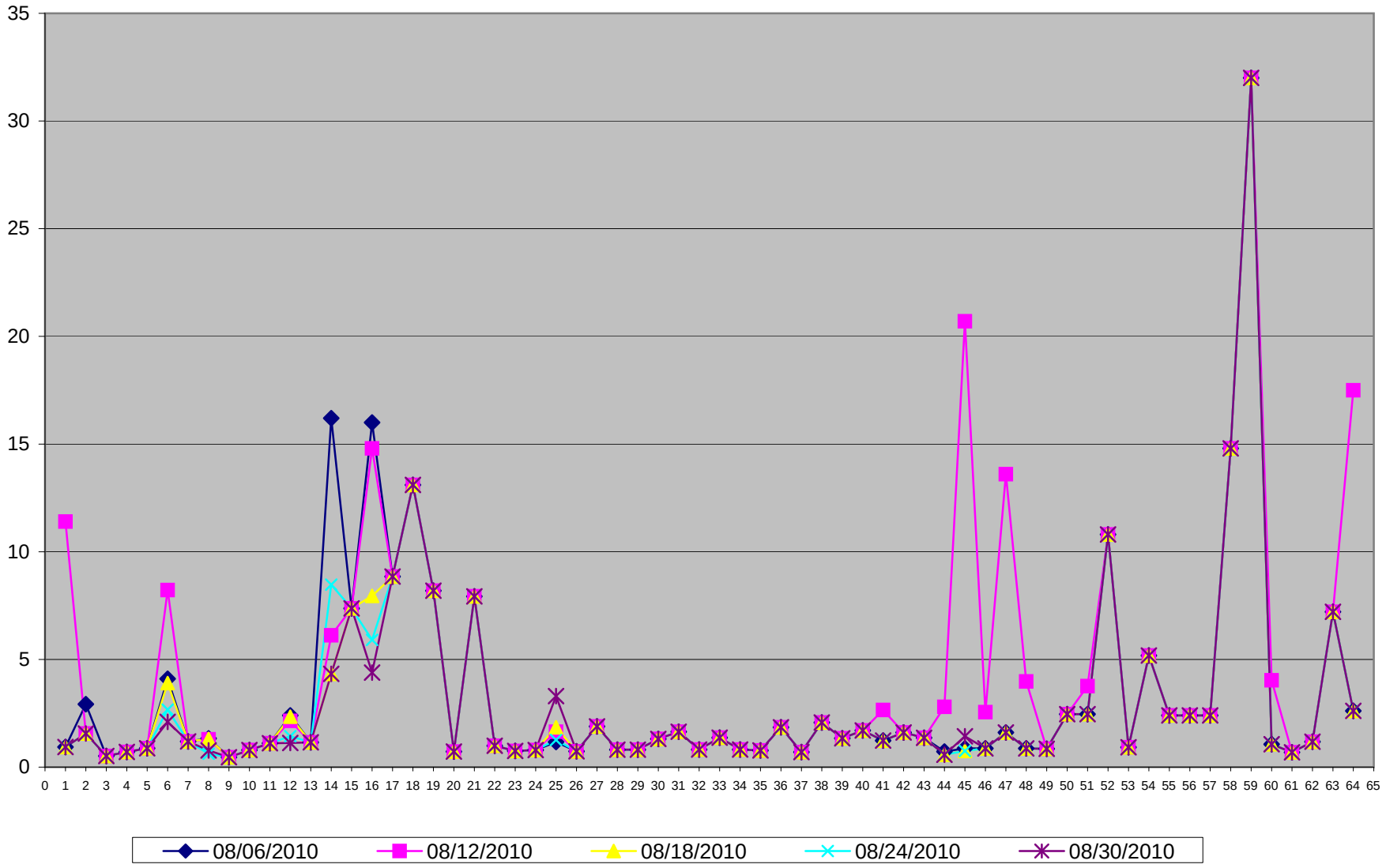
Volatile Organics

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



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

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



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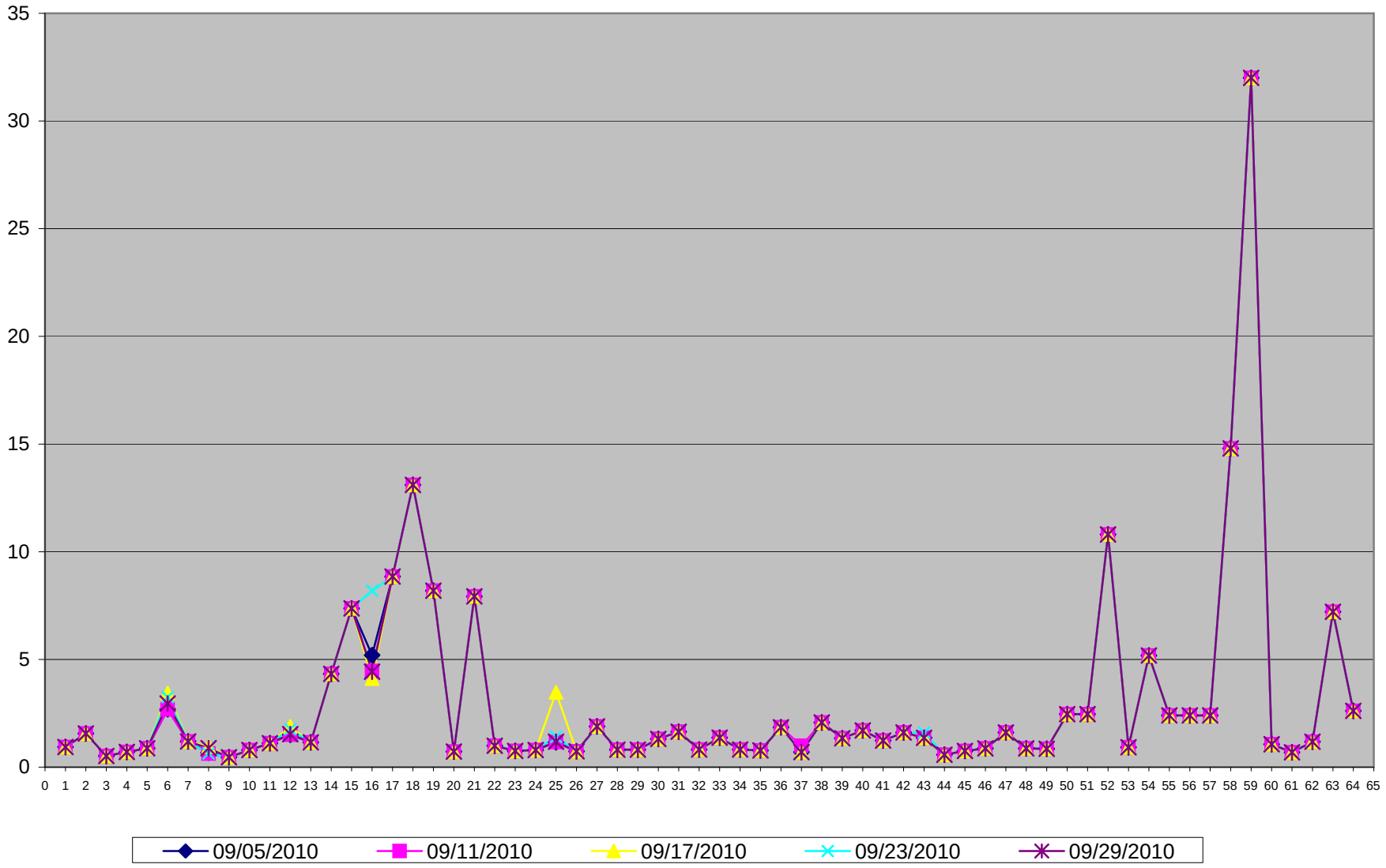
4	Vinyl Acetate	36	1,2-Dichloropropane
5	Vinyl Bromide	37	Bromomethane
6	Dichlorodifluoromethane (FREON 12)	38	Bromoform
7	1,2-Dichlorotetrafluoroethane	39	Bromodichloromethane
8	Chloromethane	40	Dibromochloromethane
9	Vinyl Chloride	41	Heptane
10	Chloroethane	42	Trichloroethylene
11	1,3-Butadiene	43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

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



1	2,2,4-Trimethylpentane	33	1,1,2,2-Tetrachloroethane
2	Carbon Disulfide	34	cis-1,3-Dichloropropene
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7	1,2-Dichlorotetrafluoroethane	39	Bromodichloromethane
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18	Methyl Isobutyl Ketone	50	1,3,5-Trimethylbenzene
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22	1,1-Dichloroethylene	54	Benzyl chloride
23	cis-1,2-Dichloroethylene	55	1,3-Dichlorobenzene
24	trans-1,2-Dichloroethylene	56	1,4-Dichlorobenzene
25	Methylene Chloride (Dichloromethane)	57	1,2-Dichlorobenzene
26	Chloroform	58	1,2,4-Trichlorobenzene
27	Carbon Tetrachloride	59	Hexachlorobutadiene
28	1,1-Dichloroethane	60	Hexane
29	1,2-Dichloroethane	61	Cyclohexane
30	Ethylene Dibromide	62	Tetrahydrofuran
31	1,1,1-Trichloroethane	63	1,4-Dioxane
32	1,1,2-Trichloroethane	64	Xylene (Total)

Polycyclic Aromatic Hydrocarbons

Polycyclic Aromatic Hydrocarbons (PAHs) Results for July 2010

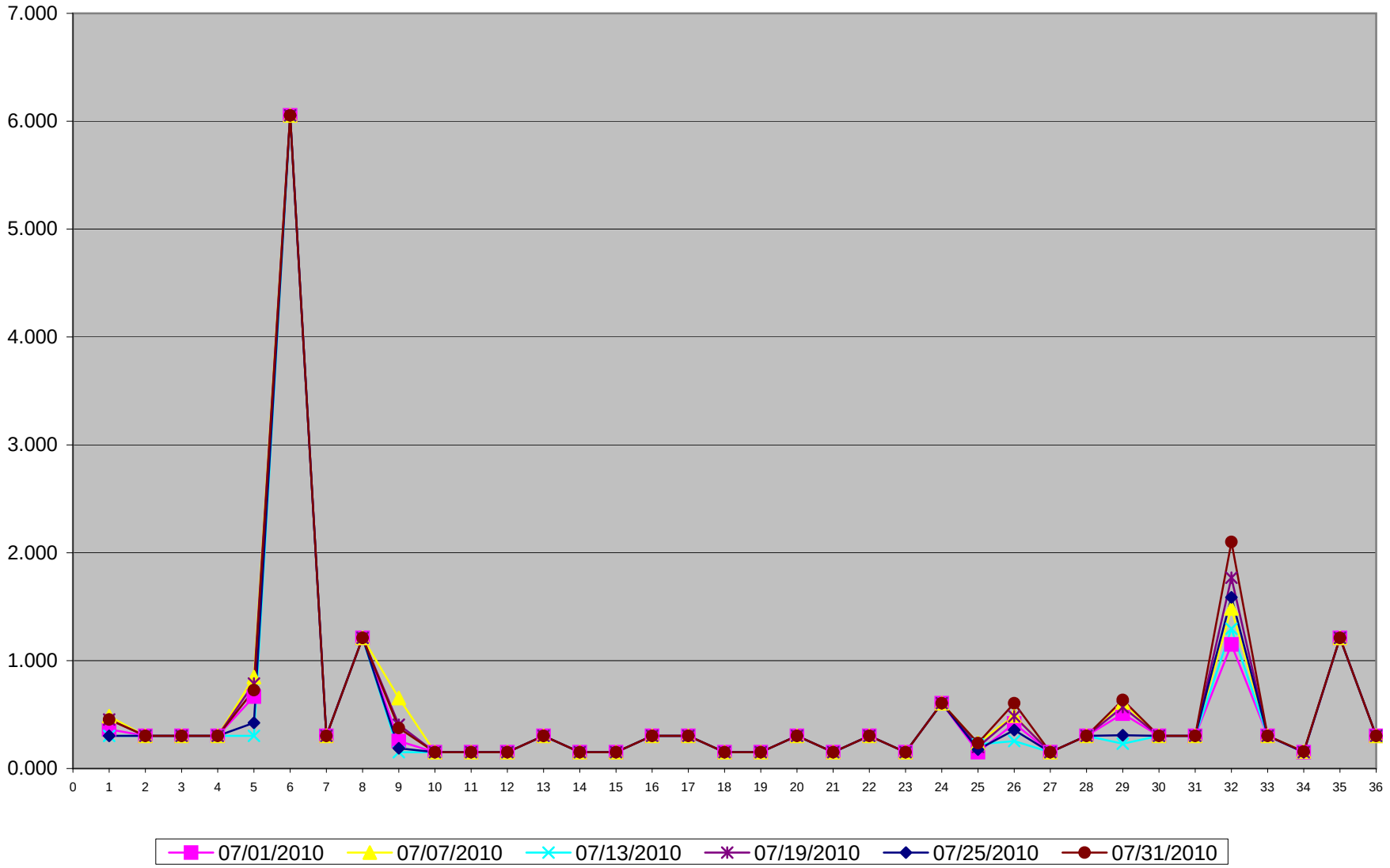
LICA- Cold Lake South Site

Unit: ng/m3

	PAHs	07/01/2010	07/07/2010	07/13/2010	07/19/2010	07/25/2010	07/31/2010
	Sample Volume (unit: m3)	330.32	330.33	330.33	330.33	330.33	330.33
1	1-Methylnaphthalene	0.363	0.484	0.303	0.454	0.303	0.454
2	1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303	0.303
4	2-Methlyanthracene	0.303	0.303	0.303	0.303	0.303	0.303
5	2-Methylnaphthalene	0.666	0.848	0.303	0.787	0.424	0.727
6	3-Methylcholanthrene	6.055	6.055	6.055	6.055	6.055	6.055
7	7,12-Dimethylbenzo(a)anthracene	0.303	0.303	0.303	0.303	0.303	0.303
8	9,10-Dimethylanthracene	1.211	1.211	1.211	1.211	1.211	1.211
9	Acenaphthene	0.254	0.654	0.151	0.406	0.188	0.375
10	Acenaphthylene	0.151	0.151	0.151	0.151	0.151	0.151
11	Anthracene	0.151	0.151	0.151	0.151	0.151	0.151
12	Benzo(a)anthracene	0.151	0.151	0.151	0.151	0.151	0.151
13	Benzo(a)fluorene	0.303	0.303	0.303	0.303	0.303	0.303
14	Benzo(a)pyrene	0.151	0.151	0.151	0.151	0.151	0.151
15	Benzo(b)fluoranthene	0.151	0.151	0.151	0.151	0.151	0.151
16	Benzo(b)fluorene	0.303	0.303	0.303	0.303	0.303	0.303
17	Benzo(e)pyrene	0.303	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	0.151
19	Benzo(k)fluoranthene	0.151	0.151	0.151	0.151	0.151	0.151
20	Biphenyl	0.303	0.303	0.303	0.303	0.303	0.303
21	Chrysene	0.151	0.151	0.151	0.151	0.151	0.151
22	Coronene	0.303	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	0.151
24	Dibenzo(a,e)pyrene	0.605	0.605	0.605	0.605	0.605	0.605
25	Fluoranthene	0.151	0.236	0.224	0.200	0.176	0.236
26	Fluorene	0.418	0.490	0.254	0.484	0.357	0.605
27	Indeno(1,2,3-cd)pyrene	0.151	0.151	0.151	0.151	0.151	0.151
28	m-Terphenyl	0.303	0.303	0.303	0.303	0.303	0.303
29	Naphthalene	0.509	0.612	0.230	0.569	0.309	0.636
30	o-Terphenyl	0.303	0.303	0.303	0.303	0.303	0.303
31	Perylene	0.303	0.303	0.303	0.303	0.303	0.303
32	Phenanthrene	1.150	1.483	1.296	1.768	1.586	2.101
33	p-Terphenyl	0.303	0.303	0.303	0.303	0.303	0.303
34	Pyrene	0.151	0.157	0.151	0.151	0.151	0.157
35	Quinoline	1.211	1.211	1.211	1.211	1.211	1.211
36	Tetralin	0.303	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.
- 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,I)perylene
19	Benzo(k)fluoranthene
20	Biphenyl
21	Chrysene
22	Coronene
23	Dibenz(a,h)anthracene
24	Dibenzo(a,e)pyrene
25	Fluoranthene
26	Fluorene
27	Indeno(1,2,3-cd)pyrene
28	m-Terphenyl
29	Naphthalene
30	o-Terphenyl
31	Perylene
32	Phenanthrene
33	p-Terphenyl
34	Pyrene
35	Quinoline
36	Tetralin

Polycyclic Aromatic Hydrocarbons (PAHs) Results for August 2010

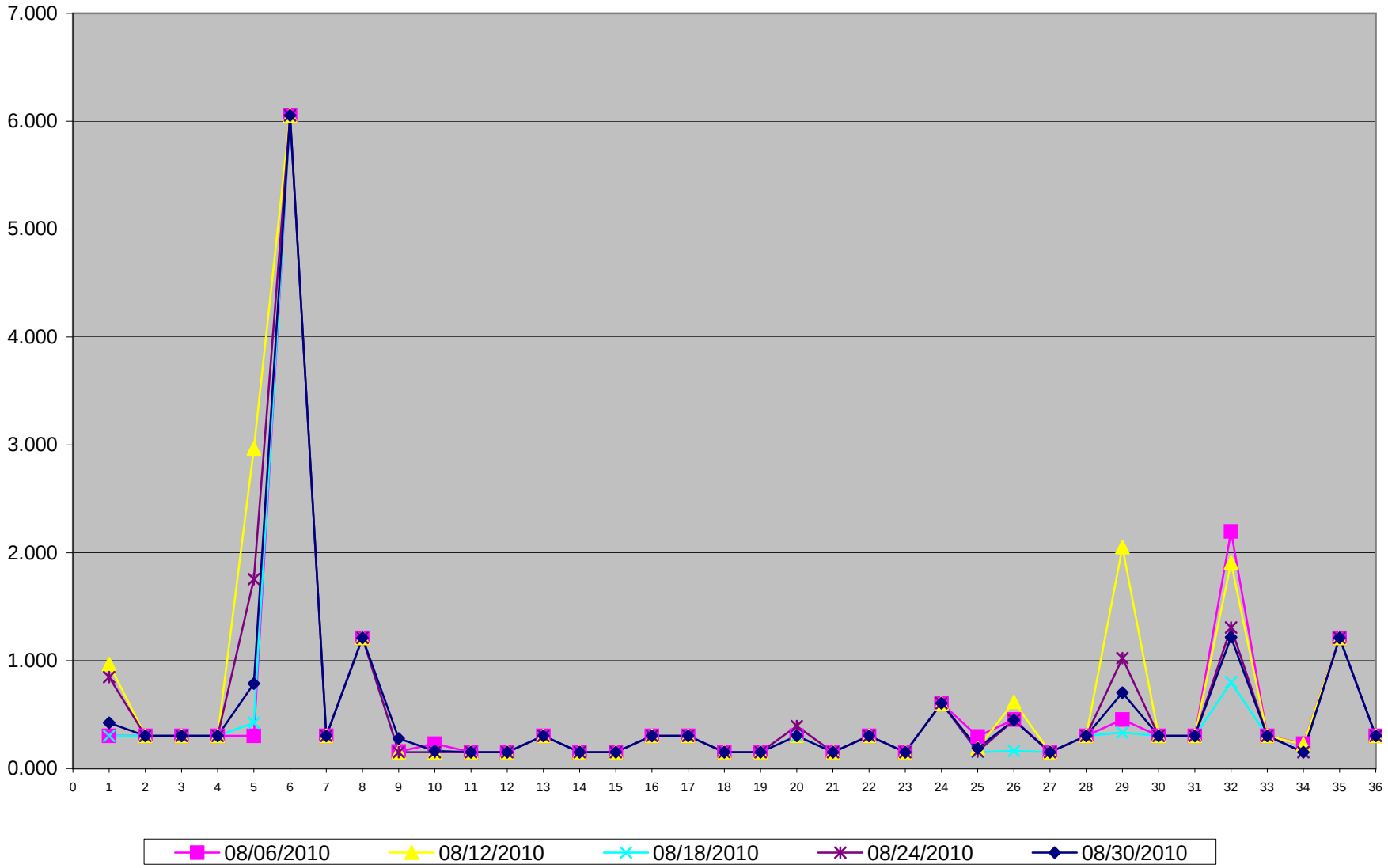
LICA- Cold Lake South Site

Unit: ng/m3

	PAHs	08/06/2010	08/12/2010	08/18/2010	08/24/2010	08/30/2010
	Sample Volume (unit: m3)	330.32	330.34	330.33	330.33	330.32
1	1-Methylnaphthalene	0.303	0.969	0.303	0.848	0.424
2	1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303
4	2-Methlyanthracene	0.303	0.303	0.303	0.303	0.303
5	2-Methylnaphthalene	0.303	2.967	0.424	1.756	0.787
6	3-Methylcholanthrene	6.055	6.054	6.055	6.055	6.055
7	7,12-Dimethylbenzo(a)anthracene	0.303	0.303	0.303	0.303	0.303
8	9,10-Dimethylanthracene	1.211	1.211	1.211	1.211	1.211
9	Acenaphthene	0.157	0.151	0.151	0.151	0.279
10	Acenaphthylene	0.230	0.151	0.151	0.151	0.163
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	0.394	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	0.297	0.188	0.151	0.157	0.188
26	Fluorene	0.454	0.618	0.163	0.448	0.448
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	0.454	2.052	0.333	1.023	0.702
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	2.198	1.907	0.799	1.308	1.217
33	p-Terphenyl	0.303	0.303	0.303	0.303	0.303
34	Pyrene	0.230	0.224	0.151	0.151	0.151
35	Quinoline	1.211	1.211	1.211	1.211	1.211
36	Tetralin	0.303	0.303	0.303	0.303	0.303

Note: - values were calculated by the formula of [reading (ug) x 1000 / sample volume (m3)].
- Where the analytical results are less than the minimum detection limit (MDL), the MDL has been used in calculations.
- 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,I)perylene
19	Benzo(k)fluoranthene
20	Biphenyl
21	Chrysene
22	Coronene
23	Dibenz(a,h)anthracene
24	Dibenzo(a,e)pyrene
25	Fluoranthene
26	Fluorene
27	Indeno(1,2,3-cd)pyrene
28	m-Terphenyl
29	Naphthalene
30	o-Terphenyl
31	Perylene
32	Phenanthrene
33	p-Terphenyl
34	Pyrene
35	Quinoline
36	Tetralin

Polycyclic Aromatic Hydrocarbons (PAHs) Results for September 2010

LICA- Cold Lake South Site

Unit: ng/m3

	PAHs	09/05/2010	09/11/2010	09/17/2010	09/23/2010	09/29/2010
	Sample Volume (unit: m3)	330.33	330.33	330.36	330.33	330.33
1	1-Methylnaphthalene	0.303	0.303	0.666	0.303	0.666
2	1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303
4	2-Methlyanthracene	0.303	0.303	0.303	0.303	0.303
5	2-Methylnaphthalene	0.363	0.303	1.181	0.303	1.150
6	3-Methylcholanthrene	6.055	6.055	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-Dimethylanthracene	1.211	1.211	1.211	1.211	1.211
9	Acenaphthene	0.206	0.151	0.176	0.151	0.351
10	Acenaphthylene	0.151	0.151	0.151	0.194	0.424
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	0.151
26	Fluorene	0.375	0.236	0.236	0.224	0.406
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	0.321	0.272	0.787	0.218	0.720
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	0.969	0.605	0.394	0.599	0.866
33	p-Terphenyl	0.303	0.303	0.303	0.303	0.303
34	Pyrene	0.151	0.151	0.151	0.151	0.176
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)].
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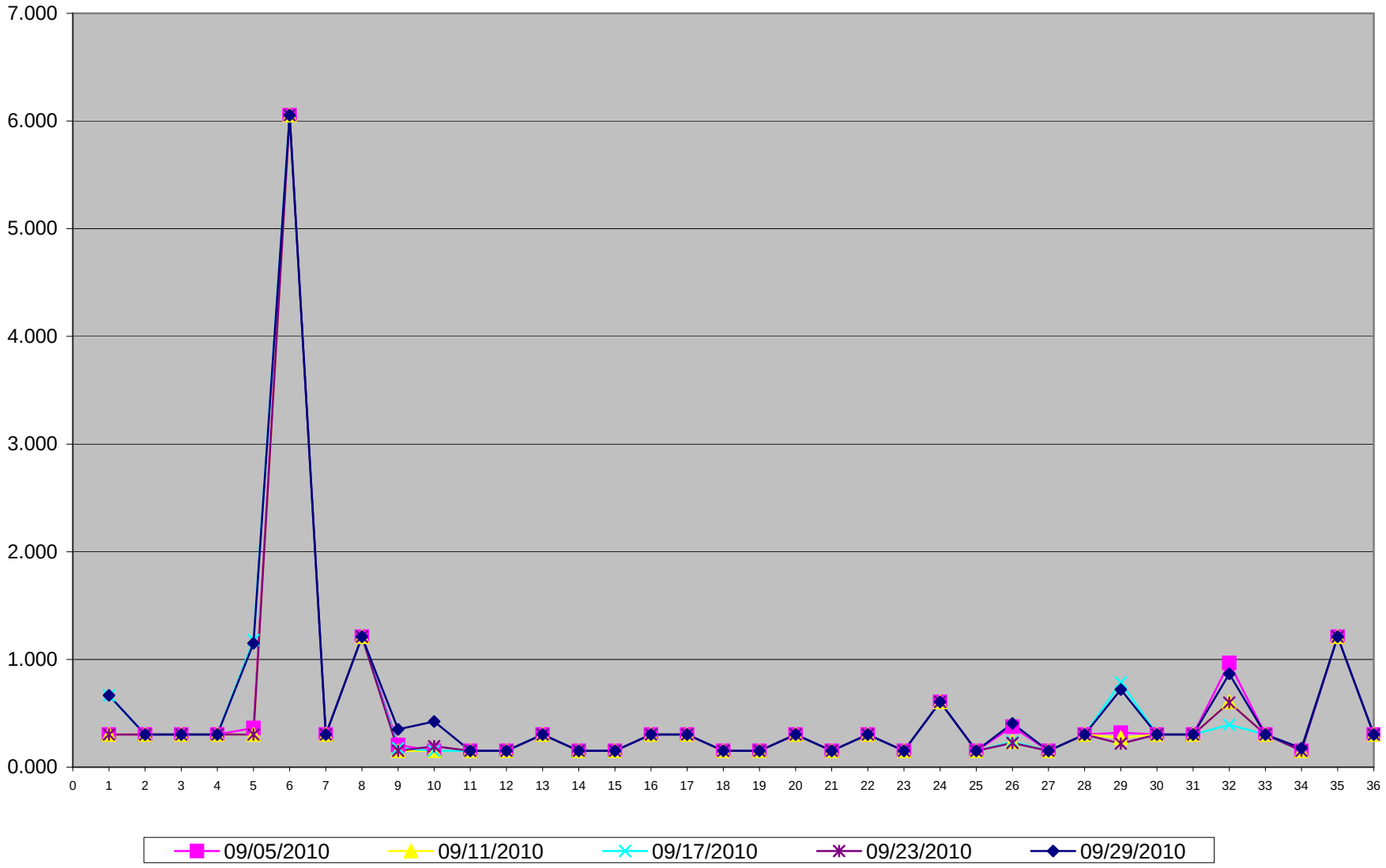
PAHs in ng/m3 Site: LICA - Cold Lake South



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

Calibration Reports

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	September 8, 2010		Previous Calibration	August 4, 2010	
Company	**Lakeland Community and Industry Association**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	14:06		End Time (MST)	18:02	
Reason:	Monthly Calibraiton				
Barometric Pressure	NA	mmHg	Station Temperature	23	Deg C
Cal Gas	51.4	ppm	Cal Gas Expiry date	5/8/2012	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range				0 - 500 ppb				
Sample Flow / Box Temp	450	ccm	28.5	Deg C	450	ccm	29	Deg C
HVPS / Lamp Setting	-632		743		-632		741	
PMT / RxCell Temp	OK	Deg C	45.2	Deg C	OK	Deg C	45.2	Deg C
Converter / IZS Temp	NA	Deg C	45.0	Deg C	NA	Deg C	45.0	Deg C
Offset / Slope	5.3		1.007		5.4		1.018	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
2999	0	0	0	N/A
2977	23.3	399	392	1.0183
2977	23.3	399	399	1.0004
2986	11.7	201	201	0.9981
2992	8.8	151	151	0.9982
2999	0	0	0	N/A
			Sum of Least Squares	0.9998
			New Correction Factor	1.0004

	Before Calibration	After Calibration
Auto Zero	0.1	0.1
Auto Span	341	345
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		-1.6%

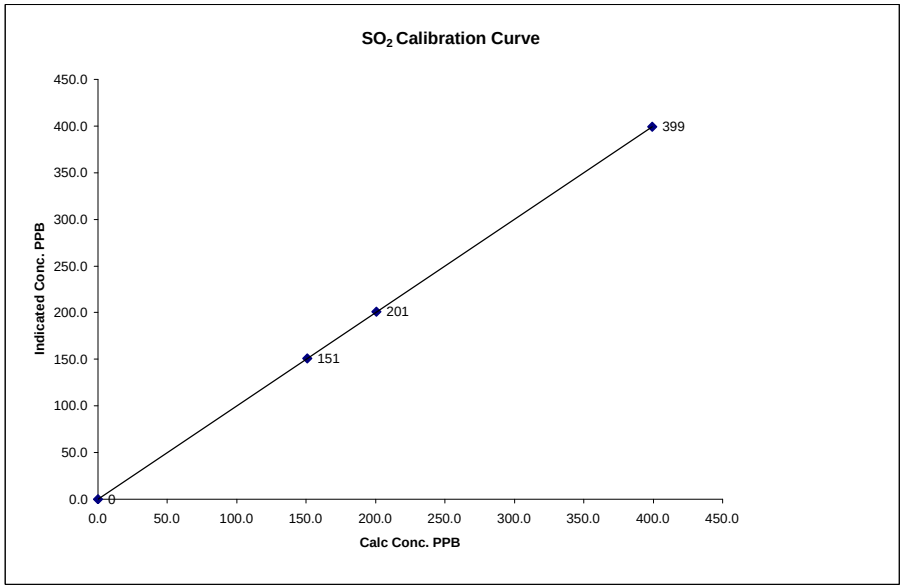
Calibration Performed by: Ting Xyu

SO_2 Calibration Curve

Calibration Date	September 8, 2010				
Company	**Lakeland Community and Industry Association**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	14:06		End Time (MST)	18:02	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
151	151	0.9982
201	201	0.9981
399	399	1.0004

Correlation Coefficient	(≥ 0.995)	0.999998
Slope	(0.85 to 1.15)	0.999508
Intercept	(± 3% F.S.)	0.213926



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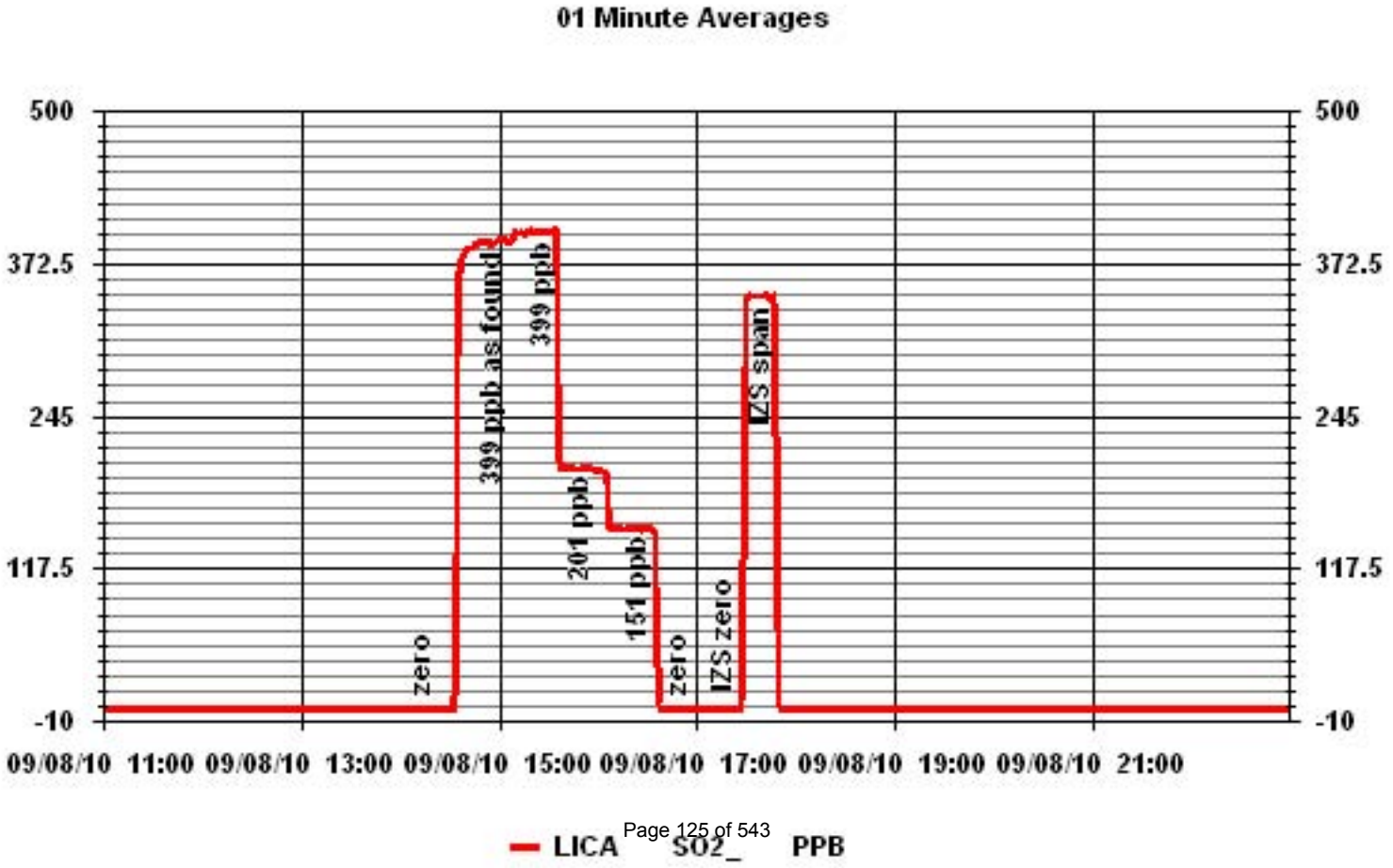

01 Minute Averages
500
372.5
245
117.5
-10
zero
399 ppb as found
399 ppb
201 ppb
151 ppb
zero
IZS zero
IZS span
09/08/10 11:00
09/08/10 13:00
09/08/10 15:00
09/08/10 17:00
09/08/10 19:00
09/08/10 21:00
LICA SO2_ PPB

Total Reduced Sulphur

TRS Calibration Report

Station Information

Calibration Date	September 3, 2010	Previous Calibration	August 4, 2010
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:00	End Time (MST)	10:30
Reason:	Post Repair Calibration		
Barometric Pressure	717 mm Hg	Station Temperature	23 Deg C
Cal Gas	10.6 ppm	Cal Gas Expiry date	May 12, 2011
DAS Output Voltage	0 - 10 Volts		

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 -100 ppb							
Sample Flow / Box Temp	359 ccm		31.9 Deg C		355 ccm		31.1 Deg C	
HVPS / Lamp Setting	-622.7		758		622.7		756	
PMT / RxCell Temp	OK Deg C		45.2 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		1.151		11.2		1.169	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4960	37.7	80	77	1.0385
4960	37.7	80	80	0.9995
4984	18.9	40	40	1.0011
4988	10.9	23	23	1.0049
4998	0	0	0	N/A
			Sum of Least Squares	1.0001
			New Correction Factor	0.9995

	Before Calibration	After Calibration
Auto Zero	0.1	0.1
Auto Span	25	26
Sample Lines Connected		YES
Percent Change from Previous Calibration		-3.8%

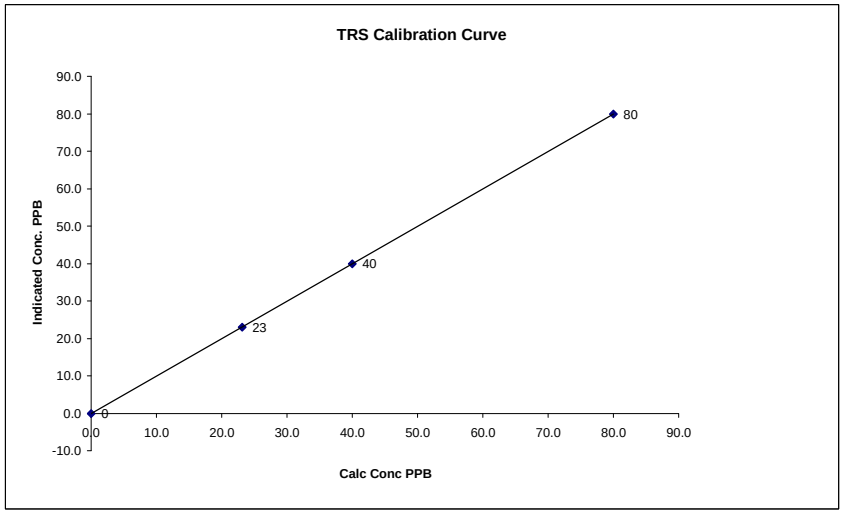
Calibration Performed by: Shea Beaton

TRS Calibration Curve

Calibration Date	September 3, 2010		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:00	End Time (MST)	10:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
23	23	1.0049
40	40	1.0011
80	80	0.9995

Correlation Coefficient	(≥ 0.995)	0.999997
Slope	(0.85 to 1.15)	1.000872
Intercept	(± 3% F.S.)	-0.060859



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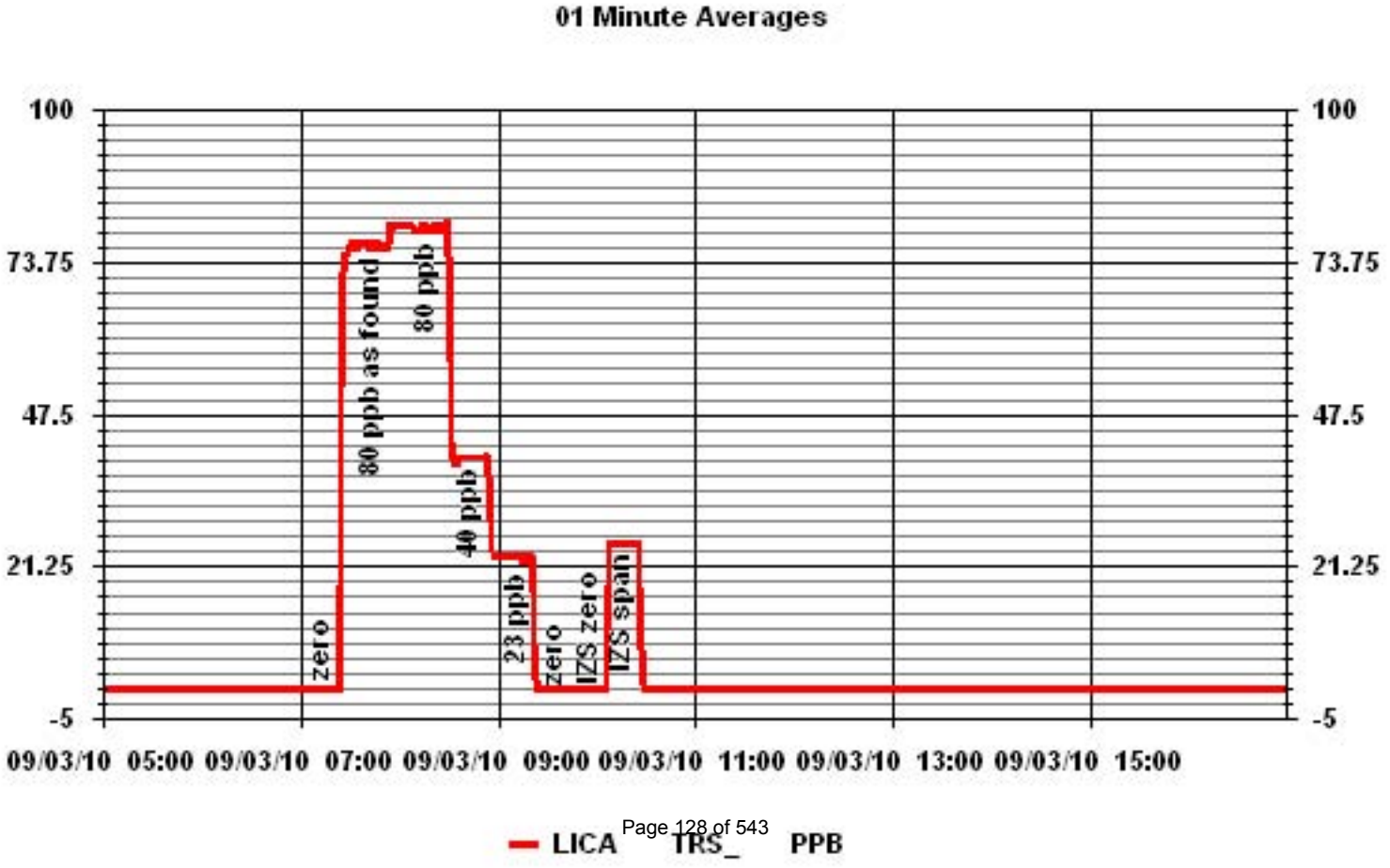

01 Minute Averages
100
73.75
47.5
21.25
-5
zero
80 ppb as found
80 ppb
40 ppb
23 ppb
zero
IZS zero
IZS span
09/03/10 05:00
09/03/10 07:00
09/03/10 09:00
09/03/10 11:00
09/03/10 13:00
09/03/10 15:00
LICA TRS_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	September 9, 2010		Previous Calibration	August 5, 2010	
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**LICA1/Cold Lake**				
Start Time (MST)	8:09		End Time (MST)	12:55	
Reason:	Monthly Calibration				
Barometric Pressure:	NA	mmHg	Station Temperature:	23	Deg C
Calibrator:	API 700		S/N:	831	
Cal Gas Concentration:	207Prop/602Meth	ppm	Cal Gas Expiry Date:	8/21/2011	
DAS make & Model:	ESC 8832		S/N :	3485	
Output Voltage Range:	0 - 10	VDC			

Analyzer Information

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

Analyzer Settings

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

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0	0.0	0.1	N/A
1999	0	0.0	0.0	N/A
1999	70	39.6	40.1	0.9882
1999	35	20.2	20.1	1.0027
1999	20	11.6	11.3	1.0268
1999	0	0.0	0.0	N/A
			Correction Factor:	0.9882

Percent Change

Previous Calibration Correction Factor:	0.9956
Current Correction Factor Before Span Adjust:	0.9882
Percent Change:	0.8%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.2	0.0
Auto Span	37.9	37.6
Sample Lines Connected		**YES**

Cylinder Pressures		
Span	700 psi	
Hydrogen	1500 psi	
Zero Air	32 psi	Maxxam-owned API 701 zero air supply with catalytic oxidizer

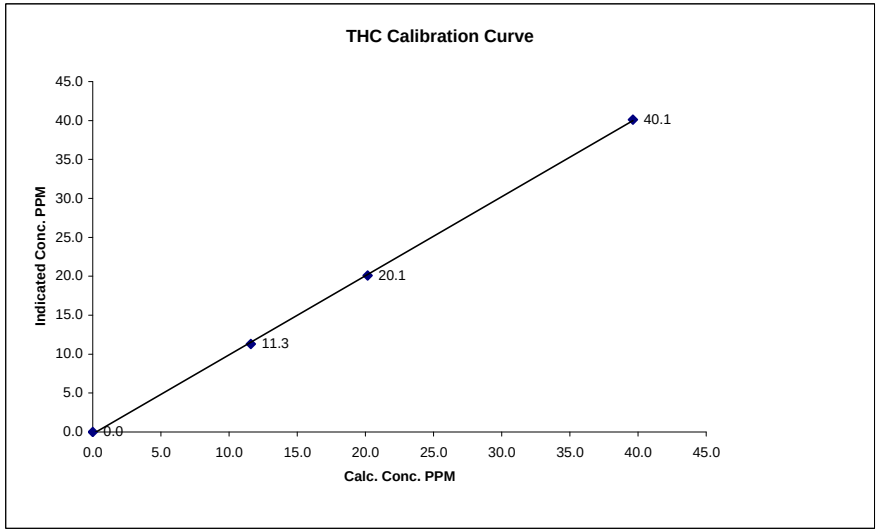
Calibration Performed by: Ting Xu

THC Calibration Curve

Calibration Date	September 9, 2010				
Company	**Lakeland Industry and Community Association**				
Plant / Location	**LICA1/Cold Lake**				
Start Time (MST)	8:09	End Time	(MST)	12:55	

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
11.6	11.3	1.0268
20.2	20.1	1.0027
39.6	40.1	0.9882

Correlation Coefficient	(≥ 0.995)	0.999836
Slope	(0.85 to 1.15)	1.014420
Intercept	(± 3% F.S.)	-0.228130



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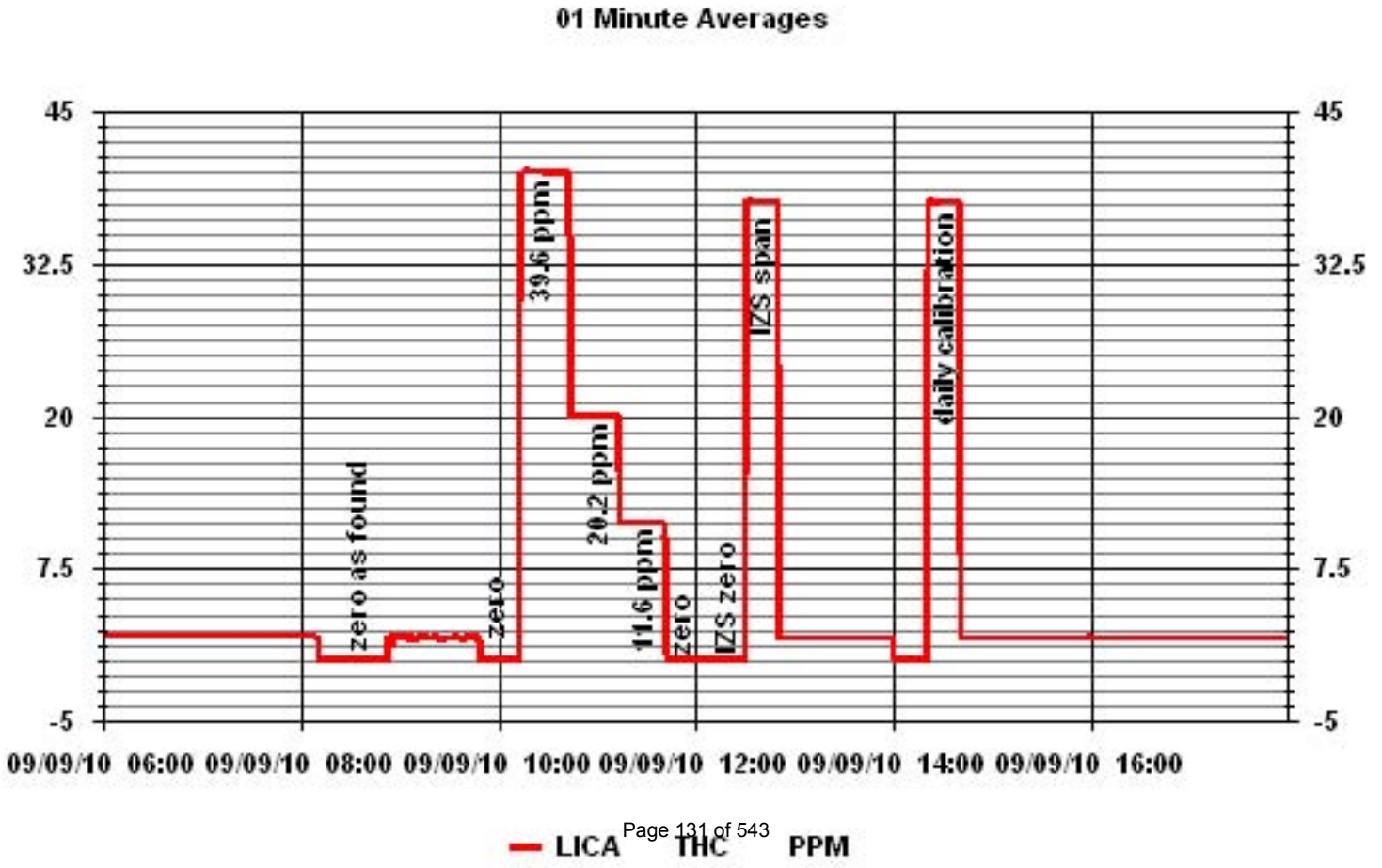

01 Minute Averages
45
32.5
20
7.5
-5
zero as found
zero
39.6 ppm
20.2 ppm
11.6 ppm
zero
IZS zero
IZS span
daily calibration
09/09/10 06:00
09/09/10 08:00
09/09/10 10:00
09/09/10 12:00
09/09/10 14:00
09/09/10 16:00
LICA THC PPM

Particulate Matter 2.5

TEOM 1405F Audit

Station		Audit Transfer Standard	
Date:	September 17, 2010	Make/Model:	Streamline FTS
Station Name:	LICA 1	Serial Number:	Hi 091001
Location:	Cold Lake South	Cell s/n:	Lo 091099
Operator:	LICA	Thermometer s/n:	VWR90758398

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1775	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A201620804	Filter Load (%)	22.5%
Firmware Ver.	1.52	K_o Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	41.7
		Press (ATM)	0.949

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.004	Warnings	None
Pump Vacuum **<0.40atm**	0.38		

Temperature/Pressure

Measured Temp **(± 2 ^oC)**	-1.8	**D ^oC**	43.5
Measured Press **(± 0.01atm)**	0.948	**DATM**	0.001

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	5.37%
Measured Main Flow (l/min)	2.52	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	5.65%
Measured Bypass Flow (l/min)	11.71	Flow Adjusted to Measured?	Yes

Leak Check

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

Instrument Setup

Flow Control = Active

Report Conditions = Standard (25.0 C and 1atm)

K_o Factor

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

Start Time: 6:45 **Finish Time:** 9:45

Sample Inlet Cleaned: Yes **New Filters Installed:** Yes

New Filter Loading %: 17.4%

Comments: Ambient temp sensor is malfunctioning new one ordered. Set flow control to passive, avg temp set to 5C, acg BP set to 0.940atm. Following changes the mainflow is 2.94lpm, and the bypass flow is 13.47lpm. Btapss error is 1.19%, main flow error is 2.28%.

Auditor/s: Shea Beaton / Ting Xu

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	September 8, 2010		Previous Calibration	August 4, 2010	
Company	LICA		Plant/Location	**LICA 1 - Cold Lake South**	
Start Time (MST)	8:04		End Time (MST)	14:23	
Reason:	Monthly Calibration			Other	
Barometric Pressure	NA mmHg	Station Temperature	23 Deg C	MFCF	#VALUE!
Cal Gas Concentration	NOx 50.8 ppm	NO 50.4 ppm	Cal Gas Expiry date	05-Aug-12	
DAS Output Voltage	0 - 10 Volts		Chart Rec. Output	NA Volts	

Equipment Information

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

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range			0 - 500	ppb					
Sample Flow/Conv. Temp	721	ccm	318	Deg C		709	ccm	318.0	Deg C
Ozone Flow / Vacuum	OK	ccm	181.8	"Hg-A		OK	ccm	179.5	"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	-2.4	Deg C
Box Temp / IZS Temp	26.9	Deg C	OK	Deg C		26.7	Deg C	OK	Deg C
Offset	3.9	NOx	3.6	NO		3.9	NOx	3.6	NO
Slope	1.006	NOx	0.940	NO		1.009	NOx	0.920	NO
NO_2 COEF / Conv Efficency	0.998	NO2	NA			0.998	NO2	NA	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4995	0.0	-----	0	0	0	0	0	0	-----	-----
4956	39.6		403	400	-----	409	407	2	0.9846	0.9816
4956	39.6	-----	403	400	-----	403	400	3	0.9992	0.9988
4975	19.8	-----	201	200	-----	201	200	1	1.0019	0.9990
4987	9.9	-----	101	100	-----	101	100	1	0.9965	0.9985
4995	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			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4956	39.6	-----	403	400	-----	404	401	3	-----	-----
4956	39.6	350	403	-----	338	404	66	338	1.0000	100.00%
4956	39.6	150	403	-----	149	404	255	149	1.0000	100.00%
4956	39.6	75	403	-----	76	404	328	76	1.0000	100.00%

Linearity			Sum of Least Squares	NOx= 1.000	NO= 0.999	NO2= 1.000		
OK?	Yes	No	Correction Factors:	NOx= 0.9992	NO= 0.9988	NO2= 1.0000		
					Average Converter Efficiency= 100.00%			

	Before Calibration					After Calibration			
Auto Zero	0.4	NOx	0.5	NO2		0.1	NOx	0.3	NO2
Auto Span	351	NOx	349	NO2		343	NOx	340	NO2
				Sample Lines Connected		YES			

Notes

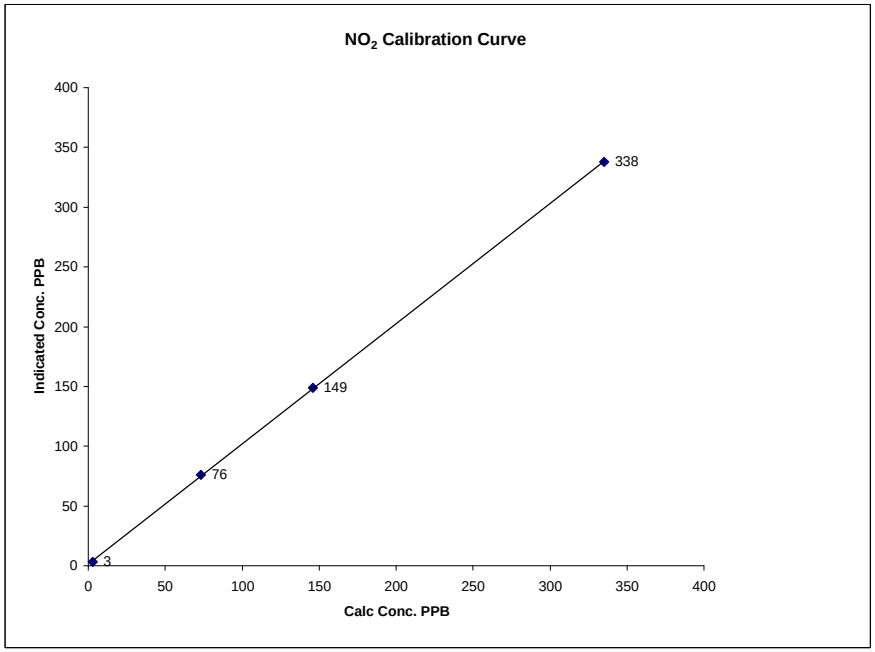
Calibration Performed by: Ting Xu

NO_2 Calibration Curve

Calibration Date	September 8, 2010		
Company	LICA		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	8:04	End Time (MST)	14:23

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
3	3	N/A
73	76	0.9605
146	149	0.9799
335	338	0.9911

Correlation Coefficient	(≥ 0.995)	0.999935
Slope	(0.85 to 1.15)	1.006666
Intercept	(± 3% F.S.)	1.32173



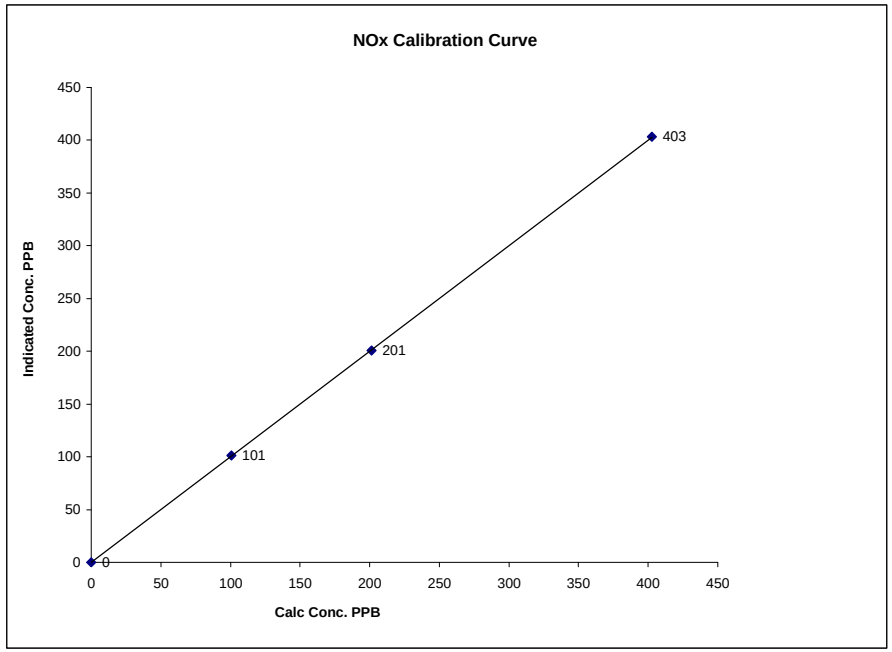
Notes:

NOx Calibration Curve

Calibration Date	September 8, 2010		
Company	LICA		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	8:04	End Time (MST)	14:23

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
101	101	0.9965
201	201	1.0019
403	403	0.9992

Correlation Coefficient	(≥ 0.995)	0.999996
Slope	(0.85 to 1.15)	1.000382
Intercept	(± 3% F.S.)	0.00407



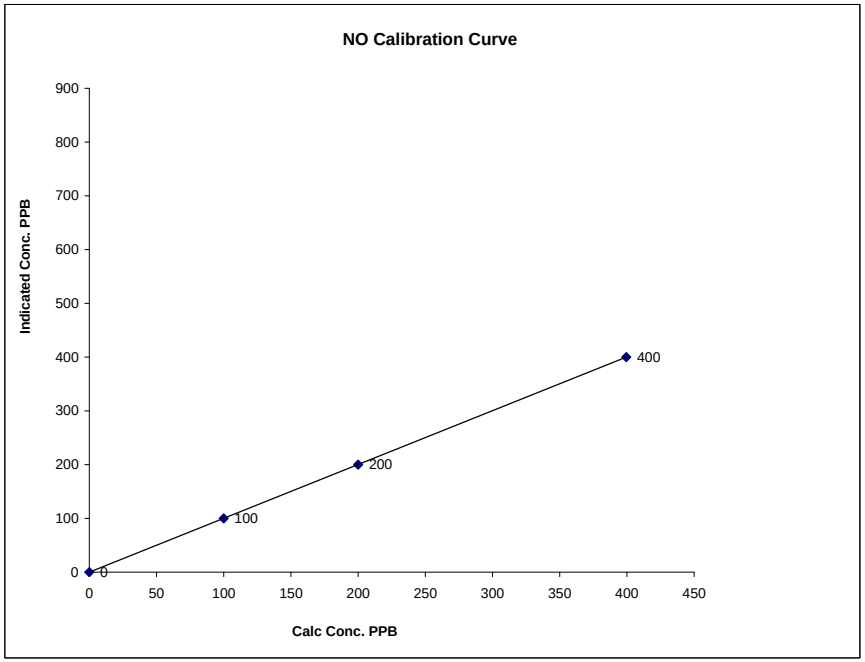
Notes:

NO Calibration Curve

Calibration Date	September 8, 2010		
Company	LICA		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	8:04	End Time (MST)	14:23

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
100	100	0.9985
200	200	0.9990
400	400	0.9988

Correlation Coefficient	(≥ 0.995)	1.000000
Slope	(0.85 to 1.15)	1.001151
Intercept	(± 3% F.S.)	-0.0641



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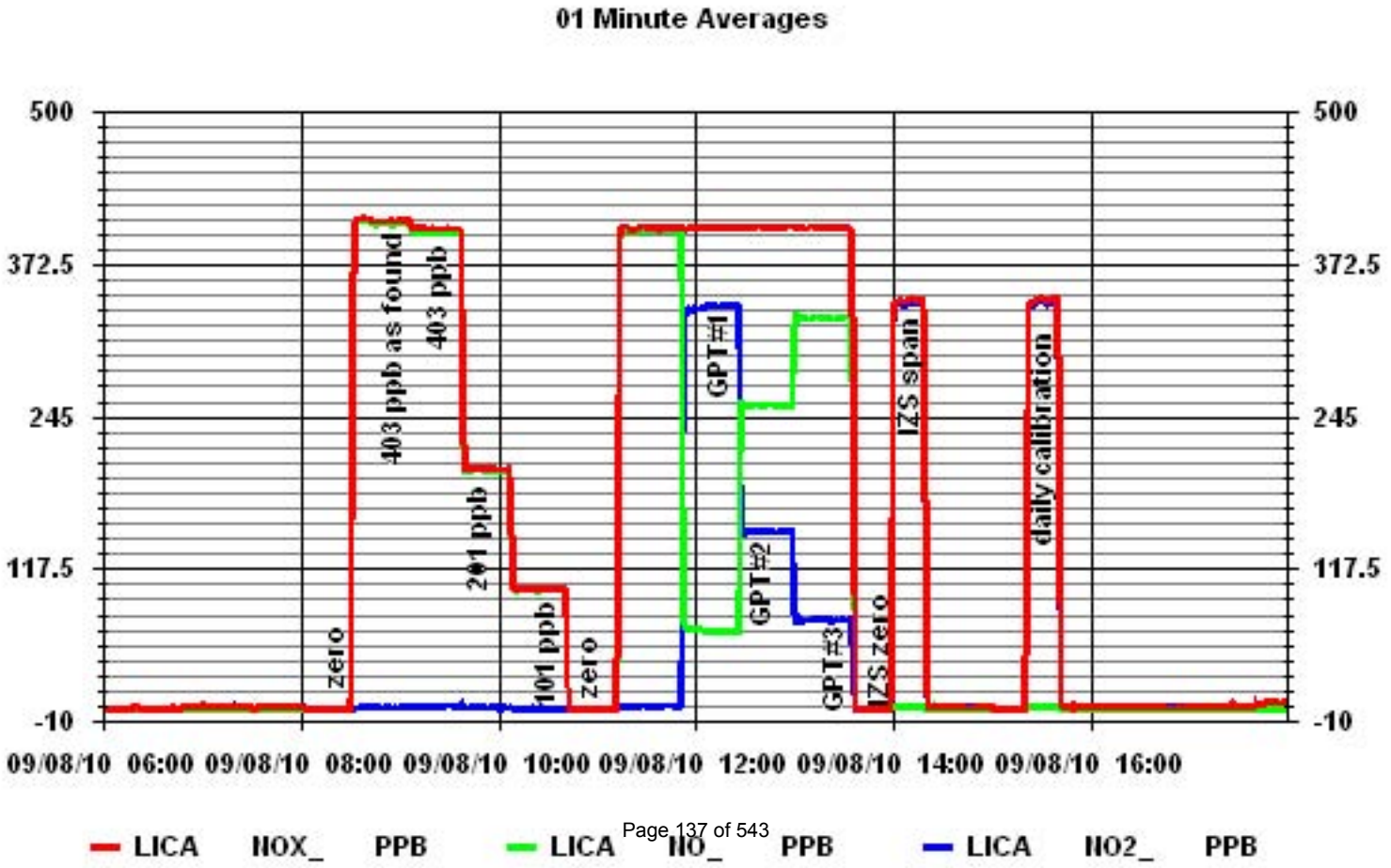

01 Minute Averages
500
372.5
245
117.5
-10
zero
403 ppb as found
403 ppb
201 ppb
101 ppb
zero
GPT#1
GPT#2
GPT#3
IZS zero
IZS span
daily calibration
09/08/10 06:00
09/08/10 08:00
09/08/10 10:00
09/08/10 12:00
09/08/10 14:00
09/08/10 16:00
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	September 8, 2010	Previous Calibration	August 4, 2010
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	13:58	End Time (MST)	17:36
Reason:		Monthly Calibration	
Barometric Pressure	NA mm Hg	Station Temperature	22 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

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

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Cell A Flow/ Cell B Flow	740 ccm	755 ccm	746 ccm	760 ccm
Pressure	707 mmHg		715 mmHg	
Bench Lamp Temp	53.5 Deg C		53.5 Deg C	
O_3 Lamp/Box Temp	67.6 Deg C	28.3 Deg C	67.7 Deg C	28.7 Deg C
Offset / Slope	0.7	1.021	0.7	1.011

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4996	0	0	0	N/A
4996	350	335	337	0.9941
4966	350	335	336	0.9970
4996	150	146	145	1.0069
4996	75	73	72	1.0139
4996	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	0.9970

	Before Calibration	After Calibration
Auto Zero	-0.2	-0.2
Auto Span	289	285
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.6%

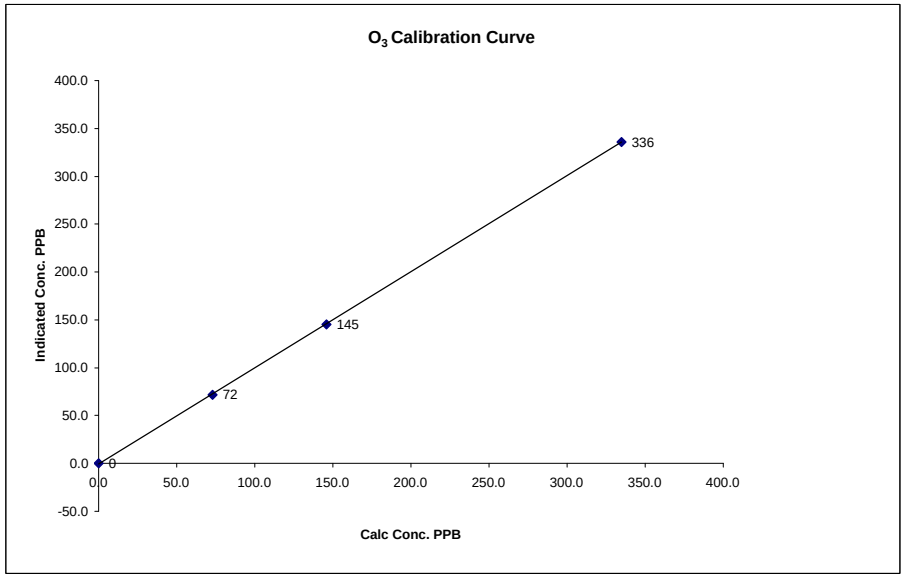
Calibration Performed by: Ting Xu

O_3 Calibration Curve

Calibration Date	September 8, 2010		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	13:58	End Time (MST)	17:36

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
73	72	1.0139
146	145	1.0069
335	336	0.9970

Correlation Coefficient	(≥ 0.995)	0.999973
Slope	(0.85 to 1.15)	1.004096
Intercept	(± 3% F.S.)	-0.817230



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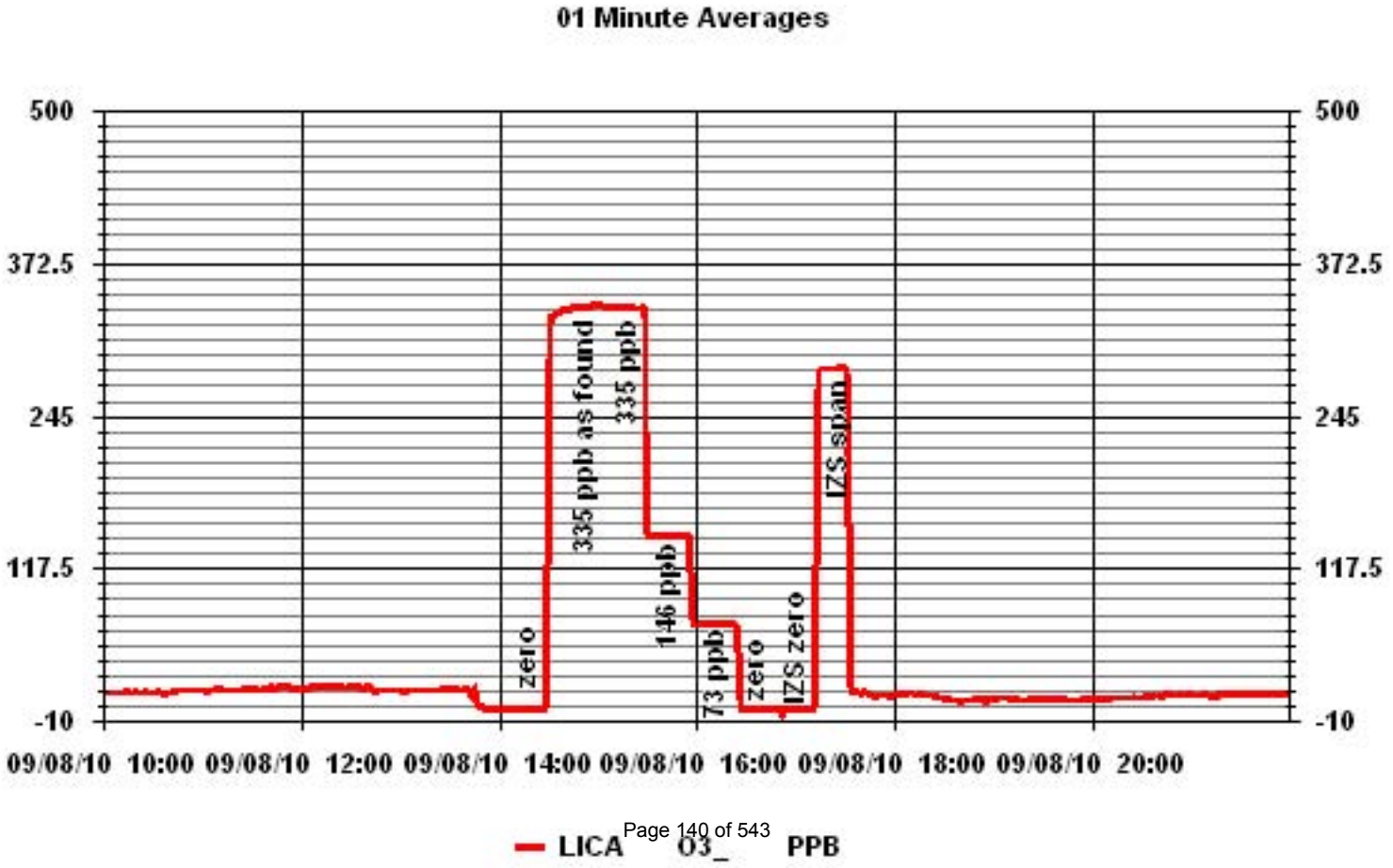

01 Minute Averages
500
372.5
245
117.5
-10
zero
335 ppb as found
335 ppb
146 ppb
73 ppb
zero
IZS zero
IZS span
09/08/10 10:00
09/08/10 12:00
09/08/10 14:00
09/08/10 16:00
09/08/10 18:00
09/08/10 20:00
LICA O3_ PPB

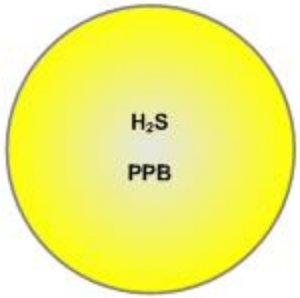
Passive Bubble Maps

Lakeland Industry & Community Association
H_2S Passive Bubble Map

SEPTEMBER 2010

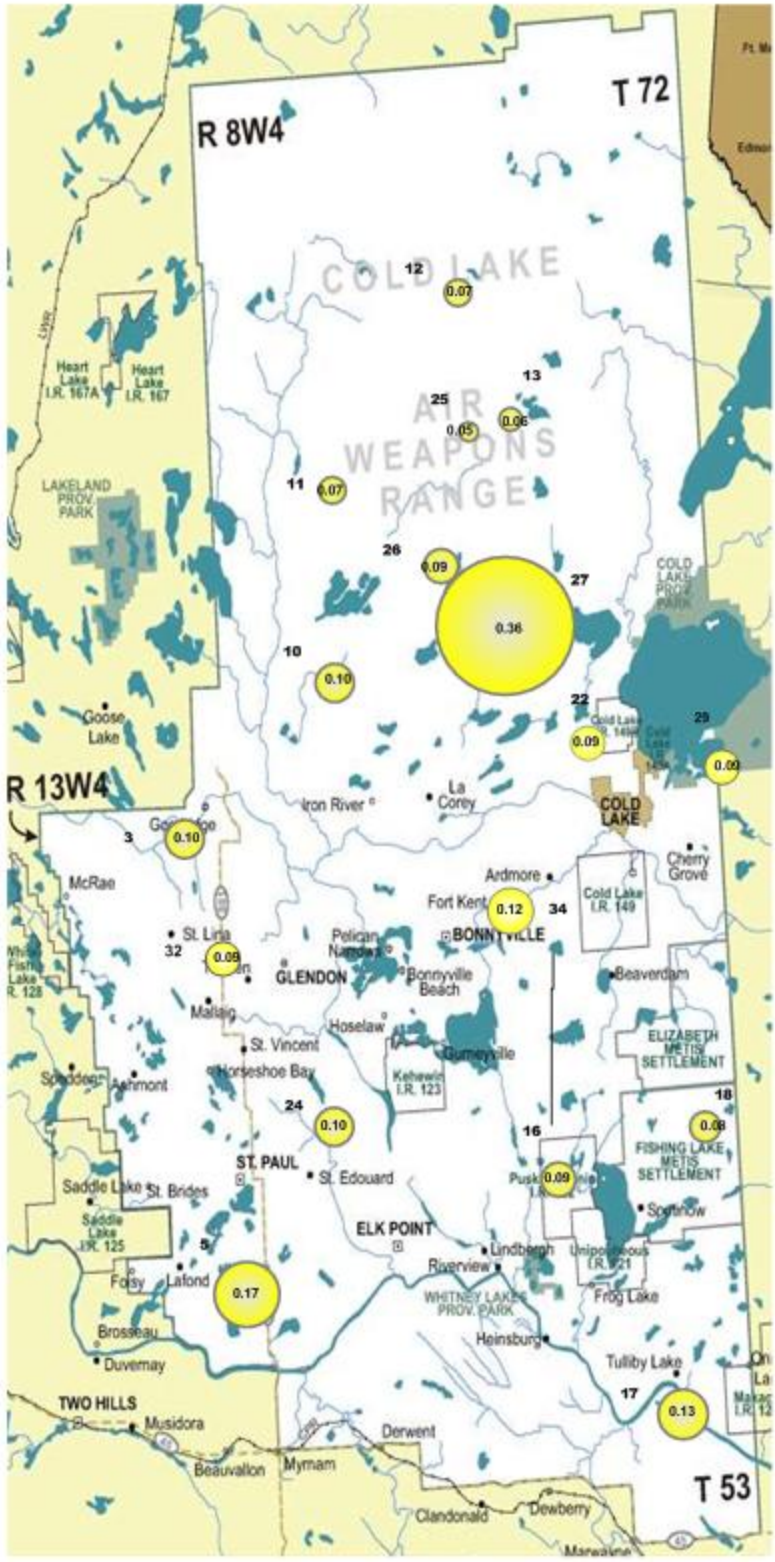
PASSIVE STATIONS

		DUPLICATE
3 – Therien	0.10 PPB	NA
5 – Lake Eliza	0.18 PPB	0.16 PPB
10 – La Corey	0.10 PPB	0.10 PPB
11 – Wolf Lake	0.07 PPB	NA
12 – Foster Creek	0.07 PPB	0.06 PPB
13 – Primrose	0.06 PPB	NA
14 – Maskwa	0.16 PPB	0.15 PPB
16 – Frog Lake	0.09 PPB	NA
17 – Clear Range	0.12 PPB	0.14 PPB
18 – Fishing Lake	0.08 PPB	NA
22 – Cold Lake South	0.09 PPB	NA
24 – Fort George	0.10 PPB	0.09 PPB
25 – Burnt Lake	0.05 PPB	NA
26 – Mahihkan	0.07 PPB	0.10 PPB
27 – Mahkeses	0.36 PPB	NA
29 – Cold Lake South 2	0.08 PPB	0.09 PPB
32 – St. Lina	0.09 PPB	NA
34 – Portable	0.12 PPB	NA



Summary

Minimum : 0.05 PPB – Burnt Lake
Maximum: 0.36 PPB – Mahkeses
Average: 0.11 PPB *Includes Duplicates



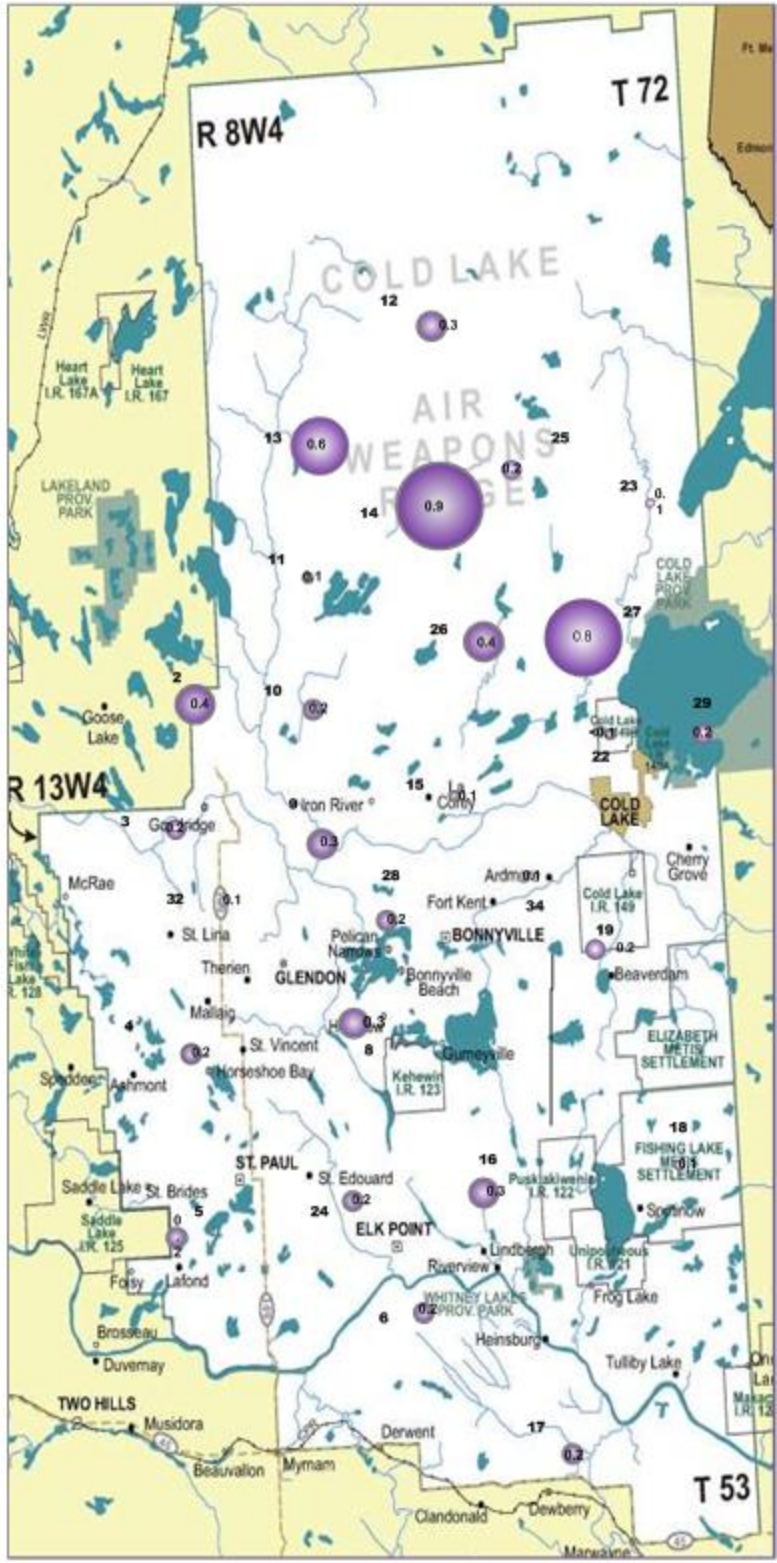
Lakeland Industry & Community Association
SO_2 Passive Bubble Map

SEPTEMBER 2010

PASSIVE STATIONS		DUPLICATE
2 – Sand River	0.4 PPB	NA
3 – Therien	0.2 PPB	0.2 PPB
4 – Flat Lake	0.2 PPB	NA
5 – Lake Eliza	0.2 PPB	0.2 PPB
6 – Telegraph Creek	0.2 PPB	NA
8 – Muriel-Kehewin	0.4 PPB	0.2 PPB
9 – Dupre	0.3 PPB	NA
10 – La Corey	<0.1 PPB	0.2 PPB
11 – Wolf Lake	0.1 PPB	NA
12 – Foster Creek	0.3 PPB	0.2 PPB
13 – Primrose	0.6 PPB	NA
14 – Maskwa	0.9 PPB	0.9 PPB
15 – Ardmore	0.1 PPB	NA
16 – Frog Lake	0.4 PPB	0.1 PPB
17 – Clear Range	0.2 PPB	NA
18 – Fishing Lake	0.1 PPB	<0.1 PPB
19 – Beaverdam	0.2 PPB	NA
22 – Cold Lake South	<0.1 PPB	NA
23 – Medley-Martineau	<0.1 PPB	0.1 PPB
24 – Fort George	0.2 PPB	NA
25 – Burnt Lake	0.2 PPB	0.2 PPB
26 – Mahikan	0.4 PPB	NA
27 – Mahkeses	0.8 PPB	0.8 PPB
28 – Town of Bonnyville	0.2 PPB	NA
29 – Cold Lake South 2	0.2 PPB	0.2 PPB
32 – St. Lina	0.1 PPB	NA
34 – Portable	0.1 PPB	NA

Summary

Minimum : <0.1 PPB – Cold Lake South
Maximum: 0.9 PPB – Maskwa
Average: 0.3 PPB *Includes Duplicates



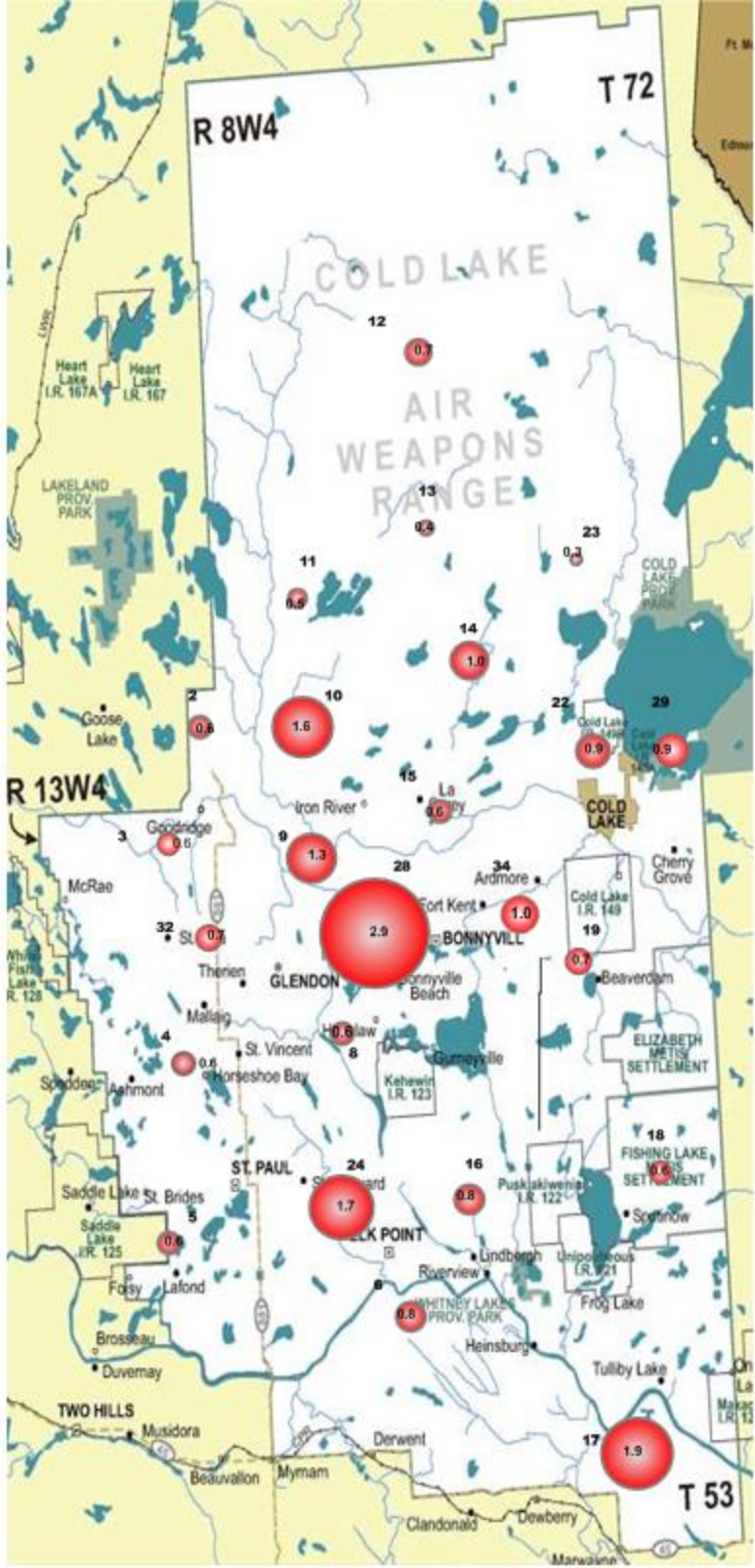
Lakeland Industry & Community Association
NO_2 Passive Bubble Map

SEPTEMBER 2010

PASSIVE STATIONS		DUPLICATE
2 – Sand River	0.6 PPB	NA
3 – Therien	0.6 PPB	0.6 PPB
4 – Flat Lake	0.6 PPB	NA
5 – Lake Eliza	0.5 PPB	0.6 PPB
6 – Telegraph Creek	0.8 PPB	NA
8 – Muriel-Kehewin	0.5 PPB	0.7 PPB
9 – Dupre	1.3 PPB	NA
10 – La Corey	1.7 PPB	1.4 PPB
11 – Wolf Lake	0.5 PPB	NA
12 – Foster Creek	0.6 PPB	0.8 PPB
13 – Primrose	0.4 PPB	NA
14 – Maskwa	1.0 PPB	1.0 PPB
15 – Ardmore	0.6 PPB	NA
16 – Frog Lake	0.8 PPB	0.8 PPB
17 – Clear Range	1.9 PPB	NA
18 – Fishing Lake	0.7 PPB	0.4 PPB
19 – Beaverdam	0.7 PPB	NA
22 – Cold Lake South	0.9 PPB	NA
23 – Medley-Martineau	0.2 PPB	0.3 PPB
24 – Fort George	1.7 PPB	NA
28 – Town of Bonnyville	2.6 PPB	3.2 PPB
29 – Cold Lake South 2	0.9 PPB	NA
32 – St. Lina	0.7 PPB	NA
34 – Portable	1.0 PPB	NA

Summary

Minimum : 0.4 PPB – Primrose
Maximum: 2.9 PPB – Town of Bonnyville
Average: 1.0 PPB *Includes Duplicates



Lakeland Industry & Community Association
O_3 Passive Bubble Map

SEPTEMBER 2010

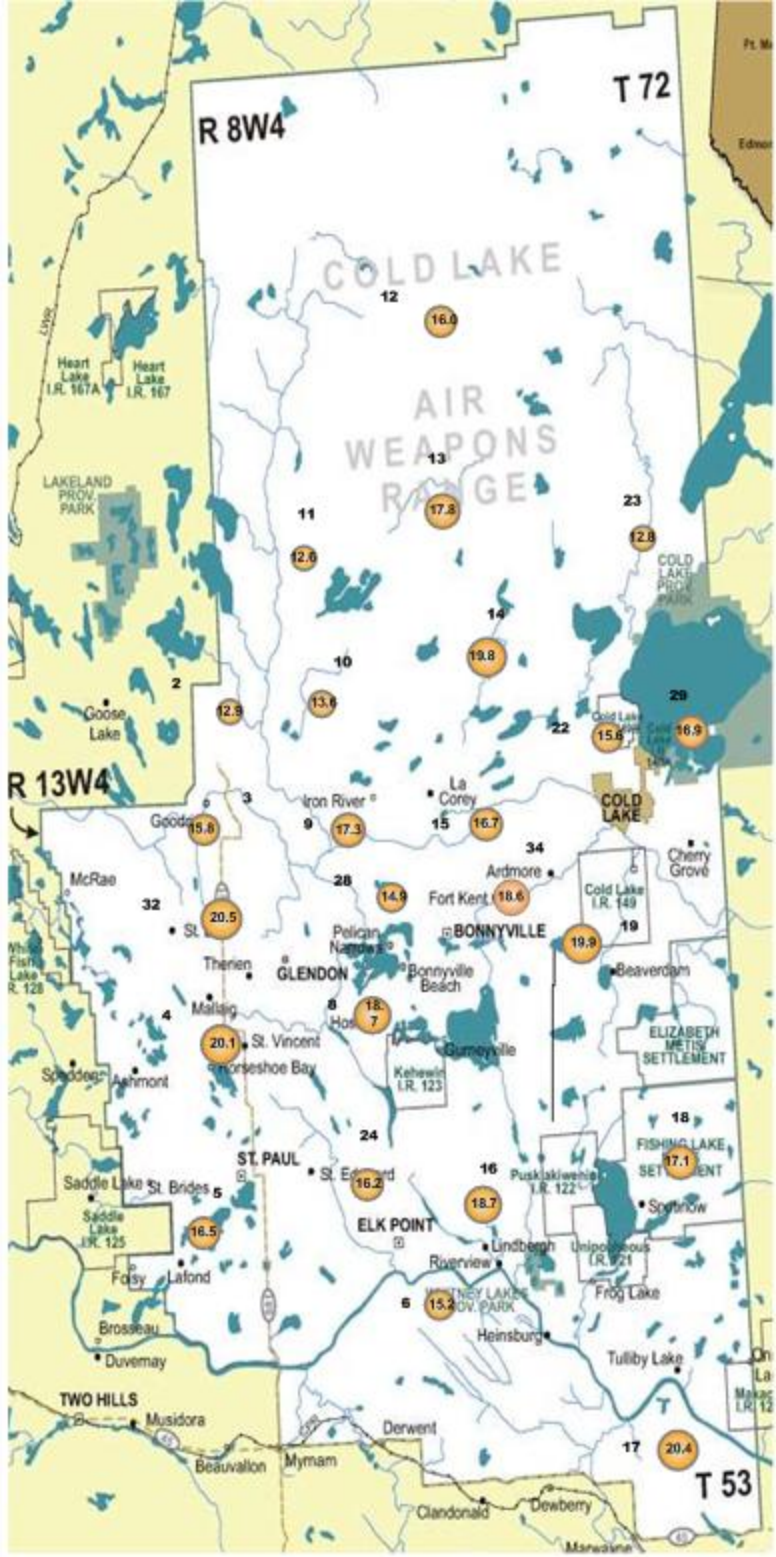
PASSIVE STATIONS

		DUPLICATE
2 – Sand River	12.9 PPB	NA
3 – Therien	15.0 PPB	16.5 PPB
4 – Flat Lake	20.1 PPB	NA
5 – Lake Eliza	15.4 PPB	17.6 PPB
6 – Telegraph Creek	15.2 PPB	NA
8 – Muriel-Kehewin	18.6 PPB	18.7 PPB
9 – Dupre	17.3 PPB	NA
10 – La Corey	13.5 PPB	13.6 PPB
11 – Wolf Lake	12.6 PPB	NA
12 – Foster Creek	15.1 PPB	16.9 PPB
13 – Primrose	17.8 PPB	NA
14 – Maskwa	18.6 PPB	21.0 PPB
15 – Ardmore	16.7 PPB	NA
16 – Frog Lake	19.0 PPB	18.4 PPB
17 – Clear Range	20.4 PPB	NA
18 – Fishing Lake	18.7 PPB	15.5 PPB
19 – Beaverdam	19.9 PPB	NA
22 – Cold Lake South	15.6 PPB	NA
23 – Medley-Martineau	13.2 PPB	12.4 PPB
24 – Fort George	16.2 PPB	NA
28 – Town of Bonnyville	15.2 PPB	14.6 PPB
29 – Cold Lake South 2	16.9 PPB	NA
32 – St. Lina	20.5 PPB	NA
34 – Portable	18.6 PPB	NA

O_3 PPB

Summary

Minimum : 12.6 PPB –Wolf Lake
Maximum: 20.5 PPB –St. Lina
Average: 16.9 PPB *Includes Duplicates



Passive Field Data

Field Notes

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
2	$SO_2/NO_2/O_3$	09/01/10	11:45	09/28/10	09:49	
2A (Dup)	NA	NA	NA	NA	NA	
3	$H_2S/SO_2/NO_2/O_3$	09/01/10	11:05	09/28/10	09:05	
3A (Dup)	$SO_2/NO_2/O_3$	09/01/10	11:05	09/28/10	09:05	
4	$SO_2/NO_2/O_3$	09/02/10	13:40	09/29/10	14:16	
4A (Dup)	NA	NA	NA	NA	NA	
5	$H_2S/SO_2/NO_2/O_3$	09/02/10	13:00	09/29/10	13:27	
5A (Dup)	$H_2S/SO_2/NO_2/O_3$	09/02/10	13:00	09/29/10	13:27	
6	$SO_2/NO_2/O_3$	09/02/10	11:35	09/29/10	11:41	
6A (Dup)	NA	NA	NA	NA	NA	
8	$SO_2/NO_2/O_3$	09/02/10	14:40	09/29/10	15:19	
8A (Dup)	$SO_2/NO_2/O_3$	09/02/10	14:40	09/29/10	15:19	
9	$SO_2/NO_2/O_3$	09/01/10	09:09	09/27/10	14:17	
9A (Dup)	NA	NA	NA	NA	NA	
10	$H_2S/SO_2/NO_2/O_3$	09/01/10	12:30	09/27/10	14:48	
10A (Dup)	$H_2S/SO_2/NO_2/O_3$	09/01/10	12:30	09/27/10	14:48	
11	$H_2S/SO_2/NO_2/O_3$	09/01/10	13:10	09/27/10	15:25	
11A (Dup)	NA	NA	NA	NA	NA	
12	$H_2S/SO_2/NO_2/O_3$	09/01/10	14:47	09/28/10	12:17	
12A (Dup)	$H_2S/SO_2/NO_2/O_3$	09/01/10	14:47	09/28/10	12:17	
13	$H_2S/SO_2/NO_2/O_3$	09/01/10	16:45	09/28/10	14:32	
13A (Dup)	NA	NA	NA	NA	NA	
14	$H_2S/SO_2/NO_2/O_3$	09/01/10	17:45	09/28/10	15:37	
14A (Dup)	$H_2S/SO_2/NO_2/O_3$	09/01/10	17:45	09/28/10	15:37	
15	$SO_2/NO_2/O_3$	09/01/10	07:47	09/27/10	11:55	
15A (Dup)	NA	NA	NA	NA	NA	
16	$H_2S/SO_2/NO_2/O_3$	09/02/10	10:07	09/29/10	09:55	
16A (Dup)	$SO_2/NO_2/O_3$	09/02/10	10:07	09/29/10	09:55	

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
17	$H_2S/SO_2/NO_2/O_3$	09/02/10	10:48	09/29/10	10:54	
17A (Dup)	H_2S	09/02/10	10:48	09/29/10	10:54	
18	$H_2S/SO_2/NO_2/O_3$	09/02/10	09:23	09/29/10	08:59	
18A (Dup)	$SO_2/NO_2/O_3$	09/02/10	09:23	09/29/10	08:59	
19	$SO_2/NO_2/O_3$	09/02/10	08:15	09/29/10	07:44	
19A (Dup)	NA	NA	NA	NA	NA	
22	$H_2S/SO_2/NO_2/O_3$	09/01/10	06:55	09/27/10	10:40	
22A (Dup)	NA	NA	NA	NA	NA	
23	$SO_2/NO_2/O_3$	09/01/10	19:03	09/27/10	17:00	
23A (Dup)	$SO_2/NO_2/O_3$	09/01/10	19:03	09/27/10	17:00	
24	$H_2S/SO_2/NO_2/O_3$	09/02/10	12:10	09/29/10	12:24	
24A (Dup)	H_2S	09/02/10	12:10	09/29/10	12:24	
25	H_2S/SO_2	09/01/10	16:26	09/28/10	13:58	
25A (Dup)	SO_2	09/01/10	16:26	09/28/10	13:58	
26	H_2S/SO_2	09/01/10	17:25	09/28/10	15:10	H2S was found on the ground.
26A (Dup)	H_2S	09/01/10	17:25	09/28/10	15:10	
27	H_2S/SO_2	09/01/10	18:10	09/28/10	15:58	
27A (Dup)	SO_2	09/01/10	18:10	09/28/10	15:58	
28	$SO_2/NO_2/O_3$	09/01/10	08:51	09/27/10	13:48	
28A (Dup)	NO_2/O_3	09/01/10	08:51	09/27/10	13:48	
29	$H_2S/SO_2/NO_2/O_3$	09/01/10	06:55	09/27/10	11:01	
29A (Dup)	H_2S/SO_2	09/01/10	06:55	09/27/10	11:01	
32	$H_2S/SO_2/NO_2/O_3$	09/01/10	09:59	09/28/10	08:11	
32A(Dup)	NA	NA	NA	NA	NA	
34	$H_2S/SO_2/NO_2/O_3$	09/01/10	08:21	09/27/10	13:01	
34A(Dup)	NA	NA	NA	NA	NA	

Passive Network Laboratory Analysis

Your Project #: 2010/09/01 - 2010/09/27
Site:LICA

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

Report Date: 2010/10/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B094125
Received: 2010/10/01, 13:12

Sample Matrix: Air
Samples Received: 43

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	26	2010/10/07	2010/10/08	EINDSOP-00150	Tang.Passive H2S in
NO2 Passive Analysis (1)	34	2010/10/06	2010/10/08	EINDSOP-00148	Tang Passive NO2 in
O3 Passive Analysis (1)	34	2010/10/05	2010/10/08	EINDSOP-00197	EPA 300 R2.1
SO2 Passive Analysis (1)	39	2010/10/07	2010/10/08	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

Maxxam Job #: B094125
Report Date: 2010/10/08

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2010/09/01 - 2010/09/27
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		X36540	X36542	X36543	X36544	X36546		
Sampling Date		2010/09/01 11:45	2010/09/01 11:05	2010/09/01 11:05	2010/09/02 13:45	2010/09/02 13:00		
	Units	**2**	**3**	**3A (DUP)**	**4**	**5**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb		0.10			0.18	0.02	4320336
Calculated NO2	ppb	0.6	0.6	0.6	0.6	0.5	0.1	4317070
Calculated O3	ppb	12.9	15.0	16.5	20.1	15.4	0.1	4313602
Calculated SO2	ppb	0.4	0.2	0.2	0.2	0.2	0.1	4321849

RDL = Reportable Detection Limit

Maxxam ID		X36547	X36548	X36549	X36550	X36551		
Sampling Date		2010/09/02 13:00	2010/09/02 11:35	2010/09/02 14:40	2010/09/02 14:40	2010/09/01 09:09		
	Units	**5A (DUP)**	**6**	**8**	**8A (DUP)**	**9**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.16					0.02	4320336
Calculated NO2	ppb	0.6	0.8	0.5	0.7	1.3	0.1	4317070
Calculated O3	ppb	17.6	15.2	18.6	18.7	17.3	0.1	4313602
Calculated SO2	ppb	0.2	0.2	0.4	0.2	0.3	0.1	4321849

RDL = Reportable Detection Limit

Maxxam ID		X36552	X36553	X36554	X36555	X36556		
Sampling Date		2010/09/01 12:30	2010/09/01 12:30	2010/09/01 13:10	2010/09/01 14:47	2010/09/01 14:47		
	Units	**10**	**10A (DUP)**	**11**	**12**	**12A (DUP)**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.10	0.10	0.07	0.07	0.06	0.02	4320336
Calculated NO2	ppb	1.7	1.4	0.5	0.6	0.8	0.1	4317070
Calculated O3	ppb	13.5	13.6	12.6	15.1	16.9	0.1	4313602
Calculated SO2	ppb	<0.1	0.2	0.1	0.3	0.2	0.1	4321849

RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		X36557	X36558	X36559		X36560		
Sampling Date		2010/09/01 14:32	2010/09/01 17:45	2010/09/01 17:45		2010/09/01 07:47		
	Units	**13**	**14**	**14A (DUP)**	**QC Batch**	**15**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.06	0.16	0.15	4320336		0.02	4320336
Calculated NO2	ppb	0.4	1.0	1.0	4317070	0.6	0.1	4317070
Calculated O3	ppb	17.8	18.6	21.0	4313602	16.7	0.1	4313609
Calculated SO2	ppb	0.6	0.9	0.9	4321849	0.1	0.1	4321849

RDL = Reportable Detection Limit

Maxxam ID		X36561	X36562	X36563	X36564	X36565		
Sampling Date		2010/09/02 10:06	2010/09/02 10:06	2010/09/02 10:48	2010/09/02 10:48	2010/09/02 09:23		
	Units	**16**	**16A (DUP)**	**17**	**17A (DUP)**	**18**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.09		0.12	0.14	0.08	0.02	4320336
Calculated NO2	ppb	0.8	0.8	1.9		0.7	0.1	4317078
Calculated O3	ppb	19.0	18.4	20.4		18.7	0.1	4313609
Calculated SO2	ppb	0.4	0.1	0.2		0.1	0.1	4321906

RDL = Reportable Detection Limit

Maxxam ID		X36566	X36567	X36569	X36570	X36571		
Sampling Date		2010/09/02 09:23	2010/09/02 08:15	2010/09/01 06:55	2010/09/01 19:03	2010/09/01 11:45		
	Units	**18A (DUP)**	**19**	**22**	**23**	**23A (DUP)**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb			0.09			0.02	4320336
Calculated NO2	ppb	0.4	0.7	0.9	0.2	0.3	0.1	4317078
Calculated O3	ppb	15.5	19.9	15.6	13.2	12.4	0.1	4313609
Calculated SO2	ppb	<0.1	0.2	<0.1	<0.1	0.1	0.1	4321906

RDL = Reportable Detection Limit

Maxxam Job #: B094125
Report Date: 2010/10/08

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2010/09/01 - 2010/09/27
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		X36572	X36573	X36574	X36575	X36576		
Sampling Date		2010/09/01 11:45	2010/09/01 11:45	2010/09/01 11:45	2010/09/01 11:45	2010/09/01 11:45		
	Units	**24**	**24A (DUP)**	**25**	**25A (DUP)**	**26**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.10	0.09	0.05		0.07	0.02	4320336
Calculated NO2	ppb	1.7					0.1	4317078
Calculated O3	ppb	16.2					0.1	4313609
Calculated SO2	ppb	0.2		0.2	0.2	0.4	0.1	4321906

RDL = Reportable Detection Limit

Maxxam ID		X36577	X36579	X36580	X36581	X36582		
Sampling Date		2010/09/01 11:45	2010/09/01 11:45	2010/09/01 11:45	2010/09/01 11:45	2010/09/01 11:45		
	Units	**26A (DUP)**	**27**	**27A (DUP)**	**28**	**28A (DUP)**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.10	0.36				0.02	4320336
Calculated NO2	ppb				2.6	3.2	0.1	4317078
Calculated O3	ppb				15.2	14.6	0.1	4313609
Calculated SO2	ppb		0.8	0.8	0.2		0.1	4321906

RDL = Reportable Detection Limit

Maxxam ID		X36583	X36584	X36585	X36733		
Sampling Date		2010/09/01 11:45	2010/09/01 11:45	2010/09/01 11:45	2010/09/01 11:45		
	Units	**29**	**29A (DUP)**	**32**	**34**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb	0.08	0.09	0.09	0.12	0.02	4320336
Calculated NO2	ppb	0.9		0.7	1.0	0.1	4317078
Calculated O3	ppb	16.9		20.5	18.6	0.1	4313609
Calculated SO2	ppb	0.2	0.2	0.1	0.1	0.1	4321906

RDL = Reportable Detection Limit

General Comments

H2S Sample X36576: Sample returned with a notification stating " was found in grass" as well as the passive filter was wet. TM

Results relate only to the items tested.

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Attention: MICHAEL BISAGA
Client Project #: 2010/09/01 - 2010/09/27
P.O. #:
Site Reference: LICA

Quality Assurance Report

Maxxam Job Number: PB094125

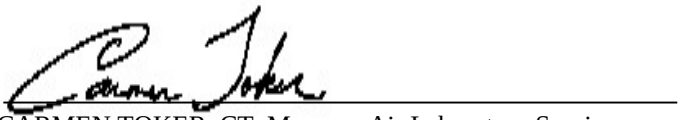
QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
4313602	OZ	Calibration Check	Calculated O3	2010/10/05		98	%	91 - 107
		Spiked Blank	Calculated O3	2010/10/05		98	%	N/A
		Method Blank	Calculated O3	2010/10/05	<0.1		ppb	
4313609	OZ	Calibration Check	Calculated O3	2010/10/05		102	%	91 - 107
		Spiked Blank	Calculated O3	2010/10/05		101	%	N/A
		Method Blank	Calculated O3	2010/10/05	<0.1		ppb	
4317070	DF4	Calibration Check	Calculated NO2	2010/10/06		96	%	76 - 118
		Spiked Blank	Calculated NO2	2010/10/06		96	%	N/A
		Method Blank	Calculated NO2	2010/10/06	<0.1		ppb	
4317078	DF4	Calibration Check	Calculated NO2	2010/10/06		101	%	76 - 118
		Spiked Blank	Calculated NO2	2010/10/06		97	%	N/A
		Method Blank	Calculated NO2	2010/10/06	<0.1		ppb	
4320336	TM5	Calibration Check	Calculated H2S	2010/10/07		104	%	80 - 120
		Spiked Blank	Calculated H2S	2010/10/07		100	%	N/A
4321849	DF4	Calibration Check	Calculated SO2	2010/10/07		100	%	95 - 105
		Spiked Blank	Calculated SO2	2010/10/07		105	%	N/A
		Method Blank	Calculated SO2	2010/10/07	<0.1		ppb	
4321906	DF4	Calibration Check	Calculated SO2	2010/10/07		100	%	95 - 105
		Spiked Blank	Calculated SO2	2010/10/07		105	%	N/A
		Method Blank	Calculated SO2	2010/10/07	<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 #: B094125

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



CARMEN TOKER, CT, Manager Air Laboratory Services

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Volatile Organics Laboratory Analysis

Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /July 01, 10

Sampler s/n: 6167
Canister ID: 7859
Canister Installation Date/Time: June 30,2010@ 07:15 mst
Canister Removal Date/Time: July 02,2010 @ 7:20 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
01-Jul-10	01/07/2010 0:00	02/07/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	598	25.5

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

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

Comments: System leak check prior to sampling. COC # 0564

Technician Signiture: Ting Xu

Your C.O.C. #: 0564

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

Report Date: 2010/09/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B088347
Received: 2010/07/07, 08:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/17	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/16	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/17	BRL SOP-00304	EPA TO-15

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

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

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

Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

RESULTS OF ANALYSES OF AIR

Maxxam ID		GK3351	GK3352	
Sampling Date		2010/07/01	2010/07/01	
COC Number		0564	0564	
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	22	2212158

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2212165
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2212165
Propene	ppbv	<0.30	<0.30	0.30	2212165
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2212165
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2212165
Dichlorodifluoromethane (FREON 12)	ppbv	0.75	0.75	0.20	2212165
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2212165
Chloromethane	ppbv	0.73	0.69	0.30	2212165
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2212165
Chloroethane	ppbv	<0.30	<0.30	0.30	2212165
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2212165
Trichlorofluoromethane (FREON 11)	ppbv	0.34	0.34	0.20	2212165
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2212165
Ethanol	ppbv	4.1	2.7	2.3	2212165
2-propanol	ppbv	<3.0	<3.0	3.0	2212165
2-Propanone	ppbv	3.94	4.45	0.80	2212165
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2212165
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2212165
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2212165
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2212165
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2212165
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2212165
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2212165
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2212165
Methylene Chloride(Dichloromethane)	ppbv	0.52	0.47	0.30	2212165
Chloroform	ppbv	<0.15	<0.15	0.15	2212165
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2212165
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2212165
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2212165
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2212165
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2212165

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2212165
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2212165
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2212165
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2212165
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2212165
Bromomethane	ppbv	<0.18	<0.18	0.18	2212165
Bromoform	ppbv	<0.20	<0.20	0.20	2212165
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2212165
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2212165
Heptane	ppbv	<0.30	<0.30	0.30	2212165
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2212165
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2212165
Benzene	ppbv	<0.18	<0.18	0.18	2212165
Toluene	ppbv	<0.20	<0.20	0.20	2212165
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2212165
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2212165
o-Xylene	ppbv	<0.20	<0.20	0.20	2212165
Styrene	ppbv	<0.20	<0.20	0.20	2212165
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2212165
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2212165
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2212165
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2212165
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2212165
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2212165
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2212165
Hexane	ppbv	<0.30	<0.30	0.30	2212165
Cyclohexane	ppbv	<0.20	<0.20	0.20	2212165
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2212165
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2212165

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2212165
Surrogate Recovery (%)					
Bromochloromethane	%	85	85		2212165
D5-Chlorobenzene	%	83	86		2212165
Difluorobenzene	%	86	87		2212165

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B088347
Report Date: 2010/09/16

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2267865
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2267865
Propene	ug/m3	<0.52	<0.52	0.52	2267865
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2267865
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2267865
Dichlorodifluoromethane (FREON 12)	ug/m3	3.72	3.71	0.99	2267865
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2267865
Chloromethane	ug/m3	1.51	1.43	0.62	2267865
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2267865
Chloroethane	ug/m3	<0.79	<0.79	0.79	2267865
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2267865
Trichlorofluoromethane (FREON 11)	ug/m3	1.9	1.9	1.1	2267865
Ethanol	ug/m3	7.6	5.0	4.3	2267865
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2267865
2-propanol	ug/m3	<7.4	<7.4	7.4	2267865
2-Propanone	ug/m3	9.4	10.6	1.9	2267865
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2267865
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2267865
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2267865
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2267865
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2267865
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2267865
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2267865
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2267865
Methylene Chloride(Dichloromethane)	ug/m3	1.8	1.6	1.0	2267865
Chloroform	ug/m3	<0.73	<0.73	0.73	2267865
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2267865
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2267865
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2267865
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2267865
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2267865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2267865
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2267865
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2267865
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2267865
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2267865
Bromomethane	ug/m3	<0.70	<0.70	0.70	2267865
Bromoform	ug/m3	<2.1	<2.1	2.1	2267865
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2267865
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2267865
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2267865
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2267865
Benzene	ug/m3	<0.58	<0.58	0.58	2267865
Toluene	ug/m3	<0.75	<0.75	0.75	2267865
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2267865
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2267865
o-Xylene	ug/m3	<0.87	<0.87	0.87	2267865
Styrene	ug/m3	<0.85	<0.85	0.85	2267865
4-ethyltoluene	ug/m3	<11	<11	11	2267865
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2267865
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2267865
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2267865
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2267865
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2267865
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2267865
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2267865
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2267865
Hexachlorobutadiene	ug/m3	<32	<32	32	2267865
Hexane	ug/m3	<1.1	<1.1	1.1	2267865
Heptane	ug/m3	<1.2	<1.2	1.2	2267865
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2267865
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2267865
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2267865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2267865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2212165	LSY	Spiked Blank	Bromochloromethane	2010/07/17		98	%	60 - 140
			D5-Chlorobenzene	2010/07/17		99	%	60 - 140
			Difluorobenzene	2010/07/17		99	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/17		100	%	70 - 130
			Carbon Disulfide	2010/07/17		97	%	70 - 130
			Propene	2010/07/17		101	%	70 - 130
			Vinyl Acetate	2010/07/17		111	%	70 - 130
			Vinyl Bromide	2010/07/17		98	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/17		95	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/17		83	%	70 - 130
			Chloromethane	2010/07/17		92	%	70 - 130
			Vinyl Chloride	2010/07/17		97	%	70 - 130
			Chloroethane	2010/07/17		97	%	70 - 130
			1,3-Butadiene	2010/07/17		89	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/07/17		94	%	70 - 130
			Trichlorotrifluoroethane	2010/07/17		96	%	70 - 130
			Ethanol	2010/07/17		117	%	70 - 130
			2-propanol	2010/07/17		111	%	70 - 130
			2-Propanone	2010/07/17		94	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/17		108	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/17		103	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/17		114	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/17		98	%	70 - 130
			Ethyl Acetate	2010/07/17		100	%	70 - 130
			1,1-Dichloroethylene	2010/07/17		97	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/17		97	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/17		100	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/17		78	%	70 - 130
			Chloroform	2010/07/17		96	%	70 - 130
			Carbon Tetrachloride	2010/07/17		97	%	70 - 130
			1,1-Dichloroethane	2010/07/17		95	%	70 - 130
			1,2-Dichloroethane	2010/07/17		95	%	70 - 130
			Ethylene Dibromide	2010/07/17		98	%	70 - 130
			1,1,1-Trichloroethane	2010/07/17		94	%	70 - 130
			1,1,2-Trichloroethane	2010/07/17		96	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/17		94	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/17		104	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/17		107	%	70 - 130
			1,2-Dichloropropane	2010/07/17		94	%	70 - 130
			Bromomethane	2010/07/17		89	%	70 - 130
			Bromoform	2010/07/17		111	%	70 - 130
			Bromodichloromethane	2010/07/17		102	%	70 - 130
			Dibromochloromethane	2010/07/17		103	%	70 - 130
			Heptane	2010/07/17		98	%	70 - 130
			Trichloroethylene	2010/07/17		94	%	70 - 130
			Tetrachloroethylene	2010/07/17		95	%	70 - 130
			Benzene	2010/07/17		94	%	70 - 130
			Toluene	2010/07/17		96	%	70 - 130
			Ethylbenzene	2010/07/17		95	%	70 - 130
			p+m-Xylene	2010/07/17		96	%	70 - 130
			o-Xylene	2010/07/17		95	%	70 - 130
			Styrene	2010/07/17		110	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/17		92	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/17		89	%	70 - 130
			4-ethyltoluene	2010/07/17		97	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2212165	LSY	Spiked Blank	Chlorobenzene	2010/07/17		97	%	70 - 130
			Benzyl chloride	2010/07/17		119	%	70 - 130
			1,3-Dichlorobenzene	2010/07/17		102	%	70 - 130
			1,4-Dichlorobenzene	2010/07/17		105	%	70 - 130
			1,2-Dichlorobenzene	2010/07/17		90	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/17		114	%	70 - 130
			Hexachlorobutadiene	2010/07/17		84	%	70 - 130
			Hexane	2010/07/17		96	%	70 - 130
			Cyclohexane	2010/07/17		98	%	70 - 130
			Tetrahydrofuran	2010/07/17		103	%	70 - 130
			1,4-Dioxane	2010/07/17		97	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/17		87	%	60 - 140
			D5-Chlorobenzene	2010/07/17		86	%	60 - 140
			Difluorobenzene	2010/07/17		89	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/17	<0.20		ppbv	
			Carbon Disulfide	2010/07/17	<0.50		ppbv	
			Propene	2010/07/17	<0.30		ppbv	
			Vinyl Acetate	2010/07/17	<0.20		ppbv	
			Vinyl Bromide	2010/07/17	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/17	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/17	<0.17		ppbv	
			Chloromethane	2010/07/17	<0.30		ppbv	
			Vinyl Chloride	2010/07/17	<0.18		ppbv	
			Chloroethane	2010/07/17	<0.30		ppbv	
			1,3-Butadiene	2010/07/17	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/17	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/17	<0.15		ppbv	
			Ethanol	2010/07/17	<2.3		ppbv	
			2-propanol	2010/07/17	<3.0		ppbv	
			2-Propanone	2010/07/17	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/17	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/17	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/17	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/17	<0.20		ppbv	
			Ethyl Acetate	2010/07/17	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/17	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/17	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/17	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/17	0.42, RDL=0.30		ppbv	
			Chloroform	2010/07/17	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/17	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/17	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/17	<0.20		ppbv	
			Ethylene Dibromide	2010/07/17	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/17	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/17	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/17	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/17	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/17	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/17	<0.40		ppbv	
			Bromomethane	2010/07/17	<0.18		ppbv	
			Bromoform	2010/07/17	<0.20		ppbv	
			Bromodichloromethane	2010/07/17	<0.20		ppbv	
			Dibromochloromethane	2010/07/17	<0.20		ppbv	
			Heptane	2010/07/17	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2212165	LSY	Method Blank	Trichloroethylene	2010/07/17	<0.30		ppbv	
			Tetrachloroethylene	2010/07/17	<0.20		ppbv	
			Benzene	2010/07/17	<0.18		ppbv	
			Toluene	2010/07/17	<0.20		ppbv	
			Ethylbenzene	2010/07/17	<0.20		ppbv	
			p+m-Xylene	2010/07/17	<0.37		ppbv	
			o-Xylene	2010/07/17	<0.20		ppbv	
			Styrene	2010/07/17	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/17	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/17	<0.50		ppbv	
			4-ethyltoluene	2010/07/17	<2.2		ppbv	
			Chlorobenzene	2010/07/17	<0.20		ppbv	
			Benzyl chloride	2010/07/17	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/17	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/17	<3.0		ppbv	
			Hexane	2010/07/17	<0.30		ppbv	
			Cyclohexane	2010/07/17	<0.20		ppbv	
			Tetrahydrofuran	2010/07/17	<0.40		ppbv	
			1,4-Dioxane	2010/07/17	<2.0		ppbv	
			Xylene (Total)	2010/07/17	<0.60		ppbv	

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

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /July 07, 10

Sampler s/n: 6167
Canister ID: 7856
Canister Installation Date/Time: July 06,2010@ 16:35 mst
Canister Removal Date/Time: July 08, 2010 @7 :10 mst

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

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	598	25.5

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

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

Comments: System leak check prior to sampling. COC # 2342

Technician Signiture: Ting Xu

Your C.O.C. #: 2342

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B090884
Received: 2010/07/12, 08:30

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/22	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/08	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/22	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	2010/07/20	2010/09/07	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. #: 2342

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

==========

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: 2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GL6211	GL6212	
Sampling Date		2010/07/07	2010/07/07	
COC Number		2342	2342	
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2215425

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223583
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2223583
Propene	ug/m3	<0.52	<0.52	0.52	2223583
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223583
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223583
Dichlorodifluoromethane (FREON 12)	ug/m3	3.55	3.56	0.99	2223583
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223583
Chloromethane	ug/m3	1.21	1.29	0.62	2223583
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223583
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223583
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223583
Trichlorofluoromethane (FREON 11)	ug/m3	1.8	1.8	1.1	2223583
Ethanol	ug/m3	5.1	9.0	4.3	2223583
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223583
2-propanol	ug/m3	<7.4	<7.4	7.4	2223583
2-Propanone	ug/m3	7.8	7.6	1.9	2223583
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223583
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223583
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223583
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223583
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223583
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223583
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223583
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223583
Methylene Chloride(Dichloromethane)	ug/m3	1.7	1.7	1.0	2223583
Chloroform	ug/m3	<0.73	<0.73	0.73	2223583
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223583
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223583
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223583
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223583

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223583
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223583
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223583
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223583
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223583
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223583
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223583
Bromoform	ug/m3	<2.1	<2.1	2.1	2223583
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223583
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223583
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223583
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223583
Benzene	ug/m3	<0.58	<0.58	0.58	2223583
Toluene	ug/m3	1.00	<0.75	0.75	2223583
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223583
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2223583
o-Xylene	ug/m3	<0.87	<0.87	0.87	2223583
Styrene	ug/m3	<0.85	<0.85	0.85	2223583
4-ethyltoluene	ug/m3	<11	<11	11	2223583
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223583
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223583
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223583
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223583
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223583
Hexachlorobutadiene	ug/m3	<32	<32	32	2223583
Hexane	ug/m3	<1.1	<1.1	1.1	2223583
Heptane	ug/m3	<1.2	<1.2	1.2	2223583
Cyclohexane	ug/m3	<0.69	0.77	0.69	2223583
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223583

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223583
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2223583

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

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

Maxxam ID		GL6213	GL6214		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA PUF/QFF/ CLS/ JULY 07,10**	**LICA PUF/QFF/ PORT/ JULY 07,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.16	<0.10	0.10	2217422
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217422
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217422
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217422
2-Methylnaphthalene	ug	0.28	0.21	0.10	2217422
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217422
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217422
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217422
Acenaphthene	ug	0.216	<0.050	0.050	2217422
Acenaphthylene	ug	<0.050	<0.050	0.050	2217422
Anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217422
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217422
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Biphenyl	ug	<0.10	<0.10	0.10	2217422
Chrysene	ug	<0.050	<0.050	0.050	2217422
Coronene	ug	<0.10	<0.10	0.10	2217422
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217422
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217422
Fluoranthene	ug	0.078	<0.050	0.050	2217422
Fluorene	ug	0.162	0.086	0.050	2217422
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217422
m-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Naphthalene	ug	0.202	0.130	0.072	2217422
o-Terphenyl	ug	<0.10	<0.10	0.10	2217422

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

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

Maxxam ID		GL6213	GL6214		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA PUF/QFF/ CLS/ JULY 07,10**	**LICA PUF/QFF/ PORT/ JULY 07,10**	**RDL**	**QC Batch**
Perylene	ug	<0.10	<0.10	0.10	2217422
Phenanthrene	ug	0.490	0.158	0.050	2217422
p-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Pyrene	ug	0.052	<0.050	0.050	2217422
Quinoline	ug	<0.40	<0.40	0.40	2217422
Tetralin	ug	<0.10	<0.10	0.10	2217422
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2217422
D10-Fluoranthene	%	112	106		2217422
D10-Fluorene (FS)	%	55	56		2217422
D10-Phenanthrene	%	98	94		2217422
D12-Benzo(a)anthracene	%	112	110		2217422
D12-Benzo(a)pyrene	%	88	82		2217422
D12-Benzo(b)fluoranthene	%	104	104		2217422
D12-Benzo(ghi)perylene	%	100	94		2217422
D12-Benzo(k)fluoranthene	%	104	100		2217422
D12-Chrysene	%	102	94		2217422
D12-Indeno(1,2,3-cd)pyrene	%	96	92		2217422
D12-Perylene	%	102	98		2217422
D14-Dibenzo(a,h)anthracene	%	78	76		2217422
D14-Terphenyl (FS)	%	104	98		2217422
D8-Acenaphthylene	%	100	102		2217422
D8-Naphthalene	%	74	82		2217422

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2215433
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2215433
Propene	ppbv	<0.30	<0.30	0.30	2215433
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2215433
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2215433
Dichlorodifluoromethane (FREON 12)	ppbv	0.72	0.72	0.20	2215433
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2215433
Chloromethane	ppbv	0.59	0.62	0.30	2215433
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2215433
Chloroethane	ppbv	<0.30	<0.30	0.30	2215433
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2215433
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.32	0.20	2215433
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2215433
Ethanol	ppbv	2.7	4.8	2.3	2215433
2-propanol	ppbv	<3.0	<3.0	3.0	2215433
2-Propanone	ppbv	3.27	3.21	0.80	2215433
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2215433
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2215433
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2215433
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2215433
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2215433
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2215433
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2215433
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2215433
Methylene Chloride(Dichloromethane)	ppbv	0.48	0.50	0.30	2215433
Chloroform	ppbv	<0.15	<0.15	0.15	2215433
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2215433
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2215433
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2215433
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2215433

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2215433
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2215433
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2215433
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2215433
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2215433
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2215433
Bromomethane	ppbv	<0.18	<0.18	0.18	2215433
Bromoform	ppbv	<0.20	<0.20	0.20	2215433
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2215433
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2215433
Heptane	ppbv	<0.30	<0.30	0.30	2215433
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2215433
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2215433
Benzene	ppbv	<0.18	<0.18	0.18	2215433
Toluene	ppbv	0.27	<0.20	0.20	2215433
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2215433
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2215433
o-Xylene	ppbv	<0.20	<0.20	0.20	2215433
Styrene	ppbv	<0.20	<0.20	0.20	2215433
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2215433
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2215433
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2215433
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2215433
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2215433
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2215433
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2215433
Hexane	ppbv	<0.30	<0.30	0.30	2215433
Cyclohexane	ppbv	<0.20	0.22	0.20	2215433
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2215433

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2215433
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2215433
Surrogate Recovery (%)					
Bromochloromethane	%	84	81		2215433
D5-Chlorobenzene	%	82	80		2215433
Difluorobenzene	%	85	83		2215433

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

Test Summary

Maxxam ID GL6211 **Collected** 2010/07/07
Sample ID LICA VOC/ CLS/ JULY 07,10 - 7856 **Shipped**
Matrix AIR **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2215425	N/A	2010/07/22	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2223583	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2215433	N/A	2010/07/22	LSY

Maxxam ID GL6212 **Collected** 2010/07/07
Sample ID LICA VOC/ PORT/ JULY 07,10 - S2312 **Shipped**
Matrix AIR **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2215425	N/A	2010/07/22	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2223583	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2215433	N/A	2010/07/22	LSY

Maxxam ID GL6213 **Collected** 2010/07/07
Sample ID LICA PUF/QFF/ CLS/ JULY 07,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

Maxxam ID GL6214 **Collected** 2010/07/07
Sample ID LICA PUF/QFF/ PORT/ JULY 07,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

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Maxxam Job #: B090884
Report Date: 2010/09/08

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Spiked Blank	Bromochloromethane	2010/07/22		121	%	60 - 140
			D5-Chlorobenzene	2010/07/22		118	%	60 - 140
			Difluorobenzene	2010/07/22		123	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/22		95	%	70 - 130
			Carbon Disulfide	2010/07/22		94	%	70 - 130
			Propene	2010/07/22		92	%	70 - 130
			Vinyl Acetate	2010/07/22		106	%	70 - 130
			Vinyl Bromide	2010/07/22		99	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/22		85	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/22		78	%	70 - 130
			Chloromethane	2010/07/22		85	%	70 - 130
			Vinyl Chloride	2010/07/22		94	%	70 - 130
			Chloroethane	2010/07/22		95	%	70 - 130
			1,3-Butadiene	2010/07/22		78	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/07/22		85	%	70 - 130
			Trichlorotrifluoroethane	2010/07/22		92	%	70 - 130
			Ethanol	2010/07/22		121	%	70 - 130
			2-propanol	2010/07/22		103	%	70 - 130
			2-Propanone	2010/07/22		97	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/22		99	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/22		91	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/22		96	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/22		95	%	70 - 130
			Ethyl Acetate	2010/07/22		92	%	70 - 130
			1,1-Dichloroethylene	2010/07/22		89	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/22		89	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/22		93	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/22		79	%	70 - 130
			Chloroform	2010/07/22		88	%	70 - 130
			Carbon Tetrachloride	2010/07/22		93	%	70 - 130
			1,1-Dichloroethane	2010/07/22		89	%	70 - 130
			1,2-Dichloroethane	2010/07/22		83	%	70 - 130
			Ethylene Dibromide	2010/07/22		88	%	70 - 130
			1,1,1-Trichloroethane	2010/07/22		89	%	70 - 130
			1,1,2-Trichloroethane	2010/07/22		91	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/22		89	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/22		97	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/22		95	%	70 - 130
			1,2-Dichloropropane	2010/07/22		89	%	70 - 130
			Bromomethane	2010/07/22		88	%	70 - 130
			Bromoform	2010/07/22		107	%	70 - 130
			Bromodichloromethane	2010/07/22		95	%	70 - 130
			Dibromochloromethane	2010/07/22		98	%	70 - 130
			Heptane	2010/07/22		92	%	70 - 130
			Trichloroethylene	2010/07/22		91	%	70 - 130
			Tetrachloroethylene	2010/07/22		90	%	70 - 130
			Benzene	2010/07/22		91	%	70 - 130
			Toluene	2010/07/22		92	%	70 - 130
			Ethylbenzene	2010/07/22		91	%	70 - 130
			p+m-Xylene	2010/07/22		91	%	70 - 130
			o-Xylene	2010/07/22		89	%	70 - 130
			Styrene	2010/07/22		94	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/22		87	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/22		83	%	70 - 130
			4-ethyltoluene	2010/07/22		91	%	70 - 130

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Attention: Michael Bisaga
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Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Spiked Blank	Chlorobenzene	2010/07/22		90	%	70 - 130
			Benzyl chloride	2010/07/22		97	%	70 - 130
			1,3-Dichlorobenzene	2010/07/22		85	%	70 - 130
			1,4-Dichlorobenzene	2010/07/22		82	%	70 - 130
			1,2-Dichlorobenzene	2010/07/22		80	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/22		90	%	70 - 130
			Hexachlorobutadiene	2010/07/22		89	%	70 - 130
			Hexane	2010/07/22		92	%	70 - 130
			Cyclohexane	2010/07/22		94	%	70 - 130
			Tetrahydrofuran	2010/07/22		95	%	70 - 130
			1,4-Dioxane	2010/07/22		91	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/22		100	%	60 - 140
			D5-Chlorobenzene	2010/07/22		97	%	60 - 140
			Difluorobenzene	2010/07/22		103	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/22	<0.20		ppbv	
			Carbon Disulfide	2010/07/22	<0.50		ppbv	
			Propene	2010/07/22	<0.30		ppbv	
			Vinyl Acetate	2010/07/22	<0.20		ppbv	
			Vinyl Bromide	2010/07/22	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/22	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/22	<0.17		ppbv	
			Chloromethane	2010/07/22	<0.30		ppbv	
			Vinyl Chloride	2010/07/22	<0.18		ppbv	
			Chloroethane	2010/07/22	<0.30		ppbv	
			1,3-Butadiene	2010/07/22	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/22	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/22	<0.15		ppbv	
			Ethanol	2010/07/22	<2.3		ppbv	
			2-propanol	2010/07/22	<3.0		ppbv	
			2-Propanone	2010/07/22	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/22	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/22	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/22	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/22	<0.20		ppbv	
			Ethyl Acetate	2010/07/22	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/22	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/22	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/22	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/22	0.41, RDL=0.30		ppbv	
			Chloroform	2010/07/22	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/22	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/22	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/22	<0.20		ppbv	
			Ethylene Dibromide	2010/07/22	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/22	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/22	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/22	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/22	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/22	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/22	<0.40		ppbv	
			Bromomethane	2010/07/22	<0.18		ppbv	
			Bromoform	2010/07/22	<0.20		ppbv	
			Bromodichloromethane	2010/07/22	<0.20		ppbv	
			Dibromochloromethane	2010/07/22	<0.20		ppbv	
			Heptane	2010/07/22	<0.30		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Method Blank	Trichloroethylene	2010/07/22	<0.30		ppbv	
			Tetrachloroethylene	2010/07/22	<0.20		ppbv	
			Benzene	2010/07/22	<0.18		ppbv	
			Toluene	2010/07/22	<0.20		ppbv	
			Ethylbenzene	2010/07/22	<0.20		ppbv	
			p+m-Xylene	2010/07/22	<0.37		ppbv	
			o-Xylene	2010/07/22	<0.20		ppbv	
			Styrene	2010/07/22	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/22	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/22	<0.50		ppbv	
			4-ethyltoluene	2010/07/22	<2.2		ppbv	
			Chlorobenzene	2010/07/22	<0.20		ppbv	
			Benzyl chloride	2010/07/22	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/22	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/22	<3.0		ppbv	
			Hexane	2010/07/22	<0.30		ppbv	
			Cyclohexane	2010/07/22	<0.20		ppbv	
			Tetrahydrofuran	2010/07/22	<0.40		ppbv	
			1,4-Dioxane	2010/07/22	<2.0		ppbv	
			Xylene (Total)	2010/07/22	<0.60		ppbv	
		RPD - Sample/Sample Dup	Benzene	2010/07/22	NC		%	25
2217422	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/08/24		70	%	50 - 150
			D10-Fluoranthene	2010/08/24		100	%	50 - 150
			D10-Phenanthrene	2010/08/24		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		140	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		90	%	50 - 150
			D12-Chrysene	2010/08/24		84	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		100	%	50 - 150
			D12-Perylene	2010/08/24		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		90	%	50 - 150
			D8-Acenaphthylene	2010/08/24		106	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			Acenaphthene	2010/08/24		83	%	60 - 130
		RPD	Acenaphthene	2010/08/24	0.6		%	50
		Spiked Blank	Acenaphthylene	2010/08/24		104	%	60 - 130
		RPD	Acenaphthylene	2010/08/24	0.5		%	50
		Spiked Blank	Anthracene	2010/08/24		84	%	60 - 130
		RPD	Anthracene	2010/08/24	4.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/08/24		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/08/24	1.0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/08/24		84	%	60 - 130
		RPD	Benzo(a)pyrene	2010/08/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/08/24		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/08/24	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/08/24		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/08/24	1.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/08/24		82	%	60 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	RPD	Benzo(k)fluoranthene	2010/08/24	5.9		%	50
		Spiked Blank	Chrysene	2010/08/24		81	%	60 - 130
		RPD	Chrysene	2010/08/24	6.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/08/24		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/08/24	1.2		%	50
		Spiked Blank	Fluoranthene	2010/08/24		94	%	60 - 130
		RPD	Fluoranthene	2010/08/24	1.6		%	50
		Spiked Blank	Fluorene	2010/08/24		84	%	60 - 130
		RPD	Fluorene	2010/08/24	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/08/24		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/08/24	0.3		%	50
		Spiked Blank	Naphthalene	2010/08/24		69	%	60 - 130
		RPD	Naphthalene	2010/08/24	2.2		%	50
		Spiked Blank	Phenanthrene	2010/08/24		83	%	60 - 130
		RPD	Phenanthrene	2010/08/24	1.8		%	50
		Spiked Blank	Pyrene	2010/08/24		96	%	60 - 130
		RPD	Pyrene	2010/08/24	2.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/08/24		68	%	50 - 150
			D10-Fluoranthene	2010/08/24		98	%	50 - 150
			D10-Phenanthrene	2010/08/24		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		132	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		102	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		82	%	50 - 150
			D12-Chrysene	2010/08/24		82	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		94	%	50 - 150
			D12-Perylene	2010/08/24		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		84	%	50 - 150
			D8-Acenaphthylene	2010/08/24		108	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			1-Methylnaphthalene	2010/08/24	<0.10		ug	
			1-Methylphenanthrene	2010/08/24	<0.10		ug	
			2-Chloronaphthalene	2010/08/24	<0.10		ug	
			2-Methylanthracene	2010/08/24	<0.10		ug	
			2-Methylnaphthalene	2010/08/24	<0.10		ug	
			3-Methylcholanthrene	2010/08/24	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/08/24	<0.10		ug	
			9,10-Dimethylanthracene	2010/08/24	<0.40		ug	
			Acenaphthene	2010/08/24	<0.050		ug	
			Acenaphthylene	2010/08/24	<0.050		ug	
			Anthracene	2010/08/24	<0.050		ug	
			Benzo(a)anthracene	2010/08/24	<0.050		ug	
			Benzo(a)fluorene	2010/08/24	<0.10		ug	
			Benzo(a)pyrene	2010/08/24	<0.050		ug	
			Benzo(b)fluoranthene	2010/08/24	<0.050		ug	
			Benzo(b)fluorene	2010/08/24	<0.10		ug	
			Benzo(e)pyrene	2010/08/24	<0.10		ug	
			Benzo(g,h,i)perylene	2010/08/24	<0.050		ug	
			Benzo(k)fluoranthene	2010/08/24	<0.050		ug	
			Biphenyl	2010/08/24	<0.10		ug	
			Chrysene	2010/08/24	<0.050		ug	
			Coronene	2010/08/24	<0.10		ug	
			Dibenz(a,h)anthracene	2010/08/24	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/08/24	<0.20		ug	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Method Blank	Fluoranthene	2010/08/24	<0.050		ug	
			Fluorene	2010/08/24	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/08/24	<0.050		ug	
			m-Terphenyl	2010/08/24	<0.10		ug	
			Naphthalene	2010/08/24	<0.072		ug	
			o-Terphenyl	2010/08/24	<0.10		ug	
			Perylene	2010/08/24	<0.10		ug	
			Phenanthrene	2010/08/24	<0.050		ug	
			p-Terphenyl	2010/08/24	<0.10		ug	
			Pyrene	2010/08/24	<0.050		ug	
			Quinoline	2010/08/24	<0.40		ug	
			Tetralin	2010/08/24	<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.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /July 13, 10

Sampler s/n: 6167
Canister ID: 7812
Canister Installation Date/Time: July 12, 2010@ 9:11 mst
Canister Removal Date/Time: July 14, 2010 @ 9:31 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
13-Jul-10	13/07/2010 0:00	14/07/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	598	25.5

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

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

Comments: System leak check prior to sampling. COC # 2310

Technician Signiture: Ting Xu

Your C.O.C. #: 2310

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B094870
Received: 2010/07/17, 15:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/28	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/08	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/28	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)	1	2010/07/20	2010/09/07	BRL SOP-00201	CARB429(ARBM1,M2)mod
PAH's in Air (CARB429mod)	1	2010/07/20	2010/09/08	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.

../2

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

Your C.O.C. #: 2310

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

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

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

==========

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

Total cover pages: 2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GN6253	GO2032	
Sampling Date		2010/07/13	2010/07/13	
COC Number		2310	2310	
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2221074

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223586
Carbon Disulfide	ug/m3	<1.6	4.6	1.6	2223586
Propene	ug/m3	<0.52	<0.52	0.52	2223586
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223586
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223586
Dichlorodifluoromethane (FREON 12)	ug/m3	3.44	3.36	0.99	2223586
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223586
Chloromethane	ug/m3	1.15	<0.62	0.62	2223586
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223586
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223586
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223586
Trichlorofluoromethane (FREON 11)	ug/m3	2.0	1.9	1.1	2223586
Ethanol	ug/m3	7.4	6.4	4.3	2223586
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223586
2-propanol	ug/m3	<7.4	<7.4	7.4	2223586
2-Propanone	ug/m3	11.3	11.8	1.9	2223586
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223586
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223586
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223586
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223586
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223586
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223586
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223586
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223586
Methylene Chloride(Dichloromethane)	ug/m3	1.1	1.1	1.0	2223586
Chloroform	ug/m3	<0.73	<0.73	0.73	2223586
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223586
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223586
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223586
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223586
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223586

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223586
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223586
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223586
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223586
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223586
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223586
Bromoform	ug/m3	<2.1	<2.1	2.1	2223586
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223586
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223586
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223586
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223586
Benzene	ug/m3	<0.58	<0.58	0.58	2223586
Toluene	ug/m3	<0.75	<0.75	0.75	2223586
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223586
p+m-Xylene	ug/m3	<1.6	4.9	1.6	2223586
o-Xylene	ug/m3	<0.87	1.48	0.87	2223586
Styrene	ug/m3	<0.85	<0.85	0.85	2223586
4-ethyltoluene	ug/m3	<11	<11	11	2223586
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223586
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223586
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223586
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223586
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223586
Hexachlorobutadiene	ug/m3	<32	<32	32	2223586
Hexane	ug/m3	<1.1	<1.1	1.1	2223586
Heptane	ug/m3	<1.2	<1.2	1.2	2223586
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2223586
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223586
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223586
Xylene (Total)	ug/m3	<2.6	6.4	2.6	2223586

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

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

Maxxam ID		GN6254	GN6255		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA PUF/CLS/JULY 13, 10**	**LICA PUF/PORT/JULY 13, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2217422
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217422
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217422
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217422
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2217422
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217422
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217422
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217422
Acenaphthene	ug	<0.050	<0.050	0.050	2217422
Acenaphthylene	ug	<0.050	<0.050	0.050	2217422
Anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217422
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217422
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Biphenyl	ug	<0.10	<0.10	0.10	2217422
Chrysene	ug	<0.050	<0.050	0.050	2217422
Coronene	ug	<0.10	<0.10	0.10	2217422
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217422
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217422
Fluoranthene	ug	0.074	<0.050	0.050	2217422
Fluorene	ug	0.084	<0.050	0.050	2217422
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217422
m-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Naphthalene	ug	0.076	<0.072	0.072	2217422
o-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Perylene	ug	<0.10	<0.10	0.10	2217422

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

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

Maxxam ID		GN6254	GN6255		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA PUF/CLS/JULY 13, 10**	**LICA PUF/PORT/JULY 13, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.428	0.122	0.050	2217422
p-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Pyrene	ug	<0.050	<0.050	0.050	2217422
Quinoline	ug	<0.40	<0.40	0.40	2217422
Tetralin	ug	<0.10	<0.10	0.10	2217422
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2217422
D10-Fluoranthene	%	108	106		2217422
D10-Fluorene (FS)	%	52	58		2217422
D10-Phenanthrene	%	98	96		2217422
D12-Benzo(a)anthracene	%	110	108		2217422
D12-Benzo(a)pyrene	%	92	92		2217422
D12-Benzo(b)fluoranthene	%	102	102		2217422
D12-Benzo(ghi)perylene	%	98	96		2217422
D12-Benzo(k)fluoranthene	%	98	100		2217422
D12-Chrysene	%	100	104		2217422
D12-Indeno(1,2,3-cd)pyrene	%	94	94		2217422
D12-Perylene	%	98	98		2217422
D14-Dibenzo(a,h)anthracene	%	76	76		2217422
D14-Terphenyl (FS)	%	98	99		2217422
D8-Acenaphthylene	%	104	108		2217422
D8-Naphthalene	%	76	82		2217422

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2220603
Carbon Disulfide	ppbv	<0.50	1.49	0.50	2220603
Propene	ppbv	<0.30	<0.30	0.30	2220603
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2220603
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2220603
Dichlorodifluoromethane (FREON 12)	ppbv	0.70	0.68	0.20	2220603
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2220603
Chloromethane	ppbv	0.56	<0.30	0.30	2220603
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2220603
Chloroethane	ppbv	<0.30	<0.30	0.30	2220603
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2220603
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.33	0.20	2220603
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2220603
Ethanol	ppbv	3.9	3.4	2.3	2220603
2-propanol	ppbv	<3.0	<3.0	3.0	2220603
2-Propanone	ppbv	4.75	4.98	0.80	2220603
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2220603
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2220603
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2220603
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2220603
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2220603
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2220603
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2220603
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2220603
Methylene Chloride(Dichloromethane)	ppbv	0.31	0.31	0.30	2220603
Chloroform	ppbv	<0.15	<0.15	0.15	2220603
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2220603
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2220603
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2220603
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2220603
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2220603

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2220603
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2220603
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2220603
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2220603
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2220603
Bromomethane	ppbv	<0.18	<0.18	0.18	2220603
Bromoform	ppbv	<0.20	<0.20	0.20	2220603
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2220603
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2220603
Heptane	ppbv	<0.30	<0.30	0.30	2220603
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2220603
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2220603
Benzene	ppbv	<0.18	<0.18	0.18	2220603
Toluene	ppbv	<0.20	<0.20	0.20	2220603
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2220603
p+m-Xylene	ppbv	<0.37	1.13	0.37	2220603
o-Xylene	ppbv	<0.20	0.34	0.20	2220603
Styrene	ppbv	<0.20	<0.20	0.20	2220603
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2220603
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2220603
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2220603
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2220603
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2220603
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2220603
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2220603
Hexane	ppbv	<0.30	<0.30	0.30	2220603
Cyclohexane	ppbv	<0.20	<0.20	0.20	2220603
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2220603
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2220603
Xylene (Total)	ppbv	<0.60	1.47	0.60	2220603

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Surrogate Recovery (%)					
Bromochloromethane	%	77	80		2220603
D5-Chlorobenzene	%	79	82		2220603
Difluorobenzene	%	80	82		2220603

QC Batch = Quality Control Batch

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Maxxam Job #: B094870
Report Date: 2010/09/08

Test Summary

Maxxam ID GN6253 **Collected** 2010/07/13
Sample ID LICA VOC/PORT/JULY 13, 10 - 7871 **Shipped**
Matrix AIR **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221074	N/A	2010/07/28	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223586	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2220603	N/A	2010/07/28	MM2

Maxxam ID GN6254 **Collected** 2010/07/13
Sample ID LICA PUF/CLS/JULY 13, 10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

Maxxam ID GN6255 **Collected** 2010/07/13
Sample ID LICA PUF/PORT/JULY 13, 10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/08	WZ

Maxxam ID GO2032 **Collected** 2010/07/13
Sample ID LICA VOC/CLS/JULY12,10 **Shipped**
Matrix AIR **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221074	N/A	2010/07/28	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223586	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2220603	N/A	2010/07/28	MM2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/08/24		70	%	50 - 150
			D10-Fluoranthene	2010/08/24		100	%	50 - 150
			D10-Phenanthrene	2010/08/24		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		140	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		90	%	50 - 150
			D12-Chrysene	2010/08/24		84	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		100	%	50 - 150
			D12-Perylene	2010/08/24		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		90	%	50 - 150
			D8-Acenaphthylene	2010/08/24		106	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			Acenaphthene	2010/08/24		83	%	60 - 130
		RPD	Acenaphthene	2010/08/24	0.6		%	50
		Spiked Blank	Acenaphthylene	2010/08/24		104	%	60 - 130
		RPD	Acenaphthylene	2010/08/24	0.5		%	50
		Spiked Blank	Anthracene	2010/08/24		84	%	60 - 130
		RPD	Anthracene	2010/08/24	4.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/08/24		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/08/24	1.0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/08/24		84	%	60 - 130
		RPD	Benzo(a)pyrene	2010/08/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/08/24		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/08/24	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/08/24		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/08/24	1.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/08/24		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/08/24	5.9		%	50
		Spiked Blank	Chrysene	2010/08/24		81	%	60 - 130
		RPD	Chrysene	2010/08/24	6.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/08/24		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/08/24	1.2		%	50
		Spiked Blank	Fluoranthene	2010/08/24		94	%	60 - 130
		RPD	Fluoranthene	2010/08/24	1.6		%	50
		Spiked Blank	Fluorene	2010/08/24		84	%	60 - 130
		RPD	Fluorene	2010/08/24	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/08/24		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/08/24	0.3		%	50
		Spiked Blank	Naphthalene	2010/08/24		69	%	60 - 130
		RPD	Naphthalene	2010/08/24	2.2		%	50
		Spiked Blank	Phenanthrene	2010/08/24		83	%	60 - 130
		RPD	Phenanthrene	2010/08/24	1.8		%	50
		Spiked Blank	Pyrene	2010/08/24		96	%	60 - 130
		RPD	Pyrene	2010/08/24	2.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/08/24		68	%	50 - 150
			D10-Fluoranthene	2010/08/24		98	%	50 - 150
			D10-Phenanthrene	2010/08/24		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		132	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		102	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		82	%	50 - 150
			D12-Chrysene	2010/08/24		82	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/08/24		94	%	50 - 150
			D12-Perylene	2010/08/24		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		84	%	50 - 150
			D8-Acenaphthylene	2010/08/24		108	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			1-Methylnaphthalene	2010/08/24	<0.10		ug	
			1-Methylphenanthrene	2010/08/24	<0.10		ug	
			2-Chloronaphthalene	2010/08/24	<0.10		ug	
			2-Methylanthracene	2010/08/24	<0.10		ug	
			2-Methylnaphthalene	2010/08/24	<0.10		ug	
			3-Methylcholanthrene	2010/08/24	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/08/24	<0.10		ug	
			9,10-Dimethylanthracene	2010/08/24	<0.40		ug	
			Acenaphthene	2010/08/24	<0.050		ug	
			Acenaphthylene	2010/08/24	<0.050		ug	
			Anthracene	2010/08/24	<0.050		ug	
			Benzo(a)anthracene	2010/08/24	<0.050		ug	
			Benzo(a)fluorene	2010/08/24	<0.10		ug	
			Benzo(a)pyrene	2010/08/24	<0.050		ug	
			Benzo(b)fluoranthene	2010/08/24	<0.050		ug	
			Benzo(b)fluorene	2010/08/24	<0.10		ug	
			Benzo(e)pyrene	2010/08/24	<0.10		ug	
			Benzo(g,h,i)perylene	2010/08/24	<0.050		ug	
			Benzo(k)fluoranthene	2010/08/24	<0.050		ug	
			Biphenyl	2010/08/24	<0.10		ug	
			Chrysene	2010/08/24	<0.050		ug	
			Coronene	2010/08/24	<0.10		ug	
			Dibenz(a,h)anthracene	2010/08/24	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/08/24	<0.20		ug	
			Fluoranthene	2010/08/24	<0.050		ug	
			Fluorene	2010/08/24	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/08/24	<0.050		ug	
			m-Terphenyl	2010/08/24	<0.10		ug	
			Naphthalene	2010/08/24	<0.072		ug	
			o-Terphenyl	2010/08/24	<0.10		ug	
			Perylene	2010/08/24	<0.10		ug	
			Phenanthrene	2010/08/24	<0.050		ug	
			p-Terphenyl	2010/08/24	<0.10		ug	
			Pyrene	2010/08/24	<0.050		ug	
			Quinoline	2010/08/24	<0.40		ug	
			Tetralin	2010/08/24	<0.10		ug	
2220603	MM2	Spiked Blank	Bromochloromethane	2010/07/28		95	%	60 - 140
			D5-Chlorobenzene	2010/07/28		96	%	60 - 140
			Difluorobenzene	2010/07/28		97	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/28		81	%	70 - 130
			Carbon Disulfide	2010/07/28		84	%	70 - 130
			Propene	2010/07/28		89	%	70 - 130
			Vinyl Acetate	2010/07/28		93	%	70 - 130
			Vinyl Bromide	2010/07/28		90	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/28		89	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/28		76	%	70 - 130
			Chloromethane	2010/07/28		87	%	70 - 130
			Vinyl Chloride	2010/07/28		92	%	70 - 130
			Chloroethane	2010/07/28		93	%	70 - 130
			1,3-Butadiene	2010/07/28		92	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Spiked Blank	Trichlorofluoromethane (FREON 11)	2010/07/28		94	%	70 - 130
			Trichlorotrifluoroethane	2010/07/28		66 (1)	%	70 - 130
			Ethanol	2010/07/28		102	%	70 - 130
			2-propanol	2010/07/28		85	%	70 - 130
			2-Propanone	2010/07/28		89	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28		82	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/28		86	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28		86	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/28		76	%	70 - 130
			Ethyl Acetate	2010/07/28		83	%	70 - 130
			1,1-Dichloroethylene	2010/07/28		70	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/28		84	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/28		86	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/28		77	%	70 - 130
			Chloroform	2010/07/28		86	%	70 - 130
			Carbon Tetrachloride	2010/07/28		99	%	70 - 130
			1,1-Dichloroethane	2010/07/28		80	%	70 - 130
			1,2-Dichloroethane	2010/07/28		81	%	70 - 130
			Ethylene Dibromide	2010/07/28		92	%	70 - 130
			1,1,1-Trichloroethane	2010/07/28		91	%	70 - 130
			1,1,2-Trichloroethane	2010/07/28		90	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/28		83	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/28		90	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/28		92	%	70 - 130
			1,2-Dichloropropane	2010/07/28		85	%	70 - 130
			Bromomethane	2010/07/28		101	%	70 - 130
			Bromoform	2010/07/28		99	%	70 - 130
			Bromodichloromethane	2010/07/28		85	%	70 - 130
			Dibromochloromethane	2010/07/28		95	%	70 - 130
			Heptane	2010/07/28		85	%	70 - 130
			Trichloroethylene	2010/07/28		93	%	70 - 130
			Tetrachloroethylene	2010/07/28		95	%	70 - 130
			Benzene	2010/07/28		85	%	70 - 130
			Toluene	2010/07/28		89	%	70 - 130
			Ethylbenzene	2010/07/28		87	%	70 - 130
			p+m-Xylene	2010/07/28		90	%	70 - 130
			o-Xylene	2010/07/28		86	%	70 - 130
			Styrene	2010/07/28		90	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/28		87	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/28		84	%	70 - 130
			4-ethyltoluene	2010/07/28		80	%	70 - 130
			Chlorobenzene	2010/07/28		92	%	70 - 130
			Benzyl chloride	2010/07/28		79	%	70 - 130
			1,3-Dichlorobenzene	2010/07/28		94	%	70 - 130
			1,4-Dichlorobenzene	2010/07/28		91	%	70 - 130
			1,2-Dichlorobenzene	2010/07/28		83	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/28		86	%	70 - 130
			Hexachlorobutadiene	2010/07/28		84	%	70 - 130
			Hexane	2010/07/28		77	%	70 - 130
			Cyclohexane	2010/07/28		82	%	70 - 130
			Tetrahydrofuran	2010/07/28		82	%	70 - 130
			1,4-Dioxane	2010/07/28		85	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/28		90	%	60 - 140
			D5-Chlorobenzene	2010/07/28		89	%	60 - 140
			Difluorobenzene	2010/07/28		91	%	60 - 140

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Method Blank	2,2,4-Trimethylpentane	2010/07/28	<0.20		ppbv	
			Carbon Disulfide	2010/07/28	<0.50		ppbv	
			Propene	2010/07/28	<0.30		ppbv	
			Vinyl Acetate	2010/07/28	<0.20		ppbv	
			Vinyl Bromide	2010/07/28	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/28	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/28	<0.17		ppbv	
			Chloromethane	2010/07/28	<0.30		ppbv	
			Vinyl Chloride	2010/07/28	<0.18		ppbv	
			Chloroethane	2010/07/28	<0.30		ppbv	
			1,3-Butadiene	2010/07/28	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/28	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/28	<0.15		ppbv	
			Ethanol	2010/07/28	<2.3		ppbv	
			2-propanol	2010/07/28	<3.0		ppbv	
			2-Propanone	2010/07/28	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/28	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/28	<0.20		ppbv	
			Ethyl Acetate	2010/07/28	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/28	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/28	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/28	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/28	<0.30		ppbv	
			Chloroform	2010/07/28	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/28	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/28	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/28	<0.20		ppbv	
			Ethylene Dibromide	2010/07/28	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/28	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/28	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/28	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/28	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/28	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/28	<0.40		ppbv	
			Bromomethane	2010/07/28	<0.18		ppbv	
			Bromoform	2010/07/28	<0.20		ppbv	
			Bromodichloromethane	2010/07/28	<0.20		ppbv	
			Dibromochloromethane	2010/07/28	<0.20		ppbv	
			Heptane	2010/07/28	<0.30		ppbv	
			Trichloroethylene	2010/07/28	<0.30		ppbv	
			Tetrachloroethylene	2010/07/28	<0.20		ppbv	
			Benzene	2010/07/28	<0.18		ppbv	
			Toluene	2010/07/28	<0.20		ppbv	
			Ethylbenzene	2010/07/28	<0.20		ppbv	
			p+m-Xylene	2010/07/28	<0.37		ppbv	
			o-Xylene	2010/07/28	<0.20		ppbv	
			Styrene	2010/07/28	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/28	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/28	<0.50		ppbv	
			4-ethyltoluene	2010/07/28	<2.2		ppbv	
			Chlorobenzene	2010/07/28	<0.20		ppbv	
			Benzyl chloride	2010/07/28	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/28	<0.40		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Method Blank	1,4-Dichlorobenzene	2010/07/28	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/28	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/28	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/28	<3.0		ppbv	
			Hexane	2010/07/28	<0.30		ppbv	
			Cyclohexane	2010/07/28	<0.20		ppbv	
			Tetrahydrofuran	2010/07/28	<0.40		ppbv	
			1,4-Dioxane	2010/07/28	<2.0		ppbv	
			Xylene (Total)	2010/07/28	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/07/28	NC		%	25
			Carbon Disulfide	2010/07/28	NC		%	25
			Propene	2010/07/28	NC		%	25
			Vinyl Acetate	2010/07/28	NC		%	25
			Vinyl Bromide	2010/07/28	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/07/28	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/07/28	NC		%	25
			Chloromethane	2010/07/28	NC		%	25
			Vinyl Chloride	2010/07/28	NC		%	25
			Chloroethane	2010/07/28	NC		%	25
			1,3-Butadiene	2010/07/28	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/07/28	NC		%	25
			Trichlorotrifluoroethane	2010/07/28	NC		%	25
			Ethanol	2010/07/28	NC		%	25
			2-propanol	2010/07/28	NC		%	25
			2-Propanone	2010/07/28	0.8		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28	NC		%	25
			Methyl Isobutyl Ketone	2010/07/28	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/07/28	NC		%	25
			Ethyl Acetate	2010/07/28	NC		%	25
			1,1-Dichloroethylene	2010/07/28	NC		%	25
			cis-1,2-Dichloroethylene	2010/07/28	NC		%	25
			trans-1,2-Dichloroethylene	2010/07/28	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/07/28	NC		%	25
			Chloroform	2010/07/28	NC		%	25
			Carbon Tetrachloride	2010/07/28	NC		%	25
			1,1-Dichloroethane	2010/07/28	NC		%	25
			1,2-Dichloroethane	2010/07/28	NC		%	25
			Ethylene Dibromide	2010/07/28	NC		%	25
			1,1,1-Trichloroethane	2010/07/28	NC		%	25
			1,1,2-Trichloroethane	2010/07/28	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/07/28	NC		%	25
			cis-1,3-Dichloropropene	2010/07/28	NC		%	25
			trans-1,3-Dichloropropene	2010/07/28	NC		%	25
			1,2-Dichloropropane	2010/07/28	NC		%	25
			Bromomethane	2010/07/28	NC		%	25
			Bromoform	2010/07/28	NC		%	25
			Bromodichloromethane	2010/07/28	NC		%	25
			Dibromochloromethane	2010/07/28	NC		%	25
			Heptane	2010/07/28	NC		%	25
			Trichloroethylene	2010/07/28	NC		%	25
			Tetrachloroethylene	2010/07/28	NC		%	25
			Benzene	2010/07/28	NC		%	25

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	RPD - Sample/Sample Dup	Toluene	2010/07/28	NC		%	25
			Ethylbenzene	2010/07/28	NC		%	25
			p+m-Xylene	2010/07/28	NC		%	25
			o-Xylene	2010/07/28	NC		%	25
			Styrene	2010/07/28	NC		%	25
			1,3,5-Trimethylbenzene	2010/07/28	NC		%	25
			1,2,4-Trimethylbenzene	2010/07/28	NC		%	25
			4-ethyltoluene	2010/07/28	NC		%	25
			Chlorobenzene	2010/07/28	NC		%	25
			Benzyl chloride	2010/07/28	NC		%	25
			1,3-Dichlorobenzene	2010/07/28	NC		%	25
			1,4-Dichlorobenzene	2010/07/28	NC		%	25
			1,2-Dichlorobenzene	2010/07/28	NC		%	25
			1,2,4-Trichlorobenzene	2010/07/28	NC		%	25
			Hexachlorobutadiene	2010/07/28	NC		%	25
			Hexane	2010/07/28	NC		%	25
			Cyclohexane	2010/07/28	NC		%	25
			Tetrahydrofuran	2010/07/28	NC		%	25
			1,4-Dioxane	2010/07/28	NC		%	25
			Xylene (Total)	2010/07/28	NC		%	25

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.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /July 19, 10

Sampler s/n: 6167
Canister ID: 7866
Canister Installation Date/Time: July 16, 2010@ 8:55 mst
Canister Removal Date/Time: July 20,2010 @ 6:47 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
19-Jul-10	19/07/2010 0:00	20/07/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	598	25

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

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

Comments: System leak check prior to sampling. COC # 2311

Technician Signiture: Ting Xu

Your C.O.C. #: 2311

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

Report Date: 2010/08/03

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B097496
Received: 2010/07/22, 13:15

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/29	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/08/03	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/29	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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Total cover pages: 1

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

RESULTS OF ANALYSES OF AIR

Maxxam ID		GO8379	GO8380	
Sampling Date		2010/07/19	2010/07/19	
COC Number		2311	2311	
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**LICA VOC/PORT/JULY 19,10 - 7852**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2221888

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GO8379	GO8380		
Sampling Date		2010/07/19	2010/07/19		
COC Number		2311	2311		
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223566
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2223566
Propene	ug/m3	<0.52	<0.52	0.52	2223566
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223566
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223566
Dichlorodifluoromethane (FREON 12)	ug/m3	3.59	3.54	0.99	2223566
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223566
Chloromethane	ug/m3	1.15	1.20	0.62	2223566
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223566
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223566
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223566
Trichlorofluoromethane (FREON 11)	ug/m3	2.0	2.0	1.1	2223566
Ethanol	ug/m3	4.6	<4.3	4.3	2223566
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223566
2-propanol	ug/m3	<7.4	<7.4	7.4	2223566
2-Propanone	ug/m3	11.4	12.0	1.9	2223566
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223566
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223566
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223566
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223566
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223566
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223566
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223566
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223566
Methylene Chloride(Dichloromethane)	ug/m3	2.0	1.5	1.0	2223566
Chloroform	ug/m3	<0.73	<0.73	0.73	2223566
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223566
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223566
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223566
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223566
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223566

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GO8379	GO8380		
Sampling Date		2010/07/19	2010/07/19		
COC Number		2311	2311		
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223566
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223566
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223566
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223566
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223566
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223566
Bromoform	ug/m3	<2.1	<2.1	2.1	2223566
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223566
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223566
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223566
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223566
Benzene	ug/m3	<0.58	<0.58	0.58	2223566
Toluene	ug/m3	1.07	<0.75	0.75	2223566
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223566
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2223566
o-Xylene	ug/m3	<0.87	<0.87	0.87	2223566
Styrene	ug/m3	<0.85	<0.85	0.85	2223566
4-ethyltoluene	ug/m3	<11	<11	11	2223566
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223566
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223566
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223566
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223566
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223566
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223566
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223566
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223566
Hexachlorobutadiene	ug/m3	<32	<32	32	2223566
Hexane	ug/m3	<1.1	<1.1	1.1	2223566
Heptane	ug/m3	<1.2	<1.2	1.2	2223566
Cyclohexane	ug/m3	<0.69	0.79	0.69	2223566
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223566
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223566
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2223566

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8379				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2221881
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2221881
Propene	ppbv	<0.30	0.30	<0.516	0.516	2221881
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2221881
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2221881
Dichlorodifluoromethane (FREON 12)	ppbv	0.73	0.20	3.59	0.989	2221881
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2221881
Chloromethane	ppbv	0.56	0.30	1.15	0.620	2221881
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2221881
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2221881
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2221881
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.20	1.97	1.12	2221881
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2221881
Ethanol	ppbv	2.5	2.3	4.63	4.33	2221881
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2221881
2-Propanone	ppbv	4.81	0.80	11.4	1.90	2221881
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2221881
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2221881
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2221881
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2221881
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2221881
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2221881
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2221881
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2221881
Methylene Chloride(Dichloromethane)	ppbv	0.59	0.30	2.04	1.04	2221881
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2221881
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2221881
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2221881
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2221881
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2221881
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2221881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8379				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2221881
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2221881
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2221881
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2221881
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2221881
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2221881
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2221881
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2221881
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2221881
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2221881
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2221881
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2221881
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2221881
Toluene	ppbv	0.29	0.20	1.07	0.753	2221881
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2221881
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2221881
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2221881
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2221881
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2221881
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2221881
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2221881
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2221881
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2221881
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2221881
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2221881
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2221881
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2221881
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2221881
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2221881
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2221881

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8379				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	75		N/A	N/A	2221881
D5-Chlorobenzene	%	79		N/A	N/A	2221881
Difluorobenzene	%	79		N/A	N/A	2221881

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

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8380				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2221881
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2221881
Propene	ppbv	<0.30	0.30	<0.516	0.516	2221881
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2221881
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2221881
Dichlorodifluoromethane (FREON 12)	ppbv	0.72	0.20	3.54	0.989	2221881
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2221881
Chloromethane	ppbv	0.58	0.30	1.20	0.620	2221881
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2221881
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2221881
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2221881
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.20	1.99	1.12	2221881
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2221881
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2221881
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2221881
2-Propanone	ppbv	5.06	0.80	12.0	1.90	2221881
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2221881
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2221881
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2221881
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2221881
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2221881
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2221881
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2221881
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2221881
Methylene Chloride(Dichloromethane)	ppbv	0.45	0.30	1.55	1.04	2221881
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2221881
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2221881
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2221881
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2221881
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2221881
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2221881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8380				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2221881
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2221881
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2221881
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2221881
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2221881
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2221881
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2221881
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2221881
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2221881
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2221881
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2221881
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2221881
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2221881
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2221881
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2221881
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2221881
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2221881
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2221881
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2221881
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2221881
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2221881
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2221881
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2221881
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2221881
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2221881
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2221881
Cyclohexane	ppbv	0.23	0.20	0.792	0.688	2221881
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2221881
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2221881
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2221881

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8380				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	67		N/A	N/A	2221881
D5-Chlorobenzene	%	71		N/A	N/A	2221881
Difluorobenzene	%	71		N/A	N/A	2221881

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

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

Test Summary

Maxxam ID GO8379 **Collected** 2010/07/19
Sample ID LICA VOC/CLS/JULY 19,10 - 7866 **Shipped**
Matrix AIR **Received** 2010/07/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221888	N/A	2010/07/29	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223566	N/A	2010/08/03	SIM
Volatile Organics in Air (TO-15)	GC/MS	2221881	N/A	2010/07/29	MM2

Maxxam ID GO8380 **Collected** 2010/07/19
Sample ID LICA VOC/PORT/JULY 19,10 - 7852 **Shipped**
Matrix AIR **Received** 2010/07/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221888	N/A	2010/07/29	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223566	N/A	2010/08/03	SIM
Volatile Organics in Air (TO-15)	GC/MS	2221881	N/A	2010/07/29	MM2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB097496

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2221881	MM2	Spiked Blank	Bromochloromethane	2010/07/29		96	%	60 - 140
			D5-Chlorobenzene	2010/07/29		98	%	60 - 140
			Difluorobenzene	2010/07/29		99	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/29		97	%	70 - 130
			Carbon Disulfide	2010/07/29		65 (1)	%	70 - 130
			Propene	2010/07/29		111	%	70 - 130
			Vinyl Acetate	2010/07/29		113	%	70 - 130
			Vinyl Bromide	2010/07/29		111	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/29		109	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/29		90	%	70 - 130
			Chloromethane	2010/07/29		106	%	70 - 130
			Vinyl Chloride	2010/07/29		113	%	70 - 130
			Chloroethane	2010/07/29		114	%	70 - 130
			1,3-Butadiene	2010/07/29		112	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/07/29		114	%	70 - 130
			Trichlorotrifluoroethane	2010/07/29		79	%	70 - 130
			Ethanol	2010/07/29		125	%	70 - 130
			2-propanol	2010/07/29		104	%	70 - 130
			2-Propanone	2010/07/29		112	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/29		91	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/29		102	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/29		102	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/29		90	%	70 - 130
			Ethyl Acetate	2010/07/29		102	%	70 - 130
			1,1-Dichloroethylene	2010/07/29		86	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/29		103	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/29		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/29		58 (1)	%	70 - 130
			Chloroform	2010/07/29		103	%	70 - 130
			Carbon Tetrachloride	2010/07/29		120	%	70 - 130
			1,1-Dichloroethane	2010/07/29		98	%	70 - 130
			1,2-Dichloroethane	2010/07/29		101	%	70 - 130
			Ethylene Dibromide	2010/07/29		109	%	70 - 130
			1,1,1-Trichloroethane	2010/07/29		110	%	70 - 130
			1,1,2-Trichloroethane	2010/07/29		107	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/29		95	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/29		108	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/29		112	%	70 - 130
			1,2-Dichloropropane	2010/07/29		101	%	70 - 130
			Bromomethane	2010/07/29		124	%	70 - 130
			Bromoform	2010/07/29		108	%	70 - 130
			Bromodichloromethane	2010/07/29		97	%	70 - 130
			Dibromochloromethane	2010/07/29		108	%	70 - 130
			Heptane	2010/07/29		97	%	70 - 130
			Trichloroethylene	2010/07/29		113	%	70 - 130
			Tetrachloroethylene	2010/07/29		113	%	70 - 130
			Benzene	2010/07/29		101	%	70 - 130
			Toluene	2010/07/29		104	%	70 - 130
			Ethylbenzene	2010/07/29		102	%	70 - 130
			p+m-Xylene	2010/07/29		106	%	70 - 130
			o-Xylene	2010/07/29		102	%	70 - 130
			Styrene	2010/07/29		105	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/29		103	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/29		100	%	70 - 130
			4-ethyltoluene	2010/07/29		89	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB097496

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2221881	MM2	Spiked Blank	Chlorobenzene	2010/07/29		109	%	70 - 130
			Benzyl chloride	2010/07/29		96	%	70 - 130
			1,3-Dichlorobenzene	2010/07/29		113	%	70 - 130
			1,4-Dichlorobenzene	2010/07/29		110	%	70 - 130
			1,2-Dichlorobenzene	2010/07/29		104	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/29		104	%	70 - 130
			Hexachlorobutadiene	2010/07/29		97	%	70 - 130
			Hexane	2010/07/29		85	%	70 - 130
			Cyclohexane	2010/07/29		94	%	70 - 130
			Tetrahydrofuran	2010/07/29		97	%	70 - 130
			1,4-Dioxane	2010/07/29		100	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/29		77	%	60 - 140
			D5-Chlorobenzene	2010/07/29		78	%	60 - 140
			Difluorobenzene	2010/07/29		79	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/29	<0.20		ppbv	
			Carbon Disulfide	2010/07/29	<0.50		ppbv	
			Propene	2010/07/29	<0.30		ppbv	
			Vinyl Acetate	2010/07/29	<0.20		ppbv	
			Vinyl Bromide	2010/07/29	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/29	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/29	<0.17		ppbv	
			Chloromethane	2010/07/29	<0.30		ppbv	
			Vinyl Chloride	2010/07/29	<0.18		ppbv	
			Chloroethane	2010/07/29	<0.30		ppbv	
			1,3-Butadiene	2010/07/29	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/29	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/29	<0.15		ppbv	
			Ethanol	2010/07/29	<2.3		ppbv	
			2-propanol	2010/07/29	<3.0		ppbv	
			2-Propanone	2010/07/29	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/29	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/29	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/29	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/29	<0.20		ppbv	
			Ethyl Acetate	2010/07/29	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/29	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/29	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/29	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/29	<0.30		ppbv	
			Chloroform	2010/07/29	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/29	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/29	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/29	<0.20		ppbv	
			Ethylene Dibromide	2010/07/29	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/29	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/29	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/29	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/29	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/29	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/29	<0.40		ppbv	
			Bromomethane	2010/07/29	<0.18		ppbv	
			Bromoform	2010/07/29	<0.20		ppbv	
			Bromodichloromethane	2010/07/29	<0.20		ppbv	
			Dibromochloromethane	2010/07/29	<0.20		ppbv	
			Heptane	2010/07/29	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB097496

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2221881	MM2	Method Blank	Trichloroethylene	2010/07/29	<0.30		ppbv	
			Tetrachloroethylene	2010/07/29	<0.20		ppbv	
			Benzene	2010/07/29	<0.18		ppbv	
			Toluene	2010/07/29	<0.20		ppbv	
			Ethylbenzene	2010/07/29	<0.20		ppbv	
			p+m-Xylene	2010/07/29	<0.37		ppbv	
			o-Xylene	2010/07/29	<0.20		ppbv	
			Styrene	2010/07/29	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/29	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/29	<0.50		ppbv	
			4-ethyltoluene	2010/07/29	<2.2		ppbv	
			Chlorobenzene	2010/07/29	<0.20		ppbv	
			Benzyl chloride	2010/07/29	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/29	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/07/29	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/29	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/29	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/29	<3.0		ppbv	
			Hexane	2010/07/29	<0.30		ppbv	
			Cyclohexane	2010/07/29	<0.20		ppbv	
			Tetrahydrofuran	2010/07/29	<0.40		ppbv	
			1,4-Dioxane	2010/07/29	<2.0		ppbv	
			Xylene (Total)	2010/07/29	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/07/29	NC		%	25
			Carbon Disulfide	2010/07/29	NC		%	25
			Propene	2010/07/29	NC		%	25
			Vinyl Acetate	2010/07/29	NC		%	25
			Vinyl Bromide	2010/07/29	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/07/29	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/07/29	NC		%	25
			Chloromethane	2010/07/29	NC		%	25
			Vinyl Chloride	2010/07/29	NC		%	25
			Chloroethane	2010/07/29	NC		%	25
			1,3-Butadiene	2010/07/29	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/07/29	NC		%	25
			Trichlorotrifluoroethane	2010/07/29	NC		%	25
			Ethanol	2010/07/29	NC		%	25
			2-propanol	2010/07/29	NC		%	25
			2-Propanone	2010/07/29	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/07/29	NC		%	25
			Methyl Isobutyl Ketone	2010/07/29	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/07/29	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/07/29	NC		%	25
			Ethyl Acetate	2010/07/29	NC		%	25
			1,1-Dichloroethylene	2010/07/29	NC		%	25
			cis-1,2-Dichloroethylene	2010/07/29	NC		%	25
			trans-1,2-Dichloroethylene	2010/07/29	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/07/29	NC		%	25
			Chloroform	2010/07/29	NC		%	25
			Carbon Tetrachloride	2010/07/29	NC		%	25
			1,1-Dichloroethane	2010/07/29	NC		%	25
			1,2-Dichloroethane	2010/07/29	NC		%	25
			Ethylene Dibromide	2010/07/29	NC		%	25

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
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Quality Assurance Report (Continued)

Maxxam Job Number: GB097496

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2221881	MM2	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2010/07/29	NC		%	25
			1,1,2-Trichloroethane	2010/07/29	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/07/29	NC		%	25
			cis-1,3-Dichloropropene	2010/07/29	NC		%	25
			trans-1,3-Dichloropropene	2010/07/29	NC		%	25
			1,2-Dichloropropane	2010/07/29	NC		%	25
			Bromomethane	2010/07/29	NC		%	25
			Bromoform	2010/07/29	NC		%	25
			Bromodichloromethane	2010/07/29	NC		%	25
			Dibromochloromethane	2010/07/29	NC		%	25
			Heptane	2010/07/29	NC		%	25
			Trichloroethylene	2010/07/29	NC		%	25
			Tetrachloroethylene	2010/07/29	NC		%	25
			Benzene	2010/07/29	NC		%	25
			Toluene	2010/07/29	NC		%	25
			Ethylbenzene	2010/07/29	NC		%	25
			p+m-Xylene	2010/07/29	NC		%	25
			o-Xylene	2010/07/29	NC		%	25
			Styrene	2010/07/29	NC		%	25
			1,3,5-Trimethylbenzene	2010/07/29	NC		%	25
			1,2,4-Trimethylbenzene	2010/07/29	NC		%	25
			4-ethyltoluene	2010/07/29	NC		%	25
			Chlorobenzene	2010/07/29	NC		%	25
			Benzyl chloride	2010/07/29	NC		%	25
			1,3-Dichlorobenzene	2010/07/29	NC		%	25
			1,4-Dichlorobenzene	2010/07/29	NC		%	25
			1,2-Dichlorobenzene	2010/07/29	NC		%	25
			1,2,4-Trichlorobenzene	2010/07/29	NC		%	25
			Hexachlorobutadiene	2010/07/29	NC		%	25
			Hexane	2010/07/29	NC		%	25
			Cyclohexane	2010/07/29	NC		%	25
			Tetrahydrofuran	2010/07/29	NC		%	25
			1,4-Dioxane	2010/07/29	NC		%	25
			Xylene (Total)	2010/07/29	NC		%	25

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

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /July 25, 10

Sampler s/n: 6167
Canister ID: 7799
Canister Installation Date/Time: July 23, 2010@ 10:20mst
Canister Removal Date/Time: July 26, 2010 @ 7:18 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
25-Jul-10	25/07/2010 0:00	26/07/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	598	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	20.5

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

Comments: System leak check prior to sampling. COC # 2313

Technician Signiture: Ting Xu

Your C.O.C. #: 2313

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

Report Date: 2010/08/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A2766
Received: 2010/07/30, 15:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/08/16	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/08/16	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

RESULTS OF ANALYSES OF AIR

Maxxam ID		GR3094	GR3095	
Sampling Date		2010/07/25	2010/07/25	
COC Number		2313	2313	
	Units	**LICA VOC/CLS/JULY 25, 10 - 7799**	**LICA VOC/PORT/JULY 25, 10 - 7826**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2239296

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3094				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/CLS/JULY 25, 10 - 7799**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2239303
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2239303
Propene	ppbv	<0.30	0.30	<0.516	0.516	2239303
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2239303
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2239303
Dichlorodifluoromethane (FREON 12)	ppbv	0.83	0.20	4.10	0.989	2239303
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2239303
Chloromethane	ppbv	0.70	0.30	1.45	0.620	2239303
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2239303
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2239303
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2239303
Trichlorofluoromethane (FREON 11)	ppbv	0.42	0.20	2.36	1.12	2239303
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2239303
Ethanol	ppbv	4.2	2.3	7.96	4.33	2239303
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2239303
2-Propanone	ppbv	5.09	0.80	12.1	1.90	2239303
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2239303
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2239303
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2239303
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2239303
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2239303
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2239303
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2239303
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2239303
Methylene Chloride(Dichloromethane)	ppbv	0.69	0.30	2.39	1.04	2239303
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2239303
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2239303
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2239303
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2239303
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2239303
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2239303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3094				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/CLS/JULY 25, 10 - 7799**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2239303
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2239303
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2239303
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2239303
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2239303
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2239303
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2239303
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2239303
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2239303
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2239303
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2239303
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2239303
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2239303
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2239303
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2239303
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2239303
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2239303
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2239303
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2239303
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2239303
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2239303
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2239303
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2239303
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2239303
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2239303
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2239303
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2239303
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2239303
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2239303
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2239303

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3094				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/CLS/JULY 25, 10 - 7799**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	79		N/A	N/A	2239303
D5-Chlorobenzene	%	76		N/A	N/A	2239303
Difluorobenzene	%	82		N/A	N/A	2239303

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

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3095				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/PORT/JULY 25, 10 - 7826**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2239303
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2239303
Propene	ppbv	<0.30	0.30	<0.516	0.516	2239303
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2239303
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2239303
Dichlorodifluoromethane (FREON 12)	ppbv	0.83	0.20	4.09	0.989	2239303
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2239303
Chloromethane	ppbv	0.69	0.30	1.42	0.620	2239303
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2239303
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2239303
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2239303
Trichlorofluoromethane (FREON 11)	ppbv	0.43	0.20	2.44	1.12	2239303
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2239303
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2239303
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2239303
2-Propanone	ppbv	5.31	0.80	12.6	1.90	2239303
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2239303
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2239303
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2239303
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2239303
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2239303
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2239303
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2239303
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2239303
Methylene Chloride(Dichloromethane)	ppbv	0.39	0.30	1.37	1.04	2239303
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2239303
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2239303
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2239303
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2239303
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2239303
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2239303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3095				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/PORT/JULY 25, 10 - 7826**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2239303
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2239303
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2239303
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2239303
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2239303
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2239303
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2239303
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2239303
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2239303
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2239303
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2239303
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2239303
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2239303
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2239303
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2239303
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2239303
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2239303
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2239303
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2239303
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2239303
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2239303
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2239303
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2239303
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2239303
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2239303
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2239303
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2239303
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2239303
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2239303
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2239303

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3095				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/PORT/JULY 25, 10 - 7826**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	75		N/A	N/A	2239303
D5-Chlorobenzene	%	73		N/A	N/A	2239303
Difluorobenzene	%	79		N/A	N/A	2239303

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

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

Test Summary

Maxxam ID	GR3094	**Collected**	2010/07/25
Sample ID	LICA VOC/CLS/JULY 25, 10 - 7799	**Shipped**	
Matrix	AIR	**Received**	2010/07/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2239296	N/A	2010/08/16	DBJ
Volatile Organics in Air (TO-15)	GC/MS	2239303	N/A	2010/08/16	MMU

Maxxam ID	GR3095	**Collected**	2010/07/25
Sample ID	LICA VOC/PORT/JULY 25, 10 - 7826	**Shipped**	
Matrix	AIR	**Received**	2010/07/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2239296	N/A	2010/08/16	DBJ
Volatile Organics in Air (TO-15)	GC/MS	2239303	N/A	2010/08/16	MMU

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0A2766

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Spiked Blank	Bromochloromethane	2010/08/16		98	%	60 - 140
			D5-Chlorobenzene	2010/08/16		96	%	60 - 140
			Difluorobenzene	2010/08/16		100	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/16		97	%	70 - 130
			Carbon Disulfide	2010/08/16		105	%	70 - 130
			Propene	2010/08/16		110	%	70 - 130
			Vinyl Acetate	2010/08/16		126	%	70 - 130
			Vinyl Bromide	2010/08/16		111	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/16		107	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/16		93	%	70 - 130
			Chloromethane	2010/08/16		104	%	70 - 130
			Vinyl Chloride	2010/08/16		114	%	70 - 130
			Chloroethane	2010/08/16		114	%	70 - 130
			1,3-Butadiene	2010/08/16		118	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/16		111	%	70 - 130
			Trichlorotrifluoroethane	2010/08/16		78	%	70 - 130
			Ethanol	2010/08/16		136 (1)	%	70 - 130
			2-propanol	2010/08/16		119	%	70 - 130
			2-Propanone	2010/08/16		107	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/16		101	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/16		111	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/16		117	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/16		108	%	70 - 130
			Ethyl Acetate	2010/08/16		106	%	70 - 130
			1,1-Dichloroethylene	2010/08/16		106	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/16		116	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/16		109	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/16		90	%	70 - 130
			Chloroform	2010/08/16		103	%	70 - 130
			Carbon Tetrachloride	2010/08/16		109	%	70 - 130
			1,1-Dichloroethane	2010/08/16		104	%	70 - 130
			1,2-Dichloroethane	2010/08/16		107	%	70 - 130
			Ethylene Dibromide	2010/08/16		106	%	70 - 130
			1,1,1-Trichloroethane	2010/08/16		102	%	70 - 130
			1,1,2-Trichloroethane	2010/08/16		104	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/16		97	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/16		114	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/16		118	%	70 - 130
			1,2-Dichloropropane	2010/08/16		106	%	70 - 130
			Bromomethane	2010/08/16		121	%	70 - 130
			Bromoform	2010/08/16		113	%	70 - 130
			Bromodichloromethane	2010/08/16		101	%	70 - 130
			Dibromochloromethane	2010/08/16		108	%	70 - 130
			Heptane	2010/08/16		108	%	70 - 130
			Trichloroethylene	2010/08/16		106	%	70 - 130
			Tetrachloroethylene	2010/08/16		108	%	70 - 130
			Benzene	2010/08/16		107	%	70 - 130
			Toluene	2010/08/16		111	%	70 - 130
			Ethylbenzene	2010/08/16		112	%	70 - 130
			p+m-Xylene	2010/08/16		108	%	70 - 130
			o-Xylene	2010/08/16		106	%	70 - 130
			Styrene	2010/08/16		106	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/16		107	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/16		105	%	70 - 130
			4-ethyltoluene	2010/08/16		103	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A2766

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Spiked Blank	Chlorobenzene	2010/08/16		100	%	70 - 130
			Benzyl chloride	2010/08/16		95	%	70 - 130
			1,3-Dichlorobenzene	2010/08/16		98	%	70 - 130
			1,4-Dichlorobenzene	2010/08/16		92	%	70 - 130
			1,2-Dichlorobenzene	2010/08/16		95	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/16		92	%	70 - 130
			Hexachlorobutadiene	2010/08/16		106	%	70 - 130
			Hexane	2010/08/16		103	%	70 - 130
			Cyclohexane	2010/08/16		105	%	70 - 130
			Tetrahydrofuran	2010/08/16		116	%	70 - 130
			1,4-Dioxane	2010/08/16		89	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/16		81	%	60 - 140
			D5-Chlorobenzene	2010/08/16		73	%	60 - 140
			Difluorobenzene	2010/08/16		81	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/16	<0.20		ppbv	
			Carbon Disulfide	2010/08/16	<0.50		ppbv	
			Propene	2010/08/16	<0.30		ppbv	
			Vinyl Acetate	2010/08/16	<0.20		ppbv	
			Vinyl Bromide	2010/08/16	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/16	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/16	<0.17		ppbv	
			Chloromethane	2010/08/16	<0.30		ppbv	
			Vinyl Chloride	2010/08/16	<0.18		ppbv	
			Chloroethane	2010/08/16	<0.30		ppbv	
			1,3-Butadiene	2010/08/16	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/16	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/16	<0.15		ppbv	
			Ethanol	2010/08/16	<2.3		ppbv	
			2-propanol	2010/08/16	<3.0		ppbv	
			2-Propanone	2010/08/16	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/16	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/16	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/16	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/16	<0.20		ppbv	
			Ethyl Acetate	2010/08/16	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/16	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/16	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/16	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/16	0.43, RDL=0.30		ppbv	
			Chloroform	2010/08/16	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/16	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/16	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/16	<0.20		ppbv	
			Ethylene Dibromide	2010/08/16	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/16	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/16	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/16	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/16	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/16	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/16	<0.40		ppbv	
			Bromomethane	2010/08/16	<0.18		ppbv	
			Bromoform	2010/08/16	<0.20		ppbv	
			Bromodichloromethane	2010/08/16	<0.20		ppbv	
			Dibromochloromethane	2010/08/16	<0.20		ppbv	
			Heptane	2010/08/16	<0.30		ppbv	

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

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A2766

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Method Blank	Trichloroethylene	2010/08/16	<0.30		ppbv	
			Tetrachloroethylene	2010/08/16	<0.20		ppbv	
			Benzene	2010/08/16	<0.18		ppbv	
			Toluene	2010/08/16	<0.20		ppbv	
			Ethylbenzene	2010/08/16	<0.20		ppbv	
			p+m-Xylene	2010/08/16	<0.37		ppbv	
			o-Xylene	2010/08/16	<0.20		ppbv	
			Styrene	2010/08/16	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/16	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/16	<0.50		ppbv	
			4-ethyltoluene	2010/08/16	<2.2		ppbv	
			Chlorobenzene	2010/08/16	<0.20		ppbv	
			Benzyl chloride	2010/08/16	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/16	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/16	<3.0		ppbv	
			Hexane	2010/08/16	<0.30		ppbv	
			Cyclohexane	2010/08/16	<0.20		ppbv	
			Tetrahydrofuran	2010/08/16	<0.40		ppbv	
			1,4-Dioxane	2010/08/16	<2.0		ppbv	
			Xylene (Total)	2010/08/16	<0.60		ppbv	

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

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /July 31, 10

Sampler s/n: 6167
Canister ID: 7867
Canister Installation Date/Time: July 30, 2010@ 7:15 mst
Canister Removal Date/Time: Aug 03, 2010 @ 7:07 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
31-Jul-10	31/07/2010 0:00	01/08/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	598	25

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

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

Comments: System leak check prior to sampling. COC # 2314

Technician Signiture: Ting Xu

Your C.O.C. #: 2314

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

Report Date: 2010/08/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A5545
Received: 2010/08/05, 19:00

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/08/15	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/08/15	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

RESULTS OF ANALYSES OF AIR

Maxxam ID		GS9596	GS9597	
Sampling Date		2010/07/31	2010/07/31	
COC Number		2314	2314	
	Units	**LICA VOC/CLS/JULY 31,10 - 7867**	**LICA VOC/PORT/JULY 31,10 - 7914**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2236708

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9596				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/CLS/JULY 31,10 - 7867**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2236709
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2236709
Propene	ppbv	<0.30	0.30	<0.516	0.516	2236709
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2236709
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2236709
Dichlorodifluoromethane (FREON 12)	ppbv	0.86	0.20	4.24	0.989	2236709
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2236709
Chloromethane	ppbv	0.77	0.30	1.58	0.620	2236709
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2236709
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2236709
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2236709
Trichlorofluoromethane (FREON 11)	ppbv	0.44	0.20	2.48	1.12	2236709
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2236709
Ethanol	ppbv	3.8	2.3	7.15	4.33	2236709
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2236709
2-Propanone	ppbv	6.97	0.80	16.6	1.90	2236709
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2236709
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2236709
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2236709
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2236709
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2236709
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2236709
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2236709
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2236709
Methylene Chloride(Dichloromethane)	ppbv	0.47	0.30	1.64	1.04	2236709
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2236709
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2236709
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2236709
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2236709
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2236709
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2236709

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9596				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/CLS/JULY 31,10 - 7867**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2236709
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2236709
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2236709
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2236709
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2236709
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2236709
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2236709
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2236709
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2236709
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2236709
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2236709
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2236709
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2236709
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2236709
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2236709
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2236709
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2236709
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2236709
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2236709
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2236709
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2236709
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2236709
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2236709
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2236709
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2236709
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2236709
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2236709
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2236709
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2236709
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2236709

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9596				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/CLS/JULY 31,10 - 7867**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	68		N/A	N/A	2236709
D5-Chlorobenzene	%	69		N/A	N/A	2236709
Difluorobenzene	%	72		N/A	N/A	2236709

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

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9597				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/PORT/JULY 31,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2236709
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2236709
Propene	ppbv	<0.30	0.30	<0.516	0.516	2236709
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2236709
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2236709
Dichlorodifluoromethane (FREON 12)	ppbv	0.81	0.20	3.99	0.989	2236709
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2236709
Chloromethane	ppbv	0.71	0.30	1.47	0.620	2236709
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2236709
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2236709
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2236709
Trichlorofluoromethane (FREON 11)	ppbv	0.41	0.20	2.32	1.12	2236709
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2236709
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2236709
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2236709
2-Propanone	ppbv	6.91	0.80	16.4	1.90	2236709
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2236709
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2236709
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2236709
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2236709
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2236709
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2236709
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2236709
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2236709
Methylene Chloride(Dichloromethane)	ppbv	0.51	0.30	1.76	1.04	2236709
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2236709
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2236709
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2236709
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2236709
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2236709
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2236709

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9597				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/PORT/JULY 31,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2236709
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2236709
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2236709
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2236709
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2236709
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2236709
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2236709
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2236709
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2236709
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2236709
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2236709
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2236709
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2236709
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2236709
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2236709
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2236709
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2236709
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2236709
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2236709
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2236709
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2236709
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2236709
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2236709
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2236709
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2236709
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2236709
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2236709
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2236709
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2236709
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2236709

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9597				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/PORT/JULY 31,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	68		N/A	N/A	2236709
D5-Chlorobenzene	%	66		N/A	N/A	2236709
Difluorobenzene	%	69		N/A	N/A	2236709

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

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

Test Summary

Maxxam ID	GS9596	**Collected**	2010/07/31
Sample ID	LICA VOC/CLS/JULY 31,10 - 7867	**Shipped**	
Matrix	AIR	**Received**	2010/08/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2236708	N/A	2010/08/15	DBJ
Volatile Organics in Air (TO-15)	GC/MS	2236709	N/A	2010/08/15	LSY

Maxxam ID	GS9597	**Collected**	2010/07/31
Sample ID	LICA VOC/PORT/JULY 31,10 - 7914	**Shipped**	
Matrix	AIR	**Received**	2010/08/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2236708	N/A	2010/08/15	DBJ
Volatile Organics in Air (TO-15)	GC/MS	2236709	N/A	2010/08/15	LSY

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0A5545

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2236709	LSY	Spiked Blank	Bromochloromethane	2010/08/15		92	%	60 - 140
			D5-Chlorobenzene	2010/08/15		93	%	60 - 140
			Difluorobenzene	2010/08/15		94	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/15		92	%	70 - 130
			Carbon Disulfide	2010/08/15		98	%	70 - 130
			Propene	2010/08/15		100	%	70 - 130
			Vinyl Acetate	2010/08/15		116	%	70 - 130
			Vinyl Bromide	2010/08/15		104	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/15		97	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/15		85	%	70 - 130
			Chloromethane	2010/08/15		95	%	70 - 130
			Vinyl Chloride	2010/08/15		105	%	70 - 130
			Chloroethane	2010/08/15		106	%	70 - 130
			1,3-Butadiene	2010/08/15		106	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/15		102	%	70 - 130
			Trichlorotrifluoroethane	2010/08/15		96	%	70 - 130
			Ethanol	2010/08/15		126	%	70 - 130
			2-propanol	2010/08/15		108	%	70 - 130
			2-Propanone	2010/08/15		97	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/15		95	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/15		105	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/15		109	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/15		100	%	70 - 130
			Ethyl Acetate	2010/08/15		99	%	70 - 130
			1,1-Dichloroethylene	2010/08/15		97	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/15		107	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/15		100	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/15		87	%	70 - 130
			Chloroform	2010/08/15		96	%	70 - 130
			Carbon Tetrachloride	2010/08/15		101	%	70 - 130
			1,1-Dichloroethane	2010/08/15		97	%	70 - 130
			1,2-Dichloroethane	2010/08/15		98	%	70 - 130
			Ethylene Dibromide	2010/08/15		101	%	70 - 130
			1,1,1-Trichloroethane	2010/08/15		95	%	70 - 130
			1,1,2-Trichloroethane	2010/08/15		99	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/15		94	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/15		107	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/15		111	%	70 - 130
			1,2-Dichloropropane	2010/08/15		98	%	70 - 130
			Bromomethane	2010/08/15		111	%	70 - 130
			Bromoform	2010/08/15		109	%	70 - 130
			Bromodichloromethane	2010/08/15		95	%	70 - 130
			Dibromochloromethane	2010/08/15		103	%	70 - 130
			Heptane	2010/08/15		100	%	70 - 130
			Trichloroethylene	2010/08/15		99	%	70 - 130
			Tetrachloroethylene	2010/08/15		103	%	70 - 130
			Benzene	2010/08/15		100	%	70 - 130
			Toluene	2010/08/15		106	%	70 - 130
			Ethylbenzene	2010/08/15		106	%	70 - 130
			p+m-Xylene	2010/08/15		103	%	70 - 130
			o-Xylene	2010/08/15		102	%	70 - 130
			Styrene	2010/08/15		103	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/15		102	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/15		100	%	70 - 130
			4-ethyltoluene	2010/08/15		98	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A5545

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2236709	LSY	Spiked Blank	Chlorobenzene	2010/08/15		94	%	70 - 130
			Benzyl chloride	2010/08/15		87	%	70 - 130
			1,3-Dichlorobenzene	2010/08/15		94	%	70 - 130
			1,4-Dichlorobenzene	2010/08/15		88	%	70 - 130
			1,2-Dichlorobenzene	2010/08/15		88	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/15		80	%	70 - 130
			Hexachlorobutadiene	2010/08/15		94	%	70 - 130
			Hexane	2010/08/15		97	%	70 - 130
			Cyclohexane	2010/08/15		101	%	70 - 130
			Tetrahydrofuran	2010/08/15		107	%	70 - 130
			1,4-Dioxane	2010/08/15		86	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/15		72	%	60 - 140
			D5-Chlorobenzene	2010/08/15		66	%	60 - 140
			Difluorobenzene	2010/08/15		72	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/15	<0.20		ppbv	
			Carbon Disulfide	2010/08/15	<0.50		ppbv	
			Propene	2010/08/15	<0.30		ppbv	
			Vinyl Acetate	2010/08/15	<0.20		ppbv	
			Vinyl Bromide	2010/08/15	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/15	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/15	<0.17		ppbv	
			Chloromethane	2010/08/15	<0.30		ppbv	
			Vinyl Chloride	2010/08/15	<0.18		ppbv	
			Chloroethane	2010/08/15	<0.30		ppbv	
			1,3-Butadiene	2010/08/15	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/15	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/15	<0.15		ppbv	
			Ethanol	2010/08/15	<2.3		ppbv	
			2-propanol	2010/08/15	<3.0		ppbv	
			2-Propanone	2010/08/15	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/15	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/15	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/15	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/15	<0.20		ppbv	
			Ethyl Acetate	2010/08/15	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/15	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/15	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/15	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/15	0.47, RDL=0.30		ppbv	
			Chloroform	2010/08/15	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/15	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/15	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/15	<0.20		ppbv	
			Ethylene Dibromide	2010/08/15	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/15	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/15	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/15	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/15	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/15	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/15	<0.40		ppbv	
			Bromomethane	2010/08/15	<0.18		ppbv	
			Bromoform	2010/08/15	<0.20		ppbv	
			Bromodichloromethane	2010/08/15	<0.20		ppbv	
			Dibromochloromethane	2010/08/15	<0.20		ppbv	
			Heptane	2010/08/15	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A5545

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2236709 LSY	Method Blank	Trichloroethylene	2010/08/15	<0.30		ppbv	
		Tetrachloroethylene	2010/08/15	<0.20		ppbv	
		Benzene	2010/08/15	<0.18		ppbv	
		Toluene	2010/08/15	<0.20		ppbv	
		Ethylbenzene	2010/08/15	<0.20		ppbv	
		p+m-Xylene	2010/08/15	<0.37		ppbv	
		o-Xylene	2010/08/15	<0.20		ppbv	
		Styrene	2010/08/15	<0.20		ppbv	
		1,3,5-Trimethylbenzene	2010/08/15	<0.50		ppbv	
		1,2,4-Trimethylbenzene	2010/08/15	<0.50		ppbv	
		4-ethyltoluene	2010/08/15	<2.2		ppbv	
		Chlorobenzene	2010/08/15	<0.20		ppbv	
		Benzyl chloride	2010/08/15	<1.0		ppbv	
		1,3-Dichlorobenzene	2010/08/15	<0.40		ppbv	
		1,4-Dichlorobenzene	2010/08/15	<0.40		ppbv	
		1,2-Dichlorobenzene	2010/08/15	<0.40		ppbv	
		1,2,4-Trichlorobenzene	2010/08/15	<2.0		ppbv	
		Hexachlorobutadiene	2010/08/15	<3.0		ppbv	
		Hexane	2010/08/15	<0.30		ppbv	
		Cyclohexane	2010/08/15	<0.20		ppbv	
		Tetrahydrofuran	2010/08/15	<0.40		ppbv	
		1,4-Dioxane	2010/08/15	<2.0		ppbv	
		Xylene (Total)	2010/08/15	<0.60		ppbv	
	RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/08/15	NC		%	25
		Carbon Disulfide	2010/08/15	NC		%	25
		Propene	2010/08/15	NC		%	25
		Vinyl Acetate	2010/08/15	NC		%	25
		Vinyl Bromide	2010/08/15	NC		%	25
		Dichlorodifluoromethane (FREON 12)	2010/08/15	NC		%	25
		1,2-Dichlorotetrafluoroethane	2010/08/15	NC		%	25
		Chloromethane	2010/08/15	NC		%	25
		Vinyl Chloride	2010/08/15	NC		%	25
		Chloroethane	2010/08/15	NC		%	25
		1,3-Butadiene	2010/08/15	NC		%	25
		Trichlorofluoromethane (FREON 11)	2010/08/15	NC		%	25
		Trichlorotrifluoroethane	2010/08/15	NC		%	25
		Ethanol	2010/08/15	NC		%	25
		2-propanol	2010/08/15	NC		%	25
		2-Propanone	2010/08/15	1		%	25
		Methyl Ethyl Ketone (2-Butanone)	2010/08/15	NC		%	25
		Methyl Isobutyl Ketone	2010/08/15	NC		%	25
		Methyl Butyl Ketone (2-Hexanone)	2010/08/15	NC		%	25
		Methyl t-butyl ether (MTBE)	2010/08/15	NC		%	25
		Ethyl Acetate	2010/08/15	NC		%	25
		1,1-Dichloroethylene	2010/08/15	NC		%	25
		cis-1,2-Dichloroethylene	2010/08/15	NC		%	25
		trans-1,2-Dichloroethylene	2010/08/15	NC		%	25
		Methylene Chloride(Dichloromethane)	2010/08/15	NC		%	25
		Chloroform	2010/08/15	5.8		%	25
		Carbon Tetrachloride	2010/08/15	NC		%	25
		1,1-Dichloroethane	2010/08/15	NC		%	25
		1,2-Dichloroethane	2010/08/15	NC		%	25
		Ethylene Dibromide	2010/08/15	NC		%	25

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A5545

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2236709	LSY	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2010/08/15	NC		%	25
			1,1,2-Trichloroethane	2010/08/15	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/08/15	NC		%	25
			cis-1,3-Dichloropropene	2010/08/15	NC		%	25
			trans-1,3-Dichloropropene	2010/08/15	NC		%	25
			1,2-Dichloropropane	2010/08/15	NC		%	25
			Bromomethane	2010/08/15	NC		%	25
			Bromoform	2010/08/15	NC		%	25
			Bromodichloromethane	2010/08/15	NC		%	25
			Dibromochloromethane	2010/08/15	NC		%	25
			Heptane	2010/08/15	NC		%	25
			Trichloroethylene	2010/08/15	NC		%	25
			Tetrachloroethylene	2010/08/15	4.8		%	25
			Benzene	2010/08/15	NC		%	25
			Toluene	2010/08/15	2.5		%	25
			Ethylbenzene	2010/08/15	NC		%	25
			p+m-Xylene	2010/08/15	NC		%	25
			o-Xylene	2010/08/15	NC		%	25
			Styrene	2010/08/15	NC		%	25
			1,3,5-Trimethylbenzene	2010/08/15	NC		%	25
			1,2,4-Trimethylbenzene	2010/08/15	NC		%	25
			4-ethyltoluene	2010/08/15	NC		%	25
			Chlorobenzene	2010/08/15	NC		%	25
			Benzyl chloride	2010/08/15	NC		%	25
			1,3-Dichlorobenzene	2010/08/15	NC		%	25
			1,4-Dichlorobenzene	2010/08/15	NC		%	25
			1,2-Dichlorobenzene	2010/08/15	NC		%	25
			1,2,4-Trichlorobenzene	2010/08/15	NC		%	25
			Hexachlorobutadiene	2010/08/15	NC		%	25
			Hexane	2010/08/15	NC		%	25
			Cyclohexane	2010/08/15	NC		%	25
			Tetrahydrofuran	2010/08/15	NC		%	25
			1,4-Dioxane	2010/08/15	NC		%	25
			Xylene (Total)	2010/08/15	NC		%	25

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

Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Aug 06, 10

Sampler s/n: 6167
Canister ID: 7810
Canister Installation Date/Time: Aug 05, 2010 @ 14:45mst
Canister Removal Date/Time: Aug 09, 2010 @ 9:09 mst

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

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

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

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

Comments: System leak check prior to sampling. COC # 2316

Technician Signiture: Ting Xu

Your C.O.C. #: 2316

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

Report Date: 2010/08/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A8316
Received: 2010/08/11, 14:05

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/08/16	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/08/16	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

RESULTS OF ANALYSES OF AIR

Maxxam ID		GU3220	GU3221	
Sampling Date		2010/08/06	2010/08/06	
COC Number		2316	2316	
	Units	**LICA VOC/CLS/AUG 06,10 - 7810**	**LICA VOC/PORT/AUG 06,10 - 7808**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2239296

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GU3220			GU3221				
Sampling Date		2010/08/06			2010/08/06				
COC Number		2316			2316				
	Units	**LICA VOC/CLS/AUG 06,10 - 7810**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 06,10 - 7808**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2239303
Carbon Disulfide	ppbv	0.94	2.92	1.56	<0.50	0.50	<1.56	1.56	2239303
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2239303
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2239303
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2239303
Dichlorodifluoromethane (FREON 12)	ppbv	0.83	4.10	0.989	0.82	0.20	4.04	0.989	2239303
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2239303
Chloromethane	ppbv	0.64	1.33	0.620	0.69	0.30	1.43	0.620	2239303
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2239303
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2239303
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2239303
Trichlorofluoromethane (FREON 11)	ppbv	0.43	2.40	1.12	0.42	0.20	2.38	1.12	2239303
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2239303
Ethanol	ppbv	8.6	16.2	4.33	<2.3	2.3	<4.33	4.33	2239303
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2239303
2-Propanone	ppbv	6.74	16.0	1.90	41.0	0.80	97.4	1.90	2239303
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2239303
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2239303
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2239303
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2239303
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2239303
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2239303
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2239303
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2239303
Methylene Chloride(Dichloromethane)	ppbv	0.34	1.17	1.04	0.32	0.30	1.10	1.04	2239303
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2239303
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2239303
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2239303
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2239303
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2239303
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2239303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GU3220			GU3221				
Sampling Date		2010/08/06			2010/08/06				
COC Number		2316			2316				
	Units	**LICA VOC/CLS/AUG 06,10 - 7810**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 06,10 - 7808**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2239303
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2239303
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2239303
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2239303
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2239303
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2239303
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2239303
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2239303
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2239303
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2239303
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2239303
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2239303
Benzene	ppbv	0.23	0.722	0.575	<0.18	0.18	<0.575	0.575	2239303
Toluene	ppbv	0.23	0.868	0.753	<0.20	0.20	<0.753	0.753	2239303
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2239303
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2239303
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2239303
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2239303
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2239303
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2239303
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2239303
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2239303
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2239303
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2239303
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2239303
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2239303
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2239303
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2239303
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2239303
Cyclohexane	ppbv	<0.20	<0.688	0.688	0.31	0.20	1.08	0.688	2239303
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2239303
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2239303
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2239303

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GU3220			GU3221				
Sampling Date		2010/08/06			2010/08/06				
COC Number		2316			2316				
	Units	**LICA VOC/CLS/AUG 06,10 - 7810**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 06,10 - 7808**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	77	N/A	N/A	78		N/A	N/A	2239303
D5-Chlorobenzene	%	75	N/A	N/A	76		N/A	N/A	2239303
Difluorobenzene	%	79	N/A	N/A	79		N/A	N/A	2239303

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

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

Test Summary

Maxxam ID	GU3220	**Collected**	2010/08/06
Sample ID	LICA VOC/CLS/AUG 06,10 - 7810	**Shipped**	
Matrix	AIR	**Received**	2010/08/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2239296	N/A	2010/08/16	MMS
Volatile Organics in Air (TO-15)	GC/MS	2239303	N/A	2010/08/16	MMU

Maxxam ID	GU3221	**Collected**	2010/08/06
Sample ID	LICA VOC/PORT/AUG 06,10 - 7808	**Shipped**	
Matrix	AIR	**Received**	2010/08/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2239296	N/A	2010/08/16	MMS
Volatile Organics in Air (TO-15)	GC/MS	2239303	N/A	2010/08/16	MMU

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0A8316

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Spiked Blank	Bromochloromethane	2010/08/16		98	%	60 - 140
			D5-Chlorobenzene	2010/08/16		96	%	60 - 140
			Difluorobenzene	2010/08/16		100	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/16		97	%	70 - 130
			Carbon Disulfide	2010/08/16		105	%	70 - 130
			Propene	2010/08/16		110	%	70 - 130
			Vinyl Acetate	2010/08/16		126	%	70 - 130
			Vinyl Bromide	2010/08/16		111	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/16		107	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/16		93	%	70 - 130
			Chloromethane	2010/08/16		104	%	70 - 130
			Vinyl Chloride	2010/08/16		114	%	70 - 130
			Chloroethane	2010/08/16		114	%	70 - 130
			1,3-Butadiene	2010/08/16		118	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/16		111	%	70 - 130
			Trichlorotrifluoroethane	2010/08/16		78	%	70 - 130
			Ethanol	2010/08/16		136 (1)	%	70 - 130
			2-propanol	2010/08/16		119	%	70 - 130
			2-Propanone	2010/08/16		107	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/16		101	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/16		111	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/16		117	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/16		108	%	70 - 130
			Ethyl Acetate	2010/08/16		106	%	70 - 130
			1,1-Dichloroethylene	2010/08/16		106	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/16		116	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/16		109	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/16		90	%	70 - 130
			Chloroform	2010/08/16		103	%	70 - 130
			Carbon Tetrachloride	2010/08/16		109	%	70 - 130
			1,1-Dichloroethane	2010/08/16		104	%	70 - 130
			1,2-Dichloroethane	2010/08/16		107	%	70 - 130
			Ethylene Dibromide	2010/08/16		106	%	70 - 130
			1,1,1-Trichloroethane	2010/08/16		102	%	70 - 130
			1,1,2-Trichloroethane	2010/08/16		104	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/16		97	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/16		114	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/16		118	%	70 - 130
			1,2-Dichloropropane	2010/08/16		106	%	70 - 130
			Bromomethane	2010/08/16		121	%	70 - 130
			Bromoform	2010/08/16		113	%	70 - 130
			Bromodichloromethane	2010/08/16		101	%	70 - 130
			Dibromochloromethane	2010/08/16		108	%	70 - 130
			Heptane	2010/08/16		108	%	70 - 130
			Trichloroethylene	2010/08/16		106	%	70 - 130
			Tetrachloroethylene	2010/08/16		108	%	70 - 130
			Benzene	2010/08/16		107	%	70 - 130
			Toluene	2010/08/16		111	%	70 - 130
			Ethylbenzene	2010/08/16		112	%	70 - 130
			p+m-Xylene	2010/08/16		108	%	70 - 130
			o-Xylene	2010/08/16		106	%	70 - 130
			Styrene	2010/08/16		106	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/16		107	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/16		105	%	70 - 130
			4-ethyltoluene	2010/08/16		103	%	70 - 130

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A8316

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Spiked Blank	Chlorobenzene	2010/08/16		100	%	70 - 130
			Benzyl chloride	2010/08/16		95	%	70 - 130
			1,3-Dichlorobenzene	2010/08/16		98	%	70 - 130
			1,4-Dichlorobenzene	2010/08/16		92	%	70 - 130
			1,2-Dichlorobenzene	2010/08/16		95	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/16		92	%	70 - 130
			Hexachlorobutadiene	2010/08/16		106	%	70 - 130
			Hexane	2010/08/16		103	%	70 - 130
			Cyclohexane	2010/08/16		105	%	70 - 130
			Tetrahydrofuran	2010/08/16		116	%	70 - 130
			1,4-Dioxane	2010/08/16		89	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/16		81	%	60 - 140
			D5-Chlorobenzene	2010/08/16		73	%	60 - 140
			Difluorobenzene	2010/08/16		81	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/16	<0.20		ppbv	
			Carbon Disulfide	2010/08/16	<0.50		ppbv	
			Propene	2010/08/16	<0.30		ppbv	
			Vinyl Acetate	2010/08/16	<0.20		ppbv	
			Vinyl Bromide	2010/08/16	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/16	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/16	<0.17		ppbv	
			Chloromethane	2010/08/16	<0.30		ppbv	
			Vinyl Chloride	2010/08/16	<0.18		ppbv	
			Chloroethane	2010/08/16	<0.30		ppbv	
			1,3-Butadiene	2010/08/16	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/16	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/16	<0.15		ppbv	
			Ethanol	2010/08/16	<2.3		ppbv	
			2-propanol	2010/08/16	<3.0		ppbv	
			2-Propanone	2010/08/16	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/16	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/16	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/16	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/16	<0.20		ppbv	
			Ethyl Acetate	2010/08/16	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/16	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/16	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/16	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/16	0.43, RDL=0.30		ppbv	
			Chloroform	2010/08/16	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/16	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/16	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/16	<0.20		ppbv	
			Ethylene Dibromide	2010/08/16	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/16	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/16	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/16	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/16	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/16	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/16	<0.40		ppbv	
			Bromomethane	2010/08/16	<0.18		ppbv	
			Bromoform	2010/08/16	<0.20		ppbv	
			Bromodichloromethane	2010/08/16	<0.20		ppbv	
			Dibromochloromethane	2010/08/16	<0.20		ppbv	
			Heptane	2010/08/16	<0.30		ppbv	

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A8316

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Method Blank	Trichloroethylene	2010/08/16	<0.30		ppbv	
			Tetrachloroethylene	2010/08/16	<0.20		ppbv	
			Benzene	2010/08/16	<0.18		ppbv	
			Toluene	2010/08/16	<0.20		ppbv	
			Ethylbenzene	2010/08/16	<0.20		ppbv	
			p+m-Xylene	2010/08/16	<0.37		ppbv	
			o-Xylene	2010/08/16	<0.20		ppbv	
			Styrene	2010/08/16	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/16	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/16	<0.50		ppbv	
			4-ethyltoluene	2010/08/16	<2.2		ppbv	
			Chlorobenzene	2010/08/16	<0.20		ppbv	
			Benzyl chloride	2010/08/16	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/16	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/16	<3.0		ppbv	
			Hexane	2010/08/16	<0.30		ppbv	
			Cyclohexane	2010/08/16	<0.20		ppbv	
			Tetrahydrofuran	2010/08/16	<0.40		ppbv	
			1,4-Dioxane	2010/08/16	<2.0		ppbv	
			Xylene (Total)	2010/08/16	<0.60		ppbv	

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

Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Aug 12, 10

Sampler s/n: 6167
Canister ID: 7834
Canister Installation Date/Time: Aug 11, 2010 @ 6:24mst
Canister Removal Date/Time: Aug 13, 2010 @ 9:12mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
12-Aug-10	12/08/2010 0:00	13/08/2010 0:00	24.00

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

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

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

Comments: System leak check prior to sampling. COC # 2537

Technician Signiture: Ting Xu

Your C.O.C. #: 2537

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

Report Date: 2010/08/26

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B2036
Received: 2010/08/18, 12:17

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/08/20	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/08/20	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

RESULTS OF ANALYSES OF AIR

Maxxam ID		GW0960	GW0961	
Sampling Date		2010/08/12	2010/08/12	
COC Number		2537	2537	
	Units	**LICA VOC/CLS/AUG 12,10 - 7834**	**LICA VOC/PORT/AUG 12,10 - 7830**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2243479

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GW0960			GW0961				
Sampling Date		2010/08/12			2010/08/12				
COC Number		2537			2537				
	Units	**LICA VOC/CLS/AUG 12,10 - 7834**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 12,10 - 7830**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	2.43	11.4	0.934	<0.20	0.20	<0.934	0.934	2243452
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2243452
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2243452
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2243452
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2243452
Dichlorodifluoromethane (FREON 12)	ppbv	1.66	8.22	0.989	0.87	0.20	4.30	0.989	2243452
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2243452
Chloromethane	ppbv	0.63	1.29	0.620	0.63	0.30	1.31	0.620	2243452
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2243452
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2243452
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2243452
Trichlorofluoromethane (FREON 11)	ppbv	0.38	2.15	1.12	0.45	0.20	2.53	1.12	2243452
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2243452
Ethanol	ppbv	3.2	6.12	4.33	<2.3	2.3	<4.33	4.33	2243452
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2243452
2-Propanone	ppbv	6.22	14.8	1.90	4.57	0.80	10.9	1.90	2243452
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2243452
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2243452
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2243452
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2243452
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2243452
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2243452
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2243452
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2243452
Methylene Chloride(Dichloromethane)	ppbv	0.47	1.64	1.04	0.46	0.30	1.60	1.04	2243452
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2243452
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2243452
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2243452
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2243452
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2243452
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2243452

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GW0960			GW0961				
Sampling Date		2010/08/12			2010/08/12				
COC Number		2537			2537				
	Units	**LICA VOC/CLS/AUG 12,10 - 7834**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 12,10 - 7830**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2243452
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2243452
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2243452
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2243452
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2243452
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2243452
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2243452
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2243452
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2243452
Heptane	ppbv	0.65	2.65	1.23	<0.30	0.30	<1.23	1.23	2243452
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2243452
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2243452
Benzene	ppbv	0.88	2.80	0.575	<0.18	0.18	<0.575	0.575	2243452
Toluene	ppbv	5.50	20.7	0.753	<0.20	0.20	<0.753	0.753	2243452
Ethylbenzene	ppbv	0.59	2.55	0.868	<0.20	0.20	<0.868	0.868	2243452
p+m-Xylene	ppbv	3.12	13.6	1.61	<0.37	0.37	<1.61	1.61	2243452
o-Xylene	ppbv	0.92	3.98	0.868	<0.20	0.20	<0.868	0.868	2243452
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2243452
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2243452
1,2,4-Trimethylbenzene	ppbv	0.77	3.76	2.46	<0.50	0.50	<2.46	2.46	2243452
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2243452
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2243452
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2243452
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2243452
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2243452
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2243452
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2243452
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2243452
Hexane	ppbv	1.14	4.03	1.06	<0.30	0.30	<1.06	1.06	2243452
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2243452
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2243452
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2243452
Xylene (Total)	ppbv	4.04	17.5	2.61	<0.60	0.60	<2.61	2.61	2243452

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GW0960			GW0961				
Sampling Date		2010/08/12			2010/08/12				
COC Number		2537			2537				
	Units	**LICA VOC/CLS/AUG 12,10 - 7834**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 12,10 - 7830**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	90	N/A	N/A	83		N/A	N/A	2243452
D5-Chlorobenzene	%	88	N/A	N/A	80		N/A	N/A	2243452
Difluorobenzene	%	95	N/A	N/A	87		N/A	N/A	2243452

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

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

Test Summary

Maxxam ID	GW0960	**Collected**	2010/08/12
Sample ID	LICA VOC/CLS/AUG 12,10 - 7834	**Shipped**	
Matrix	AIR	**Received**	2010/08/18

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2243479	N/A	2010/08/20	MMU
Volatile Organics in Air (TO-15)	GC/MS	2243452	N/A	2010/08/20	MMU

Maxxam ID	GW0961	**Collected**	2010/08/12
Sample ID	LICA VOC/PORT/AUG 12,10 - 7830	**Shipped**	
Matrix	AIR	**Received**	2010/08/18

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2243479	N/A	2010/08/20	MMU
Volatile Organics in Air (TO-15)	GC/MS	2243452	N/A	2010/08/20	MMU

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0B2036

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2243452	MMU	Spiked Blank	Bromochloromethane	2010/08/20		101	%	60 - 140
			D5-Chlorobenzene	2010/08/20		98	%	60 - 140
			Difluorobenzene	2010/08/20		105	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/20		93	%	70 - 130
			Carbon Disulfide	2010/08/20		101	%	70 - 130
			Propene	2010/08/20		103	%	70 - 130
			Vinyl Acetate	2010/08/20		119	%	70 - 130
			Vinyl Bromide	2010/08/20		108	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/20		101	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/20		90	%	70 - 130
			Chloromethane	2010/08/20		99	%	70 - 130
			Vinyl Chloride	2010/08/20		110	%	70 - 130
			Chloroethane	2010/08/20		109	%	70 - 130
			1,3-Butadiene	2010/08/20		111	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/20		106	%	70 - 130
			Trichlorotrifluoroethane	2010/08/20		103	%	70 - 130
			Ethanol	2010/08/20		118	%	70 - 130
			2-propanol	2010/08/20		112	%	70 - 130
			2-Propanone	2010/08/20		100	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/20		102	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/20		106	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/20		111	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/20		104	%	70 - 130
			Ethyl Acetate	2010/08/20		101	%	70 - 130
			1,1-Dichloroethylene	2010/08/20		106	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/20		109	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/20		104	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/20		90	%	70 - 130
			Chloroform	2010/08/20		98	%	70 - 130
			Carbon Tetrachloride	2010/08/20		103	%	70 - 130
			1,1-Dichloroethane	2010/08/20		98	%	70 - 130
			1,2-Dichloroethane	2010/08/20		101	%	70 - 130
			Ethylene Dibromide	2010/08/20		104	%	70 - 130
			1,1,1-Trichloroethane	2010/08/20		98	%	70 - 130
			1,1,2-Trichloroethane	2010/08/20		102	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/20		96	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/20		110	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/20		117	%	70 - 130
			1,2-Dichloropropane	2010/08/20		100	%	70 - 130
			Bromomethane	2010/08/20		116	%	70 - 130
			Bromoform	2010/08/20		110	%	70 - 130
			Bromodichloromethane	2010/08/20		98	%	70 - 130
			Dibromochloromethane	2010/08/20		105	%	70 - 130
			Heptane	2010/08/20		103	%	70 - 130
			Trichloroethylene	2010/08/20		104	%	70 - 130
			Tetrachloroethylene	2010/08/20		104	%	70 - 130
			Benzene	2010/08/20		99	%	70 - 130
			Toluene	2010/08/20		108	%	70 - 130
			Ethylbenzene	2010/08/20		109	%	70 - 130
			p+m-Xylene	2010/08/20		105	%	70 - 130
			o-Xylene	2010/08/20		103	%	70 - 130
			Styrene	2010/08/20		117	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/20		103	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/20		103	%	70 - 130
			4-ethyltoluene	2010/08/20		102	%	70 - 130

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B2036

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2243452	MMU	Spiked Blank	Chlorobenzene	2010/08/20		99	%	70 - 130
			Benzyl chloride	2010/08/20		97	%	70 - 130
			1,3-Dichlorobenzene	2010/08/20		100	%	70 - 130
			1,4-Dichlorobenzene	2010/08/20		95	%	70 - 130
			1,2-Dichlorobenzene	2010/08/20		92	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/20		96	%	70 - 130
			Hexachlorobutadiene	2010/08/20		98	%	70 - 130
			Hexane	2010/08/20		100	%	70 - 130
			Cyclohexane	2010/08/20		103	%	70 - 130
			Tetrahydrofuran	2010/08/20		110	%	70 - 130
			1,4-Dioxane	2010/08/20		86	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/20		85	%	60 - 140
			D5-Chlorobenzene	2010/08/20		80	%	60 - 140
			Difluorobenzene	2010/08/20		89	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/20	<0.20		ppbv	
			Carbon Disulfide	2010/08/20	<0.50		ppbv	
			Propene	2010/08/20	<0.30		ppbv	
			Vinyl Acetate	2010/08/20	<0.20		ppbv	
			Vinyl Bromide	2010/08/20	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/20	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/20	<0.17		ppbv	
			Chloromethane	2010/08/20	<0.30		ppbv	
			Vinyl Chloride	2010/08/20	<0.18		ppbv	
			Chloroethane	2010/08/20	<0.30		ppbv	
			1,3-Butadiene	2010/08/20	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/20	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/20	<0.15		ppbv	
			Ethanol	2010/08/20	<2.3		ppbv	
			2-propanol	2010/08/20	<3.0		ppbv	
			2-Propanone	2010/08/20	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/20	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/20	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/20	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/20	<0.20		ppbv	
			Ethyl Acetate	2010/08/20	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/20	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/20	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/20	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/20	0.42, RDL=0.30		ppbv	
			Chloroform	2010/08/20	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/20	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/20	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/20	<0.20		ppbv	
			Ethylene Dibromide	2010/08/20	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/20	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/20	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/20	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/20	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/20	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/20	<0.40		ppbv	
			Bromomethane	2010/08/20	<0.18		ppbv	
			Bromoform	2010/08/20	<0.20		ppbv	
			Bromodichloromethane	2010/08/20	<0.20		ppbv	
			Dibromochloromethane	2010/08/20	<0.20		ppbv	
			Heptane	2010/08/20	<0.30		ppbv	

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B2036

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2243452	MMU	Method Blank	Trichloroethylene	2010/08/20	<0.30		ppbv	
			Tetrachloroethylene	2010/08/20	<0.20		ppbv	
			Benzene	2010/08/20	<0.18		ppbv	
			Toluene	2010/08/20	<0.20		ppbv	
			Ethylbenzene	2010/08/20	<0.20		ppbv	
			p+m-Xylene	2010/08/20	<0.37		ppbv	
			o-Xylene	2010/08/20	<0.20		ppbv	
			Styrene	2010/08/20	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/20	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/20	<0.50		ppbv	
			4-ethyltoluene	2010/08/20	<2.2		ppbv	
			Chlorobenzene	2010/08/20	<0.20		ppbv	
			Benzyl chloride	2010/08/20	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/20	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/20	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/20	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/20	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/20	<3.0		ppbv	
			Hexane	2010/08/20	<0.30		ppbv	
			Cyclohexane	2010/08/20	<0.20		ppbv	
			Tetrahydrofuran	2010/08/20	<0.40		ppbv	
			1,4-Dioxane	2010/08/20	<2.0		ppbv	
			Xylene (Total)	2010/08/20	<0.60		ppbv	

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

Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Aug 18, 10

Sampler s/n: 6167
Canister ID: 7837
Canister Installation Date/Time: Aug 17, 2010 @ 6:50mst
Canister Removal Date/Time: Aug 19, 2010 @ 6:59mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
18-Aug-10	18/08/2010 0:00	19/08/2010 0:00	24.00

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

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

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

Comments: System leak check prior to sampling. COC # 2318

Technician Signiture: Ting Xu

Your C.O.C. #: 2318

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

Report Date: 2010/09/02

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B5010
Received: 2010/08/23, 10:42

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	1	N/A	2010/08/25	BRL SOP-00304	EPA TO-15
Canister Pressure (TO-15)	1	N/A	2010/08/26	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/08/25	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/08/26	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

RESULTS OF ANALYSES OF AIR

Maxxam ID		GX4731		GX4732	
Sampling Date		2010/08/18		2010/08/18	
COC Number		2318		2318	
	Units	**LICA VOC/CLS/AUG 18,10 - 7837**	**QC Batch**	**LICA VOC/PORT/AUG 18,10 - 7805**	**QC Batch**
Volatile Organics					
Pressure on Receipt	psig	20	2247185	20	2248827

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4731				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/CLS/AUG 18,10 - 7837**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2247168
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2247168
Propene	ppbv	<0.30	0.30	<0.516	0.516	2247168
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2247168
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2247168
Dichlorodifluoromethane (FREON 12)	ppbv	0.79	0.20	3.90	0.989	2247168
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2247168
Chloromethane	ppbv	0.63	0.30	1.31	0.620	2247168
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2247168
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2247168
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2247168
Trichlorofluoromethane (FREON 11)	ppbv	0.42	0.20	2.34	1.12	2247168
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2247168
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2247168
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2247168
2-Propanone	ppbv	3.35	0.80	7.95	1.90	2247168
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2247168
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2247168
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2247168
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2247168
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2247168
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2247168
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2247168
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2247168
Methylene Chloride(Dichloromethane)	ppbv	0.53	0.30	1.85	1.04	2247168
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2247168
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2247168
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2247168
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2247168
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2247168
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2247168

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4731				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/CLS/AUG 18,10 - 7837**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2247168
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2247168
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2247168
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2247168
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2247168
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2247168
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2247168
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2247168
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2247168
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2247168
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2247168
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2247168
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2247168
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2247168
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2247168
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2247168
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2247168
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2247168
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2247168
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2247168
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2247168
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2247168
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2247168
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2247168
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2247168
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2247168
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2247168
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2247168
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2247168
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2247168
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2247168
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2247168
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2247168

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4731				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/CLS/AUG 18,10 - 7837**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	78		N/A	N/A	2247168
D5-Chlorobenzene	%	77		N/A	N/A	2247168
Difluorobenzene	%	82		N/A	N/A	2247168

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

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4732				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/PORT/AUG 18,10 - 7805**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2248844
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2248844
Propene	ppbv	<0.30	0.30	<0.516	0.516	2248844
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2248844
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2248844
Dichlorodifluoromethane (FREON 12)	ppbv	0.85	0.20	4.20	0.989	2248844
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2248844
Chloromethane	ppbv	0.61	0.30	1.26	0.620	2248844
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2248844
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2248844
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2248844
Trichlorofluoromethane (FREON 11)	ppbv	0.49	0.20	2.73	1.12	2248844
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2248844
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2248844
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2248844
2-Propanone	ppbv	3.67	0.80	8.73	1.90	2248844
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2248844
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2248844
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2248844
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2248844
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2248844
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2248844
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2248844
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2248844
Methylene Chloride(Dichloromethane)	ppbv	0.50	0.30	1.75	1.04	2248844
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2248844
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2248844
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2248844
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2248844
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2248844
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2248844

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4732				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/PORT/AUG 18,10 - 7805**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2248844
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2248844
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2248844
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2248844
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2248844
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2248844
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2248844
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2248844
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2248844
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2248844
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2248844
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2248844
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2248844
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2248844
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2248844
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2248844
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2248844
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2248844
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2248844
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2248844
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2248844
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2248844
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2248844
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2248844
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2248844
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2248844
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2248844
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2248844
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2248844
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2248844
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2248844
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2248844
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2248844

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4732				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/PORT/AUG 18,10 - 7805**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	61		N/A	N/A	2248844
D5-Chlorobenzene	%	60		N/A	N/A	2248844
Difluorobenzene	%	64		N/A	N/A	2248844

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

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

Test Summary

Maxxam ID	GX4731	**Collected**	2010/08/18
Sample ID	LICA VOC/CLS/AUG 18,10 - 7837	**Shipped**	
Matrix	AIR	**Received**	2010/08/23

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2247185	N/A	2010/08/26	MMU
Volatile Organics in Air (TO-15)	GC/MS	2247168	N/A	2010/08/26	MMU

Maxxam ID	GX4732	**Collected**	2010/08/18
Sample ID	LICA VOC/PORT/AUG 18,10 - 7805	**Shipped**	
Matrix	AIR	**Received**	2010/08/23

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2248827	N/A	2010/08/25	MMU
Volatile Organics in Air (TO-15)	GC/MS	2248844	N/A	2010/08/25	MMU

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247168	MMU	Spiked Blank	Bromochloromethane	2010/08/26		113	%	60 - 140
			D5-Chlorobenzene	2010/08/26		113	%	60 - 140
			Difluorobenzene	2010/08/26		115	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/26		88	%	70 - 130
			Carbon Disulfide	2010/08/26		95	%	70 - 130
			Propene	2010/08/26		100	%	70 - 130
			Vinyl Acetate	2010/08/26		114	%	70 - 130
			Vinyl Bromide	2010/08/26		103	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/26		99	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/26		87	%	70 - 130
			Chloromethane	2010/08/26		97	%	70 - 130
			Vinyl Chloride	2010/08/26		106	%	70 - 130
			Chloroethane	2010/08/26		104	%	70 - 130
			1,3-Butadiene	2010/08/26		107	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/26		103	%	70 - 130
			Trichlorotrifluoroethane	2010/08/26		96	%	70 - 130
			Ethanol	2010/08/26		120	%	70 - 130
			2-propanol	2010/08/26		109	%	70 - 130
			2-Propanone	2010/08/26		99	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/26		98	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/26		95	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/26		106	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/26		97	%	70 - 130
			Ethyl Acetate	2010/08/26		97	%	70 - 130
			1,1-Dichloroethylene	2010/08/26		96	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/26		105	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/26		98	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/26		85	%	70 - 130
			Chloroform	2010/08/26		94	%	70 - 130
			Carbon Tetrachloride	2010/08/26		101	%	70 - 130
			1,1-Dichloroethane	2010/08/26		94	%	70 - 130
			1,2-Dichloroethane	2010/08/26		97	%	70 - 130
			Ethylene Dibromide	2010/08/26		98	%	70 - 130
			1,1,1-Trichloroethane	2010/08/26		94	%	70 - 130
			1,1,2-Trichloroethane	2010/08/26		96	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/26		90	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/26		103	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/26		109	%	70 - 130
			1,2-Dichloropropane	2010/08/26		97	%	70 - 130
			Bromomethane	2010/08/26		111	%	70 - 130
			Bromoform	2010/08/26		105	%	70 - 130
			Bromodichloromethane	2010/08/26		93	%	70 - 130
			Dibromochloromethane	2010/08/26		101	%	70 - 130
			Heptane	2010/08/26		100	%	70 - 130
			Trichloroethylene	2010/08/26		98	%	70 - 130
			Tetrachloroethylene	2010/08/26		99	%	70 - 130
			Benzene	2010/08/26		97	%	70 - 130
			Toluene	2010/08/26		102	%	70 - 130
			Ethylbenzene	2010/08/26		103	%	70 - 130
			p+m-Xylene	2010/08/26		98	%	70 - 130
			o-Xylene	2010/08/26		96	%	70 - 130
			Styrene	2010/08/26		102	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/26		96	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/26		96	%	70 - 130
			4-ethyltoluene	2010/08/26		94	%	70 - 130

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247168	MMU	Spiked Blank	Chlorobenzene	2010/08/26		92	%	70 - 130
			Benzyl chloride	2010/08/26		86	%	70 - 130
			1,3-Dichlorobenzene	2010/08/26		91	%	70 - 130
			1,4-Dichlorobenzene	2010/08/26		85	%	70 - 130
			1,2-Dichlorobenzene	2010/08/26		85	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/26		86	%	70 - 130
			Hexachlorobutadiene	2010/08/26		94	%	70 - 130
			Hexane	2010/08/26		94	%	70 - 130
			Cyclohexane	2010/08/26		95	%	70 - 130
			Tetrahydrofuran	2010/08/26		103	%	70 - 130
			1,4-Dioxane	2010/08/26		83	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/26		85	%	60 - 140
			D5-Chlorobenzene	2010/08/26		83	%	60 - 140
			Difluorobenzene	2010/08/26		89	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/26	<0.20		ppbv	
			Carbon Disulfide	2010/08/26	<0.50		ppbv	
			Propene	2010/08/26	<0.30		ppbv	
			Vinyl Acetate	2010/08/26	<0.20		ppbv	
			Vinyl Bromide	2010/08/26	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/26	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/26	<0.17		ppbv	
			Chloromethane	2010/08/26	<0.30		ppbv	
			Vinyl Chloride	2010/08/26	<0.18		ppbv	
			Chloroethane	2010/08/26	<0.30		ppbv	
			1,3-Butadiene	2010/08/26	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/26	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/26	<0.15		ppbv	
			Ethanol	2010/08/26	<2.3		ppbv	
			2-propanol	2010/08/26	<3.0		ppbv	
			2-Propanone	2010/08/26	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/26	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/26	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/26	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/26	<0.20		ppbv	
			Ethyl Acetate	2010/08/26	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/26	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/26	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/26	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/26	0.74, RDL=0.30		ppbv	
			Chloroform	2010/08/26	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/26	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/26	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/26	<0.20		ppbv	
			Ethylene Dibromide	2010/08/26	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/26	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/26	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/26	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/26	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/26	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/26	<0.40		ppbv	
			Bromomethane	2010/08/26	<0.18		ppbv	
			Bromoform	2010/08/26	<0.20		ppbv	
			Bromodichloromethane	2010/08/26	<0.20		ppbv	
			Dibromochloromethane	2010/08/26	<0.20		ppbv	
			Heptane	2010/08/26	<0.30		ppbv	

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247168	MMU	Method Blank	Trichloroethylene	2010/08/26	<0.30		ppbv	
			Tetrachloroethylene	2010/08/26	<0.20		ppbv	
			Benzene	2010/08/26	<0.18		ppbv	
			Toluene	2010/08/26	<0.20		ppbv	
			Ethylbenzene	2010/08/26	<0.20		ppbv	
			p+m-Xylene	2010/08/26	<0.37		ppbv	
			o-Xylene	2010/08/26	<0.20		ppbv	
			Styrene	2010/08/26	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/26	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/26	<0.50		ppbv	
			4-ethyltoluene	2010/08/26	<2.2		ppbv	
			Chlorobenzene	2010/08/26	<0.20		ppbv	
			Benzyl chloride	2010/08/26	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/26	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/26	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/26	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/26	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/26	<3.0		ppbv	
			Hexane	2010/08/26	<0.30		ppbv	
			Cyclohexane	2010/08/26	<0.20		ppbv	
			Tetrahydrofuran	2010/08/26	<0.40		ppbv	
			1,4-Dioxane	2010/08/26	<2.0		ppbv	
			Xylene (Total)	2010/08/26	<0.60		ppbv	
		RPD - Sample/Sample Dup	Vinyl Chloride	2010/08/26	NC		%	25
			1,1-Dichloroethylene	2010/08/26	NC		%	25
			cis-1,2-Dichloroethylene	2010/08/26	NC		%	25
			Trichloroethylene	2010/08/26	NC		%	25
			Tetrachloroethylene	2010/08/26	9.7		%	25
2248844	MMU	Spiked Blank	Bromochloromethane	2010/08/25		101	%	60 - 140
			D5-Chlorobenzene	2010/08/25		101	%	60 - 140
			Difluorobenzene	2010/08/25		104	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/25		88	%	70 - 130
			Carbon Disulfide	2010/08/25		98	%	70 - 130
			Propene	2010/08/25		99	%	70 - 130
			Vinyl Acetate	2010/08/25		113	%	70 - 130
			Vinyl Bromide	2010/08/25		104	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/25		99	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/25		87	%	70 - 130
			Chloromethane	2010/08/25		96	%	70 - 130
			Vinyl Chloride	2010/08/25		106	%	70 - 130
			Chloroethane	2010/08/25		105	%	70 - 130
			1,3-Butadiene	2010/08/25		106	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/25		103	%	70 - 130
			Trichlorotrifluoroethane	2010/08/25		100	%	70 - 130
			Ethanol	2010/08/25		112	%	70 - 130
			2-propanol	2010/08/25		106	%	70 - 130
			2-Propanone	2010/08/25		97	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/25		98	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/25		100	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/25		104	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/25		98	%	70 - 130
			Ethyl Acetate	2010/08/25		97	%	70 - 130
			1,1-Dichloroethylene	2010/08/25		132 (1)	%	70 - 130

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
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Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2248844	MMU	Spiked Blank	cis-1,2-Dichloroethylene	2010/08/25		105	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/25		100	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/25		88	%	70 - 130
			Chloroform	2010/08/25		95	%	70 - 130
			Carbon Tetrachloride	2010/08/25		99	%	70 - 130
			1,1-Dichloroethane	2010/08/25		94	%	70 - 130
			1,2-Dichloroethane	2010/08/25		98	%	70 - 130
			Ethylene Dibromide	2010/08/25		98	%	70 - 130
			1,1,1-Trichloroethane	2010/08/25		93	%	70 - 130
			1,1,2-Trichloroethane	2010/08/25		96	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/25		91	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/25		103	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/25		109	%	70 - 130
			1,2-Dichloropropane	2010/08/25		96	%	70 - 130
			Bromomethane	2010/08/25		113	%	70 - 130
			Bromoform	2010/08/25		106	%	70 - 130
			Bromodichloromethane	2010/08/25		93	%	70 - 130
			Dibromochloromethane	2010/08/25		101	%	70 - 130
			Heptane	2010/08/25		98	%	70 - 130
			Trichloroethylene	2010/08/25		98	%	70 - 130
			Tetrachloroethylene	2010/08/25		99	%	70 - 130
			Benzene	2010/08/25		97	%	70 - 130
			Toluene	2010/08/25		102	%	70 - 130
			Ethylbenzene	2010/08/25		103	%	70 - 130
			p+m-Xylene	2010/08/25		98	%	70 - 130
			o-Xylene	2010/08/25		98	%	70 - 130
			Styrene	2010/08/25		104	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/25		98	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/25		96	%	70 - 130
			4-ethyltoluene	2010/08/25		96	%	70 - 130
			Chlorobenzene	2010/08/25		92	%	70 - 130
			Benzyl chloride	2010/08/25		88	%	70 - 130
			1,3-Dichlorobenzene	2010/08/25		92	%	70 - 130
			1,4-Dichlorobenzene	2010/08/25		87	%	70 - 130
			1,2-Dichlorobenzene	2010/08/25		86	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/25		85	%	70 - 130
			Hexachlorobutadiene	2010/08/25		93	%	70 - 130
			Hexane	2010/08/25		95	%	70 - 130
			Cyclohexane	2010/08/25		95	%	70 - 130
			Tetrahydrofuran	2010/08/25		108	%	70 - 130
			1,4-Dioxane	2010/08/25		77	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/25		81	%	60 - 140
			D5-Chlorobenzene	2010/08/25		75	%	60 - 140
			Difluorobenzene	2010/08/25		84	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/25	<0.20		ppbv	
			Carbon Disulfide	2010/08/25	<0.50		ppbv	
			Propene	2010/08/25	<0.30		ppbv	
			Vinyl Acetate	2010/08/25	<0.20		ppbv	
			Vinyl Bromide	2010/08/25	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/25	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/25	<0.17		ppbv	
			Chloromethane	2010/08/25	<0.30		ppbv	
			Vinyl Chloride	2010/08/25	<0.18		ppbv	
			Chloroethane	2010/08/25	<0.30		ppbv	
			1,3-Butadiene	2010/08/25	<0.50		ppbv	

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Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2248844	MMU	Method Blank	Trichlorofluoromethane (FREON 11)	2010/08/25	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/25	<0.15		ppbv	
			Ethanol	2010/08/25	<2.3		ppbv	
			2-propanol	2010/08/25	<3.0		ppbv	
			2-Propanone	2010/08/25	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/25	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/25	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/25	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/25	<0.20		ppbv	
			Ethyl Acetate	2010/08/25	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/25	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/25	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/25	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/25	<0.30		ppbv	
			Chloroform	2010/08/25	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/25	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/25	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/25	<0.20		ppbv	
			Ethylene Dibromide	2010/08/25	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/25	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/25	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/25	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/25	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/25	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/25	<0.40		ppbv	
			Bromomethane	2010/08/25	<0.18		ppbv	
			Bromoform	2010/08/25	<0.20		ppbv	
			Bromodichloromethane	2010/08/25	<0.20		ppbv	
			Dibromochloromethane	2010/08/25	<0.20		ppbv	
			Heptane	2010/08/25	<0.30		ppbv	
			Trichloroethylene	2010/08/25	<0.30		ppbv	
			Tetrachloroethylene	2010/08/25	<0.20		ppbv	
			Benzene	2010/08/25	<0.18		ppbv	
			Toluene	2010/08/25	<0.20		ppbv	
			Ethylbenzene	2010/08/25	<0.20		ppbv	
			p+m-Xylene	2010/08/25	<0.37		ppbv	
			o-Xylene	2010/08/25	<0.20		ppbv	
			Styrene	2010/08/25	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/25	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/25	<0.50		ppbv	
			4-ethyltoluene	2010/08/25	<2.2		ppbv	
			Chlorobenzene	2010/08/25	<0.20		ppbv	
			Benzyl chloride	2010/08/25	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/25	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/25	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/25	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/25	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/25	<3.0		ppbv	
			Hexane	2010/08/25	<0.30		ppbv	
			Cyclohexane	2010/08/25	<0.20		ppbv	
			Tetrahydrofuran	2010/08/25	<0.40		ppbv	
			1,4-Dioxane	2010/08/25	<2.0		ppbv	
			Xylene (Total)	2010/08/25	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Aug 24, 10

Sampler s/n: 6167
Canister ID: 7796
Canister Installation Date/Time: Aug 23, 2010 @ 7:19 mst
Canister Removal Date/Time: Aug 25, 2010 @ 16:51mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
24-Aug-10	24/08/2010 0:00	25/08/2010 0:00	24.00

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

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

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

Comments: System leak check prior to sampling. COC # 0558

Technician Signiture: Ting Xu

Your C.O.C. #: 0558

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B8433
Received: 2010/08/28, 12:55

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/09/01	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/09/01	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

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

Total cover pages: 1

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Maxxam Job #: B0B8433
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GZ1563	GZ1564	
Sampling Date		2010/08/24	2010/08/24	
COC Number		0558	0558	
	Units	**LICA VOC/CLS/AUG 24,10 - 7796**	**LICA VOC/PORT/AUG 24,10 - 7847**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	19	20	2254075

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B8433
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GZ1563			GZ1564				
Sampling Date		2010/08/24			2010/08/24				
COC Number		0558			0558				
	Units	**LICA VOC/CLS/AUG 24,10 - 7796**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 24,10 - 7847**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2253928
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2253928
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2253928
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2253928
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2253928
Dichlorodifluoromethane (FREON 12)	ppbv	0.54	2.67	0.989	0.52	0.20	2.57	0.989	2253928
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2253928
Chloromethane	ppbv	<0.30	<0.620	0.620	0.33	0.30	0.683	0.620	2253928
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2253928
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2253928
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2253928
Trichlorofluoromethane (FREON 11)	ppbv	0.26	1.44	1.12	0.25	0.20	1.39	1.12	2253928
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2253928
Ethanol	ppbv	4.5	8.47	4.33	<2.3	2.3	<4.33	4.33	2253928
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2253928
2-Propanone	ppbv	2.49	5.91	1.90	2.83	0.80	6.72	1.90	2253928
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2253928
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2253928
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2253928
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2253928
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2253928
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2253928
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2253928
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2253928
Methylene Chloride(Dichloromethane)	ppbv	0.36	1.26	1.04	0.33	0.30	1.13	1.04	2253928
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2253928
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2253928
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2253928
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2253928
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2253928
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2253928

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B8433
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GZ1563			GZ1564				
Sampling Date		2010/08/24			2010/08/24				
COC Number		0558			0558				
	Units	**LICA VOC/CLS/AUG 24,10 - 7796**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 24,10 - 7847**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2253928
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2253928
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2253928
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2253928
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2253928
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2253928
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2253928
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2253928
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2253928
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2253928
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2253928
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2253928
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2253928
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2253928
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2253928
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2253928
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2253928
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2253928
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2253928
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2253928
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2253928
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2253928
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2253928
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2253928
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2253928
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2253928
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2253928
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2253928
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2253928
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2253928
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2253928
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2253928
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2253928

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B8433
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GZ1563			GZ1564				
Sampling Date		2010/08/24			2010/08/24				
COC Number		0558			0558				
	Units	**LICA VOC/CLS/AUG 24,10 - 7796**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 24,10 - 7847**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	86	N/A	N/A	83		N/A	N/A	2253928
D5-Chlorobenzene	%	81	N/A	N/A	79		N/A	N/A	2253928
Difluorobenzene	%	88	N/A	N/A	86		N/A	N/A	2253928

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

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Maxxam Job #: B0B8433
Report Date: 2010/09/08

Test Summary

Maxxam ID GZ1563 **Collected** 2010/08/24
Sample ID LICA VOC/CLS/AUG 24,10 - 7796 **Shipped**
Matrix AIR **Received** 2010/08/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2254075	N/A	2010/09/01	DVO
Volatile Organics in Air (TO-15)	GC/MS	2253928	N/A	2010/09/01	DVO

Maxxam ID GZ1564 **Collected** 2010/08/24
Sample ID LICA VOC/PORT/AUG 24,10 - 7847 **Shipped**
Matrix AIR **Received** 2010/08/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2254075	N/A	2010/09/01	DVO
Volatile Organics in Air (TO-15)	GC/MS	2253928	N/A	2010/09/01	DVO

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GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0B8433

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2253928	DVO	Spiked Blank	Bromochloromethane	2010/09/01		104	%	60 - 140
			D5-Chlorobenzene	2010/09/01		99	%	60 - 140
			Difluorobenzene	2010/09/01		106	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/01		94	%	70 - 130
			Carbon Disulfide	2010/09/01		93	%	70 - 130
			Propene	2010/09/01		87	%	70 - 130
			Vinyl Acetate	2010/09/01		101	%	70 - 130
			Vinyl Bromide	2010/09/01		98	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/01		90	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/01		78	%	70 - 130
			Chloromethane	2010/09/01		83	%	70 - 130
			Vinyl Chloride	2010/09/01		87	%	70 - 130
			Chloroethane	2010/09/01		87	%	70 - 130
			1,3-Butadiene	2010/09/01		78	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/01		88	%	70 - 130
			Trichlorotrifluoroethane	2010/09/01		87	%	70 - 130
			Ethanol	2010/09/01		115	%	70 - 130
			2-propanol	2010/09/01		91	%	70 - 130
			2-Propanone	2010/09/01		111	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/01		101	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/01		89	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/01		94	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/01		93	%	70 - 130
			Ethyl Acetate	2010/09/01		87	%	70 - 130
			1,1-Dichloroethylene	2010/09/01		88	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/01		89	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/01		92	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/01		77	%	70 - 130
			Chloroform	2010/09/01		86	%	70 - 130
			Carbon Tetrachloride	2010/09/01		91	%	70 - 130
			1,1-Dichloroethane	2010/09/01		85	%	70 - 130
			1,2-Dichloroethane	2010/09/01		84	%	70 - 130
			Ethylene Dibromide	2010/09/01		83	%	70 - 130
			1,1,1-Trichloroethane	2010/09/01		89	%	70 - 130
			1,1,2-Trichloroethane	2010/09/01		86	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/01		92	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/01		93	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/01		90	%	70 - 130
			1,2-Dichloropropane	2010/09/01		86	%	70 - 130
			Bromomethane	2010/09/01		91	%	70 - 130
			Bromoform	2010/09/01		105	%	70 - 130
			Bromodichloromethane	2010/09/01		94	%	70 - 130
			Dibromochloromethane	2010/09/01		93	%	70 - 130
			Heptane	2010/09/01		91	%	70 - 130
			Trichloroethylene	2010/09/01		90	%	70 - 130
			Tetrachloroethylene	2010/09/01		86	%	70 - 130
			Benzene	2010/09/01		86	%	70 - 130
			Toluene	2010/09/01		89	%	70 - 130
			Ethylbenzene	2010/09/01		95	%	70 - 130
			p+m-Xylene	2010/09/01		96	%	70 - 130
			o-Xylene	2010/09/01		94	%	70 - 130
			Styrene	2010/09/01		72	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/01		89	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/01		86	%	70 - 130
			4-ethyltoluene	2010/09/01		94	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B8433

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2253928	DVO	Spiked Blank	Chlorobenzene	2010/09/01		86	%	70 - 130
			Benzyl chloride	2010/09/01		90	%	70 - 130
			1,3-Dichlorobenzene	2010/09/01		86	%	70 - 130
			1,4-Dichlorobenzene	2010/09/01		83	%	70 - 130
			1,2-Dichlorobenzene	2010/09/01		82	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/01		73	%	70 - 130
			Hexachlorobutadiene	2010/09/01		90	%	70 - 130
			Hexane	2010/09/01		93	%	70 - 130
			Cyclohexane	2010/09/01		92	%	70 - 130
			Tetrahydrofuran	2010/09/01		89	%	70 - 130
			1,4-Dioxane	2010/09/01		92	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/01		89	%	60 - 140
			D5-Chlorobenzene	2010/09/01		82	%	60 - 140
			Difluorobenzene	2010/09/01		92	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/01	<0.20		ppbv	
			Carbon Disulfide	2010/09/01	<0.50		ppbv	
			Propene	2010/09/01	<0.30		ppbv	
			Vinyl Acetate	2010/09/01	<0.20		ppbv	
			Vinyl Bromide	2010/09/01	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/01	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/01	<0.17		ppbv	
			Chloromethane	2010/09/01	<0.30		ppbv	
			Vinyl Chloride	2010/09/01	<0.18		ppbv	
			Chloroethane	2010/09/01	<0.30		ppbv	
			1,3-Butadiene	2010/09/01	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/01	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/01	<0.15		ppbv	
			Ethanol	2010/09/01	<2.3		ppbv	
			2-propanol	2010/09/01	<3.0		ppbv	
			2-Propanone	2010/09/01	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/01	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/01	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/01	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/01	<0.20		ppbv	
			Ethyl Acetate	2010/09/01	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/01	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/01	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/01	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/01	<0.30		ppbv	
			Chloroform	2010/09/01	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/01	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/01	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/01	<0.20		ppbv	
			Ethylene Dibromide	2010/09/01	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/01	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/01	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/01	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/01	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/01	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/01	<0.40		ppbv	
			Bromomethane	2010/09/01	<0.18		ppbv	
			Bromoform	2010/09/01	<0.20		ppbv	
			Bromodichloromethane	2010/09/01	<0.20		ppbv	
			Dibromochloromethane	2010/09/01	<0.20		ppbv	
			Heptane	2010/09/01	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B8433

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2253928	DVO	Method Blank	Trichloroethylene	2010/09/01	<0.30		ppbv	
			Tetrachloroethylene	2010/09/01	<0.20		ppbv	
			Benzene	2010/09/01	<0.18		ppbv	
			Toluene	2010/09/01	<0.20		ppbv	
			Ethylbenzene	2010/09/01	<0.20		ppbv	
			p+m-Xylene	2010/09/01	<0.37		ppbv	
			o-Xylene	2010/09/01	<0.20		ppbv	
			Styrene	2010/09/01	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/01	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/01	<0.50		ppbv	
			4-ethyltoluene	2010/09/01	<2.2		ppbv	
			Chlorobenzene	2010/09/01	<0.20		ppbv	
			Benzyl chloride	2010/09/01	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/01	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/01	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/01	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/01	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/01	<3.0		ppbv	
			Hexane	2010/09/01	<0.30		ppbv	
			Cyclohexane	2010/09/01	<0.20		ppbv	
			Tetrahydrofuran	2010/09/01	<0.40		ppbv	
			1,4-Dioxane	2010/09/01	<2.0		ppbv	
			Xylene (Total)	2010/09/01	<0.60		ppbv	
		RPD - Sample/Sample Dup	2-propanol	2010/08/30	NC		%	25

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

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

Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: Lica 1
Field Sample ID: LICA VOC/ CLS /Aug 30, 10

Sampler s/n: 6167
Canister ID: 7858
Canister Installation Date/Time: Aug 27, 2010 @ 17:09 mst
Canister Removal Date/Time: Aug 31, 2010 @ 7:14 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
30-Aug-10	30/08/2010 0:00	31/08/2010 0:00	24.00

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

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

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

Comments: System leak check prior to sampling. COC # 2648

Technician Signiture: Ting Xu

Your C.O.C. #: 2648

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

Report Date: 2010/09/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C2787
Received: 2010/09/07, 10:45

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/09/10	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/09/10	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

RESULTS OF ANALYSES OF AIR

Maxxam ID		HB5830	HB5831	
Sampling Date		2010/08/30	2010/08/30	
COC Number		2648	2648	
	Units	**LICA VOC/CLS/AUG 30,10**	**LICA VOC/PORT/AUG 30,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2263737

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HB5830			HB5831				
Sampling Date		2010/08/30			2010/08/30				
COC Number		2648			2648				
	Units	**LICA VOC/CLS/AUG 30,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 30,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2263812
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2263812
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2263812
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2263812
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2263812
Dichlorodifluoromethane (FREON 12)	ppbv	0.42	2.10	0.989	0.75	0.20	3.70	0.989	2263812
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2263812
Chloromethane	ppbv	0.38	0.777	0.620	0.43	0.30	0.888	0.620	2263812
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2263812
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2263812
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2263812
Trichlorofluoromethane (FREON 11)	ppbv	<0.20	<1.12	1.12	0.34	0.20	1.92	1.12	2263812
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2263812
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2263812
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2263812
2-Propanone	ppbv	1.85	4.39	1.90	2.24	0.80	5.32	1.90	2263812
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2263812
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2263812
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2263812
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2263812
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2263812
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2263812
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2263812
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2263812
Methylene Chloride(Dichloromethane)	ppbv	0.95	3.30	1.04	0.53	0.30	1.84	1.04	2263812
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2263812
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2263812
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2263812
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2263812
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2263812
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2263812

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HB5830			HB5831				
Sampling Date		2010/08/30			2010/08/30				
COC Number		2648			2648				
	Units	**LICA VOC/CLS/AUG 30,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 30,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2263812
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2263812
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2263812
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2263812
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2263812
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2263812
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2263812
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2263812
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2263812
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2263812
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2263812
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2263812
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2263812
Toluene	ppbv	0.38	1.43	0.753	<0.20	0.20	<0.753	0.753	2263812
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2263812
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2263812
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2263812
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2263812
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2263812
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2263812
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2263812
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2263812
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2263812
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2263812
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2263812
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2263812
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2263812
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2263812
Hexane	ppbv	<0.30	<1.06	1.06	0.39	0.30	1.38	1.06	2263812
Cyclohexane	ppbv	<0.20	<0.688	0.688	0.70	0.20	2.42	0.688	2263812
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2263812
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2263812
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2263812

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HB5830			HB5831				
Sampling Date		2010/08/30			2010/08/30				
COC Number		2648			2648				
	Units	**LICA VOC/CLS/AUG 30,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 30,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	78	N/A	N/A	85		N/A	N/A	2263812
D5-Chlorobenzene	%	73	N/A	N/A	81		N/A	N/A	2263812
Difluorobenzene	%	76	N/A	N/A	84		N/A	N/A	2263812

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

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

Test Summary

Maxxam ID	HB5830	**Collected**	2010/08/30
Sample ID	LICA VOC/CLS/AUG 30,10	**Shipped**	
Matrix	AIR	**Received**	2010/09/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2263737	N/A	2010/09/10	MMU
Volatile Organics in Air (TO-15)	GC/MS	2263812	N/A	2010/09/10	MMU

Maxxam ID	HB5831	**Collected**	2010/08/30
Sample ID	LICA VOC/PORT/AUG 30,10	**Shipped**	
Matrix	AIR	**Received**	2010/09/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2263737	N/A	2010/09/10	MMU
Volatile Organics in Air (TO-15)	GC/MS	2263812	N/A	2010/09/10	MMU

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0C2787

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2263812	MMU	Spiked Blank	Bromochloromethane	2010/09/10		100	%	60 - 140
			D5-Chlorobenzene	2010/09/10		97	%	60 - 140
			Difluorobenzene	2010/09/10		100	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/10		85	%	70 - 130
			Carbon Disulfide	2010/09/10		94	%	70 - 130
			Propene	2010/09/10		96	%	70 - 130
			Vinyl Acetate	2010/09/10		97	%	70 - 130
			Vinyl Bromide	2010/09/10		92	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/10		98	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/10		85	%	70 - 130
			Chloromethane	2010/09/10		99	%	70 - 130
			Vinyl Chloride	2010/09/10		99	%	70 - 130
			Chloroethane	2010/09/10		95	%	70 - 130
			1,3-Butadiene	2010/09/10		95	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/10		94	%	70 - 130
			Trichlorotrifluoroethane	2010/09/10		98	%	70 - 130
			Ethanol	2010/09/10		97	%	70 - 130
			2-propanol	2010/09/10		87	%	70 - 130
			2-Propanone	2010/09/10		85	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/10		94	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/10		87	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/10		89	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/10		91	%	70 - 130
			Ethyl Acetate	2010/09/10		87	%	70 - 130
			1,1-Dichloroethylene	2010/09/10		97	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/10		95	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/10		90	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/10		83	%	70 - 130
			Chloroform	2010/09/10		95	%	70 - 130
			Carbon Tetrachloride	2010/09/10		96	%	70 - 130
			1,1-Dichloroethane	2010/09/10		91	%	70 - 130
			1,2-Dichloroethane	2010/09/10		94	%	70 - 130
			Ethylene Dibromide	2010/09/10		93	%	70 - 130
			1,1,1-Trichloroethane	2010/09/10		94	%	70 - 130
			1,1,2-Trichloroethane	2010/09/10		93	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/10		83	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/10		98	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/10		98	%	70 - 130
			1,2-Dichloropropane	2010/09/10		90	%	70 - 130
			Bromomethane	2010/09/10		102	%	70 - 130
			Bromoform	2010/09/10		93	%	70 - 130
			Bromodichloromethane	2010/09/10		91	%	70 - 130
			Dibromochloromethane	2010/09/10		90	%	70 - 130
			Heptane	2010/09/10		84	%	70 - 130
			Trichloroethylene	2010/09/10		95	%	70 - 130
			Tetrachloroethylene	2010/09/10		95	%	70 - 130
			Benzene	2010/09/10		93	%	70 - 130
			Toluene	2010/09/10		93	%	70 - 130
			Ethylbenzene	2010/09/10		93	%	70 - 130
			p+m-Xylene	2010/09/10		89	%	70 - 130
			o-Xylene	2010/09/10		90	%	70 - 130
			Styrene	2010/09/10		88	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/10		83	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/10		80	%	70 - 130
			4-ethyltoluene	2010/09/10		80	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C2787

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2263812	MMU	Spiked Blank	Chlorobenzene	2010/09/10		94	%	70 - 130
			Benzyl chloride	2010/09/10		77	%	70 - 130
			1,3-Dichlorobenzene	2010/09/10		90	%	70 - 130
			1,4-Dichlorobenzene	2010/09/10		86	%	70 - 130
			1,2-Dichlorobenzene	2010/09/10		80	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/10		105	%	70 - 130
			Hexachlorobutadiene	2010/09/10		99	%	70 - 130
			Hexane	2010/09/10		84	%	70 - 130
			Cyclohexane	2010/09/10		90	%	70 - 130
			Tetrahydrofuran	2010/09/10		89	%	70 - 130
			1,4-Dioxane	2010/09/10		65 (1)	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/10		100	%	60 - 140
			D5-Chlorobenzene	2010/09/10		99	%	60 - 140
			Difluorobenzene	2010/09/10		100	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/10	<0.20		ppbv	
			Carbon Disulfide	2010/09/10	<0.50		ppbv	
			Propene	2010/09/10	<0.30		ppbv	
			Vinyl Acetate	2010/09/10	<0.20		ppbv	
			Vinyl Bromide	2010/09/10	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/10	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/10	<0.17		ppbv	
			Chloromethane	2010/09/10	<0.30		ppbv	
			Vinyl Chloride	2010/09/10	<0.18		ppbv	
			Chloroethane	2010/09/10	<0.30		ppbv	
			1,3-Butadiene	2010/09/10	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/10	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/10	<0.15		ppbv	
			Ethanol	2010/09/10	<2.3		ppbv	
			2-propanol	2010/09/10	<3.0		ppbv	
			2-Propanone	2010/09/10	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/10	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/10	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/10	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/10	<0.20		ppbv	
			Ethyl Acetate	2010/09/10	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/10	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/10	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/10	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/10	0.45, RDL=0.30		ppbv	
			Chloroform	2010/09/10	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/10	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/10	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/10	<0.20		ppbv	
			Ethylene Dibromide	2010/09/10	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/10	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/10	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/10	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/10	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/10	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/10	<0.40		ppbv	
			Bromomethane	2010/09/10	<0.18		ppbv	
			Bromoform	2010/09/10	<0.20		ppbv	
			Bromodichloromethane	2010/09/10	<0.20		ppbv	
			Dibromochloromethane	2010/09/10	<0.20		ppbv	
			Heptane	2010/09/10	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C2787

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2263812	MMU	Method Blank	Trichloroethylene	2010/09/10	<0.30		ppbv	
			Tetrachloroethylene	2010/09/10	<0.20		ppbv	
			Benzene	2010/09/10	<0.18		ppbv	
			Toluene	2010/09/10	<0.20		ppbv	
			Ethylbenzene	2010/09/10	<0.20		ppbv	
			p+m-Xylene	2010/09/10	<0.37		ppbv	
			o-Xylene	2010/09/10	<0.20		ppbv	
			Styrene	2010/09/10	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/10	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/10	<0.50		ppbv	
			4-ethyltoluene	2010/09/10	<2.2		ppbv	
			Chlorobenzene	2010/09/10	<0.20		ppbv	
			Benzyl chloride	2010/09/10	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/10	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/10	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/10	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/10	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/10	<3.0		ppbv	
			Hexane	2010/09/10	<0.30		ppbv	
			Cyclohexane	2010/09/10	<0.20		ppbv	
			Tetrahydrofuran	2010/09/10	<0.40		ppbv	
			1,4-Dioxane	2010/09/10	<2.0		ppbv	
			Xylene (Total)	2010/09/10	<0.60		ppbv	
		RPD - Sample/Sample Dup	Vinyl Acetate	2010/09/10	NC		%	25
			Vinyl Bromide	2010/09/10	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/09/10	NC		%	25
			Chloromethane	2010/09/10	NC		%	25
			Chloroethane	2010/09/10	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/09/10	NC		%	25
			Trichlorotrifluoroethane	2010/09/10	NC		%	25
			Ethanol	2010/09/10	NC		%	25
			2-propanol	2010/09/10	NC		%	25
			2-Propanone	2010/09/10	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/09/10	NC		%	25
			Methyl Isobutyl Ketone	2010/09/10	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/09/10	NC		%	25
			Ethyl Acetate	2010/09/10	NC		%	25
			1,1-Dichloroethylene	2010/09/10	NC		%	25
			cis-1,2-Dichloroethylene	2010/09/10	NC		%	25
			trans-1,2-Dichloroethylene	2010/09/10	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/09/10	NC		%	25
			Chloroform	2010/09/10	NC		%	25
			Carbon Tetrachloride	2010/09/10	NC		%	25
			1,1-Dichloroethane	2010/09/10	NC		%	25
			1,2-Dichloroethane	2010/09/10	NC		%	25
			Ethylene Dibromide	2010/09/10	NC		%	25
			1,1,1-Trichloroethane	2010/09/10	NC		%	25
			1,1,2-Trichloroethane	2010/09/10	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/09/10	NC		%	25
			Bromodichloromethane	2010/09/10	NC		%	25
			Heptane	2010/09/10	NC		%	25
			Trichloroethylene	2010/09/10	NC		%	25
			Tetrachloroethylene	2010/09/10	NC		%	25

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C2787

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2263812	MMU	RPD - Sample/Sample Dup	Benzene	2010/09/10	NC		%	25
			Toluene	2010/09/10	NC		%	25
			Ethylbenzene	2010/09/10	NC		%	25
			p+m-Xylene	2010/09/10	NC		%	25
			o-Xylene	2010/09/10	NC		%	25
			Styrene	2010/09/10	NC		%	25
			1,3,5-Trimethylbenzene	2010/09/10	NC		%	25
			1,2,4-Trimethylbenzene	2010/09/10	NC		%	25
			4-ethyltoluene	2010/09/10	NC		%	25
			Chlorobenzene	2010/09/10	NC		%	25
			1,3-Dichlorobenzene	2010/09/10	NC		%	25
			1,4-Dichlorobenzene	2010/09/10	NC		%	25
			1,2-Dichlorobenzene	2010/09/10	NC		%	25
			Hexane	2010/09/10	NC		%	25
			Xylene (Total)	2010/09/10	NC		%	25

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

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

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

Sampler s/n: 6167
Canister ID: 7789
Canister Installation Date/Time: Sept 03, 2010 @ 5:50 mst
Canister Removal Date/Time: Sept 07, 2010 @ 7:30 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
05-Sep-10	05/09/2010 0:00	06/09/2010 0:00	24.00

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

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

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

Comments: System leak check prior to sampling. COC # 3634

Technician Signiture: Ting Xu

Your C.O.C. #: 3634

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

Report Date: 2010/09/17

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C6080
Received: 2010/09/13, 08:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/09/14	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/09/14	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

RESULTS OF ANALYSES OF AIR

Maxxam ID		HD1263	HD1264	
Sampling Date		2010/09/05	2010/09/05	
COC Number		3634	3634	
	Units	**LICA VOC\CLS\SEP 05,10 - #7789**	**LICA VOC\PORT\SEP 05,10 - #7832**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2266358

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD1263			HD1264				
Sampling Date		2010/09/05			2010/09/05				
COC Number		3634			3634				
	Units	**LICA VOC\CLS\SEP 05,10 - #7789**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\SEP 05,10 - #7832**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2266388
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2266388
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2266388
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2266388
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2266388
Dichlorodifluoromethane (FREON 12)	ppbv	0.54	2.69	0.989	0.53	0.20	2.60	0.989	2266388
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2266388
Chloromethane	ppbv	0.32	0.666	0.620	0.31	0.30	0.637	0.620	2266388
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2266388
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2266388
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2266388
Trichlorofluoromethane (FREON 11)	ppbv	0.27	1.50	1.12	0.27	0.20	1.50	1.12	2266388
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2266388
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2266388
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2266388
2-Propanone	ppbv	2.19	5.20	1.90	2.79	0.80	6.63	1.90	2266388
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2266388
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2266388
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2266388
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2266388
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2266388
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2266388
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2266388
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2266388
Methylene Chloride(Dichloromethane)	ppbv	0.33	1.15	1.04	0.33	0.30	1.16	1.04	2266388
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2266388
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2266388
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2266388
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2266388
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2266388
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2266388

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD1263			HD1264				
Sampling Date		2010/09/05			2010/09/05				
COC Number		3634			3634				
	Units	**LICA VOC\CLS\SEP 05,10 - #7789**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\SEP 05,10 - #7832**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2266388
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2266388
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2266388
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2266388
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2266388
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2266388
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2266388
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2266388
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2266388
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2266388
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2266388
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2266388
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2266388
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2266388
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2266388
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2266388
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2266388
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2266388
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2266388
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2266388
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2266388
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2266388
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2266388
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2266388
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2266388
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2266388
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2266388
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2266388
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2266388
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2266388
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2266388
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2266388
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2266388

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD1263			HD1264				
Sampling Date		2010/09/05			2010/09/05				
COC Number		3634			3634				
	Units	**LICA VOC\CLS\SEP 05,10 - #7789**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\SEP 05,10 - #7832**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	70	N/A	N/A	66		N/A	N/A	2266388
D5-Chlorobenzene	%	65	N/A	N/A	61		N/A	N/A	2266388
Difluorobenzene	%	71	N/A	N/A	68		N/A	N/A	2266388

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

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Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

Test Summary

Maxxam ID HD1263 **Collected** 2010/09/05
Sample ID LICA VOC\CLS\SEP 05,10 - #7789 **Shipped**
Matrix AIR **Received** 2010/09/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2266358	N/A	2010/09/14	S_S
Volatile Organics in Air (TO-15)	GC/MS	2266388	N/A	2010/09/14	S_S

Maxxam ID HD1263 Dup **Collected** 2010/09/05
Sample ID LICA VOC\CLS\SEP 05,10 - #7789 **Shipped**
Matrix AIR **Received** 2010/09/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Volatile Organics in Air (TO-15)	GC/MS	2266388	N/A	2010/09/14	S_S

Maxxam ID HD1264 **Collected** 2010/09/05
Sample ID LICA VOC\PORT\SEP 05,10 - #7832 **Shipped**
Matrix AIR **Received** 2010/09/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2266358	N/A	2010/09/14	S_S
Volatile Organics in Air (TO-15)	GC/MS	2266388	N/A	2010/09/14	S_S

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

Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0C6080

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2266388	S_S	Spiked Blank	Bromochloromethane	2010/09/14		100	%	60 - 140
			D5-Chlorobenzene	2010/09/14		97	%	60 - 140
			Difluorobenzene	2010/09/14		101	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/14		88	%	70 - 130
			Carbon Disulfide	2010/09/14		92	%	70 - 130
			Propene	2010/09/14		86	%	70 - 130
			Vinyl Acetate	2010/09/14		101	%	70 - 130
			Vinyl Bromide	2010/09/14		92	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/14		95	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/14		84	%	70 - 130
			Chloromethane	2010/09/14		88	%	70 - 130
			Vinyl Chloride	2010/09/14		93	%	70 - 130
			Chloroethane	2010/09/14		93	%	70 - 130
			1,3-Butadiene	2010/09/14		79	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/14		95	%	70 - 130
			Trichlorotrifluoroethane	2010/09/14		93	%	70 - 130
			Ethanol	2010/09/14		102	%	70 - 130
			2-propanol	2010/09/14		92	%	70 - 130
			2-Propanone	2010/09/14		100	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/14		104	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/14		91	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/14		95	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/14		94	%	70 - 130
			Ethyl Acetate	2010/09/14		86	%	70 - 130
			1,1-Dichloroethylene	2010/09/14		91	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/14		93	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/14		91	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/14		81	%	70 - 130
			Chloroform	2010/09/14		92	%	70 - 130
			Carbon Tetrachloride	2010/09/14		99	%	70 - 130
			1,1-Dichloroethane	2010/09/14		91	%	70 - 130
			1,2-Dichloroethane	2010/09/14		90	%	70 - 130
			Ethylene Dibromide	2010/09/14		89	%	70 - 130
			1,1,1-Trichloroethane	2010/09/14		96	%	70 - 130
			1,1,2-Trichloroethane	2010/09/14		93	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/14		90	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/14		101	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/14		97	%	70 - 130
			1,2-Dichloropropane	2010/09/14		92	%	70 - 130
			Bromomethane	2010/09/14		96	%	70 - 130
			Bromoform	2010/09/14		97	%	70 - 130
			Bromodichloromethane	2010/09/14		95	%	70 - 130
			Dibromochloromethane	2010/09/14		94	%	70 - 130
			Heptane	2010/09/14		91	%	70 - 130
			Trichloroethylene	2010/09/14		95	%	70 - 130
			Tetrachloroethylene	2010/09/14		93	%	70 - 130
			Benzene	2010/09/14		92	%	70 - 130
			Toluene	2010/09/14		96	%	70 - 130
			Ethylbenzene	2010/09/14		93	%	70 - 130
			p+m-Xylene	2010/09/14		94	%	70 - 130
			o-Xylene	2010/09/14		93	%	70 - 130
			Styrene	2010/09/14		92	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/14		91	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/14		90	%	70 - 130
			4-ethyltoluene	2010/09/14		90	%	70 - 130

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C6080

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2266388	S_S	Spiked Blank	Chlorobenzene	2010/09/14		87	%	70 - 130
			Benzyl chloride	2010/09/14		87	%	70 - 130
			1,3-Dichlorobenzene	2010/09/14		85	%	70 - 130
			1,4-Dichlorobenzene	2010/09/14		81	%	70 - 130
			1,2-Dichlorobenzene	2010/09/14		82	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/14		65 (1)	%	70 - 130
			Hexachlorobutadiene	2010/09/14		90	%	70 - 130
			Hexane	2010/09/14		92	%	70 - 130
			Cyclohexane	2010/09/14		92	%	70 - 130
			Tetrahydrofuran	2010/09/14		89	%	70 - 130
			1,4-Dioxane	2010/09/14		94	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/14		73	%	60 - 140
			D5-Chlorobenzene	2010/09/14		65	%	60 - 140
			Difluorobenzene	2010/09/14		73	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/14	<0.20		ppbv	
			Carbon Disulfide	2010/09/14	<0.50		ppbv	
			Propene	2010/09/14	<0.30		ppbv	
			Vinyl Acetate	2010/09/14	<0.20		ppbv	
			Vinyl Bromide	2010/09/14	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/14	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/14	<0.17		ppbv	
			Chloromethane	2010/09/14	<0.30		ppbv	
			Vinyl Chloride	2010/09/14	<0.18		ppbv	
			Chloroethane	2010/09/14	<0.30		ppbv	
			1,3-Butadiene	2010/09/14	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/14	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/14	<0.15		ppbv	
			Ethanol	2010/09/14	<2.3		ppbv	
			2-propanol	2010/09/14	<3.0		ppbv	
			2-Propanone	2010/09/14	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/14	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/14	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/14	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/14	<0.20		ppbv	
			Ethyl Acetate	2010/09/14	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/14	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/14	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/14	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/14	<0.30		ppbv	
			Chloroform	2010/09/14	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/14	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/14	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/14	<0.20		ppbv	
			Ethylene Dibromide	2010/09/14	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/14	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/14	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/14	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/14	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/14	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/14	<0.40		ppbv	
			Bromomethane	2010/09/14	<0.18		ppbv	
			Bromoform	2010/09/14	<0.20		ppbv	
			Bromodichloromethane	2010/09/14	<0.20		ppbv	
			Dibromochloromethane	2010/09/14	<0.20		ppbv	
			Heptane	2010/09/14	<0.30		ppbv	

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C6080

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2266388	S_S	Method Blank	Trichloroethylene	2010/09/14	<0.30		ppbv	
			Tetrachloroethylene	2010/09/14	<0.20		ppbv	
			Benzene	2010/09/14	<0.18		ppbv	
			Toluene	2010/09/14	<0.20		ppbv	
			Ethylbenzene	2010/09/14	<0.20		ppbv	
			p+m-Xylene	2010/09/14	<0.37		ppbv	
			o-Xylene	2010/09/14	<0.20		ppbv	
			Styrene	2010/09/14	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/14	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/14	<0.50		ppbv	
			4-ethyltoluene	2010/09/14	<2.2		ppbv	
			Chlorobenzene	2010/09/14	<0.20		ppbv	
			Benzyl chloride	2010/09/14	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/14	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/14	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/14	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/14	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/14	<3.0		ppbv	
			Hexane	2010/09/14	<0.30		ppbv	
			Cyclohexane	2010/09/14	<0.20		ppbv	
			Tetrahydrofuran	2010/09/14	<0.40		ppbv	
			1,4-Dioxane	2010/09/14	<2.0		ppbv	
			Xylene (Total)	2010/09/14	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/09/14	NC		%	25
			Carbon Disulfide	2010/09/14	NC		%	25
			Propene	2010/09/14	NC		%	25
			Vinyl Acetate	2010/09/14	NC		%	25
			Vinyl Bromide	2010/09/14	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/09/14	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/09/14	NC		%	25
			Chloromethane	2010/09/14	NC		%	25
			Vinyl Chloride	2010/09/14	NC		%	25
			Chloroethane	2010/09/14	NC		%	25
			1,3-Butadiene	2010/09/14	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/09/14	NC		%	25
			Trichlorotrifluoroethane	2010/09/14	NC		%	25
			Ethanol	2010/09/14	NC		%	25
			2-propanol	2010/09/14	NC		%	25
			2-Propanone	2010/09/14	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/09/14	NC		%	25
			Methyl Isobutyl Ketone	2010/09/14	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/09/14	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/09/14	NC		%	25
			Ethyl Acetate	2010/09/14	NC		%	25
			1,1-Dichloroethylene	2010/09/14	NC		%	25
			cis-1,2-Dichloroethylene	2010/09/14	NC		%	25
			trans-1,2-Dichloroethylene	2010/09/14	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/09/14	NC		%	25
			Chloroform	2010/09/14	NC		%	25
			Carbon Tetrachloride	2010/09/14	NC		%	25
			1,1-Dichloroethane	2010/09/14	NC		%	25
			1,2-Dichloroethane	2010/09/14	NC		%	25
			Ethylene Dibromide	2010/09/14	NC		%	25

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C6080

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2266388	S_S	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2010/09/14	NC		%	25
			1,1,2-Trichloroethane	2010/09/14	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/09/14	NC		%	25
			cis-1,3-Dichloropropene	2010/09/14	NC		%	25
			trans-1,3-Dichloropropene	2010/09/14	NC		%	25
			1,2-Dichloropropane	2010/09/14	NC		%	25
			Bromomethane	2010/09/14	NC		%	25
			Bromoform	2010/09/14	NC		%	25
			Bromodichloromethane	2010/09/14	NC		%	25
			Dibromochloromethane	2010/09/14	NC		%	25
			Heptane	2010/09/14	NC		%	25
			Trichloroethylene	2010/09/14	NC		%	25
			Tetrachloroethylene	2010/09/14	NC		%	25
			Benzene	2010/09/14	NC		%	25
			Toluene	2010/09/14	NC		%	25
			Ethylbenzene	2010/09/14	NC		%	25
			p+m-Xylene	2010/09/14	NC		%	25
			o-Xylene	2010/09/14	NC		%	25
			Styrene	2010/09/14	NC		%	25
			1,3,5-Trimethylbenzene	2010/09/14	NC		%	25
			1,2,4-Trimethylbenzene	2010/09/14	NC		%	25
			4-ethyltoluene	2010/09/14	NC		%	25
			Chlorobenzene	2010/09/14	NC		%	25
			Benzyl chloride	2010/09/14	NC		%	25
			1,3-Dichlorobenzene	2010/09/14	NC		%	25
			1,4-Dichlorobenzene	2010/09/14	NC		%	25
			1,2-Dichlorobenzene	2010/09/14	NC		%	25
			1,2,4-Trichlorobenzene	2010/09/14	NC		%	25
			Hexachlorobutadiene	2010/09/14	NC		%	25
			Hexane	2010/09/14	NC		%	25
			Cyclohexane	2010/09/14	NC		%	25
			Tetrahydrofuran	2010/09/14	NC		%	25
			1,4-Dioxane	2010/09/14	NC		%	25
			Xylene (Total)	2010/09/14	NC		%	25

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

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Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

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

Sampler s/n: 6167
Canister ID: 7840
Canister Installation Date/Time: Sept 10, 2010 @ 7:30 mst
Canister Removal Date/Time: Sept 13, 2010 @ 7:25 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
11-Sep-10	11/09/2010 0:00	12/09/2010 0:00	24.00

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

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

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

Comments: System leak check prior to sampling. COC # 3725

Technician Signiture: Ting Xu

Your C.O.C. #: 3725

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

Report Date: 2010/09/21

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C7600
Received: 2010/09/15, 10:00

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/09/16	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/09/16	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Job #: B0C7600
Report Date: 2010/09/21

RESULTS OF ANALYSES OF AIR

Maxxam ID		HD8438	HD8439	
Sampling Date		2010/09/11	2010/09/11	
COC Number		3725	3725	
	Units	**LICA VOC/CLS/SEP 11,10 - 7840**	**LICA VOC/ PORT/SEP 11,10 - 7894**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2268664

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD8438			HD8439				
Sampling Date		2010/09/11			2010/09/11				
COC Number		3725			3725				
	Units	**LICA VOC/CLS/SEP 11,10 - 7840**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/ PORT/SEP 11,10 - 7894**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2268860
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2268860
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2268860
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2268860
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2268860
Dichlorodifluoromethane (FREON 12)	ppbv	0.54	2.68	0.989	0.52	0.20	2.59	0.989	2268860
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2268860
Chloromethane	ppbv	0.30	0.629	0.620	0.31	0.30	0.639	0.620	2268860
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2268860
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2268860
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2268860
Trichlorofluoromethane (FREON 11)	ppbv	0.27	1.50	1.12	0.26	0.20	1.44	1.12	2268860
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2268860
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2268860
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2268860
2-Propanone	ppbv	1.88	4.46	1.90	2.03	0.80	4.82	1.90	2268860
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2268860
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2268860
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2268860
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2268860
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2268860
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2268860
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2268860
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2268860
Methylene Chloride(Dichloromethane)	ppbv	0.33	1.16	1.04	12.5	0.30	43.4	1.04	2268860
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2268860
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2268860
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2268860
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2268860
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2268860
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2268860

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD8438			HD8439				
Sampling Date		2010/09/11			2010/09/11				
COC Number		3725			3725				
	Units	**LICA VOC/CLS/SEP 11,10 - 7840**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/ PORT/SEP 11,10 - 7894**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2268860
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2268860
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2268860
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2268860
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2268860
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2268860
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2268860
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2268860
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2268860
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2268860
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2268860
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2268860
Benzene	ppbv	<0.18	<0.575	0.575	0.32	0.18	1.03	0.575	2268860
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2268860
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2268860
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2268860
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2268860
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2268860
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2268860
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2268860
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2268860
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2268860
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2268860
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2268860
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2268860
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2268860
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2268860
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2268860
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2268860
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2268860
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2268860
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2268860
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2268860

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD8438			HD8439				
Sampling Date		2010/09/11			2010/09/11				
COC Number		3725			3725				
	Units	**LICA VOC/CLS/SEP 11,10 - 7840**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/ PORT/SEP 11,10 - 7894**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	77	N/A	N/A	78		N/A	N/A	2268860
D5-Chlorobenzene	%	72	N/A	N/A	79		N/A	N/A	2268860
Difluorobenzene	%	80	N/A	N/A	81		N/A	N/A	2268860

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

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

Test Summary

Maxxam ID HD8438 **Collected** 2010/09/11
Sample ID LICA VOC/CLS/SEP 11,10 - 7840 **Shipped**
Matrix AIR **Received** 2010/09/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2268664	N/A	2010/09/16	S_S
Volatile Organics in Air (TO-15)	GC/MS	2268860	N/A	2010/09/16	S_S

Maxxam ID HD8439 **Collected** 2010/09/11
Sample ID LICA VOC/ PORT/SEP 11,10 - 7894 **Shipped**
Matrix AIR **Received** 2010/09/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2268664	N/A	2010/09/16	S_S
Volatile Organics in Air (TO-15)	GC/MS	2268860	N/A	2010/09/16	S_S

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0C7600

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2268860	S_S	Spiked Blank	Bromochloromethane	2010/09/16		109	%	60 - 140
			D5-Chlorobenzene	2010/09/16		113	%	60 - 140
			Difluorobenzene	2010/09/16		113	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/16		90	%	70 - 130
			Carbon Disulfide	2010/09/16		89	%	70 - 130
			Propene	2010/09/16		82	%	70 - 130
			Vinyl Acetate	2010/09/16		98	%	70 - 130
			Vinyl Bromide	2010/09/16		89	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/16		97	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/16		84	%	70 - 130
			Chloromethane	2010/09/16		87	%	70 - 130
			Vinyl Chloride	2010/09/16		90	%	70 - 130
			Chloroethane	2010/09/16		89	%	70 - 130
			1,3-Butadiene	2010/09/16		75	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/16		96	%	70 - 130
			Trichlorotrifluoroethane	2010/09/16		91	%	70 - 130
			Ethanol	2010/09/16		97	%	70 - 130
			2-propanol	2010/09/16		90	%	70 - 130
			2-Propanone	2010/09/16		99	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/16		105	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/16		95	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/16		100	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/16		91	%	70 - 130
			Ethyl Acetate	2010/09/16		86	%	70 - 130
			1,1-Dichloroethylene	2010/09/16		90	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/16		93	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/16		89	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/16		80	%	70 - 130
			Chloroform	2010/09/16		93	%	70 - 130
			Carbon Tetrachloride	2010/09/16		101	%	70 - 130
			1,1-Dichloroethane	2010/09/16		91	%	70 - 130
			1,2-Dichloroethane	2010/09/16		92	%	70 - 130
			Ethylene Dibromide	2010/09/16		96	%	70 - 130
			1,1,1-Trichloroethane	2010/09/16		98	%	70 - 130
			1,1,2-Trichloroethane	2010/09/16		98	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/16		94	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/16		103	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/16		99	%	70 - 130
			1,2-Dichloropropane	2010/09/16		94	%	70 - 130
			Bromomethane	2010/09/16		94	%	70 - 130
			Bromoform	2010/09/16		100	%	70 - 130
			Bromodichloromethane	2010/09/16		100	%	70 - 130
			Dibromochloromethane	2010/09/16		101	%	70 - 130
			Heptane	2010/09/16		94	%	70 - 130
			Trichloroethylene	2010/09/16		97	%	70 - 130
			Tetrachloroethylene	2010/09/16		100	%	70 - 130
			Benzene	2010/09/16		92	%	70 - 130
			Toluene	2010/09/16		101	%	70 - 130
			Ethylbenzene	2010/09/16		95	%	70 - 130
			p+m-Xylene	2010/09/16		96	%	70 - 130
			o-Xylene	2010/09/16		97	%	70 - 130
			Styrene	2010/09/16		93	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/16		95	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/16		94	%	70 - 130
			4-ethyltoluene	2010/09/16		94	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C7600

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2268860	S_S	Spiked Blank	Chlorobenzene	2010/09/16		88	%	70 - 130
			Benzyl chloride	2010/09/16		89	%	70 - 130
			1,3-Dichlorobenzene	2010/09/16		88	%	70 - 130
			1,4-Dichlorobenzene	2010/09/16		84	%	70 - 130
			1,2-Dichlorobenzene	2010/09/16		86	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/16		65 (1)	%	70 - 130
			Hexachlorobutadiene	2010/09/16		86	%	70 - 130
			Hexane	2010/09/16		92	%	70 - 130
			Cyclohexane	2010/09/16		93	%	70 - 130
			Tetrahydrofuran	2010/09/16		90	%	70 - 130
			1,4-Dioxane	2010/09/16		96	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/16		99	%	60 - 140
			D5-Chlorobenzene	2010/09/16		89	%	60 - 140
			Difluorobenzene	2010/09/16		104	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/16	<0.20		ppbv	
			Carbon Disulfide	2010/09/16	<0.50		ppbv	
			Propene	2010/09/16	<0.30		ppbv	
			Vinyl Acetate	2010/09/16	<0.20		ppbv	
			Vinyl Bromide	2010/09/16	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/16	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/16	<0.17		ppbv	
			Chloromethane	2010/09/16	<0.30		ppbv	
			Vinyl Chloride	2010/09/16	<0.18		ppbv	
			Chloroethane	2010/09/16	<0.30		ppbv	
			1,3-Butadiene	2010/09/16	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/16	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/16	<0.15		ppbv	
			Ethanol	2010/09/16	<2.3		ppbv	
			2-propanol	2010/09/16	<3.0		ppbv	
			2-Propanone	2010/09/16	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/16	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/16	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/16	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/16	<0.20		ppbv	
			Ethyl Acetate	2010/09/16	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/16	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/16	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/16	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/16	<0.30		ppbv	
			Chloroform	2010/09/16	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/16	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/16	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/16	<0.20		ppbv	
			Ethylene Dibromide	2010/09/16	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/16	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/16	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/16	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/16	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/16	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/16	<0.40		ppbv	
			Bromomethane	2010/09/16	<0.18		ppbv	
			Bromoform	2010/09/16	<0.20		ppbv	
			Bromodichloromethane	2010/09/16	<0.20		ppbv	
			Dibromochloromethane	2010/09/16	<0.20		ppbv	
			Heptane	2010/09/16	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C7600

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2268860	S_S	Method Blank	Trichloroethylene	2010/09/16	<0.30		ppbv	
			Tetrachloroethylene	2010/09/16	<0.20		ppbv	
			Benzene	2010/09/16	<0.18		ppbv	
			Toluene	2010/09/16	<0.20		ppbv	
			Ethylbenzene	2010/09/16	<0.20		ppbv	
			p+m-Xylene	2010/09/16	<0.37		ppbv	
			o-Xylene	2010/09/16	<0.20		ppbv	
			Styrene	2010/09/16	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/16	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/16	<0.50		ppbv	
			4-ethyltoluene	2010/09/16	<2.2		ppbv	
			Chlorobenzene	2010/09/16	<0.20		ppbv	
			Benzyl chloride	2010/09/16	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/16	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/16	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/16	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/16	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/16	<3.0		ppbv	
			Hexane	2010/09/16	<0.30		ppbv	
			Cyclohexane	2010/09/16	<0.20		ppbv	
			Tetrahydrofuran	2010/09/16	<0.40		ppbv	
			1,4-Dioxane	2010/09/16	<2.0		ppbv	
			Xylene (Total)	2010/09/16	<0.60		ppbv	

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

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

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

Sampler s/n: 6167
Canister ID: 7914
Canister Installation Date/Time: Sept 16, 2010 @ 13:22 mst
Canister Removal Date/Time: Sept 20, 2010 @ 7:24 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
17-Sep-10	17/09/2010 0:00	18/09/2010 0:00	24.00

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

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

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

Comments: System leak check prior to sampling. COC # 4704

Technician Signiture: Ting Xu

Your C.O.C. #: 4704

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

Report Date: 2010/10/01

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D3630
Received: 2010/09/24, 09:55

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	1	N/A	2010/09/27	BRL SOP-00304	EPA TO-15
Canister Pressure (TO-15)	1	N/A	2010/09/28	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/09/27	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/09/28	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

RESULTS OF ANALYSES OF AIR

Maxxam ID		HG6492		HG6493	
Sampling Date		2010/09/17		2010/09/17	
COC Number		4704		4704	
	Units	**LICA VOC / PORT / SEP 17,10 - 7914**	**QC Batch**	**LICA VOC / PORT / SEP 17,10 - 7801**	**QC Batch**
Volatile Organics					
Pressure on Receipt	psig	20	2280063	22	2280705

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6492				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2280057
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2280057
Propene	ppbv	<0.30	0.30	<0.516	0.516	2280057
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2280057
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2280057
Dichlorodifluoromethane (FREON 12)	ppbv	0.70	0.20	3.44	0.989	2280057
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2280057
Chloromethane	ppbv	0.46	0.30	0.949	0.620	2280057
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2280057
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2280057
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2280057
Trichlorofluoromethane (FREON 11)	ppbv	0.34	0.20	1.89	1.12	2280057
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2280057
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2280057
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2280057
2-Propanone	ppbv	1.73	0.80	4.11	1.90	2280057
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2280057
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2280057
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2280057
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2280057
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2280057
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2280057
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2280057
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2280057
Methylene Chloride(Dichloromethane)	ppbv	<1.0	1.0	<3.47	3.47	2280057
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2280057
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2280057
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2280057
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2280057
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2280057
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2280057

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6492				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2280057
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2280057
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2280057
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2280057
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2280057
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2280057
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2280057
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2280057
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2280057
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2280057
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2280057
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2280057
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2280057
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2280057
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2280057
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2280057
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2280057
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2280057
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2280057
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2280057
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2280057
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2280057
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2280057
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280057
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280057
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280057
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2280057
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2280057
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2280057
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2280057
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2280057
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2280057
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2280057

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6492				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	64		N/A	N/A	2280057
D5-Chlorobenzene	%	63		N/A	N/A	2280057
Difluorobenzene	%	66		N/A	N/A	2280057

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

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6493				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7801**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2280710
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2280710
Propene	ppbv	<0.30	0.30	<0.516	0.516	2280710
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2280710
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2280710
Dichlorodifluoromethane (FREON 12)	ppbv	0.63	0.20	3.11	0.989	2280710
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2280710
Chloromethane	ppbv	0.39	0.30	0.809	0.620	2280710
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2280710
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2280710
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2280710
Trichlorofluoromethane (FREON 11)	ppbv	0.31	0.20	1.76	1.12	2280710
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2280710
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2280710
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2280710
2-Propanone	ppbv	1.96	0.80	4.65	1.90	2280710
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2280710
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2280710
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2280710
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2280710
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2280710
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2280710
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2280710
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2280710
Methylene Chloride(Dichloromethane)	ppbv	<0.80	0.80	<2.78	2.78	2280710
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2280710
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2280710
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2280710
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2280710
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2280710
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2280710

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6493				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7801**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2280710
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2280710
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2280710
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2280710
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2280710
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2280710
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2280710
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2280710
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2280710
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2280710
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2280710
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2280710
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2280710
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2280710
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2280710
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2280710
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2280710
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2280710
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2280710
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2280710
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2280710
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2280710
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2280710
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280710
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280710
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280710
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2280710
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2280710
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2280710
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2280710
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2280710
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2280710
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2280710

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6493				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7801**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	86		N/A	N/A	2280710
D5-Chlorobenzene	%	81		N/A	N/A	2280710
Difluorobenzene	%	90		N/A	N/A	2280710

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

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

Test Summary

Maxxam ID HG6492 **Collected** 2010/09/17
Sample ID LICA VOC / PORT / SEP 17,10 - 7914 **Shipped**
Matrix AIR **Received** 2010/09/24

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2280063	N/A	2010/09/27	MMU
Volatile Organics in Air (TO-15)	GC/MS	2280057	N/A	2010/09/27	MMU

Maxxam ID HG6493 **Collected** 2010/09/17
Sample ID LICA VOC / PORT / SEP 17,10 - 7801 **Shipped**
Matrix AIR **Received** 2010/09/24

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2280705	N/A	2010/09/28	MMU
Volatile Organics in Air (TO-15)	GC/MS	2280710	N/A	2010/09/28	MMU

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280057	MMU	Spiked Blank	Bromochloromethane	2010/09/27		103	%	60 - 140
			D5-Chlorobenzene	2010/09/27		102	%	60 - 140
			Difluorobenzene	2010/09/27		105	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/27		85	%	70 - 130
			Carbon Disulfide	2010/09/27		107	%	70 - 130
			Propene	2010/09/27		91	%	70 - 130
			Vinyl Acetate	2010/09/27		98	%	70 - 130
			Vinyl Bromide	2010/09/27		93	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/27		94	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/27		81	%	70 - 130
			Chloromethane	2010/09/27		87	%	70 - 130
			Vinyl Chloride	2010/09/27		94	%	70 - 130
			Chloroethane	2010/09/27		87	%	70 - 130
			1,3-Butadiene	2010/09/27		93	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/27		89	%	70 - 130
			Trichlorotrifluoroethane	2010/09/27		100	%	70 - 130
			Ethanol	2010/09/27		95	%	70 - 130
			2-propanol	2010/09/27		91	%	70 - 130
			2-Propanone	2010/09/27		81	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/27		79	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/27		88	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/27		94	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/27		94	%	70 - 130
			Ethyl Acetate	2010/09/27		83	%	70 - 130
			1,1-Dichloroethylene	2010/09/27		103	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/27		92	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/27		90	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/27		92	%	70 - 130
			Chloroform	2010/09/27		87	%	70 - 130
			Carbon Tetrachloride	2010/09/27		92	%	70 - 130
			1,1-Dichloroethane	2010/09/27		83	%	70 - 130
			1,2-Dichloroethane	2010/09/27		89	%	70 - 130
			Ethylene Dibromide	2010/09/27		89	%	70 - 130
			1,1,1-Trichloroethane	2010/09/27		91	%	70 - 130
			1,1,2-Trichloroethane	2010/09/27		86	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/27		76	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/27		92	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/27		101	%	70 - 130
			1,2-Dichloropropane	2010/09/27		84	%	70 - 130
			Bromomethane	2010/09/27		93	%	70 - 130
			Bromoform	2010/09/27		97	%	70 - 130
			Bromodichloromethane	2010/09/27		87	%	70 - 130
			Dibromochloromethane	2010/09/27		92	%	70 - 130
			Heptane	2010/09/27		82	%	70 - 130
			Trichloroethylene	2010/09/27		94	%	70 - 130
			Tetrachloroethylene	2010/09/27		95	%	70 - 130
			Benzene	2010/09/27		87	%	70 - 130
			Toluene	2010/09/27		90	%	70 - 130
			Ethylbenzene	2010/09/27		92	%	70 - 130
			p+m-Xylene	2010/09/27		88	%	70 - 130
			o-Xylene	2010/09/27		84	%	70 - 130
			Styrene	2010/09/27		96	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/27		81	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/27		78	%	70 - 130
			4-ethyltoluene	2010/09/27		79	%	70 - 130

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Attention: Michael Bisaga
Client Project #:
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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280057	MMU	Spiked Blank	Chlorobenzene	2010/09/27		87	%	70 - 130
			Benzyl chloride	2010/09/27		76	%	70 - 130
			1,3-Dichlorobenzene	2010/09/27		80	%	70 - 130
			1,4-Dichlorobenzene	2010/09/27		75	%	70 - 130
			1,2-Dichlorobenzene	2010/09/27		74	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/27		92	%	70 - 130
			Hexachlorobutadiene	2010/09/27		101	%	70 - 130
			Hexane	2010/09/27		79	%	70 - 130
			Cyclohexane	2010/09/27		87	%	70 - 130
			Tetrahydrofuran	2010/09/27		90	%	70 - 130
			1,4-Dioxane	2010/09/27		83	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/27		87	%	60 - 140
			D5-Chlorobenzene	2010/09/27		83	%	60 - 140
			Difluorobenzene	2010/09/27		90	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/27	<0.20		ppbv	
			Carbon Disulfide	2010/09/27	<0.50		ppbv	
			Propene	2010/09/27	<0.30		ppbv	
			Vinyl Acetate	2010/09/27	<0.20		ppbv	
			Vinyl Bromide	2010/09/27	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/27	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/27	<0.17		ppbv	
			Chloromethane	2010/09/27	<0.30		ppbv	
			Vinyl Chloride	2010/09/27	<0.18		ppbv	
			Chloroethane	2010/09/27	<0.30		ppbv	
			1,3-Butadiene	2010/09/27	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/27	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/27	<0.15		ppbv	
			Ethanol	2010/09/27	<2.3		ppbv	
			2-propanol	2010/09/27	<3.0		ppbv	
			2-Propanone	2010/09/27	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/27	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/27	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/27	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/27	<0.20		ppbv	
			Ethyl Acetate	2010/09/27	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/27	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/27	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/27	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/27	<1.0		ppbv	
			Chloroform	2010/09/27	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/27	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/27	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/27	<0.20		ppbv	
			Ethylene Dibromide	2010/09/27	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/27	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/27	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/27	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/27	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/27	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/27	<0.40		ppbv	
			Bromomethane	2010/09/27	<0.18		ppbv	
			Bromoform	2010/09/27	<0.20		ppbv	
			Bromodichloromethane	2010/09/27	<0.20		ppbv	
			Dibromochloromethane	2010/09/27	<0.20		ppbv	
			Heptane	2010/09/27	<0.30		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280057	MMU	Method Blank	Trichloroethylene	2010/09/27	<0.30		ppbv	
			Tetrachloroethylene	2010/09/27	<0.20		ppbv	
			Benzene	2010/09/27	<0.18		ppbv	
			Toluene	2010/09/27	<0.20		ppbv	
			Ethylbenzene	2010/09/27	<0.20		ppbv	
			p+m-Xylene	2010/09/27	<0.37		ppbv	
			o-Xylene	2010/09/27	<0.20		ppbv	
			Styrene	2010/09/27	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/27	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/27	<0.50		ppbv	
			4-ethyltoluene	2010/09/27	<2.2		ppbv	
			Chlorobenzene	2010/09/27	<0.20		ppbv	
			Benzyl chloride	2010/09/27	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/27	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/27	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/27	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/27	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/27	<3.0		ppbv	
			Hexane	2010/09/27	<0.30		ppbv	
			Cyclohexane	2010/09/27	<0.20		ppbv	
			Tetrahydrofuran	2010/09/27	<0.40		ppbv	
			1,4-Dioxane	2010/09/27	<2.0		ppbv	
			Xylene (Total)	2010/09/27	<0.60		ppbv	
		RPD - Sample/Sample Dup	Dichlorodifluoromethane (FREON 12)	2010/09/27	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/09/27	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/09/27	NC		%	25
			Trichlorotrifluoroethane	2010/09/27	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/09/27	NC		%	25
			Chloroform	2010/09/27	NC		%	25
			Carbon Tetrachloride	2010/09/27	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/09/27	3.1		%	25
			Benzene	2010/09/27	NC		%	25
			Toluene	2010/09/27	NC		%	25
			p+m-Xylene	2010/09/27	NC		%	25
			o-Xylene	2010/09/27	NC		%	25
			1,2,4-Trimethylbenzene	2010/09/27	NC		%	25
			1,2,4-Trichlorobenzene	2010/09/27	NC		%	25
2280710	MMU	Spiked Blank	Bromochloromethane	2010/09/28		101	%	60 - 140
			D5-Chlorobenzene	2010/09/28		101	%	60 - 140
			Difluorobenzene	2010/09/28		105	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/28		90	%	70 - 130
			Carbon Disulfide	2010/09/28		113	%	70 - 130
			Propene	2010/09/28		92	%	70 - 130
			Vinyl Acetate	2010/09/28		102	%	70 - 130
			Vinyl Bromide	2010/09/28		96	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/28		97	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/28		85	%	70 - 130
			Chloromethane	2010/09/28		92	%	70 - 130
			Vinyl Chloride	2010/09/28		99	%	70 - 130
			Chloroethane	2010/09/28		93	%	70 - 130
			1,3-Butadiene	2010/09/28		97	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/28		93	%	70 - 130
			Trichlorotrifluoroethane	2010/09/28		102	%	70 - 130

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280710	MMU	Spiked Blank	Ethanol	2010/09/28		99	%	70 - 130
			2-propanol	2010/09/28		94	%	70 - 130
			2-Propanone	2010/09/28		86	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/28		85	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/28		95	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/28		101	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/28		95	%	70 - 130
			Ethyl Acetate	2010/09/28		87	%	70 - 130
			1,1-Dichloroethylene	2010/09/28		80	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/28		97	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/28		92	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/28		96	%	70 - 130
			Chloroform	2010/09/28		92	%	70 - 130
			Carbon Tetrachloride	2010/09/28		95	%	70 - 130
			1,1-Dichloroethane	2010/09/28		88	%	70 - 130
			1,2-Dichloroethane	2010/09/28		91	%	70 - 130
			Ethylene Dibromide	2010/09/28		93	%	70 - 130
			1,1,1-Trichloroethane	2010/09/28		94	%	70 - 130
			1,1,2-Trichloroethane	2010/09/28		92	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/28		83	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/28		99	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/28		107	%	70 - 130
			1,2-Dichloropropane	2010/09/28		89	%	70 - 130
			Bromomethane	2010/09/28		96	%	70 - 130
			Bromoform	2010/09/28		105	%	70 - 130
			Bromodichloromethane	2010/09/28		95	%	70 - 130
			Dibromochloromethane	2010/09/28		99	%	70 - 130
			Heptane	2010/09/28		87	%	70 - 130
			Trichloroethylene	2010/09/28		97	%	70 - 130
			Tetrachloroethylene	2010/09/28		101	%	70 - 130
			Benzene	2010/09/28		91	%	70 - 130
			Toluene	2010/09/28		95	%	70 - 130
			Ethylbenzene	2010/09/28		94	%	70 - 130
			p+m-Xylene	2010/09/28		92	%	70 - 130
			o-Xylene	2010/09/28		89	%	70 - 130
			Styrene	2010/09/28		100	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/28		85	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/28		84	%	70 - 130
			4-ethyltoluene	2010/09/28		84	%	70 - 130
			Chlorobenzene	2010/09/28		89	%	70 - 130
			Benzyl chloride	2010/09/28		81	%	70 - 130
			1,3-Dichlorobenzene	2010/09/28		83	%	70 - 130
			1,4-Dichlorobenzene	2010/09/28		78	%	70 - 130
			1,2-Dichlorobenzene	2010/09/28		78	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/28		90	%	70 - 130
			Hexachlorobutadiene	2010/09/28		103	%	70 - 130
			Hexane	2010/09/28		83	%	70 - 130
			Cyclohexane	2010/09/28		90	%	70 - 130
			Tetrahydrofuran	2010/09/28		94	%	70 - 130
			1,4-Dioxane	2010/09/28		90	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/28		90	%	60 - 140
			D5-Chlorobenzene	2010/09/28		84	%	60 - 140
			Difluorobenzene	2010/09/28		93	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/28	<0.20		ppbv	
			Carbon Disulfide	2010/09/28	<0.50		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280710	MMU	Method Blank	Propene	2010/09/28	<0.30		ppbv	
			Vinyl Acetate	2010/09/28	<0.20		ppbv	
			Vinyl Bromide	2010/09/28	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/28	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/28	<0.17		ppbv	
			Chloromethane	2010/09/28	<0.30		ppbv	
			Vinyl Chloride	2010/09/28	<0.18		ppbv	
			Chloroethane	2010/09/28	<0.30		ppbv	
			1,3-Butadiene	2010/09/28	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/28	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/28	<0.15		ppbv	
			Ethanol	2010/09/28	<2.3		ppbv	
			2-propanol	2010/09/28	<3.0		ppbv	
			2-Propanone	2010/09/28	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/28	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/28	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/28	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/28	<0.20		ppbv	
			Ethyl Acetate	2010/09/28	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/28	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/28	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/28	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/28	<0.80		ppbv	
			Chloroform	2010/09/28	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/28	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/28	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/28	<0.20		ppbv	
			Ethylene Dibromide	2010/09/28	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/28	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/28	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/28	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/28	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/28	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/28	<0.40		ppbv	
			Bromomethane	2010/09/28	<0.18		ppbv	
			Bromoform	2010/09/28	<0.20		ppbv	
			Bromodichloromethane	2010/09/28	<0.20		ppbv	
			Dibromochloromethane	2010/09/28	<0.20		ppbv	
			Heptane	2010/09/28	<0.30		ppbv	
			Trichloroethylene	2010/09/28	<0.30		ppbv	
			Tetrachloroethylene	2010/09/28	<0.20		ppbv	
			Benzene	2010/09/28	<0.18		ppbv	
			Toluene	2010/09/28	<0.20		ppbv	
			Ethylbenzene	2010/09/28	<0.20		ppbv	
			p+m-Xylene	2010/09/28	<0.37		ppbv	
			o-Xylene	2010/09/28	<0.20		ppbv	
			Styrene	2010/09/28	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/28	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/28	<0.50		ppbv	
			4-ethyltoluene	2010/09/28	<2.2		ppbv	
			Chlorobenzene	2010/09/28	<0.20		ppbv	
			Benzyl chloride	2010/09/28	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/28	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/28	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/28	<0.40		ppbv	

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Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280710	MMU	Method Blank	1,2,4-Trichlorobenzene	2010/09/28	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/28	<3.0		ppbv	
			Hexane	2010/09/28	<0.30		ppbv	
			Cyclohexane	2010/09/28	<0.20		ppbv	
			Tetrahydrofuran	2010/09/28	<0.40		ppbv	
			1,4-Dioxane	2010/09/28	<2.0		ppbv	
			Xylene (Total)	2010/09/28	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/09/28	NC		%	25
			Carbon Disulfide	2010/09/28	NC		%	25
			Propene	2010/09/28	NC		%	25
			Vinyl Acetate	2010/09/28	NC		%	25
			Vinyl Bromide	2010/09/28	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/09/28	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/09/28	NC		%	25
			Chloromethane	2010/09/28	NC		%	25
			Vinyl Chloride	2010/09/28	NC		%	25
			Chloroethane	2010/09/28	NC		%	25
			1,3-Butadiene	2010/09/28	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/09/28	NC		%	25
			Trichlorotrifluoroethane	2010/09/28	NC		%	25
			Ethanol	2010/09/28	NC		%	25
			2-propanol	2010/09/28	NC		%	25
			2-Propanone	2010/09/28	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/09/28	NC		%	25
			Methyl Isobutyl Ketone	2010/09/28	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/09/28	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/09/28	NC		%	25
			Ethyl Acetate	2010/09/28	NC		%	25
			1,1-Dichloroethylene	2010/09/28	NC		%	25
			cis-1,2-Dichloroethylene	2010/09/28	NC		%	25
			trans-1,2-Dichloroethylene	2010/09/28	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/09/28	NC		%	25
			Chloroform	2010/09/28	NC		%	25
			Carbon Tetrachloride	2010/09/28	NC		%	25
			1,1-Dichloroethane	2010/09/28	NC		%	25
			1,2-Dichloroethane	2010/09/28	NC		%	25
			Ethylene Dibromide	2010/09/28	NC		%	25
			1,1,1-Trichloroethane	2010/09/28	NC		%	25
			1,1,2-Trichloroethane	2010/09/28	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/09/28	NC		%	25
			cis-1,3-Dichloropropene	2010/09/28	NC		%	25
			trans-1,3-Dichloropropene	2010/09/28	NC		%	25
			1,2-Dichloropropane	2010/09/28	NC		%	25
			Bromomethane	2010/09/28	NC		%	25
			Bromoform	2010/09/28	NC		%	25
			Bromodichloromethane	2010/09/28	NC		%	25
			Dibromochloromethane	2010/09/28	NC		%	25
			Heptane	2010/09/28	NC		%	25
			Trichloroethylene	2010/09/28	NC		%	25
			Tetrachloroethylene	2010/09/28	2.1		%	25
			Benzene	2010/09/28	NC		%	25
			Toluene	2010/09/28	NC		%	25
			Ethylbenzene	2010/09/28	NC		%	25

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280710	MMU	RPD - Sample/Sample Dup	p+m-Xylene	2010/09/28	NC		%	25
			o-Xylene	2010/09/28	NC		%	25
			Styrene	2010/09/28	NC		%	25
			1,3,5-Trimethylbenzene	2010/09/28	NC		%	25
			1,2,4-Trimethylbenzene	2010/09/28	NC		%	25
			4-ethyltoluene	2010/09/28	NC		%	25
			Chlorobenzene	2010/09/28	NC		%	25
			Benzyl chloride	2010/09/28	NC		%	25
			1,3-Dichlorobenzene	2010/09/28	NC		%	25
			1,4-Dichlorobenzene	2010/09/28	NC		%	25
			1,2-Dichlorobenzene	2010/09/28	NC		%	25
			1,2,4-Trichlorobenzene	2010/09/28	NC		%	25
			Hexachlorobutadiene	2010/09/28	NC		%	25
			Hexane	2010/09/28	NC		%	25
			Cyclohexane	2010/09/28	NC		%	25
			Tetrahydrofuran	2010/09/28	NC		%	25
			1,4-Dioxane	2010/09/28	NC		%	25
			Xylene (Total)	2010/09/28	NC		%	25

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

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Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

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

Sampler s/n: 6167
Canister ID: 7823
Canister Installation Date/Time: Sept 22, 2010 @ 7:22 mst
Canister Removal Date/Time: Sept 24, 2010 @ 8:12 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
23-Sep-10	23/09/2010 0:00	24/09/2010 0:00	24.00

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

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

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

Comments: System leak check prior to sampling. COC # 3356

Technician Signiture: Ting Xu

Your C.O.C. #: 3356

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

Report Date: 2010/10/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D6975
Received: 2010/09/29, 09:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	1	N/A	2010/10/04	BRL SOP-00304	EPA TO-15
Canister Pressure (TO-15)	1	N/A	2010/10/06	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/10/04	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/10/06	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

RESULTS OF ANALYSES OF AIR

Maxxam ID		HI2770		HI2771	
Sampling Date		2010/09/23		2010/09/23	
COC Number		3356		3356	
	Units	**LICAVOC/CLS/SEPT 23,10 - 7823**	**QC Batch**	**LICAVOC/PORT/SEPT 23,10 - 7614**	**QC Batch**
Volatile Organics					
Pressure on Receipt	psig	20	2291467	22	2288230

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2770				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/CLS/SEPT 23,10 - 7823**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2291652
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2291652
Propene	ppbv	<0.30	0.30	<0.516	0.516	2291652
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2291652
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2291652
Dichlorodifluoromethane (FREON 12)	ppbv	0.66	0.20	3.25	0.989	2291652
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2291652
Chloromethane	ppbv	0.31	0.30	0.632	0.620	2291652
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2291652
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2291652
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2291652
Trichlorofluoromethane (FREON 11)	ppbv	0.31	0.20	1.76	1.12	2291652
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2291652
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2291652
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2291652
2-Propanone	ppbv	3.45	0.80	8.19	1.90	2291652
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2291652
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2291652
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2291652
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2291652
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2291652
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2291652
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2291652
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2291652
Methylene Chloride(Dichloromethane)	ppbv	0.40	0.30	1.40	1.04	2291652
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2291652
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2291652
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2291652
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2291652
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2291652
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2291652
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2291652

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2770				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/CLS/SEPT 23,10 - 7823**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2291652
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2291652
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2291652
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2291652
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2291652
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2291652
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2291652
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2291652
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2291652
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2291652
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2291652
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2291652
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2291652
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2291652
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2291652
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2291652
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2291652
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2291652
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2291652
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2291652
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2291652
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2291652
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2291652
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2291652
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2291652
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2291652
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2291652
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2291652
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2291652
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2291652
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2291652
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2291652
Surrogate Recovery (%)						
Bromochloromethane	%	80		N/A	N/A	2291652

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

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2770				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/CLS/SEPT 23,10 - 7823**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
D5-Chlorobenzene	%	76		N/A	N/A	2291652
Difluorobenzene	%	81		N/A	N/A	2291652

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

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2771				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/PORT/SEPT 23,10 - 7614**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2288262
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2288262
Propene	ppbv	<0.30	0.30	<0.516	0.516	2288262
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2288262
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2288262
Dichlorodifluoromethane (FREON 12)	ppbv	0.61	0.20	3.03	0.989	2288262
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2288262
Chloromethane	ppbv	<0.30	0.30	<0.620	0.620	2288262
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2288262
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2288262
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2288262
Trichlorofluoromethane (FREON 11)	ppbv	0.36	0.20	2.03	1.12	2288262
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2288262
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2288262
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2288262
2-Propanone	ppbv	2.16	0.80	5.12	1.90	2288262
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2288262
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2288262
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2288262
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2288262
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2288262
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2288262
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2288262
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2288262
Methylene Chloride(Dichloromethane)	ppbv	<0.90	0.90	<3.13	3.13	2288262
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2288262
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2288262
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2288262
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2288262
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2288262
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2288262
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2288262

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2771				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/PORT/SEPT 23,10 - 7614**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2288262
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2288262
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2288262
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2288262
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2288262
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2288262
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2288262
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2288262
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2288262
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2288262
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2288262
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2288262
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2288262
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2288262
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2288262
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2288262
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2288262
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2288262
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2288262
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2288262
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2288262
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2288262
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2288262
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2288262
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2288262
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2288262
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2288262
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2288262
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2288262
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2288262
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2288262
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2288262
Surrogate Recovery (%)						
Bromochloromethane	%	64		N/A	N/A	2288262

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

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2771				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/PORT/SEPT 23,10 - 7614**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
D5-Chlorobenzene	%	60		N/A	N/A	2288262
Difluorobenzene	%	65		N/A	N/A	2288262

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

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

Test Summary

Maxxam ID HI2770 **Collected** 2010/09/23
Sample ID LICAVOC/CLS/SEPT 23,10 - 7823 **Shipped**
Matrix AIR **Received** 2010/09/29

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2291467	N/A	2010/10/06	MMU
Volatile Organics in Air (TO-15)	GC/MS	2291652	N/A	2010/10/06	MMU

Maxxam ID HI2771 **Collected** 2010/09/23
Sample ID LICAVOC/PORT/SEPT 23,10 - 7614 **Shipped**
Matrix AIR **Received** 2010/09/29

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2288230	N/A	2010/10/04	MMU
Volatile Organics in Air (TO-15)	GC/MS	2288262	N/A	2010/10/04	MMU

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2288262	MMU	Spiked Blank	Bromochloromethane	2010/10/04		113	%	60 - 140
			D5-Chlorobenzene	2010/10/04		110	%	60 - 140
			Difluorobenzene	2010/10/04		116	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/04		74	%	70 - 130
			Carbon Disulfide	2010/10/04		92	%	70 - 130
			Propene	2010/10/04		75	%	70 - 130
			Vinyl Acetate	2010/10/04		81	%	70 - 130
			Vinyl Bromide	2010/10/04		91	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/04		94	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/04		81	%	70 - 130
			Chloromethane	2010/10/04		82	%	70 - 130
			Vinyl Chloride	2010/10/04		87	%	70 - 130
			Chloroethane	2010/10/04		79	%	70 - 130
			1,3-Butadiene	2010/10/04		84	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/04		91	%	70 - 130
			Trichlorotrifluoroethane	2010/10/04		97	%	70 - 130
			Ethanol	2010/10/04		72	%	70 - 130
			2-propanol	2010/10/04		92	%	70 - 130
			2-Propanone	2010/10/04		78	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/04		71	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/04		80	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/04		86	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/04		86	%	70 - 130
			Ethyl Acetate	2010/10/04		71	%	70 - 130
			1,1-Dichloroethylene	2010/10/04		97	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/04		81	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/04		84	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/04		79	%	70 - 130
			Chloroform	2010/10/04		83	%	70 - 130
			Carbon Tetrachloride	2010/10/04		98	%	70 - 130
			1,1-Dichloroethane	2010/10/04		73	%	70 - 130
			1,2-Dichloroethane	2010/10/04		84	%	70 - 130
			Ethylene Dibromide	2010/10/04		93	%	70 - 130
			1,1,1-Trichloroethane	2010/10/04		93	%	70 - 130
			1,1,2-Trichloroethane	2010/10/04		86	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/04		80	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/04		84	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/04		96	%	70 - 130
			1,2-Dichloropropane	2010/10/04		71	%	70 - 130
			Bromomethane	2010/10/04		89	%	70 - 130
			Bromoform	2010/10/04		117	%	70 - 130
			Bromodichloromethane	2010/10/04		88	%	70 - 130
			Dibromochloromethane	2010/10/04		104	%	70 - 130
			Heptane	2010/10/04		73	%	70 - 130
			Trichloroethylene	2010/10/04		97	%	70 - 130
			Tetrachloroethylene	2010/10/04		105	%	70 - 130
			Benzene	2010/10/04		79	%	70 - 130
			Toluene	2010/10/04		87	%	70 - 130
			Ethylbenzene	2010/10/04		92	%	70 - 130
			p+m-Xylene	2010/10/04		89	%	70 - 130
			o-Xylene	2010/10/04		90	%	70 - 130
			Styrene	2010/10/04		103	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/04		105	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/04		108	%	70 - 130
			4-ethyltoluene	2010/10/04		102	%	70 - 130

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Maxxam Analytics
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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2288262	MMU	Spiked Blank	Chlorobenzene	2010/10/04		88	%	70 - 130
			Benzyl chloride	2010/10/04		108	%	70 - 130
			1,3-Dichlorobenzene	2010/10/04		116	%	70 - 130
			1,4-Dichlorobenzene	2010/10/04		112	%	70 - 130
			1,2-Dichlorobenzene	2010/10/04		117	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/04		97	%	70 - 130
			Hexachlorobutadiene	2010/10/04		104	%	70 - 130
			Hexane	2010/10/04		71	%	70 - 130
			Cyclohexane	2010/10/04		81	%	70 - 130
			Tetrahydrofuran	2010/10/04		76	%	70 - 130
			1,4-Dioxane	2010/10/04		81	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/04		97	%	60 - 140
			D5-Chlorobenzene	2010/10/04		86	%	60 - 140
			Difluorobenzene	2010/10/04		101	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/04	<0.20		ppbv	
			Carbon Disulfide	2010/10/04	<0.50		ppbv	
			Propene	2010/10/04	<0.30		ppbv	
			Vinyl Acetate	2010/10/04	<0.20		ppbv	
			Vinyl Bromide	2010/10/04	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/04	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/04	<0.17		ppbv	
			Chloromethane	2010/10/04	<0.30		ppbv	
			Vinyl Chloride	2010/10/04	<0.18		ppbv	
			Chloroethane	2010/10/04	<0.30		ppbv	
			1,3-Butadiene	2010/10/04	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/04	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/04	<0.15		ppbv	
			Ethanol	2010/10/04	<2.3		ppbv	
			2-propanol	2010/10/04	<3.0		ppbv	
			2-Propanone	2010/10/04	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/04	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/04	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/04	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/04	<0.20		ppbv	
			Ethyl Acetate	2010/10/04	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/04	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/04	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/04	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/04	<0.90		ppbv	
			Chloroform	2010/10/04	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/04	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/04	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/04	<0.20		ppbv	
			Ethylene Dibromide	2010/10/04	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/04	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/04	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/04	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/04	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/04	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/04	<0.40		ppbv	
			Bromomethane	2010/10/04	<0.18		ppbv	
			Bromoform	2010/10/04	<0.20		ppbv	
			Bromodichloromethane	2010/10/04	<0.20		ppbv	
			Dibromochloromethane	2010/10/04	<0.20		ppbv	
			Heptane	2010/10/04	<0.30		ppbv	

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Maxxam Analytics
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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2288262	MMU	Method Blank	Trichloroethylene	2010/10/04	<0.30		ppbv	
			Tetrachloroethylene	2010/10/04	<0.20		ppbv	
			Benzene	2010/10/04	<0.18		ppbv	
			Toluene	2010/10/04	<0.20		ppbv	
			Ethylbenzene	2010/10/04	<0.20		ppbv	
			p+m-Xylene	2010/10/04	<0.37		ppbv	
			o-Xylene	2010/10/04	<0.20		ppbv	
			Styrene	2010/10/04	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/04	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/04	<0.50		ppbv	
			4-ethyltoluene	2010/10/04	<2.2		ppbv	
			Chlorobenzene	2010/10/04	<0.20		ppbv	
			Benzyl chloride	2010/10/04	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/04	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/04	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/04	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/04	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/04	<3.0		ppbv	
			Hexane	2010/10/04	<0.30		ppbv	
			Cyclohexane	2010/10/04	<0.20		ppbv	
			Tetrahydrofuran	2010/10/04	<0.40		ppbv	
			1,4-Dioxane	2010/10/04	<2.0		ppbv	
			Xylene (Total)	2010/10/04	<0.60		ppbv	
2291652	MMU	Spiked Blank	Bromochloromethane	2010/10/06		120	%	60 - 140
			D5-Chlorobenzene	2010/10/06		117	%	60 - 140
			Difluorobenzene	2010/10/06		122	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/06		88	%	70 - 130
			Carbon Disulfide	2010/10/06		92	%	70 - 130
			Propene	2010/10/06		94	%	70 - 130
			Vinyl Acetate	2010/10/06		105	%	70 - 130
			Vinyl Bromide	2010/10/06		93	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/06		92	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/06		80	%	70 - 130
			Chloromethane	2010/10/06		87	%	70 - 130
			Vinyl Chloride	2010/10/06		97	%	70 - 130
			Chloroethane	2010/10/06		96	%	70 - 130
			1,3-Butadiene	2010/10/06		98	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/06		86	%	70 - 130
			Trichlorotrifluoroethane	2010/10/06		90	%	70 - 130
			Ethanol	2010/10/06		123	%	70 - 130
			2-propanol	2010/10/06		94	%	70 - 130
			2-Propanone	2010/10/06		80	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/06		88	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/06		91	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/06		97	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/06		96	%	70 - 130
			Ethyl Acetate	2010/10/06		88	%	70 - 130
			1,1-Dichloroethylene	2010/10/06		94	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/06		95	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/06		93	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/06		82	%	70 - 130
			Chloroform	2010/10/06		89	%	70 - 130
			Carbon Tetrachloride	2010/10/06		88	%	70 - 130
			1,1-Dichloroethane	2010/10/06		87	%	70 - 130
			1,2-Dichloroethane	2010/10/06		88	%	70 - 130

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2291652	MMU	Spiked Blank	Ethylene Dibromide	2010/10/06		88	%	70 - 130
			1,1,1-Trichloroethane	2010/10/06		88	%	70 - 130
			1,1,2-Trichloroethane	2010/10/06		88	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/06		79	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/06		93	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/06		99	%	70 - 130
			1,2-Dichloropropane	2010/10/06		89	%	70 - 130
			Bromomethane	2010/10/06		92	%	70 - 130
			Bromoform	2010/10/06		94	%	70 - 130
			Bromodichloromethane	2010/10/06		88	%	70 - 130
			Dibromochloromethane	2010/10/06		89	%	70 - 130
			Heptane	2010/10/06		86	%	70 - 130
			Trichloroethylene	2010/10/06		91	%	70 - 130
			Tetrachloroethylene	2010/10/06		89	%	70 - 130
			Benzene	2010/10/06		89	%	70 - 130
			Toluene	2010/10/06		91	%	70 - 130
			Ethylbenzene	2010/10/06		90	%	70 - 130
			p+m-Xylene	2010/10/06		87	%	70 - 130
			o-Xylene	2010/10/06		85	%	70 - 130
			Styrene	2010/10/06		93	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/06		77	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/06		73	%	70 - 130
			4-ethyltoluene	2010/10/06		77	%	70 - 130
			Chlorobenzene	2010/10/06		86	%	70 - 130
			Benzyl chloride	2010/10/06		75	%	70 - 130
			1,3-Dichlorobenzene	2010/10/06		75	%	70 - 130
			1,4-Dichlorobenzene	2010/10/06		71	%	70 - 130
			1,2-Dichlorobenzene	2010/10/06		67 (1)	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/06		98	%	70 - 130
			Hexachlorobutadiene	2010/10/06		92	%	70 - 130
			Hexane	2010/10/06		86	%	70 - 130
			Cyclohexane	2010/10/06		89	%	70 - 130
			Tetrahydrofuran	2010/10/06		94	%	70 - 130
			1,4-Dioxane	2010/10/06		91	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/06		95	%	60 - 140
			D5-Chlorobenzene	2010/10/06		89	%	60 - 140
			Difluorobenzene	2010/10/06		97	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/06	<0.20		ppbv	
			Carbon Disulfide	2010/10/06	<0.50		ppbv	
			Propene	2010/10/06	<0.30		ppbv	
			Vinyl Acetate	2010/10/06	<0.20		ppbv	
			Vinyl Bromide	2010/10/06	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/06	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/06	<0.17		ppbv	
			Chloromethane	2010/10/06	<0.30		ppbv	
			Vinyl Chloride	2010/10/06	<0.18		ppbv	
			Chloroethane	2010/10/06	<0.30		ppbv	
			1,3-Butadiene	2010/10/06	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/06	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/06	<0.15		ppbv	
			Ethanol	2010/10/06	<2.3		ppbv	
			2-propanol	2010/10/06	<3.0		ppbv	
			2-Propanone	2010/10/06	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/06	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/06	<3.2		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2291652	MMU	Method Blank	Methyl Butyl Ketone (2-Hexanone)	2010/10/06	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/06	<0.20		ppbv	
			Ethyl Acetate	2010/10/06	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/06	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/06	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/06	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/06	0.39, RDL=0.30		ppbv	
			Chloroform	2010/10/06	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/06	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/06	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/06	<0.20		ppbv	
			Ethylene Dibromide	2010/10/06	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/06	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/06	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/06	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/06	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/06	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/06	<0.40		ppbv	
			Bromomethane	2010/10/06	<0.18		ppbv	
			Bromoform	2010/10/06	<0.20		ppbv	
			Bromodichloromethane	2010/10/06	<0.20		ppbv	
			Dibromochloromethane	2010/10/06	<0.20		ppbv	
			Heptane	2010/10/06	<0.30		ppbv	
			Trichloroethylene	2010/10/06	<0.30		ppbv	
			Tetrachloroethylene	2010/10/06	<0.20		ppbv	
			Benzene	2010/10/06	<0.18		ppbv	
			Toluene	2010/10/06	<0.20		ppbv	
			Ethylbenzene	2010/10/06	<0.20		ppbv	
			p+m-Xylene	2010/10/06	<0.37		ppbv	
			o-Xylene	2010/10/06	<0.20		ppbv	
			Styrene	2010/10/06	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/06	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/06	<0.50		ppbv	
			4-ethyltoluene	2010/10/06	<2.2		ppbv	
			Chlorobenzene	2010/10/06	<0.20		ppbv	
			Benzyl chloride	2010/10/06	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/06	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/06	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/06	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/06	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/06	<3.0		ppbv	
			Hexane	2010/10/06	<0.30		ppbv	
			Cyclohexane	2010/10/06	<0.20		ppbv	
			Tetrahydrofuran	2010/10/06	<0.40		ppbv	
			1,4-Dioxane	2010/10/06	<2.0		ppbv	
			Xylene (Total)	2010/10/06	<0.60		ppbv	

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

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Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

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

Sampler s/n: 6167
Canister ID: 7784
Canister Installation Date/Time: Sept 27, 2010 @ 7:50 mst
Canister Removal Date/Time: Sept 30 , 2010 @ 6:45 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
29-Sep-10	29/09/2010 0:00	30/09/2010 0:00	24.00

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

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

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

Comments: System leak check prior to sampling. COC # 2321

Technician Signiture: Ting Xu

Success Through Science®

Your C.O.C. #: 2321

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

Report Date: 2010/10/26

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D9866
Received: 2010/10/05, 11:00

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/10/23	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/10/23	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D9866
Report Date: 2010/10/26

RESULTS OF ANALYSES OF AIR

Maxxam ID		HJ9998	HJ9999	
Sampling Date		2010/09/29	2010/09/29	
COC Number		2321	2321	
	Units	**LICA VOC\ CLS\ SEP 29,10 - 7784**	**LICA VOC \PORT\ SEP 29,10 - 7813**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2308946

QC Batch = Quality Control Batch

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Maxxam Job #: B0D9866
Report Date: 2010/10/26

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HJ9998			HJ9999				
Sampling Date		2010/09/29			2010/09/29				
COC Number		2321			2321				
	Units	**LICA VOC\ CLS\ SEP 29,10 - 7784**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \PORT\ SEP 29,10 - 7813**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2309121
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2309121
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2309121
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2309121
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2309121
Dichlorodifluoromethane (FREON 12)	ppbv	0.60	2.95	0.989	0.60	0.20	2.95	0.989	2309121
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2309121
Chloromethane	ppbv	0.43	0.881	0.620	0.41	0.30	0.837	0.620	2309121
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2309121
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2309121
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2309121
Trichlorofluoromethane (FREON 11)	ppbv	0.27	1.53	1.12	0.28	0.20	1.59	1.12	2309121
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2309121
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2309121
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2309121
2-Propanone	ppbv	1.87	4.43	1.90	1.52	0.80	3.62	1.90	2309121
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2309121
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2309121
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2309121
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2309121
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2309121
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2309121
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2309121
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2309121
Methylene Chloride(Dichloromethane)	ppbv	0.34	1.18	1.04	0.42	0.30	1.46	1.04	2309121
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2309121
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2309121
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2309121
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2309121
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2309121
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2309121

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HJ9998			HJ9999				
Sampling Date		2010/09/29			2010/09/29				
COC Number		2321			2321				
	Units	**LICA VOC\ CLS\ SEP 29,10 - 7784**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \PORT\ SEP 29,10 - 7813**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2309121
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2309121
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2309121
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2309121
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2309121
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2309121
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2309121
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2309121
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2309121
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2309121
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2309121
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2309121
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2309121
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2309121
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2309121
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2309121
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2309121
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2309121
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2309121
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2309121
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2309121
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2309121
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2309121
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309121
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309121
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309121
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2309121
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2309121
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2309121
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2309121
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2309121
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2309121
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2309121

QC Batch = Quality Control Batch

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VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HJ9998			HJ9999				
Sampling Date		2010/09/29			2010/09/29				
COC Number		2321			2321				
	Units	**LICA VOC\ CLS\ SEP 29,10 - 7784**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \PORT\ SEP 29,10 - 7813**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	93	N/A	N/A	85		N/A	N/A	2309121
D5-Chlorobenzene	%	84	N/A	N/A	77		N/A	N/A	2309121
Difluorobenzene	%	94	N/A	N/A	85		N/A	N/A	2309121

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

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Maxxam Analytics

Maxxam Job #: B0D9866
Report Date: 2010/10/26

Test Summary

Maxxam ID HJ9998 **Collected** 2010/09/29
Sample ID LICA VOC\ CLS\ SEP 29,10 - 7784 **Shipped**
Matrix AIR **Received** 2010/10/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2308946	N/A	2010/10/23	S_S
Volatile Organics in Air (TO-15)	GC/MS	2309121	N/A	2010/10/23	S_S

Maxxam ID HJ9999 **Collected** 2010/09/29
Sample ID LICA VOC \PORT\ SEP 29,10 - 7813 **Shipped**
Matrix AIR **Received** 2010/10/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2308946	N/A	2010/10/23	S_S
Volatile Organics in Air (TO-15)	GC/MS	2309121	N/A	2010/10/23	S_S

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Maxxam Analytics

Maxxam Job #: B0D9866
Report Date: 2010/10/26

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0D9866

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309121	S_S	Spiked Blank	Bromochloromethane	2010/10/23		108	%	60 - 140
			D5-Chlorobenzene	2010/10/23		108	%	60 - 140
			Difluorobenzene	2010/10/23		109	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/23		97	%	70 - 130
			Carbon Disulfide	2010/10/23		87	%	70 - 130
			Propene	2010/10/23		99	%	70 - 130
			Vinyl Acetate	2010/10/23		107	%	70 - 130
			Vinyl Bromide	2010/10/23		96	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/23		103	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/23		113	%	70 - 130
			Chloromethane	2010/10/23		104	%	70 - 130
			Vinyl Chloride	2010/10/23		97	%	70 - 130
			Chloroethane	2010/10/23		94	%	70 - 130
			1,3-Butadiene	2010/10/23		99	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/23		99	%	70 - 130
			Trichlorotrifluoroethane	2010/10/23		93	%	70 - 130
			Ethanol	2010/10/23		105	%	70 - 130
			2-propanol	2010/10/23		106	%	70 - 130
			2-Propanone	2010/10/23		116	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/23		108	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/23		102	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/23		107	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/23		102	%	70 - 130
			Ethyl Acetate	2010/10/23		103	%	70 - 130
			1,1-Dichloroethylene	2010/10/23		99	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/23		99	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/23		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/23		91	%	70 - 130
			Chloroform	2010/10/23		99	%	70 - 130
			Carbon Tetrachloride	2010/10/23		103	%	70 - 130
			1,1-Dichloroethane	2010/10/23		97	%	70 - 130
			1,2-Dichloroethane	2010/10/23		104	%	70 - 130
			Ethylene Dibromide	2010/10/23		98	%	70 - 130
			1,1,1-Trichloroethane	2010/10/23		101	%	70 - 130
			1,1,2-Trichloroethane	2010/10/23		97	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/23		90	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/23		104	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/23		109	%	70 - 130
			1,2-Dichloropropane	2010/10/23		95	%	70 - 130
			Bromomethane	2010/10/23		93	%	70 - 130
			Bromoform	2010/10/23		104	%	70 - 130
			Bromodichloromethane	2010/10/23		102	%	70 - 130
			Dibromochloromethane	2010/10/23		107	%	70 - 130
			Heptane	2010/10/23		99	%	70 - 130
			Trichloroethylene	2010/10/23		95	%	70 - 130
			Tetrachloroethylene	2010/10/23		97	%	70 - 130
			Benzene	2010/10/23		95	%	70 - 130
			Toluene	2010/10/23		99	%	70 - 130
			Ethylbenzene	2010/10/23		99	%	70 - 130
			p+m-Xylene	2010/10/23		99	%	70 - 130
			o-Xylene	2010/10/23		96	%	70 - 130
			Styrene	2010/10/23		99	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/23		93	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/23		93	%	70 - 130
			4-ethyltoluene	2010/10/23		100	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D9866

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309121	S_S	Spiked Blank	Chlorobenzene	2010/10/23		93	%	70 - 130
			Benzyl chloride	2010/10/23		106	%	70 - 130
			1,3-Dichlorobenzene	2010/10/23		89	%	70 - 130
			1,4-Dichlorobenzene	2010/10/23		91	%	70 - 130
			1,2-Dichlorobenzene	2010/10/23		89	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/23		97	%	70 - 130
			Hexachlorobutadiene	2010/10/23		96	%	70 - 130
			Hexane	2010/10/23		100	%	70 - 130
			Cyclohexane	2010/10/23		97	%	70 - 130
			Tetrahydrofuran	2010/10/23		101	%	70 - 130
			1,4-Dioxane	2010/10/23		109	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/23		97	%	60 - 140
			D5-Chlorobenzene	2010/10/23		89	%	60 - 140
			Difluorobenzene	2010/10/23		98	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/23	<0.20		ppbv	
			Carbon Disulfide	2010/10/23	<0.50		ppbv	
			Propene	2010/10/23	<0.30		ppbv	
			Vinyl Acetate	2010/10/23	<0.20		ppbv	
			Vinyl Bromide	2010/10/23	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/23	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/23	<0.17		ppbv	
			Chloromethane	2010/10/23	<0.30		ppbv	
			Vinyl Chloride	2010/10/23	<0.18		ppbv	
			Chloroethane	2010/10/23	<0.30		ppbv	
			1,3-Butadiene	2010/10/23	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/23	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/23	<0.15		ppbv	
			Ethanol	2010/10/23	<2.3		ppbv	
			2-propanol	2010/10/23	<3.0		ppbv	
			2-Propanone	2010/10/23	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/23	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/23	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/23	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/23	<0.20		ppbv	
			Ethyl Acetate	2010/10/23	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/23	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/23	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/23	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/23	<0.30		ppbv	
			Chloroform	2010/10/23	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/23	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/23	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/23	<0.20		ppbv	
			Ethylene Dibromide	2010/10/23	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/23	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/23	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/23	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/23	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/23	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/23	<0.40		ppbv	
			Bromomethane	2010/10/23	<0.18		ppbv	
			Bromoform	2010/10/23	<0.20		ppbv	
			Bromodichloromethane	2010/10/23	<0.20		ppbv	
			Dibromochloromethane	2010/10/23	<0.20		ppbv	
			Heptane	2010/10/23	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D9866

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309121	S_S	Method Blank	Trichloroethylene	2010/10/23	<0.30		ppbv	
			Tetrachloroethylene	2010/10/23	<0.20		ppbv	
			Benzene	2010/10/23	<0.18		ppbv	
			Toluene	2010/10/23	<0.20		ppbv	
			Ethylbenzene	2010/10/23	<0.20		ppbv	
			p+m-Xylene	2010/10/23	<0.37		ppbv	
			o-Xylene	2010/10/23	<0.20		ppbv	
			Styrene	2010/10/23	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/23	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/23	<0.50		ppbv	
			4-ethyltoluene	2010/10/23	<2.2		ppbv	
			Chlorobenzene	2010/10/23	<0.20		ppbv	
			Benzyl chloride	2010/10/23	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/23	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/23	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/23	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/23	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/23	<3.0		ppbv	
			Hexane	2010/10/23	<0.30		ppbv	
			Cyclohexane	2010/10/23	<0.20		ppbv	
			Tetrahydrofuran	2010/10/23	<0.40		ppbv	
			1,4-Dioxane	2010/10/23	<2.0		ppbv	
			Xylene (Total)	2010/10/23	<0.60		ppbv	

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

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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/July 01, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: June 30, 2010 @ 8:04 mst
Removal Date/Time: July 02, 2010@ 7:38 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
01-Jul-10	01/07/2010 0:00	02/07/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
29-Jun-10	05-Jul-10	09-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
710	229	15.1	330.32

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

Comments: COC # 0564
GB079098 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/July 01, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 0564

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 #: B088347
Received: 2010/07/07, 08:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/17	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/17	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. #: 0564

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 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: 2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

RESULTS OF ANALYSES OF AIR

Maxxam ID		GK3351	GK3352	
Sampling Date		2010/07/01	2010/07/01	
COC Number		0564	0564	
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	22	2212158

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

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

Maxxam ID		GK3353	GK3354		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA PUFF/QFF/CLS/JULY 01,10**	**LICA PUFF/QFF/PORT/JULY 01,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.12	<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-Methylanthracene	ug	<0.10	<0.10	0.10	2202480
2-Methylnaphthalene	ug	0.22	0.17	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-Dimethylanthracene	ug	<0.40	<0.40	0.40	2202480
Acenaphthene	ug	0.084	<0.050	0.050	2202480
Acenaphthylene	ug	<0.050	<0.050	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	<0.050	<0.050	0.050	2202480
Fluorene	ug	0.138	0.050	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	0.168	0.128	0.072	2202480
o-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Perylene	ug	<0.10	<0.10	0.10	2202480

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

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

Maxxam ID		GK3353	GK3354		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA PUFF/QFF/CLS/JULY 01,10**	**LICA PUFF/QFF/PORT/JULY 01,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.380	0.124	0.050	2202480
p-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Pyrene	ug	<0.050	<0.050	0.050	2202480
Quinoline	ug	<0.40	<0.40	0.40	2202480
Tetralin	ug	<0.10	<0.10	0.10	2202480
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	62	68		2202480
D10-Fluoranthene	%	96	94		2202480
D10-Fluorene (FS)	%	52	59		2202480
D10-Phenanthrene	%	84	82		2202480
D12-Benzo(a)anthracene	%	112	112		2202480
D12-Benzo(a)pyrene	%	92	90		2202480
D12-Benzo(b)fluoranthene	%	90	90		2202480
D12-Benzo(ghi)perylene	%	92	90		2202480
D12-Benzo(k)fluoranthene	%	80	84		2202480
D12-Chrysene	%	80	88		2202480
D12-Indeno(1,2,3-cd)pyrene	%	90	86		2202480
D12-Perylene	%	88	88		2202480
D14-Dibenzo(a,h)anthracene	%	80	76		2202480
D14-Terphenyl (FS)	%	79	83		2202480
D8-Acenaphthylene	%	76	78		2202480
D8-Naphthalene	%	66	74		2202480

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2212165
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2212165
Propene	ppbv	<0.30	<0.30	0.30	2212165
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2212165
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2212165
Dichlorodifluoromethane (FREON 12)	ppbv	0.75	0.75	0.20	2212165
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2212165
Chloromethane	ppbv	0.73	0.69	0.30	2212165
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2212165
Chloroethane	ppbv	<0.30	<0.30	0.30	2212165
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2212165
Trichlorofluoromethane (FREON 11)	ppbv	0.34	0.34	0.20	2212165
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2212165
Ethanol	ppbv	4.1	2.7	2.3	2212165
2-propanol	ppbv	<3.0	<3.0	3.0	2212165
2-Propanone	ppbv	3.94	4.45	0.80	2212165
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2212165
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2212165
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2212165
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2212165
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2212165
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2212165
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2212165
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2212165
Methylene Chloride(Dichloromethane)	ppbv	0.52	0.47	0.30	2212165
Chloroform	ppbv	<0.15	<0.15	0.15	2212165
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2212165
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2212165
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2212165
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2212165
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2212165

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2212165
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2212165
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2212165
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2212165
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2212165
Bromomethane	ppbv	<0.18	<0.18	0.18	2212165
Bromoform	ppbv	<0.20	<0.20	0.20	2212165
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2212165
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2212165
Heptane	ppbv	<0.30	<0.30	0.30	2212165
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2212165
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2212165
Benzene	ppbv	<0.18	<0.18	0.18	2212165
Toluene	ppbv	<0.20	<0.20	0.20	2212165
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2212165
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2212165
o-Xylene	ppbv	<0.20	<0.20	0.20	2212165
Styrene	ppbv	<0.20	<0.20	0.20	2212165
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2212165
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2212165
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2212165
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2212165
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2212165
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2212165
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2212165
Hexane	ppbv	<0.30	<0.30	0.30	2212165
Cyclohexane	ppbv	<0.20	<0.20	0.20	2212165
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2212165
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2212165
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2212165

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Surrogate Recovery (%)					
Bromochloromethane	%	85	85		2212165
D5-Chlorobenzene	%	83	86		2212165
Difluorobenzene	%	86	87		2212165

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

Test Summary

Maxxam ID GK3351 **Collected** 2010/07/01
Sample ID LICA VOC/CLS/JULY 01,10 **Shipped**
Matrix AIR **Received** 2010/07/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2212158	N/A	2010/07/17	LSY
Volatile Organics in Air (TO-15)	GC/MS	2212165	N/A	2010/07/17	LSY

Maxxam ID GK3352 **Collected** 2010/07/01
Sample ID LICA VOC/PORT/JULY 01,10 **Shipped**
Matrix AIR **Received** 2010/07/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2212158	N/A	2010/07/17	LSY
Volatile Organics in Air (TO-15)	GC/MS	2212165	N/A	2010/07/17	LSY

Maxxam ID GK3353 **Collected** 2010/07/01
Sample ID LICA PUFF/QFF/CLS/JULY 01,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/07

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

Maxxam ID GK3354 **Collected** 2010/07/01
Sample ID LICA PUFF/QFF/PORT/JULY 01,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/07

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

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

Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
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
		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

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2202480	JIW	Method Blank	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-Methylanthracene	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-Dimethylanthracene	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	
			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	
2212165	LSY	Spiked Blank	Bromochloromethane	2010/07/17		98	%	60 - 140
			D5-Chlorobenzene	2010/07/17		99	%	60 - 140
			Difluorobenzene	2010/07/17		99	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/17		100	%	70 - 130
			Carbon Disulfide	2010/07/17		97	%	70 - 130
			Propene	2010/07/17		101	%	70 - 130
			Vinyl Acetate	2010/07/17		111	%	70 - 130
			Vinyl Bromide	2010/07/17		98	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/17		95	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/17		83	%	70 - 130
			Chloromethane	2010/07/17		92	%	70 - 130
			Vinyl Chloride	2010/07/17		97	%	70 - 130
			Chloroethane	2010/07/17		97	%	70 - 130
			1,3-Butadiene	2010/07/17		89	%	70 - 130

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

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2212165	LSY	Spiked Blank	Trichlorofluoromethane (FREON 11)	2010/07/17		94	%	70 - 130
			Trichlorotrifluoroethane	2010/07/17		96	%	70 - 130
			Ethanol	2010/07/17		117	%	70 - 130
			2-propanol	2010/07/17		111	%	70 - 130
			2-Propanone	2010/07/17		94	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/17		108	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/17		103	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/17		114	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/17		98	%	70 - 130
			Ethyl Acetate	2010/07/17		100	%	70 - 130
			1,1-Dichloroethylene	2010/07/17		97	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/17		97	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/17		100	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/17		78	%	70 - 130
			Chloroform	2010/07/17		96	%	70 - 130
			Carbon Tetrachloride	2010/07/17		97	%	70 - 130
			1,1-Dichloroethane	2010/07/17		95	%	70 - 130
			1,2-Dichloroethane	2010/07/17		95	%	70 - 130
			Ethylene Dibromide	2010/07/17		98	%	70 - 130
			1,1,1-Trichloroethane	2010/07/17		94	%	70 - 130
			1,1,2-Trichloroethane	2010/07/17		96	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/17		94	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/17		104	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/17		107	%	70 - 130
			1,2-Dichloropropane	2010/07/17		94	%	70 - 130
			Bromomethane	2010/07/17		89	%	70 - 130
			Bromoform	2010/07/17		111	%	70 - 130
			Bromodichloromethane	2010/07/17		102	%	70 - 130
			Dibromochloromethane	2010/07/17		103	%	70 - 130
			Heptane	2010/07/17		98	%	70 - 130
			Trichloroethylene	2010/07/17		94	%	70 - 130
			Tetrachloroethylene	2010/07/17		95	%	70 - 130
			Benzene	2010/07/17		94	%	70 - 130
			Toluene	2010/07/17		96	%	70 - 130
			Ethylbenzene	2010/07/17		95	%	70 - 130
			p+m-Xylene	2010/07/17		96	%	70 - 130
			o-Xylene	2010/07/17		95	%	70 - 130
			Styrene	2010/07/17		110	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/17		92	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/17		89	%	70 - 130
			4-ethyltoluene	2010/07/17		97	%	70 - 130
			Chlorobenzene	2010/07/17		97	%	70 - 130
			Benzyl chloride	2010/07/17		119	%	70 - 130
			1,3-Dichlorobenzene	2010/07/17		102	%	70 - 130
			1,4-Dichlorobenzene	2010/07/17		105	%	70 - 130
			1,2-Dichlorobenzene	2010/07/17		90	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/17		114	%	70 - 130
			Hexachlorobutadiene	2010/07/17		84	%	70 - 130
			Hexane	2010/07/17		96	%	70 - 130
			Cyclohexane	2010/07/17		98	%	70 - 130
			Tetrahydrofuran	2010/07/17		103	%	70 - 130
			1,4-Dioxane	2010/07/17		97	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/17		87	%	60 - 140
			D5-Chlorobenzene	2010/07/17		86	%	60 - 140
			Difluorobenzene	2010/07/17		89	%	60 - 140

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

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2212165	LSY	Method Blank	2,2,4-Trimethylpentane	2010/07/17	<0.20		ppbv	
			Carbon Disulfide	2010/07/17	<0.50		ppbv	
			Propene	2010/07/17	<0.30		ppbv	
			Vinyl Acetate	2010/07/17	<0.20		ppbv	
			Vinyl Bromide	2010/07/17	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/17	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/17	<0.17		ppbv	
			Chloromethane	2010/07/17	<0.30		ppbv	
			Vinyl Chloride	2010/07/17	<0.18		ppbv	
			Chloroethane	2010/07/17	<0.30		ppbv	
			1,3-Butadiene	2010/07/17	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/17	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/17	<0.15		ppbv	
			Ethanol	2010/07/17	<2.3		ppbv	
			2-propanol	2010/07/17	<3.0		ppbv	
			2-Propanone	2010/07/17	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/17	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/17	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/17	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/17	<0.20		ppbv	
			Ethyl Acetate	2010/07/17	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/17	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/17	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/17	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/17	0.42, RDL=0.30		ppbv	
			Chloroform	2010/07/17	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/17	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/17	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/17	<0.20		ppbv	
			Ethylene Dibromide	2010/07/17	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/17	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/17	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/17	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/17	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/17	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/17	<0.40		ppbv	
			Bromomethane	2010/07/17	<0.18		ppbv	
			Bromoform	2010/07/17	<0.20		ppbv	
			Bromodichloromethane	2010/07/17	<0.20		ppbv	
			Dibromochloromethane	2010/07/17	<0.20		ppbv	
			Heptane	2010/07/17	<0.30		ppbv	
			Trichloroethylene	2010/07/17	<0.30		ppbv	
			Tetrachloroethylene	2010/07/17	<0.20		ppbv	
			Benzene	2010/07/17	<0.18		ppbv	
			Toluene	2010/07/17	<0.20		ppbv	
			Ethylbenzene	2010/07/17	<0.20		ppbv	
			p+m-Xylene	2010/07/17	<0.37		ppbv	
			o-Xylene	2010/07/17	<0.20		ppbv	
			Styrene	2010/07/17	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/17	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/17	<0.50		ppbv	
			4-ethyltoluene	2010/07/17	<2.2		ppbv	
			Chlorobenzene	2010/07/17	<0.20		ppbv	
			Benzyl chloride	2010/07/17	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/17	<0.40		ppbv	

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
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Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2212165	LSY	Method Blank	1,4-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/17	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/17	<3.0		ppbv	
			Hexane	2010/07/17	<0.30		ppbv	
			Cyclohexane	2010/07/17	<0.20		ppbv	
			Tetrahydrofuran	2010/07/17	<0.40		ppbv	
			1,4-Dioxane	2010/07/17	<2.0		ppbv	
			Xylene (Total)	2010/07/17	<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.

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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/July 07, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: July 06, 2010 @ 16:45 mst
Removal Date/Time: July 08, 2010 @ 7:17 mst

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

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
05-Jul-10	08-Jul-10	14-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
714	229	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# 2342
GB082720 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/July 07, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2342

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B090884
Received: 2010/07/12, 08:30

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/22	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/08	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/22	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	2010/07/20	2010/09/07	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. #: 2342

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

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

Total cover pages: 2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GL6211	GL6212	
Sampling Date		2010/07/07	2010/07/07	
COC Number		2342	2342	
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2215425

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223583
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2223583
Propene	ug/m3	<0.52	<0.52	0.52	2223583
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223583
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223583
Dichlorodifluoromethane (FREON 12)	ug/m3	3.55	3.56	0.99	2223583
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223583
Chloromethane	ug/m3	1.21	1.29	0.62	2223583
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223583
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223583
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223583
Trichlorofluoromethane (FREON 11)	ug/m3	1.8	1.8	1.1	2223583
Ethanol	ug/m3	5.1	9.0	4.3	2223583
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223583
2-propanol	ug/m3	<7.4	<7.4	7.4	2223583
2-Propanone	ug/m3	7.8	7.6	1.9	2223583
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223583
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223583
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223583
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223583
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223583
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223583
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223583
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223583
Methylene Chloride(Dichloromethane)	ug/m3	1.7	1.7	1.0	2223583
Chloroform	ug/m3	<0.73	<0.73	0.73	2223583
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223583
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223583
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223583
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223583

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223583
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223583
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223583
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223583
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223583
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223583
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223583
Bromoform	ug/m3	<2.1	<2.1	2.1	2223583
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223583
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223583
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223583
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223583
Benzene	ug/m3	<0.58	<0.58	0.58	2223583
Toluene	ug/m3	1.00	<0.75	0.75	2223583
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223583
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2223583
o-Xylene	ug/m3	<0.87	<0.87	0.87	2223583
Styrene	ug/m3	<0.85	<0.85	0.85	2223583
4-ethyltoluene	ug/m3	<11	<11	11	2223583
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223583
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223583
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223583
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223583
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223583
Hexachlorobutadiene	ug/m3	<32	<32	32	2223583
Hexane	ug/m3	<1.1	<1.1	1.1	2223583
Heptane	ug/m3	<1.2	<1.2	1.2	2223583
Cyclohexane	ug/m3	<0.69	0.77	0.69	2223583
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223583

QC Batch = Quality Control Batch

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CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223583
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2223583

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

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

Maxxam ID		GL6213	GL6214		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA PUF/QFF/ CLS/ JULY 07,10**	**LICA PUF/QFF/ PORT/ JULY 07,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.16	<0.10	0.10	2217422
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217422
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217422
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217422
2-Methylnaphthalene	ug	0.28	0.21	0.10	2217422
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217422
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217422
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217422
Acenaphthene	ug	0.216	<0.050	0.050	2217422
Acenaphthylene	ug	<0.050	<0.050	0.050	2217422
Anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217422
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217422
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Biphenyl	ug	<0.10	<0.10	0.10	2217422
Chrysene	ug	<0.050	<0.050	0.050	2217422
Coronene	ug	<0.10	<0.10	0.10	2217422
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217422
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217422
Fluoranthene	ug	0.078	<0.050	0.050	2217422
Fluorene	ug	0.162	0.086	0.050	2217422
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217422
m-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Naphthalene	ug	0.202	0.130	0.072	2217422
o-Terphenyl	ug	<0.10	<0.10	0.10	2217422

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

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

Maxxam ID		GL6213	GL6214		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA PUF/QFF/ CLS/ JULY 07,10**	**LICA PUF/QFF/ PORT/ JULY 07,10**	**RDL**	**QC Batch**
Perylene	ug	<0.10	<0.10	0.10	2217422
Phenanthrene	ug	0.490	0.158	0.050	2217422
p-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Pyrene	ug	0.052	<0.050	0.050	2217422
Quinoline	ug	<0.40	<0.40	0.40	2217422
Tetralin	ug	<0.10	<0.10	0.10	2217422
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2217422
D10-Fluoranthene	%	112	106		2217422
D10-Fluorene (FS)	%	55	56		2217422
D10-Phenanthrene	%	98	94		2217422
D12-Benzo(a)anthracene	%	112	110		2217422
D12-Benzo(a)pyrene	%	88	82		2217422
D12-Benzo(b)fluoranthene	%	104	104		2217422
D12-Benzo(ghi)perylene	%	100	94		2217422
D12-Benzo(k)fluoranthene	%	104	100		2217422
D12-Chrysene	%	102	94		2217422
D12-Indeno(1,2,3-cd)pyrene	%	96	92		2217422
D12-Perylene	%	102	98		2217422
D14-Dibenzo(a,h)anthracene	%	78	76		2217422
D14-Terphenyl (FS)	%	104	98		2217422
D8-Acenaphthylene	%	100	102		2217422
D8-Naphthalene	%	74	82		2217422

QC Batch = Quality Control Batch

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Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2215433
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2215433
Propene	ppbv	<0.30	<0.30	0.30	2215433
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2215433
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2215433
Dichlorodifluoromethane (FREON 12)	ppbv	0.72	0.72	0.20	2215433
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2215433
Chloromethane	ppbv	0.59	0.62	0.30	2215433
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2215433
Chloroethane	ppbv	<0.30	<0.30	0.30	2215433
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2215433
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.32	0.20	2215433
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2215433
Ethanol	ppbv	2.7	4.8	2.3	2215433
2-propanol	ppbv	<3.0	<3.0	3.0	2215433
2-Propanone	ppbv	3.27	3.21	0.80	2215433
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2215433
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2215433
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2215433
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2215433
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2215433
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2215433
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2215433
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2215433
Methylene Chloride(Dichloromethane)	ppbv	0.48	0.50	0.30	2215433
Chloroform	ppbv	<0.15	<0.15	0.15	2215433
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2215433
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2215433
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2215433
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2215433

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2215433
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2215433
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2215433
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2215433
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2215433
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2215433
Bromomethane	ppbv	<0.18	<0.18	0.18	2215433
Bromoform	ppbv	<0.20	<0.20	0.20	2215433
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2215433
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2215433
Heptane	ppbv	<0.30	<0.30	0.30	2215433
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2215433
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2215433
Benzene	ppbv	<0.18	<0.18	0.18	2215433
Toluene	ppbv	0.27	<0.20	0.20	2215433
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2215433
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2215433
o-Xylene	ppbv	<0.20	<0.20	0.20	2215433
Styrene	ppbv	<0.20	<0.20	0.20	2215433
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2215433
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2215433
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2215433
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2215433
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2215433
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2215433
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2215433
Hexane	ppbv	<0.30	<0.30	0.30	2215433
Cyclohexane	ppbv	<0.20	0.22	0.20	2215433
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2215433

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2215433
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2215433
Surrogate Recovery (%)					
Bromochloromethane	%	84	81		2215433
D5-Chlorobenzene	%	82	80		2215433
Difluorobenzene	%	85	83		2215433

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

Test Summary

Maxxam ID GL6211 **Collected** 2010/07/07
Sample ID LICA VOC/ CLS/ JULY 07,10 - 7856 **Shipped**
Matrix AIR **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2215425	N/A	2010/07/22	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2223583	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2215433	N/A	2010/07/22	LSY

Maxxam ID GL6212 **Collected** 2010/07/07
Sample ID LICA VOC/ PORT/ JULY 07,10 - S2312 **Shipped**
Matrix AIR **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2215425	N/A	2010/07/22	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2223583	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2215433	N/A	2010/07/22	LSY

Maxxam ID GL6213 **Collected** 2010/07/07
Sample ID LICA PUF/QFF/ CLS/ JULY 07,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

Maxxam ID GL6214 **Collected** 2010/07/07
Sample ID LICA PUF/QFF/ PORT/ JULY 07,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Spiked Blank	Bromochloromethane	2010/07/22		121	%	60 - 140
			D5-Chlorobenzene	2010/07/22		118	%	60 - 140
			Difluorobenzene	2010/07/22		123	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/22		95	%	70 - 130
			Carbon Disulfide	2010/07/22		94	%	70 - 130
			Propene	2010/07/22		92	%	70 - 130
			Vinyl Acetate	2010/07/22		106	%	70 - 130
			Vinyl Bromide	2010/07/22		99	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/22		85	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/22		78	%	70 - 130
			Chloromethane	2010/07/22		85	%	70 - 130
			Vinyl Chloride	2010/07/22		94	%	70 - 130
			Chloroethane	2010/07/22		95	%	70 - 130
			1,3-Butadiene	2010/07/22		78	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/07/22		85	%	70 - 130
			Trichlorotrifluoroethane	2010/07/22		92	%	70 - 130
			Ethanol	2010/07/22		121	%	70 - 130
			2-propanol	2010/07/22		103	%	70 - 130
			2-Propanone	2010/07/22		97	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/22		99	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/22		91	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/22		96	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/22		95	%	70 - 130
			Ethyl Acetate	2010/07/22		92	%	70 - 130
			1,1-Dichloroethylene	2010/07/22		89	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/22		89	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/22		93	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/22		79	%	70 - 130
			Chloroform	2010/07/22		88	%	70 - 130
			Carbon Tetrachloride	2010/07/22		93	%	70 - 130
			1,1-Dichloroethane	2010/07/22		89	%	70 - 130
			1,2-Dichloroethane	2010/07/22		83	%	70 - 130
			Ethylene Dibromide	2010/07/22		88	%	70 - 130
			1,1,1-Trichloroethane	2010/07/22		89	%	70 - 130
			1,1,2-Trichloroethane	2010/07/22		91	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/22		89	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/22		97	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/22		95	%	70 - 130
			1,2-Dichloropropane	2010/07/22		89	%	70 - 130
			Bromomethane	2010/07/22		88	%	70 - 130
			Bromoform	2010/07/22		107	%	70 - 130
			Bromodichloromethane	2010/07/22		95	%	70 - 130
			Dibromochloromethane	2010/07/22		98	%	70 - 130
			Heptane	2010/07/22		92	%	70 - 130
			Trichloroethylene	2010/07/22		91	%	70 - 130
			Tetrachloroethylene	2010/07/22		90	%	70 - 130
			Benzene	2010/07/22		91	%	70 - 130
			Toluene	2010/07/22		92	%	70 - 130
			Ethylbenzene	2010/07/22		91	%	70 - 130
			p+m-Xylene	2010/07/22		91	%	70 - 130
			o-Xylene	2010/07/22		89	%	70 - 130
			Styrene	2010/07/22		94	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/22		87	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/22		83	%	70 - 130
			4-ethyltoluene	2010/07/22		91	%	70 - 130

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Attention: Michael Bisaga
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Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Spiked Blank	Chlorobenzene	2010/07/22		90	%	70 - 130
			Benzyl chloride	2010/07/22		97	%	70 - 130
			1,3-Dichlorobenzene	2010/07/22		85	%	70 - 130
			1,4-Dichlorobenzene	2010/07/22		82	%	70 - 130
			1,2-Dichlorobenzene	2010/07/22		80	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/22		90	%	70 - 130
			Hexachlorobutadiene	2010/07/22		89	%	70 - 130
			Hexane	2010/07/22		92	%	70 - 130
			Cyclohexane	2010/07/22		94	%	70 - 130
			Tetrahydrofuran	2010/07/22		95	%	70 - 130
			1,4-Dioxane	2010/07/22		91	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/22		100	%	60 - 140
			D5-Chlorobenzene	2010/07/22		97	%	60 - 140
			Difluorobenzene	2010/07/22		103	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/22	<0.20		ppbv	
			Carbon Disulfide	2010/07/22	<0.50		ppbv	
			Propene	2010/07/22	<0.30		ppbv	
			Vinyl Acetate	2010/07/22	<0.20		ppbv	
			Vinyl Bromide	2010/07/22	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/22	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/22	<0.17		ppbv	
			Chloromethane	2010/07/22	<0.30		ppbv	
			Vinyl Chloride	2010/07/22	<0.18		ppbv	
			Chloroethane	2010/07/22	<0.30		ppbv	
			1,3-Butadiene	2010/07/22	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/22	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/22	<0.15		ppbv	
			Ethanol	2010/07/22	<2.3		ppbv	
			2-propanol	2010/07/22	<3.0		ppbv	
			2-Propanone	2010/07/22	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/22	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/22	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/22	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/22	<0.20		ppbv	
			Ethyl Acetate	2010/07/22	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/22	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/22	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/22	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/22	0.41, RDL=0.30		ppbv	
			Chloroform	2010/07/22	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/22	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/22	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/22	<0.20		ppbv	
			Ethylene Dibromide	2010/07/22	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/22	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/22	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/22	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/22	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/22	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/22	<0.40		ppbv	
			Bromomethane	2010/07/22	<0.18		ppbv	
			Bromoform	2010/07/22	<0.20		ppbv	
			Bromodichloromethane	2010/07/22	<0.20		ppbv	
			Dibromochloromethane	2010/07/22	<0.20		ppbv	
			Heptane	2010/07/22	<0.30		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Method Blank	Trichloroethylene	2010/07/22	<0.30		ppbv	
			Tetrachloroethylene	2010/07/22	<0.20		ppbv	
			Benzene	2010/07/22	<0.18		ppbv	
			Toluene	2010/07/22	<0.20		ppbv	
			Ethylbenzene	2010/07/22	<0.20		ppbv	
			p+m-Xylene	2010/07/22	<0.37		ppbv	
			o-Xylene	2010/07/22	<0.20		ppbv	
			Styrene	2010/07/22	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/22	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/22	<0.50		ppbv	
			4-ethyltoluene	2010/07/22	<2.2		ppbv	
			Chlorobenzene	2010/07/22	<0.20		ppbv	
			Benzyl chloride	2010/07/22	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/22	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/22	<3.0		ppbv	
			Hexane	2010/07/22	<0.30		ppbv	
			Cyclohexane	2010/07/22	<0.20		ppbv	
			Tetrahydrofuran	2010/07/22	<0.40		ppbv	
			1,4-Dioxane	2010/07/22	<2.0		ppbv	
			Xylene (Total)	2010/07/22	<0.60		ppbv	
		RPD - Sample/Sample Dup	Benzene	2010/07/22	NC		%	25
2217422	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/08/24		70	%	50 - 150
			D10-Fluoranthene	2010/08/24		100	%	50 - 150
			D10-Phenanthrene	2010/08/24		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		140	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		90	%	50 - 150
			D12-Chrysene	2010/08/24		84	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		100	%	50 - 150
			D12-Perylene	2010/08/24		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		90	%	50 - 150
			D8-Acenaphthylene	2010/08/24		106	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			Acenaphthene	2010/08/24		83	%	60 - 130
		RPD	Acenaphthene	2010/08/24	0.6		%	50
		Spiked Blank	Acenaphthylene	2010/08/24		104	%	60 - 130
		RPD	Acenaphthylene	2010/08/24	0.5		%	50
		Spiked Blank	Anthracene	2010/08/24		84	%	60 - 130
		RPD	Anthracene	2010/08/24	4.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/08/24		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/08/24	1.0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/08/24		84	%	60 - 130
		RPD	Benzo(a)pyrene	2010/08/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/08/24		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/08/24	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/08/24		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/08/24	1.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/08/24		82	%	60 - 130

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
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Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	RPD	Benzo(k)fluoranthene	2010/08/24	5.9		%	50
		Spiked Blank	Chrysene	2010/08/24		81	%	60 - 130
		RPD	Chrysene	2010/08/24	6.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/08/24		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/08/24	1.2		%	50
		Spiked Blank	Fluoranthene	2010/08/24		94	%	60 - 130
		RPD	Fluoranthene	2010/08/24	1.6		%	50
		Spiked Blank	Fluorene	2010/08/24		84	%	60 - 130
		RPD	Fluorene	2010/08/24	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/08/24		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/08/24	0.3		%	50
		Spiked Blank	Naphthalene	2010/08/24		69	%	60 - 130
		RPD	Naphthalene	2010/08/24	2.2		%	50
		Spiked Blank	Phenanthrene	2010/08/24		83	%	60 - 130
		RPD	Phenanthrene	2010/08/24	1.8		%	50
		Spiked Blank	Pyrene	2010/08/24		96	%	60 - 130
		RPD	Pyrene	2010/08/24	2.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/08/24		68	%	50 - 150
			D10-Fluoranthene	2010/08/24		98	%	50 - 150
			D10-Phenanthrene	2010/08/24		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		132	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		102	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		82	%	50 - 150
			D12-Chrysene	2010/08/24		82	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		94	%	50 - 150
			D12-Perylene	2010/08/24		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		84	%	50 - 150
			D8-Acenaphthylene	2010/08/24		108	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			1-Methylnaphthalene	2010/08/24	<0.10		ug	
			1-Methylphenanthrene	2010/08/24	<0.10		ug	
			2-Chloronaphthalene	2010/08/24	<0.10		ug	
			2-Methylanthracene	2010/08/24	<0.10		ug	
			2-Methylnaphthalene	2010/08/24	<0.10		ug	
			3-Methylcholanthrene	2010/08/24	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/08/24	<0.10		ug	
			9,10-Dimethylanthracene	2010/08/24	<0.40		ug	
			Acenaphthene	2010/08/24	<0.050		ug	
			Acenaphthylene	2010/08/24	<0.050		ug	
			Anthracene	2010/08/24	<0.050		ug	
			Benzo(a)anthracene	2010/08/24	<0.050		ug	
			Benzo(a)fluorene	2010/08/24	<0.10		ug	
			Benzo(a)pyrene	2010/08/24	<0.050		ug	
			Benzo(b)fluoranthene	2010/08/24	<0.050		ug	
			Benzo(b)fluorene	2010/08/24	<0.10		ug	
			Benzo(e)pyrene	2010/08/24	<0.10		ug	
			Benzo(g,h,i)perylene	2010/08/24	<0.050		ug	
			Benzo(k)fluoranthene	2010/08/24	<0.050		ug	
			Biphenyl	2010/08/24	<0.10		ug	
			Chrysene	2010/08/24	<0.050		ug	
			Coronene	2010/08/24	<0.10		ug	
			Dibenz(a,h)anthracene	2010/08/24	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/08/24	<0.20		ug	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Method Blank	Fluoranthene	2010/08/24	<0.050		ug	
			Fluorene	2010/08/24	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/08/24	<0.050		ug	
			m-Terphenyl	2010/08/24	<0.10		ug	
			Naphthalene	2010/08/24	<0.072		ug	
			o-Terphenyl	2010/08/24	<0.10		ug	
			Perylene	2010/08/24	<0.10		ug	
			Phenanthrene	2010/08/24	<0.050		ug	
			p-Terphenyl	2010/08/24	<0.10		ug	
			Pyrene	2010/08/24	<0.050		ug	
			Quinoline	2010/08/24	<0.40		ug	
			Tetralin	2010/08/24	<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.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Maxxam Analytics Inc.

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

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

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: July 12, 2010 @ 9:40 mst
Removal Date/Time: July 14, 2010 @ 10:01 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
13-Jul-10	13/07/2010 0:00	14/07/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
09-Jul-10	15-Jul-10	20-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
700	229	16.2	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# 2310
GB082773 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/July 13, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2310

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B094870
Received: 2010/07/17, 15:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/28	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/08	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/28	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)	1	2010/07/20	2010/09/07	BRL SOP-00201	CARB429(ARBM1,M2)mod
PAH's in Air (CARB429mod)	1	2010/07/20	2010/09/08	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.

../2

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

Your C.O.C. #: 2310

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

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

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

==========

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

Total cover pages: 2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GN6253	GO2032	
Sampling Date		2010/07/13	2010/07/13	
COC Number		2310	2310	
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2221074

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223586
Carbon Disulfide	ug/m3	<1.6	4.6	1.6	2223586
Propene	ug/m3	<0.52	<0.52	0.52	2223586
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223586
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223586
Dichlorodifluoromethane (FREON 12)	ug/m3	3.44	3.36	0.99	2223586
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223586
Chloromethane	ug/m3	1.15	<0.62	0.62	2223586
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223586
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223586
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223586
Trichlorofluoromethane (FREON 11)	ug/m3	2.0	1.9	1.1	2223586
Ethanol	ug/m3	7.4	6.4	4.3	2223586
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223586
2-propanol	ug/m3	<7.4	<7.4	7.4	2223586
2-Propanone	ug/m3	11.3	11.8	1.9	2223586
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223586
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223586
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223586
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223586
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223586
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223586
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223586
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223586
Methylene Chloride(Dichloromethane)	ug/m3	1.1	1.1	1.0	2223586
Chloroform	ug/m3	<0.73	<0.73	0.73	2223586
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223586
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223586
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223586
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223586
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223586

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223586
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223586
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223586
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223586
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223586
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223586
Bromoform	ug/m3	<2.1	<2.1	2.1	2223586
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223586
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223586
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223586
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223586
Benzene	ug/m3	<0.58	<0.58	0.58	2223586
Toluene	ug/m3	<0.75	<0.75	0.75	2223586
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223586
p+m-Xylene	ug/m3	<1.6	4.9	1.6	2223586
o-Xylene	ug/m3	<0.87	1.48	0.87	2223586
Styrene	ug/m3	<0.85	<0.85	0.85	2223586
4-ethyltoluene	ug/m3	<11	<11	11	2223586
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223586
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223586
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223586
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223586
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223586
Hexachlorobutadiene	ug/m3	<32	<32	32	2223586
Hexane	ug/m3	<1.1	<1.1	1.1	2223586
Heptane	ug/m3	<1.2	<1.2	1.2	2223586
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2223586
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223586
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223586
Xylene (Total)	ug/m3	<2.6	6.4	2.6	2223586

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

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

Maxxam ID		GN6254	GN6255		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA PUF/CLS/JULY 13, 10**	**LICA PUF/PORT/JULY 13, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2217422
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217422
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217422
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217422
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2217422
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217422
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217422
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217422
Acenaphthene	ug	<0.050	<0.050	0.050	2217422
Acenaphthylene	ug	<0.050	<0.050	0.050	2217422
Anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217422
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217422
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Biphenyl	ug	<0.10	<0.10	0.10	2217422
Chrysene	ug	<0.050	<0.050	0.050	2217422
Coronene	ug	<0.10	<0.10	0.10	2217422
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217422
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217422
Fluoranthene	ug	0.074	<0.050	0.050	2217422
Fluorene	ug	0.084	<0.050	0.050	2217422
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217422
m-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Naphthalene	ug	0.076	<0.072	0.072	2217422
o-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Perylene	ug	<0.10	<0.10	0.10	2217422

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

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

Maxxam ID		GN6254	GN6255		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA PUF/CLS/JULY 13, 10**	**LICA PUF/PORT/JULY 13, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.428	0.122	0.050	2217422
p-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Pyrene	ug	<0.050	<0.050	0.050	2217422
Quinoline	ug	<0.40	<0.40	0.40	2217422
Tetralin	ug	<0.10	<0.10	0.10	2217422
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2217422
D10-Fluoranthene	%	108	106		2217422
D10-Fluorene (FS)	%	52	58		2217422
D10-Phenanthrene	%	98	96		2217422
D12-Benzo(a)anthracene	%	110	108		2217422
D12-Benzo(a)pyrene	%	92	92		2217422
D12-Benzo(b)fluoranthene	%	102	102		2217422
D12-Benzo(ghi)perylene	%	98	96		2217422
D12-Benzo(k)fluoranthene	%	98	100		2217422
D12-Chrysene	%	100	104		2217422
D12-Indeno(1,2,3-cd)pyrene	%	94	94		2217422
D12-Perylene	%	98	98		2217422
D14-Dibenzo(a,h)anthracene	%	76	76		2217422
D14-Terphenyl (FS)	%	98	99		2217422
D8-Acenaphthylene	%	104	108		2217422
D8-Naphthalene	%	76	82		2217422

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2220603
Carbon Disulfide	ppbv	<0.50	1.49	0.50	2220603
Propene	ppbv	<0.30	<0.30	0.30	2220603
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2220603
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2220603
Dichlorodifluoromethane (FREON 12)	ppbv	0.70	0.68	0.20	2220603
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2220603
Chloromethane	ppbv	0.56	<0.30	0.30	2220603
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2220603
Chloroethane	ppbv	<0.30	<0.30	0.30	2220603
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2220603
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.33	0.20	2220603
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2220603
Ethanol	ppbv	3.9	3.4	2.3	2220603
2-propanol	ppbv	<3.0	<3.0	3.0	2220603
2-Propanone	ppbv	4.75	4.98	0.80	2220603
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2220603
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2220603
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2220603
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2220603
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2220603
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2220603
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2220603
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2220603
Methylene Chloride(Dichloromethane)	ppbv	0.31	0.31	0.30	2220603
Chloroform	ppbv	<0.15	<0.15	0.15	2220603
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2220603
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2220603
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2220603
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2220603
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2220603

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2220603
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2220603
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2220603
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2220603
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2220603
Bromomethane	ppbv	<0.18	<0.18	0.18	2220603
Bromoform	ppbv	<0.20	<0.20	0.20	2220603
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2220603
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2220603
Heptane	ppbv	<0.30	<0.30	0.30	2220603
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2220603
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2220603
Benzene	ppbv	<0.18	<0.18	0.18	2220603
Toluene	ppbv	<0.20	<0.20	0.20	2220603
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2220603
p+m-Xylene	ppbv	<0.37	1.13	0.37	2220603
o-Xylene	ppbv	<0.20	0.34	0.20	2220603
Styrene	ppbv	<0.20	<0.20	0.20	2220603
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2220603
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2220603
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2220603
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2220603
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2220603
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2220603
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2220603
Hexane	ppbv	<0.30	<0.30	0.30	2220603
Cyclohexane	ppbv	<0.20	<0.20	0.20	2220603
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2220603
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2220603
Xylene (Total)	ppbv	<0.60	1.47	0.60	2220603

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Surrogate Recovery (%)					
Bromochloromethane	%	77	80		2220603
D5-Chlorobenzene	%	79	82		2220603
Difluorobenzene	%	80	82		2220603

QC Batch = Quality Control Batch

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Maxxam Job #: B094870
Report Date: 2010/09/08

Test Summary

Maxxam ID GN6253 **Collected** 2010/07/13
Sample ID LICA VOC/PORT/JULY 13, 10 - 7871 **Shipped**
Matrix AIR **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221074	N/A	2010/07/28	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223586	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2220603	N/A	2010/07/28	MM2

Maxxam ID GN6254 **Collected** 2010/07/13
Sample ID LICA PUF/CLS/JULY 13, 10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

Maxxam ID GN6255 **Collected** 2010/07/13
Sample ID LICA PUF/PORT/JULY 13, 10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/08	WZ

Maxxam ID GO2032 **Collected** 2010/07/13
Sample ID LICA VOC/CLS/JULY12,10 **Shipped**
Matrix AIR **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221074	N/A	2010/07/28	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223586	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2220603	N/A	2010/07/28	MM2

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GENERAL COMMENTS

Results relate only to the items tested.

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
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Project name:

Quality Assurance Report

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/08/24		70	%	50 - 150
			D10-Fluoranthene	2010/08/24		100	%	50 - 150
			D10-Phenanthrene	2010/08/24		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		140	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		90	%	50 - 150
			D12-Chrysene	2010/08/24		84	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		100	%	50 - 150
			D12-Perylene	2010/08/24		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		90	%	50 - 150
			D8-Acenaphthylene	2010/08/24		106	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			Acenaphthene	2010/08/24		83	%	60 - 130
		RPD	Acenaphthene	2010/08/24	0.6		%	50
		Spiked Blank	Acenaphthylene	2010/08/24		104	%	60 - 130
		RPD	Acenaphthylene	2010/08/24	0.5		%	50
		Spiked Blank	Anthracene	2010/08/24		84	%	60 - 130
		RPD	Anthracene	2010/08/24	4.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/08/24		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/08/24	1.0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/08/24		84	%	60 - 130
		RPD	Benzo(a)pyrene	2010/08/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/08/24		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/08/24	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/08/24		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/08/24	1.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/08/24		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/08/24	5.9		%	50
		Spiked Blank	Chrysene	2010/08/24		81	%	60 - 130
		RPD	Chrysene	2010/08/24	6.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/08/24		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/08/24	1.2		%	50
		Spiked Blank	Fluoranthene	2010/08/24		94	%	60 - 130
		RPD	Fluoranthene	2010/08/24	1.6		%	50
		Spiked Blank	Fluorene	2010/08/24		84	%	60 - 130
		RPD	Fluorene	2010/08/24	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/08/24		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/08/24	0.3		%	50
		Spiked Blank	Naphthalene	2010/08/24		69	%	60 - 130
		RPD	Naphthalene	2010/08/24	2.2		%	50
		Spiked Blank	Phenanthrene	2010/08/24		83	%	60 - 130
		RPD	Phenanthrene	2010/08/24	1.8		%	50
		Spiked Blank	Pyrene	2010/08/24		96	%	60 - 130
		RPD	Pyrene	2010/08/24	2.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/08/24		68	%	50 - 150
			D10-Fluoranthene	2010/08/24		98	%	50 - 150
			D10-Phenanthrene	2010/08/24		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		132	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		102	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		82	%	50 - 150
			D12-Chrysene	2010/08/24		82	%	50 - 150

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Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/08/24		94	%	50 - 150
			D12-Perylene	2010/08/24		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		84	%	50 - 150
			D8-Acenaphthylene	2010/08/24		108	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			1-Methylnaphthalene	2010/08/24	<0.10		ug	
			1-Methylphenanthrene	2010/08/24	<0.10		ug	
			2-Chloronaphthalene	2010/08/24	<0.10		ug	
			2-Methylanthracene	2010/08/24	<0.10		ug	
			2-Methylnaphthalene	2010/08/24	<0.10		ug	
			3-Methylcholanthrene	2010/08/24	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/08/24	<0.10		ug	
			9,10-Dimethylanthracene	2010/08/24	<0.40		ug	
			Acenaphthene	2010/08/24	<0.050		ug	
			Acenaphthylene	2010/08/24	<0.050		ug	
			Anthracene	2010/08/24	<0.050		ug	
			Benzo(a)anthracene	2010/08/24	<0.050		ug	
			Benzo(a)fluorene	2010/08/24	<0.10		ug	
			Benzo(a)pyrene	2010/08/24	<0.050		ug	
			Benzo(b)fluoranthene	2010/08/24	<0.050		ug	
			Benzo(b)fluorene	2010/08/24	<0.10		ug	
			Benzo(e)pyrene	2010/08/24	<0.10		ug	
			Benzo(g,h,i)perylene	2010/08/24	<0.050		ug	
			Benzo(k)fluoranthene	2010/08/24	<0.050		ug	
			Biphenyl	2010/08/24	<0.10		ug	
			Chrysene	2010/08/24	<0.050		ug	
			Coronene	2010/08/24	<0.10		ug	
			Dibenz(a,h)anthracene	2010/08/24	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/08/24	<0.20		ug	
			Fluoranthene	2010/08/24	<0.050		ug	
			Fluorene	2010/08/24	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/08/24	<0.050		ug	
			m-Terphenyl	2010/08/24	<0.10		ug	
			Naphthalene	2010/08/24	<0.072		ug	
			o-Terphenyl	2010/08/24	<0.10		ug	
			Perylene	2010/08/24	<0.10		ug	
			Phenanthrene	2010/08/24	<0.050		ug	
			p-Terphenyl	2010/08/24	<0.10		ug	
			Pyrene	2010/08/24	<0.050		ug	
			Quinoline	2010/08/24	<0.40		ug	
			Tetralin	2010/08/24	<0.10		ug	
2220603	MM2	Spiked Blank	Bromochloromethane	2010/07/28		95	%	60 - 140
			D5-Chlorobenzene	2010/07/28		96	%	60 - 140
			Difluorobenzene	2010/07/28		97	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/28		81	%	70 - 130
			Carbon Disulfide	2010/07/28		84	%	70 - 130
			Propene	2010/07/28		89	%	70 - 130
			Vinyl Acetate	2010/07/28		93	%	70 - 130
			Vinyl Bromide	2010/07/28		90	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/28		89	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/28		76	%	70 - 130
			Chloromethane	2010/07/28		87	%	70 - 130
			Vinyl Chloride	2010/07/28		92	%	70 - 130
			Chloroethane	2010/07/28		93	%	70 - 130
			1,3-Butadiene	2010/07/28		92	%	70 - 130

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Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Spiked Blank	Trichlorofluoromethane (FREON 11)	2010/07/28		94	%	70 - 130
			Trichlorotrifluoroethane	2010/07/28		66 (1)	%	70 - 130
			Ethanol	2010/07/28		102	%	70 - 130
			2-propanol	2010/07/28		85	%	70 - 130
			2-Propanone	2010/07/28		89	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28		82	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/28		86	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28		86	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/28		76	%	70 - 130
			Ethyl Acetate	2010/07/28		83	%	70 - 130
			1,1-Dichloroethylene	2010/07/28		70	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/28		84	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/28		86	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/28		77	%	70 - 130
			Chloroform	2010/07/28		86	%	70 - 130
			Carbon Tetrachloride	2010/07/28		99	%	70 - 130
			1,1-Dichloroethane	2010/07/28		80	%	70 - 130
			1,2-Dichloroethane	2010/07/28		81	%	70 - 130
			Ethylene Dibromide	2010/07/28		92	%	70 - 130
			1,1,1-Trichloroethane	2010/07/28		91	%	70 - 130
			1,1,2-Trichloroethane	2010/07/28		90	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/28		83	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/28		90	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/28		92	%	70 - 130
			1,2-Dichloropropane	2010/07/28		85	%	70 - 130
			Bromomethane	2010/07/28		101	%	70 - 130
			Bromoform	2010/07/28		99	%	70 - 130
			Bromodichloromethane	2010/07/28		85	%	70 - 130
			Dibromochloromethane	2010/07/28		95	%	70 - 130
			Heptane	2010/07/28		85	%	70 - 130
			Trichloroethylene	2010/07/28		93	%	70 - 130
			Tetrachloroethylene	2010/07/28		95	%	70 - 130
			Benzene	2010/07/28		85	%	70 - 130
			Toluene	2010/07/28		89	%	70 - 130
			Ethylbenzene	2010/07/28		87	%	70 - 130
			p+m-Xylene	2010/07/28		90	%	70 - 130
			o-Xylene	2010/07/28		86	%	70 - 130
			Styrene	2010/07/28		90	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/28		87	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/28		84	%	70 - 130
			4-ethyltoluene	2010/07/28		80	%	70 - 130
			Chlorobenzene	2010/07/28		92	%	70 - 130
			Benzyl chloride	2010/07/28		79	%	70 - 130
			1,3-Dichlorobenzene	2010/07/28		94	%	70 - 130
			1,4-Dichlorobenzene	2010/07/28		91	%	70 - 130
			1,2-Dichlorobenzene	2010/07/28		83	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/28		86	%	70 - 130
			Hexachlorobutadiene	2010/07/28		84	%	70 - 130
			Hexane	2010/07/28		77	%	70 - 130
			Cyclohexane	2010/07/28		82	%	70 - 130
			Tetrahydrofuran	2010/07/28		82	%	70 - 130
			1,4-Dioxane	2010/07/28		85	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/28		90	%	60 - 140
			D5-Chlorobenzene	2010/07/28		89	%	60 - 140
			Difluorobenzene	2010/07/28		91	%	60 - 140

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Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Method Blank	2,2,4-Trimethylpentane	2010/07/28	<0.20		ppbv	
			Carbon Disulfide	2010/07/28	<0.50		ppbv	
			Propene	2010/07/28	<0.30		ppbv	
			Vinyl Acetate	2010/07/28	<0.20		ppbv	
			Vinyl Bromide	2010/07/28	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/28	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/28	<0.17		ppbv	
			Chloromethane	2010/07/28	<0.30		ppbv	
			Vinyl Chloride	2010/07/28	<0.18		ppbv	
			Chloroethane	2010/07/28	<0.30		ppbv	
			1,3-Butadiene	2010/07/28	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/28	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/28	<0.15		ppbv	
			Ethanol	2010/07/28	<2.3		ppbv	
			2-propanol	2010/07/28	<3.0		ppbv	
			2-Propanone	2010/07/28	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/28	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/28	<0.20		ppbv	
			Ethyl Acetate	2010/07/28	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/28	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/28	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/28	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/28	<0.30		ppbv	
			Chloroform	2010/07/28	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/28	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/28	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/28	<0.20		ppbv	
			Ethylene Dibromide	2010/07/28	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/28	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/28	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/28	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/28	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/28	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/28	<0.40		ppbv	
			Bromomethane	2010/07/28	<0.18		ppbv	
			Bromoform	2010/07/28	<0.20		ppbv	
			Bromodichloromethane	2010/07/28	<0.20		ppbv	
			Dibromochloromethane	2010/07/28	<0.20		ppbv	
			Heptane	2010/07/28	<0.30		ppbv	
			Trichloroethylene	2010/07/28	<0.30		ppbv	
			Tetrachloroethylene	2010/07/28	<0.20		ppbv	
			Benzene	2010/07/28	<0.18		ppbv	
			Toluene	2010/07/28	<0.20		ppbv	
			Ethylbenzene	2010/07/28	<0.20		ppbv	
			p+m-Xylene	2010/07/28	<0.37		ppbv	
			o-Xylene	2010/07/28	<0.20		ppbv	
			Styrene	2010/07/28	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/28	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/28	<0.50		ppbv	
			4-ethyltoluene	2010/07/28	<2.2		ppbv	
			Chlorobenzene	2010/07/28	<0.20		ppbv	
			Benzyl chloride	2010/07/28	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/28	<0.40		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Method Blank	1,4-Dichlorobenzene	2010/07/28	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/28	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/28	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/28	<3.0		ppbv	
			Hexane	2010/07/28	<0.30		ppbv	
			Cyclohexane	2010/07/28	<0.20		ppbv	
			Tetrahydrofuran	2010/07/28	<0.40		ppbv	
			1,4-Dioxane	2010/07/28	<2.0		ppbv	
			Xylene (Total)	2010/07/28	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/07/28	NC		%	25
			Carbon Disulfide	2010/07/28	NC		%	25
			Propene	2010/07/28	NC		%	25
			Vinyl Acetate	2010/07/28	NC		%	25
			Vinyl Bromide	2010/07/28	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/07/28	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/07/28	NC		%	25
			Chloromethane	2010/07/28	NC		%	25
			Vinyl Chloride	2010/07/28	NC		%	25
			Chloroethane	2010/07/28	NC		%	25
			1,3-Butadiene	2010/07/28	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/07/28	NC		%	25
			Trichlorotrifluoroethane	2010/07/28	NC		%	25
			Ethanol	2010/07/28	NC		%	25
			2-propanol	2010/07/28	NC		%	25
			2-Propanone	2010/07/28	0.8		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28	NC		%	25
			Methyl Isobutyl Ketone	2010/07/28	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/07/28	NC		%	25
			Ethyl Acetate	2010/07/28	NC		%	25
			1,1-Dichloroethylene	2010/07/28	NC		%	25
			cis-1,2-Dichloroethylene	2010/07/28	NC		%	25
			trans-1,2-Dichloroethylene	2010/07/28	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/07/28	NC		%	25
			Chloroform	2010/07/28	NC		%	25
			Carbon Tetrachloride	2010/07/28	NC		%	25
			1,1-Dichloroethane	2010/07/28	NC		%	25
			1,2-Dichloroethane	2010/07/28	NC		%	25
			Ethylene Dibromide	2010/07/28	NC		%	25
			1,1,1-Trichloroethane	2010/07/28	NC		%	25
			1,1,2-Trichloroethane	2010/07/28	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/07/28	NC		%	25
			cis-1,3-Dichloropropene	2010/07/28	NC		%	25
			trans-1,3-Dichloropropene	2010/07/28	NC		%	25
			1,2-Dichloropropane	2010/07/28	NC		%	25
			Bromomethane	2010/07/28	NC		%	25
			Bromoform	2010/07/28	NC		%	25
			Bromodichloromethane	2010/07/28	NC		%	25
			Dibromochloromethane	2010/07/28	NC		%	25
			Heptane	2010/07/28	NC		%	25
			Trichloroethylene	2010/07/28	NC		%	25
			Tetrachloroethylene	2010/07/28	NC		%	25
			Benzene	2010/07/28	NC		%	25

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	RPD - Sample/Sample Dup	Toluene	2010/07/28	NC		%	25
			Ethylbenzene	2010/07/28	NC		%	25
			p+m-Xylene	2010/07/28	NC		%	25
			o-Xylene	2010/07/28	NC		%	25
			Styrene	2010/07/28	NC		%	25
			1,3,5-Trimethylbenzene	2010/07/28	NC		%	25
			1,2,4-Trimethylbenzene	2010/07/28	NC		%	25
			4-ethyltoluene	2010/07/28	NC		%	25
			Chlorobenzene	2010/07/28	NC		%	25
			Benzyl chloride	2010/07/28	NC		%	25
			1,3-Dichlorobenzene	2010/07/28	NC		%	25
			1,4-Dichlorobenzene	2010/07/28	NC		%	25
			1,2-Dichlorobenzene	2010/07/28	NC		%	25
			1,2,4-Trichlorobenzene	2010/07/28	NC		%	25
			Hexachlorobutadiene	2010/07/28	NC		%	25
			Hexane	2010/07/28	NC		%	25
			Cyclohexane	2010/07/28	NC		%	25
			Tetrahydrofuran	2010/07/28	NC		%	25
			1,4-Dioxane	2010/07/28	NC		%	25
			Xylene (Total)	2010/07/28	NC		%	25

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.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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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/July 19, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: July 16, 2010 @ 9:07 mst
Removal Date/Time: Julu 20 ,2010 @ 7:06 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
19-Jul-10	19/07/2010 0:00	20/07/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
15-Jul-10	20-Jul-10	27-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
713	229	17.2	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# 2312
GB082793 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/July 19, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2312

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B097382
Received: 2010/07/22, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/07/26	2010/09/08	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

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

Total cover pages: 1

Lakeland Industry & Community Assoc.

Maxxam Job #: B097382
Report Date: 2010/09/08

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

Maxxam ID		GO7748	GO7749		
Sampling Date		2010/07/19	2010/07/19		
COC Number		2312	2312		
	Units	**LICA PUFF/CLS/JULY19,10**	**LICA PUFF/PORT/JULY19,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.15	<0.10	0.10	2217419
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217419
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217419
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217419
2-Methylnaphthalene	ug	0.26	<0.10	0.10	2217419
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217419
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217419
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217419
Acenaphthene	ug	0.134	<0.050	0.050	2217419
Acenaphthylene	ug	<0.050	<0.050	0.050	2217419
Anthracene	ug	<0.050	<0.050	0.050	2217419
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217419
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217419
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217419
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217419
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217419
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217419
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217419
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217419
Biphenyl	ug	<0.10	<0.10	0.10	2217419
Chrysene	ug	<0.050	<0.050	0.050	2217419
Coronene	ug	<0.10	<0.10	0.10	2217419
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217419
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217419
Fluoranthene	ug	0.066	<0.050	0.050	2217419
Fluorene	ug	0.160	<0.050	0.050	2217419
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217419
m-Terphenyl	ug	<0.10	<0.10	0.10	2217419
Naphthalene	ug	0.188	0.080	0.072	2217419
o-Terphenyl	ug	<0.10	<0.10	0.10	2217419
Perylene	ug	<0.10	<0.10	0.10	2217419
Phenanthrene	ug	0.584	0.158	0.050	2217419

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097382
Report Date: 2010/09/08

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

Maxxam ID		GO7748	GO7749		
Sampling Date		2010/07/19	2010/07/19		
COC Number		2312	2312		
	Units	**LICA PUFF/CLS/JULY19,10**	**LICA PUFF/PORT/JULY19,10**	**RDL**	**QC Batch**
p-Terphenyl	ug	<0.10	<0.10	0.10	2217419
Pyrene	ug	<0.050	<0.050	0.050	2217419
Quinoline	ug	<0.40	<0.40	0.40	2217419
Tetralin	ug	<0.10	<0.10	0.10	2217419
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	84	72		2217419
D10-Fluoranthene	%	120	102		2217419
D10-Fluorene (FS)	%	69	57		2217419
D10-Phenanthrene	%	110	94		2217419
D12-Benzo(a)anthracene	%	122	104		2217419
D12-Benzo(a)pyrene	%	92	76		2217419
D12-Benzo(b)fluoranthene	%	114	96		2217419
D12-Benzo(ghi)perylene	%	102	90		2217419
D12-Benzo(k)fluoranthene	%	108	96		2217419
D12-Chrysene	%	108	96		2217419
D12-Indeno(1,2,3-cd)pyrene	%	100	86		2217419
D12-Perylene	%	106	86		2217419
D14-Dibenzo(a,h)anthracene	%	80	68		2217419
D14-Terphenyl (FS)	%	108	94		2217419
D8-Acenaphthylene	%	118	100		2217419
D8-Naphthalene	%	90	78		2217419

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097382
Report Date: 2010/09/08

Test Summary

Maxxam ID	GO7748	**Collected**	2010/07/19
Sample ID	LICA PUFF/CLS/JULY19,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/07/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217419	2010/07/26	2010/09/08	JIW

Maxxam ID	GO7749	**Collected**	2010/07/19
Sample ID	LICA PUFF/PORT/JULY19,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/07/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217419	2010/07/26	2010/09/08	JIW

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097382
Report Date: 2010/09/08

GENERAL COMMENTS

PAHMS-F(WS:2217419)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

Anthanthrene is above 25% RSD in continuing calibration.

Low recovery of Benzo(b)fluoranthene was found in Spike. Recovery of this compound was acceptable in Spike:dup.

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

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB097382

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217419	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/09/07		68	%	50 - 150
			D10-Fluoranthene	2010/09/07		90	%	50 - 150
			D10-Phenanthrene	2010/09/07		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/07		86	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/07		76	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/07		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/07		86	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/07		92	%	50 - 150
			D12-Chrysene	2010/09/07		98	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/09/07		82	%	50 - 150
			D12-Perylene	2010/09/07		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/07		68	%	50 - 150
			D8-Acenaphthylene	2010/09/07		98	%	50 - 150
			D8-Naphthalene	2010/09/07		74	%	50 - 150
			Acenaphthene	2010/09/07		73	%	60 - 130
		RPD	Acenaphthene	2010/09/08	8.8		%	50
		Spiked Blank	Acenaphthylene	2010/09/07		88	%	60 - 130
		RPD	Acenaphthylene	2010/09/08	7.9		%	50
		Spiked Blank	Anthracene	2010/09/07		70	%	60 - 130
		RPD	Anthracene	2010/09/08	20.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/09/07		63	%	60 - 130
		RPD	Benzo(a)anthracene	2010/09/08	14.3		%	50
		Spiked Blank	Benzo(a)pyrene	2010/09/07		71	%	60 - 130
		RPD	Benzo(a)pyrene	2010/09/08	13.5		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/09/07		60 (1)	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/09/08	13.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/09/07		66	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/09/08	9.1		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/09/07		84	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/09/08	6.4		%	50
		Spiked Blank	Chrysene	2010/09/07		80	%	60 - 130
		RPD	Chrysene	2010/09/08	14.8		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/09/07		63	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/09/08	9.9		%	50
		Spiked Blank	Fluoranthene	2010/09/07		75	%	60 - 130
		RPD	Fluoranthene	2010/09/08	9.8		%	50
		Spiked Blank	Fluorene	2010/09/07		69	%	60 - 130
		RPD	Fluorene	2010/09/08	6.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/09/07		63	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/09/08	11.6		%	50
		Spiked Blank	Naphthalene	2010/09/07		68	%	60 - 130
		RPD	Naphthalene	2010/09/08	12.1		%	50
		Spiked Blank	Phenanthrene	2010/09/07		63	%	60 - 130
		RPD	Phenanthrene	2010/09/08	7.3		%	50
		Spiked Blank	Pyrene	2010/09/07		75	%	60 - 130
		RPD	Pyrene	2010/09/08	10.2		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/09/08		80	%	50 - 150
			D10-Fluoranthene	2010/09/08		106	%	50 - 150
			D10-Phenanthrene	2010/09/08		92	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/08		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/08		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/08		106	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/08		98	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/08		108	%	50 - 150
			D12-Chrysene	2010/09/08		116	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB097382

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217419	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/09/08		94	%	50 - 150
			D12-Perylene	2010/09/08		106	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/08		74	%	50 - 150
			D8-Acenaphthylene	2010/09/08		114	%	50 - 150
			D8-Naphthalene	2010/09/08		88	%	50 - 150
			1-Methylnaphthalene	2010/09/08	<0.10		ug	
			1-Methylphenanthrene	2010/09/08	<0.10		ug	
			2-Chloronaphthalene	2010/09/08	<0.10		ug	
			2-Methylanthracene	2010/09/08	<0.10		ug	
			2-Methylnaphthalene	2010/09/08	<0.10		ug	
			3-Methylcholanthrene	2010/09/08	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/09/08	<0.10		ug	
			9,10-Dimethylanthracene	2010/09/08	<0.40		ug	
			Acenaphthene	2010/09/08	<0.050		ug	
			Acenaphthylene	2010/09/08	<0.050		ug	
			Anthracene	2010/09/08	<0.050		ug	
			Benzo(a)anthracene	2010/09/08	<0.050		ug	
			Benzo(a)fluorene	2010/09/08	<0.10		ug	
			Benzo(a)pyrene	2010/09/08	<0.050		ug	
			Benzo(b)fluoranthene	2010/09/08	<0.050		ug	
			Benzo(b)fluorene	2010/09/08	<0.10		ug	
			Benzo(e)pyrene	2010/09/08	<0.10		ug	
			Benzo(g,h,i)perylene	2010/09/08	<0.050		ug	
			Benzo(k)fluoranthene	2010/09/08	<0.050		ug	
			Biphenyl	2010/09/08	<0.10		ug	
			Chrysene	2010/09/08	<0.050		ug	
			Coronene	2010/09/08	<0.10		ug	
			Dibenz(a,h)anthracene	2010/09/08	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/09/08	<0.20		ug	
			Fluoranthene	2010/09/08	<0.050		ug	
			Fluorene	2010/09/08	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/09/08	<0.050		ug	
			m-Terphenyl	2010/09/08	<0.10		ug	
			Naphthalene	2010/09/08	<0.072		ug	
			o-Terphenyl	2010/09/08	<0.10		ug	
			Perylene	2010/09/08	<0.10		ug	
			Phenanthrene	2010/09/08	<0.050		ug	
			p-Terphenyl	2010/09/08	<0.10		ug	
			Pyrene	2010/09/08	<0.050		ug	
			Quinoline	2010/09/08	<0.40		ug	
			Tetralin	2010/09/08	<0.10		ug	

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

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Maxxam Analytics Inc.

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

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

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: July 23, 2010 @ 10:31 mst
Removal Date/Time: July 26, 2010 @ 7:31 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
25-Jul-10	25/07/2010 0:00	26/07/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
22-Jul-10	26-Jul-10	30-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
709	229	18.9	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# 2344
GB082821 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/July 25, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2344

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

Report Date: 2010/10/01

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A2833
Received: 2010/07/30, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/05	2010/09/29	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

==========

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

Total cover pages: 1

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2833
Report Date: 2010/10/01

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

Maxxam ID		GR3525	GR3526		
Sampling Date		2010/07/25	2010/07/25		
COC Number		2344	2344		
	Units	**LICA PUFF/QFF/CLS/JULY25,10**	**LICA PUFF/QFF/PORT/JULY25,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2226752
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2226752
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2226752
2-Methylanthracene	ug	<0.10	<0.10	0.10	2226752
2-Methylnaphthalene	ug	0.14	<0.10	0.10	2226752
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2226752
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2226752
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2226752
Acenaphthene	ug	0.062	<0.050	0.050	2226752
Acenaphthylene	ug	<0.050	<0.050	0.050	2226752
Anthracene	ug	<0.050	<0.050	0.050	2226752
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2226752
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2226752
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2226752
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2226752
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2226752
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2226752
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2226752
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2226752
Biphenyl	ug	<0.10	<0.10	0.10	2226752
Chrysene	ug	<0.050	<0.050	0.050	2226752
Coronene	ug	<0.10	<0.10	0.10	2226752
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2226752
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2226752
Fluoranthene	ug	0.058	<0.050	0.050	2226752
Fluorene	ug	0.118	<0.050	0.050	2226752
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2226752
m-Terphenyl	ug	<0.10	<0.10	0.10	2226752
Naphthalene	ug	0.102	<0.072	0.072	2226752
o-Terphenyl	ug	<0.10	<0.10	0.10	2226752
Perylene	ug	<0.10	<0.10	0.10	2226752
Phenanthrene	ug	0.524	0.162	0.050	2226752

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2833
Report Date: 2010/10/01

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

Maxxam ID		GR3525	GR3526		
Sampling Date		2010/07/25	2010/07/25		
COC Number		2344	2344		
	Units	**LICA PUFF/QFF/CLS/JULY25,10**	**LICA PUFF/QFF/PORT/JULY25,10**	**RDL**	**QC Batch**
p-Terphenyl	ug	<0.10	<0.10	0.10	2226752
Pyrene	ug	<0.050	<0.050	0.050	2226752
Quinoline	ug	<0.40	<0.40	0.40	2226752
Tetralin	ug	<0.10	<0.10	0.10	2226752
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	68		2226752
D10-Fluoranthene	%	94	88		2226752
D10-Fluorene (FS)	%	57	52		2226752
D10-Phenanthrene	%	94	88		2226752
D12-Benzo(a)anthracene	%	104	100		2226752
D12-Benzo(a)pyrene	%	86	80		2226752
D12-Benzo(b)fluoranthene	%	96	94		2226752
D12-Benzo(ghi)perylene	%	104	100		2226752
D12-Benzo(k)fluoranthene	%	92	90		2226752
D12-Chrysene	%	98	92		2226752
D12-Indeno(1,2,3-cd)pyrene	%	94	92		2226752
D12-Perylene	%	96	94		2226752
D14-Dibenzo(a,h)anthracene	%	80	78		2226752
D14-Terphenyl (FS)	%	103	98		2226752
D8-Acenaphthylene	%	82	78		2226752
D8-Naphthalene	%	78	76		2226752

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2833
Report Date: 2010/10/01

Test Summary

Maxxam ID	GR3525	**Collected**	2010/07/25
Sample ID	LICA PUFF/QFF/CLS/JULY25,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/07/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2226752	2010/08/05	2010/09/29	JIW

Maxxam ID	GR3526	**Collected**	2010/07/25
Sample ID	LICA PUFF/QFF/PORT/JULY25,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/07/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2226752	2010/08/05	2010/09/29	JIW

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2833
Report Date: 2010/10/01

GENERAL COMMENTS

PAHMS-F(WS:2226752)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial and contiuning calibrations. No positive found for this compound.

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

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0A2833

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2226752	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/09/28		76	%	50 - 150
			D10-Fluoranthene	2010/09/28		86	%	50 - 150
			D10-Phenanthrene	2010/09/28		84	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/28		102	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/28		88	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/28		100	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/28		112	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/28		94	%	50 - 150
			D12-Chrysene	2010/09/28		104	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/09/28		102	%	50 - 150
			D12-Perylene	2010/09/28		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/28		86	%	50 - 150
			D8-Acenaphthylene	2010/09/28		84	%	50 - 150
			D8-Naphthalene	2010/09/28		84	%	50 - 150
			Acenaphthene	2010/09/28		73	%	60 - 130
		RPD	Acenaphthene	2010/09/29	1.7		%	50
		Spiked Blank	Acenaphthylene	2010/09/28		74	%	60 - 130
		RPD	Acenaphthylene	2010/09/29	2.4		%	50
		Spiked Blank	Anthracene	2010/09/28		68	%	60 - 130
		RPD	Anthracene	2010/09/29	4.1		%	50
		Spiked Blank	Benzo(a)anthracene	2010/09/28		82	%	60 - 130
		RPD	Benzo(a)anthracene	2010/09/29	0.3		%	50
		Spiked Blank	Benzo(a)pyrene	2010/09/28		76	%	60 - 130
		RPD	Benzo(a)pyrene	2010/09/29	8.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/09/28		76	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/09/29	5.4		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/09/28		85	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/09/29	10.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/09/28		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/09/29	5.7		%	50
		Spiked Blank	Chrysene	2010/09/28		91	%	60 - 130
		RPD	Chrysene	2010/09/29	8.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/09/28		84	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/09/29	9.4		%	50
		Spiked Blank	Fluoranthene	2010/09/28		77	%	60 - 130
		RPD	Fluoranthene	2010/09/29	7.5		%	50
		Spiked Blank	Fluorene	2010/09/28		71	%	60 - 130
		RPD	Fluorene	2010/09/29	3.8		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/09/28		82	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/09/29	9.2		%	50
		Spiked Blank	Naphthalene	2010/09/28		72	%	60 - 130
		RPD	Naphthalene	2010/09/29	2.1		%	50
		Spiked Blank	Phenanthrene	2010/09/28		69	%	60 - 130
		RPD	Phenanthrene	2010/09/29	3.0		%	50
		Spiked Blank	Pyrene	2010/09/28		75	%	60 - 130
		RPD	Pyrene	2010/09/29	8.3		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/09/29		80	%	50 - 150
			D10-Fluoranthene	2010/09/29		84	%	50 - 150
			D10-Phenanthrene	2010/09/29		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/29		102	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/29		86	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/29		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/29		106	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/29		90	%	50 - 150
			D12-Chrysene	2010/09/29		102	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A2833

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2226752	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/09/29		96	%	50 - 150
			D12-Perylene	2010/09/29		96	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/29		82	%	50 - 150
			D8-Acenaphthylene	2010/09/29		86	%	50 - 150
			D8-Naphthalene	2010/09/29		88	%	50 - 150
			1-Methylnaphthalene	2010/09/29	<0.10		ug	
			1-Methylphenanthrene	2010/09/29	<0.10		ug	
			2-Chloronaphthalene	2010/09/29	<0.10		ug	
			2-Methylanthracene	2010/09/29	<0.10		ug	
			2-Methylnaphthalene	2010/09/29	<0.10		ug	
			3-Methylcholanthrene	2010/09/29	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/09/29	<0.10		ug	
			9,10-Dimethylanthracene	2010/09/29	<0.40		ug	
			Acenaphthene	2010/09/29	<0.050		ug	
			Acenaphthylene	2010/09/29	<0.050		ug	
			Anthracene	2010/09/29	<0.050		ug	
			Benzo(a)anthracene	2010/09/29	<0.050		ug	
			Benzo(a)fluorene	2010/09/29	<0.10		ug	
			Benzo(a)pyrene	2010/09/29	<0.050		ug	
			Benzo(b)fluoranthene	2010/09/29	<0.050		ug	
			Benzo(b)fluorene	2010/09/29	<0.10		ug	
			Benzo(e)pyrene	2010/09/29	<0.10		ug	
			Benzo(g,h,i)perylene	2010/09/29	<0.050		ug	
			Benzo(k)fluoranthene	2010/09/29	<0.050		ug	
			Biphenyl	2010/09/29	<0.10		ug	
			Chrysene	2010/09/29	<0.050		ug	
			Coronene	2010/09/29	<0.10		ug	
			Dibenz(a,h)anthracene	2010/09/29	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/09/29	<0.20		ug	
			Fluoranthene	2010/09/29	<0.050		ug	
			Fluorene	2010/09/29	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/09/29	<0.050		ug	
			m-Terphenyl	2010/09/29	<0.10		ug	
			Naphthalene	2010/09/29	<0.072		ug	
			o-Terphenyl	2010/09/29	<0.10		ug	
			Perylene	2010/09/29	<0.10		ug	
			Phenanthrene	2010/09/29	<0.050		ug	
			p-Terphenyl	2010/09/29	<0.10		ug	
			Pyrene	2010/09/29	<0.050		ug	
			Quinoline	2010/09/29	<0.40		ug	
			Tetralin	2010/09/29	<0.10		ug	

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

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Maxxam Analytics Inc.

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: Cold Lake South
Station ID: Lica1
Field Sample ID: LICA PUF/CLS/July 31, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: July 30, 2010 @ 7:29 mst
Removal Date/Time: Aug 03, 2010 @ 7:16 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
31-Jul-10	31/07/2010 0:00	01/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
29-Jul-10	03-Aug-10	09-Aug-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
710	229	20.3	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# 2315
GB081735 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/July 31, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2315

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

Report Date: 2010/10/04

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A5167
Received: 2010/08/05, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/06	2010/10/01	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

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Total cover pages: 1

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A5167
Report Date: 2010/10/04

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

Maxxam ID		GS7910	GS7911		
Sampling Date		2010/07/31	2010/07/31		
COC Number		2315	2315		
	Units	**LICA PUFF/QFF/CLS/JULY31,10**	**LICA PUFF/QFF/PORT/JULY31,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.15	<0.10	0.10	2227878
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2227878
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2227878
2-Methylanthracene	ug	<0.10	<0.10	0.10	2227878
2-Methylnaphthalene	ug	0.24	<0.10	0.10	2227878
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2227878
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2227878
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2227878
Acenaphthene	ug	0.124	<0.050	0.050	2227878
Acenaphthylene	ug	<0.050	<0.050	0.050	2227878
Anthracene	ug	<0.050	<0.050	0.050	2227878
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2227878
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2227878
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2227878
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2227878
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2227878
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2227878
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2227878
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2227878
Biphenyl	ug	<0.10	<0.10	0.10	2227878
Chrysene	ug	<0.050	<0.050	0.050	2227878
Coronene	ug	<0.10	<0.10	0.10	2227878
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2227878
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2227878
Fluoranthene	ug	0.078	<0.050	0.050	2227878
Fluorene	ug	0.200	0.066	0.050	2227878
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2227878
m-Terphenyl	ug	<0.10	<0.10	0.10	2227878
Naphthalene	ug	0.210	0.092	0.072	2227878
o-Terphenyl	ug	<0.10	<0.10	0.10	2227878
Perylene	ug	<0.10	<0.10	0.10	2227878
Phenanthrene	ug	0.694	0.244	0.050	2227878

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A5167
Report Date: 2010/10/04

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

Maxxam ID		GS7910	GS7911		
Sampling Date		2010/07/31	2010/07/31		
COC Number		2315	2315		
	Units	**LICA PUFF/QFF/CLS/JULY31,10**	**LICA PUFF/QFF/PORT/JULY31,10**	**RDL**	**QC Batch**
p-Terphenyl	ug	<0.10	<0.10	0.10	2227878
Pyrene	ug	0.052	<0.050	0.050	2227878
Quinoline	ug	<0.40	<0.40	0.40	2227878
Tetralin	ug	<0.10	<0.10	0.10	2227878
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	68	72		2227878
D10-Fluoranthene	%	98	96		2227878
D10-Fluorene (FS)	%	51	50		2227878
D10-Phenanthrene	%	96	94		2227878
D12-Benzo(a)anthracene	%	108	106		2227878
D12-Benzo(a)pyrene	%	84	90		2227878
D12-Benzo(b)fluoranthene	%	100	100		2227878
D12-Benzo(ghi)perylene	%	106	106		2227878
D12-Benzo(k)fluoranthene	%	90	90		2227878
D12-Chrysene	%	94	90		2227878
D12-Indeno(1,2,3-cd)pyrene	%	100	100		2227878
D12-Perylene	%	96	96		2227878
D14-Dibenzo(a,h)anthracene	%	86	86		2227878
D14-Terphenyl (FS)	%	100	97		2227878
D8-Acenaphthylene	%	84	86		2227878
D8-Naphthalene	%	72	76		2227878

QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A5167
Report Date: 2010/10/04

Test Summary

Maxxam ID	GS7910	**Collected**	2010/07/31
Sample ID	LICA PUFF/QFF/CLS/JULY31,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2227878	2010/08/06	2010/10/01	JIW

Maxxam ID	GS7911	**Collected**	2010/07/31
Sample ID	LICA PUFF/QFF/PORT/JULY31,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2227878	2010/08/06	2010/10/01	JIW

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A5167
Report Date: 2010/10/04

GENERAL COMMENTS

PAHMS-F(WS:2227878)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

Anthanthrene is above 25% RSD in continuing calibration.

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

The recoveries of D10-Phenanthrene and D12-Benzo(k)fluoranthene were low in Blank.

Extracts analyzed past extract hold time.

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: GB0A5167

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2227878	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/09/30		80	%	50 - 150
			D10-Fluoranthene	2010/09/30		94	%	50 - 150
			D10-Phenanthrene	2010/09/30		94	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/30		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/30		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/30		94	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/30		106	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/30		90	%	50 - 150
			D12-Chrysene	2010/09/30		96	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/09/30		100	%	50 - 150
			D12-Perylene	2010/09/30		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/30		86	%	50 - 150
			D8-Acenaphthylene	2010/09/30		86	%	50 - 150
			D8-Naphthalene	2010/09/30		86	%	50 - 150
			Acenaphthene	2010/09/30		81	%	60 - 130
		RPD	Acenaphthene	2010/10/01	1.9		%	50
		Spiked Blank	Acenaphthylene	2010/09/30		81	%	60 - 130
		RPD	Acenaphthylene	2010/10/01	0.9		%	50
		Spiked Blank	Anthracene	2010/09/30		77	%	60 - 130
		RPD	Anthracene	2010/10/01	1.3		%	50
		Spiked Blank	Benzo(a)anthracene	2010/09/30		82	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/01	1.2		%	50
		Spiked Blank	Benzo(a)pyrene	2010/09/30		76	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/01	0.3		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/09/30		75	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/01	0.7		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/09/30		82	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/01	0.9		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/09/30		80	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/01	0		%	50
		Spiked Blank	Chrysene	2010/09/30		82	%	60 - 130
		RPD	Chrysene	2010/10/01	0.9		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/09/30		83	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/01	1.2		%	50
		Spiked Blank	Fluoranthene	2010/09/30		83	%	60 - 130
		RPD	Fluoranthene	2010/10/01	0.6		%	50
		Spiked Blank	Fluorene	2010/09/30		80	%	60 - 130
		RPD	Fluorene	2010/10/01	0.9		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/09/30		81	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/01	0.3		%	50
		Spiked Blank	Naphthalene	2010/09/30		74	%	60 - 130
		RPD	Naphthalene	2010/10/01	1.0		%	50
		Spiked Blank	Phenanthrene	2010/09/30		78	%	60 - 130
		RPD	Phenanthrene	2010/10/01	1		%	50
		Spiked Blank	Pyrene	2010/09/30		82	%	60 - 130
		RPD	Pyrene	2010/10/01	1.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/01		50	%	50 - 150
			D10-Fluoranthene	2010/10/01		50	%	50 - 150
			D10-Phenanthrene	2010/10/01		48 (1)	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/01		56	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/01		52	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/01		50	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/01		56	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/01		46 (1)	%	50 - 150
			D12-Chrysene	2010/10/01		50	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A5167

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2227878	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/01		54	%	50 - 150
			D12-Perylene	2010/10/01		54	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/01		54	%	50 - 150
			D8-Acenaphthylene	2010/10/01		50	%	50 - 150
			D8-Naphthalene	2010/10/01		52	%	50 - 150
			1-Methylnaphthalene	2010/10/01	<0.10		ug	
			1-Methylphenanthrene	2010/10/01	<0.10		ug	
			2-Chloronaphthalene	2010/10/01	<0.10		ug	
			2-Methylanthracene	2010/10/01	<0.10		ug	
			2-Methylnaphthalene	2010/10/01	<0.10		ug	
			3-Methylcholanthrene	2010/10/01	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/01	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/01	<0.40		ug	
			Acenaphthene	2010/10/01	<0.050		ug	
			Acenaphthylene	2010/10/01	<0.050		ug	
			Anthracene	2010/10/01	<0.050		ug	
			Benzo(a)anthracene	2010/10/01	<0.050		ug	
			Benzo(a)fluorene	2010/10/01	<0.10		ug	
			Benzo(a)pyrene	2010/10/01	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/01	<0.050		ug	
			Benzo(b)fluorene	2010/10/01	<0.10		ug	
			Benzo(e)pyrene	2010/10/01	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/01	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/01	<0.050		ug	
			Biphenyl	2010/10/01	<0.10		ug	
			Chrysene	2010/10/01	<0.050		ug	
			Coronene	2010/10/01	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/01	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/01	<0.20		ug	
			Fluoranthene	2010/10/01	<0.050		ug	
			Fluorene	2010/10/01	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/01	<0.050		ug	
			m-Terphenyl	2010/10/01	<0.10		ug	
			Naphthalene	2010/10/01	<0.072		ug	
			o-Terphenyl	2010/10/01	<0.10		ug	
			Perylene	2010/10/01	<0.10		ug	
			Phenanthrene	2010/10/01	<0.050		ug	
			p-Terphenyl	2010/10/01	<0.10		ug	
			Pyrene	2010/10/01	<0.050		ug	
			Quinoline	2010/10/01	<0.40		ug	
			Tetralin	2010/10/01	<0.10		ug	

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

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/Aug 06, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Aug 05, 2010 @ 14:50 mst
Removal Date/Time: Aug 09, 2010 @ 9:21mst

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

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
05-Aug-10	09-Aug-10	17-Aug-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
706	229	20.6	330.32

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

Comments: COC# 2317
GB0A3259 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Aug 06, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your Project #: NAPS
Your C.O.C. #: 2317

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

Report Date: 2010/09/03

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A8133
Received: 2010/08/11, 09:07

Sample Matrix: Filter
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/12	2010/09/02	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Job #: B0A8133
Report Date: 2010/09/03

Maxxam Analytics
Client Project #: NAPS

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		GU2537	GU2538		
Sampling Date		2010/08/06	2010/08/06		
COC Number		2317	2317		
	Units	**LICA PUFF/CLS/AUG 06,10**	**LICA PUFF/PORT/AUG 06,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2233810
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2233810
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2233810
2-Methylanthracene	ug	<0.10	<0.10	0.10	2233810
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2233810
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2233810
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2233810
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2233810
Acenaphthene	ug	0.052	<0.050	0.050	2233810
Acenaphthylene	ug	0.076	<0.050	0.050	2233810
Anthracene	ug	<0.050	<0.050	0.050	2233810
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2233810
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2233810
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2233810
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2233810
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2233810
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2233810
Benzo(g,h,i)perylene	ug	<0.050	0.050	0.050	2233810
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2233810
Biphenyl	ug	<0.10	<0.10	0.10	2233810
Chrysene	ug	<0.050	<0.050	0.050	2233810
Coronene	ug	<0.10	<0.10	0.10	2233810
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2233810
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2233810
Fluoranthene	ug	0.098	<0.050	0.050	2233810
Fluorene	ug	0.150	0.052	0.050	2233810
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2233810
m-Terphenyl	ug	<0.10	<0.10	0.10	2233810
Naphthalene	ug	0.150	0.090	0.072	2233810
o-Terphenyl	ug	<0.10	<0.10	0.10	2233810
Perylene	ug	<0.10	<0.10	0.10	2233810

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Maxxam Job #: B0A8133
Report Date: 2010/09/03

Maxxam Analytics
Client Project #: NAPS

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		GU2537	GU2538		
Sampling Date		2010/08/06	2010/08/06		
COC Number		2317	2317		
	Units	**LICA PUFF/CLS/AUG 06,10**	**LICA PUFF/PORT/AUG 06,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.726	0.242	0.050	2233810
p-Terphenyl	ug	<0.10	<0.10	0.10	2233810
Pyrene	ug	0.076	<0.050	0.050	2233810
Quinoline	ug	<0.40	<0.40	0.40	2233810
Tetralin	ug	<0.10	<0.10	0.10	2233810
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	64	56		2233810
D10-Fluoranthene	%	118	102		2233810
D10-Fluorene (FS)	%	43 (1)	37 (1)		2233810
D10-Phenanthrene	%	106	90		2233810
D12-Benzo(a)anthracene	%	142	126		2233810
D12-Benzo(a)pyrene	%	108	100		2233810
D12-Benzo(b)fluoranthene	%	126	110		2233810
D12-Benzo(ghi)perylene	%	102	90		2233810
D12-Benzo(k)fluoranthene	%	94	84		2233810
D12-Chrysene	%	94	84		2233810
D12-Indeno(1,2,3-cd)pyrene	%	106	90		2233810
D12-Perylene	%	100	90		2233810
D14-Dibenzo(a,h)anthracene	%	84	72		2233810
D14-Terphenyl (FS)	%	95	81		2233810
D8-Acenaphthylene	%	94	80		2233810
D8-Naphthalene	%	78	72		2233810

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

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Maxxam Job #: B0A8133
Report Date: 2010/09/03

Maxxam Analytics
Client Project #: NAPS

Test Summary

Maxxam ID GU2537 **Collected** 2010/08/06
Sample ID LICA PUFF/CLS/AUG 06,10 **Shipped**
Matrix Filter **Received** 2010/08/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2233810	2010/08/12	2010/09/02	JIW

Maxxam ID GU2538 **Collected** 2010/08/06
Sample ID LICA PUFF/PORT/AUG 06,10 **Shipped**
Matrix Filter **Received** 2010/08/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2233810	2010/08/12	2010/09/02	JIW

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

Maxxam Job #: B0A8133
Report Date: 2010/09/03

Maxxam Analytics
Client Project #: NAPS

GENERAL COMMENTS

Sample GU2537-01: PAHMS-F(WS:2233810)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample GU2538-01: PAHMS-F(WS:2233810)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Results relate only to the items tested.

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

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

Quality Assurance Report

Maxxam Job Number: GB0A8133

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2233810	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/09/02		66	%	50 - 150
			D10-Fluoranthene	2010/09/02		110	%	50 - 150
			D10-Phenanthrene	2010/09/02		96	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/02		138	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/02		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/02		124	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/02		100	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/02		98	%	50 - 150
			D12-Chrysene	2010/09/02		98	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/09/02		102	%	50 - 150
			D12-Perylene	2010/09/02		102	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/02		84	%	50 - 150
			D8-Acenaphthylene	2010/09/02		88	%	50 - 150
			D8-Naphthalene	2010/09/02		72	%	50 - 150
			Acenaphthene	2010/09/02		67	%	60 - 130
		RPD	Acenaphthene	2010/09/02	5.5		%	50
		Spiked Blank	Acenaphthylene	2010/09/02		78	%	60 - 130
		RPD	Acenaphthylene	2010/09/02	5.3		%	50
		Spiked Blank	Anthracene	2010/09/02		77	%	60 - 130
		RPD	Anthracene	2010/09/02	7.5		%	50
		Spiked Blank	Benzo(a)anthracene	2010/09/02		93	%	60 - 130
		RPD	Benzo(a)anthracene	2010/09/02	0.3		%	50
		Spiked Blank	Benzo(a)pyrene	2010/09/02		90	%	60 - 130
		RPD	Benzo(a)pyrene	2010/09/02	1.9		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/09/02		83	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/09/02	1.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/09/02		88	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/09/02	1.7		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/09/02		87	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/09/02	3.5		%	50
		Spiked Blank	Chrysene	2010/09/02		85	%	60 - 130
		RPD	Chrysene	2010/09/02	2.4		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/09/02		89	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/09/02	1.7		%	50
		Spiked Blank	Fluoranthene	2010/09/02		89	%	60 - 130
		RPD	Fluoranthene	2010/09/02	9.1		%	50
		Spiked Blank	Fluorene	2010/09/02		69	%	60 - 130
		RPD	Fluorene	2010/09/02	5.3		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/09/02		88	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/09/02	2.3		%	50
		Spiked Blank	Naphthalene	2010/09/02		73	%	60 - 130
		RPD	Naphthalene	2010/09/02	4.0		%	50
		Spiked Blank	Phenanthrene	2010/09/02		78	%	60 - 130
		RPD	Phenanthrene	2010/09/02	7.5		%	50
		Spiked Blank	Pyrene	2010/09/02		90	%	60 - 130
		RPD	Pyrene	2010/09/02	8.7		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/09/02		72	%	50 - 150
			D10-Fluoranthene	2010/09/02		104	%	50 - 150
			D10-Phenanthrene	2010/09/02		96	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/02		150	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/02		112	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/02		128	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/02		98	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/02		98	%	50 - 150
			D12-Chrysene	2010/09/02		102	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A8133

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2233810	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/09/02		102	%	50 - 150
			D12-Perylene	2010/09/02		104	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/02		82	%	50 - 150
			D8-Acenaphthylene	2010/09/02		102	%	50 - 150
			D8-Naphthalene	2010/09/02		96	%	50 - 150
			1-Methylnaphthalene	2010/09/02	<0.10		ug	
			1-Methylphenanthrene	2010/09/02	<0.10		ug	
			2-Chloronaphthalene	2010/09/02	<0.10		ug	
			2-Methylanthracene	2010/09/02	<0.10		ug	
			2-Methylnaphthalene	2010/09/02	<0.10		ug	
			3-Methylcholanthrene	2010/09/02	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/09/02	<0.10		ug	
			9,10-Dimethylanthracene	2010/09/02	<0.40		ug	
			Acenaphthene	2010/09/02	<0.050		ug	
			Acenaphthylene	2010/09/02	<0.050		ug	
			Anthracene	2010/09/02	<0.050		ug	
			Benzo(a)anthracene	2010/09/02	<0.050		ug	
			Benzo(a)fluorene	2010/09/02	<0.10		ug	
			Benzo(a)pyrene	2010/09/02	<0.050		ug	
			Benzo(b)fluoranthene	2010/09/02	<0.050		ug	
			Benzo(b)fluorene	2010/09/02	<0.10		ug	
			Benzo(e)pyrene	2010/09/02	<0.10		ug	
			Benzo(g,h,i)perylene	2010/09/02	<0.050		ug	
			Benzo(k)fluoranthene	2010/09/02	<0.050		ug	
			Biphenyl	2010/09/02	<0.10		ug	
			Chrysene	2010/09/02	<0.050		ug	
			Coronene	2010/09/02	<0.10		ug	
			Dibenz(a,h)anthracene	2010/09/02	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/09/02	<0.20		ug	
			Fluoranthene	2010/09/02	<0.050		ug	
			Fluorene	2010/09/02	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/09/02	<0.050		ug	
			m-Terphenyl	2010/09/02	<0.10		ug	
			Naphthalene	2010/09/02	0.100, RDL=0.072		ug	
			o-Terphenyl	2010/09/02	<0.10		ug	
			Perylene	2010/09/02	<0.10		ug	
			Phenanthrene	2010/09/02	<0.050		ug	
			p-Terphenyl	2010/09/02	<0.10		ug	
			Pyrene	2010/09/02	<0.050		ug	
			Quinoline	2010/09/02	<0.40		ug	
			Tetralin	2010/09/02	<0.10		ug	

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

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Maxxam Analytics Inc.

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: Cold Lake South
Station ID: Lica1
Field Sample ID: LICA PUF/CLS/Aug 12, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Aug 11, 2010 @ 6:45 mst
Removal Date/Time: Aug 11, 2010 @ 9:17 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
12-Aug-10	12/08/2010 0:00	13/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
10-Aug-10	16-Aug-10	20-Aug-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
706	229	16.6	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# 2538
GB0A5331 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Aug 12, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

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

Report Date: 2010/10/05

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B2444
Received: 2010/08/18, 09:18

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/19	2010/10/04	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B2444
Report Date: 2010/10/05

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

Maxxam ID		GW2655	GW2656		
Sampling Date		2010/08/12	2010/08/12		
	Units	**LICA PUFF/CLS/AUG12, 10**	**LICA PUFF/PORT/AUG12, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.32	<0.10	0.10	2239881
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2239881
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2239881
2-Methylanthracene	ug	<0.10	<0.10	0.10	2239881
2-Methylnaphthalene	ug	0.98	<0.10	0.10	2239881
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2239881
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2239881
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2239881
Acenaphthene	ug	<0.050	<0.050	0.050	2239881
Acenaphthylene	ug	<0.050	<0.050	0.050	2239881
Anthracene	ug	<0.050	<0.050	0.050	2239881
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2239881
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2239881
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2239881
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2239881
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2239881
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2239881
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2239881
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2239881
Biphenyl	ug	<0.10	<0.10	0.10	2239881
Chrysene	ug	<0.050	<0.050	0.050	2239881
Coronene	ug	<0.10	<0.10	0.10	2239881
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2239881
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2239881
Fluoranthene	ug	0.062	<0.050	0.050	2239881
Fluorene	ug	0.204	<0.050	0.050	2239881
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2239881
m-Terphenyl	ug	<0.10	<0.10	0.10	2239881
Naphthalene	ug	0.678	0.072	0.072	2239881
o-Terphenyl	ug	<0.10	<0.10	0.10	2239881
Perylene	ug	<0.10	<0.10	0.10	2239881
Phenanthrene	ug	0.630	0.188	0.050	2239881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B2444
Report Date: 2010/10/05

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

Maxxam ID		GW2655	GW2656		
Sampling Date		2010/08/12	2010/08/12		
	Units	**LICA PUFF/CLS/AUG12, 10**	**LICA PUFF/PORT/AUG12, 10**	**RDL**	**QC Batch**
p-Terphenyl	ug	<0.10	<0.10	0.10	2239881
Pyrene	ug	0.074	<0.050	0.050	2239881
Quinoline	ug	<0.40	<0.40	0.40	2239881
Tetralin	ug	<0.10	<0.10	0.10	2239881
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	80		2239881
D10-Fluoranthene	%	88	96		2239881
D10-Fluorene (FS)	%	51	55		2239881
D10-Phenanthrene	%	88	94		2239881
D12-Benzo(a)anthracene	%	98	106		2239881
D12-Benzo(a)pyrene	%	80	90		2239881
D12-Benzo(b)fluoranthene	%	88	98		2239881
D12-Benzo(ghi)perylene	%	94	106		2239881
D12-Benzo(k)fluoranthene	%	84	92		2239881
D12-Chrysene	%	86	94		2239881
D12-Indeno(1,2,3-cd)pyrene	%	84	96		2239881
D12-Perylene	%	88	98		2239881
D14-Dibenzo(a,h)anthracene	%	72	80		2239881
D14-Terphenyl (FS)	%	87	97		2239881
D8-Acenaphthylene	%	82	88		2239881
D8-Naphthalene	%	80	86		2239881

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B2444
Report Date: 2010/10/05

Test Summary

Maxxam ID	GW2655	**Collected**	2010/08/12
Sample ID	LICA PUFF/CLS/AUG12, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/18

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2239881	2010/08/19	2010/10/04	JIW

Maxxam ID	GW2656	**Collected**	2010/08/12
Sample ID	LICA PUFF/PORT/AUG12, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/18

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2239881	2010/08/19	2010/10/04	JIW

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Maxxam Analytics

Maxxam Job #: B0B2444
Report Date: 2010/10/05

GENERAL COMMENTS

PAHMS-F(WS:2239881)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in continuing calibration. No positive found for this compound.

9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in continuing calibration.

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

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0B2444

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239881	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/04		84	%	50 - 150
			D10-Fluoranthene	2010/10/04		96	%	50 - 150
			D10-Phenanthrene	2010/10/04		94	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/04		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/04		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/04		100	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/04		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/04		96	%	50 - 150
			D12-Chrysene	2010/10/04		94	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/04		102	%	50 - 150
			D12-Perylene	2010/10/04		106	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/04		86	%	50 - 150
			D8-Acenaphthylene	2010/10/04		92	%	50 - 150
			D8-Naphthalene	2010/10/04		92	%	50 - 150
			Acenaphthene	2010/10/04		83	%	60 - 130
		RPD	Acenaphthene	2010/10/04	14.2		%	50
		Spiked Blank	Acenaphthylene	2010/10/04		83	%	60 - 130
		RPD	Acenaphthylene	2010/10/04	12.5		%	50
		Spiked Blank	Anthracene	2010/10/04		77	%	60 - 130
		RPD	Anthracene	2010/10/04	16.5		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/04		84	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/04	16.9		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/04		78	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/04	23.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/04		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/04	16.5		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/04		87	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/04	17.1		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/04		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/04	14.0		%	50
		Spiked Blank	Chrysene	2010/10/04		84	%	60 - 130
		RPD	Chrysene	2010/10/04	10.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/04		86	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/04	20.9		%	50
		Spiked Blank	Fluoranthene	2010/10/04		86	%	60 - 130
		RPD	Fluoranthene	2010/10/04	21.3		%	50
		Spiked Blank	Fluorene	2010/10/04		85	%	60 - 130
		RPD	Fluorene	2010/10/04	15.8		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/04		87	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/04	20.3		%	50
		Spiked Blank	Naphthalene	2010/10/04		85	%	60 - 130
		RPD	Naphthalene	2010/10/04	11.9		%	50
		Spiked Blank	Phenanthrene	2010/10/04		80	%	60 - 130
		RPD	Phenanthrene	2010/10/04	18.5		%	50
		Spiked Blank	Pyrene	2010/10/04		83	%	60 - 130
		RPD	Pyrene	2010/10/04	19.6		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/04		88	%	50 - 150
			D10-Fluoranthene	2010/10/04		96	%	50 - 150
			D10-Phenanthrene	2010/10/04		94	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/04		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/04		94	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/04		100	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/04		112	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/04		96	%	50 - 150
			D12-Chrysene	2010/10/04		98	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B2444

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239881	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/04		102	%	50 - 150
			D12-Perylene	2010/10/04		104	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/04		86	%	50 - 150
			D8-Acenaphthylene	2010/10/04		96	%	50 - 150
			D8-Naphthalene	2010/10/04		98	%	50 - 150
			1-Methylnaphthalene	2010/10/04	<0.10		ug	
			1-Methylphenanthrene	2010/10/04	<0.10		ug	
			2-Chloronaphthalene	2010/10/04	<0.10		ug	
			2-Methylanthracene	2010/10/04	<0.10		ug	
			2-Methylnaphthalene	2010/10/04	<0.10		ug	
			3-Methylcholanthrene	2010/10/04	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/04	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/04	<0.40		ug	
			Acenaphthene	2010/10/04	<0.050		ug	
			Acenaphthylene	2010/10/04	<0.050		ug	
			Anthracene	2010/10/04	<0.050		ug	
			Benzo(a)anthracene	2010/10/04	<0.050		ug	
			Benzo(a)fluorene	2010/10/04	<0.10		ug	
			Benzo(a)pyrene	2010/10/04	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/04	<0.050		ug	
			Benzo(b)fluorene	2010/10/04	<0.10		ug	
			Benzo(e)pyrene	2010/10/04	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/04	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/04	<0.050		ug	
			Biphenyl	2010/10/04	<0.10		ug	
			Chrysene	2010/10/04	<0.050		ug	
			Coronene	2010/10/04	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/04	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/04	<0.20		ug	
			Fluoranthene	2010/10/04	<0.050		ug	
			Fluorene	2010/10/04	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/04	<0.050		ug	
			m-Terphenyl	2010/10/04	<0.10		ug	
			Naphthalene	2010/10/04	<0.072		ug	
			o-Terphenyl	2010/10/04	<0.10		ug	
			Perylene	2010/10/04	<0.10		ug	
			Phenanthrene	2010/10/04	<0.050		ug	
			p-Terphenyl	2010/10/04	<0.10		ug	
			Pyrene	2010/10/04	<0.050		ug	
			Quinoline	2010/10/04	<0.40		ug	
			Tetralin	2010/10/04	<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 International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics Inc.

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: Cold Lake South
Station ID: Lica1
Field Sample ID: LICA PUF/CLS/Aug 18, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Aug 17, 2010 @ 7:02 mst
Removal Date/Time: Aug 19, 2010 @ 7:15 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
18-Aug-10	18/08/2010 0:00	19/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
16-Aug-10	19-Aug-10	25-Aug-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
708	229	14.6	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# 2319
GB0A5359 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Aug 18, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2319

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

Report Date: 2010/10/05

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B4345
Received: 2010/08/21, 09:57

Sample Matrix: Filter
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/24	2010/10/04	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B4345
Report Date: 2010/10/05

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		GX1935	GX1936		
Sampling Date		2010/08/18	2010/08/18		
COC Number		2319	2319		
	Units	**LICA PUFF/CLS/AUG 18,10**	**LICA PUFF/PORT/AUG 18,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2247900
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2247900
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2247900
2-Methylanthracene	ug	<0.10	<0.10	0.10	2247900
2-Methylnaphthalene	ug	0.14	<0.10	0.10	2247900
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2247900
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2247900
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2247900
Acenaphthene	ug	<0.050	<0.050	0.050	2247900
Acenaphthylene	ug	<0.050	<0.050	0.050	2247900
Anthracene	ug	<0.050	<0.050	0.050	2247900
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2247900
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2247900
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2247900
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2247900
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2247900
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2247900
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2247900
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2247900
Biphenyl	ug	<0.10	<0.10	0.10	2247900
Chrysene	ug	<0.050	<0.050	0.050	2247900
Coronene	ug	<0.10	<0.10	0.10	2247900
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2247900
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2247900
Fluoranthene	ug	<0.050	<0.050	0.050	2247900
Fluorene	ug	0.054	<0.050	0.050	2247900
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2247900
m-Terphenyl	ug	<0.10	<0.10	0.10	2247900
Naphthalene	ug	0.110	0.082	0.072	2247900
o-Terphenyl	ug	<0.10	<0.10	0.10	2247900
Perylene	ug	<0.10	<0.10	0.10	2247900

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B4345
Report Date: 2010/10/05

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		GX1935	GX1936		
Sampling Date		2010/08/18	2010/08/18		
COC Number		2319	2319		
	Units	**LICA PUFF/CLS/AUG 18,10**	**LICA PUFF/PORT/AUG 18,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.264	0.110	0.050	2247900
p-Terphenyl	ug	<0.10	<0.10	0.10	2247900
Pyrene	ug	<0.050	<0.050	0.050	2247900
Quinoline	ug	<0.40	<0.40	0.40	2247900
Tetralin	ug	<0.10	<0.10	0.10	2247900
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	78	84		2247900
D10-Fluoranthene	%	100	86		2247900
D10-Fluorene (FS)	%	57	68		2247900
D10-Phenanthrene	%	100	90		2247900
D12-Benzo(a)anthracene	%	106	102		2247900
D12-Benzo(a)pyrene	%	86	80		2247900
D12-Benzo(b)fluoranthene	%	98	94		2247900
D12-Benzo(ghi)perylene	%	110	102		2247900
D12-Benzo(k)fluoranthene	%	90	90		2247900
D12-Chrysene	%	92	92		2247900
D12-Indeno(1,2,3-cd)pyrene	%	102	96		2247900
D12-Perylene	%	100	96		2247900
D14-Dibenzo(a,h)anthracene	%	86	80		2247900
D14-Terphenyl (FS)	%	96	99		2247900
D8-Acenaphthylene	%	90	90		2247900
D8-Naphthalene	%	84	92		2247900

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B4345
Report Date: 2010/10/05

Test Summary

Maxxam ID	GX1935	**Collected**	2010/08/18
Sample ID	LICA PUFF/CLS/AUG 18,10	**Shipped**	
Matrix	Filter	**Received**	2010/08/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2247900	2010/08/24	2010/10/04	JIW

Maxxam ID	GX1936	**Collected**	2010/08/18
Sample ID	LICA PUFF/PORT/AUG 18,10	**Shipped**	
Matrix	Filter	**Received**	2010/08/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2247900	2010/08/24	2010/10/04	JIW

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Maxxam Analytics

Maxxam Job #: B0B4345
Report Date: 2010/10/05

GENERAL COMMENTS

PAHMS-F(WS:2247900)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in continuing calibration.

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

Pyrene is statistically out of control at 75% recovery in the Spike and at 77% recovery in the Spike:dup due to the low Pyrene level in the Method Spike. Acceptance criteria met for both spike and dup. Data reported and flagged.

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

Results relate only to the items tested.

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0B4345

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247900	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/04		82	%	50 - 150
			D10-Fluoranthene	2010/10/04		88	%	50 - 150
			D10-Phenanthrene	2010/10/04		88	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/04		112	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/04		88	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/04		96	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/04		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/04		94	%	50 - 150
			D12-Chrysene	2010/10/04		100	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/04		100	%	50 - 150
			D12-Perylene	2010/10/04		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/04		82	%	50 - 150
			D8-Acenaphthylene	2010/10/04		90	%	50 - 150
			D8-Naphthalene	2010/10/04		96	%	50 - 150
			Acenaphthene	2010/10/04		80	%	60 - 130
		RPD	Acenaphthene	2010/10/04	0.3		%	50
		Spiked Blank	Acenaphthylene	2010/10/04		80	%	60 - 130
		RPD	Acenaphthylene	2010/10/04	1.6		%	50
		Spiked Blank	Anthracene	2010/10/04		69	%	60 - 130
		RPD	Anthracene	2010/10/04	2.8		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/04		84	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/04	2.4		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/04		72	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/04	1.7		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/04		74	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/04	0.7		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/04		85	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/04	1.5		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/04		84	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/04	1.5		%	50
		Spiked Blank	Chrysene	2010/10/04		88	%	60 - 130
		RPD	Chrysene	2010/10/04	5.6		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/04		79	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/04	0		%	50
		Spiked Blank	Fluoranthene	2010/10/04		77	%	60 - 130
		RPD	Fluoranthene	2010/10/04	2.6		%	50
		Spiked Blank	Fluorene	2010/10/04		81	%	60 - 130
		RPD	Fluorene	2010/10/04	1.5		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/04		81	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/04	0.9		%	50
		Spiked Blank	Naphthalene	2010/10/04		82	%	60 - 130
		RPD	Naphthalene	2010/10/04	4.4		%	50
		Spiked Blank	Phenanthrene	2010/10/04		71	%	60 - 130
		RPD	Phenanthrene	2010/10/04	2.8		%	50
		Spiked Blank	Pyrene	2010/10/04		75	%	60 - 130
		RPD	Pyrene	2010/10/04	2.6		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/04		86	%	50 - 150
			D10-Fluoranthene	2010/10/04		96	%	50 - 150
			D10-Phenanthrene	2010/10/04		94	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/04		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/04		84	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/04		96	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/04		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/04		94	%	50 - 150
			D12-Chrysene	2010/10/04		98	%	50 - 150

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B4345

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247900	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/04		96	%	50 - 150
			D12-Perylene	2010/10/04		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/04		82	%	50 - 150
			D8-Acenaphthylene	2010/10/04		94	%	50 - 150
			D8-Naphthalene	2010/10/04		98	%	50 - 150
			1-Methylnaphthalene	2010/10/04	<0.10		ug	
			1-Methylphenanthrene	2010/10/04	<0.10		ug	
			2-Chloronaphthalene	2010/10/04	<0.10		ug	
			2-Methylanthracene	2010/10/04	<0.10		ug	
			2-Methylnaphthalene	2010/10/04	<0.10		ug	
			3-Methylcholanthrene	2010/10/04	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/04	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/04	<0.40		ug	
			Acenaphthene	2010/10/04	<0.050		ug	
			Acenaphthylene	2010/10/04	<0.050		ug	
			Anthracene	2010/10/04	<0.050		ug	
			Benzo(a)anthracene	2010/10/04	<0.050		ug	
			Benzo(a)fluorene	2010/10/04	<0.10		ug	
			Benzo(a)pyrene	2010/10/04	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/04	<0.050		ug	
			Benzo(b)fluorene	2010/10/04	<0.10		ug	
			Benzo(e)pyrene	2010/10/04	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/04	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/04	<0.050		ug	
			Biphenyl	2010/10/04	<0.10		ug	
			Chrysene	2010/10/04	<0.050		ug	
			Coronene	2010/10/04	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/04	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/04	<0.20		ug	
			Fluoranthene	2010/10/04	<0.050		ug	
			Fluorene	2010/10/04	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/04	<0.050		ug	
			m-Terphenyl	2010/10/04	<0.10		ug	
			Naphthalene	2010/10/04	0.074, RDL=0.072		ug	
			o-Terphenyl	2010/10/04	<0.10		ug	
			Perylene	2010/10/04	<0.10		ug	
			Phenanthrene	2010/10/04	<0.050		ug	
			p-Terphenyl	2010/10/04	<0.10		ug	
			Pyrene	2010/10/04	<0.050		ug	
			Quinoline	2010/10/04	<0.40		ug	
			Tetralin	2010/10/04	<0.10		ug	

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

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Maxxam Analytics Inc.

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: Cold Lake South
Station ID: Lica1
Field Sample ID: LICA PUF/CLS/Aug 24, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Aug 23, 2010 @ 7:31 mst
Removal Date/Time: Aug 25, 2010 @ 16:56 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
24-Aug-10	24/08/2010 0:00	25/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
20-Aug-10	26-Aug-10	01-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
716	229	15.7	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# 0559
GB0A5363 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Aug 24, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 0559

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

Report Date: 2010/10/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B8453
Received: 2010/08/28, 15:05

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/01	2010/10/05	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B8453
Report Date: 2010/10/07

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

Maxxam ID		GZ1642	GZ1643		
Sampling Date		2010/08/24	2010/08/24		
COC Number		0559	0559		
	Units	**LICA PUF/CLS/AUG 24, 10**	**LICA PUF/PORT/AUG 24, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.28	<0.10	0.10	2255320
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2255320
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2255320
2-Methylanthracene	ug	<0.10	<0.10	0.10	2255320
2-Methylnaphthalene	ug	0.58	0.10	0.10	2255320
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2255320
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2255320
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2255320
Acenaphthene	ug	<0.050	<0.050	0.050	2255320
Acenaphthylene	ug	<0.050	<0.050	0.050	2255320
Anthracene	ug	<0.050	<0.050	0.050	2255320
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2255320
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2255320
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2255320
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2255320
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2255320
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2255320
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2255320
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2255320
Biphenyl	ug	0.13	<0.10	0.10	2255320
Chrysene	ug	<0.050	<0.050	0.050	2255320
Coronene	ug	<0.10	<0.10	0.10	2255320
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2255320
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2255320
Fluoranthene	ug	0.052	<0.050	0.050	2255320
Fluorene	ug	0.148	0.064	0.050	2255320
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2255320
m-Terphenyl	ug	<0.10	<0.10	0.10	2255320
Naphthalene	ug	0.338	0.102	0.072	2255320
o-Terphenyl	ug	<0.10	<0.10	0.10	2255320
Perylene	ug	<0.10	<0.10	0.10	2255320

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B8453
Report Date: 2010/10/07

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

Maxxam ID		GZ1642	GZ1643		
Sampling Date		2010/08/24	2010/08/24		
COC Number		0559	0559		
	Units	**LICA PUF/CLS/AUG 24, 10**	**LICA PUF/PORT/AUG 24, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.432	0.204	0.050	2255320
p-Terphenyl	ug	<0.10	<0.10	0.10	2255320
Pyrene	ug	<0.050	<0.050	0.050	2255320
Quinoline	ug	<0.40	<0.40	0.40	2255320
Tetralin	ug	<0.10	<0.10	0.10	2255320
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	78	88		2255320
D10-Fluoranthene	%	110	114		2255320
D10-Fluorene (FS)	%	59	62		2255320
D10-Phenanthrene	%	108	114		2255320
D12-Benzo(a)anthracene	%	124	130		2255320
D12-Benzo(a)pyrene	%	94	100		2255320
D12-Benzo(b)fluoranthene	%	110	114		2255320
D12-Benzo(ghi)perylene	%	110	114		2255320
D12-Benzo(k)fluoranthene	%	100	104		2255320
D12-Chrysene	%	100	104		2255320
D12-Indeno(1,2,3-cd)pyrene	%	108	112		2255320
D12-Perylene	%	104	108		2255320
D14-Dibenzo(a,h)anthracene	%	92	94		2255320
D14-Terphenyl (FS)	%	106	111		2255320
D8-Acenaphthylene	%	96	106		2255320
D8-Naphthalene	%	82	94		2255320

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B8453
Report Date: 2010/10/07

Test Summary

Maxxam ID	GZ1642	**Collected**	2010/08/24
Sample ID	LICA PUF/CLS/AUG 24, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2255320	2010/09/01	2010/10/05	JIW

Maxxam ID	GZ1643	**Collected**	2010/08/24
Sample ID	LICA PUF/PORT/AUG 24, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2255320	2010/09/01	2010/10/05	JIW

Maxxam Analytics

Maxxam Job #: B0B8453
Report Date: 2010/10/07

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0B8453

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2255320	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/05		90	%	50 - 150
			D10-Fluoranthene	2010/10/05		104	%	50 - 150
			D10-Phenanthrene	2010/10/05		106	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/05		128	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/05		94	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/05		110	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/05		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/05		104	%	50 - 150
			D12-Chrysene	2010/10/05		108	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/05		106	%	50 - 150
			D12-Perylene	2010/10/05		106	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/05		90	%	50 - 150
			D8-Acenaphthylene	2010/10/05		98	%	50 - 150
			D8-Naphthalene	2010/10/05		100	%	50 - 150
			Acenaphthene	2010/10/05		86	%	60 - 130
		RPD	Acenaphthene	2010/10/05	12.8		%	50
		Spiked Blank	Acenaphthylene	2010/10/05		86	%	60 - 130
		RPD	Acenaphthylene	2010/10/05	13.3		%	50
		Spiked Blank	Anthracene	2010/10/05		82	%	60 - 130
		RPD	Anthracene	2010/10/05	13.8		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/05		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/05	14.6		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/05		76	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/05	16.0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/05		83	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/05	10.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/05		93	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/05	12.9		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/05		91	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/05	19.7		%	50
		Spiked Blank	Chrysene	2010/10/05		92	%	60 - 130
		RPD	Chrysene	2010/10/05	14.9		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/05		93	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/05	13.8		%	50
		Spiked Blank	Fluoranthene	2010/10/05		90	%	60 - 130
		RPD	Fluoranthene	2010/10/05	14.1		%	50
		Spiked Blank	Fluorene	2010/10/05		88	%	60 - 130
		RPD	Fluorene	2010/10/05	13.1		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/05		92	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/05	13.3		%	50
		Spiked Blank	Naphthalene	2010/10/05		77	%	60 - 130
		RPD	Naphthalene	2010/10/05	14.3		%	50
		Spiked Blank	Phenanthrene	2010/10/05		87	%	60 - 130
		RPD	Phenanthrene	2010/10/05	14.2		%	50
		Spiked Blank	Pyrene	2010/10/05		81	%	60 - 130
		RPD	Pyrene	2010/10/05	12.8		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/06		90	%	50 - 150
			D10-Fluoranthene	2010/10/06		108	%	50 - 150
			D10-Phenanthrene	2010/10/06		106	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		126	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		96	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		108	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		102	%	50 - 150
			D12-Chrysene	2010/10/06		100	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B8453

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2255320	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/06		106	%	50 - 150
			D12-Perylene	2010/10/06		104	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		90	%	50 - 150
			D8-Acenaphthylene	2010/10/06		98	%	50 - 150
			D8-Naphthalene	2010/10/06		100	%	50 - 150
			1-Methylnaphthalene	2010/10/06	<0.10		ug	
			1-Methylphenanthrene	2010/10/06	<0.10		ug	
			2-Chloronaphthalene	2010/10/06	<0.10		ug	
			2-Methylanthracene	2010/10/06	<0.10		ug	
			2-Methylnaphthalene	2010/10/06	<0.10		ug	
			3-Methylcholanthrene	2010/10/06	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/06	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/06	<0.40		ug	
			Acenaphthene	2010/10/06	<0.050		ug	
			Acenaphthylene	2010/10/06	<0.050		ug	
			Anthracene	2010/10/06	<0.050		ug	
			Benzo(a)anthracene	2010/10/06	<0.050		ug	
			Benzo(a)fluorene	2010/10/06	<0.10		ug	
			Benzo(a)pyrene	2010/10/06	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/06	<0.050		ug	
			Benzo(b)fluorene	2010/10/06	<0.10		ug	
			Benzo(e)pyrene	2010/10/06	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/06	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/06	<0.050		ug	
			Biphenyl	2010/10/06	<0.10		ug	
			Chrysene	2010/10/06	<0.050		ug	
			Coronene	2010/10/06	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/06	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/06	<0.20		ug	
			Fluoranthene	2010/10/06	<0.050		ug	
			Fluorene	2010/10/06	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/06	<0.050		ug	
			m-Terphenyl	2010/10/06	<0.10		ug	
			Naphthalene	2010/10/06	<0.072		ug	
			o-Terphenyl	2010/10/06	<0.10		ug	
			Perylene	2010/10/06	<0.10		ug	
			Phenanthrene	2010/10/06	<0.050		ug	
			p-Terphenyl	2010/10/06	<0.10		ug	
			Pyrene	2010/10/06	<0.050		ug	
			Quinoline	2010/10/06	<0.40		ug	
			Tetralin	2010/10/06	<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/Aug 30, 10

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Aug 27, 2010 @ 17:17 mst
Removal Date/Time: Aug 31, 2010 @ 7:32 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
30-Aug-10	30/08/2010 0:00	31/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
26-Aug-10	31-Aug-10	11-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
711	229	12.6	330.32

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

Comments: COC# 2649
GB0A5367 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Aug 30, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2649

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

Report Date: 2010/10/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C1248
Received: 2010/09/02, 08:33

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/03	2010/10/06	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

==========

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Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C1248
Report Date: 2010/10/12

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

Maxxam ID		HA8211	HA8212		
Sampling Date		2010/08/30	2010/08/30		
COC Number		2649	2649		
	Units	**LICA PUF/CLS/AUG 30,10**	**LICA PUF/PORT/AUG 30,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.14	<0.10	0.10	2259178
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2259178
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2259178
2-Methylanthracene	ug	<0.10	<0.10	0.10	2259178
2-Methylnaphthalene	ug	0.26	<0.10	0.10	2259178
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2259178
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2259178
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2259178
Acenaphthene	ug	0.092	<0.050	0.050	2259178
Acenaphthylene	ug	0.054	<0.050	0.050	2259178
Anthracene	ug	<0.050	<0.050	0.050	2259178
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2259178
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2259178
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2259178
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2259178
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2259178
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2259178
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2259178
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2259178
Biphenyl	ug	<0.10	<0.10	0.10	2259178
Chrysene	ug	<0.050	<0.050	0.050	2259178
Coronene	ug	<0.10	<0.10	0.10	2259178
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2259178
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2259178
Fluoranthene	ug	0.062	<0.050	0.050	2259178
Fluorene	ug	0.148	<0.050	0.050	2259178
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2259178
m-Terphenyl	ug	<0.10	<0.10	0.10	2259178
Naphthalene	ug	0.232	0.092	0.072	2259178
o-Terphenyl	ug	<0.10	<0.10	0.10	2259178
Perylene	ug	<0.10	<0.10	0.10	2259178

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Maxxam Analytics

Maxxam Job #: B0C1248
Report Date: 2010/10/12

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

Maxxam ID		HA8211	HA8212		
Sampling Date		2010/08/30	2010/08/30		
COC Number		2649	2649		
	Units	**LICA PUF/CLS/AUG 30,10**	**LICA PUF/PORT/AUG 30,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.402	0.120	0.050	2259178
p-Terphenyl	ug	<0.10	<0.10	0.10	2259178
Pyrene	ug	<0.050	<0.050	0.050	2259178
Quinoline	ug	<0.40	<0.40	0.40	2259178
Tetralin	ug	<0.10	<0.10	0.10	2259178
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2259178
D10-Fluoranthene	%	94	92		2259178
D10-Fluorene (FS)	%	58	55		2259178
D10-Phenanthrene	%	90	88		2259178
D12-Benzo(a)anthracene	%	102	98		2259178
D12-Benzo(a)pyrene	%	86	86		2259178
D12-Benzo(b)fluoranthene	%	88	84		2259178
D12-Benzo(ghi)perylene	%	94	90		2259178
D12-Benzo(k)fluoranthene	%	84	84		2259178
D12-Chrysene	%	84	80		2259178
D12-Indeno(1,2,3-cd)pyrene	%	94	92		2259178
D12-Perylene	%	88	88		2259178
D14-Dibenzo(a,h)anthracene	%	96	94		2259178
D14-Terphenyl (FS)	%	102	92		2259178
D8-Acenaphthylene	%	80	84		2259178
D8-Naphthalene	%	68	76		2259178

QC Batch = Quality Control Batch

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

Maxxam Analytics

Maxxam Job #: B0C1248
Report Date: 2010/10/12

Test Summary

Maxxam ID	HA8211	**Collected**	2010/08/30
Sample ID	LICA PUF/CLS/AUG 30,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2259178	2010/09/03	2010/10/06	JIW

Maxxam ID	HA8212	**Collected**	2010/08/30
Sample ID	LICA PUF/PORT/AUG 30,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2259178	2010/09/03	2010/10/06	JIW

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Maxxam Analytics

Maxxam Job #: B0C1248
Report Date: 2010/10/12

GENERAL COMMENTS

Sample HA8211-01: PAHMS-F(WS:2259178)
Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HA8212-01: PAHMS-F(WS:2259178)
Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0C1248

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2259178	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/05		84	%	50 - 150
			D10-Fluoranthene	2010/10/05		90	%	50 - 150
			D10-Phenanthrene	2010/10/05		88	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/05		100	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/05		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/05		86	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/05		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/05		86	%	50 - 150
			D12-Chrysene	2010/10/05		86	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/05		92	%	50 - 150
			D12-Perylene	2010/10/05		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/05		94	%	50 - 150
			D8-Acenaphthylene	2010/10/05		86	%	50 - 150
			D8-Naphthalene	2010/10/05		84	%	50 - 150
			Acenaphthene	2010/10/05		81	%	60 - 130
		RPD	Acenaphthene	2010/10/06	8.1		%	50
		Spiked Blank	Acenaphthylene	2010/10/05		83	%	60 - 130
		RPD	Acenaphthylene	2010/10/06	8.8		%	50
		Spiked Blank	Anthracene	2010/10/05		77	%	60 - 130
		RPD	Anthracene	2010/10/06	10.2		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/05		86	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/06	7.9		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/05		68	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/06	6.8		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/05		75	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/06	8.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/05		82	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/06	8.6		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/05		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/06	10.7		%	50
		Spiked Blank	Chrysene	2010/10/05		83	%	60 - 130
		RPD	Chrysene	2010/10/06	9.5		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/05		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/06	9.2		%	50
		Spiked Blank	Fluoranthene	2010/10/05		84	%	60 - 130
		RPD	Fluoranthene	2010/10/06	10.0		%	50
		Spiked Blank	Fluorene	2010/10/05		83	%	60 - 130
		RPD	Fluorene	2010/10/06	6.5		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/05		82	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/06	8.9		%	50
		Spiked Blank	Naphthalene	2010/10/05		71	%	60 - 130
		RPD	Naphthalene	2010/10/06	7.3		%	50
		Spiked Blank	Phenanthrene	2010/10/05		81	%	60 - 130
		RPD	Phenanthrene	2010/10/06	9.4		%	50
		Spiked Blank	Pyrene	2010/10/05		77	%	60 - 130
		RPD	Pyrene	2010/10/06	10.3		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/06		82	%	50 - 150
			D10-Fluoranthene	2010/10/06		94	%	50 - 150
			D10-Phenanthrene	2010/10/06		88	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		92	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		86	%	50 - 150
			D12-Chrysene	2010/10/06		90	%	50 - 150

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C1248

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2259178	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/06		96	%	50 - 150
			D12-Perylene	2010/10/06		94	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		96	%	50 - 150
			D8-Acenaphthylene	2010/10/06		80	%	50 - 150
			D8-Naphthalene	2010/10/06		80	%	50 - 150
			1-Methylnaphthalene	2010/10/06	<0.10		ug	
			1-Methylphenanthrene	2010/10/06	<0.10		ug	
			2-Chloronaphthalene	2010/10/06	<0.10		ug	
			2-Methylanthracene	2010/10/06	<0.10		ug	
			2-Methylnaphthalene	2010/10/06	<0.10		ug	
			3-Methylcholanthrene	2010/10/06	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/06	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/06	<0.40		ug	
			Acenaphthene	2010/10/06	<0.050		ug	
			Acenaphthylene	2010/10/06	<0.050		ug	
			Anthracene	2010/10/06	<0.050		ug	
			Benzo(a)anthracene	2010/10/06	<0.050		ug	
			Benzo(a)fluorene	2010/10/06	<0.10		ug	
			Benzo(a)pyrene	2010/10/06	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/06	<0.050		ug	
			Benzo(b)fluorene	2010/10/06	<0.10		ug	
			Benzo(e)pyrene	2010/10/06	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/06	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/06	<0.050		ug	
			Biphenyl	2010/10/06	<0.10		ug	
			Chrysene	2010/10/06	<0.050		ug	
			Coronene	2010/10/06	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/06	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/06	<0.20		ug	
			Fluoranthene	2010/10/06	<0.050		ug	
			Fluorene	2010/10/06	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/06	<0.050		ug	
			m-Terphenyl	2010/10/06	<0.10		ug	
			Naphthalene	2010/10/06	<0.072		ug	
			o-Terphenyl	2010/10/06	<0.10		ug	
			Perylene	2010/10/06	<0.10		ug	
			Phenanthrene	2010/10/06	<0.050		ug	
			p-Terphenyl	2010/10/06	<0.10		ug	
			Pyrene	2010/10/06	<0.050		ug	
			Quinoline	2010/10/06	<0.40		ug	
			Tetralin	2010/10/06	<0.10		ug	

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

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

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

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Sept 03, 2010 @ 6:17 mst
Removal Date/Time: Sept 07, 2010 @ 7:42 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
05-Sep-10	05/09/2010 0:00	06/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
02-Sep-10	07-Sep-10	14-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
706	229	13.7	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# 3635
GB0B3958 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Sept 05, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 3635

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

Report Date: 2010/10/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C4812
Received: 2010/09/09, 09:20

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/10	2010/10/06	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C4812
Report Date: 2010/10/07

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

Maxxam ID		HC4999	HC5000		
Sampling Date		2010/09/05	2010/09/05		
COC Number		3635	3635		
	Units	**LICA PUFF/CLS/SEPT 05,10**	**LICA PUFF/PORT/SEPT 05,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2269694
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2269694
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2269694
2-Methylanthracene	ug	<0.10	<0.10	0.10	2269694
2-Methylnaphthalene	ug	0.12	<0.10	0.10	2269694
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2269694
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2269694
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2269694
Acenaphthene	ug	0.068	<0.050	0.050	2269694
Acenaphthylene	ug	<0.050	<0.050	0.050	2269694
Anthracene	ug	<0.050	<0.050	0.050	2269694
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2269694
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2269694
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2269694
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2269694
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2269694
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2269694
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2269694
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2269694
Biphenyl	ug	<0.10	<0.10	0.10	2269694
Chrysene	ug	<0.050	<0.050	0.050	2269694
Coronene	ug	<0.10	<0.10	0.10	2269694
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2269694
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2269694
Fluoranthene	ug	<0.050	<0.050	0.050	2269694
Fluorene	ug	0.124	<0.050	0.050	2269694
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2269694
m-Terphenyl	ug	<0.10	<0.10	0.10	2269694
Naphthalene	ug	0.106	<0.072	0.072	2269694
o-Terphenyl	ug	<0.10	<0.10	0.10	2269694
Perylene	ug	<0.10	<0.10	0.10	2269694

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C4812
Report Date: 2010/10/07

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

Maxxam ID		HC4999	HC5000		
Sampling Date		2010/09/05	2010/09/05		
COC Number		3635	3635		
	Units	**LICA PUFF/CLS/SEPT 05,10**	**LICA PUFF/PORT/SEPT 05,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.320	0.100	0.050	2269694
p-Terphenyl	ug	<0.10	<0.10	0.10	2269694
Pyrene	ug	<0.050	<0.050	0.050	2269694
Quinoline	ug	<0.40	<0.40	0.40	2269694
Tetralin	ug	<0.10	<0.10	0.10	2269694
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	86	86		2269694
D10-Fluoranthene	%	92	94		2269694
D10-Fluorene (FS)	%	67	58		2269694
D10-Phenanthrene	%	92	94		2269694
D12-Benzo(a)anthracene	%	98	98		2269694
D12-Benzo(a)pyrene	%	86	86		2269694
D12-Benzo(b)fluoranthene	%	86	88		2269694
D12-Benzo(ghi)perylene	%	88	90		2269694
D12-Benzo(k)fluoranthene	%	84	88		2269694
D12-Chrysene	%	84	84		2269694
D12-Indeno(1,2,3-cd)pyrene	%	86	90		2269694
D12-Perylene	%	86	88		2269694
D14-Dibenzo(a,h)anthracene	%	86	92		2269694
D14-Terphenyl (FS)	%	88	85		2269694
D8-Acenaphthylene	%	84	90		2269694
D8-Naphthalene	%	84	84		2269694

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C4812
Report Date: 2010/10/07

Test Summary

Maxxam ID	HC4999	**Collected**	2010/09/05
Sample ID	LICA PUFF/CLS/SEPT 05,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2269694	2010/09/10	2010/10/06	JIW

Maxxam ID	HC5000	**Collected**	2010/09/05
Sample ID	LICA PUFF/PORT/SEPT 05,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2269694	2010/09/10	2010/10/06	JIW

Maxxam Analytics

Maxxam Job #: B0C4812
Report Date: 2010/10/07

GENERAL COMMENTS

PAHMS-F(WS:2269694)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

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

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

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0C4812

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2269694	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/06		86	%	50 - 150
			D10-Fluoranthene	2010/10/06		80	%	50 - 150
			D10-Phenanthrene	2010/10/06		82	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		92	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		84	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		82	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		86	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		82	%	50 - 150
			D12-Chrysene	2010/10/06		88	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/06		84	%	50 - 150
			D12-Perylene	2010/10/06		84	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		86	%	50 - 150
			D8-Acenaphthylene	2010/10/06		82	%	50 - 150
			D8-Naphthalene	2010/10/06		84	%	50 - 150
			Acenaphthene	2010/10/06		79	%	60 - 130
		RPD	Acenaphthene	2010/10/06	1.6		%	50
		Spiked Blank	Acenaphthylene	2010/10/06		78	%	60 - 130
		RPD	Acenaphthylene	2010/10/06	1.3		%	50
		Spiked Blank	Anthracene	2010/10/06		72	%	60 - 130
		RPD	Anthracene	2010/10/06	1.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/06		79	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/06	0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/06		64	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/06	1.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/06		75	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/06	3.7		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/06		76	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/06	0		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/06		75	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/06	5.5		%	50
		Spiked Blank	Chrysene	2010/10/06		82	%	60 - 130
		RPD	Chrysene	2010/10/06	1.2		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/06		75	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/06	0.7		%	50
		Spiked Blank	Fluoranthene	2010/10/06		77	%	60 - 130
		RPD	Fluoranthene	2010/10/06	0.3		%	50
		Spiked Blank	Fluorene	2010/10/06		79	%	60 - 130
		RPD	Fluorene	2010/10/06	1.3		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/06		74	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/06	0.7		%	50
		Spiked Blank	Naphthalene	2010/10/06		72	%	60 - 130
		RPD	Naphthalene	2010/10/06	1.4		%	50
		Spiked Blank	Phenanthrene	2010/10/06		76	%	60 - 130
		RPD	Phenanthrene	2010/10/06	1.3		%	50
		Spiked Blank	Pyrene	2010/10/06		70	%	60 - 130
		RPD	Pyrene	2010/10/06	0.4		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/06		62	%	50 - 150
			D10-Fluoranthene	2010/10/06		62	%	50 - 150
			D10-Phenanthrene	2010/10/06		62	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		70	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		62	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		60	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		64	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		60	%	50 - 150
			D12-Chrysene	2010/10/06		60	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C4812

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2269694	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/06		64	%	50 - 150
			D12-Perylene	2010/10/06		60	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		64	%	50 - 150
			D8-Acenaphthylene	2010/10/06		60	%	50 - 150
			D8-Naphthalene	2010/10/06		62	%	50 - 150
			1-Methylnaphthalene	2010/10/06	<0.10		ug	
			1-Methylphenanthrene	2010/10/06	<0.10		ug	
			2-Chloronaphthalene	2010/10/06	<0.10		ug	
			2-Methylanthracene	2010/10/06	<0.10		ug	
			2-Methylnaphthalene	2010/10/06	<0.10		ug	
			3-Methylcholanthrene	2010/10/06	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/06	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/06	<0.40		ug	
			Acenaphthene	2010/10/06	<0.050		ug	
			Acenaphthylene	2010/10/06	<0.050		ug	
			Anthracene	2010/10/06	<0.050		ug	
			Benzo(a)anthracene	2010/10/06	<0.050		ug	
			Benzo(a)fluorene	2010/10/06	<0.10		ug	
			Benzo(a)pyrene	2010/10/06	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/06	<0.050		ug	
			Benzo(b)fluorene	2010/10/06	<0.10		ug	
			Benzo(e)pyrene	2010/10/06	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/06	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/06	<0.050		ug	
			Biphenyl	2010/10/06	<0.10		ug	
			Chrysene	2010/10/06	<0.050		ug	
			Coronene	2010/10/06	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/06	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/06	<0.20		ug	
			Fluoranthene	2010/10/06	<0.050		ug	
			Fluorene	2010/10/06	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/06	<0.050		ug	
			m-Terphenyl	2010/10/06	<0.10		ug	
			Naphthalene	2010/10/06	<0.072		ug	
			o-Terphenyl	2010/10/06	<0.10		ug	
			Perylene	2010/10/06	<0.10		ug	
			Phenanthrene	2010/10/06	<0.050		ug	
			p-Terphenyl	2010/10/06	<0.10		ug	
			Pyrene	2010/10/06	<0.050		ug	
			Quinoline	2010/10/06	<0.40		ug	
			Tetralin	2010/10/06	<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

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

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

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Sept 10, 2010 @ 7:41 mst
Removal Date/Time: Sept 13, 2010 @ 7:31 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
11-Sep-10	11/09/2010 0:00	12/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
07-Sep-10	13-Sep-10	18-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
708	229	11.9	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# 3726
GB0B3965 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Sept 11, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 3726

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

Report Date: 2010/10/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C7690
Received: 2010/09/15, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/17	2010/10/07	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C7690
Report Date: 2010/10/07

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

Maxxam ID		HD8844	HD8845		
Sampling Date		2010/09/11	2010/09/11		
COC Number		3726	3726		
	Units	**LICA PUFF/QFF/CLS/SEPT 11,10**	**LICA PUFF/QFF/PORT/SEPT 11,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2269681
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2269681
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2269681
2-Methylanthracene	ug	<0.10	<0.10	0.10	2269681
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2269681
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2269681
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2269681
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2269681
Acenaphthene	ug	<0.050	<0.050	0.050	2269681
Acenaphthylene	ug	<0.050	<0.050	0.050	2269681
Anthracene	ug	<0.050	<0.050	0.050	2269681
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2269681
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2269681
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2269681
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2269681
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2269681
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2269681
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2269681
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2269681
Biphenyl	ug	<0.10	<0.10	0.10	2269681
Chrysene	ug	<0.050	<0.050	0.050	2269681
Coronene	ug	<0.10	<0.10	0.10	2269681
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2269681
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2269681
Fluoranthene	ug	<0.050	<0.050	0.050	2269681
Fluorene	ug	0.078	<0.050	0.050	2269681
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2269681
m-Terphenyl	ug	<0.10	<0.10	0.10	2269681
Naphthalene	ug	0.090	0.092	0.072	2269681
o-Terphenyl	ug	<0.10	<0.10	0.10	2269681
Perylene	ug	<0.10	<0.10	0.10	2269681

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7690
Report Date: 2010/10/07

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

Maxxam ID		HD8844	HD8845		
Sampling Date		2010/09/11	2010/09/11		
COC Number		3726	3726		
	Units	**LICA PUFF/QFF/CLS/SEPT 11,10**	**LICA PUFF/QFF/PORT/SEPT 11,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.200	0.138	0.050	2269681
p-Terphenyl	ug	<0.10	<0.10	0.10	2269681
Pyrene	ug	<0.050	<0.050	0.050	2269681
Quinoline	ug	<0.40	<0.40	0.40	2269681
Tetralin	ug	<0.10	<0.10	0.10	2269681
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	76	84		2269681
D10-Fluoranthene	%	94	88		2269681
D10-Fluorene (FS)	%	59	63		2269681
D10-Phenanthrene	%	86	90		2269681
D12-Benzo(a)anthracene	%	102	98		2269681
D12-Benzo(a)pyrene	%	90	88		2269681
D12-Benzo(b)fluoranthene	%	88	86		2269681
D12-Benzo(ghi)perylene	%	92	92		2269681
D12-Benzo(k)fluoranthene	%	86	86		2269681
D12-Chrysene	%	84	92		2269681
D12-Indeno(1,2,3-cd)pyrene	%	94	92		2269681
D12-Perylene	%	88	88		2269681
D14-Dibenzo(a,h)anthracene	%	96	92		2269681
D14-Terphenyl (FS)	%	84	84		2269681
D8-Acenaphthylene	%	80	86		2269681
D8-Naphthalene	%	72	82		2269681

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7690
Report Date: 2010/10/07

Test Summary

Maxxam ID	HD8844	**Collected**	2010/09/11
Sample ID	LICA PUFF/QFF/CLS/SEPT 11,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2269681	2010/09/17	2010/10/07	JIW

Maxxam ID	HD8845	**Collected**	2010/09/11
Sample ID	LICA PUFF/QFF/PORT/SEPT 11,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2269681	2010/09/17	2010/10/07	JIW

Maxxam Analytics

Maxxam Job #: B0C7690
Report Date: 2010/10/07

GENERAL COMMENTS

PAHMS-F(WS:2269681)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

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

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

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

Sample HD8844-01: PAHMS-F(WS:2269681)
The Internal Std (D12-Benzo(e)pyrene) area response criteria was high in this sample.

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0C7690

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2269681	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/06		86	%	50 - 150
			D10-Fluoranthene	2010/10/06		80	%	50 - 150
			D10-Phenanthrene	2010/10/06		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		94	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		86	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		88	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		86	%	50 - 150
			D12-Chrysene	2010/10/06		94	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/06		88	%	50 - 150
			D12-Perylene	2010/10/06		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		90	%	50 - 150
			D8-Acenaphthylene	2010/10/06		80	%	50 - 150
			D8-Naphthalene	2010/10/06		86	%	50 - 150
			Acenaphthene	2010/10/06		79	%	60 - 130
		RPD	Acenaphthene	2010/10/07	0		%	50
		Spiked Blank	Acenaphthylene	2010/10/06		77	%	60 - 130
		RPD	Acenaphthylene	2010/10/07	2.3		%	50
		Spiked Blank	Anthracene	2010/10/06		69	%	60 - 130
		RPD	Anthracene	2010/10/07	5.7		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/06		82	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/07	1.5		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/06		65	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/07	1.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/06		78	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/07	4.6		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/06		80	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/07	3.5		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/06		77	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/07	3.2		%	50
		Spiked Blank	Chrysene	2010/10/06		87	%	60 - 130
		RPD	Chrysene	2010/10/07	7.4		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/06		77	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/07	0		%	50
		Spiked Blank	Fluoranthene	2010/10/06		75	%	60 - 130
		RPD	Fluoranthene	2010/10/07	7.7		%	50
		Spiked Blank	Fluorene	2010/10/06		77	%	60 - 130
		RPD	Fluorene	2010/10/07	2.3		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/06		77	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/07	0.3		%	50
		Spiked Blank	Naphthalene	2010/10/06		74	%	60 - 130
		RPD	Naphthalene	2010/10/07	4.8		%	50
		Spiked Blank	Phenanthrene	2010/10/06		74	%	60 - 130
		RPD	Phenanthrene	2010/10/07	3.7		%	50
		Spiked Blank	Pyrene	2010/10/06		69	%	60 - 130
		RPD	Pyrene	2010/10/07	7.0		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/07		84	%	50 - 150
			D10-Fluoranthene	2010/10/07		92	%	50 - 150
			D10-Phenanthrene	2010/10/07		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/07		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/07		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/07		92	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/07		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/07		90	%	50 - 150
			D12-Chrysene	2010/10/07		92	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C7690

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2269681	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/07		94	%	50 - 150
			D12-Perylene	2010/10/07		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/07		96	%	50 - 150
			D8-Acenaphthylene	2010/10/07		84	%	50 - 150
			D8-Naphthalene	2010/10/07		84	%	50 - 150
			1-Methylnaphthalene	2010/10/07	<0.10		ug	
			1-Methylphenanthrene	2010/10/07	<0.10		ug	
			2-Chloronaphthalene	2010/10/07	<0.10		ug	
			2-Methylanthracene	2010/10/07	<0.10		ug	
			2-Methylnaphthalene	2010/10/07	<0.10		ug	
			3-Methylcholanthrene	2010/10/07	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/07	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/07	<0.40		ug	
			Acenaphthene	2010/10/07	<0.050		ug	
			Acenaphthylene	2010/10/07	<0.050		ug	
			Anthracene	2010/10/07	<0.050		ug	
			Benzo(a)anthracene	2010/10/07	<0.050		ug	
			Benzo(a)fluorene	2010/10/07	<0.10		ug	
			Benzo(a)pyrene	2010/10/07	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/07	<0.050		ug	
			Benzo(b)fluorene	2010/10/07	<0.10		ug	
			Benzo(e)pyrene	2010/10/07	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/07	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/07	<0.050		ug	
			Biphenyl	2010/10/07	<0.10		ug	
			Chrysene	2010/10/07	<0.050		ug	
			Coronene	2010/10/07	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/07	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/07	<0.20		ug	
			Fluoranthene	2010/10/07	<0.050		ug	
			Fluorene	2010/10/07	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/07	<0.050		ug	
			m-Terphenyl	2010/10/07	<0.10		ug	
			Naphthalene	2010/10/07	0.086, RDL=0.072		ug	
			o-Terphenyl	2010/10/07	<0.10		ug	
			Perylene	2010/10/07	<0.10		ug	
			Phenanthrene	2010/10/07	<0.050		ug	
			p-Terphenyl	2010/10/07	<0.10		ug	
			Pyrene	2010/10/07	<0.050		ug	
			Quinoline	2010/10/07	<0.40		ug	
			Tetralin	2010/10/07	<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

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

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

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Sept 16, 2010 @ 13:38 mst
Removal Date/Time: Sept 20, 2010 @ 7:48 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
17-Sep-10	17/09/2010 0:00	18/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
15-Sep-10	20-Sep-10	27-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
718	229	3.0	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# 4705
GB0B7658 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Sept 17, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 4705

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

Report Date: 2010/10/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D2211
Received: 2010/09/22, 09:35

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/24	2010/10/07	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D2211
Report Date: 2010/10/07

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

Maxxam ID		HF9978	HF9979		
Sampling Date		2010/09/17	2010/09/17		
COC Number		4705	4705		
	Units	**LICA PUFF/QFF/CLS/SEPT 17,10**	**LICA PUFF/QFF/PORT/SEPT 17,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.22	<0.10	0.10	2278207
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2278207
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2278207
2-Methylanthracene	ug	<0.10	<0.10	0.10	2278207
2-Methylnaphthalene	ug	0.39	<0.10	0.10	2278207
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2278207
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2278207
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2278207
Acenaphthene	ug	0.058	<0.050	0.050	2278207
Acenaphthylene	ug	<0.050	<0.050	0.050	2278207
Anthracene	ug	<0.050	<0.050	0.050	2278207
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2278207
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2278207
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2278207
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2278207
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2278207
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2278207
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2278207
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2278207
Biphenyl	ug	<0.10	<0.10	0.10	2278207
Chrysene	ug	<0.050	<0.050	0.050	2278207
Coronene	ug	<0.10	<0.10	0.10	2278207
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2278207
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2278207
Fluoranthene	ug	<0.050	<0.050	0.050	2278207
Fluorene	ug	0.078	<0.050	0.050	2278207
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2278207
m-Terphenyl	ug	<0.10	<0.10	0.10	2278207
Naphthalene	ug	0.260	0.114	0.072	2278207
o-Terphenyl	ug	<0.10	<0.10	0.10	2278207
Perylene	ug	<0.10	<0.10	0.10	2278207

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0D2211
Report Date: 2010/10/07

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

Maxxam ID		HF9978	HF9979		
Sampling Date		2010/09/17	2010/09/17		
COC Number		4705	4705		
	Units	**LICA PUFF/QFF/CLS/SEPT 17,10**	**LICA PUFF/QFF/PORT/SEPT 17,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.130	0.066	0.050	2278207
p-Terphenyl	ug	<0.10	<0.10	0.10	2278207
Pyrene	ug	<0.050	<0.050	0.050	2278207
Quinoline	ug	<0.40	<0.40	0.40	2278207
Tetralin	ug	<0.10	<0.10	0.10	2278207
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	74	78		2278207
D10-Fluoranthene	%	94	92		2278207
D10-Fluorene (FS)	%	67	58		2278207
D10-Phenanthrene	%	86	86		2278207
D12-Benzo(a)anthracene	%	98	98		2278207
D12-Benzo(a)pyrene	%	86	86		2278207
D12-Benzo(b)fluoranthene	%	86	86		2278207
D12-Benzo(ghi)perylene	%	90	90		2278207
D12-Benzo(k)fluoranthene	%	84	84		2278207
D12-Chrysene	%	82	82		2278207
D12-Indeno(1,2,3-cd)pyrene	%	90	92		2278207
D12-Perylene	%	88	88		2278207
D14-Dibenzo(a,h)anthracene	%	92	92		2278207
D14-Terphenyl (FS)	%	81	82		2278207
D8-Acenaphthylene	%	78	84		2278207
D8-Naphthalene	%	70	76		2278207

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0D2211
Report Date: 2010/10/07

Test Summary

Maxxam ID	HF9978	**Collected**	2010/09/17
Sample ID	LICA PUFF/QFF/CLS/SEPT 17,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2278207	2010/09/24	2010/10/07	JIW

Maxxam ID	HF9979	**Collected**	2010/09/17
Sample ID	LICA PUFF/QFF/PORT/SEPT 17,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2278207	2010/09/24	2010/10/07	JIW

Maxxam Analytics

Maxxam Job #: B0D2211
Report Date: 2010/10/07

GENERAL COMMENTS

PAHMS-F(WS:2278207)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

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

Benzo(a)pyrene positive found in blank. Sample rerun with similar result. The original run was reported.

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

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0D2211

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2278207	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/06		86	%	50 - 150
			D10-Fluoranthene	2010/10/06		90	%	50 - 150
			D10-Phenanthrene	2010/10/06		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		84	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		94	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		88	%	50 - 150
			D12-Chrysene	2010/10/06		90	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/06		94	%	50 - 150
			D12-Perylene	2010/10/06		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		94	%	50 - 150
			D8-Acenaphthylene	2010/10/06		84	%	50 - 150
			D8-Naphthalene	2010/10/06		88	%	50 - 150
			Acenaphthene	2010/10/06		80	%	60 - 130
		RPD	Acenaphthene	2010/10/07	0		%	50
		Spiked Blank	Acenaphthylene	2010/10/06		81	%	60 - 130
		RPD	Acenaphthylene	2010/10/07	0.6		%	50
		Spiked Blank	Anthracene	2010/10/06		74	%	60 - 130
		RPD	Anthracene	2010/10/07	1.3		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/06		91	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/07	0.5		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/06		73	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/07	3.9		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/06		76	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/07	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/06		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/07	0.3		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/06		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/07	1.9		%	50
		Spiked Blank	Chrysene	2010/10/06		86	%	60 - 130
		RPD	Chrysene	2010/10/07	0.6		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/06		80	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/07	1.9		%	50
		Spiked Blank	Fluoranthene	2010/10/06		83	%	60 - 130
		RPD	Fluoranthene	2010/10/07	0		%	50
		Spiked Blank	Fluorene	2010/10/06		84	%	60 - 130
		RPD	Fluorene	2010/10/07	1.2		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/06		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/07	1.6		%	50
		Spiked Blank	Naphthalene	2010/10/06		75	%	60 - 130
		RPD	Naphthalene	2010/10/07	4.1		%	50
		Spiked Blank	Phenanthrene	2010/10/06		79	%	60 - 130
		RPD	Phenanthrene	2010/10/07	0		%	50
		Spiked Blank	Pyrene	2010/10/06		76	%	60 - 130
		RPD	Pyrene	2010/10/07	0		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/07		86	%	50 - 150
			D10-Fluoranthene	2010/10/07		92	%	50 - 150
			D10-Phenanthrene	2010/10/07		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/07		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/07		88	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/07		88	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/07		90	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/07		84	%	50 - 150
			D12-Chrysene	2010/10/07		86	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D2211

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2278207	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/07		90	%	50 - 150
			D12-Perylene	2010/10/07		94	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/07		92	%	50 - 150
			D8-Acenaphthylene	2010/10/07		86	%	50 - 150
			D8-Naphthalene	2010/10/07		88	%	50 - 150
			1-Methylnaphthalene	2010/10/07	<0.10		ug	
			1-Methylphenanthrene	2010/10/07	<0.10		ug	
			2-Chloronaphthalene	2010/10/07	<0.10		ug	
			2-Methylanthracene	2010/10/07	<0.10		ug	
			2-Methylnaphthalene	2010/10/07	<0.10		ug	
			3-Methylcholanthrene	2010/10/07	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/07	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/07	<0.40		ug	
			Acenaphthene	2010/10/07	<0.050		ug	
			Acenaphthylene	2010/10/07	<0.050		ug	
			Anthracene	2010/10/07	<0.050		ug	
			Benzo(a)anthracene	2010/10/07	<0.050		ug	
			Benzo(a)fluorene	2010/10/07	<0.10		ug	
			Benzo(a)pyrene	2010/10/07	0.120, RDL=0.050		ug	
			Benzo(b)fluoranthene	2010/10/07	<0.050		ug	
			Benzo(b)fluorene	2010/10/07	<0.10		ug	
			Benzo(e)pyrene	2010/10/07	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/07	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/07	<0.050		ug	
			Biphenyl	2010/10/07	<0.10		ug	
			Chrysene	2010/10/07	<0.050		ug	
			Coronene	2010/10/07	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/07	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/07	<0.20		ug	
			Fluoranthene	2010/10/07	<0.050		ug	
			Fluorene	2010/10/07	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/07	<0.050		ug	
			m-Terphenyl	2010/10/07	<0.10		ug	
			Naphthalene	2010/10/07	<0.072		ug	
			o-Terphenyl	2010/10/07	<0.10		ug	
			Perylene	2010/10/07	<0.10		ug	
			Phenanthrene	2010/10/07	<0.050		ug	
			p-Terphenyl	2010/10/07	<0.10		ug	
			Pyrene	2010/10/07	<0.050		ug	
			Quinoline	2010/10/07	<0.40		ug	
			Tetralin	2010/10/07	<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

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

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

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Sept 22, 2010 @ 7:31 mst
Removal Date/Time: Sept 24, 2010 @ 8:23 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
23-Sep-10	23/09/2010 0:00	24/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
21-Sep-10	24-Sep-10	01-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
709	229	8.1	330.33

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

Comments: COC# 3357
GB0B8912 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Sept 23, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 3357

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

Report Date: 2010/10/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D6408
Received: 2010/09/29, 09:29

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/30	2010/10/08	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

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Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D6408
Report Date: 2010/10/12

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

Maxxam ID		HI0464	HI0465		
Sampling Date		2010/09/23	2010/09/23		
COC Number		3357	3357		
	Units	**LICA PUFF + QFF/CLS/SEPT 23, 10**	**LICA PUFF + QFF/PORT/SEPT 23, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2287794
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2287794
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2287794
2-Methylanthracene	ug	<0.10	<0.10	0.10	2287794
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2287794
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2287794
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2287794
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2287794
Acenaphthene	ug	<0.050	<0.050	0.050	2287794
Acenaphthylene	ug	0.064	<0.050	0.050	2287794
Anthracene	ug	<0.050	<0.050	0.050	2287794
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2287794
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2287794
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2287794
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2287794
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2287794
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2287794
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2287794
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2287794
Biphenyl	ug	<0.10	<0.10	0.10	2287794
Chrysene	ug	<0.050	<0.050	0.050	2287794
Coronene	ug	<0.10	<0.10	0.10	2287794
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2287794
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2287794
Fluoranthene	ug	<0.050	<0.050	0.050	2287794
Fluorene	ug	0.074	<0.050	0.050	2287794
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2287794
m-Terphenyl	ug	<0.10	<0.10	0.10	2287794
Naphthalene	ug	<0.072	<0.072	0.072	2287794
o-Terphenyl	ug	<0.10	<0.10	0.10	2287794
Perylene	ug	<0.10	<0.10	0.10	2287794

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Maxxam Analytics

Maxxam Job #: B0D6408
Report Date: 2010/10/12

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

Maxxam ID		HI0464	HI0465		
Sampling Date		2010/09/23	2010/09/23		
COC Number		3357	3357		
	Units	**LICA PUFF + QFF/CLS/SEPT 23, 10**	**LICA PUFF + QFF/PORT/SEPT 23, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.198	0.098	0.050	2287794
p-Terphenyl	ug	<0.10	<0.10	0.10	2287794
Pyrene	ug	<0.050	<0.050	0.050	2287794
Quinoline	ug	<0.40	<0.40	0.40	2287794
Tetralin	ug	<0.10	<0.10	0.10	2287794
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	74	76		2287794
D10-Fluoranthene	%	92	94		2287794
D10-Fluorene (FS)	%	14 (1)	13 (1)		2287794
D10-Phenanthrene	%	88	88		2287794
D12-Benzo(a)anthracene	%	96	96		2287794
D12-Benzo(a)pyrene	%	94	98		2287794
D12-Benzo(b)fluoranthene	%	92	92		2287794
D12-Benzo(ghi)perylene	%	96	98		2287794
D12-Benzo(k)fluoranthene	%	90	90		2287794
D12-Chrysene	%	88	86		2287794
D12-Indeno(1,2,3-cd)pyrene	%	96	98		2287794
D12-Perylene	%	94	96		2287794
D14-Dibenzo(a,h)anthracene	%	96	100		2287794
D14-Terphenyl (FS)	%	88	85		2287794
D8-Acenaphthylene	%	80	84		2287794
D8-Naphthalene	%	72	72		2287794

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

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

Maxxam Analytics

Maxxam Job #: B0D6408
Report Date: 2010/10/12

Test Summary

Maxxam ID	HI0464	**Collected**	2010/09/23
Sample ID	LICA PUFF + QFF/CLS/SEPT 23, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/29

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2287794	2010/09/30	2010/10/08	JIW

Maxxam ID	HI0465	**Collected**	2010/09/23
Sample ID	LICA PUFF + QFF/PORT/SEPT 23, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/29

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2287794	2010/09/30	2010/10/08	JIW

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Maxxam Analytics

Maxxam Job #: B0D6408
Report Date: 2010/10/12

GENERAL COMMENTS

PAHMS-F(WS:2287794)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

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

Sample HI0464-01: PAHMS-F(WS:2287794)
The recovery of D10-Fluorene field spike was low in this sample.

Sample HI0465-01: PAHMS-F(WS:2287794)
The recovery of D10-Fluorene field spike was low in this sample.

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0D6408

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2287794	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/08		86	%	50 - 150
			D10-Fluoranthene	2010/10/08		92	%	50 - 150
			D10-Phenanthrene	2010/10/08		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/08		102	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/08		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/08		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/08		98	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/08		88	%	50 - 150
			D12-Chrysene	2010/10/08		86	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/08		98	%	50 - 150
			D12-Perylene	2010/10/08		94	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/08		98	%	50 - 150
			D8-Acenaphthylene	2010/10/08		88	%	50 - 150
			D8-Naphthalene	2010/10/08		86	%	50 - 150
			Acenaphthene	2010/10/08		82	%	60 - 130
		RPD	Acenaphthene	2010/10/08	2.1		%	50
		Spiked Blank	Acenaphthylene	2010/10/08		85	%	60 - 130
		RPD	Acenaphthylene	2010/10/08	2.6		%	50
		Spiked Blank	Anthracene	2010/10/08		78	%	60 - 130
		RPD	Anthracene	2010/10/08	6.3		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/08		85	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/08	5.2		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/08		74	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/08	6.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/08		77	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/08	7.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/08		85	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/08	6.5		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/08		84	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/08	3.5		%	50
		Spiked Blank	Chrysene	2010/10/08		83	%	60 - 130
		RPD	Chrysene	2010/10/08	4.4		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/08		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/08	9.6		%	50
		Spiked Blank	Fluoranthene	2010/10/08		85	%	60 - 130
		RPD	Fluoranthene	2010/10/08	9.8		%	50
		Spiked Blank	Fluorene	2010/10/08		86	%	60 - 130
		RPD	Fluorene	2010/10/08	1.4		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/08		85	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/08	6.3		%	50
		Spiked Blank	Naphthalene	2010/10/08		73	%	60 - 130
		RPD	Naphthalene	2010/10/08	0.3		%	50
		Spiked Blank	Phenanthrene	2010/10/08		78	%	60 - 130
		RPD	Phenanthrene	2010/10/08	5.3		%	50
		Spiked Blank	Pyrene	2010/10/08		78	%	60 - 130
		RPD	Pyrene	2010/10/08	8.6		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/08		90	%	50 - 150
			D10-Fluoranthene	2010/10/08		98	%	50 - 150
			D10-Phenanthrene	2010/10/08		92	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/08		102	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/08		96	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/08		94	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/08		102	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/08		90	%	50 - 150
			D12-Chrysene	2010/10/08		86	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6408

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2287794	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/08		104	%	50 - 150
			D12-Perylene	2010/10/08		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/08		104	%	50 - 150
			D8-Acenaphthylene	2010/10/08		94	%	50 - 150
			D8-Naphthalene	2010/10/08		88	%	50 - 150
			1-Methylnaphthalene	2010/10/08	<0.10		ug	
			1-Methylphenanthrene	2010/10/08	<0.10		ug	
			2-Chloronaphthalene	2010/10/08	<0.10		ug	
			2-Methylanthracene	2010/10/08	<0.10		ug	
			2-Methylnaphthalene	2010/10/08	<0.10		ug	
			3-Methylcholanthrene	2010/10/08	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/08	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/08	<0.40		ug	
			Acenaphthene	2010/10/08	<0.050		ug	
			Acenaphthylene	2010/10/08	<0.050		ug	
			Anthracene	2010/10/08	<0.050		ug	
			Benzo(a)anthracene	2010/10/08	<0.050		ug	
			Benzo(a)fluorene	2010/10/08	<0.10		ug	
			Benzo(a)pyrene	2010/10/08	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/08	<0.050		ug	
			Benzo(b)fluorene	2010/10/08	<0.10		ug	
			Benzo(e)pyrene	2010/10/08	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/08	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/08	<0.050		ug	
			Biphenyl	2010/10/08	<0.10		ug	
			Chrysene	2010/10/08	<0.050		ug	
			Coronene	2010/10/08	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/08	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/08	<0.20		ug	
			Fluoranthene	2010/10/08	<0.050		ug	
			Fluorene	2010/10/08	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/08	<0.050		ug	
			m-Terphenyl	2010/10/08	<0.10		ug	
			Naphthalene	2010/10/08	<0.072		ug	
			o-Terphenyl	2010/10/08	<0.10		ug	
			Perylene	2010/10/08	<0.10		ug	
			Phenanthrene	2010/10/08	<0.050		ug	
			p-Terphenyl	2010/10/08	<0.10		ug	
			Pyrene	2010/10/08	<0.050		ug	
			Quinoline	2010/10/08	<0.40		ug	
			Tetralin	2010/10/08	<0.10		ug	

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

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

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

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Sept 27, 2010 @ 8:07 mst
Removal Date/Time: Sept 30, 2010 @ 8:09 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
29-Sep-10	29/09/2010 0:00	30/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
22-Sep-10	30-Sep-10	04-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 05-May-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
712	229	11.7	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# 2322
GB0B8918 PUFF # 1
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/CLS/Sept 29, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2322

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

Report Date: 2010/10/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D8869
Received: 2010/10/02, 14:20

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/05	2010/10/08	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

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

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

==========

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

Total cover pages: 1

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Maxxam Analytics

Maxxam Job #: B0D8869
Report Date: 2010/10/12

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

Maxxam ID		HJ2253	HJ2254		
Sampling Date		2010/09/29	2010/09/29		
COC Number		2322	2322		
	Units	**LICA PUF/CLS/SEPT 29, 10**	**LICA PUF/PORT/SEPT 29, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.22	<0.10	0.10	2287806
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2287806
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2287806
2-Methylanthracene	ug	<0.10	<0.10	0.10	2287806
2-Methylnaphthalene	ug	0.38	0.11	0.10	2287806
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2287806
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2287806
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2287806
Acenaphthene	ug	0.116	<0.050	0.050	2287806
Acenaphthylene	ug	0.140	<0.050	0.050	2287806
Anthracene	ug	<0.050	<0.050	0.050	2287806
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2287806
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2287806
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2287806
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2287806
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2287806
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2287806
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2287806
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2287806
Biphenyl	ug	<0.10	<0.10	0.10	2287806
Chrysene	ug	<0.050	<0.050	0.050	2287806
Coronene	ug	<0.10	<0.10	0.10	2287806
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2287806
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2287806
Fluoranthene	ug	<0.050	<0.050	0.050	2287806
Fluorene	ug	0.134	<0.050	0.050	2287806
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2287806
m-Terphenyl	ug	<0.10	<0.10	0.10	2287806
Naphthalene	ug	0.238	0.094	0.072	2287806
o-Terphenyl	ug	<0.10	<0.10	0.10	2287806
Perylene	ug	<0.10	<0.10	0.10	2287806

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D8869
Report Date: 2010/10/12

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

Maxxam ID		HJ2253	HJ2254		
Sampling Date		2010/09/29	2010/09/29		
COC Number		2322	2322		
	Units	**LICA PUF/CLS/SEPT 29, 10**	**LICA PUF/PORT/SEPT 29, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.286	0.100	0.050	2287806
p-Terphenyl	ug	<0.10	<0.10	0.10	2287806
Pyrene	ug	0.058	<0.050	0.050	2287806
Quinoline	ug	<0.40	<0.40	0.40	2287806
Tetralin	ug	<0.10	<0.10	0.10	2287806
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	66	78		2287806
D10-Fluoranthene	%	88	90		2287806
D10-Fluorene (FS)	%	47 (1)	49 (1)		2287806
D10-Phenanthrene	%	80	82		2287806
D12-Benzo(a)anthracene	%	90	92		2287806
D12-Benzo(a)pyrene	%	80	86		2287806
D12-Benzo(b)fluoranthene	%	80	86		2287806
D12-Benzo(ghi)perylene	%	84	88		2287806
D12-Benzo(k)fluoranthene	%	80	86		2287806
D12-Chrysene	%	76	78		2287806
D12-Indeno(1,2,3-cd)pyrene	%	84	88		2287806
D12-Perylene	%	84	86		2287806
D14-Dibenzo(a,h)anthracene	%	84	88		2287806
D14-Terphenyl (FS)	%	77	76		2287806
D8-Acenaphthylene	%	70	82		2287806
D8-Naphthalene	%	62	76		2287806

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

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Maxxam Analytics

Maxxam Job #: B0D8869
Report Date: 2010/10/12

Test Summary

Maxxam ID	HJ2253	**Collected**	2010/09/29
Sample ID	LICA PUF/CLS/SEPT 29, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2287806	2010/10/05	2010/10/08	JIW

Maxxam ID	HJ2254	**Collected**	2010/09/29
Sample ID	LICA PUF/PORT/SEPT 29, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2287806	2010/10/05	2010/10/08	JIW

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Maxxam Analytics

Maxxam Job #: B0D8869
Report Date: 2010/10/12

GENERAL COMMENTS

PAHMS-F(WS:2287806)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

Benzo(a)pyrene positive found in blank.

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

Sample HJ2253-01: PAHMS-F(WS:2287806)
The recovery of D10-Fluorene field spike was low in this sample.

Sample HJ2254-01: PAHMS-F(WS:2287806)
The recovery of D10-Fluorene field spike was low in this sample.

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0D8869

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2287806	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/08		88	%	50 - 150
			D10-Fluoranthene	2010/10/08		96	%	50 - 150
			D10-Phenanthrene	2010/10/08		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/08		106	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/08		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/08		92	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/08		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/08		88	%	50 - 150
			D12-Chrysene	2010/10/08		88	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/08		96	%	50 - 150
			D12-Perylene	2010/10/08		96	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/08		98	%	50 - 150
			D8-Acenaphthylene	2010/10/08		90	%	50 - 150
			D8-Naphthalene	2010/10/08		86	%	50 - 150
			Acenaphthene	2010/10/08		87	%	60 - 130
		RPD	Acenaphthene	2010/10/08	5.9		%	50
		Spiked Blank	Acenaphthylene	2010/10/08		90	%	60 - 130
		RPD	Acenaphthylene	2010/10/08	5.2		%	50
		Spiked Blank	Anthracene	2010/10/08		82	%	60 - 130
		RPD	Anthracene	2010/10/08	8.2		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/08		92	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/08	4.5		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/08		83	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/08	14.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/08		81	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/08	5.4		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/08		87	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/08	4.7		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/08		85	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/08	5.2		%	50
		Spiked Blank	Chrysene	2010/10/08		88	%	60 - 130
		RPD	Chrysene	2010/10/08	3.8		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/08		85	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/08	5.7		%	50
		Spiked Blank	Fluoranthene	2010/10/08		91	%	60 - 130
		RPD	Fluoranthene	2010/10/08	8.0		%	50
		Spiked Blank	Fluorene	2010/10/08		92	%	60 - 130
		RPD	Fluorene	2010/10/08	7.9		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/08		86	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/08	5.1		%	50
		Spiked Blank	Naphthalene	2010/10/08		78	%	60 - 130
		RPD	Naphthalene	2010/10/08	6.0		%	50
		Spiked Blank	Phenanthrene	2010/10/08		85	%	60 - 130
		RPD	Phenanthrene	2010/10/08	7.7		%	50
		Spiked Blank	Pyrene	2010/10/08		84	%	60 - 130
		RPD	Pyrene	2010/10/08	8.7		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/08		78	%	50 - 150
			D10-Fluoranthene	2010/10/08		76	%	50 - 150
			D10-Phenanthrene	2010/10/08		74	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/08		82	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/08		76	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/08		74	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/08		84	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/08		72	%	50 - 150
			D12-Chrysene	2010/10/08		72	%	50 - 150

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

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D8869

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2287806	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/08		80	%	50 - 150
			D12-Perylene	2010/10/08		80	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/08		82	%	50 - 150
			D8-Acenaphthylene	2010/10/08		80	%	50 - 150
			D8-Naphthalene	2010/10/08		76	%	50 - 150
			1-Methylnaphthalene	2010/10/08	<0.10		ug	
			1-Methylphenanthrene	2010/10/08	<0.10		ug	
			2-Chloronaphthalene	2010/10/08	<0.10		ug	
			2-Methylanthracene	2010/10/08	<0.10		ug	
			2-Methylnaphthalene	2010/10/08	<0.10		ug	
			3-Methylcholanthrene	2010/10/08	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/08	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/08	<0.40		ug	
			Acenaphthene	2010/10/08	<0.050		ug	
			Acenaphthylene	2010/10/08	<0.050		ug	
			Anthracene	2010/10/08	<0.050		ug	
			Benzo(a)anthracene	2010/10/08	<0.050		ug	
			Benzo(a)fluorene	2010/10/08	<0.10		ug	
			Benzo(a)pyrene	2010/10/08	0.052, RDL=0.050		ug	
			Benzo(b)fluoranthene	2010/10/08	<0.050		ug	
			Benzo(b)fluorene	2010/10/08	<0.10		ug	
			Benzo(e)pyrene	2010/10/08	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/08	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/08	<0.050		ug	
			Biphenyl	2010/10/08	<0.10		ug	
			Chrysene	2010/10/08	<0.050		ug	
			Coronene	2010/10/08	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/08	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/08	<0.20		ug	
			Fluoranthene	2010/10/08	<0.050		ug	
			Fluorene	2010/10/08	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/08	<0.050		ug	
			m-Terphenyl	2010/10/08	<0.10		ug	
			Naphthalene	2010/10/08	<0.072		ug	
			o-Terphenyl	2010/10/08	<0.10		ug	
			Perylene	2010/10/08	<0.10		ug	
			Phenanthrene	2010/10/08	<0.050		ug	
			p-Terphenyl	2010/10/08	<0.10		ug	
			Pyrene	2010/10/08	<0.050		ug	
			Quinoline	2010/10/08	<0.40		ug	
			Tetralin	2010/10/08	<0.10		ug	

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

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Lakeland Industry & Community Association

Maskwa Monitoring Site
Ambient Air Monitoring
Data Report
For
September 2010

Prepared By:

Maxxam Analytics

Driven by Service and Science

October 14, 2010

Lakeland Industry & Community Association
Ambient Air Monitoring
Maskwa

Table of Contents

Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Maskwa
Data Period: September 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 – September 2010

LICA MASKWA SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO2 (PPB)	172	57	0	0	0.59	14	28	1	9.7	294(WNW)	2.3	11	100.0
H2S (PPB)	10	3	0	0	0.03	3	18	20	1.5	128(SE)	0.3	4	100.0
THC (PPM)	-	-	-	-	2.03	3.3	3	3	0.5	142(SE)	2.4	3	100.0
NOx (PPB)	-	-	-	-	2.28	27	17	5	5.1	291(WNW)	6.1	17	100.0
NO (PPB)	-	-	-	-	0.49	14	2	7, 9	2.1, 1.5	268(W), 276(W)	2.1	16	100.0
NO_2 (PPB)	212	106	0	0	1.80	18	17	5	5.1	291(WNW)	4.8	16	100.0
VECTOR WS (KPH)	-	-	-	-	4.91	13.8	27	14	-	169(SSE)	6.8	23	100.0
VECTOR WD (DEGREES)	-	-	-	-	248(WSW)	-	-	-	-	-	-	-	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	72.80	92	VAR	VAR	VAR	VAR	89.5	7	100.0
TEMPERATURE (DEG C)	-	-	-	-	8.73	22.7	3	14	8.1	159(SSE)	15.2	4	100.0
BAROMETRIC PRESSURE (MILIBAR)	-	-	-	-	941	952	13, 30	VAR	VAR	VAR	950.9	13	100.0
PRECIPITATION (MM)	-	-	-	-	0.07	4.0	6	11	6.1	15(NNE)	17.3	6	100.0

VAR-VARIOUS

General Monthly Summary

Equipment Operation

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

AQM STATION – LICA – Maskwa

Sulphur Dioxide (PPB)

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

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

Hydrogen Sulphide (PPB)

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

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

Total HydroCarbon (PPM)

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

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

General Monthly Summary

AQM STATION – LICA – Maskwa

Nitrogen Dioxide (PPB)

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

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

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

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

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

Relative Humidity (PERCENT)

- System make / model - Met One 083

No operational issues observed during the month.

Precipitation (MM)

- System make / model - Met One 387

No operational issues observed during this month.

General Monthly Summary

AQM STATION – LICA – Maskwa

Barometric Pressure (MILLIBAR)

- System make / model - Met One 092

No operation issue was observed during the month.

Ambient Temperature (DEGC)

- System make / model - Met One 060

No operational issue was observed during the month.

Trailer Temperature (DEG C)

- System make / model – R&R 61

No operational issue was observed during the month.

Standard Deviation Wind Direction (DEG)

- System make / model – Met One 50.5H

No operational issue was observed during the month.

General Monthly Summary

AQM STATION – LICA – Maskwa

Datalogger

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

No operational issue was observed during the month.

Trailer

The manifold and inlet pipe were cleaned on September 16th.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

SEPTEMBER 2010

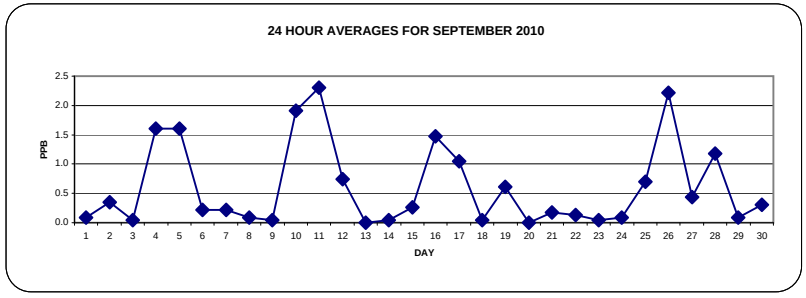
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0.1	24
2	0	0	0	0	0	0	0	1	**IZS**	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0.3	24
3	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.0	24
4	0	0	0	0	1	1	**IZS**	1	0	1	0	0	0	0	1	0	0	4	12	10	2	0	0	4	12	1.6	24
5	0	0	0	6	3	**IZS**	4	7	2	0	0	0	0	0	0	4	3	2	1	2	2	1	0	0	7	1.6	24
6	0	0	0	0	**IZS**	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	0.2	24
7	1	1	1	**IZS**	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
8	0	0	**IZS**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
9	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	1	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	1	9	8	8	4	5	4	3	**IZS**	9	1.9	24
11	10	8	6	2	1	4	2	3	3	2	3	1	4	1	0	0	0	0	0	1	0	0	**IZS**	2	10	**2.3**	24
12	2	2	4	2	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	4	0.7	24
13	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
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	1	0	0	1	0.0	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	2	2	1	0	2	0.3	24
16	0	0	0	0	0	1	0	0	**C**	**C**	**C**	**C**	0	1	0	0	6	**IZS**	5	2	4	5	3	1	6	1.5	24
17	2	4	6	1	3	6	1	0	0	0	0	0	0	0	0	1	**IZS**	0	0	0	0	0	0	0	6	1.0	24
18	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0.0	24
19	0	0	0	0	0	0	0	0	0	0	2	2	3	1	**IZS**	0	0	1	3	2	0	0	0	0	3	0.6	24
20	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
21	1	1	1	1	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	0	0	1	1	0	0	0	1	0	0	0	0	1	0.1	24
23	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.0	24
24	0	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	24
25	0	1	1	1	1	1	1	1	**IZS**	1	1	1	0	0	0	0	0	1	1	0	1	1	1	1	1	0.7	24
26	1	1	1	1	1	1	1	**IZS**	7	10	11	7	1	0	0	0	0	0	0	0	0	5	3	0	11	2.2	24
27	0	0	0	0	0	0	**IZS**	0	1	1	1	1	1	1	0	0	0	0	2	1	0	0	0	1	2	0.4	24
28	1	**14**	7	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	**14**	1.2	24
29	0	0	0	0	**IZS**	0	0	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	**IZS**	0	0	0	0	0	3	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
HOURLY MAX	10	14	7	6	3	6	4	7	7	10	11	7	4	1	1	4	9	8	12	10	5	5	3	4			
HOURLY AVG	0.6	1.1	0.9	0.5	0.4	0.6	0.4	0.5	0.5	1.0	0.8	0.6	0.3	0.1	0.1	0.3	0.7	0.6	1.2	0.9	0.6	0.8	0.4	0.4			

STATUS FLAG CODES

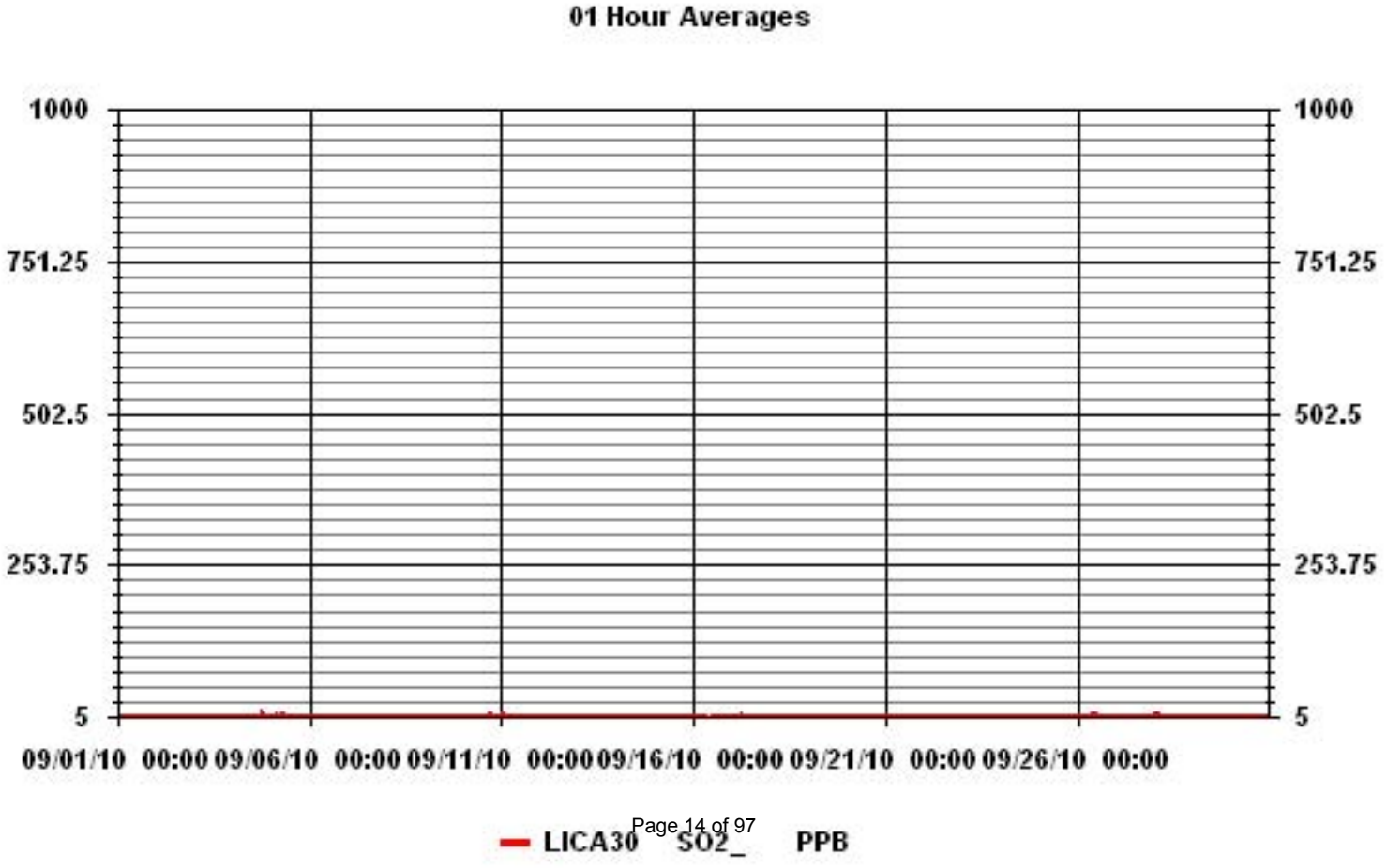
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	166					
MAXIMUM 1-HR AVERAGE:	14	PPB	@ HOUR(S)	1	ON DAY(S)	28
MAXIMUM 24-HR AVERAGE:	2.3	PPB			ON DAY(S)	11
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	1.62		MONTHLY AVERAGE:		0.59	PPB


01 Hour Averages
1000
751.25
502.5
253.75
5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

SEPTEMBER 2010

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

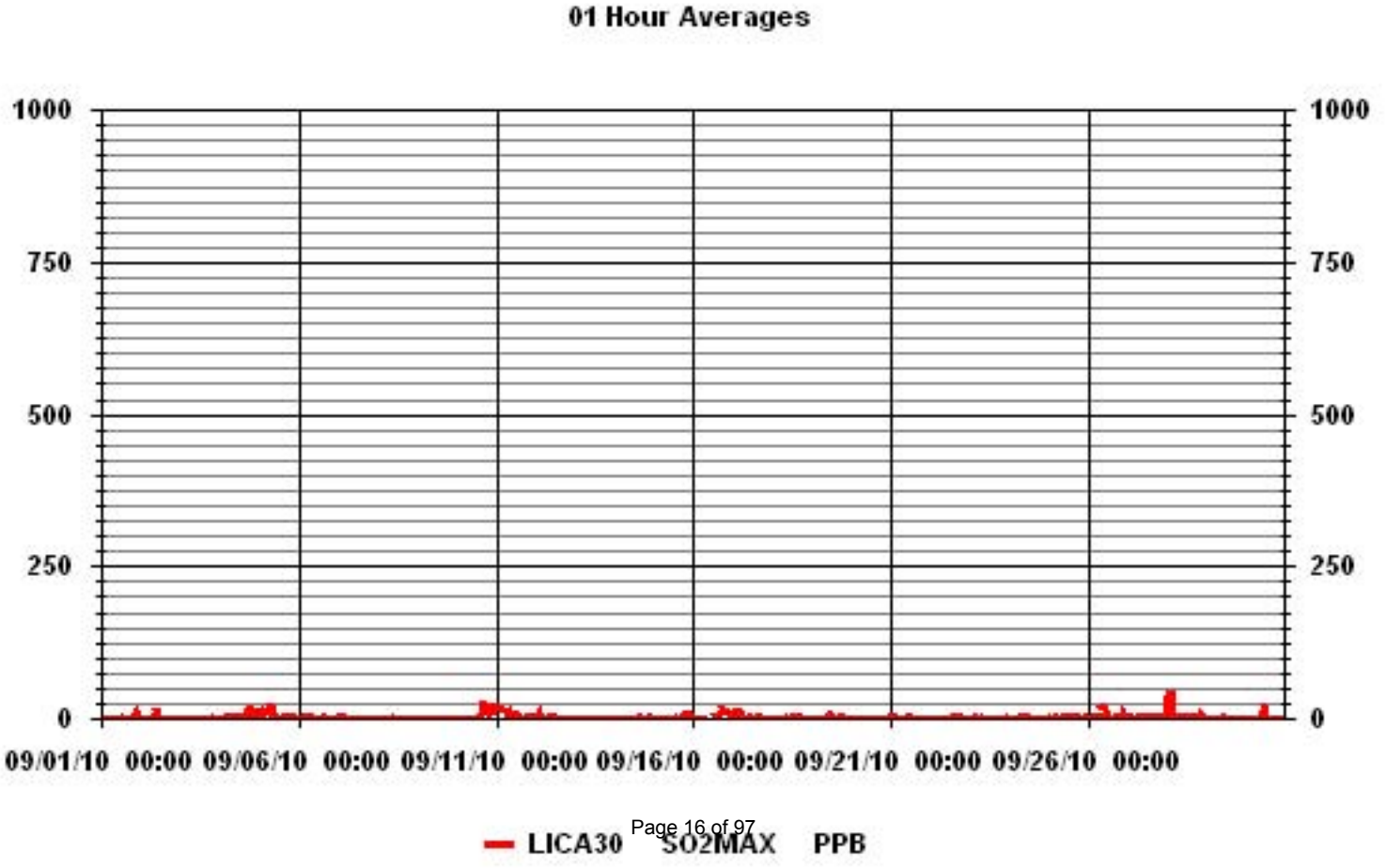
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	1	2	0	0	0	0	4	10	1	0	10	0.8	24
2	0	0	0	0	0	0	1	3	**IZS**	14	3	0	0	0	2	1	0	0	0	0	0	0	0	0	14	1.0	24
3	0	0	0	0	0	0	0	**IZS**	1	0	0	0	0	0	0	0	1	0	0	3	2	0	0	0	3	0.3	24
4	0	0	0	0	3	3	**IZS**	2	1	4	2	2	1	1	1	1	1	14	19	18	7	1	0	14	19	4.1	24
5	2	0	0	15	13	**IZS**	15	26	7	2	1	1	1	0	1	6	4	3	2	2	2	2	1	1	26	4.7	24
6	0	1	0	2	**IZS**	7	0	1	1	1	0	0	0	0	3	2	2	2	0	0	0	0	1	2	7	1.1	24
7	2	3	3	**IZS**	3	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0.6	24
8	0	0	**IZS**	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
9	0	**IZS**	0	1	0	0	0	0	0	0	0	1	0	0	3	1	0	0	0	0	0	0	0	0	3	0.3	24
10	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	3	1	7	29	18	15	11	19	17	12	**IZS**	29	6.0	24
11	23	20	18	17	9	17	8	10	14	6	13	3	9	9	0	0	0	0	0	4	1	1	**IZS**	4	23	8.1	24
12	3	6	11	5	2	2	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	**IZS**	0	0	11	1.7	24
13	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
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	**IZS**	1	3	2	1	3	0.4	24
15	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	**IZS**	8	6	6	6	0	8	1.3	24
16	0	0	0	0	1	2	1	**C**	**C**	**C**	**C**	**C**	**C**	7	2	2	11	**IZS**	15	5	13	13	6	2	15	4.7	24
17	5	12	13	2	6	10	6	0	0	0	3	3	0	2	4	5	**IZS**	0	0	0	0	0	0	0	13	3.1	24
18	0	0	0	0	0	0	0	0	1	1	2	1	1	1	0	**IZS**	1	1	1	0	0	0	0	0	2	0.4	24
19	0	0	0	0	0	0	0	0	0	4	4	6	6	4	**IZS**	0	2	5	7	5	3	1	2	0	7	2.1	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	3	3	0.1	24
21	3	2	1	1	1	0	0	0	0	0	1	1	**IZS**	1	0	0	1	0	0	0	0	0	0	0	3	0.5	24
22	0	0	0	0	0	0	0	0	0	0	1	**IZS**	0	1	1	1	1	1	1	1	1	0	0	0	1	0.4	24
23	0	0	1	1	1	1	0	1	1	0	**IZS**	0	0	0	0	0	0	1	3	1	0	0	0	1	3	0.5	24
24	1	2	0	0	0	0	1	1	1	**IZS**	1	1	1	1	0	0	0	0	0	0	0	0	0	2	2	0.5	24
25	1	1	1	2	2	1	1	2	**IZS**	2	2	1	1	1	1	1	1	1	1	1	2	1	1	2	2	1.3	24
26	2	1	1	1	1	1	5	**IZS**	21	23	19	13	6	0	1	0	1	1	1	1	0	13	10	2	23	5.4	24
27	1	1	1	1	0	0	**IZS**	1	1	2	2	2	2	1	1	1	1	1	4	1	1	1	1	3	4	1.3	24
28	35	43	**44**	2	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	3	2	1	11	8	1	0	**44**	7.0	24
29	0	0	0	0	**IZS**	0	0	0	1	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	4	0.4	24
30	0	0	0	**IZS**	0	0	0	1	0	7	4	25	1	1	1	0	0	0	0	0	0	0	0	0	25	1.7	24
HOURLY MAX	35	43	44	17	13	17	15	26	21	23	19	25	9	9	4	7	29	18	19	18	19	17	12	14			
HOURLY AVG	2.7	3.2	3.2	1.8	1.5	1.6	1.5	1.9	2.0	2.7	2.4	2.3	1.2	1.3	0.9	1.1	2.0	1.8	2.4	2.1	2.5	2.7	1.5	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:	319					
MAXIMUM INSTANTANEOUS VALUE:	44	PPB	@ HOUR(S)	2	ON DAY(S)	28
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	4.76					


01 Hour Averages
1000
750
500
250
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 SO2MAX PPB

LICA30
SO2_ / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : SO2_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	6.42	7.00	5.98	5.83	6.42	3.64	3.79	6.13	9.92	8.90	5.98	5.98	7.00	8.32	3.94	4.67	100.00
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.42	7.00	5.98	5.83	6.42	3.64	3.79	6.13	9.92	8.90	5.98	5.98	7.00	8.32	3.94	4.67	

Calm : .00 %

Total # Operational Hours : 685

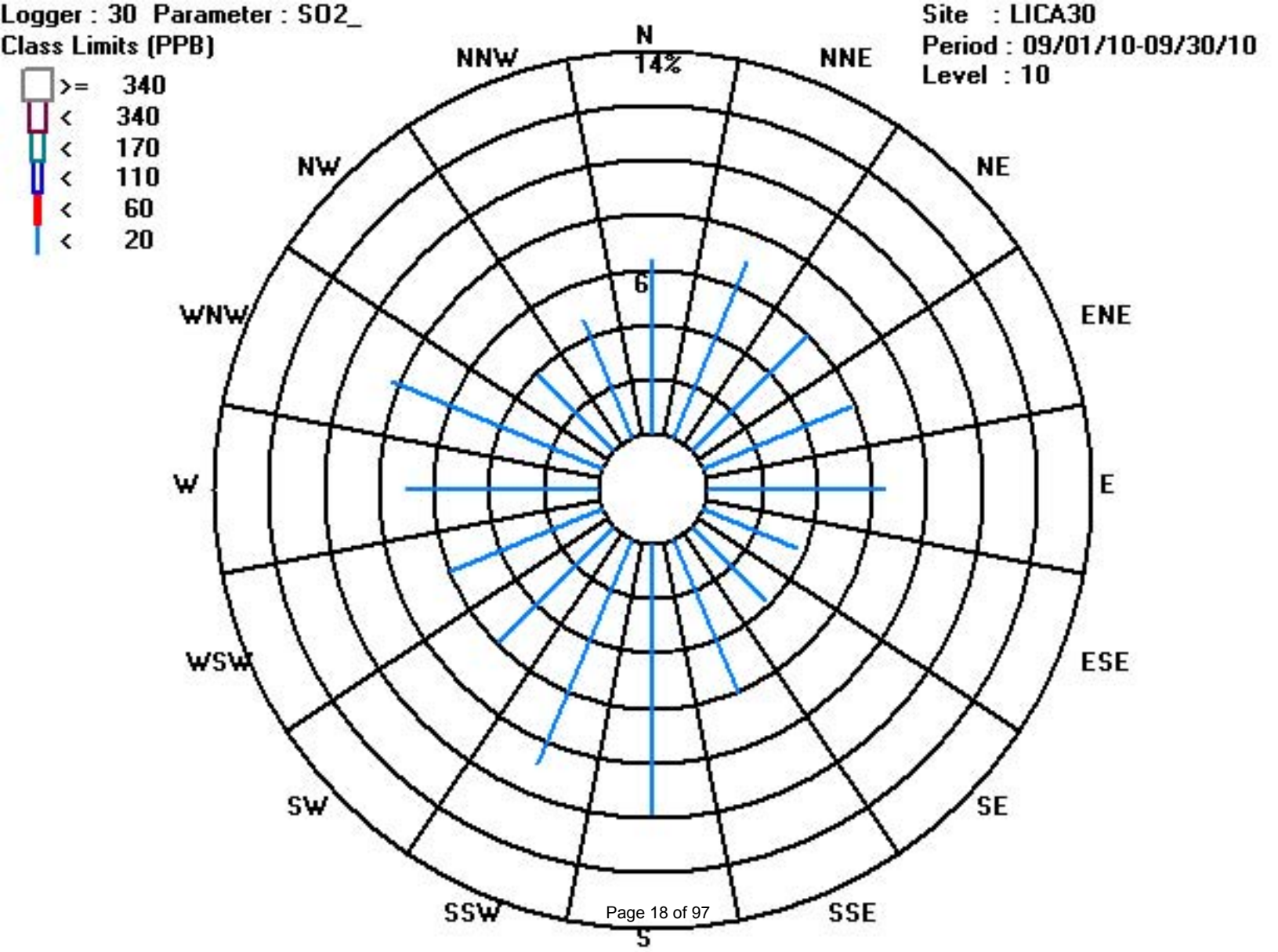
Distribution By Samples

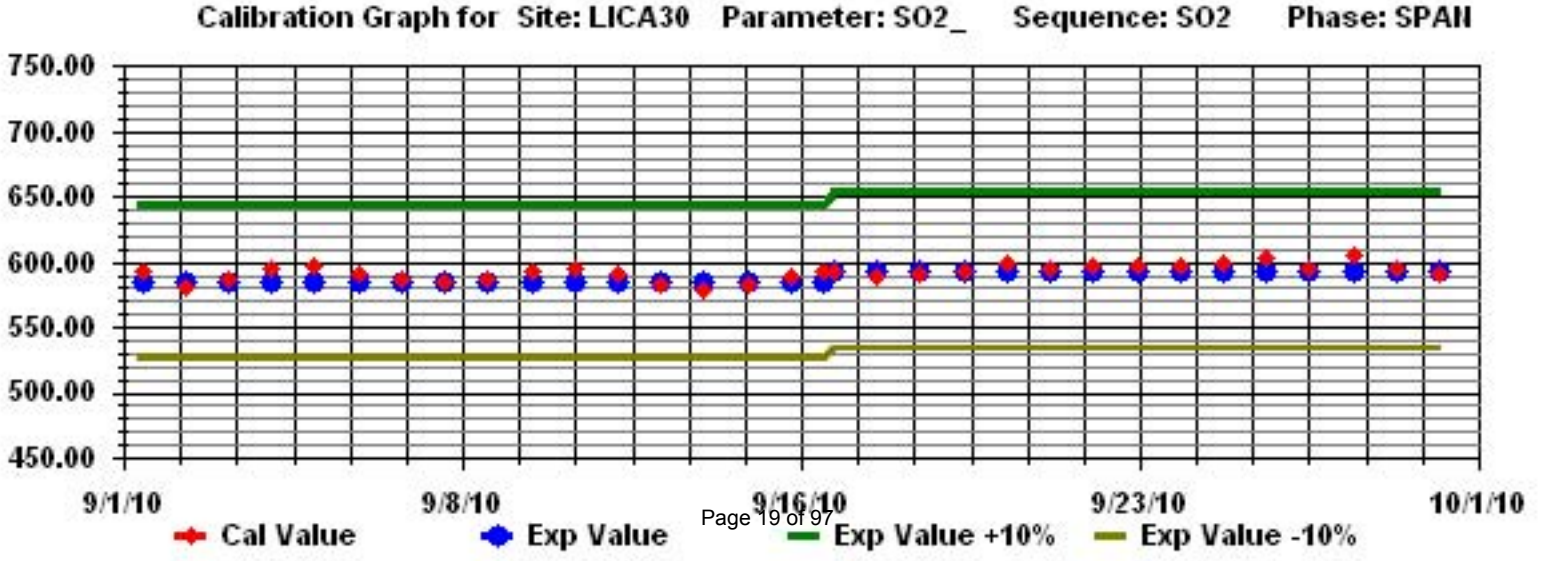
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	44	48	41	40	44	25	26	42	68	61	41	41	48	57	27	32	685
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	44	48	41	40	44	25	26	42	68	61	41	41	48	57	27	32	

Calm : .00 %

Total # Operational Hours : 685


Logger : 30 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA30
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: LICA30 Parameter: SO2_ Sequence: SO2 Phase: SPAN
750.00
700.00
650.00
600.00
550.00
500.00
450.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

SEPTEMBER 2010

HYDROGEN SULPHIDE (H_2S) hourly averages in ppb

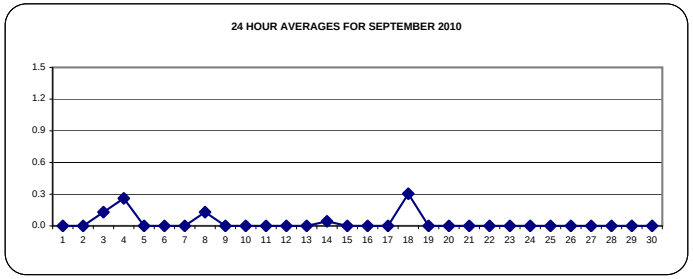
MST

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

STATUS FLAG CODES

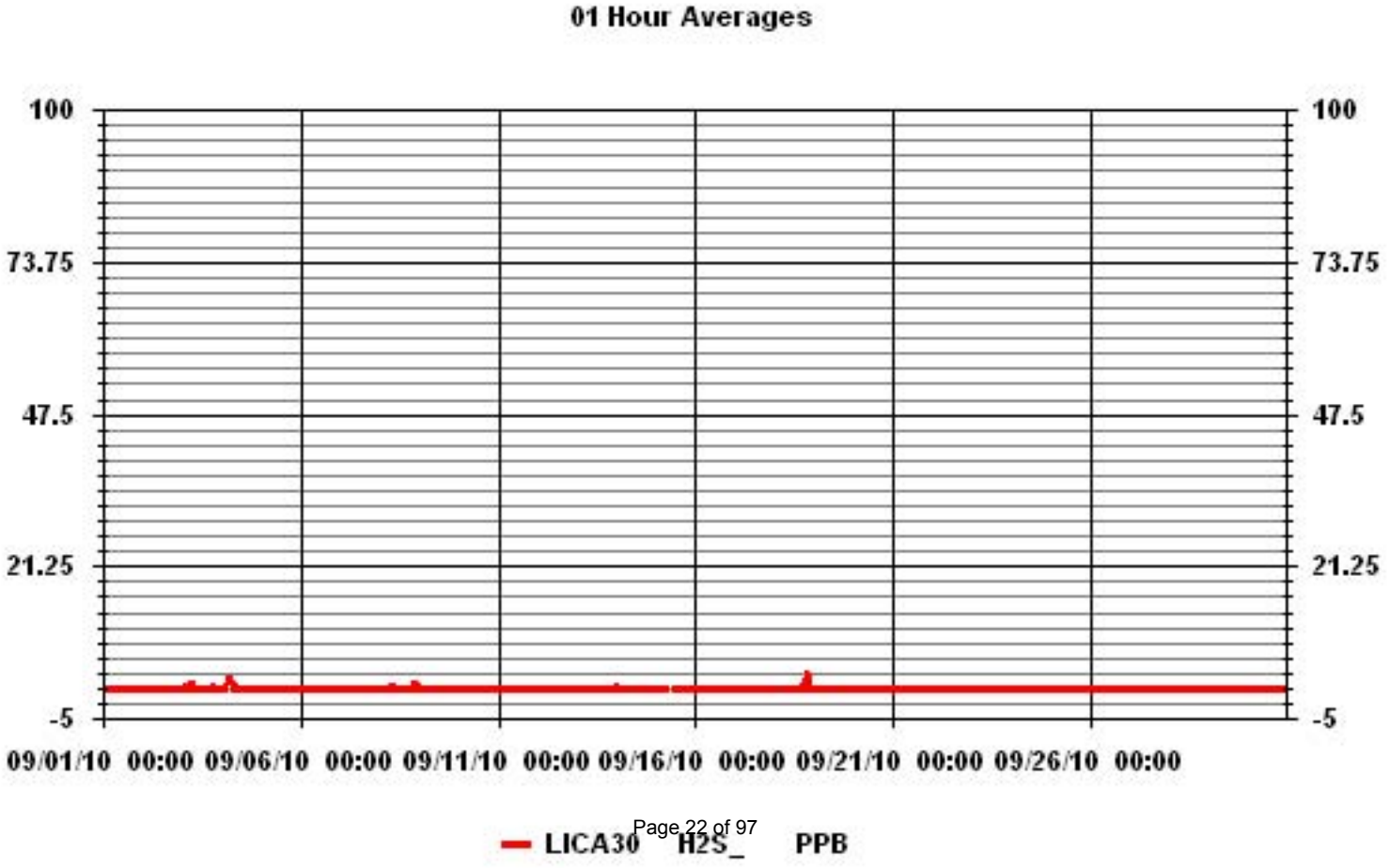
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

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:	15					
MAXIMUM 1-HR AVERAGE:	3	PPB	@ HOUR(S)	20	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	0.3	PPB			ON DAY(S)	4
					VAR-VARIOUS	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.21		MONTHLY AVERAGE:		0.03	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 H2S_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

SEPTEMBER 2010

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

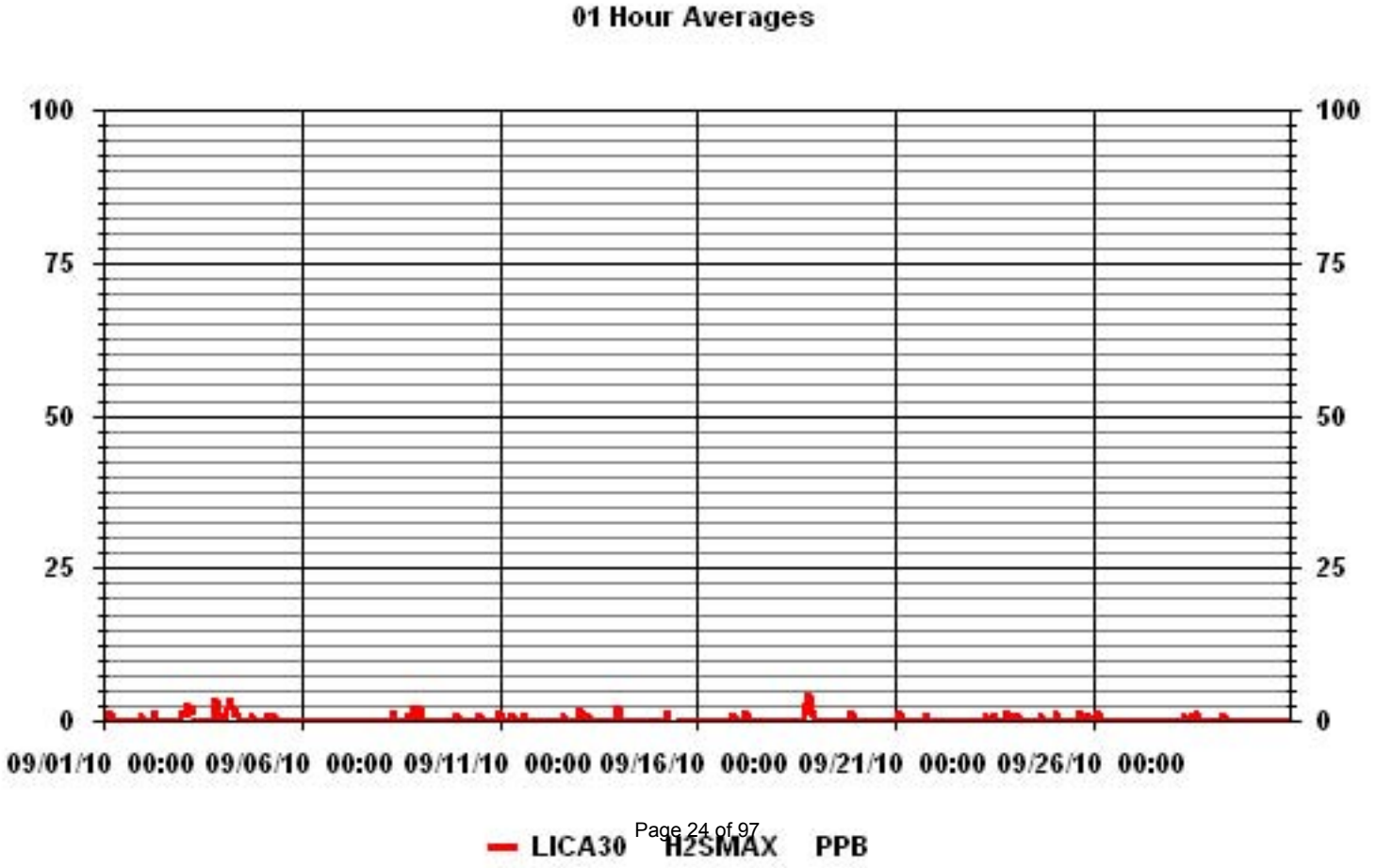
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00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

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	83						
MAXIMUM INSTANTANEOUS VALUE:	4	PPB	@ HOUR(S)	19, 20	ON DAY(S)	18	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:			720	HRS
MONTHLY CALIBRATION TIME:	7	HRS					
STANDARD DEVIATION:	0.51						


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 H2SMAX PPB

LICA30
H2S_ / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : H2S_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	6.43	7.01	5.99	5.84	6.43	3.65	3.65	6.14	9.94	8.62	5.70	5.99	7.16	8.62	3.94	4.67	99.85
< 10	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.43	7.01	5.99	5.84	6.43	3.65	3.80	6.14	9.94	8.62	5.70	5.99	7.16	8.62	3.94	4.67	

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	44	48	41	40	44	25	25	42	68	59	39	41	49	59	27	32	683
< 10							1										1
< 50																	
>= 50																	
Totals	44	48	41	40	44	25	26	42	68	59	39	41	49	59	27	32	

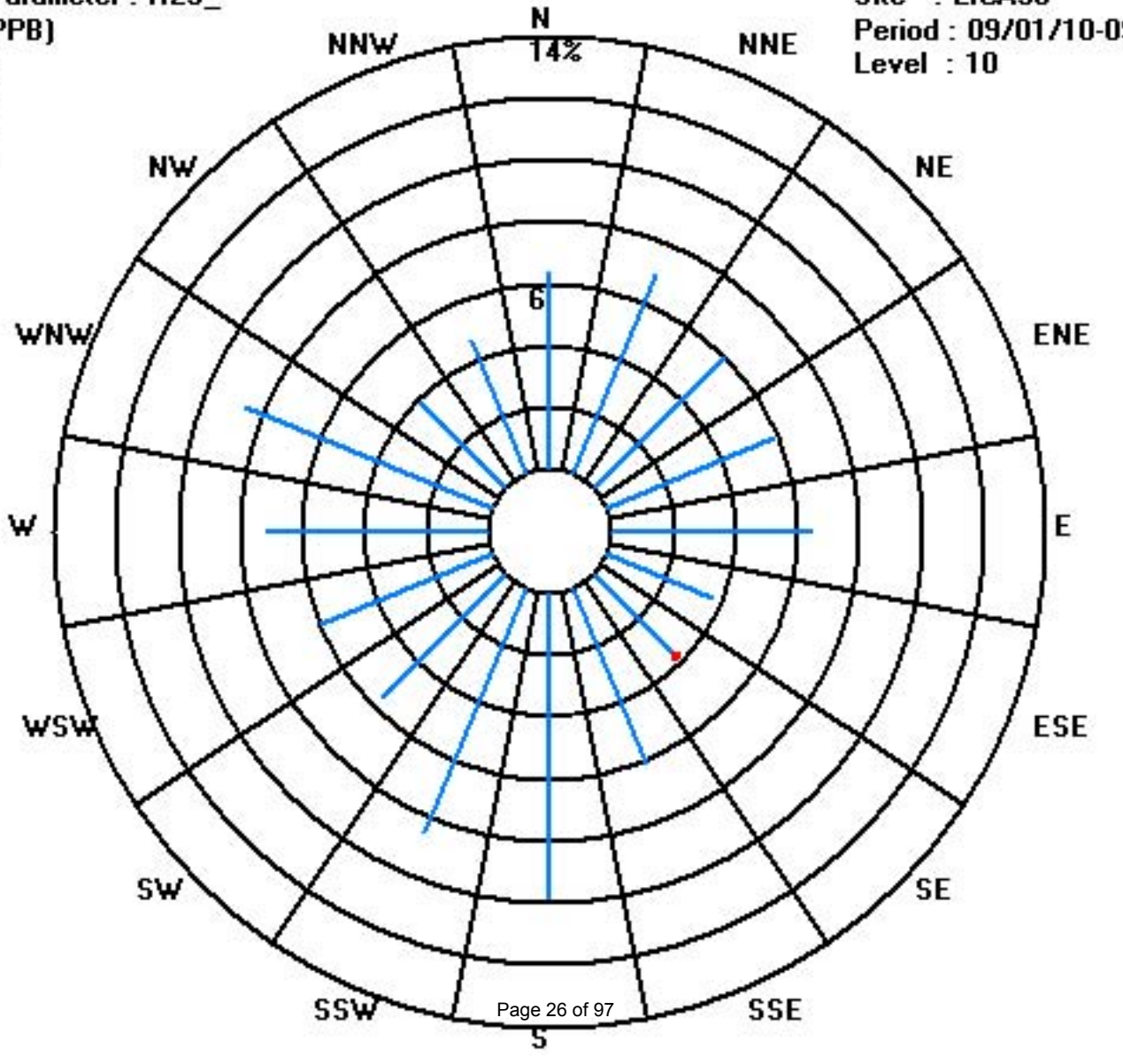
Calm : .00 %

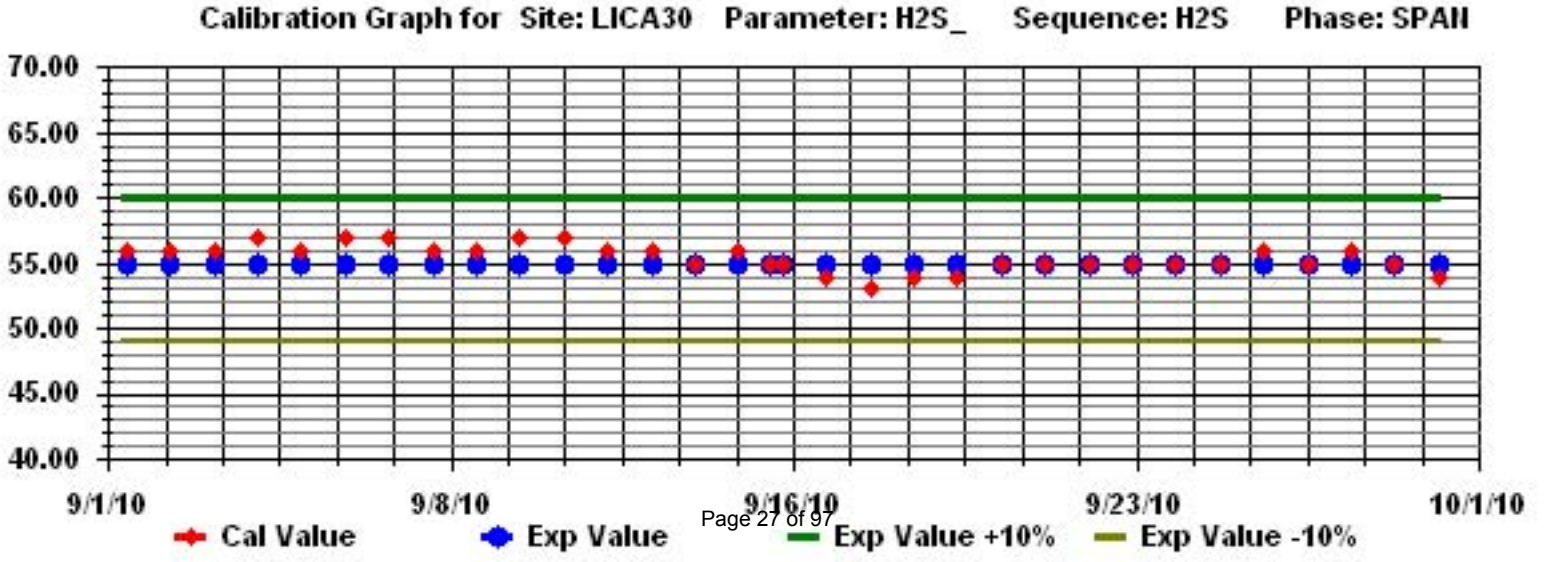
Total # Operational Hours : 684

Logger : 30 Parameter : H2S_
Class Limits (PPB)

>= 50
< 50
< 10
< 3

Site : LICA30
Period : 09/01/10-09/30/10
Level : 10




Calibration Graph for Site: LICA30 Parameter: H2S_ Sequence: H2S Phase: SPAN
70.00
65.00
60.00
55.00
50.00
45.00
40.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

SEPTEMBER 2010

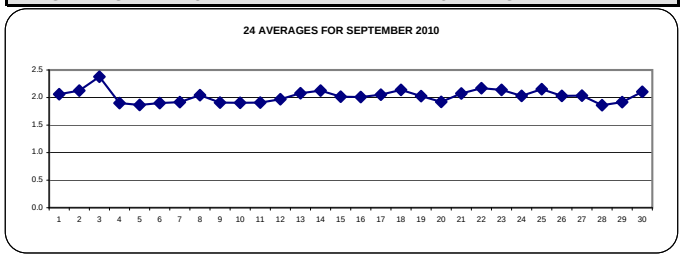
TOTAL HYDROCARBONS hourly averages in ppm

MST

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

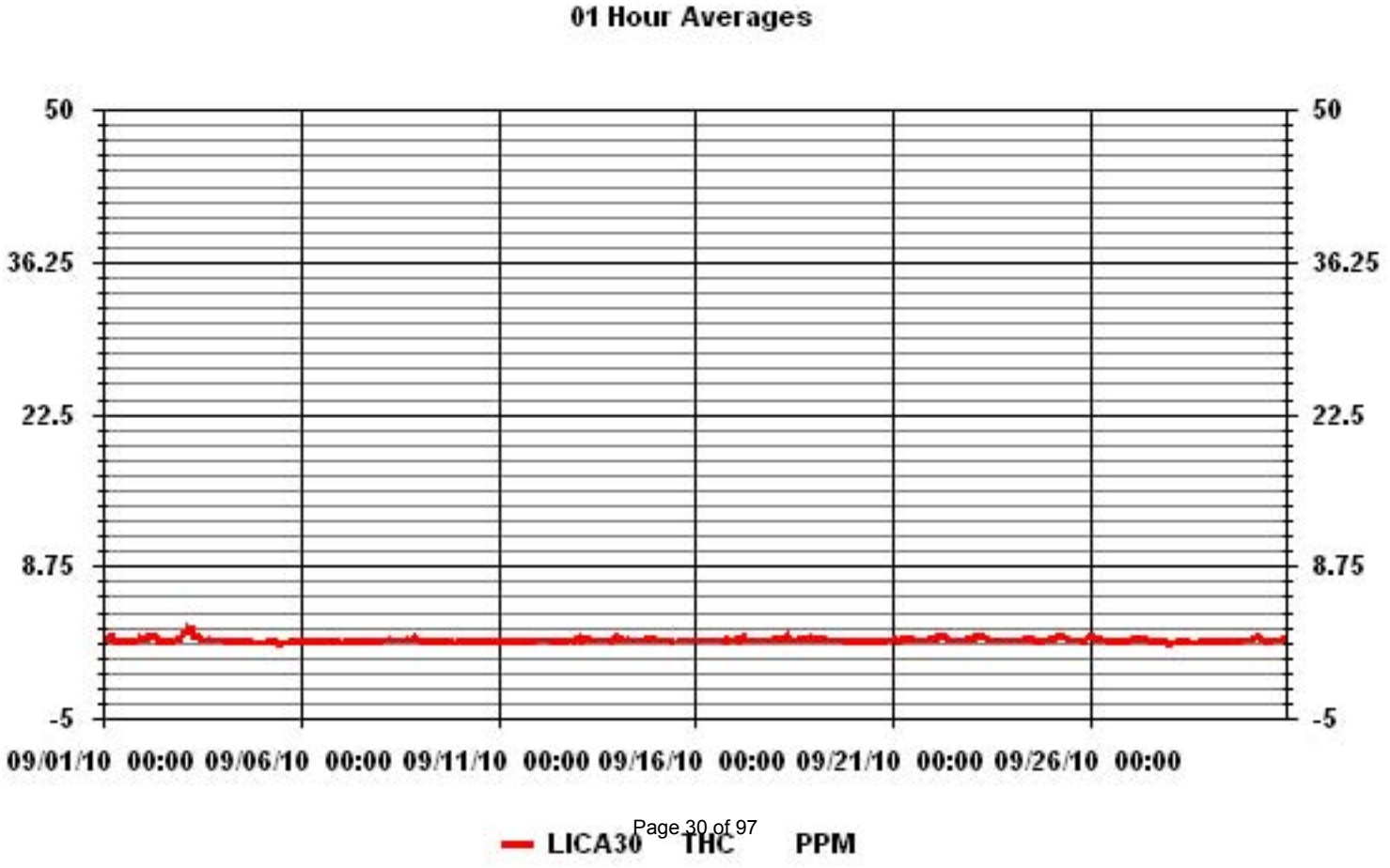
STATUS FLAG CODES

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:	684						
MAXIMUM 1-HR AVERAGE:	3.3	PPM	@ HOUR(S)	3	ON DAY(S)	3	
MAXIMUM 24-HR AVERAGE:	2.4	PPM			ON DAY(S)	3	
					VAR- VARIOUS		
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:			720	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:			100.0	%
STANDARD DEVIATION:	0.17		MONTHLY AVERAGE:			2.03	PPM


01 Hour Averages
50
36.25
22.5
8.75
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

SEPTEMBER 2010

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

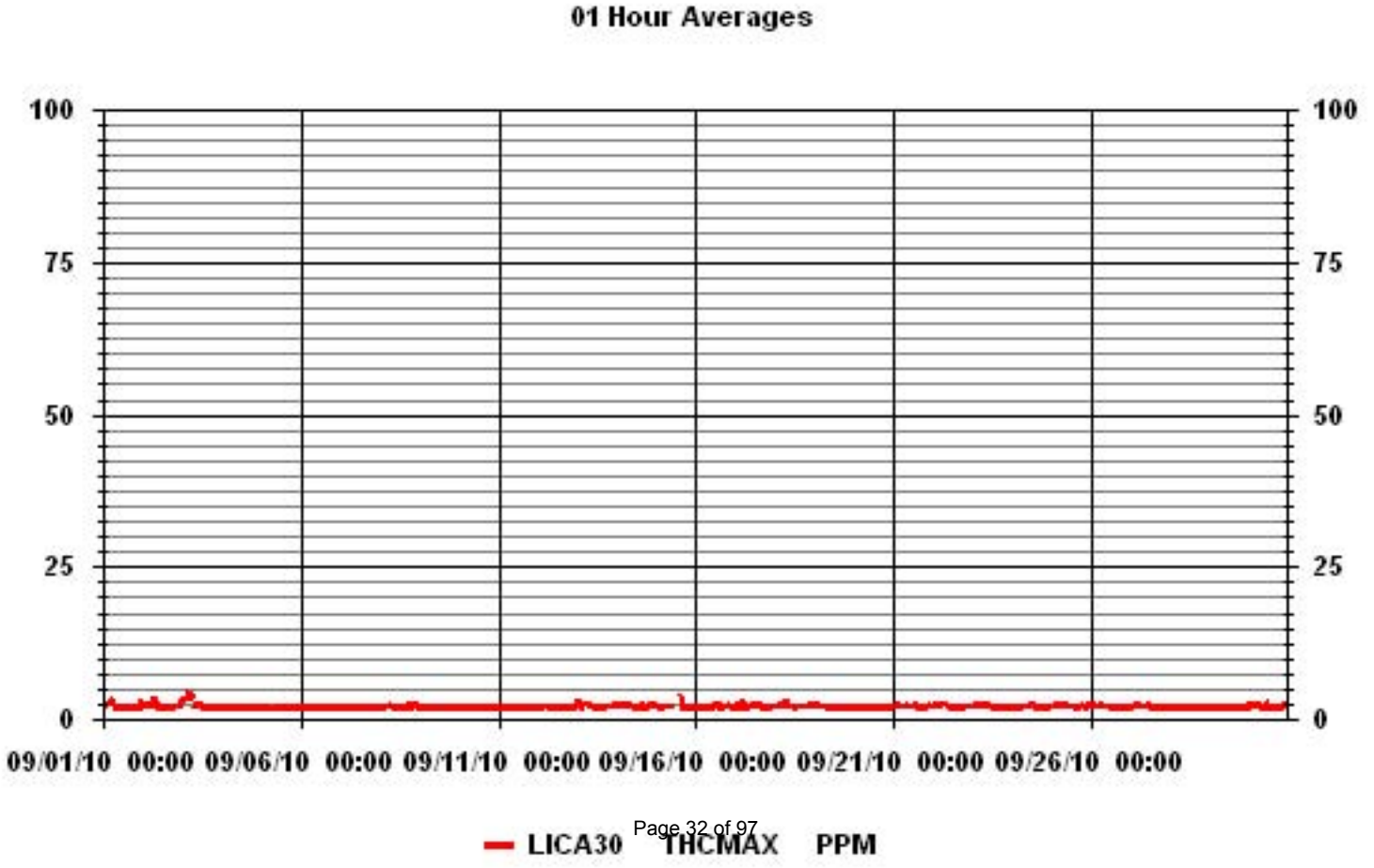
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.6	2.3	2.4	2.5	2.8	3.2	2.6	2.1	2	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2.8	2.7	3.2	2.2	24
2	2.3	2.3	2.4	2.4	2.5	2.4	2.6	3.4	**IZS**	2.5	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.2	2.8	3.4	2.3	24
3	2.9	3.4	3.5	**4.2**	3.7	4	3.7	**IZS**	2.5	2.4	2.4	2.3	2.3	2.1	2	2	2.1	2.1	2	2.1	2	2	2	2.1	**4.2**	2.6	24
4	2.1	2	2	2	2	2	**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	1.9	1.8	1.9	1.9	2.1	1.9	24
5	1.9	1.9	1.9	1.9	1.9	**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	1.9	1.9	1.9	2	1.9	24
6	2	2	1.9	2	**IZS**	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2	1.9	1.9	1.9	1.9	2	2	2	1.9	24
7	2	2	2	**IZS**	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	1.9	2	2.1	2	2.1	1.9	24
8	2	2	**IZS**	2.1	2.2	2.1	2.2	2.3	2.1	2	2	2	2	2.1	2	2.1	2.1	2.4	2.2	2	2.6	2.8	2.6	2.5	2.8	2.2	24
9	2	**IZS**	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	1.9	1.9	2	2	2	2	2.1	1.9	2.1	1.9	24
10	**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	2	1.9	2.1	2	2	2	**IZS**	2.1	1.9	24
11	2	2	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2.1	2	2	1.9	2	2	1.9	1.9	1.9	1.9	2.1	2	1.9	**IZS**	2	2.1	2.0	24
12	2	2.2	2.1	2	2.1	2.1	2.1	2	2	2	2	2	2	2	2	1.9	1.9	1.9	2	2	2	**IZS**	2.1	2.2	2.2	2.0	24
13	2.2	3	2.1	2.3	2.5	2.5	2.5	2.4	2.2	2.2	2.1	2	2	2	2.1	2	2	2	2.1	2.1	**IZS**	2.1	2.1	2.5	3	2.2	24
14	2.5	2.3	2.3	2.4	2.3	2.3	2.2	2.6	2.4	2.1	2.1	2	2	2	2	2.2	2.2	2.3	2.1	**IZS**	2.2	2.2	2.4	2.3	2.6	2.2	24
15	2.2	2.1	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	**C**	**C**	**C**	**C**	3.5	2	2.1	**IZS**	2	2.1	2	2	2	3.5	2.1	24
16	2	2	2	2	2	2	2	2	2	2	2	**C**	**C**	2.2	2.2	2.2	2	**IZS**	2.3	2.4	2.3	2.1	2.1	2	2.4	2.1	24
17	2	2.5	2.4	2.1	2.7	2.7	2.1	2	2	2.1	2.2	2.3	2.3	2.3	2.2	2.2	**IZS**	2.2	2	2	2	2	2.1	2.1	2.7	2.2	24
18	2.1	2.1	2.2	2.2	2.2	2.2	2.3	3.4	2.2	2.1	2.1	2.1	2	2.1	2.1	**IZS**	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.5	3.4	2.2	24
19	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2	2	2	2	2	2	**IZS**	2	2	2	2.1	2	2	2	2	1.9	2.3	2.1	24
20	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	2	2	2	2	2	2.1	2.1	1.9	24
21	2.1	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	**IZS**	2.5	2.3	2	2	2	2	2	2.1	2.1	2.2	2.2	2.5	2.1	24
22	2.4	2.3	2.3	2.4	2.3	2.4	2.5	2.5	2.5	2.4	2.3	**IZS**	2.1	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.5	2.2	24
23	2.1	2.2	2.3	2.4	2.4	2.5	2.4	2.4	2.4	2.4	**IZS**	2.2	2.1	2	2	2	2	2	2	2	2	2	2	2	2.5	2.2	24
24	2	2	2	2	2	2	2	2.1	2.2	**IZS**	2.2	2.3	2.4	2.3	2	1.9	1.9	1.9	1.9	2	2	2	2	2.1	2.4	2.1	24
25	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	**IZS**	2.4	2.4	2.1	2.1	2.1	2.1	2	2	2	2.1	2.2	2.2	2.1	2.5	2.5	2.5	2.2	24
26	2.5	2.4	2.3	2.2	2.1	2.2	2.3	**IZS**	2.2	2.1	2.1	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2	2.5	2.1	24
27	2	2.1	2.2	2.2	2.2	2.3	**IZS**	2.3	2.1	2.2	2.4	2.3	2	2.1	2	1.9	1.9	1.9	1.9	2	2	2	2.1	2.1	2.4	2.1	24
28	1.9	2	1.9	1.8	1.8	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	24
29	1.9	1.9	1.9	1.9	**IZS**	2	1.9	1.9	2	2	2	2	2	1.9	2	1.9	1.9	2	2	2	2	2	2	2	2	2.0	24
30	2.2	2.2	2.3	**IZS**	2.5	2.5	2.5	2.5	2.2	2.1	2.5	2	2	2	2	2	2	2	2	2	2	2.1	2.3	2.4	2.7	2.2	24
HOURLY MAX	3	3	4	4	4	4	4	3	3	3	3	2	2	3	2	4	2	2	2	2	3	3	3	3			
HOURLY AVG	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		683					
MAXIMUM INSTANTANEOUS VALUE:		4.2	PPM	@ HOUR(S)	3	ON DAY(S)	3
IZS CALIBRATION TIME:	31	HRS		OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	6	HRS					
STANDARD DEVIATION:	0.27						


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 THCMAX PPM

LICA30
THC / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	6.43	6.87	5.99	5.70	6.43	3.65	3.65	6.14	9.94	8.91	5.55	5.84	7.16	8.62	3.94	4.67	99.56
<	10.0	.00	.14	.00	.14	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.43
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.43	7.01	5.99	5.84	6.43	3.65	3.80	6.14	9.94	8.91	5.55	5.84	7.16	8.62	3.94	4.67	

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
<	3.0	44	47	41	39	44	25	25	42	68	61	38	40	49	59	27	32	681
<	10.0		1		1			1										3
<	50.0																	
>=	50.0																	
	Totals	44	48	41	40	44	25	26	42	68	61	38	40	49	59	27	32	

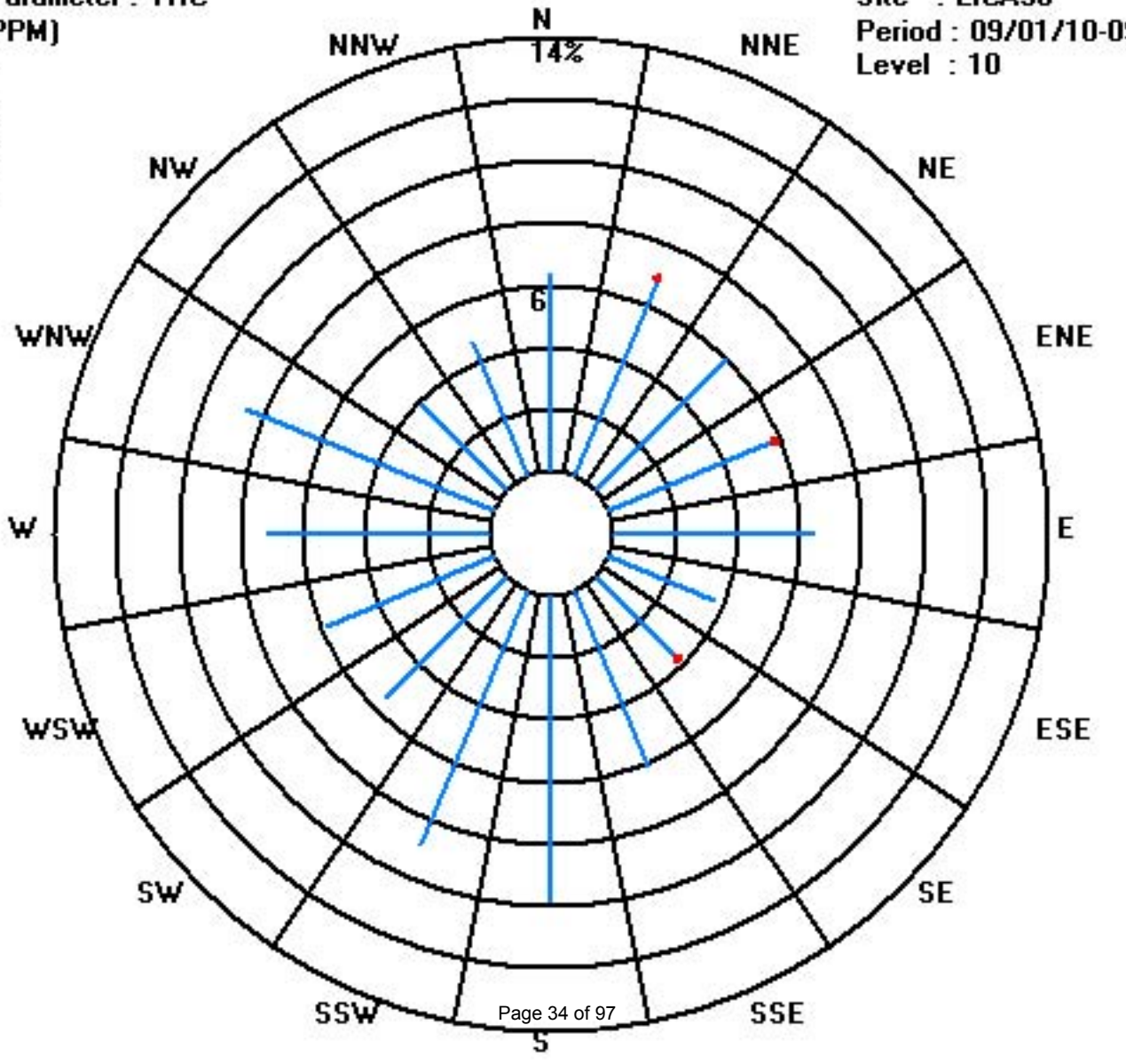
Calm : .00 %

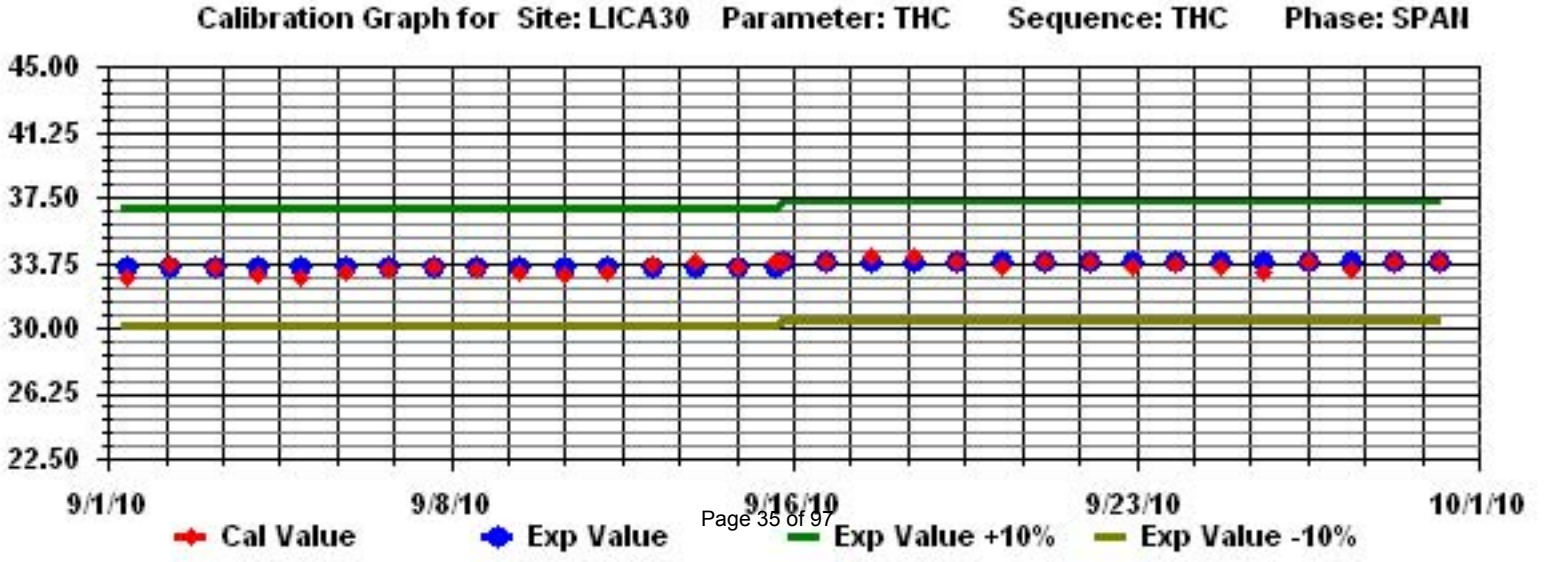
Total # Operational Hours : 684

Logger : 30 Parameter : THC
Class Limits (PPM)

>= 50.0
< 50.0
< 10.0
< 3.0

Site : LICA30
Period : 09/01/10-09/30/10
Level : 10




Calibration Graph for Site: LICA30 Parameter: THC Sequence: THC Phase: SPAN
45.00
41.25
37.50
33.75
30.00
26.25
22.50
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

SEPTEMBER 2010

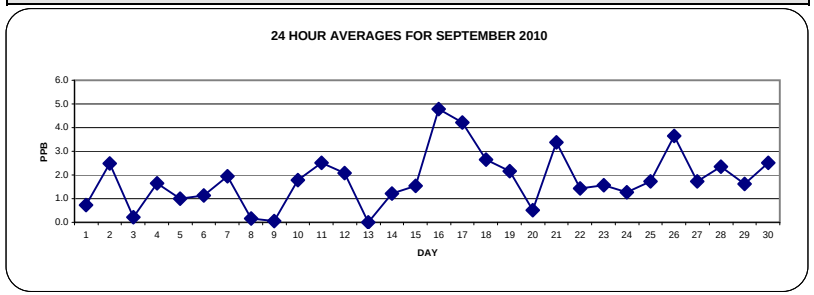
NITROGEN DIOXIDE hourly averages in ppb

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	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	5	4	8	8	0.7	24
2	6	5	5	6	5	6	7	8	**IZS**	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2.5	24
3	0	0	0	0	0	0	0	**IZS**	2	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0.2	24
4	0	0	0	0	2	4	**IZS**	2	0	1	0	0	0	0	0	0	0	4	12	8	1	0	0	4	12	1.7	24
5	0	0	0	7	3	**IZS**	3	5	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	7	1.0	24
6	1	2	1	1	**IZS**	1	1	1	1	0	0	0	0	0	0	5	4	3	0	0	0	0	0	5	5	1.1	24
7	9	9	10	**IZS**	11	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2.0	24
8	0	0	**IZS**	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
9	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	1	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	5	7	5	3	7	6	6	**IZS**	7	1.8	24
11	9	7	6	1	0	3	2	5	4	2	2	1	2	1	0	0	0	0	0	2	1	2	**IZS**	8	9	2.5	24
12	12	8	7	6	5	5	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	12	2.1	24
13	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
14	0	0	0	0	0	0	1	6	5	2	1	0	0	0	0	1	0	0	0	**IZS**	2	4	3	3	6	1.2	24
15	1	0	0	0	0	1	2	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	**IZS**	5	5	4	3	1	5	1.5	24
16	1	1	1	1	1	4	7	3	3	4	3	**C**	1	3	2	2	11	**IZS**	9	7	12	14	12	3	14	**4.8**	24
17	4	10	13	8	15	**18**	9	1	1	1	2	1	1	1	2	2	**IZS**	1	1	1	1	1	1	2	**18**	4.2	24
18	1	2	2	3	3	5	8	8	6	4	3	2	2	2	1	**IZS**	1	2	1	1	1	1	1	1	8	2.7	24
19	1	1	1	1	1	1	1	1	1	2	3	4	6	3	**IZS**	1	2	3	7	4	2	1	2	1	7	2.2	24
20	1	1	0	0	1	0	1	0	1	0	1	1	1	**IZS**	0	0	0	0	0	0	1	1	0	2	2	0.5	24
21	7	8	7	10	4	3	5	4	4	3	2	1	**IZS**	2	2	1	2	2	1	2	2	2	2	2	10	3.4	24
22	2	2	2	1	2	2	2	3	3	2	2	**IZS**	0	0	1	1	1	1	1	1	1	1	1	1	3	1.4	24
23	1	1	2	2	3	3	3	2	2	1	**IZS**	1	1	1	1	1	1	1	3	2	1	1	1	1	3	1.6	24
24	2	2	2	1	1	2	2	4	3	**IZS**	1	2	1	1	0	0	0	1	0	0	0	1	0	3	4	1.3	24
25	2	2	2	2	2	2	4	3	**IZS**	3	2	1	1	1	1	1	1	1	1	1	2	2	1	2	4	1.7	24
26	2	2	3	2	3	5	7	**IZS**	10	8	8	7	1	0	0	0	0	1	0	0	0	11	11	3	11	3.7	24
27	1	2	3	3	2	3	**IZS**	5	5	3	4	2	1	1	0	0	0	0	2	1	1	0	0	1	5	1.7	24
28	0	11	7	1	0	**IZS**	3	3	3	2	2	2	2	2	2	1	1	1	2	1	2	4	1	1	11	2.3	24
29	2	1	2	1	**IZS**	2	3	3	2	3	2	1	1	1	1	1	1	1	1	1	2	1	1	3	3	1.6	24
30	1	3	2	**IZS**	3	7	9	9	3	5	2	3	0	0	0	0	0	0	0	0	1	3	4	3	9	2.5	24
HOURLY MAX	12	11	13	10	15	18	9	9	10	9	8	7	6	3	2	5	11	7	12	8	12	14	12	8			
HOURLY AVG	2.3	2.8	2.7	2.0	2.4	3.0	3.0	2.8	2.3	2.1	1.5	1.1	0.8	0.7	0.5	0.6	1.0	1.0	1.6	1.4	1.6	2.2	1.9	2.0			

STATUS FLAG CODES

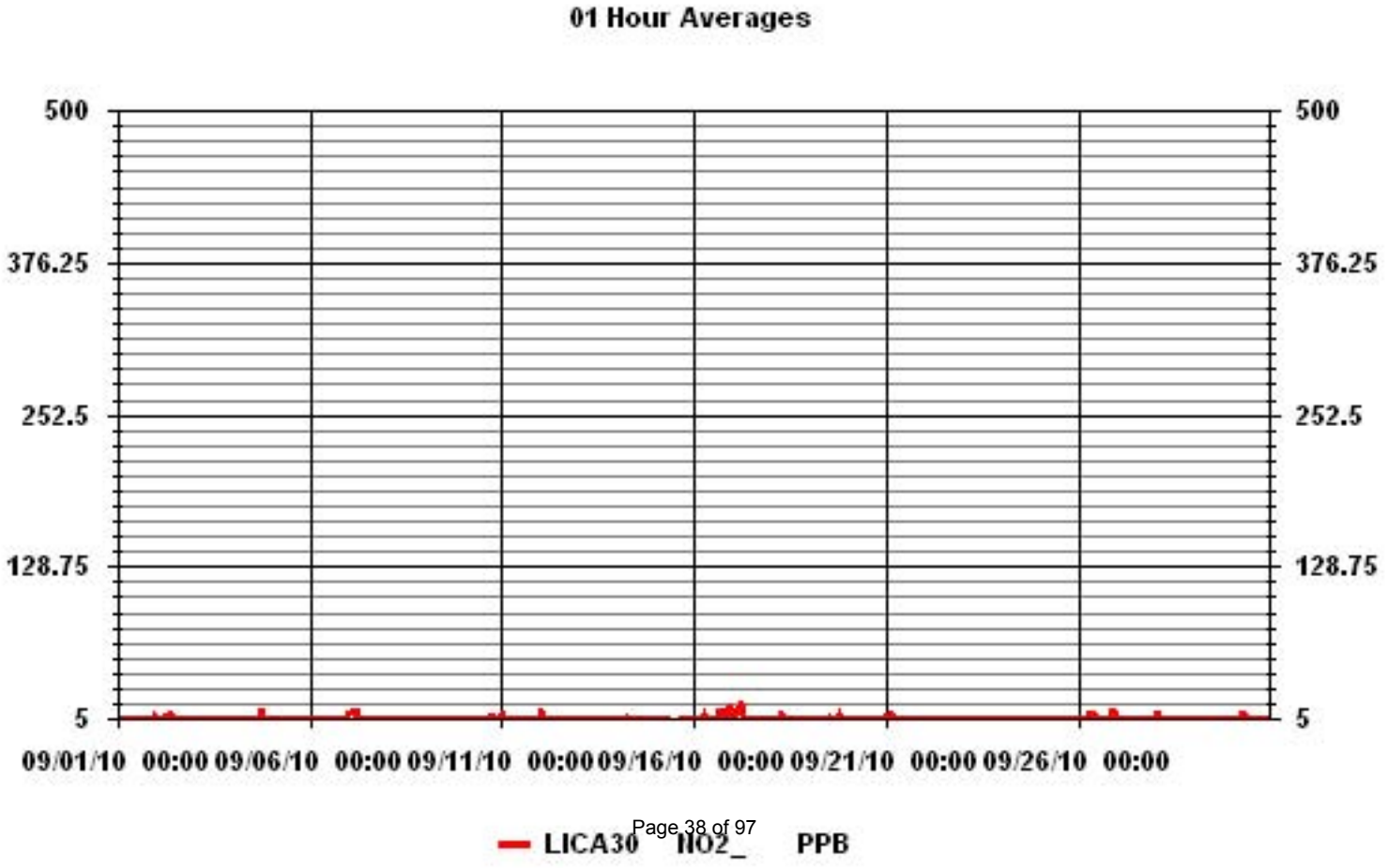
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	407					
MAXIMUM 1-HR AVERAGE:	18	PPB	@ HOUR(S)	5	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:	4.8	PPB			ON DAY(S)	16
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	2.61		MONTHLY AVERAGE:		1.80	PPB


01 Hour Averages
500
376.25
252.5
128.75
5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

SEPTEMBER 2010

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

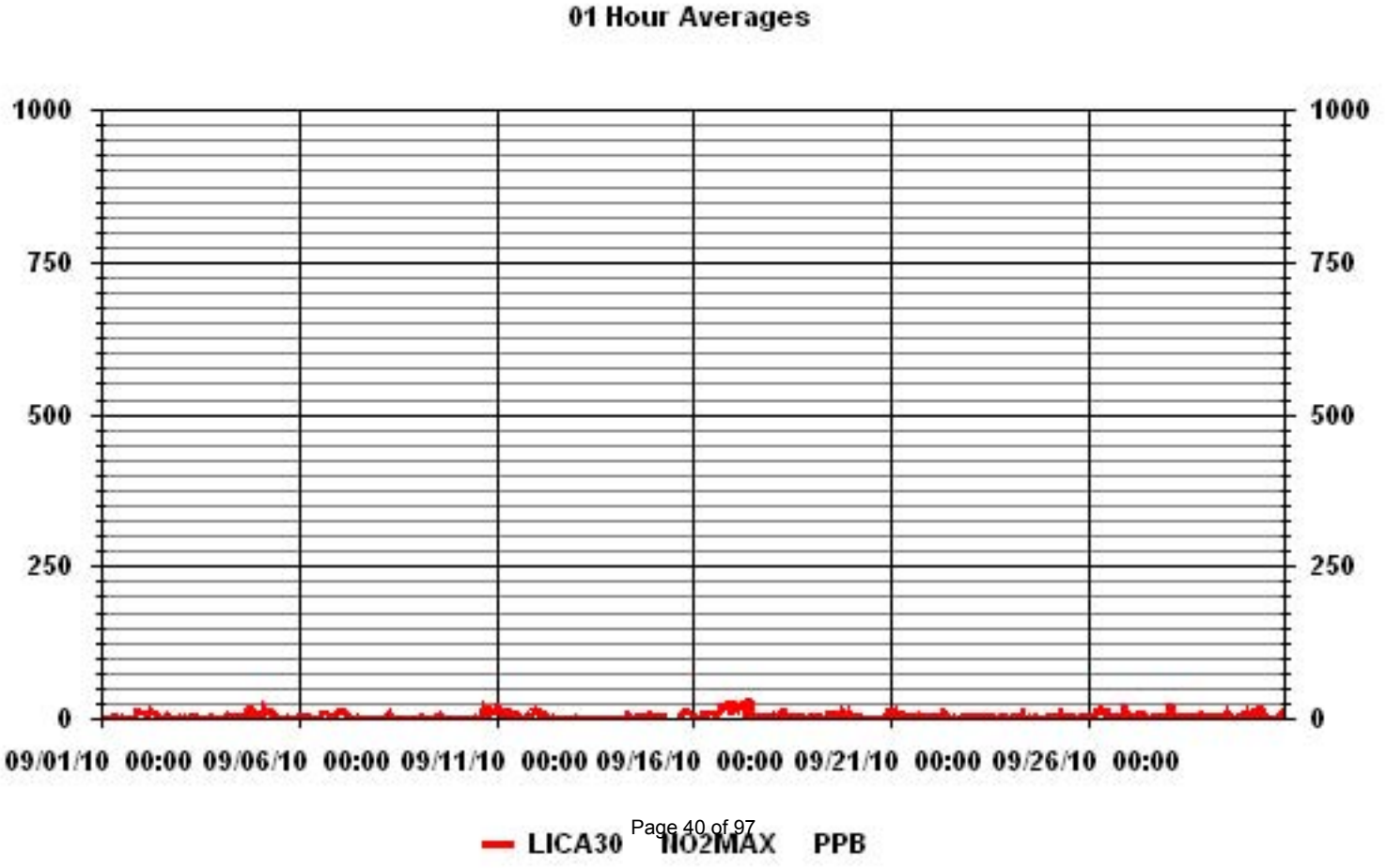
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	1	1	1	**IZS**	0	0	1	1	1	2	0	0	1	0	4	11	8	11	11	1.9	24
2	8	8	8	8	6	7	14	10	**IZS**	11	5	0	1	0	2	0	6	1	0	0	0	0	0	1	14	4.2	24
3	1	0	0	1	1	0	0	**IZS**	2	2	1	1	0	0	0	0	1	0	0	3	3	0	0	0	3	0.7	24
4	0	0	0	0	6	9	**IZS**	4	1	4	3	2	1	1	1	1	1	15	18	17	5	0	1	13	18	4.5	24
5	2	0	0	17	13	**IZS**	11	17	4	1	2	2	0	0	0	1	0	1	1	1	2	1	1	2	17	3.4	24
6	3	3	2	2	**IZS**	7	1	2	1	0	1	0	0	0	7	8	11	10	0	0	0	0	4	9	11	3.1	24
7	13	12	13	**IZS**	13	11	2	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	13	2.9	24
8	0	1	**IZS**	0	0	1	1	8	3	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	8	1.0	24
9	0	**IZS**	0	3	0	0	0	0	0	1	0	3	2	0	6	2	0	0	0	0	0	0	0	0	6	0.7	24
10	**IZS**	0	0	0	0	0	0	0	0	0	0	1	1	2	1	4	18	13	9	8	15	14	13	**IZS**	18	4.5	24
11	20	19	14	12	6	11	3	8	11	5	8	4	6	7	0	1	0	0	2	7	3	7	**IZS**	14	20	7.3	24
12	15	14	13	8	7	6	7	1	1	2	1	1	0	1	0	0	0	0	0	0	0	**IZS**	0	0	15	3.3	24
13	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	0.1	24
14	0	0	0	0	1	0	3	8	7	3	4	1	2	1	1	2	2	1	0	**IZS**	6	7	7	5	8	2.7	24
15	2	1	1	1	1	3	3	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	1	**IZS**	13	11	11	10	2	13	4.3	24
16	2	2	2	2	3	10	9	7	5	7	9	**C**	**C**	10	4	7	16	**IZS**	22	17	19	22	22	5	22	9.6	24
17	10	24	23	17	22	23	24	2	3	2	**32**	14	3	4	5	6	**IZS**	3	1	3	2	2	2	2	**32**	10.0	24
18	2	6	3	4	4	9	12	13	9	5	5	3	3	2	2	**IZS**	2	2	2	2	2	1	1	1	13	4.1	24
19	1	1	1	1	1	1	1	1	2	6	6	9	9	8	**IZS**	2	4	9	14	11	7	2	9	1	14	4.7	24
20	1	1	1	1	1	1	1	1	2	1	2	1	2	**IZS**	0	1	0	0	0	1	1	1	1	12	12	1.4	24
21	13	11	8	13	7	5	7	7	6	4	4	3	**IZS**	3	3	2	3	6	2	3	3	3	3	3	13	5.3	24
22	3	4	4	2	3	2	5	4	15	3	4	**IZS**	1	1	2	2	1	2	1	1	1	1	1	1	15	2.8	24
23	1	1	3	3	3	4	3	3	2	1	**IZS**	2	2	2	2	1	1	2	5	5	2	2	2	2	5	2.3	24
24	2	4	3	2	2	2	3	5	13	**IZS**	2	3	2	2	1	1	1	5	2	1	1	3	1	4	13	2.8	24
25	4	3	3	3	3	3	6	13	**IZS**	3	3	2	2	2	5	2	2	1	2	2	4	3	2	3	13	3.3	24
26	3	3	3	4	4	11	11	**IZS**	16	14	12	14	7	1	1	1	2	2	5	0	0	22	21	14	22	7.4	24
27	2	3	4	4	5	5	**IZS**	7	6	4	13	3	1	2	1	1	1	1	4	2	2	1	1	5	13	3.4	24
28	8	21	20	6	1	**IZS**	5	4	4	3	2	3	4	3	4	2	2	5	4	1	9	9	2	2	21	5.4	24
29	5	3	3	2	**IZS**	5	5	4	3	7	6	2	9	2	2	2	2	1	2	2	4	2	4	11	11	3.8	24
30	2	9	3	**IZS**	4	12	12	11	6	19	8	8	1	1	1	0	0	0	0	0	4	4	12	9	19	5.5	24
HOURLY MAX	20	24	23	17	22	23	24	17	16	19	32	14	9	10	7	8	18	15	22	17	19	22	22	14			
HOURLY AVG	4.3	5.3	4.7	4.1	4.2	5.3	5.4	5.1	4.6	4.1	4.9	3.1	2.3	2.0	1.9	1.8	2.7	2.8	3.3	3.4	3.8	4.4	4.4	4.6			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	522					
MAXIMUM INSTANTANEOUS VALUE:	32	PPB	@ HOUR(S)	10	ON DAY(S)	17
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	4.93					


01 Hour Averages
1000
750
500
250
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 HO2MAX PPB

LICA30
NO2_ / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : NO2_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	6.47	7.05	6.02	5.88	6.47	3.67	3.82	6.17	10.00	8.67	5.44	5.88	7.05	8.67	3.97	4.70	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.47	7.05	6.02	5.88	6.47	3.67	3.82	6.17	10.00	8.67	5.44	5.88	7.05	8.67	3.97	4.70	

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	44	48	41	40	44	25	26	42	68	59	37	40	48	59	27	32	680
< 110																	
< 210																	
>= 210																	
Totals	44	48	41	40	44	25	26	42	68	59	37	40	48	59	27	32	

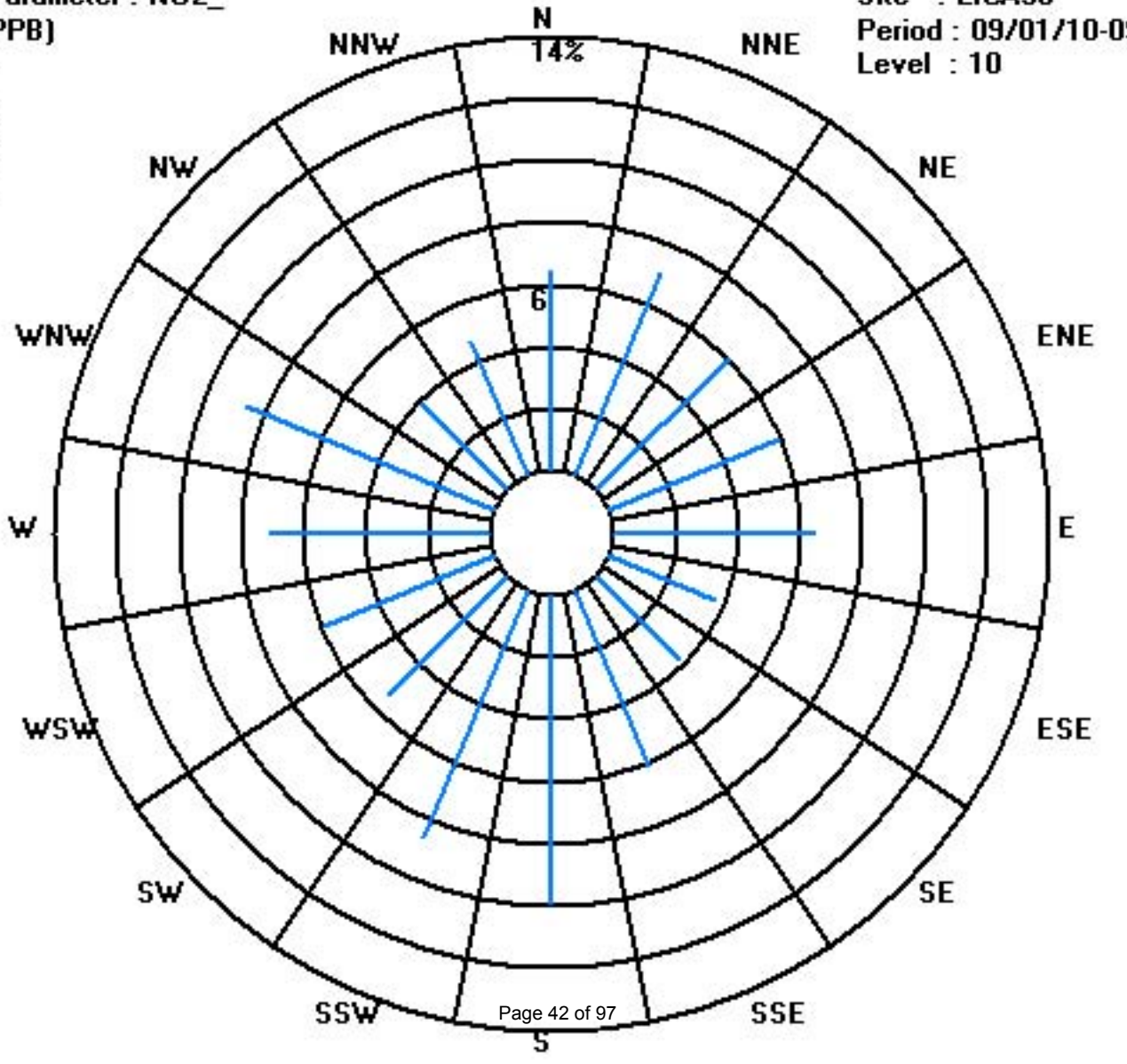
Calm : .00 %

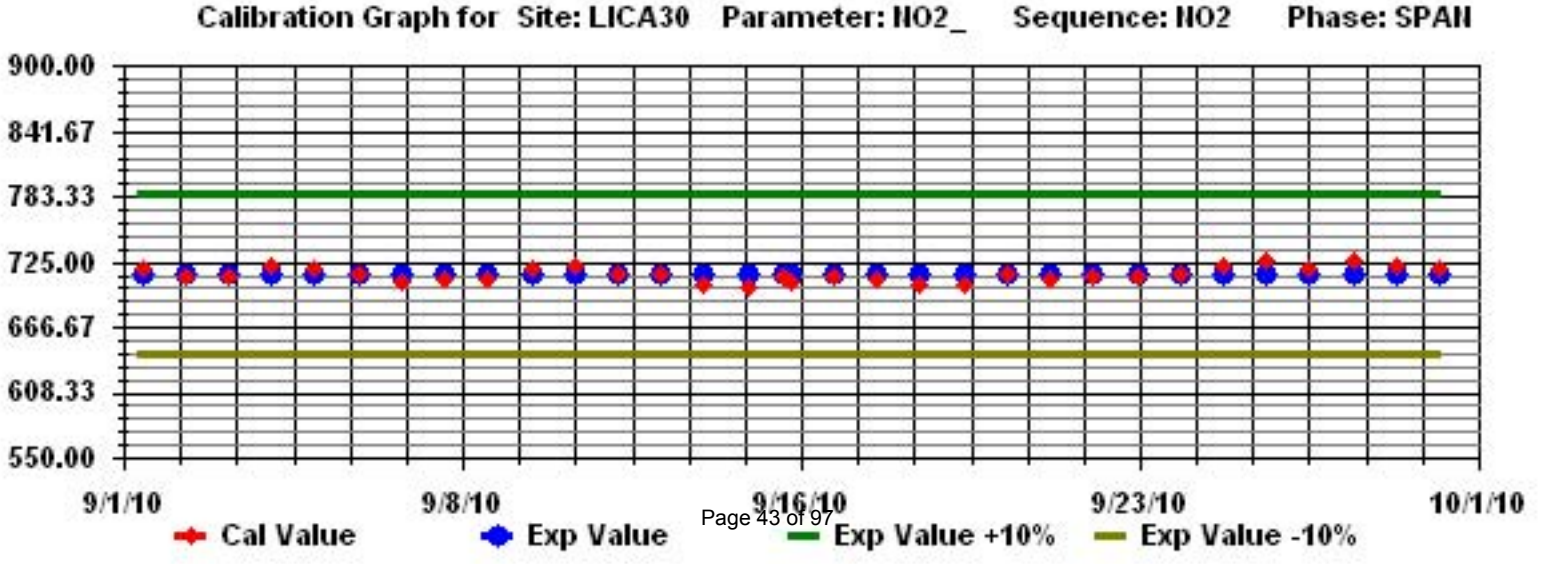
Total # Operational Hours : 680

Logger : 30 Parameter : NO2_
Class Limits (PPB)

>= 210
< 210
< 110
< 50

Site : LICA30
Period : 09/01/10-09/30/10
Level : 10




Calibration Graph for Site: LICA30 Parameter: NO2_ Sequence: NO2 Phase: SPAN
900.00
841.67
783.33
725.00
666.67
608.33
550.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSCOICATION - MASKWA

SEPTEMBER 2010

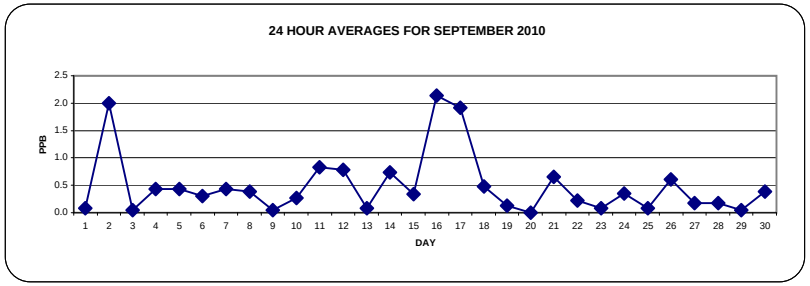
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0.1	24
2	1	1	1	1	1	1	11	**14**	**IZS**	**14**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**	2.0	24
3	0	0	0	0	0	0	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
4	0	0	0	0	0	0	**IZS**	1	0	1	0	0	0	0	0	0	0	1	4	2	0	0	0	1	4	0.4	24
5	0	0	0	2	1	**IZS**	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.4	24
6	0	0	0	0	**IZS**	1	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	1	2	0.3	24
7	2	2	2	**IZS**	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.4	24
8	0	0	**IZS**	0	0	0	0	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.4	24
9	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	1	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	3	2	1	0	0	0	0	**IZS**	3	0.3	24
11	2	2	1	0	0	1	0	2	2	2	2	1	2	1	0	0	0	0	0	0	0	0	**IZS**	1	2	0.8	24
12	3	4	4	1	1	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	4	0.8	24
13	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	0.1	24
14	0	0	0	0	0	0	1	7	4	2	1	0	1	1	0	0	0	0	0	**IZS**	0	0	0	0	7	0.7	24
15	0	0	0	0	0	0	0	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	**IZS**	1	1	1	1	0	1	0.3	24
16	0	0	0	0	0	1	1	1	1	3	2	**C**	0	2	1	1	8	**IZS**	5	1	3	9	7	1	9	**2.1**	24
17	2	6	9	1	3	9	2	1	1	1	2	1	1	1	2	2	**IZS**	0	0	0	0	0	0	0	9	1.9	24
18	0	0	0	0	0	0	3	4	2	1	1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	4	0.5	24
19	0	0	0	0	0	0	0	0	0	0	1	1	1	0	**IZS**	0	0	0	0	0	0	0	0	0	1	0.1	24
20	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
21	2	1	1	3	0	0	2	3	1	1	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	3	0.7	24
22	0	0	0	0	0	0	1	0	2	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
23	0	0	0	0	0	0	0	0	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
24	0	0	0	0	0	0	0	0	1	**IZS**	2	2	2	1	0	0	0	0	0	0	0	0	0	0	2	0.3	24
25	0	0	0	0	0	0	0	0	**IZS**	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
26	0	0	0	0	0	0	0	**IZS**	4	3	4	3	0	0	0	0	0	0	0	0	0	0	0	0	4	0.6	24
27	0	0	0	0	0	0	**IZS**	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
28	0	1	0	0	0	**IZS**	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
29	0	0	0	0	**IZS**	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
30	0	0	0	**IZS**	0	0	1	2	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0.4	24
HOURLY MAX	3	6	9	3	3	9	11	14	4	14	4	3	2	2	2	2	8	2	5	2	3	9	7	1			
HOURLY AVG	0.4	0.6	0.6	0.3	0.3	0.5	1.0	1.6	1.0	1.4	0.9	0.4	0.3	0.2	0.2	0.2	0.4	0.1	0.3	0.1	0.1	0.4	0.3	0.2			

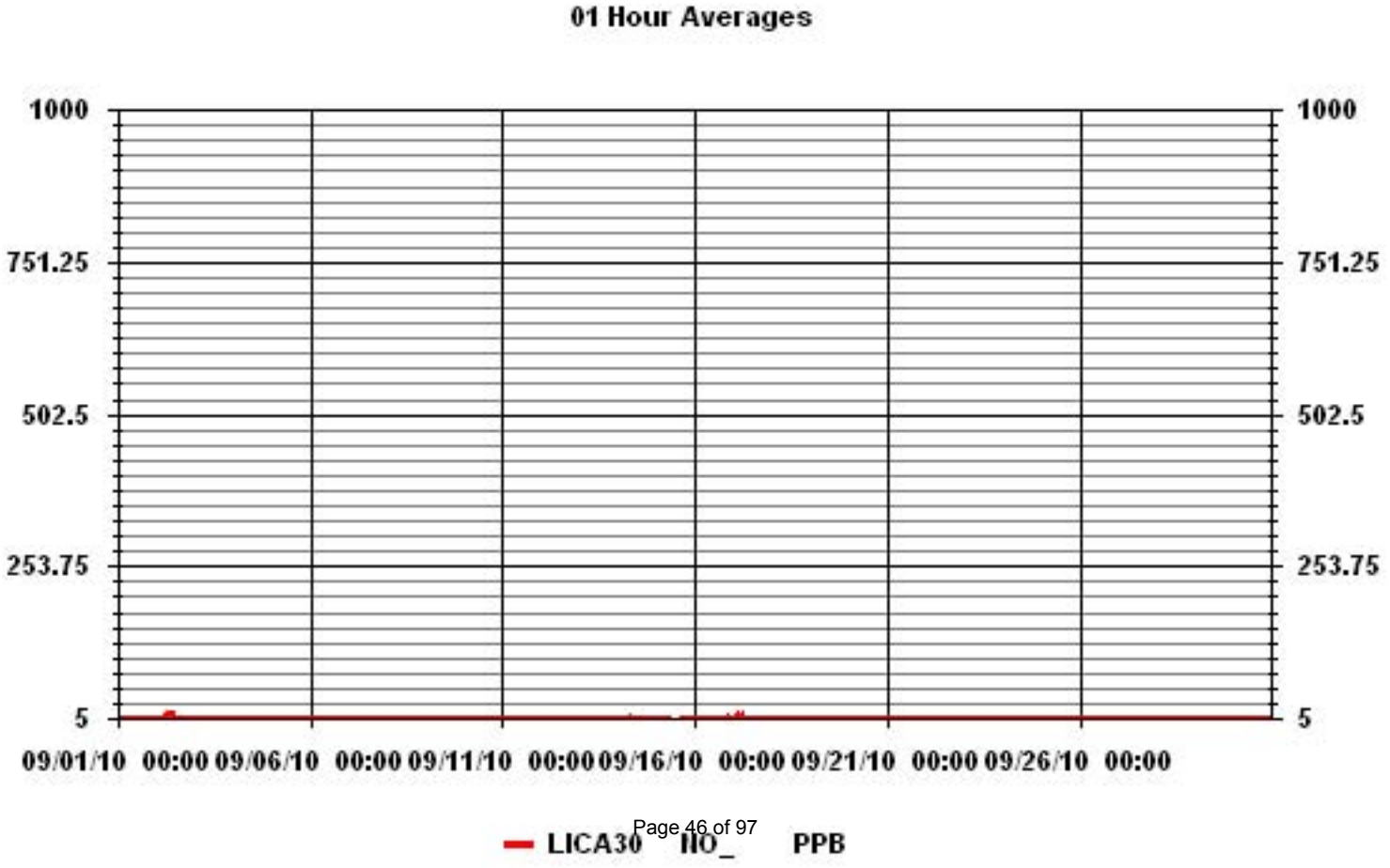
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	159						
MAXIMUM 1-HR AVERAGE:	14	PPB	@ HOUR(S)	7, 9	ON DAY(S)	2	
MAXIMUM 24-HR AVERAGE:	2.1	PPB			ON DAY(S)	16	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	1.38		MONTHLY AVERAGE:		0.49	PPB	


01 Hour Averages
1000
751.25
502.5
253.75
5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

SEPTEMBER 2010

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

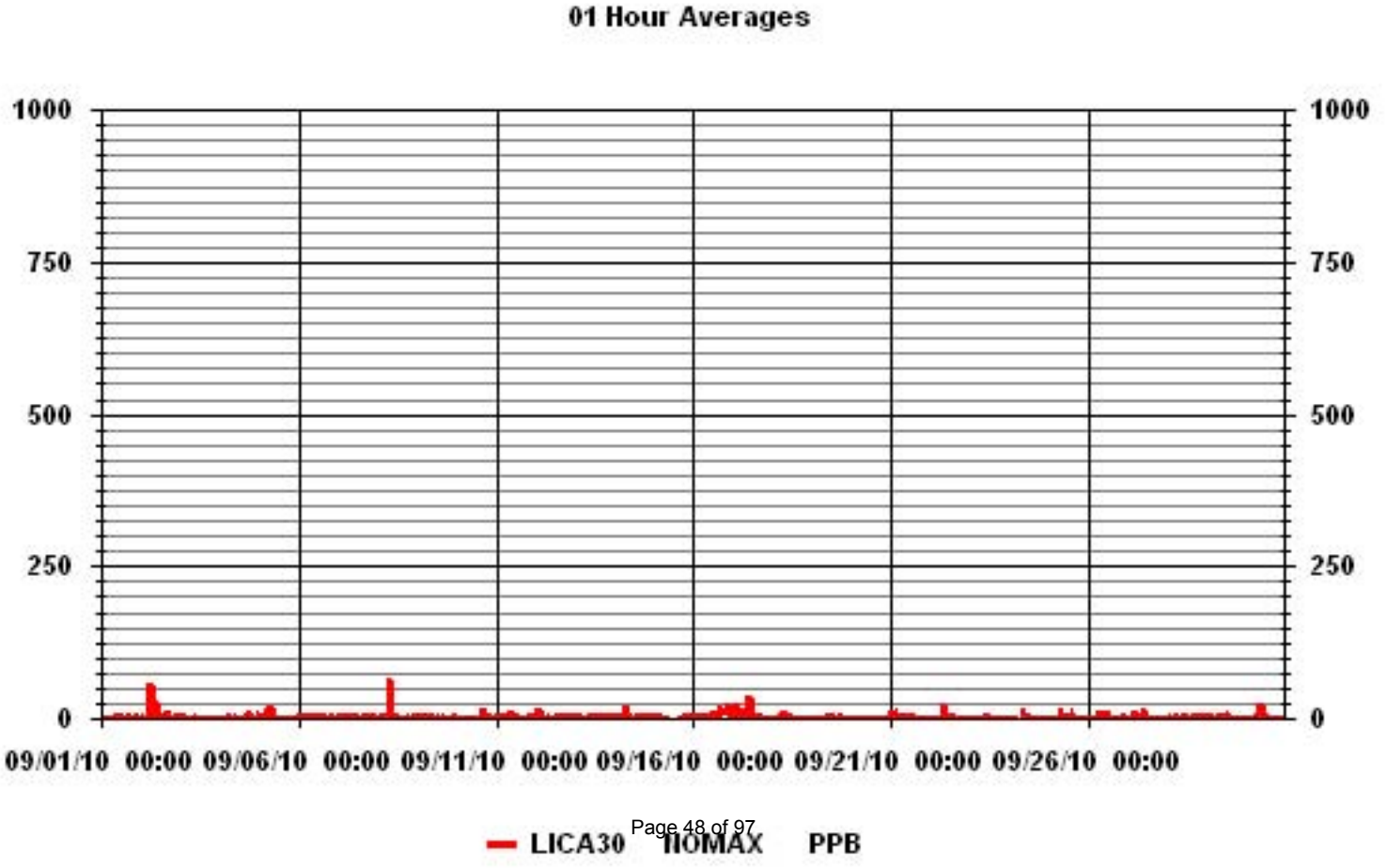
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	1	0	**IZS**	1	1	1	1	1	2	1	1	1	1	2	5	1	2	5	1.0	24
2	1	1	1	2	1	3	59	24	**IZS**	24	6	1	2	1	1	0	10	0	1	0	0	1	1	1	59	6.1	24
3	1	1	1	1	1	0	1	**IZS**	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4	24
4	0	0	0	0	1	1	**IZS**	2	1	3	2	1	0	0	0	0	0	6	8	6	1	0	0	5	8	1.6	24
5	1	0	0	8	4	**IZS**	7	21	2	1	1	1	0	1	0	0	0	1	0	0	0	0	0	1	21	2.1	24
6	1	1	1	1	**IZS**	5	1	1	1	1	1	1	1	1	6	5	2	3	1	1	1	1	1	2	6	1.7	24
7	4	4	4	**IZS**	4	3	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	4	1.6	24
8	1	0	**IZS**	1	1	1	1	**67**	4	3	2	2	1	1	0	0	0	0	1	1	0	0	1	1	**67**	3.9	24
9	1	**IZS**	1	1	1	1	1	1	1	1	1	2	1	1	3	1	1	0	0	1	0	1	1	1	3	1.0	24
10	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15	8	3	1	6	5	3	**IZS**	15	2.0	24
11	7	5	4	4	2	3	2	6	9	4	7	2	5	5	1	0	1	0	1	0	1	1	**IZS**	3	9	3.2	24
12	5	11	11	2	1	1	2	1	1	2	1	2	1	1	1	1	1	1	1	1	1	**IZS**	1	1	11	2.2	24
13	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	3	1.1	24
14	1	1	1	1	1	1	2	20	6	3	3	1	2	1	1	1	1	1	1	**IZS**	1	1	1	1	20	2.3	24
15	1	1	1	1	1	1	1	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	**IZS**	4	3	4	6	1	6	1.8	24
16	1	1	1	1	1	3	2	2	2	7	6	**C**	**C**	9	10	5	15	**IZS**	13	5	13	22	15	3	22	6.5	24
17	5	21	21	2	9	17	9	1	4	2	35	8	3	3	4	5	**IZS**	0	0	0	0	0	0	0	35	6.5	24
18	0	1	0	0	0	4	8	10	4	2	2	1	1	0	0	**IZS**	0	0	0	0	0	0	0	0	10	1.4	24
19	0	0	0	0	0	0	0	0	0	2	2	3	2	2	**IZS**	0	1	1	1	1	0	0	0	0	3	0.7	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	1	0	0	0	0	0	0	0	7	7	0.3	24
21	7	4	2	7	0	2	6	7	4	5	6	1	**IZS**	1	1	1	0	0	0	0	0	0	0	0	7	2.3	24
22	0	0	0	0	0	0	3	1	23	2	4	**IZS**	1	1	1	1	0	0	0	0	0	0	0	0	23	1.6	24
23	0	0	0	0	0	0	0	1	2	1	**IZS**	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
24	0	0	0	0	0	0	0	1	13	**IZS**	4	3	2	2	0	0	0	2	0	0	0	0	0	0	13	1.2	24
25	0	0	0	0	0	0	0	13	**IZS**	2	2	1	1	0	6	0	0	0	0	0	0	0	0	0	13	1.1	24
26	0	0	0	0	0	3	3	**IZS**	11	8	7	9	3	0	0	0	0	0	2	0	0	1	1	1	11	2.1	24
27	0	0	0	0	7	7	**IZS**	2	2	1	15	2	0	1	0	0	0	0	0	0	0	0	0	0	15	1.6	24
28	0	3	2	0	0	**IZS**	1	1	2	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	3	1.1	24
29	1	1	1	1	**IZS**	0	1	1	0	3	3	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0.7	24
30	0	2	0	**IZS**	0	2	3	3	2	25	5	6	0	0	0	0	0	0	0	0	0	0	0	0	25	2.1	24
HOURLY MAX	7	21	21	8	9	17	59	67	23	25	35	9	5	9	10	5	15	8	13	6	13	22	15	7			
HOURLY AVG	1.3	2.0	1.8	1.2	1.3	2.1	4.2	6.8	3.6	3.9	4.3	1.9	1.4	1.3	1.4	1.0	1.8	0.9	1.3	0.9	1.1	1.6	1.2	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:	412					
MAXIMUM INSTANTANEOUS VALUE:	67	PPB	@ HOUR(S)	7	ON DAY(S)	8
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	4.95					


01 Hour Averages
1000
750
500
250
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 HOMAX PPB

LICA30
NO_ / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : NO_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	6.47	7.05	6.02	5.88	6.47	3.67	3.82	6.17	10.00	8.67	5.44	5.88	7.05	8.67	3.97	4.70	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.47	7.05	6.02	5.88	6.47	3.67	3.82	6.17	10.00	8.67	5.44	5.88	7.05	8.67	3.97	4.70	

Calm : .00 %

Total # Operational Hours : 680

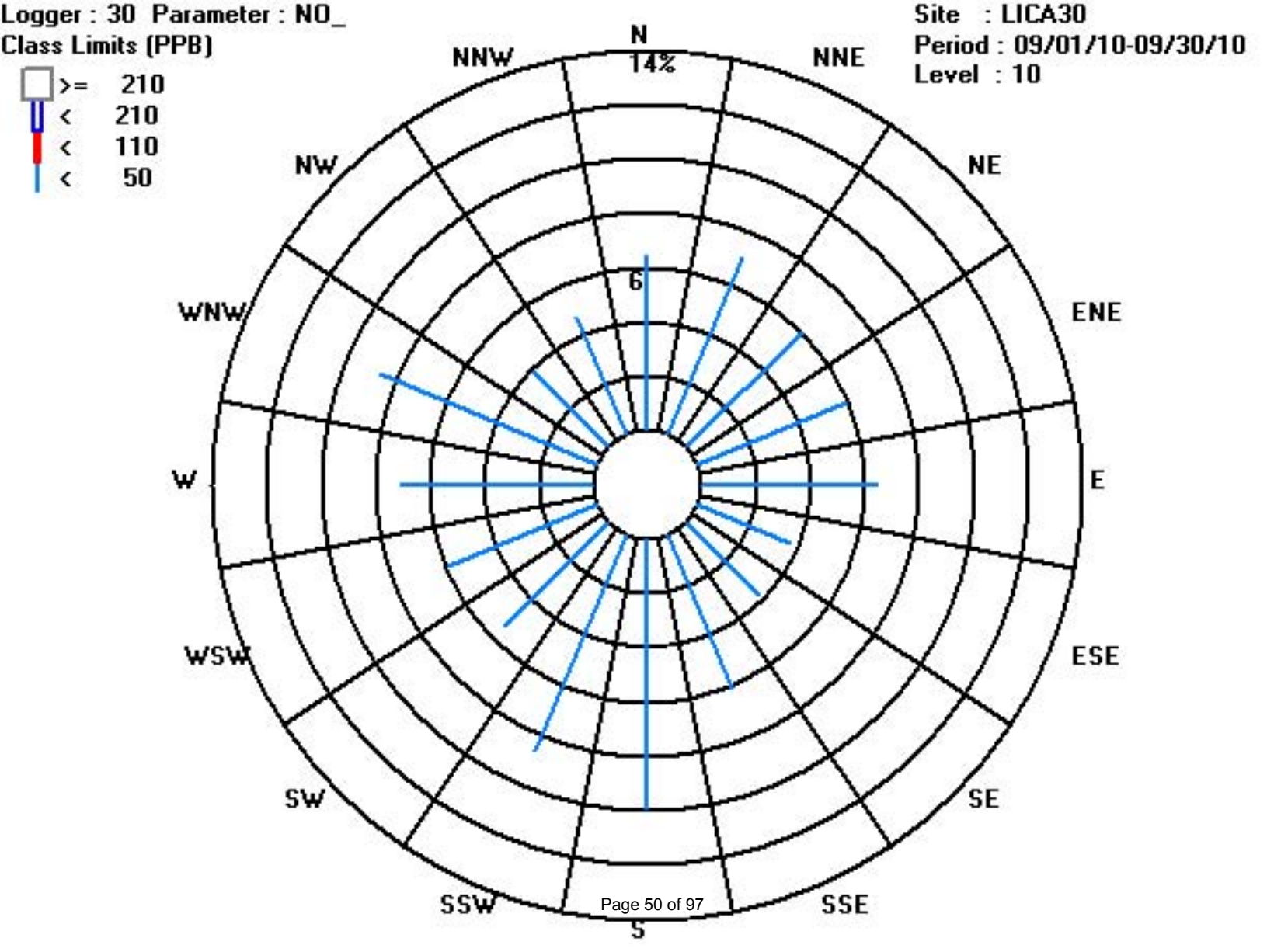
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	44	48	41	40	44	25	26	42	68	59	37	40	48	59	27	32	680
< 110																	
< 210																	
>= 210																	
Totals	44	48	41	40	44	25	26	42	68	59	37	40	48	59	27	32	

Calm : .00 %

Total # Operational Hours : 680


Logger : 30 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA30
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

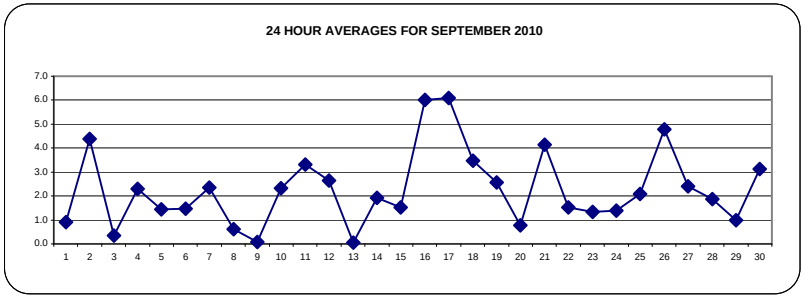
SEPTEMBER 2010

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	0	0	0	0	0	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	6	4	9	9	0.9	24
2	6	6	6	7	5	7	18	22	**IZS**	23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	23	4.4	24
3	0	0	0	0	0	0	0	**IZS**	3	2	1	1	0	0	0	0	0	0	0	1	0	0	0	0	3	0.3	24
4	0	0	0	0	2	4	**IZS**	3	0	3	1	0	0	0	0	0	0	6	17	11	1	0	0	5	17	2.3	24
5	0	0	0	10	4	**IZS**	5	9	2	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	10	1.4	24
6	1	2	1	1	**IZS**	2	1	1	1	0	0	0	0	0	1	7	5	4	0	0	0	0	0	7	7	1.5	24
7	11	11	12	**IZS**	13	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	2.3	24
8	0	0	**IZS**	0	0	0	0	5	4	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.6	24
9	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0.1	24
10	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	6	4	8	7	6	**IZS**	10	2.3	24
11	12	9	7	1	1	3	2	7	6	4	3	1	4	2	0	0	0	0	0	2	1	2	**IZS**	9	12	3.3	24
12	15	12	10	6	5	5	5	0	0	1	1	1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	15	2.7	24
13	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	0.0	24
14	0	0	0	0	0	0	2	12	9	4	1	0	1	1	1	1	0	0	0	**IZS**	2	4	3	3	12	1.9	24
15	1	0	0	0	0	1	2	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	2	**IZS**	4	4	3	3	0	4	1.5	24
16	0	0	0	0	0	2	6	2	2	5	3	**C**	1	4	3	3	18	**IZS**	14	8	15	23	19	4	23	6.0	24
17	6	16	22	8	18	**27**	11	2	2	1	4	2	2	2	3	4	**IZS**	2	1	2	1	1	1	2	**27**	**6.1**	24
18	1	2	2	3	3	6	12	12	8	6	5	3	2	2	2	**IZS**	2	2	2	1	1	1	1	1	12	3.5	24
19	1	1	1	1	1	1	1	1	1	2	5	6	8	4	**IZS**	1	2	3	8	4	2	1	3	1	8	2.6	24
20	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	0	0	0	0	0	0	1	1	0	3	3	0.8	24
21	10	10	8	14	4	4	9	9	7	4	3	2	**IZS**	2	1	0	1	2	0	1	1	1	1	1	14	4.1	24
22	1	1	1	0	1	1	3	4	5	3	2	**IZS**	1	1	1	2	1	1	1	1	1	1	1	1	5	1.5	24
23	1	1	2	3	3	3	3	3	3	2	**IZS**	1	1	0	0	0	0	0	3	1	0	0	0	1	3	1.3	24
24	1	1	1	0	0	1	1	4	3	**IZS**	4	4	4	3	0	0	0	1	0	0	0	1	0	3	4	1.4	24
25	2	3	3	2	2	2	4	4	**IZS**	4	3	2	2	2	1	1	1	1	1	1	2	2	1	2	4	2.1	24
26	2	3	3	2	3	5	8	**IZS**	14	11	14	12	3	0	0	0	1	1	1	0	0	11	12	4	14	4.8	24
27	1	2	3	3	3	4	**IZS**	7	7	5	7	3	1	1	1	1	0	0	2	1	1	1	0	1	7	2.4	24
28	0	13	8	1	0	**IZS**	3	2	3	1	1	2	2	1	1	0	0	0	1	0	1	3	0	0	13	1.9	24
29	1	1	1	0	**IZS**	1	3	2	2	3	2	1	1	0	0	0	0	0	0	0	2	0	1	2	3	1.0	24
30	0	3	2	**IZS**	3	8	11	11	4	9	4	5	1	0	0	0	0	0	0	0	1	3	4	3	11	3.1	24
HOURLY MAX	15	16	22	14	18	27	18	22	14	23	14	12	8	4	3	7	18	10	17	11	15	23	19	9			
HOURLY AVG	2.6	3.4	3.2	2.3	2.6	3.4	4.0	4.5	3.3	3.6	2.5	1.8	1.3	0.9	0.6	0.7	1.4	1.2	2.0	1.4	1.6	2.5	2.1	2.1			

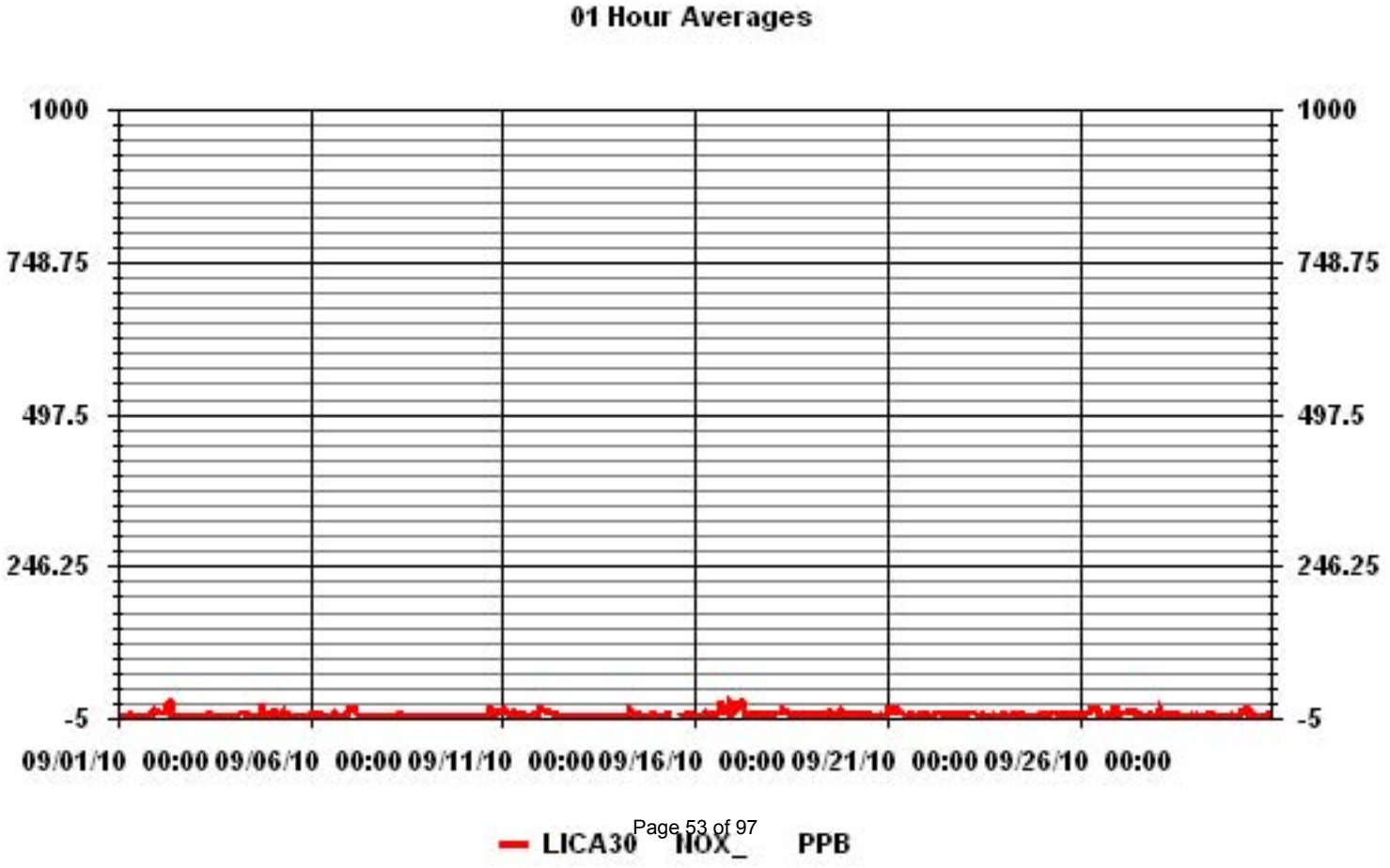
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	399						
MAXIMUM 1-HR AVERAGE:	27	PPB	@ HOUR(S)	5	ON DAY(S)	17	
MAXIMUM 24-HR AVERAGE:	6.1	PPB			ON DAY(S)	17	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME		100.0	%	
STANDARD DEVIATION	3.76		MONTHLY AVERAGE		2.28	PPB	


01 Hour Averages
1000
748.75
497.5
246.25
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

SEPTEMBER 2010

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

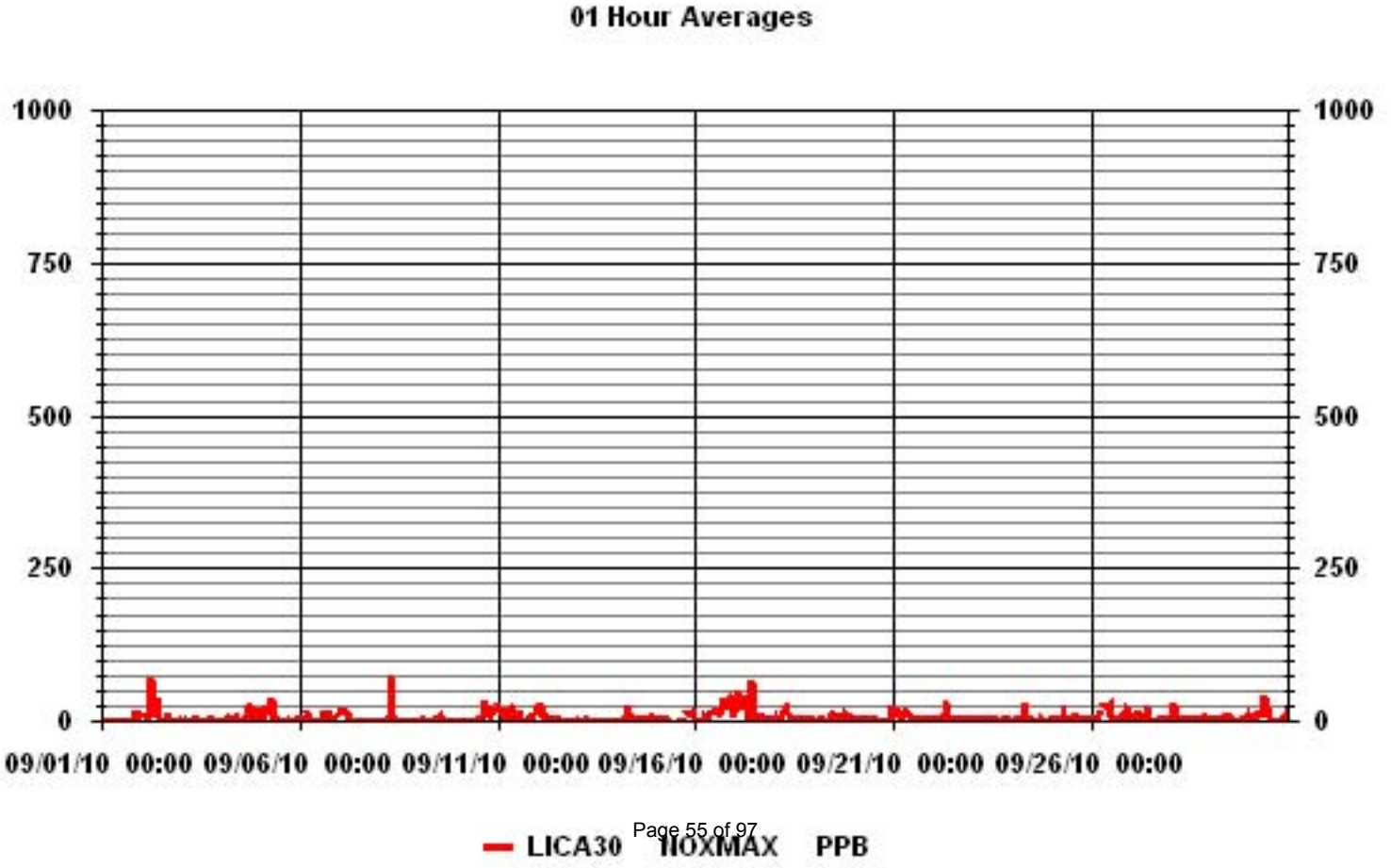
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	1	2	1	**IZS**	1	0	1	2	1	3	0	0	1	0	5	16	8	12	16	2.3	24
2	9	8	8	10	7	9	70	33	**IZS**	34	11	1	2	1	2	0	11	1	0	0	0	0	0	1	70	9.5	24
3	1	0	1	1	1	0	1	**IZS**	4	3	3	2	0	0	0	0	1	1	0	3	3	0	0	0	4	1.1	24
4	0	0	1	0	7	10	**IZS**	5	2	7	6	3	1	2	2	1	2	21	25	23	6	0	1	18	25	6.2	24
5	3	0	0	25	17	**IZS**	17	38	6	2	3	3	0	0	0	1	0	1	1	1	2	1	1	1	38	5.3	24
6	4	4	2	3	**IZS**	11	1	3	2	1	2	1	0	0	12	13	12	13	0	0	0	0	5	11	13	4.3	24
7	16	16	17	**IZS**	16	14	2	0	0	0	1	0	1	2	0	0	0	0	0	1	0	0	0	0	17	3.7	24
8	0	1	**IZS**	0	0	1	1	**75**	6	6	6	3	0	0	0	0	0	0	0	0	0	0	0	0	**75**	4.3	24
9	0	**IZS**	0	3	0	0	0	0	0	1	0	5	2	1	8	2	0	0	0	0	0	0	0	0	8	1.0	24
10	**IZS**	0	0	0	0	0	0	1	0	0	0	1	1	2	1	7	33	22	12	10	21	20	17	**IZS**	33	6.7	24
11	27	23	17	16	7	13	8	14	19	9	14	5	10	12	1	1	1	0	2	7	3	7	**IZS**	16	27	10.1	24
12	20	24	23	10	8	7	7	1	1	2	2	2	1	1	1	0	0	0	0	0	0	**IZS**	0	0	24	4.8	24
13	1	1	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	1	0	**IZS**	0	0	0	4	0.3	24
14	0	0	0	1	1	0	4	25	12	6	6	1	3	2	2	3	2	1	0	**IZS**	6	8	7	5	25	4.1	24
15	2	1	1	1	2	2	3	5	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	3	**IZS**	15	11	12	14	0	15	4.9	24
16	0	0	0	0	1	10	8	7	4	12	13	**C**	**C**	19	11	12	31	**IZS**	34	17	32	40	37	8	40	14.1	24
17	15	44	42	18	30	39	32	2	6	3	67	22	5	6	8	11	**IZS**	3	2	3	2	2	2	3	67	16.0	24
18	2	8	3	4	4	13	20	23	13	7	7	4	3	3	2	**IZS**	2	2	2	2	2	2	2	2	23	5.7	24
19	2	1	2	2	1	1	1	1	2	9	8	12	12	10	**IZS**	2	4	10	15	12	8	2	10	1	15	5.6	24
20	2	1	1	1	1	1	1	1	2	2	2	2	2	**IZS**	1	2	1	0	0	1	2	1	1	19	19	2.0	24
21	20	15	11	20	8	6	13	15	10	10	11	4	**IZS**	3	3	3	2	5	1	2	2	3	3	3	20	7.5	24
22	2	3	3	2	2	1	7	5	33	4	7	**IZS**	2	2	3	4	2	2	2	1	1	1	1	1	33	4.0	24
23	1	1	3	4	4	4	4	4	4	3	**IZS**	2	2	1	1	1	0	1	5	4	1	1	1	1	5	2.3	24
24	1	3	2	1	1	1	2	5	24	**IZS**	6	7	5	5	2	1	2	7	2	1	1	3	1	4	24	3.8	24
25	4	3	3	3	3	3	6	21	**IZS**	5	5	3	3	3	12	3	2	2	2	2	4	3	2	3	21	4.3	24
26	3	3	3	4	4	15	14	**IZS**	27	22	19	24	10	1	1	2	2	2	7	1	1	24	22	15	27	9.8	24
27	2	3	4	4	13	13	**IZS**	10	9	6	26	6	2	3	1	2	1	1	4	2	2	1	1	5	26	5.3	24
28	8	23	23	6	1	**IZS**	5	4	4	2	2	2	4	4	4	2	2	4	4	0	8	8	2	1	23	5.3	24
29	4	2	2	1	**IZS**	4	5	5	2	9	8	2	13	2	1	1	2	0	1	1	4	1	4	10	13	3.7	24
30	1	11	3	**IZS**	5	14	16	14	9	39	13	15	2	2	1	0	0	0	0	1	4	4	13	9	39	7.7	24
HOURLY MAX	27	44	42	25	30	39	70	75	33	39	67	24	13	19	12	13	33	22	34	23	32	40	37	19			
HOURLY AVG	5.2	6.9	6.0	5.0	5.1	6.9	9.0	11.4	7.5	7.6	8.9	4.9	3.2	3.2	2.9	2.8	4.0	3.5	4.2	3.8	4.5	5.5	5.3	5.1			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	538					
MAXIMUM INSTANTANEOUS VALUE:	75	PPB	@ HOUR(S)	7	ON DAY(S)	8
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	8.63					


01 Hour Averages
1000
750
500
250
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 NOXMAX PPB

LICA30
NOX_ / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : NOX_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	6.47	7.05	6.02	5.88	6.47	3.67	3.82	6.17	10.00	8.67	5.44	5.88	7.05	8.67	3.97	4.70	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.47	7.05	6.02	5.88	6.47	3.67	3.82	6.17	10.00	8.67	5.44	5.88	7.05	8.67	3.97	4.70	

Calm : .00 %

Total # Operational Hours : 680

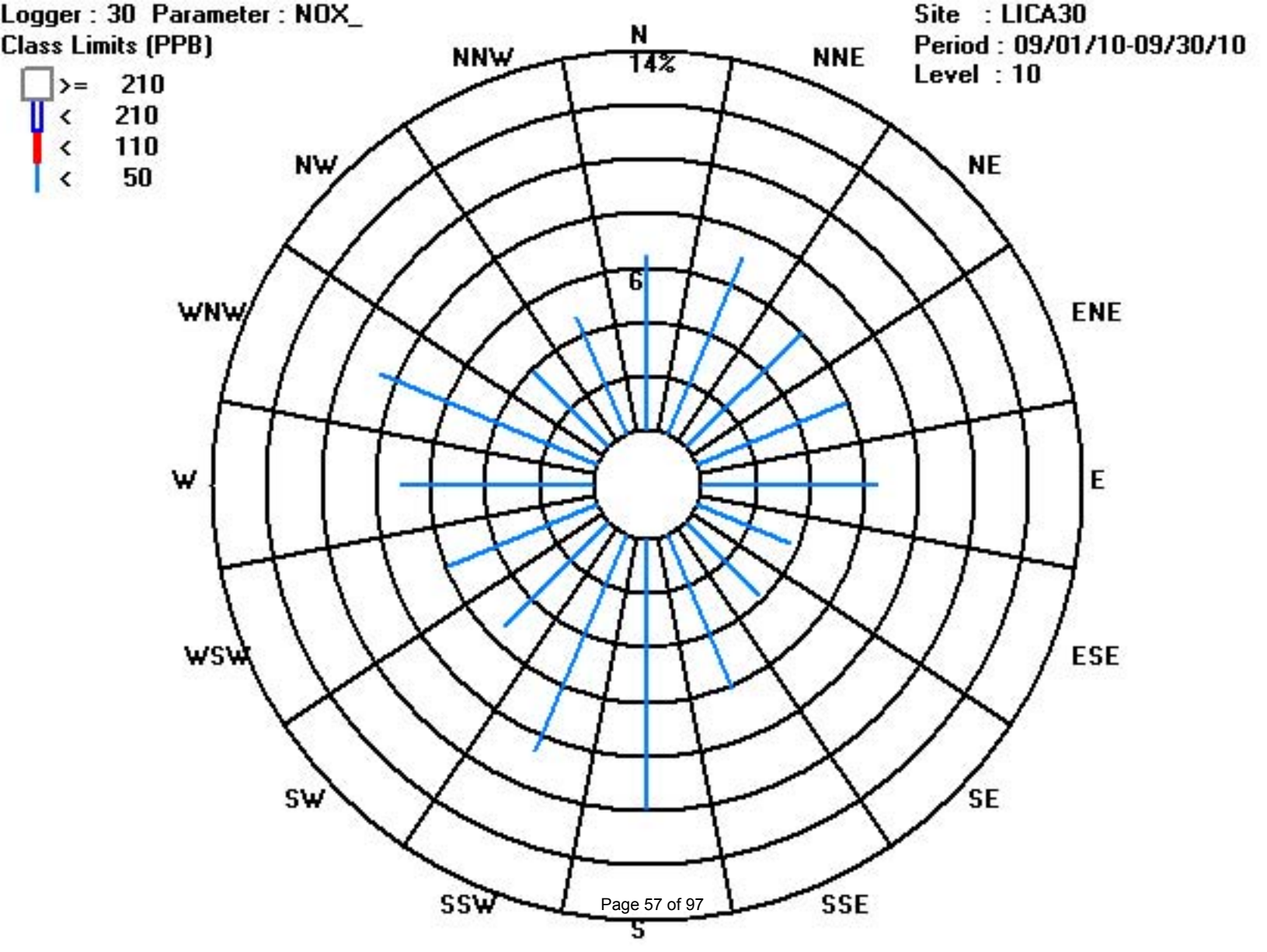
Distribution By Samples

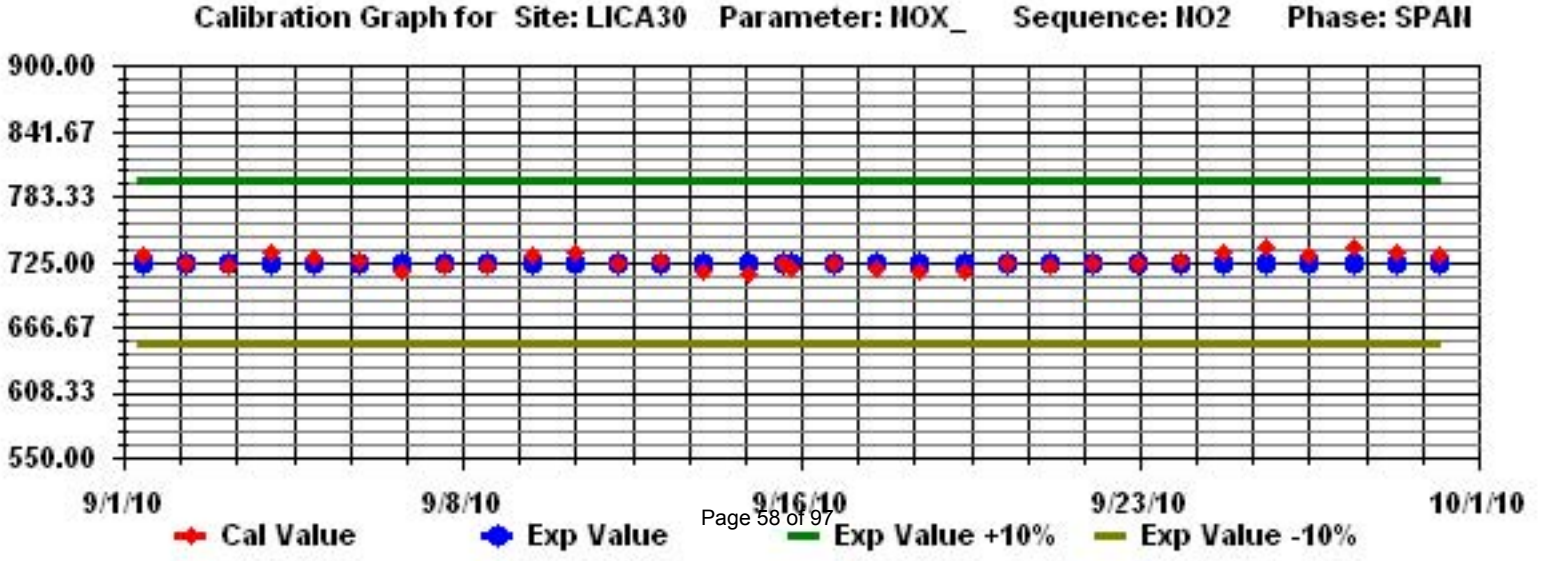
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	44	48	41	40	44	25	26	42	68	59	37	40	48	59	27	32	680
< 110																	
< 210																	
>= 210																	
Totals	44	48	41	40	44	25	26	42	68	59	37	40	48	59	27	32	

Calm : .00 %

Total # Operational Hours : 680


Logger : 30 Parameter : NOX_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA30
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: LICA30 Parameter: NOX_ Sequence: NO2 Phase: SPAN
900.00
841.67
783.33
725.00
666.67
608.33
550.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

SEPTEMBER 2010

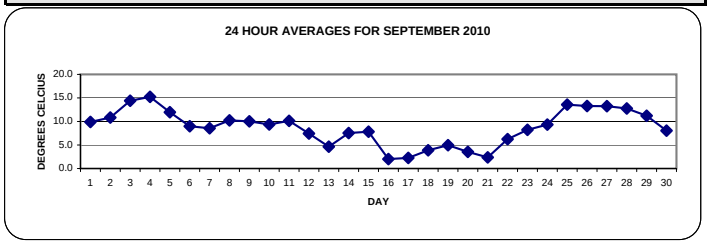
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	5	4.5	4.4	5.2	4.2	3.8	5.1	8.4	10.5	13.5	14	15.5	16	15.6	15.3	16.1	15.9	15.4	13	8.8	7.6	8.2	6.3	5.2	16.1	9.9	24
2	4.3	3.6	3.5	3.1	2.8	2.5	3.8	8	12.2	15.7	17.1	17.8	18	18.1	19.9	19.8	19.4	18.6	13.9	10.5	8.3	7.1	6.3	5.6	19.9	10.8	24
3	5.5	6.1	5.6	5	5.6	5.2	5.5	11.4	15.4	17.7	19.5	20.6	22.1	22.6	**22.7**	22.3	21	19.5	17.3	15.7	15.5	15.4	14.7	13.7	**22.7**	14.4	24
4	12.9	12.1	11.8	11.5	11.3	10.7	9.8	14	16.3	17.6	18.7	19	20.5	20	20.8	19.5	19.7	18.2	16.3	14.8	13.3	12.3	12.2	12.2	20.8	**15.2**	24
5	11.4	11.2	10.8	10.4	10.2	10.2	10	9.9	10.5	12.3	13.4	14.1	14.6	14.1	14.1	13.7	14.1	13.8	12.8	11.9	11.6	11.1	10.7	10.2	14.6	12.0	24
6	8.8	8.7	8.3	8.1	7.9	8	8	8.7	9.5	10.3	10.9	9.8	10	10.4	10.5	9.9	8.8	8.6	8.5	8.5	8.5	8.4	8.3	8.3	10.9	9.0	24
7	8.5	8.5	8.5	8.5	8.6	8.5	8.4	8.1	8	8	8.4	8.7	9.1	9.4	9.5	9.5	9.3	8.7	8.4	8.2	8.1	8.1	8.1	8.3	9.5	8.6	24
8	8.2	8.2	8.1	8	7.2	6.6	6.4	7.9	10	11.5	11.7	12.9	13.2	12.9	13.5	13	12.5	12	11	10.4	10.2	10	10	10.1	13.5	10.2	24
9	10.1	10.2	10.2	10.2	10	9.8	9.7	9.9	10.2	10.7	11.1	11.9	11.8	11.7	11.1	10.5	10.6	9.8	9.3	8.7	8.5	8.2	8.3	8.1	11.9	10.0	24
10	8	8	7.9	7.8	7.7	7.6	7.5	7.7	9.2	10.1	10.5	10.4	10.9	11	11.3	11.7	10.9	11.1	10.1	9.5	9.4	9.3	9	8.1	11.7	9.4	24
11	7.8	7.4	7	6.7	6.2	6.2	6.4	7.4	9.8	11.9	13.5	13.5	14.2	14.3	15.3	15.5	14.6	12	10.7	9.4	7.9	8.6	9	7.8	15.5	10.1	24
12	6.9	6.4	5.8	5.8	6.4	6.8	7.3	8.1	10.3	10.5	10.9	10.7	10.5	10.7	11.1	11.8	11.5	9.5	7.3	3.9	2.4	1.4	1.3	1.2	11.8	7.4	24
13	0.4	0.8	0.5	0	-0.6	-1.3	-0.9	2	3.3	4.9	8.4	10.2	10.6	10.9	10.9	10.6	9.9	9	6.4	3.9	2.5	2.6	3.1	3.2	10.9	4.6	24
14	3.5	3.6	3.6	4	4.1	4.2	4.3	6.4	8.4	11.2	10.5	11.4	10.9	10.5	10.5	10.5	10.6	9.8	7.3	6.8	6.8	7.3	7.6	7.2	11.4	7.5	24
15	7.3	7.3	6.8	6.3	5.9	5.8	5.6	6.3	7.3	7.9	9.2	9	9.4	10.6	10.9	12.7	12.2	10.9	8.5	6.8	6.2	5.6	5.3	4	12.7	7.8	24
16	2.9	1.6	1.1	0.8	-0.1	-0.5	-0.3	0.3	1.1	3.3	3.4	4.3	5.3	6.6	7.9	3.8	3.4	2.1	1.1	0	0.1	0.3	-0.2	-0.2	7.9	2.0	24
17	-0.6	-1	-1.6	-2.5	-3.1	-2.8	-2.9	0.3	2.2	3.6	5.4	6.7	7.2	8.2	8.5	8.5	8.6	7.3	4.2	2.3	0.5	-0.8	-1.5	-2.7	8.6	2.3	24
18	-3.2	-3.6	-3.2	-3.3	**-4**	-3.9	-2.9	0.6	4	7.8	10.1	11.7	12	12.6	12.9	13.4	12.6	10.1	6.1	3.7	1.4	0	-0.5	-1.5	13.4	3.9	24
19	-2	-2.3	-2.3	-2.2	-2.4	-2.6	-2.2	1.4	6.2	9.5	11.5	10.7	10.5	10.4	9.9	9.5	9.2	8.8	8.3	7.9	6.9	5.4	4.5	4.3	11.5	5.0	24
20	4	3.8	3.6	3.3	3	2.7	2.8	3.1	3.5	3.6	3.6	4.3	5.5	6.1	6	6.2	6	4.5	3.1	2.4	2.3	1.3	0.3	0	6.2	3.5	24
21	0.4	-0.7	-0.6	0.1	0.1	-1.2	-1.4	1.3	1.9	2.7	4.5	4.8	5.1	5.4	6.6	6.5	7	5.5	3.1	2.1	1.6	1.3	1	-0.2	7.0	2.4	24
22	-0.5	-1.6	-1.9	-1	-0.5	-0.5	0.4	3.5	6.5	8.4	10.2	11.2	11	12	12.2	12.3	12	11	9.2	8.7	7.9	6.7	6.4	6.1	12.3	6.2	24
23	5.6	4.3	3.2	2.5	2	0.7	0.9	5	7	9.2	11.2	12.3	13.5	14.2	15	15.2	14.5	12.3	9.9	8	8.1	7.9	7.5	7.2	15.2	8.2	24
24	7.2	6.5	5.7	4.7	4.3	4	4.6	5.4	5.6	6.9	9.6	10.5	13.4	16.2	18.1	17.9	17	13.2	9.1	7.2	7.8	9.3	9.8	9.9	18.1	9.3	24
25	9.3	8.9	8.8	8.8	8.2	7.6	8	8.7	10.6	11.8	14.6	16.8	18.4	19.7	20.7	21.2	21.5	18	14.5	11.7	15.3	16.6	14.5	11.6	21.5	13.6	24
26	12.4	11.5	12.4	12.5	11.6	11.2	11.3	11.9	13.1	13.9	16.2	19	18.6	17.8	17.7	17.1	16.7	15.8	13.7	11.8	9.1	8.7	7.6	7.1	19.0	13.3	24
27	7.2	6.1	5.7	3.8	3.5	4.2	4.1	8.1	10.7	13.3	14.6	17.7	19	20.9	21.5	21.7	21.5	20.6	19.4	18	15.2	14.2	13.7	13.3	21.7	13.3	24
28	14.5	15.2	13.3	12.2	11.7	11.4	11.4	11.6	11.8	12.2	13.1	13.6	14.4	15.9	16.1	16.1	16.9	14.4	10.9	11.6	10.8	9.3	8.9	8.8	16.9	12.8	24
29	9.1	8.7	9.4	9.4	8.7	8.2	7.3	10.3	12.5	14	15.5	16.4	17	17.6	17.5	17.6	16.6	14.1	10.9	7.6	7.7	6	4	3	17.6	11.2	24
30	3	2.9	1.5	1.1	0.2	0.6	2.2	5.7	10	11.8	13.7	15.3	16.5	17.1	17.2	16.8	16.1	13.5	9.3	7.1	4.6	3.4	2.3	1.3	17.2	8.1	24
HOURLY MAX	14.5	15.2	13.3	12.5	11.7	11.4	11.4	14.0	16.3	17.7	19.5	20.6	22.1	22.6	22.7	22.3	21.5	20.6	19.4	18.0	15.5	16.6	14.7	13.7			
HOURLY AVG	5.9	5.6	5.3	5.0	4.7	4.5	4.7	6.7	8.6	10.2	11.5	12.4	13.0	13.5	13.8	13.7	13.4	11.9	9.8	8.3	7.5	7.1	6.6	6.0			

STATUS FLAG CODES

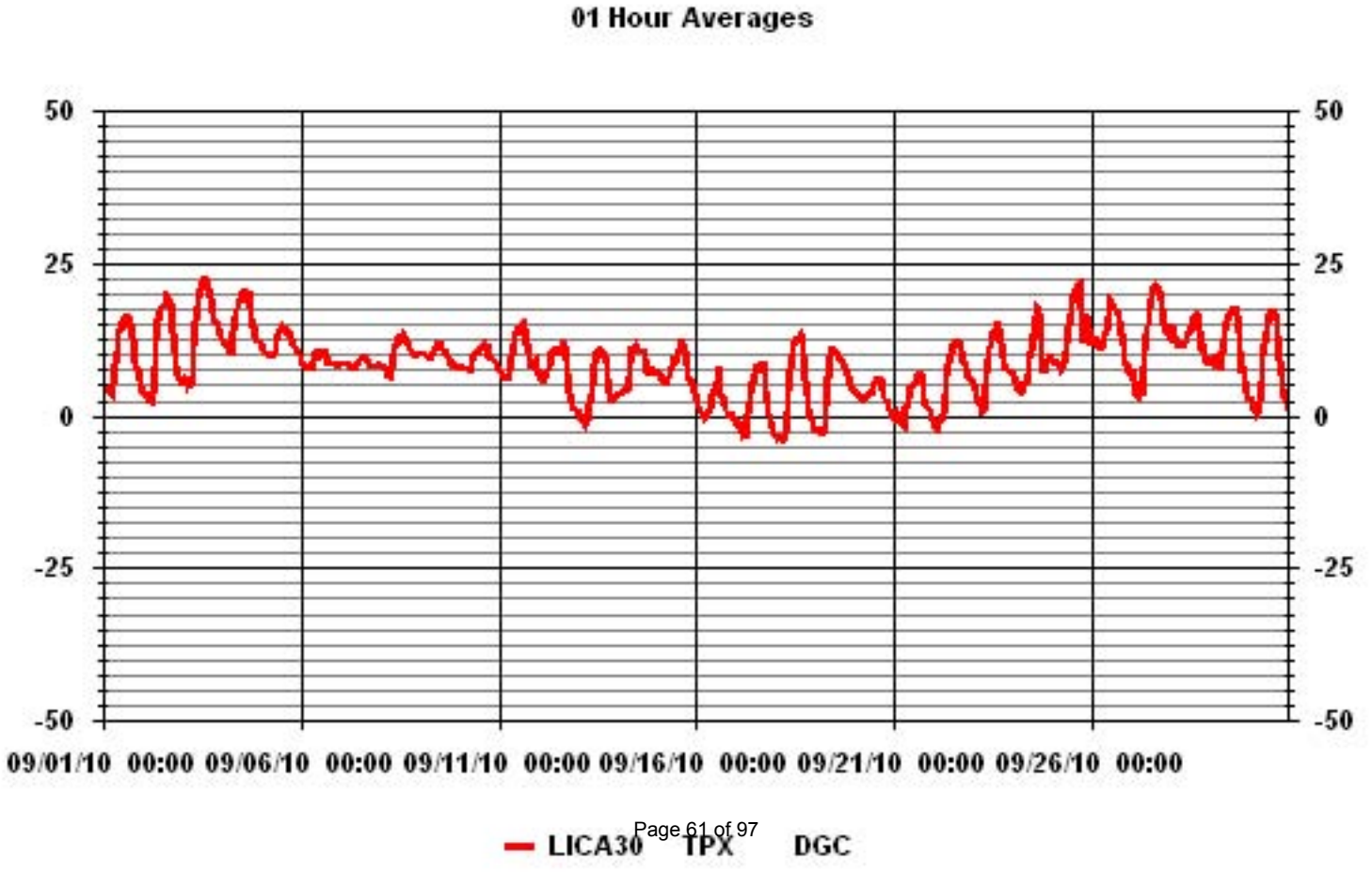
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-4	^{O}C	@ HOUR(S)	4	ON DAY(S)	18
MAXIMUM 1-HR AVERAGE:	22.7	^{O}C	@ HOUR(S)	14	ON DAY(S)	3
MAXIMUM 24-HR AVERAGE:	15.2	^{O}C			ON DAY(S)	4

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	5.43		MONTHLY AVERAGE:	8.73	^{O}C


01 Hour Averages
50
25
0
-25
-50
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30
TPX
DGC

Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

SEPTEMBER 2010

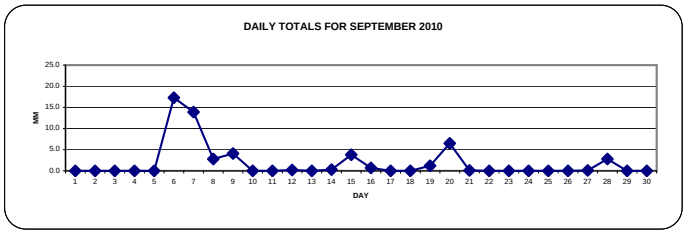
PRECIPITATION hourly averages (mm)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	TOTAL	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
4	0	0	0	0	0	0	0	0	0	0	0	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	0.1	**4**	3.6	1.3	1.9	1.1	1.1	0.6	0.2	0.9	0.8	0.7	0.8	0.2	**4.0**	**17.3**	24
7	1.1	1.4	1.2	0.9	0.6	1.2	0.5	0.7	0.9	1.1	0.9	0.8	0.5	0.2	0.2	0.1	0	0	0.3	0.5	0.2	0.2	0.2	0.2	1.4	13.9	24
8	0	0.1	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.5	0.6	0.7	0.7	2.8	24
9	0.9	0.8	1.2	0.7	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2	4.1	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	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	0.2	0	0	0	0	0	0	0	0	0	0	0.2	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	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0.1	0	0	0	0.1	0.3	24
15	0	0	0	0	0	0	0	0	0	0	0.1	1.1	0.4	0	0	0	0	0	2.2	0	0	0	0	0	2.2	3.8	24
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0	0	0.1	0	0	0.6	0.7	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	0.6	0.6	1.2	24
20	1.5	1.2	0.9	0.8	0.6	0.1	0	0	0	0	1	0.1	0	0	0.1	0	0.2	0	0	0	0	0	0	0	1.5	6.5	24
21	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	0.1	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	0	0	0	0	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	0.1	0	0.1	0.1	24
28	0	0.2	0.8	0.7	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.3	0	0	0	0.8	2.8	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1.5	1.4	1.2	0.9	0.6	1.2	0.5	0.7	0.9	1.1	1.0	4.0	3.6	1.3	1.9	1.1	1.1	0.6	2.2	0.9	0.8	0.7	0.8	0.7			

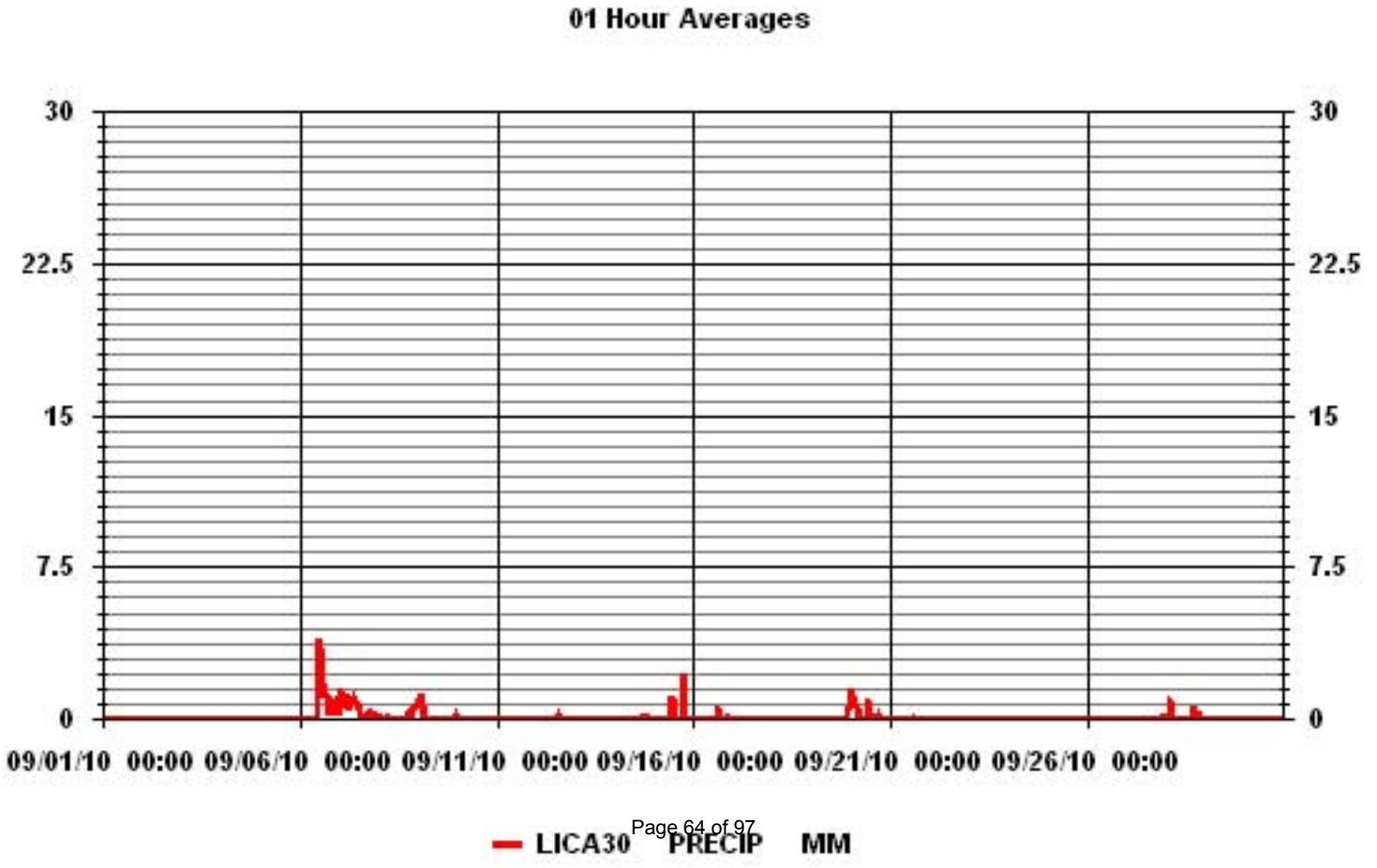
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:			4.0	MM	HOUR(S)	11	ON DAY(S) 6
MAXIMUM DAILY TOTAL			17.3	MM			ON DAY(S) 6
MONTHLY TOTAL			53.8	MM			
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:			720	HRS
			AMD OPERATION UPTIME:			100.0	%
STANDARD DEVIATION:	0.31		MONTHLY AVERAGE:			0.07	MM


01 Hour Averages
30
22.5
15
7.5
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 PRECIP MM

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

SEPTEMBER 2010

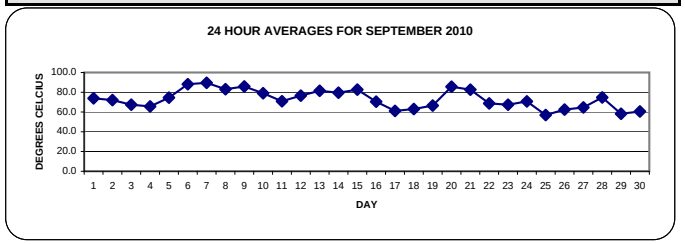
RELATIVE HUMIDITY hourly averages (%)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	92	92	92	92	92	92	92	86	80	68	63	53	48	52	52	49	47	48	59	79	84	82	89	90	92	73.9	24
2	91	91	91	91	91	91	92	88	73	60	53	50	47	45	38	39	40	45	70	82	89	91	91	91	92	72.1	24
3	92	92	91	92	92	91	91	77	62	54	51	51	46	43	43	43	50	55	62	68	68	67	68	69	92	67.4	24
4	71	74	74	74	75	77	82	67	60	57	54	55	52	53	51	57	59	63	64	66	71	75	73	72	82	65.7	24
5	77	80	80	82	82	78	78	77	72	67	65	61	64	70	70	72	70	71	74	78	78	80	81	82	82	74.5	24
6	87	87	88	89	89	89	88	86	84	81	79	89	90	90	90	88	88	89	90	91	91	91	91	90	91	88.1	24
7	90	91	91	91	91	91	91	90	89	88	88	88	88	87	88	87	87	89	90	90	91	91	91	91	91	**89.5**	24
8	91	91	91	91	91	91	91	90	83	73	73	67	69	73	69	70	74	78	85	89	90	91	91	92	92	83.1	24
9	91	92	91	91	91	90	90	90	88	87	86	81	79	77	79	82	79	80	82	87	86	86	87	89	92	85.9	24
10	90	90	89	88	87	87	87	87	80	74	72	71	69	69	68	66	72	72	76	81	81	80	80	80	90	79.0	24
11	76	76	77	77	77	77	77	75	67	60	57	58	56	58	55	54	58	68	75	82	87	84	84	86	87	70.9	24
12	89	89	91	91	90	89	89	85	73	68	64	62	64	64	57	53	53	60	68	82	88	89	90	90	91	76.6	24
13	90	91	91	91	91	90	91	90	89	88	76	64	60	60	60	60	65	76	83	89	90	90	91	90	91	81.5	24
14	90	90	91	91	90	90	90	84	76	64	65	60	60	68	69	68	69	73	85	89	89	86	85	87	91	79.5	24
15	86	85	86	87	88	89	89	88	85	83	79	85	83	79	78	66	64	72	81	86	88	87	86	84	89	82.7	24
16	82	84	83	80	81	83	85	82	79	69	63	57	55	51	45	74	69	62	58	62	61	75	78	73	85	70.5	24
17	73	74	74	74	76	75	73	64	59	51	45	42	41	40	40	40	39	44	57	65	73	80	82	86	86	61.1	24
18	88	88	87	88	88	88	86	77	62	50	39	33	31	29	29	28	27	36	57	68	80	84	83	86	88	63.0	24
19	87	87	87	86	86	87	86	77	70	55	45	45	45	44	46	47	48	50	52	54	62	77	86	88	88	66.5	24
20	88	88	88	88	88	88	88	88	87	87	87	86	82	78	78	77	77	83	86	88	88	88	89	90	90	85.6	24
21	90	90	90	90	90	89	90	87	86	85	79	77	77	77	70	66	63	67	80	84	87	88	90	90	90	82.6	24
22	90	90	90	90	89	89	90	87	75	69	60	53	51	50	50	48	49	52	58	58	60	66	67	68	90	68.7	24
23	71	76	81	84	86	87	90	78	72	66	62	56	52	49	46	44	44	50	58	64	67	74	79	81	90	67.4	24
24	82	84	87	89	90	91	91	90	89	83	74	71	62	51	35	37	40	52	69	76	71	64	60	60	91	70.8	24
25	61	62	61	60	62	64	63	61	56	56	51	46	44	42	41	40	42	55	68	78	61	56	64	73	78	57.0	24
26	70	74	70	67	70	72	71	72	70	68	63	51	51	49	46	47	49	49	52	58	67	68	72	73	74	62.5	24
27	71	76	77	85	87	85	85	80	75	62	63	55	47	43	40	39	40	44	49	55	71	72	72	78	87	64.6	24
28	73	70	82	85	86	87	85	82	81	80	78	77	74	68	62	59	56	63	75	64	76	79	77	75	87	74.8	24
29	73	74	70	69	71	72	74	64	56	51	46	42	39	38	38	38	40	46	55	66	62	65	73	75	75	58.2	24
30	78	82	84	84	87	88	81	68	56	51	45	40	36	33	31	30	32	39	50	56	67	73	79	83	88	60.5	24
HOURLY MAX	92	92	92	92	92	92	92	90	89	88	88	89	90	90	90	88	88	89	90	91	91	91	91	92			
HOURLY AVG	82.7	83.7	84.2	84.6	85.1	85.2	85.2	80.6	74.5	68.5	64.2	60.9	58.7	57.7	55.5	55.6	56.3	61.0	68.9	74.5	77.5	79.3	81.0	82.1			

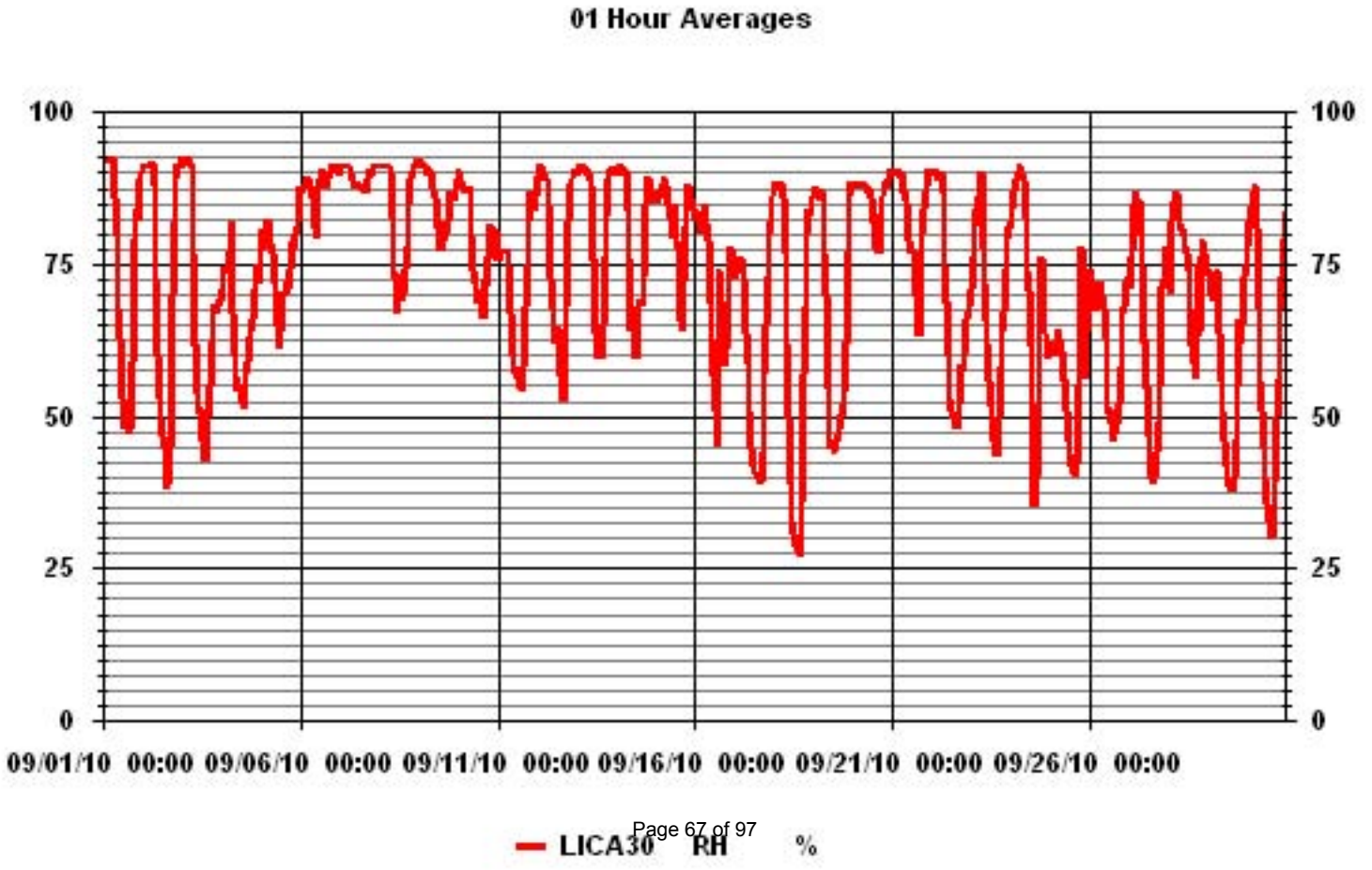
STATUS FLAG CODES

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

MAXIMUM 1-HR AVERAGE:		92	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:		89.5	%			ON DAY(S)	7
						VAR-VARIOUS	
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		720	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	16.18			MONTHLY AVERAGE:		72.80	%


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 RH %

Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

SEPTEMBER 2010

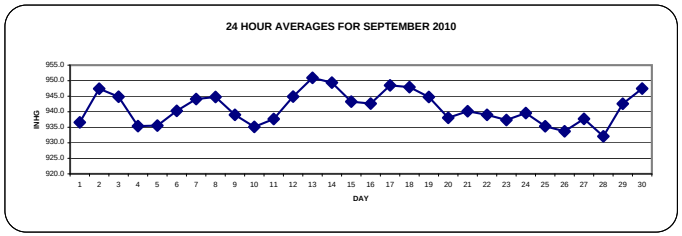
BAROMETRIC PRESSURE hourly averages (millibar)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	932	932	932	932	932	932	933	933	934	935	936	936	937	937	938	938	939	940	940	941	941	942	943	943	943	936.6	24
2	944	944	945	945	945	946	946	947	948	949	949	950	949	949	949	949	949	949	948	948	948	948	947	947	950	947.4	24
3	947	947	947	947	947	947	946	947	948	947	947	947	946	946	945	945	944	943	942	941	941	940	940	939	948	944.8	24
4	938	938	937	936	936	935	935	935	935	935	936	935	935	935	935	935	935	934	934	935	935	935	935	935	938	935.4	24
5	934	934	934	934	934	934	934	934	934	935	935	935	935	935	936	936	937	937	937	937	938	938	938	938	938	935.5	24
6	939	939	938	939	939	940	940	940	940	940	940	940	939	939	940	941	941	941	942	942	942	942	942	942	942	940.3	24
7	942	942	942	943	943	943	943	944	944	944	944	945	945	945	945	945	945	945	944	945	945	945	945	945	945	944.1	24
8	945	945	945	945	945	945	945	944	944	945	946	946	946	946	945	945	945	945	944	944	944	944	944	943	946	944.8	24
9	943	942	942	941	941	940	940	940	939	940	939	939	938	938	938	938	938	938	938	938	937	937	937	937	943	939.0	24
10	936	936	936	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	936	935.1	24
11	935	936	936	936	936	937	937	937	938	938	938	938	938	938	938	938	938	938	938	939	939	939	939	940	940	937.7	24
12	940	940	940	941	942	942	943	944	944	945	945	946	946	946	947	947	947	947	947	947	947	947	948	948	948	944.9	24
13	948	949	949	949	950	950	950	951	952	952	952	952	952	952	952	952	952	952	951	951	951	951	951	951	**952**	**950.9**	24
14	951	951	951	951	951	951	950	950	951	951	951	950	950	950	949	949	948	948	948	947	947	947	947	946	951	949.4	24
15	946	946	946	946	945	945	944	944	944	944	944	943	943	943	942	942	942	941	941	941	941	941	942	942	946	943.3	24
16	942	942	942	942	941	941	941	942	942	942	942	942	941	941	941	941	942	943	944	944	945	946	947	947	947	942.6	24
17	948	948	948	948	948	948	949	949	949	949	949	949	949	949	949	949	949	949	948	948	948	948	948	948	949	948.5	24
18	948	948	948	948	947	947	948	948	949	949	949	949	949	949	948	948	948	948	947	947	947	947	947	947	949	947.9	24
19	947	947	947	947	947	946	946	947	947	947	947	947	946	945	944	944	943	942	942	942	942	942	941	939	947	944.8	24
20	939	939	938	937	937	937	937	937	937	937	937	937	937	937	936	938	938	938	939	939	939	940	940	940	940	938.0	24
21	940	940	940	941	940	940	940	941	941	941	941	941	941	941	940	940	940	940	940	939	939	940	940	940	941	940.2	24
22	939	939	939	939	939	939	939	939	940	940	940	940	939	939	939	939	939	938	938	938	938	939	939	939	940	939.0	24
23	939	938	938	938	938	937	937	938	938	938	938	938	938	938	938	938	937	937	937	936	936	936	936	936	939	937.3	24
24	936	936	936	936	936	936	936	937	938	939	940	940	941	941	942	942	943	942	942	942	942	942	943	942	943	939.6	24
25	942	941	940	939	939	938	938	937	936	936	937	936	936	935	934	934	933	933	932	931	931	931	930	929	942	935.3	24
26	929	929	929	929	929	929	930	931	932	933	933	934	934	935	935	935	936	936	937	938	938	939	939	940	940	933.7	24
27	940	940	941	941	941	941	941	941	941	941	941	940	939	938	937	936	935	935	934	933	933	932	932	932	941	937.7	24
28	932	932	932	933	932	931	931	930	931	931	931	931	931	931	931	931	931	932	932	932	934	935	936	937	937	932.1	24
29	937	938	938	939	940	940	941	942	943	943	944	944	944	945	945	945	945	945	944	944	944	944	944	944	945	942.6	24
30	944	944	944	943	943	943	943	944	945	946	947	947	948	948	949	950	950	951	951	951	952	952	952	952	**952**	947.5	24
HOURLY MAX	951	951	951	951	951	951	950	951	952	952	952	952	952	952	952	952	952	952	951	951	952	952	952	952			
HOURLY AVG	941	941	941	941	941	941	941	941	941	942	942	942	942	941	941	941	941	941	941	941	941	942	942	941			

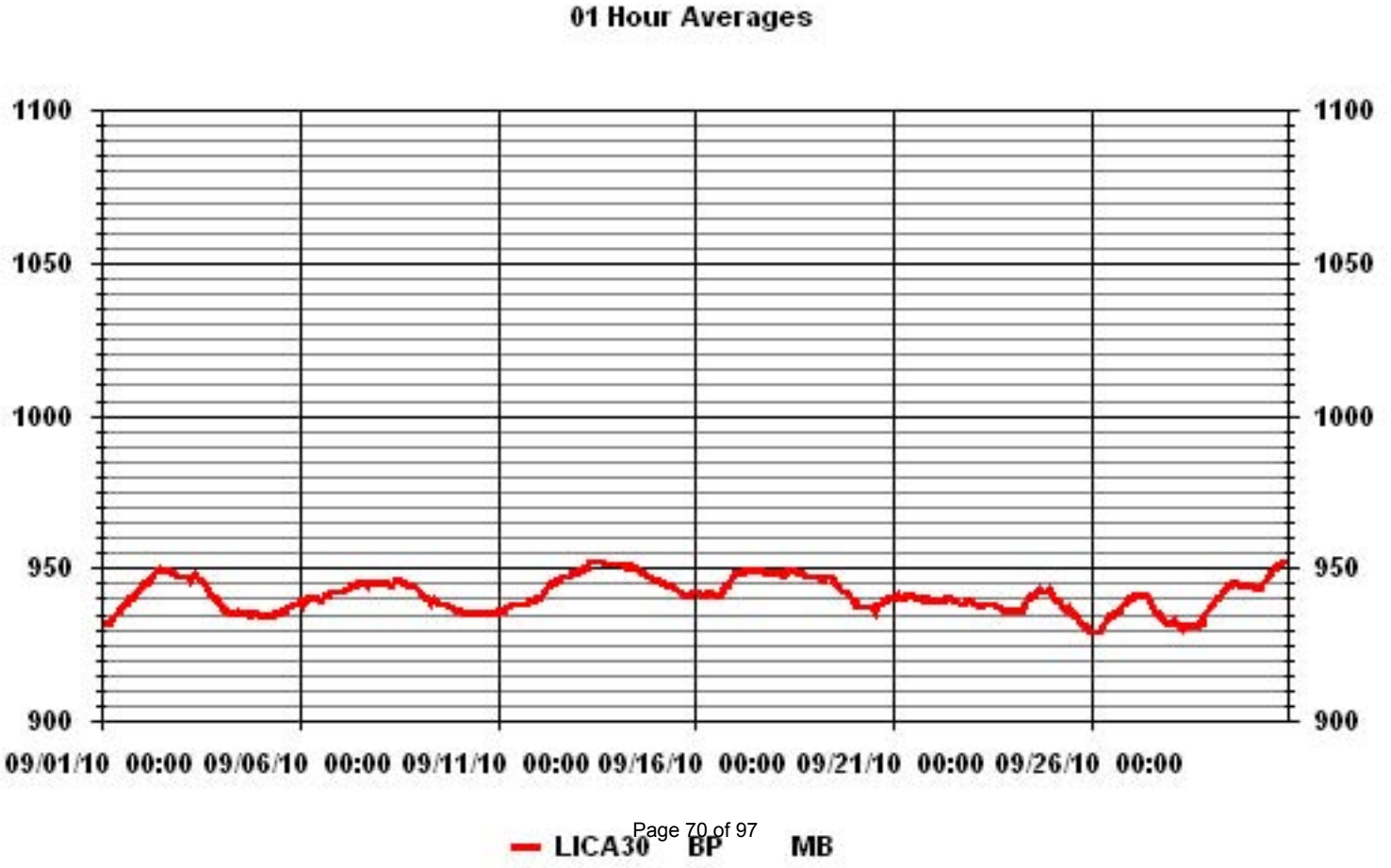
STATUS FLAG CODES

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:		952	MB	@ HOUR(S)	VAR	ON DAY(S)	13, 30
MAXIMUM 24-HR AVERAGE:		950.9	MB			ON DAY(S)	13
						VAR-VARIOUS	
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		720	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	5.47			MONTHLY AVERAGE:		941	MB


01 Hour Averages
1100
1050
1000
950
900
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 BP MB

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

SEPTEMBER 2010

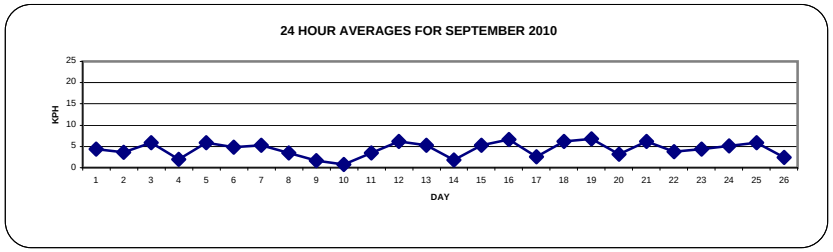
WIND SPEED hourly averages (km/hr)

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	1	0.4	0.9	0.3	0.9	0.8	1.1	2.8	2.5	4.8	4.5	5	5.4	4.7	5.7	6.5	7.7	5.3	2.8	1.4	1.6	1.2	1.5	1.1	7.7	2.4	24
2	1.5	1.4	1.2	1.5	1.5	1.4	1.5	2.1	2.8	1.5	3.4	3.9	4.5	4	4.2	4.6	4.3	2.1	1.8	2.5	2.1	0.4	0.4	0.3	4.6	1.8	24
3	0.6	0.4	0.3	0.5	0.8	0.3	0.5	0.7	4.4	4.8	5.9	7.2	9.1	8.5	8.1	9.2	5.5	5.3	4	4.7	6.6	7.6	7.6	7	9.2	4	24
4	7.1	5.8	6	5.6	6.3	3.7	1.8	4.4	6	3.6	0.7	5.4	2.2	3.4	4.8	4.3	3.7	5	6.2	6.4	5.9	6.2	5.3	5.3	7.1	0.5	24
5	6.7	7.7	4.9	5.6	4.7	4.9	5.9	4.7	5.1	5.3	5.2	5.6	4.9	4.7	6.6	6.2	8.1	4.2	3.2	3.4	3	3.5	4.3	2.1	8.1	4.3	24
6	0.5	2.3	2.9	4	3.6	3.9	3.2	4.7	5.4	5.7	6	6.1	4.8	6.2	5.8	7.8	6.3	6.7	6.6	6.4	7.2	5.4	9.2	7.8	9.2	3.6	24
7	9.1	8.3	9.1	7	4	5.3	9.3	8.2	7.9	7.3	7.4	8.1	6.4	5.5	5.3	6	5.8	5.5	5	5.7	5.4	3.6	3.9	2.9	9.3	5.9	24
8	3.1	2.5	1.1	0.5	0.7	0.7	1.2	0.4	0.7	2.6	1.5	2	2.3	5.4	5.1	5	3.4	2.7	3.2	2.6	3.1	3	2.8	3.9	5.4	1.9	24
9	5.4	5	5.3	5	5.3	5.9	7.4	6.4	8.2	8	7.1	7.9	7.2	6.4	7	6.2	7.2	7.1	6	5.3	5.7	5.3	3.5	3.5	8.2	5.8	24
10	4.5	5.2	6.9	8	6.1	4.8	3.8	3.8	7.7	6.7	6.4	6.7	5.9	5.8	6.2	6	6.9	5.5	5.4	3.3	4.7	5.7	6.3	5.9	8	4.8	24
11	7.1	5.8	5.6	5.4	5	5.4	3.5	5.7	5.9	6.3	7.5	8.1	7.4	5.9	7.2	7.1	7.9	6.3	4.6	0.8	2.1	3.8	4.2	4	8.1	5.2	24
12	4	3	2.4	2.5	3	2	1.6	2.5	3.9	6.1	6.7	7.4	9.3	8.5	7	7	9.1	8.3	4.9	0.6	1.2	1.4	1.1	0	9.3	3.4	24
13	1	1.9	0.7	0.2	0.6	0.7	1.3	3.9	4.5	3.2	3.5	4.7	4.1	4.3	4.1	4.3	1.4	1.5	1.5	1.6	1.1	0.6	0.7	1	4.7	1.6	24
14	1.2	1	1.9	0.9	0.7	0.8	1.8	0.2	0.3	2	3.1	2.7	2.6	2.3	4.7	3.1	3.6	1.1	0.7	2.3	2.3	3.5	2.1	2.7	4.7	0.7	24
15	4.3	5.8	6	5.4	5.9	6.6	6.2	7.3	6.6	3.5	5.8	3.7	5.6	4.9	3.4	4.9	5	3.3	3.8	2.9	3	3.2	6.1	6.5	7.3	3.4	24
16	6.9	4.3	4.5	4.7	2.5	2.5	2.2	4.1	4.4	4.8	6	8.7	7.6	8.8	10.1	9.7	10	10.7	8.4	6.7	8.3	10.4	9.4	8.7	10.7	6.2	24
17	7.5	7.1	6.3	5.7	4.4	5.1	3.6	3.5	5.1	9.1	9.8	10.5	8.6	8.9	8.6	7.3	6.3	6	2.5	3.5	2.5	2.3	2.2	1.5	10.5	5.2	24
18	1.4	1	2.2	1.5	2	1.8	3	2.1	1.6	1.3	3.5	5.4	5.5	4.8	4.1	2.2	4.1	3.1	3.1	2.8	1.5	1.6	1.9	1.8	5.5	1.8	24
19	2.2	1.5	2.2	3.2	3.1	3.7	3.4	4	5.4	6.1	7.2	7.7	7.6	7.4	8.6	9.3	8.2	7.7	6	7.9	7.4	5.5	5.6	6.3	9.3	5.2	24
20	6.9	7.9	8.2	8.2	8.4	9.3	7.1	8.3	9.3	9.8	10.2	10.1	9.2	11.2	8.9	8.6	7.4	5.1	2.4	2.1	2.6	3.7	2.9	2.2	11.2	6.6	24
21	2.6	1.5	2.1	2.1	0.7	1.9	2.1	2.1	3.5	3	3.3	4.8	4.4	4.7	5.9	5	4.4	2.2	3.6	4.3	3.8	3.1	4.1	1.9	5.9	2.6	24
22	2	1.3	0.7	0.8	1.3	0.5	2.6	4.8	6.6	8.3	10.4	10.9	10	12.1	11.7	11.7	9.9	7.8	6.2	7.2	7.4	7	7	7.4	12.1	6.2	24
23	7.1	5.7	5.5	4	3.2	1.6	3.9	6.3	7.4	8.6	9	10.6	10.1	9.4	8.9	7.8	8.9	7.2	5.8	4.9	7.7	9.6	10.1	8.8	10.6	**6.8**	24
24	4.5	3.3	3.9	4.3	4.1	3	3	3.7	3.8	3.3	4.4	5.3	5.8	7.7	7.2	7	5.5	3	2.8	4	4.5	5.9	5.2	6.3	7.7	3.1	24
25	5.8	6.8	9.3	9.8	8.6	6.8	7.3	6.2	7.8	6.5	7.6	8.4	8.2	8.1	10.4	7.8	4.8	2.9	1.1	1	5.3	6.3	3.9	3.8	10.4	6.1	24
26	5	3.3	6.1	6	2.6	3.3	3.3	2.7	3.8	5.1	4.4	6.9	6.7	8.2	7.6	6.2	5.3	5.3	4.1	3	2.3	2.2	2	3	8.2	3.8	24
27	4.4	3.8	3.5	1.6	0.7	1.8	1.2	3.6	4.1	3.3	7.3	8.8	10.7	11.4	**13.8**	12.2	9	7.2	6.3	2.6	1.3	1.6	1.9	1.7	**13.8**	4.3	24
28	2.8	9.7	6.9	5.5	7.3	6.1	7	4.9	5.1	5.6	7.2	7.8	6.7	7.8	7.3	7.3	8.1	5.9	3.7	4.5	5.8	4.2	3.9	3.6	9.7	5.1	24
29	3.4	4	6.6	5.5	5.4	4.2	3.9	5.7	10.4	10.3	10.6	11.3	12.9	10.4	10.6	9.5	7.6	4.6	2.7	2.5	2.6	2	1.5	1.3	12.9	5.8	24
30	2.4	1.4	1	2.8	2.3	2.8	5.7	4.6	6.4	9.5	9.5	9.3	9.6	8.7	8.2	10.9	8.5	3.8	0.8	1.2	1	1.5	1.2	1	10.9	2.4	24
HOURLY MAX	9.1	9.7	9.3	9.8	8.6	9.3	9.3	8.3	10.4	10.3	10.6	11.3	12.9	12.1	13.8	12.2	10.0	10.7	8.4	7.9	8.3	10.4	10.1	8.8			
HOURLY AVG	4.1	4.0	4.1	3.9	3.5	3.4	3.6	4.1	5.2	5.5	6.2	7.0	6.8	7.0	7.2	7.0	6.5	5.1	4.0	3.6	4.0	4.0	4.1	3.8			

STATUS FLAG CODES

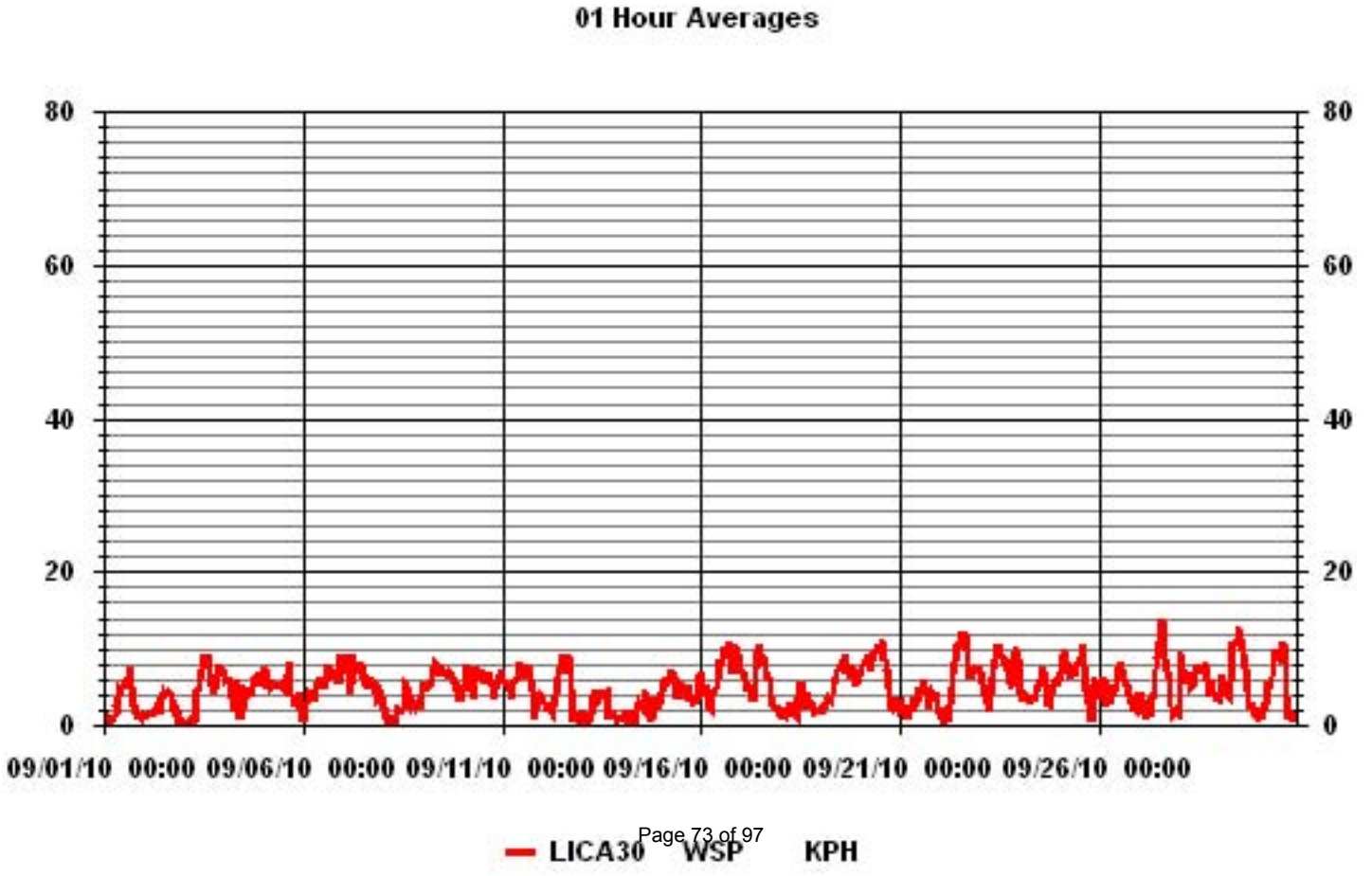
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION: February 4, 2009

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		13.8	KPH	@ HOUR(S)	14	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:		6.8	KPH			ON DAY(S)	23
CALMS (≤ 1 KPH)	5.51	%		OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	0	HRS		AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	2.73			MONTHLY AVERAGE		4.91	KPH


01 Hour Averages
80
60
40
20
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

SEPTEMBER 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

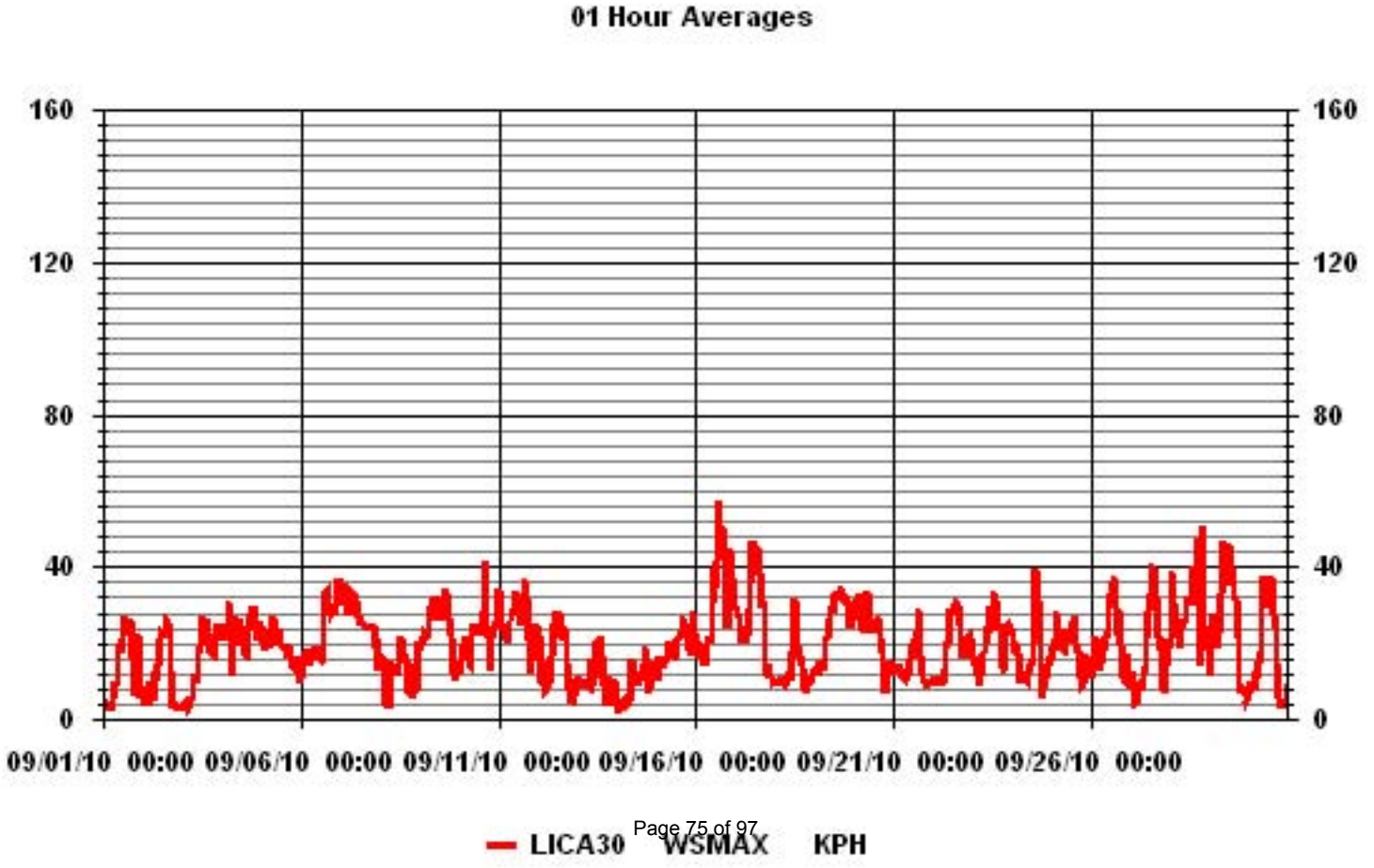
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	4.7	2.6	4.1	3.5	3	3	5.4	9.7	8.8	18.9	18.7	21.1	22.2	26.9	24.5	26.4	23.6	26.2	16.4	6	9.9	22.6	5.8	7.5	26.9
2	4.7	5	8.6	3.7	9.7	6.3	6	12.7	12	14.2	21.1	23.2	22.6	21.7	26	25.4	22.6	13.5	3.2	3.9	4.8	2.2	3	3	26
3	3.7	4.1	4.7	2.4	2.8	5.4	5.6	11	10.8	12.1	17	19.4	26.9	24.9	25.2	26.2	17.4	21.7	17.4	17	22.4	24.1	24.1	20.7	26.9
4	22.8	25.2	24	23.4	30.7	20.9	11.2	25.4	26.7	27.3	19.2	26.4	22.4	24.3	17.4	17	23.4	27.3	29.7	27.1	29.7	24.3	20.9	25.6	30.7
5	20.2	24.3	17.9	22.6	18.7	20	21.1	26.7	22.4	20.5	20.3	23.4	20	19.5	18.9	16.2	18.9	19.6	14	13.6	14.9	14.4	16.2	9.7	26.7
6	10.8	13.3	17.9	17.2	18.7	14.4	15.3	17.9	18.9	16.2	18.9	16.1	15.4	16.2	33.4	34	28	28.8	27.5	28.6	27.5	30.1	36.4	36.6	36.6
7	34.2	34.6	31	29.7	35.7	27.5	28.2	34	33.1	30.3	30.5	27.3	25.4	25.4	25.2	24.3	24.3	24.1	23.7	23.7	25	18.7	21.5	12.7	35.7
8	14.9	16.4	16.2	3.2	6	2.8	6.5	14.9	13.3	13.3	11.4	12.7	19.6	21.3	19.4	17.4	15.5	6.5	15.3	6.7	5.8	8	7.3	20.4	21.3
9	18.9	19.6	21.3	22.8	22.2	23	29.4	26	31.2	32.1	28.2	32.5	31.2	25.8	27.3	29.9	34.2	33.4	26.7	22.4	21.3	12.7	10.3	13.1	34.2
10	11.8	14.9	18.3	19.4	21.7	15.7	14.4	14	24.1	23.9	22.2	25.2	24.3	23.9	22.2	28.6	41.5	22.6	21.7	12.7	21.1	24.3	25	25.4	41.5
11	34	23.8	25.6	23.2	23.9	24.5	19.6	25.6	28.2	28.2	30.3	33.3	28.4	24.3	28.4	31.6	36.6	32.1	21.1	11.8	15.5	20.2	20.7	24.8	36.6
12	20.4	22.5	10.3	9.7	14.9	7.8	8.4	9.5	16.6	23.7	23.2	28	27.8	27.7	23.7	20.5	24.1	20.9	14.9	7.8	5	4.7	10.4	6.3	28
13	10.1	11.2	9.5	9.7	9.3	9.5	9.5	9	15.7	8.8	11	19.6	19.8	20.5	21.5	17.4	9.5	3.7	6.9	4.3	11	8.8	3.2	10.6	21.5
14	2.6	2.8	4.4	5.1	2.2	5.2	5.8	4.5	5	15.5	11.4	12.9	9	10.3	10.6	11.8	14.6	18.9	11.6	6.7	8	12.7	14.2	14.2	18.9
15	9.9	16.6	14.4	14.9	13.1	16.2	14.9	16.2	20.2	17.9	16.6	15.9	20.8	21	21.7	23.2	26.7	24.7	24.5	17.7	20	16.8	28.6	22.4	28.6
16	22	15.9	20.5	15.7	19	14.4	16.2	21.5	20	21.8	30.6	39.4	34.2	41.3	**57.4**	46.3	50.4	43.3	38.1	23.5	36.2	44.6	37.7	29.7	**57.4**
17	29.5	27.3	27.3	25.2	20.5	21.3	19.8	22.2	28.9	35.7	47.1	41.3	40.2	45.2	37.6	39.2	29.1	31	12.3	12	14.6	11.4	9.5	9.9	47.1
18	9.5	9.7	10.1	8.6	10.4	10.3	9.5	10.6	11.4	10.1	17.9	20.4	31.6	18.3	19.8	16.8	14.6	13.6	8	6.9	8.8	10.8	9.7	13.1	31.6
19	13.6	12.1	12.1	14.4	14.7	14.7	13.1	20.7	21.5	26.2	28.7	28.6	32.5	32.9	33.1	33.4	34.9	32.1	31.2	31.9	31.2	25	24.8	26.7	34.9
20	26	31.4	28	32.7	27.4	23.9	22.6	30.6	33.4	22.8	25.4	22.8	26.3	25.2	25.2	27.3	19.4	19.8	14.2	6.6	12.5	15.1	11.6	14.7	33.4
21	14.2	13.6	13.6	13.8	13.1	11.6	12.2	11.4	10.6	11.4	15.7	19.6	21.1	22.4	22.4	29	16.8	12.3	10.3	8.8	8.8	10.7	8.6	10.1	29
22	10.6	10.8	9.1	10.6	10.6	8.8	11.9	11.4	18.7	20.2	29.3	27.5	28.6	29.9	31.8	29.9	25	22.2	16.2	19.2	21.1	21.7	17	22	31.8
23	16.8	13.8	15.7	12.1	9	11.6	16.8	17.7	20.2	24.1	22.2	29.5	28.8	33.3	31.8	23.4	24.1	23.9	14.2	12.3	24.8	24.1	25	24.3	33.3
24	22.2	17	20.4	17.2	17	9.7	12.3	11.2	11	10.3	11.8	14.4	15.7	24.1	39.8	31.2	31.8	20.2	5.6	9	8.2	10.8	14.2	15.7	39.8
25	15.9	18.7	21.3	28.4	23.9	18.1	19.2	18.7	23.7	21.1	21.5	21.3	25.4	24.5	27.1	20.6	18.1	11.6	9	9.7	16.6	16.4	14	13.3	28.4
26	14.8	11	18.5	21.5	18.3	12.7	14.6	18.1	18.5	21.3	23	30.1	32.7	36.3	37.4	29.7	21.7	29.2	19.6	11.4	10.6	11.4	17.2	8.4	37.4
27	10.8	11.4	10.1	4.5	4.8	8.6	7.3	10.3	12.1	14	21.3	28.4	32.7	40.8	39.8	36.3	32	22.1	18.5	14.4	8	6.7	14	20.9	40.8
28	18.7	38.7	30.8	22.8	24.1	22.2	18.9	23.7	26.2	25.2	30.1	32.3	31	34.6	40.2	29.5	47.5	35.2	14	24.5	50.7	20.4	19.6	18.3	50.7
29	11.4	24.3	27.8	25.2	20.5	18.7	22.8	33.1	47.1	37.6	37.6	34.8	46	37.4	39.8	32.9	31.4	21.5	9.7	6.8	8.4	6.9	4.5	5.2	47.1
30	7.1	9.7	8.6	7.5	12.5	10.8	14.9	17.7	29	37.6	30.3	29	37.8	34.9	37.8	27.9	24.3	15.1	6	3	4.1	4.6	3.2	8.4	37.8
PEAK	34.2	38.7	31.0	32.7	35.7	27.5	29.4	34.0	47.1	37.6	47.1	41.3	46.0	45.2	57.4	46.3	50.4	43.3	38.1	31.9	50.7	44.6	37.7	36.6	

STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	57.4	KPH	@ HOUR(S)	14
			ON DAY(S)	16


01 Hour Averages
160
120
80
40
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 WSMAX KPH

LICA30
WSP / WDR Joint Frequency Distribution (Percent)

September 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	4.02	3.88	5.13	4.30	2.50	1.94	2.22	2.91	5.83	6.52	5.41	5.41	4.16	4.44	2.63	3.61	65.00
<	12.0	1.94	3.33	.83	1.52	3.75	1.66	1.38	2.91	3.75	2.50	.55	.41	3.05	4.16	1.52	.97	34.30
<	20.0	.00	.00	.00	.00	.00	.00	.00	.13	.27	.00	.00	.00	.00	.13	.00	.00	.55
<	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	5.97	7.22	5.97	5.83	6.25	3.61	3.61	5.97	9.86	9.02	5.97	5.83	7.22	8.75	4.16	4.58	

Calm : .13 %

Total # Operational Hours : 720

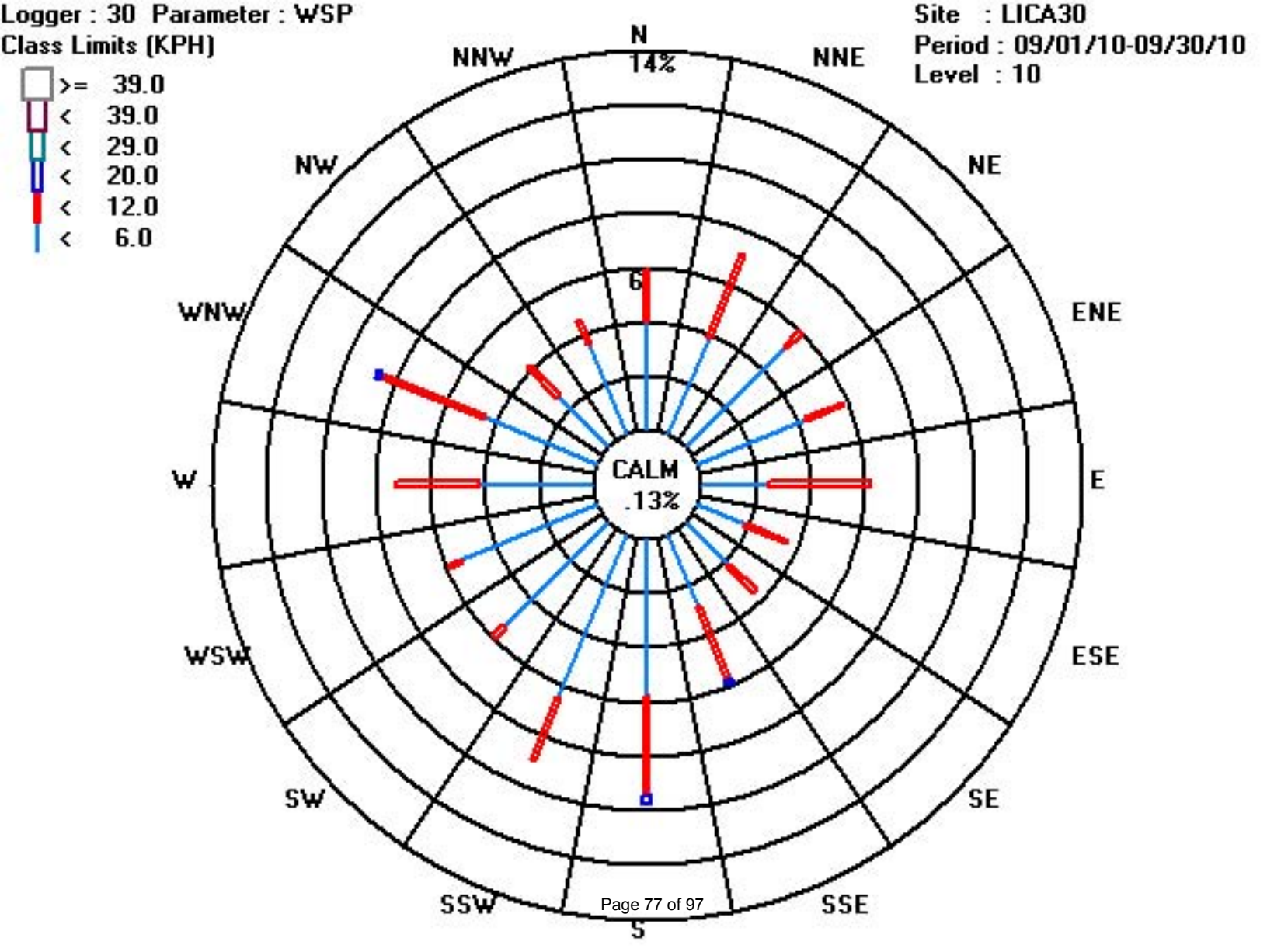
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	29	28	37	31	18	14	16	21	42	47	39	39	30	32	19	26	468
<	12.0	14	24	6	11	27	12	10	21	27	18	4	3	22	30	11	7	247
<	20.0								1	2					1			4
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	43	52	43	42	45	26	26	43	71	65	43	42	52	63	30	33	

Calm : .13 %

Total # Operational Hours : 720


Logger : 30 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA30
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6
CALM
.13%

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

SEPTEMBER 2010

WIND DIRECTION hourly averages in degrees

MST

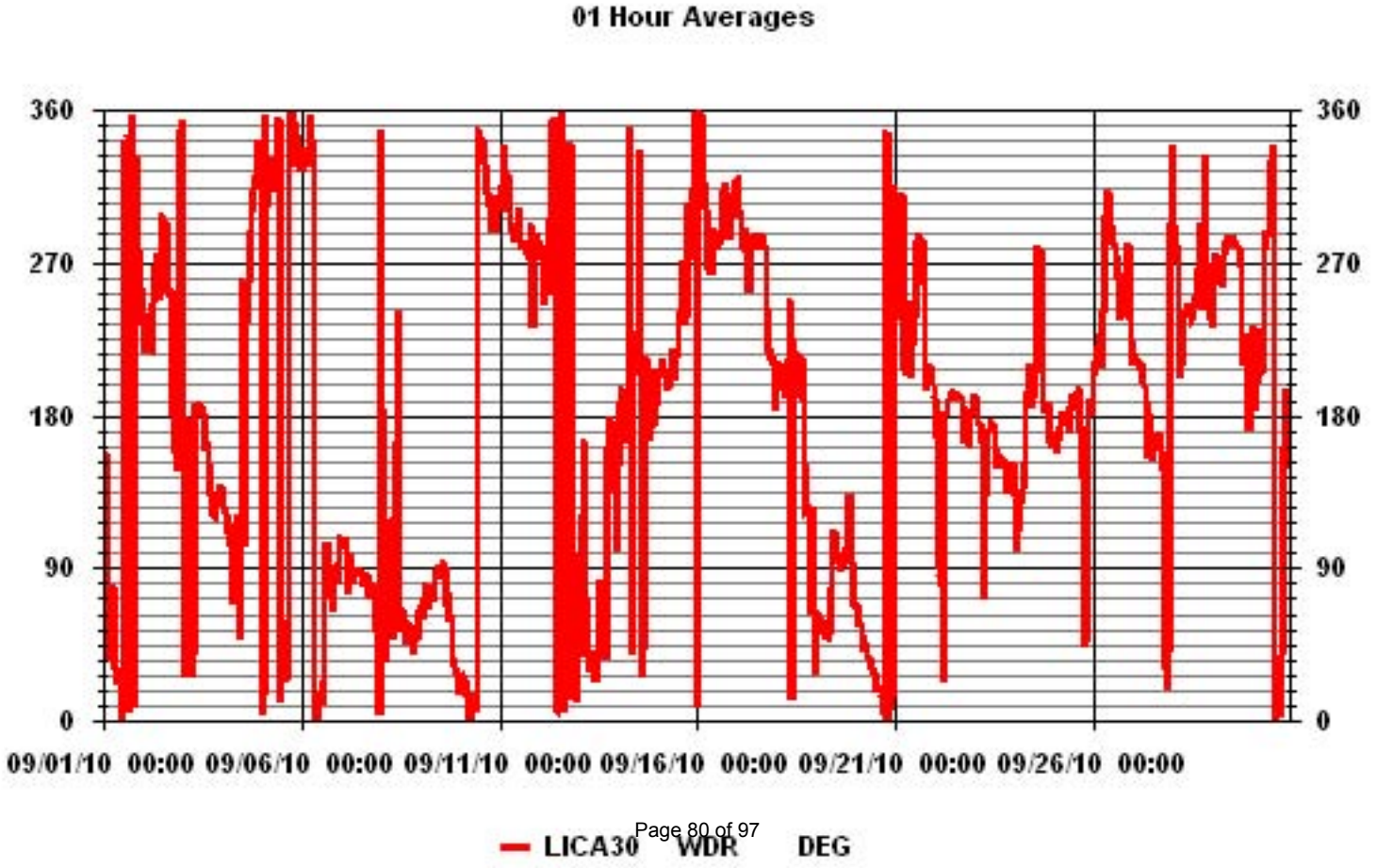
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	66	158	39	37	63	78	78	32	21	29	23	0	7	343	341	345	5	358	334	8	333	279	264	256	1	N	24
2	235	217	240	225	221	220	246	268	261	276	248	299	256	255	295	255	250	255	181	159	147	218	348	294	248	WSW	24
3	355	25	179	142	70	96	25	39	187	184	188	180	185	182	159	165	153	133	123	122	127	134	132	139	155	SSE	24
4	134	127	123	111	106	107	68	112	116	122	107	48	261	103	207	234	258	289	299	313	322	331	343	319	92	E	24
5	3	15	357	303	322	326	312	332	316	330	356	10	43	59	25	25	26	359	339	358	354	327	345	335	354	N	24
6	324	338	336	326	330	358	343	337	2	1	16	15	14	24	81	106	98	93	73	64	84	81	93	110	48	NE	24
7	103	103	107	107	74	99	82	82	90	88	89	89	85	89	80	83	87	75	72	81	75	53	19	3	85	E	24
8	348	186	35	58	68	117	118	48	84	55	164	242	52	67	59	45	59	47	52	56	39	52	47	65	58	ENE	24
9	68	59	73	82	73	66	73	70	80	89	83	92	85	87	94	92	67	77	58	63	39	33	28	15	71	ENE	24
10	24	25	27	25	15	6	0	6	16	5	8	350	342	334	344	329	311	303	311	288	294	289	292	303	344	NNW	24
11	309	315	299	340	324	322	316	289	284	284	294	289	303	278	280	283	277	276	271	294	231	269	288	284	292	WNW	24
12	279	282	273	245	268	250	296	355	353	356	7	6	14	9	359	5	19	18	12	341	12	19	25	11	355	N	24
13	62	100	122	166	37	73	28	35	41	24	24	28	46	83	56	45	36	162	134	180	177	172	135	99	59	ENE	24
14	150	188	197	183	173	164	177	350	38	230	203	209	224	336	26	42	47	215	166	166	177	173	207	186	180	S	24
15	203	205	205	213	203	196	196	197	208	220	201	214	218	235	242	272	234	237	305	272	302	314	339	359	228	SW	24
16	7	359	358	356	319	302	266	288	262	288	290	285	277	283	281	311	312	317	306	283	294	308	311	318	304	WNW	24
17	319	299	299	280	279	291	253	255	253	278	286	288	278	285	284	288	280	279	245	218	213	215	211	182	277	W	24
18	194	204	212	209	198	190	202	214	249	12	226	209	190	217	216	214	190	153	124	125	128	63	126	27	191	S	24
19	65	54	60	51	59	58	50	49	51	79	92	112	104	96	97	88	91	93	102	124	134	128	95	69	91	E	24
20	66	70	56	58	52	41	46	39	38	31	31	29	18	20	18	18	15	3	349	0	347	7	14	316	32	NNE	24
21	293	254	240	237	311	206	216	203	208	202	248	221	237	283	287	258	284	258	195	204	204	211	202	199	235	SW	24
22	191	167	91	87	80	22	183	181	189	193	193	196	192	189	194	189	191	186	164	166	165	180	184	189	185	S	24
23	192	183	175	175	164	72	132	150	169	172	176	175	173	162	148	155	151	154	152	134	140	140	144	152	158	SSE	24
24	133	100	117	116	128	136	152	189	194	211	184	203	190	205	280	272	279	235	181	184	183	189	165	160	187	S	24
25	170	163	158	165	174	182	180	176	175	169	185	193	182	189	194	197	170	144	44	47	174	189	183	181	177	S	24
26	204	212	210	220	228	208	241	298	302	312	298	294	282	280	276	261	236	264	262	238	251	281	238	225	258	WSW	24
27	210	217	215	211	206	212	200	198	189	155	183	165	153	161	169	167	170	160	149	106	32	18	40	294	171	S	24
28	340	294	281	271	202	215	209	238	241	244	244	235	236	243	251	267	272	294	242	253	333	268	270	238	255	WSW	24
29	232	263	276	271	274	258	255	274	283	286	283	284	284	279	282	280	279	269	220	210	225	228	170	205	272	W	24
30	204	233	183	199	225	219	204	232	278	289	285	303	330	340	0	14	14	1	38	162	181	195	148	161	308	NW	24
HOURLY AVG	355	359	358	356	330	358	343	355	353	356	356	350	342	343	359	345	312	359	349	358	354	331	348	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 4, 2009
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS
STANDARD DEVIATION	102.00		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	248	DEG


01 Hour Averages
360
270
180
90
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

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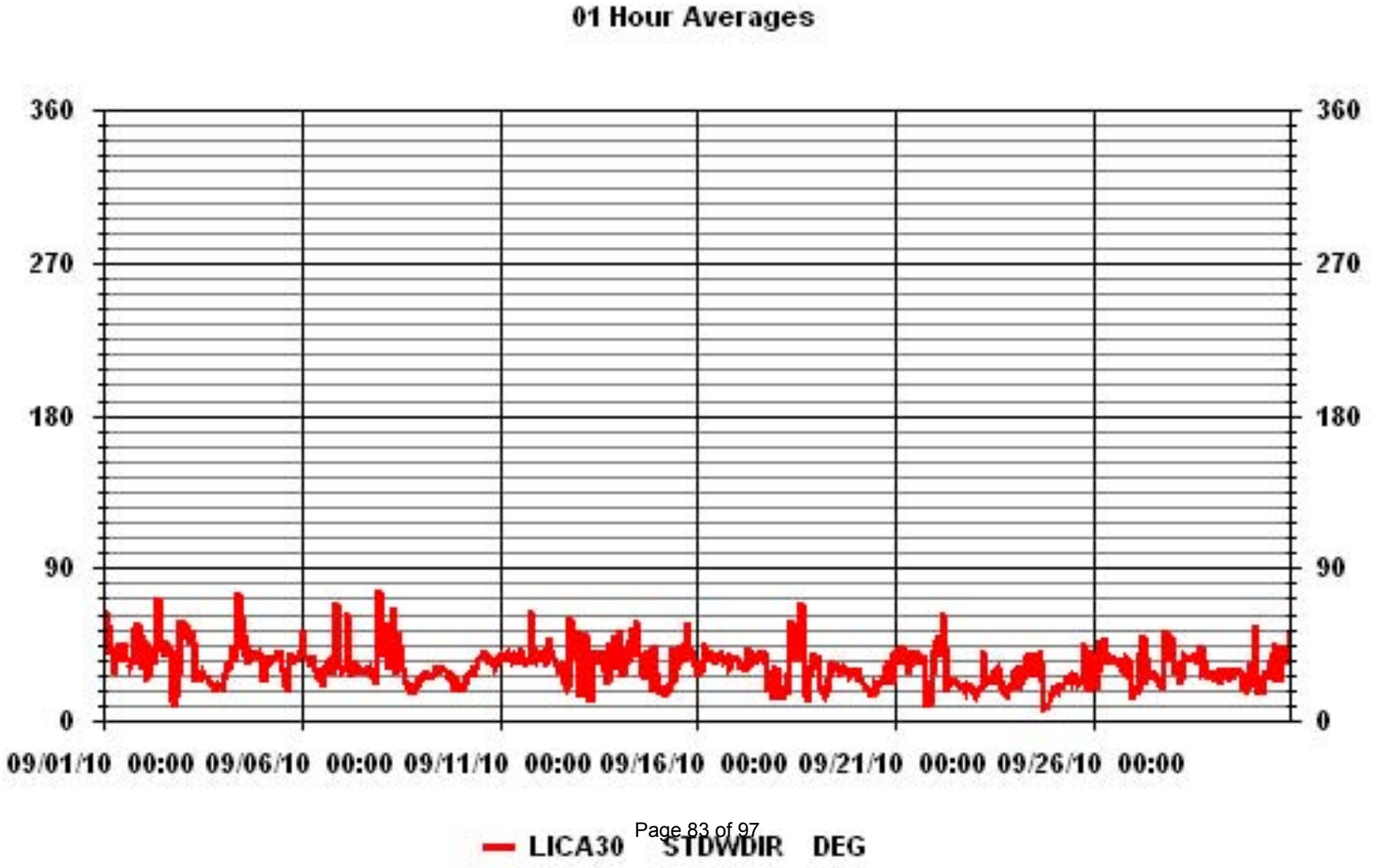
25	19	19	18	21	20	20	22	25	24	25	27	23	25	26	22	23	23	22	46	27	20	17	41	38
26	26	23	18	28	47	42	33	49	36	39	37	37	37	35	34	36	31	34	31	29	37	35	35	23
27	13	15	17	19	40	39	51	21	28	37	27	28	25	29	25	24	24	22	19	43	54	36	36	51
28	44	28	31	32	22	27	25	37	36	36	36	36	38	39	38	33	37	44	28	29	36	24	26	27
29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

STATUS FLAG CODES

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

LAST CALIBRATION: February 4, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 720 HRS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360
270
180
90
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA30 STDWDIR DEG

Calibration Reports

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	September 16, 2010		Previous Calibration	August 14, 2010	
Company	**Lakeland Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	8:06		End Time (MST)	11:59	
Reason:	Monthly Calibration				
Barometric Pressure	942	mBar	Station Temperature	24	Deg C
Cal Gas	51.4	ppm	Cal Gas Expiry date	5-Aug-2012	
DAS Output Voltage	0 - 1	Volts	Chart Rec. Output	0 - 1	Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 -1000	ppb				
Sample Flow / Box Temp	610	ccm	29.5	Deg C	608	ccm	29.1	Deg C
HVPS / Lamp Setting	494		3273		494		3272	
PMT / RxCell Temp	7.7	Deg C	50	Deg C	7.7	Deg C	50	Deg C
Converter / IZS Temp	NA	Deg C	45	Deg C	NA	Deg C	45	Deg C
Offset / Slope	36		0.961		36		0.979	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4926	72.9	750	735	1.0198
4926	72.9	750	752	0.9968
4962	38.9	400	399	1.0021
4983	16.5	170	170	0.9979
4998	0	0	0	N/A
			Sum of Least Squares	0.9979
			New Correction Factor	0.9968

	Before Calibration	After Calibration
Auto Zero	0.7	0.6
Auto Span	589	594
Sample Lines Connected		YES
Percent Change from Previous Calibration		-2.0%

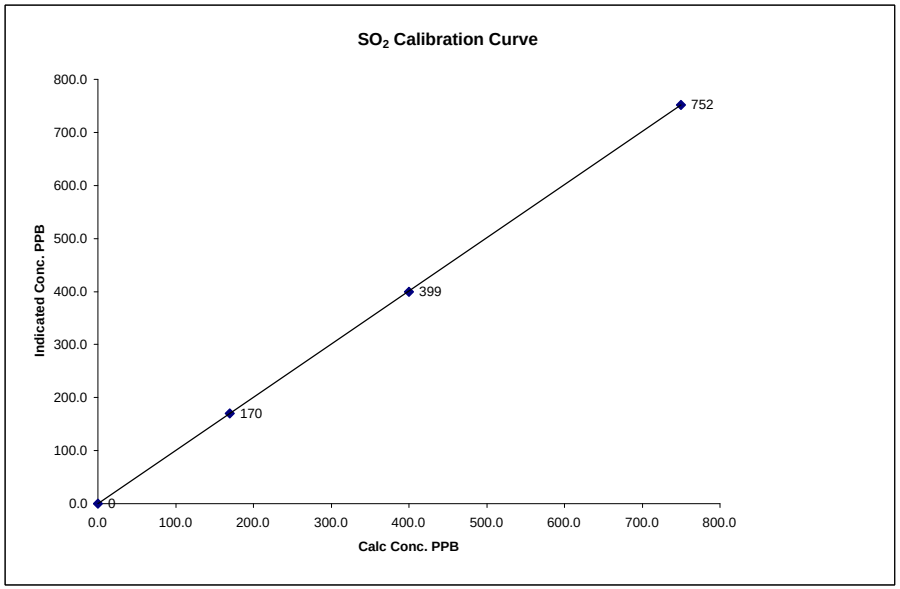
Calibration Performed by: Ting Xu

SO_2 Calibration Curve

Calibration Date	September 16, 2010			
Company	**Lakeland Industry & Community Association**			
Plant / Location	**Cold Lake - Maskwa**			
Start Time (MST)	8:06	End Time (MST)	11:59	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
170	170	0.9979
400	399	1.0021
750	752	0.9968

Correlation Coefficient	(≥ 0.995)	0.999990
Slope	(0.85 to 1.15)	1.002858
Intercept	(± 3% F.S.)	-0.450795



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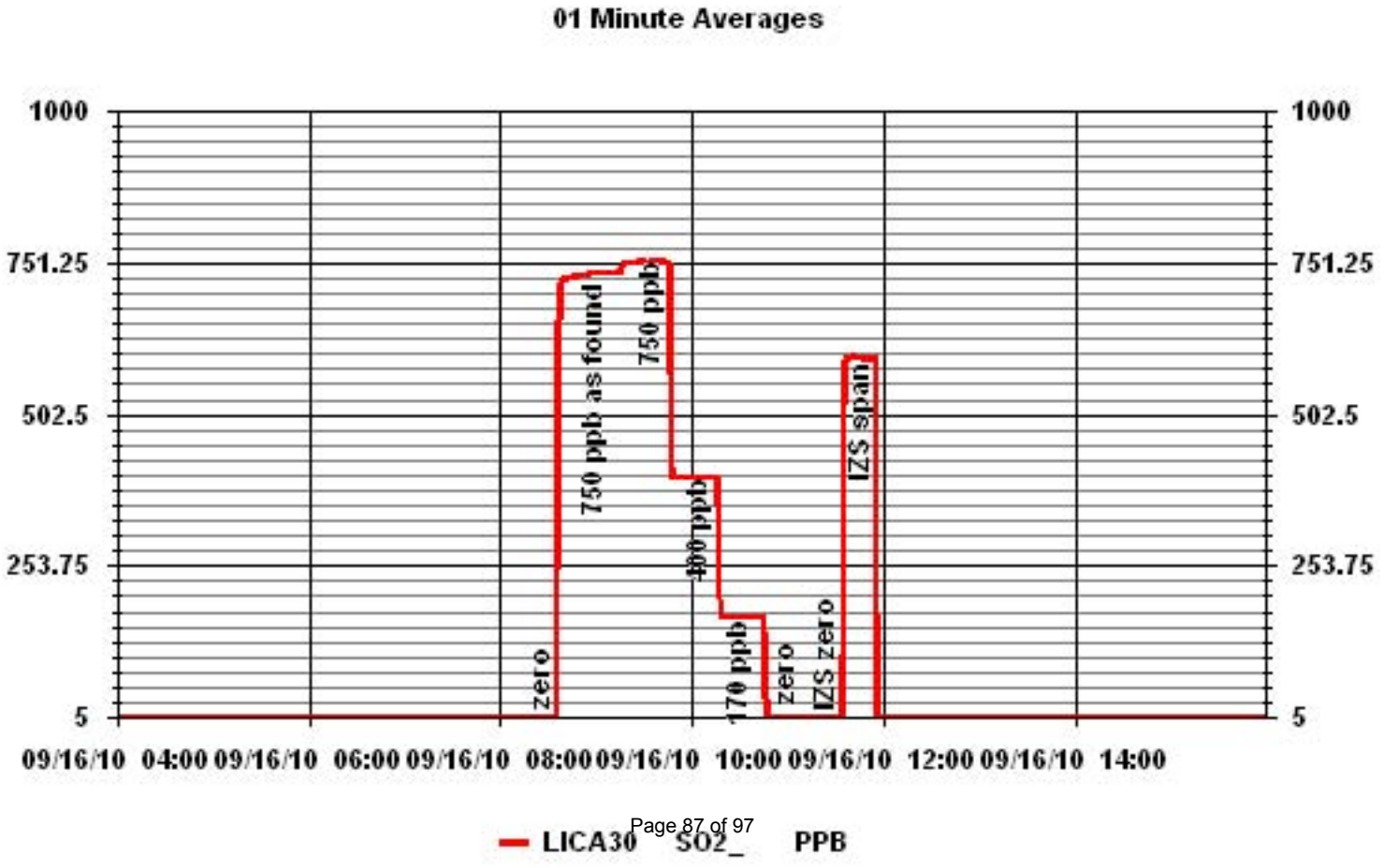

01 Minute Averages
1000
751.25
502.5
253.75
5
zero
750 ppb as found
750 ppb
400 ppb
170 ppb
zero
IZS zero
IZS span
09/16/10 04:00 09/16/10 06:00 09/16/10 08:00 09/16/10 10:00 09/16/10 12:00 09/16/10 14:00
LICA30 SO2_ PPB

Hydrogen Sulphide

H_2S Calibration Report

Station Information

Calibration Date	September 15, 2010		Previous Calibration	August 16, 2010	
Company	**Lakelnad Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	8:16		End Time (MST)	12:05	
Reason:	Monthly Calibration				
Barometric Pressure	945	mBar	Station Temperature	22	Deg C
Cal Gas	10.6	ppm	Cal Gas Install date	05/12/2011	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 100	ppb				
Sample Flow / Box Temp	541	ccm	30.8	Deg C	537	ccm	31.9	Deg C
HVPS / Lamp Setting	552		2188		552		2187	
PMT / RxCell Temp	7.9	Deg C	50	Deg C	7.9	Deg C	50	Deg C
Converter / IZS Temp	315.2	Deg C	45	Deg C	315.7	Deg C	45	Deg C
Offset / Slope	30		0.982		30		0.964	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4962	37.7	80	82	0.9747
4962	37	78	80	0.9807
4981	18.9	40	40	1.0017
4987	10.9	23	23	1.0051
4998	0	0	0	N/A
			Sum of Least Squares	0.9862
			New Correction Factor	0.9807

	Before Calibration	After Calibration
Auto Zero	0.5	0.8
Auto Span	56	55
Sample Lines Connected		YES
Percent Change from Previous Calibration		2.5%

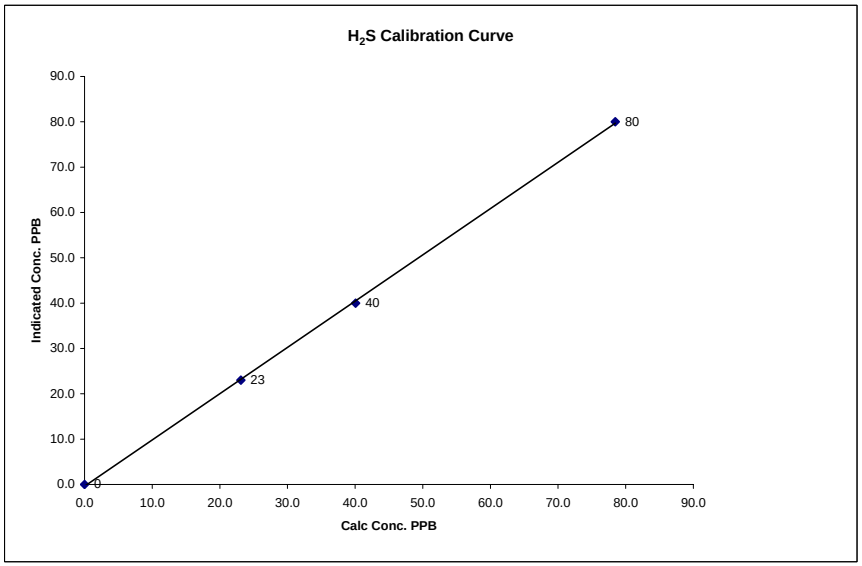
Calibration Performed by: Ting Xu

H_2S Calibration Curve

Calibration Date	September 15, 2010				
Company	**Lakelnad Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	8:16		End Time (MST)	12:05	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
23	23	1.0051
40	40	1.0017
78	80	0.9807

Correlation Coefficient	(≥ 0.995)	0.999839
Slope	(0.85 to 1.15)	1.020613
Intercept	(± 3% F.S.)	-0.390457



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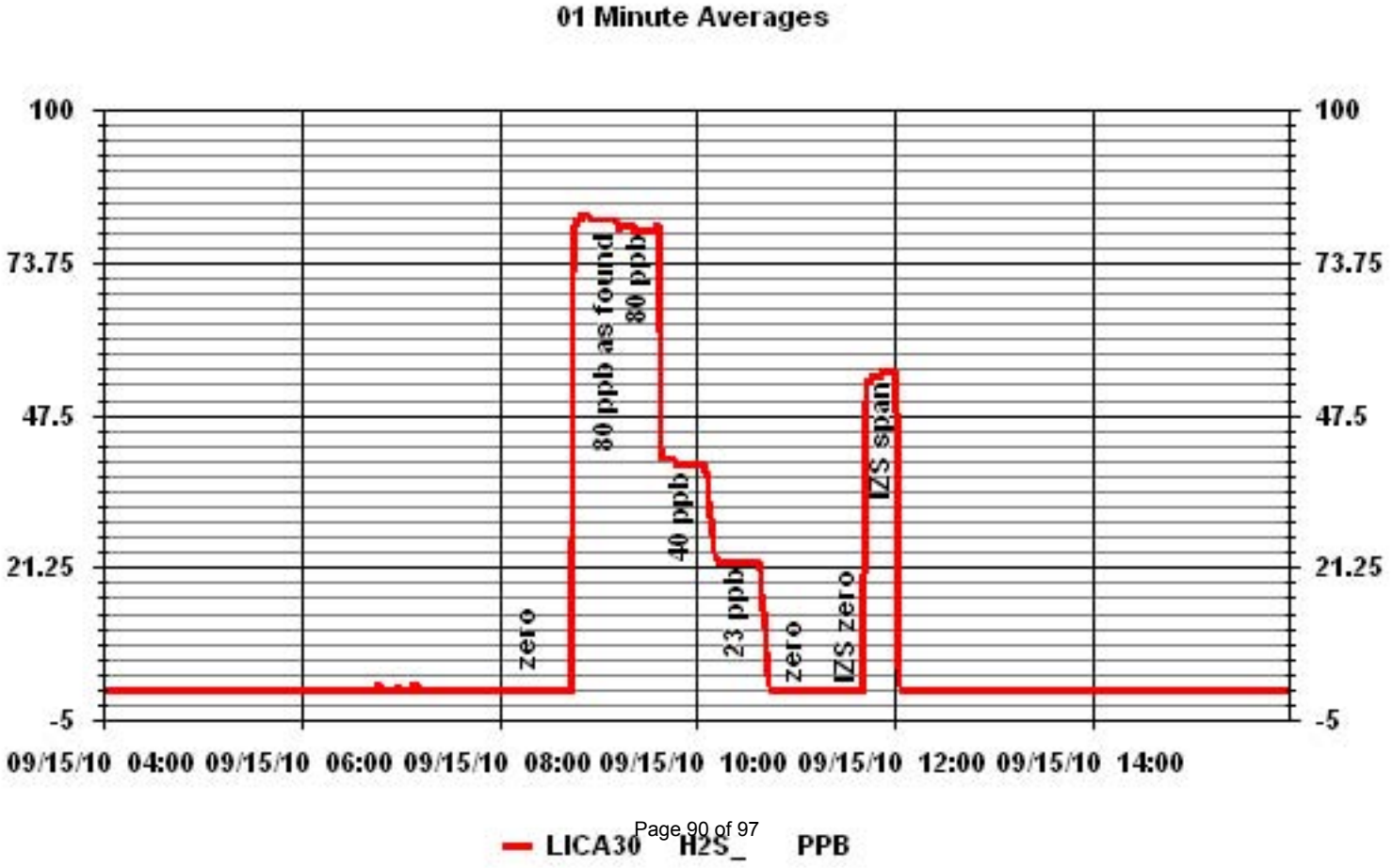

01 Minute Averages
100
73.75
47.5
21.25
-5
zero
80 ppb as found
80 ppb
40 ppb
23 ppb
zero
IZS zero
IZS span
09/15/10 04:00
09/15/10 06:00
09/15/10 08:00
09/15/10 10:00
09/15/10 12:00
09/15/10 14:00
LICA30 H2S_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	September 15, 2010	Previous Calibration	August 16, 2010
Company:	**Lakeland Industry & Community Association**		
Plant / Location:	**Cold Lake - Maskwa**		
: (MST)	11:26	End Time (MST)	14:54
Reason:	Monthly Calibration		
Barometric Pressure:	943 mBar	Station Temperature:	22 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207 Prop/ 602 Meth/1171.25THC ppm	Cal Gas Expiry Date:	August 21, 2011
DAS make & Model:	ESC 8832	S/N :	AO 791
Output Voltage Range:	0 - 10 VDC		

Analyzer Information

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

Analyzer Settings

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

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0.0	0.0	0.0	N/A
1999	70.0	39.6	39.4	N/A
1999	70.0	39.6	39.9	0.9931
1998	35.0	20.2	20.3	0.9933
1998	20.0	11.6	11.6	1.0007
1998	0	0.0	0.0	N/A
			Correction Factor:	0.9931

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

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	33.7	33.8
Sample Lines Connected		YES

Cylinder Pressures		
Span	1200	psi
Hydrogen	1400	psi
Zero Air	32	psi

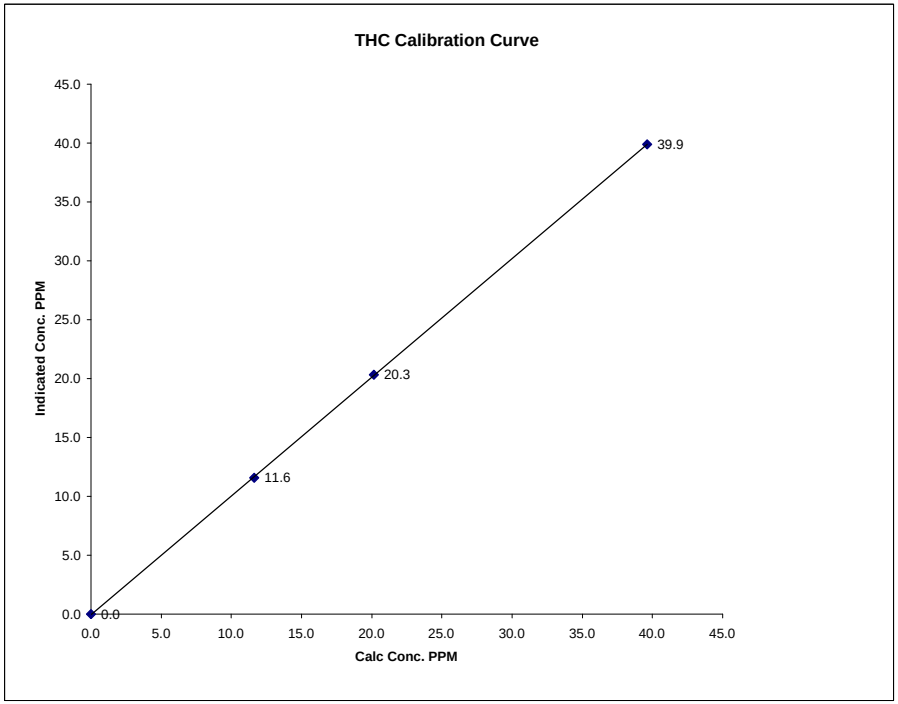
Calibration Performed by: Ting Xu

THC Calibration Curve

Calibration Date	September 15, 2010		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**Cold Lake - Maskwa**		
Start Time (MST)	11:26	End Time (MST)	14:54

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

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



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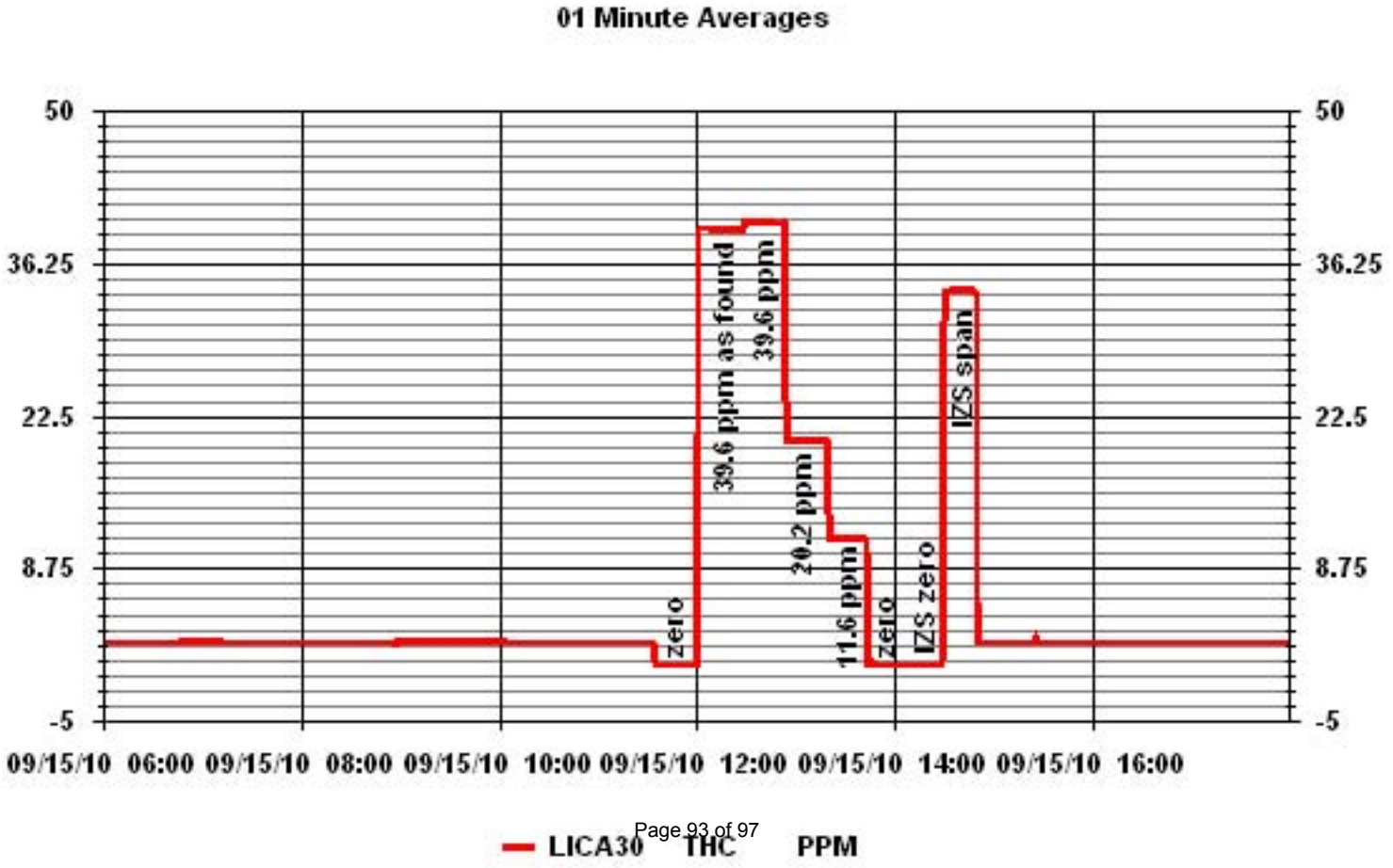

01 Minute Averages
50
36.25
22.5
8.75
-5
zero
39.6 ppm as found
39.6 ppm
20.2 ppm
11.6 ppm
zero
IZS zero
IZS span
09/15/10 06:00
09/15/10 08:00
09/15/10 10:00
09/15/10 12:00
09/15/10 14:00
09/15/10 16:00
LICA30 THC PPM

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	September 15, 2010		Previous Calibration	August 16, 2010	
Company	LICA		Plant/Location	Maskwa	
Start Time (MST)	8:16		End Time (MST)	15:19	
Reason:	Monthly Calibration			Other	
Barometric Pressure	945 mmHg	Station Temperature	22 Deg C	MFCF	1
Cal Gas Concentration	NOx 50.8 ppm	NO 50.4 ppm	Cal Gas Expiry date	05-Aug-12	
DAS Output Voltage	0 - 1 Volts		Chart Rec. Output	NA Volts	

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	594	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration				
Concentration Range					0-1000				ppb	
Sample Flow/Conv. Temp	457	ccm	314.8	Deg C		457	ccm	313.5	Deg C	
Ozone Flow / Vacuum	79	ccm	5.5	"Hg-A		79	ccm	5.5	"Hg-A	
HVPS / A ZERO	767	Volts	17.2	MV		767	Volts	17.7	MV	
Rx/ Temp / PMT Temp	49.8	Deg C	6.5	Deg C		50.0	Deg C	6.6	Deg C	
Box Temp / IZS Temp	30.1	Deg C	45.2	Deg C		32.2	Deg C	45.1	Deg C	
Offset	2.2	NOx	0.2	NO		-0.2	NOx	-0.1	NO	
Slope	1.111	NOx	1.105	NO		1.106	NOx	1.095	NO	
NO_2 COEF / Conv Efficency	NA	NO2	0.994			NA	NO2	0.994		

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4994	0.0		0	0	0	-1	1	-1	-----	-----
4994	0.0	-----	0	0	0	0	0	1	-----	-----
4919	74.2	-----	755	749	-----	757	756	1	0.9972	0.9907
4919	74.2	-----	755	749	-----	757	751	6	0.9972	0.9973
4962	34.6	-----	352	349	-----	354	351	3	0.9937	0.9943
4975	19.8	-----	201	200	-----	203	201	2	0.9920	0.9940
4996	0.0	-----	0	0	0	0	0	0	-----	-----

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4919	74.2	-----	755	749	-----	758	751	7	-----	-----
4919	74.2	600	755	-----	579	758	179	579	1.0017	100.00%
4919	74.2	300	755	-----	294	760	464	296	0.9966	100.70%
4919	74.2	150	755	-----	150	759	608	151	1.0000	100.70%

Linearity			Sum of Least Squares	NOx= 0.996	NO= 0.997	NO2= 0.998		
OK?	Yes	No	Correction Factors:	NOx= 0.9972	NO= 0.9973	NO2= 1.0017		
					Average Converter Efficiency= 100.47%			

	Before Calibration					After Calibration			
Auto Zero	-0.1	NOx	-0.1	NO2		2.6	NOx	1.1	NO2
Auto Span	715	NOx	704	NO2		725	NOx	714	NO2
					Sample Lines Connected	YES			

Notes

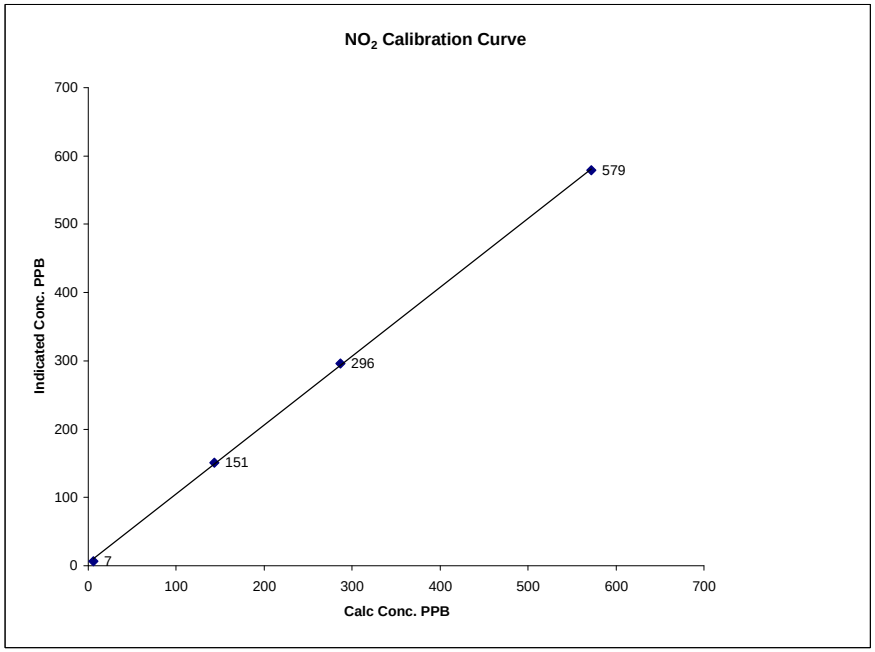
Calibration Performed by: Ting Xu

NO_2 Calibration Curve

Calibration Date	September 15, 2010		
Company	LICA		
Plant / Location	Maskwa		
Start Time (MST)	8:16	End Time (MST)	15:19

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
6	7	N/A
143	151	0.9470
287	296	0.9696
572	579	0.9879

Correlation Coefficient	(≥ 0.995)	0.999849
Slope	(0.85 to 1.15)	1.008164
Intercept	(± 3% F.S.)	4.19273

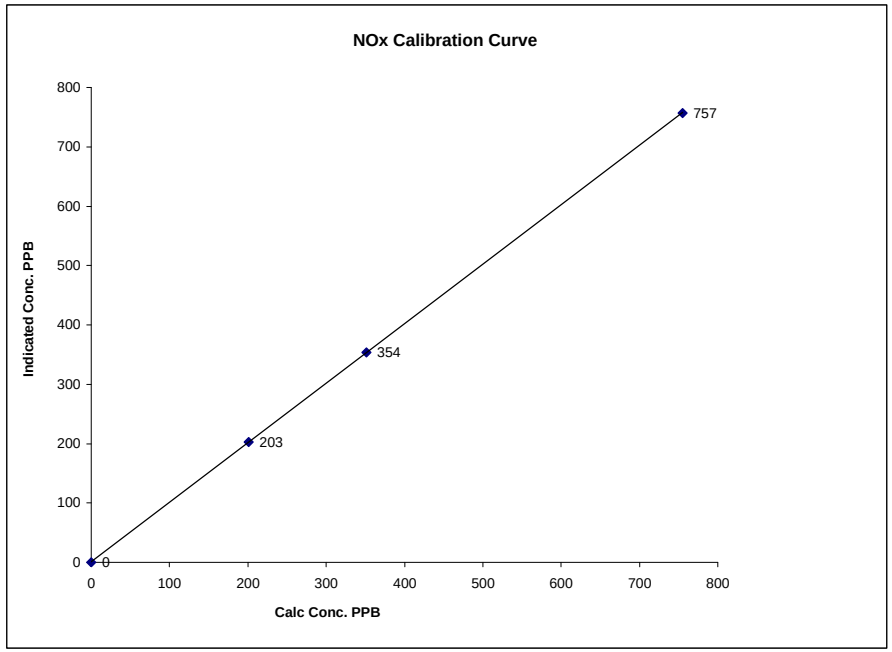


Notes: No CE gain adjustment.

NOx Calibration Curve

Calibration Date	September 15, 2010				
Company	LICA				
Plant / Location	Maskwa				
Start Time (MST)	8:16	End Time (MST)	15:19		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999996
			Slope (0.85 to 1.15)	1.002449
0	0	N/A	Intercept (± 3% F.S.)	0.68638
201	203	0.9920		
352	354	0.9937		
755	757	0.9972		

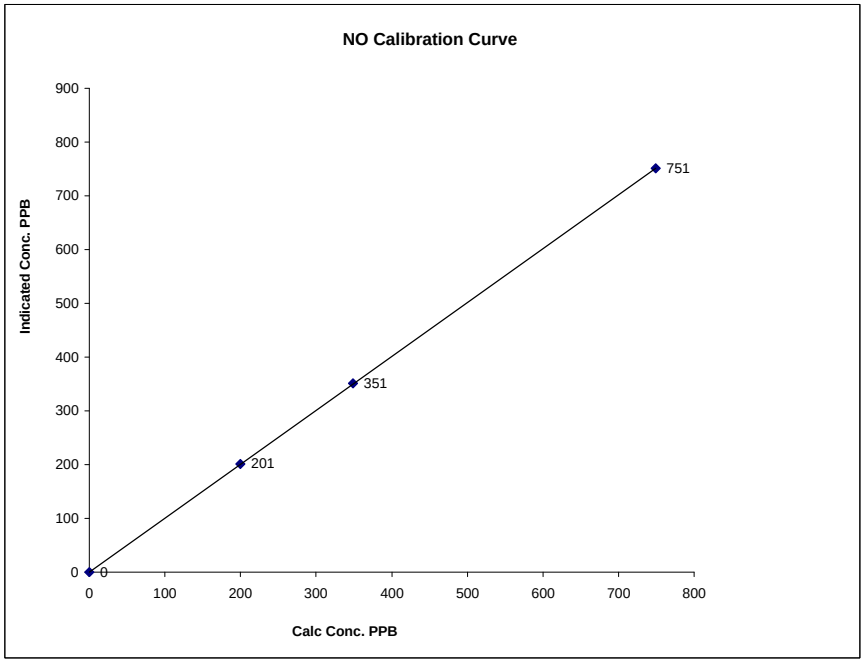


Notes:

NO Calibration Curve

Calibration Date	September 15, 2010				
Company	LICA				
Plant / Location	Maskwa				
Start Time (MST)	8:16	End Time (MST)	15:19		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999997
			Slope (0.85 to 1.15)	1.001235
0	0	N/A	Intercept (± 3% F.S.)	1.9504
200	201	0.9940		
349	351	0.9943		
749	751	0.9973		



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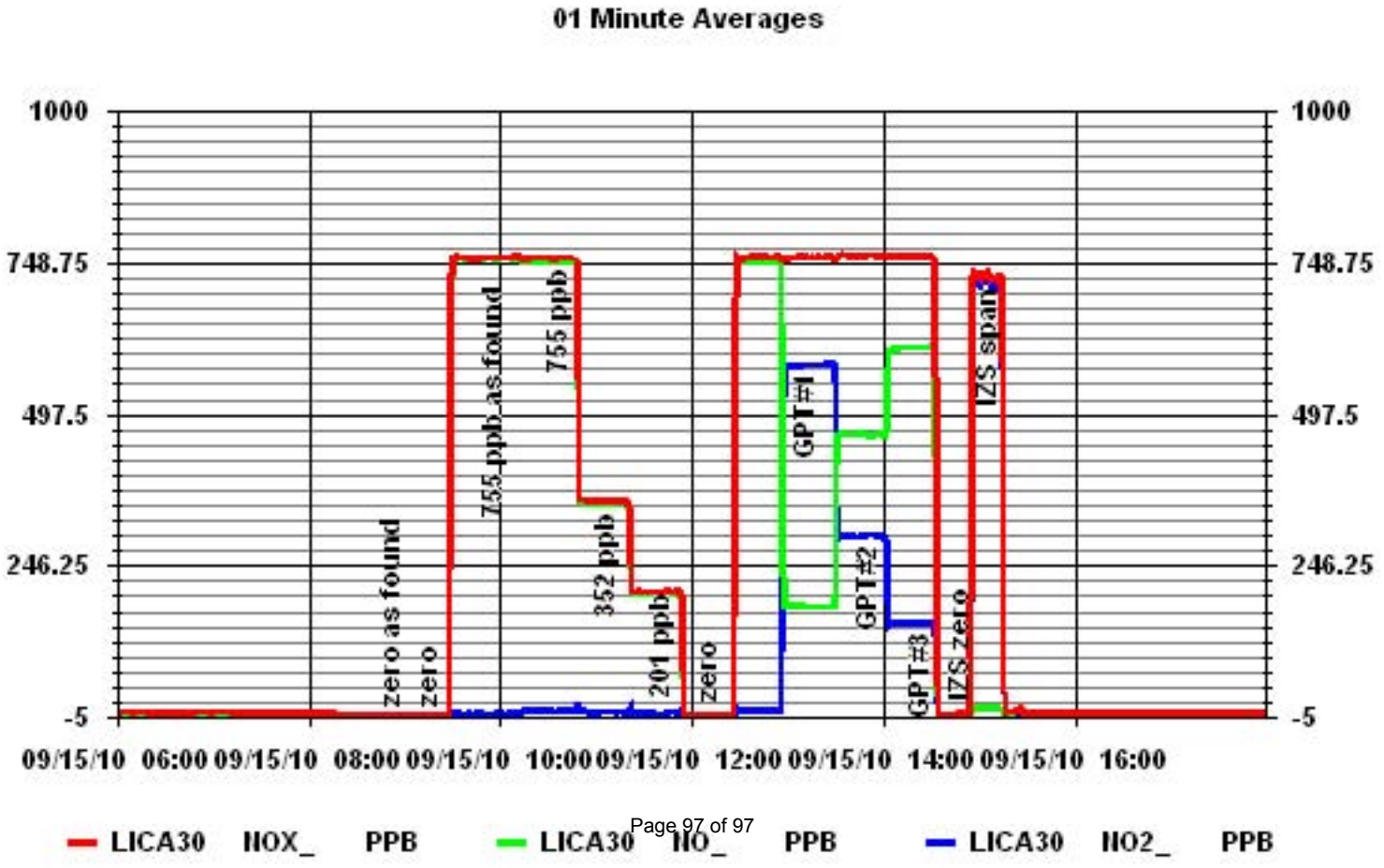
01 Minute Averages
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748.75
497.5
246.25
-5
zero as found
zero
755 ppb as found
755 ppb
352 ppb
201 ppb
zero
GPT#1
GPT#2
GPT#3
IZS zero
IZS span
09/15/10 06:00
09/15/10 08:00
09/15/10 10:00
09/15/10 12:00
09/15/10 14:00
09/15/10 16:00
LICA30 NOX_ PPB
LICA30 NO_ PPB
LICA30 NO2_ PPB

Lakeland Industry & Community Association

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

Prepared By:

Maxxam Analytics

Driven by Service and Science

October 14, 2010

Lakeland Industry & Community Association
St. Lina
Ambient Air Monitoring

Table of Contents

Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: St. Lina
Data Period: September 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
- CAL SOP-00215

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

MONTHLY CONTINUOUS DATA SUMMARY
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – ST. LINA

Continuous Ambient Monitoring – September 2010

LICA ST. LINA SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO2 (PPB)	172	57	0	0	0.04	3	27	11	4.6	139(SE)	0.4	27	100.0
H2S (PPB)	10	3	0	0	0.01	1	25, 26	VAR	VAR	VAR	0.2	26	100.0
THC (PPM)	-	-	-	-	2.03	2.8	19	5, 6	8.9, 10.9	63(ENE), 69(ENE)	2.3	19	100.0
OZONE (PPB)	82	-	0	-	23.20	43	28	2, 3	14.2, 10	313(NW), 297(WNW)	34.2	28	100.0
NOx (PPB)	-	-	-	-	0.98	7	27	4	10.9	350(N)	2.8	27	100.0
NO (PPB)	-	-	-	-	0.04	2	24	7, 8	11.3, 9.6	316(NW), 291(WNW)	0.2	24	100.0
NO_2 (PPB)	212	106	0	0	0.88	7	27	4	10.9	350(N)	2.7	27	100.0
PM2.5 (ug/m3)	-	30	-	3	3.28	13.1	12	21	12.3	167(SSE)	5.7	27	99.2
TEMPERATURE (DEGREE C)	-	-	-	-	9.28	25.5	25	15	10	224(SW)	15.4	3	100.0
BP (MILLIBAR)	-	-	-	-	930	942	13, 30	VAR	VAR	VAR	939.8	13	100.0
RH (%)	-	-	-	-	69.75	91	VAR	VAR	VAR	VAR	87.5	7	100.0
PRECIPITATION (MM)	-	-	-	-	0.04	2.1	6	16, 17	10.1, 10.2	63(ENE), 71(ENE)	10.0	6	100.0
VECTOR WS (KPH)	-	-	-	-	9.78	30.5	28	13	-	244(WSW)	11.6	28	100.0
VECTOR WD (DEGREES)	-	-	-	-	213(SSW)	-	-	-	-	-	-	-	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. Data was corrected using daily zero information.

Hydrogen Sulphide (PPB)

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

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

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. Data was corrected using daily zero information.

Total HydroCarbon (PPM)

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

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

General Monthly Summary

AQM STATION – LICA – St. Lina

Nitrogen Dioxide (PPB)

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

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

Particulate Matter 2.5 (UG/M3)

- Analyzer make / model – Thermo Scientific Series 1405F, S/N: 1405A208301003

No operational issue was observed during this month. Data was corrected using Alberta air quality guideline. If the data was between 0 to –3, the data was corrected to 0. If the data was below –3, the data was invalidated. 4 hours of data were invalidated because the readings were below –3.

Temperature (Degree C)

- Analyzer make / model – Met One 060

No operational issue was observed during the month.

Barometric Pressure (Millibar)

- Analyzer make / model - Met One 092

No operational issue was observed during this month.

Relative Humidity (%)

- Analyzer make / model - Met One 083

No operational issue was observed during this month.

General Monthly Summary

AQM STATION – LICA – St. Lina

Precipitation (MM)

- Analyzer make / model - Met One 387

No operational issue was observed during this month. A power chord for the tipping bucket heater was installed and the inner screen was removed on September 16th. The tipping bucket was checked on September 16th, and the result was good. The tipping bucket was cleaned and leveled.

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

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 September 22nd.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

SEPTEMBER 2010

AIR QUALITY INDEX (AQI)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	12	11	11	11	7	7	8	8	9	10	12	-	15	15	16	16	17	15	14	13	11	10	11	10	17
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
2	9	9	8	9	8	9	6	7	9	11	-	15	16	16	15	14	14	13	14	14	13	13	14	14	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
3	14	12	11	10	9	9	9	10	11	-	16	18	18	18	18	17	17	17	17	16	16	17	15	15	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
4	15	14	13	13	12	10	10	10	-	11	13	14	15	17	17	16	15	16	16	15	14	13	10	11	17
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
5	11	11	11	11	11	10	10	-	10	10	11	12	14	14	15	16	15	14	12	11	11	10	9	9	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
6	8	7	7	6	6	5	-	5	6	6	7	8	8	7	7	6	6	6	9	12	11	10	9	8	12
	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
7	8	8	-	7	7	-	6	6	6	6	7	7	7	8	9	9	9	8	7	6	6	6	7	6	9
	O3_	O3_	**NA**	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
8	6	6	6	7	-	7	7	6	6	6	7	7	8	8	9	8	7	7	6	6	6	7	7	7	9
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
9	11	8	8	-	8	10	9	9	9	9	9	10	11	11	12	13	13	14	13	12	11	10	10	10	14
	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
10	9	9	-	8	8	9	8	9	9	9	9	11	12	12	12	11	12	12	11	11	10	10	9	8	12
	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
11	7	-	11	13	13	13	13	14	16	16	19	18	16	14	13	12	12	12	11	12	12	12	11	10	19
	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
12	-	10	10	9	9	9	9	8	11	10	11	12	13	13	13	13	14	13	12	11	12	11	12	-	14
	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
13	11	10	9	10	9	9	8	8	8	7	10	13	14	14	14	14	13	13	11	10	8	7	-	9	14
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_
14	9	9	9	8	8	7	8	7	7	8	10	12	14	15	14	14	13	12	12	11	13	-	11	10	15
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_
15	9	8	7	7	7	6	6	6	7	6	11	10	10	10	10	11	11	12	13	12	-	12	10	9	13
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
16	9	10	10	9	9	9	9	9	9	11	13	15	15	15	15	-	-	-	-	-	13	12	11	11	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_
17	11	11	11	10	10	8	7	8	10	13	13	13	13	12	13	13	13	13	-	14	15	13	12	11	15
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
18	11	10	11	11	10	10	10	12	12	11	11	13	16	17	17	17	18	-	17	15	15	15	16	14	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_
19	15	15	13	13	11	7	7	8	9	10	12	13	15	17	16	17	-	17	19	17	15	14	14	13	19
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
20	13	12	12	11	12	12	11	12	11	10	9	11	11	11	11	-	11	11	10	10	9	9	9	9	13
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
21	9	8	7	9	9	6	6	8	7	-	-	-	-	-	-	-	12	10	9	8	8	8	8	7	12
	O3_	O3_	O3_	O3_	O3_	PM2	O3_	PM2	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
22	6	7	6	7	6	6	5	5	6	7	7	11	-	-	-	-	-	16	15	14	13	13	12	12	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
23	12	11	11	10	9	8	6	6	7	8	10	13	-	15	16	16	15	16	15	16	14	13	12	10	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
24	9	8	8	7	5	4	5	5	7	11	15	-	19	17	17	18	18	19	18	18	16	16	16	15	19
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
25	15	15	14	12	12	12	12	11	10	11	-	13	15	17	18	21	21	20	19	18	17	16	15	14	21
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
26	14	14	13	12	11	11	10	10	11	-	15	19	19	19	18	17	18	19	19	17	16	14	13	13	19
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
27	13	10	8	6	7	9	8	7	-	10	15	17	19	19	18	18	19	18	17	16	14	14	14	-	19
	O3_	O3_	O3_	O3_	PM2	PM2	PM2	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
28	20	20	22	22	20	19	20	-	17	17	17	-	16	17	17	16	16	17	16	15	16	15	14	15	22
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
29	15	13	13	12	12	12	-	13	14	14	17	17	18	19	19	19	20	20	19	18	18	17	17	16	20
	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
30	15	15	13	12	10	-	13	14	14	16	17	17	18	19	19	19	19	18	19	19	19	19	19	19	19
	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
PEAK	20	20	22	22	20	19	20	14	17	17	19	19	19	19	19	21	21	20	19	19	19	19	19	19	
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	

STATUS FLAG CODES	NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O_3)					PARTICULATE MATTER 2.5 (PM2)					NITROGEN DIOXIDE (NO_2)					SULPHUR DIOXIDE (SO_2)					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
POOR (51-100)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
FAIR (26-50)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
GOOD (1-25)	663	92.1%	22	2, 3	28	9	1.3%	19	11	16	0	0.0%	-	-	-	0	0.0%	-	-	-	672	93.3%
OVERALL	663	92.1%	-	-	-	9	1.3%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	672	93.3%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	6.7%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA

SEPTEMBER 2010

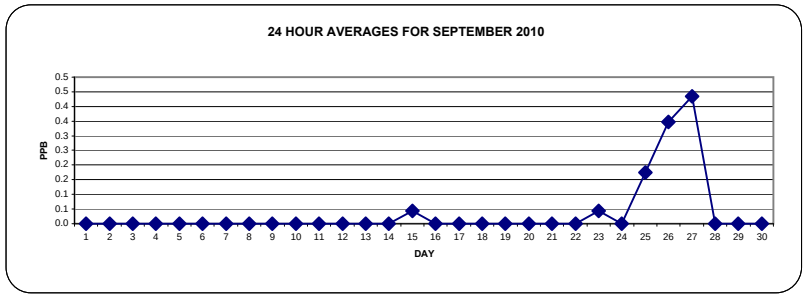
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

MST

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

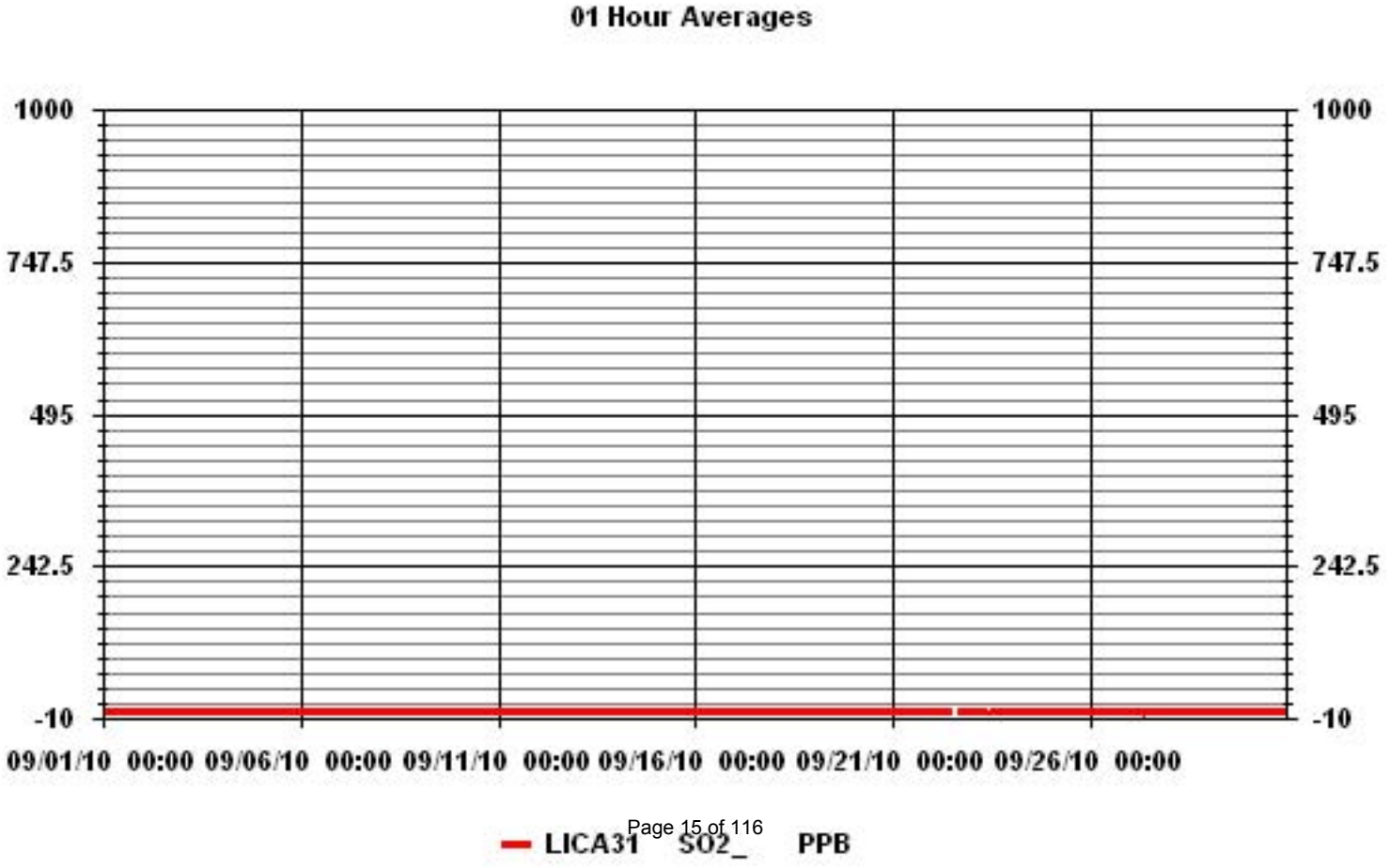
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	21					
MAXIMUM 1-HR AVERAGE:	3	PPB	@ HOUR(S)	11	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	0.4	PPB			ON DAY(S)	27
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.21		MONTHLY AVERAGE:		0.04	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

SEPTEMBER 2010

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

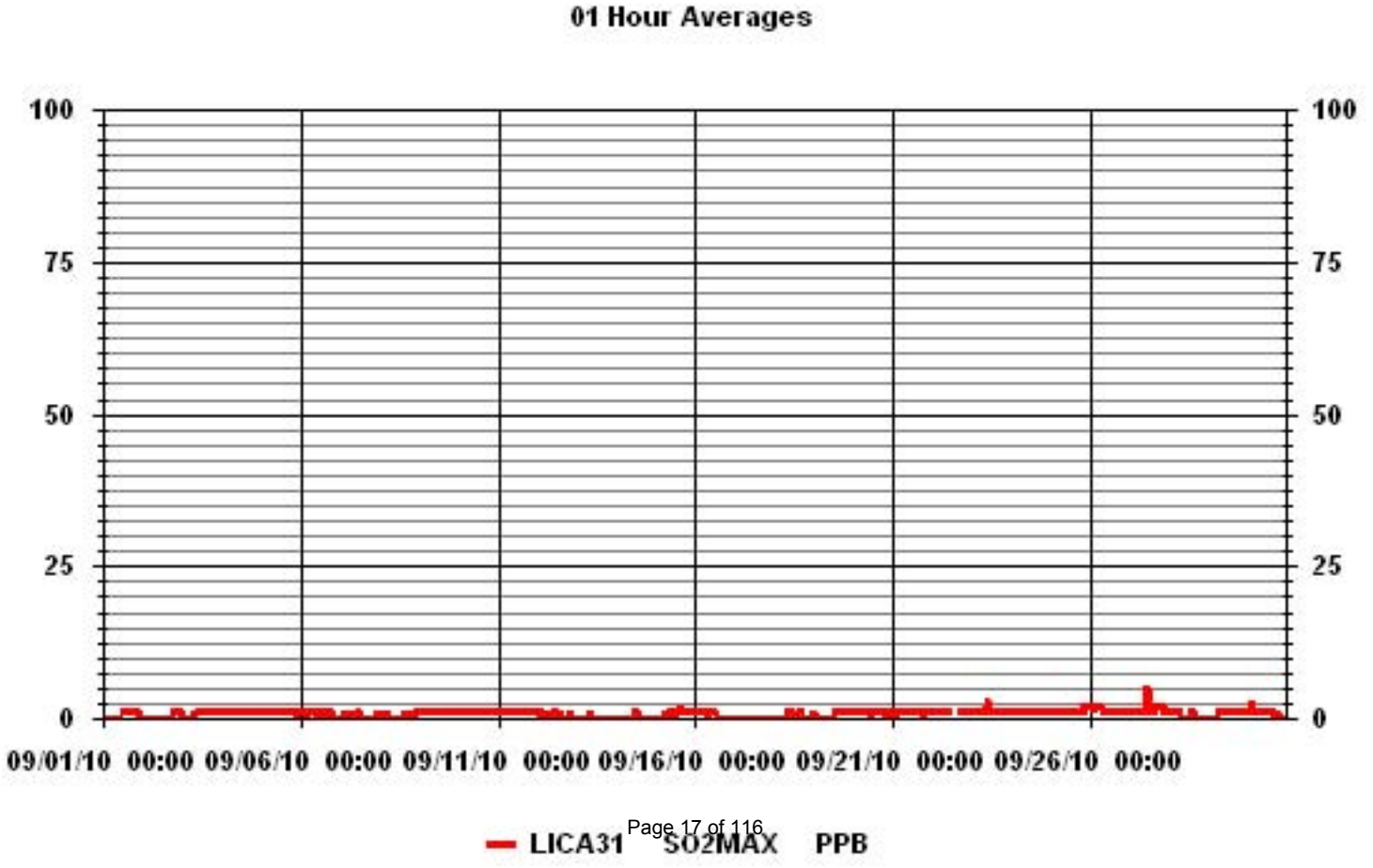
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	1	1	1	1	1	1	1	1	1	0	0	1	0.4	24
2	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.3	24
3	0	0	0	0	0	0	0	1	0	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	24
4	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
5	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1.0	24
6	1	1	1	1	0	0	**IZS**	1	1	1	0	1	1	1	1	0	1	1	1	0	0	0	0	0	1	0.6	24
7	0	0	1	0	0	**IZS**	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0.3	24
8	0	0	1	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	0.3	24
9	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
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	1.0	24
11	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
12	**IZS**	0	1	1	0	0	1	0	1	0	0	1	1	0	1	0	0	0	0	0	1	0	0	**IZS**	1	0.4	24
13	0	0	0	0	0	0	0	0	1	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	1	1	0	0	0	0	0	0	0	0	**IZS**	0	0	1	0.1	24
15	0	0	0	0	0	1	0	0	1	1	0	0	1	1	1	2	1	1	1	1	**IZS**	1	1	1	2	0.7	24
16	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	**IZS**	0	0	0	0	1	0.5	24
17	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	1	1	1	1	0	1	0	1	1	**IZS**	0	0	0	0	0	0	1	0.3	24
19	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**IZS**	1	1	1	1	1	1	1	1	0.5	24
20	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	**IZS**	1	1	1	1	0	1	1	1	1	0.9	24
21	0	0	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	0	1	1	1	1	1	1	0.9	24
22	1	1	1	1	1	1	1	1	1	1	1	1	**C**	**C**	**C**	**C**	**C**	1	1	1	1	1	1	1	1	1.0	24
23	1	1	1	1	1	1	1	1	1	2	3	2	**IZS**	1	1	1	1	1	1	1	1	1	1	1	3	1.2	24
24	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
25	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1.2	24
26	2	2	1	2	2	2	2	2	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.3	24
27	1	1	1	1	1	1	1	1	**IZS**	1	**5**	**5**	3	1	1	1	2	2	2	2	2	1	1	1	**5**	1.7	24
28	1	1	1	1	1	1	1	**IZS**	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0.4	24
29	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
30	1	1	3	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	3	0.8	24
HOURLY MAX	2	2	3	2	2	2	2	2	1	2	5	5	3	1	1	2	2	2	2	2	2	2	2	2			
HOURLY AVG	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.8	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	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:	444						
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	10, 11	ON DAY(S)	27	
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:			720	HRS
MONTHLY CALIBRATION TIME:	5	HRS					
STANDARD DEVIATION:	0.59						


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 SO2MAX PPB

LICA31
SO2_ / WDR Joint Frequency Distribution (Percent)

September 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	5.69	3.64	9.92	6.27	3.94	5.54	2.62	8.32	10.07	8.46	6.86	4.52	6.56	8.32	6.13	3.06	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	5.69	3.64	9.92	6.27	3.94	5.54	2.62	8.32	10.07	8.46	6.86	4.52	6.56	8.32	6.13	3.06	

Calm : .00 %

Total # Operational Hours : 685

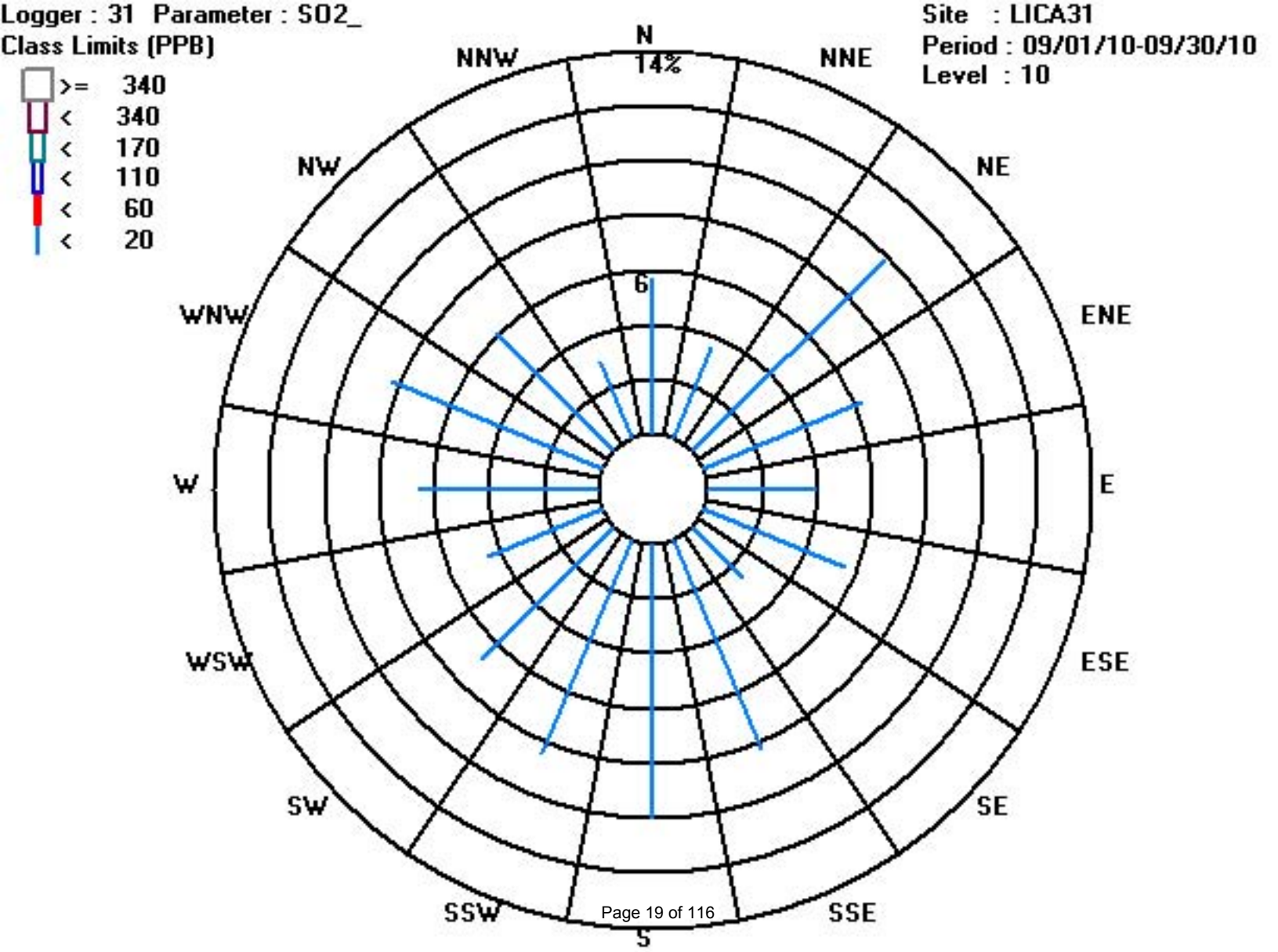
Distribution By Samples

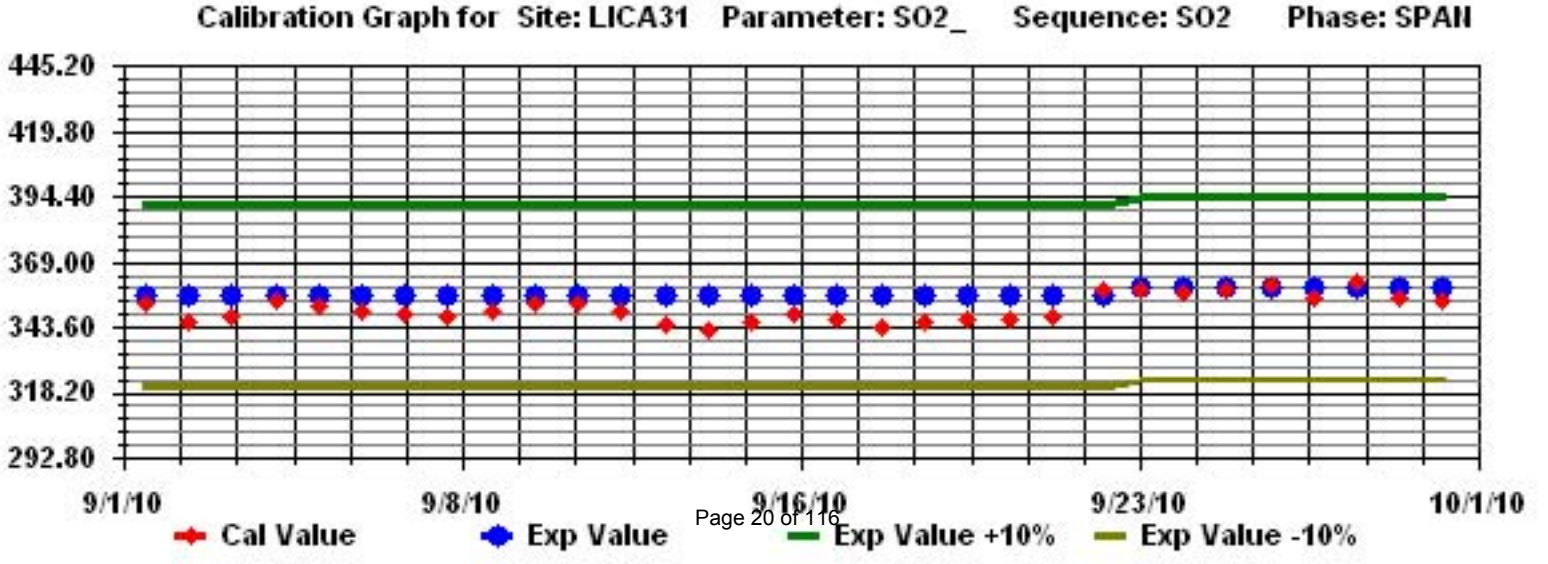
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	39	25	68	43	27	38	18	57	69	58	47	31	45	57	42	21	685
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	39	25	68	43	27	38	18	57	69	58	47	31	45	57	42	21	

Calm : .00 %

Total # Operational Hours : 685


Logger : 31 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA31
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: LICA31 Parameter: SO2_ Sequence: SO2 Phase: SPAN
445.20
419.80
394.40
369.00
343.60
318.20
292.80
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

SEPTEMBER 2010

HYDROGEN SULPHIDE (H_2S) hourly averages in ppb

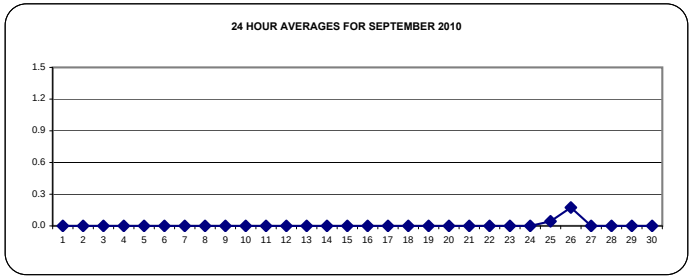
MST

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

STATUS FLAG CODES

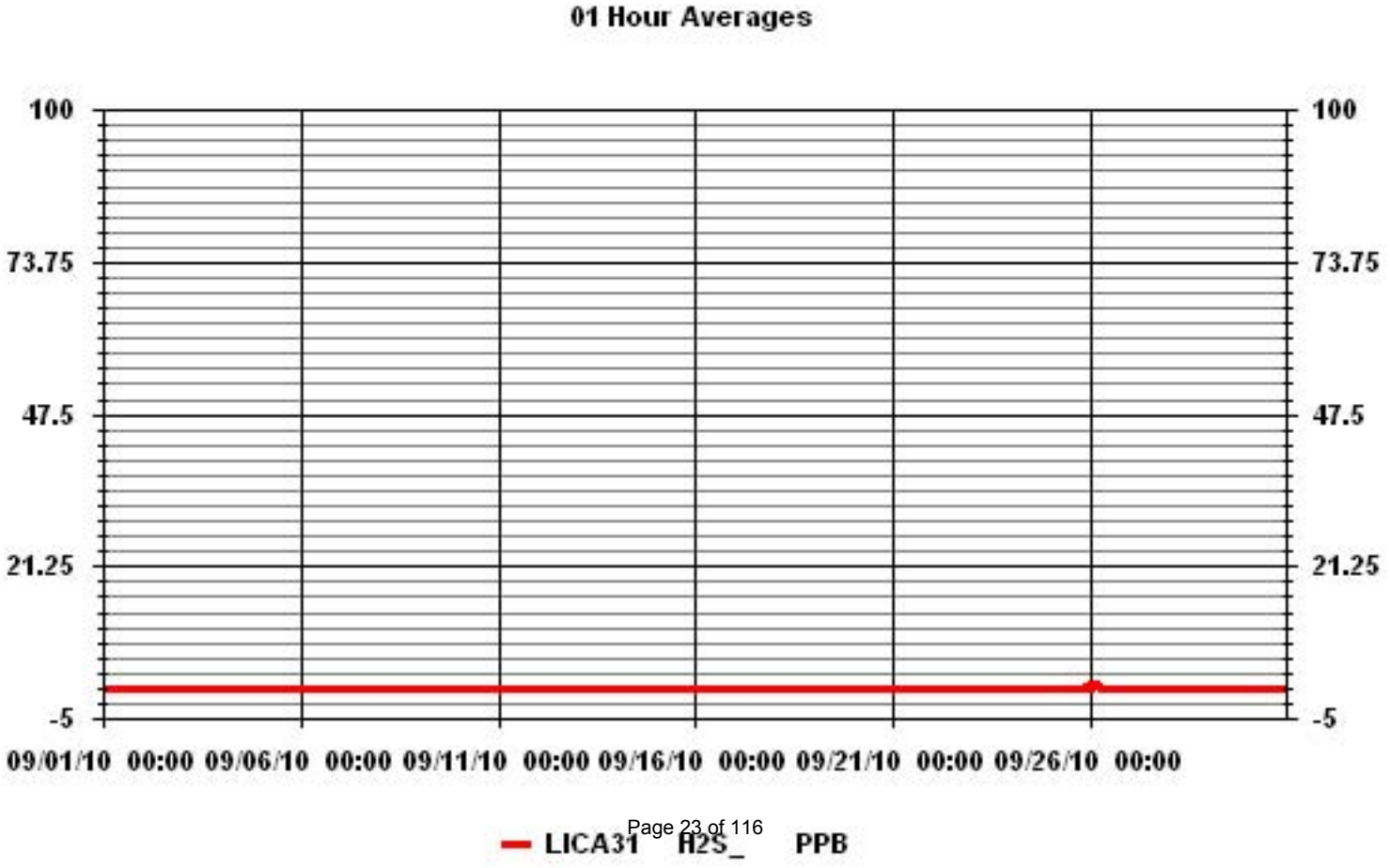
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 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:	5					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	25, 26
MAXIMUM 24-HR AVERAGE:	0.2	PPB			ON DAY(S)	26
				VAR-VARIOUS		
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.09		MONTHLY AVERAGE:		0.01	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 H2S_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

SEPTEMBER 2010

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

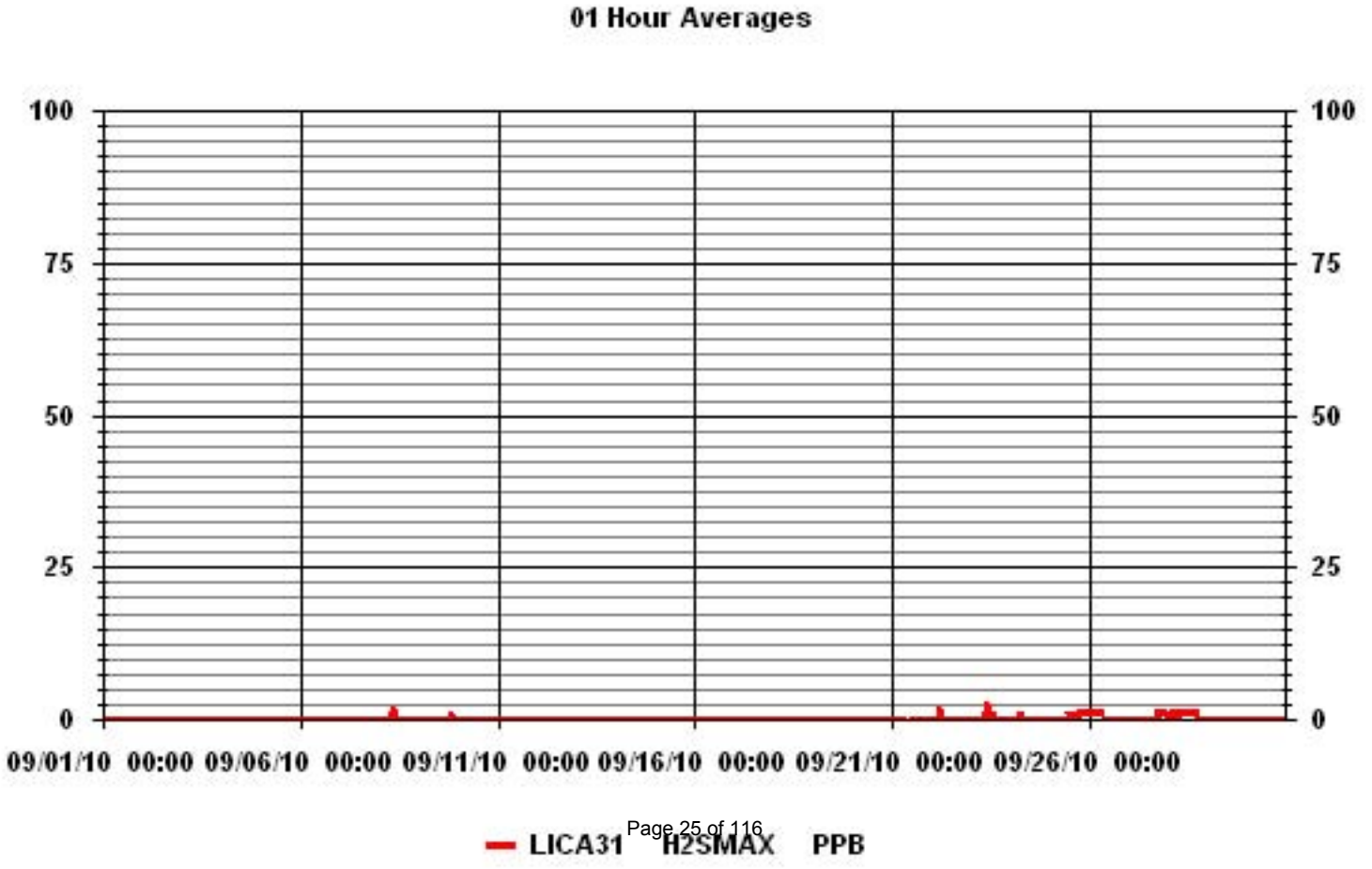
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	0	0	0	0	0	0	0	0	**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	**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	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
9	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	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	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
14	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
15	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	**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	**IZS**	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	2	0	0	0	0	0	0	0	**IZS**	0	0	**C**	0	0	0	0	0	0	0	2	0.1	24
23	0	0	0	0	0	0	0	0	0	1	**3**	1	**IZS**	1	0	0	0	0	0	0	0	0	0	0	**3**	0.3	24
24	0	0	0	0	0	0	1	0	0	0	0	**IZS**	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	**IZS**	1	0	0	1	0	0	0	1	1	1	1	1	1	1	0.3	24
26	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
27	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0.2	24
28	0	0	0	1	1	1	0	**IZS**	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.6	24
29	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	0	0	0	0	**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	2	1	1	1	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1			
HOURLY AVG	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	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:	44					
MAXIMUM INSTANTANEOUS VALUE:	3	PPB	@ HOUR(S)	10	ON DAY(S)	23
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	6	HRS				
STANDARD DEVIATION:	0.28					


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 H2SMAX PPB

LICA31
H2S_ / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : H2S_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	5.69	3.64	9.92	6.27	3.94	5.54	2.77	8.61	10.07	8.46	6.86	3.94	6.71	8.32	6.13	3.06	100.00
< 10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	5.69	3.64	9.92	6.27	3.94	5.54	2.77	8.61	10.07	8.46	6.86	3.94	6.71	8.32	6.13	3.06	

Calm : .00 %

Total # Operational Hours : 685

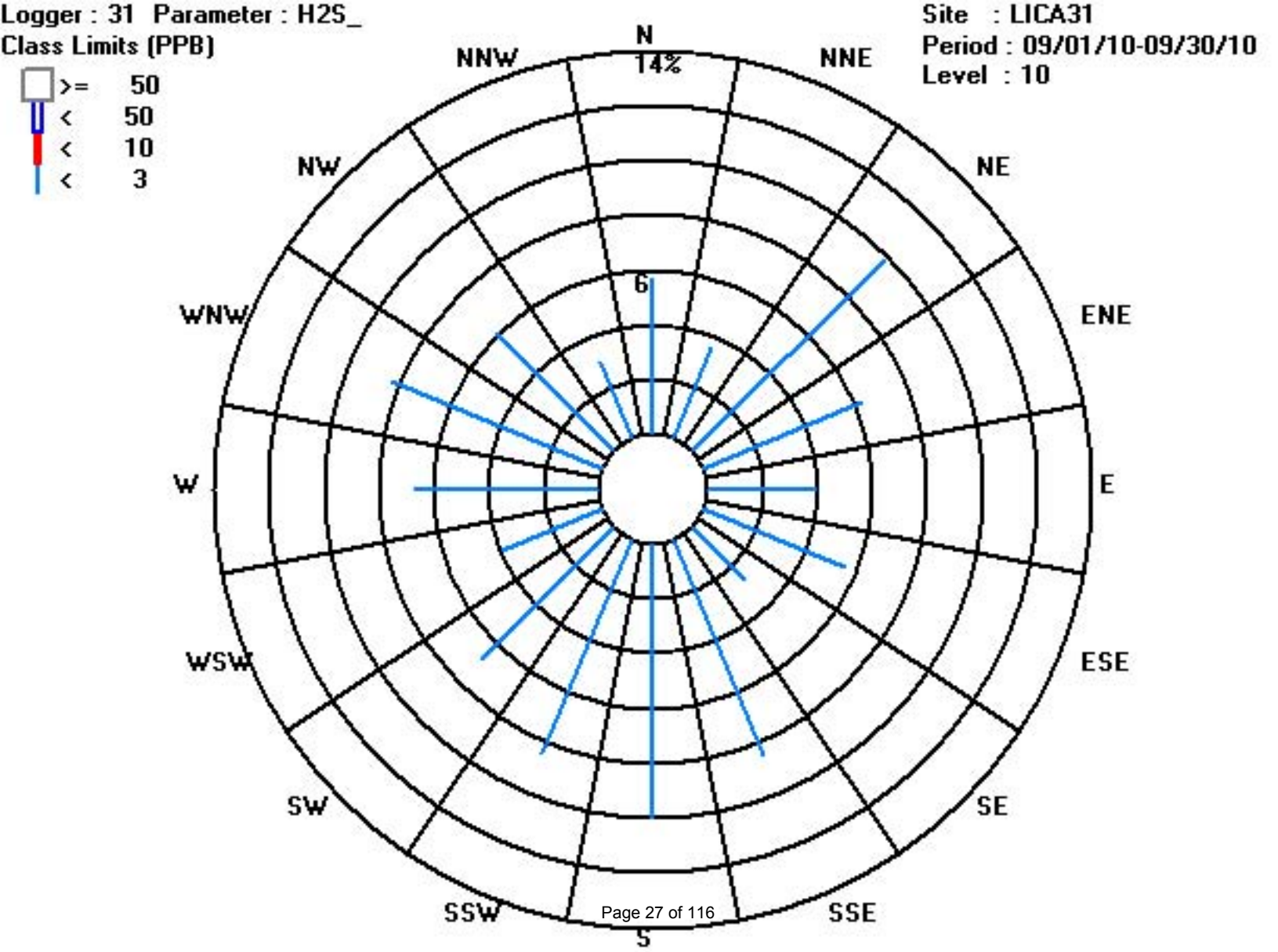
Distribution By Samples

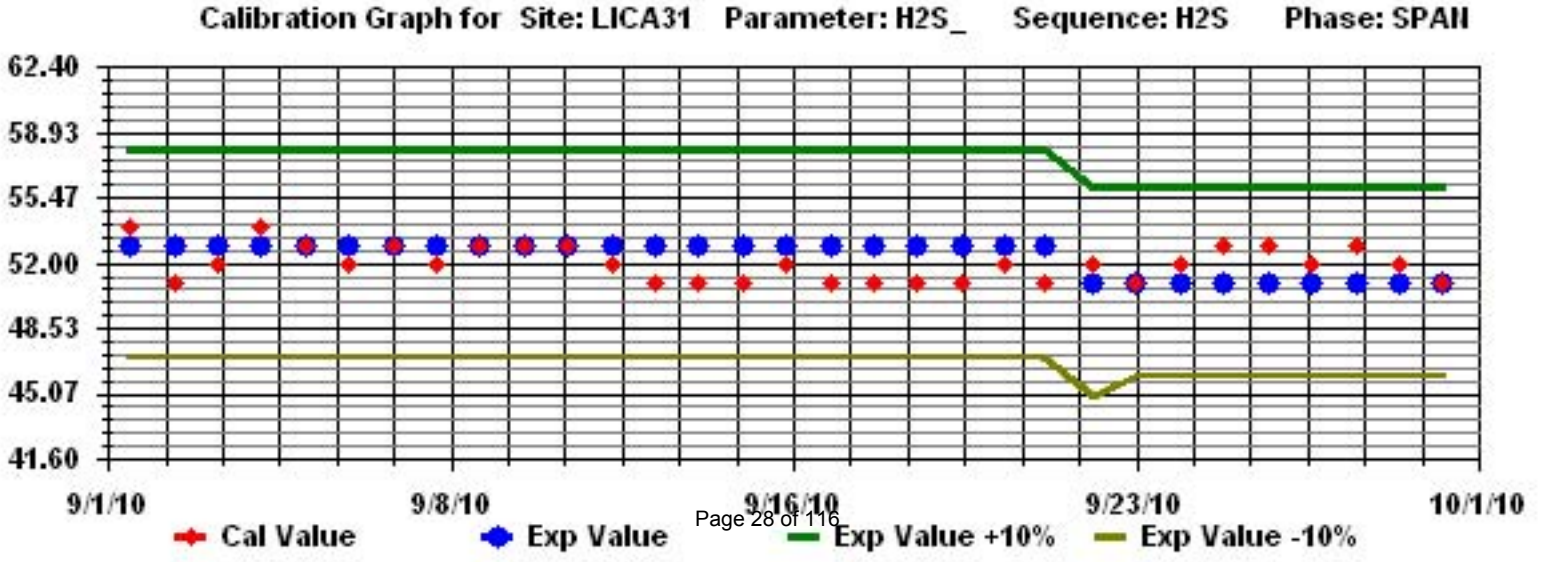
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	39	25	68	43	27	38	19	59	69	58	47	27	46	57	42	21	685
< 10																	
< 50																	
>= 50																	
Totals	39	25	68	43	27	38	19	59	69	58	47	27	46	57	42	21	

Calm : .00 %

Total # Operational Hours : 685


Logger : 31 Parameter : H2S_
Class Limits (PPB)
>= 50
< 50
< 10
< 3
Site : LICA31
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: LICA31 Parameter: H2S_ Sequence: H2S Phase: SPAN
62.40
58.93
55.47
52.00
48.53
45.07
41.60
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

SEPTEMBER 2010

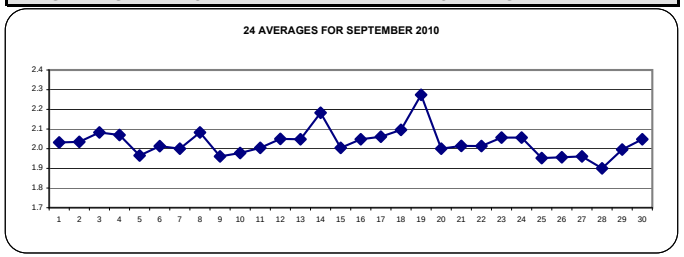
TOTAL HYDROCARBONS hourly averages in ppm

MST

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

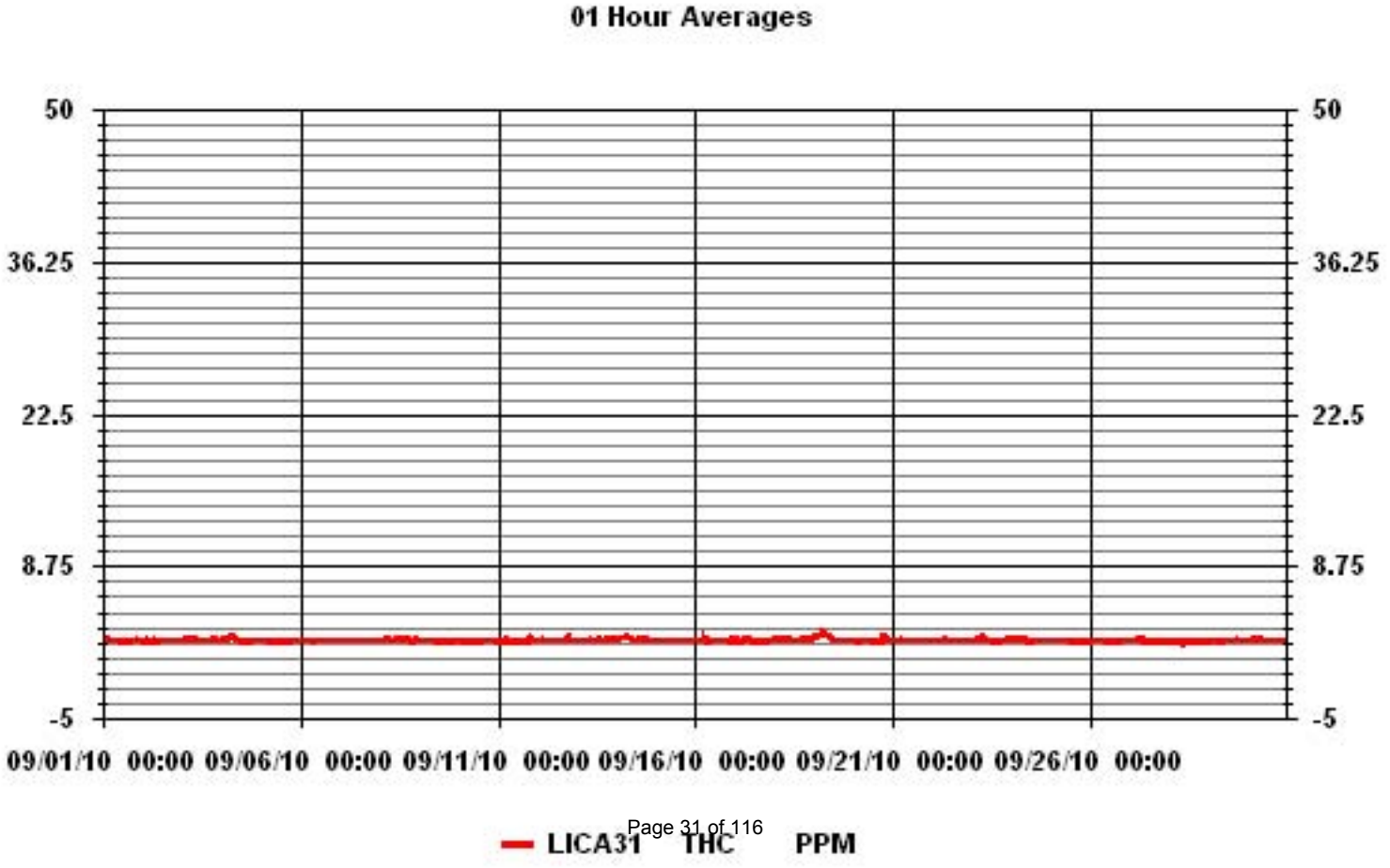
STATUS FLAG CODES

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:	685						
MAXIMUM 1-HR AVERAGE:	2.8	PPM	@ HOUR(S)	5,6	ON DAY(S)	19	
MAXIMUM 24-HR AVERAGE:	2.3	PPM			ON DAY(S)	19	
					VAR- VARIOUS		
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS	
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	0.12		MONTHLY AVERAGE:		2.03	PPM	


01 Hour Averages
50
36.25
22.5
8.75
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

SEPTEMBER 2010

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

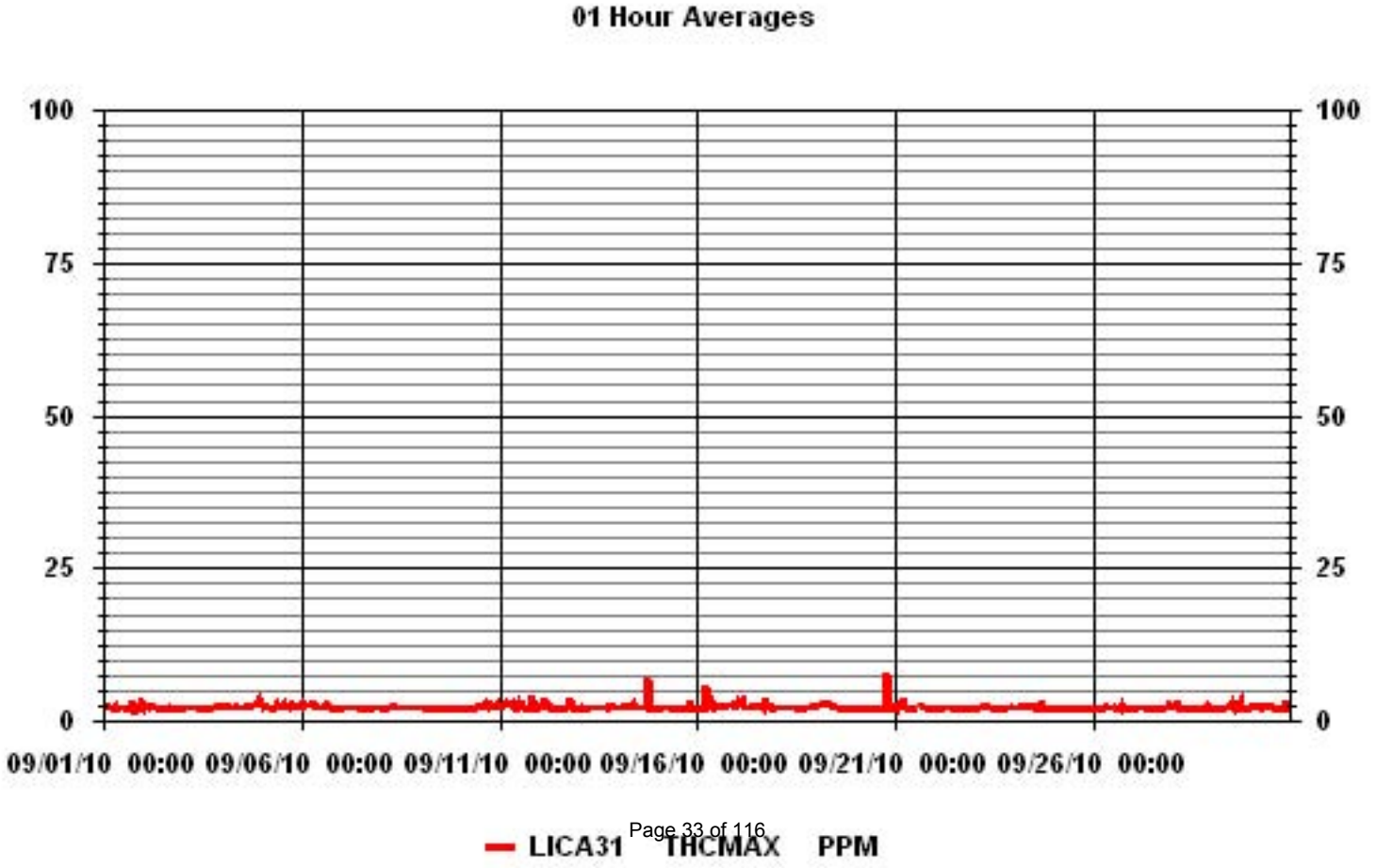
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.1	2.2	2.2	2.3	2.3	2.1	2	2.5	2	**C**	**C**	**IZS**	2.3	2	2.2	2.1	2.3	2	3.1	2.4	2	2.4	2.6	3.6	3.6	2.3	24
2	2.6	2.1	2.6	2.4	2.1	2.2	2.3	2.2	2.1	2.1	**IZS**	2.1	2	2	2	2	2.3	2	2	2	2	2	2	2	2.6	2.1	24
3	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**IZS**	2	2	2	2	2	2	2	2	2.2	2.3	2.3	2.2	2.2	2.2	2.3	2.1	24
4	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.3	**IZS**	2.5	2.4	2.2	2.1	2.3	2.2	2.2	2.3	2.3	2.2	2.4	2.6	2.8	3.5	2.9	3.5	2.4	24
5	2.7	2.3	2.6	2.3	2.4	2.1	2.2	**IZS**	2.3	2.8	2.1	2.1	2.2	2.8	2.2	2.2	2.5	2.8	2.2	2.4	2.5	2.4	2.3	2.3	2.8	2.4	24
6	2.9	2.2	2.4	2.8	2.6	2.8	**IZS**	3.2	2.5	2.6	2.3	2.3	2.1	2.1	2.6	2.7	2.7	2.5	2	2	2	2	2.1	2	3.2	2.4	24
7	2	2	2.1	2.1	2.1	**IZS**	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	24
8	2.1	2	2	2.1	**IZS**	2.1	2.1	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.1	24
9	2.1	2.1	2.1	**IZS**	2	2	2	2	2	2	2	2	2	2	2	2	2	1.9	2	2	2	2	2	2	2.1	2.0	24
10	2	2.1	**IZS**	1.9	1.9	1.9	2	2	2	2.1	2.5	2.5	2.5	2.3	2.3	2.3	2.8	2.3	2.8	2.8	2.4	2.4	2.5	3	3	2.3	24
11	2.5	**IZS**	2.3	2.7	3.2	2.9	2.8	2.7	3	2.1	2.2	2.9	2.2	2.4	2.8	2.5	2.1	1.9	2.2	4.2	3.4	2.2	2.4	2	4.2	2.6	24
12	**IZS**	2.4	2.3	3.4	3.3	3.2	3	2	2.2	2	2	2	2	2.1	2	2.2	2	2.1	2.6	3.6	2.2	2	2	**IZS**	3.6	2.4	24
13	2	2	2.2	2.2	2.1	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.1	2.2	2.2	2.2	**IZS**	2.1	2.4	2.1	24
14	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.4	2.9	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	7.2	2.1	2	**IZS**	2	2	7.2	2.4	24
15	2	2	2	2.1	2.1	2.1	2.1	2.1	2	2	2.1	2	2	2	2	2	2	2	2	3.1	**IZS**	2	2	2	3.1	2.1	24
16	2	2	2.1	2	2	5.9	3	3.1	2.6	3.1	2.3	2.6	2.5	2.6	2.4	2.3	2.6	2.2	2.2	**IZS**	2.7	2.4	2.7	2.7	5.9	2.6	24
17	2.1	3.3	3	3.3	2.1	2.1	2.1	2.1	2.2	2.6	2.4	2.3	2.4	2.3	2.3	2.6	2.2	3.2	**IZS**	2.3	2.5	2.1	2	2.1	3.3	2.4	24
18	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2	2	2	2	2.1	**IZS**	2.2	2.1	2.2	2.2	2.2	2.4	2.4	2.1	24
19	2.4	2.5	2.5	2.6	2.8	3	2.9	2.8	2.7	2.4	2.4	2.3	2.2	2.1	2	2	**IZS**	2	2	2	2	2	2	2	3	2.3	24
20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	**IZS**	2	2	2	**7.7**	2.5	2	2	2	**7.7**	2.3	24
21	2.9	2.2	2.9	2.6	2.7	3.7	2.2	2	2.1	2	2	2	**C**	**C**	**C**	**C**	2.7	2.4	2.1	2.1	2	2	2	2	3.7	2.3	24
22	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2	2	**IZS**	2	2	**C**	2	2	2	2	2	2	2	2.1	2.0	24
23	2	2	2	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.1	2	**IZS**	1.9	1.9	1.9	1.9	2	2	2	2.1	2.1	2.2	2.2	2.3	2.1	24
24	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.4	**IZS**	2.7	2	2.2	2.6	3	3.1	2	2	2	2	2	2	3.1	2.3	24
25	2	2	2	2	2	2	2	2	2	2	**IZS**	2	2	2	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	2	2	2.0	24
26	2	2	2	2	2	2.1	2	2.5	2.3	**IZS**	2.2	2.3	2.1	2.2	2.2	2	2	2.6	1.9	2.1	2.2	2	2	2	2.6	2.1	24
27	2	2	2	2.1	2.1	2.1	2.1	2.1	**IZS**	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	3	1.9	3	2.0	24
28	2.5	2.6	2.6	2.8	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	2.1	2.1	1.9	1.9	1.9	2.6	2.2	1.9	2.8	2.1	24
29	1.9	2	2	2	2	2.1	**IZS**	2	2.1	2.3	2.3	2.3	3.1	2.5	2	2.5	2.8	3.3	2.1	2.3	2.1	2	2	2.1	3.3	2.3	24
30	2.2	2.3	2.2	2.2	2.2	**IZS**	2.1	2.2	2.3	2.4	2.4	2.7	2.6	2.5	2.1	2	2	2.1	2	2	2	3.1	2.1	2.3	3.1	2.3	24
HOURLY MAX	3	3	3	3	3	6	3	3	3	3	3	3	3	3	3	3	3	3	7	8	3	3	4	4			
HOURLY AVG	2.2	2.2	2.2	2.3	2.2	2.4	2.2	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.5	2.2	2.2	2.2	2.2			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	683						
MAXIMUM INSTANTANEOUS VALUE:	7.7	PPM	@ HOUR(S)	19	ON DAY(S)	20	
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	720	HRS		
MONTHLY CALIBRATION TIME:	7	HRS					
STANDARD DEVIATION:	0.45						


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 THCMAX PPM

LICA31
THC / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : THC
Units : PPM

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	5.69	3.50	9.92	6.27	3.94	5.54	2.77	8.61	10.07	8.46	6.71	4.37	6.56	8.32	6.13	3.06	100.00
<	10.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.69	3.50	9.92	6.27	3.94	5.54	2.77	8.61	10.07	8.46	6.71	4.37	6.56	8.32	6.13	3.06	

Calm : .00 %

Total # Operational Hours : 685

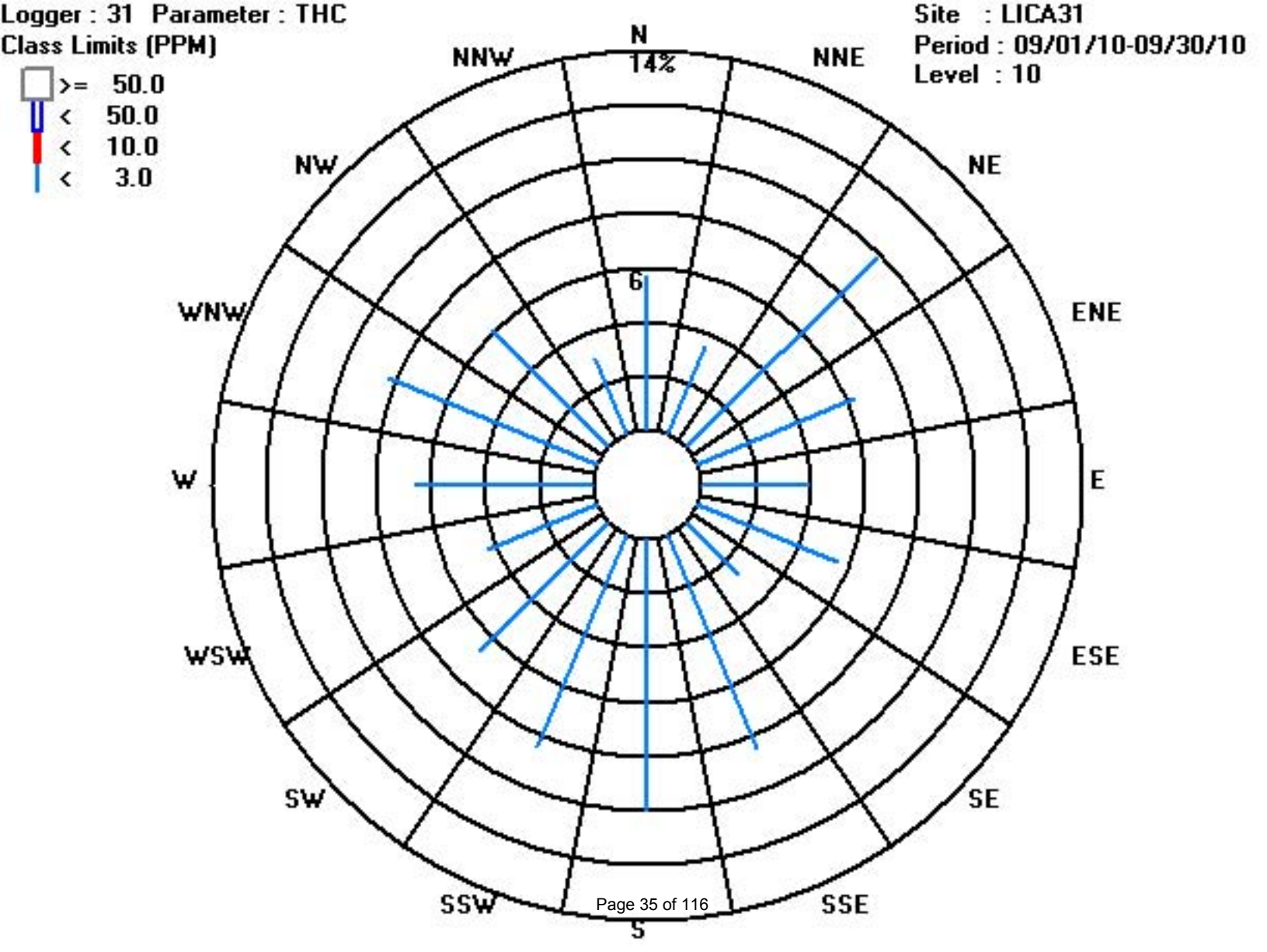
Distribution By Samples

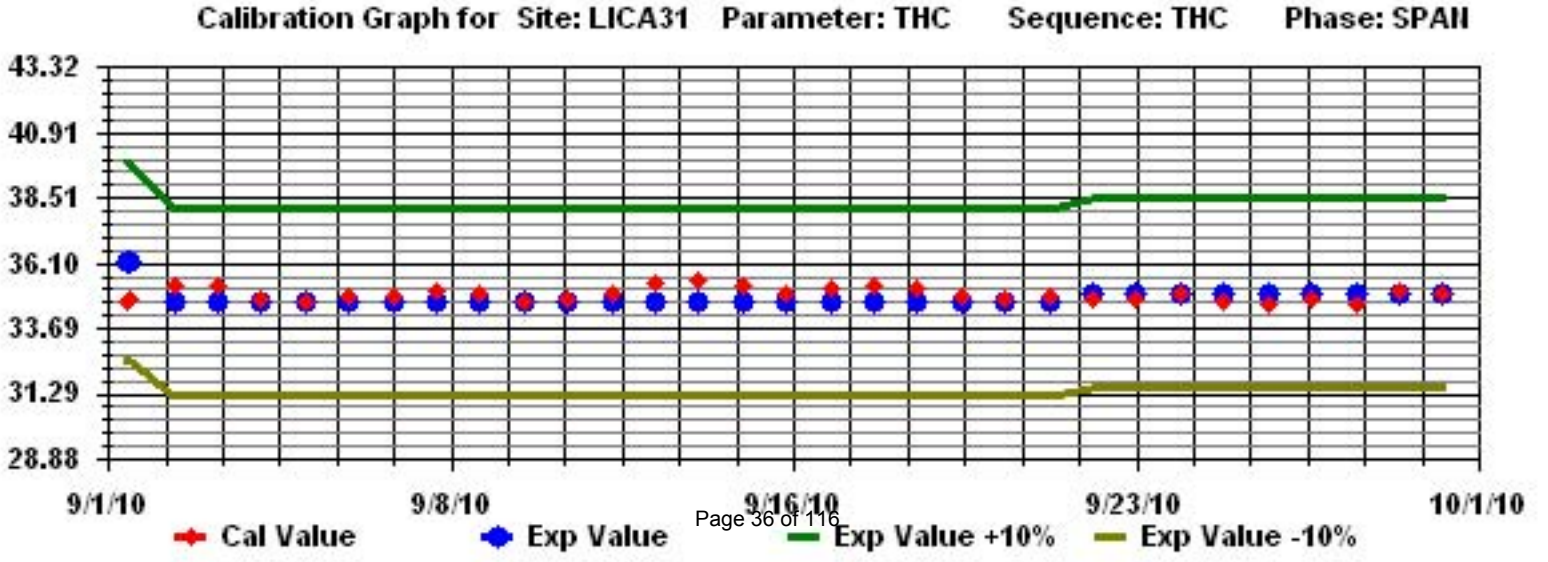
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	39	24	68	43	27	38	19	59	69	58	46	30	45	57	42	21	685
<	10.0																	
<	50.0																	
>=	50.0																	
	Totals	39	24	68	43	27	38	19	59	69	58	46	30	45	57	42	21	

Calm : .00 %

Total # Operational Hours : 685


Logger : 31 Parameter : THC
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0
Site : LICA31
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: LICA31 Parameter: THC Sequence: THC Phase: SPAN
43.32
40.91
38.51
36.10
33.69
31.29
28.88
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

SEPTEMBER 2010

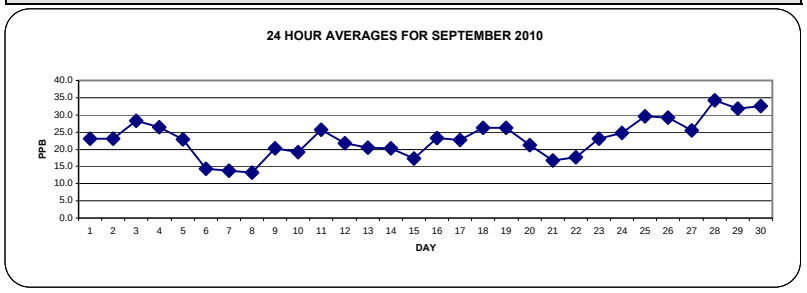
OZONE (O_3) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	24	22	22	22	14	14	15	15	18	20	24	**IZS**	29	30	32	32	33	30	28	25	21	20	21	19	33	23.0	24
2	18	17	16	17	16	17	11	14	18	21	**IZS**	30	31	32	30	28	28	26	27	27	25	26	28	28	32	23.1	24
3	27	24	21	20	18	18	18	20	21	**IZS**	32	36	35	35	36	33	34	34	33	31	32	33	30	30	36	28.3	24
4	30	27	26	25	23	19	19	20	**IZS**	22	25	28	30	33	33	32	29	32	31	29	28	25	19	21	33	26.3	24
5	21	21	22	22	21	20	20	**IZS**	19	20	21	24	27	28	29	32	29	27	24	22	21	20	18	17	32	22.8	24
6	15	14	13	12	11	10	**IZS**	10	11	12	13	15	15	14	13	12	12	12	18	24	21	19	18	16	24	14.3	24
7	15	15	15	14	14	**IZS**	12	12	12	12	13	13	14	15	17	17	17	15	14	12	11	12	13	12	17	13.7	24
8	12	11	11	13	**IZS**	13	13	12	11	11	14	14	15	16	17	16	14	13	12	12	12	13	14	14	17	13.2	24
9	21	16	15	**IZS**	16	19	18	18	17	17	17	20	21	22	23	25	26	27	26	24	21	20	20	19	27	20.3	24
10	18	17	**IZS**	16	15	17	16	17	18	17	18	22	23	23	23	22	23	23	21	22	20	19	17	15	23	19.2	24
11	14	**IZS**	22	25	26	26	25	28	31	32	37	36	31	28	25	24	24	24	22	24	24	23	21	20	37	25.7	24
12	**IZS**	20	19	18	18	17	17	16	21	20	21	23	25	25	25	26	28	26	23	22	24	22	24	**IZS**	28	21.8	24
13	22	20	18	19	18	17	16	16	15	14	20	26	28	28	27	28	26	25	22	19	16	14	**IZS**	17	28	20.5	24
14	18	17	18	16	15	14	15	13	14	15	19	23	28	30	27	27	25	23	23	22	25	**IZS**	22	19	30	20.3	24
15	17	15	13	13	13	12	11	11	12	12	17	18	19	20	19	21	21	24	26	24	**IZS**	23	19	18	26	17.3	24
16	18	20	19	17	18	17	18	17	18	21	25	29	30	30	29	29	28	32	30	**IZS**	25	23	22	22	32	23.3	24
17	22	21	21	20	19	16	14	15	20	25	25	25	25	24	25	26	26	25	**IZS**	28	29	25	23	22	29	22.7	24
18	21	20	21	21	20	19	19	23	24	22	22	25	31	34	34	34	35	**IZS**	33	30	30	29	31	27	35	26.3	24
19	30	29	26	26	22	14	13	16	18	19	23	25	29	34	32	34	**IZS**	34	37	33	29	28	28	26	37	26.3	24
20	25	24	24	22	23	23	22	23	22	20	18	21	21	22	22	**IZS**	22	22	19	20	18	18	17	18	25	21.1	24
21	17	15	14	17	18	10	11	13	13	16	18	20	22	22	**IZS**	23	23	19	18	16	16	15	15	13	23	16.7	24
22	12	13	12	13	12	12	10	9	12	13	14	21	**C**	**C**	**C**	**C**	**C**	31	29	27	25	25	24	23	31	17.7	24
23	23	22	21	19	18	16	12	11	13	16	20	26	**IZS**	29	32	32	30	32	30	31	28	26	23	19	32	23.0	24
24	18	15	15	13	9	8	9	9	13	21	29	**IZS**	37	34	33	36	36	37	36	35	32	31	32	30	37	24.7	24
25	29	30	27	24	23	23	23	21	19	21	**IZS**	25	30	33	36	41	41	39	37	36	34	31	29	28	41	29.6	24
26	27	27	25	23	22	22	20	20	21	**IZS**	29	37	38	38	36	34	36	38	37	34	31	27	26	25	38	29.3	24
27	25	19	15	11	8	8	11	13	**IZS**	20	30	34	37	37	35	36	37	35	34	32	27	27	27	30	37	25.6	24
28	39	40	**43**	**43**	40	37	39	**IZS**	34	33	33	33	31	33	33	32	32	33	32	29	31	30	28	29	**43**	**34.2**	24
29	29	25	25	23	24	23	**IZS**	26	27	28	33	34	36	38	38	38	39	39	38	36	35	33	34	32	39	31.9	24
30	29	29	25	23	20	**IZS**	26	27	27	31	34	34	35	37	37	37	37	36	37	37	37	38	38	38	38	32.6	24
HOURLY MAX	39	40	43	43	40	37	39	28	34	33	37	37	38	38	38	41	41	39	38	37	37	38	38	38			
HOURLY AVG	21.9	20.9	20.1	19.6	18.4	17.2	16.9	16.6	18.5	19.7	23.0	25.6	27.6	28.4	28.5	28.8	28.3	28.0	27.5	26.3	25.1	24.0	23.5	22.3			

STATUS FLAG CODES

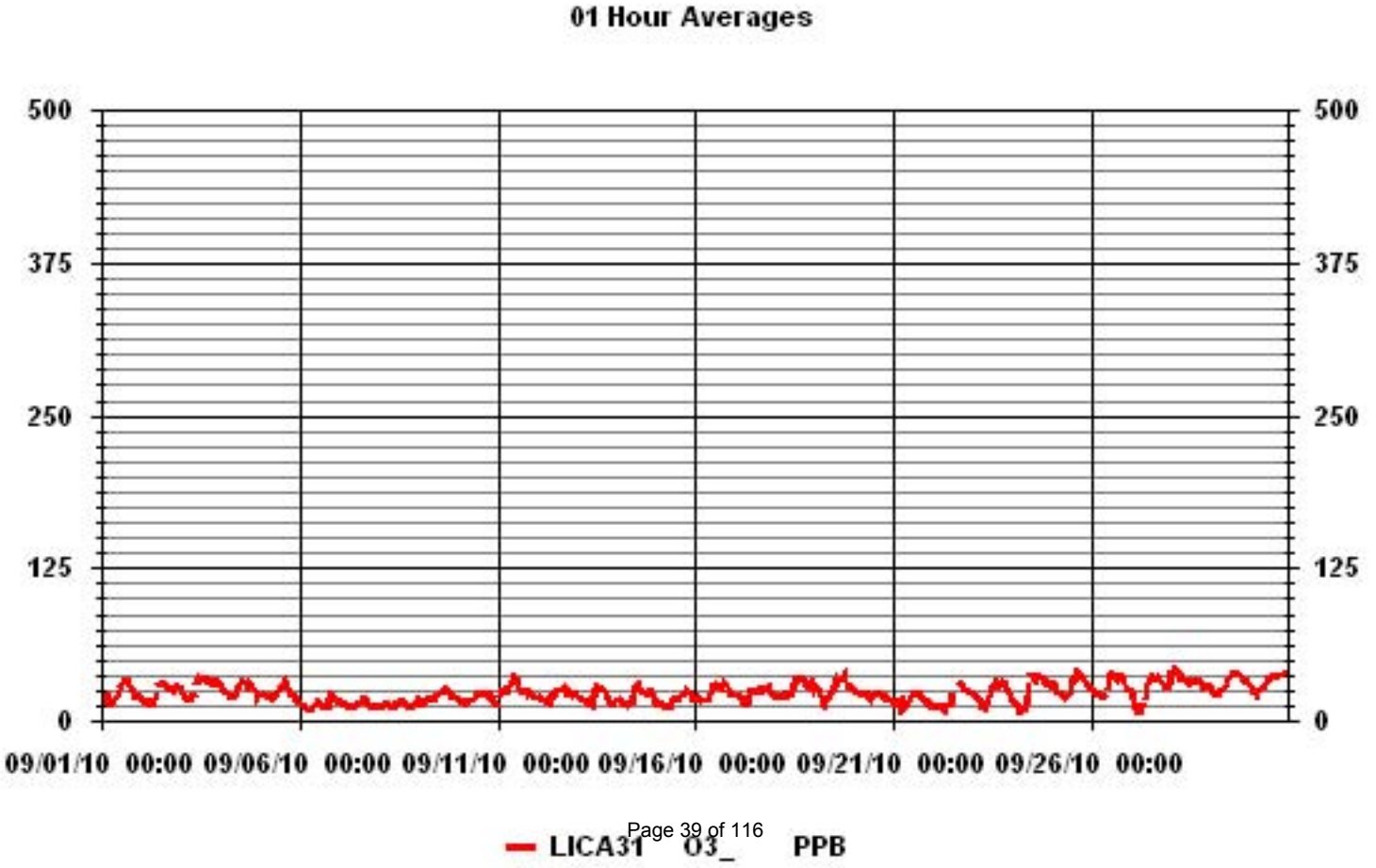
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	685						
MAXIMUM 1-HR AVERAGE:	43	PPB	@ HOUR(S)	2, 3	ON DAY(S)		28
MAXIMUM 24-HR AVERAGE:	34.2	PPB			ON DAY(S)		28
					VAR-VARIOUS		
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:			720	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME			100.0	%
STANDARD DEVIATION	7.63		MONTHLY AVERAGE			23.20	PPB


01 Hour Averages
500
375
250
125
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 O3_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

SEPTEMBER 2010

OZONE MAX instantaneous maximum in ppb

MST

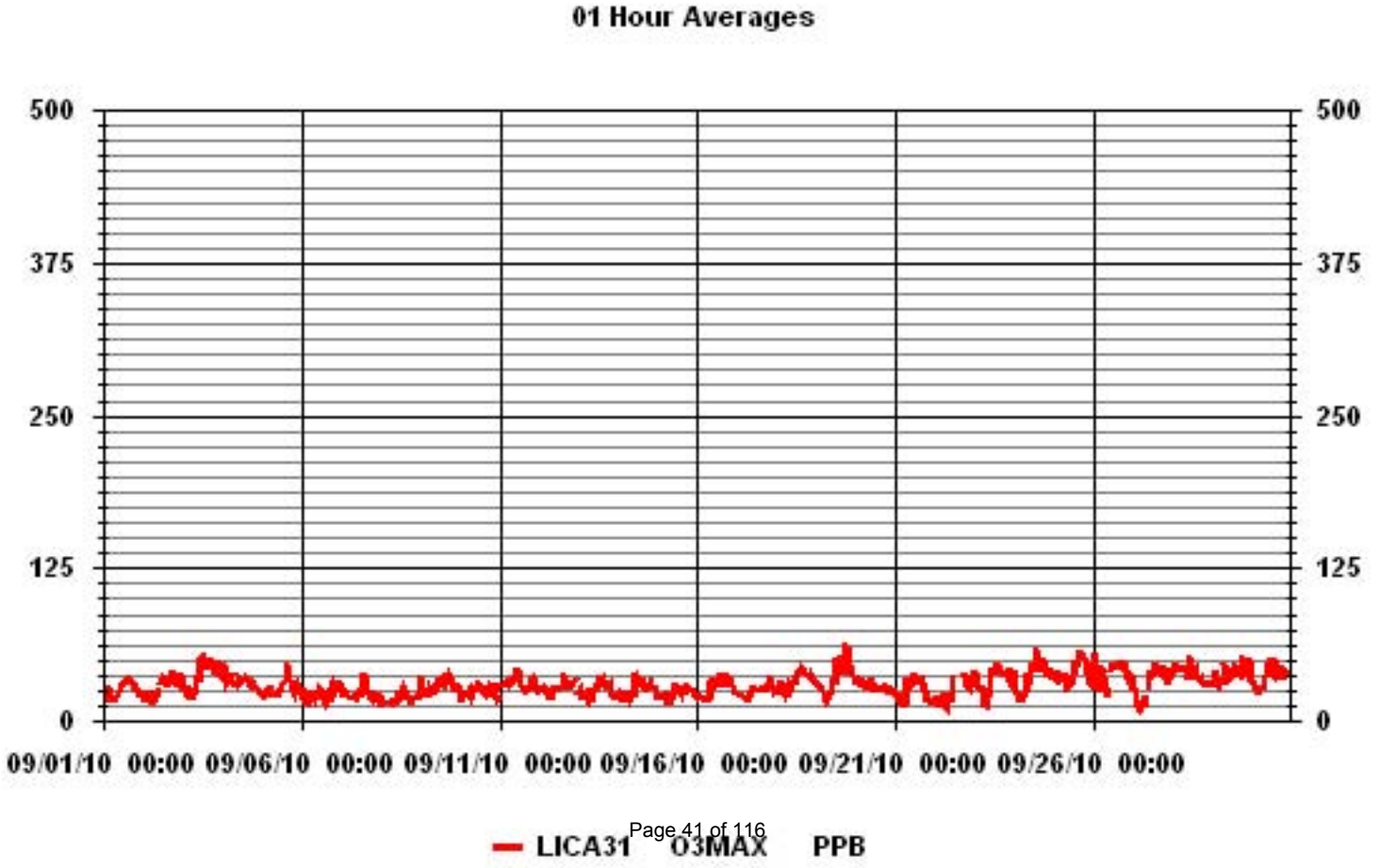
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	27	24	26	26	15	18	17	18	20	24	28	**IZS**	31	33	33	34	34	33	31	27	24	25	21	21	34	25.7	24
2	18	17	17	25	19	19	14	25	19	24	**IZS**	32	35	33	32	29	37	29	41	36	36	29	29	39	41	27.6	24
3	28	26	27	21	19	19	26	22	35	**IZS**	35	50	52	48	44	44	45	50	45	39	43	49	38	37	52	36.6	24
4	44	44	31	33	30	39	32	31	**IZS**	37	29	30	32	34	36	34	31	33	33	31	29	27	24	22	44	32.4	24
5	22	21	24	23	27	27	27	**IZS**	21	21	24	25	29	30	32	48	31	35	26	23	27	30	26	24	48	27.1	24
6	22	27	13	17	16	23	**IZS**	22	19	24	20	27	25	20	17	14	16	17	27	32	30	26	29	33	33	22.4	24
7	27	20	23	21	21	**IZS**	19	19	21	20	25	20	26	22	38	22	24	21	22	20	25	20	21	21	38	22.5	24
8	14	13	14	15	**IZS**	15	14	17	18	17	20	24	20	22	28	26	22	19	13	19	19	19	20	18	28	18.5	24
9	36	24	22	**IZS**	22	27	24	24	24	25	30	35	29	33	31	38	33	39	37	32	28	26	27	31	39	29.4	24
10	26	18	**IZS**	21	22	22	25	20	23	29	23	33	24	27	25	29	24	27	23	24	22	30	23	18	33	24.3	24
11	19	**IZS**	30	31	28	34	29	30	33	37	40	40	34	30	27	27	25	26	28	33	35	30	26	25	40	30.3	24
12	**IZS**	27	26	28	25	24	20	20	26	27	26	26	27	27	27	38	34	31	29	28	29	32	34	**IZS**	38	27.8	24
13	24	26	20	20	20	18	27	22	16	24	26	30	35	35	32	34	29	30	28	30	21	21	**IZS**	20	35	25.6	24
14	23	21	19	21	16	25	21	18	21	21	39	27	36	34	32	33	29	27	28	25	32	**IZS**	27	21	39	25.9	24
15	20	20	20	20	20	24	16	16	20	20	22	30	25	26	23	27	22	29	29	27	**IZS**	25	21	21	30	22.7	24
16	19	21	21	19	19	18	18	27	25	34	28	31	34	37	36	32	33	39	31	**IZS**	34	30	24	23	39	27.5	24
17	23	22	21	21	20	19	16	22	22	27	27	26	25	25	26	26	28	26	**IZS**	29	36	29	25	27	36	24.7	24
18	27	21	26	32	26	22	25	29	26	29	34	33	39	39	43	41	41	**IZS**	39	38	33	37	34	33	43	32.5	24
19	31	31	28	28	25	18	16	18	22	24	32	32	52	43	42	51	**IZS**	47	**61**	60	37	46	38	33	**61**	35.4	24
20	34	34	32	28	34	29	25	31	31	34	28	29	25	25	28	**IZS**	28	27	31	26	27	25	24	25	34	28.7	24
21	22	18	16	19	22	16	12	34	27	28	33	39	29	34	**IZS**	35	32	27	25	18	17	17	16	17	39	24.0	24
22	19	19	14	14	15	23	11	10	22	15	19	35	**C**	**C**	**C**	**C**	**C**	37	37	29	27	33	27	30	37	22.9	24
23	40	31	30	28	26	26	15	14	20	26	40	40	**IZS**	42	48	39	39	39	38	38	36	43	30	28	48	32.9	24
24	41	24	23	18	18	18	20	23	40	30	44	**IZS**	47	59	39	45	44	48	51	42	39	38	43	39	59	36.2	24
25	36	37	40	33	34	38	31	39	28	29	**IZS**	32	37	46	46	51	58	50	54	43	44	32	30	32	58	39.1	24
26	27	56	26	31	24	45	31	32	22	**IZS**	43	45	45	45	45	45	49	44	49	42	37	40	33	38	56	38.9	24
27	28	25	17	14	10	12	13	18	**IZS**	27	42	37	39	46	39	43	41	39	38	46	35	30	34	39	46	31.0	24
28	42	45	46	45	43	42	42	**IZS**	36	45	53	34	45	42	36	36	34	36	33	31	32	31	32	31	53	38.8	24
29	31	28	42	31	29	33	**IZS**	44	30	36	39	36	37	45	45	44	40	39	54	41	36	48	51	34	54	38.8	24
30	33	32	28	25	24	**IZS**	28	29	37	45	45	52	39	38	51	37	38	37	44	41	37	38	38	38	52	37.1	24
HOURLY MAX	44	56	46	45	43	45	42	44	40	45	53	52	52	59	51	51	58	50	61	60	44	49	51	39			
HOURLY AVG	27.7	26.6	24.9	24.4	23.1	24.8	21.9	24.1	25.1	27.8	31.9	33.2	34.0	35.2	35.0	35.8	33.6	33.8	35.3	32.8	31.3	31.2	29.1	28.2			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	685					
MAXIMUM INSTANTANEOUS VALUE:	61	PPB	@ HOUR(S)	18	ON DAY(S)	19
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	9.22					


01 Hour Averages
500
375
250
125
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 O3MAX PPB

LICA31
O3_ / WDR Joint Frequency Distribution (Percent)

September 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	5.69	3.64	9.92	6.27	3.94	5.54	2.62	8.32	10.07	8.46	6.86	4.52	6.56	8.32	6.13	3.06	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.69	3.64	9.92	6.27	3.94	5.54	2.62	8.32	10.07	8.46	6.86	4.52	6.56	8.32	6.13	3.06	

Calm : .00 %

Total # Operational Hours : 685

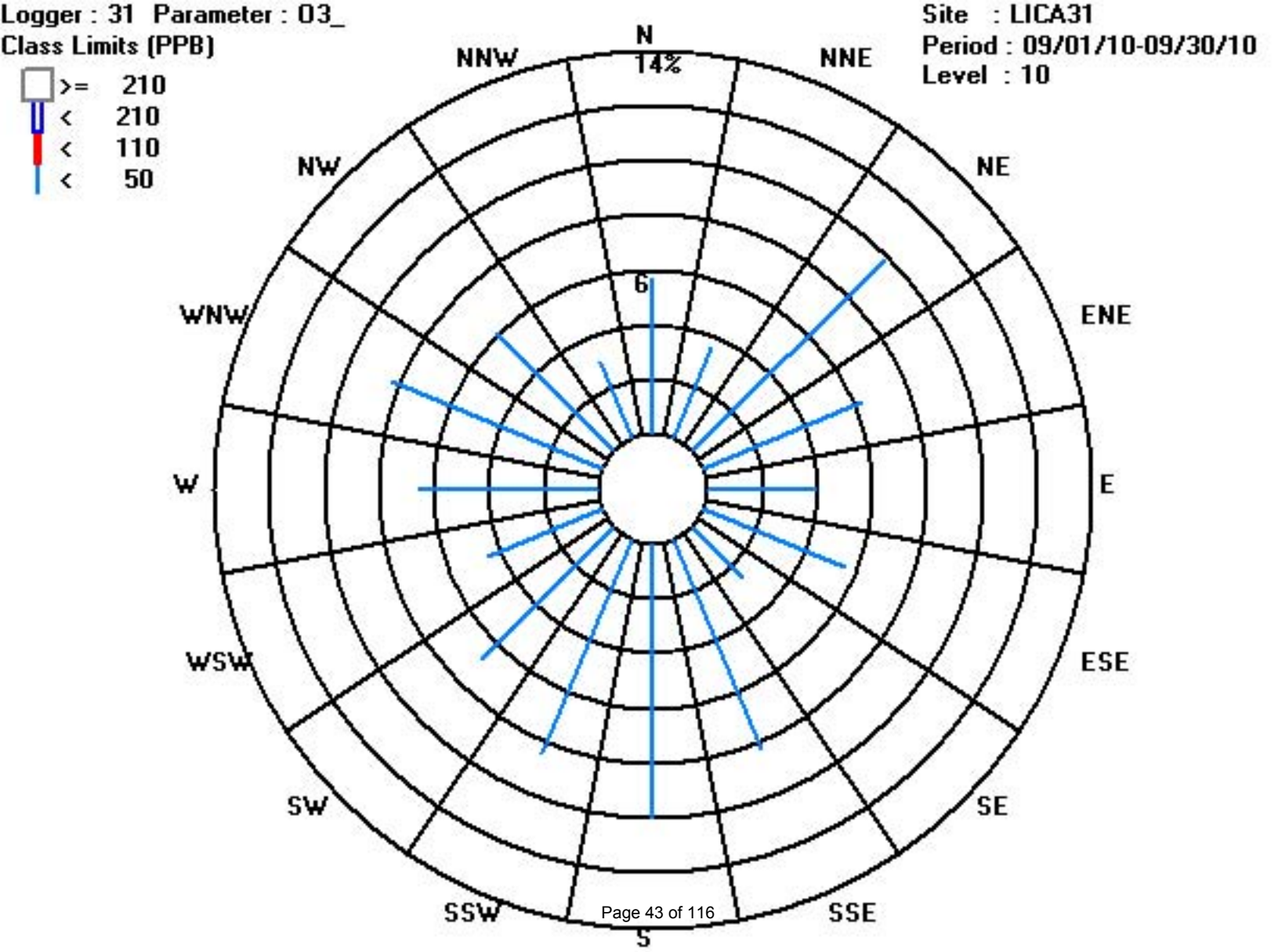
Distribution By Samples

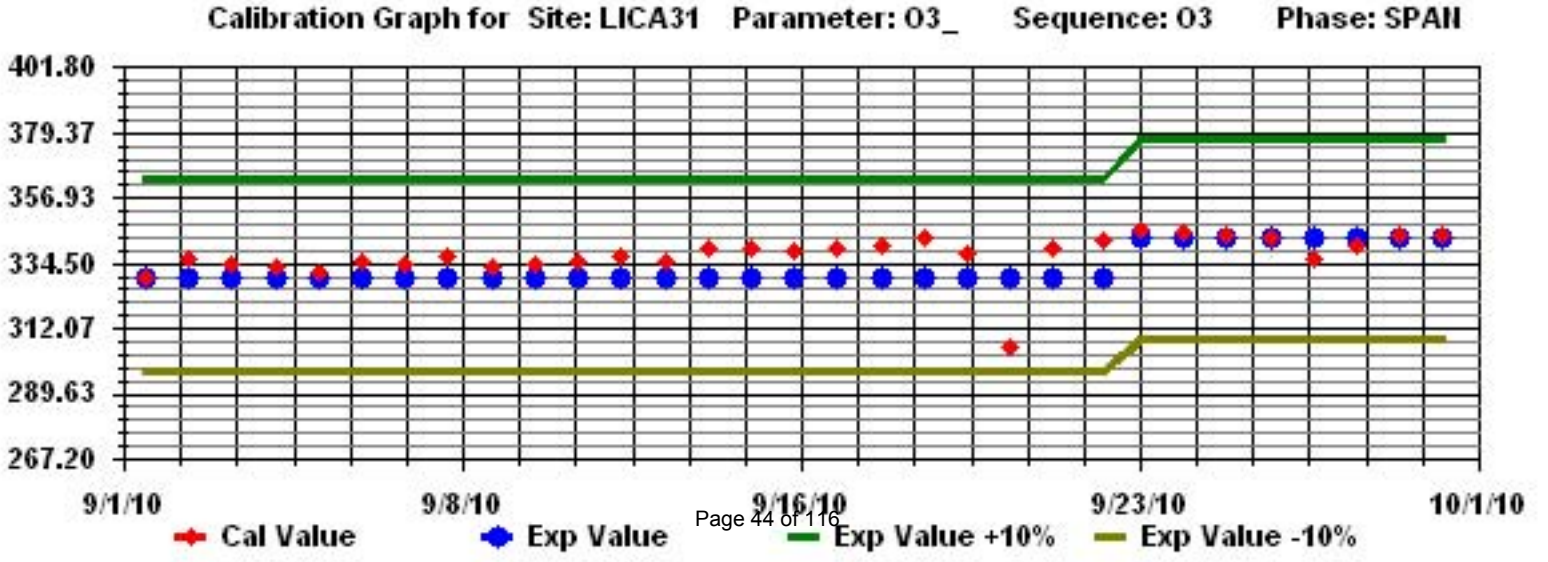
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	39	25	68	43	27	38	18	57	69	58	47	31	45	57	42	21	685
<	110																	
<	210																	
>=	210																	
	Totals	39	25	68	43	27	38	18	57	69	58	47	31	45	57	42	21	

Calm : .00 %

Total # Operational Hours : 685


Logger : 31 Parameter : 03_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA31
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: LICA31 Parameter: O3_ Sequence: O3 Phase: SPAN
401.80
379.37
356.93
334.50
312.07
289.63
267.20
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

SEPTEMBER 2010

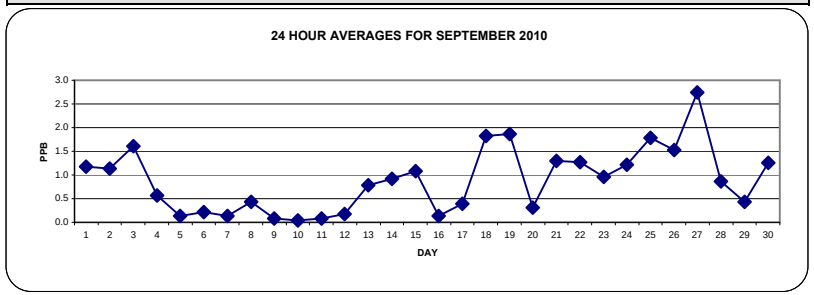
NITROGEN DIOXIDE hourly averages in ppb

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	2	3	2	2	3	3	2	3	2	1	1	**IZS**	0	0	0	0	0	0	0	0	0	1	1	1	3	1.2	24
2	1	1	1	1	1	1	1	1	1	1	**IZS**	0	1	1	1	0	0	1	1	1	2	3	3	2	3	1.1	24
3	2	2	2	2	2	3	3	3	2	**IZS**	1	1	1	1	1	1	1	1	1	2	2	1	1	1	3	1.6	24
4	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0.6	24
5	0	1	1	0	0	0	0	**IZS**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
6	0	0	0	0	0	1	**IZS**	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	0.2	24
7	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	0.1	24
8	0	0	0	0	**IZS**	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.4	24
9	0	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24
10	0	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
11	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0.1	24
12	**IZS**	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**IZS**	1	0.2	24
13	0	0	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	1	1	1	2	2	**IZS**	1	2	0.8	24
14	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	**IZS**	1	1	2	0.9	24
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	1	1	**IZS**	0	0	1	3	1.1	24
16	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	2	0.1	24
17	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	**IZS**	0	1	2	2	1	2	0.4	24
18	1	2	2	2	3	3	4	3	3	2	2	2	1	1	1	1	1	**IZS**	1	1	1	2	1	2	4	1.8	24
19	2	2	2	2	3	6	5	3	3	2	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	6	1.9	24
20	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0.3	24
21	0	1	1	1	1	1	1	1	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	1	1	1	3	3	2	2	3	1.3	24
22	3	2	1	1	1	1	1	1	1	2	2	1	1	**IZS**	1	1	**C**	1	2	1	1	1	1	1	3	1.3	24
23	1	1	1	1	1	2	2	2	2	1	1	1	**IZS**	0	0	0	0	0	1	1	1	1	1	1	2	1.0	24
24	1	1	1	1	1	1	2	3	3	2	1	**IZS**	0	0	1	0	0	0	1	1	2	2	2	2	3	1.2	24
25	1	2	2	2	2	2	2	2	2	2	**IZS**	2	1	2	1	1	1	2	2	2	2	2	2	2	2	1.8	24
26	3	3	2	3	3	3	4	3	2	**IZS**	0	0	0	0	0	0	0	0	0	1	1	2	3	2	4	1.5	24
27	3	4	4	5	**7**	6	5	3	**IZS**	2	2	2	1	1	1	1	1	2	2	2	3	3	2	1	**7**	**2.7**	24
28	1	0	0	0	0	1	0	**IZS**	0	1	1	2	3	3	3	2	1	0	0	1	0	1	0	0	3	0.9	24
29	0	1	1	1	1	1	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.4	24
30	2	2	3	4	3	**IZS**	3	4	2	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	4	1.3	24
HOURLY MAX	3	4	4	5	7	6	5	4	3	2	2	2	3	3	3	2	3	2	2	2	3	3	3	2			
HOURLY AVG	0.9	1.1	1.0	1.1	1.2	1.5	1.5	1.4	1.0	0.9	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.6	0.8	1.0	1.1	0.9	0.9			

STATUS FLAG CODES

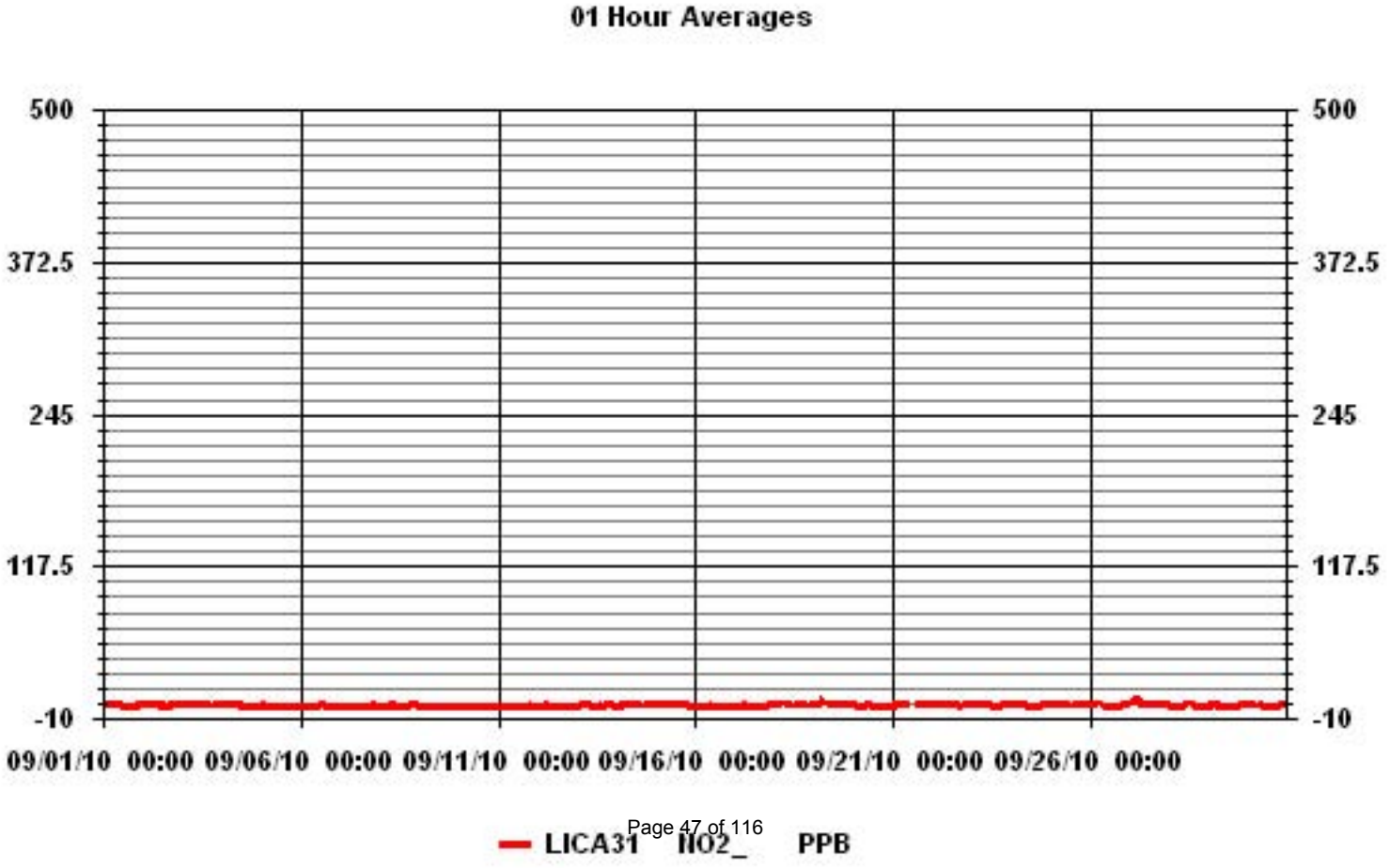
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	389					
MAXIMUM 1-HR AVERAGE:	7	PPB	@ HOUR(S)	4	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	2.7	PPB			ON DAY(S)	27
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	1.02		MONTHLY AVERAGE:		0.88	PPB


01 Hour Averages
500
372.5
245
117.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

SEPTEMBER 2010

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

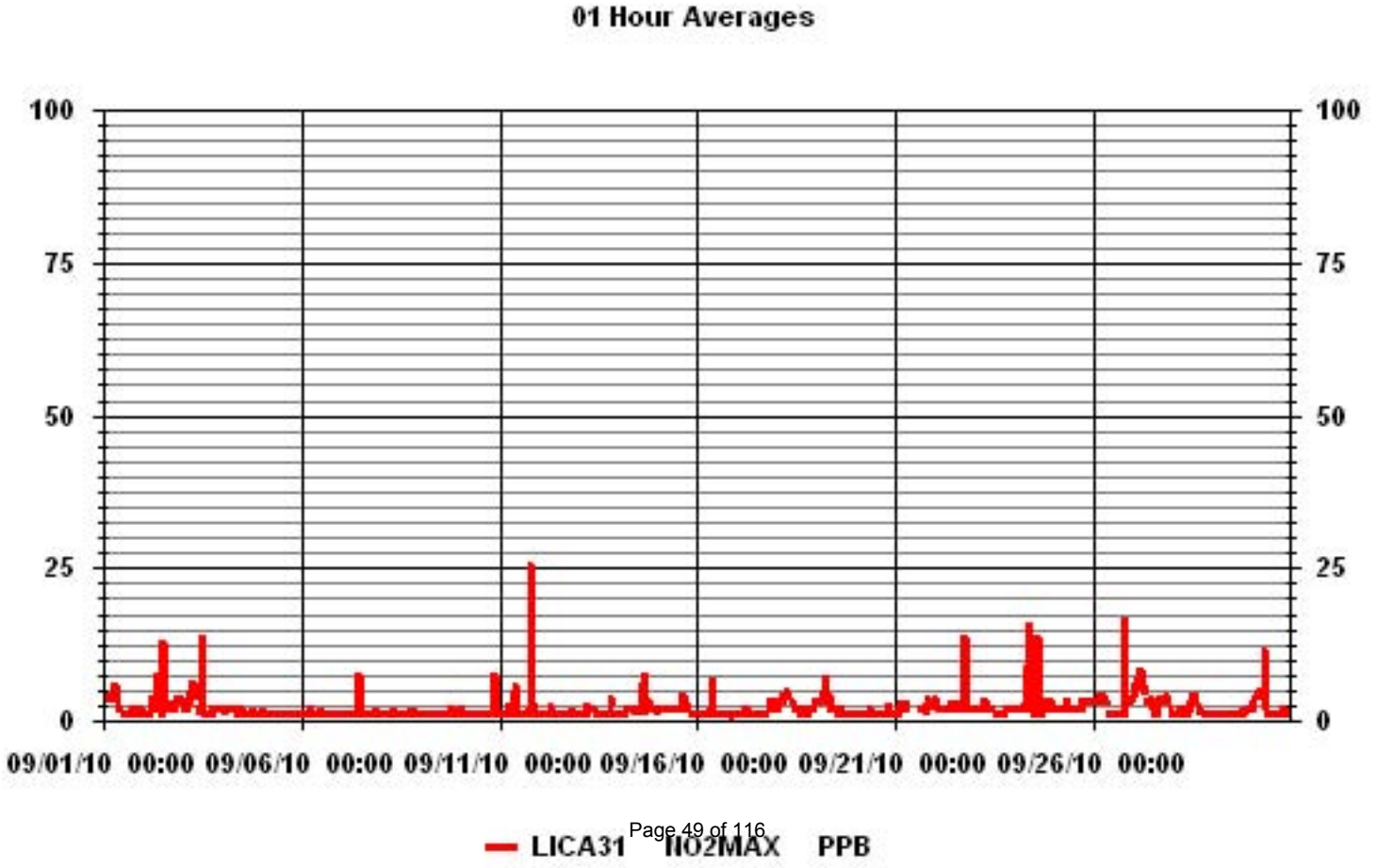
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	4	4	3	4	4	4	3	6	4	2	2	**IZS**	1	1	1	1	1	2	2	1	1	1	2	2	6	2.4	24
2	1	1	1	1	1	2	4	3	8	2	**IZS**	1	13	2	2	3	2	3	2	2	3	4	3	4	13	3.0	24
3	3	2	2	3	3	5	6	6	4	**IZS**	2	1	14	1	1	1	1	1	2	2	2	2	2	2	14	3.0	24
4	2	2	1	2	2	2	2	2	**IZS**	1	1	2	2	1	1	1	1	1	1	2	1	1	1	1	2	1.4	24
5	1	2	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	24
6	1	1	1	1	1	2	**IZS**	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1.1	24
7	1	1	1	1	1	**IZS**	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	2	1	1	8	1.3	24
8	1	1	1	1	**IZS**	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	2	1.1	24
9	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	2	1.1	24
10	1	2	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	1	1	8	1.3	24
11	1	**IZS**	1	1	1	1	1	1	1	5	6	1	1	1	1	1	1	1	2	**26**	3	2	1	1	**26**	2.7	24
12	**IZS**	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	**IZS**	3	1.1	24
13	1	1	1	1	1	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	4	3	**IZS**	1	4	1.5	24
14	1	1	1	1	1	2	2	2	2	2	1	2	2	1	6	1	8	2	3	3	2	**IZS**	2	2	8	2.2	24
15	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	4	3	2	2	**IZS**	1	1	1	4	2.0	24
16	1	1	1	1	1	1	1	1	2	7	1	1	1	1	1	1	1	1	1	**IZS**	0	1	1	1	7	1.3	24
17	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	**IZS**	2	3	3	3	2	3	1.4	24
18	2	3	3	3	4	4	5	5	4	3	3	2	2	2	1	1	2	**IZS**	1	2	2	2	2	3	5	2.7	24
19	3	3	3	3	5	7	7	4	4	2	2	2	2	1	1	2	**IZS**	1	1	1	1	1	1	1	7	2.5	24
20	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	**IZS**	1	1	1	1	3	1	1	1	3	1.2	24
21	1	1	2	2	3	2	2	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	2	1	3	4	3	2	3	4	2.3	24
22	4	3	2	2	2	2	2	2	2	2	3	2	2	**IZS**	3	2	**C**	3	14	2	2	2	2	2	14	2.8	24
23	2	2	2	2	2	2	3	3	2	2	2	2	**IZS**	1	1	1	1	1	1	2	2	2	2	2	3	1.8	24
24	2	2	2	2	2	2	3	9	4	16	2	**IZS**	1	1	14	1	1	1	2	2	3	3	3	2	16	3.5	24
25	2	2	2	2	2	2	2	2	3	3	**IZS**	2	2	2	2	2	2	3	3	3	3	3	3	3	3	2.4	24
26	3	3	3	3	4	4	4	4	3	**IZS**	1	1	1	1	1	1	1	1	1	17	3	3	4	3	17	3.0	24
27	4	6	5	7	8	8	6	5	**IZS**	3	3	4	2	1	1	2	3	4	3	3	4	4	3	1	8	3.9	24
28	1	1	1	1	2	2	1	**IZS**	1	2	2	3	4	4	4	3	2	1	2	1	1	1	1	1	4	1.8	24
29	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2	2	1.2	24
30	2	3	4	5	4	**IZS**	5	5	12	2	1	1	1	1	1	1	1	1	1	2	2	1	1	1	12	2.5	24
HOURLY MAX	4	6	5	7	8	8	7	9	12	16	6	8	14	4	14	4	8	4	14	26	4	8	4	4			
HOURLY AVG	1.7	1.9	1.8	2.0	2.2	2.4	2.6	2.8	2.7	2.6	1.7	1.7	2.3	1.3	1.9	1.4	1.6	1.5	1.9	3.1	2.0	2.1	1.7	1.7			

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:	680					
MAXIMUM INSTANTANEOUS VALUE:	26	PPB	@ HOUR(S)	19	ON DAY(S)	11
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION:	2.03					


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 IIO2MAX PPB

LICA31
NO2_ / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : NO2_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	5.71	3.66	9.97	6.30	3.95	5.57	2.78	8.65	10.11	8.50	6.74	3.95	6.59	8.35	6.01	3.07	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.71	3.66	9.97	6.30	3.95	5.57	2.78	8.65	10.11	8.50	6.74	3.95	6.59	8.35	6.01	3.07	

Calm : .00 %

Total # Operational Hours : 682

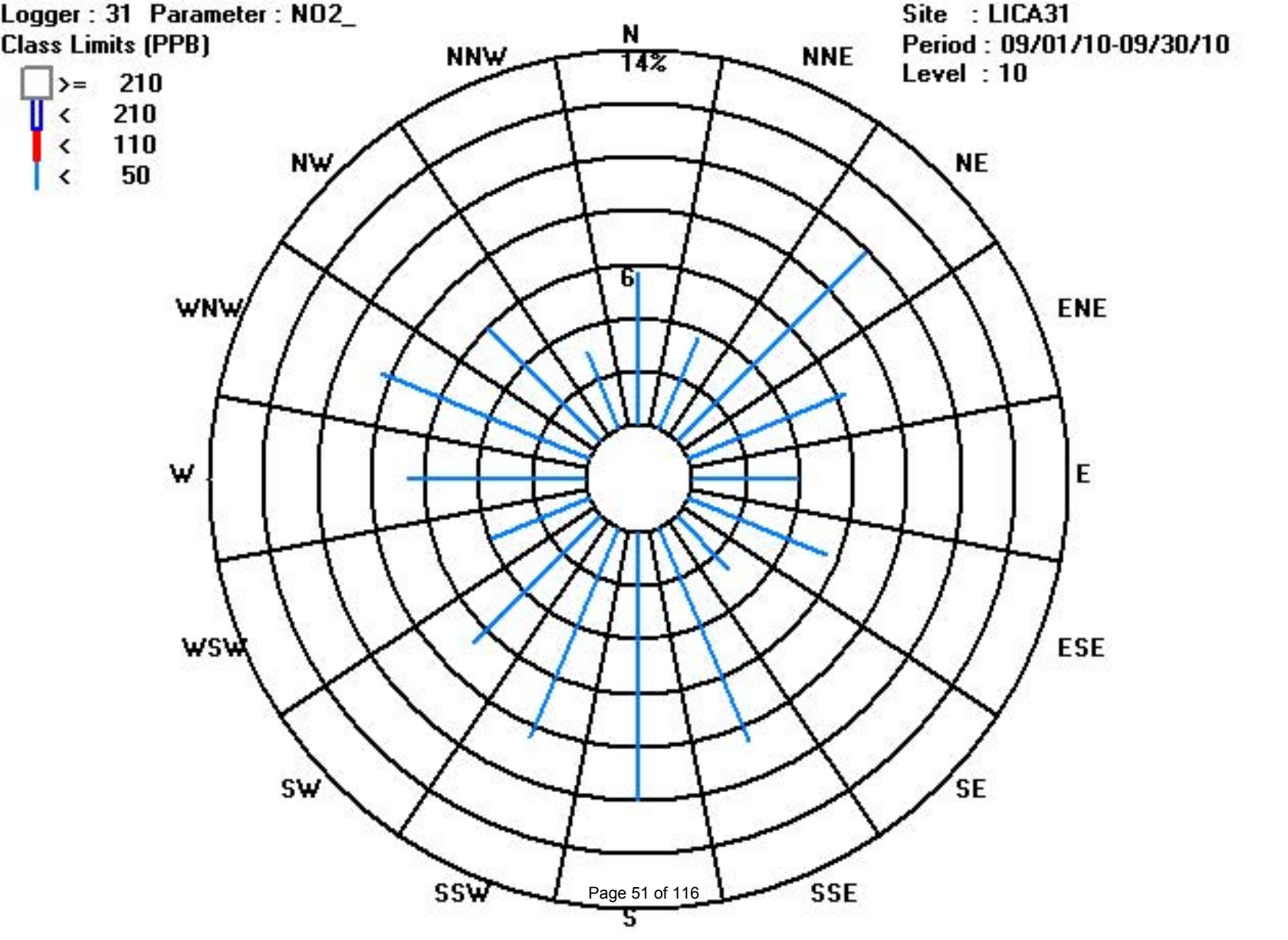
Distribution By Samples

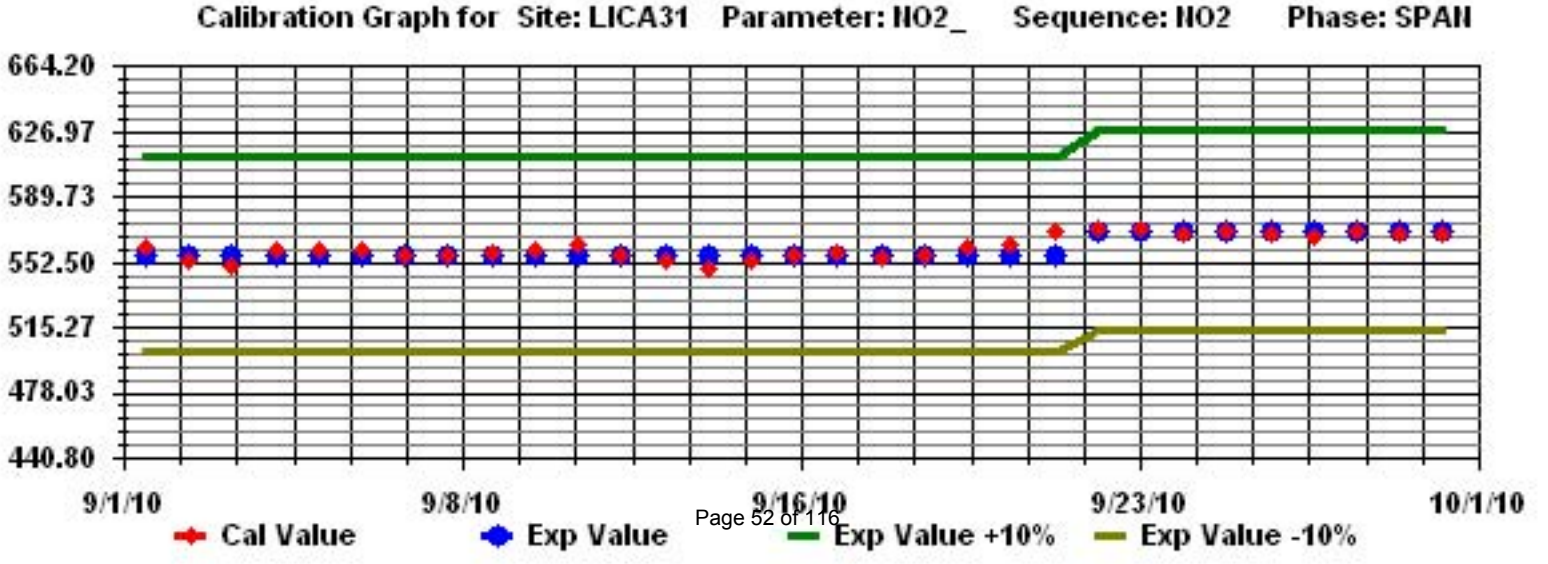
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	39	25	68	43	27	38	19	59	69	58	46	27	45	57	41	21	682
<	110																	
<	210																	
>=	210																	
	Totals	39	25	68	43	27	38	19	59	69	58	46	27	45	57	41	21	

Calm : .00 %

Total # Operational Hours : 682


Logger : 31 Parameter : NO2_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA31
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: LICA31 Parameter: NO2_ Sequence: NO2 Phase: SPAN
664.20
626.97
589.73
552.50
515.27
478.03
440.80
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNICATY ASSOCIATION - ST. LINA

SEPTEMBER 2010

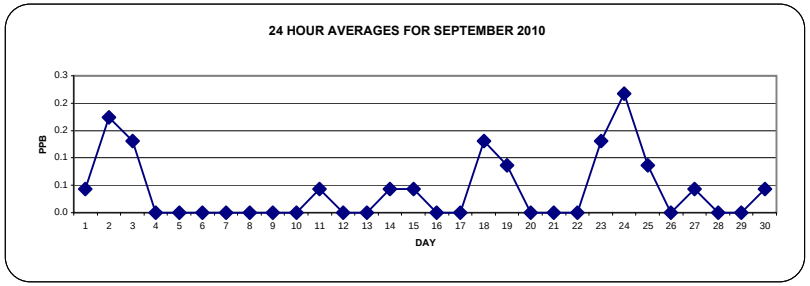
NITRIC OXIDE hourly averages in ppb

MST

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

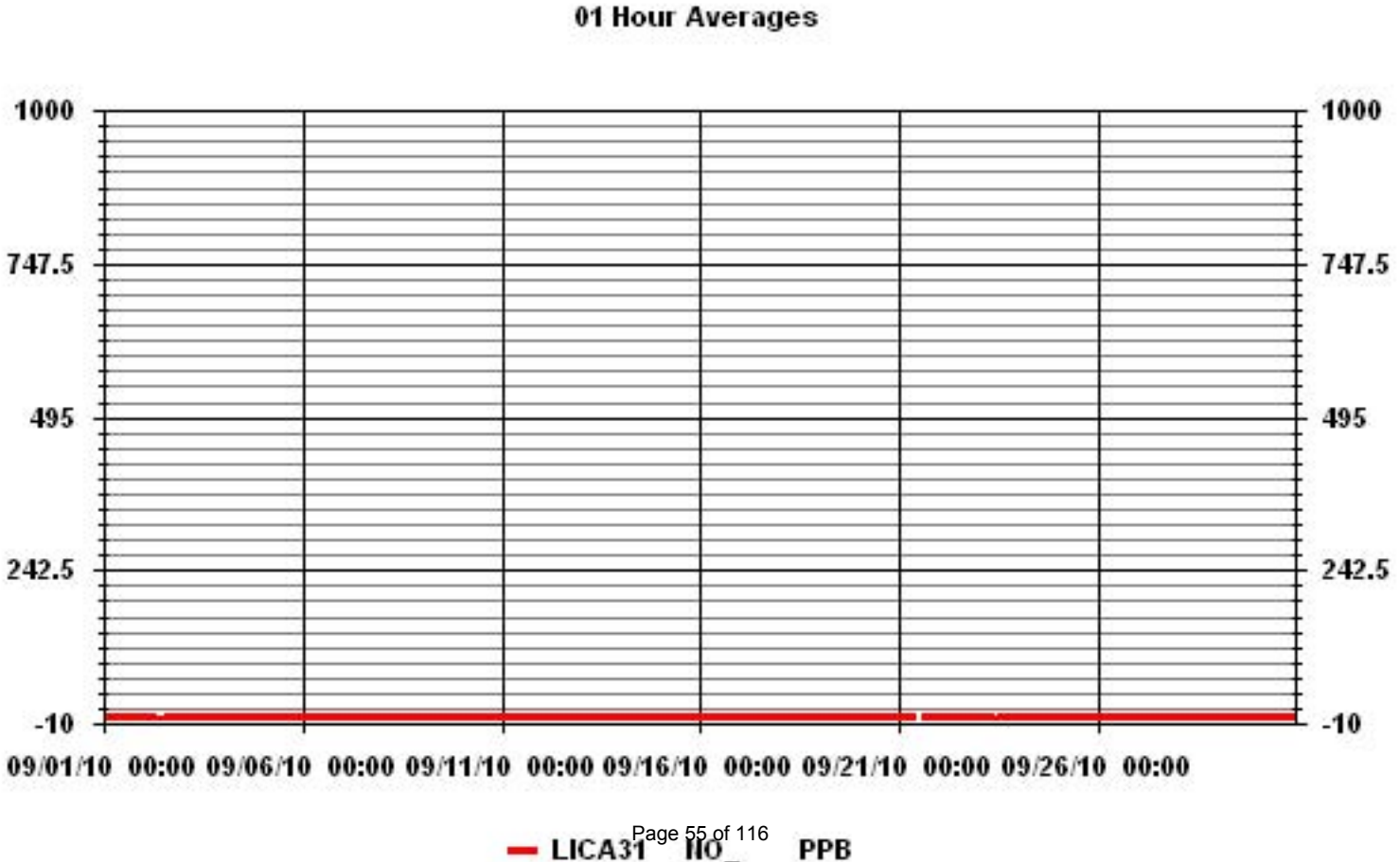
STATUS FLAG CODES

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:		26					
MAXIMUM 1-HR AVERAGE:		2	PPB	@ HOUR(S)	7, 8	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:		0.2	PPB			ON DAY(S)	24
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:			720	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:			100.0	%
STANDARD DEVIATION:	0.21		MONTHLY AVERAGE:			0.04	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

SEPTEMBER 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	0	0	0	4	4	1	0	**IZS**	1	1	0	0	0	1	1	1	0	0	0	0	4	0.6	24
2	0	0	0	0	1	1	20	3	14	1	**IZS**	1	31	1	2	2	2	1	0	0	0	0	0	0	31	3.5	24
3	0	0	0	0	0	0	5	5	3	**IZS**	2	0	4	0	0	0	0	0	0	0	0	0	0	0	5	0.8	24
4	0	0	0	0	0	0	0	1	**IZS**	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.1	24
5	0	0	0	0	0	0	0	**IZS**	1	1	1	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0.2	24
6	0	0	0	0	0	1	**IZS**	1	0	2	1	1	1	1	1	2	1	2	0	0	0	0	0	0	2	0.6	24
7	0	0	0	0	0	**IZS**	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
8	0	0	0	0	**IZS**	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
9	0	0	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
10	0	0	**IZS**	1	0	0	0	0	0	1	1	1	2	2	0	1	0	0	0	0	0	18	0	0	18	1.2	24
11	0	**IZS**	1	0	1	1	2	0	1	7	6	0	0	0	0	0	0	0	1	**45**	2	1	0	0	**45**	3.0	24
12	**IZS**	1	0	1	0	0	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	5	0.5	24
13	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	1	0.2	24
14	0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	0	7	0	1	0	1	**IZS**	1	0	7	0.7	24
15	0	0	0	0	0	0	1	1	1	1	2	1	1	1	1	2	2	1	0	1	**IZS**	1	0	0	2	0.7	24
16	0	0	0	0	0	0	0	1	1	3	1	0	0	0	1	0	0	0	0	**IZS**	1	0	0	0	3	0.3	24
17	0	0	0	0	1	0	1	1	1	1	0	0	0	1	1	0	1	1	**IZS**	2	0	0	0	0	2	0.5	24
18	0	0	0	0	1	0	1	1	2	1	2	1	0	0	0	0	0	**IZS**	1	0	0	0	0	0	2	0.4	24
19	0	0	1	0	0	0	1	2	2	1	0	1	0	0	0	0	**IZS**	1	0	0	0	0	0	0	2	0.4	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	0	0	0	2	0	0	0	2	0.1	24
21	0	0	0	0	1	0	0	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	3	0.3	24
22	0	0	0	0	0	0	0	0	0	2	2	0	1	**IZS**	2	1	**C**	2	12	0	0	0	0	0	12	1.0	24
23	0	0	0	0	0	0	0	1	1	1	1	1	**IZS**	1	0	0	0	0	0	0	0	0	0	0	1	0.3	24
24	0	0	0	0	0	1	1	24	3	24	1	**IZS**	1	1	8	0	0	0	0	0	0	0	0	0	24	2.8	24
25	0	0	0	0	0	0	0	0	1	1	**IZS**	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0.2	24
26	0	0	0	0	0	0	0	1	0	**IZS**	1	0	0	0	0	0	0	0	0	26	0	0	0	1	26	1.3	24
27	0	0	0	1	0	0	1	1	**IZS**	2	1	1	0	0	0	0	1	1	0	0	0	0	0	0	2	0.4	24
28	0	0	0	0	0	0	0	**IZS**	1	0	0	1	1	1	1	1	0	0	1	0	0	0	0	0	1	0.3	24
29	0	0	0	0	0	0	**IZS**	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1	24
30	0	0	0	0	0	**IZS**	1	1	20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	1.0	24
HOURLY MAX	1	1	1	1	1	1	20	24	20	24	6	1	31	2	8	2	7	2	12	45	2	18	1	1			
HOURLY AVG	0.0	0.0	0.1	0.1	0.2	0.2	1.4	2.1	2.2	2.0	0.9	0.4	1.6	0.4	0.8	0.3	0.5	0.3	0.6	2.6	0.2	0.7	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

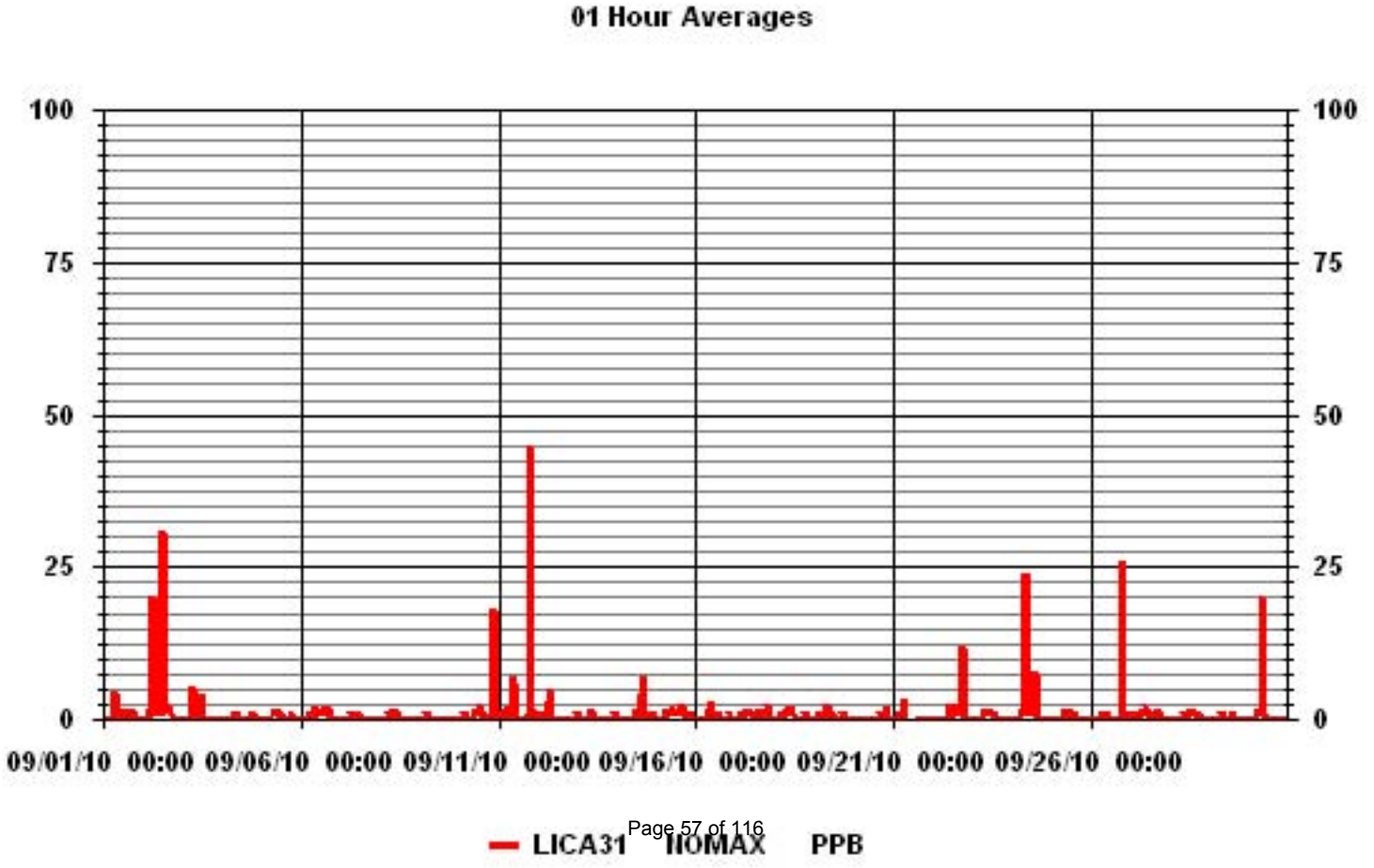
NUMBER OF NON-ZERO READINGS: 191

MAXIMUM INSTANTANEOUS VALUE: 45 PPB @ HOUR(S) 19 ON DAY(S) 11

IZS CALIBRATION TIME: 30 HRS OPERATIONAL TIME: 720 HRS

MONTHLY CALIBRATION TIME: 9 HRS

STANDARD DEVIATION: 3.10


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 NOMAX PPB

LICA31
NO_ / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	5.71	3.66	9.97	6.30	3.95	5.57	2.78	8.65	10.11	8.50	6.74	3.95	6.59	8.35	6.01	3.07	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	5.71	3.66	9.97	6.30	3.95	5.57	2.78	8.65	10.11	8.50	6.74	3.95	6.59	8.35	6.01	3.07	

Calm : .00 %

Total # Operational Hours : 682

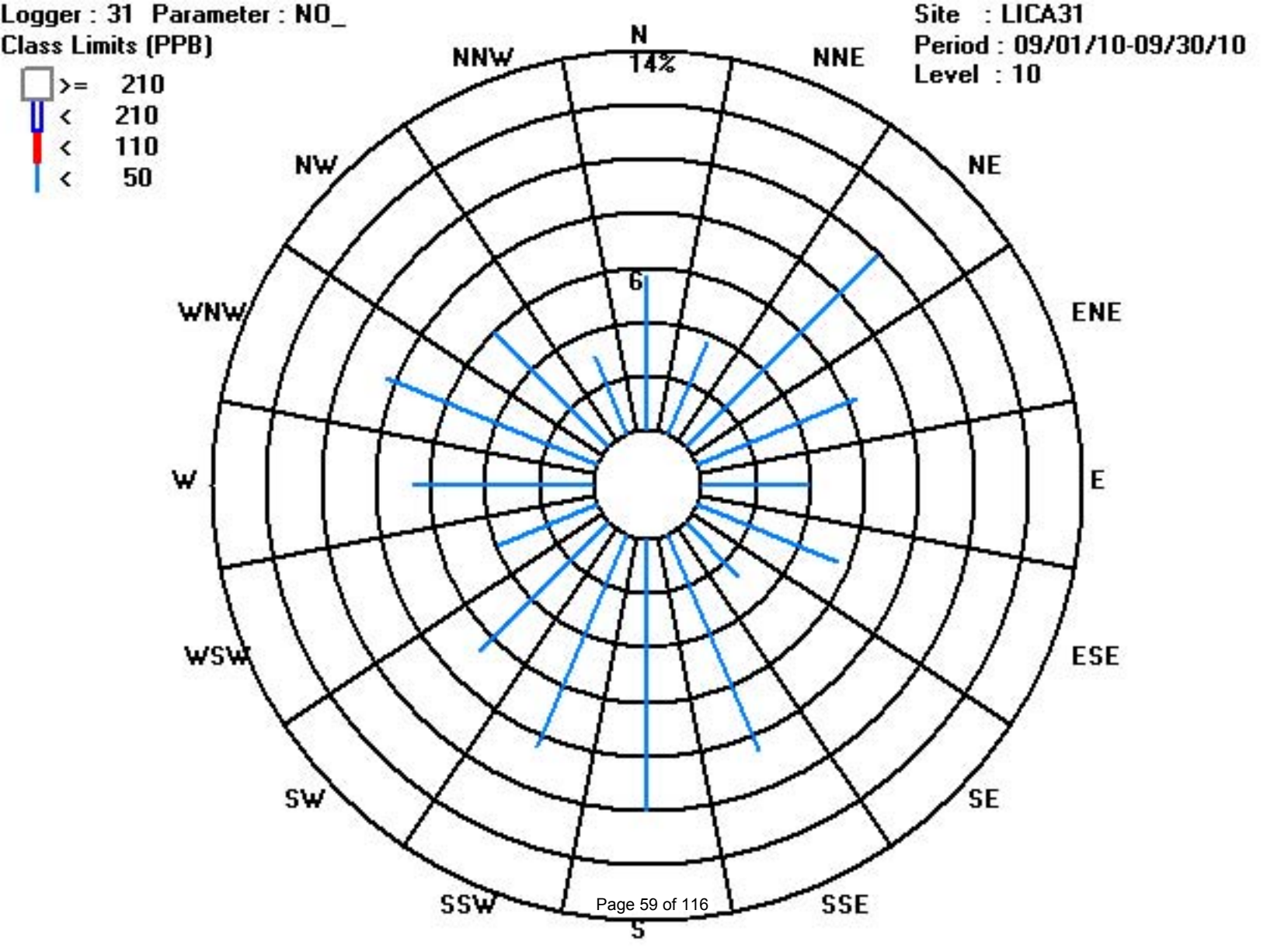
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	39	25	68	43	27	38	19	59	69	58	46	27	45	57	41	21	682
< 110																	
< 210																	
>= 210																	
Totals	39	25	68	43	27	38	19	59	69	58	46	27	45	57	41	21	

Calm : .00 %

Total # Operational Hours : 682


Logger : 31 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA31
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

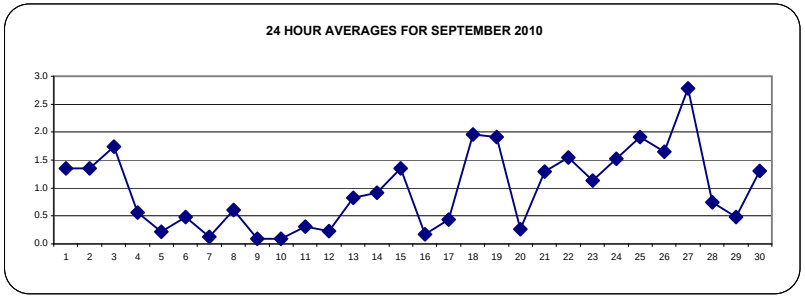
SEPTEMBER 2010

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	2	3	2	2	3	3	2	4	3	1	1	**IZS**	1	0	0	0	0	1	1	0	0	0	1	1	4	1.3	24
2	1	0	0	0	1	1	2	3	2	2	**IZS**	1	2	1	1	1	0	1	1	1	2	3	3	2	3	1.3	24
3	2	2	2	2	3	3	5	4	3	**IZS**	2	1	1	0	1	1	0	0	1	2	2	1	1	1	5	1.7	24
4	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0.6	24
5	0	1	0	0	0	0	0	**IZS**	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
6	0	0	0	1	0	1	**IZS**	1	0	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	1	0.5	24
7	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	0.1	24
8	0	0	0	0	**IZS**	1	0	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1	1	1	1	0.6	24
9	0	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	24
10	0	1	**IZS**	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
11	0	**IZS**	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	3	1	0	0	0	3	0.3	24
12	**IZS**	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	**IZS**	1	0.2	24
13	0	0	1	1	1	1	1	1	2	2	1	0	0	0	1	0	0	0	1	1	2	2	**IZS**	1	2	0.8	24
14	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	3	1	1	1	1	**IZS**	1	1	3	0.9	24
15	1	1	1	1	1	1	1	2	1	2	2	1	2	1	2	3	3	2	1	1	**IZS**	0	0	1	3	1.3	24
16	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	3	0.2	24
17	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	**IZS**	1	1	2	2	1	2	0.4	24
18	1	2	2	2	3	3	4	3	3	3	3	2	1	1	1	1	1	**IZS**	1	1	2	2	1	2	4	2.0	24
19	2	2	2	2	3	5	5	4	4	2	2	2	1	1	1	1	**IZS**	1	1	1	1	1	0	0	5	1.9	24
20	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	**IZS**	0	0	0	0	1	0	0	0	1	0.3	24
21	0	0	1	1	1	1	1	2	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	1	1	1	3	3	2	2	3	1.3	24
22	3	2	1	1	1	1	1	2	2	3	3	2	2	**IZS**	1	1	**C**	1	2	1	1	1	1	1	3	1.5	24
23	1	1	1	1	1	2	2	2	3	2	2	1	**IZS**	0	0	0	1	0	1	1	1	1	1	1	3	1.1	24
24	1	1	1	1	1	1	2	5	5	4	2	**IZS**	0	0	1	0	0	0	1	1	2	2	2	2	5	1.5	24
25	1	1	2	2	2	2	2	2	2	3	**IZS**	3	2	2	2	1	1	2	2	2	2	2	2	2	3	1.9	24
26	3	2	2	2	3	3	4	4	2	**IZS**	1	0	0	0	0	0	1	0	0	2	1	2	3	3	4	1.7	24
27	3	4	4	6	**7**	6	5	4	**IZS**	3	2	2	1	1	0	1	1	2	2	2	3	3	1	1	**7**	**2.8**	24
28	0	0	0	0	0	0	0	**IZS**	0	1	1	2	3	4	3	2	0	0	0	1	0	0	0	0	4	0.7	24
29	0	1	1	1	1	0	**IZS**	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.5	24
30	2	2	3	4	3	**IZS**	4	5	3	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	5	1.3	24
HOURLY MAX	3	4	4	6	7	6	5	5	5	4	3	3	3	4	3	3	3	2	2	3	3	3	3	3			
HOURLY AVG	0.9	1.0	0.9	1.1	1.3	1.4	1.7	1.9	1.5	1.5	1.1	0.8	0.7	0.5	0.6	0.5	0.4	0.4	0.7	0.9	1.1	1.0	0.8	0.8			

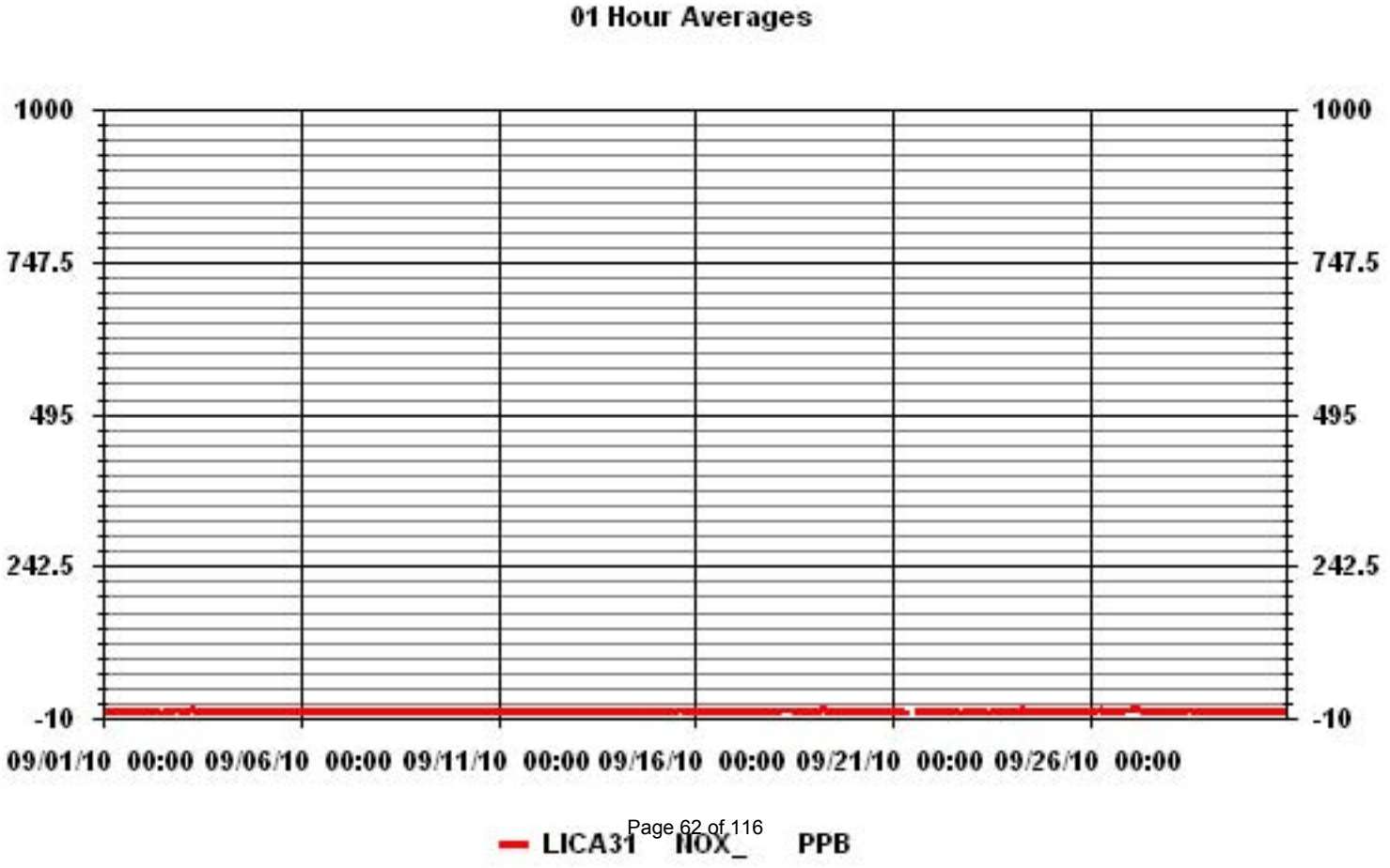
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	396					
MAXIMUM 1-HR AVERAGE:	7	PPB	@ HOUR(S)	4	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	2.8	PPB			ON DAY(S)	27
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	1.14		MONTHLY AVERAGE		0.98	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

SEPTEMBER 2010

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

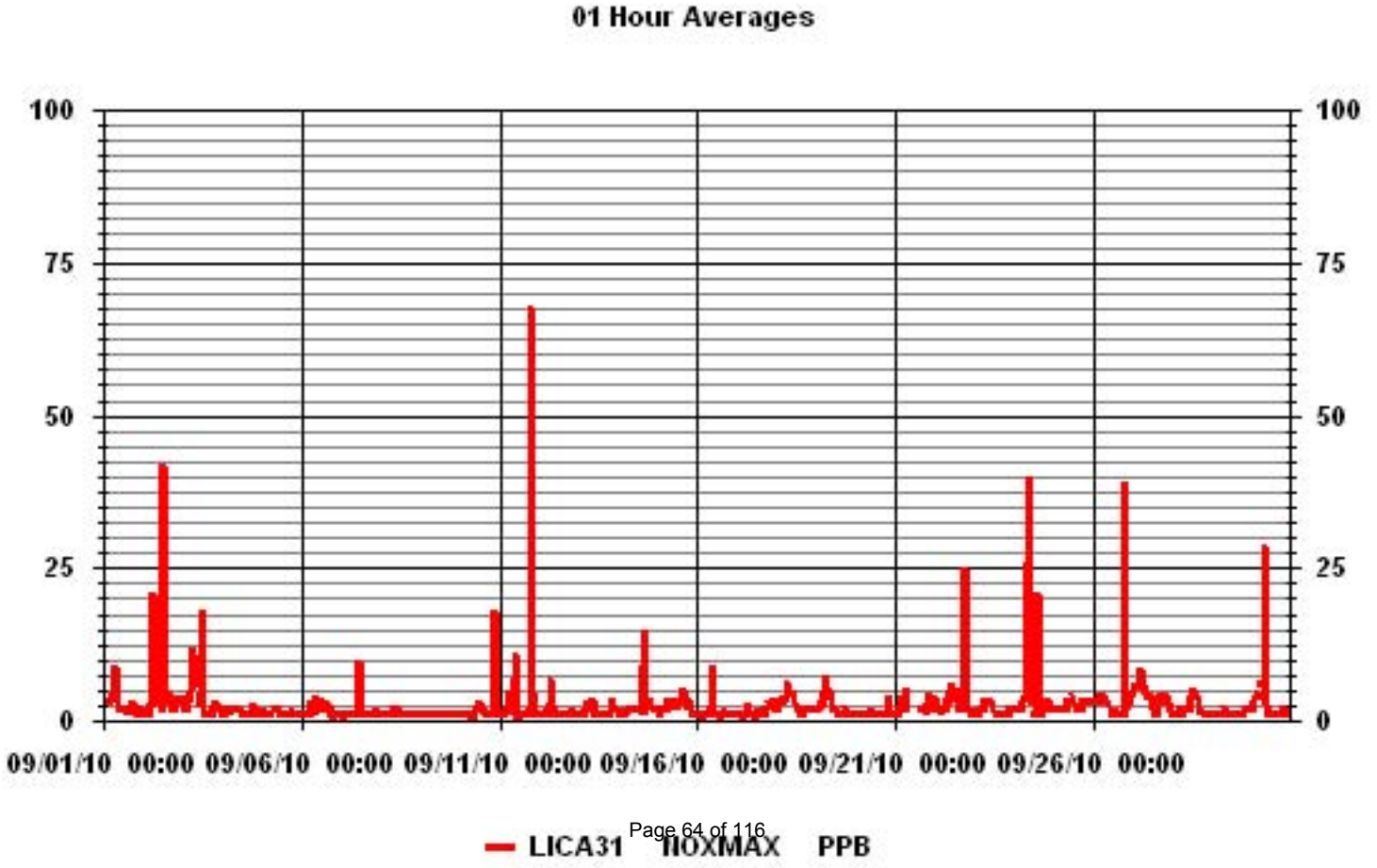
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3	3	3	3	4	4	3	9	7	2	2	**IZS**	2	2	1	2	1	2	3	2	1	1	2	2	9	2.8	24
2	1	1	1	1	3	2	21	5	19	3	**IZS**	2	42	3	3	5	4	4	2	2	3	4	3	3	42	6.0	24
3	4	2	2	4	3	5	12	11	6	**IZS**	4	2	18	1	1	1	1	1	2	2	3	2	2	2	18	4.0	24
4	1	1	1	2	2	1	2	2	**IZS**	2	2	2	1	1	1	1	1	1	1	3	1	1	1	1	3	1.4	24
5	1	2	1	1	1	1	1	**IZS**	2	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1	2	1.2	24
6	1	1	1	1	1	3	**IZS**	2	1	4	2	3	3	2	2	3	2	3	1	0	1	1	1	1	4	1.7	24
7	1	0	1	1	1	**IZS**	1	1	1	1	1	10	1	1	1	1	1	1	1	1	1	2	1	1	10	1.4	24
8	1	1	1	1	**IZS**	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.2	24
9	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
10	1	1	**IZS**	1	1	1	1	0	0	2	2	2	3	2	1	2	1	1	1	1	1	18	1	1	18	2.0	24
11	1	**IZS**	1	1	2	2	5	1	2	7	11	0	1	1	1	1	1	1	2	**68**	5	2	1	1	**68**	5.1	24
12	**IZS**	1	1	1	1	2	3	7	3	1	1	1	1	1	1	1	1	1	1	1	2	1	1	**IZS**	7	1.5	24
13	1	1	1	1	2	3	2	2	3	3	1	1	1	1	1	1	1	1	1	1	3	3	**IZS**	2	3	1.6	24
14	1	1	1	1	2	1	2	2	2	2	2	2	2	2	9	1	15	2	3	3	3	**IZS**	2	2	15	2.7	24
15	1	1	2	2	2	2	3	3	3	3	3	2	3	3	3	5	5	4	2	3	**IZS**	1	1	1	5	2.5	24
16	1	1	1	0	1	1	1	2	2	9	2	1	1	0	1	1	2	1	1	**IZS**	1	1	1	1	9	1.4	24
17	1	1	1	0	1	1	3	2	1	1	1	0	1	2	1	1	1	2	**IZS**	3	2	3	3	2	3	1.5	24
18	2	3	3	3	4	3	6	6	5	4	5	3	2	2	1	1	2	**IZS**	2	2	2	2	2	2	6	2.9	24
19	2	2	3	2	5	7	7	5	5	4	2	2	2	1	1	1	**IZS**	2	1	1	1	1	1	1	7	2.6	24
20	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	**IZS**	1	1	1	1	4	1	1	1	4	1.2	24
21	1	1	2	2	4	2	2	5	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	2	1	3	4	4	2	2	5	2.4	24
22	4	3	2	1	2	2	2	3	3	5	6	3	4	**IZS**	5	2	**C**	4	25	2	2	1	1	1	25	3.8	24
23	1	2	1	1	2	2	3	3	3	3	3	2	**IZS**	1	1	1	1	1	1	1	1	2	2	2	3	1.7	24
24	2	2	2	2	2	3	4	26	7	40	3	**IZS**	1	1	21	1	1	1	2	2	3	3	2	2	40	5.8	24
25	2	2	2	2	2	2	2	2	3	3	**IZS**	4	3	2	2	2	2	3	3	3	3	3	3	3	4	2.5	24
26	3	3	3	3	4	4	4	4	3	**IZS**	2	1	1	1	2	1	1	1	1	39	2	3	3	4	39	4.0	24
27	5	6	5	6	8	8	6	5	**IZS**	4	4	4	2	1	1	1	4	4	3	3	4	4	3	2	8	4.0	24
28	1	1	1	1	2	2	1	**IZS**	2	2	2	4	5	5	4	4	2	1	2	1	1	1	1	1	5	2.0	24
29	1	1	1	1	1	1	**IZS**	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1.3	24
30	2	3	4	5	4	**IZS**	6	6	29	3	1	1	1	1	1	1	1	1	1	2	2	1	1	1	29	3.4	24
HOURLY MAX	5	6	5	6	8	8	21	26	29	40	11	10	42	5	21	5	15	4	25	68	5	18	3	4			
HOURLY AVG	1.7	1.7	1.7	1.8	2.4	2.4	3.8	4.3	4.3	4.3	2.6	2.1	3.8	1.5	2.4	1.6	2.1	1.7	2.4	5.3	2.1	2.4	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:	672					
MAXIMUM INSTANTANEOUS VALUE:	68	PPB	@ HOUR(S)	19	ON DAY(S)	11
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION:	4.49					


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31
NOXMAX
PPB

LICA31
NOX_ / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	5.71	3.66	9.97	6.30	3.95	5.57	2.78	8.65	10.11	8.50	6.74	3.95	6.59	8.35	6.01	3.07	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	5.71	3.66	9.97	6.30	3.95	5.57	2.78	8.65	10.11	8.50	6.74	3.95	6.59	8.35	6.01	3.07	

Calm : .00 %

Total # Operational Hours : 682

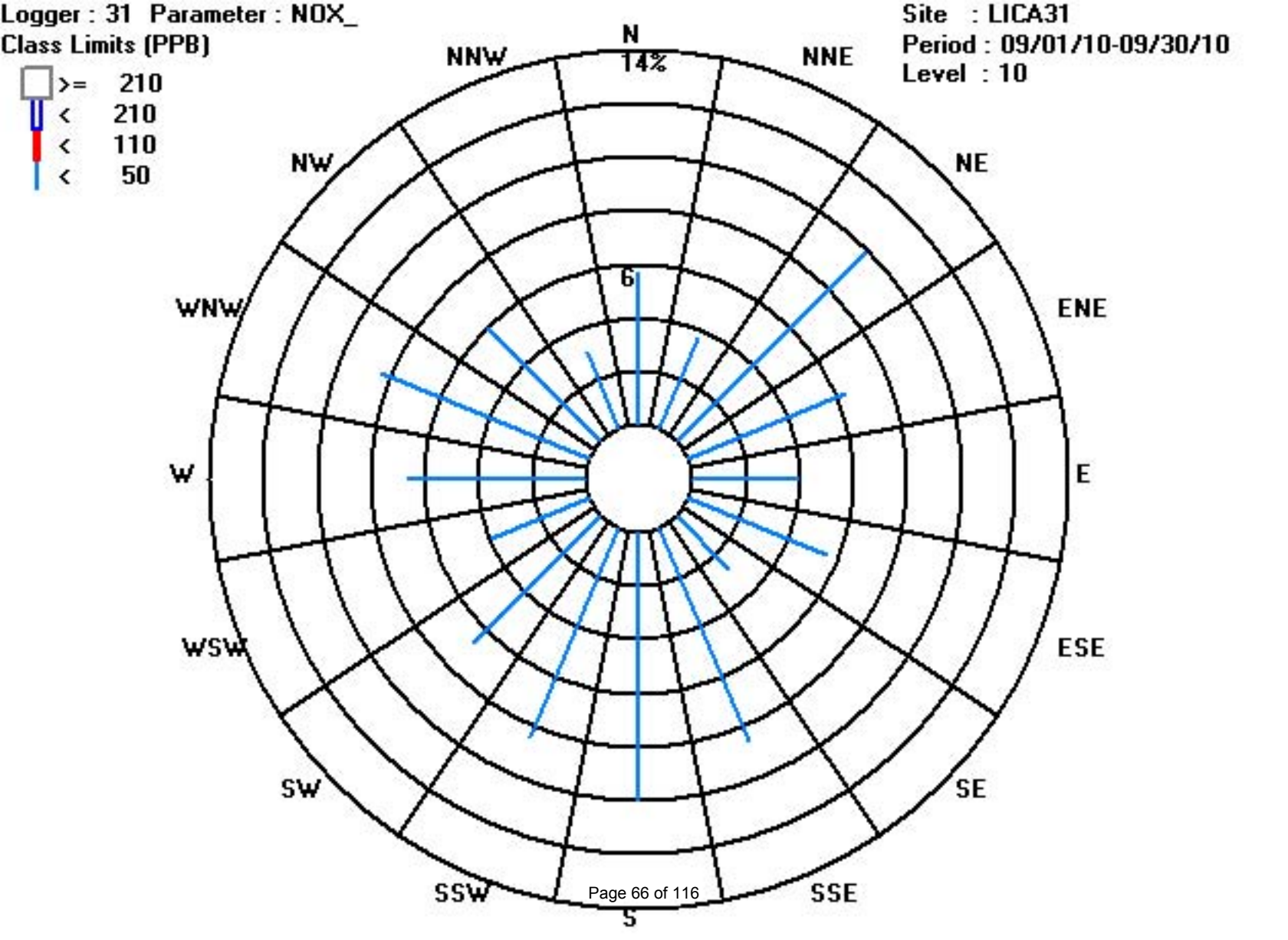
Distribution By Samples

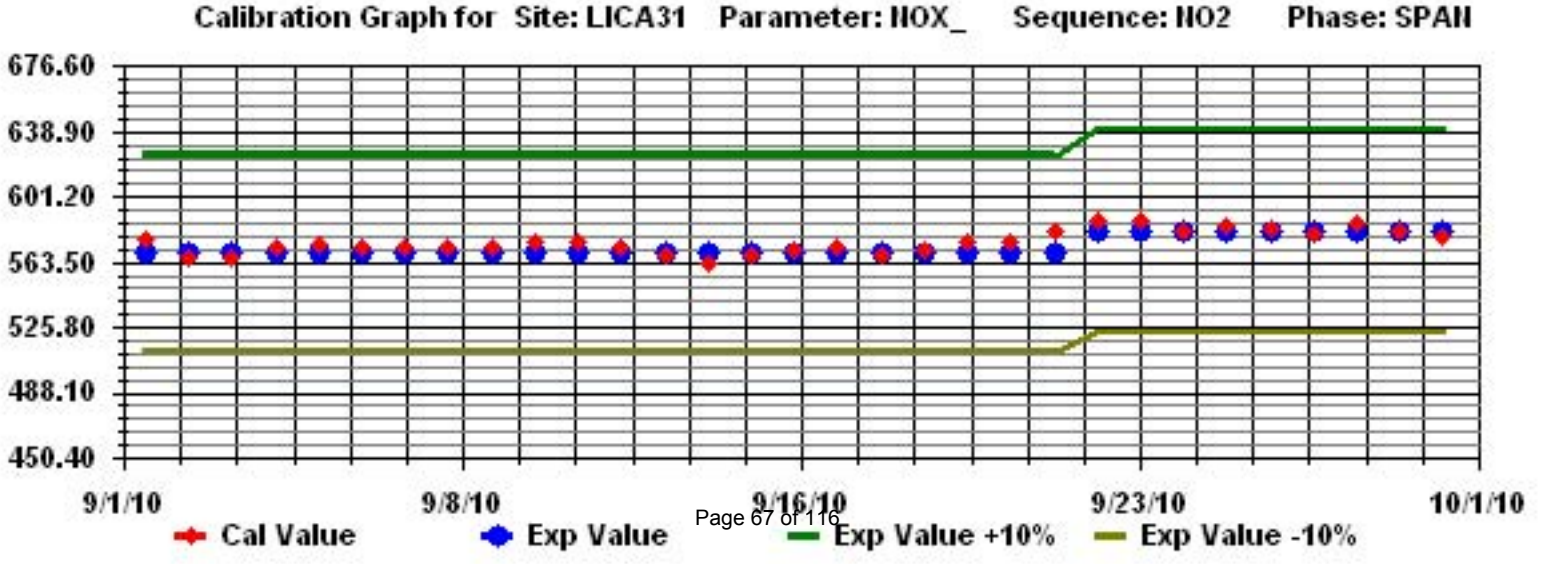
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	39	25	68	43	27	38	19	59	69	58	46	27	45	57	41	21	682
< 110																	
< 210																	
>= 210																	
Totals	39	25	68	43	27	38	19	59	69	58	46	27	45	57	41	21	

Calm : .00 %

Total # Operational Hours : 682


Logger : 31 Parameter : NOX_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA31
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: LICA31 Parameter: NOX_ Sequence: NO2 Phase: SPAN
676.60
638.90
601.20
563.50
525.80
488.10
450.40
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

SEPTEMBER 2010

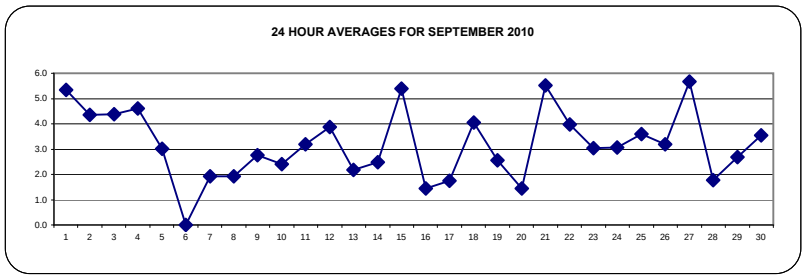
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	4.5	5.7	7.7	9	6.6	3.3	5.8	4.9	5.4	7.1	9.3	8.1	5.4	5.8	4.8	4.4	1.4	0.5	5	4.8	5.4	3.8	5.7	3.9	9.3	5.3	24
2	8.1	7.3	4.6	5.2	5.7	5.2	4.8	4.7	5.6	3.8	4	2.8	4.3	3.9	5.2	3.6	3.3	0	6.3	3.4	2	0	5.8	5.1	8.1	4.4	24
3	5.4	3.8	5.4	4.1	6.9	1.6	4.1	0.7	4.5	0	2.8	3.9	7.4	1.8	7.2	5.3	7.2	4	9	4.1	4.8	2.7	5.5	2.9	9.0	4.4	24
4	5.7	3.1	3.6	2.1	2.1	3.8	4.1	4.8	6.3	6.8	9.3	6.9	6.8	3.8	5.3	5.2	1.1	3.1	2.7	2.8	5.4	2.6	6.8	6.3	9.3	4.6	24
5	3.1	0	5.3	3.8	3.1	3.7	3.3	3.1	5.7	5.2	2.7	3.2	2.7	2.6	0.5	0	1.9	2.9	2.3	3.3	3.1	3.3	2.3	5.4	5.7	3.0	24
6	6.8	5.1	2.8	0.6	2.2	5	2.8	2.9	2	2.2	2.9	2.2	1.6	3.2	4	2.8	2.7	1	1.2	2.9	1.7	4.4	1.7	3.6	6.8	0.0	24
7	0.3	0	**N**	0	0.9	3.8	1.7	0.9	1.6	3.3	1.6	1.4	1.5	2.6	0.6	3.6	2.4	3.7	0.5	2.8	3.2	3.5	1.4	3.2	3.8	1.9	23
8	1.6	2.3	1	2.5	4.3	1.8	0	2.5	4.7	2.5	0	4.9	2.1	3.9	1	0	0	2.2	1.6	2.4	0.5	2.4	0.6	1.4	4.9	1.9	24
9	1.9	1.3	0.7	1	3.8	4.8	1.7	1.5	2.5	1.6	2.6	3.1	2.6	3.6	5	4.1	2.7	4.5	3	0.1	4.5	4.1	1.7	3.6	5.0	2.8	24
10	1.8	2.3	2.8	2.5	3.1	0.8	1	1.1	3.3	4.9	1.2	1.4	0	0	0.6	2.2	1.2	2.5	4	2.8	3.3	5.8	4.1	5.1	5.8	2.4	24
11	4.3	2.7	4.4	4	2.4	2	4.1	0	3.3	5.2	3.9	0	0	0.7	4.4	4	5.4	4	7.2	3.8	2	3.7	2.9	2.1	7.2	3.2	24
12	0	0	2.4	1.5	4.5	3.9	4	3.8	1.3	0.2	6.1	3.9	6.4	4.7	3.2	0.7	4.7	0	5.4	4.2	6	**13.1**	9.5	3.6	**13.1**	3.9	24
13	4	0	2.6	1	3.5	3.4	1	0.6	0	2.5	4.9	2.2	0.7	1.6	0	0	3.6	1.9	3	4.3	2.7	1.9	2.6	4.3	4.9	2.2	24
14	1.3	2.6	2.5	3.3	3.2	3.3	1	4.4	0.1	2.4	2.8	1.1	1.6	4.8	1	2	0.7	2.4	1.6	6	4.9	0.4	2.1	4.2	6.0	2.5	24
15	3.3	6.1	0.1	2.4	2.1	2.3	4.5	5.3	8.3	7.7	12.6	12.1	7.8	5.6	2.7	4.6	9.8	10.7	2.7	2.4	1.8	3.9	5.6	5.3	12.6	5.4	24
16	2.2	3.2	3.5	3	2.5	0.1	1.1	1.6	0.8	1.4	0.7	1.3	0	1.9	0	**C**	**C**	**C**	**M**	**M**	2.2	1.1	0.4	0.6	3.5	1.5	22
17	0	1.3	1.7	4.6	0.6	2.1	1.7	0	0	1.8	3.1	1.2	2.9	1.1	2.4	1.4	0	1.1	4.1	2.1	1	2.8	1.3	3.6	4.6	1.7	24
18	4.1	3.6	3.6	3.3	2.6	3.6	0.2	0.6	3.5	1.3	3.1	4.3	3.2	5.6	4.4	4	4.7	5.7	5.8	4.9	5	5.9	7	7	7.0	4.0	24
19	4.3	1.7	3.6	5.2	2.2	2.7	5.3	1.1	4	3.8	3.6	0.8	0.5	0.4	2	2.5	0.8	0.1	0	4	3.2	2.5	4.5	2.8	5.3	2.6	24
20	2.6	1.4	1.2	0	1.4	0.9	0	0	1.5	2.1	1.3	1	5	0	0.9	0.9	1	2	3.1	1	0.3	2.4	3.2	1.6	5.0	1.5	24
21	3.8	2.7	5.9	5.2	3.5	7.5	3.8	9.2	6.6	6.2	4.6	1.7	3.4	8.7	12	7.8	8.2	3.7	2	2.9	6	8.4	3.2	5.2	12.0	5.5	24
22	4.3	5.2	3.8	3.5	2.3	3.3	5.3	4.5	6.5	4.9	4.9	4.7	5.9	5	2.1	1.9	1.8	2	2.4	3.2	4.2	5.3	5	3.6	6.5	4.0	24
23	2.2	1.3	10.2	8	0.5	1	3.3	1.7	3.8	3.1	2.8	4.6	4	4.4	0	0	2.8	2.3	1.2	1.2	4.7	5.2	2.8	1.9	10.2	3.0	24
24	3.7	1.2	2.9	0.8	1.8	2.7	0.9	4.2	5.8	7.9	5.4	4.3	3.1	2.4	2.1	2.6	2.7	2.7	1.9	2.2	1.8	2.7	3.5	4	7.9	3.1	24
25	3.9	4.6	2	1.1	5	1.8	0.3	3.1	4.2	4.3	3.3	1.5	3.3	2.5	2.4	3.8	3.6	4.8	4.6	3.9	2.2	5.8	8.5	5.5	8.5	3.6	24
26	4.9	6.7	3	4.3	6.4	6.7	3.9	1.4	0	3.5	5.3	3.6	0	1.8	0	0	2.3	1.8	1.8	5.9	3.1	0.7	3.7	5.7	6.7	3.2	24
27	3.6	4.2	4	6.2	8.2	11.2	9.2	6	6.6	4	3.5	3.4	4.2	2.9	2.3	3.4	5.4	8.1	8.1	5.8	10.6	7.3	2.5	**N**	11.2	**5.7**	23
28	0	2.8	4.6	0	1.2	0	0	**N**	1	0	0.3	**N**	0	1.1	3.9	4.8	2	1.9	2.3	4.4	1.6	0.3	2.7	4	4.8	1.8	22
29	3.5	2.1	2.5	2.1	0.5	0.8	1.8	1.8	0	2.2	3.8	4.4	2.6	1.4	2.5	2.8	2.7	2.6	3.7	2	2.6	4.9	5.9	5.3	5.9	2.7	24
30	2.2	3	5.3	5.8	6.1	3.8	6.2	4.4	3.9	4.7	4.8	4.9	4.3	1.6	2.9	4	3.1	2	0.7	3.1	2.4	2	1	2.7	6.2	3.5	24
HOURLY MAX	8	7	10	9	8	11	9	9	8	8	13	12	8	9	12	8	10	11	9	6	11	13	10	7			
HOURLY AVG	3.2	2.9	3.6	3.2	3.3	3.2	2.9	2.8	3.4	3.6	3.9	3.4	3.1	3.0	2.8	2.8	3.1	2.9	3.4	3.3	3.4	3.8	3.8	3.9			

STATUS FLAG CODES

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

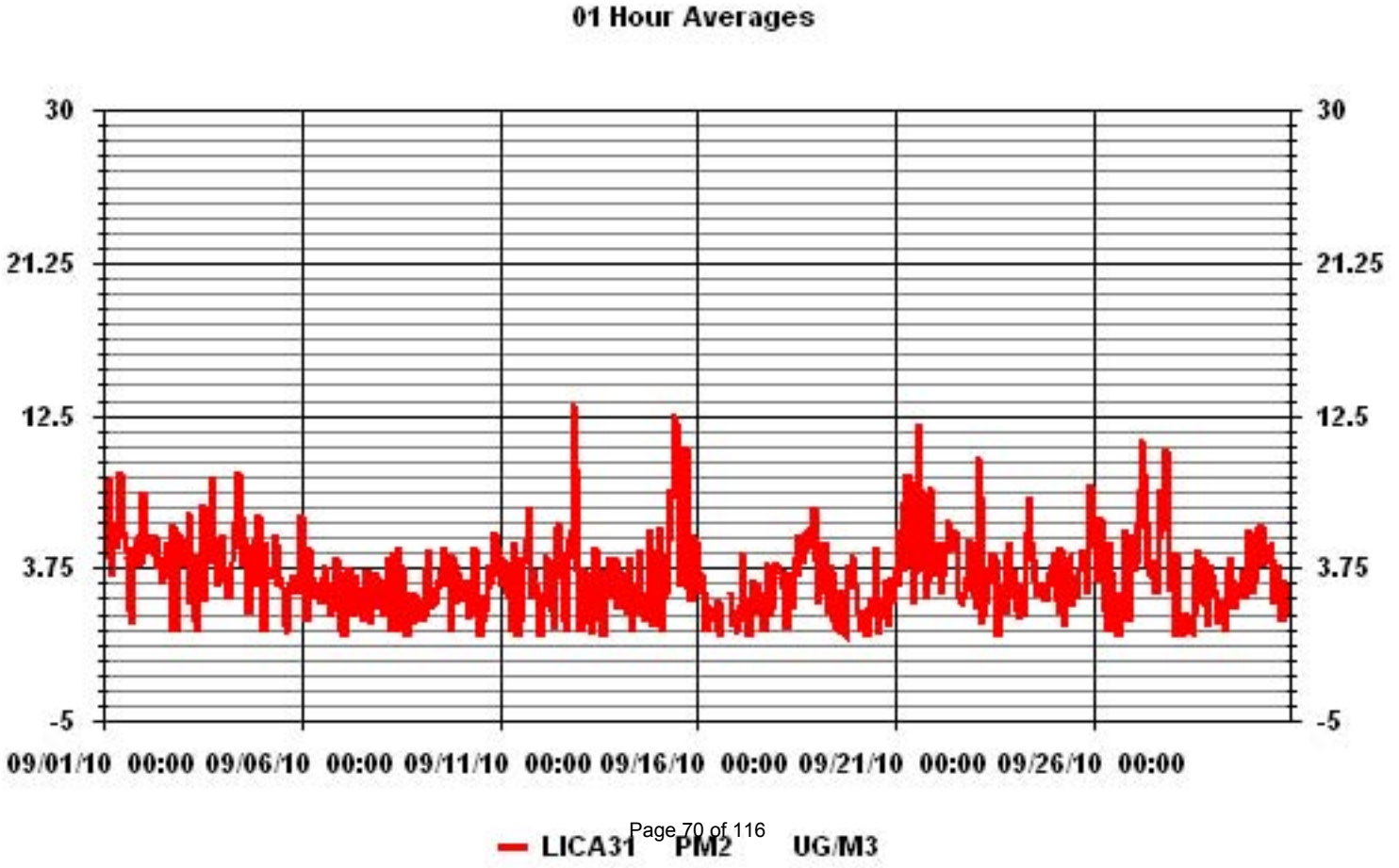


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - ug/m3 | 24-HR 30 ug/m3

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	664					
MAXIMUM 1-HR AVERAGE:	13.1	UG/M^3	@ HOUR(S)	21	ON DAY(S)	12
MAXIMUM 24-HR AVERAGE:	5.7	UG/M^3			ON DAY(S)	27

IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	714	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:	99.2	%
STANDARD DEVIATION:	2.22		MONTHLY AVERAGE:	3.28	UG/M^3


01 Hour Averages
30
21.25
12.5
3.75
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 PM2 UG/M3

LICA31
PM2 / WDR Joint Frequency Distribution (Percent)

September 2010

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : PM2
Units : UG/M3

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	5.20	3.37	9.70	6.46	4.07	5.76	2.81	8.72	9.98	8.29	7.03	4.50	6.61	8.43	6.04	2.95	100.00
<	60.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	80.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	120.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.20	3.37	9.70	6.46	4.07	5.76	2.81	8.72	9.98	8.29	7.03	4.50	6.61	8.43	6.04	2.95	

Calm : .00 %

Total # Operational Hours : 711

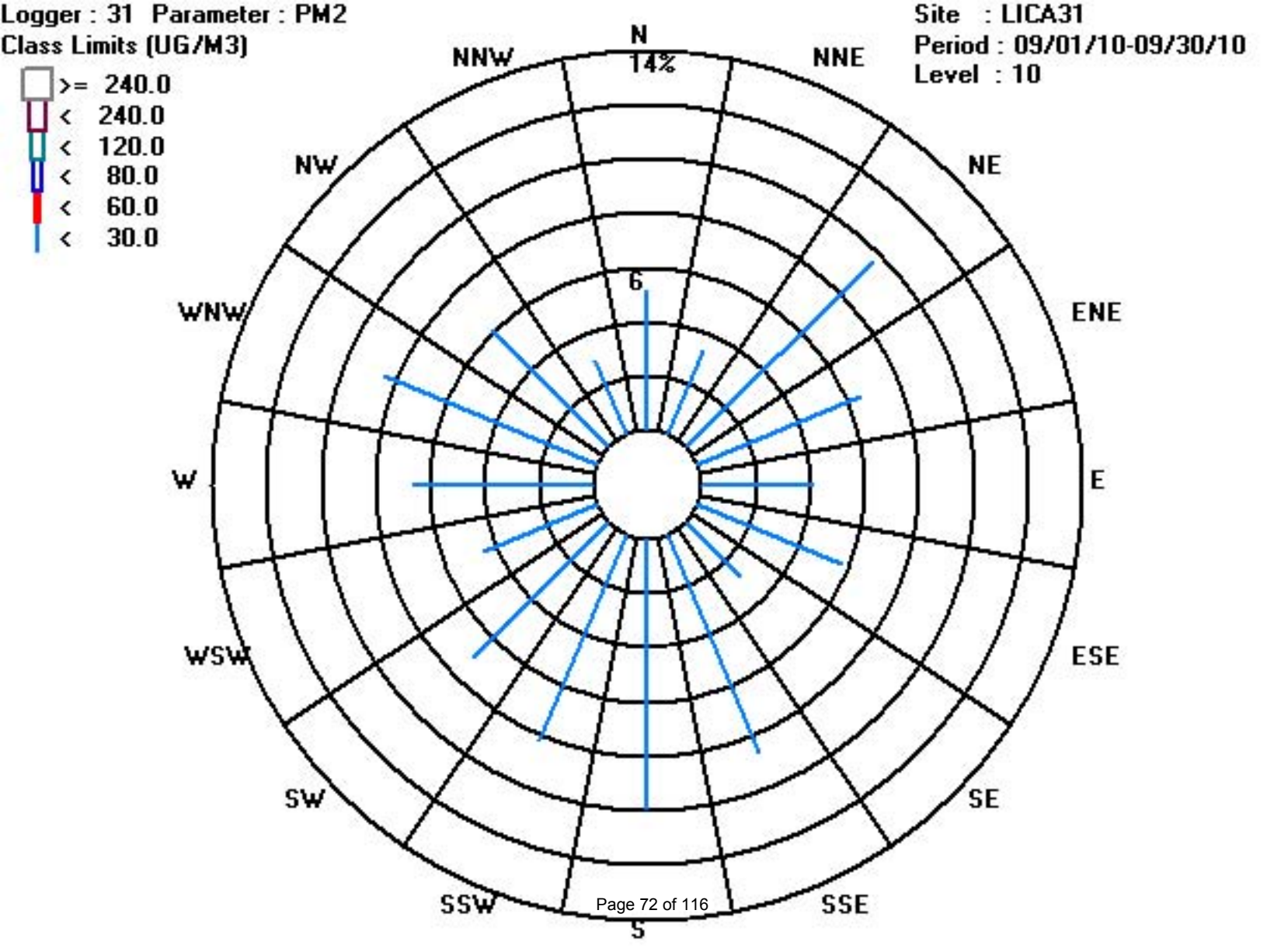
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	37	24	69	46	29	41	20	62	71	59	50	32	47	60	43	21	711
<	60.0																	
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	37	24	69	46	29	41	20	62	71	59	50	32	47	60	43	21	

Calm : .00 %

Total # Operational Hours : 711


Logger : 31 Parameter : PM2
Class Limits (UG/M3)
>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0
Site : LICA31
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

SEPTEMBER 2010

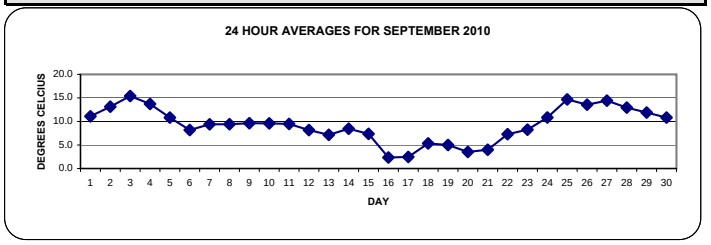
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	9	8.7	8.6	8.3	7.3	7.2	7.6	8.8	10.3	11.5	12.5	13.6	15.1	15.7	16.7	15.3	15.2	14.1	13.2	11.3	10.2	9.1	8.7	8.3	16.7	11.1	24
2	8	7.4	7.1	6.5	6.1	6.3	6.5	9.2	12.5	14.7	16.7	17.7	17.8	19.2	19.9	19.8	19.4	18.4	16.6	15	13.8	12.9	12.2	11.6	19.9	13.1	24
3	11.3	10.4	9.5	8.9	8.3	8.1	10.2	12.7	14.5	16.9	19.7	21.1	21.4	21.3	20.8	20.1	20.1	19.6	17.9	16.1	15.5	15.8	15	14.5	21.4	**15.4**	24
4	13.8	12.8	12.3	11.4	10.3	8.8	10.5	12.4	14.3	15.7	16.7	17.1	18	18	18.8	17.9	16.3	15.9	14	12.5	11.4	10.4	10	9.9	18.8	13.7	24
5	9.6	9.1	9	8.1	7.1	6.7	7.3	7.8	9.1	11.1	11.6	12.5	15	15.9	15.8	15.3	15	13.4	11.8	10.6	10.5	10.1	9.1	8.2	15.9	10.8	24
6	7.7	7.3	6.5	6.3	6.2	6.2	6.4	6.7	7.7	8.6	9.3	10	10.2	9.6	9.5	9.5	9.4	9.5	9.1	8.3	8	8	8.2	8.2	10.2	8.2	24
7	8.3	8.3	8.3	8.3	8.2	8.1	8.2	8.5	9.3	9.9	10.3	11.4	10.9	10.8	11.5	11.8	11.5	10.5	9.8	9	8.7	8.2	7.9	7.7	11.8	9.4	24
8	7.8	7.8	7.6	7.3	7	6.7	6.7	6.9	7.9	8.6	9.7	10.3	11.3	12.6	12.7	12.7	12	10.9	10.3	10	9.7	9.8	9.8	9.9	12.7	9.4	24
9	9.7	9.7	9.9	9.7	9.5	9.2	9.2	9.3	9.5	9.8	10.2	10.7	10.9	10.9	11.1	10.5	10.7	10.6	9.6	8.4	8.2	8.1	7.9	7.8	11.1	9.6	24
10	7.9	7.8	7.7	7.7	7.7	7.5	7.5	8.6	9	10.3	10.2	11	11.4	11.8	13.2	12.2	11.5	11	10.4	9.9	9.6	8.9	8.8	8.7	13.2	9.6	24
11	8.2	7.7	6.3	5	4	3.6	4.8	7.7	9.5	10.9	12.1	13.5	13.1	13.2	12.7	13.2	13.9	14.1	11.6	9.7	9.3	8.5	7.7	7.2	14.1	9.5	24
12	6.8	6.4	5.8	5.5	5	4.7	5.2	7.9	10.2	10.5	11.4	11.7	12	12.3	11.7	11.9	11.2	9.7	7.8	6.8	6.2	5.3	5.1	4.9	12.3	8.2	24
13	4.4	3.9	2.9	2.9	2.7	2.3	2.5	4.7	5.9	7.3	9.9	11.2	11.2	11.6	11.6	11.4	10.4	10.5	8.4	7.5	7.4	7.2	7	7	11.6	7.2	24
14	6.8	6.5	6.3	5.9	5.6	5.5	5.7	6.3	7.5	8.7	10	10.6	12.3	12.3	10	11.2	11.2	10.6	10	9.5	9	8	7.2	6.3	12.3	8.5	24
15	4.9	4.5	4.5	4.3	4.5	4.6	4.9	6.3	7.7	8	9.1	9.9	10.8	10.7	10.9	12.4	11.1	11.1	8.2	6.7	5.8	6	5.7	4.2	12.4	7.4	24
16	3.5	2.5	1.4	0.2	-0.6	-1.2	-0.2	1	1.9	2.9	4.1	5.3	6.3	6.4	6.9	5.5	5	4.4	1.9	0.8	0.3	-0.1	-0.7	-1.1	6.9	2.4	24
17	-1.5	-2.3	-2.7	-3.3	-3.7	**-4.4**	-3.6	-0.8	1.2	3	4.7	5.9	7	7.7	8.3	8.4	8.3	7.5	5.3	3.9	3.7	2.7	2.2	1.4	8.4	2.5	24
18	0.8	0.1	0	-0.2	-0.8	-1.2	0	1.1	3	5.2	7.8	9.7	11.6	12.4	11.7	10.5	10.8	9.4	8	6.6	6	5.5	5.7	4.2	12.4	5.3	24
19	4.5	4	3.5	2.8	1.2	0	0	2.1	4.6	6.3	7.6	8.6	9.2	9.5	9.1	8.5	7.8	6.7	4.9	4.4	4	3.8	3.5	3.4	9.5	5.0	24
20	3.1	2.8	2.7	2.6	2.3	2.3	2.4	2.7	2.9	3.4	3.6	3.9	4.7	5	5.9	6.9	5.8	5.5	3.9	3	3	2.9	2	1.4	6.9	3.5	24
21	1.5	1.6	1.6	1.1	1.5	0.8	0.8	1.7	2.8	3.8	3.9	4.5	5.4	6.6	8.2	7.3	6.9	6.6	5.3	4.7	5.1	4.9	4.6	4.4	8.2	4.0	24
22	4.3	4.2	3.6	3.5	3	2.3	2.4	3.7	6.3	8.2	9.7	10.9	11.8	12.9	13	13.4	12.9	11.8	9.3	7.4	6.3	5.5	4.8	3.8	13.4	7.3	24
23	3.6	3.7	3.6	2.7	2.2	2.3	2.9	4.2	5.9	8.2	10.8	12.5	13.5	13.9	14.5	14.2	14.1	12.5	10.4	9.3	8.8	8.5	8.2	7.6	14.5	8.3	24
24	6.9	6.1	5.5	4.7	4.1	3.5	3.1	5.9	8.5	11.4	14.7	16.1	17	17.7	18	17.9	17.3	14.9	13.5	12.4	11.2	10.4	9.9	9.6	18.0	10.8	24
25	8.8	8.6	7.6	7	6.9	6.9	7.5	7.9	9.7	12.1	15.6	17.5	20.1	20.8	23.1	**25.5**	23.5	22.6	20.1	18.9	17.2	16.1	14.8	13.7	**25.5**	14.7	24
26	12.9	12.3	12.2	11.2	11.2	11.5	12	12.5	12.6	13.6	16.3	17.4	16.9	16.9	16.7	17	17.4	17.3	14.4	12.2	11.2	10.4	10	9.4	17.4	13.6	24
27	8.7	8	7.1	6.7	6.3	6.1	6	7	9	12.6	16.3	17.3	19.6	21.5	22.6	23.4	23.4	21.6	20.5	19.6	16.7	15.5	15.7	14.8	23.4	14.4	24
28	14.8	14	12.8	11.8	11.4	11.2	11.6	11.4	11.6	11.7	12.3	12.9	13.6	14.4	15.4	15.9	16.2	15.5	13.6	12.4	12.6	12	11.1	10.5	16.2	12.9	24
29	10	8.8	7.9	7.2	7.1	7.5	7.8	9.7	12.2	14.1	14.8	15.8	16.7	17.3	17.7	17.4	16.9	15.1	12.5	11.4	10.6	9.9	9.1	7.8	17.7	11.9	24
30	7.1	7.1	6.6	5.7	4.6	4.6	5.2	8.1	9.6	11.5	12.8	14.9	15.4	15.9	16.1	16.3	16.1	14.9	12.5	12	11.5	10.7	10.2	10.6	16.3	10.8	24
HOURLY MAX	14.8	14.0	12.8	11.8	11.4	11.5	12.0	12.7	14.5	16.9	19.7	21.1	21.4	21.5	23.1	25.5	23.5	22.6	20.5	19.6	17.2	16.1	15.7	14.8			
HOURLY AVG	7.1	6.7	6.2	5.7	5.2	4.9	5.4	6.7	8.2	9.7	11.1	12.2	13.0	13.5	13.8	13.8	13.4	12.5	10.8	9.7	9.1	8.5	8.0	7.5			

STATUS FLAG CODES

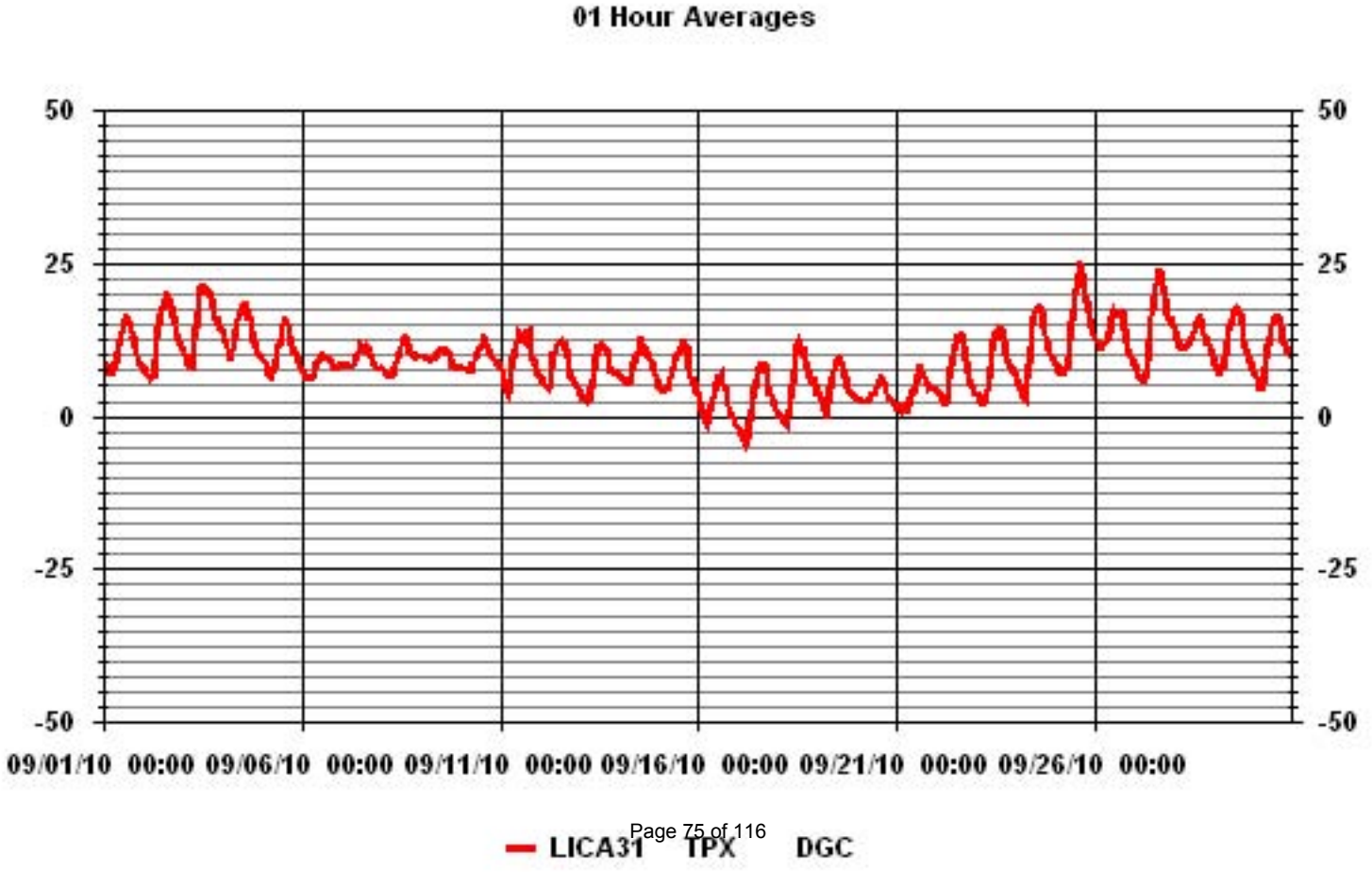
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-4.4	^{o}C	@ HOUR(S)	5	ON DAY(S)	17
MAXIMUM 1-HR AVERAGE:	25.5	^{o}C	@ HOUR(S)	15	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:	15.4	^{o}C			ON DAY(S)	3

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	720	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	4.95		MONTHLY AVERAGE:	9.28	^{o}C


01 Hour Averages
50
25
0
-25
-50
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31
TPX
DGC

Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

SEPTEMBER 2010

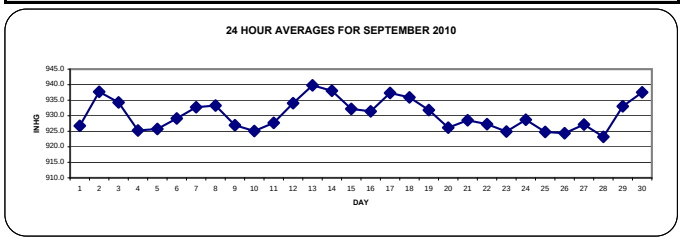
BAROMETRIC PRESSURE hourly averages (millibar)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	922	921	921	921	921	921	922	923	924	925	926	927	927	928	929	930	930	931	932	931	932	932	933	933	933	926.8	24
2	934	934	934	935	935	935	936	936	937	938	939	940	940	940	941	941	941	940	940	938	938	938	938	937	941	937.7	24
3	937	937	937	936	936	935	935	936	936	937	937	937	937	936	936	935	934	933	932	930	930	929	928	927	937	934.3	24
4	927	926	925	924	924	924	923	924	925	925	926	926	926	926	926	926	926	926	926	926	925	925	925	924	927	925.3	24
5	924	924	924	923	923	923	924	924	924	925	925	926	926	927	927	928	928	927	927	927	928	928	928	928	928	925.8	24
6	928	928	928	928	928	929	929	929	929	930	930	930	930	929	929	929	929	929	929	929	930	930	930	930	930	929.1	24
7	930	930	931	931	931	931	931	932	932	933	933	933	934	934	934	934	934	934	934	934	934	934	934	934	934	932.8	24
8	934	934	933	934	934	933	933	933	934	934	934	934	934	935	934	934	934	933	932	932	932	932	932	931	935	933.3	24
9	931	930	930	929	929	928	927	927	927	927	927	927	926	926	926	926	926	926	926	926	925	925	925	925	931	927.0	24
10	925	925	925	925	924	924	924	925	925	925	925	925	925	925	926	926	926	926	925	925	926	925	925	925	926	925.1	24
11	925	925	925	925	926	926	926	926	927	928	928	929	929	929	929	929	929	930	929	929	929	929	929	929	930	927.7	24
12	929	930	930	930	930	931	931	932	933	934	935	935	936	936	936	937	937	936	936	936	936	936	937	937	937	934.0	24
13	937	937	937	938	938	938	938	939	940	941	941	942	942	942	942	941	941	941	940	940	940	940	940	940	**942**	**939.8**	24
14	940	939	939	939	939	939	938	939	939	939	939	939	939	939	938	938	938	937	937	936	936	936	936	935	940	938.0	24
15	935	934	934	933	933	933	933	932	933	933	933	933	933	932	932	932	932	932	931	930	930	930	930	930	935	932.2	24
16	930	930	930	929	929	929	929	930	930	930	931	931	931	931	931	931	932	933	933	934	934	935	935	936	936	931.4	24
17	936	936	936	936	936	936	936	937	938	938	938	938	939	939	939	939	939	939	938	937	937	937	936	936	939	937.3	24
18	936	936	935	935	935	935	935	935	936	936	937	937	938	938	937	937	937	936	936	935	935	935	935	935	938	935.9	24
19	935	935	934	934	934	933	933	933	933	934	934	934	933	932	931	931	930	930	930	929	929	928	928	927	935	931.8	24
20	926	926	925	924	924	924	924	924	925	925	925	926	926	926	927	927	928	928	928	928	928	928	928	928	928	926.2	24
21	929	929	929	928	928	928	928	928	929	929	930	929	929	929	929	929	929	928	928	928	928	928	928	928	930	928.5	24
22	928	928	927	927	927	927	927	927	927	928	928	928	928	929	928	928	928	928	927	926	926	926	926	926	929	927.3	24
23	925	925	925	925	924	924	924	924	925	925	926	926	926	926	926	926	926	925	925	924	924	924	924	924	926	924.9	24
24	923	923	924	924	924	924	924	925	926	928	930	931	931	932	933	933	933	933	932	932	932	931	931	930	933	928.7	24
25	930	929	928	927	927	926	925	925	924	925	926	926	926	926	925	925	925	924	923	922	921	921	920	919	930	924.8	24
26	919	919	919	919	919	919	920	922	923	923	924	925	926	926	926	927	927	928	928	928	929	929	930	930	930	924.4	24
27	930	930	930	930	930	930	929	929	929	929	930	929	928	927	927	927	926	925	924	923	923	922	923	922	930	927.2	24
28	923	924	924	923	923	921	921	921	922	922	922	922	922	921	922	922	923	924	924	925	926	926	927	927	927	923.2	24
29	928	928	929	929	930	930	931	932	933	934	934	935	935	936	936	936	936	936	935	934	934	934	934	934	936	933.0	24
30	933	933	933	933	933	933	933	934	935	936	937	938	938	939	940	940	941	942	941	941	942	942	942	942	**942**	937.5	24
HOURLY MAX	940	939	939	939	939	939	938	939	940	941	941	942	942	942	942	941	941	942	941	941	942	942	942	942			
HOURLY AVG	930	930	929	929	929	929	929	929	930	931	931	931	931	931	931	931	932	931	931	931	931	931	931	930			

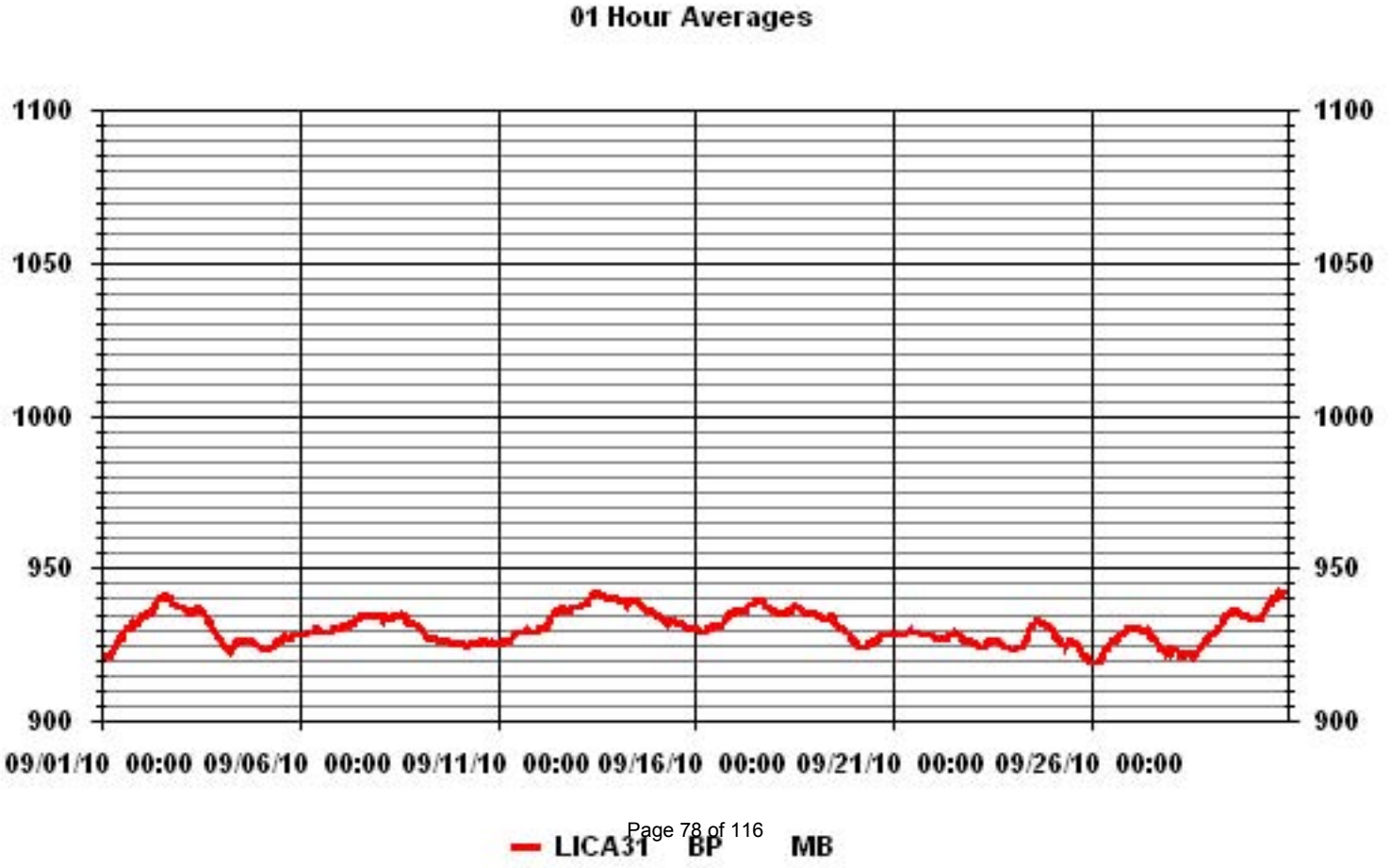
STATUS FLAG CODES

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:		942	MB	@ HOUR(S)	VAR	ON DAY(S)	13, 30
MAXIMUM 24-HR AVERAGE:		939.8	MB			ON DAY(S)	13
						VAR-VARIOUS	
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		720	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	5.28			MONTHLY AVERAGE:		930	MB


01 Hour Averages
1100
1050
1000
950
900
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 BP MB

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

SEPTEMBER 2010

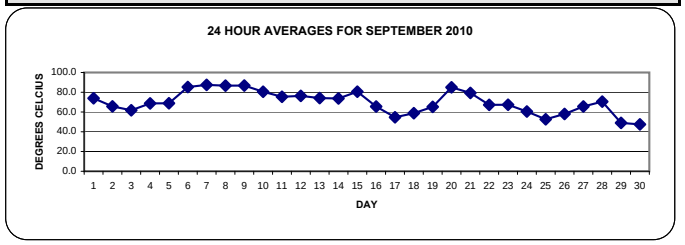
RELATIVE HUMIDITY hourly averages (%)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	84	86	89	88	90	90	89	86	83	77	72	66	58	52	46	52	52	57	62	72	79	81	80	83	90	73.9	24
2	85	85	86	85	86	85	81	76	69	65	57	54	53	48	47	44	42	49	55	61	65	66	66	67	86	65.7	24
3	68	72	76	78	79	79	71	64	63	56	49	45	47	48	49	53	53	54	60	67	66	61	62	62	79	61.8	24
4	64	68	70	73	77	84	79	74	67	64	61	62	60	57	54	55	60	58	64	70	76	82	86	84	86	68.7	24
5	82	82	79	81	83	81	77	78	73	68	66	63	54	49	49	46	49	56	67	72	74	72	74	78	83	68.9	24
6	80	81	84	84	84	85	85	84	81	80	79	78	81	86	88	88	89	90	89	90	90	90	91	90	91	85.3	24
7	90	91	91	91	91	91	91	91	91	87	85	84	85	85	81	79	79	83	85	88	89	90	90	91	91	**87.5**	24
8	91	91	91	91	91	91	91	91	90	89	86	83	78	74	74	75	80	86	88	89	90	90	90	90	91	86.7	24
9	90	91	90	90	90	90	90	90	90	89	88	85	84	84	81	80	78	78	81	87	88	89	90	90	91	86.8	24
10	90	90	90	90	90	90	90	85	83	78	76	71	69	68	64	69	70	73	76	78	83	85	87	87	90	80.5	24
11	89	88	87	87	87	88	83	75	70	66	61	57	60	61	69	69	68	66	73	77	79	80	84	86	89	75.4	24
12	86	87	87	88	89	90	90	85	78	76	70	64	61	61	61	60	62	68	75	78	77	80	79	80	90	76.3	24
13	82	84	88	88	89	90	90	87	84	80	70	61	58	53	54	53	59	59	70	75	76	78	77	74	90	74.1	24
14	73	75	75	77	79	80	80	80	77	75	70	66	59	59	75	70	68	72	73	75	73	75	80	83	83	73.7	24
15	87	89	89	90	90	90	90	90	86	84	79	76	73	72	74	66	67	63	70	77	82	83	84	82	90	80.5	24
16	82	80	82	86	85	86	85	82	78	71	59	53	48	50	50	64	56	42	53	50	50	57	61	63	86	65.5	24
17	64	68	70	71	75	77	74	66	57	47	42	40	38	36	35	36	37	40	47	53	53	59	61	66	77	54.7	24
18	68	69	68	68	69	70	66	62	57	58	59	56	49	43	45	48	47	50	55	59	61	62	59	63	70	58.8	24
19	56	57	59	62	71	79	79	73	66	62	57	53	46	43	46	49	50	59	74	80	84	85	87	88	88	65.2	24
20	88	88	88	88	89	89	89	89	88	87	87	86	83	83	78	73	77	77	83	85	85	85	87	88	89	85.0	24
21	88	88	88	88	85	88	89	88	86	84	83	81	76	70	62	63	63	67	75	77	75	78	80	81	89	79.3	24
22	80	80	82	83	85	87	86	82	75	71	65	58	50	45	44	44	45	50	57	64	67	69	71	74	87	67.3	24
23	75	74	75	78	80	84	85	81	77	71	63	58	53	50	49	50	49	53	60	64	66	69	74	78	85	67.3	24
24	81	84	86	88	89	90	89	80	72	60	48	41	37	36	36	36	38	43	47	50	52	55	57	57	90	60.5	24
25	59	58	62	64	65	65	63	64	62	58	50	47	41	40	36	32	34	37	44	47	53	57	61	64	65	52.6	24
26	65	65	63	66	65	62	61	64	70	71	59	45	45	44	46	48	43	39	46	52	60	68	72	74	74	58.0	24
27	75	81	88	90	90	90	89	88	84	73	57	50	46	41	38	38	39	44	46	49	65	70	70	73	90	65.6	24
28	70	73	78	84	86	82	80	82	82	82	82	80	76	71	65	63	57	49	56	60	56	58	60	60	86	70.5	24
29	62	66	69	71	71	69	66	59	52	45	41	38	33	29	28	28	28	32	38	44	47	50	52	57	71	49.0	24
30	59	58	61	64	70	68	64	54	53	49	45	39	36	35	34	34	34	36	39	39	41	42	43	42	70	47.5	24
HOURLY MAX	91	91	91	91	91	91	91	91	91	89	88	86	85	86	88	88	89	90	89	90	90	90	91	91			
HOURLY AVG	77.1	78.3	79.7	81.1	82.3	83.0	81.4	78.3	74.8	70.8	65.5	61.3	57.9	55.8	55.3	55.5	55.8	57.7	63.6	67.6	70.1	72.2	73.8	75.2			

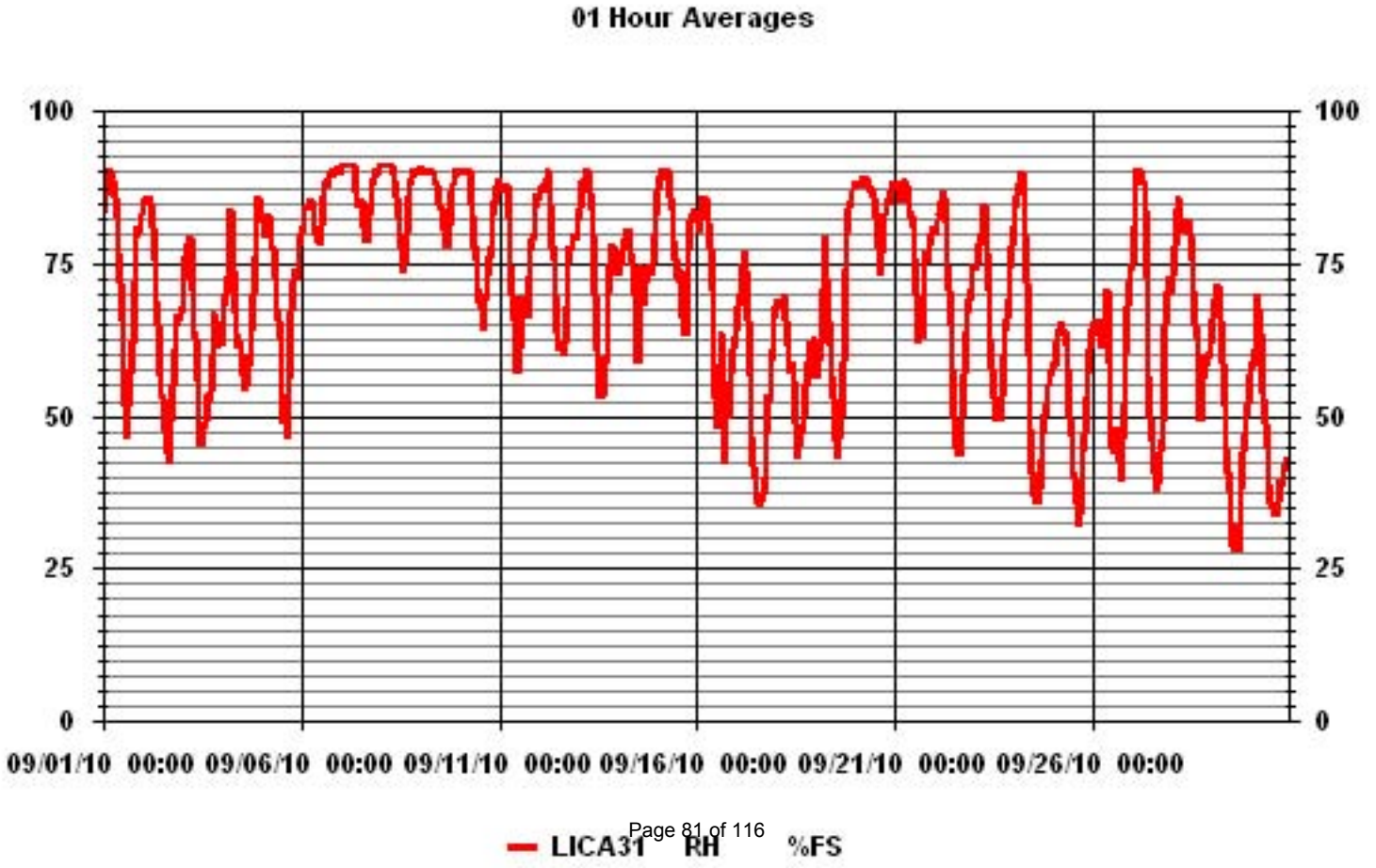
STATUS FLAG CODES

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

MAXIMUM 1-HR AVERAGE:		91	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:		87.5	%			ON DAY(S)	7
						VAR-VARIOUS	
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		720	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	16.07			MONTHLY AVERAGE:		69.75	%


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 RH %FS

Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

SEPTEMBER 2010

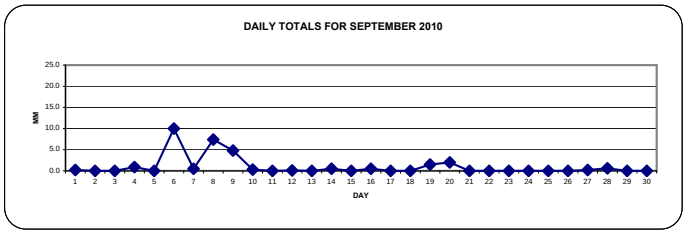
PRECIPITATION hourly averages (mm)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	TOTAL	RDGS.
DAY																											
1	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	24
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0.2	0	0	0.7	0.9	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	0.6	1.1	2	1.3	**2.1**	**2.1**	0.6	0	0.1	0	0.1	0	**2.1**	**10.0**	24
7	0	0	0	0.3	0	0.1	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	24
8	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0.1	0.6	0.8	0.7	0.7	1.6	1.6	1.2	1.6	7.4	24
9	1.4	0.4	0.1	0.4	0.4	0.4	0.7	0.3	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	0.2	1.4	4.8	24
10	0.1	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	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	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
13	0	0	0	0	0	0	0	0	0	0	0	0	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	0.2	0.3	0	0	0	0	0	0	0	0	0	0.3	0.5	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	**C**	0	0	0	0	0	0	0	0.5	0.5	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	0.2	0.8	0.8	1.5	24
20	1.1	0.3	0.1	0	0.1	0	0	0.1	0	0	0	0	0.1	0.1	0	0	0.1	0	0	0	0	0	0	0	1.1	2.0	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0.1	0.2	24
28	0	0	0.2	0.2	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	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	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	1.4	0.4	0.2	0.4	0.4	0.4	0.7	0.3	0.1	0.0	0.1	0.0	0.6	1.1	2.0	1.3	2.1	2.1	0.8	0.7	0.7	1.6	1.6	1.2			

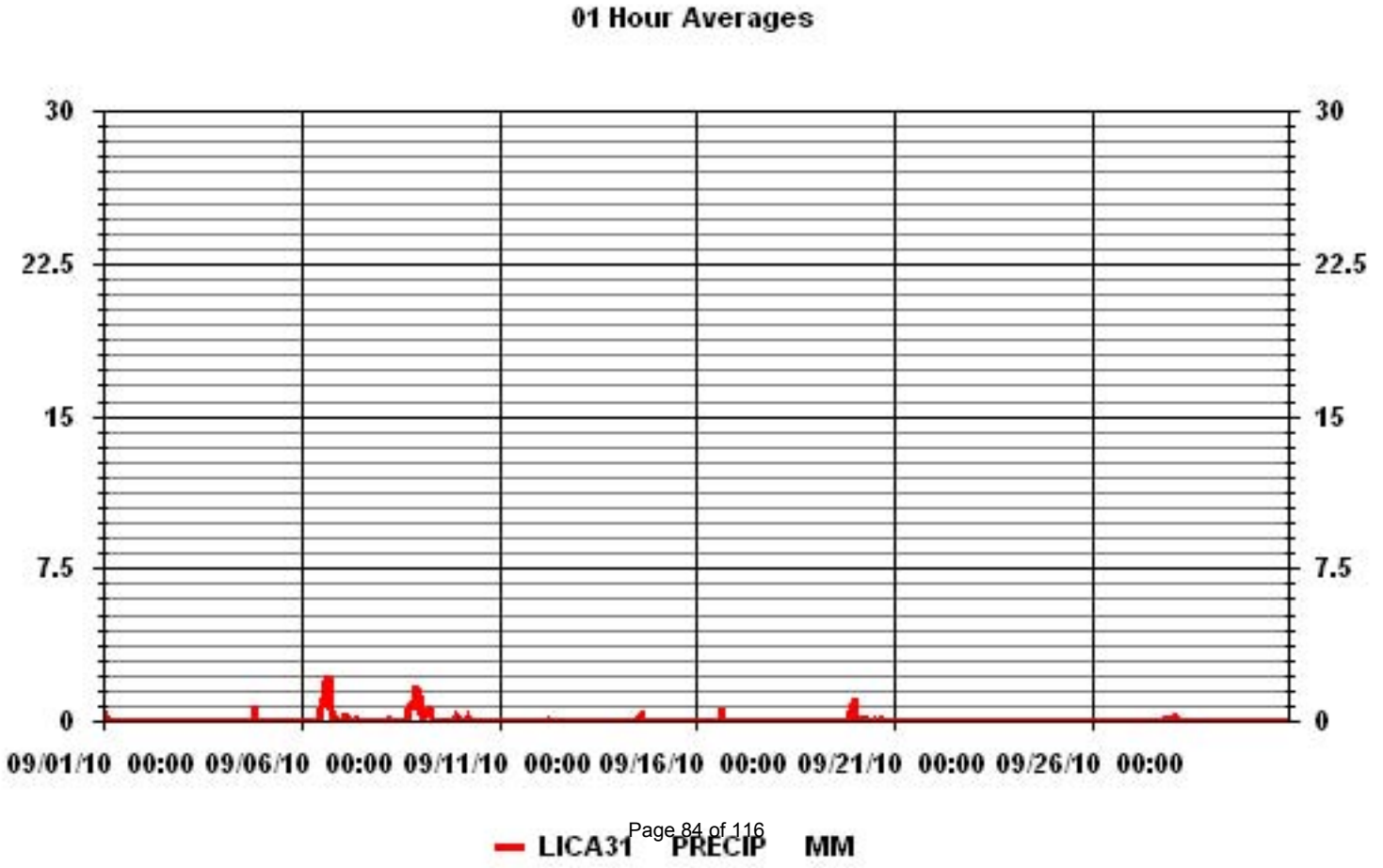
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:			2.1	MM	HOUR(S)	16, 17	ON DAY(S) 6
MAXIMUM DAILY TOTAL			10.0	MM			ON DAY(S) 6
MONTHLY TOTAL			29.5	MM			
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		720	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.21			MONTHLY AVERAGE:		0.04	MM


01 Hour Averages
30
22.5
15
7.5
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 PRECIP MM

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA

SEPTEMBER 2010

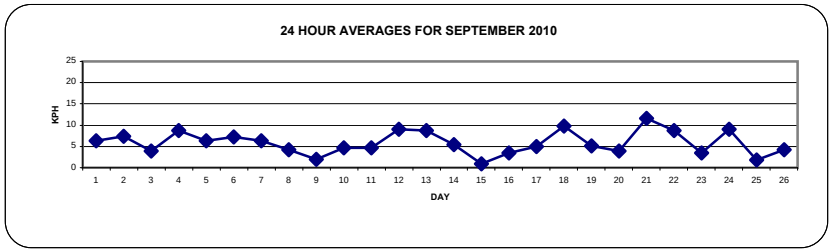
WIND SPEED hourly averages (km/hr)

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	7.1	6.7	5.6	6.1	6.2	6.6	5.3	2.5	5.5	5.8	5.6	8.9	10.4	7.4	11.7	10	7.7	11.2	13.2	7	8.9	8.8	8.4	9.9	13.2	2.6	24
2	10.4	9.8	7.9	6.8	9.1	7.6	7.8	8.5	7.4	7.4	6.6	9.3	9.9	10.4	10	9.1	10.2	14	12.4	5.7	6.7	6	6.9	8.4	14	3.1	24
3	8.7	8.7	7.8	7.2	7.5	8.7	7.4	6.5	6.6	8	9.6	9.1	7.4	10.4	11.4	13.4	14.4	14.8	16.4	16.9	14.7	13.9	12.4	10.4	16.9	4.3	24
4	10.6	9.4	10.1	12.4	9.3	5.6	7.7	7.8	3.1	7	10.1	12	11.5	12.3	8.1	10.9	12.1	12.5	13.6	13.4	12.7	12.9	5.7	8.2	13.6	1.1	24
5	8.9	7.9	7.6	9.6	9.9	8.4	9	12.1	10.9	10.6	13.7	13.3	8.3	12.2	10.9	13.5	10.8	10.8	8.7	9.3	10.1	7.7	9.7	10.7	13.7	6.3	24
6	10.2	10.2	8.1	11.2	12.1	13.4	12.6	11.7	12.1	12.1	11.8	11.8	12.4	13.5	13	12.1	10.1	10.2	5.4	3.3	5.7	7.2	8.5	9.5	13.5	7.4	24
7	9.8	11.8	14.2	3.7	6.1	7	6.4	5.6	4.8	5.3	4.5	12.5	13	13.1	13	7.3	8	7.9	6.1	6.8	7.4	7.6	6.8	5.2	14.2	3.9	24
8	4.5	5.8	6.7	21.9	21.9	6.2	1.7	12.5	11.5	11.1	10	12.6	12.4	12.4	12.6	12.5	11.5	10.5	9.7	9.1	8.4	6.8	7	7.6	21.9	8.7	24
9	6.9	7.5	6.6	6.6	5.7	8.4	6.3	4.3	4.6	11.6	11.9	11.4	6.2	7	6.2	5.2	7.3	8.8	7.6	9.5	12.7	13.6	23.4	23.2	23.4	6.3	24
10	16	12.5	7.8	6.2	6.8	5.3	10.9	2.9	8.7	10.8	8.4	11.3	12.2	13.4	12.5	13.3	13.4	13.5	13.5	12.8	11.7	10.9	11.2	13	16	7.2	24
11	13.4	12.7	11.5	13	12.5	13.8	12.8	11.5	11.5	9	10.7	11.2	12.3	13.9	5.1	6.6	11	8.3	6.3	6.7	7.9	8.9	8.2	8.9	13.9	6.3	24
12	8.8	8.3	8.8	8.9	8.5	8	8.4	7.2	5.3	6.9	11.4	9	1.7	10.3	9.8	9.7	10.9	12	13	12.6	11.4	12.3	11.9	12.4	13	4.2	24
13	11.8	11.9	12.3	12.1	11.4	11.5	10.7	6.1	5.6	8	10.7	10.7	10.7	10.3	9.8	0.6	4.3	3.8	5.1	6.4	6.5	5.1	4.9	5.3	12.3	2	24
14	6.1	6.2	6.7	5.9	6.2	5.4	3.1	2.4	3	1.5	3	4.2	5.9	10.3	9.9	11	1.9	3.4	3.1	6.8	9.9	11.7	10	8.9	11.7	4.7	24
15	10.1	9.8	10.5	9.7	9.8	6.8	8	10.2	12.2	9.7	10	10.6	9.5	13	9.1	8.9	5.6	8.3	8.9	8.3	12.7	12.6	13.1	12.7	13.1	4.6	24
16	9.6	10.1	7.6	7.1	7.1	6.9	7.6	6.9	9.5	8.6	7.8	7.4	10.4	8.9	6.4	11.8	15.7	17.3	17.4	15.6	11.6	13.6	13.2	13.7	17.4	9.1	24
17	14.1	12.4	11.2	11	7.8	7.4	11.3	8.9	5.7	5.4	7.2	6	5.1	3.7	8.6	9	9.3	10.1	12.4	14	14	14.7	15.5	15.8	15.8	8.7	24
18	16	15.4	15.2	16.2	13.3	8	7.5	11.3	12.3	12.7	12.3	11.2	11	6	6.6	7.1	5.3	7.5	8.8	10.3	10.5	10.8	11.6	10.6	16.2	5.4	24
19	11.4	11.6	12.2	10.7	9.6	8.9	10.9	11.9	10.4	6.7	6.8	4.7	2.3	2.9	2.3	2.9	4.2	9	6.2	9.4	12	6.9	6.8	8	12.2	0.9	24
20	5.2	6.6	7.8	7.9	8.8	8.2	10	11.3	10	6.1	11.2	9.7	8.7	6.9	7.9	8.9	9.4	11.4	13.6	13.1	11.6	11.7	10.8	12.8	13.6	3.5	24
21	4.2	3.5	4.9	5.9	2.8	3.2	9.2	6.1	7.7	12.3	9.2	12	13.7	11.9	12.5	13.1	5.6	1.1	4	3.7	5.1	5.4	5.4	6.8	13.7	5	24
22	7.7	5.9	7.1	7.2	6.5	9.2	8.9	8.8	10.1	10.8	14	13.7	14.5	12.3	12.7	13.3	12.4	12.2	9.7	8.7	10.7	10.4	10.2	11	14.5	9.8	24
23	12.1	12.1	10.7	11.2	12.1	12.1	12.3	12.6	11.3	11	12.7	4.1	4.4	5.4	9.3	11.1	11.2	12.5	14.8	13.8	13.7	11	8	7.8	14.8	5.1	24
24	7.9	9.1	7.4	9.2	9.6	10.9	14.6	11.3	9.6	13	12.7	14	14.2	12.5	10.6	11.6	3.1	2.3	5.8	6.9	8.2	9.5	11	11.7	14.6	3.9	24
25	11.3	11.7	12.8	14.4	13.5	14	15.1	14.5	14.5	12.5	13	12.3	13.7	12	11.2	10	10.6	10	8.9	11.5	12	10.5	10	10.6	15.1	**11.6**	24
26	8.4	8.6	8.1	10	6.4	13.7	18.6	11.4	14.1	12.6	12.5	14.3	13.8	14.1	9.9	15	12	11.9	10.2	15	14	15.5	16.8	16.7	18.6	8.7	24
27	14.6	12.1	11.9	11.7	10.9	9.6	7.7	8.2	7.8	5.8	2.1	4.6	6.9	5	9.1	2.6	7.7	12.8	9.8	10.6	10.3	14.1	5.7	1.2	14.6	3.5	24
28	14.1	14.7	14.2	10	6.1	12.8	15.6	14.2	18.4	16	20.6	25.9	26.2	**30.5**	13.5	6.2	1.4	4.5	8.2	6.2	7.9	4	8.7	10.3	**30.5**	9	24
29	11.3	11.2	10.3	10.9	9.7	12.3	13.3	12.4	13	15	6.5	5.3	3	2.3	3	5.8	8.5	11.9	12.4	13.6	14.9	16.4	7.1	7.3	16.4	1.8	24
30	7.1	8.1	8.5	8.9	9.2	10	10	9.9	12.1	16.9	15.7	14.8	12.8	16.6	13.7	3.9	6.2	11	11.6	10.4	11	12.6	6.3	8.3	16.9	4.2	24
HOURLY MAX	16.0	15.4	15.2	21.9	21.9	14.0	18.6	14.5	18.4	16.9	20.6	25.9	26.2	30.5	13.7	15.0	15.7	17.3	17.4	16.9	14.9	16.4	23.4	23.2			
HOURLY AVG	9.9	9.7	9.4	9.8	9.2	9.0	9.7	9.1	9.3	9.7	10.1	10.6	10.2	10.7	9.7	9.2	8.7	9.9	9.9	9.9	10.5	10.4	9.8	10.2			

STATUS FLAG CODES

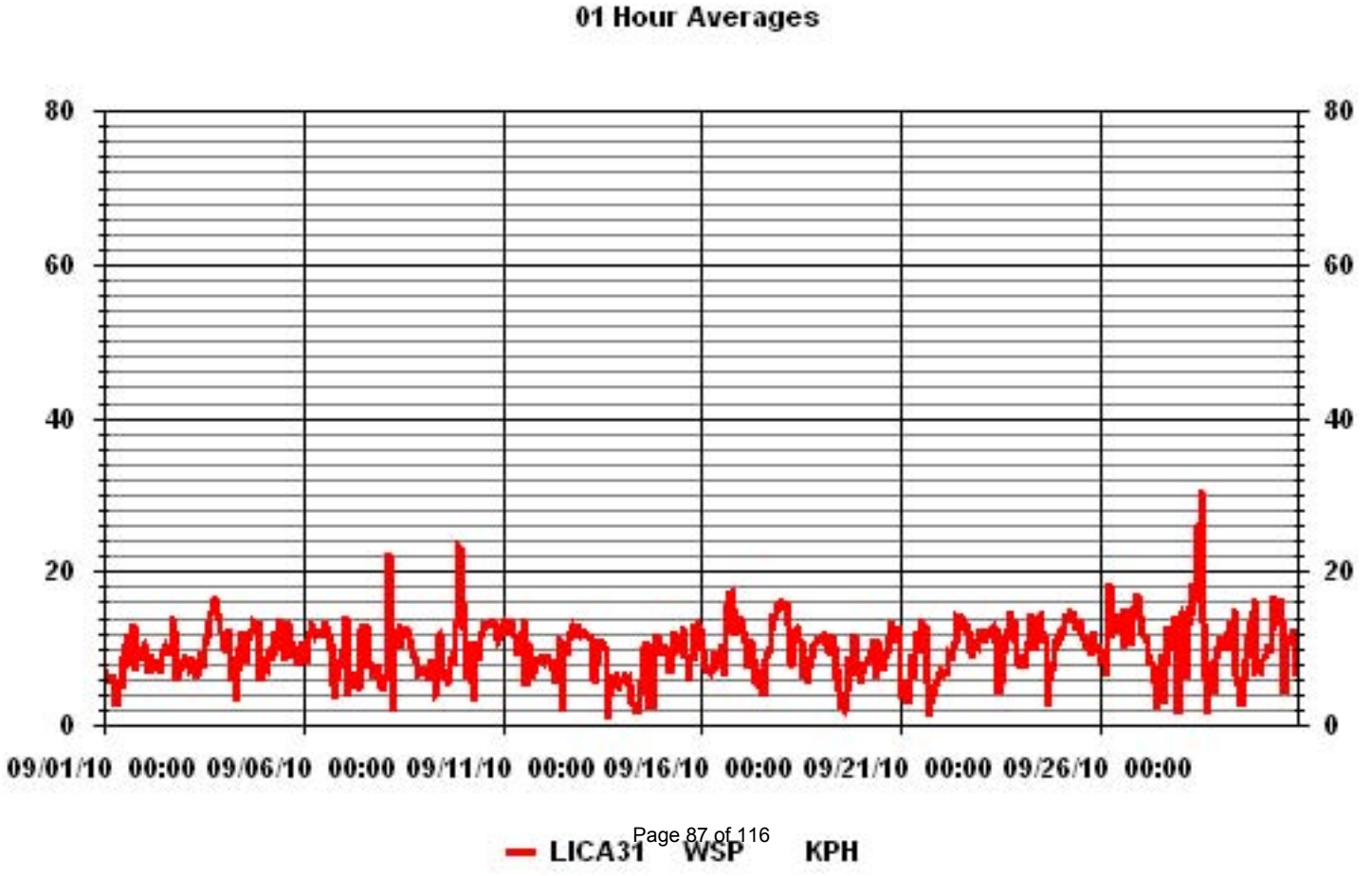
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION: February 3, 2009

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		30.5	KPH	@ HOUR(S)	13	ON DAY(S)	28
MAXIMUM 24-HR AVERAGE:		11.6	KPH			ON DAY(S)	28
CALMS (≤ 0 KPH)	0.13	%		OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	0	HRS		AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	3.63			MONTHLY AVERAGE		9.78	KPH


01 Hour Averages
80
60
40
20
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

SEPTEMBER 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

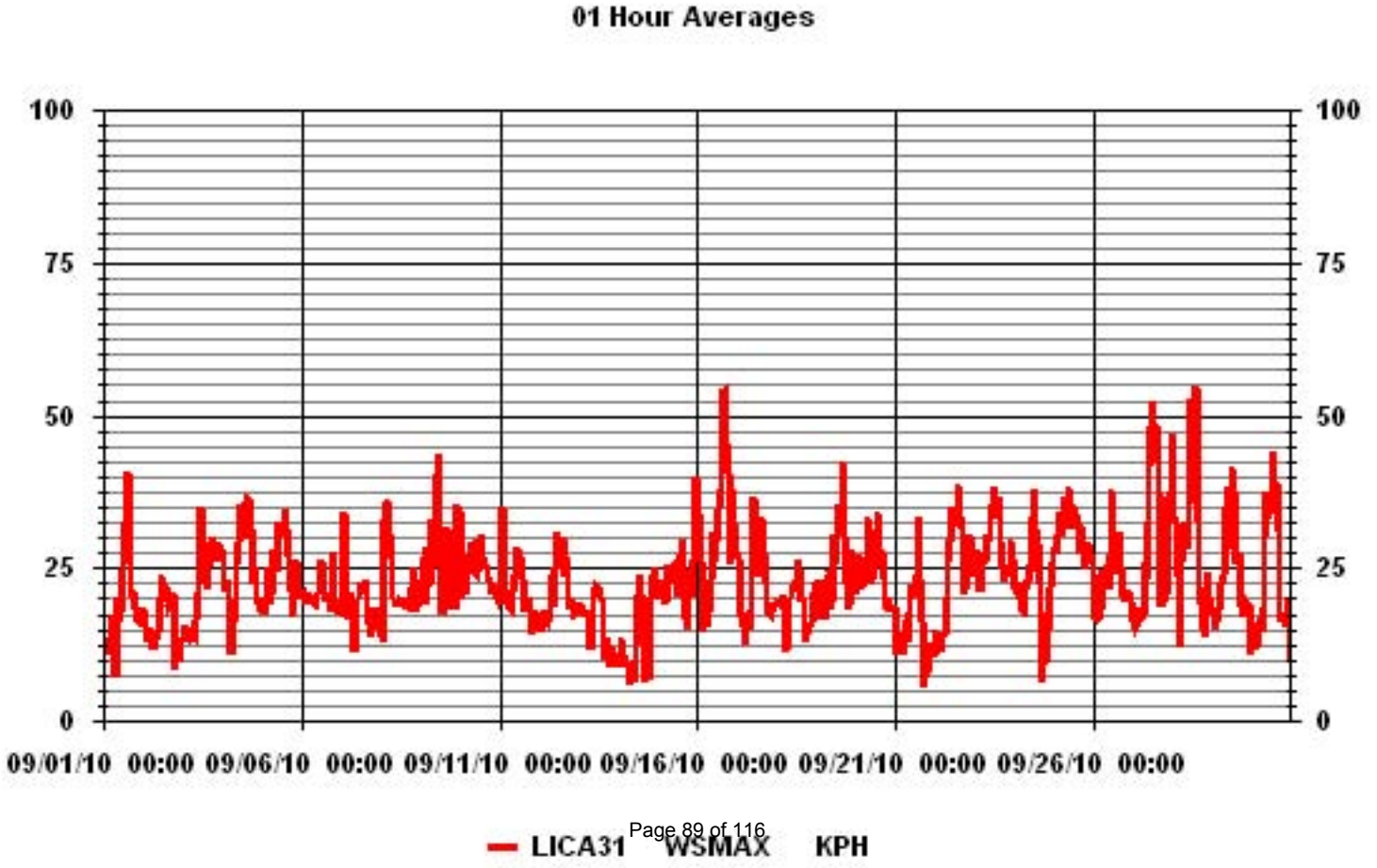
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	12.9	13.5	10.7	12.4	12.9	16.6	16.6	7	20.3	16.2	17.7	24.5	25.8	32.6	31.7	40.9	30.4	20.5	21.4	18.8	16.8	16.6	16.4	17.7	40.9
2	18.6	17.6	15.1	12.7	14.2	15.3	11.6	14.5	13.3	14.6	20.1	24	19.6	21.6	21.6	18.6	19	20.3	20.3	8.5	10.5	10.2	9.6	13.3	24
3	13.7	15.3	15.3	14	13.5	13.8	14.4	14	16.6	21.2	28.4	35.2	30.4	24.1	22.7	21.8	25.1	29.3	30.2	26.6	26	29.3	28.9	26.6	35.2
4	28.2	22.7	21.2	23	20.1	10.7	18.8	17.9	16.1	25.8	29.3	35.6	35.2	35.4	35.8	36.9	29.5	36.1	31.8	22.5	25.1	19.4	18.6	18.8	36.9
5	20.3	17.5	18.8	24.5	24.5	19.2	20.5	28	26	24.5	32.4	30.4	30.6	32.4	34.4	31.7	27.3	21.4	17.9	18.1	23.6	26.2	24.2	21.4	34.4
6	19.9	21.2	19.2	20.8	20.4	21	19.4	19.4	19.2	20.3	20.8	21.2	26.2	22.3	20.5	19.5	20.3	17.9	21	27.5	18.8	19.9	18.1	18	27.5
7	17.7	18.3	34.1	19.7	16.6	18.6	20.8	15.5	11.3	12.9	19.7	22.1	22.1	21.5	21.4	23.2	18.8	16.2	13.7	15.3	17.3	18.6	16.6	15.5	34.1
8	14.2	12.7	33	35.6	36.1	26.4	30.4	20.1	19.2	19.2	19.7	20.1	19.9	19.4	19.9	19.7	18.3	19	17.9	21.8	25.1	18	18.6	19.4	36.1
9	23.2	19.2	26.7	19	28.3	22.9	22.1	32.8	25.3	33.5	40.2	43.5	31.9	17.5	20.5	31	31.9	26.2	18.4	20.3	19.4	19.2	35	35	43.5
10	34.4	19.9	23.4	20.5	22.5	27.3	25.6	29.1	24.5	24.2	29.5	24.9	25.1	30.4	26.9	25.8	25.1	23.6	23.1	21.6	21.8	20.7	20.8	19.9	34.4
11	20.5	26.9	35.2	20.8	19	19.7	19	18.6	21.2	23.8	25.8	28.2	25.3	27.3	23.6	18.1	18.1	19.1	20.3	14	16.6	17.9	16.8	17.1	35.2
12	15.1	14.6	16.1	17.9	16.6	16.2	17.9	23.8	18.6	24.7	24.9	30.7	24.9	26.4	25.8	30.2	23.4	26.7	18.4	19.7	19.4	17.5	17.7	18.6	30.7
13	17.7	19.3	17.5	18.4	17.7	17	18.2	11.6	13.3	21.6	22.5	22.3	22	20.6	19.9	10.7	10	13.5	8.7	10.5	12.1	10.3	9.4	8.7	22.5
14	11.1	8.9	13.4	11.1	10	9.6	9.1	5.9	8.3	6.1	9.8	12.4	20.7	24	19.9	20.4	6.3	9.6	6.5	16.4	23.2	23.8	25.1	19.9	25.1
15	21.2	20.5	22.9	20.1	21.9	19.2	25.4	24.7	25.1	22.3	24.9	23.6	20.1	27.3	21.4	29.7	16.8	17.9	15.1	24.9	20.1	26.2	36.3	39.8	39.8
16	27.3	34.1	26.2	14.6	15.7	15.7	19.4	17.9	23.2	30.7	26.2	29.5	34.6	35	37.8	44.2	54.3	54.5	45.5	40.7	25.6	38.1	31.5	31.7	54.5
17	28	26.9	17.7	17.3	15.9	12.5	17.7	15.1	18.1	24.9	36.5	30.4	23.8	25.2	29.5	33.5	27.5	22.7	19.5	17.9	17.5	18.8	18.6	19.2	36.5
18	19.7	19.5	19.2	19.9	19.9	13.3	11.4	18.6	20.1	21.6	21.6	22.9	22.1	26.4	25.1	19.7	20.3	12.9	14.9	14.2	15.3	16.2	21	16.6	26.4
19	22.5	22.8	22.9	19.2	17	17	19.5	23.8	24.7	18.4	19.5	30.4	25.6	35.3	33.3	33.5	42.6	30.4	22.7	18.6	19	28.2	22.5	20.8	42.6
20	24.7	23.8	27.1	24	22.5	22.7	24.3	33.5	25.8	22.7	23.2	27.3	31.3	34.3	25.4	26.9	28.2	23.4	18.6	17.7	20.3	19	18.1	18.1	34.3
21	19.1	10.9	14	14	11.1	11.8	16.6	12.9	17.5	22.3	20.5	20.8	23.4	23.8	33.5	23.4	16.6	5.5	7.2	8.1	10	12.7	11.6	12.5	33.5
22	14.9	11.4	11.6	12.9	11.3	14	14.4	20.3	26.2	29.5	34.8	33.5	35	31.7	38.7	33.7	31.7	20.8	21.5	22.9	28.4	30.4	23.6	25.6	38.7
23	27.7	27.8	26	21	24.9	26.3	25.8	30.4	30	30.4	35.4	37.8	37.9	36.7	33	36.5	29.7	25.3	22.9	25.2	24.9	23.6	29.5	26.9	37.9
24	22.1	21.7	21	21.8	22.7	18.4	18.1	21.5	22.9	25.6	24.2	33.5	37.8	31.7	29.3	22.8	18.3	6.3	10.3	9.4	14.9	15.1	21.7	26	37.8
25	28.4	27.3	30.4	34.1	30	33.2	34.8	36.7	32.1	38.3	31.3	32.4	35.2	32.1	33.7	32.4	27.3	31.7	24.9	25.6	29.3	28.9	26.9	26.9	38.3
26	20.5	17.1	16.5	16.8	24	18.3	24.9	24.5	25.6	21.4	27.3	37.8	31.3	28	25.8	24	31	25.6	20.7	19.5	20.8	21.2	21	19.9	37.8
27	16.4	15.1	15.5	17.9	17.9	17	17.4	26	22.9	32.4	41.8	48.3	52.5	44.8	48.5	42.6	37.6	18.8	20.8	19.5	36.5	20.8	37.4	36.3	52.5
28	47	33.5	32.4	23.8	11.8	30.8	26.2	32.4	30.8	28	35.4	52.7	47.7	50.7	**54.7**	33	22.1	19.4	15.3	13.8	16.4	24.5	19	19.9	**54.7**
29	18.6	17.7	15.1	16.2	18.4	22.3	22.5	24.1	35.2	38.5	32.6	28	41.5	37.8	25.6	26.3	27.7	19.2	17	18.1	19.5	19	19.5	10.7	41.5
30	12.7	12.7	12.2	11.8	15.9	16.8	14.6	18.4	29.9	37.4	33	35.3	35	43.9	38	39.1	31.5	18.1	16.2	16.8	15.3	17.3	20.1	10.2	43.9
PEAK	47.0	34.1	35.2	35.6	36.1	33.2	34.8	36.7	35.2	38.5	41.8	52.7	52.5	50.7	54.7	44.2	54.3	54.5	45.5	40.7	36.5	38.1	37.4	39.8	

STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	54.7	KPH	@ HOUR(S)	14
			ON DAY(S)	28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100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 WSMAX KPH

LICA31
WSP / WDR Joint Frequency Distribution (Percent)

September 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	.69	.97	1.25	.83	.83	1.11	.83	1.38	.97	.55	.27	1.25	.27	.55	.55	13.75
<	12.0	2.77	2.36	5.55	3.61	2.22	3.33	1.25	4.16	6.94	5.41	3.19	2.36	3.05	6.11	3.75	1.80	57.91
<	20.0	1.25	.69	3.05	1.38	.97	1.52	.41	3.61	1.66	1.80	3.19	1.52	1.80	1.94	1.66	.55	27.08
<	29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.41	.55	.00	.00	.00	.97
<	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.13
>=	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.41	3.75	9.58	6.25	4.02	5.69	2.77	8.61	10.00	8.19	6.94	4.72	6.66	8.33	5.97	2.91	

Calm : .13 %

Total # Operational Hours : 720

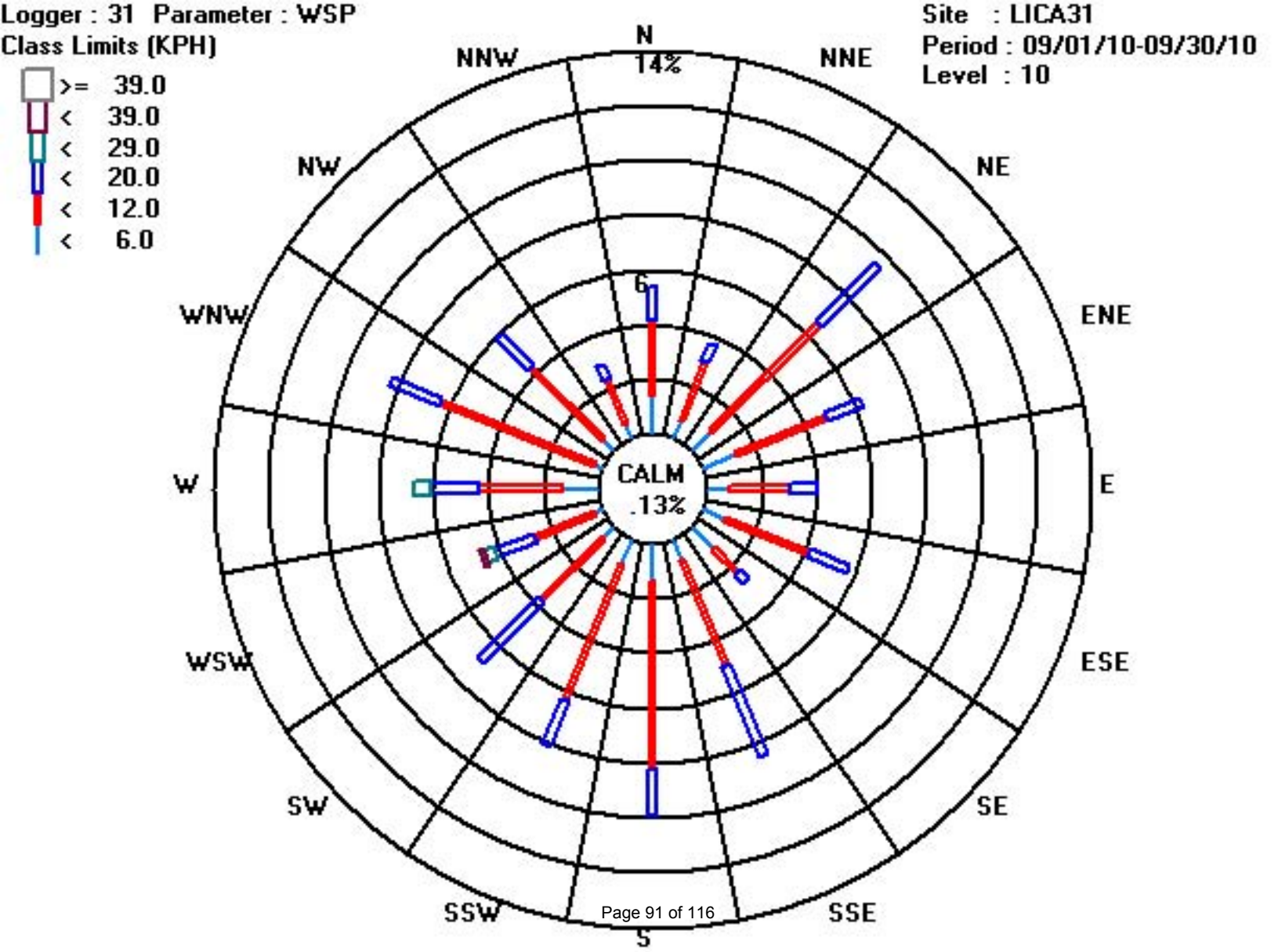
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	10	5	7	9	6	6	8	6	10	7	4	2	9	2	4	4	99
<	12.0	20	17	40	26	16	24	9	30	50	39	23	17	22	44	27	13	417
<	20.0	9	5	22	10	7	11	3	26	12	13	23	11	13	14	12	4	195
<	29.0												3	4				7
<	39.0												1					1
>=	39.0																	
	Totals	39	27	69	45	29	41	20	62	72	59	50	34	48	60	43	21	

Calm : .13 %

Total # Operational Hours : 720


Logger : 31 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA31
Period : 09/01/10-09/30/10
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6
CALM
.13%

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

SEPTEMBER 2010

WIND DIRECTION hourly averages in degrees

MST

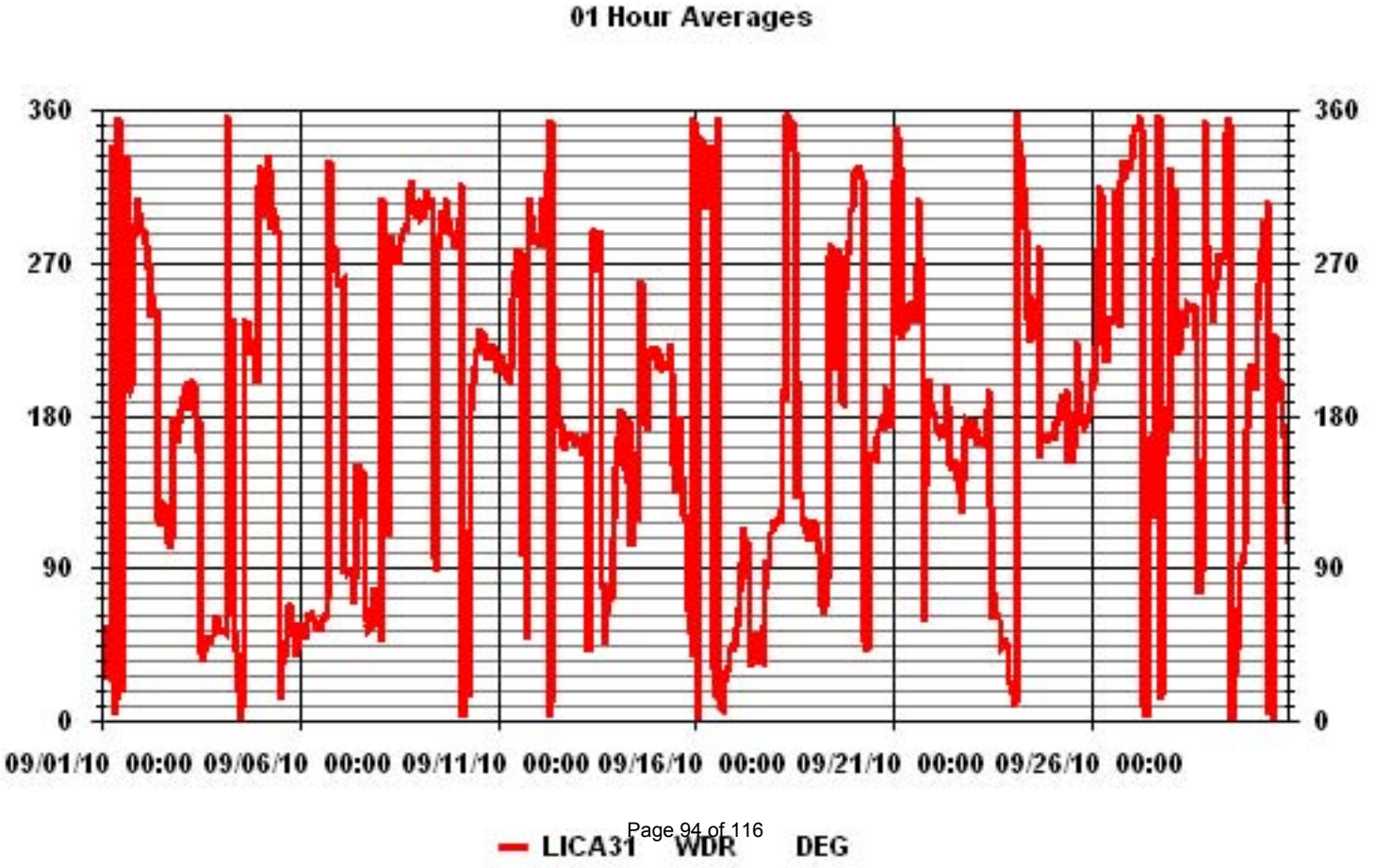
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	46	43	56	39	24	28	23	339	4	12	356	52	51	17	231	333	197	195	198	277	285	293	308	301	343	NNW	24
2	292	287	290	282	265	272	238	250	243	242	120	119	114	121	128	127	106	101	107	179	174	179	164	175	174	S	24
3	183	191	195	198	197	183	199	200	198	180	157	178	40	34	43	41	48	47	47	50	51	60	60	57	86	E	24
4	56	51	53	52	357	61	90	84	237	54	41	18	1	8	35	237	227	235	226	215	220	201	199	315	15	NNE	24
5	327	323	312	299	299	333	326	289	303	299	289	288	12	41	33	37	47	67	69	63	50	39	39	42	355	N	24
6	56	56	50	48	55	58	63	64	62	60	55	55	52	59	60	61	63	71	330	266	266	280	273	259	51	NE	24
7	256	259	260	86	92	87	88	87	88	69	83	152	148	149	148	120	59	55	57	53	67	79	77	77	107	ESE	24
8	56	46	309	273	280	133	108	275	286	281	275	270	270	284	284	289	289	293	300	314	318	300	299	304	288	WNW	24
9	306	305	297	298	305	313	306	302	309	95	98	88	278	286	301	299	293	309	296	288	287	289	281	280	297	WNW	24
10	281	297	318	3	3	19	14	112	183	199	209	218	218	230	230	229	222	217	212	216	220	220	220	205	231	SW	24
11	212	218	215	214	207	208	202	201	208	248	250	266	279	274	278	97	101	108	48	309	299	289	284	280	233	SW	24
12	285	285	279	308	297	298	323	1	354	10	180	172	209	179	176	175	164	159	167	170	165	167	165	167	194	SSW	24
13	167	165	163	158	158	169	166	40	55	288	289	288	284	264	289	78	82	45	63	66	74	71	106	119	166	SSE	24
14	150	164	163	184	169	164	148	139	178	103	137	159	138	118	241	259	173	183	201	171	213	219	221	213	187	S	24
15	221	210	209	217	210	212	206	210	221	221	206	151	133	152	143	179	145	122	118	64	83	52	38	353	169	SSE	24
16	352	0	345	338	339	306	304	302	311	339	52	31	16	15	356	8	7	13	23	29	33	42	44	40	8	N	24
17	43	55	67	76	94	114	99	106	85	31	35	44	46	52	34	37	36	57	77	95	91	110	111	112	76	ENE	24
18	118	115	118	118	124	195	189	357	359	352	350	355	336	131	202	136	133	122	116	111	107	107	118	105	102	E	24
19	119	109	108	99	68	63	69	69	83	274	282	276	255	206	279	219	189	188	224	254	274	283	300	303	115	ESE	24
20	323	325	323	328	324	320	49	48	41	58	153	159	157	156	168	172	178	179	171	195	194	186	173	177	169	SSE	24
21	227	318	350	345	327	224	245	232	233	238	245	248	243	235	268	308	269	273	58	138	193	198	202	188	248	WSW	24
22	184	180	173	171	175	168	168	173	199	187	152	147	149	151	154	142	135	122	141	173	178	177	167	169	161	SSE	24
23	174	177	173	164	163	163	164	167	160	184	196	128	60	77	61	63	61	43	44	49	47	45	22	24	113	ESE	24
24	17	11	12	359	343	333	327	316	291	238	223	239	243	248	247	224	280	155	170	167	165	165	168	169	254	WSW	24
25	168	172	170	174	177	184	183	193	190	195	151	157	151	160	183	224	201	196	180	175	173	175	180	187	178	S	24
26	195	205	204	221	278	316	311	261	230	211	223	238	235	236	247	313	285	231	318	330	320	323	324	326	273	W	24
27	331	345	349	349	350	357	350	7	20	1	168	139	157	118	169	273	340	358	12	15	159	157	186	170	3	N	24
28	326	313	313	297	216	219	236	239	241	232	246	245	241	244	244	226	155	74	108	109	88	354	282	267	251	WSW	24
29	261	254	234	254	260	275	270	272	273	289	347	355	352	1	11	27	41	67	94	92	98	104	172	206	280	W	24
30	207	211	200	195	206	236	258	277	284	295	292	307	3	18	0	228	189	201	200	195	177	167	129	106	243	WSW	24
HOURLY AVG	352	345	350	359	357	357	350	357	359	352	356	355	352	286	356	333	340	358	330	330	320	354	324	353			

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	98.18		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	213	DEG


01 Hour Averages
360
270
180
90
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

SEPTEMEBR 2010

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

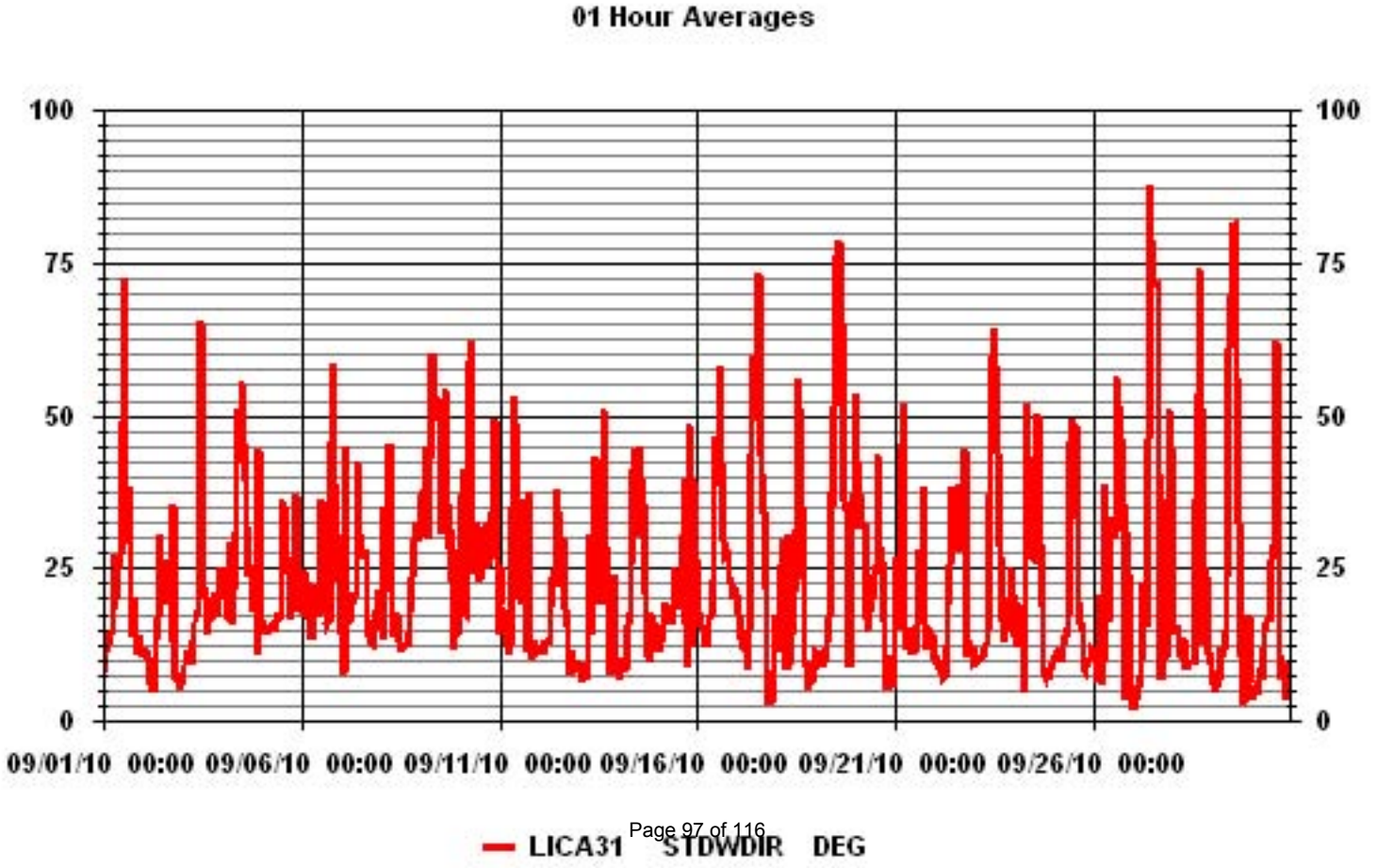
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	9	11	12	13	15	15	18	27	20	25	27	49	49	72	29	32	38	15	14	20	11	13	14	10
2	11	11	12	11	6	10	5	8	13	17	30	25	19	26	24	21	21	13	35	7	7	7	5	6
3	8	9	11	11	11	9	13	16	18	18	55	65	**42**	**22**	20	14	16	17	20	21	17	18	20	25
4	24	24	22	17	29	17	16	22	31	51	42	46	56	46	39	32	24	26	22	18	19	11	44	14
5	17	14	15	14	15	15	16	15	15	18	17	17	36	30	35	27	25	17	21	18	20	37	26	21
6	18	17	25	18	17	23	14	13	22	18	17	24	36	24	18	16	16	16	46	58	39	31	23	17
7	14	9	8	45	17	16	17	19	21	20	42	31	27	28	28	28	17	14	13	13	15	18	20	21
8	18	13	35	29	21	46	45	14	15	17	18	13	11	13	12	13	12	14	18	24	30	33	32	29
9	37	30	38	34	45	30	43	60	58	52	53	49	44	31	42	54	36	28	32	23	12	14	15	15
10	28	37	41	18	18	59	31	62	28	24	33	23	23	28	32	32	26	25	27	34	45	49	46	14
11	26	19	18	18	12	17	11	12	35	53	49	33	20	19	36	35	11	21	38	10	12	13	12	11
12	11	12	11	12	13	13	14	19	23	25	22	38	35	27	23	30	19	16	8	8	12	8	9	9
13	9	9	6	9	9	7	30	14	20	42	43	33	26	19	31	51	25	28	9	8	10	16	24	9
14	8	7	9	10	9	9	16	18	26	41	45	30	42	45	40	36	21	16	11	9	18	13	15	16
15	11	15	16	13	17	19	17	18	16	18	25	22	18	22	25	30	40	16	9	49	12	38	40	27
16	20	18	16	15	14	12	15	17	17	23	46	46	38	45	58	43	30	27	27	23	23	21	20	21
17	21	18	14	12	13	12	8	15	44	60	49	57	64	73	44	41	34	22	9	2	4	4	3	13
18	17	11	25	15	30	9	8	31	9	14	16	21	31	56	51	23	35	9	10	5	6	6	9	8
19	12	11	11	11	9	10	11	13	17	37	36	51	76	70	79	68	65	36	35	18	9	33	37	32
20	54	43	37	37	32	32	17	15	18	22	20	24	26	44	33	29	26	16	9	5	9	10	11	5
21	27	24	15	16	46	52	12	15	15	11	14	12	11	16	28	26	18	38	11	16	12	13	14	10
22	11	10	9	10	10	7	7	12	19	26	39	33	28	29	39	28	28	35	45	11	12	12	12	10
23	10	11	10	10	10	11	12	13	15	37	44	60	64	58	44	29	27	16	13	15	16	20	25	21
24	14	12	19	13	14	14	5	52	44	40	27	27	35	40	50	38	29	19	8	7	8	7	9	9
25	10	11	10	10	10	12	13	14	15	18	46	50	44	49	33	20	16	15	9	8	9	10	10	12
26	12	10	11	6	21	6	10	39	23	16	22	33	33	30	57	31	51	47	36	3	31	24	21	3
27	2	3	4	6	7	10	23	17	17	46	88	79	73	72	71	72	41	7	11	10	36	11	51	45
28	15	14	15	15	13	11	10	14	8	9	9	10	10	9	36	54	74	51	13	25	24	24	11	10
29	9	6	5	6	7	12	10	12	15	24	61	70	80	81	81	57	33	11	5	3	3	4	17	6
30	5	4	5	4	7	9	7	12	14	16	17	16	26	29	42	62	49	11	7	8	6	3	10	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

LAST CALIBRATION: February 3, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 720 HRS


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA31 STDWDIR DEG

Calibration Reports

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	September 22, 2010	Previous Calibration	August 31, 2010
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	12:38	End Time (MST)	16:41
Reason:	Monthly Calibration		
Barometric Pressure	929 mmHg	Station Temperature	22 Deg C
Cal Gas	51.4 ppm	Cal Gas Expiry date	August 5, 2012
DAS Output Voltage	0 - 1 Volts		

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	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	555 ccm	30.3 Deg C	553 ccm	30.3 Deg C
HVPS / Lamp Setting	529	2513.2	529	2513.8
PMT / RxCell Temp	7.8 Deg C	50 Deg C	7.8 Deg C	50 Deg C
Converter / IZS Temp	NA Deg C	40 Deg C	NA Deg C	40 Deg C
Offset / Slope	62.7	1.101	62.7	1.127

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4925	72.9	750	731	1.0256
4925	72.9	750	751	0.9983
4961	38.9	400	399	1.0023
4982	16.5	170	171	0.9922
4999	0	0	0	N/A
			Sum of Least Squares	0.9989
			New Correction Factor	0.9983

	Before Calibration	After Calibration
Auto Zero	0.5	0.8
Auto Span	348	359
Sample Lines Connected		YES
Percent Change from Previous Calibration		-2.6%

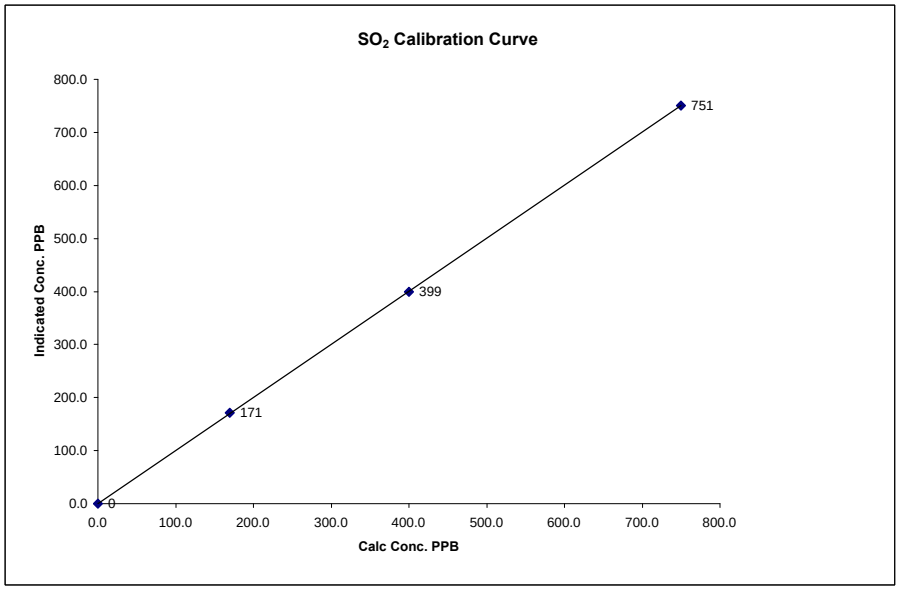
Calibration Performed by: Ting Xu

SO_2 Calibration Curve

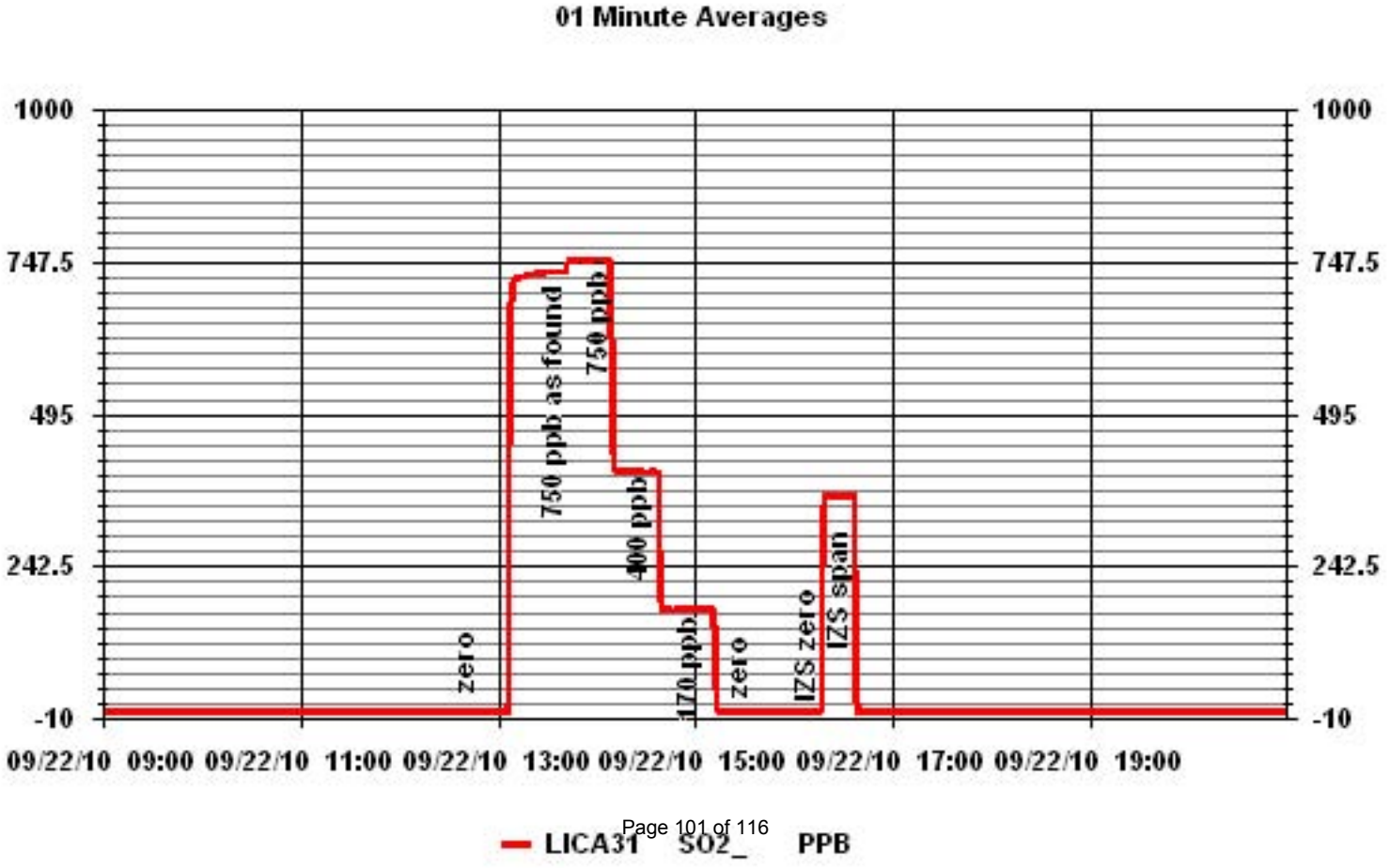
Calibration Date	September 22, 2010		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	12:38	End Time (MST)	16:41

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
170	171	0.9922
400	399	1.0023
750	751	0.9983

Correlation Coefficient	(≥ 0.995)	0.999990
Slope	(0.85 to 1.15)	1.000819
Intercept	(± 3% F.S.)	0.155293



Notes:


01 Minute Averages
1000
747.5
495
242.5
-10
zero
750 ppb as found
750 ppb
400 ppb
170 ppb
zero
IZS zero
IZS span
09/22/10 09:00 09/22/10 11:00 09/22/10 13:00 09/22/10 15:00 09/22/10 17:00 09/22/10 19:00
LICA31 SO2_ PPB

Hydrogen Sulphide

H_2S Calibration Report

Station Information

Calibration Date	September 21, 2010		Previous Calibration	August 30, 2010	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	9:01		End Time (MST)	12:46	
Reason:			Monthly Calibration		
Barometric Pressure	930	mmHg	Station Temperature	21	Deg C
Cal Gas	10.6	ppm	Cal Gas Expiry date	05/12/2011	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	510	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 100	ppb				
Sample Flow / Box Temp	547	ccm	30.2	Deg C	544	ccm	31.4	Deg C
HVPS / Lamp Setting	534		2563.5		534		2561.8	
PMT / RxCell Temp	8.4	Deg C	50	Deg C	8.4	Deg C	50	Deg C
Converter / IZS Temp	315.2	Deg C	45	Deg C	315.5	Deg C	45	Deg C
Offset / Slope	62.9		0.879		62.9		0.865	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	0	N/A
4962	37.8	80	82	0.9773
4962	37.8	80	80	1.0017
4982	18.9	40	40	1.0015
4987	10.9	23	23	1.0051
4998	0	0	0	N/A
			Sum of Least Squares	1.0019
			New Correction Factor	1.0017

	Before Calibration	After Calibration
Auto Zero	0.5	0.7
Auto Span	53	51
Sample Lines Connected		YES
Percent Change from Previous Calibration		2.3%

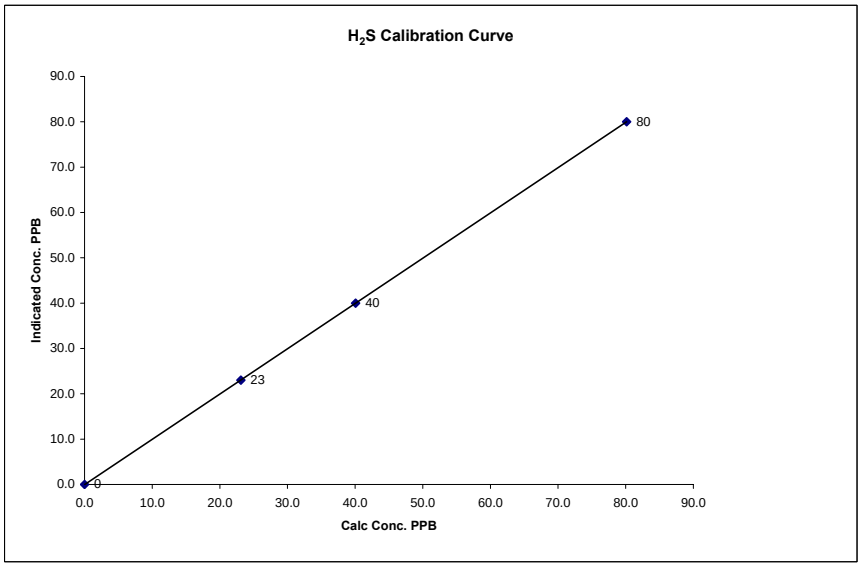
Calibration Performed by: Ting Xu

H_2S Calibration Curve

Calibration Date	September 21, 2010				
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	9:01		End Time (MST)	12:46	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
23	23	1.0051
40	40	1.0015
80	80	1.0017

Correlation Coefficient	(≥ 0.995)	0.999999
Slope	(0.85 to 1.15)	0.998562
Intercept	(± 3% F.S.)	-0.027886



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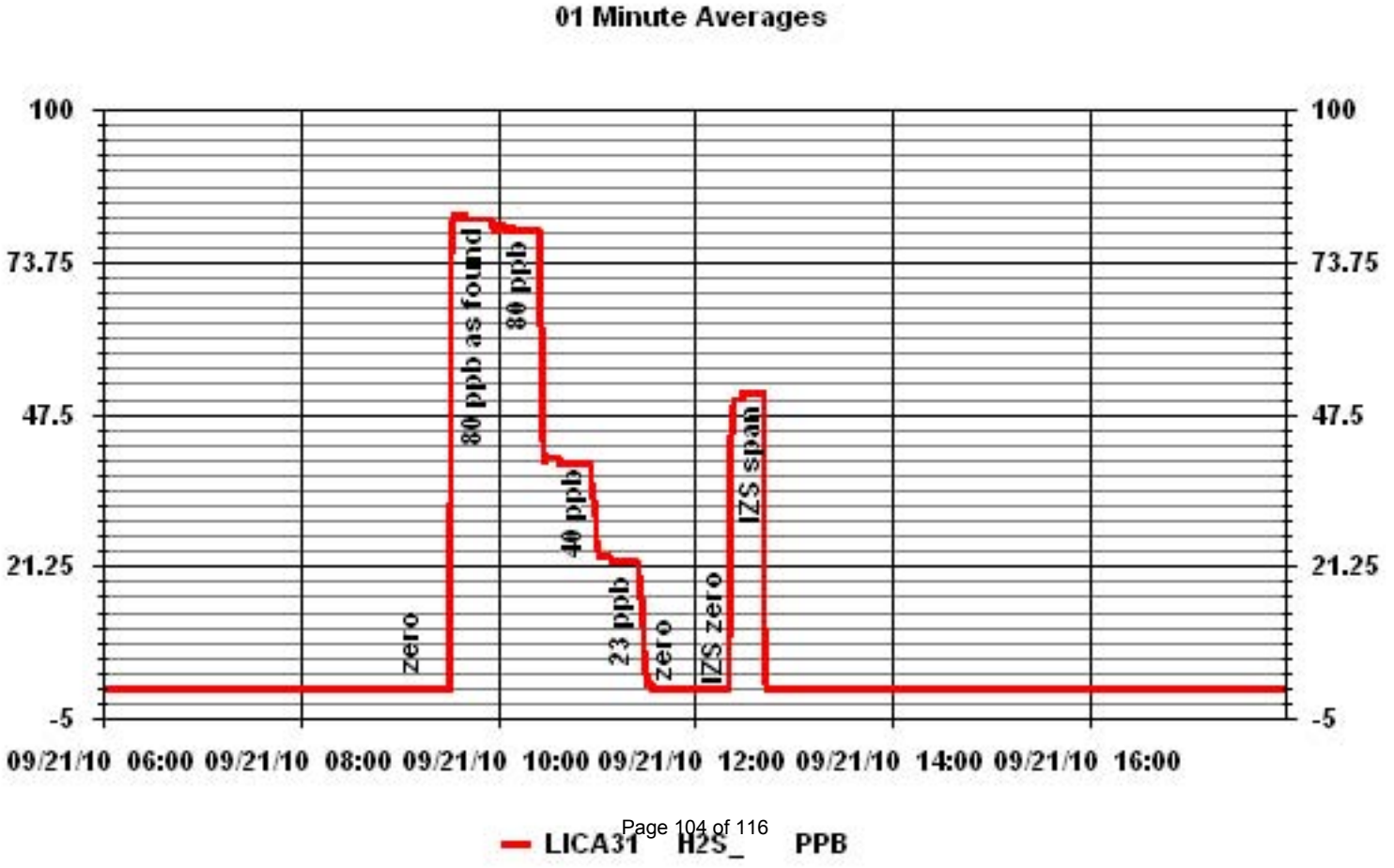

01 Minute Averages
100
73.75
47.5
21.25
-5
zero
80 ppb as found
80 ppb
40 ppb
23 ppb
zero
IZS zero
IZS span
09/21/10 06:00
09/21/10 08:00
09/21/10 10:00
09/21/10 12:00
09/21/10 14:00
09/21/10 16:00
LICA31 H2S_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	September 21, 2010	Previous Calibration	August 30, 2010
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location:	ST. LINA		
: (MST)	12:01	End Time (MST)	15:11
Reason:	Monthly Calibration		
Barometric Pressure:	930 mmHg	Station Temperature:	22 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	207 Prop/ 602 Meth/1171.25 THC ppm	Cal Gas Expiry Date:	August 21, 2011
DAS make & Model:	ESC 8832	S/N :	AO717
Output Voltage Range:	0 - 10 VDC		

Analyzer Information

Make / Model	TECO 51C	S/N :	77021-384	Method	Flame Ionization

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 -50	ppm	0 - 50	ppm
Sample Pressure	6.9	psi	6.9	psi
Hydrogen Pressure	8	psi	8	psi
Air Pressure	21	psi	21	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0.0	0.0	0.0	NA
1999	70.0	39.6	40.0	0.9907
1999	40.0	23.0	22.9	1.0034
1999	20.0	11.6	11.4	1.0177
1999	0	0.0	0.0	N/A
			Correction Factor:	0.9907

Previous Calibration Correction Factor:	0.9907	
Current Correction Factor Before Span Adjust:	0.9907	
Percent Change:	0.00%	

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	34.9	35.0
Sample Lines Connected		YES

Cylinder Pressures			
Span	1800	psi	
Hydrogen	1500	psi	
Zero Air	31	psi	Unlimited API 701

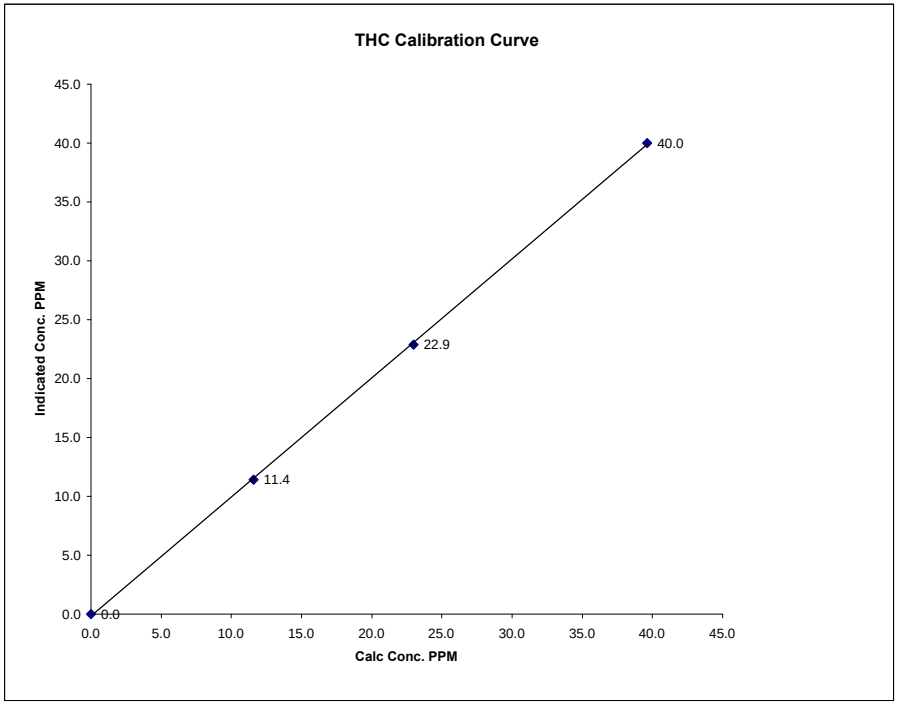
Calibration Performed by: Ting Xu

THC Calibration Curve

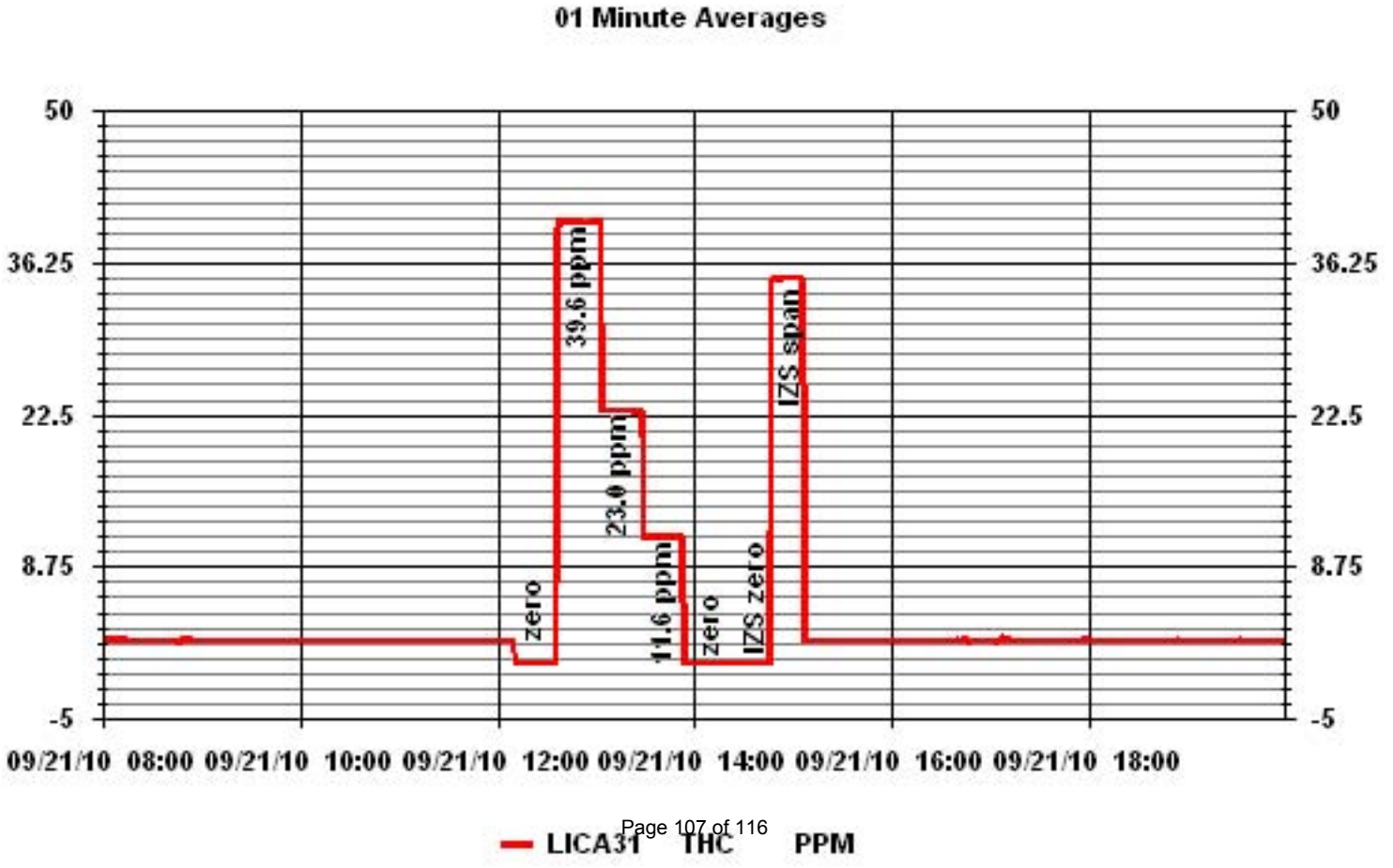
Calibration Date	September 21, 2010		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	12:01	End Time (MST)	15:11

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
11.6	11.4	1.0177
23.0	22.9	1.0034
39.6	40.0	0.9907

Correlation Coefficient	(≥ 0.995)	0.999896
Slope	(0.85 to 1.15)	1.010434
Intercept	(± 3% F.S.)	-0.170039



Notes: Flame temp 175.


01 Minute Averages
50
36.25
22.5
8.75
-5
zero
39.6 ppm
23.0 ppm
11.6 ppm
zero
IZS zero
IZS span
09/21/10 08:00
09/21/10 10:00
09/21/10 12:00
09/21/10 14:00
09/21/10 16:00
09/21/10 18:00
LICA31 THC PPM

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	September 21, 2010		Previous Calibration	August 30, 2010	
Company	LICA		Plant/Location	St. Lina	
Start Time (MST)	9:05		End Time (MST)	15:48	
Reason:	Monthly Calibration			Other	
Barometric Pressure	930 mmHg	Station Temperature	21 Deg C	MFCF	1
Cal Gas Concentration	NOx 50.8 ppm	NO 50.4 ppm	Cal Gas Expiry date	05-Aug-12	
DAS Output Voltage	0 - 1 Volts		Chart Rec. Output	NA Volts	

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration				
Concentration Range					0-1000		ppb			
Sample Flow/Conv. Temp	477	ccm	314.2	Deg C		476	ccm	314.8	Deg C	
Ozone Flow / Vacuum	73	ccm	3.9	"Hg-A		73	ccm	3.8	"Hg-A	
HVPS / A ZERO	646	Volts	17.4	MV		646	Volts	17.4	MV	
Rx/ Temp / PMT Temp	50.0	Deg C	6.8	Deg C		50.0	Deg C	6.8	Deg C	
Box Temp / IZS Temp	28.0	Deg C	45.1	Deg C		28.2	Deg C	45.2	Deg C	
Offset	0.5	NOx	0.4	NO		0.5	NOx	0.4	NO	
Slope	1.209	NOx	1.201	NO		1.226	NOx	1.211	NO	
NO_2 COEF / Conv Efficency	NA	NO2	0.993			NA	NO2	0.993		

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4994	0.0	-----	0	0	0	0	0	1	-----	-----
4919	74.2	-----	755	749	-----	743	741	2	1.0160	1.0107
4919	74.2	-----	755	749	-----	758	750	8	0.9959	0.9986
4962	34.6	-----	352	349	-----	354	351	3	0.9937	0.9943
4978	16.8	-----	171	170	-----	173	172	1	0.9877	0.9856
4995	0.0	-----	0	0	0	0	0	0	-----	-----

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4919	74.2	-----	755	749	-----	759	752	8	-----	-----
4919	74.2	550	755	-----	528	761	232	529	1.0000	100.19%
4919	74.2	300	755	-----	293	761	467	294	1.0000	100.35%
4919	74.2	100	755	-----	101	760	659	101	1.0100	100.00%

Linearity		Sum of Least Squares	NOx=	0.995	NO=	0.997	NO2=	0.998
OK?	**Yes** No	Correction Factors:	NOx=	0.9959	NO=	0.9986	NO2=	1.0000
					Average Converter Efficiency=		100.18%	

	Before Calibration					After Calibration			
Auto Zero	0.5	NOx	0.6	NO2		0.2	NOx	-0.5	NO2
Auto Span	577	NOx	564	NO2		582	NOx	570	NO2
					Sample Lines Connected	YES			

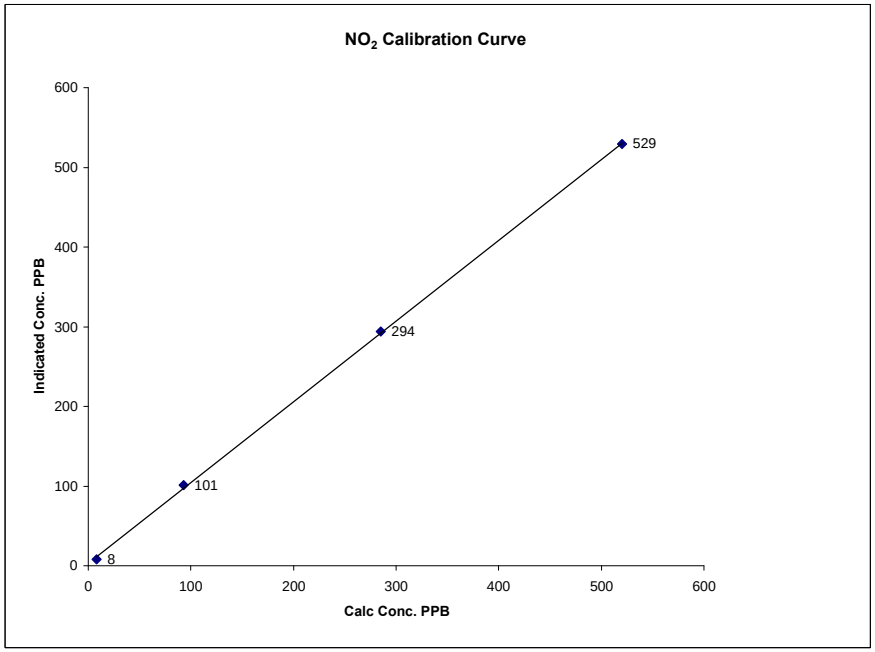
Notes: Additional GPT point done for ozone calibration. O3 set point 450, NO=322, NO2=437

Calibration Performed by: Ting Xu

NO_2 Calibration Curve

Calibration Date	September 21, 2010				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	9:05	End Time	(MST)	15:48	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999821
			Slope (0.85 to 1.15)	1.013537
8	8	N/A	Intercept (± 3% F.S.)	3.43384
93	101	0.9208		
285	294	0.9694		
520	529	0.9830		

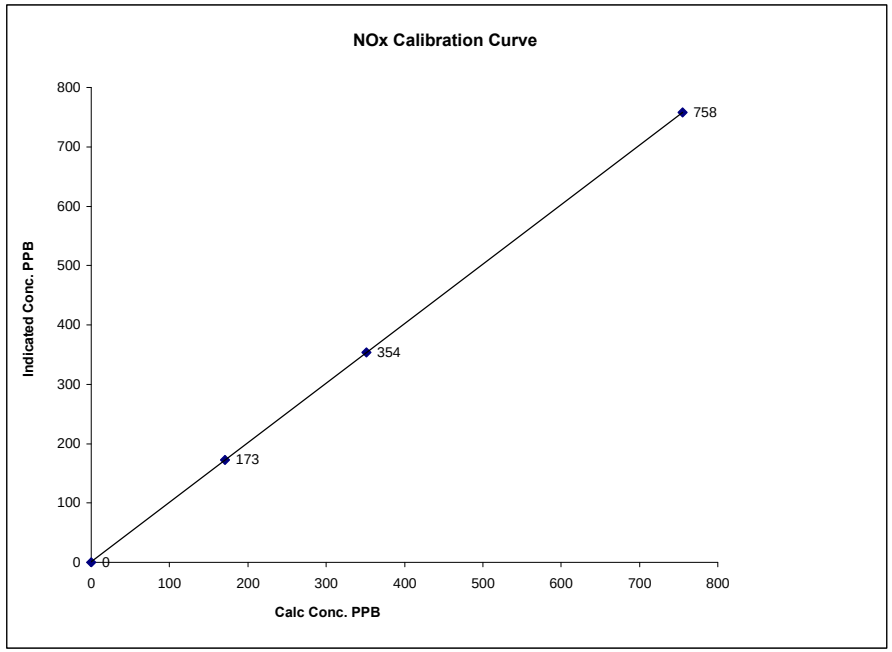


Notes:

NOx Calibration Curve

Calibration Date	September 21, 2010				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	9:05	End Time (MST)	15:48		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999996
			Slope (0.85 to 1.15)	1.003513
0	0	N/A	Intercept (± 3% F.S.)	0.74320
171	173	0.9877		
352	354	0.9937		
755	758	0.9959		

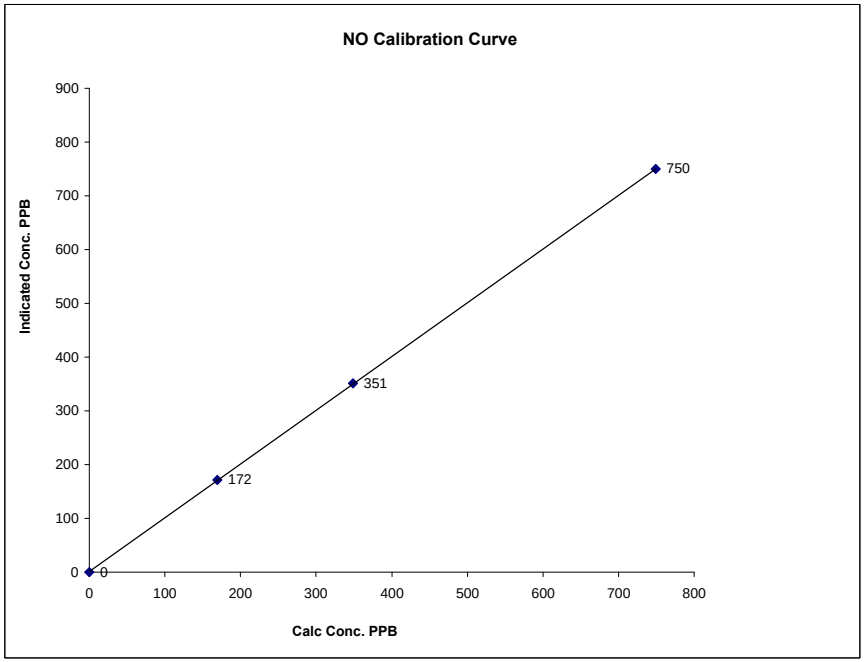


Notes:

NO Calibration Curve

Calibration Date	September 21, 2010				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	9:05	End Time (MST)	15:48		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999989
			Slope (0.85 to 1.15)	0.997542
0	0	N/A	Intercept (± 3% F.S.)	2.8230
170	172	0.9856		
349	351	0.9943		
749	750	0.9986		



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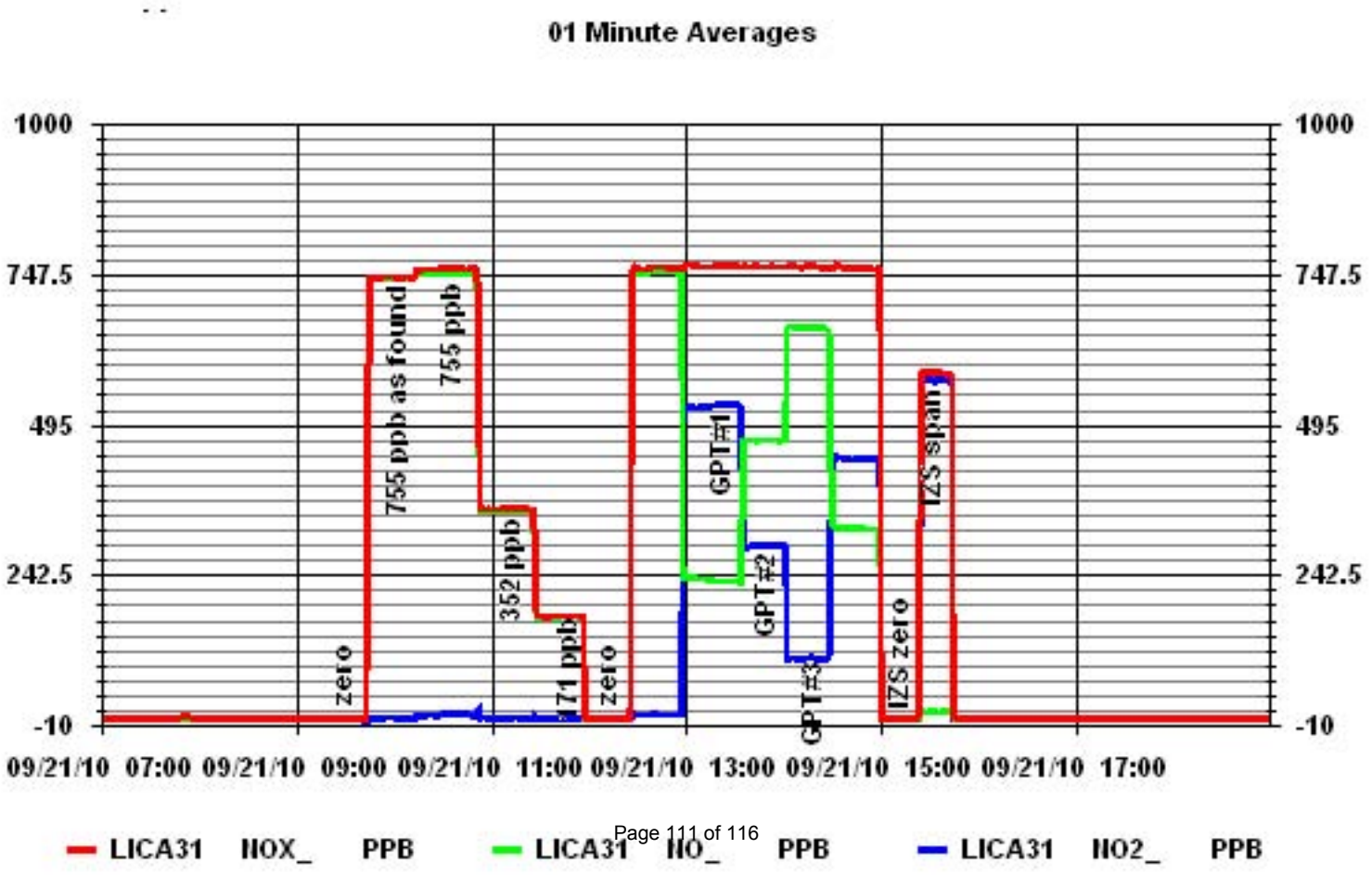

01 Minute Averages
1000
747.5
495
242.5
-10
zero
755 ppb as found
755 ppb
352 ppb
171 ppb
zero
GPT#1
GPT#2
GPT#3
IZS zero
IZS span
09/21/10 07:00
09/21/10 09:00
09/21/10 11:00
09/21/10 13:00
09/21/10 15:00
09/21/10 17:00
LICA31 NOX_ PPB
LICA31 NO_ PPB
LICA31 NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	September 22, 2010	Previous Calibration	August 31, 2010
Company	**Lakeland Industry & Community Association**		
Plant / Location	**St. Lina**		
Start Time (MST)	12:38	End Time (MST)	16:41
Reason:		Monthly Calibration	
Barometric Pressure	929 mm Hg	Station Temperature	22 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240371	Method:	Fluorescent
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO 717		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
CellA Flow / Cell B Flow	735 ccm	725 ccm	733 ccm	724 ccm
Pressure	688.3 mmHg		686.5 mmHg	
Bench Temp	53.7 Deg C		53.8 Deg C	
O3 Lamp / Box Temp	67.9 Deg C	29.4 Deg C	67.9 Deg C	29.8 Deg C
Offset / Slope	-0.2	0.989	-0.2	0.998

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4994	0	0	0	N/A
4996	450	430	424	1.0142
4996	450	430	431	0.9977
4996	300	285	289	0.9862
4996	100	93	96	0.9688
4996	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	0.9977

	Before Calibration	After Calibration
Auto Zero	1.4	0.3
Auto Span	341	343
Sample Lines Connected		YES
Percent Change from Previous Calibration		-1.6%

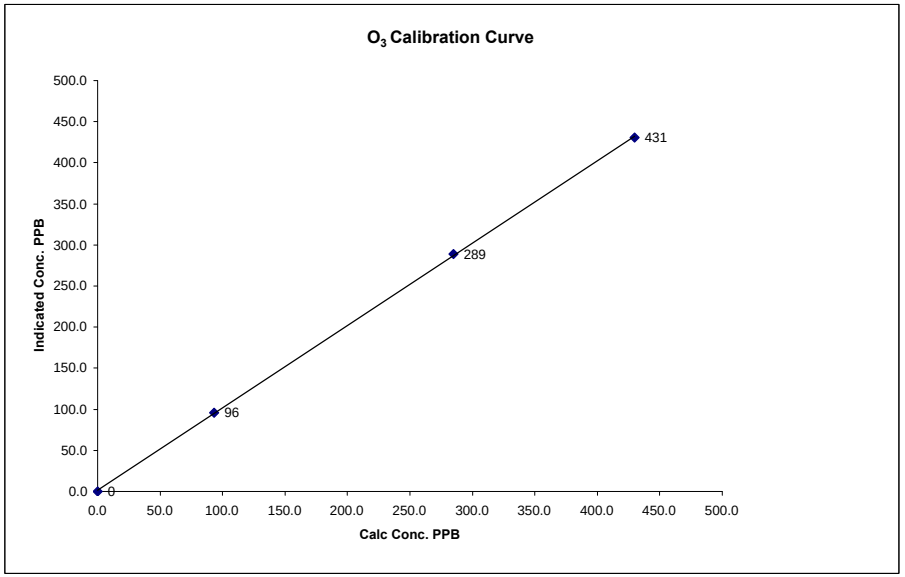
Calibration Performed by: Ting Xu

O_3 Calibration Curve

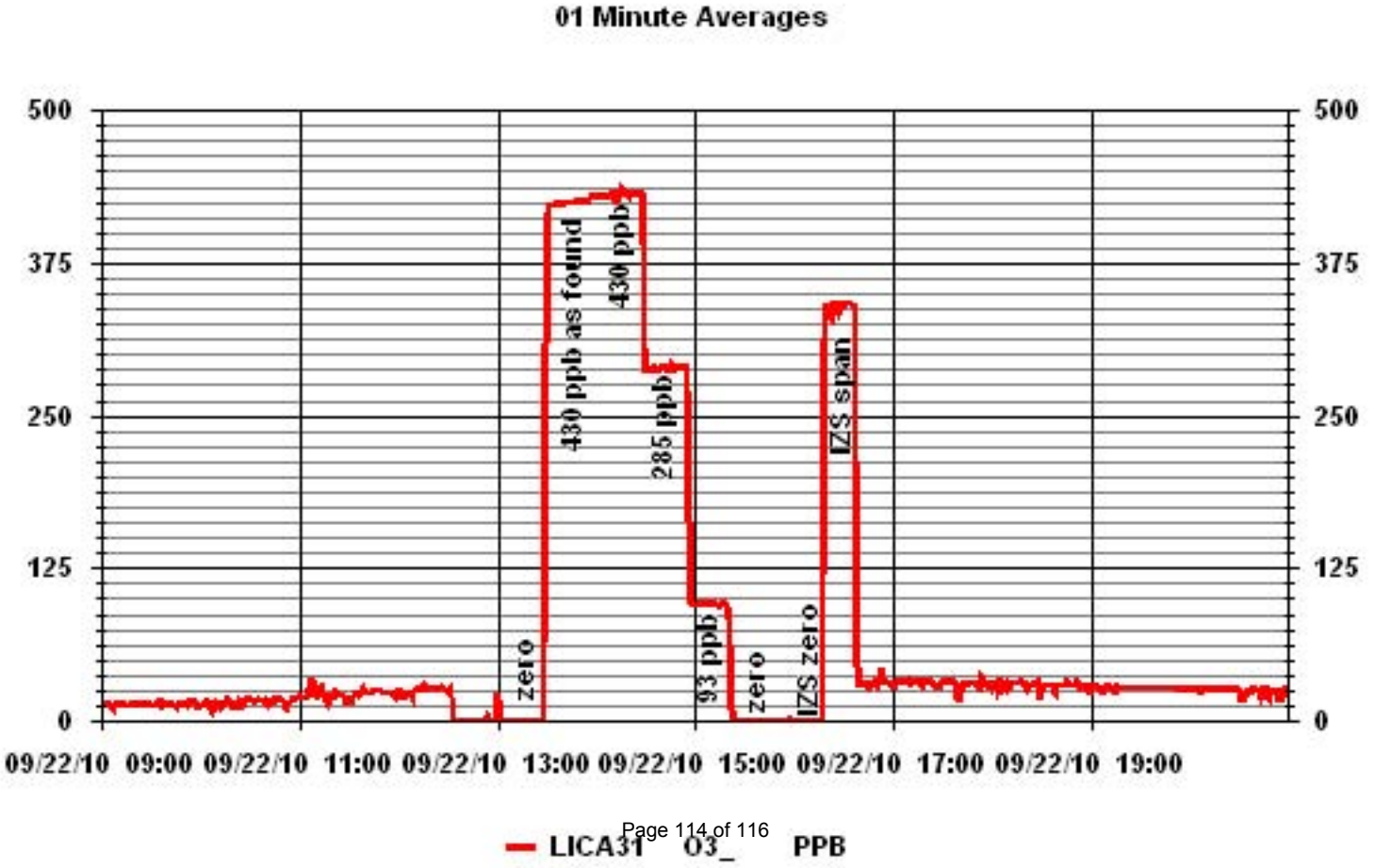
Calibration Date	September 22, 2010		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**St. Lina**		
Start Time (MST)	12:38	End Time (MST)	16:41

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
93	96	0.9688
285	289	0.9862
430	431	0.9977

Correlation Coefficient	(≥ 0.995)	0.999915
Slope	(0.85 to 1.15)	1.002089
Intercept	(± 3% F.S.)	1.578103



Notes:


01 Minute Averages
500
375
250
125
0
zero
430 ppb as found
430 ppb
285 ppb
93 ppb
zero
IZS zero
IZS span
09/22/10 09:00
09/22/10 11:00
09/22/10 13:00
09/22/10 15:00
09/22/10 17:00
09/22/10 19:00
LICA31 O3_ PPB

Particulate Matter 2.5

TEOM® 1405F Audit

Station

Date:	September 16, 2010
Station Name:	Lica St. Lina (CASA # 31)
Location:	St. Lina Station
Operator:	LICA

Audit Transfer Standard

Make/Model:	Streamline FTS
Serial Number:	LO 091099, Hi 091001
Cell s/n:	NA
Thermometer s/	VWR 90758398

Sampler

Make/Model	Thermo Scientific Series 1405F
Unit #	NA
Unit s/n	1405A208301003
Firmware Ver.	1.52
Parameter	PM 2.5 (with FDMS)

Set-up and current Sampler readings

F-Main Set Pt (l/min)	3.00
F-Aux Set Pt (l/min)	13.67
Filter Load (%)	32.7%
K_o Factor	13125.0
Temp (^oC)	5.4
Press (ATM)	0.925

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.003	Warnings	None
Pump Vacuum **<0.40atm**	0.29	Pump Gauge (inHg)	-20

Temperature/Pressure

Measured Temp **(± 2 °C)**	6.9	**Δ °C**	-1.5
Measured Press **(± 0.01atm)**	0.923	**ΔATM**	0.002

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	1.88%
Measured Main Flow (l/min)	2.95	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.66	Bypass Flow Drift **(±10.0%)**	1.02%
Measured Bypass Flow (l/min)	13.88	Flow Adjusted to Measured?	Yes

Leak Check

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

Instrument Setup

Flow Control = Active

Report Conditions = Standard (25.0 C and 1atm)

K_o Factor

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

Start Time: 14:50 **Finish Time:** 16:00

Sample Inlet Cleaned: Yes **New Filters Installed:** Yes

New Filter Loading %: 18.0%

Comments: Adjusted ambient temperature closer to the expected value following the audit.

Auditor/s: Shea Beaton

Lakeland Industry & Community Association

Portable / Devon Wellsite 13-16-62-5 W4M Monitoring Site
Ambient Air Monitoring Data Report
For
September 2010

Prepared By:

Maxxam Analytics

Driven by Service and Science

October 26, 2010

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

Table of Contents

Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Portable / Devon Wellsite 13-16-62-5 W4M
Data Period: May 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 – September 2010

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PORTABEL / DEVON WELLSITE 13-16-62-5 W4M SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO_2 (PPB)	172	57	0	0	0.02	1	VAR	VAR	VAR	VAR	0.3	15	100.0
H_2S (PPB)	10	3	-	-	0.05	2	3	4	3.5	122(ESE)	0.4	3	100.0
THC (PPM)	-	-	-	-	2.24	5.8	27	21	4.2	86(E)	3.0	14	100.0
NO_2 (PPB)	212	106	0	0	1.49	10	30	22	4.5	237(SW)	3.8	30	100.0
NO (PPB)	-	-	-	-	0.21	7	13, 15	7, 7	4.1, 6.7	318(NNW), 198(SSW)	1.0	15	100.0
NOx (PPB)	-	-	-	-	1.68	13	13	7	4.1	318(NNW)	4.2	30	100.0
O_3 (PPB)	82	-	0	-	19.95	39	3, 27	VAR	VAR	VAR	30.8	28	100.0
PM 2.5 (UG/M^3)	-	30	-	0	2.46	30.0	25	19	7.6	127(SE)	4.9	25	96.4
VECTOR WS (KPH)	-	-	-	-	9.11	23.4	28	14	-	273(W)	14.9	9	100.0
VECTOR WD (DEGREES)	-	-	-	-	300(WNW)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

Volatile Organics Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

Xontech Model 910A – July 01, 2010

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

Xontech Model 910A – July 07, 2010

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

Xontech Model 910A – July 13, 2010

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

Xontech Model 910A – July 19, 2010

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

Xontech Model 910A – July 25, 2010

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

Xontech Model 910A – July 31, 2010

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

Volatile Organics Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

Xontech Model 910A – August 06, 2010

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

Xontech Model 910A –August 12, 2010

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

Xontech Model 910A – August 18, 2010

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

Xontech Model 910A – August 24, 2010

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

Xontech Model 910A – August 30, 2010

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

Volatile Organics Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

Xontech Model 910A – September 5, 2010

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

Xontech Model 910A – September 11, 2010

Maximum reading (ug/m3)	Volatile Organic
43.4	Methylene Chloride (Dichloromethane)

Xontech Model 910A – September 17, 2010

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

Xontech Model 910A – September 23, 2010

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

Xontech Model 910A – September 29, 2010

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

Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

PUF cartridge – July 01, 2010

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

PUF cartridge – July 07, 2010

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

PUF cartridge – July 13, 2010

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

PUF cartridge – July 19, 2010

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

PUF cartridge – July 25, 2010

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

PUF cartridge – July 31, 2010

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

Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

PUF cartridge – August 6, 2010

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

PUF cartridge – August 12, 2010

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

PUF cartridge – August 18, 2010

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

PUF cartridge – August 24, 2010

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

PUF cartridge – August 30, 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 – September 5, 2010

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

PUF cartridge – September 11, 2010

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

PUF cartridge – September 17, 2010

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

PUF cartridge – September 23, 2010

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

PUF cartridge – September 29, 2010

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

General Monthly Summary

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

AQM STATION – LICA – PORTABLE

Sulphur Dioxide (PPB)
- Analyzer make / model – API 100E, S/N: 467

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

Hydrogen Sulphide (PPB)
- Analyzer make / model –API 101E, S/N: 509
- Converter - Internal

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

Nitrogen Dioxide (PPB)
- Analyzer make / model – API 200E, S/N: 593

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

General Monthly Summary

AQM STATION – LICA – PORTABLE

Ozone (PPB)

- Analyzer make / model –Thermo 49i, S/N: 1002240372

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

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. Data was corrected using daily zero information.

Particulate Matter 2.5 (ug/m^3)

- Analyzer make / model –TEOM 1405F, S/N: 1405A207691003

The Teom unit was working well throughout the month. A routine audit with leak check was performed on September 17th. 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. 26 hours of data were invalidated as they were below –3.0 ug/m^3. The new Teom 1405F unit output provides hourly average, but no instantaneous output. As a result, no hourly maximum value is recorded.

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

- System make / model – RM Young 5103VK, S/N: 41334

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

General Monthly Summary

AQM STATION – LICA – PORTABLE

Datalogger

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

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

Trailer

No issue was observed this month. The manifold was cleaned on September 16th.

Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. All AQI values recorded in September 2010 were within the Good range. The highest hourly concentration of PM2.5 was 30.0ug/m3 and an AQI value of 25, hour 19 on September 25th. The highest hourly concentration of Ozone was391 ppb and an AQI value of 20 on September 3rd and 27th, in various hours.

General Monthly Summary

AQM STATION – LICA – PORTABLE

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

Polycyclic Aromatic Hydrocarbons (PAHs)
The PAHs were sampled from September 5th to September 29th. The sampler was programmed to run for 24 hours, and, every 6 days per sample cycle. The values for the PAHs in this report were reported as ng/m3.
The lab result for July and August are also included in this monthly report.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

AIR QUALITY INDEX (AQI)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	3	6	-	5	2	4	5	5	8	10	13	16	17	16	15	16	17	16	15	10	8	8	5	4	17
	O3_	PM2	**NA**	PM2	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
2	3	-	3	2	4	2	8	7	7	10	13	16	17	18	18	18	18	17	14	12	9	6	6	5	18
	O3_	**NA**	O3_	O3_	PM2	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
3	-	3	3	1	2	6	4	5	6	10	14	18	**20**	19	18	19	16	14	13	13	11	10	8	-	20
	NA	O3_	O3_	O3_	O3_	PM2	PM2	PM2	O3_	O3_	O3_	O3_	**O3_**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
4	9	8	7	9	9	8	8	10	12	13	14	15	17	18	18	16	15	15	14	15	15	15	-	13	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_
5	15	14	10	10	8	7	7	8	11	12	13	15	15	15	16	14	11	11	10	12	14	-	10	8	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_
6	8	7	4	3	4	4	6	6	6	9	8	8	7	7	5	7	-	13	11	10	-	9	9	9	13
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
7	9	9	9	8	8	8	8	8	9	12	13	14	12	11	11	11	10	9	9	-	8	8	8	8	14
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_
8	8	8	8	8	8	8	8	8	7	7	9	9	9	10	10	9	8	7	-	6	5	5	5	6	10
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
9	6	6	7	7	9	10	10	9	9	9	11	12	13	13	13	15	16	-	13	13	12	-	10	9	16
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	**NA**	O3_	O3_	O3_
10	-	7	7	7	7	7	6	7	9	10	10	-	12	13	13	13	-	12	10	9	10	9	10	11	13
	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
11	12	13	16	15	13	12	12	13	15	15	17	16	16	16	15	-	14	13	12	11	9	7	-	6	17
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	PM2	**NA**	O3_	O3_
12	6	6	5	2	3	4	-	4	5	9	12	13	14	14	-	15	15	16	15	12	11	9	7	7	16
	O3_	PM2	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
13	6	6	4	3	2	1	3	2	-	-	-	-	-	-	-	-	-	10	8	6	4	5	7	-	13
	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	PM2	PM2	**NA**	O3_
14	2	4	2	2	2	1	1	1	2	4	8	9	-	12	13	-	-	-	-	7	6	-	10	11	13
	PM2	PM2	O3_	O3_	PM2	PM2	O3_	PM2	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	**NA**	**NA**	**NA**	**NA**	O3_	O3_	**NA**	O3_	O3_	O3_
15	11	10	9	7	6	6	6	5	6	8	9	-	12	12	10	9	9	9	8	10	12	10	10	8	12
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
16	9	9	9	10	10	9	8	7	9	10	-	13	14	15	15	-	-	15	15	13	13	-	14	13	15
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_
17	-	12	11	9	9	9	10	10	11	-	-	-	-	15	15	-	15	15	13	7	9	9	8	5	15
	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
18	3	3	3	3	2	1	2	3	-	10	12	14	17	18	19	19	19	18	14	12	10	10	10	11	19
	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
19	10	6	7	7	7	7	-	-	10	12	14	16	17	16	15	15	-	17	17	16	15	14	14	13	17
	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
20	13	13	13	13	-	12	-	12	11	11	12	12	12	12	12	12	12	13	11	10	7	8	8	7	13
	O3_	O3_	O3_	O3_	**NA**	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
21	5	5	4	4	4	-	2	5	5	6	-	9	11	11	10	10	10	9	7	6	6	4	2	3	11
	O3_	O3_	PM2	O3_	PM2	**NA**	PM2	PM2	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	O3_	PM2	O3_
22	4	5	3	-	-	4	3	-	7	9	12	14	14	14	15	15	16	15	14	12	11	12	12	12	16
	O3_	O3_	O3_	NA	**NA**	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
23	10	8	5	-	4	3	3	4	6	8	11	12	15	16	16	17	17	16	12	10	10	10	6	5	17
	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
24	7	7	-	2	5	3	2	3	5	6	6	8	13	18	19	19	18	16	9	11	7	9	9	9	19
	O3_	O3_	**NA**	O3_	PM2	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
25	10	-	12	13	13	10	8	9	11	11	12	12	12	14	15	17	17	16	13	**25**	12	12	11	11	25
	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**PM2**	O3_	O3_	O3_	O3_	PM2
26	-	9	8	11	10	8	6	6	8	8	10	15	17	18	18	19	17	16	16	11	10	11	11	-	19
	NA	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
27	9	8	8	5	4	4	3	6	7	7	12	16	17	19	**20**	**20**	18	15	12	12	12	8	-	13	20
	O3_	O3_	PM2	O3_	O3_	PM2	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	**O3_**	**O3_**	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_
28	12	16	-	19	17	17	-	17	16	16	16	-	16	16	18	17	16	16	15	14	14	-	10	-	19
	O3_	O3_	**NA**	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	O3_
29	11	12	13	12	11	10	9	10	13	15	15	17	17	18	18	18	18	15	13	14	-	11	9	6	18
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
30	5	5	4	3	3	3	3	7	12	13	15	17	18	18	19	19	19	15	14	-	7	4	6	8	20
	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	PM2	O3_	PM2	PM2
PEAK	15	16	16	19	17	17	12	17	16	16	17	18	20	19	20	20	19	18	17	25	15	15	14	13	
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	

STATUS FLAG CODES	NA - NOT APPLICABLE

AQI CLASS	OZONE (O_3)					PARTICULATE MATTER 2.5 (PM2)					NITROGEN DIOXIDE (NO_2)					SULPHUR DIOXIDE (SO_2)					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
POOR (51-100)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
FAIR (26-50)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
GOOD (1-25)	610	84.7%	20	VAR	3, 27	40	5.6%	25	19	25	0	0.0%	-	-	-	0	0.0%	-	-	-	650	90.3%
OVERALL	610	84.7%	-	-	-	40	5.6%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	650	90.3%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	9.7%

VAR: VARIOUS

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

SEPTEMBER 2010

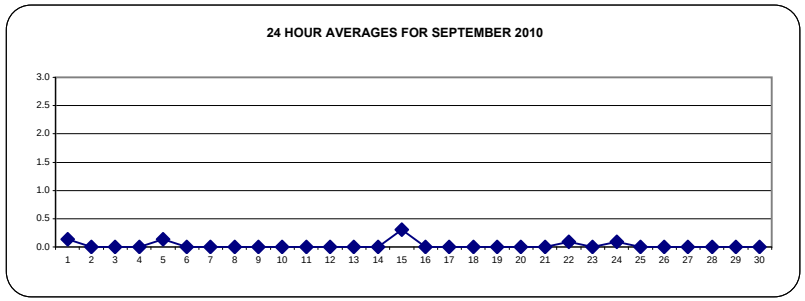
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

MST

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

STATUS FLAG CODES

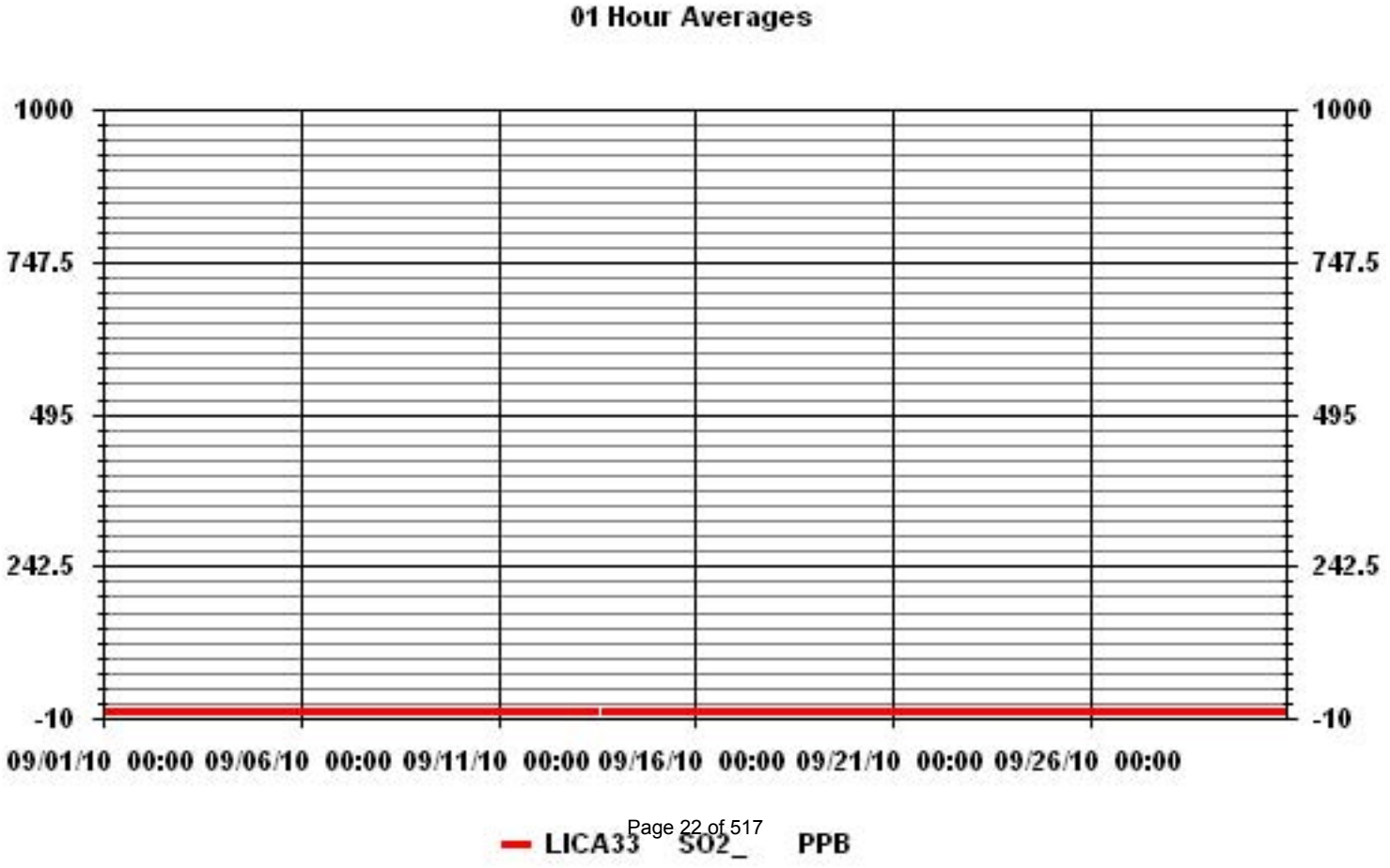
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	17					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.3	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:	0.16		MONTHLY AVERAGE:		0.02	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

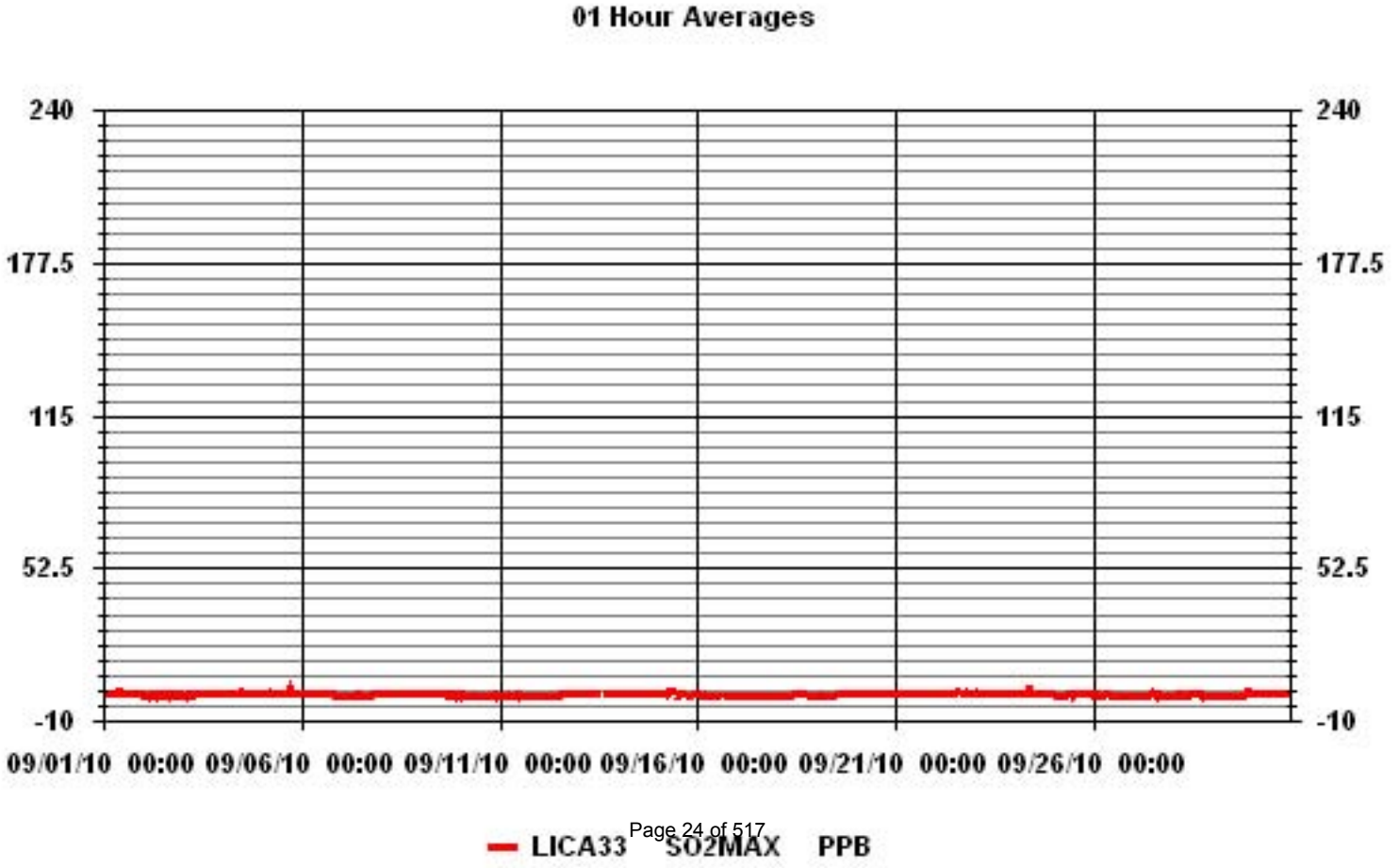
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	**IZS**	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.1	24
2	1	**IZS**	0	1	0	1	1	1	0	1	1	1	0	0	1	1	0	1	1	1	0	0	1	1	1	0.7	24
3	**IZS**	0	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	0.8	24
4	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	**IZS**	1	2	1.1	24
5	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2	**4**	3	1	1	**IZS**	1	1	**4**	1.3	24
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	0	0	0	1	0.9	24
7	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	**IZS**	1	1	1	1	2	0.3	24
8	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	1.0	24
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	0	0	1	1	0	1	1	0.9	24
10	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	**IZS**	0	0	0	1	0	1	0	1	0.3	24
11	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0.1	24
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	2	1	1	1	1	1	1	1	1	2	0.4	24
13	1	1	1	1	1	1	1	1	1	1	1	1	**C**	**C**	**C**	**C**	**C**	1	1	1	1	1	1	1	1	1.0	24
14	1	1	1	1	1	1	1	1	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
15	1	1	1	1	1	2	1	2	2	2	2	**IZS**	0	1	1	1	1	1	0	0	0	1	1	1	2	1.0	24
16	1	1	0	0	1	0	0	0	0	0	**IZS**	0	0	0	**C**	**C**	1	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	24
18	0	0	0	0	0	0	0	0	**IZS**	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0.4	24
19	0	0	1	0	0	0	0	**IZS**	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	24
20	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
21	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
22	1	1	1	1	**IZS**	1	1	1	1	1	1	1	1	2	2	2	1	1	2	1	1	1	1	1	2	1.2	24
23	2	1	1	**IZS**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	24
24	1	1	**IZS**	1	1	1	1	1	1	**4**	2	2	1	1	1	1	1	1	1	1	1	1	1	1	**4**	1.2	24
25	1	**IZS**	0	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	24
26	**IZS**	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	0.3	24
27	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	1	1	0	0	0	0	0	**IZS**	0	2	0.3	24
28	0	0	1	0	0	1	1	0	0	0	1	1	1	1	1	1	1	0	1	0	0	**IZS**	0	0	1	0.5	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	3	1	3	0.2	24
30	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
HOURLY MAX	2	1	1	1	1	2	1	2	2	4	2	2	2	2	2	2	2	4	3	1	1	1	3	1			
HOURLY AVG	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.8	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.6	0.7	0.7	0.8	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:	455						
MAXIMUM INSTANTANEOUS VALUE:	4	PPB	@ HOUR(S)	17, 9	ON DAY(S)	5, 24	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:			720	HRS
MONTHLY CALIBRATION TIME:	7	HRS					
STANDARD DEVIATION:	0.57						


01 Hour Averages
240
177.5
115
52.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 SO2MAX PPB

LICA33
SO2_ / WDR Joint Frequency Distribution (Percent)

September 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	4.39	1.75	3.66	8.63	8.63	6.29	3.95	8.34	4.09	1.90	5.12	6.73	7.46	16.54	6.73	5.71	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	4.39	1.75	3.66	8.63	8.63	6.29	3.95	8.34	4.09	1.90	5.12	6.73	7.46	16.54	6.73	5.71	

Calm : .00 %

Total # Operational Hours : 683

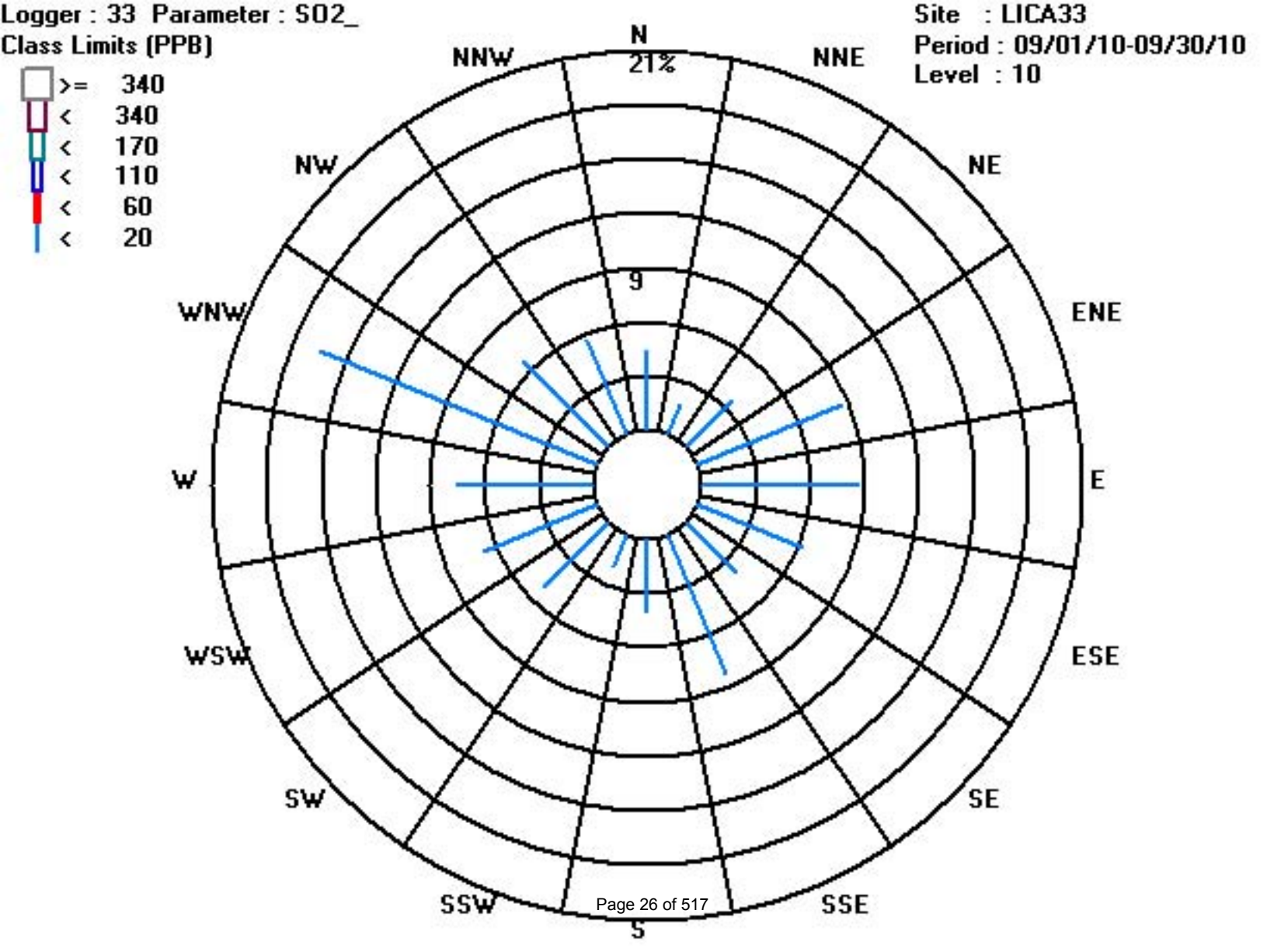
Distribution By Samples

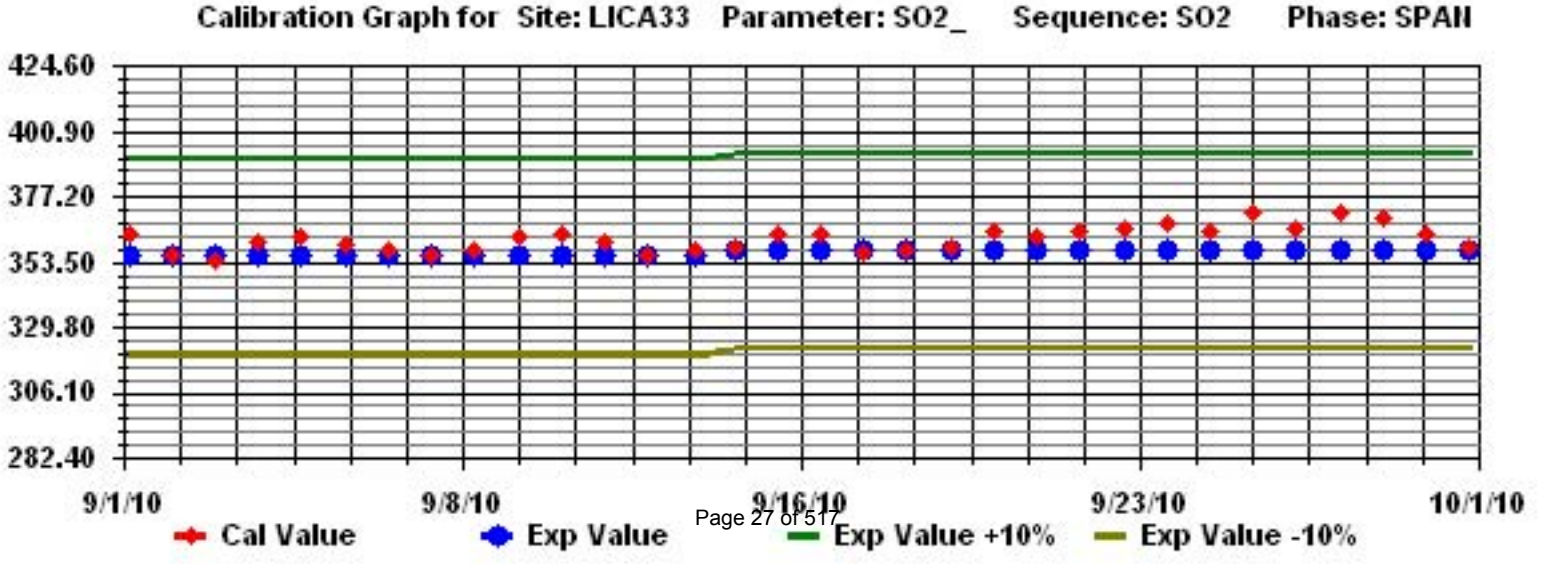
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	30	12	25	59	59	43	27	57	28	13	35	46	51	113	46	39	683
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	30	12	25	59	59	43	27	57	28	13	35	46	51	113	46	39	

Calm : .00 %

Total # Operational Hours : 683


Logger : 33 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA33
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: SO2_ Sequence: SO2 Phase: SPAN
424.60
400.90
377.20
353.50
329.80
306.10
282.40
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE

SEPTEMBER 2010

HYDROGEN SULPHIDE (H_2S) hourly averages in ppb

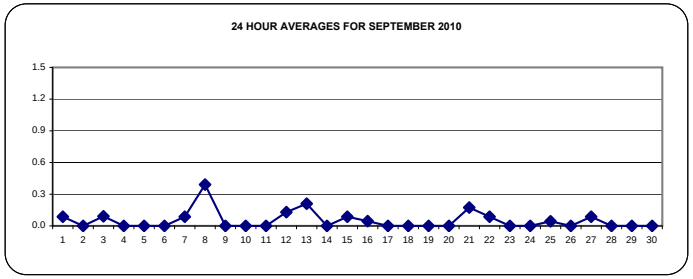
MST

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

STATUS FLAG CODES

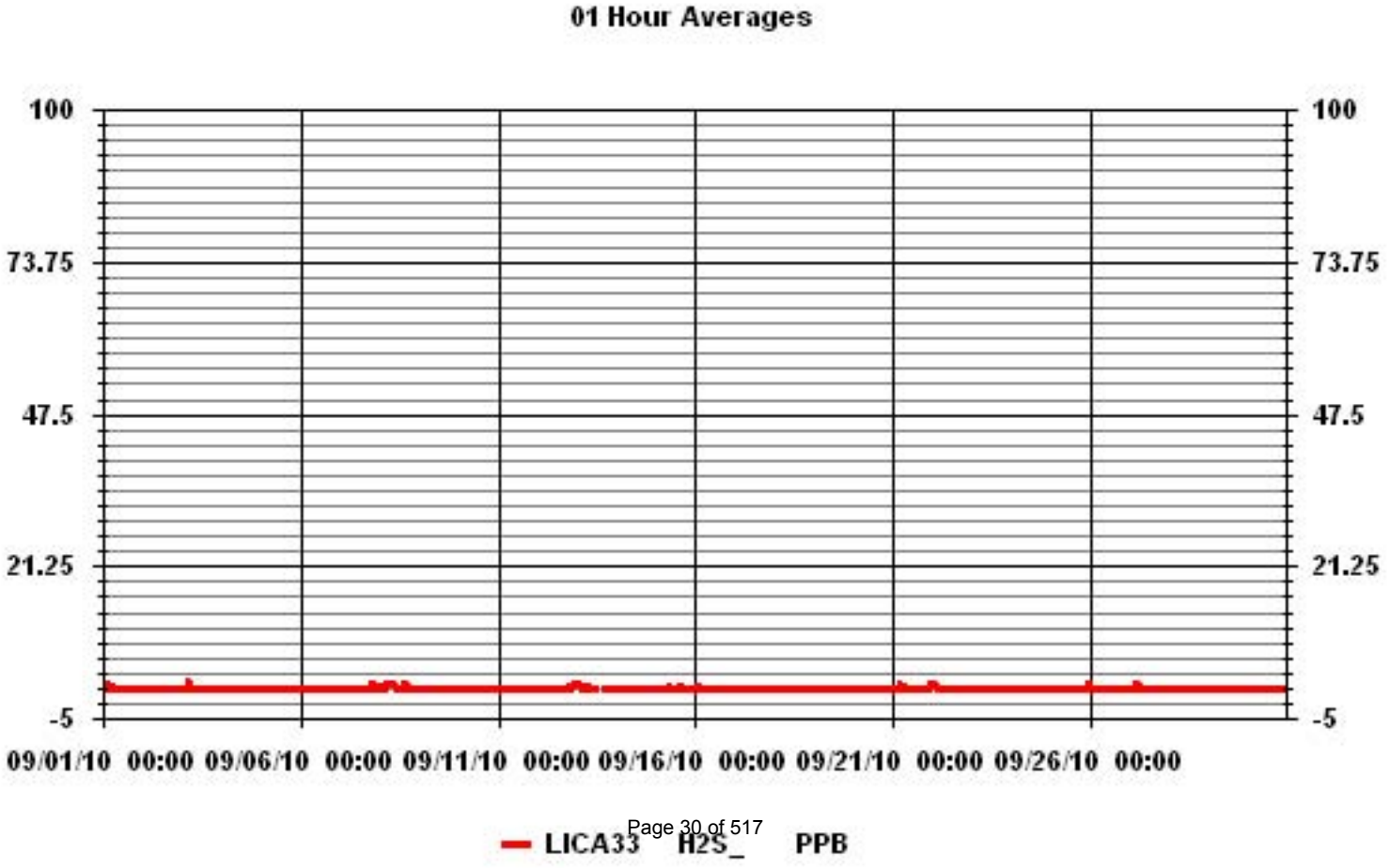
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

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:	33					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	4	ON DAY(S)	3
MAXIMUM 24-HR AVERAGE:	0.4	PPB			ON DAY(S)	3
					VAR-VARIOUS	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.22		MONTHLY AVERAGE:		0.05	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 H2S_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

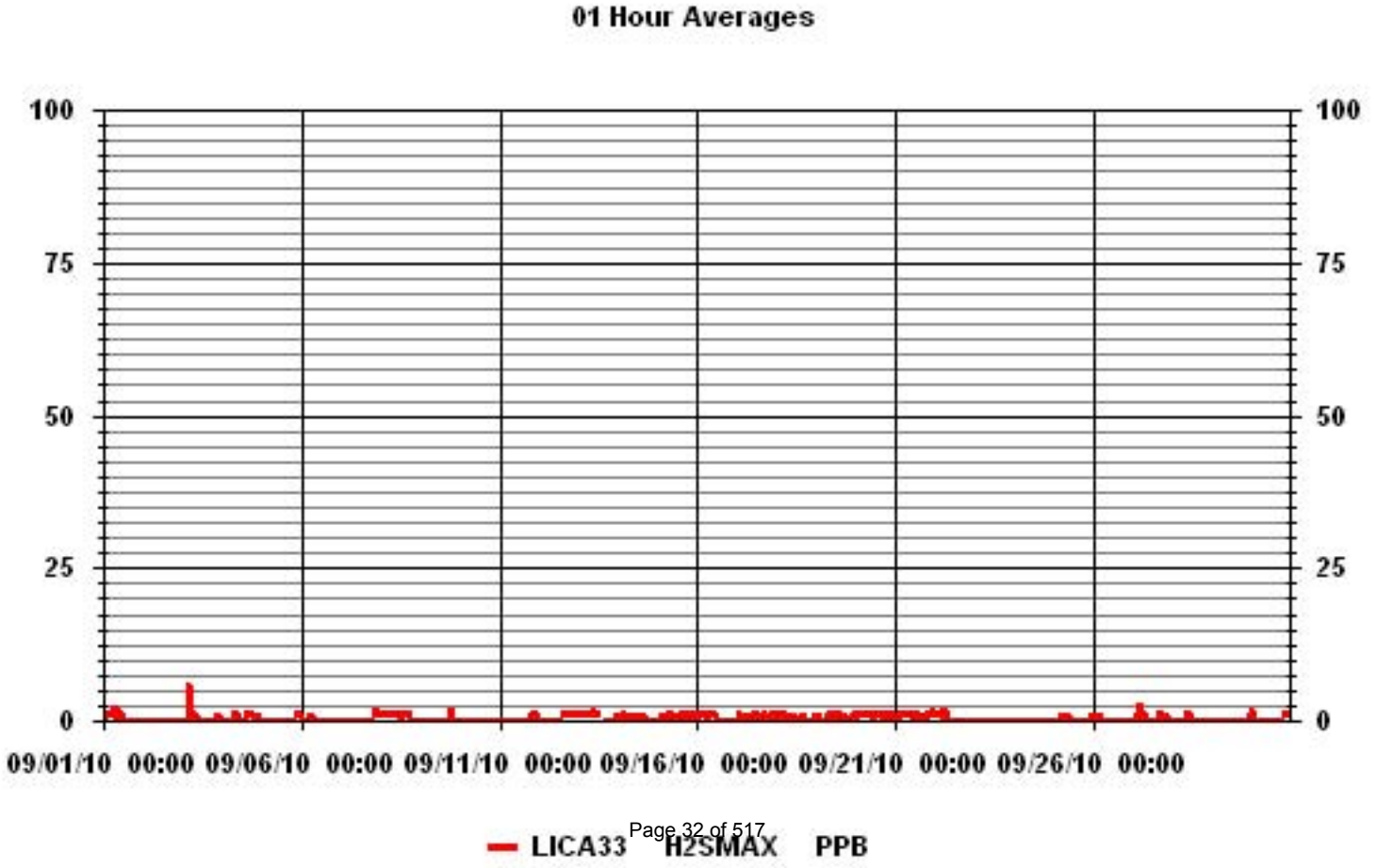
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00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

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	187					
MAXIMUM INSTANTANEOUS VALUE:	6	PPB	@ HOUR(S)	4	ON DAY(S)	3
				VAR - VARIOUS		
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	0.54					


01 Hour Averages
100
75
50
25
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 H2SMAX PPB

LICA33
H2S_ / WDR Joint Frequency Distribution (Percent)

September 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	4.39	1.75	3.66	8.63	8.63	6.29	3.95	8.34	4.09	1.90	5.12	6.73	7.46	16.54	6.73	5.71	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	4.39	1.75	3.66	8.63	8.63	6.29	3.95	8.34	4.09	1.90	5.12	6.73	7.46	16.54	6.73	5.71	

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	30	12	25	59	59	43	27	57	28	13	35	46	51	113	46	39	683
< 10																	
< 50																	
>= 50																	
Totals	30	12	25	59	59	43	27	57	28	13	35	46	51	113	46	39	

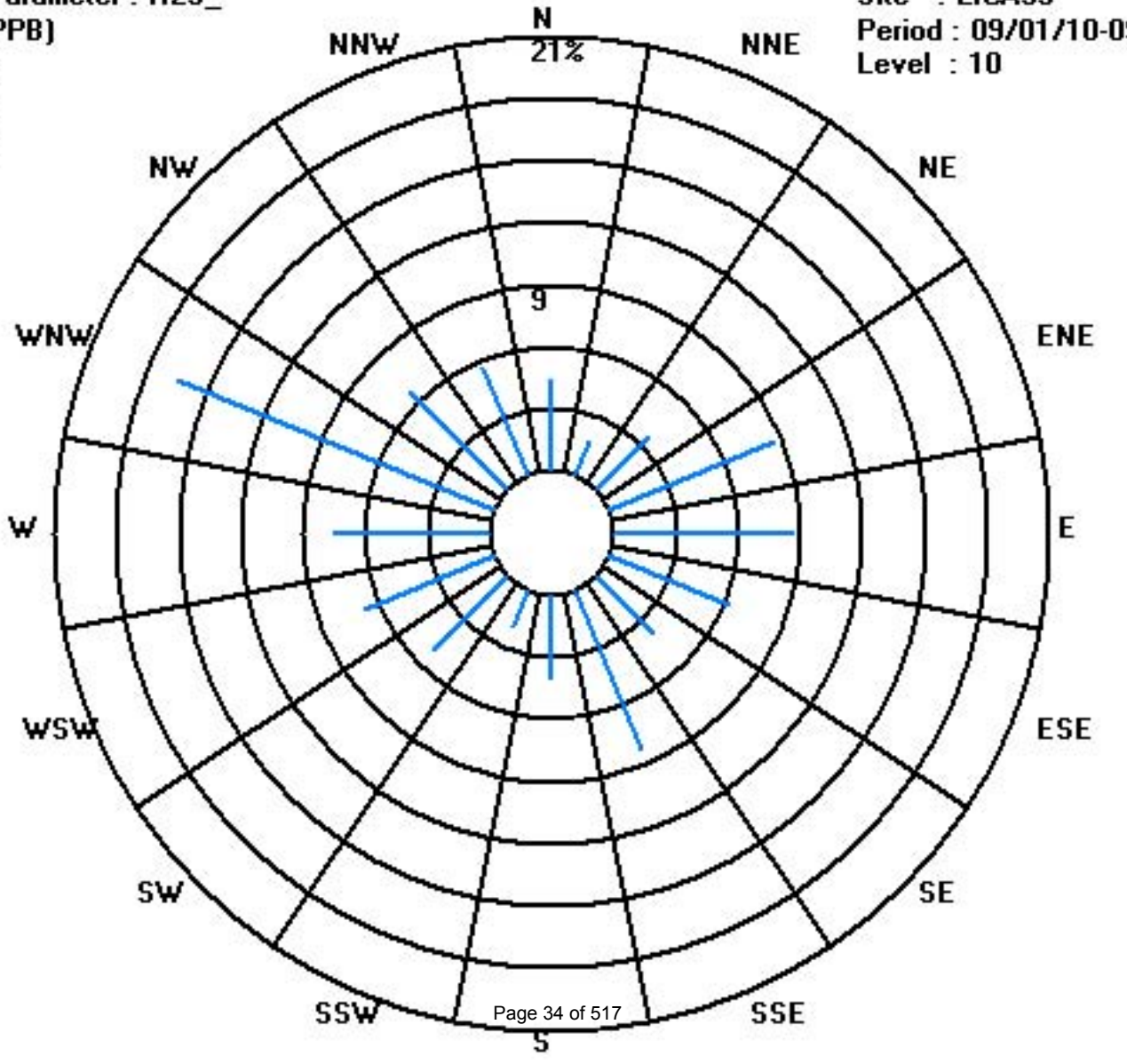
Calm : .00 %

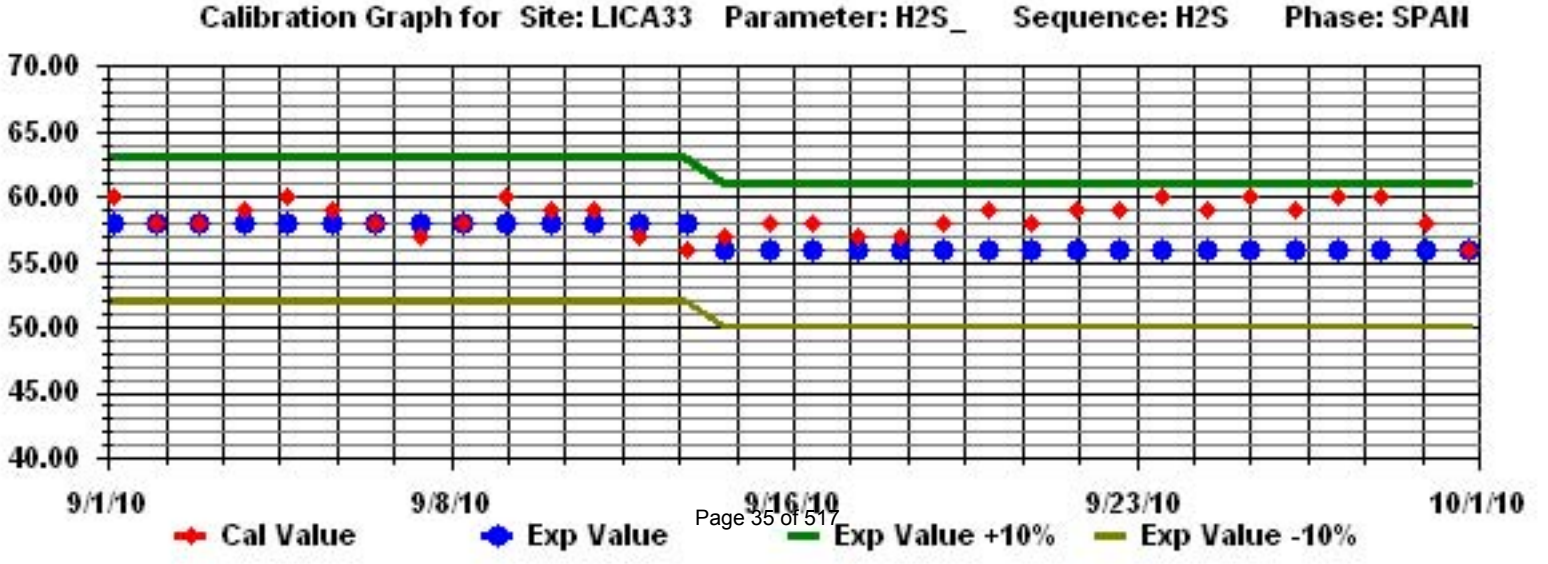
Total # Operational Hours : 683

Logger : 33 Parameter : H2S_
Class Limits (PPB)

>= 50
< 50
< 10
< 3

Site : LICA33
Period : 09/01/10-09/30/10
Level : 10




Calibration Graph for Site: LICA33 Parameter: H2S_ Sequence: H2S Phase: SPAN
70.00
65.00
60.00
55.00
50.00
45.00
40.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

SEPTEMBER 2010

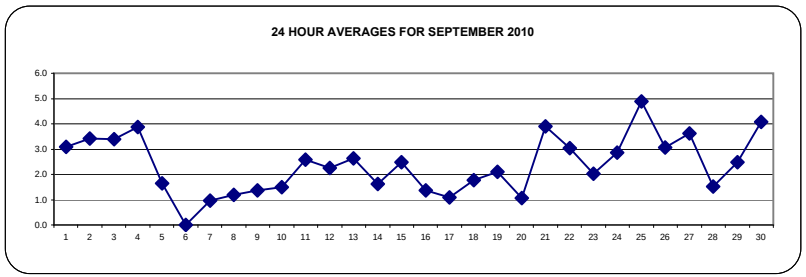
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.1	7.6	3.1	6.1	1.6	1.6	5.6	3.6	5.1	6.1	0.1	0.1	5.1	8.6	1.1	0	0.6	1.6	1.1	3.1	3.6	0	2.1	3.6	8.6	3.1	24
2	0	2.1	2.1	1.1	5.1	1.1	10.1	8.1	5.1	3.6	2.1	6.1	0.6	2.1	3.6	4.1	0	5.1	4.1	4.6	5.6	2.6	3.1	0.1	10.1	3.4	24
3	2.6	2.6	0	1.1	0.6	7.1	4.6	5.6	3.1	4.6	6.1	0	2.6	3.6	7.6	5.1	4.1	1.6	2.6	0.6	0.6	5.1	4.6	5.1	7.6	3.4	24
4	2.6	5.6	3.6	1.6	3.6	1.6	6.6	5.1	3.1	3.6	2.1	11.1	5.6	2.1	10.6	2.6	8.6	0.6	0.6	6.1	0	0	1.1	5.1	11.1	3.9	24
5	1.1	1.1	1.6	1.1	0.6	0.6	2.1	5.1	0.1	1.6	0.6	0.7	0	1.6	2.1	0	0.7	0	5.1	1.6	2.6	4.1	3.1	2.1	5.1	1.6	24
6	0	3.1	4.6	2.1	4.6	1.6	3.1	0	6.6	2.1	0.1	0.6	3.1	1.6	1.6	0	**N**	2.1	5.1	3.1	6.1	2.6	0.1	2.1	6.6	0.0	23
7	0	0	2.6	2.6	3.1	1.6	0	1.6	0	1.6	0	0.1	2.1	1.1	0	0	0	1.1	2.1	2.1	1.6	0	0	0	3.1	1.0	24
8	0	2.6	0	0	0.1	2.1	0	0	2.1	1.6	0	0.6	0	2.1	3.6	0.1	0.1	1.6	1.6	1.1	0	3.1	2.1	4.1	4.1	1.2	24
9	0	1.1	0.1	0.6	0.6	0	0	0.6	1.1	2.6	0	1.1	3.6	5.6	2.1	1.6	3.1	0	0.1	0.1	0.6	**N**	0.6	6.1	6.1	1.4	23
10	**N**	1.1	0	0.6	2.1	4.6	0.1	0	0	1.6	1.1	**N**	1.1	0	0.1	0	0.1	2.6	1.6	1.1	4.6	6.1	3.1	1.1	6.1	1.5	22
11	1.1	0	1.1	7.1	3.6	8.6	4.6	3.1	2.1	5.1	0	4.1	1.1	0	0.6	0.6	0	0	0	2.1	0.6	8.6	**N**	5.1	8.6	2.6	23
12	0	7.6	5.6	2.1	0	0.6	**N**	1.6	3.6	5.6	5.6	2.1	0	0.6	5.1	0	1.6	0.6	0	0	1.6	4.1	3.6	0	7.6	2.2	23
13	3.1	3.1	2.1	0	1.6	1.6	3.1	0.6	4.6	6.1	0	0	**N**	5.6	0.6	**N**	**N**	0	2.1	1.6	2.6	5.6	8.6	**N**	8.6	2.6	20
14	2.2	4.6	0	0	2.6	0.7	0.1	1.6	0	2.1	0	0	0.1	0	2.6	1.6	6.1	2.6	0	0	5.1	**N**	2.1	3.1	6.1	1.6	23
15	2.6	1.1	7.1	0	0.1	3.1	3.1	0	0.1	1.1	2.2	4.7	2.2	3.1	4.6	4.6	2.1	1.1	8.6	5.1	1.6	0	0.6	0.6	8.6	2.5	24
16	0	0.7	1.6	2.1	0	1.1	0.6	0	2.1	0	1.6	0	0	0	0	7.6	**N**	0	5.1	5.1	0.7	**N**	0	1.6	7.6	1.4	22
17	**N**	0	1.6	1.1	0	2.6	0.6	0	0	0.6	**N**	**C**	**C**	2.1	0	**N**	0	0	5.1	0	0	0.1	3.1	3.6	5.1	1.1	21
18	0	2.1	0	3.1	2.6	0	1.6	0.6	5.1	2.6	0	4.6	2.6	0	1.6	4.6	2.6	4.1	0.1	3.1	0	0.6	0	1.1	5.1	1.8	24
19	0.6	1.1	0	1.1	0	4.1	**N**	0	4.6	6.1	1.1	0	2.1	1.6	1.1	3.1	**N**	0.1	4.6	5.6	6.1	0	2.6	0.6	6.1	2.1	22
20	0	0	5.6	0.1	**N**	0	0	0.1	2.6	1.6	2.6	0	3.1	1.1	0.1	0	0.1	2.6	0.6	0	0.1	0.1	4.1	0	5.6	1.1	23
21	0.7	2.6	5.1	4.1	5.1	3.6	2.6	6.1	4.1	0.1	**N**	1.1	2.1	10.6	8.1	1.1	1.1	5.6	6.1	3.1	5.6	5.1	2.1	3.6	10.6	3.9	23
22	4.1	0.7	3.1	**N**	0	0.6	3.6	**N**	0	0.1	4.6	7.2	3.6	1.6	5.1	6.1	3.1	3.1	3.6	4.1	0.6	4.6	5.6	1.6	7.2	3.0	22
23	2.1	1.6	4.6	1.1	1.1	2.2	3.1	2.1	1.1	3.1	3.6	0	3.1	2.6	1.6	2.2	2.2	2.2	1.1	0.1	1.6	0.7	1.6	4.1	4.6	2.0	24
24	0.1	4.6	7.2	0.6	6.1	0	0	0	5.6	7.6	5.1	7.1	0	0	1.1	5.1	1.1	0	1.1	4.1	2.2	1.6	8.6	0	8.6	2.9	24
25	5.1	0	2.6	2.6	0	0.1	1.6	2.6	9.6	1.6	3.8	1.1	8.6	3.6	3.6	0	4.6	3.6	7.6	**30**	12.2	6.7	5.2	1.1	**30.0**	**4.9**	24
26	1.6	5.1	8.1	6.7	5.1	2.2	4.6	5.2	1.6	0.7	3	3.6	1.9	4.5	3.3	1.6	1	3.6	2.5	2.3	0	0.7	4.4	0.3	8.1	3.1	24
27	1	0	9.4	1.4	3.3	4.4	1.7	6.8	7.9	2.3	0.3	0	0	2.4	1.4	2	4.3	9.8	6.5	0	4.5	6.4	9	2	9.8	3.6	24
28	7	0	**N**	0	0	0	**N**	2.3	6.8	1.7	2.7	**N**	0	5	0	0	0	0.6	1.4	3	0	0	0	**N**	7.0	1.5	20
29	2.4	0	6.3	0	1.1	2.7	0	1.1	1.3	0.7	0.1	2.2	1.4	0	0.2	6	2.5	0	2.8	3.6	7.4	4.3	7.4	6.1	7.4	2.5	24
30	0.4	5.1	3.1	4.1	3.3	2	0.5	3.4	2.8	3.1	2.5	3.6	4.7	3.3	0	0.8	0	5	4	23.6	5.3	4.3	3.5	9.4	23.6	4.1	24
HOURLY MAX	7	8	9	7	6	9	10	8	10	8	6	11	9	11	11	8	9	10	9	30	12	9	9	9			
HOURLY AVG	1.6	2.2	3.2	1.9	2.0	2.1	2.4	2.3	3.1	2.7	1.8	2.3	2.2	2.5	2.4	2.2	1.9	2.0	2.9	4.0	2.8	2.9	3.2	2.6			

STATUS FLAG CODES

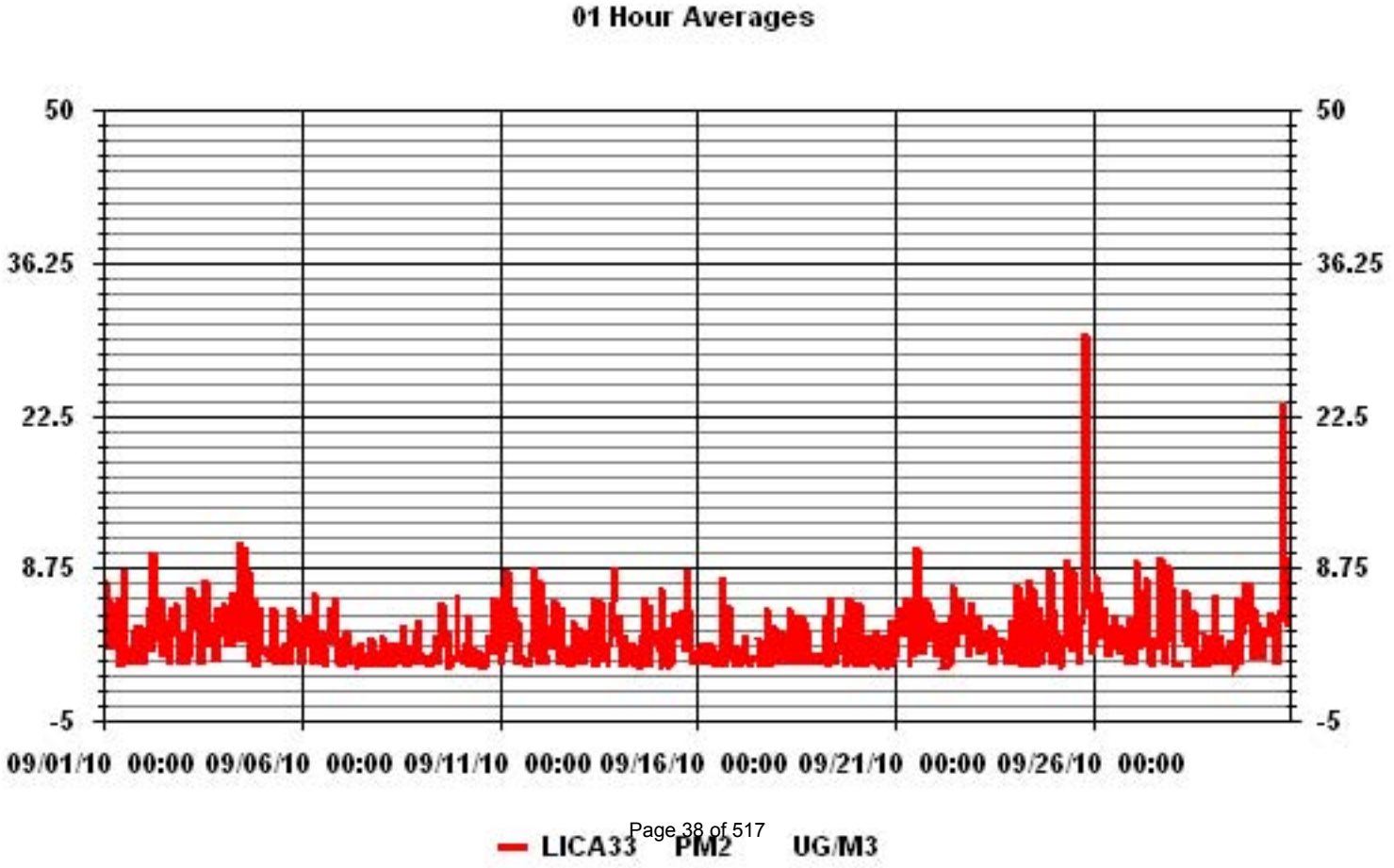
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:		546					
MAXIMUM 1-HR AVERAGE:		30.0	UG/M^3	@ HOUR(S)	19	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:		4.9	UG/M^3			ON DAY(S)	25
IZS CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		694	HRS
MONTHLY CALIBRATION TIME:	2	HRS		AMD OPERATION UPTIME:		96.4	%
STANDARD DEVIATION:	2.71			MONTHLY AVERAGE:		2.46	UG/M^3


01 Hour Averages
50
36.25
22.5
8.75
-5
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 PM2 UG/M3

LICA33
PM2 / WDR Joint Frequency Distribution (Percent)

September 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	4.33	1.73	4.19	8.67	8.67	6.35	3.90	8.23	3.90	2.02	5.05	6.64	7.65	16.32	6.35	5.78	99.85
<	60.0	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
<	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	4.33	1.73	4.19	8.67	8.67	6.35	4.04	8.23	3.90	2.02	5.05	6.64	7.65	16.32	6.35	5.78	

Calm : .00 %

Total # Operational Hours : 692

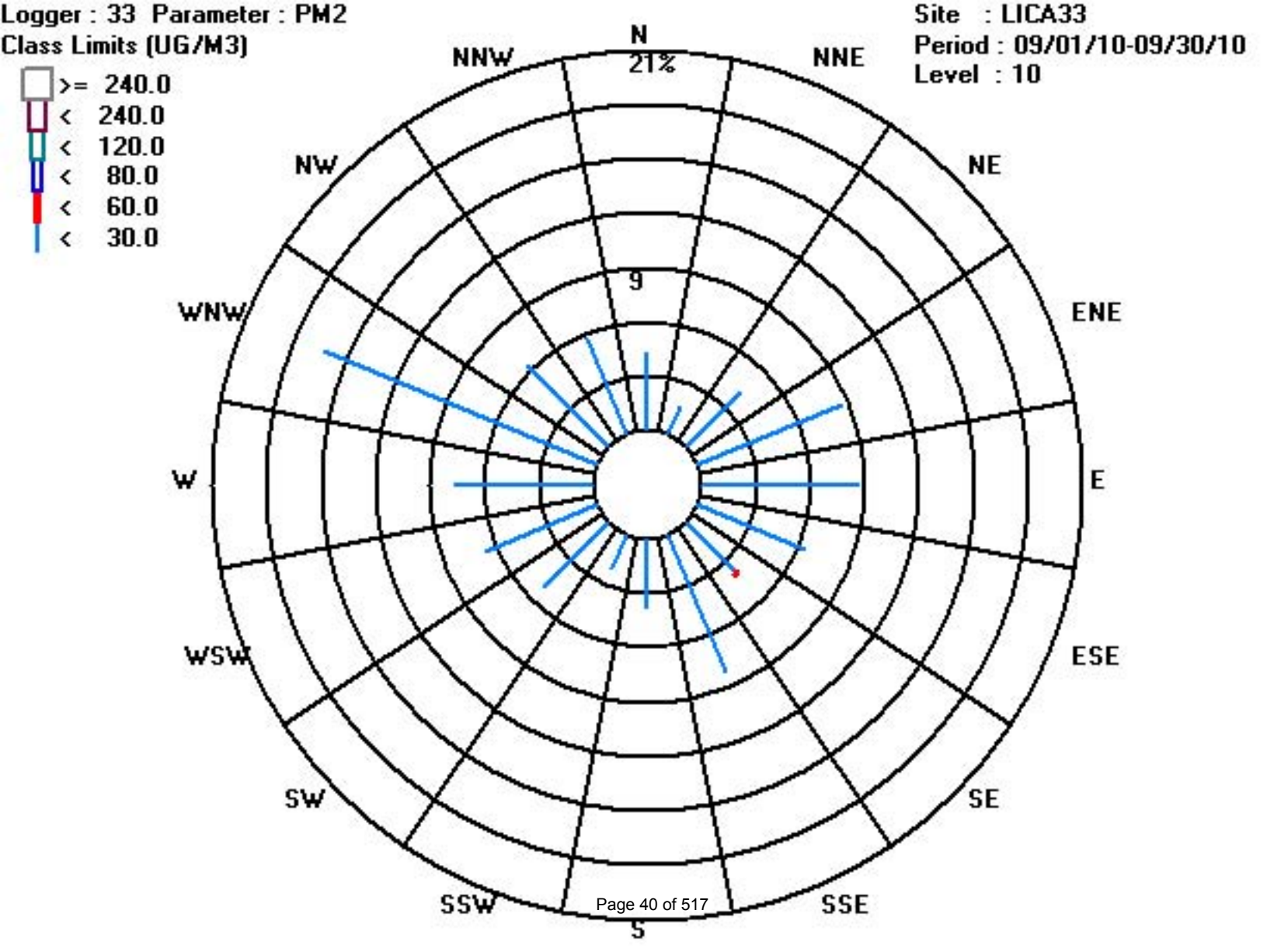
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	30	12	29	60	60	44	27	57	27	14	35	46	53	113	44	40	691
<	60.0							1										1
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	30	12	29	60	60	44	28	57	27	14	35	46	53	113	44	40	

Calm : .00 %

Total # Operational Hours : 692


Logger : 33 Parameter : PM2
Class Limits (UG/M3)
>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0
Site : LICA33
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

SEPTEMBER 2010

NITROGEN DIOXIDE hourly averages in ppb

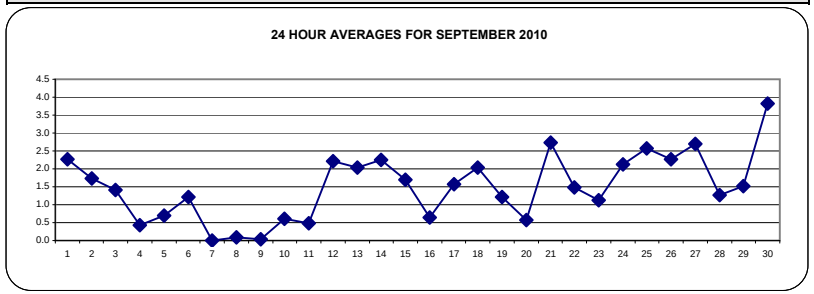
MST

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	4	3	**IZS**	3	4	1	4	5	4	4	2	1	0	0	0	0	0	0	2	1	2	4	2	6	6	2.3	24
2	6	**IZS**	5	4	1	4	5	1	1	1	0	0	0	0	0	0	0	0	0	1	2	3	3	3	6	1.7	24
3	**IZS**	2	3	3	3	4	3	2	2	2	1	1	0	0	0	0	0	1	1	1	1	0	1	**IZS**	4	1.4	24
4	0	2	3	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	3	0.4	24
5	0	0	1	0	2	2	2	1	1	0	0	0	0	0	0	0	1	1	1	0	0	**IZS**	2	2	2	0.7	24
6	1	2	3	4	3	3	2	2	2	0	1	1	1	1	2	0	0	0	0	0	**IZS**	0	0	0	4	1.2	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	24
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**IZS**	0	1	0	0	0	1	0.1	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	1	1	0.0	24
10	0	1	2	1	1	1	3	1	0	0	0	0	0	0	0	0	**IZS**	0	0	1	1	1	0	1	3	0.6	24
11	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	1	2	2	2	2	0.5	24
12	3	3	2	6	5	3	2	2	1	0	0	0	0	0	**IZS**	0	0	0	0	2	3	5	9	5	9	2.2	24
13	4	4	3	2	3	7	4	6	2	1	0	0	0	**IZS**	0	0	0	0	0	2	1	1	3	4	7	2.0	24
14	3	4	2	1	2	3	4	4	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	2	3	2	2	2	1	0	4	2.3	24
15	0	0	0	0	1	2	4	5	3	2	1	**IZS**	2	2	2	3	1	1	2	2	1	1	2	2	5	1.7	24
16	2	1	1	1	1	1	2	3	1	1	**IZS**	0	0	0	0	**C**	0	0	0	0	0	0	0	0	3	0.6	24
17	0	1	0	1	2	2	1	1	0	**IZS**	0	0	0	0	0	0	0	0	1	8	6	5	4	4	8	1.6	24
18	5	2	2	2	1	1	2	6	**IZS**	3	2	2	1	1	1	1	1	1	1	3	5	2	1	1	6	2.0	24
19	3	7	5	4	2	2	2	**IZS**	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1.2	24
20	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	2	2	3	2	2	2	3	0.6	24
21	2	3	6	4	7	**IZS**	5	5	2	2	2	1	0	0	1	1	1	1	2	2	2	4	6	4	7	2.7	24
22	3	2	2	1	**IZS**	3	3	2	2	1	1	0	0	1	1	1	1	1	1	2	2	2	1	1	3	1.5	24
23	1	2	2	**IZS**	2	3	3	2	1	1	1	1	0	0	0	0	0	0	1	2	1	1	1	1	3	1.1	24
24	1	1	**IZS**	4	2	1	3	3	3	3	2	3	2	0	0	0	0	1	2	2	7	5	2	2	7	2.1	24
25	2	**IZS**	2	2	2	2	2	2	2	2	2	2	1	1	1	1	2	3	5	9	5	3	3	3	9	2.6	24
26	**IZS**	2	2	2	2	3	4	7	5	3	2	1	0	0	0	0	1	1	2	3	4	3	3	**IZS**	7	2.3	24
27	5	1	1	2	1	1	2	4	5	4	3	2	1	0	0	0	2	4	5	3	6	7	**IZS**	3	7	2.7	24
28	5	1	1	0	1	1	1	1	1	1	1	1	1	2	1	1	0	0	1	0	0	**IZS**	5	3	5	1.3	24
29	2	1	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	2	4	5	**IZS**	6	6	3	6	1.5	24
30	2	2	2	4	6	4	7	5	3	2	1	0	0	0	0	1	1	9	4	**IZS**	9	9	**10**	7	**10**	**3.8**	24
HOURLY MAX	6	7	6	6	7	7	7	7	5	4	3	3	2	2	2	3	2	9	5	9	9	9	10	7			
HOURLY AVG	2.0	1.7	1.8	1.8	1.9	2.0	2.5	2.5	1.5	1.2	0.8	0.6	0.3	0.3	0.3	0.3	0.4	1.0	1.4	1.9	2.3	2.4	2.5	2.2			

STATUS FLAG CODES

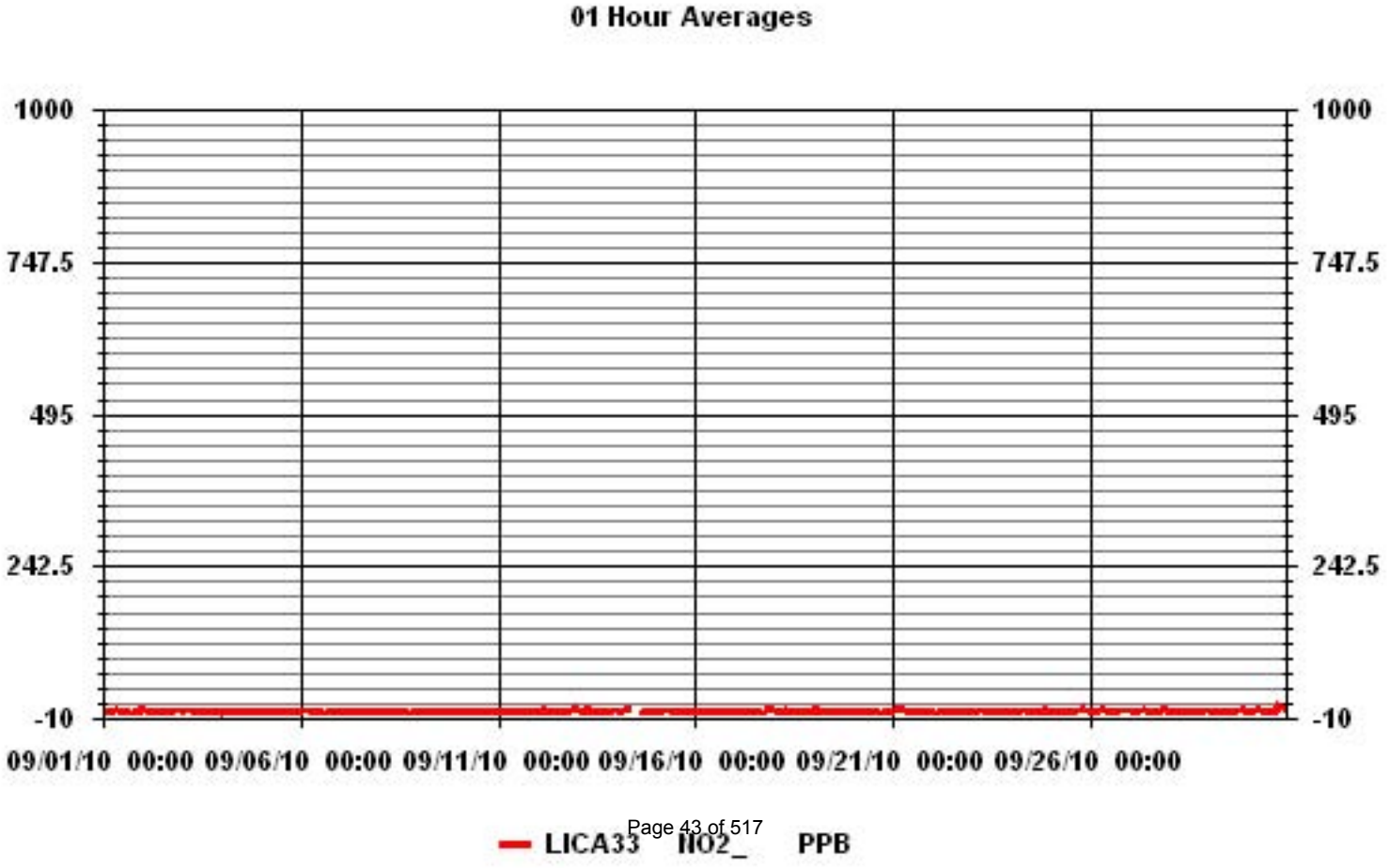
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE

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:	412					
MAXIMUM 1-HR AVERAGE:	10	PPB	@ HOUR(S)	22	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	3.8	PPB			ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	1.79		MONTHLY AVERAGE:		1.49	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

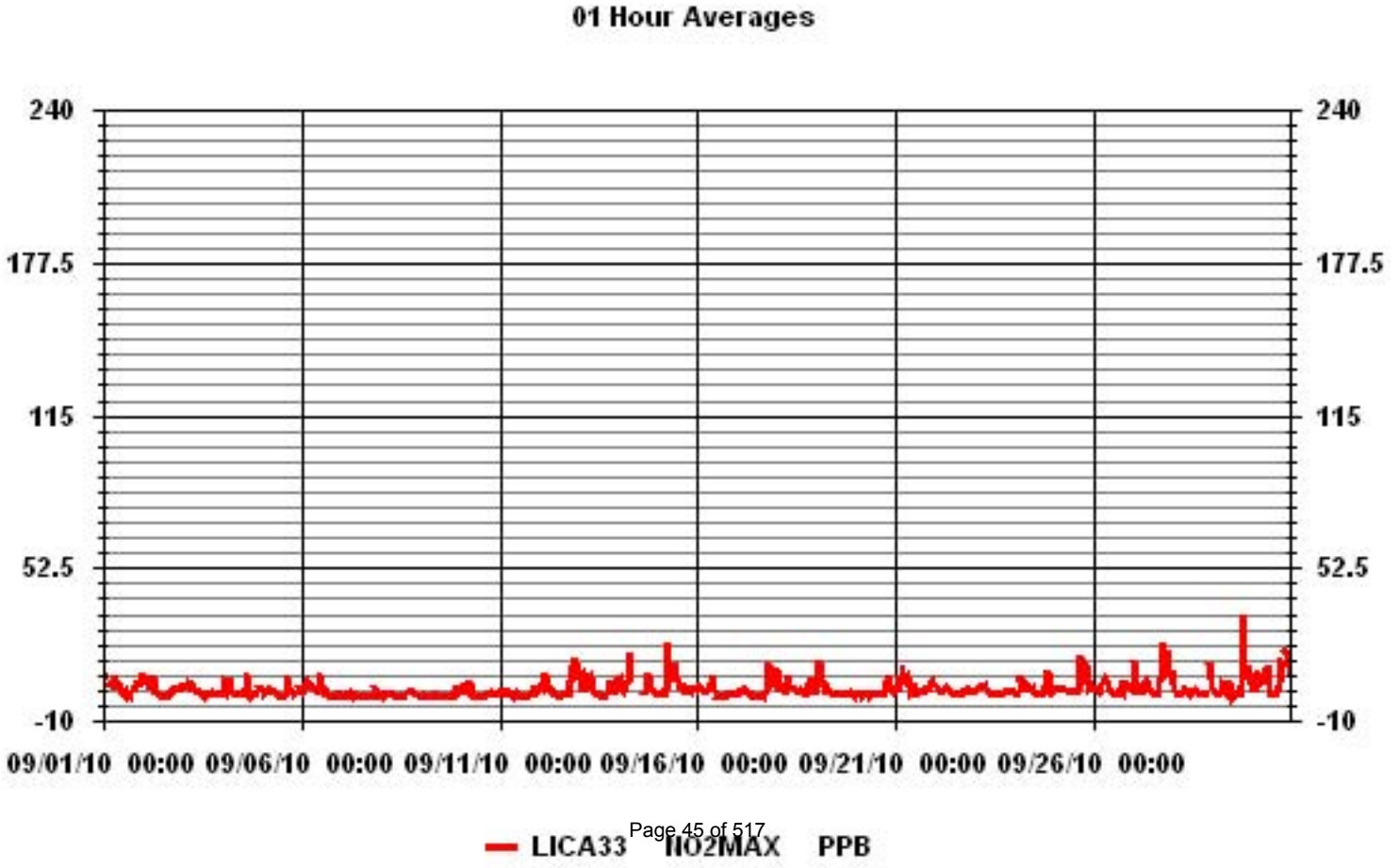
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	8	8	**IZS**	5	6	5	7	7	5	5	4	2	1	2	0	1	0	2	4	5	4	6	4	8	8	4.3	24
2	8	**IZS**	8	6	3	7	7	2	2	1	1	0	0	0	0	1	1	2	2	3	3	4	3	3	8	2.9	24
3	**IZS**	4	4	6	5	5	3	3	2	2	2	1	1	0	1	1	1	1	2	1	1	1	1	**IZS**	6	2.2	24
4	1	6	5	2	3	7	3	1	1	1	1	1	1	2	2	10	1	0	1	1	1	1	**IZS**	4	10	2.4	24
5	3	1	2	2	3	3	2	2	2	1	1	0	0	1	0	8	2	2	2	1	2	**IZS**	4	3	8	2.0	24
6	2	3	5	6	3	5	4	3	3	2	2	10	3	2	3	2	1	0	0	1	**IZS**	0	1	1	10	2.7	24
7	1	0	0	1	1	2	1	0	1	1	0	0	0	0	0	0	0	0	0	**IZS**	3	0	0	1	3	0.5	24
8	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	1	2	3	**IZS**	2	2	1	1	0	3	0.9	24
9	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	**IZS**	0	0	2	1	2	4	4	0.5	24
10	2	2	5	3	3	2	6	2	1	0	0	0	0	0	0	0	**IZS**	1	1	2	1	1	1	1	6	1.5	24
11	2	2	1	1	2	2	1	1	0	1	2	1	1	0	0	**IZS**	0	0	1	1	2	4	2	3	4	1.3	24
12	3	5	4	8	8	4	3	3	2	1	1	0	0	0	**IZS**	1	1	1	1	6	13	16	14	8	16	4.5	24
13	8	9	3	3	5	9	7	8	4	2	2	1	1	**IZS**	0	0	0	1	2	6	2	2	5	7	9	3.8	24
14	6	7	3	2	4	5	6	17	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	3	9	5	3	3	2	1	17	4.9	24
15	1	1	1	1	1	3	22	10	9	6	13	**IZS**	7	4	3	5	2	2	3	3	2	3	3	4	22	4.7	24
16	3	4	4	3	2	2	3	4	2	7	**IZS**	0	1	0	**C**	**C**	0	0	1	1	1	1	1	1	7	2.0	24
17	1	2	2	2	3	3	2	1	1	**IZS**	0	0	0	0	0	1	0	1	3	14	13	9	7	8	14	3.2	24
18	12	4	3	3	2	2	5	8	**IZS**	4	3	3	2	2	3	2	1	1	3	5	7	5	2	2	12	3.7	24
19	7	13	13	6	5	5	2	**IZS**	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	0	13	3.0	24
20	1	1	1	0	1	1	**IZS**	2	0	1	1	1	1	1	1	1	1	1	5	5	8	3	2	3	8	1.8	24
21	3	3	8	5	11	**IZS**	7	8	5	2	3	5	1	1	2	2	2	2	3	3	3	6	7	6	11	4.3	24
22	5	3	3	2	**IZS**	3	4	3	3	2	2	1	1	1	1	1	1	2	2	3	3	2	2	2	5	2.3	24
23	2	3	3	**IZS**	4	4	5	4	2	2	1	1	1	1	1	1	1	1	2	2	2	2	2	2	5	2.1	24
24	2	1	**IZS**	7	7	2	6	4	4	4	3	4	3	1	1	1	1	1	4	3	9	9	3	2	9	3.6	24
25	3	**IZS**	3	3	3	3	3	3	2	2	2	2	2	2	2	3	17	5	8	14	7	4	5	3	17	4.4	24
26	**IZS**	3	3	2	3	5	6	8	7	4	3	2	1	1	1	1	3	2	6	4	5	4	5	**IZS**	8	3.6	24
27	13	2	2	5	2	2	4	6	7	5	3	2	2	1	1	1	6	7	22	8	11	18	**IZS**	6	22	5.9	24
28	11	3	1	1	1	2	3	3	2	2	1	2	2	3	2	2	1	1	1	1	1	**IZS**	13	8	13	2.9	24
29	4	2	1	1	1	2	5	4	2	1	6	4	0	1	1	1	1	4	7	**32**	**IZS**	12	10	6	**32**	4.7	24
30	3	3	3	9	9	7	8	7	5	11	13	1	1	1	1	2	4	16	7	**IZS**	19	18	13	10	19	7.4	24
HOURLY MAX	13	13	13	9	11	9	22	17	9	11	13	10	7	4	3	10	17	16	22	32	19	18	14	10			
HOURLY AVG	4.1	3.4	3.3	3.3	3.5	3.6	4.7	4.3	2.8	2.6	2.5	1.6	1.2	1.0	1.0	1.9	1.8	2.2	3.6	4.8	4.7	4.9	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:	595					
MAXIMUM INSTANTANEOUS VALUE:	32	PPB	@ HOUR(S)	19	ON DAY(S)	29
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	3.47					


01 Hour Averages
240
177.5
115
52.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 IIO2MAX PPB

LICA33
NO2_ / WDR Joint Frequency Distribution (Percent)

September 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	4.41	1.91	3.82	8.67	8.52	6.02	3.67	8.38	4.11	1.91	5.14	6.76	7.50	16.61	6.76	5.73	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	1.91	3.82	8.67	8.52	6.02	3.67	8.38	4.11	1.91	5.14	6.76	7.50	16.61	6.76	5.73	

Calm : .00 %

Total # Operational Hours : 680

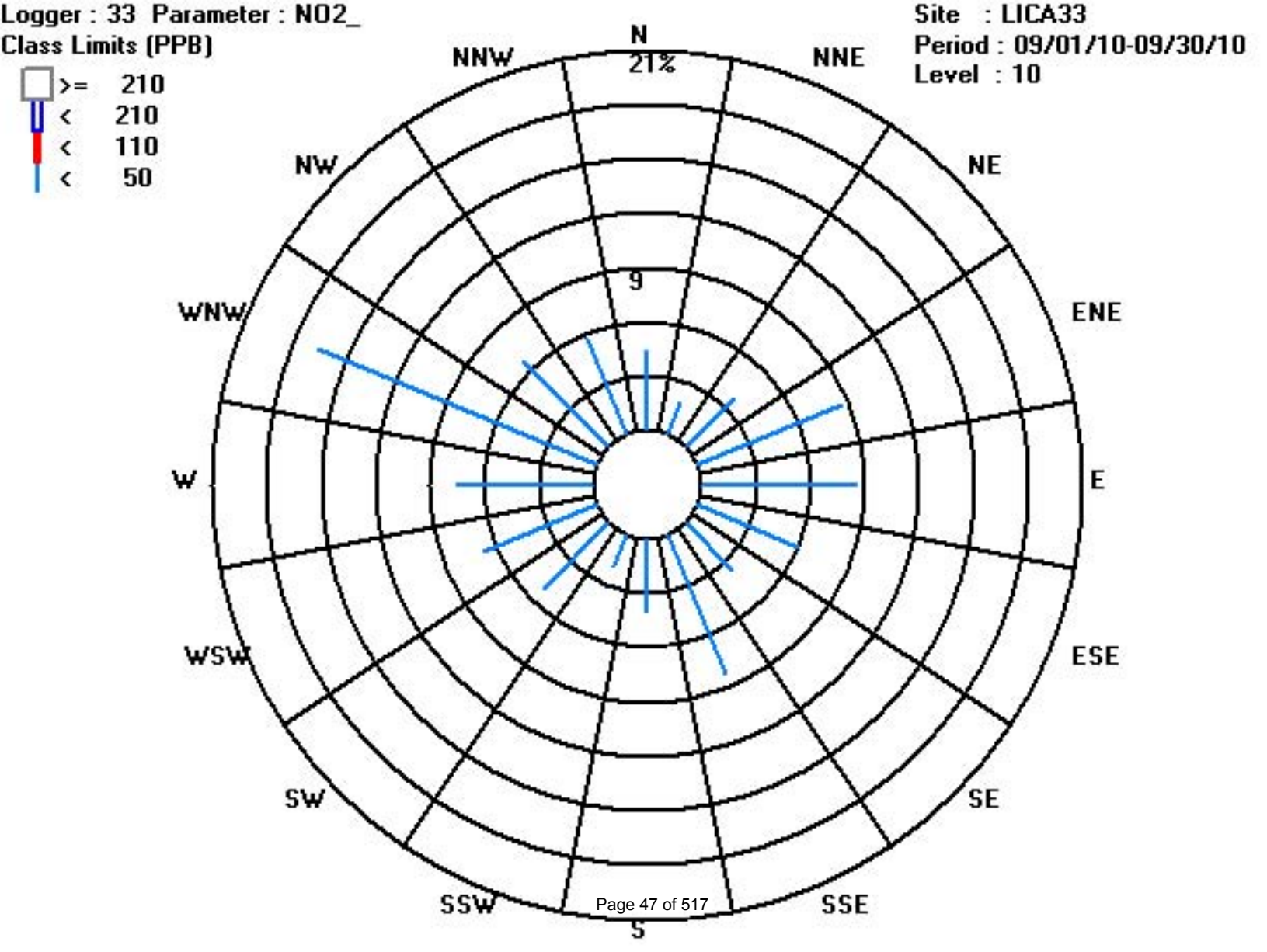
Distribution By Samples

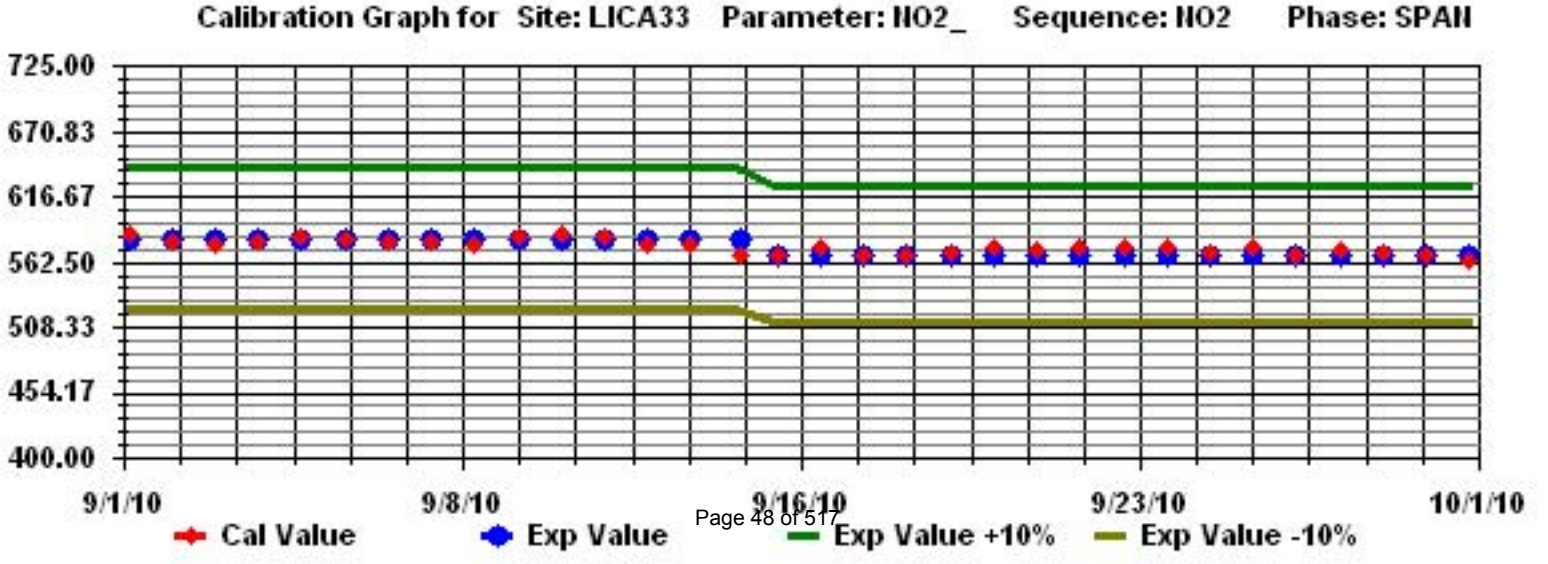
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	30	13	26	59	58	41	25	57	28	13	35	46	51	113	46	39	680
< 110																	
< 210																	
>= 210																	
Totals	30	13	26	59	58	41	25	57	28	13	35	46	51	113	46	39	

Calm : .00 %

Total # Operational Hours : 680


Logger : 33 Parameter : NO2_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA33
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: NO2_ Sequence: NO2 Phase: SPAN
725.00
670.83
616.67
562.50
508.33
454.17
400.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

SEPTEMBER 2010

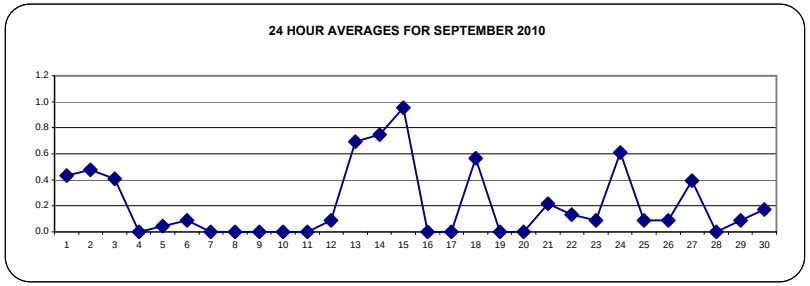
NITRIC OXIDE hourly averages in ppb

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	1	**IZS**	1	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4	24
2	0	**IZS**	0	0	0	1	6	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0.5	24
3	**IZS**	0	0	0	0	0	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	2	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	**IZS**	0	0	0.0	24
5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	0.0	24
6	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	0.1	24
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0.0	24
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0.0	24
9	0	0	0	0	0	0	0	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	**IZS**	0	0	0	0	0	0	0	0	0.0	24
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
12	0	0	0	0	0	0	0	1	1	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	1	0.1	24
13	0	0	0	0	0	1	2	**7**	2	0	1	0	0	**IZS**	0	0	0	0	0	1	0	0	1	1	**7**	0.7	24
14	1	1	0	0	1	3	3	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	3	0.8	24
15	0	0	0	0	0	0	4	**7**	4	1	1	**IZS**	1	2	1	1	0	0	0	0	0	0	0	0	**7**	**1.0**	24
16	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	**C**	0	0	0	0	0	0	0	0	0	0.0	24
17	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18	1	0	0	0	0	1	1	6	**IZS**	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	6	0.6	24
19	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	**IZS**	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24
22	0	0	0	0	**IZS**	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
23	0	0	0	**IZS**	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
24	0	0	**IZS**	0	0	0	0	2	3	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	3	0.6	24
25	0	**IZS**	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1	24
26	**IZS**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	0.1	24
27	0	0	0	0	0	0	0	3	3	1	1	0	0	0	0	0	0	0	1	0	0	0	**IZS**	0	3	0.4	24
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	**IZS**	0	0	0	1	0.1	24
30	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	1	0.2	24
HOURLY MAX	1	1	0	1	1	3	6	7	4	3	3	2	1	2	1	1	1	0	1	1	0	0	1	1			
HOURLY AVG	0.1	0.1	0.0	0.0	0.0	0.2	0.7	1.4	0.9	0.5	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0			

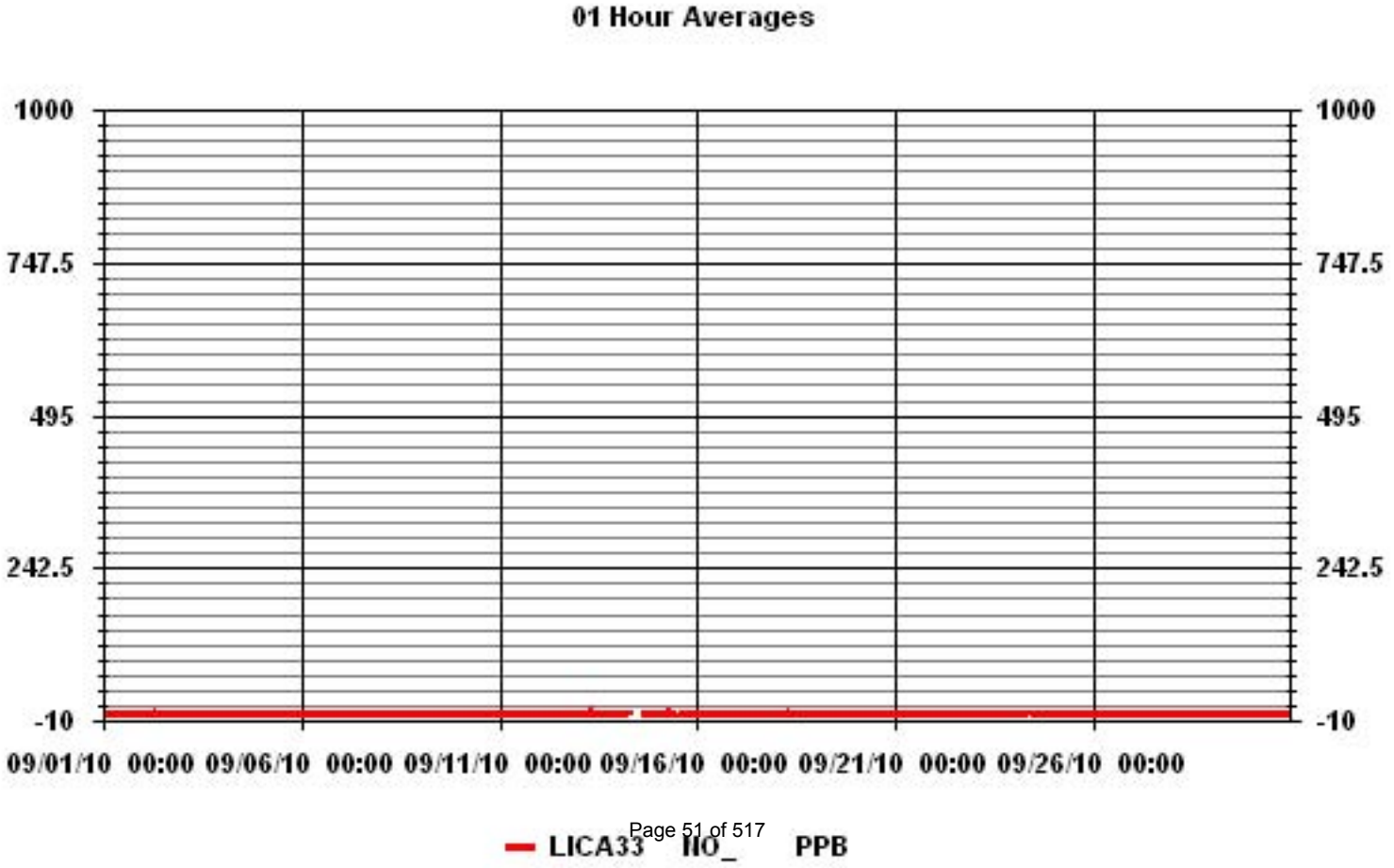
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	81						
MAXIMUM 1-HR AVERAGE:	7	PPB	@ HOUR(S)	7, 7	ON DAY(S)	13, 15	
MAXIMUM 24-HR AVERAGE:	1.0	PPB			ON DAY(S)	15	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	0.73		MONTHLY AVERAGE:		0.21	PPB	


01 Hour Averages
1000
747.5
495
242.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

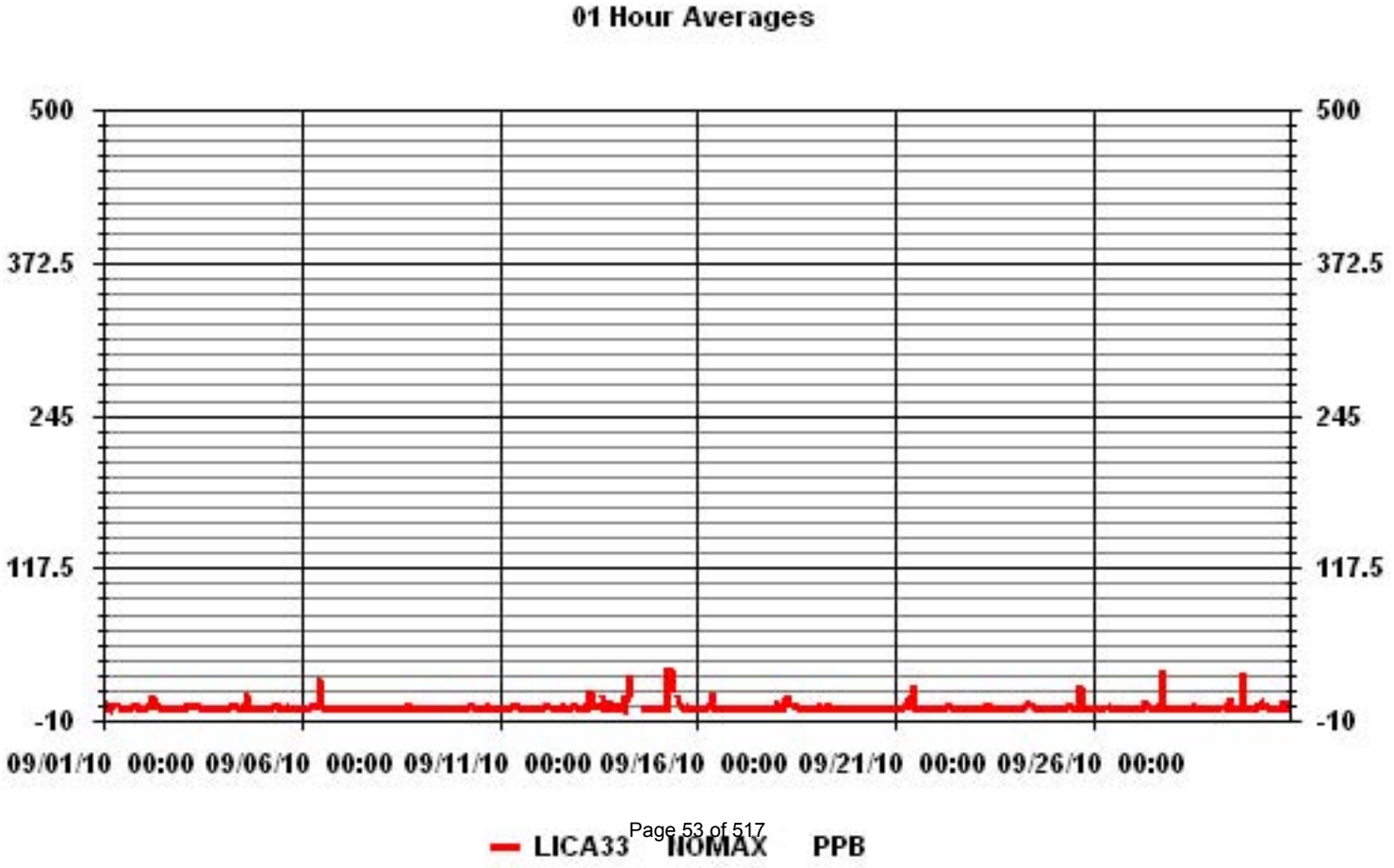
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	5	**IZS**	3	2	0	3	3	3	3	2	1	0	1	0	1	0	1	1	2	3	0	0	0	5	1.5	24
2	0	**IZS**	0	1	1	4	11	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11	1.0	24
3	**IZS**	0	1	1	1	2	2	3	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	3	0.8	24
4	0	0	0	0	0	1	1	1	1	1	1	0	0	1	1	12	0	0	0	0	0	0	**IZS**	0	12	0.9	24
5	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0	2	0	0	0	0	0	**IZS**	0	0	2	0.3	24
6	0	0	0	0	0	0	1	1	1	1	3	26	1	1	1	0	0	0	0	0	**IZS**	0	0	0	26	1.6	24
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	0	0	0	1	0.0	24
8	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	**IZS**	1	0	0	0	0	1	0.2	24
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0.0	24
10	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	**IZS**	2	0	0	0	0	0	0	2	0.3	24
11	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	**IZS**	1	0	0	0	0	0	0	0	1	0.3	24
12	0	0	0	1	1	1	1	1	2	1	0	0	0	0	**IZS**	1	1	0	0	0	1	1	1	1	2	0.6	24
13	0	1	0	0	0	3	7	14	4	1	1	1	1	**IZS**	9	0	0	0	1	7	0	0	3	2	14	2.4	24
14	2	2	1	0	8	8	10	25	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	25	3.5	24
15	0	0	0	0	0	0	**35**	18	34	15	15	**IZS**	9	6	3	3	1	0	2	0	0	0	0	0	**35**	6.1	24
16	0	0	0	0	0	0	1	1	1	11	**IZS**	0	0	0	**C**	**C**	0	0	0	0	0	0	0	0	11	0.7	24
17	0	0	0	0	0	0	0	0	0	**IZS**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
18	6	0	0	0	0	9	3	9	**IZS**	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	9	1.6	24
19	0	2	2	0	0	0	0	**IZS**	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
20	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	0.0	24
21	0	0	0	0	1	**IZS**	3	6	3	1	1	19	0	0	0	0	0	0	0	0	0	0	0	0	19	1.5	24
22	0	0	0	0	**IZS**	0	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
23	0	0	0	**IZS**	0	0	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	24
24	0	0	**IZS**	1	0	0	1	3	4	4	3	3	2	0	0	0	1	0	0	0	0	0	0	0	4	1.0	24
25	0	**IZS**	0	0	0	0	0	0	1	1	1	1	1	0	0	1	20	0	0	1	0	0	0	0	20	1.2	24
26	**IZS**	1	0	0	0	1	0	1	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	**IZS**	2	0.4	24
27	1	0	0	1	0	0	2	4	4	2	2	1	0	0	0	0	3	4	33	0	0	0	**IZS**	1	33	2.5	24
28	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	**IZS**	1	0	1	0.2	24
29	0	0	0	0	0	1	2	1	1	0	4	9	0	0	0	0	0	0	4	27	**IZS**	1	0	0	27	2.2	24
30	0	0	0	3	2	2	5	2	2	3	3	1	0	0	0	0	0	**2**	1	**IZS**	5	1	0	0	5	1.4	24
HOURLY MAX	6	5	2	3	8	9	35	25	34	15	15	26	9	6	9	12	20	4	33	27	5	1	3	2			
HOURLY AVG	0.4	0.4	0.1	0.4	0.6	1.1	3.2	3.6	2.7	2.1	1.6	2.4	0.6	0.4	0.6	0.7	1.0	0.3	1.4	1.4	0.4	0.1	0.2	0.1			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	223					
MAXIMUM INSTANTANEOUS VALUE:	35	PPB	@ HOUR(S)	6	ON DAY(S)	15
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	3.51					


01 Hour Averages
500
372.5
245
117.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 HOMAX PPB

LICA33
NO_ / WDR Joint Frequency Distribution (Percent)

September 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	4.41	1.91	3.82	8.67	8.52	6.02	3.67	8.38	4.11	1.91	5.14	6.76	7.50	16.61	6.76	5.73	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	1.91	3.82	8.67	8.52	6.02	3.67	8.38	4.11	1.91	5.14	6.76	7.50	16.61	6.76	5.73	

Calm : .00 %

Total # Operational Hours : 680

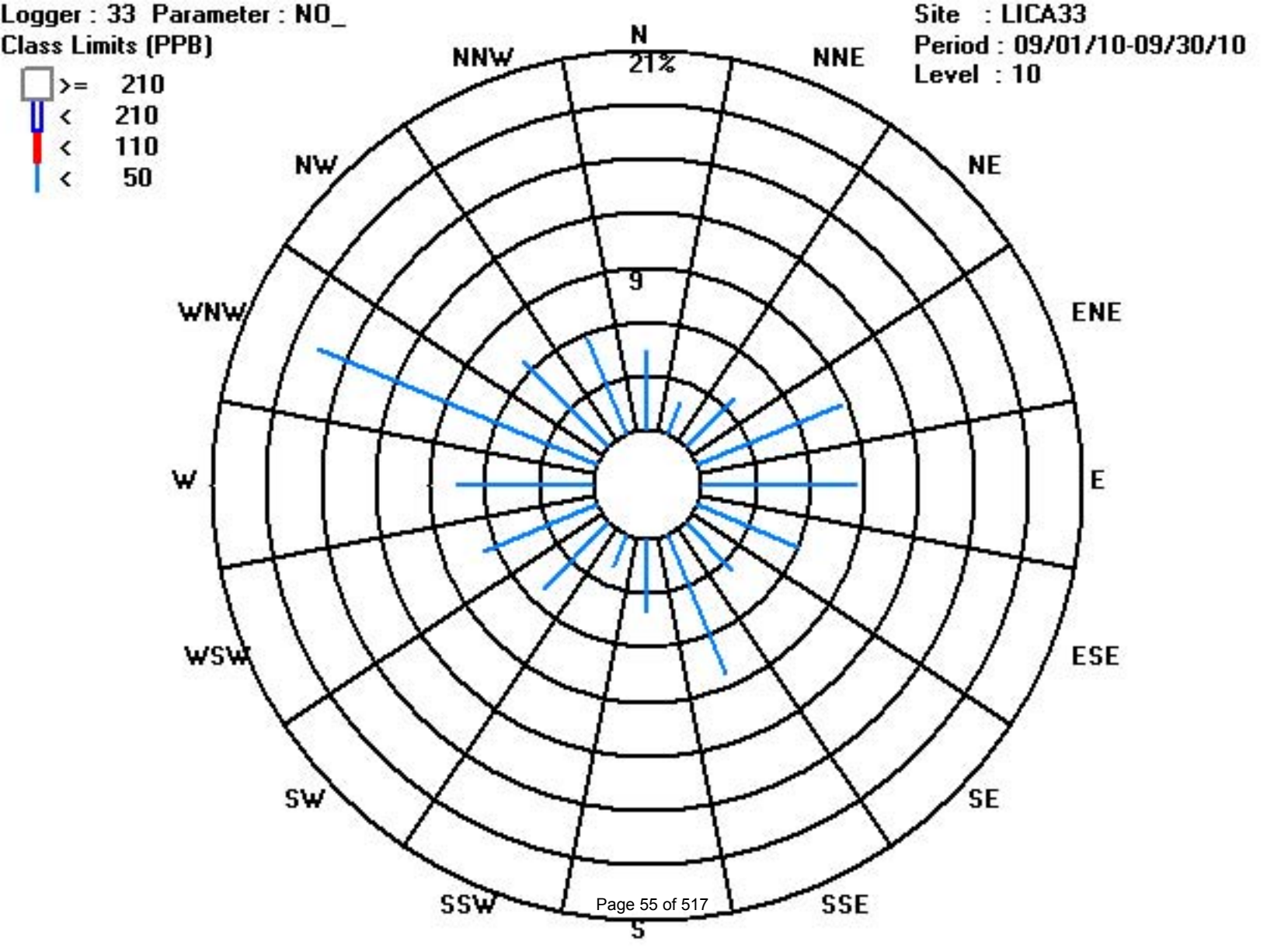
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	30	13	26	59	58	41	25	57	28	13	35	46	51	113	46	39	680
< 110																	
< 210																	
>= 210																	
Totals	30	13	26	59	58	41	25	57	28	13	35	46	51	113	46	39	

Calm : .00 %

Total # Operational Hours : 680


Logger : 33 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA33
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

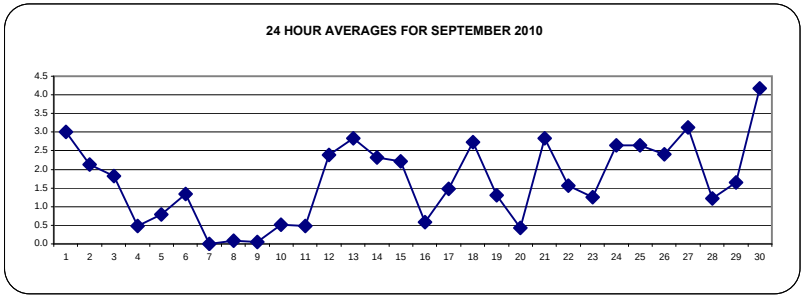
SEPTEMBER 2010

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	5	4	**IZS**	4	5	2	5	8	6	7	4	2	0	0	0	0	0	0	2	1	2	4	2	6	8	3.0	24
2	6	**IZS**	5	4	1	5	11	3	2	1	0	0	0	0	0	0	0	0	0	1	2	3	3	2	11	2.1	24
3	**IZS**	2	3	3	4	4	5	5	4	3	2	1	0	0	0	0	0	1	1	1	0	0	1	**IZS**	5	1.8	24
4	0	2	3	0	1	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	3	0.5	24
5	0	0	1	0	2	2	2	2	2	0	0	0	0	0	0	0	1	1	1	0	0	**IZS**	2	2	2	0.8	24
6	1	2	3	4	3	3	2	2	2	0	2	2	2	1	2	0	0	0	0	0	**IZS**	0	0	0	4	1.3	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	24
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**IZS**	0	1	0	0	0	1	0.1	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	1	1	0.0	24
10	0	1	2	1	1	1	3	1	0	0	0	0	0	0	0	0	**IZS**	0	0	1	0	1	0	0	3	0.5	24
11	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	**IZS**	0	0	0	0	1	2	2	2	2	0.5	24
12	2	3	2	6	5	3	2	3	3	1	0	0	0	0	**IZS**	0	0	0	0	2	3	6	9	5	9	2.4	24
13	4	4	2	2	3	8	7	**13**	5	1	1	1	0	**IZS**	0	0	0	0	0	3	1	1	4	5	**13**	2.8	24
14	4	5	2	1	3	7	7	7	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	1	0	0	0	0	0	7	2.3	24
15	0	0	0	0	0	0	7	12	6	2	1	**IZS**	3	3	3	4	2	1	2	1	0	1	1	2	12	2.2	24
16	2	1	1	0	1	1	2	3	1	1	**IZS**	0	0	0	0	**C**	0	0	0	0	0	0	0	0	3	0.6	24
17	0	0	0	1	2	2	1	1	0	**IZS**	0	0	0	0	0	0	0	0	0	8	6	5	4	4	8	1.5	24
18	6	2	2	2	1	2	3	12	**IZS**	5	3	3	2	2	2	1	1	1	1	3	5	2	1	1	12	2.7	24
19	3	7	5	4	2	2	2	**IZS**	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1.3	24
20	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	2	3	2	1	1	3	0.4	24
21	1	2	6	4	7	**IZS**	7	9	3	2	2	1	0	0	1	1	1	1	1	1	2	4	5	4	9	2.8	24
22	3	2	2	1	**IZS**	2	3	4	4	2	1	0	0	1	1	1	1	0	1	2	2	1	1	1	4	1.6	24
23	1	1	2	**IZS**	2	3	4	4	2	2	1	1	0	0	0	0	0	0	1	1	1	1	1	1	4	1.3	24
24	1	0	**IZS**	4	2	1	4	5	6	6	5	5	3	0	0	0	0	0	2	2	7	5	2	1	7	2.7	24
25	2	**IZS**	2	2	2	2	2	2	2	2	2	2	2	1	1	1	4	3	5	9	4	3	3	3	9	2.7	24
26	**IZS**	3	2	1	2	3	4	8	6	4	3	1	0	0	0	0	1	1	2	3	3	3	3	**IZS**	8	2.4	24
27	5	1	1	2	1	1	2	8	8	5	4	2	1	0	0	0	2	4	6	3	6	7	**IZS**	3	8	3.1	24
28	5	1	0	0	0	1	1	1	1	1	1	1	1	3	2	1	0	0	0	0	0	**IZS**	5	3	5	1.2	24
29	2	1	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	2	5	6	**IZS**	7	6	3	7	1.7	24
30	2	2	2	4	6	4	8	7	4	3	1	1	0	0	0	0	1	9	4	**IZS**	10	10	10	8	10	**4.2**	24
HOURLY MAX	6	7	6	6	7	8	11	13	8	7	5	5	3	3	3	4	4	9	6	9	10	10	10	8			
HOURLY AVG	2.0	1.6	1.7	1.7	2.0	2.2	3.3	4.2	2.5	1.8	1.3	0.9	0.5	0.4	0.4	0.3	0.5	0.9	1.2	1.8	2.1	2.4	2.4	2.1			

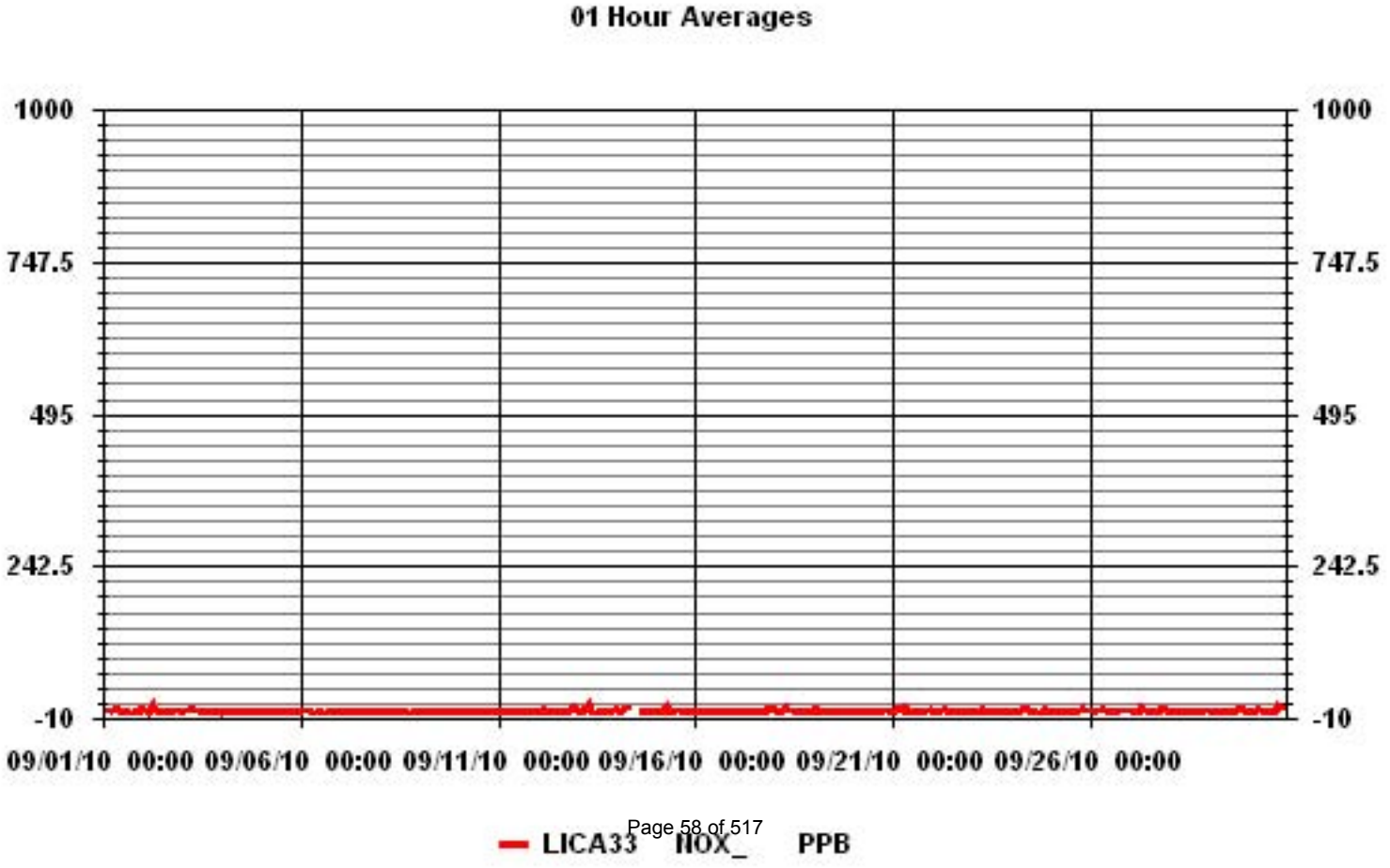
STATUS FLAG CODES

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:	395					
MAXIMUM 1-HR AVERAGE:	13	PPB	@ HOUR(S)	7	ON DAY(S)	13
MAXIMUM 24-HR AVERAGE:	4.2	PPB			ON DAY(S)	30
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	2.21		MONTHLY AVERAGE		1.68	PPB


01 Hour Averages
1000
747.5
495
242.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

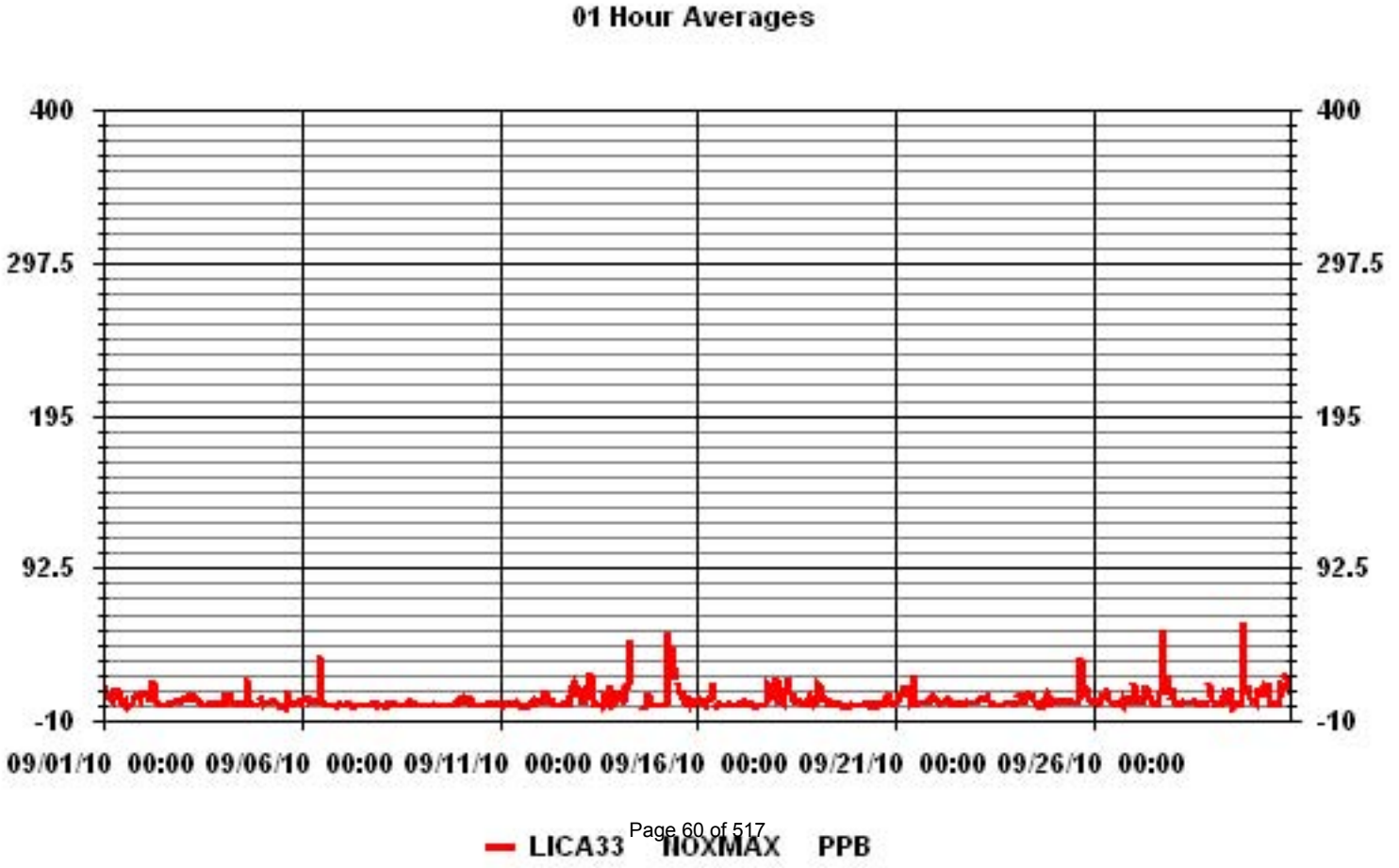
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	9	13	**IZS**	8	7	5	10	10	9	9	6	3	1	3	0	2	1	2	6	7	6	6	4	8	13	5.9	24
2	8	**IZS**	9	7	3	11	17	4	3	2	2	0	0	0	0	1	1	2	2	2	3	4	3	3	17	3.8	24
3	**IZS**	4	4	6	5	6	6	6	5	4	3	2	1	0	0	1	1	1	2	1	1	1	1	**IZS**	6	2.8	24
4	1	6	5	2	3	8	3	1	1	1	1	1	1	2	2	19	1	1	1	1	0	0	**IZS**	5	19	2.9	24
5	3	1	2	2	2	3	3	3	3	2	2	1	0	1	0	10	1	2	2	1	1	**IZS**	4	3	10	2.3	24
6	2	3	5	5	3	5	5	3	3	3	5	34	4	2	3	2	1	0	0	0	**IZS**	0	1	1	34	3.9	24
7	1	0	0	1	1	2	1	0	1	0	0	0	0	0	0	0	0	0	0	**IZS**	3	0	1	1	3	0.5	24
8	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0	1	2	4	**IZS**	2	2	1	1	0	4	0.9	24
9	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	**IZS**	0	0	1	1	2	4	4	0.4	24
10	2	2	5	3	3	2	7	3	2	0	0	0	0	0	0	0	**IZS**	2	1	2	1	1	1	1	7	1.7	24
11	1	2	0	1	2	1	1	1	1	1	3	2	2	0	1	**IZS**	1	0	1	1	2	4	2	3	4	1.4	24
12	3	5	4	8	8	5	3	3	4	2	1	0	0	0	**IZS**	1	1	1	1	6	13	17	15	9	17	4.8	24
13	8	9	3	3	5	12	13	22	7	2	3	2	1	**IZS**	8	0	1	1	3	13	1	2	8	7	22	5.8	24
14	7	10	4	2	12	12	15	42	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	2	8	3	1	0	0	0	42	7.4	24
15	0	0	0	0	0	1	49	27	40	17	23	**IZS**	14	9	7	8	3	2	4	4	1	3	2	4	49	9.5	24
16	3	4	4	2	2	1	4	5	3	14	**IZS**	0	1	1	**C**	**C**	0	0	0	1	1	0	0	0	14	2.2	24
17	1	2	1	2	3	3	2	1	1	**IZS**	1	0	1	0	0	0	0	1	3	15	14	8	7	8	15	3.2	24
18	18	3	3	3	2	11	7	17	**IZS**	7	4	4	3	3	3	2	1	1	3	5	7	4	1	2	18	5.0	24
19	7	16	15	6	5	5	2	**IZS**	3	3	1	1	1	1	1	1	0	1	0	1	0	2	1	0	16	3.2	24
20	0	0	0	0	0	1	**IZS**	2	0	1	1	1	1	0	1	1	1	1	5	5	8	3	2	3	8	1.6	24
21	2	3	9	5	12	**IZS**	10	14	8	3	5	21	1	1	2	2	2	2	2	3	3	6	7	6	21	5.6	24
22	5	3	3	2	**IZS**	3	4	5	5	3	2	1	1	1	1	1	1	1	2	3	3	2	2	2	5	2.4	24
23	2	3	3	**IZS**	4	4	5	6	4	3	2	1	1	0	0	0	0	1	2	2	2	2	2	2	6	2.2	24
24	1	1	**IZS**	8	7	1	6	7	8	8	6	7	4	2	0	1	2	1	4	3	9	8	3	2	9	4.3	24
25	3	**IZS**	3	3	3	3	3	3	3	3	3	3	2	2	2	4	33	6	8	14	7	4	4	3	33	5.3	24
26	**IZS**	3	3	2	3	6	6	9	9	5	4	3	1	1	1	1	3	1	6	4	5	4	5	**IZS**	9	3.9	24
27	13	2	2	6	2	2	6	11	11	6	6	3	2	1	1	1	9	10	51	8	11	18	**IZS**	7	51	8.2	24
28	11	3	1	1	1	2	3	3	2	2	2	2	2	4	3	2	1	1	1	1	1	**IZS**	13	8	13	3.0	24
29	4	2	1	1	1	2	7	5	4	1	9	12	0	1	1	1	1	4	11	**54**	**IZS**	13	10	6	**54**	6.6	24
30	3	3	2	12	10	9	12	9	6	14	14	2	1	1	1	1	4	17	7	**IZS**	20	19	13	10	20	8.3	24
HOURLY MAX	18	16	15	12	12	12	49	42	40	17	23	34	14	9	8	19	33	17	51	54	20	19	15	10			
HOURLY AVG	4.2	3.7	3.3	3.5	3.8	4.4	7.3	7.7	5.3	4.2	3.9	3.8	1.6	1.3	1.4	2.3	2.5	2.3	4.7	5.8	4.5	4.8	4.1	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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	572					
MAXIMUM INSTANTANEOUS VALUE:	54	PPB	@ HOUR(S)	19	ON DAY(S)	29
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	5.75					


01 Hour Averages
400
297.5
195
92.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 NOXMAX PPB

LICA33
NOX_ / WDR Joint Frequency Distribution (Percent)

September 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	4.41	1.91	3.82	8.67	8.52	6.02	3.67	8.38	4.11	1.91	5.14	6.76	7.50	16.61	6.76	5.73	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	1.91	3.82	8.67	8.52	6.02	3.67	8.38	4.11	1.91	5.14	6.76	7.50	16.61	6.76	5.73	

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	13	26	59	58	41	25	57	28	13	35	46	51	113	46	39	680
< 110																	
< 210																	
>= 210																	
Totals	30	13	26	59	58	41	25	57	28	13	35	46	51	113	46	39	

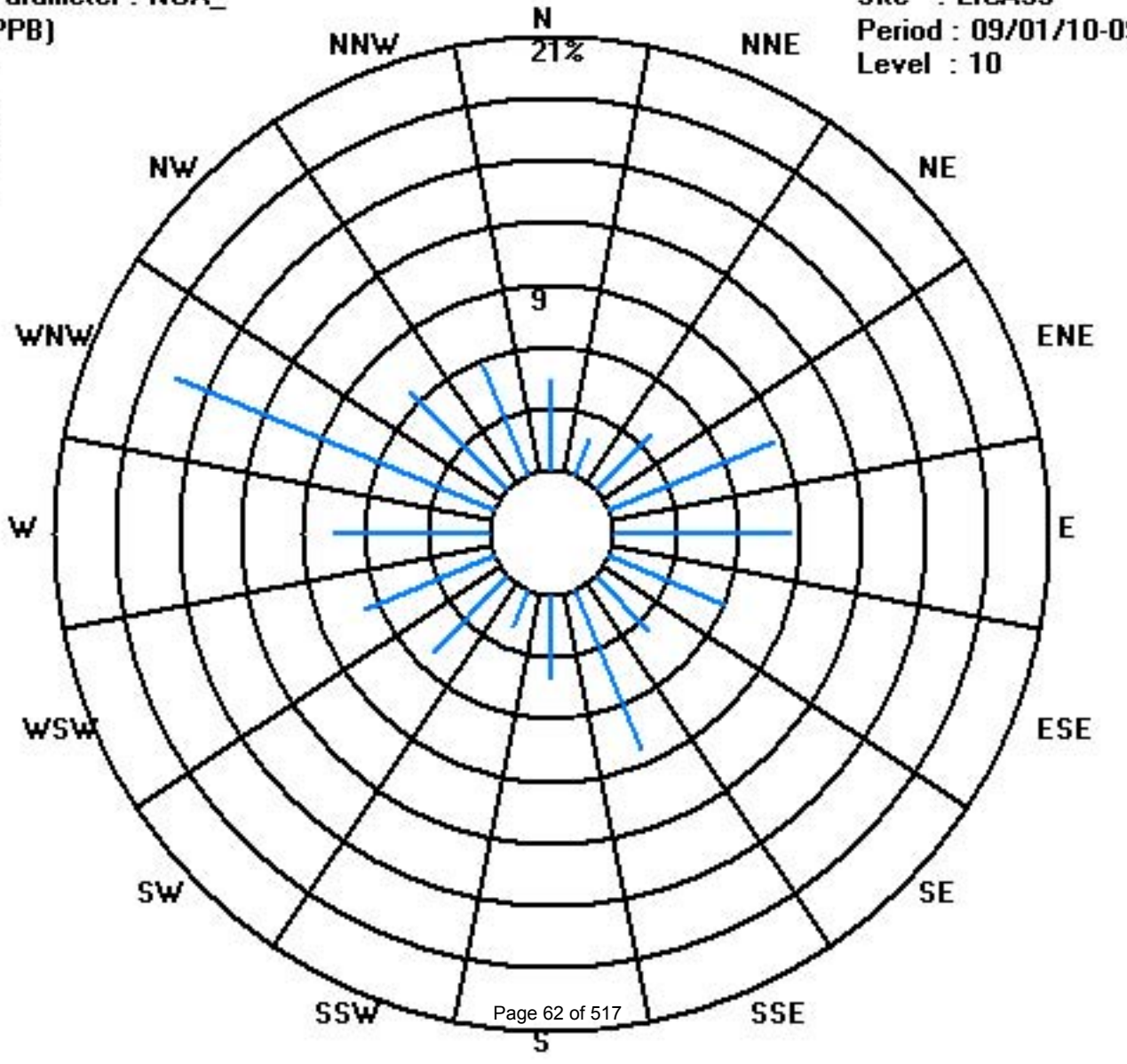
Calm : .00 %

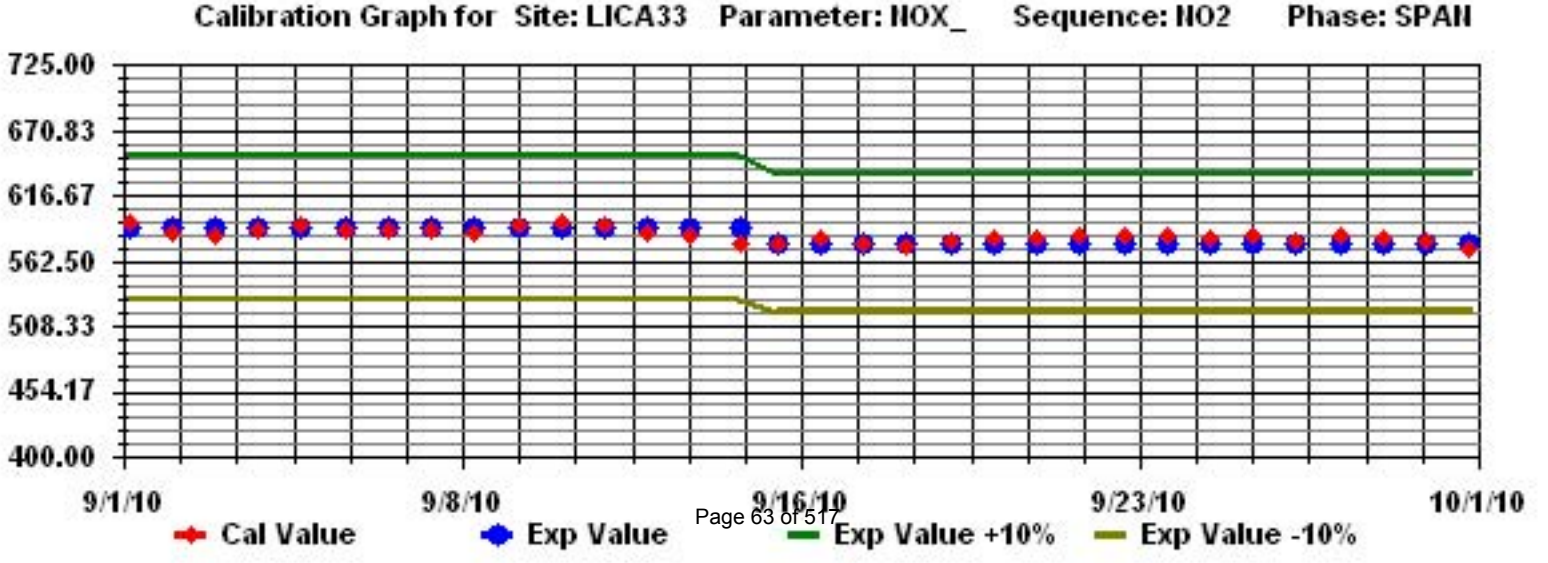
Total # Operational Hours : 680

Logger : 33 Parameter : NOX_
Class Limits (PPB)

>= 210
< 210
< 110
< 50

Site : LICA33
Period : 09/01/10-09/30/10
Level : 10




Calibration Graph for Site: LICA33 Parameter: NOX_ Sequence: NO2 Phase: SPAN
725.00
670.83
616.67
562.50
508.33
454.17
400.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

SEPTEMBER 2010

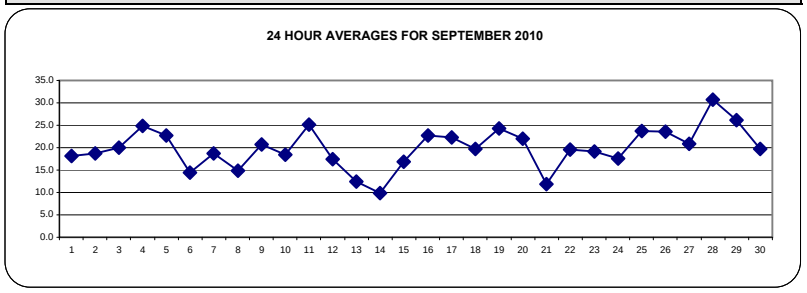
OZONE (O_3) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6	4	**IZS**	3	4	7	5	9	15	19	26	31	34	32	29	32	34	32	29	19	16	15	9	7	34	18.1	24
2	5	**IZS**	5	3	3	3	3	10	13	19	25	31	34	35	36	36	35	33	28	23	17	12	11	10	36	18.7	24
3	**IZS**	6	5	2	3	2	6	9	11	19	28	35	39	38	36	37	32	27	25	25	22	19	15	**IZS**	**39**	20.0	24
4	17	15	13	17	17	15	16	20	23	25	28	30	33	35	35	32	29	29	28	30	30	29	**IZS**	25	35	24.8	24
5	30	28	19	19	15	14	13	15	21	24	26	30	30	30	31	28	22	21	20	23	27	**IZS**	19	16	31	22.7	24
6	15	13	8	6	8	8	11	12	12	17	16	15	13	13	10	13	22	26	22	20	**IZS**	17	18	17	26	14.4	24
7	18	18	17	16	16	15	15	16	18	23	26	27	24	22	22	21	19	18	18	**IZS**	15	16	15	15	27	18.7	24
8	15	15	16	16	16	16	15	15	14	13	18	17	18	19	19	18	16	14	**IZS**	11	10	10	10	12	19	14.9	24
9	12	12	13	14	17	19	19	18	18	18	21	24	26	25	26	30	31	**IZS**	26	25	23	22	20	17	31	20.7	24
10	16	14	14	13	13	14	11	13	17	19	20	20	24	26	26	25	**IZS**	23	19	18	20	18	20	21	26	18.4	24
11	23	26	31	29	25	24	24	25	29	30	33	32	31	31	30	**IZS**	27	26	24	21	18	14	14	11	33	25.1	24
12	11	10	10	4	5	7	7	7	10	18	23	25	27	28	**IZS**	29	30	31	29	24	21	17	13	14	31	17.4	24
13	12	12	8	5	4	2	4	4	11	17	19	22	25	**IZS**	26	25	24	20	15	11	7	8	3	2	26	12.4	24
14	1	2	3	3	1	0	1	2	4	8	15	17	**IZS**	23	26	**C**	**C**	**C**	**C**	14	12	14	20	22	26	9.9	24
15	21	19	17	14	11	12	11	9	12	15	18	**IZS**	23	23	20	17	17	18	15	19	23	20	19	16	23	16.9	24
16	17	18	18	20	19	17	15	13	17	19	**IZS**	25	27	29	29	**C**	27	30	29	26	25	27	27	26	30	22.7	24
17	25	23	21	18	17	18	19	20	22	**IZS**	28	28	28	29	29	29	30	29	25	14	17	17	16	9	30	22.2	24
18	5	6	6	3	2	2	3	5	**IZS**	20	24	28	33	36	37	37	38	36	27	23	20	20	20	21	38	19.7	24
19	19	11	13	14	14	14	13	**IZS**	20	23	27	31	33	32	29	29	31	33	33	31	29	28	27	26	33	24.3	24
20	26	26	25	25	24	24	**IZS**	23	22	22	23	24	23	24	23	23	24	25	22	20	13	16	16	13	26	22.0	24
21	9	9	6	8	5	**IZS**	4	4	10	12	16	18	21	22	20	19	20	18	14	12	12	7	4	4	22	11.9	24
22	8	9	6	6	**IZS**	7	6	8	13	18	24	28	28	27	29	30	31	29	27	24	22	24	23	23	31	19.6	24
23	19	15	10	**IZS**	8	5	6	8	12	16	21	24	29	31	32	34	34	32	24	19	20	19	12	10	34	19.1	24
24	14	13	**IZS**	4	5	6	3	5	7	9	12	16	26	36	37	37	36	32	18	22	13	17	17	18	37	17.5	24
25	20	**IZS**	23	26	25	19	16	18	21	21	23	23	24	27	29	34	33	31	25	18	24	23	21	22	34	23.7	24
26	**IZS**	18	16	21	20	16	12	12	15	16	20	30	34	35	36	37	33	31	31	22	20	22	21	**IZS**	37	23.5	24
27	17	15	11	9	8	4	5	4	10	14	24	32	34	38	39	39	36	29	24	24	23	16	**IZS**	25	**39**	20.9	24
28	24	31	37	38	34	34	33	34	31	31	31	29	31	32	35	34	32	32	30	28	28	**IZS**	19	20	38	**30.8**	24
29	22	24	25	24	22	20	18	20	25	29	30	33	34	35	35	35	35	30	26	27	**IZS**	22	17	12	35	26.1	24
30	9	9	8	6	4	6	5	13	24	26	30	33	35	36	38	38	38	29	28	**IZS**	13	7	11	6	38	19.7	24
HOURLY MAX	30	31	37	38	34	34	33	34	31	31	33	35	39	38	39	39	38	36	33	31	30	29	27	26			
HOURLY AVG	15.6	15.0	14.4	13.3	12.6	12.1	11.0	12.8	16.4	19.3	23.3	26.1	28.3	29.3	29.3	29.6	29.1	27.3	24.3	21.2	19.3	17.7	16.3	15.7			

STATUS FLAG CODES

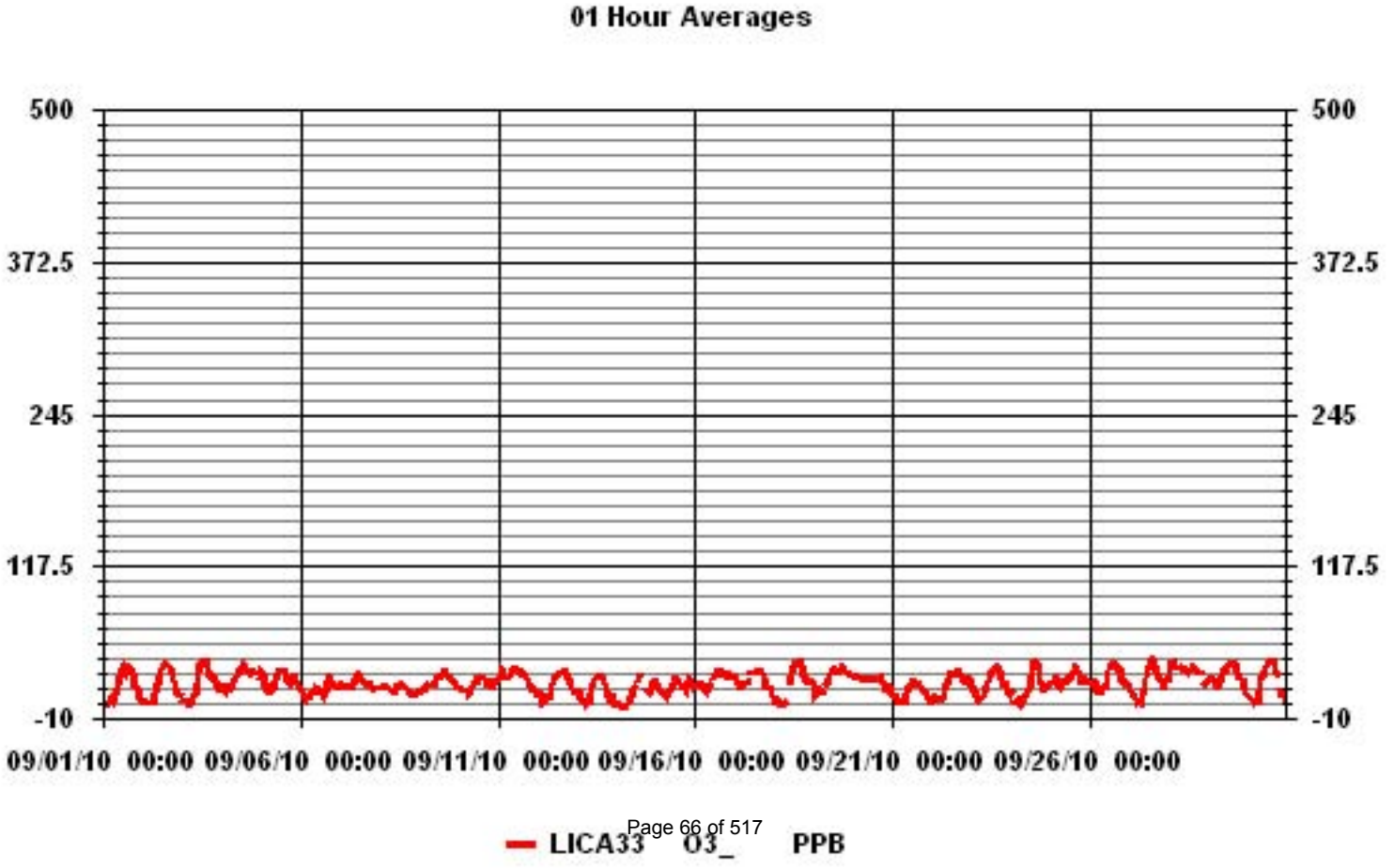
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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:	39	PPB	@ HOUR(S)	VAR	ON DAY(S)	3, 27
MAXIMUM 24-HR AVERAGE:	30.8	PPB			ON DAY(S)	28
					VAR-VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	9.17		MONTHLY AVERAGE		19.95	PPB


01 Hour Averages
500
372.5
245
117.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 O3_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

OZONE MAX instantaneous maximum in ppb

MST

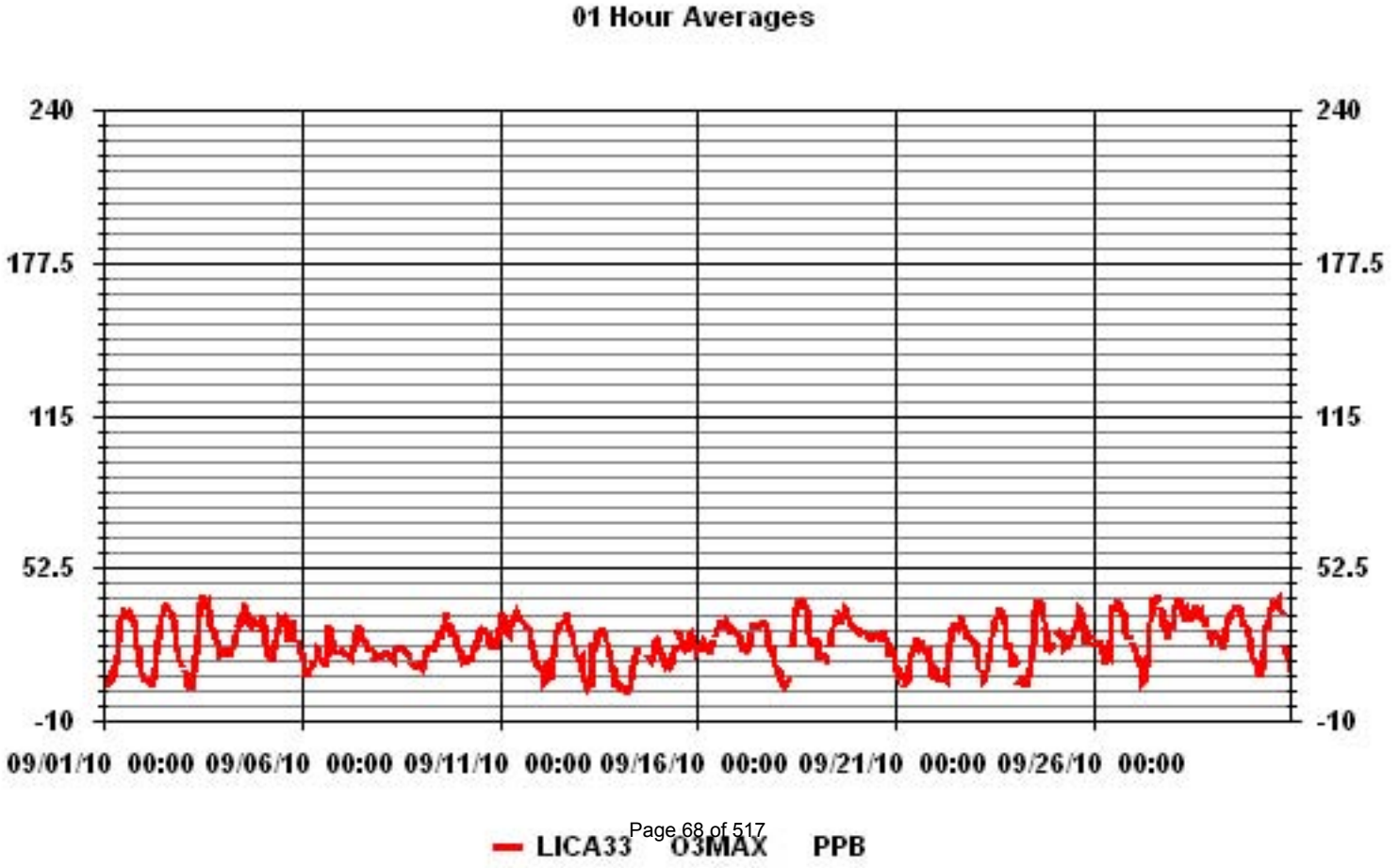
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	7	7	**IZS**	5	6	10	8	13	17	22	31	33	36	34	32	34	35	34	32	29	20	20	13	10	36	21.2	24
2	7	**IZS**	7	6	5	5	7	12	17	23	29	33	36	36	37	37	36	35	32	27	20	19	15	13	37	21.5	24
3	**IZS**	10	7	5	4	4	9	10	17	25	32	38	40	40	38	39	36	29	27	27	24	22	16	**IZS**	40	22.7	24
4	19	18	16	19	19	18	19	21	25	27	29	32	34	37	37	35	31	30	29	31	31	30	**IZS**	28	37	26.7	24
5	33	30	22	21	17	16	14	19	23	26	28	32	31	32	33	32	23	23	23	30	30	**IZS**	22	18	33	25.1	24
6	18	16	12	8	10	11	13	13	15	19	18	16	14	14	12	16	28	28	24	21	**IZS**	18	18	18	28	16.5	24
7	19	19	18	17	17	17	16	18	21	26	28	28	25	24	23	22	20	19	19	**IZS**	16	17	16	16	28	20.0	24
8	16	17	18	18	18	18	17	16	15	19	20	20	20	20	20	19	18	16	**IZS**	13	12	12	12	13	20	16.8	24
9	13	12	14	17	18	20	20	19	19	20	23	26	27	26	29	33	33	**IZS**	29	26	25	25	21	19	33	22.3	24
10	19	15	16	14	14	15	15	15	19	20	22	23	27	28	27	27	**IZS**	25	22	20	20	20	23	24	28	20.4	24
11	28	33	33	32	26	26	25	28	31	33	35	34	33	32	31	**IZS**	29	29	28	24	20	16	15	13	35	27.6	24
12	12	11	12	6	7	7	8	8	16	21	25	27	29	29	**IZS**	31	32	34	30	27	25	22	17	17	34	19.7	24
13	15	16	11	8	7	4	5	5	22	18	21	26	27	**IZS**	27	26	25	23	19	17	10	13	5	5	27	15.4	24
14	4	5	4	4	3	1	3	4	7	13	17	19	**IZS**	26	**C**	**C**	**C**	**C**	**C**	16	15	17	23	24	26	11.4	24
15	23	21	18	16	13	14	13	12	13	18	20	**IZS**	26	26	24	20	19	20	18	25	26	23	20	18	26	19.4	24
16	19	20	21	23	22	18	20	17	20	22	**IZS**	26	28	30	**C**	**C**	29	31	30	29	26	28	28	27	31	24.5	24
17	25	25	22	20	18	20	19	20	25	**IZS**	29	29	29	29	30	30	30	30	28	21	19	20	20	13	30	24.0	24
18	10	10	10	7	5	4	6	7	**IZS**	22	26	32	36	38	38	39	39	38	36	26	23	23	22	23	39	22.6	24
19	23	15	18	16	16	16	14	**IZS**	22	26	28	32	34	34	31	31	32	36	35	33	30	30	29	28	36	26.5	24
20	28	27	26	27	26	26	**IZS**	25	23	23	24	24	25	25	25	24	25	27	24	23	17	17	18	17	28	23.7	24
21	11	11	8	9	8	**IZS**	5	6	13	16	18	21	23	23	23	20	21	19	19	17	18	13	9	7	23	14.7	24
22	11	10	7	7	**IZS**	8	7	11	15	22	28	29	29	28	30	32	32	30	28	25	24	24	24	23	32	21.0	24
23	22	17	12	**IZS**	10	7	8	10	14	18	24	26	31	32	33	35	35	34	30	20	21	21	14	12	35	21.1	24
24	15	14	**IZS**	6	7	7	5	5	8	11	15	21	35	38	38	38	38	35	31	28	18	22	20	21	38	20.7	24
25	21	**IZS**	26	27	26	24	20	21	23	22	24	25	27	28	31	36	35	33	30	21	26	25	24	24	36	26.0	24
26	**IZS**	21	21	22	22	18	15	13	18	17	23	36	36	37	38	38	36	34	34	26	24	24	24	**IZS**	38	26.2	24
27	21	19	15	15	13	6	7	7	12	17	30	34	39	39	40	40	38	35	29	26	31	25	**IZS**	28	40	24.6	24
28	28	37	39	39	39	37	35	36	32	32	33	31	38	33	36	36	34	35	32	29	31	**IZS**	26	23	39	33.5	24
29	24	26	26	25	23	22	19	22	28	30	32	34	35	36	36	36	36	34	30	30	**IZS**	28	25	19	36	28.5	24
30	16	14	14	13	10	8	11	19	28	28	31	35	36	38	38	39	40	36	35	**IZS**	20	16	16	11	40	24.0	24
HOURLY MAX	33	37	39	39	39	37	35	36	32	33	35	38	40	40	40	40	40	38	36	33	31	30	29	28			
HOURLY AVG	18.1	17.7	16.9	15.6	14.8	14.0	13.2	14.9	19.2	21.9	25.6	28.3	30.6	30.8	31.0	31.3	30.9	29.7	28.0	24.5	22.2	21.1	19.1	18.3			

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:	681					
MAXIMUM INSTANTANEOUS VALUE:	40	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	9.03					


01 Hour Averages
240
177.5
115
52.5
-10
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 O3MAX PPB

LICA33
O3_ / WDR Joint Frequency Distribution (Percent)

September 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	4.39	1.61	3.80	8.63	8.63	6.29	3.95	8.34	4.09	1.90	5.12	6.73	7.46	16.54	6.73	5.71	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	1.61	3.80	8.63	8.63	6.29	3.95	8.34	4.09	1.90	5.12	6.73	7.46	16.54	6.73	5.71	

Calm : .00 %

Total # Operational Hours : 683

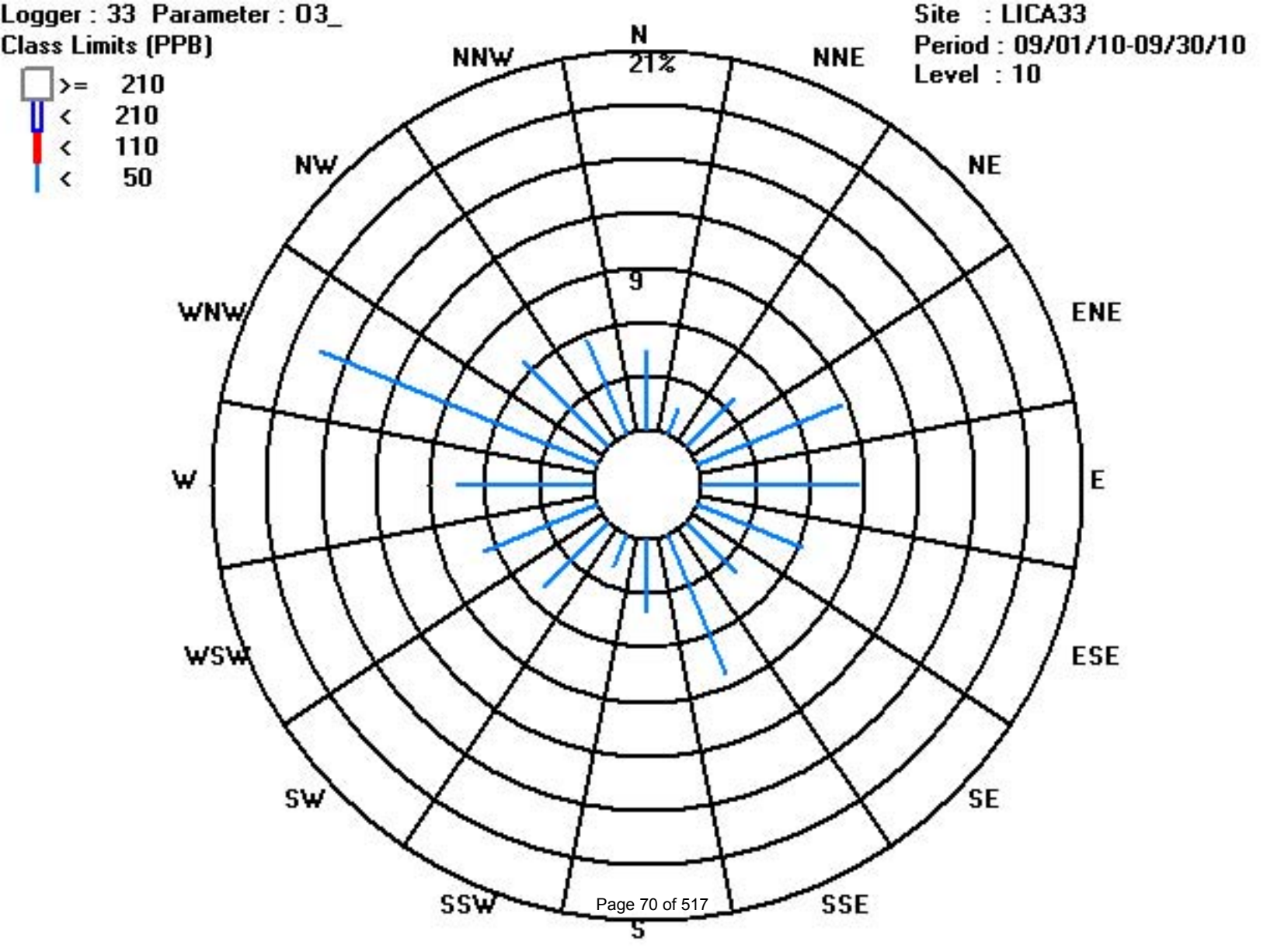
Distribution By Samples

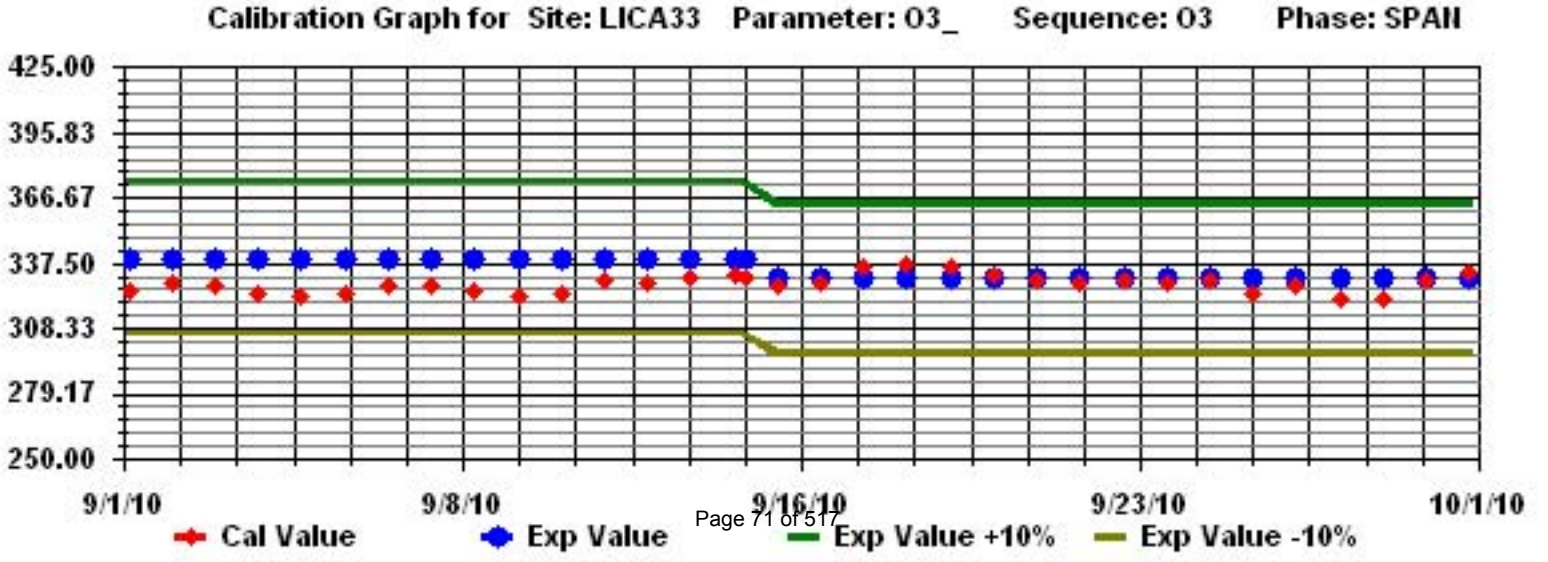
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	30	11	26	59	59	43	27	57	28	13	35	46	51	113	46	39	683
<	110																	
<	210																	
>=	210																	
	Totals	30	11	26	59	59	43	27	57	28	13	35	46	51	113	46	39	

Calm : .00 %

Total # Operational Hours : 683


Logger : 33 Parameter : 03_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA33
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: O3_ Sequence: O3 Phase: SPAN
425.00
395.83
366.67
337.50
308.33
279.17
250.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

SEPTEMBER 2010

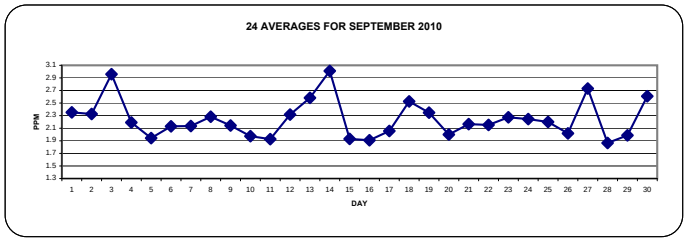
TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.5	3.5	**IZS**	3.3	3	2.2	2.3	2.3	2.5	2.2	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2	2.1	2.7	2.4	2.6	3.5	2.4	24
2	2.9	**IZS**	2.4	2.8	2.9	2.4	2.3	2.1	2.1	2	2	2	2	2	2	2	1.9	1.9	2	2.3	2.5	2.6	2.8	3.6	3.6	2.3	24
3	**IZS**	4.5	5.1	3.7	3.8	4	4.1	3.8	3.4	2.9	2.7	2.4	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.4	**IZS**	5.1	3.0	24
4	2.6	3.2	2.9	2.5	2.4	2.7	3	2.2	2.2	2	2.1	2	2	2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	**IZS**	2	3.2	2.2	24
5	1.9	1.8	2	1.9	2.1	2	2	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.3	2.2	1.9	1.9	1.9	**IZS**	2	2.2	2.3	1.9	24
6	2.2	2.1	2.6	2.6	2.2	2.1	2	2	2.1	1.9	2	2	2.1	2	2.6	2.3	2	1.9	2	2.2	**IZS**	2	2	2.1	2.6	2.1	24
7	2	2	2	2.1	2.2	2.2	2	2	2	2	2	2	2	2.1	2.2	2.1	2.3	2.3	2.4	**IZS**	2.2	2.4	2.2	2.4	2.4	2.1	24
8	2.3	2	2.1	2.2	2.2	2.1	2.4	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.1	2.6	**IZS**	3	3	2.4	2.3	2.4	3.0	2.3	24
9	2.4	2.3	2.1	2	2.4	2.5	2	2	2	1.9	2	2	1.9	1.9	1.9	2	2.1	**IZS**	2.2	2.4	2.4	2.6	2	2.3	2.6	2.1	24
10	2	2.1	2.2	2.2	2.1	2	2.3	2.1	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	**IZS**	1.8	1.9	2	2	2	2	1.9	2.3	2.0	24
11	2	1.9	1.9	1.9	2	2	2	2	1.9	1.9	1.9	1.8	1.8	1.8	1.8	**IZS**	1.8	1.8	1.8	1.9	1.9	2.1	2.2	2.2	2.2	1.9	24
12	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.3	2	1.9	1.9	2	2	**IZS**	2	2	2	2.2	3	3.5	2.6	3.2	2.8	3.5	2.3	24
13	3.1	2.5	2.4	2.4	2.7	2.9	2.9	3.3	2.7	2.4	2.3	2.2	2.3	**IZS**	2.1	2	2.2	2.7	2.9	2.2	2.4	2.7	2.9	3.2	3.3	2.6	24
14	3.1	3.3	3.6	3.7	3.7	4.1	4.4	4	3.4	**C**	**C**	**C**	**C**	**C**	2.1	2.3	2.6	2.8	2.6	2.5	2.8	2.3	2	1.9	4.4	**3.0**	24
15	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.1	1.9	1.9	**IZS**	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.2	1.9	2	2	2.1	2.2	1.9	24
16	2	1.9	2	2	2	2	2	2.1	1.9	1.9	**IZS**	1.8	1.8	1.8	1.8	**C**	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	24
17	2	2	2	2.1	2.2	2.1	2	2	2	**IZS**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.1	2.1	2.6	2.8	2.8	2.1	24
18	2.7	2.4	2.2	3	2.6	3	3.7	3.8	**IZS**	2.7	2.3	2.2	2.1	2	2	2.1	2.1	2.1	2.8	2.2	2.6	2.5	2.2	2.8	3.8	2.5	24
19	3.6	3.2	3.4	3.5	3	2.5	2.3	**IZS**	2.2	2.2	2.1	2	2	2	2	2	2	1.9	1.9	1.9	2.1	2	2.2	2	3.6	2.3	24
20	2	2.1	2.1	2	2.2	2.2	**IZS**	1.9	2	2	1.9	1.9	1.8	1.8	1.9	1.8	1.9	1.9	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.0	24
21	2.2	2.3	2.7	2.6	3.1	**IZS**	2.4	2.2	2	2	1.9	1.9	1.9	1.8	2	1.9	1.9	1.9	2.1	1.9	2	2.4	2.3	2.4	3.1	2.2	24
22	2	2.2	2.9	3.2	**IZS**	2.5	2.6	2.6	2.4	2.1	2	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2	2.1	2.1	2.1	3.2	2.2	24
23	2.1	2.1	2.2	**IZS**	2.9	3.6	4.3	3.2	2.4	2.4	2.1	2	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.1	2	2	2	2.2	4.3	2.3	24
24	2.2	2.2	**IZS**	2.5	2.7	2.6	2.8	2.9	2.3	2.2	**C**	2.2	2.1	1.8	1.8	1.8	1.8	1.8	2.3	2.1	2.2	2.3	2.4	2.4	2.9	2.2	24
25	2.3	**IZS**	2.3	2.4	2.3	2.7	3.1	2.4	2.1	2.1	2	2	2	2	1.9	1.9	1.8	1.9	2.1	2	2.2	2.3	2.4	2.4	3.1	2.2	24
26	**IZS**	2.5	2.4	2	1.9	2	2.1	2.4	2.3	2.2	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.1	2	2	**IZS**	2.5	2.0	24
27	2	2.6	3.4	3.9	2.7	4.3	3.9	3.6	3.2	2.7	2.2	2	2	1.8	1.8	1.8	1.8	1.8	2.2	2.3	2.8	**5.8**	**IZS**	2.2	**5.8**	2.7	24
28	2.8	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	**IZS**	2	2	2.8	1.9	24
29	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	**IZS**	2	2	3	3.0	2.0	24
30	3.1	2.7	2.8	5.2	5.8	3	2.7	2.1	2	2.2	2	1.9	1.8	1.9	1.9	2	1.9	2.1	2.3	**IZS**	2.2	2.9	2.5	3	5.8	2.6	24
HOURLY MAX	3.6	4.5	5.1	5.2	5.8	4.3	4.4	4.0	3.4	2.9	2.7	2.4	2.3	2.2	2.6	2.3	2.6	2.8	2.9	3.0	3.5	5.8	3.2	3.6			
HOURLY AVG	2.4	2.4	2.5	2.6	2.6	2.5	2.6	2.5	2.2	2.1	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.4	2.3	2.4			

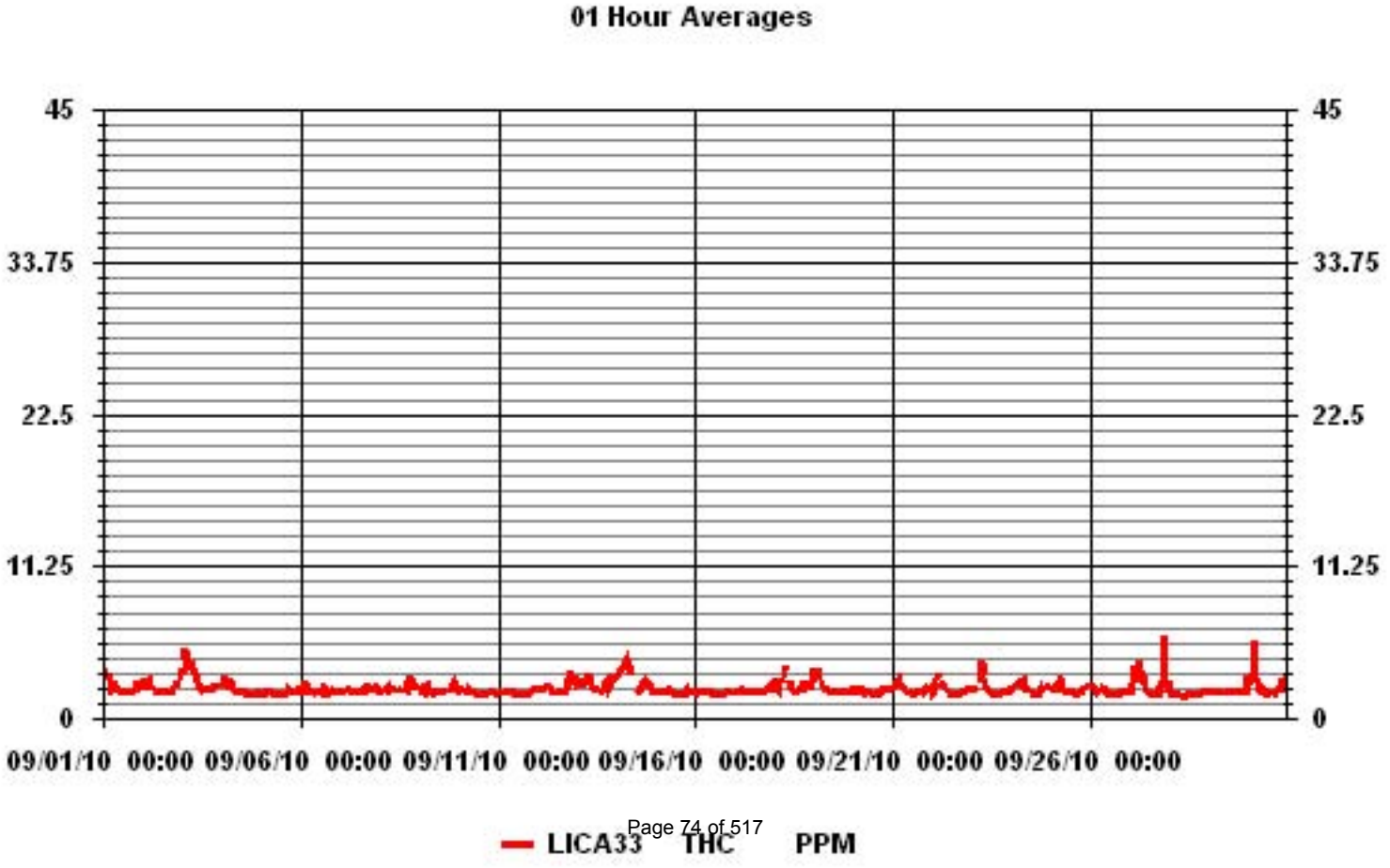
STATUS FLAG CODES

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
BB	- BELOW BACKGROUND OF 1.5 PPM		



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	682						
MAXIMUM 1-HR AVERAGE:	5.8	PPM	@ HOUR(S)	21	ON DAY(S)	27	
MAXIMUM 24-HR AVERAGE:	3.0	PPM			ON DAY(S)	14	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		720	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	0.53		MONTHLY AVERAGE:		2.24	PPM	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22.5
11.25
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09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

TOTAL HYDROCARBONS MAX instantaneous maximum in ppr

MST

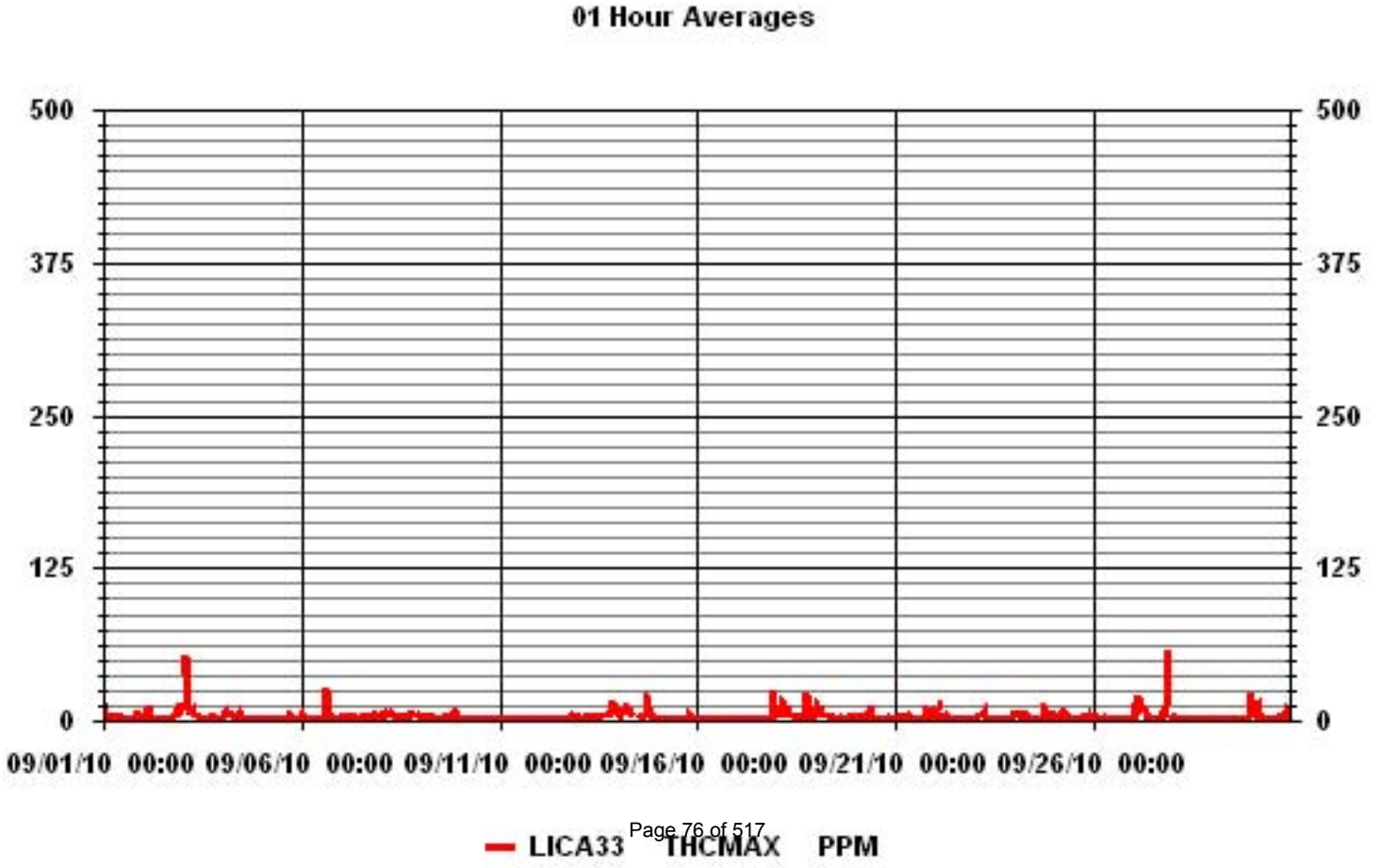
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	5.4	12.3	**IZS**	4.6	5.4	2.6	2.4	2.7	2.7	3	3.8	1.9	2.1	2.4	1.9	2.1	2.2	2.2	2.6	2.3	2.2	8.7	2.5	2.8	12.3	3.5	24
2	3.1	**IZS**	2.5	9.7	12.5	2.5	2.4	2.2	2.1	2.1	2	2	2	2	2	2.1	2	2	2	5.1	9	5.9	6.6	12.4	12.5	4.2	24
3	**IZS**	39.2	54.1	11.9	7.4	7.6	10.2	6	5	4.3	3.6	3.1	2.2	2.2	2.2	2.3	2.8	3.5	3.4	3.7	3.5	2.4	2.8	**IZS**	54.1	8.3	24
4	3.5	6.8	9	5.1	5.4	6.4	6.1	3.8	3.8	2.2	6.4	3.2	2	2.7	2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	**IZS**	3.3	9	3.7	24
5	2.2	2	2	2	2.2	2.1	2	2.1	2	1.9	1.9	1.8	1.8	1.8	1.8	3.2	5.3	5.4	1.9	1.9	2	**IZS**	2.3	2.3	5.4	2.3	24
6	5.2	2.3	2.8	2.8	2.3	2.2	2.1	2	2.2	2.2	2.2	2.3	2.4	2.8	10.9	26.9	2.3	2.5	2.6	4.2	**IZS**	2.6	2.5	3.1	26.9	4.1	24
7	2.7	2.7	2.9	3	3.3	3	3	2.6	2.7	2.6	2.5	2.6	3	3.5	4	3.3	3.5	4.1	3.7	**IZS**	5.5	5.2	3.4	4.4	5.5	3.4	24
8	5.9	3.1	4.1	6.5	4.6	4.5	7.3	4.8	5.2	4.2	5.1	4.4	4.5	3.7	3.3	3.8	3.6	6.3	**IZS**	6	5.2	5.4	4.7	4.8	7.3	4.8	24
9	4	4.3	3.7	3.1	3.8	3.5	3.4	2.8	2.6	2.3	2.5	2.6	2.3	2.5	2.7	3.1	3.3	**IZS**	4.2	3.9	4.8	9.8	3.8	3	9.8	3.6	24
10	2.2	2.3	2.8	2.4	2.7	2.3	2.8	2.4	2.1	2.1	2	2	2.2	2.1	1.8	1.8	**IZS**	1.8	2	2.1	2.1	2.1	2.1	2	2.8	2.2	24
11	2.1	2.1	1.9	2	2.1	2.1	2.1	2	2	2	1.9	1.9	1.9	1.9	1.9	**IZS**	1.9	1.9	1.9	1.9	2	2.2	2.3	2.3	2.3	2.0	24
12	2.2	2.2	2.2	2.2	2.4	2.4	2.5	2.6	2.5	2.1	2.2	2.1	2.2	2.1	**IZS**	2.2	2.4	2.5	2.8	4.2	5.5	5.5	4.5	3.7	5.5	2.8	24
13	3.9	3.2	2.4	2.4	3	3	3.4	4.4	3.9	4.2	4.6	3.9	4.4	**IZS**	3.5	4	4.4	5.2	6.9	2.6	6.7	15.6	5.4	10.9	15.6	4.9	24
14	5.8	3.9	10.4	5.5	9.8	11	11.2	8.5	7.1	**C**	**C**	**C**	**C**	**C**	3.2	4.5	6.8	23.2	8.9	5.1	6.7	2.4	2.2	1.9	23.2	7.3	24
15	1.9	1.9	1.9	2	2	2	2	2.1	2.2	2	1.9	**IZS**	1.8	1.8	1.9	1.9	1.9	2	1.9	6.8	5.5	2.2	2.1	2.3	6.8	2.3	24
16	2.4	2.4	2.4	2.3	2.1	2.2	2.2	2.3	2.1	2.1	**IZS**	1.9	1.9	1.9	**C**	**C**	1.9	1.9	1.9	2	2	1.9	2	2	2.4	2.1	24
17	2	2	2	2.2	2.3	2.2	2	2	2	**IZS**	2	2	2	2	1.9	1.9	1.9	1.9	2	2.1	2.1	2.2	25.2	14	25.2	3.6	24
18	8.2	6.4	3.2	15.1	13	10.7	11.2	6.5	**IZS**	5.3	3.3	2.9	3.2	3.5	4	3.9	3.6	2.1	22.9	2.4	2.9	3	2.3	8.9	22.9	6.5	24
19	15.3	13.8	7.9	9.4	5.8	4.6	4.5	**IZS**	3.4	3.5	3.1	2.6	2.4	2.5	2.8	3	2.6	2.5	2.3	2.7	2.7	3	3.3	2.8	15.3	4.6	24
20	3.3	3	3.2	3.3	3.8	3.6	**IZS**	2.9	7.6	11.3	2.5	2.4	2	1.9	2.2	2	2	2.3	2.9	2.6	2.7	2.2	2.2	2.3	11.3	3.2	24
21	2.2	2.4	2.9	2.8	3.8	**IZS**	2.5	4.9	2.1	2.1	2.1	1.9	1.9	1.9	2.6	2.1	2	2	13.1	2	2.5	7.2	9	5.7	13.1	3.6	24
22	2.1	2.3	9.1	15.4	**IZS**	2.6	2.6	5.2	2.6	2.3	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2.2	2.1	2.1	2.1	2.1	15.4	3.1	24
23	2.1	2.2	4	**IZS**	5.3	7	9.4	4.4	3	2.4	2.3	2	1.9	1.8	1.8	1.9	1.8	1.9	2.1	2.2	2.2	2.1	2.1	5.3	9.4	3.1	24
24	4	5.6	**IZS**	5.8	2.9	4.7	6.1	6.3	2.5	**C**	**C**	2.3	2.2	2	1.8	1.8	1.8	4.8	14	5.2	4.1	4.7	3	7.2	14	4.4	24
25	2.6	**IZS**	2.4	2.4	2.4	7.2	8.8	7.6	2.1	2.1	2	2	2	2	2	1.9	1.9	1.9	6	2.2	2.2	6.4	3.8	5.5	8.8	3.5	24
26	**IZS**	4.2	3.5	2.1	1.9	3.5	2.4	2.7	2.7	2.2	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.1	2.2	**IZS**	4.2	2.3	24
27	2.8	13.1	12.6	19.9	9.9	10.9	11.5	10	6.9	3.8	2.3	2.2	2.1	1.8	1.8	1.8	1.8	1.8	7	6.5	12.7	**54.1**	**IZS**	3.6	**54.1**	8.7	24
28	4.5	2.1	1.8	2	1.9	1.8	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	**IZS**	2.1	2	4.5	2.0	24
29	2	2	1.9	1.9	2	2	2	2	2	2	2	1.9	2	2	2	2	2	2	2.1	2.1	**IZS**	2.8	4.7	21.7	21.7	3.0	24
30	9.7	7.7	16.2	12.8	14.4	4.2	3.3	2.4	2.2	2.3	2.1	1.9	1.9	2.1	2.4	2.3	2.3	3.7	4.2	**IZS**	2.3	12.1	11.2	10.7	16.2	5.8	24
HOURLY MAX	15	39	54	20	14	11	12	10	8	11	6	4	5	4	11	27	7	23	23	7	13	54	25	22			
HOURLY AVG	4.0	5.6	6.3	5.6	4.8	4.3	4.6	3.9	3.1	3.0	2.7	2.3	2.3	2.2	2.6	3.3	2.6	3.4	4.6	3.2	3.8	6.3	4.4	5.5			

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
BB	- BELOW BACKGROUND OF 1.5 PPM		

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	680						
MAXIMUM INSTANTANEOUS VALUE:	54.1	PPM	@ HOUR(S)	21	ON DAY(S)	27	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	720	HRS		
MONTHLY CALIBRATION TIME:	9	HRS					
STANDARD DEVIATION:	4.44						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09/06/10 00:00
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09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 THCMAX PPM

LICA33
THC / WDR Joint Frequency Distribution (Percent)

September 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	3.95	1.61	3.22	7.47	6.59	4.54	3.51	8.06	3.95	1.61	4.98	6.59	7.18	16.42	6.59	4.83	91.20
<	10.0	.43	.29	.73	1.17	2.05	1.46	.29	.29	.14	.29	.14	.14	.29	.00	.14	.87	8.79
<	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	4.39	1.90	3.95	8.65	8.65	6.01	3.81	8.35	4.10	1.90	5.13	6.74	7.47	16.42	6.74	5.71	

Calm : .00 %

Total # Operational Hours : 682

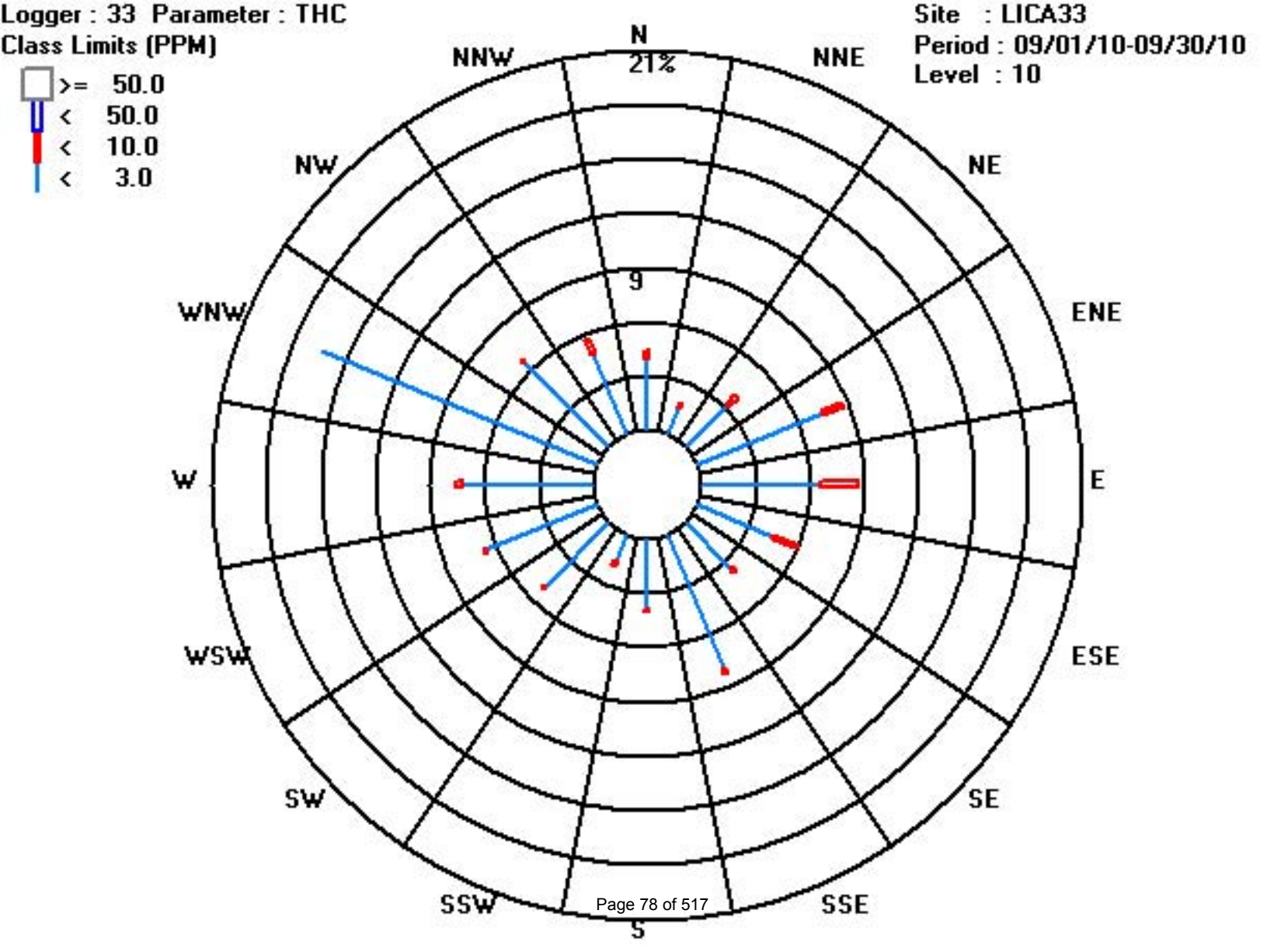
Distribution By Samples

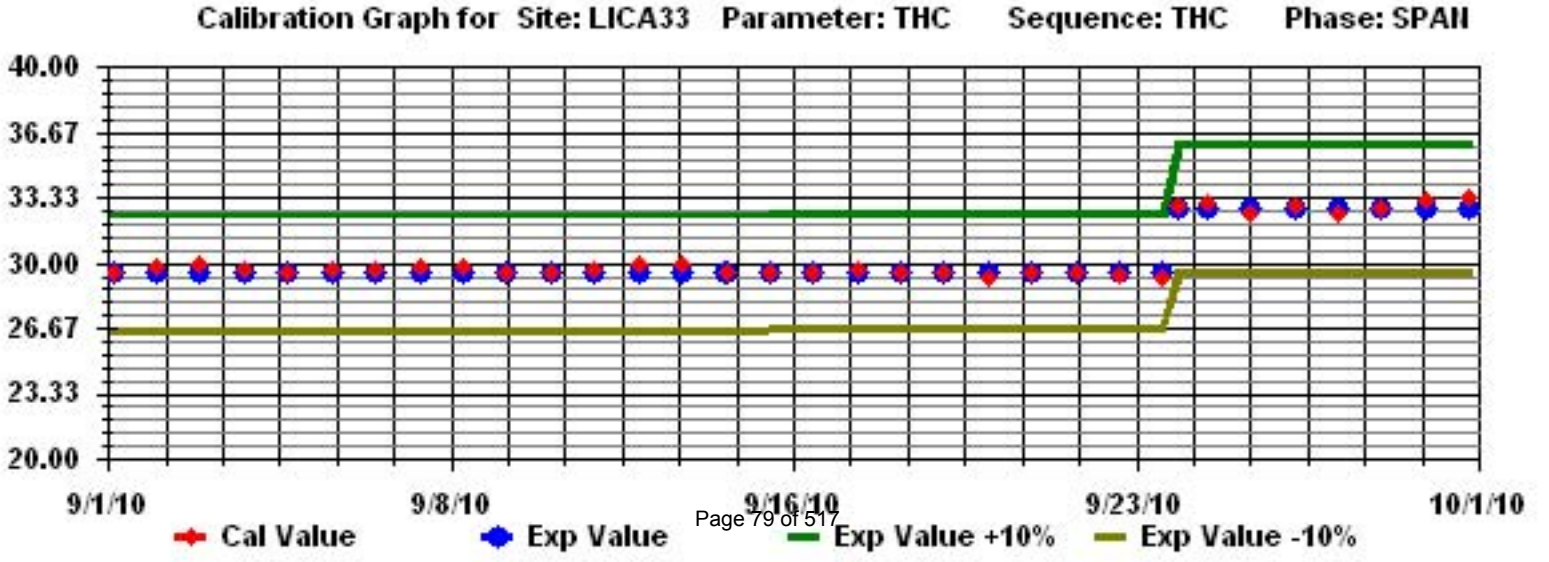
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	27	11	22	51	45	31	24	55	27	11	34	45	49	112	45	33	622
<	10.0	3	2	5	8	14	10	2	2	1	2	1	1	2		1	6	60
<	50.0																	
>=	50.0																	
	Totals	30	13	27	59	59	41	26	57	28	13	35	46	51	112	46	39	

Calm : .00 %

Total # Operational Hours : 682


Logger : 33 Parameter : THC
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0
Site : LICA33
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA33 Parameter: THC Sequence: THC Phase: SPAN
40.00
36.67
33.33
30.00
26.67
23.33
20.00
9/1/10
9/8/10
9/16/10
9/23/10
10/1/10
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

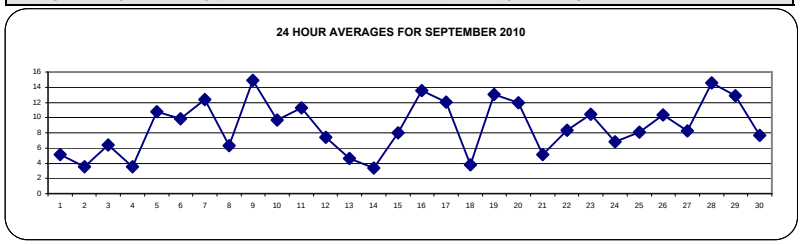
VECTOR WIND SPEED (WS) hourly averages (km/hr)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.4	2.2	1.8	2.9	4.1	4.3	5.1	4.7	5.5	2.3	0.6	3.3	8.4	8.7	9.3	11.9	11.6	9.3	7.2	5.2	6.3	4.1	6.1	4.8	11.9	5.1	24
2	8.2	3.6	2.7	1.9	3.8	5.1	5.7	4.4	4.5	4.6	6.2	8.1	9.1	8.6	8.3	5.8	4.6	4.6	3.4	5.7	3.3	4.3	4.7	2.3	9.1	3.5	24
3	1.9	3.1	3.1	1.1	3.5	5	4.2	4	1.3	7.1	5.9	9.1	12.4	12.5	12.9	11.8	10.3	9.6	9.6	9.7	8.5	9.4	8.6	9.8	12.9	6.4	24
4	11.7	6.1	7.2	10.6	12.4	8.9	9.7	12.1	11.5	2.4	0.7	2.7	3.8	3.1	5.9	10.5	14.5	17	17.8	16.3	14.2	12	6.8	9.7	17.8	3.5	24
5	11.6	7.8	11.8	9.9	8.5	9.9	6.5	9.6	15.8	14.7	15.1	18.4	19.1	20.6	18.7	9.5	7.1	4.6	3.6	6.8	6.2	6.7	8.1	7.8	20.6	10.8	24
6	3.5	5.9	5.8	7.8	4.9	5.9	6.2	8.4	7.1	9.1	9.7	6.9	6.4	6.7	6.3	13.9	20.4	17.6	14.9	10.3	11.5	14.2	16.6	15.6	20.4	9.8	24
7	15.3	12.9	11.8	12.3	12.2	11.4	11.5	12.6	14.3	17.9	16.7	15.3	14.4	13	13.9	13.4	14.1	12.6	11.7	7.3	8.1	9.1	9.1	7.2	17.9	12.4	24
8	3.7	0.9	2.8	4.4	2.6	4.7	4.5	4.8	5.4	4.9	4.2	4.8	5.9	6	7.1	9.2	11.3	9.1	6.7	8.6	9.8	9.8	10.4	10.7	11.3	6.3	24
9	13.4	11.8	13.3	13.9	13.5	13.8	15.1	14.2	18.5	21.2	21.7	21.4	22	20.9	18.2	19.8	16.7	15.3	12.6	13.8	8.9	6.4	5.2	6.7	22.0	**14.9**	24
10	6.8	6.5	6	7	7.2	7.7	7.2	7.6	11.8	9.7	9.4	12.1	13.4	12.4	12.3	11.6	13.7	11.9	9.2	11	9.9	9.6	11.3	8.1	13.7	9.7	24
11	9	10.8	12	10.5	10	10.6	11.1	10.7	8.8	8.7	13	17	15.6	19.2	13.9	15.4	14.2	14.7	7	6.4	7.3	9.3	8.8	6.4	19.2	11.3	24
12	6.3	7.2	7.1	6.5	8.1	8	6.4	7	5.1	6.4	7.9	8.8	10.3	10.5	12	10.6	8.8	8.2	7.1	4.9	4.6	4	5.5	6.5	12.0	7.4	24
13	5.9	5	5.1	5	6.2	4.7	5.4	4.1	4.1	2.1	1.4	4.5	8.7	7.1	8.6	7.7	7.2	8	5.4	1.5	0.8	1.1	1.6	0.7	8.7	4.7	24
14	1.7	1.8	2.5	3.4	2.4	1.5	2.9	2.4	2.2	3.8	1.5	1.6	2	3.3	1.4	4.4	4.2	4.7	5.9	5.2	4.2	4.9	5.7	7.2	7.2	3.4	24
15	7.2	4.5	4.1	3.8	4	5.4	7.1	6.7	7.9	8.1	11.3	10.4	13.5	17.9	13.2	8.2	9	9.2	5.2	5.2	2.7	6.4	6.6	14.3	17.9	8.0	24
16	9.9	10.3	9.1	8.3	5.3	4.6	5.1	7.4	9.9	12.3	14.6	15	16.2	22.3	18.7	19.8	20.7	21.3	18.6	10	15	19.5	18.1	13.7	22.3	13.6	24
17	13.7	11.4	10.1	10	8	9.4	10.3	9.6	12.3	19	20.6	19	18.4	19	19.2	17.8	15.4	13.2	6.6	7.9	8	6.2	4.1	0.8	20.6	12.1	24
18	1.4	1	1	0.4	0.1	0.7	1.3	1.8	3	2.9	3.9	5	5.7	4.2	4	5.3	7.2	5.7	3.3	6.1	7	9	6.8	4.4	9.0	3.8	24
19	3.5	4.1	5.9	5.8	6.8	7.1	7.6	8.7	14	13.7	14.1	18.1	19.7	19.4	19.6	19.6	19.5	18.1	17.5	12.4	13.1	13.4	14.2	16.9	19.7	13.0	24
20	16.4	18	18	17.6	13.6	13.2	11.3	12.9	12.5	13.3	16.7	15.6	14.1	12.8	12.9	13.3	12	10.6	5.7	5.7	5	6.1	6	3.9	18.0	12.0	24
21	5.6	6.7	6.4	6.4	1.9	5.8	4.4	2.3	4.4	4	7.5	10	12.5	11.2	5.5	4.9	4.4	3.2	0.6	3.9	3.9	2.8	1.1	3.1	12.5	5.1	24
22	4.1	4.9	4.4	3.5	5.4	5.3	3.8	4.8	9	9.2	13.2	12.7	11.9	10.9	11.8	11.3	10.1	8.9	8.3	7.8	7.4	10.5	10.8	9.9	13.2	8.3	24
23	7.9	6.3	7.5	5.9	8.6	5.8	6.4	9.1	11.1	13.3	13.8	13.9	17	16.3	13.2	16.2	16.8	13.9	9.7	8.1	8.2	9	7.4	5.9	17.0	10.5	24
24	8	7.2	5	5.7	6.6	3.8	2.6	1.5	4.2	5.3	4	4.7	8.3	16.5	16.2	15.7	13.4	3.4	2.2	5.2	5.5	6.7	5.8	7	16.5	6.9	24
25	7.7	8.1	10.9	12.1	10.6	5.1	3.5	7.2	9.9	9.3	7.6	8.6	10.2	12.1	10.8	11.1	8.8	7.7	6.4	7.6	7	3	4	5	12.1	8.1	24
26	3.3	2.4	4.2	15.2	10.6	3.3	6.5	11.1	14.7	13.3	14.7	17.5	15.8	14.7	16.4	13	11.1	11	9.1	8.2	9.8	10.4	7.8	5.1	17.5	10.4	24
27	6.3	3.6	1.1	0.4	2.3	1.5	2.8	3	4.7	8.4	13.1	18.1	17.7	22.5	20.1	18.1	11.8	8.6	6.8	5.8	4.2	4.2	5.6	8.1	22.5	8.3	24
28	7.2	16.3	13.8	13.4	9.8	9.8	11.7	14.1	13.5	15.1	16.7	18.9	20.1	20.1	**23.4**	22.6	19.6	19.9	12.2	13.1	12	7.4	9.5	9.6	**23.4**	14.6	24
29	10.8	12.7	14.6	12.2	11	11.8	10	9	14.2	22.3	23.1	22.6	20.6	22.2	20.1	17.3	14	7.9	6.1	6.8	6.2	7.8	4.6	1.8	23.1	12.9	24
30	1.9	1.4	0.8	1.4	0.6	3.3	3.2	4.7	9.8	17.8	17.2	18.8	18.1	16.9	17	16.1	12.7	6.1	2	3.4	4	2.4	4.5	0.1	18.8	7.7	24
HOURLY MAX	16.4	18.0	18.0	17.6	13.6	13.8	15.1	14.2	18.5	22.3	23.1	22.6	22.0	22.5	23.4	22.6	20.7	21.3	18.6	16.3	15.0	19.5	18.1	16.9			
HOURLY AVG	7.2	6.8	7.0	7.3	6.8	6.6	6.6	7.4	9.0	10.1	10.9	12.1	13.0	13.7	13.0	12.9	12.2	10.5	8.1	7.7	7.4	7.7	7.5	7.1			

STATUS FLAG CODES

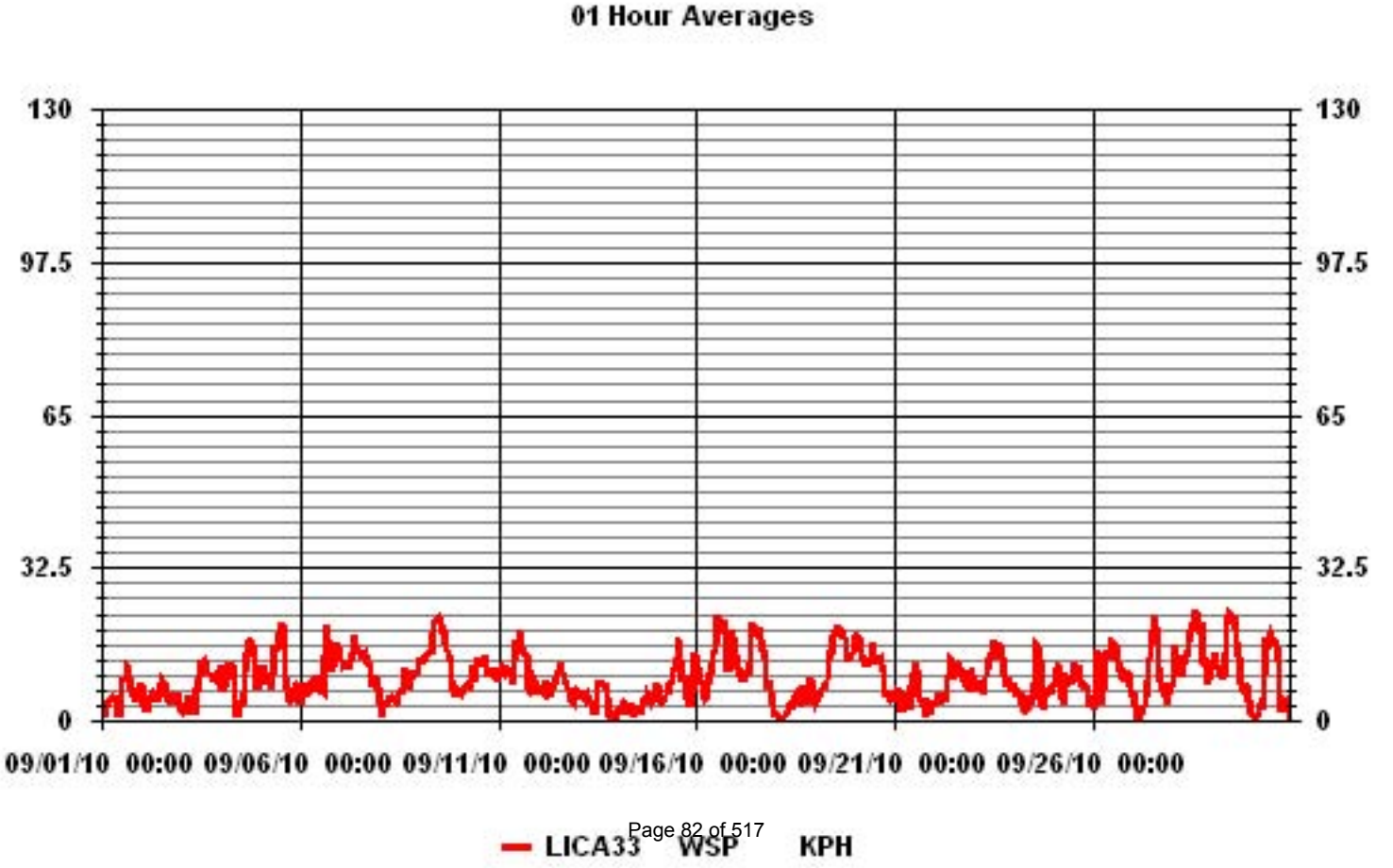
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	-MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION:	September 24, 2009

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		23.4	KPH	@ HOUR(S)	14	ON DAY(S)	28
MAXIMUM 24-HR AVERAGE:		14.9	KPH			ON DAY(S)	9
CALMS (≤ 1 KPH)	0.27	%		OPERATIONAL TIME:		720	HRS
MONTHLY CALIBRATION TIME:	0	HRS		AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION:	5.21			MONTHLY AVERAGE:		9.11	KPH


01 Hour Averages
130
97.5
65
32.5
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

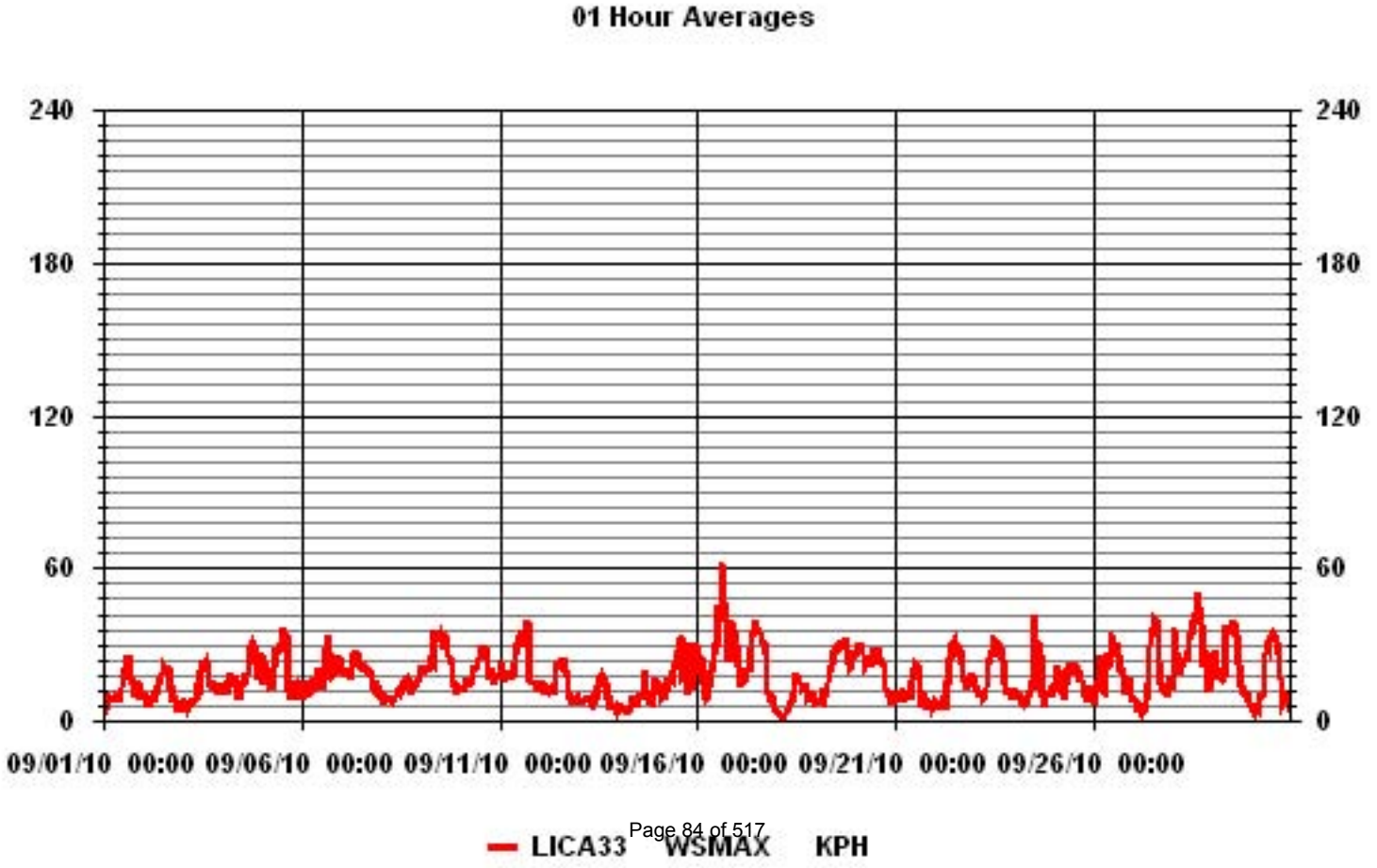
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	5.8	5	6.9	9.8	9.4	8.4	8.7	10	9	8.7	10.8	13.1	15.9	21.1	24.5	24	24.1	18	14.7	10.3	9.2	15.8	8.6	10.2	24.5
2	10.8	8.1	10.5	5.3	8.3	8.4	8.5	11	11.3	14	16.6	18.5	22.3	21.5	20.4	20.5	13.9	13.6	7.8	10	5.4	5.8	7.4	4.7	22.3
3	4.9	9.1	6.4	4.7	5.9	7.6	6.9	7.5	8.7	13.4	12.9	19.6	23.4	22.1	23.6	21.4	16.1	14.2	13.1	15.8	12.7	12.6	11.8	12.9	23.6
4	15.1	12	11.6	15.3	19.1	15.6	15.1	16.9	18	11.6	8.4	16.2	13.6	14.3	18.2	18.8	28.8	28.6	31	29.9	23.5	21.7	16	21.6	31
5	26.5	13.8	22.4	16.8	13.8	14.4	12.4	20.9	28.5	26.8	27.5	30.3	34.5	36.6	33.5	33.3	12.4	11.8	8.5	16.1	11.3	11.6	15	14.3	36.6
6	7.8	11.3	9.7	16.1	9.7	12.3	11	15.6	15.7	16.8	20.3	17.7	12.6	15	16.4	28.5	33.6	26.8	26.2	17.8	18.5	22.9	24.3	24.4	33.6
7	23.1	19.4	19	19.7	18.6	17.1	17.3	21.4	26.5	27.1	27	22.2	21.8	20.9	21.4	19.9	20.1	18.8	19.1	13.3	12.2	13.9	14.5	13	27.1
8	9.4	6.4	7.7	9.6	9	9.5	9.1	7.9	9.5	9.9	12	13.1	11.3	12.6	15	16	17	15.5	10	12.7	14.6	14.4	15.6	16.3	17
9	21.6	17.8	20.8	21.3	20.8	20.6	23.5	22.7	35.3	31.8	34.1	33.2	34.7	32.7	27.9	34.8	29.4	26.1	23.4	23.7	17	14.2	9.9	13.7	35.3
10	12.9	12.8	11	13.5	15.4	15.6	14.7	15.3	21.8	20.3	21.4	24.7	27.2	26.3	23.7	29.8	25.7	21.6	15.9	20.2	15.8	16.1	18.4	16.3	29.8
11	18.9	23.4	20.6	18.4	15.6	20	18.6	19.3	16.6	22.6	25.8	30.7	33	35.4	28.7	32.8	32.6	39.9	16	15.4	15.6	14.6	15.8	12.1	39.9
12	12.2	12.5	15.7	9.9	12.9	12.6	11.5	12.5	10.4	15.1	19.7	22.1	22.7	21.6	23.6	23.9	20.1	18	12.1	9.2	7.9	6.3	9.2	9.8	23.9
13	8.7	7.9	7.6	8.2	9.1	8.4	8.9	7.2	8.8	7.4	8.6	13.4	18.1	16.5	18.4	17.2	11.6	12.6	10.3	5.9	5.2	5.5	6.2	3.3	18.4
14	4.4	5.9	5.8	5.5	5	4.3	5.6	4.7	5.6	9.3	6.8	5.3	8.1	10.9	8.1	10.9	20.1	10.9	9.2	8	7.4	12.1	17	14.8	20.1
15	15.9	11.4	9	10.1	7.9	10.7	17.1	15.8	17.8	16.7	20.1	22.4	27.8	32.3	33.2	17.2	18	16.3	9.6	27.7	30.6	11.6	18.7	30.2	33.2
16	19.8	20.1	25.7	15.5	10.1	8.4	9.4	13.4	19.4	22.3	26.1	30.9	28.6	45.7	38.4	**62.1**	47.5	43.4	40	22.8	31.3	39.1	36.5	26.3	**62.1**
17	27.3	21.9	15.1	14.8	15.4	18.9	19.7	20.1	28.8	32.9	35.7	39.8	36.3	35.7	35	30.6	31.9	26.5	12	9.7	10.6	10	6.9	4.4	39.8
18	4	3.9	3.1	2.3	1.9	2.5	3.7	3.8	6.1	7.4	10.5	13.8	18.2	16.8	15.5	13	13.7	14	8.8	9.3	11.2	10.8	8.4	7.1	18.2
19	7.4	8.1	8.3	7.8	12.3	10.4	10.3	15.1	19.4	21.1	22.5	27	28.9	28.3	29.4	31.8	28.1	30.1	32.4	23.3	21	21.8	23.7	27.5	32.4
20	25.6	28.7	28.1	30.4	26.7	21	21.6	23.6	20.9	25.7	28.1	26.5	24.7	22.5	28.8	25.4	22.7	21.9	13.1	11.4	9.8	11.3	10.8	6.4	30.4
21	8	8.2	11.2	11.6	8.1	11.6	8.7	8.8	9.5	9.3	15.8	20.8	23	22	17.9	8.7	9.5	6.6	4.7	8.5	7.4	7	4.3	5.1	23
22	8.2	7.3	5.8	5.6	8.3	7.8	7	15.2	15.3	24.4	30.7	31.6	25.6	27.6	30.1	28.3	23	16.8	15.8	13.6	13.9	17.2	18.3	18.1	31.6
23	14.9	12.3	11.7	9.7	11.9	9.5	10.5	12.8	22.8	24	26.7	26.6	32	31.4	30.7	28.6	30	24.4	15.3	10.6	12.3	12.5	11.9	8.5	32
24	12.7	10.7	10.9	10.5	9.6	7.6	6.2	6.7	9.7	11.9	14.5	14.2	41.4	30.3	31.3	31.1	26.5	10.3	5.4	9.1	10.5	11.4	9.4	12.6	41.4
25	12.4	14.6	21.8	19.9	19.1	11.3	7.8	13.7	20.6	18.5	22.8	21.3	18.5	22.1	19.9	19.8	16.4	16.2	10.9	10.6	9	7.7	12.5	12.4	22.8
26	7.7	7.6	15.3	23.7	25.2	12.3	11.8	19.1	26.3	21.6	22.4	34.2	30.9	29.3	29.6	26.1	18.9	21.2	18.5	10.7	13.6	15.5	15.8	9	34.2
27	9.4	8.5	5.4	3.1	5.1	3.8	5.6	5.2	8.6	14.5	29.5	32.8	36.9	40.8	40.3	35.1	23.6	15.4	12.1	10.7	15.2	9.1	16.7	17	40.8
28	12.3	36.8	26.9	25	18.4	21.2	23.8	24.5	24.2	27.1	32	34.1	39.3	37.6	42.5	50.1	45.6	39	22	22	27.7	11.8	12.7	13.2	50.1
29	21.2	26.2	27.3	21.4	16.1	17.3	16.2	17	36.3	36.3	36	36.3	34.4	39	33.7	33.4	22.8	14.8	13.9	11.8	9.6	12.1	8.1	6.4	39
30	5.3	4	6.4	4.3	3.5	11.2	9.8	10.4	26.5	29.2	28	31.2	33.5	35	34.4	31.7	26.7	17.4	5.9	6.7	7.4	9.2	11.4	4.6	35
PEAK	27.3	36.8	28.1	30.4	26.7	21.2	23.8	24.5	36.3	36.3	36.0	39.8	41.4	45.7	42.5	62.1	47.5	43.4	40.0	29.9	31.3	39.1	36.5	30.2	

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

MAXIMUM INSTANTANEOUS READING	62.1	KPH	@ HOUR(S)	15
			ON DAY(S)	16


01 Hour Averages
240
180
120
60
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 WSMAX KPH

LICA33
WSP / WDR Joint Frequency Distribution (Percent)

September 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	1.11	1.38	2.36	1.94	2.22	2.63	2.08	2.77	2.08	1.11	2.36	1.94	1.66	2.63	2.63	1.66	32.63
<	12.0	2.36	.27	1.25	3.61	1.25	3.19	1.25	3.19	1.38	.69	2.36	2.91	3.61	5.97	2.22	3.33	38.88
<	20.0	.83	.13	.69	3.47	4.16	.41	.55	1.80	.41	.13	.27	1.52	1.94	6.80	1.52	.55	25.27
<	29.0	.00	.00	.00	.00	.83	.00	.00	.27	.00	.00	.00	.41	.41	.97	.27	.00	3.19
<	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	4.30	1.80	4.30	9.02	8.47	6.25	3.88	8.05	3.88	1.94	5.00	6.80	7.63	16.38	6.66	5.55	

Calm : .00 %

Total # Operational Hours : 720

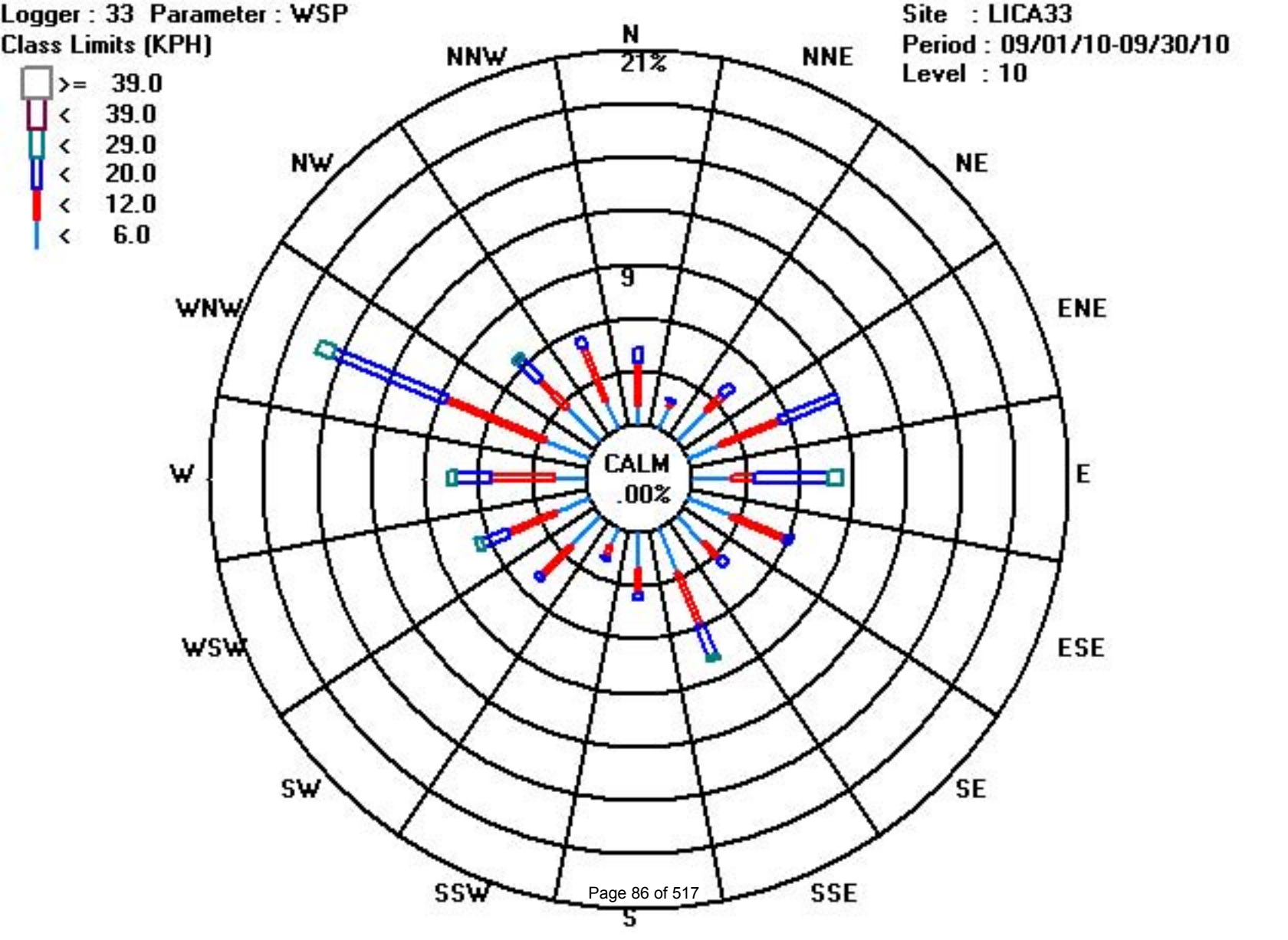
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	8	10	17	14	16	19	15	20	15	8	17	14	12	19	19	12	235
<	12.0	17	2	9	26	9	23	9	23	10	5	17	21	26	43	16	24	280
<	20.0	6	1	5	25	30	3	4	13	3	1	2	11	14	49	11	4	182
<	29.0					6			2				3	3	7	2		23
<	39.0																	
>=	39.0																	
	Totals	31	13	31	65	61	45	28	58	28	14	36	49	55	118	48	40	

Calm : .00 %

Total # Operational Hours : 720


Logger : 33 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA33
Period : 09/01/10-09/30/10
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9
CALM
.00%

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 2010

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

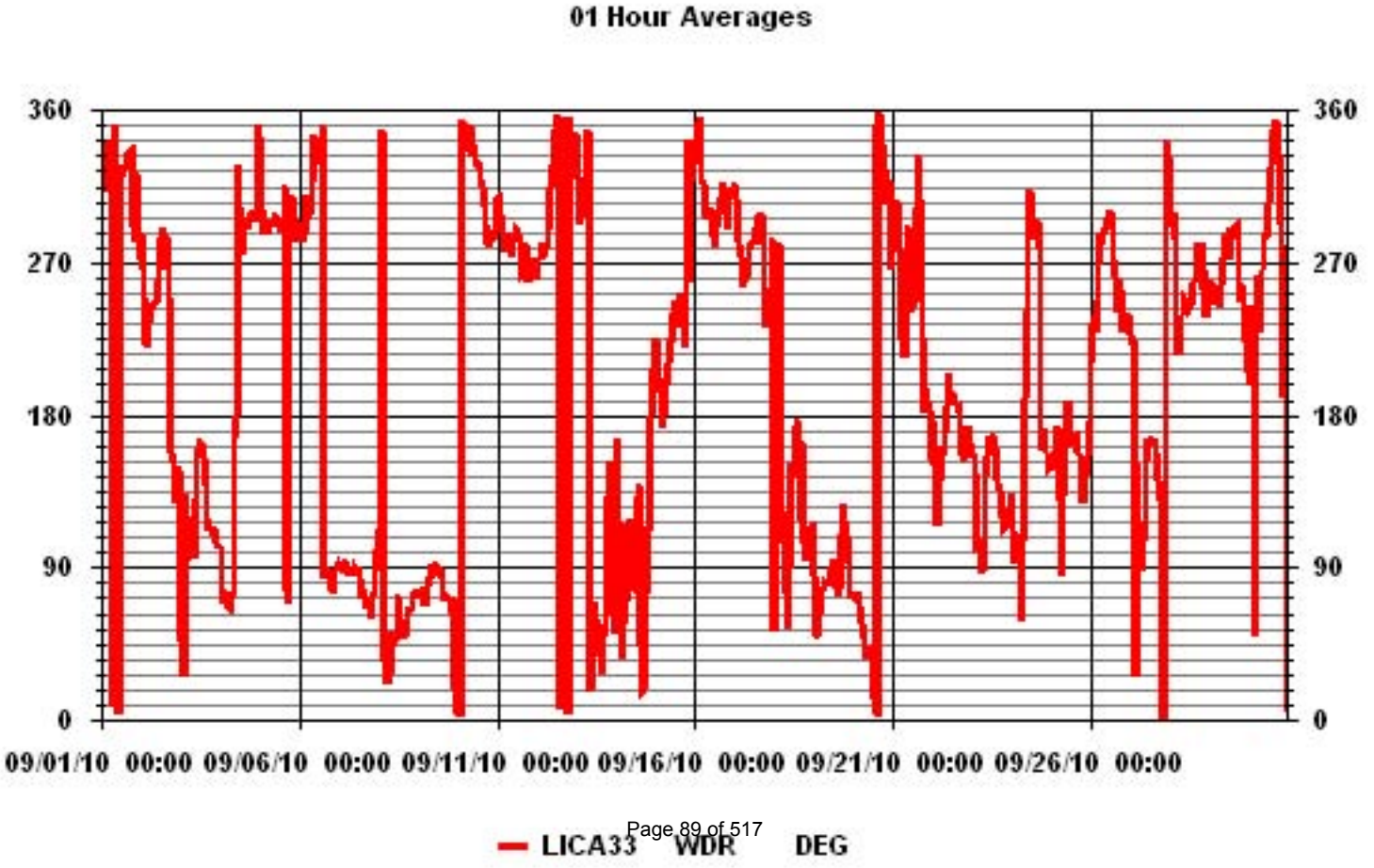
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	326	334	312	330	343	313	294	8	351	20	3	305	320	327	325	332	334	336	337	292	282	323	284	271	323	NW	24
2	288	267	251	223	220	235	243	245	246	247	259	275	285	291	288	266	285	250	159	153	146	128	150	148	251	WSW	24
3	46	99	26	133	122	96	97	108	95	130	158	158	164	163	156	139	120	114	113	111	114	106	104	103	126	SE	24
4	102	79	69	73	76	67	66	74	75	166	179	328	304	275	282	292	294	293	295	299	300	299	294	351	341	NNW	24
5	346	302	287	295	294	286	292	292	295	300	292	292	289	293	296	316	77	69	296	306	309	298	282	286	298	WNW	24
6	293	291	282	286	310	300	299	303	318	345	342	336	343	328	352	84	90	89	87	78	75	84	89	92	43	NE	24
7	90	90	89	91	95	92	87	86	86	90	88	87	88	84	71	77	65	72	70	59	73	76	87	101	83	E	24
8	113	278	349	34	42	21	52	27	38	44	52	46	74	61	49	49	50	56	63	67	64	75	76	75	56	NE	24
9	71	76	77	79	69	67	79	84	90	89	92	92	91	90	85	74	71	74	73	67	68	72	20	8	78	ENE	24
10	9	4	2	355	336	340	346	343	351	333	339	326	330	326	319	316	304	294	282	280	286	283	289	295	320	NW	24
11	307	308	299	289	278	278	282	282	288	273	286	290	288	287	283	262	263	281	260	260	266	271	273	268	281	W	24
12	260	272	273	280	280	278	282	290	314	328	349	347	339	357	6	351	356	12	9	3	356	326	333	336	328	NNW	24
13	347	321	293	302	301	315	308	348	17	19	48	70	60	37	52	27	49	56	73	132	90	153	62	50	20	NNE	24
14	114	166	106	117	36	57	84	70	90	118	112	78	77	132	140	45	17	18	75	114	111	180	207	218	105	ESE	24
15	225	194	198	194	172	179	202	198	211	225	223	240	247	231	245	252	247	236	219	342	258	323	317	342	238	SW	24
16	334	328	353	356	320	317	298	296	302	295	302	286	279	295	291	300	308	317	315	299	289	312	312	308	306	NW	24
17	317	309	283	281	274	256	259	266	265	278	281	283	290	281	298	285	299	292	257	233	233	233	235	284	279	W	24
18	52	220	226	281	219	125	105	76	53	89	152	150	143	173	178	145	118	164	106	93	110	103	113	114	124	ESE	24
19	86	51	49	62	71	76	78	82	81	79	86	90	95	93	79	74	77	110	127	119	110	93	73	73	87	E	24
20	73	72	71	75	68	58	50	45	37	40	42	41	14	3	351	2	359	350	341	326	304	315	319	266	33	NNE	24
21	287	293	284	307	278	224	232	214	268	292	240	248	243	247	303	333	308	305	227	181	195	189	184	153	258	WSW	24
22	178	151	125	114	140	142	161	156	169	186	204	188	193	193	187	184	185	164	158	155	156	174	171	165	173	S	24
23	155	157	147	103	104	95	87	104	144	155	168	163	156	169	161	143	140	136	121	113	114	121	118	124	139	SE	24
24	134	113	92	95	109	103	58	106	190	241	297	313	294	294	284	291	295	279	159	166	172	159	148	149	240	WSW	24
25	152	151	159	172	172	130	84	132	147	160	189	169	165	162	167	168	160	158	155	127	139	144	156	177	157	SSE	24
26	211	234	239	229	247	269	288	281	286	290	294	294	301	294	273	262	241	260	255	229	233	235	234	240	266	W	24
27	228	221	226	26	152	118	88	95	106	117	153	166	162	167	163	166	158	142	130	76	0	86	342	333	152	SSE	24
28	325	295	296	284	231	215	228	239	250	249	248	242	243	245	257	259	266	281	267	253	282	267	238	241	257	WSW	24
29	245	259	256	253	249	247	243	257	273	285	287	288	271	289	289	291	292	285	247	258	255	229	224	206	270	W	24
30	197	245	240	49	173	253	262	228	266	285	285	286	306	326	328	348	352	352	335	294	282	190	237	7	302	WNW	24
HOURLY AVG	347	334	353	356	343	340	346	348	351	345	349	347	343	357	352	351	359	352	341	342	356	326	342	351			

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	100.60		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	300	DEG


01 Hour Averages
360
270
180
90
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *PORTABLE SITE*

SEPTEMBER 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	10	25	30	23	35	18	10	25	13	40	65	45	15	19	13	19	18	14	12	8	4	27	8	13
2	6	14	42	27	21	7	8	19	23	26	29	30	19	25	28	30	27	30	11	10	11	8	9	10
3	21	24	14	50	13	8	10	42	32	16	24	18	18	16	14	12	7	6	6	7	7	5	4	3
4	4	8	5	5	6	8	5	8	13	37	78	62	36	64	33	14	10	10	10	11	10	10	33	17
5	15	13	11	11	8	8	13	11	13	13	14	12	13	14	15	42	12	29	17	12	11	11	14	8
6	40	9	13	9	13	11	8	11	15	16	15	15	13	16	21	12	7	7	7	7	8	7	7	7
7	7	7	8	7	7	7	7	7	8	9	8	8	10	11	10	10	8	8	8	8	8	7	8	9
8	28	38	38	20	39	15	13	14	13	21	27	29	21	26	18	12	7	7	6	6	6	7	7	7
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10	12	11	14	12	13	13	13	14	16	16	22	14	16	16	13	14	12	9	10	9	8	9	10	8
11	11	11	10	10	11	10	10	12	15	21	20	14	18	14	16	20	20	16	17	19	16	12	13	13
12	14	12	13	7	10	10	12	10	17	22	19	18	18	21	19	17	20	13	10	10	9	8	7	8
13	8	9	9	9	9	7	10	13	18	48	46	34	22	23	24	22	16	7	11	29	31	34	26	29
14	19	33	12	10	18	17	13	15	19	13	43	52	55	40	69	33	18	19	13	9	9	15	24	16
15	13	25	21	20	13	14	18	17	20	19	16	19	18	12	16	17	17	13	17	50	28	14	15	14
16	13	12	14	15	11	11	10	11	14	17	14	14	16	15	14	14	13	13	13	10	9	13	13	12
17	12	11	9	6	12	13	17	17	19	14	15	16	17	16	14	14	13	11	10	4	5	7	13	41
18	25	29	26	33	35	20	15	16	15	23	30	30	53	55	57	30	22	12	19	6	6	4	3	7
19	11	7	6	5	6	6	5	8	8	10	12	10	8	8	8	7	7	12	10	6	7	7	7	7
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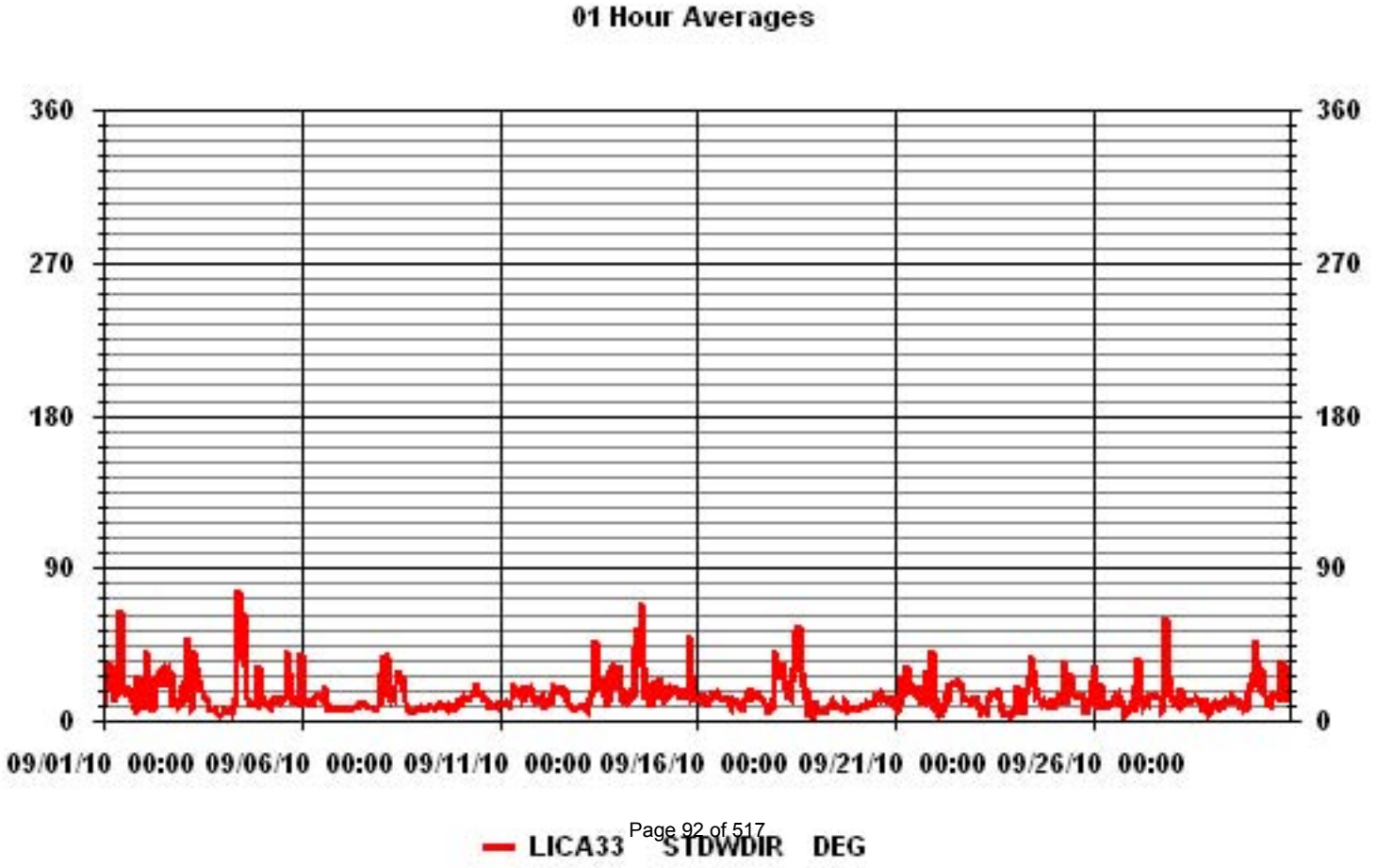
23	13	14	9	9	5	6	6	5	12	14	16	17	16	15	18	15	11	7	4	3	4	4	3	5
24	8	10	20	6	5	5	19	17	19	26	39	27	28	16	17	14	12	10	12	10	9	10	7	11
25	12	10	14	12	13	16	36	12	11	14	28	22	16	15	15	15	14	15	10	5	5	13	10	23
26	22	33	22	6	11	22	13	7	9	9	9	11	12	14	12	15	11	12	10	4	4	6	9	11
27	5	21	23	37	14	13	9	11	13	11	14	14	15	15	15	14	14	7	9	19	61	18	27	15
28	13	10	10	9	13	20	9	10	11	12	12	11	12	13	15	13	12	9	10	9	13	10	5	6
29	10	11	10	8	7	8	8	11	13	11	11	11	15	14	12	13	12	7	11	7	8	6	**17**	22
30	25	29	48	19	36	16	31	17	15	11	12	11	16	17	16	15	16	11	35	30	10	32	28	31

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

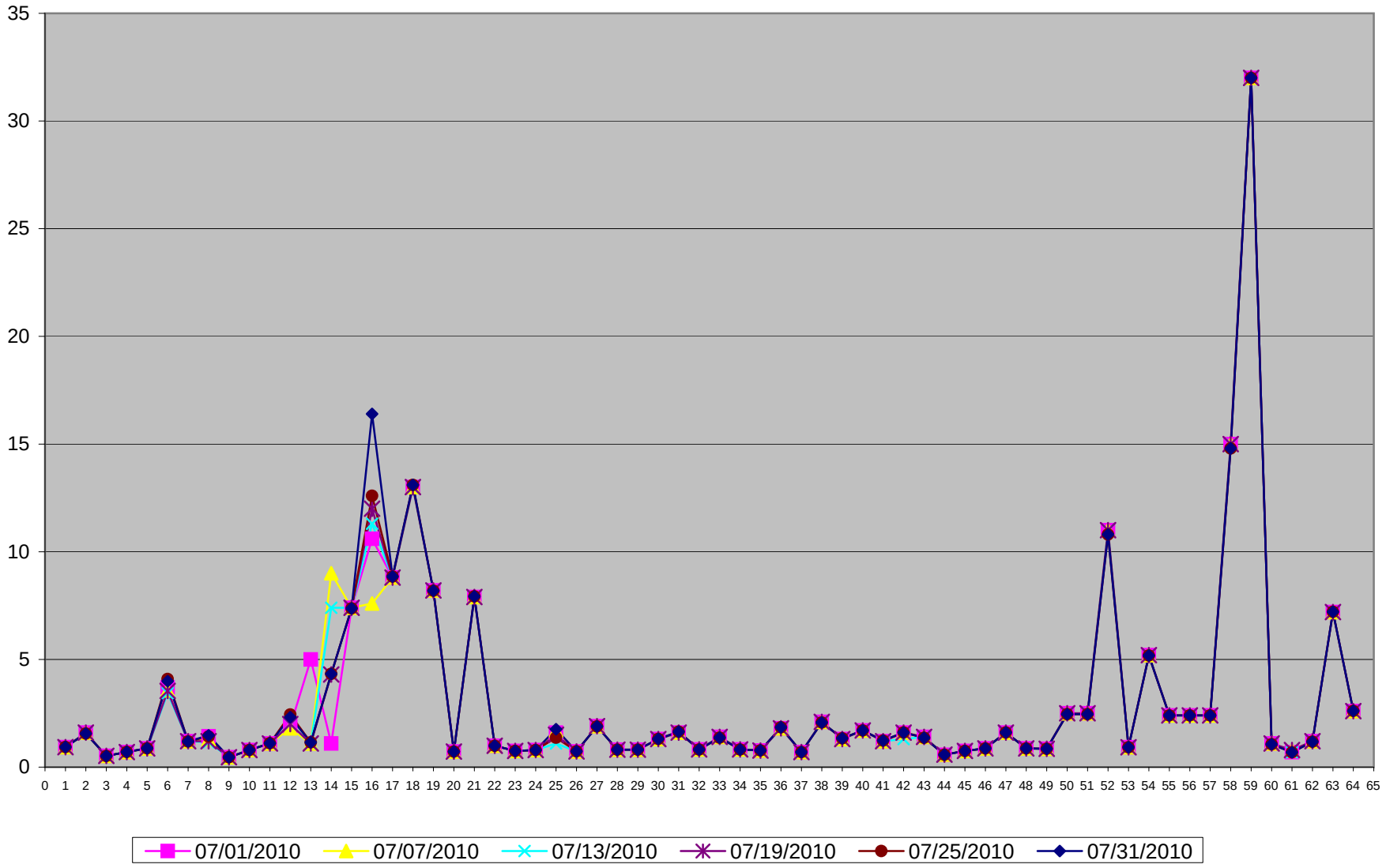
LAST CALIBRATION: September 24, 2009

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 720 HRS

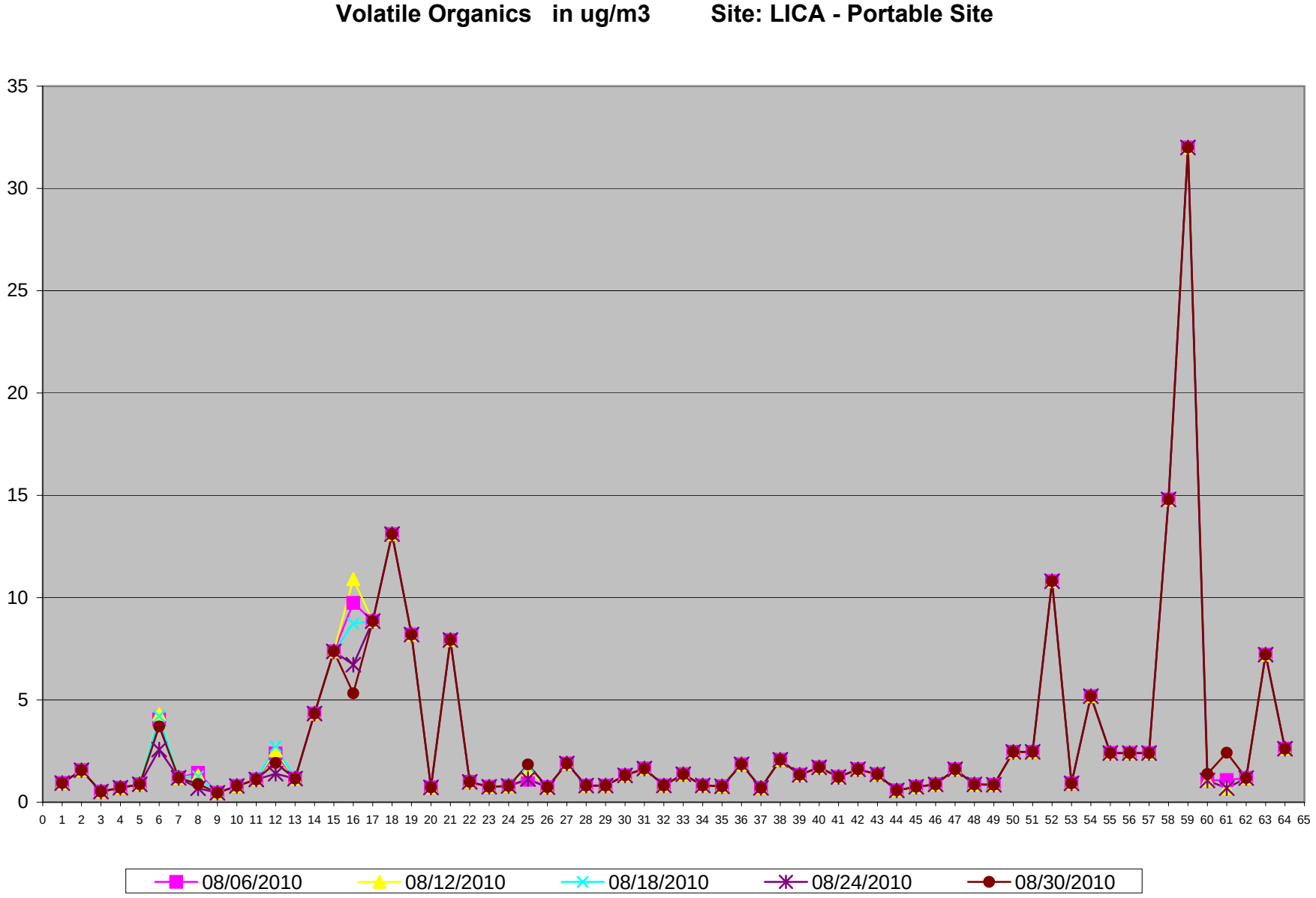

01 Hour Averages
360
270
180
90
0
09/01/10 00:00
09/06/10 00:00
09/11/10 00:00
09/16/10 00:00
09/21/10 00:00
09/26/10 00:00
LICA33 STDWDIR DEG

Volatile Organics

Volatile Organics in ug/m3 Site: LICA - Portable Site

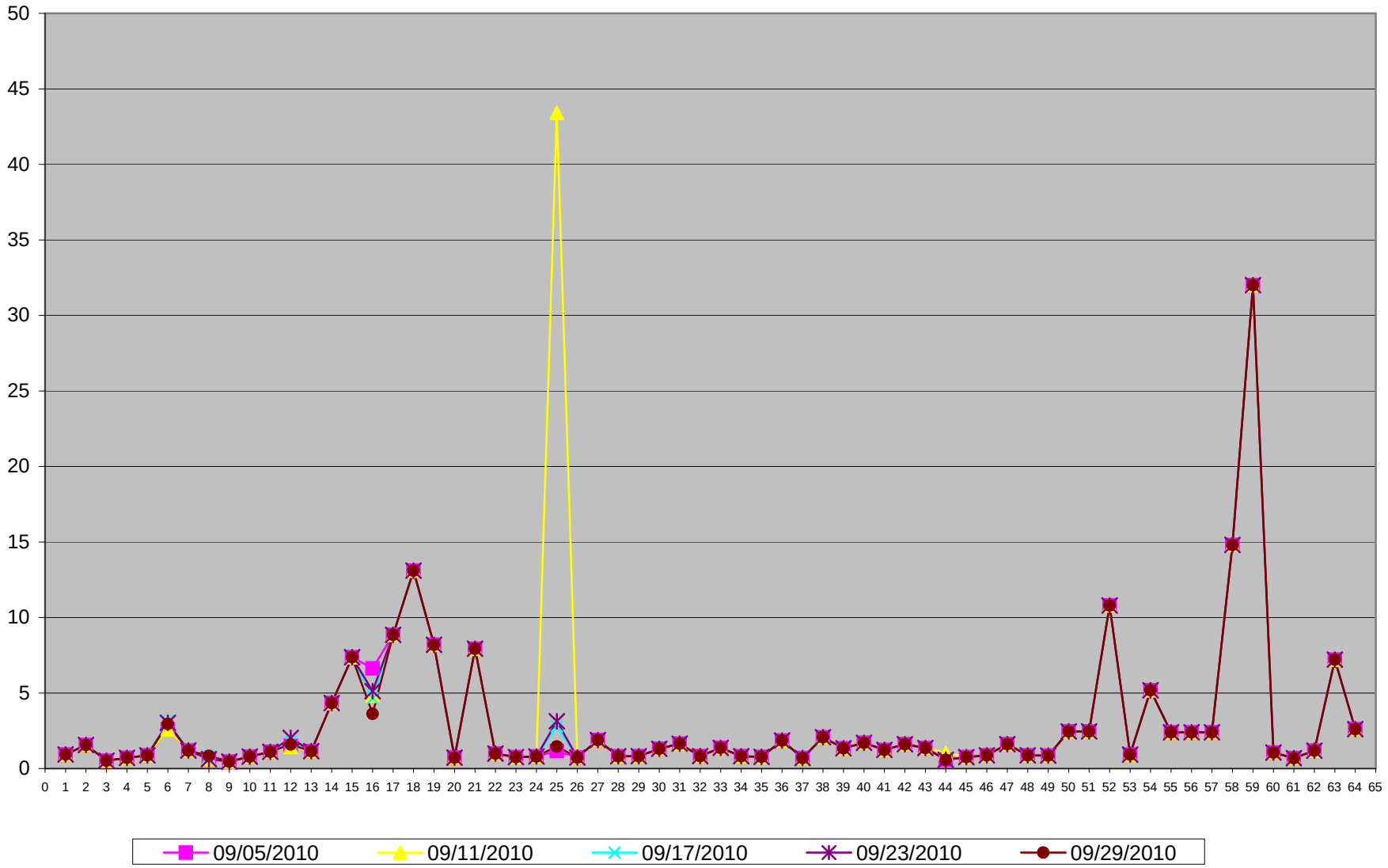


1	2,2,4-Trimethylpentane	33	1,1,2,2-Tetrachloroethane
2	Carbon Disulfide	34	cis-1,3-Dichloropropene
3	Propene	35	trans-1,3-Dichloropropene
4	Vinyl Acetate	36	1,2-Dichloropropane
5	Vinyl Bromide	37	Bromomethane
6	Dichlorodifluoromethane (FREON 12)	38	Bromoform
7	1,2-Dichlorotetrafluoroethane	39	Bromodichloromethane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


Volatile Organics in ug/m3 Site: LICA - Portable Site
35
30
25
20
15
10
5
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65
08/06/2010
08/12/2010
08/18/2010
08/24/2010
08/30/2010

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

Volatile Organics in ug/m3 Site: LICA - Portable Site



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

Polycyclic Aromatic Hydrocarbons

Polycyclic Aromatic Hydrocarbons (PAHs) Results for July 2010

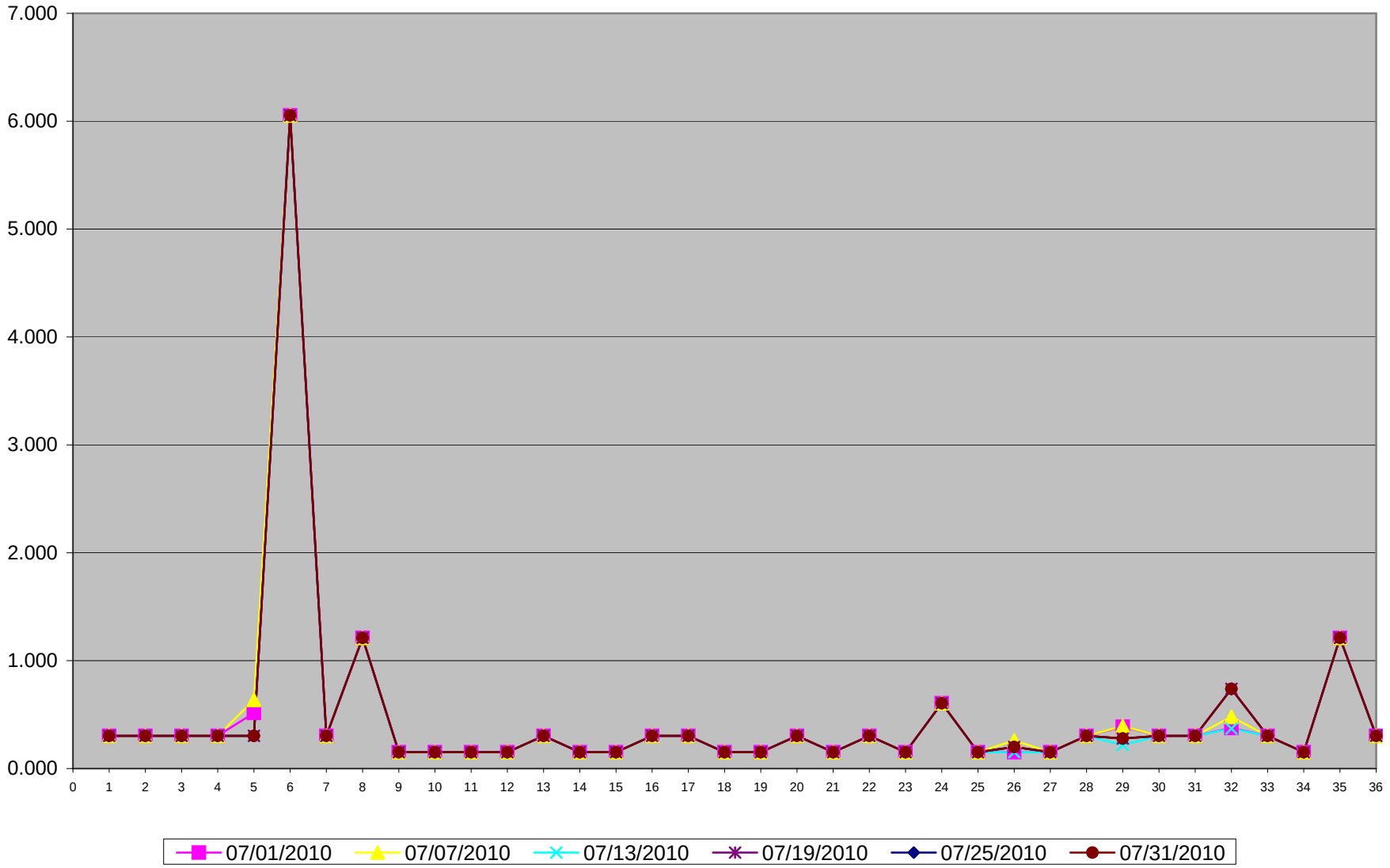
LICA- Portable Site

Unit: ng/m3

	PAHs	07/01/2010	07/07/2010	07/13/2010	07/19/2010	07/25/2010	07/31/2010
	Sample Volume (unit: m3)	330.32	330.33	330.33	330.33	330.35	330.34
1	1-Methylnaphthalene	0.303	0.303	0.303	0.303	0.303	0.303
2	1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303	0.303
4	2-Methlyanthracene	0.303	0.303	0.303	0.303	0.303	0.303
5	2-Methylnaphthalene	0.515	0.636	0.303	0.303	0.303	0.303
6	3-Methylcholanthrene	6.055	6.055	6.055	6.055	6.054	6.054
7	7,12-Dimethylbenzo(a)anthracene	0.303	0.303	0.303	0.303	0.303	0.303
8	9,10-Dimethylanthracene	1.211	1.211	1.211	1.211	1.211	1.211
9	Acenaphthene	0.151	0.151	0.151	0.151	0.151	0.151
10	Acenaphthylene	0.151	0.151	0.151	0.151	0.151	0.151
11	Anthracene	0.151	0.151	0.151	0.151	0.151	0.151
12	Benzo(a)anthracene	0.151	0.151	0.151	0.151	0.151	0.151
13	Benzo(a)fluorene	0.303	0.303	0.303	0.303	0.303	0.303
14	Benzo(a)pyrene	0.151	0.151	0.151	0.151	0.151	0.151
15	Benzo(b)fluoranthene	0.151	0.151	0.151	0.151	0.151	0.151
16	Benzo(b)fluorene	0.303	0.303	0.303	0.303	0.303	0.303
17	Benzo(e)pyrene	0.303	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	0.151
19	Benzo(k)fluoranthene	0.151	0.151	0.151	0.151	0.151	0.151
20	Biphenyl	0.303	0.303	0.303	0.303	0.303	0.303
21	Chrysene	0.151	0.151	0.151	0.151	0.151	0.151
22	Coronene	0.303	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	0.151
24	Dibenzo(a,e)pyrene	0.605	0.605	0.605	0.605	0.605	0.605
25	Fluoranthene	0.151	0.151	0.151	0.151	0.151	0.151
26	Fluorene	0.151	0.260	0.151	0.151	0.151	0.200
27	Indeno(1,2,3-cd)pyrene	0.151	0.151	0.151	0.151	0.151	0.151
28	m-Terphenyl	0.303	0.303	0.303	0.303	0.303	0.303
29	Naphthalene	0.388	0.394	0.218	0.242	0.218	0.278
30	o-Terphenyl	0.303	0.303	0.303	0.303	0.303	0.303
31	Perylene	0.303	0.303	0.303	0.303	0.303	0.303
32	Phenanthrene	0.375	0.478	0.369	0.478	0.490	0.739
33	p-Terphenyl	0.303	0.303	0.303	0.303	0.303	0.303
34	Pyrene	0.151	0.151	0.151	0.151	0.151	0.151
35	Quinoline	1.211	1.211	1.211	1.211	1.211	1.211
36	Tetralin	0.303	0.303	0.303	0.303	0.303	0.303

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

PAHs in ng/m3 Site: LICA - Portable Site



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

Polycyclic Aromatic Hydrocarbons (PAHs) Results for August 2010

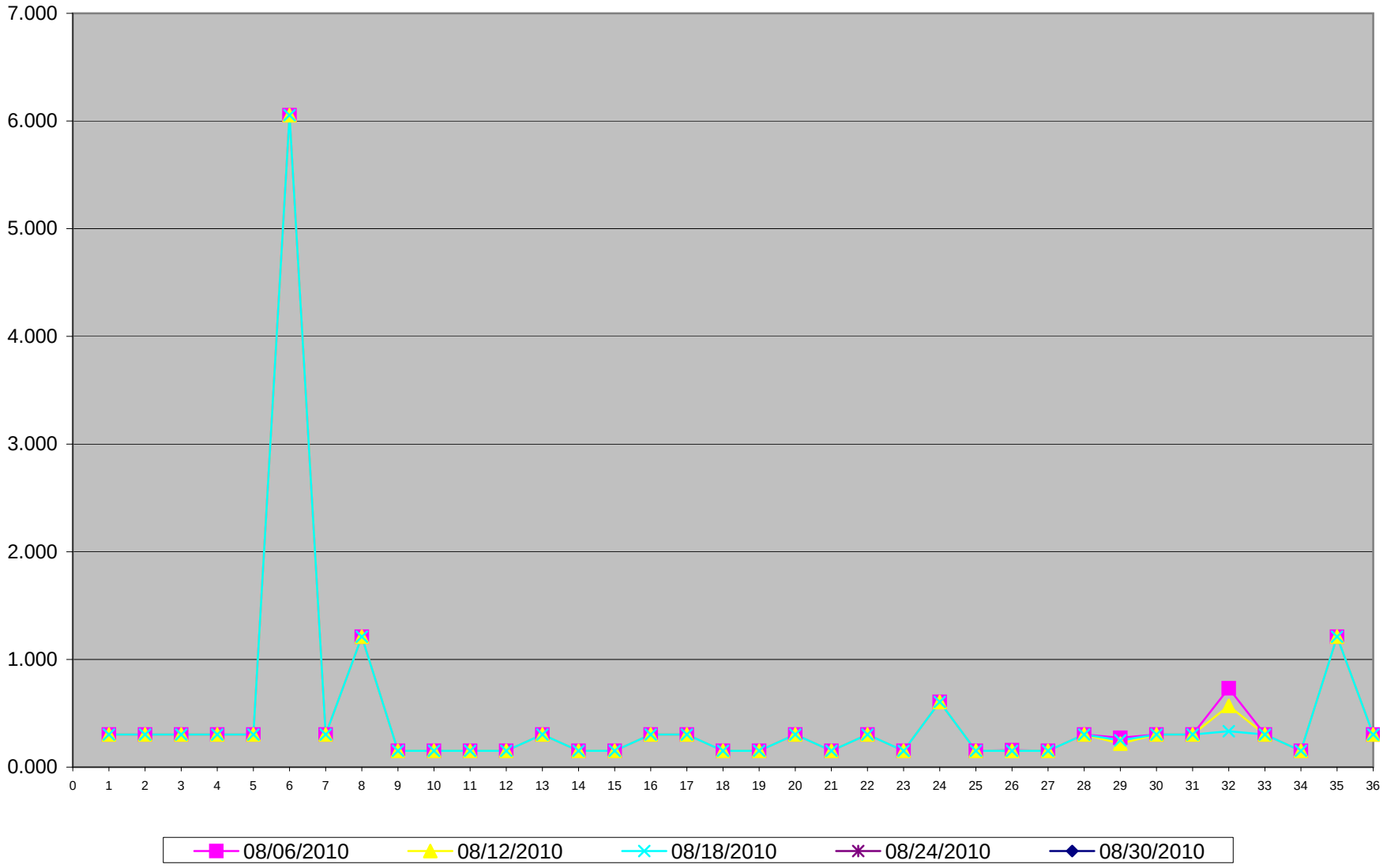
LICA- Portable Site

Unit: ng/m3

	PAHs	08/06/2010	08/12/2010	08/18/2010	08/24/2010	08/30/2010
	Sample Volume (unit: m3)	330.33	330.33	330.33	330.33	330.33
1	1-Methylnaphthalene	0.303	0.303	0.303	0.303	0.303
2	1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303
4	2-Methlyanthracene	0.303	0.303	0.303	0.303	0.303
5	2-Methylnaphthalene	0.303	0.303	0.303	0.303	0.303
6	3-Methylcholanthrene	6.055	6.055	6.055	6.055	6.055
7	7,12-Dimethylbenzo(a)anthracene	0.303	0.303	0.303	0.303	0.303
8	9,10-Dimethylanthracene	1.211	1.211	1.211	1.211	1.211
9	Acenaphthene	0.151	0.151	0.151	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	0.151	0.151	0.151	0.151
26	Fluorene	0.157	0.151	0.151	0.194	0.151
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	0.272	0.218	0.248	0.309	0.279
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	0.733	0.569	0.333	0.618	0.363
33	p-Terphenyl	0.303	0.303	0.303	0.303	0.303
34	Pyrene	0.151	0.151	0.151	0.151	0.151
35	Quinoline	1.211	1.211	1.211	1.211	1.211
36	Tetralin	0.303	0.303	0.303	0.303	0.303

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

PAHs in ng/m3 Site: LICA - Portable Site



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

Polycyclic Aromatic Hydrocarbons (PAHs) Results for September 2010

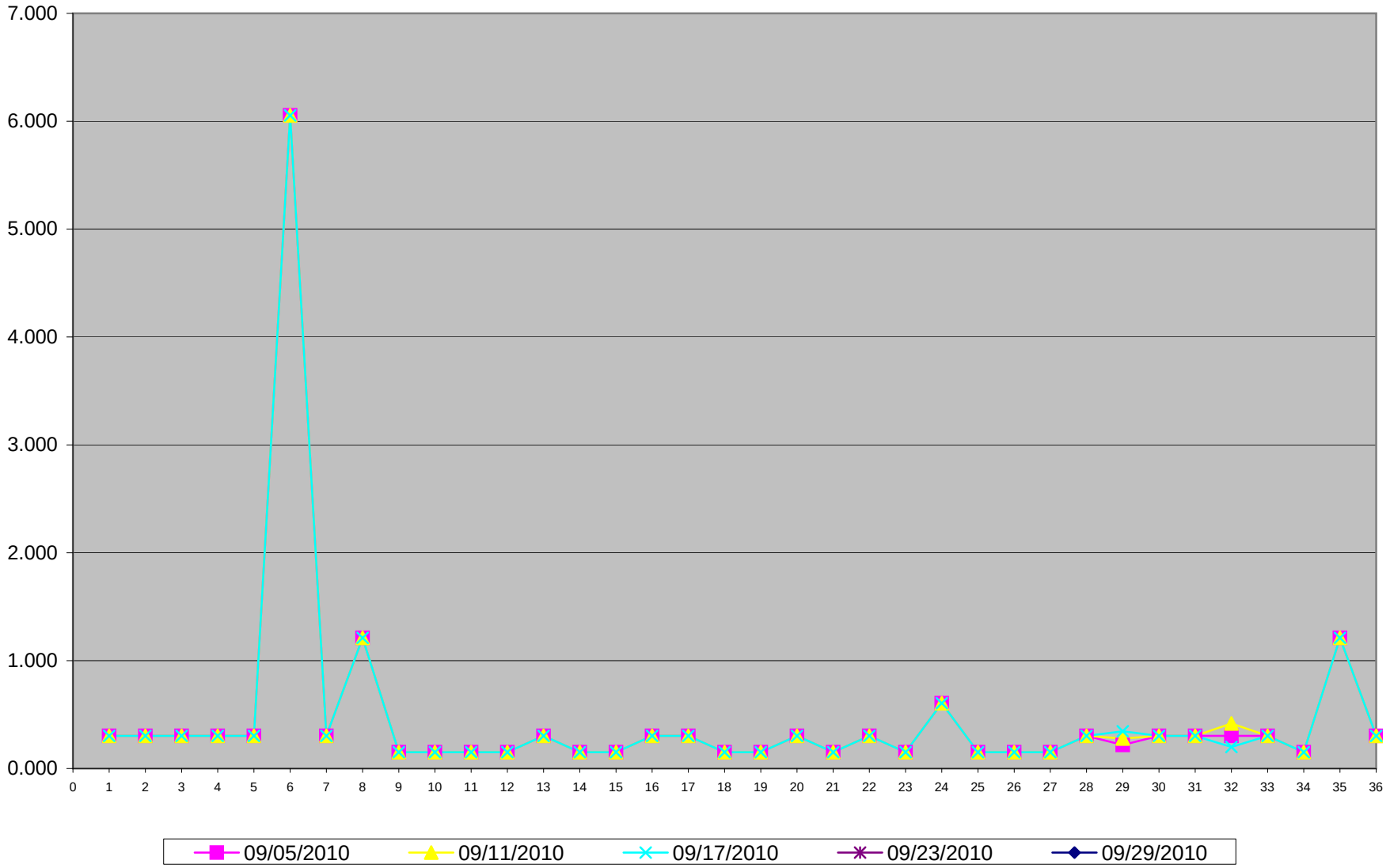
LICA- Portable Site

Unit: ng/m3

	PAHs	09/05/2010	09/11/2010	09/17/2010	09/23/2010	09/29/2010
	Sample Volume (unit: m3)	330.33	330.33	330.33	330.34	330.33
1	1-Methylnaphthalene	0.303	0.303	0.303	0.303	0.303
2	1-Methylphenanthrene	0.303	0.303	0.303	0.303	0.303
3	2-Chloronaphthalene	0.303	0.303	0.303	0.303	0.303
4	2-Methlyanthracene	0.303	0.303	0.303	0.303	0.303
5	2-Methylnaphthalene	0.303	0.303	0.303	0.303	0.333
6	3-Methylcholanthrene	6.055	6.055	6.055	6.054	6.055
7	7,12-Dimethylbenzo(a)anthracene	0.303	0.303	0.303	0.303	0.303
8	9,10-Dimethylanthracene	1.211	1.211	1.211	1.211	1.211
9	Acenaphthene	0.151	0.151	0.151	0.151	0.151
10	Acenaphthylene	0.151	0.151	0.151	0.151	0.151
11	Anthracene	0.151	0.151	0.151	0.151	0.151
12	Benzo(a)anthracene	0.151	0.151	0.151	0.151	0.151
13	Benzo(a)fluorene	0.303	0.303	0.303	0.303	0.303
14	Benzo(a)pyrene	0.151	0.151	0.151	0.151	0.151
15	Benzo(b)fluoranthene	0.151	0.151	0.151	0.151	0.151
16	Benzo(b)fluorene	0.303	0.303	0.303	0.303	0.303
17	Benzo(e)pyrene	0.303	0.303	0.303	0.303	0.303
18	Benzo(g,h,I)perylene	0.151	0.151	0.151	0.151	0.151
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	0.182
26	Fluorene	0.151	0.151	0.151	0.151	0.151
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	0.218	0.279	0.345	0.218	0.285
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	0.418	0.200	0.297	0.303
33	p-Terphenyl	0.303	0.303	0.303	0.303	0.303
34	Pyrene	0.151	0.151	0.151	0.151	0.151
35	Quinoline	1.211	1.211	1.211	1.211	1.211
36	Tetralin	0.303	0.303	0.303	0.303	0.303

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

PAHs in ng/m3 Site: LICA - Portable Site



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

Calibration Reports

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	September 13, 2010		Previous Calibration	August 9, 2010	
Company	**Lakeland Community and Industry Association**				
Plant / Location	**Portable / Devon Wellsite 13-16-62-5 W4M**				
Start Time (MST)	12:13		End Time (MST)	16:33	
Reason:	As Found				
Barometric Pressure	NA	mmHg	Station Temperature	24	Deg C
Cal Gas	51.4	ppm	Cal Gas Expiry date	5/8/2010	
DAS Output Voltage	0 - 10	Volts			

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	467	Method:	UV absorbtion
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range				0 - 1000 ppb				
Sample Flow / Box Temp	610	ccm	32.3	Deg C	606	ccm	32.7	Deg C
HVPS / Lamp Setting	604		2543		604		2541	
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	62.2		0.942		64		0.962	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	1	N/A
4998	0	0	0	N/A
4923	72.7	748	732	1.0219
4923	72.7	748	748	1.0000
4957	38.8	399	397	1.0055
4980	16.5	170	167	1.0164
4996	0	0	0	N/A
			Sum of Least Squares	1.0018
			New Correction Factor	1.0000

	Before Calibration	After Calibration
Auto Zero	1.8	0.8
Auto Span	357	358
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		-2.3%

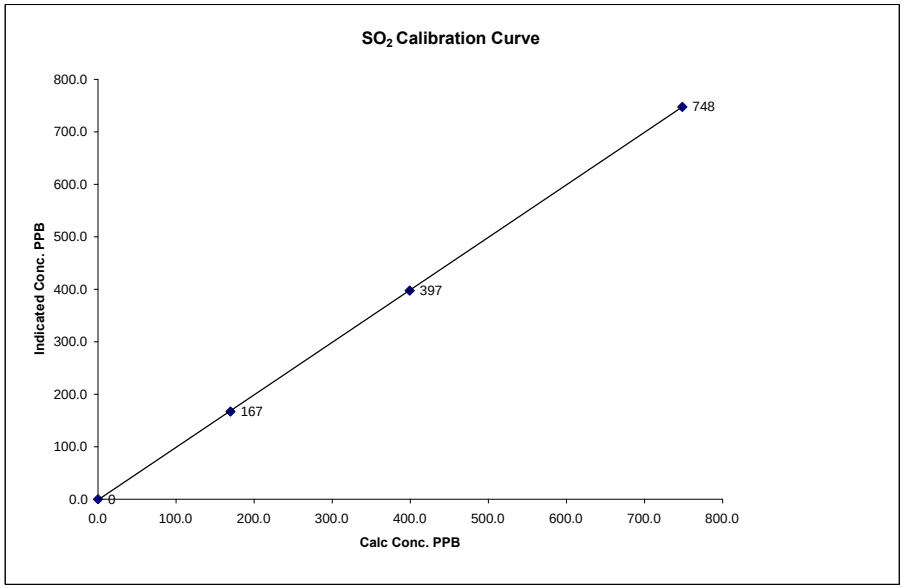
Calibration Performed by: Ting Xu

SO_2 Calibration Curve

Calibration Date	September 13, 2010				
Company	**Lakeland Community and Industry Association**				
Plant / Location	**Portable / Devon Wellsite 13-16-62-5 W4M**				
Start Time (MST)	12:13		End Time (MST)	16:33	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
170	167	1.0164
399	397	1.0055
748	748	1.0000

Correlation Coefficient	(≥ 0.995)	0.999981
Slope	(0.85 to 1.15)	1.000902
Intercept	(± 3% F.S.)	-1.531266



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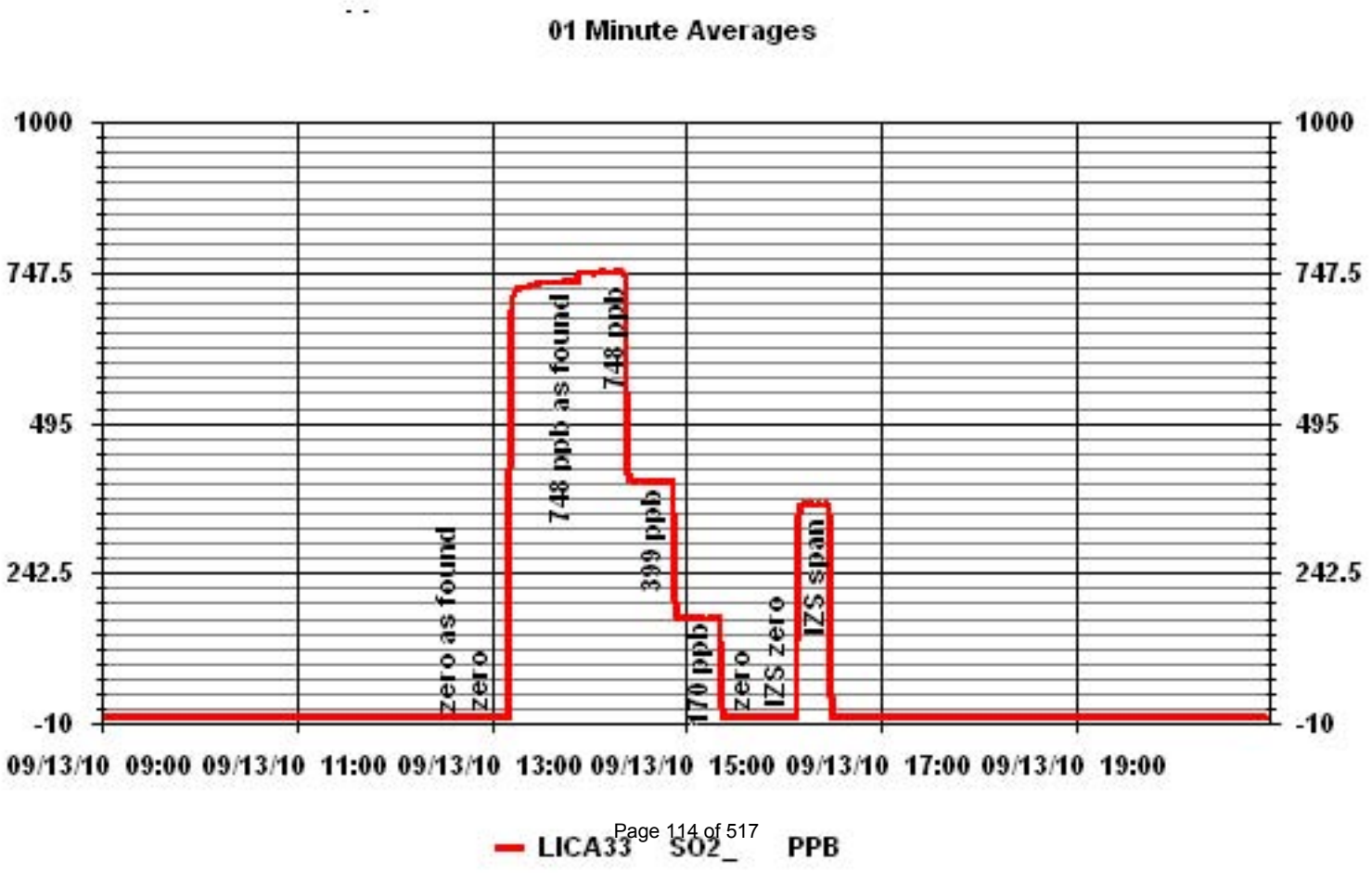
01 Minute Averages
1000
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495
242.5
-10
zero as found
zero
748 ppb as found
748 ppb
399 ppb
170 ppb
zero
IZS zero
IZS span
09/13/10 09:00
09/13/10 11:00
09/13/10 13:00
09/13/10 15:00
09/13/10 17:00
09/13/10 19:00
LICA33 SO2_ PPB

Hydrogen Sulphide

H_2S Calibration Report

Station Information

Calibration Date	September 13, 2010		Previous Calibration	August 6, 2010	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	Portable/ Devon Wellsite 13-16-62-5-W4M				
Start Time (MST)	12:18		End Time (MST)	16:36	
Reason:			Monthly Calibration		
Barometric Pressure	NA	mmHg	Station Temperature	24	Deg C
Cal Gas	10.6	ppm	Cal Gas Expiry date	05/12/2011	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	509	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 100	ppb				
Sample Flow / Box Temp	550	ccm	32.5	Deg C	547	ccm	33.1	Deg C
HVPS / Lamp Setting	528		2406.5		528		2405.1	
PMT / RxCell Temp	7.9	Deg C	50	Deg C	7.9	Deg C	50	Deg C
Converter / IZS Temp	313.9	Deg C	45	Deg C	314.9	Deg C	45	Deg C
Offset / Slope	48.4		0.986		49.6		1.004	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4998	0	0	1	N/A
4998	0	0	0	N/A
4962	37.7	80	79	1.0118
4962	37.7	80	80	1.0000
4982	18.9	40	40	1.0015
4988	10.9	23	23	1.0049
4998	0	0	0	N/A
			Sum of Least Squares	0.9999
			New Correction Factor	1.0000

	Before Calibration	After Calibration
Auto Zero	1.0	0.3
Auto Span	58	56
Sample Lines Connected		YES
Percent Change from Previous Calibration		-1.2%

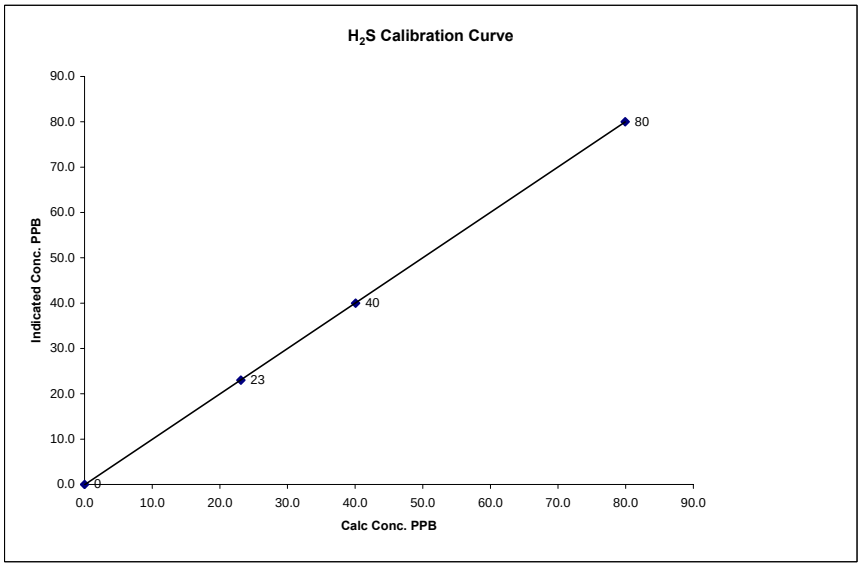
Calibration Performed by: Ting Xu

H_2S Calibration Curve

Calibration Date	September 13, 2010		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	Portable/ Devon Wellsite 13-16-62-5-W4M		
Start Time (MST)	12:18	End Time (MST)	16:36

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
23	23	1.0049
40	40	1.0015
80	80	0.9991

Correlation Coefficient	(≥ 0.995)	0.999996
Slope	(0.85 to 1.15)	1.001266
Intercept	(± 3% F.S.)	-0.070967



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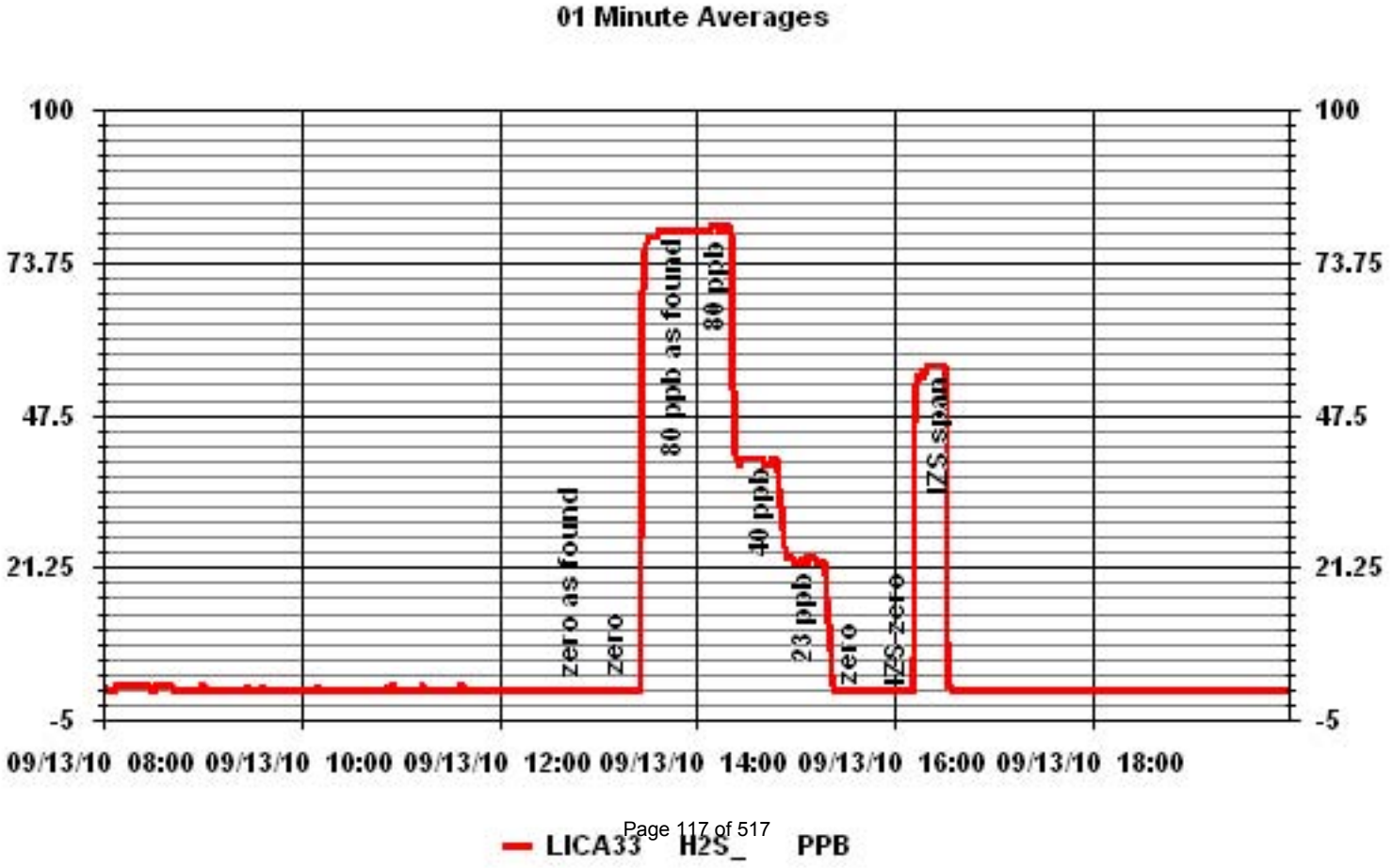

01 Minute Averages
100
73.75
47.5
21.25
-5
zero as found
zero
80 ppb as found
80 ppb
40 ppb
23 ppb
zero
H2S zero
H2S span
09/13/10 08:00
09/13/10 10:00
09/13/10 12:00
09/13/10 14:00
09/13/10 16:00
09/13/10 18:00
LICA33 H2S_ PPB

Particulate Matter 2.5

TEOM 1405F Audit

Station		Audit Transfer Standard	
Date:	September 17, 2010	Make/Model:	Streamline FTS
Station Name:	Lica Portable (CASA # 33)	Serial Number:	Hi 091001
Location:	Devon Wellsite 13-16-62-5 W4M	Cell s/n:	Lo 091099
Operator:	LICA	Thermometer s/n:	VWR 90758398

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A207691003	Filter Load (%)	29.8%
Firmware Ver.	1.51	K_o Factor	15634.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	5.7
		Press (ATM)	0.944

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.003	Warnings	None
Pump Vacuum **<0.40atm**	0.33	Pump Gauge (inHg)	-20

Temperature/Pressure

Measured Temp **(± 2 °C)**	5.4	**D °C**	0.3
Measured Press **(± 0.01atm)**	0.945	**DATM**	-0.001

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	61.00%
Measured Main Flow (l/min)	2.97	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.65	Bypass Flow Drift **(±10.0%)**	1.00%
Measured Bypass Flow (l/min)	13.69	Flow Adjusted to Measured?	Yes

Leak Check

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

Instrument Setup

Flow Control = Active

Report Conditions = Standard (25.0 C and 1atm)

K_o Factor

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

Start Time: 11:21 **Finish Time:** 12:38

Sample Inlet Cleaned: Yes **New Filters Installed:** Yes

New Filter Loading %: 18.0%

Comments:

Auditor/s: Shea Beaton / Ting Xu

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	September 13, 2010		Previous Calibration	August 6, 2010	
Company	LICA		Plant/Location	**Portable/ 13-16-62-5W4M**	
Start Time (MST)	9:05		End Time (MST)	16:46	
Reason:	Monthly Calibration			Other	
Barometric Pressure	NA mmHg	Station Temperature	23 Deg C	MFCF	#VALUE!
Cal Gas Concentration	NOx 50.8 ppm	NO 50.4 ppm	Cal Gas Expiry date	05-Aug-12	
DAS Output Voltage	0 - 1 Volts		Chart Rec. Output	NA Volts	

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 5100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Environics 5100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range					0-1000		ppb		
Sample Flow/Conv. Temp	481	ccm	313.9	Deg C		479	ccm	314.6	Deg C
Ozone Flow / Vacuum	79	ccm	5.0	"Hg-A		78	ccm	5.2	"Hg-A
HVPS / A ZERO	634	Volts	5.3	MV		634	Volts	5.4	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	33.1	Deg C	45.1	Deg C		33.2	Deg C	45.3	Deg C
Offset	0.9	NOx	-0.2	NO		0.2	NOx	0.1	NO
Slope	1.128	NOx	1.115	NO		1.103	NOx	1.094	NO
NO_2 COEF / Conv Efficency	NA	NO2	0.996			NA	NO2	0.996	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4995	0.0	-----	0	0	-1	-1	0	-1	-----	-----
4995	0.0	-----	0	0	0	0	0	0	-----	-----
4919	74.2	-----	755	749	-----	769	766	3	0.9817	0.9777
4919	74.2	-----	755	749	-----	754	751	3	1.0012	0.9973
4962	34.6	-----	352	349	-----	351	350	2	1.0022	0.9972
4975	19.8	-----	201	200	-----	200	199	1	1.0069	1.0040
4995	0.0	-----	0	0	0	0	0	0	-----	-----

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4919	74.2	-----	755	749	-----	753	749	4	-----	-----
4919	74.2	600	755	-----	563	752	190	561	1.0036	99.64%
4919	74.2	250	755	-----	238	752	515	237	1.0042	99.57%
4919	74.2	140	755	-----	136	753	617	136	1.0000	100.00%

Linearity			Sum of Least Squares	NOx= 1.002	NO= 0.998	NO2= 1.003		
OK?	Yes	No	Correction Factors:	NOx= 1.0012	NO= 0.9973	NO2= 1.0036		
					Average Converter Efficiency= 99.74%			

	Before Calibration					After Calibration			
Auto Zero	-0.5	NOx	-0.5	NO2		2.0	NOx	0.1	NO2
Auto Span	586	NOx	578	NO2		578	NOx	567	NO2
				Sample Lines Connected		YES			

Notes: Additional point done for ozone cal (O3 set point= 420), NOx=753, NO=354, NO2=399.

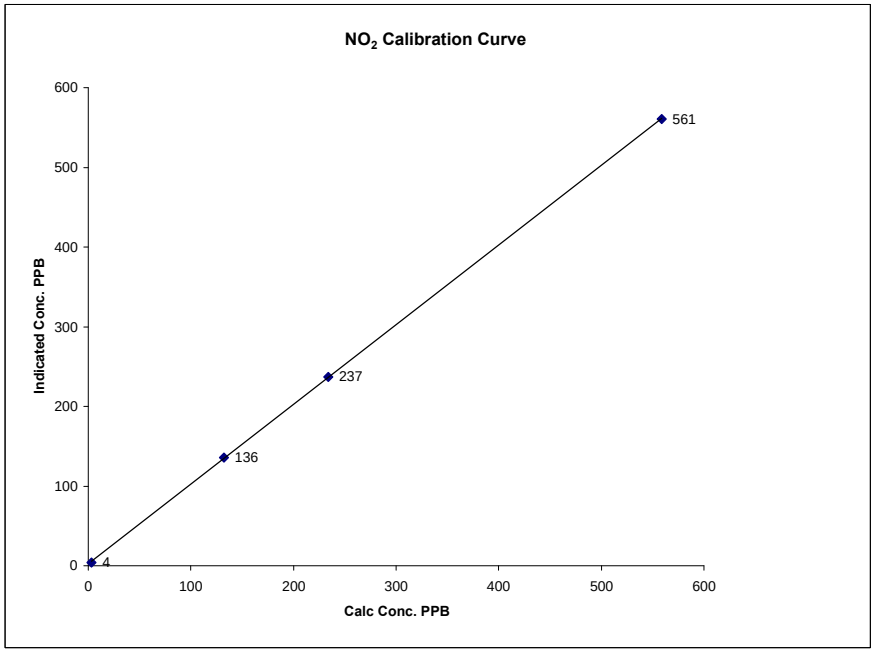
Calibration Performed by: Ting Xu

NO_2 Calibration Curve

Calibration Date	September 13, 2010		
Company	**LICA**		
Plant / Location	**Portable/ 13-16-62-5W4M**		
Start Time (MST)	9:05	End Time (MST)	16:46

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
3	4	N/A
132	136	0.9706
234	237	0.9873
559	561	0.9964

Correlation Coefficient	(≥ 0.995)	0.999971
Slope	(0.85 to 1.15)	1.000183
Intercept	(± 3% F.S.)	2.45754

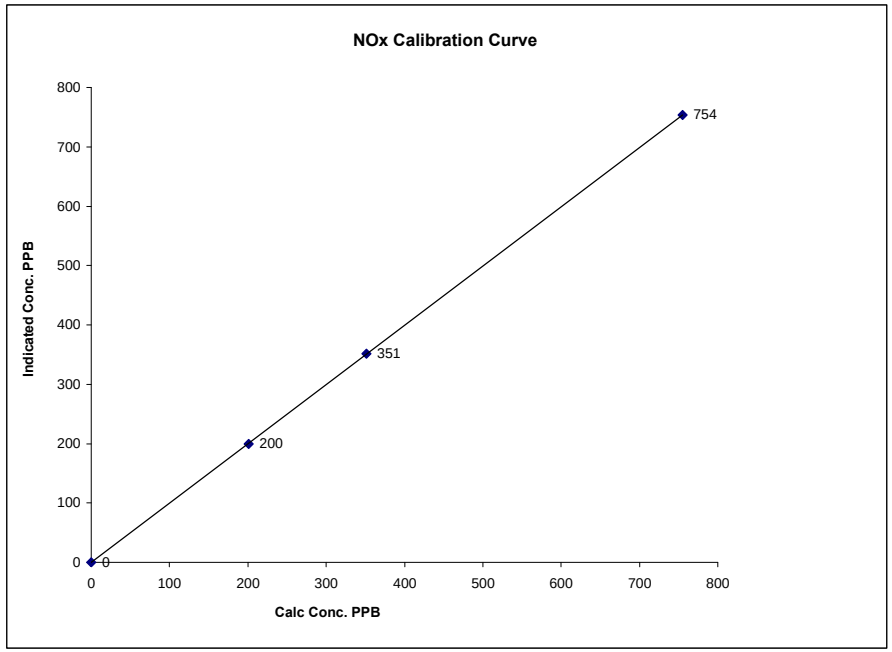


Notes:

NOx Calibration Curve

Calibration Date	September 13, 2010				
Company	LICA				
Plant / Location	Portable/ 13-16-62-5W4M				
Start Time (MST)	9:05	End Time (MST)	16:46		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999997
			Slope	(0.85 to 1.15)	0.999247
0	0	N/A	Intercept	(± 3% F.S.)	-0.51666
201	200	1.0069			
352	351	1.0022			
755	754	1.0012			

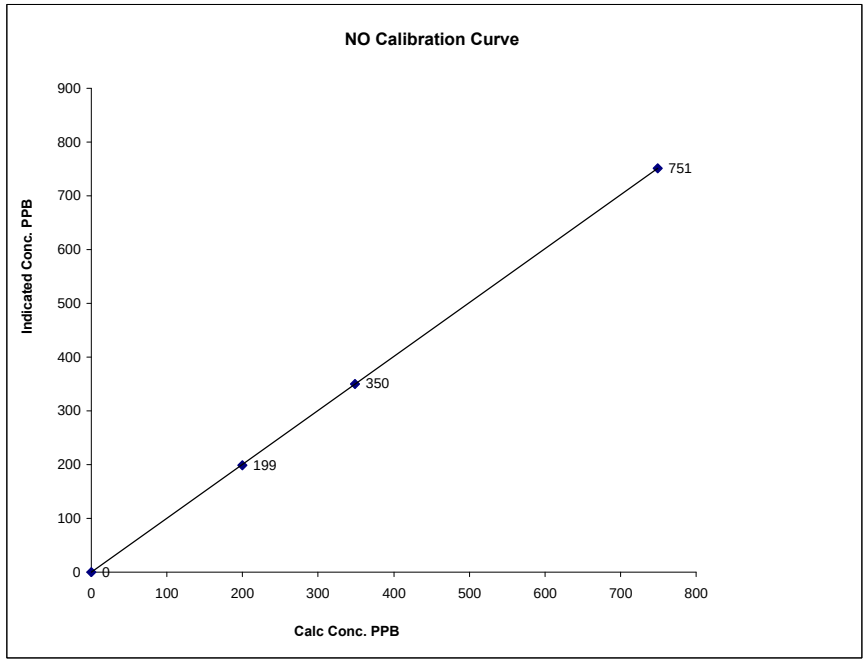


Notes:

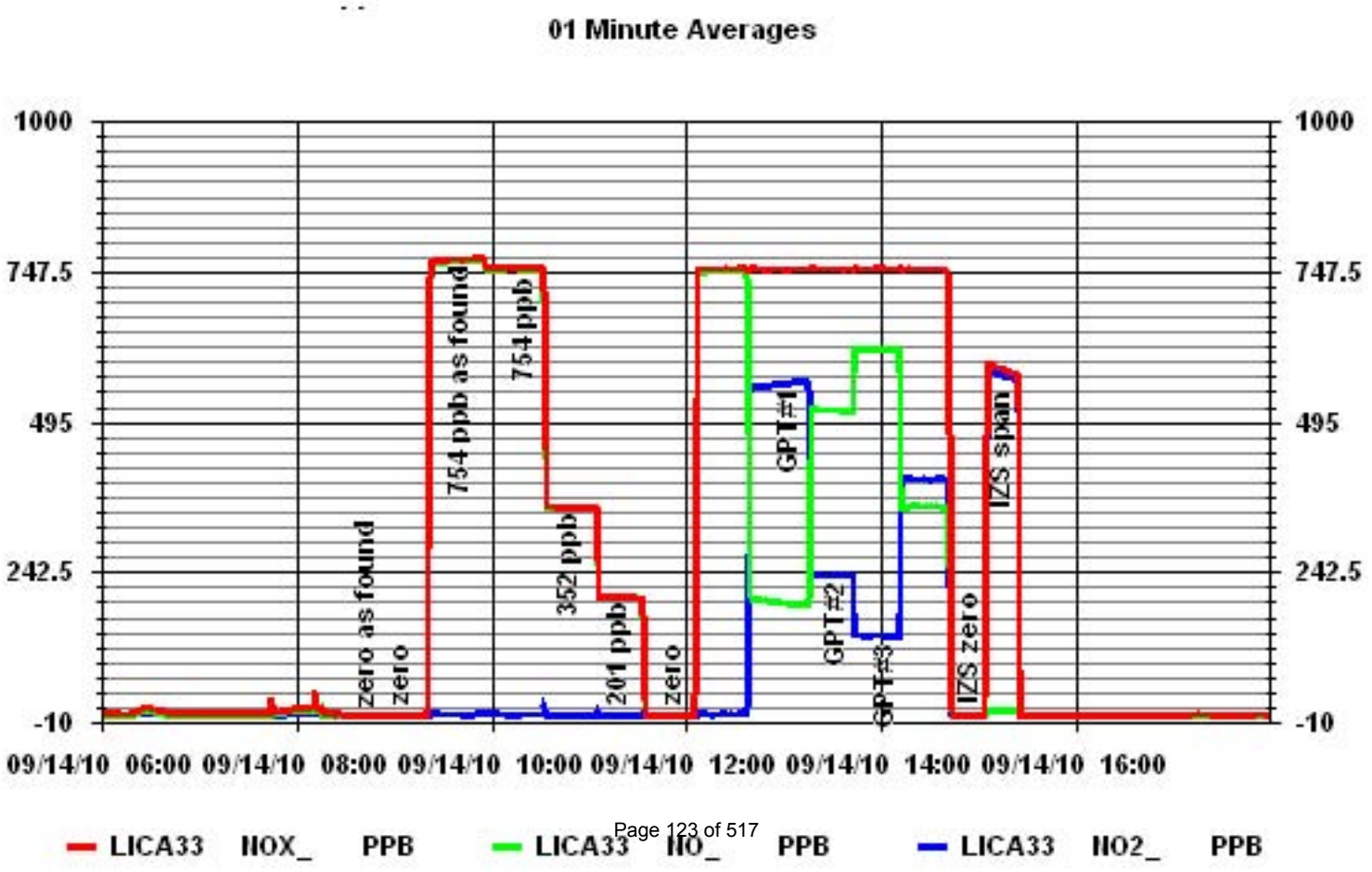
NO Calibration Curve

Calibration Date	September 13, 2010				
Company	LICA				
Plant / Location	Portable/ 13-16-62-5W4M				
Start Time (MST)	9:05	End Time (MST)	16:46		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999996
			Slope	(0.85 to 1.15)	1.004640
0	0	N/A	Intercept	(± 3% F.S.)	0.0778
200	199	1.0040			
349	350	0.9972			
749	751	0.9973			



Notes:


01 Minute Averages
1000
747.5
495
242.5
-10
zero as found
zero
754 ppb as found
754 ppb
352 ppb
201 ppb
zero
GPT#1
GPT#2
GPT#3
IZS zero
IZS span
09/14/10 06:00
09/14/10 08:00
09/14/10 10:00
09/14/10 12:00
09/14/10 14:00
09/14/10 16:00
LICA33 NOX_ PPB
LICA33 NO_ PPB
LICA33 NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	September 14, 2010	Previous Calibration	August 9, 2010
Company	**Lakeland Industry & Community Association**		
Plant / Location	**Portable / Devon Wellsite 13-16-62-5 W4M**		
Start Time (MST)	14:52	End Time (MST)	18:26
Reason:		Monthly Calibration	
Barometric Pressure	NA mm Hg	Station Temperature	24 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240372	Method:	Photometric
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO717		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Cell A Flow / Cell B Flow	762 ccm	765 ccm	765 ccm	771 Deg C
Pressure	707 mmHg		711 mmHg	
Bench Lamp Temp	54.1 Deg C		54.1 Deg C	
O3 Lamp / Box Temp	68.2 Deg C	32.6 Deg C	68.2 Deg C	32.7 Deg C
Offset/Slop	0	1.005	0	0.99

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4996	0	0	0	N/A
4996	420	395	384	1.0286
4996	420	395	367	1.0763
4996	250	234	223	1.0493
4996	140	132	121	1.0909
4996	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	1.0763

	Before Calibration	After Calibration
Auto Zero	-0.1	0.0
Auto Span	333	331
Sample Lines Connected		YES
Percent Change from Previous Calibration		-3.0%

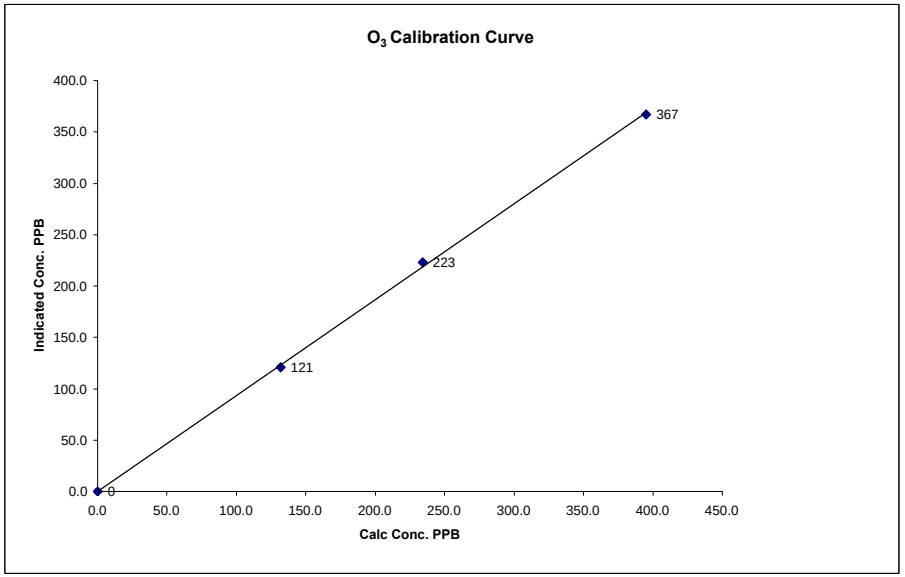
Calibration Performed by: Ting Xu

O_3 Calibration Curve

Calibration Date	September 14, 2010		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**Portable / Devon Wellsite 13-16-62-5 W4M**		
Start Time (MST)	14:52	End Time (MST)	18:26

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
132	121	1.0909
234	223	1.0493
395	367	1.0763

Correlation Coefficient	(≥ 0.995)	0.999606
Slope	(0.85 to 1.15)	0.933191
Intercept	(± 3% F.S.)	0.210357



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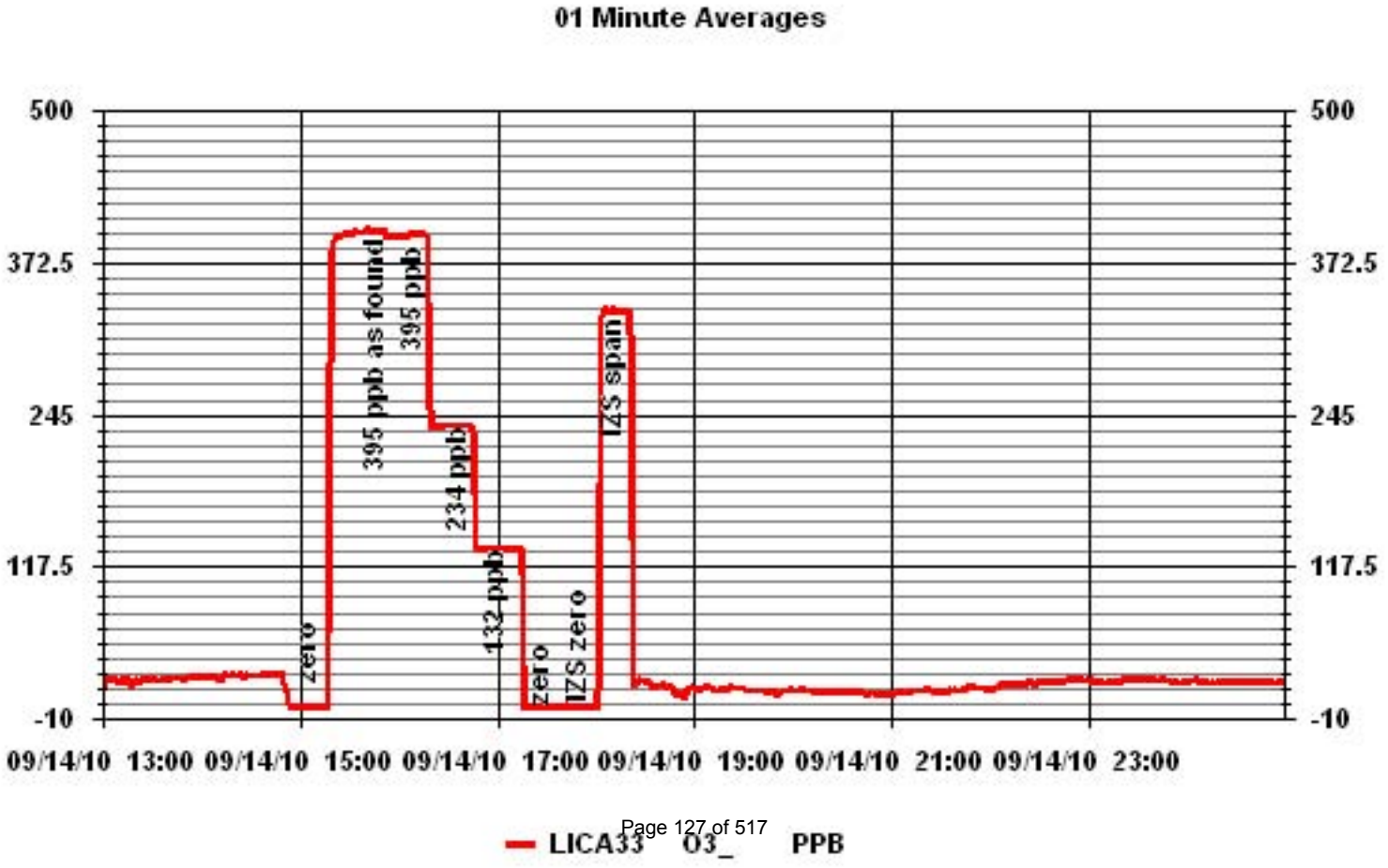

01 Minute Averages
500
372.5
245
117.5
-10
zero
395 ppb as found
395 ppb
234 ppb
132 ppb
zero
IZS zero
IZS span
09/14/10 13:00
09/14/10 15:00
09/14/10 17:00
09/14/10 19:00
09/14/10 21:00
09/14/10 23:00
LICA33 O3_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	September 14, 2010		Previous Calibration	August 10, 2010	
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**Portable Station Devon Wellsite 13-16-62-5W4M**				
Start Time (MST)	9:41		End Time (MST)	13:40	
Reason:			Monthly Calibration		
Barometric Pressure:	NA	mmHg	Station Temperature:	23	Deg C
Calibrator:	API 700		S/N:	831	
Cal Gas Concentration:	207Prop/602Meth/1171.25THC	ppm	Cal Gas Expiry Date:	9/21/2011	
DAS make & Model:	ESC 8832		S/N :	AO717	
Output Voltage Range:	0 - 10	VDC			

Analyzer Information

Make / Model	TECO 51C	S/N :	04366-09739	Method	Flame Ionization

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 50	ppm	0 - 50	ppm
Sample Pressure	6.8	psi	6.8	psi
Hydrogen Pressure	8	psi	8	psi
Air Pressure	21	psi	21	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
1999	0	0.0	0.1	N/A
1999	0	0.0	0.0	N/A
1999	70.0	39.6	40.3	0.9833
1999	70.0	39.6	39.8	0.9956
1999	35.0	20.2	20.0	1.0077
1999	20.0	11.6	11.5	1.0089
2000	0	0.0	0.0	N/A
			Correction Factor:	0.9956

Percent Change

Previous Calibration Correction Factor:	0.9907
Current Correction Factor Before Span Adjust:	0.9833
Percent Change:	0.7%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.1	0.0
Auto Span	30.0	29.6
Sample Lines Connected		**YES**

Cylinder Pressures		
Span	400 psi	
Hydrogen	900 psi	
Zero Air	30 psi	Using API 700

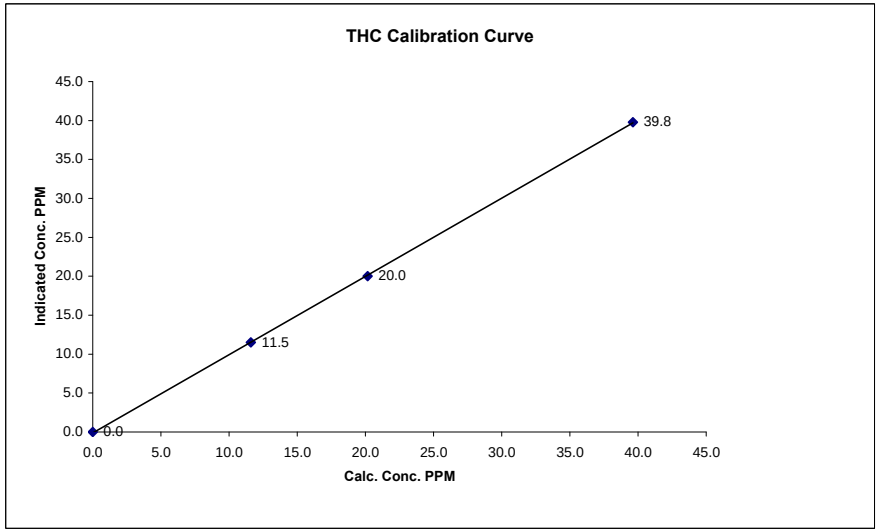
Calibration Performed by: Ting Xu

THC Calibration Curve

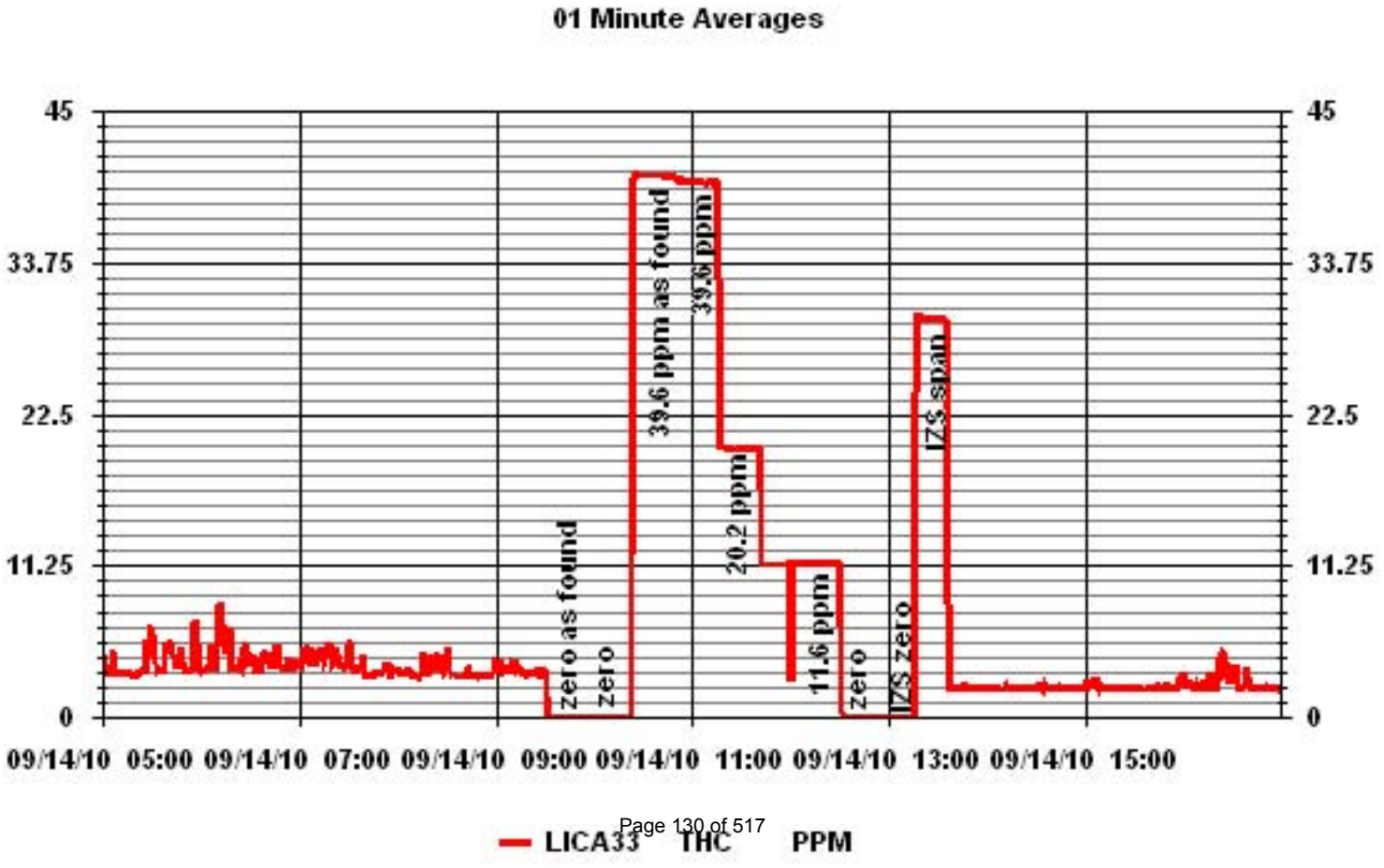
Calibration Date	September 14, 2010				
Company	**Lakeland Industry and Community Association**				
Plant / Location	**Portable Station Devon Wellsite 13-16-62-5W4M**				
Start Time (MST)	9:41	End Time	(MST)	13:40	

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
11.6	11.5	1.0089
20.2	20.0	1.0077
39.6	39.8	0.9956

Correlation Coefficient	(≥ 0.995)	0.999949
Slope	(0.85 to 1.15)	1.004848
Intercept	(± 3% F.S.)	-0.107305



Notes: During the calibration, at the last span point, the analyzer started daily calibration, abort the daily cal and redid the point.


01 Minute Averages
45
33.75
22.5
11.25
0
zero as found
zero
39.6 ppm as found
39.6 ppm
20.2 ppm
11.6 ppm
zero
IZS zero
IZS span
09/14/10 05:00
09/14/10 07:00
09/14/10 09:00
09/14/10 11:00
09/14/10 13:00
09/14/10 15:00
LICA33 THC PPM

Volatile Organics Laboratory Analysis

Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ July 01, 10

Sampler s/n: 6200
Canister ID: 7795
Canister Installation Date/Time: June 30, 10 @ 09:33 mst
Canister Removal Date/Time: July 02, 10 @ 9:13 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
01-Jul-10	01/07/2010 0:00	02/07/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	20.8

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

Comments: System leak check prior to sampling. COC # 0564

Technician Signiture: Ting Xu

Your C.O.C. #: 0564

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

Report Date: 2010/09/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B088347
Received: 2010/07/07, 08:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/17	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/16	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/17	BRL SOP-00304	EPA TO-15

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

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

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

Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

RESULTS OF ANALYSES OF AIR

Maxxam ID		GK3351	GK3352	
Sampling Date		2010/07/01	2010/07/01	
COC Number		0564	0564	
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	22	2212158

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2212165
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2212165
Propene	ppbv	<0.30	<0.30	0.30	2212165
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2212165
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2212165
Dichlorodifluoromethane (FREON 12)	ppbv	0.75	0.75	0.20	2212165
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2212165
Chloromethane	ppbv	0.73	0.69	0.30	2212165
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2212165
Chloroethane	ppbv	<0.30	<0.30	0.30	2212165
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2212165
Trichlorofluoromethane (FREON 11)	ppbv	0.34	0.34	0.20	2212165
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2212165
Ethanol	ppbv	4.1	2.7	2.3	2212165
2-propanol	ppbv	<3.0	<3.0	3.0	2212165
2-Propanone	ppbv	3.94	4.45	0.80	2212165
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2212165
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2212165
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2212165
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2212165
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2212165
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2212165
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2212165
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2212165
Methylene Chloride(Dichloromethane)	ppbv	0.52	0.47	0.30	2212165
Chloroform	ppbv	<0.15	<0.15	0.15	2212165
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2212165
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2212165
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2212165
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2212165
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2212165

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2212165
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2212165
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2212165
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2212165
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2212165
Bromomethane	ppbv	<0.18	<0.18	0.18	2212165
Bromoform	ppbv	<0.20	<0.20	0.20	2212165
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2212165
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2212165
Heptane	ppbv	<0.30	<0.30	0.30	2212165
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2212165
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2212165
Benzene	ppbv	<0.18	<0.18	0.18	2212165
Toluene	ppbv	<0.20	<0.20	0.20	2212165
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2212165
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2212165
o-Xylene	ppbv	<0.20	<0.20	0.20	2212165
Styrene	ppbv	<0.20	<0.20	0.20	2212165
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2212165
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2212165
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2212165
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2212165
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2212165
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2212165
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2212165
Hexane	ppbv	<0.30	<0.30	0.30	2212165
Cyclohexane	ppbv	<0.20	<0.20	0.20	2212165
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2212165
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2212165

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2212165
Surrogate Recovery (%)					
Bromochloromethane	%	85	85		2212165
D5-Chlorobenzene	%	83	86		2212165
Difluorobenzene	%	86	87		2212165

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2267865
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2267865
Propene	ug/m3	<0.52	<0.52	0.52	2267865
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2267865
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2267865
Dichlorodifluoromethane (FREON 12)	ug/m3	3.72	3.71	0.99	2267865
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2267865
Chloromethane	ug/m3	1.51	1.43	0.62	2267865
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2267865
Chloroethane	ug/m3	<0.79	<0.79	0.79	2267865
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2267865
Trichlorofluoromethane (FREON 11)	ug/m3	1.9	1.9	1.1	2267865
Ethanol	ug/m3	7.6	5.0	4.3	2267865
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2267865
2-propanol	ug/m3	<7.4	<7.4	7.4	2267865
2-Propanone	ug/m3	9.4	10.6	1.9	2267865
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2267865
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2267865
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2267865
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2267865
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2267865
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2267865
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2267865
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2267865
Methylene Chloride(Dichloromethane)	ug/m3	1.8	1.6	1.0	2267865
Chloroform	ug/m3	<0.73	<0.73	0.73	2267865
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2267865
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2267865
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2267865
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2267865
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2267865

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2267865
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2267865
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2267865
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2267865
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2267865
Bromomethane	ug/m3	<0.70	<0.70	0.70	2267865
Bromoform	ug/m3	<2.1	<2.1	2.1	2267865
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2267865
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2267865
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2267865
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2267865
Benzene	ug/m3	<0.58	<0.58	0.58	2267865
Toluene	ug/m3	<0.75	<0.75	0.75	2267865
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2267865
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2267865
o-Xylene	ug/m3	<0.87	<0.87	0.87	2267865
Styrene	ug/m3	<0.85	<0.85	0.85	2267865
4-ethyltoluene	ug/m3	<11	<11	11	2267865
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2267865
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2267865
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2267865
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2267865
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2267865
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2267865
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2267865
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2267865
Hexachlorobutadiene	ug/m3	<32	<32	32	2267865
Hexane	ug/m3	<1.1	<1.1	1.1	2267865
Heptane	ug/m3	<1.2	<1.2	1.2	2267865
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2267865
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2267865
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2267865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2267865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/09/16

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB088347

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2212165 LSY	Spiked Blank	Bromochloromethane	2010/07/17		98	%	60 - 140
		D5-Chlorobenzene	2010/07/17		99	%	60 - 140
		Difluorobenzene	2010/07/17		99	%	60 - 140
		2,2,4-Trimethylpentane	2010/07/17		100	%	70 - 130
		Carbon Disulfide	2010/07/17		97	%	70 - 130
		Propene	2010/07/17		101	%	70 - 130
		Vinyl Acetate	2010/07/17		111	%	70 - 130
		Vinyl Bromide	2010/07/17		98	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2010/07/17		95	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2010/07/17		83	%	70 - 130
		Chloromethane	2010/07/17		92	%	70 - 130
		Vinyl Chloride	2010/07/17		97	%	70 - 130
		Chloroethane	2010/07/17		97	%	70 - 130
		1,3-Butadiene	2010/07/17		89	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2010/07/17		94	%	70 - 130
		Trichlorotrifluoroethane	2010/07/17		96	%	70 - 130
		Ethanol	2010/07/17		117	%	70 - 130
		2-propanol	2010/07/17		111	%	70 - 130
		2-Propanone	2010/07/17		94	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2010/07/17		108	%	70 - 130
		Methyl Isobutyl Ketone	2010/07/17		103	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2010/07/17		114	%	70 - 130
		Methyl t-butyl ether (MTBE)	2010/07/17		98	%	70 - 130
		Ethyl Acetate	2010/07/17		100	%	70 - 130
		1,1-Dichloroethylene	2010/07/17		97	%	70 - 130
		cis-1,2-Dichloroethylene	2010/07/17		97	%	70 - 130
		trans-1,2-Dichloroethylene	2010/07/17		100	%	70 - 130
		Methylene Chloride(Dichloromethane)	2010/07/17		78	%	70 - 130
		Chloroform	2010/07/17		96	%	70 - 130
		Carbon Tetrachloride	2010/07/17		97	%	70 - 130
		1,1-Dichloroethane	2010/07/17		95	%	70 - 130
		1,2-Dichloroethane	2010/07/17		95	%	70 - 130
		Ethylene Dibromide	2010/07/17		98	%	70 - 130
		1,1,1-Trichloroethane	2010/07/17		94	%	70 - 130
		1,1,2-Trichloroethane	2010/07/17		96	%	70 - 130
		1,1,2,2-Tetrachloroethane	2010/07/17		94	%	70 - 130
		cis-1,3-Dichloropropene	2010/07/17		104	%	70 - 130
		trans-1,3-Dichloropropene	2010/07/17		107	%	70 - 130
		1,2-Dichloropropane	2010/07/17		94	%	70 - 130
		Bromomethane	2010/07/17		89	%	70 - 130
		Bromoform	2010/07/17		111	%	70 - 130
		Bromodichloromethane	2010/07/17		102	%	70 - 130
		Dibromochloromethane	2010/07/17		103	%	70 - 130
		Heptane	2010/07/17		98	%	70 - 130
		Trichloroethylene	2010/07/17		94	%	70 - 130
		Tetrachloroethylene	2010/07/17		95	%	70 - 130
		Benzene	2010/07/17		94	%	70 - 130
		Toluene	2010/07/17		96	%	70 - 130
		Ethylbenzene	2010/07/17		95	%	70 - 130
		p+m-Xylene	2010/07/17		96	%	70 - 130
		o-Xylene	2010/07/17		95	%	70 - 130
		Styrene	2010/07/17		110	%	70 - 130
		1,3,5-Trimethylbenzene	2010/07/17		92	%	70 - 130
		1,2,4-Trimethylbenzene	2010/07/17		89	%	70 - 130
		4-ethyltoluene	2010/07/17		97	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2212165	LSY	Spiked Blank	Chlorobenzene	2010/07/17		97	%	70 - 130
			Benzyl chloride	2010/07/17		119	%	70 - 130
			1,3-Dichlorobenzene	2010/07/17		102	%	70 - 130
			1,4-Dichlorobenzene	2010/07/17		105	%	70 - 130
			1,2-Dichlorobenzene	2010/07/17		90	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/17		114	%	70 - 130
			Hexachlorobutadiene	2010/07/17		84	%	70 - 130
			Hexane	2010/07/17		96	%	70 - 130
			Cyclohexane	2010/07/17		98	%	70 - 130
			Tetrahydrofuran	2010/07/17		103	%	70 - 130
			1,4-Dioxane	2010/07/17		97	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/17		87	%	60 - 140
			D5-Chlorobenzene	2010/07/17		86	%	60 - 140
			Difluorobenzene	2010/07/17		89	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/17	<0.20		ppbv	
			Carbon Disulfide	2010/07/17	<0.50		ppbv	
			Propene	2010/07/17	<0.30		ppbv	
			Vinyl Acetate	2010/07/17	<0.20		ppbv	
			Vinyl Bromide	2010/07/17	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/17	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/17	<0.17		ppbv	
			Chloromethane	2010/07/17	<0.30		ppbv	
			Vinyl Chloride	2010/07/17	<0.18		ppbv	
			Chloroethane	2010/07/17	<0.30		ppbv	
			1,3-Butadiene	2010/07/17	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/17	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/17	<0.15		ppbv	
			Ethanol	2010/07/17	<2.3		ppbv	
			2-propanol	2010/07/17	<3.0		ppbv	
			2-Propanone	2010/07/17	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/17	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/17	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/17	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/17	<0.20		ppbv	
			Ethyl Acetate	2010/07/17	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/17	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/17	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/17	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/17	0.42, RDL=0.30		ppbv	
			Chloroform	2010/07/17	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/17	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/17	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/17	<0.20		ppbv	
			Ethylene Dibromide	2010/07/17	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/17	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/17	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/17	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/17	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/17	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/17	<0.40		ppbv	
			Bromomethane	2010/07/17	<0.18		ppbv	
			Bromoform	2010/07/17	<0.20		ppbv	
			Bromodichloromethane	2010/07/17	<0.20		ppbv	
			Dibromochloromethane	2010/07/17	<0.20		ppbv	
			Heptane	2010/07/17	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
2212165	LSY	Method Blank	Trichloroethylene	2010/07/17	<0.30		ppbv	
			Tetrachloroethylene	2010/07/17	<0.20		ppbv	
			Benzene	2010/07/17	<0.18		ppbv	
			Toluene	2010/07/17	<0.20		ppbv	
			Ethylbenzene	2010/07/17	<0.20		ppbv	
			p+m-Xylene	2010/07/17	<0.37		ppbv	
			o-Xylene	2010/07/17	<0.20		ppbv	
			Styrene	2010/07/17	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/17	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/17	<0.50		ppbv	
			4-ethyltoluene	2010/07/17	<2.2		ppbv	
			Chlorobenzene	2010/07/17	<0.20		ppbv	
			Benzyl chloride	2010/07/17	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/17	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/17	<3.0		ppbv	
			Hexane	2010/07/17	<0.30		ppbv	
			Cyclohexane	2010/07/17	<0.20		ppbv	
			Tetrahydrofuran	2010/07/17	<0.40		ppbv	
			1,4-Dioxane	2010/07/17	<2.0		ppbv	
			Xylene (Total)	2010/07/17	<0.60		ppbv	

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

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ July 07, 10

Sampler s/n: 6200
Canister ID: S2312
Canister Installation Date/Time: July 07, 10 @ 13:04 mst
Canister Removal Date/Time: July 08, 10 @ 8:16 mst

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

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-29	21

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

Comments: System leak check prior to sampling. COC # 2342

Technician Signiture: Ting Xu

Your C.O.C. #: 2342

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B090884
Received: 2010/07/12, 08:30

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/22	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/08	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/22	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	2010/07/20	2010/09/07	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. #: 2342

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

==========

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.

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Total cover pages: 2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GL6211	GL6212	
Sampling Date		2010/07/07	2010/07/07	
COC Number		2342	2342	
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2215425

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223583
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2223583
Propene	ug/m3	<0.52	<0.52	0.52	2223583
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223583
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223583
Dichlorodifluoromethane (FREON 12)	ug/m3	3.55	3.56	0.99	2223583
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223583
Chloromethane	ug/m3	1.21	1.29	0.62	2223583
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223583
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223583
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223583
Trichlorofluoromethane (FREON 11)	ug/m3	1.8	1.8	1.1	2223583
Ethanol	ug/m3	5.1	9.0	4.3	2223583
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223583
2-propanol	ug/m3	<7.4	<7.4	7.4	2223583
2-Propanone	ug/m3	7.8	7.6	1.9	2223583
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223583
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223583
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223583
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223583
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223583
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223583
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223583
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223583
Methylene Chloride(Dichloromethane)	ug/m3	1.7	1.7	1.0	2223583
Chloroform	ug/m3	<0.73	<0.73	0.73	2223583
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223583
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223583
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223583
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223583

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223583
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223583
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223583
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223583
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223583
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223583
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223583
Bromoform	ug/m3	<2.1	<2.1	2.1	2223583
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223583
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223583
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223583
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223583
Benzene	ug/m3	<0.58	<0.58	0.58	2223583
Toluene	ug/m3	1.00	<0.75	0.75	2223583
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223583
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2223583
o-Xylene	ug/m3	<0.87	<0.87	0.87	2223583
Styrene	ug/m3	<0.85	<0.85	0.85	2223583
4-ethyltoluene	ug/m3	<11	<11	11	2223583
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223583
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223583
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223583
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223583
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223583
Hexachlorobutadiene	ug/m3	<32	<32	32	2223583
Hexane	ug/m3	<1.1	<1.1	1.1	2223583
Heptane	ug/m3	<1.2	<1.2	1.2	2223583
Cyclohexane	ug/m3	<0.69	0.77	0.69	2223583
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223583

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223583
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2223583

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

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

Maxxam ID		GL6213	GL6214		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA PUF/QFF/ CLS/ JULY 07,10**	**LICA PUF/QFF/ PORT/ JULY 07,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.16	<0.10	0.10	2217422
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217422
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217422
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217422
2-Methylnaphthalene	ug	0.28	0.21	0.10	2217422
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217422
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217422
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217422
Acenaphthene	ug	0.216	<0.050	0.050	2217422
Acenaphthylene	ug	<0.050	<0.050	0.050	2217422
Anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217422
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217422
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Biphenyl	ug	<0.10	<0.10	0.10	2217422
Chrysene	ug	<0.050	<0.050	0.050	2217422
Coronene	ug	<0.10	<0.10	0.10	2217422
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217422
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217422
Fluoranthene	ug	0.078	<0.050	0.050	2217422
Fluorene	ug	0.162	0.086	0.050	2217422
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217422
m-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Naphthalene	ug	0.202	0.130	0.072	2217422
o-Terphenyl	ug	<0.10	<0.10	0.10	2217422

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

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

Maxxam ID		GL6213	GL6214		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA PUF/QFF/ CLS/ JULY 07,10**	**LICA PUF/QFF/ PORT/ JULY 07,10**	**RDL**	**QC Batch**
Perylene	ug	<0.10	<0.10	0.10	2217422
Phenanthrene	ug	0.490	0.158	0.050	2217422
p-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Pyrene	ug	0.052	<0.050	0.050	2217422
Quinoline	ug	<0.40	<0.40	0.40	2217422
Tetralin	ug	<0.10	<0.10	0.10	2217422
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2217422
D10-Fluoranthene	%	112	106		2217422
D10-Fluorene (FS)	%	55	56		2217422
D10-Phenanthrene	%	98	94		2217422
D12-Benzo(a)anthracene	%	112	110		2217422
D12-Benzo(a)pyrene	%	88	82		2217422
D12-Benzo(b)fluoranthene	%	104	104		2217422
D12-Benzo(ghi)perylene	%	100	94		2217422
D12-Benzo(k)fluoranthene	%	104	100		2217422
D12-Chrysene	%	102	94		2217422
D12-Indeno(1,2,3-cd)pyrene	%	96	92		2217422
D12-Perylene	%	102	98		2217422
D14-Dibenzo(a,h)anthracene	%	78	76		2217422
D14-Terphenyl (FS)	%	104	98		2217422
D8-Acenaphthylene	%	100	102		2217422
D8-Naphthalene	%	74	82		2217422

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2215433
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2215433
Propene	ppbv	<0.30	<0.30	0.30	2215433
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2215433
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2215433
Dichlorodifluoromethane (FREON 12)	ppbv	0.72	0.72	0.20	2215433
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2215433
Chloromethane	ppbv	0.59	0.62	0.30	2215433
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2215433
Chloroethane	ppbv	<0.30	<0.30	0.30	2215433
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2215433
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.32	0.20	2215433
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2215433
Ethanol	ppbv	2.7	4.8	2.3	2215433
2-propanol	ppbv	<3.0	<3.0	3.0	2215433
2-Propanone	ppbv	3.27	3.21	0.80	2215433
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2215433
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2215433
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2215433
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2215433
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2215433
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2215433
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2215433
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2215433
Methylene Chloride(Dichloromethane)	ppbv	0.48	0.50	0.30	2215433
Chloroform	ppbv	<0.15	<0.15	0.15	2215433
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2215433
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2215433
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2215433
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2215433

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2215433
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2215433
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2215433
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2215433
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2215433
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2215433
Bromomethane	ppbv	<0.18	<0.18	0.18	2215433
Bromoform	ppbv	<0.20	<0.20	0.20	2215433
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2215433
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2215433
Heptane	ppbv	<0.30	<0.30	0.30	2215433
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2215433
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2215433
Benzene	ppbv	<0.18	<0.18	0.18	2215433
Toluene	ppbv	0.27	<0.20	0.20	2215433
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2215433
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2215433
o-Xylene	ppbv	<0.20	<0.20	0.20	2215433
Styrene	ppbv	<0.20	<0.20	0.20	2215433
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2215433
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2215433
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2215433
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2215433
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2215433
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2215433
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2215433
Hexane	ppbv	<0.30	<0.30	0.30	2215433
Cyclohexane	ppbv	<0.20	0.22	0.20	2215433
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2215433

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2215433
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2215433
Surrogate Recovery (%)					
Bromochloromethane	%	84	81		2215433
D5-Chlorobenzene	%	82	80		2215433
Difluorobenzene	%	85	83		2215433

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

Test Summary

Maxxam ID GL6211 **Collected** 2010/07/07
Sample ID LICA VOC/ CLS/ JULY 07,10 - 7856 **Shipped**
Matrix AIR **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2215425	N/A	2010/07/22	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2223583	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2215433	N/A	2010/07/22	LSY

Maxxam ID GL6212 **Collected** 2010/07/07
Sample ID LICA VOC/ PORT/ JULY 07,10 - S2312 **Shipped**
Matrix AIR **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2215425	N/A	2010/07/22	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2223583	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2215433	N/A	2010/07/22	LSY

Maxxam ID GL6213 **Collected** 2010/07/07
Sample ID LICA PUF/QFF/ CLS/ JULY 07,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

Maxxam ID GL6214 **Collected** 2010/07/07
Sample ID LICA PUF/QFF/ PORT/ JULY 07,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

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Maxxam Job #: B090884
Report Date: 2010/09/08

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Spiked Blank	Bromochloromethane	2010/07/22		121	%	60 - 140
			D5-Chlorobenzene	2010/07/22		118	%	60 - 140
			Difluorobenzene	2010/07/22		123	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/22		95	%	70 - 130
			Carbon Disulfide	2010/07/22		94	%	70 - 130
			Propene	2010/07/22		92	%	70 - 130
			Vinyl Acetate	2010/07/22		106	%	70 - 130
			Vinyl Bromide	2010/07/22		99	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/22		85	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/22		78	%	70 - 130
			Chloromethane	2010/07/22		85	%	70 - 130
			Vinyl Chloride	2010/07/22		94	%	70 - 130
			Chloroethane	2010/07/22		95	%	70 - 130
			1,3-Butadiene	2010/07/22		78	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/07/22		85	%	70 - 130
			Trichlorotrifluoroethane	2010/07/22		92	%	70 - 130
			Ethanol	2010/07/22		121	%	70 - 130
			2-propanol	2010/07/22		103	%	70 - 130
			2-Propanone	2010/07/22		97	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/22		99	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/22		91	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/22		96	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/22		95	%	70 - 130
			Ethyl Acetate	2010/07/22		92	%	70 - 130
			1,1-Dichloroethylene	2010/07/22		89	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/22		89	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/22		93	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/22		79	%	70 - 130
			Chloroform	2010/07/22		88	%	70 - 130
			Carbon Tetrachloride	2010/07/22		93	%	70 - 130
			1,1-Dichloroethane	2010/07/22		89	%	70 - 130
			1,2-Dichloroethane	2010/07/22		83	%	70 - 130
			Ethylene Dibromide	2010/07/22		88	%	70 - 130
			1,1,1-Trichloroethane	2010/07/22		89	%	70 - 130
			1,1,2-Trichloroethane	2010/07/22		91	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/22		89	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/22		97	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/22		95	%	70 - 130
			1,2-Dichloropropane	2010/07/22		89	%	70 - 130
			Bromomethane	2010/07/22		88	%	70 - 130
			Bromoform	2010/07/22		107	%	70 - 130
			Bromodichloromethane	2010/07/22		95	%	70 - 130
			Dibromochloromethane	2010/07/22		98	%	70 - 130
			Heptane	2010/07/22		92	%	70 - 130
			Trichloroethylene	2010/07/22		91	%	70 - 130
			Tetrachloroethylene	2010/07/22		90	%	70 - 130
			Benzene	2010/07/22		91	%	70 - 130
			Toluene	2010/07/22		92	%	70 - 130
			Ethylbenzene	2010/07/22		91	%	70 - 130
			p+m-Xylene	2010/07/22		91	%	70 - 130
			o-Xylene	2010/07/22		89	%	70 - 130
			Styrene	2010/07/22		94	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/22		87	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/22		83	%	70 - 130
			4-ethyltoluene	2010/07/22		91	%	70 - 130

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
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Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Spiked Blank	Chlorobenzene	2010/07/22		90	%	70 - 130
			Benzyl chloride	2010/07/22		97	%	70 - 130
			1,3-Dichlorobenzene	2010/07/22		85	%	70 - 130
			1,4-Dichlorobenzene	2010/07/22		82	%	70 - 130
			1,2-Dichlorobenzene	2010/07/22		80	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/22		90	%	70 - 130
			Hexachlorobutadiene	2010/07/22		89	%	70 - 130
			Hexane	2010/07/22		92	%	70 - 130
			Cyclohexane	2010/07/22		94	%	70 - 130
			Tetrahydrofuran	2010/07/22		95	%	70 - 130
			1,4-Dioxane	2010/07/22		91	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/22		100	%	60 - 140
			D5-Chlorobenzene	2010/07/22		97	%	60 - 140
			Difluorobenzene	2010/07/22		103	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/22	<0.20		ppbv	
			Carbon Disulfide	2010/07/22	<0.50		ppbv	
			Propene	2010/07/22	<0.30		ppbv	
			Vinyl Acetate	2010/07/22	<0.20		ppbv	
			Vinyl Bromide	2010/07/22	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/22	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/22	<0.17		ppbv	
			Chloromethane	2010/07/22	<0.30		ppbv	
			Vinyl Chloride	2010/07/22	<0.18		ppbv	
			Chloroethane	2010/07/22	<0.30		ppbv	
			1,3-Butadiene	2010/07/22	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/22	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/22	<0.15		ppbv	
			Ethanol	2010/07/22	<2.3		ppbv	
			2-propanol	2010/07/22	<3.0		ppbv	
			2-Propanone	2010/07/22	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/22	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/22	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/22	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/22	<0.20		ppbv	
			Ethyl Acetate	2010/07/22	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/22	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/22	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/22	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/22	0.41, RDL=0.30		ppbv	
			Chloroform	2010/07/22	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/22	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/22	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/22	<0.20		ppbv	
			Ethylene Dibromide	2010/07/22	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/22	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/22	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/22	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/22	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/22	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/22	<0.40		ppbv	
			Bromomethane	2010/07/22	<0.18		ppbv	
			Bromoform	2010/07/22	<0.20		ppbv	
			Bromodichloromethane	2010/07/22	<0.20		ppbv	
			Dibromochloromethane	2010/07/22	<0.20		ppbv	
			Heptane	2010/07/22	<0.30		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Method Blank	Trichloroethylene	2010/07/22	<0.30		ppbv	
			Tetrachloroethylene	2010/07/22	<0.20		ppbv	
			Benzene	2010/07/22	<0.18		ppbv	
			Toluene	2010/07/22	<0.20		ppbv	
			Ethylbenzene	2010/07/22	<0.20		ppbv	
			p+m-Xylene	2010/07/22	<0.37		ppbv	
			o-Xylene	2010/07/22	<0.20		ppbv	
			Styrene	2010/07/22	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/22	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/22	<0.50		ppbv	
			4-ethyltoluene	2010/07/22	<2.2		ppbv	
			Chlorobenzene	2010/07/22	<0.20		ppbv	
			Benzyl chloride	2010/07/22	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/22	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/22	<3.0		ppbv	
			Hexane	2010/07/22	<0.30		ppbv	
			Cyclohexane	2010/07/22	<0.20		ppbv	
			Tetrahydrofuran	2010/07/22	<0.40		ppbv	
			1,4-Dioxane	2010/07/22	<2.0		ppbv	
			Xylene (Total)	2010/07/22	<0.60		ppbv	
		RPD - Sample/Sample Dup	Benzene	2010/07/22	NC		%	25
2217422	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/08/24		70	%	50 - 150
			D10-Fluoranthene	2010/08/24		100	%	50 - 150
			D10-Phenanthrene	2010/08/24		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		140	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		90	%	50 - 150
			D12-Chrysene	2010/08/24		84	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		100	%	50 - 150
			D12-Perylene	2010/08/24		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		90	%	50 - 150
			D8-Acenaphthylene	2010/08/24		106	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			Acenaphthene	2010/08/24		83	%	60 - 130
		RPD	Acenaphthene	2010/08/24	0.6		%	50
		Spiked Blank	Acenaphthylene	2010/08/24		104	%	60 - 130
		RPD	Acenaphthylene	2010/08/24	0.5		%	50
		Spiked Blank	Anthracene	2010/08/24		84	%	60 - 130
		RPD	Anthracene	2010/08/24	4.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/08/24		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/08/24	1.0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/08/24		84	%	60 - 130
		RPD	Benzo(a)pyrene	2010/08/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/08/24		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/08/24	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/08/24		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/08/24	1.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/08/24		82	%	60 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	RPD	Benzo(k)fluoranthene	2010/08/24	5.9		%	50
		Spiked Blank	Chrysene	2010/08/24		81	%	60 - 130
		RPD	Chrysene	2010/08/24	6.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/08/24		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/08/24	1.2		%	50
		Spiked Blank	Fluoranthene	2010/08/24		94	%	60 - 130
		RPD	Fluoranthene	2010/08/24	1.6		%	50
		Spiked Blank	Fluorene	2010/08/24		84	%	60 - 130
		RPD	Fluorene	2010/08/24	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/08/24		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/08/24	0.3		%	50
		Spiked Blank	Naphthalene	2010/08/24		69	%	60 - 130
		RPD	Naphthalene	2010/08/24	2.2		%	50
		Spiked Blank	Phenanthrene	2010/08/24		83	%	60 - 130
		RPD	Phenanthrene	2010/08/24	1.8		%	50
		Spiked Blank	Pyrene	2010/08/24		96	%	60 - 130
		RPD	Pyrene	2010/08/24	2.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/08/24		68	%	50 - 150
			D10-Fluoranthene	2010/08/24		98	%	50 - 150
			D10-Phenanthrene	2010/08/24		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		132	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		102	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		82	%	50 - 150
			D12-Chrysene	2010/08/24		82	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		94	%	50 - 150
			D12-Perylene	2010/08/24		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		84	%	50 - 150
			D8-Acenaphthylene	2010/08/24		108	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			1-Methylnaphthalene	2010/08/24	<0.10		ug	
			1-Methylphenanthrene	2010/08/24	<0.10		ug	
			2-Chloronaphthalene	2010/08/24	<0.10		ug	
			2-Methylanthracene	2010/08/24	<0.10		ug	
			2-Methylnaphthalene	2010/08/24	<0.10		ug	
			3-Methylcholanthrene	2010/08/24	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/08/24	<0.10		ug	
			9,10-Dimethylanthracene	2010/08/24	<0.40		ug	
			Acenaphthene	2010/08/24	<0.050		ug	
			Acenaphthylene	2010/08/24	<0.050		ug	
			Anthracene	2010/08/24	<0.050		ug	
			Benzo(a)anthracene	2010/08/24	<0.050		ug	
			Benzo(a)fluorene	2010/08/24	<0.10		ug	
			Benzo(a)pyrene	2010/08/24	<0.050		ug	
			Benzo(b)fluoranthene	2010/08/24	<0.050		ug	
			Benzo(b)fluorene	2010/08/24	<0.10		ug	
			Benzo(e)pyrene	2010/08/24	<0.10		ug	
			Benzo(g,h,i)perylene	2010/08/24	<0.050		ug	
			Benzo(k)fluoranthene	2010/08/24	<0.050		ug	
			Biphenyl	2010/08/24	<0.10		ug	
			Chrysene	2010/08/24	<0.050		ug	
			Coronene	2010/08/24	<0.10		ug	
			Dibenz(a,h)anthracene	2010/08/24	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/08/24	<0.20		ug	

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

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Method Blank	Fluoranthene	2010/08/24	<0.050		ug	
			Fluorene	2010/08/24	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/08/24	<0.050		ug	
			m-Terphenyl	2010/08/24	<0.10		ug	
			Naphthalene	2010/08/24	<0.072		ug	
			o-Terphenyl	2010/08/24	<0.10		ug	
			Perylene	2010/08/24	<0.10		ug	
			Phenanthrene	2010/08/24	<0.050		ug	
			p-Terphenyl	2010/08/24	<0.10		ug	
			Pyrene	2010/08/24	<0.050		ug	
			Quinoline	2010/08/24	<0.40		ug	
			Tetralin	2010/08/24	<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.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ July 13, 10

Sampler s/n: 6200
Canister ID: 7871
Canister Installation Date/Time: July 12, 10 @ 11:15 mst
Canister Removal Date/Time: July 14, 2010 @ 14:45 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
13-Jul-10	13/07/2010 0:00	14/07/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	20.5

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

Comments: System leak check prior to sampling. COC # 2310

Technician Signiture: Ting Xu

Your C.O.C. #: 2310

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B094870
Received: 2010/07/17, 15:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/28	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/08	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/28	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)	1	2010/07/20	2010/09/07	BRL SOP-00201	CARB429(ARBM1,M2)mod
PAH's in Air (CARB429mod)	1	2010/07/20	2010/09/08	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.

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Your C.O.C. #: 2310

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

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

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

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

Total cover pages: 2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GN6253	GO2032	
Sampling Date		2010/07/13	2010/07/13	
COC Number		2310	2310	
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2221074

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223586
Carbon Disulfide	ug/m3	<1.6	4.6	1.6	2223586
Propene	ug/m3	<0.52	<0.52	0.52	2223586
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223586
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223586
Dichlorodifluoromethane (FREON 12)	ug/m3	3.44	3.36	0.99	2223586
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223586
Chloromethane	ug/m3	1.15	<0.62	0.62	2223586
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223586
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223586
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223586
Trichlorofluoromethane (FREON 11)	ug/m3	2.0	1.9	1.1	2223586
Ethanol	ug/m3	7.4	6.4	4.3	2223586
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223586
2-propanol	ug/m3	<7.4	<7.4	7.4	2223586
2-Propanone	ug/m3	11.3	11.8	1.9	2223586
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223586
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223586
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223586
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223586
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223586
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223586
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223586
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223586
Methylene Chloride(Dichloromethane)	ug/m3	1.1	1.1	1.0	2223586
Chloroform	ug/m3	<0.73	<0.73	0.73	2223586
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223586
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223586
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223586
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223586
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223586

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223586
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223586
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223586
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223586
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223586
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223586
Bromoform	ug/m3	<2.1	<2.1	2.1	2223586
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223586
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223586
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223586
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223586
Benzene	ug/m3	<0.58	<0.58	0.58	2223586
Toluene	ug/m3	<0.75	<0.75	0.75	2223586
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223586
p+m-Xylene	ug/m3	<1.6	4.9	1.6	2223586
o-Xylene	ug/m3	<0.87	1.48	0.87	2223586
Styrene	ug/m3	<0.85	<0.85	0.85	2223586
4-ethyltoluene	ug/m3	<11	<11	11	2223586
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223586
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223586
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223586
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223586
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223586
Hexachlorobutadiene	ug/m3	<32	<32	32	2223586
Hexane	ug/m3	<1.1	<1.1	1.1	2223586
Heptane	ug/m3	<1.2	<1.2	1.2	2223586
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2223586
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223586
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223586
Xylene (Total)	ug/m3	<2.6	6.4	2.6	2223586

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

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

Maxxam ID		GN6254	GN6255		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA PUF/CLS/JULY 13, 10**	**LICA PUF/PORT/JULY 13, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2217422
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217422
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217422
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217422
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2217422
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217422
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217422
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217422
Acenaphthene	ug	<0.050	<0.050	0.050	2217422
Acenaphthylene	ug	<0.050	<0.050	0.050	2217422
Anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217422
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217422
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Biphenyl	ug	<0.10	<0.10	0.10	2217422
Chrysene	ug	<0.050	<0.050	0.050	2217422
Coronene	ug	<0.10	<0.10	0.10	2217422
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217422
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217422
Fluoranthene	ug	0.074	<0.050	0.050	2217422
Fluorene	ug	0.084	<0.050	0.050	2217422
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217422
m-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Naphthalene	ug	0.076	<0.072	0.072	2217422
o-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Perylene	ug	<0.10	<0.10	0.10	2217422

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

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

Maxxam ID		GN6254	GN6255		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA PUF/CLS/JULY 13, 10**	**LICA PUF/PORT/JULY 13, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.428	0.122	0.050	2217422
p-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Pyrene	ug	<0.050	<0.050	0.050	2217422
Quinoline	ug	<0.40	<0.40	0.40	2217422
Tetralin	ug	<0.10	<0.10	0.10	2217422
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2217422
D10-Fluoranthene	%	108	106		2217422
D10-Fluorene (FS)	%	52	58		2217422
D10-Phenanthrene	%	98	96		2217422
D12-Benzo(a)anthracene	%	110	108		2217422
D12-Benzo(a)pyrene	%	92	92		2217422
D12-Benzo(b)fluoranthene	%	102	102		2217422
D12-Benzo(ghi)perylene	%	98	96		2217422
D12-Benzo(k)fluoranthene	%	98	100		2217422
D12-Chrysene	%	100	104		2217422
D12-Indeno(1,2,3-cd)pyrene	%	94	94		2217422
D12-Perylene	%	98	98		2217422
D14-Dibenzo(a,h)anthracene	%	76	76		2217422
D14-Terphenyl (FS)	%	98	99		2217422
D8-Acenaphthylene	%	104	108		2217422
D8-Naphthalene	%	76	82		2217422

QC Batch = Quality Control Batch

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

Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2220603
Carbon Disulfide	ppbv	<0.50	1.49	0.50	2220603
Propene	ppbv	<0.30	<0.30	0.30	2220603
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2220603
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2220603
Dichlorodifluoromethane (FREON 12)	ppbv	0.70	0.68	0.20	2220603
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2220603
Chloromethane	ppbv	0.56	<0.30	0.30	2220603
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2220603
Chloroethane	ppbv	<0.30	<0.30	0.30	2220603
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2220603
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.33	0.20	2220603
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2220603
Ethanol	ppbv	3.9	3.4	2.3	2220603
2-propanol	ppbv	<3.0	<3.0	3.0	2220603
2-Propanone	ppbv	4.75	4.98	0.80	2220603
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2220603
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2220603
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2220603
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2220603
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2220603
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2220603
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2220603
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2220603
Methylene Chloride(Dichloromethane)	ppbv	0.31	0.31	0.30	2220603
Chloroform	ppbv	<0.15	<0.15	0.15	2220603
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2220603
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2220603
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2220603
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2220603
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2220603

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2220603
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2220603
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2220603
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2220603
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2220603
Bromomethane	ppbv	<0.18	<0.18	0.18	2220603
Bromoform	ppbv	<0.20	<0.20	0.20	2220603
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2220603
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2220603
Heptane	ppbv	<0.30	<0.30	0.30	2220603
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2220603
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2220603
Benzene	ppbv	<0.18	<0.18	0.18	2220603
Toluene	ppbv	<0.20	<0.20	0.20	2220603
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2220603
p+m-Xylene	ppbv	<0.37	1.13	0.37	2220603
o-Xylene	ppbv	<0.20	0.34	0.20	2220603
Styrene	ppbv	<0.20	<0.20	0.20	2220603
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2220603
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2220603
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2220603
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2220603
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2220603
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2220603
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2220603
Hexane	ppbv	<0.30	<0.30	0.30	2220603
Cyclohexane	ppbv	<0.20	<0.20	0.20	2220603
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2220603
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2220603
Xylene (Total)	ppbv	<0.60	1.47	0.60	2220603

QC Batch = Quality Control Batch

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VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Surrogate Recovery (%)					
Bromochloromethane	%	77	80		2220603
D5-Chlorobenzene	%	79	82		2220603
Difluorobenzene	%	80	82		2220603

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

Test Summary

Maxxam ID GN6253 **Collected** 2010/07/13
Sample ID LICA VOC/PORT/JULY 13, 10 - 7871 **Shipped**
Matrix AIR **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221074	N/A	2010/07/28	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223586	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2220603	N/A	2010/07/28	MM2

Maxxam ID GN6254 **Collected** 2010/07/13
Sample ID LICA PUF/CLS/JULY 13, 10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

Maxxam ID GN6255 **Collected** 2010/07/13
Sample ID LICA PUF/PORT/JULY 13, 10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/08	WZ

Maxxam ID GO2032 **Collected** 2010/07/13
Sample ID LICA VOC/CLS/JULY12,10 **Shipped**
Matrix AIR **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221074	N/A	2010/07/28	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223586	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2220603	N/A	2010/07/28	MM2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/08/24		70	%	50 - 150
			D10-Fluoranthene	2010/08/24		100	%	50 - 150
			D10-Phenanthrene	2010/08/24		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		140	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		90	%	50 - 150
			D12-Chrysene	2010/08/24		84	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		100	%	50 - 150
			D12-Perylene	2010/08/24		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		90	%	50 - 150
			D8-Acenaphthylene	2010/08/24		106	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			Acenaphthene	2010/08/24		83	%	60 - 130
		RPD	Acenaphthene	2010/08/24	0.6		%	50
		Spiked Blank	Acenaphthylene	2010/08/24		104	%	60 - 130
		RPD	Acenaphthylene	2010/08/24	0.5		%	50
		Spiked Blank	Anthracene	2010/08/24		84	%	60 - 130
		RPD	Anthracene	2010/08/24	4.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/08/24		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/08/24	1.0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/08/24		84	%	60 - 130
		RPD	Benzo(a)pyrene	2010/08/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/08/24		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/08/24	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/08/24		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/08/24	1.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/08/24		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/08/24	5.9		%	50
		Spiked Blank	Chrysene	2010/08/24		81	%	60 - 130
		RPD	Chrysene	2010/08/24	6.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/08/24		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/08/24	1.2		%	50
		Spiked Blank	Fluoranthene	2010/08/24		94	%	60 - 130
		RPD	Fluoranthene	2010/08/24	1.6		%	50
		Spiked Blank	Fluorene	2010/08/24		84	%	60 - 130
		RPD	Fluorene	2010/08/24	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/08/24		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/08/24	0.3		%	50
		Spiked Blank	Naphthalene	2010/08/24		69	%	60 - 130
		RPD	Naphthalene	2010/08/24	2.2		%	50
		Spiked Blank	Phenanthrene	2010/08/24		83	%	60 - 130
		RPD	Phenanthrene	2010/08/24	1.8		%	50
		Spiked Blank	Pyrene	2010/08/24		96	%	60 - 130
		RPD	Pyrene	2010/08/24	2.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/08/24		68	%	50 - 150
			D10-Fluoranthene	2010/08/24		98	%	50 - 150
			D10-Phenanthrene	2010/08/24		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		132	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		102	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		82	%	50 - 150
			D12-Chrysene	2010/08/24		82	%	50 - 150

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/08/24		94	%	50 - 150
			D12-Perylene	2010/08/24		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		84	%	50 - 150
			D8-Acenaphthylene	2010/08/24		108	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			1-Methylnaphthalene	2010/08/24	<0.10		ug	
			1-Methylphenanthrene	2010/08/24	<0.10		ug	
			2-Chloronaphthalene	2010/08/24	<0.10		ug	
			2-Methylanthracene	2010/08/24	<0.10		ug	
			2-Methylnaphthalene	2010/08/24	<0.10		ug	
			3-Methylcholanthrene	2010/08/24	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/08/24	<0.10		ug	
			9,10-Dimethylanthracene	2010/08/24	<0.40		ug	
			Acenaphthene	2010/08/24	<0.050		ug	
			Acenaphthylene	2010/08/24	<0.050		ug	
			Anthracene	2010/08/24	<0.050		ug	
			Benzo(a)anthracene	2010/08/24	<0.050		ug	
			Benzo(a)fluorene	2010/08/24	<0.10		ug	
			Benzo(a)pyrene	2010/08/24	<0.050		ug	
			Benzo(b)fluoranthene	2010/08/24	<0.050		ug	
			Benzo(b)fluorene	2010/08/24	<0.10		ug	
			Benzo(e)pyrene	2010/08/24	<0.10		ug	
			Benzo(g,h,i)perylene	2010/08/24	<0.050		ug	
			Benzo(k)fluoranthene	2010/08/24	<0.050		ug	
			Biphenyl	2010/08/24	<0.10		ug	
			Chrysene	2010/08/24	<0.050		ug	
			Coronene	2010/08/24	<0.10		ug	
			Dibenz(a,h)anthracene	2010/08/24	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/08/24	<0.20		ug	
			Fluoranthene	2010/08/24	<0.050		ug	
			Fluorene	2010/08/24	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/08/24	<0.050		ug	
			m-Terphenyl	2010/08/24	<0.10		ug	
			Naphthalene	2010/08/24	<0.072		ug	
			o-Terphenyl	2010/08/24	<0.10		ug	
			Perylene	2010/08/24	<0.10		ug	
			Phenanthrene	2010/08/24	<0.050		ug	
			p-Terphenyl	2010/08/24	<0.10		ug	
			Pyrene	2010/08/24	<0.050		ug	
			Quinoline	2010/08/24	<0.40		ug	
			Tetralin	2010/08/24	<0.10		ug	
2220603	MM2	Spiked Blank	Bromochloromethane	2010/07/28		95	%	60 - 140
			D5-Chlorobenzene	2010/07/28		96	%	60 - 140
			Difluorobenzene	2010/07/28		97	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/28		81	%	70 - 130
			Carbon Disulfide	2010/07/28		84	%	70 - 130
			Propene	2010/07/28		89	%	70 - 130
			Vinyl Acetate	2010/07/28		93	%	70 - 130
			Vinyl Bromide	2010/07/28		90	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/28		89	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/28		76	%	70 - 130
			Chloromethane	2010/07/28		87	%	70 - 130
			Vinyl Chloride	2010/07/28		92	%	70 - 130
			Chloroethane	2010/07/28		93	%	70 - 130
			1,3-Butadiene	2010/07/28		92	%	70 - 130

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Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Spiked Blank	Trichlorofluoromethane (FREON 11)	2010/07/28		94	%	70 - 130
			Trichlorotrifluoroethane	2010/07/28		66 (1)	%	70 - 130
			Ethanol	2010/07/28		102	%	70 - 130
			2-propanol	2010/07/28		85	%	70 - 130
			2-Propanone	2010/07/28		89	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28		82	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/28		86	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28		86	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/28		76	%	70 - 130
			Ethyl Acetate	2010/07/28		83	%	70 - 130
			1,1-Dichloroethylene	2010/07/28		70	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/28		84	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/28		86	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/28		77	%	70 - 130
			Chloroform	2010/07/28		86	%	70 - 130
			Carbon Tetrachloride	2010/07/28		99	%	70 - 130
			1,1-Dichloroethane	2010/07/28		80	%	70 - 130
			1,2-Dichloroethane	2010/07/28		81	%	70 - 130
			Ethylene Dibromide	2010/07/28		92	%	70 - 130
			1,1,1-Trichloroethane	2010/07/28		91	%	70 - 130
			1,1,2-Trichloroethane	2010/07/28		90	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/28		83	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/28		90	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/28		92	%	70 - 130
			1,2-Dichloropropane	2010/07/28		85	%	70 - 130
			Bromomethane	2010/07/28		101	%	70 - 130
			Bromoform	2010/07/28		99	%	70 - 130
			Bromodichloromethane	2010/07/28		85	%	70 - 130
			Dibromochloromethane	2010/07/28		95	%	70 - 130
			Heptane	2010/07/28		85	%	70 - 130
			Trichloroethylene	2010/07/28		93	%	70 - 130
			Tetrachloroethylene	2010/07/28		95	%	70 - 130
			Benzene	2010/07/28		85	%	70 - 130
			Toluene	2010/07/28		89	%	70 - 130
			Ethylbenzene	2010/07/28		87	%	70 - 130
			p+m-Xylene	2010/07/28		90	%	70 - 130
			o-Xylene	2010/07/28		86	%	70 - 130
			Styrene	2010/07/28		90	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/28		87	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/28		84	%	70 - 130
			4-ethyltoluene	2010/07/28		80	%	70 - 130
			Chlorobenzene	2010/07/28		92	%	70 - 130
			Benzyl chloride	2010/07/28		79	%	70 - 130
			1,3-Dichlorobenzene	2010/07/28		94	%	70 - 130
			1,4-Dichlorobenzene	2010/07/28		91	%	70 - 130
			1,2-Dichlorobenzene	2010/07/28		83	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/28		86	%	70 - 130
			Hexachlorobutadiene	2010/07/28		84	%	70 - 130
			Hexane	2010/07/28		77	%	70 - 130
			Cyclohexane	2010/07/28		82	%	70 - 130
			Tetrahydrofuran	2010/07/28		82	%	70 - 130
			1,4-Dioxane	2010/07/28		85	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/28		90	%	60 - 140
			D5-Chlorobenzene	2010/07/28		89	%	60 - 140
			Difluorobenzene	2010/07/28		91	%	60 - 140

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Method Blank	2,2,4-Trimethylpentane	2010/07/28	<0.20		ppbv	
			Carbon Disulfide	2010/07/28	<0.50		ppbv	
			Propene	2010/07/28	<0.30		ppbv	
			Vinyl Acetate	2010/07/28	<0.20		ppbv	
			Vinyl Bromide	2010/07/28	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/28	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/28	<0.17		ppbv	
			Chloromethane	2010/07/28	<0.30		ppbv	
			Vinyl Chloride	2010/07/28	<0.18		ppbv	
			Chloroethane	2010/07/28	<0.30		ppbv	
			1,3-Butadiene	2010/07/28	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/28	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/28	<0.15		ppbv	
			Ethanol	2010/07/28	<2.3		ppbv	
			2-propanol	2010/07/28	<3.0		ppbv	
			2-Propanone	2010/07/28	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/28	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/28	<0.20		ppbv	
			Ethyl Acetate	2010/07/28	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/28	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/28	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/28	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/28	<0.30		ppbv	
			Chloroform	2010/07/28	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/28	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/28	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/28	<0.20		ppbv	
			Ethylene Dibromide	2010/07/28	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/28	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/28	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/28	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/28	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/28	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/28	<0.40		ppbv	
			Bromomethane	2010/07/28	<0.18		ppbv	
			Bromoform	2010/07/28	<0.20		ppbv	
			Bromodichloromethane	2010/07/28	<0.20		ppbv	
			Dibromochloromethane	2010/07/28	<0.20		ppbv	
			Heptane	2010/07/28	<0.30		ppbv	
			Trichloroethylene	2010/07/28	<0.30		ppbv	
			Tetrachloroethylene	2010/07/28	<0.20		ppbv	
			Benzene	2010/07/28	<0.18		ppbv	
			Toluene	2010/07/28	<0.20		ppbv	
			Ethylbenzene	2010/07/28	<0.20		ppbv	
			p+m-Xylene	2010/07/28	<0.37		ppbv	
			o-Xylene	2010/07/28	<0.20		ppbv	
			Styrene	2010/07/28	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/28	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/28	<0.50		ppbv	
			4-ethyltoluene	2010/07/28	<2.2		ppbv	
			Chlorobenzene	2010/07/28	<0.20		ppbv	
			Benzyl chloride	2010/07/28	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/28	<0.40		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Method Blank	1,4-Dichlorobenzene	2010/07/28	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/28	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/28	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/28	<3.0		ppbv	
			Hexane	2010/07/28	<0.30		ppbv	
			Cyclohexane	2010/07/28	<0.20		ppbv	
			Tetrahydrofuran	2010/07/28	<0.40		ppbv	
			1,4-Dioxane	2010/07/28	<2.0		ppbv	
			Xylene (Total)	2010/07/28	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/07/28	NC		%	25
			Carbon Disulfide	2010/07/28	NC		%	25
			Propene	2010/07/28	NC		%	25
			Vinyl Acetate	2010/07/28	NC		%	25
			Vinyl Bromide	2010/07/28	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/07/28	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/07/28	NC		%	25
			Chloromethane	2010/07/28	NC		%	25
			Vinyl Chloride	2010/07/28	NC		%	25
			Chloroethane	2010/07/28	NC		%	25
			1,3-Butadiene	2010/07/28	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/07/28	NC		%	25
			Trichlorotrifluoroethane	2010/07/28	NC		%	25
			Ethanol	2010/07/28	NC		%	25
			2-propanol	2010/07/28	NC		%	25
			2-Propanone	2010/07/28	0.8		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28	NC		%	25
			Methyl Isobutyl Ketone	2010/07/28	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/07/28	NC		%	25
			Ethyl Acetate	2010/07/28	NC		%	25
			1,1-Dichloroethylene	2010/07/28	NC		%	25
			cis-1,2-Dichloroethylene	2010/07/28	NC		%	25
			trans-1,2-Dichloroethylene	2010/07/28	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/07/28	NC		%	25
			Chloroform	2010/07/28	NC		%	25
			Carbon Tetrachloride	2010/07/28	NC		%	25
			1,1-Dichloroethane	2010/07/28	NC		%	25
			1,2-Dichloroethane	2010/07/28	NC		%	25
			Ethylene Dibromide	2010/07/28	NC		%	25
			1,1,1-Trichloroethane	2010/07/28	NC		%	25
			1,1,2-Trichloroethane	2010/07/28	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/07/28	NC		%	25
			cis-1,3-Dichloropropene	2010/07/28	NC		%	25
			trans-1,3-Dichloropropene	2010/07/28	NC		%	25
			1,2-Dichloropropane	2010/07/28	NC		%	25
			Bromomethane	2010/07/28	NC		%	25
			Bromoform	2010/07/28	NC		%	25
			Bromodichloromethane	2010/07/28	NC		%	25
			Dibromochloromethane	2010/07/28	NC		%	25
			Heptane	2010/07/28	NC		%	25
			Trichloroethylene	2010/07/28	NC		%	25
			Tetrachloroethylene	2010/07/28	NC		%	25
			Benzene	2010/07/28	NC		%	25

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	RPD - Sample/Sample Dup	Toluene	2010/07/28	NC		%	25
			Ethylbenzene	2010/07/28	NC		%	25
			p+m-Xylene	2010/07/28	NC		%	25
			o-Xylene	2010/07/28	NC		%	25
			Styrene	2010/07/28	NC		%	25
			1,3,5-Trimethylbenzene	2010/07/28	NC		%	25
			1,2,4-Trimethylbenzene	2010/07/28	NC		%	25
			4-ethyltoluene	2010/07/28	NC		%	25
			Chlorobenzene	2010/07/28	NC		%	25
			Benzyl chloride	2010/07/28	NC		%	25
			1,3-Dichlorobenzene	2010/07/28	NC		%	25
			1,4-Dichlorobenzene	2010/07/28	NC		%	25
			1,2-Dichlorobenzene	2010/07/28	NC		%	25
			1,2,4-Trichlorobenzene	2010/07/28	NC		%	25
			Hexachlorobutadiene	2010/07/28	NC		%	25
			Hexane	2010/07/28	NC		%	25
			Cyclohexane	2010/07/28	NC		%	25
			Tetrahydrofuran	2010/07/28	NC		%	25
			1,4-Dioxane	2010/07/28	NC		%	25
			Xylene (Total)	2010/07/28	NC		%	25

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.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ July 19, 10

Sampler s/n: 6200
Canister ID: 7852
Canister Installation Date/Time: July 16, 10 @ 7:19 mst
Canister Removal Date/Time: July 20, 10 @ 8:41 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
19-Jul-10	19/07/2010 0:00	20/07/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

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

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

Comments: System leak check prior to sampling. COC # 2311

Technician Signiture: Ting Xu

Your C.O.C. #: 2311

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

Report Date: 2010/08/03

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B097496
Received: 2010/07/22, 13:15

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/29	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/08/03	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/29	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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Total cover pages: 1

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

RESULTS OF ANALYSES OF AIR

Maxxam ID		GO8379	GO8380	
Sampling Date		2010/07/19	2010/07/19	
COC Number		2311	2311	
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**LICA VOC/PORT/JULY 19,10 - 7852**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2221888

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GO8379	GO8380		
Sampling Date		2010/07/19	2010/07/19		
COC Number		2311	2311		
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223566
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2223566
Propene	ug/m3	<0.52	<0.52	0.52	2223566
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223566
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223566
Dichlorodifluoromethane (FREON 12)	ug/m3	3.59	3.54	0.99	2223566
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223566
Chloromethane	ug/m3	1.15	1.20	0.62	2223566
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223566
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223566
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223566
Trichlorofluoromethane (FREON 11)	ug/m3	2.0	2.0	1.1	2223566
Ethanol	ug/m3	4.6	<4.3	4.3	2223566
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223566
2-propanol	ug/m3	<7.4	<7.4	7.4	2223566
2-Propanone	ug/m3	11.4	12.0	1.9	2223566
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223566
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223566
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223566
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223566
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223566
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223566
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223566
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223566
Methylene Chloride(Dichloromethane)	ug/m3	2.0	1.5	1.0	2223566
Chloroform	ug/m3	<0.73	<0.73	0.73	2223566
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223566
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223566
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223566
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223566
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223566

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GO8379	GO8380		
Sampling Date		2010/07/19	2010/07/19		
COC Number		2311	2311		
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223566
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223566
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223566
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223566
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223566
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223566
Bromoform	ug/m3	<2.1	<2.1	2.1	2223566
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223566
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223566
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223566
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223566
Benzene	ug/m3	<0.58	<0.58	0.58	2223566
Toluene	ug/m3	1.07	<0.75	0.75	2223566
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223566
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2223566
o-Xylene	ug/m3	<0.87	<0.87	0.87	2223566
Styrene	ug/m3	<0.85	<0.85	0.85	2223566
4-ethyltoluene	ug/m3	<11	<11	11	2223566
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223566
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223566
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223566
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223566
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223566
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223566
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223566
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223566
Hexachlorobutadiene	ug/m3	<32	<32	32	2223566
Hexane	ug/m3	<1.1	<1.1	1.1	2223566
Heptane	ug/m3	<1.2	<1.2	1.2	2223566
Cyclohexane	ug/m3	<0.69	0.79	0.69	2223566
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223566
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223566
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2223566

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8379				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2221881
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2221881
Propene	ppbv	<0.30	0.30	<0.516	0.516	2221881
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2221881
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2221881
Dichlorodifluoromethane (FREON 12)	ppbv	0.73	0.20	3.59	0.989	2221881
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2221881
Chloromethane	ppbv	0.56	0.30	1.15	0.620	2221881
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2221881
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2221881
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2221881
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.20	1.97	1.12	2221881
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2221881
Ethanol	ppbv	2.5	2.3	4.63	4.33	2221881
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2221881
2-Propanone	ppbv	4.81	0.80	11.4	1.90	2221881
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2221881
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2221881
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2221881
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2221881
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2221881
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2221881
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2221881
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2221881
Methylene Chloride(Dichloromethane)	ppbv	0.59	0.30	2.04	1.04	2221881
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2221881
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2221881
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2221881
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2221881
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2221881
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2221881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8379				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2221881
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2221881
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2221881
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2221881
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2221881
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2221881
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2221881
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2221881
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2221881
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2221881
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2221881
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2221881
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2221881
Toluene	ppbv	0.29	0.20	1.07	0.753	2221881
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2221881
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2221881
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2221881
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2221881
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2221881
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2221881
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2221881
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2221881
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2221881
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2221881
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2221881
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2221881
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2221881
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2221881
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2221881
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2221881

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8379				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/CLS/JULY 19,10 - 7866**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	75		N/A	N/A	2221881
D5-Chlorobenzene	%	79		N/A	N/A	2221881
Difluorobenzene	%	79		N/A	N/A	2221881

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

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8380				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2221881
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2221881
Propene	ppbv	<0.30	0.30	<0.516	0.516	2221881
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2221881
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2221881
Dichlorodifluoromethane (FREON 12)	ppbv	0.72	0.20	3.54	0.989	2221881
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2221881
Chloromethane	ppbv	0.58	0.30	1.20	0.620	2221881
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2221881
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2221881
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2221881
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.20	1.99	1.12	2221881
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2221881
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2221881
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2221881
2-Propanone	ppbv	5.06	0.80	12.0	1.90	2221881
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2221881
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2221881
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2221881
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2221881
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2221881
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2221881
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2221881
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2221881
Methylene Chloride(Dichloromethane)	ppbv	0.45	0.30	1.55	1.04	2221881
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2221881
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2221881
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2221881
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2221881
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2221881
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2221881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8380				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2221881
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2221881
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2221881
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2221881
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2221881
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2221881
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2221881
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2221881
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2221881
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2221881
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2221881
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2221881
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2221881
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2221881
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2221881
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2221881
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2221881
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2221881
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2221881
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2221881
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2221881
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2221881
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2221881
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2221881
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2221881
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2221881
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2221881
Cyclohexane	ppbv	0.23	0.20	0.792	0.688	2221881
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2221881
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2221881
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2221881

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GO8380				
Sampling Date		2010/07/19				
COC Number		2311				
	Units	**LICA VOC/PORT/JULY 19,10 - 7852**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	67		N/A	N/A	2221881
D5-Chlorobenzene	%	71		N/A	N/A	2221881
Difluorobenzene	%	71		N/A	N/A	2221881

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

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

Test Summary

Maxxam ID GO8379 **Collected** 2010/07/19
Sample ID LICA VOC/CLS/JULY 19,10 - 7866 **Shipped**
Matrix AIR **Received** 2010/07/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221888	N/A	2010/07/29	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223566	N/A	2010/08/03	SIM
Volatile Organics in Air (TO-15)	GC/MS	2221881	N/A	2010/07/29	MM2

Maxxam ID GO8380 **Collected** 2010/07/19
Sample ID LICA VOC/PORT/JULY 19,10 - 7852 **Shipped**
Matrix AIR **Received** 2010/07/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221888	N/A	2010/07/29	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223566	N/A	2010/08/03	SIM
Volatile Organics in Air (TO-15)	GC/MS	2221881	N/A	2010/07/29	MM2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097496
Report Date: 2010/08/03

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB097496

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2221881	MM2	Spiked Blank	Bromochloromethane	2010/07/29		96	%	60 - 140
			D5-Chlorobenzene	2010/07/29		98	%	60 - 140
			Difluorobenzene	2010/07/29		99	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/29		97	%	70 - 130
			Carbon Disulfide	2010/07/29		65 (1)	%	70 - 130
			Propene	2010/07/29		111	%	70 - 130
			Vinyl Acetate	2010/07/29		113	%	70 - 130
			Vinyl Bromide	2010/07/29		111	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/29		109	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/29		90	%	70 - 130
			Chloromethane	2010/07/29		106	%	70 - 130
			Vinyl Chloride	2010/07/29		113	%	70 - 130
			Chloroethane	2010/07/29		114	%	70 - 130
			1,3-Butadiene	2010/07/29		112	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/07/29		114	%	70 - 130
			Trichlorotrifluoroethane	2010/07/29		79	%	70 - 130
			Ethanol	2010/07/29		125	%	70 - 130
			2-propanol	2010/07/29		104	%	70 - 130
			2-Propanone	2010/07/29		112	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/29		91	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/29		102	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/29		102	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/29		90	%	70 - 130
			Ethyl Acetate	2010/07/29		102	%	70 - 130
			1,1-Dichloroethylene	2010/07/29		86	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/29		103	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/29		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/29		58 (1)	%	70 - 130
			Chloroform	2010/07/29		103	%	70 - 130
			Carbon Tetrachloride	2010/07/29		120	%	70 - 130
			1,1-Dichloroethane	2010/07/29		98	%	70 - 130
			1,2-Dichloroethane	2010/07/29		101	%	70 - 130
			Ethylene Dibromide	2010/07/29		109	%	70 - 130
			1,1,1-Trichloroethane	2010/07/29		110	%	70 - 130
			1,1,2-Trichloroethane	2010/07/29		107	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/29		95	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/29		108	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/29		112	%	70 - 130
			1,2-Dichloropropane	2010/07/29		101	%	70 - 130
			Bromomethane	2010/07/29		124	%	70 - 130
			Bromoform	2010/07/29		108	%	70 - 130
			Bromodichloromethane	2010/07/29		97	%	70 - 130
			Dibromochloromethane	2010/07/29		108	%	70 - 130
			Heptane	2010/07/29		97	%	70 - 130
			Trichloroethylene	2010/07/29		113	%	70 - 130
			Tetrachloroethylene	2010/07/29		113	%	70 - 130
			Benzene	2010/07/29		101	%	70 - 130
			Toluene	2010/07/29		104	%	70 - 130
			Ethylbenzene	2010/07/29		102	%	70 - 130
			p+m-Xylene	2010/07/29		106	%	70 - 130
			o-Xylene	2010/07/29		102	%	70 - 130
			Styrene	2010/07/29		105	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/29		103	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/29		100	%	70 - 130
			4-ethyltoluene	2010/07/29		89	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB097496

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2221881	MM2	Spiked Blank	Chlorobenzene	2010/07/29		109	%	70 - 130
			Benzyl chloride	2010/07/29		96	%	70 - 130
			1,3-Dichlorobenzene	2010/07/29		113	%	70 - 130
			1,4-Dichlorobenzene	2010/07/29		110	%	70 - 130
			1,2-Dichlorobenzene	2010/07/29		104	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/29		104	%	70 - 130
			Hexachlorobutadiene	2010/07/29		97	%	70 - 130
			Hexane	2010/07/29		85	%	70 - 130
			Cyclohexane	2010/07/29		94	%	70 - 130
			Tetrahydrofuran	2010/07/29		97	%	70 - 130
			1,4-Dioxane	2010/07/29		100	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/29		77	%	60 - 140
			D5-Chlorobenzene	2010/07/29		78	%	60 - 140
			Difluorobenzene	2010/07/29		79	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/29	<0.20		ppbv	
			Carbon Disulfide	2010/07/29	<0.50		ppbv	
			Propene	2010/07/29	<0.30		ppbv	
			Vinyl Acetate	2010/07/29	<0.20		ppbv	
			Vinyl Bromide	2010/07/29	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/29	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/29	<0.17		ppbv	
			Chloromethane	2010/07/29	<0.30		ppbv	
			Vinyl Chloride	2010/07/29	<0.18		ppbv	
			Chloroethane	2010/07/29	<0.30		ppbv	
			1,3-Butadiene	2010/07/29	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/29	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/29	<0.15		ppbv	
			Ethanol	2010/07/29	<2.3		ppbv	
			2-propanol	2010/07/29	<3.0		ppbv	
			2-Propanone	2010/07/29	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/29	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/29	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/29	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/29	<0.20		ppbv	
			Ethyl Acetate	2010/07/29	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/29	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/29	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/29	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/29	<0.30		ppbv	
			Chloroform	2010/07/29	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/29	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/29	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/29	<0.20		ppbv	
			Ethylene Dibromide	2010/07/29	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/29	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/29	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/29	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/29	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/29	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/29	<0.40		ppbv	
			Bromomethane	2010/07/29	<0.18		ppbv	
			Bromoform	2010/07/29	<0.20		ppbv	
			Bromodichloromethane	2010/07/29	<0.20		ppbv	
			Dibromochloromethane	2010/07/29	<0.20		ppbv	
			Heptane	2010/07/29	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB097496

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2221881	MM2	Method Blank	Trichloroethylene	2010/07/29	<0.30		ppbv	
			Tetrachloroethylene	2010/07/29	<0.20		ppbv	
			Benzene	2010/07/29	<0.18		ppbv	
			Toluene	2010/07/29	<0.20		ppbv	
			Ethylbenzene	2010/07/29	<0.20		ppbv	
			p+m-Xylene	2010/07/29	<0.37		ppbv	
			o-Xylene	2010/07/29	<0.20		ppbv	
			Styrene	2010/07/29	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/29	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/29	<0.50		ppbv	
			4-ethyltoluene	2010/07/29	<2.2		ppbv	
			Chlorobenzene	2010/07/29	<0.20		ppbv	
			Benzyl chloride	2010/07/29	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/29	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/07/29	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/29	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/29	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/29	<3.0		ppbv	
			Hexane	2010/07/29	<0.30		ppbv	
			Cyclohexane	2010/07/29	<0.20		ppbv	
			Tetrahydrofuran	2010/07/29	<0.40		ppbv	
			1,4-Dioxane	2010/07/29	<2.0		ppbv	
			Xylene (Total)	2010/07/29	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/07/29	NC		%	25
			Carbon Disulfide	2010/07/29	NC		%	25
			Propene	2010/07/29	NC		%	25
			Vinyl Acetate	2010/07/29	NC		%	25
			Vinyl Bromide	2010/07/29	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/07/29	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/07/29	NC		%	25
			Chloromethane	2010/07/29	NC		%	25
			Vinyl Chloride	2010/07/29	NC		%	25
			Chloroethane	2010/07/29	NC		%	25
			1,3-Butadiene	2010/07/29	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/07/29	NC		%	25
			Trichlorotrifluoroethane	2010/07/29	NC		%	25
			Ethanol	2010/07/29	NC		%	25
			2-propanol	2010/07/29	NC		%	25
			2-Propanone	2010/07/29	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/07/29	NC		%	25
			Methyl Isobutyl Ketone	2010/07/29	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/07/29	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/07/29	NC		%	25
			Ethyl Acetate	2010/07/29	NC		%	25
			1,1-Dichloroethylene	2010/07/29	NC		%	25
			cis-1,2-Dichloroethylene	2010/07/29	NC		%	25
			trans-1,2-Dichloroethylene	2010/07/29	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/07/29	NC		%	25
			Chloroform	2010/07/29	NC		%	25
			Carbon Tetrachloride	2010/07/29	NC		%	25
			1,1-Dichloroethane	2010/07/29	NC		%	25
			1,2-Dichloroethane	2010/07/29	NC		%	25
			Ethylene Dibromide	2010/07/29	NC		%	25

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB097496

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2221881	MM2	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2010/07/29	NC		%	25
			1,1,2-Trichloroethane	2010/07/29	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/07/29	NC		%	25
			cis-1,3-Dichloropropene	2010/07/29	NC		%	25
			trans-1,3-Dichloropropene	2010/07/29	NC		%	25
			1,2-Dichloropropane	2010/07/29	NC		%	25
			Bromomethane	2010/07/29	NC		%	25
			Bromoform	2010/07/29	NC		%	25
			Bromodichloromethane	2010/07/29	NC		%	25
			Dibromochloromethane	2010/07/29	NC		%	25
			Heptane	2010/07/29	NC		%	25
			Trichloroethylene	2010/07/29	NC		%	25
			Tetrachloroethylene	2010/07/29	NC		%	25
			Benzene	2010/07/29	NC		%	25
			Toluene	2010/07/29	NC		%	25
			Ethylbenzene	2010/07/29	NC		%	25
			p+m-Xylene	2010/07/29	NC		%	25
			o-Xylene	2010/07/29	NC		%	25
			Styrene	2010/07/29	NC		%	25
			1,3,5-Trimethylbenzene	2010/07/29	NC		%	25
			1,2,4-Trimethylbenzene	2010/07/29	NC		%	25
			4-ethyltoluene	2010/07/29	NC		%	25
			Chlorobenzene	2010/07/29	NC		%	25
			Benzyl chloride	2010/07/29	NC		%	25
			1,3-Dichlorobenzene	2010/07/29	NC		%	25
			1,4-Dichlorobenzene	2010/07/29	NC		%	25
			1,2-Dichlorobenzene	2010/07/29	NC		%	25
			1,2,4-Trichlorobenzene	2010/07/29	NC		%	25
			Hexachlorobutadiene	2010/07/29	NC		%	25
			Hexane	2010/07/29	NC		%	25
			Cyclohexane	2010/07/29	NC		%	25
			Tetrahydrofuran	2010/07/29	NC		%	25
			1,4-Dioxane	2010/07/29	NC		%	25
			Xylene (Total)	2010/07/29	NC		%	25

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

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ July 25, 10

Sampler s/n: 6200
Canister ID: 7826
Canister Installation Date/Time: July 23, 10 @ 8:20 mst
Canister Removal Date/Time: July 26, 10 @ 8:59 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
25-Jul-10	25/07/2010 0:00	26/07/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

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

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

Comments: System leak check prior to sampling. COC #2313

Technician Signiture: Ting Xu

Your C.O.C. #: 2313

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

Report Date: 2010/08/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A2766
Received: 2010/07/30, 15:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/08/16	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/08/16	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

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

Total cover pages: 1

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

RESULTS OF ANALYSES OF AIR

Maxxam ID		GR3094	GR3095	
Sampling Date		2010/07/25	2010/07/25	
COC Number		2313	2313	
	Units	**LICA VOC/CLS/JULY 25, 10 - 7799**	**LICA VOC/PORT/JULY 25, 10 - 7826**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2239296

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3094				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/CLS/JULY 25, 10 - 7799**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2239303
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2239303
Propene	ppbv	<0.30	0.30	<0.516	0.516	2239303
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2239303
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2239303
Dichlorodifluoromethane (FREON 12)	ppbv	0.83	0.20	4.10	0.989	2239303
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2239303
Chloromethane	ppbv	0.70	0.30	1.45	0.620	2239303
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2239303
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2239303
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2239303
Trichlorofluoromethane (FREON 11)	ppbv	0.42	0.20	2.36	1.12	2239303
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2239303
Ethanol	ppbv	4.2	2.3	7.96	4.33	2239303
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2239303
2-Propanone	ppbv	5.09	0.80	12.1	1.90	2239303
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2239303
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2239303
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2239303
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2239303
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2239303
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2239303
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2239303
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2239303
Methylene Chloride(Dichloromethane)	ppbv	0.69	0.30	2.39	1.04	2239303
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2239303
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2239303
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2239303
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2239303
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2239303
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2239303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3094				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/CLS/JULY 25, 10 - 7799**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2239303
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2239303
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2239303
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2239303
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2239303
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2239303
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2239303
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2239303
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2239303
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2239303
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2239303
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2239303
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2239303
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2239303
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2239303
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2239303
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2239303
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2239303
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2239303
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2239303
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2239303
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2239303
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2239303
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2239303
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2239303
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2239303
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2239303
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2239303
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2239303
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2239303

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3094				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/CLS/JULY 25, 10 - 7799**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	79		N/A	N/A	2239303
D5-Chlorobenzene	%	76		N/A	N/A	2239303
Difluorobenzene	%	82		N/A	N/A	2239303

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

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3095				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/PORT/JULY 25, 10 - 7826**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2239303
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2239303
Propene	ppbv	<0.30	0.30	<0.516	0.516	2239303
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2239303
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2239303
Dichlorodifluoromethane (FREON 12)	ppbv	0.83	0.20	4.09	0.989	2239303
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2239303
Chloromethane	ppbv	0.69	0.30	1.42	0.620	2239303
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2239303
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2239303
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2239303
Trichlorofluoromethane (FREON 11)	ppbv	0.43	0.20	2.44	1.12	2239303
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2239303
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2239303
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2239303
2-Propanone	ppbv	5.31	0.80	12.6	1.90	2239303
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2239303
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2239303
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2239303
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2239303
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2239303
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2239303
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2239303
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2239303
Methylene Chloride(Dichloromethane)	ppbv	0.39	0.30	1.37	1.04	2239303
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2239303
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2239303
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2239303
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2239303
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2239303
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2239303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3095				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/PORT/JULY 25, 10 - 7826**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2239303
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2239303
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2239303
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2239303
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2239303
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2239303
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2239303
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2239303
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2239303
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2239303
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2239303
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2239303
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2239303
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2239303
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2239303
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2239303
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2239303
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2239303
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2239303
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2239303
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2239303
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2239303
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2239303
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2239303
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2239303
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2239303
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2239303
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2239303
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2239303
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2239303
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2239303

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GR3095				
Sampling Date		2010/07/25				
COC Number		2313				
	Units	**LICA VOC/PORT/JULY 25, 10 - 7826**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	75		N/A	N/A	2239303
D5-Chlorobenzene	%	73		N/A	N/A	2239303
Difluorobenzene	%	79		N/A	N/A	2239303

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

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

Test Summary

Maxxam ID	GR3094	**Collected**	2010/07/25
Sample ID	LICA VOC/CLS/JULY 25, 10 - 7799	**Shipped**	
Matrix	AIR	**Received**	2010/07/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2239296	N/A	2010/08/16	DBJ
Volatile Organics in Air (TO-15)	GC/MS	2239303	N/A	2010/08/16	MMU

Maxxam ID	GR3095	**Collected**	2010/07/25
Sample ID	LICA VOC/PORT/JULY 25, 10 - 7826	**Shipped**	
Matrix	AIR	**Received**	2010/07/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2239296	N/A	2010/08/16	DBJ
Volatile Organics in Air (TO-15)	GC/MS	2239303	N/A	2010/08/16	MMU

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2766
Report Date: 2010/08/20

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0A2766

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Spiked Blank	Bromochloromethane	2010/08/16		98	%	60 - 140
			D5-Chlorobenzene	2010/08/16		96	%	60 - 140
			Difluorobenzene	2010/08/16		100	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/16		97	%	70 - 130
			Carbon Disulfide	2010/08/16		105	%	70 - 130
			Propene	2010/08/16		110	%	70 - 130
			Vinyl Acetate	2010/08/16		126	%	70 - 130
			Vinyl Bromide	2010/08/16		111	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/16		107	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/16		93	%	70 - 130
			Chloromethane	2010/08/16		104	%	70 - 130
			Vinyl Chloride	2010/08/16		114	%	70 - 130
			Chloroethane	2010/08/16		114	%	70 - 130
			1,3-Butadiene	2010/08/16		118	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/16		111	%	70 - 130
			Trichlorotrifluoroethane	2010/08/16		78	%	70 - 130
			Ethanol	2010/08/16		136 (1)	%	70 - 130
			2-propanol	2010/08/16		119	%	70 - 130
			2-Propanone	2010/08/16		107	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/16		101	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/16		111	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/16		117	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/16		108	%	70 - 130
			Ethyl Acetate	2010/08/16		106	%	70 - 130
			1,1-Dichloroethylene	2010/08/16		106	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/16		116	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/16		109	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/16		90	%	70 - 130
			Chloroform	2010/08/16		103	%	70 - 130
			Carbon Tetrachloride	2010/08/16		109	%	70 - 130
			1,1-Dichloroethane	2010/08/16		104	%	70 - 130
			1,2-Dichloroethane	2010/08/16		107	%	70 - 130
			Ethylene Dibromide	2010/08/16		106	%	70 - 130
			1,1,1-Trichloroethane	2010/08/16		102	%	70 - 130
			1,1,2-Trichloroethane	2010/08/16		104	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/16		97	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/16		114	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/16		118	%	70 - 130
			1,2-Dichloropropane	2010/08/16		106	%	70 - 130
			Bromomethane	2010/08/16		121	%	70 - 130
			Bromoform	2010/08/16		113	%	70 - 130
			Bromodichloromethane	2010/08/16		101	%	70 - 130
			Dibromochloromethane	2010/08/16		108	%	70 - 130
			Heptane	2010/08/16		108	%	70 - 130
			Trichloroethylene	2010/08/16		106	%	70 - 130
			Tetrachloroethylene	2010/08/16		108	%	70 - 130
			Benzene	2010/08/16		107	%	70 - 130
			Toluene	2010/08/16		111	%	70 - 130
			Ethylbenzene	2010/08/16		112	%	70 - 130
			p+m-Xylene	2010/08/16		108	%	70 - 130
			o-Xylene	2010/08/16		106	%	70 - 130
			Styrene	2010/08/16		106	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/16		107	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/16		105	%	70 - 130
			4-ethyltoluene	2010/08/16		103	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A2766

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Spiked Blank	Chlorobenzene	2010/08/16		100	%	70 - 130
			Benzyl chloride	2010/08/16		95	%	70 - 130
			1,3-Dichlorobenzene	2010/08/16		98	%	70 - 130
			1,4-Dichlorobenzene	2010/08/16		92	%	70 - 130
			1,2-Dichlorobenzene	2010/08/16		95	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/16		92	%	70 - 130
			Hexachlorobutadiene	2010/08/16		106	%	70 - 130
			Hexane	2010/08/16		103	%	70 - 130
			Cyclohexane	2010/08/16		105	%	70 - 130
			Tetrahydrofuran	2010/08/16		116	%	70 - 130
			1,4-Dioxane	2010/08/16		89	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/16		81	%	60 - 140
			D5-Chlorobenzene	2010/08/16		73	%	60 - 140
			Difluorobenzene	2010/08/16		81	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/16	<0.20		ppbv	
			Carbon Disulfide	2010/08/16	<0.50		ppbv	
			Propene	2010/08/16	<0.30		ppbv	
			Vinyl Acetate	2010/08/16	<0.20		ppbv	
			Vinyl Bromide	2010/08/16	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/16	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/16	<0.17		ppbv	
			Chloromethane	2010/08/16	<0.30		ppbv	
			Vinyl Chloride	2010/08/16	<0.18		ppbv	
			Chloroethane	2010/08/16	<0.30		ppbv	
			1,3-Butadiene	2010/08/16	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/16	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/16	<0.15		ppbv	
			Ethanol	2010/08/16	<2.3		ppbv	
			2-propanol	2010/08/16	<3.0		ppbv	
			2-Propanone	2010/08/16	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/16	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/16	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/16	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/16	<0.20		ppbv	
			Ethyl Acetate	2010/08/16	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/16	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/16	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/16	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/16	0.43, RDL=0.30		ppbv	
			Chloroform	2010/08/16	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/16	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/16	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/16	<0.20		ppbv	
			Ethylene Dibromide	2010/08/16	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/16	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/16	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/16	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/16	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/16	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/16	<0.40		ppbv	
			Bromomethane	2010/08/16	<0.18		ppbv	
			Bromoform	2010/08/16	<0.20		ppbv	
			Bromodichloromethane	2010/08/16	<0.20		ppbv	
			Dibromochloromethane	2010/08/16	<0.20		ppbv	
			Heptane	2010/08/16	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A2766

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Method Blank	Trichloroethylene	2010/08/16	<0.30		ppbv	
			Tetrachloroethylene	2010/08/16	<0.20		ppbv	
			Benzene	2010/08/16	<0.18		ppbv	
			Toluene	2010/08/16	<0.20		ppbv	
			Ethylbenzene	2010/08/16	<0.20		ppbv	
			p+m-Xylene	2010/08/16	<0.37		ppbv	
			o-Xylene	2010/08/16	<0.20		ppbv	
			Styrene	2010/08/16	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/16	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/16	<0.50		ppbv	
			4-ethyltoluene	2010/08/16	<2.2		ppbv	
			Chlorobenzene	2010/08/16	<0.20		ppbv	
			Benzyl chloride	2010/08/16	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/16	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/16	<3.0		ppbv	
			Hexane	2010/08/16	<0.30		ppbv	
			Cyclohexane	2010/08/16	<0.20		ppbv	
			Tetrahydrofuran	2010/08/16	<0.40		ppbv	
			1,4-Dioxane	2010/08/16	<2.0		ppbv	
			Xylene (Total)	2010/08/16	<0.60		ppbv	

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

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ July 31, 10

Sampler s/n: 6200
Canister ID: 7914
Canister Installation Date/Time: July 30, 10 @ 10:40mst
Canister Removal Date/Time: Aug 03, 2010 @ 8:45 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
31-Jul-10	31/07/2010 0:00	01/08/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28.5	20

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

Comments: System leak check prior to sampling. COC #2314

Technician Signiture: Ting Xu

Your C.O.C. #: 2314

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

Report Date: 2010/08/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A5545
Received: 2010/08/05, 19:00

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/08/15	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/08/15	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

RESULTS OF ANALYSES OF AIR

Maxxam ID		GS9596	GS9597	
Sampling Date		2010/07/31	2010/07/31	
COC Number		2314	2314	
	Units	**LICA VOC/CLS/JULY 31,10 - 7867**	**LICA VOC/PORT/JULY 31,10 - 7914**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2236708

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9596				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/CLS/JULY 31,10 - 7867**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2236709
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2236709
Propene	ppbv	<0.30	0.30	<0.516	0.516	2236709
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2236709
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2236709
Dichlorodifluoromethane (FREON 12)	ppbv	0.86	0.20	4.24	0.989	2236709
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2236709
Chloromethane	ppbv	0.77	0.30	1.58	0.620	2236709
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2236709
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2236709
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2236709
Trichlorofluoromethane (FREON 11)	ppbv	0.44	0.20	2.48	1.12	2236709
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2236709
Ethanol	ppbv	3.8	2.3	7.15	4.33	2236709
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2236709
2-Propanone	ppbv	6.97	0.80	16.6	1.90	2236709
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2236709
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2236709
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2236709
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2236709
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2236709
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2236709
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2236709
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2236709
Methylene Chloride(Dichloromethane)	ppbv	0.47	0.30	1.64	1.04	2236709
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2236709
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2236709
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2236709
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2236709
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2236709
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2236709

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9596				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/CLS/JULY 31,10 - 7867**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2236709
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2236709
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2236709
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2236709
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2236709
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2236709
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2236709
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2236709
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2236709
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2236709
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2236709
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2236709
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2236709
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2236709
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2236709
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2236709
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2236709
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2236709
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2236709
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2236709
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2236709
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2236709
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2236709
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2236709
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2236709
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2236709
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2236709
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2236709
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2236709
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2236709

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9596				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/CLS/JULY 31,10 - 7867**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	68		N/A	N/A	2236709
D5-Chlorobenzene	%	69		N/A	N/A	2236709
Difluorobenzene	%	72		N/A	N/A	2236709

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

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9597				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/PORT/JULY 31,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2236709
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2236709
Propene	ppbv	<0.30	0.30	<0.516	0.516	2236709
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2236709
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2236709
Dichlorodifluoromethane (FREON 12)	ppbv	0.81	0.20	3.99	0.989	2236709
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2236709
Chloromethane	ppbv	0.71	0.30	1.47	0.620	2236709
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2236709
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2236709
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2236709
Trichlorofluoromethane (FREON 11)	ppbv	0.41	0.20	2.32	1.12	2236709
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2236709
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2236709
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2236709
2-Propanone	ppbv	6.91	0.80	16.4	1.90	2236709
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2236709
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2236709
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2236709
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2236709
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2236709
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2236709
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2236709
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2236709
Methylene Chloride(Dichloromethane)	ppbv	0.51	0.30	1.76	1.04	2236709
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2236709
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2236709
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2236709
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2236709
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2236709
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2236709

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9597				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/PORT/JULY 31,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2236709
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2236709
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2236709
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2236709
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2236709
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2236709
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2236709
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2236709
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2236709
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2236709
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2236709
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2236709
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2236709
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2236709
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2236709
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2236709
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2236709
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2236709
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2236709
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2236709
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2236709
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2236709
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2236709
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2236709
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2236709
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2236709
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2236709
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2236709
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2236709
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2236709
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2236709

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GS9597				
Sampling Date		2010/07/31				
COC Number		2314				
	Units	**LICA VOC/PORT/JULY 31,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	68		N/A	N/A	2236709
D5-Chlorobenzene	%	66		N/A	N/A	2236709
Difluorobenzene	%	69		N/A	N/A	2236709

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

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

Test Summary

Maxxam ID	GS9596	**Collected**	2010/07/31
Sample ID	LICA VOC/CLS/JULY 31,10 - 7867	**Shipped**	
Matrix	AIR	**Received**	2010/08/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2236708	N/A	2010/08/15	DBJ
Volatile Organics in Air (TO-15)	GC/MS	2236709	N/A	2010/08/15	LSY

Maxxam ID	GS9597	**Collected**	2010/07/31
Sample ID	LICA VOC/PORT/JULY 31,10 - 7914	**Shipped**	
Matrix	AIR	**Received**	2010/08/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2236708	N/A	2010/08/15	DBJ
Volatile Organics in Air (TO-15)	GC/MS	2236709	N/A	2010/08/15	LSY

Maxxam Analytics

Maxxam Job #: B0A5545
Report Date: 2010/08/20

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0A5545

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2236709	LSY	Spiked Blank	Bromochloromethane	2010/08/15		92	%	60 - 140
			D5-Chlorobenzene	2010/08/15		93	%	60 - 140
			Difluorobenzene	2010/08/15		94	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/15		92	%	70 - 130
			Carbon Disulfide	2010/08/15		98	%	70 - 130
			Propene	2010/08/15		100	%	70 - 130
			Vinyl Acetate	2010/08/15		116	%	70 - 130
			Vinyl Bromide	2010/08/15		104	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/15		97	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/15		85	%	70 - 130
			Chloromethane	2010/08/15		95	%	70 - 130
			Vinyl Chloride	2010/08/15		105	%	70 - 130
			Chloroethane	2010/08/15		106	%	70 - 130
			1,3-Butadiene	2010/08/15		106	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/15		102	%	70 - 130
			Trichlorotrifluoroethane	2010/08/15		96	%	70 - 130
			Ethanol	2010/08/15		126	%	70 - 130
			2-propanol	2010/08/15		108	%	70 - 130
			2-Propanone	2010/08/15		97	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/15		95	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/15		105	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/15		109	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/15		100	%	70 - 130
			Ethyl Acetate	2010/08/15		99	%	70 - 130
			1,1-Dichloroethylene	2010/08/15		97	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/15		107	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/15		100	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/15		87	%	70 - 130
			Chloroform	2010/08/15		96	%	70 - 130
			Carbon Tetrachloride	2010/08/15		101	%	70 - 130
			1,1-Dichloroethane	2010/08/15		97	%	70 - 130
			1,2-Dichloroethane	2010/08/15		98	%	70 - 130
			Ethylene Dibromide	2010/08/15		101	%	70 - 130
			1,1,1-Trichloroethane	2010/08/15		95	%	70 - 130
			1,1,2-Trichloroethane	2010/08/15		99	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/15		94	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/15		107	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/15		111	%	70 - 130
			1,2-Dichloropropane	2010/08/15		98	%	70 - 130
			Bromomethane	2010/08/15		111	%	70 - 130
			Bromoform	2010/08/15		109	%	70 - 130
			Bromodichloromethane	2010/08/15		95	%	70 - 130
			Dibromochloromethane	2010/08/15		103	%	70 - 130
			Heptane	2010/08/15		100	%	70 - 130
			Trichloroethylene	2010/08/15		99	%	70 - 130
			Tetrachloroethylene	2010/08/15		103	%	70 - 130
			Benzene	2010/08/15		100	%	70 - 130
			Toluene	2010/08/15		106	%	70 - 130
			Ethylbenzene	2010/08/15		106	%	70 - 130
			p+m-Xylene	2010/08/15		103	%	70 - 130
			o-Xylene	2010/08/15		102	%	70 - 130
			Styrene	2010/08/15		103	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/15		102	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/15		100	%	70 - 130
			4-ethyltoluene	2010/08/15		98	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A5545

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2236709	LSY	Spiked Blank	Chlorobenzene	2010/08/15		94	%	70 - 130
			Benzyl chloride	2010/08/15		87	%	70 - 130
			1,3-Dichlorobenzene	2010/08/15		94	%	70 - 130
			1,4-Dichlorobenzene	2010/08/15		88	%	70 - 130
			1,2-Dichlorobenzene	2010/08/15		88	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/15		80	%	70 - 130
			Hexachlorobutadiene	2010/08/15		94	%	70 - 130
			Hexane	2010/08/15		97	%	70 - 130
			Cyclohexane	2010/08/15		101	%	70 - 130
			Tetrahydrofuran	2010/08/15		107	%	70 - 130
			1,4-Dioxane	2010/08/15		86	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/15		72	%	60 - 140
			D5-Chlorobenzene	2010/08/15		66	%	60 - 140
			Difluorobenzene	2010/08/15		72	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/15	<0.20		ppbv	
			Carbon Disulfide	2010/08/15	<0.50		ppbv	
			Propene	2010/08/15	<0.30		ppbv	
			Vinyl Acetate	2010/08/15	<0.20		ppbv	
			Vinyl Bromide	2010/08/15	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/15	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/15	<0.17		ppbv	
			Chloromethane	2010/08/15	<0.30		ppbv	
			Vinyl Chloride	2010/08/15	<0.18		ppbv	
			Chloroethane	2010/08/15	<0.30		ppbv	
			1,3-Butadiene	2010/08/15	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/15	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/15	<0.15		ppbv	
			Ethanol	2010/08/15	<2.3		ppbv	
			2-propanol	2010/08/15	<3.0		ppbv	
			2-Propanone	2010/08/15	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/15	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/15	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/15	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/15	<0.20		ppbv	
			Ethyl Acetate	2010/08/15	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/15	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/15	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/15	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/15	0.47, RDL=0.30		ppbv	
			Chloroform	2010/08/15	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/15	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/15	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/15	<0.20		ppbv	
			Ethylene Dibromide	2010/08/15	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/15	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/15	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/15	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/15	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/15	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/15	<0.40		ppbv	
			Bromomethane	2010/08/15	<0.18		ppbv	
			Bromoform	2010/08/15	<0.20		ppbv	
			Bromodichloromethane	2010/08/15	<0.20		ppbv	
			Dibromochloromethane	2010/08/15	<0.20		ppbv	
			Heptane	2010/08/15	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A5545

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2236709	LSY	Method Blank	Trichloroethylene	2010/08/15	<0.30		ppbv	
			Tetrachloroethylene	2010/08/15	<0.20		ppbv	
			Benzene	2010/08/15	<0.18		ppbv	
			Toluene	2010/08/15	<0.20		ppbv	
			Ethylbenzene	2010/08/15	<0.20		ppbv	
			p+m-Xylene	2010/08/15	<0.37		ppbv	
			o-Xylene	2010/08/15	<0.20		ppbv	
			Styrene	2010/08/15	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/15	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/15	<0.50		ppbv	
			4-ethyltoluene	2010/08/15	<2.2		ppbv	
			Chlorobenzene	2010/08/15	<0.20		ppbv	
			Benzyl chloride	2010/08/15	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/15	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/15	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/15	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/15	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/15	<3.0		ppbv	
			Hexane	2010/08/15	<0.30		ppbv	
			Cyclohexane	2010/08/15	<0.20		ppbv	
			Tetrahydrofuran	2010/08/15	<0.40		ppbv	
			1,4-Dioxane	2010/08/15	<2.0		ppbv	
			Xylene (Total)	2010/08/15	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/08/15	NC		%	25
			Carbon Disulfide	2010/08/15	NC		%	25
			Propene	2010/08/15	NC		%	25
			Vinyl Acetate	2010/08/15	NC		%	25
			Vinyl Bromide	2010/08/15	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/08/15	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/08/15	NC		%	25
			Chloromethane	2010/08/15	NC		%	25
			Vinyl Chloride	2010/08/15	NC		%	25
			Chloroethane	2010/08/15	NC		%	25
			1,3-Butadiene	2010/08/15	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/08/15	NC		%	25
			Trichlorotrifluoroethane	2010/08/15	NC		%	25
			Ethanol	2010/08/15	NC		%	25
			2-propanol	2010/08/15	NC		%	25
			2-Propanone	2010/08/15	1		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/08/15	NC		%	25
			Methyl Isobutyl Ketone	2010/08/15	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/08/15	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/08/15	NC		%	25
			Ethyl Acetate	2010/08/15	NC		%	25
			1,1-Dichloroethylene	2010/08/15	NC		%	25
			cis-1,2-Dichloroethylene	2010/08/15	NC		%	25
			trans-1,2-Dichloroethylene	2010/08/15	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/08/15	NC		%	25
			Chloroform	2010/08/15	5.8		%	25
			Carbon Tetrachloride	2010/08/15	NC		%	25
			1,1-Dichloroethane	2010/08/15	NC		%	25
			1,2-Dichloroethane	2010/08/15	NC		%	25
			Ethylene Dibromide	2010/08/15	NC		%	25

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A5545

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2236709	LSY	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2010/08/15	NC		%	25
			1,1,2-Trichloroethane	2010/08/15	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/08/15	NC		%	25
			cis-1,3-Dichloropropene	2010/08/15	NC		%	25
			trans-1,3-Dichloropropene	2010/08/15	NC		%	25
			1,2-Dichloropropane	2010/08/15	NC		%	25
			Bromomethane	2010/08/15	NC		%	25
			Bromoform	2010/08/15	NC		%	25
			Bromodichloromethane	2010/08/15	NC		%	25
			Dibromochloromethane	2010/08/15	NC		%	25
			Heptane	2010/08/15	NC		%	25
			Trichloroethylene	2010/08/15	NC		%	25
			Tetrachloroethylene	2010/08/15	4.8		%	25
			Benzene	2010/08/15	NC		%	25
			Toluene	2010/08/15	2.5		%	25
			Ethylbenzene	2010/08/15	NC		%	25
			p+m-Xylene	2010/08/15	NC		%	25
			o-Xylene	2010/08/15	NC		%	25
			Styrene	2010/08/15	NC		%	25
			1,3,5-Trimethylbenzene	2010/08/15	NC		%	25
			1,2,4-Trimethylbenzene	2010/08/15	NC		%	25
			4-ethyltoluene	2010/08/15	NC		%	25
			Chlorobenzene	2010/08/15	NC		%	25
			Benzyl chloride	2010/08/15	NC		%	25
			1,3-Dichlorobenzene	2010/08/15	NC		%	25
			1,4-Dichlorobenzene	2010/08/15	NC		%	25
			1,2-Dichlorobenzene	2010/08/15	NC		%	25
			1,2,4-Trichlorobenzene	2010/08/15	NC		%	25
			Hexachlorobutadiene	2010/08/15	NC		%	25
			Hexane	2010/08/15	NC		%	25
			Cyclohexane	2010/08/15	NC		%	25
			Tetrahydrofuran	2010/08/15	NC		%	25
			1,4-Dioxane	2010/08/15	NC		%	25
			Xylene (Total)	2010/08/15	NC		%	25

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

Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Aug 06,10

Sampler s/n: 6200
Canister ID: 7808
Canister Installation Date/Time: Aug 05, 10 @ 16:15 mst
Canister Removal Date/Time: Aug 09, 10 @ 10:25 mst

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

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28.5	20

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

Comments: System leak check prior to sampling. COC #2316

Technician Signiture: Ting Xu

Your C.O.C. #: 2316

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

Report Date: 2010/08/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A8316
Received: 2010/08/11, 14:05

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/08/16	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/08/16	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

RESULTS OF ANALYSES OF AIR

Maxxam ID		GU3220	GU3221	
Sampling Date		2010/08/06	2010/08/06	
COC Number		2316	2316	
	Units	**LICA VOC/CLS/AUG 06,10 - 7810**	**LICA VOC/PORT/AUG 06,10 - 7808**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2239296

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GU3220			GU3221				
Sampling Date		2010/08/06			2010/08/06				
COC Number		2316			2316				
	Units	**LICA VOC/CLS/AUG 06,10 - 7810**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 06,10 - 7808**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2239303
Carbon Disulfide	ppbv	0.94	2.92	1.56	<0.50	0.50	<1.56	1.56	2239303
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2239303
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2239303
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2239303
Dichlorodifluoromethane (FREON 12)	ppbv	0.83	4.10	0.989	0.82	0.20	4.04	0.989	2239303
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2239303
Chloromethane	ppbv	0.64	1.33	0.620	0.69	0.30	1.43	0.620	2239303
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2239303
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2239303
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2239303
Trichlorofluoromethane (FREON 11)	ppbv	0.43	2.40	1.12	0.42	0.20	2.38	1.12	2239303
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2239303
Ethanol	ppbv	8.6	16.2	4.33	<2.3	2.3	<4.33	4.33	2239303
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2239303
2-Propanone	ppbv	6.74	16.0	1.90	41.0	0.80	97.4	1.90	2239303
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2239303
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2239303
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2239303
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2239303
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2239303
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2239303
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2239303
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2239303
Methylene Chloride(Dichloromethane)	ppbv	0.34	1.17	1.04	0.32	0.30	1.10	1.04	2239303
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2239303
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2239303
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2239303
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2239303
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2239303
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2239303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GU3220			GU3221				
Sampling Date		2010/08/06			2010/08/06				
COC Number		2316			2316				
	Units	**LICA VOC/CLS/AUG 06,10 - 7810**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 06,10 - 7808**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2239303
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2239303
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2239303
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2239303
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2239303
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2239303
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2239303
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2239303
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2239303
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2239303
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2239303
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2239303
Benzene	ppbv	0.23	0.722	0.575	<0.18	0.18	<0.575	0.575	2239303
Toluene	ppbv	0.23	0.868	0.753	<0.20	0.20	<0.753	0.753	2239303
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2239303
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2239303
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2239303
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2239303
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2239303
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2239303
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2239303
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2239303
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2239303
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2239303
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2239303
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2239303
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2239303
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2239303
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2239303
Cyclohexane	ppbv	<0.20	<0.688	0.688	0.31	0.20	1.08	0.688	2239303
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2239303
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2239303
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2239303

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GU3220			GU3221				
Sampling Date		2010/08/06			2010/08/06				
COC Number		2316			2316				
	Units	**LICA VOC/CLS/AUG 06,10 - 7810**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 06,10 - 7808**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	77	N/A	N/A	78		N/A	N/A	2239303
D5-Chlorobenzene	%	75	N/A	N/A	76		N/A	N/A	2239303
Difluorobenzene	%	79	N/A	N/A	79		N/A	N/A	2239303

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

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

Test Summary

Maxxam ID	GU3220	**Collected**	2010/08/06
Sample ID	LICA VOC/CLS/AUG 06,10 - 7810	**Shipped**	
Matrix	AIR	**Received**	2010/08/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2239296	N/A	2010/08/16	MMS
Volatile Organics in Air (TO-15)	GC/MS	2239303	N/A	2010/08/16	MMU

Maxxam ID	GU3221	**Collected**	2010/08/06
Sample ID	LICA VOC/PORT/AUG 06,10 - 7808	**Shipped**	
Matrix	AIR	**Received**	2010/08/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2239296	N/A	2010/08/16	MMS
Volatile Organics in Air (TO-15)	GC/MS	2239303	N/A	2010/08/16	MMU

Maxxam Analytics

Maxxam Job #: B0A8316
Report Date: 2010/08/20

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0A8316

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Spiked Blank	Bromochloromethane	2010/08/16		98	%	60 - 140
			D5-Chlorobenzene	2010/08/16		96	%	60 - 140
			Difluorobenzene	2010/08/16		100	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/16		97	%	70 - 130
			Carbon Disulfide	2010/08/16		105	%	70 - 130
			Propene	2010/08/16		110	%	70 - 130
			Vinyl Acetate	2010/08/16		126	%	70 - 130
			Vinyl Bromide	2010/08/16		111	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/16		107	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/16		93	%	70 - 130
			Chloromethane	2010/08/16		104	%	70 - 130
			Vinyl Chloride	2010/08/16		114	%	70 - 130
			Chloroethane	2010/08/16		114	%	70 - 130
			1,3-Butadiene	2010/08/16		118	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/16		111	%	70 - 130
			Trichlorotrifluoroethane	2010/08/16		78	%	70 - 130
			Ethanol	2010/08/16		136 (1)	%	70 - 130
			2-propanol	2010/08/16		119	%	70 - 130
			2-Propanone	2010/08/16		107	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/16		101	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/16		111	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/16		117	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/16		108	%	70 - 130
			Ethyl Acetate	2010/08/16		106	%	70 - 130
			1,1-Dichloroethylene	2010/08/16		106	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/16		116	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/16		109	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/16		90	%	70 - 130
			Chloroform	2010/08/16		103	%	70 - 130
			Carbon Tetrachloride	2010/08/16		109	%	70 - 130
			1,1-Dichloroethane	2010/08/16		104	%	70 - 130
			1,2-Dichloroethane	2010/08/16		107	%	70 - 130
			Ethylene Dibromide	2010/08/16		106	%	70 - 130
			1,1,1-Trichloroethane	2010/08/16		102	%	70 - 130
			1,1,2-Trichloroethane	2010/08/16		104	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/16		97	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/16		114	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/16		118	%	70 - 130
			1,2-Dichloropropane	2010/08/16		106	%	70 - 130
			Bromomethane	2010/08/16		121	%	70 - 130
			Bromoform	2010/08/16		113	%	70 - 130
			Bromodichloromethane	2010/08/16		101	%	70 - 130
			Dibromochloromethane	2010/08/16		108	%	70 - 130
			Heptane	2010/08/16		108	%	70 - 130
			Trichloroethylene	2010/08/16		106	%	70 - 130
			Tetrachloroethylene	2010/08/16		108	%	70 - 130
			Benzene	2010/08/16		107	%	70 - 130
			Toluene	2010/08/16		111	%	70 - 130
			Ethylbenzene	2010/08/16		112	%	70 - 130
			p+m-Xylene	2010/08/16		108	%	70 - 130
			o-Xylene	2010/08/16		106	%	70 - 130
			Styrene	2010/08/16		106	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/16		107	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/16		105	%	70 - 130
			4-ethyltoluene	2010/08/16		103	%	70 - 130

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A8316

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Spiked Blank	Chlorobenzene	2010/08/16		100	%	70 - 130
			Benzyl chloride	2010/08/16		95	%	70 - 130
			1,3-Dichlorobenzene	2010/08/16		98	%	70 - 130
			1,4-Dichlorobenzene	2010/08/16		92	%	70 - 130
			1,2-Dichlorobenzene	2010/08/16		95	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/16		92	%	70 - 130
			Hexachlorobutadiene	2010/08/16		106	%	70 - 130
			Hexane	2010/08/16		103	%	70 - 130
			Cyclohexane	2010/08/16		105	%	70 - 130
			Tetrahydrofuran	2010/08/16		116	%	70 - 130
			1,4-Dioxane	2010/08/16		89	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/16		81	%	60 - 140
			D5-Chlorobenzene	2010/08/16		73	%	60 - 140
			Difluorobenzene	2010/08/16		81	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/16	<0.20		ppbv	
			Carbon Disulfide	2010/08/16	<0.50		ppbv	
			Propene	2010/08/16	<0.30		ppbv	
			Vinyl Acetate	2010/08/16	<0.20		ppbv	
			Vinyl Bromide	2010/08/16	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/16	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/16	<0.17		ppbv	
			Chloromethane	2010/08/16	<0.30		ppbv	
			Vinyl Chloride	2010/08/16	<0.18		ppbv	
			Chloroethane	2010/08/16	<0.30		ppbv	
			1,3-Butadiene	2010/08/16	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/16	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/16	<0.15		ppbv	
			Ethanol	2010/08/16	<2.3		ppbv	
			2-propanol	2010/08/16	<3.0		ppbv	
			2-Propanone	2010/08/16	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/16	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/16	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/16	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/16	<0.20		ppbv	
			Ethyl Acetate	2010/08/16	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/16	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/16	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/16	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/16	0.43, RDL=0.30		ppbv	
			Chloroform	2010/08/16	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/16	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/16	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/16	<0.20		ppbv	
			Ethylene Dibromide	2010/08/16	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/16	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/16	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/16	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/16	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/16	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/16	<0.40		ppbv	
			Bromomethane	2010/08/16	<0.18		ppbv	
			Bromoform	2010/08/16	<0.20		ppbv	
			Bromodichloromethane	2010/08/16	<0.20		ppbv	
			Dibromochloromethane	2010/08/16	<0.20		ppbv	
			Heptane	2010/08/16	<0.30		ppbv	

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A8316

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239303	MMU	Method Blank	Trichloroethylene	2010/08/16	<0.30		ppbv	
			Tetrachloroethylene	2010/08/16	<0.20		ppbv	
			Benzene	2010/08/16	<0.18		ppbv	
			Toluene	2010/08/16	<0.20		ppbv	
			Ethylbenzene	2010/08/16	<0.20		ppbv	
			p+m-Xylene	2010/08/16	<0.37		ppbv	
			o-Xylene	2010/08/16	<0.20		ppbv	
			Styrene	2010/08/16	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/16	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/16	<0.50		ppbv	
			4-ethyltoluene	2010/08/16	<2.2		ppbv	
			Chlorobenzene	2010/08/16	<0.20		ppbv	
			Benzyl chloride	2010/08/16	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/16	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/16	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/16	<3.0		ppbv	
			Hexane	2010/08/16	<0.30		ppbv	
			Cyclohexane	2010/08/16	<0.20		ppbv	
			Tetrahydrofuran	2010/08/16	<0.40		ppbv	
			1,4-Dioxane	2010/08/16	<2.0		ppbv	
			Xylene (Total)	2010/08/16	<0.60		ppbv	

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

Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Aug 12,10

Sampler s/n: 6200
Canister ID: 7830
Canister Installation Date/Time: Aug 11, 10 @ 11:36 mst
Canister Removal Date/Time: Aug 13, 10 @ 7:59 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
12-Aug-10	12/08/2010 0:00	13/08/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

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

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

Comments: System leak check prior to sampling. COC # 2537

Technician Signiture: Ting Xu

Your C.O.C. #: 2537

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

Report Date: 2010/08/26

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B2036
Received: 2010/08/18, 12:17

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/08/20	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/08/20	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

RESULTS OF ANALYSES OF AIR

Maxxam ID		GW0960	GW0961	
Sampling Date		2010/08/12	2010/08/12	
COC Number		2537	2537	
	Units	**LICA VOC/CLS/AUG 12,10 - 7834**	**LICA VOC/PORT/AUG 12,10 - 7830**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2243479

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GW0960			GW0961				
Sampling Date		2010/08/12			2010/08/12				
COC Number		2537			2537				
	Units	**LICA VOC/CLS/AUG 12,10 - 7834**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 12,10 - 7830**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	2.43	11.4	0.934	<0.20	0.20	<0.934	0.934	2243452
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2243452
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2243452
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2243452
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2243452
Dichlorodifluoromethane (FREON 12)	ppbv	1.66	8.22	0.989	0.87	0.20	4.30	0.989	2243452
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2243452
Chloromethane	ppbv	0.63	1.29	0.620	0.63	0.30	1.31	0.620	2243452
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2243452
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2243452
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2243452
Trichlorofluoromethane (FREON 11)	ppbv	0.38	2.15	1.12	0.45	0.20	2.53	1.12	2243452
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2243452
Ethanol	ppbv	3.2	6.12	4.33	<2.3	2.3	<4.33	4.33	2243452
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2243452
2-Propanone	ppbv	6.22	14.8	1.90	4.57	0.80	10.9	1.90	2243452
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2243452
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2243452
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2243452
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2243452
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2243452
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2243452
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2243452
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2243452
Methylene Chloride(Dichloromethane)	ppbv	0.47	1.64	1.04	0.46	0.30	1.60	1.04	2243452
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2243452
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2243452
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2243452
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2243452
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2243452
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2243452

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GW0960			GW0961				
Sampling Date		2010/08/12			2010/08/12				
COC Number		2537			2537				
	Units	**LICA VOC/CLS/AUG 12,10 - 7834**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 12,10 - 7830**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2243452
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2243452
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2243452
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2243452
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2243452
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2243452
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2243452
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2243452
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2243452
Heptane	ppbv	0.65	2.65	1.23	<0.30	0.30	<1.23	1.23	2243452
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2243452
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2243452
Benzene	ppbv	0.88	2.80	0.575	<0.18	0.18	<0.575	0.575	2243452
Toluene	ppbv	5.50	20.7	0.753	<0.20	0.20	<0.753	0.753	2243452
Ethylbenzene	ppbv	0.59	2.55	0.868	<0.20	0.20	<0.868	0.868	2243452
p+m-Xylene	ppbv	3.12	13.6	1.61	<0.37	0.37	<1.61	1.61	2243452
o-Xylene	ppbv	0.92	3.98	0.868	<0.20	0.20	<0.868	0.868	2243452
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2243452
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2243452
1,2,4-Trimethylbenzene	ppbv	0.77	3.76	2.46	<0.50	0.50	<2.46	2.46	2243452
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2243452
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2243452
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2243452
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2243452
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2243452
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2243452
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2243452
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2243452
Hexane	ppbv	1.14	4.03	1.06	<0.30	0.30	<1.06	1.06	2243452
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2243452
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2243452
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2243452
Xylene (Total)	ppbv	4.04	17.5	2.61	<0.60	0.60	<2.61	2.61	2243452

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GW0960			GW0961				
Sampling Date		2010/08/12			2010/08/12				
COC Number		2537			2537				
	Units	**LICA VOC/CLS/AUG 12,10 - 7834**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 12,10 - 7830**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	90	N/A	N/A	83		N/A	N/A	2243452
D5-Chlorobenzene	%	88	N/A	N/A	80		N/A	N/A	2243452
Difluorobenzene	%	95	N/A	N/A	87		N/A	N/A	2243452

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

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

Test Summary

Maxxam ID	GW0960	**Collected**	2010/08/12
Sample ID	LICA VOC/CLS/AUG 12,10 - 7834	**Shipped**	
Matrix	AIR	**Received**	2010/08/18

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2243479	N/A	2010/08/20	MMU
Volatile Organics in Air (TO-15)	GC/MS	2243452	N/A	2010/08/20	MMU

Maxxam ID	GW0961	**Collected**	2010/08/12
Sample ID	LICA VOC/PORT/AUG 12,10 - 7830	**Shipped**	
Matrix	AIR	**Received**	2010/08/18

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2243479	N/A	2010/08/20	MMU
Volatile Organics in Air (TO-15)	GC/MS	2243452	N/A	2010/08/20	MMU

Maxxam Analytics

Maxxam Job #: B0B2036
Report Date: 2010/08/26

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0B2036

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2243452	MMU	Spiked Blank	Bromochloromethane	2010/08/20		101	%	60 - 140
			D5-Chlorobenzene	2010/08/20		98	%	60 - 140
			Difluorobenzene	2010/08/20		105	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/20		93	%	70 - 130
			Carbon Disulfide	2010/08/20		101	%	70 - 130
			Propene	2010/08/20		103	%	70 - 130
			Vinyl Acetate	2010/08/20		119	%	70 - 130
			Vinyl Bromide	2010/08/20		108	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/20		101	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/20		90	%	70 - 130
			Chloromethane	2010/08/20		99	%	70 - 130
			Vinyl Chloride	2010/08/20		110	%	70 - 130
			Chloroethane	2010/08/20		109	%	70 - 130
			1,3-Butadiene	2010/08/20		111	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/20		106	%	70 - 130
			Trichlorotrifluoroethane	2010/08/20		103	%	70 - 130
			Ethanol	2010/08/20		118	%	70 - 130
			2-propanol	2010/08/20		112	%	70 - 130
			2-Propanone	2010/08/20		100	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/20		102	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/20		106	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/20		111	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/20		104	%	70 - 130
			Ethyl Acetate	2010/08/20		101	%	70 - 130
			1,1-Dichloroethylene	2010/08/20		106	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/20		109	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/20		104	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/20		90	%	70 - 130
			Chloroform	2010/08/20		98	%	70 - 130
			Carbon Tetrachloride	2010/08/20		103	%	70 - 130
			1,1-Dichloroethane	2010/08/20		98	%	70 - 130
			1,2-Dichloroethane	2010/08/20		101	%	70 - 130
			Ethylene Dibromide	2010/08/20		104	%	70 - 130
			1,1,1-Trichloroethane	2010/08/20		98	%	70 - 130
			1,1,2-Trichloroethane	2010/08/20		102	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/20		96	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/20		110	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/20		117	%	70 - 130
			1,2-Dichloropropane	2010/08/20		100	%	70 - 130
			Bromomethane	2010/08/20		116	%	70 - 130
			Bromoform	2010/08/20		110	%	70 - 130
			Bromodichloromethane	2010/08/20		98	%	70 - 130
			Dibromochloromethane	2010/08/20		105	%	70 - 130
			Heptane	2010/08/20		103	%	70 - 130
			Trichloroethylene	2010/08/20		104	%	70 - 130
			Tetrachloroethylene	2010/08/20		104	%	70 - 130
			Benzene	2010/08/20		99	%	70 - 130
			Toluene	2010/08/20		108	%	70 - 130
			Ethylbenzene	2010/08/20		109	%	70 - 130
			p+m-Xylene	2010/08/20		105	%	70 - 130
			o-Xylene	2010/08/20		103	%	70 - 130
			Styrene	2010/08/20		117	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/20		103	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/20		103	%	70 - 130
			4-ethyltoluene	2010/08/20		102	%	70 - 130

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B2036

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2243452	MMU	Spiked Blank	Chlorobenzene	2010/08/20		99	%	70 - 130
			Benzyl chloride	2010/08/20		97	%	70 - 130
			1,3-Dichlorobenzene	2010/08/20		100	%	70 - 130
			1,4-Dichlorobenzene	2010/08/20		95	%	70 - 130
			1,2-Dichlorobenzene	2010/08/20		92	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/20		96	%	70 - 130
			Hexachlorobutadiene	2010/08/20		98	%	70 - 130
			Hexane	2010/08/20		100	%	70 - 130
			Cyclohexane	2010/08/20		103	%	70 - 130
			Tetrahydrofuran	2010/08/20		110	%	70 - 130
			1,4-Dioxane	2010/08/20		86	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/20		85	%	60 - 140
			D5-Chlorobenzene	2010/08/20		80	%	60 - 140
			Difluorobenzene	2010/08/20		89	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/20	<0.20		ppbv	
			Carbon Disulfide	2010/08/20	<0.50		ppbv	
			Propene	2010/08/20	<0.30		ppbv	
			Vinyl Acetate	2010/08/20	<0.20		ppbv	
			Vinyl Bromide	2010/08/20	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/20	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/20	<0.17		ppbv	
			Chloromethane	2010/08/20	<0.30		ppbv	
			Vinyl Chloride	2010/08/20	<0.18		ppbv	
			Chloroethane	2010/08/20	<0.30		ppbv	
			1,3-Butadiene	2010/08/20	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/20	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/20	<0.15		ppbv	
			Ethanol	2010/08/20	<2.3		ppbv	
			2-propanol	2010/08/20	<3.0		ppbv	
			2-Propanone	2010/08/20	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/20	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/20	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/20	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/20	<0.20		ppbv	
			Ethyl Acetate	2010/08/20	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/20	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/20	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/20	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/20	0.42, RDL=0.30		ppbv	
			Chloroform	2010/08/20	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/20	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/20	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/20	<0.20		ppbv	
			Ethylene Dibromide	2010/08/20	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/20	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/20	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/20	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/20	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/20	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/20	<0.40		ppbv	
			Bromomethane	2010/08/20	<0.18		ppbv	
			Bromoform	2010/08/20	<0.20		ppbv	
			Bromodichloromethane	2010/08/20	<0.20		ppbv	
			Dibromochloromethane	2010/08/20	<0.20		ppbv	
			Heptane	2010/08/20	<0.30		ppbv	

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B2036

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2243452	MMU	Method Blank	Trichloroethylene	2010/08/20	<0.30		ppbv	
			Tetrachloroethylene	2010/08/20	<0.20		ppbv	
			Benzene	2010/08/20	<0.18		ppbv	
			Toluene	2010/08/20	<0.20		ppbv	
			Ethylbenzene	2010/08/20	<0.20		ppbv	
			p+m-Xylene	2010/08/20	<0.37		ppbv	
			o-Xylene	2010/08/20	<0.20		ppbv	
			Styrene	2010/08/20	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/20	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/20	<0.50		ppbv	
			4-ethyltoluene	2010/08/20	<2.2		ppbv	
			Chlorobenzene	2010/08/20	<0.20		ppbv	
			Benzyl chloride	2010/08/20	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/20	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/20	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/20	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/20	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/20	<3.0		ppbv	
			Hexane	2010/08/20	<0.30		ppbv	
			Cyclohexane	2010/08/20	<0.20		ppbv	
			Tetrahydrofuran	2010/08/20	<0.40		ppbv	
			1,4-Dioxane	2010/08/20	<2.0		ppbv	
			Xylene (Total)	2010/08/20	<0.60		ppbv	

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

Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Aug 18,10

Sampler s/n: 6200
Canister ID: 7805
Canister Installation Date/Time: Aug 17, 10 @ 8:15 mst
Canister Removal Date/Time: Aug 19, 10 @ 8:39mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
18-Aug-10	18/08/2010 0:00	19/08/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

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

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

Comments: System leak check prior to sampling. COC # 2318

Technician Signiture: Ting Xu

Your C.O.C. #: 2318

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

Report Date: 2010/09/02

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B5010
Received: 2010/08/23, 10:42

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	1	N/A	2010/08/25	BRL SOP-00304	EPA TO-15
Canister Pressure (TO-15)	1	N/A	2010/08/26	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/08/25	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/08/26	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

RESULTS OF ANALYSES OF AIR

Maxxam ID		GX4731		GX4732	
Sampling Date		2010/08/18		2010/08/18	
COC Number		2318		2318	
	Units	**LICA VOC/CLS/AUG 18,10 - 7837**	**QC Batch**	**LICA VOC/PORT/AUG 18,10 - 7805**	**QC Batch**
Volatile Organics					
Pressure on Receipt	psig	20	2247185	20	2248827

QC Batch = Quality Control Batch

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

Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4731				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/CLS/AUG 18,10 - 7837**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2247168
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2247168
Propene	ppbv	<0.30	0.30	<0.516	0.516	2247168
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2247168
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2247168
Dichlorodifluoromethane (FREON 12)	ppbv	0.79	0.20	3.90	0.989	2247168
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2247168
Chloromethane	ppbv	0.63	0.30	1.31	0.620	2247168
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2247168
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2247168
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2247168
Trichlorofluoromethane (FREON 11)	ppbv	0.42	0.20	2.34	1.12	2247168
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2247168
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2247168
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2247168
2-Propanone	ppbv	3.35	0.80	7.95	1.90	2247168
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2247168
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2247168
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2247168
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2247168
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2247168
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2247168
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2247168
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2247168
Methylene Chloride(Dichloromethane)	ppbv	0.53	0.30	1.85	1.04	2247168
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2247168
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2247168
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2247168
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2247168
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2247168
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2247168

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4731				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/CLS/AUG 18,10 - 7837**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2247168
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2247168
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2247168
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2247168
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2247168
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2247168
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2247168
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2247168
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2247168
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2247168
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2247168
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2247168
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2247168
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2247168
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2247168
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2247168
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2247168
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2247168
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2247168
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2247168
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2247168
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2247168
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2247168
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2247168
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2247168
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2247168
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2247168
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2247168
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2247168
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2247168
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2247168
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2247168
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2247168

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4731				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/CLS/AUG 18,10 - 7837**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	78		N/A	N/A	2247168
D5-Chlorobenzene	%	77		N/A	N/A	2247168
Difluorobenzene	%	82		N/A	N/A	2247168

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

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4732				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/PORT/AUG 18,10 - 7805**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2248844
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2248844
Propene	ppbv	<0.30	0.30	<0.516	0.516	2248844
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2248844
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2248844
Dichlorodifluoromethane (FREON 12)	ppbv	0.85	0.20	4.20	0.989	2248844
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2248844
Chloromethane	ppbv	0.61	0.30	1.26	0.620	2248844
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2248844
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2248844
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2248844
Trichlorofluoromethane (FREON 11)	ppbv	0.49	0.20	2.73	1.12	2248844
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2248844
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2248844
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2248844
2-Propanone	ppbv	3.67	0.80	8.73	1.90	2248844
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2248844
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2248844
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2248844
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2248844
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2248844
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2248844
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2248844
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2248844
Methylene Chloride(Dichloromethane)	ppbv	0.50	0.30	1.75	1.04	2248844
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2248844
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2248844
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2248844
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2248844
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2248844
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2248844

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4732				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/PORT/AUG 18,10 - 7805**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2248844
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2248844
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2248844
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2248844
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2248844
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2248844
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2248844
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2248844
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2248844
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2248844
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2248844
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2248844
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2248844
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2248844
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2248844
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2248844
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2248844
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2248844
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2248844
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2248844
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2248844
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2248844
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2248844
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2248844
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2248844
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2248844
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2248844
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2248844
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2248844
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2248844
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2248844
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2248844
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2248844

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GX4732				
Sampling Date		2010/08/18				
COC Number		2318				
	Units	**LICA VOC/PORT/AUG 18,10 - 7805**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	61		N/A	N/A	2248844
D5-Chlorobenzene	%	60		N/A	N/A	2248844
Difluorobenzene	%	64		N/A	N/A	2248844

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

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

Test Summary

Maxxam ID	GX4731	**Collected**	2010/08/18
Sample ID	LICA VOC/CLS/AUG 18,10 - 7837	**Shipped**	
Matrix	AIR	**Received**	2010/08/23

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2247185	N/A	2010/08/26	MMU
Volatile Organics in Air (TO-15)	GC/MS	2247168	N/A	2010/08/26	MMU

Maxxam ID	GX4732	**Collected**	2010/08/18
Sample ID	LICA VOC/PORT/AUG 18,10 - 7805	**Shipped**	
Matrix	AIR	**Received**	2010/08/23

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2248827	N/A	2010/08/25	MMU
Volatile Organics in Air (TO-15)	GC/MS	2248844	N/A	2010/08/25	MMU

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Maxxam Analytics

Maxxam Job #: B0B5010
Report Date: 2010/09/02

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247168	MMU	Spiked Blank	Bromochloromethane	2010/08/26		113	%	60 - 140
			D5-Chlorobenzene	2010/08/26		113	%	60 - 140
			Difluorobenzene	2010/08/26		115	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/26		88	%	70 - 130
			Carbon Disulfide	2010/08/26		95	%	70 - 130
			Propene	2010/08/26		100	%	70 - 130
			Vinyl Acetate	2010/08/26		114	%	70 - 130
			Vinyl Bromide	2010/08/26		103	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/26		99	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/26		87	%	70 - 130
			Chloromethane	2010/08/26		97	%	70 - 130
			Vinyl Chloride	2010/08/26		106	%	70 - 130
			Chloroethane	2010/08/26		104	%	70 - 130
			1,3-Butadiene	2010/08/26		107	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/26		103	%	70 - 130
			Trichlorotrifluoroethane	2010/08/26		96	%	70 - 130
			Ethanol	2010/08/26		120	%	70 - 130
			2-propanol	2010/08/26		109	%	70 - 130
			2-Propanone	2010/08/26		99	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/26		98	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/26		95	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/26		106	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/26		97	%	70 - 130
			Ethyl Acetate	2010/08/26		97	%	70 - 130
			1,1-Dichloroethylene	2010/08/26		96	%	70 - 130
			cis-1,2-Dichloroethylene	2010/08/26		105	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/26		98	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/26		85	%	70 - 130
			Chloroform	2010/08/26		94	%	70 - 130
			Carbon Tetrachloride	2010/08/26		101	%	70 - 130
			1,1-Dichloroethane	2010/08/26		94	%	70 - 130
			1,2-Dichloroethane	2010/08/26		97	%	70 - 130
			Ethylene Dibromide	2010/08/26		98	%	70 - 130
			1,1,1-Trichloroethane	2010/08/26		94	%	70 - 130
			1,1,2-Trichloroethane	2010/08/26		96	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/26		90	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/26		103	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/26		109	%	70 - 130
			1,2-Dichloropropane	2010/08/26		97	%	70 - 130
			Bromomethane	2010/08/26		111	%	70 - 130
			Bromoform	2010/08/26		105	%	70 - 130
			Bromodichloromethane	2010/08/26		93	%	70 - 130
			Dibromochloromethane	2010/08/26		101	%	70 - 130
			Heptane	2010/08/26		100	%	70 - 130
			Trichloroethylene	2010/08/26		98	%	70 - 130
			Tetrachloroethylene	2010/08/26		99	%	70 - 130
			Benzene	2010/08/26		97	%	70 - 130
			Toluene	2010/08/26		102	%	70 - 130
			Ethylbenzene	2010/08/26		103	%	70 - 130
			p+m-Xylene	2010/08/26		98	%	70 - 130
			o-Xylene	2010/08/26		96	%	70 - 130
			Styrene	2010/08/26		102	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/26		96	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/26		96	%	70 - 130
			4-ethyltoluene	2010/08/26		94	%	70 - 130

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247168	MMU	Spiked Blank	Chlorobenzene	2010/08/26		92	%	70 - 130
			Benzyl chloride	2010/08/26		86	%	70 - 130
			1,3-Dichlorobenzene	2010/08/26		91	%	70 - 130
			1,4-Dichlorobenzene	2010/08/26		85	%	70 - 130
			1,2-Dichlorobenzene	2010/08/26		85	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/26		86	%	70 - 130
			Hexachlorobutadiene	2010/08/26		94	%	70 - 130
			Hexane	2010/08/26		94	%	70 - 130
			Cyclohexane	2010/08/26		95	%	70 - 130
			Tetrahydrofuran	2010/08/26		103	%	70 - 130
			1,4-Dioxane	2010/08/26		83	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/26		85	%	60 - 140
			D5-Chlorobenzene	2010/08/26		83	%	60 - 140
			Difluorobenzene	2010/08/26		89	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/26	<0.20		ppbv	
			Carbon Disulfide	2010/08/26	<0.50		ppbv	
			Propene	2010/08/26	<0.30		ppbv	
			Vinyl Acetate	2010/08/26	<0.20		ppbv	
			Vinyl Bromide	2010/08/26	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/26	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/26	<0.17		ppbv	
			Chloromethane	2010/08/26	<0.30		ppbv	
			Vinyl Chloride	2010/08/26	<0.18		ppbv	
			Chloroethane	2010/08/26	<0.30		ppbv	
			1,3-Butadiene	2010/08/26	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/08/26	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/26	<0.15		ppbv	
			Ethanol	2010/08/26	<2.3		ppbv	
			2-propanol	2010/08/26	<3.0		ppbv	
			2-Propanone	2010/08/26	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/26	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/26	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/26	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/26	<0.20		ppbv	
			Ethyl Acetate	2010/08/26	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/26	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/26	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/26	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/26	0.74, RDL=0.30		ppbv	
			Chloroform	2010/08/26	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/26	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/26	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/26	<0.20		ppbv	
			Ethylene Dibromide	2010/08/26	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/26	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/26	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/26	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/26	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/26	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/26	<0.40		ppbv	
			Bromomethane	2010/08/26	<0.18		ppbv	
			Bromoform	2010/08/26	<0.20		ppbv	
			Bromodichloromethane	2010/08/26	<0.20		ppbv	
			Dibromochloromethane	2010/08/26	<0.20		ppbv	
			Heptane	2010/08/26	<0.30		ppbv	

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247168	MMU	Method Blank	Trichloroethylene	2010/08/26	<0.30		ppbv	
			Tetrachloroethylene	2010/08/26	<0.20		ppbv	
			Benzene	2010/08/26	<0.18		ppbv	
			Toluene	2010/08/26	<0.20		ppbv	
			Ethylbenzene	2010/08/26	<0.20		ppbv	
			p+m-Xylene	2010/08/26	<0.37		ppbv	
			o-Xylene	2010/08/26	<0.20		ppbv	
			Styrene	2010/08/26	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/26	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/26	<0.50		ppbv	
			4-ethyltoluene	2010/08/26	<2.2		ppbv	
			Chlorobenzene	2010/08/26	<0.20		ppbv	
			Benzyl chloride	2010/08/26	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/26	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/26	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/26	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/26	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/26	<3.0		ppbv	
			Hexane	2010/08/26	<0.30		ppbv	
			Cyclohexane	2010/08/26	<0.20		ppbv	
			Tetrahydrofuran	2010/08/26	<0.40		ppbv	
			1,4-Dioxane	2010/08/26	<2.0		ppbv	
			Xylene (Total)	2010/08/26	<0.60		ppbv	
		RPD - Sample/Sample Dup	Vinyl Chloride	2010/08/26	NC		%	25
			1,1-Dichloroethylene	2010/08/26	NC		%	25
			cis-1,2-Dichloroethylene	2010/08/26	NC		%	25
			Trichloroethylene	2010/08/26	NC		%	25
			Tetrachloroethylene	2010/08/26	9.7		%	25
2248844	MMU	Spiked Blank	Bromochloromethane	2010/08/25		101	%	60 - 140
			D5-Chlorobenzene	2010/08/25		101	%	60 - 140
			Difluorobenzene	2010/08/25		104	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/25		88	%	70 - 130
			Carbon Disulfide	2010/08/25		98	%	70 - 130
			Propene	2010/08/25		99	%	70 - 130
			Vinyl Acetate	2010/08/25		113	%	70 - 130
			Vinyl Bromide	2010/08/25		104	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/08/25		99	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/08/25		87	%	70 - 130
			Chloromethane	2010/08/25		96	%	70 - 130
			Vinyl Chloride	2010/08/25		106	%	70 - 130
			Chloroethane	2010/08/25		105	%	70 - 130
			1,3-Butadiene	2010/08/25		106	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/08/25		103	%	70 - 130
			Trichlorotrifluoroethane	2010/08/25		100	%	70 - 130
			Ethanol	2010/08/25		112	%	70 - 130
			2-propanol	2010/08/25		106	%	70 - 130
			2-Propanone	2010/08/25		97	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/08/25		98	%	70 - 130
			Methyl Isobutyl Ketone	2010/08/25		100	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/08/25		104	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/08/25		98	%	70 - 130
			Ethyl Acetate	2010/08/25		97	%	70 - 130
			1,1-Dichloroethylene	2010/08/25		132 (1)	%	70 - 130

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2248844	MMU	Spiked Blank	cis-1,2-Dichloroethylene	2010/08/25		105	%	70 - 130
			trans-1,2-Dichloroethylene	2010/08/25		100	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/08/25		88	%	70 - 130
			Chloroform	2010/08/25		95	%	70 - 130
			Carbon Tetrachloride	2010/08/25		99	%	70 - 130
			1,1-Dichloroethane	2010/08/25		94	%	70 - 130
			1,2-Dichloroethane	2010/08/25		98	%	70 - 130
			Ethylene Dibromide	2010/08/25		98	%	70 - 130
			1,1,1-Trichloroethane	2010/08/25		93	%	70 - 130
			1,1,2-Trichloroethane	2010/08/25		96	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/08/25		91	%	70 - 130
			cis-1,3-Dichloropropene	2010/08/25		103	%	70 - 130
			trans-1,3-Dichloropropene	2010/08/25		109	%	70 - 130
			1,2-Dichloropropane	2010/08/25		96	%	70 - 130
			Bromomethane	2010/08/25		113	%	70 - 130
			Bromoform	2010/08/25		106	%	70 - 130
			Bromodichloromethane	2010/08/25		93	%	70 - 130
			Dibromochloromethane	2010/08/25		101	%	70 - 130
			Heptane	2010/08/25		98	%	70 - 130
			Trichloroethylene	2010/08/25		98	%	70 - 130
			Tetrachloroethylene	2010/08/25		99	%	70 - 130
			Benzene	2010/08/25		97	%	70 - 130
			Toluene	2010/08/25		102	%	70 - 130
			Ethylbenzene	2010/08/25		103	%	70 - 130
			p+m-Xylene	2010/08/25		98	%	70 - 130
			o-Xylene	2010/08/25		98	%	70 - 130
			Styrene	2010/08/25		104	%	70 - 130
			1,3,5-Trimethylbenzene	2010/08/25		98	%	70 - 130
			1,2,4-Trimethylbenzene	2010/08/25		96	%	70 - 130
			4-ethyltoluene	2010/08/25		96	%	70 - 130
			Chlorobenzene	2010/08/25		92	%	70 - 130
			Benzyl chloride	2010/08/25		88	%	70 - 130
			1,3-Dichlorobenzene	2010/08/25		92	%	70 - 130
			1,4-Dichlorobenzene	2010/08/25		87	%	70 - 130
			1,2-Dichlorobenzene	2010/08/25		86	%	70 - 130
			1,2,4-Trichlorobenzene	2010/08/25		85	%	70 - 130
			Hexachlorobutadiene	2010/08/25		93	%	70 - 130
			Hexane	2010/08/25		95	%	70 - 130
			Cyclohexane	2010/08/25		95	%	70 - 130
			Tetrahydrofuran	2010/08/25		108	%	70 - 130
			1,4-Dioxane	2010/08/25		77	%	70 - 130
		Method Blank	Bromochloromethane	2010/08/25		81	%	60 - 140
			D5-Chlorobenzene	2010/08/25		75	%	60 - 140
			Difluorobenzene	2010/08/25		84	%	60 - 140
			2,2,4-Trimethylpentane	2010/08/25	<0.20		ppbv	
			Carbon Disulfide	2010/08/25	<0.50		ppbv	
			Propene	2010/08/25	<0.30		ppbv	
			Vinyl Acetate	2010/08/25	<0.20		ppbv	
			Vinyl Bromide	2010/08/25	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/08/25	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/08/25	<0.17		ppbv	
			Chloromethane	2010/08/25	<0.30		ppbv	
			Vinyl Chloride	2010/08/25	<0.18		ppbv	
			Chloroethane	2010/08/25	<0.30		ppbv	
			1,3-Butadiene	2010/08/25	<0.50		ppbv	

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2248844	MMU	Method Blank	Trichlorofluoromethane (FREON 11)	2010/08/25	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/08/25	<0.15		ppbv	
			Ethanol	2010/08/25	<2.3		ppbv	
			2-propanol	2010/08/25	<3.0		ppbv	
			2-Propanone	2010/08/25	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/08/25	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/08/25	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/08/25	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/08/25	<0.20		ppbv	
			Ethyl Acetate	2010/08/25	<2.2		ppbv	
			1,1-Dichloroethylene	2010/08/25	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/08/25	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/08/25	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/08/25	<0.30		ppbv	
			Chloroform	2010/08/25	<0.15		ppbv	
			Carbon Tetrachloride	2010/08/25	<0.30		ppbv	
			1,1-Dichloroethane	2010/08/25	<0.20		ppbv	
			1,2-Dichloroethane	2010/08/25	<0.20		ppbv	
			Ethylene Dibromide	2010/08/25	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/08/25	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/08/25	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/08/25	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/08/25	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/08/25	<0.17		ppbv	
			1,2-Dichloropropane	2010/08/25	<0.40		ppbv	
			Bromomethane	2010/08/25	<0.18		ppbv	
			Bromoform	2010/08/25	<0.20		ppbv	
			Bromodichloromethane	2010/08/25	<0.20		ppbv	
			Dibromochloromethane	2010/08/25	<0.20		ppbv	
			Heptane	2010/08/25	<0.30		ppbv	
			Trichloroethylene	2010/08/25	<0.30		ppbv	
			Tetrachloroethylene	2010/08/25	<0.20		ppbv	
			Benzene	2010/08/25	<0.18		ppbv	
			Toluene	2010/08/25	<0.20		ppbv	
			Ethylbenzene	2010/08/25	<0.20		ppbv	
			p+m-Xylene	2010/08/25	<0.37		ppbv	
			o-Xylene	2010/08/25	<0.20		ppbv	
			Styrene	2010/08/25	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/08/25	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/08/25	<0.50		ppbv	
			4-ethyltoluene	2010/08/25	<2.2		ppbv	
			Chlorobenzene	2010/08/25	<0.20		ppbv	
			Benzyl chloride	2010/08/25	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/08/25	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/08/25	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/08/25	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/08/25	<2.0		ppbv	
			Hexachlorobutadiene	2010/08/25	<3.0		ppbv	
			Hexane	2010/08/25	<0.30		ppbv	
			Cyclohexane	2010/08/25	<0.20		ppbv	
			Tetrahydrofuran	2010/08/25	<0.40		ppbv	
			1,4-Dioxane	2010/08/25	<2.0		ppbv	
			Xylene (Total)	2010/08/25	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0B5010

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Aug 24,10

Sampler s/n: 6200
Canister ID: 7847
Canister Installation Date/Time: Aug 23, 10 @ 8:59 mst
Canister Removal Date/Time: Aug 25, 10 @ 15:43 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
24-Aug-10	24/08/2010 0:00	25/08/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

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

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

Comments: System leak check prior to sampling. COC # 0558

Technician Signiture: Ting Xu

Your C.O.C. #: 0558

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

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B8433
Received: 2010/08/28, 12:55

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/09/01	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/09/01	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

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

Total cover pages: 1

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Maxxam Analytics

Maxxam Job #: B0B8433
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GZ1563	GZ1564	
Sampling Date		2010/08/24	2010/08/24	
COC Number		0558	0558	
	Units	**LICA VOC/CLS/AUG 24,10 - 7796**	**LICA VOC/PORT/AUG 24,10 - 7847**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	19	20	2254075

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B8433
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GZ1563			GZ1564				
Sampling Date		2010/08/24			2010/08/24				
COC Number		0558			0558				
	Units	**LICA VOC/CLS/AUG 24,10 - 7796**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 24,10 - 7847**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2253928
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2253928
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2253928
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2253928
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2253928
Dichlorodifluoromethane (FREON 12)	ppbv	0.54	2.67	0.989	0.52	0.20	2.57	0.989	2253928
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2253928
Chloromethane	ppbv	<0.30	<0.620	0.620	0.33	0.30	0.683	0.620	2253928
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2253928
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2253928
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2253928
Trichlorofluoromethane (FREON 11)	ppbv	0.26	1.44	1.12	0.25	0.20	1.39	1.12	2253928
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2253928
Ethanol	ppbv	4.5	8.47	4.33	<2.3	2.3	<4.33	4.33	2253928
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2253928
2-Propanone	ppbv	2.49	5.91	1.90	2.83	0.80	6.72	1.90	2253928
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2253928
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2253928
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2253928
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2253928
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2253928
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2253928
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2253928
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2253928
Methylene Chloride(Dichloromethane)	ppbv	0.36	1.26	1.04	0.33	0.30	1.13	1.04	2253928
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2253928
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2253928
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2253928
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2253928
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2253928
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2253928

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B8433
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GZ1563			GZ1564				
Sampling Date		2010/08/24			2010/08/24				
COC Number		0558			0558				
	Units	**LICA VOC/CLS/AUG 24,10 - 7796**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 24,10 - 7847**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2253928
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2253928
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2253928
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2253928
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2253928
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2253928
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2253928
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2253928
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2253928
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2253928
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2253928
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2253928
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2253928
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2253928
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2253928
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2253928
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2253928
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2253928
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2253928
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2253928
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2253928
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2253928
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2253928
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2253928
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2253928
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2253928
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2253928
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2253928
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2253928
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2253928
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2253928
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2253928
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2253928

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B8433
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GZ1563			GZ1564				
Sampling Date		2010/08/24			2010/08/24				
COC Number		0558			0558				
	Units	**LICA VOC/CLS/AUG 24,10 - 7796**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 24,10 - 7847**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	86	N/A	N/A	83		N/A	N/A	2253928
D5-Chlorobenzene	%	81	N/A	N/A	79		N/A	N/A	2253928
Difluorobenzene	%	88	N/A	N/A	86		N/A	N/A	2253928

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

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Maxxam Analytics

Maxxam Job #: B0B8433
Report Date: 2010/09/08

Test Summary

Maxxam ID	GZ1563	**Collected**	2010/08/24
Sample ID	LICA VOC/CLS/AUG 24,10 - 7796	**Shipped**	
Matrix	AIR	**Received**	2010/08/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2254075	N/A	2010/09/01	DVO
Volatile Organics in Air (TO-15)	GC/MS	2253928	N/A	2010/09/01	DVO

Maxxam ID	GZ1564	**Collected**	2010/08/24
Sample ID	LICA VOC/PORT/AUG 24,10 - 7847	**Shipped**	
Matrix	AIR	**Received**	2010/08/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2254075	N/A	2010/09/01	DVO
Volatile Organics in Air (TO-15)	GC/MS	2253928	N/A	2010/09/01	DVO

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Maxxam Analytics

Maxxam Job #: B0B8433
Report Date: 2010/09/08

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0B8433

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2253928	DVO	Spiked Blank	Bromochloromethane	2010/09/01		104	%	60 - 140
			D5-Chlorobenzene	2010/09/01		99	%	60 - 140
			Difluorobenzene	2010/09/01		106	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/01		94	%	70 - 130
			Carbon Disulfide	2010/09/01		93	%	70 - 130
			Propene	2010/09/01		87	%	70 - 130
			Vinyl Acetate	2010/09/01		101	%	70 - 130
			Vinyl Bromide	2010/09/01		98	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/01		90	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/01		78	%	70 - 130
			Chloromethane	2010/09/01		83	%	70 - 130
			Vinyl Chloride	2010/09/01		87	%	70 - 130
			Chloroethane	2010/09/01		87	%	70 - 130
			1,3-Butadiene	2010/09/01		78	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/01		88	%	70 - 130
			Trichlorotrifluoroethane	2010/09/01		87	%	70 - 130
			Ethanol	2010/09/01		115	%	70 - 130
			2-propanol	2010/09/01		91	%	70 - 130
			2-Propanone	2010/09/01		111	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/01		101	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/01		89	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/01		94	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/01		93	%	70 - 130
			Ethyl Acetate	2010/09/01		87	%	70 - 130
			1,1-Dichloroethylene	2010/09/01		88	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/01		89	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/01		92	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/01		77	%	70 - 130
			Chloroform	2010/09/01		86	%	70 - 130
			Carbon Tetrachloride	2010/09/01		91	%	70 - 130
			1,1-Dichloroethane	2010/09/01		85	%	70 - 130
			1,2-Dichloroethane	2010/09/01		84	%	70 - 130
			Ethylene Dibromide	2010/09/01		83	%	70 - 130
			1,1,1-Trichloroethane	2010/09/01		89	%	70 - 130
			1,1,2-Trichloroethane	2010/09/01		86	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/01		92	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/01		93	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/01		90	%	70 - 130
			1,2-Dichloropropane	2010/09/01		86	%	70 - 130
			Bromomethane	2010/09/01		91	%	70 - 130
			Bromoform	2010/09/01		105	%	70 - 130
			Bromodichloromethane	2010/09/01		94	%	70 - 130
			Dibromochloromethane	2010/09/01		93	%	70 - 130
			Heptane	2010/09/01		91	%	70 - 130
			Trichloroethylene	2010/09/01		90	%	70 - 130
			Tetrachloroethylene	2010/09/01		86	%	70 - 130
			Benzene	2010/09/01		86	%	70 - 130
			Toluene	2010/09/01		89	%	70 - 130
			Ethylbenzene	2010/09/01		95	%	70 - 130
			p+m-Xylene	2010/09/01		96	%	70 - 130
			o-Xylene	2010/09/01		94	%	70 - 130
			Styrene	2010/09/01		72	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/01		89	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/01		86	%	70 - 130
			4-ethyltoluene	2010/09/01		94	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B8433

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2253928	DVO	Spiked Blank	Chlorobenzene	2010/09/01		86	%	70 - 130
			Benzyl chloride	2010/09/01		90	%	70 - 130
			1,3-Dichlorobenzene	2010/09/01		86	%	70 - 130
			1,4-Dichlorobenzene	2010/09/01		83	%	70 - 130
			1,2-Dichlorobenzene	2010/09/01		82	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/01		73	%	70 - 130
			Hexachlorobutadiene	2010/09/01		90	%	70 - 130
			Hexane	2010/09/01		93	%	70 - 130
			Cyclohexane	2010/09/01		92	%	70 - 130
			Tetrahydrofuran	2010/09/01		89	%	70 - 130
			1,4-Dioxane	2010/09/01		92	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/01		89	%	60 - 140
			D5-Chlorobenzene	2010/09/01		82	%	60 - 140
			Difluorobenzene	2010/09/01		92	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/01	<0.20		ppbv	
			Carbon Disulfide	2010/09/01	<0.50		ppbv	
			Propene	2010/09/01	<0.30		ppbv	
			Vinyl Acetate	2010/09/01	<0.20		ppbv	
			Vinyl Bromide	2010/09/01	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/01	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/01	<0.17		ppbv	
			Chloromethane	2010/09/01	<0.30		ppbv	
			Vinyl Chloride	2010/09/01	<0.18		ppbv	
			Chloroethane	2010/09/01	<0.30		ppbv	
			1,3-Butadiene	2010/09/01	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/01	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/01	<0.15		ppbv	
			Ethanol	2010/09/01	<2.3		ppbv	
			2-propanol	2010/09/01	<3.0		ppbv	
			2-Propanone	2010/09/01	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/01	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/01	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/01	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/01	<0.20		ppbv	
			Ethyl Acetate	2010/09/01	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/01	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/01	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/01	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/01	<0.30		ppbv	
			Chloroform	2010/09/01	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/01	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/01	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/01	<0.20		ppbv	
			Ethylene Dibromide	2010/09/01	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/01	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/01	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/01	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/01	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/01	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/01	<0.40		ppbv	
			Bromomethane	2010/09/01	<0.18		ppbv	
			Bromoform	2010/09/01	<0.20		ppbv	
			Bromodichloromethane	2010/09/01	<0.20		ppbv	
			Dibromochloromethane	2010/09/01	<0.20		ppbv	
			Heptane	2010/09/01	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B8433

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2253928	DVO	Method Blank	Trichloroethylene	2010/09/01	<0.30		ppbv	
			Tetrachloroethylene	2010/09/01	<0.20		ppbv	
			Benzene	2010/09/01	<0.18		ppbv	
			Toluene	2010/09/01	<0.20		ppbv	
			Ethylbenzene	2010/09/01	<0.20		ppbv	
			p+m-Xylene	2010/09/01	<0.37		ppbv	
			o-Xylene	2010/09/01	<0.20		ppbv	
			Styrene	2010/09/01	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/01	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/01	<0.50		ppbv	
			4-ethyltoluene	2010/09/01	<2.2		ppbv	
			Chlorobenzene	2010/09/01	<0.20		ppbv	
			Benzyl chloride	2010/09/01	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/01	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/01	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/01	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/01	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/01	<3.0		ppbv	
			Hexane	2010/09/01	<0.30		ppbv	
			Cyclohexane	2010/09/01	<0.20		ppbv	
			Tetrahydrofuran	2010/09/01	<0.40		ppbv	
			1,4-Dioxane	2010/09/01	<2.0		ppbv	
			Xylene (Total)	2010/09/01	<0.60		ppbv	
		RPD - Sample/Sample Dup	2-propanol	2010/08/30	NC		%	25

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

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Maxxam Analytics Inc.

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Aug 30,10

Sampler s/n: 6200
Canister ID: 7798
Canister Installation Date/Time: Aug 27, 10 @ 15:49 mst
Canister Removal Date/Time: Aug 31, 10 @ 8:39 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
30-Aug-10	30/08/2010 0:00	31/08/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

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

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

Comments: System leak check prior to sampling. COC # 2648

Technician Signiture: Ting Xu

Your C.O.C. #: 2648

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

Report Date: 2010/09/16

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C2787
Received: 2010/09/07, 10:45

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/09/10	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/09/10	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

RESULTS OF ANALYSES OF AIR

Maxxam ID		HB5830	HB5831	
Sampling Date		2010/08/30	2010/08/30	
COC Number		2648	2648	
	Units	**LICA VOC/CLS/AUG 30,10**	**LICA VOC/PORT/AUG 30,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2263737

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HB5830			HB5831				
Sampling Date		2010/08/30			2010/08/30				
COC Number		2648			2648				
	Units	**LICA VOC/CLS/AUG 30,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 30,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2263812
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2263812
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2263812
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2263812
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2263812
Dichlorodifluoromethane (FREON 12)	ppbv	0.42	2.10	0.989	0.75	0.20	3.70	0.989	2263812
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2263812
Chloromethane	ppbv	0.38	0.777	0.620	0.43	0.30	0.888	0.620	2263812
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2263812
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2263812
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2263812
Trichlorofluoromethane (FREON 11)	ppbv	<0.20	<1.12	1.12	0.34	0.20	1.92	1.12	2263812
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2263812
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2263812
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2263812
2-Propanone	ppbv	1.85	4.39	1.90	2.24	0.80	5.32	1.90	2263812
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2263812
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2263812
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2263812
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2263812
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2263812
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2263812
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2263812
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2263812
Methylene Chloride(Dichloromethane)	ppbv	0.95	3.30	1.04	0.53	0.30	1.84	1.04	2263812
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2263812
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2263812
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2263812
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2263812
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2263812
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2263812

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HB5830			HB5831				
Sampling Date		2010/08/30			2010/08/30				
COC Number		2648			2648				
	Units	**LICA VOC/CLS/AUG 30,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 30,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2263812
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2263812
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2263812
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2263812
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2263812
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2263812
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2263812
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2263812
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2263812
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2263812
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2263812
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2263812
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2263812
Toluene	ppbv	0.38	1.43	0.753	<0.20	0.20	<0.753	0.753	2263812
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2263812
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2263812
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2263812
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2263812
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2263812
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2263812
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2263812
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2263812
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2263812
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2263812
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2263812
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2263812
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2263812
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2263812
Hexane	ppbv	<0.30	<1.06	1.06	0.39	0.30	1.38	1.06	2263812
Cyclohexane	ppbv	<0.20	<0.688	0.688	0.70	0.20	2.42	0.688	2263812
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2263812
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2263812
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2263812

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HB5830			HB5831				
Sampling Date		2010/08/30			2010/08/30				
COC Number		2648			2648				
	Units	**LICA VOC/CLS/AUG 30,10**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/PORT/AUG 30,10**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	78	N/A	N/A	85		N/A	N/A	2263812
D5-Chlorobenzene	%	73	N/A	N/A	81		N/A	N/A	2263812
Difluorobenzene	%	76	N/A	N/A	84		N/A	N/A	2263812

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

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

Test Summary

Maxxam ID	HB5830	**Collected**	2010/08/30
Sample ID	LICA VOC/CLS/AUG 30,10	**Shipped**	
Matrix	AIR	**Received**	2010/09/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2263737	N/A	2010/09/10	MMU
Volatile Organics in Air (TO-15)	GC/MS	2263812	N/A	2010/09/10	MMU

Maxxam ID	HB5831	**Collected**	2010/08/30
Sample ID	LICA VOC/PORT/AUG 30,10	**Shipped**	
Matrix	AIR	**Received**	2010/09/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2263737	N/A	2010/09/10	MMU
Volatile Organics in Air (TO-15)	GC/MS	2263812	N/A	2010/09/10	MMU

Maxxam Analytics

Maxxam Job #: B0C2787
Report Date: 2010/09/16

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0C2787

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2263812	MMU	Spiked Blank	Bromochloromethane	2010/09/10		100	%	60 - 140
			D5-Chlorobenzene	2010/09/10		97	%	60 - 140
			Difluorobenzene	2010/09/10		100	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/10		85	%	70 - 130
			Carbon Disulfide	2010/09/10		94	%	70 - 130
			Propene	2010/09/10		96	%	70 - 130
			Vinyl Acetate	2010/09/10		97	%	70 - 130
			Vinyl Bromide	2010/09/10		92	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/10		98	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/10		85	%	70 - 130
			Chloromethane	2010/09/10		99	%	70 - 130
			Vinyl Chloride	2010/09/10		99	%	70 - 130
			Chloroethane	2010/09/10		95	%	70 - 130
			1,3-Butadiene	2010/09/10		95	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/10		94	%	70 - 130
			Trichlorotrifluoroethane	2010/09/10		98	%	70 - 130
			Ethanol	2010/09/10		97	%	70 - 130
			2-propanol	2010/09/10		87	%	70 - 130
			2-Propanone	2010/09/10		85	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/10		94	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/10		87	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/10		89	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/10		91	%	70 - 130
			Ethyl Acetate	2010/09/10		87	%	70 - 130
			1,1-Dichloroethylene	2010/09/10		97	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/10		95	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/10		90	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/10		83	%	70 - 130
			Chloroform	2010/09/10		95	%	70 - 130
			Carbon Tetrachloride	2010/09/10		96	%	70 - 130
			1,1-Dichloroethane	2010/09/10		91	%	70 - 130
			1,2-Dichloroethane	2010/09/10		94	%	70 - 130
			Ethylene Dibromide	2010/09/10		93	%	70 - 130
			1,1,1-Trichloroethane	2010/09/10		94	%	70 - 130
			1,1,2-Trichloroethane	2010/09/10		93	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/10		83	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/10		98	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/10		98	%	70 - 130
			1,2-Dichloropropane	2010/09/10		90	%	70 - 130
			Bromomethane	2010/09/10		102	%	70 - 130
			Bromoform	2010/09/10		93	%	70 - 130
			Bromodichloromethane	2010/09/10		91	%	70 - 130
			Dibromochloromethane	2010/09/10		90	%	70 - 130
			Heptane	2010/09/10		84	%	70 - 130
			Trichloroethylene	2010/09/10		95	%	70 - 130
			Tetrachloroethylene	2010/09/10		95	%	70 - 130
			Benzene	2010/09/10		93	%	70 - 130
			Toluene	2010/09/10		93	%	70 - 130
			Ethylbenzene	2010/09/10		93	%	70 - 130
			p+m-Xylene	2010/09/10		89	%	70 - 130
			o-Xylene	2010/09/10		90	%	70 - 130
			Styrene	2010/09/10		88	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/10		83	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/10		80	%	70 - 130
			4-ethyltoluene	2010/09/10		80	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C2787

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2263812	MMU	Spiked Blank	Chlorobenzene	2010/09/10		94	%	70 - 130
			Benzyl chloride	2010/09/10		77	%	70 - 130
			1,3-Dichlorobenzene	2010/09/10		90	%	70 - 130
			1,4-Dichlorobenzene	2010/09/10		86	%	70 - 130
			1,2-Dichlorobenzene	2010/09/10		80	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/10		105	%	70 - 130
			Hexachlorobutadiene	2010/09/10		99	%	70 - 130
			Hexane	2010/09/10		84	%	70 - 130
			Cyclohexane	2010/09/10		90	%	70 - 130
			Tetrahydrofuran	2010/09/10		89	%	70 - 130
			1,4-Dioxane	2010/09/10		65 (1)	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/10		100	%	60 - 140
			D5-Chlorobenzene	2010/09/10		99	%	60 - 140
			Difluorobenzene	2010/09/10		100	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/10	<0.20		ppbv	
			Carbon Disulfide	2010/09/10	<0.50		ppbv	
			Propene	2010/09/10	<0.30		ppbv	
			Vinyl Acetate	2010/09/10	<0.20		ppbv	
			Vinyl Bromide	2010/09/10	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/10	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/10	<0.17		ppbv	
			Chloromethane	2010/09/10	<0.30		ppbv	
			Vinyl Chloride	2010/09/10	<0.18		ppbv	
			Chloroethane	2010/09/10	<0.30		ppbv	
			1,3-Butadiene	2010/09/10	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/10	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/10	<0.15		ppbv	
			Ethanol	2010/09/10	<2.3		ppbv	
			2-propanol	2010/09/10	<3.0		ppbv	
			2-Propanone	2010/09/10	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/10	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/10	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/10	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/10	<0.20		ppbv	
			Ethyl Acetate	2010/09/10	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/10	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/10	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/10	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/10	0.45, RDL=0.30		ppbv	
			Chloroform	2010/09/10	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/10	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/10	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/10	<0.20		ppbv	
			Ethylene Dibromide	2010/09/10	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/10	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/10	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/10	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/10	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/10	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/10	<0.40		ppbv	
			Bromomethane	2010/09/10	<0.18		ppbv	
			Bromoform	2010/09/10	<0.20		ppbv	
			Bromodichloromethane	2010/09/10	<0.20		ppbv	
			Dibromochloromethane	2010/09/10	<0.20		ppbv	
			Heptane	2010/09/10	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C2787

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2263812	MMU	Method Blank	Trichloroethylene	2010/09/10	<0.30		ppbv	
			Tetrachloroethylene	2010/09/10	<0.20		ppbv	
			Benzene	2010/09/10	<0.18		ppbv	
			Toluene	2010/09/10	<0.20		ppbv	
			Ethylbenzene	2010/09/10	<0.20		ppbv	
			p+m-Xylene	2010/09/10	<0.37		ppbv	
			o-Xylene	2010/09/10	<0.20		ppbv	
			Styrene	2010/09/10	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/10	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/10	<0.50		ppbv	
			4-ethyltoluene	2010/09/10	<2.2		ppbv	
			Chlorobenzene	2010/09/10	<0.20		ppbv	
			Benzyl chloride	2010/09/10	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/10	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/10	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/10	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/10	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/10	<3.0		ppbv	
			Hexane	2010/09/10	<0.30		ppbv	
			Cyclohexane	2010/09/10	<0.20		ppbv	
			Tetrahydrofuran	2010/09/10	<0.40		ppbv	
			1,4-Dioxane	2010/09/10	<2.0		ppbv	
			Xylene (Total)	2010/09/10	<0.60		ppbv	
		RPD - Sample/Sample Dup	Vinyl Acetate	2010/09/10	NC		%	25
			Vinyl Bromide	2010/09/10	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/09/10	NC		%	25
			Chloromethane	2010/09/10	NC		%	25
			Chloroethane	2010/09/10	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/09/10	NC		%	25
			Trichlorotrifluoroethane	2010/09/10	NC		%	25
			Ethanol	2010/09/10	NC		%	25
			2-propanol	2010/09/10	NC		%	25
			2-Propanone	2010/09/10	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/09/10	NC		%	25
			Methyl Isobutyl Ketone	2010/09/10	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/09/10	NC		%	25
			Ethyl Acetate	2010/09/10	NC		%	25
			1,1-Dichloroethylene	2010/09/10	NC		%	25
			cis-1,2-Dichloroethylene	2010/09/10	NC		%	25
			trans-1,2-Dichloroethylene	2010/09/10	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/09/10	NC		%	25
			Chloroform	2010/09/10	NC		%	25
			Carbon Tetrachloride	2010/09/10	NC		%	25
			1,1-Dichloroethane	2010/09/10	NC		%	25
			1,2-Dichloroethane	2010/09/10	NC		%	25
			Ethylene Dibromide	2010/09/10	NC		%	25
			1,1,1-Trichloroethane	2010/09/10	NC		%	25
			1,1,2-Trichloroethane	2010/09/10	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/09/10	NC		%	25
			Bromodichloromethane	2010/09/10	NC		%	25
			Heptane	2010/09/10	NC		%	25
			Trichloroethylene	2010/09/10	NC		%	25
			Tetrachloroethylene	2010/09/10	NC		%	25

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C2787

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2263812	MMU	RPD - Sample/Sample Dup	Benzene	2010/09/10	NC		%	25
			Toluene	2010/09/10	NC		%	25
			Ethylbenzene	2010/09/10	NC		%	25
			p+m-Xylene	2010/09/10	NC		%	25
			o-Xylene	2010/09/10	NC		%	25
			Styrene	2010/09/10	NC		%	25
			1,3,5-Trimethylbenzene	2010/09/10	NC		%	25
			1,2,4-Trimethylbenzene	2010/09/10	NC		%	25
			4-ethyltoluene	2010/09/10	NC		%	25
			Chlorobenzene	2010/09/10	NC		%	25
			1,3-Dichlorobenzene	2010/09/10	NC		%	25
			1,4-Dichlorobenzene	2010/09/10	NC		%	25
			1,2-Dichlorobenzene	2010/09/10	NC		%	25
			Hexane	2010/09/10	NC		%	25
			Xylene (Total)	2010/09/10	NC		%	25

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

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Sept 05,10

Sampler s/n: 6200
Canister ID: 7832
Canister Installation Date/Time: Sept 03, 10 @ 7:28 mst
Canister Removal Date/Time: Sept 07, 10 @ 9:28 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
05-Sep-10	05/09/2010 0:00	06/09/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

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

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

Comments: System leak check prior to sampling. COC # 3634

Technician Signiture: Ting Xu

Your C.O.C. #: 3634

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

Report Date: 2010/09/17

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C6080
Received: 2010/09/13, 08:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/09/14	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/09/14	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

RESULTS OF ANALYSES OF AIR

Maxxam ID		HD1263	HD1264	
Sampling Date		2010/09/05	2010/09/05	
COC Number		3634	3634	
	Units	**LICA VOC\CLS\SEP 05,10 - #7789**	**LICA VOC\PORT\SEP 05,10 - #7832**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2266358

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD1263			HD1264				
Sampling Date		2010/09/05			2010/09/05				
COC Number		3634			3634				
	Units	**LICA VOC\CLS\SEP 05,10 - #7789**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\SEP 05,10 - #7832**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2266388
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2266388
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2266388
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2266388
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2266388
Dichlorodifluoromethane (FREON 12)	ppbv	0.54	2.69	0.989	0.53	0.20	2.60	0.989	2266388
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2266388
Chloromethane	ppbv	0.32	0.666	0.620	0.31	0.30	0.637	0.620	2266388
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2266388
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2266388
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2266388
Trichlorofluoromethane (FREON 11)	ppbv	0.27	1.50	1.12	0.27	0.20	1.50	1.12	2266388
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2266388
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2266388
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2266388
2-Propanone	ppbv	2.19	5.20	1.90	2.79	0.80	6.63	1.90	2266388
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2266388
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2266388
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2266388
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2266388
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2266388
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2266388
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2266388
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2266388
Methylene Chloride(Dichloromethane)	ppbv	0.33	1.15	1.04	0.33	0.30	1.16	1.04	2266388
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2266388
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2266388
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2266388
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2266388
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2266388
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2266388

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD1263			HD1264				
Sampling Date		2010/09/05			2010/09/05				
COC Number		3634			3634				
	Units	**LICA VOC\CLS\SEP 05,10 - #7789**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\SEP 05,10 - #7832**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2266388
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2266388
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2266388
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2266388
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2266388
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2266388
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2266388
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2266388
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2266388
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2266388
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2266388
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2266388
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2266388
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2266388
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2266388
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2266388
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2266388
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2266388
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2266388
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2266388
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2266388
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2266388
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2266388
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2266388
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2266388
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2266388
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2266388
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2266388
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2266388
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2266388
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2266388
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2266388
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2266388

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD1263			HD1264				
Sampling Date		2010/09/05			2010/09/05				
COC Number		3634			3634				
	Units	**LICA VOC\CLS\SEP 05,10 - #7789**	**ug/m3**	**DL (ug/m3)**	**LICA VOC\PORT\SEP 05,10 - #7832**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	70	N/A	N/A	66		N/A	N/A	2266388
D5-Chlorobenzene	%	65	N/A	N/A	61		N/A	N/A	2266388
Difluorobenzene	%	71	N/A	N/A	68		N/A	N/A	2266388

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

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

Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

Test Summary

Maxxam ID HD1263 **Collected** 2010/09/05
Sample ID LICA VOC\CLS\SEP 05,10 - #7789 **Shipped**
Matrix AIR **Received** 2010/09/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2266358	N/A	2010/09/14	S_S
Volatile Organics in Air (TO-15)	GC/MS	2266388	N/A	2010/09/14	S_S

Maxxam ID HD1263 Dup **Collected** 2010/09/05
Sample ID LICA VOC\CLS\SEP 05,10 - #7789 **Shipped**
Matrix AIR **Received** 2010/09/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Volatile Organics in Air (TO-15)	GC/MS	2266388	N/A	2010/09/14	S_S

Maxxam ID HD1264 **Collected** 2010/09/05
Sample ID LICA VOC\PORT\SEP 05,10 - #7832 **Shipped**
Matrix AIR **Received** 2010/09/13

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2266358	N/A	2010/09/14	S_S
Volatile Organics in Air (TO-15)	GC/MS	2266388	N/A	2010/09/14	S_S

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Maxxam Analytics

Maxxam Job #: B0C6080
Report Date: 2010/09/17

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0C6080

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2266388	S_S	Spiked Blank	Bromochloromethane	2010/09/14		100	%	60 - 140
			D5-Chlorobenzene	2010/09/14		97	%	60 - 140
			Difluorobenzene	2010/09/14		101	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/14		88	%	70 - 130
			Carbon Disulfide	2010/09/14		92	%	70 - 130
			Propene	2010/09/14		86	%	70 - 130
			Vinyl Acetate	2010/09/14		101	%	70 - 130
			Vinyl Bromide	2010/09/14		92	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/14		95	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/14		84	%	70 - 130
			Chloromethane	2010/09/14		88	%	70 - 130
			Vinyl Chloride	2010/09/14		93	%	70 - 130
			Chloroethane	2010/09/14		93	%	70 - 130
			1,3-Butadiene	2010/09/14		79	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/14		95	%	70 - 130
			Trichlorotrifluoroethane	2010/09/14		93	%	70 - 130
			Ethanol	2010/09/14		102	%	70 - 130
			2-propanol	2010/09/14		92	%	70 - 130
			2-Propanone	2010/09/14		100	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/14		104	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/14		91	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/14		95	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/14		94	%	70 - 130
			Ethyl Acetate	2010/09/14		86	%	70 - 130
			1,1-Dichloroethylene	2010/09/14		91	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/14		93	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/14		91	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/14		81	%	70 - 130
			Chloroform	2010/09/14		92	%	70 - 130
			Carbon Tetrachloride	2010/09/14		99	%	70 - 130
			1,1-Dichloroethane	2010/09/14		91	%	70 - 130
			1,2-Dichloroethane	2010/09/14		90	%	70 - 130
			Ethylene Dibromide	2010/09/14		89	%	70 - 130
			1,1,1-Trichloroethane	2010/09/14		96	%	70 - 130
			1,1,2-Trichloroethane	2010/09/14		93	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/14		90	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/14		101	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/14		97	%	70 - 130
			1,2-Dichloropropane	2010/09/14		92	%	70 - 130
			Bromomethane	2010/09/14		96	%	70 - 130
			Bromoform	2010/09/14		97	%	70 - 130
			Bromodichloromethane	2010/09/14		95	%	70 - 130
			Dibromochloromethane	2010/09/14		94	%	70 - 130
			Heptane	2010/09/14		91	%	70 - 130
			Trichloroethylene	2010/09/14		95	%	70 - 130
			Tetrachloroethylene	2010/09/14		93	%	70 - 130
			Benzene	2010/09/14		92	%	70 - 130
			Toluene	2010/09/14		96	%	70 - 130
			Ethylbenzene	2010/09/14		93	%	70 - 130
			p+m-Xylene	2010/09/14		94	%	70 - 130
			o-Xylene	2010/09/14		93	%	70 - 130
			Styrene	2010/09/14		92	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/14		91	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/14		90	%	70 - 130
			4-ethyltoluene	2010/09/14		90	%	70 - 130

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C6080

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2266388	S_S	Spiked Blank	Chlorobenzene	2010/09/14		87	%	70 - 130
			Benzyl chloride	2010/09/14		87	%	70 - 130
			1,3-Dichlorobenzene	2010/09/14		85	%	70 - 130
			1,4-Dichlorobenzene	2010/09/14		81	%	70 - 130
			1,2-Dichlorobenzene	2010/09/14		82	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/14		65 (1)	%	70 - 130
			Hexachlorobutadiene	2010/09/14		90	%	70 - 130
			Hexane	2010/09/14		92	%	70 - 130
			Cyclohexane	2010/09/14		92	%	70 - 130
			Tetrahydrofuran	2010/09/14		89	%	70 - 130
			1,4-Dioxane	2010/09/14		94	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/14		73	%	60 - 140
			D5-Chlorobenzene	2010/09/14		65	%	60 - 140
			Difluorobenzene	2010/09/14		73	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/14	<0.20		ppbv	
			Carbon Disulfide	2010/09/14	<0.50		ppbv	
			Propene	2010/09/14	<0.30		ppbv	
			Vinyl Acetate	2010/09/14	<0.20		ppbv	
			Vinyl Bromide	2010/09/14	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/14	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/14	<0.17		ppbv	
			Chloromethane	2010/09/14	<0.30		ppbv	
			Vinyl Chloride	2010/09/14	<0.18		ppbv	
			Chloroethane	2010/09/14	<0.30		ppbv	
			1,3-Butadiene	2010/09/14	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/14	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/14	<0.15		ppbv	
			Ethanol	2010/09/14	<2.3		ppbv	
			2-propanol	2010/09/14	<3.0		ppbv	
			2-Propanone	2010/09/14	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/14	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/14	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/14	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/14	<0.20		ppbv	
			Ethyl Acetate	2010/09/14	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/14	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/14	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/14	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/14	<0.30		ppbv	
			Chloroform	2010/09/14	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/14	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/14	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/14	<0.20		ppbv	
			Ethylene Dibromide	2010/09/14	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/14	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/14	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/14	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/14	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/14	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/14	<0.40		ppbv	
			Bromomethane	2010/09/14	<0.18		ppbv	
			Bromoform	2010/09/14	<0.20		ppbv	
			Bromodichloromethane	2010/09/14	<0.20		ppbv	
			Dibromochloromethane	2010/09/14	<0.20		ppbv	
			Heptane	2010/09/14	<0.30		ppbv	

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C6080

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2266388	S_S	Method Blank	Trichloroethylene	2010/09/14	<0.30		ppbv	
			Tetrachloroethylene	2010/09/14	<0.20		ppbv	
			Benzene	2010/09/14	<0.18		ppbv	
			Toluene	2010/09/14	<0.20		ppbv	
			Ethylbenzene	2010/09/14	<0.20		ppbv	
			p+m-Xylene	2010/09/14	<0.37		ppbv	
			o-Xylene	2010/09/14	<0.20		ppbv	
			Styrene	2010/09/14	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/14	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/14	<0.50		ppbv	
			4-ethyltoluene	2010/09/14	<2.2		ppbv	
			Chlorobenzene	2010/09/14	<0.20		ppbv	
			Benzyl chloride	2010/09/14	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/14	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/14	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/14	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/14	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/14	<3.0		ppbv	
			Hexane	2010/09/14	<0.30		ppbv	
			Cyclohexane	2010/09/14	<0.20		ppbv	
			Tetrahydrofuran	2010/09/14	<0.40		ppbv	
			1,4-Dioxane	2010/09/14	<2.0		ppbv	
			Xylene (Total)	2010/09/14	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/09/14	NC		%	25
			Carbon Disulfide	2010/09/14	NC		%	25
			Propene	2010/09/14	NC		%	25
			Vinyl Acetate	2010/09/14	NC		%	25
			Vinyl Bromide	2010/09/14	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/09/14	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/09/14	NC		%	25
			Chloromethane	2010/09/14	NC		%	25
			Vinyl Chloride	2010/09/14	NC		%	25
			Chloroethane	2010/09/14	NC		%	25
			1,3-Butadiene	2010/09/14	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/09/14	NC		%	25
			Trichlorotrifluoroethane	2010/09/14	NC		%	25
			Ethanol	2010/09/14	NC		%	25
			2-propanol	2010/09/14	NC		%	25
			2-Propanone	2010/09/14	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/09/14	NC		%	25
			Methyl Isobutyl Ketone	2010/09/14	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/09/14	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/09/14	NC		%	25
			Ethyl Acetate	2010/09/14	NC		%	25
			1,1-Dichloroethylene	2010/09/14	NC		%	25
			cis-1,2-Dichloroethylene	2010/09/14	NC		%	25
			trans-1,2-Dichloroethylene	2010/09/14	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/09/14	NC		%	25
			Chloroform	2010/09/14	NC		%	25
			Carbon Tetrachloride	2010/09/14	NC		%	25
			1,1-Dichloroethane	2010/09/14	NC		%	25
			1,2-Dichloroethane	2010/09/14	NC		%	25
			Ethylene Dibromide	2010/09/14	NC		%	25

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C6080

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2266388	S_S	RPD - Sample/Sample Dup	1,1,1-Trichloroethane	2010/09/14	NC		%	25
			1,1,2-Trichloroethane	2010/09/14	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/09/14	NC		%	25
			cis-1,3-Dichloropropene	2010/09/14	NC		%	25
			trans-1,3-Dichloropropene	2010/09/14	NC		%	25
			1,2-Dichloropropane	2010/09/14	NC		%	25
			Bromomethane	2010/09/14	NC		%	25
			Bromoform	2010/09/14	NC		%	25
			Bromodichloromethane	2010/09/14	NC		%	25
			Dibromochloromethane	2010/09/14	NC		%	25
			Heptane	2010/09/14	NC		%	25
			Trichloroethylene	2010/09/14	NC		%	25
			Tetrachloroethylene	2010/09/14	NC		%	25
			Benzene	2010/09/14	NC		%	25
			Toluene	2010/09/14	NC		%	25
			Ethylbenzene	2010/09/14	NC		%	25
			p+m-Xylene	2010/09/14	NC		%	25
			o-Xylene	2010/09/14	NC		%	25
			Styrene	2010/09/14	NC		%	25
			1,3,5-Trimethylbenzene	2010/09/14	NC		%	25
			1,2,4-Trimethylbenzene	2010/09/14	NC		%	25
			4-ethyltoluene	2010/09/14	NC		%	25
			Chlorobenzene	2010/09/14	NC		%	25
			Benzyl chloride	2010/09/14	NC		%	25
			1,3-Dichlorobenzene	2010/09/14	NC		%	25
			1,4-Dichlorobenzene	2010/09/14	NC		%	25
			1,2-Dichlorobenzene	2010/09/14	NC		%	25
			1,2,4-Trichlorobenzene	2010/09/14	NC		%	25
			Hexachlorobutadiene	2010/09/14	NC		%	25
			Hexane	2010/09/14	NC		%	25
			Cyclohexane	2010/09/14	NC		%	25
			Tetrahydrofuran	2010/09/14	NC		%	25
			1,4-Dioxane	2010/09/14	NC		%	25
			Xylene (Total)	2010/09/14	NC		%	25

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

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Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Sept 11,10

Sampler s/n: 6200
Canister ID: 7894
Canister Installation Date/Time: Sept 10, 10 @ 9:25 mst
Canister Removal Date/Time: Sept 13, 10 @ 10:13 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
11-Sep-10	11/09/2010 0:00	12/09/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

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

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

Comments: System leak check prior to sampling. COC # 3725

Technician Signiture: Ting Xu

Your C.O.C. #: 3725

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

Report Date: 2010/09/21

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C7600
Received: 2010/09/15, 10:00

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/09/16	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/09/16	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

RESULTS OF ANALYSES OF AIR

Maxxam ID		HD8438	HD8439	
Sampling Date		2010/09/11	2010/09/11	
COC Number		3725	3725	
	Units	**LICA VOC/CLS/SEP 11,10 - 7840**	**LICA VOC/ PORT/SEP 11,10 - 7894**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2268664

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD8438			HD8439				
Sampling Date		2010/09/11			2010/09/11				
COC Number		3725			3725				
	Units	**LICA VOC/CLS/SEP 11,10 - 7840**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/ PORT/SEP 11,10 - 7894**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2268860
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2268860
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2268860
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2268860
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2268860
Dichlorodifluoromethane (FREON 12)	ppbv	0.54	2.68	0.989	0.52	0.20	2.59	0.989	2268860
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2268860
Chloromethane	ppbv	0.30	0.629	0.620	0.31	0.30	0.639	0.620	2268860
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2268860
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2268860
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2268860
Trichlorofluoromethane (FREON 11)	ppbv	0.27	1.50	1.12	0.26	0.20	1.44	1.12	2268860
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2268860
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2268860
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2268860
2-Propanone	ppbv	1.88	4.46	1.90	2.03	0.80	4.82	1.90	2268860
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2268860
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2268860
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2268860
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2268860
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2268860
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2268860
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2268860
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2268860
Methylene Chloride(Dichloromethane)	ppbv	0.33	1.16	1.04	12.5	0.30	43.4	1.04	2268860
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2268860
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2268860
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2268860
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2268860
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2268860
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2268860

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD8438			HD8439				
Sampling Date		2010/09/11			2010/09/11				
COC Number		3725			3725				
	Units	**LICA VOC/CLS/SEP 11,10 - 7840**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/ PORT/SEP 11,10 - 7894**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2268860
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2268860
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2268860
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2268860
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2268860
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2268860
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2268860
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2268860
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2268860
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2268860
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2268860
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2268860
Benzene	ppbv	<0.18	<0.575	0.575	0.32	0.18	1.03	0.575	2268860
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2268860
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2268860
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2268860
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2268860
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2268860
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2268860
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2268860
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2268860
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2268860
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2268860
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2268860
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2268860
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2268860
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2268860
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2268860
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2268860
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2268860
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2268860
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2268860
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2268860

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HD8438			HD8439				
Sampling Date		2010/09/11			2010/09/11				
COC Number		3725			3725				
	Units	**LICA VOC/CLS/SEP 11,10 - 7840**	**ug/m3**	**DL (ug/m3)**	**LICA VOC/ PORT/SEP 11,10 - 7894**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	77	N/A	N/A	78		N/A	N/A	2268860
D5-Chlorobenzene	%	72	N/A	N/A	79		N/A	N/A	2268860
Difluorobenzene	%	80	N/A	N/A	81		N/A	N/A	2268860

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

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

Test Summary

Maxxam ID	HD8438	**Collected**	2010/09/11
Sample ID	LICA VOC/CLS/SEP 11,10 - 7840	**Shipped**	
Matrix	AIR	**Received**	2010/09/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2268664	N/A	2010/09/16	S_S
Volatile Organics in Air (TO-15)	GC/MS	2268860	N/A	2010/09/16	S_S

Maxxam ID	HD8439	**Collected**	2010/09/11
Sample ID	LICA VOC/ PORT/SEP 11,10 - 7894	**Shipped**	
Matrix	AIR	**Received**	2010/09/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2268664	N/A	2010/09/16	S_S
Volatile Organics in Air (TO-15)	GC/MS	2268860	N/A	2010/09/16	S_S

Maxxam Analytics

Maxxam Job #: B0C7600
Report Date: 2010/09/21

GENERAL COMMENTS

Results relate only to the items tested.

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

Quality Assurance Report

Maxxam Job Number: GB0C7600

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2268860	S_S	Spiked Blank	Bromochloromethane	2010/09/16		109	%	60 - 140
			D5-Chlorobenzene	2010/09/16		113	%	60 - 140
			Difluorobenzene	2010/09/16		113	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/16		90	%	70 - 130
			Carbon Disulfide	2010/09/16		89	%	70 - 130
			Propene	2010/09/16		82	%	70 - 130
			Vinyl Acetate	2010/09/16		98	%	70 - 130
			Vinyl Bromide	2010/09/16		89	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/16		97	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/16		84	%	70 - 130
			Chloromethane	2010/09/16		87	%	70 - 130
			Vinyl Chloride	2010/09/16		90	%	70 - 130
			Chloroethane	2010/09/16		89	%	70 - 130
			1,3-Butadiene	2010/09/16		75	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/16		96	%	70 - 130
			Trichlorotrifluoroethane	2010/09/16		91	%	70 - 130
			Ethanol	2010/09/16		97	%	70 - 130
			2-propanol	2010/09/16		90	%	70 - 130
			2-Propanone	2010/09/16		99	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/16		105	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/16		95	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/16		100	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/16		91	%	70 - 130
			Ethyl Acetate	2010/09/16		86	%	70 - 130
			1,1-Dichloroethylene	2010/09/16		90	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/16		93	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/16		89	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/16		80	%	70 - 130
			Chloroform	2010/09/16		93	%	70 - 130
			Carbon Tetrachloride	2010/09/16		101	%	70 - 130
			1,1-Dichloroethane	2010/09/16		91	%	70 - 130
			1,2-Dichloroethane	2010/09/16		92	%	70 - 130
			Ethylene Dibromide	2010/09/16		96	%	70 - 130
			1,1,1-Trichloroethane	2010/09/16		98	%	70 - 130
			1,1,2-Trichloroethane	2010/09/16		98	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/16		94	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/16		103	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/16		99	%	70 - 130
			1,2-Dichloropropane	2010/09/16		94	%	70 - 130
			Bromomethane	2010/09/16		94	%	70 - 130
			Bromoform	2010/09/16		100	%	70 - 130
			Bromodichloromethane	2010/09/16		100	%	70 - 130
			Dibromochloromethane	2010/09/16		101	%	70 - 130
			Heptane	2010/09/16		94	%	70 - 130
			Trichloroethylene	2010/09/16		97	%	70 - 130
			Tetrachloroethylene	2010/09/16		100	%	70 - 130
			Benzene	2010/09/16		92	%	70 - 130
			Toluene	2010/09/16		101	%	70 - 130
			Ethylbenzene	2010/09/16		95	%	70 - 130
			p+m-Xylene	2010/09/16		96	%	70 - 130
			o-Xylene	2010/09/16		97	%	70 - 130
			Styrene	2010/09/16		93	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/16		95	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/16		94	%	70 - 130
			4-ethyltoluene	2010/09/16		94	%	70 - 130

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C7600

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2268860	S_S	Spiked Blank	Chlorobenzene	2010/09/16		88	%	70 - 130
			Benzyl chloride	2010/09/16		89	%	70 - 130
			1,3-Dichlorobenzene	2010/09/16		88	%	70 - 130
			1,4-Dichlorobenzene	2010/09/16		84	%	70 - 130
			1,2-Dichlorobenzene	2010/09/16		86	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/16		65 (1)	%	70 - 130
			Hexachlorobutadiene	2010/09/16		86	%	70 - 130
			Hexane	2010/09/16		92	%	70 - 130
			Cyclohexane	2010/09/16		93	%	70 - 130
			Tetrahydrofuran	2010/09/16		90	%	70 - 130
			1,4-Dioxane	2010/09/16		96	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/16		99	%	60 - 140
			D5-Chlorobenzene	2010/09/16		89	%	60 - 140
			Difluorobenzene	2010/09/16		104	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/16	<0.20		ppbv	
			Carbon Disulfide	2010/09/16	<0.50		ppbv	
			Propene	2010/09/16	<0.30		ppbv	
			Vinyl Acetate	2010/09/16	<0.20		ppbv	
			Vinyl Bromide	2010/09/16	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/16	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/16	<0.17		ppbv	
			Chloromethane	2010/09/16	<0.30		ppbv	
			Vinyl Chloride	2010/09/16	<0.18		ppbv	
			Chloroethane	2010/09/16	<0.30		ppbv	
			1,3-Butadiene	2010/09/16	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/16	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/16	<0.15		ppbv	
			Ethanol	2010/09/16	<2.3		ppbv	
			2-propanol	2010/09/16	<3.0		ppbv	
			2-Propanone	2010/09/16	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/16	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/16	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/16	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/16	<0.20		ppbv	
			Ethyl Acetate	2010/09/16	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/16	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/16	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/16	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/16	<0.30		ppbv	
			Chloroform	2010/09/16	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/16	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/16	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/16	<0.20		ppbv	
			Ethylene Dibromide	2010/09/16	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/16	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/16	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/16	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/16	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/16	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/16	<0.40		ppbv	
			Bromomethane	2010/09/16	<0.18		ppbv	
			Bromoform	2010/09/16	<0.20		ppbv	
			Bromodichloromethane	2010/09/16	<0.20		ppbv	
			Dibromochloromethane	2010/09/16	<0.20		ppbv	
			Heptane	2010/09/16	<0.30		ppbv	

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

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C7600

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2268860	S_S	Method Blank	Trichloroethylene	2010/09/16	<0.30		ppbv	
			Tetrachloroethylene	2010/09/16	<0.20		ppbv	
			Benzene	2010/09/16	<0.18		ppbv	
			Toluene	2010/09/16	<0.20		ppbv	
			Ethylbenzene	2010/09/16	<0.20		ppbv	
			p+m-Xylene	2010/09/16	<0.37		ppbv	
			o-Xylene	2010/09/16	<0.20		ppbv	
			Styrene	2010/09/16	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/16	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/16	<0.50		ppbv	
			4-ethyltoluene	2010/09/16	<2.2		ppbv	
			Chlorobenzene	2010/09/16	<0.20		ppbv	
			Benzyl chloride	2010/09/16	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/16	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/16	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/16	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/16	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/16	<3.0		ppbv	
			Hexane	2010/09/16	<0.30		ppbv	
			Cyclohexane	2010/09/16	<0.20		ppbv	
			Tetrahydrofuran	2010/09/16	<0.40		ppbv	
			1,4-Dioxane	2010/09/16	<2.0		ppbv	
			Xylene (Total)	2010/09/16	<0.60		ppbv	

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

Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Sept 17,10

Sampler s/n: 6200
Canister ID: 7801
Canister Installation Date/Time: Sept 16, 10 @ 15:28 mst
Canister Removal Date/Time: Sept 20, 10 @ 8:52 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
17-Sep-10	17/09/2010 0:00	18/09/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	21

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

Comments: System leak check prior to sampling. COC # 4704

Technician Signiture: Ting Xu

Your C.O.C. #: 4704

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

Report Date: 2010/10/01

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D3630
Received: 2010/09/24, 09:55

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	1	N/A	2010/09/27	BRL SOP-00304	EPA TO-15
Canister Pressure (TO-15)	1	N/A	2010/09/28	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/09/27	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/09/28	BRL SOP-00304	EPA TO-15

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

RESULTS OF ANALYSES OF AIR

Maxxam ID		HG6492		HG6493	
Sampling Date		2010/09/17		2010/09/17	
COC Number		4704		4704	
	Units	**LICA VOC / PORT / SEP 17,10 - 7914**	**QC Batch**	**LICA VOC / PORT / SEP 17,10 - 7801**	**QC Batch**
Volatile Organics					
Pressure on Receipt	psig	20	2280063	22	2280705

QC Batch = Quality Control Batch

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

Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6492				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2280057
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2280057
Propene	ppbv	<0.30	0.30	<0.516	0.516	2280057
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2280057
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2280057
Dichlorodifluoromethane (FREON 12)	ppbv	0.70	0.20	3.44	0.989	2280057
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2280057
Chloromethane	ppbv	0.46	0.30	0.949	0.620	2280057
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2280057
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2280057
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2280057
Trichlorofluoromethane (FREON 11)	ppbv	0.34	0.20	1.89	1.12	2280057
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2280057
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2280057
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2280057
2-Propanone	ppbv	1.73	0.80	4.11	1.90	2280057
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2280057
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2280057
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2280057
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2280057
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2280057
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2280057
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2280057
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2280057
Methylene Chloride(Dichloromethane)	ppbv	<1.0	1.0	<3.47	3.47	2280057
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2280057
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2280057
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2280057
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2280057
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2280057
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2280057

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6492				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2280057
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2280057
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2280057
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2280057
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2280057
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2280057
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2280057
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2280057
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2280057
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2280057
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2280057
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2280057
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2280057
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2280057
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2280057
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2280057
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2280057
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2280057
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2280057
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2280057
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2280057
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2280057
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2280057
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280057
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280057
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280057
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2280057
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2280057
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2280057
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2280057
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2280057
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2280057
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2280057

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6492				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7914**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	64		N/A	N/A	2280057
D5-Chlorobenzene	%	63		N/A	N/A	2280057
Difluorobenzene	%	66		N/A	N/A	2280057

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

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6493				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7801**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2280710
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2280710
Propene	ppbv	<0.30	0.30	<0.516	0.516	2280710
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2280710
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2280710
Dichlorodifluoromethane (FREON 12)	ppbv	0.63	0.20	3.11	0.989	2280710
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2280710
Chloromethane	ppbv	0.39	0.30	0.809	0.620	2280710
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2280710
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2280710
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2280710
Trichlorofluoromethane (FREON 11)	ppbv	0.31	0.20	1.76	1.12	2280710
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2280710
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2280710
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2280710
2-Propanone	ppbv	1.96	0.80	4.65	1.90	2280710
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2280710
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2280710
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2280710
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2280710
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2280710
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2280710
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2280710
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2280710
Methylene Chloride(Dichloromethane)	ppbv	<0.80	0.80	<2.78	2.78	2280710
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2280710
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2280710
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2280710
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2280710
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2280710
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2280710

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6493				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7801**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2280710
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2280710
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2280710
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2280710
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2280710
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2280710
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2280710
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2280710
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2280710
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2280710
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2280710
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2280710
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2280710
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2280710
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2280710
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2280710
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2280710
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2280710
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2280710
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2280710
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2280710
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2280710
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2280710
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280710
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280710
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2280710
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2280710
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2280710
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2280710
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2280710
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2280710
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2280710
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2280710

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HG6493				
Sampling Date		2010/09/17				
COC Number		4704				
	Units	**LICA VOC / PORT / SEP 17,10 - 7801**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)						
Bromochloromethane	%	86		N/A	N/A	2280710
D5-Chlorobenzene	%	81		N/A	N/A	2280710
Difluorobenzene	%	90		N/A	N/A	2280710

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

Test Summary

Maxxam ID HG6492 **Collected** 2010/09/17
Sample ID LICA VOC / PORT / SEP 17,10 - 7914 **Shipped**
Matrix AIR **Received** 2010/09/24

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2280063	N/A	2010/09/27	MMU
Volatile Organics in Air (TO-15)	GC/MS	2280057	N/A	2010/09/27	MMU

Maxxam ID HG6493 **Collected** 2010/09/17
Sample ID LICA VOC / PORT / SEP 17,10 - 7801 **Shipped**
Matrix AIR **Received** 2010/09/24

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2280705	N/A	2010/09/28	MMU
Volatile Organics in Air (TO-15)	GC/MS	2280710	N/A	2010/09/28	MMU

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Maxxam Analytics

Maxxam Job #: B0D3630
Report Date: 2010/10/01

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280057	MMU	Spiked Blank	Bromochloromethane	2010/09/27		103	%	60 - 140
			D5-Chlorobenzene	2010/09/27		102	%	60 - 140
			Difluorobenzene	2010/09/27		105	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/27		85	%	70 - 130
			Carbon Disulfide	2010/09/27		107	%	70 - 130
			Propene	2010/09/27		91	%	70 - 130
			Vinyl Acetate	2010/09/27		98	%	70 - 130
			Vinyl Bromide	2010/09/27		93	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/27		94	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/27		81	%	70 - 130
			Chloromethane	2010/09/27		87	%	70 - 130
			Vinyl Chloride	2010/09/27		94	%	70 - 130
			Chloroethane	2010/09/27		87	%	70 - 130
			1,3-Butadiene	2010/09/27		93	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/27		89	%	70 - 130
			Trichlorotrifluoroethane	2010/09/27		100	%	70 - 130
			Ethanol	2010/09/27		95	%	70 - 130
			2-propanol	2010/09/27		91	%	70 - 130
			2-Propanone	2010/09/27		81	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/27		79	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/27		88	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/27		94	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/27		94	%	70 - 130
			Ethyl Acetate	2010/09/27		83	%	70 - 130
			1,1-Dichloroethylene	2010/09/27		103	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/27		92	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/27		90	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/27		92	%	70 - 130
			Chloroform	2010/09/27		87	%	70 - 130
			Carbon Tetrachloride	2010/09/27		92	%	70 - 130
			1,1-Dichloroethane	2010/09/27		83	%	70 - 130
			1,2-Dichloroethane	2010/09/27		89	%	70 - 130
			Ethylene Dibromide	2010/09/27		89	%	70 - 130
			1,1,1-Trichloroethane	2010/09/27		91	%	70 - 130
			1,1,2-Trichloroethane	2010/09/27		86	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/27		76	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/27		92	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/27		101	%	70 - 130
			1,2-Dichloropropane	2010/09/27		84	%	70 - 130
			Bromomethane	2010/09/27		93	%	70 - 130
			Bromoform	2010/09/27		97	%	70 - 130
			Bromodichloromethane	2010/09/27		87	%	70 - 130
			Dibromochloromethane	2010/09/27		92	%	70 - 130
			Heptane	2010/09/27		82	%	70 - 130
			Trichloroethylene	2010/09/27		94	%	70 - 130
			Tetrachloroethylene	2010/09/27		95	%	70 - 130
			Benzene	2010/09/27		87	%	70 - 130
			Toluene	2010/09/27		90	%	70 - 130
			Ethylbenzene	2010/09/27		92	%	70 - 130
			p+m-Xylene	2010/09/27		88	%	70 - 130
			o-Xylene	2010/09/27		84	%	70 - 130
			Styrene	2010/09/27		96	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/27		81	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/27		78	%	70 - 130
			4-ethyltoluene	2010/09/27		79	%	70 - 130

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280057	MMU	Spiked Blank	Chlorobenzene	2010/09/27		87	%	70 - 130
			Benzyl chloride	2010/09/27		76	%	70 - 130
			1,3-Dichlorobenzene	2010/09/27		80	%	70 - 130
			1,4-Dichlorobenzene	2010/09/27		75	%	70 - 130
			1,2-Dichlorobenzene	2010/09/27		74	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/27		92	%	70 - 130
			Hexachlorobutadiene	2010/09/27		101	%	70 - 130
			Hexane	2010/09/27		79	%	70 - 130
			Cyclohexane	2010/09/27		87	%	70 - 130
			Tetrahydrofuran	2010/09/27		90	%	70 - 130
			1,4-Dioxane	2010/09/27		83	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/27		87	%	60 - 140
			D5-Chlorobenzene	2010/09/27		83	%	60 - 140
			Difluorobenzene	2010/09/27		90	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/27	<0.20		ppbv	
			Carbon Disulfide	2010/09/27	<0.50		ppbv	
			Propene	2010/09/27	<0.30		ppbv	
			Vinyl Acetate	2010/09/27	<0.20		ppbv	
			Vinyl Bromide	2010/09/27	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/27	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/27	<0.17		ppbv	
			Chloromethane	2010/09/27	<0.30		ppbv	
			Vinyl Chloride	2010/09/27	<0.18		ppbv	
			Chloroethane	2010/09/27	<0.30		ppbv	
			1,3-Butadiene	2010/09/27	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/27	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/27	<0.15		ppbv	
			Ethanol	2010/09/27	<2.3		ppbv	
			2-propanol	2010/09/27	<3.0		ppbv	
			2-Propanone	2010/09/27	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/27	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/27	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/27	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/27	<0.20		ppbv	
			Ethyl Acetate	2010/09/27	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/27	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/27	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/27	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/27	<1.0		ppbv	
			Chloroform	2010/09/27	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/27	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/27	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/27	<0.20		ppbv	
			Ethylene Dibromide	2010/09/27	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/27	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/27	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/27	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/27	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/27	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/27	<0.40		ppbv	
			Bromomethane	2010/09/27	<0.18		ppbv	
			Bromoform	2010/09/27	<0.20		ppbv	
			Bromodichloromethane	2010/09/27	<0.20		ppbv	
			Dibromochloromethane	2010/09/27	<0.20		ppbv	
			Heptane	2010/09/27	<0.30		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280057	MMU	Method Blank	Trichloroethylene	2010/09/27	<0.30		ppbv	
			Tetrachloroethylene	2010/09/27	<0.20		ppbv	
			Benzene	2010/09/27	<0.18		ppbv	
			Toluene	2010/09/27	<0.20		ppbv	
			Ethylbenzene	2010/09/27	<0.20		ppbv	
			p+m-Xylene	2010/09/27	<0.37		ppbv	
			o-Xylene	2010/09/27	<0.20		ppbv	
			Styrene	2010/09/27	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/27	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/27	<0.50		ppbv	
			4-ethyltoluene	2010/09/27	<2.2		ppbv	
			Chlorobenzene	2010/09/27	<0.20		ppbv	
			Benzyl chloride	2010/09/27	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/27	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/27	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/27	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/09/27	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/27	<3.0		ppbv	
			Hexane	2010/09/27	<0.30		ppbv	
			Cyclohexane	2010/09/27	<0.20		ppbv	
			Tetrahydrofuran	2010/09/27	<0.40		ppbv	
			1,4-Dioxane	2010/09/27	<2.0		ppbv	
			Xylene (Total)	2010/09/27	<0.60		ppbv	
		RPD - Sample/Sample Dup	Dichlorodifluoromethane (FREON 12)	2010/09/27	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/09/27	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/09/27	NC		%	25
			Trichlorotrifluoroethane	2010/09/27	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/09/27	NC		%	25
			Chloroform	2010/09/27	NC		%	25
			Carbon Tetrachloride	2010/09/27	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/09/27	3.1		%	25
			Benzene	2010/09/27	NC		%	25
			Toluene	2010/09/27	NC		%	25
			p+m-Xylene	2010/09/27	NC		%	25
			o-Xylene	2010/09/27	NC		%	25
			1,2,4-Trimethylbenzene	2010/09/27	NC		%	25
			1,2,4-Trichlorobenzene	2010/09/27	NC		%	25
2280710	MMU	Spiked Blank	Bromochloromethane	2010/09/28		101	%	60 - 140
			D5-Chlorobenzene	2010/09/28		101	%	60 - 140
			Difluorobenzene	2010/09/28		105	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/28		90	%	70 - 130
			Carbon Disulfide	2010/09/28		113	%	70 - 130
			Propene	2010/09/28		92	%	70 - 130
			Vinyl Acetate	2010/09/28		102	%	70 - 130
			Vinyl Bromide	2010/09/28		96	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/09/28		97	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/09/28		85	%	70 - 130
			Chloromethane	2010/09/28		92	%	70 - 130
			Vinyl Chloride	2010/09/28		99	%	70 - 130
			Chloroethane	2010/09/28		93	%	70 - 130
			1,3-Butadiene	2010/09/28		97	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/09/28		93	%	70 - 130
			Trichlorotrifluoroethane	2010/09/28		102	%	70 - 130

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280710	MMU	Spiked Blank	Ethanol	2010/09/28		99	%	70 - 130
			2-propanol	2010/09/28		94	%	70 - 130
			2-Propanone	2010/09/28		86	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/09/28		85	%	70 - 130
			Methyl Isobutyl Ketone	2010/09/28		95	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/09/28		101	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/09/28		95	%	70 - 130
			Ethyl Acetate	2010/09/28		87	%	70 - 130
			1,1-Dichloroethylene	2010/09/28		80	%	70 - 130
			cis-1,2-Dichloroethylene	2010/09/28		97	%	70 - 130
			trans-1,2-Dichloroethylene	2010/09/28		92	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/09/28		96	%	70 - 130
			Chloroform	2010/09/28		92	%	70 - 130
			Carbon Tetrachloride	2010/09/28		95	%	70 - 130
			1,1-Dichloroethane	2010/09/28		88	%	70 - 130
			1,2-Dichloroethane	2010/09/28		91	%	70 - 130
			Ethylene Dibromide	2010/09/28		93	%	70 - 130
			1,1,1-Trichloroethane	2010/09/28		94	%	70 - 130
			1,1,2-Trichloroethane	2010/09/28		92	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/09/28		83	%	70 - 130
			cis-1,3-Dichloropropene	2010/09/28		99	%	70 - 130
			trans-1,3-Dichloropropene	2010/09/28		107	%	70 - 130
			1,2-Dichloropropane	2010/09/28		89	%	70 - 130
			Bromomethane	2010/09/28		96	%	70 - 130
			Bromoform	2010/09/28		105	%	70 - 130
			Bromodichloromethane	2010/09/28		95	%	70 - 130
			Dibromochloromethane	2010/09/28		99	%	70 - 130
			Heptane	2010/09/28		87	%	70 - 130
			Trichloroethylene	2010/09/28		97	%	70 - 130
			Tetrachloroethylene	2010/09/28		101	%	70 - 130
			Benzene	2010/09/28		91	%	70 - 130
			Toluene	2010/09/28		95	%	70 - 130
			Ethylbenzene	2010/09/28		94	%	70 - 130
			p+m-Xylene	2010/09/28		92	%	70 - 130
			o-Xylene	2010/09/28		89	%	70 - 130
			Styrene	2010/09/28		100	%	70 - 130
			1,3,5-Trimethylbenzene	2010/09/28		85	%	70 - 130
			1,2,4-Trimethylbenzene	2010/09/28		84	%	70 - 130
			4-ethyltoluene	2010/09/28		84	%	70 - 130
			Chlorobenzene	2010/09/28		89	%	70 - 130
			Benzyl chloride	2010/09/28		81	%	70 - 130
			1,3-Dichlorobenzene	2010/09/28		83	%	70 - 130
			1,4-Dichlorobenzene	2010/09/28		78	%	70 - 130
			1,2-Dichlorobenzene	2010/09/28		78	%	70 - 130
			1,2,4-Trichlorobenzene	2010/09/28		90	%	70 - 130
			Hexachlorobutadiene	2010/09/28		103	%	70 - 130
			Hexane	2010/09/28		83	%	70 - 130
			Cyclohexane	2010/09/28		90	%	70 - 130
			Tetrahydrofuran	2010/09/28		94	%	70 - 130
			1,4-Dioxane	2010/09/28		90	%	70 - 130
		Method Blank	Bromochloromethane	2010/09/28		90	%	60 - 140
			D5-Chlorobenzene	2010/09/28		84	%	60 - 140
			Difluorobenzene	2010/09/28		93	%	60 - 140
			2,2,4-Trimethylpentane	2010/09/28	<0.20		ppbv	
			Carbon Disulfide	2010/09/28	<0.50		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280710	MMU	Method Blank	Propene	2010/09/28	<0.30		ppbv	
			Vinyl Acetate	2010/09/28	<0.20		ppbv	
			Vinyl Bromide	2010/09/28	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/09/28	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/09/28	<0.17		ppbv	
			Chloromethane	2010/09/28	<0.30		ppbv	
			Vinyl Chloride	2010/09/28	<0.18		ppbv	
			Chloroethane	2010/09/28	<0.30		ppbv	
			1,3-Butadiene	2010/09/28	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/09/28	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/09/28	<0.15		ppbv	
			Ethanol	2010/09/28	<2.3		ppbv	
			2-propanol	2010/09/28	<3.0		ppbv	
			2-Propanone	2010/09/28	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/09/28	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/09/28	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/09/28	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/09/28	<0.20		ppbv	
			Ethyl Acetate	2010/09/28	<2.2		ppbv	
			1,1-Dichloroethylene	2010/09/28	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/09/28	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/09/28	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/09/28	<0.80		ppbv	
			Chloroform	2010/09/28	<0.15		ppbv	
			Carbon Tetrachloride	2010/09/28	<0.30		ppbv	
			1,1-Dichloroethane	2010/09/28	<0.20		ppbv	
			1,2-Dichloroethane	2010/09/28	<0.20		ppbv	
			Ethylene Dibromide	2010/09/28	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/09/28	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/09/28	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/09/28	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/09/28	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/09/28	<0.17		ppbv	
			1,2-Dichloropropane	2010/09/28	<0.40		ppbv	
			Bromomethane	2010/09/28	<0.18		ppbv	
			Bromoform	2010/09/28	<0.20		ppbv	
			Bromodichloromethane	2010/09/28	<0.20		ppbv	
			Dibromochloromethane	2010/09/28	<0.20		ppbv	
			Heptane	2010/09/28	<0.30		ppbv	
			Trichloroethylene	2010/09/28	<0.30		ppbv	
			Tetrachloroethylene	2010/09/28	<0.20		ppbv	
			Benzene	2010/09/28	<0.18		ppbv	
			Toluene	2010/09/28	<0.20		ppbv	
			Ethylbenzene	2010/09/28	<0.20		ppbv	
			p+m-Xylene	2010/09/28	<0.37		ppbv	
			o-Xylene	2010/09/28	<0.20		ppbv	
			Styrene	2010/09/28	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/09/28	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/09/28	<0.50		ppbv	
			4-ethyltoluene	2010/09/28	<2.2		ppbv	
			Chlorobenzene	2010/09/28	<0.20		ppbv	
			Benzyl chloride	2010/09/28	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/09/28	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/09/28	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/09/28	<0.40		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280710	MMU	Method Blank	1,2,4-Trichlorobenzene	2010/09/28	<2.0		ppbv	
			Hexachlorobutadiene	2010/09/28	<3.0		ppbv	
			Hexane	2010/09/28	<0.30		ppbv	
			Cyclohexane	2010/09/28	<0.20		ppbv	
			Tetrahydrofuran	2010/09/28	<0.40		ppbv	
			1,4-Dioxane	2010/09/28	<2.0		ppbv	
			Xylene (Total)	2010/09/28	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/09/28	NC		%	25
			Carbon Disulfide	2010/09/28	NC		%	25
			Propene	2010/09/28	NC		%	25
			Vinyl Acetate	2010/09/28	NC		%	25
			Vinyl Bromide	2010/09/28	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/09/28	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/09/28	NC		%	25
			Chloromethane	2010/09/28	NC		%	25
			Vinyl Chloride	2010/09/28	NC		%	25
			Chloroethane	2010/09/28	NC		%	25
			1,3-Butadiene	2010/09/28	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/09/28	NC		%	25
			Trichlorotrifluoroethane	2010/09/28	NC		%	25
			Ethanol	2010/09/28	NC		%	25
			2-propanol	2010/09/28	NC		%	25
			2-Propanone	2010/09/28	NC		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/09/28	NC		%	25
			Methyl Isobutyl Ketone	2010/09/28	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/09/28	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/09/28	NC		%	25
			Ethyl Acetate	2010/09/28	NC		%	25
			1,1-Dichloroethylene	2010/09/28	NC		%	25
			cis-1,2-Dichloroethylene	2010/09/28	NC		%	25
			trans-1,2-Dichloroethylene	2010/09/28	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/09/28	NC		%	25
			Chloroform	2010/09/28	NC		%	25
			Carbon Tetrachloride	2010/09/28	NC		%	25
			1,1-Dichloroethane	2010/09/28	NC		%	25
			1,2-Dichloroethane	2010/09/28	NC		%	25
			Ethylene Dibromide	2010/09/28	NC		%	25
			1,1,1-Trichloroethane	2010/09/28	NC		%	25
			1,1,2-Trichloroethane	2010/09/28	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/09/28	NC		%	25
			cis-1,3-Dichloropropene	2010/09/28	NC		%	25
			trans-1,3-Dichloropropene	2010/09/28	NC		%	25
			1,2-Dichloropropane	2010/09/28	NC		%	25
			Bromomethane	2010/09/28	NC		%	25
			Bromoform	2010/09/28	NC		%	25
			Bromodichloromethane	2010/09/28	NC		%	25
			Dibromochloromethane	2010/09/28	NC		%	25
			Heptane	2010/09/28	NC		%	25
			Trichloroethylene	2010/09/28	NC		%	25
			Tetrachloroethylene	2010/09/28	2.1		%	25
			Benzene	2010/09/28	NC		%	25
			Toluene	2010/09/28	NC		%	25
			Ethylbenzene	2010/09/28	NC		%	25

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Quality Assurance Report (Continued)

Maxxam Job Number: GB0D3630

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2280710	MMU	RPD - Sample/Sample Dup	p+m-Xylene	2010/09/28	NC		%	25
			o-Xylene	2010/09/28	NC		%	25
			Styrene	2010/09/28	NC		%	25
			1,3,5-Trimethylbenzene	2010/09/28	NC		%	25
			1,2,4-Trimethylbenzene	2010/09/28	NC		%	25
			4-ethyltoluene	2010/09/28	NC		%	25
			Chlorobenzene	2010/09/28	NC		%	25
			Benzyl chloride	2010/09/28	NC		%	25
			1,3-Dichlorobenzene	2010/09/28	NC		%	25
			1,4-Dichlorobenzene	2010/09/28	NC		%	25
			1,2-Dichlorobenzene	2010/09/28	NC		%	25
			1,2,4-Trichlorobenzene	2010/09/28	NC		%	25
			Hexachlorobutadiene	2010/09/28	NC		%	25
			Hexane	2010/09/28	NC		%	25
			Cyclohexane	2010/09/28	NC		%	25
			Tetrahydrofuran	2010/09/28	NC		%	25
			1,4-Dioxane	2010/09/28	NC		%	25
			Xylene (Total)	2010/09/28	NC		%	25

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Sept 23,10

Sampler s/n: 6200
Canister ID: 7614
Canister Installation Date/Time: Sept 22, 10 @ 10:53 mst
Canister Removal Date/Time: Sept 24, 10 @ 9:32 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
23-Sep-10	23/09/2010 0:00	24/09/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	21

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 3356

Technician Signiture: Ting Xu

Your C.O.C. #: 3356

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D6975
Received: 2010/09/29, 09:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	1	N/A	2010/10/04	BRL SOP-00304	EPA TO-15
Canister Pressure (TO-15)	1	N/A	2010/10/06	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/10/04	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	1	N/A	2010/10/06	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

RESULTS OF ANALYSES OF AIR

Maxxam ID		HI2770		HI2771	
Sampling Date		2010/09/23		2010/09/23	
COC Number		3356		3356	
	Units	**LICAVOC/CLS/SEPT 23,10 - 7823**	**QC Batch**	**LICAVOC/PORT/SEPT 23,10 - 7614**	**QC Batch**
Volatile Organics					
Pressure on Receipt	psig	20	2291467	22	2288230

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2770				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/CLS/SEPT 23,10 - 7823**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2291652
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2291652
Propene	ppbv	<0.30	0.30	<0.516	0.516	2291652
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2291652
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2291652
Dichlorodifluoromethane (FREON 12)	ppbv	0.66	0.20	3.25	0.989	2291652
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2291652
Chloromethane	ppbv	0.31	0.30	0.632	0.620	2291652
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2291652
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2291652
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2291652
Trichlorofluoromethane (FREON 11)	ppbv	0.31	0.20	1.76	1.12	2291652
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2291652
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2291652
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2291652
2-Propanone	ppbv	3.45	0.80	8.19	1.90	2291652
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2291652
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2291652
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2291652
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2291652
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2291652
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2291652
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2291652
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2291652
Methylene Chloride(Dichloromethane)	ppbv	0.40	0.30	1.40	1.04	2291652
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2291652
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2291652
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2291652
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2291652
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2291652
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2291652
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2291652

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2770				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/CLS/SEPT 23,10 - 7823**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2291652
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2291652
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2291652
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2291652
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2291652
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2291652
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2291652
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2291652
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2291652
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2291652
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2291652
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2291652
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2291652
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2291652
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2291652
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2291652
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2291652
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2291652
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2291652
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2291652
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2291652
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2291652
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2291652
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2291652
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2291652
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2291652
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2291652
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2291652
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2291652
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2291652
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2291652
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2291652
Surrogate Recovery (%)						
Bromochloromethane	%	80		N/A	N/A	2291652

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2770				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/CLS/SEPT 23,10 - 7823**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
D5-Chlorobenzene	%	76		N/A	N/A	2291652
Difluorobenzene	%	81		N/A	N/A	2291652

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2771				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/PORT/SEPT 23,10 - 7614**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics						
2,2,4-Trimethylpentane	ppbv	<0.20	0.20	<0.934	0.934	2288262
Carbon Disulfide	ppbv	<0.50	0.50	<1.56	1.56	2288262
Propene	ppbv	<0.30	0.30	<0.516	0.516	2288262
Vinyl Acetate	ppbv	<0.20	0.20	<0.704	0.704	2288262
Vinyl Bromide	ppbv	<0.20	0.20	<0.875	0.875	2288262
Dichlorodifluoromethane (FREON 12)	ppbv	0.61	0.20	3.03	0.989	2288262
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	0.17	<1.19	1.19	2288262
Chloromethane	ppbv	<0.30	0.30	<0.620	0.620	2288262
Vinyl Chloride	ppbv	<0.18	0.18	<0.460	0.460	2288262
Chloroethane	ppbv	<0.30	0.30	<0.792	0.792	2288262
1,3-Butadiene	ppbv	<0.50	0.50	<1.11	1.11	2288262
Trichlorofluoromethane (FREON 11)	ppbv	0.36	0.20	2.03	1.12	2288262
Trichlorotrifluoroethane	ppbv	<0.15	0.15	<1.15	1.15	2288262
Ethanol	ppbv	<2.3	2.3	<4.33	4.33	2288262
2-propanol	ppbv	<3.0	3.0	<7.37	7.37	2288262
2-Propanone	ppbv	2.16	0.80	5.12	1.90	2288262
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	3.0	<8.85	8.85	2288262
Methyl Isobutyl Ketone	ppbv	<3.2	3.2	<13.1	13.1	2288262
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	2.0	<8.19	8.19	2288262
Methyl t-butyl ether (MTBE)	ppbv	<0.20	0.20	<0.721	0.721	2288262
Ethyl Acetate	ppbv	<2.2	2.2	<7.93	7.93	2288262
1,1-Dichloroethylene	ppbv	<0.25	0.25	<0.991	0.991	2288262
cis-1,2-Dichloroethylene	ppbv	<0.19	0.19	<0.753	0.753	2288262
trans-1,2-Dichloroethylene	ppbv	<0.20	0.20	<0.793	0.793	2288262
Methylene Chloride(Dichloromethane)	ppbv	<0.90	0.90	<3.13	3.13	2288262
Chloroform	ppbv	<0.15	0.15	<0.732	0.732	2288262
Carbon Tetrachloride	ppbv	<0.30	0.30	<1.89	1.89	2288262
1,1-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2288262
1,2-Dichloroethane	ppbv	<0.20	0.20	<0.809	0.809	2288262
Ethylene Dibromide	ppbv	<0.17	0.17	<1.31	1.31	2288262
1,1,1-Trichloroethane	ppbv	<0.30	0.30	<1.64	1.64	2288262
1,1,2-Trichloroethane	ppbv	<0.15	0.15	<0.818	0.818	2288262

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2771				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/PORT/SEPT 23,10 - 7614**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2,2-Tetrachloroethane	ppbv	<0.20	0.20	<1.37	1.37	2288262
cis-1,3-Dichloropropene	ppbv	<0.18	0.18	<0.817	0.817	2288262
trans-1,3-Dichloropropene	ppbv	<0.17	0.17	<0.772	0.772	2288262
1,2-Dichloropropane	ppbv	<0.40	0.40	<1.85	1.85	2288262
Bromomethane	ppbv	<0.18	0.18	<0.699	0.699	2288262
Bromoform	ppbv	<0.20	0.20	<2.07	2.07	2288262
Bromodichloromethane	ppbv	<0.20	0.20	<1.34	1.34	2288262
Dibromochloromethane	ppbv	<0.20	0.20	<1.70	1.70	2288262
Heptane	ppbv	<0.30	0.30	<1.23	1.23	2288262
Trichloroethylene	ppbv	<0.30	0.30	<1.61	1.61	2288262
Tetrachloroethylene	ppbv	<0.20	0.20	<1.36	1.36	2288262
Benzene	ppbv	<0.18	0.18	<0.575	0.575	2288262
Toluene	ppbv	<0.20	0.20	<0.753	0.753	2288262
Ethylbenzene	ppbv	<0.20	0.20	<0.868	0.868	2288262
p+m-Xylene	ppbv	<0.37	0.37	<1.61	1.61	2288262
o-Xylene	ppbv	<0.20	0.20	<0.868	0.868	2288262
Styrene	ppbv	<0.20	0.20	<0.852	0.852	2288262
1,3,5-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2288262
1,2,4-Trimethylbenzene	ppbv	<0.50	0.50	<2.46	2.46	2288262
4-ethyltoluene	ppbv	<2.2	2.2	<10.8	10.8	2288262
Chlorobenzene	ppbv	<0.20	0.20	<0.921	0.921	2288262
Benzyl chloride	ppbv	<1.0	1.0	<5.18	5.18	2288262
1,3-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2288262
1,4-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2288262
1,2-Dichlorobenzene	ppbv	<0.40	0.40	<2.40	2.40	2288262
1,2,4-Trichlorobenzene	ppbv	<2.0	2.0	<14.8	14.8	2288262
Hexachlorobutadiene	ppbv	<3.0	3.0	<32.0	32.0	2288262
Hexane	ppbv	<0.30	0.30	<1.06	1.06	2288262
Cyclohexane	ppbv	<0.20	0.20	<0.688	0.688	2288262
Tetrahydrofuran	ppbv	<0.40	0.40	<1.18	1.18	2288262
1,4-Dioxane	ppbv	<2.0	2.0	<7.21	7.21	2288262
Xylene (Total)	ppbv	<0.60	0.60	<2.61	2.61	2288262
Surrogate Recovery (%)						
Bromochloromethane	%	64		N/A	N/A	2288262

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HI2771				
Sampling Date		2010/09/23				
COC Number		3356				
	Units	**LICAVOC/PORT/SEPT 23,10 - 7614**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
D5-Chlorobenzene	%	60		N/A	N/A	2288262
Difluorobenzene	%	65		N/A	N/A	2288262

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

Test Summary

Maxxam ID HI2770 **Collected** 2010/09/23
Sample ID LICAVOC/CLS/SEPT 23,10 - 7823 **Shipped**
Matrix AIR **Received** 2010/09/29

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2291467	N/A	2010/10/06	MMU
Volatile Organics in Air (TO-15)	GC/MS	2291652	N/A	2010/10/06	MMU

Maxxam ID HI2771 **Collected** 2010/09/23
Sample ID LICAVOC/PORT/SEPT 23,10 - 7614 **Shipped**
Matrix AIR **Received** 2010/09/29

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2288230	N/A	2010/10/04	MMU
Volatile Organics in Air (TO-15)	GC/MS	2288262	N/A	2010/10/04	MMU

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Maxxam Analytics

Maxxam Job #: B0D6975
Report Date: 2010/10/12

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2288262	MMU	Spiked Blank	Bromochloromethane	2010/10/04		113	%	60 - 140
			D5-Chlorobenzene	2010/10/04		110	%	60 - 140
			Difluorobenzene	2010/10/04		116	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/04		74	%	70 - 130
			Carbon Disulfide	2010/10/04		92	%	70 - 130
			Propene	2010/10/04		75	%	70 - 130
			Vinyl Acetate	2010/10/04		81	%	70 - 130
			Vinyl Bromide	2010/10/04		91	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/04		94	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/04		81	%	70 - 130
			Chloromethane	2010/10/04		82	%	70 - 130
			Vinyl Chloride	2010/10/04		87	%	70 - 130
			Chloroethane	2010/10/04		79	%	70 - 130
			1,3-Butadiene	2010/10/04		84	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/04		91	%	70 - 130
			Trichlorotrifluoroethane	2010/10/04		97	%	70 - 130
			Ethanol	2010/10/04		72	%	70 - 130
			2-propanol	2010/10/04		92	%	70 - 130
			2-Propanone	2010/10/04		78	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/04		71	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/04		80	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/04		86	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/04		86	%	70 - 130
			Ethyl Acetate	2010/10/04		71	%	70 - 130
			1,1-Dichloroethylene	2010/10/04		97	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/04		81	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/04		84	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/04		79	%	70 - 130
			Chloroform	2010/10/04		83	%	70 - 130
			Carbon Tetrachloride	2010/10/04		98	%	70 - 130
			1,1-Dichloroethane	2010/10/04		73	%	70 - 130
			1,2-Dichloroethane	2010/10/04		84	%	70 - 130
			Ethylene Dibromide	2010/10/04		93	%	70 - 130
			1,1,1-Trichloroethane	2010/10/04		93	%	70 - 130
			1,1,2-Trichloroethane	2010/10/04		86	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/04		80	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/04		84	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/04		96	%	70 - 130
			1,2-Dichloropropane	2010/10/04		71	%	70 - 130
			Bromomethane	2010/10/04		89	%	70 - 130
			Bromoform	2010/10/04		117	%	70 - 130
			Bromodichloromethane	2010/10/04		88	%	70 - 130
			Dibromochloromethane	2010/10/04		104	%	70 - 130
			Heptane	2010/10/04		73	%	70 - 130
			Trichloroethylene	2010/10/04		97	%	70 - 130
			Tetrachloroethylene	2010/10/04		105	%	70 - 130
			Benzene	2010/10/04		79	%	70 - 130
			Toluene	2010/10/04		87	%	70 - 130
			Ethylbenzene	2010/10/04		92	%	70 - 130
			p+m-Xylene	2010/10/04		89	%	70 - 130
			o-Xylene	2010/10/04		90	%	70 - 130
			Styrene	2010/10/04		103	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/04		105	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/04		108	%	70 - 130
			4-ethyltoluene	2010/10/04		102	%	70 - 130

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2288262	MMU	Spiked Blank	Chlorobenzene	2010/10/04		88	%	70 - 130
			Benzyl chloride	2010/10/04		108	%	70 - 130
			1,3-Dichlorobenzene	2010/10/04		116	%	70 - 130
			1,4-Dichlorobenzene	2010/10/04		112	%	70 - 130
			1,2-Dichlorobenzene	2010/10/04		117	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/04		97	%	70 - 130
			Hexachlorobutadiene	2010/10/04		104	%	70 - 130
			Hexane	2010/10/04		71	%	70 - 130
			Cyclohexane	2010/10/04		81	%	70 - 130
			Tetrahydrofuran	2010/10/04		76	%	70 - 130
			1,4-Dioxane	2010/10/04		81	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/04		97	%	60 - 140
			D5-Chlorobenzene	2010/10/04		86	%	60 - 140
			Difluorobenzene	2010/10/04		101	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/04	<0.20		ppbv	
			Carbon Disulfide	2010/10/04	<0.50		ppbv	
			Propene	2010/10/04	<0.30		ppbv	
			Vinyl Acetate	2010/10/04	<0.20		ppbv	
			Vinyl Bromide	2010/10/04	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/04	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/04	<0.17		ppbv	
			Chloromethane	2010/10/04	<0.30		ppbv	
			Vinyl Chloride	2010/10/04	<0.18		ppbv	
			Chloroethane	2010/10/04	<0.30		ppbv	
			1,3-Butadiene	2010/10/04	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/04	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/04	<0.15		ppbv	
			Ethanol	2010/10/04	<2.3		ppbv	
			2-propanol	2010/10/04	<3.0		ppbv	
			2-Propanone	2010/10/04	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/04	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/04	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/04	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/04	<0.20		ppbv	
			Ethyl Acetate	2010/10/04	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/04	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/04	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/04	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/04	<0.90		ppbv	
			Chloroform	2010/10/04	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/04	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/04	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/04	<0.20		ppbv	
			Ethylene Dibromide	2010/10/04	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/04	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/04	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/04	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/04	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/04	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/04	<0.40		ppbv	
			Bromomethane	2010/10/04	<0.18		ppbv	
			Bromoform	2010/10/04	<0.20		ppbv	
			Bromodichloromethane	2010/10/04	<0.20		ppbv	
			Dibromochloromethane	2010/10/04	<0.20		ppbv	
			Heptane	2010/10/04	<0.30		ppbv	

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2288262	MMU	Method Blank	Trichloroethylene	2010/10/04	<0.30		ppbv	
			Tetrachloroethylene	2010/10/04	<0.20		ppbv	
			Benzene	2010/10/04	<0.18		ppbv	
			Toluene	2010/10/04	<0.20		ppbv	
			Ethylbenzene	2010/10/04	<0.20		ppbv	
			p+m-Xylene	2010/10/04	<0.37		ppbv	
			o-Xylene	2010/10/04	<0.20		ppbv	
			Styrene	2010/10/04	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/04	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/04	<0.50		ppbv	
			4-ethyltoluene	2010/10/04	<2.2		ppbv	
			Chlorobenzene	2010/10/04	<0.20		ppbv	
			Benzyl chloride	2010/10/04	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/04	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/04	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/04	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/04	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/04	<3.0		ppbv	
			Hexane	2010/10/04	<0.30		ppbv	
			Cyclohexane	2010/10/04	<0.20		ppbv	
			Tetrahydrofuran	2010/10/04	<0.40		ppbv	
			1,4-Dioxane	2010/10/04	<2.0		ppbv	
			Xylene (Total)	2010/10/04	<0.60		ppbv	
2291652	MMU	Spiked Blank	Bromochloromethane	2010/10/06		120	%	60 - 140
			D5-Chlorobenzene	2010/10/06		117	%	60 - 140
			Difluorobenzene	2010/10/06		122	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/06		88	%	70 - 130
			Carbon Disulfide	2010/10/06		92	%	70 - 130
			Propene	2010/10/06		94	%	70 - 130
			Vinyl Acetate	2010/10/06		105	%	70 - 130
			Vinyl Bromide	2010/10/06		93	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/06		92	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/06		80	%	70 - 130
			Chloromethane	2010/10/06		87	%	70 - 130
			Vinyl Chloride	2010/10/06		97	%	70 - 130
			Chloroethane	2010/10/06		96	%	70 - 130
			1,3-Butadiene	2010/10/06		98	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/06		86	%	70 - 130
			Trichlorotrifluoroethane	2010/10/06		90	%	70 - 130
			Ethanol	2010/10/06		123	%	70 - 130
			2-propanol	2010/10/06		94	%	70 - 130
			2-Propanone	2010/10/06		80	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/06		88	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/06		91	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/06		97	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/06		96	%	70 - 130
			Ethyl Acetate	2010/10/06		88	%	70 - 130
			1,1-Dichloroethylene	2010/10/06		94	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/06		95	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/06		93	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/06		82	%	70 - 130
			Chloroform	2010/10/06		89	%	70 - 130
			Carbon Tetrachloride	2010/10/06		88	%	70 - 130
			1,1-Dichloroethane	2010/10/06		87	%	70 - 130
			1,2-Dichloroethane	2010/10/06		88	%	70 - 130

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2291652	MMU	Spiked Blank	Ethylene Dibromide	2010/10/06		88	%	70 - 130
			1,1,1-Trichloroethane	2010/10/06		88	%	70 - 130
			1,1,2-Trichloroethane	2010/10/06		88	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/06		79	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/06		93	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/06		99	%	70 - 130
			1,2-Dichloropropane	2010/10/06		89	%	70 - 130
			Bromomethane	2010/10/06		92	%	70 - 130
			Bromoform	2010/10/06		94	%	70 - 130
			Bromodichloromethane	2010/10/06		88	%	70 - 130
			Dibromochloromethane	2010/10/06		89	%	70 - 130
			Heptane	2010/10/06		86	%	70 - 130
			Trichloroethylene	2010/10/06		91	%	70 - 130
			Tetrachloroethylene	2010/10/06		89	%	70 - 130
			Benzene	2010/10/06		89	%	70 - 130
			Toluene	2010/10/06		91	%	70 - 130
			Ethylbenzene	2010/10/06		90	%	70 - 130
			p+m-Xylene	2010/10/06		87	%	70 - 130
			o-Xylene	2010/10/06		85	%	70 - 130
			Styrene	2010/10/06		93	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/06		77	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/06		73	%	70 - 130
			4-ethyltoluene	2010/10/06		77	%	70 - 130
			Chlorobenzene	2010/10/06		86	%	70 - 130
			Benzyl chloride	2010/10/06		75	%	70 - 130
			1,3-Dichlorobenzene	2010/10/06		75	%	70 - 130
			1,4-Dichlorobenzene	2010/10/06		71	%	70 - 130
			1,2-Dichlorobenzene	2010/10/06		67 (1)	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/06		98	%	70 - 130
			Hexachlorobutadiene	2010/10/06		92	%	70 - 130
			Hexane	2010/10/06		86	%	70 - 130
			Cyclohexane	2010/10/06		89	%	70 - 130
			Tetrahydrofuran	2010/10/06		94	%	70 - 130
			1,4-Dioxane	2010/10/06		91	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/06		95	%	60 - 140
			D5-Chlorobenzene	2010/10/06		89	%	60 - 140
			Difluorobenzene	2010/10/06		97	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/06	<0.20		ppbv	
			Carbon Disulfide	2010/10/06	<0.50		ppbv	
			Propene	2010/10/06	<0.30		ppbv	
			Vinyl Acetate	2010/10/06	<0.20		ppbv	
			Vinyl Bromide	2010/10/06	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/06	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/06	<0.17		ppbv	
			Chloromethane	2010/10/06	<0.30		ppbv	
			Vinyl Chloride	2010/10/06	<0.18		ppbv	
			Chloroethane	2010/10/06	<0.30		ppbv	
			1,3-Butadiene	2010/10/06	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/06	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/06	<0.15		ppbv	
			Ethanol	2010/10/06	<2.3		ppbv	
			2-propanol	2010/10/06	<3.0		ppbv	
			2-Propanone	2010/10/06	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/06	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/06	<3.2		ppbv	

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6975

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2291652	MMU	Method Blank	Methyl Butyl Ketone (2-Hexanone)	2010/10/06	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/06	<0.20		ppbv	
			Ethyl Acetate	2010/10/06	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/06	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/06	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/06	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/06	0.39, RDL=0.30		ppbv	
			Chloroform	2010/10/06	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/06	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/06	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/06	<0.20		ppbv	
			Ethylene Dibromide	2010/10/06	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/06	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/06	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/06	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/06	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/06	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/06	<0.40		ppbv	
			Bromomethane	2010/10/06	<0.18		ppbv	
			Bromoform	2010/10/06	<0.20		ppbv	
			Bromodichloromethane	2010/10/06	<0.20		ppbv	
			Dibromochloromethane	2010/10/06	<0.20		ppbv	
			Heptane	2010/10/06	<0.30		ppbv	
			Trichloroethylene	2010/10/06	<0.30		ppbv	
			Tetrachloroethylene	2010/10/06	<0.20		ppbv	
			Benzene	2010/10/06	<0.18		ppbv	
			Toluene	2010/10/06	<0.20		ppbv	
			Ethylbenzene	2010/10/06	<0.20		ppbv	
			p+m-Xylene	2010/10/06	<0.37		ppbv	
			o-Xylene	2010/10/06	<0.20		ppbv	
			Styrene	2010/10/06	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/06	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/06	<0.50		ppbv	
			4-ethyltoluene	2010/10/06	<2.2		ppbv	
			Chlorobenzene	2010/10/06	<0.20		ppbv	
			Benzyl chloride	2010/10/06	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/06	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/06	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/06	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/06	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/06	<3.0		ppbv	
			Hexane	2010/10/06	<0.30		ppbv	
			Cyclohexane	2010/10/06	<0.20		ppbv	
			Tetrahydrofuran	2010/10/06	<0.40		ppbv	
			1,4-Dioxane	2010/10/06	<2.0		ppbv	
			Xylene (Total)	2010/10/06	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Xontech Model 910A VOC Sample Collection Data Sheet

Client: LICA
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA VOC/PORT/ Sept 29,10

Sampler s/n: 6200
Canister ID: 7813
Canister Installation Date/Time: Sept 27, 10 @ 11:33 mst
Canister Removal Date/Time: Sept 30, 10 @ 9:05 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
29-Sep-10	29/09/2010 0:00	30/09/2010 0:00	24.00

Flow Settings		
Meter Reading (sccm)	Pot Set Pt.	Pump Pressure Setting (psig)
10.0	1482	25

Canister Information	
Initial Canister Vacuum (inHg)	Final Canister Pressure (psig)
-28	21

Canister valve open prior to sampling?: YES / NO
Timer set to 0.00 minutes prior to sampling? YES / NO
Canister valve closed prior to disconnection?: YES / NO

Comments: System leak check prior to sampling. COC # 2321

Technician Signiture: Ting Xu

Your C.O.C. #: 2321

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/26

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D9866
Received: 2010/10/05, 11:00

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/10/23	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/10/23	BRL SOP-00304	EPA TO-15

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO14A. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO14A on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Maxxam for a period of 5 calendar days from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: TStephenson@maxxam.ca
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D9866
Report Date: 2010/10/26

RESULTS OF ANALYSES OF AIR

Maxxam ID		HJ9998	HJ9999	
Sampling Date		2010/09/29	2010/09/29	
COC Number		2321	2321	
	Units	**LICA VOC\ CLS\ SEP 29,10 - 7784**	**LICA VOC \PORT\ SEP 29,10 - 7813**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2308946

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D9866
Report Date: 2010/10/26

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HJ9998			HJ9999				
Sampling Date		2010/09/29			2010/09/29				
COC Number		2321			2321				
	Units	**LICA VOC\ CLS\ SEP 29,10 - 7784**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \PORT\ SEP 29,10 - 7813**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Volatile Organics									
2,2,4-Trimethylpentane	ppbv	<0.20	<0.934	0.934	<0.20	0.20	<0.934	0.934	2309121
Carbon Disulfide	ppbv	<0.50	<1.56	1.56	<0.50	0.50	<1.56	1.56	2309121
Propene	ppbv	<0.30	<0.516	0.516	<0.30	0.30	<0.516	0.516	2309121
Vinyl Acetate	ppbv	<0.20	<0.704	0.704	<0.20	0.20	<0.704	0.704	2309121
Vinyl Bromide	ppbv	<0.20	<0.875	0.875	<0.20	0.20	<0.875	0.875	2309121
Dichlorodifluoromethane (FREON 12)	ppbv	0.60	2.95	0.989	0.60	0.20	2.95	0.989	2309121
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<1.19	1.19	<0.17	0.17	<1.19	1.19	2309121
Chloromethane	ppbv	0.43	0.881	0.620	0.41	0.30	0.837	0.620	2309121
Vinyl Chloride	ppbv	<0.18	<0.460	0.460	<0.18	0.18	<0.460	0.460	2309121
Chloroethane	ppbv	<0.30	<0.792	0.792	<0.30	0.30	<0.792	0.792	2309121
1,3-Butadiene	ppbv	<0.50	<1.11	1.11	<0.50	0.50	<1.11	1.11	2309121
Trichlorofluoromethane (FREON 11)	ppbv	0.27	1.53	1.12	0.28	0.20	1.59	1.12	2309121
Trichlorotrifluoroethane	ppbv	<0.15	<1.15	1.15	<0.15	0.15	<1.15	1.15	2309121
Ethanol	ppbv	<2.3	<4.33	4.33	<2.3	2.3	<4.33	4.33	2309121
2-propanol	ppbv	<3.0	<7.37	7.37	<3.0	3.0	<7.37	7.37	2309121
2-Propanone	ppbv	1.87	4.43	1.90	1.52	0.80	3.62	1.90	2309121
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<8.85	8.85	<3.0	3.0	<8.85	8.85	2309121
Methyl Isobutyl Ketone	ppbv	<3.2	<13.1	13.1	<3.2	3.2	<13.1	13.1	2309121
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<8.19	8.19	<2.0	2.0	<8.19	8.19	2309121
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.721	0.721	<0.20	0.20	<0.721	0.721	2309121
Ethyl Acetate	ppbv	<2.2	<7.93	7.93	<2.2	2.2	<7.93	7.93	2309121
1,1-Dichloroethylene	ppbv	<0.25	<0.991	0.991	<0.25	0.25	<0.991	0.991	2309121
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.753	0.753	<0.19	0.19	<0.753	0.753	2309121
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.793	0.793	<0.20	0.20	<0.793	0.793	2309121
Methylene Chloride(Dichloromethane)	ppbv	0.34	1.18	1.04	0.42	0.30	1.46	1.04	2309121
Chloroform	ppbv	<0.15	<0.732	0.732	<0.15	0.15	<0.732	0.732	2309121
Carbon Tetrachloride	ppbv	<0.30	<1.89	1.89	<0.30	0.30	<1.89	1.89	2309121
1,1-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2309121
1,2-Dichloroethane	ppbv	<0.20	<0.809	0.809	<0.20	0.20	<0.809	0.809	2309121
Ethylene Dibromide	ppbv	<0.17	<1.31	1.31	<0.17	0.17	<1.31	1.31	2309121
1,1,1-Trichloroethane	ppbv	<0.30	<1.64	1.64	<0.30	0.30	<1.64	1.64	2309121

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HJ9998			HJ9999				
Sampling Date		2010/09/29			2010/09/29				
COC Number		2321			2321				
	Units	**LICA VOC\ CLS\ SEP 29,10 - 7784**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \PORT\ SEP 29,10 - 7813**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.818	0.818	<0.15	0.15	<0.818	0.818	2309121
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<1.37	1.37	<0.20	0.20	<1.37	1.37	2309121
cis-1,3-Dichloropropene	ppbv	<0.18	<0.817	0.817	<0.18	0.18	<0.817	0.817	2309121
trans-1,3-Dichloropropene	ppbv	<0.17	<0.772	0.772	<0.17	0.17	<0.772	0.772	2309121
1,2-Dichloropropane	ppbv	<0.40	<1.85	1.85	<0.40	0.40	<1.85	1.85	2309121
Bromomethane	ppbv	<0.18	<0.699	0.699	<0.18	0.18	<0.699	0.699	2309121
Bromoform	ppbv	<0.20	<2.07	2.07	<0.20	0.20	<2.07	2.07	2309121
Bromodichloromethane	ppbv	<0.20	<1.34	1.34	<0.20	0.20	<1.34	1.34	2309121
Dibromochloromethane	ppbv	<0.20	<1.70	1.70	<0.20	0.20	<1.70	1.70	2309121
Heptane	ppbv	<0.30	<1.23	1.23	<0.30	0.30	<1.23	1.23	2309121
Trichloroethylene	ppbv	<0.30	<1.61	1.61	<0.30	0.30	<1.61	1.61	2309121
Tetrachloroethylene	ppbv	<0.20	<1.36	1.36	<0.20	0.20	<1.36	1.36	2309121
Benzene	ppbv	<0.18	<0.575	0.575	<0.18	0.18	<0.575	0.575	2309121
Toluene	ppbv	<0.20	<0.753	0.753	<0.20	0.20	<0.753	0.753	2309121
Ethylbenzene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2309121
p+m-Xylene	ppbv	<0.37	<1.61	1.61	<0.37	0.37	<1.61	1.61	2309121
o-Xylene	ppbv	<0.20	<0.868	0.868	<0.20	0.20	<0.868	0.868	2309121
Styrene	ppbv	<0.20	<0.852	0.852	<0.20	0.20	<0.852	0.852	2309121
1,3,5-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2309121
1,2,4-Trimethylbenzene	ppbv	<0.50	<2.46	2.46	<0.50	0.50	<2.46	2.46	2309121
4-ethyltoluene	ppbv	<2.2	<10.8	10.8	<2.2	2.2	<10.8	10.8	2309121
Chlorobenzene	ppbv	<0.20	<0.921	0.921	<0.20	0.20	<0.921	0.921	2309121
Benzyl chloride	ppbv	<1.0	<5.18	5.18	<1.0	1.0	<5.18	5.18	2309121
1,3-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309121
1,4-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309121
1,2-Dichlorobenzene	ppbv	<0.40	<2.40	2.40	<0.40	0.40	<2.40	2.40	2309121
1,2,4-Trichlorobenzene	ppbv	<2.0	<14.8	14.8	<2.0	2.0	<14.8	14.8	2309121
Hexachlorobutadiene	ppbv	<3.0	<32.0	32.0	<3.0	3.0	<32.0	32.0	2309121
Hexane	ppbv	<0.30	<1.06	1.06	<0.30	0.30	<1.06	1.06	2309121
Cyclohexane	ppbv	<0.20	<0.688	0.688	<0.20	0.20	<0.688	0.688	2309121
Tetrahydrofuran	ppbv	<0.40	<1.18	1.18	<0.40	0.40	<1.18	1.18	2309121
1,4-Dioxane	ppbv	<2.0	<7.21	7.21	<2.0	2.0	<7.21	7.21	2309121
Xylene (Total)	ppbv	<0.60	<2.61	2.61	<0.60	0.60	<2.61	2.61	2309121

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D9866
Report Date: 2010/10/26

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		HJ9998			HJ9999				
Sampling Date		2010/09/29			2010/09/29				
COC Number		2321			2321				
	Units	**LICA VOC\ CLS\ SEP 29,10 - 7784**	**ug/m3**	**DL (ug/m3)**	**LICA VOC \PORT\ SEP 29,10 - 7813**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Surrogate Recovery (%)									
Bromochloromethane	%	93	N/A	N/A	85		N/A	N/A	2309121
D5-Chlorobenzene	%	84	N/A	N/A	77		N/A	N/A	2309121
Difluorobenzene	%	94	N/A	N/A	85		N/A	N/A	2309121

N/A = Not Applicable
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D9866
Report Date: 2010/10/26

Test Summary

Maxxam ID HJ9998 **Collected** 2010/09/29
Sample ID LICA VOC\ CLS\ SEP 29,10 - 7784 **Shipped**
Matrix AIR **Received** 2010/10/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2308946	N/A	2010/10/23	S_S
Volatile Organics in Air (TO-15)	GC/MS	2309121	N/A	2010/10/23	S_S

Maxxam ID HJ9999 **Collected** 2010/09/29
Sample ID LICA VOC \PORT\ SEP 29,10 - 7813 **Shipped**
Matrix AIR **Received** 2010/10/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2308946	N/A	2010/10/23	S_S
Volatile Organics in Air (TO-15)	GC/MS	2309121	N/A	2010/10/23	S_S

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Maxxam Analytics

Maxxam Job #: B0D9866
Report Date: 2010/10/26

GENERAL COMMENTS

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0D9866

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309121	S_S	Spiked Blank	Bromochloromethane	2010/10/23		108	%	60 - 140
			D5-Chlorobenzene	2010/10/23		108	%	60 - 140
			Difluorobenzene	2010/10/23		109	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/23		97	%	70 - 130
			Carbon Disulfide	2010/10/23		87	%	70 - 130
			Propene	2010/10/23		99	%	70 - 130
			Vinyl Acetate	2010/10/23		107	%	70 - 130
			Vinyl Bromide	2010/10/23		96	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/10/23		103	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/10/23		113	%	70 - 130
			Chloromethane	2010/10/23		104	%	70 - 130
			Vinyl Chloride	2010/10/23		97	%	70 - 130
			Chloroethane	2010/10/23		94	%	70 - 130
			1,3-Butadiene	2010/10/23		99	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2010/10/23		99	%	70 - 130
			Trichlorotrifluoroethane	2010/10/23		93	%	70 - 130
			Ethanol	2010/10/23		105	%	70 - 130
			2-propanol	2010/10/23		106	%	70 - 130
			2-Propanone	2010/10/23		116	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/10/23		108	%	70 - 130
			Methyl Isobutyl Ketone	2010/10/23		102	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/10/23		107	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/10/23		102	%	70 - 130
			Ethyl Acetate	2010/10/23		103	%	70 - 130
			1,1-Dichloroethylene	2010/10/23		99	%	70 - 130
			cis-1,2-Dichloroethylene	2010/10/23		99	%	70 - 130
			trans-1,2-Dichloroethylene	2010/10/23		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/10/23		91	%	70 - 130
			Chloroform	2010/10/23		99	%	70 - 130
			Carbon Tetrachloride	2010/10/23		103	%	70 - 130
			1,1-Dichloroethane	2010/10/23		97	%	70 - 130
			1,2-Dichloroethane	2010/10/23		104	%	70 - 130
			Ethylene Dibromide	2010/10/23		98	%	70 - 130
			1,1,1-Trichloroethane	2010/10/23		101	%	70 - 130
			1,1,2-Trichloroethane	2010/10/23		97	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/10/23		90	%	70 - 130
			cis-1,3-Dichloropropene	2010/10/23		104	%	70 - 130
			trans-1,3-Dichloropropene	2010/10/23		109	%	70 - 130
			1,2-Dichloropropane	2010/10/23		95	%	70 - 130
			Bromomethane	2010/10/23		93	%	70 - 130
			Bromoform	2010/10/23		104	%	70 - 130
			Bromodichloromethane	2010/10/23		102	%	70 - 130
			Dibromochloromethane	2010/10/23		107	%	70 - 130
			Heptane	2010/10/23		99	%	70 - 130
			Trichloroethylene	2010/10/23		95	%	70 - 130
			Tetrachloroethylene	2010/10/23		97	%	70 - 130
			Benzene	2010/10/23		95	%	70 - 130
			Toluene	2010/10/23		99	%	70 - 130
			Ethylbenzene	2010/10/23		99	%	70 - 130
			p+m-Xylene	2010/10/23		99	%	70 - 130
			o-Xylene	2010/10/23		96	%	70 - 130
			Styrene	2010/10/23		99	%	70 - 130
			1,3,5-Trimethylbenzene	2010/10/23		93	%	70 - 130
			1,2,4-Trimethylbenzene	2010/10/23		93	%	70 - 130
			4-ethyltoluene	2010/10/23		100	%	70 - 130

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D9866

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309121	S_S	Spiked Blank	Chlorobenzene	2010/10/23		93	%	70 - 130
			Benzyl chloride	2010/10/23		106	%	70 - 130
			1,3-Dichlorobenzene	2010/10/23		89	%	70 - 130
			1,4-Dichlorobenzene	2010/10/23		91	%	70 - 130
			1,2-Dichlorobenzene	2010/10/23		89	%	70 - 130
			1,2,4-Trichlorobenzene	2010/10/23		97	%	70 - 130
			Hexachlorobutadiene	2010/10/23		96	%	70 - 130
			Hexane	2010/10/23		100	%	70 - 130
			Cyclohexane	2010/10/23		97	%	70 - 130
			Tetrahydrofuran	2010/10/23		101	%	70 - 130
			1,4-Dioxane	2010/10/23		109	%	70 - 130
		Method Blank	Bromochloromethane	2010/10/23		97	%	60 - 140
			D5-Chlorobenzene	2010/10/23		89	%	60 - 140
			Difluorobenzene	2010/10/23		98	%	60 - 140
			2,2,4-Trimethylpentane	2010/10/23	<0.20		ppbv	
			Carbon Disulfide	2010/10/23	<0.50		ppbv	
			Propene	2010/10/23	<0.30		ppbv	
			Vinyl Acetate	2010/10/23	<0.20		ppbv	
			Vinyl Bromide	2010/10/23	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/10/23	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/10/23	<0.17		ppbv	
			Chloromethane	2010/10/23	<0.30		ppbv	
			Vinyl Chloride	2010/10/23	<0.18		ppbv	
			Chloroethane	2010/10/23	<0.30		ppbv	
			1,3-Butadiene	2010/10/23	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/10/23	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/10/23	<0.15		ppbv	
			Ethanol	2010/10/23	<2.3		ppbv	
			2-propanol	2010/10/23	<3.0		ppbv	
			2-Propanone	2010/10/23	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/10/23	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/10/23	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/10/23	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/10/23	<0.20		ppbv	
			Ethyl Acetate	2010/10/23	<2.2		ppbv	
			1,1-Dichloroethylene	2010/10/23	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/10/23	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/10/23	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/10/23	<0.30		ppbv	
			Chloroform	2010/10/23	<0.15		ppbv	
			Carbon Tetrachloride	2010/10/23	<0.30		ppbv	
			1,1-Dichloroethane	2010/10/23	<0.20		ppbv	
			1,2-Dichloroethane	2010/10/23	<0.20		ppbv	
			Ethylene Dibromide	2010/10/23	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/10/23	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/10/23	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/10/23	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/10/23	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/10/23	<0.17		ppbv	
			1,2-Dichloropropane	2010/10/23	<0.40		ppbv	
			Bromomethane	2010/10/23	<0.18		ppbv	
			Bromoform	2010/10/23	<0.20		ppbv	
			Bromodichloromethane	2010/10/23	<0.20		ppbv	
			Dibromochloromethane	2010/10/23	<0.20		ppbv	
			Heptane	2010/10/23	<0.30		ppbv	

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D9866

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2309121	S_S	Method Blank	Trichloroethylene	2010/10/23	<0.30		ppbv	
			Tetrachloroethylene	2010/10/23	<0.20		ppbv	
			Benzene	2010/10/23	<0.18		ppbv	
			Toluene	2010/10/23	<0.20		ppbv	
			Ethylbenzene	2010/10/23	<0.20		ppbv	
			p+m-Xylene	2010/10/23	<0.37		ppbv	
			o-Xylene	2010/10/23	<0.20		ppbv	
			Styrene	2010/10/23	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/10/23	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/10/23	<0.50		ppbv	
			4-ethyltoluene	2010/10/23	<2.2		ppbv	
			Chlorobenzene	2010/10/23	<0.20		ppbv	
			Benzyl chloride	2010/10/23	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/10/23	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/10/23	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/10/23	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/10/23	<2.0		ppbv	
			Hexachlorobutadiene	2010/10/23	<3.0		ppbv	
			Hexane	2010/10/23	<0.30		ppbv	
			Cyclohexane	2010/10/23	<0.20		ppbv	
			Tetrahydrofuran	2010/10/23	<0.40		ppbv	
			1,4-Dioxane	2010/10/23	<2.0		ppbv	
			Xylene (Total)	2010/10/23	<0.60		ppbv	

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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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/July 01, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: June 30, 10 @ 10:04 mst
Removal Date/Time: July 02,10 @ 9:03 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
01-Jul-10	01/07/2010 0:00	02/07/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
29-Jun-10	05-Jul-10	09-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
708	229	14.0	330.32

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 0564
GB079098 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/July 01, 10

Technician Signiture: Ting Xu

Your C.O.C. #: 0564

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 #: B088347
Received: 2010/07/07, 08:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/17	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/17	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. #: 0564

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.

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Total cover pages: 2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

RESULTS OF ANALYSES OF AIR

Maxxam ID		GK3351	GK3352	
Sampling Date		2010/07/01	2010/07/01	
COC Number		0564	0564	
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	22	2212158

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GK3353	GK3354		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA PUFF/QFF/CLS/JULY 01,10**	**LICA PUFF/QFF/PORT/JULY 01,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.12	<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-Methylanthracene	ug	<0.10	<0.10	0.10	2202480
2-Methylnaphthalene	ug	0.22	0.17	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-Dimethylanthracene	ug	<0.40	<0.40	0.40	2202480
Acenaphthene	ug	0.084	<0.050	0.050	2202480
Acenaphthylene	ug	<0.050	<0.050	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	<0.050	<0.050	0.050	2202480
Fluorene	ug	0.138	0.050	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	0.168	0.128	0.072	2202480
o-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Perylene	ug	<0.10	<0.10	0.10	2202480

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GK3353	GK3354		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA PUFF/QFF/CLS/JULY 01,10**	**LICA PUFF/QFF/PORT/JULY 01,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.380	0.124	0.050	2202480
p-Terphenyl	ug	<0.10	<0.10	0.10	2202480
Pyrene	ug	<0.050	<0.050	0.050	2202480
Quinoline	ug	<0.40	<0.40	0.40	2202480
Tetralin	ug	<0.10	<0.10	0.10	2202480
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	62	68		2202480
D10-Fluoranthene	%	96	94		2202480
D10-Fluorene (FS)	%	52	59		2202480
D10-Phenanthrene	%	84	82		2202480
D12-Benzo(a)anthracene	%	112	112		2202480
D12-Benzo(a)pyrene	%	92	90		2202480
D12-Benzo(b)fluoranthene	%	90	90		2202480
D12-Benzo(ghi)perylene	%	92	90		2202480
D12-Benzo(k)fluoranthene	%	80	84		2202480
D12-Chrysene	%	80	88		2202480
D12-Indeno(1,2,3-cd)pyrene	%	90	86		2202480
D12-Perylene	%	88	88		2202480
D14-Dibenzo(a,h)anthracene	%	80	76		2202480
D14-Terphenyl (FS)	%	79	83		2202480
D8-Acenaphthylene	%	76	78		2202480
D8-Naphthalene	%	66	74		2202480

QC Batch = Quality Control Batch

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Maxxam Job #: B088347
Report Date: 2010/07/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2212165
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2212165
Propene	ppbv	<0.30	<0.30	0.30	2212165
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2212165
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2212165
Dichlorodifluoromethane (FREON 12)	ppbv	0.75	0.75	0.20	2212165
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2212165
Chloromethane	ppbv	0.73	0.69	0.30	2212165
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2212165
Chloroethane	ppbv	<0.30	<0.30	0.30	2212165
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2212165
Trichlorofluoromethane (FREON 11)	ppbv	0.34	0.34	0.20	2212165
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2212165
Ethanol	ppbv	4.1	2.7	2.3	2212165
2-propanol	ppbv	<3.0	<3.0	3.0	2212165
2-Propanone	ppbv	3.94	4.45	0.80	2212165
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2212165
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2212165
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2212165
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2212165
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2212165
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2212165
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2212165
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2212165
Methylene Chloride(Dichloromethane)	ppbv	0.52	0.47	0.30	2212165
Chloroform	ppbv	<0.15	<0.15	0.15	2212165
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2212165
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2212165
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2212165
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2212165
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2212165

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2212165
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2212165
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2212165
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2212165
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2212165
Bromomethane	ppbv	<0.18	<0.18	0.18	2212165
Bromoform	ppbv	<0.20	<0.20	0.20	2212165
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2212165
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2212165
Heptane	ppbv	<0.30	<0.30	0.30	2212165
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2212165
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2212165
Benzene	ppbv	<0.18	<0.18	0.18	2212165
Toluene	ppbv	<0.20	<0.20	0.20	2212165
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2212165
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2212165
o-Xylene	ppbv	<0.20	<0.20	0.20	2212165
Styrene	ppbv	<0.20	<0.20	0.20	2212165
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2212165
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2212165
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2212165
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2212165
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2212165
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2212165
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2212165
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2212165
Hexane	ppbv	<0.30	<0.30	0.30	2212165
Cyclohexane	ppbv	<0.20	<0.20	0.20	2212165
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2212165
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2212165
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2212165

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GK3351	GK3352		
Sampling Date		2010/07/01	2010/07/01		
COC Number		0564	0564		
	Units	**LICA VOC/CLS/JULY 01,10**	**LICA VOC/PORT/JULY 01,10**	**RDL**	**QC Batch**
Surrogate Recovery (%)					
Bromochloromethane	%	85	85		2212165
D5-Chlorobenzene	%	83	86		2212165
Difluorobenzene	%	86	87		2212165

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

Test Summary

Maxxam ID GK3351 **Collected** 2010/07/01
Sample ID LICA VOC/CLS/JULY 01,10 **Shipped**
Matrix AIR **Received** 2010/07/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2212158	N/A	2010/07/17	LSY
Volatile Organics in Air (TO-15)	GC/MS	2212165	N/A	2010/07/17	LSY

Maxxam ID GK3352 **Collected** 2010/07/01
Sample ID LICA VOC/PORT/JULY 01,10 **Shipped**
Matrix AIR **Received** 2010/07/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2212158	N/A	2010/07/17	LSY
Volatile Organics in Air (TO-15)	GC/MS	2212165	N/A	2010/07/17	LSY

Maxxam ID GK3353 **Collected** 2010/07/01
Sample ID LICA PUFF/QFF/CLS/JULY 01,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2202480	2010/07/09	2010/07/24	JIW

Maxxam ID GK3354 **Collected** 2010/07/01
Sample ID LICA PUFF/QFF/PORT/JULY 01,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/07

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2202480	2010/07/09	2010/07/24	JIW

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Lakeland Industry & Community Assoc.

Maxxam Job #: B088347
Report Date: 2010/07/28

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
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
		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

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2202480	JIW	Method Blank	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-Methylanthracene	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-Dimethylanthracene	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	
			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	
2212165	LSY	Spiked Blank	Bromochloromethane	2010/07/17		98	%	60 - 140
			D5-Chlorobenzene	2010/07/17		99	%	60 - 140
			Difluorobenzene	2010/07/17		99	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/17		100	%	70 - 130
			Carbon Disulfide	2010/07/17		97	%	70 - 130
			Propene	2010/07/17		101	%	70 - 130
			Vinyl Acetate	2010/07/17		111	%	70 - 130
			Vinyl Bromide	2010/07/17		98	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/17		95	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/17		83	%	70 - 130
			Chloromethane	2010/07/17		92	%	70 - 130
			Vinyl Chloride	2010/07/17		97	%	70 - 130
			Chloroethane	2010/07/17		97	%	70 - 130
			1,3-Butadiene	2010/07/17		89	%	70 - 130

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2212165	LSY	Spiked Blank	Trichlorofluoromethane (FREON 11)	2010/07/17		94	%	70 - 130
			Trichlorotrifluoroethane	2010/07/17		96	%	70 - 130
			Ethanol	2010/07/17		117	%	70 - 130
			2-propanol	2010/07/17		111	%	70 - 130
			2-Propanone	2010/07/17		94	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/17		108	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/17		103	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/17		114	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/17		98	%	70 - 130
			Ethyl Acetate	2010/07/17		100	%	70 - 130
			1,1-Dichloroethylene	2010/07/17		97	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/17		97	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/17		100	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/17		78	%	70 - 130
			Chloroform	2010/07/17		96	%	70 - 130
			Carbon Tetrachloride	2010/07/17		97	%	70 - 130
			1,1-Dichloroethane	2010/07/17		95	%	70 - 130
			1,2-Dichloroethane	2010/07/17		95	%	70 - 130
			Ethylene Dibromide	2010/07/17		98	%	70 - 130
			1,1,1-Trichloroethane	2010/07/17		94	%	70 - 130
			1,1,2-Trichloroethane	2010/07/17		96	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/17		94	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/17		104	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/17		107	%	70 - 130
			1,2-Dichloropropane	2010/07/17		94	%	70 - 130
			Bromomethane	2010/07/17		89	%	70 - 130
			Bromoform	2010/07/17		111	%	70 - 130
			Bromodichloromethane	2010/07/17		102	%	70 - 130
			Dibromochloromethane	2010/07/17		103	%	70 - 130
			Heptane	2010/07/17		98	%	70 - 130
			Trichloroethylene	2010/07/17		94	%	70 - 130
			Tetrachloroethylene	2010/07/17		95	%	70 - 130
			Benzene	2010/07/17		94	%	70 - 130
			Toluene	2010/07/17		96	%	70 - 130
			Ethylbenzene	2010/07/17		95	%	70 - 130
			p+m-Xylene	2010/07/17		96	%	70 - 130
			o-Xylene	2010/07/17		95	%	70 - 130
			Styrene	2010/07/17		110	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/17		92	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/17		89	%	70 - 130
			4-ethyltoluene	2010/07/17		97	%	70 - 130
			Chlorobenzene	2010/07/17		97	%	70 - 130
			Benzyl chloride	2010/07/17		119	%	70 - 130
			1,3-Dichlorobenzene	2010/07/17		102	%	70 - 130
			1,4-Dichlorobenzene	2010/07/17		105	%	70 - 130
			1,2-Dichlorobenzene	2010/07/17		90	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/17		114	%	70 - 130
			Hexachlorobutadiene	2010/07/17		84	%	70 - 130
			Hexane	2010/07/17		96	%	70 - 130
			Cyclohexane	2010/07/17		98	%	70 - 130
			Tetrahydrofuran	2010/07/17		103	%	70 - 130
			1,4-Dioxane	2010/07/17		97	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/17		87	%	60 - 140
			D5-Chlorobenzene	2010/07/17		86	%	60 - 140
			Difluorobenzene	2010/07/17		89	%	60 - 140

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2212165	LSY	Method Blank	2,2,4-Trimethylpentane	2010/07/17	<0.20		ppbv	
			Carbon Disulfide	2010/07/17	<0.50		ppbv	
			Propene	2010/07/17	<0.30		ppbv	
			Vinyl Acetate	2010/07/17	<0.20		ppbv	
			Vinyl Bromide	2010/07/17	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/17	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/17	<0.17		ppbv	
			Chloromethane	2010/07/17	<0.30		ppbv	
			Vinyl Chloride	2010/07/17	<0.18		ppbv	
			Chloroethane	2010/07/17	<0.30		ppbv	
			1,3-Butadiene	2010/07/17	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/17	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/17	<0.15		ppbv	
			Ethanol	2010/07/17	<2.3		ppbv	
			2-propanol	2010/07/17	<3.0		ppbv	
			2-Propanone	2010/07/17	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/17	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/17	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/17	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/17	<0.20		ppbv	
			Ethyl Acetate	2010/07/17	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/17	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/17	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/17	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/17	0.42, RDL=0.30		ppbv	
			Chloroform	2010/07/17	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/17	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/17	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/17	<0.20		ppbv	
			Ethylene Dibromide	2010/07/17	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/17	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/17	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/17	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/17	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/17	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/17	<0.40		ppbv	
			Bromomethane	2010/07/17	<0.18		ppbv	
			Bromoform	2010/07/17	<0.20		ppbv	
			Bromodichloromethane	2010/07/17	<0.20		ppbv	
			Dibromochloromethane	2010/07/17	<0.20		ppbv	
			Heptane	2010/07/17	<0.30		ppbv	
			Trichloroethylene	2010/07/17	<0.30		ppbv	
			Tetrachloroethylene	2010/07/17	<0.20		ppbv	
			Benzene	2010/07/17	<0.18		ppbv	
			Toluene	2010/07/17	<0.20		ppbv	
			Ethylbenzene	2010/07/17	<0.20		ppbv	
			p+m-Xylene	2010/07/17	<0.37		ppbv	
			o-Xylene	2010/07/17	<0.20		ppbv	
			Styrene	2010/07/17	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/17	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/17	<0.50		ppbv	
			4-ethyltoluene	2010/07/17	<2.2		ppbv	
			Chlorobenzene	2010/07/17	<0.20		ppbv	
			Benzyl chloride	2010/07/17	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/17	<0.40		ppbv	

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB088347

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2212165	LSY	Method Blank	1,4-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/17	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/17	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/17	<3.0		ppbv	
			Hexane	2010/07/17	<0.30		ppbv	
			Cyclohexane	2010/07/17	<0.20		ppbv	
			Tetrahydrofuran	2010/07/17	<0.40		ppbv	
			1,4-Dioxane	2010/07/17	<2.0		ppbv	
			Xylene (Total)	2010/07/17	<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.

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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/July 07, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: July 06, 10 @ 14:20 mst
Removal Date/Time: July 08, 10 @ 8:23 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
07-Jul-10	07/07/2010 0:00	08/07/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
05-Jul-10	08-Jul-10	14-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
712	229	16.7	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 # 2342
GB082720 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/July 07, 10

Technician Signiture: Ting Xu

Your C.O.C. #: 2342

Attention: Michael Bisaga
Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B090884
Received: 2010/07/12, 08:30

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/22	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/08	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/22	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	2010/07/20	2010/09/07	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. #: 2342

Attention: Michael Bisaga
Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

==========

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.

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Total cover pages: 2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GL6211	GL6212	
Sampling Date		2010/07/07	2010/07/07	
COC Number		2342	2342	
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	21	2215425

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223583
Carbon Disulfide	ug/m3	<1.6	<1.6	1.6	2223583
Propene	ug/m3	<0.52	<0.52	0.52	2223583
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223583
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223583
Dichlorodifluoromethane (FREON 12)	ug/m3	3.55	3.56	0.99	2223583
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223583
Chloromethane	ug/m3	1.21	1.29	0.62	2223583
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223583
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223583
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223583
Trichlorofluoromethane (FREON 11)	ug/m3	1.8	1.8	1.1	2223583
Ethanol	ug/m3	5.1	9.0	4.3	2223583
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223583
2-propanol	ug/m3	<7.4	<7.4	7.4	2223583
2-Propanone	ug/m3	7.8	7.6	1.9	2223583
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223583
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223583
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223583
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223583
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223583
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223583
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223583
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223583
Methylene Chloride(Dichloromethane)	ug/m3	1.7	1.7	1.0	2223583
Chloroform	ug/m3	<0.73	<0.73	0.73	2223583
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223583
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223583
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223583
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223583

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223583
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223583
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223583
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223583
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223583
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223583
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223583
Bromoform	ug/m3	<2.1	<2.1	2.1	2223583
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223583
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223583
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223583
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223583
Benzene	ug/m3	<0.58	<0.58	0.58	2223583
Toluene	ug/m3	1.00	<0.75	0.75	2223583
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223583
p+m-Xylene	ug/m3	<1.6	<1.6	1.6	2223583
o-Xylene	ug/m3	<0.87	<0.87	0.87	2223583
Styrene	ug/m3	<0.85	<0.85	0.85	2223583
4-ethyltoluene	ug/m3	<11	<11	11	2223583
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223583
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223583
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223583
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223583
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223583
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223583
Hexachlorobutadiene	ug/m3	<32	<32	32	2223583
Hexane	ug/m3	<1.1	<1.1	1.1	2223583
Heptane	ug/m3	<1.2	<1.2	1.2	2223583
Cyclohexane	ug/m3	<0.69	0.77	0.69	2223583
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223583

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223583
Xylene (Total)	ug/m3	<2.6	<2.6	2.6	2223583

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GL6213	GL6214		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA PUF/QFF/ CLS/ JULY 07,10**	**LICA PUF/QFF/ PORT/ JULY 07,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.16	<0.10	0.10	2217422
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217422
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217422
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217422
2-Methylnaphthalene	ug	0.28	0.21	0.10	2217422
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217422
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217422
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217422
Acenaphthene	ug	0.216	<0.050	0.050	2217422
Acenaphthylene	ug	<0.050	<0.050	0.050	2217422
Anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217422
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217422
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Biphenyl	ug	<0.10	<0.10	0.10	2217422
Chrysene	ug	<0.050	<0.050	0.050	2217422
Coronene	ug	<0.10	<0.10	0.10	2217422
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217422
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217422
Fluoranthene	ug	0.078	<0.050	0.050	2217422
Fluorene	ug	0.162	0.086	0.050	2217422
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217422
m-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Naphthalene	ug	0.202	0.130	0.072	2217422
o-Terphenyl	ug	<0.10	<0.10	0.10	2217422

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GL6213	GL6214		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA PUF/QFF/ CLS/ JULY 07,10**	**LICA PUF/QFF/ PORT/ JULY 07,10**	**RDL**	**QC Batch**
Perylene	ug	<0.10	<0.10	0.10	2217422
Phenanthrene	ug	0.490	0.158	0.050	2217422
p-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Pyrene	ug	0.052	<0.050	0.050	2217422
Quinoline	ug	<0.40	<0.40	0.40	2217422
Tetralin	ug	<0.10	<0.10	0.10	2217422
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2217422
D10-Fluoranthene	%	112	106		2217422
D10-Fluorene (FS)	%	55	56		2217422
D10-Phenanthrene	%	98	94		2217422
D12-Benzo(a)anthracene	%	112	110		2217422
D12-Benzo(a)pyrene	%	88	82		2217422
D12-Benzo(b)fluoranthene	%	104	104		2217422
D12-Benzo(ghi)perylene	%	100	94		2217422
D12-Benzo(k)fluoranthene	%	104	100		2217422
D12-Chrysene	%	102	94		2217422
D12-Indeno(1,2,3-cd)pyrene	%	96	92		2217422
D12-Perylene	%	102	98		2217422
D14-Dibenzo(a,h)anthracene	%	78	76		2217422
D14-Terphenyl (FS)	%	104	98		2217422
D8-Acenaphthylene	%	100	102		2217422
D8-Naphthalene	%	74	82		2217422

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2215433
Carbon Disulfide	ppbv	<0.50	<0.50	0.50	2215433
Propene	ppbv	<0.30	<0.30	0.30	2215433
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2215433
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2215433
Dichlorodifluoromethane (FREON 12)	ppbv	0.72	0.72	0.20	2215433
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2215433
Chloromethane	ppbv	0.59	0.62	0.30	2215433
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2215433
Chloroethane	ppbv	<0.30	<0.30	0.30	2215433
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2215433
Trichlorofluoromethane (FREON 11)	ppbv	0.32	0.32	0.20	2215433
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2215433
Ethanol	ppbv	2.7	4.8	2.3	2215433
2-propanol	ppbv	<3.0	<3.0	3.0	2215433
2-Propanone	ppbv	3.27	3.21	0.80	2215433
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2215433
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2215433
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2215433
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2215433
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2215433
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2215433
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2215433
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2215433
Methylene Chloride(Dichloromethane)	ppbv	0.48	0.50	0.30	2215433
Chloroform	ppbv	<0.15	<0.15	0.15	2215433
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2215433
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2215433
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2215433
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2215433

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2215433
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2215433
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2215433
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2215433
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2215433
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2215433
Bromomethane	ppbv	<0.18	<0.18	0.18	2215433
Bromoform	ppbv	<0.20	<0.20	0.20	2215433
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2215433
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2215433
Heptane	ppbv	<0.30	<0.30	0.30	2215433
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2215433
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2215433
Benzene	ppbv	<0.18	<0.18	0.18	2215433
Toluene	ppbv	0.27	<0.20	0.20	2215433
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2215433
p+m-Xylene	ppbv	<0.37	<0.37	0.37	2215433
o-Xylene	ppbv	<0.20	<0.20	0.20	2215433
Styrene	ppbv	<0.20	<0.20	0.20	2215433
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2215433
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2215433
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2215433
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2215433
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2215433
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2215433
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2215433
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2215433
Hexane	ppbv	<0.30	<0.30	0.30	2215433
Cyclohexane	ppbv	<0.20	0.22	0.20	2215433
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2215433

QC Batch = Quality Control Batch

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Maxxam Job #: B090884
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GL6211	GL6212		
Sampling Date		2010/07/07	2010/07/07		
COC Number		2342	2342		
	Units	**LICA VOC/ CLS/ JULY 07,10 - 7856**	**LICA VOC/ PORT/ JULY 07,10 - S2312**	**RDL**	**QC Batch**
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2215433
Xylene (Total)	ppbv	<0.60	<0.60	0.60	2215433
Surrogate Recovery (%)					
Bromochloromethane	%	84	81		2215433
D5-Chlorobenzene	%	82	80		2215433
Difluorobenzene	%	85	83		2215433

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

Test Summary

Maxxam ID GL6211 **Collected** 2010/07/07
Sample ID LICA VOC/ CLS/ JULY 07,10 - 7856 **Shipped**
Matrix AIR **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2215425	N/A	2010/07/22	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2223583	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2215433	N/A	2010/07/22	LSY

Maxxam ID GL6212 **Collected** 2010/07/07
Sample ID LICA VOC/ PORT/ JULY 07,10 - S2312 **Shipped**
Matrix AIR **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2215425	N/A	2010/07/22	LSY
Volatile Organics in Air (ug/m3)	GC/MS	2223583	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2215433	N/A	2010/07/22	LSY

Maxxam ID GL6213 **Collected** 2010/07/07
Sample ID LICA PUF/QFF/ CLS/ JULY 07,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

Maxxam ID GL6214 **Collected** 2010/07/07
Sample ID LICA PUF/QFF/ PORT/ JULY 07,10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/12

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

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Lakeland Industry & Community Assoc.

Maxxam Job #: B090884
Report Date: 2010/09/08

GENERAL COMMENTS

Results relate only to the items tested.

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB090884

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433 LSY	Spiked Blank	Bromochloromethane	2010/07/22		121	%	60 - 140
		D5-Chlorobenzene	2010/07/22		118	%	60 - 140
		Difluorobenzene	2010/07/22		123	%	60 - 140
		2,2,4-Trimethylpentane	2010/07/22		95	%	70 - 130
		Carbon Disulfide	2010/07/22		94	%	70 - 130
		Propene	2010/07/22		92	%	70 - 130
		Vinyl Acetate	2010/07/22		106	%	70 - 130
		Vinyl Bromide	2010/07/22		99	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2010/07/22		85	%	70 - 130
		1,2-Dichlorotetrafluoroethane	2010/07/22		78	%	70 - 130
		Chloromethane	2010/07/22		85	%	70 - 130
		Vinyl Chloride	2010/07/22		94	%	70 - 130
		Chloroethane	2010/07/22		95	%	70 - 130
		1,3-Butadiene	2010/07/22		78	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2010/07/22		85	%	70 - 130
		Trichlorotrifluoroethane	2010/07/22		92	%	70 - 130
		Ethanol	2010/07/22		121	%	70 - 130
		2-propanol	2010/07/22		103	%	70 - 130
		2-Propanone	2010/07/22		97	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2010/07/22		99	%	70 - 130
		Methyl Isobutyl Ketone	2010/07/22		91	%	70 - 130
		Methyl Butyl Ketone (2-Hexanone)	2010/07/22		96	%	70 - 130
		Methyl t-butyl ether (MTBE)	2010/07/22		95	%	70 - 130
		Ethyl Acetate	2010/07/22		92	%	70 - 130
		1,1-Dichloroethylene	2010/07/22		89	%	70 - 130
		cis-1,2-Dichloroethylene	2010/07/22		89	%	70 - 130
		trans-1,2-Dichloroethylene	2010/07/22		93	%	70 - 130
		Methylene Chloride(Dichloromethane)	2010/07/22		79	%	70 - 130
		Chloroform	2010/07/22		88	%	70 - 130
		Carbon Tetrachloride	2010/07/22		93	%	70 - 130
		1,1-Dichloroethane	2010/07/22		89	%	70 - 130
		1,2-Dichloroethane	2010/07/22		83	%	70 - 130
		Ethylene Dibromide	2010/07/22		88	%	70 - 130
		1,1,1-Trichloroethane	2010/07/22		89	%	70 - 130
		1,1,2-Trichloroethane	2010/07/22		91	%	70 - 130
		1,1,2,2-Tetrachloroethane	2010/07/22		89	%	70 - 130
		cis-1,3-Dichloropropene	2010/07/22		97	%	70 - 130
		trans-1,3-Dichloropropene	2010/07/22		95	%	70 - 130
		1,2-Dichloropropane	2010/07/22		89	%	70 - 130
		Bromomethane	2010/07/22		88	%	70 - 130
		Bromoform	2010/07/22		107	%	70 - 130
		Bromodichloromethane	2010/07/22		95	%	70 - 130
		Dibromochloromethane	2010/07/22		98	%	70 - 130
		Heptane	2010/07/22		92	%	70 - 130
		Trichloroethylene	2010/07/22		91	%	70 - 130
		Tetrachloroethylene	2010/07/22		90	%	70 - 130
		Benzene	2010/07/22		91	%	70 - 130
		Toluene	2010/07/22		92	%	70 - 130
		Ethylbenzene	2010/07/22		91	%	70 - 130
		p+m-Xylene	2010/07/22		91	%	70 - 130
		o-Xylene	2010/07/22		89	%	70 - 130
		Styrene	2010/07/22		94	%	70 - 130
		1,3,5-Trimethylbenzene	2010/07/22		87	%	70 - 130
		1,2,4-Trimethylbenzene	2010/07/22		83	%	70 - 130
		4-ethyltoluene	2010/07/22		91	%	70 - 130

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Spiked Blank	Chlorobenzene	2010/07/22		90	%	70 - 130
			Benzyl chloride	2010/07/22		97	%	70 - 130
			1,3-Dichlorobenzene	2010/07/22		85	%	70 - 130
			1,4-Dichlorobenzene	2010/07/22		82	%	70 - 130
			1,2-Dichlorobenzene	2010/07/22		80	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/22		90	%	70 - 130
			Hexachlorobutadiene	2010/07/22		89	%	70 - 130
			Hexane	2010/07/22		92	%	70 - 130
			Cyclohexane	2010/07/22		94	%	70 - 130
			Tetrahydrofuran	2010/07/22		95	%	70 - 130
			1,4-Dioxane	2010/07/22		91	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/22		100	%	60 - 140
			D5-Chlorobenzene	2010/07/22		97	%	60 - 140
			Difluorobenzene	2010/07/22		103	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/22	<0.20		ppbv	
			Carbon Disulfide	2010/07/22	<0.50		ppbv	
			Propene	2010/07/22	<0.30		ppbv	
			Vinyl Acetate	2010/07/22	<0.20		ppbv	
			Vinyl Bromide	2010/07/22	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/22	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/22	<0.17		ppbv	
			Chloromethane	2010/07/22	<0.30		ppbv	
			Vinyl Chloride	2010/07/22	<0.18		ppbv	
			Chloroethane	2010/07/22	<0.30		ppbv	
			1,3-Butadiene	2010/07/22	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/22	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/22	<0.15		ppbv	
			Ethanol	2010/07/22	<2.3		ppbv	
			2-propanol	2010/07/22	<3.0		ppbv	
			2-Propanone	2010/07/22	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/22	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/22	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/22	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/22	<0.20		ppbv	
			Ethyl Acetate	2010/07/22	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/22	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/22	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/22	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/22	0.41, RDL=0.30		ppbv	
			Chloroform	2010/07/22	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/22	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/22	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/22	<0.20		ppbv	
			Ethylene Dibromide	2010/07/22	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/22	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/22	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/22	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/22	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/22	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/22	<0.40		ppbv	
			Bromomethane	2010/07/22	<0.18		ppbv	
			Bromoform	2010/07/22	<0.20		ppbv	
			Bromodichloromethane	2010/07/22	<0.20		ppbv	
			Dibromochloromethane	2010/07/22	<0.20		ppbv	
			Heptane	2010/07/22	<0.30		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2215433	LSY	Method Blank	Trichloroethylene	2010/07/22	<0.30		ppbv	
			Tetrachloroethylene	2010/07/22	<0.20		ppbv	
			Benzene	2010/07/22	<0.18		ppbv	
			Toluene	2010/07/22	<0.20		ppbv	
			Ethylbenzene	2010/07/22	<0.20		ppbv	
			p+m-Xylene	2010/07/22	<0.37		ppbv	
			o-Xylene	2010/07/22	<0.20		ppbv	
			Styrene	2010/07/22	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/22	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/22	<0.50		ppbv	
			4-ethyltoluene	2010/07/22	<2.2		ppbv	
			Chlorobenzene	2010/07/22	<0.20		ppbv	
			Benzyl chloride	2010/07/22	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,4-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/22	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/22	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/22	<3.0		ppbv	
			Hexane	2010/07/22	<0.30		ppbv	
			Cyclohexane	2010/07/22	<0.20		ppbv	
			Tetrahydrofuran	2010/07/22	<0.40		ppbv	
			1,4-Dioxane	2010/07/22	<2.0		ppbv	
			Xylene (Total)	2010/07/22	<0.60		ppbv	
		RPD - Sample/Sample Dup	Benzene	2010/07/22	NC		%	25
2217422	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/08/24		70	%	50 - 150
			D10-Fluoranthene	2010/08/24		100	%	50 - 150
			D10-Phenanthrene	2010/08/24		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		140	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		90	%	50 - 150
			D12-Chrysene	2010/08/24		84	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		100	%	50 - 150
			D12-Perylene	2010/08/24		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		90	%	50 - 150
			D8-Acenaphthylene	2010/08/24		106	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			Acenaphthene	2010/08/24		83	%	60 - 130
		RPD	Acenaphthene	2010/08/24	0.6		%	50
		Spiked Blank	Acenaphthylene	2010/08/24		104	%	60 - 130
		RPD	Acenaphthylene	2010/08/24	0.5		%	50
		Spiked Blank	Anthracene	2010/08/24		84	%	60 - 130
		RPD	Anthracene	2010/08/24	4.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/08/24		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/08/24	1.0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/08/24		84	%	60 - 130
		RPD	Benzo(a)pyrene	2010/08/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/08/24		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/08/24	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/08/24		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/08/24	1.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/08/24		82	%	60 - 130

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
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Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	RPD	Benzo(k)fluoranthene	2010/08/24	5.9		%	50
		Spiked Blank	Chrysene	2010/08/24		81	%	60 - 130
		RPD	Chrysene	2010/08/24	6.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/08/24		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/08/24	1.2		%	50
		Spiked Blank	Fluoranthene	2010/08/24		94	%	60 - 130
		RPD	Fluoranthene	2010/08/24	1.6		%	50
		Spiked Blank	Fluorene	2010/08/24		84	%	60 - 130
		RPD	Fluorene	2010/08/24	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/08/24		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/08/24	0.3		%	50
		Spiked Blank	Naphthalene	2010/08/24		69	%	60 - 130
		RPD	Naphthalene	2010/08/24	2.2		%	50
		Spiked Blank	Phenanthrene	2010/08/24		83	%	60 - 130
		RPD	Phenanthrene	2010/08/24	1.8		%	50
		Spiked Blank	Pyrene	2010/08/24		96	%	60 - 130
		RPD	Pyrene	2010/08/24	2.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/08/24		68	%	50 - 150
			D10-Fluoranthene	2010/08/24		98	%	50 - 150
			D10-Phenanthrene	2010/08/24		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		132	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		102	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		82	%	50 - 150
			D12-Chrysene	2010/08/24		82	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		94	%	50 - 150
			D12-Perylene	2010/08/24		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		84	%	50 - 150
			D8-Acenaphthylene	2010/08/24		108	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			1-Methylnaphthalene	2010/08/24	<0.10		ug	
			1-Methylphenanthrene	2010/08/24	<0.10		ug	
			2-Chloronaphthalene	2010/08/24	<0.10		ug	
			2-Methylanthracene	2010/08/24	<0.10		ug	
			2-Methylnaphthalene	2010/08/24	<0.10		ug	
			3-Methylcholanthrene	2010/08/24	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/08/24	<0.10		ug	
			9,10-Dimethylanthracene	2010/08/24	<0.40		ug	
			Acenaphthene	2010/08/24	<0.050		ug	
			Acenaphthylene	2010/08/24	<0.050		ug	
			Anthracene	2010/08/24	<0.050		ug	
			Benzo(a)anthracene	2010/08/24	<0.050		ug	
			Benzo(a)fluorene	2010/08/24	<0.10		ug	
			Benzo(a)pyrene	2010/08/24	<0.050		ug	
			Benzo(b)fluoranthene	2010/08/24	<0.050		ug	
			Benzo(b)fluorene	2010/08/24	<0.10		ug	
			Benzo(e)pyrene	2010/08/24	<0.10		ug	
			Benzo(g,h,i)perylene	2010/08/24	<0.050		ug	
			Benzo(k)fluoranthene	2010/08/24	<0.050		ug	
			Biphenyl	2010/08/24	<0.10		ug	
			Chrysene	2010/08/24	<0.050		ug	
			Coronene	2010/08/24	<0.10		ug	
			Dibenz(a,h)anthracene	2010/08/24	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/08/24	<0.20		ug	

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
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Quality Assurance Report (Continued)

Maxxam Job Number: GB090884

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Method Blank	Fluoranthene	2010/08/24	<0.050		ug	
			Fluorene	2010/08/24	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/08/24	<0.050		ug	
			m-Terphenyl	2010/08/24	<0.10		ug	
			Naphthalene	2010/08/24	<0.072		ug	
			o-Terphenyl	2010/08/24	<0.10		ug	
			Perylene	2010/08/24	<0.10		ug	
			Phenanthrene	2010/08/24	<0.050		ug	
			p-Terphenyl	2010/08/24	<0.10		ug	
			Pyrene	2010/08/24	<0.050		ug	
			Quinoline	2010/08/24	<0.40		ug	
			Tetralin	2010/08/24	<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.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Maxxam Analytics 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/July 13, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: July 12, 10 @ 13:55 mst
Removal Date/Time: July 14, 10 @ 14:55 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
13-Jul-10	13/07/2010 0:00	14/07/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
09-Jul-10	15-Jul-10	20-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
698	229	15.0	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 # 2310
GB082773 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/July 13, 10

Technician Signiture: Ting Xu

Your C.O.C. #: 2310

Attention: Michael Bisaga
Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B094870
Received: 2010/07/17, 15:50

Sample Matrix: AIR
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Canister Pressure (TO-15)	2	N/A	2010/07/28	BRL SOP-00304	EPA TO-15
Volatile Organics in Air (ug/m3)	2	N/A	2010/09/08	BRL SOP-00304	EPA TO15 Calculated
Volatile Organics in Air (TO-15) (1)	2	N/A	2010/07/28	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)	1	2010/07/20	2010/09/07	BRL SOP-00201	CARB429(ARBM1,M2)mod
PAH's in Air (CARB429mod)	1	2010/07/20	2010/09/08	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.

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Your C.O.C. #: 2310

Attention: Michael Bisaga
Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

-2-

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

RESULTS OF ANALYSES OF AIR

Maxxam ID		GN6253	GO2032	
Sampling Date		2010/07/13	2010/07/13	
COC Number		2310	2310	
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**QC Batch**
Volatile Organics				
Pressure on Receipt	psig	20	20	2221074

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Calculated Parameters					
2,2,4-Trimethylpentane	ug/m3	<0.93	<0.93	0.93	2223586
Carbon Disulfide	ug/m3	<1.6	4.6	1.6	2223586
Propene	ug/m3	<0.52	<0.52	0.52	2223586
Vinyl Acetate	ug/m3	<0.70	<0.70	0.70	2223586
Vinyl Bromide	ug/m3	<0.87	<0.87	0.87	2223586
Dichlorodifluoromethane (FREON 12)	ug/m3	3.44	3.36	0.99	2223586
1,2-Dichlorotetrafluoroethane	ug/m3	<1.2	<1.2	1.2	2223586
Chloromethane	ug/m3	1.15	<0.62	0.62	2223586
Vinyl Chloride	ug/m3	<0.46	<0.46	0.46	2223586
Chloroethane	ug/m3	<0.79	<0.79	0.79	2223586
1,3-Butadiene	ug/m3	<1.1	<1.1	1.1	2223586
Trichlorofluoromethane (FREON 11)	ug/m3	2.0	1.9	1.1	2223586
Ethanol	ug/m3	7.4	6.4	4.3	2223586
Trichlorotrifluoroethane	ug/m3	<1.1	<1.1	1.1	2223586
2-propanol	ug/m3	<7.4	<7.4	7.4	2223586
2-Propanone	ug/m3	11.3	11.8	1.9	2223586
Methyl Ethyl Ketone (2-Butanone)	ug/m3	<8.8	<8.8	8.8	2223586
Methyl Isobutyl Ketone	ug/m3	<13	<13	13	2223586
Methyl Butyl Ketone (2-Hexanone)	ug/m3	<8.2	<8.2	8.2	2223586
Methyl t-butyl ether (MTBE)	ug/m3	<0.72	<0.72	0.72	2223586
Ethyl Acetate	ug/m3	<7.9	<7.9	7.9	2223586
1,1-Dichloroethylene	ug/m3	<0.99	<0.99	0.99	2223586
cis-1,2-Dichloroethylene	ug/m3	<0.75	<0.75	0.75	2223586
trans-1,2-Dichloroethylene	ug/m3	<0.79	<0.79	0.79	2223586
Methylene Chloride(Dichloromethane)	ug/m3	1.1	1.1	1.0	2223586
Chloroform	ug/m3	<0.73	<0.73	0.73	2223586
Carbon Tetrachloride	ug/m3	<1.9	<1.9	1.9	2223586
1,1-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223586
1,2-Dichloroethane	ug/m3	<0.81	<0.81	0.81	2223586
Ethylene Dibromide	ug/m3	<1.3	<1.3	1.3	2223586
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	1.6	2223586

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

CALCULATED VOLATILE ORGANICS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ug/m3	<0.82	<0.82	0.82	2223586
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	<1.4	1.4	2223586
cis-1,3-Dichloropropene	ug/m3	<0.82	<0.82	0.82	2223586
trans-1,3-Dichloropropene	ug/m3	<0.77	<0.77	0.77	2223586
1,2-Dichloropropane	ug/m3	<1.8	<1.8	1.8	2223586
Bromomethane	ug/m3	<0.70	<0.70	0.70	2223586
Bromoform	ug/m3	<2.1	<2.1	2.1	2223586
Bromodichloromethane	ug/m3	<1.3	<1.3	1.3	2223586
Dibromochloromethane	ug/m3	<1.7	<1.7	1.7	2223586
Trichloroethylene	ug/m3	<1.6	<1.6	1.6	2223586
Tetrachloroethylene	ug/m3	<1.4	<1.4	1.4	2223586
Benzene	ug/m3	<0.58	<0.58	0.58	2223586
Toluene	ug/m3	<0.75	<0.75	0.75	2223586
Ethylbenzene	ug/m3	<0.87	<0.87	0.87	2223586
p+m-Xylene	ug/m3	<1.6	4.9	1.6	2223586
o-Xylene	ug/m3	<0.87	1.48	0.87	2223586
Styrene	ug/m3	<0.85	<0.85	0.85	2223586
4-ethyltoluene	ug/m3	<11	<11	11	2223586
1,3,5-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223586
1,2,4-Trimethylbenzene	ug/m3	<2.5	<2.5	2.5	2223586
Chlorobenzene	ug/m3	<0.92	<0.92	0.92	2223586
Benzyl chloride	ug/m3	<5.2	<5.2	5.2	2223586
1,3-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,4-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,2-Dichlorobenzene	ug/m3	<2.4	<2.4	2.4	2223586
1,2,4-Trichlorobenzene	ug/m3	<15	<15	15	2223586
Hexachlorobutadiene	ug/m3	<32	<32	32	2223586
Hexane	ug/m3	<1.1	<1.1	1.1	2223586
Heptane	ug/m3	<1.2	<1.2	1.2	2223586
Cyclohexane	ug/m3	<0.69	<0.69	0.69	2223586
Tetrahydrofuran	ug/m3	<1.2	<1.2	1.2	2223586
1,4-Dioxane	ug/m3	<7.2	<7.2	7.2	2223586
Xylene (Total)	ug/m3	<2.6	6.4	2.6	2223586

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GN6254	GN6255		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA PUF/CLS/JULY 13, 10**	**LICA PUF/PORT/JULY 13, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2217422
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217422
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217422
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217422
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2217422
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217422
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217422
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217422
Acenaphthene	ug	<0.050	<0.050	0.050	2217422
Acenaphthylene	ug	<0.050	<0.050	0.050	2217422
Anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217422
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217422
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217422
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217422
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217422
Biphenyl	ug	<0.10	<0.10	0.10	2217422
Chrysene	ug	<0.050	<0.050	0.050	2217422
Coronene	ug	<0.10	<0.10	0.10	2217422
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217422
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217422
Fluoranthene	ug	0.074	<0.050	0.050	2217422
Fluorene	ug	0.084	<0.050	0.050	2217422
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217422
m-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Naphthalene	ug	0.076	<0.072	0.072	2217422
o-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Perylene	ug	<0.10	<0.10	0.10	2217422

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GN6254	GN6255		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA PUF/CLS/JULY 13, 10**	**LICA PUF/PORT/JULY 13, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.428	0.122	0.050	2217422
p-Terphenyl	ug	<0.10	<0.10	0.10	2217422
Pyrene	ug	<0.050	<0.050	0.050	2217422
Quinoline	ug	<0.40	<0.40	0.40	2217422
Tetralin	ug	<0.10	<0.10	0.10	2217422
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2217422
D10-Fluoranthene	%	108	106		2217422
D10-Fluorene (FS)	%	52	58		2217422
D10-Phenanthrene	%	98	96		2217422
D12-Benzo(a)anthracene	%	110	108		2217422
D12-Benzo(a)pyrene	%	92	92		2217422
D12-Benzo(b)fluoranthene	%	102	102		2217422
D12-Benzo(ghi)perylene	%	98	96		2217422
D12-Benzo(k)fluoranthene	%	98	100		2217422
D12-Chrysene	%	100	104		2217422
D12-Indeno(1,2,3-cd)pyrene	%	94	94		2217422
D12-Perylene	%	98	98		2217422
D14-Dibenzo(a,h)anthracene	%	76	76		2217422
D14-Terphenyl (FS)	%	98	99		2217422
D8-Acenaphthylene	%	104	108		2217422
D8-Naphthalene	%	76	82		2217422

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Volatile Organics					
2,2,4-Trimethylpentane	ppbv	<0.20	<0.20	0.20	2220603
Carbon Disulfide	ppbv	<0.50	1.49	0.50	2220603
Propene	ppbv	<0.30	<0.30	0.30	2220603
Vinyl Acetate	ppbv	<0.20	<0.20	0.20	2220603
Vinyl Bromide	ppbv	<0.20	<0.20	0.20	2220603
Dichlorodifluoromethane (FREON 12)	ppbv	0.70	0.68	0.20	2220603
1,2-Dichlorotetrafluoroethane	ppbv	<0.17	<0.17	0.17	2220603
Chloromethane	ppbv	0.56	<0.30	0.30	2220603
Vinyl Chloride	ppbv	<0.18	<0.18	0.18	2220603
Chloroethane	ppbv	<0.30	<0.30	0.30	2220603
1,3-Butadiene	ppbv	<0.50	<0.50	0.50	2220603
Trichlorofluoromethane (FREON 11)	ppbv	0.35	0.33	0.20	2220603
Trichlorotrifluoroethane	ppbv	<0.15	<0.15	0.15	2220603
Ethanol	ppbv	3.9	3.4	2.3	2220603
2-propanol	ppbv	<3.0	<3.0	3.0	2220603
2-Propanone	ppbv	4.75	4.98	0.80	2220603
Methyl Ethyl Ketone (2-Butanone)	ppbv	<3.0	<3.0	3.0	2220603
Methyl Isobutyl Ketone	ppbv	<3.2	<3.2	3.2	2220603
Methyl Butyl Ketone (2-Hexanone)	ppbv	<2.0	<2.0	2.0	2220603
Methyl t-butyl ether (MTBE)	ppbv	<0.20	<0.20	0.20	2220603
Ethyl Acetate	ppbv	<2.2	<2.2	2.2	2220603
1,1-Dichloroethylene	ppbv	<0.25	<0.25	0.25	2220603
cis-1,2-Dichloroethylene	ppbv	<0.19	<0.19	0.19	2220603
trans-1,2-Dichloroethylene	ppbv	<0.20	<0.20	0.20	2220603
Methylene Chloride(Dichloromethane)	ppbv	0.31	0.31	0.30	2220603
Chloroform	ppbv	<0.15	<0.15	0.15	2220603
Carbon Tetrachloride	ppbv	<0.30	<0.30	0.30	2220603
1,1-Dichloroethane	ppbv	<0.20	<0.20	0.20	2220603
1,2-Dichloroethane	ppbv	<0.20	<0.20	0.20	2220603
Ethylene Dibromide	ppbv	<0.17	<0.17	0.17	2220603
1,1,1-Trichloroethane	ppbv	<0.30	<0.30	0.30	2220603

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
1,1,2-Trichloroethane	ppbv	<0.15	<0.15	0.15	2220603
1,1,2,2-Tetrachloroethane	ppbv	<0.20	<0.20	0.20	2220603
cis-1,3-Dichloropropene	ppbv	<0.18	<0.18	0.18	2220603
trans-1,3-Dichloropropene	ppbv	<0.17	<0.17	0.17	2220603
1,2-Dichloropropane	ppbv	<0.40	<0.40	0.40	2220603
Bromomethane	ppbv	<0.18	<0.18	0.18	2220603
Bromoform	ppbv	<0.20	<0.20	0.20	2220603
Bromodichloromethane	ppbv	<0.20	<0.20	0.20	2220603
Dibromochloromethane	ppbv	<0.20	<0.20	0.20	2220603
Heptane	ppbv	<0.30	<0.30	0.30	2220603
Trichloroethylene	ppbv	<0.30	<0.30	0.30	2220603
Tetrachloroethylene	ppbv	<0.20	<0.20	0.20	2220603
Benzene	ppbv	<0.18	<0.18	0.18	2220603
Toluene	ppbv	<0.20	<0.20	0.20	2220603
Ethylbenzene	ppbv	<0.20	<0.20	0.20	2220603
p+m-Xylene	ppbv	<0.37	1.13	0.37	2220603
o-Xylene	ppbv	<0.20	0.34	0.20	2220603
Styrene	ppbv	<0.20	<0.20	0.20	2220603
1,3,5-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2220603
1,2,4-Trimethylbenzene	ppbv	<0.50	<0.50	0.50	2220603
4-ethyltoluene	ppbv	<2.2	<2.2	2.2	2220603
Chlorobenzene	ppbv	<0.20	<0.20	0.20	2220603
Benzyl chloride	ppbv	<1.0	<1.0	1.0	2220603
1,3-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,4-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,2-Dichlorobenzene	ppbv	<0.40	<0.40	0.40	2220603
1,2,4-Trichlorobenzene	ppbv	<2.0	<2.0	2.0	2220603
Hexachlorobutadiene	ppbv	<3.0	<3.0	3.0	2220603
Hexane	ppbv	<0.30	<0.30	0.30	2220603
Cyclohexane	ppbv	<0.20	<0.20	0.20	2220603
Tetrahydrofuran	ppbv	<0.40	<0.40	0.40	2220603
1,4-Dioxane	ppbv	<2.0	<2.0	2.0	2220603
Xylene (Total)	ppbv	<0.60	1.47	0.60	2220603

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

VOLATILE ORGANICS BY GC/MS (AIR)

Maxxam ID		GN6253	GO2032		
Sampling Date		2010/07/13	2010/07/13		
COC Number		2310	2310		
	Units	**LICA VOC/PORT/JULY 13, 10 - 7871**	**LICA VOC/CLS/JULY12,10**	**RDL**	**QC Batch**
Surrogate Recovery (%)					
Bromochloromethane	%	77	80		2220603
D5-Chlorobenzene	%	79	82		2220603
Difluorobenzene	%	80	82		2220603

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

Test Summary

Maxxam ID GN6253 **Collected** 2010/07/13
Sample ID LICA VOC/PORT/JULY 13, 10 - 7871 **Shipped**
Matrix AIR **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221074	N/A	2010/07/28	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223586	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2220603	N/A	2010/07/28	MM2

Maxxam ID GN6254 **Collected** 2010/07/13
Sample ID LICA PUF/CLS/JULY 13, 10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/07	WZ

Maxxam ID GN6255 **Collected** 2010/07/13
Sample ID LICA PUF/PORT/JULY 13, 10 **Shipped**
Matrix PUF AND FILTER **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217422	2010/07/20	2010/09/08	WZ

Maxxam ID GO2032 **Collected** 2010/07/13
Sample ID LICA VOC/CLS/JULY12,10 **Shipped**
Matrix AIR **Received** 2010/07/17

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Canister Pressure (TO-15)	PRES	2221074	N/A	2010/07/28	MM2
Volatile Organics in Air (ug/m3)	GC/MS	2223586	N/A	2010/09/08	
Volatile Organics in Air (TO-15)	GC/MS	2220603	N/A	2010/07/28	MM2

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Lakeland Industry & Community Assoc.

Maxxam Job #: B094870
Report Date: 2010/09/08

GENERAL COMMENTS

Results relate only to the items tested.

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
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Quality Assurance Report

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Spiked Blank	D10-2-Methylnaphthalene	2010/08/24		70	%	50 - 150
			D10-Fluoranthene	2010/08/24		100	%	50 - 150
			D10-Phenanthrene	2010/08/24		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		140	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		90	%	50 - 150
			D12-Chrysene	2010/08/24		84	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/08/24		100	%	50 - 150
			D12-Perylene	2010/08/24		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		90	%	50 - 150
			D8-Acenaphthylene	2010/08/24		106	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			Acenaphthene	2010/08/24		83	%	60 - 130
		RPD	Acenaphthene	2010/08/24	0.6		%	50
		Spiked Blank	Acenaphthylene	2010/08/24		104	%	60 - 130
		RPD	Acenaphthylene	2010/08/24	0.5		%	50
		Spiked Blank	Anthracene	2010/08/24		84	%	60 - 130
		RPD	Anthracene	2010/08/24	4.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/08/24		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/08/24	1.0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/08/24		84	%	60 - 130
		RPD	Benzo(a)pyrene	2010/08/24	0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/08/24		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/08/24	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/08/24		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/08/24	1.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/08/24		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/08/24	5.9		%	50
		Spiked Blank	Chrysene	2010/08/24		81	%	60 - 130
		RPD	Chrysene	2010/08/24	6.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/08/24		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/08/24	1.2		%	50
		Spiked Blank	Fluoranthene	2010/08/24		94	%	60 - 130
		RPD	Fluoranthene	2010/08/24	1.6		%	50
		Spiked Blank	Fluorene	2010/08/24		84	%	60 - 130
		RPD	Fluorene	2010/08/24	0.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/08/24		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/08/24	0.3		%	50
		Spiked Blank	Naphthalene	2010/08/24		69	%	60 - 130
		RPD	Naphthalene	2010/08/24	2.2		%	50
		Spiked Blank	Phenanthrene	2010/08/24		83	%	60 - 130
		RPD	Phenanthrene	2010/08/24	1.8		%	50
		Spiked Blank	Pyrene	2010/08/24		96	%	60 - 130
		RPD	Pyrene	2010/08/24	2.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/08/24		68	%	50 - 150
			D10-Fluoranthene	2010/08/24		98	%	50 - 150
			D10-Phenanthrene	2010/08/24		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/08/24		132	%	50 - 150
			D12-Benzo(a)pyrene	2010/08/24		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/08/24		102	%	50 - 150
			D12-Benzo(ghi)perylene	2010/08/24		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/08/24		82	%	50 - 150
			D12-Chrysene	2010/08/24		82	%	50 - 150

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Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217422	WZ	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/08/24		94	%	50 - 150
			D12-Perylene	2010/08/24		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/08/24		84	%	50 - 150
			D8-Acenaphthylene	2010/08/24		108	%	50 - 150
			D8-Naphthalene	2010/08/24		70	%	50 - 150
			1-Methylnaphthalene	2010/08/24	<0.10		ug	
			1-Methylphenanthrene	2010/08/24	<0.10		ug	
			2-Chloronaphthalene	2010/08/24	<0.10		ug	
			2-Methylanthracene	2010/08/24	<0.10		ug	
			2-Methylnaphthalene	2010/08/24	<0.10		ug	
			3-Methylcholanthrene	2010/08/24	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/08/24	<0.10		ug	
			9,10-Dimethylanthracene	2010/08/24	<0.40		ug	
			Acenaphthene	2010/08/24	<0.050		ug	
			Acenaphthylene	2010/08/24	<0.050		ug	
			Anthracene	2010/08/24	<0.050		ug	
			Benzo(a)anthracene	2010/08/24	<0.050		ug	
			Benzo(a)fluorene	2010/08/24	<0.10		ug	
			Benzo(a)pyrene	2010/08/24	<0.050		ug	
			Benzo(b)fluoranthene	2010/08/24	<0.050		ug	
			Benzo(b)fluorene	2010/08/24	<0.10		ug	
			Benzo(e)pyrene	2010/08/24	<0.10		ug	
			Benzo(g,h,i)perylene	2010/08/24	<0.050		ug	
			Benzo(k)fluoranthene	2010/08/24	<0.050		ug	
			Biphenyl	2010/08/24	<0.10		ug	
			Chrysene	2010/08/24	<0.050		ug	
			Coronene	2010/08/24	<0.10		ug	
			Dibenz(a,h)anthracene	2010/08/24	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/08/24	<0.20		ug	
			Fluoranthene	2010/08/24	<0.050		ug	
			Fluorene	2010/08/24	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/08/24	<0.050		ug	
			m-Terphenyl	2010/08/24	<0.10		ug	
			Naphthalene	2010/08/24	<0.072		ug	
			o-Terphenyl	2010/08/24	<0.10		ug	
			Perylene	2010/08/24	<0.10		ug	
			Phenanthrene	2010/08/24	<0.050		ug	
			p-Terphenyl	2010/08/24	<0.10		ug	
			Pyrene	2010/08/24	<0.050		ug	
			Quinoline	2010/08/24	<0.40		ug	
			Tetralin	2010/08/24	<0.10		ug	
2220603	MM2	Spiked Blank	Bromochloromethane	2010/07/28		95	%	60 - 140
			D5-Chlorobenzene	2010/07/28		96	%	60 - 140
			Difluorobenzene	2010/07/28		97	%	60 - 140
			2,2,4-Trimethylpentane	2010/07/28		81	%	70 - 130
			Carbon Disulfide	2010/07/28		84	%	70 - 130
			Propene	2010/07/28		89	%	70 - 130
			Vinyl Acetate	2010/07/28		93	%	70 - 130
			Vinyl Bromide	2010/07/28		90	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2010/07/28		89	%	70 - 130
			1,2-Dichlorotetrafluoroethane	2010/07/28		76	%	70 - 130
			Chloromethane	2010/07/28		87	%	70 - 130
			Vinyl Chloride	2010/07/28		92	%	70 - 130
			Chloroethane	2010/07/28		93	%	70 - 130
			1,3-Butadiene	2010/07/28		92	%	70 - 130

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Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Spiked Blank	Trichlorofluoromethane (FREON 11)	2010/07/28		94	%	70 - 130
			Trichlorotrifluoroethane	2010/07/28		66 (1)	%	70 - 130
			Ethanol	2010/07/28		102	%	70 - 130
			2-propanol	2010/07/28		85	%	70 - 130
			2-Propanone	2010/07/28		89	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28		82	%	70 - 130
			Methyl Isobutyl Ketone	2010/07/28		86	%	70 - 130
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28		86	%	70 - 130
			Methyl t-butyl ether (MTBE)	2010/07/28		76	%	70 - 130
			Ethyl Acetate	2010/07/28		83	%	70 - 130
			1,1-Dichloroethylene	2010/07/28		70	%	70 - 130
			cis-1,2-Dichloroethylene	2010/07/28		84	%	70 - 130
			trans-1,2-Dichloroethylene	2010/07/28		86	%	70 - 130
			Methylene Chloride(Dichloromethane)	2010/07/28		77	%	70 - 130
			Chloroform	2010/07/28		86	%	70 - 130
			Carbon Tetrachloride	2010/07/28		99	%	70 - 130
			1,1-Dichloroethane	2010/07/28		80	%	70 - 130
			1,2-Dichloroethane	2010/07/28		81	%	70 - 130
			Ethylene Dibromide	2010/07/28		92	%	70 - 130
			1,1,1-Trichloroethane	2010/07/28		91	%	70 - 130
			1,1,2-Trichloroethane	2010/07/28		90	%	70 - 130
			1,1,2,2-Tetrachloroethane	2010/07/28		83	%	70 - 130
			cis-1,3-Dichloropropene	2010/07/28		90	%	70 - 130
			trans-1,3-Dichloropropene	2010/07/28		92	%	70 - 130
			1,2-Dichloropropane	2010/07/28		85	%	70 - 130
			Bromomethane	2010/07/28		101	%	70 - 130
			Bromoform	2010/07/28		99	%	70 - 130
			Bromodichloromethane	2010/07/28		85	%	70 - 130
			Dibromochloromethane	2010/07/28		95	%	70 - 130
			Heptane	2010/07/28		85	%	70 - 130
			Trichloroethylene	2010/07/28		93	%	70 - 130
			Tetrachloroethylene	2010/07/28		95	%	70 - 130
			Benzene	2010/07/28		85	%	70 - 130
			Toluene	2010/07/28		89	%	70 - 130
			Ethylbenzene	2010/07/28		87	%	70 - 130
			p+m-Xylene	2010/07/28		90	%	70 - 130
			o-Xylene	2010/07/28		86	%	70 - 130
			Styrene	2010/07/28		90	%	70 - 130
			1,3,5-Trimethylbenzene	2010/07/28		87	%	70 - 130
			1,2,4-Trimethylbenzene	2010/07/28		84	%	70 - 130
			4-ethyltoluene	2010/07/28		80	%	70 - 130
			Chlorobenzene	2010/07/28		92	%	70 - 130
			Benzyl chloride	2010/07/28		79	%	70 - 130
			1,3-Dichlorobenzene	2010/07/28		94	%	70 - 130
			1,4-Dichlorobenzene	2010/07/28		91	%	70 - 130
			1,2-Dichlorobenzene	2010/07/28		83	%	70 - 130
			1,2,4-Trichlorobenzene	2010/07/28		86	%	70 - 130
			Hexachlorobutadiene	2010/07/28		84	%	70 - 130
			Hexane	2010/07/28		77	%	70 - 130
			Cyclohexane	2010/07/28		82	%	70 - 130
			Tetrahydrofuran	2010/07/28		82	%	70 - 130
			1,4-Dioxane	2010/07/28		85	%	70 - 130
		Method Blank	Bromochloromethane	2010/07/28		90	%	60 - 140
			D5-Chlorobenzene	2010/07/28		89	%	60 - 140
			Difluorobenzene	2010/07/28		91	%	60 - 140

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Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Method Blank	2,2,4-Trimethylpentane	2010/07/28	<0.20		ppbv	
			Carbon Disulfide	2010/07/28	<0.50		ppbv	
			Propene	2010/07/28	<0.30		ppbv	
			Vinyl Acetate	2010/07/28	<0.20		ppbv	
			Vinyl Bromide	2010/07/28	<0.20		ppbv	
			Dichlorodifluoromethane (FREON 12)	2010/07/28	<0.20		ppbv	
			1,2-Dichlorotetrafluoroethane	2010/07/28	<0.17		ppbv	
			Chloromethane	2010/07/28	<0.30		ppbv	
			Vinyl Chloride	2010/07/28	<0.18		ppbv	
			Chloroethane	2010/07/28	<0.30		ppbv	
			1,3-Butadiene	2010/07/28	<0.50		ppbv	
			Trichlorofluoromethane (FREON 11)	2010/07/28	<0.20		ppbv	
			Trichlorotrifluoroethane	2010/07/28	<0.15		ppbv	
			Ethanol	2010/07/28	<2.3		ppbv	
			2-propanol	2010/07/28	<3.0		ppbv	
			2-Propanone	2010/07/28	<0.80		ppbv	
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28	<3.0		ppbv	
			Methyl Isobutyl Ketone	2010/07/28	<3.2		ppbv	
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28	<2.0		ppbv	
			Methyl t-butyl ether (MTBE)	2010/07/28	<0.20		ppbv	
			Ethyl Acetate	2010/07/28	<2.2		ppbv	
			1,1-Dichloroethylene	2010/07/28	<0.25		ppbv	
			cis-1,2-Dichloroethylene	2010/07/28	<0.19		ppbv	
			trans-1,2-Dichloroethylene	2010/07/28	<0.20		ppbv	
			Methylene Chloride(Dichloromethane)	2010/07/28	<0.30		ppbv	
			Chloroform	2010/07/28	<0.15		ppbv	
			Carbon Tetrachloride	2010/07/28	<0.30		ppbv	
			1,1-Dichloroethane	2010/07/28	<0.20		ppbv	
			1,2-Dichloroethane	2010/07/28	<0.20		ppbv	
			Ethylene Dibromide	2010/07/28	<0.17		ppbv	
			1,1,1-Trichloroethane	2010/07/28	<0.30		ppbv	
			1,1,2-Trichloroethane	2010/07/28	<0.15		ppbv	
			1,1,2,2-Tetrachloroethane	2010/07/28	<0.20		ppbv	
			cis-1,3-Dichloropropene	2010/07/28	<0.18		ppbv	
			trans-1,3-Dichloropropene	2010/07/28	<0.17		ppbv	
			1,2-Dichloropropane	2010/07/28	<0.40		ppbv	
			Bromomethane	2010/07/28	<0.18		ppbv	
			Bromoform	2010/07/28	<0.20		ppbv	
			Bromodichloromethane	2010/07/28	<0.20		ppbv	
			Dibromochloromethane	2010/07/28	<0.20		ppbv	
			Heptane	2010/07/28	<0.30		ppbv	
			Trichloroethylene	2010/07/28	<0.30		ppbv	
			Tetrachloroethylene	2010/07/28	<0.20		ppbv	
			Benzene	2010/07/28	<0.18		ppbv	
			Toluene	2010/07/28	<0.20		ppbv	
			Ethylbenzene	2010/07/28	<0.20		ppbv	
			p+m-Xylene	2010/07/28	<0.37		ppbv	
			o-Xylene	2010/07/28	<0.20		ppbv	
			Styrene	2010/07/28	<0.20		ppbv	
			1,3,5-Trimethylbenzene	2010/07/28	<0.50		ppbv	
			1,2,4-Trimethylbenzene	2010/07/28	<0.50		ppbv	
			4-ethyltoluene	2010/07/28	<2.2		ppbv	
			Chlorobenzene	2010/07/28	<0.20		ppbv	
			Benzyl chloride	2010/07/28	<1.0		ppbv	
			1,3-Dichlorobenzene	2010/07/28	<0.40		ppbv	

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Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	Method Blank	1,4-Dichlorobenzene	2010/07/28	<0.40		ppbv	
			1,2-Dichlorobenzene	2010/07/28	<0.40		ppbv	
			1,2,4-Trichlorobenzene	2010/07/28	<2.0		ppbv	
			Hexachlorobutadiene	2010/07/28	<3.0		ppbv	
			Hexane	2010/07/28	<0.30		ppbv	
			Cyclohexane	2010/07/28	<0.20		ppbv	
			Tetrahydrofuran	2010/07/28	<0.40		ppbv	
			1,4-Dioxane	2010/07/28	<2.0		ppbv	
			Xylene (Total)	2010/07/28	<0.60		ppbv	
		RPD - Sample/Sample Dup	2,2,4-Trimethylpentane	2010/07/28	NC		%	25
			Carbon Disulfide	2010/07/28	NC		%	25
			Propene	2010/07/28	NC		%	25
			Vinyl Acetate	2010/07/28	NC		%	25
			Vinyl Bromide	2010/07/28	NC		%	25
			Dichlorodifluoromethane (FREON 12)	2010/07/28	NC		%	25
			1,2-Dichlorotetrafluoroethane	2010/07/28	NC		%	25
			Chloromethane	2010/07/28	NC		%	25
			Vinyl Chloride	2010/07/28	NC		%	25
			Chloroethane	2010/07/28	NC		%	25
			1,3-Butadiene	2010/07/28	NC		%	25
			Trichlorofluoromethane (FREON 11)	2010/07/28	NC		%	25
			Trichlorotrifluoroethane	2010/07/28	NC		%	25
			Ethanol	2010/07/28	NC		%	25
			2-propanol	2010/07/28	NC		%	25
			2-Propanone	2010/07/28	0.8		%	25
			Methyl Ethyl Ketone (2-Butanone)	2010/07/28	NC		%	25
			Methyl Isobutyl Ketone	2010/07/28	NC		%	25
			Methyl Butyl Ketone (2-Hexanone)	2010/07/28	NC		%	25
			Methyl t-butyl ether (MTBE)	2010/07/28	NC		%	25
			Ethyl Acetate	2010/07/28	NC		%	25
			1,1-Dichloroethylene	2010/07/28	NC		%	25
			cis-1,2-Dichloroethylene	2010/07/28	NC		%	25
			trans-1,2-Dichloroethylene	2010/07/28	NC		%	25
			Methylene Chloride(Dichloromethane)	2010/07/28	NC		%	25
			Chloroform	2010/07/28	NC		%	25
			Carbon Tetrachloride	2010/07/28	NC		%	25
			1,1-Dichloroethane	2010/07/28	NC		%	25
			1,2-Dichloroethane	2010/07/28	NC		%	25
			Ethylene Dibromide	2010/07/28	NC		%	25
			1,1,1-Trichloroethane	2010/07/28	NC		%	25
			1,1,2-Trichloroethane	2010/07/28	NC		%	25
			1,1,2,2-Tetrachloroethane	2010/07/28	NC		%	25
			cis-1,3-Dichloropropene	2010/07/28	NC		%	25
			trans-1,3-Dichloropropene	2010/07/28	NC		%	25
			1,2-Dichloropropane	2010/07/28	NC		%	25
			Bromomethane	2010/07/28	NC		%	25
			Bromoform	2010/07/28	NC		%	25
			Bromodichloromethane	2010/07/28	NC		%	25
			Dibromochloromethane	2010/07/28	NC		%	25
			Heptane	2010/07/28	NC		%	25
			Trichloroethylene	2010/07/28	NC		%	25
			Tetrachloroethylene	2010/07/28	NC		%	25
			Benzene	2010/07/28	NC		%	25

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB094870

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2220603	MM2	RPD - Sample/Sample Dup	Toluene	2010/07/28	NC		%	25
			Ethylbenzene	2010/07/28	NC		%	25
			p+m-Xylene	2010/07/28	NC		%	25
			o-Xylene	2010/07/28	NC		%	25
			Styrene	2010/07/28	NC		%	25
			1,3,5-Trimethylbenzene	2010/07/28	NC		%	25
			1,2,4-Trimethylbenzene	2010/07/28	NC		%	25
			4-ethyltoluene	2010/07/28	NC		%	25
			Chlorobenzene	2010/07/28	NC		%	25
			Benzyl chloride	2010/07/28	NC		%	25
			1,3-Dichlorobenzene	2010/07/28	NC		%	25
			1,4-Dichlorobenzene	2010/07/28	NC		%	25
			1,2-Dichlorobenzene	2010/07/28	NC		%	25
			1,2,4-Trichlorobenzene	2010/07/28	NC		%	25
			Hexachlorobutadiene	2010/07/28	NC		%	25
			Hexane	2010/07/28	NC		%	25
			Cyclohexane	2010/07/28	NC		%	25
			Tetrahydrofuran	2010/07/28	NC		%	25
			1,4-Dioxane	2010/07/28	NC		%	25
			Xylene (Total)	2010/07/28	NC		%	25

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.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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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/July 19, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: July 16, 10 @ 7:30mst
Removal Date/Time: July 20, 10 @ 8:31mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
19-Jul-10	19/07/2010 0:00	20/07/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
15-Jul-10	20-Jul-10	27-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
711	229	16.4	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 # 2312
GB082793 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/July 19, 10

Technician Signiture: Ting Xu

Your C.O.C. #: 2312

Attention: Michael Bisaga
Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2010/09/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B097382
Received: 2010/07/22, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/07/26	2010/09/08	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Lakeland Industry & Community Assoc.

Maxxam Job #: B097382
Report Date: 2010/09/08

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GO7748	GO7749		
Sampling Date		2010/07/19	2010/07/19		
COC Number		2312	2312		
	Units	**LICA PUFF/CLS/JULY19,10**	**LICA PUFF/PORT/JULY19,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.15	<0.10	0.10	2217419
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2217419
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2217419
2-Methylanthracene	ug	<0.10	<0.10	0.10	2217419
2-Methylnaphthalene	ug	0.26	<0.10	0.10	2217419
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2217419
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2217419
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2217419
Acenaphthene	ug	0.134	<0.050	0.050	2217419
Acenaphthylene	ug	<0.050	<0.050	0.050	2217419
Anthracene	ug	<0.050	<0.050	0.050	2217419
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2217419
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2217419
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2217419
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2217419
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2217419
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2217419
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2217419
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2217419
Biphenyl	ug	<0.10	<0.10	0.10	2217419
Chrysene	ug	<0.050	<0.050	0.050	2217419
Coronene	ug	<0.10	<0.10	0.10	2217419
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2217419
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2217419
Fluoranthene	ug	0.066	<0.050	0.050	2217419
Fluorene	ug	0.160	<0.050	0.050	2217419
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2217419
m-Terphenyl	ug	<0.10	<0.10	0.10	2217419
Naphthalene	ug	0.188	0.080	0.072	2217419
o-Terphenyl	ug	<0.10	<0.10	0.10	2217419
Perylene	ug	<0.10	<0.10	0.10	2217419
Phenanthrene	ug	0.584	0.158	0.050	2217419

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097382
Report Date: 2010/09/08

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GO7748	GO7749		
Sampling Date		2010/07/19	2010/07/19		
COC Number		2312	2312		
	Units	**LICA PUFF/CLS/JULY19,10**	**LICA PUFF/PORT/JULY19,10**	**RDL**	**QC Batch**
p-Terphenyl	ug	<0.10	<0.10	0.10	2217419
Pyrene	ug	<0.050	<0.050	0.050	2217419
Quinoline	ug	<0.40	<0.40	0.40	2217419
Tetralin	ug	<0.10	<0.10	0.10	2217419
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	84	72		2217419
D10-Fluoranthene	%	120	102		2217419
D10-Fluorene (FS)	%	69	57		2217419
D10-Phenanthrene	%	110	94		2217419
D12-Benzo(a)anthracene	%	122	104		2217419
D12-Benzo(a)pyrene	%	92	76		2217419
D12-Benzo(b)fluoranthene	%	114	96		2217419
D12-Benzo(ghi)perylene	%	102	90		2217419
D12-Benzo(k)fluoranthene	%	108	96		2217419
D12-Chrysene	%	108	96		2217419
D12-Indeno(1,2,3-cd)pyrene	%	100	86		2217419
D12-Perylene	%	106	86		2217419
D14-Dibenzo(a,h)anthracene	%	80	68		2217419
D14-Terphenyl (FS)	%	108	94		2217419
D8-Acenaphthylene	%	118	100		2217419
D8-Naphthalene	%	90	78		2217419

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097382
Report Date: 2010/09/08

Test Summary

Maxxam ID	GO7748	**Collected**	2010/07/19
Sample ID	LICA PUFF/CLS/JULY19,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/07/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217419	2010/07/26	2010/09/08	JIW

Maxxam ID	GO7749	**Collected**	2010/07/19
Sample ID	LICA PUFF/PORT/JULY19,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/07/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2217419	2010/07/26	2010/09/08	JIW

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Lakeland Industry & Community Assoc.

Maxxam Job #: B097382
Report Date: 2010/09/08

GENERAL COMMENTS

PAHMS-F(WS:2217419)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

Anthanthrene is above 25% RSD in continuing calibration.

Low recovery of Benzo(b)fluoranthene was found in Spike. Recovery of this compound was acceptable in Spike:dup.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Results relate only to the items tested.

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB097382

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217419	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/09/07		68	%	50 - 150
			D10-Fluoranthene	2010/09/07		90	%	50 - 150
			D10-Phenanthrene	2010/09/07		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/07		86	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/07		76	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/07		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/07		86	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/07		92	%	50 - 150
			D12-Chrysene	2010/09/07		98	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/09/07		82	%	50 - 150
			D12-Perylene	2010/09/07		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/07		68	%	50 - 150
			D8-Acenaphthylene	2010/09/07		98	%	50 - 150
			D8-Naphthalene	2010/09/07		74	%	50 - 150
			Acenaphthene	2010/09/07		73	%	60 - 130
		RPD	Acenaphthene	2010/09/08	8.8		%	50
		Spiked Blank	Acenaphthylene	2010/09/07		88	%	60 - 130
		RPD	Acenaphthylene	2010/09/08	7.9		%	50
		Spiked Blank	Anthracene	2010/09/07		70	%	60 - 130
		RPD	Anthracene	2010/09/08	20.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/09/07		63	%	60 - 130
		RPD	Benzo(a)anthracene	2010/09/08	14.3		%	50
		Spiked Blank	Benzo(a)pyrene	2010/09/07		71	%	60 - 130
		RPD	Benzo(a)pyrene	2010/09/08	13.5		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/09/07		60 (1)	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/09/08	13.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/09/07		66	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/09/08	9.1		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/09/07		84	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/09/08	6.4		%	50
		Spiked Blank	Chrysene	2010/09/07		80	%	60 - 130
		RPD	Chrysene	2010/09/08	14.8		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/09/07		63	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/09/08	9.9		%	50
		Spiked Blank	Fluoranthene	2010/09/07		75	%	60 - 130
		RPD	Fluoranthene	2010/09/08	9.8		%	50
		Spiked Blank	Fluorene	2010/09/07		69	%	60 - 130
		RPD	Fluorene	2010/09/08	6.6		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/09/07		63	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/09/08	11.6		%	50
		Spiked Blank	Naphthalene	2010/09/07		68	%	60 - 130
		RPD	Naphthalene	2010/09/08	12.1		%	50
		Spiked Blank	Phenanthrene	2010/09/07		63	%	60 - 130
		RPD	Phenanthrene	2010/09/08	7.3		%	50
		Spiked Blank	Pyrene	2010/09/07		75	%	60 - 130
		RPD	Pyrene	2010/09/08	10.2		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/09/08		80	%	50 - 150
			D10-Fluoranthene	2010/09/08		106	%	50 - 150
			D10-Phenanthrene	2010/09/08		92	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/08		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/08		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/08		106	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/08		98	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/08		108	%	50 - 150
			D12-Chrysene	2010/09/08		116	%	50 - 150

Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB097382

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2217419	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/09/08		94	%	50 - 150
			D12-Perylene	2010/09/08		106	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/08		74	%	50 - 150
			D8-Acenaphthylene	2010/09/08		114	%	50 - 150
			D8-Naphthalene	2010/09/08		88	%	50 - 150
			1-Methylnaphthalene	2010/09/08	<0.10		ug	
			1-Methylphenanthrene	2010/09/08	<0.10		ug	
			2-Chloronaphthalene	2010/09/08	<0.10		ug	
			2-Methylanthracene	2010/09/08	<0.10		ug	
			2-Methylnaphthalene	2010/09/08	<0.10		ug	
			3-Methylcholanthrene	2010/09/08	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/09/08	<0.10		ug	
			9,10-Dimethylanthracene	2010/09/08	<0.40		ug	
			Acenaphthene	2010/09/08	<0.050		ug	
			Acenaphthylene	2010/09/08	<0.050		ug	
			Anthracene	2010/09/08	<0.050		ug	
			Benzo(a)anthracene	2010/09/08	<0.050		ug	
			Benzo(a)fluorene	2010/09/08	<0.10		ug	
			Benzo(a)pyrene	2010/09/08	<0.050		ug	
			Benzo(b)fluoranthene	2010/09/08	<0.050		ug	
			Benzo(b)fluorene	2010/09/08	<0.10		ug	
			Benzo(e)pyrene	2010/09/08	<0.10		ug	
			Benzo(g,h,i)perylene	2010/09/08	<0.050		ug	
			Benzo(k)fluoranthene	2010/09/08	<0.050		ug	
			Biphenyl	2010/09/08	<0.10		ug	
			Chrysene	2010/09/08	<0.050		ug	
			Coronene	2010/09/08	<0.10		ug	
			Dibenz(a,h)anthracene	2010/09/08	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/09/08	<0.20		ug	
			Fluoranthene	2010/09/08	<0.050		ug	
			Fluorene	2010/09/08	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/09/08	<0.050		ug	
			m-Terphenyl	2010/09/08	<0.10		ug	
			Naphthalene	2010/09/08	<0.072		ug	
			o-Terphenyl	2010/09/08	<0.10		ug	
			Perylene	2010/09/08	<0.10		ug	
			Phenanthrene	2010/09/08	<0.050		ug	
			p-Terphenyl	2010/09/08	<0.10		ug	
			Pyrene	2010/09/08	<0.050		ug	
			Quinoline	2010/09/08	<0.40		ug	
			Tetralin	2010/09/08	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics 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/July 25, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: July 23, 10 @ 9:01mst
Removal Date/Time: July 26, 10 @ 9:05mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
25-Jul-10	25/07/2010 0:00	26/07/2010 0:00	

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
22-Jul-10	26-Jul-10	30-Jul-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
708	229	17.3	330.35

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 # 2344
GB082821Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/July 25, 10

Technician Signiture: Ting Xu

Your C.O.C. #: 2344

Attention: Michael Bisaga
Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2010/10/01

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A2833
Received: 2010/07/30, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/05	2010/09/29	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2833
Report Date: 2010/10/01

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GR3525	GR3526		
Sampling Date		2010/07/25	2010/07/25		
COC Number		2344	2344		
	Units	**LICA PUFF/QFF/CLS/JULY25,10**	**LICA PUFF/QFF/PORT/JULY25,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2226752
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2226752
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2226752
2-Methylanthracene	ug	<0.10	<0.10	0.10	2226752
2-Methylnaphthalene	ug	0.14	<0.10	0.10	2226752
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2226752
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2226752
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2226752
Acenaphthene	ug	0.062	<0.050	0.050	2226752
Acenaphthylene	ug	<0.050	<0.050	0.050	2226752
Anthracene	ug	<0.050	<0.050	0.050	2226752
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2226752
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2226752
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2226752
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2226752
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2226752
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2226752
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2226752
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2226752
Biphenyl	ug	<0.10	<0.10	0.10	2226752
Chrysene	ug	<0.050	<0.050	0.050	2226752
Coronene	ug	<0.10	<0.10	0.10	2226752
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2226752
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2226752
Fluoranthene	ug	0.058	<0.050	0.050	2226752
Fluorene	ug	0.118	<0.050	0.050	2226752
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2226752
m-Terphenyl	ug	<0.10	<0.10	0.10	2226752
Naphthalene	ug	0.102	<0.072	0.072	2226752
o-Terphenyl	ug	<0.10	<0.10	0.10	2226752
Perylene	ug	<0.10	<0.10	0.10	2226752
Phenanthrene	ug	0.524	0.162	0.050	2226752

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2833
Report Date: 2010/10/01

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GR3525	GR3526		
Sampling Date		2010/07/25	2010/07/25		
COC Number		2344	2344		
	Units	**LICA PUFF/QFF/CLS/JULY25,10**	**LICA PUFF/QFF/PORT/JULY25,10**	**RDL**	**QC Batch**
p-Terphenyl	ug	<0.10	<0.10	0.10	2226752
Pyrene	ug	<0.050	<0.050	0.050	2226752
Quinoline	ug	<0.40	<0.40	0.40	2226752
Tetralin	ug	<0.10	<0.10	0.10	2226752
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	68		2226752
D10-Fluoranthene	%	94	88		2226752
D10-Fluorene (FS)	%	57	52		2226752
D10-Phenanthrene	%	94	88		2226752
D12-Benzo(a)anthracene	%	104	100		2226752
D12-Benzo(a)pyrene	%	86	80		2226752
D12-Benzo(b)fluoranthene	%	96	94		2226752
D12-Benzo(ghi)perylene	%	104	100		2226752
D12-Benzo(k)fluoranthene	%	92	90		2226752
D12-Chrysene	%	98	92		2226752
D12-Indeno(1,2,3-cd)pyrene	%	94	92		2226752
D12-Perylene	%	96	94		2226752
D14-Dibenzo(a,h)anthracene	%	80	78		2226752
D14-Terphenyl (FS)	%	103	98		2226752
D8-Acenaphthylene	%	82	78		2226752
D8-Naphthalene	%	78	76		2226752

QC Batch = Quality Control Batch

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2833
Report Date: 2010/10/01

Test Summary

Maxxam ID	GR3525	**Collected**	2010/07/25
Sample ID	LICA PUFF/QFF/CLS/JULY25,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/07/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2226752	2010/08/05	2010/09/29	JIW

Maxxam ID	GR3526	**Collected**	2010/07/25
Sample ID	LICA PUFF/QFF/PORT/JULY25,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/07/30

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2226752	2010/08/05	2010/09/29	JIW

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Lakeland Industry & Community Assoc.

Maxxam Job #: B0A2833
Report Date: 2010/10/01

GENERAL COMMENTS

PAHMS-F(WS:2226752)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial and contiuning calibrations. No positive found for this compound.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Results relate only to the items tested.

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0A2833

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2226752	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/09/28		76	%	50 - 150
			D10-Fluoranthene	2010/09/28		86	%	50 - 150
			D10-Phenanthrene	2010/09/28		84	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/28		102	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/28		88	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/28		100	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/28		112	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/28		94	%	50 - 150
			D12-Chrysene	2010/09/28		104	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/09/28		102	%	50 - 150
			D12-Perylene	2010/09/28		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/28		86	%	50 - 150
			D8-Acenaphthylene	2010/09/28		84	%	50 - 150
			D8-Naphthalene	2010/09/28		84	%	50 - 150
			Acenaphthene	2010/09/28		73	%	60 - 130
		RPD	Acenaphthene	2010/09/29	1.7		%	50
		Spiked Blank	Acenaphthylene	2010/09/28		74	%	60 - 130
		RPD	Acenaphthylene	2010/09/29	2.4		%	50
		Spiked Blank	Anthracene	2010/09/28		68	%	60 - 130
		RPD	Anthracene	2010/09/29	4.1		%	50
		Spiked Blank	Benzo(a)anthracene	2010/09/28		82	%	60 - 130
		RPD	Benzo(a)anthracene	2010/09/29	0.3		%	50
		Spiked Blank	Benzo(a)pyrene	2010/09/28		76	%	60 - 130
		RPD	Benzo(a)pyrene	2010/09/29	8.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/09/28		76	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/09/29	5.4		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/09/28		85	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/09/29	10.2		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/09/28		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/09/29	5.7		%	50
		Spiked Blank	Chrysene	2010/09/28		91	%	60 - 130
		RPD	Chrysene	2010/09/29	8.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/09/28		84	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/09/29	9.4		%	50
		Spiked Blank	Fluoranthene	2010/09/28		77	%	60 - 130
		RPD	Fluoranthene	2010/09/29	7.5		%	50
		Spiked Blank	Fluorene	2010/09/28		71	%	60 - 130
		RPD	Fluorene	2010/09/29	3.8		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/09/28		82	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/09/29	9.2		%	50
		Spiked Blank	Naphthalene	2010/09/28		72	%	60 - 130
		RPD	Naphthalene	2010/09/29	2.1		%	50
		Spiked Blank	Phenanthrene	2010/09/28		69	%	60 - 130
		RPD	Phenanthrene	2010/09/29	3.0		%	50
		Spiked Blank	Pyrene	2010/09/28		75	%	60 - 130
		RPD	Pyrene	2010/09/29	8.3		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/09/29		80	%	50 - 150
			D10-Fluoranthene	2010/09/29		84	%	50 - 150
			D10-Phenanthrene	2010/09/29		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/29		102	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/29		86	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/29		98	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/29		106	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/29		90	%	50 - 150
			D12-Chrysene	2010/09/29		102	%	50 - 150

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Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A2833

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2226752	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/09/29		96	%	50 - 150
			D12-Perylene	2010/09/29		96	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/29		82	%	50 - 150
			D8-Acenaphthylene	2010/09/29		86	%	50 - 150
			D8-Naphthalene	2010/09/29		88	%	50 - 150
			1-Methylnaphthalene	2010/09/29	<0.10		ug	
			1-Methylphenanthrene	2010/09/29	<0.10		ug	
			2-Chloronaphthalene	2010/09/29	<0.10		ug	
			2-Methylanthracene	2010/09/29	<0.10		ug	
			2-Methylnaphthalene	2010/09/29	<0.10		ug	
			3-Methylcholanthrene	2010/09/29	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/09/29	<0.10		ug	
			9,10-Dimethylanthracene	2010/09/29	<0.40		ug	
			Acenaphthene	2010/09/29	<0.050		ug	
			Acenaphthylene	2010/09/29	<0.050		ug	
			Anthracene	2010/09/29	<0.050		ug	
			Benzo(a)anthracene	2010/09/29	<0.050		ug	
			Benzo(a)fluorene	2010/09/29	<0.10		ug	
			Benzo(a)pyrene	2010/09/29	<0.050		ug	
			Benzo(b)fluoranthene	2010/09/29	<0.050		ug	
			Benzo(b)fluorene	2010/09/29	<0.10		ug	
			Benzo(e)pyrene	2010/09/29	<0.10		ug	
			Benzo(g,h,i)perylene	2010/09/29	<0.050		ug	
			Benzo(k)fluoranthene	2010/09/29	<0.050		ug	
			Biphenyl	2010/09/29	<0.10		ug	
			Chrysene	2010/09/29	<0.050		ug	
			Coronene	2010/09/29	<0.10		ug	
			Dibenz(a,h)anthracene	2010/09/29	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/09/29	<0.20		ug	
			Fluoranthene	2010/09/29	<0.050		ug	
			Fluorene	2010/09/29	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/09/29	<0.050		ug	
			m-Terphenyl	2010/09/29	<0.10		ug	
			Naphthalene	2010/09/29	<0.072		ug	
			o-Terphenyl	2010/09/29	<0.10		ug	
			Perylene	2010/09/29	<0.10		ug	
			Phenanthrene	2010/09/29	<0.050		ug	
			p-Terphenyl	2010/09/29	<0.10		ug	
			Pyrene	2010/09/29	<0.050		ug	
			Quinoline	2010/09/29	<0.40		ug	
			Tetralin	2010/09/29	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics 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/July 31, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: July 30, 10 @ 10:50 mst
Removal Date/Time: Aug 03, 10 @ 9:01 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
31-Jul-10	31/07/2010 0:00	01/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
29-Jul-10	03-Aug-10	09-Aug-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
708	229	18.3	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 # 2315
GB081735Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/July 31, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2315

Attention: Michael Bisaga
Lakeland Industry & Community Assoc.
P.O. Box 8237
Bonnyville, AB
CANADA T9N 2J5

Report Date: 2010/10/04

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A5167
Received: 2010/08/05, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/06	2010/10/01	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

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A5167
Report Date: 2010/10/04

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GS7910	GS7911		
Sampling Date		2010/07/31	2010/07/31		
COC Number		2315	2315		
	Units	**LICA PUFF/QFF/CLS/JULY31,10**	**LICA PUFF/QFF/PORT/JULY31,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.15	<0.10	0.10	2227878
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2227878
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2227878
2-Methylanthracene	ug	<0.10	<0.10	0.10	2227878
2-Methylnaphthalene	ug	0.24	<0.10	0.10	2227878
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2227878
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2227878
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2227878
Acenaphthene	ug	0.124	<0.050	0.050	2227878
Acenaphthylene	ug	<0.050	<0.050	0.050	2227878
Anthracene	ug	<0.050	<0.050	0.050	2227878
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2227878
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2227878
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2227878
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2227878
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2227878
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2227878
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2227878
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2227878
Biphenyl	ug	<0.10	<0.10	0.10	2227878
Chrysene	ug	<0.050	<0.050	0.050	2227878
Coronene	ug	<0.10	<0.10	0.10	2227878
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2227878
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2227878
Fluoranthene	ug	0.078	<0.050	0.050	2227878
Fluorene	ug	0.200	0.066	0.050	2227878
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2227878
m-Terphenyl	ug	<0.10	<0.10	0.10	2227878
Naphthalene	ug	0.210	0.092	0.072	2227878
o-Terphenyl	ug	<0.10	<0.10	0.10	2227878
Perylene	ug	<0.10	<0.10	0.10	2227878
Phenanthrene	ug	0.694	0.244	0.050	2227878

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A5167
Report Date: 2010/10/04

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GS7910	GS7911		
Sampling Date		2010/07/31	2010/07/31		
COC Number		2315	2315		
	Units	**LICA PUFF/QFF/CLS/JULY31,10**	**LICA PUFF/QFF/PORT/JULY31,10**	**RDL**	**QC Batch**
p-Terphenyl	ug	<0.10	<0.10	0.10	2227878
Pyrene	ug	0.052	<0.050	0.050	2227878
Quinoline	ug	<0.40	<0.40	0.40	2227878
Tetralin	ug	<0.10	<0.10	0.10	2227878
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	68	72		2227878
D10-Fluoranthene	%	98	96		2227878
D10-Fluorene (FS)	%	51	50		2227878
D10-Phenanthrene	%	96	94		2227878
D12-Benzo(a)anthracene	%	108	106		2227878
D12-Benzo(a)pyrene	%	84	90		2227878
D12-Benzo(b)fluoranthene	%	100	100		2227878
D12-Benzo(ghi)perylene	%	106	106		2227878
D12-Benzo(k)fluoranthene	%	90	90		2227878
D12-Chrysene	%	94	90		2227878
D12-Indeno(1,2,3-cd)pyrene	%	100	100		2227878
D12-Perylene	%	96	96		2227878
D14-Dibenzo(a,h)anthracene	%	86	86		2227878
D14-Terphenyl (FS)	%	100	97		2227878
D8-Acenaphthylene	%	84	86		2227878
D8-Naphthalene	%	72	76		2227878

QC Batch = Quality Control Batch

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A5167
Report Date: 2010/10/04

Test Summary

Maxxam ID	GS7910	**Collected**	2010/07/31
Sample ID	LICA PUFF/QFF/CLS/JULY31,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2227878	2010/08/06	2010/10/01	JIW

Maxxam ID	GS7911	**Collected**	2010/07/31
Sample ID	LICA PUFF/QFF/PORT/JULY31,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/05

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2227878	2010/08/06	2010/10/01	JIW

Lakeland Industry & Community Assoc.

Maxxam Job #: B0A5167
Report Date: 2010/10/04

GENERAL COMMENTS

PAHMS-F(WS:2227878)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

Anthanthrene is above 25% RSD in continuing calibration.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

The recoveries of D10-Phenanthrene and D12-Benzo(k)fluoranthene were low in Blank.

Extracts analyzed past extract hold time.

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: GB0A5167

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2227878	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/09/30		80	%	50 - 150
			D10-Fluoranthene	2010/09/30		94	%	50 - 150
			D10-Phenanthrene	2010/09/30		94	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/30		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/30		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/30		94	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/30		106	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/30		90	%	50 - 150
			D12-Chrysene	2010/09/30		96	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/09/30		100	%	50 - 150
			D12-Perylene	2010/09/30		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/30		86	%	50 - 150
			D8-Acenaphthylene	2010/09/30		86	%	50 - 150
			D8-Naphthalene	2010/09/30		86	%	50 - 150
			Acenaphthene	2010/09/30		81	%	60 - 130
		RPD	Acenaphthene	2010/10/01	1.9		%	50
		Spiked Blank	Acenaphthylene	2010/09/30		81	%	60 - 130
		RPD	Acenaphthylene	2010/10/01	0.9		%	50
		Spiked Blank	Anthracene	2010/09/30		77	%	60 - 130
		RPD	Anthracene	2010/10/01	1.3		%	50
		Spiked Blank	Benzo(a)anthracene	2010/09/30		82	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/01	1.2		%	50
		Spiked Blank	Benzo(a)pyrene	2010/09/30		76	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/01	0.3		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/09/30		75	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/01	0.7		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/09/30		82	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/01	0.9		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/09/30		80	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/01	0		%	50
		Spiked Blank	Chrysene	2010/09/30		82	%	60 - 130
		RPD	Chrysene	2010/10/01	0.9		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/09/30		83	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/01	1.2		%	50
		Spiked Blank	Fluoranthene	2010/09/30		83	%	60 - 130
		RPD	Fluoranthene	2010/10/01	0.6		%	50
		Spiked Blank	Fluorene	2010/09/30		80	%	60 - 130
		RPD	Fluorene	2010/10/01	0.9		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/09/30		81	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/01	0.3		%	50
		Spiked Blank	Naphthalene	2010/09/30		74	%	60 - 130
		RPD	Naphthalene	2010/10/01	1.0		%	50
		Spiked Blank	Phenanthrene	2010/09/30		78	%	60 - 130
		RPD	Phenanthrene	2010/10/01	1		%	50
		Spiked Blank	Pyrene	2010/09/30		82	%	60 - 130
		RPD	Pyrene	2010/10/01	1.9		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/01		50	%	50 - 150
			D10-Fluoranthene	2010/10/01		50	%	50 - 150
			D10-Phenanthrene	2010/10/01		48 (1)	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/01		56	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/01		52	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/01		50	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/01		56	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/01		46 (1)	%	50 - 150
			D12-Chrysene	2010/10/01		50	%	50 - 150

Lakeland Industry & Community Assoc.
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A5167

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2227878	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/01		54	%	50 - 150
			D12-Perylene	2010/10/01		54	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/01		54	%	50 - 150
			D8-Acenaphthylene	2010/10/01		50	%	50 - 150
			D8-Naphthalene	2010/10/01		52	%	50 - 150
			1-Methylnaphthalene	2010/10/01	<0.10		ug	
			1-Methylphenanthrene	2010/10/01	<0.10		ug	
			2-Chloronaphthalene	2010/10/01	<0.10		ug	
			2-Methylanthracene	2010/10/01	<0.10		ug	
			2-Methylnaphthalene	2010/10/01	<0.10		ug	
			3-Methylcholanthrene	2010/10/01	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/01	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/01	<0.40		ug	
			Acenaphthene	2010/10/01	<0.050		ug	
			Acenaphthylene	2010/10/01	<0.050		ug	
			Anthracene	2010/10/01	<0.050		ug	
			Benzo(a)anthracene	2010/10/01	<0.050		ug	
			Benzo(a)fluorene	2010/10/01	<0.10		ug	
			Benzo(a)pyrene	2010/10/01	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/01	<0.050		ug	
			Benzo(b)fluorene	2010/10/01	<0.10		ug	
			Benzo(e)pyrene	2010/10/01	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/01	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/01	<0.050		ug	
			Biphenyl	2010/10/01	<0.10		ug	
			Chrysene	2010/10/01	<0.050		ug	
			Coronene	2010/10/01	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/01	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/01	<0.20		ug	
			Fluoranthene	2010/10/01	<0.050		ug	
			Fluorene	2010/10/01	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/01	<0.050		ug	
			m-Terphenyl	2010/10/01	<0.10		ug	
			Naphthalene	2010/10/01	<0.072		ug	
			o-Terphenyl	2010/10/01	<0.10		ug	
			Perylene	2010/10/01	<0.10		ug	
			Phenanthrene	2010/10/01	<0.050		ug	
			p-Terphenyl	2010/10/01	<0.10		ug	
			Pyrene	2010/10/01	<0.050		ug	
			Quinoline	2010/10/01	<0.40		ug	
			Tetralin	2010/10/01	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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/Aug 06, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Aug 05, 10 @ 16:21 mst
Removal Date/Time: Aug 09, 10 @ 10:32 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
06-Aug-10	06/08/2010 0:00	07/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
05-Aug-10	09-Aug-10	17-Aug-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
704	229	20.0	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 # 2317
GB0A3259Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Aug 06, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your Project #: NAPS
Your C.O.C. #: 2317

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/09/03

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0A8133
Received: 2010/08/11, 09:07

Sample Matrix: Filter
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/12	2010/09/02	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B0A8133
Report Date: 2010/09/03

Maxxam Analytics
Client Project #: NAPS

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		GU2537	GU2538		
Sampling Date		2010/08/06	2010/08/06		
COC Number		2317	2317		
	Units	**LICA PUFF/CLS/AUG 06,10**	**LICA PUFF/PORT/AUG 06,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2233810
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2233810
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2233810
2-Methylanthracene	ug	<0.10	<0.10	0.10	2233810
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2233810
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2233810
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2233810
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2233810
Acenaphthene	ug	0.052	<0.050	0.050	2233810
Acenaphthylene	ug	0.076	<0.050	0.050	2233810
Anthracene	ug	<0.050	<0.050	0.050	2233810
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2233810
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2233810
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2233810
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2233810
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2233810
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2233810
Benzo(g,h,i)perylene	ug	<0.050	0.050	0.050	2233810
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2233810
Biphenyl	ug	<0.10	<0.10	0.10	2233810
Chrysene	ug	<0.050	<0.050	0.050	2233810
Coronene	ug	<0.10	<0.10	0.10	2233810
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2233810
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2233810
Fluoranthene	ug	0.098	<0.050	0.050	2233810
Fluorene	ug	0.150	0.052	0.050	2233810
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2233810
m-Terphenyl	ug	<0.10	<0.10	0.10	2233810
Naphthalene	ug	0.150	0.090	0.072	2233810
o-Terphenyl	ug	<0.10	<0.10	0.10	2233810
Perylene	ug	<0.10	<0.10	0.10	2233810

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B0A8133
Report Date: 2010/09/03

Maxxam Analytics
Client Project #: NAPS

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		GU2537	GU2538		
Sampling Date		2010/08/06	2010/08/06		
COC Number		2317	2317		
	Units	**LICA PUFF/CLS/AUG 06,10**	**LICA PUFF/PORT/AUG 06,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.726	0.242	0.050	2233810
p-Terphenyl	ug	<0.10	<0.10	0.10	2233810
Pyrene	ug	0.076	<0.050	0.050	2233810
Quinoline	ug	<0.40	<0.40	0.40	2233810
Tetralin	ug	<0.10	<0.10	0.10	2233810
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	64	56		2233810
D10-Fluoranthene	%	118	102		2233810
D10-Fluorene (FS)	%	43 (1)	37 (1)		2233810
D10-Phenanthrene	%	106	90		2233810
D12-Benzo(a)anthracene	%	142	126		2233810
D12-Benzo(a)pyrene	%	108	100		2233810
D12-Benzo(b)fluoranthene	%	126	110		2233810
D12-Benzo(ghi)perylene	%	102	90		2233810
D12-Benzo(k)fluoranthene	%	94	84		2233810
D12-Chrysene	%	94	84		2233810
D12-Indeno(1,2,3-cd)pyrene	%	106	90		2233810
D12-Perylene	%	100	90		2233810
D14-Dibenzo(a,h)anthracene	%	84	72		2233810
D14-Terphenyl (FS)	%	95	81		2233810
D8-Acenaphthylene	%	94	80		2233810
D8-Naphthalene	%	78	72		2233810

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Job #: B0A8133
Report Date: 2010/09/03

Maxxam Analytics
Client Project #: NAPS

Test Summary

Maxxam ID GU2537 **Collected** 2010/08/06
Sample ID LICA PUFF/CLS/AUG 06,10 **Shipped**
Matrix Filter **Received** 2010/08/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2233810	2010/08/12	2010/09/02	JIW

Maxxam ID GU2538 **Collected** 2010/08/06
Sample ID LICA PUFF/PORT/AUG 06,10 **Shipped**
Matrix Filter **Received** 2010/08/11

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2233810	2010/08/12	2010/09/02	JIW

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B0A8133
Report Date: 2010/09/03

Maxxam Analytics
Client Project #: NAPS

GENERAL COMMENTS

Sample GU2537-01: PAHMS-F(WS:2233810)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Sample GU2538-01: PAHMS-F(WS:2233810)
Low D10-Fluorene field spike recovery. Suspect sample matrix as cause due to acceptable recovery of D14-Terphenyl field spike.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics
Attention: Michael Bisaga
Client Project #: NAPS
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0A8133

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2233810	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/09/02		66	%	50 - 150
			D10-Fluoranthene	2010/09/02		110	%	50 - 150
			D10-Phenanthrene	2010/09/02		96	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/02		138	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/02		102	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/02		124	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/02		100	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/02		98	%	50 - 150
			D12-Chrysene	2010/09/02		98	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/09/02		102	%	50 - 150
			D12-Perylene	2010/09/02		102	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/02		84	%	50 - 150
			D8-Acenaphthylene	2010/09/02		88	%	50 - 150
			D8-Naphthalene	2010/09/02		72	%	50 - 150
			Acenaphthene	2010/09/02		67	%	60 - 130
		RPD	Acenaphthene	2010/09/02	5.5		%	50
		Spiked Blank	Acenaphthylene	2010/09/02		78	%	60 - 130
		RPD	Acenaphthylene	2010/09/02	5.3		%	50
		Spiked Blank	Anthracene	2010/09/02		77	%	60 - 130
		RPD	Anthracene	2010/09/02	7.5		%	50
		Spiked Blank	Benzo(a)anthracene	2010/09/02		93	%	60 - 130
		RPD	Benzo(a)anthracene	2010/09/02	0.3		%	50
		Spiked Blank	Benzo(a)pyrene	2010/09/02		90	%	60 - 130
		RPD	Benzo(a)pyrene	2010/09/02	1.9		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/09/02		83	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/09/02	1.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/09/02		88	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/09/02	1.7		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/09/02		87	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/09/02	3.5		%	50
		Spiked Blank	Chrysene	2010/09/02		85	%	60 - 130
		RPD	Chrysene	2010/09/02	2.4		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/09/02		89	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/09/02	1.7		%	50
		Spiked Blank	Fluoranthene	2010/09/02		89	%	60 - 130
		RPD	Fluoranthene	2010/09/02	9.1		%	50
		Spiked Blank	Fluorene	2010/09/02		69	%	60 - 130
		RPD	Fluorene	2010/09/02	5.3		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/09/02		88	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/09/02	2.3		%	50
		Spiked Blank	Naphthalene	2010/09/02		73	%	60 - 130
		RPD	Naphthalene	2010/09/02	4.0		%	50
		Spiked Blank	Phenanthrene	2010/09/02		78	%	60 - 130
		RPD	Phenanthrene	2010/09/02	7.5		%	50
		Spiked Blank	Pyrene	2010/09/02		90	%	60 - 130
		RPD	Pyrene	2010/09/02	8.7		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/09/02		72	%	50 - 150
			D10-Fluoranthene	2010/09/02		104	%	50 - 150
			D10-Phenanthrene	2010/09/02		96	%	50 - 150
			D12-Benzo(a)anthracene	2010/09/02		150	%	50 - 150
			D12-Benzo(a)pyrene	2010/09/02		112	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/09/02		128	%	50 - 150
			D12-Benzo(ghi)perylene	2010/09/02		98	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/09/02		98	%	50 - 150
			D12-Chrysene	2010/09/02		102	%	50 - 150

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #: NAPS
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0A8133

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2233810	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/09/02		102	%	50 - 150
			D12-Perylene	2010/09/02		104	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/09/02		82	%	50 - 150
			D8-Acenaphthylene	2010/09/02		102	%	50 - 150
			D8-Naphthalene	2010/09/02		96	%	50 - 150
			1-Methylnaphthalene	2010/09/02	<0.10		ug	
			1-Methylphenanthrene	2010/09/02	<0.10		ug	
			2-Chloronaphthalene	2010/09/02	<0.10		ug	
			2-Methylanthracene	2010/09/02	<0.10		ug	
			2-Methylnaphthalene	2010/09/02	<0.10		ug	
			3-Methylcholanthrene	2010/09/02	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/09/02	<0.10		ug	
			9,10-Dimethylanthracene	2010/09/02	<0.40		ug	
			Acenaphthene	2010/09/02	<0.050		ug	
			Acenaphthylene	2010/09/02	<0.050		ug	
			Anthracene	2010/09/02	<0.050		ug	
			Benzo(a)anthracene	2010/09/02	<0.050		ug	
			Benzo(a)fluorene	2010/09/02	<0.10		ug	
			Benzo(a)pyrene	2010/09/02	<0.050		ug	
			Benzo(b)fluoranthene	2010/09/02	<0.050		ug	
			Benzo(b)fluorene	2010/09/02	<0.10		ug	
			Benzo(e)pyrene	2010/09/02	<0.10		ug	
			Benzo(g,h,i)perylene	2010/09/02	<0.050		ug	
			Benzo(k)fluoranthene	2010/09/02	<0.050		ug	
			Biphenyl	2010/09/02	<0.10		ug	
			Chrysene	2010/09/02	<0.050		ug	
			Coronene	2010/09/02	<0.10		ug	
			Dibenz(a,h)anthracene	2010/09/02	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/09/02	<0.20		ug	
			Fluoranthene	2010/09/02	<0.050		ug	
			Fluorene	2010/09/02	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/09/02	<0.050		ug	
			m-Terphenyl	2010/09/02	<0.10		ug	
			Naphthalene	2010/09/02	0.100, RDL=0.072		ug	
			o-Terphenyl	2010/09/02	<0.10		ug	
			Perylene	2010/09/02	<0.10		ug	
			Phenanthrene	2010/09/02	<0.050		ug	
			p-Terphenyl	2010/09/02	<0.10		ug	
			Pyrene	2010/09/02	<0.050		ug	
			Quinoline	2010/09/02	<0.40		ug	
			Tetralin	2010/09/02	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics 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/Aug 12, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Aug 11, 10 @ 11:47 mst
Removal Date/Time: Aug 13, 10 @ 8:06 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
12-Aug-10	12/08/2010 0:00	13/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
10-Aug-10	16-Aug-10	20-Aug-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
704	229	14.7	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 # 2538
GB0A5331 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Aug 12, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/05

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B2444
Received: 2010/08/18, 09:18

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/19	2010/10/04	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B2444
Report Date: 2010/10/05

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GW2655	GW2656		
Sampling Date		2010/08/12	2010/08/12		
	Units	**LICA PUFF/CLS/AUG12, 10**	**LICA PUFF/PORT/AUG12, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.32	<0.10	0.10	2239881
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2239881
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2239881
2-Methylanthracene	ug	<0.10	<0.10	0.10	2239881
2-Methylnaphthalene	ug	0.98	<0.10	0.10	2239881
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2239881
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2239881
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2239881
Acenaphthene	ug	<0.050	<0.050	0.050	2239881
Acenaphthylene	ug	<0.050	<0.050	0.050	2239881
Anthracene	ug	<0.050	<0.050	0.050	2239881
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2239881
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2239881
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2239881
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2239881
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2239881
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2239881
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2239881
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2239881
Biphenyl	ug	<0.10	<0.10	0.10	2239881
Chrysene	ug	<0.050	<0.050	0.050	2239881
Coronene	ug	<0.10	<0.10	0.10	2239881
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2239881
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2239881
Fluoranthene	ug	0.062	<0.050	0.050	2239881
Fluorene	ug	0.204	<0.050	0.050	2239881
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2239881
m-Terphenyl	ug	<0.10	<0.10	0.10	2239881
Naphthalene	ug	0.678	0.072	0.072	2239881
o-Terphenyl	ug	<0.10	<0.10	0.10	2239881
Perylene	ug	<0.10	<0.10	0.10	2239881
Phenanthrene	ug	0.630	0.188	0.050	2239881

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B2444
Report Date: 2010/10/05

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GW2655	GW2656		
Sampling Date		2010/08/12	2010/08/12		
	Units	**LICA PUFF/CLS/AUG12, 10**	**LICA PUFF/PORT/AUG12, 10**	**RDL**	**QC Batch**
p-Terphenyl	ug	<0.10	<0.10	0.10	2239881
Pyrene	ug	0.074	<0.050	0.050	2239881
Quinoline	ug	<0.40	<0.40	0.40	2239881
Tetralin	ug	<0.10	<0.10	0.10	2239881
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	80		2239881
D10-Fluoranthene	%	88	96		2239881
D10-Fluorene (FS)	%	51	55		2239881
D10-Phenanthrene	%	88	94		2239881
D12-Benzo(a)anthracene	%	98	106		2239881
D12-Benzo(a)pyrene	%	80	90		2239881
D12-Benzo(b)fluoranthene	%	88	98		2239881
D12-Benzo(ghi)perylene	%	94	106		2239881
D12-Benzo(k)fluoranthene	%	84	92		2239881
D12-Chrysene	%	86	94		2239881
D12-Indeno(1,2,3-cd)pyrene	%	84	96		2239881
D12-Perylene	%	88	98		2239881
D14-Dibenzo(a,h)anthracene	%	72	80		2239881
D14-Terphenyl (FS)	%	87	97		2239881
D8-Acenaphthylene	%	82	88		2239881
D8-Naphthalene	%	80	86		2239881

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B2444
Report Date: 2010/10/05

Test Summary

Maxxam ID	GW2655	**Collected**	2010/08/12
Sample ID	LICA PUFF/CLS/AUG12, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/18

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2239881	2010/08/19	2010/10/04	JIW

Maxxam ID	GW2656	**Collected**	2010/08/12
Sample ID	LICA PUFF/PORT/AUG12, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/18

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2239881	2010/08/19	2010/10/04	JIW

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Maxxam Analytics

Maxxam Job #: B0B2444
Report Date: 2010/10/05

GENERAL COMMENTS

PAHMS-F(WS:2239881)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in continuing calibration. No positive found for this compound.

9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in continuing calibration.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0B2444

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239881	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/04		84	%	50 - 150
			D10-Fluoranthene	2010/10/04		96	%	50 - 150
			D10-Phenanthrene	2010/10/04		94	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/04		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/04		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/04		100	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/04		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/04		96	%	50 - 150
			D12-Chrysene	2010/10/04		94	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/04		102	%	50 - 150
			D12-Perylene	2010/10/04		106	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/04		86	%	50 - 150
			D8-Acenaphthylene	2010/10/04		92	%	50 - 150
			D8-Naphthalene	2010/10/04		92	%	50 - 150
			Acenaphthene	2010/10/04		83	%	60 - 130
		RPD	Acenaphthene	2010/10/04	14.2		%	50
		Spiked Blank	Acenaphthylene	2010/10/04		83	%	60 - 130
		RPD	Acenaphthylene	2010/10/04	12.5		%	50
		Spiked Blank	Anthracene	2010/10/04		77	%	60 - 130
		RPD	Anthracene	2010/10/04	16.5		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/04		84	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/04	16.9		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/04		78	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/04	23.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/04		80	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/04	16.5		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/04		87	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/04	17.1		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/04		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/04	14.0		%	50
		Spiked Blank	Chrysene	2010/10/04		84	%	60 - 130
		RPD	Chrysene	2010/10/04	10.0		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/04		86	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/04	20.9		%	50
		Spiked Blank	Fluoranthene	2010/10/04		86	%	60 - 130
		RPD	Fluoranthene	2010/10/04	21.3		%	50
		Spiked Blank	Fluorene	2010/10/04		85	%	60 - 130
		RPD	Fluorene	2010/10/04	15.8		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/04		87	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/04	20.3		%	50
		Spiked Blank	Naphthalene	2010/10/04		85	%	60 - 130
		RPD	Naphthalene	2010/10/04	11.9		%	50
		Spiked Blank	Phenanthrene	2010/10/04		80	%	60 - 130
		RPD	Phenanthrene	2010/10/04	18.5		%	50
		Spiked Blank	Pyrene	2010/10/04		83	%	60 - 130
		RPD	Pyrene	2010/10/04	19.6		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/04		88	%	50 - 150
			D10-Fluoranthene	2010/10/04		96	%	50 - 150
			D10-Phenanthrene	2010/10/04		94	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/04		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/04		94	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/04		100	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/04		112	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/04		96	%	50 - 150
			D12-Chrysene	2010/10/04		98	%	50 - 150

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B2444

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2239881	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/04		102	%	50 - 150
			D12-Perylene	2010/10/04		104	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/04		86	%	50 - 150
			D8-Acenaphthylene	2010/10/04		96	%	50 - 150
			D8-Naphthalene	2010/10/04		98	%	50 - 150
			1-Methylnaphthalene	2010/10/04	<0.10		ug	
			1-Methylphenanthrene	2010/10/04	<0.10		ug	
			2-Chloronaphthalene	2010/10/04	<0.10		ug	
			2-Methylanthracene	2010/10/04	<0.10		ug	
			2-Methylnaphthalene	2010/10/04	<0.10		ug	
			3-Methylcholanthrene	2010/10/04	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/04	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/04	<0.40		ug	
			Acenaphthene	2010/10/04	<0.050		ug	
			Acenaphthylene	2010/10/04	<0.050		ug	
			Anthracene	2010/10/04	<0.050		ug	
			Benzo(a)anthracene	2010/10/04	<0.050		ug	
			Benzo(a)fluorene	2010/10/04	<0.10		ug	
			Benzo(a)pyrene	2010/10/04	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/04	<0.050		ug	
			Benzo(b)fluorene	2010/10/04	<0.10		ug	
			Benzo(e)pyrene	2010/10/04	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/04	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/04	<0.050		ug	
			Biphenyl	2010/10/04	<0.10		ug	
			Chrysene	2010/10/04	<0.050		ug	
			Coronene	2010/10/04	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/04	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/04	<0.20		ug	
			Fluoranthene	2010/10/04	<0.050		ug	
			Fluorene	2010/10/04	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/04	<0.050		ug	
			m-Terphenyl	2010/10/04	<0.10		ug	
			Naphthalene	2010/10/04	<0.072		ug	
			o-Terphenyl	2010/10/04	<0.10		ug	
			Perylene	2010/10/04	<0.10		ug	
			Phenanthrene	2010/10/04	<0.050		ug	
			p-Terphenyl	2010/10/04	<0.10		ug	
			Pyrene	2010/10/04	<0.050		ug	
			Quinoline	2010/10/04	<0.40		ug	
			Tetralin	2010/10/04	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics 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/Aug 18, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Aug 17, 10 @ 8:20 mst
Removal Date/Time: Aug 19, 10 @ 8:45 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
18-Aug-10	18/08/2010 0:00	19/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
16-Aug-10	19-Aug-10	25-Aug-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
706	229	13.8	330.33

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 2319
GB0A5359 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Aug 18, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2319

Attention: Ting Xu
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/05

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B4345
Received: 2010/08/21, 09:57

Sample Matrix: Filter
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/08/24	2010/10/04	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B4345
Report Date: 2010/10/05

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		GX1935	GX1936		
Sampling Date		2010/08/18	2010/08/18		
COC Number		2319	2319		
	Units	**LICA PUFF/CLS/AUG 18,10**	**LICA PUFF/PORT/AUG 18,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2247900
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2247900
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2247900
2-Methylanthracene	ug	<0.10	<0.10	0.10	2247900
2-Methylnaphthalene	ug	0.14	<0.10	0.10	2247900
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2247900
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2247900
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2247900
Acenaphthene	ug	<0.050	<0.050	0.050	2247900
Acenaphthylene	ug	<0.050	<0.050	0.050	2247900
Anthracene	ug	<0.050	<0.050	0.050	2247900
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2247900
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2247900
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2247900
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2247900
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2247900
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2247900
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2247900
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2247900
Biphenyl	ug	<0.10	<0.10	0.10	2247900
Chrysene	ug	<0.050	<0.050	0.050	2247900
Coronene	ug	<0.10	<0.10	0.10	2247900
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2247900
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2247900
Fluoranthene	ug	<0.050	<0.050	0.050	2247900
Fluorene	ug	0.054	<0.050	0.050	2247900
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2247900
m-Terphenyl	ug	<0.10	<0.10	0.10	2247900
Naphthalene	ug	0.110	0.082	0.072	2247900
o-Terphenyl	ug	<0.10	<0.10	0.10	2247900
Perylene	ug	<0.10	<0.10	0.10	2247900

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B4345
Report Date: 2010/10/05

SEMI-VOLATILE ORGANICS BY GC-MS (FILTER)

Maxxam ID		GX1935	GX1936		
Sampling Date		2010/08/18	2010/08/18		
COC Number		2319	2319		
	Units	**LICA PUFF/CLS/AUG 18,10**	**LICA PUFF/PORT/AUG 18,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.264	0.110	0.050	2247900
p-Terphenyl	ug	<0.10	<0.10	0.10	2247900
Pyrene	ug	<0.050	<0.050	0.050	2247900
Quinoline	ug	<0.40	<0.40	0.40	2247900
Tetralin	ug	<0.10	<0.10	0.10	2247900
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	78	84		2247900
D10-Fluoranthene	%	100	86		2247900
D10-Fluorene (FS)	%	57	68		2247900
D10-Phenanthrene	%	100	90		2247900
D12-Benzo(a)anthracene	%	106	102		2247900
D12-Benzo(a)pyrene	%	86	80		2247900
D12-Benzo(b)fluoranthene	%	98	94		2247900
D12-Benzo(ghi)perylene	%	110	102		2247900
D12-Benzo(k)fluoranthene	%	90	90		2247900
D12-Chrysene	%	92	92		2247900
D12-Indeno(1,2,3-cd)pyrene	%	102	96		2247900
D12-Perylene	%	100	96		2247900
D14-Dibenzo(a,h)anthracene	%	86	80		2247900
D14-Terphenyl (FS)	%	96	99		2247900
D8-Acenaphthylene	%	90	90		2247900
D8-Naphthalene	%	84	92		2247900

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0B4345
Report Date: 2010/10/05

Test Summary

Maxxam ID	GX1935	**Collected**	2010/08/18
Sample ID	LICA PUFF/CLS/AUG 18,10	**Shipped**	
Matrix	Filter	**Received**	2010/08/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2247900	2010/08/24	2010/10/04	JIW

Maxxam ID	GX1936	**Collected**	2010/08/18
Sample ID	LICA PUFF/PORT/AUG 18,10	**Shipped**	
Matrix	Filter	**Received**	2010/08/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2247900	2010/08/24	2010/10/04	JIW

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Maxxam Analytics

Maxxam Job #: B0B4345
Report Date: 2010/10/05

GENERAL COMMENTS

PAHMS-F(WS:2247900)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in continuing calibration.

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank.

Pyrene is statistically out of control at 75% recovery in the Spike and at 77% recovery in the Spike:dup due to the low Pyrene level in the Method Spike. Acceptance criteria met for both spike and dup. Data reported and flagged.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0B4345

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247900	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/04		82	%	50 - 150
			D10-Fluoranthene	2010/10/04		88	%	50 - 150
			D10-Phenanthrene	2010/10/04		88	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/04		112	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/04		88	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/04		96	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/04		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/04		94	%	50 - 150
			D12-Chrysene	2010/10/04		100	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/04		100	%	50 - 150
			D12-Perylene	2010/10/04		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/04		82	%	50 - 150
			D8-Acenaphthylene	2010/10/04		90	%	50 - 150
			D8-Naphthalene	2010/10/04		96	%	50 - 150
			Acenaphthene	2010/10/04		80	%	60 - 130
		RPD	Acenaphthene	2010/10/04	0.3		%	50
		Spiked Blank	Acenaphthylene	2010/10/04		80	%	60 - 130
		RPD	Acenaphthylene	2010/10/04	1.6		%	50
		Spiked Blank	Anthracene	2010/10/04		69	%	60 - 130
		RPD	Anthracene	2010/10/04	2.8		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/04		84	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/04	2.4		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/04		72	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/04	1.7		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/04		74	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/04	0.7		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/04		85	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/04	1.5		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/04		84	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/04	1.5		%	50
		Spiked Blank	Chrysene	2010/10/04		88	%	60 - 130
		RPD	Chrysene	2010/10/04	5.6		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/04		79	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/04	0		%	50
		Spiked Blank	Fluoranthene	2010/10/04		77	%	60 - 130
		RPD	Fluoranthene	2010/10/04	2.6		%	50
		Spiked Blank	Fluorene	2010/10/04		81	%	60 - 130
		RPD	Fluorene	2010/10/04	1.5		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/04		81	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/04	0.9		%	50
		Spiked Blank	Naphthalene	2010/10/04		82	%	60 - 130
		RPD	Naphthalene	2010/10/04	4.4		%	50
		Spiked Blank	Phenanthrene	2010/10/04		71	%	60 - 130
		RPD	Phenanthrene	2010/10/04	2.8		%	50
		Spiked Blank	Pyrene	2010/10/04		75	%	60 - 130
		RPD	Pyrene	2010/10/04	2.6		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/04		86	%	50 - 150
			D10-Fluoranthene	2010/10/04		96	%	50 - 150
			D10-Phenanthrene	2010/10/04		94	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/04		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/04		84	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/04		96	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/04		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/04		94	%	50 - 150
			D12-Chrysene	2010/10/04		98	%	50 - 150

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Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B4345

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2247900	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/04		96	%	50 - 150
			D12-Perylene	2010/10/04		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/04		82	%	50 - 150
			D8-Acenaphthylene	2010/10/04		94	%	50 - 150
			D8-Naphthalene	2010/10/04		98	%	50 - 150
			1-Methylnaphthalene	2010/10/04	<0.10		ug	
			1-Methylphenanthrene	2010/10/04	<0.10		ug	
			2-Chloronaphthalene	2010/10/04	<0.10		ug	
			2-Methylanthracene	2010/10/04	<0.10		ug	
			2-Methylnaphthalene	2010/10/04	<0.10		ug	
			3-Methylcholanthrene	2010/10/04	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/04	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/04	<0.40		ug	
			Acenaphthene	2010/10/04	<0.050		ug	
			Acenaphthylene	2010/10/04	<0.050		ug	
			Anthracene	2010/10/04	<0.050		ug	
			Benzo(a)anthracene	2010/10/04	<0.050		ug	
			Benzo(a)fluorene	2010/10/04	<0.10		ug	
			Benzo(a)pyrene	2010/10/04	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/04	<0.050		ug	
			Benzo(b)fluorene	2010/10/04	<0.10		ug	
			Benzo(e)pyrene	2010/10/04	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/04	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/04	<0.050		ug	
			Biphenyl	2010/10/04	<0.10		ug	
			Chrysene	2010/10/04	<0.050		ug	
			Coronene	2010/10/04	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/04	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/04	<0.20		ug	
			Fluoranthene	2010/10/04	<0.050		ug	
			Fluorene	2010/10/04	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/04	<0.050		ug	
			m-Terphenyl	2010/10/04	<0.10		ug	
			Naphthalene	2010/10/04	0.074, RDL=0.072		ug	
			o-Terphenyl	2010/10/04	<0.10		ug	
			Perylene	2010/10/04	<0.10		ug	
			Phenanthrene	2010/10/04	<0.050		ug	
			p-Terphenyl	2010/10/04	<0.10		ug	
			Pyrene	2010/10/04	<0.050		ug	
			Quinoline	2010/10/04	<0.40		ug	
			Tetralin	2010/10/04	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics 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/Aug 24, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Aug 23, 10 @ 9:20 mst
Removal Date/Time: Aug 25, 10 @ 15:50mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
24-Aug-10	24/08/2010 0:00	25/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
20-Aug-10	26-Aug-10	01-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
714	229	13.8	330.33

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 0559
GB0A5363 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Aug 24, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 0559

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0B8453
Received: 2010/08/28, 15:05

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/01	2010/10/05	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0B8453
Report Date: 2010/10/07

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GZ1642	GZ1643		
Sampling Date		2010/08/24	2010/08/24		
COC Number		0559	0559		
	Units	**LICA PUF/CLS/AUG 24, 10**	**LICA PUF/PORT/AUG 24, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.28	<0.10	0.10	2255320
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2255320
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2255320
2-Methylanthracene	ug	<0.10	<0.10	0.10	2255320
2-Methylnaphthalene	ug	0.58	0.10	0.10	2255320
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2255320
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2255320
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2255320
Acenaphthene	ug	<0.050	<0.050	0.050	2255320
Acenaphthylene	ug	<0.050	<0.050	0.050	2255320
Anthracene	ug	<0.050	<0.050	0.050	2255320
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2255320
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2255320
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2255320
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2255320
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2255320
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2255320
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2255320
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2255320
Biphenyl	ug	0.13	<0.10	0.10	2255320
Chrysene	ug	<0.050	<0.050	0.050	2255320
Coronene	ug	<0.10	<0.10	0.10	2255320
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2255320
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2255320
Fluoranthene	ug	0.052	<0.050	0.050	2255320
Fluorene	ug	0.148	0.064	0.050	2255320
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2255320
m-Terphenyl	ug	<0.10	<0.10	0.10	2255320
Naphthalene	ug	0.338	0.102	0.072	2255320
o-Terphenyl	ug	<0.10	<0.10	0.10	2255320
Perylene	ug	<0.10	<0.10	0.10	2255320

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B8453
Report Date: 2010/10/07

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		GZ1642	GZ1643		
Sampling Date		2010/08/24	2010/08/24		
COC Number		0559	0559		
	Units	**LICA PUF/CLS/AUG 24, 10**	**LICA PUF/PORT/AUG 24, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.432	0.204	0.050	2255320
p-Terphenyl	ug	<0.10	<0.10	0.10	2255320
Pyrene	ug	<0.050	<0.050	0.050	2255320
Quinoline	ug	<0.40	<0.40	0.40	2255320
Tetralin	ug	<0.10	<0.10	0.10	2255320
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	78	88		2255320
D10-Fluoranthene	%	110	114		2255320
D10-Fluorene (FS)	%	59	62		2255320
D10-Phenanthrene	%	108	114		2255320
D12-Benzo(a)anthracene	%	124	130		2255320
D12-Benzo(a)pyrene	%	94	100		2255320
D12-Benzo(b)fluoranthene	%	110	114		2255320
D12-Benzo(ghi)perylene	%	110	114		2255320
D12-Benzo(k)fluoranthene	%	100	104		2255320
D12-Chrysene	%	100	104		2255320
D12-Indeno(1,2,3-cd)pyrene	%	108	112		2255320
D12-Perylene	%	104	108		2255320
D14-Dibenzo(a,h)anthracene	%	92	94		2255320
D14-Terphenyl (FS)	%	106	111		2255320
D8-Acenaphthylene	%	96	106		2255320
D8-Naphthalene	%	82	94		2255320

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0B8453
Report Date: 2010/10/07

Test Summary

Maxxam ID	GZ1642	**Collected**	2010/08/24
Sample ID	LICA PUF/CLS/AUG 24, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2255320	2010/09/01	2010/10/05	JIW

Maxxam ID	GZ1643	**Collected**	2010/08/24
Sample ID	LICA PUF/PORT/AUG 24, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/08/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2255320	2010/09/01	2010/10/05	JIW

Maxxam Analytics

Maxxam Job #: B0B8453
Report Date: 2010/10/07

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0B8453

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2255320	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/05		90	%	50 - 150
			D10-Fluoranthene	2010/10/05		104	%	50 - 150
			D10-Phenanthrene	2010/10/05		106	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/05		128	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/05		94	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/05		110	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/05		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/05		104	%	50 - 150
			D12-Chrysene	2010/10/05		108	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/05		106	%	50 - 150
			D12-Perylene	2010/10/05		106	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/05		90	%	50 - 150
			D8-Acenaphthylene	2010/10/05		98	%	50 - 150
			D8-Naphthalene	2010/10/05		100	%	50 - 150
			Acenaphthene	2010/10/05		86	%	60 - 130
		RPD	Acenaphthene	2010/10/05	12.8		%	50
		Spiked Blank	Acenaphthylene	2010/10/05		86	%	60 - 130
		RPD	Acenaphthylene	2010/10/05	13.3		%	50
		Spiked Blank	Anthracene	2010/10/05		82	%	60 - 130
		RPD	Anthracene	2010/10/05	13.8		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/05		95	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/05	14.6		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/05		76	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/05	16.0		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/05		83	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/05	10.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/05		93	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/05	12.9		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/05		91	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/05	19.7		%	50
		Spiked Blank	Chrysene	2010/10/05		92	%	60 - 130
		RPD	Chrysene	2010/10/05	14.9		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/05		93	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/05	13.8		%	50
		Spiked Blank	Fluoranthene	2010/10/05		90	%	60 - 130
		RPD	Fluoranthene	2010/10/05	14.1		%	50
		Spiked Blank	Fluorene	2010/10/05		88	%	60 - 130
		RPD	Fluorene	2010/10/05	13.1		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/05		92	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/05	13.3		%	50
		Spiked Blank	Naphthalene	2010/10/05		77	%	60 - 130
		RPD	Naphthalene	2010/10/05	14.3		%	50
		Spiked Blank	Phenanthrene	2010/10/05		87	%	60 - 130
		RPD	Phenanthrene	2010/10/05	14.2		%	50
		Spiked Blank	Pyrene	2010/10/05		81	%	60 - 130
		RPD	Pyrene	2010/10/05	12.8		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/06		90	%	50 - 150
			D10-Fluoranthene	2010/10/06		108	%	50 - 150
			D10-Phenanthrene	2010/10/06		106	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		126	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		96	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		108	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		108	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		102	%	50 - 150
			D12-Chrysene	2010/10/06		100	%	50 - 150

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0B8453

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2255320	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/06		106	%	50 - 150
			D12-Perylene	2010/10/06		104	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		90	%	50 - 150
			D8-Acenaphthylene	2010/10/06		98	%	50 - 150
			D8-Naphthalene	2010/10/06		100	%	50 - 150
			1-Methylnaphthalene	2010/10/06	<0.10		ug	
			1-Methylphenanthrene	2010/10/06	<0.10		ug	
			2-Chloronaphthalene	2010/10/06	<0.10		ug	
			2-Methylanthracene	2010/10/06	<0.10		ug	
			2-Methylnaphthalene	2010/10/06	<0.10		ug	
			3-Methylcholanthrene	2010/10/06	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/06	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/06	<0.40		ug	
			Acenaphthene	2010/10/06	<0.050		ug	
			Acenaphthylene	2010/10/06	<0.050		ug	
			Anthracene	2010/10/06	<0.050		ug	
			Benzo(a)anthracene	2010/10/06	<0.050		ug	
			Benzo(a)fluorene	2010/10/06	<0.10		ug	
			Benzo(a)pyrene	2010/10/06	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/06	<0.050		ug	
			Benzo(b)fluorene	2010/10/06	<0.10		ug	
			Benzo(e)pyrene	2010/10/06	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/06	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/06	<0.050		ug	
			Biphenyl	2010/10/06	<0.10		ug	
			Chrysene	2010/10/06	<0.050		ug	
			Coronene	2010/10/06	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/06	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/06	<0.20		ug	
			Fluoranthene	2010/10/06	<0.050		ug	
			Fluorene	2010/10/06	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/06	<0.050		ug	
			m-Terphenyl	2010/10/06	<0.10		ug	
			Naphthalene	2010/10/06	<0.072		ug	
			o-Terphenyl	2010/10/06	<0.10		ug	
			Perylene	2010/10/06	<0.10		ug	
			Phenanthrene	2010/10/06	<0.050		ug	
			p-Terphenyl	2010/10/06	<0.10		ug	
			Pyrene	2010/10/06	<0.050		ug	
			Quinoline	2010/10/06	<0.40		ug	
			Tetralin	2010/10/06	<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/Aug 30, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Aug 27, 10 @ 16:03 mst
Removal Date/Time: Aug 31, 10 @ 8:45 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
30-Aug-10	30/08/2010 0:00	31/08/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
26-Aug-10	31-Aug-10	11-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
708	229	10.5	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 # 2649
GB0A5367 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Aug 30, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2649

Attention: Ting Xu
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C1248
Received: 2010/09/02, 08:33

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/03	2010/10/06	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C1248
Report Date: 2010/10/12

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HA8211	HA8212		
Sampling Date		2010/08/30	2010/08/30		
COC Number		2649	2649		
	Units	**LICA PUF/CLS/AUG 30,10**	**LICA PUF/PORT/AUG 30,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.14	<0.10	0.10	2259178
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2259178
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2259178
2-Methylanthracene	ug	<0.10	<0.10	0.10	2259178
2-Methylnaphthalene	ug	0.26	<0.10	0.10	2259178
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2259178
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2259178
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2259178
Acenaphthene	ug	0.092	<0.050	0.050	2259178
Acenaphthylene	ug	0.054	<0.050	0.050	2259178
Anthracene	ug	<0.050	<0.050	0.050	2259178
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2259178
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2259178
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2259178
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2259178
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2259178
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2259178
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2259178
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2259178
Biphenyl	ug	<0.10	<0.10	0.10	2259178
Chrysene	ug	<0.050	<0.050	0.050	2259178
Coronene	ug	<0.10	<0.10	0.10	2259178
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2259178
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2259178
Fluoranthene	ug	0.062	<0.050	0.050	2259178
Fluorene	ug	0.148	<0.050	0.050	2259178
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2259178
m-Terphenyl	ug	<0.10	<0.10	0.10	2259178
Naphthalene	ug	0.232	0.092	0.072	2259178
o-Terphenyl	ug	<0.10	<0.10	0.10	2259178
Perylene	ug	<0.10	<0.10	0.10	2259178

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics

Maxxam Job #: B0C1248
Report Date: 2010/10/12

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HA8211	HA8212		
Sampling Date		2010/08/30	2010/08/30		
COC Number		2649	2649		
	Units	**LICA PUF/CLS/AUG 30,10**	**LICA PUF/PORT/AUG 30,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.402	0.120	0.050	2259178
p-Terphenyl	ug	<0.10	<0.10	0.10	2259178
Pyrene	ug	<0.050	<0.050	0.050	2259178
Quinoline	ug	<0.40	<0.40	0.40	2259178
Tetralin	ug	<0.10	<0.10	0.10	2259178
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	72	78		2259178
D10-Fluoranthene	%	94	92		2259178
D10-Fluorene (FS)	%	58	55		2259178
D10-Phenanthrene	%	90	88		2259178
D12-Benzo(a)anthracene	%	102	98		2259178
D12-Benzo(a)pyrene	%	86	86		2259178
D12-Benzo(b)fluoranthene	%	88	84		2259178
D12-Benzo(ghi)perylene	%	94	90		2259178
D12-Benzo(k)fluoranthene	%	84	84		2259178
D12-Chrysene	%	84	80		2259178
D12-Indeno(1,2,3-cd)pyrene	%	94	92		2259178
D12-Perylene	%	88	88		2259178
D14-Dibenzo(a,h)anthracene	%	96	94		2259178
D14-Terphenyl (FS)	%	102	92		2259178
D8-Acenaphthylene	%	80	84		2259178
D8-Naphthalene	%	68	76		2259178

QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0C1248
Report Date: 2010/10/12

Test Summary

Maxxam ID	HA8211	**Collected**	2010/08/30
Sample ID	LICA PUF/CLS/AUG 30,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2259178	2010/09/03	2010/10/06	JIW

Maxxam ID	HA8212	**Collected**	2010/08/30
Sample ID	LICA PUF/PORT/AUG 30,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2259178	2010/09/03	2010/10/06	JIW

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Maxxam Analytics

Maxxam Job #: B0C1248
Report Date: 2010/10/12

GENERAL COMMENTS

Sample HA8211-01: PAHMS-F(WS:2259178)
Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HA8212-01: PAHMS-F(WS:2259178)
Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0C1248

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2259178	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/05		84	%	50 - 150
			D10-Fluoranthene	2010/10/05		90	%	50 - 150
			D10-Phenanthrene	2010/10/05		88	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/05		100	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/05		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/05		86	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/05		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/05		86	%	50 - 150
			D12-Chrysene	2010/10/05		86	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/05		92	%	50 - 150
			D12-Perylene	2010/10/05		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/05		94	%	50 - 150
			D8-Acenaphthylene	2010/10/05		86	%	50 - 150
			D8-Naphthalene	2010/10/05		84	%	50 - 150
			Acenaphthene	2010/10/05		81	%	60 - 130
		RPD	Acenaphthene	2010/10/06	8.1		%	50
		Spiked Blank	Acenaphthylene	2010/10/05		83	%	60 - 130
		RPD	Acenaphthylene	2010/10/06	8.8		%	50
		Spiked Blank	Anthracene	2010/10/05		77	%	60 - 130
		RPD	Anthracene	2010/10/06	10.2		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/05		86	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/06	7.9		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/05		68	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/06	6.8		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/05		75	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/06	8.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/05		82	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/06	8.6		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/05		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/06	10.7		%	50
		Spiked Blank	Chrysene	2010/10/05		83	%	60 - 130
		RPD	Chrysene	2010/10/06	9.5		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/05		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/06	9.2		%	50
		Spiked Blank	Fluoranthene	2010/10/05		84	%	60 - 130
		RPD	Fluoranthene	2010/10/06	10.0		%	50
		Spiked Blank	Fluorene	2010/10/05		83	%	60 - 130
		RPD	Fluorene	2010/10/06	6.5		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/05		82	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/06	8.9		%	50
		Spiked Blank	Naphthalene	2010/10/05		71	%	60 - 130
		RPD	Naphthalene	2010/10/06	7.3		%	50
		Spiked Blank	Phenanthrene	2010/10/05		81	%	60 - 130
		RPD	Phenanthrene	2010/10/06	9.4		%	50
		Spiked Blank	Pyrene	2010/10/05		77	%	60 - 130
		RPD	Pyrene	2010/10/06	10.3		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/06		82	%	50 - 150
			D10-Fluoranthene	2010/10/06		94	%	50 - 150
			D10-Phenanthrene	2010/10/06		88	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		110	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		90	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		92	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		86	%	50 - 150
			D12-Chrysene	2010/10/06		90	%	50 - 150

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics
Attention: Ting Xu
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C1248

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2259178	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/06		96	%	50 - 150
			D12-Perylene	2010/10/06		94	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		96	%	50 - 150
			D8-Acenaphthylene	2010/10/06		80	%	50 - 150
			D8-Naphthalene	2010/10/06		80	%	50 - 150
			1-Methylnaphthalene	2010/10/06	<0.10		ug	
			1-Methylphenanthrene	2010/10/06	<0.10		ug	
			2-Chloronaphthalene	2010/10/06	<0.10		ug	
			2-Methylanthracene	2010/10/06	<0.10		ug	
			2-Methylnaphthalene	2010/10/06	<0.10		ug	
			3-Methylcholanthrene	2010/10/06	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/06	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/06	<0.40		ug	
			Acenaphthene	2010/10/06	<0.050		ug	
			Acenaphthylene	2010/10/06	<0.050		ug	
			Anthracene	2010/10/06	<0.050		ug	
			Benzo(a)anthracene	2010/10/06	<0.050		ug	
			Benzo(a)fluorene	2010/10/06	<0.10		ug	
			Benzo(a)pyrene	2010/10/06	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/06	<0.050		ug	
			Benzo(b)fluorene	2010/10/06	<0.10		ug	
			Benzo(e)pyrene	2010/10/06	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/06	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/06	<0.050		ug	
			Biphenyl	2010/10/06	<0.10		ug	
			Chrysene	2010/10/06	<0.050		ug	
			Coronene	2010/10/06	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/06	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/06	<0.20		ug	
			Fluoranthene	2010/10/06	<0.050		ug	
			Fluorene	2010/10/06	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/06	<0.050		ug	
			m-Terphenyl	2010/10/06	<0.10		ug	
			Naphthalene	2010/10/06	<0.072		ug	
			o-Terphenyl	2010/10/06	<0.10		ug	
			Perylene	2010/10/06	<0.10		ug	
			Phenanthrene	2010/10/06	<0.050		ug	
			p-Terphenyl	2010/10/06	<0.10		ug	
			Pyrene	2010/10/06	<0.050		ug	
			Quinoline	2010/10/06	<0.40		ug	
			Tetralin	2010/10/06	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA PUF/PORT/Sept 05, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Sept 03, 10 @ 7:41 mst
Removal Date/Time: Sept 07, 10 @ 9:38 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
05-Sep-10	05/09/2010 0:00	06/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
02-Sep-10	07-Sep-10	14-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
705	229	12.7	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 # 3635
GB0B3958 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Sept 05, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 3635

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C4812
Received: 2010/09/09, 09:20

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/10	2010/10/06	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C4812
Report Date: 2010/10/07

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HC4999	HC5000		
Sampling Date		2010/09/05	2010/09/05		
COC Number		3635	3635		
	Units	**LICA PUFF/CLS/SEPT 05,10**	**LICA PUFF/PORT/SEPT 05,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2269694
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2269694
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2269694
2-Methylanthracene	ug	<0.10	<0.10	0.10	2269694
2-Methylnaphthalene	ug	0.12	<0.10	0.10	2269694
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2269694
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2269694
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2269694
Acenaphthene	ug	0.068	<0.050	0.050	2269694
Acenaphthylene	ug	<0.050	<0.050	0.050	2269694
Anthracene	ug	<0.050	<0.050	0.050	2269694
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2269694
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2269694
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2269694
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2269694
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2269694
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2269694
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2269694
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2269694
Biphenyl	ug	<0.10	<0.10	0.10	2269694
Chrysene	ug	<0.050	<0.050	0.050	2269694
Coronene	ug	<0.10	<0.10	0.10	2269694
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2269694
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2269694
Fluoranthene	ug	<0.050	<0.050	0.050	2269694
Fluorene	ug	0.124	<0.050	0.050	2269694
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2269694
m-Terphenyl	ug	<0.10	<0.10	0.10	2269694
Naphthalene	ug	0.106	<0.072	0.072	2269694
o-Terphenyl	ug	<0.10	<0.10	0.10	2269694
Perylene	ug	<0.10	<0.10	0.10	2269694

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C4812
Report Date: 2010/10/07

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HC4999	HC5000		
Sampling Date		2010/09/05	2010/09/05		
COC Number		3635	3635		
	Units	**LICA PUFF/CLS/SEPT 05,10**	**LICA PUFF/PORT/SEPT 05,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.320	0.100	0.050	2269694
p-Terphenyl	ug	<0.10	<0.10	0.10	2269694
Pyrene	ug	<0.050	<0.050	0.050	2269694
Quinoline	ug	<0.40	<0.40	0.40	2269694
Tetralin	ug	<0.10	<0.10	0.10	2269694
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	86	86		2269694
D10-Fluoranthene	%	92	94		2269694
D10-Fluorene (FS)	%	67	58		2269694
D10-Phenanthrene	%	92	94		2269694
D12-Benzo(a)anthracene	%	98	98		2269694
D12-Benzo(a)pyrene	%	86	86		2269694
D12-Benzo(b)fluoranthene	%	86	88		2269694
D12-Benzo(ghi)perylene	%	88	90		2269694
D12-Benzo(k)fluoranthene	%	84	88		2269694
D12-Chrysene	%	84	84		2269694
D12-Indeno(1,2,3-cd)pyrene	%	86	90		2269694
D12-Perylene	%	86	88		2269694
D14-Dibenzo(a,h)anthracene	%	86	92		2269694
D14-Terphenyl (FS)	%	88	85		2269694
D8-Acenaphthylene	%	84	90		2269694
D8-Naphthalene	%	84	84		2269694

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C4812
Report Date: 2010/10/07

Test Summary

Maxxam ID	HC4999	**Collected**	2010/09/05
Sample ID	LICA PUFF/CLS/SEPT 05,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2269694	2010/09/10	2010/10/06	JIW

Maxxam ID	HC5000	**Collected**	2010/09/05
Sample ID	LICA PUFF/PORT/SEPT 05,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2269694	2010/09/10	2010/10/06	JIW

Maxxam Analytics

Maxxam Job #: B0C4812
Report Date: 2010/10/07

GENERAL COMMENTS

PAHMS-F(WS:2269694)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

7,12-Dimethylbenzo(a)anthracene is above 25% RSD in continuing calibration.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0C4812

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2269694	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/06		86	%	50 - 150
			D10-Fluoranthene	2010/10/06		80	%	50 - 150
			D10-Phenanthrene	2010/10/06		82	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		92	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		84	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		82	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		86	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		82	%	50 - 150
			D12-Chrysene	2010/10/06		88	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/06		84	%	50 - 150
			D12-Perylene	2010/10/06		84	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		86	%	50 - 150
			D8-Acenaphthylene	2010/10/06		82	%	50 - 150
			D8-Naphthalene	2010/10/06		84	%	50 - 150
			Acenaphthene	2010/10/06		79	%	60 - 130
		RPD	Acenaphthene	2010/10/06	1.6		%	50
		Spiked Blank	Acenaphthylene	2010/10/06		78	%	60 - 130
		RPD	Acenaphthylene	2010/10/06	1.3		%	50
		Spiked Blank	Anthracene	2010/10/06		72	%	60 - 130
		RPD	Anthracene	2010/10/06	1.4		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/06		79	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/06	0		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/06		64	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/06	1.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/06		75	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/06	3.7		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/06		76	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/06	0		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/06		75	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/06	5.5		%	50
		Spiked Blank	Chrysene	2010/10/06		82	%	60 - 130
		RPD	Chrysene	2010/10/06	1.2		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/06		75	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/06	0.7		%	50
		Spiked Blank	Fluoranthene	2010/10/06		77	%	60 - 130
		RPD	Fluoranthene	2010/10/06	0.3		%	50
		Spiked Blank	Fluorene	2010/10/06		79	%	60 - 130
		RPD	Fluorene	2010/10/06	1.3		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/06		74	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/06	0.7		%	50
		Spiked Blank	Naphthalene	2010/10/06		72	%	60 - 130
		RPD	Naphthalene	2010/10/06	1.4		%	50
		Spiked Blank	Phenanthrene	2010/10/06		76	%	60 - 130
		RPD	Phenanthrene	2010/10/06	1.3		%	50
		Spiked Blank	Pyrene	2010/10/06		70	%	60 - 130
		RPD	Pyrene	2010/10/06	0.4		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/06		62	%	50 - 150
			D10-Fluoranthene	2010/10/06		62	%	50 - 150
			D10-Phenanthrene	2010/10/06		62	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		70	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		62	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		60	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		64	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		60	%	50 - 150
			D12-Chrysene	2010/10/06		60	%	50 - 150

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C4812

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2269694	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/06		64	%	50 - 150
			D12-Perylene	2010/10/06		60	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		64	%	50 - 150
			D8-Acenaphthylene	2010/10/06		60	%	50 - 150
			D8-Naphthalene	2010/10/06		62	%	50 - 150
			1-Methylnaphthalene	2010/10/06	<0.10		ug	
			1-Methylphenanthrene	2010/10/06	<0.10		ug	
			2-Chloronaphthalene	2010/10/06	<0.10		ug	
			2-Methylanthracene	2010/10/06	<0.10		ug	
			2-Methylnaphthalene	2010/10/06	<0.10		ug	
			3-Methylcholanthrene	2010/10/06	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/06	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/06	<0.40		ug	
			Acenaphthene	2010/10/06	<0.050		ug	
			Acenaphthylene	2010/10/06	<0.050		ug	
			Anthracene	2010/10/06	<0.050		ug	
			Benzo(a)anthracene	2010/10/06	<0.050		ug	
			Benzo(a)fluorene	2010/10/06	<0.10		ug	
			Benzo(a)pyrene	2010/10/06	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/06	<0.050		ug	
			Benzo(b)fluorene	2010/10/06	<0.10		ug	
			Benzo(e)pyrene	2010/10/06	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/06	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/06	<0.050		ug	
			Biphenyl	2010/10/06	<0.10		ug	
			Chrysene	2010/10/06	<0.050		ug	
			Coronene	2010/10/06	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/06	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/06	<0.20		ug	
			Fluoranthene	2010/10/06	<0.050		ug	
			Fluorene	2010/10/06	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/06	<0.050		ug	
			m-Terphenyl	2010/10/06	<0.10		ug	
			Naphthalene	2010/10/06	<0.072		ug	
			o-Terphenyl	2010/10/06	<0.10		ug	
			Perylene	2010/10/06	<0.10		ug	
			Phenanthrene	2010/10/06	<0.050		ug	
			p-Terphenyl	2010/10/06	<0.10		ug	
			Pyrene	2010/10/06	<0.050		ug	
			Quinoline	2010/10/06	<0.40		ug	
			Tetralin	2010/10/06	<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

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/Sept 11, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Sept 10, 10 @ 9:41 mst
Removal Date/Time: Sept 13, 10 @ 10:16 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
11-Sep-10	11/09/2010 0:00	12/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
07-Sep-10	13-Sep-10	18-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
707	229	9.8	330.33

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 3726
GB0B3965 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Sept 11, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 3726

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0C7690
Received: 2010/09/15, 09:15

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/17	2010/10/07	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0C7690
Report Date: 2010/10/07

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HD8844	HD8845		
Sampling Date		2010/09/11	2010/09/11		
COC Number		3726	3726		
	Units	**LICA PUFF/QFF/CLS/SEPT 11,10**	**LICA PUFF/QFF/PORT/SEPT 11,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2269681
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2269681
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2269681
2-Methylanthracene	ug	<0.10	<0.10	0.10	2269681
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2269681
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2269681
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2269681
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2269681
Acenaphthene	ug	<0.050	<0.050	0.050	2269681
Acenaphthylene	ug	<0.050	<0.050	0.050	2269681
Anthracene	ug	<0.050	<0.050	0.050	2269681
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2269681
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2269681
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2269681
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2269681
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2269681
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2269681
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2269681
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2269681
Biphenyl	ug	<0.10	<0.10	0.10	2269681
Chrysene	ug	<0.050	<0.050	0.050	2269681
Coronene	ug	<0.10	<0.10	0.10	2269681
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2269681
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2269681
Fluoranthene	ug	<0.050	<0.050	0.050	2269681
Fluorene	ug	0.078	<0.050	0.050	2269681
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2269681
m-Terphenyl	ug	<0.10	<0.10	0.10	2269681
Naphthalene	ug	0.090	0.092	0.072	2269681
o-Terphenyl	ug	<0.10	<0.10	0.10	2269681
Perylene	ug	<0.10	<0.10	0.10	2269681

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7690
Report Date: 2010/10/07

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HD8844	HD8845		
Sampling Date		2010/09/11	2010/09/11		
COC Number		3726	3726		
	Units	**LICA PUFF/QFF/CLS/SEPT 11,10**	**LICA PUFF/QFF/PORT/SEPT 11,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.200	0.138	0.050	2269681
p-Terphenyl	ug	<0.10	<0.10	0.10	2269681
Pyrene	ug	<0.050	<0.050	0.050	2269681
Quinoline	ug	<0.40	<0.40	0.40	2269681
Tetralin	ug	<0.10	<0.10	0.10	2269681
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	76	84		2269681
D10-Fluoranthene	%	94	88		2269681
D10-Fluorene (FS)	%	59	63		2269681
D10-Phenanthrene	%	86	90		2269681
D12-Benzo(a)anthracene	%	102	98		2269681
D12-Benzo(a)pyrene	%	90	88		2269681
D12-Benzo(b)fluoranthene	%	88	86		2269681
D12-Benzo(ghi)perylene	%	92	92		2269681
D12-Benzo(k)fluoranthene	%	86	86		2269681
D12-Chrysene	%	84	92		2269681
D12-Indeno(1,2,3-cd)pyrene	%	94	92		2269681
D12-Perylene	%	88	88		2269681
D14-Dibenzo(a,h)anthracene	%	96	92		2269681
D14-Terphenyl (FS)	%	84	84		2269681
D8-Acenaphthylene	%	80	86		2269681
D8-Naphthalene	%	72	82		2269681

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0C7690
Report Date: 2010/10/07

Test Summary

Maxxam ID	HD8844	**Collected**	2010/09/11
Sample ID	LICA PUFF/QFF/CLS/SEPT 11,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2269681	2010/09/17	2010/10/07	JIW

Maxxam ID	HD8845	**Collected**	2010/09/11
Sample ID	LICA PUFF/QFF/PORT/SEPT 11,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/15

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2269681	2010/09/17	2010/10/07	JIW

Maxxam Analytics

Maxxam Job #: B0C7690
Report Date: 2010/10/07

GENERAL COMMENTS

PAHMS-F(WS:2269681)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration.

Naphthalene positive found in blank. Samples should be considered to be possibly contaminated to the level found in the blank.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HD8844-01: PAHMS-F(WS:2269681)
The Internal Std (D12-Benzo(e)pyrene) area response criteria was high in this sample.

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0C7690

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2269681	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/06		86	%	50 - 150
			D10-Fluoranthene	2010/10/06		80	%	50 - 150
			D10-Phenanthrene	2010/10/06		80	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		94	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		86	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		88	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		92	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		86	%	50 - 150
			D12-Chrysene	2010/10/06		94	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/06		88	%	50 - 150
			D12-Perylene	2010/10/06		86	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		90	%	50 - 150
			D8-Acenaphthylene	2010/10/06		80	%	50 - 150
			D8-Naphthalene	2010/10/06		86	%	50 - 150
			Acenaphthene	2010/10/06		79	%	60 - 130
		RPD	Acenaphthene	2010/10/07	0		%	50
		Spiked Blank	Acenaphthylene	2010/10/06		77	%	60 - 130
		RPD	Acenaphthylene	2010/10/07	2.3		%	50
		Spiked Blank	Anthracene	2010/10/06		69	%	60 - 130
		RPD	Anthracene	2010/10/07	5.7		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/06		82	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/07	1.5		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/06		65	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/07	1.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/06		78	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/07	4.6		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/06		80	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/07	3.5		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/06		77	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/07	3.2		%	50
		Spiked Blank	Chrysene	2010/10/06		87	%	60 - 130
		RPD	Chrysene	2010/10/07	7.4		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/06		77	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/07	0		%	50
		Spiked Blank	Fluoranthene	2010/10/06		75	%	60 - 130
		RPD	Fluoranthene	2010/10/07	7.7		%	50
		Spiked Blank	Fluorene	2010/10/06		77	%	60 - 130
		RPD	Fluorene	2010/10/07	2.3		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/06		77	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/07	0.3		%	50
		Spiked Blank	Naphthalene	2010/10/06		74	%	60 - 130
		RPD	Naphthalene	2010/10/07	4.8		%	50
		Spiked Blank	Phenanthrene	2010/10/06		74	%	60 - 130
		RPD	Phenanthrene	2010/10/07	3.7		%	50
		Spiked Blank	Pyrene	2010/10/06		69	%	60 - 130
		RPD	Pyrene	2010/10/07	7.0		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/07		84	%	50 - 150
			D10-Fluoranthene	2010/10/07		92	%	50 - 150
			D10-Phenanthrene	2010/10/07		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/07		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/07		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/07		92	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/07		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/07		90	%	50 - 150
			D12-Chrysene	2010/10/07		92	%	50 - 150

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0C7690

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2269681	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/07		94	%	50 - 150
			D12-Perylene	2010/10/07		92	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/07		96	%	50 - 150
			D8-Acenaphthylene	2010/10/07		84	%	50 - 150
			D8-Naphthalene	2010/10/07		84	%	50 - 150
			1-Methylnaphthalene	2010/10/07	<0.10		ug	
			1-Methylphenanthrene	2010/10/07	<0.10		ug	
			2-Chloronaphthalene	2010/10/07	<0.10		ug	
			2-Methylanthracene	2010/10/07	<0.10		ug	
			2-Methylnaphthalene	2010/10/07	<0.10		ug	
			3-Methylcholanthrene	2010/10/07	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/07	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/07	<0.40		ug	
			Acenaphthene	2010/10/07	<0.050		ug	
			Acenaphthylene	2010/10/07	<0.050		ug	
			Anthracene	2010/10/07	<0.050		ug	
			Benzo(a)anthracene	2010/10/07	<0.050		ug	
			Benzo(a)fluorene	2010/10/07	<0.10		ug	
			Benzo(a)pyrene	2010/10/07	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/07	<0.050		ug	
			Benzo(b)fluorene	2010/10/07	<0.10		ug	
			Benzo(e)pyrene	2010/10/07	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/07	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/07	<0.050		ug	
			Biphenyl	2010/10/07	<0.10		ug	
			Chrysene	2010/10/07	<0.050		ug	
			Coronene	2010/10/07	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/07	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/07	<0.20		ug	
			Fluoranthene	2010/10/07	<0.050		ug	
			Fluorene	2010/10/07	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/07	<0.050		ug	
			m-Terphenyl	2010/10/07	<0.10		ug	
			Naphthalene	2010/10/07	0.086, RDL=0.072		ug	
			o-Terphenyl	2010/10/07	<0.10		ug	
			Perylene	2010/10/07	<0.10		ug	
			Phenanthrene	2010/10/07	<0.050		ug	
			p-Terphenyl	2010/10/07	<0.10		ug	
			Pyrene	2010/10/07	<0.050		ug	
			Quinoline	2010/10/07	<0.40		ug	
			Tetralin	2010/10/07	<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

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/Sept 17, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Sept 16, 10 @ 15:43 mst
Removal Date/Time: Sept 20 , 10 @ 8:57 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
17-Sep-10	17/09/2010 0:00	18/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
15-Sep-10	20-Sep-10	27-Sep-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
715	229	2.3	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 # 4705
GB0B7658 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Sept 17, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 4705

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D2211
Received: 2010/09/22, 09:35

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/24	2010/10/07	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

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Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D2211
Report Date: 2010/10/07

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HF9978	HF9979		
Sampling Date		2010/09/17	2010/09/17		
COC Number		4705	4705		
	Units	**LICA PUFF/QFF/CLS/SEPT 17,10**	**LICA PUFF/QFF/PORT/SEPT 17,10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.22	<0.10	0.10	2278207
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2278207
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2278207
2-Methylanthracene	ug	<0.10	<0.10	0.10	2278207
2-Methylnaphthalene	ug	0.39	<0.10	0.10	2278207
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2278207
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2278207
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2278207
Acenaphthene	ug	0.058	<0.050	0.050	2278207
Acenaphthylene	ug	<0.050	<0.050	0.050	2278207
Anthracene	ug	<0.050	<0.050	0.050	2278207
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2278207
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2278207
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2278207
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2278207
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2278207
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2278207
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2278207
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2278207
Biphenyl	ug	<0.10	<0.10	0.10	2278207
Chrysene	ug	<0.050	<0.050	0.050	2278207
Coronene	ug	<0.10	<0.10	0.10	2278207
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2278207
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2278207
Fluoranthene	ug	<0.050	<0.050	0.050	2278207
Fluorene	ug	0.078	<0.050	0.050	2278207
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2278207
m-Terphenyl	ug	<0.10	<0.10	0.10	2278207
Naphthalene	ug	0.260	0.114	0.072	2278207
o-Terphenyl	ug	<0.10	<0.10	0.10	2278207
Perylene	ug	<0.10	<0.10	0.10	2278207

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0D2211
Report Date: 2010/10/07

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HF9978	HF9979		
Sampling Date		2010/09/17	2010/09/17		
COC Number		4705	4705		
	Units	**LICA PUFF/QFF/CLS/SEPT 17,10**	**LICA PUFF/QFF/PORT/SEPT 17,10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.130	0.066	0.050	2278207
p-Terphenyl	ug	<0.10	<0.10	0.10	2278207
Pyrene	ug	<0.050	<0.050	0.050	2278207
Quinoline	ug	<0.40	<0.40	0.40	2278207
Tetralin	ug	<0.10	<0.10	0.10	2278207
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	74	78		2278207
D10-Fluoranthene	%	94	92		2278207
D10-Fluorene (FS)	%	67	58		2278207
D10-Phenanthrene	%	86	86		2278207
D12-Benzo(a)anthracene	%	98	98		2278207
D12-Benzo(a)pyrene	%	86	86		2278207
D12-Benzo(b)fluoranthene	%	86	86		2278207
D12-Benzo(ghi)perylene	%	90	90		2278207
D12-Benzo(k)fluoranthene	%	84	84		2278207
D12-Chrysene	%	82	82		2278207
D12-Indeno(1,2,3-cd)pyrene	%	90	92		2278207
D12-Perylene	%	88	88		2278207
D14-Dibenzo(a,h)anthracene	%	92	92		2278207
D14-Terphenyl (FS)	%	81	82		2278207
D8-Acenaphthylene	%	78	84		2278207
D8-Naphthalene	%	70	76		2278207

QC Batch = Quality Control Batch

Maxxam Analytics

Maxxam Job #: B0D2211
Report Date: 2010/10/07

Test Summary

Maxxam ID	HF9978	**Collected**	2010/09/17
Sample ID	LICA PUFF/QFF/CLS/SEPT 17,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2278207	2010/09/24	2010/10/07	JIW

Maxxam ID	HF9979	**Collected**	2010/09/17
Sample ID	LICA PUFF/QFF/PORT/SEPT 17,10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/22

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2278207	2010/09/24	2010/10/07	JIW

Maxxam Analytics

Maxxam Job #: B0D2211
Report Date: 2010/10/07

GENERAL COMMENTS

PAHMS-F(WS:2278207)
9.10-Dimethylanthracene and 7,12-Dimethylbenzo(a)anthracene are above 25% RSD in initial calibration. No positives found for these 2 compounds.

7,12-Dimethylbenzo(a)anthracene are above 25% RSD in continuing calibration.

Benzo(a)pyrene positive found in blank. Sample rerun with similar result. The original run was reported.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Results relate only to the items tested.

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0D2211

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2278207	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/06		86	%	50 - 150
			D10-Fluoranthene	2010/10/06		90	%	50 - 150
			D10-Phenanthrene	2010/10/06		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/06		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/06		84	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/06		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/06		94	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/06		88	%	50 - 150
			D12-Chrysene	2010/10/06		90	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/06		94	%	50 - 150
			D12-Perylene	2010/10/06		90	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/06		94	%	50 - 150
			D8-Acenaphthylene	2010/10/06		84	%	50 - 150
			D8-Naphthalene	2010/10/06		88	%	50 - 150
			Acenaphthene	2010/10/06		80	%	60 - 130
		RPD	Acenaphthene	2010/10/07	0		%	50
		Spiked Blank	Acenaphthylene	2010/10/06		81	%	60 - 130
		RPD	Acenaphthylene	2010/10/07	0.6		%	50
		Spiked Blank	Anthracene	2010/10/06		74	%	60 - 130
		RPD	Anthracene	2010/10/07	1.3		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/06		91	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/07	0.5		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/06		73	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/07	3.9		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/06		76	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/07	0.3		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/06		81	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/07	0.3		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/06		82	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/07	1.9		%	50
		Spiked Blank	Chrysene	2010/10/06		86	%	60 - 130
		RPD	Chrysene	2010/10/07	0.6		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/06		80	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/07	1.9		%	50
		Spiked Blank	Fluoranthene	2010/10/06		83	%	60 - 130
		RPD	Fluoranthene	2010/10/07	0		%	50
		Spiked Blank	Fluorene	2010/10/06		84	%	60 - 130
		RPD	Fluorene	2010/10/07	1.2		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/06		80	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/07	1.6		%	50
		Spiked Blank	Naphthalene	2010/10/06		75	%	60 - 130
		RPD	Naphthalene	2010/10/07	4.1		%	50
		Spiked Blank	Phenanthrene	2010/10/06		79	%	60 - 130
		RPD	Phenanthrene	2010/10/07	0		%	50
		Spiked Blank	Pyrene	2010/10/06		76	%	60 - 130
		RPD	Pyrene	2010/10/07	0		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/07		86	%	50 - 150
			D10-Fluoranthene	2010/10/07		92	%	50 - 150
			D10-Phenanthrene	2010/10/07		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/07		108	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/07		88	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/07		88	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/07		90	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/07		84	%	50 - 150
			D12-Chrysene	2010/10/07		86	%	50 - 150

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D2211

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2278207	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/07		90	%	50 - 150
			D12-Perylene	2010/10/07		94	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/07		92	%	50 - 150
			D8-Acenaphthylene	2010/10/07		86	%	50 - 150
			D8-Naphthalene	2010/10/07		88	%	50 - 150
			1-Methylnaphthalene	2010/10/07	<0.10		ug	
			1-Methylphenanthrene	2010/10/07	<0.10		ug	
			2-Chloronaphthalene	2010/10/07	<0.10		ug	
			2-Methylanthracene	2010/10/07	<0.10		ug	
			2-Methylnaphthalene	2010/10/07	<0.10		ug	
			3-Methylcholanthrene	2010/10/07	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/07	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/07	<0.40		ug	
			Acenaphthene	2010/10/07	<0.050		ug	
			Acenaphthylene	2010/10/07	<0.050		ug	
			Anthracene	2010/10/07	<0.050		ug	
			Benzo(a)anthracene	2010/10/07	<0.050		ug	
			Benzo(a)fluorene	2010/10/07	<0.10		ug	
			Benzo(a)pyrene	2010/10/07	0.120, RDL=0.050		ug	
			Benzo(b)fluoranthene	2010/10/07	<0.050		ug	
			Benzo(b)fluorene	2010/10/07	<0.10		ug	
			Benzo(e)pyrene	2010/10/07	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/07	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/07	<0.050		ug	
			Biphenyl	2010/10/07	<0.10		ug	
			Chrysene	2010/10/07	<0.050		ug	
			Coronene	2010/10/07	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/07	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/07	<0.20		ug	
			Fluoranthene	2010/10/07	<0.050		ug	
			Fluorene	2010/10/07	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/07	<0.050		ug	
			m-Terphenyl	2010/10/07	<0.10		ug	
			Naphthalene	2010/10/07	<0.072		ug	
			o-Terphenyl	2010/10/07	<0.10		ug	
			Perylene	2010/10/07	<0.10		ug	
			Phenanthrene	2010/10/07	<0.050		ug	
			p-Terphenyl	2010/10/07	<0.10		ug	
			Pyrene	2010/10/07	<0.050		ug	
			Quinoline	2010/10/07	<0.40		ug	
			Tetralin	2010/10/07	<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

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/Sept 23, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Sept 22, 10 @ 11:09 mst
Removal Date/Time: Sept 24, 10 @ 9:39 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
23-Sep-10	23/09/2010 0:00	24/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
22-Sep-10	24-Sep-10	01-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
706	229	6.8	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 # 3357
GB0B8912 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Sept 23, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 3357

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D6408
Received: 2010/09/29, 09:29

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/09/30	2010/10/08	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D6408
Report Date: 2010/10/12

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HI0464	HI0465		
Sampling Date		2010/09/23	2010/09/23		
COC Number		3357	3357		
	Units	**LICA PUFF + QFF/CLS/SEPT 23, 10**	**LICA PUFF + QFF/PORT/SEPT 23, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	<0.10	<0.10	0.10	2287794
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2287794
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2287794
2-Methylanthracene	ug	<0.10	<0.10	0.10	2287794
2-Methylnaphthalene	ug	<0.10	<0.10	0.10	2287794
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2287794
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2287794
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2287794
Acenaphthene	ug	<0.050	<0.050	0.050	2287794
Acenaphthylene	ug	0.064	<0.050	0.050	2287794
Anthracene	ug	<0.050	<0.050	0.050	2287794
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2287794
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2287794
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2287794
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2287794
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2287794
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2287794
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2287794
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2287794
Biphenyl	ug	<0.10	<0.10	0.10	2287794
Chrysene	ug	<0.050	<0.050	0.050	2287794
Coronene	ug	<0.10	<0.10	0.10	2287794
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2287794
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2287794
Fluoranthene	ug	<0.050	<0.050	0.050	2287794
Fluorene	ug	0.074	<0.050	0.050	2287794
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2287794
m-Terphenyl	ug	<0.10	<0.10	0.10	2287794
Naphthalene	ug	<0.072	<0.072	0.072	2287794
o-Terphenyl	ug	<0.10	<0.10	0.10	2287794
Perylene	ug	<0.10	<0.10	0.10	2287794

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics

Maxxam Job #: B0D6408
Report Date: 2010/10/12

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HI0464	HI0465		
Sampling Date		2010/09/23	2010/09/23		
COC Number		3357	3357		
	Units	**LICA PUFF + QFF/CLS/SEPT 23, 10**	**LICA PUFF + QFF/PORT/SEPT 23, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.198	0.098	0.050	2287794
p-Terphenyl	ug	<0.10	<0.10	0.10	2287794
Pyrene	ug	<0.050	<0.050	0.050	2287794
Quinoline	ug	<0.40	<0.40	0.40	2287794
Tetralin	ug	<0.10	<0.10	0.10	2287794
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	74	76		2287794
D10-Fluoranthene	%	92	94		2287794
D10-Fluorene (FS)	%	14 (1)	13 (1)		2287794
D10-Phenanthrene	%	88	88		2287794
D12-Benzo(a)anthracene	%	96	96		2287794
D12-Benzo(a)pyrene	%	94	98		2287794
D12-Benzo(b)fluoranthene	%	92	92		2287794
D12-Benzo(ghi)perylene	%	96	98		2287794
D12-Benzo(k)fluoranthene	%	90	90		2287794
D12-Chrysene	%	88	86		2287794
D12-Indeno(1,2,3-cd)pyrene	%	96	98		2287794
D12-Perylene	%	94	96		2287794
D14-Dibenzo(a,h)anthracene	%	96	100		2287794
D14-Terphenyl (FS)	%	88	85		2287794
D8-Acenaphthylene	%	80	84		2287794
D8-Naphthalene	%	72	72		2287794

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0D6408
Report Date: 2010/10/12

Test Summary

Maxxam ID	HI0464	**Collected**	2010/09/23
Sample ID	LICA PUFF + QFF/CLS/SEPT 23, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/29

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2287794	2010/09/30	2010/10/08	JIW

Maxxam ID	HI0465	**Collected**	2010/09/23
Sample ID	LICA PUFF + QFF/PORT/SEPT 23, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/09/29

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2287794	2010/09/30	2010/10/08	JIW

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Maxxam Analytics

Maxxam Job #: B0D6408
Report Date: 2010/10/12

GENERAL COMMENTS

PAHMS-F(WS:2287794)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HI0464-01: PAHMS-F(WS:2287794)
The recovery of D10-Fluorene field spike was low in this sample.

Sample HI0465-01: PAHMS-F(WS:2287794)
The recovery of D10-Fluorene field spike was low in this sample.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0D6408

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2287794	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/08		86	%	50 - 150
			D10-Fluoranthene	2010/10/08		92	%	50 - 150
			D10-Phenanthrene	2010/10/08		86	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/08		102	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/08		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/08		90	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/08		98	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/08		88	%	50 - 150
			D12-Chrysene	2010/10/08		86	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/08		98	%	50 - 150
			D12-Perylene	2010/10/08		94	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/08		98	%	50 - 150
			D8-Acenaphthylene	2010/10/08		88	%	50 - 150
			D8-Naphthalene	2010/10/08		86	%	50 - 150
			Acenaphthene	2010/10/08		82	%	60 - 130
		RPD	Acenaphthene	2010/10/08	2.1		%	50
		Spiked Blank	Acenaphthylene	2010/10/08		85	%	60 - 130
		RPD	Acenaphthylene	2010/10/08	2.6		%	50
		Spiked Blank	Anthracene	2010/10/08		78	%	60 - 130
		RPD	Anthracene	2010/10/08	6.3		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/08		85	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/08	5.2		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/08		74	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/08	6.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/08		77	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/08	7.8		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/08		85	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/08	6.5		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/08		84	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/08	3.5		%	50
		Spiked Blank	Chrysene	2010/10/08		83	%	60 - 130
		RPD	Chrysene	2010/10/08	4.4		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/08		82	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/08	9.6		%	50
		Spiked Blank	Fluoranthene	2010/10/08		85	%	60 - 130
		RPD	Fluoranthene	2010/10/08	9.8		%	50
		Spiked Blank	Fluorene	2010/10/08		86	%	60 - 130
		RPD	Fluorene	2010/10/08	1.4		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/08		85	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/08	6.3		%	50
		Spiked Blank	Naphthalene	2010/10/08		73	%	60 - 130
		RPD	Naphthalene	2010/10/08	0.3		%	50
		Spiked Blank	Phenanthrene	2010/10/08		78	%	60 - 130
		RPD	Phenanthrene	2010/10/08	5.3		%	50
		Spiked Blank	Pyrene	2010/10/08		78	%	60 - 130
		RPD	Pyrene	2010/10/08	8.6		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/08		90	%	50 - 150
			D10-Fluoranthene	2010/10/08		98	%	50 - 150
			D10-Phenanthrene	2010/10/08		92	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/08		102	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/08		96	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/08		94	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/08		102	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/08		90	%	50 - 150
			D12-Chrysene	2010/10/08		86	%	50 - 150

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D6408

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2287794	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/08		104	%	50 - 150
			D12-Perylene	2010/10/08		100	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/08		104	%	50 - 150
			D8-Acenaphthylene	2010/10/08		94	%	50 - 150
			D8-Naphthalene	2010/10/08		88	%	50 - 150
			1-Methylnaphthalene	2010/10/08	<0.10		ug	
			1-Methylphenanthrene	2010/10/08	<0.10		ug	
			2-Chloronaphthalene	2010/10/08	<0.10		ug	
			2-Methylanthracene	2010/10/08	<0.10		ug	
			2-Methylnaphthalene	2010/10/08	<0.10		ug	
			3-Methylcholanthrene	2010/10/08	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/08	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/08	<0.40		ug	
			Acenaphthene	2010/10/08	<0.050		ug	
			Acenaphthylene	2010/10/08	<0.050		ug	
			Anthracene	2010/10/08	<0.050		ug	
			Benzo(a)anthracene	2010/10/08	<0.050		ug	
			Benzo(a)fluorene	2010/10/08	<0.10		ug	
			Benzo(a)pyrene	2010/10/08	<0.050		ug	
			Benzo(b)fluoranthene	2010/10/08	<0.050		ug	
			Benzo(b)fluorene	2010/10/08	<0.10		ug	
			Benzo(e)pyrene	2010/10/08	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/08	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/08	<0.050		ug	
			Biphenyl	2010/10/08	<0.10		ug	
			Chrysene	2010/10/08	<0.050		ug	
			Coronene	2010/10/08	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/08	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/08	<0.20		ug	
			Fluoranthene	2010/10/08	<0.050		ug	
			Fluorene	2010/10/08	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/08	<0.050		ug	
			m-Terphenyl	2010/10/08	<0.10		ug	
			Naphthalene	2010/10/08	<0.072		ug	
			o-Terphenyl	2010/10/08	<0.10		ug	
			Perylene	2010/10/08	<0.10		ug	
			Phenanthrene	2010/10/08	<0.050		ug	
			p-Terphenyl	2010/10/08	<0.10		ug	
			Pyrene	2010/10/08	<0.050		ug	
			Quinoline	2010/10/08	<0.40		ug	
			Tetralin	2010/10/08	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Maxxam Analytics

Tisch Hi-Vol PUF+ Sample Collection Data Sheet

Client: Lica
Location: 13-16-62-5 W4M
Station ID: Lica 33 (Portable)
Field Sample ID: LICA PUF/PORT/Sept 29, 10

Puf+ s/n: 100-1015
Motor s/n: 1139
Installation Date/Time: Sept 27, 10 @ 11:49 mst
Removal Date/Time: Sept 30, 10 @ 9:12 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
29-Sep-10	29/09/2010 0:00	30/09/2010 0:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
22-Sep-10	30-Sep-10	04-Oct-10	????

Set Flow Rate (slpm): 230

Date of Last Calibration: 29-Mar-10

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Tempurature (C)	Volume (Vstd m^3)
710	229	11.1	330.33

Time set correctly prior to sampling? YES
Timer set correctly prior to sampling? YES
Sampling data saved to memory card after sampling? YES

Comments: COC # 2322
GB0B8918 Puff #2
Ran with a 102mm Quartz Fiber Filter - Sample ID - LICA QFF/PORT/Sept 29, 10

- Noticed condensation on the PUFF glass holder

Technician Signiture: Ting Xu

Your C.O.C. #: 2322

Attention: Michael Bisaga
Maxxam Analytics
2608 6A Ave.
Cold Lake, AB
CANADA T9M 2C7

Report Date: 2010/10/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B0D8869
Received: 2010/10/02, 14:20

Sample Matrix: PUF AND FILTER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
PAH's in Air (CARB429mod)	2	2010/10/05	2010/10/08	BRL SOP-00201	CARB429(ARBM1,M2)mod

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

THERESA STEPHENSON, Project Manager
Email: Theresa.Stephenson@MaxxamAnalytics.com
Phone# (905) 817-5763

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Analytics

Maxxam Job #: B0D8869
Report Date: 2010/10/12

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HJ2253	HJ2254		
Sampling Date		2010/09/29	2010/09/29		
COC Number		2322	2322		
	Units	**LICA PUF/CLS/SEPT 29, 10**	**LICA PUF/PORT/SEPT 29, 10**	**RDL**	**QC Batch**
Semivolatile Organics					
1-Methylnaphthalene	ug	0.22	<0.10	0.10	2287806
1-Methylphenanthrene	ug	<0.10	<0.10	0.10	2287806
2-Chloronaphthalene	ug	<0.10	<0.10	0.10	2287806
2-Methylanthracene	ug	<0.10	<0.10	0.10	2287806
2-Methylnaphthalene	ug	0.38	0.11	0.10	2287806
3-Methylcholanthrene	ug	<2.0	<2.0	2.0	2287806
7,12-Dimethylbenzo(a)anthracene	ug	<0.10	<0.10	0.10	2287806
9,10-Dimethylanthracene	ug	<0.40	<0.40	0.40	2287806
Acenaphthene	ug	0.116	<0.050	0.050	2287806
Acenaphthylene	ug	0.140	<0.050	0.050	2287806
Anthracene	ug	<0.050	<0.050	0.050	2287806
Benzo(a)anthracene	ug	<0.050	<0.050	0.050	2287806
Benzo(a)fluorene	ug	<0.10	<0.10	0.10	2287806
Benzo(a)pyrene	ug	<0.050	<0.050	0.050	2287806
Benzo(b)fluoranthene	ug	<0.050	<0.050	0.050	2287806
Benzo(b)fluorene	ug	<0.10	<0.10	0.10	2287806
Benzo(e)pyrene	ug	<0.10	<0.10	0.10	2287806
Benzo(g,h,i)perylene	ug	<0.050	<0.050	0.050	2287806
Benzo(k)fluoranthene	ug	<0.050	<0.050	0.050	2287806
Biphenyl	ug	<0.10	<0.10	0.10	2287806
Chrysene	ug	<0.050	<0.050	0.050	2287806
Coronene	ug	<0.10	<0.10	0.10	2287806
Dibenz(a,h)anthracene	ug	<0.050	<0.050	0.050	2287806
Dibenzo(a,e)pyrene	ug	<0.20	<0.20	0.20	2287806
Fluoranthene	ug	<0.050	<0.050	0.050	2287806
Fluorene	ug	0.134	<0.050	0.050	2287806
Indeno(1,2,3-cd)pyrene	ug	<0.050	<0.050	0.050	2287806
m-Terphenyl	ug	<0.10	<0.10	0.10	2287806
Naphthalene	ug	0.238	0.094	0.072	2287806
o-Terphenyl	ug	<0.10	<0.10	0.10	2287806
Perylene	ug	<0.10	<0.10	0.10	2287806

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Analytics

Maxxam Job #: B0D8869
Report Date: 2010/10/12

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Maxxam ID		HJ2253	HJ2254		
Sampling Date		2010/09/29	2010/09/29		
COC Number		2322	2322		
	Units	**LICA PUF/CLS/SEPT 29, 10**	**LICA PUF/PORT/SEPT 29, 10**	**RDL**	**QC Batch**
Phenanthrene	ug	0.286	0.100	0.050	2287806
p-Terphenyl	ug	<0.10	<0.10	0.10	2287806
Pyrene	ug	0.058	<0.050	0.050	2287806
Quinoline	ug	<0.40	<0.40	0.40	2287806
Tetralin	ug	<0.10	<0.10	0.10	2287806
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	66	78		2287806
D10-Fluoranthene	%	88	90		2287806
D10-Fluorene (FS)	%	47 (1)	49 (1)		2287806
D10-Phenanthrene	%	80	82		2287806
D12-Benzo(a)anthracene	%	90	92		2287806
D12-Benzo(a)pyrene	%	80	86		2287806
D12-Benzo(b)fluoranthene	%	80	86		2287806
D12-Benzo(ghi)perylene	%	84	88		2287806
D12-Benzo(k)fluoranthene	%	80	86		2287806
D12-Chrysene	%	76	78		2287806
D12-Indeno(1,2,3-cd)pyrene	%	84	88		2287806
D12-Perylene	%	84	86		2287806
D14-Dibenzo(a,h)anthracene	%	84	88		2287806
D14-Terphenyl (FS)	%	77	76		2287806
D8-Acenaphthylene	%	70	82		2287806
D8-Naphthalene	%	62	76		2287806

QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Analytics

Maxxam Job #: B0D8869
Report Date: 2010/10/12

Test Summary

Maxxam ID	HJ2253	**Collected**	2010/09/29
Sample ID	LICA PUF/CLS/SEPT 29, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2287806	2010/10/05	2010/10/08	JIW

Maxxam ID	HJ2254	**Collected**	2010/09/29
Sample ID	LICA PUF/PORT/SEPT 29, 10	**Shipped**	
Matrix	PUF AND FILTER	**Received**	2010/10/02

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
PAH's in Air (CARB429mod)	GC/MS	2287806	2010/10/05	2010/10/08	JIW

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Maxxam Analytics

Maxxam Job #: B0D8869
Report Date: 2010/10/12

GENERAL COMMENTS

PAHMS-F(WS:2287806)
7,12-Dimethylbenzo(a)anthracene is above 25% RSD in initial calibration. No positive found for this compound.

Benzo(a)pyrene positive found in blank.

Not calibrated for Benzo(b)Anthracene, Picene, Dibenzo(a,c) anthracene and Triphenylene. An estimated mdl for each of these compounds is 0.1ug.
Since Dibenzo(a,c) anthracene co-elutes with Dibenz(a,h) anthracene and Triphenylene with Chrysene each would have a value below estimated mdl.
Benzo(b)Anthracene elutes after Benzo(a)Anthracene and Chysene. Picene elutes after Dibenz(a,h) anthracene. Searched for ions specific to these 2 compounds in the appropriate retention time range with no possible positives detected.

Sample HJ2253-01: PAHMS-F(WS:2287806)
The recovery of D10-Fluorene field spike was low in this sample.

Sample HJ2254-01: PAHMS-F(WS:2287806)
The recovery of D10-Fluorene field spike was low in this sample.

Results relate only to the items tested.

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Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: GB0D8869

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2287806	JIW	Spiked Blank	D10-2-Methylnaphthalene	2010/10/08		88	%	50 - 150
			D10-Fluoranthene	2010/10/08		96	%	50 - 150
			D10-Phenanthrene	2010/10/08		90	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/08		106	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/08		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/08		92	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/08		96	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/08		88	%	50 - 150
			D12-Chrysene	2010/10/08		88	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2010/10/08		96	%	50 - 150
			D12-Perylene	2010/10/08		96	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/08		98	%	50 - 150
			D8-Acenaphthylene	2010/10/08		90	%	50 - 150
			D8-Naphthalene	2010/10/08		86	%	50 - 150
			Acenaphthene	2010/10/08		87	%	60 - 130
		RPD	Acenaphthene	2010/10/08	5.9		%	50
		Spiked Blank	Acenaphthylene	2010/10/08		90	%	60 - 130
		RPD	Acenaphthylene	2010/10/08	5.2		%	50
		Spiked Blank	Anthracene	2010/10/08		82	%	60 - 130
		RPD	Anthracene	2010/10/08	8.2		%	50
		Spiked Blank	Benzo(a)anthracene	2010/10/08		92	%	60 - 130
		RPD	Benzo(a)anthracene	2010/10/08	4.5		%	50
		Spiked Blank	Benzo(a)pyrene	2010/10/08		83	%	60 - 130
		RPD	Benzo(a)pyrene	2010/10/08	14.2		%	50
		Spiked Blank	Benzo(b)fluoranthene	2010/10/08		81	%	60 - 130
		RPD	Benzo(b)fluoranthene	2010/10/08	5.4		%	50
		Spiked Blank	Benzo(g,h,i)perylene	2010/10/08		87	%	60 - 130
		RPD	Benzo(g,h,i)perylene	2010/10/08	4.7		%	50
		Spiked Blank	Benzo(k)fluoranthene	2010/10/08		85	%	60 - 130
		RPD	Benzo(k)fluoranthene	2010/10/08	5.2		%	50
		Spiked Blank	Chrysene	2010/10/08		88	%	60 - 130
		RPD	Chrysene	2010/10/08	3.8		%	50
		Spiked Blank	Dibenz(a,h)anthracene	2010/10/08		85	%	60 - 130
		RPD	Dibenz(a,h)anthracene	2010/10/08	5.7		%	50
		Spiked Blank	Fluoranthene	2010/10/08		91	%	60 - 130
		RPD	Fluoranthene	2010/10/08	8.0		%	50
		Spiked Blank	Fluorene	2010/10/08		92	%	60 - 130
		RPD	Fluorene	2010/10/08	7.9		%	50
		Spiked Blank	Indeno(1,2,3-cd)pyrene	2010/10/08		86	%	60 - 130
		RPD	Indeno(1,2,3-cd)pyrene	2010/10/08	5.1		%	50
		Spiked Blank	Naphthalene	2010/10/08		78	%	60 - 130
		RPD	Naphthalene	2010/10/08	6.0		%	50
		Spiked Blank	Phenanthrene	2010/10/08		85	%	60 - 130
		RPD	Phenanthrene	2010/10/08	7.7		%	50
		Spiked Blank	Pyrene	2010/10/08		84	%	60 - 130
		RPD	Pyrene	2010/10/08	8.7		%	50
		Method Blank	D10-2-Methylnaphthalene	2010/10/08		78	%	50 - 150
			D10-Fluoranthene	2010/10/08		76	%	50 - 150
			D10-Phenanthrene	2010/10/08		74	%	50 - 150
			D12-Benzo(a)anthracene	2010/10/08		82	%	50 - 150
			D12-Benzo(a)pyrene	2010/10/08		76	%	50 - 150
			D12-Benzo(b)fluoranthene	2010/10/08		74	%	50 - 150
			D12-Benzo(ghi)perylene	2010/10/08		84	%	50 - 150
			D12-Benzo(k)fluoranthene	2010/10/08		72	%	50 - 150
			D12-Chrysene	2010/10/08		72	%	50 - 150

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Analytics
Attention: Michael Bisaga
Client Project #:
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GB0D8869

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
2287806	JIW	Method Blank	D12-Indeno(1,2,3-cd)pyrene	2010/10/08		80	%	50 - 150
			D12-Perylene	2010/10/08		80	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2010/10/08		82	%	50 - 150
			D8-Acenaphthylene	2010/10/08		80	%	50 - 150
			D8-Naphthalene	2010/10/08		76	%	50 - 150
			1-Methylnaphthalene	2010/10/08	<0.10		ug	
			1-Methylphenanthrene	2010/10/08	<0.10		ug	
			2-Chloronaphthalene	2010/10/08	<0.10		ug	
			2-Methylanthracene	2010/10/08	<0.10		ug	
			2-Methylnaphthalene	2010/10/08	<0.10		ug	
			3-Methylcholanthrene	2010/10/08	<2.0		ug	
			7,12-Dimethylbenzo(a)anthracene	2010/10/08	<0.10		ug	
			9,10-Dimethylanthracene	2010/10/08	<0.40		ug	
			Acenaphthene	2010/10/08	<0.050		ug	
			Acenaphthylene	2010/10/08	<0.050		ug	
			Anthracene	2010/10/08	<0.050		ug	
			Benzo(a)anthracene	2010/10/08	<0.050		ug	
			Benzo(a)fluorene	2010/10/08	<0.10		ug	
			Benzo(a)pyrene	2010/10/08	0.052, RDL=0.050		ug	
			Benzo(b)fluoranthene	2010/10/08	<0.050		ug	
			Benzo(b)fluorene	2010/10/08	<0.10		ug	
			Benzo(e)pyrene	2010/10/08	<0.10		ug	
			Benzo(g,h,i)perylene	2010/10/08	<0.050		ug	
			Benzo(k)fluoranthene	2010/10/08	<0.050		ug	
			Biphenyl	2010/10/08	<0.10		ug	
			Chrysene	2010/10/08	<0.050		ug	
			Coronene	2010/10/08	<0.10		ug	
			Dibenz(a,h)anthracene	2010/10/08	<0.050		ug	
			Dibenzo(a,e)pyrene	2010/10/08	<0.20		ug	
			Fluoranthene	2010/10/08	<0.050		ug	
			Fluorene	2010/10/08	<0.050		ug	
			Indeno(1,2,3-cd)pyrene	2010/10/08	<0.050		ug	
			m-Terphenyl	2010/10/08	<0.10		ug	
			Naphthalene	2010/10/08	<0.072		ug	
			o-Terphenyl	2010/10/08	<0.10		ug	
			Perylene	2010/10/08	<0.10		ug	
			Phenanthrene	2010/10/08	<0.050		ug	
			p-Terphenyl	2010/10/08	<0.10		ug	
			Pyrene	2010/10/08	<0.050		ug	
			Quinoline	2010/10/08	<0.40		ug	
			Tetralin	2010/10/08	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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