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April 12, 2013

RE: February 2013 Ambient Air Monitoring Monthly Reports

Attached are the monthly ambient air monitoring reports for the LICA Airshed Zone's Cold Lake South, Maskwa, St. Lina, and Elk Point continuous stations. In addition, there are also summaries for the passive monitoring network and speciated VOC and PAH sampling programs.

Should you have any questions, please don't hesitate to contact me directly at (780) 266-7068.

Respectfully,

A handwritten signature in blue ink that reads "Michael Bisaga".

Michael Bisaga

Airshed Program Manager
Lakeland Industry and Community Association

cc (email): LICA Office

Lakeland Industry & Community Association

Cold Lake Monitoring Site

Ambient Air Monitoring

Data Report

For

February 2013

Prepared By:



March 28, 2013

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
5107W – 50 Street
Bonnyville, Alberta
T9N 2J5

Monitoring Location: Cold Lake
Data Period: February 2013

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Katherine Rapske

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

The 6-day analytical report for VOCs and PAHs:
Authorized by AITF Laboratory

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 – February 2013

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION COLD LAKE SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						OBJECTIVES					EXCEEDENCES		
PARAMETER	1-HR	24-HR	1-HR	24-HR		READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
SO ₂ (PPB)	172	48	0	0	0.52	4	28	16	3.7	204(SSW)	1.3	10	100.0
TRS (PPB)	-	-	-	-	0.00	1	14	19	0.3	165(SSE)	0.3	14	51.G
NO ₂ (PPB)	159	-	0	-	7.30	32.8	26	7	1.6	62(ENE)	17.3	8	100.0
NO (PPB)	-	-	-	-	1.24	26.9	26	8	0.9	71(ENE)	4.6	8	100.0
NOx (PPB)	-	-	-	-	8.53	58.4	26	8	0.9	71(ENE)	21.9	8	100.0
O ₃ (PPB)	82	-	0	-	32.33	45	VAR	VAR	VAR	VAR	40.5	27, 28	99.9
THC (PPM)	-	-	-	-	2.25	3.7	25	5	1.8	54(NE)	2.9	8	96.9
PM 2.5 (UG/M ³)	-	30	-	0	7.98	43.0	23	7	1.1	238(SW)	20.1	8	93.8
TEMPERATURE (DEG C)	-	-	-	-	-8.29	5.8	16	13	8.4	249(WSW)	0.3	12	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	76.24	97.0	13	7, 8	4.1, 4.3	277(W), 270(W)	88.9	13	100.0
VECTOR WS (KPH)	-	-	-	-	5.55	18.1	2, 9	1, 18	-	332(NNW), 219(SW)	10.5	9	100.0
VECTOR WD (DEGREES)	-	-	-	-	160(SSE)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS NA: NOT AVAILABLE

Monthly Non-Continuous Data Summary

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

Passive Ambient Monitoring Network – February 2013

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
SO ₂	#27	1.3	0.76
H ₂ S	#24	0.27	0.15
NO ₂	#28	5.8	1.8
O ₃	#4	47.4	37.4

Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – COLD LAKE

PUF cartridge – January 28, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
NA	NA

Note: The sample went missing and was unable to be located. Therefore, no data is reported.

PUF cartridge – February 03, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
2.603	Naphthalene

PUF cartridge – February 09, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
1.241	Phenanthrene

PUF cartridge – February 15, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
1.211	Phenanthrene

PUF cartridge – February 21, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
0.515	Naphthalene

PUF cartridge – February 27, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
1.392	Retene

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 – COLD LAKE SOUTH

Sulphur Dioxide (PPB)

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

No operational issues were observed during the month. The inlet filter was changed before the monthly calibration was started on February 14th. The oxidizer powder was also changed on the same day. 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

On February 14th, the as found points check result showed -31.3% differences from the last calibration check on January 31st. Performed troubleshooting by renewing the scrubber material on February 14th. The analyzer was allowed time to stabilize, and a post-repair calibration was performed on February 15th. The last scrubber material renew was performed on June 4th, 2012 (according to the manufacturer requirements, the scrubber material should be renewed annually.) As we are not sure when the scrubber material failed, we have to invalidate the data back to the last good calibration, which was January 31st. 324 hours of data were discarded due to this issue. The as found points check was performed on February 21st to verify the analyzer's functionality, and the result was good. The inlet filter was changed before the as found points check on February 14th. Data was corrected using daily zero information.

Ozone (PPB)

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

No operational issues were observed during the month. The inlet filter was changed before the monthly calibration was started on February 14th. Data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – COLD LAKE SOUTH

Total Hydrocarbon (PPM)

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

During the site visit on February 11th, it was noticed that the sample tube was not connected to the manifold system properly. The tube was reconnected to the manifold system on February 12th. All tubing was thoroughly inspected on January 31st, and since the pattern for the hourly data graphs for THC and NO_x matched for most of the month, Maxxam Analytics is confident that the data between January 31st and February 11th at hour 11 was valid. Data between February 11th at hour 12 (the time our tech was working on the VOC sampler at the station) and February 12th at hour 7 were considered invalid and was discarded. Twenty hours of data were invalidated. The inlet filter was changed before the monthly calibration was started on February 14th. Data was corrected using daily zero information.

Nitrogen Dioxide (PPB)

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

No operational issues were observed during the month. The inlet filter was changed before the monthly calibration was started on February 14th. Data was corrected using daily zero information.

Particulate Matter 2.5 (UG/M3)

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

Two Teom audits were performed in February: one was on February 14th and the other one was on February 28th. Both audits passed the manufacturer requirements. 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. Forty-two hours of data were invalid as the data were below –3 ug/m³.

General Monthly Summary

AQM STATION – LICA – COLD LAKE SOUTH

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

- System make / model –RM Young, S/N: 46553

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

No operational issues were observed during the month.

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

No operational issues were observed during the month.

Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3

No operational issues were observed during the month.

Trailer Temperature (DEGC)

- System make / model - R&R 61

No operational issues were observed during the month.

Datalogger

- System make / model - ESC 8832, S/N: 263

- Software make / version - ESC v 5.51a

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

Trailer

The manifold was cleaned on February 28th.

General Monthly Summary

AQM STATION – LICA – COLD LAKE SOUTH

Passive Network

The samplers installed at site #2 had been removed and all samples were missing. All samples installed at site #11 were not changed, as the access to the samplers was blocked by snow.

Volatile Organics (VOCs)

The volatile organics were sampled from February 1st to February 28th. 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. Sample results for January 16th and 28th are as well as all February are not included in this monthly report because they are not available when the monthly report was preparing. The results will be provided and put into a separate report when they are available.

Polycyclic Aromatic Hydrocarbons (PAHs)

The PAHs scheduled to be sampled on February 1st to February 28th. 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 sample for January 28th went missing and was unable to be located. Therefore, no data is reported.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

SULPHUR DIOXIDE (SO₂) hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.																							
DAY																																																		
1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24																						
2	1	1	1	1	1	1	1	1	1	1	1	S	1	0	0	0	0	0	0	0	0	0	1	1	1	0.6	24																							
3	0	1	0	0	1	1	2	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	0	2	0.9	24																							
4	0	1	0	1	1	1	1	0	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	24																							
5	1	1	0	0	0	0	0	0	S	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.3	24																						
6	0	0	1	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24																						
7	0	0	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	1	0.7	24																							
8	0	0	1	0	0	S	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.3	24																							
9	0	0	0	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	24																							
10	1	1	1	S	1	1	1	2	2	3	3	3	2	1	1	1	1	1	1	0	0	0	1	1	3	1.3	24																							
11	1	1	S	1	0	0	0	0	0	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	1	0.5	24																							
12	0	S	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0.1	24																							
13	S	1	0	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	S	1	0.5	24																							
14	1	1	1	1	1	1	0	0	0	C	C	C	C	0	0	0	1	1	C	0	0	0	S	0	1	0.4	24																							
15	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	S	0	0	1	0.5	24																							
16	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	S	0	0	0	1	0.1	24																							
17	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	0.2	24																							
18	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	S	1	0	0	0	0	1	0.3	24																							
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	S	2	2	1	1	1	1	2	0.5	24																							
20	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	S	1	1	1	1	2	2	1	1	2	1.2	24																							
21	2	2	1	2	1	1	1	1	2	2	1	1	1	1	1	S	1	0	0	0	0	0	0	0	2	0.9	24																							
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	1	1	1	0	0	0	0	0	0	0	1	0.1	24																							
24	0	0	0	0	0	0	0	0	0	0	0	1	S	1	1	1	1	1	1	1	2	1	1	0	2	0.5	24																							
25	0	0	0	0	0	0	0	0	0	1	1	S	1	0	0	0	0	0	0	0	0	0	1	1	1	0.2	24																							
26	1	1	1	1	0	0	0	0	1	1	S	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	24																							
27	1	1	0	0	1	1	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24																							
28	0	0	0	0	0	0	0	1	S	1	1	1	1	1	1	2	4	3	2	2	2	2	1	1	1	4	1.1	24																						
HOURLY MAX	2	2	1	2	1	1	2	2	2	3	3	3	2	2	2	2	4	3	2	2	2	2	1	1																										
HOURLY AVG	0.4	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.4	0.5	0.4	0.4	0.4																										

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

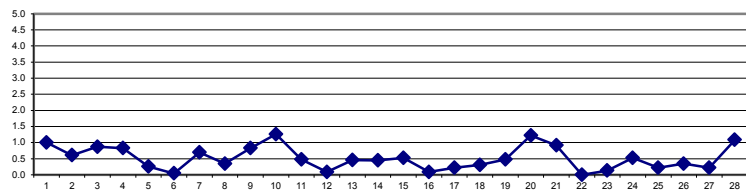
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR 172 PPB 24-HR 48 PPB

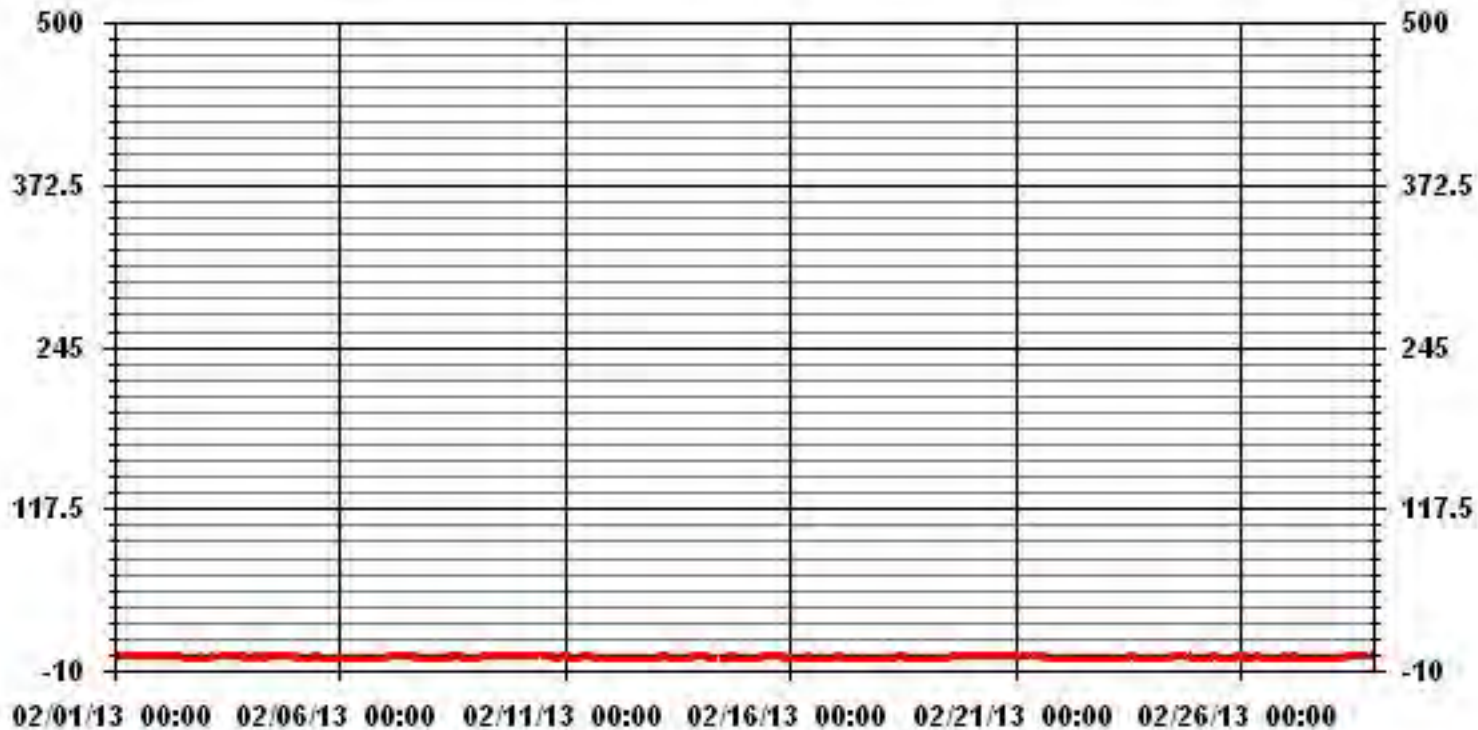
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	298
MAXIMUM 1-HR AVERAGE:	4 PPB @ HOUR(S) 16 ON DAY(S) 28
MAXIMUM 24-HR AVERAGE:	1.3 PPB ON DAY(S) 10
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	5 HRS
STANDARD DEVIATION:	0.61
OPERATIONAL TIME:	672 HRS
AMD OPERATION UPTIME:	100.0 %
MONTHLY AVERAGE:	0.52 PPB

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00				
DAY																												
1	2	1	1	2	2	1	2	1	2	2	2	2	S	1	1	1	1	1	1	1	1	1	1	1	1	2	1.3	24
2	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
3	1	1	1	1	1	2	2	2	2	2	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.2	24
4	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	2	1.1	24
5	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
6	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
7	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
8	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
9	1	1	1	1	S	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	2	2	2	1.3	24
10	1	1	1	S	2	1	2	2	3	3	4	4	2	2	1	1	1	1	1	1	1	1	1	1	1	4	1.7	24
11	1	1	S	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	1	S	1	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
13	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	S	2	1.0	24
14	1	2	2	1	1	1	1	1	C	C	C	C	C	1	1	1	1	C	C	1	1	1	1	S	1	2	1.1	24
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	S	1	1	1	2	1.0	24
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1.0	24
17	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	2	1.0	24
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1.0	24
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	S	2	2	2	2	2	2	1	2	1.3	24
20	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	S	2	2	2	2	2	2	2	2	2	1.6	24
21	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	S	1	1	1	1	1	1	1	1	1	2	1.6	24
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1.0	24
23	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
24	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	2	2	2	1	1	2	1.1	24	
25	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
26	2	2	2	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.2	24
27	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
28	1	1	1	1	1	1	1	1	S	1	1	Y	1	2	2	4	4	3	3	2	2	2	2	1	4	1.7	23	
HOURLY MAX	2	2	2	2	2	2	2	2	3	3	4	4	2	2	2	4	4	3	3	2	2	2	2	2				
HOURLY AVG	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.1	1.1	1.1	1.2	1.1	1.2	1.2	1.2	1.2	1.1	1.2	1.1				

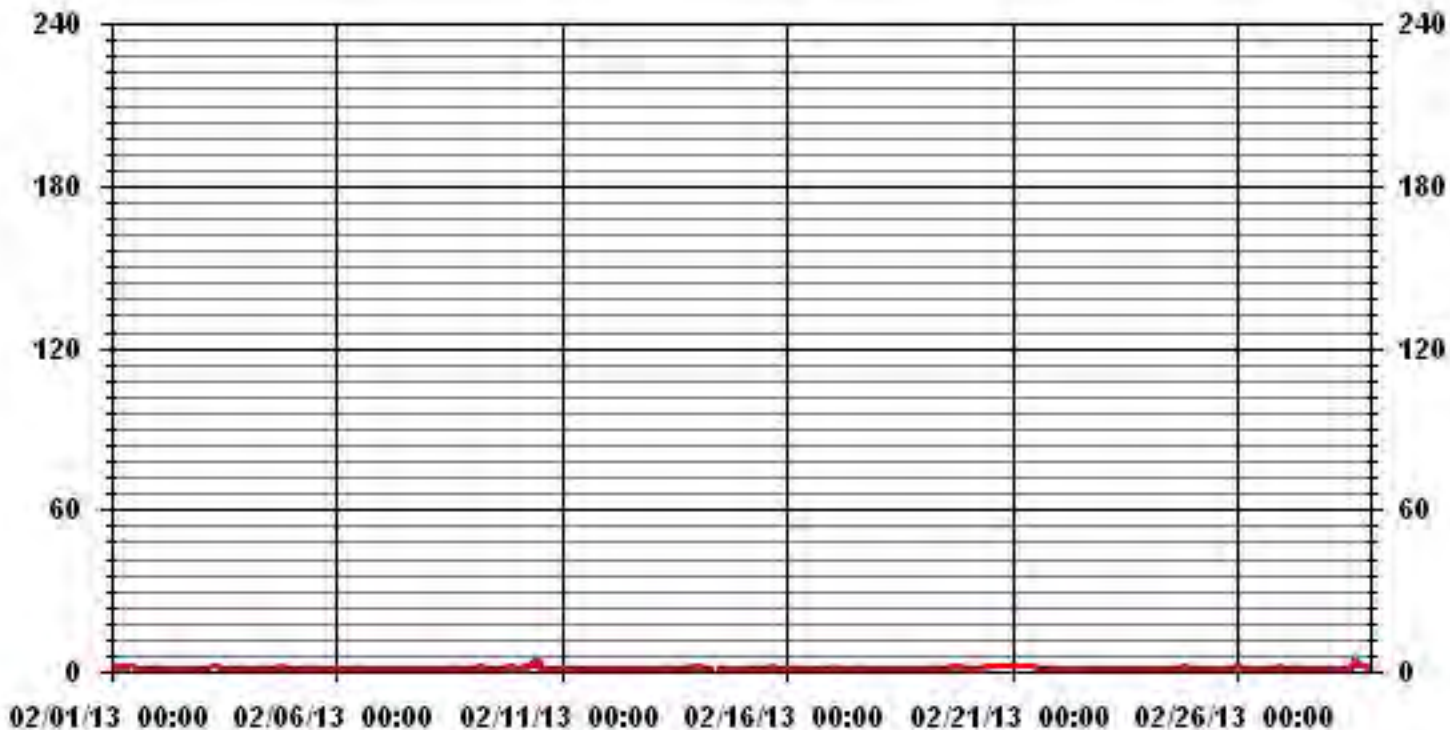
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	635					
MAXIMUM INSTANTANEOUS VALUE:	4	PPB	@ HOUR(S)	VAR	ON DAY(S)	10, 28
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	0.43					

01 Hour Averages



— LICA SO2MAX PPB

LICA
 SO2_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	2.97	3.13	4.38	2.19	9.24	6.26	18.65	5.17	3.44	1.72	3.91	12.69	10.81	5.32	4.85	5.17	100.00
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.97	3.13	4.38	2.19	9.24	6.26	18.65	5.17	3.44	1.72	3.91	12.69	10.81	5.32	4.85	5.17	

Calm : .00 %

Total # Operational Hours : 638

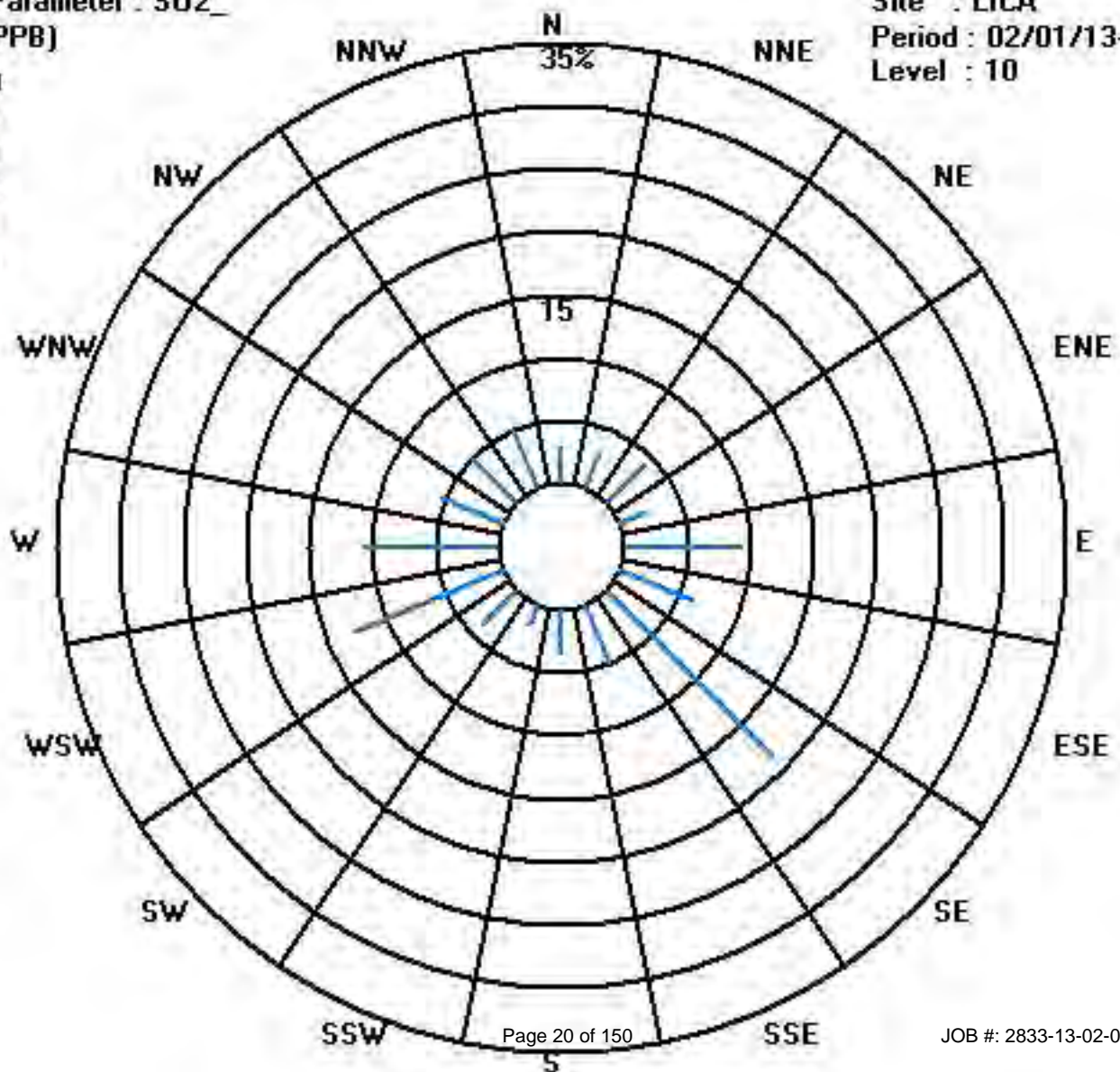
Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	19	20	28	14	59	40	119	33	22	11	25	81	69	34	31	33	638
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	19	20	28	14	59	40	119	33	22	11	25	81	69	34	31	33	

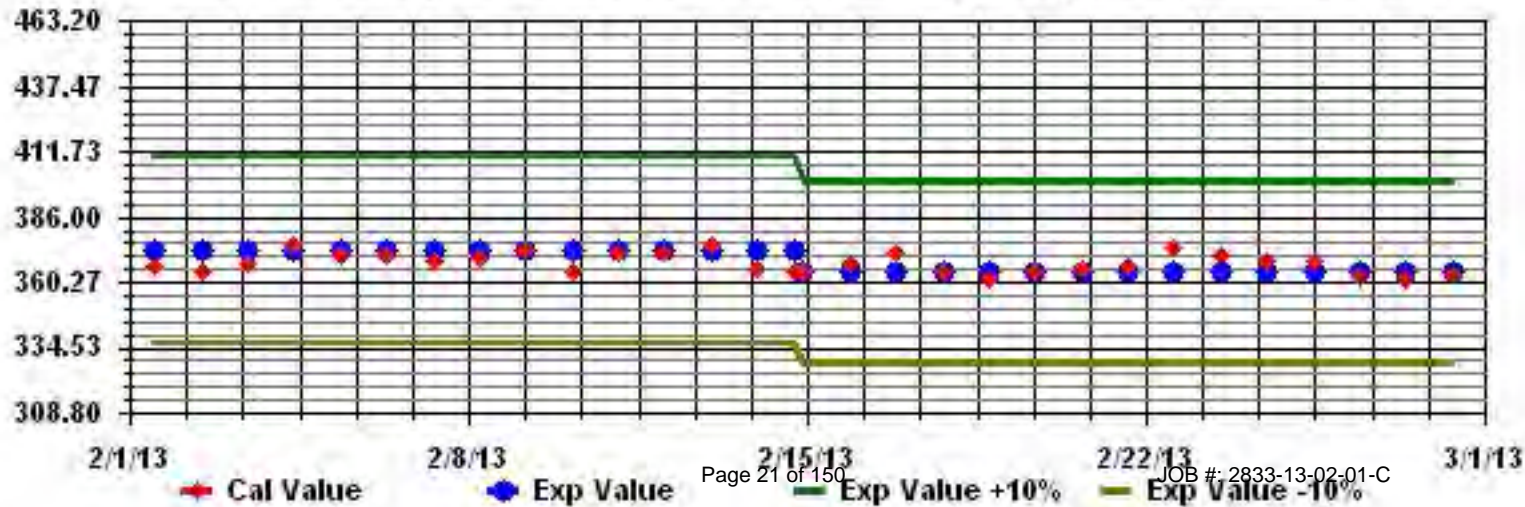
Calm : .00 %

Total # Operational Hours : 638

Class Limits (PPB)



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



Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX	24-HOUR AVG.	RDGS.
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00			
DAY																												
1		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
2		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
3		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
4		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
5		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
6		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
7		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
8		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
9		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
10		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
11		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
12		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
13		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
14		X	X	X	X	X	X	X	X	X	X	X	X	C	C	C	Y	Y	Y	Y	1	0	0	S	0	1	0.3	8
15		0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	S	0	0	0	0.0	24
16		0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0	24
17		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	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	S	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	S	0	0	0	0	0	0	0	0	0	0.0	24
21		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	S	S	0	0	0	0	0	0	0.0	24
22		0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	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	S	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	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26		0	0	0	0	0	0	S	S	0	0	S	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	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28		0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
HOURLY MAX		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	0.1	0.0	0.0	0.0	0.0			

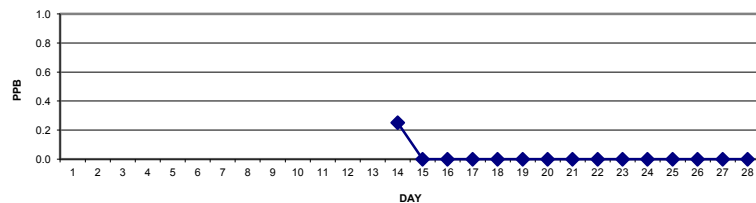
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

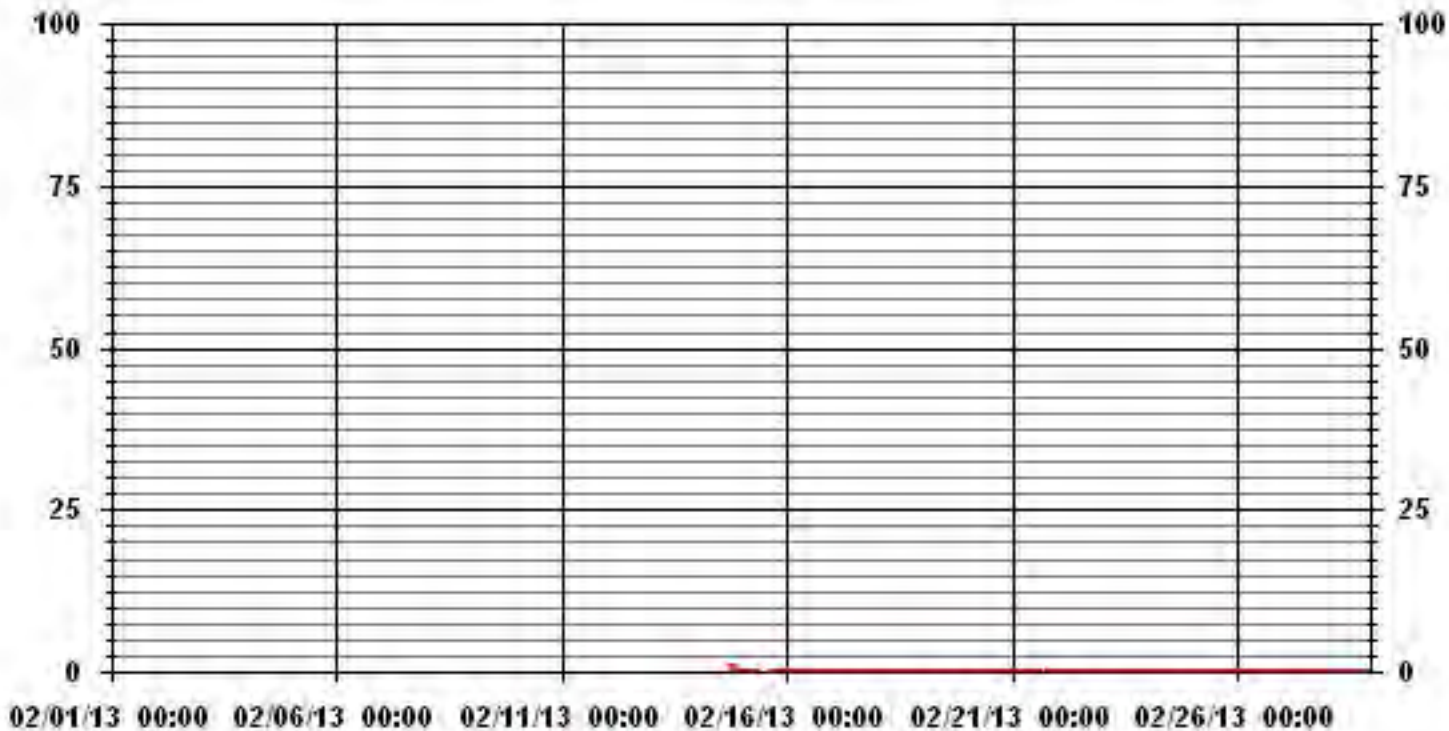
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	1
MAXIMUM 1-HR AVERAGE:	1 PPB @ HOUR(S) 19 ON DAY(S) 14
MAXIMUM 24-HR AVERAGE:	0.3 PPB ON DAY(S) 14
	VAR-VARIOUS
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	11 HRS
STANDARD DEVIATION:	0.06
OPERATIONAL TIME:	344 HRS
AMD OPERATION UPTIME:	51.2 %
MONTHLY AVERAGE:	0.00 PPB

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

TOTAL REDUCED SULPHUR MAX instantaneous maximum in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	RDGS.	
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.		
DAY																													
1		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
2		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
3		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
4		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
5		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
6		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
7		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
8		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
9		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
10		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
11		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
12		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
13		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0
14		X	X	X	X	X	X	X	X	X	X	X	X	C	C	C	Y	Y	Y	Y	1	1	1	S	1	1	1	1.0	12
15		1	1	1	1	1	1	1	1	C	C	C	C	C	C	C	1	1	1	1	1	1	S	1	1	1	1	1.0	24
16		1	1	1	1	1	1	1	1	1	S	S	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1.0	24
17		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1.0	24
18		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1.0	24
19		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1.0	24
20		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1.0	24
21		1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	S	S	S	1	1	1	1	1	1	1	1.0	24
22		1	1	1	1	1	1	1	1	1	1	1	0	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
23		1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	0	0	1	0.9	24	
24		1	0	1	1	1	1	1	1	1	1	1	1	S	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	1	S	1	1	1	0	1	1	1	1	1	0	1	0	1	0.9	24	
26		1	1	1	1	1	1	S	S	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
27		1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
28		1	1	1	1	1	1	1	1	S	1	1	Y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	23
HOURLY MAX		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
HOURLY AVG		1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9				

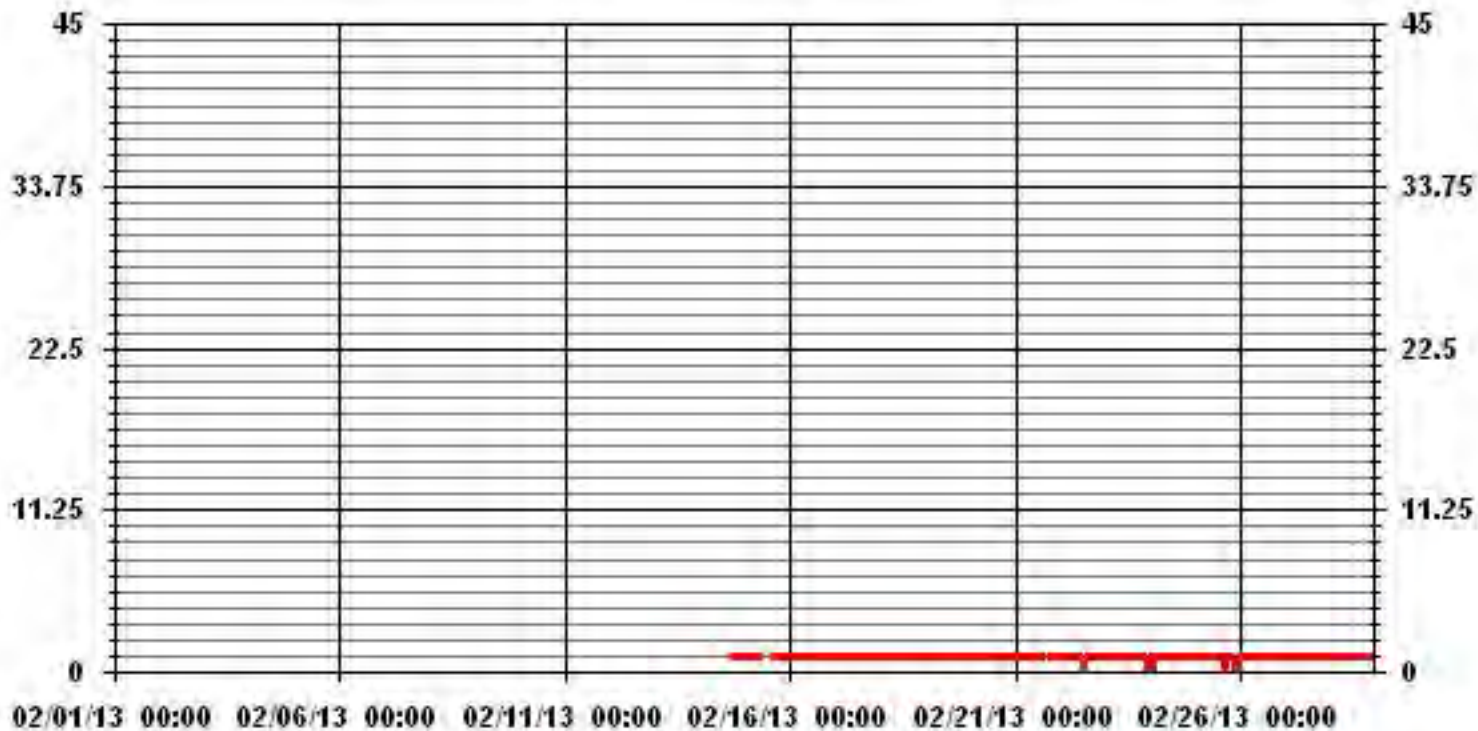
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	303					
MAXIMUM INSTANTANEOUS VALUE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
						VAR - VARIOUS
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	347	HRS	
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	0.15					

01 Hour Averages



LICA
 TRS_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 3	3.19	3.19	7.02	2.23	6.38	7.98	30.67	7.98	3.19	1.59	3.19	9.26	6.07	3.83	2.87	1.27	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	3.19	3.19	7.02	2.23	6.38	7.98	30.67	7.98	3.19	1.59	3.19	9.26	6.07	3.83	2.87	1.27	

Calm : .00 %

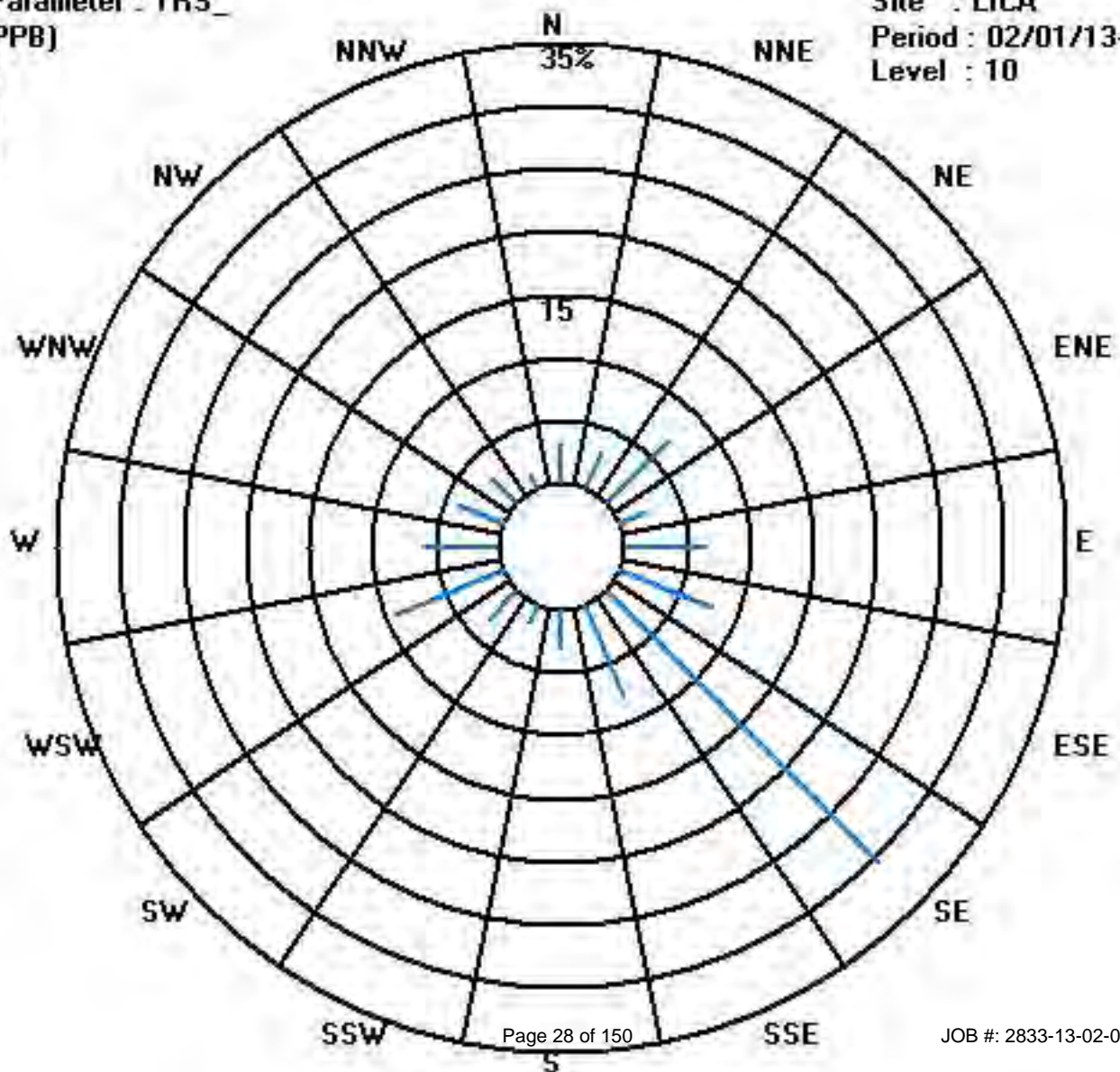
Total # Operational Hours : 313

Distribution By Samples

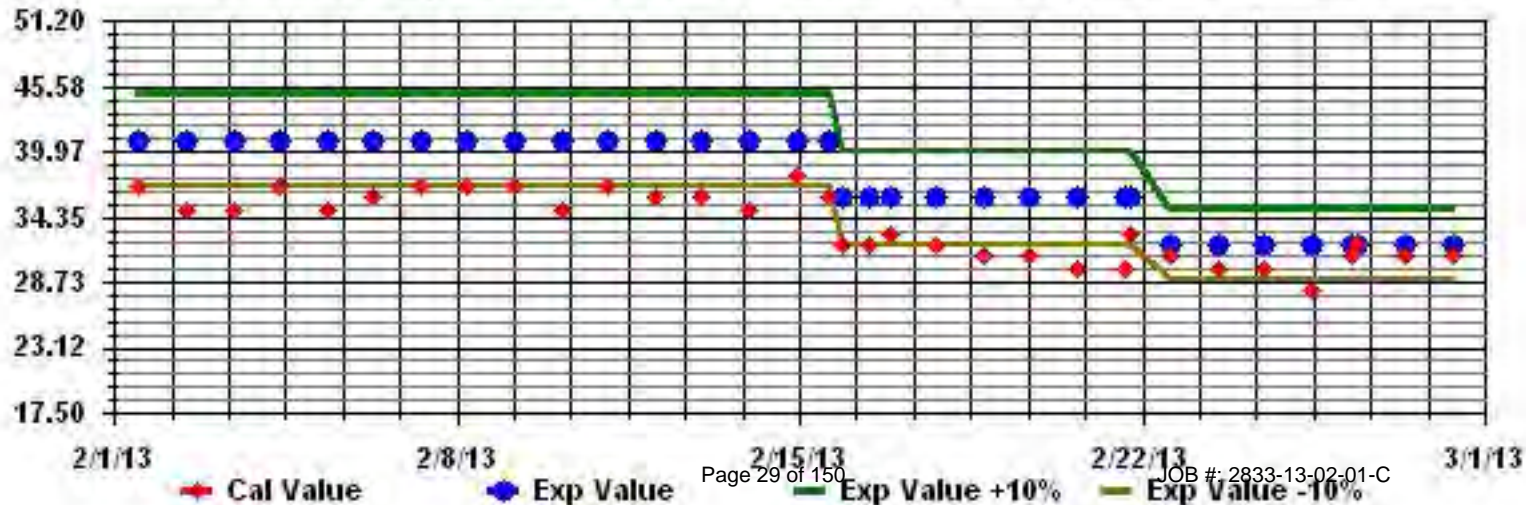
Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 3	10	10	22	7	20	25	96	25	10	5	10	29	19	12	9	4	313
< 10																	
< 50																	
>= 50																	
Totals	10	10	22	7	20	25	96	25	10	5	10	29	19	12	9	4	

Calm : .00 %

Total # Operational Hours : 313



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



Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR			
DAY	HOURLY MAX	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.		
1		2.3	2.3	2.5	2.6	2.4	2.3	2.3	2.3	2.3	2.2	2	2	S	2.2	2.2	2.4	2.4	2.4	2.4	2.6	3.2	3.3	3.3	3.3	3.3	3.3	2.5	24	
2		3.1	2.3	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2	S	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.3	2.3	2.3	2.1	2.1	2.1	3.1	2.2	24	
3		2.1	2.1	2.1	2	2	2	2	2	2	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.0	24
4		2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	S	2.1	2.2	2.3	2.4	2.5	2.1	2	2	2.1	2.1	2.1	2.1	2	2.1	2.5	2.1	2.1	24	
5		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	S	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2.1	2	2	2	2	2	2	2.1	2.1	2.1	24
6		2	2	2	2	2	2	2	S	2	2	2	2	2	2.1	2.1	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.0	24	
7		2.3	2.3	2.4	2.4	2.4	2.4	S	2.5	2.5	2.5	2.6	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.8	2.9	2.9	2.8	2.8	2.8	2.8	2.9	2.6	24	
8		2.9	3	3	3	3	S	3.2	3.3	3.2	3.2	3.4	3.4	3.2	3	2.9	2.6	2.6	2.7	2.7	2.6	2.5	2.5	2.6	3.4	2.9	2.4	24		
9		2.6	2.7	2.6	2.6	S	2.3	2.1	2	1.9	2	2	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	2.7	2.0	24	
10		1.9	1.9	1.9	S	2	2	2	2	2	2	2.1	2	2.1	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.2	2.3	2.2	2.2	2.4	2.1	24		
11		2.2	2.2	S	2.2	2.2	2.2	2.3	2.4	2.5	2.6	2.5	2.3	O	O	O	O	O	O	O	O	O	O	O	O	O	2.6	2.3	12	
12		O	O	O	O	O	O	O	O	O	O	2.2	2.2	2.1	2.1	2	2	2	2	1.9	1.9	2	2	2	2	2	2.2	2.0	16	
13		S	2.2	2.1	2	2	2.1	2.2	2.3	2.2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	2	S	2.3	2.0	24		
14		2	2	2	2.1	2.4	2.3	2	2	2.2	C	C	C	C	C	2.2	2.2	2.3	2.3	C	2.3	2.3	2.5	S	3	3.0	2.2	24		
15		3.4	3.3	3.1	3.2	3.1	3.3	3.1	3.2	3	3.1	3.3	3.2	3	2.4	2.3	2.2	2.1	2.1	2.1	2.2	2.2	S	2.3	2.3	3.4	2.8	24		
16		2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.5	2.6	2.7	2.4	2.1	2.1	2.1	2	2.1	2.1	2	2.1	2.2	S	2.2	2.2	2.2	2.7	2.2	24		
17		2.1	2.1	2.1	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	S	2.1	2.1	2.1	2.1	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	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	S	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	24	
19		2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.0	24		
20		2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	S	2.3	2.4	2.4	2.4	2.5	2.6	2.6	2.6	2.3	24		
21		2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2.2	2.2	S	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.6	2.4	24	
22		2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	S	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.3	2.2	24	
23		2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.5	2.6	S	2.9	2.5	2.2	2	2.1	2.3	2.3	2.3	2.2	2.2	2.9	2.3	24		
24		2.2	2.3	2.3	2.4	2.3	2.3	2.4	2.3	2.8	2.6	2.4	2.6	S	2.2	2.2	2.4	2.6	2.7	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.8	2.4	24	
25		2.5	2.6	2.7	2.8	3.6	3.7	3.4	3.1	3.2	3.2	3.1	S	1.8	1.7	1.6	1.6	1.6	1.7	1.7	1.8	1.7	1.7	1.7	1.6	3.7	2.4	24		
26		1.7	1.7	1.7	1.7	1.7	1.7	1.9	2.1	2	1.9	S	2.1	2	2	2.2	2.1	2	2.1	2.2	2.3	2.4	2.5	2.4	2.4	2.5	2.0	24		
27		2.4	2.4	2.6	2.7	2.8	2.7	2.7	2.8	2.8	S	2.4	2.3	2	2	2	2	2	2	2	2.1	2	2	2	2	2.8	2.3	24		
28		2.1	2.1	2.1	2	2.1	2.1	2.1	2.1	S	2.4	2.4	Y	2.4	2.4	2.5	2.6	2.5	2.5	2.7	2.9	2.8	2.8	2.7	2.7	2.9	2.4	23		
HOURLY MAX		3.4	3.3	3.1	3.2	3.6	3.7	3.4	3.3	3.2	3.2	3.4	3.4	3.2	3.0	2.9	2.6	2.6	2.7	2.8	2.9	3.2	3.3	3.3	3.3					
HOURLY AVG		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.3					

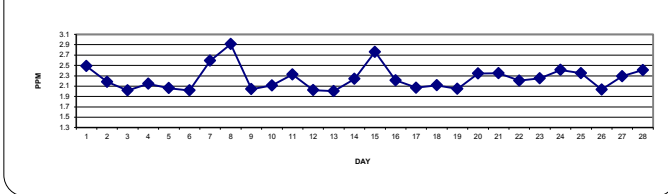
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

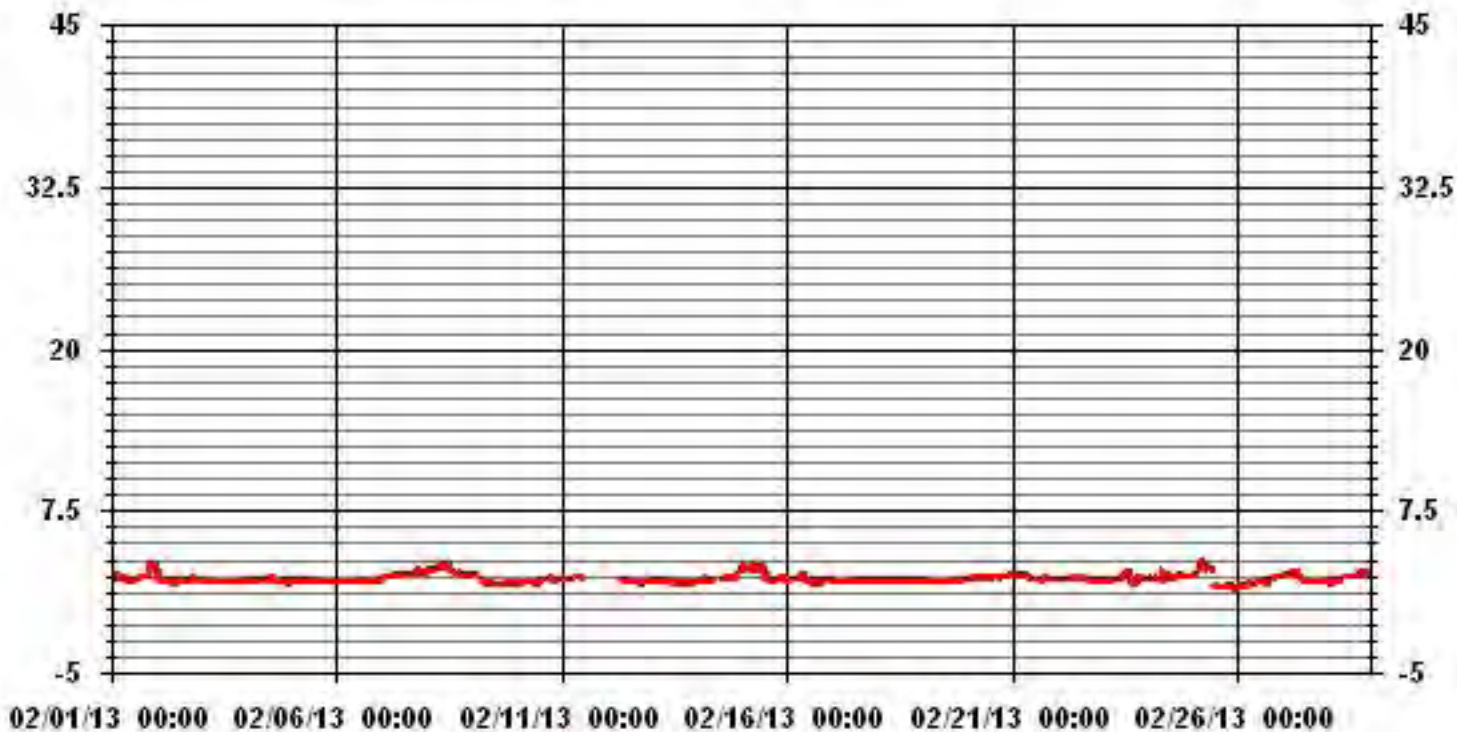
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	617				
MAXIMUM 1-HR AVERAGE:	3.7	PPM @ HOUR(S)	5 ON DAY(S)		
MAXIMUM 24-HR AVERAGE:	2.9	PPM	8 ON DAY(S)		
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	651	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	96.9	%
STANDARD DEVIATION:	0.34		MONTHLY AVERAGE:	2.25	PPM

24 AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST																										DAILY	24-HOUR		
HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	MAX.	AVG.	RDGS.	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00					
DAY																													
1	2.4	2.4	2.7	2.7	2.5	2.4	2.4	2.3	2.3	2.3	2.1	2.1	S	2.3	2.3	2.4	2.5	2.4	2.4	3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	2.6	24
2	3.2	2.9	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	S	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.2	2.2	2.2	2.2	3.2	2.3	24
3	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	S	2	2	2	2	2.1	2.1	2.1	2.1	2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	24
4	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	S	2.2	2.3	2.3	2.5	2.5	2.5	2.1	2	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.5	2.2	24	
5	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	S	2.2	2.1	2.2	2.2	2.1	2.1	2	2.1	2.1	2.1	2.1	2	2	2	2	2	2.2	2.1	24	
6	2	2	2	2	2	2	2	S	2	2	2	2	2	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.1	24	
7	2.4	2.4	2.4	2.4	2.5	2.5	S	2.6	2.6	2.6	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.7	3.2	3.2	3	2.9	2.8	2.9	3.2	2.7	24		
8	3	3	3.1	3.1	3	S	3.5	3.5	3.3	3.3	3.5	3.5	3.3	3.2	3	2.8	2.7	2.7	2.7	2.6	2.5	2.5	2.7	3.5	3.0	24			
9	2.7	2.7	2.7	2.6	S	2.6	2.2	2.1	2	2.1	2.1	2	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.7	2.1	24		
10	1.9	1.9	1.9	S	2	2	2	2	2	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.3	2.5	2.5	2.3	2.4	2.3	2.3	2.5	2.2	24		
11	2.3	2.2	S	2.2	2.2	2.2	2.4	2.4	2.6	2.7	2.7	2.4	O	O	O	O	O	O	O	O	O	O	O	O	O	2.7	2.4	12	
12	O	O	O	O	O	O	O	O	O	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2.2	2.3	2.1	16	
13	S	2.3	2.2	2.2	2.1	2.2	2.3	2.4	2.3	2.2	2.1	1.9	1.9	1.9	2	2.1	2	2	2	2	2	2	2	2	S	2.4	2.1	24	
14	2	2.1	2.1	2.2	2.7	2.6	2	2.2	C	C	C	C	C	C	2.3	2.5	2.4	C	C	2.5	2.5	3.1	S	3.6	3.6	2.5	24		
15	3.7	3.5	3.3	3.3	3.4	3.9	3.3	3.6	3.2	3.4	3.6	3.3	3.2	2.8	2.4	2.3	2.2	2.2	2.3	2.3	S	2.3	S	2.3	3.9	3.0	24		
16	2.2	2.2	2.4	2.4	2.3	2.4	2.6	2.6	3.6	5	4.4	2.4	2.1	2.3	2.1	2.1	2.3	2.1	2.1	2.2	S	2.3	2.3	2.3	5.0	2.6	24		
17	2.2	2.1	2.2	2	2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	S	2.3	2.2	2.1	2.2	2.3	2.1	24		
18	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.1	2.2	3.9	3	2.4	2.3	3.2	2.3	2.9	S	2.1	2.2	2.2	2.1	2.1	3.9	2.4	24		
19	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	2.1	2.1	S	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	24		
20	2.2	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.8	2.6	2.5	S	2.4	2.6	2.6	2.5	2.5	2.7	2.7	2.8	2.5	24		
21	2.7	2.6	2.6	2.5	2.6	2.7	2.7	2.7	2.6	2.5	2.4	2.3	2.4	2.3	2.3	S	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.7	2.5	24		
22	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.4	2.5	S	2.5	2.3	2.3	2.2	2.2	3.1	2.1	2.2	2.1	3.1	2.3	24		
23	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.3	2.6	2.7	S	3.1	2.9	2.5	2	2.3	2.3	2.3	2.3	2.3	2.3	3.1	2.4	24		
24	2.3	2.3	2.4	2.5	2.4	2.4	2.4	2.4	3.4	2.9	2.6	2.7	S	2.4	2.3	2.7	2.9	2.9	2.7	2.5	2.4	2.5	2.5	2.5	3.4	2.6	24		
25	3	2.9	2.9	2.9	4.8	4.4	4	3.3	3.3	3.2	3.4	S	2.1	2	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.8	1.7	4.8	2.6	24		
26	1.8	1.7	1.8	1.8	1.8	2	2.3	3.9	2.3	2.3	S	2.2	2.3	2.1	2.2	2.2	2.1	2.2	2.3	2.8	2.9	2.7	2.7	2.7	3.9	2.3	24		
27	2.4	2.5	2.7	2.8	2.9	2.8	3	2.9	2.9	S	2.5	2.4	2.3	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	3.0	2.4	24		
28	2.1	2.2	2.3	2.1	2.1	2.2	2.2	2.3	S	2.5	2.5	Y	2.5	2.5	2.6	2.7	2.6	2.9	2.9	3	2.9	2.9	2.8	2.8	3.0	2.5	23		
HOURLY MAX	3.7	3.5	3.3	3.3	4.8	4.4	4.0	3.9	3.6	5.0	4.4	3.9	3.3	3.2	3.1	3.2	2.9	2.9	3.2	3.2	3.3	3.4	3.4	3.6					
HOURLY AVG	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.5	2.4	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.4	2.4	2.3	2.4					

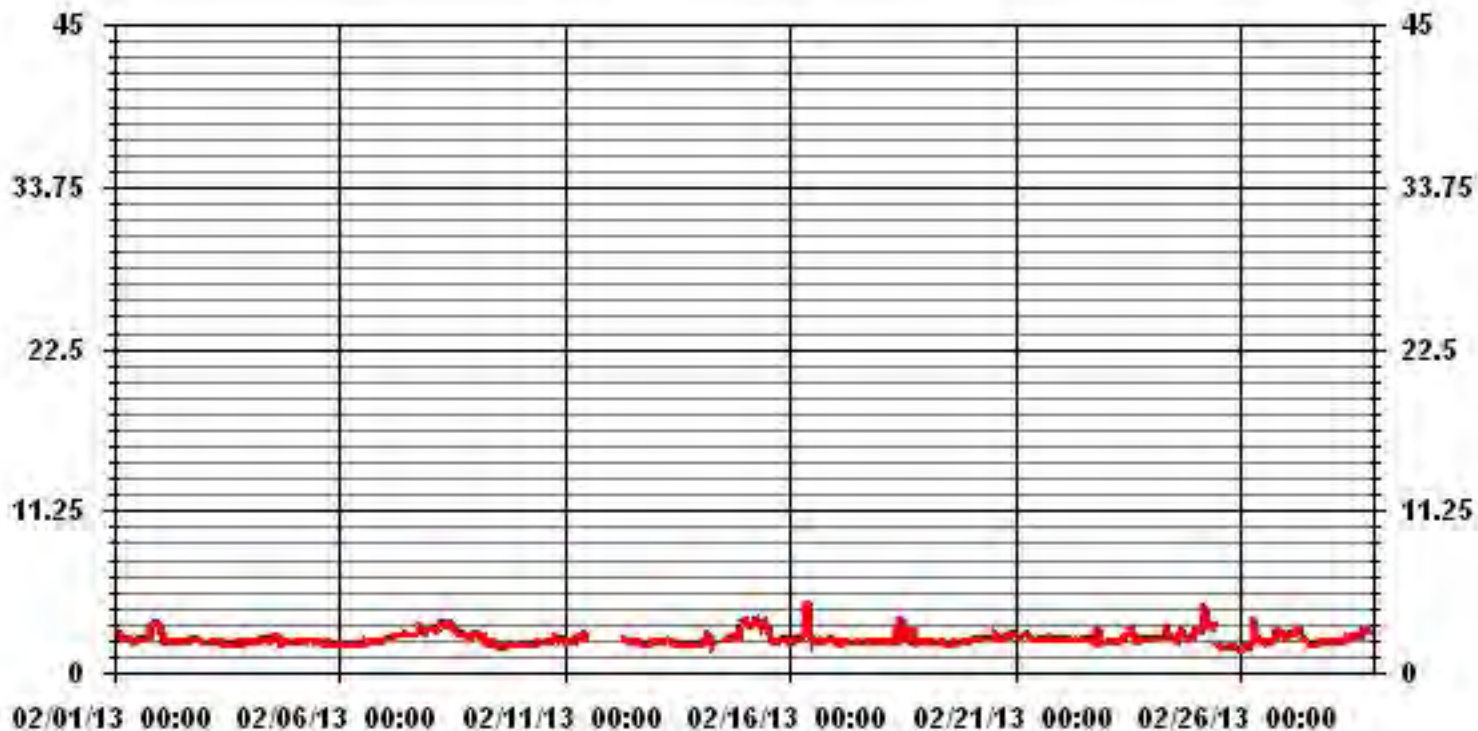
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	615					
MAXIMUM INSTANTANEOUS VALUE:	5.0	PPM	@ HOUR(S)	9	ON DAY(S)	16
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	651	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	0.43					

01 Hour Averages



— LICA THCMAX PPM

LICA
 THC / WD Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WD
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 3.0	2.26	3.07	4.37	2.26	9.56	6.48	18.80	5.18	3.40	1.78	3.40	10.85	8.75	4.37	4.21	5.02	93.84
< 10.0	.81	.16	.16	.00	.00	.00	.32	.16	.16	.00	.64	.97	.48	1.13	.81	.32	6.15
< 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.07	3.24	4.53	2.26	9.56	6.48	19.12	5.34	3.56	1.78	4.05	11.83	9.23	5.51	5.02	5.34	

Calm : .00 %

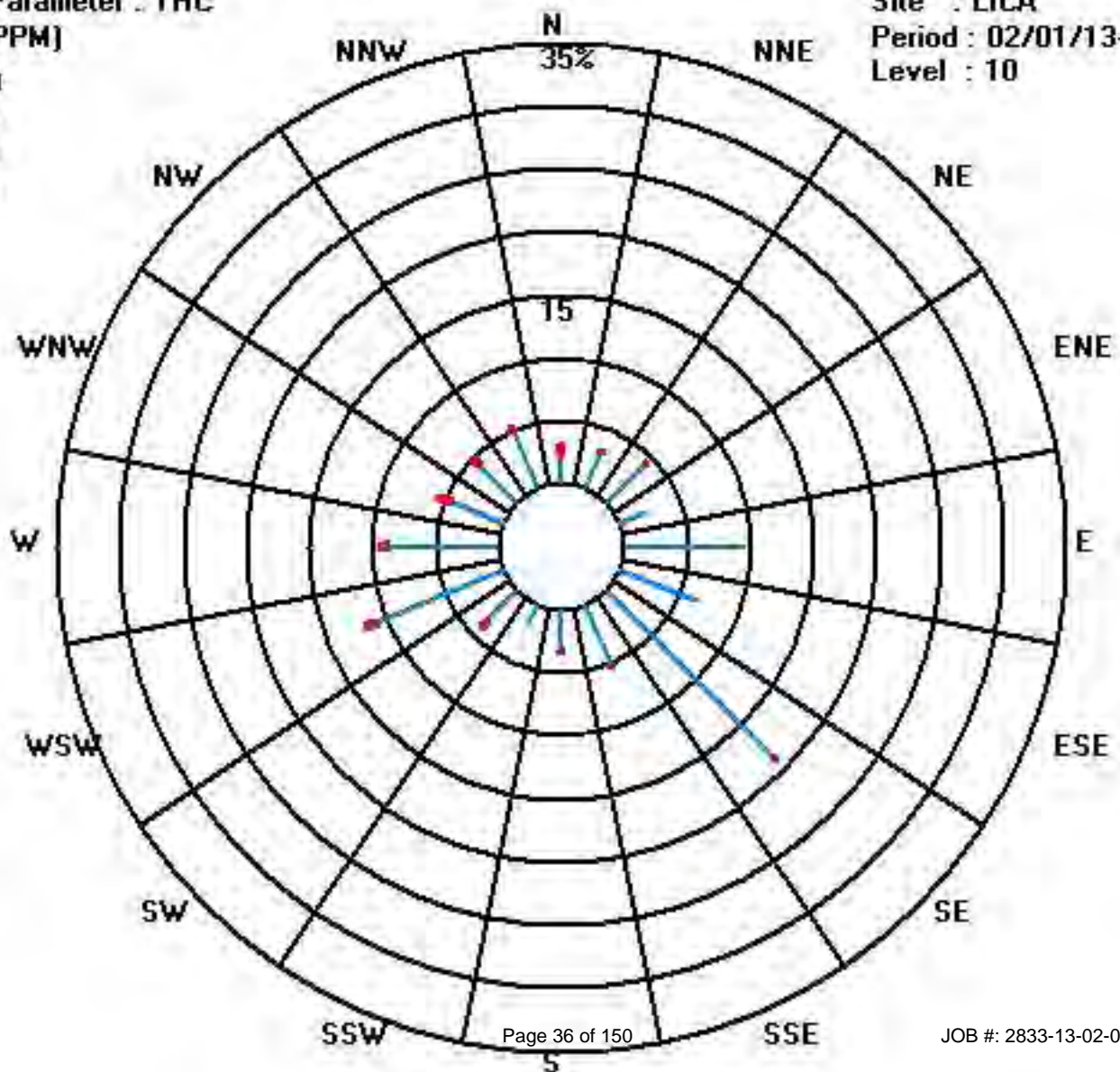
Total # Operational Hours : 617

Distribution By Samples

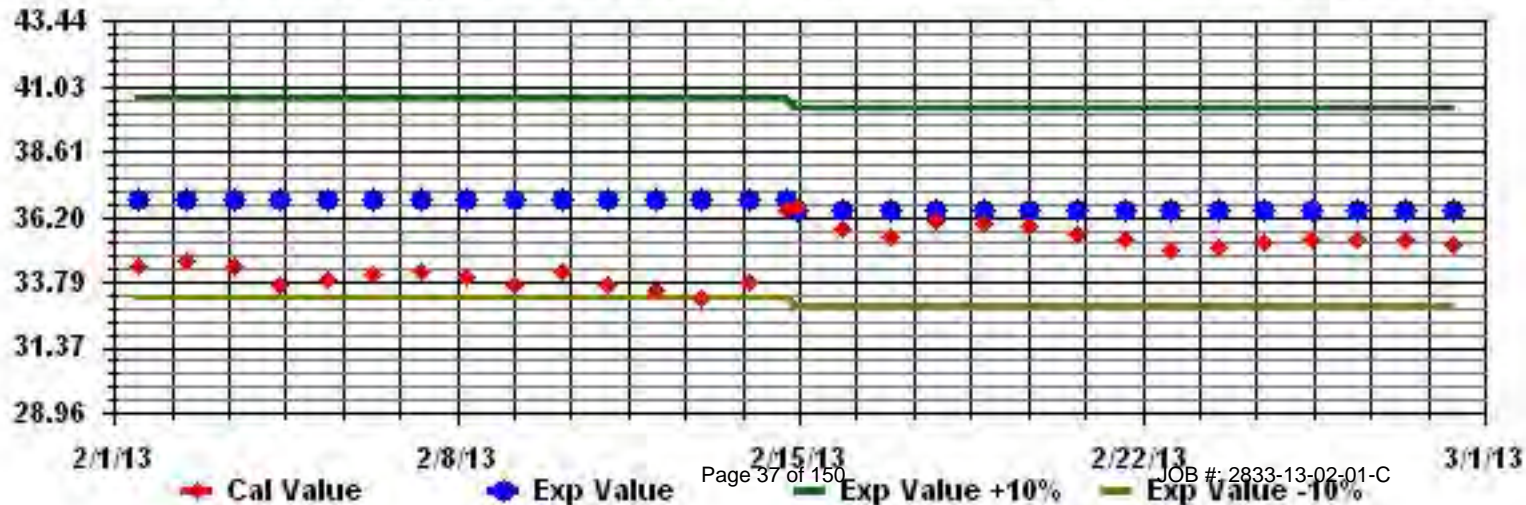
Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 3.0	14	19	27	14	59	40	116	32	21	11	21	67	54	27	26	31	579
< 10.0	5	1	1				2	1	1		4	6	3	7	5	2	38
< 50.0																	
>= 50.0																	
Totals	19	20	28	14	59	40	118	33	22	11	25	73	57	34	31	33	

Calm : .00 %

Total # Operational Hours : 617



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



Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

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

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	8	5	7	13	13	8	13	13	13	12	8	10	7	13	10	3	13	7	9	X	0	0	11	6	13.0	8.8	23
2	5	7	5	0	0	1	0	X	0	X	5	3	4	X	1	6	9	X	X	X	18	5	0	X	18.0	4.1	17
3	0	0	0	5	2	7	1	8	1	0	0	X	X	4	7	0	6	12	2	5	4	5	0	2	12.0	3.2	22
4	1	5	2	0	6	4	8	5	7	5	3	11	11	7	13	3	0	4	0	2	12	10	4	4	13.0	5.3	24
5	1	7	8	X	0	X	0	X	X	0	4	14	9	0	0	0	0	1	0	0	1	5	1	0	14.0	2.6	20
6	1	0	0	3	0	0	0	X	1	0	X	1	4	1	X	6	2	6	9	5	13	4	12	10	13.0	3.7	21
7	5	3	4	3	14	6	3	10	7	11	10	6	15	4	13	9	11	11	14	16	12	17	14	10	17.0	9.5	24
8	22	13	7	16	23	15	18	19	14	12	19	25	29	35	24	32	21	14	20	17	21	26	24	17	35.0	20.1	24
9	19	20	18	18	10	11	17	8	1	13	5	9	1	5	0	0	0	X	X	0	12	3	7	0	20.0	8.0	22
10	X	0	X	0	3	1	1	0	7	0	1	3	3	5	2	3	1	2	0	0	9	1	X	X	9.0	2.1	20
11	1	5	3	4	2	9	10	11	0	5	3	8	0	1	10	4	4	1	X	0	X	X	0	0	11.0	3.9	21
12	0	1	0	0	X	X	0	3	0	2	1	3	8	6	3	3	0	0	0	3	0	0	3	1	8.0	1.7	22
13	0	0	X	2	11	8	3	10	3	0	0	0	X	0	0	X	0	0	0	1	0	4	5	1	11.0	2.3	21
14	1	3	5	6	4	1	0	5	2	0	0	2	1	C	C	C	C	0	4	21	4	7	3	3	21.0	3.6	24
15	1	0	11	11	8	2	8	10	3	14	12	11	18	23	10	14	26	33	29	28	25	27	14	12	33.0	14.6	24
16	15	15	24	5	5	27	23	15	22	18	23	8	0	5	0	1	3	1	4	4	4	7	9	15	27.0	10.5	24
17	11	12	10	9	17	18	14	25	6	7	5	0	10	8	22	X	3	19	X	X	0	7	9	4	25.0	10.3	21
18	3	10	6	13	2	8	2	10	6	9	1	X	6	9	1	0	15	10	2	5	2	4	10	2	15.0	5.9	23
19	3	4	3	3	7	5	3	6	3	6	5	9	8	6	11	12	13	4	11	14	7	12	17	9	17.0	7.5	24
20	9	7	13	5	13	17	4	7	8	14	6	10	6	0	20	4	15	11	14	2	0	2	17	16	20.0	9.2	24
21	9	21	5	6	13	23	2	10	12	21	13	3	25	7	15	20	16	14	6	7	12	1	23	1	25.0	11.9	24
22	29	10	11	15	4	3	15	5	11	6	15	21	20	17	17	X	30	36	26	10	1	14	X	20	36.0	15.3	22
23	14	14	22	24	21	22	15	43	23	11	14	20	14	4	14	22	9	3	X	11	8	15	16	9	43.0	16.0	23
24	1	4	6	6	7	4	6	15	13	2	3	7	1	8	13	15	9	5	2	10	15	12	16	0	16.0	7.5	24
25	6	14	15	6	5	5	5	10	23	25	30	16	11	3	4	0	6	9	0	12	1	0	X	14	30.0	9.6	23
26	2	5	7	6	0	1	7	9	6	4	11	6	3	3	4	4	X	3	7	5	12	0	0	0	12.0	4.6	23
27	7	0	0	8	2	7	8	X	11	22	5	7	8	12	7	12	9	6	2	6	2	13	7	3	22.0	7.1	23
28	6	6	11	14	11	7	16	18	18	8	9	C	C	X	6	3	6	10	6	12	11	9	7	8	18.0	9.6	23
HOURLY MAX	29	21	24	24	23	27	23	43	23	25	30	25	29	35	24	32	30	36	29	28	25	27	24	20			
HOURLY AVG	6.7	6.8	7.8	7.4	7.5	8.5	7.2	11.5	8.2	8.4	7.8	8.5	8.9	7.4	8.7	7.3	8.7	8.5	7.3	7.8	7.6	7.8	9.2	6.4			

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

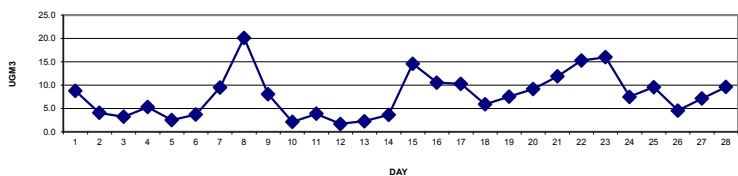
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR - ug/m³ 24-HR 30 ug/m³

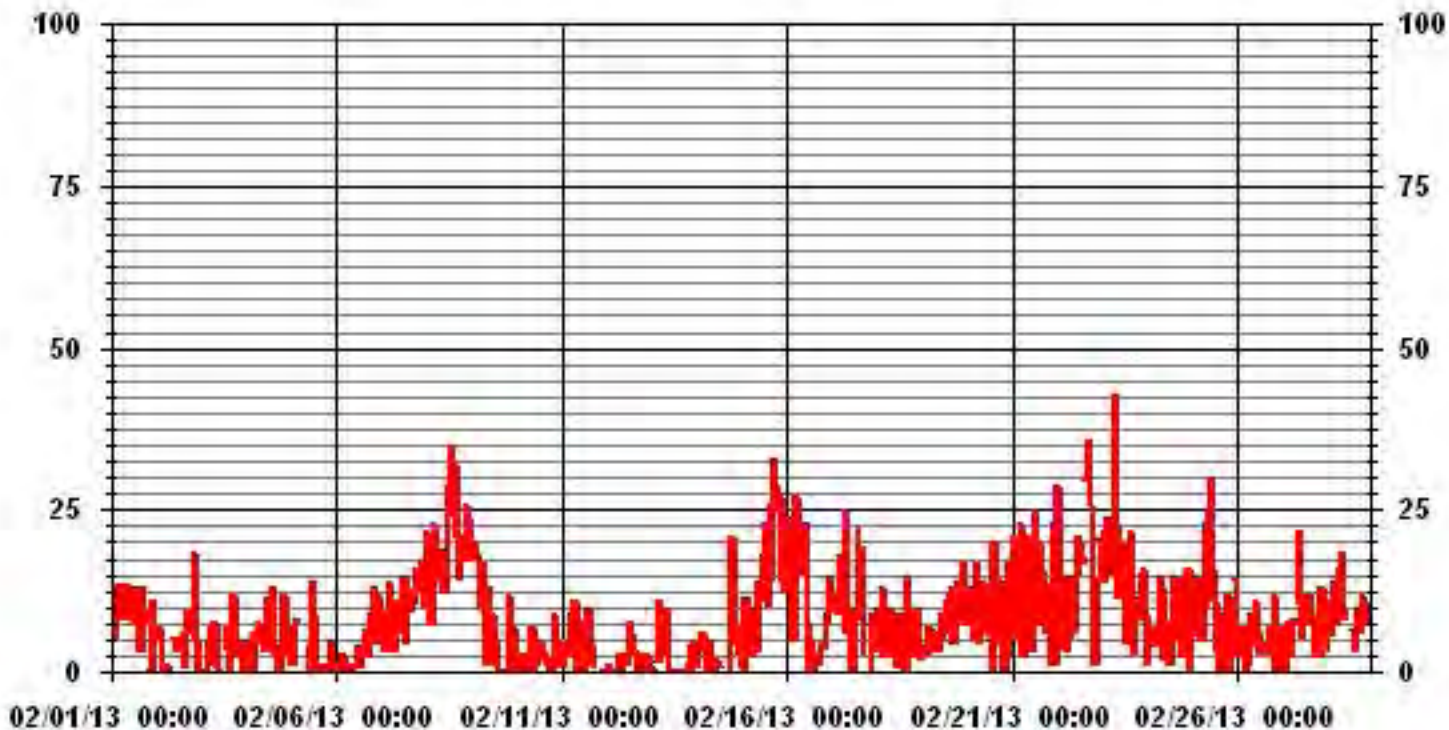
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-	PROPOSED CANADA WIDE GUIDELINE
NUMBER OF 24-HR EXCEEDENCES:	0	
NUMBER OF NON-ZERO READINGS:	532	
MAXIMUM 1-HR AVERAGE:	43.0 UG/M ³	@ HOUR(S) 7 ON DAY(S) 23
MAXIMUM 24-HR AVERAGE:	20.1 UG/M ³	ON DAY(S) 8
IZS CALIBRATION TIME:	0 HRS	OPERATIONAL TIME: 630 HRS
MONTHLY CALIBRATION TIME:	6 HRS	AMD OPERATION UPTIME: 93.8 %
STANDARD DEVIATION:	7.27	MONTHLY AVERAGE: 7.98 UG/M ³

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LICA
PM2 / WD Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 30	3.04	3.04	3.84	2.24	8.97	5.76	19.39	5.76	3.52	1.76	4.00	12.01	10.73	5.12	4.96	4.64	98.87
< 60	.16	.00	.16	.00	.16	.00	.00	.00	.00	.00	.00	.64	.00	.00	.00	.00	1.12
< 80	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 120	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 240	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 240	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.20	3.04	4.00	2.24	9.13	5.76	19.39	5.76	3.52	1.76	4.00	12.66	10.73	5.12	4.96	4.64	

Calm : .00 %

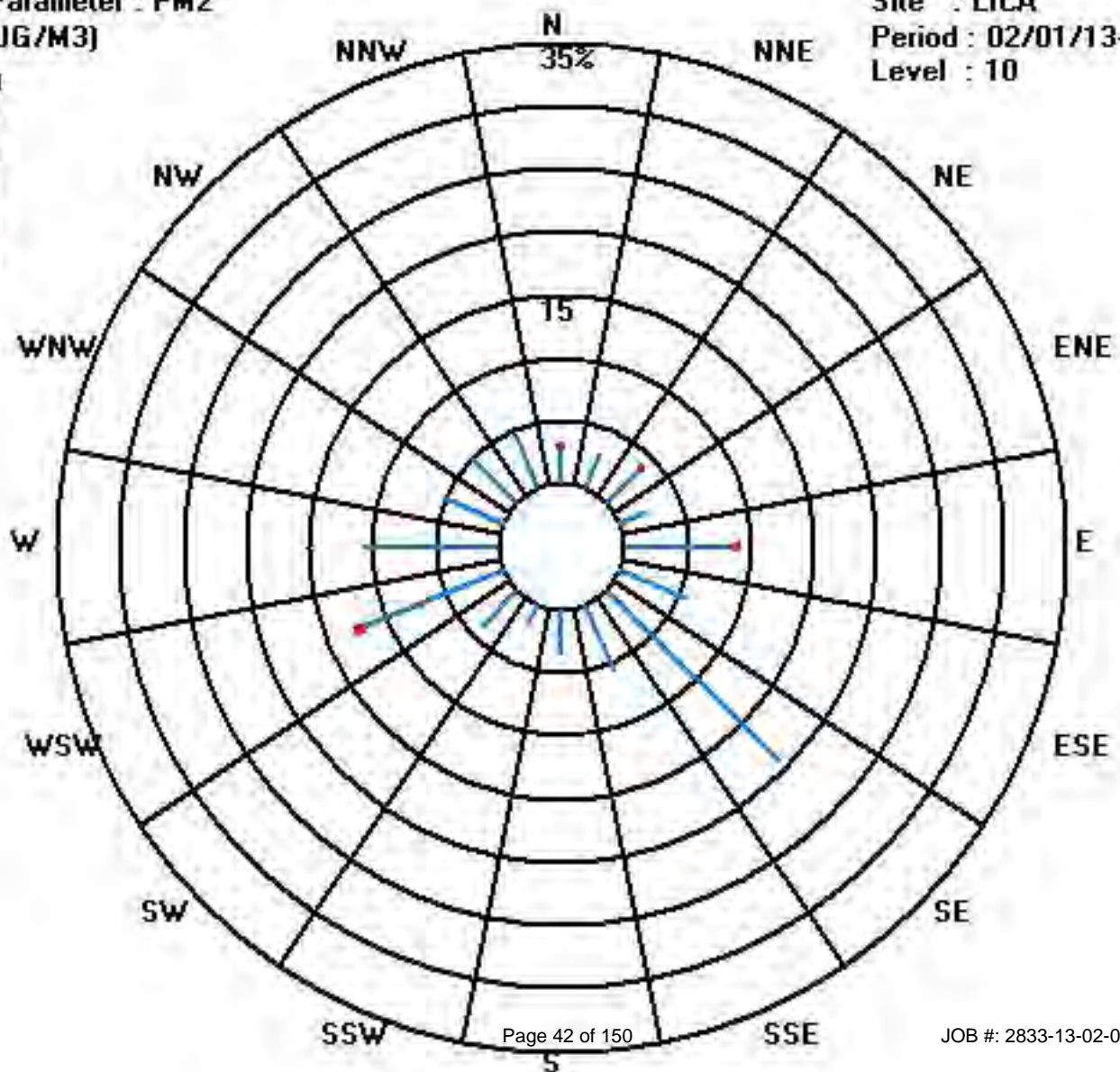
Total # Operational Hours : 624

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 30	19	19	24	14	56	36	121	36	22	11	25	75	67	32	31	29	617
< 60	1		1		1							4					7
< 80																	
< 120																	
< 240																	
>= 240																	
Totals	20	19	25	14	57	36	121	36	22	11	25	79	67	32	31	29	

Calm : .00 %

Total # Operational Hours : 624



Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	RDGS.	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.		
DAY																												
1	9.8	8.5	9.5	10.9	10.1	9.9	10.8	11.5	13.8	11.1	6.2	5.9	S	4.6	5.2	7.2	9.0	7.4	6.5	10.3	12.6	12.5	13.5	16.1	16.1	9.7	24	
2	16.4	5.3	2.7	1.8	2.2	2.8	2.9	4.8	3.9	2.8	1.6	S	1.9	2.0	3.2	3.0	4.7	5.6	6.2	16.0	20.3	9.7	6.4	5.0	20.3	5.7	24	
3	5.3	6.1	5.8	4.0	4.0	5.0	4.8	3.8	4.2	3.7	S	3.3	2.6	2.5	1.4	2.0	5.2	5.1	2.6	2.5	4.1	5.8	5.4	3.1	6.1	4.0	24	
4	1.8	2.6	6.2	7.0	6.1	9.3	6.6	5.3	16.0	S	10.5	8.6	8.9	12.5	13.2	3.7	3.6	3.4	4.7	4.7	5.2	5.3	5.6	4.0	16.0	6.7	24	
5	3.5	11.2	14.7	8.7	3.7	4.4	5.2	7.3	S	10.2	7.9	8.2	10.1	5.4	3.2	4.6	8.5	15.0	21.9	11.7	6.8	3.9	2.6	2.2	21.9	7.9	24	
6	2.2	2.0	2.1	2.1	2.6	3.2	4.3	S	5.1	3.4	2.4	1.7	2.5	2.9	3.7	4.1	4.1	3.8	3.0	1.6	2.0	1.3	1.4	2.0	5.1	2.8	24	
7	2.7	3.2	3.1	3.1	3.2	3.4	S	4.2	4.4	3.9	3.8	3.8	4.8	5.4	6.9	7.3	9.9	15.8	25.6	24.4	30.0	27.1	25.9	27.0	30.0	10.8	24	
8	26.6	13.9	6.9	12.1	9.4	S	10.4	14.7	13.5	9.3	11.5	14.2	16.3	16.1	16.0	18.3	20.0	21.4	27.8	27.1	19.2	21.0	25.0	27.6	27.8	17.3	24	
9	26.3	26.2	26.7	26.4	S	9.5	8.4	7.2	7.2	5.4	4.7	3.4	2.6	2.6	2.4	2.5	3.4	2.9	2.2	3.3	2.8	2.7	3.1	3.0	26.7	8.0	24	
10	2.4	1.9	2.2	S	2.5	2.0	2.5	2.8	3.2	3.6	6.0	5.1	3.0	3.4	3.0	3.5	3.8	3.6	4.4	4.8	3.7	3.7	2.9	2.9	6.0	3.3	24	
11	3.0	3.0	S	3.3	3.7	6.9	9.7	19.8	24.8	16.1	12.8	9.1	6.3	6.8	5.0	3.8	4.6	6.0	7.7	11.9	6.4	6.3	5.5	4.0	24.8	8.1	24	
12	3.8	S	4.4	4.0	3.9	4.3	5.3	7.8	8.0	7.5	4.3	3.9	4.2	6.4	3.5	3.7	5.3	4.3	3.3	3.9	3.8	3.8	3.1	3.5	8.0	4.6	24	
13	S	4.6	4.3	3.4	7.6	7.9	7.0	7.6	7.9	5.0	3.3	1.7	1.8	1.4	1.4	3.0	2.2	1.9	5.2	2.6	2.4	2.7	2.4	S	7.9	4.0	24	
14	5.2	5.7	5.1	3.2	4.1	3.7	0.8	4.3	4.8	C	C	C	C	C	4.5	5.3	10.9	C	24.8	11.5	13.9	S	12.4	24.8	7.5	24		
15	12.7	12.4	13.3	13.1	17.8	24.9	26.8	26.3	13.6	10.7	10.6	11.0	9.5	8.1	6.7	8.3	10.0	11.8	14.9	13.7	10.8	S	8.8	6.3	26.8	13.1	24	
16	5.4	5.0	5.1	5.6	6.0	7.1	14.3	26.0	24.3	20.2	13.8	5.4	4.9	5.0	4.6	5.4	5.3	5.2	6.6	8.4	S	7.1	9.6	8.9	26.0	9.1	24	
17	5.9	5.2	4.8	3.7	3.9	2.9	2.7	3.4	3.6	3.6	3.2	3.3	3.5	3.1	3.2	3.1	3.2	3.4	3.4	S	3.2	3.3	3.3	3.4	5.9	3.6	24	
18	3.5	3.4	3.6	2.9	3.7	3.8	3.8	4.5	2.9	3.7	3.0	2.8	3.1	3.3	3.6	4.6	6.2	9.4	S	4.5	3.6	3.6	4.4	3.9	9.4	4.0	24	
19	5.0	4.8	5.4	5.4	4.8	8.0	6.3	5.8	6.0	4.4	5.9	4.4	4.4	4.1	3.7	4.3	3.7	S	5.0	4.7	4.6	4.5	4.3	4.3	8.0	4.9	24	
20	4.7	4.2	4.3	4.2	5.0	5.0	5.0	5.7	5.9	5.3	5.5	5.2	5.7	5.6	5.8	6.4	S	7.1	6.6	6.3	6.5	6.8	6.9	7.2	7.2	5.7	24	
21	6.5	6.2	5.9	6.1	6.2	5.9	7.2	6.9	7.2	6.9	6.3	5.9	5.9	6.3	6.1	S	6.2	5.9	5.8	5.9	5.3	4.9	4.6	4.6	7.2	6.0	24	
22	4.8	5.1	5.8	5.1	4.7	4.8	5.1	5.2	5.7	4.9	4.5	4.5	5.2	5.7	S	8.5	9.5	14.8	12.1	6.9	5.5	5.4	6.6	7.1	14.8	6.4	24	
23	7.1	7.6	7.7	7.2	9.0	10.8	13.2	11.4	11.0	10.1	7.4	8.0	8.5	S	9.3	8.2	6.4	4.8	5.5	5.5	5.6	6.1	5.9	6.1	13.2	7.9	24	
24	5.5	6.4	6.7	7.0	7.9	6.4	5.3	6.5	7.1	5.6	5.5	5.5	S	6.1	6.3	8.0	9.5	9.5	8.8	8.4	8.2	9.9	15.7	13.1	15.7	7.8	24	
25	8.7	8.5	10.3	10.5	9.8	24.8	28.4	20.6	20.6	19.9	15.6	S	6.8	6.5	9.0	8.6	7.5	9.3	13.7	10.8	11.4	6.4	5.4	4.2	28.4	12.1	24	
26	5.6	7.5	8.4	6.9	6.7	7.2	18.9	32.8	31.5	26.6	S	14.8	4.7	3.5	3.9	5.2	8.6	14.4	9.2	14.6	10.4	6.1	6.0	4.9	32.8	11.2	24	
27	5.2	6.0	6.3	8.0	6.8	6.2	6.8	7.4	6.4	S	5.8	5.8	4.0	4.2	3.8	4.0	4.8	4.4	4.7	4.7	4.6	4.4	3.8	4.1	8.0	5.3	24	
28	4.0	4.1	4.0	3.8	4.1	4.2	4.5	5.2	S	5.3	5.3	5.3	4.4	5.5	6.7	6.9	9.1	9.2	10.3	11.5	10.7	10.2	8.8	8.2	11.5	6.6	24	
HOURLY MAX	26.6	26.2	26.7	26.4	17.8	24.9	28.4	32.8	31.5	26.6	15.6	14.8	16.3	16.1	16.0	18.3	20.0	21.4	27.8	27.1	30.0	27.1	25.9	27.6				
HOURLY AVG	7.2	6.7	6.9	6.6	5.9	7.2	8.4	10.0	10.1	8.4	6.7	6.0	5.4	5.3	5.4	5.7	6.7	8.0	8.8	9.5	8.2	7.3	7.3	7.4				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

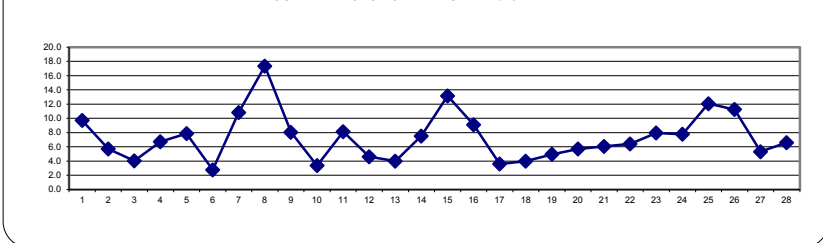
OBJECTIVE LIMIT:

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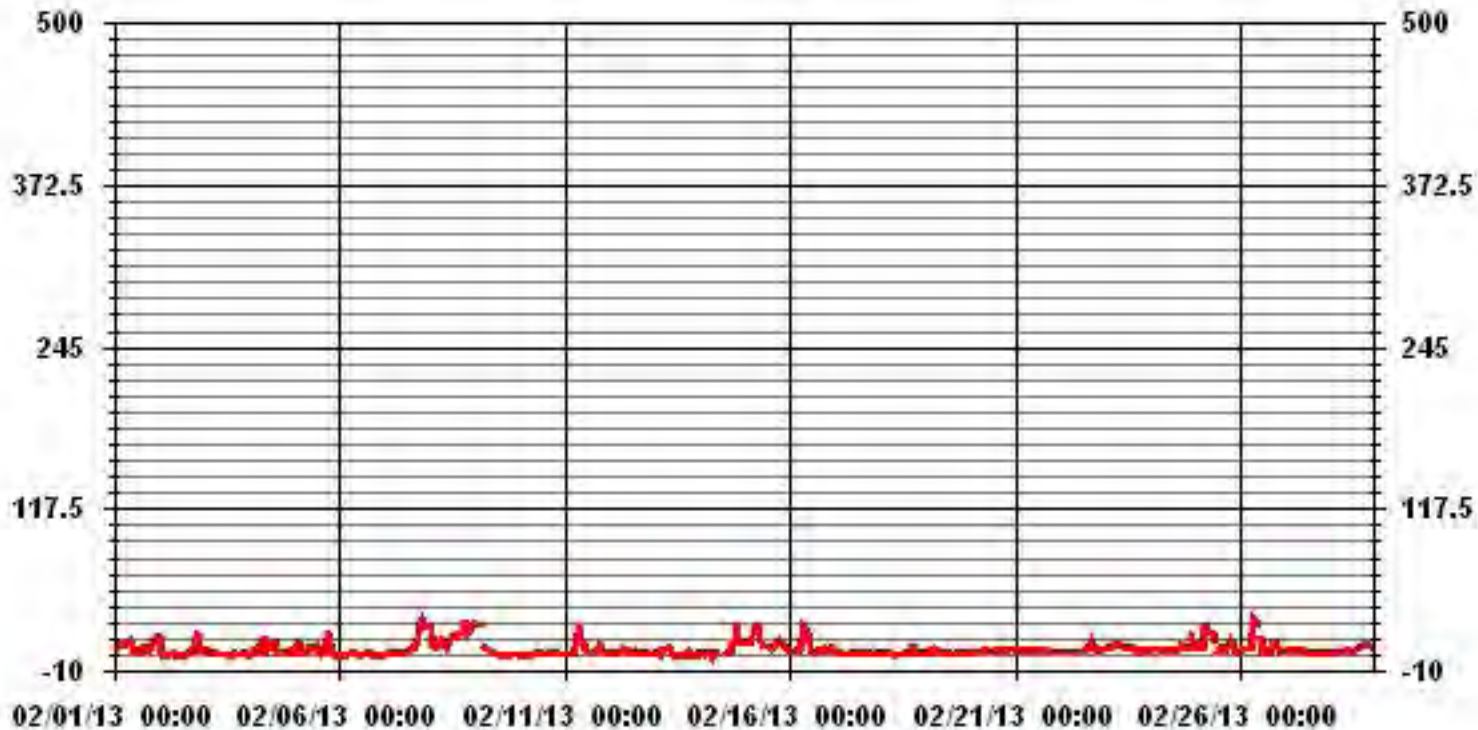
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	636					
MAXIMUM 1-HR AVERAGE:	32.8	PPB	@ HOUR(S)	7	ON DAY(S)	26
MAXIMUM 24-HR AVERAGE:	17.3	PPB			ON DAY(S)	8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	5.56		MONTHLY AVERAGE:	7.30	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA 1102_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	11.7	9.8	11.7	12.7	12.2	12.2	12.7	13.7	22.2	15.2	7.2	8.7	S	6.0	6.5	10.5	13.0	13.0	7.0	23.5	16.0	15.5	17.0	20.0	23.5	13.0	24
2	18.5	14.0	3.0	2.5	3.0	3.5	5.0	6.0	5.5	4.5	2.5	S	3.0	3.0	5.0	5.0	6.0	8.0	10.0	19.0	25.0	17.5	8.0	6.5	25.0	8.0	24
3	7.5	7.5	8.0	6.5	5.5	8.0	9.0	5.0	6.5	6.5	S	13.0	6.0	4.5	2.0	4.5	26.5	7.5	4.5	4.0	10.0	7.5	8.0	5.0	26.5	7.5	24
4	2.5	4.0	15.0	11.5	7.5	12.0	11.5	7.5	21.5	S	14.5	15.0	10.5	16.5	16.5	9.5	5.5	4.0	5.5	6.0	6.0	7.0	8.0	5.5	21.5	9.7	24
5	8.0	20.0	19.0	16.5	4.0	5.5	8.0	12.0	S	14.0	10.0	14.5	14.0	8.0	6.0	7.0	14.0	28.5	30.0	26.5	9.5	6.0	4.0	3.5	30.0	12.5	24
6	3.5	3.0	3.0	4.0	4.5	5.0	6.5	S	8.0	4.5	6.0	3.5	5.0	9.5	8.5	8.0	6.0	5.5	27.5	2.5	3.0	3.0	4.0	3.0	27.5	6.0	24
7	6.0	4.0	3.5	3.5	4.5	4.0	S	4.5	7.0	7.0	14.5	5.5	6.5	8.0	22.5	9.5	12.0	22.5	32.0	31.0	33.5	29.5	28.5	29.0	33.5	14.3	24
8	29.5	25.5	11.0	15.0	12.0	S	13.5	18.5	17.5	11.5	14.0	17.5	23.0	18.0	18.0	23.0	22.0	28.0	36.0	32.5	23.5	30.5	32.5	31.5	36.0	21.9	24
9	31.5	29.5	30.5	28.5	S	10.5	9.5	8.0	9.5	6.5	5.5	4.0	3.0	3.0	3.5	4.0	3.5	3.0	4.5	3.5	3.0	3.5	3.5	3.5	31.5	9.3	24
10	3.0	2.0	2.5	S	3.0	2.5	3.5	3.5	4.0	6.5	10.5	6.5	4.5	7.0	4.0	5.5	5.5	4.5	6.0	8.0	5.0	5.5	5.0	3.1	10.5	4.8	24
11	3.0	3.0	S	4.0	7.5	12.5	15.0	32.5	30.5	21.5	16.5	14.0	8.5	10.0	9.0	5.5	7.5	8.0	12.5	16.5	13.0	9.0	7.5	6.0	32.5	11.9	24
12	6.0	S	6.5	5.5	5.5	6.0	8.5	10.0	11.0	10.5	6.0	5.0	21.5	16.0	6.0	4.5	11.5	9.5	4.5	5.5	5.5	7.5	4.5	6.5	21.5	8.0	24
13	S	7.6	6.6	5.1	11.6	12.6	9.1	8.1	9.6	9.1	4.6	3.1	3.1	1.6	4.1	10.6	3.6	3.1	26.6	4.6	3.5	3.1	3.6	S	26.6	7.0	24
14	11.5	7.0	7.5	5.0	5.5	7.0	1.0	8.0	C	C	C	C	C	C	C	6.5	C	C	C	37.0	16.5	16.0	S	16.5	37.0	11.2	24
15	17.0	16.0	16.0	18.0	22.0	31.0	28.5	29.0	24.0	13.0	13.0	12.5	11.0	15.5	7.5	11.0	11.4	14.9	19.9	16.4	11.9	S	9.6	8.0	31.0	16.4	24
16	6.0	7.5	6.0	8.5	8.0	15.5	23.5	37.0	27.5	26.5	24.5	8.0	6.0	6.0	5.5	7.5	9.1	7.0	10.1	13.5	S	11.0	11.7	19.5	37.0	13.3	24
17	10.1	8.0	7.5	4.1	4.5	4.0	3.1	4.5	4.6	4.5	4.5	4.5	4.0	3.6	4.5	4.0	3.6	5.0	4.5	S	4.5	4.5	4.5	4.5	10.1	4.8	24
18	4.5	5.6	5.1	5.6	6.5	8.0	6.0	6.0	3.6	5.6	4.0	3.6	3.6	4.0	4.5	9.5	10.0	15.5	S	24.0	5.5	5.1	9.0	10.0	24.0	7.2	24
19	31.0	9.0	12.0	13.5	6.5	20.0	11.5	7.5	8.5	5.5	30.5	15.0	15.0	9.6	10.5	9.6	5.0	S	6.5	5.5	5.1	6.0	4.6	6.5	31.0	11.1	24
20	15.0	4.5	5.1	4.6	16.5	10.5	11.0	8.5	23.5	6.0	6.0	6.5	10.5	6.5	7.5	7.5	S	15.0	7.5	7.0	7.5	7.5	8.0	8.0	23.5	9.1	24
21	7.0	7.0	6.0	6.5	7.0	7.0	9.1	8.0	8.6	12.0	7.0	7.0	11.5	16.0	7.0	S	17.6	7.5	6.5	6.5	6.0	6.5	5.1	5.5	17.6	8.2	24
22	5.1	5.5	6.5	5.5	5.1	6.0	6.0	7.0	7.5	5.5	5.1	8.0	6.5	17.1	S	16.0	11.5	31.0	15.5	10.5	6.5	6.5	9.1	10.1	31.0	9.3	24
23	8.5	10.1	10.5	9.0	16.0	13.5	18.1	13.5	12.0	12.5	10.1	10.5	11.5	S	10.1	9.1	8.5	5.1	6.5	6.5	6.0	7.0	7.0	7.0	18.1	9.9	24
24	6.5	8.0	8.5	8.5	8.5	8.0	7.0	10.1	10.5	7.0	6.0	6.0	S	7.0	7.5	10.1	10.6	10.1	9.6	9.1	9.6	14.5	24.5	20.5	24.5	9.9	24
25	12.5	11.5	14.0	13.0	13.5	33.5	36.0	28.0	30.1	22.6	22.0	S	10.5	14.0	17.6	24.5	9.1	12.5	21.5	20.0	14.0	10.5	8.5	5.1	36.0	17.6	24
26	8.6	9.1	11.0	9.1	10.1	14.5	35.5	37.1	35.0	33.5	S	29.5	7.5	7.0	5.5	9.0	14.0	17.6	14.0	22.0	24.1	8.5	11.0	5.5	37.1	16.5	24
27	7.0	8.5	8.0	12.0	9.6	8.0	9.1	10.0	8.0	S	9.0	7.0	5.1	11.0	4.1	5.1	8.0	5.5	5.5	6.0	5.5	5.5	5.1	4.5	12.0	7.3	24
28	4.5	5.1	4.5	4.5	5.0	5.0	6.0	8.0	S	6.5	13.5	Y	5.1	8.6	9.6	8.6	10.1	11.5	11.1	12.0	11.6	13.0	11.0	9.1	13.5	8.4	23
HOURLY MAX	31.5	29.5	30.5	28.5	22.0	33.5	36.0	37.1	35.0	33.5	30.5	29.5	23.0	18.0	22.5	24.5	26.5	31.0	36.0	37.0	33.5	30.5	32.5	31.5			
HOURLY AVG	10.6	9.3	9.2	9.0	8.3	10.6	12.0	13.0	14.2	11.1	10.7	9.5	8.7	9.1	8.2	9.2	10.1	11.7	13.2	14.1	10.8	9.9	9.7	9.8			

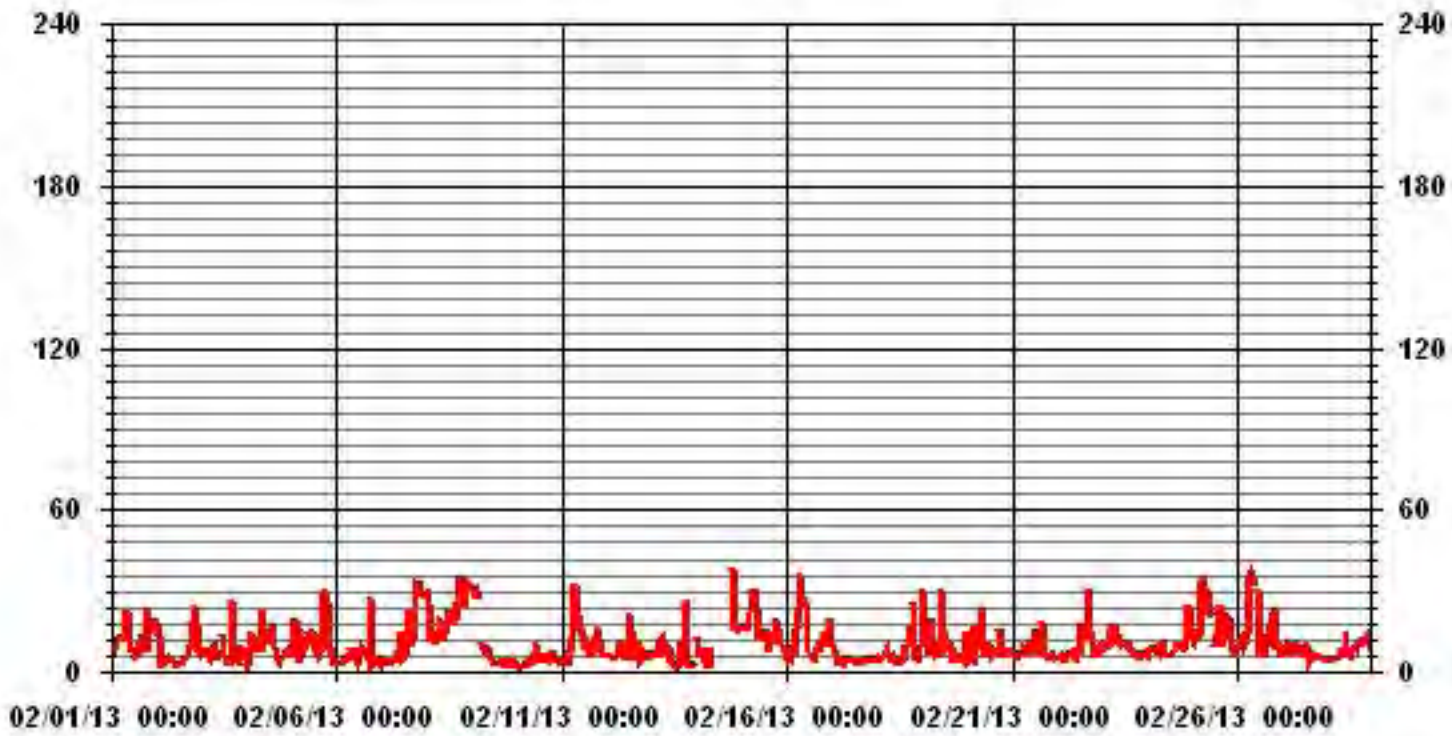
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	632				
MAXIMUM INSTANTANEOUS VALUE:	37.1	PPB	@ HOUR(S)	7	ON DAY(S) 26
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS
MONTHLY CALIBRATION TIME:	10	HRS			
STANDARD DEVIATION:	7.44				

01 Hour Averages



— LICA NO2MAX PPB

LICA
 NO2_ / WD Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WD
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	2.98	3.14	4.40	2.20	9.27	6.28	18.71	5.18	3.45	1.72	3.93	12.42	10.84	5.34	4.87	5.18	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.98	3.14	4.40	2.20	9.27	6.28	18.71	5.18	3.45	1.72	3.93	12.42	10.84	5.34	4.87	5.18	

Calm : .00 %

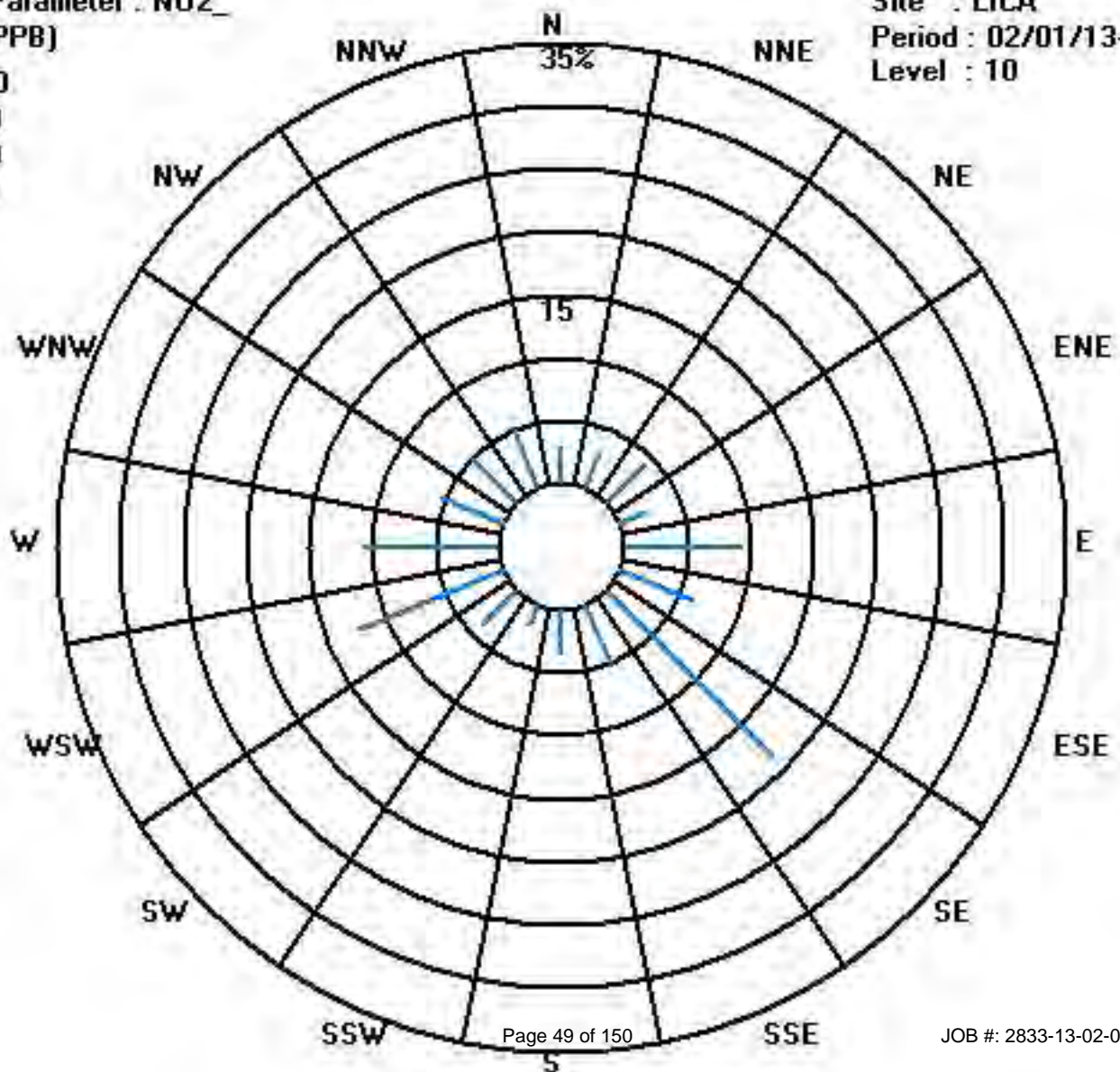
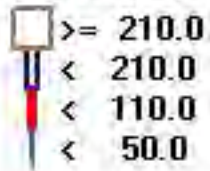
Total # Operational Hours : 636

Distribution By Samples

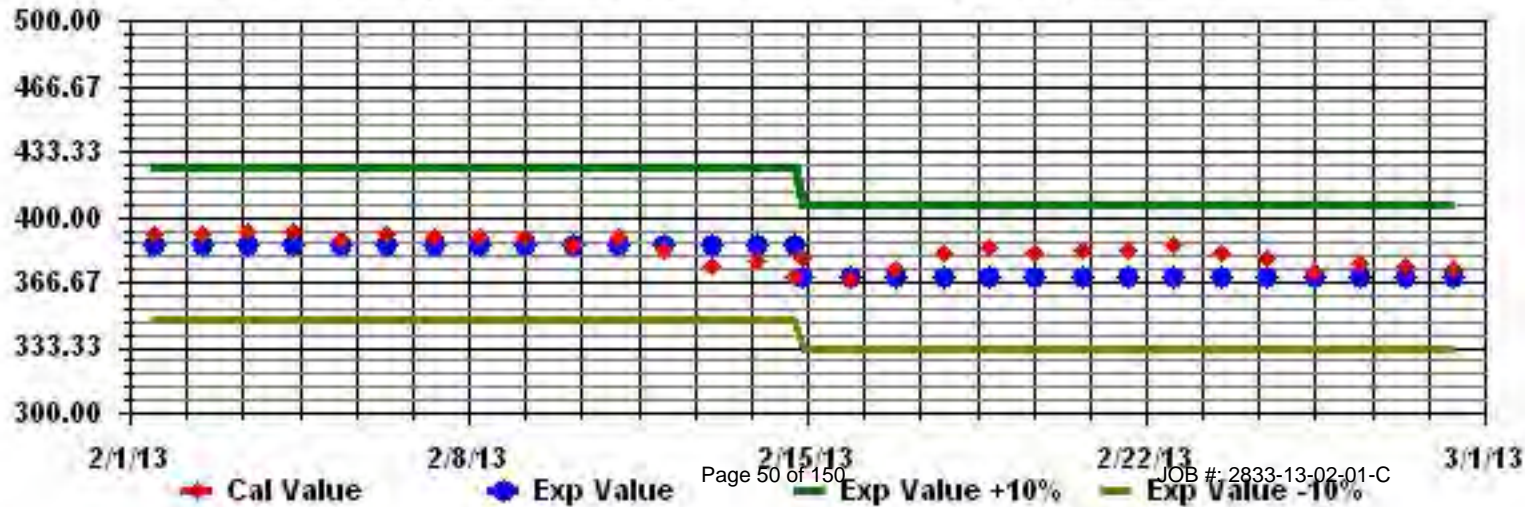
Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	19	20	28	14	59	40	119	33	22	11	25	79	69	34	31	33	636
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	19	20	28	14	59	40	119	33	22	11	25	79	69	34	31	33	

Calm : .00 %

Total # Operational Hours : 636



Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAll



Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

NITRIC OXIDE hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	0.1	0.0	0.3	0.5	0.5	0.2	0.2	0.3	2.0	4.0	2.8	3.8	S	2.1	2.2	2.2	1.4	0.5	0.0	0.3	0.3	0.4	0.3	0.6	4.0	1.1	24	
2	0.3	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.3	0.5	0.6	S	0.8	0.9	1.2	0.9	0.5	0.1	0.1	0.4	0.8	0.7	0.6	0.3	1.2	0.4	24	
3	0.4	0.5	0.5	0.4	0.5	0.8	0.9	0.5	0.6	1.1	S	2.1	1.2	1.3	0.4	0.4	1.3	0.8	0.1	0.2	0.9	0.5	0.3	0.1	2.1	0.7	24	
4	0.0	0.2	0.4	0.2	0.4	0.3	0.2	0.1	2.7	S	5.3	4.7	4.6	5.1	6.3	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.0	6.3	1.4	24		
5	0.1	0.6	0.3	0.2	0.0	0.1	0.2	0.5	S	3.3	3.4	5.4	7.7	3.3	1.4	1.2	2.2	1.7	1.3	0.7	0.2	0.4	0.3	0.2	7.7	1.5	24	
6	0.3	0.2	0.3	0.4	0.4	0.5	0.8	S	1.0	0.9	1.1	1.3	1.5	1.4	1.7	1.2	1.0	0.3	0.3	0.1	0.1	0.1	0.2	0.1	1.7	0.7	24	
7	0.1	0.0	0.0	0.0	0.1	0.0	S	0.0	0.6	0.7	1.5	2.2	2.8	3.0	5.6	2.2	1.7	0.5	1.9	1.5	11.4	6.7	6.6	10.4	11.4	2.6	24	
8	9.9	1.0	0.0	0.1	0.0	S	0.2	0.3	1.9	2.5	6.2	12.2	14.9	13.1	10.3	7.8	3.9	1.1	3.4	2.3	1.1	1.0	2.7	8.9	14.9	4.6	24	
9	12.5	14.2	10.2	5.8	S	0.1	0.1	0.4	0.5	0.7	1.0	0.5	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	2.1	24	
10	0.0	0.0	0.0	S	0.0	0.0	0.0	0.1	0.1	0.8	2.3	2.1	1.6	2.0	1.5	1.2	0.4	0.1	0.0	0.2	0.1	0.0	0.1	0.0	2.3	0.5	24	
11	0.0	0.0	S	0.0	0.1	0.4	0.3	4.1	13.7	8.6	7.6	4.9	2.6	2.6	1.7	0.5	0.5	0.1	0.2	0.3	0.3	0.2	0.2	0.1	13.7	2.1	24	
12	0.2	S	0.2	0.2	0.2	0.3	0.2	0.3	0.8	2.0	1.5	1.4	2.7	6.2	0.9	0.6	0.5	0.1	0.0	0.0	0.0	0.1	0.0	0.8	6.2	0.8	24	
13	S	0.0	0.0	0.2	0.3	0.3	0.2	0.2	1.0	1.2	0.9	0.2	0.4	0.1	0.3	0.9	0.0	0.0	2.8	0.2	0.0	0.0	0.0	S	2.8	0.4	24	
14	0.1	0.4	0.1	0.1	0.0	0.2	0.0	0.2	0.4	C	C	C	C	C	1.2	0.7	0.4	C	1.0	0.1	0.0	S	0.1	1.2	0.3	24		
15	0.2	0.2	0.1	0.1	0.6	12.6	10.6	16.8	3.1	2.1	2.7	2.6	2.7	2.2	1.2	1.6	0.9	0.4	0.1	0.3	0.1	S	0.1	0.1	16.8	2.7	24	
16	0.0	0.0	0.1	0.2	0.1	0.2	0.2	5.9	18.2	20.9	6.8	1.3	1.0	0.7	0.4	0.2	0.1	0.2	0.2	0.0	S	0.0	0.2	0.4	20.9	2.5	24	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.5	0.5	0.2	0.1	0.2	0.1	0.2	0.3	S	0.1	0.1	0.3	0.2	0.5	0.1	24	
18	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.0	0.4	0.3	0.1	0.2	0.5	0.6	1.1	2.2	2.6	S	0.0	0.2	0.2	0.0	0.5	0.8	2.6	0.4	24	
19	1.3	0.6	0.8	0.6	0.8	1.0	0.9	0.6	1.3	0.6	1.4	1.9	1.1	0.5	1.2	0.6	0.5	S	0.0	0.0	0.0	0.0	0.0	0.1	1.9	0.7	24	
20	0.6	0.0	0.0	0.0	0.1	0.4	0.9	0.0	1.3	0.6	0.7	1.0	1.0	0.9	0.9	0.6	S	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.4	24	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.8	1.3	1.2	1.4	2.9	0.8	S	0.6	0.2	0.0	0.0	0.0	0.2	0.0	0.0	2.9	0.5	24	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.6	0.6	1.9	1.5	S	1.7	1.3	2.6	0.5	0.1	0.0	0.0	0.2	0.1	2.6	0.5	24	
23	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.3	1.6	2.8	2.1	2.7	3.4	S	3.1	1.7	0.4	0.0	0.1	0.0	0.0	0.0	0.2	0.1	3.4	0.9	24	
24	0.2	0.3	0.2	0.0	0.0	0.0	0.2	0.3	0.8	1.3	1.1	1.5	S	1.7	1.3	1.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.5	24	
25	0.0	0.0	0.0	0.0	0.0	3.8	2.0	1.2	6.2	8.5	6.9	S	1.3	1.6	3.0	2.3	0.5	0.2	0.2	0.1	0.0	0.1	0.2	0.0	8.5	1.7	24	
26	0.1	0.2	0.2	0.0	0.0	0.2	2.1	18.1	26.9	19.4	S	11.1	1.4	0.2	0.2	0.7	1.0	0.7	0.0	0.6	0.1	0.0	0.0	26.9	3.6	24		
27	0.0	0.1	0.0	0.2	0.1	0.0	0.1	0.4	0.7	S	1.0	1.2	0.3	0.6	0.3	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.0	1.2	0.3	24	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	0.4	1.5	1.1	1.1	1.1	1.3	1.4	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.4	24	
HOURLY MAX	12.5	14.2	10.2	5.8	0.8	12.6	10.6	18.1	26.9	20.9	7.6	12.2	14.9	13.1	10.3	7.8	3.9	2.6	3.4	2.3	11.4	6.7	6.6	10.4				
HOURLY AVG	1.0	0.7	0.5	0.3	0.2	0.8	0.8	1.9	3.3	3.4	2.4	2.7	2.3	2.2	1.9	1.3	0.9	0.5	0.4	0.3	0.6	0.4	0.5	0.9				

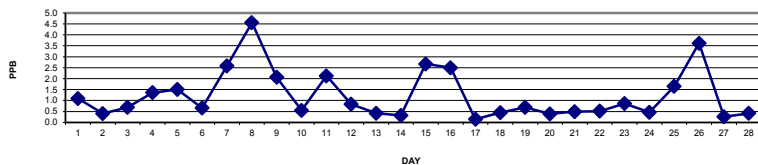
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

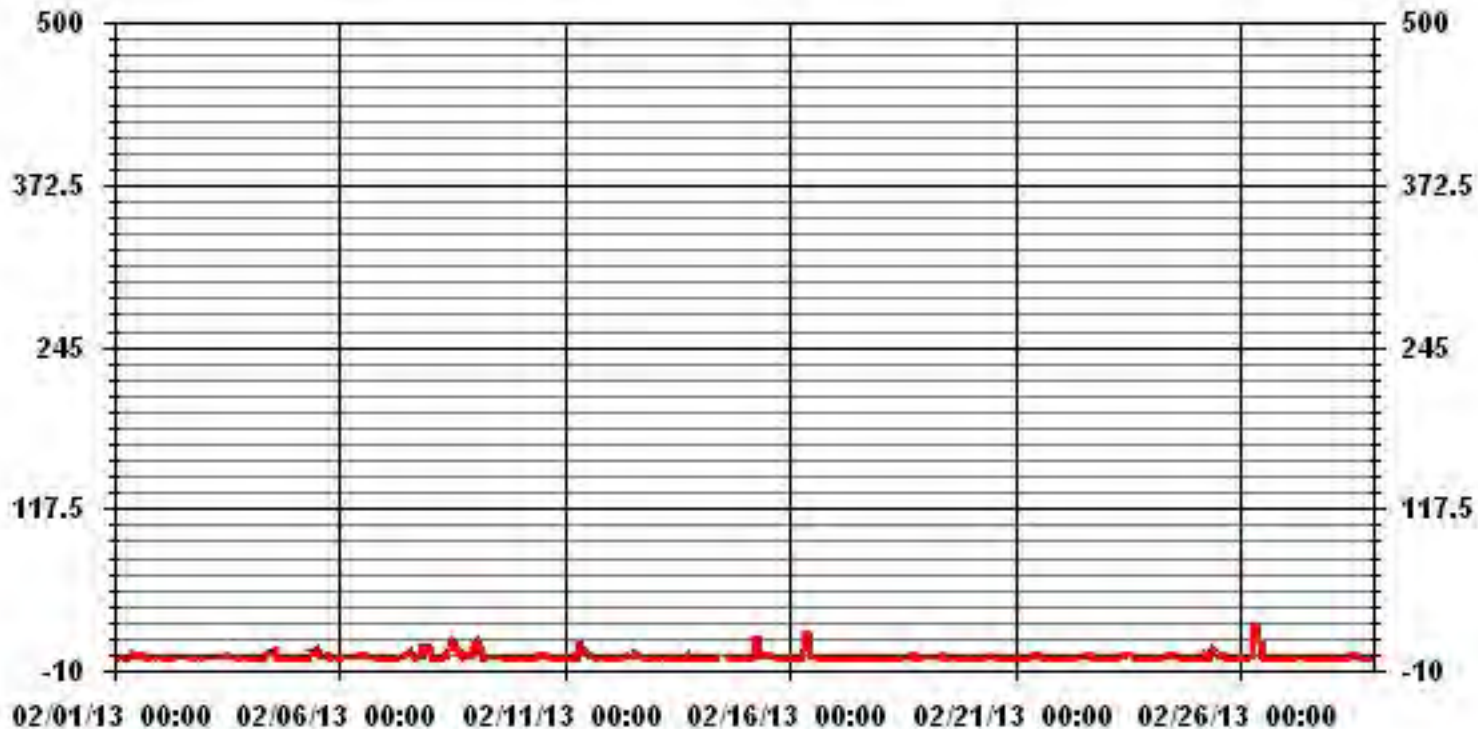
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	480					
MAXIMUM 1-HR AVERAGE:	26.9	PPB	@ HOUR(S)	8	ON DAY(S)	26
MAXIMUM 24-HR AVERAGE:	4.6	PPB			ON DAY(S)	8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	2.84		MONTHLY AVERAGE:	1.24	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	1.0	0.5	3.0	2.5	2.0	1.0	1.0	1.5	8.5	6.5	4.5	9.0	S	4.0	6.0	5.0	5.5	5.0	0.5	7.5	8.0	5.0	4.0	3.0	9.0	4.1	24	
2	1.5	0.5	0.0	0.5	0.5	0.5	0.0	2.5	1.5	1.0	2.0	S	1.5	3.0	3.0	2.0	1.5	3.0	2.5	2.5	2.0	2.5	2.5	1.5	3.0	1.7	24	
3	1.0	1.5	1.5	1.5	1.0	13.0	13.0	1.5	1.5	2.5	S	17.0	2.5	2.5	1.0	2.0	16.5	10.0	1.0	3.5	16.5	2.0	2.0	1.0	17.0	5.0	24	
4	0.5	1.0	2.5	1.5	2.0	2.0	0.5	0.5	10.0	S	8.5	10.0	6.0	8.5	9.0	4.5	1.0	0.0	0.5	0.5	0.0	0.5	0.5	0.5	10.0	3.1	24	
5	1.0	3.0	3.0	2.5	1.0	1.0	2.0	2.5	S	6.5	5.0	12.0	12.0	4.5	3.0	2.0	20.5	12.5	4.5	3.0	0.5	2.0	1.0	1.0	20.5	4.6	24	
6	1.0	1.0	1.5	1.5	1.5	1.5	2.0	S	2.0	2.0	5.5	12.5	4.5	5.5	6.5	2.5	4.0	1.5	4.0	2.0	2.0	1.0	7.0	6.5	12.5	3.4	24	
7	1.0	0.5	0.5	0.5	1.0	0.5	S	0.5	6.0	1.5	4.5	8.5	4.5	6.0	39.0	2.5	5.0	1.5	6.0	4.5	21.0	14.5	10.0	16.0	39.0	6.8	24	
8	14.0	5.0	0.5	0.5	0.5	S	3.0	1.0	3.7	4.0	14.0	16.0	22.5	15.5	12.0	9.5	8.0	3.5	30.5	5.5	3.0	6.0	18.0	18.5	30.5	9.3	24	
9	27.0	18.5	18.0	13.0	S	0.5	1.0	1.5	1.5	2.0	2.0	1.0	0.5	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	27.0	3.9	24	
10	0.0	0.0	0.5	S	0.5	0.0	0.5	0.5	1.0	3.0	5.0	3.0	3.0	4.0	3.0	2.0	1.5	4.0	0.5	1.0	1.0	0.5	1.5	0.0	5.0	1.6	24	
11	0.0	0.0	S	0.0	1.0	4.5	2.0	18.5	27.0	15.5	11.0	9.5	4.5	4.5	4.0	1.0	2.0	1.0	1.5	1.5	2.0	1.0	1.0	1.0	27.0	5.0	24	
12	3.0	S	1.0	1.5	2.0	2.5	1.0	2.0	3.0	3.5	2.5	3.0	23.5	23.5	5.5	1.5	2.5	1.5	0.5	1.0	1.5	2.0	0.5	18.5	23.5	4.7	24	
13	S	1.0	0.5	1.5	2.0	2.0	1.0	1.0	2.0	2.5	1.5	1.0	1.0	0.5	2.0	6.0	0.5	1.0	21.5	3.5	3.5	0.5	0.5	S	21.5	2.6	24	
14	1.0	4.0	1.5	1.0	0.5	1.0	0.0	1.5	C	C	C	C	C	C	C	1.5	C	C	4.5	1.0	1.0	S	1.0	4.5	1.5	1.5	24	
15	2.5	2.5	1.5	0.5	2.0	34.5	16.0	25.5	14.0	6.0	6.0	5.0	4.0	18.0	1.5	3.0	1.5	2.5	1.0	2.0	1.5	S	2.0	0.9	34.5	6.7	24	
16	0.5	1.0	1.0	3.5	1.5	5.5	2.5	25.5	29.5	37.5	22.0	3.0	2.5	1.5	1.0	1.0	2.0	2.5	3.0	1.2	S	0.4	3.5	5.9	37.5	6.8	24	
17	1.5	1.0	0.5	0.0	0.0	0.0	0.5	0.5	0.5	0.9	2.5	3.0	1.5	1.0	0.5	1.5	0.9	1.0	5.0	S	0.9	0.9	1.5	0.9	5.0	1.2	24	
18	1.0	1.4	1.0	0.9	1.5	1.0	1.0	0.9	0.5	0.9	1.0	1.5	0.9	1.5	2.0	5.5	13.4	30.5	S	2.5	1.5	0.5	0.5	9.0	30.5	3.9	24	
19	31.0	6.9	9.0	4.0	8.5	2.5	5.5	2.0	12.0	2.0	5.5	19.5	5.5	5.5	18.9	5.5	14.9	S	1.5	0.3	0.5	0.5	0.0	3.5	31.0	7.2	24	
20	15.5	0.5	0.0	0.5	5.9	9.0	14.9	2.0	13.9	8.0	1.0	5.5	2.5	1.5	1.5	1.2	S	1.0	0.0	2.5	0.4	0.0	0.3	0.0	15.5	3.8	24	
21	0.0	0.9	0.5	0.5	0.9	0.5	0.9	1.5	2.0	9.5	4.5	2.0	9.5	46.0	1.5	S	9.5	3.0	0.5	0.5	1.5	4.0	0.8	0.5	46.0	4.4	24	
22	0.5	0.0	0.0	0.5	0.5	0.0	0.5	1.0	1.0	1.5	1.5	2.5	11.0	3.5	S	5.4	2.5	17.0	1.5	1.5	0.5	0.5	2.0	1.0	17.0	2.4	24	
23	1.5	1.0	1.5	2.0	2.0	1.5	1.0	1.5	2.5	4.5	3.5	4.5	5.0	S	4.0	2.5	1.0	0.0	1.5	0.0	0.0	0.5	1.5	1.0	5.0	1.9	24	
24	1.0	1.5	1.5	0.9	1.0	0.5	2.5	2.5	1.5	2.5	1.5	5.4	S	2.0	2.0	2.0	1.5	0.5	0.0	0.0	1.5	1.0	1.0	0.5	5.4	1.5	24	
25	0.5	0.9	0.5	2.5	0.5	11.9	10.0	6.0	17.5	11.9	14.5	S	3.0	7.5	7.5	18.9	1.0	1.4	4.5	1.5	1.4	1.5	1.5	0.5	18.9	5.5	24	
26	1.0	1.5	2.0	0.5	0.5	3.5	12.0	35.0	41.0	29.0	S	27.5	6.5	1.5	1.0	2.0	3.0	4.5	0.9	11.5	0.9	0.5	1.5	0.5	41.0	8.2	24	
27	0.5	1.0	0.5	1.5	0.9	0.9	2.0	2.0	1.5	S	2.5	3.0	1.5	5.0	1.5	5.9	1.5	5.4	2.5	1.5	0.2	0.0	17.5	0.9	17.5	2.6	24	
28	0.0	0.5	0.0	0.0	0.5	0.5	0.0	1.0	S	2.5	23.0	Y	2.0	4.0	3.0	4.0	4.0	5.0	0.0	0.0	0.5	0.5	0.9	0.8	23.0	2.4	23	
HOURLY MAX	31.0	18.5	18.0	13.0	8.5	34.5	16.0	35.0	41.0	37.5	23.0	27.5	23.5	46.0	39.0	18.9	20.5	30.5	30.5	11.5	21.0	14.5	18.0	18.5				
HOURLY AVG	4.0	2.1	2.0	1.7	1.5	3.8	3.6	5.3	8.2	6.7	6.2	7.7	5.7	7.0	5.4	3.8	4.7	4.6	3.7	2.4	2.7	1.8	3.4	3.5				

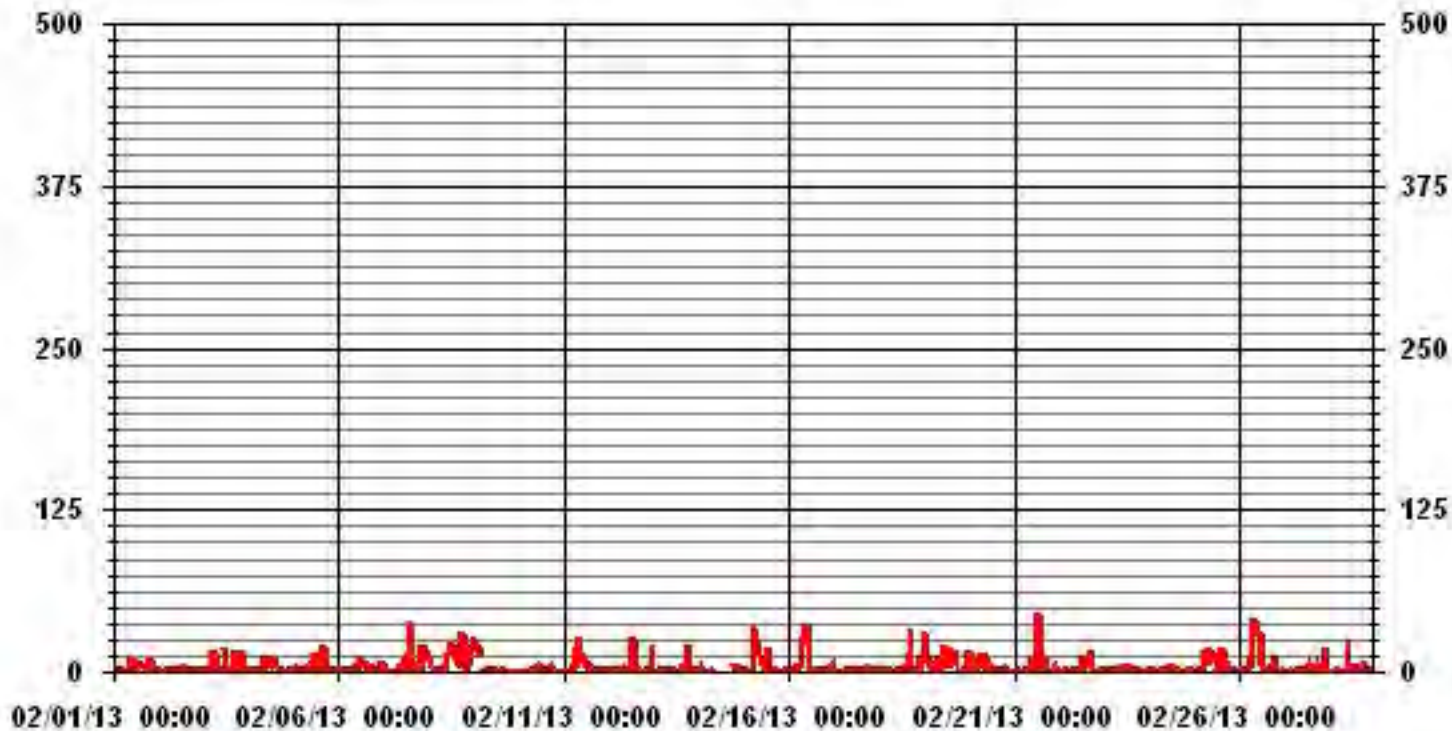
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	590
MAXIMUM INSTANTANEOUS VALUE:	46.0 PPB @ HOUR(S) 13 ON DAY(S) 21
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	10 HRS
OPERATIONAL TIME:	671 HRS
STANDARD DEVIATION:	6.45

01 Hour Averages



— LICA NOMAX PPB

LICA
 NO_ / WD Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WD
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	2.98	3.14	4.40	2.20	9.27	6.28	18.71	5.18	3.45	1.72	3.93	12.42	10.84	5.34	4.87	5.18	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.98	3.14	4.40	2.20	9.27	6.28	18.71	5.18	3.45	1.72	3.93	12.42	10.84	5.34	4.87	5.18	

Calm : .00 %

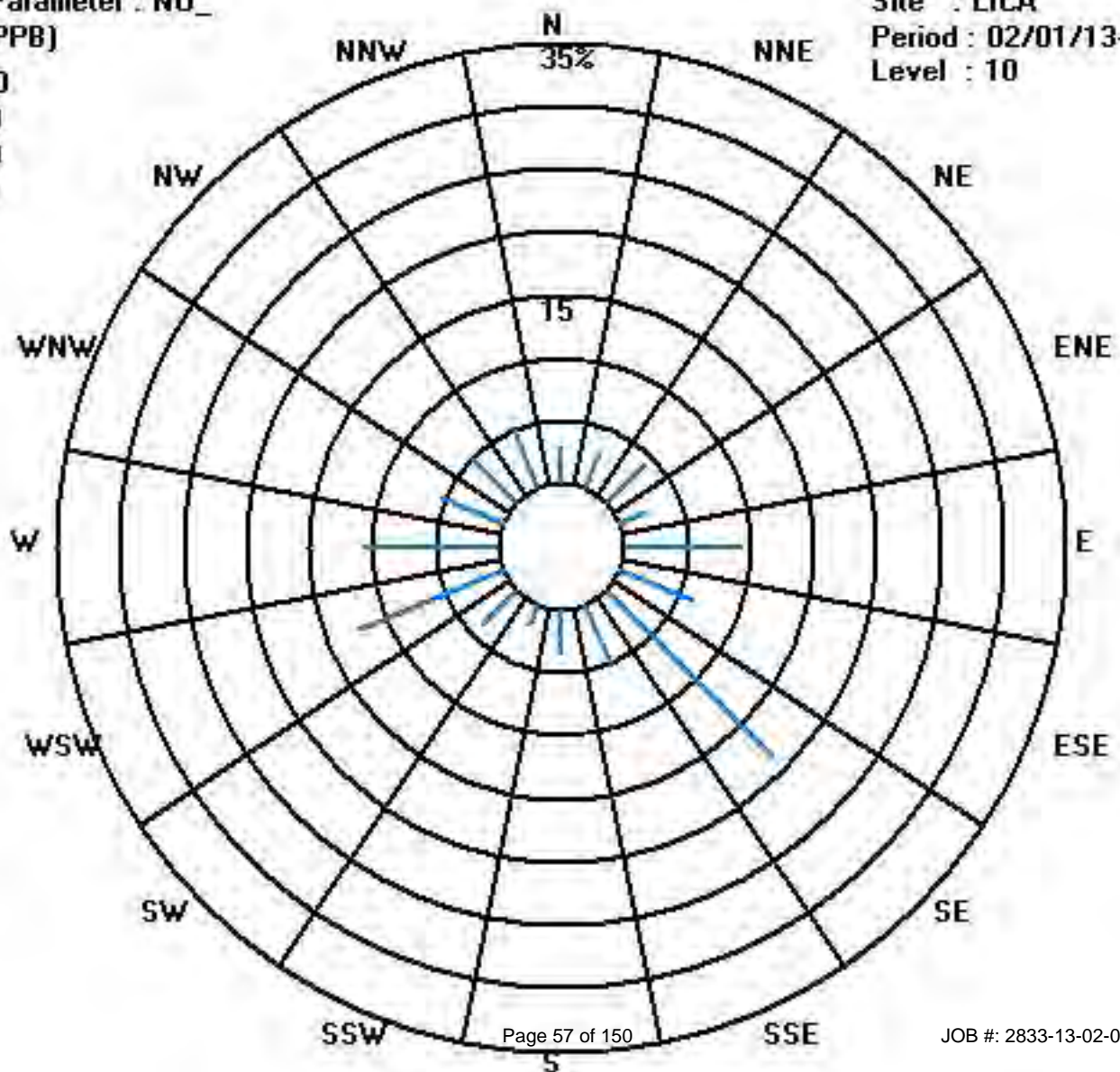
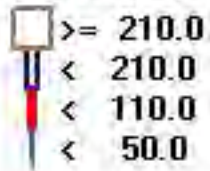
Total # Operational Hours : 636

Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	19	20	28	14	59	40	119	33	22	11	25	79	69	34	31	33	636
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	19	20	28	14	59	40	119	33	22	11	25	79	69	34	31	33	

Calm : .00 %

Total # Operational Hours : 636



Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

OXIDES OF NITROGEN hourly averages in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
DAY	DAY	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
1	1	9.9	8.5	9.8	11.4	10.6	10.1	11.0	11.8	15.8	15.1	9.0	9.7	S	6.7	7.4	9.4	10.4	7.9	6.5	10.6	12.9	12.9	13.8	16.7	16.7	10.8	24
2	2	16.7	5.3	2.7	1.8	2.3	2.9	2.9	5.0	4.2	3.3	2.2	S	2.7	2.9	4.4	3.9	5.2	5.7	6.3	16.4	21.1	10.4	7.0	5.3	21.1	6.1	24
3	3	5.7	6.6	6.3	4.4	4.5	5.8	5.7	4.3	4.8	4.8	S	5.4	3.8	3.8	1.8	2.4	6.5	5.9	2.7	2.7	5.0	6.3	5.7	3.2	6.6	4.7	24
4	4	1.8	2.8	6.6	7.2	6.5	9.6	6.8	5.4	18.7	S	15.8	13.3	13.5	17.6	19.5	4.3	3.7	3.4	4.7	4.7	5.2	5.3	5.7	4.0	19.5	8.1	24
5	5	3.6	11.8	15.0	8.9	3.7	4.5	5.4	7.8	S	13.5	11.3	13.6	17.8	8.7	4.6	5.8	10.7	16.7	23.2	12.4	7.0	4.3	2.9	2.4	23.2	9.4	24
6	6	2.5	2.2	2.4	2.5	3.0	3.7	5.1	S	6.1	4.3	3.5	3.0	4.0	4.3	5.4	5.3	5.1	4.1	3.3	1.7	2.1	1.4	1.6	2.1	6.1	3.4	24
7	7	2.8	3.2	3.1	3.1	3.3	3.4	S	4.2	5.0	4.6	5.3	6.0	7.6	8.4	12.5	9.5	11.6	16.3	27.5	25.9	41.4	33.8	32.5	37.4	41.4	13.4	24
8	8	36.5	14.9	6.9	12.2	9.4	S	10.6	15.0	15.4	11.8	17.7	26.4	31.2	29.2	26.3	26.1	23.9	22.5	31.2	29.4	20.3	22.0	27.7	36.5	36.5	21.9	24
9	9	38.8	40.4	36.9	32.2	S	9.6	8.5	7.6	7.7	6.1	5.7	3.9	3.1	2.7	2.6	3.5	2.9	2.2	3.3	2.8	2.7	3.1	3.0	40.4	10.1	24	
10	10	2.4	1.9	2.2	S	2.5	2.0	2.5	2.9	3.3	4.4	8.3	7.2	4.6	5.4	4.5	4.7	4.2	3.7	4.4	5.0	3.8	3.7	3.0	2.9	8.3	3.9	24
11	11	3.0	3.0	S	3.3	3.8	7.3	10.0	23.9	38.5	24.7	20.4	14.0	8.9	9.4	6.7	4.3	5.1	6.1	7.9	12.2	6.7	6.5	5.7	4.1	38.5	10.2	24
12	12	4.0	S	4.6	4.2	4.1	4.6	5.5	8.1	8.8	9.5	5.8	5.3	6.9	12.6	4.4	4.3	5.8	4.4	3.3	3.9	3.8	3.9	3.1	4.3	12.6	5.4	24
13	13	S	4.6	4.3	3.6	7.9	8.2	7.2	7.8	8.9	6.2	4.2	1.9	2.2	1.5	1.7	3.9	2.2	1.9	8.0	2.8	2.4	2.7	2.4	S	8.9	4.4	24
14	14	5.3	6.1	5.2	3.3	4.1	3.9	0.8	4.5	5.2	C	C	C	C	C	C	5.7	6.0	11.3	C	25.8	11.6	13.9	S	12.5	25.8	7.8	24
15	15	12.9	12.6	13.4	13.2	18.4	37.5	37.4	43.1	16.7	12.8	13.3	13.6	12.2	10.3	7.9	9.9	10.9	12.2	15.0	14.0	10.9	S	8.9	6.4	43.1	15.8	24
16	16	5.4	5.0	5.2	5.8	6.1	7.3	14.5	31.9	42.5	41.1	20.6	6.7	5.9	5.7	5.0	5.6	5.4	5.4	6.8	8.4	S	7.1	9.8	9.3	42.5	11.6	24
17	17	5.9	5.2	4.8	3.7	3.9	2.9	2.7	3.4	3.7	3.8	3.4	3.8	4.0	3.3	3.3	3.3	3.6	3.7	S	3.3	3.4	3.6	3.6	3.6	5.9	3.7	24
18	18	3.6	3.5	3.8	2.9	3.7	3.9	3.9	4.5	2.9	4.1	3.3	2.9	3.3	3.8	4.2	5.7	8.4	12.0	S	4.7	3.8	3.6	4.9	4.7	12.0	4.4	24
19	19	6.3	5.4	6.2	6.0	5.6	9.0	7.2	6.4	7.3	5.0	7.3	6.3	5.5	4.6	4.9	4.9	4.2	S	5.0	4.7	4.6	4.5	4.3	4.4	9.0	5.6	24
20	20	5.3	4.2	4.3	4.2	5.1	5.4	5.9	5.7	7.2	5.9	6.2	6.2	6.7	6.5	6.7	7.0	S	7.2	6.6	6.3	6.5	6.8	6.9	7.2	7.2	6.1	24
21	21	6.5	6.2	5.9	6.1	6.2	5.9	7.2	7.0	8.0	8.7	7.6	7.1	7.3	9.2	6.9	S	6.8	6.1	5.8	5.9	5.3	5.1	4.6	4.6	9.2	6.5	24
22	22	4.8	5.1	5.8	5.1	4.7	4.8	5.1	5.2	5.9	5.4	5.1	5.1	7.1	7.2	S	10.2	10.8	17.4	12.6	7.0	5.5	5.4	6.8	7.2	17.4	6.9	24
23	23	7.3	7.7	7.9	7.4	9.2	11.1	13.3	11.7	12.6	12.9	9.5	10.7	11.9	S	12.4	9.9	6.8	4.8	5.6	5.5	5.6	6.1	6.1	6.2	13.3	8.8	24
24	24	5.7	6.7	6.9	7.0	7.9	6.4	5.5	6.8	7.9	6.9	6.6	7.0	S	7.8	7.6	9.0	10.1	9.6	8.8	8.4	8.2	9.9	15.7	13.1	15.7	8.2	24
25	25	8.7	8.5	10.3	10.5	9.8	28.6	30.4	21.8	26.8	28.4	22.5	S	8.1	8.1	12.0	10.9	8.0	9.5	13.9	10.9	11.4	6.5	5.6	4.2	30.4	13.7	24
26	26	5.7	7.7	8.6	6.9	6.7	7.4	21.0	50.9	58.4	46.0	S	25.9	6.1	3.7	4.1	5.9	9.6	15.1	9.2	15.2	10.5	6.1	6.0	4.9	58.4	14.9	24
27	27	5.2	6.1	6.3	8.2	6.9	6.2	6.9	7.8	7.1	S	6.8	7.0	4.3	4.8	4.1	4.4	4.9	4.5	4.7	4.7	4.6	4.4	4.3	4.1	8.2	5.6	24
28	28	4.0	4.1	4.0	3.8	4.1	4.2	4.5	5.2	S	5.7	6.8	6.4	5.5	6.6	8.0	8.3	10.3	9.6	10.3	11.5	10.7	10.2	8.8	8.2	11.5	7.0	24
HOURLY MAX		38.8	40.4	36.9	32.2	18.4	37.5	37.4	50.9	58.4	46.0	22.5	26.4	31.2	29.2	26.3	26.1	23.9	22.5	31.2	29.4	41.4	33.8	32.5	37.4			
HOURLY AVG		8.2	7.4	7.4	7.0	6.1	8.0	9.2	11.8	13.4	11.8	9.1	8.7	7.8	7.5	7.3	6.9	7.5	8.5	9.2	9.8	8.8	7.7	7.8	8.2			

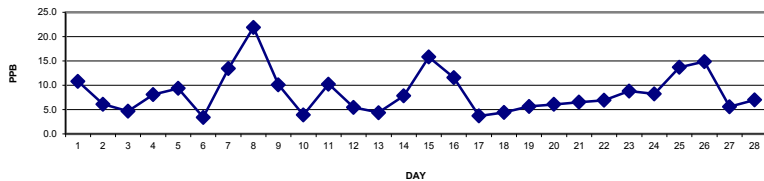
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

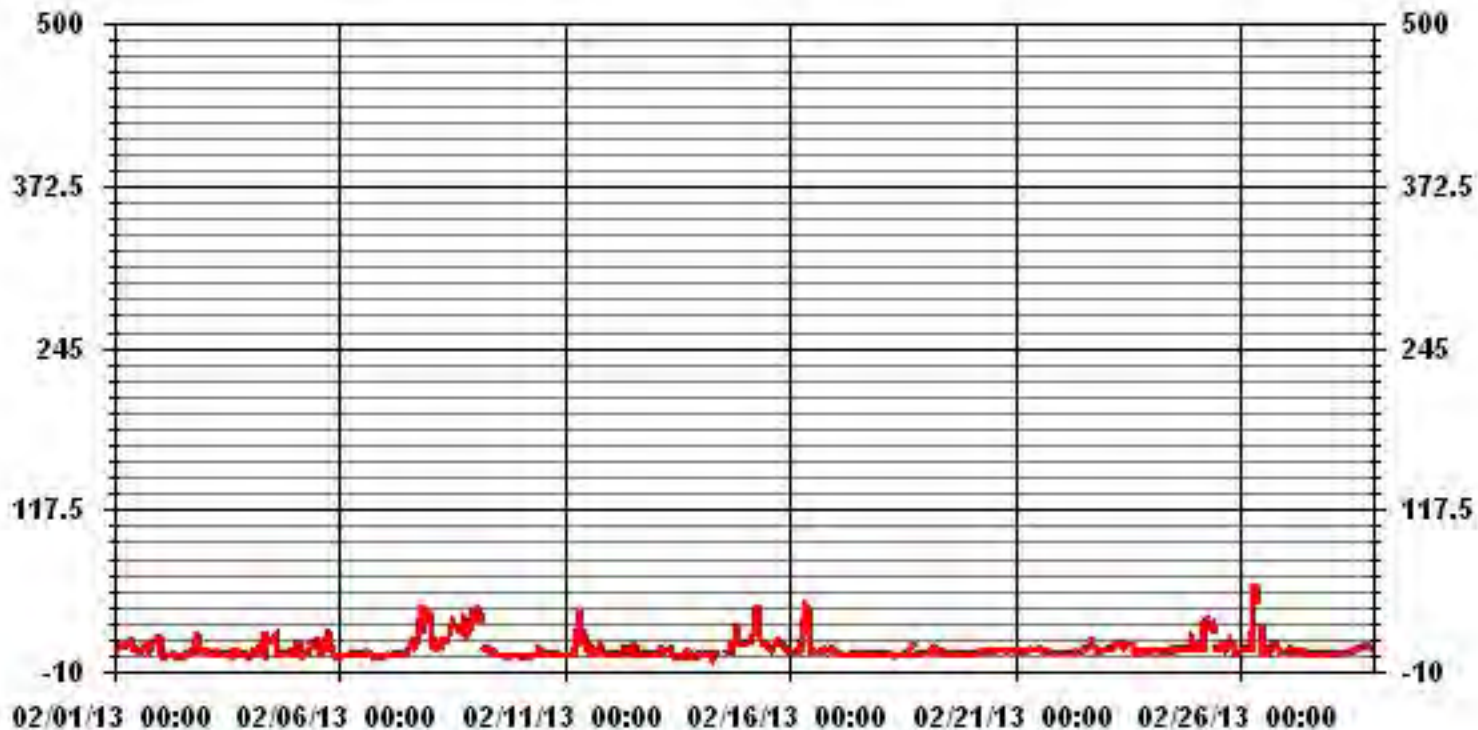
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	636
MAXIMUM 1-HR AVERAGE:	58.4 PPB @ HOUR(S) 8 ON DAY(S) 26
MAXIMUM 24-HR AVERAGE:	21.9 PPB ON DAY(S) 8
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	7 HRS
OPERATIONAL TIME:	672 HRS
AMD OPERATION UPTIME:	100.0 %
STANDARD DEVIATION:	7.73
MONTHLY AVERAGE:	8.53 PPB

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	12.1	10.1	13.1	13.6	13.1	12.6	13.6	14.6	30.6	21.6	11.6	16.1	S	10.0	10.0	14.0	17.0	17.5	7.5	31.0	23.0	20.0	17.0	21.5	31.0	16.1	24
2	19.5	14.5	3.0	2.5	3.0	3.5	5.0	8.0	7.0	5.5	4.0	S	4.0	5.5	7.5	7.0	7.0	9.5	12.5	19.5	26.5	20.0	9.0	8.0	26.5	9.2	24
3	8.5	8.5	8.5	7.0	6.0	21.0	21.0	5.5	8.0	8.5	S	29.5	7.0	6.0	3.5	6.0	42.5	13.0	5.0	7.5	23.0	8.5	9.5	5.5	42.5	11.7	24
4	2.5	4.0	17.0	12.0	9.0	14.0	11.5	7.5	30.0	S	23.0	25.0	16.0	24.5	25.0	13.5	6.0	4.0	5.5	6.5	6.0	7.0	8.0	5.5	30.0	12.3	24
5	8.0	22.0	20.0	18.5	4.5	6.0	9.5	12.0	S	18.0	15.0	26.5	26.0	12.0	9.0	32.0	41.0	34.0	28.0	9.5	6.5	4.5	4.0	41.0	16.3	24	
6	4.0	4.0	4.5	4.5	5.0	6.0	7.5	S	9.5	6.5	11.5	9.5	8.5	11.0	14.5	10.5	8.5	6.0	31.0	3.0	3.5	3.0	7.0	5.0	31.0	8.0	24
7	6.5	4.5	3.5	4.0	5.0	4.5	S	5.0	8.0	9.0	18.5	9.5	10.0	13.0	52.0	11.5	15.5	23.0	36.5	34.5	52.0	43.5	37.5	45.0	52.0	19.7	24
8	43.0	30.5	11.0	15.0	12.0	S	15.5	19.0	20.0	15.5	27.0	33.0	44.5	33.0	29.5	30.0	28.5	29.0	44.0	38.0	24.5	36.0	48.0	50.0	50.0	29.4	24
9	56.5	47.5	46.5	41.5	S	10.5	10.0	9.0	10.5	7.0	7.0	4.5	3.5	3.5	3.0	3.5	4.0	3.5	3.0	4.5	3.5	3.0	3.5	3.5	56.5	12.7	24
10	3.0	2.3	3.5	S	3.0	2.5	3.5	4.0	4.5	8.5	15.0	9.5	6.0	10.0	7.0	7.0	7.0	7.0	6.5	9.0	5.0	5.5	5.5	3.0	15.0	6.0	24
11	3.8	3.1	S	4.5	8.5	16.0	15.5	50.0	53.0	35.0	27.5	23.5	13.0	14.5	12.5	6.0	7.5	8.5	13.0	17.5	13.0	9.5	8.0	6.0	53.0	16.1	24
12	6.0	S	7.0	7.0	7.0	6.5	9.0	11.0	13.5	13.5	8.5	7.5	43.0	34.0	8.5	6.0	12.5	10.0	4.5	6.0	5.5	9.5	5.5	16.0	43.0	11.2	24
13	S	8.6	6.6	6.6	13.6	14.1	10.1	9.1	11.1	11.1	5.6	4.1	4.1	2.1	6.1	16.1	3.6	3.6	38.6	5.1	5.6	3.6	3.6	S	38.6	8.8	24
14	11.5	10.0	8.0	6.0	6.0	7.0	1.0	8.5	C	C	C	C	C	C	C	7.5	C	C	41.0	18.0	16.0	S	16.5	41.0	12.1	24	
15	19.0	16.0	16.0	18.0	24.0	65.0	43.5	53.0	38.0	19.0	17.0	15.5	14.5	29.5	9.0	13.4	12.4	14.9	19.9	16.9	13.4	S	10.6	8.5	65.0	22.0	24
16	6.6	8.0	6.0	11.0	9.1	19.5	24.1	61.5	53.5	63.5	44.1	10.6	8.6	7.0	6.1	8.1	11.1	8.1	11.6	13.5	S	11.1	13.5	24.1	63.5	19.1	24
17	11.6	8.6	8.1	4.1	4.6	4.1	3.6	5.1	5.1	5.1	7.0	6.6	5.6	4.6	4.6	5.1	4.1	5.6	7.0	S	5.1	5.1	5.6	5.6	11.6	5.7	24
18	5.1	6.5	6.0	6.0	8.0	9.1	7.0	7.0	3.6	6.0	5.1	5.1	4.6	5.6	6.6	14.5	16.5	21.0	S	25.5	6.5	5.1	11.6	13.0	25.5	8.9	24
19	61.5	12.5	18.5	17.1	7.7	22.6	15.6	9.0	16.0	6.6	36.0	19.5	20.5	12.0	13.0	12.0	5.1	S	7.0	5.6	5.6	6.5	4.6	10.6	61.5	15.0	24
20	30.1	4.6	5.1	4.6	16.6	19.0	17.6	10.5	33.5	8.5	7.0	9.1	13.0	7.5	8.6	8.6	S	15.6	8.0	7.5	7.5	7.6	8.1	8.1	33.5	11.6	24
21	7.0	6.6	6.1	6.6	7.0	7.0	9.6	8.6	9.6	18.1	11.6	9.1	20.0	50.1	8.1	S	26.5	9.6	6.6	6.6	7.0	7.5	6.1	5.6	50.1	11.3	24
22	5.5	5.6	6.6	5.5	5.1	6.1	6.6	7.6	8.1	6.6	6.0	10.1	14.6	20.0	S	21.6	13.5	47.5	17.1	11.6	7.0	6.6	10.6	47.5	11.3	24	
23	10.1	10.6	11.1	11.1	16.6	15.0	18.5	14.5	14.6	16.5	13.0	15.1	16.1	S	13.5	11.1	9.6	5.1	7.6	6.5	6.1	7.0	8.6	8.1	18.5	11.6	24
24	7.6	9.1	9.6	8.6	9.6	8.6	7.6	11.6	11.6	9.1	7.0	9.1	S	9.1	9.1	12.0	11.6	10.1	9.6	9.1	10.6	15.0	25.5	20.5	25.5	10.9	24
25	13.0	12.0	14.5	13.0	13.5	45.0	46.0	30.6	47.5	33.5	36.6	S	13.5	22.1	25.0	41.0	9.6	14.0	25.5	21.0	16.0	10.6	9.6	5.1	47.5	22.5	24
26	9.1	10.1	12.5	9.1	10.1	18.1	47.0	72.0	75.5	62.0	S	57.0	10.6	7.6	6.6	10.6	17.6	20.0	15.0	33.0	24.6	8.5	12.0	6.1	75.5	24.1	24
27	7.0	9.1	8.0	13.0	9.6	8.6	11.1	11.5	9.6	S	11.1	9.1	6.0	15.1	5.1	8.0	9.1	5.5	6.0	6.5	5.5	5.6	7.0	5.1	15.1	8.4	24
28	4.6	5.1	4.1	4.1	5.1	5.1	6.0	9.1	S	7.0	15.0	Y	6.6	12.1	12.5	10.1	13.0	14.1	11.1	12.0	11.6	13.5	11.1	9.6	15.0	9.2	23
HOURLY MAX	61.5	47.5	46.5	41.5	24.0	65.0	47.0	72.0	75.5	63.5	44.1	57.0	44.5	50.1	52.0	41.0	42.5	47.5	44.0	41.0	52.0	43.5	48.0	50.0			
HOURLY AVG	14.2	10.9	10.5	10.2	9.0	14.0	14.7	17.6	21.3	16.8	15.6	15.6	13.6	14.7	12.2	12.2	13.3	14.1	15.1	15.8	12.8	11.2	11.5	12.2			

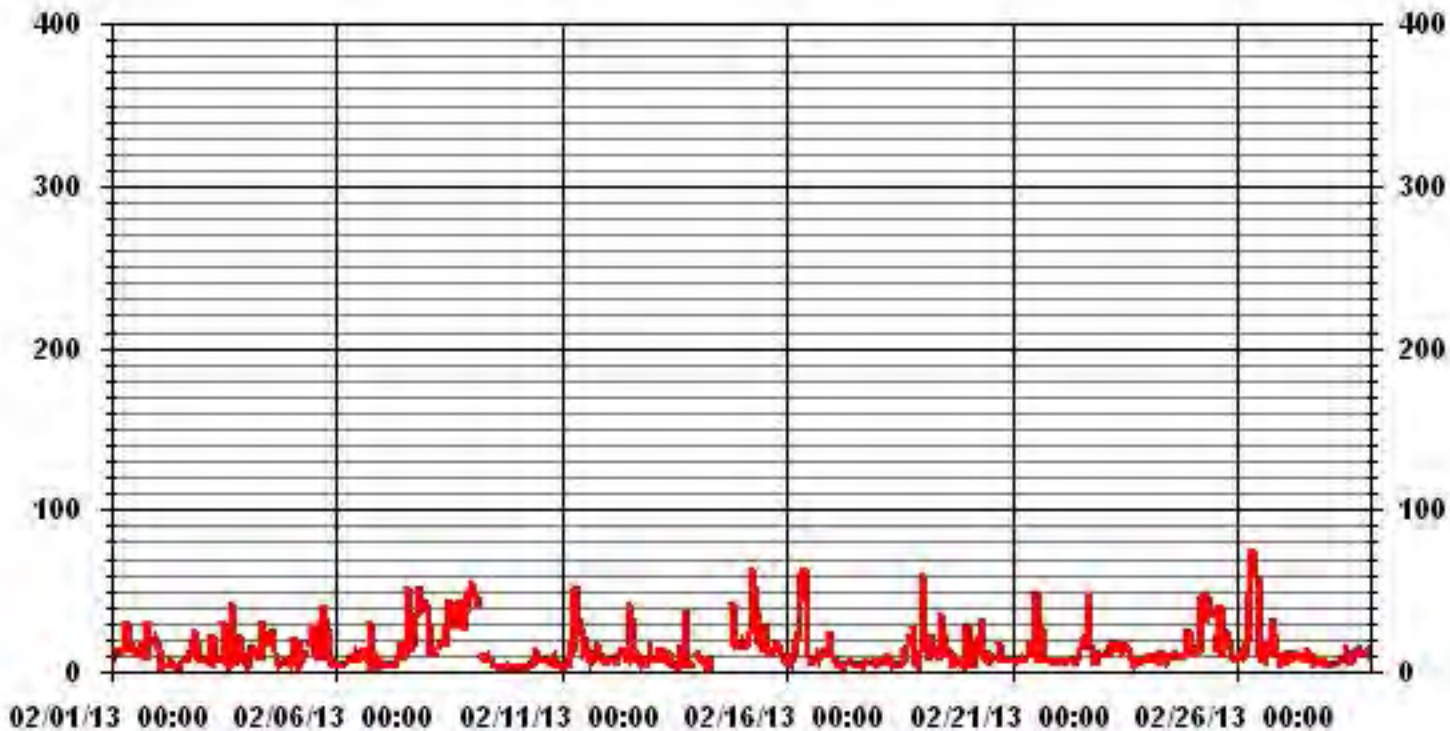
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	632				
MAXIMUM INSTANTANEOUS VALUE:	75.5	PPB	@ HOUR(S)	8	ON DAY(S) 26
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS
MONTHLY CALIBRATION TIME:	10	HRS			
STANDARD DEVIATION:	11.97				

01 Hour Averages



LICA
NOX_ / WD Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	2.98	3.14	4.40	1.88	9.27	6.28	18.71	5.18	3.45	1.72	3.93	12.42	10.84	5.34	4.87	5.18	99.68
< 110.0	.00	.00	.00	.31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.31
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.98	3.14	4.40	2.20	9.27	6.28	18.71	5.18	3.45	1.72	3.93	12.42	10.84	5.34	4.87	5.18	

Calm : .00 %

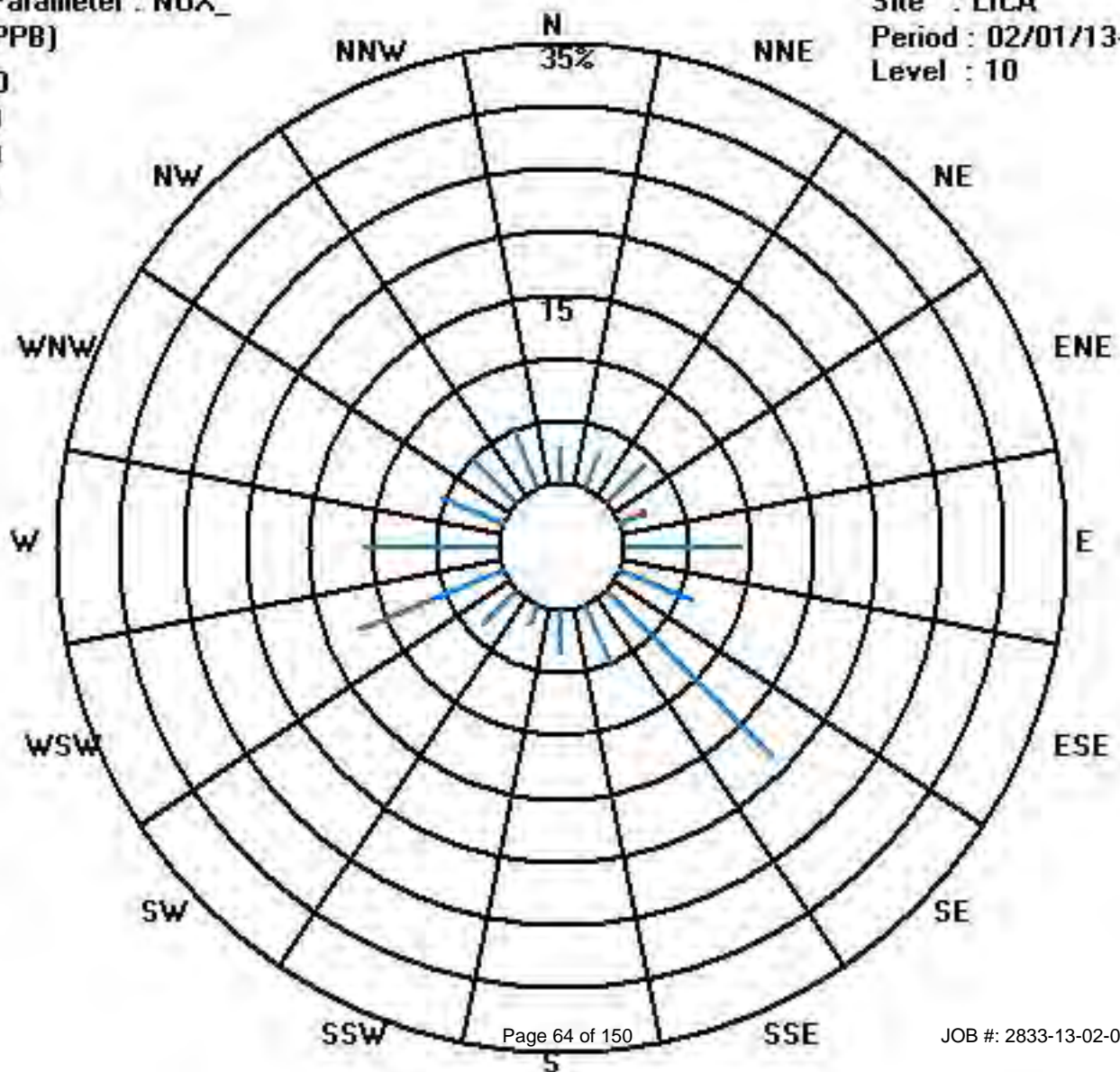
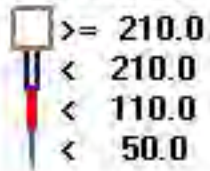
Total # Operational Hours : 636

Distribution By Samples

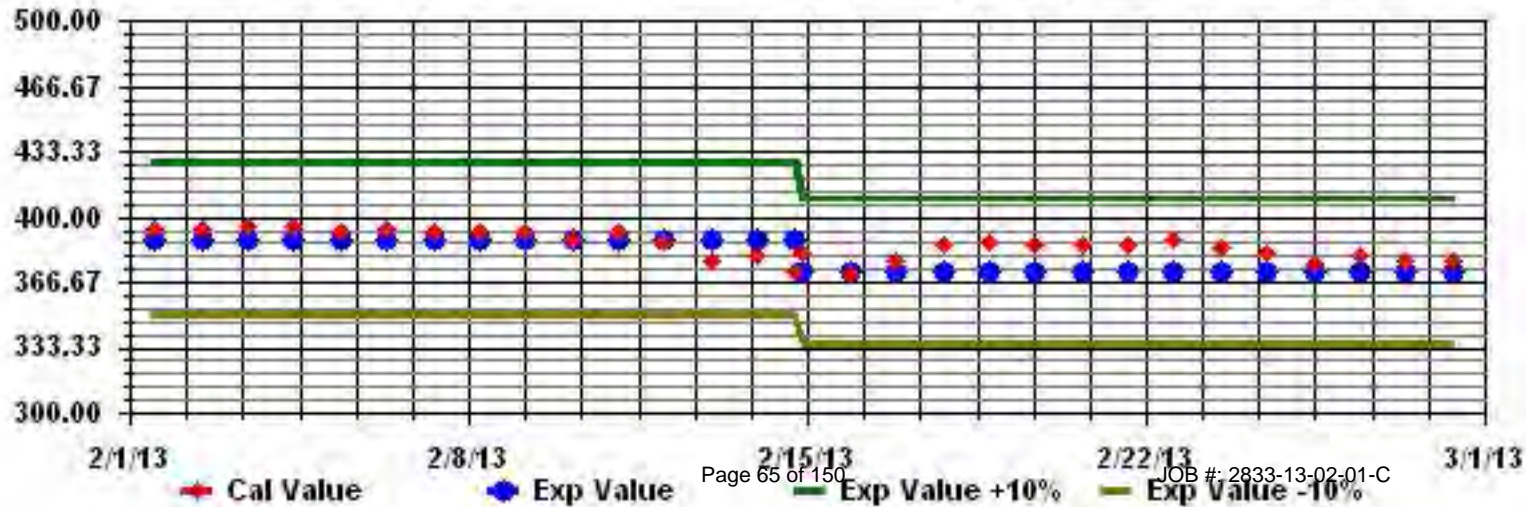
Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	19	20	28	12	59	40	119	33	22	11	25	79	69	34	31	33	634
< 110.0				2													2
< 210.0																	
>= 210.0																	
Totals	19	20	28	14	59	40	119	33	22	11	25	79	69	34	31	33	

Calm : .00 %

Total # Operational Hours : 636



Calibration Graph for Site: LICA Parameter: IIOX_ Sequence: IIO2 Phase: SPAll



Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

OZONE (O₃) hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	21	22	20	18	18	18	17	17	14	17	24	24	S	27	26	24	22	24	24	19	16	15	14	11	27	19.7	24	
2	13	31	31	31	29	29	32	32	32	32	32	S	31	31	31	31	29	28	27	18	14	23	26	27	32	27.8	24	
3	26	25	25	29	30	29	29	29	28	29	S	31	32	32	33	32	30	29	31	31	30	28	29	31	33	29.5	24	
4	32	32	29	28	29	26	29	29	20	S	26	27	27	23	24	33	31	31	28	27	30	29	26	33	33	28.2	24	
5	33	21	13	19	34	36	36	34	S	31	34	34	32	35	37	36	32	25	19	29	32	32	33	32	37	30.4	24	
6	31	32	30	31	31	31	29	S	29	30	32	32	32	32	31	31	31	32	34	35	35	36	35	34	36	32.0	24	
7	33	34	34	35	34	33	S	32	32	33	33	33	33	34	32	32	29	23	10	8	2	2	2	1	35	25.0	24	
8	3	20	29	22	24	S	22	18	18	23	23	22	22	23	24	23	22	19	9	6	19	14	5	3	29	18.0	24	
9	2	1	1	1	S	26	29	31	32	33	33	35	38	40	41	41	40	38	36	32	31	31	31	32	41	28.5	24	
10	35	40	39	S	39	40	39	36	35	34	31	33	35	36	36	36	38	39	37	36	37	37	40	40	40	36.9	24	
11	39	39	S	37	33	26	24	13	8	21	28	33	37	37	40	42	42	40	38	34	39	39	40	41	42	33.5	24	
12	42	S	40	41	40	39	39	36	36	36	39	41	43	43	44	44	42	42	42	39	36	35	34	33	44	39.4	24	
13	S	29	25	36	30	26	26	24	22	25	27	33	38	40	41	40	39	39	37	39	39	39	41	S	41	33.4	24	
14	32	33	33	34	34	34	39	35	32	32	35	37	39	39	40	C	C	C	C	13	21	17	S	13	40	31.2	24	
15	14	13	11	11	6	3	1	2	22	28	30	31	33	39	42	42	40	37	31	30	32	S	32	36	42	24.6	24	
16	38	37	37	35	35	32	19	6	6	12	30	39	41	43	44	44	44	44	42	38	S	37	33	33	44	33.4	24	
17	34	33	33	34	31	34	36	37	38	38	36	34	34	36	36	36	36	36	36	S	36	36	36	37	38	35.3	24	
18	38	39	40	41	41	41	41	39	40	37	37	38	39	39	38	37	36	31	S	40	38	37	35	36	41	38.2	24	
19	36	36	36	37	37	37	37	37	37	37	39	40	41	43	45	44	44	44	S	43	42	42	42	42	42	45	40.1	24
20	41	42	42	41	41	41	40	40	39	40	40	40	40	40	40	39	S	38	39	40	39	39	38	37	42	39.8	24	
21	38	38	39	38	38	39	38	37	37	37	38	39	38	36	37	S	37	37	37	37	38	38	39	39	39	39	37.8	24
22	38	38	37	39	40	40	39	39	38	39	40	40	39	39	S	38	37	32	35	39	40	39	38	37	40	38.3	24	
23	37	35	34	34	32	30	25	23	25	28	33	33	34	S	35	36	39	41	39	36	33	30	24	21	41	32.0	24	
24	21	20	21	22	23	27	29	25	26	31	31	34	S	36	40	40	38	39	41	42	42	37	27	26	42	31.2	24	
25	27	27	25	24	19	8	6	12	15	17	23	S	38	39	38	40	41	38	33	36	35	40	41	41	41	28.8	24	
26	39	37	35	33	29	27	14	4	8	17	S	30	38	42	42	41	38	31	36	28	34	39	39	41	42	31.4	24	
27	40	38	36	35	35	36	35	35	37	S	40	40	42	42	43	43	44	45	45	44	44	44	44	44	45	40.5	24	
28	43	42	44	45	44	43	42	41	S	40	39	Y	40	40	41	41	39	40	40	38	37	37	38	38	45	40.5	23	
HOURLY MAX	43	42	44	45	44	43	42	41	40	40	40	41	43	45	44	44	44	45	45	44	44	44	44	44	44			
HOURLY AVG	30.6	30.9	30.3	30.8	31.7	30.8	29.3	27.5	27.2	30.0	32.8	34.2	36.1	36.6	37.0	37.2	36.2	34.5	33.4	31.7	32.3	32.3	31.9	31.1				

STATUS FLAG CODES

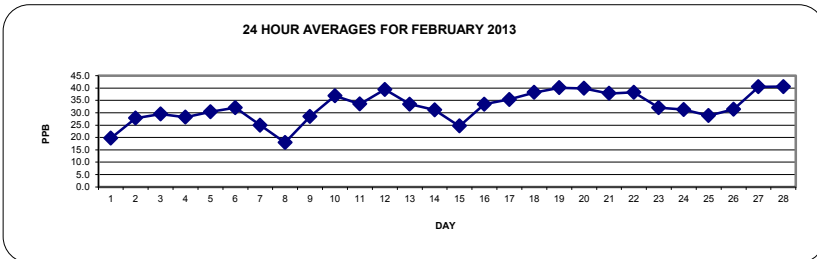
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0				
NUMBER OF NON-ZERO READINGS:	638				
MAXIMUM 1-HR AVERAGE:	45	PPB	@ HOUR(S)	VAR	ON DAY(S)
MAXIMUM 24-HR AVERAGE:	40.5	PPB			27,28
				VAR-VARIOUS	
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	99.9	%
STANDARD DEVIATION:	9.21		MONTHLY AVERAGE:	32.33	PPB



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

OZONE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	23	23	22	18	19	19	18	20	16	23	25	27	S	29	27	26	23	25	25	23	17	16	15	12	29	21.3	24
2	16	36	36	32	30	30	36	34	33	33	32	S	32	32	31	31	31	29	29	25	19	27	27	28	36	30.0	24
3	28	27	27	31	31	30	31	30	29	30	S	32	33	33	47	33	31	31	32	32	31	30	30	32	47	31.3	24
4	33	33	33	32	31	30	31	31	29	S	29	29	29	25	28	34	33	32	31	28	30	32	31	35	35	30.8	24
5	35	30	17	33	37	37	37	37	S	34	36	36	36	37	38	38	35	29	23	33	34	33	34	33	38	33.6	24
6	32	33	31	32	32	32	31	S	31	32	33	33	33	33	32	32	32	33	35	36	36	36	36	35	36	33.1	24
7	34	34	35	36	35	34	S	33	33	33	34	35	35	35	34	33	31	28	19	13	7	3	3	2	36	26.9	24
8	16	30	30	26	27	S	24	22	23	24	25	24	24	25	26	24	22	22	17	13	24	23	10	13	30	22.3	24
9	11	1	1	3	S	28	31	34	34	34	33	37	40	41	42	43	42	39	38	34	32	32	31	34	43	30.2	24
10	39	40	40	S	40	41	40	39	36	35	33	34	37	37	37	37	39	40	39	38	38	39	41	41	41	38.3	24
11	40	40	S	38	36	30	29	25	15	26	31	38	38	39	43	43	43	42	42	37	42	42	42	42	43	36.7	24
12	43	S	42	41	41	41	39	38	38	39	40	43	44	45	45	45	44	43	43	41	39	36	35	35	45	40.9	24
13	S	32	31	38	36	31	29	24	24	27	28	37	40	41	41	42	41	39	39	41	40	40	42	S	42	35.6	24
14	35	36	36	36	35	39	40	39	33	34	37	39	41	40	42	C	C	C	C	25	26	21	S	16	42	34.2	24
15	18	15	14	15	10	7	1	17	28	29	32	32	36	41	43	43	41	39	34	32	34	S	35	39	43	27.6	24
16	39	38	38	37	37	35	30	12	8	27	38	40	42	43	45	45	45	45	43	42	S	39	35	35	45	36.4	24
17	35	35	35	35	33	37	37	38	39	39	37	35	36	37	37	36	36	37	37	S	37	37	38	38	39	36.6	24
18	39	40	41	42	42	42	42	41	41	40	38	39	41	40	39	38	38	34	S	42	39	37	37	37	42	39.5	24
19	37	37	37	38	38	39	39	39	40	40	40	42	45	46	46	45	44	S	43	43	42	42	42	42	46	41.1	24
20	42	42	42	42	42	42	41	40	40	40	40	40	40	41	41	40	S	39	40	41	40	39	39	38	42	40.5	24
21	38	39	39	39	39	40	39	38	38	38	39	39	39	38	38	S	37	37	37	37	38	39	39	39	40	38.4	24
22	39	38	38	40	41	40	40	40	39	39	40	40	40	S	40	39	37	39	41	41	40	39	39	41	39.5	24	
23	38	36	35	35	35	32	29	27	27	34	35	35	S	37	37	43	42	41	38	34	33	25	23	43	34.2	24	
24	21	22	22	24	25	29	30	30	30	32	33	35	S	38	42	42	39	40	43	43	43	42	33	31	43	33.4	24
25	29	30	28	27	23	18	12	16	21	20	33	S	40	41	42	43	42	41	36	41	36	43	42	42	43	32.4	24
26	41	39	36	36	33	30	25	10	15	28	S	39	40	43	43	42	42	37	39	34	39	41	41	42	43	35.4	24
27	41	40	38	37	37	36	36	38	S	43	44	43	43	43	44	45	46	46	45	45	45	44	44	46	46	41.7	24
28	44	43	46	46	45	44	44	43	S	40	40	Y	41	41	42	43	40	41	41	39	38	38	39	39	46	41.7	23
HOURLY MAX	44	43	46	46	45	44	44	43	41	40	43	44	45	46	47	45	45	46	46	45	45	45	44	44			
HOURLY AVG	32.8	32.9	32.2	32.9	33.7	33.1	31.9	30.9	29.9	32.7	34.8	36.2	37.7	37.9	38.9	38.4	37.6	36.4	35.8	34.7	34.1	34.3	33.5	32.8			

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

NUMBER OF NON-ZERO READINGS:	638					
MAXIMUM INSTANTANEOUS VALUE:	47	PPB	@ HOUR(S)	14	ON DAY(S)	3
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS	
MONTHLY CALIBRATION TIME:	4	HRS				
STANDARD DEVIATION:	8.26					

01 Hour Averages



LICA
O3_ / WD Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50	2.97	3.13	4.38	2.19	9.24	6.26	18.49	5.17	3.44	1.72	4.07	12.69	10.81	5.32	4.85	5.17	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.97	3.13	4.38	2.19	9.24	6.26	18.49	5.17	3.44	1.72	4.07	12.69	10.81	5.32	4.85	5.17	

Calm : .00 %

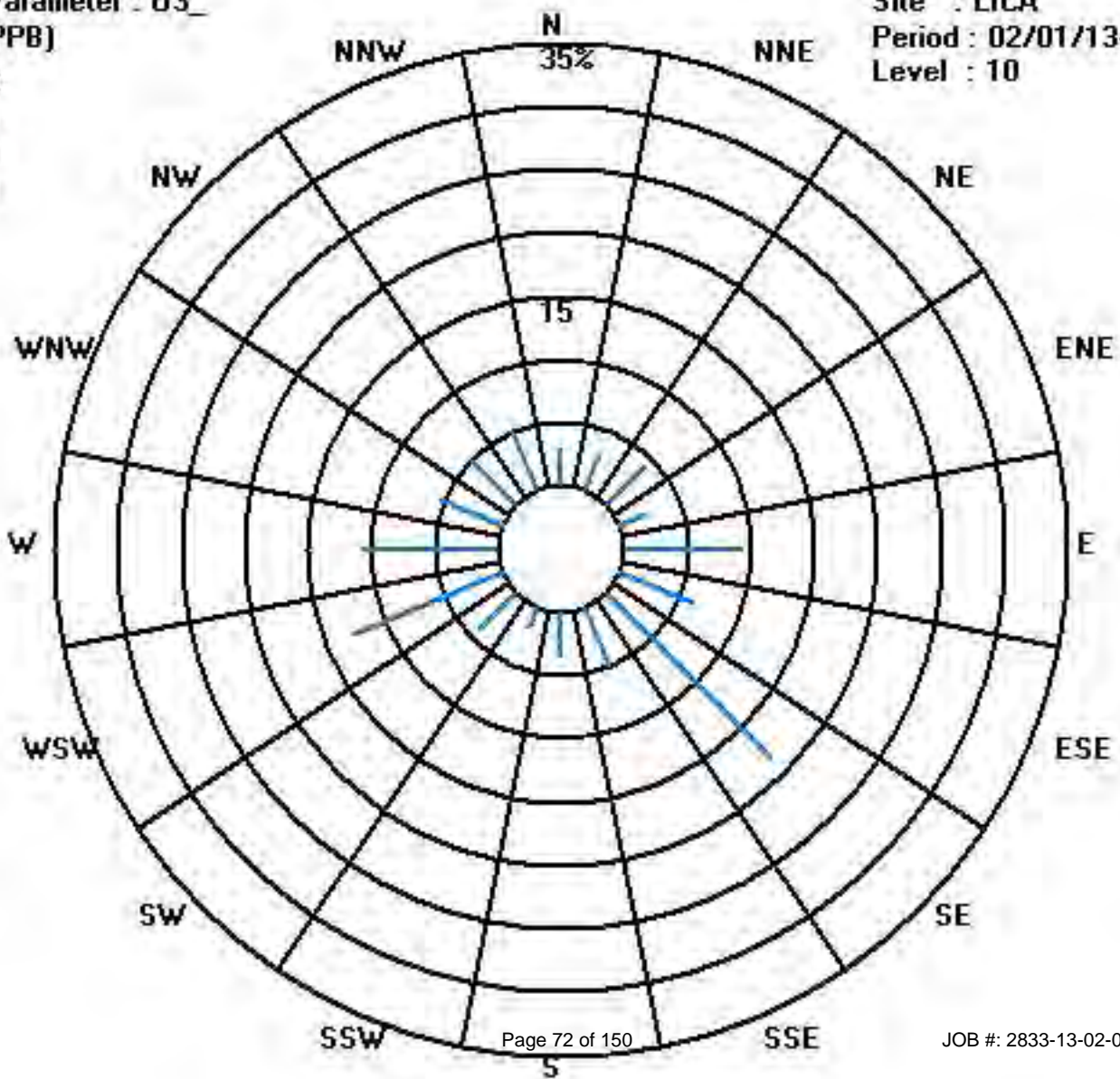
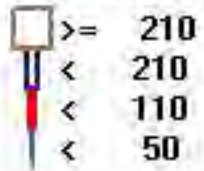
Total # Operational Hours : 638

Distribution By Samples

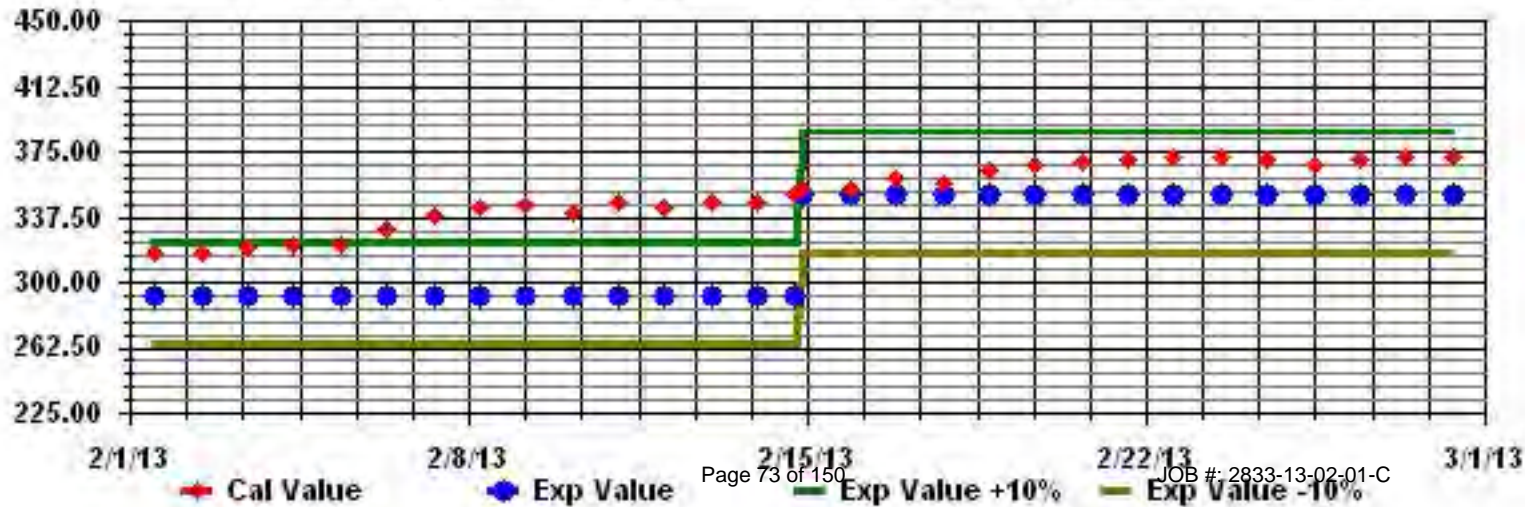
Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50	19	20	28	14	59	40	118	33	22	11	26	81	69	34	31	33	638
< 110																	
< 210																	
>= 210																	
Totals	19	20	28	14	59	40	118	33	22	11	26	81	69	34	31	33	

Calm : .00 %

Total # Operational Hours : 638



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



Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

AMBIENT TEMPERATURE hourly averages (Degrees C)

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY																													
1		-19.7	-19.8	-19.5	-19.3	-19.1	-19	-18.9	-18.7	-18.9	-18.3	-17.4	-16.6	-16.1	-15.4	-15.1	-14.8	-14.5	-14.4	-13.8	-13.1	-12.4	-11.7	-11.2	-10.2	-10.2	-10.2	-16.2	24
2		-7.9	-5.6	-7.6	-10.4	-12.3	-12.8	-13.4	-14.9	-15.6	-14.9	-14.3	-13.5	-12.6	-11.8	-11.1	-10.3	-10.4	-10.5	-10.5	-10.4	-10.5	-10.9	-11.6	-12	-5.6	-5.6	-11.5	24
3		-12.1	-12.4	-12.9	-13.9	-15.1	-15.7	-16	-16.7	-17	-17	-16.8	-16.5	-16.1	-15.6	-15.4	-15.1	-14.8	-14.7	-14.6	-14.5	-14.2	-13.8	-13.6	-13.3	-12.1	-12.1	-14.9	24
4		-13.2	-12.7	-12	-11.9	-11.7	-11.5	-11.1	-11.1	-11.1	-10.8	-9.4	-7.7	-5.8	-4.7	-3.4	-0.4	-1.1	-2	-2.3	-2.6	-2.5	-2.6	-3.6	-2.7	-0.4	-0.4	-7.0	24
5		-2.7	-4.4	-7.3	-9.5	-9	-8.8	-9.2	-10	-10.4	-8.5	-6.8	-5	-5.5	-5.1	-5.2	-5.6	-6.2	-7.6	-7.3	-6.6	-6.5	-7.2	-8.1	-9	-2.7	-2.7	-7.1	24
6		-9.6	-10.4	-11	-11.7	-12.4	-13.1	-13.5	-13.9	-13.9	-13.7	-13.6	-13	-12.4	-11.9	-11.6	-11.6	-11.4	-11.2	-10.8	-10.5	-10.4	-10.4	-10.2	-10.2	-9.6	-9.6	-11.8	24
7		-10	-9.7	-10.1	-11.1	-11.2	-11.4	-11.6	-11.6	-11.5	-11.4	-10.7	-9.1	-7.6	-6.5	-7.3	-7.6	-9.2	-10.9	-13.2	-15.1	-16.2	-17.6	-18.8	-17.8	-6.5	-6.5	-11.6	24
8		-15.8	-13.8	-13.3	-13.4	-13.4	-13.6	-14.1	-15	-15.2	-14.1	-12.9	-10.6	-7.9	-5.8	-4.4	-2.8	-3.1	-5.6	-9.1	-10.8	-10	-11.6	-12.9	-14	-2.8	-2.8	-11.0	24
9		-13	-11.7	-10.7	-9.9	-7.6	-4	-2.7	-1.7	-1.2	-0.8	-0.3	0.7	1.3	1.4	0.7	-0.1	-0.6	-1.3	-2	-3.3	-5.2	-5.5	-5.8	-6.1	1.4	1.4	-3.7	24
10		-6.6	-7	-7.3	-7.9	-8.9	-9.6	-10.1	-10.7	-10.9	-10.8	-10.9	-10.7	-9.8	-8.6	-7.7	-7	-6.5	-8.7	-10.5	-11.8	-11.6	-11.5	-10.9	-10.7	-6.5	-6.5	-9.4	24
11		-10.8	-10.4	-10.9	-11.3	-13.4	-15.3	-15	-15.7	-14.6	-7.8	-3.2	0.3	1.8	2.8	3.7	4.1	3.5	1.3	-0.1	-0.9	-0.3	0	0.4	0.6	4.1	4.1	-4.6	24
12		0.9	1	0.2	-0.7	-1.2	-1.5	-1.4	-2.4	-2.4	-1.5	0.3	1.5	2.6	3.3	3	3.1	1.6	0.9	0.4	-0.1	-0.2	-0.3	-0.3	3.3	0.3	0.3	0.3	24
13		-0.2	0.1	0	0.2	0	-0.2	-0.1	0	0	0.1	0.4	-0.8	-1.3	-1.6	-1.7	-1.4	-1.6	-1.6	-2.3	-3	-3.7	-4.6	-5.9	-7.7	0.4	0.4	-1.5	24
14		-8.4	-7.3	-6.9	-6.7	-6.4	-5.9	-5.8	-6	-6.1	-6.1	-5.9	-4	-4.3	-3.4	-3.1	-3	-3.3	-5.8	-9.5	-11.7	-13.8	-15.4	-16.4	-17.2	-3.0	-3.0	-7.6	24
15		-18	-19	-19.4	-18.9	-17.5	-16.5	-15.9	-14.3	-11	-8.8	-6.9	-5.7	-3.4	-0.9	0.8	1.9	1.2	0.2	-0.6	-0.6	-0.5	-0.4	1.9	-7.3	1.9	1.9	-7.3	24
16		-0.5	-1.4	-2.2	-3	-3.2	-6	-7.4	-8.2	-7.6	-4.3	0.9	3.3	5.1	5.8	5.4	5.4	5.4	5.5	4.7	3	1.7	1.3	0.3	-0.2	5.8	0.2	5.8	24
17		0.7	0.9	1.3	1.6	1.1	0.3	-0.1	-0.6	-1.1	-1.3	-2.4	-3	-3.7	-3.9	-4.3	-5.5	-6.2	-7	-7.4	-7.7	-8.5	-9.2	-10.2	-11.1	1.6	1.6	-3.6	24
18		-11.7	-12.3	-12.8	-12.9	-13	-13.1	-13.3	-13.4	-13.5	-13.4	-13	-12	-11.1	-10.6	-10.6	-10.8	-11.7	-13.1	-13.9	-14.6	-16.1	-17.2	-17.9	-18.5	-10.6	-10.6	-13.4	24
19		-19	-19.5	-20.1	-20.5	-20.8	-20.9	-21.1	-20.8	-20.1	-19.2	-18	-15.9	-12.9	-11.5	-11.7	-13.5	-14.7	-15.2	-15.7	-16.4	-16.7	-17.1	-17.4	-17.7	-11.5	-11.5	-17.4	24
20		-17.8	-17.9	-17.9	-18.1	-18.1	-18.2	-18	-17.9	-17.6	-17.2	-16.5	-15.7	-14.7	-13.6	-13	-12.4	-11.8	-11.9	-12.2	-12.5	-12.7	-12.9	-13	-13.3	-11.8	-11.8	-15.2	24
21		-13.3	-13.5	-13.6	-13.9	-14.5	-14.8	-16.2	-17.2	-17.1	-16.5	-15.6	-14.2	-12.9	-11.3	-10.3	-10	-10	-10.4	-10.8	-11.2	-11.4	-11.5	-11.5	-11.4	-10.0	-10.0	-13.0	24
22		-11.3	-11.3	-11.4	-11.6	-11.9	-12.2	-12.6	-13	-13	-12.7	-12.1	-11	-9.4	-8.1	-7.1	-6.2	-7.5	-8.7	-8.8	-8.4	-8.8	-8.9	-8.6	-8.3	-6.2	-6.2	-10.1	24
23		-8.7	-8.8	-9	-9.5	-9.8	-10	-11	-12.3	-10.8	-8.8	-7.6	-6.4	-4.9	-2.7	-2.6	-2.4	-1.1	-0.3	-0.5	-0.8	-1.1	-1.6	-2.4	-3.1	-0.3	-0.3	-5.7	24
24		-4	-4.8	-6.3	-8.9	-10.6	-11.7	-12.3	-13.2	-11.3	-7.9	-6.2	-3.9	-1.7	0.4	2	2.1	1.2	-0.1	-1.5	-2.3	-3	-5.4	-7.4	-7.2	2.1	2.1	-5.2	24
25		-7.1	-8.8	-10.2	-11.4	-12.1	-11.8	-10.8	-10.3	-8.9	-6.4	-4.3	-3.4	-2.1	-1.3	-0.5	0	-0.1	-1.3	-2.4	-3	-3.3	-3.6	-3.8	-4	0.0	0.0	-5.5	24
26		-5.1	-6.3	-6.6	-7.7	-9.5	-11	-12.4	-13.1	-11.2	-8.1	-5.9	-4.3	-2.6	-1.6	-1.2	-0.3	-0.9	-1.9	-2.4	-3.4	-3.7	-3.9	-4.5	-4.8	-0.3	-0.3	-5.5	24
27		-6.3	-8.4	-9.8	-10.7	-11.1	-11.3	-11.9	-12	-11.3	-10.1	-8.1	-6.3	-4.2	-4.3	-4.3	-4.3	-4.8	-5	-5.9	-6.3	-6.8	-7.2	-7.3	-7.1	-4.2	-4.2	-7.7	24
28		-6.9	-6.8	-6.4	-6.2	-6.4	-6.6	-6.8	-7.1	-7.3	-7.1	-6.5	-5.3	-3.7	-2.1	-0.6	0	0.6	-0.9	-3	-4.4	-5.6	-6.6	-7.7	-8.2	0.6	0.6	-5.1	24
HOURLY MAX		0.9	1.0	1.3	1.6	1.1	0.3	-0.1	0.0	0.0	0.1	0.9	3.3	5.1	5.8	5.4	5.4	5.4	5.5	4.7	3.0	1.7	1.3	0.4	0.6				
HOURLY AVG		-9.2	-9.4	-9.8	-10.3	-10.7	-10.9	-11.2	-11.5	-11.1	-9.9	-8.7	-7.5	-6.3	-5.3	-4.9	-4.6	-4.9	-5.8	-6.6	-7.3	-7.6	-8.1	-8.6	-8.8				

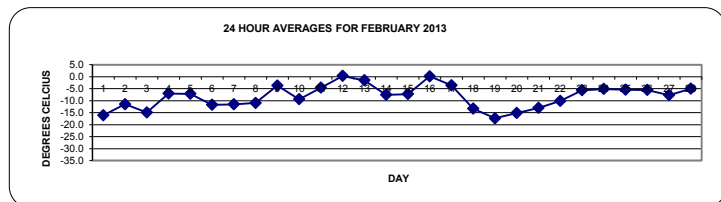
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

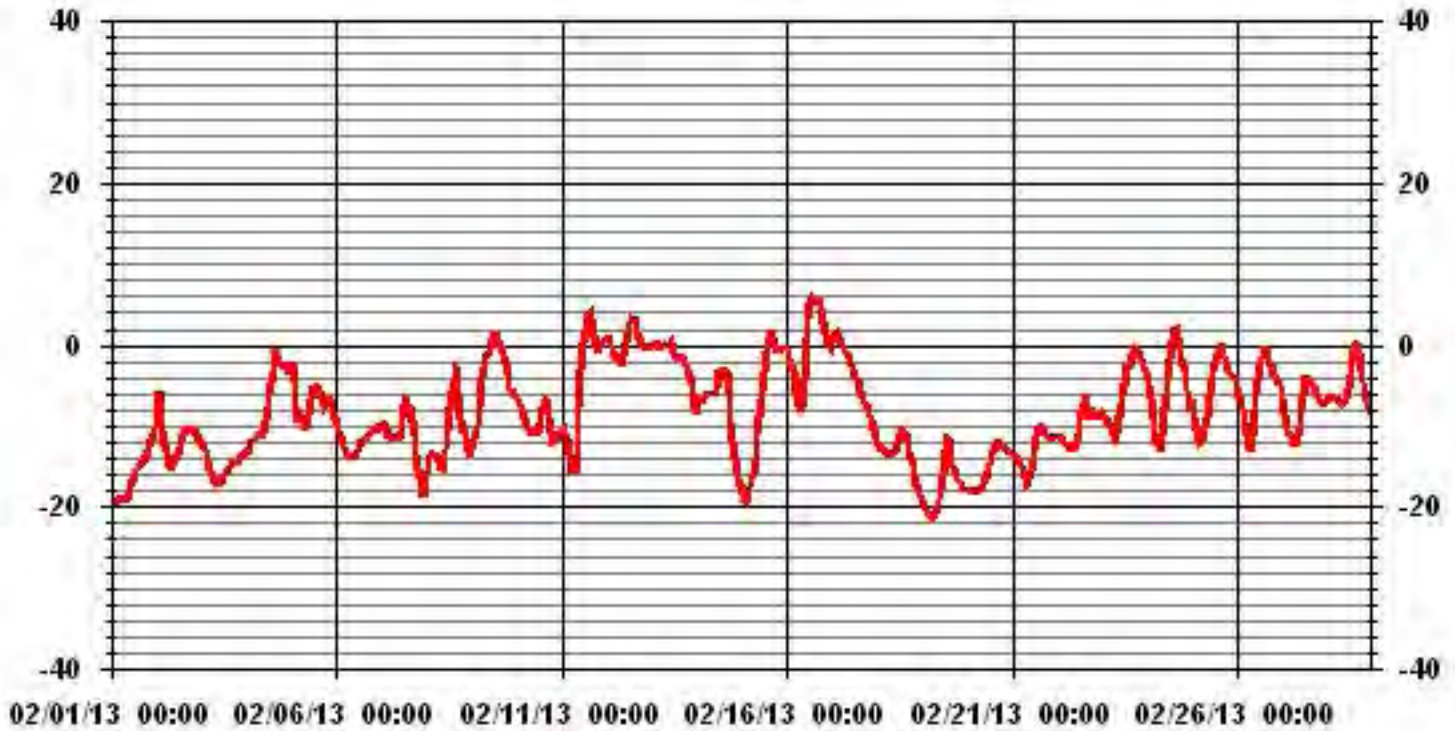
MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-21.1 °C	@ HOUR(S)	6	ON DAY(S)	19
MAXIMUM 1-HR AVERAGE:	5.8 °C	@ HOUR(S)	13	ON DAY(S)	16
MAXIMUM 24-HR AVERAGE:	0.3 °C			ON DAY(S)	12
				VAR-VARIOUS	
CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	672 HRS		
STANDARD DEVIATION:	5.94	AMD OPERATION UPTIME:	100.0 %		
		MONTHLY AVERAGE:	-8.29 °C		

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

RELATIVE HUMIDITY hourly averages (%)

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HOURLY MAX	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX	AVG	RDGS	
1	75	75	76	81	79	79	78	78	78	78	77	73	72	69	70	72	74	76	79	82	82	82	83	84	84	84	84	77.2	24
2	85	81	71	72	74	77	76	77	77	73	72	71	69	67	67	68	71	73	76	77	78	77	82	83	85	85	85	74.8	24
3	83	84	84	82	81	80	79	77	77	76	75	75	74	73	72	73	74	75	76	77	78	78	79	82	84	84	84	77.7	24
4	82	83	84	85	84	85	85	84	84	81	77	73	73	75	77	84	84	77	80	84	82	83	86	77	86	81.2	24	24	
5	76	85	90	90	90	89	89	88	86	81	76	68	71	71	77	85	86	88	88	88	88	88	89	90	91	91	84.2	24	
6	90	88	87	87	85	84	84	84	83	80	78	77	77	75	75	77	79	80	81	81	82	82	82	82	90	90	81.7	24	
7	82	82	83	88	88	88	89	88	88	87	84	76	70	66	68	68	75	82	84	82	82	79	78	82	89	80.8	24	24	
8	83	85	86	85	85	85	84	83	83	84	85	84	74	66	66	65	69	78	86	86	87	85	84	83	87	80.9	24	24	
9	82	82	84	85	88	92	94	95	95	95	91	84	76	70	68	64	69	77	72	76	76	78	77	77	95	81.1	24	24	
10	79	78	78	79	81	82	84	83	84	83	82	82	78	72	68	65	64	75	82	87	86	84	79	74	87	78.7	24	24	
11	74	73	75	77	81	83	82	82	80	72	70	65	62	61	58	56	58	65	69	70	67	66	66	65	83	69.9	24	24	
12	64	62	65	68	68	69	69	71	71	67	62	59	55	52	55	55	62	73	85	92	94	95	95	96	96	71.0	24	24	
13	96	96	96	96	96	96	96	97	97	95	92	93	92	89	86	82	88	83	78	76	78	78	76	81	97	88.9	24	24	
14	85	83	82	83	82	81	76	77	80	80	78	67	64	60	58	58	60	70	81	84	84	82	81	80	85	75.7	24	24	
15	79	78	77	77	78	79	79	82	83	81	79	83	81	79	76	71	74	78	82	83	82	82	80	83	79.4	24	24		
16	79	80	82	84	84	88	89	89	86	76	66	60	55	54	58	58	56	54	57	65	69	68	72	75	89	71.0	24	24	
17	79	83	83	82	81	78	83	87	86	84	86	87	84	80	82	80	77	77	76	77	78	78	77	77	87	80.9	24	24	
18	77	77	77	77	77	76	74	72	70	72	66	60	56	56	55	54	57	62	66	67	70	71	73	73	77	68.1	24	24	
19	73	73	74	74	74	74	74	73	72	70	66	60	51	52	65	70	72	73	73	73	71	72	73	73	74	69.8	24	24	
20	73	72	71	71	71	72	72	73	72	72	71	69	68	68	69	71	72	72	71	71	71	72	73	73	73	73	71.3	24	24
21	73	73	74	75	79	82	82	81	79	77	80	77	79	78	78	79	81	87	87	88	88	88	88	88	88	88	80.9	24	24
22	88	87	87	87	86	86	86	85	85	84	80	74	67	62	60	60	65	69	71	75	78	80	79	77	88	77.4	24	24	
23	78	78	79	80	81	82	84	85	82	75	70	66	63	56	55	59	69	71	72	74	75	78	78	85	73.4	24	24		
24	77	77	78	81	83	84	84	84	82	71	67	62	57	51	48	47	51	55	60	63	67	74	80	78	84	69.2	24	24	
25	79	82	84	86	85	86	86	85	84	76	72	73	70	66	59	53	52	57	62	63	62	61	64	63	86	71.3	24	24	
26	67	72	74	77	82	84	85	85	82	75	67	61	53	45	44	41	45	53	52	57	56	54	54	55	85	63.3	24	24	
27	62	70	77	82	85	86	88	88	87	85	78	72	63	61	59	61	64	70	78	79	78	82	84	85	88	76.0	24	24	
28	85	86	87	89	90	91	92	92	92	90	86	79	72	65	62	61	57	60	68	73	77	80	84	85	92	79.3	24	24	
HOURLY MAX	96	96	96	96	96	96	96	97	97	95	92	93	92	89	86	85	88	88	88	92	94	95	95	96					
HOURLY AVG	78.8	79.5	80.2	81.4	82.1	82.8	83.0	83.0	82.3	79.3	76.2	72.5	68.8	65.7	65.5	65.6	68.0	71.8	74.7	76.7	77.3	77.7	78.5	78.5					

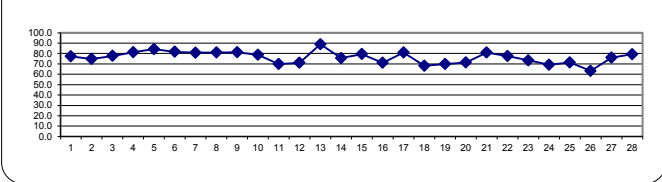
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

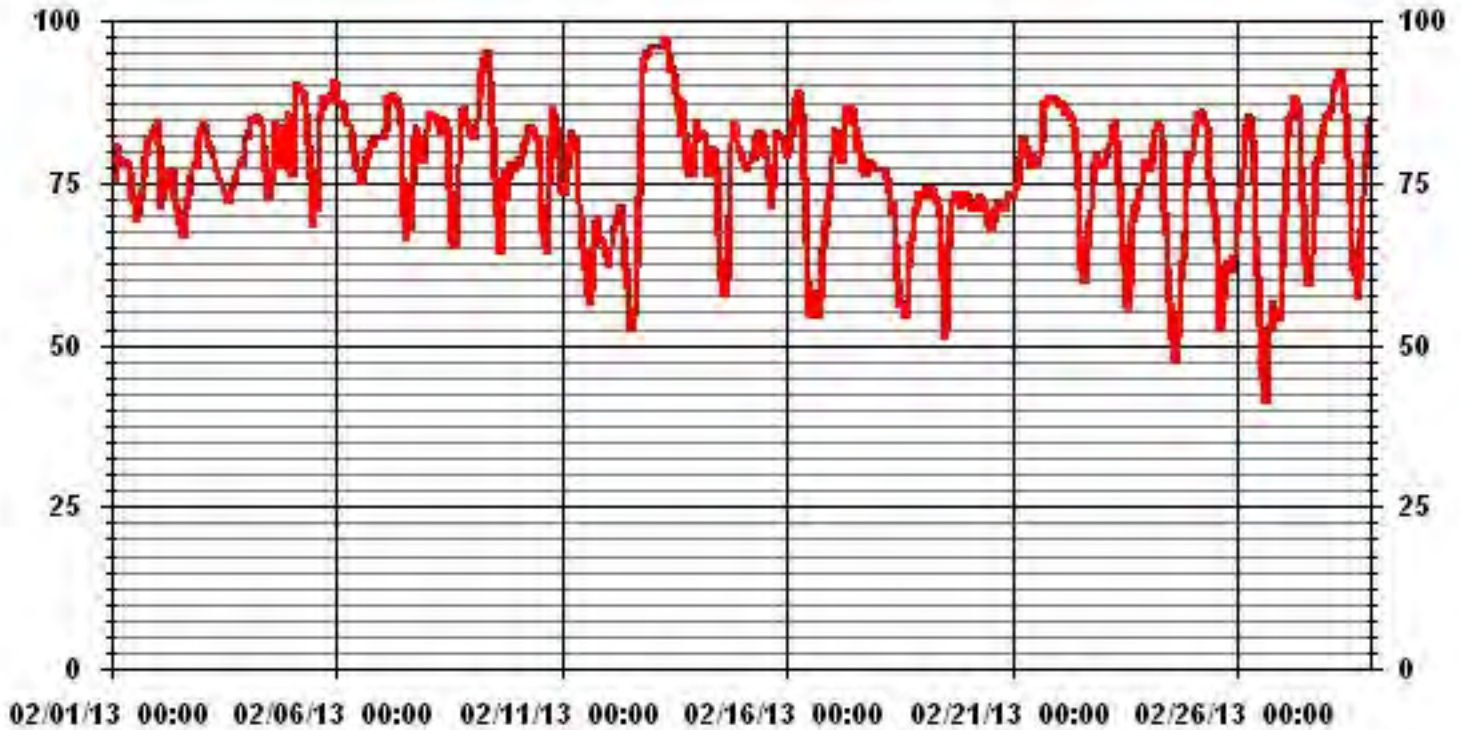
MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	97.0	%	@ HOUR(S)	7,8	ON DAY(S)	13
MAXIMUM 24-HR AVERAGE:	88.9	%			ON DAY(S)	13
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
STANDARD DEVIATION:	10.00		AMSD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	76.24	%	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

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

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	3.1	3	2.5	3.6	3.3	2	1.4	1.5	0.8	1.2	1.2	1	2.2	0.7	1.1	2	3.1	5	2.5	2.4	3.8	1.7	1.3	5.2	5.2	1	24
2	6	18.1	18	14.4	8.7	8	8.9	5.7	5.2	6.5	6.4	6.9	6.2	7	6.7	5.9	4.2	2.7	0.2	1.3	2.2	4.3	5	4.5	18.1	4.9	24
3	4.2	6.1	7	9	8.9	7.9	7.1	9	6.4	6.1	7.4	6.7	6.6	5.4	6.2	4.2	4	3.3	5.6	5.8	4.5	3.8	3.8	4.1	9	5.7	24
4	6.7	4.6	2.3	2.2	2.6	1.8	2	2	1.8	2.1	1.6	1.5	1.7	3.4	4.4	11.5	11.2	12.3	7.3	6.1	9	4.8	2.5	5.8	12.3	2.3	24
5	2.5	2	0.5	3.6	6	5.8	5.4	5.5	4.7	3.6	4.3	0.7	5.1	4.8	5.1	4.5	4.1	3.2	2.9	5.8	6.5	7.8	8.1	8.6	8.6	4.6	24
6	7.7	8.5	7.6	6.8	7.2	7.2	5.9	8.6	5.8	5	6.9	7	6.4	7.5	6.7	6.9	6.2	6.2	8	6.6	6.9	7	3.8	3.4	8.6	6.7	24
7	1.5	1.8	3.4	3	1.8	2.2	2.7	2.6	3.7	4.6	4.4	3.9	3.9	3.3	4.4	3.6	2.6	1	0.8	1.1	0.5	0.3	1.1	0.5	4.6	2.4	24
8	0.8	1.7	0.4	0.7	0.8	1.3	1.6	1.6	1.7	2.6	3.4	5	5.8	5.9	6.4	6	5.6	4.2	1.3	3.2	4.9	1.3	0.8	0.4	6.4	2.8	24
9	0.6	0.9	1.2	1.1	3.7	5.8	4.9	6.9	8.1	8.5	8.2	13.4	15.2	16.3	16	15.1	12.7	14.1	18.1	16.2	17.6	14.8	16.1	15.6	18.1	10.5	24
10	13.2	11.1	7.6	6	8.8	7.9	7.4	3.7	1.6	0.8	4	5.3	6.6	5.7	6.9	5.7	3.1	5.3	1.1	1.3	1.2	3.4	4.3	3.8	13.2	5.2	24
11	2.9	4.5	2.5	1.9	0.7	1	2.9	2.4	1.3	2.4	5	6.2	7.3	7.8	11.4	9.6	8.9	7.6	7	7.6	9.1	8.2	7.2	8.5	11.4	5.6	24
12	9	10.1	7.8	6.8	7.8	8	8.4	7.9	8.3	6.7	8.3	9.8	10.1	9.6	8	6.8	6.8	6.4	5.6	2.8	1.4	1.5	1.8	2.2	10.1	6.7	24
13	1.7	1.5	0.6	2.2	2.6	1.9	4.4	4.1	4.3	5.8	4.1	7.6	9.9	11.3	11.4	6.9	3.5	10.6	10.9	8.9	10.1	9	7.5	2.1	11.4	6.0	24
14	2.3	3	2.6	1.7	3.8	7.3	8.7	4.6	3.8	6.1	6.7	5.8	8.7	7.3	8	6.8	5.9	3.6	0.8	0.3	0.8	0.8	0.6	0.9	8.7	4.2	24
15	0.9	0.9	0.4	0.6	0.7	0.7	0.3	0.8	2.2	4.3	4.6	3.5	6	7.5	7.7	8.9	5.8	4.9	6.3	5.9	5.8	4.9	6.3	8.9	3.8	24	
16	5.6	5.6	5.2	5	5.6	1.8	0.5	0.8	1	1.6	3.6	6	8.9	8.4	9.6	10.5	8.6	9.5	5.2	3.5	4.4	5	4.8	4.2	10.5	5.2	24
17	6.9	4.8	5.9	11.8	10	12.7	10.3	6.7	6.5	6.5	10	9.4	12.5	10.3	9.1	11.6	11	10.7	7.7	7	7.2	8.4	10.2	9.1	12.7	9.0	24
18	6.2	6.7	5.3	2.3	2.3	3.3	3.7	5.1	7.9	7.4	8.1	8.3	7	7.6	7.5	8.2	6.8	5.4	5.9	10	8.7	10.5	7.2	8.4	10.5	6.7	24
19	7.3	6.9	7	6.7	8.3	8.3	8.3	8.6	7.5	8.3	7.9	8.8	10.6	15.3	15.2	15.5	17	15.3	12.5	13.2	11.6	10.1	9.8	7	17.0	10.3	24
20	8.8	9.7	8.2	8.6	7.7	7.6	5.9	6.3	7.2	7.4	6.1	5.8	5.5	5.5	5.7	6.4	4.8	5.3	5.1	4.6	4.1	3.5	4.3	4.4	9.7	6.2	24
21	4.8	5.6	6.4	5.3	5.2	4.1	5.1	5.5	6.5	5.8	7.8	6.5	7.5	5.2	7.2	9	10.3	10.6	9.8	9.7	9.2	8.2	7.8	7	10.6	7.1	24
22	7.1	6.5	4.9	5.8	5.4	3.6	5.6	6.7	5.6	5.2	10.4	8.8	5.9	6.2	6.6	6.4	4	4.8	5.6	8.1	9.7	9.5	6	5.4	10.4	6.4	24
23	6.1	3.9	4.9	4	0.9	3.1	0.9	1.1	1.3	2.9	5.3	7.7	6.6	6.9	8.2	9.7	10.2	12.3	8.1	9.7	9.2	8.8	8.5	9.7	12.3	6.3	24
24	9	8.1	7.8	5.9	5.2	5.1	4	0.5	2	3.1	4	5.6	5.5	5.2	5.4	4.1	3.3	3.5	3.7	2.6	1.8	0.4	0.6	1.3	9.0	4.1	24
25	1.1	1.6	1.2	1.2	0.4	1.8	1.4	1.2	1.7	0.7	2.4	5.1	6.3	5.2	5.6	4.4	3.9	3.7	2.5	3.4	1.7	4.7	4	5.4	6.3	2.9	24
26	3.7	3.1	2.7	1	0.6	0.7	0.5	1.6	0.9	1.7	1.8	3.9	2.6	5.4	4.2	3.8	2.1	0.6	2.7	1.1	2.5	1.9	3.2	2.4	5.4	2.3	24
27	3.4	4.5	4.4	3.4	5.1	3.8	5.7	6.1	6.7	5.8	4.8	6.7	11.4	11.5	12.9	13.8	9.1	5.6	5.1	4.6	5.9	6.3	5.3	6.6	13.8	6.6	24
28	3.9	3.7	3.8	3.8	2.6	3	2.7	3.9	3.8	4.7	6.7	5.1	6	5.6	2.5	6.2	3.7	3.6	4.3	3.8	2.9	4.1	4.6	5.2	6.7	4.2	24
HOURLY MAX	13.2	18.1	18.0	14.4	10.0	12.7	10.3	9.0	8.3	8.5	10.4	13.4	15.2	16.3	16.0	15.5	17.0	15.3	18.1	16.2	17.6	14.8	16.1	15.6			
HOURLY AVG	4.9	5.3	4.7	4.6	4.5	4.6	4.5	4.3	4.2	4.5	5.5	6.2	7.0	7.2	7.5	7.6	6.6	6.5	5.5	5.6	5.8	5.6	5.2	5.3			

STATUS FLAG CODES

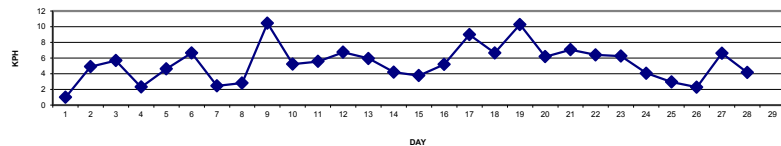
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

LAST CALIBRATION: November 28, 2012

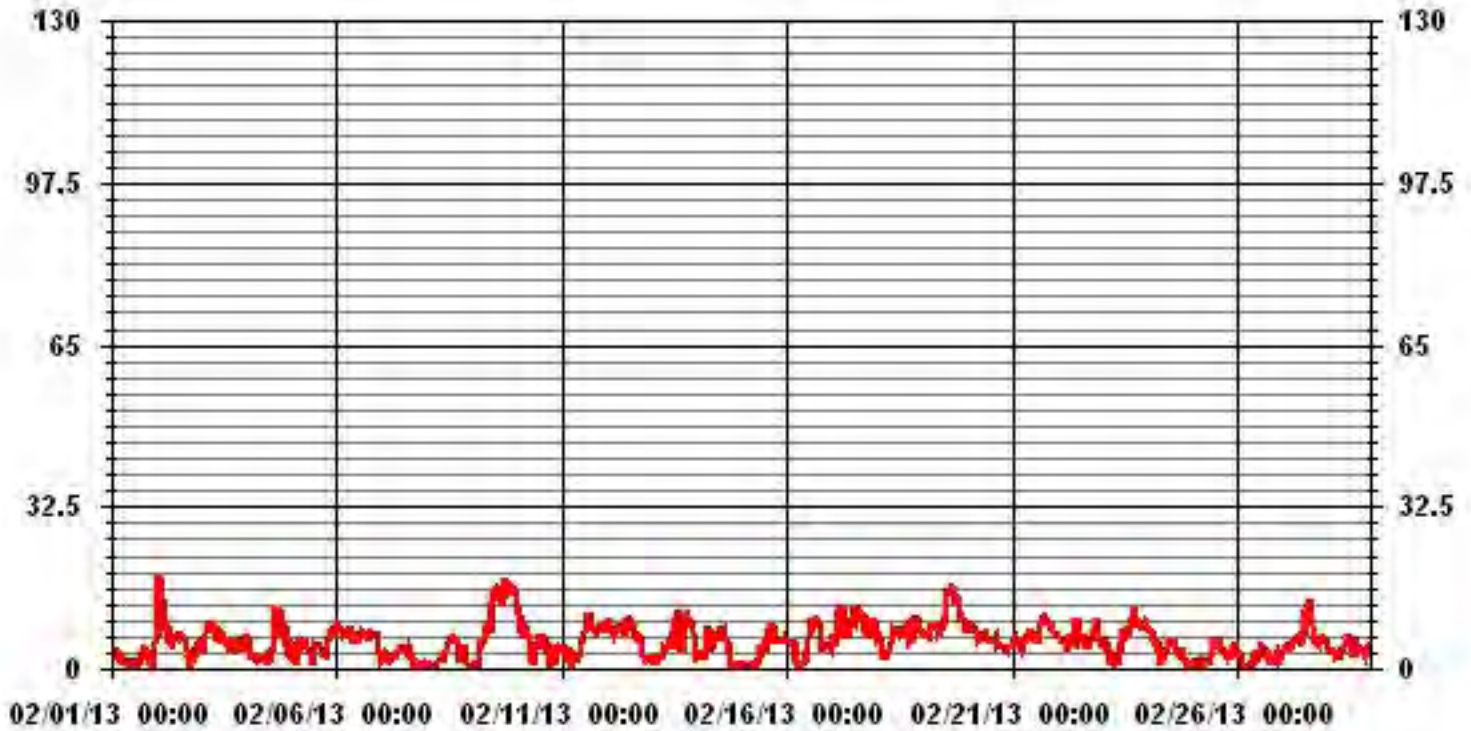
MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	18.1	KPH	@ HOUR(S)	1,18	ON DAY(S)	2,9
MAXIMUM 24-HR AVERAGE:	10.5	KPH			ON DAY(S)	9
CALMS (≤ 0 KPH)	0.57	%	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	3.43		MONTHLY AVERAGE:	5.55	KPH	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	
DAY																											
1		4.9	4.7	6	6	5.1	4.8	3.3	2.7	2.5	3.9	4.4	6.3	7.6	6.2	5.9	5.3	6.2	8.5	5.2	5.4	6.7	4.4	4.3	8.7	8.7	
2		11.4	29.7	27.4	20.6	17	16.7	13.5	10.2	8.8	11.4	10	9.9	11.3	11.4	11.6	9.1	7.3	5.7	3.5	3.5	4.2	6.6	8.8	9.5	29.7	
3		7.4	8.9	12	14.7	13.2	12.3	12.8	15.7	12.4	12.4	11.8	12.6	11.2	10.5	9.4	8.2	7.7	5.8	10.5	9.6	8.1	6.6	6	7.8	15.7	
4		10.5	7.7	6.1	4.3	5.1	4	4.3	4.9	5.2	4.3	6	4.3	5.1	6.1	10	18.3	20.9	18.4	11.7	10.5	16.5	10.3	13.9	9.6	20.9	
5		6.6	6.5	4.5	6.6	8.4	8.4	7.8	7.8	6.7	6.1	7.6	6.3	9.1	8.3	9.7	6.3	6.2	5.6	5.6	10.2	10.4	15.5	11.8	12.9	15.5	
6		17.3	15.3	12.3	12.2	10.8	11.6	11.8	12.6	10.9	8.3	11.4	11.4	11.3	13.2	11.9	12.9	10.9	9.9	12.9	12.8	12.7	10.7	10.8	5.3	17.3	
7		4.8	7.7	8.9	9.6	4.4	6.4	6.8	5.5	6	7.3	7.9	8	6.3	6.6	5.8	5.4	4	2.9	2.5	2.4	2.4	2	4.6	3.3	9.6	
8		4.1	4.2	3.2	2.6	2.5	3.5	5.4	5.2	4.1	6.6	8	7.9	8.5	10.2	9.6	9.1	8.3	6	3.9	5	6.3	4.5	0.9	3.1	10.2	
9		1.9	2.6	3.5	3.2	8.1	8.3	8.1	12.6	13.4	12.1	13	19.2	24.8	22.3	21.9	20.9	19.4	24.2	27.8	21.2	27.7	21.8	24.7	21.1	27.8	
10		17.7	15.4	13.8	9.9	13.6	11.4	13.5	8	5.2	4.5	7.7	8.5	12.2	10.1	9.6	9.2	7	11.8	5.5	3.3	3.3	8.5	9.8	9	17.7	
11		6.4	9.9	4.7	4.2	2.9	3.2	6.5	5.1	5.8	5.6	7	9.2	14.6	15.5	18.2	13.6	11.9	9.2	10	10	12.9	10.8	9.9	11.5	18.2	
12		13.2	13.4	12.3	9.2	10.3	10.8	11.6	11.4	11.3	10.8	12.5	15.2	13.2	13.7	12.3	11.1	11.6	10.6	10.3	5.2	3.7	3.5	3.4	4.5	15.2	
13		3.5	3.4	2.3	4.4	3.9	5.3	6	6.4	6.2	10.3	8.6	12.6	16.1	17.6	16.9	12.9	9.4	15.5	16.7	13.7	17.5	14.1	13.7	5	17.6	
14		4.5	4.9	5	4.8	7.2	15.3	18.5	8	6.8	9.7	10.1	10.9	13	10.9	14.8	10.1	10.5	7.3	4	0.8	0.8	1.2	2.1	1.7	18.5	
15		0.9	0.9	2.2	0.9	0.9	1.7	0.9	2.2	4.1	5.9	7.5	10.6	9	10.1	11.9	12.9	12.1	9.3	6	8.2	8.5	7.4	7.5	9.4	12.9	
16		8.8	8.6	6.5	6.5	7.8	3.6	2.5	1.6	2.6	4	6.1	10.4	14.9	13.4	15.7	16.3	12.3	13.7	7.7	5.7	6.2	7	6.6	5.5	16.3	
17		9.5	8.4	10	17.4	16.7	17.5	14.8	10.2	10.4	12.7	15.3	15	18	15.5	12.9	17.7	15.8	17.1	15	12.7	13.6	13.1	16.6	15.4	18	
18		11.1	12	11.8	5.7	6.9	9.4	9.1	8.3	11.4	13.9	13.9	13.6	12.8	12.8	11.5	12.6	14.6	9.2	13.4	14.2	11.3	15.4	10.6	13	15.4	
19		12	10	12.8	10.4	13.3	12.7	12.7	13.1	11.4	14.7	11.5	13.4	19.3	22.4	24.7	23.3	24.9	21.9	17.8	19.5	17.5	14.4	15.1	11.2	24.9	
20		12.7	13.1	12.9	12.7	10.8	10.8	8.8	8.9	10.9	10.8	9.5	8.4	9.1	8.2	9.1	9.4	8.2	8.4	7.7	8.7	6.8	6.9	7.1	8.1	13.1	
21		7.3	7.3	9.2	8	6.9	7.5	7.4	7.7	9.7	8.6	11.9	11.6	13.7	9.8	12	14.8	14.5	17.3	13.5	13.9	13.5	11.7	10.6	11	17.3	
22		10.6	9.1	7.8	9.7	9	8.9	10.3	11.3	10	10.6	13.9	12.5	14.1	10	10.6	9.3	8.7	7.9	8.3	13.7	16.4	14.6	8.6	9.5	16.4	
23		9	10.3	9.5	9.9	5.9	7.9	5.8	4.4	3.1	7	10.3	12.7	11.9	12.8	13.7	16	23.1	22.7	12.7	17.5	13.3	12.8	14.3	13.9	23.1	
24		14.6	12	9.9	8.7	7	7.5	6.6	3	6.5	7.3	7.2	8.7	9.4	9.4	9.5	8.1	6	7.1	8.5	5.5	5.3	4.3	3.8	3.6	14.6	
25		5.2	4.7	3.6	3.5	2	4.4	4.2	3.4	3.5	0.9	6.7	7.6	9.5	8.4	9.3	8.1	5.9	5.8	4.2	6.7	3.1	8.9	6	8.3	9.5	
26		7.1	4.9	4.2	2.6	2.3	2.4	2.6	3.5	2.5	4.3	4.3	8.2	6.5	9.8	8.5	6.9	5.3	4.5	4.3	2.8	4.4	4.4	5	6.1	9.8	
27		5.4	6.3	5.9	6.3	8.5	7.9	8.5	8.5	10.2	9.8	7.8	11.7	17	17.9	18.9	20.4	15.7	9.9	9.1	7.3	8.3	9.4	7.8	9.8	20.4	
28		8.1	7.6	8.9	7.7	6.6	7.6	6.9	7.4	9.3	11.2	12.8	9.7	11	10.1	10.6	11.4	8.8	6.7	8.1	8.7	6.6	6.6	7.2	8.4	12.8	
PEAK		17.7	29.7	27.4	20.6	17.0	17.5	18.5	15.7	13.4	14.7	15.3	19.2	24.8	22.4	24.7	23.3	24.9	24.2	27.8	21.2	27.7	21.8	24.7	21.1		

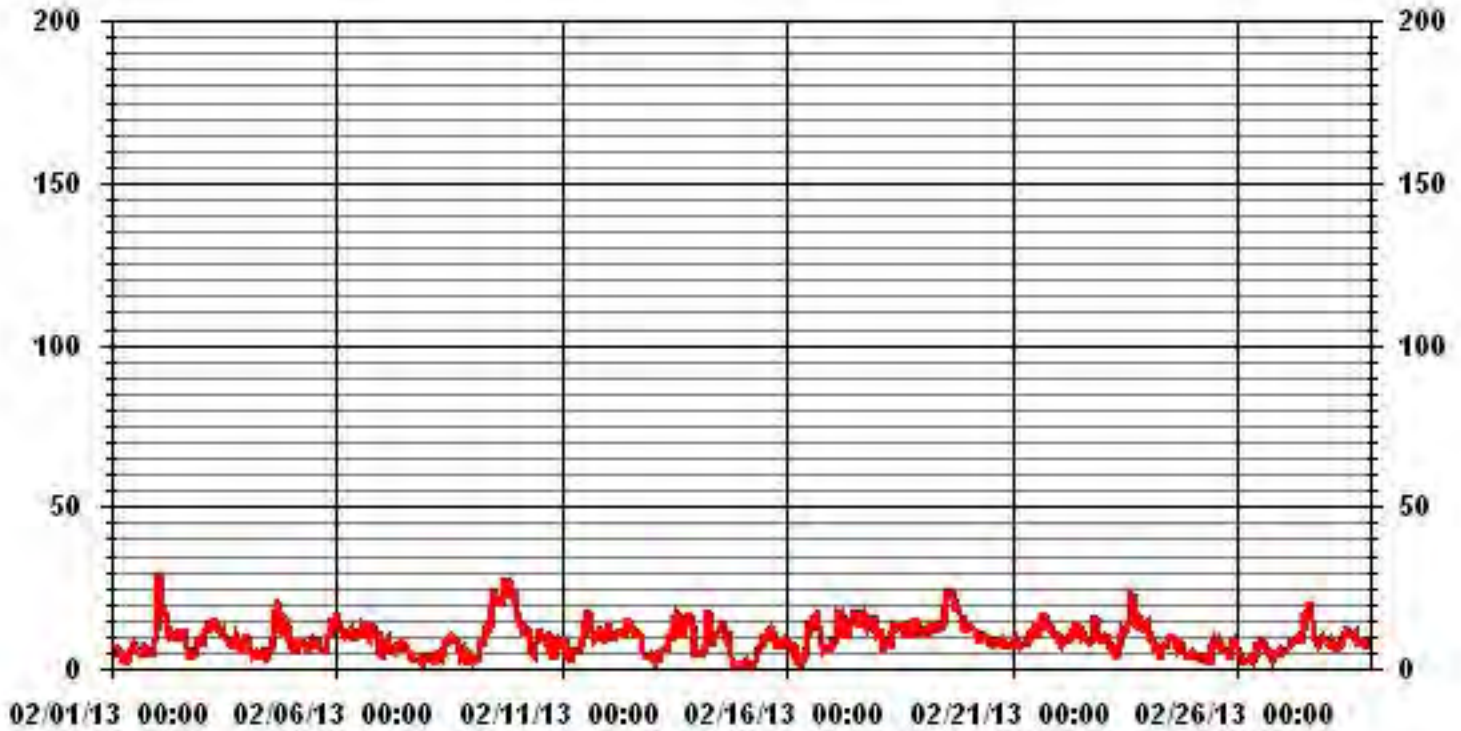
STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	29.7	KPH	@ HOUR(S) ON DAY(S)	1 2
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01 Hour Averages



LICA
WSP / WD Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 6.0	1.78	2.08	2.23	1.78	3.86	2.97	8.63	4.61	3.57	1.78	3.57	7.73	5.80	3.57	2.52	1.33	57.88
< 12.0	1.04	.89	2.08	.44	5.20	3.12	8.77	.44	.00	.00	.44	5.35	4.76	1.63	1.04	1.78	37.05
< 20.0	.14	.00	.14	.00	.00	.00	1.19	.14	.00	.00	.00	.00	.00	.00	1.04	1.78	4.46
< 29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.97	2.97	4.46	2.23	9.07	6.10	18.60	5.20	3.57	1.78	4.01	13.09	10.56	5.20	4.61	4.91	

Calm : .59 %

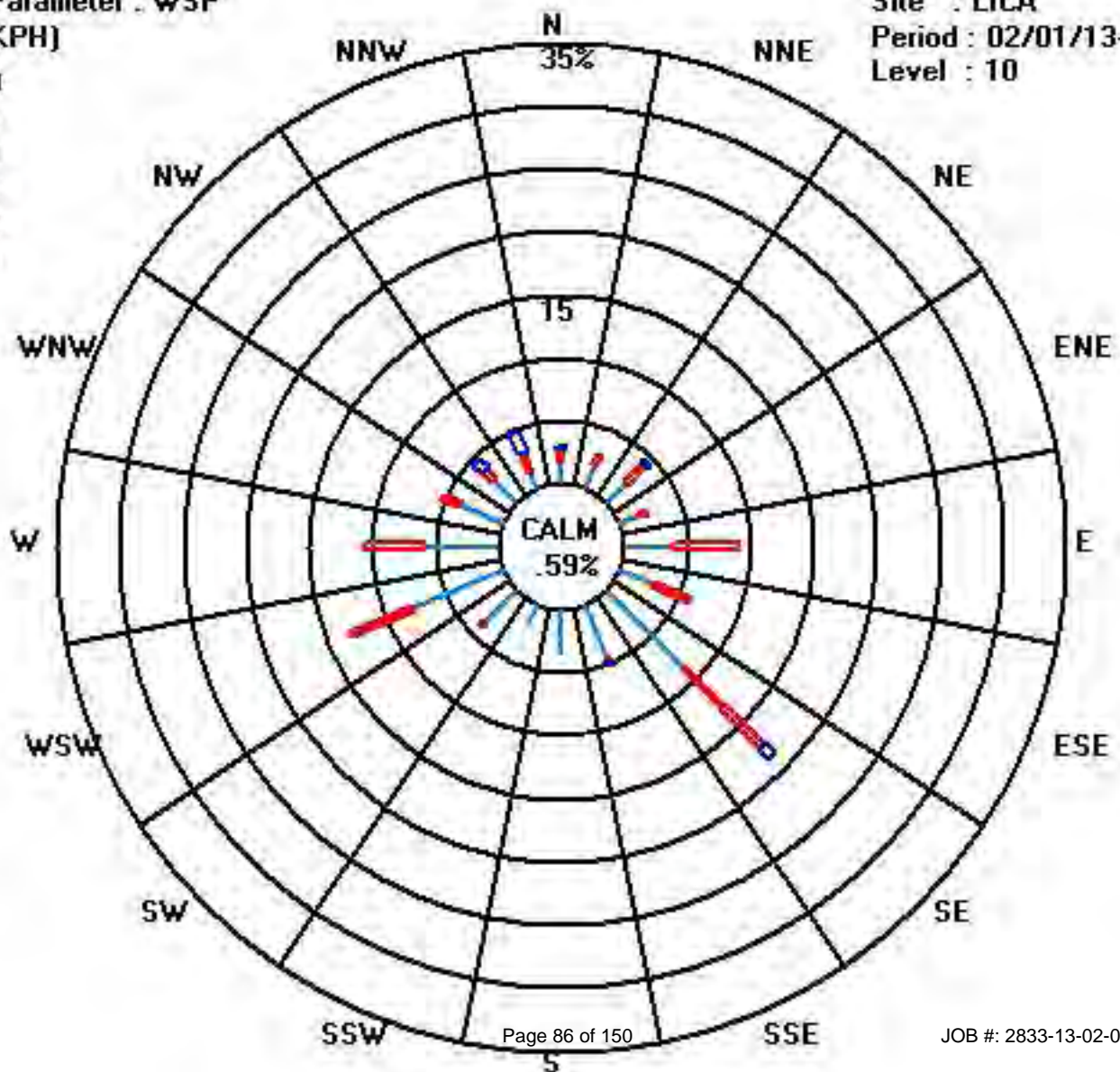
Total # Operational Hours : 672

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 6.0	12	14	15	12	26	20	58	31	24	12	24	52	39	24	17	9	389
< 12.0	7	6	14	3	35	21	59	3			3	36	32	11	7	12	249
< 20.0	1		1				8	1							7	12	30
< 29.0																	
< 39.0																	
>= 39.0																	
Totals	20	20	30	15	61	41	125	35	24	12	27	88	71	35	31	33	

Calm : .59 %

Total # Operational Hours : 672



Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - COLD LAKE

FEBRUARY 2013

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	RDGS.
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	AVG.	QUADRANT	
DAY																											
1	345	333	315	287	284	298	284	292	298	219	192	180	151	230	173	108	130	143	187	220	232	254	300	263	249	WSW	24
2	307	332	324	344	332	318	314	308	299	296	284	286	273	282	271	280	245	235	336	75	86	84	100	106	312	NW	24
3	100	91	90	91	91	90	93	89	98	92	90	101	104	109	144	135	93	95	130	135	115	83	97	123	102	E	24
4	134	127	99	79	55	72	126	143	63	65	74	95	284	257	268	302	322	333	328	339	321	339	12	319	338	NNW	24
5	323	110	116	239	234	239	241	257	255	262	249	316	56	36	13	36	49	49	61	88	90	94	96	92	75	ENE	24
6	90	97	97	85	91	92	88	94	104	106	104	103	101	97	84	99	106	120	134	137	136	147	146	136	106	ESE	24
7	149	171	187	191	173	182	183	163	146	141	126	122	95	79	23	18	25	4	24	286	318	324	270	69	127	SE	24
8	242	265	188	342	314	323	294	283	272	251	242	244	242	242	241	241	247	264	270	252	258	269	284	257	254	WSW	24
9	9	330	318	295	246	234	241	257	271	275	293	315	322	324	325	329	326	336	338	340	348	342	341	347	323	NW	24
10	337	338	347	1	331	329	340	1	300	269	255	268	259	275	272	275	216	224	195	148	193	165	187	179	303	WNW	24
11	188	219	199	211	209	241	265	255	281	272	270	259	247	253	267	272	273	266	259	258	262	264	269	266	258	WSW	24
12	269	272	256	253	257	259	263	258	260	258	269	256	259	254	233	232	238	238	241	237	220	138	154	149	253	WSW	24
13	166	245	201	260	264	261	270	277	270	274	304	10	28	17	14	19	346	339	346	0	355	3	356	336	347	NNW	24
14	271	279	257	242	237	285	305	279	251	240	241	235	240	253	240	239	239	246	132	165	230	234	227	287	253	WSW	24
15	286	286	11	4	346	357	351	14	222	141	146	159	214	242	246	256	259	254	257	256	249	249	239	246	244	WSW	24
16	233	237	244	242	243	253	261	8	298	282	256	251	260	249	244	242	245	269	267	259	266	259	261	281	253	WSW	24
17	319	302	321	342	344	352	3	28	38	41	52	50	56	48	42	50	50	49	42	42	42	52	59	63	31	NNE	24
18	55	62	79	8	90	110	117	125	140	125	130	137	122	106	103	96	101	99	132	141	140	137	130	130	117	ESE	24
19	127	121	122	110	101	101	100	100	107	126	111	110	133	137	145	148	145	143	142	143	143	142	145	142	131	SE	24
20	138	139	145	144	145	141	142	141	140	141	139	139	137	134	134	139	148	146	151	152	151	156	147	147	143	SE	24
21	150	147	145	149	145	144	139	143	135	123	133	123	128	115	116	134	138	140	142	137	138	137	139	137	136	SE	24
22	138	137	149	144	148	157	147	144	144	145	145	144	114	99	103	97	55	80	96	123	131	133	117	108	127	SE	24
23	99	96	97	95	62	94	313	238	303	272	249	242	253	247	237	240	287	304	283	295	293	280	274	270	270	W	24
24	269	268	264	240	243	237	249	232	134	129	140	137	137	112	145	175	173	189	205	224	231	266	129	237	208	SSW	24
25	185	260	308	262	321	54	235	304	288	321	9	22	23	35	60	42	31	21	12	9	27	40	36	31	24	NNE	24
26	32	61	48	24	149	292	2	62	71	304	35	95	101	138	117	106	54	331	253	172	140	157	141	153	98	E	24
27	139	133	130	117	131	137	142	136	138	139	124	106	140	140	139	142	143	156	147	154	143	136	135	139	138	SE	24
28	149	146	185	220	194	188	187	158	173	179	147	130	123	138	204	157	204	217	215	204	176	133	126	128	165	SSE	24
HOURLY AVG	345	338	347	344	346	357	351	308	303	321	304	316	322	324	325	329	346	339	346	340	355	342	356	347			

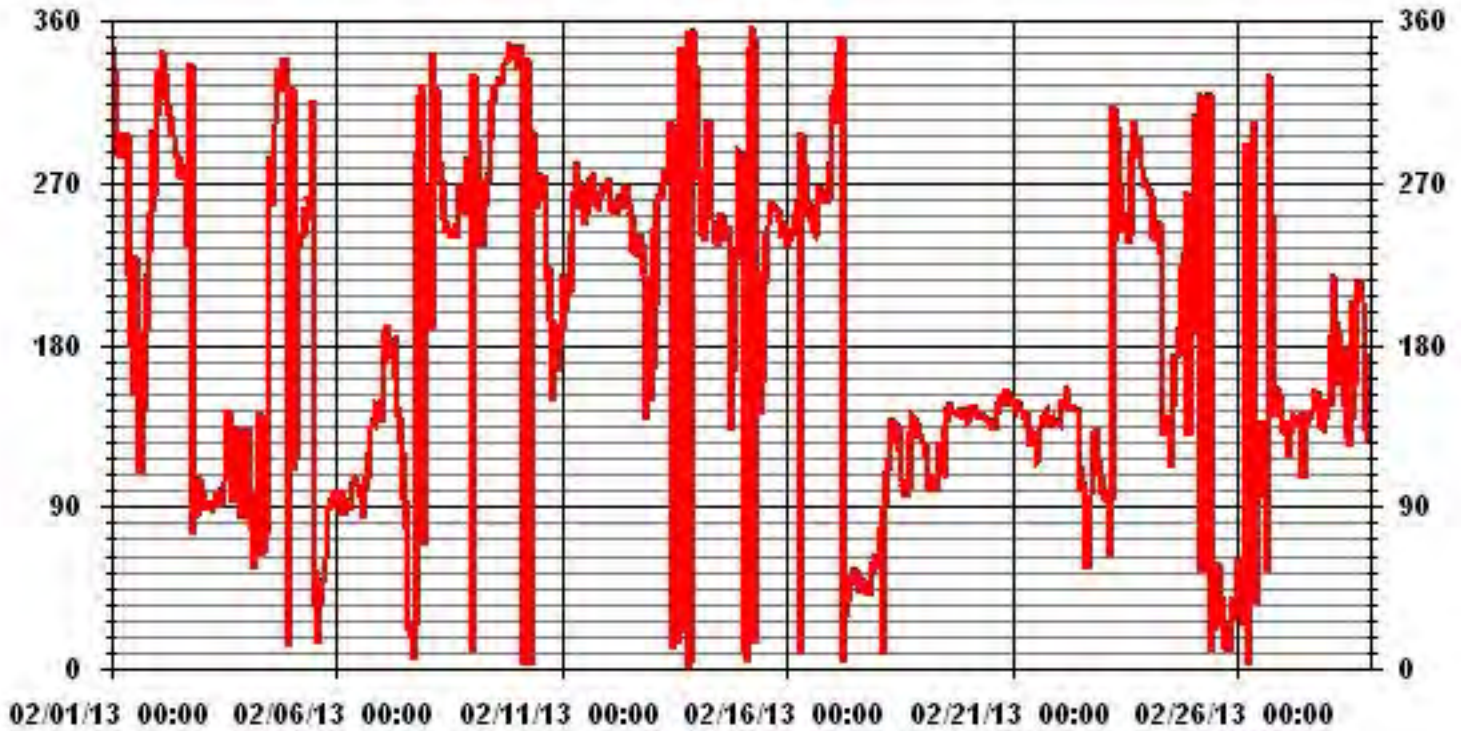
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

LAST CALIBRATION:	November 28, 2012
DECLINATION:	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS
STANDARD DEVIATION:	91.83		AMD OPERATION UPTIME:	100.0	%
			MONTHLY AVERAGE:	160	DEG

01 Hour Averages



— LICA WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

FEBRUARY 2013

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	
DAY																									
1	13	11	14	13	17	20	29	14	25	34	61	66	46	64	49	40	22	18	38	39	22	34	44	20	
2	21	15	13	15	13	13	14	12	15	17	18	18	19	19	21	20	21	20	18	37	26	19	19	24	
3	20	18	19	17	18	18	20	18	21	23	21	23	22	23	18	22	24	25	24	20	25	22	22	20	
4	17	21	30	29	19	21	27	42	39	31	39	37	49	21	18	18	17	14	12	12	15	18	38	15	
5	40	40	46	27	12	12	14	11	11	14	18	41	14	23	19	21	16	18	18	17	17	19	20	20	
6	20	19	19	20	18	20	20	17	22	23	23	23	21	22	20	21	23	24	21	19	17	21	43	18	
7	42	60	44	44	45	53	46	32	21	23	21	27	26	33	16	13	13	6	7	20	38	41	9	51	
8	51	24	42	38	23	40	44	51	28	35	24	23	23	22	19	17	16	12	15	10	10	7	0	34	
9	34	13	20	14	23	18	19	19	16	17	19	15	15	14	14	14	15	15	15	18	16	16	17		
10	15	14	18	16	13	13	16	33	29	64	49	20	25	24	16	15	43	32	70	58	52	46	43	42	
11	43	31	35	41	23	46	21	34	37	21	15	17	18	20	18	17	15	12	13	12	16	15	15	16	
12	16	16	17	15	14	14	14	14	16	17	18	19	16	18	20	23	20	19	18	21	46	32	31	35	
13	31	12	29	15	12	12	16	17	15	17	23	18	22	19	18	19	18	14	15	17	17	17	15	14	
14	48	12	40	27	19	19	16	18	18	18	17	23	20	19	20	20	17	10	44	36	0	6	42	1	
15	0	0	41	18	19	19	18	34	62	33	26	37	42	22	21	19	15	13	8	10	12	12	14	16	
16	14	13	11	10	9	4	10	0	17	26	9	18	18	19	18	19	19	16	15	13	11	10	9	14	
17	14	11	10	15	15	16	17	20	21	20	18	20	17	21	21	19	20	19	21	21	19	19	17	19	
18	24	20	25	37	25	38	48	22	16	23	22	20	27	24	22	21	22	18	16	14	15	15	20	19	
19	21	22	22	22	18	18	20	19	22	22	23	23	24	17	18	19	16	16	14	16	17	16	15	15	
20	14	14	16	16	15	15	16	16	13	16	19	18	19	22	18	16	27	18	21	26	27	31	21	23	
21	22	19	17	21	16	21	14	17	15	23	19	23	22	26	24	20	15	15	15	15	15	15	16	17	
22	15	16	24	16	24	37	26	22	27	27	14	15	24	22	22	21	22	17	19	20	19	17	24	21	
23	19	29	20	48	37	48	53	34	4	27	20	20	22	20	21	19	21	16	18	17	19	19	16	17	
24	18	17	14	15	14	16	12	62	55	45	32	20	19	24	24	35	33	36	41	33	60	36	23	21	
25	29	30	30	16	43	30	49	7	16	31	27	19	17	19	18	20	19	15	12	13	19	21	20	20	
26	17	14	15	31	47	31	40	18	23	16	25	22	46	31	26	26	27	29	11	20	24	34	19	43	
27	18	9	12	16	21	24	17	14	16	20	25	23	17	17	17	15	15	31	25	26	17	15	15	15	
28	24	20	31	33	43	40	44	32	29	22	29	33	25	25	47	27	36	33	32	38	41	23	21	20	

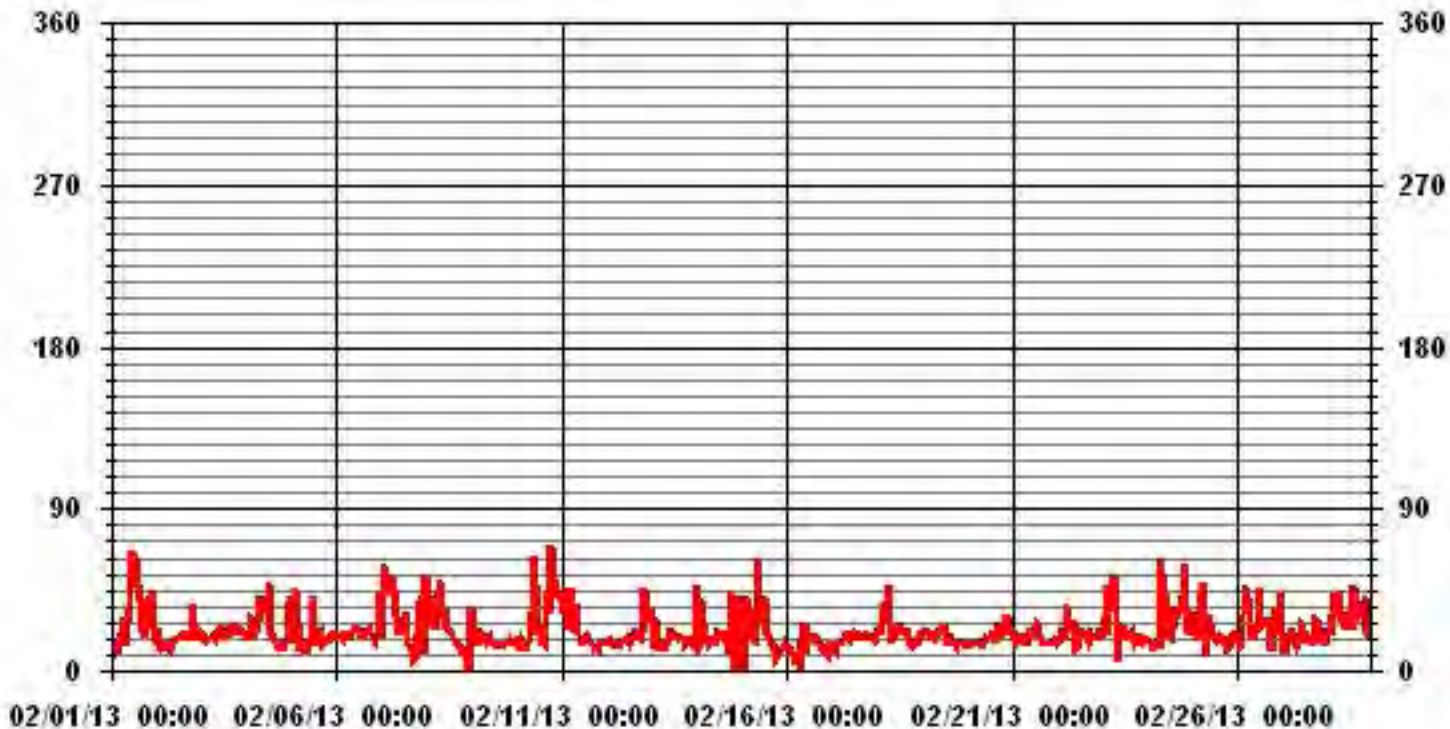
STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

LAST CALIBRATION: November 28, 2012

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 672 HRS

01 Hour Averages



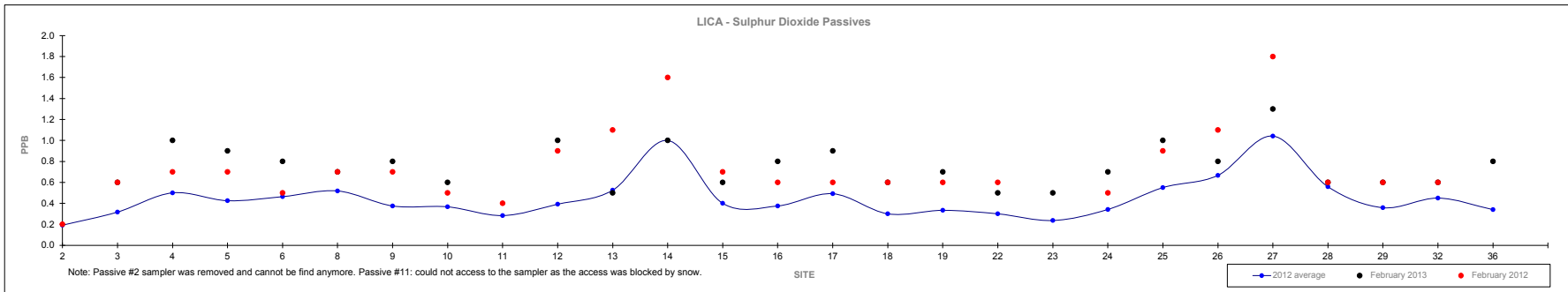
— LICA STDWDIR DEG

Non-Continuous Monitoring

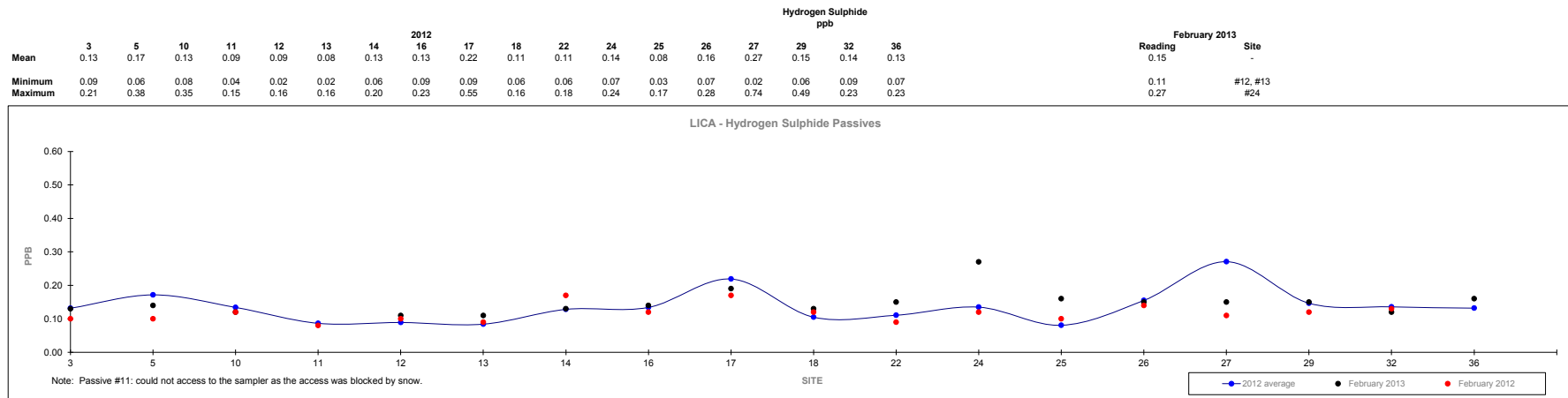
Passive Summary Results for February 2013

Lakeland Industry & Community Association

	Sulphur Dioxide ppb																																February 2013	
	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	36	Reading	Site					
Mean	0.2	0.3	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.4	0.5	1.0	0.4	0.4	0.5	0.3	0.3	0.3	0.2	0.3	0.6	0.7	1.0	0.6	0.4	0.5	0.3	0.76	-					
Minimum	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.7	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.4	0.2	0.2	0.1	0.5	#13					
Maximum	0.3	0.6	0.8	0.7	0.7	1.2	0.7	0.7	0.5	0.9	1.1	1.6	0.7	0.7	1.0	0.6	0.7	0.6	0.4	0.7	0.9	1.1	1.8	1.0	0.6	0.8	0.8	1.3	#27					

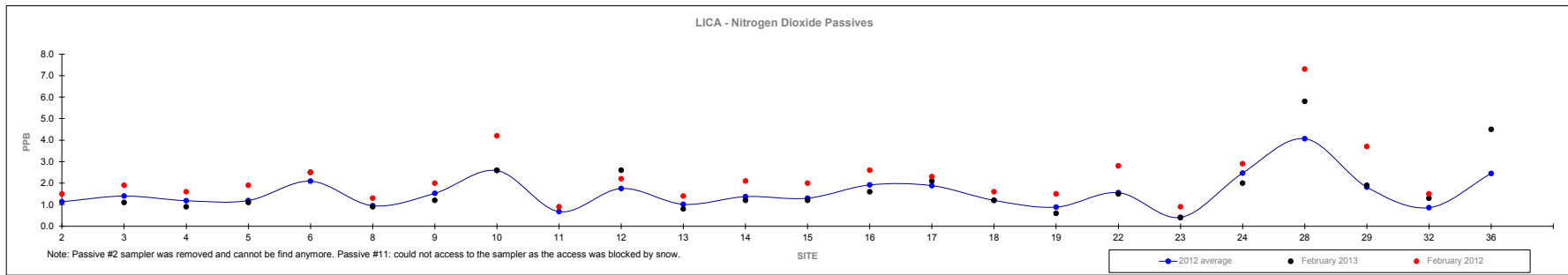


Passive Summary Results for February 2013 Lakeland Industry & Community Association



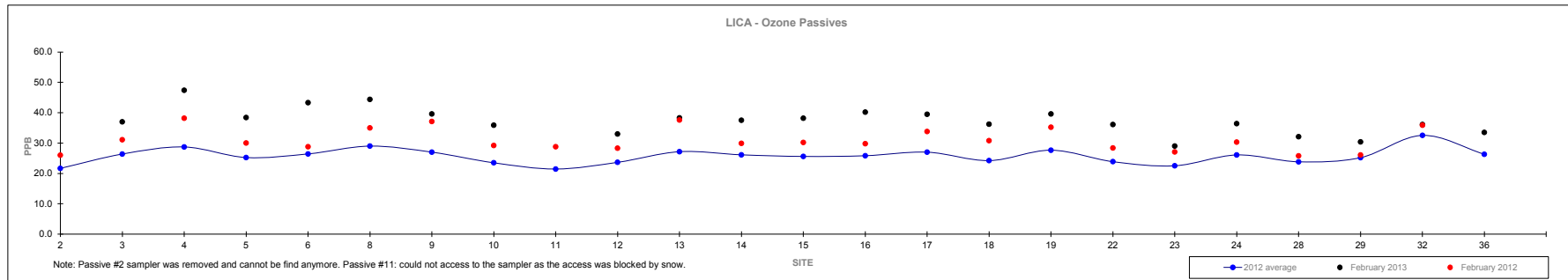
Passive Summary Results for February 2013 Lakeland Industry & Community Association

	Nitrogen Dioxide ppb																												February 2013	
	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	22	23	24	28	29	32	36	Reading	Site				
Mean	1.1	1.4	1.2	1.2	2.1	1.0	1.5	2.6	0.7	1.8	1.0	1.4	1.3	1.9	1.9	1.2	0.9	1.6	0.4	2.5	4.1	1.8	0.9	2.5	1.8	-				
Minimum	0.4	0.5	0.4	0.3	0.9	0.3	0.7	1.3	0.2	0.4	0.3	0.5	0.3	0.6	0.8	0.4	0.3	0.4	0.1	1.1	1.2	0.4	0.2	1.0	0.4	#23				
Maximum	3.6	3.6	3.6	3.2	4.7	2.1	3.6	5.2	1.8	4.4	2.5	3.2	2.9	4.9	3.9	2.7	2.0	3.2	1.2	6.0	8.6	4.8	2.4	6.6	5.8	#28				



Passive Summary Results for February 2013 Lakeland Industry & Community Association

	Ozone ppb																												February 2013	
	2	3	4	5	6	8	9	10	11	12	2012 13	14	15	16	17	18	19	22	23	24	28	29	32	36	Reading	Site				
Mean	21.7	26.4	28.7	25.2	26.4	29.0	27.0	23.5	21.5	23.7	27.2	26.1	25.6	25.8	27.0	24.2	27.7	23.9	22.5	26.1	23.8	25.2	32.5	26.3	37.4	-				
Minimum	12.8	18.4	18.8	19.0	17.5	21.6	17.6	15.1	12.3	13.9	15.9	17.8	16.8	18.4	16.4	15.8	18.3	15.2	11.8	17.5	17.1	17.5	24.4	20.4	29.0	#23				
Maximum	32.2	41.2	42.3	34.7	37.0	38.8	40.2	35.4	32.1	33.1	38.9	37.4	36.6	38.1	38.7	33.8	35.6	35.2	36.1	37.9	30.2	33.2	40.8	33.1	47.4	#4				



Polycyclic Aromatic Hydrocarbons

Polycyclic Aromatic Hydrocarbons (PAHs) Results for February 2013
LICA- Cold Lake South Site
Unit: ng/m3

PAHs	2013/02/03	2013/02/09	2013/02/15	2013/02/21	2013/02/27
Sample Volume (unit: m3)	330.38	330.31	330.34	330.39	330.36
1 3-Methylchloranthrene	0.000	0.000	0.000	0.000	0.000
2 7,12-Dimethylbenz(a)anthracen	0.000	0.000	0.000	0.000	0.076
3 Acenaphthene	0.230	0.000	0.303	0.163	0.157
4 Acenaphthylene	0.363	0.000	0.115	0.085	0.148
5 Acridine	0.000	0.000	0.000	0.000	0.000
6 Anthracene	0.076	0.051	0.085	0.061	0.136
7 Benzo(a)anthracene	0.028	0.036	0.030	0.000	0.048
8 Benzo(a)pyrene	0.030	0.000	0.029	0.000	0.054
9 Benzo(b,j,k)fluoranthene	0.145	0.160	0.127	0.085	0.173
10 Benzo(c)phenanthrene	0.000	0.000	0.000	0.000	0.000
11 Benzo(e)pyrene	0.064	0.079	0.045	0.039	0.000
12 Benzo(ghi)perylene	0.061	0.048	0.045	0.039	0.064
13 Chrysene	0.079	0.163	0.109	0.039	0.088
14 Dibenzo(a,h)pyrene	0.000	0.000	0.000	0.000	0.000
15 Dibenzo(a,i)pyrene	0.000	0.000	0.000	0.000	0.000
16 Dibenzo(a,l)pyrene	0.000	0.000	0.000	0.000	0.000
17 Dibenzo(ah)anthracene	0.024	0.025	0.022	0.000	0.000
18 Fluoranthene	0.303	0.285	0.266	0.124	0.294
19 Fluorene	0.484	0.605	0.696	0.242	0.363
20 Indeno(1,2,3-cd)pyrene	0.073	0.051	0.036	0.029	0.054
21 Naphthalene	2.603	0.575	0.999	0.515	0.363
22 Phenanthrene	1.180	1.241	1.211	0.484	0.969
23 Pyrene	0.230	0.224	0.333	0.151	0.236
24 Retene	0.166	0.163	0.179	0.054	1.392

Note: - Values were calculated by the formula of [reading (ug) x 1000 / sample volume (m3)].

1	3-Methylchloranthrene
2	7,12-Dimethylbenz(a)anthracen
3	Acenaphthene
4	Acenaphthylene
5	Acridine
6	Anthracene
7	Benzo(a)anthracene
8	Benzo(a)pyrene
9	Benzo(b,j,k)fluoranthene
10	Benzo(c)phenanthrene
11	Benzo(e)pyrene
12	Benzo(ghi)perylene
13	Chrysene
14	Dibenzo(a,h)pyrene
15	Dibenzo(a,i)pyrene
16	Dibenzo(a,l)pyrene
17	Dibenzo(ah)anthracene
18	Fluoranthene
19	Fluorene
20	Indeno(1,2,3-cd)pyrene
21	Naphthalene
22	Phenanthrene
23	Pyrene
24	Retene

Calibration Reports

Sulphur Dioxide

SO2 Calibration Report

Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Company	Lakeland Community and Industry Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	09:00	End Time (MST)	12:25
Reason:	Monthly Calibration		
Barometric Pressure	0.94 atm	Station Temperature	20 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	LL42502
DAS Output Voltage	0 - 10 Volts	Cal Gas Expiry date	December 29, 2013
		Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	Thermo 43i	S/N :	806528242	Method:	Fluorescent
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	EnviroNics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	3485		
Chart Recorder Make / Model:	NA	S/N :	NA		
Flow Meter:	EnviroNics 6100	S/N :	4760		

Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb		
Sample Flow / Box Temp	451 ccm 32.3 Deg C	453 ccm 32.8 Deg C	
HVPS / Lamp Setting	-631.6 737	-631.6 738	
PMT / RxCell Temp	OK Deg C 45.2 Deg C	OK Deg C 45.1 Deg C	
Converter / IZS Temp	NA Deg C 45 Deg C	NA Deg C 45.0 Deg C	
Offset / Slope	6 1.031	6 1.031	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	0	N/A
	No Zero Adj			
4955	39.7	394	390	1.0109
	No Span Adj.			
4975	19.8	197	196	1.0032
4984	9.9	98	98	1.0000
4995	0	0	1	N/A
Sum of Least Squares				1.0090
New Correction Factor				1.0109

IZS Calibration Data

Before Calibration		After Calibration	
Auto Zero	0.2		0.0
Auto Span	373.0		364.1
Sample Lines Connected			YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0058
Current Correction Factor Before Span Adjust:	1.0109
Percent Change:	-0.5%

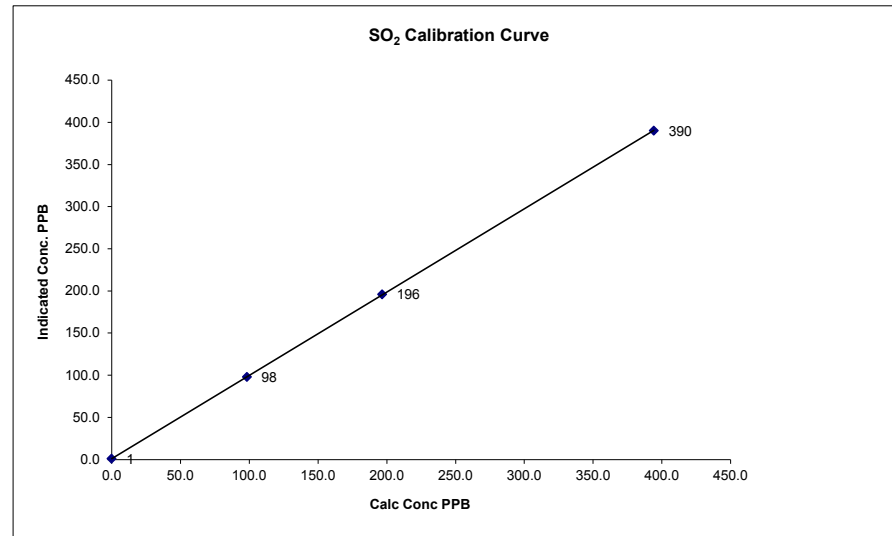
Notes: **N/A : Not applicable**
 changed oxidizer powder (CND 101)

Calibration Performed by: Waseem Ahmed / Limin Li

SO2 Calibration Curve

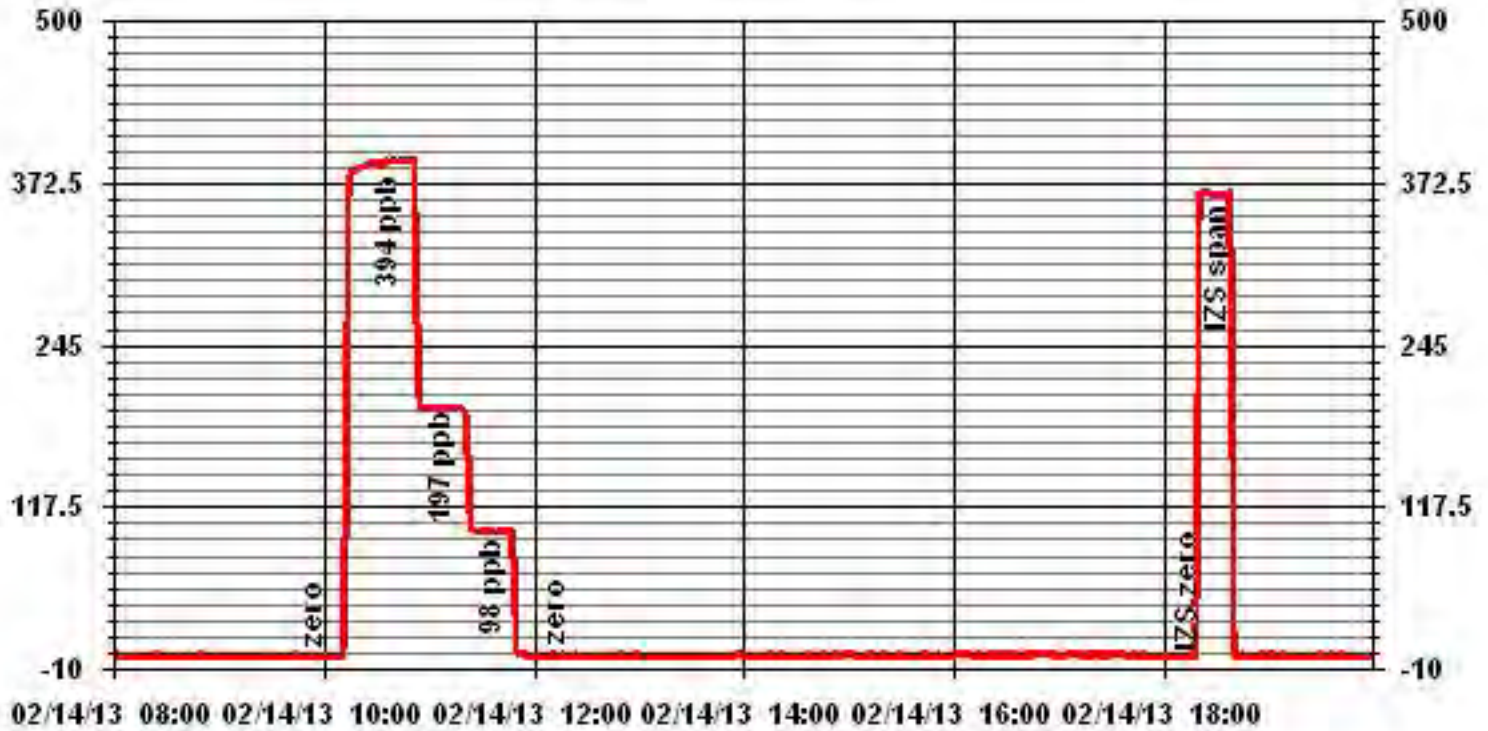
Calibration Date	February 14, 2013
Company	Lakeland Community and Industry Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	09:00
End Time (MST)	12:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	1	n/a		0.999991
98	98	1.0033		0.987006
197	196	1.0032		1.191230
394	390	1.0109		



Notes:

01 Minute Averages



Total Reduced Sulphur

**TRS Calibration Report
Station Information**

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	12:50	End Time (MST)	14:45
Reason:	As Found		
Barometric Pressure	0.94 atm	Station Temperature	20.6 Deg C
Cal Gas	10 ppm	Gas Cyl. #	LL42648
DAS Output Voltage	0 - 10 Volts	Cal Gas Expiry date	December 27, 2012
		Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	Thermo 450i	S/N :	812728560	Method:	Fluorescent
Converter Make / Model:	CDN 101	S/N :	501		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	3485		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

		Before Calibration		After Calibration	
Concentration Range		0 - 100			
Sample Flow / Box Temp	476 ccm	34.6 Deg C	476 ccm	34.6 Deg C	
HVPS / Lamp Setting	-640	748	-640	748	
PMT / RxCell Temp	OK Deg C	45.3 Deg C	0.1 Deg C	45.3 Deg C	
Converter / IZS Temp	810 Deg C	45 Deg C	810 Deg C	45.0 Deg C	
Offset / Slope	13.3	1.052	13.3	1.052	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
4960	No Zero Adj 40.0	80	55	1.4545
Sum of Least Squares New Correction Factor				1.4545

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	-0.1	-0.1
Auto Span	42.5	42.5
Sample Lines Connected		YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.4545
Percent Change:	-31.3%

Notes:

N/A : Not applicable

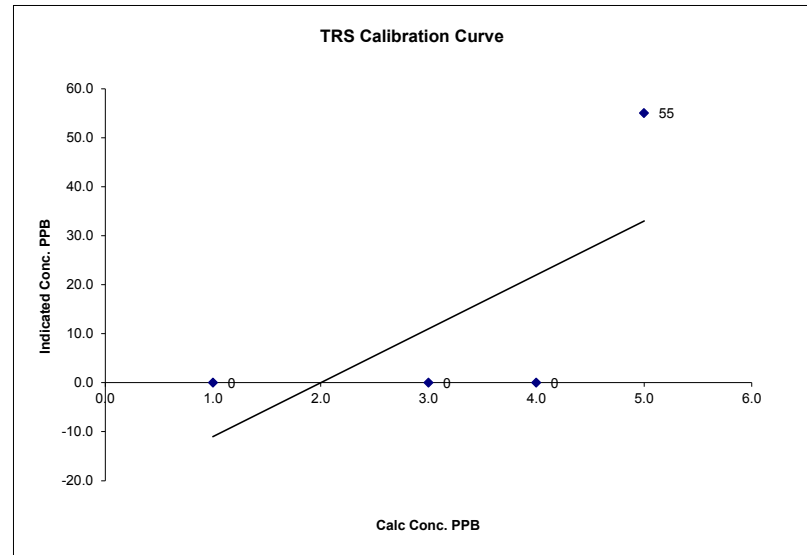
After AF check, renewed the scrubber material. Analyzer was allowed time to stabilize. Will perform a post repair calibration tomorrow.

Calibration Performed by: Waseem Ahmed / Limin Li

TRS Calibration Curve

Calibration Date	February 14, 2013
Company	Lakeland Industry & Community Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	12:50
End Time (MST)	14:45

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
	0	n/a	Slope (0.85 to 1.15)
	0	#DIV/0!	Intercept (± 3% F.S.)
80	55	#VALUE!	#DIV/0!



Notes:

TRS Calibration Report

Station Information

Calibration Date	February 15, 2013	Previous Calibration	February 14, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	08:15	End Time (MST)	16:00
Reason:	Post Repair Calibration		
Barometric Pressure	0.94 atm	Station Temperature	16.9 Deg C
Cal Gas	10 ppm	Gas Cyl. #	LL42648
DAS Output Voltage	0 - 10 Volts	Cal Gas Expiry date	December 27, 2012
		Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	Thermo 450i	S/N :	812728560	Method:	Fluorescent
Converter Make / Model:	CDN 101	S/N :	501		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	3485		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 100		
Sample Flow / Box Temp	501 ccm 34 Deg C	501 ccm 32.2 Deg C	
HVPS / Lamp Setting	-650.5 749	-650.5 749	
PMT / RxCell Temp	OK Deg C 45.1 Deg C	0.1 Deg C 45.1 Deg C	
Converter / IZS Temp	810 Deg C 45 Deg C	810 Deg C 45.0 Deg C	
Offset / Slope	13.4 1.052	13.4 0.986	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	1	N/A
5000	0	0	0	N/A
4960	40.0	80	83	0.9639
4960	40.0	80	79	1.0127
4980	20.0	40	39	1.0256
4990	10.0	20	19	1.0526
5000	0.0	0	1	N/A
Sum of Least Squares				1.0169
New Correction Factor				1.0127

IZS Calibration Data

Before Calibration		After Calibration	
Auto Zero	-0.1		0.1
Auto Span	42.5		36.1
Sample Lines Connected			YES

Percent Change

Previous Month's Calibration Correction Factor:	NA
Current Correction Factor Before Span Adjust:	0.9639
Percent Change:	#VALUE!

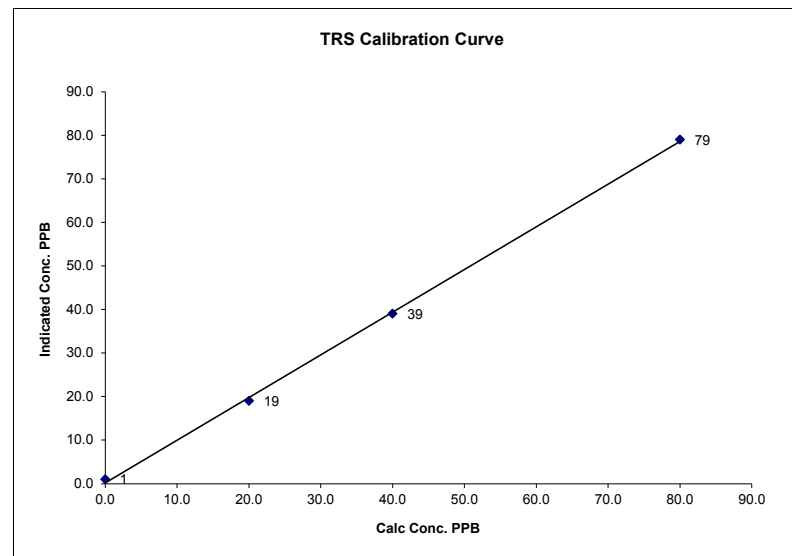
Notes: **N/A : Not applicable**

Calibration Performed by: Waseem Ahmed

TRS Calibration Curve

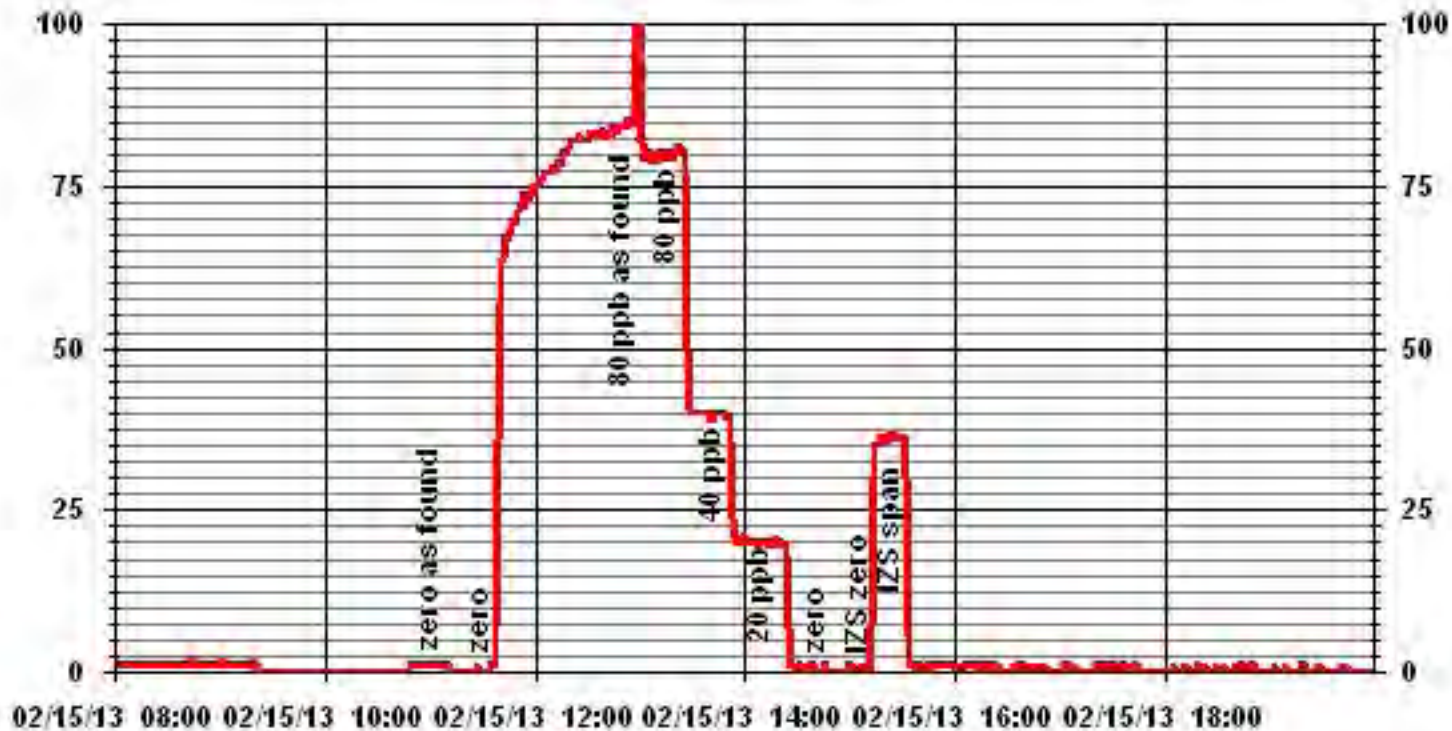
Calibration Date	February 15, 2013
Company	Lakeland Industry & Community Association
Plant / Location	LICA 1 - Cold Lake South
Start Time (MST)	08:15
End Time (MST)	16:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	1	n/a		0.999524
20	19	0.0000		0.980000
40	39	0.5128		
80	79	0.5063		0.200000

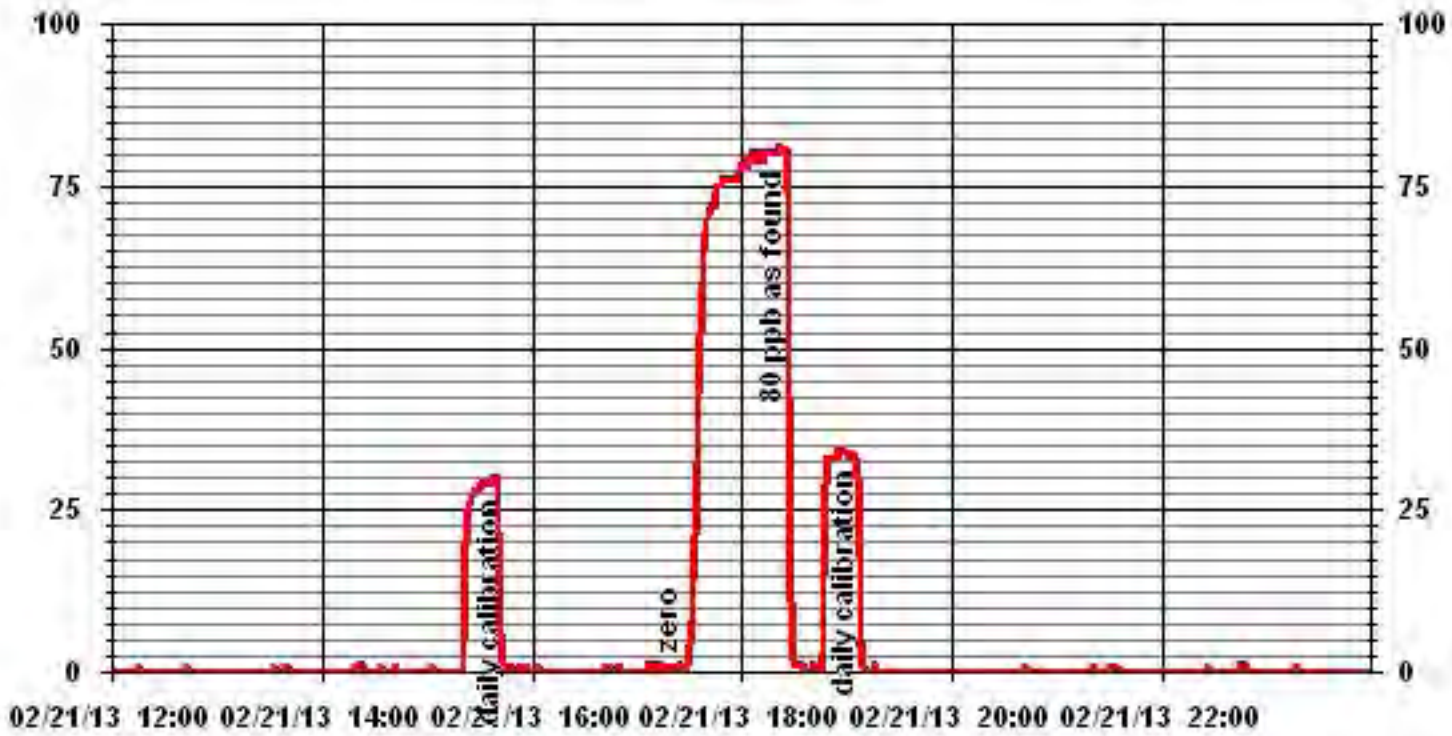


Notes:

01 Minute Averages



01 Minute Averages



Total Hydrocarbons

THC Calibration Report

Station Information			
Calibration Date:	February 14, 2013	Previous Calibration	January 9, 2013
Company:	Lakeland Industry and Community Association		
Plant / Location:	LICA1/Cold Lake		
Start Time (MST)	09:00	End Time (MST)	12:50
Reason:	Monthly Calibration		
Barometric Pressure:	0.94 atm	Station Temperature:	20 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	CH4 600 PPM TOTAL CH4 1161.0 PPM	C3H8 204 PPM Gas Cyl. # LL55310	Cal Gas Expiry Date: September 9, 2013
DAS make & Model:	ESC 8832	S/N :	3485
Chart Recorder:	NA	S/N:	NA
Output Voltage Range:	0 - 10 VDC	Chart Speed:	NA mm/hr

Analyzer Information

Make / Model	TEI 51C-LT	S/N :	427408718	Method	Flame Ionization
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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
2000	0.0	0.0	-0.2	NA
2000	0.0	0.0	0.0	NA
2000	74.0	41.4	38.3	1.0816
2000	74.0	41.4	41.3	1.0030
2000	37.0	21.1	20.8	1.0139
2000	20.0	11.5	11.3	1.0173
2000	0.0	0.0	0.0	NA
New Correction Factor:				1.0030

Percent Change

Previous Calibration Correction Factor:	0.9982
Current Correction Factor Before Span Adjust:	1.0816
Percent Change:	-7.7%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	36.9	36.5
Sample Lines Connected	YES	

Cylinder Pressures			
Span	1150 psi	Hydrogen	400 psi
		Zero Air	32 psi

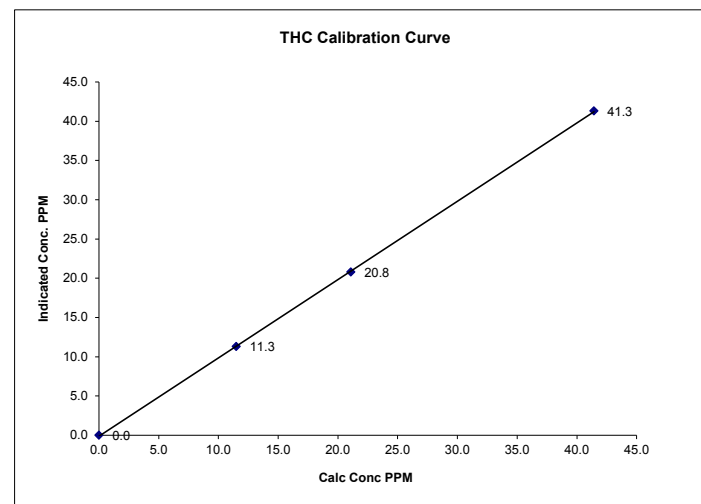
Notes: **NA : Not Applicable**

Calibration Performed by: Waseem Ahmed / Limin Li

THC Calibration Curve

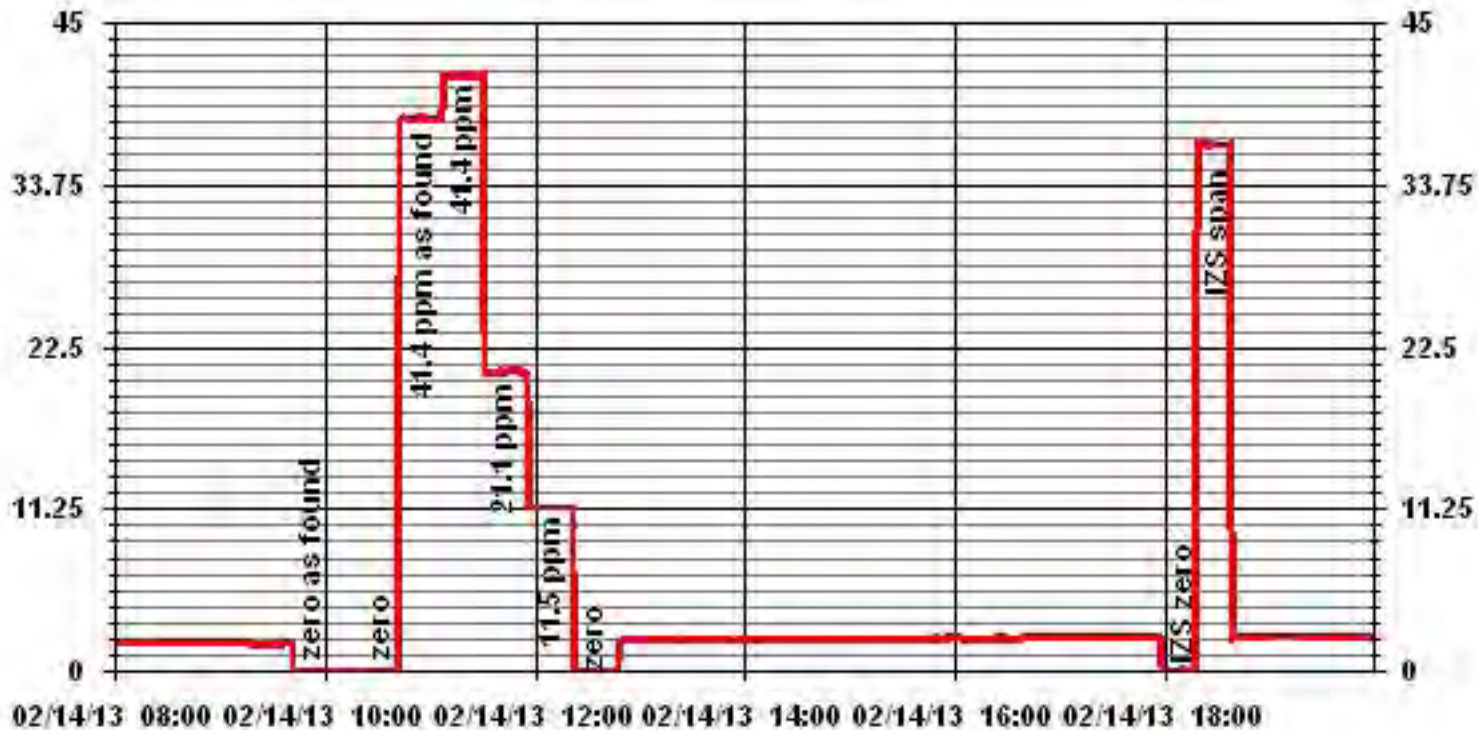
Calibration Date	February 14, 2013		
Company	Lakeland Industry and Community Association		
Plant / Location	LICA1/Cold Lake		
Start Time (MST)	09:00	End Time (MST)	12:50

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient (≥ 0.995)	Slope (0.85 to 1.15)	Intercept (± 3% F.S.)
0.0	0.0	NA	0.999958	0.997587	-0.10729
11.5	11.3	1.0173			
21.1	20.8	1.0139			
41.4	41.3	1.0030			



Notes:

01 Minute Averages



Particulate Matter 2.5

TEOM 1405F Audit

	<u>Station</u>		<u>Audit Transfer Standard</u>
Date:	February 14, 2013	Make/Model:	Streamline FTS
Station Name:	LICA 1	Serial Number:	Hi 091001, Lo 091099
Location:	Cold Lake South	Cell s/n:	NA
Operator:	LICA	Thermometer s/n:	Station Temp Sensor

	<u>Sampler</u>		<u>Set-up and current Sampler readings</u>
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1775	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A201620804	Filter Load (%)	31.0%
Firmware Ver.	1.52	K _o Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	-3.1
		Press (ATM)	0.947

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

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

Audit

Status			
Noise <0.10ug	0.011	Warnings	None
Pump Vacuum < 0.40 atm	0.36	Pump Guage (in Hg)	NA
Temperature/Pressure			
Measured Temp (± 2 °C)	-2.33	Δ °C	-0.77
Measured Press (± 0.01atm)	0.945	DATM	0.002
Flow Audit			
Indicated Main Flow (l/min)	3.00	Main Flow Drift (± 10.0%)	3.07%
Measured Main Flow (l/min)	3.02	Flow Adjusted to Measured?	YES
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift (± 10.0%)	1.86%
Measured Bypass Flow (l/min)	13.62	Flow Adjusted to Measured?	YES
Leak Check		Instrument Setup	
Main (< 0.15 l/min)	Base=0.02 Ref=0.02	Flow Control = Active	
Aux (< 0.6 l/min)	Base=0.00 Ref=0.00	Report Conditions = Actual	
K_o Factor			
Measured	NA		
K _o Difference (± 2.5%)	NA		

Start Time: 13:00 **Finish Time:** 17:30

Sample Inlet Cleaned: No **New Filters Installed:** Yes
New Filter Loading %: 20.2%

Comments:

TEOM 1405F Audit

	Station		Audit Transfer Standard
Date:	February 28, 2013	Make/Model:	Streamline FTS
Station Name:	LICA 1	Serial Number:	Hi 091001, Lo 091099
Location:	Cold Lake South	Cell s/n:	NA
Operator:	LICA	Thermometer s/n:	Station Temp Sensor

	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 (%)	23.1%
Firmware Ver.	1.52	K _o Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	-4.6
		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 <0.10ug	0.009	Warnings	None
Pump Vacuum < 0.40 atm	0.36	Pump Guage (in Hg)	NA
Temperature/Pressure			
Measured Temp (± 2 °C)	-3.26	Δ °C	-1.34
Measured Press (± 0.01atm)	0.943	DATM	0.001
Flow Audit			
Indicated Main Flow (l/min)	3.00	Main Flow Drift (±10.0%)	3.07%
Measured Main Flow (l/min)	3.00	Flow Adjusted to Measured?	YES
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift (±10.0%)	1.97%
Measured Bypass Flow (l/min)	13.68	Flow Adjusted to Measured?	YES
Leak Check		Instrument Setup	
Main (< 0.15 l/min)	Base=0.01 Ref=0.01	Flow Control = Active	
Aux (< 0.6 l/min)	Base=0.00 Ref=0.00	Report Conditions = Actual	
K_o Factor			
Measured	NA		
K _o Difference (± 2.5%)	NA		

Start Time: 11:40 **Finish Time:** 13:20

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

Comments:

Nitrogen Dioxide

NOx - NO- NO2 Calibration Report

Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Company	LICA	Plant/Location	Cold Lake South
Start Time (MST)	09:00	End Time (MST)	15:00
Reason:	Monthly Calibration		
Barometric Pressure	0.94 atm	Station Temperature	20 Deg C
Cal Gas Concentration	NOx 50.1 ppm	NO 50.1 ppm	Cal Gas Expiry date
Cal Gas Cylinder #	LL42502		December 29, 2013
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	Thermo 42C	S/N :	427408716	Method:	Chemiluminescent
Calibrator Make / Model:	Enviro-nics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	3485		
Chart Recorder Make / Model:	N/A	S/N:	NA		
Flow Meter:	Enviro-nics 6100	S/N :	4760		

Analyzer Settings

Before Calibration				After Calibration			
Concentration Range	0 - 500			ppb			
Sample Flow/Conv. Temp	742 ccm	317 Deg C		743 ccm	317 Deg C		
Ozone Flow / Vacuum	OK	178.7 *Hg-A		OK	179.1 *Hg-A		
HVPS / A ZERO	821 Volts	NA MV		821 Volts	NA MV		
Rx/ Temp / PMT Temp	50.0 Deg C	-2.5 Deg C		49.7 Deg C	-2.5 Deg C		
Box Temp / IZS Temp	31.8 Deg C	OK Deg C		31.5 Deg C	OK Deg C		
Offset	3.9 NOx	3.6 NO		3.9 NOx	3.6 NO		
Slope	1.002 NOx	0.920 NO		1.002 NOx	0.920 NO		
NO2 COEF / Conv Efficiency	0.998 NO2	NA		0.998 NO2	NA		

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4995	0.0	NA	0	0	NA	0	0	0	NA	NA
	No Zero Adj.									
4955	39.7	NA	398	398	NA	394	393	1	1.0107	1.0133
	No Span Adj.									
4975	19.8	NA	199	199	NA	198	197	1	1.0030	1.0081
4984	9.9	NA	99	99	NA	100	99	1	0.9932	1.0000
5000	0.0	NA	0	0	NA	1	0	1	NA	NA

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		
4956	39.8	NA	399	399	NA	394	393	1	NA	NA
4956	39.7	350	398	NA	318	394	76	318	1.0000	100.00%
	No Adj.									
4955	39.8	150	399	NA	139	394	255	139	1.0000	100.00%
4960	39.8	75	399	NA	69	394	325	68	1.0147	98.53%

Linearity OK?	Yes	No	Sum of Least Squares Correction Factors:	NOx= 1.008	NO= 1.012	NO2= 1.001
				NOx= 1.0107	NO= 1.0133	NO2= 1.0000
				Average Converter Efficiency= 99.51%		

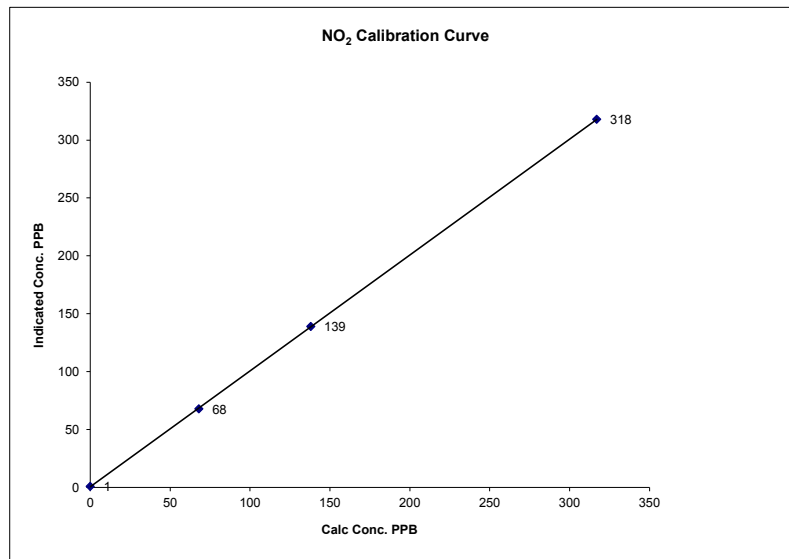
IZS Calibration Data

Before Calibration				After Calibration			
Auto Zero	0.0	NOx	0.0	NO2	0.0	NOx	0.0
Auto Span	389	NOx	386	NO2	372	NOx	369
		Sample Lines Connected		YES			
Percent Change from Previous Calibration		NOx	-1.1%	NO	-1.3%	NO2	0.0%
Notes	NA : Not Applicable						
Calibration Performed by:	Waseem Ahmed / Limin Li						

NO2 Calibration Curve

Calibration Date	February 14, 2013
Company	LICA
Plant / Location	Cold Lake South
Start Time (MST)	09:00
End Time (MST)	15:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)	
0	1	N/A			0.999988
68	68	1.0000			1.001125
138	139	0.9928			0.60290
317	318	0.9969			

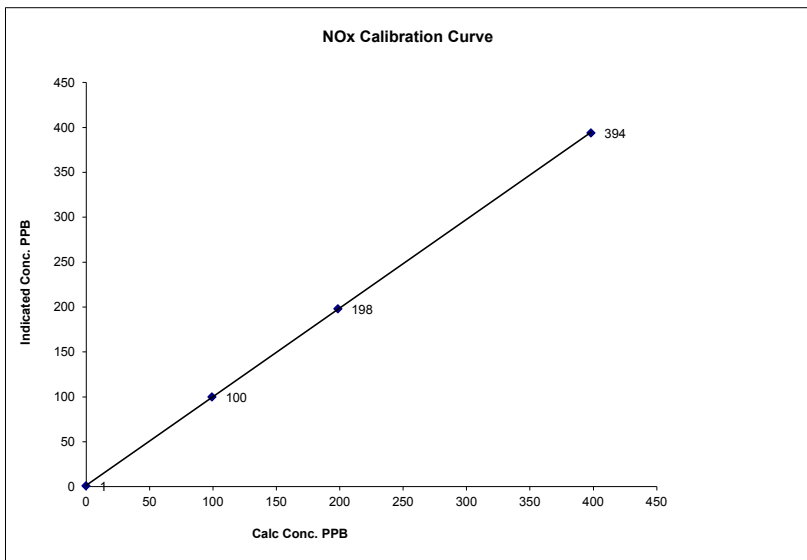


Notes:

NOx Calibration Curve

Calibration Date	February 14, 2013	
Company	LICA	
Plant / Location	Cold Lake South	
Start Time (MST)	09:00	End Time (MST) 15:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999989
0	1	N/A	Slope (0.85 to 1.15)	0.986338
99	100	0.9932	Intercept (± 3% F.S.)	1.59312
199	198	1.0030		
398	394	1.0107		

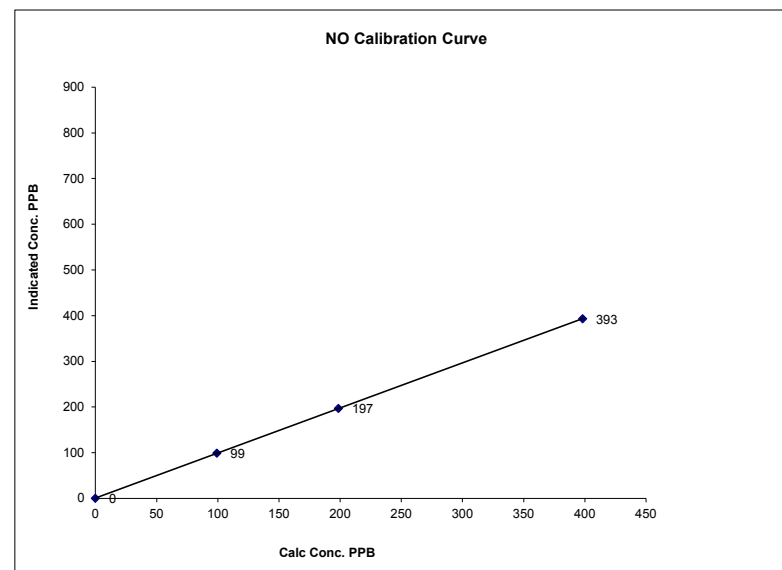


Notes:

NO Calibration Curve

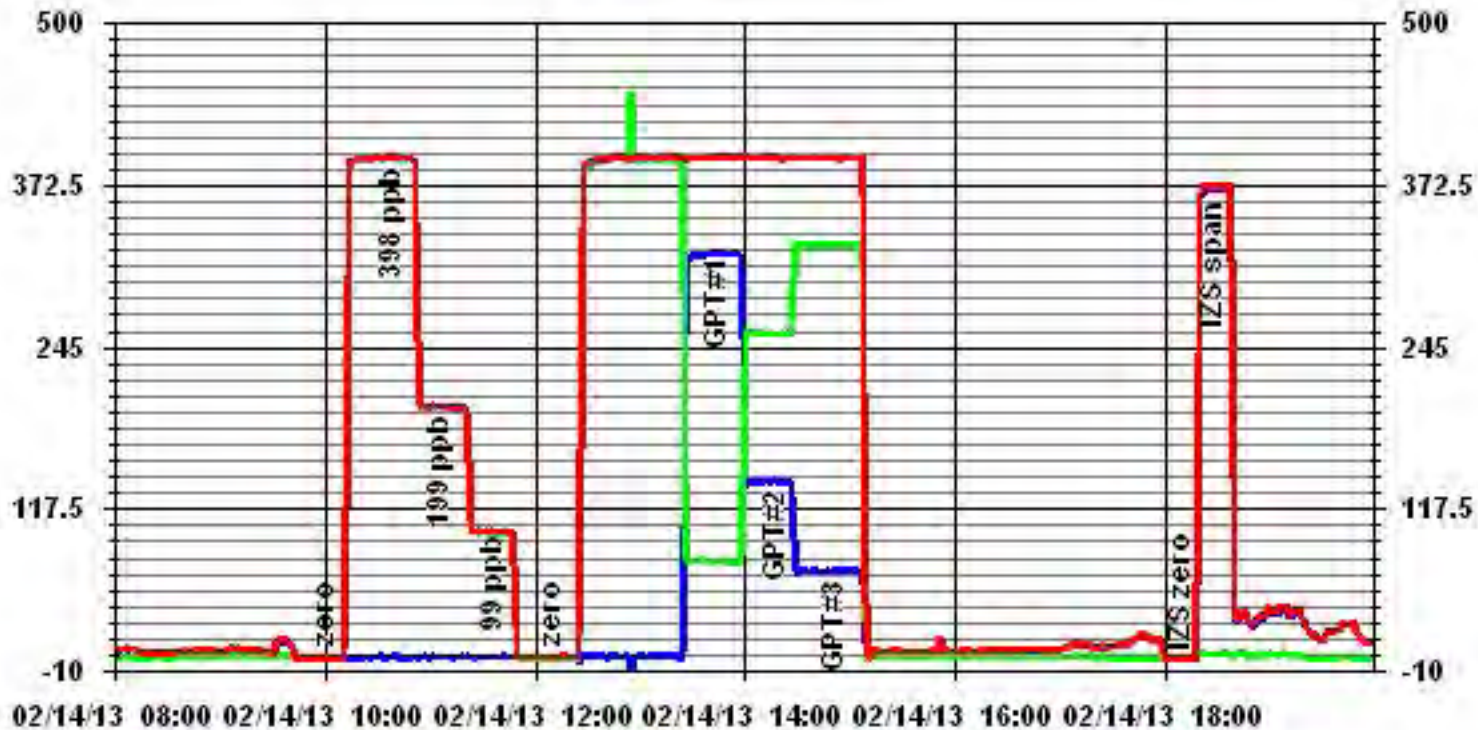
Calibration Date	February 14, 2013	
Company	LICA	
Plant / Location	Cold Lake South	
Start Time (MST)	09:00	End Time (MST) 15:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999989
0	0	N/A	Slope (0.85 to 1.15)	0.983369
99	99	1.0032	Intercept (± 3% F.S.)	1.9927
199	197	1.0081		
398	393	1.0133		



Notes:

01 Minute Averages



Ozone

O₃ Calibration Report

Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	15:00	End Time (MST)	18:00
Reason:	Monthly Calibration		
Barometric Pressure	0.94 atm	Station Temperature	21.2 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	700419951	Method:	Photometric
Calibrator Make / Model:	Envionics 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	715 LPM	756 LPM		715 LPM	756 LPM		
O ₃ Set Level	712 mmHg			712 mmHg			
Bench Lamp	30.7 Deg C			30.5 Deg C			
O ₃ Lamp / Box Temp	53.6 Deg	67.6 Deg C		53.6 Deg C	67.6 Deg C		
Offset / Slope	-0.1	1.046		-0.1	1.046		

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4994	0	0	0.1	NA
	No Zero Adj			
4994	350	317	318	0.9969
	No Span Adj.			
4995	150	138	138	1.0000
4994	75	67	68	0.9853
4994	0	0	0	NA
Sum of Least Squares				0.9969
New Correction Factor				0.9969

IZS Calibration Data

Before Calibration		After Calibration	
Auto Zero	0.2	0.1	
Auto Span	293	351	
Sample Lines Connected		YES	
Previous Calibration Correction Factor:		0.9970	
Current Correctio Factor Before Span Adjust:		0.9969	
Percent Change:		0.0%	

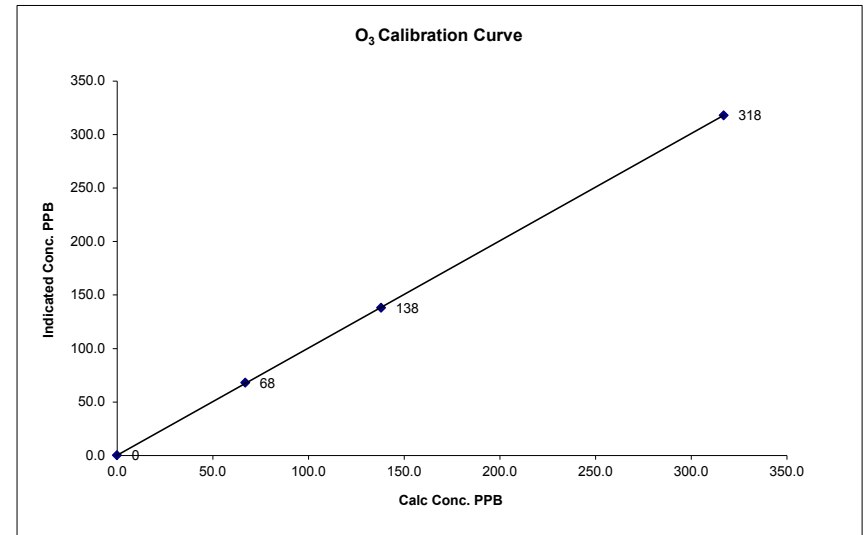
Note: NA : Not Applicable

Calibration Performed by: Waseem Ahmed / Limin Li

O₃ Calibration Curve

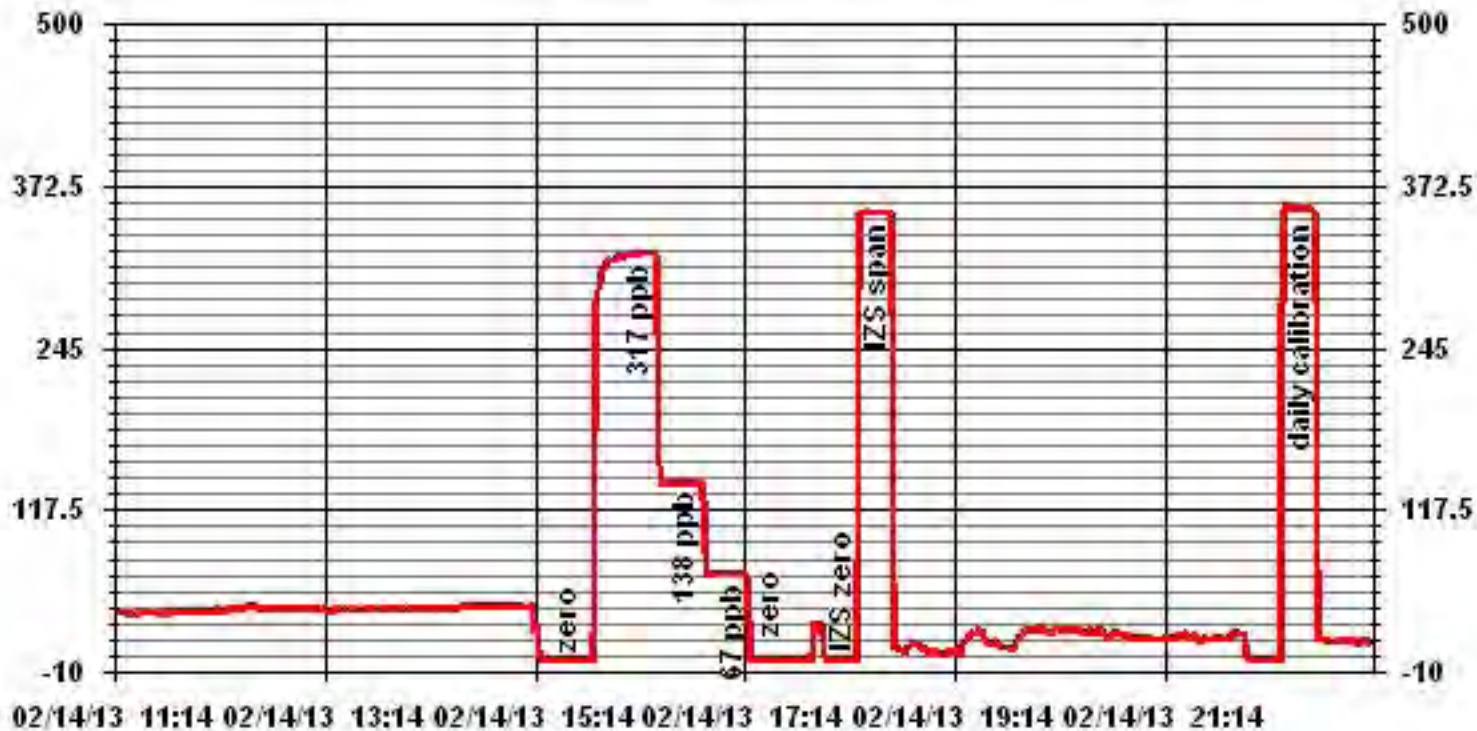
Calibration Date	February 14, 2013		
Company	Lakeland Industry & Community Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	15:00	End Time (MST)	18:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	
0	0	n/a	Slope (0.85 to 1.15)	0.999988
67	68	0.9853	Intercept (± 3% F.S.)	1.001967
138	138	1.0000		0.268323
317	318	0.9969		



Notes:

01 Minute Averages



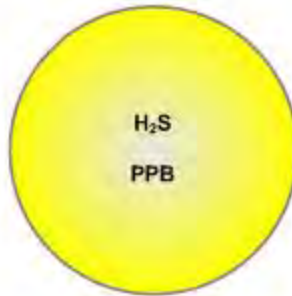
Passive Bubble Maps

Lakeland Industry & Community Association H₂S Passive Bubble Map

FEBRUARY 2013

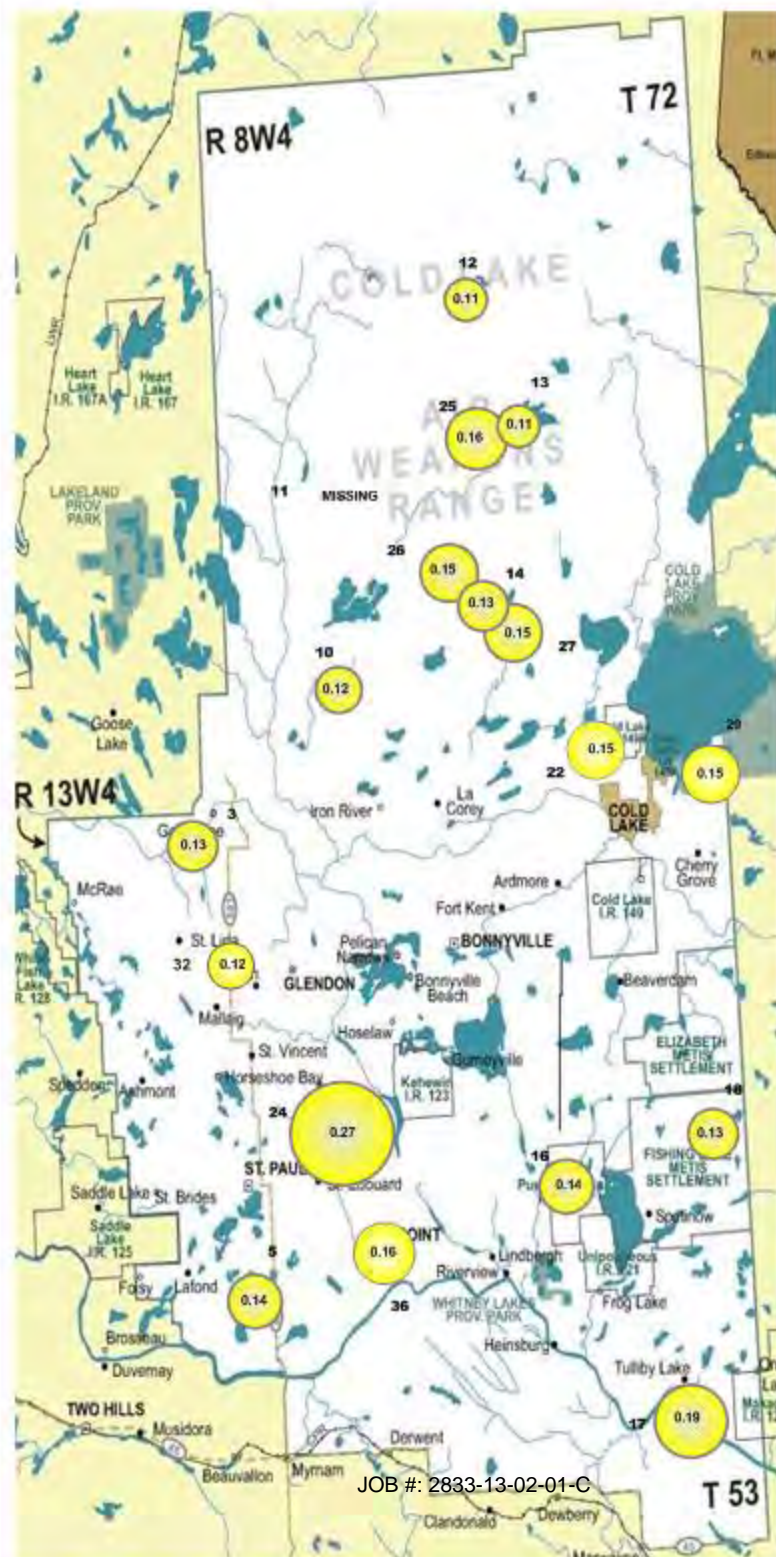
PASSIVE STATIONS

Station Number	Concentration	Duplicate
3 - Therien	0.13 PPB	NA
5 - Lake Eliza	0.14 PPB	NA
10 - La Corey	0.12 PPB	NA
11 - Wolf Lake	MISSING	NA
12 - Foster Creek	0.11 PPB	NA
13 - Primrose	0.11 PPB	NA
14 - Maskwa	0.13 PPB	NA
16 - Frog Lake	0.14 PPB	NA
17 - Clear Range	0.19 PPB	NA
18 - Fishing Lake	0.13 PPB	NA
22 - Cold Lake South	0.15 PPB	NA
24 - Fort George	0.27 PPB	NA
25 - Burnt Lake	0.21 PPB	0.11 PPB
26 - Mahihkan	0.16 PPB	0.14 PPB
27 - Mahkeses	0.15 PPB	NA
29 - Cold Lake South 2	0.15 PPB	NA
32 - St. Lina	0.12 PPB	NA
36 - Elk Point	0.16 PPB	NA



Summary

Minimum : 0.11 PPB - Foster Creek and Primrose
 Maximum: 0.27 PPB - Fort George
 Average: 0.15 PPB (Includes Duplicates)



Lakeland Industry & Community Association NO₂ Passive Bubble Map

FEBRUARY 2013

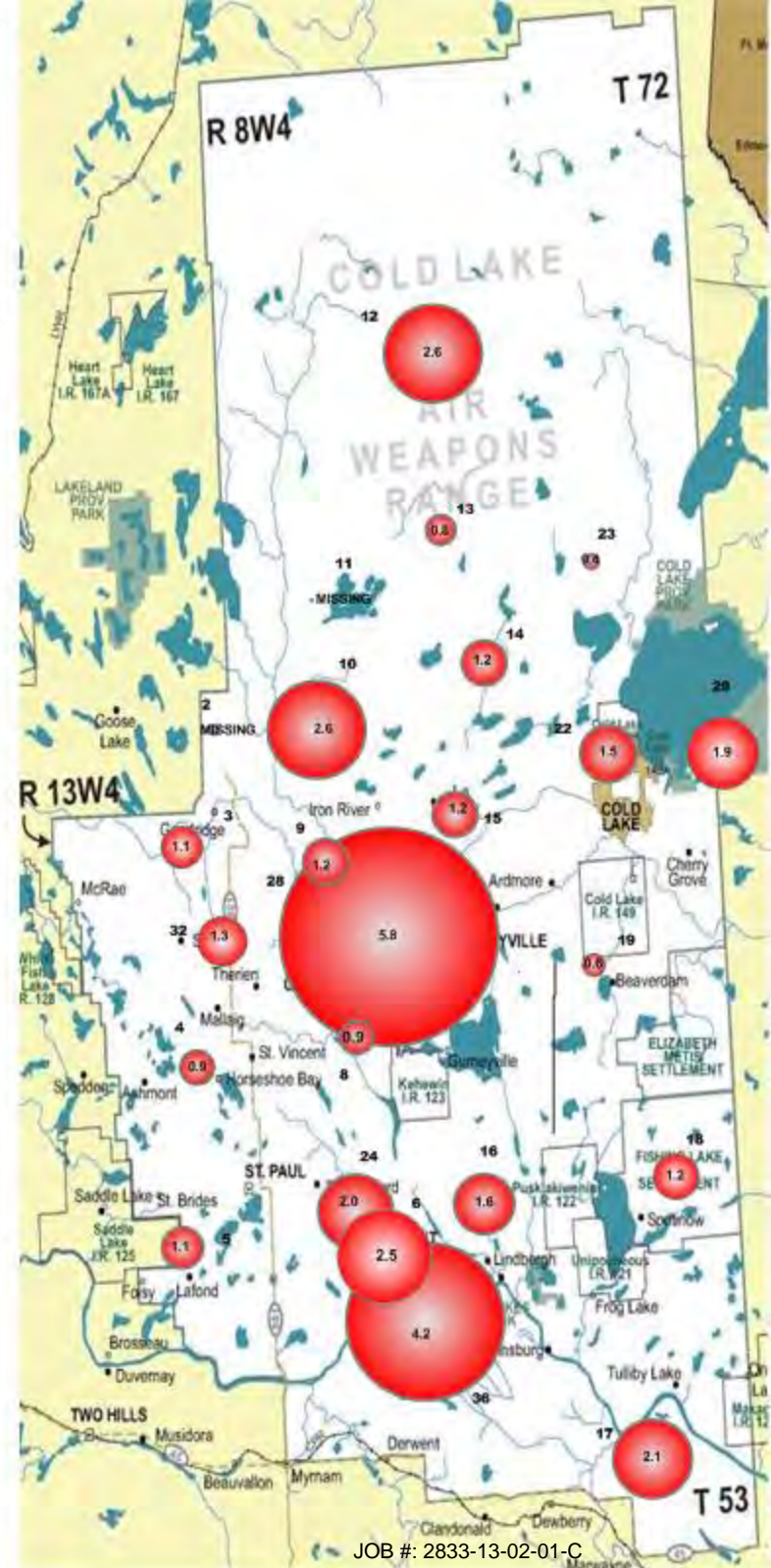
PASSIVE STATIONS

		DUPLICATE
2 – Sand River	MISSING	NA
3 – Therien	1.1 PPB	NA
4 – Flat Lake	0.9 PPB	NA
5 – Lake Eliza	1.1 PPB	NA
6 – Telegraph Creek	2.4 PPB	2.5 PPB
8 – Muriel-Kehewin	0.9 PPB	0.9 PPB
9 – Dupre	1.2 PPB	NA
10 – La Corey	2.6 PPB	NA
11 – Wolf Lake	MISSING	NA
12 – Foster Creek	2.6 PPB	NA
13 – Primrose	0.8 PPB	NA
14 – Maskwa	1.2 PPB	NA
15 – Ardmore	1.2 PPB	NA
16 – Frog Lake	1.6 PPB	NA
17 – Clear Range	2.1 PPB	NA
18 – Fishing Lake	1.2 PPB	NA
19 – Beaverdam	0.6 PPB	NA
22 – Cold Lake South	1.5 PPB	NA
23 – Medley-Martineau	0.4 PPB	NA
24 – Fort George	2.0 PPB	NA
28 – Town of Bonnyville	5.8 PPB	NA
29 – Cold Lake South 2	1.9 PPB	NA
32 – St. Lina	1.3 PPB	NA
36 – Elk Point	4.2 PPB	NA



Summary

Minimum : 0.4 PPB – Medley-Martineau
Maximum: 5.8 PPB – Town of Bonnyville
Average: 1.8 PPB *Includes Duplicates

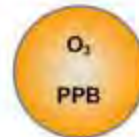


Lakeland Industry & Community Association O₃ Passive Bubble Map

FEBRUARY 2013

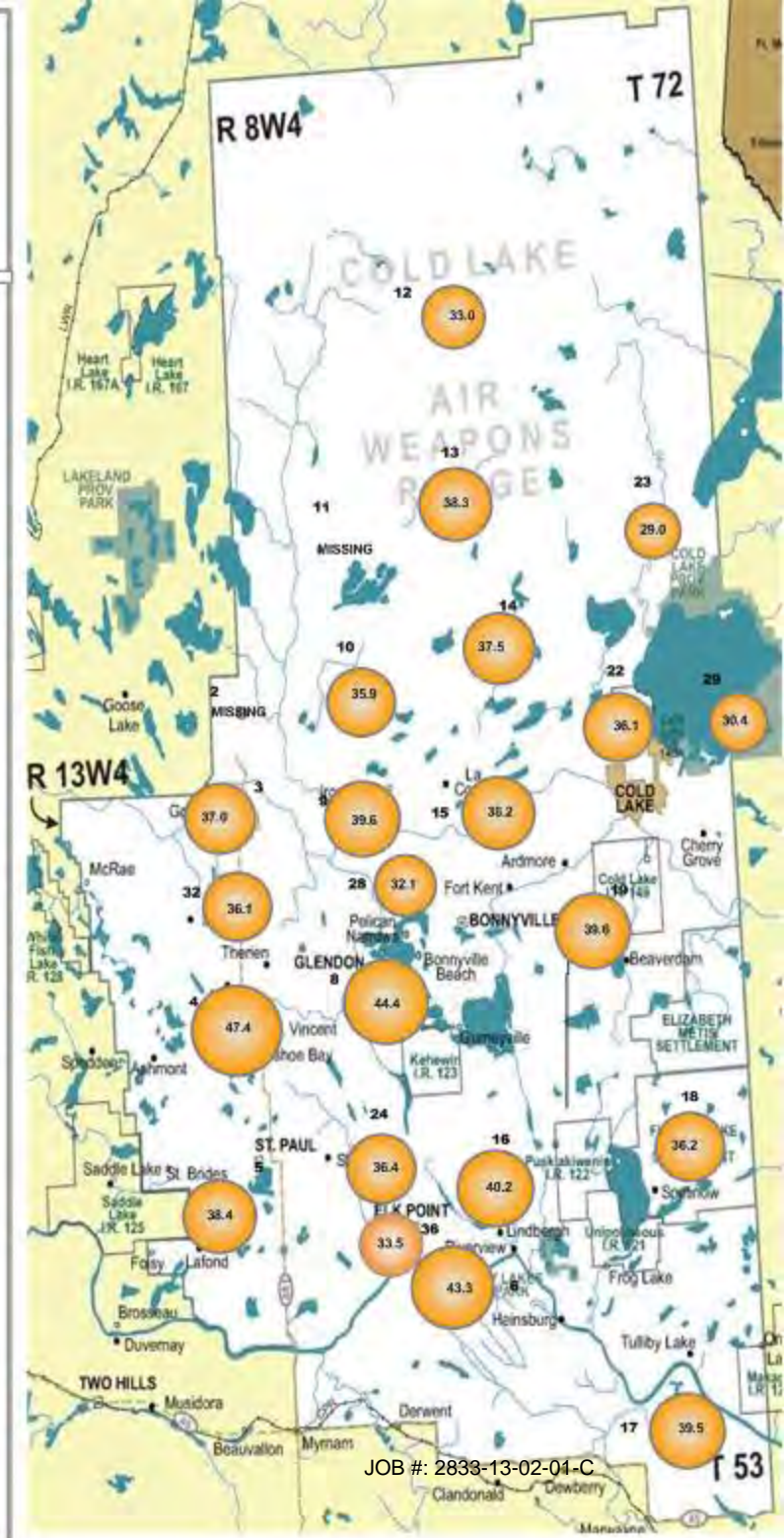
PASSIVE STATIONS

		DUPLICATE
2 – Sand River	MISSING	NA
3 – Therien	37.0 PPB	NA
4 – Flat Lake	47.4 PPB	NA
5 – Lake Eliza	38.4 PPB	NA
6 – Telegraph Creek	41.6 PPB	45.0 PPB
8 – Muriel-Kehewin	45.4 PPB	43.3 PPB
9 – Dupre	39.6 PPB	NA
10 – La Corey	35.9 PPB	NA
11 – Wolf Lake	MISSING	NA
12 – Foster Creek	33.0 PPB	NA
13 – Primrose	38.3 PPB	NA
14 – Maskwa	37.5 PPB	NA
15 – Ardmore	38.2 PPB	NA
16 – Frog Lake	40.2 PPB	NA
17 – Clear Range	39.5 PPB	NA
18 – Fishing Lake	36.2 PPB	NA
19 – Beaverdam	39.6 PPB	NA
22 – Cold Lake South	36.1 PPB	NA
23 – Medley-Martineau	29.0 PPB	NA
24 – Fort George	36.4 PPB	NA
28 – Town of Bonnyville	32.1 PPB	NA
29 – Cold Lake South 2	30.4 PPB	NA
32 – St. Lina	36.1 PPB	NA
36 – Elk Point	33.5 PPB	NA



Summary

Minimum : 29.0 PPB – Medley-Martineau
 Maximum: 47.4 PPB – Flat Lake
 Average: 37.4 PPB *Includes Duplicates



Lakeland Industry & Community Association SO₂ Passive Bubble Map

FEBRUARY 2013

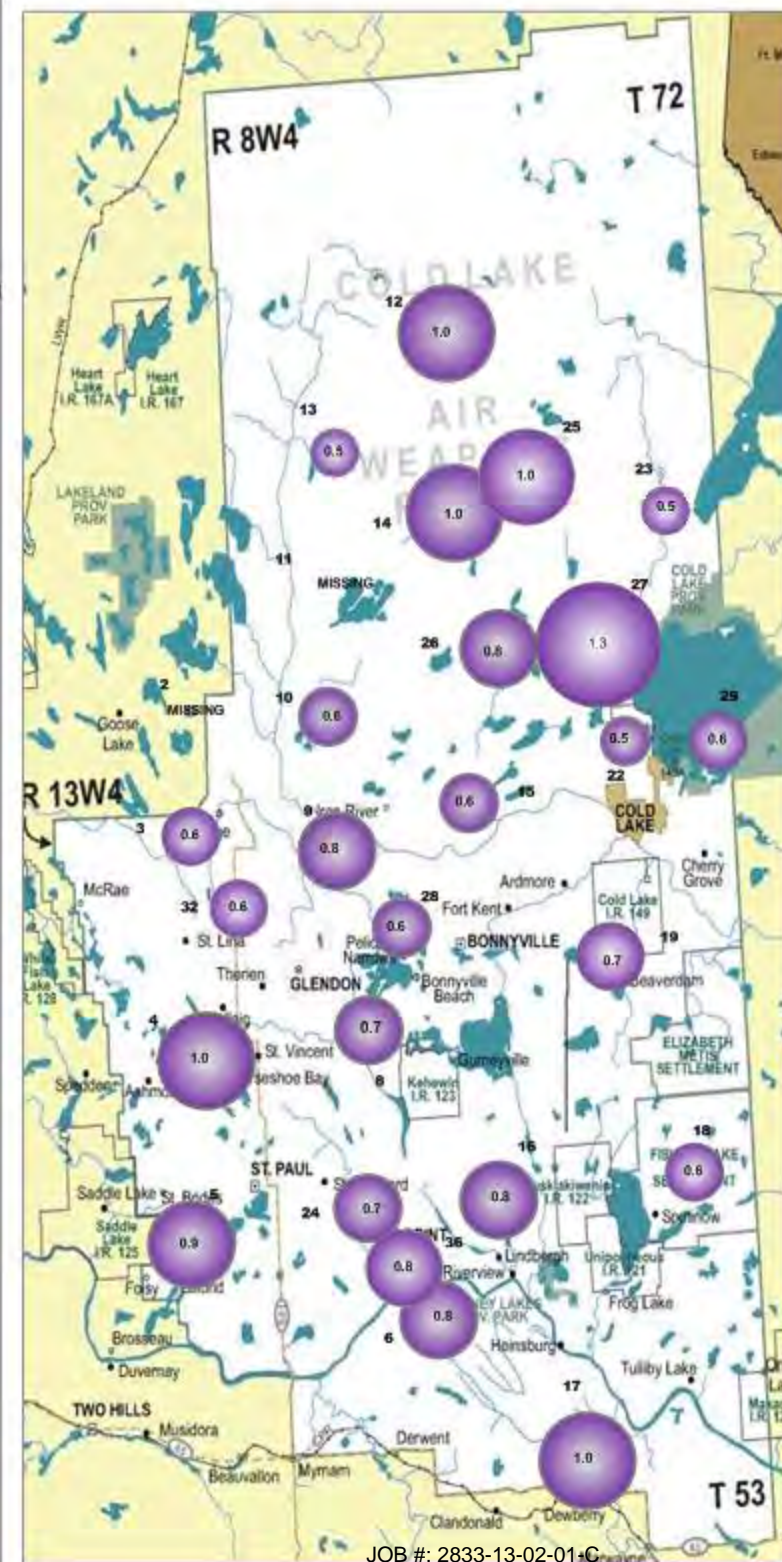
PASSIVE STATIONS

		DUPLICATE
2 – Sand River	MISSING	NA
3 – Therien	0.6 PPB	NA
4 – Flat Lake	1.0 PPB	NA
5 – Lake Eliza	0.9 PPB	NA
6 – Telegraph Creek	0.8 PPB	NA
8 – Muriel-Kehewin	0.7 PPB	NA
9 – Dupre	0.8 PPB	NA
10 – La Corey	0.6 PPB	NA
11 – Wolf Lake	MISSING	NA
12 – Foster Creek	1.0 PPB	NA
13 – Primrose	0.5 PPB	NA
14 – Maskwa	1.0 PPB	NA
15 – Ardmore	0.6 PPB	NA
16 – Frog Lake	0.8 PPB	0.8 PPB
17 – Clear Range	1.0 PPB	0.8 PPB
18 – Fishing Lake	0.6 PPB	0.6 PPB
19 – Beaverdam	0.7 PPB	NA
22 – Cold Lake South	0.5 PPB	NA
23 – Medley-Martineau	0.5 PPB	NA
24 – Fort George	0.7 PPB	NA
25 – Burnt Lake	1.0 PPB	NA
26 – Mahikan	0.8 PPB	NA
27 – Mahkeses	1.3 PPB	NA
28 – Town of Bonnyville	0.6 PPB	NA
29 – Cold Lake South 2	0.6 PPB	NA
32 – St. Lina	0.6 PPB	NA
36 – Elk Point	0.8 PPB	NA



Summary

Minimum : 0.5 PPB –Primrose
 Maximum: 1.3 PPB –Mahkeses
 Average: 0.76 PPB *Includes Duplicates



Passive Field Data

Field Notes

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
2	SO ₂ /NO ₂ /O ₃	01/29/2013	11:52	NA	NA	All samplers had been removed and samples are missing.
3	H ₂ S/SO ₂ /NO ₂ /O ₃	01/29/2013	11:16	03/05/2013	12:23	
4	SO ₂ /NO ₂ /O ₃	01/30/2013	16:18	03/06/2013	16:08	
5	H ₂ S/SO ₂ /NO ₂ /O ₃	01/30/2013	15:09	03/06/2013	15:32	
6	SO ₂ /NO ₂ /O ₃	01/30/2013	13:15	03/06/2013	13:14	
8	SO ₂ /NO ₂ /O ₃	01/30/2013	17:24	03/06/2013	17:03	
9	SO ₂ /NO ₂ /O ₃	01/29/2013	08:32	03/05/2013	10:30	
10	H ₂ S/SO ₂ /NO ₂ /O ₃	01/29/2013	12:59	03/05/2013	14:15	
11	H ₂ S/SO ₂ /NO ₂ /O ₃	NA	NA	NA	NA	Sample was not changed as the access to the sample was blocked by snow.
12	H ₂ S/SO ₂ /NO ₂ /O ₃	01/31/2013	10:49	03/05/2013	17:48	
13	H ₂ S/SO ₂ /NO ₂ /O ₃	01/31/2013	14:55	03/06/2013	18:48	
14	H ₂ S/SO ₂ /NO ₂ /O ₃	01/31/2013	15:47	03/06/2013	19:48	
15	SO ₂ /NO ₂ /O ₃	01/30/2013	17:50	03/05/2013	09:45	
16	H ₂ S/SO ₂ /NO ₂ /O ₃	01/30/2013	11:25	03/06/2013	09:45	
17	H ₂ S/SO ₂ /NO ₂ /O ₃	01/30/2013	12:18	03/06/2013	12:17	
18	H ₂ S/SO ₂ /NO ₂ /O ₃	01/30/2013	10:35	03/06/2013	10:36	
19	SO ₂ /NO ₂ /O ₃	01/30/2013	09:06	03/06/2013	09:07	
22	H ₂ S/SO ₂ /NO ₂ /O ₃	01/29/2013	18:20	03/05/2013	08:45	
23	SO ₂ /NO ₂ /O ₃	01/29/2013	17:15	03/07/2013	16:36	
24	H ₂ S/SO ₂ /NO ₂ /O ₃	01/30/2013	13:51	03/06/2013	13:48	
25	H ₂ S/SO ₂	01/31/2013	12:13	03/05/2013	19:00	
26	H ₂ S/SO ₂	01/31/2013	15:13	03/06/2013	19:27	
27	H ₂ S/SO ₂	01/31/2013	16:41	03/07/2013	17:42	
28	SO ₂ /NO ₂ /O ₃	01/29/2013	09:03	03/05/2013	10:55	
29	H ₂ S/SO ₂ /NO ₂ /O ₃	01/29/2013	18:20	03/05/2013	08:45	
32	H ₂ S/SO ₂ /NO ₂ /O ₃	01/29/2013	09:55	03/05/2013	11:48	
36	H ₂ S/SO ₂ /NO ₂ /O ₃	01/30/2013	14:01	03/06/2013	13:56	

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
Duplicate # 16	SO ₂	01/30/2013	11:25	03/06/2013	09:45	
Duplicate # 17	SO ₂	01/30/2013	12:18	03/06/2013	12:7	
Duplicate # 18	SO ₂	01/30/2013	10:35	03/06/2013	10:36	
Duplicate # 25	H ₂ S	01/31/2013	12:13	03/05/2013	19:00	
Duplicate # 26	H ₂ S	01/31/2013	15:13	03/06/2013	19:27	
Duplicate # 06	NO ₂	01/30/2013	13:15	03/06/2013	13:4	
Duplicate # 08	NO ₂	01/30/2013	17:24	03/06/2013	17:03	
Duplicate # 06	O ₃	01/30/2013	13:15	03/06/2013	13:14	
Duplicate # 08	O ₃	01/30/2013	1724	03/06/2013	17:03	

Passive Network Laboratory Analysis



Your Project #: 2013/01/29 - 203/03/05
Site Location: LICA

Attention: MICHAEL BISAGA

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

Report Date: 2013/03/18

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B319490

Received: 2013/03/12, 13:31

Sample Matrix: Air
Samples Received: 34

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	20	2013/03/14	2013/03/18	EINDSOP-00150	Tang.Passive H2S in
NO2 Passive Analysis (1)	26	2013/03/15	2013/03/18	EINDSOP-00148	Tang Passive NO2 in
O3 Passive Analysis (1)	26	2013/03/14	2013/03/18	EINDSOP-00197	EPA 300 R2.1
SO2 Passive Analysis (1)	30	2013/03/15	2013/03/18	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, Customer Service
Email: LManchak@maxxam.ca
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 Analytics International Corporation o/a Maxxam Analytics Edmonton: 6744 - 50th Street T6B 3M9 Telephone(780) 378-8500 FAX(780) 378-8699



Maxxam Job #: B319490
 Report Date: 2013/03/18

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
 Client Project #: 2013/01/29 - 2013/03/05
 Site Location: LICA
 Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		FV9214	FV9215	FV9217	FV9218	FV9219		
Sampling Date			2013/01/29 11:16	2013/01/30 16:18	2013/01/30 15:09	2013/01/30 13:15		
	UNITS	2	3	4	5	6	RDL	QC Batch

Passive Monitoring								
Calculated H2S	ppb		0.13		0.14		0.02	6650560
Calculated NO2	ppb	MISSING	1.1	0.9	1.1	2.4	0.1	6654271
Calculated O3	ppb	MISSING	37.0	47.4	38.4	41.6	0.1	6649288
Calculated SO2	ppb	MISSING	0.6	1.0	0.9	0.8	0.1	6654466

RDL = Reportable Detection Limit

Maxxam ID		FV9220	FV9221	FV9222	FV9223	FV9224		
Sampling Date		2013/01/30 17:24	2013/01/29 08:32	2013/01/29 12:59		2013/01/31 10:49		
	UNITS	8	9	10	11	12	RDL	QC Batch

Passive Monitoring								
Calculated H2S	ppb			0.12	MISSING	0.11	0.02	6650560
Calculated NO2	ppb	0.9	1.2	2.6	MISSING	2.6	0.1	6654271
Calculated O3	ppb	45.4	39.6	35.9	MISSING	33.0	0.1	6649288
Calculated SO2	ppb	0.7	0.8	0.6	MISSING	1.0	0.1	6654466

RDL = Reportable Detection Limit

Maxxam ID		FV9225	FV9226		FV9227	FV9228		
Sampling Date		2013/01/31 14:55	2013/01/31 15:47		2013/01/31 17:50	2013/01/30 11:25		
	UNITS	13	14	QC Batch	15	16	RDL	QC Batch

Passive Monitoring								
Calculated H2S	ppb	0.11	0.13	6650560		0.14	0.02	6650560
Calculated NO2	ppb	0.8	1.2	6654271	1.2	1.6	0.1	6654271
Calculated O3	ppb	38.3	37.5	6649288	38.2	40.2	0.1	6649339
Calculated SO2	ppb	0.5	1.0	6654466	0.6	0.8	0.1	6654466

RDL = Reportable Detection Limit



Maxxam Job #: B319490
 Report Date: 2013/03/18

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
 Client Project #: 2013/01/29 - 2013/03/05
 Site Location: LICA
 Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		FV9229	FV9230	FV9231	FV9232	FV9233		
Sampling Date		2013/01/30 12:18	2013/01/30 10:35	2013/01/30 09:06	2013/01/29 18:20	2013/01/29 17:15		
	UNITS	17	18	19	22	23	RDL	QC Batch

Passive Monitoring								
Calculated H2S	ppb	0.19	0.13		0.15		0.02	6650560
Calculated NO2	ppb	2.1	1.2	0.6	1.5	0.4	0.1	6654271
Calculated O3	ppb	39.5	36.2	39.6	36.1	29.0	0.1	6649339
Calculated SO2	ppb	1.0	0.6	0.7	0.5	0.5	0.1	6654466
RDL = Reportable Detection Limit								

Maxxam ID		FV9234	FV9235	FV9236	FV9237	FV9238		
Sampling Date		2013/01/30 13:51	2013/01/31 12:13	2013/01/31 15:13	2013/01/31 16:41	2013/01/29 09:03		
	UNITS	24	25	26	27	28	RDL	QC Batch

Passive Monitoring								
Calculated H2S	ppb	0.27	0.21	0.16	0.15		0.02	6650560
Calculated NO2	ppb	2.0				5.8	0.1	6654271
Calculated O3	ppb	36.4				32.1	0.1	6649339
Calculated SO2	ppb	0.7	1.0	0.8	1.3	0.6	0.1	6654466
RDL = Reportable Detection Limit								

Maxxam ID		FV9239	FV9240	FV9241	FV9244	FV9245		
Sampling Date		2013/01/29 18:20	2013/01/29 09:55	2013/01/30 14:01	2013/01/30 13:15	2013/01/30 17:24		
	UNITS	29	32	36	6 DUP	8 DUP	RDL	QC Batch

Passive Monitoring								
Calculated H2S	ppb	0.15	0.12	0.16			0.02	6650560
Calculated NO2	ppb	1.9	1.3	4.2	2.5	0.9	0.1	6654271
Calculated O3	ppb	30.4	36.1	33.5	45.0	43.3	0.1	6649339
Calculated SO2	ppb	0.6	0.6	0.8			0.1	6654466
RDL = Reportable Detection Limit								



Maxxam Job #: B319490
Report Date: 2013/03/18

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2013/01/29 - 203/03/05
Site Location: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		FV9246	FV9247	FV9248	FV9249	FV9250		
Sampling Date		2013/01/30 11:25	2013/01/30 12:18	2013/01/30 10:35	2013/01/31 12:13	2013/01/31 15:13		
	UNITS	16 DUP	17 DUP	18 DUP	25 DUP	26 DUP	RDL	QC Batch

Passive Monitoring								
Calculated H2S	ppb				0.11	0.14	0.02	6650560
Calculated SO2	ppb	0.8	0.8	0.6			0.1	6654468

RDL = Reportable Detection Limit



Maxxam Job #: B319490
Report Date: 2013/03/18

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2013/01/29 - 2013/03/05
Site Location: LICA
Sampler Initials: SB

General Comments

Sample FV9228 (#16) O3 with perforation in filter membrane. - OZ
Sample's number #2 and #11 not returned due to site inaccessibility resulting from heavy snowfall.

Results relate only to the items tested.



LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
 Attention: MICHAEL BISAGA
 Client Project #: 2013/01/29 - 203/03/05
 P.O. #:
 Site Location: LICA

Quality Assurance Report
 Maxxam Job Number: PB319490

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
6649288 OZ	Calibration Check	Calculated O3	2013/03/14		100	%	91 - 107
	Spiked Blank	Calculated O3	2013/03/14		99	%	N/A
	Method Blank	Calculated O3	2013/03/14	<0.1		ppb	
6649339 OZ	Calibration Check	Calculated O3	2013/03/14		99	%	91 - 107
	Spiked Blank	Calculated O3	2013/03/14		99	%	N/A
	Method Blank	Calculated O3	2013/03/14	<0.1		ppb	
6650560 WC6	Calibration Check	Calculated H2S	2013/03/14		99	%	80 - 120
	Spiked Blank	Calculated H2S	2013/03/14		98	%	N/A
6654271 SS6	Calibration Check	Calculated NO2	2013/03/15		98	%	76 - 118
	Spiked Blank	Calculated NO2	2013/03/15		97	%	N/A
	Method Blank	Calculated NO2	2013/03/15	<0.1		ppb	
6654466 SS6	Calibration Check	Calculated SO2	2013/03/15		102	%	95 - 105
	Spiked Blank	Calculated SO2	2013/03/15		103	%	N/A
	Method Blank	Calculated SO2	2013/03/15	<0.1		ppb	

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

Maxxam Analytics International Corporation o/a Maxxam Analytics Edmonton: 6744 - 50th Street T6B 3M9 Telephone(780) 378-8500 FAX(780) 378-8699

Validation Signature Page

Maxxam Job #: B319490

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

A handwritten signature in black ink, appearing to be "Linda Lin", written over a horizontal line.

Linda Lin, Supervisor, Centre for Passive Sampling Technology

=====

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

Polycyclic Aromatic Hydrocarbons Laboratory Analysis

Maxxam

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA Puff S/N: 100-1020
 Location: COLD LAKE SOUTH Motor S/N: 1138
 Station ID: LICA 1 Installation Date/Time: JAN 31, 2013 @ 17:30 MST
 Field Sample ID: LICA PUF / CUS / JAN 28, 2013 Removal Date/Time: FEB 06, 2013 @ 14:14 MST
FEB 03

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
<u>3 FEB, 2013</u>	<u>02/03/2013 0100</u>	<u>02/04/2013 0100</u>	<u>24 HRS</u>

PUF and QFF Information			
Date Received	Date Shipped	Puff Expiration Date	QFF Prep Date
<u>JAN 29, 2013</u>		<u>04 FEB, 2013</u>	<u>21 JAN, 2013</u>

Set Flow Rate (slpm): 230

Date of Last Calibration: 22 SEP 11

Sampling Data			
Average Pressure (mmHg)	Average Flow (Qstd slpm)	Average Temperature (°C)	Volume (Vstd m³)
<u>713</u>	<u>229</u>	<u>-13.9</u>	<u>330.38</u>

Time set correctly prior to sampling? YES / NO ✓
 Timer set correctly prior to sampling? YES / NO ✓
 Sampling data saved to memory card after sampling? YES / NO ✓

Comments: CO C. # 13236

Comments:

RAJA ABID ASHLAF

Technician Signature

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF CLS				Max Actual
Matrix :			Date Received : 1-Mar-13 by: RMR	- 26 --
SmpDate: 3-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 4-Mar-13 by: rnr	45 29 ok
EndDate: 4-Feb-13 @ 0000	..ID2 :		Date Analyzed : 7-Mar-13 by: rnr	60 32 ok
			Raw DataFile : p0596	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	0.00		
102849	Acenaphthene	.08			102850	Acenaphthylene	.12		
102851	Acridine	0.00			102852	Anthracene	.03		
102853	Benzo(a)anthracene	.01			102854	Benzo(a)pyrene	.01		
102855	Benzo(b,j,k)fluoranthene	.05			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	.02			102858	Benzo(ghi)perylene	.02		
102859	Chrysene	.03			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	.01			102864	Fluoranthene	.10		
102865	Fluorene	.16			102866	Indeno(1,2,3-cd)pyrene	.02		
102867	Naphthalene	.86			102868	Phenanthrene	.39		
102869	Pyrene	.08			103826	Retene	.06		

Total Particulate Weight (when applicable) = mg

Total cubic meters of air =(hrs @ m3/min) = m3

MDL : The Method Detection Limit for this sample has been calculated based on the volume of sample collected.

Typically, 10 ng of analyte per sample must be present on the filter to satisfy the current analytical technique.

Zero (0) values indicate that the analyte is not DETECTED.

MDL - Method Detection Limit

flags B - This analyte is found in the blank as well as the sample. The blank value has been subtracted.

X - Estimated value. The target compound meets the identification criteria, but is less than the MDL.

Q - Qualifying ions present but failed the ion ratio limits.

M - This value is calculated by an alternate Raw DataFile.

* - asterik following the value for Actual days taken indicates the prescribed time for that event was exceeded.

** - the Date Sampled is unknown, therefore timeline calculations can not be performed.

Certified For: Ryan Rybchuk	Team Leader	mail to: LICA
	Organic Environmental Monitoring	attn: Mike Bisaga
	Alberta Innovates - Technology Futures	Lakeland Industry and Community Assn
Date: 14-Mar-13	Bag 4000, Vegreville, Alberta	Box 8237, 5107W-50 Street
Contact No. (780) 632-8455	T9C 1T4	Bonnyville, Alberta
		T9N 2J5

"results relate only to the item tested"

Please check the mailing information and inform the lab if changes are required.

page 1 of 1

Maxxam

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA Puff S/N: 100 - 1020
 Location: COLD LAKE SOUTH Motor S/N: 1138
 Station ID: LICA 1 Installation Date/Time: FEB 06, 2013 14:17mst
 Field Sample ID: LICA PUF / CLS / FEB 09, 2013 Removal Date/Time: FEB 11, 2013 @ 13:35mst

Date and Time Information		
Sample Date	Start Time (MST)	End Time (MST)
9 FEB 2013	02/09/13 0:00	02/10/2013 0:00
		Elapsed Time (Hours) 24 HRS.

PUF and QFF Information		
Date Received	Date Shipped	Puff Expiration Date
JAN 22, 2013		
		QFF Prep Date

Set Flow Rate (slpm): 230
 Date of Last Calibration: 22 SEP 11

Sampling Data		
Average Pressure (mmHg)	Average Flow (Qstd slpm)	Average Temperature (Vstd m ³)
709	229	-2.0
		Volume (Vstd m ³) 330.31

Time set correctly prior to sampling? YES / NO ✓
 Timer set correctly prior to sampling? YES / NO ✓
 Sampling data saved to memory card after sampling? YES / NO

Comments:

Technician Signature: RAJ A ABID

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF CLS				Max Actual
Matrix :			Date Received : 13-Feb-13 by: RMR	- 4 --
SmpDate: 9-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 23-Feb-13 by: rnr	45 14 ok
EndDate: 10-Feb-13 @ 0000	..ID2 :		Date Analyzed : 7-Mar-13 by: rnr	60 26 ok
			Raw DataFile : p0432	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	0.00		
102849	Acenaphthene	0.00			102850	Acenaphthylene	0.00		
102851	Acridine	0.00			102852	Anthracene	.02		
102853	Benzo(a)anthracene	.01			102854	Benzo(a)pyrene	0.00		
102855	Benzo(b,j,k)fluoranthene	.05			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	.03			102858	Benzo(ghi)perylene	.02		
102859	Chrysene	.05			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	.01			102864	Fluoranthene	.09		
102865	Fluorene	.20			102866	Indeno(1,2,3-cd)pyrene	.02		
102867	Naphthalene	.19			102868	Phenanthrene	.41		
102869	Pyrene	.07			103826	Retene	.05		

Total Particulate Weight (when applicable) = mg

Total cubic meters of air =(hrs @ m3/min) = m3

MDL : The Method Detection Limit for this sample has been calculated based on the volume of sample collected.

Typically, 10 ng of analyte per sample must be present on the filter to satisfy the current analytical technique.

Zero (0) values indicate that the analyte is not DETECTED.

MDL - Method Detection Limit

flags B - This analyte is found in the blank as well as the sample. The blank value has been subtracted.

X - Estimated value. The target compound meets the identification criteria, but is less than the MDL.

Q - Qualifying ions present but failed the ion ratio limits.

M - This value is calculated by an alternate Raw DataFile.

* - asterik following the value for Actual days taken indicates the prescribed time for that event was exceeded.

** - the Date Sampled is unknown, therefore timeline calculations can not be performed.

Certified For: Ryan Rybchuk	Team Leader	mail to: LICA
	Organic Environmental Monitoring	attn: Mike Bisaga
	Alberta Innovates - Technology Futures	Lakeland Industry and Community Assn
Date: 14-Mar-13	Bag 4000, Vegreville, Alberta	Box 8237, 5107W-50 Street
Contact No. (780) 632-8455	T9C 1T4	Bonnyville, Alberta T9N 2J5

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Please check the mailing information and inform the lab if changes are required.

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Maxxam

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA
 Location: COLD LAKE SOUTH
 Station ID: LICA 4
 Field Sample ID: LICA PUF/CLS/FEB15,2013
 Puf+ S/N: 100 - 1020
 Motor S/N: 1138
 Installation Date/Time: FEB 11, 2013 @ 13:35 mst
 Removal Date/Time: FEB 20, 2013 @ 19:08 mst

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
15 FEB, 2013	02:15/2013	02:16/2013 0:00	24 HRS

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
24 JAN 2013			

Set Flow Rate (slpm): 230
 Date of Last Calibration: 22 SEP 11

Sampling Data			
Average Pressure (mmHg)	Average Flow (Qstd slpm)	Average Temperature (°C)	Volume (Vstd m ³)
715	229	-4.9	330.34

Time set correctly prior to sampling? YES / NO ✓
 Timer set correctly prior to sampling? YES / NO ✓
 Sampling data saved to memory card after sampling? YES / NO

Comments: _____

Technician Signature: _____

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF CLS				Max Actual
Matrix :			Date Received : 26-Feb-13 by: RMR	- 11 --
SmpDate: 15-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 28-Feb-13 by: rnr	45 13 ok
EndDate: 16-Feb-13 @ 0000	..ID2 :		Date Analyzed : 7-Mar-13 by: rnr	60 20 ok
			Raw DataFile : p0563	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	0.00		
102849	Acenaphthene	.10			102850	Acenaphthylene	.04		
102851	Acridine	0.00			102852	Anthracene	.03		
102853	Benzo(a)anthracene	.01			102854	Benzo(a)pyrene	.01		
102855	Benzo(b,j,k)fluoranthene	.04			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	.02			102858	Benzo(ghi)perylene	.02		
102859	Chrysene	.04			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	.01			102864	Fluoranthene	.09		
102865	Fluorene	.23			102866	Indeno(1,2,3-cd)pyrene	.01		
102867	Naphthalene	.33			102868	Phenanthrene	.40		
102869	Pyrene	.11			103826	Retene	.06		

Total Particulate Weight (when applicable) = mg

Total cubic meters of air =(hrs @ m3/min) = m3

MDL : The Method Detection Limit for this sample has been calculated based on the volume of sample collected.

Typically, 10 ng of analyte per sample must be present on the filter to satisfy the current analytical technique.

Zero (0) values indicate that the analyte is not DETECTED.

MDL - Method Detection Limit

flags B - This analyte is found in the blank as well as the sample. The blank value has been subtracted.

X - Estimated value. The target compound meets the identification criteria, but is less than the MDL.

Q - Qualifying ions present but failed the ion ratio limits.

M - This value is calculated by an alternate Raw DataFile.

* - asterik following the value for Actual days taken indicates the prescribed time for that event was exceeded.

** - the Date Sampled is unknown, therefore timeline calculations can not be performed.

Certified For: Ryan Rybchuk	Team Leader	mail to: LICA
	Organic Environmental Monitoring	attn: Mike Bisaga
	Alberta Innovates - Technology Futures	Lakeland Industry and Community Assn
Date: 14-Mar-13	Bag 4000, Vegreville, Alberta	Box 8237, 5107W-50 Street
Contact No. (780) 632-8455	T9C 1T4	Bonnyville, Alberta T9N 2J5

"results relate only to the item tested"

Please check the mailing information and inform the lab if changes are required.

page 1 of 1

MAXXAM

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA
 Location: Cold Lake South
 Station ID: LICA 1
 Field Sample ID: LICA PUF/ CLS /Feb 21, 2013

Puf+ s/n: 100-1020
 Motor s/n: 1138
 Installation Date/Time: Feb 20, 2013 @ 19:20 mst
 Removal Date/Time: Feb 26, 2013 @ 16:05 mst

Date and Time Information			
Sample Date	Start Time (MST)	Finish Time (MST)	Elapsed Time (Hours)
Feb 21, 2013	00:00	Feb 22, 2013 00:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
Feb 07, 2013			????

Set Flow Rate (slpm): 230
 Date of Last Calibration: 22-Sep-11

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature (C)	Volume (Vstd m ³)
713	229	-12.2	330.39

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

Comments:

Technician Signiture: Raja Abid

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF CLS				Max Actual
Matrix :			Date Received : 1-Mar-13 by: RMR	- 8 --
SmpDate: 21-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 4-Mar-13 by: rnr	45 11 ok
EndDate: 22-Feb-13 @ 0000	..ID2 :		Date Analyzed : 7-Mar-13 by: rnr	60 14 ok
			Raw DataFile : p0599	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	0.00		
102849	Acenaphthene	.05			102850	Acenaphthylene	.03		
102851	Acridine	0.00			102852	Anthracene	.02		
102853	Benzo(a)anthracene	0.00			102854	Benzo(a)pyrene	0.00		
102855	Benzo(b,j,k)fluoranthene	.03			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	.01			102858	Benzo(ghi)perylene	.01		
102859	Chrysene	.01			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	0.00			102864	Fluoranthene	.04		
102865	Fluorene	.08			102866	Indeno(1,2,3-cd)pyrene	.01		
102867	Naphthalene	.17			102868	Phenanthrene	.16		
102869	Pyrene	.05			103826	Retene	.02		

Total Particulate Weight (when applicable) = mg

Total cubic meters of air =(hrs @ m3/min) = m3

MDL : The Method Detection Limit for this sample has been calculated based on the volume of sample collected.

Typically, 10 ng of analyte per sample must be present on the filter to satisfy the current analytical technique.

Zero (0) values indicate that the analyte is not DETECTED.

MDL - Method Detection Limit

flags B - This analyte is found in the blank as well as the sample. The blank value has been subtracted.

X - Estimated value. The target compound meets the identification criteria, but is less than the MDL.

Q - Qualifying ions present but failed the ion ratio limits.

M - This value is calculated by an alternate Raw DataFile.

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Certified For: Ryan Rybchuk	Team Leader	mail to: LICA
	Organic Environmental Monitoring	attn: Mike Bisaga
	Alberta Innovates - Technology Futures	Lakeland Industry and Community Assn
Date: 14-Mar-13	Bag 4000, Vegreville, Alberta	Box 8237, 5107W-50 Street
Contact No. (780) 632-8455	T9C 1T4	Bonnyville, Alberta
		T9N 2J5

"results relate only to the item tested"

Please check the mailing information and inform the lab if changes are required.

page 1 of 1

MAXXAM

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA
Location: Cold Lake South
Station ID: LICA 1
Field Sample ID: LICA PUF/ CLS /Feb 27, 2013

Puf+ s/n: 100-1020
Motor s/n: 1138
Installation Date/Time: Feb 26, 2013 @ 16:09 mst
Removal Date/Time: Feb 28, 2013 @ 12:53 mst

Date and Time Information			
Sample Date	Start Time (MST)	Finish Time (MST)	Elapsed Time (Hours)
Feb 27, 2013	00:00	Feb 28, 2013 00:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
Feb 04, 2013			????

Set Flow Rate (slpm): 230
Date of Last Calibration: 22-Sep-11

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature (C)	Volume (Vstd m ³)
719	229	-6.8	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:

Technician Signiture: Raja Abid / Waseem Ahmed

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF CLS				Max Actual
Matrix :			Date Received : 4-Mar-13 by: RMR	- 5 --
SmpDate: 27-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 12-Mar-13 by: rnr	45 13 ok
EndDate: 28-Feb-13 @ 0000	..ID2 :		Date Analyzed : 16-Mar-13 by: rnr	60 17 ok
			Raw DataFile : p0619	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	.03		
102849	Acenaphthene	.05			102850	Acenaphthylene	.05		
102851	Acridine	0.00			102852	Anthracene	.05		
102853	Benzo(a)anthracene	.02			102854	Benzo(a)pyrene	.02		
102855	Benzo(b,j,k)fluoranthene	.06			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	0.00			102858	Benzo(ghi)perylene	.02		
102859	Chrysene	.03			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	0.00			102864	Fluoranthene	.10		
102865	Fluorene	.12			102866	Indeno(1,2,3-cd)pyrene	.02		
102867	Naphthalene	.12			102868	Phenanthrene	.32		
102869	Pyrene	.08			103826	Retene	.46		

Total Particulate Weight (when applicable) = mg

Total cubic meters of air =(hrs @ m3/min) = m3

MDL : The Method Detection Limit for this sample has been calculated based on the volume of sample collected.

Typically, 10 ng of analyte per sample must be present on the filter to satisfy the current analytical technique.

Zero (0) values indicate that the analyte is not DETECTED.

MDL - Method Detection Limit

flags B - This analyte is found in the blank as well as the sample. The blank value has been subtracted.

X - Estimated value. The target compound meets the identification criteria, but is less than the MDL.

Q - Qualifying ions present but failed the ion ratio limits.

M - This value is calculated by an alternate Raw DataFile.

* - asterik following the value for Actual days taken indicates the prescribed time for that event was exceeded.

** - the Date Sampled is unknown, therefore timeline calculations can not be performed.

Certified For: Ryan Rybchuk	Team Leader	mail to: LICA
	Organic Environmental Monitoring	attn: Mike Bisaga
	Alberta Innovates - Technology Futures	Lakeland Industry and Community Assn
Date: 16-Mar-13	Bag 4000, Vegreville, Alberta	Box 8237, 5107W-50 Street
Contact No. (780) 632-8455	T9C 1T4	Bonnyville, Alberta T9N 2J5

"results relate only to the item tested"

Please check the mailing information and inform the lab if changes are required.

page 1 of 1

Lakeland Industry & Community Association

Maskwa Monitoring Site
Ambient Air Monitoring
Data Report
For
February 2013

Prepared By:



March 26, 2013

Lakeland Industry & Community Association Ambient Air Monitoring Maskwa

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• Temperature	59		
• Precipitation	62		
• Relative Humidity	65		
• Barometric Pressure	68		
• Vector Wind Speed	71		
• Vector Wind Direction	78		
• Standard Deviation Wind Direction	81		

Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Maskwa
Data Period: February 2013

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Katherine Rapske

Calibration Procedure

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

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

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

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

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

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

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

MONTHLY CONTINUOUS DATA SUMMARY

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – MASKWA

Continuous Ambient Monitoring – February 2013

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	48	0	0	0.66	9	13	9	5.5	307(NW)	1.3	10	99.9
H2S (PPB)	10	3	0	0	0.21	1	VAR	VAR	VAR	VAR	0.8	8, 23	100.0
THC (PPM)	-	-	-	-	2.31	4.4	8, 26	16, 9	6.1, 1.5	212(SSW), 36(NE)	3.3	8	100.0
NOx (PPB)	-	-	-	-	4.65	33.1	5	9	0.2	183(S)	14.9	8	100.0
NO (PPB)	-	-	-	-	0.62	13.6	5	9	0.2	183(S)	2.7	8	100.0
NO ₂ (PPB)	159	-	0	-	4.03	27.5	8	17	5.4	210(SSW)	12.2	8	100.0
VECTOR WS (KPH)	-	-	-	-	5.89	15.1	13	12	-	30(NNE)	9.4	17	100.0
VECTOR WD (DEGREES)	-	-	-	-	169(SSE)	-	-	-	-	-	-	-	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	71.93	89	12, 13	VAR	VAR	VAR	82.6	13	100.0
TEMPERATURE (DEG C)	-	-	-	-	-7.89	7.6	16	13	9.2	287(WNW)	1.3	16	100.0
BAROMETRIC PRESSURE (MILIBAR)	-	-	-	-	938	949	14, 18	VAR	VAR	VAR	948.3	14	100.0
PRECIPITATION (MM)	-	-	-	-	0.05	5.9	27	16	8.6	181(S)	14.1	27	100.0

NA-NOT APPLICABLE VAR-VARIOUS

General Monthly Summary

Equipment Operation

The following summary outlines the analyzer performance. Any non-conformances, problems encountered 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

Following the as found points check on February 21st, the analog output was calibrated and adjusted. A post-repair calibration was then performed. The inlet filter was changed before the as found points check on February 21st. The analyzer spanned high on February 25th. Following the as found points check on February 27th, the exhaust pump was rebuilt. A daily zero/span check was run after the pump rebuilt. This issue did not affect the daily quality. Data was corrected using daily zero information.

Hydrogen Sulphide (PPB)

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

No operational issues were observed during the month. The inlet filter was changed before the monthly calibration was started on February 21st. Data was corrected using daily zero information.

Total Hydrocarbon (PPM)

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

No operational issues were observed during the month. The inlet filter was changed before the monthly calibration was started on February 21st. 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 issues were observed during the month. Following the as found points check on February 21st, the analog output was calibrated and adjusted. A post-repair calibration was then performed. The inlet filter was changed before the as found points check on February 21st. Data was corrected using daily zero information.

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

- System make / model - MetOne 50.5H Sonic, S/N: H10703

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

Relative Humidity (PERCENT)

- System make / model - Met One 083

No operational issues were observed during the month.

Precipitation (MM)

- System make / model - Met One 387

No operational issues were observed during the month.

General Monthly Summary

AQM STATION – LICA – Maskwa

Barometric Pressure (MILLIBAR)

- System make / model - Met One 092
- No operation issues were observed during the month.

Ambient Temperature (DEGC)

- System make / model - Met One 060
- No operational issues were observed during the month.

Trailer Temperature (DEG C)

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

Standard Deviation Wind Direction (DEG)

- System make / model –Met One 50.5H
- No operational issues were 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 issues were observed during the month.

Trailer

No issue was recorded this month.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA
FEBRUARY 2013
SULPHUR DIOXIDE (SO₂) hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.	RDGS.		
DAY																												
1	1	1	3	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	S	0	3	1.0	24	
2	1	0	0	0	0	1	0	1	4	2	2	0	0	0	0	0	0	0	0	0	0	S	0	0	4	0.5	24	
3	1	0	0	0	0	1	1	1	3	1	1	2	2	3	1	1	1	1	1	1	S	0	0	0	3	1.0	24	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	2	0	0	S	2	1	0	4	8	0.8	24	
5	0	0	0	0	0	0	0	0	1	0	2	2	0	0	0	0	0	0	S	0	0	0	0	0	2	0.2	24	
6	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0	2	S	0	0	0	0	0	0	2	0.3	24	
7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	S	0	0	0	0	0	0	0	1	0.0	24	
8	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	S	2	1	0	0	0	0	0	0	2	0.3	24	
9	0	0	0	1	2	2	3	0	0	6	8	1	0	0	S	0	0	0	0	0	0	0	0	0	8	1.0	24	
10	0	0	0	0	1	2	1	2	2	3	6	4	3	S	1	1	0	0	0	0	0	0	1	1	1	6	1.3	24
11	1	1	1	1	1	2	2	2	1	2	1	1	S	0	0	1	0	0	0	0	0	0	0	0	2	0.7	24	
12	0	0	0	0	0	0	0	0	0	0	1	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24	
13	0	0	0	0	0	1	1	5	6	9	S	0	0	0	0	0	0	0	0	0	0	0	1	1	2	9	1.1	24
14	0	0	0	0	0	0	4	0	0	S	1	1	1	2	1	0	0	0	0	0	0	0	0	0	4	0.4	24	
15	0	0	0	0	0	0	0	0	S	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	2	0.7	24
16	1	1	1	1	1	1	1	S	0	1	2	2	0	0	0	0	0	0	0	0	1	4	6	0	6	1.0	24	
17	1	1	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24	
18	0	0	0	0	0	S	1	0	0	0	0	0	0	0	1	3	2	7	2	0	0	0	0	0	7	0.7	24	
19	0	0	0	0	S	3	0	0	3	1	1	4	2	2	1	1	1	1	1	2	1	1	1	1	1	4	1.2	24
20	1	1	1	S	0	0	0	1	0	1	1	1	1	0	1	2	0	0	0	1	1	1	1	1	1	2	0.7	24
21	1	1	S	0	0	0	0	C	C	C	C	C	C	C	C	1	C	C	0	0	0	0	0	0	1	0.2	24	
22	0	S	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	7	2	5	1	7	1.1	24		
23	S	0	0	0	0	0	0	0	0	0	2	1	1	0	0	6	0	0	4	6	5	0	S	6	1.1	24		
24	0	1	0	0	0	0	0	0	0	0	0	1	1	1	2	1	1	1	1	1	1	1	S	2	2	0.7	24	
25	2	1	1	1	6	3	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	S	0	1	6	0.9	24	
26	1	0	0	0	0	0	S	S	0	0	1	3	1	0	1	0	0	0	0	S	0	0	0	3	0.3	24		
27	0	1	0	0	0	0	0	0	0	0	0	0	0	0	C	C	[C	0	S	0	0	1	1	1	0.2	23	
28	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	S	1	1	2	2	1	2	0.6	24	
HOURLY MAX	2	1	3	1	6	3	4	5	6	9	8	4	3	3	2	8	6	7	2	5	7	5	6	4				
HOURLY AVG	0.4	0.3	0.3	0.2	0.4	0.6	0.6	0.5	0.8	1.2	1.3	1.2	0.7	0.5	0.6	1.0	1.0	0.5	0.3	0.7	0.8	0.8	0.7	0.6				

STATUS FLAG CODES

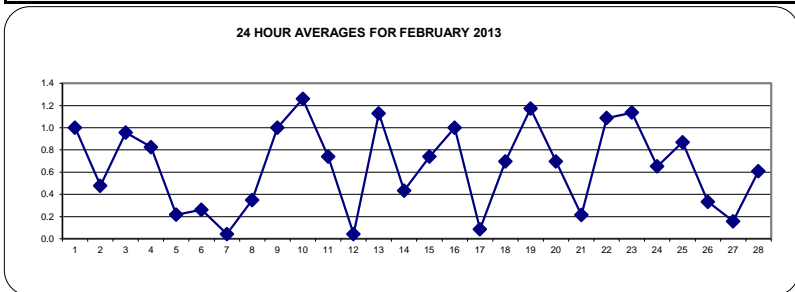
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

OBJECTIVE LIMIT:

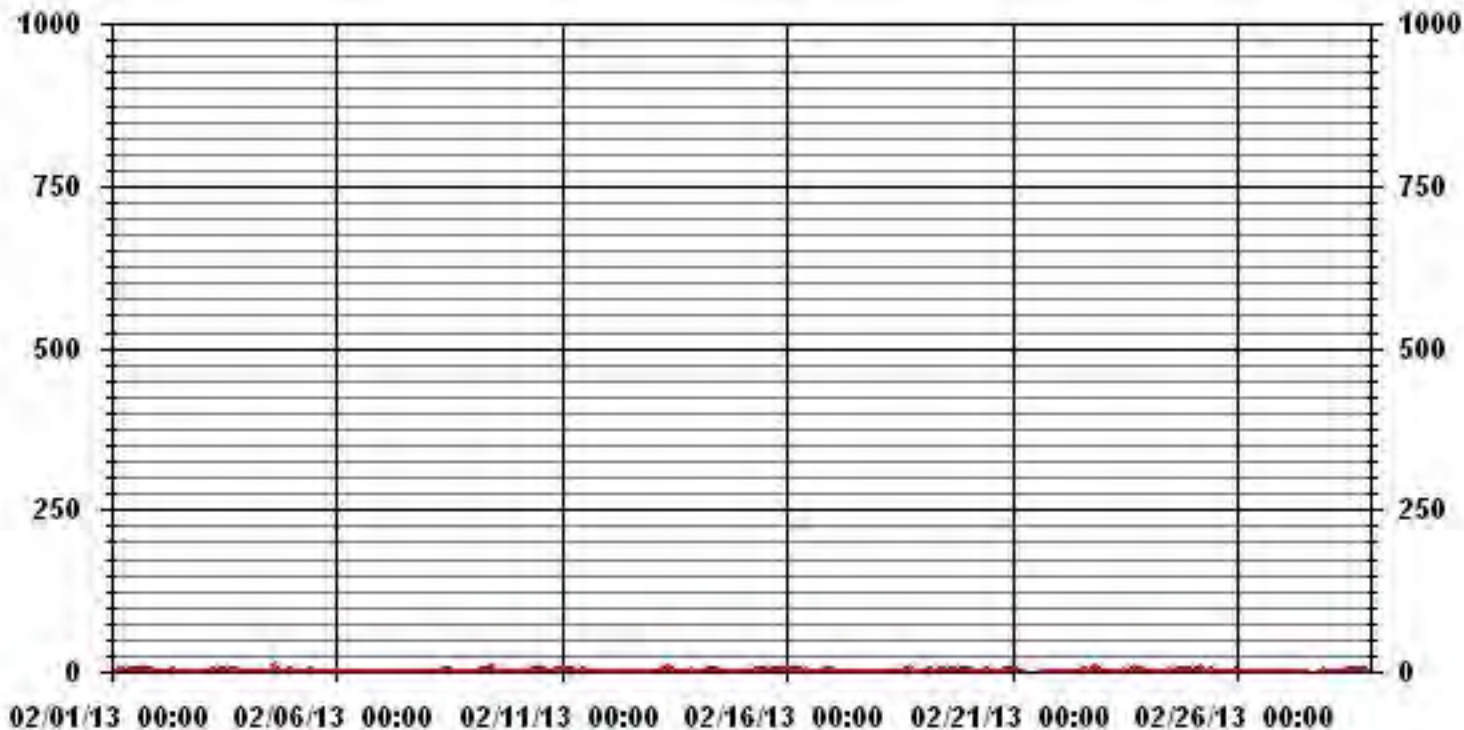
ALBERTA ENVIRONMENT: 1-HR 172 PPB | 24-HR 48 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0				
NUMBER OF 24-HR EXCEEDENCES:	0				
NUMBER OF NON-ZERO READINGS:	243				
MAXIMUM 1-HR AVERAGE:	9	PPB	@ HOUR(S)	9	ON DAY(S)
MAXIMUM 24-HR AVERAGE:	1.3	PPB			ON DAY(S)
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS
MONTHLY CALIBRATION TIME:	12	HRS	AMD OPERATION UPTIME:	99.9	%
STANDARD DEVIATION:	1.22		MONTHLY AVERAGE:	0.66	PPB



01 Hour Averages



— LICA30 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	1	1	5	1	1	1	1	1	1	1	3	3	2	2	2	2	2	1	1	1	1	2	S	0	5	1.6	24	
2	12	0	0	0	1	12	13	7	11	11	8	4	2	2	0	0	0	0	0	0	S	1	4	13	3.8	24		
3	4	0	1	1	1	1	2	2	5	2	2	5	8	1	2	2	2	1	2	S	1	1	1	8	2.3	24		
4	0	0	1	2	0	0	0	1	1	0	1	0	0	1	8	20	8	3	3	S	11	6	5	13	20	3.7	24	
5	1	1	0	0	0	0	1	0	2	1	4	4	1	0	1	1	0	0	S	0	0	0	0	0	4	0.7	24	
6	0	0	0	0	0	0	0	0	0	3	2	5	5	2	5	2	5	S	4	1	0	0	0	0	5	1.5	24	
7	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	0	S	0	0	0	0	0	0	0	2	0.3	24	
8	0	0	0	0	0	0	0	1	1	2	2	2	2	1	1	S	3	2	0	0	1	0	0	0	3	0.8	24	
9	1	1	1	2	3	3	4	3	0	22	18	3	2	4	S	0	0	0	1	0	0	0	0	0	22	3.0	24	
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11	2	2	2	2	2	3	3	3	3	3	2	1	S	1	0	3	2	0	0	0	0	0	0	0	3	1.5	24	
12	0	0	0	0	0	0	0	0	0	1	2	S	0	0	0	0	0	0	1	1	1	0	0	0	2	0.3	24	
13	1	1	1	1	1	2	3	12	15	17	S	0	0	1	1	0	0	0	0	0	0	2	2	8	17	3.0	24	
14	2	3	1	0	0	4	16	1	0	S	1	1	3	7	7	1	1	1	1	1	1	0	0	0	16	2.3	24	
15	0	0	1	1	0	1	1	1	S	1	1	1	1	1	3	3	3	2	2	2	3	2	1	2	3	1.4	24	
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17	1	1	1	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24	
18	0	0	0	0	2	S	3	1	1	1	1	1	1	1	5	13	6	10	7	1	1	1	1	1	13	2.5	24	
19	1	1	1	1	S	7	1	1	5	4	2	8	5	5	4	2	1	1	2	2	2	2	2	2	8	2.7	24	
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22	1	S	0	1	0	0	0	0	1	2	0	0	0	0	1	10	10	0	0	11	12	9	10	5	12	3.2	24	
23	S	1	1	0	0	0	0	0	0	2	3	2	6	2	2	0	26	3	0	14	20	20	0	S	26	4.6	24	
24	1	2	1	0	1	1	1	0	0	1	1	1	2	2	3	2	1	1	1	1	1	2	S	3	3	1.3	24	
25	4	2	1	2	16	6	1	1	1	2	1	3	1	1	0	0	0	0	0	0	0	S	1	1	16	1.9	24	
26	1	1	0	0	1	1	S	S	0	1	1	12	5	1	2	0	0	0	0	0	S	0	0	2	12	1.3	24	
27	0	2	1	0	1	1	1	1	2	1	1	1	0	1	C	C	[C	1	S	1	1	2	2	2	1.1	23	
28	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	S	1	2	3	3	2	3	1.3	24	
HOURLY MAX	12	3	5	2	16	12	16	12	15	22	18	12	6	8	8	20	26	10	7	14	20	20	19	13				
HOURLY AVG	1.4	0.9	0.9	0.7	1.4	1.9	2.3	1.6	2.2	3.3	2.8	2.7	2.0	1.8	2.0	2.6	2.9	1.2	1.0	1.6	2.4	2.4	2.0	1.9				

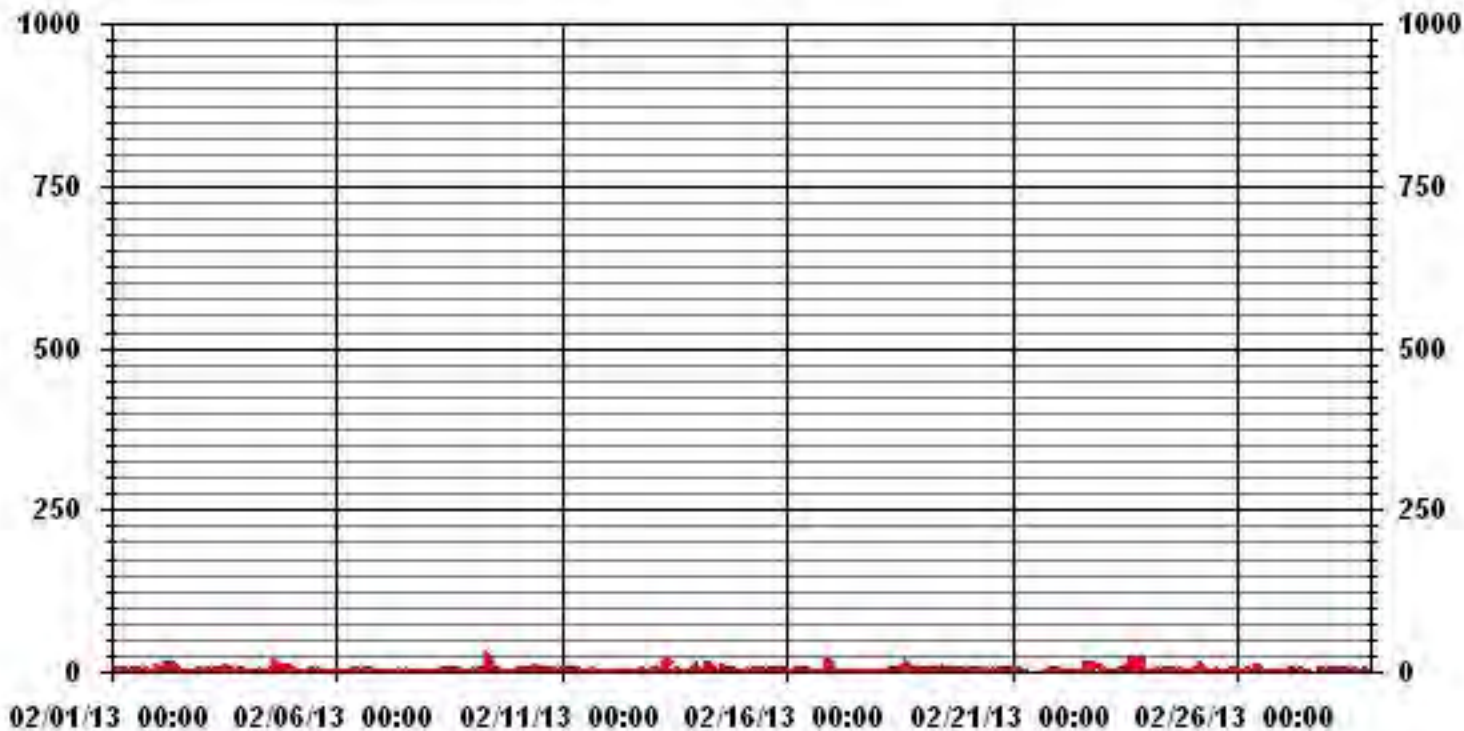
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	424				
MAXIMUM INSTANTANEOUS VALUE:	26	PPB	@ HOUR(S)	16	ON DAY(S) 23
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS
MONTHLY CALIBRATION TIME:	12	HRS			
STANDARD DEVIATION:	3.26				

01 Hour Averages



LICA30
SO2_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : SO2_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	4.29	5.89	4.93	4.45	4.77	5.73	8.28	8.12	6.52	17.67	7.00	2.07	6.05	6.52	2.86	4.77	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	4.29	5.89	4.93	4.45	4.77	5.73	8.28	8.12	6.52	17.67	7.00	2.07	6.05	6.52	2.86	4.77	

Calm : .00 %

Total # Operational Hours : 628

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 20	27	37	31	28	30	36	52	51	41	111	44	13	38	41	18	30	628
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	27	37	31	28	30	36	52	51	41	111	44	13	38	41	18	30	

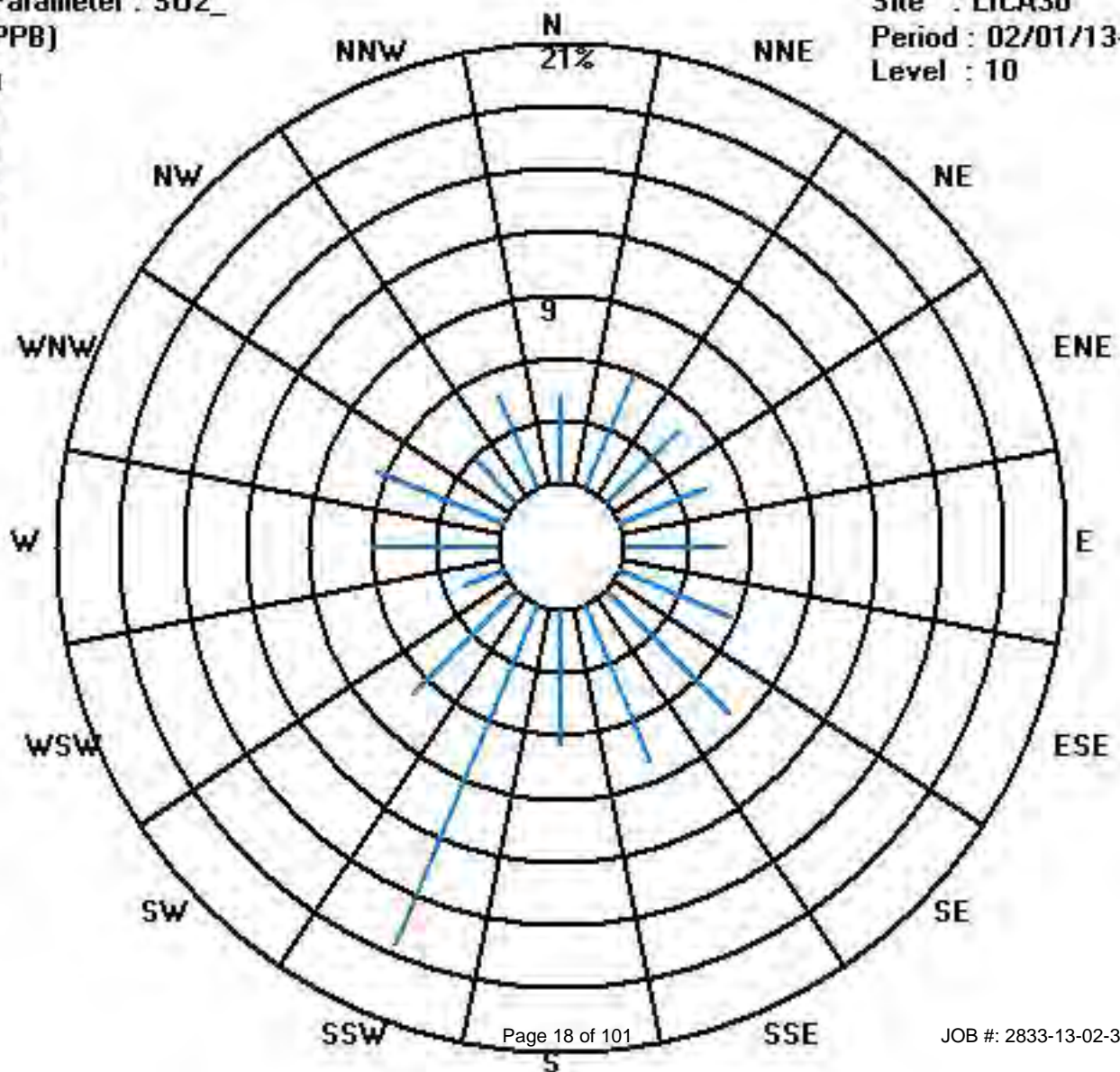
Calm : .00 %

Total # Operational Hours : 628

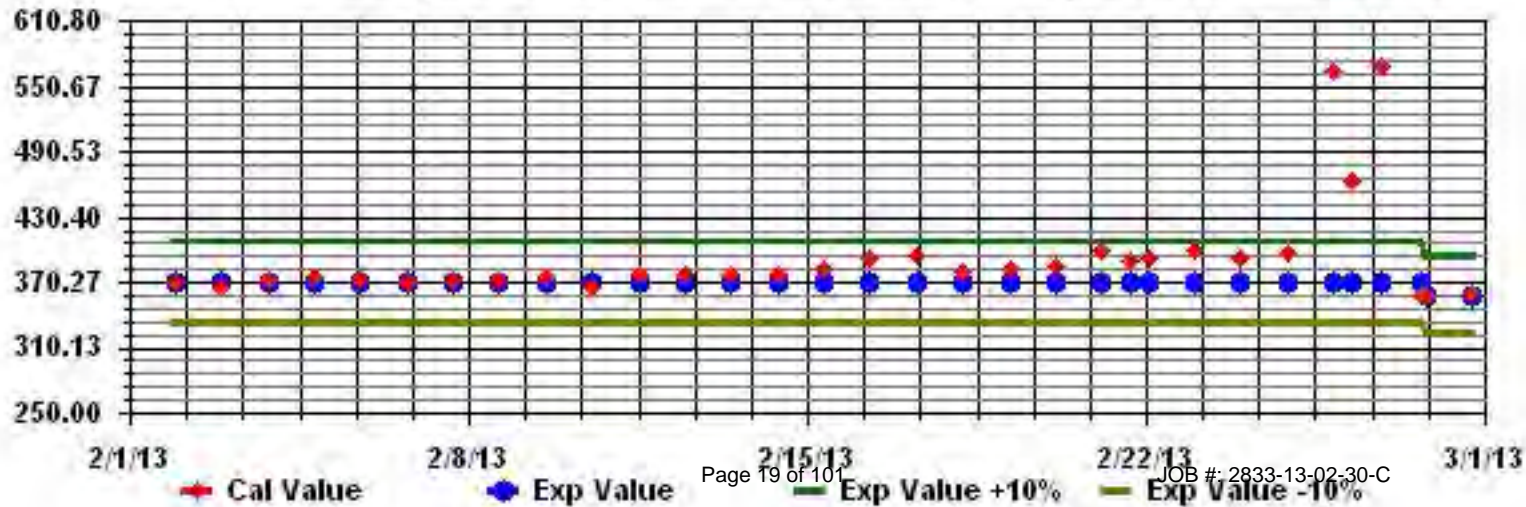
Class Limits (PPB)

Period : 02/01/13-02/28/13

Level : 10



Calibration Graph for Site: LICA30 Parameter: SO2_ Sequence: S02 Phase: SPAll



Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

HYDROGEN SULPHIDE (H₂S) hourly averages in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
DAY	HOURLY MAX	HOURLY AVG	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.	RDGS.	
1	0	0.1	0	0	0	0	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	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24
4	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24
5	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24
6	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24
7	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24
8	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	24
9	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24
10	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
11	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24
12	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	24
13	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	24
14	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
15	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	24
16	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24
17	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	24
18	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24
22	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	24
23	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	24
24	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24
25	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	24
26	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
HOURLY MAX	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HOURLY AVG	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

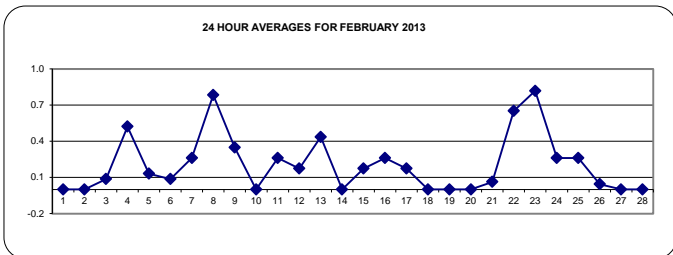
OBJECTIVE LIMIT:

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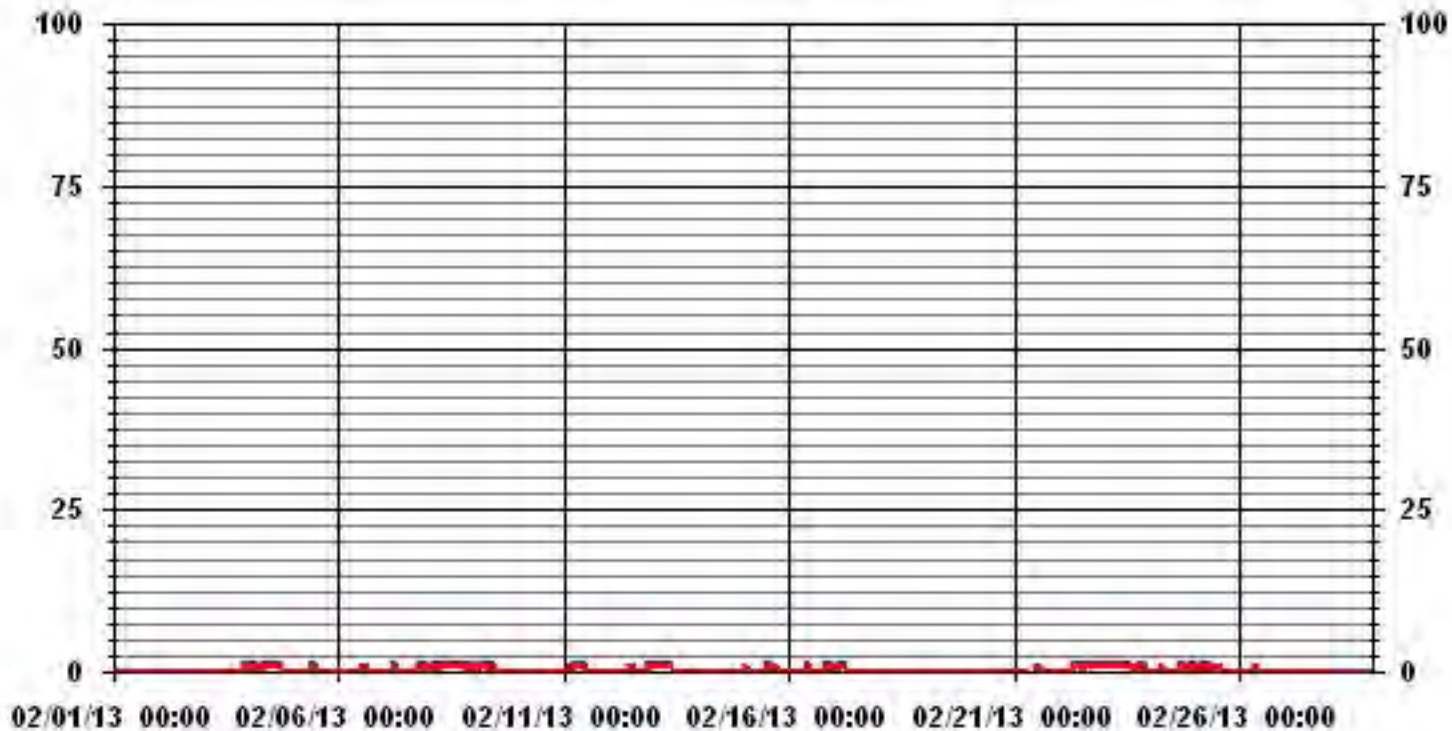
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	132					
MAXIMUM 1-HR AVERAGE:	1	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.8	PPB			ON DAY(S)	8,23
					VAR-VARIOUS	
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672 HRS		
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0 %		
STANDARD DEVIATION:	0.41		MONTHLY AVERAGE:	0.21 PPB		

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																													
1		1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	S	1	1	1	1	0.4	24
2		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	S	0	0	1	1	0.1	24
3		1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	0	S	1	1	1	1	1	0.3	24
4		1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	S	1	1	1	1	1	3	1.1	24
5		1	1	0	0	0	0	1	1	1	1	1	1	1	0	1	0	1	S	1	1	1	1	1	1	1	1	0.7	24
6		0	0	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	S	1	0	1	1	1	1	1	1	0.6	24
7		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1.0	24
8		1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1.0	24
9		1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	0	0	0	0	0	0	1	1	0.7	24
10		0	0	0	0	0	0	0	0	0	0	0	1	S	0	0	0	0	0	1	1	1	0	1	1	1	1	0.3	24
11		1	1	1	1	1	1	1	1	1	2	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	24
12		1	1	1	1	0	1	1	1	0	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	24
13		1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	0	1	0	1	0	0	0	0	1	1	0.7	24
14		0	0	0	0	0	1	1	0	0	S	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.2	24
15		1	2	1	0	0	1	0	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.9	24
16		1	0	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
17		1	1	1	1	1	1	S	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0.6	24
18		0	0	0	0	0	S	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	S	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	1	1	0.3	24
20		0	0	0	S	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	24
21		1	1	S	1	0	0	1	C	C	C	C	C	1	1	1	C	C	1	1	0	1	1	1	1	1	1	0.8	24
22		1	S	1	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
23		S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1.0	24
24		1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1.0	24
25		1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	S	0	0	0	1	1	0.8	24
26		0	0	0	0	0	1	0	1	3	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	3	0.3	24	
27		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0	24
28		0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	S	1	1	1	1	1	1	1	0.3	24
HOURLY MAX		1	2	1	1	1	1	1	1	1	3	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1		
HOURLY AVG		0.7	0.6	0.5	0.6	0.5	0.6	0.6	0.6	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.5	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6		

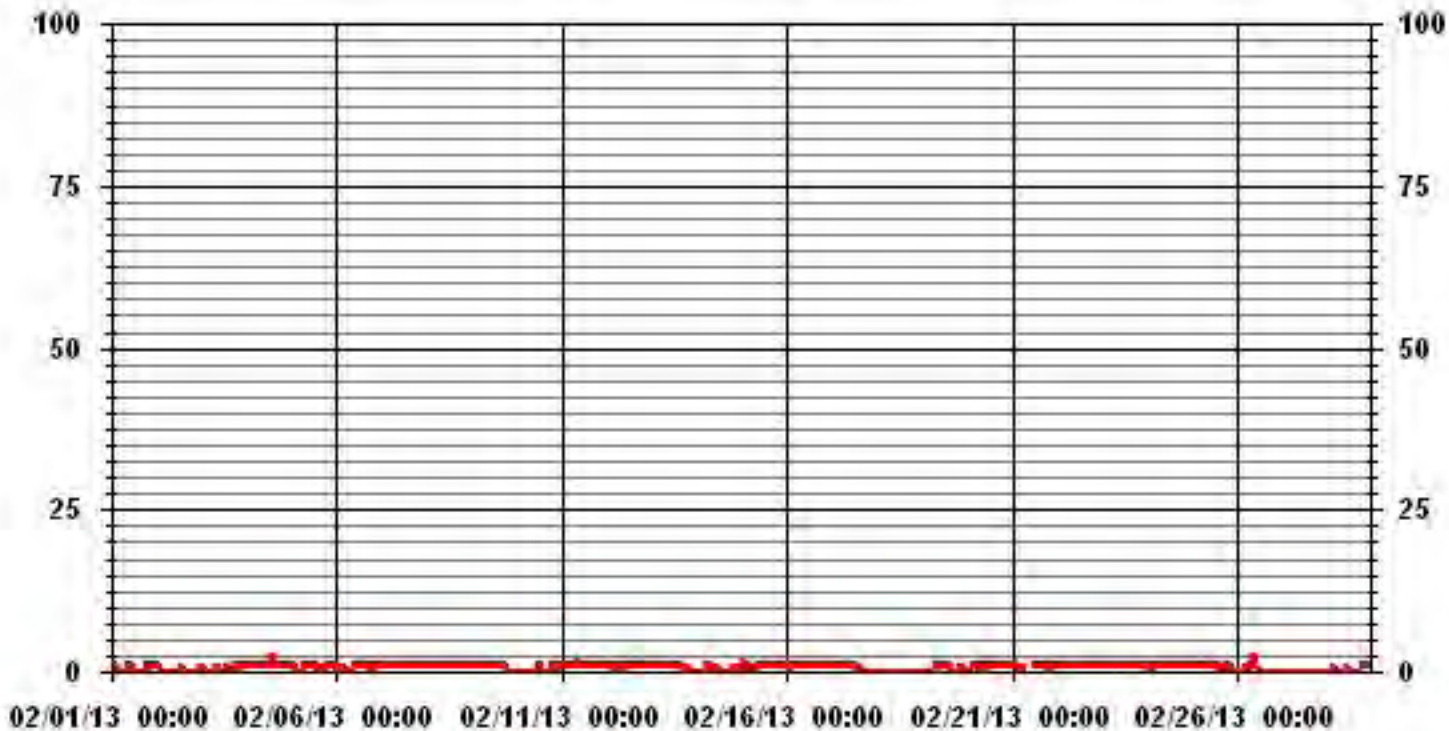
STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	397					
MAXIMUM INSTANTANEOUS VALUE:	3	PPB	@ HOUR(S)	14,9	ON DAY(S)	4,26
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672 HRS		
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	0.51					

01 Hour Averages



— LICA30 H2S MAX PPB

LICA30
H2S_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : H2S_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 3	4.24	5.81	4.87	4.40	4.71	5.81	8.64	8.17	6.60	17.61	7.07	2.04	5.97	6.44	2.83	4.71	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	4.24	5.81	4.87	4.40	4.71	5.81	8.64	8.17	6.60	17.61	7.07	2.04	5.97	6.44	2.83	4.71	

Calm : .00 %

Total # Operational Hours : 636

Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 3	27	37	31	28	30	37	55	52	42	112	45	13	38	41	18	30	636
< 10																	
< 50																	
>= 50																	
Totals	27	37	31	28	30	37	55	52	42	112	45	13	38	41	18	30	

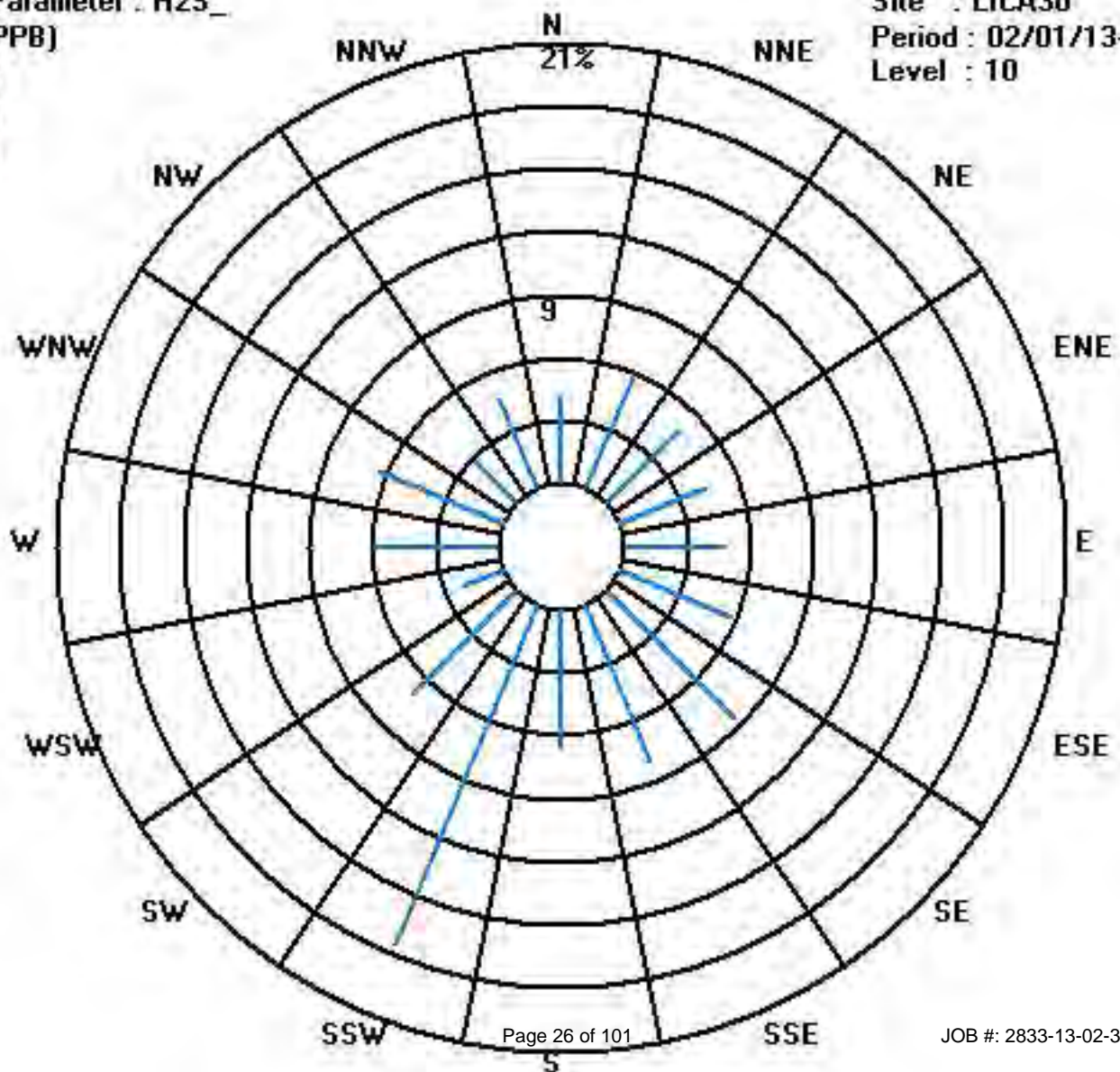
Calm : .00 %

Total # Operational Hours : 636

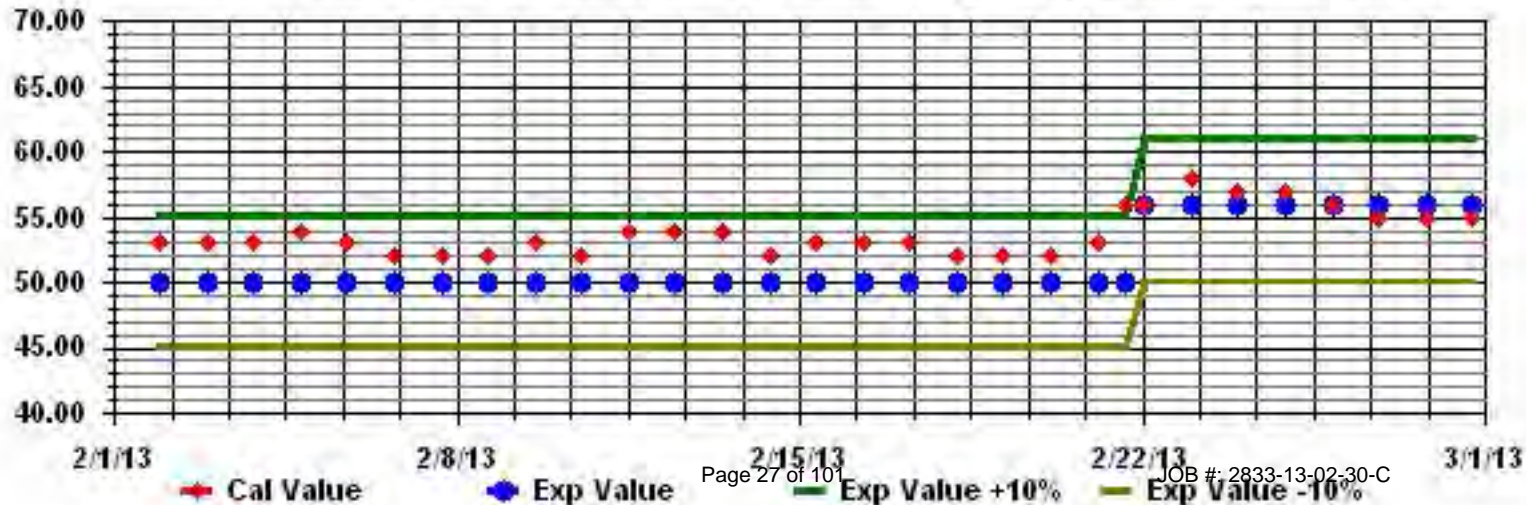
Class Limits (PPB)

Period : 02/01/13-02/28/13

Level : 10



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



Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

FEBRUARY 2013

TOTAL HYDROCARBONS hourly averages in ppm

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
DAY	HOURLY MAX	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.	RDGS.		
1		2.9	2.9	2.9	2.6	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.6	2.7	2.8	3	3.2	S	2.7	3.2	2.6	24	
2		2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	S	2.2	2.2	2.3	2.2	24	
3		2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	S	2.1	2.1	2.2	2.2	2.1	24	
4		2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.3	2.4	2.4	2.2	2.5	2.3	2.1	2.1	S	2.1	2.1	2.1	2.1	2.2	2.5	2.2	24	
5		2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.3	2.2	2.1	2.1	2.1	2	2	S	2.1	2.1	2.1	2.1	2.1	2.1	2.5	2.2	24
6		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.2	S	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.1	24	
7		2.4	2.5	2.5	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.7	2.8	2.8	2.7	2.7	2.7	S	2.7	2.7	2.8	2.8	2.8	2.7	2.8	2.8	2.7	24	
8		3.3	3.4	3.5	3.3	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.5	3.5	3.3	3.6	S	4.4	4.1	3.7	3.2	2.9	2.9	2.7	2.5	4.4	3.3	24	
9		2.4	2.3	2.5	2.5	2.4	2.5	2.9	3.1	2.5	2.2	2	2	2	S	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.1	2.3	24	
10		2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	S	2.3	2.2	2.2	2.3	2.4	2.5	2.5	2.4	2.4	2.4	2.5	2.2	24	
11		2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.2	2.2	2.1	2	S	2	2	2.1	2	2	2	2	2	2	2	2	2.4	2.2	24	
12		2	2	2	2	2	2	2	2	2	2	2	S	2.2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.2	2.0	24	
13		2.2	2.2	2.2	2.2	2.1	2.1	2.3	2.2	2.2	S	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.1	24
14		2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.2	S	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.4	2.2	2.2	2.2	2.5	2.2	24	
15		2.2	2.5	2.9	2.6	2.6	2.5	2.4	2.5	S	2.8	2.8	2.9	3	2.7	2.5	2.4	2.4	2.4	2.4	2.3	2.2	2.3	2.2	2.2	3.0	2.5	24	
16		2.2	2.2	2.4	2.2	2.1	2.1	S	2.3	2.3	2.4	2.4	2.4	2	2	2	2	2	2	2	2	2	2	2	2	2.4	2.1	24	
17		2	2	2	2	2	2	S	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	24	
18		2.1	2.1	2.1	2.1	2.1	S	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	24	
19		2.2	2.2	2.2	2.2	S	2.2	2.1	2.1	2.2	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	2.2	2.2	2.2	2.1	24	
20		2.2	2.2	2.2	S	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.4	1.6	2.5	2.5	2.6	2.6	2.6	2.6	2.3	24	
21		2.6	2.6	S	2.5	2.5	2.4	2.4	2.5	2.5	2.4	2.4	C	C	C	2.4	C	C	2.3	2.3	2.3	2.3	2.2	2.2	2.6	2.4	24		
22		2.2	S	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.3	2.2	24	
23		S	2.1	2.1	2.2	2.2	2.2	2.3	2.6	2.4	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.4	2.4	2.2	S	2.6	2.3	24
24		2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.6	2.4	2.3	2.3	2.2	2.3	2.3	2.3	2.5	2.6	2.6	2.7	2.8	2.7	2.6	S	2.6	2.8	2.4	24	
25		2.5	2.6	2.7	2.7	2.7	2.5	2.4	2.2	2.3	2.2	2.1	2.2	2.1	2	2	2	2.1	2.1	2.1	2.1	2.1	S	2.1	2.1	2.7	2.3	24	
26		2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.4	4.4	2.4	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.4	S	2.3	2.4	2.4	4.4	2.3	24	
27		2.4	2.5	2.5	2.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.4	2.3	2.2	2.2	2.3	C	C	S	2.3	2.3	2.3	2.3	2.7	2.5	24	
28		2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.7	S	2.8	2.8	2.9	2.9	2.8	2.9	2.5	24	
HOURLY MAX		3.3	3.4	3.5	3.3	3.2	3.2	3.2	3.2	3.3	4.4	3.3	3.5	3.5	3.3	3.6	2.7	4.4	4.1	3.7	3.2	3.0	3.2	2.9	2.8				
HOURLY AVG		2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.3	2.3	2.3	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3				

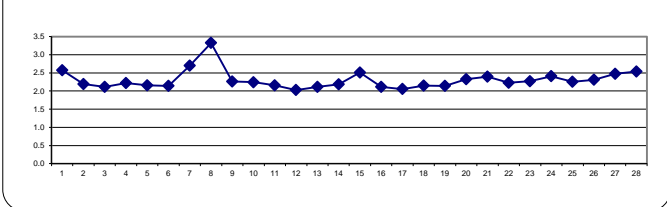
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

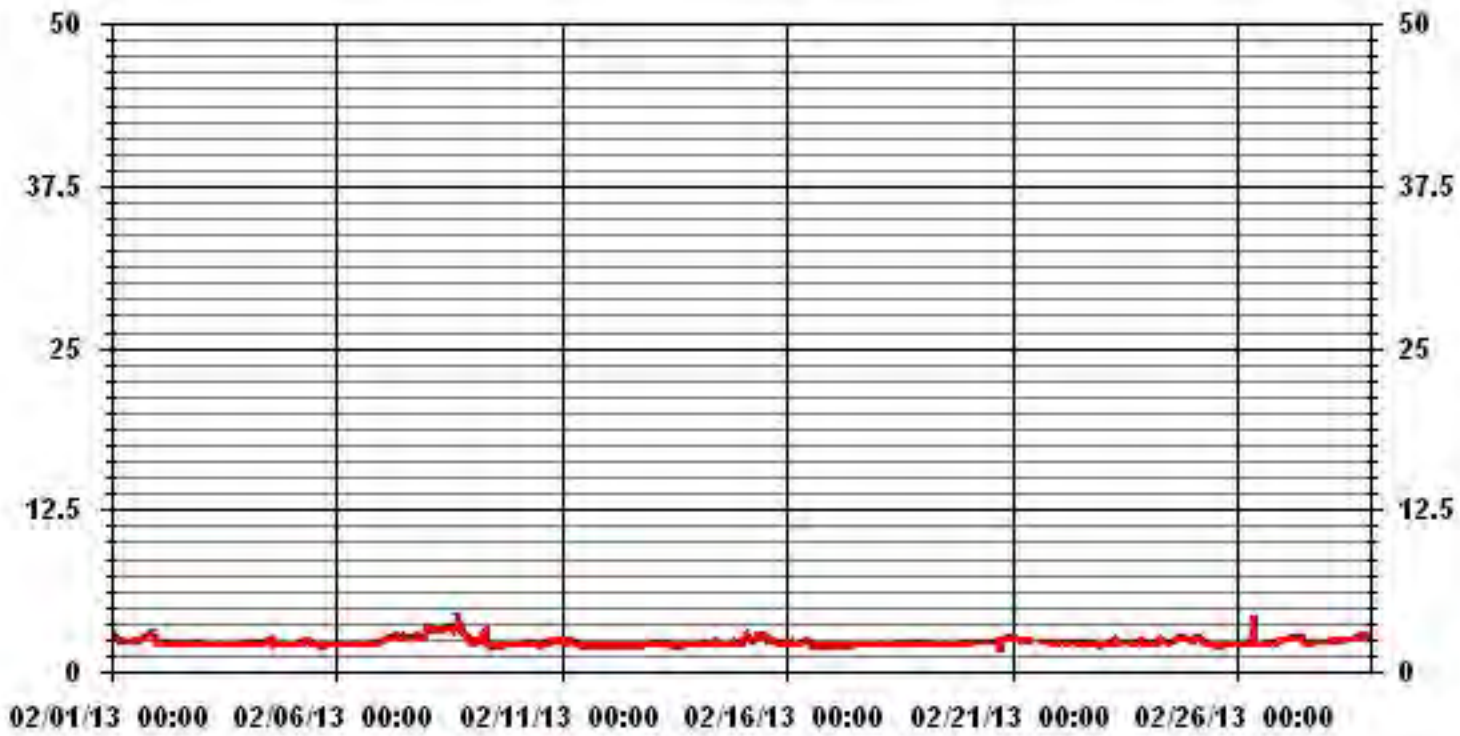
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	636					
MAXIMUM 1-HR AVERAGE:	4.4	PPM	@ HOUR(S)	16,9	ON DAY(S)	8,26
MAXIMUM 24-HR AVERAGE:	3.3	PPM			ON DAY(S)	8
					VAR- VARIOUS	
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.32		MONTHLY AVERAGE:	2.31	PPM	

24 AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA30 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST																										DAILY	24-HOUR	
HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.	RDGS.	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00					
DAY																												
1	3	3	3.1	2.7	2.5	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.7	2.7	2.9	3.2	3.2	S	3	3.2	2.7	24	
2	2.6	2.1	2.2	2.2	2.2	2.4	2.2	2.5	2.4	2.3	2.4	2.4	2.4	2.6	2.2	2.2	2.2	2.3	2.3	2.2	2.2	S	2.2	2.3	2.6	2.3	24	
3	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.3	2.2	2.1	2.2	2.2	2.1	2.2	2.3	2.2	2.1	2.1	S	2.2	2.2	2.2	2.2	2.3	2.2	24	
4	2.3	2.4	2.4	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.8	2.5	2.4	3.5	3.1	2.1	2.1	S	2.1	2.1	2.3	2.4	3.5	2.4	2.4	24	
5	2.4	2.1	2.1	2.2	2.2	2.2	2.2	2.4	2.5	2.7	2.7	2.2	2.2	2.1	2.1	2.1	2	S	2.1	2.1	2.1	2.1	2.1	2.1	2.7	2.2	24	
6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.4	2.2	2.2	2.3	2.3	2.2	S	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.2	24	
7	2.4	2.5	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.9	2.8	2.7	2.7	S	2.7	2.8	3.3	2.9	2.9	2.8	3.3	3.3	2.8	24	
8	3.4	3.5	3.5	3.4	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.7	3.7	3.4	3.8	S	4.5	4.3	4	3.5	3	3	2.8	2.6	4.5	3.4	24	
9	2.4	2.4	2.5	2.5	2.5	2.7	3.1	3.2	2.9	2.4	2.1	2	2	2	S	2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	3.2	2.3	24	
10	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	S	2.4	2.2	2.2	2.2	2.4	2.5	2.5	2.5	2.5	2.4	2.5	2.3	2.4	24	
11	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.1	2.2	S	2.4	2	2.4	2.2	2	2	2	2	2	2	2	2.4	2.2	24	
12	2	2	2	2	2	2	2	2	2.1	2.1	2.1	S	2.4	2	2	2	2	2	2.1	2.1	2.1	2.2	2.1	2.2	2.4	2.1	24	
13	2.2	2.2	2.3	2.3	2.2	2.1	2.2	2.5	2.5	2.6	S	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	2.6	2.2	24	
14	2.2	2.3	2.2	2.2	2.4	2.6	2.5	2.1	2.3	S	2.5	2.5	2.4	2.2	2.1	2.1	2.2	2.3	2.2	4.4	2.4	2.2	2.2	4.4	2.4	2.4	24	
15	2.4	3	3.1	2.8	2.8	2.8	2.4	2.7	S	2.8	2.9	3.1	3	2.9	2.6	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.3	2.3	3.1	2.6	24	
16	2.2	2.2	2.4	2.3	2.2	2.1	2.2	S	2.4	2.3	2.4	2.4	2.1	2	2	2	2	2	2	2	2.1	2.2	2.3	2	2.4	2.2	24	
17	2	2	2	2	2	2.1	S	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	24	
18	2.1	2.1	2.2	2.2	2.2	S	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.2	24	
19	2.2	2.2	2.2	2.2	S	2.3	2.2	2.2	2.3	2.2	2.1	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	24	
20	2.2	2.2	2.2	S	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.4	24	
21	2.6	2.6	S	2.6	2.5	2.4	2.5	2.5	2.5	2.5	2.4	C	C	C	C	C	C	2.3	2.3	2.4	2.4	2.3	2.2	2.2	2.6	2.4	24	
22	2.3	S	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.4	2.3	2.2	2.3	2.4	2.3	2.3	2.3	2.2	2.4	2.3	24	
23	S	2.2	2.1	3	2.7	2.3	3.2	2.8	2.5	2.4	2.4	2.4	2.5	2.5	2.6	2.3	2.4	2.4	2.3	2.5	2.7	2.5	2.2	S	3.2	2.5	24	
24	2.2	2.4	2.2	2.2	2.2	2.3	2.6	2.6	2.5	2.4	2.3	2.2	2.3	2.3	2.4	2.6	2.6	2.6	2.8	2.8	2.7	2.7	S	2.7	2.8	2.5	24	
25	2.6	2.6	2.8	3	2.9	2.7	3	2.4	2.5	2.3	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	S	2.1	2.1	3	2.4	24	
26	2.2	2.2	2.1	2.2	2.1	2.2	2.2	2.2	5.9	10.5	2.7	2.6	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.4	S	2.4	2.4	2.4	10.5	2.8	24	
27	2.5	2.5	2.5	2.6	2.8	2.7	2.7	2.7	2.8	2.7	2.7	2.6	2.5	2.4	2.3	2.2	2.4	C	C	S	2.3	2.3	2.3	2.3	2.8	2.5	24	
28	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.5	2.6	2.6	2.7	S	2.8	2.9	3	2.9	3	3	2.6	24	
HOURLY MAX	3	4	4	3	3	3	3	3	6	11	3	4	4	3	4	3	5	4	4	4	4	3	3	3				
HOURLY AVG	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.6	2.7	2.4	2.4	2.4	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.4	2.3	2.4			

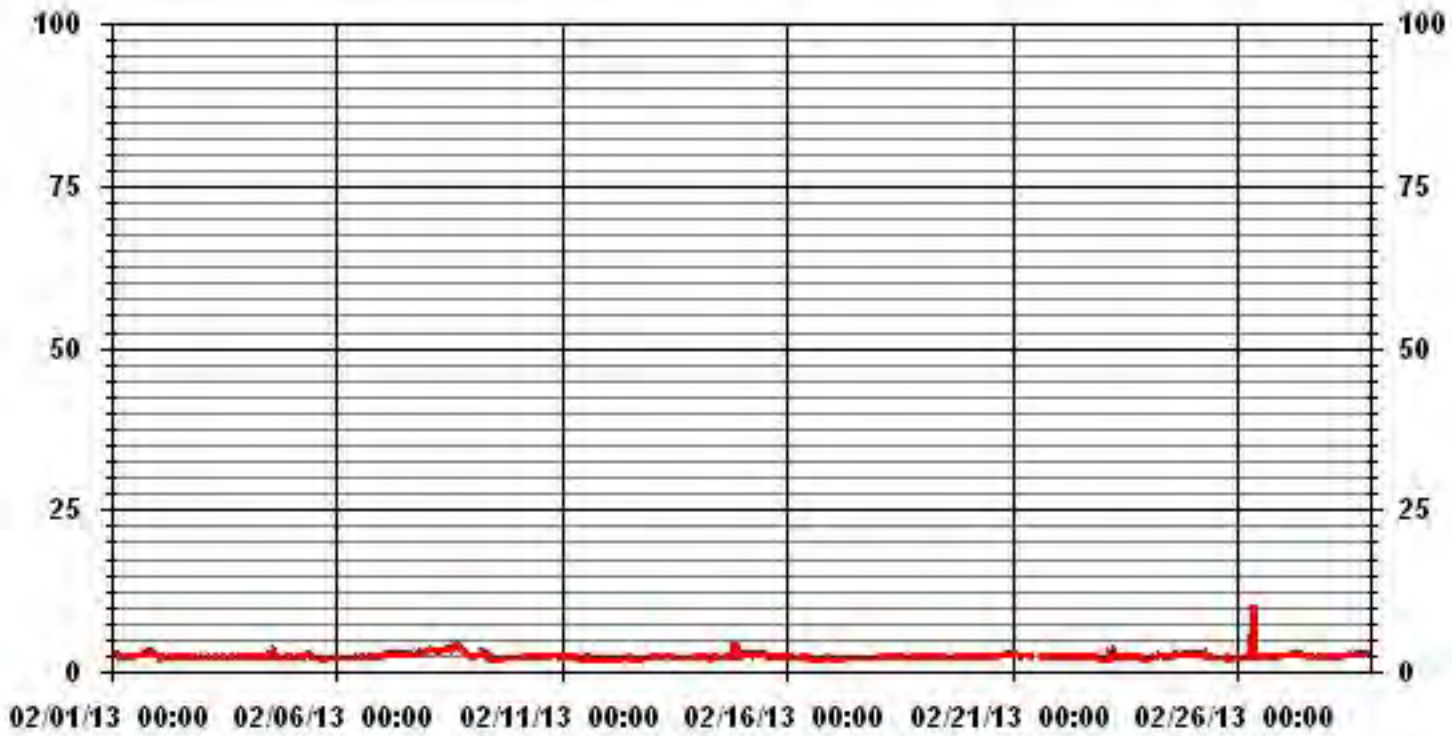
STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	635					
MAXIMUM INSTANTANEOUS VALUE:	10.5	PPM	@ HOUR(S)	9	ON DAY(S)	26
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	0.49					

01 Hour Averages



LICA30
 THC / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 3.0	4.24	5.81	4.71	4.40	4.71	5.66	8.96	8.33	6.44	15.25	5.66	2.04	5.97	6.44	2.83	4.71	96.22
< 10.0	.00	.00	.15	.00	.00	.00	.00	.00	.00	2.20	1.41	.00	.00	.00	.00	.00	3.77
< 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	4.24	5.81	4.87	4.40	4.71	5.66	8.96	8.33	6.44	17.45	7.07	2.04	5.97	6.44	2.83	4.71	

Calm : .00 %

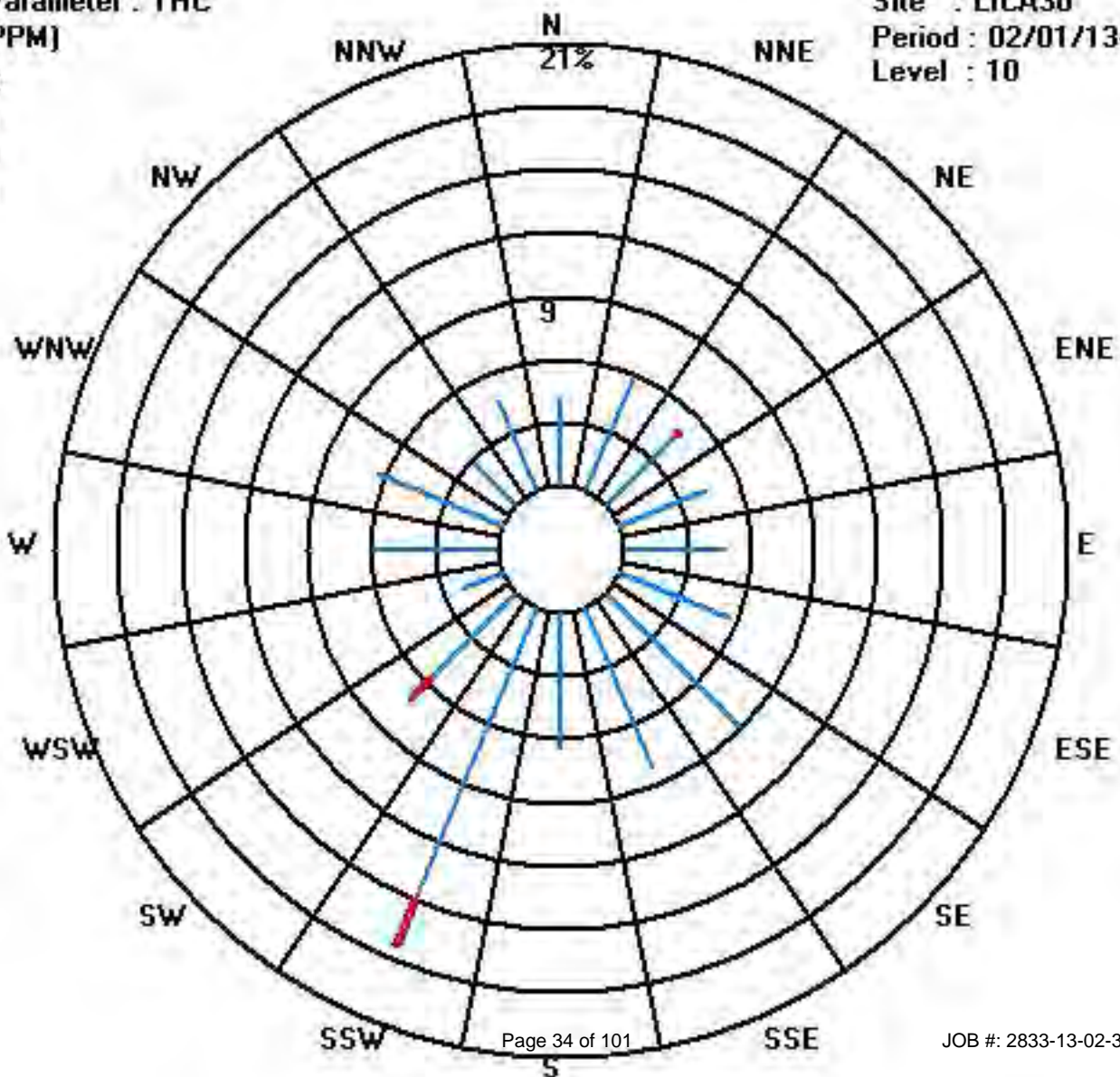
Total # Operational Hours : 636

Distribution By Samples

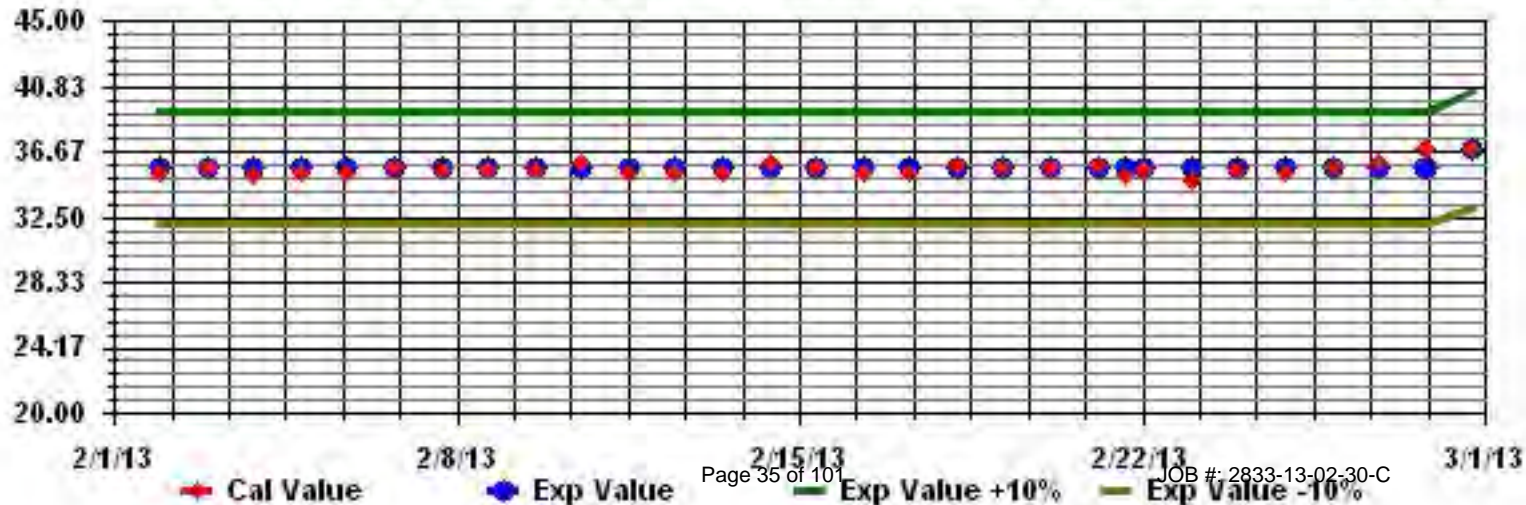
Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 3.0	27	37	30	28	30	36	57	53	41	97	36	13	38	41	18	30	612
< 10.0			1							14	9						24
< 50.0																	
>= 50.0																	
Totals	27	37	31	28	30	36	57	53	41	111	45	13	38	41	18	30	

Calm : .00 %

Total # Operational Hours : 636



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



Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

NITROGEN DIOXIDE hourly averages in ppb

MST

DAY	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
1	8.2	S	8.4	8.9	6.9	5.1	5.6	5.1	4.7	4	3.5	4.1	3.9	3	3.5	4.6	6	5.9	6	8.4	11.2	7.5	4.7	2	11.2	5.7	24	
2	S	0.7	0.4	0.2	0	0.1	0	0.2	0.3	0.3	0.3	0.4	0.2	0.5	0.4	0.6	1	1	1.5	1.5	1.2	0.8	1.1	S	1.5	0.6	24	
3	2	3	3	2.6	2.6	2.6	2.3	1.7	1.7	1.8	2.1	2.1	2	2.1	2.1	2.3	2.7	3.4	3	3.7	4.1	4.8	S	4.6	4.8	2.7	24	
4	4.4	4.5	4.5	4.5	4.5	4.9	4.3	2.6	1.6	1.4	1.3	0.5	0.2	0.7	0.6	0.6	0.5	0.5	0.4	0.3	S	0.4	0.3	4.9	1.9	24		
5	0.4	0.8	0.8	1	1.8	1.9	1.6	3.5	8.5	8.2	8	7.7	7.5	7.6	5.9	5.9	6.9	7.4	7.2	4.4	S	2.2	1.5	0.9	8.5	4.4	24	
6	0.8	1	1.2	1.2	1.1	0.9	0.9	0.9	1	1	1.4	1.7	1.6	1.9	2.2	2.4	3.3	3.7	4.2	S	4.3	4.4	3.2	2.8	4.4	2.0	24	
7	3	3.1	3.3	3.6	4.1	4.6	4.7	4.3	3.6	3	3.1	2.9	3	3.6	3.9	4.2	4.8	5	S	8.9	8.4	7	6.7	7	8.9	4.6	24	
8	6.3	5.1	4.7	5	4.7	4.7	6	10.1	14.7	15.1	14.2	14.1	15.4	11.3	7.8	5.9	5.2	S	3.9	5.1	9.7	10.7	11.5	10.2	15.4	8.8	24	
9	8.9	8.3	10	12	10.4	9.7	8	3.2	1.5	0.8	0.7	0.4	0.1	0	0	0	S	1	1.1	0.9	1	0.8	0.6	0.6	12.0	3.5	24	
10	0.6	0.6	0.7	0.6	0.5	1	1.5	1.2	1	1.4	1.7	1.9	1.6	1.5	1.8	S	1.4	1.4	1.8	1.6	2.2	3	3.2	3.7	3.7	1.6	24	
11	4.4	5.2	5.7	6.2	6.5	7.2	7.3	4.1	2.8	2.1	1.4	1	0.9	0.8	S	0.4	0.3	0.5	0.7	0.9	0.8	0.4	0.5	1.2	7.3	2.7	24	
12	0.9	0.5	0.4	0.3	0.6	0.4	0.1	0.3	0.4	0.4	0.5	0.3	0.1	S	0.5	0.8	1.3	1.2	2.9	3	2.2	2	2.2	3.7	3.7	1.1	24	
13	4.7	3.8	2.5	1.4	0.8	0.7	0.6	0.9	0.7	0.6	0.7	0.7	S	0.5	0.7	2.6	5	3.2	2.9	2	1.3	0.5	0.4	0.5	5.0	1.6	24	
14	0.4	0.3	0.3	0.2	0.2	0.3	0.5	0.8	1.2	1.5	1.7	S	3.1	4	3.2	3.9	4.8	6	5	3.8	3.7	2.7	2.5	5.8	6.0	2.4	24	
15	6.2	4.7	4.2	4.9	7.3	8.4	7.2	7.1	7.4	7.2	S	4.2	2.9	2.9	4.6	4.4	3.9	3.9	5.9	4	3.9	3.9	3.1	1	8.4	4.9	24	
16	0.6	0	0	0.5	0	0.3	0.4	1.1	1.6	S	2.7	1.7	2.2	1.4	0.7	0.5	0.6	0.8	3.1	5.9	2.5	0.8	0.7	0.7	5.9	1.3	24	
17	0.6	0.9	0.7	0.5	0.4	0.7	1.1	1.2	S	1.5	1.2	0.8	1.3	1.8	1.8	1.7	2.4	2.7	2.5	2.3	1	0.7	0.9	0.9	2.7	1.3	24	
18	0.6	0.5	0.6	0.5	0.3	0.1	0.2	S	1.3	1.1	1.2	1.2	1.3	1.3	1.2	1.7	2.3	2.8	2.4	2.1	2	2.4	2.6	2.5	2.8	1.4	24	
19	2.6	2.2	2.5	3	2.3	2	S	1.3	1.9	C	C	C	C	C	C	C	C	C	4.4	4.2	3.9	4	3.6	2.9	4.4	2.9	24	
20	2.4	2.2	2.5	2.3	2.5	S	1.8	1.9	2.7	C	C	C	C	C	2.2	2.2	2.3	2.4	3	4.1	4	4.3	3.9	3.1	2.6	4.3	2.8	24
21	2.8	1.9	1.3	1.4	S	2.2	2.4	2.3	2.2	2.2	2.6	2.9	3.1	3.5	4.3	5.4	6.2	6.5	5.7	5.9	4.9	4.3	4.3	4.1	6.5	3.6	24	
22	3.8	3.5	3.4	S	1.5	1.1	1.2	1.4	1.3	1.4	1.8	2.1	2.2	2.6	3.7	5.5	7.3	7.3	6.2	5.5	4.7	5.1	5.2	5.1	7.3	3.6	24	
23	5	4.9	S	3.3	3.3	3.1	3.3	3.3	3.5	3	3.1	3.6	3.9	3	2.4	3.4	3.8	1.4	1.4	0.9	0.6	0.5	0.1	0	5.0	2.6	24	
24	0	S	0.8	1.3	1.8	1.8	1.8	3.1	4.5	4.2	3.9	3.6	3.6	4.1	4.3	4.3	5.4	6.2	6.4	6.2	6.4	6.8	6.6	6.6	6.8	4.1	24	
25	S	5.8	4.7	4	2.5	2	1.4	1.5	1.3	1.2	1.2	0.8	0.5	0.5	0.8	0.6	0	0	0	0	0	0	0	S	5.8	1.3	24	
26	1.6	2.5	3.4	4.3	5.5	5.3	4.9	5	4.8	1.8	0.8	1	0.8	1.2	1	0.7	0.8	0.8	1.7	2.8	3.7	4.5	S	3.4	5.5	2.7	24	
27	2.7	2.8	2.7	2.8	3.2	3.1	2.3	2	1.4	1.7	1.8	1.7	1.6	1.6	1.8	1.8	2.1	2.7	3.7	3.5	2.8	S	1.4	1.5	3.7	2.3	24	
28	1.4	1.2	1.1	1.1	0.9	1.2	1.1	1.2	1.3	1.9	2.6	2.6	3.6	4.2	5.1	7.1	9.1	11.9	12.8	10.2	S	7.9	7.9	8.2	12.8	4.6	24	
HOURLY MAX	8.9	8.3	10.0	12.0	10.4	9.7	8.0	10.1	14.7	15.1	14.2	14.1	15.4	11.3	7.8	7.1	9.1	11.9	12.8	10.2	11.2	10.7	11.5	10.2				
HOURLY AVG	2.9	2.7	2.7	2.9	2.8	2.8	2.7	2.6	2.9	2.8	2.5	2.6	2.7	2.6	2.6	2.8	3.4	3.5	3.7	3.8	3.5	3.5	3.0	3.2				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

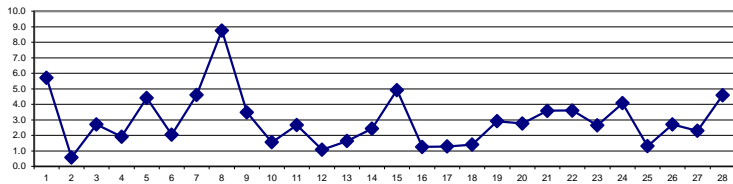
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR 159 PPB

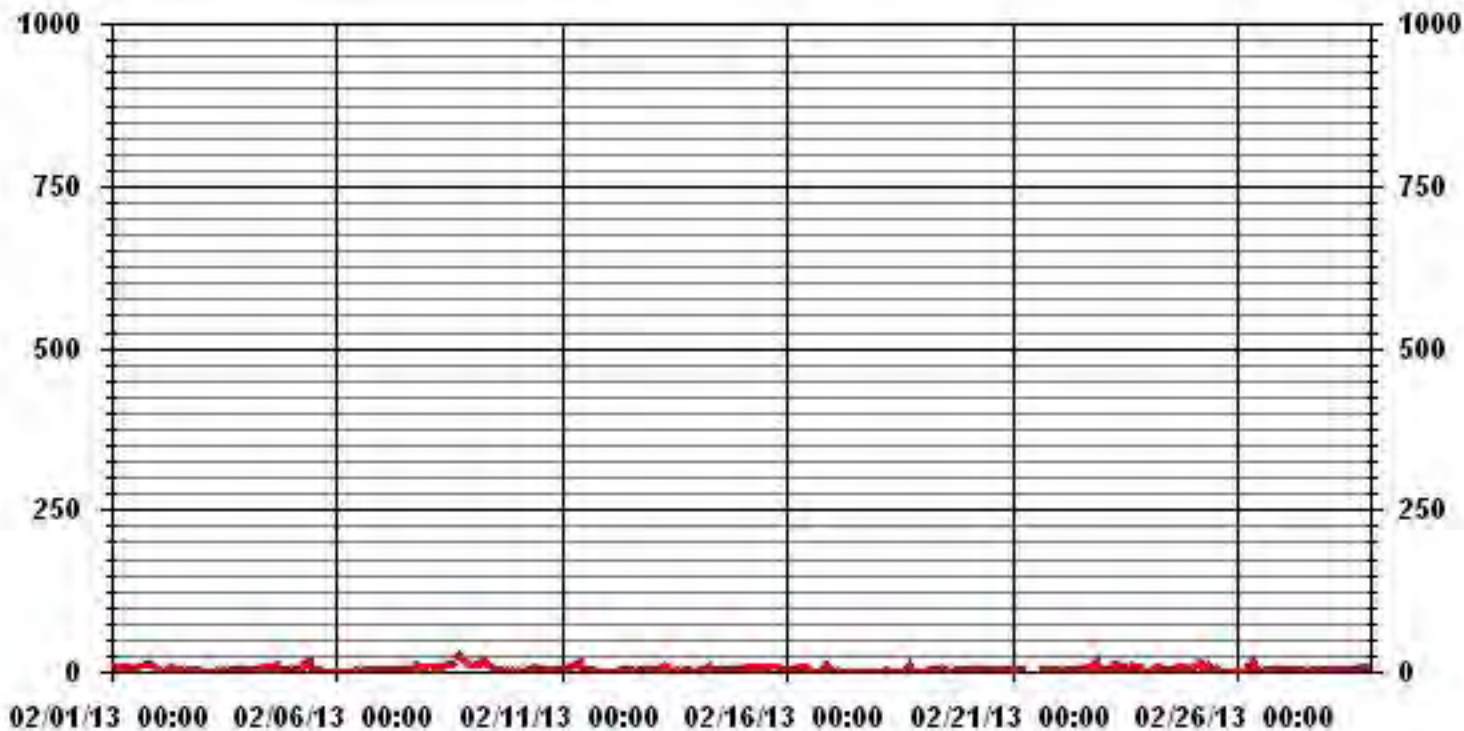
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	612					
MAXIMUM 1-HR AVERAGE:	15.4	PPB	@ HOUR(S)	12	ON DAY(S)	8
MAXIMUM 24-HR AVERAGE:	8.8	PPB			ON DAY(S)	8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	13	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	2.63		MONTHLY AVERAGE:	2.97	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA30 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	DAILY	24-HOUR	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	8.9	9.2	13.2	8	6.4	6.6	7.2	11	8	13.1	8.5	6.7	4.9	5.9	7.2	8.9	11.2	11	11	10.5	12.5	14.5	S	14	14.5	9.5	24	
2	20.6	1.4	2.8	2.4	3.6	12.6	12.9	11.2	15.7	12.2	9.7	5.6	7.5	8.1	1.9	5	2.7	1.9	2.5	2.3	2.3	S	2.1	6.8	20.6	6.7	24	
3	7	1.3	1.4	1.2	1.4	1	1.4	1.7	8.6	1.7	1.7	6.4	6.2	9.1	1.8	3.5	4.3	4.5	2.8	2.3	S	4.4	4.4	3.2	9.1	3.5	24	
4	2.8	3	4.4	4.6	1.8	1.6	1.8	22	2.1	9.8	7.3	7.9	10.5	14	13.1	20.8	9.4	4	5	S	15	6	6.8	17.5	22.0	8.3	24	
5	5.7	5.9	3.6	4	4.5	5.2	16	16.1	22.6	43.1	23.6	11.2	5.7	4.6	4.2	3.4	2.1	1.9	S	0.9	0.6	0.6	0.7	0.8	43.1	8.1	24	
6	0.8	0.5	0.8	0.5	0.8	0.8	0.7	0.6	0.6	5.8	4.1	8.2	8.5	3.9	9.5	5.6	9.9	S	7.5	3.7	1.9	3.1	2.9	3.4	9.9	3.7	24	
7	3.3	3.3	3.7	4	4.3	5.3	5.7	5.9	4.9	5.4	5.5	6	6.7	7.3	5.6	4.8	S	6.9	12	12.1	9.7	9.1	7.7	7	12.1	6.4	24	
8	7.7	9.2	11.1	9.9	8.3	8	9.8	11.4	15.8	9.4	9.1	11.6	12.8	11.9	15.4	S	26	30.1	25.1	22.8	18.4	17.4	13.2	11.3	30.1	14.2	24	
9	10.5	10.5	10.9	11.9	15.1	17.8	24.3	23.5	23.4	25.2	20.7	3.7	3.5	4.1	S	1.8	1.9	1.8	2.1	2.1	2	1.6	1.4	1.7	25.2	9.6	24	
10	2	2.1	1.6	1.9	3.2	7.1	5.5	7.1	7.1	8.8	11.4	10.5	6	S	3.6	3.1	2.8	4.1	4.4	4.4	4.4	3.5	3.6	2.8	11.4	4.8	24	
11	3.3	3.4	4.4	4.5	5.5	10.2	9.4	17.8	17.5	27.9	8.1	2.6	S	4.8	1.9	8.3	7.7	6.3	5	3.2	1.8	1.6	1.5	1.4	27.9	6.9	24	
12	1.2	1.2	1.3	1.3	1	1	2.5	19.7	4.4	6.9	8	S	2.6	1.5	1.8	2.5	14.6	2.8	3.9	3.8	3.6	2.8	3.1	3.9	19.7	4.1	24	
13	3.7	4.5	3.9	7.1	5.4	9.5	9.8	18	17.6	15.9	S	1.2	1.2	2.3	2.7	1.3	2.6	2.1	2.4	3	2.5	2.5	3.3	8.6	18.0	5.7	24	
14	3.9	4.7	4.4	4.5	2.5	10.9	22.9	7	9.3	S	7.9	5.4	5.4	5.4	8.7	1.2	3.9	2.9	2.8	3.4	7	2.6	2	6.7	22.9	5.9	24	
15	8.2	6.6	11.3	9.2	6.7	6.7	6	9.1	S	9.6	10.2	9.6	9.6	8.4	7.3	10.3	11.4	9.9	8.7	8.5	8.4	8.6	6.4	7	11.4	8.6	24	
16	6.5	4.8	5.8	5	6	5.6	26.9	S	10.6	8.4	7.8	8	3.7	1.6	1.3	2.3	1.3	3.2	1.3	1.4	12.2	16.5	21	3.9	26.9	7.2	24	
17	3.5	2.5	1.8	2.1	2.3	1.6	S	1.5	1.9	2.7	2.7	0.7	0.7	0.8	0.9	0.9	0.7	0.6	0.6	0.8	0.6	0.8	0.6	0.2	3.5	1.4	24	
18	0.4	0.5	0.3	1.1	4.6	S	11.3	1.5	0.9	0.9	0.6	0.8	1	1.4	3.7	6.8	7.2	13.6	8.2	1.2	1.2	1.2	1.2	1.2	13.6	3.1	24	
19	1.3	1.3	2.7	2.7	S	15	1.7	2.6	11.4	9.8	3.6	9.9	7.9	7	6	2	1.6	1.9	2	2.5	2.5	2.1	2.1	2.4	15.0	4.4	24	
20	2.4	2.2	2.3	S	2.6	2.5	3.2	4.2	3.5	3.6	4.8	4	4.1	3.4	3.9	4	3.8	2.9	3.4	3.7	4	3.9	4.2	3.9	4.8	3.5	24	
21	3.5	3.2	S	3.2	2.7	2.2	2.6	C	C	C	C	C	C	C	C	C	C	2.8	2.7	3.2	3.1	2.5	2.3	2.3	3.5	2.8	24	
22	2.3	S	2.9	3.8	2.5	2.2	2.4	3.3	4.2	4.2	3.1	2.3	2.3	2.5	3.8	11.4	12.8	2.3	2.7	21.2	18.9	19.2	20.7	12.1	21.2	7.1	24	
23	S	3.2	2.8	2.3	2.3	2.3	4.9	21.2	16.5	11.3	9.8	10.8	10.6	9.3	11.8	3.4	20.2	9.5	5.4	19.1	19.6	21.2	2.4	S	21.2	10.0	24	
24	2	5.5	3	2	5.5	20.8	8.7	9.7	6.5	5.1	3.7	3.5	4.1	4.2	4.7	5.8	6.9	8	8.8	8.8	8	7.2	S	8.7	20.8	6.6	24	
25	10.1	10.1	9	9.8	28.3	25	12.3	9.7	19.6	8.5	6.9	8.2	3.5	14.2	1.4	1.2	1.6	3.1	4.3	3.2	3.1	S	1.5	1.3	28.3	8.5	24	
26	1.6	0.6	0.6	0.5	7.8	21.4	7.8	23.7	24.3	13.8	9.1	11.1	5.4	2.1	2	2.6	8.2	2.4	3.2	3.5	S	3	2.2	2.6	24.3	6.9	24	
27	2.2	4.8	5.2	2.7	6.3	4.6	3.7	4.3	4.7	4.1	3.3	3.3	2.2	3.1	1.5	1.7	2.9	3	3.2	S	2.2	2.2	3.5	3.5	6.3	3.4	24	
28	2.1	2	2.1	2	2	2.4	2.6	15.5	3.4	3	3.2	12	3	2.7	3.5	3.7	5	6.6	S	7.4	8	8.7	9.7	8.1	15.5	5.2	24	
HOURLY MAX	20.6	10.5	13.2	11.9	28.3	25.0	26.9	23.7	24.3	43.1	23.6	12.0	12.8	14.2	15.4	20.8	26.0	30.1	25.1	22.8	19.6	21.2	21.0	17.5				
HOURLY AVG	4.7	4.0	4.3	4.2	5.3	7.8	8.3	10.7	10.2	10.4	7.5	6.6	5.4	5.5	5.0	4.9	7.0	5.6	5.4	6.1	6.7	6.4	5.0	5.4				

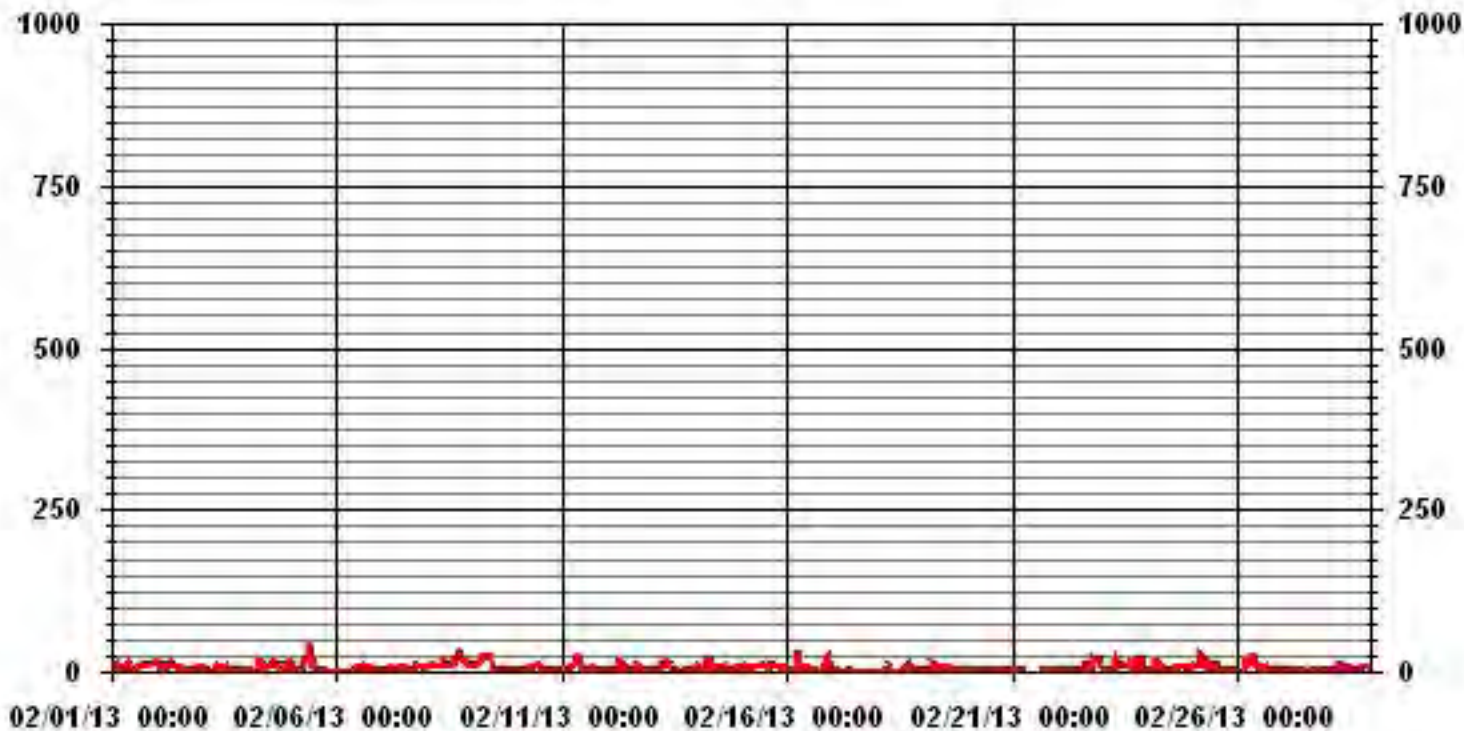
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	633					
MAXIMUM INSTANTANEOUS VALUE:	43.1	PPB	@ HOUR(S)	9	ON DAY(S)	5
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	5.75					

01 Hour Averages



LICA30
 NO2_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 30
 Site Name : LICA30
 Parameter : NO2_
 Units : PPB

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	4.26	5.84	4.89	4.42	4.73	5.52	8.53	8.21	6.63	17.69	7.10	2.05	6.00	6.47	2.84	4.73	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	4.26	5.84	4.89	4.42	4.73	5.52	8.53	8.21	6.63	17.69	7.10	2.05	6.00	6.47	2.84	4.73	

Calm : .00 %

Total # Operational Hours : 633

Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	27	37	31	28	30	35	54	52	42	112	45	13	38	41	18	30	633
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	27	37	31	28	30	35	54	52	42	112	45	13	38	41	18	30	

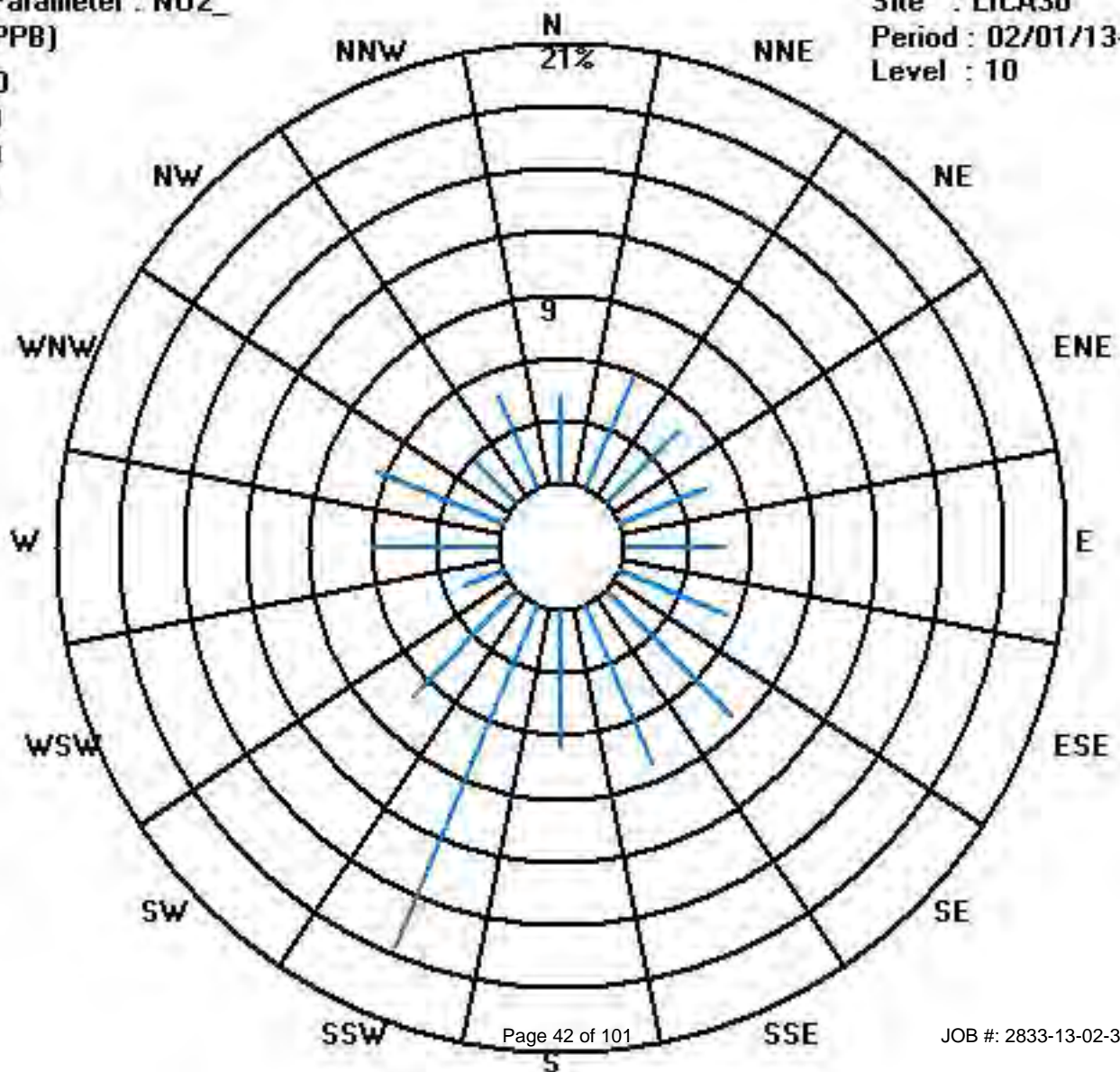
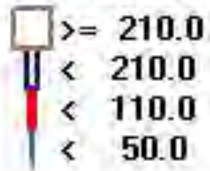
Calm : .00 %

Total # Operational Hours : 633

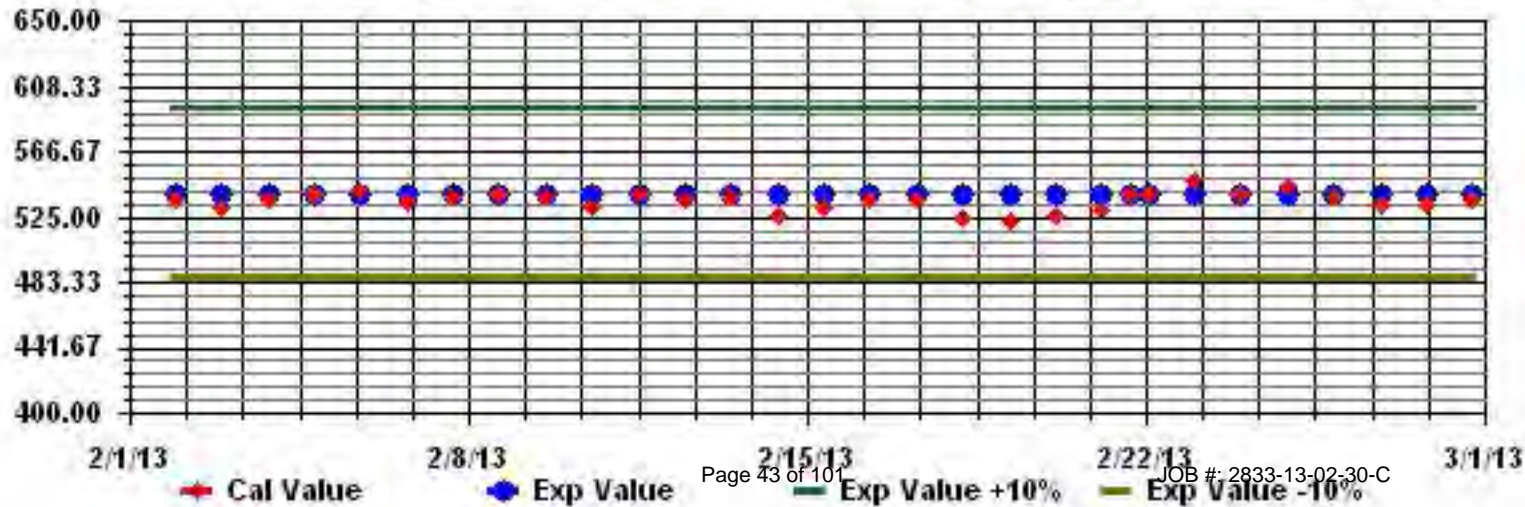
Class Limits (PPB)

Period : 02/01/13-02/28/13

Level : 10



Calibration Graph for Site: LICA30 Parameter: H02_ Sequence: H02 Phase: SPAll



Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOICATION - MASKWA

FEBRUARY 2013

NITRIC OXIDE hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	0	0.2	0	0	0	0	0.1	0.4	2.3	2.9	2.5	2.4	2.5	2.7	2.1	0.9	0	0	0	0	0	S	0	0	2.9	0.8	24
2	0.7	0	0	0	0	0.7	0.2	0.3	1.6	1.5	2.7	0.9	1.6	1.3	0	0	0	0	0	0	0	S	0	0	0	2.7	0.5	24
3	0.1	0	0	0	0	0	0	0	0.5	0.2	0.3	1.1	1.3	1.9	0.2	0.3	0.3	0	0	0	S	0	0	0	0	1.9	0.3	24
4	0	0	0	0	0	0	0	0.5	0	0.9	1.7	1.8	4.3	4.3	1.9	5.6	1	0	0	S	0.7	0.5	0.2	0.9	0	5.6	1.1	24
5	0	0	0	0	0.1	0	0.6	1.4	2.5	13.6	10.3	6	2.3	2	1.3	0.2	0	0	S	0	0	0	0	0	0	13.6	1.8	24
6	0	0	0	0	0	0	0	0	0.1	0.5	0.3	1.5	1.7	0.6	1	0.4	0.7	S	0.5	0.3	0.3	0.2	0.2	0.2	0.2	1.7	0.4	24
7	0.1	0.3	0.1	0.3	0.3	0.3	0.4	0.5	0.5	1.3	1.9	3	2.8	2.6	1.9	0.9	S	0	0.2	0.1	0.2	0.3	0.1	0	0	3.0	0.8	24
8	0.1	0.1	0.3	0.3	0.3	0.2	0.4	0.3	1.3	2.8	5.8	9.4	10.1	9.8	10.3	S	8.4	2.3	0.1	0	0.1	0.1	0.1	0.1	0.1	10.3	2.7	24
9	0	0	0	0	0.1	0.1	0.3	0.4	1.6	5.4	5.1	0.4	0.2	0	S	0	0.1	0	0	0	0	0	0	0	0	5.4	0.6	24
10	0	0	0	0	0	0.1	0.2	0.4	0.3	1.4	4.5	5	4.3	S	1.6	0.7	0.1	0	0	0	0	0	0	0	0	5.0	0.8	24
11	0.1	0	0	0	0	0	0.1	0.3	1.3	6.1	2.4	0.7	S	0.6	0.1	0.8	0.7	0	0	0	0	0	0	0	0	6.1	0.6	24
12	0	0	0	0.1	0.1	0.1	0.1	0.3	0.4	1.3	1.3	S	0.5	0.3	0.1	0	0.4	0	0	0	0	0	0	0	0	1.3	0.2	24
13	0	0	0	0	0	0	0	2.5	2.8	4.6	S	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	4.6	0.4	24
14	0	0	0	0	0	0	1.3	0.3	0.5	S	2.4	2.7	1.8	0.9	0.3	0	0	0	0	0	0	0	0	0	0	2.7	0.4	24
15	0	0	0	0	0	0	0	0.2	S	1.1	1.6	1.5	2.4	2.6	2.2	2.4	0.6	0	0	0	0	0	0	0	0	2.6	0.6	24
16	0	0	0	0	0	0	0.3	S	0.8	1.6	2.7	3.4	0.2	0	0	0	0	0	0	0	0	0	0	0.7	0	3.4	0.4	24
17	0	0	0	0	0	0	S	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	0.1	0	0	S	0	0	0	0	0	0	0	0	0.4	0.6	0.2	0.6	0	0	0	0	0	0	0	0.6	0.1	24
19	0	0	0	0	S	0.4	0	0	1	0.7	0.4	2.6	1.3	1.3	0.4	0	0	0	0	0	0	0	0	0	0	2.6	0.4	24
20	0	0	0	S	0	0	0	0	0	0.1	0.5	0.5	0.3	0.1	0.2	0.1	0	0	0.1	0	0	0	0	0	0	0.5	0.1	24
21	0	0	S	0	0	0	0	C	C	C	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0.0	0.0	24
22	0	S	0	0	0	0	0	0	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.9	1.2	0	0	0.1	0.2	0	0	0	0	1.2	0.2	24
23	S	0	0	0	0	0	0	1.2	3.2	3.4	4.1	2.6	5.5	1.6	1.8	0.1	2.9	0	0	1.2	2.8	1.8	0	S	0	5.5	1.5	24
24	0	0	0	0	0	0.7	0.1	0.5	1.1	1.4	0.7	1.1	1.5	1.8	1.1	0.5	0.4	0.1	0	0	0	0	S	0	0	1.8	0.5	24
25	0	0	0	0	0.6	0.3	0.2	0.1	1.9	1.6	1.5	2	0.8	4.8	0	0	0.1	0.1	0	0	0	0	S	0	0	4.8	0.6	24
26	0	0	0	0	0	0.4	0.1	1.8	7.5	5.6	4.9	2.7	1.4	0.2	0.5	0.4	0.4	0	0	0	S	0	0	0	0	7.5	1.1	24
27	0	0.1	0.1	0	0	0	0.1	0.2	0.8	0.9	0.8	0.6	0.4	0.7	0.4	0.2	0	0.1	0	S	0	0	0	0	0	0.9	0.2	24
28	0	0	0	0	0	0	0	0.4	0	0	0.2	0.3	0.3	0.2	0.3	0.1	0.1	0	S	0	0	0.1	0	0	0	0.4	0.1	24
HOURLY MAX	0.7	0.3	0.3	0.3	0.6	0.7	1.3	2.5	7.5	13.6	10.3	9.4	10.1	9.8	10.3	5.6	8.4	2.3	0.5	1.2	2.8	1.8	0.7	0.9	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.5	1.2	2.3	2.3	2.0	1.8	1.6	1.1	0.6	0.7	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0			

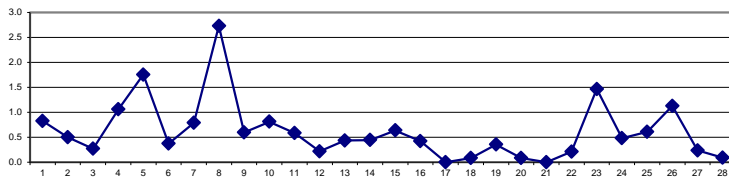
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

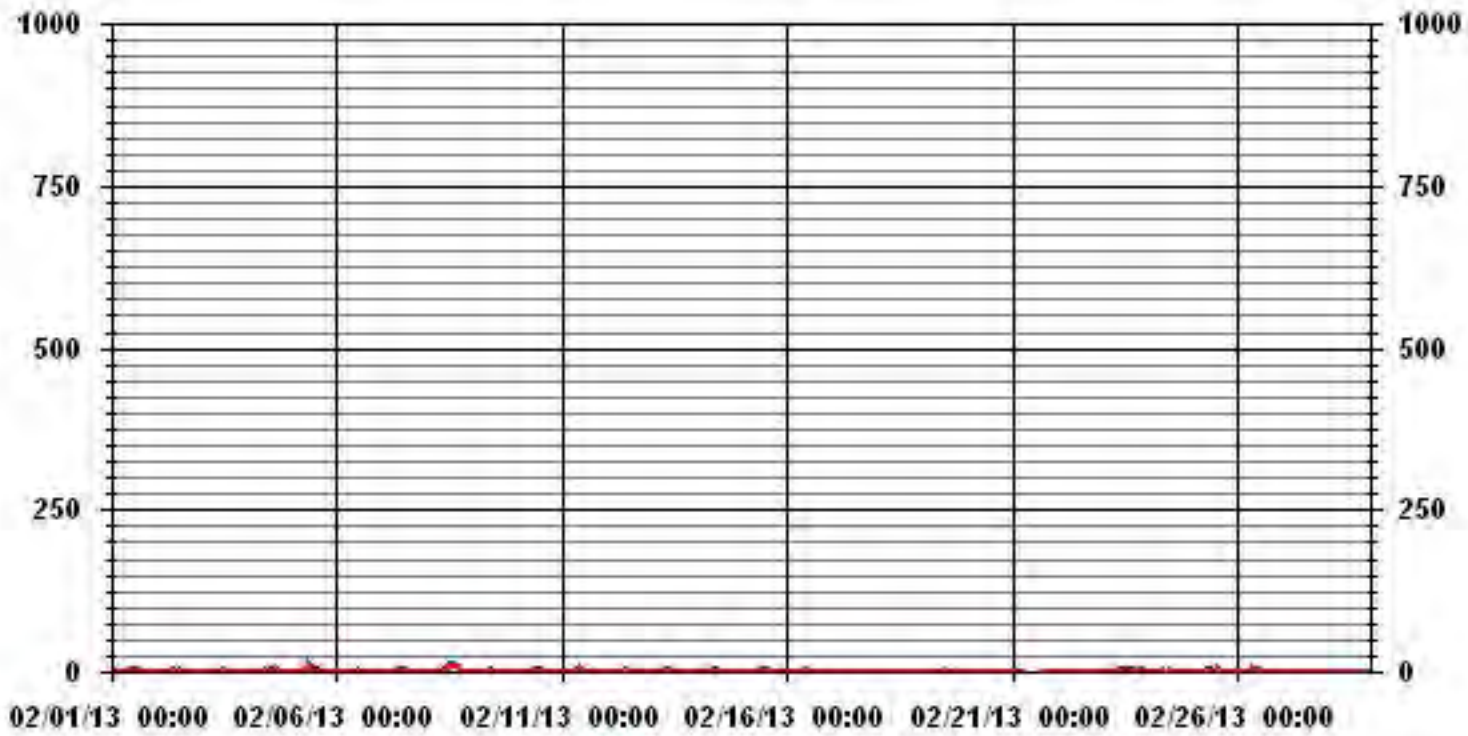
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	290					
MAXIMUM 1-HR AVERAGE:	13.6	PPB	@ HOUR(S)	9	ON DAY(S)	5
MAXIMUM 24-HR AVERAGE:	2.7	PPB			ON DAY(S)	8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	1.48		MONTHLY AVERAGE:	0.62	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA30 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	0.4	0.5	1.2	0.2	0.1	0.3	0.1	3.3	1.9	6	5.7	4.5	3.2	3.5	3.2	3.3	4.7	0.2	0.1	0.3	0.3	1.7	S	0.3	6.0	2.0	24	
2	9.5	0.2	0	0.1	0.3	6	5.9	2.5	5.4	5.2	6	2.8	4.5	4.8	0.8	0.9	0.1	0.2	0.2	0.1	0.1	S	0.6	0.7	9.5	2.5	24	
3	0.8	0.4	0.4	0.4	0.4	0.4	0.7	0.6	1	0.6	0.8	2.6	3.3	5.5	0.8	1	0.8	0.4	0.4	0.4	S	0.2	0.4	0.1	5.5	1.0	24	
4	0	0.2	0	0.1	0.1	0	0.1	19.3	0	3.2	4.8	3.5	6.5	10.9	6.3	15.9	5.4	0.4	0.2	S	5.5	2.7	1.2	4.4	19.3	3.9	24	
5	0.4	0.3	0.6	0.6	0.5	0.5	3.2	4.2	5.3	40.3	29.6	8.2	3.6	3.3	2.1	1.3	0.5	0.4	S	0.4	0.3	0.3	0.4	0.4	40.3	4.6	24	
6	0.4	0.7	0.3	0.4	0.4	0.6	0.7	0.5	0.7	2	1.7	4.1	3.7	1.9	3.5	1.5	1.6	S	1.2	0.8	0.9	0.8	0.7	0.8	4.1	1.3	24	
7	0.7	0.9	0.7	0.8	1.1	1	1.3	1.3	1.1	2.9	2.5	3.9	4.5	4.6	3.1	1.7	S	0.5	0.7	0.6	0.8	0.8	0.7	0.5	4.6	1.6	24	
8	0.7	0.6	0.9	0.9	0.7	1.1	1.3	0.8	20	4.3	7.6	12.9	15	11.1	41.5	S	12.6	5	0.7	0.5	0.7	0.6	0.7	0.6	41.5	6.1	24	
9	0.3	0.3	0.5	0.6	1.6	1.8	1.3	1.6	23.5	19.6	13.7	1.4	1.3	1.7	S	0.6	0.7	0.6	0.7	0.4	0.4	0.4	0.5	0.7	23.5	3.2	24	
10	0.7	0.5	0.6	0.4	0.7	0.6	0.8	1.8	1.8	2.6	6.4	6.9	6.4	S	2.9	1.5	0.8	0.7	0.4	0.6	0.7	0.5	0.3	0.6	6.9	1.7	24	
11	0.7	0.5	0.5	0.5	0.4	0.4	0.5	1	4.1	21.1	4.5	1.8	S	4.3	1	2.1	3.4	0.7	0.4	0.5	0.5	0.8	0.7	0.4	21.1	2.2	24	
12	0.5	0.5	0.6	0.6	0.6	0.7	1.4	5.8	1.3	3.4	2.7	S	2.4	0.9	0.7	0.6	13.2	0.4	0.3	0.3	0.5	0.4	0.4	0.4	13.2	1.7	24	
13	0.3	0.6	0.4	0.5	0.4	0.7	1.1	6.5	8.3	11.1	S	0.5	0.3	0.8	0.6	0.4	0.4	0.5	0.4	0.5	0.2	0.2	0.1	0.9	11.1	1.6	24	
14	0.4	0.6	0.3	0.2	0.2	1.4	13.3	2.7	2	S	3.8	3.8	3.1	3.1	5.3	0.3	1.2	0.3	0.2	0.2	0.4	0.2	0.1	0.2	13.3	1.9	24	
15	0.1	0.3	0.5	0.3	0.2	0.2	0.4	1.8	S	1.9	2.5	2.6	3.3	3.4	2.8	5.8	1.9	0.4	0.1	0.2	0	0.2	0	0	5.8	1.3	24	
16	0.2	0	0.2	0.2	0.1	0.5	16	S	1.6	2.7	4.3	4.9	1.2	0.3	1.9	0.2	0.1	0.3	0	0	0.2	1.6	4.3	0	16.0	1.8	24	
17	0	0	0	0	0	0.2	S	0.6	0.4	0.6	0.4	0.5	0.7	0.6	0.6	0.6	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.7	0.4	24	
18	0.5	0.5	0.5	0.5	0.5	S	0.5	0.2	0.5	0.2	0.2	0.4	0.5	0.4	2.2	2.4	2.1	1.4	0.4	0.2	0.4	0.4	0.2	0.3	2.4	0.7	24	
19	0.2	0.3	0.4	0.3	S	1.5	0.3	1.1	2.6	2.6	1.3	4.7	3.2	3	2	0.5	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	4.7	1.1	24
20	0.3	0.6	0.6	S	0.1	0.2	0.2	0.2	0.3	0.6	1.8	1.1	2.3	1.2	0.8	0.6	0.2	0.2	1.3	0.4	0.3	0	0	0	2.3	0.6	24	
21	0	0	S	0.5	0.7	0.7	0.5	C	C	C	C	C	C	C	C	C	C	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.7	0.3	24	
22	0.2	S	0.4	0.3	0.1	0.3	0.4	0.3	0.7	1.1	1.1	1	1.1	0.8	0.9	3.1	3.8	0.2	0.3	1	1.3	1.3	1.2	0.2	3.8	0.9	24	
23	S	0.3	0.5	0.3	0.3	0.4	0.8	4.3	10.6	6.1	5.7	5.7	9	4.5	5.5	0.9	11.9	0.7	0.2	6.3	11	11.5	0.2	S	11.9	4.4	24	
24	0.3	0.5	0.5	0.5	0.5	22.6	1.2	1.9	2.2	2.2	1.7	2.3	2.4	2.3	2.6	1.5	1.1	0.8	0.4	0.4	0.4	0.4	S	0.6	22.6	2.1	24	
25	1.8	1.7	0.4	0.6	3.8	1.2	0.7	0.8	5	2.4	2.5	3.1	2	26.8	0.9	0.9	0.8	0.6	0.5	0.6	0.6	S	0.6	0.5	26.8	2.6	24	
26	0.5	0.4	0.5	0.3	0.7	3	0.5	12.6	13.7	8.8	7.1	7.8	4.2	1.2	1	1.1	4.4	0.5	0.4	0.4	S	0.6	0.4	0.5	13.7	3.1	24	
27	0.6	0.7	0.7	0.4	0.6	0.5	0.7	1	1.3	1.5	1.4	1.4	1.1	1.1	0.9	0.8	0.6	0.7	0.7	S	0.5	0.2	0.3	0.3	1.5	0.8	24	
28	0.3	0.1	0.4	0.3	0.1	0.2	0.3	17.6	0.5	0.8	0.9	5.4	0.9	1.1	1	0.7	1	0.5	S	0.5	0.5	0.6	0.5	0.5	17.6	1.5	24	
HOURLY MAX	9.5	1.7	1.2	0.9	3.8	22.6	16.0	19.3	23.5	40.3	29.6	12.9	15.0	26.8	41.5	15.9	13.2	5.0	1.3	6.3	11.0	11.5	4.3	4.4				
HOURLY AVG	0.8	0.5	0.5	0.4	0.6	1.7	2.0	3.6	4.5	5.9	4.6	3.8	3.5	4.0	3.7	1.9	2.8	0.6	0.4	0.6	1.1	1.0	0.6	0.5				

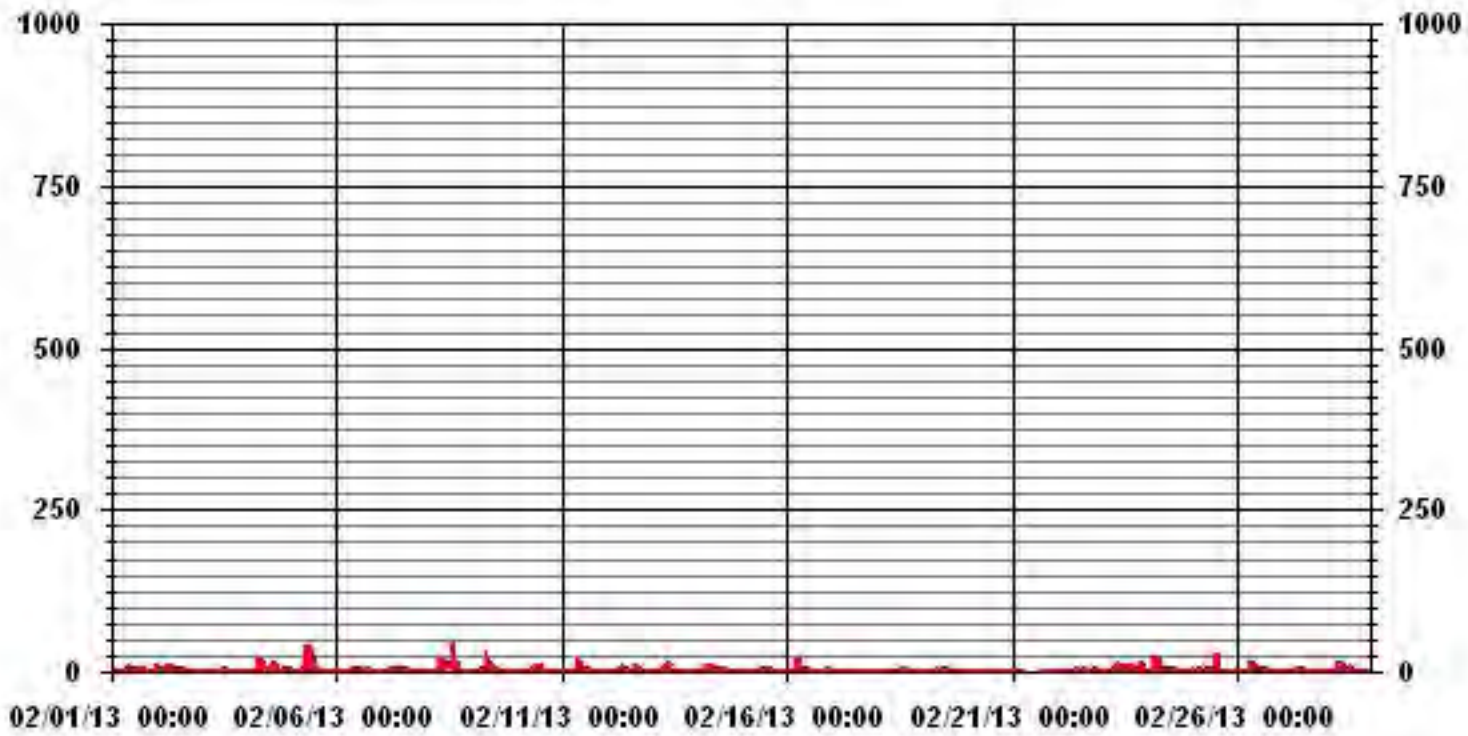
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	611				
MAXIMUM INSTANTANEOUS VALUE:	41.5	PPB	@ HOUR(S)	14	ON DAY(S) 8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS
MONTHLY CALIBRATION TIME:	10	HRS			
STANDARD DEVIATION:	4.14				

01 Hour Averages



LICA30
 NO_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 30
 Site Name : LICA30
 Parameter : NO_
 Units : PPB

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 50.0	4.26	5.84	4.89	4.42	4.73	5.52	8.53	8.21	6.63	17.69	7.10	2.05	6.00	6.47	2.84	4.73	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	4.26	5.84	4.89	4.42	4.73	5.52	8.53	8.21	6.63	17.69	7.10	2.05	6.00	6.47	2.84	4.73	

Calm : .00 %

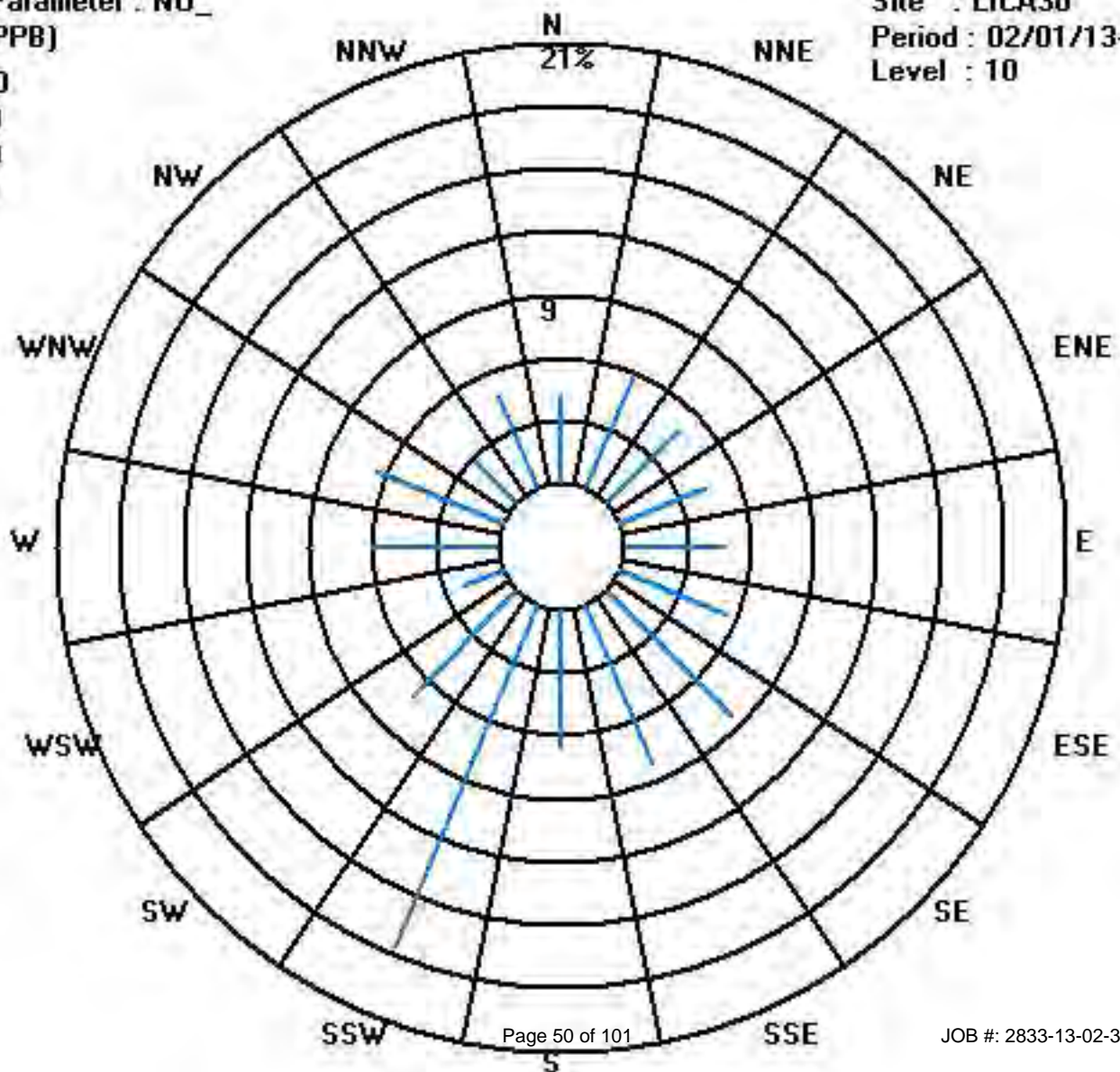
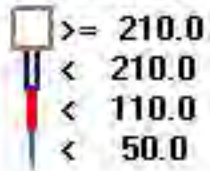
Total # Operational Hours : 633

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 50.0	27	37	31	28	30	35	54	52	42	112	45	13	38	41	18	30	633
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	27	37	31	28	30	35	54	52	42	112	45	13	38	41	18	30	

Calm : .00 %

Total # Operational Hours : 633



Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX	AVG	RDGS.	
DAY																												
1	8.5	8.7	11.1	7.2	5.6	6.3	6.6	7.8	7.4	9.8	9	7.5	6.7	8.1	9.2	10.7	10.1	9.6	9.9	9.8	11.2	13.1	S	9.9	13.1	8.9	24	
2	6.8	0.5	1.3	1	1.7	4.4	2.6	4.2	9.5	6.8	8.6	3.8	5.7	4.8	0.7	2.1	1.2	1	1.4	1.4	1.4	S	1.7	1.8	9.5	3.2	24	
3	3.5	0.7	0.7	0.5	0.5	0.6	0.8	0.9	4.9	1.2	1.1	3.8	4.5	5.7	1	2.1	3.2	3.2	1.9	1.6	S	2.5	2.5	2.2	5.7	2.2	24	
4	2	2.2	2.9	1.9	1.2	1	1	5.6	1	6.1	7	8.4	14.2	13.6	9.8	16.8	5.3	1.6	2.1	S	4.3	2.8	2	8.3	16.8	5.3	24	
5	3.1	4.4	2.4	2.8	3.7	4.2	7.6	13.4	17	33.1	24	14.4	5.8	5.7	4.8	2.2	1.3	0.8	S	0.3	0	0	0	0	33.1	6.6	24	
6	0	0	0.1	0	0	0.1	0	0	0.1	2	1.1	5.2	5.8	2.1	4.6	2.8	6.6	S	2	1.5	1.3	1.8	1.9	2.4	6.6	1.8	24	
7	2.4	2.8	2.9	3.3	3.5	3.8	4.1	4.8	4.3	5.4	6.2	8	7.7	7.6	6.3	4.6	S	4.4	10.3	10	9.1	7.1	6	5.4	10.3	5.7	24	
8	7.2	8.3	9.9	9	7.4	7.1	7.9	9.5	8.8	10.9	14.2	19.2	20.5	21	23.7	S	32.5	29.8	22.6	19.9	17.4	15.3	11.9	9.3	32.5	14.9	24	
9	9	9.1	9.6	10.7	13.2	14.1	21.5	18.8	13.4	17.6	14.6	2.4	1.6	1.3	S	0.9	1.1	1	1.4	1.5	1.3	0.8	1	1	21.5	7.3	24	
10	1.4	1.2	1	0.9	2.1	5.2	3.9	5.2	4.1	6.4	13.3	12	8.9	S	4.5	2.8	2.5	3.1	3.7	3.9	3.6	2.9	2.8	2.4	13.3	4.3	24	
11	2.8	2.9	3.6	4.1	4.9	7	10.3	14.4	12.1	20.4	7.9	2.7	S	2.1	1.2	4.7	4.2	2.3	2.1	1.8	1.1	1.1	0.8	0.7	20.4	5.0	24	
12	0.4	0.4	0.4	0.5	0.4	0.4	1	2.2	2.3	4.7	5.3	S	1.6	1.4	1.3	1.2	2.7	1.5	2.2	3.2	2.2	2	2.4	3.1	5.3	1.9	24	
13	3.2	3.5	3.1	4.9	4.2	6.1	5.8	13.9	11.9	14.2	S	0.6	0.3	1.3	1.7	0.4	1.3	1.4	1.4	2.3	1.5	1.4	1.5	3.2	14.2	3.9	24	
14	1.4	1.1	1.6	2.6	0.3	5.1	10.9	3.3	5.8	S	8.3	7.4	5.6	3.3	1.8	0.6	2.4	2.2	1.7	2.2	4	1.8	1.4	2.9	10.9	3.4	24	
15	4.3	4.8	9.2	6.8	5.8	5.2	5.2	7	S	9.6	10.9	10.5	11.6	10	9.1	11	9.5	8.2	7.9	7	5.9	7.1	4	4.1	11.6	7.6	24	
16	5.2	3.7	4.7	4	4	3.2	7.7	S	9.7	9.4	10.3	10.6	2.4	0.7	0.6	0.8	0.6	0.9	0.7	0.5	5.4	11.8	10.2	1.5	11.8	4.7	24	
17	2.2	1.1	0.9	1.1	1.1	0.5	S	0.8	0.7	1.1	0.3	0.2	0.2	0	0.2	0.1	0	0.1	0	0.1	0.1	0.1	0	0	2.2	0.5	24	
18	0	0	0.1	0	1.5	S	3.3	0.4	0	0	0	0.1	0.3	0.1	1.8	3.4	3.6	11.1	3.2	0.4	0.3	0.2	0.2	0	11.1	1.3	24	
19	0.3	0.4	0.7	0.9	S	7.7	0.5	1	6.2	3.7	2.2	9.4	4.8	5.4	2.8	1.2	0.9	0.9	1.2	1.5	1.4	1.4	1.3	1.7	9.4	2.5	24	
20	1.4	1.4	1.6	S	2	1.9	2.1	3.6	3	3.5	4.4	4	3.3	2.7	3.4	3.7	2.7	2.3	2.7	2.8	3.5	3.2	3.4	3.4	4.4	2.9	24	
21	2.9	2.6	S	2.6	2.1	1.8	1.9	C	C	C	C	C	C	C	C	C	C	C	2	2	2.1	2	1.5	1.4	1.5	2.9	2.0	24
22	1.5	S	1.8	2.5	1.4	1.3	1.5	2	3.4	3.4	2.4	2.3	2.3	2.1	2.6	6.1	8.7	1.4	1.4	10.9	15.2	7.1	13	3.7	15.2	4.3	24	
23	S	1.7	1.3	1.3	1.5	1.4	2.9	11.5	14.2	10.6	12.4	8.4	13.2	6	7.5	2.7	13.3	6.5	2	9.1	13.7	10.9	1.2	S	14.2	7.0	24	
24	1.1	2.8	1.2	1	3.3	6.8	7.1	7.9	6.2	4.5	3.1	3.7	4.8	5.4	5	5.4	6.4	7.2	8.1	7.8	6.7	6.5	S	6.8	8.1	5.2	24	
25	8.2	7.1	8	8.2	16.5	14.7	6.4	5.7	12.6	7.2	6.3	7.8	2.3	10.9	0.3	0.2	0.6	1.3	2.7	1.2	2.2	S	0.6	0.8	16.5	5.7	24	
26	0.7	0.2	0.1	0.1	2.4	7.8	5.3	11.6	23.3	15.2	12.5	7.4	3.8	1.1	2	2.4	2.6	1.9	2.6	3	S	2.3	1.8	1.9	23.3	4.9	24	
27	1.8	3.2	4	2.3	4.8	3.1	3.1	3.6	4.4	4.3	3.6	3.1	1.8	2.4	1.3	1.4	1.9	2.7	2.6	S	1.9	1.7	2.4	2.7	4.8	2.8	24	
28	1.6	1.5	1.8	1.6	1.6	1.6	2	4.1	2.4	2.6	2.7	3	3	3	3.4	3.4	4.5	5.8	S	6.8	7.2	7.4	8.6	6.3	8.6	3.7	24	
HOURLY MAX	9.0	9.1	11.1	10.7	16.5	14.7	21.5	18.8	23.3	33.1	24.0	19.2	20.5	21.0	23.7	16.8	32.5	29.8	22.6	19.9	17.4	15.3	13.0	9.9				
HOURLY AVG	3.1	2.8	3.2	3.0	3.6	4.5	4.9	6.3	7.3	8.2	7.4	6.4	5.5	4.9	4.3	3.6	5.0	4.2	3.8	4.3	4.8	4.4	3.2	3.2				

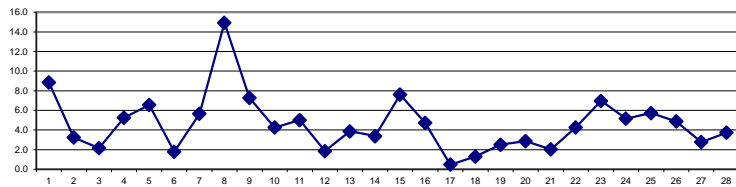
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

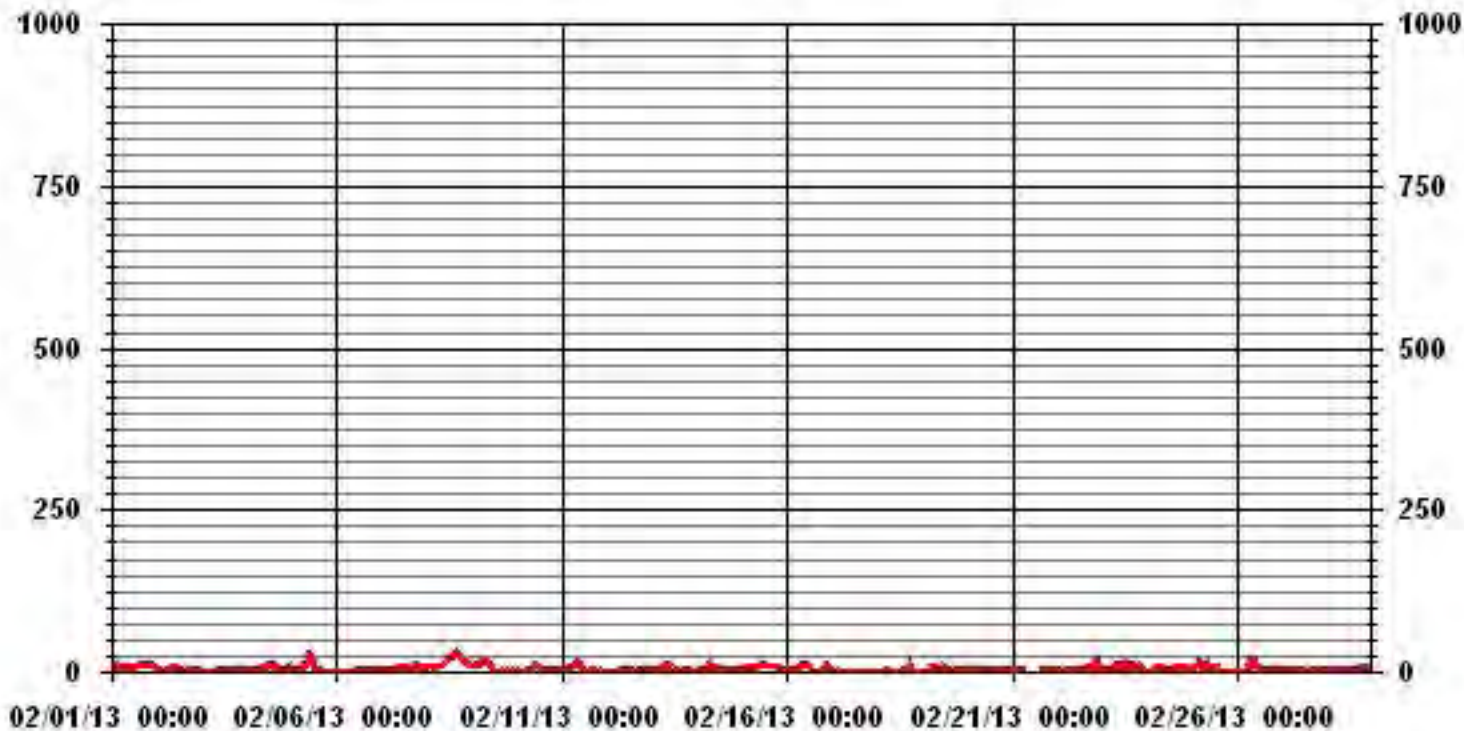
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	611					
MAXIMUM 1-HR AVERAGE:	33.1	PPB	@ HOUR(S)	9	ON DAY(S)	5
MAXIMUM 24-HR AVERAGE:	14.9	PPB			ON DAY(S)	8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	4.77		MONTHLY AVERAGE:	4.65	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA30 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00				
DAY																												
1	9.1	9.4	14.3	8.4	6.7	7.2	7.3	14.4	10	19.5	14.2	11.3	8.1	9.5	10.5	11.6	16	11	10.9	10.6	12.5	15.9	S	13.9	19.5	11.4	24	
2	29.5	1.1	2.5	2.2	3.8	18.3	18.6	13.6	21	16.9	15.5	8.5	12.1	12.7	2.7	5.8	2.5	1.7	2.2	1.9	2	S	2.4	7.4	29.5	8.9	24	
3	7.8	1.4	1.2	1.1	1.4	1.1	1.4	1.7	9.4	1.7	1.6	8.8	9.2	14.5	1.9	4.2	4.8	4.4	2.7	2.2	S	4.6	4.5	3.1	14.5	4.1	24	
4	2.8	3.3	4.2	4.7	1.6	1.5	1.5	40.6	2.1	13.2	12.3	11.9	16.6	25.1	19.6	36.8	14.7	4.3	5.5	S	20.1	8.2	8	21.5	40.6	12.2	24	
5	5.6	5.9	3.5	4	4.5	5.3	18.4	19.6	26	80	52.2	19.1	9.2	7.5	5.9	4.5	1.8	1.5	S	0.8	0.3	0.4	0.6	0.5	80.0	12.0	24	
6	0.5	0.7	0.6	0.2	0.5	0.8	0.6	0.4	0.6	7.6	5.1	12	11.7	5.3	12.9	6.6	11.1	S	8	3.8	2	2.8	2.7	3.3	12.9	4.3	24	
7	3	3.4	3.6	3.9	4.8	5.7	6.4	6.7	5	7.6	7.3	9.7	10.8	11.2	8	5.7	S	7.2	12.4	12.4	10	9.3	7.7	7.4	12.4	7.4	24	
8	8	9.2	11.4	10.2	8.4	8.7	11	12	32.8	13.3	16.4	24.2	27.5	22.8	47.6	S	35.1	34	25.7	23	18.4	17.7	13.2	11.6	47.6	19.2	24	
9	10.7	10.4	11.2	12	16.6	18	25.3	24.5	45.1	44.4	33.7	4.9	4.7	5.8	S	1.7	1.8	1.6	2	2	1.9	1.4	1.5	1.5	45.1	12.3	24	
10	1.9	2.1	1.5	1.8	2.8	7.1	5.7	8.5	8.4	10.4	17.1	16.8	12.2	S	6.4	4.5	3.3	4.1	4.5	4.7	4.7	3.5	3.6	3.2	17.1	6.0	24	
11	3.6	3.3	4.5	4.7	5.8	10.5	11.9	18.2	21.4	46	12.7	4.1	S	7.5	2.6	10	10	6.6	5	3	1.5	1.6	1.3	1.3	46.0	8.6	24	
12	1	1	1.1	1	0.8	1	3	24.7	5.1	9.8	10.4	S	4.7	2.2	2.4	3	26.3	3	3.8	3.8	3.6	2.8	3.2	3.9	26.3	5.3	24	
13	3.7	4.3	4.1	7	5.3	9.5	10.3	24.3	25.7	26.8	S	1.2	1.1	2.7	3	1.2	2.6	2.1	2.1	2.9	2.3	2.3	3.3	9.2	26.8	6.8	24	
14	3.5	4.5	4.3	4.6	2.5	10.9	30.3	7.4	11.1	S	10.4	9.4	8.2	8.2	13.9	1.2	4.8	3.1	2.5	3.2	6.9	2.6	2	6.7	30.3	7.1	24	
15	8	6.8	11.5	9	6.8	6.5	6.2	9.8	S	11.1	12.6	12.1	12.5	11.4	9.9	15.7	12.6	10.5	8.8	8.6	8.5	8.3	6.1	6.8	15.7	9.6	24	
16	6.3	4.7	5.3	5.1	6.1	6.4	41.7	S	11.8	11	12.4	13	4.9	2.2	3.6	2.6	1.3	4	1.4	1.2	12.5	18.5	25.6	3.9	41.7	8.9	24	
17	3.5	2.4	1.7	1.8	2	1.4	S	1.6	2	3.1	3.1	0.8	0.8	0.7	1.2	0.9	0.9	0.5	0.5	1.1	0.6	0.6	0.6	0.3	3.5	1.4	24	
18	0.3	0.7	0.5	1.1	4.6	S	11.4	1.1	0.5	0.5	0.4	0.9	1.1	1.5	5.9	9	9.1	14.6	8.4	1	1	0.8	0.7	0.6	14.6	3.3	24	
19	0.9	1.1	2.5	2.6	S	16.1	1.4	2.9	13.7	11.8	4.7	14.3	11	10.1	7.8	1.9	1.7	1.6	1.7	2.2	2.2	1.8	1.9	2.2	16.1	5.1	24	
20	2	2	2.1	S	2.6	2.6	3.1	4.4	3.7	4.1	6.4	5.1	6.6	5	4.8	4.5	3.9	3	3.8	3.8	4.2	3.8	4.1	4	6.6	3.9	24	
21	3.4	3.2	S	3.1	2.7	2.4	2.9	C	C	C	C	C	C	C	C	C	C	2.6	2.5	3	2.7	2.2	2	2	3.4	2.7	24	
22	2	S	2.7	3.5	2	1.8	2.3	3.1	4.5	4.7	3.6	2.8	3.1	3	4.5	14.6	16.4	1.9	2.4	21.7	19.8	20.4	21.5	12.1	21.7	7.6	24	
23	S	3.1	2.8	2.1	2.2	2	5.1	24.3	26.5	16.9	15.1	16.3	18.8	13.7	17.4	4	31.8	10.1	5.3	25.1	30.4	32.4	2.5	S	32.4	14.0	24	
24	1.9	5.5	2.9	2.1	5.4	40	9.6	11.4	7.7	6.5	5	5.2	6.1	5.9	6.8	6.2	7.1	8.1	8.8	8.7	7.6	7.4	S	8.8	40.0	8.0	24	
25	11.6	11.9	9.2	9.8	31.8	26.1	12.5	9.9	24.8	10.6	9.2	10.9	5.6	37.9	1.8	1.4	1.5	3.1	4.1	3.2	3.3	S	1.6	1.4	37.9	10.6	24	
26	1.5	0.8	0.8	0.5	8.6	24.5	8.1	35.9	37.7	22.5	16.1	18.9	9.2	3	2.7	3.3	12.7	2.6	3.2	3.7	S	3.5	2.2	2.9	37.7	9.8	24	
27	2.4	5.2	5.5	3	6.6	4.5	3.6	5.2	5.5	5.1	4.5	4.4	3.1	3.8	1.9	1.9	3	3.5	3.2	S	2.4	2.2	3.4	3.7	6.6	3.8	24	
28	2	2.2	2.2	2.1	2.1	2.2	2.9	29.2	3.5	3.5	4.1	17.9	4.2	3.6	4.7	4.4	6.3	6.9	S	7.8	8.1	8.8	9.8	8.2	29.2	6.4	24	
HOURLY MAX	29.5	11.9	14.3	12.0	31.8	40.0	41.7	40.6	45.1	80.0	52.2	24.2	27.5	37.9	47.6	36.8	35.1	34.0	25.7	25.1	30.4	32.4	25.6	21.5				
HOURLY AVG	5.1	4.1	4.4	4.1	5.5	9.0	9.7	13.7	14.1	15.7	11.8	10.2	8.6	9.1	8.1	6.4	9.4	5.8	5.4	6.4	7.3	7.1	5.2	5.6				

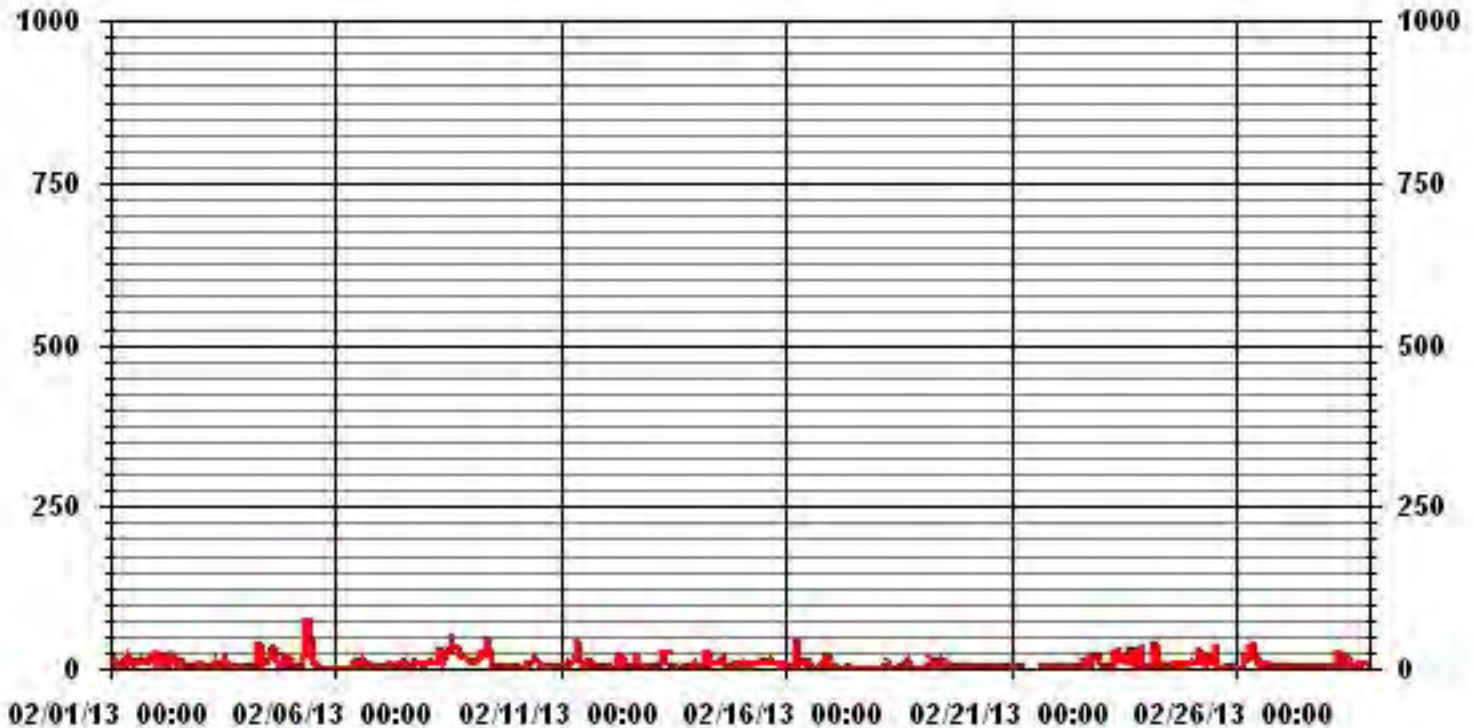
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	633
MAXIMUM INSTANTANEOUS VALUE:	80.0 PPB @ HOUR(S) 9 ON DAY(S) 5
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	10 HRS
STANDARD DEVIATION:	8.76
OPERATIONAL TIME:	672 HRS

01 Hour Averages



— LICA30 NOXMAX PPB

LICA30
NOX_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 30
Site Name : LICA30
Parameter : NOX_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	4.26	5.84	4.89	4.42	4.73	5.52	8.53	8.21	6.63	17.69	7.10	2.05	6.00	6.47	2.84	4.73	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	4.26	5.84	4.89	4.42	4.73	5.52	8.53	8.21	6.63	17.69	7.10	2.05	6.00	6.47	2.84	4.73	

Calm : .00 %

Total # Operational Hours : 633

Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	27	37	31	28	30	35	54	52	42	112	45	13	38	41	18	30	633
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	27	37	31	28	30	35	54	52	42	112	45	13	38	41	18	30	

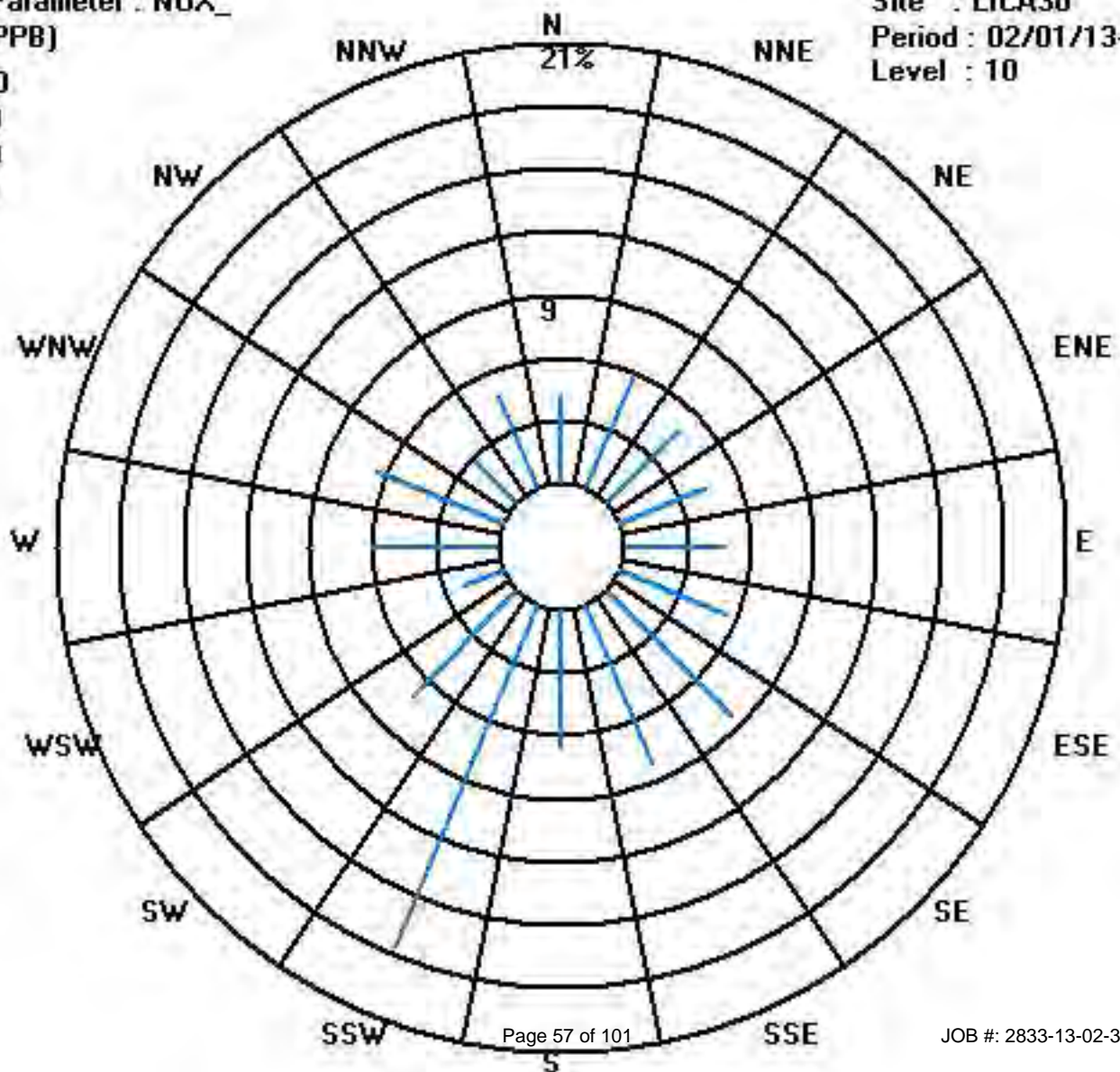
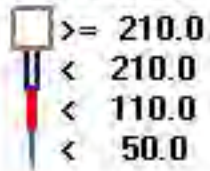
Calm : .00 %

Total # Operational Hours : 633

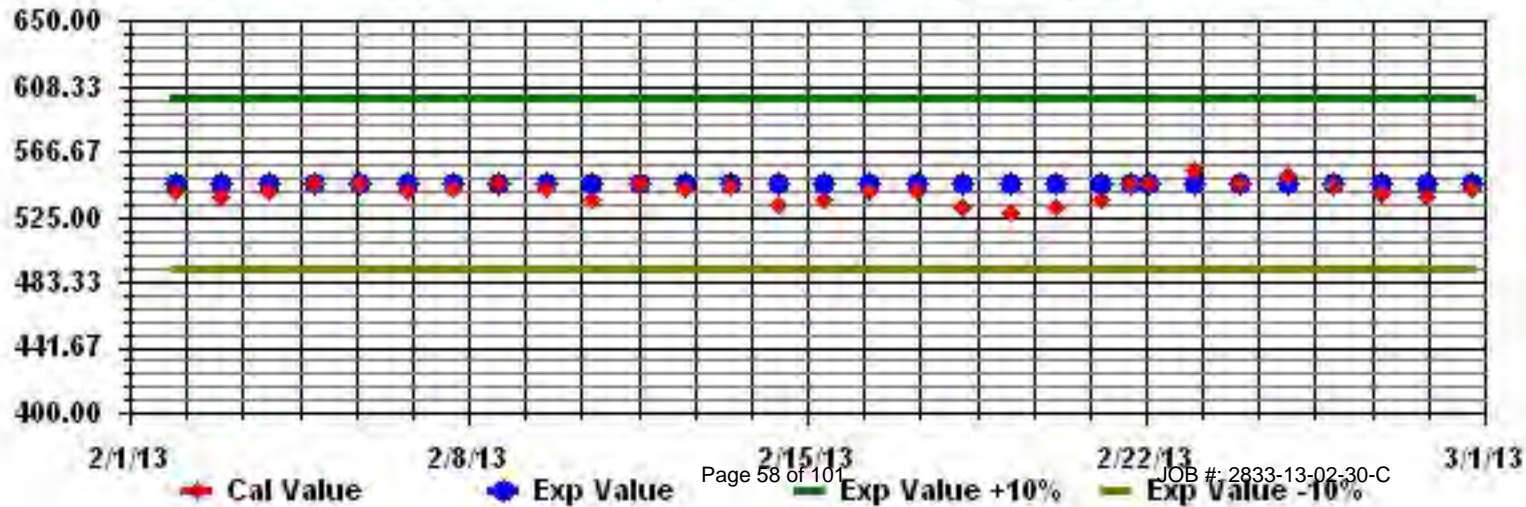
Class Limits (PPB)

Period : 02/01/13-02/28/13

Level : 10



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



Temperature

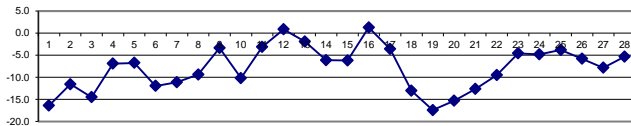
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA
FEBRUARY 2013
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	DAILY MAX.	24-HOUR AVG.	RDGS.
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00				
DAY																													
1		-19.9	-19.6	-19.4	-19.3	-19.3	-19.4	-19.5	-19.5	-19.9	-18.6	-17.1	-16.2	-15.2	-14.9	-14.9	-14.7	-14.9	-15	-14.9	-14.3	-13.7	-12.8	-11.8	-8.9	-8.9	-8.9	-16.4	24
2		-4.7	-6.8	-9.7	-11.6	-12.8	-13.4	-15.1	-16.9	-16.8	-15.3	-13.7	-12.4	-10.8	-10	-9.5	-9.5	-10	-10.4	-10.7	-10.8	-10.9	-11.5	-12.1	-12.4	-4.7	-11.6	24	
3		-12.8	-13.3	-13.5	-13.9	-14.6	-15.4	-16	-16.2	-16	-16.2	-15.8	-14.7	-14	-13.3	-13.7	-13.8	-14.2	-14.6	-14.9	-14.7	-14.4	-14.2	-14	-13.9	-12.8	-14.5	24	
4		-13.2	-12.5	-12.1	-12.1	-12.3	-12.2	-11.8	-11.7	-11.9	-10.2	-7.7	-5.9	-3.3	-1.1	0.5	-0.6	-2.4	-3.2	-3.5	-3.6	-3.4	-3.6	-3.7	-3.8	0.5	-6.9	24	
5		-4.4	-6.8	-7.6	-7.3	-8.7	-10.4	-11.5	-11.5	-10.4	-8.5	-4	-0.1	-0.8	-1.7	-0.8	-2.4	-5.1	-5.7	-5.8	-6.6	-8.7	-9.9	-11	-11.9	-0.1	-6.7	24	
6		-12.1	-12.7	-13.2	-13.8	-14	-14.3	-14.4	-14.6	-14	-12.3	-11.2	-10.6	-10.3	-10.1	-10.5	-11	-11.4	-11.7	-11.2	-11	-11	-10.6	-10.5	-10.5	-10.1	-12.0	24	
7		-10.4	-10.3	-10.9	-13.2	-12.8	-12.9	-13	-13.1	-13	-12	-9.3	-5.9	-3.1	-1.6	-3.8	-5.8	-8.2	-11	-12.7	-15.1	-16.4	-17.1	-17	-18.2	-1.6	-11.1	24	
8		-15	-15.5	-16.2	-15.6	-15.3	-15.1	-15	-15.1	-14.4	-13.3	-10.2	-7.8	-3.8	-1	-1.2	-1.3	-3.1	-4.8	-5.9	-6.8	-7	-6.8	-7.7	-7.2	-1.0	-9.4	24	
9		-6.2	-5.9	-6	-6	-5.3	-5	-4.5	-3.5	-2.4	-0.7	0.2	1.2	1.3	0.9	-0.2	-0.9	-1.6	-2.5	-3.4	-5.2	-5.8	-5.9	-6.3	-6.7	1.3	-3.4	24	
10		-7.7	-8.4	-9	-10	-10.9	-11.3	-11.7	-12.8	-12.5	-11.6	-10.5	-9.7	-7.4	-7	-7.3	-7.5	-8.9	-10.5	-11.4	-11.8	-11.8	-11.9	-11.8	-11.5	-7.0	-10.2	24	
11		-11.4	-12.1	-11.5	-11.9	-12.2	-12.1	-11.4	-11	-7.2	-3	1.4	4	5.1	5.7	5.6	5	2.7	0.3	-0.5	-0.5	0	0.1	0.2	5.7	-3.1	24		
12		0.3	-0.1	-0.6	-0.3	-1.1	-1.1	-1.4	-2.2	-1.9	0.7	1.6	4	6.7	7.3	5	4.2	2.1	0.9	0.2	-0.5	-0.7	-0.7	-0.7	-0.7	7.3	0.9	24	
13		-0.7	-0.6	-0.5	-0.5	-0.4	-0.3	-0.1	-0.2	-0.2	0.3	-0.5	-1.2	-1.2	-0.5	-0.7	-0.9	-1.8	-2.6	-3.4	-4.1	-4.7	-5.7	-7.4	-8	0.3	-1.9	24	
14		-7.9	-6.8	-6.6	-6.6	-6	-6.3	-6.5	-6.7	-6.6	-6.3	-4.6	-1.5	1.2	1.3	0.9	0.2	-2.3	-5.8	-8.4	-10.7	-11.1	-11.6	-13.5	-14.7	1.3	-6.1	24	
15		-16.5	-16.6	-14.5	-11.9	-11.6	-12.3	-11.3	-10.7	-10.5	-9.5	-7.8	-6.5	-4.9	-1.9	1.5	2.8	1.3	-0.5	-1.2	-1.3	-1	-1	-1.2	-1.5	2.8	-6.2	24	
16		-2.3	-2.8	-2.7	-3	-2.9	-3.1	-2.3	-2.3	-1.3	0.7	2.2	5.1	7.4	7.6	7	6.5	5.3	4.2	3.3	2.3	1	0.2	0.5	0.1	7.6	1.3	24	
17		0.5	1.2	1.3	0.8	0.3	-0.1	-0.6	-0.8	-0.9	-0.8	-1	-1.7	-2.3	-3.3	-4.3	-4.8	-5.8	-6.9	-7.8	-8.4	-9.4	-9.9	-10.3	-11	1.3	-3.6	24	
18		-11.7	-12.2	-12.8	-13.3	-13.7	-14	-14.2	-14.3	-13.8	-13.3	-11.7	-10.5	-8.9	-8	-8.4	-9.2	-11.2	-13.8	-15.2	-15.6	-15.2	-16.3	-17.3	-18.5	-8.0	-13.0	24	
19		-19.3	-19.8	-20.2	-20.7	-20.9	-21.4	-21.8	-21.5	-20.3	-18.7	-16.9	-15.7	-14.3	-12.8	-11.4	-12.1	-14	-15.3	-15.8	-16.3	-16.8	-17.3	-17.5	-17.7	-11.4	-17.4	24	
20		-17.9	-18	-18	-18.1	-18.2	-18.2	-18.3	-18.1	-17.6	-16.8	-15.9	-14.9	-14.2	-13.2	-12.5	-12.4	-12.5	-12.7	-12.8	-13	-13.2	-13.4	-13.6	-13.7	-12.4	-15.3	24	
21		-13.9	-14	-14	-14.2	-14.7	-14.8	-15.2	-15.7	-16	-15.1	-13.2	-11.9	-10.7	-10.9	-10.5	-10.1	-10	-10.5	-10.7	-11	-11.3	-11.6	-11.7	-11.7	-10.0	-12.6	24	
22		-11.5	-11.4	-11.5	-11.6	-12	-12.3	-12.7	-13.1	-12.9	-11.8	-9.3	-7.5	-5.6	-4.5	-4.5	-5.5	-6.9	-9.5	-10.8	-9.1	-8.5	-8.7	-8.6	-8.8	-4.5	-9.5	24	
23		-8.8	-8.8	-8.9	-9.6	-11.1	-11.4	-12.2	-11.9	-10.6	-5.4	-3.8	-2.6	1.4	3.7	2.7	2	-0.4	-0.8	-1.3	-1.6	-1.8	-2.1	-3	-3.6	3.7	-4.6	24	
24		-4.3	-5.4	-7	-8.6	-10.2	-11.3	-11.9	-11.7	-10.5	-6.2	-5	-2.9	-1.9	1.5	2.4	1.6	0.6	-0.9	-2.1	-3	-3.9	-5.3	-5	-4	2.4	-4.8	24	
25		-4.6	-6	-7.8	-10.3	-10.1	-9	-8.3	-7.2	-6	-3.7	-1.6	-0.1	0.4	1	1.2	1	0.1	-0.9	-2.1	-2.7	-2.9	-3.2	-3.8	-4.6	1.2	-3.8	24	
26		-5.6	-7.1	-8.9	-10.5	-11.6	-13.4	-14.6	-14.9	-11.9	-7.8	-3.4	0.5	1	0.5	0.6	0.2	-1.6	-2.7	-3.7	-4.3	-4.3	-4.2	-5	-6.4	1.0	-5.8	24	
27		-8.1	-9.3	-10.9	-12.4	-13.9	-13.3	-11.6	-11.6	-10.7	-9.1	-7.5	-6.4	-4.2	-2.5	-1.3	-3.5	-4.5	-5.7	-6.5	-6.6	-6.8	-7	-7.3	-7.2	-1.3	-7.8	24	
28		-7.2	-7.2	-6.9	-6.9	-6.9	-7.2	-7.4	-7.2	-7.1	-6.3	-5.6	-4.3	-2.3	-0.6	0	1	0	-2.4	-4.2	-5.2	-6.7	-7.7	-9.1	-10.1	1.0	-5.3	24	
HOURLY MAX		0.5	1.2	1.3	0.8	0.3	-0.1	-0.1	-0.2	-0.2	0.7	2.2	5.1	7.4	7.6	7.0	6.5	5.3	4.2	3.3	2.3	1.0	0.2	0.5	0.2				
HOURLY AVG		-9.2	-9.6	-10.0	-10.4	-10.8	-11.1	-11.2	-11.3	-10.6	-9.0	-7.2	-5.6	-4.1	-3.2	-3.1	-3.6	-5.0	-6.3	-7.1	-7.6	-7.9	-8.2	-8.6	-8.8				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

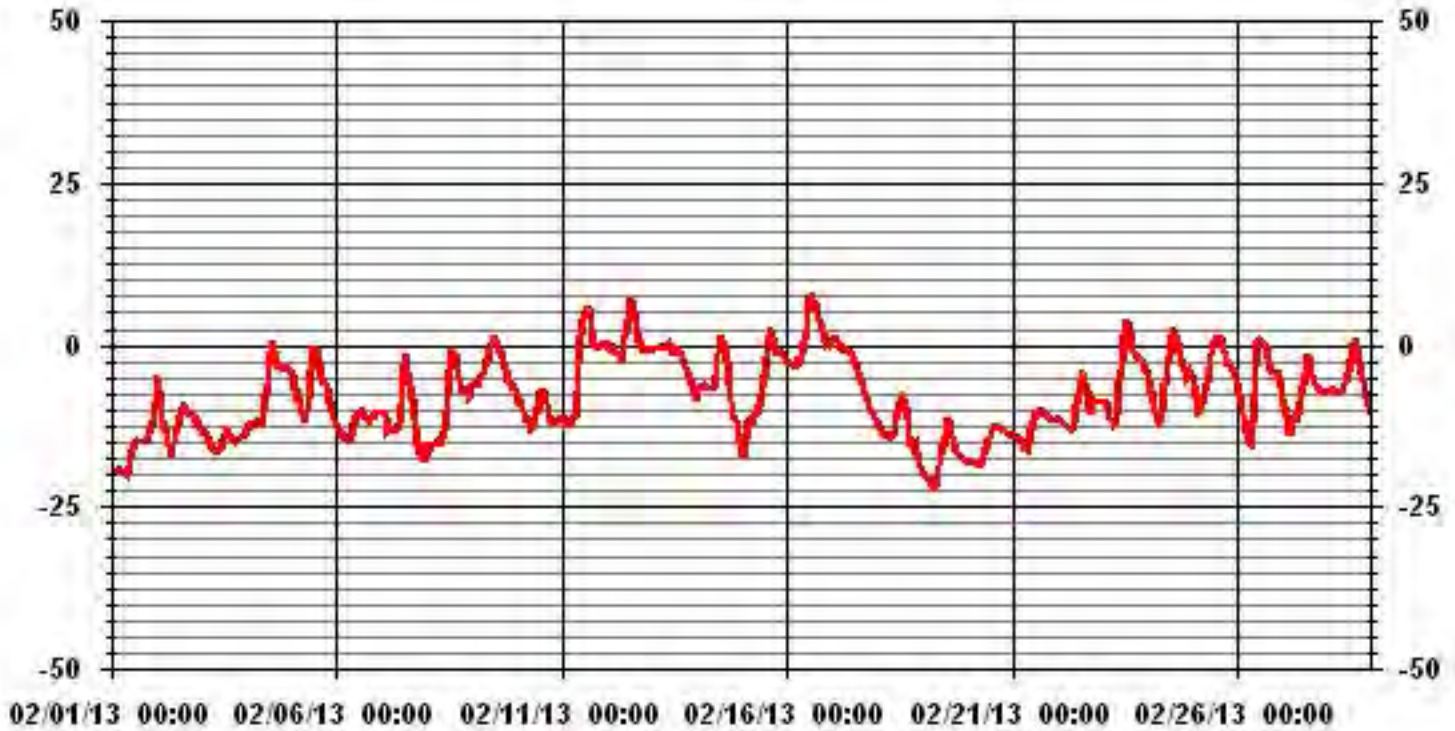
24 HOUR AVERAGES FOR FEBRUARY 2013



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-21.8 °C	@ HOUR(S)	6	ON DAY(S)	19
MAXIMUM 1-HR AVERAGE:	7.6 °C	@ HOUR(S)	13	ON DAY(S)	16
MAXIMUM 24-HR AVERAGE:	1.3 °C			ON DAY(S)	16
CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:		672 HRS	
STANDARD DEVIATION:	6.16	AMD OPERATION UPTIME:		100.0 %	
		MONTHLY AVERAGE:		-7.89 °C	

01 Hour Averages



— LICA30 TPX DGC

Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

PRECIPITATION hourly averages (mm)

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	DAILY MAX.	DAILY TOTAL	RDGS.	
DAY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0.1	24	
5		0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0	0	0.2	0.3	24	
6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
8		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
9		0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	0.6	0.2	0.1	0	0	0	0	0	0	0	0	0.7	1.9	24	
10		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
11		0	0	0	0	0	0	0	0	0	0	0	1.5	2.1	1.9	1.6	0.9	0.1	0.1	0	0	0	0	0	0	0	2.1	8.2	24	
12		0	0	0	0	0	0	0	0	0	0	0	0.6	0.9	0.9	0.3	0	0	0	0	0	0	0	0	0	0	0.9	2.7	24	
13		0	0	0.1	0.1	0	0.1	0.1	0.1	0	0.2	0.2	0	0	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0.2	1.2	24	
14		0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	0.3	0	0	0	0	0	0	0	0	0	0	0.5	1.2	24	
15		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0.6	0	0	0	0	0	0	0	0	0	0.6	1.2	24	
16		0	0	0	0	0	0	0	0	0	0	0	0.7	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0.8	24	
17		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
18		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
19		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
21		0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	24	
22		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
23		0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	24	
24		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
25		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
26		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24	
27		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.9	2.9	2.4	1.8	0.9	0.2	0	0	5.9	14.1	24		
28		0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.6	0.1	0	0	0	0	0	0	0	0	0	0	0	0.6	1.1	24	
HOURLY MAX		0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.2	1.5	2.1	1.9	1.6	0.9	5.9	2.9	2.4	1.8	0.9	0.2	0.0	0.0					

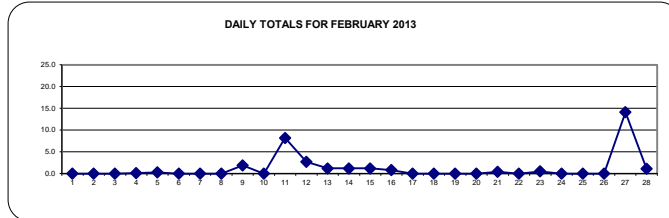
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

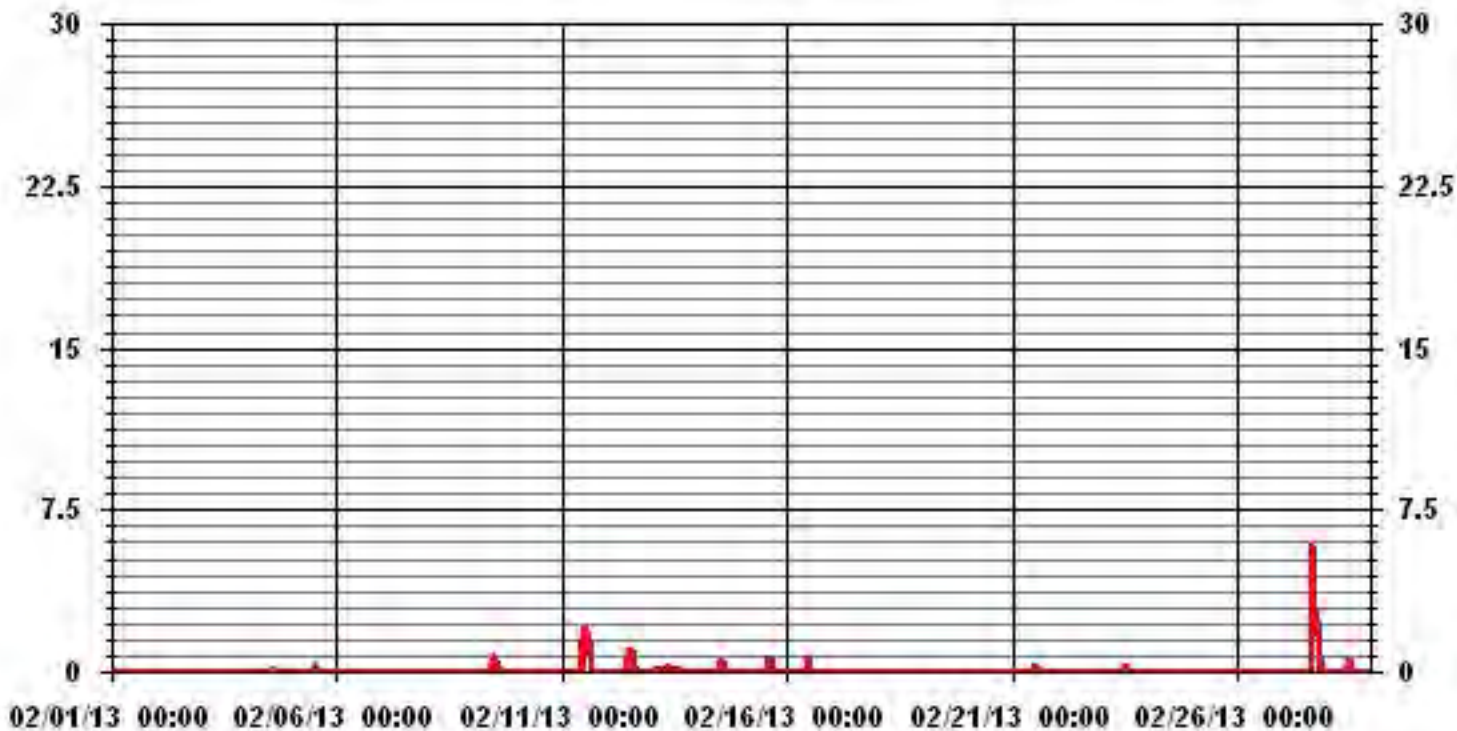
MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	5.9	MM	16	HOUR(S)	ON DAY(S)	27
MAXIMUM DAILY TOTAL	14.1	MM			ON DAY(S)	27
MONTHLY TOTAL	33.7	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
STANDARD DEVIATION:	0.32		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	0.05	MM	

DAILY TOTALS FOR FEBRUARY 2013



01 Hour Averages



Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

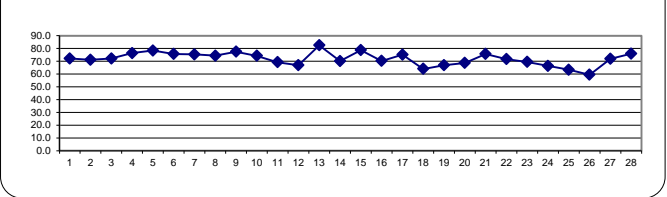
RELATIVE HUMIDITY hourly averages (%)

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOURLY MAX	HOURLY AVG	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																													
1		71	71	74	73	73	73	73	73	72	72	71	68	65	65	66	66	70	72	75	75	76	77	78	82	82	82	72.1	24
2		81	74	72	73	72	73	72	74	73	71	68	66	62	62	62	64	68	72	74	73	74	75	76	76	81	81	71.1	24
3		76	76	76	75	74	74	73	73	73	71	70	68	66	64	66	69	72	73	74	73	73	74	75	76	76	76	72.1	24
4		75	76	76	76	76	77	76	76	76	72	68	68	68	74	79	81	77	78	82	85	81	80	79	77	85	85	76.4	24
5		79	85	86	86	85	83	82	82	83	80	77	66	62	66	64	70	79	81	82	81	81	81	80	80	86	86	78.4	24
6		81	80	79	79	78	77	77	77	77	77	74	70	69	68	70	72	74	75	75	76	77	78	78	79	81	81	75.7	24
7		78	78	79	81	81	80	79	79	79	79	79	72	60	54	60	67	73	81	82	79	78	77	77	76	82	82	75.3	24
8		78	77	77	77	77	77	77	77	77	77	77	73	65	60	58	59	67	74	77	80	82	81	82	80	82	80	74.4	24
9		78	76	76	78	82	84	85	86	87	85	82	76	73	69	68	69	77	78	74	74	76	77	76	76	87	87	77.6	24
10		77	77	77	78	77	78	78	79	79	75	71	71	63	62	63	65	69	74	78	81	81	80	77	73	81	81	74.3	24
11		72	73	73	75	77	78	79	83	82	74	64	59	56	55	56	64	72	72	71	69	68	67	83	83	83	69.3	24	
12		66	66	67	66	67	68	69	71	70	62	59	52	43	40	46	50	59	66	79	86	88	88	89	89	89	89	66.9	24
13		89	89	89	89	89	89	89	89	88	85	84	82	82	79	78	78	79	78	75	77	76	74	77	78	89	89	82.6	24
14		79	76	76	78	77	75	74	76	76	76	71	59	49	46	45	46	52	66	76	81	83	83	82	80	83	80	70.1	24
15		78	77	80	81	80	79	80	80	78	78	79	79	77	73	68	65	71	78	81	84	85	85	86	86	86	86	78.7	24
16		86	87	86	86	85	85	83	81	78	71	67	59	52	51	52	53	56	58	60	63	67	71	72	78	87	87	70.3	24
17		81	80	79	78	78	78	80	80	77	73	73	69	70	76	75	72	73	72	72	71	71	72	74	81	81	75.1	24	
18		72	73	73	74	74	74	74	73	70	64	59	53	49	46	46	48	53	60	65	67	66	67	68	69	74	64.0	24	
19		70	71	71	70	70	71	71	70	69	65	60	57	52	55	62	66	69	70	70	70	69	69	69	69	71	66.9	24	
20		70	70	69	68	69	69	70	70	69	67	66	65	65	64	65	67	70	71	72	71	71	71	71	71	71	72	68.8	24
21		71	71	72	73	76	78	77	76	74	74	73	72	71	71	73	74	77	80	82	81	81	81	81	81	80	82	75.8	24
22		80	80	80	80	80	79	79	79	78	76	71	64	59	55	54	55	61	68	72	73	74	75	75	75	80	80	71.8	24
23		75	75	76	77	80	80	81	80	80	65	59	57	47	47	51	56	70	70	71	73	74	74	75	75	81	81	69.5	24
24		74	74	75	78	82	83	81	80	78	66	63	58	56	49	48	50	52	56	59	62	65	69	69	66	83	83	66.4	24
25		66	70	75	81	83	83	81	83	81	73	66	60	53	46	43	41	44	48	52	56	57	57	59	62	83	83	63.3	24
26		65	69	75	80	82	82	80	78	77	71	54	41	40	41	39	40	44	48	51	54	54	51	53	58	82	82	59.5	24
27		65	72	78	80	80	82	81	82	80	77	72	67	60	57	53	56	62	70	74	76	74	75	76	79	82	82	72.0	24
28		80	81	82	83	84	85	85	84	84	83	81	77	68	61	58	55	59	67	70	72	77	80	82	83	85	85	75.9	24
HOURLY MAX		89	89	89	89	89	89	89	89	88	85	84	82	82	79	79	81	79	81	82	86	88	88	89	89	89	89	89	89
HOURLY AVG		75.5	75.9	76.7	77.6	78.1	78.4	78.0	78.3	77.4	73.7	69.9	65.4	60.8	58.9	59.6	61.2	65.7	69.9	72.4	73.8	74.3	74.6	75.0	75.5	75.5	75.5	75.5	75.5

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

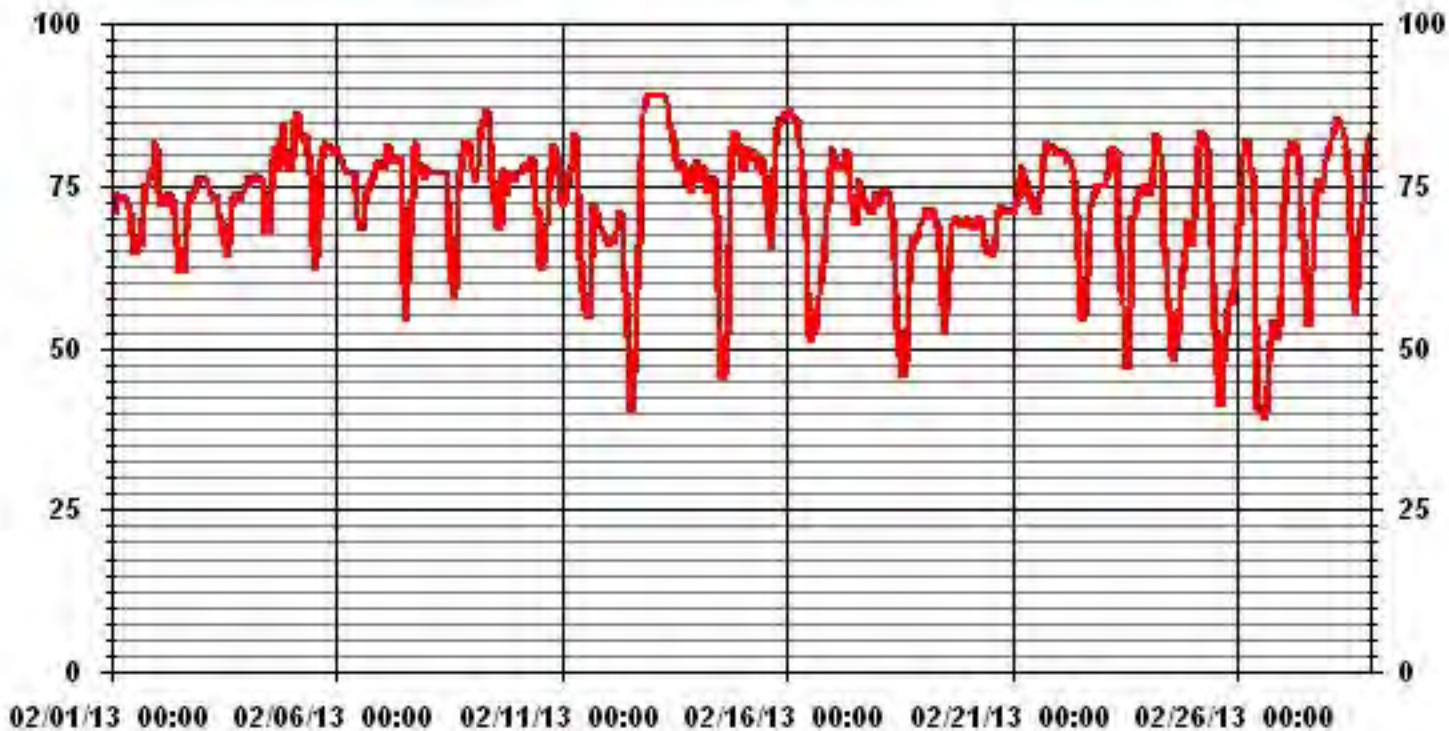
24 HOUR AVERAGES FOR FEBRUARY 2013



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	89	%	@ HOUR(S)	VAR	ON DAY(S)	12,13
MAXIMUM 24-HR AVERAGE:	82.6	%			ON DAY(S)	13
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
STANDARD DEVIATION:	9.85		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	71.93	%	

01 Hour Averages



— LICA30 RH %

Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

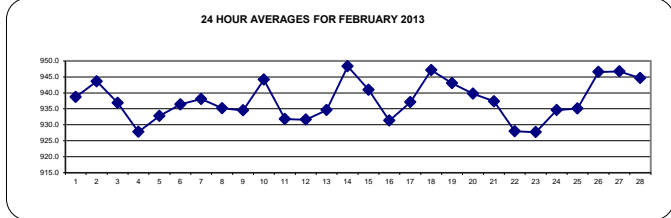
BAROMETRIC PRESSURE hourly averages (millibar)

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.	RDGS.	
1		937	938	938	939	939	939	939	940	940	940	940	940	940	940	940	940	940	939	938	938	937	936	935	936	940	938.7	24	
2		937	939	941	943	944	945	945	945	945	946	945	945	946	946	945	945	945	944	944	944	943	942	942	941	946	943.6	24	
3		941	940	940	939	939	938	938	938	938	938	938	938	938	937	937	937	936	936	935	934	934	933	932	931	941	936.9	24	
4		930	929	928	927	926	925	925	924	924	924	924	925	925	925	926	928	929	930	931	932	932	933	933	933	933	933	927.8	24
5		934	934	934	933	933	933	933	933	933	933	933	934	933	932	932	932	932	932	932	932	932	932	932	933	933	934	932.8	24
6		933	934	934	934	934	935	935	935	936	936	937	937	937	937	937	937	937	938	938	939	938	939	939	938	939	936.4	24	
7		939	939	939	938	938	938	938	938	939	939	939	939	939	939	938	938	938	937	937	937	937	937	937	937	939	938.1	24	
8		937	937	936	936	936	936	936	935	935	935	936	936	936	936	935	935	935	935	934	934	934	934	933	933	937	935.2	24	
9		932	932	931	931	930	930	930	930	930	931	931	932	933	934	934	936	936	938	939	940	941	942	943	943	943	943.5	24	
10		944	945	945	946	947	947	948	948	948	947	948	947	947	946	946	945	944	943	942	940	939	937	936	934	948	944.1	24	
11		933	932	931	931	930	930	930	930	930	931	932	932	932	932	933	933	932	932	932	933	933	933	933	933	933	933	931.8	24
12		933	933	933	932	932	933	933	933	933	934	933	933	934	933	933	932	931	931	930	929	929	928	927	927	934	931.6	24	
13		927	927	927	927	927	927	928	928	929	930	931	932	934	935	937	938	940	941	942	943	944	945	945	946	946	946	934.6	24
14		946	947	947	947	947	948	948	948	948	948	948	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	948.3	24
15		948	948	948	948	947	946	945	944	943	942	941	940	939	938	938	938	937	937	937	937	937	936	936	935	935	948	941.0	24
16		935	935	935	934	934	934	933	933	932	932	932	932	932	931	930	930	929	929	929	928	928	928	928	928	935	931.3	24	
17		929	929	930	930	931	932	932	933	934	935	936	937	937	938	939	940	941	942	943	943	944	945	945	945	945	945	937.1	24
18		946	946	947	947	947	948	948	948	948	948	948	949	948	948	948	947	947	947	946	946	946	946	946	946	949	947.1	24	
19		946	946	946	945	945	945	944	944	943	943	943	942	942	942	941	941	942	942	942	941	942	942	942	942	942	946	943.0	24
20		941	941	941	941	941	940	940	940	940	940	940	940	940	939	939	939	939	939	939	939	939	939	939	939	941	939.8	24	
21		939	939	939	939	939	939	939	939	938	938	938	938	938	937	937	936	936	936	936	936	936	935	935	935	939	937.4	24	
22		934	934	934	933	932	932	931	931	930	930	929	929	928	927	926	926	925	924	924	923	923	922	922	922	934	928.0	24	
23		922	921	921	922	922	922	923	923	924	925	926	927	928	929	930	930	931	932	933	934	934	935	935	936	936	927.7	24	
24		936	937	937	937	937	937	937	937	936	936	936	936	935	935	934	934	933	932	932	932	931	931	931	931	937	934.6	24	
25		931	931	931	931	932	932	932	933	933	934	935	935	935	935	936	936	937	937	937	937	938	939	940	941	942	942	935.1	24
26		942	943	943	944	944	945	945	946	946	947	948	948	948	948	948	948	948	948	948	948	948	948	948	948	948	948	946.5	24
27		948	948	948	947	947	947	947	947	947	947	947	947	947	947	947	946	946	946	946	946	946	946	946	946	946	948	946.7	24
28		945	945	945	945	945	945	945	945	945	945	945	945	945	946	946	945	946	945	944	944	944	943	943	942	946	944.6	24	
HOURLY MAX		948	948	948	948	947	948	948	948	948	948	948	949	949	949	949	949	949	949	949	949	949	949	949	949	949			
HOURLY AVG		937	937	937	937	937	937	937	937	937	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938			

STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

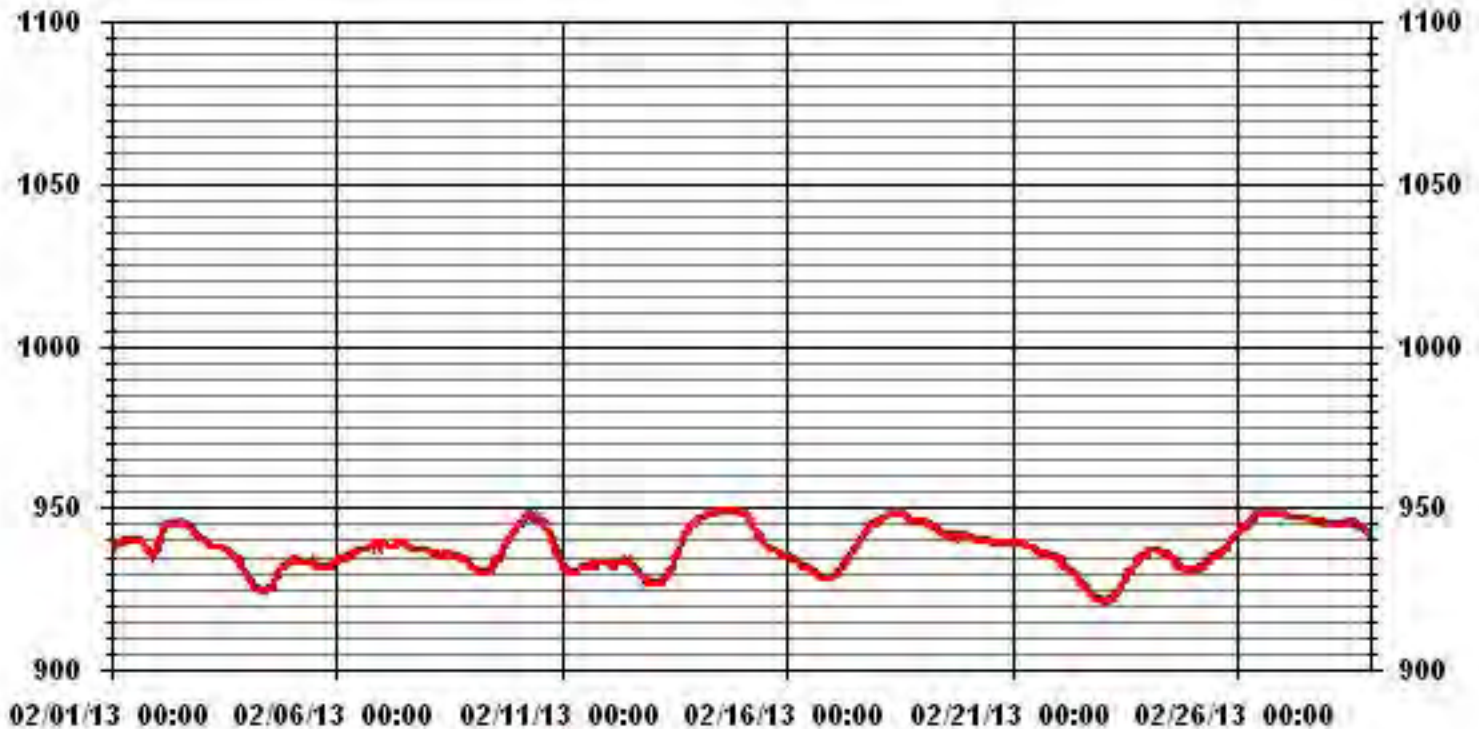
24 HOUR AVERAGES FOR FEBRUARY 2013



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	949 MB	@ HOUR(S)	VAR	ON DAY(S)	14,18
MAXIMUM 24-HR AVERAGE:	948.3 MB			ON DAY(S)	14
				VAR-VARIOUS	
CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:		672 HRS	
		AMD OPERATION UPTIME:		100.0 %	
STANDARD DEVIATION:	6.68	MONTHLY AVERAGE:		938 MB	

01 Hour Averages



Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

FEBRUARY 2013

WIND SPEED hourly averages (km/hr)

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.																						
DAY																																																	
1	0.3	1.4	2.9	2.8	3.2	3.5	1	1	1.2	2.8	3.8	4.9	5.2	4.5	5	3.6	6.5	5.8	5.6	4.7	4.7	4.1	5.7	6.5	2.5	24																							
2	10.6	13	10.3	7.3	6.9	6.5	7.1	4.4	4.6	5.1	4.7	4.9	5.1	4.4	4.4	3.7	2.6	0.7	2.2	3.6	4	5.4	5	5.2	13	3.7	24																						
3	5.4	5.8	5.7	6.9	7.1	6.9	7.6	6.8	6.3	6	7.5	6.2	5.8	5.4	3.4	2.2	2.6	3.3	4	3.5	3.4	3.2	4.2	4.9	7.6	4.8	24																						
4	3.1	3.6	3.2	3	3.1	2.5	2.5	1.3	2.6	0.7	1.4	1.1	1.4	3.8	9.8	10.1	10.5	7.7	6.1	5.3	7.1	5.8	4.7	3.3	10.5	2.7	24																						
5	0.6	1.6	3.7	3.9	3.4	2.6	3	4.3	3.6	0.2	1.2	1	5.9	5.6	5	5.6	5.8	5.6	6.1	6.9	6.8	7.4	7.3	6.5	7.4	2	24																						
6	5.9	6.4	7.3	6.8	4.8	5.5	4.9	6	4.7	3.8	7	5.8	6.1	5.7	5.9	5.8	6.7	5	3.8	3.7	6.1	1.5	3.1	4.3	7.3	4.3	24																						
7	4.3	3.2	3.4	2.8	6	4.9	2.9	4	3.8	3	2.6	1.9	1.1	1.4	4.5	4.6	3	3.9	2.1	0.9	1.5	2	2.5	2.2	6	1.9	24																						
8	4	2.9	3	2.1	4.5	2.9	2.8	2.9	3.5	4.2	3.3	4.4	4	5	6.4	5.5	6.1	5.4	5.9	5.3	5.4	6.3	5.7	6.7	6.7	4.5	24																						
9	7.6	9.1	7.4	5.8	4.9	6.8	5.4	3.8	3.6	8.5	10	9.1	8.8	9	9.1	8	7.4	9.6	13.5	12.7	9.7	9.7	9.5	10.2	13.5	4.7	24																						
10	10.5	7.1	6.6	6.7	4	4.3	3.2	1.9	1.5	1.5	3.7	4.6	6.5	6.6	8.1	9.9	8	7.9	8.6	8.2	7.6	9.3	9.8	11	11	2.8	24																						
11	9.4	5.4	8.4	6.9	5.5	6.5	4.6	3.7	3.9	5	7.8	9.4	9.2	8.3	9.7	8.5	7.8	3.8	4	4.7	4.9	3.9	5.3	5.5	9.7	5.3	24																						
12	6.8	7.1	5.4	7.2	6	7	7.8	6.7	7.5	9.7	7.8	6.8	5.2	6.2	5	6.7	3.9	3	4	4.9	5	4.4	4.3	3.4	9.7	5.1	24																						
13	4.2	4.1	2.4	3	2.7	2.9	4	5.5	4.7	5.5	9.6	14	15.1	10.7	9.4	7.3	7	8.2	8.6	6.9	7.4	6.4	3.5	3.6	15.1	4.5	24																						
14	3.8	3	1.4	2.6	6.3	7.2	5.1	2.9	4.4	5	5	4.8	6.1	6.2	5.9	5.1	4.3	2.3	1.5	1.3	2.3	1	1.3	1.4	7.2	2.2	24																						
15	2.9	3	4.9	5.4	3.8	4.2	6.5	7.7	8.2	6.7	8.3	7.8	6.2	5.7	5.3	5.3	5.4	7	5.1	4.6	5.7	4.7	3.4	5.1	8.3	5.5	24																						
16	4.4	4.7	4.7	4.2	5	4.1	5.5	6	4.9	4.3	5.9	5.9	7	9.2	10.2	5.9	5.4	6.9	4.5	4.6	4.2	4.5	7.1	5.6	10.2	4.6	24																						
17	5.4	7.2	8.6	8.2	8.5	7.9	8.4	9.4	7.2	11.7	10.6	10.9	13.4	11.8	12	11.5	11.1	12.9	10.6	9.9	11.8	9.1	7.4	6.3	13.4	9.4	24																						
18	6.5	6.1	5.9	4.9	5.8	4.5	3.9	5	8.3	10.3	9.6	9.9	8.4	9.4	8.3	9	7.9	7.6	6.7	7.4	9.2	11.2	11.3	8.3	11.3	6.9	24																						
19	8.1	8.5	8.6	9.8	8.8	6.9	6.6	6.6	7.4	9.5	10.8	11.7	10.7	9.4	10.1	14.2	13	10.9	9.7	10	8.6	8.4	7.5	8.2	14.2	8.7	24																						
20	6.9	6.7	6.8	6.5	5.8	6.3	4.9	5.3	5.3	6.4	5.6	6.3	6.8	5.7	6.4	7.6	7	6.3	6.6	6.3	5.3	6	5.6	5.3	7.6	6	24																						
21	6.3	7.6	6.9	6.7	6.9	6.7	7.8	7	7.8	7.2	5.3	7.7	6.4	7.5	7.3	5.9	6.9	7.8	8.4	7.6	7	7.9	6.5	5.9	8.4	6.8	24																						
22	6.6	5.8	6.4	6.2	6.3	6	6.4	6.4	6.3	6.8	7.4	5.3	6.7	7.4	6.6	7.1	6.4	5.9	5.2	5.6	6.2	9.3	6	4.8	9.3	5.5	24																						
23	4	4	4.3	2.6	4.5	1.5	0.8	1	1.1	1.2	3.6	7	6.1	7.2	7.8	9.1	11.8	8.9	8.8	8.5	9.4	8.2	7.3	7.6	11.8	4.1	24																						
24	7.5	7.3	6.3	3.7	4.2	5.3	7.5	7.6	3.1	5.5	6.8	9	8.9	8.3	9	6.6	9.4	8.8	9.4	9.5	8	3.7	3.9	5.4	9.5	6.1	24																						
25	5.9	5.5	3.9	2.1	2.1	1	4.9	2.6	0.9	3.5	1.5	2.5	6.4	8.5	8.3	7.4	8.4	5.8	4.9	4.2	5.6	6.3	5.5	5.5	8.5	3	24																						
26	6	4.3	2.9	1.1	1.5	1.6	1.5	1.3	0.7	1.5	3.8	4.5	5.1	5.4	6	6.1	6.9	5.4	3.4	3.7	4.8	7.8	5.7	4.7	7.8	2.5	24																						
27	5	5.1	4.6	3.6	4	4.6	3.9	5.3	4	5.5	6.9	7.6	7.6	9.7	11.7	10.5	8.6	7.9	6.3	7.1	9.3	7.3	7.3	6.8	11.7	5.9	24																						
28	6	6.1	5.8	6.3	5.9	7	7.6	5.2	7.3	6.6	5.9	6.2	6.8	7.8	7.2	7.6	8.7	6.6	5.6	6.7	4.1	5.3	4.4	4.3	8.7	6	24																						
HOURLY MAX	10.6	13.0	10.3	9.8	8.8	7.9	8.4	9.4	8.3	11.7	10.8	14.0	15.1	11.8	12.0	14.2	13.0	12.9	13.5	12.7	11.8	11.2	11.3	11.0																									
HOURLY AVG	5.6	5.6	5.4	5.0	5.1	4.9	4.9	4.7	4.6	5.3	6.0	6.5	6.9	7.0	7.4	7.2	7.1	6.5	6.1	6.0	6.3	6.1	5.7	5.6																									

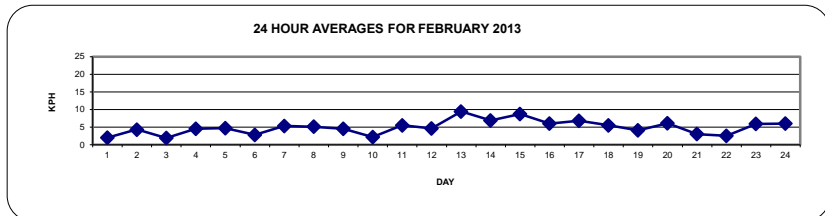
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

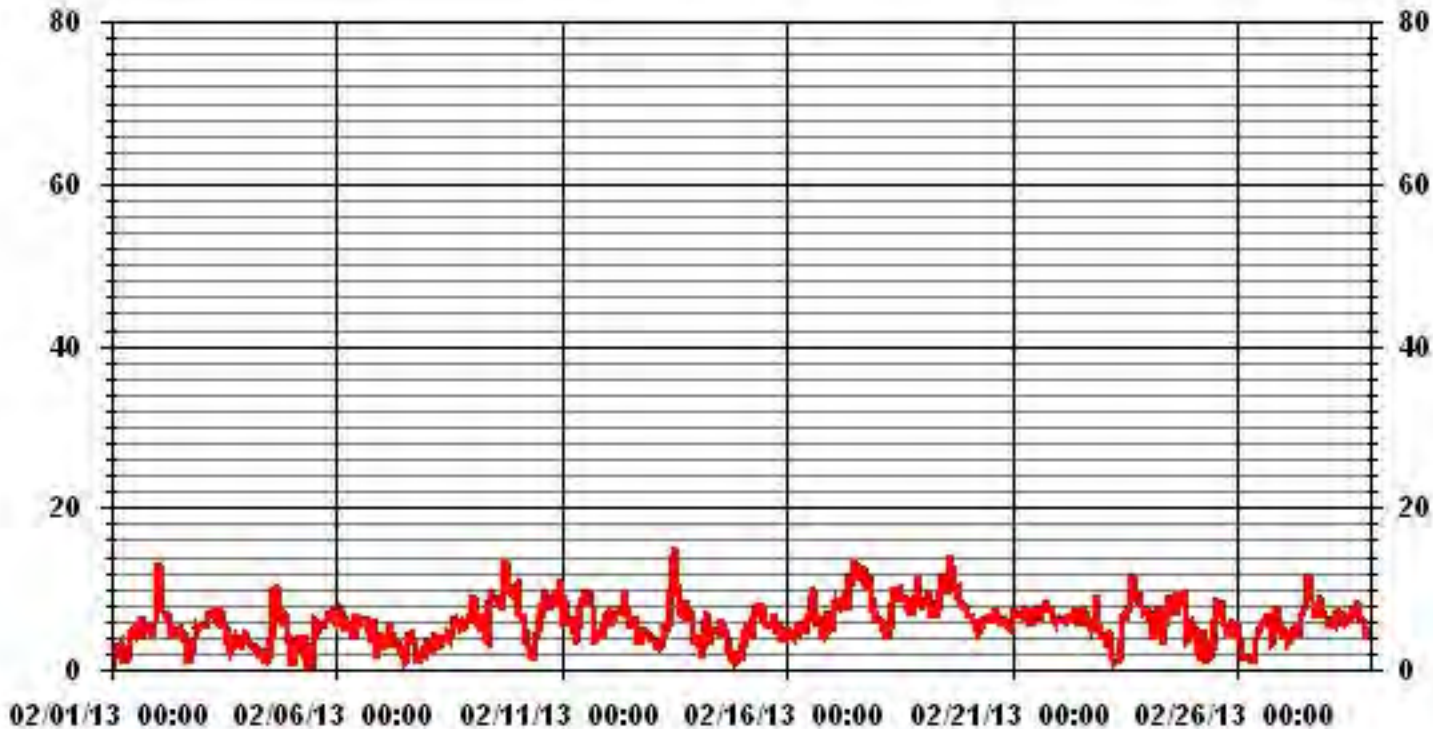
LAST CALIBRATION: December 20, 2011

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	15.1	KPH	@ HOUR(S)	12	ON DAY(S)	13
MAXIMUM 24-HR AVERAGE:	9.4	KPH			ON DAY(S)	17
CALMS (≤ 1 KPH)	1.01	%	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	2.56		MONTHLY AVERAGE:	5.89	KPH	



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	
DAY																										
1	21.6	48.3	34.9	39.2	13.4	16.2	39.9	44	17.3	15.7	15.3	13	12.3	12	10.4	11.7	12.8	13.6	15.7	13.2	15.2	15.6	15.6	27	48.3	
2	44.2	51.1	40.9	27.8	30	30.2	31.2	19.2	20.6	23.2	19.4	17.3	17.5	17.7	15.7	15.1	13.5	13	16.2	29.5	15.5	19.2	20.6	20.6	51.1	
3	18.4	18.4	19.5	20.3	21	20.6	21.9	23.8	20.6	19.8	24.7	20.6	20.6	17.3	12.9	27.1	57.2	16.4	13.5	25.2	16.2	17.7	17.3	18.8	57.2	
4	15.6	15.1	26.9	17	12.4	42.6	22.6	17.9	30.9	10.7	12.9	10	9.2	25.1	37.4	37.2	39.4	32.2	19.9	21.4	25.6	21.5	17.5	17	42.6	
5	10.9	10	11.3	8.7	7.4	10.9	12	10.2	11.1	10.2	11.3	11.5	18.4	18.7	17.1	21.4	19	18.1	19.2	20.3	21.6	17.9	18.9	17.9	21.6	
6	18.8	21.2	16.8	15.8	17.3	22.3	16.8	17.9	17.7	17.5	23.6	21.2	20.1	22.1	21	22.1	20.6	20.6	19	18.6	19.3	13.5	14.4	12.4	23.6	
7	11.3	15.3	13.7	10.5	14.2	13.7	8.3	10.3	10.5	8.5	8.3	11.6	12	9.8	10.9	11.4	13.5	17	11.1	21.4	16.4	17.9	15.3	19.7	21.4	
8	10.2	9.8	45.7	15.1	11.8	17	13.7	13.8	12.9	12.4	12.4	12.2	11.8	12.1	13.7	12.6	15.5	10.7	13.1	13.3	10.7	15.1	13.4	15.3	45.7	
9	18.1	19	15.5	16.6	12.2	15	16.5	13.5	15.9	25.1	44.9	33.7	33.9	31.9	42.7	31.9	27.8	34.9	49.5	56.3	30.4	30.2	32.6	35.2	56.3	
10	31.1	25.7	21.2	21.6	17.7	16.4	12.2	16.6	16.6	11.1	14.6	12.9	17.3	14.5	16.4	20.8	27.5	18.1	19	18.8	16.6	32.4	20.3	30.6	32.4	
11	23.4	17.5	19.9	20.6	13.7	14.6	14.8	17.5	13.7	18.8	25.6	29.9	30.2	28.6	32.4	29.7	29.3	13.5	13.8	17	19.2	13.7	17.2	23.8	32.4	
12	22.7	27.3	21.4	23.6	17.7	19.5	26.3	23.6	33.7	28.4	23.8	24.3	16.1	23.8	17.2	25.8	20.5	14.2	13.4	12.1	10.5	10.5	12.4	8	33.7	
13	12.4	11.3	8.3	8.3	8.3	14.5	14.6	16.6	22.3	20.1	28	32.4	39.6	27.8	23.2	22.3	23.1	36.4	34.4	23.6	26.3	22.7	15.7	17.7	39.6	
14	13.4	18.6	12.9	18.8	20.6	29	23	14	13.3	11.6	11.1	14.2	24.9	22.1	21.6	15.9	13.7	10.5	12.7	47.5	15.1	18.6	9.4	18.2	47.5	
15	10.8	12	10.9	12.2	10.7	14.7	14.9	18.6	18	14.2	21.1	19.4	15.6	15.5	16.4	13.5	12.6	13.1	11.6	11.3	12.2	11.1	12.4	11.9	21.1	
16	10.2	9.9	11.7	10.8	12.5	11.7	13.3	13.6	12.4	11.2	15.5	15.9	29.5	32.6	34.2	21.9	25.4	21	15.3	16.4	15.3	19.3	21.4	19.2	34.2	
17	20	25.6	39.7	28.7	26.7	38.7	23.4	21.7	18.2	32	29	30	32.9	33	29.1	24.8	29.6	26.6	23.5	25.2	27.8	21.6	18.3	20.7	39.7	
18	20.5	19.4	19.5	17.2	18	25.4	27.2	17.4	23.3	26.8	27.7	29.4	22.7	25.9	24.8	26.5	24.5	24.9	21.8	19.2	23.2	29.3	28.2	22.8	29.4	
19	24.7	24.7	34.4	27	29.1	25.6	25	23	27.3	32.3	37.9	33.3	35	31.5	35.2	42.3	37	33.4	25.8	28.4	22.3	22.7	22.7	19.7	42.3	
20	16.6	19.9	17.7	17.9	16.8	14.9	13.5	14.6	16.6	15	15	14.6	15	18.6	19	19.2	19	16.6	17.5	15.5	14.6	15	15	13.2	19.9	
21	19.4	17.9	16.1	18.5	17.8	19.3	22.4	17.4	19.4	19.2	17.1	20.5	16.8	21.4	22.9	19.6	21.7	22.4	24.1	21.2	18.1	20.7	18.2	15	24.1	
22	17.5	14.7	15.7	15.5	17.7	16.6	17.6	19.7	16.1	17	19.5	15.6	21.9	19.2	20.3	21	21.9	16.3	17.7	21	24.2	30.8	21.3	17.3	30.8	
23	15.7	19.5	14.8	14	27.1	17.9	29.7	36.3	16.3	10.7	18.1	18.8	22.2	23.2	26	32.8	52.3	27	27.9	29.9	31.2	27	28.2	28.6	52.3	
24	25.3	23.3	20.8	13.5	8.2	9.6	17.3	17.1	13.5	13.9	15.1	18.8	17.8	15.7	20.7	13.5	19.8	20	24.1	19	18.2	11.8	11.8	14.2	25.3	
25	12.4	13.3	13.1	12.1	14	12.5	12.7	11.6	9.9	9.9	11.2	11.1	13.9	18.5	20.8	19.1	20.7	13.9	12.4	11.7	12.6	12.6	16.4	14.4	20.8	
26	12.9	13.9	12.6	9.5	10.9	11.1	16.1	9.7	15.9	15.6	14.5	14.6	14.5	14.2	15.9	14.6	15.7	12.5	9.1	7.4	14.4	17.8	21.9	14.2	21.9	
27	11.3	12.2	13.3	17.3	14.9	19.5	12.8	15.4	17.7	16.6	18.8	24.7	20.7	31.5	29.5	28.2	23	19.4	15.3	16.9	27.3	22.3	18.8	19.2	31.5	
28	14.8	17.5	15.7	13.1	14.6	17.7	15.1	13.3	17.3	18	13.8	15	16.9	24.1	16.2	22.1	19.7	16.8	12.4	15.1	13.6	14.1	13.5	14.8	24.1	
PEAK	44.2	51.1	45.7	39.2	30.0	42.6	39.9	44.0	33.7	32.3	44.9	33.7	39.6	33.0	42.7	42.3	57.2	36.4	49.5	56.3	31.2	32.4	32.6	35.2		

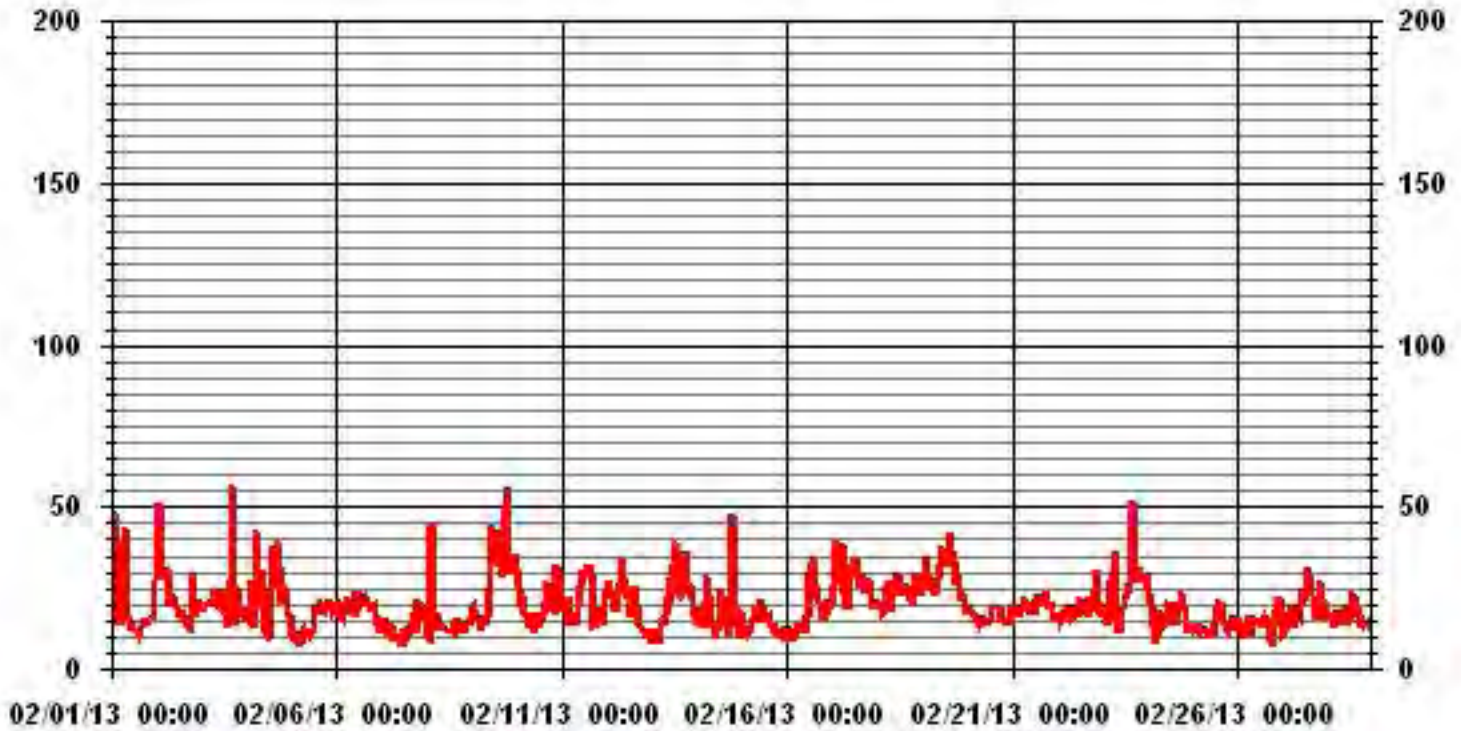
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	57.2	KPH	@ HOUR(S)	16
			ON DAY(S)	3

01 Hour Averages



LICA30
WSP / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 6.0	.89	2.08	3.12	3.27	2.97	2.23	2.82	3.72	3.27	10.11	6.69	1.93	3.72	1.78	1.33	2.52	52.52
< 12.0	2.82	2.97	1.63	1.33	1.78	3.72	6.25	4.46	3.27	7.29	.29	.00	2.08	4.61	1.48	1.93	45.98
< 20.0	.29	.74	.00	.00	.00	.00	.14	.14	.00	.00	.00	.00	.00	.00	.00	.14	1.48
< 29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	4.01	5.80	4.76	4.61	4.76	5.95	9.22	8.33	6.54	17.41	6.99	1.93	5.80	6.39	2.82	4.61	

Calm : .00 %

Total # Operational Hours : 672

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 6.0	6	14	21	22	20	15	19	25	22	68	45	13	25	12	9	17	353
< 12.0	19	20	11	9	12	25	42	30	22	49	2		14	31	10	13	309
< 20.0	2	5					1	1								1	10
< 29.0																	
< 39.0																	
>= 39.0																	
Totals	27	39	32	31	32	40	62	56	44	117	47	13	39	43	19	31	

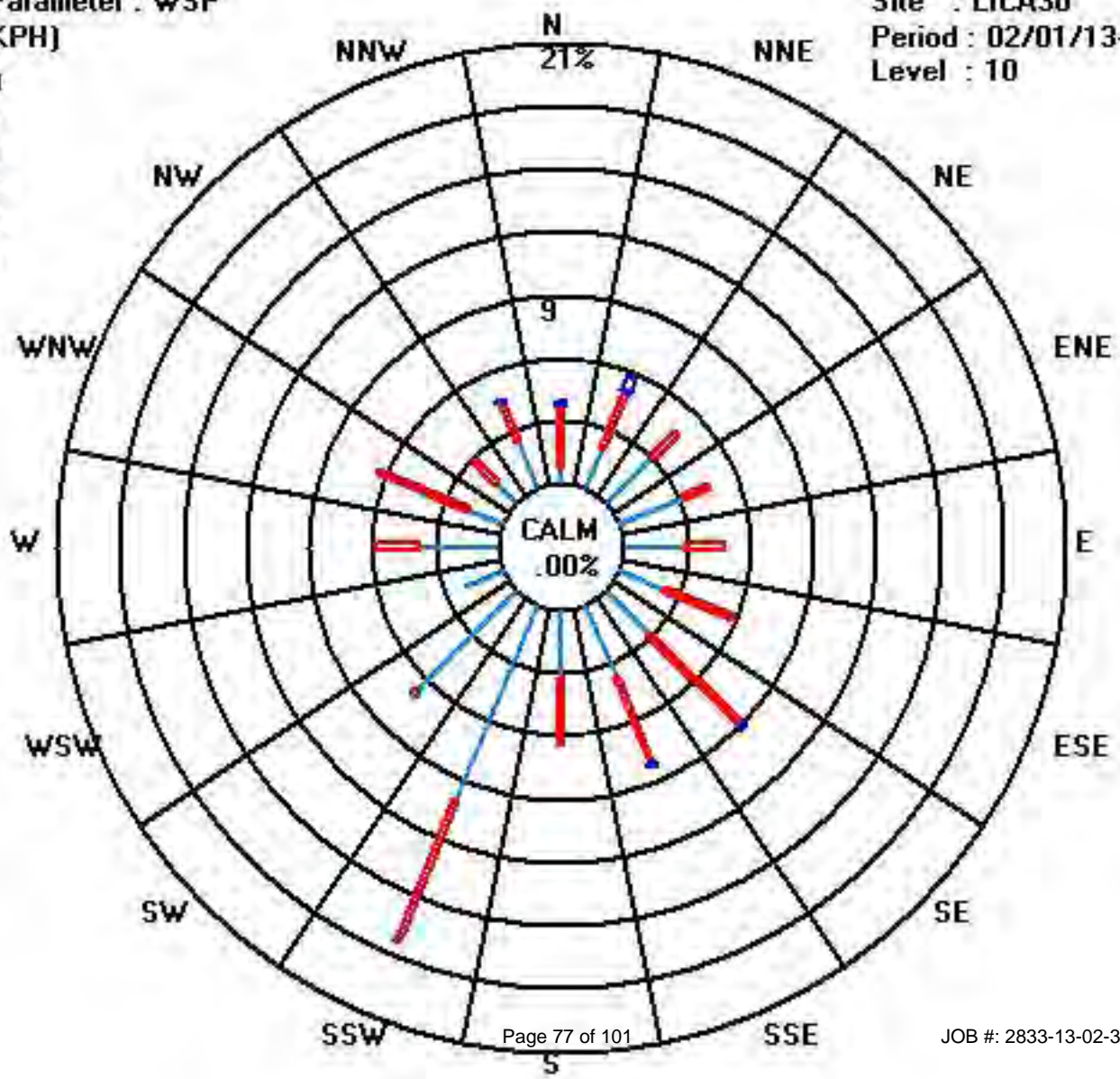
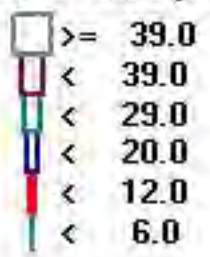
Calm : .00 %

Total # Operational Hours : 672

Class Limits (KPH)

Period : 02/01/13-02/28/13

Level : 10



Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -COLD LAKE- MASKWA

FEBRUARY 2013

WIND DIRECTION hourly averages in degrees

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	AVG.	QUADRANT	RDGS.		
DAY																												
1	261	347	331	2	353	32	265	254	187	209	204	206	193	209	194	200	199	202	208	214	227	231	232	276	221	SW	24	
2	324	341	351	354	336	308	326	314	308	287	298	308	301	278	280	280	276	15	52	69	76	79	78	85	333	NNW	24	
3	97	73	75	77	80	79	71	79	90	78	82	105	101	121	153	138	97	113	133	139	93	88	107	112	93	E	24	
4	123	104	100	66	34	43	41	44	64	46	27	239	208	271	291	313	323	328	327	316	321	322	331	320	332	NNW	24	
5	204	182	213	211	209	205	211	211	217	183	251	255	38	52	58	74	64	71	70	53	55	45	45	46	69	ENE	24	
6	49	50	39	40	52	62	56	57	61	81	87	102	96	89	108	90	107	125	112	130	142	172	164	164	86	E	24	
7	178	179	176	155	187	196	181	177	170	166	157	166	169	158	31	40	62	99	110	83	104	199	209	203	158	SSE	24	
8	205	211	198	219	203	209	214	208	213	221	219	202	217	215	201	212	212	210	210	209	208	208	209	204	209	SSW	24	
9	205	203	206	211	219	210	222	233	262	298	318	320	333	332	347	335	329	357	356	358	358	1	356	2	322	NW	24	
10	3	352	348	341	346	348	352	21	18	55	146	198	194	189	195	196	198	200	195	193	197	190	193	192	205	SSW	24	
11	194	209	203	211	214	214	222	259	267	276	283	286	282	291	286	257	275	267	251	228	208	196	182	188	195	268	W	24
12	280	281	276	281	285	284	281	276	282	286	283	282	291	286	257	275	266	265	274	265	275	274	288	307	342	254	WSW	24
13	207	210	222	225	232	270	286	302	299	307	24	27	30	19	19	7	356	360	2	3	347	345	348	323	354	N	24	
14	331	327	291	224	286	287	297	257	219	212	204	217	289	323	339	347	11	27	95	202	268	251	200	198	285	WNW	24	
15	213	208	205	212	209	205	204	203	208	204	201	200	205	224	226	215	215	197	210	220	204	217	231	213	209	SSW	24	
16	206	202	214	214	217	222	221	223	225	217	217	279	287	277	266	265	274	265	275	274	288	307	342	254	254	WSW	24	
17	344	348	359	4	2	356	16	25	19	21	15	11	17	14	18	17	21	27	20	17	18	27	42	61	16	NNE	24	
18	59	66	53	80	73	104	98	131	133	140	141	157	148	131	115	116	111	104	113	132	135	135	133	122	120	ESE	24	
19	113	116	115	117	113	90	70	79	94	116	115	112	115	119	124	151	144	148	146	141	146	142	145	143	124	ESE	24	
20	141	143	143	145	146	141	151	142	145	146	158	157	182	163	147	154	158	158	165	167	169	172	165	160	155	SSE	24	
21	168	158	164	165	171	167	159	154	144	138	137	144	131	106	112	120	138	137	146	146	143	142	142	139	145	SE	24	
22	132	147	143	151	159	167	155	156	163	151	141	148	133	132	128	112	92	52	61	87	106	114	93	72	127	SE	24	
23	63	72	64	342	87	19	345	170	222	340	247	289	277	289	290	283	298	287	283	302	297	292	274	279	294	WNW	24	
24	284	283	273	242	219	208	204	207	211	200	195	193	193	202	199	202	196	195	195	197	199	215	212	218	210	SSW	24	
25	208	210	215	290	298	348	18	171	356	27	1	330	26	20	17	19	23	20	18	17	20	35	51	50	19	NNE	24	
26	39	43	77	40	97	154	146	227	321	36	50	135	156	162	164	188	209	204	171	148	160	172	170	168	155	SSE	24	
27	159	148	128	83	69	117	133	151	142	144	137	113	121	126	133	147	181	200	188	180	172	161	153	169	147	SE	24	
28	185	166	173	190	193	187	190	169	193	164	190	181	188	197	183	175	191	198	193	197	175	155	134	105	182	S	24	
HOURLY AVG	344	352	359	354	353	356	352	314	356	340	318	330	333	332	347	347	356	360	356	358	358	345	356	342				

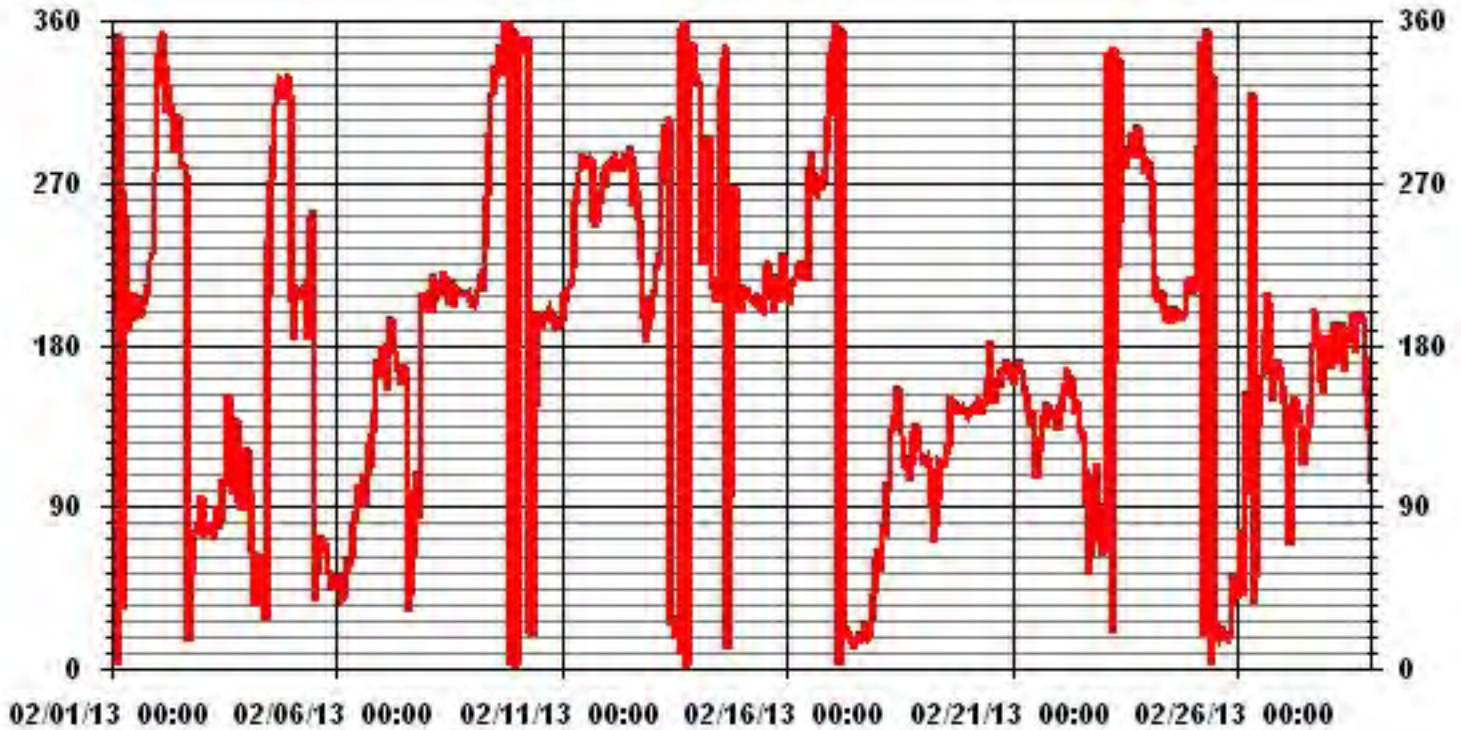
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

LAST CALIBRATION:	December 20, 2011
DECLINATION:	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS
STANDARD DEVIATION:	91.16		AMD OPERATION UPTIME:	100.0	%
			MONTHLY AVERAGE:	169	DEG

01 Hour Averages



Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

FEBRUARY 2013

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00
DAY																								
1	57	45	37	27	31	18	46	47	46	20	24	27	24	31	19	22	17	18	22	23	26	27	25	24
2	32	34	29	27	33	32	35	33	36	31	35	32	31	32	33	35	31	69	24	18	22	23	25	25
3	23	24	24	22	23	24	23	27	24	29	25	25	30	27	37	46	38	28	25	32	27	24	25	23
4	30	26	32	27	14	23	22	35	28	71	53	53	53	31	25	31	34	33	32	31	32	35	37	41
5	32	23	14	13	13	13	13	14	17	56	42	54	26	28	29	24	24	24	23	21	23	20	22	21
6	21	21	18	17	22	26	22	21	24	30	25	29	25	26	25	25	22	28	40	30	34	73	40	22
7	21	34	37	20	19	46	29	22	24	30	43	46	80	70	14	18	19	13	22	47	37	29	23	29
8	17	18	26	42	22	31	47	35	32	25	26	22	23	17	15	18	14	11	11	13	11	13	14	14
9	14	13	14	19	20	15	19	27	32	26	33	35	35	34	32	33	36	26	25	25	26	24	26	25
10	26	27	29	31	33	33	30	49	42	45	25	24	21	22	18	17	17	17	16	17	17	18	17	17
11	18	24	16	19	20	16	15	26	28	28	25	24	27	28	25	24	23	28	28	32	31	32	27	32
12	24	24	26	22	22	21	23	26	24	24	25	28	33	33	39	36	41	35	25	14	14	19	20	21
13	18	17	28	23	28	39	36	23	31	34	24	13	14	17	18	20	31	24	23	22	29	31	28	36
14	36	36	60	30	32	28	33	36	22	19	18	26	32	35	34	31	23	19	28	46	30	51	25	44
15	18	21	14	16	22	39	15	14	16	16	15	17	22	25	29	20	17	8	13	14	12	16	23	13
16	16	14	15	11	13	15	15	15	18	18	17	21	33	26	28	38	36	28	28	27	32	30	30	39
17	33	31	24	23	22	27	17	14	19	16	24	21	20	20	15	18	18	14	17	19	16	19	20	25
18	25	24	30	34	29	40	39	30	24	26	27	27	29	29	28	23	23	22	21	20	21	20	20	22
19	25	24	27	25	27	27	24	28	29	28	27	26	26	27	25	23	21	23	22	21	24	22	24	20
20	22	23	26	22	22	21	24	22	22	22	25	23	22	27	27	21	23	23	23	25	23	22	23	21
21	22	20	19	22	23	21	23	22	24	25	36	26	29	23	24	26	25	24	22	24	24	23	23	25
22	22	23	24	26	26	25	22	24	24	27	30	40	33	27	29	26	26	17	20	27	32	24	28	26
23	22	27	25	35	20	31	45	50	44	63	41	30	33	28	25	30	27	28	26	32	27	29	30	31
24	29	30	28	27	15	12	12	17	40	21	19	17	18	17	21	19	16	16	15	14	20	32	30	18
25	17	21	35	37	41	38	27	39	50	23	56	41	18	18	19	18	15	14	12	13	13	13	20	19
26	14	19	22	50	49	36	57	39	55	58	26	40	41	35	31	29	20	17	19	15	21	18	20	22
27	17	14	17	23	18	24	31	28	34	29	27	25	30	27	25	23	22	19	20	22	21	23	21	22
28	21	24	23	19	22	21	17	24	24	28	26	25	25	26	23	30	19	16	15	16	24	21	22	17

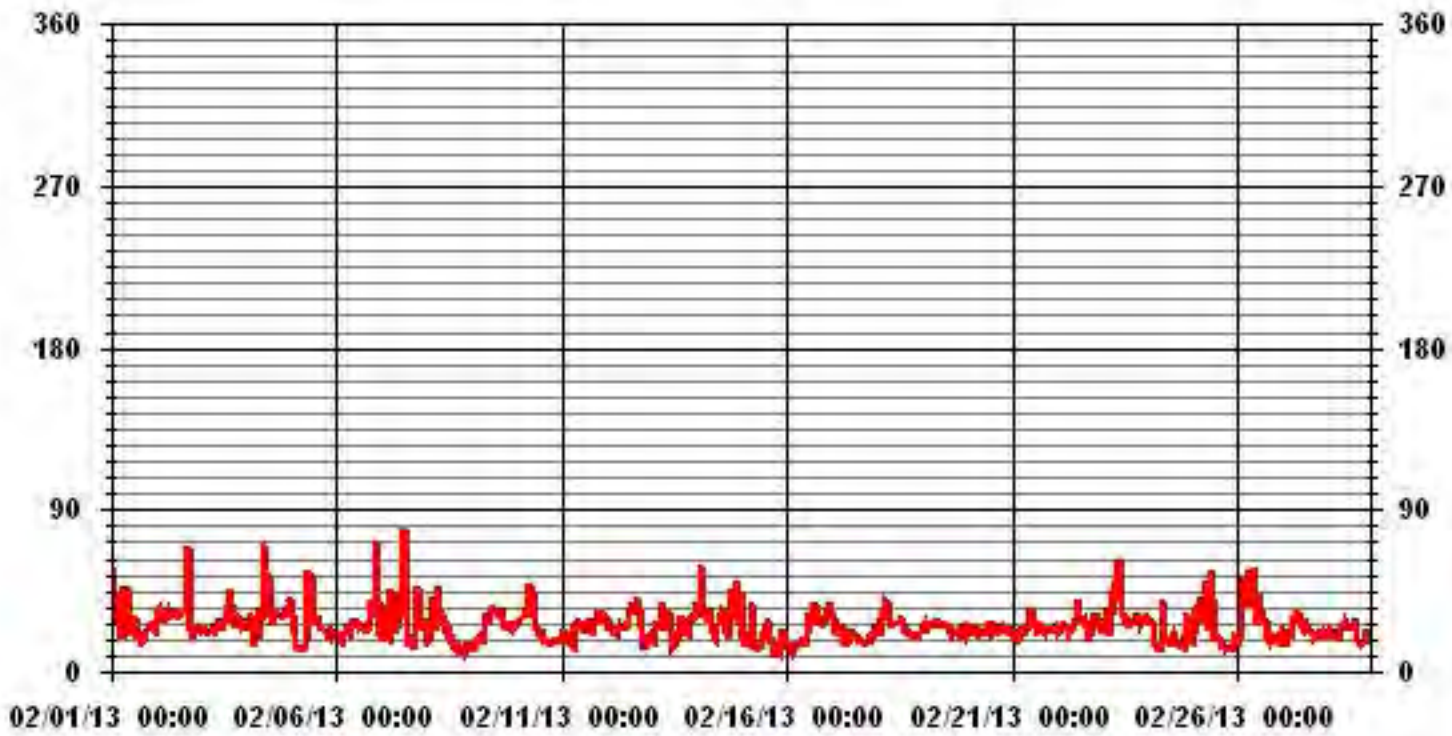
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

LAST CALIBRATION: December 20, 2011

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 672 HRS

01 Hour Averages



— LICA30 STDWDIR DEG

Calibration Reports

Sulphur Dioxide

SO2 Calibration Report

Station Information

Calibration Date	February 21, 2013	Previous Calibration	January 3, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	07:30	End Time (MST)	09:40
Reason:	As Found		
Barometric Pressure	27.81 inHg	Station Temperature	17 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	LL42502
		Cal Gas Expiry date	December 29, 2013
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	EnviroNics 6100	S/N :	4760	Method:	Dilution
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 / Box Temp	565 ccm	31 Deg C	565 ccm	31 Deg C	
HVPS / Lamp Setting	515	2200	515	2200	
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	45.0 Deg C	
Offset / Slope	66.6	1.01	66.6	1.01	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	2	N/A
	No Zero Adj.			
4920	80.0	794	800	0.9920
Sum of Least Squares New Correction Factor				0.9920

IZS Calibration Data

Before Calibration		After Calibration	
Auto Zero	1.3	Auto Zero	0.0
Auto Span	370.0	Auto Span	370.0
Sample Lines Connected		Sample Lines Connected	NO

Percent Change

Previous Month's Calibration Correction Factor:	0.9935
Current Correction Factor Before Span Adjust:	0.9920
Percent Change:	0.1%

Notes:

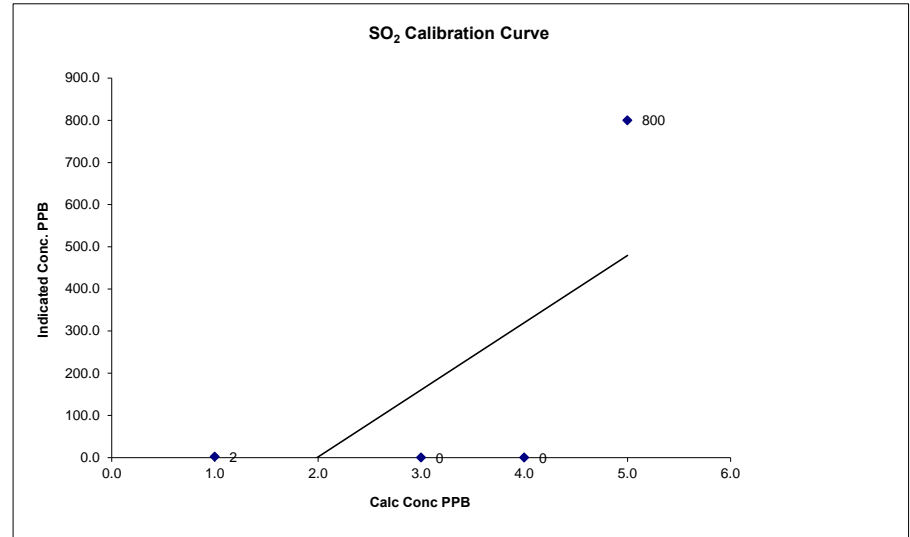
N/A : Not applicable

Wrong AF point was put in (400ppb), corrected the point to 800 ppb after 20 mins.
After A/F points, calibrated and adjusted the analog output.

SO₂ Calibration Curve

Calibration Date	February 21, 2013
Company	Lakeland Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	07:30
End Time (MST)	09:40

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept (≥ 0.995 (0.85 to 1.15) ($\pm 3\%$ F.S.))	
0	2	n/a		1.000000
	0	#VALUE!		
	0	#VALUE!		1.005544
794	800	0.9920		2.000000



Notes:

Calibration Performed by: Waseem Ahmed / Limin Li

SO2 Calibration Report

Station Information

Calibration Date	February 21, 2013	Previous Calibration	January 3, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	10:50	End Time (MST)	13:45
Reason:	Post Repair Calibration		
Barometric Pressure	27.81 inHg	Station Temperature	24 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	LL42502
DAS Output Voltage	0 - 1 Volts	Cal Gas Expiry date	December 29, 2013
		Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	EnviroNics 6100	S/N :	4760	Method:	Dilution
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 / Box Temp	565 ccm	31 Deg C		565 ccm	31 Deg C		
HVPS / Lamp Setting	515	2200		515	2200		
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	45.0 Deg C		
Offset / Slope	66.6	1.01		66.6	1.01		

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	2	N/A
	No Zero Adj.			
4920	80.0	794	794	1.0000
	No Span Adj.			
4960	40.0	397	392	1.0122
4980	20.0	198	197	1.0071
4995	0	0	0	N/A
		Sum of Least Squares		1.0023
		New Correction Factor		1.0000

IZS Calibration Data

Before Calibration		After Calibration	
Auto Zero	1.3		0.0
Auto Span	370.0		370.0
Sample Lines Connected			YES

Percent Change

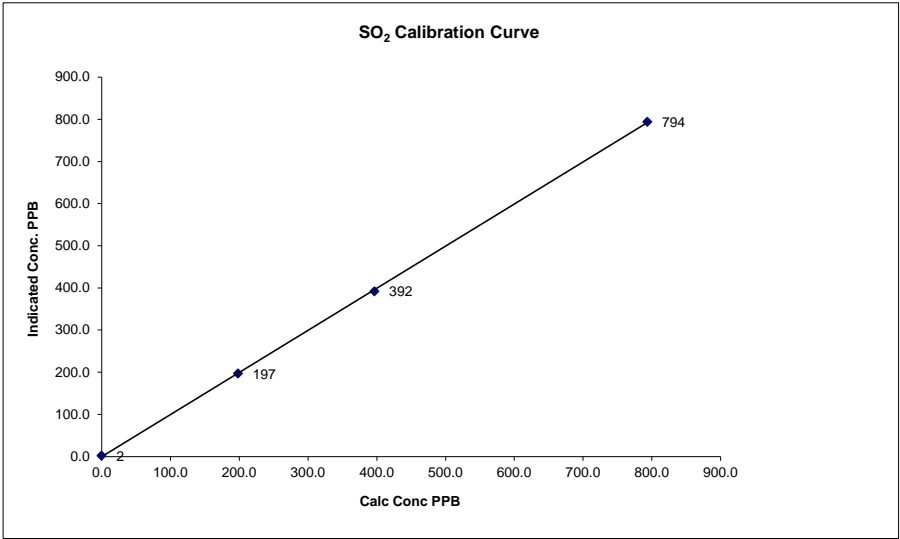
Previous Month's Calibration Correction Factor:	0.9935
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	-0.7%

Notes: **N/A : Not applicable**

SO2 Calibration Curve

Calibration Date	February 21, 2013
Company	Lakeland Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	10:50
End Time (MST)	13:45

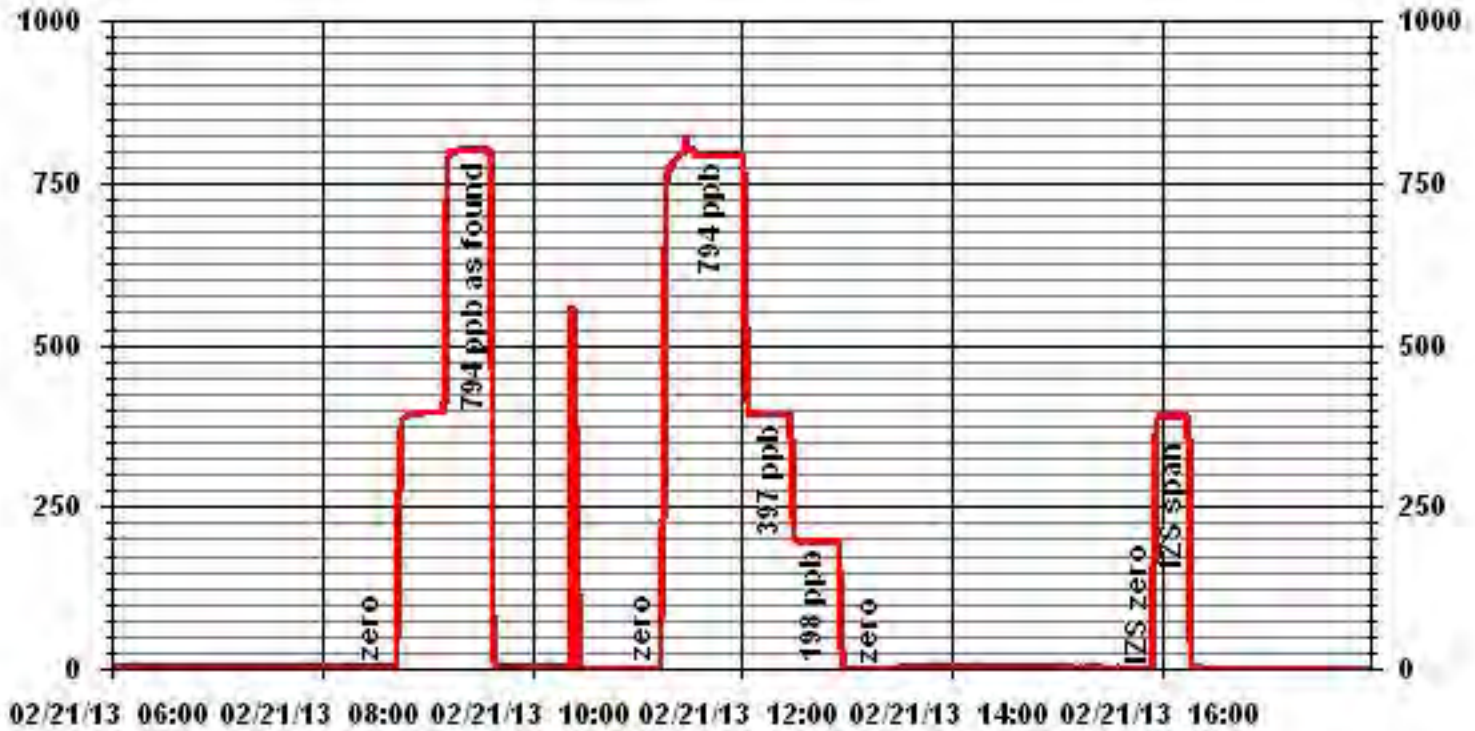
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	2	n/a		0.999928
198	197	1.0071		0.998416
397	392	1.0122		-0.400000
794	794	0.9995		



Notes:

Calibration Performed by: Waseem Ahmed / Limin Li

01 Minute Averages



SO2 Calibration Report

Station Information

Calibration Date	February 27, 2013	Previous Calibration	January 3, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	14:25	End Time (MST)	17:45
Reason:	As Found		
Barometric Pressure	28.01 inHg	Station Temperature	20 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	LL42502
DAS Output Voltage	0 - 1 Volts	Cal Gas Expiry date	December 29, 2013
		Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	EnviroNics 6100	S/N :	4760	Method:	Dilution
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 / Box Temp	362 ccm, 29 Deg C	593 ccm, 30.6 Deg C	
HVPS / Lamp Setting	515, 2193	515, 2190	
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, 45.0 Deg C	
Offset / Slope	67.5, 0.998	67.5, 0.998	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4993	0	0	-2	N/A
	No Zero Adj.			
4914	79.9	794	780	1.0174
Sum of Least Squares New Correction Factor				1.0174

IZS Calibration Data

Before Calibration		After Calibration	
Auto Zero	-1.7		0.3
Auto Span	569.3		358.1
Sample Lines Connected			YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0174
Percent Change:	-1.7%

Notes: N/A : Not applicable

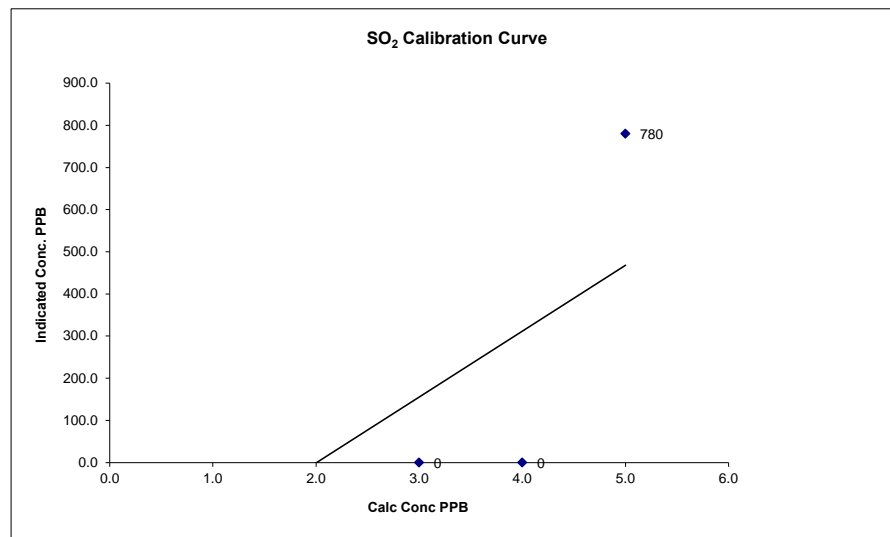
Following A/F, rebuilt exhaust pump. Ran a daily cal check after.

Calibration Performed by: Waseem Ahmed / Limin Li

SO₂ Calibration Curve

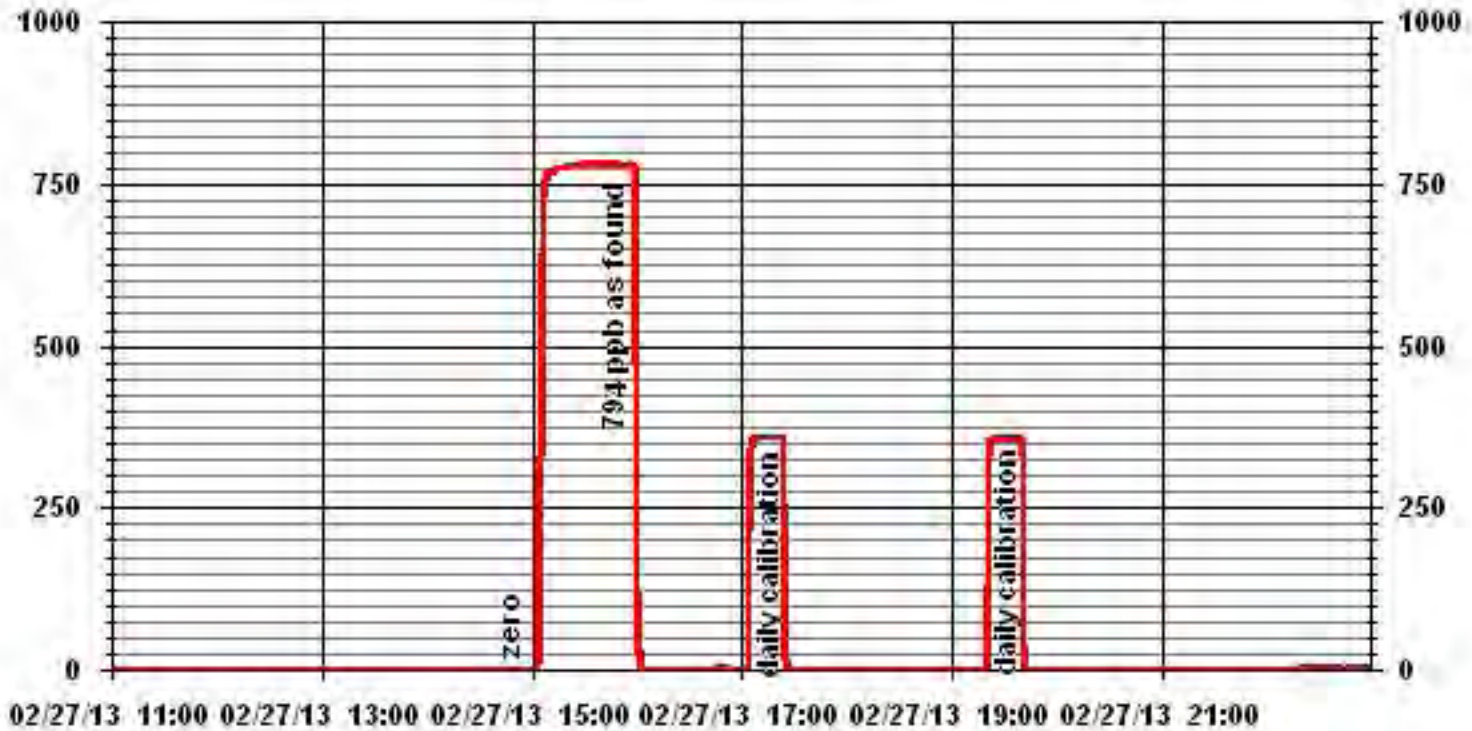
Calibration Date	February 27, 2013
Company	Lakeland Industry & Community Association
Plant / Location	Cold Lake - Maskwa
Start Time (MST)	14:25
End Time (MST)	17:45

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	-2	n/a		1.000000
794	780	1.0174		0.985413



Notes:

01 Minute Averages



— LICA30 SO2_ PPB

Hydrogen Sulphide

H2S Calibration Report

Station Information

Calibration Date	February 21, 2013	Previous Calibration	January 3, 2013
Company	Lakelnad Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	07:45	End Time (MST)	11:35
Reason:	Monthly Calibration		
Barometric Pressure	27.81 inHg	Station Temperature	17.2 Deg C
Cal Gas	10 ppm	Gas Cyl. #	LL42648
		Cal Gas Expiry date	December 27, 2012
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	API 101A	S/N :	324	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	NA		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Chart Recorder Make / Model:	Not in use	S/N:	S/N:	NA	
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

		Before Calibration		After Calibration	
Concentration Range		0 - 100 ppb			
Sample Flow / Box Temp	600 ccm	31.4 Deg C		605 ccm	31.8 Deg C
HVPS / Lamp Setting	634	4710		634	4710
PMT / RxCell Temp	6.7 Deg C	49.5 Deg C		6.7 Deg C	51.4 Deg C
Converter / IZS Temp	323.3 Deg C	45 Deg C		323.3 Deg C	45.3 Deg C
Offset / Slope	45.2	0.938		45.2	0.976

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	NA
	No Zero Adj.			
4960	40.0	80	76	1.0526
4960	40.0	80	80	1.0000
4980	20.0	40	40	1.0000
4988	12.0	24	24	1.0000
5000	0	0	0	NA
Sum of Least Squares				1.0000
New Correction Factor				1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.2	0.0
Auto Span	49.6	49.6
Sample Lines Connected		YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0526
Percent Change:	-5.0%

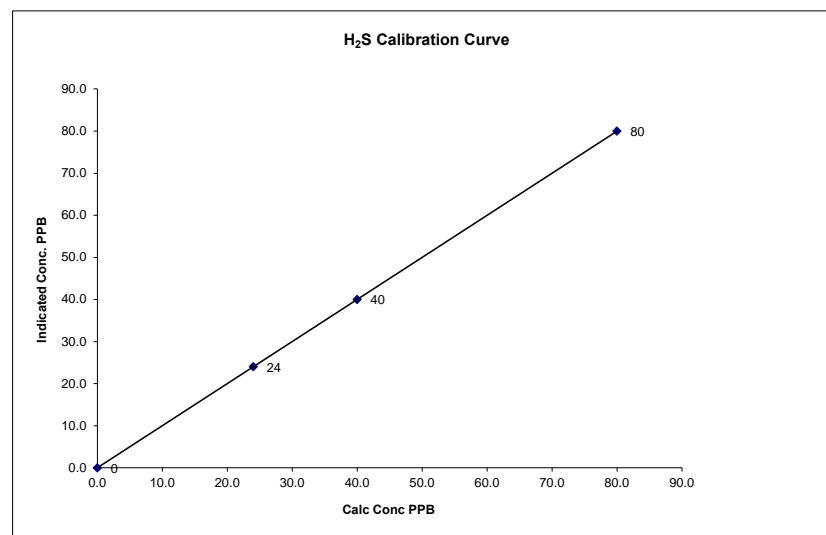
Notes:	NA : Not Applicable

Calibration Performed by: Waseem Ahmed / Limin Li

H₂S Calibration Curve

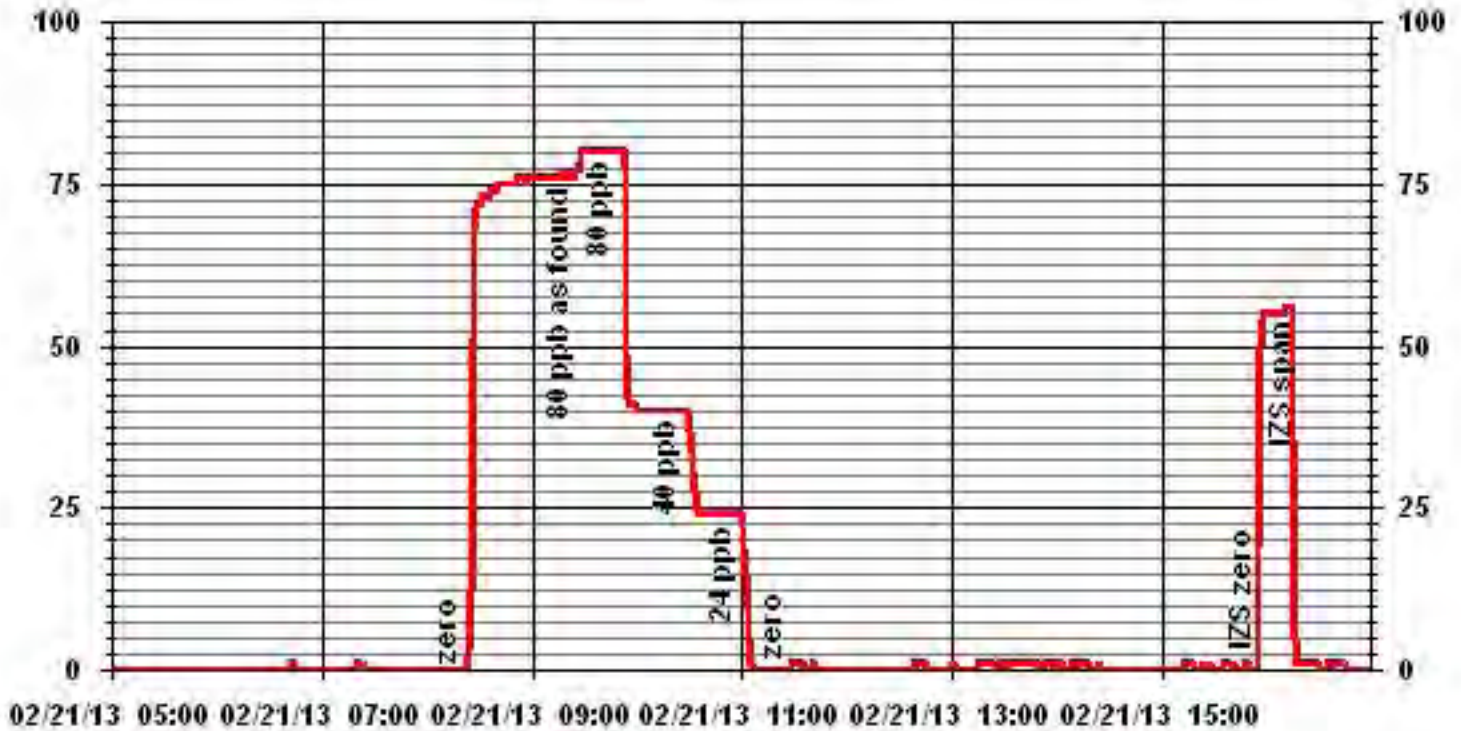
Calibration Date	February 21, 2013		
Company	Lakelnad Industry & Community Association		
Plant / Location	Cold Lake - Maskwa		
Start Time (MST)	07:45	End Time (MST)	11:35

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	1.000000
0	0		Intercept	(± 3% F.S.)	0.000000
24	24	1.0000			
40	40	1.0000			
80	80	1.0000			



Notes:

01 Minute Averages



Total Hydrocarbons

THC Calibration Report

Station Information			
Calibration Date:	February 21, 2013	Previous Calibration	January 3, 2013
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location:	Maskwa		
Start Time (MST)	11:40	End Time (MST)	15:00
Reason:	Monthly Calibration		
Barometric Pressure:	- mmHg	Station Temperature:	- Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	CH4 600 PPM	C3H8 204 PPM	
	TOTAL CH4 1161.0 PPM	Gas Cyl. #	LL155310
		Cal Gas Expiry Date:	September 9, 2013
DAS make & Model:	ESC 8832	S/N :	AO 791
Chart Recorder:	NA	S/N:	NA
Output Voltage Range:	0 - 1 VDC	Chart Speed:	NA mm/hr

Analyzer Information

Make / Model	Thermo 51C-LT	S/N :	436609738	Method	Flame Ionization
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Analyzer Settings

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

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2000	0.0	0.0	0.0	NA
	No Zero Adj.			
2000	74.0	41.4	41.2	1.0054
	No Span Adj.			
2000	37.0	21.1	20.9	1.0090
2000	20.0	11.5	11.5	1.0000
2000	0.0	0.0	0.0	NA
New Correction Factor:				1.0054

Percent Change

Previous Calibration Correction Factor:	0.9958
Current Correction Factor Before Span Adjust:	1.0054
Percent Change:	-1.0%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.1
Auto Span	35.6	35.6
Sample Lines Connected	YES	

Cylinder Pressures			
Span	300 psi	Hydrogen 1080 psi	Zero Air 32 psi

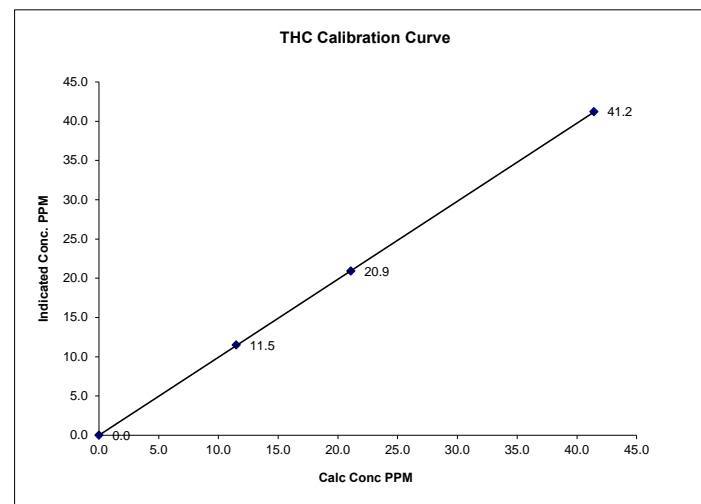
Notes: **NA : Not Applicable**

Calibration Performed by: Waseem Ahmed / Limin Li

THC Calibration Curve

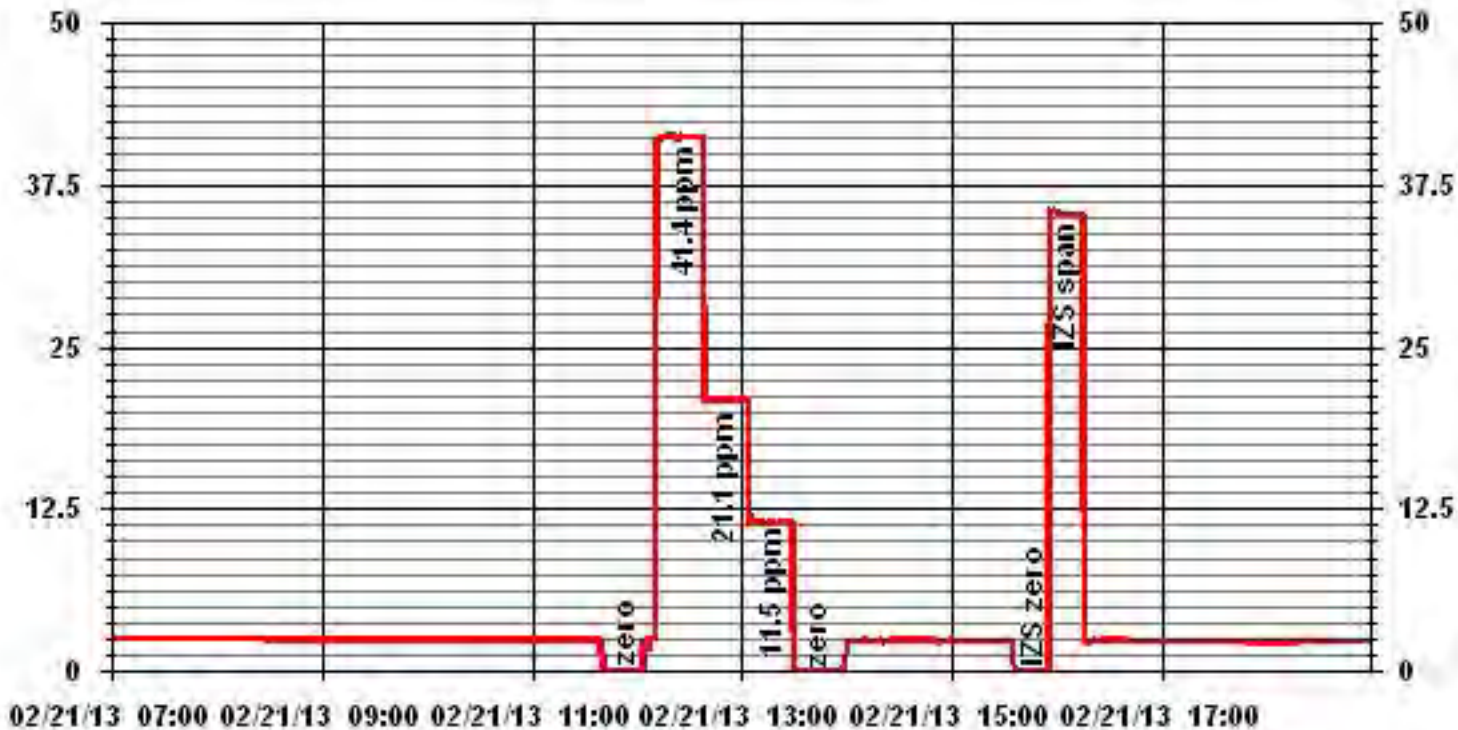
Calibration Date	February 21, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	Maskwa		
Start Time (MST)	11:40	End Time (MST)	15:00

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient	Slope	Intercept	(≥ 0.995)	0.999990
0.0	0.0	NA				(0.85 to 1.15)	0.993868
11.5	11.5	0.9996				(± 3% F.S.)	0.01153
21.1	20.9	1.0090					
41.4	41.2	1.0054					



Notes:

01 Minute Averages



Nitrogen Dioxide

NOx - NO- NO2 Calibration Report

Station Information

Calibration Date	February 21, 2013	Previous Calibration	January 3, 2013
Company	LICA	Plant/Location	Maskwa
Start Time (MST)	07:15	End Time (MST)	09:40
Reason:	As Found		
Barometric Pressure	27.81 inHg	Station Temperature	17 Deg C
Cal Gas Concentration	NOx 50.1 ppm	NO 50.1 ppm	Cal Gas Expiry date December 29, 2013
Cal Gas Cylinder #	LL42502		
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	TAPI 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:	N/A	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	448 ccm	316 Deg C		448 ccm	316 Deg C		
Ozone Flow / Vacuum	79 ccm	4.5 *Hg-A		79 ccm	4.5 *Hg-A		
HVPS / A ZERO	751 Volts	15.2 MV		751 Volts	15.2 MV		
Rx/ Temp / PMT Temp	50.0 Deg C	6.6 Deg C		50.0 Deg C	6.6 Deg C		
Box Temp / IZS Temp	30.4 Deg C	42.2 Deg C		30.4 Deg C	42.2 Deg C		
Offset	0.6 NOx	0.3 NO		0.6 NOx	0.3 NO		
Slope	1.066 NOx	1.063 NO		1.066 NOx	1.063 NO		
NO2 COEF / Conv Efficiency	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
4995	0.0	NA	0	0	NA	1	1	1	NA	NA
4920	No Zero Adj. 80.0	NA	802	802	NA	785	784	1	1.0224	1.0238

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		

Linearity OK?	Yes	No	Sum of Least Squares Correction Factors:	NOx= 1.0224	NO= 1.0238	NO2= #VALUE!
				Average Converter Efficiency=		

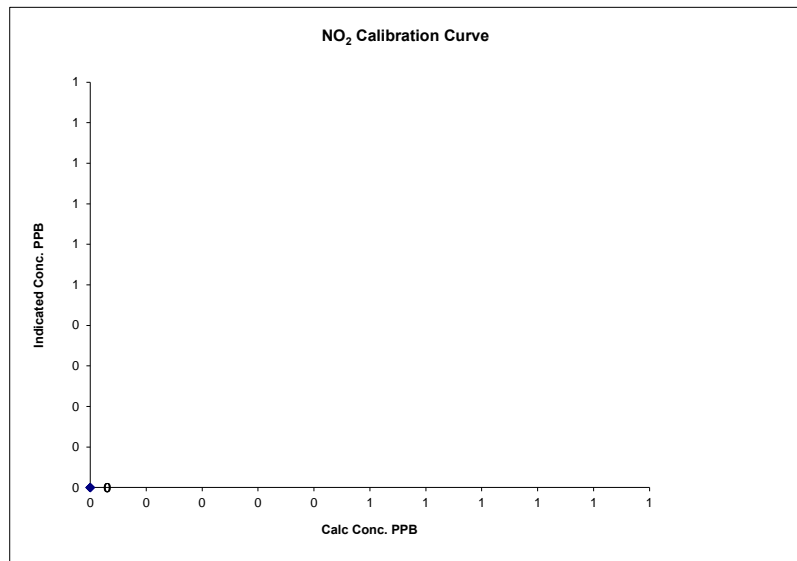
IZS Calibration Data

Before Calibration				After Calibration			
Auto Zero	0.7 NOx	0.5 NO2		0.7 NOx	0.5 NO2		
Auto Span	546 NOx	540 NO2		546 NOx	540 NO2		
				Sample Lines Connected YES			
Percent Change from Previous Calibration	NOx	-2.2%	NO	-2.0%	NO2	NA	
Notes	NA : Not Applicable						
	Wrong AF points were put in (400 ppb), corrected the point to 800 ppb after 20 mins.						
	After A/F points, calibrated and adjusted the analog output.						
Calibration Performed by:	Waseem Ahmed / Limin Li						

NO2 Calibration Curve

Calibration Date	February 21, 2013
Company	LICA
Plant / Location	Maskwa
Start Time (MST)	07:15
End Time (MST)	09:40

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	#DIV/0!
0	0	N/A	Slope (0.85 to 1.15)	#DIV/0!
0	0	#DIV/0!	Intercept (± 3% F.S.)	#DIV/0!
0	0	#DIV/0!		
0	0	#DIV/0!		



Notes:

NOx - NO- NO2 Calibration Report

Station Information

Calibration Date	February 21, 2013		Previous Calibration		January 3, 2013			
Company	LICA		Plant/Location		Maskwa			
Start Time (MST)	10:50		End Time (MST)		16:25			
Reason:	Post Repair Calibration							
Barometric Pressure	27.81	inHg	Station Temperature	24	Deg C	MFCF	0	
Cal Gas Concentration	NOx	50.1	ppm	NO	50.1	ppm	Cal Gas Expiry date	December 29, 2013
Cal Gas Cylinder #	LL42502							
DAS Output Voltage	0 - 1		Volts		Chart Rec. Output	NA		

Equipment Information

Analyzer Make / Model:	TAPI 200E	S/N :	594	Method:	Chemiluminescent
Calibrator Make / Model:	Enviro-nics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Chart Recorder Make / Model:	N/A	S/N:	NA		
Flow Meter:	Enviro-nics 6100	S/N :	4760		

Analyzer Settings

Before Calibration				After Calibration				
Concentration Range	448 ccm			0 - 1000			ppb	
Sample Flow/Conv. Temp	448	ccm	316	Deg C	450	ccm	316	Deg C
Ozone Flow / Vacuum	79	ccm	4.5	"Hg-A	79	ccm	4.5	"Hg-A
HVPS / A ZERO	751	Volts	15.2	MV	751	Volts	15.2	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.6	Deg C	50.0	Deg C	6.6	Deg C
Box Temp / IZS Temp	30.4	Deg C	42.2	Deg C	31.1	Deg C	42.2	Deg C
Offset	0.6	NOx	0.3	NO	0.7	NOx	0.3	NO
Slope	1.066	NOx	1.063	NO	1.087	NOx	1.085	NO
NO2 COEF / Conv Efficiency	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
4995	0.0	NA	0	0	NA	0	0	0	NA	NA
4920	80.0	NA	802	802	NA	802	801	1	1.0000	1.0007
	No Span Adj.									
4960	40.0	NA	401	401	NA	400	399	1	1.0020	1.0045
4980	20.0	NA	200	200	NA	201	201	0	0.9970	0.9970
5000	0.0	NA	0	0	NA	0	0	0	NA	NA

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		
4920	80.0	NA	802	802	NA	803	802	1	NA	NA
4920	80.0	600	802	NA	554	801	249	552	1.0036	99.64%
	No Adj.									
4920	80.0	300	802	NA	281	804	522	282	0.9965	100.36%
4920	80.0	120	802	NA	112	805	691	113	0.9912	100.90%

Linearity OK?	Yes	No	Sum of Least Squares Correction Factors:	NOx= 1.000	NO= 1.001	NO2= 1.002
				NOx= 1.0000	NO= 1.0007	NO2= 1.0036
			Average Converter Efficiency=			

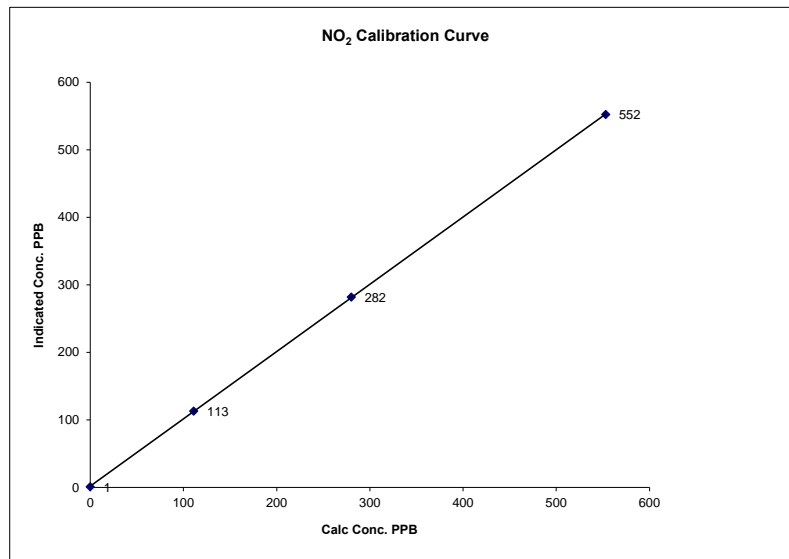
IZS Calibration Data

Before Calibration				After Calibration				
Auto Zero	0.7	NOx	0.5	NO2	0.0	NOx	0.0	NO2
Auto Span	546	NOx	540	NO2	546	NOx	540	NO2
	Sample Lines Connected: YES							
Percent Change from Previous Calibration	NOx		NA	NO	NA	NO2	NA	
Notes	NA : Not Applicable							
Calibration Performed by:	Waseem Ahmed / Limin Li							

NO2 Calibration Curve

Calibration Date	February 21, 2013		
Company	LICA		
Plant / Location	Maskwa		
Start Time (MST)	10:50	End Time (MST)	16:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999982
0	1	N/A	Intercept	(± 3% F.S.)	0.995885
111	113	0.9823			
280	282	0.9929			
553	552	1.0018			

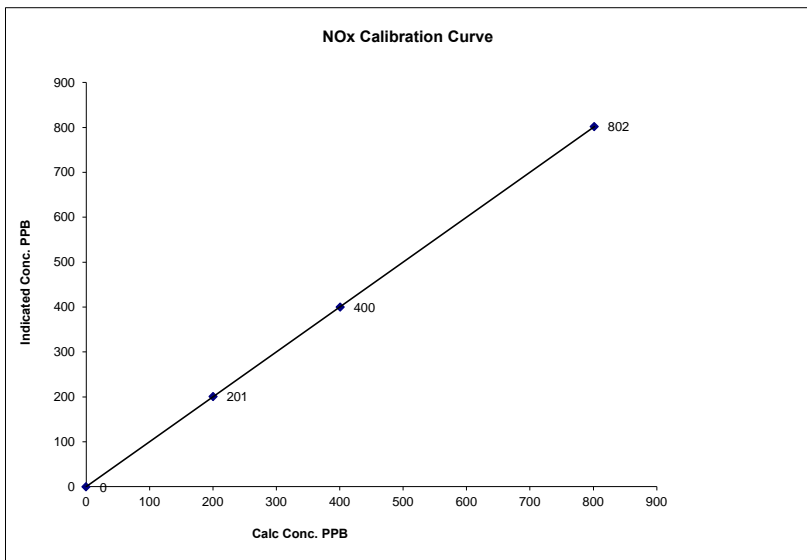


Notes:

NOx Calibration Curve

Calibration Date	February 21, 2013	
Company	LICA	
Plant / Location	Maskwa	
Start Time (MST)	10:50	End Time (MST) 16:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999997
0	0	N/A	Slope (0.85 to 1.15)	1.000143
200	201	0.9970	Intercept (± 3% F.S.)	0.00000
401	400	1.0020		
802	802	0.9995		

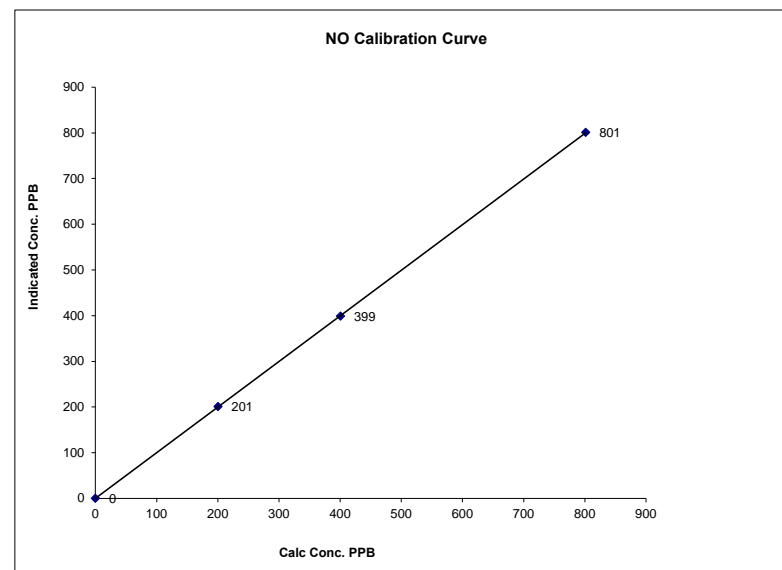


Notes:

NO Calibration Curve

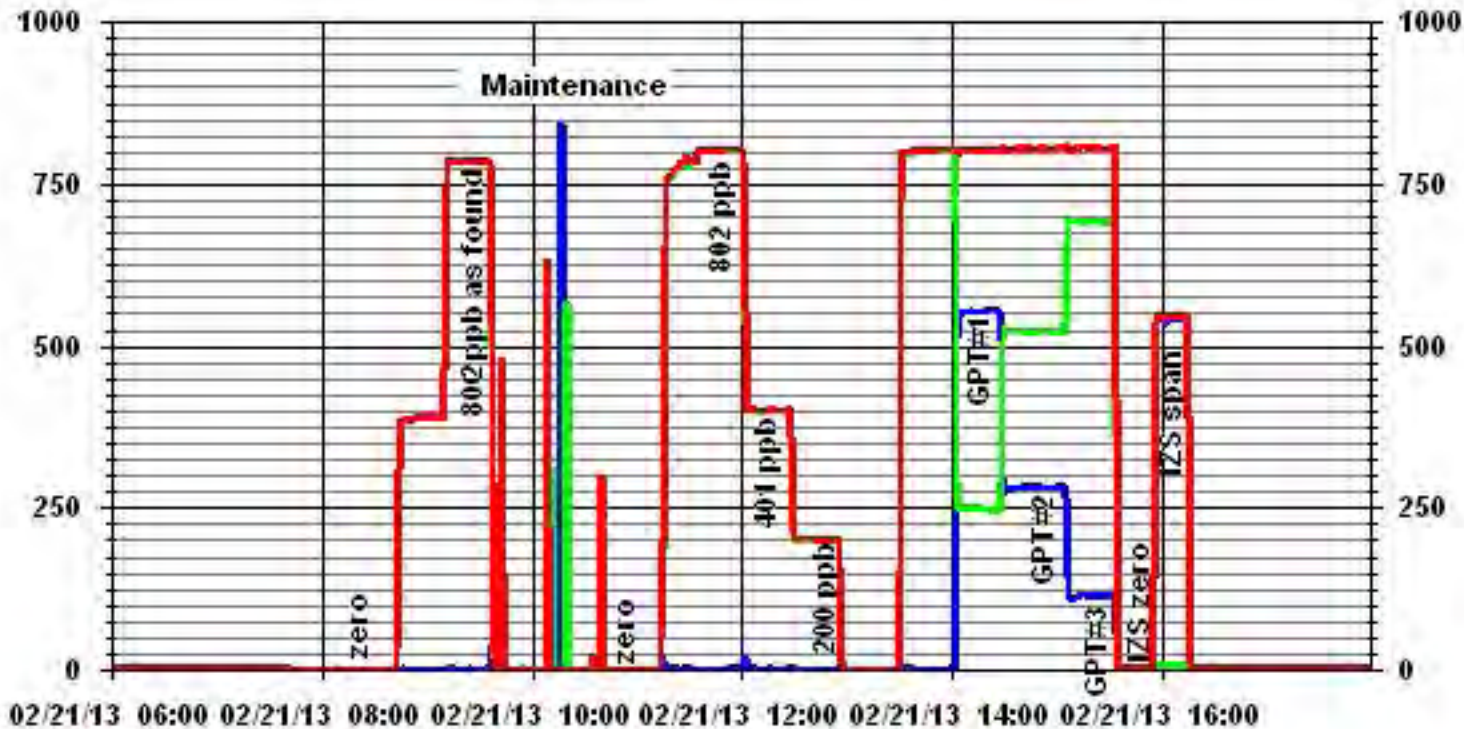
Calibration Date	February 21, 2013	
Company	LICA	
Plant / Location	Maskwa	
Start Time (MST)	10:50	End Time (MST) 16:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999993
0	0	N/A	Slope (0.85 to 1.15)	0.998717
200	201	0.9970	Intercept (± 3% F.S.)	-3.0000
401	399	1.0045		
802	801	1.0007		



Notes:

01 Minute Averages



— LICA30 IIOX_ PPB

— LICA30 IIO_ PPB

— LICA30 IIO2_ PPB

Lakeland Industry & Community Association

St. Lina Monitoring Site
Ambient Air Monitoring
Data Report
For
February 2013

Prepared By:



March 26, 2013

Lakeland Industry & Community Association

St. Lina

Ambient Air Monitoring

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Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: St. Lina
Data Period: February 2013

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Katherine Rapske

Calibration Procedure

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

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

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

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

The calibrations conducted at the LICA – St. Lina Air Monitoring Stations conform to the following Maxxam Standard Operation Procedures:

- CAL SOP-00211
- CAL SOP-00209
- CAL SOP-00213
- CAL SOP-00214
- CAL SOP-00208
- CAL SOP-00215

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

MONTHLY CONTINUOUS DATA SUMMARY

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION – ST. LINA

Continuous Ambient Monitoring – February 2013

LICA ST. LINA SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						OBJECTIVES				EXCEEDENCES		MONTHLY AVERAGE	
PARAMETER	1-HR	24-HR	1-HR	24-HR	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY		
SO2 (PPB)	172	48	0	0	0.61	4	9	2	11.6	231(SW)	1.5	5	96.7
H2S (PPB)	10	3	0	0	1.20	3	8	23	10.3	213(SSW)	2.0	4, 8	100.0
THC (PPM)	-	-	-	-	2.21	3.1	7	VAR	VAR	VAR	2.6	7, 8	100.0
OZONE (PPB)	82	-	0	-	34.1	45	27	22, 23	11.4, 12.1	180(S), 198(SSW)	40.6	12	100.0
NOx (PPB)	-	-	-	-	3.47	30.8	8	12	9.9	234(SW)	12.2	8	100.0
NO (PPB)	-	-	-	-	0.50	15.4	8	12	9.9	234(SW)	3.4	8	100.0
NO ₂ (PPB)	159	-	0	-	2.97	15.4	8	12	9.9	234(SW)	8.8	8	100.0
PM2.5 (ug/m3)	-	30	-	0	6.10	32.0	19	1	17.4	130(SE)	14.9	8	98.8
TEMPERATURE (DEGREE C)	-	-	-	-	-7.09	9.9	16	14	15.2	290(WNW)	2.9	16	100.0
BP (MILLIBAR)	-	-	-	-	921	933	14	VAR	VAR	VAR	932.3	14	100.0
RH (%)	-	-	-	-	72.03	89	12	22, 23	10.8, 12	201(SSW), 211(SSW)	84.5	13	100.0
PRECIPITATION (MM)	-	-	-	-	0.02	2.8	13	10	9	240(WSW)	7.1	13	100.0
VECTOR WS (KPH)	-	-	-	-	11.82	30.0	2	0	-	314(NW)	16.0	19	100.0
VECTOR WD (DEGREES)	-	-	-	-	217(SW)	-	-	-	-	-	-	-	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

The analyzer was working well throughout the month. Following the as found points check on February 19th, the slope and offset was adjusted. The analyzer was allowed time to stabilize. A post repair calibration was performed on February 20th. A total of 21 hours of data was invalidated due to this maintenance. The inlet filter was changed before the monthly calibration was started on February 20th. Data was corrected using daily zero information.

Hydrogen Sulphide (PPB)

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

The analyzer was working well throughout the month. The inlet filter was changed before the monthly calibration was started on February 19th. Data was corrected using daily zero information.

Ozone (PPB)

Analyzer make / model Thermo 49C, S/N: 49C-54926-302

The analyzer was working well throughout the month. The inlet filter was changed before the monthly calibration was started on February 20th. Data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – St. Lina

Total Hydrocarbon (PPM)

Analyzer make / model – Thermo 51C-LT, S/N: 77021-384 replaced to Thermo 51C-LT, S/N: 04366-09739

The analyzer was working well throughout the month. The inlet filter was changed before the monthly calibration was started on February 19th. The maximum reading recorded at hour 9 and 11 on February 2nd and hour 12 on February 21st were invalid, as not 100% of the data for the hour was recorded (reason unknown). Data was corrected using daily zero information.

Nitrogen Dioxide (PPB)

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

The analyzer was working well throughout the month. The inlet filter was changed before the monthly calibration was started on February 19th. An extra span point was performed on February 20th for the reference point for the ozone calibration. Data was corrected using daily zero information.

Particulate Matter 2.5 (UG/M3)

Analyzer make / model –Thermo Scientific Series 1405F, S/N: 1405A207691003

Two routine Teom audits were performed on February 15th and February 28th. 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. A total of 8 hours of PM 2.5 data was invalidated as the data were below –3 ug/m3.

Temperature (Degree C)

Analyzer make / model – Met One 060

No issues were recorded this month.

Barometric Pressure (Millibar)

Analyzer make / model - Met One 092

No issues were recorded this month.

General Monthly Summary

AQM STATION – LICA – St. Lina

Relative Humidity (%)

Analyzer make / model - Met One 083

No issues were recorded this month.

Precipitation (MM)

Analyzer make / model - Met One 387

No issues were recorded this month.

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

System make / model –MetOne 50.5H Sonic, S/N: H12635

No issues were recorded this month. The last wind system calibration was performed on June 12th, 2012 by the manufacturer.

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

Both the sample inlet and glass manifold were cleaned on February 28th.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA
FEBRUARY 2013
SULPHUR DIOXIDE (SO₂) hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.																							
DAY																																																		
1	3	0	2	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	3	0.7	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	S	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	S	1	1	0.0	24																						
4	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	2	1.2	24																						
5	1	1	1	1	1	1	1	2	3	2	2	2	2	2	3	3	2	2	1	1	S	0	0	0	3	1.5	24																							
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	1	1	1	1	1	0.2	24																						
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	2	2	2	2	1	2	1.2	24																						
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	2	2	2	2	2	1.1	24																						
9	2	2	4	3	3	2	2	1	1	1	1	1	1	1	1	1	S	1	0	0	0	0	0	0	4	1.2	24																							
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	1	2	2	2	2	2	2	0.4	24																						
11	2	2	2	2	2	2	2	1	1	1	1	1	1	1	S	0	0	0	0	0	0	0	0	0	0	2	0.9	24																						
12	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	1	1	1	1	1	1	1	0.3	24																						
13	1	1	1	0	0	0	0	0	0	0	0	0	S	0	0	0	1	1	1	1	0	0	0	0	0	1	0.3	24																						
14	0	0	0	0	0	0	0	0	0	0	0	S	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.2	24																						
15	0	0	0	0	1	1	1	1	1	1	S	1	1	2	2	1	1	1	1	1	1	1	1	1	1	2	0.9	24																						
16	1	1	1	1	1	1	1	1	1	S	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	0.8	24																							
17	0	0	0	0	0	1	1	0	S	0	1	0	1	1	1	1	2	2	1	1	0	0	0	0	0	2	0.6	24																						
18	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.4	24																						
19	1	1	1	1	1	1	S	1	1	C	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	1	1.0	9																						
20	Y	Y	Y	Y	Y	Y	Y	Y	C	C	C	C	C	C	2	C	0	1	1	1	1	1	1	1	1	2	1.0	17																						
21	1	1	0	0	S	1	1	0	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0.5	24																						
22	0	0	0	S	0	0	0	0	0	0	0	1	1	1	1	2	3	1	1	1	1	1	1	1	3	0.7	24																							
23	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24																						
24	0	S	0	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	0.4	24																						
25	S	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	0.1	24																						
26	1	1	1	1	1	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	2	0.6	24																						
27	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	S	0	0	1	0.4	24																							
28	0	0	0	0	1	0	0	1	0	0	1	1	1	2	2	2	2	2	2	1	1	S	1	1	2	2	0.9	24																						
HOURLY MAX	3	2	4	3	3	2	2	2	3	2	2	2	2	2	3	3	3	2	1	2	2	2	2	2	2																									
HOURLY AVG	0.7	0.6	0.7	0.6	0.7	0.6	0.7	0.5	0.6	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.7	0.7																										

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

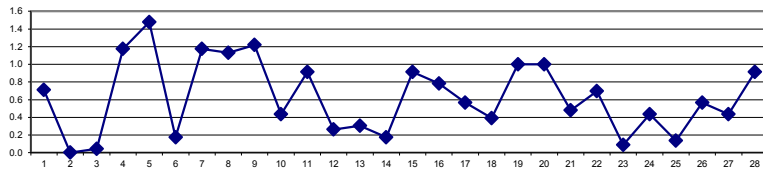
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR 172 PPB | 24-HR 48 PPB

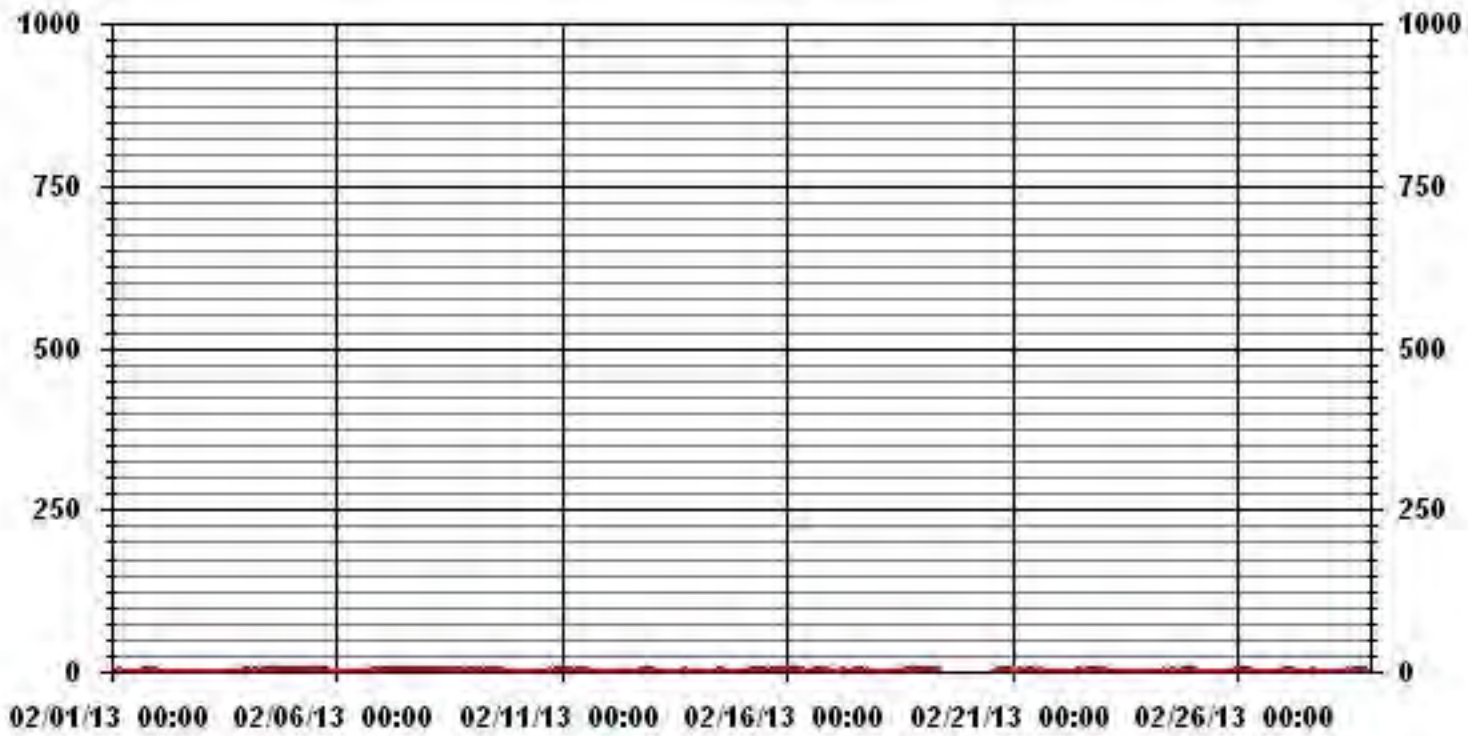
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	309					
MAXIMUM 1-HR AVERAGE:	4	PPB	@ HOUR(S)	2	ON DAY(S)	9
MAXIMUM 24-HR AVERAGE:	1.5	PPB			ON DAY(S)	5
I/ZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	650	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	96.7	%	
STANDARD DEVIATION:	0.70		MONTHLY AVERAGE:	0.61	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA31 SO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	DAILY MAX	24-HOUR AVG	RDGS	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00					
DAY																													
1	4	S	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	4	1.7	24	
2	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1.0	24
3	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	2	2	0.7	24	
4	2	2	3	2	3	3	3	3	2	3	2	2	2	2	2	2	2	2	2	2	2	S	2	2	3	2.3	24		
5	2	2	2	2	2	2	2	3	4	4	3	3	3	4	3	4	3	2	2	S	1	1	1	1	4	2.5	24		
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	2	2	2	2	1.2	24		
7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	3	2	3	2	2	3	2.1	24		
8	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	S	2	2	2	2	3	3	3	3	2.2	24		
9	3	4	S	S	4	3	3	2	2	2	2	2	2	2	2	S	1	0	0	0	0	0	0	0	5	2.0	24		
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	1	2	2	3	3	3	3	3	3	0.8	24		
11	3	3	3	3	3	3	3	2	2	2	2	2	2	S	1	1	1	1	1	1	1	1	1	1	3	1.9	24		
12	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	2	2	2	2	2	2	2	2	1.3	24		
13	2	2	2	1	1	1	1	1	1	1	1	1	S	1	1	1	2	2	2	3	1	0	1	0	3	1.3	24		
14	0	0	0	0	0	0	0	0	0	0	0	S	1	2	1	2	1	1	1	1	1	1	1	1	2	0.6	24		
15	1	1	1	1	2	2	2	2	2	2	S	2	2	3	3	2	2	2	2	2	2	2	2	2	3	1.9	24		
16	2	2	2	2	2	2	2	2	2	S	1	1	1	1	1	1	1	3	3	2	2	2	2	1	3	1.7	24		
17	1	1	1	1	1	2	2	2	S	2	2	1	2	2	2	2	3	3	3	2	1	0	0	0	3	1.6	24		
18	0	0	0	0	0	0	0	S	1	1	1	1	1	1	1	2	2	3	3	2	2	2	2	2	3	1.2	24		
19	2	2	2	2	2	2	S	2	C	C	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	2	2.0	9		
20	Y	Y	Y	Y	Y	Y	Y	C	C	C	C	C	C	C	3	C	1	2	2	2	2	2	2	2	1	3	1.9	17	
21	2	2	1	1	S	2	2	1	2	2	3	2	1	1	2	2	2	2	1	2	1	1	1	1	3	1.6	24		
22	1	1	1	S	1	1	1	1	4	1	1	2	2	2	3	4	3	2	2	2	2	2	2	2	4	1.9	24		
23	2	2	S	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	2	0.7	24		
24	0	S	1	1	1	1	1	2	1	2	1	2	1	1	2	2	1	1	1	1	2	2	1	1	2	1.3	24		
25	S	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	1.2	24	
26	2	2	2	3	4	2	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	4	1.7	24	
27	2	1	1	2	2	1	2	3	2	1	1	1	1	1	1	2	2	1	1	1	1	1	S	1	1	3	1.4	24	
28	1	1	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	3	3	Y	2	S	2	3	3	3	1.9	23	
HOURLY MAX	4	4	5	5	4	3	3	3	4	4	3	3	3	3	4	3	4	3	3	3	3	3	3	3	3	3			
HOURLY AVG	1.5	1.5	1.6	1.5	1.6	1.4	1.5	1.5	1.6	1.5	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.7	1.6	1.7	1.5	1.5	1.5	1.4					

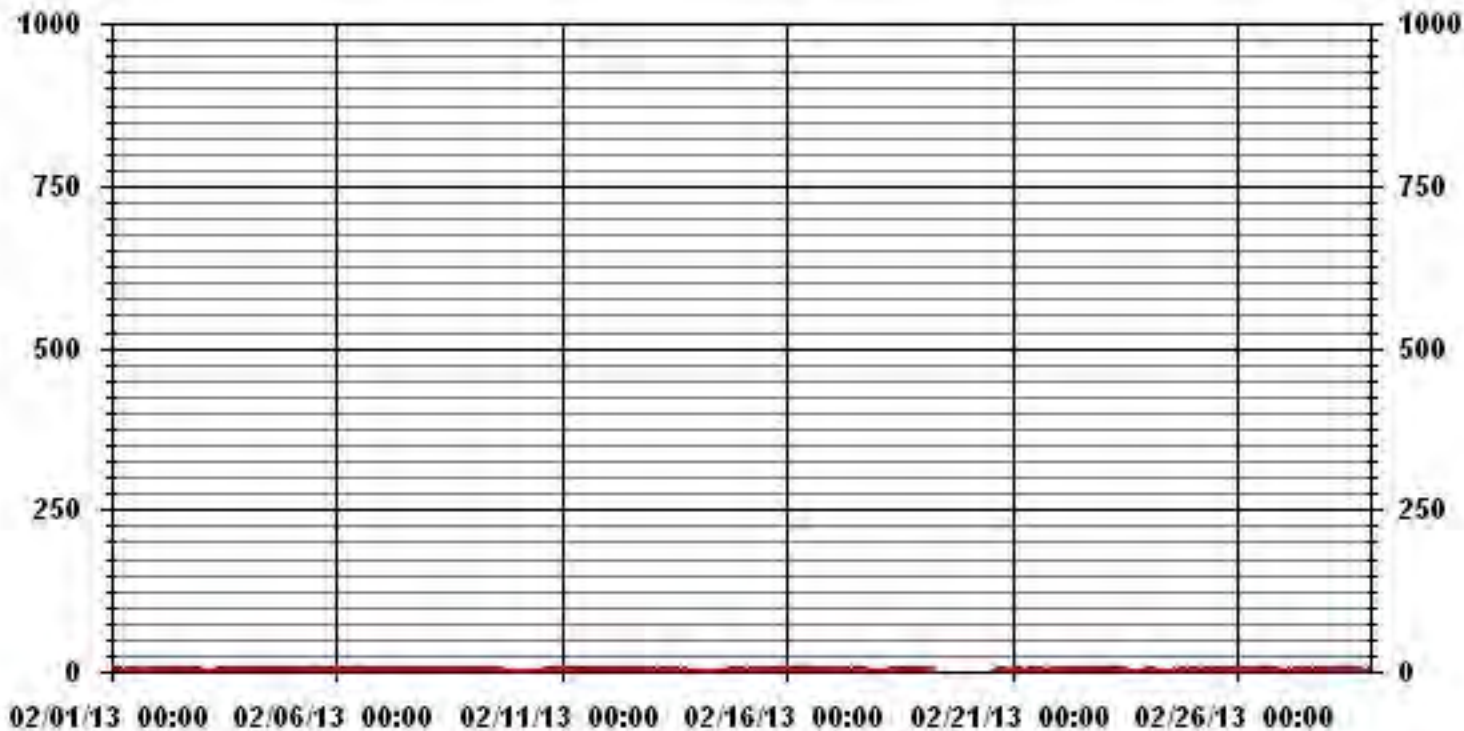
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	550				
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	2,3	ON DAY(S) 9
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	649	HRS
MONTHLY CALIBRATION TIME:	11	HRS			
STANDARD DEVIATION:	0.89				

01 Hour Averages



— LICA31 SO2MAX PPB

LICA31
 SO2_ / WDR Joint Frequency Distribution (Percent)

February 2013

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	3.42	1.95	2.93	1.95	5.22	6.52	7.34	5.05	7.83	13.53	7.01	8.97	8.64	6.52	5.87	7.17	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	3.42	1.95	2.93	1.95	5.22	6.52	7.34	5.05	7.83	13.53	7.01	8.97	8.64	6.52	5.87	7.17	

Calm : .00 %

Total # Operational Hours : 613

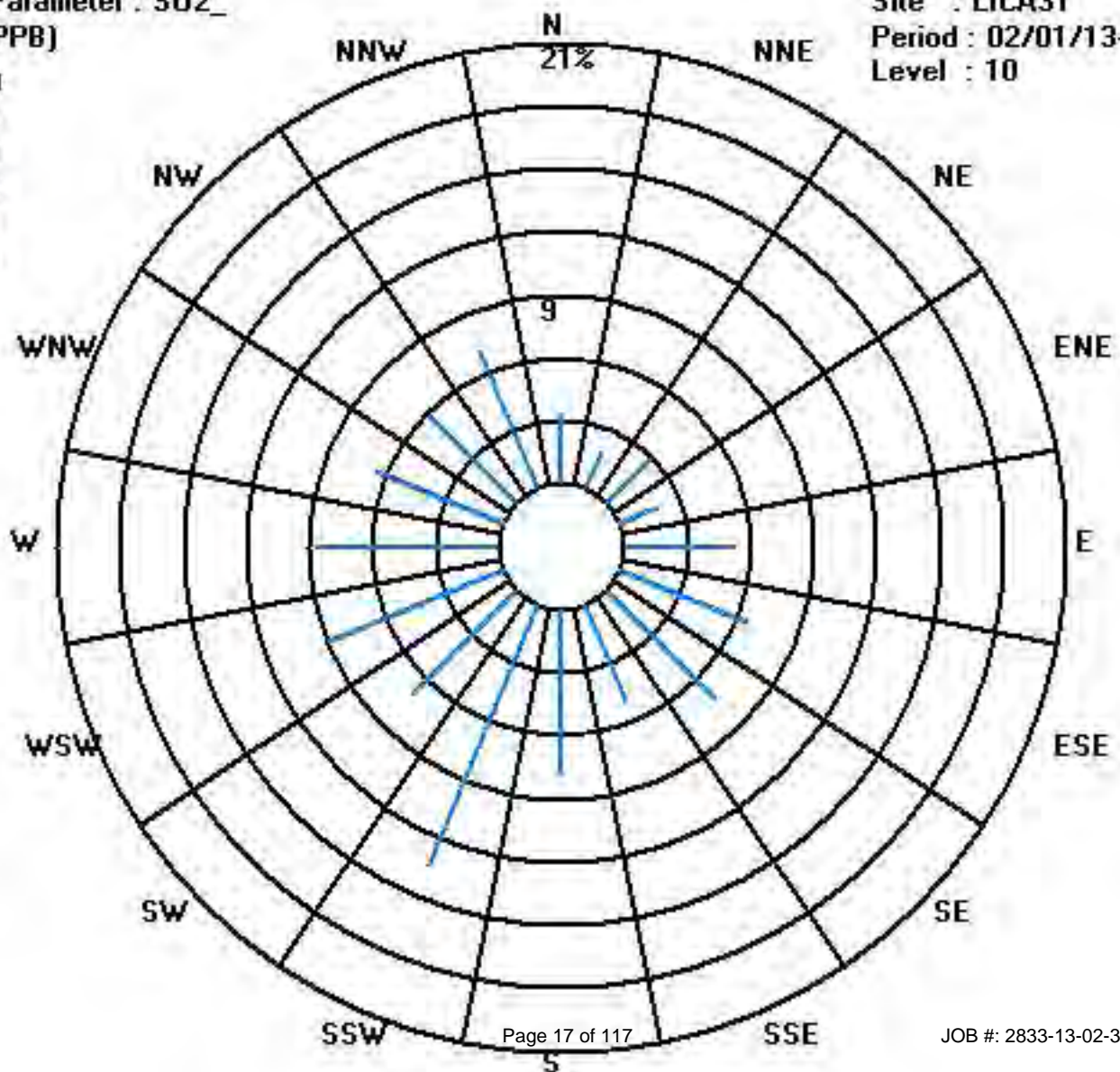
Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 20	21	12	18	12	32	40	45	31	48	83	43	55	53	40	36	44	613
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	21	12	18	12	32	40	45	31	48	83	43	55	53	40	36	44	

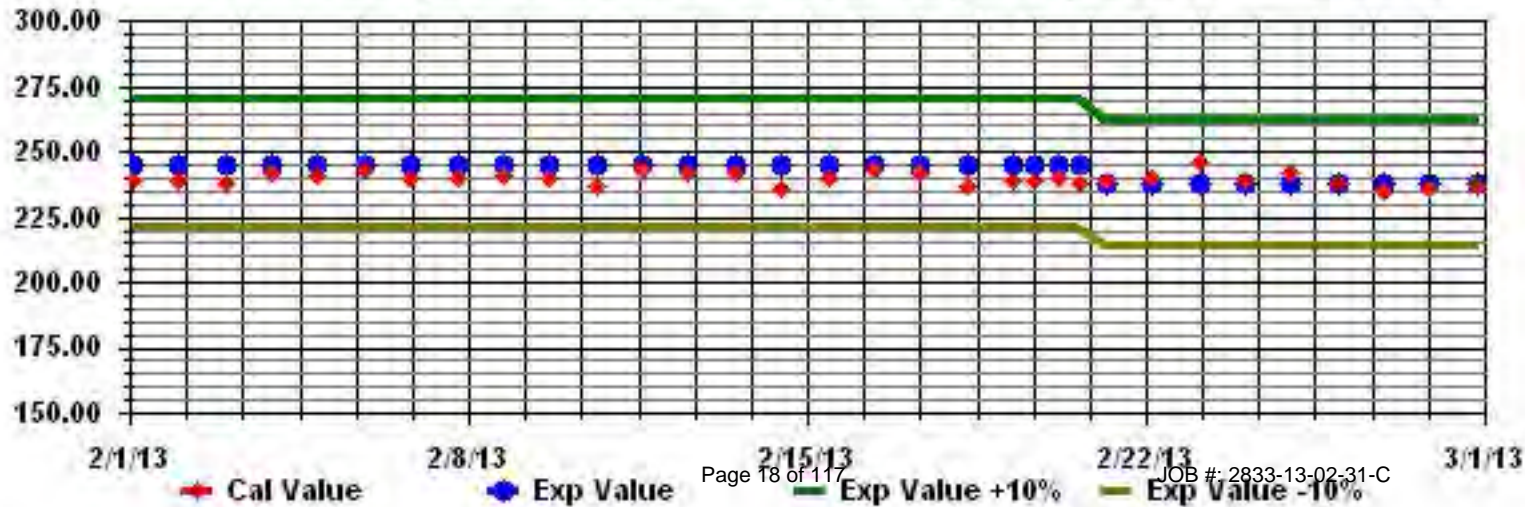
Calm : .00 %

Total # Operational Hours : 613

Class Limits (PPB)



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



Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

HYDROGEN SULPHIDE (H₂S) hourly averages in ppb

MST		01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	DAILY 24-HOUR			
HOUR START	HOUR END																									MAX.	AVG.	RDGS.	
DAY																													
1		2	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	24
2		S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	S	1	0.5	24
3		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	S	2	2	2	1.2	24
4		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	2	2	2	2.0	24
5		2	1	2	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	S	2	2	2	2	2	1.9	24
6		2	2	2	2	2	2	2	2	1	1	1	2	1	1	1	2	1	1	1	S	1	1	1	1	1	2	1.4	24
7		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	2	2	2	2	1	2	1.2	24
8		2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	S	2	2	2	2	2	2	3	3	2.0	24	
9		1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	1	1	1	1	1	1	1	1	1	2	1.7	24
10		1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	2	2	2	1.1	24
11		2	2	2	2	2	2	2	2	2	2	2	2	2	S	1	1	1	1	1	1	1	1	1	1	1	2	1.6	24
12		1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	2	2	2	2	2	1.1	24
13		2	2	1	1	2	1	2	1	1	1	1	1	S	1	1	1	1	0	0	0	0	0	0	0	0	2	0.9	24
14		0	0	0	0	0	0	0	0	0	0	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	24
15		1	1	1	1	1	1	1	1	1	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.6	24
16		2	2	2	2	2	2	2	2	2	S	1	1	1	2	2	2	2	2	1	1	1	2	2	2	2	2	1.7	24
17		2	2	1	1	2	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	2	1.0	24
18		0	0	0	0	0	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	24
19		1	1	1	1	2	1	S	1	1	C	C	C	C	C	1	1	1	C	1	1	1	1	1	1	1	2	1.1	24
20		1	1	1	1	1	S	1	1	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	S	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1.4	24
22		2	2	2	S	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.6	24
23		2	2	S	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.5	24
24		0	S	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	24
25		S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1.0	24
26		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1.0	24
27		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1.0	24
28		1	1	1	1	1	1	1	1	1	1	2	1	2	1	2	1	2	1	1	1	1	S	2	2	2	2	1.3	24
HOURLY MAX		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3			
HOURLY AVG		1.3	1.3	1.2	1.1	1.3	1.1	1.1	1.1	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.3	1.2	1.2	1.1	1.2	1.2	1.2	1.3	1.3				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

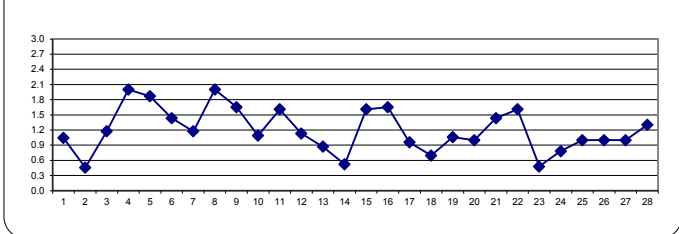
OBJECTIVE LIMIT:

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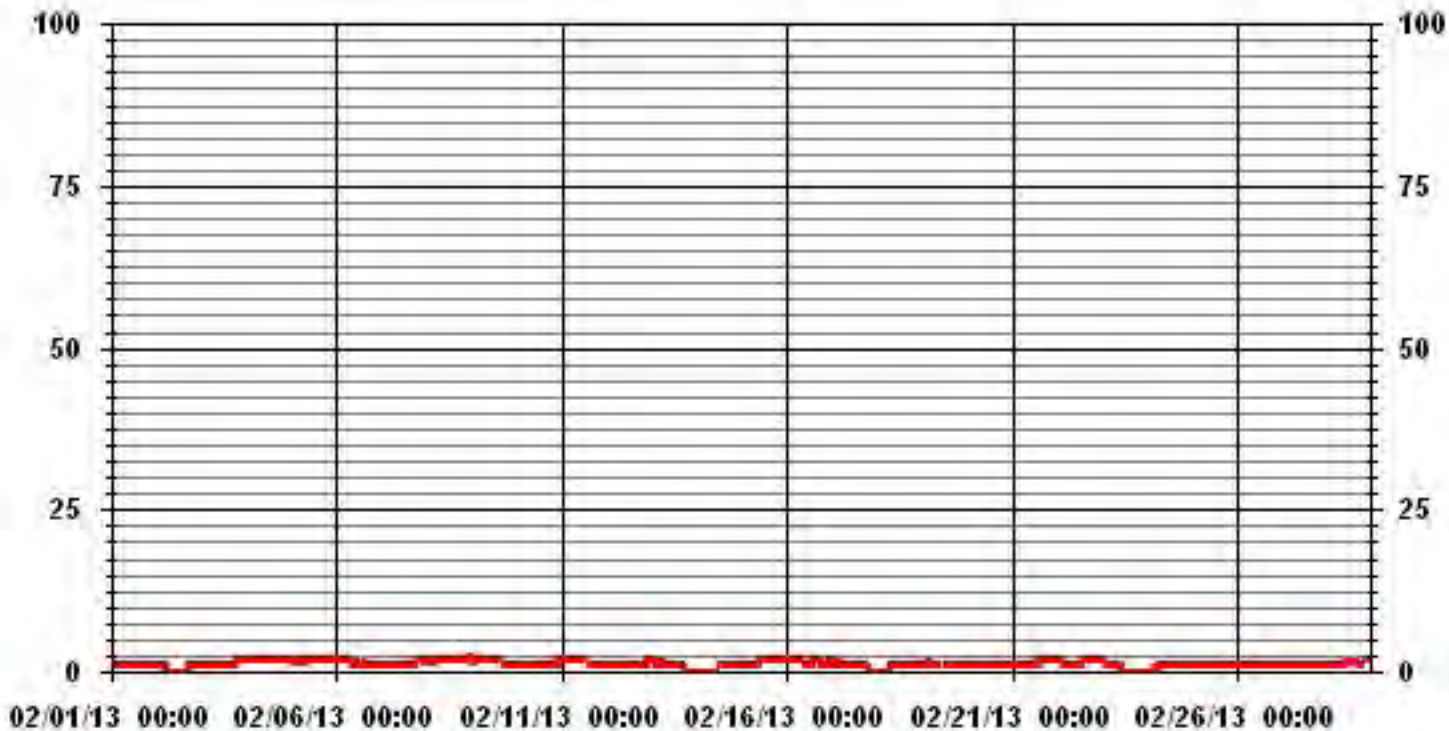
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	576					
MAXIMUM 1-HR AVERAGE:	3	PPB	@ HOUR(S)	23	ON DAY(S)	8
MAXIMUM 24-HR AVERAGE:	2.0	PPB			ON DAY(S)	4,8
					VAR-VARIOUS	
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.59		MONTHLY AVERAGE:	1.20	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00				
DAY																												
1	2	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2	1.1	24	
2	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1.0	24	
3	1	1	1	2	2	2	2	2	2	2	1	2	1	2	2	2	2	2	2	2	2	2	S	2	2	1.8	24	
4	2	2	2	3	2	3	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2	S	4	5	5	2.4	24	
5	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	2	2	2	4	2.1	24	
6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	2	2	2	2	2	2.0	24	
7	2	1	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	S	2	2	2	2	2	2	1.9	24	
8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	2	2	2	2	2	2	6	6	2.2	24
9	2	2	2	2	3	3	3	3	3	2	2	2	2	2	2	2	S	2	2	2	2	1	1	1	3	2.1	24	
10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	2	2	2	2	2	1.2	24	
11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	S	1	1	3	1	1	1	1	1	1	3	1.7	24	
12	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	2	2	2	2	2	2	2	2	2	1.3	24	
13	2	2	2	2	2	2	2	2	1	2	2	1	S	1	1	1	1	1	1	1	1	0	0	0	2	1.3	24	
14	1	0	0	0	0	0	0	0	0	0	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	24	
15	1	1	1	1	1	1	1	2	2	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.7	24	
16	2	2	2	2	2	2	2	2	3	S	2	2	2	2	2	2	2	3	3	2	2	2	2	2	3	2.1	24	
17	2	2	2	2	2	2	2	1	S	2	1	1	1	1	1	1	1	1	1	1	1	1	0	2	1.3	24		
18	1	0	1	0	1	0	1	S	1	1	1	1	1	1	1	1	3	3	1	2	1	2	2	3	1.2	24		
19	2	2	1	2	2	2	S	2	C	C	C	C	C	C	C	1	1	C	2	1	2	2	1	1	2	1.6	24	
20	2	2	2	1	2	S	1	1	1	2	2	1	2	2	2	2	1	2	2	2	2	2	2	2	2	1.7	24	
21	1	2	2	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	
22	2	2	2	S	1	1	1	1	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.7	24	
23	2	2	S	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	2	0.7	24	
24	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2	1.1	24	
25	S	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	1.1	24	
26	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	2	1.1	24	
27	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	2	S	1	2	2	1.2	24	
28	1	2	2	2	2	2	1	2	2	2	2	3	2	2	2	2	2	2	2	Y	2	S	2	2	3	2.0	23	
HOURLY MAX	4	2	2	3	3	3	3	3	3	2	2	3	2	2	2	2	2	3	3	2	2	2	4	6				
HOURLY AVG	1.7	1.5	1.5	1.5	1.6	1.6	1.5	1.5	1.6	1.5	1.4	1.5	1.5	1.6	1.5	1.5	1.4	1.7	1.6	1.5	1.7	1.5	1.6	1.8				

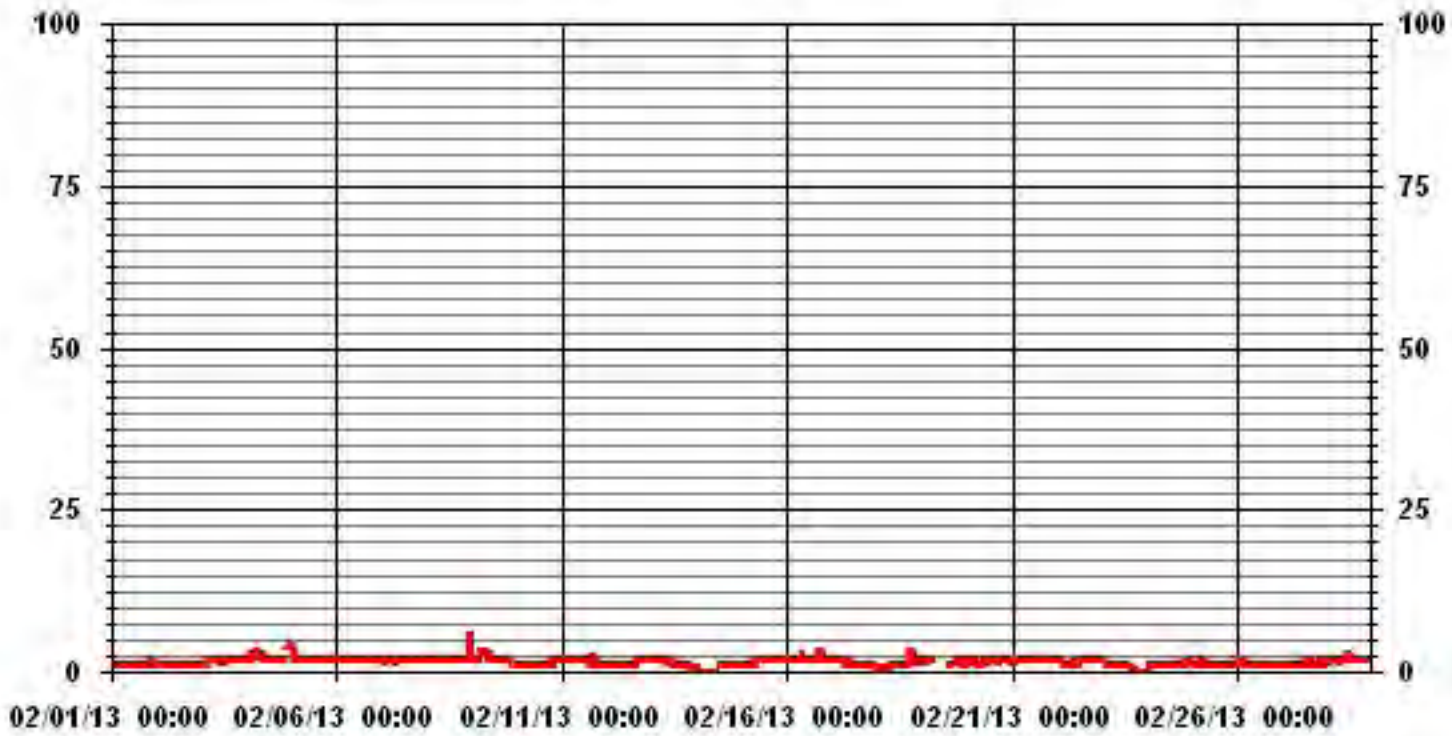
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	607					
MAXIMUM INSTANTANEOUS VALUE:	6	PPB	@ HOUR(S)	23	ON DAY(S)	6
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	0.67					

01 Hour Averages



LICA31
H2S_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : H2S_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 3	3.30	1.88	2.83	1.88	5.03	6.28	8.17	5.97	8.96	12.89	6.76	8.64	8.33	6.28	5.66	6.91	99.84
< 10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00	.00	.15
< 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	3.30	1.88	2.83	1.88	5.03	6.28	8.17	5.97	8.96	13.05	6.76	8.64	8.33	6.28	5.66	6.91	

Calm : .00 %

Total # Operational Hours : 636

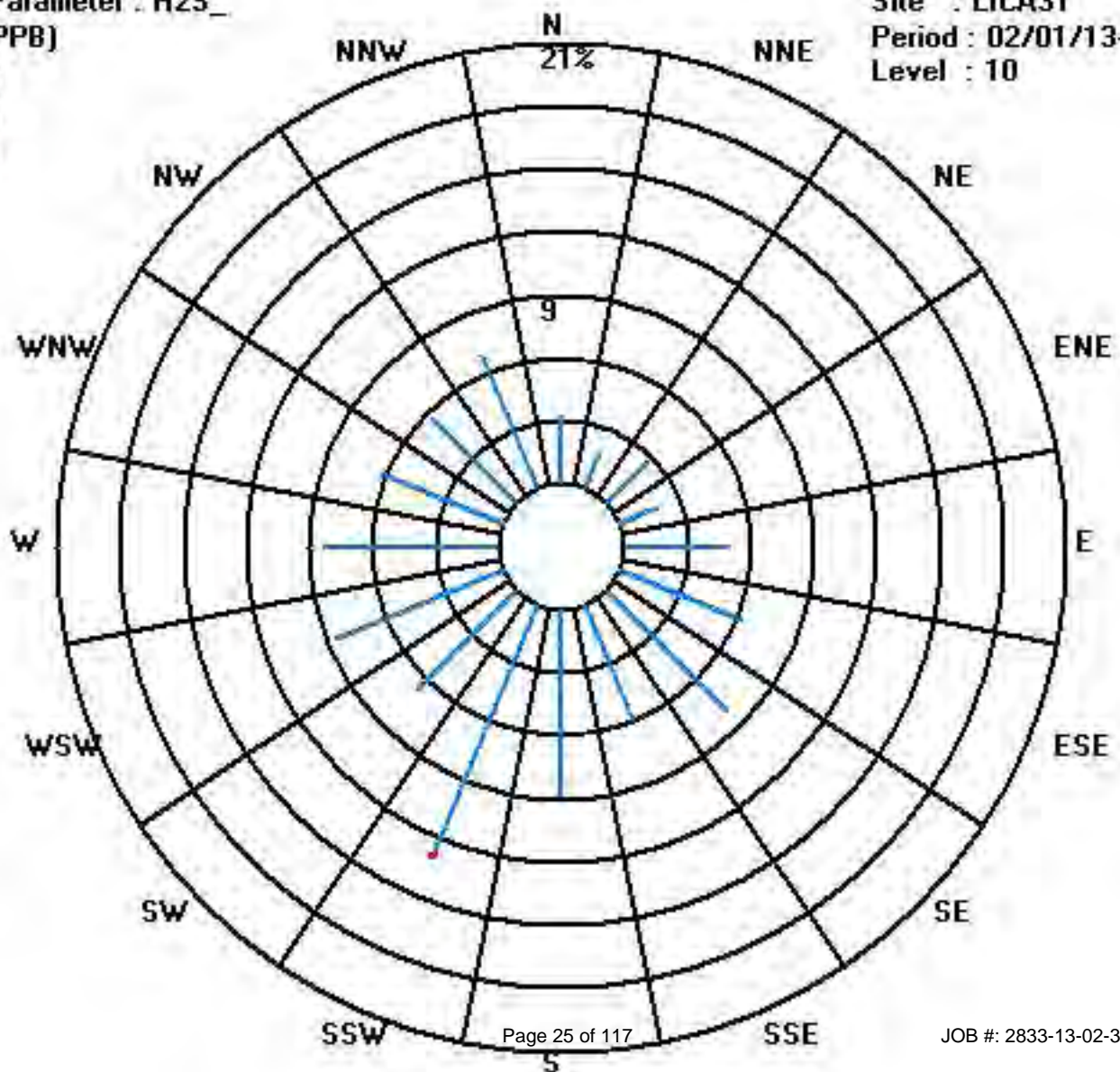
Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 3	21	12	18	12	32	40	52	38	57	82	43	55	53	40	36	44	635
< 10										1							1
< 50																	
>= 50																	
Totals	21	12	18	12	32	40	52	38	57	83	43	55	53	40	36	44	

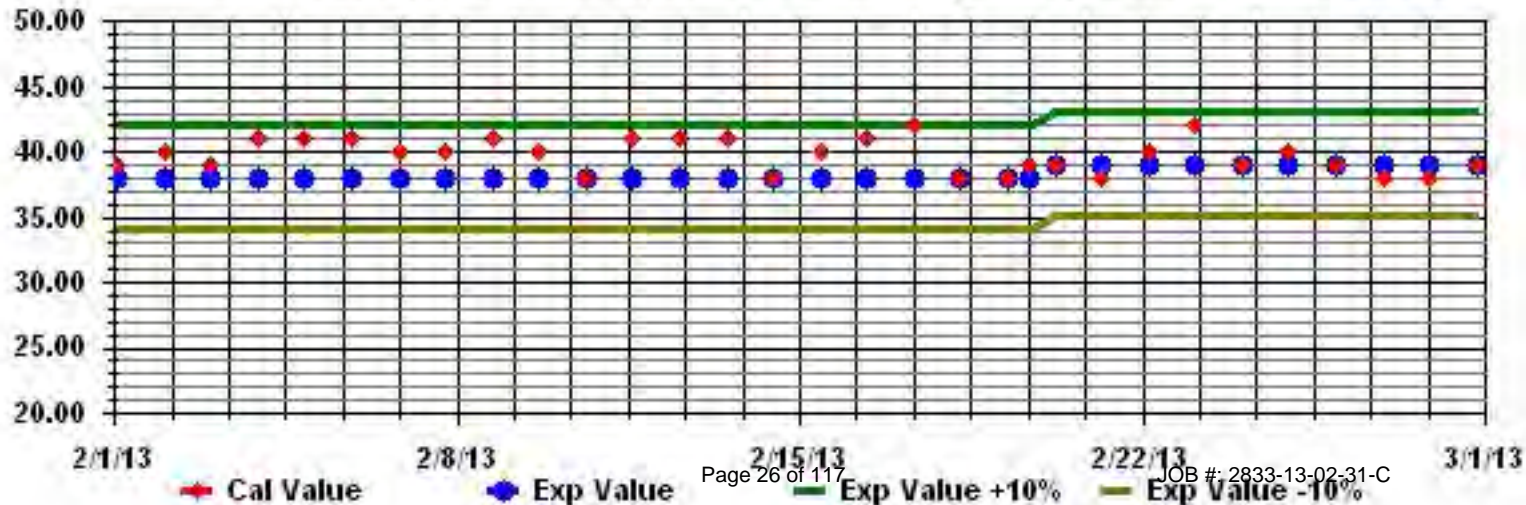
Calm : .00 %

Total # Operational Hours : 636

Class Limits (PPB)



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



Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

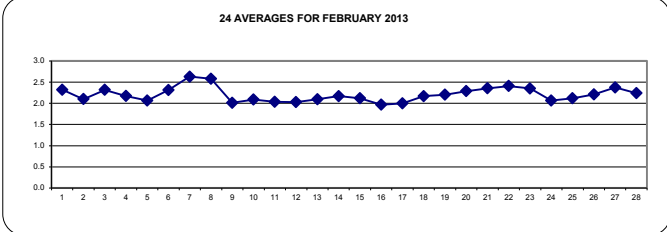
TOTAL HYDROCARBONS hourly averages in ppm

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR				
DAY	HOURLY MAX	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.		
1		2.6	S	2.5	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2	2.6	2.3	24		
2		S	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	S	2.8	2.1	24		
3		2.2	2.4	2.5	2.4	2.4	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.6	S	2.8	2.8	2.3	24		
4		2.8	2.8	2.7	2.6	2.4	2.3	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	S	2	1.9	2.8	2.2	24		
5		2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2.1	2.1	2.1	S	2.1	2.1	2.1	2.1	2.1	24		
6		2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4	2.6	2.6	S	2.4	2.4	2.4	2.4	2.6	2.3	24		
7		2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.5	2.8	2.8	2.8	S	3.1	3.1	3	3.1	3	3.1	3	3.1	24		
8		3	3	3	3	2.9	2.9	2.9	2.9	2.8	2.9	2.7	2.8	2.7	2.4	2.3	2.2	2.1	S	2.1	2.1	2.2	2.1	2.2	2.2	2.2	3.0	2.6	24	
9		2.1	2.1	2.2	2.2	2.1	2.2	2.1	2	1.9	2	1.9	1.9	1.9	1.9	1.9	S	2	2	2	2	2	2	2	2	2	2.2	2.0	24	
10		2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	S	2.1	2.1	2.1	2	2	2.1	2	2.1	2	2.1	2.2	2.1	24
11		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2	1.9	S	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.0	24	
12		2.1	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2	S	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.0	24	
13		2.1	2	2	2	2	2	2.1	2	2	2	2	2.1	S	2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.1	24	
14		2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	S	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2	2.1	2.1	2.3	2.2	24	
15		2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	S	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2.2	2.1	24	
16		2	2	2	2	2	2	2	2	2	S	2	2	2	1.9	1.9	1.9	1.9	1.9	2	2	2	2	2	1.9	1.9	2.0	2.0	24	
17		1.9	1.9	1.9	1.9	1.9	1.9	1.9	S	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	24
18		2.3	2.1	2.2	2.2	2.2	2.3	2.2	S	2.1	2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	24	
19		2.2	2.2	2.2	2.2	2.2	2.1	S	2.2	2.2	2.2	2.2	2.2	2.2	2.2	C	C	C	C	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.2	24		
20		2.2	2.2	2.2	2.2	2.2	S	2.3	2.3	2.4	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.2	2.2	2.3	2.4	2.5	2.4	2.3	2.2	2.5	2.3	2.4	24	
21		2.3	2.1	2.1	2.2	S	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.5	2.6	2.7	2.8	2.6	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.8	2.4	24	
22		2.2	2.2	2.2	S	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.5	2.6	2.7	2.6	2.6	2.7	2.6	2.5	2.5	2.8	2.6	2.8	2.4	24		
23		2.6	2.6	S	2.6	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2.3	2.3	2.1	2.2	2.2	2.2	2.1	2.2	2.6	2.4	2.4	24		
24		2.1	S	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	24	
25		S	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	S	2.2	2.1	24		
26		2	2.1	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.4	2.6	S	2.5	2.6	2.2	24	
27		2.4	2.4	2.5	2.6	2.6	2.5	2.3	2.3	2.2	2.2	2.4	2.4	2.3	2.3	2.3	2.4	2.3	2.4	2.5	2.5	2.4	S	2.2	2.2	2.6	2.4	24		
28		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	S	2.5	2.7	2.7	2.7	2.2	24		
HOURLY MAX		3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.8	2.9	2.7	2.8	2.7	2.5	2.8	2.8	2.8	2.8	2.7	3.1	3.1	3.0	3.1	3.0					
HOURLY AVG		2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

24 AVERAGES FOR FEBRUARY 2013



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	638					
MAXIMUM 1-HR AVERAGE:	3.1	PPM	@ HOUR(S)	20,22	ON DAY(S)	7
MAXIMUM 24-HR AVERAGE:	2.6	PPM			ON DAY(S)	7,8
					VAR- VARIOUS	
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	0.22		MONTHLY AVERAGE:	2.21	PPM	

01 Hour Averages



— LICA31 THC PPM

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST																										DAILY	24-HOUR	
HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	MAX.	AVG.	RDGS.
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00				
DAY																												
1	2.7	S	2.8	2.5	2.3	2.4	2.4	2.4	3.2	2.9	2.4	2.4	2.3	2.4	2.3	2.4	2.4	2.3	2.3	2.3	2.4	2.3	2.1	2.1	3.2	2.4	24	
2	S	2	2.1	2.1	2.1	2.1	2.4	2.3	2.4	X	2.1	X	2.1	2.5	2.2	2.3	2.1	2.1	2.1	2.1	2.1	3.6	2.9	S	3.6	2.3	22	
3	2.5	2.7	2.8	2.6	2.7	2.7	2.8	2.9	3	2.7	2.7	2.8	2.5	2.7	3	3	3.3	2.9	2.9	3	3.3	3.4	S	2.9	3.4	2.9	24	
4	2.9	2.8	2.8	2.7	2.5	2.4	2.3	2.1	2	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	S	2.6	2	2.9	2.3	24		
5	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.7	2.5	2.1	2.1	2.9	2.7	2.1	2.2	2.2	2.3	S	2.3	2.1	2.4	2.9	2.2	24	
6	2.6	2.9	2.5	2.3	2.2	2.6	2.6	2.7	2.4	2.7	2.5	2.8	2.6	2.7	2.8	2.7	2.8	2.7	2.6	S	2.4	2.4	2.4	2.5	2.9	2.6	24	
7	2.5	3.7	2.5	2.6	2.6	2.6	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.8	3.2	3.3	2.8	3.5	S	3.2	3.1	3.1	3.1	3.1	3.7	2.8	24	
8	3	3	3	3.1	3	3	3	2.9	2.9	3	2.9	2.8	2.7	2.5	2.4	2.2	2.2	S	2.2	2.2	2.4	2.2	2.2	2.2	3.1	2.7	24	
9	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2	2.1	2.1	2	2.1	2	2.1	2	2.1	S	2	2	2	2	2	2.1	2.1	2.2	2.1	24	
10	2.1	2.1	2.1	2.2	2.1	2.3	2.4	3.2	2.9	2.1	2.2	2.2	2.1	2.1	2.1	S	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.2	2.2	24	
11	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2	2	2	2.1	2.1	2.1	S	2.2	2.2	2.2	2.1	2.1	2.1	2.3	2.1	2.1	2.3	2.1	24	
12	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	S	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2.1	2.1	2.1	2.1	24	
13	2.1	2.1	2	2	2	2.2	2.2	2.2	2.2	2.3	2.5	2.1	S	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.5	2.4	2.5	2.6	2.6	2.2	24	
14	2.7	2.6	2.5	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	S	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.4	2.2	2.7	2.3	24	
15	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	S	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	24	
16	2	2.1	2	2	2	2	2	2.1	2.1	S	2	2	2	1.9	2	2.2	2.4	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.4	2.1	24	
17	2	2.1	2	2	1.9	1.9	1.9	2	S	2	2	2	2	2.2	2.1	2.1	2.1	2.3	2.1	2.1	2.1	2.1	2.2	2.7	2.7	2.1	24	
18	2.8	2.6	2.9	3.3	3.1	2.8	2.8	S	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.3	2.4	2.3	2.3	2.2	2.3	2.3	2.3	3.3	2.4	24	
19	2.3	2.2	2.3	2.3	2.2	2.2	S	3	2.4	2.4	2.4	2.2	2.2	C	C	C	C	2.2	2.2	2.3	2.3	2.3	2.3	3	2.3	24		
20	2.2	2.2	2.3	2.3	2.3	S	2.3	2.5	2.5	2.5	2.5	2.5	2.4	2.3	2.6	2.2	2.2	2.2	2.3	2.6	2.6	2.5	2.4	2.3	2.6	2.4	24	
21	2.3	2.3	2.1	2.2	S	2.2	2.2	2.2	2.2	2.2	2.4	2.4	X	2.7	2.7	2.8	2.8	2.7	2.6	2.5	2.4	2.4	2.4	2.3	2.8	2.4	23	
22	2.3	2.3	2.3	S	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.7	2.8	2.7	2.8	2.7	2.7	2.7	2.6	2.5	3.2	3.6	3.5	3.6	2.6	24	
23	3.1	3.4	S	7.2	4.3	3.1	2.9	2.9	2.7	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.4	2.2	2.3	2.3	2.4	2.4	2.4	2.3	7.2	2.9	24	
24	2.4	S	2	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.1	24	
25	S	2.4	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	S	2.5	2.2	24	
26	2.1	2.2	2.3	2.3	2.4	2.3	2.3	2.7	2.5	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.5	2.7	S	2.6	2.7	24	
27	2.5	2.5	2.5	2.6	2.6	2.6	2.5	2.3	2.2	2.3	2.4	2.5	2.3	2.3	2.4	2.4	2.4	2.5	2.6	2.5	2.4	S	2.2	2.2	2.6	2.4	24	
28	2.2	2.2	2.2	2.2	2.1	2.1	2.2	3.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	Y	2.4	S	2.6	2.7	2.9	3.2	2.3	23
HOURLY MAX	3	4	3	7	4	3	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3	4	4	4				
HOURLY AVG	2.4	2.4	2.3	2.5	2.4	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.2	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4				

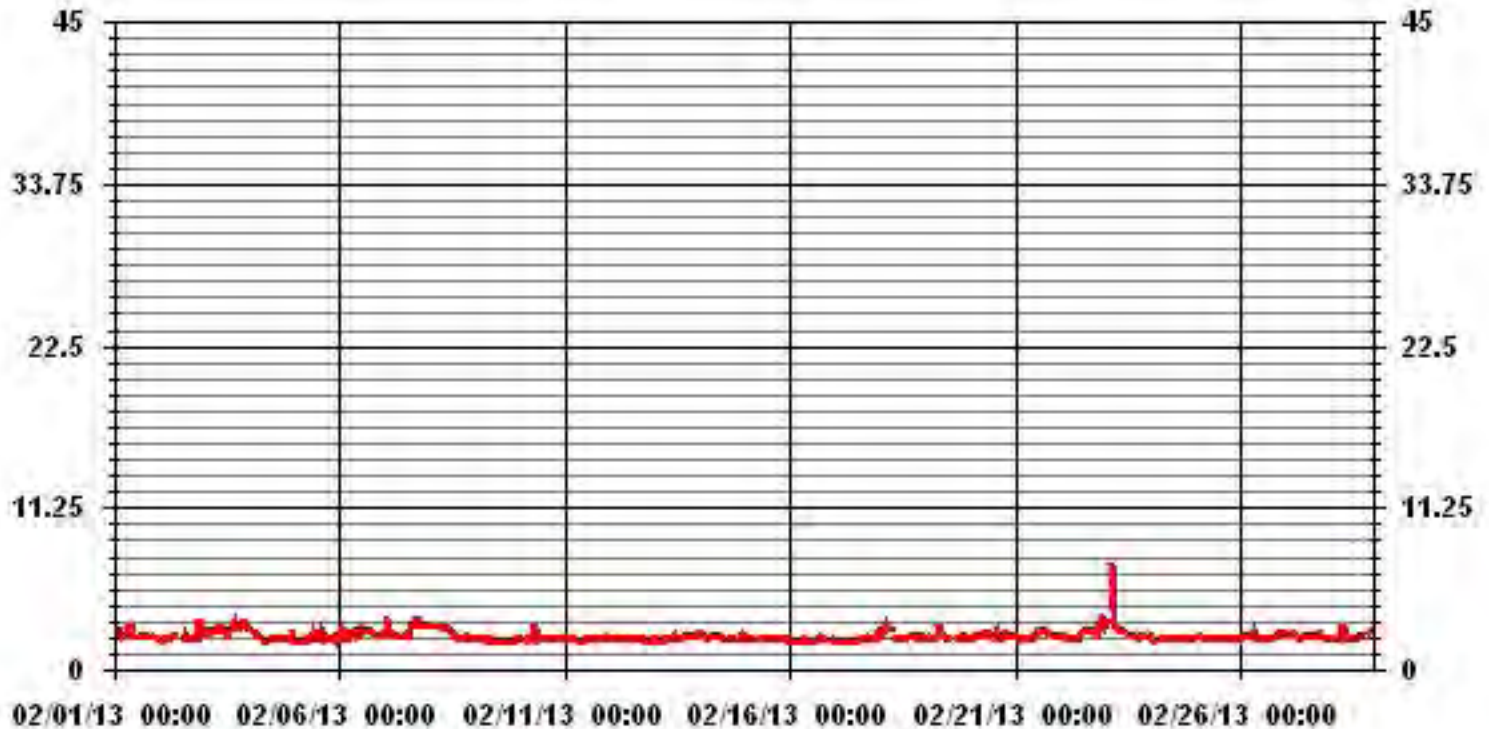
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	634					
MAXIMUM INSTANTANEOUS VALUE:	7.2	PPM	@ HOUR(S)	3	ON DAY(S)	23
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	668 HRS		
MONTHLY CALIBRATION TIME:	4	HRS				
STANDARD DEVIATION:	0.38					

01 Hour Averages



LICA31
 THC / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 31
 Site Name : LICA31
 Parameter : THC
 Units : PPM

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 3.0	3.29	1.88	2.82	1.88	5.01	6.26	8.30	5.64	8.77	12.53	6.58	8.46	8.30	6.26	5.64	6.89	98.58
< 10.0	.00	.00	.00	.00	.00	.00	.15	.31	.15	.47	.15	.15	.00	.00	.00	.00	1.41
< 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	3.29	1.88	2.82	1.88	5.01	6.26	8.46	5.95	8.93	13.00	6.73	8.62	8.30	6.26	5.64	6.89	

Calm : .00 %

Total # Operational Hours : 638

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 3.0	21	12	18	12	32	40	53	36	56	80	42	54	53	40	36	44	629
< 10.0							1	2	1	3	1	1					9
< 50.0																	
>= 50.0																	
Totals	21	12	18	12	32	40	54	38	57	83	43	55	53	40	36	44	

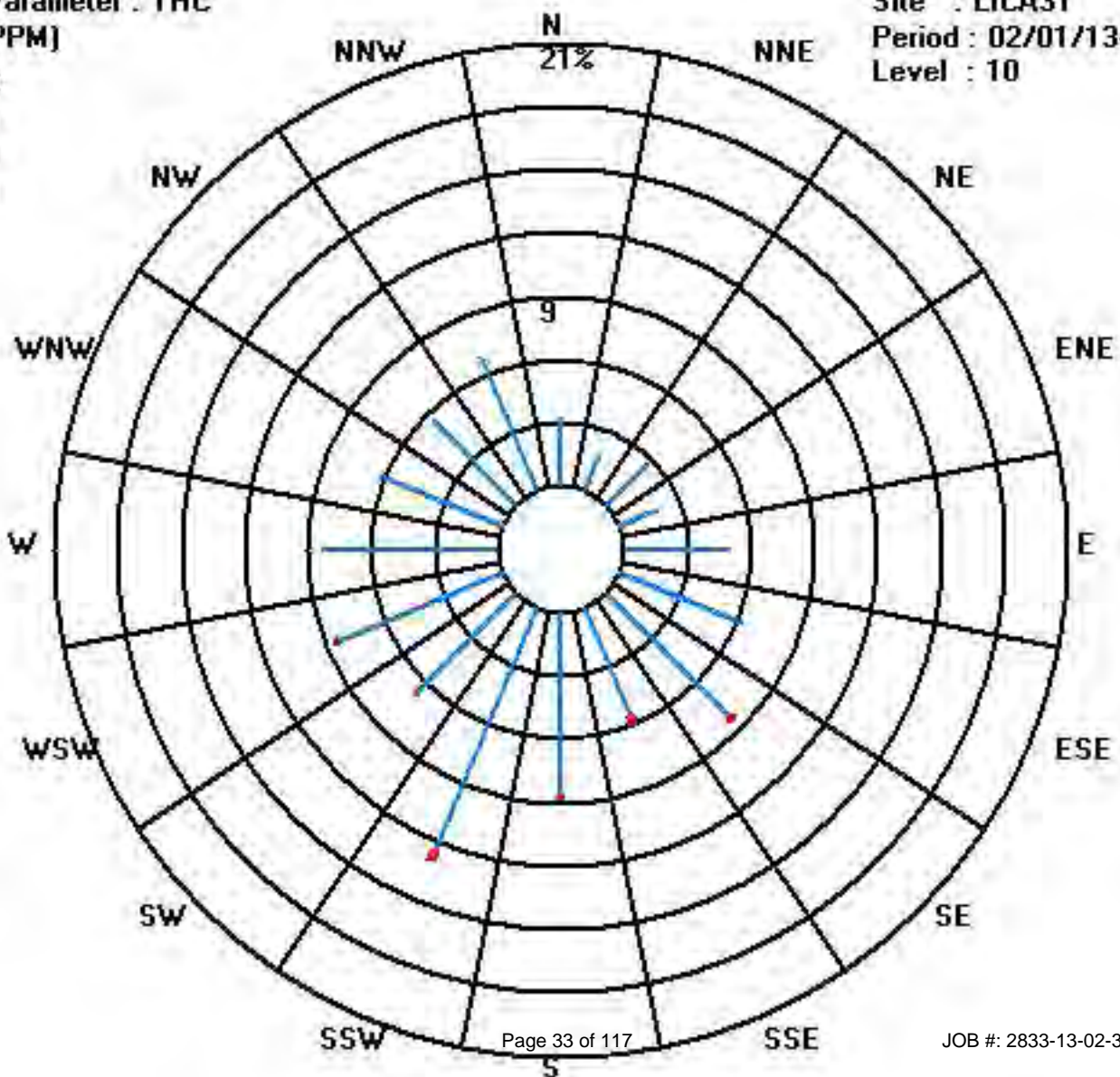
Calm : .00 %

Total # Operational Hours : 638

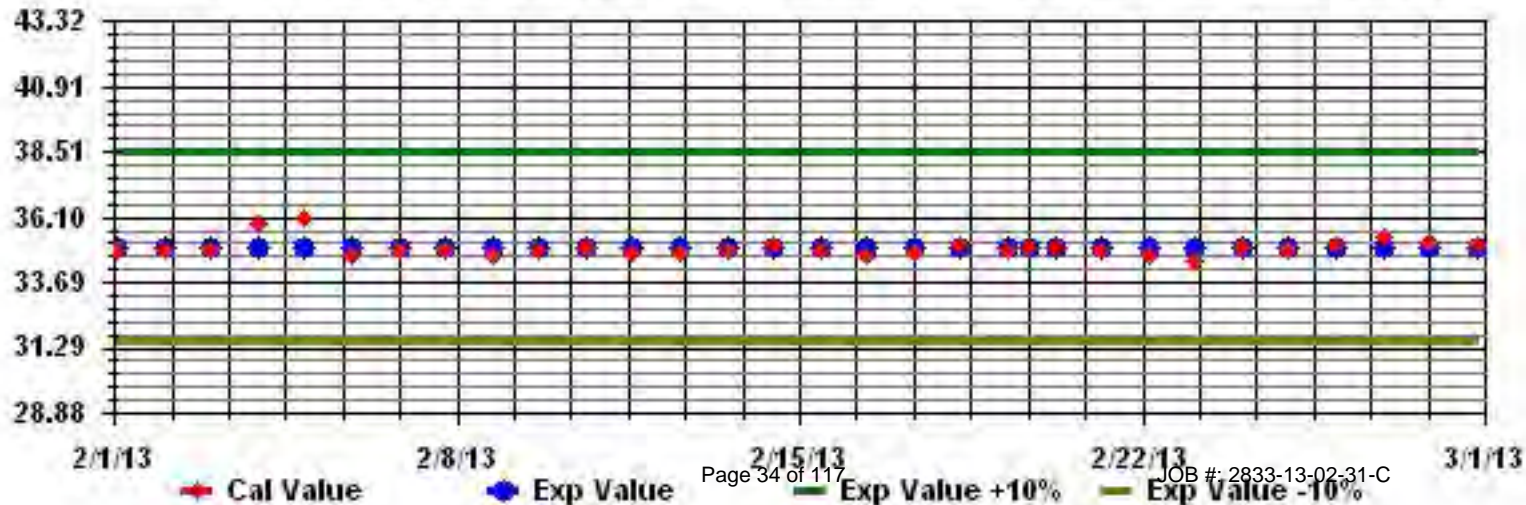
Class Limits (PPM)

Period : 02/01/13-02/28/13

Level : 10



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



Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

OZONE (O₃) hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	17	S	15	14	18	21	19	19	20	21	21	22	23	24	24	23	21	22	21	17	14	25	30	36	36	21.2	24	
2	S	39	36	35	36	34	32	31	30	30	30	30	30	30	31	31	31	31	30	30	31	34	32	S	39	32.0	24	
3	31	29	29	29	27	26	26	27	27	28	28	28	28	28	28	29	28	27	27	27	26	27	S	27	31	27.7	24	
4	28	28	28	28	29	29	31	34	36	37	37	38	39	39	39	38	37	38	39	40	40	S	40	39	40	35.3	24	
5	39	39	38	38	36	36	37	35	29	29	30	30	31	34	37	37	36	35	32	32	S	34	34	35	39	34.5	24	
6	34	32	29	28	28	28	28	28	28	29	28	28	29	30	30	30	30	33	33	S	31	31	32	32	34	30.0	24	
7	32	32	32	30	30	29	30	31	33	34	35	36	36	36	35	34	32	31	S	26	26	27	27	26	36	31.3	24	
8	27	28	28	27	27	27	25	21	17	17	20	21	21	26	30	33	35	S	37	35	30	28	26	27	37	26.7	24	
9	29	28	26	24	25	26	28	35	37	37	38	37	38	38	40	40	S	37	36	37	37	38	38	38	40	34.2	24	
10	37	37	36	35	34	34	33	33	32	31	31	31	33	34	35	S	36	38	37	38	37	37	37	36	38	34.9	24	
11	34	33	33	32	31	30	30	35	36	38	39	40	42	43	S	43	44	43	43	42	42	42	42	41	44	38.2	24	
12	41	41	42	41	41	41	41	40	40	40	41	41	42	S	42	41	42	42	40	39	40	40	40	36	42	40.6	24	
13	34	34	34	35	34	35	34	33	33	32	33	30	S	38	39	34	29	31	31	34	36	35	34	32	39	33.7	24	
14	32	32	33	32	35	37	36	35	35	36	37	S	37	37	38	37	36	35	36	36	36	37	37	32	38	35.4	24	
15	31	33	34	33	31	29	31	29	29	30	S	35	40	41	39	38	38	37	35	37	36	35	35	38	41	34.5	24	
16	38	38	38	37	37	36	36	35	35	S	36	39	39	41	43	44	44	43	40	37	40	42	41	40	44	39.1	24	
17	39	38	37	34	32	30	29	28	S	25	27	31	29	28	28	29	28	27	28	28	30	32	32	32	39	30.5	24	
18	33	33	33	34	34	34	35	S	35	35	35	35	35	36	35	35	35	35	35	35	35	34	33	33	33	36	34.3	24
19	33	33	33	34	34	35	S	36	35	35	36	36	37	39	39	38	38	C	37	38	37	37	38	38	39	36.2	24	
20	39	39	38	38	38	S	37	36	C	C	C	C	C	C	C	C	37	36	35	36	35	36	36	37	39	36.9	24	
21	36	39	40	39	S	35	33	33	33	33	33	33	33	34	33	32	31	31	31	31	32	33	33	33	40	33.7	24	
22	33	34	34	S	36	37	38	37	37	37	37	37	37	37	38	37	36	34	33	33	33	33	32	32	32	38	35.1	24
23	31	31	S	31	31	31	31	30	30	29	30	30	30	35	39	37	36	35	28	25	25	26	28	30	39	30.8	24	
24	31	S	32	31	30	27	27	27	27	27	29	31	35	38	39	40	41	40	39	38	37	36	34	33	33	41	33.7	24
25	S	33	35	34	36	37	37	37	37	37	37	38	39	40	41	42	42	43	42	42	41	42	41	41	S	43	39.0	24
26	38	36	35	33	32	31	31	31	33	37	39	39	39	40	40	41	42	42	40	38	37	36	S	37	42	36.8	24	
27	38	38	38	37	37	36	38	38	40	40	40	40	40	40	41	41	42	43	42	40	41	43	S	45	45	45	40.1	24
28	44	44	44	44	44	44	44	43	43	41	40	39	39	39	38	38	36	32	31	34	S	34	33	32	44	39.1	24	
HOURLY MAX	44	44	44	44	44	44	44	43	43	41	41	41	42	43	43	44	44	43	43	42	43	42	45	45				
HOURLY AVG	33.8	34.7	33.7	32.9	32.7	32.4	32.5	32.5	32.6	32.6	33.5	33.8	34.8	35.7	36.2	36.3	35.6	35.3	34.6	34.2	34.1	34.1	35.0	34.5				

STATUS FLAG CODES

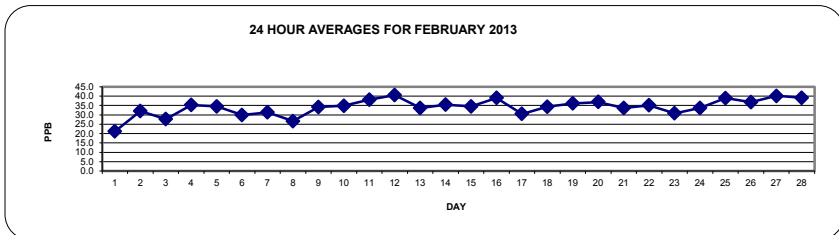
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	633					
MAXIMUM 1-HR AVERAGE:	45	PPB	@ HOUR(S)	22,23	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	40.6	PPB			ON DAY(S)	12
					VAR-VARIOUS	
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	5.40		MONTHLY AVERAGE:	34.1	PPB	



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

OZONE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	17	S	15	15	23	23	20	20	21	23	23	25	25	25	24	23	23	23	19	15	32	32	39	39	39	22.8	24
2	S	40	37	35	36	35	33	32	31	31	30	30	31	32	32	31	31	31	30	32	36	33	S	40	40	32.7	24
3	31	30	29	29	28	26	26	27	28	28	28	28	29	29	29	29	29	27	27	27	28	S	28	31	28.1	24	
4	28	28	28	29	29	30	33	35	37	37	38	39	39	39	39	38	38	39	40	40	41	S	40	40	41	35.8	24
5	40	39	38	39	38	37	37	37	31	30	37	37	33	36	39	39	36	35	34	33	S	34	35	35	40	36.0	24
6	35	34	31	29	28	28	28	29	29	29	29	30	30	30	30	30	33	33	S	32	31	32	32	32	35	30.4	24
7	32	32	32	31	30	30	31	32	34	35	35	36	36	36	35	34	33	32	S	28	26	28	27	27	36	31.8	24
8	27	28	28	28	28	27	26	23	18	18	21	21	23	29	32	34	36	S	37	37	32	29	27	28	37	27.7	24
9	29	29	27	25	27	26	33	35	37	37	38	38	38	39	41	41	S	38	37	37	37	38	38	38	41	34.9	24
10	38	37	36	35	35	34	33	33	32	32	32	32	34	34	36	S	38	38	37	38	38	37	37	36	38	35.3	24
11	35	34	33	32	31	31	32	37	37	39	40	41	42	43	S	44	44	44	43	43	42	43	43	41	44	38.9	24
12	41	42	42	42	42	41	41	40	40	40	41	42	42	S	42	42	43	43	42	40	40	41	40	38	43	41.2	24
13	35	34	34	35	35	35	34	33	33	33	34	31	S	39	40	38	30	32	32	35	36	36	35	33	40	34.4	24
14	32	33	33	33	37	37	36	36	36	36	38	S	38	39	40	38	37	36	36	38	38	38	39	34	40	36.4	24
15	33	34	34	33	32	30	32	30	29	32	S	38	41	41	40	39	39	38	36	38	37	36	36	38	41	35.5	24
16	39	39	38	38	38	37	37	36	35	S	37	40	41	42	44	44	44	43	38	41	42	41	41	44	44	40.0	24
17	39	38	37	35	33	31	30	28	S	25	31	34	29	28	28	29	28	28	28	28	32	32	33	33	39	31.2	24
18	33	33	34	34	34	34	35	S	35	36	35	35	36	36	35	35	36	35	35	35	35	34	33	33	36	34.6	24
19	34	34	34	34	35	36	S	36	35	35	36	37	38	39	39	39	38	C	37	38	39	38	38	39	39	36.7	24
20	39	39	39	38	38	S	37	C	C	C	C	C	C	C	C	C	37	37	36	36	36	36	37	37	39	37.3	24
21	37	40	40	39	S	36	34	33	33	33	33	33	34	34	34	33	32	31	32	31	32	33	33	34	40	34.1	24
22	34	34	34	S	37	38	38	38	37	37	37	37	38	38	38	36	34	34	34	33	33	32	32	32	38	35.4	24
23	31	31	S	31	31	31	31	30	30	30	30	30	32	38	40	40	38	38	31	26	26	27	29	31	40	31.8	24
24	31	S	32	32	30	28	27	27	27	30	33	37	39	40	40	41	40	39	39	38	36	35	34	33	41	34.3	24
25	S	35	35	36	37	37	37	38	37	38	39	39	41	42	43	43	43	42	42	42	42	42	42	S	43	39.6	24
26	39	37	36	34	33	31	32	31	36	39	40	40	40	40	41	42	42	42	41	39	37	37	S	37	42	37.7	24
27	38	38	38	37	37	37	38	39	40	40	40	40	41	41	42	42	43	43	41	42	43	S	45	45	45	40.4	24
28	44	44	45	45	44	44	44	43	43	42	41	40	40	39	39	38	37	34	Y	34	S	34	33	33	45	40.0	23
HOURLY MAX	44	44	45	45	44	44	44	43	43	42	41	42	42	43	44	44	44	44	43	43	43	43	45	45			
HOURLY AVG	34.3	35.2	34.0	33.4	33.6	33.0	33.1	33.0	33.1	33.2	34.5	34.9	35.7	36.4	37.0	37.1	36.3	36.0	35.7	34.9	34.8	35.0	35.5	35.2			

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	631				
MAXIMUM INSTANTANEOUS VALUE:	45	PPB	@ HOUR(S)	VAR	ON DAY(S) 27,28
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS
MONTHLY CALIBRATION TIME:	10	HRS			
STANDARD DEVIATION:	5.32				

01 Hour Averages



LICA31
O3_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : O3_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 50	3.31	1.89	2.84	1.89	5.05	6.31	9.00	5.37	8.37	13.11	6.79	8.68	8.37	6.31	5.68	6.95	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	3.31	1.89	2.84	1.89	5.05	6.31	9.00	5.37	8.37	13.11	6.79	8.68	8.37	6.31	5.68	6.95	

Calm : .00 %

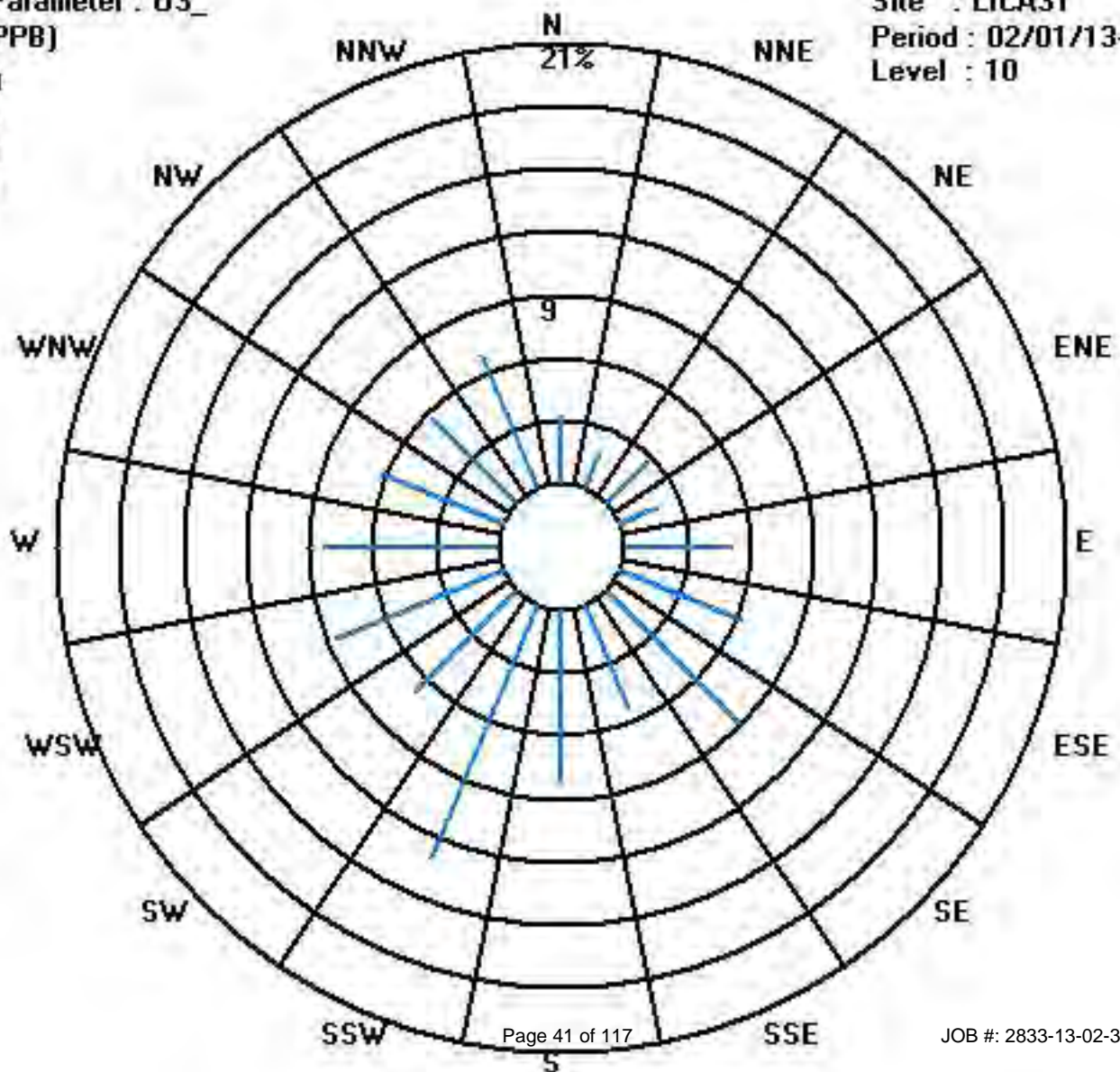
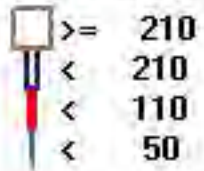
Total # Operational Hours : 633

Distribution By Samples

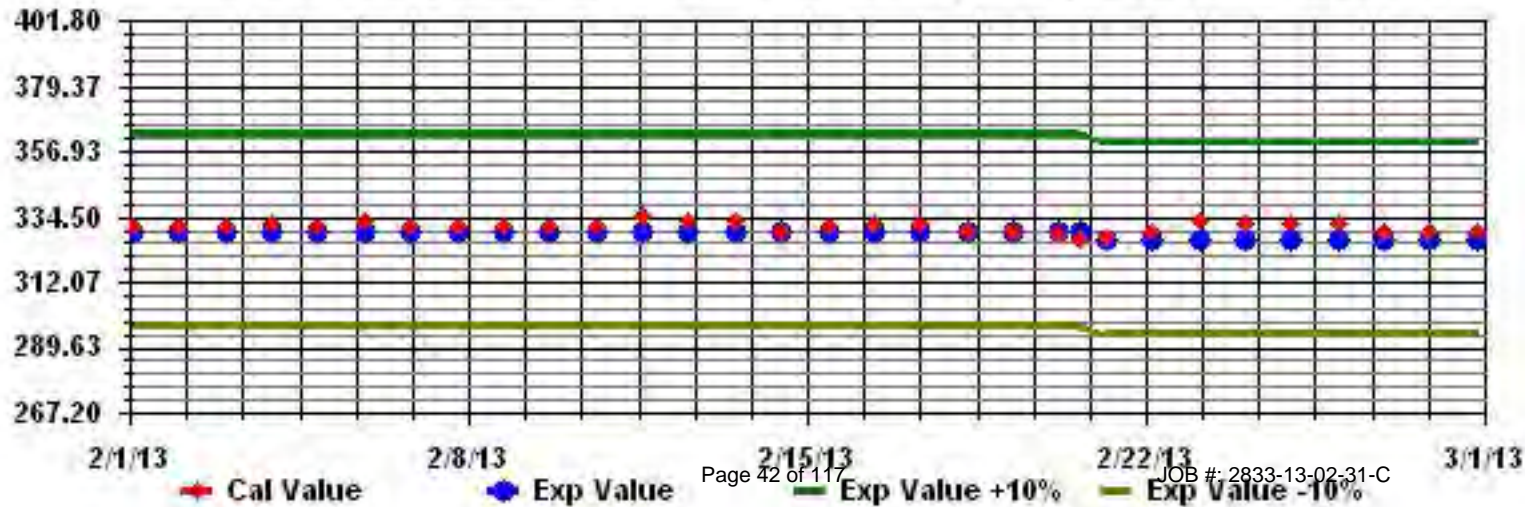
Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 50	21	12	18	12	32	40	57	34	53	83	43	55	53	40	36	44	633
< 110																	
< 210																	
>= 210																	
Totals	21	12	18	12	32	40	57	34	53	83	43	55	53	40	36	44	

Calm : .00 %

Total # Operational Hours : 633



Calibration Graph for Site: LICA31 Parameter: 03_ Sequence: 03 Phase: SPAll



Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

NITROGEN DIOXIDE hourly averages in ppb

MST

DAY	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
1	8.2	S	8.4	8.9	6.9	5.1	5.6	5.1	4.7	4	3.5	4.1	3.9	3	3.5	4.6	6	5.9	6	8.4	11.2	7.5	4.7	2	11.2	5.7	24	
2	S	0.7	0.4	0.2	0	0.1	0	0.2	0.3	0.3	0.3	0.4	0.2	0.5	0.4	0.6	1	1	1.5	1.5	1.2	0.8	1.1	S	1.5	0.6	24	
3	2	3	3	2.6	2.6	2.6	2.3	1.7	1.7	1.8	2.1	2.1	2	2.1	2.1	2.3	2.7	3.4	3	3.7	4.1	4.8	S	4.6	4.8	2.7	24	
4	4.4	4.5	4.5	4.5	4.5	4.9	4.3	2.6	1.6	1.4	1.3	0.5	0.2	0.7	0.6	0.6	0.5	0.5	0.4	0.3	S	0.4	0.3	4.9	1.9	24		
5	0.4	0.8	0.8	1	1.8	1.9	1.6	3.5	8.5	8.2	8	7.7	7.5	7.6	5.9	5.9	6.9	7.4	7.2	4.4	S	2.2	1.5	0.9	8.5	4.4	24	
6	0.8	1	1.2	1.2	1.1	0.9	0.9	0.9	1	1	1.4	1.7	1.6	1.9	2.2	2.4	3.3	3.7	4.2	S	4.3	4.4	3.2	2.8	4.4	2.0	24	
7	3	3.1	3.3	3.6	4.1	4.6	4.7	4.3	3.6	3	3.1	2.9	3	3.6	3.9	4.2	4.8	5	S	8.9	8.4	7	6.7	7	8.9	4.6	24	
8	6.3	5.1	4.7	5	4.7	4.7	6	10.1	14.7	15.1	14.2	14.1	15.4	11.3	7.8	5.9	5.2	S	3.9	5.1	9.7	10.7	11.5	10.2	15.4	8.8	24	
9	8.9	8.3	10	12	10.4	9.7	8	3.2	1.5	0.8	0.7	0.4	0.1	0	0	0	S	1	1.1	0.9	1	0.8	0.6	0.6	12.0	3.5	24	
10	0.6	0.6	0.7	0.6	0.5	1	1.5	1.2	1	1.4	1.7	1.9	1.6	1.5	1.8	S	1.4	1.4	1.8	1.6	2.2	3	3.2	3.7	3.7	1.6	24	
11	4.4	5.2	5.7	6.2	6.5	7.2	7.3	4.1	2.8	2.1	1.4	1	0.9	0.8	S	0.4	0.3	0.5	0.7	0.9	0.8	0.4	0.5	1.2	7.3	2.7	24	
12	0.9	0.5	0.4	0.3	0.6	0.4	0.1	0.3	0.4	0.4	0.5	0.3	0.1	S	0.5	0.8	1.3	1.2	2.9	3	2.2	2	2.2	3.7	3.7	1.1	24	
13	4.7	3.8	2.5	1.4	0.8	0.7	0.6	0.9	0.7	0.6	0.7	0.7	S	0.5	0.7	2.6	5	3.2	2.9	2	1.3	0.5	0.4	0.5	5.0	1.6	24	
14	0.4	0.3	0.3	0.2	0.2	0.3	0.5	0.8	1.2	1.5	1.7	S	3.1	4	3.2	3.9	4.8	6	5	3.8	3.7	2.7	2.5	5.8	6.0	2.4	24	
15	6.2	4.7	4.2	4.9	7.3	8.4	7.2	7.1	7.4	7.2	S	4.2	2.9	2.9	4.6	4.4	3.9	3.9	5.9	4	3.9	3.9	3.1	1	8.4	4.9	24	
16	0.6	0	0	0.5	0	0.3	0.4	1.1	1.6	S	2.7	1.7	2.2	1.4	0.7	0.5	0.6	0.8	3.1	5.9	2.5	0.8	0.7	0.7	5.9	1.3	24	
17	0.6	0.9	0.7	0.5	0.4	0.7	1.1	1.2	S	1.5	1.2	0.8	1.3	1.8	1.8	1.7	2.4	2.7	2.5	2.3	1	0.7	0.9	0.9	2.7	1.3	24	
18	0.6	0.5	0.6	0.5	0.3	0.1	0.2	S	1.3	1.1	1.2	1.2	1.3	1.3	1.2	1.7	2.3	2.8	2.4	2.1	2	2.4	2.6	2.5	2.8	1.4	24	
19	2.6	2.2	2.5	3	2.3	2	S	1.3	1.9	C	C	C	C	C	C	C	C	C	4.4	4.2	3.9	4	3.6	2.9	4.4	2.9	24	
20	2.4	2.2	2.5	2.3	2.5	S	1.8	1.9	2.7	C	C	C	C	C	2.2	2.2	2.3	2.4	3	4.1	4	4.3	3.9	3.1	2.6	4.3	2.8	24
21	2.8	1.9	1.3	1.4	S	2.2	2.4	2.3	2.2	2.2	2.6	2.9	3.1	3.5	4.3	5.4	6.2	6.5	5.7	5.9	4.9	4.3	4.3	4.1	6.5	3.6	24	
22	3.8	3.5	3.4	S	1.5	1.1	1.2	1.4	1.3	1.4	1.8	2.1	2.2	2.6	3.7	5.5	7.3	7.3	6.2	5.5	4.7	5.1	5.2	5.1	7.3	3.6	24	
23	5	4.9	S	3.3	3.3	3.1	3.3	3.3	3.5	3	3.1	3.6	3.9	3	2.4	3.4	3.8	1.4	1.4	0.9	0.6	0.5	0.1	0	5.0	2.6	24	
24	0	S	0.8	1.3	1.8	1.8	1.8	3.1	4.5	4.2	3.9	3.6	3.6	4.1	4.3	4.3	5.4	6.2	6.4	6.2	6.4	6.8	6.6	6.6	6.8	4.1	24	
25	S	5.8	4.7	4	2.5	2	1.4	1.5	1.3	1.2	1.2	0.8	0.5	0.5	0.8	0.6	0	0	0	0	0	0	0	S	5.8	1.3	24	
26	1.6	2.5	3.4	4.3	5.5	5.3	4.9	5	4.8	1.8	0.8	1	0.8	1.2	1	0.7	0.8	0.8	1.7	2.8	3.7	4.5	S	3.4	5.5	2.7	24	
27	2.7	2.8	2.7	2.8	3.2	3.1	2.3	2	1.4	1.7	1.8	1.7	1.6	1.6	1.8	1.8	2.1	2.7	3.7	3.5	2.8	S	1.4	1.5	3.7	2.3	24	
28	1.4	1.2	1.1	1.1	0.9	1.2	1.1	1.2	1.3	1.9	2.6	2.6	3.6	4.2	5.1	7.1	9.1	11.9	12.8	10.2	S	7.9	7.9	8.2	12.8	4.6	24	
HOURLY MAX	8.9	8.3	10.0	12.0	10.4	9.7	8.0	10.1	14.7	15.1	14.2	14.1	15.4	11.3	7.8	7.1	9.1	11.9	12.8	10.2	11.2	10.7	11.5	10.2				
HOURLY AVG	2.9	2.7	2.7	2.9	2.8	2.8	2.7	2.6	2.9	2.8	2.5	2.6	2.7	2.6	2.6	2.8	3.4	3.5	3.7	3.8	3.5	3.5	3.0	3.2				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

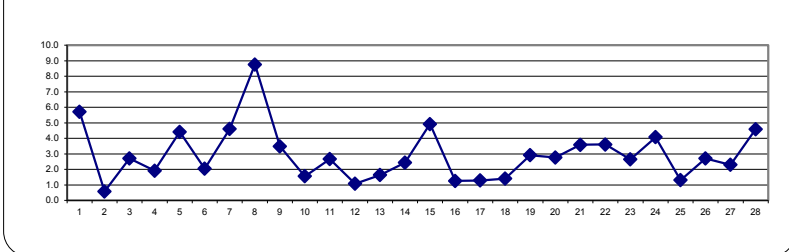
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR 159 PPB

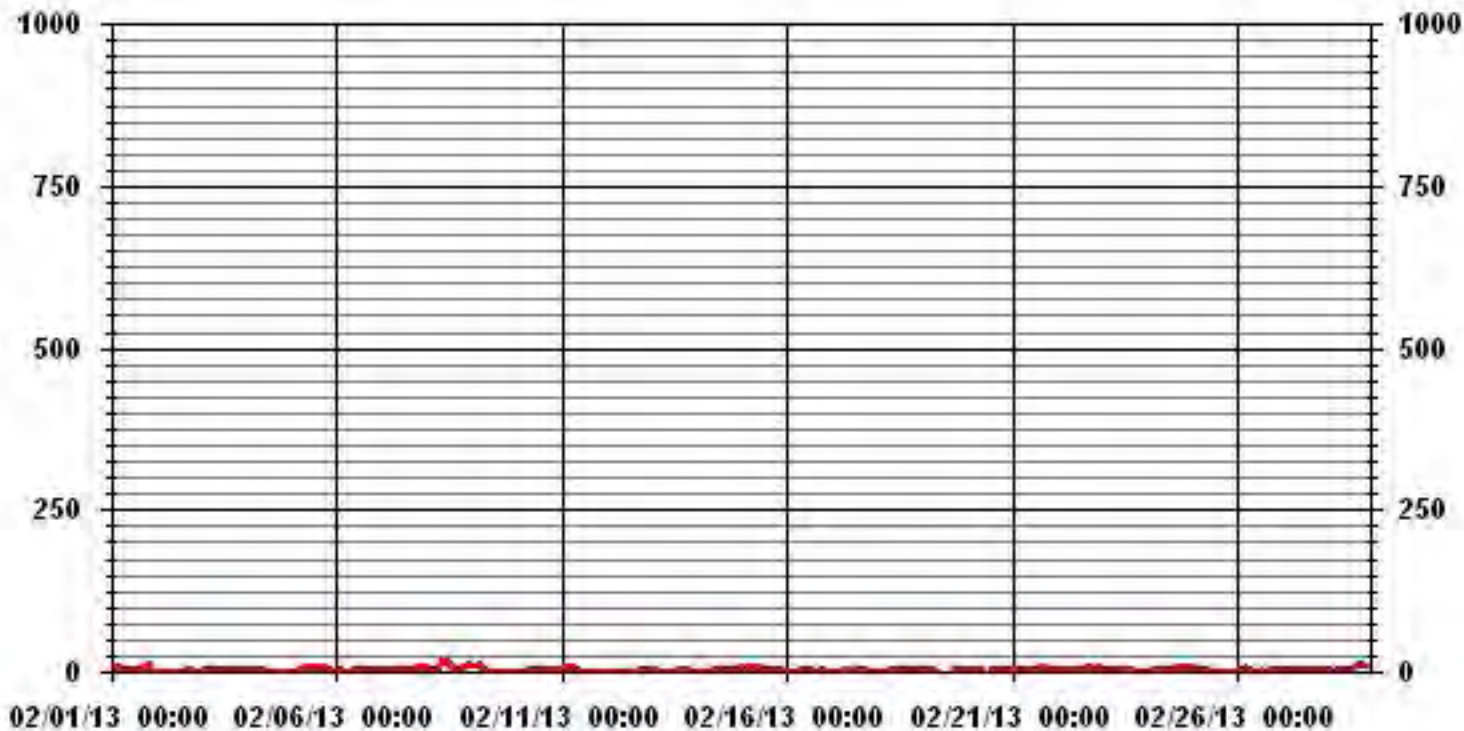
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	612					
MAXIMUM 1-HR AVERAGE:	15.4	PPB	@ HOUR(S)	12	ON DAY(S)	8
MAXIMUM 24-HR AVERAGE:	8.8	PPB			ON DAY(S)	8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	13	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	2.63		MONTHLY AVERAGE:	2.97	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																													
1		10	S	9.6	9.8	9.2	7	6.9	5.7	5.8	5	5.7	15.6	6.5	3.7	4.3	6.1	8.1	21.8	7.4	10.2	18.4	12.2	5.6	4.5	21.8	8.7	24	
2		S	1.2	1.1	0.7	0.6	0.8	1	1.3	2.4	2.5	1	2.6	1.4	2.1	1.8	2.2	12.9	1.8	2.2	2.1	2	1.6	1.8	S	12.9	2.1	24	
3		2.8	3.7	3.7	3.9	3.5	3.6	3	2.2	2.3	2.5	3.1	3	2.7	2.7	2.7	3	3.6	4.1	3.8	4.3	5	5.5	S	5.6	5.6	3.5	24	
4		5.1	5.1	5.3	5.1	5.3	6	5.6	4	2.6	2.2	2.2	1.4	1.3	1.3	1.4	1.4	1.8	1.5	1.3	1.3	1.2	S	1.1	1	22	3.7	24	
5		1.3	1.5	2.5	1.6	2.8	2.9	2.2	7.2	18.3	18.4	14	10.8	8.9	9	7.3	7.1	7.8	9	8.8	5.7	S	2.9	2.8	1.7	18.4	6.7	24	
6		1.6	1.7	2.3	2.3	2.2	2.1	1.5	1.7	1.9	1.9	2.1	2.5	2.2	2.7	3	2.9	4.8	4.8	4.9	S	5.2	5.3	4.3	3.8	5.3	2.9	24	
7		3.9	4	4.4	4.9	5.2	5.4	6.1	5	4.6	4	3.8	3.7	4.1	4.8	4.6	5.3	5.5	6	S	11.1	9.9	8.1	7.5	9.9	11.1	5.7	24	
8		7.2	6	5.3	6.1	5.6	5.7	9.7	14	30.5	16.8	15.3	15.8	16.9	14.8	9.7	7.1	6.1	S	4.6	8	12	11.7	12.4	11.3	30.5	11.0	24	
9		9.6	8.9	11.3	13.3	12.4	10.6	9.7	4.9	3.1	1.7	1.2	1.2	0.9	0.8	0.6	0.4	S	1.3	1.2	1	1.1	0.7	0.9	0.9	13.3	4.2	24	
10		0.7	0.8	0.9	0.9	0.7	1.3	3.6	1.3	1.5	3.5	3.9	2.5	2.6	1.9	1.9	S	3	2.5	3.1	2.4	3.5	3.9	4.2	4.9	4.9	2.4	24	
11		5.7	6.2	6.6	7.1	7.7	8.1	8.7	6.8	4.9	3	2.2	3.9	1.8	1.7	S	0.8	0.9	1.6	1.8	6.8	2.1	1.1	1.5	1.8	8.7	4.0	24	
12		1.5	1.3	1	0.9	1.7	1	0.8	0.9	1.6	1.2	1.5	1.1	0.9	S	1.1	1.6	2.3	7.5	4.1	4.1	3.5	2.6	3.1	4.6	7.5	2.2	24	
13		5.6	5	3.7	2.7	1.8	1.5	1.6	1.5	1.3	1	1.3	1.7	S	1.2	1.6	5.9	6.6	4.3	5.2	3.2	2.6	1.6	1.4	1.4	6.6	2.8	24	
14		1.2	1.4	1.1	1.1	1.1	1.3	1.4	1.8	2.4	2.6	9.1	S	22.6	5.5	5.3	5.4	6	11	6	5.6	5.2	4.1	4.9	7.2	22.6	4.9	24	
15		7.7	5.8	4.9	6.2	8.5	9.1	9	8	8.3	8.2	S	5.3	10.3	3.8	5.9	5.4	5	6	7	5.4	5.6	5.4	3.9	2.3	10.3	6.4	24	
16		1.2	0.9	0.8	1.1	1.1	1	1.3	2.1	2.6	S	3.9	2.8	7.4	2.1	7.4	1.1	1.5	1.4	7.1	7.4	4.9	1.6	1.4	1.4	7.4	2.8	24	
17		1.5	1.7	1.4	1.1	1.1	1.6	1.7	1.7	S	2.4	2.4	1.9	2.4	2.9	3	2.8	3.8	4.3	3.8	3.5	3.1	1.7	2.2	2.1	4.3	2.4	24	
18		1.6	1.6	1.6	1.6	1.6	1	1.1	S	1.8	1.4	1.8	2.1	2.4	1.9	1.8	3.2	3.1	12	3.2	2.9	2.7	3	3.2	3.5	12	2.6	24	
19		3.4	3	3.9	3.8	3	2.6	S	2.2	C	C	C	C	C	C	C	C	C	C	C	4.6	4.5	4.4	4.2	4	3.7	4.6	3.6	24
20		2.9	2.7	2.5	2.6	2.9	S	2.6	2.6	3.4	C	C	C	C	2.9	3.5	3.2	3.4	4	5.3	5	5.3	4.9	4.4	3.7	5.3	3.6	24	
21		3.8	3.1	2.1	2.3	S	3.1	3	3	2.9	2.9	3.5	3.8	3.8	4.7	5.1	6.5	7	7.1	6.8	6.8	5.9	5	4.9	4.8	7.1	4.4	24	
22		4.6	4.5	4	S	2	1.9	2	2.3	2	2.5	2.5	2.7	2.8	3.3	4.9	6.5	8	8.3	7.5	6.7	5.8	5.8	6.3	5.8	8.3	4.5	24	
23		5.8	5.8	S	4.3	4.1	3.9	3.9	4.7	4.2	3.8	3.8	4.2	5.3	4	3.1	4.5	5	2.6	2.4	1.9	1.6	1.5	1.2	0.9	5.8	3.6	24	
24		0.9	S	1.4	2.2	2.3	2.8	2.4	4.6	5.8	5.4	4.8	4.2	4.5	4.8	4.9	5.2	6.5	7	7.2	7.3	7.3	7.4	7.1	7.4	7.4	4.9	24	
25		S	6.2	5.1	4.6	3.1	2.7	2.3	2.1	1.8	1.8	1.6	1	1	1	1.3	1.4	0.3	0.2	0.2	0.3	0.3	0.3	0.8	0.7	S	6.2	1.8	24
26		3.3	3.7	4.5	5.5	6.6	6.4	6	6	6.3	3.8	1.7	2.1	1.7	2.2	1.9	1.7	1.7	1.9	2.8	4.1	4.7	5.4	S	4.3	6.6	3.8	24	
27		3.2	3.4	3.3	3.4	3.9	3.7	3.4	2.8	2	2.4	2.6	2.4	2.3	2.3	2.5	2.5	2.8	3.6	4.5	3.7	S	2	2.1	4.5	3.0	24		
28		2	1.6	1.8	1.6	1.6	1.8	1.8	1.8	1.8	1.8	3	3.3	3.2	4.3	4.6	6.6	8.3	11	13.5	Y	30.1	S	8.5	8.7	9.3	30.1	5.9	23
HOURLY MAX		10.0	8.9	11.3	13.3	12.4	10.6	9.7	14.0	30.5	18.4	22.0	15.8	22.6	14.8	9.7	8.3	12.9	21.8	8.8	30.1	18.4	12.2	12.4	11.3				
HOURLY AVG		3.8	3.5	3.6	3.7	3.8	3.7	3.8	3.8	4.9	4.2	4.7	4.1	4.8	3.6	3.7	3.9	4.9	5.7	4.5	5.8	4.9	4.5	3.9	4.2				

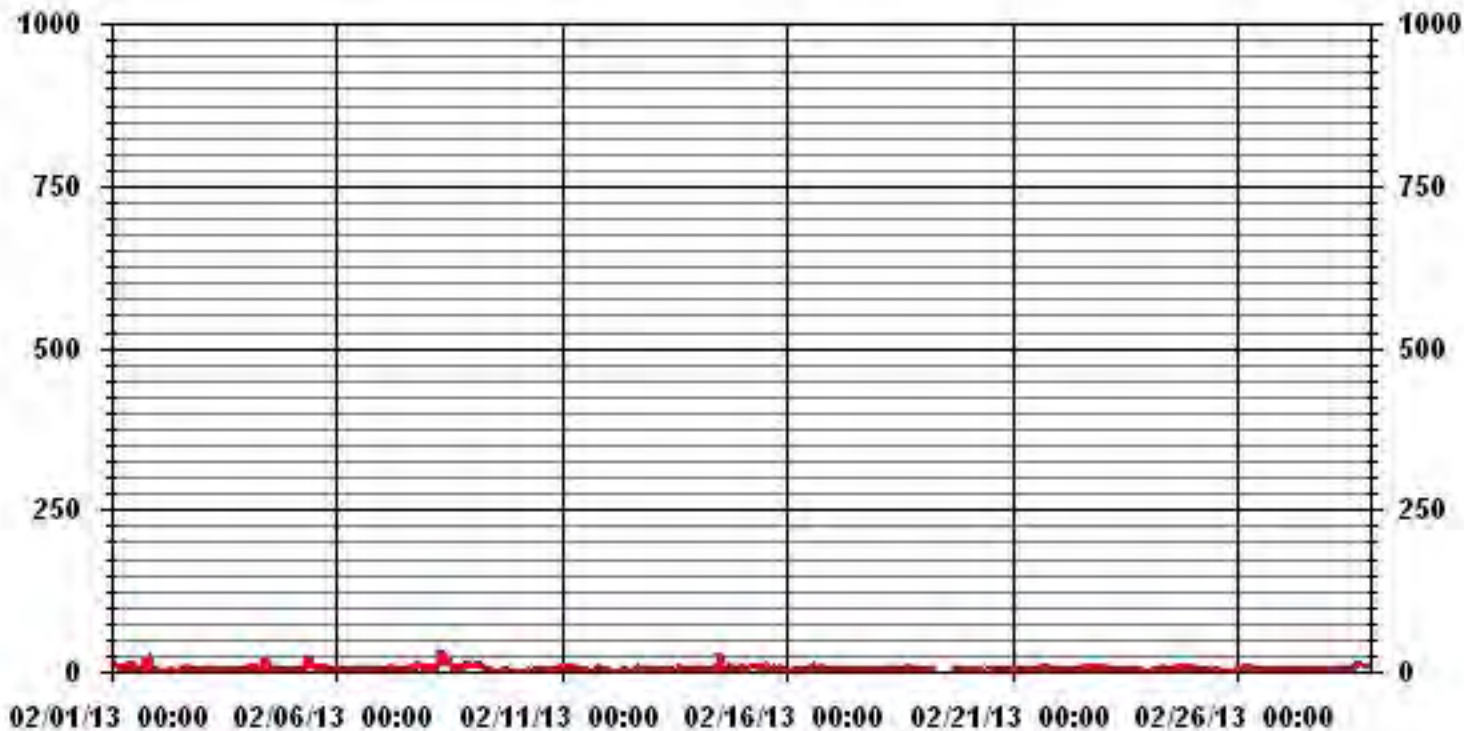
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	627				
MAXIMUM INSTANTANEOUS VALUE:	30.5	PPB	@ HOUR(S)	8	ON DAY(S) 8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS
MONTHLY CALIBRATION TIME:	14	HRS			
STANDARD DEVIATION:	3.60				

01 Hour Averages



— LICA31 NO2MAX PPB

LICA31
 NO2_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 31
 Site Name : LICA31
 Parameter : NO2_
 Units : PPB

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	3.33	1.90	2.86	1.90	5.08	6.35	7.79	5.56	8.90	13.19	6.83	8.74	8.42	6.35	5.72	6.99	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.33	1.90	2.86	1.90	5.08	6.35	7.79	5.56	8.90	13.19	6.83	8.74	8.42	6.35	5.72	6.99	

Calm : .00 %

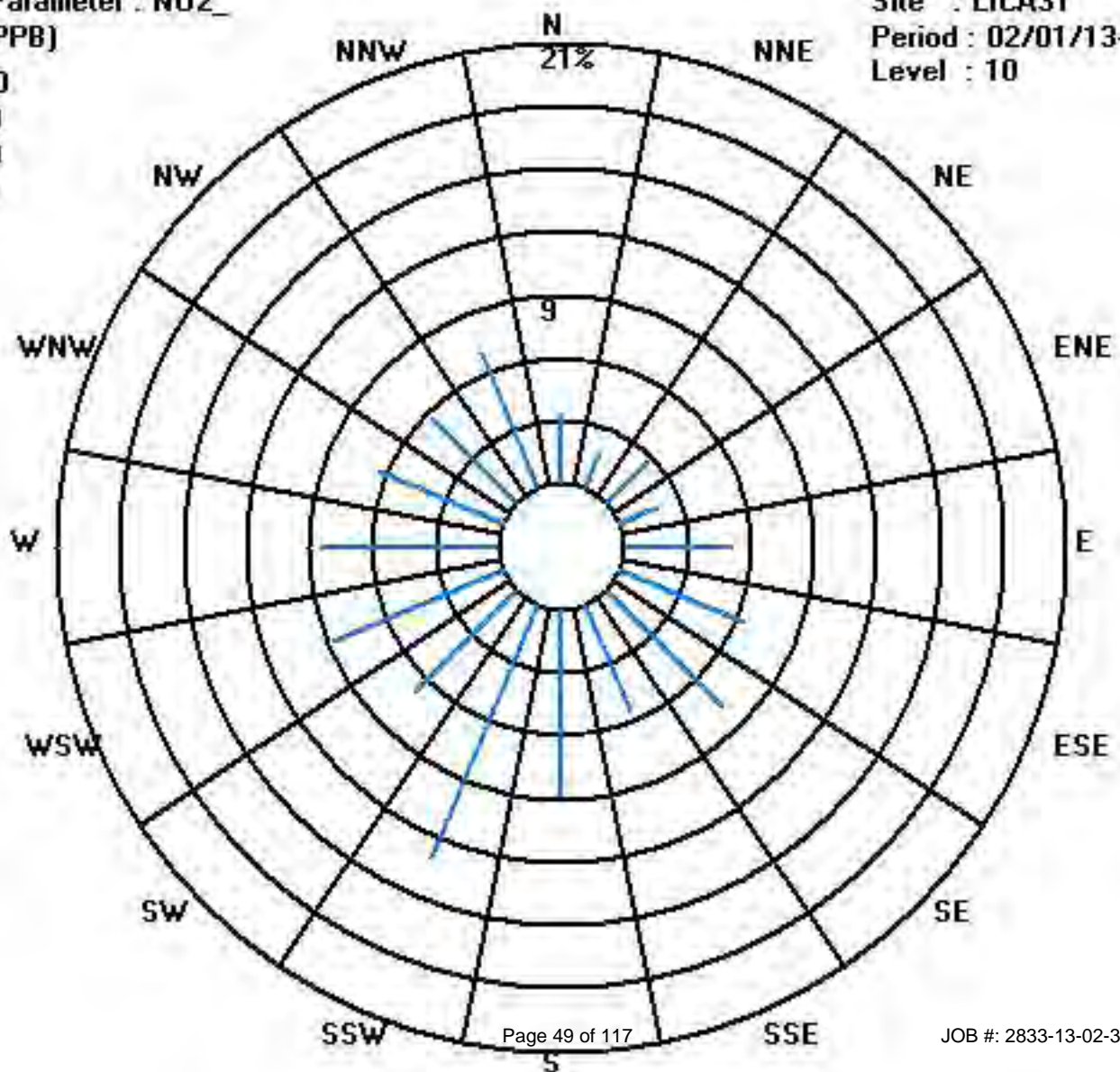
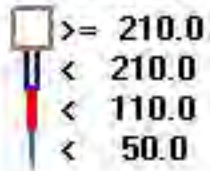
Total # Operational Hours : 629

Distribution By Samples

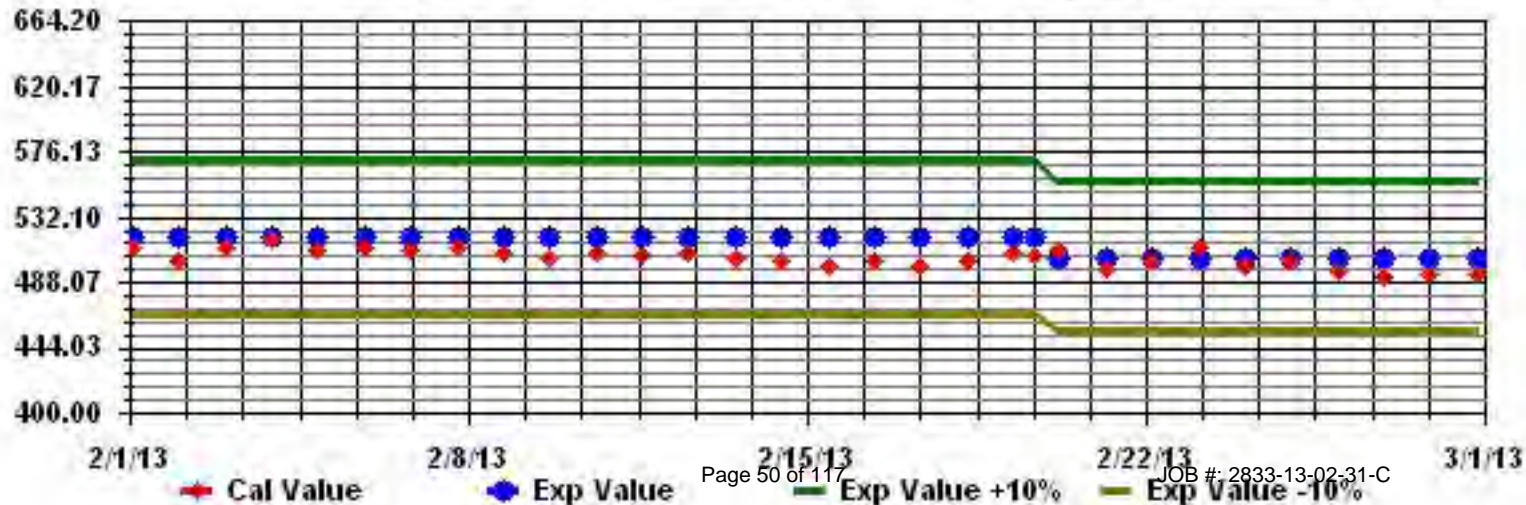
Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	21	12	18	12	32	40	49	35	56	83	43	55	53	40	36	44	629
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	21	12	18	12	32	40	49	35	56	83	43	55	53	40	36	44	

Calm : .00 %

Total # Operational Hours : 629



Calibration Graph for Site: LICA31 Parameter: H02_ Sequence: H02 Phase: SPAll



Nitric Oxide

LAKELAND INDUSTRY & COMMUNICATY ASSOCIATION - ST. LINA

FEBRUARY 2013

NITRIC OXIDE hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	0	S	1.1	0.6	0.4	0.3	0.4	0.3	0.6	0.9	2.1	2.6	1.6	1.6	1.3	1.5	1.2	0.6	0.2	0.2	0.3	0.2	0.1	0	2.6	0.8	24	
2	S	0.6	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.6	0.5	0.8	0.8	0.7	0.7	0.6	0.8	0.4	0.2	0.4	0.2	0.4	0.3	S	0.8	0.5	24	
3	0.3	0.3	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.5	0.7	0.8	1	0.7	0.6	0.4	0.5	0.3	0.1	0.2	0.4	0.4	S	0.5	1.0	0.4	24	
4	0.3	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	S	0.4	0.1	0.4	0.1	24	
5	0	0	0.1	0	0	0	0	0	1.4	2.1	3.9	4.2	3.6	2.9	1.6	1.1	0.7	0.4	0.1	0	S	0.1	0	0	4.2	1.0	24	
6	0	0	0	0	0	0	0	0	0	0	0.3	0.6	0.3	0.4	0.4	0.4	0.2	0	0	S	0.7	0.3	0.2	0.2	0.7	0.2	24	
7	0.3	0	0.2	0.2	0.2	0.1	0.2	0	0.2	0.5	0.9	0.7	0.8	1.2	1.4	1.1	0.5	0.2	S	1.2	0.9	1	0.8	1	1.4	0.6	24	
8	0.6	0.6	0.8	0.7	0.8	0.8	0.7	0.8	3.3	9.1	12.2	14	15.4	8.4	4.5	2.5	1.4	S	0.6	0.1	0.3	0.2	0.2	0.1	15.4	3.4	24	
9	0.1	0	0.1	0.2	0.3	0.2	0.1	0	0.1	0	0.1	0	0	0	0	0	S	0.3	0	0	0	0	0	0	0.3	0.1	24	
10	0	0	0	0	0	0	0	0	0	0.4	0.9	1	0.4	0.4	0.4	S	0.7	0.3	0.1	0.1	0.2	0.1	0.1	0.2	1.0	0.2	24	
11	0	0	0	0.1	0.1	0.3	0.3	0.1	0.4	0.1	0.1	0.4	0	0.1	S	0.4	0.3	0.3	0.1	0.1	0.1	0	0	0	0.4	0.1	24	
12	0.1	0	0.1	0.1	0.2	0	0.3	0.2	0.3	0.2	0.3	0.2	0.1	S	0.3	0	0	0	0	0	0	0	0	0	0.3	0.1	24	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0.6	0.3	0.6	1.3	0.5	0.7	0.5	0.4	0.3	0.5	0.4	1.3	0.3	24
14	0.4	0.3	0.6	0.3	0.5	0.3	0.5	0.3	0.8	0.9	1.2	S	2.4	2.6	1.5	1.5	1.2	0.6	0.2	0.1	0.1	0	0.2	0.3	2.6	0.7	24	
15	0.1	0.2	0.1	0.3	0.2	0.3	0.3	0.4	0.7	1.3	S	1.7	1.3	1.4	1.8	1.5	0.6	0	0	0	0	0	0	0	1.8	0.5	24	
16	0	0	0	0	0	0	0	0.2	0.3	S	2	1.3	1.3	0.9	0.5	0.2	0.2	0.3	0.4	0.4	0.4	0.2	0.5	0.3	2.0	0.4	24	
17	0.3	0.1	0.2	0.2	0.2	0.2	0.1	0.3	S	1.2	0.9	0.6	1.2	1.3	1.2	1.2	1	0.7	0.6	0.6	0.5	0.2	0.4	0.5	1.3	0.6	24	
18	0.4	0.4	0.4	0.5	0.3	0.4	0.5	S	0.6	0.2	0.3	0.4	0.4	0.2	0.4	0.4	0.2	0.3	0	0	0	0	0	0	0.6	0.3	24	
19	0	0	0	0.1	0	0	S	0.4	0.4	C	C	C	C	C	C	C	C	C	C	0	0	0	0	0	0.4	0.1	24	
20	0	0	0	0	0	S	0	0	0.2	C	C	C	C	0.5	0.6	0.5	0.6	0.5	0.4	0.4	0.3	0.3	0.5	0.4	0.6	0.3	24	
21	0.4	0.4	0.3	0.5	S	0.6	0.5	0.3	0.6	0.9	1.3	1.3	1.2	1.4	1.7	1.5	1.3	0.4	0.4	0.1	0.1	0.2	0.2	0.2	1.7	0.7	24	
22	0.2	0.1	0.3	S	0.2	0	0	0	0	0.2	0.5	1.1	1	0.8	1.4	1.6	1.1	0.2	0	0	0	0	0	0	1.6	0.4	24	
23	0	0	S	0.3	0.2	0	0	0.4	0.2	0.8	0.8	0.9	1.1	0.9	0.3	0.4	0.3	0	0	0	0	0	0	0	1.1	0.3	24	
24	0	S	0.4	0.3	0.3	0.1	0	0	0.7	1.2	1.7	1.3	1.3	1.6	1.3	0.8	0.6	0.2	0.1	0.1	0	0	0	0	1.7	0.5	24	
25	S	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	0.0	24	
26	0.6	0.4	0.3	0.2	0.3	0.2	0.3	0.4	0.7	0.7	0.4	0.3	0.3	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.3	S	0.3	0.7	0.3	24	
27	0.2	0.2	0.1	0.3	0.1	0.2	0.3	0.2	0.2	0.2	0.5	0.7	0.5	0.5	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.1	S	0.4	0.2	0.7	0.3	24
28	0.2	0.1	0.1	0.2	0.4	0.2	0	0	0.1	0.3	0.7	0.8	1.4	1.8	2.2	2.6	2.4	1.2	0.4	0.3	S	0.6	0.3	0.3	2.6	0.7	24	
HOURLY MAX	0.6	0.6	1.1	0.7	0.8	0.8	0.7	0.8	3.3	9.1	12.2	14.0	15.4	8.4	4.5	2.6	2.4	1.2	0.7	1.2	0.9	1.0	0.8	1.0				
HOURLY AVG	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.9	1.3	1.4	1.5	1.2	1.0	0.8	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.2				

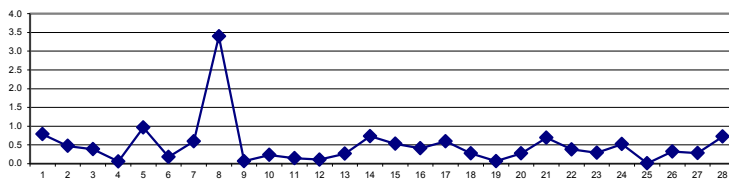
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

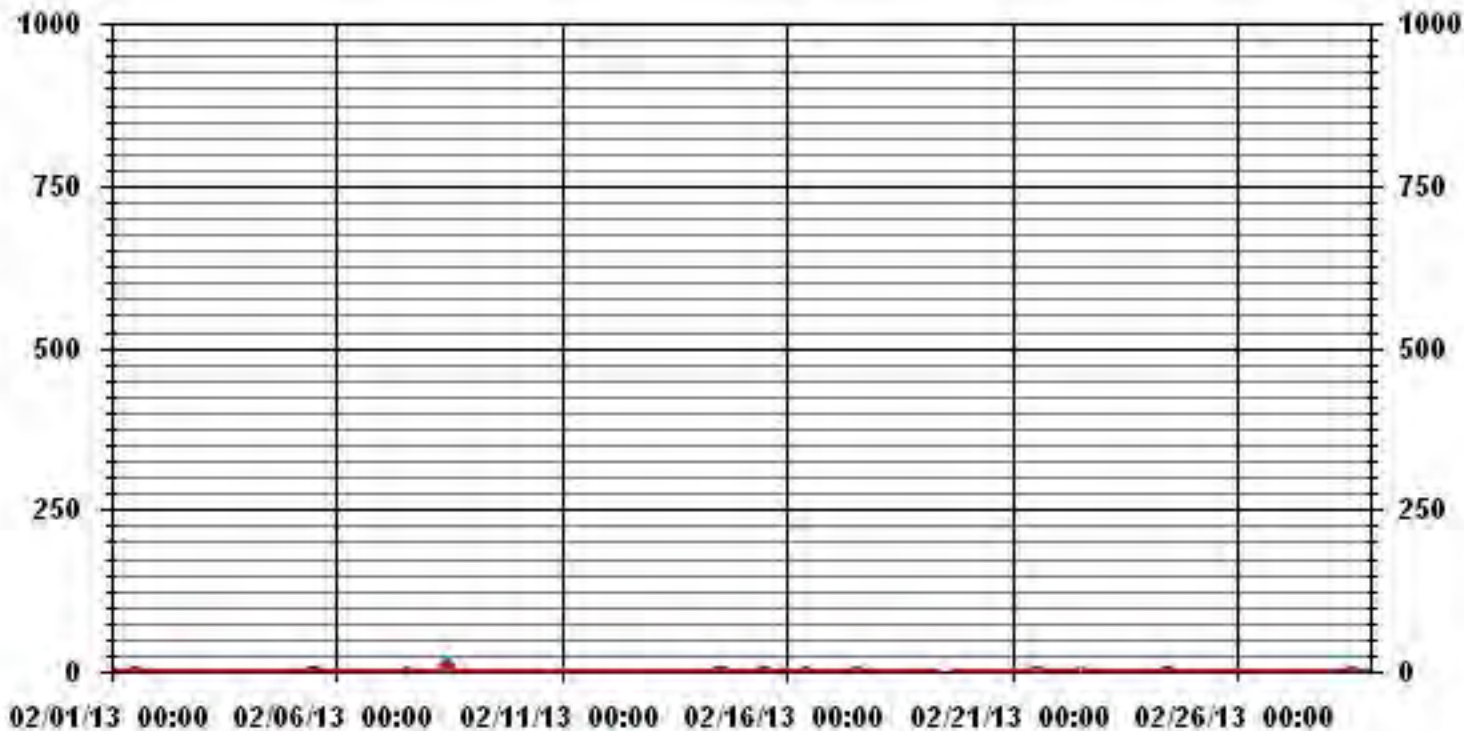
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	445		
MAXIMUM 1-HR AVERAGE:	15.4	PPB	@ HOUR(S) 12 ON DAY(S) 8
MAXIMUM 24-HR AVERAGE:	3.4	PPB	ON DAY(S) 8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME: 672 HRS
MONTHLY CALIBRATION TIME:	13	HRS	AMD OPERATION UPTIME: 100.0 %
STANDARD DEVIATION:	1.19		MONTHLY AVERAGE: 0.50 PPB

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	0.4	S	2.2	1.4	0.9	1.1	1.1	1	1.1	1.8	5.4	21.5	3	2.4	2	3.3	2.7	18.1	5.2	0.9	7.1	0.8	0.8	0.5	21.5	3.7	24
2	S	1.6	1	1	0.9	1.2	1	1.3	1.3	1.5	1.5	3.1	2.4	2.1	2.5	1.7	15.6	1	0.9	1	0.9	1	1	S	15.6	2.1	24
3	1.2	0.9	0.7	1.1	1	1	0.8	0.8	0.8	1.3	1.7	1.7	1.7	1.3	1.3	1.2	1.3	1.3	0.7	0.8	1.1	1	S	1.3	1.7	1.1	24
4	0.9	0.8	0.7	0.7	0.7	0.7	0.9	0.7	0.7	0.6	1	0.5	0.4	0.8	0.6	0.9	1.2	0.8	0.7	0.5	0.6	S	1.2	0.7	1.2	0.8	24
5	0.7	0.7	1	0.6	0.7	0.9	0.7	0.9	26.7	23.1	21.2	8.9	5.9	4.5	2.4	1.6	1.3	1	0.6	0.7	S	0.9	0.6	0.4	26.7	4.6	24
6	0.4	0.4	0.4	0.3	0.4	0.4	0.7	0.4	0.5	0.5	1	1.2	1.2	1	1.1	1.2	0.9	0.7	0.6	S	1.6	1.1	0.7	0.8	1.6	0.8	24
7	0.9	0.7	0.7	0.8	0.9	1	1.4	0.7	0.8	1.4	1.4	1.3	1.4	1.7	2	1.8	1.2	1	S	2	1.5	1.7	1.5	2.1	2.1	1.3	24
8	1.3	1.2	1.4	1.2	1.4	1.4	1.5	2.4	33.5	12.3	14	15.4	17.3	13.1	6.2	3.9	2.6	S	1.6	0.6	1.4	0.8	0.9	0.8	33.5	5.9	24
9	0.8	0.8	0.6	1	1	1.8	0.7	1.1	1.2	0.3	1.7	0.5	0.4	0.5	0.4	0.3	S	1.1	0.7	0.7	0.8	0.6	0.6	0.5	1.8	0.8	24
10	0.6	0.8	0.6	0.6	0.4	0.8	1	0.7	0.8	1.8	2.9	2.2	1.8	1.3	1.1	S	1.7	1.3	0.9	0.7	0.7	0.7	0.8	1	2.9	1.1	24
11	0.4	0.7	0.8	0.9	0.8	1.2	1.2	1.1	1.8	1.1	0.8	8.6	0.7	1	S	1.2	1.2	0.8	0.7	4.8	1	0.7	0.9	0.8	8.6	1.4	24
12	0.8	0.7	0.8	0.8	1.6	0.6	0.9	1.2	1.1	1.1	0.9	1.2	0.7	S	1.4	1.2	0.8	2	0.6	0.3	0.3	0.3	0.5	0.4	2	0.9	24
13	0.6	0.4	0.4	0.3	0.2	0.6	0.1	0.7	0.7	0.6	0.8	0.5	S	1.5	1	2	2.4	1.2	1.7	1.2	1.2	1.1	1.1	1.1	2.4	0.9	24
14	1.2	1	1.1	1	1.1	1	1.3	1	1.9	2.4	6.7	S	7.1	3.9	2.9	3	2.7	2.7	0.8	0.8	0.9	0.9	1	1	7.1	2.1	24
15	1	1	0.8	1	0.8	0.8	1	0.8	1.6	2.7	S	2.6	3.3	2	2.5	2.8	1.6	0.5	0.6	0.6	0.5	0.5	0.6	0.7	3.3	1.3	24
16	0.5	0.3	0.6	0.7	0.5	0.4	0.6	1.6	1.2	S	3.1	2.3	3.6	1.6	5.9	1.1	1	1	1.2	1	1.1	0.9	1.2	1	5.9	1.4	24
17	1.7	1	0.8	0.8	0.8	0.8	0.8	1	S	2	1.6	1.4	2	2	1.8	1.8	1.8	1.4	1.2	1.3	1.1	0.9	1.1	0.9	2	1.3	24
18	1.2	0.9	1.2	1.2	0.9	1	1.2	S	1.3	0.9	1.2	1.2	1.2	0.9	1.1	1	0.8	14.3	0.4	0.6	0.4	0.6	0.6	0.3	14.3	1.5	24
19	0.4	0.6	0.4	0.7	0.6	0.4	S	1.1	C	C	C	C	C	C	C	C	C	C	0.6	0.5	0.2	0.6	0.3	0.1	1.1	0.5	24
20	0.4	0.3	0.4	0.3	0.6	S	0.6	0.5	0.8	C	C	C	C	1.3	2.7	1.2	2	1.1	1.1	0.9	0.9	0.9	1.2	0.9	2.7	1.0	24
21	0.9	1	0.9	1	S	1.9	1.1	1	1.3	1.4	2	1.9	1.9	2.2	2.5	2.2	1.9	1	1	0.8	0.8	0.9	0.8	0.8	2.5	1.4	24
22	0.8	0.5	1	S	1.3	0.5	0.3	0.6	0.4	0.9	1.3	1.7	1.6	1.5	2.1	2.1	2.1	1	0.2	0.3	0.5	0.5	0.3	0.4	2.1	1.0	24
23	0.6	0.7	S	1.1	0.7	0.7	0.6	2	0.8	2.2	1.4	1.7	1.9	2.1	1.1	1.5	1.1	0.4	0.3	0.4	0.4	0.3	0.4	0.3	2.2	1.0	24
24	0.3	S	1	0.8	0.8	1.4	0.6	0.5	2.3	1.8	2.4	2.1	2.3	2.6	2.4	1.6	1.4	0.8	0.8	0.8	0.5	0.5	0.5	0.3	2.6	1.2	24
25	S	0.7	0.7	0.3	0.5	0.2	0.3	0.4	0.5	0.3	0.8	0.5	0.6	0.8	0.8	0.8	0.4	0.3	0.4	0.3	0.7	0.3	0.2	S	0.8	0.5	24
26	1.5	1	0.9	0.9	0.9	0.9	0.9	1.2	1.5	1.5	1	1.1	1	1.3	1	0.7	1	1	0.9	1	0.8	0.9	S	0.9	1.5	1.0	24
27	0.9	0.9	0.7	0.8	0.7	0.8	1	0.7	0.9	0.8	1.3	1.3	1	1	1	1	1	0.9	1	0.9	0.7	S	1.1	0.7	1.3	0.9	24
28	0.7	0.7	0.7	0.8	1	0.7	0.5	0.9	0.6	1.4	1.9	1.4	2.2	2.4	3.4	3.3	3.3	2.4	Y	7	S	1.3	1.1	1	7	1.8	24
HOURLY MAX	1.7	1.6	2.2	1.4	1.6	1.9	1.5	2.4	33.5	23.1	21.2	21.5	17.3	13.1	6.2	3.9	15.6	18.1	5.2	7.0	7.1	1.7	1.5	2.1			
HOURLY AVG	0.8	0.8	0.8	0.8	0.8	0.9	0.8	1.0	3.3	2.6	3.2	3.4	2.7	2.2	2.0	1.7	2.1	2.3	1.0	1.2	1.1	0.8	0.8	0.8			

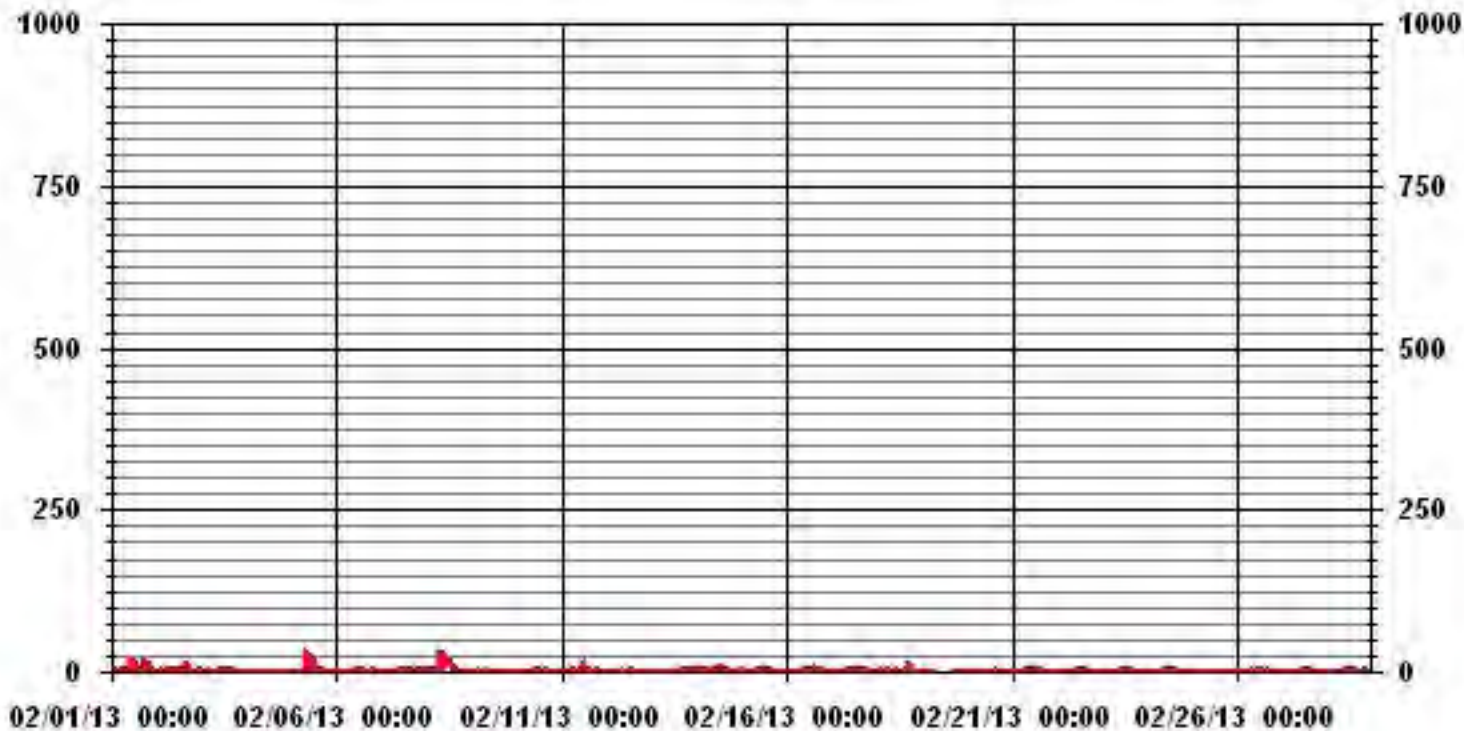
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	627
MAXIMUM INSTANTANEOUS VALUE:	33.5 PPB @ HOUR(S) 8 ON DAY(S) 8
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	14 HRS
OPERATIONAL TIME:	672 HRS
STANDARD DEVIATION:	2.85

01 Hour Averages



LICA31
 NO_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	3.33	1.90	2.86	1.90	5.08	6.35	7.79	5.56	8.90	13.19	6.83	8.74	8.42	6.35	5.72	6.99	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.33	1.90	2.86	1.90	5.08	6.35	7.79	5.56	8.90	13.19	6.83	8.74	8.42	6.35	5.72	6.99	

Calm : .00 %

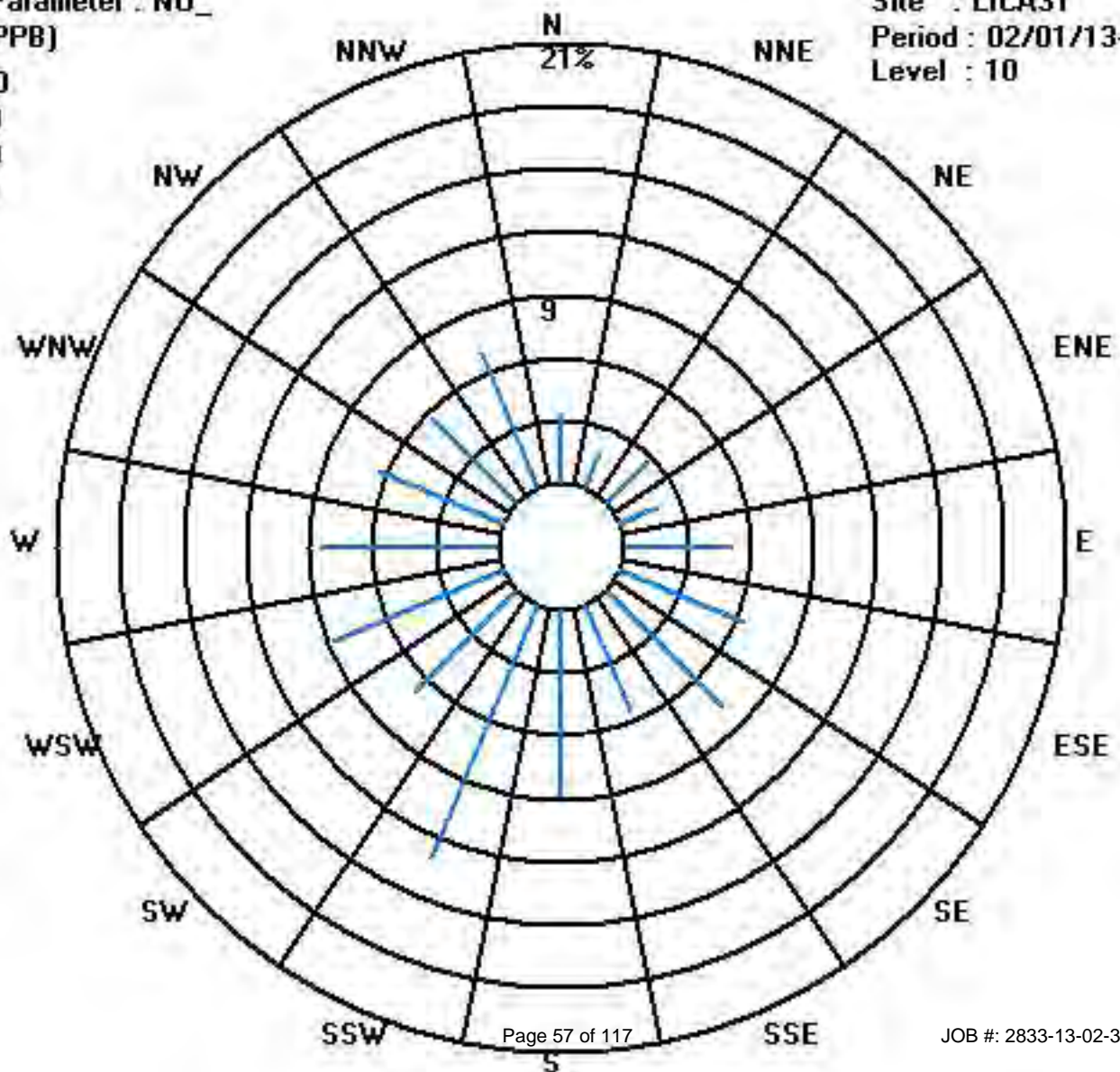
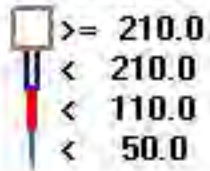
Total # Operational Hours : 629

Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	21	12	18	12	32	40	49	35	56	83	43	55	53	40	36	44	629
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	21	12	18	12	32	40	49	35	56	83	43	55	53	40	36	44	

Calm : .00 %

Total # Operational Hours : 629



Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	8.2	S	9.5	9.5	7.3	5.4	6	5.4	5.3	4.9	5.6	6.7	5.5	4.6	4.8	6.1	7.2	6.5	6.2	8.6	11.5	7.7	4.8	2	11.5	6.5	24	
2	S	1.3	0.6	0.5	0.3	0.5	0.3	0.6	0.7	0.9	0.8	1.2	1	1.2	1.1	1.2	1.8	1.4	1.7	1.9	1.4	1.2	1.4	S	1.9	1.0	24	
3	2.3	3.3	3.1	2.8	2.8	2.9	2.4	1.8	1.8	2.3	2.8	2.9	3	2.8	2.7	2.7	3.2	3.7	3.1	3.9	4.5	5.2	S	5.1	5.2	3.1	24	
4	4.7	4.6	4.6	4.6	4.6	4.9	4.3	2.6	1.6	1.4	1.3	0.5	0.2	0.8	0.6	0.6	0.6	0.5	0.5	0.4	0.3	S	0.8	0.4	4.9	2.0	24	
5	0.4	0.8	0.9	1	1.8	1.9	1.6	3.5	9.9	10.3	11.9	11.9	11.1	10.5	7.5	7	7.6	7.8	7.3	4.4	S	2.3	1.5	0.9	11.9	5.4	24	
6	0.8	1	1.2	1.2	1.1	0.9	0.9	0.9	1	1	1.7	2.3	1.9	2.3	2.6	2.8	3.5	3.7	4.2	S	5	4.7	3.4	3	5	2.2	24	
7	3.3	3.1	3.5	3.8	4.3	4.7	4.9	4.3	3.8	3.5	4	3.6	3.8	4.8	5.3	5.3	5.2	S	10.1	9.3	8	7.5	8	10.1	5.2	24		
8	6.9	5.7	5.5	5.7	5.5	5.5	6.7	10.9	18	24.2	26.4	28.1	30.8	19.7	12.3	8.4	6.6	S	4.5	5.2	10	10.9	11.7	10.3	30.8	12.2	24	
9	9	8.3	10.1	12.2	10.7	9.9	8.1	3.2	1.6	0.8	0.8	0.4	0.1	0	0	0	S	1.3	1.1	0.9	1	0.8	0.6	0.6	12.2	3.5	24	
10	0.6	0.6	0.7	0.6	0.5	1	1.5	1.2	1	1.8	2.6	2.9	2	1.9	2.2	S	2.1	1.7	1.9	1.7	2.4	3.1	3.3	3.9	3.9	1.8	24	
11	4.4	5.2	5.7	6.3	6.6	7.5	7.6	4.2	3.2	2.2	1.5	1.4	0.9	0.9	S	0.8	0.6	0.8	0.8	1	0.9	0.4	0.5	1.2	7.6	2.8	24	
12	1	0.5	0.5	0.4	0.8	0.4	0.4	0.5	0.7	0.6	0.8	0.5	0.2	S	0.8	0.8	1.3	1.2	2.9	3	2.2	2	2.2	3.7	3.7	1.2	24	
13	4.7	3.8	2.5	1.4	0.8	0.7	0.6	0.9	0.7	0.6	0.7	0.7	S	1.1	1	3.2	6.3	3.7	3.6	2.5	1.7	0.8	0.9	0.9	6.3	1.9	24	
14	0.8	0.6	0.9	0.5	0.7	0.6	1	1.1	2	2.4	2.9	S	5.5	6.6	4.7	5.4	6	6.6	5.2	3.9	3.8	2.7	2.7	6.1	6.6	3.2	24	
15	6.3	4.9	4.3	5.2	7.5	8.7	7.5	7.5	8.1	8.5	S	5.9	4.2	4.3	6.4	5.9	4.5	3.9	5.9	4	3.9	3.9	3.1	1	8.7	5.5	24	
16	0.6	0	0	0.5	0	0.3	0.4	1.3	1.9	S	4.7	3	3.5	2.3	1.2	0.7	0.8	1.1	3.5	6.3	2.9	1	1.2	1	6.3	1.7	24	
17	0.9	1	0.9	0.7	0.6	0.9	1.2	1.5	S	2.7	2.1	1.4	2.5	3.1	3	2.9	3.4	3.4	3.1	2.9	1.5	0.9	1.3	1.4	3.4	1.9	24	
18	1	0.9	1	1	0.6	0.5	0.7	S	1.9	1.3	1.5	1.6	1.7	1.5	1.6	2.1	2.5	3.1	2.4	2.1	2	2.4	2.6	2.5	3.1	1.7	24	
19	2.6	2.2	2.5	3.1	2.3	2	S	1.7	2.3	C	C	C	C	C	C	C	C	C	C	4.4	4.2	3.9	4	3.6	2.9	4.4	3.0	24
20	2.4	2.2	2.5	2.3	2.5	S	1.8	1.9	2.9	C	C	C	C	C	2.7	2.8	2.8	3	3.5	4.5	4.4	4.6	4.2	3.6	3	4.6	3.0	24
21	3.2	2.3	1.6	1.9	S	2.8	2.9	2.6	2.8	3.1	3.9	4.2	4.3	4.9	6	6.9	7.5	6.9	6.1	6	5	4.5	4.5	4.3	7.5	4.3	24	
22	4	3.6	3.7	S	1.7	1.1	1.2	1.4	1.3	1.6	2.3	3.2	3.2	3.4	5.1	7.1	8.4	7.5	6.2	5.5	4.7	5.1	5.2	5.1	8.4	4.0	24	
23	5	4.9	S	3.6	3.5	3.1	3.3	3.7	3.7	3.8	3.9	4.5	5	3.9	2.7	3.8	4.1	1.4	1.4	0.9	0.6	0.5	0.1	0	5	2.9	24	
24	0	S	1.2	1.6	2.1	1.9	1.8	3.1	5.2	5.4	5.6	4.9	4.9	5.7	5.6	5.1	6	6.4	6.5	6.3	6.4	6.8	6.6	6.6	6.8	4.6	24	
25	S	5.8	4.7	4	2.5	2	1.4	1.5	1.3	1.2	1.2	0.8	0.5	0.5	0.9	0.6	0	0	0	0	0	0	0	S	5.8	1.3	24	
26	2.2	2.9	3.7	4.5	5.8	5.5	5.2	5.4	5.5	2.5	1.2	1.3	1.1	1.7	1.3	0.9	1	0.9	1.8	2.9	3.9	4.8	S	3.7	5.8	3.0	24	
27	2.9	3	2.8	3.1	3.3	3.3	2.6	2.2	1.6	1.9	2.3	2.4	2.1	2.1	2.1	2.1	2.5	2.9	3.9	3.7	2.9	S	1.8	1.7	3.9	2.6	24	
28	1.6	1.3	1.2	1.3	1.3	1.4	1.1	1.2	1.4	2.2	3.3	3.4	5	6	7.3	9.7	11.5	13.1	13.2	10.5	S	8.5	8.2	8.5	13.2	5.3	24	
HOURLY MAX	9.0	8.3	10.1	12.2	10.7	9.9	8.1	10.9	18.0	24.2	26.4	28.1	30.8	19.7	12.3	9.7	11.5	13.1	13.2	10.5	11.5	10.9	11.7	10.3				
HOURLY AVG	3.1	2.8	2.9	3.1	3.0	3.0	2.9	2.8	3.4	3.6	3.8	4.0	4.2	3.8	3.5	3.7	4.1	3.8	3.9	4.0	3.7	3.7	3.2	3.4				

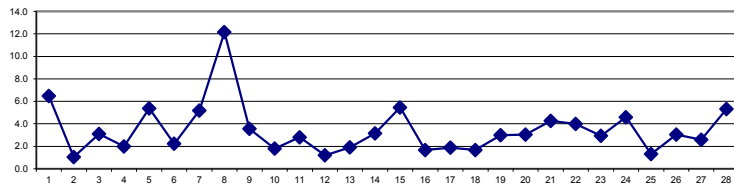
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

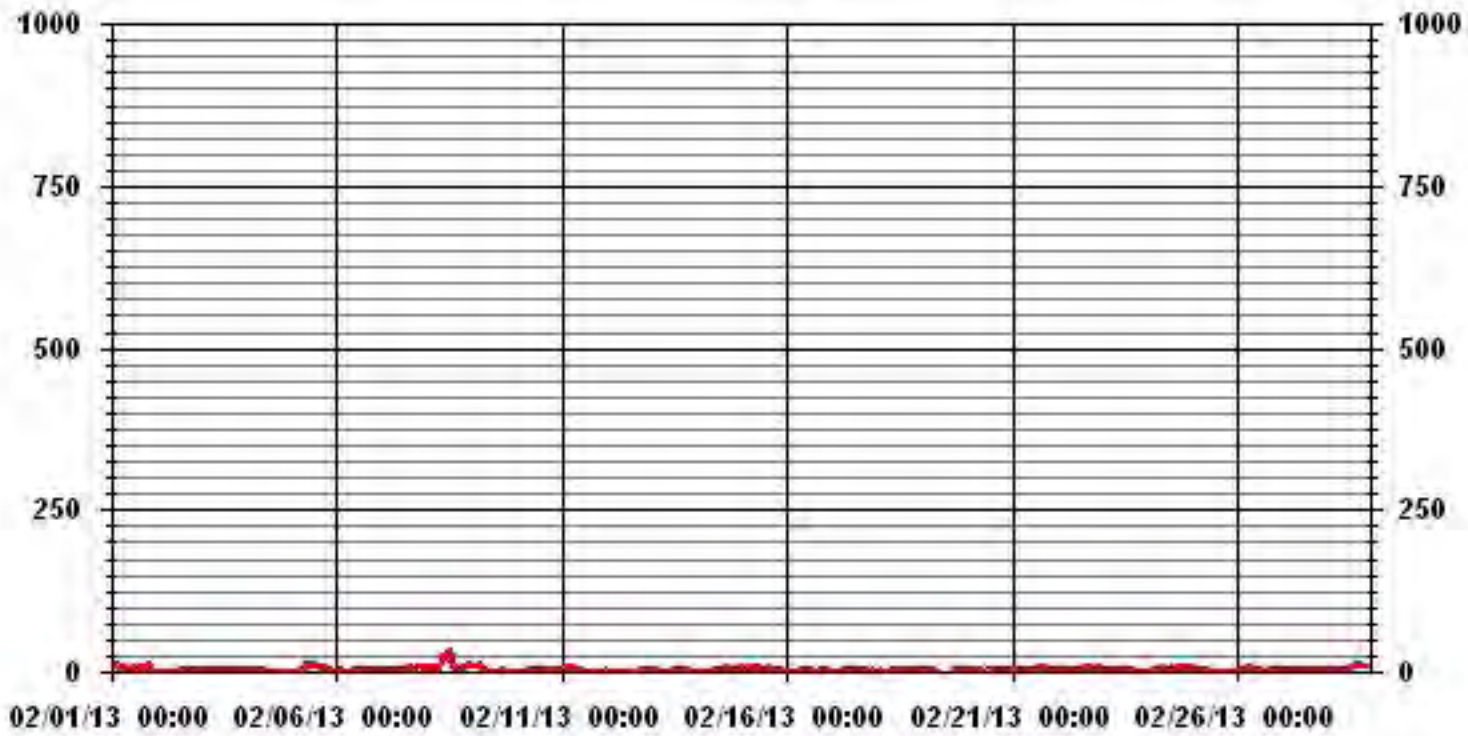
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	614
MAXIMUM 1-HR AVERAGE:	30.8 PPB @ HOUR(S) 12 ON DAY(S) 8
MAXIMUM 24-HR AVERAGE:	12.2 PPB ON DAY(S) 8
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	13 HRS
STANDARD DEVIATION:	3.36
OPERATIONAL TIME:	672 HRS
AMD OPERATION UPTIME:	100.0 %
MONTHLY AVERAGE:	3.47 PPB

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA31 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HOUR START	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
1		9.5	S	11	10.2	9.6	7.1	7.1	6.1	6.6	5.7	9.6	35.9	9.3	5.6	5.6	8.9	10.4	35.6	7.5	10.3	22.2	12.2	5.8	4.7	35.9	11.2	24	
2		S	2.1	1.3	1.2	0.8	1.3	1.6	1.7	3.3	3.6	2.1	5.2	2.8	3.8	3.7	3.3	27.9	2.1	2.7	2.7	2.1	2	2.2	S	27.9	3.6	24	
3		3.1	4.1	3.7	3.7	3.4	3.4	3.1	2.3	2.3	3.1	3.9	3.8	4.1	3.3	3.3	3.3	4.3	4.5	3.8	4.6	5.4	5.9	S	6.4	6.4	3.9	24	
4		5.3	5.3	5.3	5.3	5.6	5.7	6.2	3.7	3	2.3	22.3	1.2	1	1.6	1.4	1.7	2.3	1.2	1.2	1.3	1.4	S	1.4	1.2	22.3	3.8	24	
5		1.1	1.4	2.8	1.7	2.9	2.8	2.5	7.7	40.8	40.7	31.9	19.2	14.5	12.9	9.1	8	8.3	9	8.9	5.7	S	3.2	3	1.5	40.8	10.4	24	
6		1.4	1.7	2.1	2	2.1	2.1	1.6	1.6	1.8	1.7	2.6	3.2	3.1	3.1	3.4	3.4	5.1	4.7	4.9	S	5.8	5.9	4.5	4	5.9	3.1	24	
7		4	3.7	4.2	5.1	4.9	5.7	6.5	5.1	4.6	4.5	4.7	4.6	5	5.8	5.9	6	5.8	5.9	S	12.1	10.8	8.9	8.3	11.4	12.1	6.2	24	
8		7.8	6.4	6.3	6.9	6.8	6.4	10.6	15	61	27.7	28.2	30.3	33.8	27.3	14.9	10.5	7.8	S	5.5	8.2	12.9	12.2	12.9	11.3	61.0	16.1	24	
9		9.7	9.3	11.1	13.9	12.7	11.6	9.9	5.2	3.9	1.5	2.1	1.5	1.1	0.9	0.5	0.3	S	2	1.8	1.5	1.6	1.5	1.3	1.4	13.9	4.6	24	
10		1.3	1.3	1.6	1.3	1.3	2.2	4.5	1.8	2	5.5	7.1	5.2	4.4	2.9	2.9	S	3.9	2.7	2.9	2.3	3.2	3.7	4	4.9	7.1	3.2	24	
11		5.3	5.9	6.3	7.2	7.9	8.4	9	6.5	6	3.4	2.3	11.9	1.5	1.5	S	1.5	1.5	1.9	1.8	10.8	2.6	1.5	1.2	1.8	11.9	4.7	24	
12		1.7	1.5	1.3	1	2.7	1.1	1.1	1.3	1.8	1.3	1.7	1.5	1.1	S	2	1.8	2.6	9.2	4	4.1	3.3	2.5	3	4.6	9.2	2.4	24	
13		5.5	4.9	3.4	2.2	1.6	1.6	1.4	1.8	2	1.2	1.9	1.6	S	1.9	1.8	6.7	8.4	4.5	6.2	3.4	3	1.8	1.5	1.5	8.4	3.0	24	
14		1.6	1.4	1.4	1.2	1.4	1.7	1.9	2.1	3.7	4.4	11.4	S	28.8	9	7.6	7.9	7.7	12.9	6.1	5.6	5.3	4.2	5.1	7.3	28.8	6.1	24	
15		7.6	5.9	5	6.5	8.8	9.5	9.3	8.3	8.8	10.1	S	7.3	13.4	5.1	7.7	7.5	6.1	6.1	7	5.4	5.3	5.2	4	2.5	13.4	7.1	24	
16		1.2	0.6	0.5	1.2	0.9	0.9	1.4	2.8	2.7	S	6.4	4.6	10.8	3.1	13.4	1.7	2.2	2	7.5	7.8	5.3	2.1	1.9	1.6	13.4	3.6	24	
17		2.7	1.7	1.5	1.4	1.4	1.8	2	2	S	3.2	2.8	2.4	3.2	3.8	3.8	3.7	4.5	4.8	4	3.8	3.3	1.5	2.1	2.1	4.8	2.8	24	
18		1.6	1.6	1.6	1.5	1.3	1.2	1.4	S	2.7	1.7	2.2	3.1	3	2.3	2.4	3.3	3.3	15.3	3.1	3.1	2.6	3	3.3	3	15.3	2.9	24	
19		3.2	3.1	3.7	4.1	3.1	2.8	S	2.5	C	C	C	C	C	C	C	C	C	C	5.3	5.2	4.6	4.7	4.3	4	5.3	3.9	24	
20		3.2	2.9	3.1	2.9	3.3	S	2.5	2.7	3.6	C	C	C	C	3.8	5.8	3.5	3.8	4.2	5.3	5.1	5.4	4.8	4.7	3.7	5.8	3.9	24	
21		3.7	3.4	2.3	2.6	S	3.7	3.7	3.2	3.5	3.7	4.8	4.8	5.1	6.1	6.7	7.7	8.2	7.7	6.9	7.1	6	5.1	5.2	5	8.2	5.1	24	
22		4.7	4.4	4.4	S	2.7	1.7	1.7	2.2	2	2.4	3.3	3.8	3.9	4.3	6.6	8.3	9.2	8.7	7.1	6.3	5.6	5.7	6	5.7	9.2	4.8	24	
23		5.7	5.5	S	4.5	4.3	3.7	3.9	5.2	4.4	5.3	4.7	5.1	6.8	5	3.5	5.2	5.1	2.2	2.2	1.7	1.3	1.1	0.9	0.6	6.8	3.8	24	
24		0.5	S	1.9	2.7	2.6	3.5	2.5	4.7	7.6	6.5	6.7	5.8	6.1	6.5	7.1	5.9	7.6	7.1	7.6	7.5	7.1	7.6	7.3	7.1	7.6	5.6	24	
25		S	6.6	5.8	4.7	3.5	2.8	2.3	2.3	2.3	1.9	2.1	1.6	1.2	1.6	1.8	2.2	0.2	0.2	0.5	0.2	0.5	0.8	0.7	S	6.6	2.1	24	
26		3.2	3.6	4.5	5.4	6.7	6.4	5.9	6.4	6.9	4.7	1.8	2.8	1.8	2.9	2.3	1.5	1.7	1.8	2.6	4.3	4.6	5.4	S	4.8	6.9	4.0	24	
27		3.6	3.5	3.5	3.5	3.9	4.1	3.5	2.9	2.4	2.4	3.2	3.2	2.7	2.8	2.9	2.9	3.1	3.7	4.5	4.8	3.5	S	2.6	2.3	4.8	3.3	24	
28		2	1.9	1.9	1.8	2	2	1.8	1.8	2.2	4	4.9	4.3	6.4	7	9.2	10.6	13.6	14.4	Y	36.8	S	9.1	8.9	9.7	36.8	7.1	23	
HOURLY MAX		9.7	9.3	11.1	13.9	12.7	11.6	10.6	15.0	61.0	40.7	31.9	35.9	33.8	27.3	14.9	10.6	27.9	35.6	8.9	36.8	22.2	12.2	12.9	11.4				
HOURLY AVG		3.9	3.6	3.8	3.9	4.0	3.9	4.0	4.0	4.0	7.4	6.1	7.0	7.0	7.0	5.2	5.2	4.9	6.3	6.7	4.7	6.4	5.2	4.7	4.1	4.4			

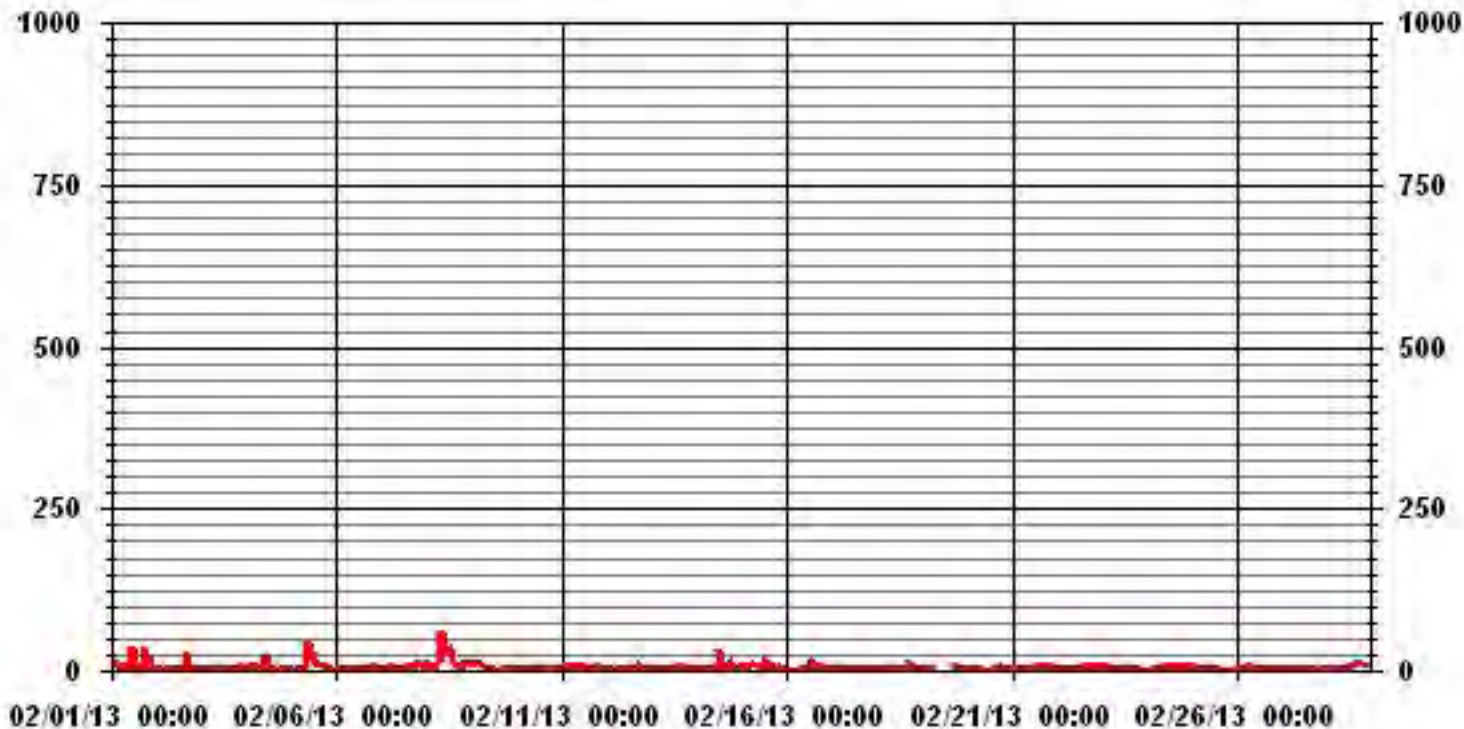
STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	627				
MAXIMUM INSTANTANEOUS VALUE:	61.0	PPB	@ HOUR(S)	8	ON DAY(S) 8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	671	HRS
MONTHLY CALIBRATION TIME:	14	HRS			
STANDARD DEVIATION:	5.60				

01 Hour Averages



LICA31
NOX_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 50.0	3.33	1.90	2.86	1.90	5.08	6.35	7.79	5.56	8.90	13.19	6.83	8.74	8.42	6.35	5.72	6.99	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.33	1.90	2.86	1.90	5.08	6.35	7.79	5.56	8.90	13.19	6.83	8.74	8.42	6.35	5.72	6.99	

Calm : .00 %

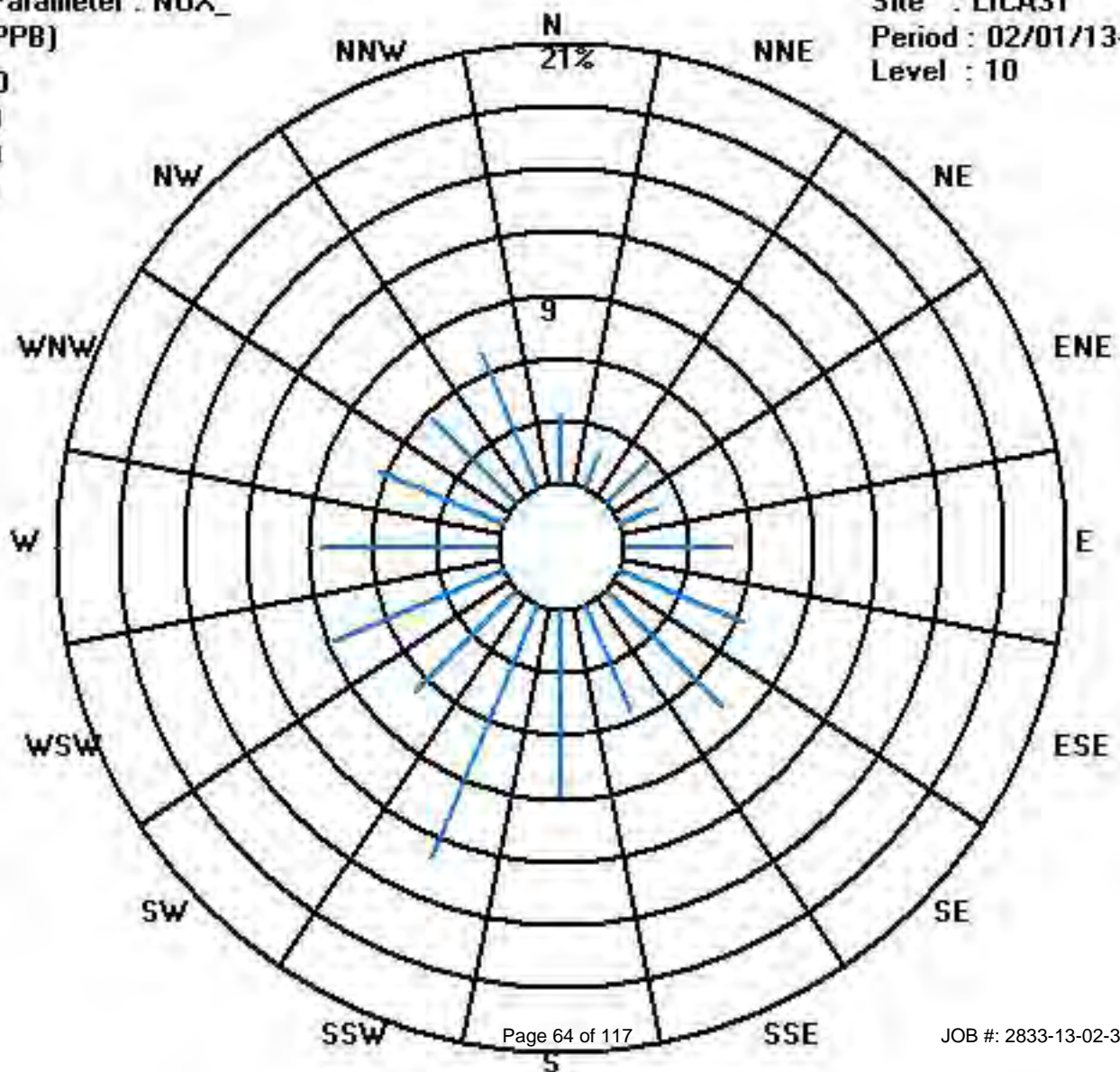
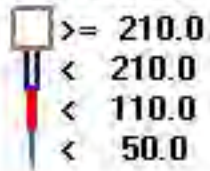
Total # Operational Hours : 629

Distribution By Samples

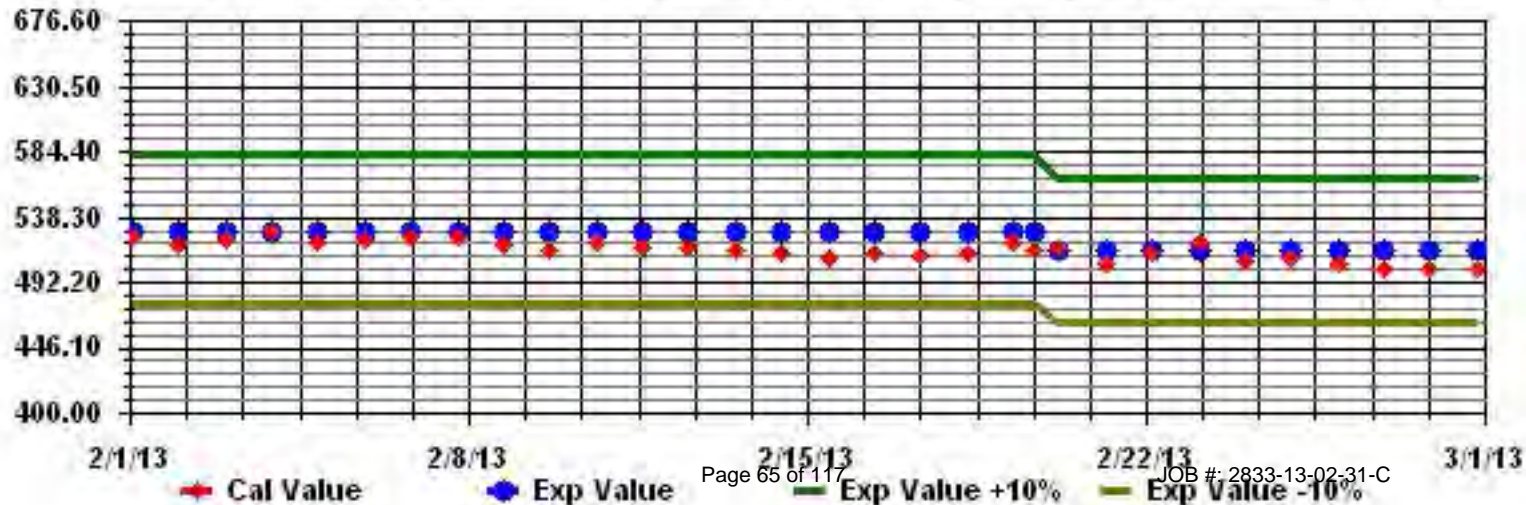
Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 50.0	21	12	18	12	32	40	49	35	56	83	43	55	53	40	36	44	629
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	21	12	18	12	32	40	49	35	56	83	43	55	53	40	36	44	

Calm : .00 %

Total # Operational Hours : 629



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



Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

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

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
DAY	HR START	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
1	6	12	14	17	8	7	7	7	7	8	10	7	2	3	5	8	9	13	10	12	15	9	5	5	17.0	8.6	24	
2	3	X	0	0	1	8	1	0	5	2	0	2	9	0	0	0	5	3	3	4	6	1	5	7	9.0	2.8	23	
3	1	0	1	3	3	2	5	4	8	0	5	12	8	6	7	6	1	8	3	7	4	8	7	12.0	4.8	24		
4	10	8	7	14	11	14	7	4	4	0	1	2	1	0	0	1	3	2	4	2	0	2	0	0	14.0	4.0	24	
5	2	1	2	2	1	1	2	8	13	14	19	13	17	17	11	12	9	15	4	4	4	3	3	0	19.0	7.4	24	
6	0	3	0	4	3	7	2	4	5	4	1	4	6	8	4	11	0	10	6	5	10	10	10	8	11.0	0.0	24	
7	8	12	10	9	12	15	12	13	9	9	8	7	7	6	9	11	10	8	7	9	8	11	10	17	17.0	9.9	24	
8	10	6	10	5	8	14	13	25	23	29	29	30	29	19	13	9	8	6	8	5	14	11	18	16	30.0	14.9	24	
9	17	16	17	19	14	14	11	6	1	0	0	1	1	4	3	2	4	2	2	0	2	3	2	1	19.0	5.9	24	
10	0	1	1	2	2	0	4	0	0	0	3	0	5	0	6	2	3	5	5	2	3	5	5	9	9.0	2.6	24	
11	15	8	16	14	15	13	11	6	4	2	0	4	0	4	5	1	1	0	1	X	2	5	6	0	16.0	5.8	23	
12	2	2	X	0	1	0	4	4	0	3	0	2	3	4	0	1	5	X	0	2	3	2	0	6	6.0	2.0	22	
13	10	7	6	1	0	4	1	5	7	0	5	4	4	6	0	5	4	3	2	4	8	0	3	1	10.0	3.8	24	
14	1	0	0	5	0	0	1	1	0	5	6	8	5	9	4	4	2	1	3	4	3	4	5	8	9.0	3.3	24	
15	10	14	12	16	16	21	15	16	13	C	2	8	0	3	0	2	3	1	2	8	9	6	3	3	21.0	8.0	24	
16	1	0	1	3	1	2	2	5	2	6	4	3	1	2	0	1	0	0	1	8	1	2	0	3	8.0	2.0	24	
17	2	2	2	0	0	X	0	0	0	1	4	4	4	3	4	4	6	6	0	2	2	5	5	2	6.0	2.5	23	
18	2	1	1	3	1	1	3	2	4	4	2	1	3	4	1	3	3	3	0	3	5	6	3	5	6.0	2.7	24	
19	5	32	6	X	X	26	X	10	2	14	2	3	3	1	6	5	5	2	5	5	4	6	3	6	32.0	7.2	21	
20	5	8	6	7	5	7	7	7	2	7	8	6	11	4	5	4	4	2	9	7	11	10	6	9	11.0	6.5	24	
21	9	2	5	3	4	7	6	7	8	10	13	14	17	16	14	12	8	9	13	13	11	8	13	14	17.0	9.8	24	
22	15	10	12	7	5	2	2	5	9	4	11	8	7	5	8	11	13	9	17	8	9	9	13	11	17.0	8.8	24	
23	16	10	16	13	16	9	13	8	12	11	15	12	14	11	12	11	14	3	6	2	4	5	6	0	16.0	10.0	24	
24	5	6	2	5	5	2	9	10	16	10	12	6	8	7	10	8	6	8	13	11	13	15	13	9	16.0	8.7	24	
25	15	9	10	10	6	1	6	12	4	2	4	2	2	0	0	0	1	2	2	3	5	5	2	1	15.0	4.3	24	
26	0	3	3	4	1	4	5	2	0	2	0	2	3	2	0	8	2	3	4	7	3	7	7	6	8.0	3.3	24	
27	0	5	2	3	8	11	7	11	8	7	6	5	6	8	6	6	4	7	3	6	5	8	6	7	11.0	6.0	24	
28	8	7	5	3	1	7	6	12	8	7	5	14	11	6	13	15	16	22	C	2	13	14	13	17	22.0	9.8	24	
HOURLY MAX	17	32	17	19	16	26	15	25	23	29	29	30	29	19	14	15	16	22	17	13	15	15	18	17				
HOURLY AVG	6.4	6.9	6.2	6.4	5.5	7.4	6.0	6.9	6.2	6.0	6.3	6.6	6.7	5.6	5.2	5.9	5.5	5.4	5.1	5.2	6.4	6.3	6.2	6.4				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

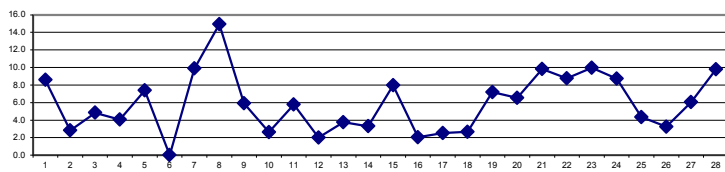
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR - ug/m³ 24-HR 30 ug/m³

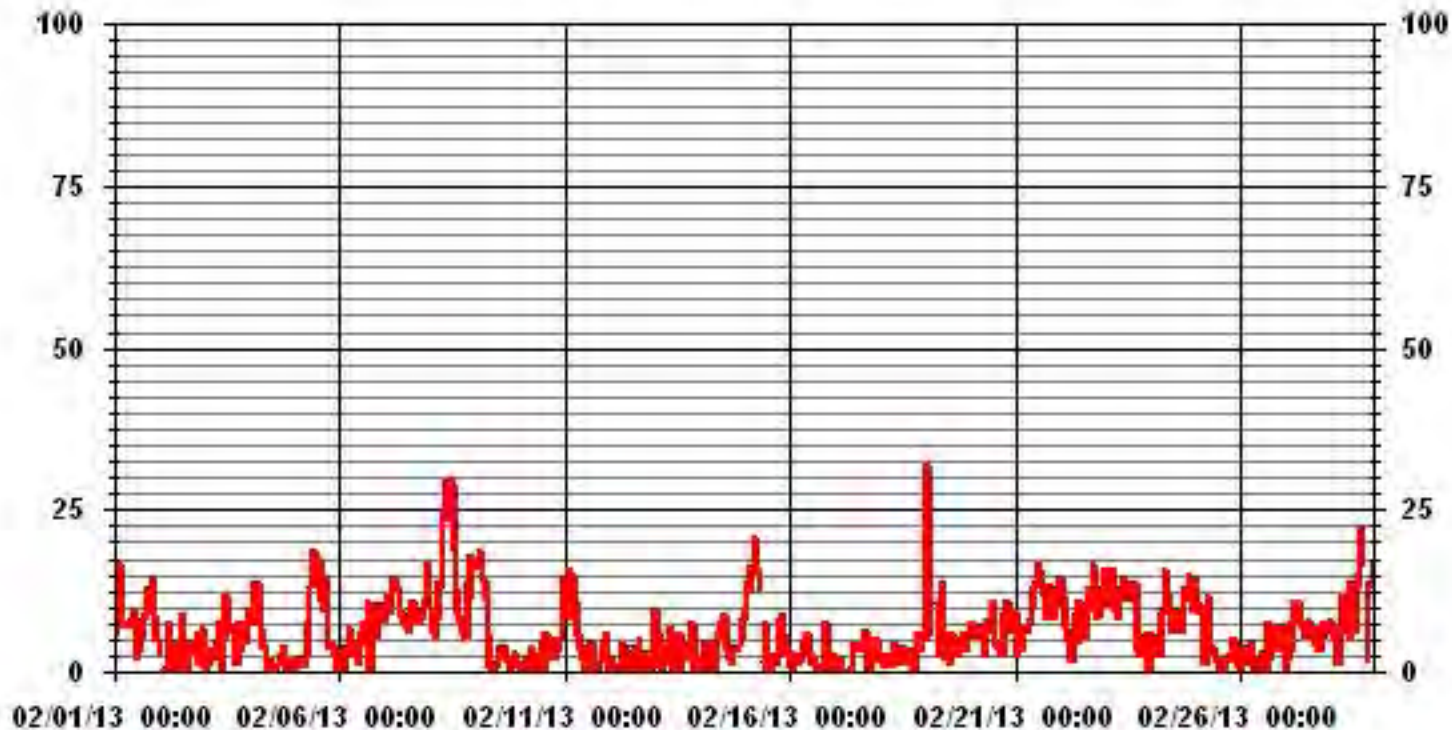
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-	PROPOSED CANADA WIDE GUIDELINE
NUMBER OF 24-HR EXCEEDENCES:	0	
NUMBER OF NON-ZERO READINGS:	590	
MAXIMUM 1-HR AVERAGE:	32.0 UG/M ³	@ HOUR(S) 1 ON DAY(S) 19
MAXIMUM 24-HR AVERAGE:	14.9 UG/M ³	ON DAY(S) 8
IZS CALIBRATION TIME:	0 HRS	OPERATIONAL TIME: 664 HRS
MONTHLY CALIBRATION TIME:	2 HRS	AMD OPERATION UPTIME: 98.8 %
STANDARD DEVIATION:	5.24	MONTHLY AVERAGE: 6.10 UG/M ³

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA31 PM2 UG/M3

LICA31
 PM2 / WDR Joint Frequency Distribution (Percent)

February 2013

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	3.32	1.96	2.71	1.96	5.13	6.19	8.76	5.74	9.36	12.68	6.49	8.30	8.15	6.19	6.04	6.64	99.69
< 60	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00	.15	.00	.00	.00	.00	.30
< 80	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 120	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 240	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 240	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.32	1.96	2.71	1.96	5.13	6.19	8.91	5.74	9.36	12.68	6.49	8.45	8.15	6.19	6.04	6.64	

Calm : .00 %

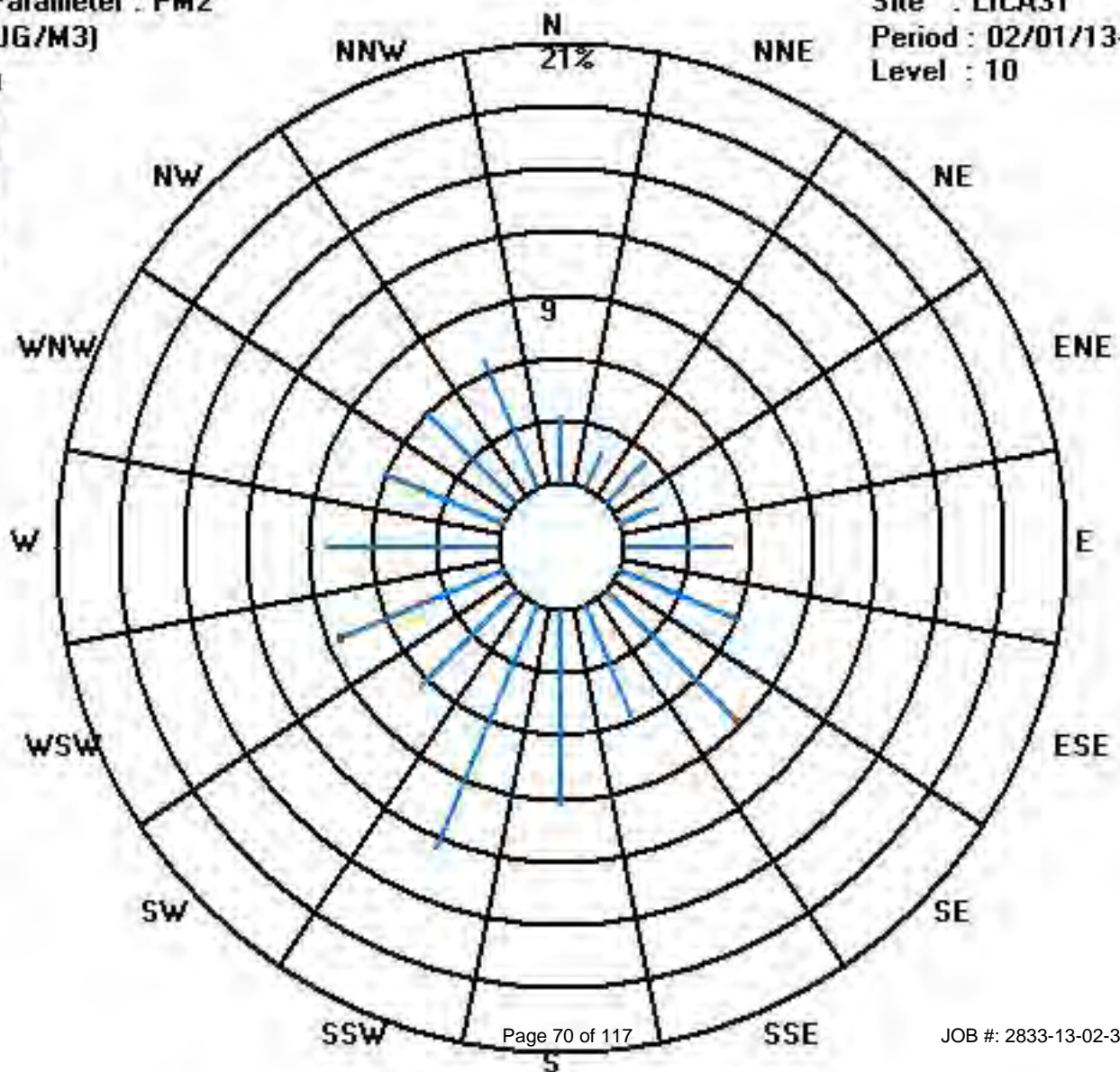
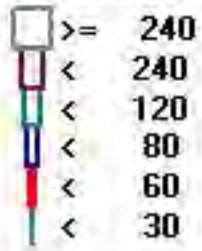
Total # Operational Hours : 662

Distribution By Samples

	Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 30	22	13	18	13	34	41	58	38	62	84	43	55	54	41	40	44	660
< 60							1					1					2
< 80																	
< 120																	
< 240																	
>= 240																	
Totals	22	13	18	13	34	41	59	38	62	84	43	56	54	41	40	44	

Calm : .00 %

Total # Operational Hours : 662



Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA
FEBRUARY 2013
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY	DAY	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00			
1	1	-15	-14.4	-14.1	-14.1	-14.6	-15.4	-16.6	-16.7	-16.5	-15.3	-13.9	-13	-12.2	-11.1	-10.9	-10.9	-10.9	-10.2	-9.4	-9	-7.8	-3.6	-1.9	-0.4	-0.4	-11.6	24
2	2	0.4	-1.2	-5.4	-8.7	-11.1	-12.6	-14.1	-14.8	-14.4	-13.1	-11.5	-10.8	-9	-7.4	-7.7	-8.1	-8.6	-9	-9.4	-9.6	-9.6	-9.3	-9.8	-10	0.4	-9.4	24
3	3	-10.3	-10.3	-10.4	-10.8	-11.5	-12.4	-13	-13.5	-13.7	-13.6	-13.4	-12.8	-13.2	-12.9	-13	-12.6	-12.9	-13.5	-13.5	-12.7	-13	-11.6	-10.6	-9.7	-9.7	-12.3	24
4	4	-8.5	-7.3	-6.3	-5.7	-4.7	-3.7	-2.1	-1.1	0	1.7	3.4	3.2	3.2	2.1	1.3	1	0.5	-0.2	-0.1	-0.3	-0.6	-1.5	-2.9	-3.8	3.4	-1.4	24
5	5	-5.1	-5.8	-7.3	-7.4	-8.9	-9.7	-10	-10.5	-9.9	-9.8	-5.4	-3.6	-3.3	-3.4	-2.5	-4.4	-5.2	-5.6	-6.4	-7.3	-7.5	-7.7	-7.9	-8	-2.5	-6.8	24
6	6	-7.9	-8	-8.6	-9.5	-10.5	-11.1	-11.8	-12.2	-12.6	-12.7	-12.1	-11	-10.4	-9.8	-9.7	-9.9	-9.9	-9.1	-9.4	-9.8	-9.6	-9.8	-9.9	-10.4	-7.9	-10.2	24
7	7	-11.1	-11.7	-12	-12.9	-13.4	-13.7	-14	-14	-13.2	-11.8	-9.6	-7	-5.1	-5.3	-6.4	-7.3	-9.4	-11.4	-11.9	-12.2	-13.7	-13.3	-13.7	-14.3	-5.1	-11.2	24
8	8	-14.5	-14.3	-14.4	-15.4	-15	-15.1	-14.8	-14.5	-13.9	-11.8	-7	-4.4	-1.7	0.1	0.3	0.3	-0.6	-2.4	-3.4	-4	-5.1	-5.6	-6.3	-7.1	0.3	-7.9	24
9	9	-6.7	-6.5	-5.8	-4.9	-3.8	-3.4	-2.5	-1.5	-1	0.1	0.7	1.2	2.1	2	1.2	-0.6	-2	-2.8	-3.4	-3.8	-4.3	-5.1	-6.2	-8.1	2.1	-2.7	24
10	10	-9.3	-10.2	-11.4	-12.4	-12.9	-13.3	-14.1	-15.5	-14.7	-12.8	-9.8	-8.1	-7.9	-8.4	-8.8	-8.8	-9	-10.4	-11.7	-12	-12.1	-11.4	-10.3	-9.8	-7.9	-11.0	24
11	11	-9.8	-10.4	-11	-10.9	-10.1	-8.2	-7.3	-4.6	-2.9	-0.6	2.7	4.9	4.8	6.4	6.9	6.5	4.8	2	0.1	-0.8	-0.9	0.6	0.9	-0.4	6.9	-1.6	24
12	12	-0.8	-0.1	-0.1	-0.1	-0.1	-0.8	-1.8	-2.4	-1.4	-0.2	2.4	3.4	3.7	3	1.7	1.1	1.1	0.4	-0.1	-0.3	-0.1	-0.3	-0.6	-0.9	3.7	0.3	24
13	13	-0.8	-0.3	-1	-0.8	-0.5	-0.4	-0.6	-0.7	-0.5	0	-0.2	-0.4	-0.3	-0.3	0	-1.2	-2.3	-3.5	-4	-4.3	-4.8	-5.4	-6.3	-7	0.0	-1.9	24
14	14	-6.9	-6.6	-6.6	-7	-8.2	-9.3	-9.9	-11.1	-10	-8.5	-6.7	-4.3	-2.7	0.3	1	-0.8	-3.5	-6.2	-7.2	-8.2	-8.7	-8.7	-9.2	-11.7	1.0	-6.7	24
15	15	-12.8	-12.8	-12.7	-12.8	-12.2	-12	-10.7	-10.2	-9	-7	-4.3	-2.6	-0.3	2.1	3.6	5.2	4.6	2.8	0.6	0.6	0	-0.4	-1.1	0.4	5.2	-4.2	24
16	16	0.5	0.5	0.5	0.3	0.6	0.1	-0.1	-0.8	0.1	1.3	3.2	5.9	5.5	7	9.9	9	7.1	5.5	4	3.3	2.8	2.2	1.4	0.8	9.9	2.9	24
17	17	0.3	0.2	0.2	0.2	0.3	0.1	0	-0.6	-0.4	0.1	-0.1	-0.5	-0.5	-1.1	-2.5	-2.9	-4	-5.5	-6.1	-6.5	-6.8	-7.5	-8.1	-9	0.3	-2.5	24
18	18	-9.5	-10	-10.3	-10.7	-11.5	-12.3	-12.8	-13.2	-13.1	-12.4	-11.8	-11	-10.5	-10.6	-10.9	-11	-12	-12.6	-13.2	-13.9	-14.5	-14.8	-15.3	-15.9	-9.5	-12.2	24
19	19	-17	-18.4	-19.5	-20.1	-20.2	-20.4	-20.4	-20.6	-20.7	-19.7	-18.3	-17.3	-16.8	-16.5	-16.3	-16.5	-16.8	-17	-17	-16.6	-16.5	-16.3	-16	-16	-16.0	-18.0	24
20	20	-16.2	-16.4	-16.6	-16.7	-16.6	-16.7	-16.6	-16.7	-16.4	-15.7	-14.8	-13.7	-12.3	-11.5	-10.9	-10.5	-10.7	-11.2	-11.8	-12.4	-12.7	-12.8	-12.5	-12.6	-10.5	-14.0	24
21	21	-13.1	-12.9	-13	-13.7	-14	-14	-13.6	-13.7	-13.2	-12.1	-11	-10	-9.2	-8.9	-8.9	-9.7	-10.9	-11.3	-11.4	-11.7	-11.3	-10.9	-10.9	-10.7	-8.9	-11.7	24
22	22	-10.4	-10.3	-10.2	-10.3	-10.3	-11	-12.1	-13.1	-13.4	-12.7	-10.7	-9.4	-8.3	-8.9	-9.1	-10.1	-10.8	-11.4	-11.9	-12	-11.8	-11.8	-11.6	-11.1	-8.3	-10.9	24
23	23	-11	-11	-11.3	-11.8	-11.7	-12.1	-12.3	-12.6	-11.2	-8.2	-7.8	-6.2	-4.2	0.4	3.3	0.6	-0.4	-1	-2.8	-4.3	-5.3	-6.3	-7.4	-8.2	3.3	-6.8	24
24	24	-9.2	-9.7	-10.7	-11.8	-11.9	-13	-11.9	-10.7	-9.4	-7.7	-3.6	-2.3	-0.7	0.3	0.5	0.5	-1.1	-1.9	-2.9	-3.8	-4.5	-5	-4.8	-5.3	0.5	-5.9	24
25	25	-5.7	-4.8	-2.3	-3.4	-3.6	-3.3	-3.5	-4	-3.9	-3.3	-2.7	-1.8	-0.4	0.4	0.5	0.1	-0.5	-1.4	-2	-2.4	-2.9	-3.4	-4	-4.4	0.5	-2.6	24
26	26	-4.8	-5.3	-5.8	-6.2	-6.4	-6.6	-6.7	-7	-6.1	-3.8	-2.6	-2	-2.2	-1.7	-1.4	-2	-2.5	-3.3	-4.4	-5	-5.5	-5.9	-6.4	-7.1	-1.4	-4.6	24
27	27	-8	-9	-10.1	-10.9	-11.1	-11.7	-11.4	-11.1	-10.1	-9.3	-8.5	-7.3	-6.6	-6.4	-6.6	-6.6	-6.3	-6.6	-7.5	-7.2	-6.7	-6.4	-7.1	-7.9	-6.3	-8.4	24
28	28	-8.6	-9.1	-8.7	-8.9	-9.1	-8.8	-8.7	-8.5	-7.8	-6.1	-3.8	-2.1	-1.5	-1.1	-0.4	0	-0.7	-2.8	-4	-4.9	-6.1	-6.5	-6.9	-6.6	0.0	-5.5	24
HOURLY MAX		0.5	0.5	0.5	0.3	0.6	0.1	0.0	-0.6	0.1	1.7	3.4	5.9	5.5	7.0	9.9	9.0	7.1	5.5	4.0	3.3	2.8	2.2	1.4	0.8			
HOURLY AVG		-8.3	-8.4	-8.7	-9.2	-9.4	-9.7	-9.8	-9.9	-9.3	-8.0	-6.3	-5.1	-4.3	-3.6	-3.4	-3.9	-4.7	-5.7	-6.4	-6.8	-7.1	-7.1	-7.3	-7.7			

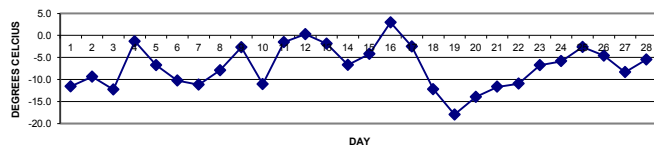
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

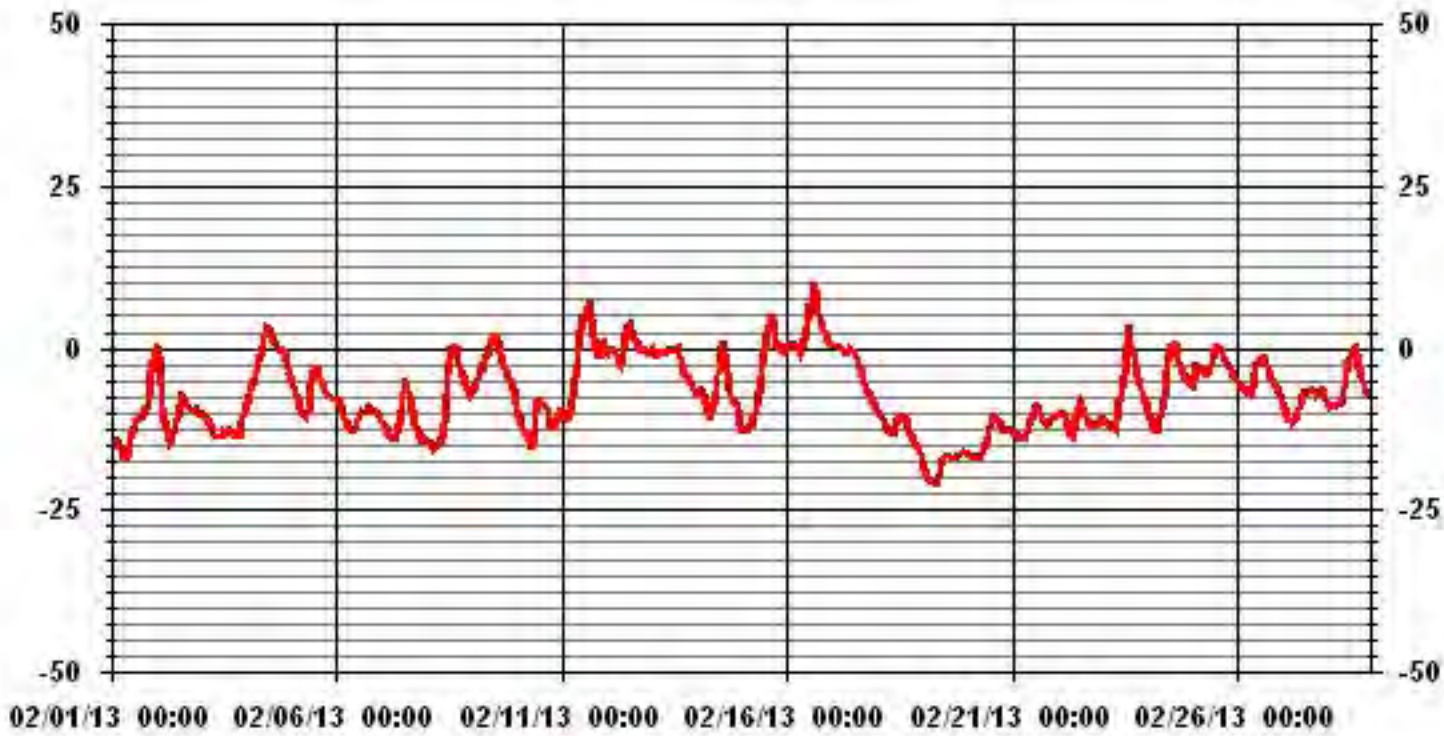
MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-20.7 °C	@ HOUR(S)	8	ON DAY(S)	19
MAXIMUM 1-HR AVERAGE:	9.9 °C	@ HOUR(S)	14	ON DAY(S)	16
MAXIMUM 24-HR AVERAGE:	2.9 °C			ON DAY(S)	16
CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	672 HRS		
STANDARD DEVIATION:	5.81	AMD OPERATION UPTIME:	100.0 %		
		MONTHLY AVERAGE:	-7.09 °C		

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA31 TPX DGC

Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

BAROMETRIC PRESSURE hourly averages (millibar)

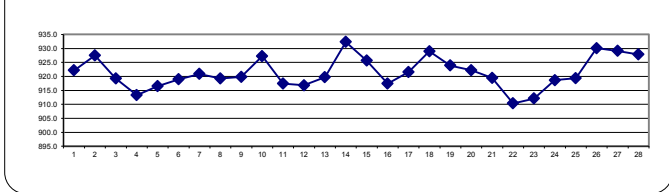
MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	DAILY	24-HOUR	RDGS.	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.			
DAY																													
1	920	921	921	922	922	922	922	922	922	923	923	923	923	923	923	923	923	922	922	922	921	922	922	923	923	922.2	24		
2	923	924	926	927	928	929	929	929	929	929	929	929	930	930	929	929	928	928	928	926	926	925	925	924	930	927.5	24		
3	923	922	922	921	920	920	920	920	920	920	921	921	920	920	920	919	919	918	918	917	916	915	915	914	923	919.2	24		
4	913	912	912	911	911	910	910	910	910	910	911	911	911	912	913	914	915	916	917	917	918	918	918	919	919	913.3	24		
5	919	919	919	919	918	918	917	917	917	917	917	917	916	916	915	915	915	915	915	915	915	915	915	916	919	916.5	24		
6	916	916	917	917	917	917	917	917	918	918	919	919	919	920	920	920	921	921	921	921	921	922	922	921	922	921	922	919.0	24
7	921	921	921	921	921	921	921	921	921	921	921	921	922	922	922	921	921	921	921	920	920	920	920	920	920	920	920.9	24	
8	920	919	920	919	919	919	919	919	919	919	919	920	920	920	920	920	920	920	920	919	919	918	918	917	920	919.3	24		
9	917	916	916	916	915	915	915	915	916	917	918	918	919	919	920	920	921	922	923	924	925	926	927	927	928	928	919.8	24	
10	928	929	929	930	930	930	931	931	930	930	931	931	930	929	928	927	927	926	924	923	922	920	919	918	931	927.2	24		
11	917	917	916	915	915	915	915	916	916	917	918	918	918	918	918	919	919	919	919	919	919	919	919	919	919	917.5	24		
12	919	918	918	918	918	918	918	918	918	919	919	919	918	918	918	918	917	916	915	915	914	914	913	912	912	919	916.8	24	
13	912	912	912	912	912	913	914	914	915	915	916	917	919	920	922	923	925	926	927	928	929	929	930	930	930	919.7	24		
14	931	931	932	932	932	932	932	932	932	932	932	932	932	933	933	933	933	933	933	933	933	933	933	933	933	933	933	932.3	24
15	932	932	931	931	930	929	929	928	927	926	925	925	924	923	923	923	923	923	923	922	922	922	922	921	932	925.7	24		
16	921	921	921	920	920	920	919	919	918	918	918	918	918	917	917	916	916	915	915	914	914	914	914	914	914	914	917.4	24	
17	914	915	915	916	916	917	918	918	919	920	920	921	922	922	923	924	925	926	926	927	927	928	928	929	929	921.5	24		
18	929	929	930	930	930	930	930	930	929	930	930	930	930	930	930	929	929	928	928	928	928	927	927	927	927	930	929.0	24	
19	927	926	926	925	925	925	924	924	924	924	923	923	923	923	923	923	923	923	923	923	923	923	924	923	927	923.9	24		
20	923	923	923	923	923	922	922	922	922	922	922	922	922	922	922	922	922	922	922	922	922	922	922	923	922.2	24			
21	921	921	921	921	921	921	921	920	920	920	920	920	920	920	919	919	919	918	918	918	918	917	917	917	921	919.5	24		
22	917	916	916	916	915	915	914	914	913	912	911	911	910	909	908	907	907	906	905	905	904	904	904	905	917	910.3	24		
23	904	904	905	905	905	906	907	907	908	909	910	912	912	913	915	916	917	917	918	919	920	920	920	921	921	912.1	24		
24	921	921	921	921	920	920	920	920	920	920	920	920	919	919	918	918	918	917	916	916	916	915	915	916	921	918.6	24		
25	916	916	916	917	916	916	917	917	918	918	919	919	919	920	920	920	921	921	922	922	923	923	924	925	925	919.4	24		
26	926	926	927	928	928	928	929	930	930	931	931	931	932	932	932	932	932	931	931	931	931	931	931	931	931	932	930.1	24	
27	930	930	930	930	929	929	929	929	929	929	929	930	929	929	929	929	929	929	929	929	929	929	928	928	930	929.1	24		
28	928	928	928	928	928	928	928	928	928	928	928	929	929	929	929	929	929	928	928	928	927	926	925	925	929	927.9	24		
HOURLY MAX	932	932	932	932	932	932	932	932	932	932	932	932	932	933	933	933	933	933	933	933	933	933	933	933	932				
HOURLY AVG	921	921	921	921	921	921	921	921	921	921	921	922	922	922	922	922	922	922	922	922	922	921	921	921					

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

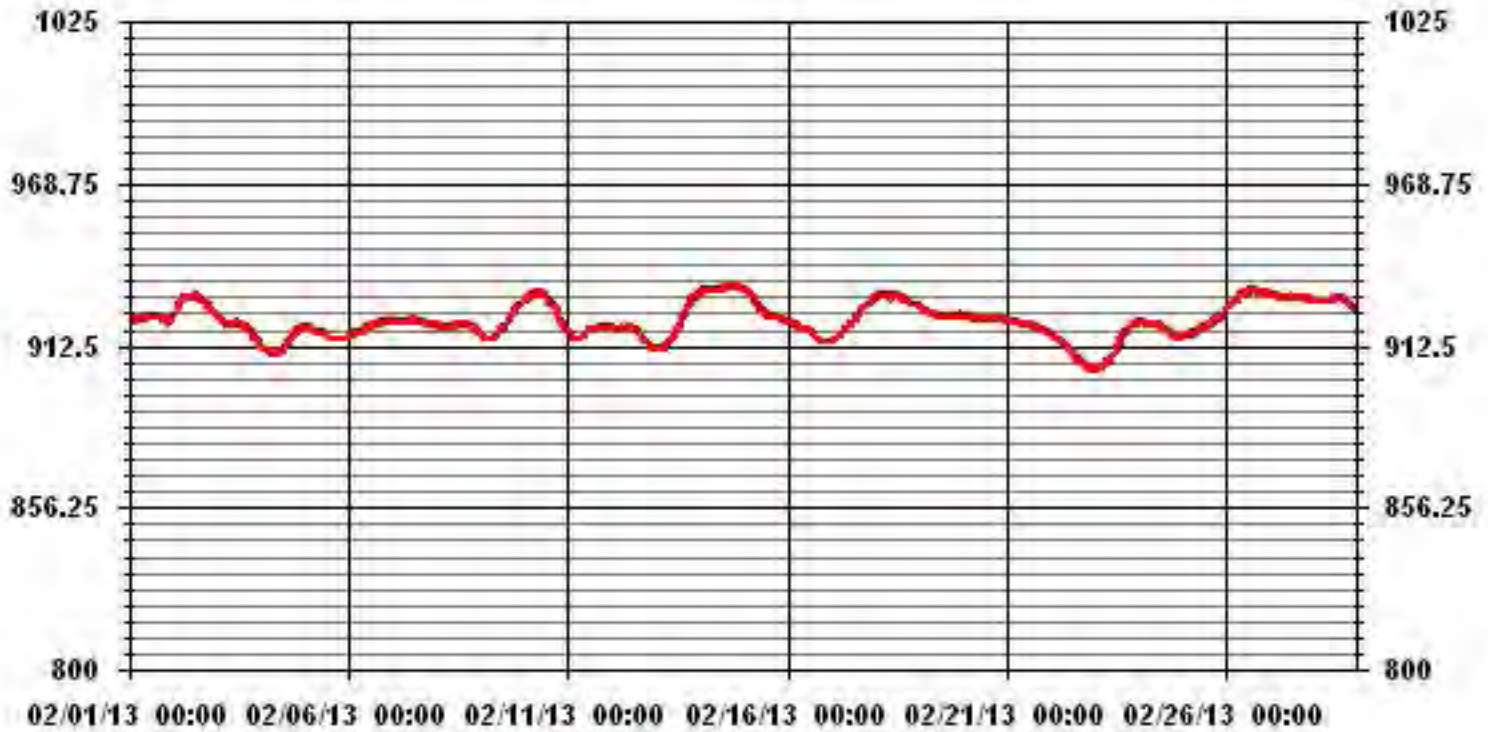
24 HOUR AVERAGES FOR FEBRUARY 2013



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	933	MB	@ HOUR(S)	VAR	ON DAY(S)	14
MAXIMUM 24-HR AVERAGE:	932.3	MB			ON DAY(S)	14
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
STANDARD DEVIATION:	6.16		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	921	MB	

01 Hour Averages



Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

RELATIVE HUMIDITY hourly averages (%)

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	DAILY	24-HOUR	
DAY	DAY	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
1	1	75	75	75	77	77	75	74	74	74	74	73	70	67	66	67	71	76	78	79	80	81	80	78	75	81	81	74.6	24
2	2	68	70	70	69	66	69	74	76	75	71	67	66	62	60	62	64	68	72	77	79	80	80	81	81	81	81	71.1	24
3	3	80	80	79	79	78	78	77	77	77	75	73	72	71	71	71	72	74	75	76	77	78	78	81	81	81	81	75.8	24
4	4	82	83	84	85	85	86	87	84	78	70	64	63	62	71	80	77	71	74	72	70	69	68	72	74	87	87	75.5	24
5	5	77	79	83	83	83	81	80	80	77	76	62	57	54	52	49	54	60	65	75	81	84	84	83	83	84	84	72.6	24
6	6	83	82	82	81	80	79	79	78	78	77	77	78	78	78	79	78	80	80	80	80	80	80	80	80	80	83	79.5	24
7	7	80	80	79	78	78	78	77	77	78	78	79	77	74	71	70	71	76	81	80	80	80	79	78	77	81	81	77.2	24
8	8	77	77	77	76	76	76	76	76	77	78	80	78	75	65	58	58	59	64	67	69	74	76	76	76	80	80	72.5	24
9	9	74	74	74	80	83	83	81	84	87	83	78	74	69	68	60	69	75	70	70	70	70	70	71	74	87	87	74.6	24
10	10	75	76	78	80	80	80	79	77	74	70	61	56	58	62	64	65	66	71	75	74	71	69	69	70	80	80	70.8	24
11	11	71	72	74	74	74	72	72	72	67	62	54	49	50	44	42	43	46	55	61	63	62	57	58	63	74	60.7	24	
12	12	63	59	60	61	61	63	65	66	62	59	51	50	50	55	70	75	71	80	82	85	88	88	89	89	89	89	68.4	24
13	13	88	88	88	88	88	88	88	88	88	87	87	84	81	79	78	82	82	83	83	82	82	81	82	83	88	88	84.5	24
14	14	81	78	78	80	81	82	82	81	78	70	62	57	54	48	47	52	59	68	71	74	75	76	77	80	82	82	70.5	24
15	15	80	79	79	79	78	78	77	77	81	82	82	79	76	69	64	59	61	67	74	74	75	76	77	71	82	82	74.8	24
16	16	70	70	69	69	68	69	69	71	67	62	56	51	53	48	39	40	45	50	58	60	60	61	64	72	72	72	60.0	24
17	17	83	86	87	87	87	86	84	83	83	82	82	82	77	74	74	72	74	76	76	76	75	75	75	76	87	87	79.7	24
18	18	76	75	74	72	78	78	77	77	77	74	72	69	68	67	66	65	70	72	72	72	72	73	72	72	78	78	72.5	24
19	19	73	72	70	70	69	69	70	69	67	65	64	64	65	66	66	67	68	70	71	72	72	73	73	73	73	73	69.1	24
20	20	73	72	72	72	73	73	73	73	72	71	70	69	67	68	69	71	71	72	73	74	74	74	75	74	75	75	71.9	24
21	21	75	77	78	77	77	78	78	77	77	78	78	79	79	78	76	76	77	78	80	80	80	80	80	80	80	80	78.0	24
22	22	80	80	80	80	80	80	80	80	78	77	77	78	77	73	72	71	70	71	72	74	75	75	75	75	80	80	76.0	24
23	23	76	77	78	80	80	80	81	80	77	67	66	63	66	57	52	57	60	66	70	70	69	70	71	72	81	81	70.2	24
24	24	74	74	77	80	80	80	80	80	78	74	62	58	55	52	51	48	52	54	56	59	61	64	65	67	80	80	65.9	24
25	25	69	66	63	68	74	74	74	75	74	72	69	65	58	50	46	47	47	49	51	53	54	55	56	58	75	75	61.1	24
26	26	60	62	64	65	66	67	67	69	66	56	46	44	46	47	46	47	49	50	56	59	63	66	66	68	69	58.1	24	
27	27	71	75	79	81	81	80	80	80	80	80	80	80	79	76	74	73	72	74	76	79	80	81	83	83	83	83	78.2	24
28	28	83	82	83	82	82	82	82	82	82	82	81	75	67	60	57	54	56	62	65	67	71	72	72	69	83	83	72.9	24
HOURLY MAX		88	88	88	88	88	88	88	88	88	87	87	84	81	79	80	82	82	83	83	85	88	88	89	89				
HOURLY AVG		75.6	75.7	76.2	76.9	77.3	77.3	77.2	77.2	76.0	73.3	69.8	67.4	65.5	63.4	62.4	63.4	65.5	68.8	71.4	72.6	73.3	73.6	74.1	74.9				

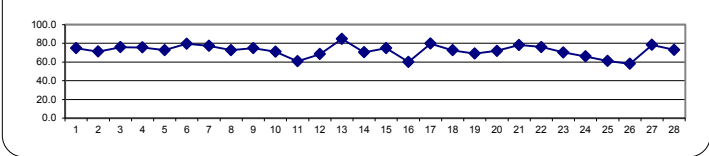
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

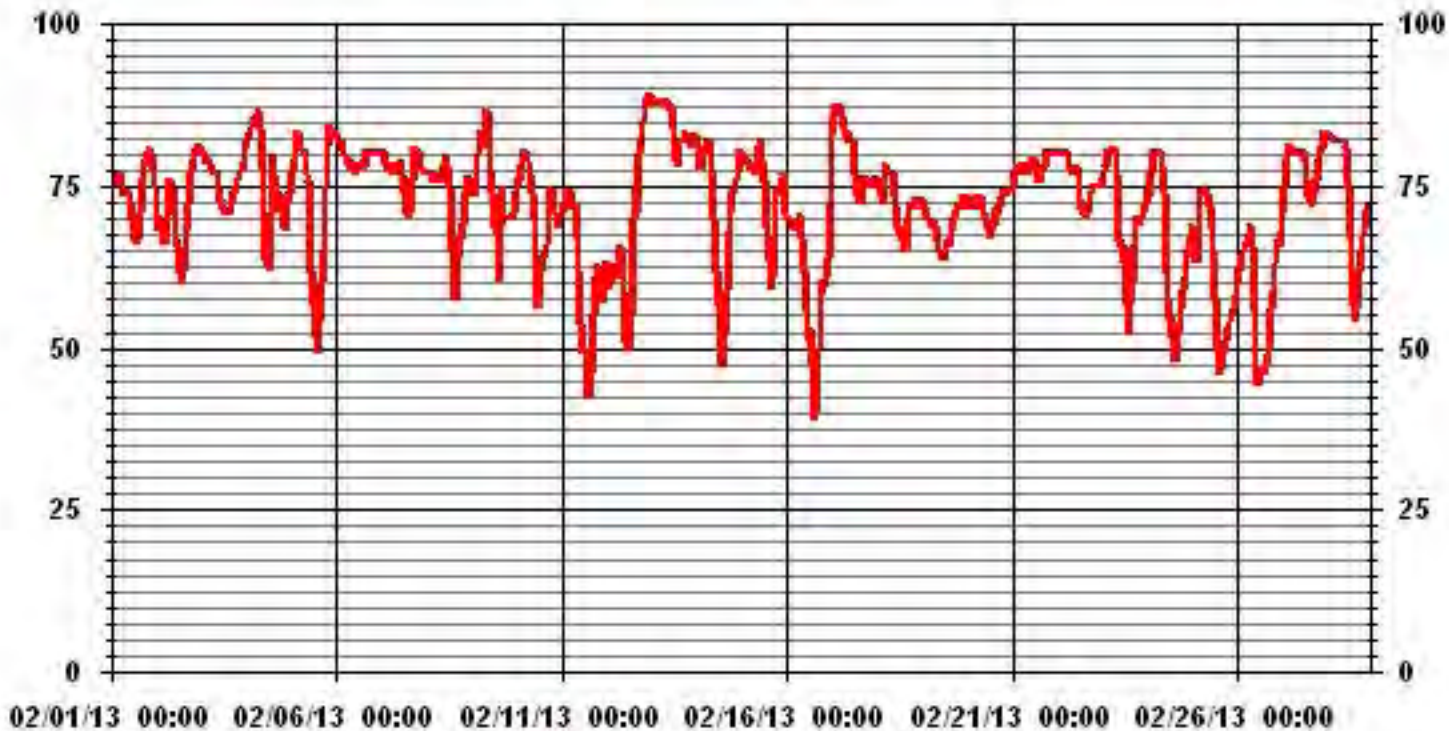
MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	89	%	@ HOUR(S)	22,23	ON DAY(S)	12
MAXIMUM 24-HR AVERAGE:	84.5	%			ON DAY(S)	13
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
STANDARD DEVIATION:	9.60		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	72.03	%	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

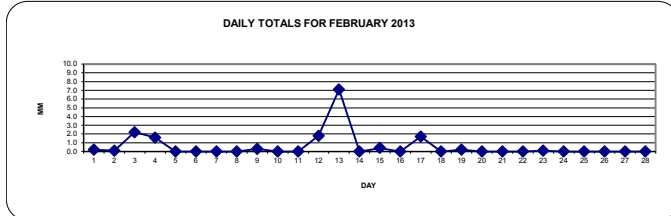
PRECIPITATION hourly averages (mm)

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY		
DAY	HOURLY MAX	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	TOTAL	RDGS.	
1		0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1	0.2	24	
2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0.1	24
3		0.3	0	0.6	0.5	0.3	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	0.6	2.2	24
4		0.4	0.4	0.1	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	1.6	24
5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
8		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
9		0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0.3	24
10		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
11		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
12		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	0.9	0.3	0.1	0.9	1.8	24
13		0.1	0.5	0	0	0	0	0	0	0	0.8	2.8	2.5	0.2	0	0	0.1	0	0	0.1	0	0	0	0	0	0	2.8	7.1	24
14		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
15		0	0	0	0	0	0	0	0.1	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	24
16		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
17		0	0	0	0.1	0	0	0	0	0	0.2	0.4	0.7	0.2	0	0.1	0	0	0	0	0	0	0	0	0	0	0.7	1.7	24
18		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
19		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0.1	0.2	24
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
21		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
22		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
23		0	0	0	0	0	0	0	0	0	0	0	0	0.1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
25		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
26		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
27		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
28		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
HOURLY MAX		0.4	0.5	0.6	0.5	0.7	0.1	0.0	0.1	0.2	0.8	2.8	2.5	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.4	0.9	0.3	0.3				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

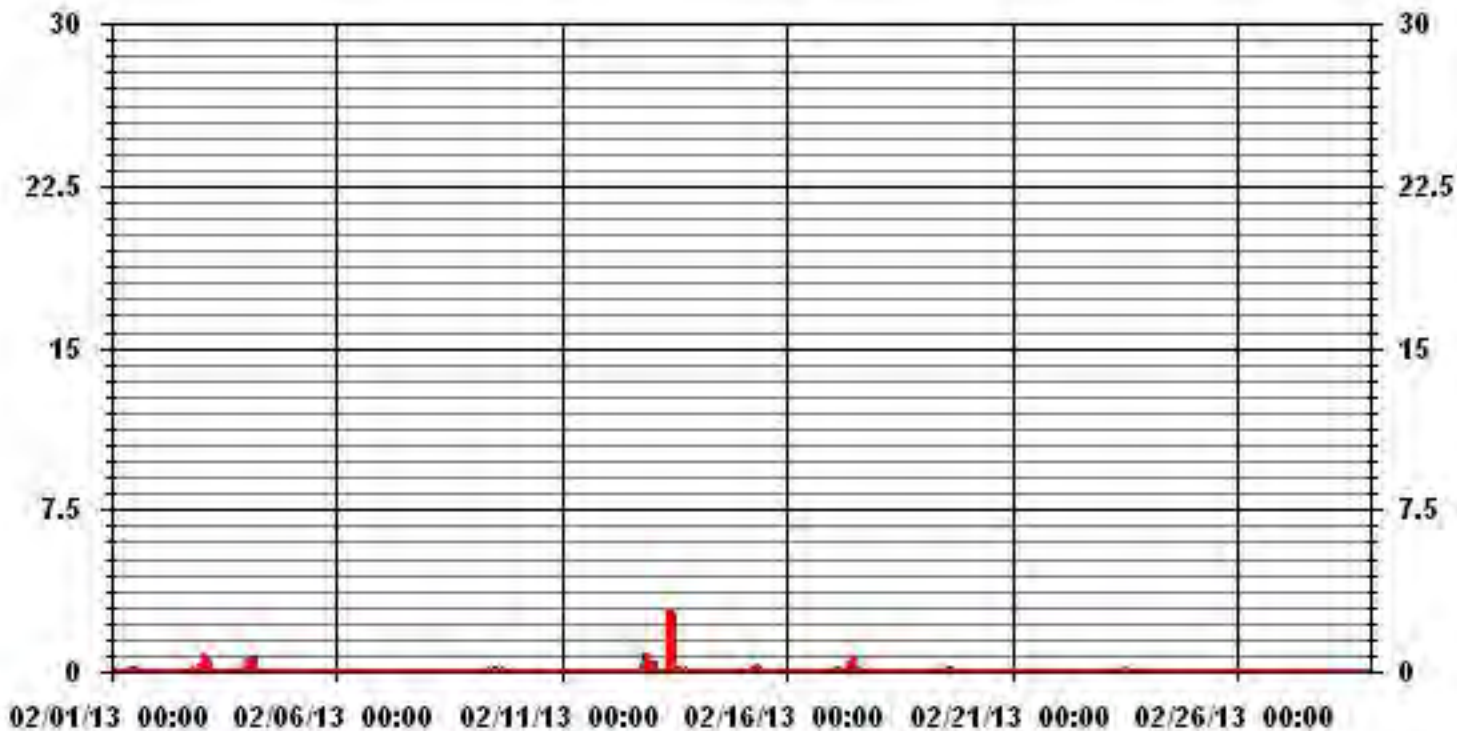
DAILY TOTALS FOR FEBRUARY 2013



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	2.8	MM	10	HOUR(S)	13	ON DAY(S)
MAXIMUM DAILY TOTAL	7.1	MM			13	ON DAY(S)
MONTHLY TOTAL	15.7	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	672	HRS	
STANDARD DEVIATION:	0.17		AMD OPERATION UPTIME:	100.0	%	
			MONTHLY AVERAGE:	0.02	MM	

01 Hour Averages



Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA

FEBRUARY 2013

WIND SPEED hourly averages (km/hr)

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	3.1	5.4	6.5	9.3	7.9	7.5	6.4	2.9	1.4	1.2	4.5	5.1	3.2	5.7	6.1	7.2	7	12.8	18	15.4	12.6	14.5	16.7	17.1	18	5	24
2	30	27.5	28.3	21.5	17.6	14.3	9	7.9	4.9	4	4.3	7.5	3.9	2.4	4.6	2	3.1	3.3	5.3	6	6.2	7	11.2	14	30	5.4	24
3	14	14.7	13.5	15.7	15	13	11.9	9.9	9.5	9.3	8	9	10.3	7.5	9.2	6.3	6.4	8.7	8.5	8.4	9.6	7.7	6.2	8.5	15.7	9.4	24
4	8.9	8.9	9.2	9.5	9.6	9.8	10.1	10.4	15.1	17	18.9	19.6	23.5	22.8	20.8	20.1	19.2	16.4	18.2	16.3	18.4	13.8	7.3	10.3	23.5	12.3	24
5	9.2	8.9	10	10.3	10.1	11.1	11.3	10.2	8.8	8.6	5.2	5.2	6.9	3.2	3.5	7.8	9.5	13	15.8	17.3	18	17.5	17.8	16	18	1.9	24
6	14.1	11.9	12.7	14.3	15	15.8	15.1	15	14.4	15.2	13.5	11.7	12.4	10.2	13	13.8	10.6	8	8.4	7.1	7.2	11.1	12.9	12.3	15.8	10.1	24
7	10.3	7.6	9.7	10.7	11.2	11.3	11.9	12.1	11.7	11.6	8.9	5.9	4.1	5.8	7.2	6.3	5.6	5.9	9	8.1	7.5	5.5	6.1	5.1	12.1	7.2	24
8	7.1	7.8	7.9	8.6	7.6	11.7	9.6	9.3	10.9	10.9	12.2	10.3	9.9	11.5	15.9	15.9	15.5	12.9	10.3	7.7	9.3	8.8	9.8	10.3	15.9	9.8	24
9	10	10.2	11.6	10.7	9.4	9.9	11.8	14	14.5	17.8	20.3	19.6	19.8	18	20.1	19.5	22.7	23.8	25.3	24.8	19	18.4	16.2	15.8	25.3	12.8	24
10	14.6	12.3	10.9	10.4	10.8	9.1	6.8	4.3	3.6	2.3	6.4	5.5	7.9	10.5	14.9	16.1	15.9	16.9	18.3	20	19.9	22.7	21.9	20.4	22.7	7.1	24
11	19.9	19	17.9	15	13.8	13.7	13.5	14.2	14.8	13.7	12.9	13.3	15.6	14.4	15.5	14.5	16.6	10.9	11.4	11.4	10.6	13.1	13.1	11.4	19.9	12.4	24
12	12.5	14.5	14.2	15.1	14.4	13.7	12.8	12.6	13.3	15.3	14.8	15	15.5	15.9	16.5	9.4	14.4	13.2	14.5	14.2	14.9	12.7	10.8	12	16.5	12.7	24
13	13.8	11.8	9.6	11.1	9.4	11.8	10.4	11.7	11.1	8.4	9	16.1	17.2	18	15.1	16.2	17.9	16.8	16.3	14.2	12.5	12.8	10.1	8.6	18	11.6	24
14	8.5	8.1	6.3	6.2	9.3	10.7	10.8	10.1	9.7	11.6	13.4	11.6	9.7	4.5	4.7	7.2	7.4	6.1	5.4	8.3	8	6.4	5.5	8.6	13.4	7.6	24
15	10.3	8.7	8.4	10.1	10.3	11.4	11.6	11.6	14.8	15.2	16.5	13.7	20.8	17.8	15.4	15.6	11.2	8.3	8.4	7.9	8.2	9.7	11.3	12.3	20.8	11.1	24
16	12.4	11.6	12.6	13.2	13.8	13	13.8	12.8	12.4	12	9.1	12.6	16.5	17.5	15.2	10.9	4.5	7.4	10.9	11	11.2	11.4	12.3	12.3	17.5	10.8	24
17	12.1	12.4	13.8	13.7	13.4	14.1	11.8	10	8.4	9	12.1	17.2	16.3	15.1	15.6	15.1	14.9	14	13.4	11	10	9.7	8.7	9.6	17.2	11.6	24
18	8.7	4	6	5.2	8.2	9.4	10.1	13.3	16.2	14	12.5	14.8	15.8	15.2	14.7	13.7	16.6	19.4	19.4	19	17.5	18.6	20.1	20.1	20.1	13.2	24
19	18.2	17.4	17.5	17.9	18.7	18.3	20.4	19.6	20.6	20.5	20.7	18.4	19	17	16.9	15	11.9	11	9.9	10	8.9	8.3	10	20.7	16	24	
20	10.4	12.3	12.6	9.6	9.4	9.9	9.5	9.5	9.1	9.5	9.7	8.1	8.1	11.3	12.8	15.4	14.7	11.9	10.5	11.3	11.9	12.3	12.3	14	15.4	11	24
21	19.5	19.4	20.1	12.4	13.5	11.9	13.6	13.3	13.5	13.6	12.5	10.6	11.2	11.5	11.4	14	12.5	12.7	13.7	15.4	14.5	13.6	12.6	11.3	20.1	13	24
22	10.6	10.7	10.9	10	10.7	10.9	10.1	9.6	10.3	11.6	10	10.4	10.9	13.5	14.1	15.7	16.8	14.5	14.9	16.9	14.8	14.3	13.3	10	16.9	11.1	24
23	12.3	10.8	5	7.8	7.3	6.8	7.4	8.7	9.8	6.6	9.4	11	11.7	12.7	9.6	6.1	3.6	15.8	18.4	17.9	12.9	13.5	11.8	11.3	18.4	6.7	24
24	9.8	10.6	10.6	10	9.2	10.8	9.6	10.6	9.7	8.1	8.1	10.6	11.9	11.8	10.6	11	11.7	15	13.5	14.2	11	10.5	11.5	10.6	15	9.5	24
25	10.4	9.8	13.8	11.8	11.7	16.4	7.9	7.7	9.2	9.8	10	12	10.2	11.8	11.7	12.4	9.2	8.7	11.2	9	10.5	11.9	10.3	11.1	16.4	8.9	24
26	11.1	9.5	5.3	5.8	6.7	6.1	4.8	6.2	6.8	6.7	8.7	7	9.3	10.9	9.6	8.8	10.6	9.3	8.6	9.7	11.6	13.7	13.2	11.3	13.7	5.6	24
27	13.8	14.3	14.5	14.5	13.5	15.1	12.6	10.7	11.5	13.4	14	13.7	13.6	16.2	13.6	11.3	9	8.3	8.1	8.2	9.3	9.8	11.4	12.1	16.2	11.6	24
28	11.2	11	12.3	9.3	7.4	8.2	6.4	5.9	8.5	7.8	8	6.8	10.8	13.2	11.4	11.5	9.9	11.6	10	11.5	14	15.1	15.6	16.6	16.6	10.2	24
HOURLY MAX	30.0	27.5	28.3	21.5	18.7	18.3	20.4	19.6	20.6	20.5	20.7	19.6	23.5	22.8	20.8	20.1	22.7	23.8	25.3	24.8	19.9	22.7	21.9	20.4			
HOURLY AVG	12.4	11.8	11.8	11.4	11.2	11.6	10.8	10.5	10.9	10.9	11.2	11.5	12.4	12.4	12.5	12.2	11.9	12.1	12.7	12.6	12.2	12.3	12.1	12.3			

STATUS FLAG CODES

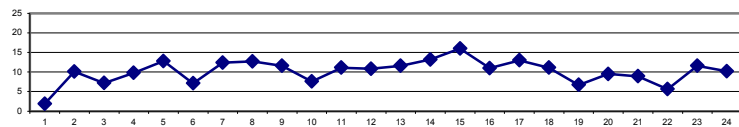
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

LAST CALIBRATION: June 12, 2012

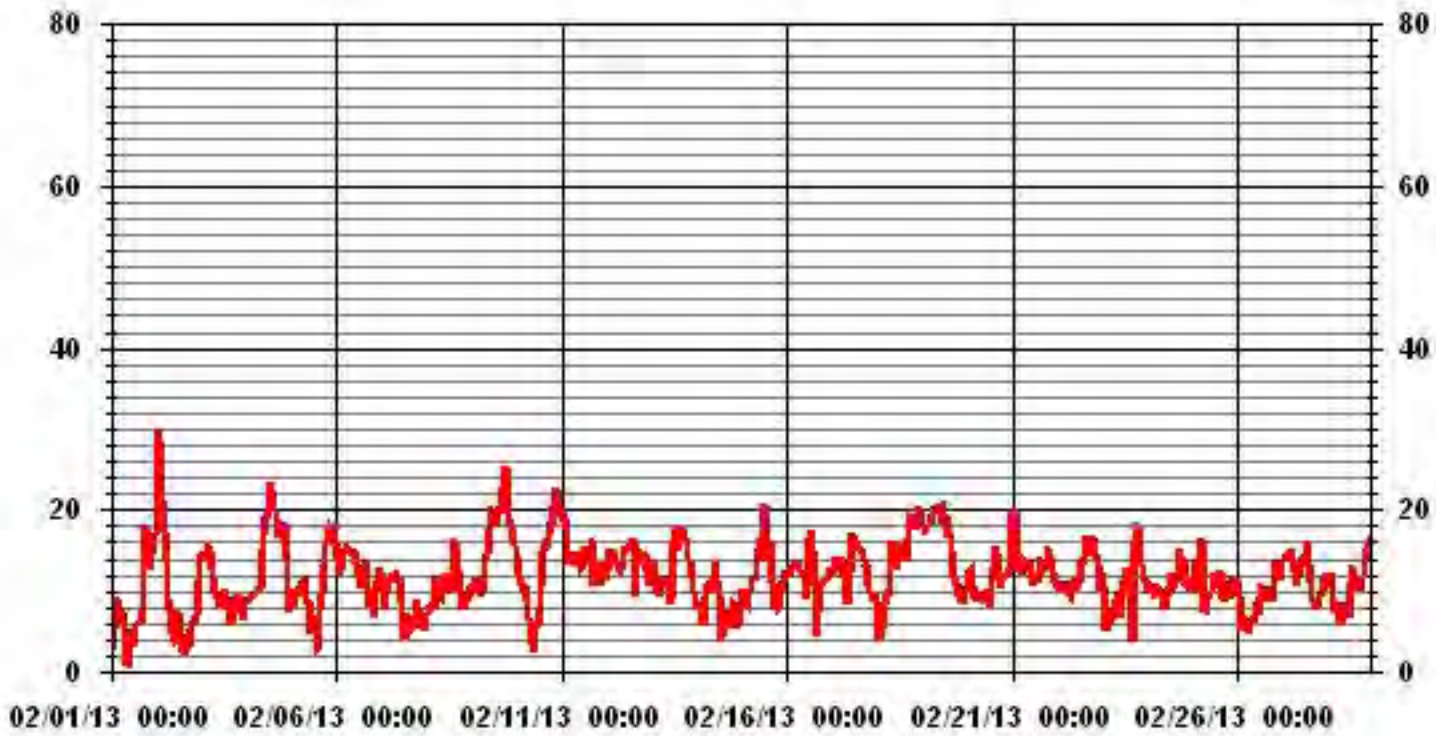
MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	30.0	KPH	@ HOUR(S)	0	ON DAY(S)	2
MAXIMUM 24-HR AVERAGE:	16.0	KPH			ON DAY(S)	19
CALMS (≤ 0 KPH)	0.00	%	OPERATIONAL TIME:	672	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME:	100.0	%	
STANDARD DEVIATION:	4.24		MONTHLY AVERAGE:	11.82	KPH	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA31 WSP KPH

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

FEBRUARY 2013

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST																								DAILY		
HOURLY START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	
HOURLY END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00		
DAY																										
1	16	14.9	16	20.2	20.4	19.4	19.3	18.7	14.3	11.2	12.8	13.7	26.1	13.4	13.2	14.3	16	24.6	25.7	19.7	17.1	28.1	36.8	42.1	42.1	
2	63.3	65.5	60.4	51	37.7	32	29.8	21.1	18.5	17.1	12.5	13.4	10.8	13.4	15.2	12.6	10.8	5.7	12.7	14.7	16.5	19.3	19.3	22.6	65.5	
3	23.2	23.7	23.5	29.2	30.5	30.3	25	21.1	21.3	18.9	17.2	19.1	22.1	16.7	20.2	20.4	17.4	19.8	19.1	16	19.5	16.9	16.2	20.2	30.5	
4	21.7	15.2	15.2	18	14.3	19.1	17.1	20.8	30.5	38.3	42.4	47.3	50.1	54.7	46.5	45.3	47.3	37.2	38.8	37.5	51.7	51.2	19.3	17.3	54.7	
5	13.8	17.8	12.3	13.4	13.4	16.9	15.6	17.6	10.8	10.3	10.1	15.6	11.2	10.8	11.7	14.7	16	22.1	35.3	34.4	34.9	36.2	37.9	28.3	37.9	
6	26.7	22.1	23.5	26.6	31.4	30.3	32.7	28.6	32.5	30.1	25	23.5	21.7	20.6	23	23.9	20	18.2	22.6	13.8	20.4	25.4	27.4	24.5	32.7	
7	20.6	22.4	21.1	21.9	19.7	19.7	23.7	18.9	20.4	18.7	17.1	14	14	13.6	17	13	13.4	13.4	16.9	14.7	13	12.3	9.9	10.1	23.7	
8	13.4	18.2	16.5	15.6	17.2	20.2	15.4	15.8	15.9	13.8	16.2	14.5	13.6	17.1	38.1	25.2	23.5	19.1	20	12.3	13.2	16.9	20.2	17.8	38.1	
9	15.4	15.8	15.8	16.2	18	16.2	29.4	28.3	29.4	37.9	49.7	43.6	46.9	54.5	48.6	50.2	56.3	51.9	57.4	66.1	46.7	42.7	42.5	37.5	66.1	
10	36.8	28.7	24.3	22.6	22.8	20.2	18.4	13.6	9.7	57.6	11.9	13.6	21.8	21.1	30.5	31.1	31.6	30.9	34.2	35.1	39.1	39.7	38.4	39	57.6	
11	34.6	29.6	23.5	21.1	18.7	21.7	18	22.4	22.4	22.8	24.1	33.5	34.4	31.1	37	33.3	38.6	29.6	17.1	22.6	19.5	29.6	26.3	23.2	38.6	
12	21	26.3	26.1	32.4	34.2	23.9	25.3	22.8	23.5	32.2	32.2	38.3	28.7	42.7	42.1	18	25.2	24.5	23	23	26.3	22.6	19.3	22.1	42.7	
13	29.8	22.1	17.1	17.8	20.2	28.5	22.3	26.1	22.6	97.9	36.4	40.7	44.7	43	37.9	35.5	39.4	40.1	36.4	31.1	31.3	30.7	19.1	17.8	97.9	
14	15.6	17.8	13.4	11.2	16	18.4	13.8	13	12.1	16.9	22.4	16.5	16.5	12.7	12.3	10.5	10.4	9.7	7.5	11.9	10.3	9	9.7	11.9	22.4	
15	13.9	12.5	16.2	20	20.6	20.4	24.1	20.2	27.4	28.1	32	27.4	31	30.7	26.7	29.6	21	14.7	12.3	12.3	11.9	12.7	16.7	17.1	32	
16	19.1	17.6	20.6	20	21	18	19.3	20	18.9	20.2	15.2	30.2	27.6	33.5	33.8	29.4	11.4	18.6	17.3	22.1	24.3	26.5	25.2	26.1	33.8	
17	24.5	26.7	30	29.4	29.6	35.5	27.8	21.7	17.8	25	31.1	43.4	39.2	38.8	38	34.2	33.3	31.8	34.4	27.8	23.2	25.7	19.8	18.3	43.4	
18	18.9	14.5	14.1	18.7	18	21.3	20	28.3	32	26.3	23.5	32	28.5	27.8	27.4	30.3	34.2	38.4	39.2	37.5	35.3	36.4	35.1	38.8	39.2	
19	37.3	32.2	34.7	37.5	40.1	41	38.6	37.9	39.5	36.2	39	34.9	34.2	35.5	34.2	35.1	31.6	23	21.3	20	17.6	17.8	18.5	21.3	41	
20	23	25.7	27.2	21.5	20.9	22.4	21.3	22.6	20.4	21.7	20.6	21.3	19.1	26.7	29.4	31.4	29.2	27.6	23.3	24.8	29.4	28.1	28.3	34.2	34.2	
21	37.3	43.7	38.6	28.7	31.1	25.3	33.8	31.1	34.9	31.6	29.6	26.7	25.3	23.2	23.7	30.3	22.4	26.1	28.1	31.1	25	27.2	23	22	43.7	
22	21.7	23.5	21.1	20.4	21.5	21.1	19.8	20.2	21.1	25.7	22.2	20.8	21.7	24.1	24.1	28.1	29.4	25.2	25.6	29.9	31.8	26.1	29.9	27.2	31.8	
23	20.8	20.4	17.1	20.6	16.2	16.9	14.3	19.1	22.8	16.1	20.6	25	26.5	27.8	21.5	18.2	30.3	33.8	35.9	36.8	30.5	31.1	30.9	25	36.8	
24	18.4	20.6	18.4	13.9	13.4	17.3	15.4	18	18.9	14.3	13	24.4	25.7	25.9	23.2	27.4	25.9	30.3	25.4	29.8	23	16.9	16.7	14.5	30.3	
25	14.3	18.9	25.9	25.9	27.6	32.7	20.8	15.4	16.7	17.3	23.5	23.5	19.1	25.4	29.4	23.2	19.5	15.8	20	18.4	20	21.9	18.3	18.4	32.7	
26	18.4	18.9	9.9	11.9	8.8	7.7	18.4	7.3	10.8	13	17.6	15.2	23.5	24.1	23.9	23.7	24.6	21.7	16.9	20.8	25.2	31.1	28.5	24.1	31.1	
27	25	28.3	28.1	27.8	29	31.8	30.9	21.1	26.6	29.2	32.9	29.6	31.8	31.8	31.1	25.7	21.3	17.7	16.2	17.6	22.8	25.7	26.7	27.6	32.9	
28	23.2	29.7	25.7	25.7	16.9	16.7	15	13.6	21.3	17.8	23.7	17.3	24.8	26.1	21	19.8	18.4	20.2	21.7	23.5	26.7	29.8	31.6	31.8	31.8	
PEAK	63.3	65.5	60.4	51.0	40.1	41.0	38.6	37.9	39.5	97.9	49.7	47.3	50.1	54.7	48.6	50.2	56.3	51.9	57.4	66.1	51.7	51.2	42.5	42.1		

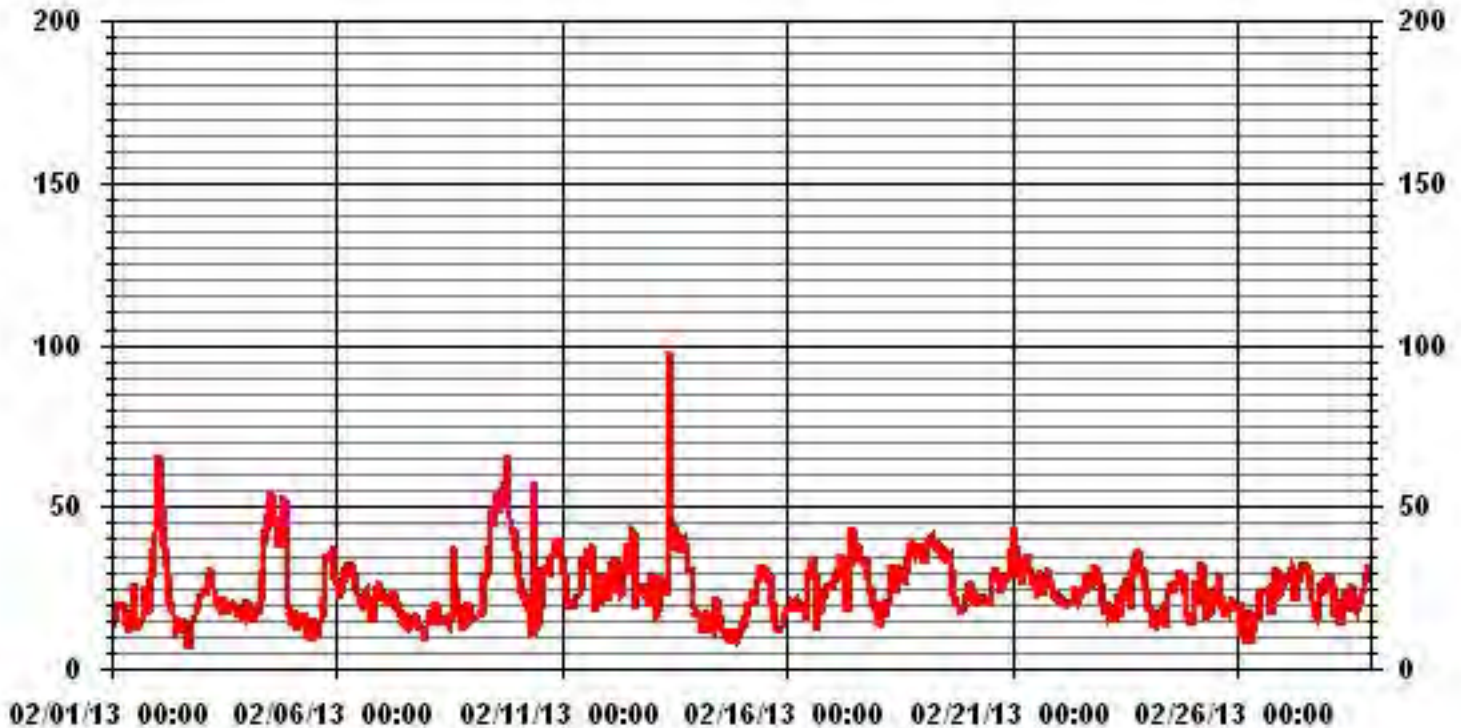
STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	97.9	KPH	@ HOUR(S)	9
			ON DAY(S)	13

01 Hour Averages



LICA31
WSP / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 31
Site Name : LICA31
Parameter : WSP
Units : KPH

Wind Parameter : WDR
Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 6.0	.00	.29	.29	.00	.29	.89	.44	.29	.14	1.04	.74	.59	.74	.59	.44	.14	6.99
< 12.0	1.19	1.48	2.08	1.04	2.08	2.52	2.97	4.16	5.20	8.33	3.86	5.05	2.97	3.12	2.08	1.63	49.85
< 20.0	2.23	.14	.29	.89	2.67	2.67	4.91	1.19	3.86	2.52	1.78	2.82	4.61	2.38	2.67	3.57	39.28
< 29.0	.00	.00	.00	.00	.00	.14	.74	.00	.14	.59	.14	.00	.00	.00	.59	1.33	3.72
< 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.14
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	3.42	1.93	2.67	1.93	5.05	6.25	9.07	5.65	9.37	12.50	6.54	8.48	8.33	6.10	5.95	6.69	

Calm : .00 %

Total # Operational Hours : 672

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 6.0		2	2		2	6	3	2	1	7	5	4	5	4	3	1	47
< 12.0	8	10	14	7	14	17	20	28	35	56	26	34	20	21	14	11	335
< 20.0	15	1	2	6	18	18	33	8	26	17	12	19	31	16	18	24	264
< 29.0						1	5		1	4	1				4	9	25
< 39.0															1		1
>= 39.0																	
Totals	23	13	18	13	34	42	61	38	63	84	44	57	56	41	40	45	

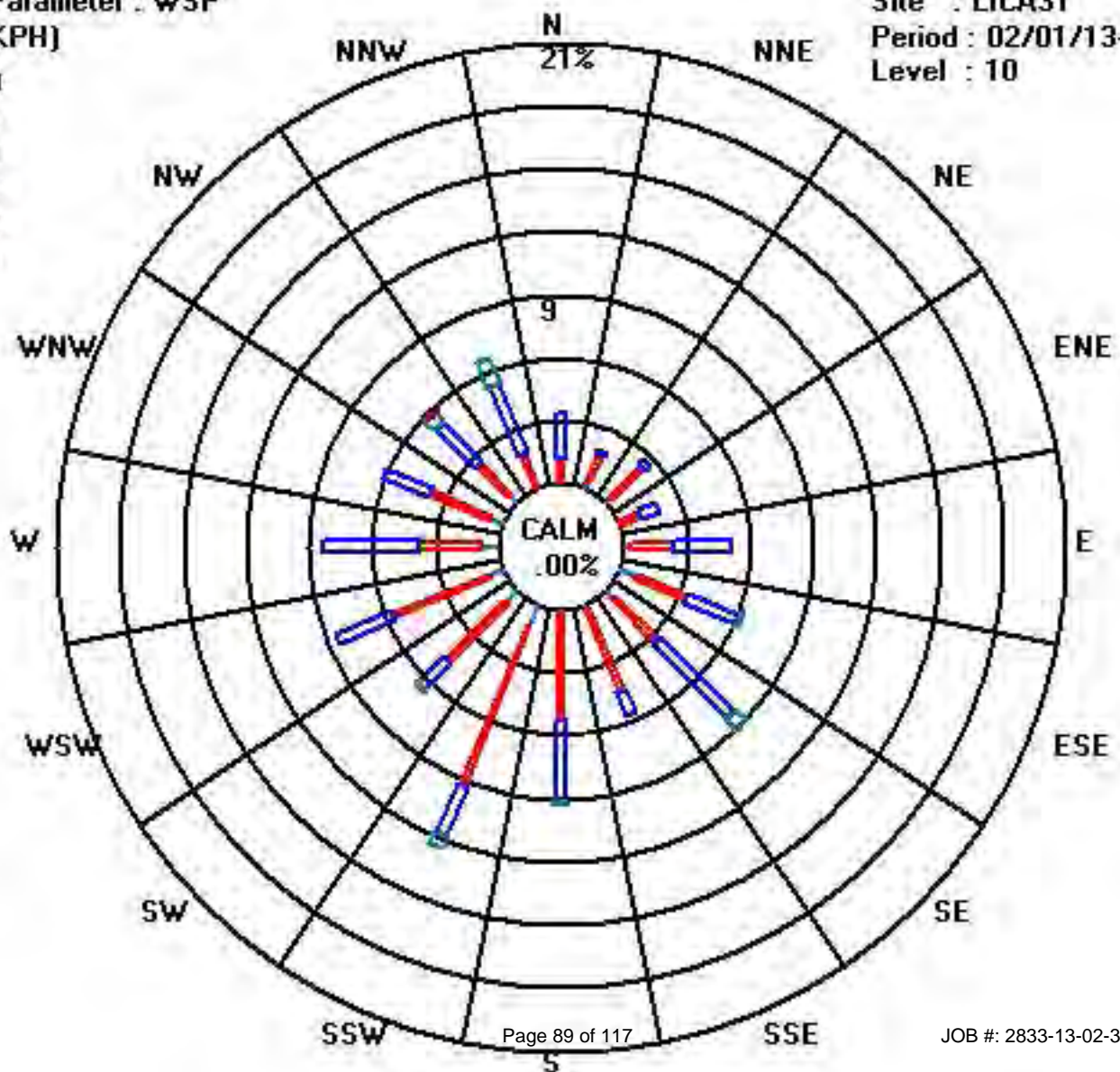
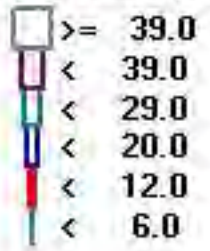
Calm : .00 %

Total # Operational Hours : 672

Class Limits (KPH)

Period : 02/01/13-02/28/13

Level : 10



Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA

FEBRUARY 2013

WIND DIRECTION hourly averages in degrees

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	AVG.	QUADRANT	RDGS.
DAY 1	14	304	319	341	1	8	25	15	116	100	216	213	204	209	213	210	206	222	232	237	238	271	265	291	259	WSW	24
2	314	336	340	343	351	345	341	10	277	283	259	247	249	306	260	288	223	235	212	194	195	102	107	105	328	NNW	24
3	108	103	104	103	94	92	93	84	94	78	71	85	77	93	102	102	102	98	99	119	115	140	132	178	101	E	24
4	200	210	229	212	225	241	275	263	265	281	279	293	307	310	314	317	326	309	311	319	319	323	305	283	292	WNW	24
5	259	269	240	258	229	220	253	246	225	228	244	215	222	204	121	76	74	75	79	78	77	74	74	85	129	SE	24
6	87	87	79	74	79	84	85	90	83	89	94	94	91	102	99	104	109	137	158	136	159	180	188	200	104	ESE	24
7	205	185	192	201	198	198	200	203	196	200	201	180	163	122	110	118	145	117	142	141	152	157	173	210	179	S	24
8	195	197	236	242	225	245	247	239	241	255	265	250	234	235	247	259	264	261	265	239	206	210	200	213	240	WSW	24
9	223	213	231	253	236	242	264	285	301	322	330	332	331	337	348	343	341	341	341	343	350	5	8	8	326	NW	24
10	359	356	346	335	345	337	327	322	287	207	240	214	215	203	195	199	217	210	205	211	208	206	199	208	226	SW	24
11	219	226	230	231	238	237	252	282	280	285	285	296	303	302	306	306	308	289	270	268	270	291	277	269	270	W	24
12	270	277	276	276	280	280	282	285	283	279	281	284	275	266	278	251	250	250	246	239	236	216	201	211	263	W	24
13	256	284	286	279	286	308	314	303	298	288	333	350	355	354	350	339	324	327	332	334	331	329	332	324	321	NW	24
14	317	316	290	275	283	272	257	243	246	240	252	257	252	246	257	232	232	249	259	278	282	291	262	226	261	W	24
15	233	217	200	191	194	201	198	208	208	215	221	223	236	241	251	269	272	256	219	253	230	242	241	269	230	SW	24
16	266	256	260	265	265	260	253	251	253	230	254	252	261	290	309	332	261	250	287	305	317	327	337	272	272	W	24
17	332	331	333	341	342	351	359	7	349	351	356	359	347	340	341	341	344	338	355	354	37	50	50	70	353	N	24
18	90	124	109	118	104	89	83	94	102	113	117	136	133	138	131	143	136	134	137	142	140	134	130	127	125	SE	24
19	126	130	130	126	129	127	120	133	130	134	133	131	136	134	131	135	139	137	134	138	128	133	151	154	132	SE	24
20	166	174	170	171	169	173	176	174	164	165	162	164	171	185	189	191	192	187	169	168	170	173	180	179	175	S	24
21	176	176	184	189	171	166	165	167	175	172	163	163	158	144	143	141	133	134	132	132	140	141	140	146	157	SSE	24
22	151	153	154	169	181	177	164	171	158	157	161	142	115	110	117	113	114	113	116	121	123	108	97	104	133	SE	24
23	97	103	96	94	101	307	308	305	345	277	284	294	296	311	324	257	292	315	312	309	309	307	291	302	312	NW	24
24	296	292	269	249	248	221	211	203	202	209	208	193	200	203	191	193	197	199	197	194	213	217	227	262	217	SW	24
25	267	293	316	328	13	26	25	24	37	42	35	45	44	51	50	46	39	35	30	24	23	27	22	32	22	NNE	24
26	46	54	44	38	42	63	108	123	133	143	159	174	198	200	196	188	181	184	167	168	170	171	175	186	157	SSE	24
27	198	189	186	179	180	183	184	175	148	156	143	157	154	152	157	163	171	146	130	142	160	175	180	198	168	SSE	24
28	200	192	196	199	184	172	205	145	191	154	207	192	199	200	207	210	209	200	190	182	180	181	177	174	190	S	24
HOURLY AVG	359	356	346	343	351	351	359	322	349	351	356	359	355	354	350	343	344	341	355	354	350	329	332	337			

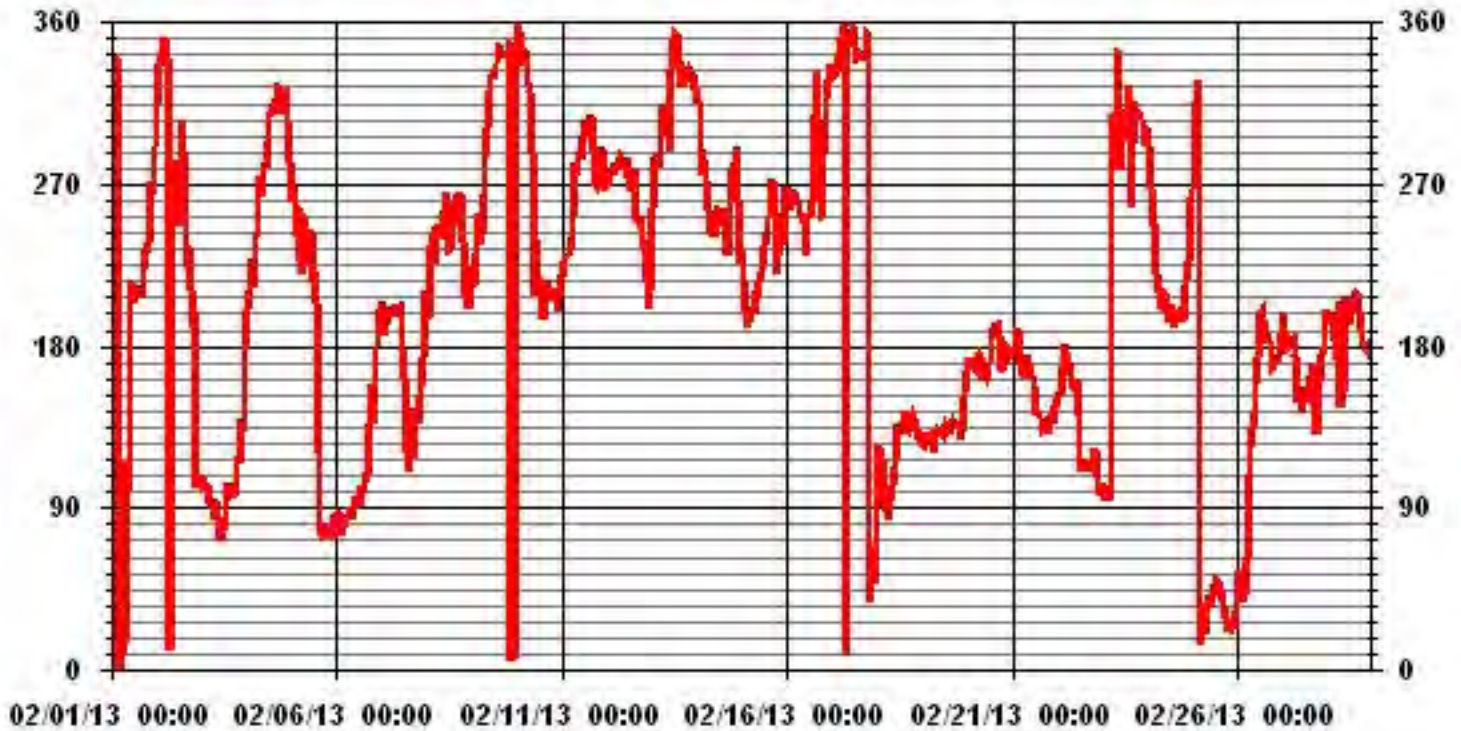
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

LAST CALIBRATION:	June 12, 2012
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	672 HRS
STANDARD DEVIATION:	85.50	AMD OPERATION UPTIME:	100.0 %
		MONTHLY AVERAGE:	217 DEG

01 Hour Averages



Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

FEBRUARY 2013

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00
DAY																								
1	23	16	16	12	17	15	16	46	39	62	16	15	26	16	12	14	13	9	5	4	3	10	8	15
2	15	14	13	14	18	14	15	15	23	30	21	12	28	52	33	36	12	9	8	11	15	12	9	9
3	9	9	10	9	11	13	11	10	10	12	12	12	12	14	10	14	12	12	12	11	10	12	13	13
4	10	8	8	9	6	8	8	7	8	12	12	15	16	15	16	15	15	15	14	15	15	14	13	9
5	7	9	3	7	6	6	7	6	3	3	17	38	9	17	22	8	7	8	10	9	9	9	9	11
6	10	11	10	10	10	10	11	11	12	10	11	11	11	12	9	10	10	14	14	12	15	12	11	12
7	11	19	9	8	8	9	8	8	8	9	13	17	28	18	13	13	12	11	9	11	10	12	9	11
8	10	11	14	15	15	10	9	11	6	4	5	4	4	4	7	7	5	5	5	7	7	6	6	8
9	6	9	4	4	7	5	8	12	14	13	14	14	14	15	15	14	16	14	14	13	15	20	15	14
10	14	15	11	10	11	12	12	17	23	27	24	14	13	13	12	11	10	10	10	9	9	9	9	10
11	9	7	5	4	5	4	4	7	7	10	11	15	15	15	16	14	13	6	7	7	7	14	11	9
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27	10	9	8	8	9	10	11	11	14	14	14	17	15	14	15	15	14	14	12	14	14	14	11	11
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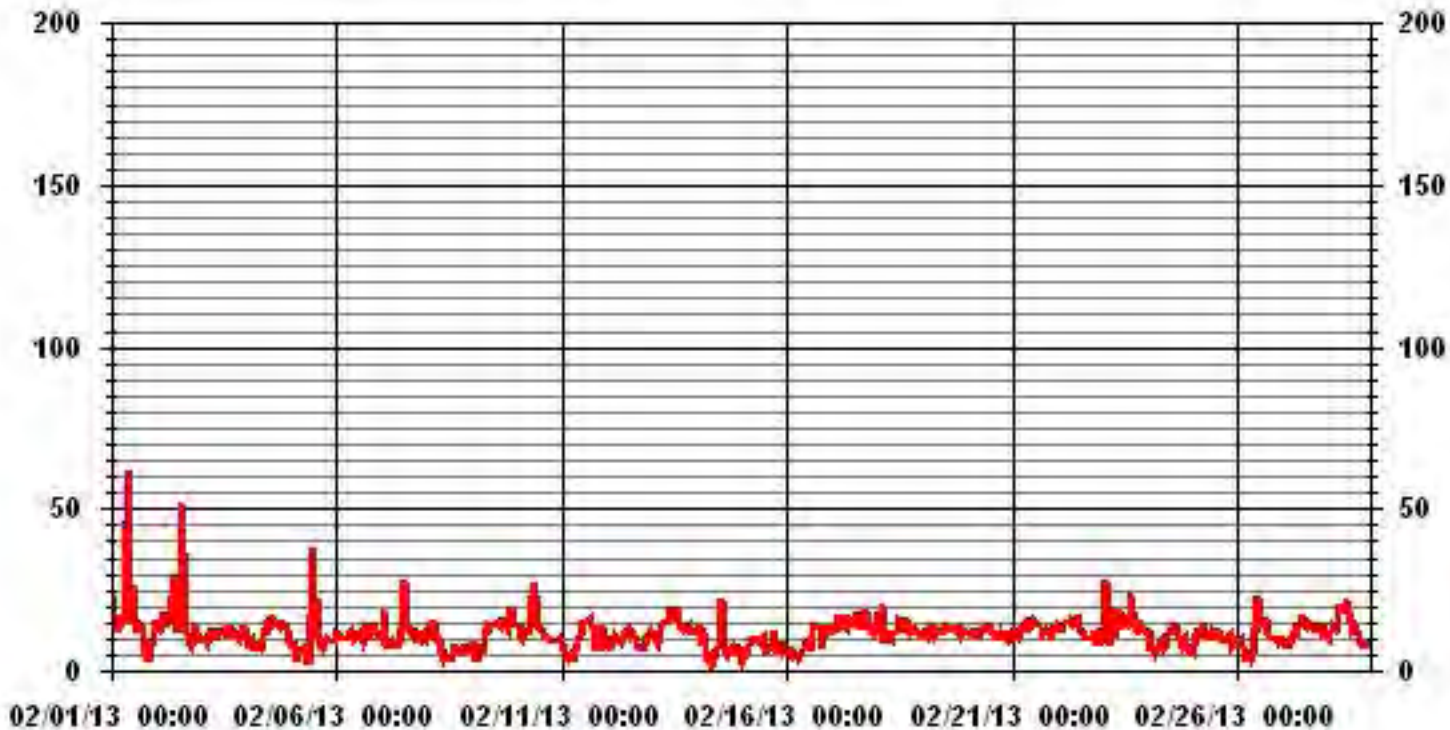
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

LAST CALIBRATION: June 12, 2012

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 672 HRS

01 Hour Averages



Calibration Reports

Sulphur Dioxide

SO₂ Calibration Report

Station Information

Calibration Date	February 19, 2013	Previous Calibration	January 17, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	08:15	End Time (MST)	16:30		
Reason:	As Found				
Barometric Pressure	0.9 atm	Station Temperature	13.5 Deg C		
Cal Gas	49.6 ppm	Gas Cyl. #	LL42502	Cal Gas Expiry date	December 29, 2013
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA	Volts	

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	NA	S/N :	NA		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

Before Calibration			After Calibration		
Concentration Range	0 - 1000 ppb				
Sample Flow / Box Temp	575 ccm	26.8 Deg C	575 ccm	27.1 Deg C	
HVPS / Lamp Setting	540	2175	540	2174	
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	40.0 Deg C	
Offset / Slope	98.4	1	98.4	1.003	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
	No Zero Adj.			
4920	80.0	794	786	1.0097
			Sum of Least Squares New Correction Factor	1.0097

IZS aibration Data

Before Calibration		After Calibration	
Auto Zero	0.0	0.0	
Auto Span	245.0	245.0	
Sample Lines Connected		YES	

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0097
Percent Change:	-1.0%

Notes: **N/A : Not applicable**

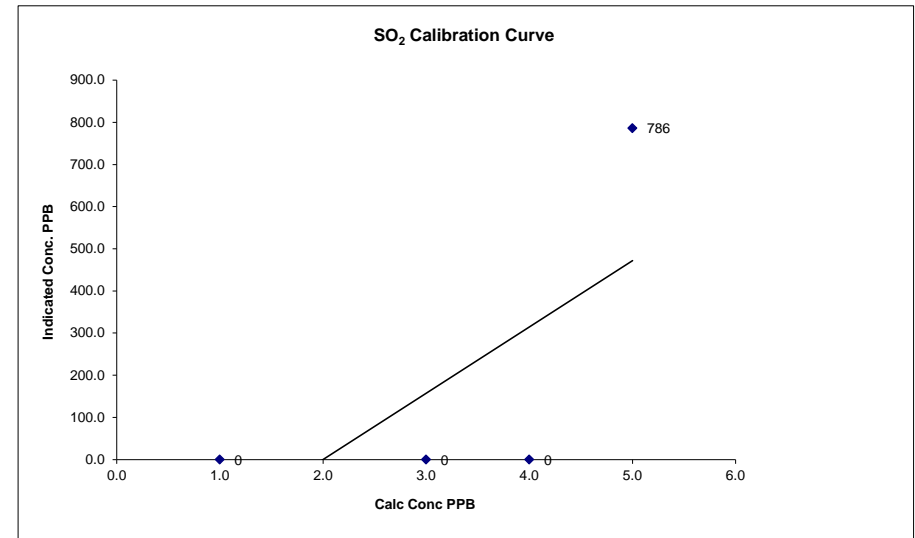
Following the A/F, worked on the slop/offset. The analyzer was left in Maintenance mode. Will perform a post-repair calibration tomorrow.

Calibration Performed by: Waseem Ahmed

SO₂ Calibration Curve

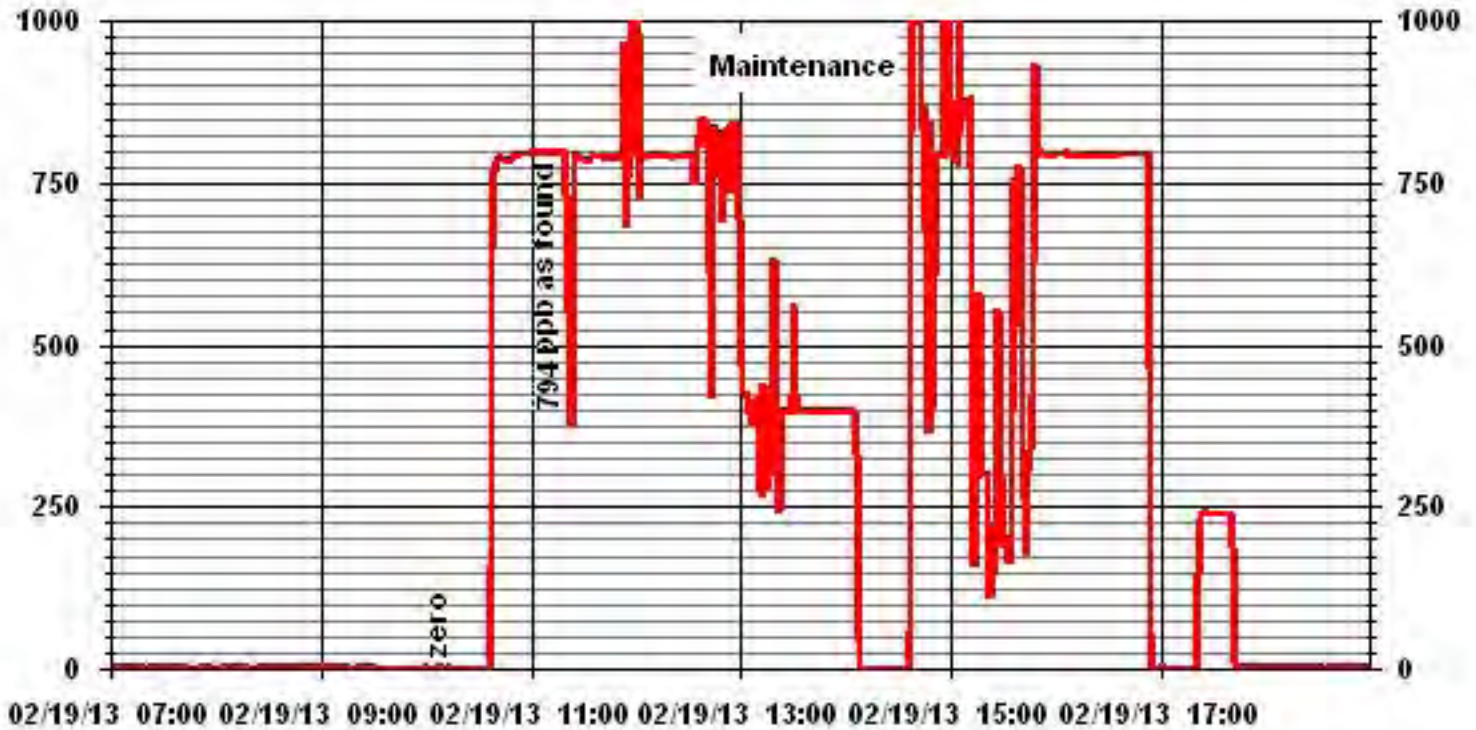
Calibration Date	February 19, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	08:15	End Time (MST)	16:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995)	(0.85 to 1.15)
0	0	n/a	Intercept	($\pm 3\%$ F.S.)	1.000000
794	786	1.0097			0.990423
					0.000000



Notes:

01 Minute Averages



SO2 Calibration Report

Station Information

Calibration Date	February 20, 2013	Previous Calibration	January 17, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	11:30	End Time (MST)	16:00
Reason:	Post-Repair Calibration		
Barometric Pressure	0.92 atm	Station Temperature	13.5 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	LL42502
DAS Output Voltage	0 - 1 Volts	Cal Gas Expiry date	December 29, 2013
		Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	NA	S/N :	NA		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

Before Calibration				After Calibration			
Concentration Range	0 - 1000 ppb						
Sample Flow / Box Temp	574 ccm	27.3 Deg C		575 ccm	26.3 Deg C		
HVPS / Lamp Setting	540	2174		540	2171		
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	40.0 Deg C		
Offset / Slope	98.4	1		98.2	1		

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
	No Zero Adj.			
4920	80.0	794	796	0.9970
	No Span Adj.			
4960	40.0	397	399	0.9945
4980	20.0	198	201	0.9871
5000	0	0	0	N/A
Sum of Least Squares				0.9960
New Correction Factor				0.9970

IZS alibration Data

Before Calibration		After Calibration	
Auto Zero	0.0	Auto Zero	0.0
Auto Span	240.0	Auto Span	238.1
Sample Lines Connected		Sample Lines Connected	YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	0.9970
Percent Change:	0.3%

Notes:

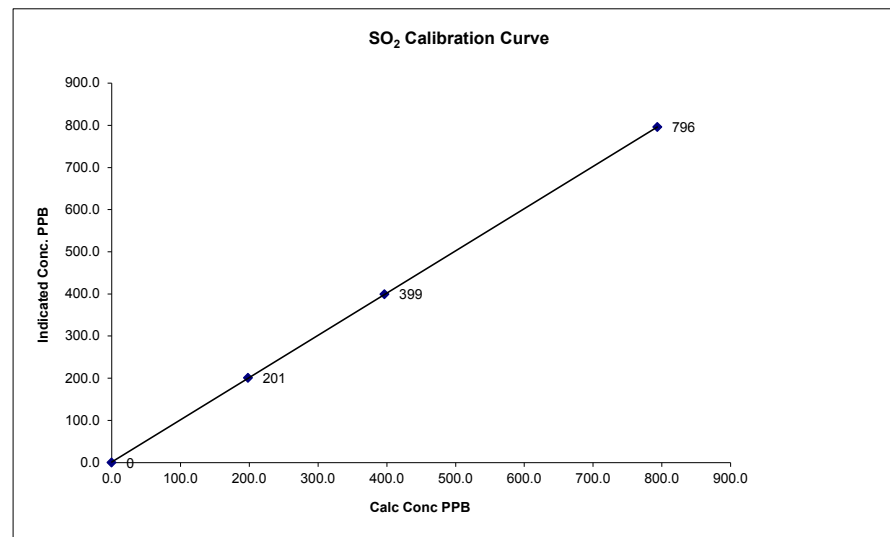
N/A : Not applicable

Kept working on the slop/offset, then perform a full calibration.

SO2 Calibration Curve

Calibration Date	February 20, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST. LINA
Start Time (MST)	11:30
End Time (MST)	16:00

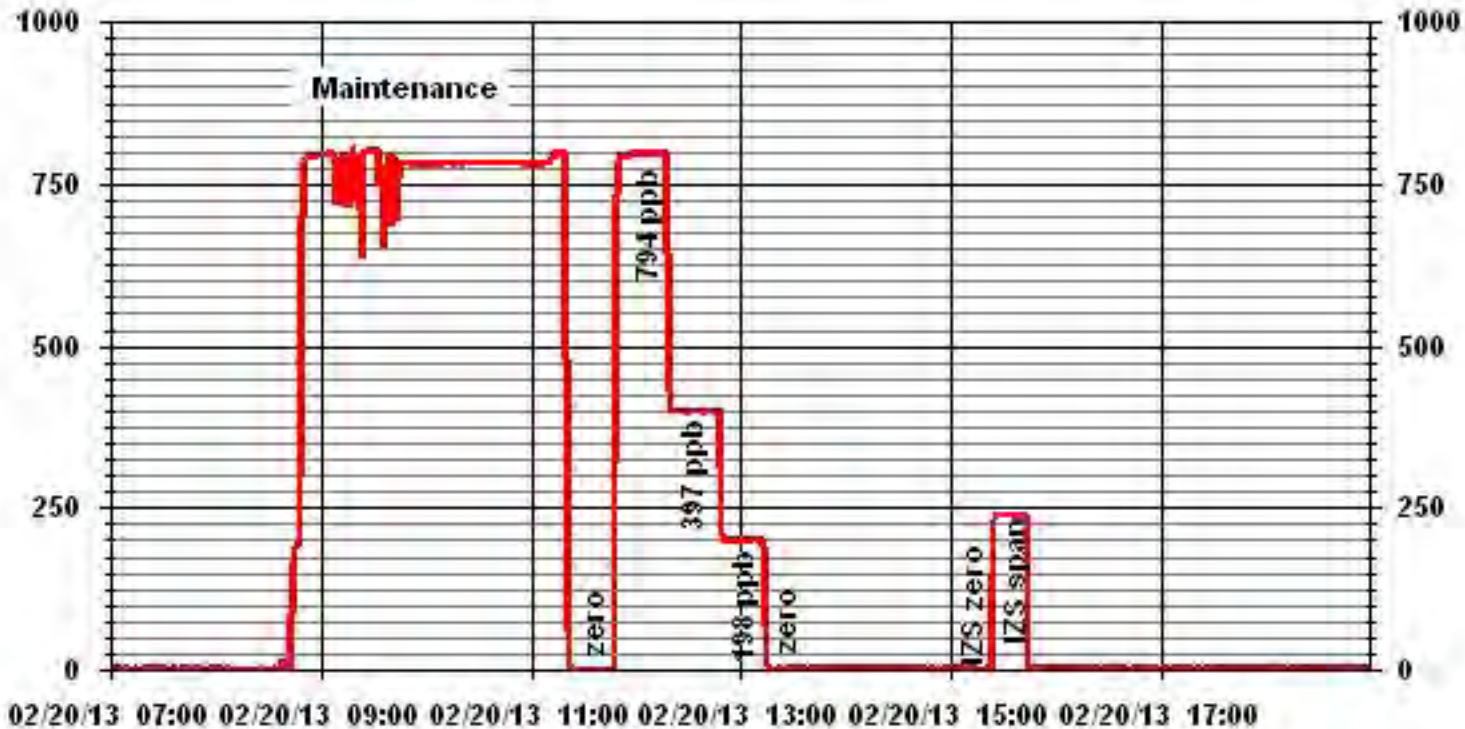
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	0	n/a		0.999993
198	201	0.9871		1.002304
397	399	0.9945		1.000000
794	796	0.9970		



Notes:

Calibration Performed by: Waseem Ahmed / Limin Li

01 Minute Averages



Hydrogen Sulphide

H2S Calibration Report

Station Information

Calibration Date	February 19, 2013	Previous Calibration	January 17, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST.LINA		
Start Time (MST)	08:45	End Time (MST)	14:10
Reason:	Monthly Calibration		
Barometric Pressure	0.9 atm	Station Temperature	1JEE Deg C
Cal Gas	10 ppm	Gas Cyl. #	LL42648
DAS Output Voltage	0 - 1 Volts	Cal Gas Expiry date	December 27, 2012
		Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	510	Method:	Fluorescent
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	NA	S/N :	NA		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 100		
Sample Flow / Box Temp	529 ccm 29.6 Deg C	531 ppb	29 Deg C
HVPS / Lamp Setting	518 2138	518	2136
PMT / RxCell Temp	8.4 Deg C 50 Deg C	8.4 Deg C	50 Deg C
Converter / IZS Temp	315.5 Deg C 45 Deg C	315.4 Deg C	45.0 Deg C
Offset / Slope	103.7 1.035	105.8	1.055

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	1	NA
5000	0	0	0	1.0000
4960	40.0	80	79	1.0127
4960	40.0	80	81	0.9877
4980	20.0	40	41	0.9756
4988	10.0	20	21	0.9528
5000	0	0	0	NA
Sum of Least Squares				0.9836
New Correction Factor				0.9877

IZS Calibration Data

Before Calibration		After Calibration	
Auto Zero	0.0		0.6
Auto Span	H EE		38.8
Sample Lines Connected			YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0127
Percent Change:	-1.3%

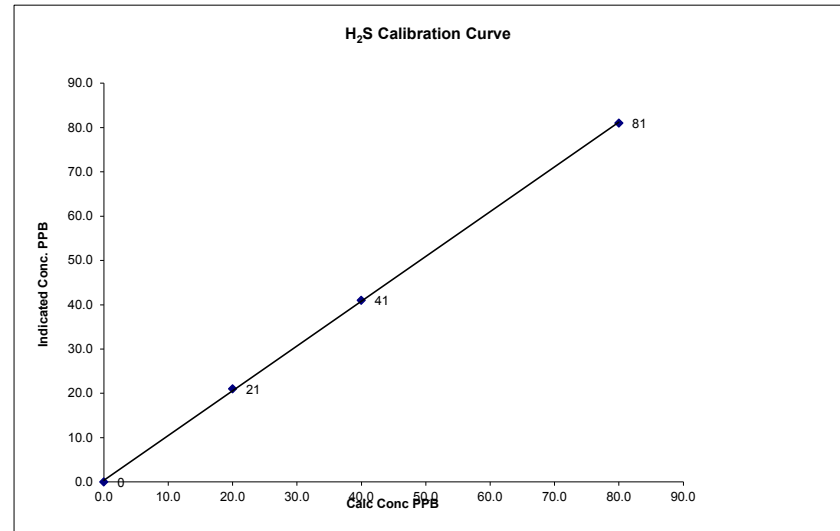
Notes: **NA : Not Applicable**
 After A/F, accidentally turned off zero off air supply. Corrected the issue and then performed adjustment.

Calibration Performed by: Waseem Ahmed

H₂S Calibration Curve

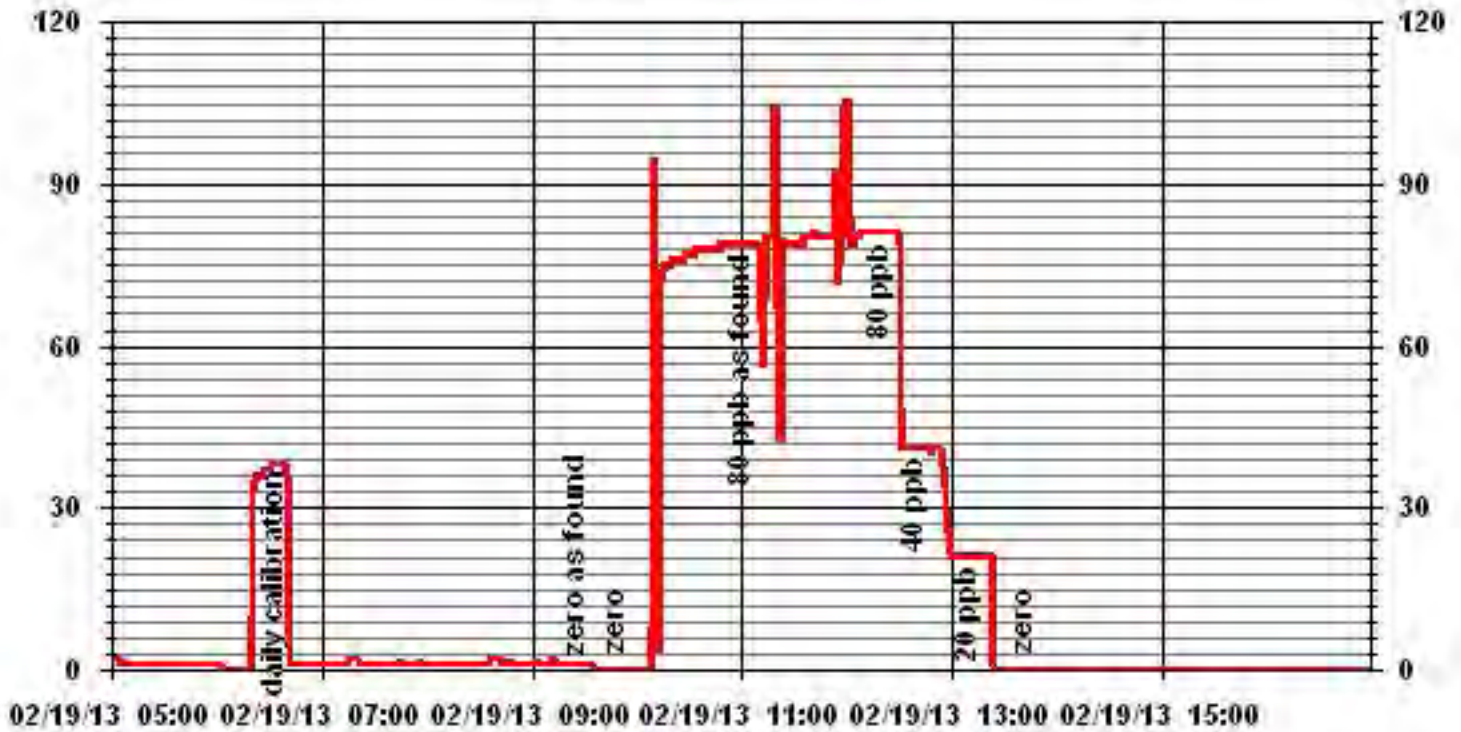
Calibration Date	February 19, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION
Plant / Location	ST.LINA
Start Time (MST)	08:45
End Time (MST)	14:10

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)
ppb	ppb		Slope	0.999890
0	0		Intercept	1.010036
			(± 3% F.S.)	0.396735
20	21	0.9528		
40	41	0.9756		
80	81	0.9877		



Notes:

01 Minute Averages



Total Hydrocarbons

THC Calibration Report

Station Information			
Calibration Date:	February 19, 2013	Previous Calibration	January 17, 2013
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location:	ST. LINA		
Start Time (MST)	14:15	End Time (MST)	17:00
Reason:	Monthly Calibration		
Barometric Pressure:	0.9 atm	Station Temperature:	14.8 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	CH4 600 PPM TOTAL CH4 1161.0 PPM	C3H8 204 PPM Gas Cyl. # LL155310	Cal Gas Expiry Date: September 9, 2013
DAS make & Model:	ESC 8832	S/N :	AO 717
Chart Recorder:	NA	S/N:	NA
Output Voltage Range:	0 - 10 VDC	Chart Speed:	NA mm/hr

Analyzer Information

Make / Model	TECO 51C	S/N :	77021-384	Method	Flame Ionization
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Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 50	ppm	0 - 50	ppm
Sample Pressure	6.8	psi	6.8	psi
Hydrogen Pressure	9	psi	9	psi
Air Pressure	21	psi	21	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2000	0.0	0.0	-0.7	NA
2000	0.0	0.0	0.0	NA
1931	69.2	40.2	40.2	1.0000
	No Span Adj.			
1965	34.6	20.1	19.8	1.0146
1983	17.3	10.0	9.8	1.0246
2000	0.0	0.0	0.0	NA
New Correction Factor:				1.0000

Percent Change

Previous Calibration Correction Factor:	0.9934
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	-0.7%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	35.0	35.0
Sample Lines Connected	YES	

Cylinder Pressures			
Span	650 psi	Hydrogen 1450 psi	Zero Air 34 psi

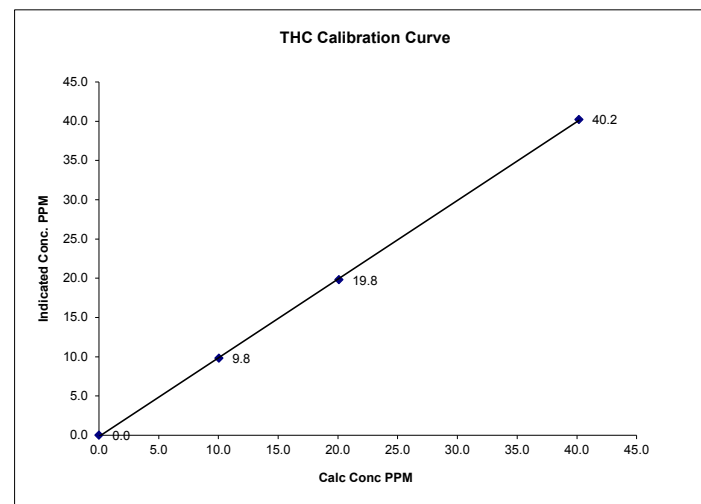
Notes: **NA : Not Applicable**

Calibration Performed by: Waseem Ahmed

THC Calibration Curve

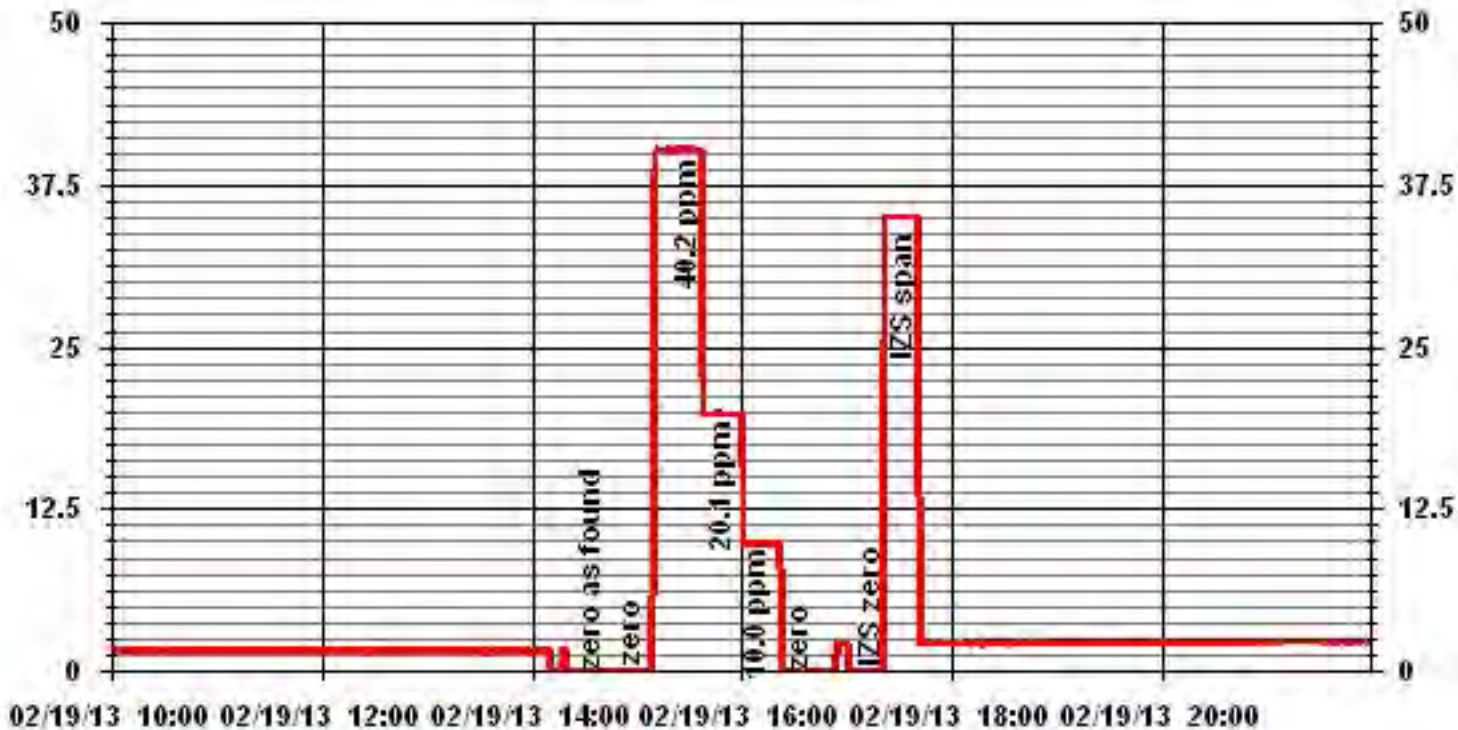
Calibration Date	February 19, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	14:15	End Time (MST)	17:00

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient (≥ 0.995)	Slope (0.85 to 1.15)	Intercept (± 3% F.S.)
0.0	0.0	NA	0.999913	1.002090	-0.16099
10.0	9.8	1.0246			
20.1	19.8	1.0146			
40.2	40.2	0.9992			



Notes:

01 Minute Averages



Nitrogen Dioxide

NOx - NO- NO2 Calibration Report

Station Information

Calibration Date	February 19, 2013		Previous Calibration		January 17, 2013	
Company	LICA		Plant/Location		St. Lina	
Start Time (MST)	08:15		End Time (MST)		16:30	
Reason:	Monthly Calibration					
Barometric Pressure	0.9 atm	Station Temperature	11 Deg C	MFCF	0	
Cal Gas Concentration	NOx 50.1 ppm	NO	50.1 ppm	Cal Gas Expiry date	December 29, 2013	
Cal Gas Cylinder #	LL42502					
DAS Output Voltage	0 - 1 Volts	Chart Rec. Output	NA Volts			

Equipment Information

Analyzer Make / Model:	TAPI 200E	S/N :	592	Method:	Chemiluminescent	
Calibrator Make / Model:	Enviroics 6100	S/N:	4760			
DAS Make / Model:	ESC 8832	S/N :	AO717			
Chart Recorder Make / Model:	NA	S/N:	NA			
Flow Meter:	Enviroics 6100	S/N :	4760			

Analyzer Settings

Before Calibration				After Calibration			
Concentration Range	0 - 1000			ppb			
Sample Flow/Conv. Temp	477 ccm	314 Deg C		486 ccm	316 Deg C		
Ozone Flow / Vacuum	73 ccm	6.2 *Hg-A		73 ccm	6.2 *Hg-A		
HVPS / A ZERO	637 Volts	18.0 MV		637 Volts	19 MV		
Rx/ Temp / PMT Temp	50.0 Deg C	6.9 Deg C		50.0 Deg C	6.9 Deg C		
Box Temp / IZS Temp	31.5 Deg C	45.1 Deg C		33.3 Deg C	45.4 Deg C		
Offset	1.1 NOx	-0.1 NO		0 NOx	0.3 NO		
Slope	1.075 NOx	1.070 NO		1.074 NOx	1.070 NO		
NO2 COEF / Conv Efficiency	N/A NO2	0.993 N/A		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
4995	0.0	NA	0	0	NA	0	1	0	NA	NA
4995	0.0	NA	0	0	NA	1	0	1	NA	NA
4914	79.8	NA	801	801	NA	788	788	0	1.0160	1.0173
4914	79.8	NA	801	801	NA	791	789	2	1.0121	1.0160
4955	39.9	NA	400	400	NA	394	393	1	1.0158	1.0209
4975	19.8	NA	199	199	NA	200	200	0	0.9930	0.9980
4995	0.0	NA	0	0	NA	1	0	1	NA	NA

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		
4915	79.8	NA	800	800	NA	790	789	1	NA	NA
4915	79.8	600	800	NA	537	789	253	537	1.0000	100.00%
	No Adj.									
4915	79.8	300	800	NA	274	790	516	275	0.9964	100.37%
4915	79.8	120	800	NA	109	789	681	109	1.0000	100.00%

Linearity OK?	Yes	No	Sum of Least Squares Correction Factors:	NOx= 1.012	NO= 1.014	NO2= 0.999
				NOx= 1.0121	NO= 1.0160	NO2= 1.0000
				Average Converter Efficiency= 100.12%		

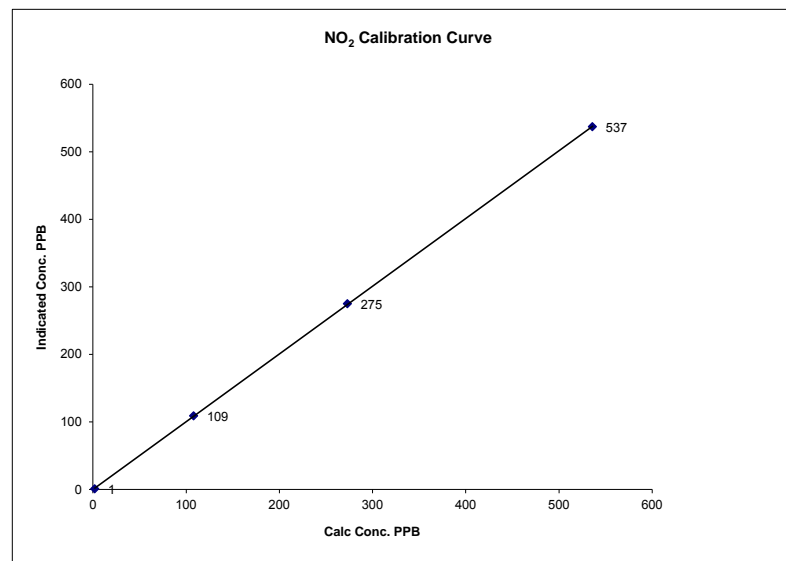
IZS Calibration Data

Before Calibration				After Calibration				
Auto Zero	0.5 NOx	0.0 NO2		0.6 NOx	0.8 NO2			
Auto Span	529 NOx	518 NO2		514 NOx	505 NO2			
				Sample Lines Connected: YES				
Percent Change from Previous Calibration				NOx -1.6%	NO -1.7%	NO2 -0.2%		
Notes	NA : Not Applicable							
	After A/F, wrong setting on the calibrator was input. Corrected the error after 20mins. Re-did the first span point (801 ppb)							
Calibration Performed by: Waseem Ahmed/Limin Li								

NO2 Calibration Curve

Calibration Date	February 19, 2013	
Company	LICA	
Plant / Location	St. Lina	
Start Time (MST)	08:15	End Time (MST) 16:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999980
2	1	N/A	Intercept	(± 3% F.S.)	1.003072
108	109	0.9908			0.04420
273	275	0.9927			
536	537	0.9981			

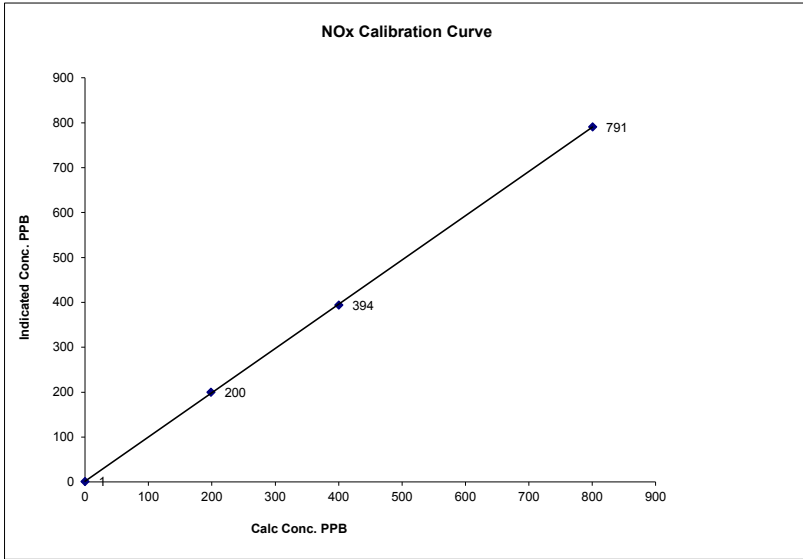


Notes:

NOx Calibration Curve

Calibration Date	February 19, 2013		
Company	LICA		
Plant / Location	St. Lina		
Start Time (MST)	08:15	End Time (MST)	16:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999966
0	1	N/A	Slope (0.85 to 1.15)	0.985196
199	200	0.9930	Intercept (± 3% F.S.)	1.82976
400	394	1.0158		
801	791	1.0121		

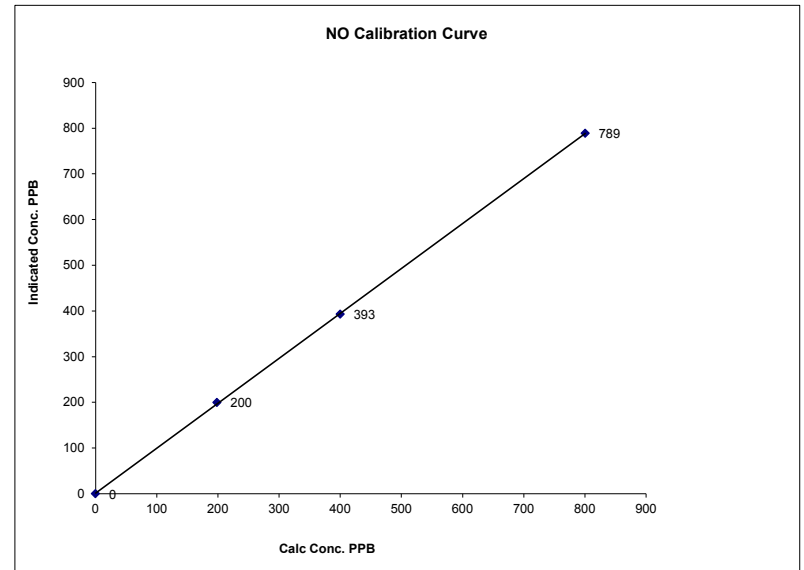


Notes:

NO Calibration Curve

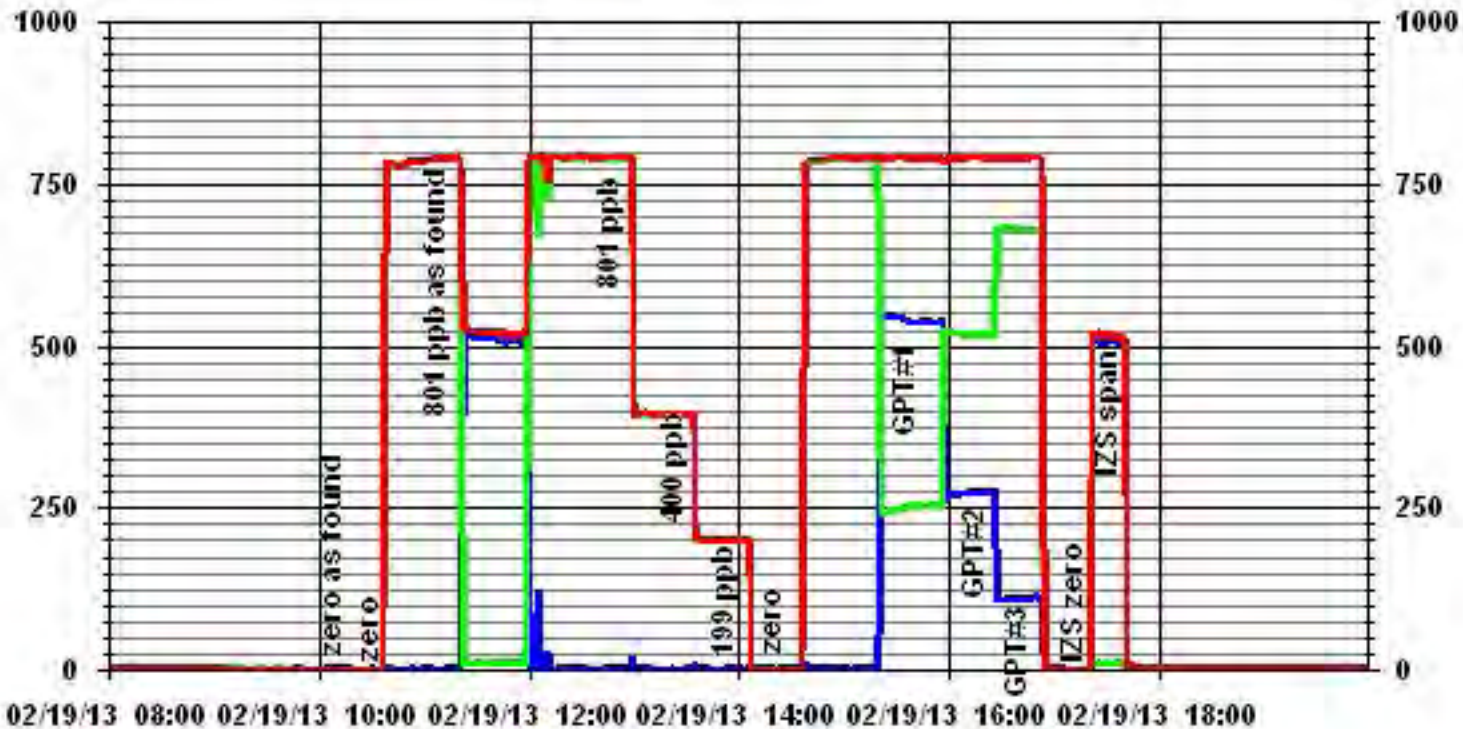
Calibration Date	February 19, 2013		
Company	LICA		
Plant / Location	St. Lina		
Start Time (MST)	08:15	End Time (MST)	16:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999951
0	0	N/A	Slope (0.85 to 1.15) <td>0.979929</td>	0.979929
199	200	0.9930	Intercept (± 3% F.S.) <td>-2.8256</td>	-2.8256
400	393	1.0183		
801	789	1.0147		



Notes:

01 Minute Averages



— LICA31 IIOX_ PPB

— LICA31 IIO_ PPB

— LICA31 IIO2_ PPB

Ozone

O₃ Calibration Report
Station Information

Calibration Date	February 20, 2013	Previous Calibration	January 17, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	St. Lina		
Start Time (MST)	08:00	End Time (MST)	16:00
Reason:	Monthly Calibration		
Barometric Pressure	0.92 atm	Station Temperature	13.5 Deg C
DAS Output Voltage	0-10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49C	S/N :	49C-54926-302	Method:	Fluorescent
Calibrator Make / Model:	Enviro-nics 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					
Cell A Flow / Cell B Flow	840 ccm	872 ccm	839 ccm	871 ccm	871 ccm	
Pressure	703.9 mmHg		703.2 mmHg			
Bench Temp	56.6 Deg C		56.6 Deg C			
O3 Lamp / Box Temp	80 Deg C	29 Deg C	80 Deg C	26.6 Deg C		
Offset / Slope	0.1	1.011	0.1	1.011		

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4994	0	0	0	N/A
	No Zero Adj			
4994	450	412	411	1.0024
	No Span Adj.			
4994	300	275	275	1.0000
4994	120	111	111	1.0000
4994	0	0	0	N/A
Sum of Least Squares				N/A
New Correction Factor				0.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	330.0	326.9
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.0%

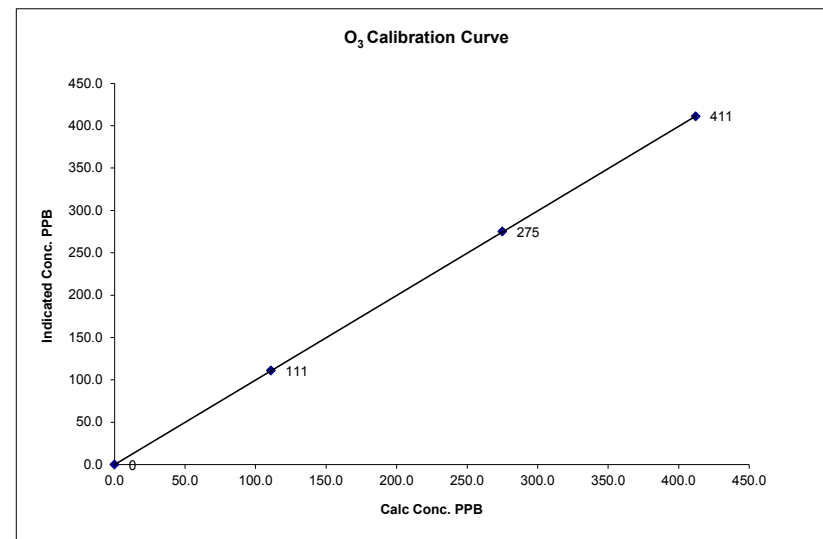
Note: **NA: Not Applicable**

Calibration Performed by: Waseem Ahmed / Limin Li

O₃ Calibration Curve

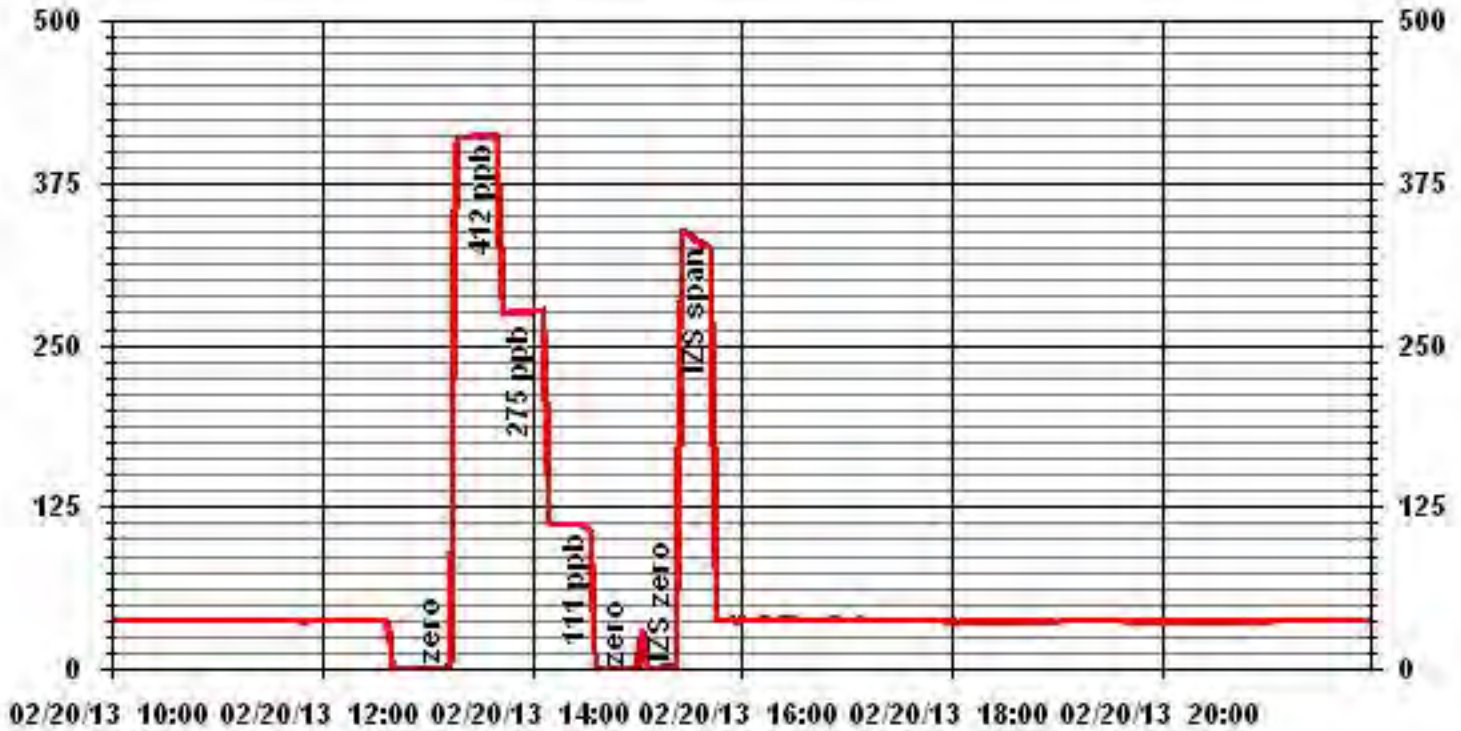
Calibration Date	February 20, 2013		
Company	Lakeland Industry & Community Association		
Plant / Location	St. Lina		
Start Time (MST)	08:00	End Time (MST)	16:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	
0	0	n/a	Intercept	(± 3% F.S.)	0.999997
111	111	1.0000			0.997842
275	275	1.0000			
412	411	1.0024			0.180441



Notes:

01 Minute Averages



Particulate Matter 2.5

TEOMÒ 1405F Audit

	<u>Station</u>		<u>Audit Transfer Standard</u>
Date:	February 15, 2013	Make/Model:	Stremline FTS
Station Name:	Lica St. Lina (CASA # 31)	Serial Number:	Lo 091099, Hi 091001
Location:	St. Lina Station	Cell s/n:	NA
Operator:	LICA	Thermometer s/:	Station Temp. Sensor

	<u>Sampler</u>		<u>Set-up and current Sampler readings</u>
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A207691003	Filter Load (%)	29.4%
Firmware Ver.	1.55	K _o Factor	15634.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	-7.34
		Press (ATM)	0.926

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 <0.10µg	0.003	Warnings	None
Pump Vacuum <0.4atm	0.30	Pump Gauge (inHg)	-19
Temperature/Pressure			
Measured Temp (± 2 °C)	-6.24	D °C	-1.1
Measured Press (± 0.01atm)	0.921	DATM	0.005
Flow Audit			
Indicated Main Flow (l/min)	3.00	Main Flow Drift (±10.0%)	2.18%
Measured Main Flow (l/min)	2.99	Flow Adjusted to Measured?	YES
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift (±10.0%)	2.65%
Measured Bypass Flow (l/min)	13.67	Flow Adjusted to Measured?	YES
Leak Check		Instrument Setup	
Main (< 0.15 l/min)	Base=-0.01 Ref=-0.00	Flow Control = Active	
Aux (< 0.6 l/min)	Base=-0.01 Ref=0.04	Report Conditions = Actual	
K_o Factor			
Measured	NA		
K _o Difference (± 2.5%)	NA		

Start Time: 09:00 **Finish Time:** 10:30

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

New Filter Loading %: 19.6%

Comments: _____

TEOM0 1405F Audit

	<u>Station</u>		<u>Audit Transfer Standard</u>
Date:	February 19, 2013	Make/Model:	Stremline FTS
Station Name:	Lica St. Lina (CASA # 31)	Serial Number:	Lo 091099, Hi 091001
Location:	St. Lina Station	Cell s/n:	NA
Operator:	LICA	Thermometer s/	Station Temp. Sensor

	<u>Sampler</u>		<u>Set-up and current Sampler readings</u>
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A207691003	Filter Load (%)	22.9%
Firmware Ver.	1.55	K _o Factor	15634.0
Parameter	PM 2.5 (with FDMS)	Temp (°C)	-4
		Press (ATM)	0.924

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status			
Noise <0.10ug	0.004	Warnings	None
Pump Vacuum <0.4atm	0.29	Pump Gauge (inHg)	-19
Temperature/Pressure			
Measured Temp (± 2 °C)	-2.79	D °C	-1.2
Measured Press (± 0.01atm)	0.930	DATM	-0.006
Flow Audit			
Indicated Main Flow (l/min)	3.01	Main Flow Drift (±10.0%)	1.11%
Measured Main Flow (l/min)	2.98	Flow Adjusted to Measured?	YES
Indicated Bypass Flow (l/min)	13.65	Bypass Flow Drift (±10.0%)	1.63%
Measured Bypass Flow (l/min)	13.61	Flow Adjusted to Measured?	YES
Leak Check		Instrument Setup	
Main (< 0.15 l/min)	Base=-0.00 Ref=-0.00	Flow Control = Active	
Aux (< 0.6 l/min)	Base=-0.00 Ref=0.00	Report Conditions = Actual	
K_o Factor			
Measured	NA		
K _o Difference (± 2.5%)	NA		

Start Time: 18:30 **Finish Time:** 18:55

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

Comments: _____

Lakeland Industry & Community Association

Portable / Elk Point Airport Monitoring Site

Ambient Air Monitoring Data Report

For

February 2013

Prepared By:



March 28, 2013

Lakeland Industry & Community Association Portable / Elk Point Airport Ambient Air Monitoring

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• Monthly Summaries, Graphs & Wind Roses	12	• Nitrogen Dioxide	1\$)
○ Sulphur Dioxide	13	• Ozone	1\$-
○ Hydrogen Sulphide	21	Polycyclic Aromatic Hydrocarbons Laboratory Analysis	1%&
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○ Nitrogen Dioxide	34		
○ Nitric Oxide	42		
○ Oxides of Nitrogen	49		
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○ Total Hydrocarbons	65		
○ Vector Wind Speed	73		
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Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Portable / Elk Point Airport
Data Period: February 2013

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Katherine Rapske

The 6-days analytical report for PAHs:
Authorized by AITF Laboratory

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 –
 - ELK POINT AIRPORT -

Continuous Ambient Monitoring – February 2013

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PORTABLÒ / ELK POINT AIRPORT SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
											1-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO ₂ (PPB)	172	48	0	0	0.21	2	VAR	VAR	VAR	VAR	0.8	15, 16	58.8
H ₂ S (PPB)	10	3	0	0	0.07	2	1	17	6.5	140(SE)	0.4	3	98.8
THC (PPM)	-	-	-	-	3.46	15.0	25	5	5.1	199(SSW)	5.8	15	90.3
NO ₂ (PPB)	159	-	0	-	8.57	44.6	14	18	4.8	265(W)	21.6	15	98.8
NO (PPB)	-	-	-	-	1.90	33.1	25	5	5.1	199(SSW)	6.6	15	98.8
NO _x (PPB)	-	-	-	-	10.47	72.6	25	5	5.1	199(SSW)	28.3	15	98.8
O ₃ (PPB)	82	-	0	-	30.68	44	25	17	8	24(NNE)	37.8	12	99.0
PM 2.5 (UG/M ³)	-	30	-	0	9.60	66	15	6	2.6	102(E)	19.8	15	86.5
VECTOR WS (KPH)	-	-	-	-	11.46	40.1	2	1	-	312(NW)	23.5	19	99.0
VECTOR WD (DEGREES)	-	-	-	-	111(ESE)	-	-	-	-	-	-	-	99.0

VAR-VARIOUS

Polycyclic Aromatic Hydrocarbons (PAHs) Data Summary

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

- PORTABLE – Elk Point Airport Site

PUF cartridge – January 28, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
NA	NA

Note: The sample went missing and was unable to be located. Therefore, no data is reported.

PUF cartridge – February 03, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
1.241	Naphthalene

PUF cartridge – February 09, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
0.645	Phenanthrene

PUF cartridge – February 15, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
0.878	Phenanthrene

PUF cartridge – February 21, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
0.575	Naphthalene

PUF cartridge – February 27, 2013

Maximum reading (ng/m3)	Semi-Volatile Organic
0.394	Phenanthrene

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

The analyzer was brought back to the Calgary shop for repair on January 30th. The analyzer was installed back following an installation calibration on February 12th. 274 hours of data were invalidated due to this issue. The hourly data on February 13th at hour 9 and 10 were invalidated due to a power failure. A daily zero/span check was run to check the analyzer's functionality at hour 11 on February 13th, and the result was good. The operational uptime for this month was 58.8%. All data was corrected using daily zero information.

Hydrogen Sulphide (PPB)

- Analyzer make / model –API 101E, S/N: 509
- Converter - Internal

The analyzer was working well throughout the month. The inlet filter was replaced before the monthly calibration was started on February 12th. Seven hours of data were invalidated due to power failures this month. The hourly data collected on February 8th at hour 17 was invalidated, as the analyzer was recovering from a power failure. All data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – PORTABLE

THC (PPM)

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

Five hours of data were invalidated due to power failures this month. The power failures caused the analyzer to flame out, which led a total of 37 hours to be invalidated. A removal calibration was performed on February 12th, and a TECO 55i HC analyzer attempted to be installed. However, the 55i analyzer did not show CO_2 as CO_2 stabilization *. As a result, the 55i HC analyzer was removed, and the Thermo 51C was re-installed back to service following an installation calibration on February 13th. Twenty-two hours of data were invalidated due to this issue. All data was corrected using daily zero information.

Nitrogen Dioxide (PPB)

- Analyzer make / model – API 200E, S/N: 593

The analyzer was working well throughout the month. The inlet filter was replaced before the monthly calibration was started on February 12th. The fan was also changed on the same day. Seven hours of data were invalidated due to power failures this month. Eleven hours of maximum reading collected on February 13th for NOx/NO/NO2 were invalidated, as the datalogger did not record the value correctly after the power failure. All data was corrected using daily zero information.

Ozone (PPB)

- Analyzer make / model –Thermo 49i, S/N: 1002240372

The analyzer was working well throughout the month. The inlet filter was replaced before the monthly calibration was started on February 13th. Seven hours of data were invalidated due to power failures this month. Eleven hours of maximum reading collected on February 13th for ozone were invalidated, as the datalogger did not record the value correctly after the power failure. All data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – PORTABLE

Particulate Matter 2.5 (ug/m³)

- Analyzer make / model – TEOM 1405F, S/N: 1405A208301003

Two routine Teom audits were performed on February 13th and February 28th. Seven hours of data were invalidated due to power failures this month. The PM2.5 channel was left in the “Maintenance” mode after the audit on February 28th in order to check the Teom unit stability. The channel was put back to the sampling mode on March 1st at hour 9. Seven hours of data were invalidated due to this event this month. Seven hours of data were invalidated due to power failure. 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. Seventy-seven hours of data were invalidated this month as the data were below -3 ug/m³. The operational uptime was 86.5% this month.

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

- System make / model –RM Young 5103VK, S/N: 43708

The wind system is reported as vector wind speed and vector wind direction. The most recent wind system calibration was done on November 24, 2011.

No operational issues were observed during the month. Seven hours of data were invalidated due to power failures this month.

Datalogger

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

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

Trailer

A new manifold with 8 ports was installed on February 12th.

General Monthly Summary

AQM STATION – LICA – PORTABLE

Volatile Organics (VOCs)

The volatile organics were sampled from February 1st to February 28th. 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. Sample results for January 16th and 28th are as well as all February are not included in this monthly report as they were not available when the monthly report was generated. The results will be provided and put into a separate report when they are available.

Polycyclic Aromatic Hydrocarbons (PAHs)

The PAHs scheduled to be sampled on February 1st to February 28th. 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 sample for January 28th went missing and was unable to be located. Therefore, no data is reported.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

FEBRUARY 2013

SULPHUR DIOXIDE (SO₂) hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00				
DAY																												
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			0	
12	X	X	X	X	X	X	X	X	X	X	Y	C	C	C	C	1	0	0	S	0	0	0	0	0	1	0.1	13	
13	0	0	0	0	S	0	0	0	0	0	P	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0	22
14	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
15	0	S	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	0.8	24	
16	S	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	S	2	0.8	24	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	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	1	1	S	1	1	1	1	0.2	24	
20	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	2	S	1	2	1	1	2	0.7	24	
21	2	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	1	S	0	0	0	0	0	2	0.6	24	
22	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	S	0	0	0	0	0	0	2	0.2	24	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	1	0	1	1	1	0	0	0	1	0.2	24	
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	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	S	0	0	0	0	0	0	0	0	0	0	0.0	24	
28	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24	
HOURLY MAX	2	1	0	0	0	1	1	1	1	1	1	1	2	1	1	1	2	1	2	2	1	2	1	1				
HOURLY AVG	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3					

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

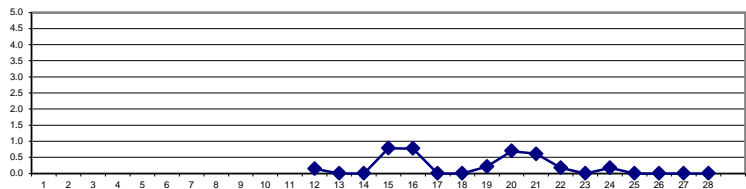
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR 172 PPB 24-HR 48 PPB

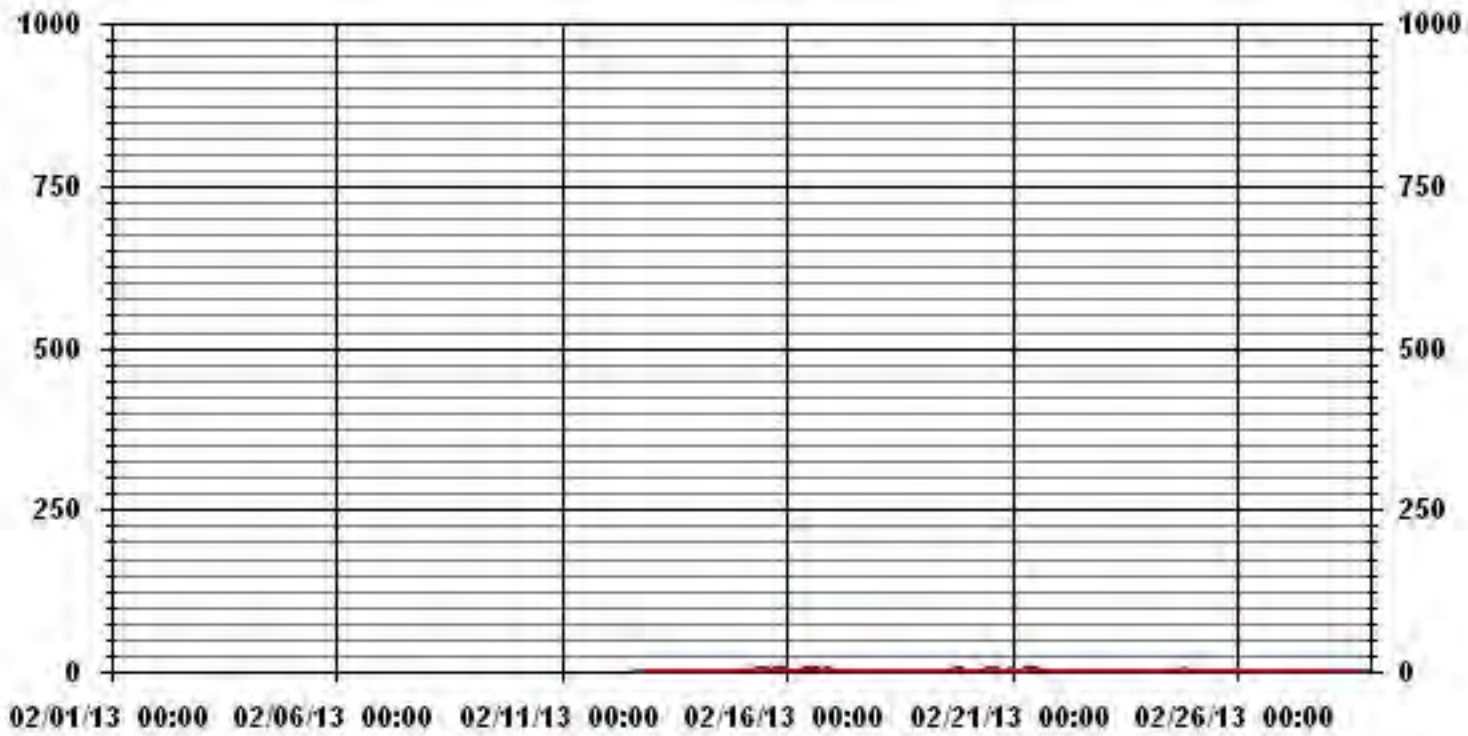
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	73
MAXIMUM 1-HR AVERAGE:	2 PPB @ HOUR(S) VAR ON DAY(S)
MAXIMUM 24-HR AVERAGE:	0.8 PPB ON DAY(S) VAR 15, 16
IZS CALIBRATION TIME:	0 HRS OPERATIONAL TIME: 395 HRS
MONTHLY CALIBRATION TIME:	5 HRS AMD OPERATION UPTIME: 58.8 %
STANDARD DEVIATION:	0.45 MONTHLY AVERAGE: 0.21 PPB

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																													
1		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
2		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
3		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
4		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
5		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
6		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
7		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
8		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
9		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
10		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
11		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
12		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				0
13		1	2	2	1	X	2	2	2	1	P	P	0	0	0	0	S	0	0	0	0	0	0	1	1	2	2	1.2	12
14		1	1	X	0	0	0	0	2	0	0	0	0	1	1	1	1	0	0	1	3	0	0	0	0	3	0.5	24	24
15		0	X	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	2	2	3	3	2	2	3	1.9	24	24	
16		X	1	2	1	2	2	1	2	2	2	2	2	3	2	2	3	3	2	3	2	2	2	2	X	3	2.0	24	24
17		2	2	2	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	X	0	2	1.0	24	24
18		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	1	0	1	0.0	24	24
19		0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	3	2	X	2	3	2	3	1.1	24	24
20		2	1	1	1	1	1	1	1	2	2	2	2	2	2	3	2	3	3	3	X	3	3	3	3	3	2.0	24	24
21		3	2	1	1	1	2	2	2	2	2	2	2	3	2	3	2	2	2	X	0	0	1	1	1	3	1.7	24	24
22		1	1	1	1	1	1	2	1	1	1	1	4	4	2	2	2	2	X	1	1	0	1	1	1	4	1.4	24	24
23		1	0	1	1	1	1	0	1	1	0	1	1	1	1	1	1	X	1	1	1	0	0	0	1	0.7	24	24	
24		0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	X	2	2	2	3	2	2	1	1	3	1.0	24	24
25		1	1	1	2	1	2	1	2	2	2	1	1	1	1	X	0	0	0	0	0	0	0	0	0	2	0.8	24	24
26		0	0	0	0	0	0	0	0	0	0	0	0	0	X	1	0	1	1	1	1	1	1	1	1	1	0.4	24	24
27		0	1	0	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	0.9	24	24
28		1	1	1	1	1	1	1	1	1	1	1	X	0	0	0	1	1	1	1	0	1	1	1	1	1	0.8	24	24
HOURLY MAX		3	2	2	2	2	2	2	2	2	2	4	4	2	3	2	3	3	3	3	3	3	3	3	3				
HOURLY AVG		0.9	0.9	0.9	0.8	0.7	1.0	0.8	1.3	1.1	1.1	1.1	1.2	1.3	1.1	1.5	1.3	1.3	1.3	1.1	0.9	1.1	1.2	1.0					

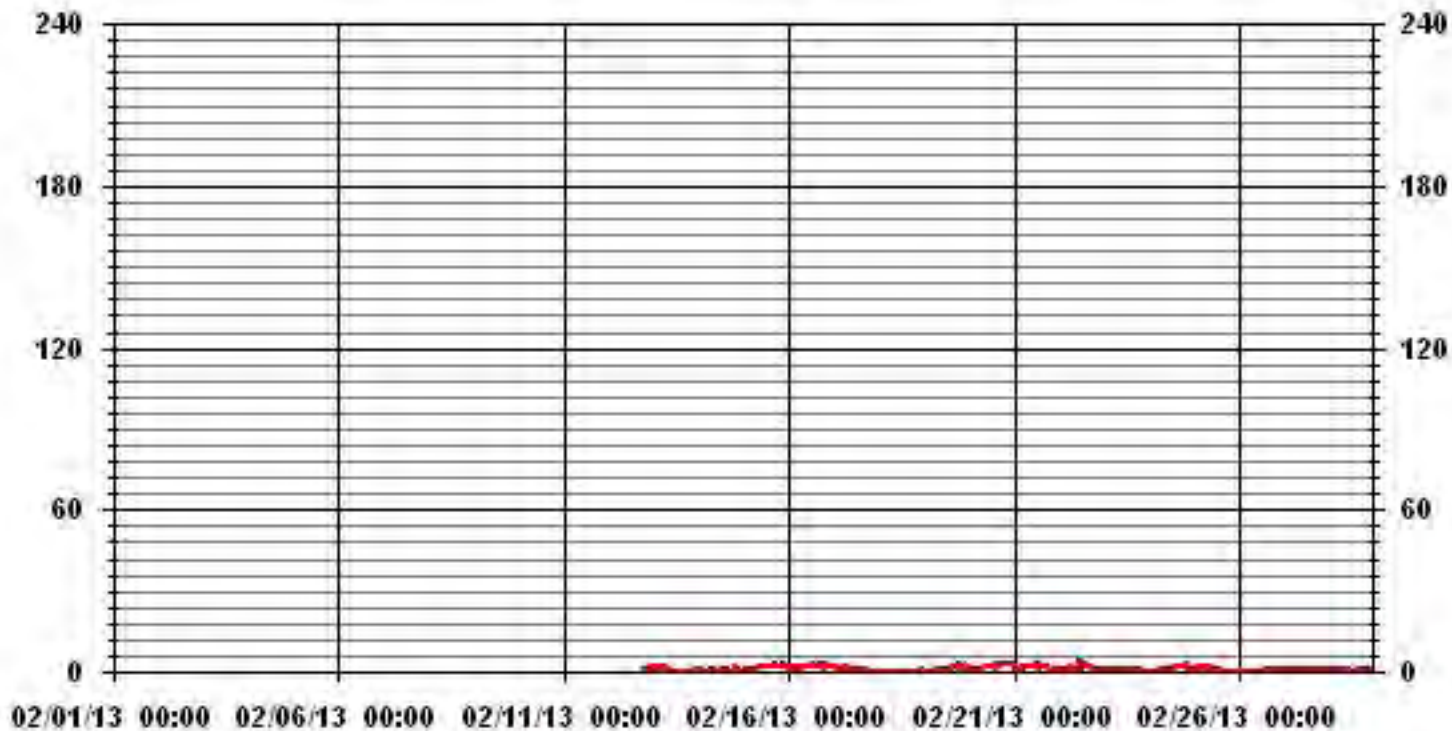
STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	266					
MAXIMUM INSTANTANEOUS VALUE:	4	PPB	@ HOUR(S)	11, 12	ON DAY(S)	22
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	394	HRS	
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	0.89					

01 Hour Averages



LICA-ELK
 SO2_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 35
 Site Name : LICA-ELK
 Parameter : SO2_
 Units : PPB

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 20	2.42	4.31	2.15	1.61	4.58	28.84	16.98	2.96	1.07	1.07	1.34	4.85	9.43	7.54	7.27	3.50	100.00
< 60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	2.42	4.31	2.15	1.61	4.58	28.84	16.98	2.96	1.07	1.07	1.34	4.85	9.43	7.54	7.27	3.50	

Calm : .00 %

Total # Operational Hours : 371

Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 20	9	16	8	6	17	107	63	11	4	4	5	18	35	28	27	13	371
< 60																	
< 110																	
< 170																	
< 340																	
>= 340																	
Totals	9	16	8	6	17	107	63	11	4	4	5	18	35	28	27	13	

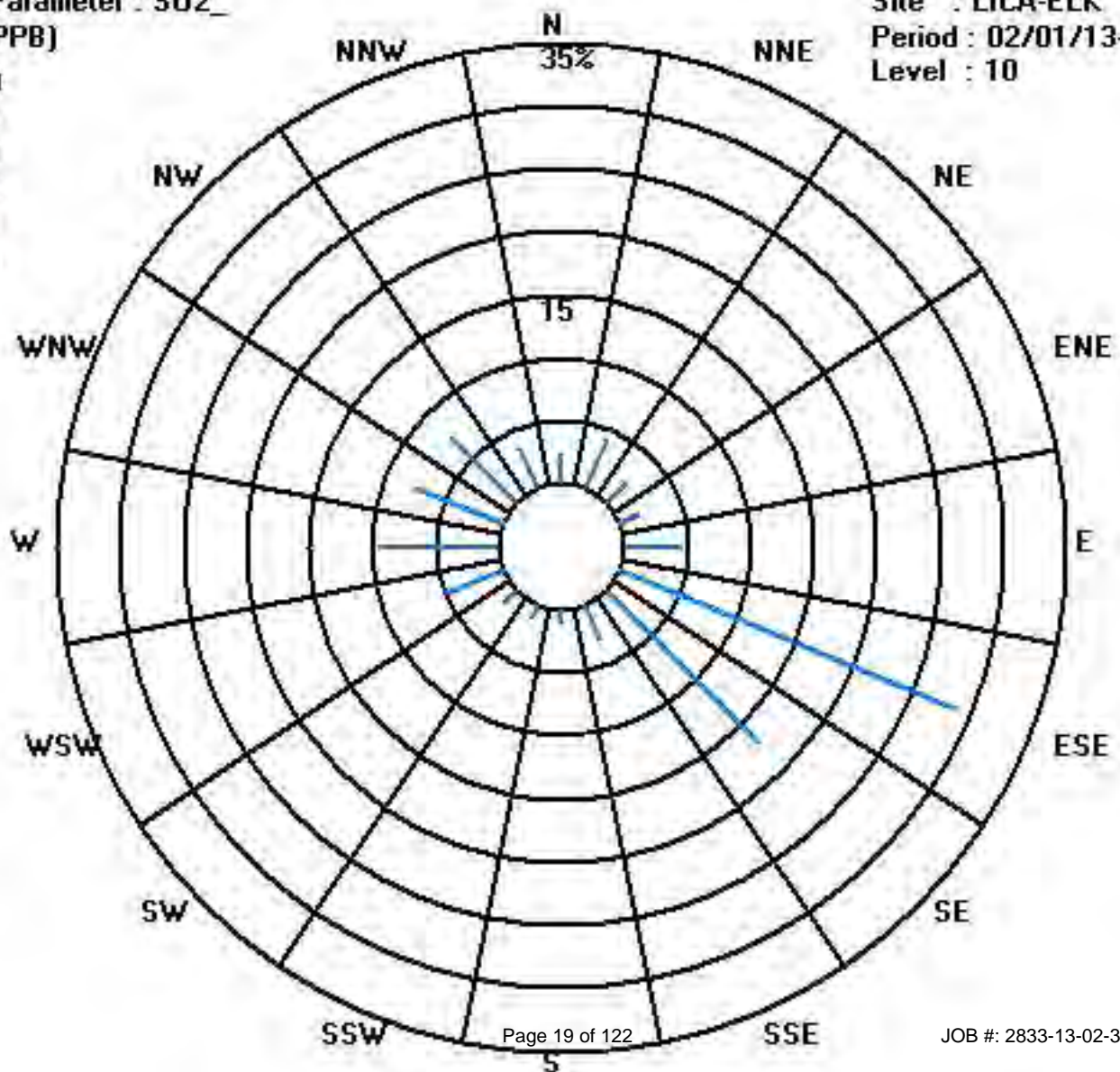
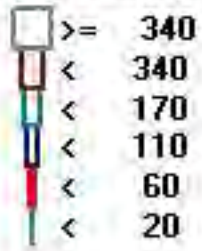
Calm : .00 %

Total # Operational Hours : 371

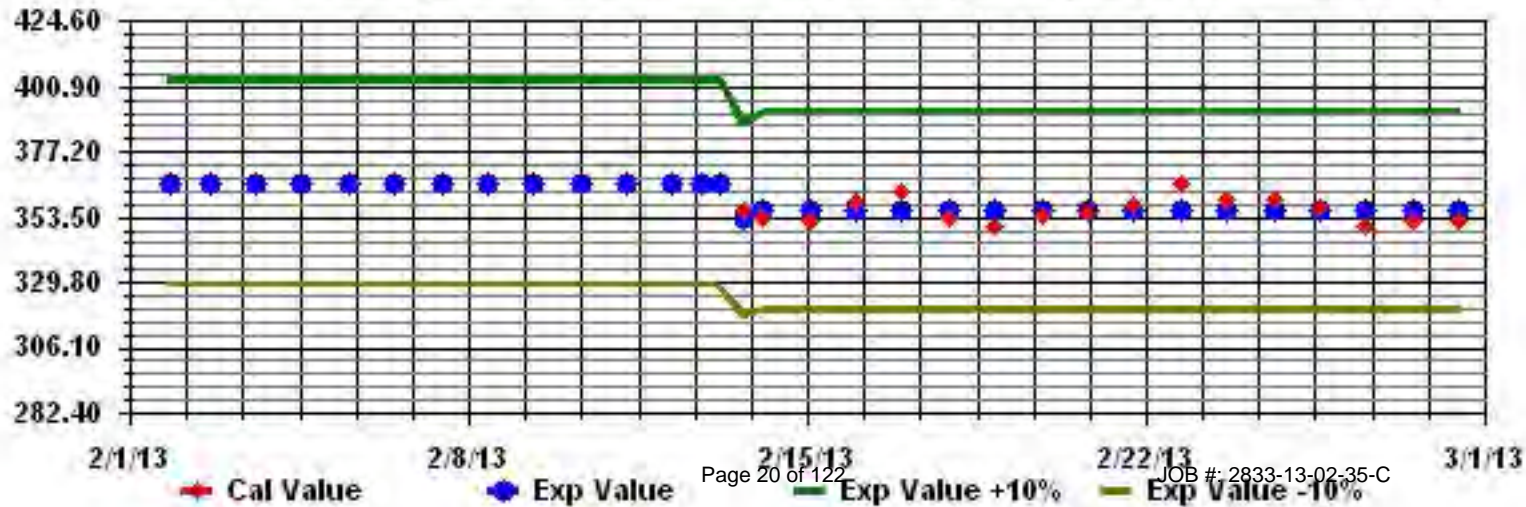
Class Limits (PPB)

Period : 02/01/13-02/28/13

Level : 10



Calibration Graph for Site: LICA35 Parameter: S02_ Sequence: S02 Phase: SPAll



Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE - Elk Point Airport

FEBRUARY 2013

HYDROGEN SULPHIDE (H₂S) hourly averages in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR			
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																													
1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	2	0	0	S	1	1	1	2	0.3	21	
2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0	24
3		0	1	0	0	1	1	1	1	1	1	1	0	0	1	S	0	0	0	0	0	0	0	0	0	0	1	0.4	24
4		0	0	0	0	1	1	1	1	1	1	1	1	0	S	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24
5		0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7		0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8		0	0	0	0	0	0	0	0	1	S	0	1	1	0	0	0	0	P	X	0	0	0	0	0	1	1	0.2	22
9		1	0	1	1	1	1	1	0	S	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	0	1	0.3	23
10		0	0	0	0	0	0	S	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	S	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	S	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0.0	24
13		0	0	0	0	S	0	0	0	0	P	P	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0	22
14		0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
15		0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.0	24
16		0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
17		S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	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	S	0	0	0	0	0	0.0	24
20		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S	0	0	0	0	0	1	0.0	24
21		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	0	0	0	0	0	0	0	0	0.0	24
23		0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.3	24
24		0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	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	S	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	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28		0	0	0	0	0	0	0	0	0	0	0	S	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	1	1	1	1	1	1	0	0	1	2	1	0	0	1	1	1				
HOURLY AVG		0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

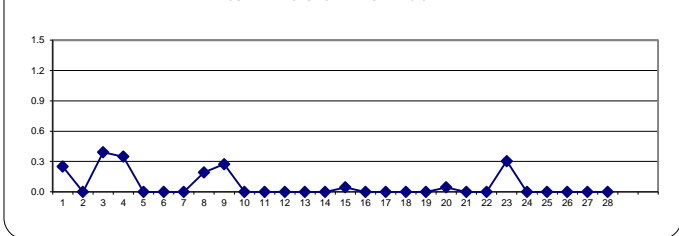
OBJECTIVE LIMIT:

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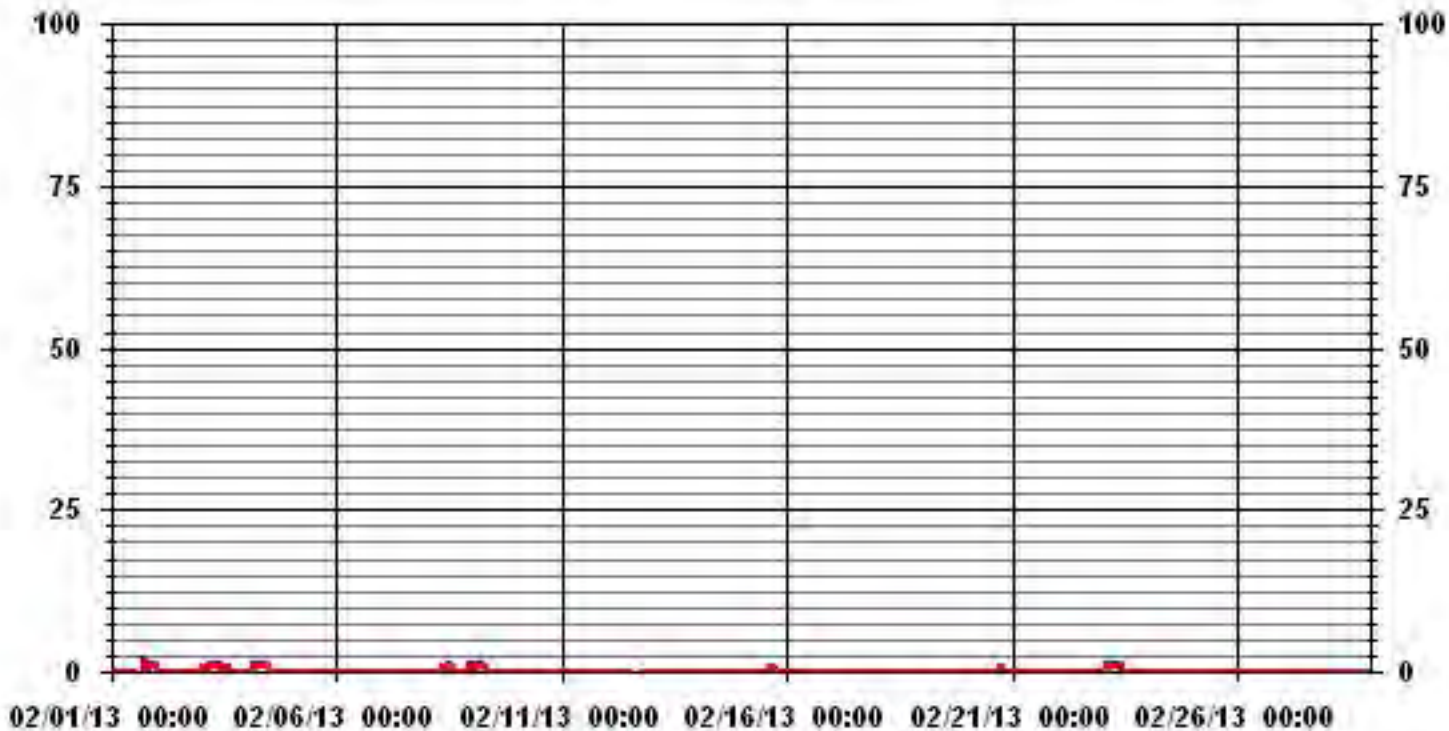
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	40					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	17	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	0.4	PPB			ON DAY(S)	3
					VAR-VARIOUS	
S CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:	664	HRS	
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:	98.8	%	
STANDARD DEVIATION:	0.25		MONTHLY AVERAGE:	0.07	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	DAILY 24-HOUR																								
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.																							
DAY																																																		
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	8	0	S	S	1	1	1	8	0.6	21																							
2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	1	1	1	1	1	1	1	1	0.4	24																						
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0.7	24																						
4	1	1	1	1	1	1	1	1	2	2	1	1	1	S	0	0	0	0	0	0	0	0	0	0	0	2	0.7	24																						
5	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0	0	0	0	1	0.0	24																						
6	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24																						
7	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24																						
8	0	0	0	0	0	1	1	1	1	S	1	1	1	1	1	1	P	X	0	0	1	1	1	1	1	1	0.7	22																						
9	1	1	1	1	1	1	1	1	S	0	0	0	0	0	0	P	5	0	0	0	0	0	0	0	0	5	0.6	23																						
10	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24																						
11	0	0	1	0	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	24																						
12	0	0	0	0	0	S	0	0	0	0	0	P	0	0	C	C	C	C	C	C	1	0	0	0	0	1	0.1	23																						
13	0	0	0	1	S	0	0	0	0	P	P	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.1	22																						
14	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0.1	24																						
15	1	1	S	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	24																						
16	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24																						
17	S	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	2	0.1	24																						
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	0	0	1	1	0.0	24																						
20	1	1	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	S	0	0	0	0	1	0.6	24																						
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0	24																						
22	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	1	0	S	1	1	1	1	1	1	1	1	0.5	24																						
23	1	1	1	2	2	1	1	2	2	1	1	1	1	0	1	1	S	0	0	0	0	0	0	0	0	2	0.8	24																						
24	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	S	0	0	0	0	0	0	0	0	0	1	0.1	24																						
25	0	0	0	1	0	1	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	0.1	24																						
26	0	0	0	0	0	0	0	0	0	0	0	0	0	S	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	S	0	0	0	0	0	0	1	0	0	0	1	0	1	0.1	24																						
28	0	0	0	0	1	0	0	0	1	0	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24																						
HOURLY MAX	1	1	1	2	2	1	1	2	2	2	1	1	1	1	1	1	5	8	1	1	1	1	1	1	1	1																								
HOURLY AVG	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.3	0.4																										

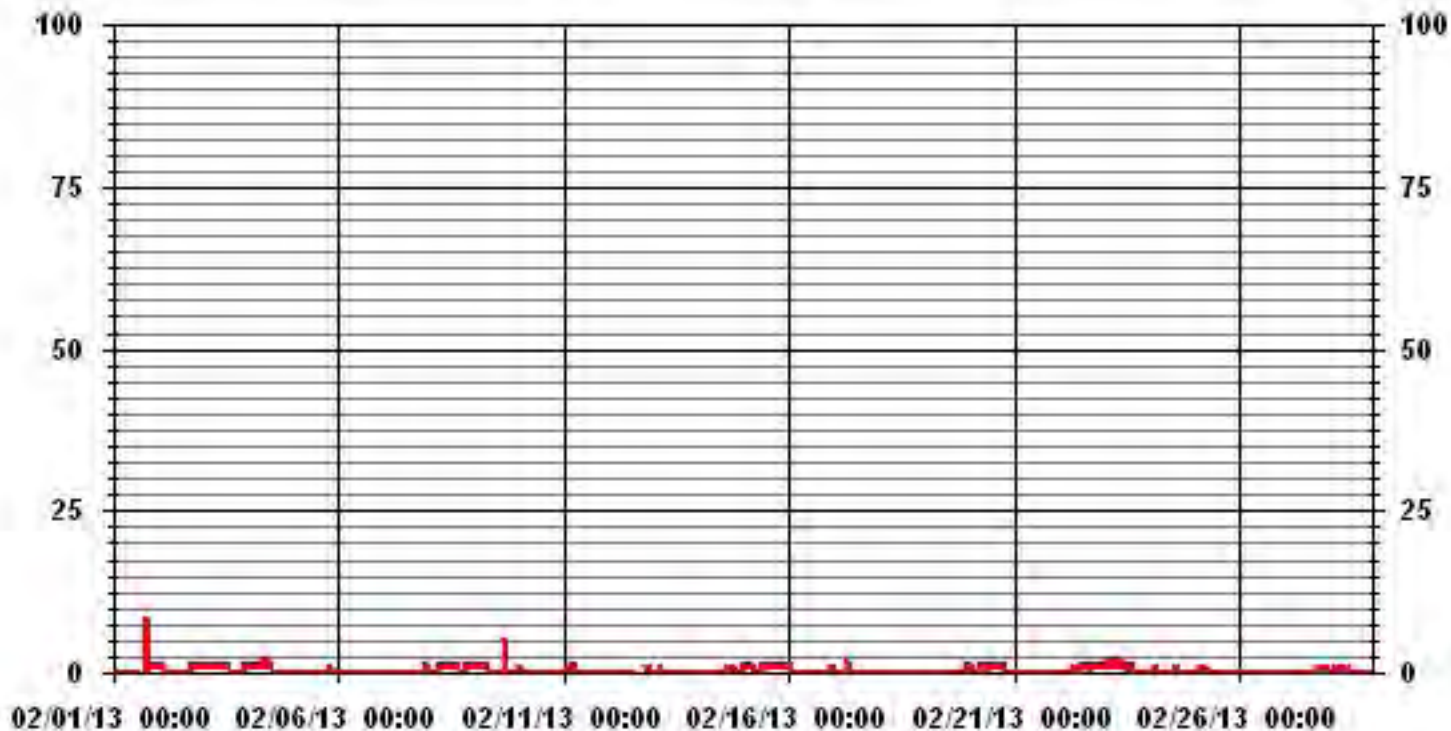
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	150
MAXIMUM INSTANTANEOUS VALUE:	8 PPB @ HOUR(S) 17 ON DAY(S) 1
	VAR - VARIOUS
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	6 HRS
STANDARD DEVIATION:	0.58
OPERATIONAL TIME:	663 HRS

01 Hour Averages



LICA-ELK
H2S_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 35
Site Name : LICA-ELK
Parameter : H2S_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 3	1.91	2.54	1.75	2.38	6.36	26.59	13.53	2.22	1.27	1.43	1.91	5.89	10.98	8.28	8.91	3.98	100.00
< 10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.91	2.54	1.75	2.38	6.36	26.59	13.53	2.22	1.27	1.43	1.91	5.89	10.98	8.28	8.91	3.98	

Calm : .00 %

Total # Operational Hours : 628

Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 3	12	16	11	15	40	167	85	14	8	9	12	37	69	52	56	25	628
< 10																	
< 50																	
>= 50																	
Totals	12	16	11	15	40	167	85	14	8	9	12	37	69	52	56	25	

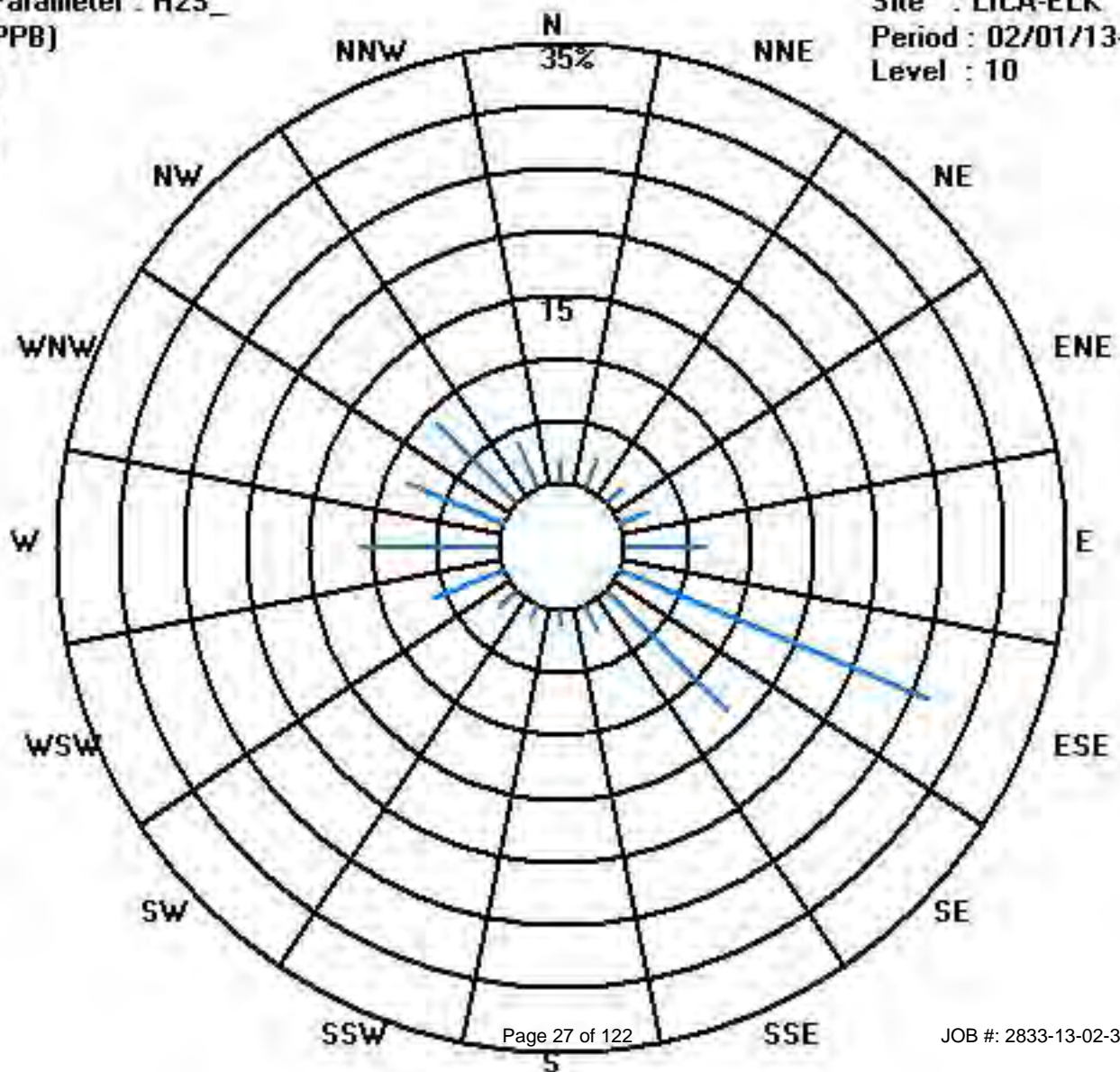
Calm : .00 %

Total # Operational Hours : 628

Class Limits (PPB)

Period : 02/01/13-02/28/13

Level : 10



Calibration Graph for Site: LICA35 Parameter: H2S_ Sequence: H2S Phase: SPAN



Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Poinr Airport

FEBRUARY 2013

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

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	28	15	X	X	11	15	X	X	0	47	21	15	13	12	P	P	P	13	28	20	X	16	4	0	47	16.1	16	
2	0	0	0	X	9	13	13	X	2	X	7	X	6	X	0	X	X	1	2	1	0	4	3	X	13	3.8	16	
3	18	X	X	12	X	X	7	10	X	X	5	0	2	1	4	0	6	X	X	20	X	X	7	X	20	7.1	13	
4	0	19	0	X	5	5	5	X	14	5	0	0	0	1	X	X	1	X	1	X	0	X	X	4	19	3.8	16	
5	1	0	5	X	14	X	13	11	4	4	7	10	6	0	5	1	9	2	4	5	2	4	0	X	14	5.1	21	
6	8	4	0	8	X	2	X	X	14	X	0	0	5	0	X	4	X	X	14	1	6	X	X	X	14	4.7	14	
7	6	X	8	10	16	26	17	0	6	8	9	X	10	0	1	2	6	14	3	2	X	X	11	2	26	7.9	20	
8	9	12	4	21	10	15	18	7	X	1	16	22	27	24	24	20	P	1	11	12	10	15	9	3	27	13.2	22	
9	9	10	11	13	11	11	12	13	3	0	0	0	0	0	0	P	0	0	6	1	0	X	1	1	13	4.6	22	
10	X	0	0	0	6	X	3	X	2	4	2	0	2	2	0	X	0	4	0	X	4	X	6	2	6	2.1	18	
11	X	X	6	14	12	0	1	17	0	5	0	0	3	X	1	0	0	0	1	0	0	2	X	0	17	3.1	20	
12	1	1	1	2	5	2	0	2	0	0	4	X	X	1	0	X	X	1	0	4	0	X	7	0	7	1.6	19	
13	0	6	5	3	3	3	0	4	3	P	P	0	0	0	0	C	C	7	5	X	4	6	3	7	7	3.1	21	
14	2	5	8	14	5	0	2	13	10	3	6	16	22	18	2	8	3	15	0	38	6	46	0	14	46	10.7	24	
15	29	31	14	6	20	34	66	15	38	12	25	26	21	17	17	19	15	16	11	9	10	8	12	5	66	19.8	24	
16	4	7	6	12	10	12	19	21	8	7	5	8	13	11	17	16	16	15	19	21	15	8	5	0	21	11.5	24	
17	0	2	0	0	0	0	4	2	0	2	5	3	13	9	11	4	1	12	5	5	4	10	5	7	13	4.3	24	
18	3	5	3	11	1	20	X	29	X	18	0	13	10	6	15	8	1	X	8	6	53	61	25	19	61	15.0	21	
19	5	15	2	6	1	7	2	8	17	19	19	24	14	7	6	12	21	3	7	X	X	X	X	X	24	10.3	19	
20	X	12	28	38	27	25	27	22	13	0	7	29	2	18	11	9	26	12	3	23	6	8	25	14	38	16.7	23	
21	16	5	14	2	21	5	15	0	37	1	19	16	3	12	15	9	20	18	10	9	13	9	18	14	37	12.5	24	
22	21	24	12	13	16	19	21	17	9	20	22	6	21	11	18	15	15	15	21	12	13	17	19	18	24	16.5	24	
23	14	23	24	17	16	11	15	20	22	13	19	15	24	17	19	23	16	15	13	14	0	10	9	4	24	15.5	24	
24	7	5	13	9	13	13	5	10	12	13	16	15	7	14	15	10	16	12	21	12	14	21	13	12	21	12.4	24	
25	19	17	21	14	16	18	19	17	13	1	8	1	3	4	3	7	8	8	X	1	18	8	6	5	21	10.2	23	
26	8	6	7	5	6	9	7	4	0	3	0	2	1	4	4	3	2	14	10	4	7	7	12	8	14	5.5	24	
27	6	12	17	16	9	13	11	14	11	16	14	12	12	12	4	13	13	5	5	15	8	9	14	9	17	11.3	24	
28	13	10	7	13	11	17	10	10	10	5	11	5	12	4	6	C	C	Y	Y	Y	Y	Y	Y	Y	Y	17	9.6	17
HOURLY MAX	29	31	28	38	27	34	66	29	38	47	25	29	27	24	24	23	26	18	28	38	53	61	25	19				
HOURLY AVG	9.1	9.8	8.3	10.8	10.5	11.8	12.5	11.6	9.9	8.6	9.1	9.5	9.3	7.9	7.9	9.2	9.3	8.8	8.3	10.2	8.4	14.2	9.3	6.7				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

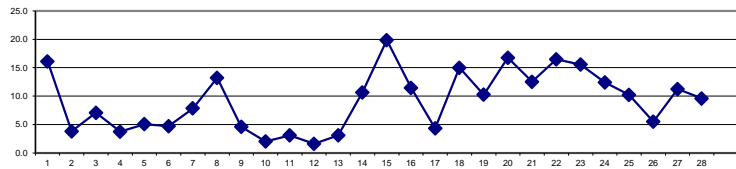
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR - PPB 24-HR 30 PPB

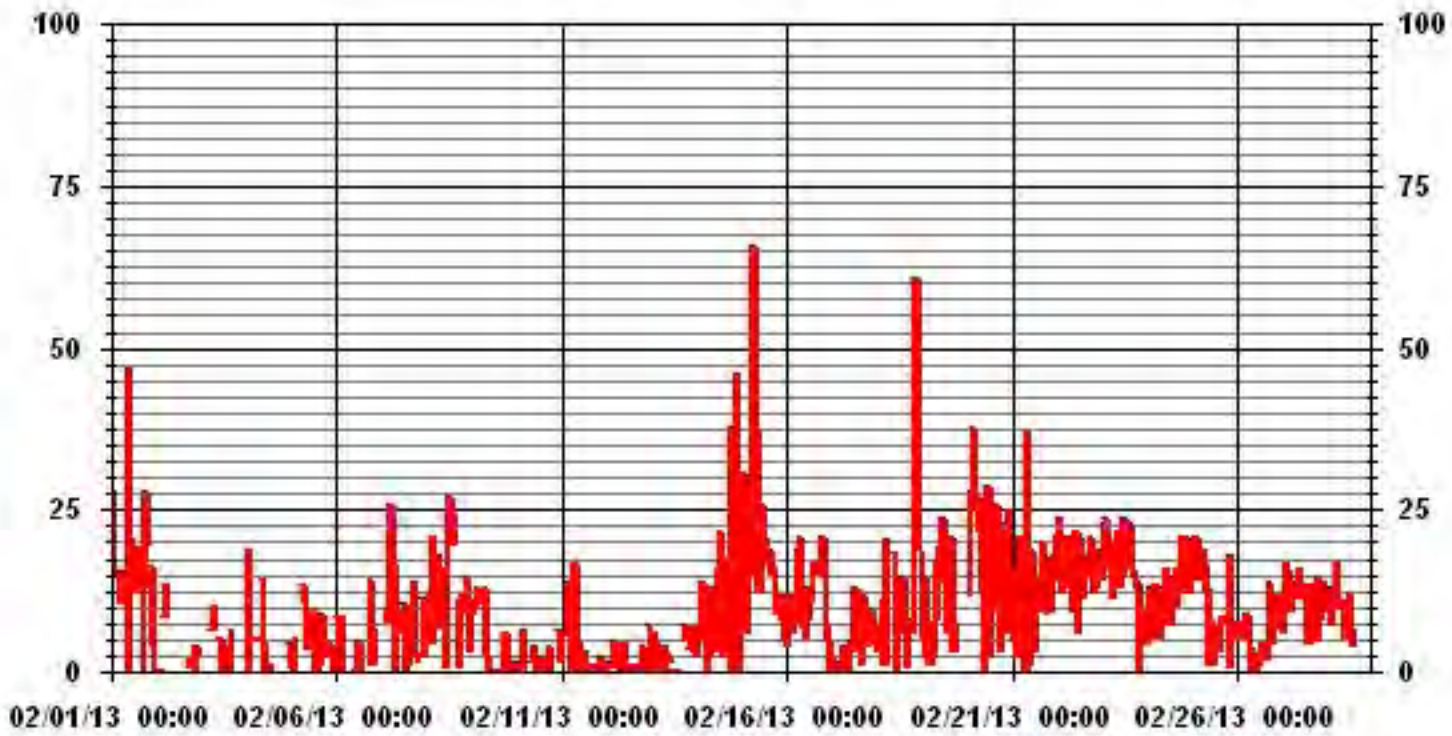
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-
NUMBER OF 24-HR EXCEEDENCES:	0
NUMBER OF NON-ZERO READINGS:	498
MAXIMUM 1-HR AVERAGE:	66 UG/M ³ @ HOUR(S) 6 ON DAY(S) 15
MAXIMUM 24-HR AVERAGE:	19.8 UG/M ³ ON DAY(S) 15
IZS CALIBRATION TIME:	0 HRS
MONTHLY CALIBRATION TIME:	4 HRS
STANDARD DEVIATION:	8.77
OPERATIONAL TIME:	581 HRS
AMD OPERATION UPTIME:	86.5 %
MONTHLY AVERAGE:	9.60 UG/M ³

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA35 PM2 UG/M3

LICA-ELK
 PM2 / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 35
 Site Name : LICA-ELK
 Parameter : PM2
 Units : UG/M3

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 30	1.73	3.11	1.90	2.25	5.54	24.61	13.17	2.42	1.03	1.55	2.25	5.89	11.95	8.14	8.83	3.63	98.09
< 60	.00	.00	.00	.17	.17	.69	.17	.00	.00	.00	.00	.17	.17	.00	.00	.00	1.55
< 80	.00	.00	.00	.00	.00	.34	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.34
< 120	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 240	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 240	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.73	3.11	1.90	2.42	5.71	25.64	13.34	2.42	1.03	1.55	2.25	6.06	12.13	8.14	8.83	3.63	

Calm : .00 %

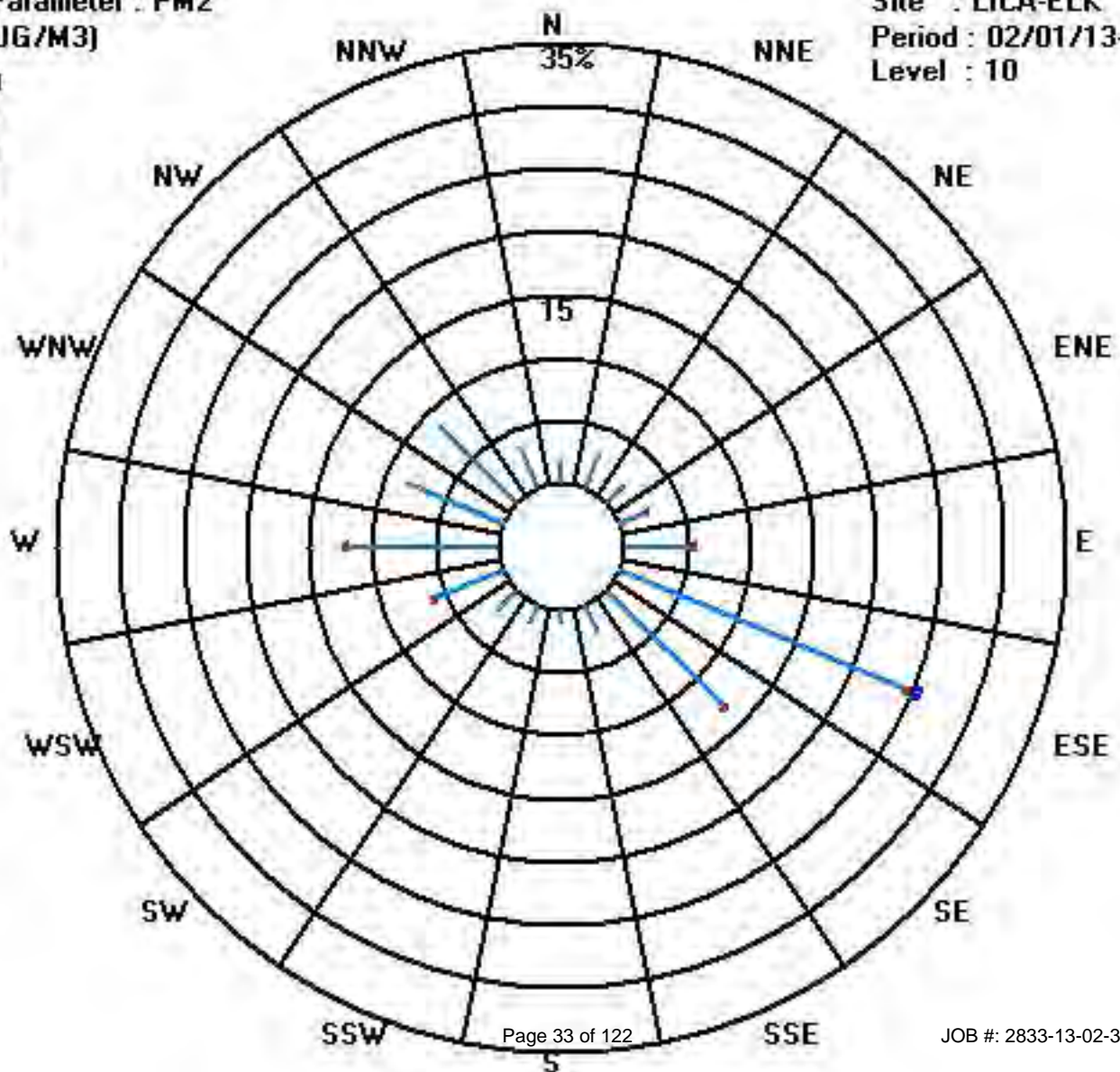
Total # Operational Hours : 577

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 30	10	18	11	13	32	142	76	14	6	9	13	34	69	47	51	21	566
< 60				1	1	4	1					1	1				9
< 80						2											2
< 120																	
< 240																	
>= 240																	
Totals	10	18	11	14	33	148	77	14	6	9	13	35	70	47	51	21	

Calm : .00 %

Total # Operational Hours : 577



Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY MAX.	24-HOUR AVG.	RDGS.	
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00				
DAY 1	17.6	18.3	22.9	20.3	18.4	12.7	16.3	7.4	7.9	8.3	6.8	8.1	7.4	8.7	P	P	P	12.6	15.7	16.4	S	20	17.5	9.4	22.9	13.6	21	
2	2.7	1.3	0.7	0.5	0.4	0.2	1.8	6.4	0.4	3.1	2.3	2.5	2	2.4	2.3	S	5.2	14.7	14.9	10.1	10.3	12.5	6.5	9.8	14.9	4.9	24	
3	11.3	4.6	3.5	4.4	4	2.4	3.6	3.5	2.9	2.6	2.5	2.7	2.4	2.6	S	3.8	5.2	5.4	5.9	6	7.8	7.7	6.1	6.6	11.3	4.7	24	
4	6.4	6.5	8.5	6.8	12	11.9	13.6	15.2	28.1	13.7	4	3.3	3.3	S	2.5	3.2	1.6	0.9	1	1	1.2	0.4	0.4	9.9	28.1	6.8	24	
5	5.2	2.2	4.7	8.5	11.4	11.2	14.2	15.8	21.1	19.6	11	11.6	S	8.9	9.3	14.3	14.9	15.3	31.9	35	28.5	24.2	12.2	3.8	35	14.6	24	
6	3.1	3.5	2	2.1	1.8	1.5	1	1.2	1.7	2.3	3.1	S	3.2	3.1	3.6	4.4	3.9	4.9	5.4	5.6	5.8	7	8.6	8.2	8.6	3.8	24	
7	7.7	8.8	8.7	6.8	7.4	8.8	10.7	10.4	8	5	S	3.7	4.1	6.1	8	8.3	7.7	11.8	9.8	8.3	8.2	8.5	8.4	8	11.8	8.0	24	
8	7.4	7.4	7.4	7.2	10.4	12.3	17.6	24.9	29.2	S	9.3	14.7	13.6	12.7	15	15.3	P	12.8	14	14.6	26.6	25.3	33.7	35.5	35.5	16.7	23	
9	30.9	26.7	23.8	24.2	25.7	20.6	17.8	10.9	S	4	1.4	0.4	0.2	0.4	0.1	P	0	0	0	0	0	0	0	0	0	30.9	8.5	23
10	0	0	0	0	0	1.4	0.3	S	2.4	2	1.3	2.5	2.4	1.9	2.4	3.7	5.7	7.2	4.4	6.6	6.8	5.6	5.3	5.7	7.2	2.9	24	
11	7.5	10.9	11.5	8.2	9.1	18	S	26	13.2	7.3	4.1	3.9	2.1	3.2	3.9	10	6.4	9.6	9	7.5	12.9	8.2	9	4.2	26	8.9	24	
12	3.9	4.4	4.5	4.9	6.2	S	8	7	6.4	2.9	1.8	C	C	C	C	C	C	C	C	C	4.9	6.9	3.5	2.3	8	4.8	24	
13	2.8	6.2	4.1	4.4	S	8.6	8.9	5.8	2.6	P	P	1	0.8	1.4	1.4	0.8	S	0.9	3.6	2.8	1.2	1	1	1	8.9	3.0	22	
14	1.2	3.2	S	11	6.1	4.9	4.4	9.4	12.3	11.6	8.3	7.1	8.1	7.1	10.8	18.2	15.4	27.6	44.6	38	25.2	32.7	29.6	36.2	44.6	16.2	24	
15	37.2	S	37.1	37	34.4	30.4	25.9	24.1	22.4	17.2	16.1	14.7	13	11.1	10.8	15.2	22.2	26.6	16.9	14.4	13.7	21.8	24.1	11.2	37.2	21.6	24	
16	S	22.3	9.3	11.4	14.6	11.4	11.1	15.2	11.6	10.1	6.6	4.9	5.1	5.9	4.2	5	11.8	19.7	16.5	17	8.7	9.5	10.6	S	22.3	11.0	24	
17	7.6	1	0.9	0.8	0.7	0.8	1.3	1.2	0.7	0.9	1	0.9	1	0.7	0.9	1	1.2	0.8	0.9	0.5	0.7	0.8	S	0.5	7.6	1.2	24	
18	0.5	0.4	0.1	0.2	1.2	1.3	1.4	0.8	1.8	2.7	2	1.4	1	1.6	2	2.6	2.5	2.6	2.7	2.4	3.3	S	3.3	3.6	3.6	1.8	24	
19	3.7	4.3	3.3	2.9	3	3.2	4.3	3.7	3.7	3.5	2.6	2.3	2.2	2.9	3.3	3.5	3.9	6.4	5.6	4.6	S	3.3	4.1	4.9	6.4	3.7	24	
20	4.5	4.4	3.5	4.6	5.1	6.9	7.9	8.8	5.8	5.3	6	6.5	6.1	6.6	8.2	8.3	9.9	10.7	9.9	S	10.9	9.9	10.1	9.4	10.9	7.4	24	
21	9.6	6.9	2.2	2.7	2.9	4.9	6.3	8	6.3	5.3	6.2	5.8	6.4	6.6	6.9	6.9	7.5	8.9	S	5.9	5.8	5.8	5.9	7	9.6	6.1	24	
22	6.3	6.5	6	4.7	5.5	5.6	4.7	4.5	4.9	4.5	4.5	4.8	4.9	5.1	5.8	6.2	8.1	S	8.6	8.6	7.2	6.9	7	7	8.6	6.0	24	
23	6.1	5.8	8.6	19.6	26.4	27.7	33.3	23.4	19.2	10.3	6	5.6	5.9	5.7	6.2	7	S	11.2	16.6	18.2	5.2	8	2.3	4.4	33.3	12.3	24	
24	4.6	8.5	4	10.9	6.3	14.5	22.7	28.3	16.5	10.7	7.9	6.8	6.4	6.5	7.3	S	7.3	10.5	15.5	16.4	21.7	27.1	23	20.9	28.3	13.2	24	
25	15.1	27.6	29.7	35.7	36	39.5	36.3	30.4	S	6.7	4.1	3.5	2.4	2	S	2.7	2.4	1.2	1	1.3	2.1	4	3.5	2.4	39.5	13.2	23	
26	2.7	2.5	3	3.8	3.2	7.3	9.8	25.4	7.7	7.9	10.6	5.8	5.2	S	2.9	5.2	7.4	10.6	17.7	12.6	10.6	12.6	11.8	14.9	25.4	8.7	24	
27	12.8	15	12.9	15.1	9.6	7.4	8.2	3.7	3.6	3.5	3.3	3	S	3.3	5.2	4.3	6.3	7.4	8.2	5.3	5.6	5.7	4.7	6.4	15.1	7.0	24	
28	5.3	7.1	7.8	9	5.3	3.1	3.5	4.7	4.5	3.3	3	S	3.5	3.8	4.6	6.3	7.1	13.3	22.8	20.9	18.2	14.3	14.4	8.9	22.8	8.5	24	
HOURLY MAX	37.2	27.6	37.1	37.0	36.0	39.5	36.3	30.4	29.2	19.6	16.1	14.7	13.6	12.7	15.0	18.2	22.2	27.6	44.6	38.0	28.5	32.7	33.7	36.2				
HOURLY AVG	8.3	8.0	8.5	9.6	9.9	10.3	10.9	12.1	9.4	6.7	5.2	5.1	4.5	4.8	5.3	6.8	7.1	9.8	11.7	10.8	9.7	10.7	9.9	9.0				

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

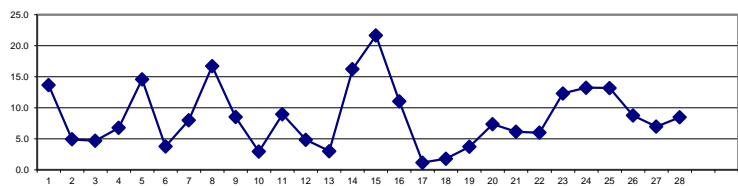
OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR 159 PPB

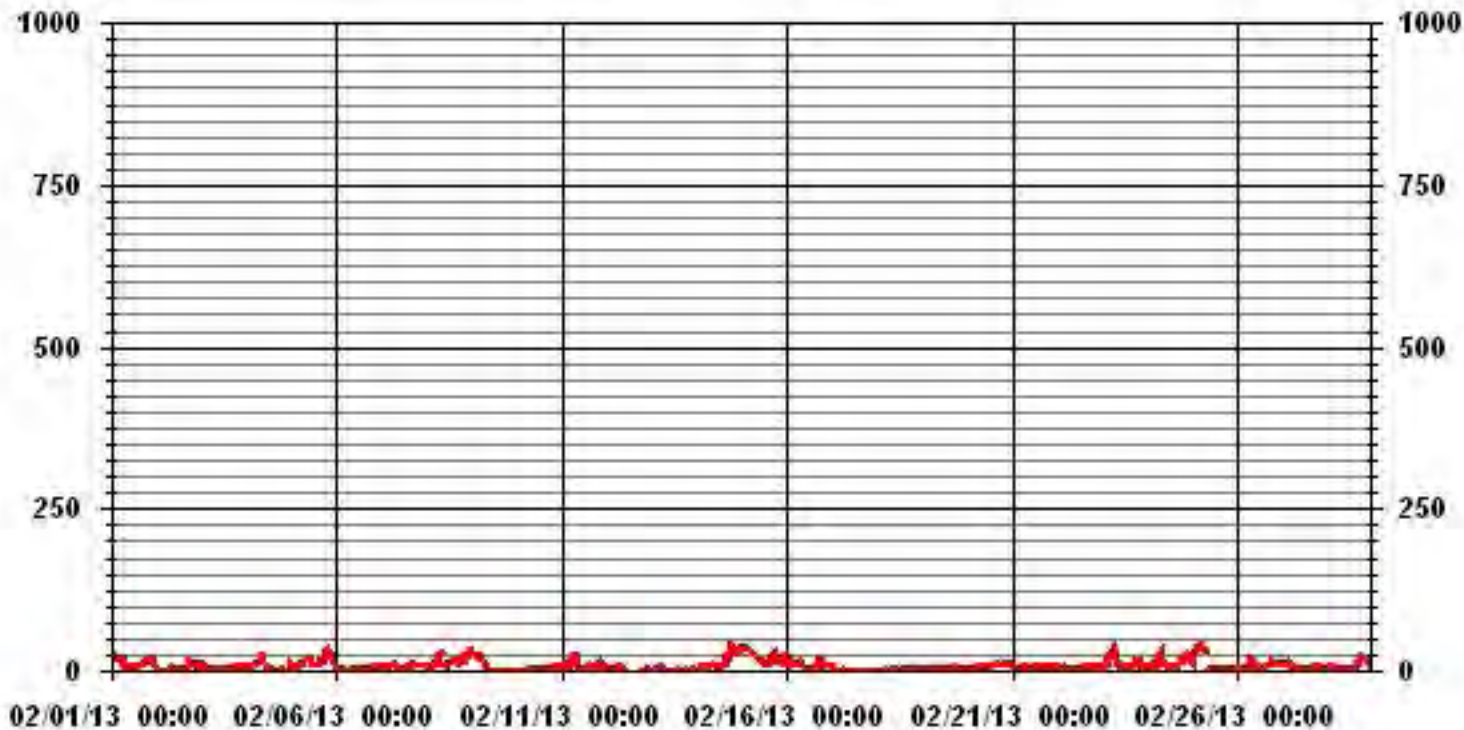
MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	612					
MAXIMUM 1-HR AVERAGE:	44.6	PPB	@ HOUR(S)	18	ON DAY(S)	14
MAXIMUM 24-HR AVERAGE:	21.6	PPB			ON DAY(S)	15
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	664	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	98.8	%	
STANDARD DEVIATION:	8.01		MONTHLY AVERAGE:	8.57	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA35 NO2_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	HR	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
1		22.9	22.5	24.1	25	23.4	16.7	20.6	12.4	11.5	17.6	9.8	9.9	8.3	9.8	P	P	P	16.6	17.5	S	S	23.3	24.2	15.1	25	17.4	21	
2		6.1	4.7	1.5	1.3	1.1	1.4	5.2	29.3	2.7	6.4	4.6	3.9	3.9	5.8	5.5	S	11.7	21.5	19.5	15.3	18.4	15.7	9	12.3	29.3	9.0	24	
3		14.4	10.5	6.4	6.5	6.6	3.5	5.3	4.7	5.3	4.6	4	3.6	3.8	4.2	S	5.7	17.6	9.1	7.6	8.3	13.6	11.2	7.3	8.3	17.6	7.5	24	
4		7.7	8.5	10.5	8.5	17.4	15	22.3	27.3	157.6	29.9	6.3	5.5	5	S	6.3	7.7	4.6	1.5	1.7	1.4	3	0.8	0.8	31.3	157.6	16.5	24	
5		14.6	3.5	11.8	24.8	24.9	20	20.6	27.7	45.6	37.7	18.1	13.4	S	10	11.8	22.8	20.2	26.6	38.5	49.4	34.5	40.7	19	5.6	49.4	23.6	24	
6		4.4	5.4	3	2.8	2.6	2.6	2	2.9	3.1	3.9	4.8	S	4.3	15.7	4.6	6.1	5.2	7.1	6.8	7.7	7	9.8	11.9	10.7	15.7	5.8	24	
7		11	10.8	12.7	9.8	10.7	13.3	14.3	15.5	15.1	8.4	S	5.4	5.5	8.7	10.5	14.1	9.6	20.3	11.8	9.8	9.9	11.7	10.1	10.2	20.3	11.3	24	
8		8.8	8.2	9.1	9.7	12.9	17.2	33.2	32.9	32.5	S	11.6	15.8	16.4	13.6	18.8	18.7	P	17	17	32.4	32.5	29.6	35.5	37.4	37.4	20.9	23	
9		35.3	28.5	27.2	28.7	31.4	30.4	24.6	18.9	S	7.9	5.2	0.8	0.7	3.6	3	P	0.4	0.4	0.3	0.3	0.1	0.1	0.1	0.1	35.3	11.3	23	
10		0	0	0.2	0.7	0.6	15	8.7	S	7.9	4.6	2.1	3.8	3.5	3	4.7	5.3	9.6	9.4	7.8	15.1	9.1	9.3	7	8	15.1	5.9	24	
11		10.6	16.5	31.7	14.6	12.3	44.9	S	34.2	18.8	10.9	6.1	12.8	10.1	6.3	5.5	25	11	14.7	13.7	10.1	19	12.4	15.6	12.7	44.9	16.1	24	
12		7.8	6.1	7.7	6.2	8	S	14.7	9.6	10.1	7.1	2.3	P	C	C	C	C	C	C	C	C	11.1	12.5	7.6	4.6	14.7	8.2	23	
13		4.7	11.7	8.9	11.7	S	17.6	19.8	16.2	10.1	P	P	X	X	X	X	X	X	X	X	X	X	X	X	1.9	1.6	19.8	10.4	11
14		2.1	10.1	S	18.7	17.2	7.6	6.1	16.8	16.6	25.2	12.9	11.6	10.5	10	22	33.8	23.3	34.9	49.1	45.7	42.3	40.4	34	44.8	49.1	23.3	24	
15		40.1	S	37.9	39.2	36.8	34.1	28.5	26.6	26.2	20.4	18.2	17.3	13.7	13.2	12.6	29.2	37	33.3	27	19.1	37.4	29.4	32.8	22.5	40.1	27.5	24	
16		S	29.9	24.3	15.8	24.1	16.5	17.4	22.3	13.9	13.3	8.6	6.6	6.4	12.5	13.5	11.4	18.4	25.8	23.6	28.1	15.9	14.2	37.4	S	37.4	18.2	24	
17		35.2	1.5	1.3	1.3	1.4	1.4	1.8	1.7	1.1	1.5	1.5	1.3	1	1.3	1.4	1.7	1.4	1.4	1.3	1.4	1.3	S	0.9	35.2	2.9	24		
18		1.2	1.2	0.8	0.9	3.8	3.6	3.4	2.5	3.8	4.1	16.3	2.8	1.7	2.2	3.2	3.7	4	4.1	3.8	3.4	4.5	S	4.1	5	16.3	3.7	24	
19		4.3	5.5	4.6	3.9	4.7	4.3	7.6	5.3	7.2	4.8	4.9	2.9	2.6	10.2	4.3	11.7	5.6	9.5	6.9	7.4	S	3.9	5.3	6.6	11.7	5.8	24	
20		6.3	5.1	4.1	5.3	6.2	8.9	9.4	12.2	21.4	7.1	7.7	8.8	7.7	7.6	10.4	9.9	11.9	19	11.9	S	14.2	13.4	13.7	11	21.4	10.1	24	
21		12.9	10.7	4.2	3.5	3.6	6.8	8.5	10.5	7.2	6.2	7.6	7.2	7.7	8.7	8	8.4	10.9	S	6.6	10.8	14.7	9.6	8.7	8.7	14.7	8.3	24	
22		7.1	7.1	7.5	5.9	6.7	7	7.1	6.2	6.2	5.9	7.1	6.4	6.6	6.3	7.4	7.8	9.8	S	12.5	10.1	8.5	9.4	7.8	8.1	12.5	7.6	24	
23		8	6.9	11.9	33.2	34.4	33.2	36.8	39.1	23.6	15.9	9.8	8.4	9.6	7.5	8.6	11.8	S	27.6	38.4	38	11.5	18.6	8.1	12.7	39.1	19.7	24	
24		14.3	16.6	8.7	25.2	10.1	24.7	28.5	38.5	26.2	13.8	9.3	7.5	7.1	7.7	14.7	S	9.8	18.4	21.7	43.7	42.3	42.2	27.3	25.3	43.7	21.0	24	
25		21.7	41.2	34.9	42.5	42.4	41.3	38.6	44.1	S	S	5.4	4.3	3	2.2	S	2.9	3.2	1.5	1.4	2	4.2	5.8	10.7	3.2	44.1	17.0	24	
26		3.4	3	9.1	8.7	7.3	9.8	33.4	36.7	20.8	10.5	14.8	8.7	7.3	S	4.4	7.7	16.1	15.4	40.2	18.8	16	17.3	22.1	23.2	40.2	15.4	24	
27		15.6	19.1	16.7	19.5	15.4	9.3	11.6	5.9	4.5	4.4	4.2	3.8	S	5.4	7.6	5.6	7.9	12.6	13	8.7	20.3	8.3	5.8	8.2	20.3	10.1	24	
28		7.5	9.3	11	12.7	8	4.7	5.8	7.4	8.3	4.2	3.8	S	4.6	4.9	7.5	10.1	10	25.2	41.7	37.8	21.7	24.1	17.8	10.7	41.7	13.0	24	
HOURLY MAX		40.1	41.2	37.9	42.5	42.4	44.9	38.6	44.1	157.6	37.7	18.2	17.3	16.4	15.7	22.0	33.8	37.0	34.9	49.1	49.4	42.3	42.2	37.4	44.8				
HOURLY AVG		12.1	11.3	12.3	13.8	13.9	15.2	16.1	18.8	19.5	11.1	8.0	7.2	6.3	7.5	8.6	11.8	11.2	15.4	17.4	17.5	16.4	16.2	14.3	12.9				

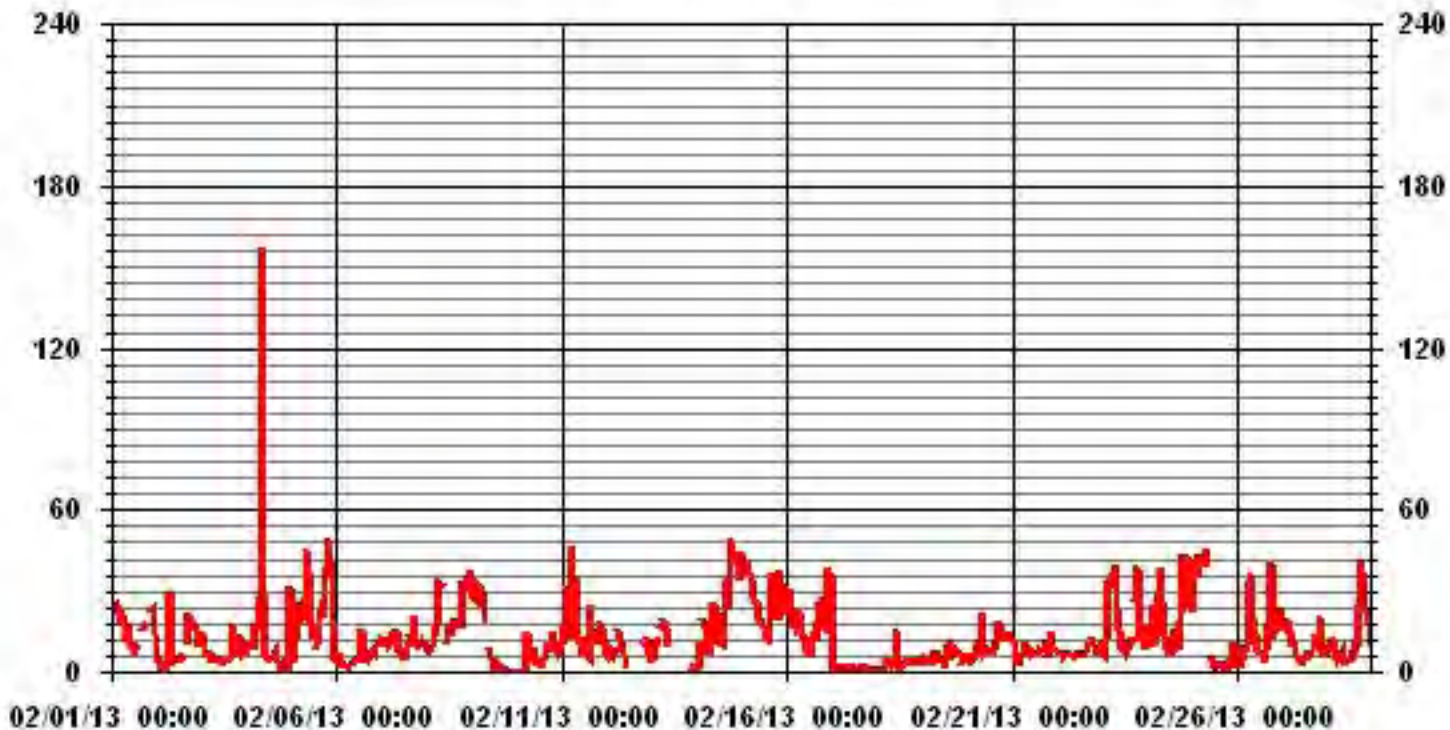
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	611					
MAXIMUM INSTANTANEOUS VALUE:	157.6	PPB	@ HOUR(S)	8	ON DAY(S)	4
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	653	HRS	
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	12.27					

01 Hour Averages



— LICA35 NO2MAX PPB

LICA-ELK
 NO2_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 35
 Site Name : LICA-ELK
 Parameter : NO2_
 Units : PPB

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	1.92	2.40	1.76	2.40	6.40	26.56	13.76	2.24	1.28	1.44	1.92	5.92	10.88	8.00	9.12	4.00	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.92	2.40	1.76	2.40	6.40	26.56	13.76	2.24	1.28	1.44	1.92	5.92	10.88	8.00	9.12	4.00	

Calm : .00 %

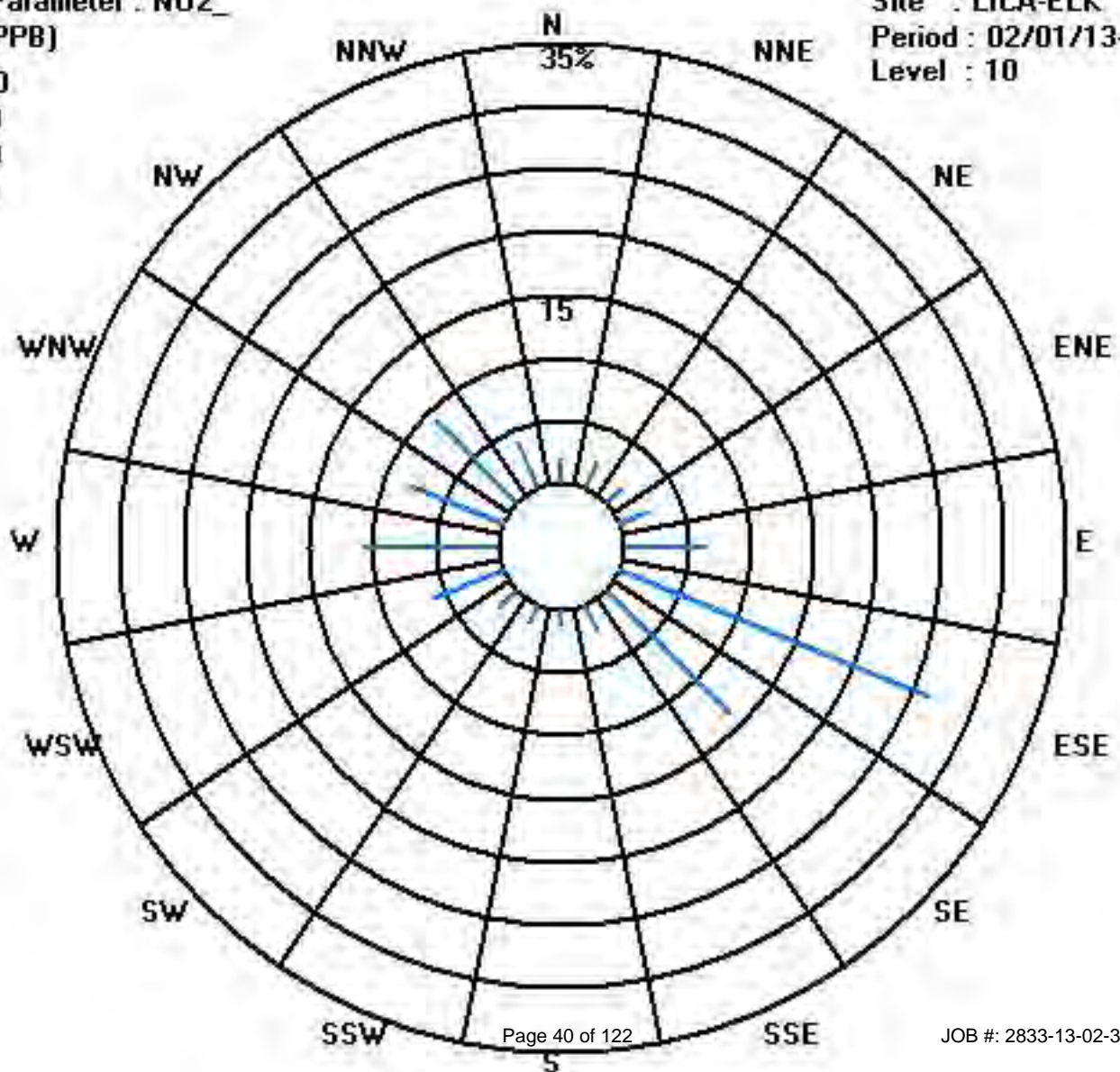
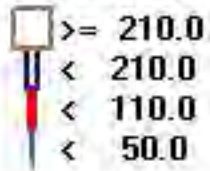
Total # Operational Hours : 625

Distribution By Samples

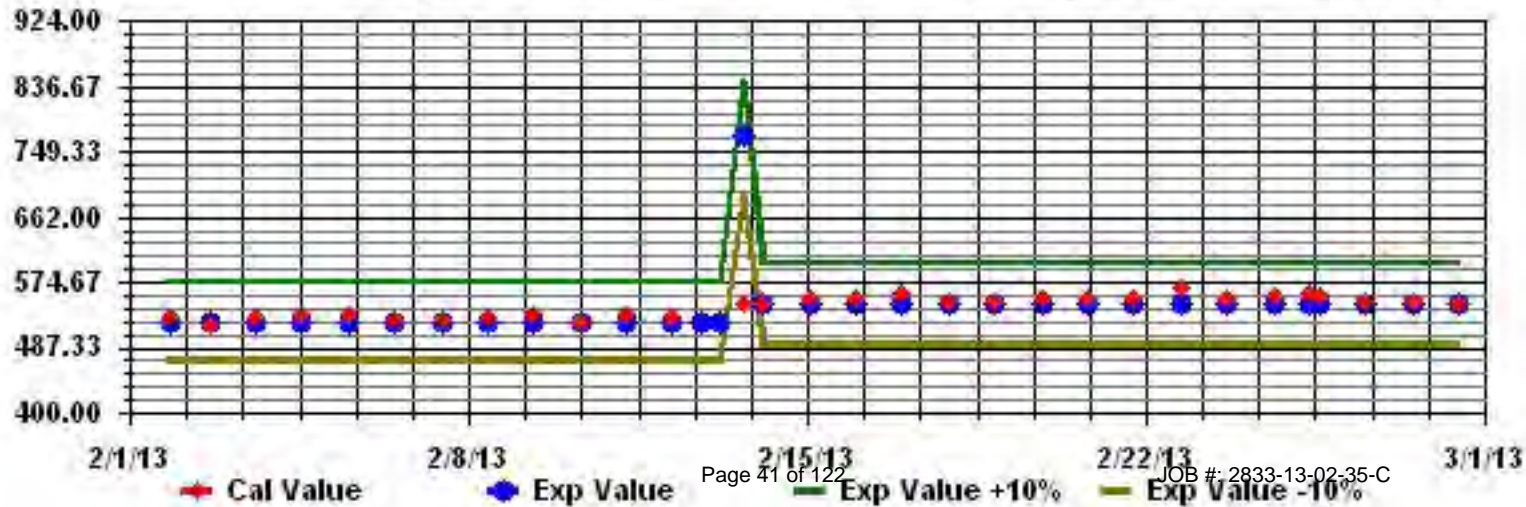
Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	12	15	11	15	40	166	86	14	8	9	12	37	68	50	57	25	625
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	12	15	11	15	40	166	86	14	8	9	12	37	68	50	57	25	

Calm : .00 %

Total # Operational Hours : 625



Calibration Graph for Site: LICA35 Parameter: H02_ Sequence: H02 Phase: SPAll



Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

NITRIC OXIDE hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	0.4	0.5	0.8	1.7	0.4	0	0.6	0	1	7.7	5.1	8.4	6.1	6.4	P	P	P	1.7	0.8	1	S	1.7	1.1	0.6	8.4	2.3	21
2	0.4	0.3	0.2	0.2	0.1	0.1	0.3	3.4	0.3	1.2	1.1	1.4	1.4	1.7	1.2	S	1	1.3	1.2	0.6	0.5	0.5	0.3	0.4	3.4	0.8	24
3	0.3	0.3	0.4	0.3	0.4	0.1	0.3	0.6	0.6	1	1	1.3	1.5	1.4	S	1.4	1.5	0.7	0.5	0.6	0.4	0.3	0.1	0.3	1.5	0.7	24
4	0.1	0.1	0.1	0.1	0.5	0.2	0.6	1.3	10	6.9	1.4	1.5	1.5	S	1.2	1.4	0.4	0.1	0	0	0	0.1	3.1	10	1.3	24	
5	0	0	0.3	0.2	0.4	0.2	0.4	1.5	5.1	15	7.3	8.5	S	6.6	4.3	5.4	2.9	1.1	4.6	11.3	1.7	2.9	0.4	0.1	15	3.5	24
6	0	0	0.1	0.1	0.1	0	0.1	0	0.1	0.8	1.5	S	2	1.4	1.5	1.4	0.7	0.7	0.9	0.5	0.5	0.4	0.7	0.4	2	0.6	24
7	0.4	0.3	0.3	0.3	0.3	0.1	0.5	1.2	1.4	1.7	S	1.9	2.3	3.9	4.6	3.8	1.7	1.6	0.9	0.4	0.2	0.1	0.1	0.1	4.6	1.2	24
8	0.1	0	0.1	0.1	0.2	0.8	4.4	9.1	23.5	S	6.7	14.9	13.8	10.3	11.4	8.4	P	2.3	0.8	0.3	1	0.6	3.2	4.6	23.5	5.3	23
9	2.5	0.6	1.1	1.4	1.4	1.9	1	0.6	S	1.3	0.6	0.2	0.1	0.3	0	P	0	0	0	0	0	0	0	0	2.5	0.6	23
10	0	0	0.1	0	0	0.9	0.2	S	0.5	0.7	0.5	1.3	1.4	1.1	1.1	1.5	1.3	0.9	0.4	0.6	0	0.2	0.1	0	1.5	0.6	24
11	0.1	0	1.4	0	0.1	1.7	S	6.1	2.5	2.6	2	2.7	1	1.7	1.7	6	1	0.5	0.6	0.5	0.2	0.1	0.3	0.2	6.1	1.4	24
12	0	0	0	0.1	0.2	S	0.5	0.6	1	1	0.8	C	C	C	C	C	C	C	C	C	0.2	0.2	0	0.1	1	0.3	24
13	0	0	0	0	S	0.1	0.6	1.9	0.7	P	P	0	0	0	1.3	0.1	S	0.1	0.1	0.1	0.1	0	0	0	1.9	0.3	22
14	0	0.2	S	0.7	0.7	0	0.1	0.7	3.1	8.4	6.6	5.5	6.9	5	8.2	15.1	4.3	5.2	15.2	9.3	4.3	4.3	2.3	5.2	15.2	4.8	24
15	10	S	9.9	15.1	16.1	5.5	1.7	1.6	7	10.3	11.6	11	10.1	8.3	7	7.6	9	2.7	1	1.4	0.6	1.7	3.3	0.3	16.1	6.6	24
16	S	1.7	0.1	0	0.1	0.1	0.1	0.8	2.4	5.2	3.1	2.4	2	2.9	1.9	1.4	1.6	1.1	0.3	0.2	0	0	2.2	S	5.2	1.3	24
17	2.3	0	0	0	0	0	0	0	0	0.1	0.2	0.1	0.1	0	0.2	0.1	0	0	0	0	0	0	S	0	2.3	0.1	24
18	0	0	0	0	0	0	0	0	0.3	0.7	1	0.8	0.5	0.7	0.8	1.2	0.8	0.2	0	0	0	S	0	0	1.2	0.3	24
19	0	0	0	0	0	0	0.2	0.5	0.9	1.5	1.1	0.9	1	1.1	1.3	0.9	0.5	0.2	0.2	S	0.2	0.2	0.1	1.5	0.5	24	
20	0.1	0.1	0.2	0.1	0.2	0.3	0.3	1.1	1.5	2.2	3	3.9	3.9	3.9	4.1	3.2	2.7	1.3	0.5	S	0.8	0.6	0.4	0.3	4.1	1.5	24
21	0.3	0.1	0.1	0.1	0	0.2	0.6	1	1.4	1.9	3.1	3.6	3.9	3.9	3.7	3	1.9	1.4	S	0.5	0.1	0.2	0.2	0.1	3.9	1.4	24
22	0	0	0	0	0	0	0.3	0.5	0.8	1.8	3	3.5	3.6	3.9	3.9	2.7	2.8	S	1.1	0.3	0	0.1	0	0	3.9	1.2	24
23	0	0	0	3.4	2.8	3.5	10.7	6.7	10.9	4.8	3.1	3.4	3	3.3	3.2	2.9	S	1.5	2.1	5.1	0.9	2.7	0.1	0.9	10.9	3.3	24
24	0.4	1	0	1.8	0.1	1.2	2.9	12.8	10.3	9.7	8.9	6.7	6.1	5.8	5.6	S	1.5	1	0.7	1	1.2	1.8	0.6	0	12.8	3.5	24
25	0	3.1	0.9	28.4	15.6	33.1	15.3	17.2	S	1.7	1.2	1.2	0.8	0.6	S	0.5	0.2	0	0	0	0	0	0	0	33.1	5.4	23
26	0	0	0	0	0	0.4	0.9	7.2	2.3	4.1	9.6	4.1	3.7	S	1.7	2.3	2	1.4	2.2	0.1	0.6	0.1	0.6	0	9.6	1.9	24
27	0	0.1	0	0.4	0	0	0	0.3	0.6	1.4	1.3	1.5	S	1.9	2.7	1.6	1.3	0.9	0.3	0.2	0.6	0.1	0	0	2.7	0.7	24
28	0	0	0.1	0	0	0	0.1	0.6	0.7	0.8	0.9	S	2.1	2.5	2.7	2.6	2	2.9	3.6	3	0.6	0.6	0.2	0.2	3.6	1.1	24
HOURLY MAX	10.0	3.1	9.9	28.4	16.1	33.1	15.3	17.2	23.5	15.0	11.6	14.9	13.8	10.3	11.4	15.1	9.0	5.2	15.2	11.3	4.3	4.3	3.3	5.2			
HOURLY AVG	0.6	0.3	0.6	1.9	1.5	1.9	1.6	2.9	3.4	3.6	3.3	3.6	3.2	3.1	3.1	3.2	1.8	1.2	1.5	1.4	0.6	0.7	0.6	0.6			

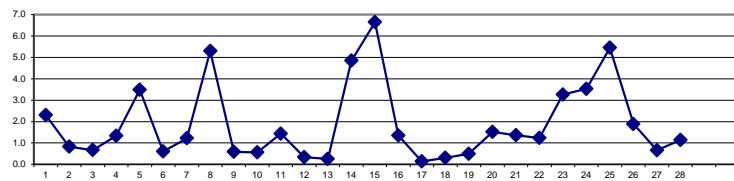
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

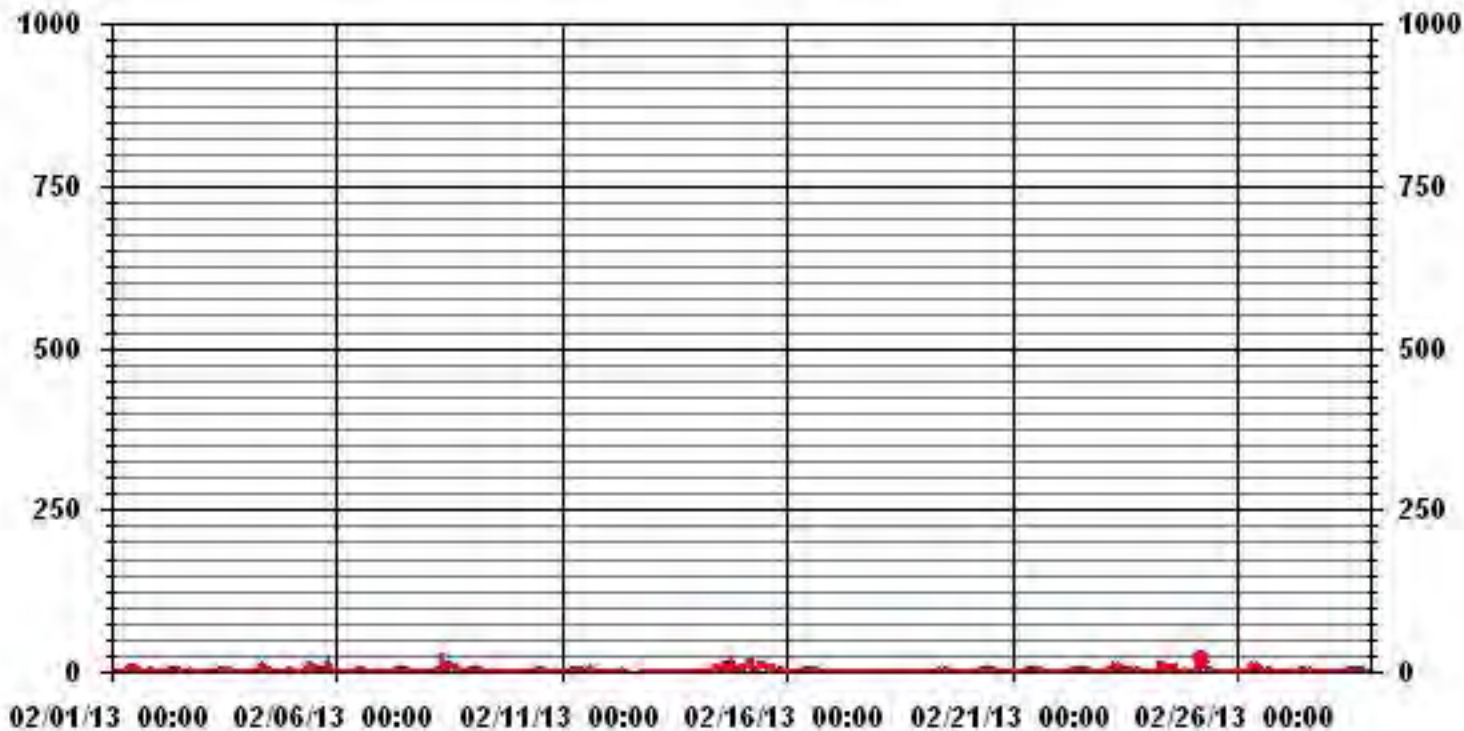
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	500					
MAXIMUM 1-HR AVERAGE:	33.1	PPB	@ HOUR(S)	5	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:	6.6	PPB			ON DAY(S)	15
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	664	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	98.8	%	
STANDARD DEVIATION:	3.45		MONTHLY AVERAGE:	1.90	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA35 NO_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.		
DAY																													
1	2.4	2.4	2.9	7.2	1.4	0.8	3.1	0.3	12.1	51.5	11	11.6	7.3	7.7	P	P	P	4.9	2.6	S	S	4.8	3	1.2	51.5	7.3	21		
2	1.6	1.7	0.8	0.6	0.6	0.5	1.9	23	1.1	2.9	2.6	2.6	2.6	4	3.9	S	2.6	4.7	3.7	1.9	1	1	0.8	0.8	23	2.9	24		
3	1	1	1.7	1	1.2	0.7	1.5	1.4	1.6	2.2	2.1	1.9	2.8	2.2	S	2.9	23.9	2.4	1.8	2.2	1.6	2.2	0.7	1	23.9	2.7	24		
4	0.6	0.7	0.5	0.7	1.1	0.9	3.4	7.4	51.2	28.3	2.7	3.2	2.7	S	3.2	2.7	2.2	0.6	0.4	0.5	0.6	0.4	0.5	29.5	51.2	6.3	24		
5	0.7	0.6	2.6	1.7	1.8	1.1	1.2	7.5	18.3	60.5	16.3	14.6	S	8.2	6.3	10.8	8	6.4	8.7	45.3	4.3	32.2	1	0.7	60.5	11.3	24		
6	0.6	0.5	0.6	0.7	0.4	0.4	0.6	0.5	0.7	2	2.6	S	4.1	8.3	2.4	2.2	1.7	2.3	2.6	1.3	2	1.5	3	1	8.3	1.8	24		
7	2	0.7	1.4	0.9	0.8	0.8	1.3	3.6	2.6	10.3	S	3.9	4	6.9	7.3	9.1	3.2	4.4	2.4	1.3	1.1	0.9	0.7	0.7	10.3	3.1	24		
8	0.7	0.6	0.8	0.6	0.7	3.1	36.3	24.8	38.4	S	12.1	17.5	21.4	12.1	15.7	14.7	P	29.7	1.9	3.3	3	1.6	10.9	7.3	38.4	11.7	23		
9	5.2	1.3	10.3	11.5	7	7.1	3.3	1.9	S	3.8	2.9	0.7	0.7	2.7	1.8	P	5.6	0.6	0.5	0.4	0.4	0.5	0.5	0.5	11.5	3.1	23		
10	0.4	0.5	0.5	0.5	0.5	8	3.8	S	1.9	2.2	1.1	2.4	2.4	2.2	2.6	2.6	2.5	1.9	1.6	3.7	0.8	1.3	1	0.6	8	2.0	24		
11	0.6	0.8	18.6	0.6	0.8	22	S	19.4	4.4	3.9	3.4	12.1	8.7	4.2	3	17.6	1.5	1.3	3.3	3.2	0.7	0.6	1	1	22	5.8	24		
12	0.4	0.5	0.7	0.7	0.8	S	1.6	2	2.5	2.4	1.5	P	C	C	C	C	C	C	C	C	0.9	0.8	0.7	1	2.5	1.2	23		
13	0.6	0.7	0.7	1	S	2	3.1	6.5	4.2	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	0.3	0.5	6.5	2.0	11
14	0.3	2.1	S	3.1	2.5	0.8	0.8	2.3	6	39.5	11.9	10.3	9.2	7.4	25.3	40.1	13.9	9.2	26.1	27	18.6	9.6	6.2	16.3	40.1	12.5	24		
15	19.6	S	16.9	25.8	23.8	20.3	4.2	4.1	11	13.5	15.8	14.1	11.5	10.6	8.1	30.8	34.4	6.7	3.7	5.2	11.6	6.9	16.4	1	34.4	13.7	24		
16	S	10.1	1	0.8	0.8	0.9	1.2	2.6	5.5	9.9	4.5	4.1	3.8	9.6	9.7	5.9	3.9	2.6	1.7	2.2	0.4	1.3	26.9	S	26.9	5.0	24		
17	21.8	0.4	0.3	0.5	0.3	0.4	0.2	0.5	0.3	0.6	0.6	0.5	0.7	0.4	0.8	0.6	0.5	0.2	0.2	0.2	0.2	0.2	0.3	S	0.3	21.8	1.3	24	
18	0.3	0.1	0.1	0.2	0.5	0.1	0.3	0.2	1.9	1.7	16	3	2.1	1.7	1.8	2.5	8.3	1.1	1.1	0.7	0.5	S	0.6	0.5	16	2.0	24		
19	0.3	0.9	0.5	0.3	1.8	0.8	2	2.1	2.4	2.7	3.3	2	2	2.6	2.2	6.8	1.4	2.1	1	10.1	S	0.9	0.7	0.6	10.1	2.2	24		
20	0.6	0.7	1	0.8	1.1	1.7	1.3	2.4	16.3	4.3	5.1	5.7	5.9	5.2	5.4	4.3	4.4	10.3	1.7	S	3	1.6	1.4	1	16.3	3.7	24		
21	1	0.8	1	0.8	0.6	1.2	1.5	1.9	2.6	3	5	5.2	5.4	5.3	6.1	4.1	3.7	3.1	S	1.9	3.9	6.8	7.7	1.1	7.7	3.2	24		
22	0.5	0.5	0.6	0.3	1	1.1	2.9	2.2	1.7	3.3	6.3	5.5	5.6	5.6	6.1	5.2	5.3	S	3	1.9	0.8	2.1	0.5	0.7	6.3	2.7	24		
23	0.2	0.2	1.1	10.8	12.7	13.1	19.6	47.6	21.6	9.6	6.3	7.1	6.9	5.4	5.7	7.1	S	5.9	21.8	21.7	5.4	8.9	2.1	3.9	47.6	10.6	24		
24	2.5	3	2.4	8.2	0.5	7.1	8.1	43.8	26	12.4	12.6	7.8	7.5	7.7	26.9	S	3.5	3.1	2.6	33.6	23.9	9	4.1	0.8	43.8	11.2	24		
25	1.5	15	2.7	113	49.3	55.8	28.6	110.5	S	S	1.8	1.7	1.4	1.1	S	0.9	0.6	0.2	0.2	0.2	0.3	0.2	0.5	0.2	113	18.4	24		
26	0.2	0.1	2	1.9	0.5	1.7	19.6	20.6	10.1	7	17.1	7.2	6	S	2.5	4.4	6.1	5	28.8	1.4	2.2	1.6	4	0.7	28.8	6.6	24		
27	0.3	0.9	0.5	1.4	0.4	0.6	0.6	0.9	1.4	2.8	1.9	2.2	S	4.2	4.9	3	3.3	2	1.7	1	14.7	1.2	0.5	0.5	14.7	2.2	24		
28	0.5	0.6	0.8	0.5	0.7	0.4	0.8	1.5	1.6	2.1	1.7	S	3.7	3.2	4.8	4.8	4.1	8.2	50.5	11.3	1.7	3.7	0.9	2.5	50.5	4.8	24		
HOURLY MAX	21.8	15.0	18.6	113.0	49.3	55.8	36.3	110.5	51.2	60.5	17.1	17.5	21.4	12.1	26.9	40.1	34.4	29.7	50.5	45.3	23.9	32.2	26.9	29.5					
HOURLY AVG	2.5	1.8	2.7	7.0	4.2	5.7	5.7	12.6	9.5	11.3	6.5	6.1	5.4	5.4	6.8	8.3	6.3	4.8	6.9	7.6	4.1	3.9	3.6	2.8					

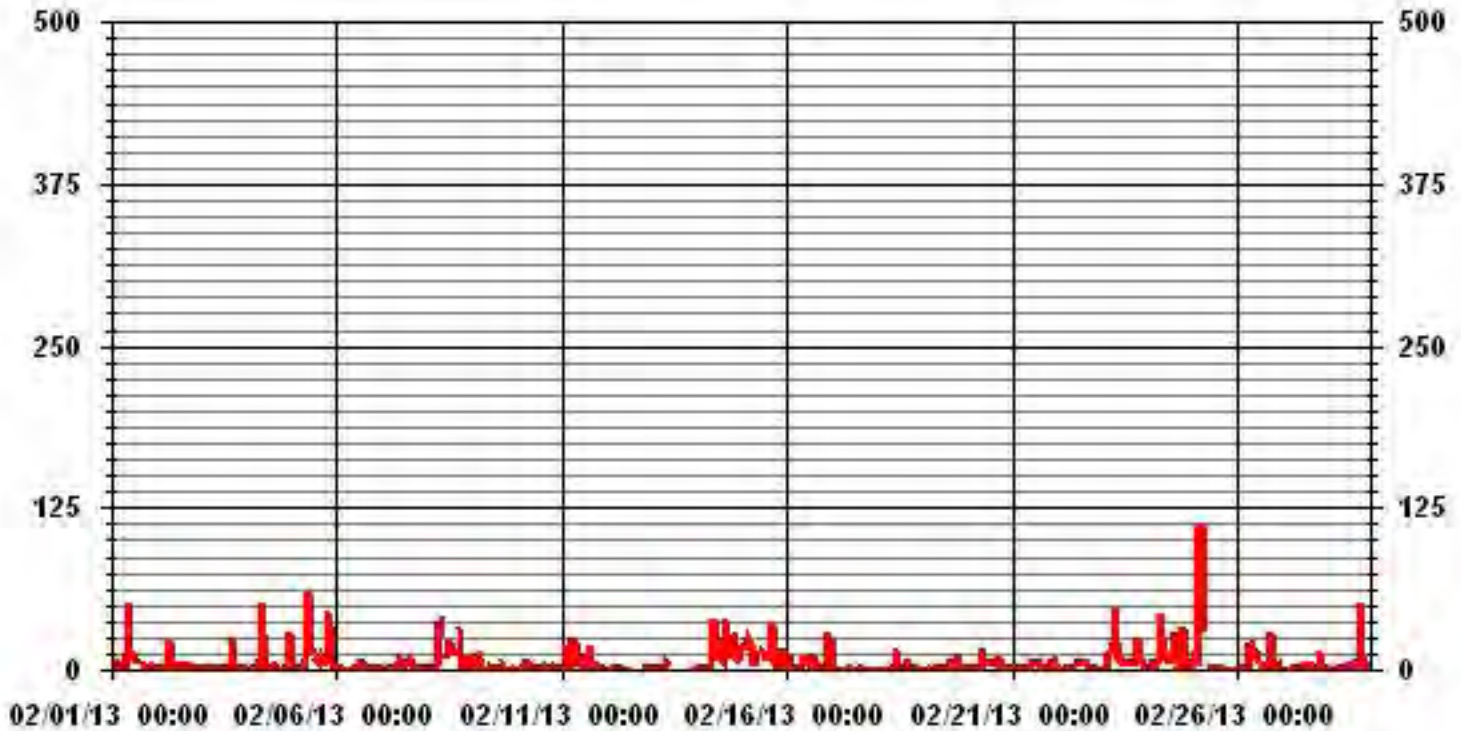
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	613				
MAXIMUM INSTANTANEOUS VALUE:	113.0	PPB	@ HOUR(S)	3	ON DAY(S) 25
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	653	HRS
MONTHLY CALIBRATION TIME:	8	HRS			
STANDARD DEVIATION:	10.65				

01 Hour Averages



LICA-ELK
 NO_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 35
 Site Name : LICA-ELK
 Parameter : NO_
 Units : PPB

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	1.92	2.40	1.76	2.40	6.40	26.56	13.76	2.24	1.28	1.44	1.92	5.92	10.88	8.00	9.12	4.00	100.00
< 110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.92	2.40	1.76	2.40	6.40	26.56	13.76	2.24	1.28	1.44	1.92	5.92	10.88	8.00	9.12	4.00	

Calm : .00 %

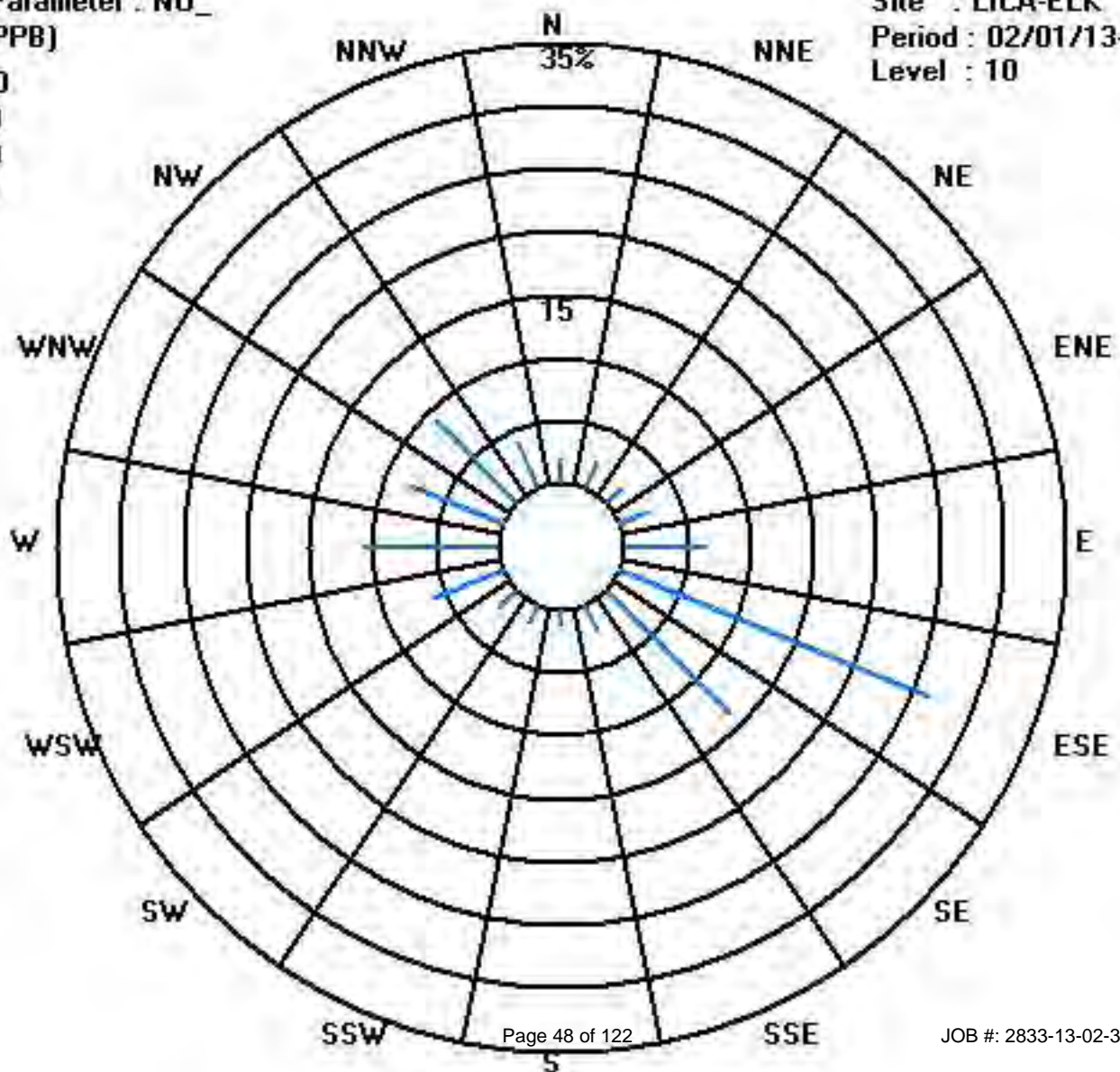
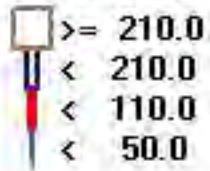
Total # Operational Hours : 625

Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	12	15	11	15	40	166	86	14	8	9	12	37	68	50	57	25	625
< 110.0																	
< 210.0																	
>= 210.0																	
Totals	12	15	11	15	40	166	86	14	8	9	12	37	68	50	57	25	

Calm : .00 %

Total # Operational Hours : 625



Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	18	18.8	23.7	22	18.8	12.7	16.9	7.4	8.9	16	11.9	16.5	13.5	15.1	P	P	P	14.3	16.5	17.4	S	21.7	18.6	10	23.7	15.9	21	
2	3.1	1.6	0.9	0.7	0.5	0.3	2.1	9.8	0.7	4.3	3.4	3.9	3.4	4.1	3.5	S	6.2	16	16.1	10.7	10.8	13	6.8	10.2	16.1	5.7	24	
3	11.6	4.9	3.9	4.7	4.4	2.5	3.9	4.1	3.5	3.6	3.5	4	3.9	4	S	5.2	6.7	6.1	6.4	6.6	8.2	8	6.2	6.9	11.6	5.3	24	
4	6.5	6.6	8.6	6.9	12.5	12.1	14.2	16.5	38.1	20.6	5.4	4.8	4.8	S	3.7	4.6	2	1	1	1	1.2	0.4	0.5	13	38.1	8.1	24	
5	5.2	2.2	5	8.7	11.8	11.4	14.6	17.3	26.2	34.6	18.3	20.1	S	15.5	13.6	19.7	17.8	16.4	36.5	46.3	30.2	27.1	12.6	3.9	46.3	18.0	24	
6	3.1	3.5	2.1	2.2	1.9	1.5	1.1	1.2	1.8	3.1	4.6	S	5.2	4.5	5.1	5.8	4.6	5.6	6.3	6.1	6.3	7.4	9.3	8.6	9.3	4.4	24	
7	8.1	9.1	9	7.1	7.7	8.9	11.2	11.6	9.4	6.7	S	5.6	6.4	10	12.6	12.1	9.4	13.4	10.7	8.7	8.4	8.6	8.5	8.1	13.4	9.2	24	
8	7.5	7.4	7.5	7.3	10.6	13.1	22	34	52.7	S	16	29.6	27.4	23	26.4	23.7	P	15.1	14.8	14.9	27.6	25.9	36.9	40.1	52.7	22.0	23	
9	33.4	27.3	24.9	25.6	27.1	22.5	18.8	11.5	S	5.3	2	0.6	0.3	0.7	0.1	P	0	0	0	0	0	0	0	0	0	33.4	9.1	23
10	0	0	0.1	0	0	2.3	0.5	S	2.9	2.7	1.8	3.8	3.8	3	3.5	5.2	7	8.1	4.8	7.2	6.8	5.8	5.4	5.7	8.1	3.5	24	
11	7.6	10.9	12.9	8.2	9.2	19.7	S	32.1	15.7	9.9	6.1	6.6	3.1	4.9	5.6	16	7.4	10.1	9.6	8	13.1	8.3	9.3	4.4	32.1	10.4	24	
12	3.9	4.4	4.5	5	6.4	S	8.5	7.6	7.4	3.9	2.6	C	C	C	C	C	C	C	C	C	5.1	7.1	3.5	2.4	8.5	5.2	24	
13	2.8	6.2	4.1	4.4	S	8.7	9.5	7.7	3.3	P	P	1	0.8	1.4	2.7	0.9	S	1	3.7	2.9	1.3	1	1	1	9.5	3.3	22	
14	1.2	3.4	S	11.7	6.8	4.9	4.5	10.1	15.4	20	14.9	12.6	15	12.1	19	33.3	19.7	32.8	59.8	47.3	29.5	37	31.9	41.4	59.8	21.1	24	
15	47.2	S	47	52.1	50.5	35.9	27.6	25.7	29.4	27.5	27.7	25.7	23.1	19.4	17.8	22.8	31.2	29.3	17.9	15.8	14.3	23.5	27.4	11.5	52.1	28.3	24	
16	S	24	9.4	11.4	14.7	11.5	11.2	16	14	15.3	9.7	7.3	7.1	8.8	6.1	6.4	13.4	20.8	16.8	17.2	8.7	9.5	12.8	S	24	12.4	24	
17	9.9	1	0.9	0.8	0.7	0.8	1.3	1.2	0.7	1	1.2	1	1.1	0.7	1.1	1.1	1.2	0.8	0.9	0.5	0.7	0.8	S	0.5	9.9	1.3	24	
18	0.5	0.4	0.1	0.2	1.2	1.3	1.4	0.8	2.1	3.4	3	2.2	1.5	2.3	2.8	3.8	3.3	2.8	2.7	2.4	3.3	S	3.3	3.6	3.8	2.1	24	
19	3.7	4.3	3.3	2.9	3	3.2	4.5	4.2	4.6	5	3.7	3.2	3.2	4	4.6	4.4	4.4	6.9	5.8	4.8	S	3.5	4.3	5	6.9	4.2	24	
20	4.6	4.5	3.7	4.7	5.3	7.2	8.2	9.9	7.3	7.5	9	10.4	10	10.5	12.3	11.5	12.6	12	10.4	S	11.7	10.5	10.5	9.7	12.6	8.9	24	
21	9.9	7	2.3	2.8	2.9	5.1	6.9	9	7.7	7.2	9.3	9.4	10.3	10.5	10.6	9.9	9.4	10.3	S	6.4	5.9	6	6.1	7.1	10.6	7.5	24	
22	6.3	6.5	6	4.7	5.5	5.6	5	5	5.7	6.3	7.5	8.3	8.5	9	9.7	8.9	10.9	S	9.7	8.9	7.2	7	7	7	10.9	7.2	24	
23	6.1	5.8	8.6	23	29.2	31.2	44	30.1	30.1	15.1	9.1	9	8.9	9	9.4	9.9	S	12.7	18.7	23.3	6.1	10.7	2.4	5.3	44	15.6	24	
24	5	9.5	4	12.7	6.4	15.7	25.6	41.1	26.8	20.4	16.8	13.5	12.5	12.3	12.9	S	8.8	11.5	16.2	17.4	22.9	28.9	23.6	20.9	41.1	16.8	24	
25	15.1	30.7	30.6	64.1	51.6	72.6	51.6	47.6	S	8.4	5.3	4.7	3.2	2.6	S	3.2	2.6	1.2	1	1.3	2.1	4	3.5	2.4	72.6	18.6	23	
26	2.7	2.5	3	3.8	3.2	7.7	10.7	32.6	10	12	20.2	9.9	8.9	S	4.6	7.5	9.4	12	19.9	12.7	11.2	12.7	12.4	14.9	32.6	10.6	24	
27	12.8	15.1	12.9	15.5	9.6	7.4	8.2	4	4.2	4.9	4.6	4.5	S	5.2	7.9	5.9	7.6	8.3	8.5	5.5	6.2	5.8	4.7	6.4	15.5	7.6	24	
28	5.3	7.1	7.9	9	5.3	3.1	3.6	5.3	5.2	4.1	3.9	S	5.6	6.3	7.3	8.9	9.1	16.2	26.4	23.9	18.8	14.9	14.6	9.1	26.4	9.6	24	
HOURLY MAX	47.2	30.7	47.0	64.1	51.6	72.6	51.6	47.6	52.7	34.6	27.7	29.6	27.4	23.0	26.4	33.3	31.2	32.8	59.8	47.3	30.2	37.0	36.9	41.4				
HOURLY AVG	8.9	8.3	9.1	11.5	11.4	12.2	12.5	14.9	12.8	10.3	8.5	8.7	7.7	8.0	8.5	10.0	8.9	11.0	13.1	12.2	10.3	11.4	10.5	9.6				

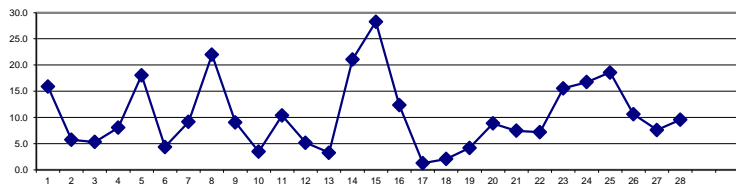
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

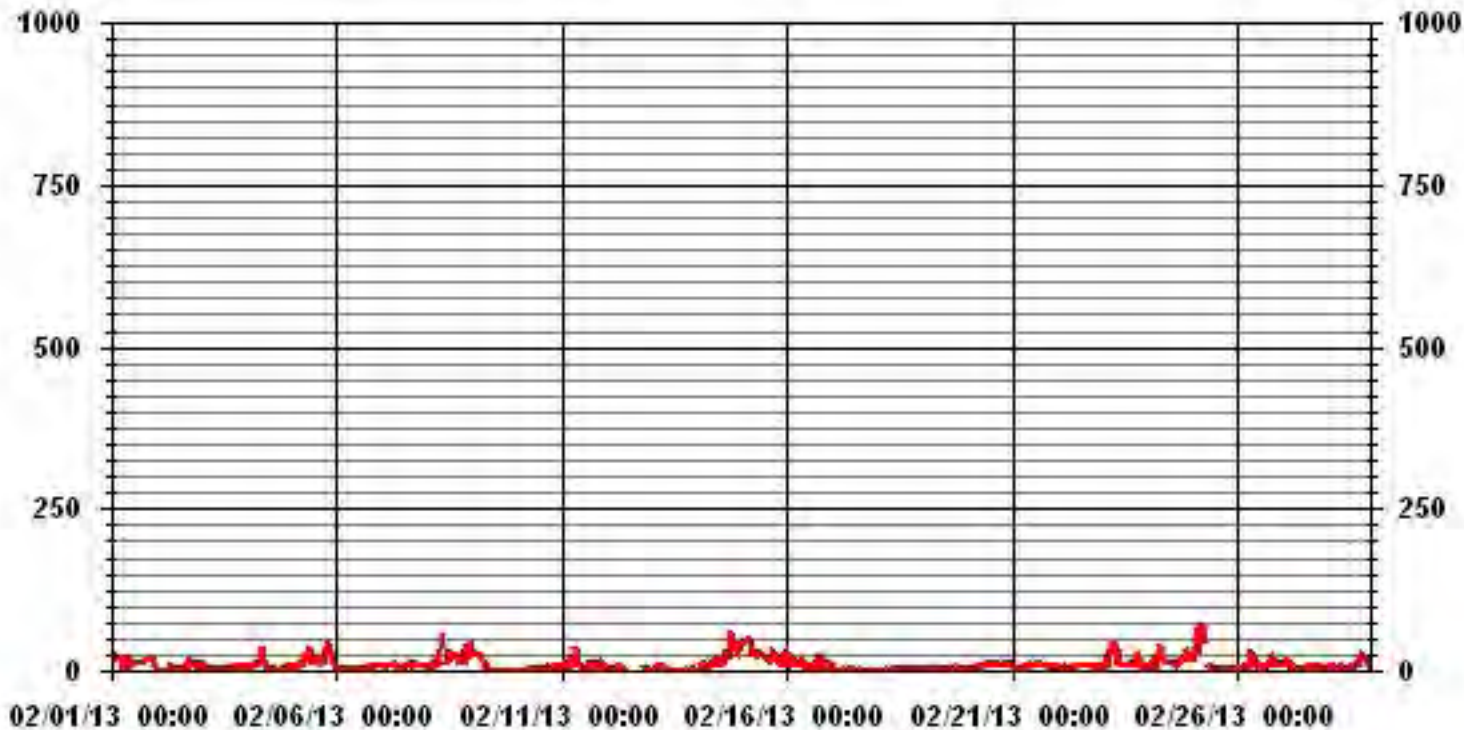
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	613					
MAXIMUM 1-HR AVERAGE:	72.6	PPB	@ HOUR(S)	5	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:	28.3	PPB			ON DAY(S)	15
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	664	HRS	
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	98.8	%	
STANDARD DEVIATION:	10.42		MONTHLY AVERAGE:	10.47	PPB	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



— LICA35 NOX_ PPB

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	DAY	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
1	1	25.1	24.5	26.9	32.2	24.6	16.6	22.8	12.5	23.4	66.2	20.5	21.2	15.1	17.5	P	P	P	17.8	19.7	S	S	26.6	26.8	15.9	66.2	24.0	21	
2	2	6.4	6	1.5	1.2	1	1.1	6	50.2	3.2	8.7	6.8	6	5.8	9.3	8.7	S	14	26	22.1	16.1	18.8	16.1	9	12.4	50.2	11.1	24	
3	3	14.8	10.8	7.6	7.1	7.1	3.5	5.9	5.2	6.2	5.8	5.5	4.9	6.3	5.7	S	8.2	40.4	10.8	9.2	10	15	12.8	7.4	8.7	40.4	9.5	24	
4	4	7.6	8.5	10.4	8.7	18	15.1	24	34.4	200.5	57.9	8.6	8.4	7.3	S	9.3	10	6.5	1.6	1.9	1.6	3.1	0.9	1	59.2	200.5	21.9	24	
5	5	15.4	3.6	14	26.5	26.4	21.1	21.6	35.1	63.9	91	34.8	28.1	S	18.2	17.9	33.6	27.4	32.7	46.2	93.8	36.8	70	19.8	5.6	93.8	34.1	24	
6	6	4.4	5.5	3	3.1	2.6	2.2	2.2	2.9	3.1	5.2	7.1	S	7.8	23.3	6.5	7.7	6.2	9	8.2	8.5	8.2	10.6	12.1	10.7	23.3	7.0	24	
7	7	12.4	11.2	13.6	10.1	10.7	13.6	15.2	18.4	17.1	17.9	S	9.1	9.3	15.7	17.9	23.2	11.8	24.2	13.5	10.2	10.3	12.4	10.4	10.6	24.2	13.9	24	
8	8	9.2	8.4	9.9	9.9	13.2	20.4	67.5	57.4	67.8	S	23.9	33.5	37.8	25	33.5	33.4	P	33.6	18.6	35.7	34.6	31.1	46.1	45	67.8	31.6	23	
9	9	40.4	29.5	37.6	40.3	38	37.8	27.9	20.2	S	11	8	1.1	0.9	5.6	4.7	P	5.1	0.4	0.2	0.2	0	0	0.1	0.1	40.4	14.1	23	
10	10	0	0	0.1	0.4	0.5	22.9	12.3	S	9.5	6	2.6	5.7	5.6	4.8	7.1	7.4	10.6	10.5	9.2	18.4	9.3	10.1	7.6	8.3	22.9	7.3	24	
11	11	10.9	16.8	49.6	14.7	12.7	65.6	S	51.6	23	14.4	9.2	25.1	18.7	10.2	7.6	42.8	12.1	15.6	14.8	13	19.3	12.5	16	12.9	65.6	21.3	24	
12	12	7.9	6.2	7.6	6.1	8.2	S	15.8	10.9	11.9	9.5	3.5	P	C	C	C	C	C	C	C	C	11.3	13	8.1	5	15.8	8.9	23	
13	13	4.9	11.8	8.9	12	S	17.9	20.5	22.3	13.8	P	P	X	X	X	X	X	X	X	X	X	X	X	X	1.6	1.4	22.3	11.5	11
14	14	1.9	10	S	21.4	18.4	8	6.1	18.7	21.3	59.7	24.7	21.8	19.3	17	47.1	73.7	36.2	43.5	70.8	72.3	60	50.1	38.6	56.5	73.7	34.7	24	
15	15	58.8	S	53.8	62.7	58	54.6	32.2	30.4	37.2	33.1	33.8	30.7	25.1	23.6	20.6	57.4	68.6	37.1	30.2	23.2	47.4	31.4	49.2	23.4	68.6	40.1	24	
16	16	S	39.4	25.2	16.2	24.9	17.2	18.6	25.2	18.5	23.3	13	10.4	9.8	22.3	23.7	17.7	22.3	28.1	24.7	28.9	16.2	15.5	63.8	S	63.8	23.0	24	
17	17	57.2	1.6	1.5	1.2	1.2	1.4	1.7	1.7	1.2	1.4	1.7	1.4	1.6	1.2	1.7	1.5	1.8	1.4	1.4	1.1	1.2	1.4	S	0.9	57.2	3.8	24	
18	18	0.9	1.1	0.7	0.7	4.2	3.5	3.3	2.5	5	5.6	32.5	5.5	3	4	4.7	5.5	11.8	4.6	4.4	3.6	4.5	S	4.2	5.3	32.5	5.3	24	
19	19	4.6	6.2	4.8	4.3	6.4	5	9.8	7.6	9.7	7.5	8.2	5	4.8	12.2	5.9	15.8	6.5	11.4	7.6	16.8	S	4.5	5.7	7.2	16.8	7.7	24	
20	20	6.9	5.7	4.4	6.1	7	10.7	10.3	13.7	37.7	10.4	12.7	14.6	13.6	12.7	16	14.2	15.6	28.7	13.4	S	17	15.1	15.1	11.8	37.7	13.6	24	
21	21	13.8	11.6	4.3	4.2	4.3	7.3	10	12.3	9.7	9.4	12.6	12.6	12.8	15.1	12.1	12.1	13.3	S	8.3	14.8	21.5	16.7	9.4	21.5	11.3	24		
22	22	7.4	7.4	7.9	6.1	7.8	8.3	9.8	8.4	7.9	9.3	13.4	12.1	12.2	11.8	13.5	13.1	15.1	S	14.5	11.3	9.1	11.8	7.9	8.8	15.1	10.2	24	
23	23	8.1	7.1	12.3	44	47.1	46.4	55.6	84.8	42.7	25.7	15.9	15.4	16.4	12.7	13.1	17.8	S	33.5	56	58.1	14.3	27.7	10.4	16.5	84.8	29.6	24	
24	24	16.7	17.8	9.2	33.5	10.1	31.8	36.5	78.9	52.5	26.4	22	15	14.9	15.5	38.5	S	13.3	21.6	23.1	76	65.9	51.2	31.2	25.6	78.9	31.6	24	
25	25	22	56.1	36.8	150.4	92.1	97.3	67.5	148.1	S	S	7.2	5.8	4.2	3.2	S	3.7	3.7	1.9	1.5	2.1	4.3	5.7	11.1	3.1	150.4	34.7	22	
26	26	3.3	3.1	11	10.7	7.7	10.4	43.3	57.1	31.4	17.6	32.1	16.4	13.7	S	6.2	11.2	22.3	18.5	67.1	19.4	17.9	18.7	25.4	23.8	67.1	21.2	24	
27	27	15.6	19.6	17	20.7	15.3	9.4	11.8	6.9	5.8	6.9	6	6	S	9.7	12.3	8.4	11.4	14.6	14.7	9.1	34.2	9.3	6	8.5	34.2	12.1	24	
28	28	7.8	9.5	11.4	12.8	8.2	4.6	6.3	8.5	9.6	5.9	5.2	S	8.1	8	11.9	14.8	13.1	33.1	90.8	49.2	23.6	27.7	18.4	13.1	90.8	17.5	24	
HOURLY MAX		58.8	56.1	53.8	150.4	92.1	97.3	67.5	148.1	200.5	91.0	34.8	33.5	37.8	25.0	47.1	73.7	68.6	43.5	90.8	93.8	65.9	70.0	63.8	59.2				
HOURLY AVG		14.2	12.6	14.5	20.3	17.6	20.5	20.9	30.6	28.2	21.4	14.3	13.2	11.4	12.6	14.9	19.7	16.9	18.9	23.4	24.5	19.9	19.5	17.4	15.2				

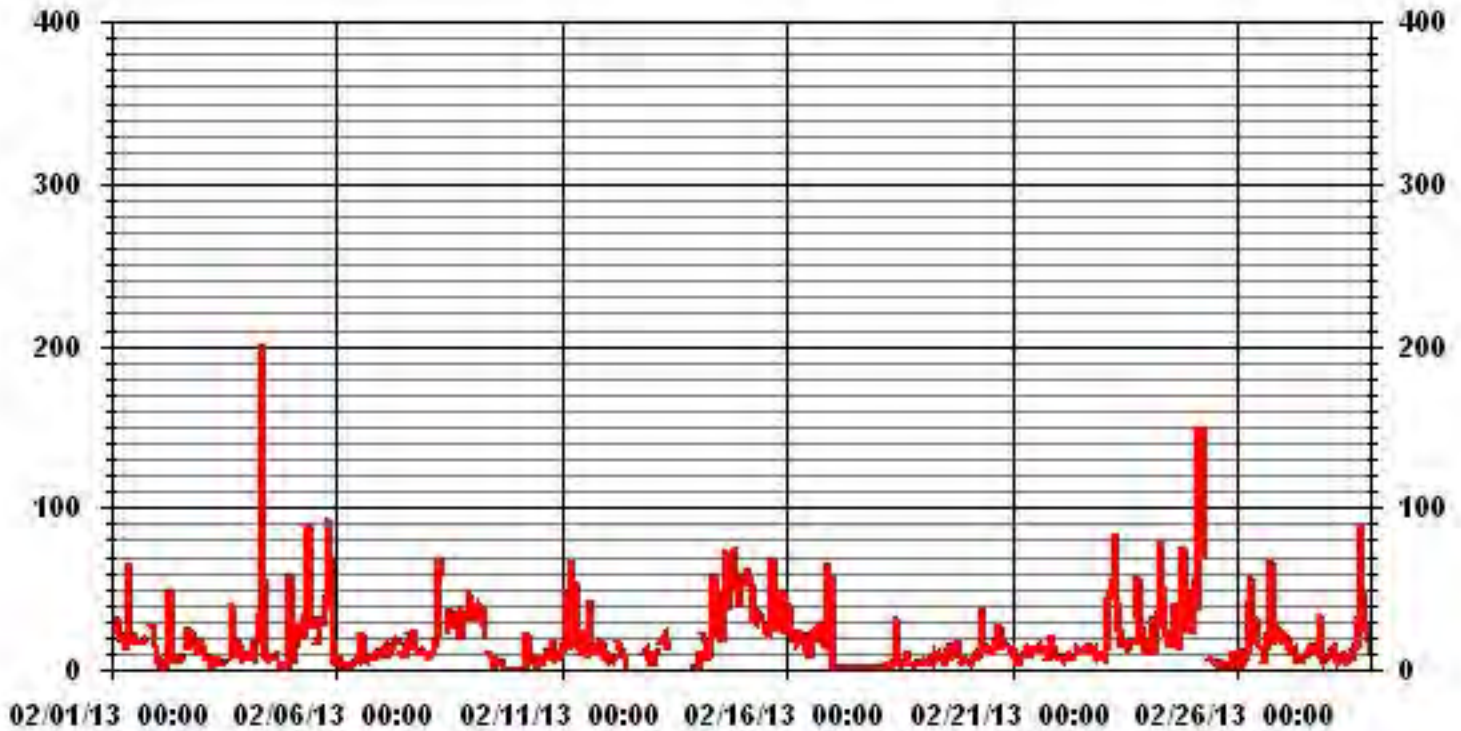
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	609				
MAXIMUM INSTANTANEOUS VALUE:	200.5	PPB	@ HOUR(S)	8	ON DAY(S) 4
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	651	HRS
MONTHLY CALIBRATION TIME:	8	HRS			
STANDARD DEVIATION:	20.21				

01 Hour Averages



LICA-ELK
 NOX_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 35
 Site Name : LICA-ELK
 Parameter : NOX_
 Units : PPB

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	1.92	2.40	1.76	2.40	6.40	26.24	13.76	2.24	1.28	1.28	1.92	5.76	10.72	7.68	8.96	4.00	98.72
< 110.0	.00	.00	.00	.00	.00	.32	.00	.00	.00	.16	.00	.16	.16	.32	.16	.00	1.28
< 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.92	2.40	1.76	2.40	6.40	26.56	13.76	2.24	1.28	1.44	1.92	5.92	10.88	8.00	9.12	4.00	

Calm : .00 %

Total # Operational Hours : 625

Distribution By Samples

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50.0	12	15	11	15	40	164	86	14	8	8	12	36	67	48	56	25	617
< 110.0						2				1		1	1	2	1		8
< 210.0																	
>= 210.0																	
Totals	12	15	11	15	40	166	86	14	8	9	12	37	68	50	57	25	

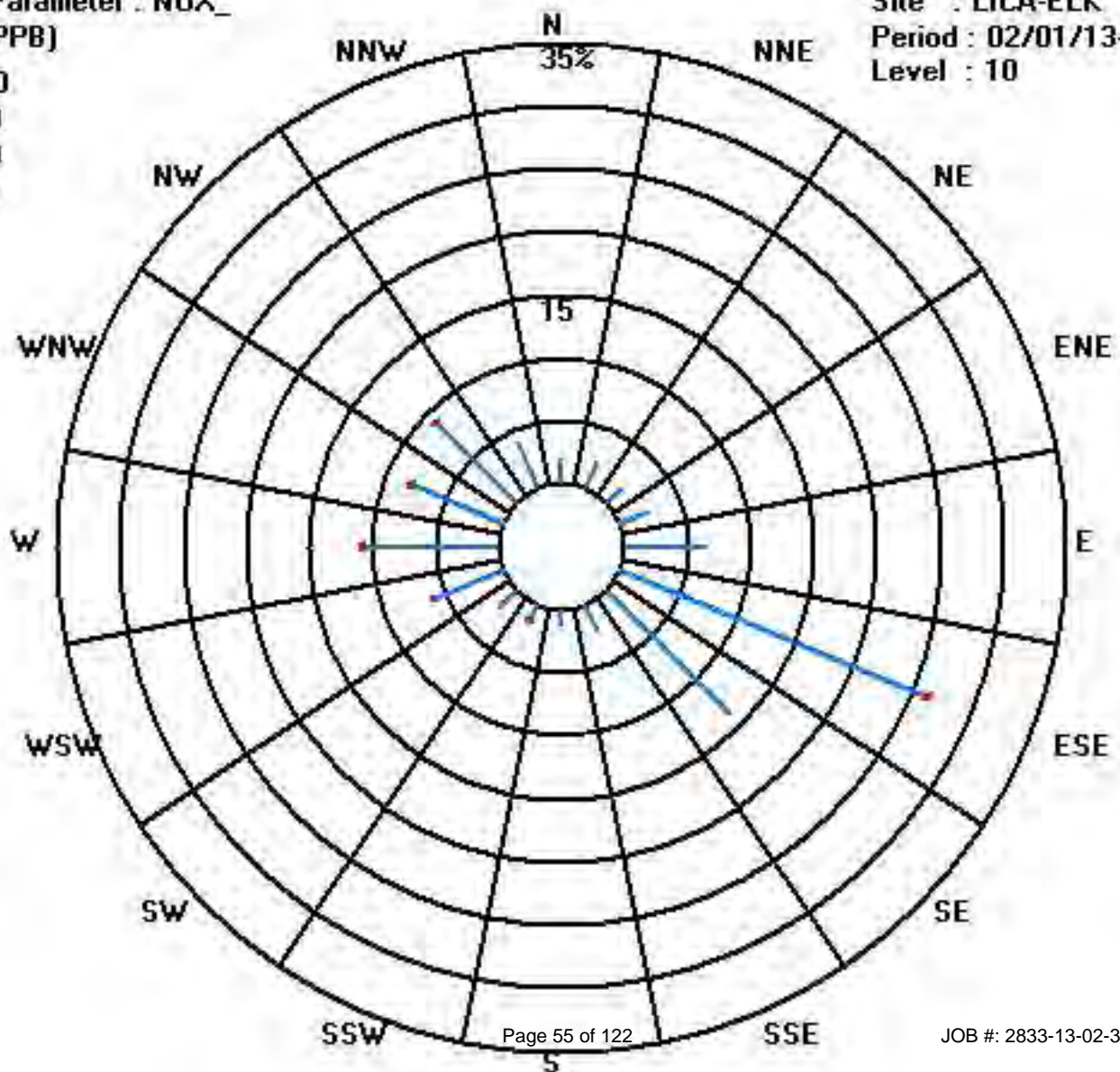
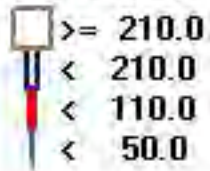
Calm : .00 %

Total # Operational Hours : 625

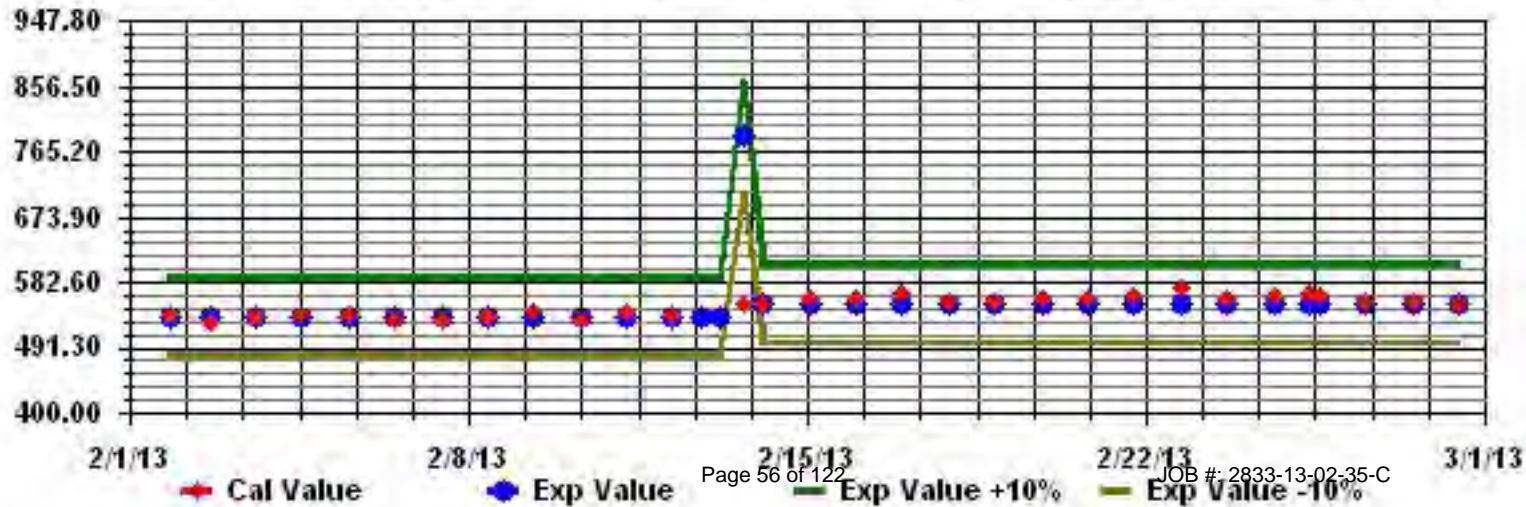
Class Limits (PPB)

Period : 02/01/13-02/28/13

Level : 10



Calibration Graph for Site: LICA35 Parameter: NOX_ Sequence: NO2 Phase: SPAll



Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

OZONE (O₃) hourly averages in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
DAY																												
1	11	10	5	7	9	13	10	18	17	17	19	19	20	19	P	P	P	14	12	11	S	6	10	26	26	13.7	21	
2	38	41	39	37	38	41	39	32	35	31	32	32	32	31	32	S	29	19	19	23	22	20	25	21	41	30.8	24	
3	20	29	30	29	30	33	31	32	33	33	32	32	33	34	S	33	31	31	30	30	28	27	29	28	34	30.3	24	
4	27	27	25	26	20	20	16	15	8	23	37	39	39	S	39	38	37	36	36	36	37	42	42	33	42	30.3	24	
5	37	39	36	32	30	29	26	23	19	20	30	29	S	33	34	30	29	27	11	9	12	16	26	34	39	26.6	24	
6	33	30	29	28	29	29	30	30	30	29	30	S	35	35	35	34	35	33	32	31	31	29	26	27	35	30.9	24	
7	27	26	26	29	28	26	25	25	30	33	S	33	33	31	30	31	31	27	28	29	29	28	28	28	33	28.7	24	
8	28	28	27	27	23	21	16	7	5	S	22	19	22	25	24	25	P	26	29	27	15	14	4	2	29	19.8	23	
9	4	7	9	9	6	13	18	25	S	36	38	39	39	38	40	P	41	41	39	38	38	38	37	38	41	28.7	23	
10	39	40	40	39	38	35	36	S	34	36	37	36	37	38	39	38	36	34	37	34	34	36	36	35	40	36.7	24	
11	32	28	28	31	29	21	S	13	27	34	38	39	42	41	42	36	39	36	36	38	31	36	35	41	42	33.6	24	
12	39	39	39	37	35	S	35	36	37	40	41	39	43	40	41	33	39	26	28	S	41	38	42	43	43	37.8	24	
13	41	35	36	35	S	31	30	32	35	P	C	C	C	C	C	41	S	38	32	33	38	39	39	37	41	35.8	22	
14	37	34	S	24	30	30	34	30	28	29	32	34	34	37	35	28	30	18	2	7	17	10	11	4	37	25.0	24	
15	2	S	1	1	1	3	7	9	12	17	19	22	25	28	31	29	26	20	30	31	31	22	19	32	32	18.2	24	
16	S	19	32	27	24	26	27	23	26	29	34	38	39	40	43	43	36	27	30	30	38	35	35	S	43	31.9	24	
17	38	41	40	39	37	34	34	35	38	38	38	39	41	37	38	38	38	36	34	35	35	36	S	37	41	37.2	24	
18	36	36	37	37	35	35	36	37	36	35	36	36	37	37	37	37	37	36	36	35	33	S	34	33	37	35.8	24	
19	33	33	35	36	37	36	35	36	36	36	37	39	41	42	41	41	41	40	38	38	39	S	39	38	37	42	37.7	24
20	38	38	39	38	37	35	34	33	36	36	36	36	37	37	36	36	35	34	33	S	31	32	32	32	39	35.3	24	
21	31	35	42	41	41	38	35	33	35	36	35	35	34	34	33	34	33	31	S	33	34	34	34	32	42	34.9	24	
22	33	33	34	36	35	35	36	36	36	36	36	37	37	38	38	37	34	S	32	32	33	33	31	31	38	34.7	24	
23	32	32	29	17	9	7	3	13	18	28	32	32	33	34	34	35	S	31	26	23	26	21	26	25	35	24.6	24	
24	28	25	30	22	24	16	8	5	15	20	25	29	32	34	36	S	41	37	33	30	24	19	21	22	41	25.0	24	
25	27	13	9	4	4	1	1	8	33	35	37	38	40	41	S	43	43	44	43	43	41	38	39	40	44	28.9	24	
26	39	39	38	37	36	32	28	13	31	31	29	36	37	S	40	39	37	34	26	31	33	30	30	26	40	32.7	24	
27	27	24	25	22	31	33	32	39	39	39	40	41	S	42	40	42	40	39	39	42	41	39	39	37	42	36.2	24	
28	37	35	33	32	39	43	42	41	41	42	42	S	41	41	42	43	41	35	25	25	26	30	29	34	43	36.5	24	
HOURLY MAX	41	41	42	41	41	43	42	41	41	42	42	41	43	42	43	43	43	43	44	43	43	41	42	42	43			
HOURLY AVG	30.1	30.2	29.4	27.8	27.2	26.5	26.1	25.1	28.5	31.5	33.3	34.0	35.4	35.4	36.7	36.0	35.8	31.4	29.5	29.8	30.7	29.1	29.5	30.2				

STATUS FLAG CODES

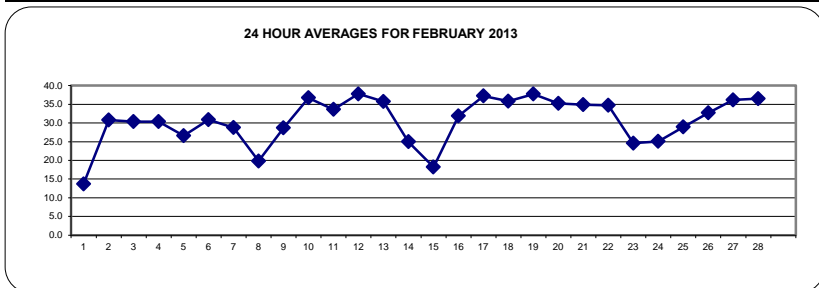
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

OBJECTIVE LIMIT:

ALBERTA ENVIRONMENT: 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	630					
MAXIMUM 1-HR AVERAGE:	44	PPB	@ HOUR(S)	17	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:	37.8	PPB			ON DAY(S)	12
					VAR-VARIOUS	
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	665	HRS	
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	99.0	%	
STANDARD DEVIATION:	9.39		MONTHLY AVERAGE:	30.68	PPB	



01 Hour Averages



— LICA35_03_PPb

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

OZONE MAX instantaneous maximum in ppb

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	DAILY	24-HOUR		
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.		
DAY																													
1	17	14	8	11	15	16	15	21	18	19	20	20	21	20	P	P	P	17	15	S	S	11	17	35	35	17.4	21		
2	39	42	42	38	40	42	42	38	36	34	34	33	33	33	S	S	34	29	24	27	27	26	27	24	42	33.8	24		
3	24	31	32	30	33	34	34	33	34	34	34	33	34	35	S	S	35	33	32	32	31	31	29	30	29	35	32.0	24	
4	28	29	27	27	25	21	20	19	15	35	39	40	41	S	41	40	39	37	37	36	40	42	42	42	42	42	33.1	24	
5	40	40	39	37	39	36	32	33	23	29	34	32	S	35	36	34	34	33	26	20	25	22	33	35	40	32.5	24		
6	34	31	30	29	30	30	31	31	31	30	33	S	35	36	36	36	36	35	33	33	32	31	30	29	36	32.3	24		
7	29	28	28	32	32	28	28	30	34	35	S	34	34	33	32	33	33	32	30	31	30	31	30	30	30	35	31.2	24	
8	30	28	28	28	25	24	22	15	8	S	24	22	24	26	26	32	P	X	33	31	22	21	10	4	33	23.0	22		
9	8	9	13	13	11	25	26	30	S	39	40	40	40	39	42	P	43	42	41	39	39	39	39	39	39	43	31.6	23	
10	40	41	42	40	39	38	37	S	37	38	38	37	38	40	41	39	39	37	39	39	38	38	38	38	42	38.7	24		
11	36	32	31	35	33	31	S	25	32	38	41	42	44	43	44	45	43	41	39	39	39	41	45	45	45	38.4	24		
12	44	41	41	39	37	S	41	38	41	42	43	P	44	43	43	42	41	39	X	X	43	42	S	44	44	41.5	21		
13	43	38	38	37	S	37	38	37	38	P	P	X	X	X	X	X	X	X	X	X	X	X	X	X	39	39	43	38.4	11
14	38	37	S	30	36	35	37	36	33	35	36	36	36	41	40	38	39	24	9	22	25	18	16	9	41	30.7	24		
15	11	S	1	1	1	7	12	13	16	21	21	24	26	31	33	32	39	35	35	35	34	30	27	38	39	22.7	24		
16	S	33	37	33	31	32	30	30	29	33	37	40	41	46	46	45	43	36	41	41	41	41	42	S	46	37.6	23		
17	43	42	40	39	38	35	34	38	39	39	39	41	42	38	39	39	38	37	35	36	36	37	S	37	43	38.3	24		
18	36	37	38	37	37	36	37	38	37	37	38	38	37	38	38	39	38	38	37	36	35	S	35	34	39	37.0	24		
19	34	34	35	37	37	38	37	37	38	39	41	42	42	42	42	42	41	40	40	40	S	40	39	39	42	39.0	24		
20	39	39	40	39	39	36	36	37	38	38	38	38	38	38	38	38	37	36	36	S	33	34	33	34	40	37.0	24		
21	34	40	44	42	42	41	37	36	37	36	37	36	36	35	35	35	35	35	S	35	36	35	36	34	44	36.9	24		
22	34	35	36	37	36	38	38	38	38	37	38	38	38	39	39	39	36	S	35	34	35	35	33	33	39	36.5	24		
23	33	33	31	27	15	13	11	24	26	35	36	35	35	36	37	39	S	38	36	35	33	28	28	28	39	30.1	24		
24	32	29	32	32	30	22	15	9	19	23	29	31	34	36	39	S	43	42	39	39	33	32	28	32	43	30.4	24		
25	32	30	18	18	13	3	5	22	36	36	38	39	41	42	S	44	44	44	44	44	43	40	41	41	44	33.0	24		
26	40	40	39	39	38	36	36	25	34	33	35	38	41	S	42	41	41	39	38	35	37	34	34	30	42	36.7	24		
27	29	26	28	26	36	36	39	40	40	40	41	42	S	44	41	44	43	42	44	44	44	40	40	39	44	38.6	24		
28	39	36	36	36	43	44	44	44	43	43	43	S	42	42	45	45	42	42	37	36	29	34	35	36	45	39.8	24		
HOURLY MAX	44	42	44	42	43	44	44	44	43	43	43	42	44	46	46	45	44	44	44	44	44	42	45	45					
HOURLY AVG	32.8	33.1	31.6	31.0	30.8	30.1	30.1	30.3	31.4	34.6	35.6	35.5	36.7	37.2	38.7	39.0	38.9	36.1	34.2	34.9	34.4	32.7	32.6	33.2					

STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	619					
MAXIMUM INSTANTANEOUS VALUE:	46	PPB	@ HOUR(S)	13, 14	ON DAY(S)	16
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	649	HRS	
MONTHLY CALIBRATION TIME:	0	HRS				
STANDARD DEVIATION:	8.27					

01 Hour Averages



— LICA35 O3MAX PPB

LICA-ELK
 O3_ / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 35
 Site Name : LICA-ELK
 Parameter : O3_
 Units : PPB

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50	1.90	2.53	1.74	2.38	6.34	26.34	13.80	2.22	1.26	1.42	1.90	6.03	11.42	8.25	8.73	3.65	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.90	2.53	1.74	2.38	6.34	26.34	13.80	2.22	1.26	1.42	1.90	6.03	11.42	8.25	8.73	3.65	

Calm : .00 %

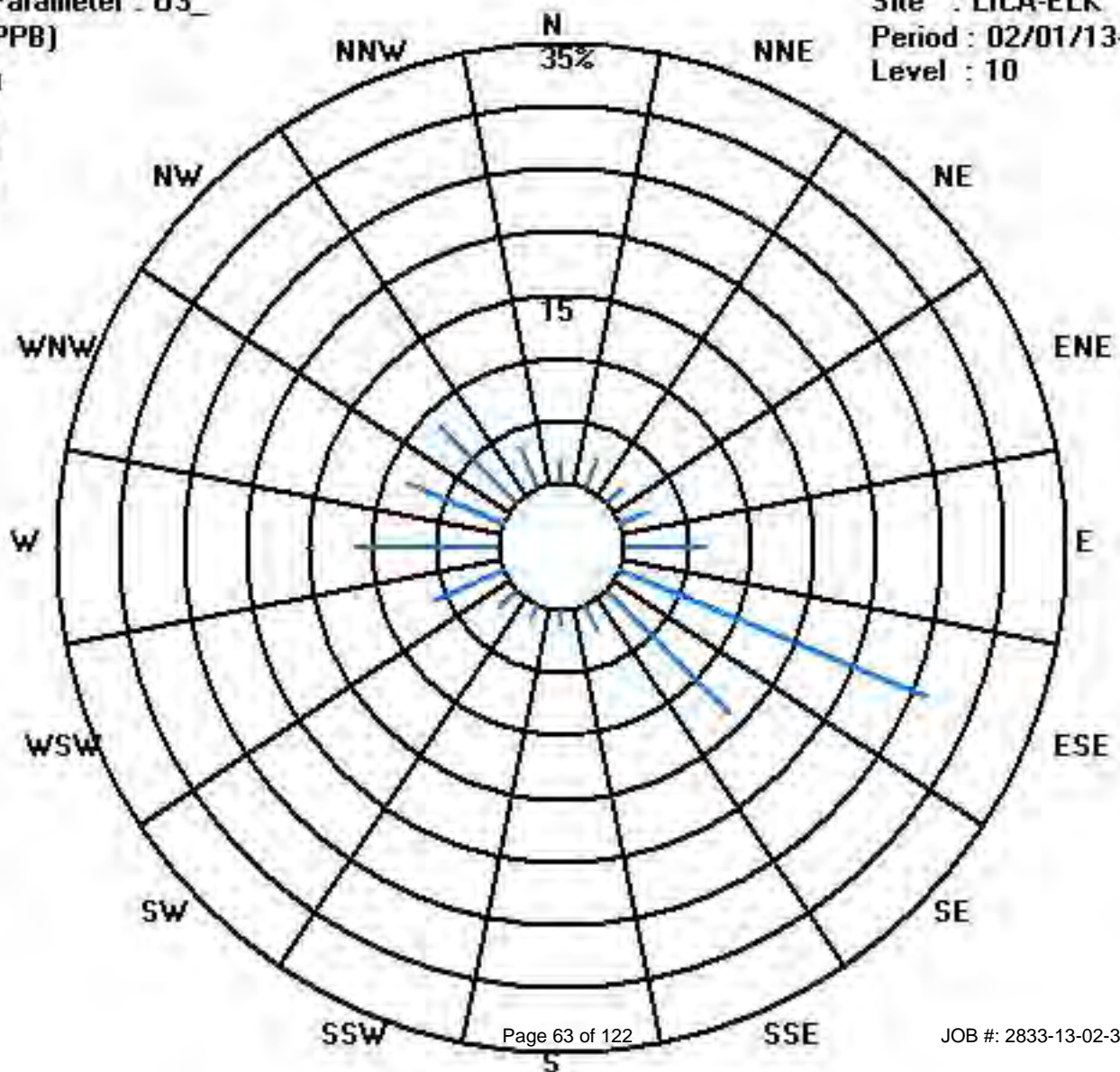
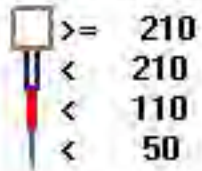
Total # Operational Hours : 630

Distribution By Samples

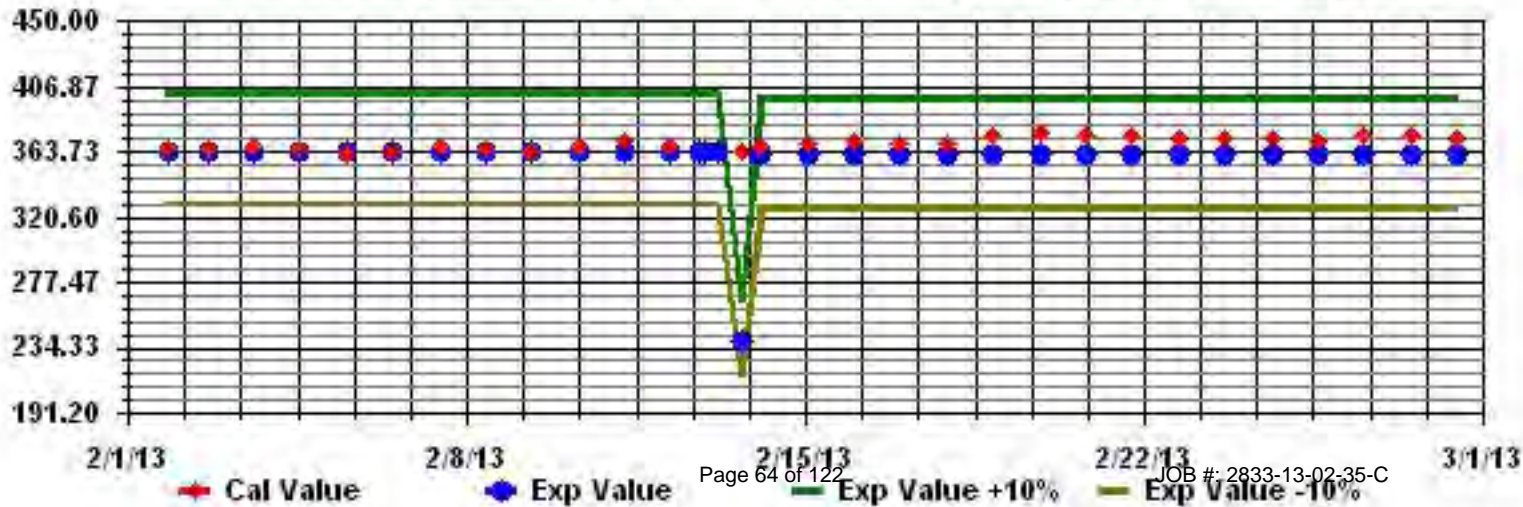
Limit	Direction															Freq	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW		NNW
< 50	12	16	11	15	40	166	87	14	8	9	12	38	72	52	55	23	630
< 110																	
< 210																	
>= 210																	
Totals	12	16	11	15	40	166	87	14	8	9	12	38	72	52	55	23	

Calm : .00 %

Total # Operational Hours : 630



Calibration Graph for Site: LICA35 Parameter: O3_ Sequence: 03 Phase: SPAll



Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR		
DAY	DAY	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.	
1	1	4.9	4.8	6.4	5.5	5	4.3	4.9	3	2.9	3.1	S	4.4	3.7	4	P	P	P	X	X	X	X	X	X	X	6.4	4.4	14	
2	2	X	X	X	X	X	X	X	X	X	X	X	X	S	S	S	2.5	3.2	3.2	3.5	3.7	4.6	3.3	4.5	4.6	3.6	11		
3	3	4.6	3	2.8	3.2	2.8	2.5	2.5	2.8	2.7	2.7	2.6	2.7	2.5	2.7	S	2.9	3	3.3	3.3	3.4	3.7	3.8	3.3	3.5	4.6	3.1	24	
4	4	3.9	3.9	4.4	4.2	5.6	5.3	5.3	5.9	7.5	5.1	2.1	2.1	2.1	S	2	2.1	2	2.1	2.1	2.1	2.1	2.1	2.1	2.3	7.5	3.4	24	
5	5	2.6	2.3	2.6	2.8	3.6	3.7	4.2	3.7	4.3	5.7	5.4	6.3	S	3.2	3	3.3	2.4	2.5	4.3	7.4	6.3	4.8	3.7	1.9	7.4	3.9	24	
6	6	2.3	2.6	1.9	2.1	1.9	1.7	1.5	X	1.6	1.9	2	S	2.8	2.8	3.1	2.8	2.9	3.1	3.2	3.1	3.2	3.5	3.5	4.4	4.4	2.6	23	
7	7	4.3	3.8	3.7	3.9	3.9	3.9	4	3.9	4.2	3.7	S	2.6	2.8	3.1	3.4	3.2	3.3	3.7	3.7	3.5	3.6	3.7	3.3	3.3	4.3	3.6	24	
8	8	3.6	3.5	3.3	3.4	4	5.3	5.7	8.5	7.2	S	4.8	4.9	4.1	3.6	4	4.1	P	2	2.8	2.7	4.1	4.8	10.1	11.9	11.9	4.9	23	
9	9	10.5	8.6	7.6	6.3	7.6	5.3	4.1	2.8	S	2.1	2	1.9	1.9	1.9	1.9	P	X	X	X	X	X	X	X	X	10.5	4.6	15	
10	10	X	X	X	X	X	X	X	X	S	S	2.5	2.9	2.8	2.4	2.8	3.5	3.6	3.7	3.2	3.8	3.2	3	3.2	3.8	3.1	15		
11	11	4.2	3.6	6.2	3.6	3.5	5.1	S	5.7	3.2	2.6	2.4	2.4	2.2	2.2	2.3	2.5	2.3	2.4	2.5	2.6	2.9	2.5	2.6	2.3	6.2	3.1	24	
12	12	2.3	2.3	2.4	2.2	2.4	S	2.4	2.4	2.2	2.1	2.2	C	C	C	C	C	C	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	15	
13	13																												11
14	14	2.4	2.6	S	2.6	1.9	1.8	1.6	1.7	2	3.2	3.1	2.4	2.9	2	2	2.6	2.5	2.4	4	4.6	3.7	5.8	5.5	11.2	11.2	3.2	24	
15	15	9.8	S	8.7	9.3	6.6	8.3	6.9	6.2	7.2	7.1	6.9	6.3	5.8	5.1	4.6	4.5	4	3.9	2.7	3	2.6	3.8	6.2	3.3	9.8	5.8	24	
16	16	S	5.3	2.6	4.6	4.1	3.5	3.6	3.9	2.6	2.5	2.2	2	1.9	2.1	1.7	2	2.3	2.9	2.3	4.4	2.7	2.4	2	S	5.3	2.9	24	
17	17	2	1.9	1.9	1.9	1.9	2	2	2	2	2.1	2	2	2.1	2.2	2.1	2.1	2.1	2.2	2.3	2.2	2.3	2.3	S	2.1	2.3	2.1	24	
18	18	2.1	2.2	2.1	2.2	2.3	2.4	2.3	2.3	2.3	2.7	2.6	2.3	2.2	2.5	2.6	3	3	2.7	2.6	2.7	2.9	S	2.2	2.1	3.0	2.4	24	
19	19	2.2	2.2	2.3	2.4	2.1	2.2	2.1	2	2	2.1	1.9	1.8	1.9	1.9	2	2	1.9	1.8	1.8	1.9	S	2.5	2.9	3.1	3.1	2.1	24	
20	20	2.7	2.9	2.6	2.8	3	2.9	3	3.1	3	3.1	3.4	3.6	3.4	3.5	3.8	3.8	4.1	3.6	3.3	S	2.9	3.5	3.6	3.7	4.1	3.3	24	
21	21	3.6	2.7	1.9	1.9	2	2.4	2.6	2.9	2.9	2.8	2.7	2.8	3.3	3.4	3	2.7	2.6	3	S	2.7	2.9	3.1	2.8	3	3.6	2.8	24	
22	22	3.1	3.5	2.8	2.7	2.8	2.8	2.6	2.6	2.8	3	2.7	3.2	2.9	2.7	2.9	3	2.9	S	2.6	2.6	2.5	2.4	2.4	3.2	3.5	2.8	24	
23	23	2.5	2.4	2.9	4.4	6.2	7.8	7.4	5.2	5.7	3.6	2.4	2.7	2.7	2.6	2.5	2.6	S	3.4	3.7	3.3	2.1	2.2	2.1	2.4	7.8	3.6	24	
24	24	2.4	2.8	2.3	2.8	2.6	3.6	7.1	7.2	6.3	5.8	4.9	4.1	3.8	4	5.5	S	1.9	2.8	4.9	4	7.7	5.8	14.2	7.2	14.2	4.9	24	
25	25	4.8	7	7.1	10.7	8.7	15	11.1	7.4	S	2.7	2.5	2.3	2	2	S	2.1	2.1	2	2	2.1	2.2	2.4	2.6	2.4	15.0	4.7	24	
26	26	2.5	2.5	2.5	2.6	2.6	2.6	3	5.7	3.5	4.1	5.1	3.1	3.5	S	2.4	2.9	3.4	3.6	7.2	3.8	5.3	5	5.5	6.4	7.2	3.9	24	
27	27	5.2	5.7	5.6	5.3	4.4	3.7	3.8	2.4	2.8	3.1	2.9	2.8	S	2.6	2.5	2.3	2.3	2.2	2.3	2.1	2.6	2.4	2.4	3.4	5.7	3.3	24	
28	28	3	3.4	3.6	4.1	3	2.3	2.4	2.5	2.4	2.3	2.5	S	2.9	3	3	4.4	3	5.4	7.9	4.8	4.3	4.4	4.3	3.6	7.9	3.6	24	
HOURLY MAX		10.5	8.6	8.7	10.7	8.7	15.0	11.1	8.5	7.5	7.1	6.9	6.3	5.8	5.1	5.5	4.5	4.1	5.4	7.9	7.4	7.7	5.8	14.2	11.9				
HOURLY AVG		3.8	3.6	3.8	3.9	3.8	4.2	4.0	4.0	3.6	3.3	3.1	3.1	2.9	2.9	2.9	2.9	2.7	2.9	3.4	3.3	3.4	3.5	4.0	4.0				

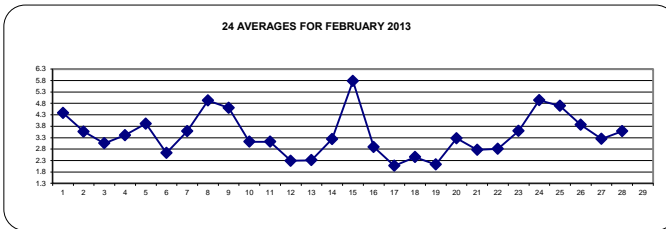
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

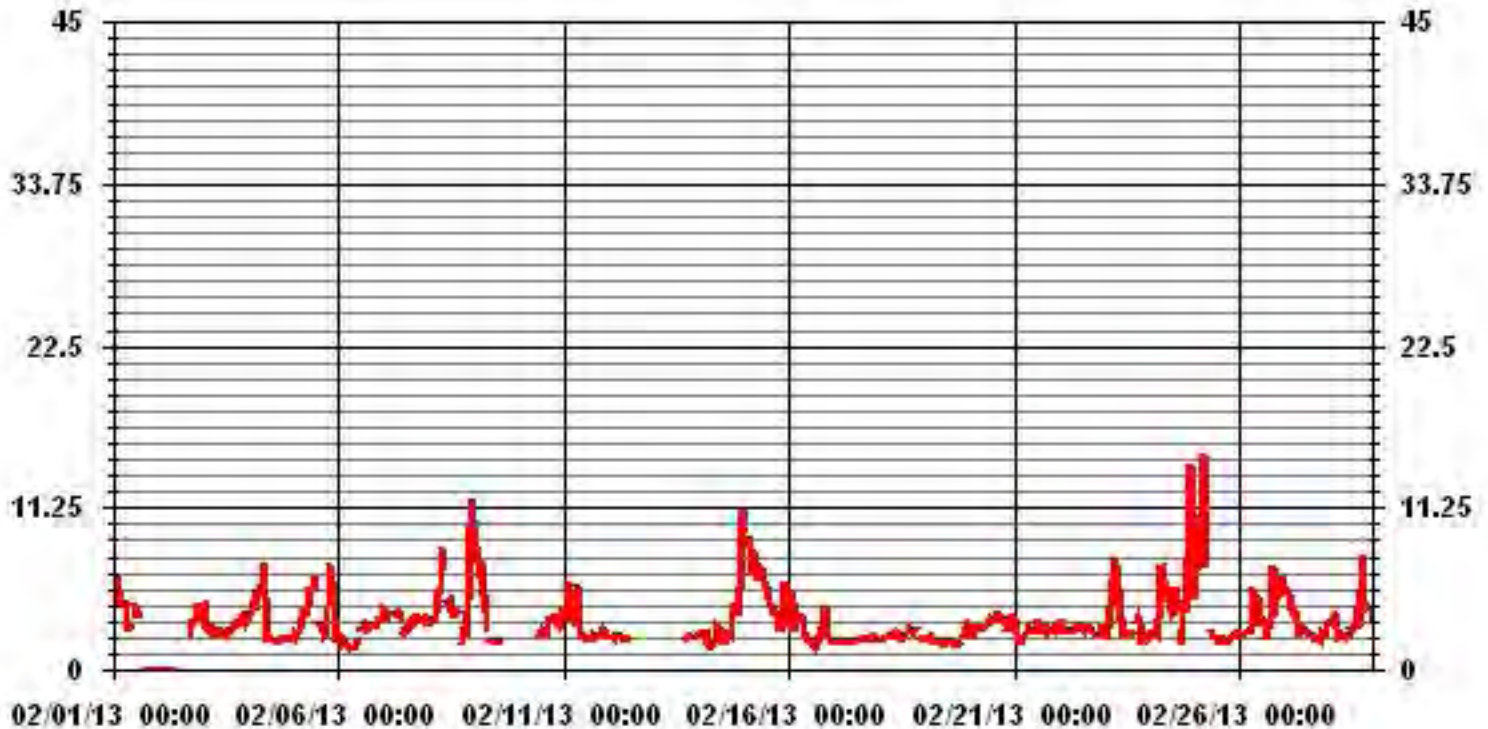
MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	567		
MAXIMUM 1-HR AVERAGE:	15.0 PPM	@ HOUR(S)	5 ON DAY(S)
MAXIMUM 24-HR AVERAGE:	5.8 PPM		ON DAY(S)
IZS CALIBRATION TIME:	0 HRS	OPERATIONAL TIME:	607 HRS
MONTHLY CALIBRATION TIME:	8 HRS	AMD OPERATION UPTIME:	90.3 %
STANDARD DEVIATION:	1.77	MONTHLY AVERAGE:	3.46 PPM

24 AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST																					DAILY	24-HOUR					
HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	MAX.	AVG.	RDGS.
HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00				
DAY																											
1	5.3	5.9	6.6	6.6	5.5	6.1	6	4.3	3.1	S	S	5	4.4	4.3	P	P	P	X	X	X	X	X	X	X	6.6	5.3	14
2	X	X	X	X	X	X	X	X	X	X	X	X	X	S	S	S	3.4	3.5	3.5	4.2	5.1	5.6	4	5	5.6	4.3	11
3	5.2	4.3	3.4	3.8	4.2	2.7	4.6	4.1	3.3	3.2	2.8	2.8	2.7	3.7	S	4.2	3.9	4.3	5.3	4.7	4.8	5.1	3.6	4.2	5.3	4.0	24
4	5.2	4.3	5.2	4.4	6.6	5.7	5.5	6.8	8.6	7.3	2.8	2.6	2.6	S	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.1	2.1	2.8	8.6	3.9	24
5	3	2.4	3.2	4.3	4.2	4.6	4.9	4.9	5.4	6.6	20.1	10.1	S	3.8	3.4	6.1	2.8	3.1	9.9	18	37.4	6.3	4.9	2.8	37.4	7.5	24
6	3	3.5	2.4	2.2	2.1	2	1.9	1.6	1.8	2.1	2.2	S	3.3	3.8	4.9	3.8	4.3	5	4.8	4.3	5.8	4.9	4.3	13.3	13.3	3.8	24
7	10.8	4.1	4	5.1	4.5	4.5	4.2	4.4	6.1	5.8	S	3.5	4.3	3.3	4.1	3.6	5.8	4.8	4	4.6	4.4	5.3	3.6	4.4	10.8	4.7	24
8	4.4	4.5	3.5	3.8	4.7	16.8	8.6	42.6	8.1	S	4.9	5.2	5.1	3.7	5.3	5.1	P	9.9	3.2	3.3	5.4	6.1	16.8	22.3	42.6	8.8	23
9	15.5	10.9	10.7	7.5	8.7	7.9	5	3.7	S	2.4	2.1	2	2	2.1	2	P	X	X	X	X	X	X	X	X	15.5	5.9	15
10	X	X	X	X	X	X	X	X	X	S	S	2.7	3.8	7.6	3.1	4.2	5.1	4.2	19.8	4.4	6.3	4.6	5	9.2	19.8	6.2	15
11	14.4	6.5	18.4	4.6	3.9	19.1	S	6.7	4.9	2.7	2.5	3.2	2.6	2.5	2.5	4.7	2.5	2.8	2.7	2.9	3.1	3	3.1	3.1	19.1	5.3	24
12	2.7	2.5	2.7	2.3	2.5	S	2.7	3.5	2.3	2.2	3.2	P	C	C	C	C	C	2.4	2.4	2.4	2.4	2.5	2.5	2.5	3.5	2.7	14
13														C	C	C	C	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.4	11
14	2.6	3.2	S	3.5	2.7	2.1	1.7	1.8	2.4	5	3.6	3.1	5.3	2.9	2.4	5.3	3.6	2.7	5.6	5.6	8.2	7.2	7.5	28.4	28.4	5.1	24
15	25.2	S	13.9	11.5	11.3	10.2	7.6	6.5	9.4	8	7.1	7	5.9	5.6	4.8	4.6	6.1	5.4	4	6	3.2	5.4	10.1	4.7	25.2	8.0	24
16	S	10.2	3.8	6.4	6.6	7.6	6.6	8	4.3	3.5	2.8	2.2	2	2.5	2	2.5	3.3	4	2.6	6.5	3.4	3.2	2.8	S	10.2	4.4	24
17	2.4	1.9	1.9	1.9	2	2	2.1	2.1	2.1	2.2	2	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.5	2.3	2.4	2.4	S	2.2	2.5	2.2	24
18	2.2	2.3	2.2	2.3	2.6	2.5	2.5	2.4	2.5	3.3	3.8	2.8	2.5	3.2	4	4.7	4.4	3.5	3.3	4	4.4	S	3.1	2.6	4.7	3.1	24
19	2.6	2.4	2.5	2.7	2.3	2.5	2.6	2.2	2.3	2.5	2.1	2.1	2.5	2.9	3.5	3.1	2.8	2	1.9	2.1	S	3.8	4.5	4.6	4.6	2.7	24
20	3.3	3.6	3.4	3.5	3.3	3.1	3.6	4	3.6	3.4	4.3	4.2	4	4.6	4.9	4.8	4.8	4.3	3.9	S	3.1	4.9	4.6	5.2	5.2	4.0	24
21	4.9	4.3	2.8	2	2.2	3.3	2.9	3.3	3.4	3.5	3.1	3	3.9	4.3	3.3	3.5	3.1	3.9	S	3.3	4.2	4.9	3.7	4.4	4.9	3.5	24
22	6.1	6	3.7	3.4	3.5	4.2	3.8	3.6	3.8	4.4	2.9	5.7	4	4	3.1	3.1	3	S	2.7	2.7	2.7	2.5	2.5	6.3	6.3	3.8	24
23	5.2	2.5	5.2	6.8	10.1	11.7	11.2	7.4	7.4	4.8	2.7	3.5	3.1	2.8	3.1	3.1	S	4.8	5.7	4.5	2.4	2.5	2.7	3.2	11.7	5.1	24
24	3.4	3.2	2.8	3.8	3.4	5.5	13.1	10.4	8.3	6.1	5.7	4.8	4.4	6.4	10.5	S	3.2	8.8	15	6.4	21.8	12.4	31	13.3	31	8.9	24
25	7.3	11.1	12	14.6	10.7	20.7	14.8	12.2	S	S	3.2	3.3	2.1	2	S	2.2	2.1	2.1	2.1	2.2	2.4	2.7	3.3	2.6	20.7	6.5	24
26	2.6	2.5	3.6	2.9	2.9	2.8	4.7	6.9	4.2	5.1	13.2	5.4	7	S	4.8	7.5	6	5.6	20.5	6.9	15.1	11.8	17.6	32.1	32.1	8.3	24
27	5.8	6.1	6.4	6.3	5.7	4.4	5.7	3	7.5	5.3	5.7	5.5	S	4.1	5.6	3.7	2.4	2.4	2.5	2.3	4.7	2.6	2.6	7.7	7.7	4.7	24
28	5.2	5.1	5.7	5.7	5.4	3.3	3.3	6.5	3.6	4	5	S	4.3	4.3	5.1	8.8	3.7	18.5	21.2	15	5.6	6.2	6.3	4	21.2	6.8	24
HOURLY MAX	25.2	11.1	18.4	14.6	11.3	20.7	14.8	42.6	9.4	8.0	20.1	10.1	7.0	7.6	10.5	8.8	6.1	18.5	21.2	18.0	37.4	12.4	31.0	32.1			
HOURLY AVG	6.2	4.7	5.4	4.9	4.9	6.5	5.4	6.5	4.7	4.2	4.7	4.0	3.6	3.8	3.9	4.2	3.7	4.7	6.3	5.0	6.7	4.9	6.3	8.0			

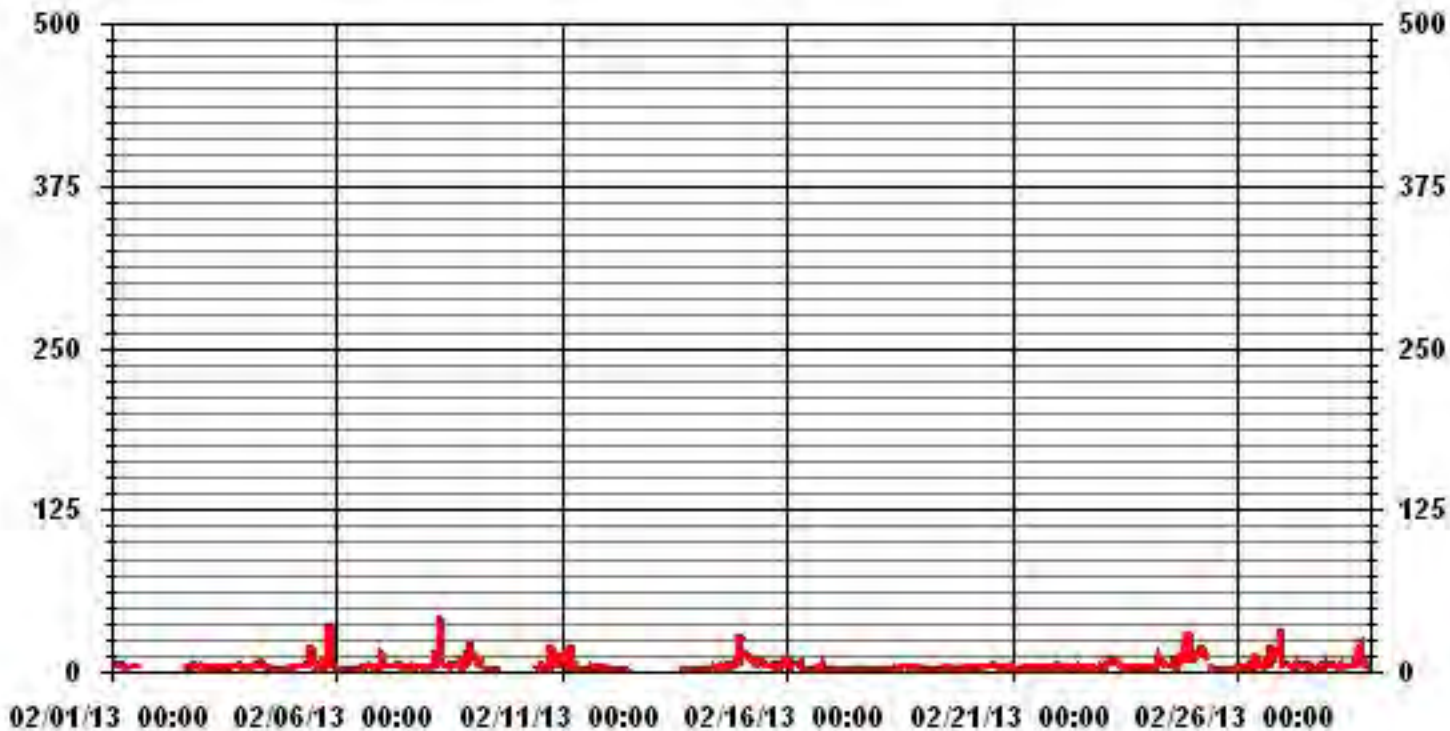
STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	566					
MAXIMUM INSTANTANEOUS VALUE:	42.6	PPB	@ HOUR(S)	7	ON DAY(S)	8
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	607	HRS	
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	4.49					

01 Hour Averages



— LICA35 THCMAX PPM

LICA-ELK
 THC / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 35
 Site Name : LICA-ELK
 Parameter : THC
 Units : PPM

Wind Parameter : WDR
 Instrument Height : 10 Meters

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 3.0	1.37	2.57	1.03	1.54	1.71	13.91	5.49	1.37	.51	.34	.51	2.92	7.38	4.81	5.84	2.23	53.60
< 10.0	.34	.00	.85	1.03	4.63	14.26	9.10	1.03	.85	1.03	.85	2.92	3.43	2.06	2.23	.34	45.01
< 50.0	.00	.00	.00	.00	.34	.17	.17	.00	.00	.17	.00	.00	.00	.34	.17	.00	1.37
>= 50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	1.71	2.57	1.89	2.57	6.70	28.35	14.77	2.40	1.37	1.54	1.37	5.84	10.82	7.21	8.24	2.57	

Calm : .00 %

Total # Operational Hours : 582

Distribution By Samples

Limit	Direction																Freq
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
< 3.0	8	15	6	9	10	81	32	8	3	2	3	17	43	28	34	13	312
< 10.0	2		5	6	27	83	53	6	5	6	5	17	20	12	13	2	262
< 50.0					2	1	1			1				2	1		8
>= 50.0																	
Totals	10	15	11	15	39	165	86	14	8	9	8	34	63	42	48	15	

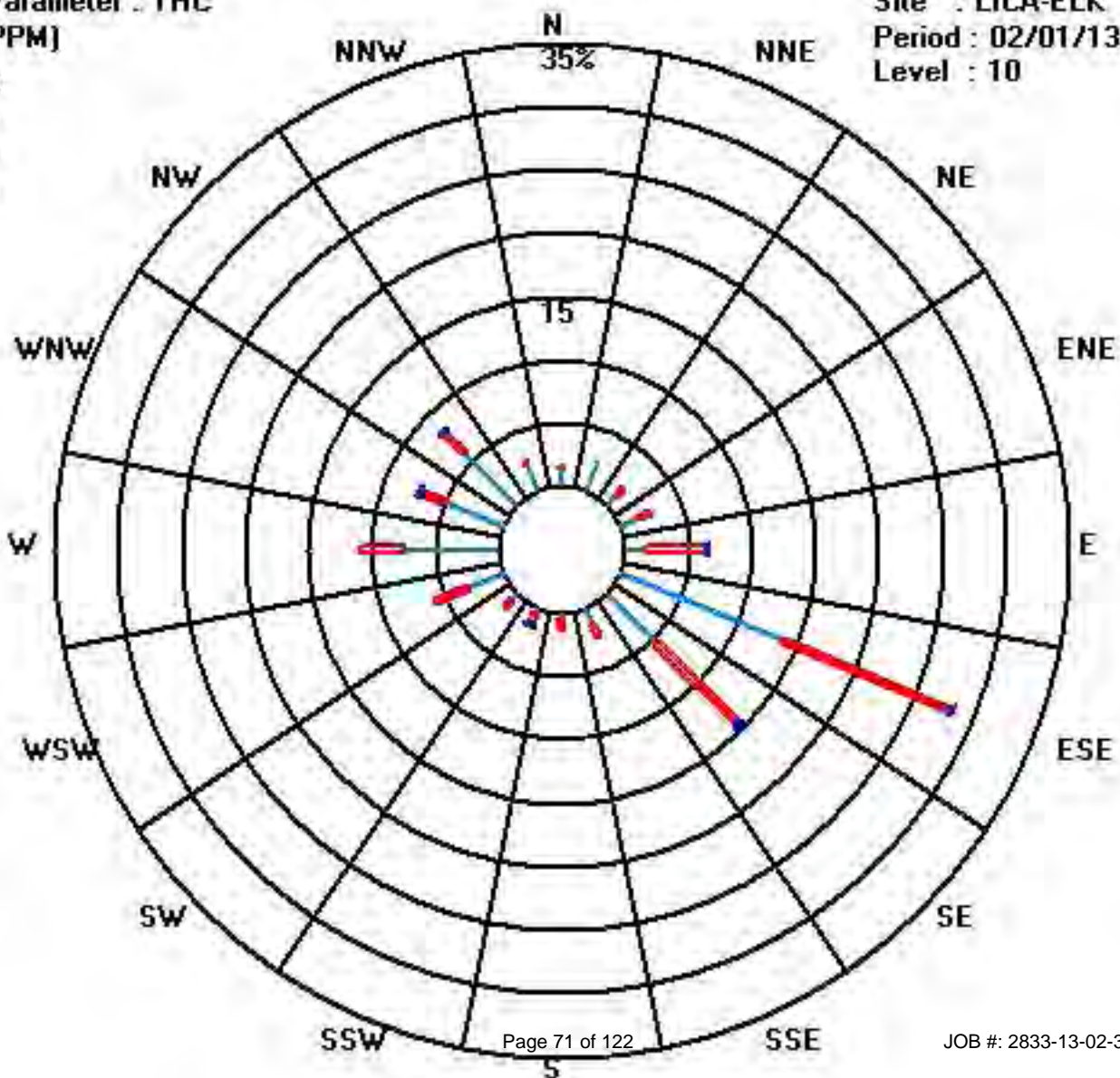
Calm : .00 %

Total # Operational Hours : 582

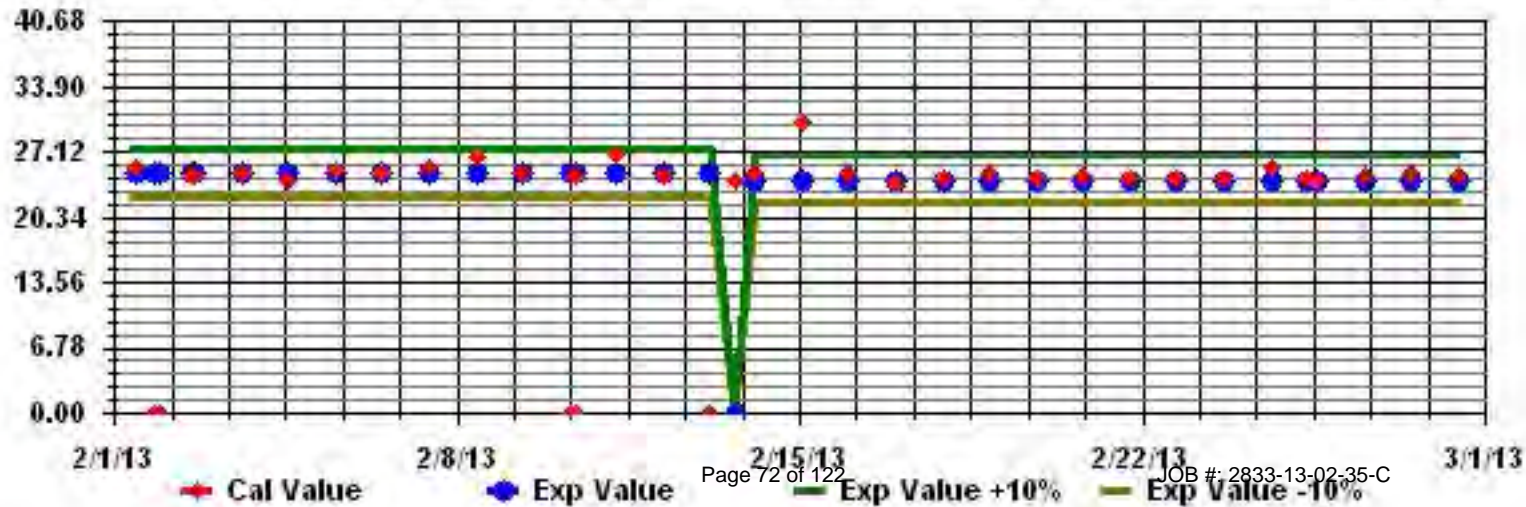
Class Limits (PPM)

Period : 02/01/13-02/28/13

Level : 10



Calibration Graph for Site: LICA35 Parameter: THC Sequence: THC Phase: SPAN



Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

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

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	AVG.	RDGS.
DAY																											
1	0.5	1.3	1.5	1.1	1.4	0.8	0.9	2.9	2.2	0.5	1.3	3.3	6.4	8.3	P	P	P	6.5	6.1	4.4	1.6	0.6	5.5	21.1	21.1	0.2	21
2	33.5	40.1	38.7	29.5	20	22.6	15	15.9	5.8	10	8.9	8.1	10.8	9	8.2	6.6	5.1	3.4	2.8	3.2	0.9	6.5	9.1	11.8	40.1	10.6	24
3	16.2	19.4	18.9	19.3	19.1	17.1	13.1	15.7	15.6	15.6	10.1	6.3	10.1	8.1	8.1	9.1	6.4	9.8	10.7	10.3	11.2	10.3	9.8	9.1	19.4	12.3	24
4	9.7	7.7	3.6	4.1	3	1.1	0.2	4.7	3.9	6	25.5	27.9	31.1	28	33	34.3	29.5	19.5	14.7	13.1	13.5	19.5	17.8	15	34.3	12.6	24
5	10.6	12.8	9	9	9.3	8.2	5.9	5	7.7	7.1	3.1	2.1	1.2	5.3	9.9	10.3	9.8	6.7	6.1	5.3	4.6	6.8	7.3	10.5	12.8	7.2	24
6	8.1	7.8	10.1	11.5	11.7	10.1	13	10.8	11	12.9	15.4	18.4	20.8	17.2	15.9	15.8	19	16.7	13.1	14.3	13.1	10.1	9.2	8.5	20.8	13.1	24
7	10.1	9.5	9.3	8.5	7.6	5.8	5.4	6.8	7.2	8.8	9.5	10.5	11.7	10.8	10.6	11.6	11.5	10.9	10.9	9.6	6.3	6.7	6.5	6.9	11.7	8.9	24
8	5.9	4.7	5.6	2.8	1.9	4.5	0.9	1.1	1.1	3.2	5.8	7.4	7.5	6.1	6.4	6.3	P	9.5	10.6	5.2	3.1	4.2	2.3	3.7	10.6	4.8	23
9	5	0.1	1.9	0.9	1.4	4.8	8.3	8.8	19.3	23.4	28.3	28.7	24.2	25	20.8	P	23.8	22.1	27.5	32.4	32.2	26.6	22.1	24.3	32.4	17.9	23
10	24.8	23.4	17.7	17	18.5	15.4	15.2	12.8	9.3	7.1	2.3	4.9	5.9	9.5	9.3	9.1	9.2	7.5	10.6	9	7.8	8.7	7	9.6	24.8	11.3	24
11	11.1	9.1	6.7	5.3	1.9	1.5	2.1	6.3	11.6	14	15.7	17.7	21.6	16.8	9.5	15.2	11.3	10.9	14.5	13.8	5.2	2.6	13.5	22	22.0	10.8	24
12	11.4	12.1	12	11.1	9.7	10.3	9.1	11.7	12.4	19.1	15.8	16.7	17.2	16.5	16.3	19.5	4	1.5	5.5	6.6	15.1	13.9	9.6	9.7	19.5	12.0	24
13	9.9	13	13	7.3	3.7	4.3	15	23.5	21	P	P	11.3	21.2	27	26.4	17.2	16	15.9	20.1	21.2	21.5	15.9	12.7	12.1	27.0	15.9	22
14	7	4.4	9.1	8.1	12	10.5	12.3	10.1	6.8	7.5	3.6	2.8	3.9	13	17.5	12.7	8.2	7.1	4.8	5.3	9.6	9.7	3.1	0.4	17.5	7.9	24
15	1.7	0.3	1.1	1	2.8	3.2	5.2	3.2	2.4	5.3	4.9	3.1	0.4	2.2	2.4	1.4	2.6	0.2	3.8	8.3	7.2	8.6	8	10.6	10.6	3.7	24
16	5.3	1.9	4.1	0.7	0.5	1	2.2	0.8	3.2	4.9	10.6	11.8	11.3	17.7	18.8	15.4	8.3	6.9	9.7	7.6	6	8.7	13	15.8	18.8	7.8	24
17	13.2	14.9	15.9	18.4	16.2	16.9	19.7	18.9	17.4	15.6	13.6	16.4	19.4	14.9	17.5	18.2	17	11.9	11.9	13.2	12.3	12.6	11.6	9.3	19.7	15.3	24
18	8.7	11.4	5.9	6.8	5.1	11.4	9.2	11.1	14.5	13.8	17.7	19.8	20.7	21.5	21.5	27	25.1	25.2	25.5	23.1	20.4	22.1	22.7	21.1	27.0	17.1	24
19	20.6	21.5	27.8	26.8	27.1	26.4	24.9	25.5	21.4	20.3	28.1	30.6	29.6	28.3	30	27.3	22.1	19.5	19.6	21.8	19.2	18.2	16	12.2	30.6	23.5	24
20	14.8	15.2	14.5	13.8	12.7	10.8	9.4	11.2	13.1	12.5	12.4	11.8	12.6	13.7	13.6	13	13	13	11	11.1	13.3	15.7	14.9	15.7	12.9	24	
21	11.6	10.3	14.7	13.1	11.2	11.2	12.4	11.2	10.9	9.8	8.8	15	13.6	17.4	20.1	20.8	17.5	15.2	14.4	13.5	14	15.2	15	15.3	20.8	13.8	24
22	13.3	12.8	11.2	12.5	9.3	8.7	8.3	10.4	10.3	12.2	14.7	14.1	14.6	13.6	16	16.1	19.5	20.9	18.2	16.9	18	18.6	15.6	13.5	20.9	14.1	24
23	12.8	9.6	3.8	5.1	1.5	2.4	8.1	7.4	7.5	9.4	12.9	17.4	14.6	15.2	18.5	16.3	16.9	11.2	9.2	13.7	18.5	21.2	19.1	22.1	22.1	12.3	24
24	21	15.6	12.9	8.5	4.3	2.4	1.1	3.5	4.6	5.6	7.8	11.1	9.4	9.5	9.1	8.2	8.6	8.3	8.1	5.5	6.1	5.7	4.4	2.9	21.0	7.7	24
25	1.3	5	0.5	5.6	4.9	5.1	3.9	8.6	6.3	8	9.3	10.5	11.6	11.7	11.2	11.8	11.3	8	6.3	5	8.8	6.4	4.2	11.8	7.3	24	
26	4.9	5.1	3.8	4.7	7.2	6.6	5.8	6.7	7	2.3	6	7.8	6.4	8.6	6.6	9.2	7.3	4.4	6.5	6.7	11.3	7.3	9.1	9	11.3	6.7	24
27	8	6.7	6.2	6.7	5.8	6.2	8.1	13.8	16.6	18	18.3	20.2	21	21.7	19.9	16.2	17.2	15.8	12.1	11.5	12.8	13.5	12.6	12	21.7	13.4	24
28	11.6	9.3	8.6	7.5	7.3	7.2	7.5	8.2	6.3	8.7	12.6	14	8.2	7.5	12.2	11.2	9.3	8.7	10.1	11.2	11.3	10.3	12.3	15.2	15.2	9.8	24
HOURLY MAX	33.5	40.1	38.7	29.5	27.1	26.4	24.9	25.5	21.4	23.4	28.3	30.6	31.1	28.3	33.0	34.3	29.5	25.2	27.5	32.4	32.2	26.6	22.7	24.3			
HOURLY AVG	11.2	10.9	10.3	9.5	8.5	8.4	8.7	9.9	9.9	10.4	12.0	13.2	13.8	14.4	15.2	14.6	13.5	11.4	11.7	11.6	11.4	11.7	11.3	12.2			

STATUS FLAG CODES

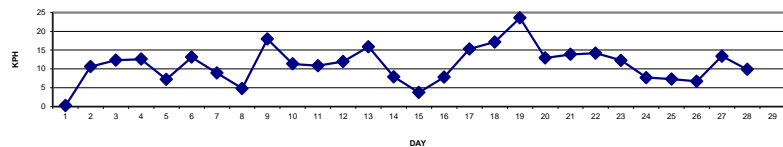
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

LAST CALIBRATION: November 24, 2011

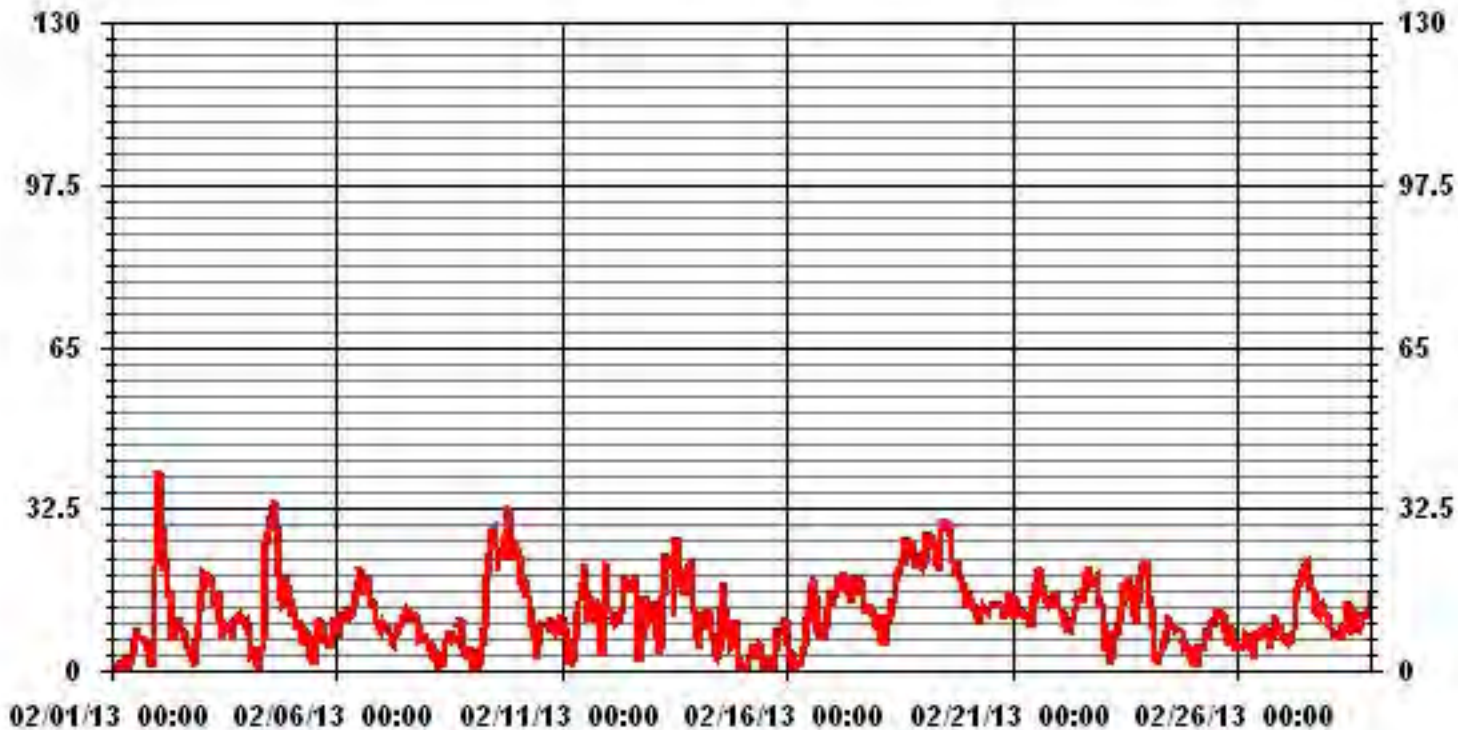
MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	40.1	KPH	@ HOUR(S)	1	ON DAY(S)	2
MAXIMUM 24-HR AVERAGE:	23.5	KPH			ON DAY(S)	19
CALMS (≤ 0 KPH)	0.57	%	OPERATIONAL TIME:	665	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME:	99.0	%	
STANDARD DEVIATION:	6.98		MONTHLY AVERAGE:	11.46	KPH	

24 HOUR AVERAGES FOR FEBRUARY 2013



01 Hour Averages



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport
FEBRUARY 2013

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	MAX.	
DAY																											
1		4	5.7	5.9	4.5	4.5	4.1	4.8	4.7	4.3	2.6	3.4	5.1	10.8	10.8	P	P	P	12.1	9.8	8.5	6.2	4.3	10.7	44.7	44.7	
2		54.8	73.4	74.8	52.4	33.6	38	25.4	34.1	25	25.6	16.2	17.5	16	14.1	13.8	14.3	9.2	6.2	5.1	6.1	7.7	13.6	15.2	18.1	74.8	
3		24.1	27.5	27.9	29.2	27.5	25.7	22.7	22.5	22.1	22.8	18.8	10.9	18	17.1	13.6	14.8	12.4	14.7	15.8	14.8	15.3	14.7	14	13.4	29.2	
4		12.4	11.4	9.7	8.3	6.8	3.6	5	11.9	12.8	24.4	43.1	44.4	45.7	41	52.8	60.8	53.4	32.4	26.5	22.1	30	41.8	36.2	26.3	60.8	
5		21.3	22.3	16.2	16.8	16.2	14.7	12.2	9.9	10.1	11.1	11.9	6.4	5.2	10.3	13.8	13.7	13.8	9.7	8.6	8.7	8.2	9.8	12.7	16.8	22.3	
6		12.6	12.4	16.6	19.2	21.4	16.7	19.3	15.8	16.6	17.9	24.1	25.2	26.8	25	23	25.4	30.9	25.9	22.4	24	19	15.2	14.3	15	30.9	
7		14.3	14.2	13.9	13.9	13.5	8.6	8.7	9.8	11.2	12.8	14.2	13.8	15.4	13.6	14.3	16.2	17	19.3	15.7	14.6	12.6	10.4	9.8	10.1	19.3	
8		11	7.4	8.3	6.8	6.5	9.3	8.7	6.6	3.8	8.4	10.1	13.5	13.9	11.7	16	10	P	18.3	15.1	11.6	7.9	6.7	4.8	8.3	18.3	
9		8.7	4.1	6	5	7.9	8.8	14.5	18.3	31.5	35.2	47.3	47.4	51.6	40.6	42.8	P	45.6	49.2	57.6	59.4	57.2	49.1	45	37.1	59.4	
10		41.7	42.9	30.3	30.1	25.5	23.4	20.9	19	15.2	12.9	8.1	11.6	12.1	17.9	16.6	15.9	17.9	16.9	19.2	17.1	17	16.8	16.2	14.7	42.9	
11		15.1	14.3	11.6	7.5	6	5.5	7.2	14.8	19.8	23.4	24.5	24.2	35.5	26.5	19.7	23.7	22.1	20.6	21.8	18.3	12.4	9.3	35.3	36.4	36.4	
12		24.4	26.6	22.5	23.9	20.6	22.1	18.6	21.1	23.9	27.8	24.3	P	25.3	24.5	33.1	31.7	12.1	5.7	12.9	17.2	23.6	22.2	16.7	18.4	33.1	
13		18.6	19.6	23.7	17.4	10	8.9	33.9	38	29.4	P	P	21.4	38.4	46.8	40.7	36	27.3	29.8	35.5	34.2	36.9	30.9	23.4	19.9	46.8	
14		15.5	8	14.9	15.5	22.4	17.6	22.7	15.6	12.7	11.6	8.5	7.1	13.1	23.7	21.5	16.5	13.3	15.1	9.9	10.7	13.3	12.8	8.2	3.5	23.7	
15		6.6	2.9	3.9	3.1	4.5	6.3	7.8	5.2	5.2	8.2	7.8	7.4	3.6	6.3	6.7	7.4	15.8	6.3	8.4	14.4	13.6	15.6	16.7	18.3	18.3	
16		12	6.9	17.3	10.9	10.7	8.9	7.8	7.7	12	12.4	22.4	20.3	20.6	24.4	30.1	22.8	15.6	13.3	16.6	17.4	14.2	15.4	20.5	23	30.1	
17		22.9	25.3	25.9	31.5	26.3	27.1	34.4	32.8	35.4	29.4	28	33.4	30.5	29.4	31.1	29.4	25.7	22.9	24.8	22.4	26	22.6	17.7	35.4	35.4	
18		16.2	19.3	12.5	10.9	14.4	16.4	14	16.4	23.2	20.9	28.8	26.5	28.2	30.9	32.1	35.1	38.3	37.1	40.6	35.8	33.9	34.3	34.3	29.5	40.6	
19		28.8	28.7	39.8	38.5	37.3	38.7	36.4	37	34.1	32.7	43.6	43.8	42.9	47	43.7	46.5	39.3	29.2	26.7	30.9	27.1	26.2	24.2	18.2	47	
20		21	20.7	22.2	17.7	16.5	13.9	12.7	16.9	18.1	16.7	17.4	17.5	17	18	19	18.1	18.3	18	18.8	15.8	15.2	18.9	22.2	20.6	22.2	
21		17.4	20.9	28.5	26.7	20.6	17.2	19.5	17.1	16.4	13.5	12.7	20.6	23	27.9	30.2	29.3	24.8	20.9	20.4	19.4	22.3	25.4	24	23.1	30.2	
22		21.1	21.6	16.6	19.9	13	16.6	13.7	18.1	16.1	19.8	20.7	19.9	22.1	18.7	20.7	21.6	29.9	30	24.9	24.3	26.3	26.2	23.5	19.3	30	
23		18.4	16.7	10.3	9.5	6.4	6.1	41.7	10.6	12.2	16.5	20.4	27	22.4	20.6	28.4	21.7	21.4	18.5	14.3	20.5	27.3	29	26.9	30.6	41.7	
24		27.7	23.8	24.6	22.4	18.8	8	6.6	6.8	7.9	8.1	12.6	13.6	13.7	13.7	15	14.3	15	14.3	13.5	9.6	9.5	8.4	9.7	5.2	27.7	
25		5.6	11.2	4.3	11	13.4	10.5	8.7	13	17.5	17.3	17.1	16.5	18.7	20.2	22.6	25.7	24.2	20.4	13.7	13.9	9	10.9	10	9.7	25.7	
26		11.4	11.9	10	11.2	10.8	10.6	10.4	8.5	9.9	6	9.6	11.4	15.4	15.5	12.8	14.3	11.7	7.6	10.7	10.4	15.7	13.4	14.8	13.7	15.7	
27		10.3	9.5	8.8	10.8	11.4	17.7	17.8	27.5	25.2	27.5	32.8	32	33.7	32.7	26.8	23.7	23.7	23.6	17.6	17.7	19.7	20.7	17.4	15.7	33.7	
28		15.1	12.6	11.2	10.9	14.6	14.4	15	15.2	12.4	15.7	20.2	21.5	15.4	14	17.7	16.1	15	13.8	13.1	15.1	15.3	13.2	18.8	19.8	21.5	
PEAK		54.8	73.4	74.8	52.4	37.3	38.7	41.7	38.0	35.4	35.2	47.3	47.4	51.6	47.0	52.8	60.8	53.4	49.2	57.6	59.4	57.2	49.1	45.0	44.7		

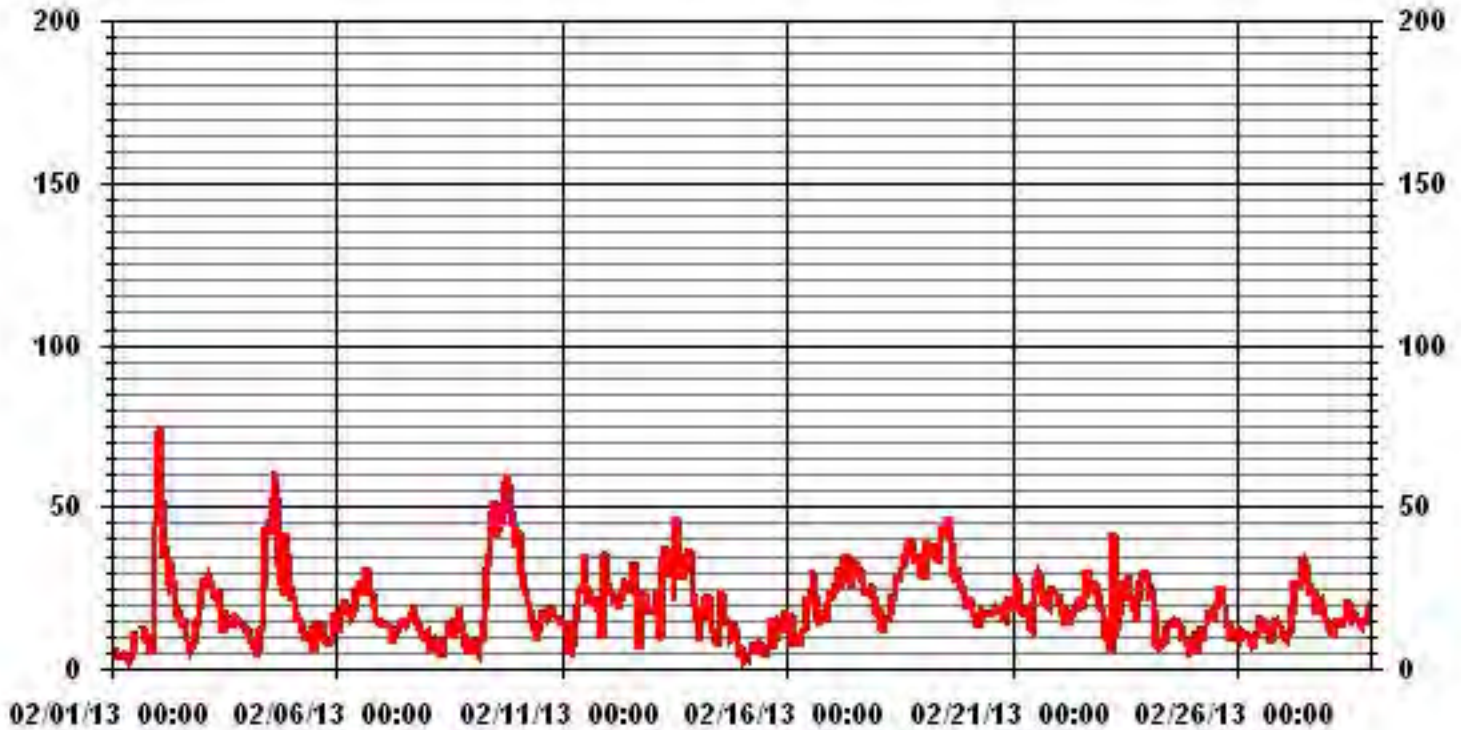
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	74.8	KPH	@ HOUR(S) ON DAY(S)	2 2
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01 Hour Averages



LICA-ELK
WSP / WDR Joint Frequency Distribution (Percent)

February 2013

Distribution By % Of Samples

Logger Id : 35
Site Name : LICA-ELK
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	.45	.45	.90	.90	3.60	2.40	1.80	.15	.15	.60	1.35	1.20	3.30	1.65	2.10	.75	21.80	
< 12.0	.30	1.65	.60	1.50	2.10	10.07	5.41	1.95	1.20	.75	.60	3.90	4.21	2.10	1.35	.15	37.89	
< 20.0	.90	.60	.15	.00	.45	9.62	4.81	.15	.00	.00	.00	.75	3.45	2.85	3.15	1.35	28.27	
< 29.0	.15	.00	.00	.00	.00	4.06	1.05	.00	.00	.00	.00	.00	.60	1.05	1.95	1.20	10.07	
< 39.0	.00	.00	.00	.00	.00	.15	.30	.00	.00	.00	.00	.00	.00	.60	.30	.45	1.80	
>= 39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.00	.15	
Totals	1.80	2.70	1.65	2.40	6.16	26.31	13.38	2.25	1.35	1.35	1.95	5.86	11.57	8.27	9.02	3.90		

Calm : .00 %

Total # Operational Hours : 665

Distribution By Samples

		Direction																
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq	
< 6.0	3	3	6	6	24	16	12	1	1	4	9	8	22	11	14	5	145	
< 12.0	2	11	4	10	14	67	36	13	8	5	4	26	28	14	9	1	252	
< 20.0	6	4	1		3	64	32	1				5	23	19	21	9	188	
< 29.0	1					27	7						4	7	13	8	67	
< 39.0						1	2							4	2	3	12	
>= 39.0															1		1	
Totals	12	18	11	16	41	175	89	15	9	9	13	39	77	55	60	26		

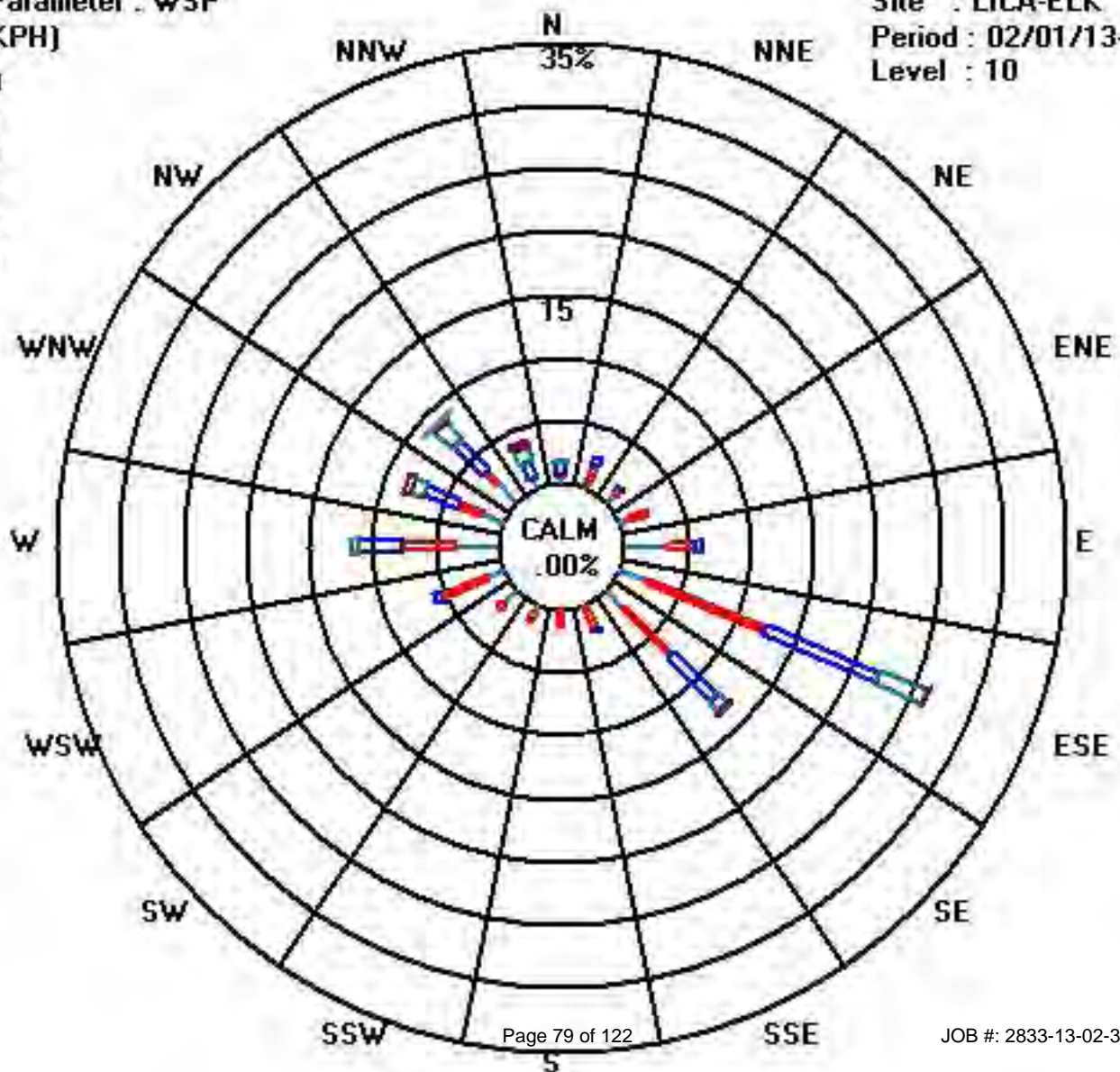
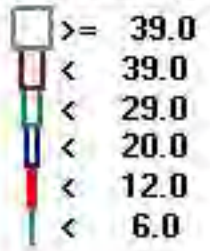
Calm : .00 %

Total # Operational Hours : 665

Class Limits (KPH)

Period : 02/01/13-02/28/13

Level : 10



Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST		00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG			
HOUR START	HOUR END	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	AVG.	QUADRANT	RDGS.		
DAY																														
1		307	233	263	342	356	49	79	330	319	69	105	97	102	105	P	P	P	140	135	121	80	216	269	284	184		S	21	
2		293	312	322	329	326	309	304	309	333	283	285	266	280	287	282	286	260	277	264	211	116	75	104	102	308		NW	24	
3		114	114	110	115	103	100	107	121	115	114	103	97	108	120	115	126	145	129	127	123	112	109	108	113	113		ESE	24	
4		99	103	80	93	142	310	292	289	281	278	281	281	283	283	297	302	312	315	317	316	314	322	315	298	301		WNW	24	
5		258	251	271	257	252	250	261	281	317	284	237	101	70	85	99	115	113	103	115	124	108	97	82	65	184		S	24	
6		74	72	71	77	72	71	85	87	86	97	109	119	115	123	126	120	125	122	136	125	123	127	120	127	108		ESE	24	
7		120	111	111	132	121	101	116	121	127	125	124	119	125	110	113	109	120	115	115	129	129	103	115	120	118		ESE	24	
8		122	99	122	134	152	130	214	232	254	270	261	242	254	264	254	274	P	255	252	269	288	313	97	111	239		WSW	23	
9		98	46	98	119	236	260	244	257	276	296	311	316	326	315	325	P	337	321	326	335	341	350	345	336	323		NW	23	
10		340	340	349	337	314	309	309	322	307	297	230	242	220	197	197	177	175	196	194	182	182	154	164	134	287		WNW	24	
11		125	114	116	82	43	100	336	256	264	275	271	280	277	281	273	284	263	278	282	281	309	297	294	286	277		W	24	
12		258	260	260	257	261	264	258	255	261	275	285	287	276	285	271	273	260	135	245	236	247	239	229	219	263		W	24	
13		217	245	275	295	300	276	302	304	296	P	P	319	325	339	347	347	326	324	321	324	329	327	333	329	317		NW	22	
14		324	284	272	269	287	265	263	256	261	244	246	224	246	280	282	284	267	266	265	265	239	240	268	301	268		W	24	
15		308	122	124	107	104	99	102	82	132	88	93	76	35	88	324	73	272	254	268	251	271	254	273	254	247		WSW	24	
16		243	326	262	143	90	108	315	74	308	297	250	249	261	282	295	274	267	270	253	260	275	270	301	306	276		W	24	
17		310	322	322	321	324	325	339	340	344	343	357	8	14	23	358	357	4	13	39	29	38	26	16	15	354		N	24	
18		54	73	47	57	83	90	92	87	102	118	125	115	115	119	117	126	126	123	123	123	115	123	121	118	113		ESE	24	
19		117	114	115	115	114	114	115	115	118	114	117	120	126	131	128	128	120	112	115	118	121	124	126	111	119		ESE	24	
20		110	117	120	115	115	112	112	117	123	121	125	123	117	126	126	126	127	122	114	110	112	125	135	135	121		ESE	24	
21		128	146	157	145	150	130	117	114	117	117	110	112	111	120	116	119	115	116	122	120	126	128	128	131	124		ESE	24	
22		134	133	123	126	121	135	142	141	138	128	116	123	124	117	114	107	112	117	111	111	110	109	106	112	119		ESE	24	
23		103	103	96	279	352	222	268	302	303	291	279	278	279	280	289	285	280	289	293	302	300	289	294	281	288		WNW	24	
24		289	281	257	278	271	290	111	124	90	95	113	110	110	119	130	151	167	148	141	142	120	109	128	63	151		SSE	24	
25		50	210	208	298	299	199	313	310	24	46	48	14	21	24	26	23	23	24	9	11	321	314	339	24	6		N	24	
26		24	31	2	343	317	303	307	310	312	314	120	118	159	187	177	188	197	173	129	113	135	113	140	113	143		SE	24	
27		97	95	82	101	135	108	109	141	134	130	131	136	128	130	115	118	111	113	114	119	127	119	121	127	122		ESE	24	
28		126	120	127	137	148	164	166	155	143	138	129	123	168	147	118	128	174	143	121	116	112	107	110	110	131		SE	24	
HOURLY AVG		340	340	349	343	356	325	339	340	344	343	357	319	326	339	358	357	337	324	326	335	341	350	345	336					

STATUS FLAG CODES

C - CALIBRATION	Q - QUALITY ASSURANCE
Y - MAINTENANCE	R - RECOVERY
S - DAILY ZERO/SPAN CHECK	X - MACHINE MALFUNCTION
P - POWER FAILURE	O - OPERATOR ERROR
G - OUT FOR REPAIR	K - COLLECTION ERROR

LAST CALIBRATION:	November 24, 2011
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	665	HRS
STANDARD DEVIATION:	93.40		AMD OPERATION UPTIME:	99.0	%
			MONTHLY AVERAGE:	111	DEG

01 Hour Averages



Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE - Elk Point Airport

FEBRUARY 2013

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	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	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	
DAY																									
1	28	30	22	32	57	48	30	12	11	38	18	12	10	8	P	P	P	12	9	16	47	27	14	21	
2	6	8	9	10	10	9	9	13	21	11	10	14	7	7	10	13	10	9	10	16	21	9	8	5	
3	6	6	6	6	6	6	9	6	6	6	11	11	8	12	9	12	11	9	9	10	6	7	6	8	
4	6	8	26	14	17	17	50	9	37	27	8	5	5	5	6	7	9	9	10	8	10	10	7	8	
5	10	9	9	8	10	10	15	16	5	7	19	32	40	25	8	8	5	7	6	6	17	11	8	7	
6	9	9	9	9	11	11	8	8	9	7	7	6	6	7	8	7	6	6	9	6	5	7	5	8	
7	7	6	7	9	8	7	7	6	8	8	9	7	7	5	5	5	6	5	7	9	10	11	7	6	
8	8	9	7	18	24	13	49	41	22	14	12	8	10	10	9	11	P	P	9	6	11	14	11	44	35
9	12	41	51	29	14	11	11	10	8	5	7	8	10	8	12	P	10	9	9	9	9	13	13	9	
10	8	11	11	9	5	5	4	7	6	9	37	19	18	10	14	11	11	11	8	12	13	16	17	13	
11	5	9	10	8	31	35	42	21	10	7	7	4	5	4	9	5	11	15	8	3	20	26	16	6	
12	11	13	12	12	13	13	9	11	10	6	5	5	6	7	11	8	28	21	12	12	8	8	9	9	
13	11	7	9	9	13	9	8	5	5	P	X	X	X	X	X	X	X	X	X	X	8	9	9	8	
14	8	9	8	11	7	11	10	6	7	5	12	11	13	8	2	2	8	12	7	12	5	3	13	5	
15	17	31	33	54	6	21	6	18	21	8	12	40	65	39	26	68	34	54	21	5	7	10	10	10	
16	13	37	29	56	51	67	46	65	29	26	19	10	11	5	6	6	18	12	9	17	11	9	5	4	
17	5	7	8	8	8	8	8	8	11	10	14	14	14	13	13	13	13	18	13	11	12	14	17	14	
18	13	11	16	11	30	7	8	7	7	8	9	8	7	7	7	6	6	6	6	6	7	6	7	6	
19	5	5	6	5	6	6	6	6	6	6	7	7	7	8	7	7	7	6	6	6	6	6	6	5	
20	6	6	6	5	6	6	7	7	6	6	8	7	8	6	5	6	6	7	6	6	6	6	6	6	
21	4	11	13	11	13	8	5	5	5	6	7	6	7	8	6	6	5	5	6	7	7	9	7	6	
22	7	8	6	8	6	8	11	12	9	7	6	7	8	7	5	5	6	6	5	6	6	5	7	7	
23	5	4	29	10	44	16	32	6	8	9	9	6	5	5	5	4	4	7	7	5	4	4	5	4	
24	5	5	11	16	32	14	42	23	18	12	7	4	6	6	13	11	11	9	10	19	8	9	35	23	
25	27	13	28	40	35	9	21	5	14	12	11	14	11	11	12	12	12	11	14	16	13	3	9	16	
26	18	18	18	22	6	8	9	6	5	5	28	7	15	12	19	7	9	14	7	11	7	9	6	5	
27	6	5	10	8	14	14	10	11	8	6	7	10	7	8	6	6	6	5	6	6	7	5	6	5	
28	4	5	5	7	12	15	12	12	14	10	10	7	18	18	9	11	11	10	4	4	4	5	4	5	

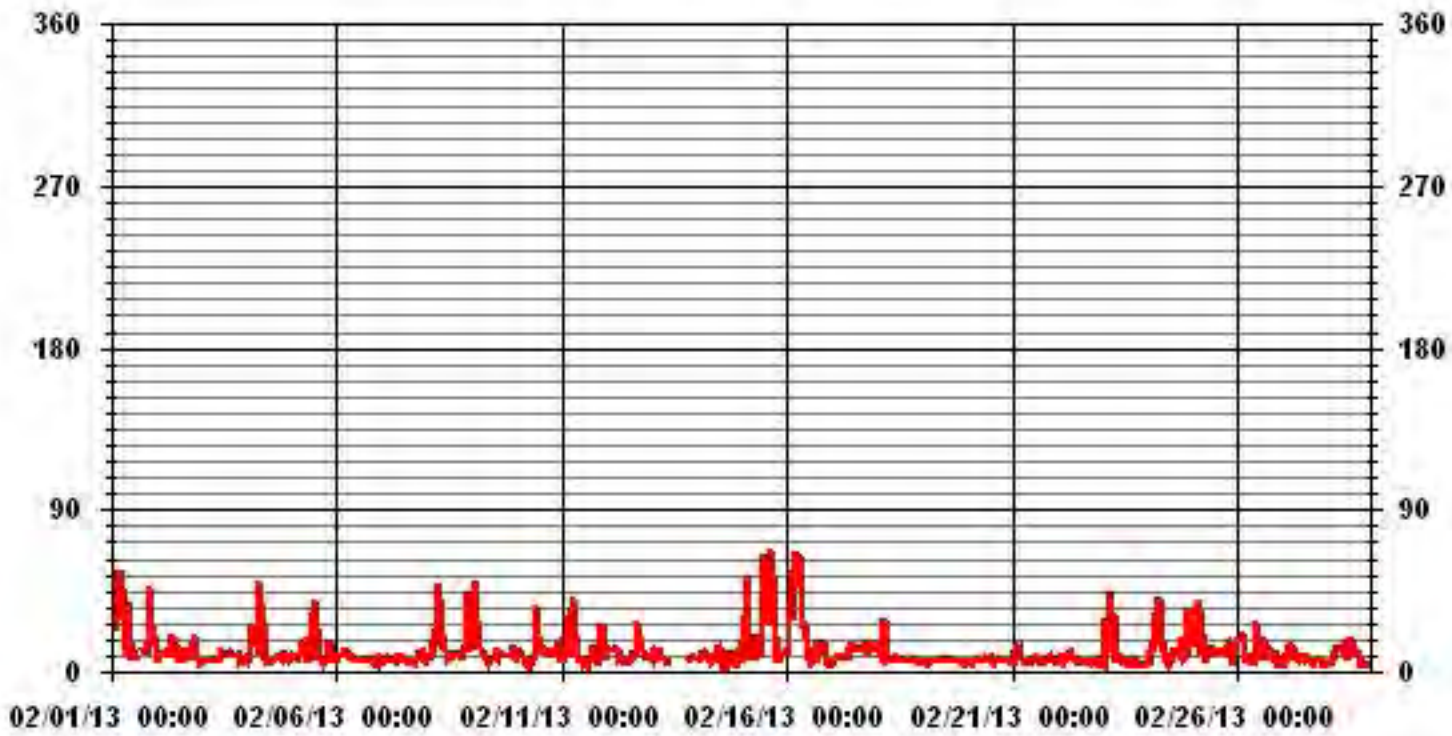
STATUS FLAG CODES

C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR

LAST CALIBRATION: November 24, 2011

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 656 HRS

01 Hour Averages



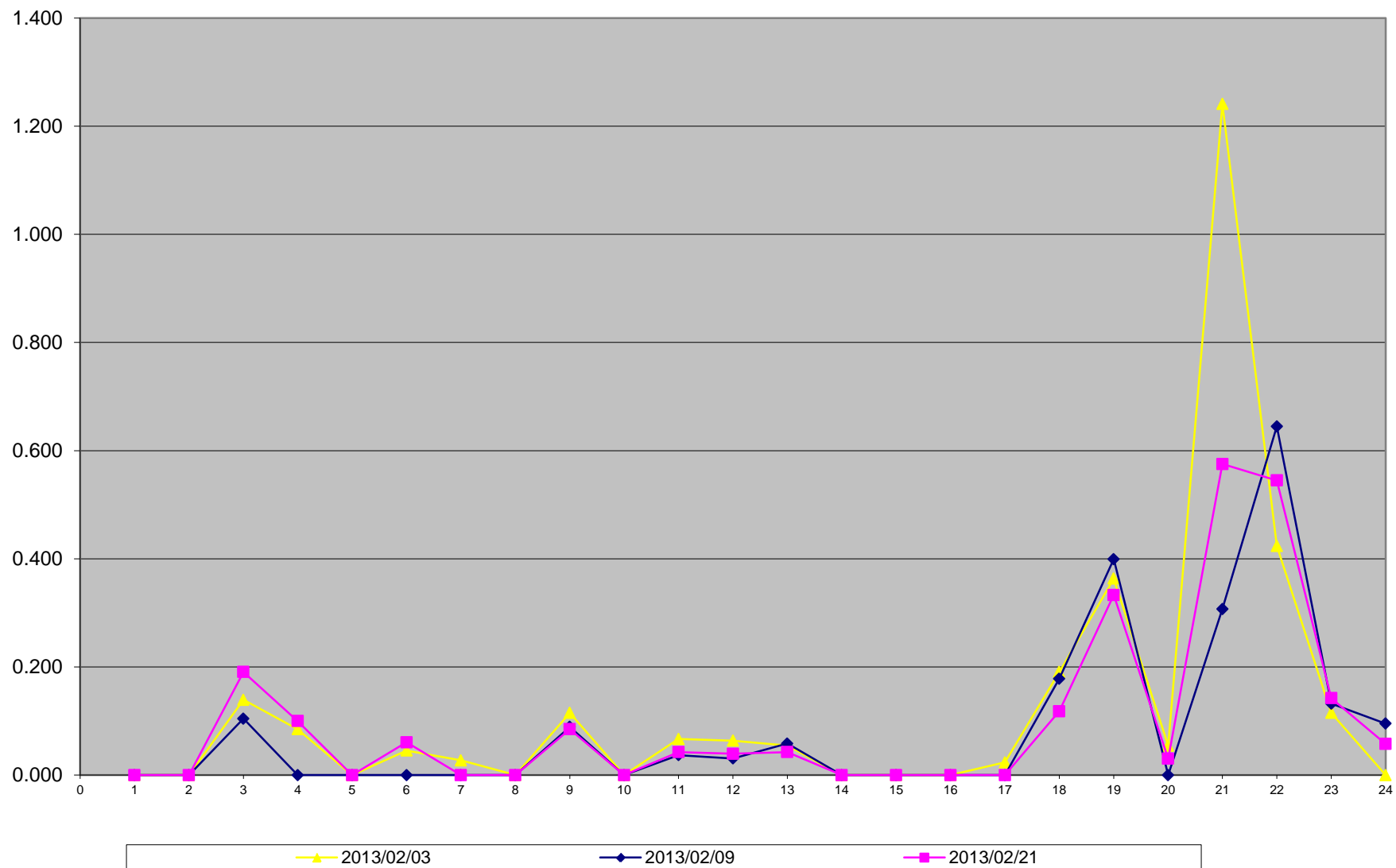
Polycyclic Aromatic Hydrocarbons

Polycyclic Aromatic Hydrocarbons (PAHs) Results for February 2013
LICA - Portable Site - Elk Point Airport
Unit: ng/m3

PAHs	2013/02/03	2013/02/09	2013/02/15	2013/02/21	0213/02/27
Sample Volume (unit: m3)	330.35	325.66	330.33	330.34	330.33
1 3-Methylchloranthrene	0.000	0.000	0.000	0.000	0.000
2 7,12-Dimethylbenz(a)anthracen	0.000	0.000	0.000	0.000	0.000
3 Acenaphthene	0.139	0.104	0.233	0.191	0.124
4 Acenaphthylene	0.085	0.000	0.085	0.100	0.082
5 Acridine	0.000	0.000	0.000	0.000	0.000
6 Anthracene	0.045	0.000	0.064	0.061	0.051
7 Benzo(a)anthracene	0.027	0.000	0.029	0.000	0.039
8 Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000
9 Benzo(b,j,k)fluoranthene	0.115	0.089	0.118	0.085	0.133
10 Benzo(c)phenanthrene	0.000	0.000	0.000	0.000	0.000
11 Benzo(e)pyrene	0.067	0.037	0.048	0.042	0.000
12 Benzo(ghi)perylene	0.064	0.031	0.048	0.039	0.051
13 Chrysene	0.054	0.058	0.073	0.042	0.051
14 Dibenzo(a,h)pyrene	0.000	0.000	0.000	0.000	0.000
15 Dibenzo(a,i)pyrene	0.000	0.000	0.000	0.000	0.000
16 Dibenzo(a,l)pyrene	0.000	0.000	0.000	0.000	0.000
17 Dibenzo(ah)anthracene	0.023	0.000	0.026	0.000	0.000
18 Fluoranthene	0.191	0.178	0.182	0.118	0.133
19 Fluorene	0.363	0.399	0.605	0.333	0.300
20 Indeno(1,2,3-cd)pyrene	0.054	0.000	0.030	0.030	0.045
21 Naphthalene	1.241	0.307	0.484	0.575	0.363
22 Phenanthrene	0.424	0.645	0.878	0.545	0.394
23 Pyrene	0.115	0.132	0.215	0.142	0.106
24 Retene	0.000	0.095	0.127	0.058	0.076

Note: - Values were calculated by the formula of [reading (ug) x 1000 / sample volume (m3)].

PAHs in ng/m3 Site: LICA - Portable - Elk Point Airport



1	3-Methylchloranthrene
2	7,12-Dimethylbenz(a)anthracen
3	Acenaphthene
4	Acenaphthylene
5	Acridine
6	Anthracene
7	Benzo(a)anthracene
8	Benzo(a)pyrene
9	Benzo(b,j,k)fluoranthene
10	Benzo(c)phenanthrene
11	Benzo(e)pyrene
12	Benzo(ghi)perylene
13	Chrysene
14	Dibenzo(a,h)pyrene
15	Dibenzo(a,i)pyrene
16	Dibenzo(a,l)pyrene
17	Dibenzo(ah)anthracene
18	Fluoranthene
19	Fluorene
20	Indeno(1,2,3-cd)pyrene
21	Naphthalene
22	Phenanthrene
23	Pyrene
24	Retene

Calibration Reports

Sulphur Dioxide

SO2 Calibration Report

Station Information

Calibration Date	February 12, 2013	Previous Calibration	January 8, 2013
Company	Lakeland Community and Industry Association		
Plant / Location	Portable / Elk Poin Airport		
Start Time (MST)	11:30	End Time (MST)	16:00
Reason:	Installation Calibration		
Barometric Pressure	27.69 inHg	Station Temperature	23 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	LL42502
DAS Output Voltage	0 - 1 Volts	Cal Gas Expiry date	December 29, 2013
		Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	467	Method:	Fluorescent
Converter Make / Model:	NA	S/N :	NA		
Calibrator Make / Model:	EnviroNics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
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 / Box Temp	621 ccm 30.9 Deg C	621 ccm 30.8 Deg C	
HVPS / Lamp Setting	612 1616	612 1681	
PMT / RxCell Temp	8.1 Deg C 50 Deg C	8.1 Deg C 50 Deg C	
Converter / IZS Temp	NA Deg C 45 Deg C	97.9 Deg C 45.0 Deg C	
Offset / Slope	101.8 1.189	104.1 1.25	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
	No Zero Adj.			
4920	79.8	792	750	1.0555
4920	79.8	792	792	1.0000
4960	39.9	396	394	1.0046
4980	20.0	198	199	0.9970
5000	0	0	0	N/A
Sum of Least Squares				1.0004
New Correction Factor				1.0000

IZS Calibration Data

Before Calibration		After Calibration	
Auto Zero	0.0	0.0	
Auto Span	366.0	356.0	
Sample Lines Connected		YES	

Percent Change

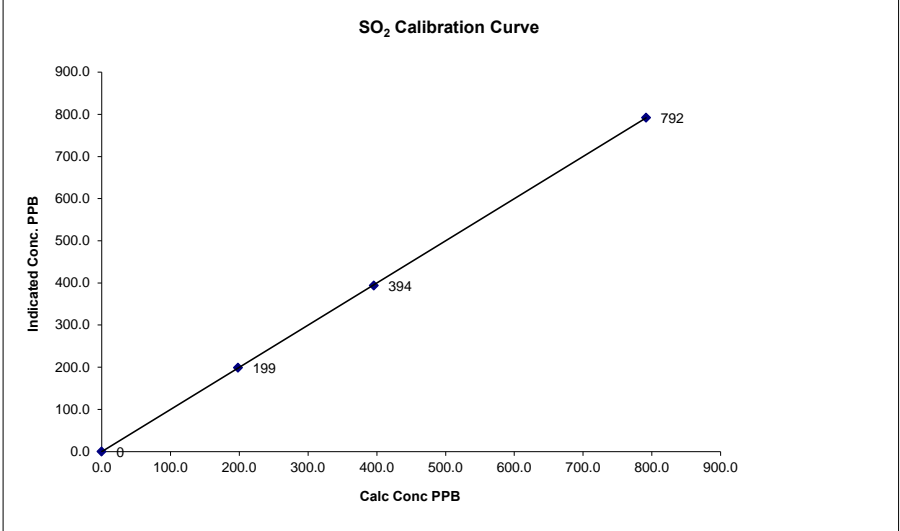
Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0555
Percent Change:	-5.3%

Notes: **N/A : Not applicable**

SO2 Calibration Curve

Calibration Date	February 12, 2013
Company	Lakeland Community and Industry Association
Plant / Location	Portable / Elk Poin Airport
Start Time (MST)	11:30
End Time (MST)	16:00

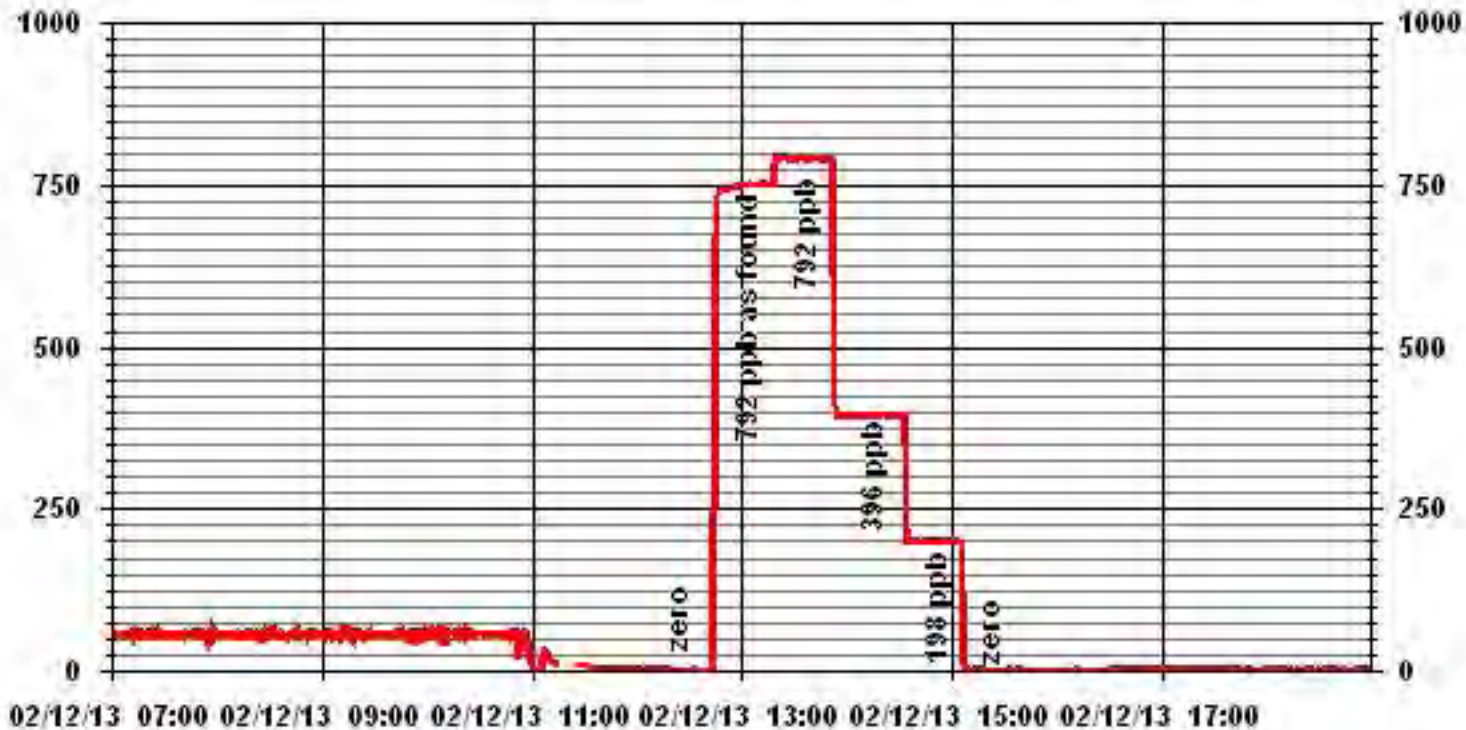
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope Intercept	(≥ 0.995) (0.85 to 1.15) (± 3% F.S.)
0	0	n/a		0.999990
198	199	0.9970		0.999937
396	394	1.0046		-0.194048
792	792	0.9996		



Notes:

Calibration Performed by: Waseem Ahmed / Limin Li

01 Minute Averages



Hydrogen Sulphide

H2S Calibration Report

Station Information

Calibration Date	February 12, 2013	Previous Calibration	January 7, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	Portable/ Elk Point Airport		
Start Time (MST)	14:50	End Time (MST)	18:40
Reason:	Monthly Calibration		
Barometric Pressure	27.69 inHg	Station Temperature	22.5 Deg C
Cal Gas	10 ppm	Gas Cyl. #	LL42648
DAS Output Voltage	0 - 1 Volts	Cal Gas Expiry date	December 27, 2012
		Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	509	Method:	Fluorescent
Converter Make / Model:	internal	S/N :	NA		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	NA	S/N :	NA		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

Before Calibration		After Calibration	
Concentration Range	0 - 100		
Sample Flow / Box Temp	508 ccm, 32.5 Deg C	513 ppb, 31.8 Deg C	
HVPS / Lamp Setting	540, 1835.2	540, 1919	
PMT / RxCell Temp	7.9 Deg C, 50.0 Deg C	7.9 Deg C, 50.0 Deg C	
Converter / IZS Temp	314.0 Deg C, 45.0 Deg C	315 Deg C, 45.0 Deg C	
Offset / Slope	98.8, 0.998	101.3, 0.97	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	2	NA
4995	0	0	0	NA
4960	40.0	80	83	0.9639
4960	40.0	80	80	1.0000
4977	20.0	40	40	1.0000
4988	12.0	24	25	0.9600
4996	0	0	0	NA
Sum of Least Squares				0.9973
New Correction Factor				1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.4	0.4
Auto Span	57.5	54.0
Sample Lines Connected		YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	0.9639
Percent Change:	3.8%

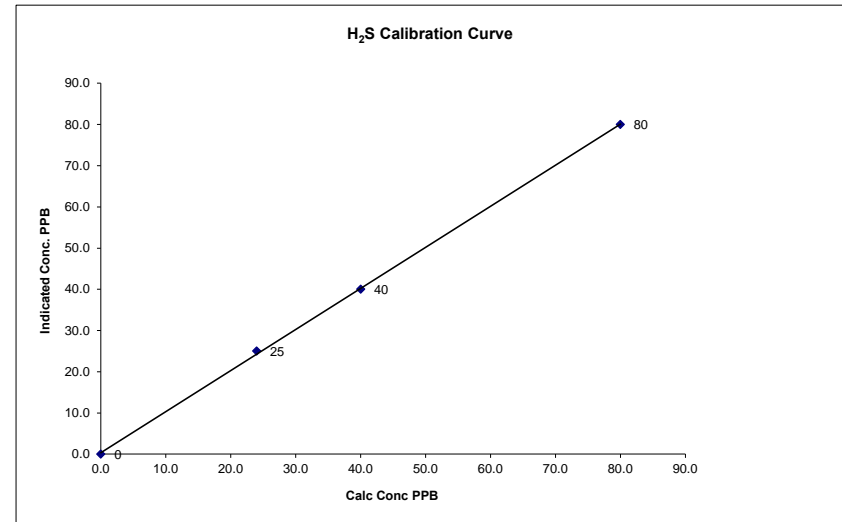
Notes: **NA : Not Applicable**

Calibration Performed by: Waseem Ahmed / Limin Li

H₂S Calibration Curve

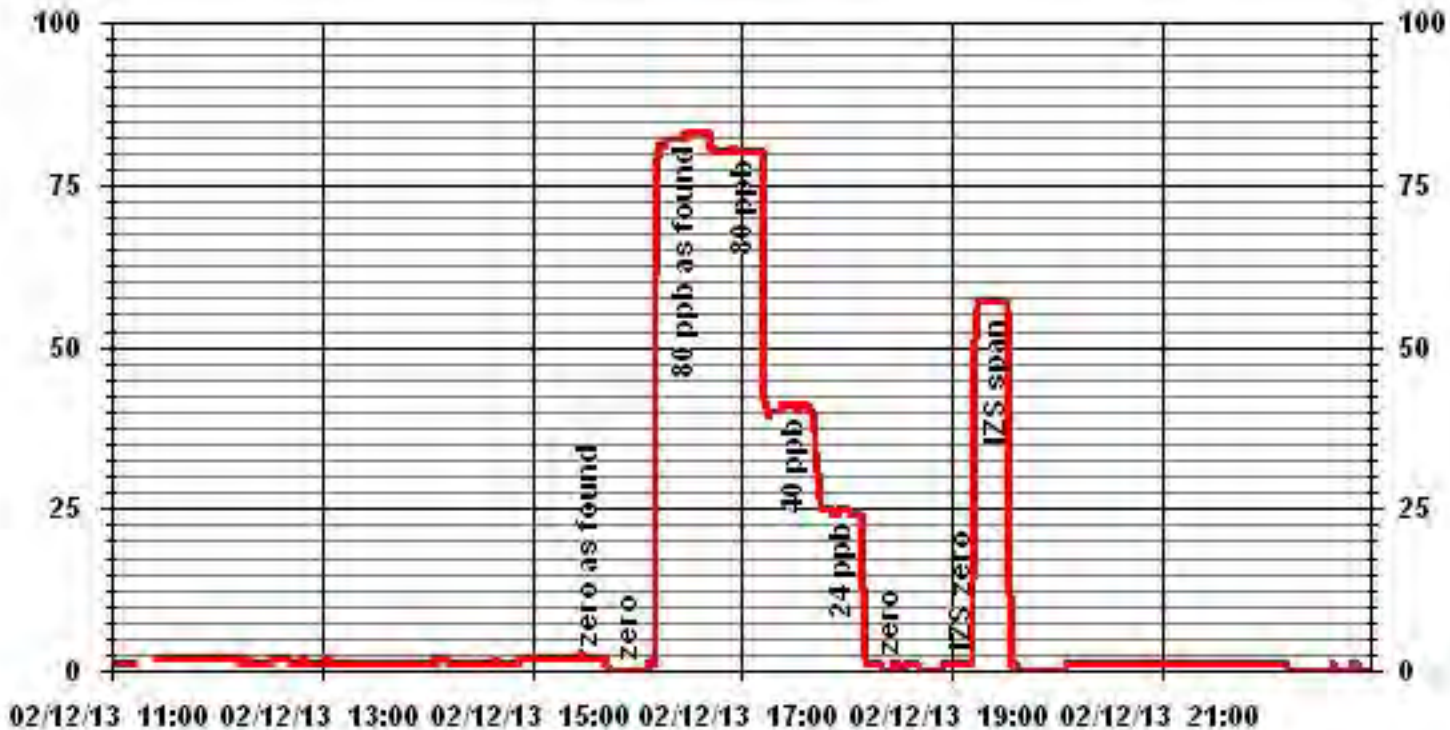
Calibration Date	February 12, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	Portable/ Elk Point Airport		
Start Time (MST)	14:50	End Time (MST)	18:40

Calculated Conc.	Indicated Response	Correction Factor	Correlation Coefficient	(≥ 0.995)
0	0		Slope	0.999786
24	25	0.9600	Intercept	0.996432
40	40	1.0006		0.372457
80	80	1.0000		



Notes:

01 Minute Averages



Total Hydrocarbons

THC Calibration Report

Station Information			
Calibration Date:	February 12, 2013	Previous Calibration	January 7, 2013
Company:	Lakeland Industry and Community Association		
Plant / Location:	ELICA Portable Station / Elk Point Airport		
Start Time (MST)	11:30	End Time (MST)	14:35
Reason:	Removal Calibration		
Barometric Pressure:	27.69 inHg	Station Temperature:	22 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	CH4 600 PPM	C3H8 204 PPM	
	TOTAL CH4 1161.0 PPM	Gas Cyl. # LL155310	Cal Gas Expiry Date: September 9, 2013
DAS make & Model:	ESC 8832	S/N :	AO 717
Chart Recorder:	NA	S/N:	NA
Output Voltage Range:	0 - 10 VDC	Chart Speed:	NA mm/hr

Analyzer Information

Make / Model	Thermo 51C	S/N :	04366-09739	Method	Flame Ionization
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Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 50	ppm	0 - 50	ppm
Sample Pressure	6.9	psi	6.9	psi
Hydrogen Pressure	9	psi	9	psi
Air Pressure	20	psi	20	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2000	0.0	0.0	-0.5	NA
	No Zero Adj.			
2000	74.0	41.4	42.2	0.9816
	No Span Adj.			
2000	37.0	21.1	21.1	1.0000
2000	20.0	11.5	11.3	1.0173
2000	0.0	0.0	-0.5	NA
New Correction Factor:				0.9816

Percent Change

Previous Calibration Correction Factor:	0.9934
Current Correction Factor Before Span Adjust:	0.9816
Percent Change:	1.2%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	-0.3	0.0
Auto Span	38.3	38.3
Sample Lines Connected	YES	

Cylinder Pressures			
Span	1600 psi	Hydrogen 1350 psi	Zero Air 33 psi

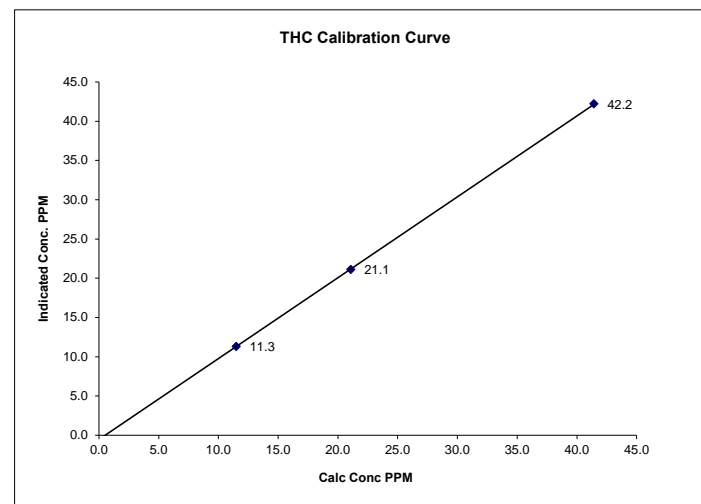
Notes: **NA : Not Applicable**

Calibration Performed by: Waseem Ahmed / Limin Li

THC Calibration Curve

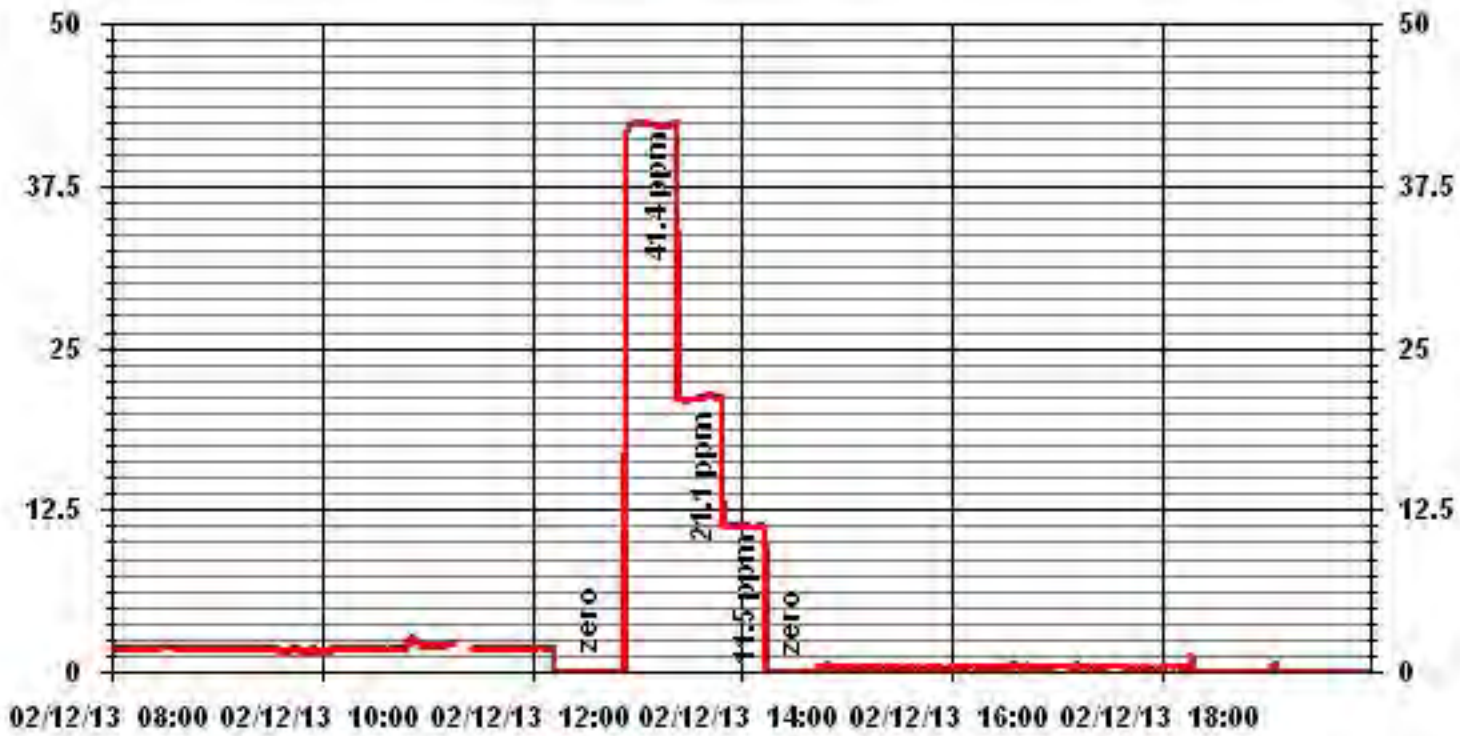
Calibration Date	February 12, 2013		
Company	Lakeland Industry and Community Association		
Plant / Location	ELICA Portable Station / Elk Point Airport		
Start Time (MST)	11:30	End Time (MST)	14:35

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient (≥ 0.995)	Slope (0.85 to 1.15)	Intercept (± 3% F.S.)
0.0	-0.5	NA	0.999987	1.030782	-0.54646
11.5	11.3	1.0173			
21.1	21.1	0.9994			
41.4	42.2	0.9816			



Notes:

01 Minute Averages



— LICA35 THC PPM

THC Calibration Report

Station Information			
Calibration Date:	February 13, 2013	Previous Calibration	February 12, 2013
Company:	Lakeland Industry and Community Association		
Plant / Location:	ELICA Portable Station / Elk Point Airport		
Start Time (MST)	13:20	End Time (MST)	16:50
Reason:	Installation Calibration		
Barometric Pressure:	27.59 inHg	Station Temperature:	22 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	CH4 600 PPM TOTAL CH4 1161.0 PPM	C3H8 204 PPM Gas Cyl. # LL155310	Cal Gas Expiry Date: September 9, 2013
DAS make & Model:	ESC 8832	S/N :	AO 717
Chart Recorder:	NA	S/N:	NA
Output Voltage Range:	0 - 10 VDC	Chart Speed:	NA mm/hr

Analyzer Information

Make / Model	Thermo 51C	S/N :	04366-09739	Method	Flame Ionization
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Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 50	ppm	0 - 50	ppm
Sample Pressure	6.9	psi	6.9	psi
Hydrogen Pressure	11	psi	11	psi
Air Pressure	20	psi	20	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2000	0.0	0.0	0.0	NA
2000	No Zero Adj.			
	74.0	41.4	41.4	1.0000
2000	No Span Adj.			
	37.0	21.1	21.0	1.0042
2000	20.0	11.5	11.7	0.9825
2000	0.0	0.0	0.0	NA
New Correction Factor:				1.0000

Percent Change

Previous Calibration Correction Factor:	NA
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	#VALUE!

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	-0.3	0.0
Auto Span	38.3	24.2
Sample Lines Connected	YES	

Cylinder Pressures			
Span	1600 psi	Hydrogen 1350 psi	Zero Air 33 psi

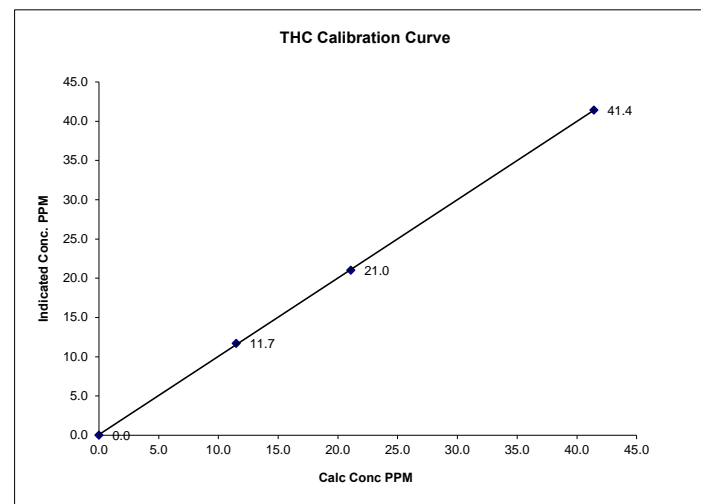
Notes: **NA : Not Applicable**
 A 55i HC analyzer attempted to be installed on Feb 13. However, the analyzer showed its instability. 55i HC was removed and 51C THC was re-installed back.

Calibration Performed by: Waseem Ahmed / Limin Li

THC Calibration Curve

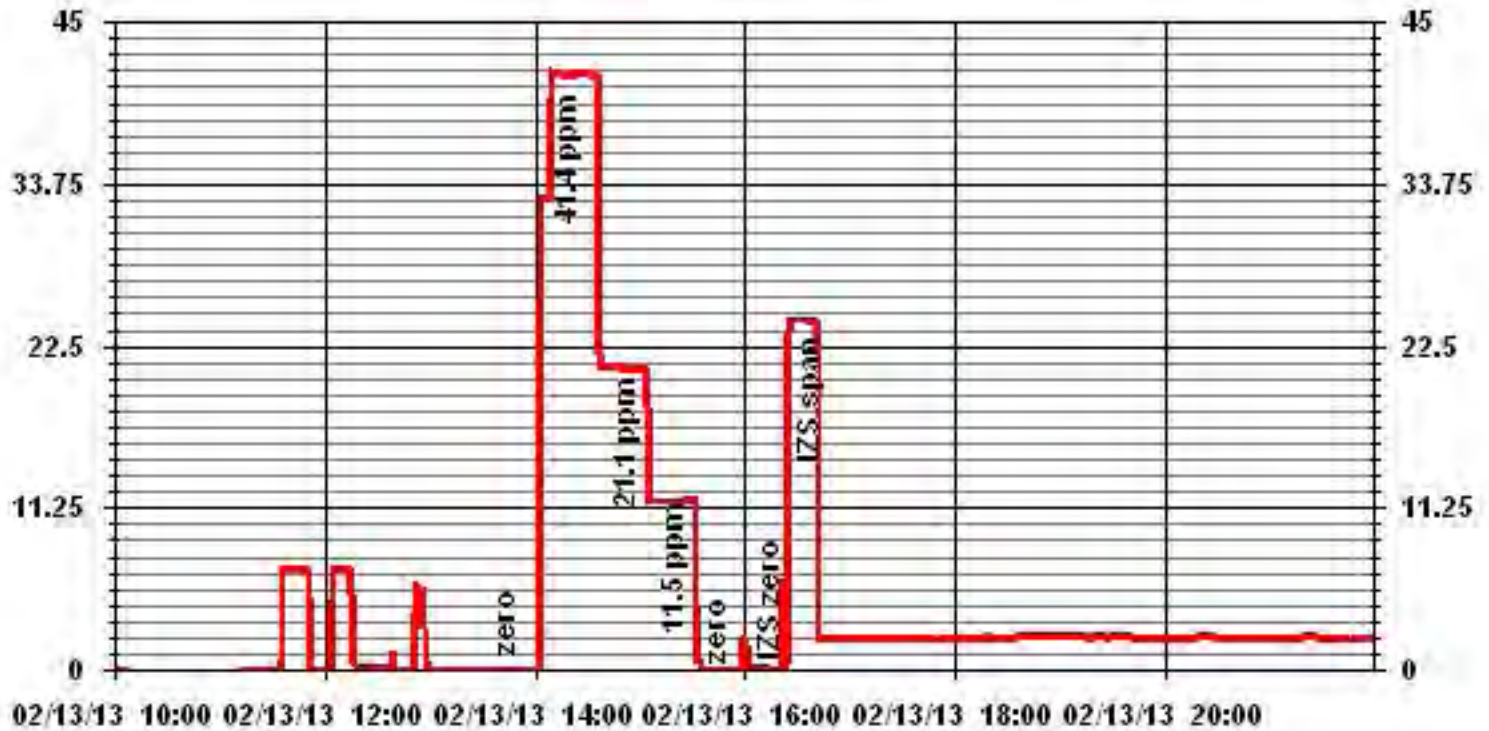
Calibration Date	February 13, 2013		
Company	Lakeland Industry and Community Association		
Plant / Location	ELICA Portable Station / Elk Point Airport		
Start Time (MST)	13:20	End Time (MST)	16:50

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient (≥ 0.995)	Slope (0.85 to 1.15)	Intercept (± 3% F.S.)
0.0	0.0	NA	0.999953	0.997594	0.06758
11.5	11.7	0.9825			
21.1	21.0	1.0042			
41.4	41.4	1.0006			



Notes:

01 Minute Averages



Particulate Matter 2.5

TEOM 1405F Audit

	<u>Station</u>		<u>Audit Transfer Standard</u>
Date:	February 13, 2013	Make/Model:	Streamline FTS
Station Name:	Lica Portable (CASA # 35)	Serial Number:	Hi 091001, Low 091099
Location:	Elk Point Airport	Cell s/n:	NA
Operator:	LICA	Thermometer s/n:	Fluke 1551A / 1735039

	<u>Sampler</u>		<u>Set-up and current Sampler readings</u>
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A208301003	Filter Load (%)	27.6%
Firmware Ver.	1.52	K _o Factor	13125
Parameter	PM 2.5 (with FDMS)	Temp (°C)	-0.4
		Press (ATM)	0.928

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

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

Audit

Status			
Noise <0.10µg	0.005	Warnings	None
Pump Vacuum <0.40atm	0.32	Pump Gauge (inHg)	-18
Temperature/Pressure		D °C	
Measured Temp (± 2 °C)	-0.8		0.4
Measured Press (± 0.01atm)	0.932	DATM	-0.004
Flow Audit			
Indicated Main Flow (l/min)	3.00	Main Flow Drift (± 10.0%)	0.44%
Measured Main Flow (l/min)	3.01	Flow Adjusted to Measured?	0.2%
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift (± 10.0%)	0.02%
Measured Bypass Flow (l/min)	13.63	Flow Adjusted to Measured?	Yes
Leak Check		Instrument Setup	
Main (< 0.15 l/min)	Base=-0.02 Ref=-0.04	Flow Control = Active	
Aux (< 0.6 l/min)	Base=0.00 Ref=0.00	Report Conditions = Actual	
K_o Factor			
Measured	NA		
K _o Difference (± 2.5%)	NA		

Start Time: 14:40 Finish Time: 15:30

Sample Inlet Cleaned: No New Filters Installed: Yes
 New Filter Loading %: 16.8%

Comments:

TEOM 1405F Audit

	<u>Station</u>		<u>Audit Transfer Standard</u>
Date:	<u>February 28, 2013</u>	Make/Model:	<u>Streamline FTS</u>
Station Name:	<u>Lica Portable (CASA # 35)</u>	Serial Number:	<u>Hi 091001, Low 091099</u>
Location:	<u>Elk Point Airport</u>	Cell s/n:	<u>NA</u>
Operator:	<u>LICA</u>	Thermometer s/n:	<u>Fluke 1551A / 1735039</u>

	<u>Sampler</u>		<u>Set-up and current Sampler readings</u>
Make/Model	<u>Thermo Scientific Series 1405F</u>	F-Main Set Pt (l/min)	<u>3.00</u>
Unit #	<u>NA</u>	F-Aux Set Pt (l/min)	<u>13.67</u>
Unit s/n	<u>1405A208301003</u>	Filter Load (%)	<u>19.6%</u>
Firmware Ver.	<u>1.52</u>	K _o Factor	<u>13125</u>
Parameter	<u>PM 2.5 (with FDMS)</u>	Temp (°C)	<u>-3.6</u>
		Press (ATM)	<u>0.936</u>

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 <0.10µg	<u>0.009</u>	Warnings	<u>None</u>
Pump Vacuum <0.40atm	<u>0.33</u>	Pump Gauge (inHg)	<u>-18</u>
Temperature/Pressure		D °C	
Measured Temp (± 2 °C)	<u>-2.7</u>		<u>-0.9</u>
Measured Press (± 0.01atm)	<u>0.940</u>	DATM	<u>-0.004</u>
Flow Audit			
Indicated Main Flow (l/min)	<u>3.00</u>	Main Flow Drift (±10.0%)	<u>1.46%</u>
Measured Main Flow (l/min)	<u>3.03</u>	Flow Adjusted to Measured?	<u>0.2%</u>
Indicated Bypass Flow (l/min)	<u>13.67</u>	Bypass Flow Drift (±10.0%)	<u>0.35%</u>
Measured Bypass Flow (l/min)	<u>13.58</u>	Flow Adjusted to Measured?	<u>Yes</u>
Leak Check		Instrument Setup	
Main (< 0.15 l/min)	<u>Base=-0.04 Ref=-0.04</u>	<u>Flow Control = Active</u>	
Aux (< 0.6 l/min)	<u>Base=0.00 Ref=0.00</u>	<u>Report Conditions = Actual</u>	
K_o Factor			
Measured	<u>NA</u>		
K _o Difference (± 2.5%)	<u>NA</u>		

Start Time: 15:25 Finish Time: 17:00

Sample Inlet Cleaned: Yes New Filters Installed: No
 New Filter Loading %: NA

Comments:

Nitrogen Dioxide

NOx - NO- NO2 Calibration Report
Station Information

Calibration Date	February 12, 2013	Previous Calibration	January 7, 2013	
Company	LICA	Plant/Location	Lica Portable/ Elk Point Airport	
Start Time (MST)	11:30	End Time (MST)	18:50	
Reason:	Monthly Calibration			
Barometric Pressure	27.69 inHg	Station Temperature	23 Deg C	
Cal Gas Concentration	NOx 50.1 ppm	NO 50.1 ppm	Cal Gas Expiry date	December 29, 2013
Cal Gas Cylinder #	LL42502			
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:	Envionics 6100	S/N :	4760		
DAS Make / Model:	ESC 8832	S/N :	AO 717		
Chart Recorder Make / Model:	NA	S/N:	NA		
Flow Meter:	Envionics 6100	S/N :	4760		

Analyzer Settings

Before Calibration			After Calibration		
Concentration Range	0 - 1000				
Sample Flow/Conv. Temp	472 ccm	315.5 Deg C	467 ccm	315 Deg C	
Ozone Flow / Vacuum	78 ccm	4.9 "Hg-A	77 ccm	4.9 "Hg-A	
HVPS / A ZERO	638 Volts	7.9 MV	638 Volts	6.5 MV	
Rx/ Temp / PMT Temp	50.0 Deg C	6.6 Deg C	50.0 Deg C	6.7 Deg C	
Box Temp / IZS Temp	33.0 Deg C	45.3 Deg C	35.5 Deg C	45.1 Deg C	
Offset	0.3 NOx	0.3 NO	0.3 NOx	0.0 NO	
Slope	1.097 NOx	1.090 NO	1.174 NOx	1.168 NO	
NO2 COEF / Conv Efficiency	NA	0.996	NA	0.996	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
5000	0.0	NA	0	0	NA	0	0	0	NA	NA
4920	79.8	NA	800	800	NA	746	748	-2	1.0719	1.0690
4920	79.8	NA	800	800	NA	800	800	0	1.0000	1.0000
4960	39.9	NA	400	400	NA	397	398	-1	1.0071	1.0045
4980	20.0	NA	200	200	NA	201	201	0	0.9970	0.9970
5000	0.0	NA	0	0	NA	0	0	0	NA	NA

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO2 Correction Factor	NO2 Conv Efficiency
			NOx	NO	NO2	NOx	NO	NO2		
4920	79.8	NA	800	800	NA	800	800	0	NA	NA
4920	79.8	600	800	800	NA	798	263	535	1.0037	99.63%
		No Adj.								
4920	79.8	300	800	NA	270	800	530	270	1.0000	100.00%
4920	79.8	120	800	NA	109	801	691	110	0.9909	100.92%

Linearity OK?	Yes	No	Sum of Least Squares Correction Factors:	NOx= 1.001	NO= 1.001	NO2= 0.997
				NOx= 1.0000	NO= 1.0000	NO2= 1.0000
				Average Converter Efficiency=		

Before Calibration **After Calibration**

Auto Zero	0.7	NOx	-0.1	NO2		0.0	NOx	0.0	NO2
Auto Span	534	NOx	523	NO2		552	NOx	545	NO2
		Sample Lines Connected				YES			
Percent Change from Previous Calibration		NOx	-6.7%	NO		-6.5%	NO2	-0.4%	

Notes

NA : Not Applicable

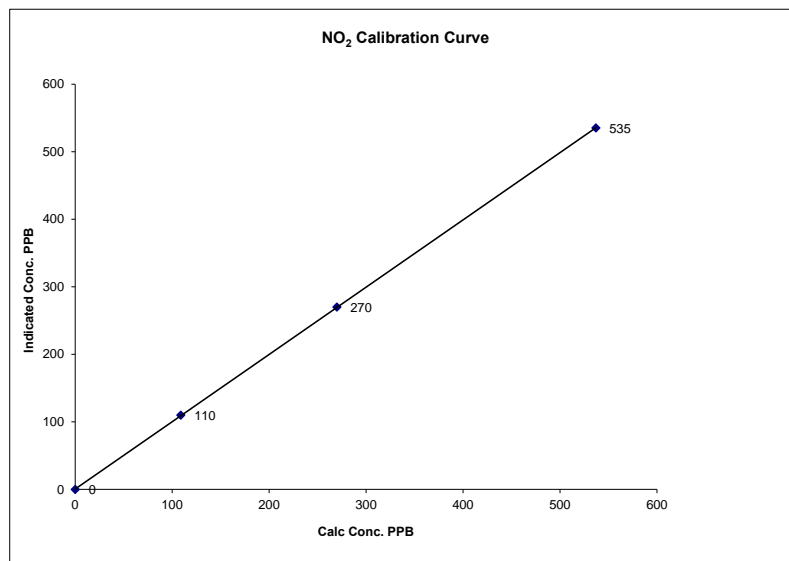
Additional point done for ozone cal O3 St. Pt. 450 Nox=801, NO=397, NO2=404

Calibration Performed by: Waseem Ahmed / Limin Li

NO2 Calibration Curve

Calibration Date	February 12, 2013	Company	LICA
Plant / Location	Lica Portable/ Elk Point Airport		
Start Time (MST)	11:30	End Time (MST)	18:50

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient Slope	(≥ 0.995) (0.85 to 1.15)	0.999991
0	0	N/A	Intercept	(± 3% F.S.)	0.78157
109	110	0.9909			
270	270	1.0000			
537	535	1.0037			

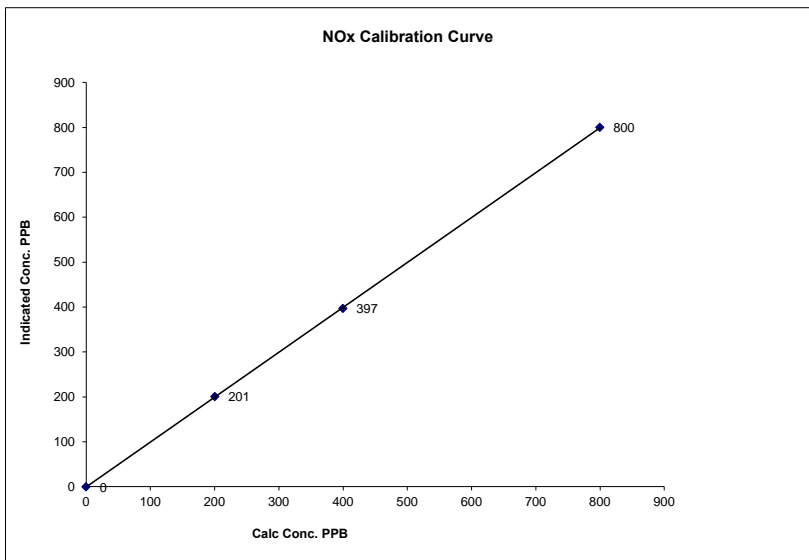


Notes:

NOx Calibration Curve

Calibration Date	February 12, 2013	
Company	LICA	
Plant / Location	Lica Portable/ Elk Point Airport	
Start Time (MST)	11:30	End Time (MST) 18:50

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999978
0	0	N/A	Slope (0.85 to 1.15)	0.999822
200	201	0.9970	Intercept (± 3% F.S.)	-0.39609
400	397	1.0071		
800	800	0.9995		

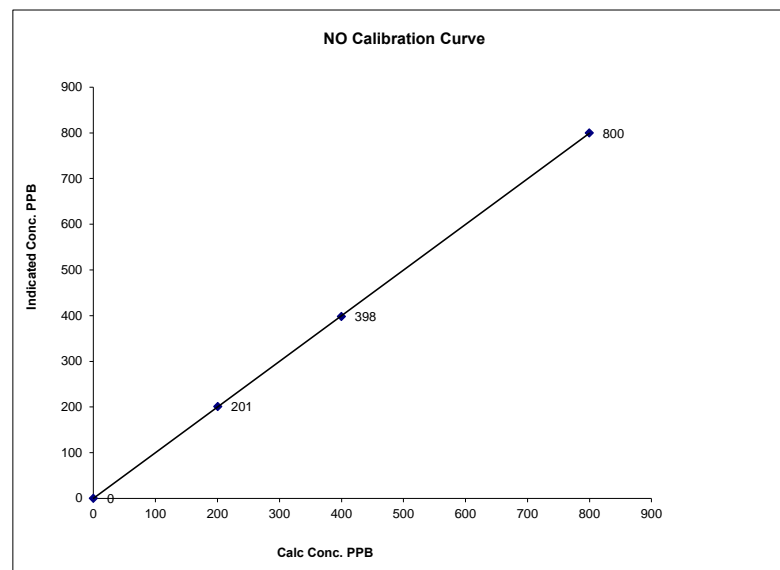


Notes:

NO Calibration Curve

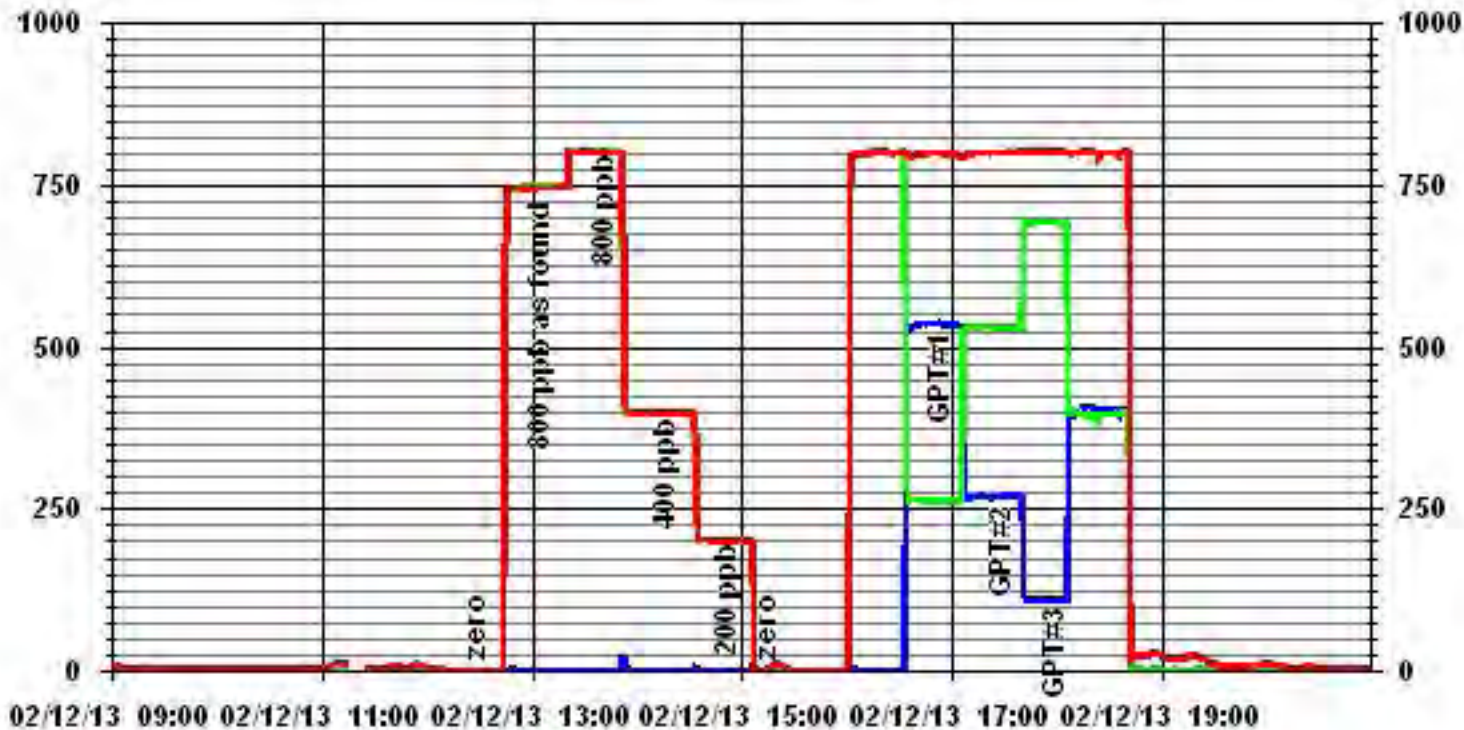
Calibration Date	February 12, 2013	
Company	LICA	
Plant / Location	Lica Portable/ Elk Point Airport	
Start Time (MST)	11:30	End Time (MST) 18:50

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999990
0	0	N/A	Slope (0.85 to 1.15)	1.000455
200	201	0.9970	Intercept (± 3% F.S.)	-3.9839
400	398	1.0045		
800	800	0.9995		



Notes:

01 Minute Averages



— LICA35 IIOX_ PPB

— LICA35 IIO_ PPB

— LICA35 IIO2_ PPB

Ozone

O₃ Calibration Report

Station Information

Calibration Date	February 13, 2013	Previous Calibration	January 8, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	Elk Point Station		
Start Time (MST)	09:14	End Time (MST)	15:00
Reason:	Monthly Calibration		
Barometric Pressure	27.59 inHg	Station Temperature	21.5 Deg C
DAS Output Voltage	0 - 1 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240372	Method:	Photometric
Calibrator Make / Model:	Envionics 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		
Cell A Flow / Cell B Flow	744 LPM	752 ccm	742 LPM	747 ccm	
O ₃ Set Level	679 mmHg		674 mmHg		
Bench Lamp	54.1 Deg C		54.1 Deg C		
O ₃ Lamp / Box Temp	68.2 Deg	29.5 Deg C	68.2 Deg C	32 Deg C	
Offset / Slope	-0.2	1.003	-0.2	1.016	

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	1	NA
5000	0	0	0	NA
5000	450	404	398	1.0151
5000	450	404	405	0.9975
5000	300	270	271	0.9963
5000	120	110	109	1.0092
5000	0	0	0	NA
Sum of Least Squares				0.9977
New Correction Factor				0.9975

IZS Calibration Data

Before Calibration		After Calibration	
Auto Zero	0.0	Auto Zero	0.0
Auto Span	365	Auto Span	362
Sample Lines Connected		YES	
Previous Calibration Correction Factor:		1.0026	
Current Correctio Factor Before Span Adjust:		1.0151	
Percent Change:		-1.2%	

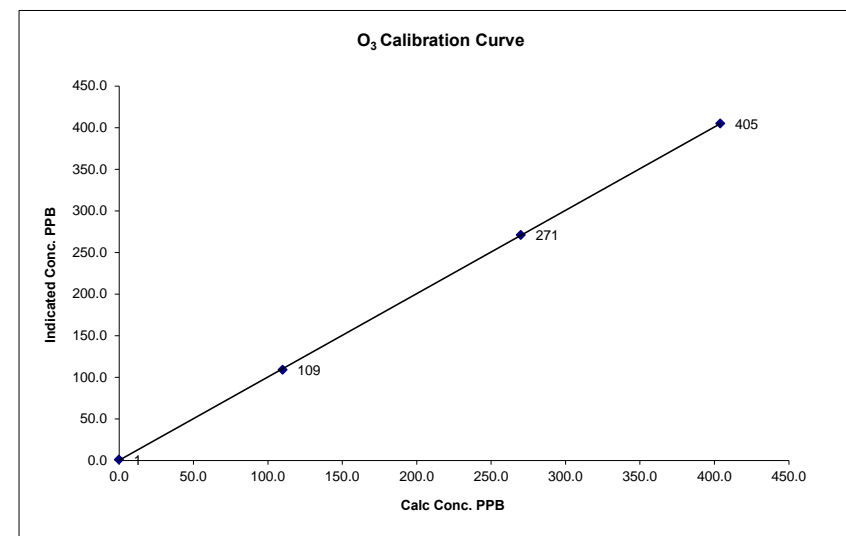
Note: NA : Not Applicable

Calibration Performed by: Waseem Ahmed / Limin Li

O₃ Calibration Curve

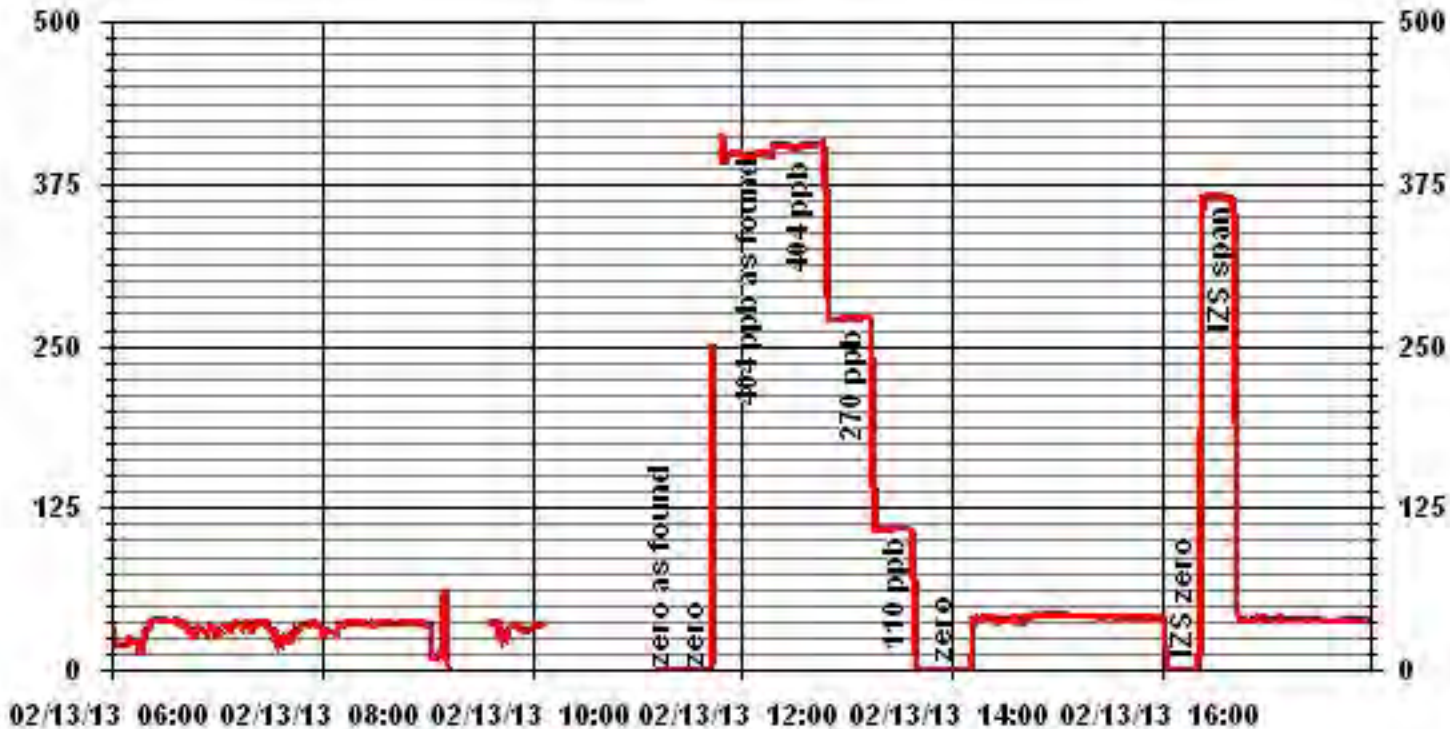
Calibration Date	February 13, 2013
Company	Lakeland Industry & Community Association
Plant / Location	Elk Point Station
Start Time (MST)	09:14
End Time (MST)	15:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	
0	1	n/a	Slope	0.999972
110	109	1.0092	Intercept	1.001819
270	271	0.9963		0.143455
404	405	0.9975		



Notes:

01 Minute Averages



— LICA35 O3 PPB

Note: one-minute data between 11:45 and 11:48 is missing.

Polycyclic Aromatic Hydrocarbons Laboratory Analysis

Maxxam

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA Puff+ S/N: 100-1015
 Location: EUK PAINT AIRPORT Motor S/N: 1139
 Station ID: LICA35 (PORTABLE) Installation Date/Time: FEB 07 2013 @ 9:58 AM
 Field Sample ID: LICA PUF PORTABLE 2013 Removal Date/Time: FEB 06, 2013 @ 17:00 MST

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
2 FEB 2013	21312030100	21410000	24:00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
JAN 29, 2013		04 FEB, 2013	21 JAN, 2013

Set Flow Rate (slpm): 230
 Date of Last Calibration: 25-SEP-11

Sampling Data		
Average Pressure (mmHg)	Average Flow (Qstd slpm)	Average Temperature (Vstd m ³)
706	229	-11.1
		530.55

Time set correctly prior to sampling? YES / NO
 Timer set correctly prior to sampling? YES / NO
 Sampling data saved to memory card after sampling? YES / NO

Comments: COC # 13236

Comments:

Technician Signature: RAJA ABD AS HRAF

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF Port				Max Actual
Matrix :			Date Received : 1-Mar-13 by: RMR	- 26 --
SmpDate: 3-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 4-Mar-13 by: rnr	45 29 ok
EndDate: 4-Feb-13 @ 0000	..ID2 :		Date Analyzed : 7-Mar-13 by: rnr	60 32 ok
			Raw DataFile : p0597	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	0.00		
102849	Acenaphthene	.05			102850	Acenaphthylene	.03		
102851	Acridine	0.00			102852	Anthracene	.02		
102853	Benzo(a)anthracene	.01			102854	Benzo(a)pyrene	0.00		
102855	Benzo(b,j,k)fluoranthene	.04			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	.02			102858	Benzo(ghi)perylene	.02		
102859	Chrysene	.02			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	.01			102864	Fluoranthene	.06		
102865	Fluorene	.12			102866	Indeno(1,2,3-cd)pyrene	.02		
102867	Naphthalene	.41			102868	Phenanthrene	.14		
102869	Pyrene	.04			103826	Retene	0.00		

Total Particulate Weight (when applicable) = mg

Total cubic meters of air =(hrs @ m3/min) = m3

MDL : The Method Detection Limit for this sample has been calculated based on the volume of sample collected.

Typically, 10 ng of analyte per sample must be present on the filter to satisfy the current analytical technique.

Zero (0) values indicate that the analyte is not DETECTED.

MDL - Method Detection Limit

flags B - This analyte is found in the blank as well as the sample. The blank value has been subtracted.

X - Estimated value. The target compound meets the identification criteria, but is less than the MDL.

Q - Qualifying ions present but failed the ion ratio limits.

M - This value is calculated by an alternate Raw DataFile.

* - asterik following the value for Actual days taken indicates the prescribed time for that event was exceeded.

** - the Date Sampled is unknown, therefore timeline calculations can not be performed.

Certified For: Ryan Rybchuk	Team Leader	mail to: LICA
	Organic Environmental Monitoring	attn: Mike Bisaga
	Alberta Innovates - Technology Futures	Lakeland Industry and Community Assn
Date: 14-Mar-13	Bag 4000, Vegreville, Alberta	Box 8237, 5107W-50 Street
Contact No. (780) 632-8455	T9C 1T4	Bonnyville, Alberta
		T9N 2J5

"results relate only to the item tested"

Please check the mailing information and inform the lab if changes are required.

page 1 of 1

Maxxam

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA Puff S/N: 100-1015
 Location: ELK POINT AIR PORT Motor S/N: 1139
 Station ID: LICA 35 (PORTABLE) Installation Date/Time: FEB 06, 2013 @ 16:45
 Field Sample ID: LICA PUF/PORT IFEB092013 Removal Date/Time: FEB 11, 2013 @ 16:50

Date and Time Information			
Sample Date	Start Time (MST)	End Time (MST)	Elapsed Time (Hours)
09 FEB 2013	01:00	02:10/2013	24:00

PUF and QFF Information			
Date Received	Date Shipped	Puff Expiration Date	QFF Prep Date
22 JAN 2013			

Set Flow Rate (slpm): 230
 Date of Last Calibration: 25 SEP 11

Sampling Data			
Average Pressure (mmHg)	Average Flow (Qstd slpm)	Average Temperature (°C)	Volume (Vstd m³)
704	229	-3.4	325.66

Time set correctly prior to sampling? YES/NO ✓
 Timer set correctly prior to sampling? YES/NO ✓
 Sampling data saved to memory card after sampling? YES/NO

Comments:

Technician Signature: RAJA ABID ASHRAF

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF Port				Max Actual
Matrix :			Date Received : 13-Feb-13 by: RMR	- 4 --
SmpDate: 9-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 23-Feb-13 by: rnr	45 14 ok
EndDate: 10-Feb-13 @ 0000	..ID2 :		Date Analyzed : 7-Mar-13 by: rnr	60 26 ok
			Raw DataFile : p0431	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	0.00		
102849	Acenaphthene	.03			102850	Acenaphthylene	0.00		
102851	Acridine	0.00			102852	Anthracene	0.00		
102853	Benzo(a)anthracene	0.00			102854	Benzo(a)pyrene	0.00		
102855	Benzo(b,j,k)fluoranthene	.03			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	.01			102858	Benzo(ghi)perylene	.01		
102859	Chrysene	.02			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	0.00			102864	Fluoranthene	.06		
102865	Fluorene	.13			102866	Indeno(1,2,3-cd)pyrene	0.00		
102867	Naphthalene	.10			102868	Phenanthrene	.21		
102869	Pyrene	.04			103826	Retene	.03		

Total Particulate Weight (when applicable) = mg

Total cubic meters of air =(hrs @ m3/min) = m3

MDL : The Method Detection Limit for this sample has been calculated based on the volume of sample collected.

Typically, 10 ng of analyte per sample must be present on the filter to satisfy the current analytical technique.

Zero (0) values indicate that the analyte is not DETECTED.

MDL - Method Detection Limit

flags B - This analyte is found in the blank as well as the sample. The blank value has been subtracted.

X - Estimated value. The target compound meets the identification criteria, but is less than the MDL.

Q - Qualifying ions present but failed the ion ratio limits.

M - This value is calculated by an alternate Raw DataFile.

* - asterik following the value for Actual days taken indicates the prescribed time for that event was exceeded.

** - the Date Sampled is unknown, therefore timeline calculations can not be performed.

Certified For: Ryan Rybchuk	Team Leader	mail to: LICA
	Organic Environmental Monitoring	attn: Mike Bisaga
	Alberta Innovates - Technology Futures	Lakeland Industry and Community Assn
Date: 14-Mar-13	Bag 4000, Vegreville, Alberta	Box 8237, 5107W-50 Street
Contact No. (780) 632-8455	T9C 1T4	Bonnyville, Alberta T9N 2J5

"results relate only to the item tested"

Please check the mailing information and inform the lab if changes are required.

page 1 of 1

Maxxam

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA Puff S/N: 100 - 1015
 Location: ELK POINT AIRPORT Motor S/N: 1139
 Station ID: LICA 35 (PORTABLE) Installation Date/Time: FEB 11, 2013 @ 16:55
 Field Sample ID: LICA PUF 1 PORT 1 FEB 15, 2013 Removal Date/Time: _____

Date and Time Information		
Sample Date	Start Time (MST)	End Time (MST)
15 FEB 2013	0:50	16 FEB 2013
		Elapsed Time (Hours)
		24 HRS.

PUF and QFF Information		
Date Received	Date Shipped	Puff Expiration Date
25 JAN 2013	24 JAN 2013	
		QFF Prep Date

Set Flow Rate (slpm): 230

Date of Last Calibration: 25 SEP 11

Sampling Data		
Average Pressure (mmHg)	Average Flow (Qstd slpm)	Average Temperature (°C)
710	229	-13.4
		Volume (Vstd m ³)
		330.33

Time set correctly prior to sampling? YES/NO YES NO
 Timer set correctly prior to sampling? YES/NO YES NO
 Sampling data saved to memory card after sampling? YES/NO YES NO

Comments:

Technician Signature

RAJA A ARABID.

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF Port				Max Actual
Matrix :			Date Received : 26-Feb-13 by: RMR	- 11 --
SmpDate: 15-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 28-Feb-13 by: rnr	45 13 ok
EndDate: 16-Feb-13 @ 0000	..ID2 :		Date Analyzed : 7-Mar-13 by: rnr	60 20 ok
			Raw DataFile : p0564	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	0.00		
102849	Acenaphthene	.08			102850	Acenaphthylene	.03		
102851	Acridine	0.00			102852	Anthracene	.02		
102853	Benzo(a)anthracene	.01			102854	Benzo(a)pyrene	0.00		
102855	Benzo(b,j,k)fluoranthene	.04			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	.02			102858	Benzo(ghi)perylene	.02		
102859	Chrysene	.02			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	.01			102864	Fluoranthene	.06		
102865	Fluorene	.20			102866	Indeno(1,2,3-cd)pyrene	.01		
102867	Naphthalene	.16			102868	Phenanthrene	.29		
102869	Pyrene	.07			103826	Retene	.04		

Total Particulate Weight (when applicable) = mg

Total cubic meters of air =(hrs @ m3/min) = m3

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Zero (0) values indicate that the analyte is not DETECTED.

MDL - Method Detection Limit

flags B - This analyte is found in the blank as well as the sample. The blank value has been subtracted.

X - Estimated value. The target compound meets the identification criteria, but is less than the MDL.

Q - Qualifying ions present but failed the ion ratio limits.

M - This value is calculated by an alternate Raw DataFile.

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** - the Date Sampled is unknown, therefore timeline calculations can not be performed.

Certified For: Ryan Rybchuk	Team Leader	mail to: LICA
	Organic Environmental Monitoring	attn: Mike Bisaga
	Alberta Innovates - Technology Futures	Lakeland Industry and Community Assn
Date: 14-Mar-13	Bag 4000, Vegreville, Alberta	Box 8237, 5107W-50 Street
Contact No. (780) 632-8455	T9C 1T4	Bonnyville, Alberta T9N 2J5

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MAXXAM

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA
 Location: ELK Point Airport
 Station ID: LICA 35 (PORTABLE)
 Field Sample ID: LICA PUF/ PORT /Feb 21, 2013

Puf+ s/n: 100-1015
 Motor s/n: 1139
 Installation Date/Time: Feb 20, 2013 @ 16:11 mst
 Removal Date/Time: Feb 26, 2013 @ 18:04 mst

Date and Time Information			
Sample Date	Start Time (MST)	Finish Time (MST)	Elapsed Time (Hours)
Feb 21, 2013	00:00	Feb 22, 2013 00:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
Feb 07, 2013			????

Set Flow Rate (slpm): 230
 Date of Last Calibration: 25-Sep-11

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature (C)	Volume (Vstd m ³)
708	229	-14.1	330.34

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

Comments:

Technician Signiture: Raja Abid / Waseem Ahmed

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF Port				Max Actual
Matrix :			Date Received : 1-Mar-13 by: RMR	- 8 --
SmpDate: 21-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 4-Mar-13 by: rnr	45 11 ok
EndDate: 22-Feb-13 @ 0000	..ID2 :		Date Analyzed : 7-Mar-13 by: rnr	60 14 ok
			Raw DataFile : p0598	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	0.00		
102849	Acenaphthene	.06			102850	Acenaphthylene	.03		
102851	Acridine	0.00			102852	Anthracene	.02		
102853	Benzo(a)anthracene	0.00			102854	Benzo(a)pyrene	0.00		
102855	Benzo(b,j,k)fluoranthene	.03			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	.01			102858	Benzo(ghi)perylene	.01		
102859	Chrysene	.01			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	0.00			102864	Fluoranthene	.04		
102865	Fluorene	.11			102866	Indeno(1,2,3-cd)pyrene	.01		
102867	Naphthalene	.19			102868	Phenanthrene	.18		
102869	Pyrene	.05			103826	Retene	.02		

Total Particulate Weight (when applicable) = mg

Total cubic meters of air =(hrs @ m3/min) = m3

MDL : The Method Detection Limit for this sample has been calculated based on the volume of sample collected.

Typically, 10 ng of analyte per sample must be present on the filter to satisfy the current analytical technique.

Zero (0) values indicate that the analyte is not DETECTED.

MDL - Method Detection Limit

flags B - This analyte is found in the blank as well as the sample. The blank value has been subtracted.

X - Estimated value. The target compound meets the identification criteria, but is less than the MDL.

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	Organic Environmental Monitoring	attn: Mike Bisaga
	Alberta Innovates - Technology Futures	Lakeland Industry and Community Assn
Date: 14-Mar-13	Bag 4000, Vegreville, Alberta	Box 8237, 5107W-50 Street
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MAXXAM

Hi-Vol PUF+ Sample Collection Data Sheet

Client: LICA
 Location: ELK Point Airport
 Station ID: LICA 35 (PORTABLE)
 Field Sample ID: LICA PUF/ PORT /Feb 27, 2013

Puf+ s/n: 100-1015
 Motor s/n: 1139
 Installation Date/Time: Feb 26, 2013 @ 18:08 mst
 Removal Date/Time: Feb 28, 2013 @ 17:00 mst

Date and Time Information			
Sample Date	Start Time (MST)	Finish Time (MST)	Elapsed Time (Hours)
Feb 27, 2013	00:00	Feb 28, 2013 00:00	24.00

PUF and QFF Information			
Date Received	Date Shipped	Puf Expiration Date	QFF Prep Date
Feb 07, 2013			????

Set Flow Rate (slpm): 230
 Date of Last Calibration: 25-Sep-11

Sampling Data			
Average Pressure(mmHg)	AverageFlow (Qstd slpm)	Average Temperature (C)	Volume (Vstd m ³)
713	229	-9.7	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: _____

Technician Signiture: Waseem Ahmed

Contact: LICA			PUF ANALYSIS	
SmpNo :	ProjNo :	GrpSmpNo :	METHOD: - - -	TimeLines (days)
StaNo :	StaType:		SCAN: PAHPUF	from sample date
Comment: LICA PUF Port				Max Actual
Matrix :			Date Received : 4-Mar-13 by: RMR	- 5 --
SmpDate: 27-Feb-13 @ 0000	Samplers..ID1 :		Date Extracted: 12-Mar-13 by: rnr	45 13 ok
EndDate: 28-Feb-13 @ 0000	..ID2 :		Date Analyzed : 16-Mar-13 by: rnr	60 17 ok
			Raw DataFile : p0618	

VMV_CODE	COMPOUND NAME	ug	flag	MDL	VMV_CODE	COMPOUND NAME	ug	flag	MDL
102847	3-Methylchloranthrene	0.00			102848	7,12-Dimethylbenz(a)anthracen	0.00		
102849	Acenaphthene	.04			102850	Acenaphthylene	.03		
102851	Acridine	0.00			102852	Anthracene	.02		
102853	Benzo(a)anthracene	.01			102854	Benzo(a)pyrene	0.00		
102855	Benzo(b,j,k)fluoranthene	.04			102856	Benzo(c)phenanthrene	0.00		
102857	Benzo(e)pyrene	0.00			102858	Benzo(ghi)perylene	.02		
102859	Chrysene	.02			102860	Dibenzo(a,h)pyrene	0.00		
102861	Dibenzo(a,i)pyrene	0.00			102862	Dibenzo(a,l)pyrene	0.00		
102863	Dibenzo(ah)anthracene	0.00			102864	Fluoranthene	.04		
102865	Fluorene	.10			102866	Indeno(1,2,3-cd)pyrene	.02		
102867	Naphthalene	.12			102868	Phenanthrene	.13		
102869	Pyrene	.04			103826	Retene	.03		

Total Particulate Weight (when applicable) = mg

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