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Monitoring and Science
Data Management
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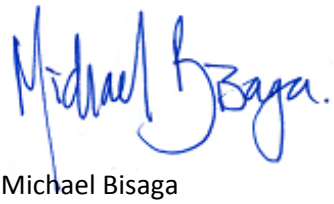
Sept 12, 2013

RE: July 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,



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
July 2013

Prepared By:

September 4, 2013

JOB #: 2833-13-07-01-C

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: July 2013

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Lili Zhou

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

Calibration Procedure

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

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

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

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

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 – July 2013

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION COLD LAKE SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO_2 (PPB)	172	48	0	0	0.08	2	17	17	4.8	214(SSW)	0.5	17	100.0
TRS (PPB)	-	-	-	-	0.12	6	10	0	0.5	256(WSW)	0.5	1, 4	100.0
NO_2 (PPB)	159	-	0	-	1.57	8.6	18	6	2.9	269(W)	2.7	4	100.0
NO (PPB)	-	-	-	-	0.36	26.6	23	20	2.4	243(WSW)	1.9	23	100.0
NOx (PPB)	-	-	-	-	1.93	34.5	23	20	2.4	243(WSW)	4.4	23	100.0
O_3 (PPB)	82	-	0	-	22.06	58	17	17	4.8	214(SSW)	33.0	11	100.0
THC (PPM)	-	-	-	-	2.21	3.9	18	6	2.9	269(W)	2.6	VAR	100.0
PM 2.5 (UG/M^3)	-	30	-	0	8.80	33	8	17	5	234(SW)	15.9	1	97.8
TEMPERATURE (DEG C)	-	-	-	-	16.40	31.8	2	16	9.5	152(SSE)	25.2	2	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	72.44	99	VAR	VAR	VAR	VAR	91.6	7	100.0
VECTOR WS (KPH)	-	-	-	-	5.38	17.6	2	23	-	353(N)	10.4	12	100.0
VECTOR WD (DEGREES)	-	-	-	-	266(W)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS NA: NOT AVAILABLE

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

Passive Ambient Monitoring Network – July 2013

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
SO_2	#27	0.9	0.32
H_2S	#5	0.87	0.24
NO_2	#24, #28	2.2	1.0
O_3	#32	26.9	20.0

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 monthly calibration was performed on July 7th. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

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

The analyzer spanned low on July 1st. An as found points check was performed on July 7th. The result was within the acceptable range (-3.7% difference). No data was discarded due to this event. The monthly calibration was performed on July 7th. The inlet filter was changed before the monthly calibration was started. Another as found points check was performed on July 25th to verify the analyzer's functionality. The result was within the acceptable range. 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 monthly calibration was performed on July 8th. The inlet filter was changed before the monthly calibration was started. 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

No operational issues were observed during the month. The monthly calibration was performed on July 8th. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

Nitrogen Dioxide (PPB)

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

No operational issues were observed during the month. The monthly calibration was performed on July 7th. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

Particulate Matter 2.5 (UG/M3)

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

Two Teom audits were performed in July: one was on July 8th and the other one was on July 30th. Both audits passed the manufacturer requirements. On July 30th, the sample inlet was cleaned, the sample filter was changed, the leak test was performed and the flow audit was completed. 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. Sixteen hours of data were invalidated as the data were below –3 ug/m3.

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

No operational issues were observed during the month.

General Monthly Summary

AQM STATION – LICA – COLD LAKE SOUTH

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

- System make / model –MetOne, S/N: F1644

The wind system is reported as vector wind speed and vector wind direction.
No operational issues were observed during the month. The last wind system calibration was performed on December 18th, 2012.

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 July 8th.

Passive Network

The samplers installed at site #2 had been removed and all samples were missing.
The SO2 sample at site #23 was damaged.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

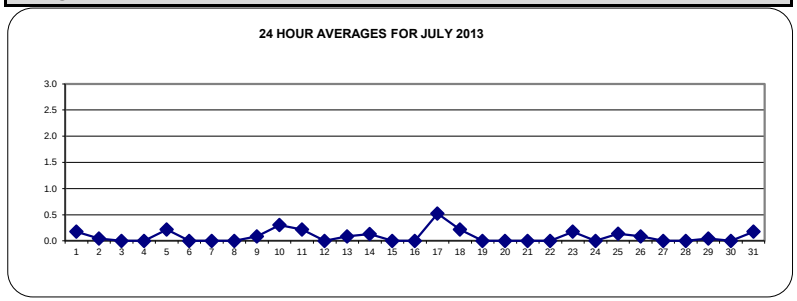
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

MST

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

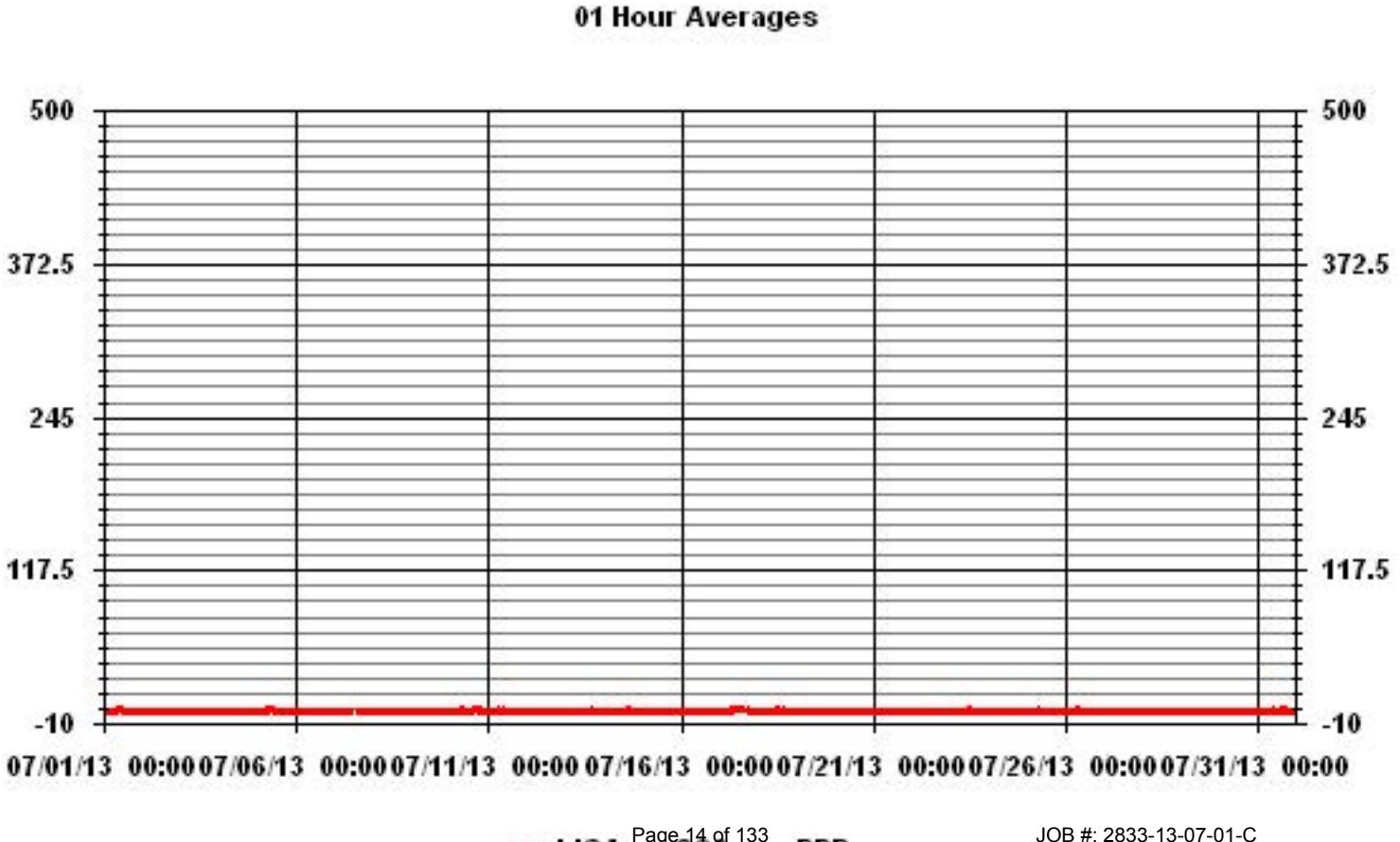


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 48 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	59					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	17	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:	0.5	PPB			ON DAY(S)	17

IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.28		MONTHLY AVERAGE:	0.08	PPB



JOB #: 2833-13-07-01-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	**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
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	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
4	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
5	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	**S**	1	1	1	2	1.1	24
6	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
7	1	1	1	1	1	1	1	1	1	1	1	**C**	**C**	**C**	**C**	**C**	1	1	**S**	1	1	1	1	1	1	1.0	24
8	1	1	1	1	1	1	1	1	1	1	1	**Y**	1	1	1	1	1	**S**	1	1	1	1	1	1	1	1.0	23
9	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**S**	2	1	1	1	1	1	1	2	1.0	24
10	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	**S**	1	1	1	1	1	1	1	1	1	1.0	24
11	1	1	1	1	1	1	1	1	1	2	1	1	1	1	**S**	1	1	1	1	0	1	1	1	1	2	1.0	24
12	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
13	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
14	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
15	1	1	1	1	1	1	1	1	1	1	**S**	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
16	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	1.0	24
17	1	1	1	1	1	1	1	1	**S**	1	1	1	1	1	1	1	2	**3**	2	1	1	1	1	1	**3**	1.2	24
18	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
19	1	1	1	1	0	1	**S**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
20	1	1	1	1	1	**S**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1.0	24
21	1	1	1	1	**S**	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	24
22	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	1.0	24
23	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	1.0	24
24	1	**S**	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	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	**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	**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	**S**	1	1	1	1.0	24
28	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	1.0	24
29	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**S**	1	1	1	1	1	1.0	24
30	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
31	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
HOURLY MAX	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	2	3	2	1	1	1	1	1			
HOURLY AVG	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	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

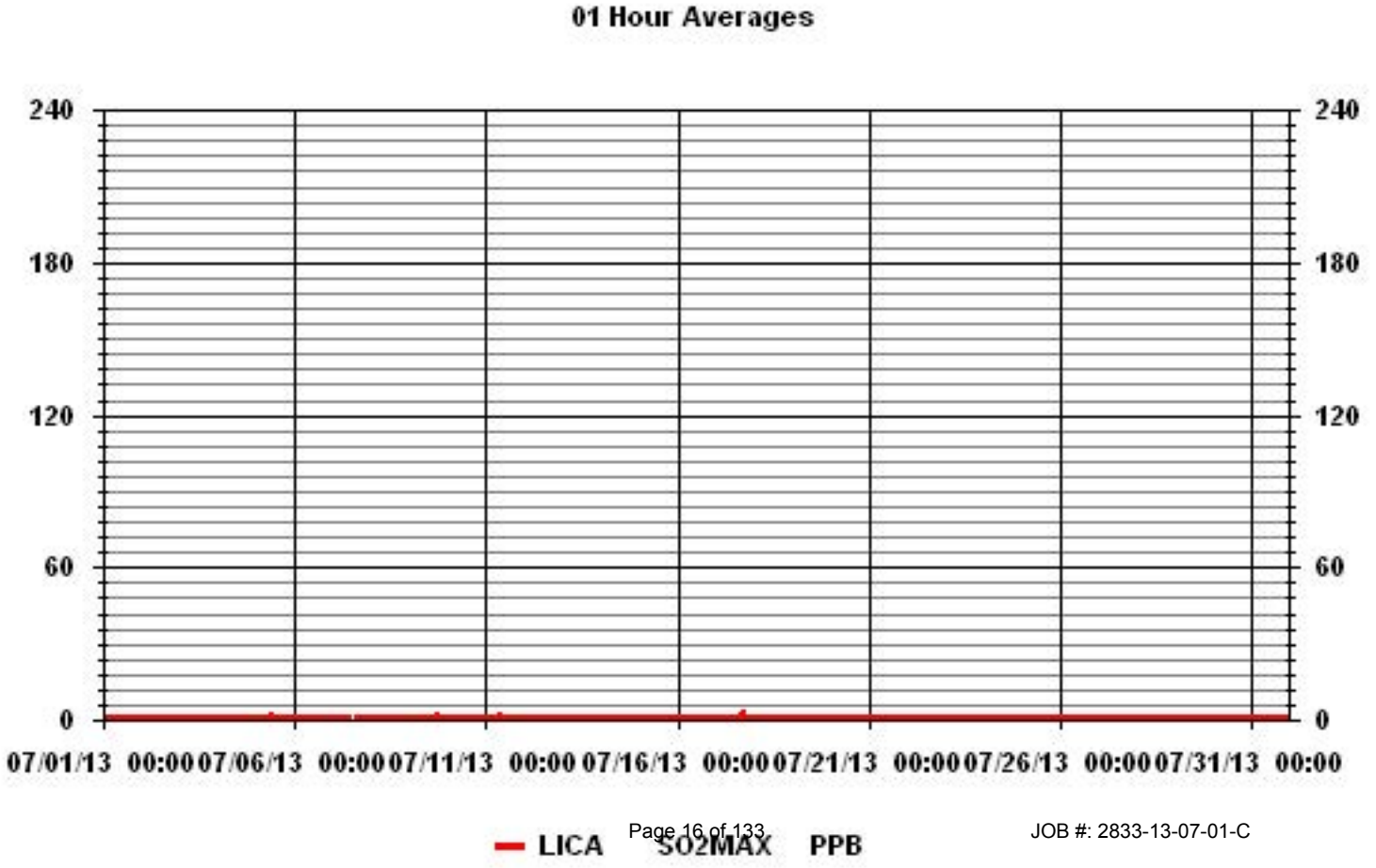
NUMBER OF NON-ZERO READINGS: 696

MAXIMUM INSTANTANEOUS VALUE: 3 PPB @ HOUR(S) 17 ON DAY(S) 17

IZS CALIBRATION TIME: 33 HRS OPERATIONAL TIME: 743 HRS

MONTHLY CALIBRATION TIME: 5 HRS

STANDARD DEVIATION: 0.16



JOB #: 2833-13-07-01-C

LICA
SO2_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	2.69	4.81	5.66	2.83	1.84	2.97	13.17	5.94	1.98	3.54	7.93	15.58	12.46	8.78	6.51	3.25	100.00
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.69	4.81	5.66	2.83	1.84	2.97	13.17	5.94	1.98	3.54	7.93	15.58	12.46	8.78	6.51	3.25	

Calm : .00 %

Total # Operational Hours : 706

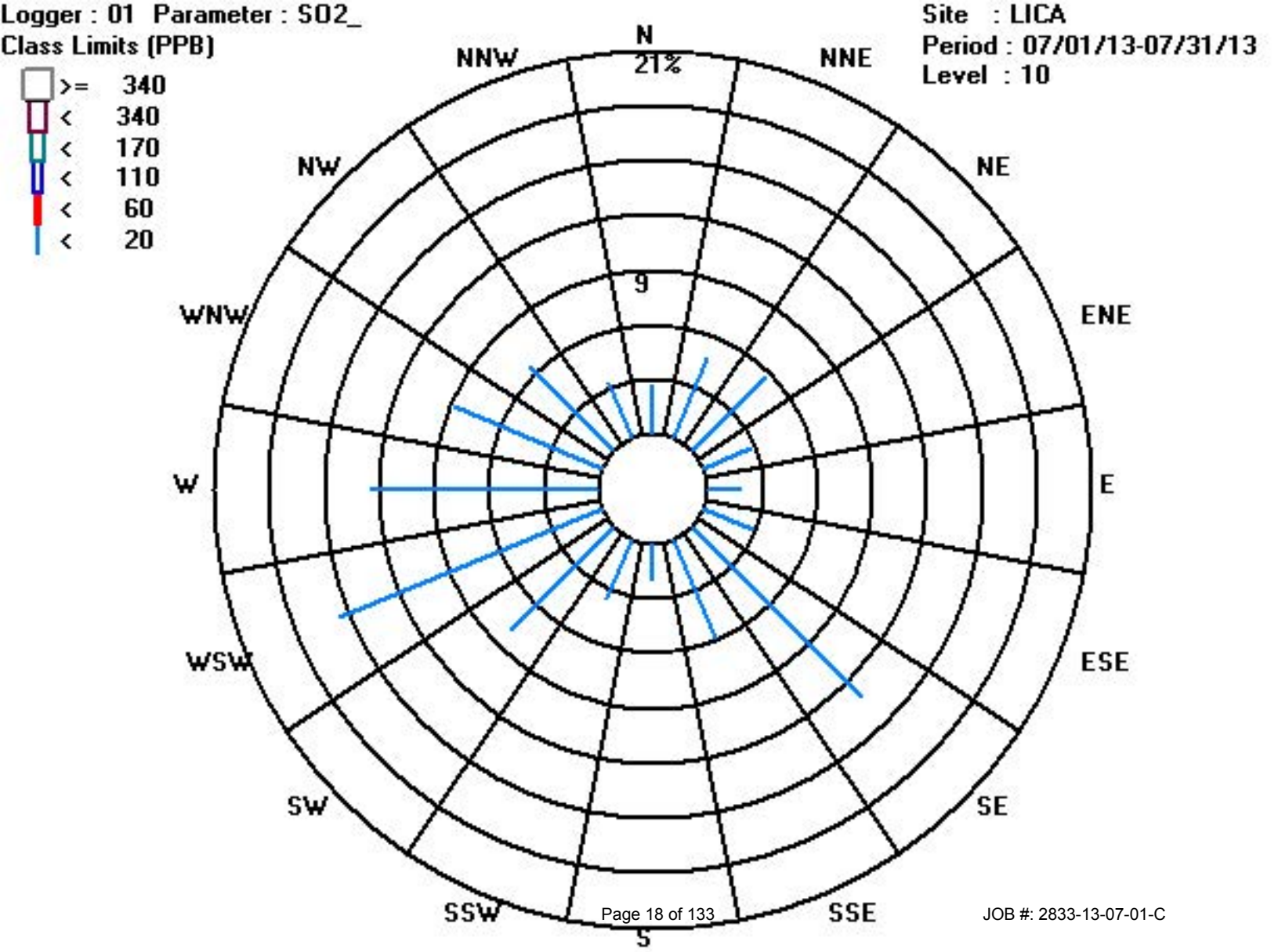
Distribution By Samples

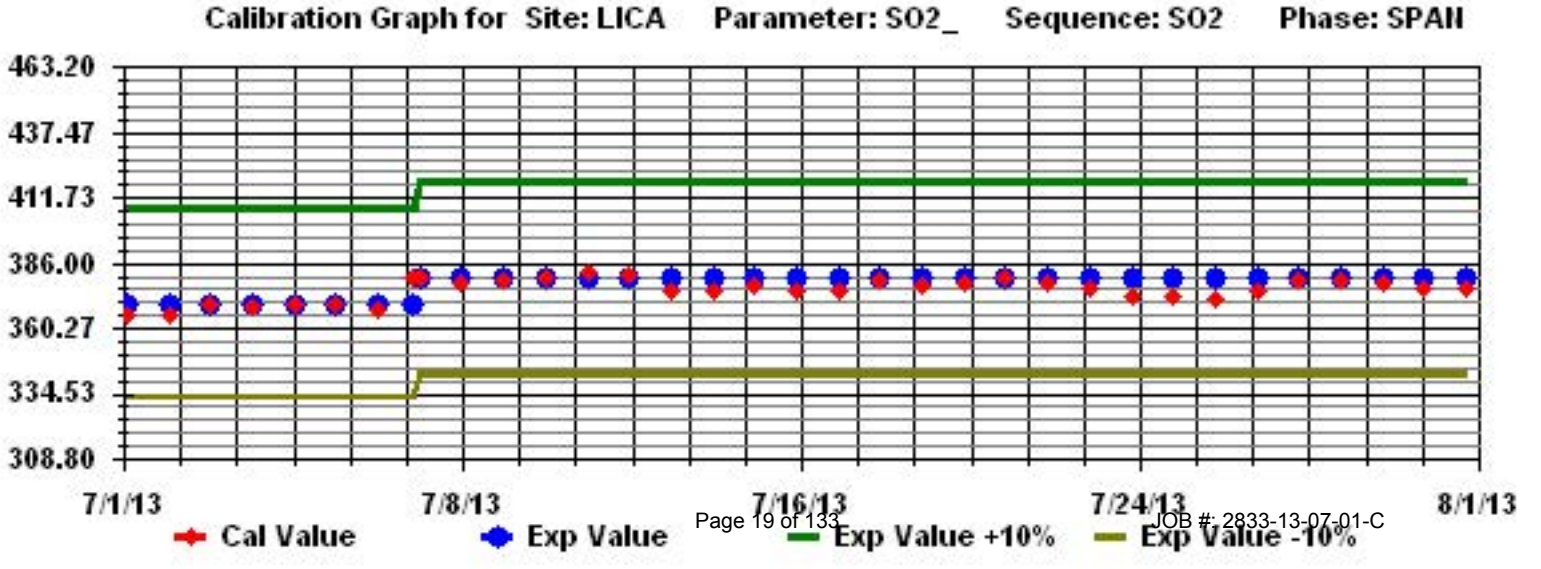
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	19	34	40	20	13	21	93	42	14	25	56	110	88	62	46	23	706
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	19	34	40	20	13	21	93	42	14	25	56	110	88	62	46	23	

Calm : .00 %

Total # Operational Hours : 706


Logger : 01 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA
Period : 07/01/13-07/31/13
Level : 10
N
21%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
9


Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN
463.20
437.47
411.73
386.00
360.27
334.53
308.80
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

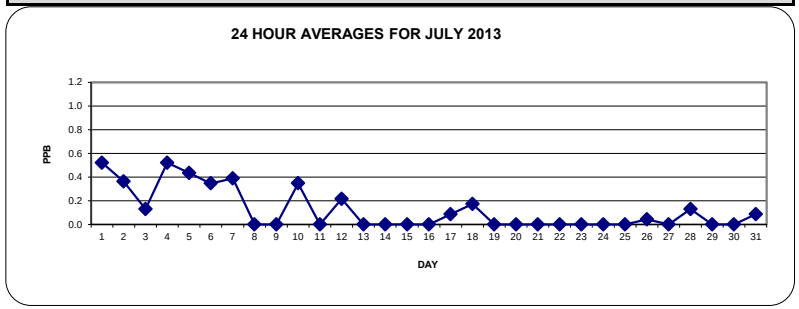
TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

MST

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

STATUS FLAG CODES

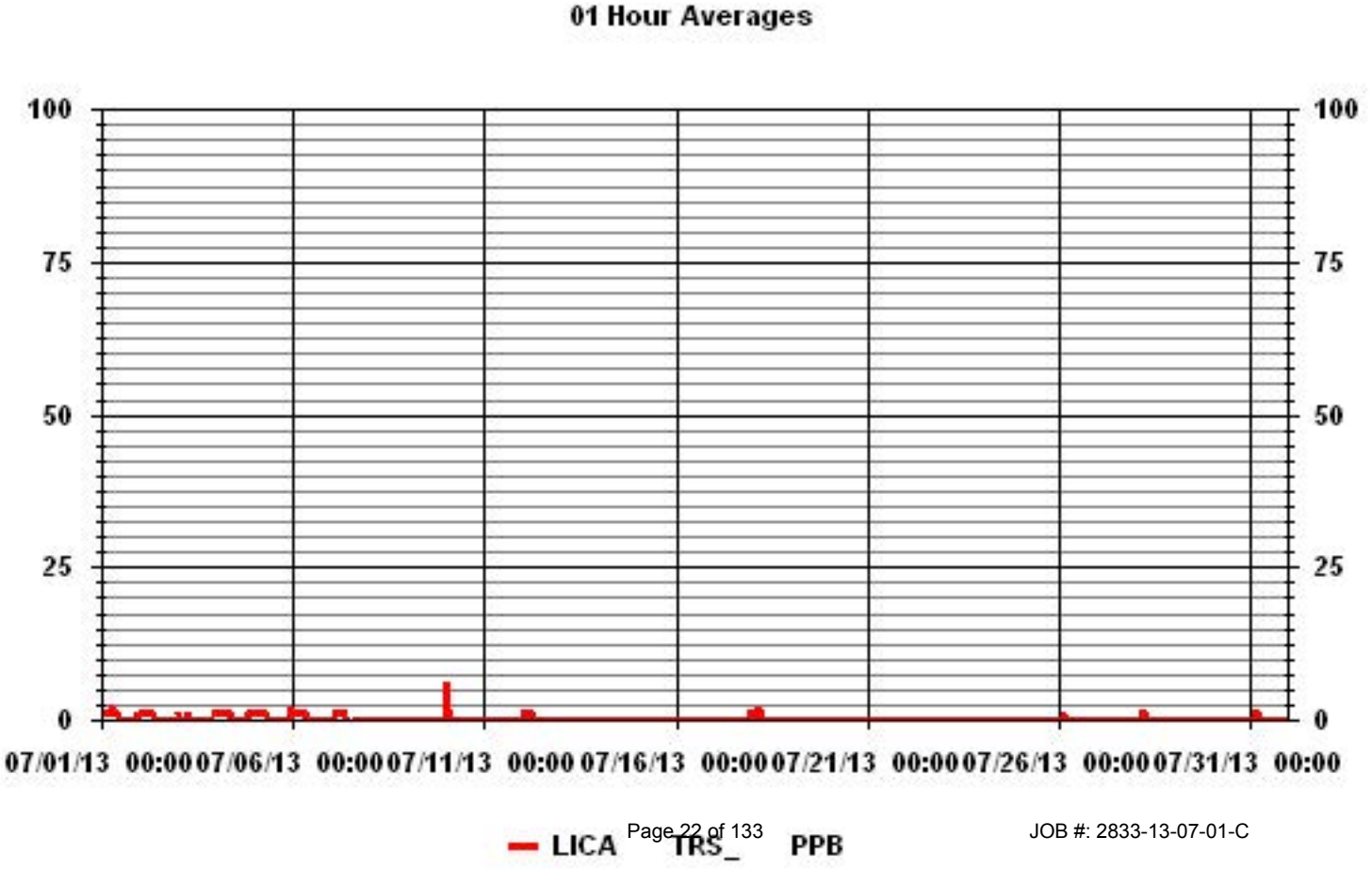
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	75					
MAXIMUM 1-HR AVERAGE:	6	PPB	@ HOUR(S)	0	ON DAY(S)	10
MAXIMUM 24-HR AVERAGE:	0.5	PPB			ON DAY(S)	1, 4
					VAR-VARIOUS	

IZS CALIBRATION TIME:	35	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.40		MONTHLY AVERAGE:	0.12	PPB



JOB #: 2833-13-07-01-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

TOTAL REDUCED SULPHUR MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	**S**	1	1	1	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.2	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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**S**	2	2	1.0	24
4	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	**S**	1	2	2	1.1	24
5	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**S**	1	1	7	7	1.3	24
6	1	2	1	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	**S**	1	1	1	1	3	1.3	24
7	1	1	1	1	1	1	1	1	1	1	1	**C**	**C**	**C**	**C**	**C**	0	0	**S**	0	0	0	0	0	1	0.6	24
8	0	0	0	0	1	1	1	0	0	0	0	**Y**	0	0	0	0	0	**S**	0	0	0	0	0	0	1	0.1	23
9	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	1	1	0.1	24
10	**25**	5	1	1	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	**25**	1.4	24
11	0	0	1	1	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	1	0.1	24
12	0	1	2	1	1	2	1	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	2	0.3	24
13	0	0	0	0	1	0	1	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
14	0	0	0	1	0	0	1	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
15	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
16	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
17	0	0	0	0	1	1	1	1	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	6	0.5	24
18	1	4	3	3	4	1	1	**S**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.8	24
19	1	0	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
20	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
21	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
22	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	24
23	0	0	**S**	0	0	1	1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	**S**	0	0	1	1	0	1	1	**S**	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	1	0.2	24
26	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	4	0.3	24
27	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
28	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	1	0.3	24
29	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
30	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
31	0	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	2	0.3	24
HOURLY MAX	25	5	3	4	4	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	6	7			
HOURLY AVG	1.1	0.7	0.6	0.8	0.7	0.6	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	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: 205

MAXIMUM INSTANTANEOUS VALUE: 25 PPB @ HOUR(S) 0 ON DAY(S) 10

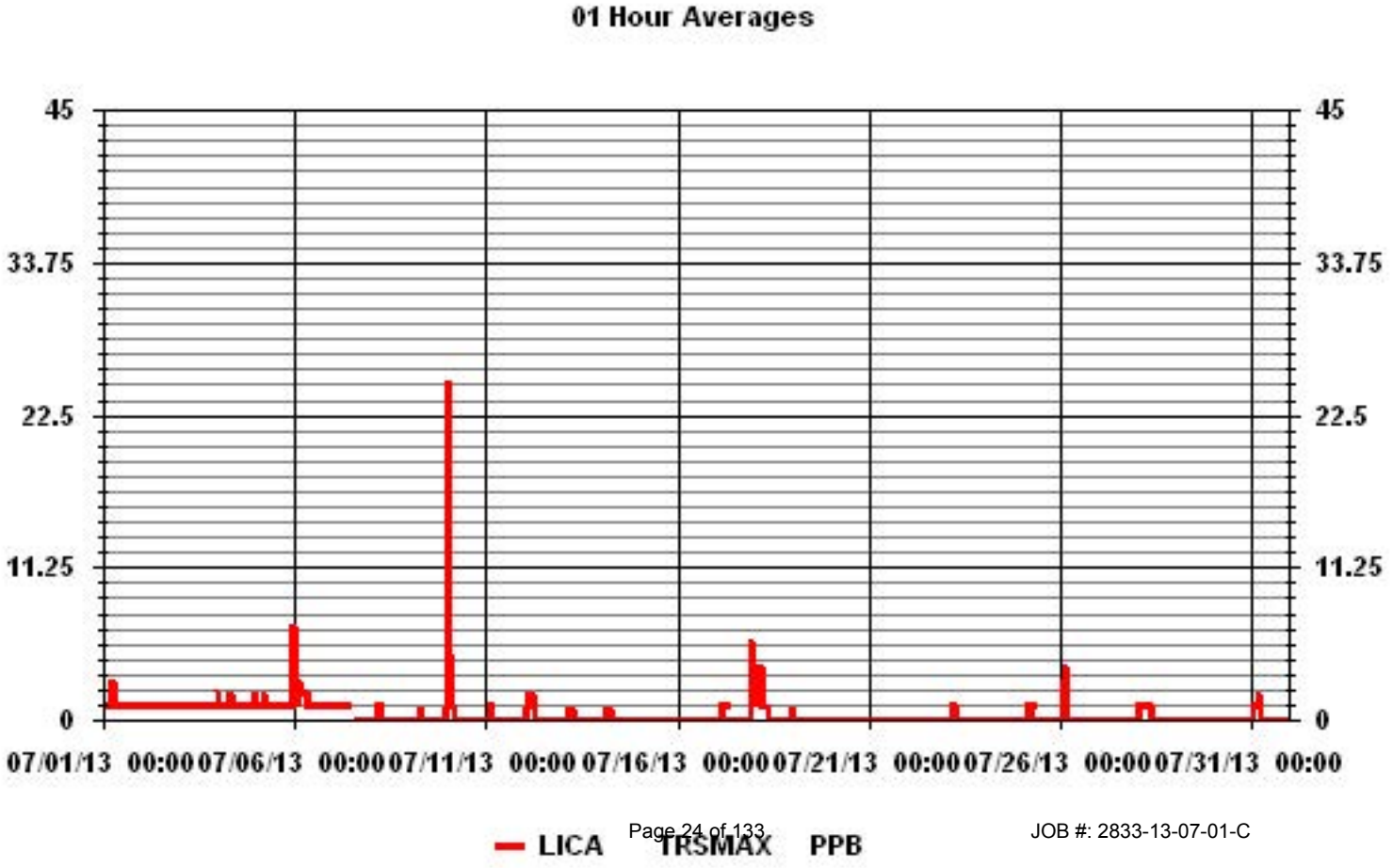
VAR - VARIOUS

IZS CALIBRATION TIME: 35 HRS OPERATIONAL TIME: 743 HRS

MONTHLY CALIBRATION TIME: 5 HRS

STANDARD DEVIATION: 1.17

JOB #: 2833-13-07-01-C



JOB #: 2833-13-07-01-C

LICA
TRS_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	2.69	4.82	5.68	2.84	1.84	2.98	13.06	5.96	1.98	3.40	7.95	15.48	12.50	8.80	6.53	3.26	99.85
<	10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.14
<	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.69	4.82	5.68	2.84	1.84	2.98	13.06	5.96	1.98	3.40	7.95	15.62	12.50	8.80	6.53	3.26	

Calm : .00 %

Total # Operational Hours : 704

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	19	34	40	20	13	21	92	42	14	24	56	109	88	62	46	23	703
<	10												1					1
<	50																	
>=	50																	
	Totals	19	34	40	20	13	21	92	42	14	24	56	110	88	62	46	23	

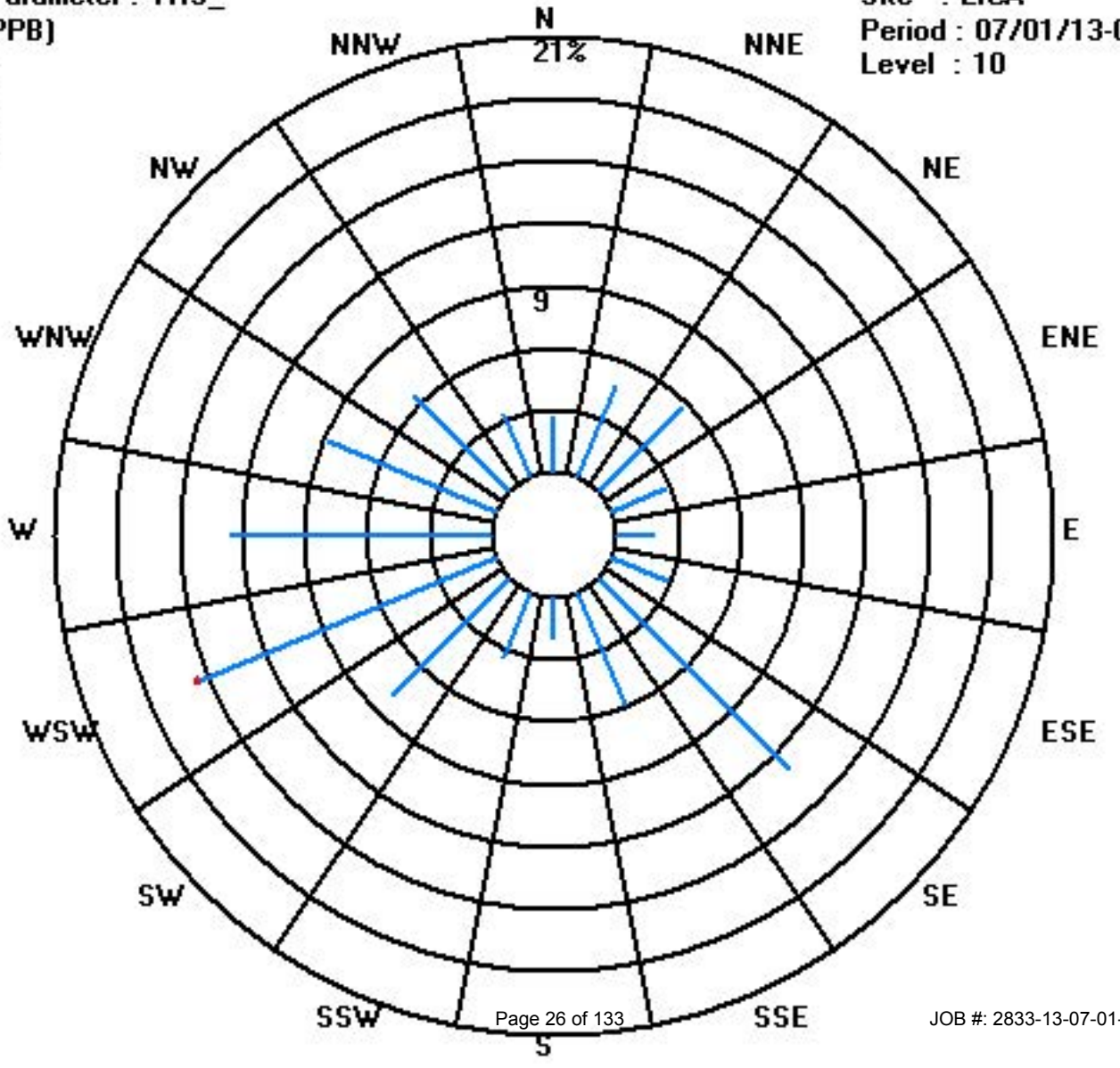
Calm : .00 %

Total # Operational Hours : 704

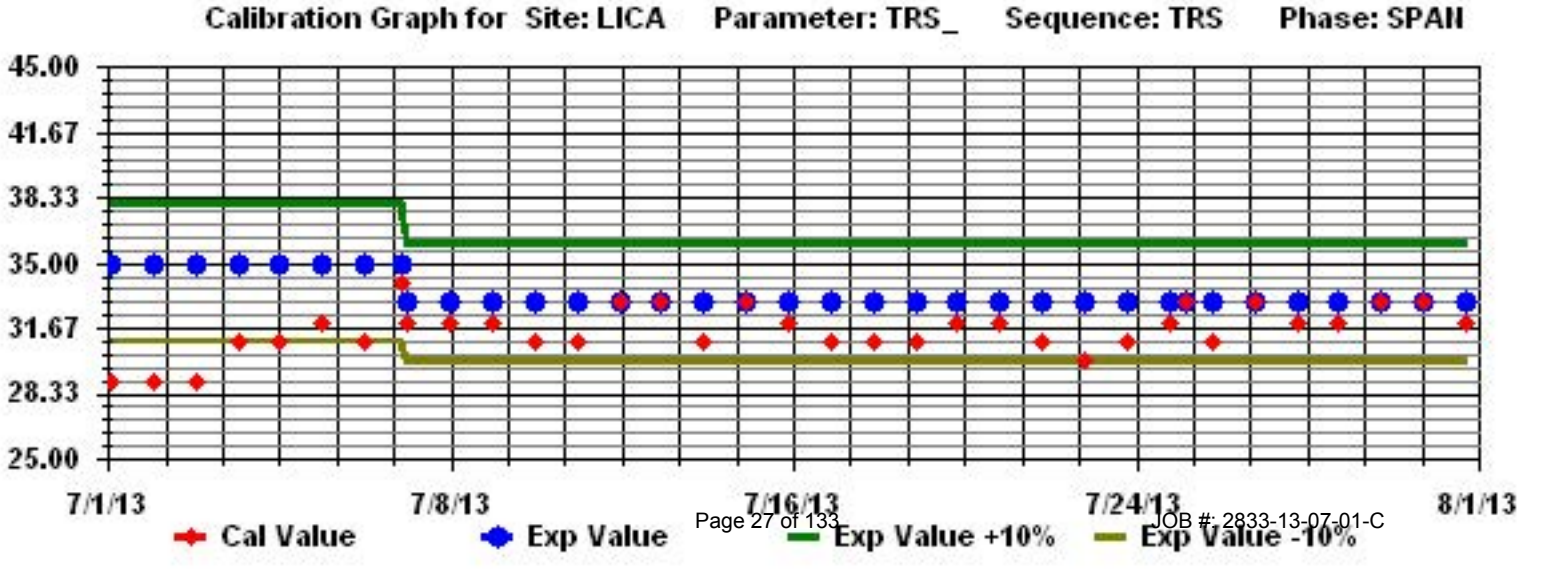
Logger : 01 Parameter : TRS_
Class Limits (PPB)

>= 50
< 50
< 10
< 3

Site : LICA
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-01-C


Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN
45.00
41.67
38.33
35.00
31.67
28.33
25.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

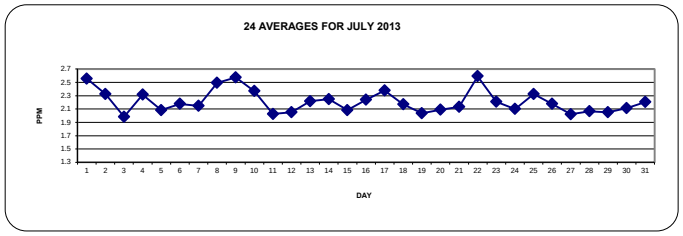
TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3	**S**	3.3	3.4	3.3	3.4	3.4	3.2	2.6	2.2	2.1	2	2	2	2	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.5	2.5	3.4	2.6	24
2	**S**	2.8	2.7	2.7	2.9	3	3	2.7	2.3	2.2	2.2	2.1	2	2	2	2	2	2	2	2.1	2.1	2.2	2.1	**S**	3.0	2.3	24
3	1.8	1.8	1.8	1.9	1.9	2	2.3	2.2	2	2	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.1	2.1	**S**	2.4	2.4	2.0	24
4	2.7	2.8	2.8	2.8	2.6	2.7	3.1	2.7	2.2	2	1.9	1.9	2	2	2	2	2	2	2.1	2.2	2.1	**S**	2.3	2.4	3.1	2.3	24
5	2.6	2.7	2.6	2.1	2	2.1	2.1	2	2	2	2	2	1.9	2	1.9	1.9	2	2	2	2	**S**	2	2	2	2.7	2.1	24
6	2.1	2.3	2.7	2.6	2.6	2.7	2.8	2.2	2	2	2	2	2	2	2	2	2	2	2	**S**	2	2	2.1	2	2.8	2.2	24
7	2.1	2.1	2.1	2.1	2.2	2.6	2.8	2.8	2.2	2.1	2	2	1.9	2	2	2	2	2	**S**	1.9	2	2	2.1	2.4	2.8	2.1	24
8	2.7	2.5	2.6	2.7	2.9	3.8	3.7	**C**	**C**	**C**	**C**	2	2	2	2	2	2	**S**	2.2	2.2	2.3	2.4	2.6	2.8	3.8	2.5	24
9	3	3.1	3.2	3.3	3.4	3.5	3.4	3	2.5	2.4	2.4	2.5	2.3	2.1	2.1	2.1	**S**	2	2	2	2.1	2.2	2.3	2.3	3.5	2.6	24
10	2.4	2.5	2.6	3	3.3	2.9	2.9	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	**S**	2.3	2.3	2.1	2.1	2.2	2.2	2.2	2.2	3.3	2.4	24
11	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2	2	2	2	2	**S**	2	1.9	1.9	2	2	2	2	2.1	2.1	2.1	2.0	24
12	2.2	2.2	2.1	2.1	2.1	2.1	2	2	2	2	2	2	2	**S**	2	2	2	2	2	2	2	2	2.1	2.3	2.3	2.1	24
13	2.4	2.5	2.6	2.7	2.8	2.8	2.5	2.2	2.1	2.1	2.1	2.1	**S**	1.9	1.9	2	2	2	2	2	2	2.1	2.1	2.1	2.8	2.2	24
14	2.1	2.1	2.1	2.3	2.4	2.2	2.3	2.3	2.5	2.5	2.6	**S**	2.5	2.6	2.4	2.1	2.1	1.9	2	2	2.5	2.1	2.1	2	2.6	2.2	24
15	2	2	2.1	2.1	2.1	2.2	2.1	1.8	1.8	1.8	**S**	2	2	2	2	2	2.1	2.1	2.1	2.1	2.2	2.4	2.5	2.4	2.5	2.1	24
16	2.4	2.2	2.3	2.6	2.6	2.6	2.6	2.5	2.4	**S**	2.1	2	2	2	2	2	2	2	2	2	2	2.1	2.4	2.7	2.7	2.2	24
17	2.6	2.6	2.7	2.7	3.4	3.4	3.1	3.1	**S**	2.3	2.2	2.2	2.2	2	1.9	1.9	1.9	1.9	1.9	2	2	2.1	2.3	2.3	3.4	2.4	24
18	2.3	2.5	2.8	2.9	2.9	3.1	**3.9**	**S**	2.4	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2	**3.9**	2.2	24
19	2.2	1.8	1.8	1.9	2.1	2.2	**S**	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.2	2.3	2.3	2.0	24
20	2.2	2.1	2.1	2.1	2.2	**S**	2	2	2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2	2.1	2.1	2.1	2	2	2.2	2.2	2.1	24
21	2	2	2	2	**S**	2.1	2.1	2.1	2.1	2	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.4	2.5	2.6	2.6	2.1	24
22	2.8	3.1	3.3	**S**	3.3	3.4	3.1	2.8	2.9	2.6	2.7	2.5	2.4	2.4	2.3	2.3	2.2	2	2	2.1	2.2	2.4	2.4	2.4	3.4	2.6	24
23	2.4	2.7	**S**	2.7	2.7	2.8	2.9	2.5	2.4	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.1	2.1	2.9	2.2	24
24	2.2	**S**	2.3	2.5	2.6	2.6	2.1	2	2	1.9	2	2	2	1.9	2	2	2	1.9	1.9	2	2.1	2.1	2.1	2.1	2.6	2.1	24
25	**S**	2.5	2.6	2.8	2.9	3	3.1	2.7	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2	2	2	2.1	2.1	2.1	2.1	2.1	**S**	3.1	2.3	24
26	2.2	2.3	2.4	2.5	2.5	2.6	2.5	2.5	2.4	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	**S**	2	2.6	2.2	24
27	2	2	2	2	2	2	2.1	2	2.1	2	2	2	2.1	2	2	2	2	2	2	2.1	2.1	**S**	2	2	2.1	2.0	24
28	2	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2	2	2	2	2	2	2	2	2	2	2	**S**	2.1	2.1	2.2	2.2	2.1	24
29	2.2	2.1	2	2	2.1	2.1	2.1	2	2	2	2	2	2	2	2	2	2.1	2	2.1	**S**	2.1	2	2.1	2.2	2.2	2.1	24
30	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.5	2.3	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	**S**	2	2.1	2.2	2.4	2.3	2.5	2.1	24
31	2.3	2.4	2.5	2.5	2.3	2.3	2.5	2.6	2.7	2.3	2	1.9	1.9	2	1.9	2	2	**S**	1.9	2	2.1	2.1	2.2	2.3	2.7	2.2	24
HOURLY MAX	3.0	3.1	3.3	3.4	3.4	3.8	3.9	3.2	2.9	2.6	2.7	2.5	2.5	2.6	2.4	2.3	2.3	2.3	2.3	2.2	2.5	2.4	2.6	2.8			
HOURLY AVG	2.3	2.3	2.4	2.4	2.6	2.6	2.6	2.4	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3			

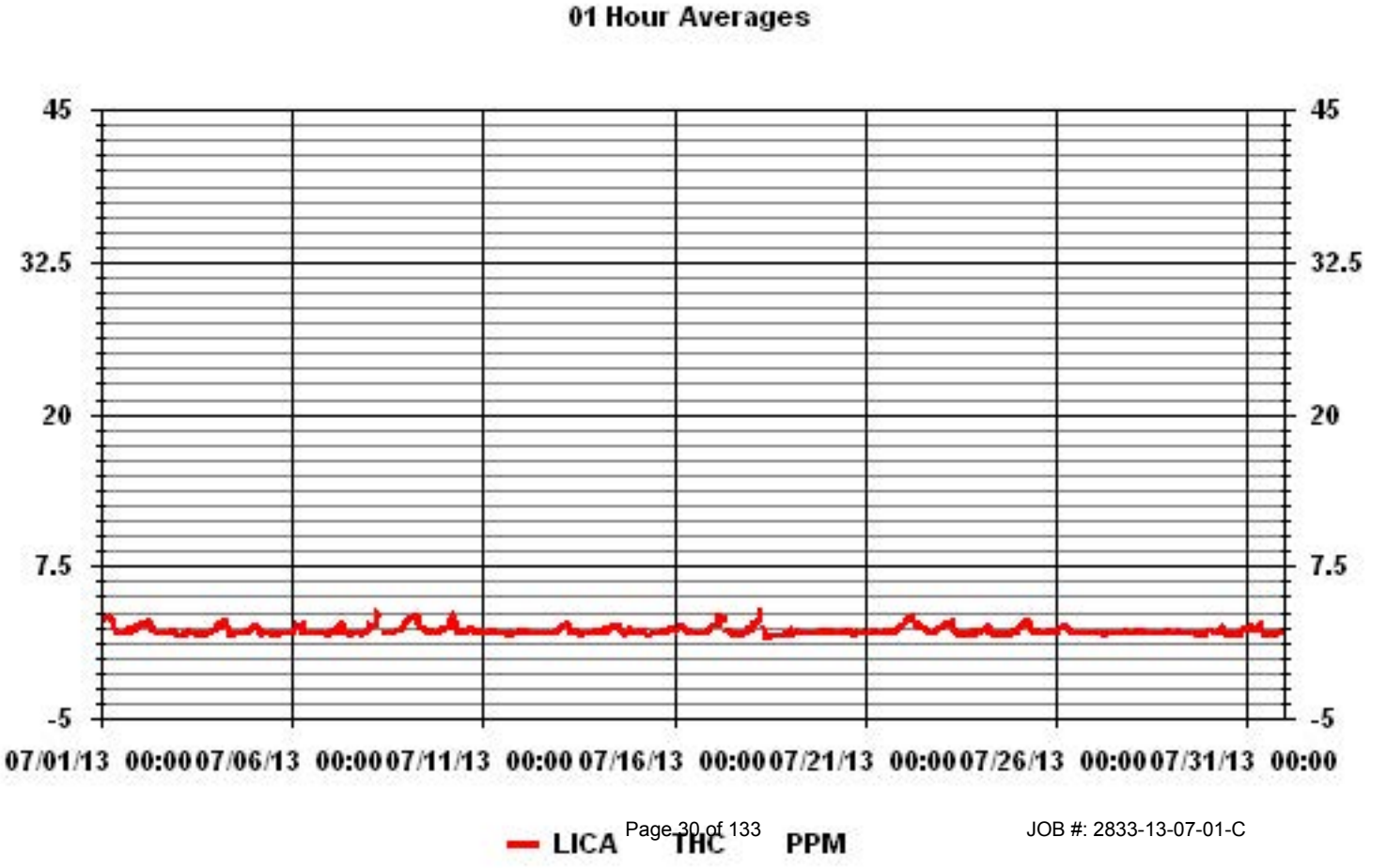
STATUS FLAG CODES

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:	707					
MAXIMUM 1-HR AVERAGE:	3.9	PPM	@ HOUR(S)	6	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	2.6	PPM			ON DAY(S)	VAR
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.34		MONTHLY AVERAGE:		2.21	PPM



JOB #: 2833-13-07-01-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

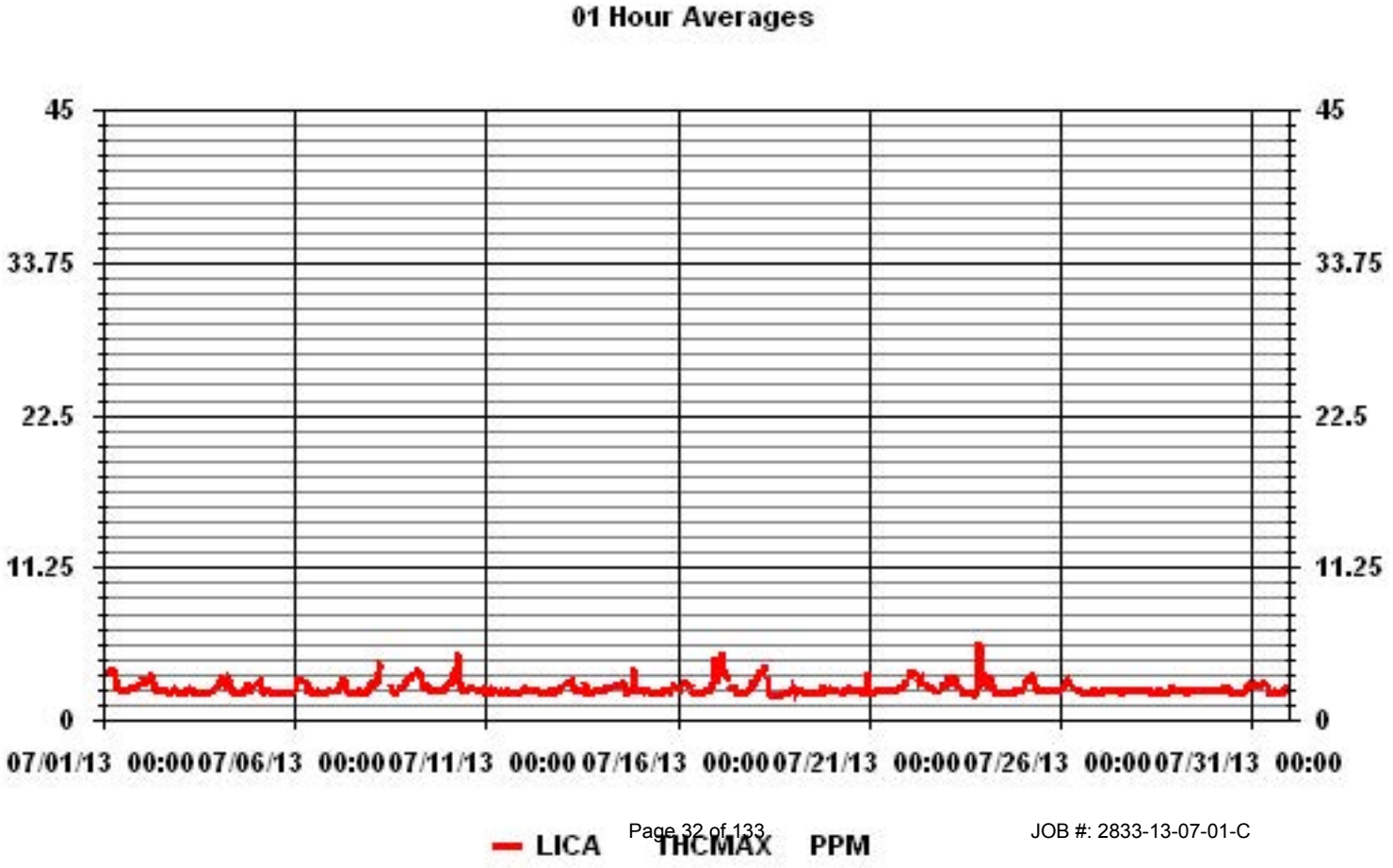
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.1	**S**	3.5	3.5	3.6	3.6	3.6	3.4	3.1	2.4	2.3	2.1	2.1	2.1	2.1	2.3	2.4	2.4	2.3	2.3	2.4	2.5	2.6	2.6	3.6	2.7	24
2	**S**	3.1	2.9	2.8	3	3.2	3.2	2.9	2.4	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2	2	2.2	2.2	2.4	2.3	**S**	3.2	2.4	23
3	1.9	1.9	1.9	1.9	2.1	2.1	2.4	2.3	2.1	2.1	2	2	2	2.1	2	2	2	2	2	2.1	2.2	2.2	**S**	2.6	2.6	2.1	24
4	2.8	2.8	3.1	3	2.7	2.9	3.2	3	2.5	2.1	2	2	2.1	2	2	2	2.4	2	2.6	2.6	2.2	**S**	2.5	2.6	3.2	2.5	24
5	2.6	2.7	2.8	2.2	2.1	2.3	2.2	2.2	2.3	2.1	2	2	2	2	2.1	2	2	2	2	2	**S**	2.1	2	2.1	2.8	2.2	24
6	2.2	2.9	2.9	3	2.9	2.9	2.9	2.8	2.1	2.1	2.1	2.1	2	2	2	2.2	2.1	2	2	**S**	2	2.2	2.1	2.1	3	2.3	24
7	2.1	2.2	2.2	2.2	2.3	2.7	2.9	2.9	2.5	2.2	2.1	2	2	2	2	2.1	2.2	2	**S**	2	2	2.1	2.3	2.7	2.9	2.2	24
8	2.8	2.6	2.7	2.8	3.5	4.2	4.1	**C**	**C**	**C**	**C**	**C**	2.5	2.1	2	2	2	**S**	2.3	2.3	2.4	2.5	2.8	3	4.2	2.7	24
9	3.1	3.1	3.4	3.5	3.7	3.7	3.6	3.2	2.6	2.5	2.4	2.6	2.5	2.2	2.1	2.1	**S**	2.1	2.1	2.1	2.2	2.2	2.3	2.3	3.7	2.7	24
10	2.6	2.7	2.7	3.4	3.6	3.1	5	2.9	2.3	2.2	2.1	2.1	2.2	2.3	2.3	**S**	2.4	2.4	2.3	2.2	2.2	2.3	2.4	2.4	5	2.6	24
11	2.1	2	2.1	2.4	2.3	2.1	2.2	2.2	2.1	2.1	2	2	2.1	2.1	**S**	2	2	2	2	2.1	2	2.1	2.2	2.2	2.4	2.1	24
12	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2	2	2.1	**S**	2	2	2.1	2.1	2	2.1	2.1	2.1	2.2	2.4	2.4	2.1	24
13	2.5	2.6	2.7	2.7	2.9	3	2.6	2.4	2.1	2.1	2.1	2.1	**S**	2.1	2.8	2	2	2	2	2.1	2.1	2.2	2.1	2.2	3	2.3	24
14	2.2	2.2	2.2	2.4	2.4	2.3	2.3	2.4	2.5	2.6	2.7	**S**	2.6	2.7	2.7	2.2	2.1	2	2.2	2.4	3.9	2.2	2.1	2.1	3.9	2.4	24
15	2.1	2.2	2.3	2.1	2.2	2.3	2.2	1.9	1.9	1.9	**S**	2	2	2.1	2	2.1	2.1	2.1	2.2	2.1	2.3	2.6	2.6	2.5	2.6	2.2	24
16	2.4	2.3	2.5	2.7	2.7	2.7	2.7	2.6	2.5	**S**	2.1	2	2	2.1	2	2	2	2.1	2.1	2.1	2.1	2.3	2.7	4.6	4.6	2.4	24
17	2.7	2.9	3.7	3.7	4.9	3.9	3.5	3.2	**S**	2.5	2.4	2.3	2.4	2.1	2	2	2	2	2	2.2	2.1	2.2	3	2.7	4.9	2.7	24
18	2.4	2.8	3.2	3.7	3.3	3.6	4	**S**	3	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	2.1	2.2	4	2.4	24
19	2.5	2.2	1.9	2.1	2.2	2.3	**S**	2.1	2	2	2	2	2	2	2	2.1	2	2	2	2.5	2.1	2.2	2.3	2.4	2.5	2.1	24
20	2.4	2.2	2.2	2.2	2.3	**S**	2.1	2	2.1	2.1	2.2	2.3	2.3	2.2	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2	2.1	3.6	3.6	2.2	24
21	2	2	2	2.1	**S**	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	2.2	2.3	2.3	2.4	2.6	2.8	2.8	2.2	24
22	3	3.5	3.4	**S**	3.5	3.5	3.4	2.9	3.1	2.7	2.7	2.6	2.6	2.6	2.3	2.3	2.3	2.1	2.1	2.1	2.2	2.5	2.5	2.5	3.5	2.7	24
23	2.6	3.1	**S**	3.1	2.9	3.1	3.1	2.7	2.5	2.4	2	1.9	1.9	1.9	1.9	1.9	2	2	1.9	2	2.3	**5.7**	3.2	3.3	**5.7**	2.6	24
24	2.7	**S**	2.5	3.1	3.1	2.8	2.4	2.1	2	2	2	2	2	2	2	2	2	2	2	2.2	2.3	2.2	2.2	2.2	3.1	2.3	24
25	**S**	2.6	2.8	2.9	2.9	3.2	3.3	2.9	2.6	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.2	2.1	2.1	**S**	3.3	2.4	24
26	2.3	2.4	2.5	2.8	3	2.6	2.6	2.6	2.5	2.3	2.1	2.1	2.1	2.1	2	2	2.1	2	2	2.1	2.1	2.1	**S**	2	3	2.3	24
27	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2	2	2.1	2.1	2.1	2.1	2.2	2.2	**S**	2.1	2.1	2.2	2.1	24
28	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2	2	2	2.1	2.1	2.1	2	2	2	2.1	**S**	2.1	2.5	2.2	2.5	2.1	24
29	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**S**	2.2	2.1	2.2	2.2	2.3	2.1	24
30	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.4	2.5	2.4	2.1	2.1	2	2	1.9	1.9	1.9	1.9	**S**	2.1	2.2	2.4	2.6	2.4	2.6	2.2	24
31	2.4	2.5	2.7	2.6	2.4	2.4	2.6	2.7	2.8	2.7	2	2	2	2	2.1	2.1	2	**S**	2	2	2.3	2.4	2.3	2.5	2.8	2.3	24
HOURLY MAX	3.1	3.5	3.7	3.7	4.9	4.2	5.0	3.4	3.1	2.7	2.7	2.6	2.6	2.7	2.8	2.3	2.4	2.4	2.6	2.6	3.9	5.7	3.2	4.6			
HOURLY AVG	2.4	2.5	2.6	2.7	2.8	2.8	2.8	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.4	2.4	2.5			

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:	706						
MAXIMUM INSTANTANEOUS VALUE:	5.7	PPM	@ HOUR(S)	21	ON DAY(S)	23	
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:			743	HRS
MONTHLY CALIBRATION TIME:	5	HRS					
STANDARD DEVIATION:	0.46						



JOB #: 2833-13-07-01-C

LICA
THC / WD Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	2.68	5.09	5.51	2.68	1.83	2.82	12.72	5.51	1.83	3.11	7.35	14.28	11.73	8.48	6.22	3.11	95.04
<	10.0	.14	.00	.14	.14	.00	.14	.42	.42	.14	.42	.70	1.27	.56	.00	.28	.14	4.95
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.82	5.09	5.65	2.82	1.83	2.97	13.15	5.94	1.98	3.53	8.06	15.55	12.30	8.48	6.50	3.25	

Calm : .00 %

Total # Operational Hours : 707

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	19	36	39	19	13	20	90	39	13	22	52	101	83	60	44	22	672
<	10.0	1		1	1		1	3	3	1	3	5	9	4		2	1	35
<	50.0																	
>=	50.0																	
	Totals	20	36	40	20	13	21	93	42	14	25	57	110	87	60	46	23	

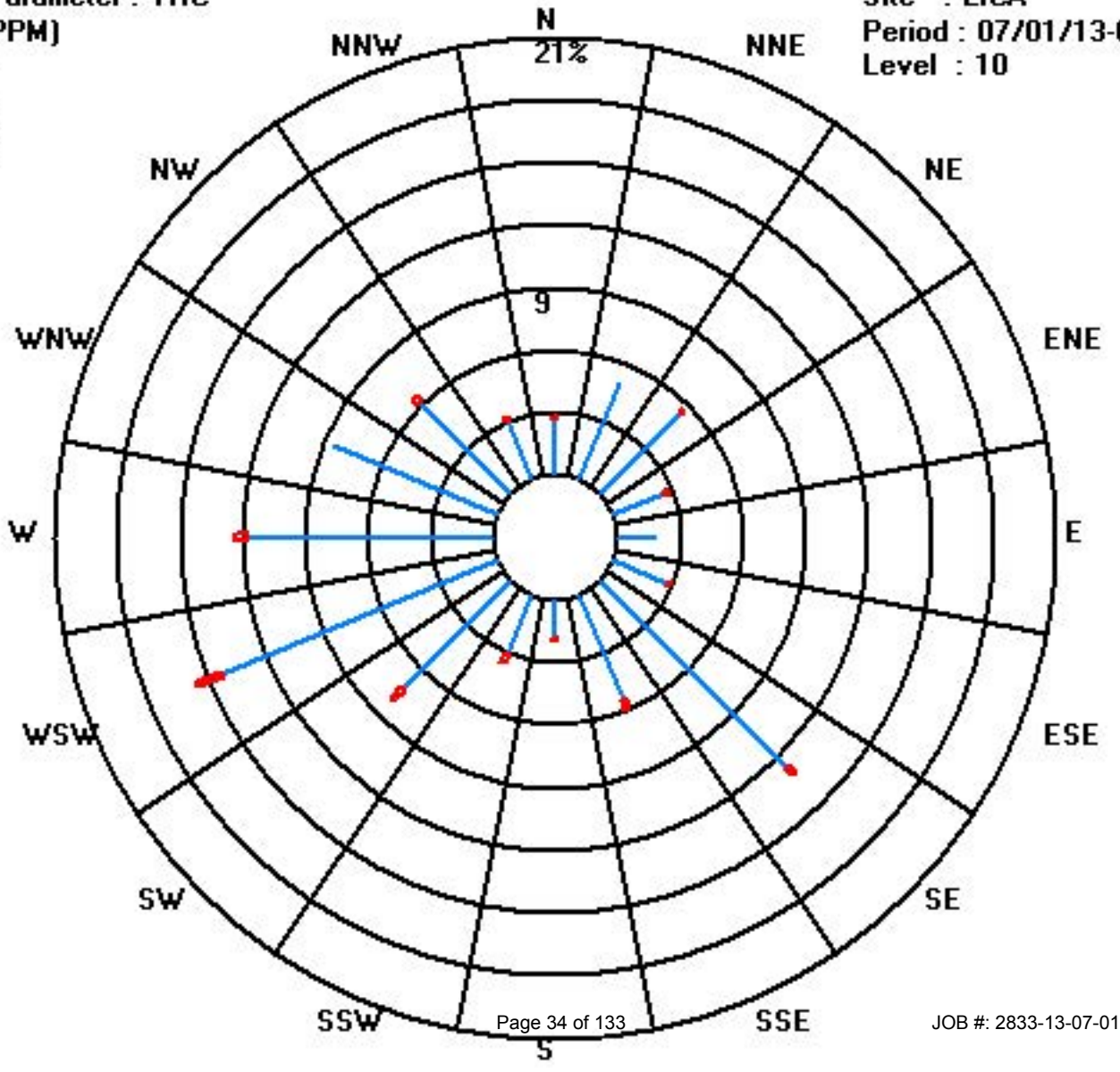
Calm : .00 %

Total # Operational Hours : 707

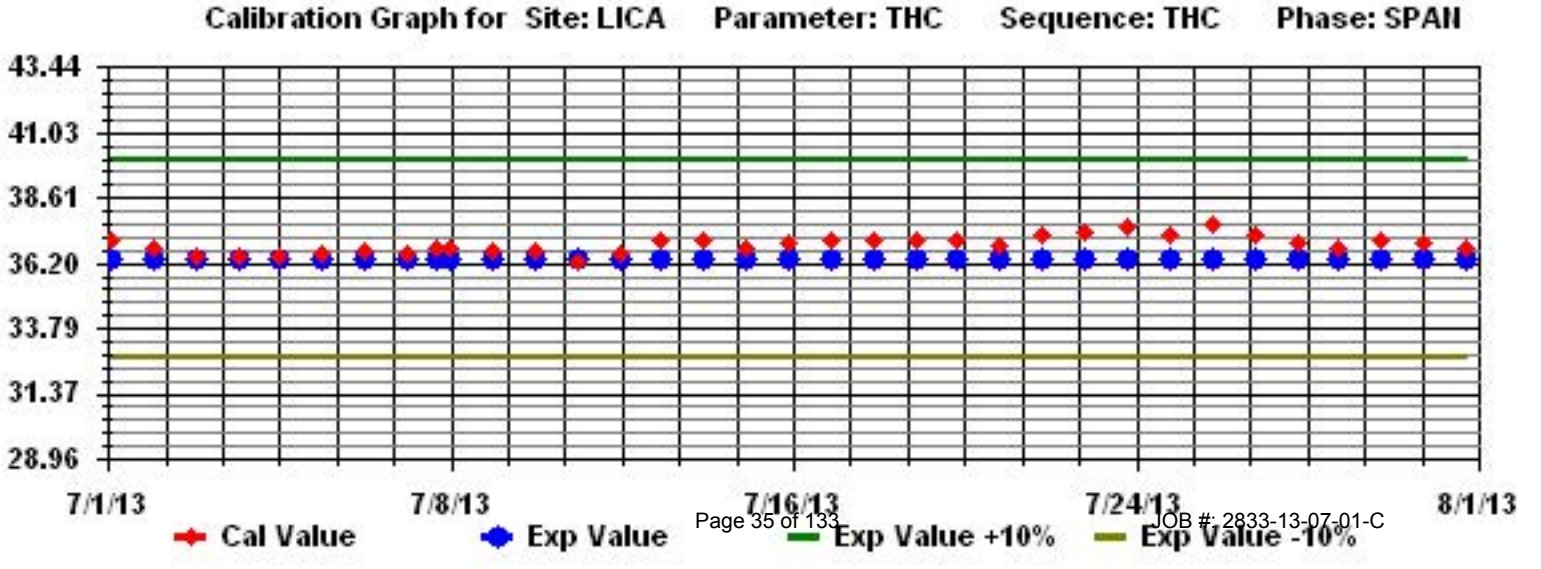
Logger : 01 Parameter : THC
Class Limits (PPM)

>= 50.0
< 50.0
< 10.0
< 3.0

Site : LICA
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-01-C


Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN
43.44
41.03
38.61
36.20
33.79
31.37
28.96
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

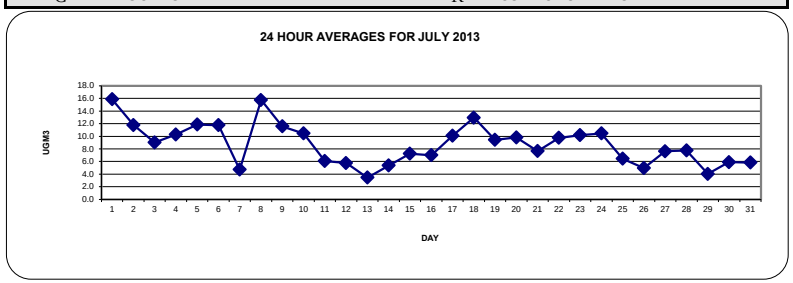
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	12	12	16	12	15	16	9	14	11	16	6	13	10	17	18	21	22	25	26	20	14	15	16	25	26	**15.9**	24
2	19	19	17	17	20	14	15	7	8	8	14	12	10	8	11	10	11	11	10	7	11	10	0	14	20	11.8	24
3	15	0	6	20	9	5	18	12	1	9	13	11	11	10	15	10	1	0	0	12	5	11	9	13	20	9.0	24
4	12	7	9	10	9	8	9	6	14	15	3	6	6	13	8	9	10	14	18	11	10	7	14	19	19	10.3	24
5	18	7	16	19	22	14	15	8	7	21	23	17	13	3	1	9	9	20	9	3	0	10	10	11	23	11.9	24
6	10	9	16	9	8	16	16	25	19	19	16	15	18	17	19	11	7	7	8	2	3	3	4	5	25	11.8	24
7	4	4	3	0	6	5	2	5	4	4	4	**X**	2	5	**X**	1	6	**X**	7	5	6	6	8	12	12	4.7	21
8	10	11	18	16	19	8	9	15	9	6	14	**C**	4	17	21	18	17	**33**	21	30	16	16	16	18	**33**	15.7	24
9	12	13	16	15	18	16	16	19	11	5	2	11	7	23	10	10	12	11	10	13	**X**	8	2	6	23	11.6	23
10	2	7	10	8	8	8	6	12	14	10	10	9	8	9	14	12	16	20	16	13	12	5	8	14	20	10.5	24
11	**X**	10	0	8	0	4	0	0	1	8	8	10	5	5	9	9	**X**	5	**X**	7	14	10	7	8	14	6.1	21
12	10	10	10	12	19	8	11	7	3	5	1	4	5	1	3	9	1	0	4	1	5	4	0	5	19	5.8	24
13	0	2	7	3	**X**	7	4	0	**X**	6	1	2	3	3	6	4	5	6	3	2	2	5	2	3	7	3.5	22
14	3	3	2	5	4	0	4	9	7	1	4	8	2	3	5	11	10	8	4	1	8	12	8	7	12	5.4	24
15	5	4	8	4	14	8	8	11	5	6	8	5	10	6	4	3	15	8	6	8	4	9	8	7	15	7.3	24
16	11	12	12	12	9	7	4	4	10	**X**	**X**	1	11	1	5	2	5	2	6	10	2	8	11	9	12	7.0	22
17	9	11	10	5	2	16	2	9	2	11	6	15	9	9	11	11	11	12	11	18	12	8	13	19	19	10.1	24
18	9	6	14	9	14	17	15	10	18	15	15	9	11	11	14	15	15	16	13	22	6	7	16	14	22	13.0	24
19	10	15	16	12	11	15	15	8	8	6	8	8	6	9	8	6	1	7	3	12	6	10	10	16	16	9.4	24
20	10	9	10	8	6	14	15	13	11	12	12	15	10	14	14	10	10	8	10	8	7	0	5	5	15	9.8	24
21	5	6	8	4	9	9	4	9	6	2	6	20	16	8	3	8	5	6	3	10	7	9	16	5	20	7.7	24
22	9	10	9	9	7	15	14	12	8	8	11	12	11	10	0	14	4	9	10	11	8	10	12	11	15	9.8	24
23	12	14	11	10	9	13	21	3	0	11	5	6	1	8	6	10	8	7	9	17	19	13	15	16	21	10.2	24
24	16	15	21	17	16	18	9	11	11	14	5	6	9	11	5	6	11	9	11	6	4	10	5	5	21	10.5	24
25	6	3	3	7	1	4	7	14	**X**	10	8	11	8	3	7	10	4	2	8	5	6	8	8	5	14	6.4	23
26	6	1	1	4	3	9	7	11	8	6	10	7	15	0	2	3	3	0	5	2	6	2	4	4	15	5.0	24
27	3	3	9	7	0	7	7	23	14	5	1	9	9	11	12	7	9	7	5	11	11	3	5	5	23	7.6	24
28	8	12	12	7	7	11	9	9	6	11	12	**X**	9	10	11	4	3	8	0	4	2	7	7	9	12	7.7	23
29	10	8	7	4	0	0	0	0	2	0	**X**	1	7	0	0	2	**X**	0	4	6	8	6	11	13	13	4.0	22
30	17	8	11	4	6	7	10	6	**C**	**C**	1	4	4	5	4	10	1	2	6	6	2	7	4	5	17	5.9	24
31	4	4	6	3	4	6	7	7	6	8	5	3	**X**	6	11	9	4	0	8	7	2	8	10	6	11	5.8	23
HOURLY MAX	19	19	21	20	22	18	21	25	19	21	23	20	18	23	21	21	22	33	26	30	19	16	16	25			
HOURLY AVG	9.2	8.2	10.1	9.0	9.2	9.8	9.3	9.6	8.0	8.9	8.0	8.9	8.3	8.3	8.6	8.8	8.1	8.8	8.5	9.4	7.3	8.0	8.5	10.1			

STATUS FLAG CODES

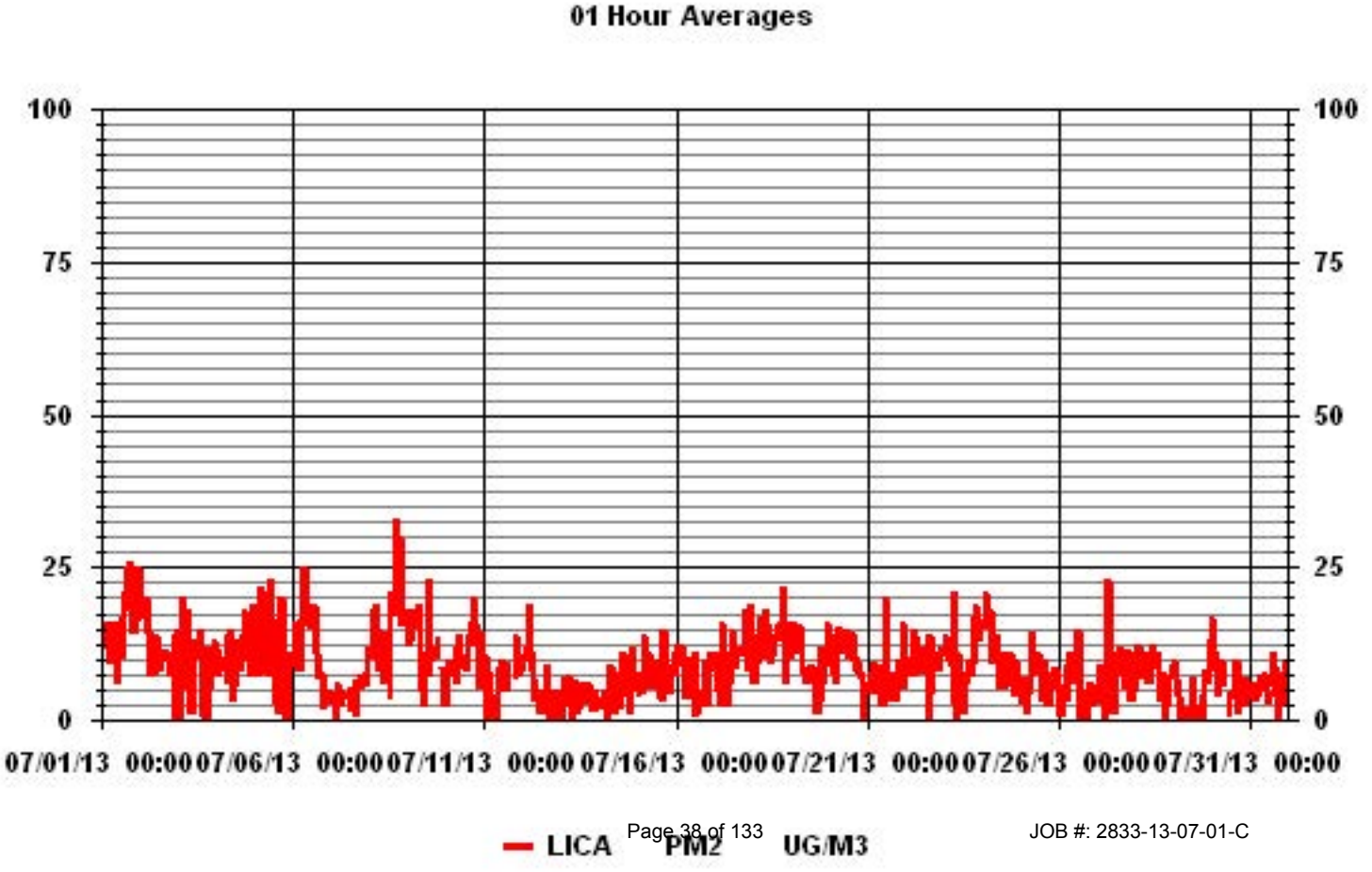
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-						
NUMBER OF 24-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	694						
MAXIMUM 1-HR AVERAGE:	33	UG/M^3	@ HOUR(S)	17	ON DAY(S)	8	
MAXIMUM 24-HR AVERAGE:	15.9	UG/M^3			ON DAY(S)	1	
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		728	HRS	
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:		97.8	%	
STANDARD DEVIATION:	5.33		MONTHLY AVERAGE:		8.80	UG/M^3	



JOB #: 2833-13-07-01-C

LICA
PM2 / WD Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30	2.75	4.68	5.79	2.89	1.79	3.03	13.37	6.06	1.79	3.44	8.00	15.72	12.00	8.41	6.75	3.17	99.72
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.13	.00	.00	.00	.00	.00	.27
<	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	2.75	4.68	5.79	2.89	1.79	3.03	13.37	6.06	1.93	3.44	8.13	15.72	12.00	8.41	6.75	3.17	

Calm : .00 %

Total # Operational Hours : 725

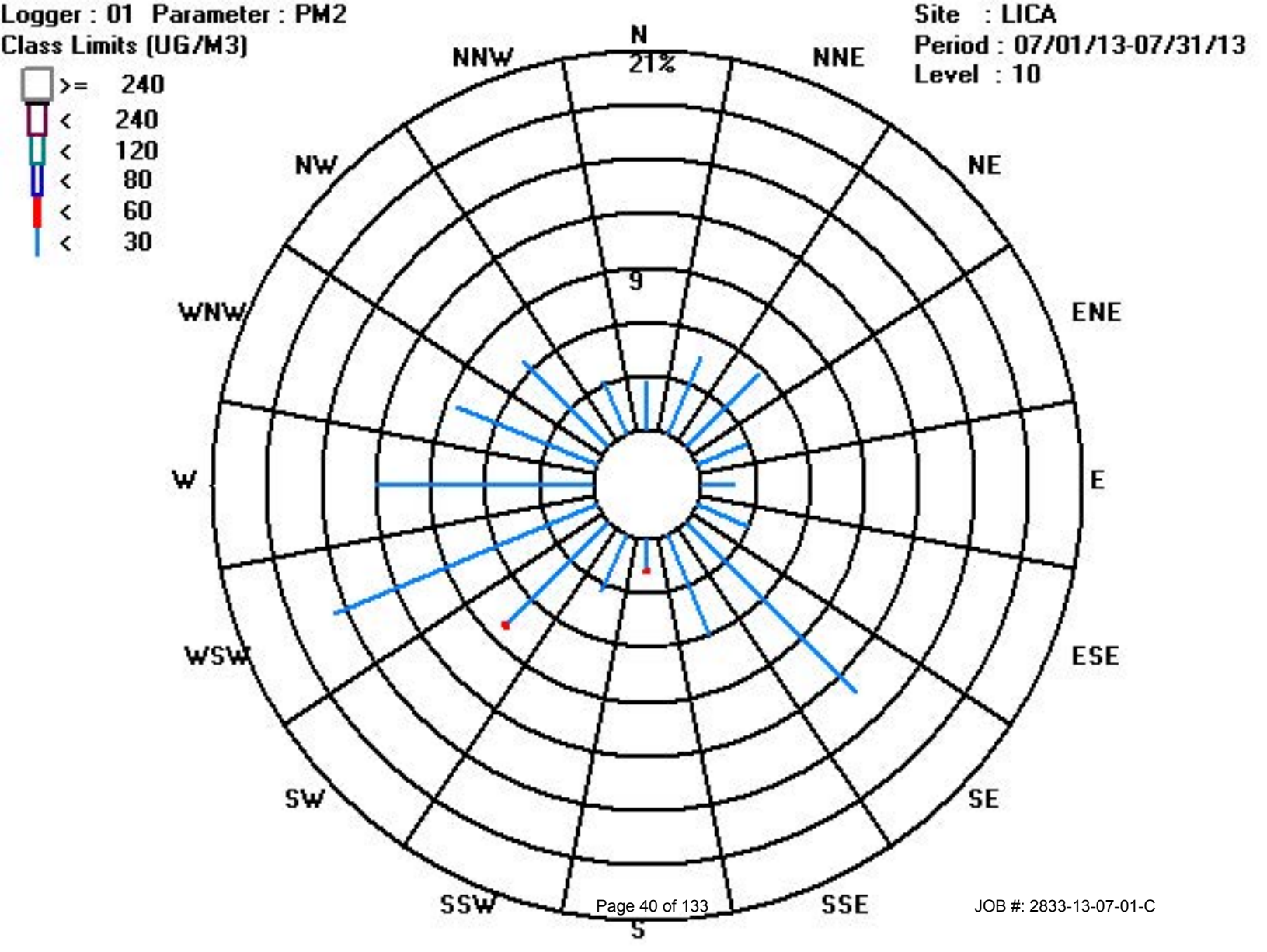
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30	20	34	42	21	13	22	97	44	13	25	58	114	87	61	49	23	723
<	60									1		1						2
<	80																	
<	120																	
<	240																	
>=	240																	
	Totals	20	34	42	21	13	22	97	44	14	25	59	114	87	61	49	23	

Calm : .00 %

Total # Operational Hours : 725



JOB #: 2833-13-07-01-C

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

NITROGEN DIOXIDE hourly averages in ppb

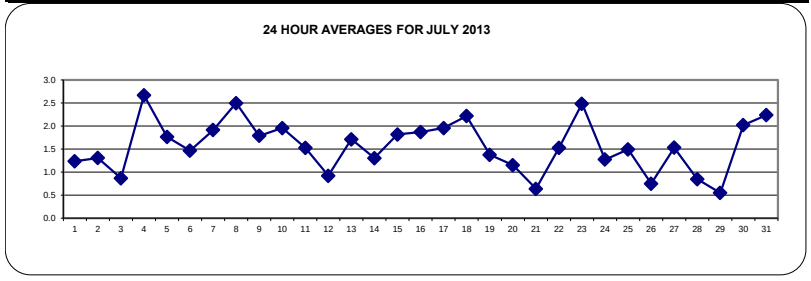
MST

HOUR START / HOUR END	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY																											
1	1.8	**S**	1	0.5	0.3	0.7	2.7	2.2	1.7	1.4	1.2	1	0.7	0.6	0.5	0.6	0.8	1	0.7	0.8	1.7	2.2	1.8	2.5	2.7	1.2	24
2	**S**	2.2	1.7	1.8	2.2	1.8	1.6	1.5	1.1	0.8	1.1	0.9	1	0.9	0.8	0.9	0.9	0.9	0.9	1.3	1.5	1.7	1.3	**S**	2.2	1.3	24
3	0.5	0.4	0.2	0.4	0.5	0.9	2.3	1.5	0.9	0.8	0.8	0.6	0.5	0.4	0.2	0.2	0	0.2	0.4	1.2	2.1	1.4	**S**	3.6	3.6	0.9	24
4	4.6	5	4.2	4.1	5.1	4.3	4.7	3.6	2	1	1	0.8	0.9	0.8	0.8	0.8	0.8	1.4	1.3	2.3	3.7	**S**	3.6	4.5	5.1	**2.7**	24
5	3.9	4.1	4.2	1.4	1.7	2	3.4	1.9	1.3	2.1	1.9	1	0.8	1	2.2	0.7	0.7	0.5	0.6	0.5	**S**	1.2	1.5	1.9	4.2	1.8	24
6	2.8	3.9	3	2.2	1.3	2.2	2.2	1.1	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.8	0.8	1.1	2	**S**	1.1	1.3	1.5	1.2	3.9	1.5	24
7	1.3	1.2	2.1	3.4	1.9	3.2	3.9	4.6	1.5	0.8	0.8	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1.1	0.5	0.9	1.4	2	4.6	1.9	24
8	2.1	1.7	1.9	2.1	2.9	6.1	7.2	5.3	3.6	2.7	2.2	1.6	1.1	0.9	0.8	0.9	0.7	**S**	1.2	1.9	4	3.2	1.6	1.7	7.2	2.5	24
9	1.5	1.6	1.8	1.6	1.7	2.1	2.4	2.5	2.3	1.8	1.5	1.7	1.3	0.9	1	0.8	**S**	1.4	2.3	2.8	3.2	2.3	1.5	1.1	3.2	1.8	24
10	1.2	1	1.1	4.4	5.3	3.3	4.6	4.2	3.1	2	1.1	0.9	0.7	0.7	1	**S**	1.2	0.7	2.4	1.5	2	0.9	0.5	1.2	5.3	2.0	24
11	1.5	0.9	0.9	1.4	1.5	2.3	3.6	2.7	1.7	2.7	1.9	1.8	1.7	1.7	**S**	1.1	0.5	0.5	0.8	0.9	0.7	1.2	1.3	1.8	3.6	1.5	24
12	1.8	1.3	1	1	1.8	1.4	1.1	0.9	0.9	0.8	0.7	0.6	0.6	**S**	0.6	0.6	0.3	0.3	0	0	0	0.6	2.7	2.2	2.7	0.9	24
13	4.2	2.4	3.2	3.8	4	3.7	2	0.8	0	0	0	0	**S**	0	0	0.1	0.3	0.7	0.7	1.1	3.7	3.8	2.9	2	4.2	1.7	24
14	1.7	1.1	0.5	0.2	0.5	0.5	0.5	0.6	0.7	0.8	1.5	**S**	2.4	2.3	1.9	1	1	0.6	0.8	1.9	3.1	2.8	2	1.6	3.1	1.3	24
15	1.1	1.8	1.1	1.4	1.8	3	2.1	1.2	0.5	0.7	**S**	0.8	0.7	4	1.3	0.6	1.3	1.2	3.1	2.2	2.8	3.1	3.5	2.5	4	1.8	24
16	2.6	2.7	2.5	3.1	3.3	2.8	2.8	2.9	2.1	**S**	1.5	0.8	0.6	0.5	0.4	0.4	0.5	0.5	0.4	1.2	3.3	2.5	2.8	2.8	3.3	1.9	24
17	2.1	1.6	1.5	1.5	1.5	2.3	4.2	2.9	**S**	1.9	1.5	1.5	1.4	1.1	0.9	1	1	1.1	1.1	1.3	3.5	2.6	2.7	4.8	4.8	2.0	24
18	3.9	1.9	1.5	2.1	1.7	3.5	**8.6**	**S**	4.1	1.7	1.2	2.1	1	1	0.9	0.7	0.7	1	1.3	1.2	2.8	2.4	2.9	2.8	**8.6**	2.2	24
19	3	1.2	0.8	0.8	2.6	3.7	**S**	2.2	0.9	1.1	0.6	0.6	0.6	0.6	0.6	0.5	0.6	1.5	2	2.4	1.6	1.3	1.3	1.1	3.7	1.4	24
20	0.6	0.5	0.4	0.2	1	**S**	1.2	1.7	1.1	1.5	1.1	0.9	0.9	0.8	1.1	2.1	1.5	1.6	1.8	1.9	1.6	1	1.2	0.8	2.1	1.2	24
21	0.6	0.6	0.5	0.5	**S**	0.6	0.5	0.1	0.2	0	0.1	0	0.3	0.2	0.2	0.2	0	0	0.5	1.7	2	2.6	1.7	1.6	2.6	0.6	24
22	1.5	1.6	1.2	**S**	0.9	1.2	2.3	1.8	2.5	1.8	1.8	1.9	2.3	2.6	1.4	1.3	0.8	0.5	0.7	1	2.6	1.6	1	0.8	2.6	1.5	24
23	0.7	1	**S**	1.9	2.1	2.2	2.8	2.2	2.2	1.5	0.8	0.9	1	0.9	0.9	0.5	2.9	2.6	1.2	3	7.9	7.2	5.1	5.6	7.9	2.5	24
24	4.9	**S**	2.2	1.7	1.6	2	1.6	1.4	0.7	0.6	0.1	0.2	0.4	0.2	0.4	0.4	0.5	0.3	0.2	0.6	2.1	2.9	2.5	1.8	4.9	1.3	24
25	**S**	1.6	1.8	1.2	1	1.3	3	3.4	2.6	3.9	1.6	1.3	1.5	0.9	1.2	1	0.5	0.5	0.5	1.4	1.5	0.7	0.5	**S**	3.9	1.5	24
26	0.7	0.9	0.9	0.7	1.3	1.4	1.6	1.3	1.1	0.8	0.4	0.6	0.3	0.2	0.6	0.4	0.3	0.3	0.6	0.6	0.9	0.8	**S**	0.5	1.6	0.7	24
27	0.5	0.4	0.2	0.4	1.7	1.3	1.8	2	3.9	1.7	0.7	0.9	1.7	2.2	2.3	3.9	2.6	0.5	1.2	1.8	1.2	**S**	1.5	0.8	3.9	1.5	24
28	1.2	1	0.8	1.1	1.2	1.3	0.9	0.8	0.9	0.9	0.6	0.5	0.8	0.5	0.5	0.5	0.5	0.4	0.3	0.6	**S**	1	1	2.2	2.2	0.8	24
29	1.7	0.6	0.4	0.4	0.5	0.6	0.8	0.7	1	0.8	0.3	0	0.1	0.1	0.1	0	0.2	0	0.8	**S**	1.4	0.2	0.7	1.2	1.7	0.5	24
30	2	2.1	1.4	1.8	3.3	3.7	3.4	2.8	2.4	1.7	1.1	0.7	0.6	2	0.8	0.5	0.2	0.4	**S**	2.2	2.2	2.9	5.2	3	5.2	2.0	24
31	3.3	2.4	1.8	2.3	2.4	3.3	4.6	4.2	3.2	2	1.2	0.6	1.1	1.1	0.6	1.2	1.1	**S**	0.7	1.7	3.7	2.5	3.1	3.3	4.6	2.2	24
HOURLY MAX	4.9	5.0	4.2	4.4	5.3	6.1	8.6	5.3	4.1	3.9	2.2	2.1	2.4	4.0	2.3	3.9	2.9	2.6	3.1	3.0	7.9	7.2	5.2	5.6			
HOURLY AVG	2.0	1.7	1.5	1.6	2.0	2.3	2.8	2.2	1.7	1.4	1.0	0.9	1.0	1.0	0.9	0.8	0.8	0.8	1.1	1.5	2.4	2.0	2.1	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

OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 159 PPB

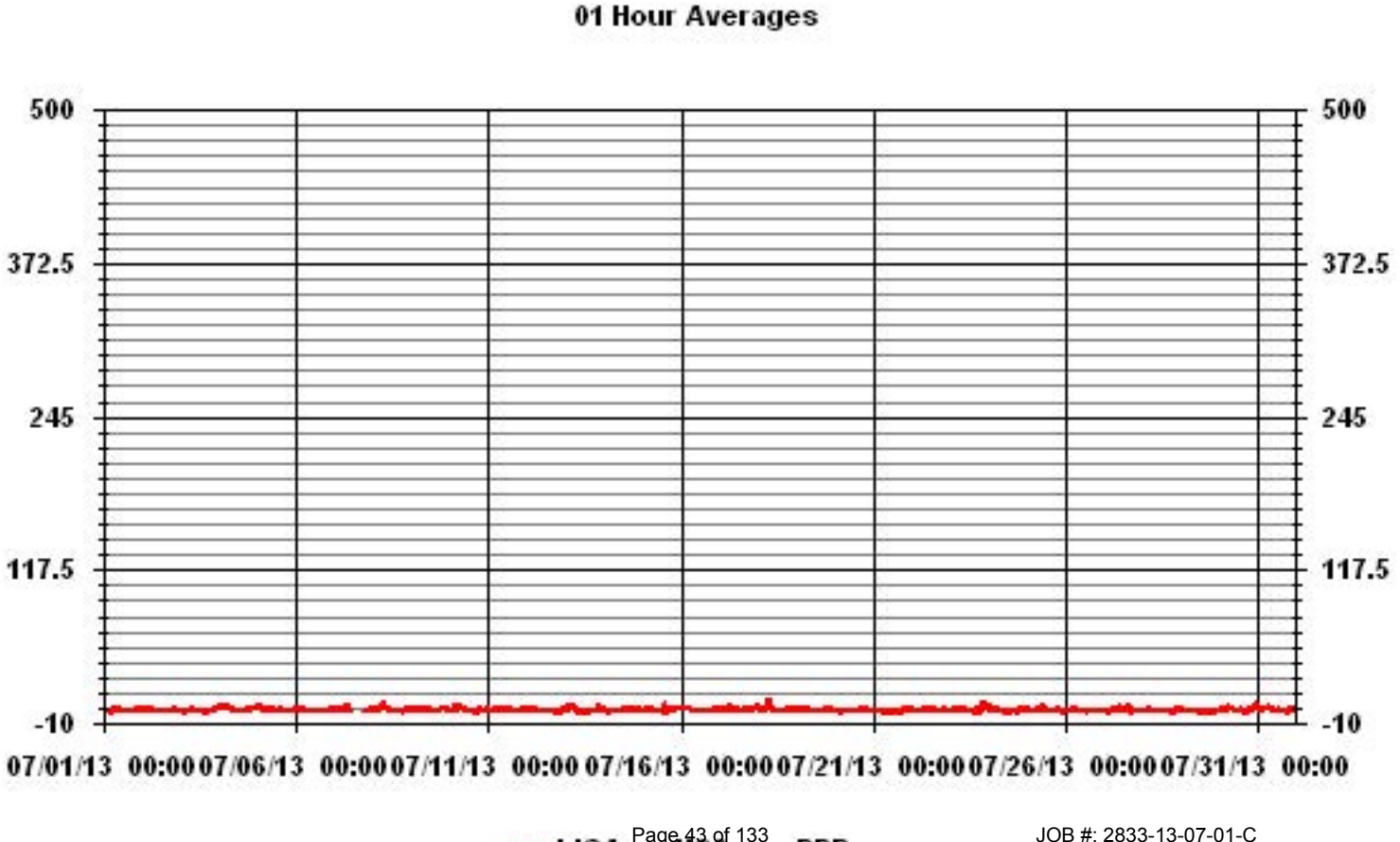


MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	687					
MAXIMUM 1-HR AVERAGE:	8.6	PPB	@ HOUR(S)	6	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	2.7	PPB			ON DAY(S)	4

IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	1.20		MONTHLY AVERAGE:	1.57	PPB

JOB #: 2833-13-07-01-C



JOB #: 2833-13-07-01-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

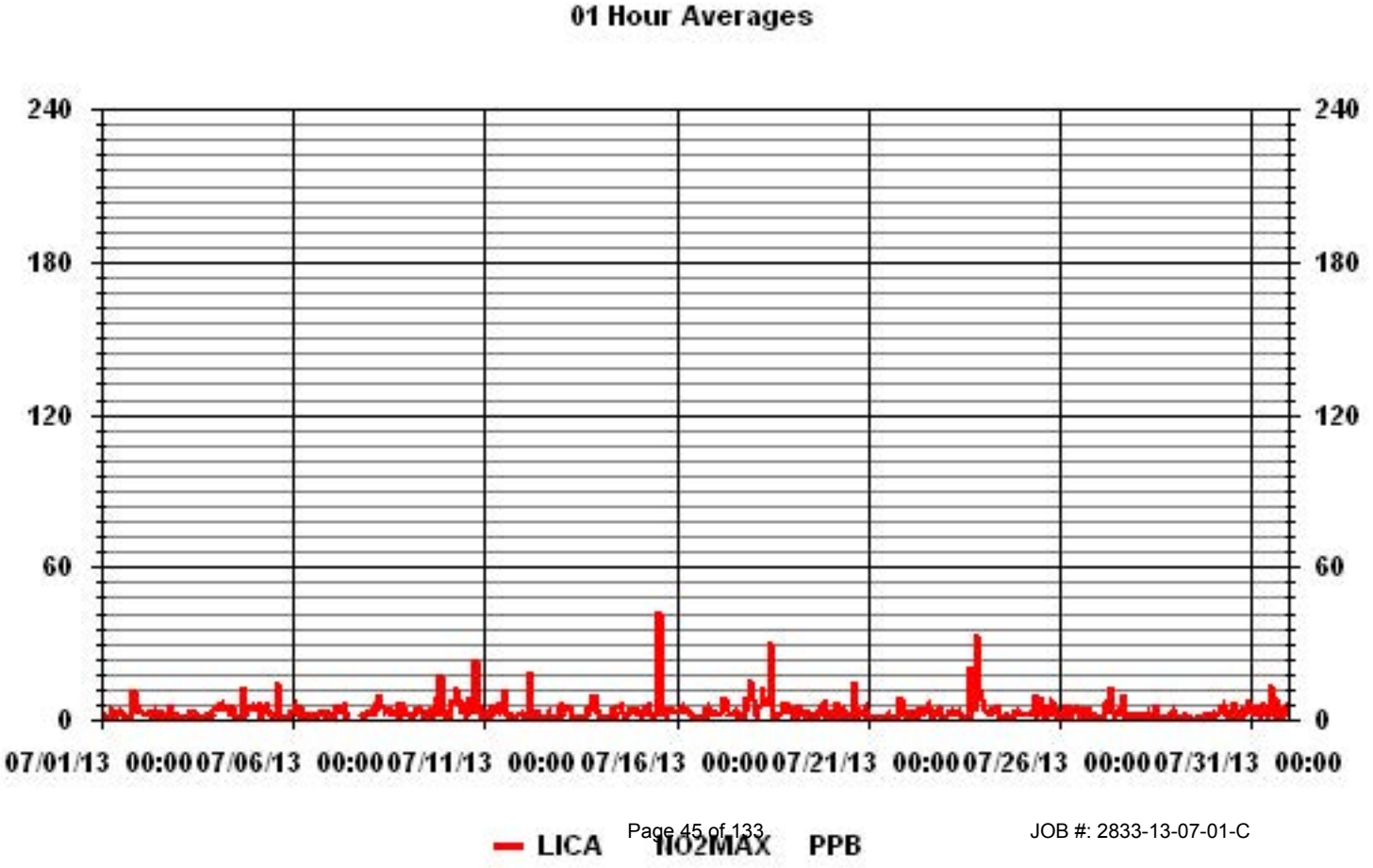
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.7	**S**	1.7	1.2	1.2	1.7	3.7	2.7	2.2	1.7	2.2	3.2	2.2	2.2	1.7	1.2	1.7	1.2	1.2	2.2	11.7	3.2	3.2	5.2	11.7	2.7	24
2	**S**	3.3	2.8	2.3	2.8	2.3	2.3	3.8	1.3	1.3	3.3	1.8	3.3	2.8	1.3	1.8	1.8	1.3	1.8	5.3	2.3	1.8	1.8	**S**	5.3	2.4	24
3	1	0.5	0.5	0.5	0.5	1.5	2.5	2.5	1.5	1.5	3	2.5	0.5	1	0.5	0.5	0.4	0.5	0.5	2	2.5	2	**S**	4.4	4.4	1.4	24
4	5.4	5.9	4.9	5.4	6.4	4.9	5.4	4.4	2.9	1.4	5.4	1.4	1.4	1.4	0.9	1.4	1.4	12.8	1.9	3.9	4.9	**S**	4.7	5.7	12.8	4.1	24
5	4.7	5.2	5.7	1.7	2.7	3.2	4.7	5.2	2.2	3.7	3.2	2.2	1.2	3.2	14.6	2.7	2.2	1.2	1.2	1.2	**S**	1.9	2.9	3.4	14.6	3.5	24
6	3.9	5.4	3.9	2.9	2.4	3.9	2.9	2.4	1.4	0.9	1.4	1.4	1.4	1.4	2.4	1.9	2.9	2.4	2.9	**S**	2.1	3.1	3.1	1.6	5.4	2.5	24
7	1.6	1.6	4.6	4.6	2.1	4.6	5.1	5.6	3.1	1.6	1.6	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	1	1.5	2.5	2.5	5.6	2.9	24
8	2.5	2.5	4	3.5	6.5	7	10	7	5	3.4	3.9	**Y**	4.4	1.5	4	3.5	2.5	**S**	2	7	5.5	5	2.5	2.5	10	4.4	23
9	2	2	2.5	2	3.5	3	3	5	4.5	2.5	2.5	2	3	2	5	2	**S**	2	9	13.9	18	3.5	3	2	18	4.3	24
10	4	1.5	1.5	7	7	7	13	8.5	5	8	2.9	4.4	2.4	3	7.5	**S**	5.5	4.5	24	4.5	5	3	1.5	2.5	24	5.8	24
11	3	1.5	1.5	3.5	2.5	3.5	5	5.5	2.5	5.5	3.5	4	2.5	10.5	**S**	2	1	1	1.5	1.5	2	2	2	2.5	10.5	3.0	24
12	2.5	2	1.5	1.5	19	1.5	1.5	1	1.5	3.5	1.5	1	1	**S**	1.5	2.5	0.5	0.5	0.5	0.5	0.5	1.5	4	3	19	2.3	24
13	7	3	4	5	5	5	2.5	2	0.5	0.5	0.5	0.5	**S**	0.5	0.5	0.5	1.5	4.5	5.5	3	10	8.5	4	3.2	10	3.4	24
14	2	1.5	1	1	1.5	1	0.5	2	4.5	2.5	2	**S**	5.5	6	3.5	1.5	1.5	2	4	3.5	4	3.5	3.5	3.5	6	2.7	24
15	1.5	4	2	2.5	3	5	5.5	2.5	2.5	1.5	**S**	3	5	**42.5**	3	1	3	2.5	4	4	4	4	4	3	**42.5**	4.9	24
16	3	3	3.5	3.5	5	3.5	3.5	3.5	2.5	**S**	2	1.5	1	1	1	0.5	1	2.5	1	3	4.5	3	3.5	3	5	2.6	24
17	3	2	2	2	2.5	3.5	8.5	4.5	**S**	2.5	2	2	2	3	1.5	2.5	1.5	2.5	1.5	3.5	9	7	16	10	16	4.1	24
18	9	2.5	2	5	5	6	12	**S**	6	6	9	31	1.5	2	1.5	1.5	2	3	6	6	3.5	3.5	7	3.5	31	5.8	24
19	5	2	1.5	1.5	4.5	4.5	**S**	3.5	2.5	3	1.5	1.5	2	2	2	1	2.5	2.5	3.5	5.5	6	1.5	2	2.5	6	2.8	24
20	1	1	1	0.5	6	**S**	1.5	2.5	4	2.5	1.5	2	1	1.5	1.5	15	2	2	3.5	2.5	3	2.5	4	2	15	2.8	24
21	2	1.5	0.5	1	**S**	1	0.5	0.5	0.5	0.5	0.5	1	1.5	2.5	1	0.5	0.5	0.5	2	3.5	9	3.5	2.5	3	9	1.7	24
22	2	2.5	3	**S**	1.5	2.5	3	2.5	5	2	2	2.5	4	5	2	4.5	1.5	1.5	2	2.5	4	3	1.5	1.5	5	2.7	24
23	1	1	**S**	2.5	2.5	4	3.5	2.5	2.5	3.5	1.9	1.5	1	1.5	1	1	20.4	19.5	3	18	34	13	7	8.5	34	6.7	24
24	5.5	**S**	3.5	2.5	2.5	5	2.5	4.5	5	6	0.5	0.5	1	1	2	1	1.5	1	0.5	2	3.5	4	4	2.5	6	2.7	24
25	**S**	2	2	2	2	2	3.5	4	5.9	9.4	2.5	3	8.5	4	3.5	1.5	2.5	5.5	1.4	6	5	2.5	1	**S**	9.4	3.6	24
26	1	2	1.5	1.5	6	2	6	2	3	3	4.5	4.5	1.5	1.5	3	1.5	1.5	0.5	4.5	3	1.5	1.5	**S**	1.5	6	2.5	24
27	1	0.5	0.5	0.5	6.5	2	8	3.5	13	3.5	1	2	3	4	3.5	8.5	8.5	1.5	2	2	1.5	**S**	2	1.5	13	3.5	24
28	2	1.5	1	1.5	1.5	1.5	1	2.5	1	2	1	1	5.5	1	0.5	0.5	1	0.5	0.5	1.5	**S**	1.5	1.5	3.5	5.5	1.5	24
29	2.5	1.5	1	1	1	1	1.5	1.5	1	1.5	1	0.5	0.5	1	1	0.5	0.5	0.5	1.5	**S**	2	0.5	1.5	2	2.5	1.2	24
30	2.5	2.5	2	2.5	4.5	4	5.5	4	3	2.5	2	1	2.5	7	4	2.5	0.5	1	**S**	4	3.5	5	7.5	4	7.5	3.4	24
31	4.5	3	2.5	3	2.5	5.5	6	6	3.5	3	1.6	2.5	13.5	2	2	9	1.5	**S**	1.5	3	4.5	3.5	5	4	13.5	4.0	24
HOURLY MAX	9.0	5.9	5.7	7.0	19.0	7.0	13.0	8.5	13.0	9.4	9.0	31.0	13.5	42.5	14.6	15.0	20.4	19.5	24.0	18.0	34.0	13.0	16.0	10.0			
HOURLY AVG	3.1	2.4	2.3	2.5	4.0	3.4	4.5	3.6	3.3	3.0	2.4	3.1	2.9	4.1	2.7	2.6	2.6	2.9	3.3	4.2	5.8	3.4	3.7	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:	703					
MAXIMUM INSTANTANEOUS VALUE:	42.5	PPB	@ HOUR(S)	13	ON DAY(S)	15
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	3.50					



JOB #: 2833-13-07-01-C

LICA
NO2_ / WD Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	2.55	4.68	5.68	2.84	1.84	2.98	13.21	5.96	1.98	3.55	7.95	15.62	12.50	8.80	6.53	3.26	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	2.55	4.68	5.68	2.84	1.84	2.98	13.21	5.96	1.98	3.55	7.95	15.62	12.50	8.80	6.53	3.26	

Calm : .00 %

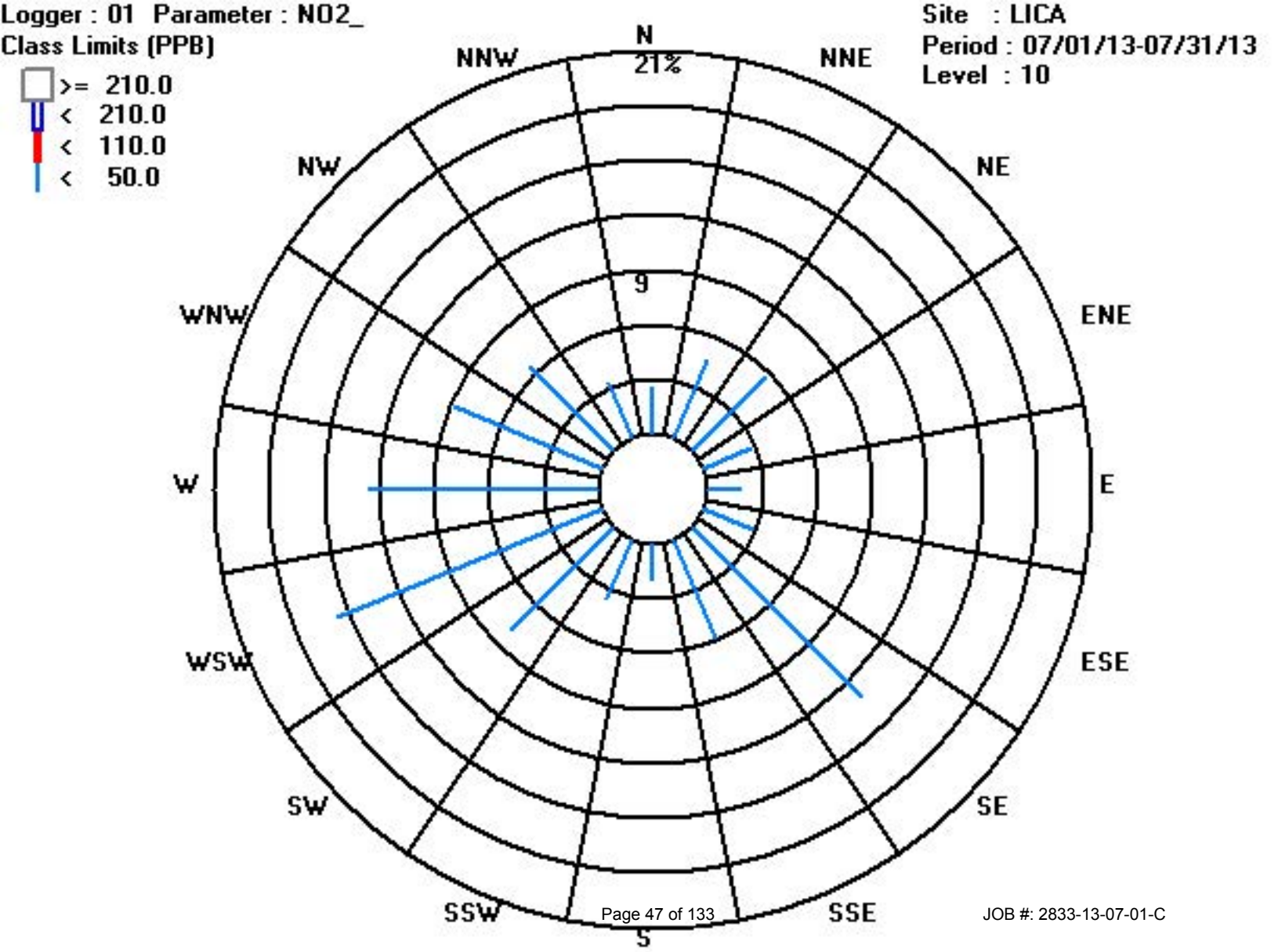
Total # Operational Hours : 704

Distribution By Samples

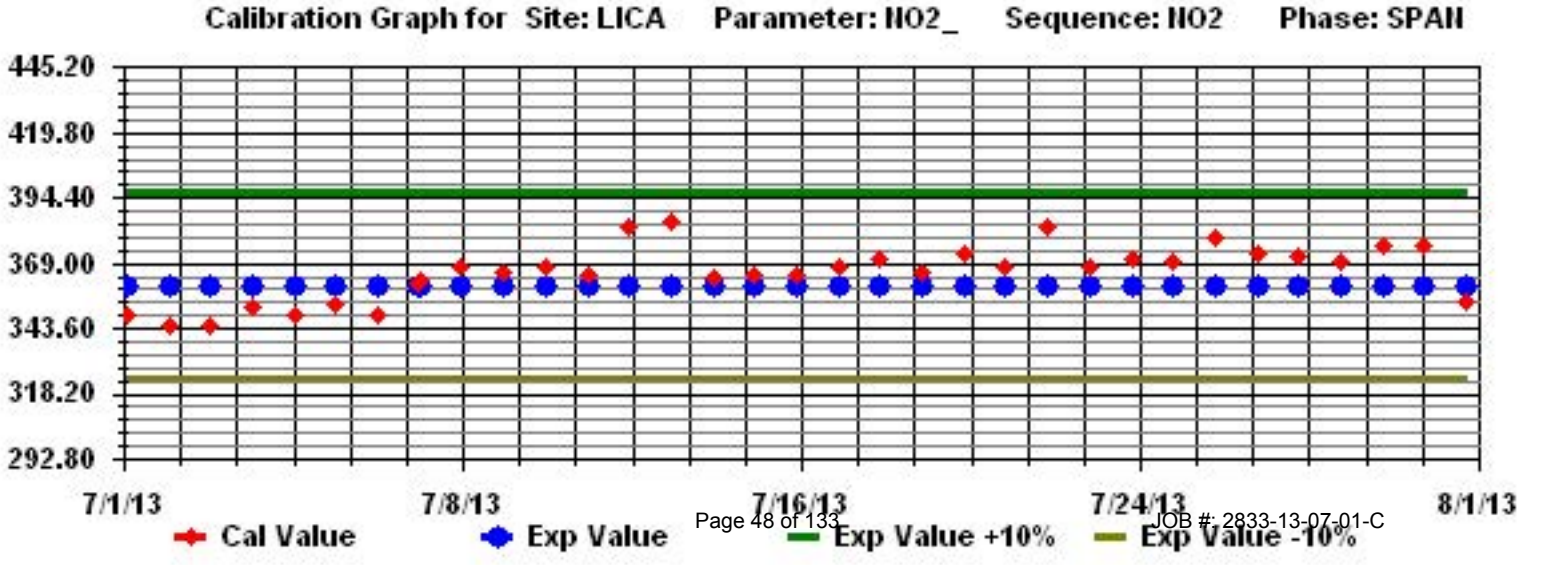
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	18	33	40	20	13	21	93	42	14	25	56	110	88	62	46	23	704
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	18	33	40	20	13	21	93	42	14	25	56	110	88	62	46	23	

Calm : .00 %

Total # Operational Hours : 704



JOB #: 2833-13-07-01-C


Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAN
445.20
419.80
394.40
369.00
343.60
318.20
292.80
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

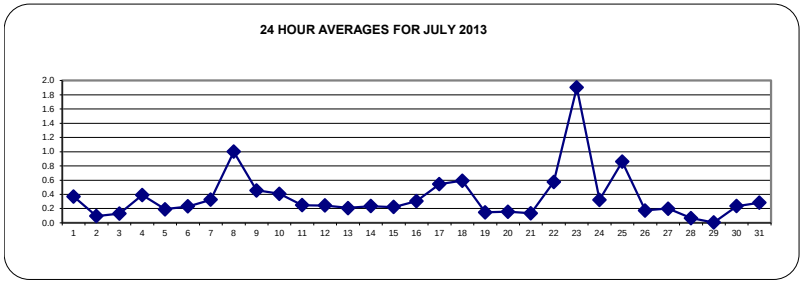
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.7	**S**	1	1.1	1	1.4	1.4	0.8	0.5	0.1	0.1	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	1.4	0.4	24
2	**S**	0	0	0	0.1	0.3	0.7	0.5	0	0	0	0.1	0	0.2	0	0.1	0	0	0	0.1	0	0	0	**S**	0.7	0.1	24
3	0	0	0	0	0	0.2	0.9	0.7	0.4	0.5	0.2	0	0	0.1	0	0	0	0	0	0	0	0	**S**	0	0.9	0.1	24
4	0.1	0.1	0.2	0.4	0.6	1.3	2.3	1.6	0.5	0.1	0.8	0	0	0	0	0	0	0.7	0	0	0.2	**S**	0.1	0	2.3	0.4	24
5	0.1	0.1	0	0	0	0.1	0.5	0.5	0.4	0.6	0.4	0.1	0	0.2	1.2	0.1	0.1	0	0	0	**S**	0	0	0	1.2	0.2	24
6	0.1	0.2	0.2	0.3	0.7	1.2	1.2	0.5	0.1	0	0.1	0	0	0	0.2	0.1	0.2	0.1	0.1	**S**	0	0	0	0	1.2	0.2	24
7	0	0	0	0	0.1	0.9	1.4	1.1	0.5	0.3	0.2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0.3	0.4	1.4	0.3	24
8	0.3	0.5	0.2	1.4	2.5	3.9	5.8	3.2	2.5	1.1	0.4	0.2	0.2	0	0	0.1	0	**S**	0.1	0.2	0.1	0.1	0.1	0.1	5.8	1.0	24
9	0.1	0.1	0.1	0.3	1.4	2.7	1.1	0.9	0.7	0.2	0.2	0.1	0.2	0.2	0.2	0.2	**S**	0	0.8	0.7	0.3	0	0	0	2.7	0.5	24
10	0.2	0	0	0	0	0.5	2	2.5	0.9	0.3	0.1	0	0.3	0.1	0.2	**S**	0.2	0.9	0.7	0.1	0.1	0.1	0.1	0.1	2.5	0.4	24
11	0.1	0.1	0.1	0.1	0.1	0.1	1.2	1.4	0.3	0.8	0.5	0.2	0.2	0.4	**S**	0.1	0	0	0	0	0	0	0	0	1.4	0.2	24
12	0	0	0	0	2.9	0.1	0.4	0.5	0.3	0.2	0.1	0	0	**S**	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.9	0.2	24
13	0.1	0.1	0.1	0.1	0.3	1.3	1.1	0.4	0.1	0.1	0.1	0.1	**S**	0	0	0	0.1	0.2	0.1	0	0.5	0	0	0	1.3	0.2	24
14	0	0	0	0.1	0	0	0	0.1	1.5	0.8	0.2	**S**	0.5	0.7	0.4	0.1	0	0	0.4	0	0.1	0.2	0	0.3	1.5	0.2	24
15	0	0.1	0	0.1	0.1	0.7	0.2	0.4	0.4	0.1	**S**	0.1	0.1	1.5	0.1	0	0.1	0.1	0.5	0.1	0.1	0.3	0	0	1.5	0.2	24
16	0	0	0	0	0.5	1.4	2.2	1.9	0.8	**S**	0.1	0	0	0	0	0	0	0.1	0	0	0	0	0	0	2.2	0.3	24
17	0	0.1	0.1	0.3	0.3	2.6	5.6	0.9	**S**	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0.3	0.3	1.8	5.6	0.5	24
18	1	0	0.2	0.5	1.5	2.1	2.7	**S**	1.5	0.4	0.9	0.9	0	0.1	0	0	0	0	0.1	0.1	0	0.3	0.9	0.4	2.7	0.6	24
19	0.1	0	0	0	0.1	0.3	**S**	0.3	0.3	0.2	0.2	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.4	0	0	0	0.4	0.1	24
20	0	0	0	0	0.2	**S**	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.2	0.7	0.2	0.1	0.4	0.2	0.2	0.2	0.1	0	0.7	0.2	24
21	0.2	0	0	0	**S**	0	0	0	0	0.1	0	0.1	0	0.2	0	0	0	0	0	0.4	1.7	0	0.2	0.2	1.7	0.1	24
22	0.6	0.6	0.9	**S**	2	2.4	1.9	1	1	0.5	0.4	0.1	0.4	1	0	0.2	0	0.1	0	0	0	0	0	0.1	2.4	0.6	24
23	0	0	**S**	0	0	1.5	1.8	1.2	0.7	0.3	0	0	0	0	0	0	5.2	2.8	0.1	2	**26.6**	0.6	0.1	0.9	**26.6**	**1.9**	24
24	1.1	**S**	0.2	0.4	0.9	3	0.4	0.4	0.1	0.5	0	0	0.1	0.1	0	0	0.1	0.1	0	0	0	0	0	0	3	0.3	24
25	**S**	0.1	0.3	0.2	2.6	3.5	3.5	3	1.1	1.8	0.3	0	0.3	0	0.5	0.3	0.1	0.4	0	0.7	0.1	0.1	0	**S**	3.5	0.9	24
26	0	0.1	0	0	0.3	0.1	0.6	0.5	0.7	0.3	0.4	0.1	0.1	0.1	0.2	0.1	0.1	0	0	0.2	0	0.1	**S**	0	0.7	0.2	24
27	0	0	0	0	0.2	0.1	0.4	0.3	0.7	0.3	0	0.1	0.1	0.6	0.2	0.7	0.8	0.1	0	0	0	**S**	0	0	0.8	0.2	24
28	0	0	0	0	0	0	0.5	0.5	0.1	0	0	0	0.4	0	0	0	0	0	0	0	**S**	0	0	0	0.5	0.1	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	**S**	0	0	0	0	0.1	0.0	24
30	0	0	0	0	0	0	0	0.6	1.3	0.9	0.2	0	0.1	1.3	0.8	0.2	0	0	**S**	0	0	0	0	0	1.3	0.2	24
31	0	0	0	0	0	0	0.3	1.4	1.9	1.3	0.1	0.3	0.4	0.1	0.3	0.4	0	**S**	0	0	0	0	0	0	1.9	0.3	24
HOURLY MAX	1.1	0.6	1.0	1.4	2.9	3.9	5.8	3.2	2.5	1.8	0.9	0.9	0.5	1.5	1.2	0.7	5.2	2.8	0.8	2.0	26.6	0.6	0.9	1.8			
HOURLY AVG	0.2	0.1	0.1	0.2	0.6	1.1	1.3	0.9	0.6	0.4	0.2	0.1	0.1	0.3	0.2	0.1	0.3	0.2	0.1	0.2	1.1	0.1	0.1	0.2			

STATUS FLAG CODES

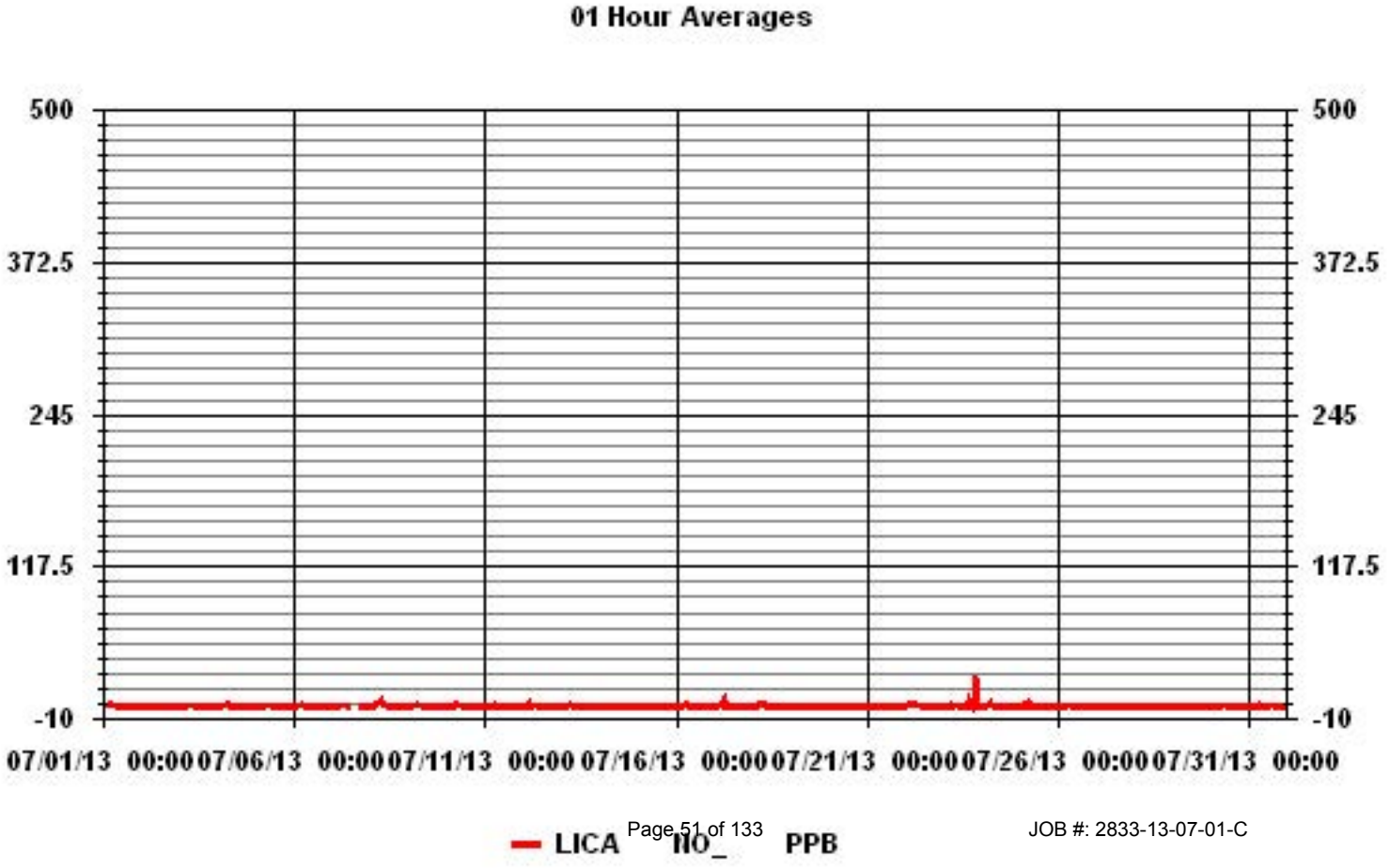
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:		406					
MAXIMUM 1-HR AVERAGE:		26.6	PPB	@ HOUR(S)	20	ON DAY(S)	23
MAXIMUM 24-HR AVERAGE:		1.9	PPB			ON DAY(S)	23
IZS CALIBRATION TIME:	32	HRS		OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	8	HRS		AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	1.19			MONTHLY AVERAGE:		0.36	PPB

JOB #: 2833-13-07-01-C



JOB #: 2833-13-07-01-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

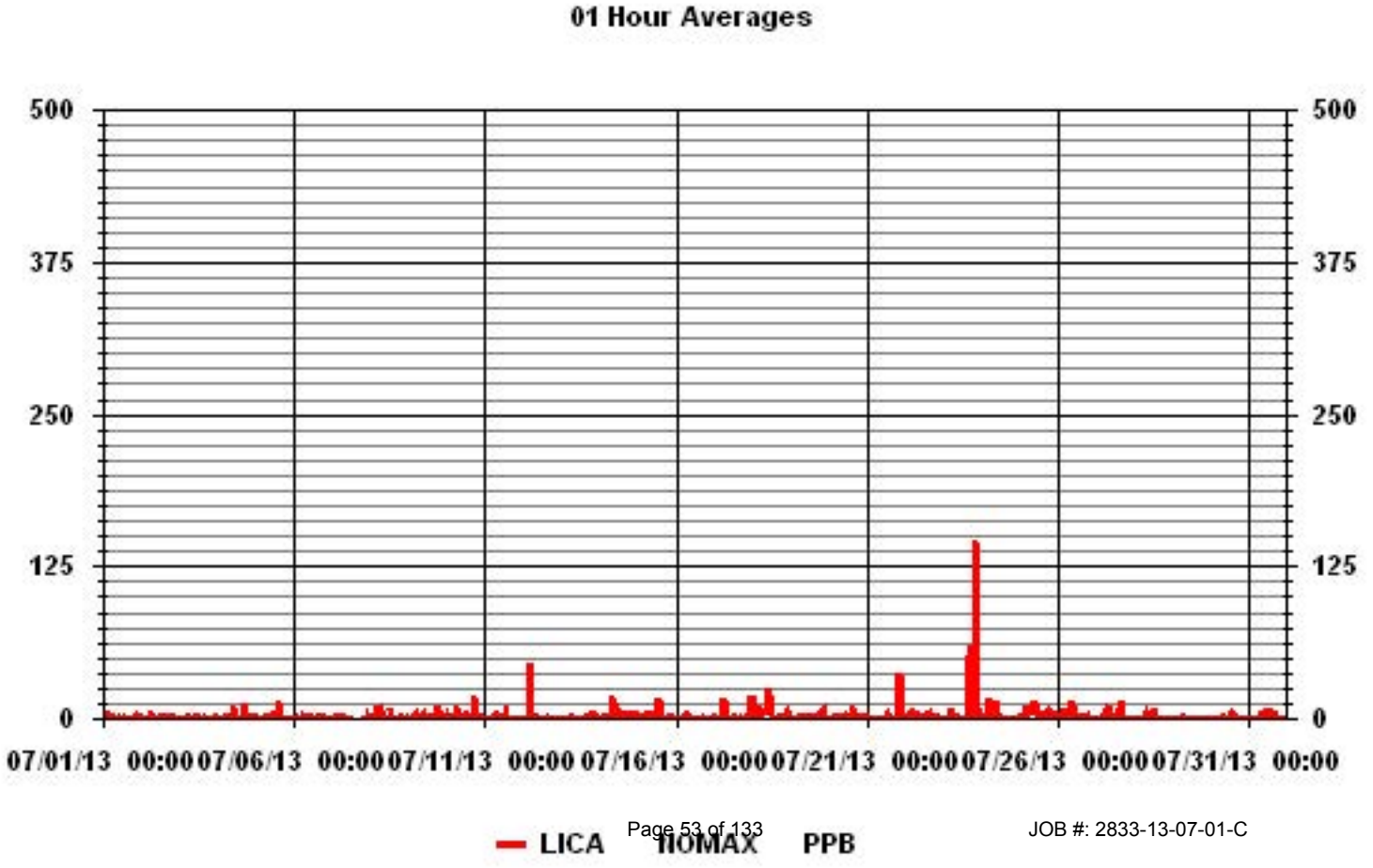
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.5	**S**	2.5	3	3.5	2	1.5	1	1	0.5	0.5	0.5	1	0.5	0.5	0	0	0	0	0	3	0.5	1	2	3.5	1.2	24
2	**S**	0.5	0	0	1	0.5	5.5	2.5	0.5	0.5	1	0.5	0.5	2	0.5	0.5	0.5	0.5	1	1.5	0.5	0.5	0	**S**	5.5	0.9	24
3	0.5	0	0	0	0.5	0.5	1.5	1	0.5	1	1.5	0.5	0.5	0.5	0	0.5	0.5	0	0	0	0	0	**S**	0.5	1.5	0.4	24
4	0.5	0.5	1	0.5	1	2	3	2	1	1	10.5	0.5	0.5	0.5	0	0	1	13	0.5	0.5	0.5	**S**	0.5	0.5	13	1.8	24
5	0.5	0.5	0	0	0	0.5	1	1.5	1	1.5	3	0.5	0.5	2	14.5	3	2	0	0	0	**S**	0	0.4	0.5	14.5	1.4	24
6	0.5	1	1	1	1.5	3.5	1.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5	1.5	1	2.5	1	1	**S**	0.5	0	0	0	3.5	1.0	24
7	0	0.5	0.5	0.5	0.5	2	2	1.5	1	0.5	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0.5	0	0	3.5	1.5	3.5	1.0	24
8	0.5	1.5	1.5	2	11	6	8.5	4.5	4	2.5	1	**Y**	7	0	0.5	1	0	**S**	0.1	1.6	0.1	0.1	0.1	0.6	11	2.5	23
9	0.6	0.1	0.6	1.6	2.1	4.1	1.6	3.1	1.6	0.6	3.1	0.1	0.6	2.6	1.1	1.6	**S**	0	10.5	7.5	5.5	0	0.5	0	10.5	2.1	24
10	3.5	0	0	0	0.5	3.5	9	5.5	2	1.5	2	1	6.5	1	2	**S**	3.1	17.6	6.6	0.6	0.6	1.1	1.1	0.1	17.6	3.0	24
11	0.1	0.1	0.2	0.1	0.1	0.1	2.6	4.1	0.6	3.1	2.6	1.1	1.6	8.6	**S**	0.5	0	0	0	0	0	0	0	0	8.6	1.1	24
12	0	0	0	0	46	0.5	0.5	0.5	0.5	1	1	0	0	**S**	0.6	1.6	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	46	2.3	24
13	0.1	0.1	0.1	0.1	0.6	1.6	1.6	1.1	0.1	0.1	0.1	0.1	**S**	0	0	0	2	3	1.5	0.5	6.5	1	0	0	6.5	0.9	24
14	0.5	0	0	2	0.5	0.5	0	3	17.5	14.5	1	**S**	6.5	6.5	1	1	0	0.5	4.5	0.5	0.5	5.5	0	5	17.5	3.1	24
15	0.5	1	0	1	1.5	3	1	3	6.5	1.5	**S**	1	2	17	1.5	0	0.5	0.5	1	0.5	0.5	2	0	0	17	2.0	24
16	0	0	0	0	1	2.5	3	3	1.5	**S**	0.5	0	0	0	0	0	0	2	0	0	0.7	0.2	0	0.5	3	0.6	24
17	0.5	0.5	0.5	1	1	4	16.5	5.5	**S**	0	0	0	0	2	0.5	1	0.5	0.5	0	0	0	5.5	4	16	16.5	2.6	24
18	16.5	0.5	1	3.5	10	3	3	**S**	4	4	24.5	20.5	0	1.5	0	0	0	1	1.5	1.5	0	3.5	6	1.5	24.5	4.7	24
19	1	0	0	0	0.5	0.5	**S**	1	2	1.5	1.5	0.5	2	2	2	0.5	2.5	1	0.5	6	8	0	0.5	0.5	8	1.5	24
20	0	0	0	0	3.5	**S**	1	1	1.5	2	0.5	3.5	2	2	3	9	3	0.5	2.5	1.5	2.5	2.5	1.5	0	9	1.9	24
21	2	0.5	0	0	**S**	0	0.5	0.1	0	1.5	0.5	1	0.5	3.5	0	0	0	0	0	5	38	0.5	2	0.5	38	2.4	24
22	1.5	1.5	3	**S**	6	4	4	1.5	3.5	1	1	0.5	1.5	3	0.5	3.5	0.5	1	0.5	0	1	1	0	1	6	1.8	24
23	0	0.5	**S**	0	0.5	7	3	2	1	2	0.5	0	0	0	0	0	52	59.5	1	26	**147.1**	9.5	0.5	4	**147.1**	13.7	24
24	2.5	**S**	0.5	1	3.5	15.5	2	3.5	1.5	14.5	0	0	1	1.5	0.5	0.5	1	0.5	0	0	0.5	0	0.5	0	15.5	2.2	24
25	**S**	1.5	1.5	1	9.5	6.5	6	4	4	13.4	6.5	1	2.5	1	3.5	4.5	2.5	5	0.5	7	2.5	3.5	1	**S**	13.4	4.0	24
26	0	2	0.5	0	8	1.5	3	1	13.5	2.5	10	2	0.5	2	2.5	1.5	0.8	1	0.5	3	0	1	**S**	0.5	13.5	2.5	24
27	0	0	0	0	3	1	5.5	2.5	10.5	3.5	0.5	0.5	1.5	4.5	1	13	15	2	0	0	0	**S**	0	0.1	15	2.8	24
28	0	0	0.1	0	0	0.5	0.5	4	0.5	0.5	0	0.1	7	0	0.5	0	0.5	0	0.1	1	**S**	0	0	0	7	0.7	24
29	0	0	0	0	0	0	0.5	0.5	0.5	1	0.5	0	0.5	0	1	0	0	0	0	**S**	0.1	0	0	0	1	0.2	24
30	0	0	0	0	0	0	0.5	1	1.5	2	1	0	2	6	4.5	1	0.1	0	**S**	0	0	0	0	0	6	0.9	24
31	0	0	0	0	0	0.5	1	6	3	4.5	0.5	4.5	5.5	2.5	4.5	5	0	**S**	0	0	0	0.5	0	0.6	6	1.7	24
HOURLY MAX	16.5	2.0	3.0	3.5	46.0	15.5	16.5	6.0	17.5	14.5	24.5	20.5	7.0	17.0	14.5	13.0	52.0	59.5	10.5	26.0	147.1	9.5	6.0	16.0			
HOURLY AVG	1.2	0.4	0.5	0.6	3.9	2.6	3.0	2.4	2.9	2.8	2.6	1.4	1.9	2.5	1.6	1.7	3.1	3.9	1.2	2.2	7.5	1.3	0.8	1.2			

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:	517					
MAXIMUM INSTANTANEOUS VALUE:	147.1	PPB	@ HOUR(S)	20	ON DAY(S)	23
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	7.25					



JOB #: 2833-13-07-01-C

LICA
NO_ / WD Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	2.55	4.68	5.68	2.84	1.84	2.98	13.21	5.96	1.98	3.55	7.95	15.62	12.50	8.80	6.53	3.26	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	2.55	4.68	5.68	2.84	1.84	2.98	13.21	5.96	1.98	3.55	7.95	15.62	12.50	8.80	6.53	3.26	

Calm : .00 %

Total # Operational Hours : 704

Distribution By Samples

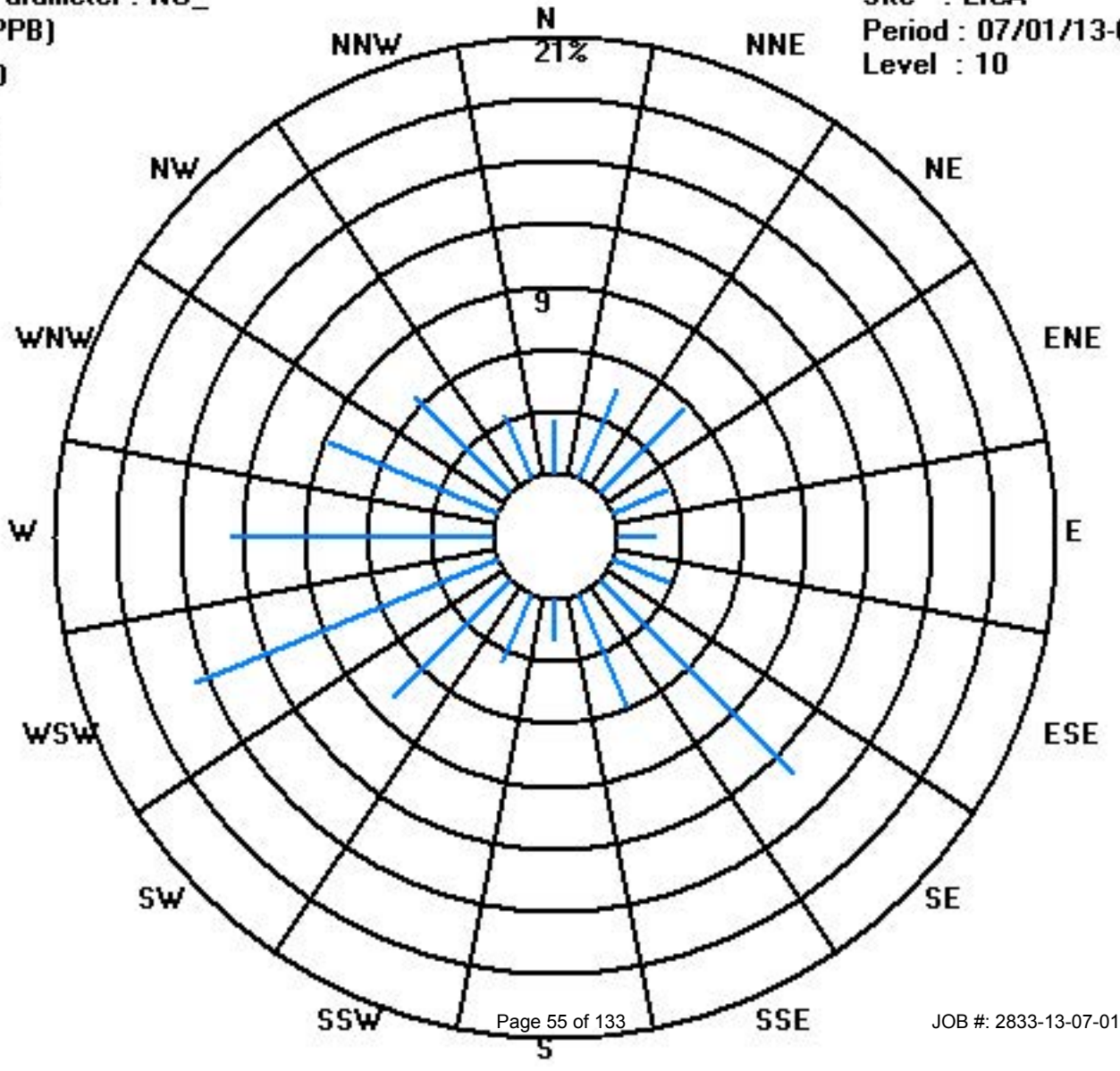
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	18	33	40	20	13	21	93	42	14	25	56	110	88	62	46	23	704
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	18	33	40	20	13	21	93	42	14	25	56	110	88	62	46	23	

Calm : .00 %

Total # Operational Hours : 704

Logger : 01 Parameter : NO_
Class Limits (PPB)
>= 210.0
< 210.0
< 110.0
< 50.0

Site : LICA
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-01-C

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

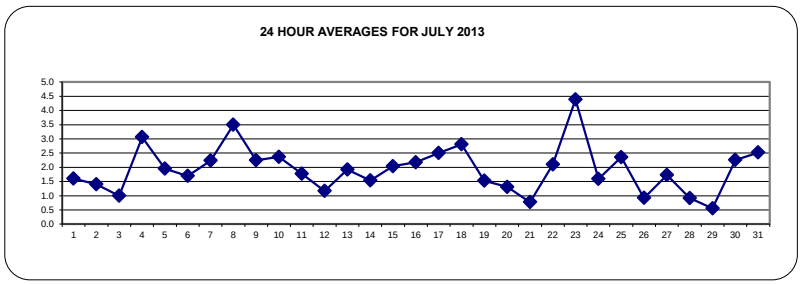
OXIDES OF NITROGEN hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.5	**S**	2	1.6	1.3	2.1	4.1	3	2.2	1.5	1.3	1	0.7	0.6	0.5	0.6	0.8	1	0.7	0.8	1.8	2.3	1.9	2.6	4.1	1.6	24
2	**S**	2.2	1.7	1.8	2.3	2.1	2.3	2	1.1	0.8	1.1	1	1	1.1	0.8	1	0.9	0.9	0.9	1.4	1.5	1.7	1.3	**S**	2.3	1.4	24
3	0.5	0.4	0.2	0.4	0.5	1.1	3.2	2.2	1.3	1.3	1	0.6	0.5	0.5	0.2	0.2	0	0.2	0.4	1.2	2.1	1.4	**S**	3.6	3.6	1.0	24
4	4.7	5.1	4.4	4.5	5.7	5.6	7	5.2	2.5	1.1	1.8	0.8	0.9	0.8	0.8	0.8	0.8	2.1	1.3	2.3	3.9	**S**	3.7	4.5	7	3.1	24
5	4	4.2	4.2	1.4	1.7	2.1	3.9	2.4	1.7	2.7	2.3	1.1	0.8	1.2	3.4	0.8	0.8	0.5	0.6	0.5	**S**	1.2	1.5	1.9	4.2	2.0	24
6	2.9	4.1	3.2	2.5	2	3.4	3.4	1.6	0.8	0.7	0.8	0.7	0.7	0.8	1.1	0.9	1	1.2	2.1	**S**	1.1	1.3	1.5	1.2	4.1	1.7	24
7	1.3	1.2	2.1	3.4	2	4.1	5.3	5.7	2	1.1	1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1.1	0.5	0.9	1.7	2.4	5.7	2.2	24
8	2.4	2.2	2.1	3.5	5.4	10	13	8.5	6.1	3.8	2.6	1.8	1.3	0.9	0.8	1	0.7	**S**	1.3	2.1	4.1	3.3	1.7	1.8	13	3.5	24
9	1.6	1.7	1.9	1.9	3.1	4.8	3.5	3.4	3	2	1.7	1.8	1.5	1.1	1.2	1	**S**	1.4	3.1	3.5	3.5	2.3	1.5	1.1	4.8	2.2	24
10	1.4	1	1.1	4.4	5.3	3.8	6.6	6.7	4	2.3	1.2	0.9	1	0.8	1.2	**S**	1.4	1.6	3.1	1.6	2.1	1	0.6	1.3	6.7	2.4	24
11	1.6	1	1	1.5	1.6	2.4	4.8	4.1	2	3.5	2.4	2	1.9	2.1	**S**	1.2	0.5	0.5	0.8	0.9	0.7	1.2	1.3	1.8	4.8	1.8	24
12	1.8	1.3	1	1	4.7	1.5	1.5	1.4	1.2	1	0.8	0.6	0.6	**S**	0.7	0.8	0.4	0.4	0.1	0.1	0.1	0.7	2.8	2.3	4.7	1.2	24
13	4.3	2.5	3.3	3.9	4.3	5	3.1	1.2	0.1	0.1	0.1	0.1	**S**	0	0	0.1	0.4	0.9	0.8	1.1	4.2	3.8	2.9	2	5	1.9	24
14	1.7	1.1	0.5	0.3	0.5	0.5	0.5	0.7	2.2	1.6	1.7	**S**	2.9	3	2.3	1.1	1	0.6	1.2	1.9	3.2	3	2	1.9	3.2	1.5	24
15	1.1	1.9	1.1	1.5	1.9	3.7	2.3	1.6	0.9	0.8	**S**	0.9	0.8	5.5	1.4	0.6	1.4	1.3	3.6	2.3	2.9	3.4	3.5	2.5	5.5	2.0	24
16	2.6	2.7	2.5	3.1	3.8	4.2	5	4.8	2.9	**S**	1.6	0.8	0.6	0.5	0.4	0.4	0.5	0.6	0.4	1.2	3.3	2.5	2.8	2.8	5	2.2	24
17	2.1	1.7	1.6	1.8	1.8	4.9	9.8	3.8	**S**	1.9	1.5	1.5	1.4	1.2	0.9	1.1	1	1.1	1.1	1.3	3.5	2.9	3	6.6	9.8	2.5	24
18	4.9	1.9	1.7	2.6	3.2	5.6	11.3	**S**	5.6	2.1	2.1	3	1	1.1	0.9	0.7	0.7	1	1.4	1.3	2.8	2.7	3.8	3.2	11.3	2.8	24
19	3.1	1.2	0.8	0.8	2.7	4	**S**	2.5	1.2	1.3	0.8	0.7	0.9	0.8	0.8	0.6	0.7	1.6	2.1	2.7	2	1.3	1.3	1.1	4	1.5	24
20	0.6	0.5	0.4	0.2	1.2	**S**	1.3	1.8	1.2	1.7	1.2	1.2	1	0.9	1.3	2.8	1.7	1.7	2.2	2.1	1.8	1.2	1.3	0.8	2.8	1.3	24
21	0.8	0.6	0.5	0.5	**S**	0.6	0.5	0.1	0.2	0.1	0.1	0.1	0.3	0.4	0.2	0.2	0	0	0.5	2.1	3.7	2.6	1.9	1.8	3.7	0.8	24
22	2.1	2.2	2.1	**S**	2.9	3.6	4.2	2.8	3.5	2.3	2.2	2	2.7	3.6	1.4	1.5	0.8	0.6	0.7	1	2.6	1.6	1	0.9	4.2	2.1	24
23	0.7	1	**S**	1.9	2.1	3.7	4.6	3.4	2.9	1.8	0.8	0.9	1	0.9	0.9	0.5	8.1	5.4	1.3	5	**34.5**	7.8	5.2	6.5	**34.5**	**4.4**	24
24	6	**S**	2.4	2.1	2.5	5	2	1.8	0.8	1.1	0.1	0.2	0.5	0.3	0.4	0.4	0.6	0.4	0.2	0.6	2.1	2.9	2.5	1.8	6	1.6	24
25	**S**	1.7	2.1	1.4	3.6	4.8	6.5	6.4	3.7	5.7	1.9	1.3	1.8	0.9	1.7	1.3	0.6	0.9	0.5	2.1	1.6	0.8	0.5	**S**	6.5	2.4	24
26	0.7	1	0.9	0.7	1.6	1.5	2.2	1.8	1.8	1.1	0.8	0.7	0.4	0.3	0.8	0.5	0.4	0.3	0.6	0.8	0.9	0.9	**S**	0.5	2.2	0.9	24
27	0.5	0.4	0.2	0.4	1.9	1.4	2.2	2.3	4.6	2	0.7	1	1.8	2.8	2.5	4.6	3.4	0.6	1.2	1.8	1.2	**S**	1.5	0.8	4.6	1.7	24
28	1.2	1	0.8	1.1	1.2	1.3	1.4	1.3	1	0.9	0.6	0.5	1.2	0.5	0.5	0.5	0.5	0.4	0.3	0.6	**S**	1	1	2.2	2.2	0.9	24
29	1.7	0.6	0.4	0.4	0.5	0.6	0.8	0.7	1	0.8	0.3	0	0.1	0.1	0.2	0	0.2	0	0.8	**S**	1.4	0.2	0.7	1.2	1.7	0.6	24
30	2	2.1	1.4	1.8	3.3	3.7	3.4	3.4	3.7	2.6	1.3	0.7	0.7	3.3	1.6	0.7	0.2	0.4	**S**	2.2	2.2	2.9	5.2	3	5.2	2.3	24
31	3.3	2.4	1.8	2.3	2.4	3.3	4.9	5.6	5.1	3.3	1.3	0.9	1.5	1.2	0.9	1.6	1.1	**S**	0.7	1.7	3.7	2.5	3.1	3.3	5.6	2.5	24
HOURLY MAX	6.0	5.1	4.4	4.5	5.7	10.0	13.0	8.5	6.1	5.7	2.6	3.0	2.9	5.5	3.4	4.6	8.1	5.4	3.6	5.0	34.5	7.8	5.2	6.6			
HOURLY AVG	2.2	1.8	1.6	1.8	2.6	3.3	4.2	3.1	2.3	1.8	1.2	1.0	1.1	1.3	1.0	0.9	1.1	1.0	1.2	1.6	3.4	2.1	2.2	2.3			

STATUS FLAG CODES

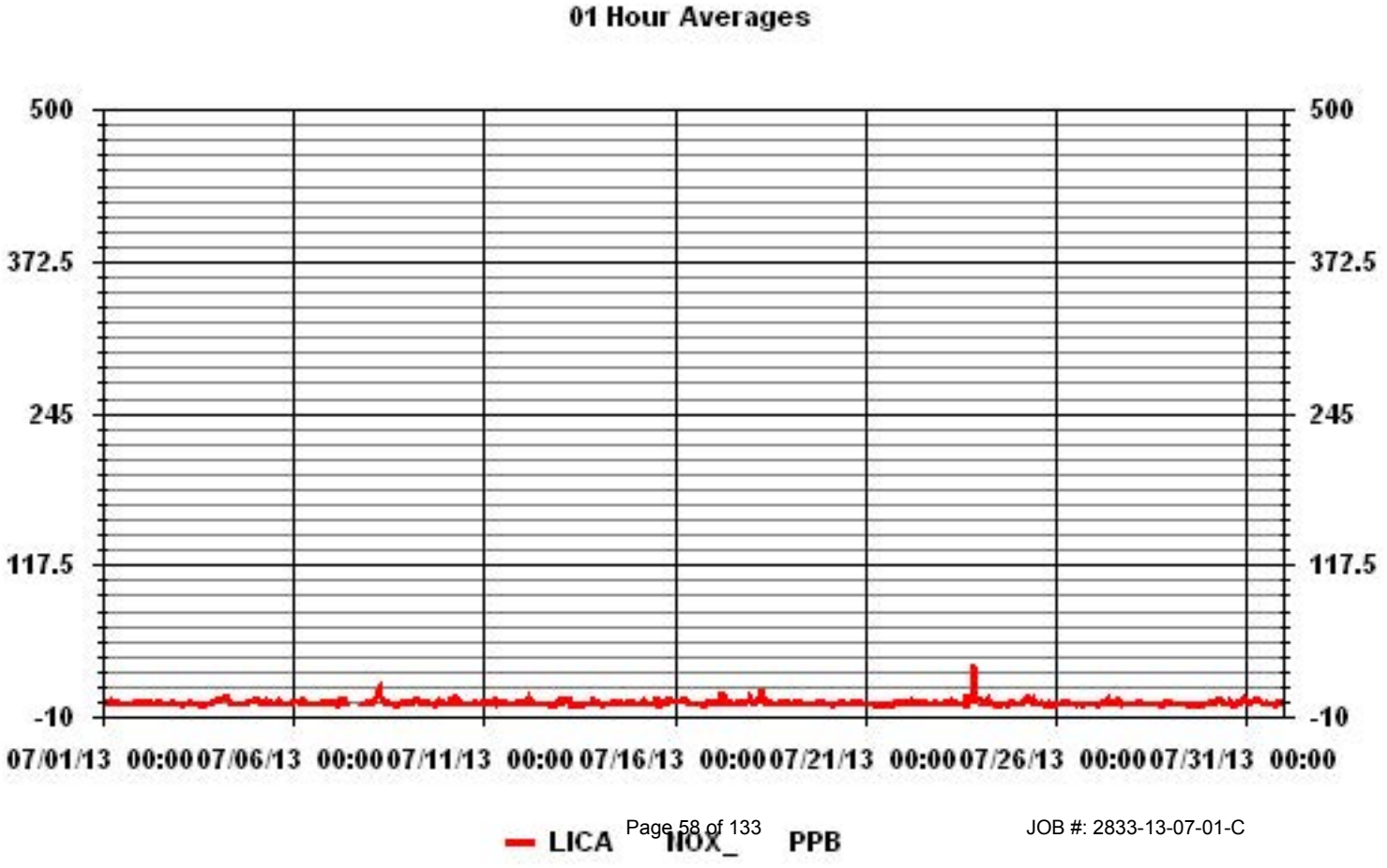
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	696					
MAXIMUM 1-HR AVERAGE:	34.5	PPB	@ HOUR(S)	20	ON DAY(S)	23
MAXIMUM 24-HR AVERAGE:	4.4	PPB			ON DAY(S)	23
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	2.01		MONTHLY AVERAGE:		1.93	PPB

JOB #: 2833-13-07-01-C



JOB #: 2833-13-07-01-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

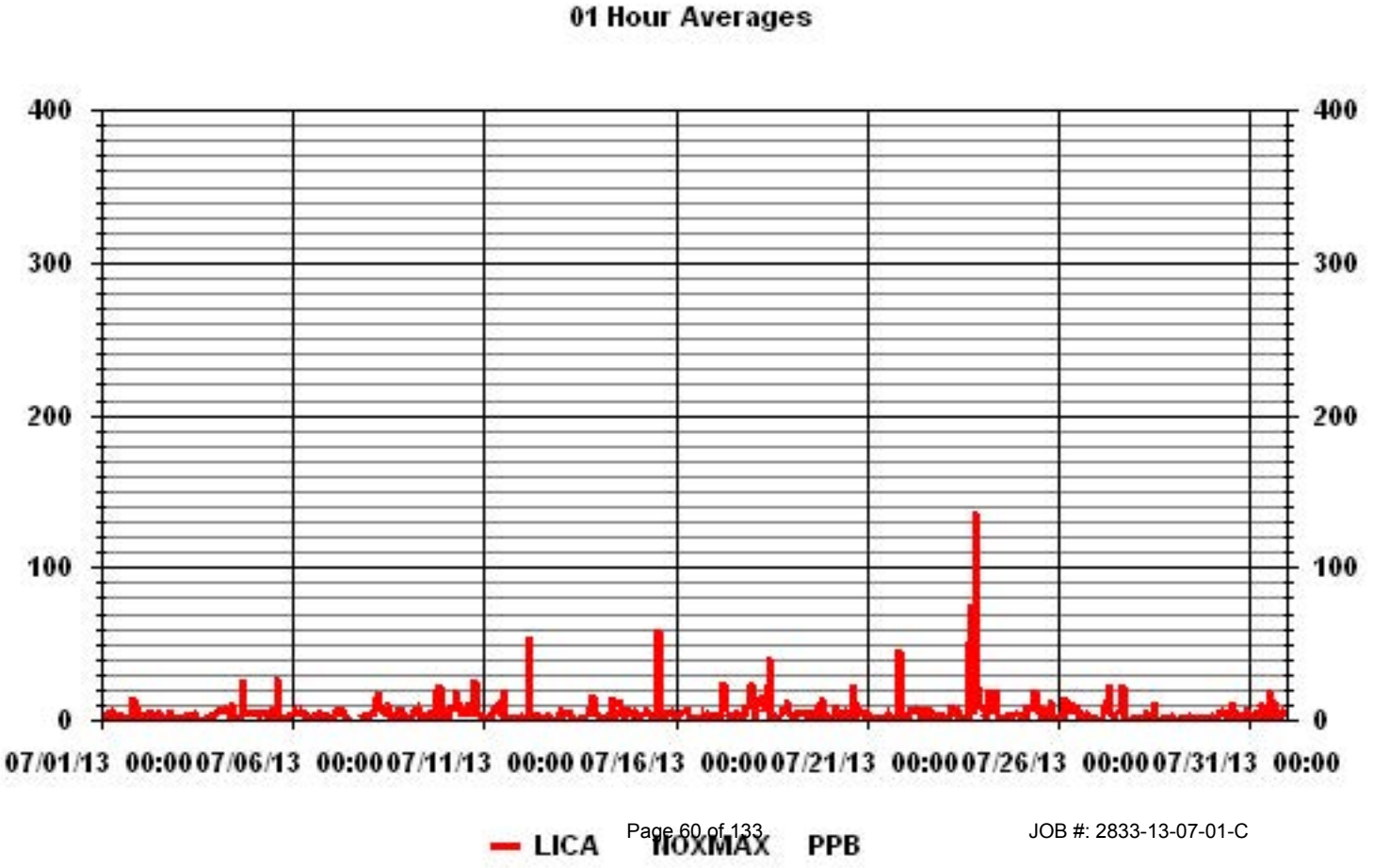
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6.2	**S**	3.5	4	4	3	5.5	3.5	3	2	2	3	3	2.5	2	1	1.5	1	1	2	14	3.5	4	7	14	3.6	24
2	**S**	3.7	2.7	2.2	3.7	2.7	4.7	4.7	1.7	1.7	3.2	2.7	3.7	3.7	1.2	1.7	2.2	1.7	2.2	6.2	2.2	2.2	1.7	**S**	6.2	2.8	24
3	1	0.5	0.5	0.5	0.5	2	4	3.5	2	2.5	4	2.5	1	1.5	0.5	1	0.5	0.5	1	2	2.5	2	**S**	4.3	4.3	1.8	24
4	5.3	5.8	5.8	5.8	6.3	5.8	7.8	6.3	3.3	1.8	11.3	1.3	1.8	1.3	0.8	1.3	2.8	25.8	2.3	4.3	5.3	**S**	4.5	5.5	25.8	5.3	24
5	4.5	5	5.5	2	3	3.6	5.5	6	3	4.5	5.5	2.5	1.5	4.5	27.5	4.5	4	1	1	1	**S**	2.2	2.7	3.7	27.5	4.5	24
6	4.2	6.2	4.2	3.2	3.2	6.2	3.7	3.7	1.2	0.7	1.7	1.7	1.2	1.7	3.2	3.2	4.2	2.2	3.7	**S**	2	3	3	1.5	6.2	3.0	24
7	2	2	5	4.5	2	6	6.5	6.5	3.5	1.5	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2.5	1	1.5	3.5	4	6.5	3.4	24
8	3	4	4	5.5	13	13	18.5	11.5	8.5	6	5	**Y**	9.4	1.5	4	4.5	2.5	**S**	2	8.5	5.5	5	2	2.5	18.5	6.3	23
9	2	2	2.5	3	5	6	4.5	8	6	3	3	2	3.5	3	6	3	**S**	2.5	19	21	23.5	3.5	3.5	2	23.5	6.0	24
10	7.5	1.5	1.5	7	7	9.5	19.5	13.5	6.5	9	3.5	5.5	3.5	3.5	9.5	**S**	8.5	10	26	5	5.5	4.5	2.5	2.5	26	7.5	24
11	2.5	1	1.5	3.5	2.5	4	7.5	9	3	8.5	4.5	4.5	3.5	18.5	**S**	2	1	1	1.5	1.5	2	1.5	2	2.5	18.5	3.9	24
12	2.5	1.5	1	1	55	2	2	1.5	2	5	2	1	1	**S**	2.5	3.5	0.5	0.5	0.5	0.5	0.5	1.5	3.5	3	55	4.1	24
13	7	3	4	5	5.5	6	3.5	3	0.5	0.5	0	0	**S**	0.5	0.5	0.5	2.5	6	6.5	3	16	9.5	4	3	16	3.9	24
14	2.5	1.5	1	2.5	2	1	0.5	4.5	14.5	7.5	2.5	**S**	11.5	12	4.5	2	1.5	2.5	8.5	4	4	5.5	3.5	6.5	14.5	4.6	24
15	1.5	5	2	3	4.5	6.5	6.5	5	3.5	3	**S**	3.5	7	59	4	1	3	3	5	5	4.5	6	4	3	59	6.5	24
16	3	3	3.5	4	5	5.5	6	6.5	4	**S**	2	1	1	1	1	0.5	1.1	4	1	3	4.5	3	3.5	3.5	6.5	3.1	24
17	3	2.5	2.5	2.5	3.5	6.5	24.5	7.5	**S**	3	2	2	2	4	1.5	3.5	2	3	1.5	3	9	10	19	22	24.5	6.1	24
18	25	2.5	2.5	8	14.5	8.5	15	**S**	8	9.5	23.5	42	1.5	3	1	1.5	2	3.5	7.5	7	3.5	6.5	12.5	5	42	9.3	24
19	4.5	2	1.5	1.5	5	5	**S**	4	4	4.5	3	2	4	4	4	1.5	5	2.5	4	11.5	14	1.5	2	3	14	4.1	24
20	1	1	0.5	0.9	8.5	**S**	2.5	3.5	5.5	4.5	1.5	5	3	2.5	3.5	22.5	3.5	2.5	6	3.5	4.5	4.5	5	1.5	22.5	4.2	24
21	4	1.5	0.5	0.5	**S**	1	1	0.5	0.5	2	0.5	2	1.5	4	1	0.5	0.5	0.5	2	7.5	46.5	3.5	3.5	3	46.5	3.8	24
22	3.5	3	6	**S**	5.5	5.5	7	4	7.5	3	3.5	2.5	5.5	7.5	2	8	2	2.5	2	2.5	4	3.5	1.5	3	8	4.1	24
23	1	1.5	**S**	2	3	10.5	6.5	4.5	3.5	5.5	2	1.5	1.5	1.5	1	1	51.5	76	3.5	40.4	**136.9**	22.5	7	10.5	**136.9**	17.2	24
24	8	**S**	4	3	5.5	19	4	8	6.5	19	0.5	0.5	1.5	1	2.5	1	2.5	1	0.5	2	3.5	4	4	2.5	19	4.5	24
25	**S**	3	3	2.5	10.5	8.5	9	8	9.4	18.9	6.5	4	10	5	6	4	3.5	8.5	1	12.5	7.5	5	1.5	**S**	18.9	6.7	24
26	1	3.5	1.5	1.5	14	3.5	8.5	3	12	5	5	6.5	1.5	2	4	3	2	0.5	4.5	4	1.5	2	**S**	1.5	14	4.0	24
27	1	1	0.5	1	9.5	3	12.5	5.5	23	4	1	2.5	4.5	6	4	21	23.5	3	2	2	1.5	**S**	2	1.5	23.5	5.9	24
28	1.5	1.5	1	1.5	1.5	1.5	1.5	6.5	1	2.5	1	1	12	1	1	0.5	1	0.5	0.5	2.5	**S**	1.5	1.5	3.5	12	2.1	24
29	2.5	1	1	0.5	1	1	2	1.5	1	2.5	1	0.5	1	1	2	0.5	0.5	0.5	1.5	**S**	2	0.5	1	2	2.5	1.2	24
30	2.5	2.5	1.5	2	4.5	4	6	4.5	4.5	4.5	3	1	4.5	12	8	3.5	0.5	1	**S**	4	3	5	7.5	3.5	12	4.0	24
31	4	2.5	2.5	2.5	2.5	5.5	6.5	11	5.5	7	2	4	19	3	5	13	1.5	**S**	1.5	3	5	3.5	4.5	4	19	5.2	24
HOURLY MAX	25.0	6.2	6.0	8.0	55.0	19.0	24.5	13.5	23.0	19.0	23.5	42.0	19.0	59.0	27.5	22.5	51.5	76.0	26.0	40.4	136.9	22.5	19.0	22.0			
HOURLY AVG	4.0	2.6	2.6	2.9	7.0	5.5	7.1	5.6	5.3	5.1	3.6	3.9	4.3	5.9	3.9	4.0	4.7	6.0	4.1	6.0	11.6	4.4	4.2	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:	701					
MAXIMUM INSTANTANEOUS VALUE:	136.9	PPB	@ HOUR(S)	20	ON DAY(S)	23
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	8	HRS				
STANDARD DEVIATION:	8.22					



JOB #: 2833-13-07-01-C

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	2.55	4.68	5.68	2.84	1.84	2.98	13.21	5.96	1.98	3.55	7.95	15.62	12.50	8.80	6.53	3.26	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	2.55	4.68	5.68	2.84	1.84	2.98	13.21	5.96	1.98	3.55	7.95	15.62	12.50	8.80	6.53	3.26	

Calm : .00 %

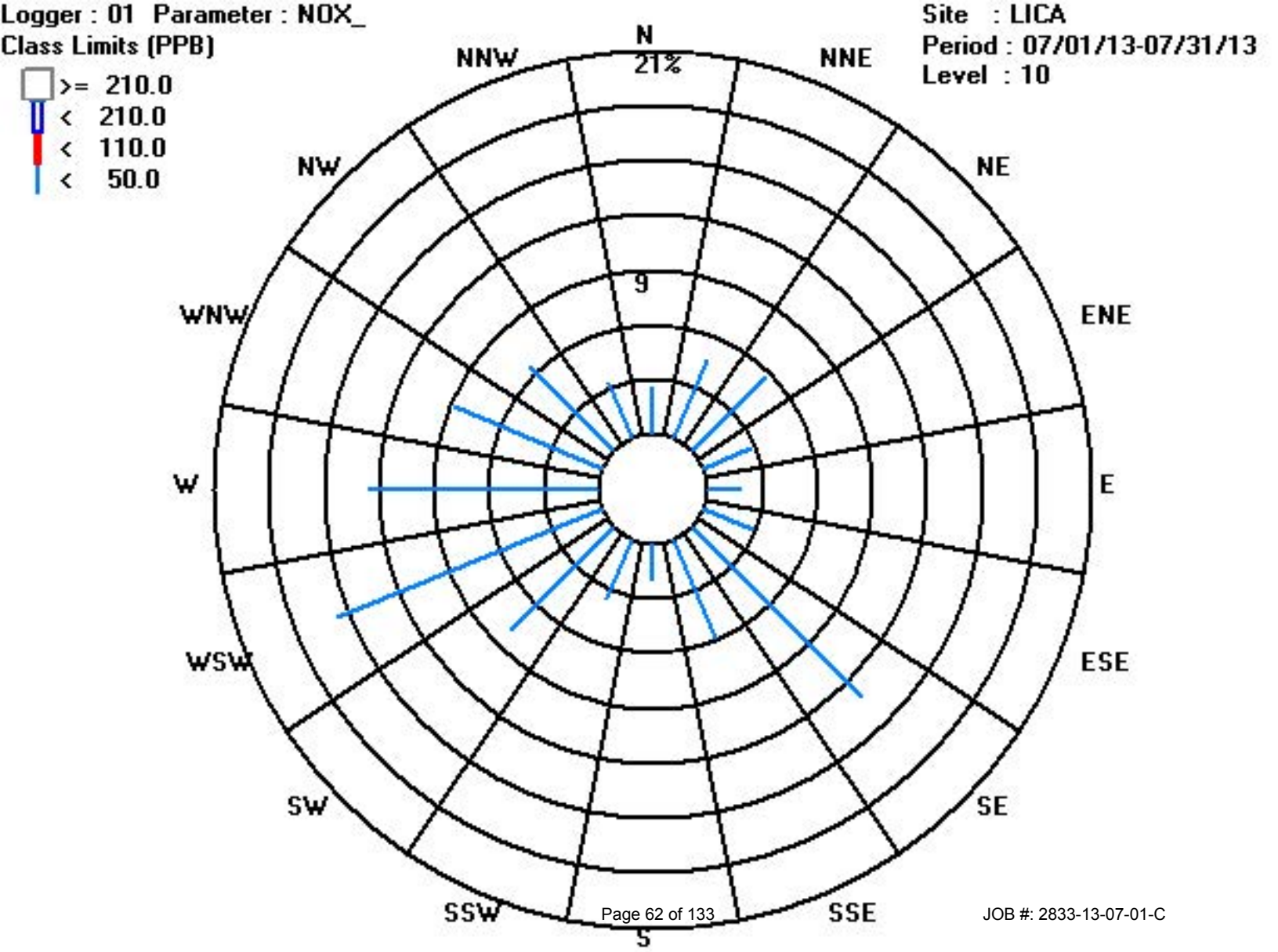
Total # Operational Hours : 704

Distribution By Samples

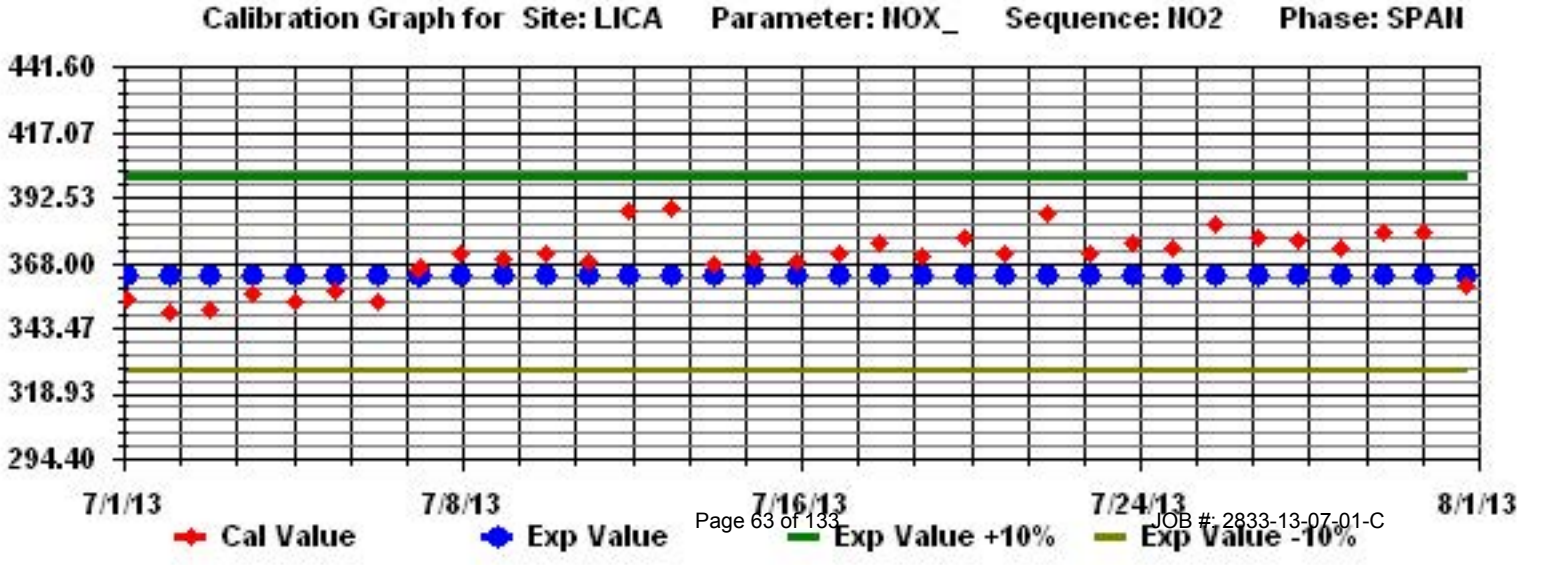
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	18	33	40	20	13	21	93	42	14	25	56	110	88	62	46	23	704
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	18	33	40	20	13	21	93	42	14	25	56	110	88	62	46	23	

Calm : .00 %

Total # Operational Hours : 704



JOB #: 2833-13-07-01-C


Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN
441.60
417.07
392.53
368.00
343.47
318.93
294.40
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

OZONE (O_3) hourly averages in ppb

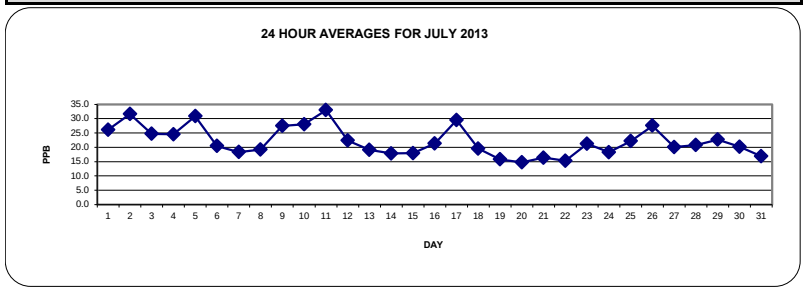
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2	**S**	1	1	1	2	13	22	30	38	40	41	40	40	39	43	46	49	43	37	25	13	16	19	49	26.1	24
2	**S**	17	19	19	19	22	24	28	33	35	37	38	39	41	40	41	40	39	38	36	32	30	29	**S**	41	31.6	24
3	26	28	25	13	14	16	17	22	23	23	25	23	27	33	35	30	30	30	30	29	27	26	**S**	16	35	24.7	24
4	12	11	6	5	8	12	15	22	30	32	34	36	38	38	39	39	39	38	34	29	18	**S**	15	14	39	24.5	24
5	11	10	17	29	28	22	19	20	22	30	40	35	40	44	45	46	44	44	42	38	**S**	31	32	20	46	30.8	24
6	10	7	6	3	2	4	7	14	17	20	23	27	33	36	34	30	20	29	36	**S**	36	27	25	25	36	20.5	24
7	19	9	12	13	10	10	9	10	25	31	27	30	29	26	27	23	20	26	**S**	29	22	10	3	2	31	18.3	24
8	2	2	3	1	2	4	7	**C**	**C**	**C**	**C**	**C**	37	37	38	40	40	**S**	43	34	19	14	14	9	43	19.2	24
9	8	9	8	3	2	4	14	22	30	39	45	50	51	49	47	46	**S**	48	33	31	24	22	24	22	51	27.4	24
10	11	9	6	8	7	11	11	16	26	30	30	32	35	34	36	**S**	51	52	48	43	39	36	36	38	52	28.0	24
11	41	41	38	31	29	23	19	21	28	31	36	38	44	37	**S**	31	37	34	32	35	36	35	34	28	44	**33.0**	24
12	23	24	24	21	18	18	20	22	23	24	25	29	29	**S**	28	28	27	25	22	23	22	17	9	13	29	22.3	24
13	8	8	8	10	10	10	14	19	23	24	24	26	**S**	29	29	31	33	33	30	27	19	11	7	5	33	19.0	24
14	4	4	12	14	12	14	14	14	13	15	17	**S**	17	19	28	32	32	30	27	24	18	17	17	16	32	17.8	24
15	14	9	3	5	8	8	17	34	37	33	**S**	32	34	33	29	24	19	18	13	14	9	4	7	8	37	17.9	24
16	8	10	11	6	5	7	10	16	25	**S**	32	34	35	35	36	37	37	37	37	33	16	12	7	5	37	21.3	24
17	3	2	3	1	2	2	10	25	**S**	48	50	50	50	49	48	48	53	**58**	53	44	31	23	18	8	**58**	29.5	24
18	4	3	1	1	0	3	7	**S**	21	29	35	37	41	42	42	37	36	34	31	26	8	4	3	3	42	19.5	24
19	8	19	15	8	8	7	**S**	22	23	23	23	21	20	21	21	21	21	19	17	15	11	8	5	6	23	15.7	24
20	10	11	12	12	11	**S**	18	19	19	16	15	15	17	19	18	18	17	14	12	11	12	13	17	12	19	14.7	24
21	13	11	15	13	**S**	14	12	13	16	19	21	22	23	24	24	27	28	29	23	10	7	5	4	3	29	16.3	24
22	2	1	1	**S**	1	1	4	7	9	13	16	21	21	23	28	30	34	34	30	23	11	15	15	11	34	15.3	24
23	9	4	**S**	10	8	3	9	16	23	31	35	33	32	34	35	33	32	33	35	30	20	12	7	4	35	21.2	24
24	1	**S**	3	2	1	3	13	18	22	25	24	29	28	30	29	30	31	32	32	24	19	9	8	7	32	18.3	24
25	**S**	2	1	0	0	1	6	13	24	29	37	38	37	36	35	33	32	32	32	29	24	24	22	**S**	38	22.1	24
26	18	13	10	10	17	19	19	21	27	33	36	38	38	37	36	36	37	37	36	33	29	28	**S**	25	38	27.5	24
27	25	24	24	23	21	20	19	16	13	19	24	23	23	22	17	12	16	25	20	14	18	**S**	22	21	25	20.0	24
28	22	21	18	17	18	15	13	14	16	19	26	28	28	28	29	29	28	26	22	18	**S**	17	16	10	29	20.8	24
29	8	11	14	13	13	18	22	27	28	26	27	28	29	30	32	32	32	32	30	**S**	19	22	19	9	32	22.7	24
30	8	9	8	10	14	15	15	16	16	21	28	30	29	27	30	31	31	32	**S**	29	20	15	15	15	32	20.2	24
31	11	9	9	13	15	13	11	10	12	19	26	27	27	25	24	27	28	**S**	29	23	10	9	7	4	29	16.9	24
HOURLY MAX	41	41	38	31	29	23	24	34	37	48	50	50	51	49	48	48	53	58	53	44	39	36	36	38			
HOURLY AVG	11.8	11.7	11.1	10.5	10.1	10.7	13.6	18.6	22.6	26.7	29.6	31.4	32.4	32.6	32.6	32.2	32.4	33.4	31.4	27.3	20.7	17.6	15.6	13.0			

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 82 PPB

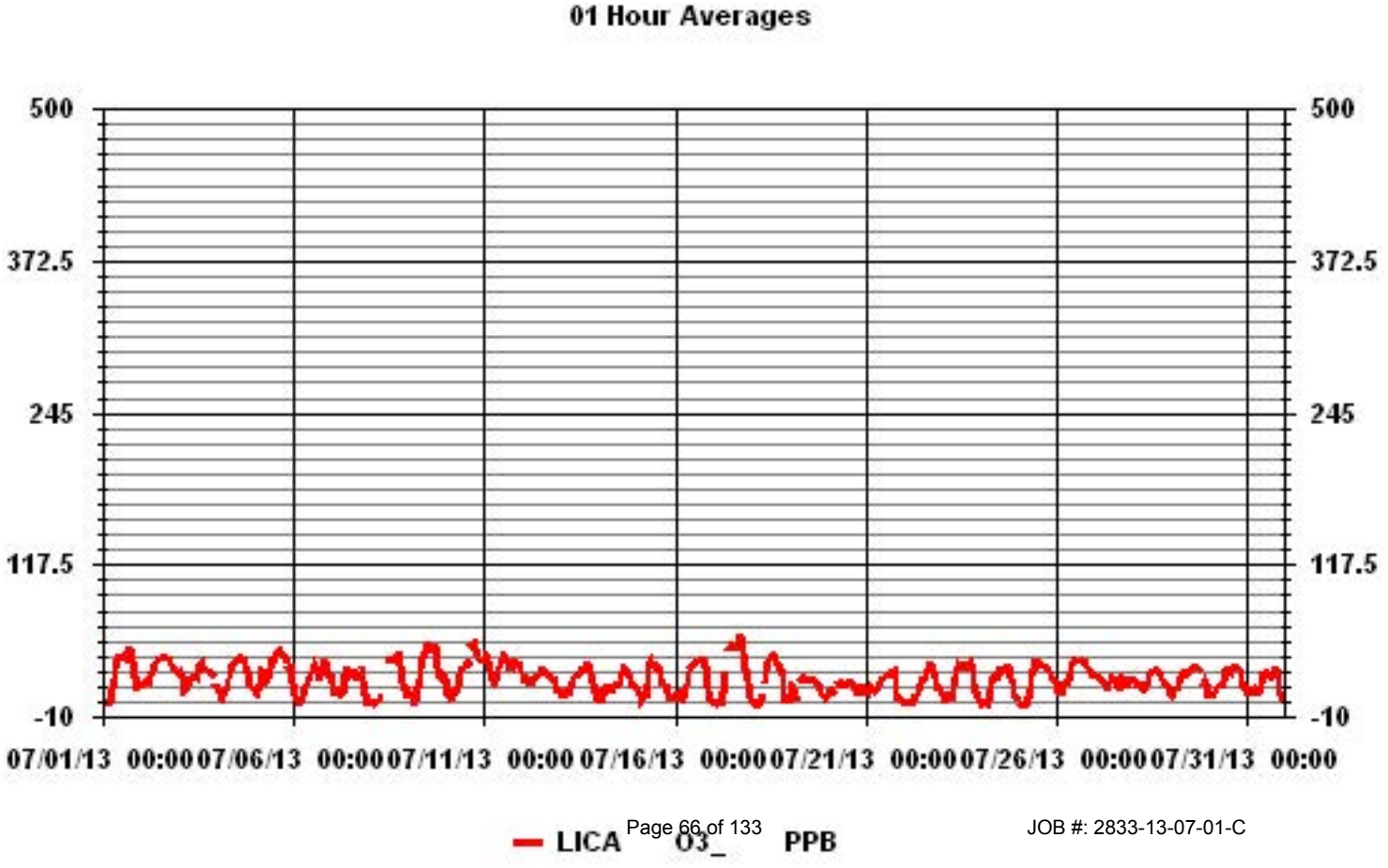


MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	703					
MAXIMUM 1-HR AVERAGE:	58	PPB	@ HOUR(S)	17	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:	33.0	PPB			ON DAY(S)	11
					VAR-VARIOUS	

IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	12.17		MONTHLY AVERAGE:	22.06	PPB

JOB #: 2833-13-07-01-C



JOB #: 2833-13-07-01-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

OZONE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	5	**S**	2	1	1	4	21	25	36	42	42	43	43	42	40	46	48	51	48	41	32	18	24	24	51	29.5	24
2	**S**	23	24	21	22	23	27	32	36	37	39	40	41	42	41	42	41	41	39	38	36	32	33	**S**	42	34.1	24
3	27	29	29	24	19	18	21	25	24	26	27	26	31	35	37	33	31	32	32	31	29	27	**S**	20	37	27.5	24
4	17	13	11	8	10	13	18	27	33	**S**	**S**	38	40	39	42	41	41	41	36	33	26	**S**	18	17	42	26.8	24
5	14	13	25	32	33	26	22	23	26	36	44	41	45	47	49	48	47	46	45	41	**S**	32	34	30	49	34.7	24
6	16	10	11	6	5	7	8	18	19	23	25	31	36	39	40	35	24	38	39	**S**	42	32	28	30	42	24.4	24
7	25	13	16	16	12	11	11	18	31	34	32	33	33	29	30	26	24	29	**S**	33	29	17	4	5	34	22.2	24
8	6	3	7	1	5	6	11	**C**	**C**	**C**	**C**	**C**	40	40	41	43	43	**S**	47	41	26	23	19	13	47	23.1	24
9	14	15	14	5	4	11	18	29	35	44	48	53	54	52	49	48	**S**	57	35	34	32	27	28	26	57	31.8	24
10	19	14	12	12	13	15	13	22	29	34	34	36	37	36	42	**S**	53	55	51	47	41	38	38	43	55	31.9	24
11	44	43	44	36	32	27	23	27	34	35	41	41	52	43	**S**	34	41	36	33	37	37	36	36	31	52	36.7	24
12	27	26	26	22	20	19	22	23	24	25	27	31	30	**S**	29	29	29	27	23	24	23	20	13	15	31	24.1	24
13	12	10	10	11	12	13	15	22	24	24	25	27	**S**	31	30	34	34	34	32	30	23	16	10	7	34	21.1	24
14	6	8	16	16	13	16	15	15	14	17	19	**S**	21	24	32	34	34	31	30	26	20	19	19	17	34	20.1	24
15	17	15	7	8	9	11	30	38	42	38	**S**	34	37	35	33	29	22	20	16	16	16	7	8	10	42	21.7	24
16	10	11	12	10	7	8	13	20	29	**S**	34	36	36	37	38	38	39	38	38	37	29	17	10	10	39	24.2	24
17	5	3	7	2	5	12	19	32	**S**	51	51	52	53	51	50	51	59	**61**	58	49	38	31	25	16	**61**	34.0	24
18	8	5	3	2	1	9	9	**S**	28	34	38	40	44	44	46	40	37	35	34	35	14	7	7	5	46	22.8	24
19	24	25	22	12	10	9	**S**	24	25	24	25	23	21	22	22	22	22	21	18	16	13	13	9	10	25	18.8	24
20	12	13	14	14	12	**S**	20	21	21	18	17	17	18	21	19	19	19	16	14	13	14	15	19	14	21	16.5	24
21	14	13	17	16	**S**	15	14	14	19	21	22	23	24	25	26	28	30	31	30	16	11	7	7	4	31	18.6	24
22	3	2	2	**S**	1	2	7	10	13	16	20	24	25	28	30	34	36	37	34	27	15	18	18	13	37	18.0	24
23	11	6	**S**	12	10	6	12	21	28	34	37	38	34	38	37	36	37	37	37	34	30	26	10	8	38	25.2	24
24	3	**S**	4	3	2	11	17	23	23	30	28	30	31	32	31	32	33	33	33	30	25	13	13	10	33	21.3	24
25	**S**	4	2	1	0	3	9	17	29	35	39	39	39	38	38	36	34	34	35	34	26	26	24	**S**	39	24.6	24
26	20	16	13	18	19	20	20	24	31	35	38	40	39	38	37	38	38	37	37	35	31	29	**S**	25	40	29.5	24
27	25	25	24	24	23	22	22	19	17	21	26	24	25	24	21	15	23	27	26	18	20	**S**	23	23	27	22.5	24
28	24	24	21	20	20	17	14	16	17	24	29	30	30	30	30	31	30	29	26	20	**S**	19	17	15	31	23.2	24
29	9	15	16	14	18	19	25	31	30	28	28	30	32	32	34	34	34	34	33	**S**	23	24	23	14	34	25.2	24
30	10	11	10	14	16	17	17	18	18	27	31	32	31	32	33	35	34	33	**S**	33	28	19	17	17	35	23.2	24
31	16	13	14	15	16	15	13	12	14	26	28	29	29	29	29	30	29	**S**	32	30	16	15	12	7	32	20.4	24
HOURLY MAX	44	43	44	36	33	27	30	38	42	51	51	53	54	52	50	51	59	61	58	49	42	38	38	43			
HOURLY AVG	15.3	14.5	14.5	13.2	12.3	13.5	16.9	22.3	25.8	30.0	31.9	33.8	35.0	35.2	35.2	34.7	34.9	35.9	34.2	31.0	25.7	21.5	18.8	16.5			

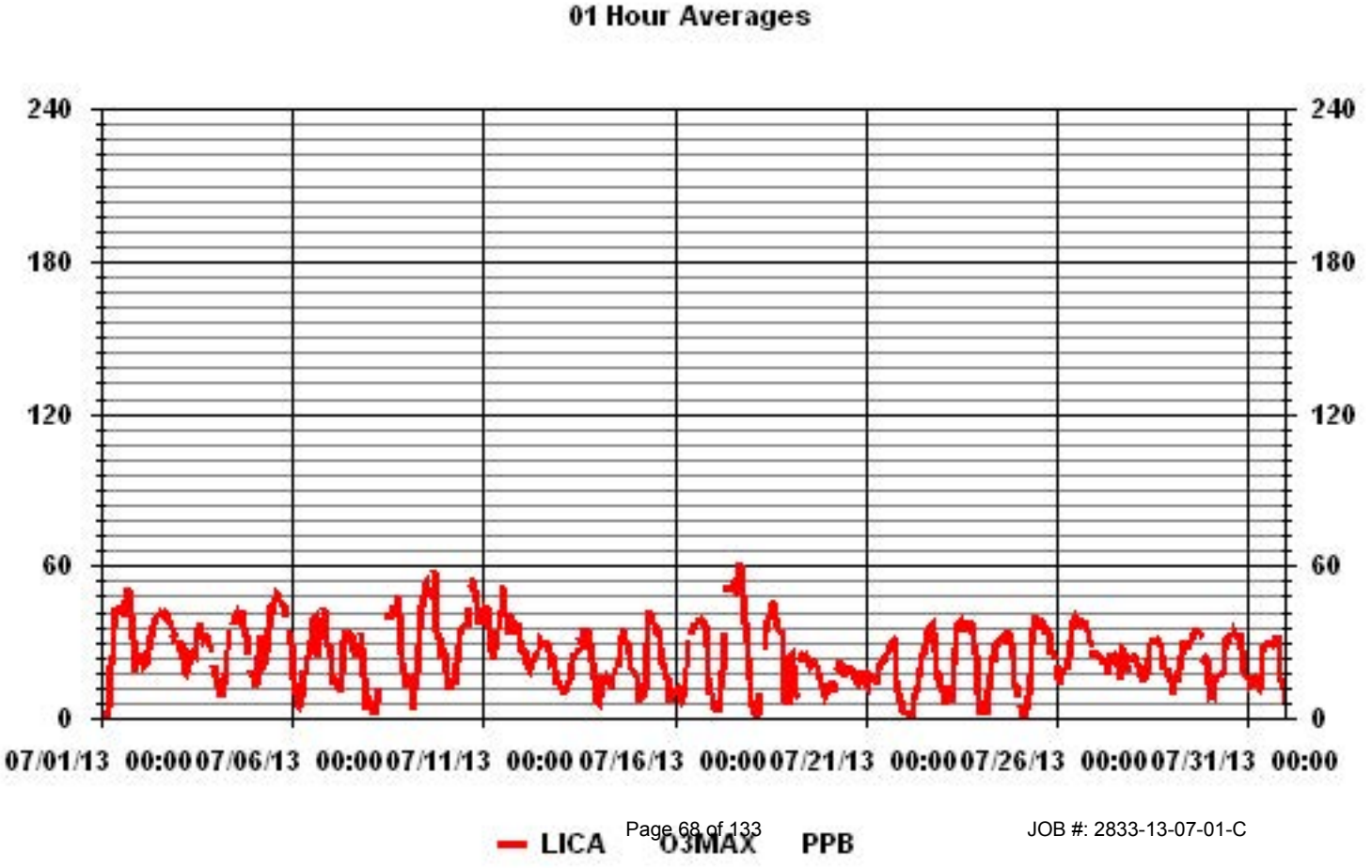
STATUS FLAG CODES

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:	703						
MAXIMUM INSTANTANEOUS VALUE:	61	PPB	@ HOUR(S)	17	ON DAY(S)	17	
S CALIBRATION TIME:	35	HRS	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	5	HRS					
STANDARD DEVIATION:	12.22						

JOB #: 2833-13-07-01-C



JOB #: 2833-13-07-01-C

LICA
O3_ / WD Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	2.83	5.09	5.66	2.83	1.84	2.97	13.03	5.80	1.98	3.39	6.94	15.58	12.32	8.49	6.51	3.25	98.58
<	110	.00	.00	.00	.00	.00	.00	.14	.14	.00	.14	.99	.00	.00	.00	.00	.00	1.41
<	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	2.83	5.09	5.66	2.83	1.84	2.97	13.17	5.94	1.98	3.54	7.93	15.58	12.32	8.49	6.51	3.25	

Calm : .00 %

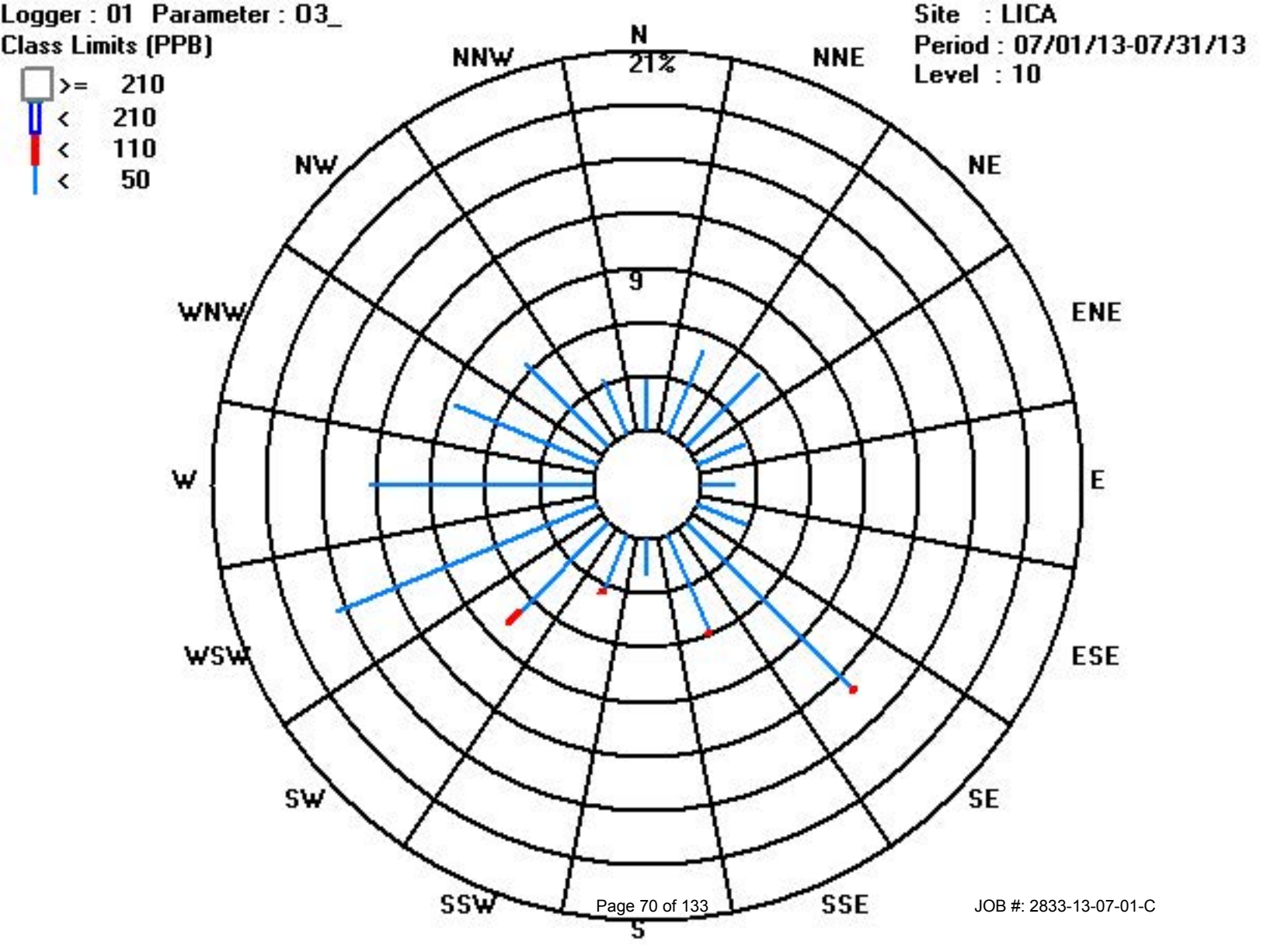
Total # Operational Hours : 706

Distribution By Samples

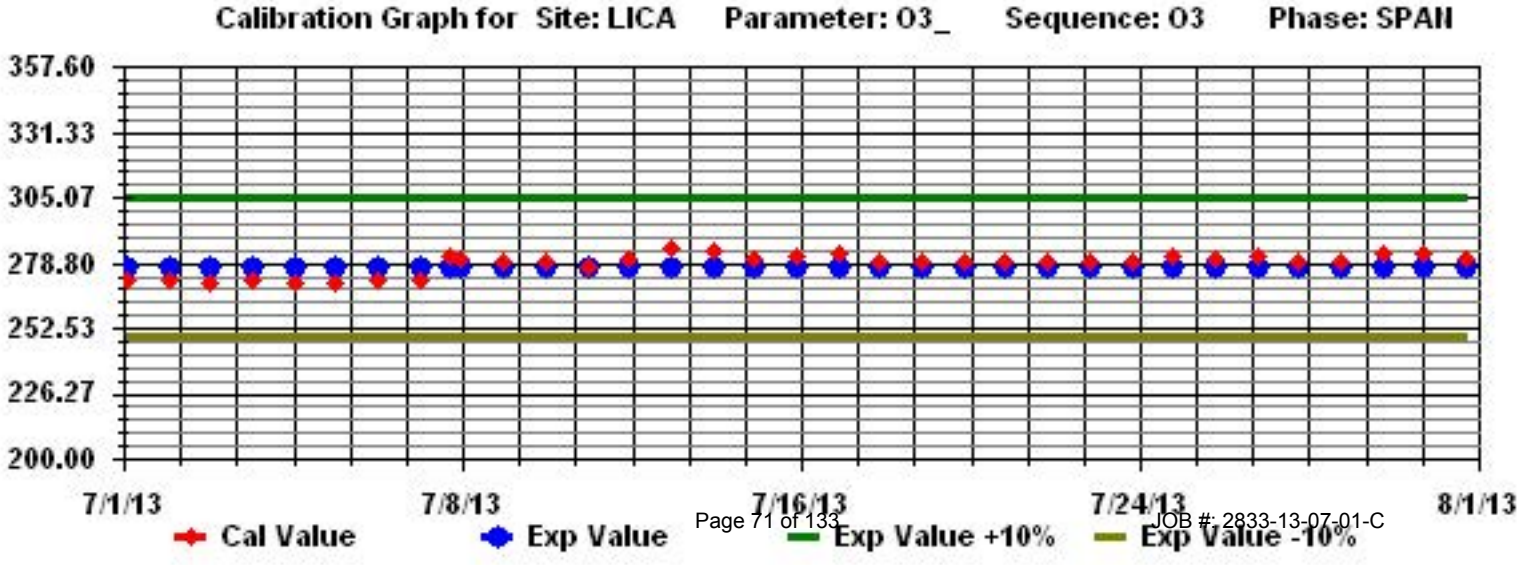
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	20	36	40	20	13	21	92	41	14	24	49	110	87	60	46	23	696
<	110							1	1		1	7						10
<	210																	
>=	210																	
	Totals	20	36	40	20	13	21	93	42	14	25	56	110	87	60	46	23	

Calm : .00 %

Total # Operational Hours : 706



JOB #: 2833-13-07-01-C


Calibration Graph for Site: LICA Parameter: O3_ Sequence: O3 Phase: SPAN
357.60
331.33
305.07
278.80
252.53
226.27
200.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

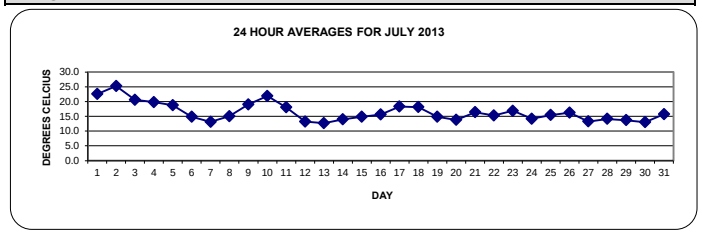
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	14.1	13.3	12.6	11.9	11.9	15.3	19	21	23.9	26	27.2	28.2	28.6	29.4	30	29.8	29.8	29.8	29.2	27.7	24.2	20.4	19	18.6	30.0	22.5	24
2	17.5	16.8	16.6	16.3	17.1	19.3	21.2	23.6	25.8	27.3	28.5	29.3	30.1	30.7	31.5	31.6	**31.8**	31.7	30.8	29.7	27.3	26	25.2	20	**31.8**	**25.2**	24
3	18	17.5	17.1	16.1	16.1	16.3	17.8	19.5	20	20.8	22	22.1	23.5	24.5	25	25	25.1	25.3	24.9	23.7	21.7	19.5	16.8	15.3	25.3	20.6	24
4	13.8	12.6	11	10.1	11.3	13.4	16	18.8	21.5	23.5	24.1	24.4	25.4	25.6	26.4	26.6	26.2	26.2	24	22.8	19.7	16.9	17.5	17.4	26.6	19.8	24
5	16.9	16.5	17	16.5	14.8	14.6	15.4	16.4	17.3	19.9	21.4	20.6	21.4	21.9	22.7	22.9	23.2	23.5	22.5	21.4	19.2	16.1	14.8	12.8	23.5	18.7	24
6	11.7	10.8	10	9.2	9	10.7	12.8	14.9	15.5	16.9	18	19.8	20.9	21.5	21.6	20.6	18.1	15.1	14.2	13.4	13.2	12.9	13	13.1	21.6	14.9	24
7	13	12.3	12.1	12	11.5	11.7	12.6	13.1	13.9	14.9	14.7	13.9	15.1	15.9	17	14.2	13.5	13.9	13.8	13.7	13	11	9.4	8.2	17.0	13.1	24
8	7.3	6.8	6.6	5.9	5.7	7.4	9.4	11.5	14.4	16.7	18.6	19.8	20.8	20.6	21.8	22	22.2	22.4	21.9	19.9	17.5	15	13.9	12.7	22.4	15.0	24
9	11.9	11.6	11.1	10.1	9.9	12.4	15.6	17.7	19.8	21.4	22.9	24	25.3	26.1	26.8	27.2	27	25.3	20.9	20.9	19.4	17.3	16.5	15.9	27.2	19.0	24
10	14	13.6	13.8	14.9	15.8	16.3	16.9	19.5	22	23.5	24.7	25.4	26	26.9	27.4	28	28.1	27.8	26.9	25.5	23.7	22	20.9	20.7	28.1	21.8	24
11	18.3	18	17.8	16.6	16.2	16.3	17	18.5	19.1	20.4	20.7	21.9	23.6	23.2	21.1	20.3	19.1	18.1	18.4	16.9	15.3	13.5	12.1	10.7	23.6	18.0	24
12	9.3	9.3	9.5	8.8	8.6	10	11.9	13.5	14.6	15.5	15.9	16.1	17	16.7	17.1	17.3	17.5	17.2	16.1	14.9	13	10.7	8.1	7.9	17.5	13.2	24
13	6.8	5.6	5.3	5.2	5.2	7.4	9.7	11.9	12.9	13.8	14.8	15.6	16.6	17.3	18.4	18.6	18.7	19.1	19	17.6	15.2	11.8	9.2	7.8	19.1	12.6	24
14	6.7	6	8.4	9.6	9.7	10.2	10.8	11.8	12.6	15.4	16	15.6	14.7	15.1	17.6	18.9	19.4	19.7	18.3	18	16.7	15.5	14.3	13.9	19.7	14.0	24
15	13.7	13.6	12.8	12.8	12.8	12.8	13.4	15.3	16.2	16.9	17.3	18.1	17.9	18.5	17.6	15.2	14.5	15.2	15.9	15.8	14.9	12.7	12	11.3	18.5	14.9	24
16	10.5	10	10	9.4	8.8	9.9	12	14.3	16.2	17.5	18.5	19.4	20	20.7	21.2	21.5	21.5	21.7	21.2	20.7	16.2	12.3	10.8	10.1	21.7	15.6	24
17	9.1	8.3	7.8	7.2	6.9	10.3	14	17.7	20.5	22.4	23.3	24.4	24.5	25.3	26.2	26.4	25.9	25.8	25.1	23.5	19.8	16.8	14.8	13	26.4	18.3	24
18	11.9	11.1	10.4	9.9	9.9	12.1	13.8	14.4	17.6	19.6	21.3	22.3	23.9	25.1	25.9	25.8	25.7	24.9	23.5	19.7	17.8	16.9	16	16	25.9	18.1	24
19	16.2	15.3	14.3	13.2	13.1	13.4	13.9	14.2	14.7	14.6	15.2	15.1	15.7	16.2	16.6	17	16.5	15.7	15.5	15.3	14.6	14.1	13.5	13	17.0	14.9	24
20	12.7	12.4	12.3	12.3	12.2	11.9	11.9	12.2	12.6	13	13.3	14.2	14.7	15.2	15.9	16.2	15.8	15.4	15.2	14.7	14.4	14.2	14.2	14	16.2	13.8	24
21	13.9	13.8	13.7	13.5	12.9	13.1	13.6	14.3	16.1	17.2	18.2	19	19.7	19.8	20.7	20.7	21.5	21.9	20.6	17.4	15.3	13.4	12.1	11.3	21.9	16.4	24
22	10.7	10.6	10.2	9.4	8.9	9.8	11.8	13.6	15	16.3	17.3	17.4	17.5	18.4	19.1	20	20.5	21.3	20	18.7	15.5	15.2	15	14.2	21.3	15.3	24
23	13.4	12.3	11.7	12.1	11.5	11.3	14.1	16.6	18.6	20	20.8	20.6	20.3	20.6	21.1	21.6	21.1	21	21.4	18.2	17.3	15.1	12.6	11.9	21.6	16.9	24
24	11.9	11.6	10.9	10.8	11.1	11.8	13.5	14.9	15	15	15.3	14.5	14.5	16	17.2	17.5	18.2	18.5	18.8	16.9	14.5	10.9	10.7	10.7	18.8	14.2	24
25	8.8	7.3	6.6	5.8	**5.1**	7	12	15.5	18.3	19.5	20.1	20.5	21.1	21.5	21.1	21.3	20.9	21	20.3	19	16.6	14.8	13.8	12.8	21.5	15.4	24
26	11.9	10.4	9	8.4	9.4	10.6	12.4	14.6	16.9	18.8	19.3	20	20.5	20.9	21.3	21.4	21.1	21	20.2	18.9	16.9	15.9	15.6	15	21.4	16.3	24
27	14.4	14.1	13.3	12.4	11.9	12.1	12.3	11.8	11.7	11.3	12.1	13.1	14.2	15.2	15.3	15.1	16.1	16.4	14.9	14.4	13.9	12.1	10.6	10	16.4	13.3	24
28	10	9.7	9	8.6	9	10	11.6	13.1	14.2	14.6	16.6	17.8	18.5	19	18.6	18.4	18.4	18.2	16.5	14.9	14.1	13.3	12.9	12.2	19.0	14.1	24
29	12.4	12	11.4	11.3	11.1	10.9	11.1	10.7	11.5	13.2	14.6	15.9	16.5	17.2	18	17.5	17.3	17.5	16.9	15.3	13.6	12.5	11.2	9.1	18.0	13.7	24
30	7.8	7	6	6.5	7.9	8.8	9.1	9.6	11.1	14.5	16.2	16.7	16.5	17.2	17.9	19	18.7	19	19	17.2	14.1	11.7	11.2	9.9	19.0	13.0	24
31	9	8.4	8.3	8.5	9.1	10.1	10.5	11.3	13.5	17.9	19.2	20.5	21.5	20.4	20.6	22.9	22.8	22.8	20.7	20	16.3	15	13.8	13.5	22.9	15.7	24
HOURLY MAX	18.3	18.0	17.8	16.6	17.1	19.3	21.2	23.6	25.8	27.3	28.5	29.3	30.1	30.7	31.5	31.6	31.8	31.7	30.8	29.7	27.3	26.0	25.2	20.7			
HOURLY AVG	12.2	11.6	11.2	10.8	10.8	11.8	13.5	15.0	16.5	18.0	19.0	19.6	20.2	20.7	21.2	21.3	21.2	21.0	20.2	18.9	16.9	15.0	13.9	13.0			

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

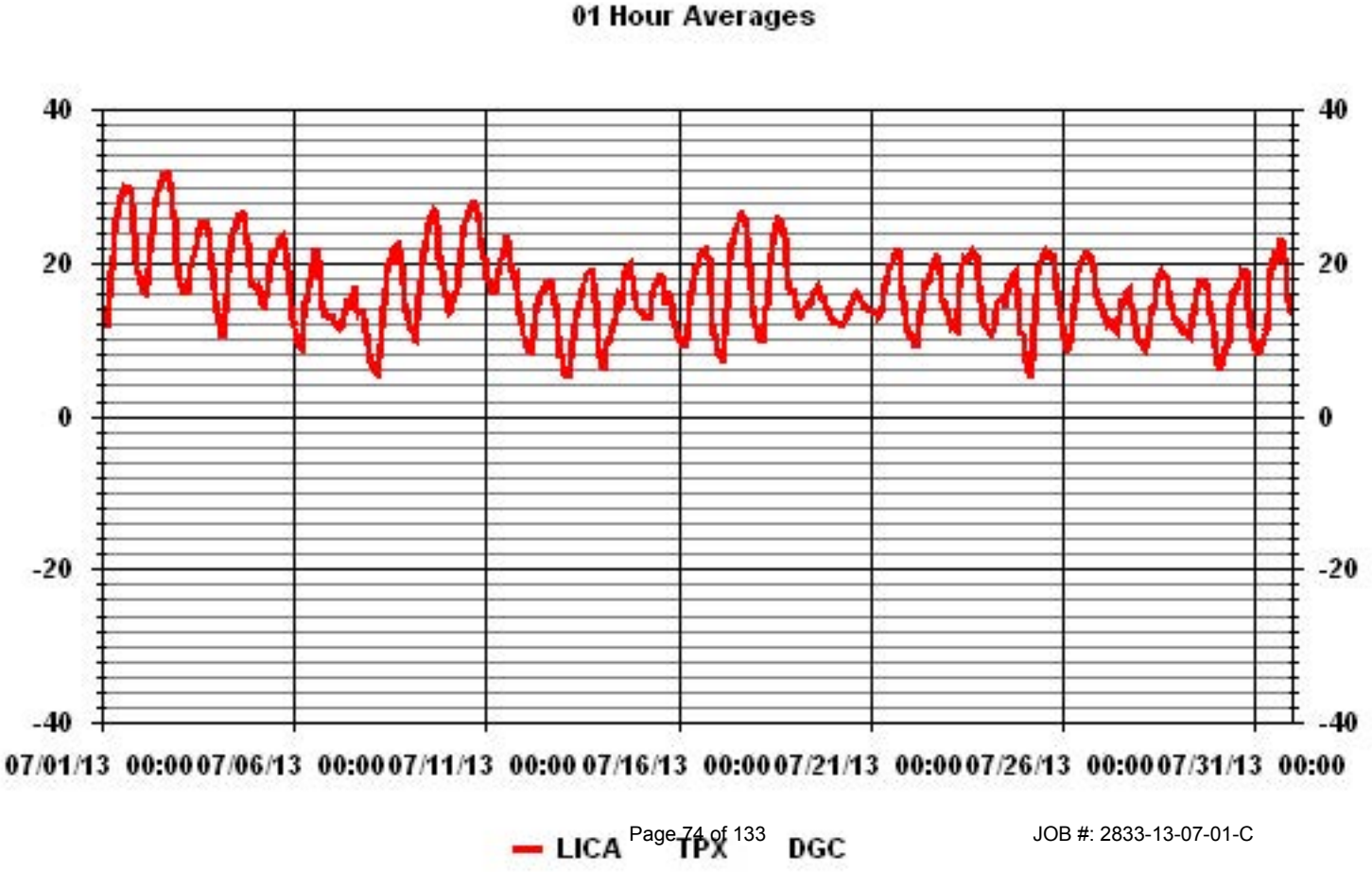


MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	5.1	^{O}C	@ HOUR(S)	4	ON DAY(S)	25
MAXIMUM 1-HR AVERAGE:	31.8	^{O}C	@ HOUR(S)	16	ON DAY(S)	2
MAXIMUM 24-HR AVERAGE:	25.2	^{O}C			ON DAY(S)	2
					VAR-VARIOUS	

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	5.31		MONTHLY AVERAGE:	16.40	^{O}C

*** Outside detection limits of sensor.**



JOB #: 2833-13-07-01-C

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

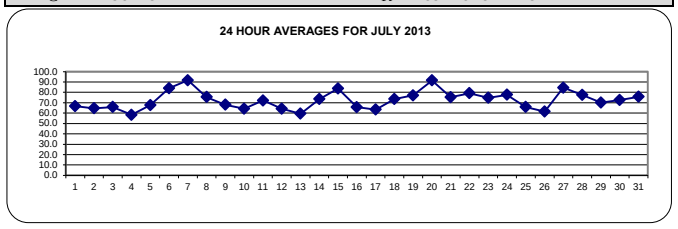
RELATIVE HUMIDITY hourly averages (%)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	95	95	96	96	96	85	82	77	68	61	55	48	41	41	38	40	40	39	43	50	66	82	84	80	96	66.6	24
2	84	85	85	87	85	78	73	68	61	58	54	52	49	48	48	49	49	50	52	56	64	69	68	81	87	64.7	24
3	89	89	90	95	98	96	89	81	77	70	63	62	51	39	35	40	41	40	41	45	52	57	68	74	98	65.9	24
4	80	84	90	92	89	80	71	61	52	44	37	38	36	34	32	31	32	32	40	48	67	79	76	76	92	58.4	24
5	80	81	71	75	88	92	87	83	78	68	58	58	54	51	48	46	45	43	47	50	61	80	85	92	92	67.5	24
6	94	95	95	95	95	94	93	92	88	81	75	65	59	54	55	61	80	87	87	92	90	96	96	95	96	83.9	24
7	96	97	98	99	99	99	98	97	93	86	85	89	83	83	79	88	95	88	84	85	89	95	96	97	99	**91.6**	24
8	97	97	97	97	97	98	98	94	85	74	62	58	54	55	48	48	44	47	51	63	77	86	90	94	98	75.5	24
9	95	95	95	96	95	88	82	74	66	57	50	47	43	40	38	37	40	45	62	65	73	81	83	86	96	68.0	24
10	92	95	95	93	88	87	84	74	60	51	50	46	47	47	46	41	41	43	47	53	60	67	68	67	95	64.3	24
11	72	74	75	83	87	88	84	77	74	69	68	64	59	62	70	68	67	68	63	64	66	73	76	82	88	72.2	24
12	88	89	86	86	85	76	66	57	55	52	52	52	50	52	51	49	48	50	54	52	58	70	83	81	89	64.3	24
13	86	90	90	90	91	83	75	65	54	46	44	41	38	35	35	34	31	30	33	41	54	72	83	86	91	59.5	24
14	89	90	83	81	82	79	77	75	75	67	68	71	84	81	65	56	56	49	55	59	68	75	89	90	90	73.5	24
15	90	93	96	97	97	97	94	80	72	68	67	63	62	61	71	87	93	85	85	83	88	95	94	92	97	83.8	24
16	93	92	91	93	95	91	84	76	66	60	56	47	42	40	37	36	37	35	35	41	67	82	89	91	95	65.7	24
17	93	93	93	93	94	84	79	68	57	51	47	44	43	39	35	35	34	36	41	49	65	77	83	89	94	63.4	24
18	91	93	94	95	95	90	87	86	74	63	52	49	47	44	44	44	43	49	56	80	96	98	98	98	98	73.6	24
19	95	93	94	97	98	98	94	75	64	63	59	62	62	60	59	57	60	65	70	72	81	86	92	94	98	77.1	24
20	93	92	92	91	93	95	96	94	92	91	90	87	86	84	83	82	86	90	93	96	96	97	99	99	99	91.5	24
21	99	98	95	95	95	92	92	88	79	69	63	58	55	53	51	47	45	44	56	77	84	88	93	93	99	75.4	24
22	94	95	95	95	96	96	94	90	84	79	75	73	75	70	64	59	53	47	54	66	83	84	88	91	96	79.2	24
23	93	95	96	93	94	95	89	81	72	66	60	61	60	56	54	54	56	56	54	68	73	84	92	94	96	74.8	24
24	93	94	95	95	96	96	88	81	76	74	71	74	77	65	62	61	56	51	50	64	74	90	91	90	96	77.7	24
25	92	94	94	95	94	90	80	70	58	53	50	46	46	44	45	46	45	45	48	55	64	70	76	81	95	65.9	24
26	84	88	91	92	86	80	76	69	61	52	47	43	42	40	41	42	42	43	45	52	60	65	66	69	92	61.5	24
27	71	72	74	76	79	77	78	86	91	91	86	85	82	84	89	91	84	77	91	96	93	90	93	93	96	84.5	24
28	89	90	93	94	94	90	85	81	78	77	67	61	57	56	56	58	57	57	66	80	88	94	96	96	96	77.5	24
29	96	93	90	92	93	91	85	81	73	67	61	54	51	48	44	44	46	45	49	59	72	72	82	93	96	70.0	24
30	94	94	94	94	93	95	95	94	88	73	60	55	57	55	50	46	47	47	46	53	69	79	80	86	95	72.7	24
31	90	93	92	92	88	86	90	92	86	74	66	60	55	63	66	51	50	49	56	64	84	89	91	92	93	75.8	24
HOURLY MAX	99	98	98	99	99	99	98	97	93	91	90	89	86	84	89	91	95	90	93	96	96	98	98	99	99		
HOURLY AVG	89.9	90.9	90.8	91.7	92.1	89.2	85.3	79.6	72.8	66.3	61.2	58.5	56.4	54.3	52.9	52.5	53.0	52.6	56.6	63.8	73.6	81.4	85.4	87.8			

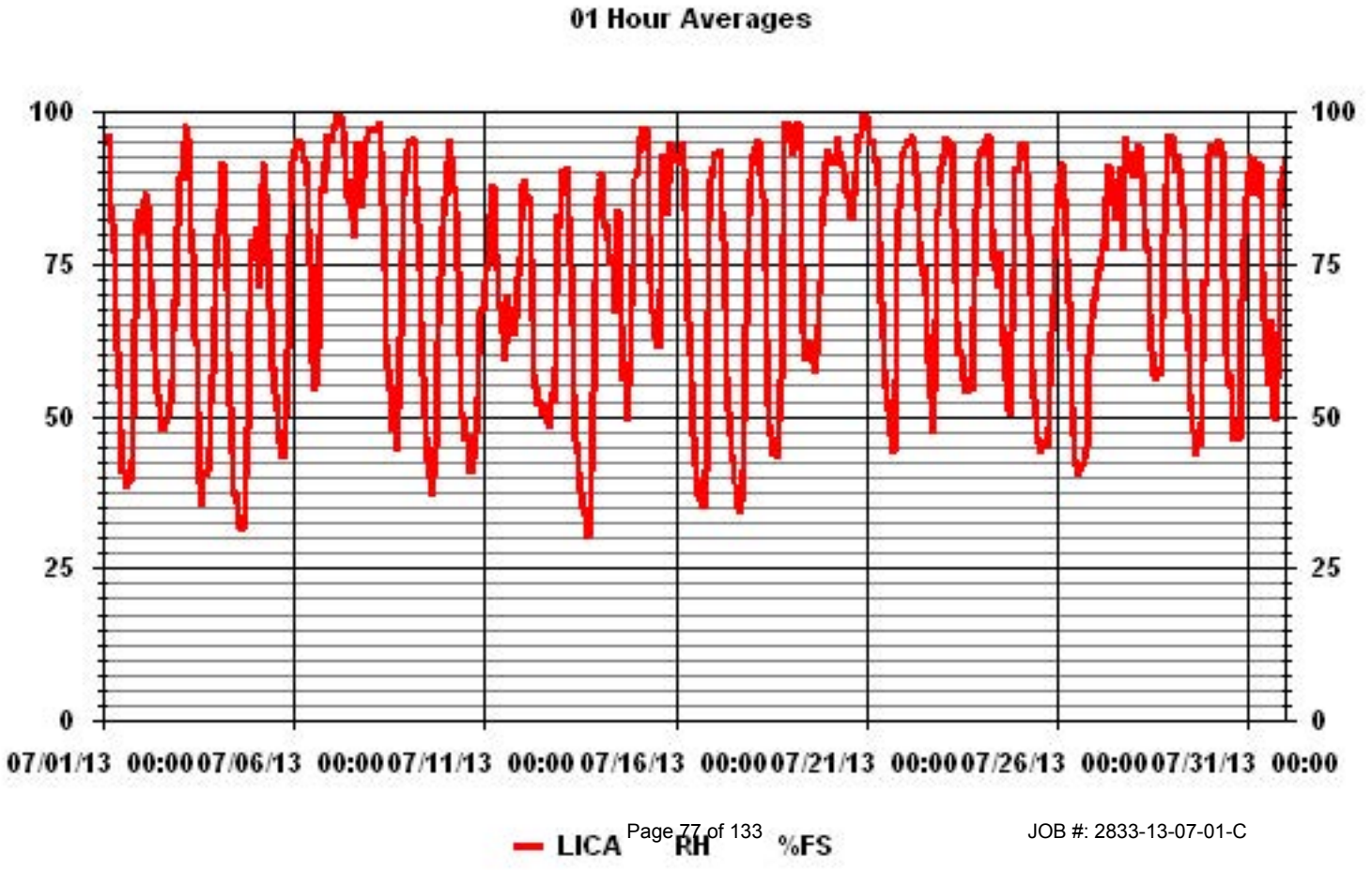
STATUS FLAG CODES

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

MAXIMUM 1-HR AVERAGE:		99	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:		91.6	%			ON DAY(S)	7
CALIBRATION TIME:	0 HRS			OPERATIONAL TIME:		744	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	19.26			MONTHLY AVERAGE:		72.44	%



JOB #: 2833-13-07-01-C

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

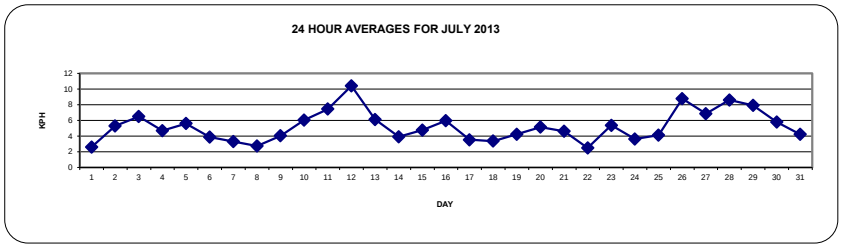
VECTOR WIND SPEED (WS) hourly averages (km/hr)

MST

HOUR START / HOUR END	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY																											
1	0.2	0.8	0.4	0.4	1	0.3	2.6	4.1	3.6	3.2	3.8	4.8	6	5.8	5	5.3	4.7	4.3	3.7	2.6	1.5	0.8	0.9	1.4	6	2.6	24
2	2.1	2.6	3.2	2.9	4.5	4.4	7	8.1	7.4	6.7	10.3	11.6	12.4	12.9	10.9	10.6	9.5	7.7	7.8	5.6	4.3	2.6	9.4	**17.6**	**17.6**	5.3	24
3	11.2	8.2	4	2.1	1.6	6.1	9.4	8.5	9	9.9	10.6	10.7	9.9	13.3	12.5	11.8	10.5	8.8	9.4	8.7	7	4.6	3.5	4.2	13.3	6.5	24
4	3.5	3.9	0.6	2.9	3.5	4.3	5.5	5.5	5.5	6.2	8.4	6.6	6.7	7.2	6.1	5.8	7.1	8.2	6.8	2.9	3.2	2.1	3.8	2.9	8.4	4.7	24
5	2.2	3.5	7.2	7.2	8.2	9.1	3.8	4	5.4	4.7	6.8	5.6	7.4	6.5	5.8	6.5	5.5	6.7	7.3	6.6	4.5	5.8	2.7	1.7	9.1	5.6	24
6	0.9	0.6	0.7	0.7	0.9	0.6	2	4.8	5.8	4.9	4.3	5.4	4.4	4.7	8.4	8.4	7.4	5.2	5.9	3.9	2.8	3.9	3.4	3.1	8.4	3.9	24
7	0.2	1.2	2.4	2.3	1.8	2.8	3.2	5.1	4.9	8.2	3.6	5.1	3.5	1.7	2.8	4.2	4	8	5	3	2.7	1.1	1.5	1.4	8.2	3.3	24
8	2	0.7	1.6	0.7	1	3	4	3.8	4.3	4.7	3.7	1.8	2.6	3.7	4	4.8	5.8	5	3.9	1.6	1.2	1	0.4	0.3	5.8	2.7	24
9	0.6	0.7	0.6	0.2	0.1	0.5	2.3	4.8	4	5	4.6	5.1	6	7.8	8.5	10.9	9.9	5.1	4.9	5	2	3.9	3.1	1.9	10.9	4.1	24
10	0.5	0.9	1.5	4.3	3.9	0.6	1.6	4.3	4.7	4.9	8	9.6	9.9	7.2	8.5	8.1	8	10.1	10.4	6.7	6.1	8.5	6.8	9.8	10.4	6.0	24
11	9.1	6.2	0.9	3.8	3.6	1.8	7.1	6.8	6.2	4.5	5.7	3.4	2.6	7.3	13	16.6	13.1	14.1	9.5	12	11.2	8.5	7.9	4	16.6	7.5	24
12	3.4	4.9	5.9	5	4.6	7.1	8.7	12.9	14.4	17.1	16.5	15.9	16.2	15.7	15.9	16.7	14.9	12.5	12.9	12.1	8.2	2.8	2.7	3.5	17.1	**10.4**	24
13	2.8	2.6	3.4	3.8	3.2	3.4	4.6	6.8	10.5	12.3	11.9	11.9	9.8	11.3	8.3	9.4	9.7	7.8	4.5	3.7	3.2	1.4	0.4	0.5	12.3	6.1	24
14	0.4	1.4	4.2	4.5	3.3	5.3	5.1	6.3	5.7	2.2	3	3.4	2.3	2.2	2.5	5.2	5.8	6.2	5.6	4.2	3.3	2.8	5.9	3.5	6.3	3.9	24
15	3.7	1	1.8	1.5	2	4	3.3	6.5	8.5	7.9	5.7	5.9	7.4	6.4	4.7	8.6	5.7	5.9	4.1	5.6	3.4	2.3	4.5	4.5	8.6	4.8	24
16	3.7	4.1	5.5	2.9	2.6	3.6	4.2	4.4	6.3	8.2	8	11.1	10.3	11.1	11.5	11.6	9.7	8.7	8.2	3.5	1.4	0.6	1.3	0.6	11.6	6.0	24
17	0.6	0.4	0.4	0.3	0.5	0.3	2.6	4.2	5.6	6.8	7.5	6.9	6	6.1	7.9	6.8	6.2	4.8	3.9	2.7	2	0.9	0.5	1.1	7.9	3.5	24
18	1	0.5	0.3	0.4	0.6	2.2	2.9	2.2	4.3	6	5.3	3.3	1.7	4.8	8.5	7.8	10.5	7.2	3.2	4.8	1.7	0.8	0.2	0.6	10.5	3.4	24
19	4.4	1.3	1.1	1.2	2.1	2.3	3.5	6.3	6.7	7.6	7.1	6.8	6.2	7.3	6.9	7.7	6.2	4.8	3.8	3.4	2.4	0.5	0.9	1.4	7.7	4.2	24
20	1.8	2.7	4.3	3.5	3.1	4.9	4.7	4.8	5.6	6.2	8.1	7.5	9.6	8.2	6.7	5.9	6.5	6.3	5	3.8	3.5	4.2	3.6	3.2	9.6	5.2	24
21	4.2	5.3	4.2	5.8	7.1	6.4	6.6	8.2	7.7	9.2	8.9	8.5	6.4	4.1	2.4	4.5	3.4	2.4	1	1	0.9	0.7	1.2	0.7	9.2	4.6	24
22	0.7	0.1	0.4	0.4	0.5	0.7	1.8	2.2	1.5	2.1	3.3	2.7	1.8	2.1	3	2.7	4.4	4.3	7.2	3.5	1.6	4.9	4.2	4.1	7.2	2.5	24
23	1.2	0.3	0.3	1.5	1.9	1	5.9	7.5	7.4	8.2	10.2	13.2	15	10.9	9.7	8.4	6.7	5.2	4.6	5.4	2.4	0.2	1.9	0.4	15.0	5.4	24
24	0.6	0.7	1.2	0.2	1.1	0.4	1.7	3.5	6.1	7.6	10.9	9.4	7.2	6.4	3.4	5.1	5.4	5.2	3.3	2.2	1.3	2.2	1.1	1.1	10.9	3.6	24
25	1.4	0.8	0.3	0.5	0.6	0.7	0.8	1.2	1.4	2.4	2.3	2.7	5.9	6.4	7.8	8.5	8.7	8.2	8.9	6	6	6.6	6	4.9	8.9	4.1	24
26	4.7	3	0.6	2.9	5.6	7.9	7.1	6.8	10	9.7	12.3	13.1	13.4	13.7	12.8	13.5	13.8	12	13.1	8	5.6	6.7	7.3	7.2	13.8	8.8	24
27	9.1	12.6	13.3	11.1	7.2	3.9	2.4	2.9	4.2	8.1	15.2	9.5	5.7	4.3	3.4	2.6	5.8	9.1	4.9	5.6	6.4	7	5.7	4.4	15.2	6.9	24
28	7.2	5.2	3.7	3.1	4.9	3.8	6.2	7.4	7.5	10.1	10.1	11.5	12.6	10.6	13.4	12.7	12	12.7	10.6	9.6	8.6	8.2	8	6.9	13.4	8.6	24
29	6.1	6.9	7.5	5.9	6.4	7.9	11.7	12.4	11.6	10.5	10.7	11.2	10.7	11	11.5	10.1	6.2	9.1	6.5	3.2	2.9	3.6	4.5	2.5	12.4	7.9	24
30	3.3	3.5	3.4	3.5	3.4	2.9	4.1	6.2	7.4	7.8	9.1	8.9	7.1	7.3	9	7.5	8.4	8.9	7.9	5.9	3.3	3.6	3.6	3.4	9.1	5.8	24
31	2.8	3.3	3.6	4.1	4.6	3.6	3.5	2.9	5	5.8	9	6.2	5.7	4.6	2.2	5	7.3	7.4	5.5	3.1	2.9	1.6	1	0.9	9.0	4.2	24
HOURLY MAX	11.2	12.6	13.3	11.1	8.2	9.1	11.7	12.9	14.4	17.1	16.5	15.9	16.2	15.7	15.9	16.7	14.9	14.1	13.1	12.1	11.2	8.5	9.4	17.6			
HOURLY AVG	3.1	2.9	2.9	2.9	3.1	3.4	4.5	5.7	6.4	7.1	7.9	7.7	7.5	7.5	7.6	8.2	7.8	7.5	6.4	5.0	3.8	3.4	3.5	3.3			

STATUS FLAG CODES

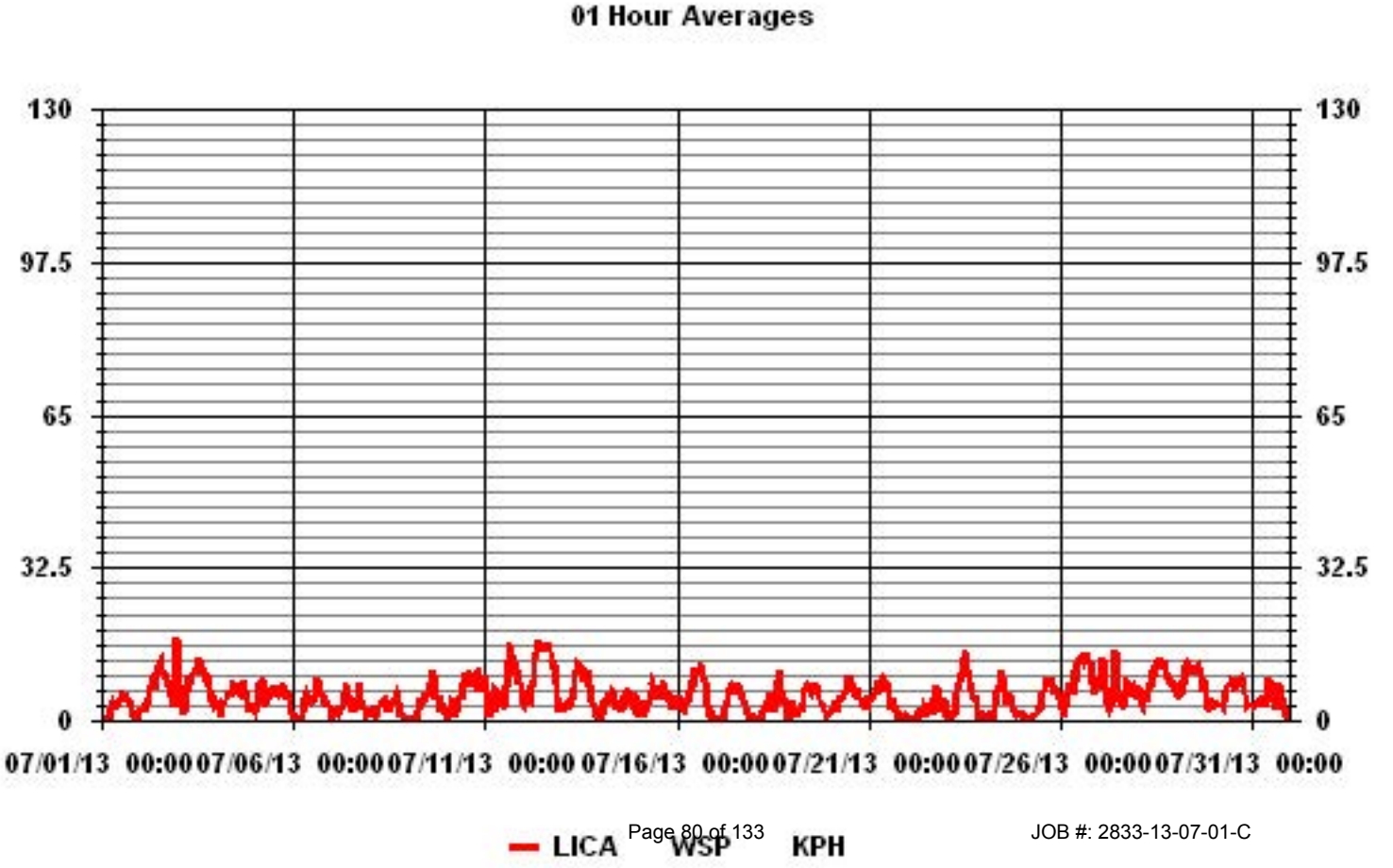
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



LAST CALIBRATION: November 28, 2012

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	17.6	KPH	@ HOUR(S)	23	ON DAY(S)	2	
MAXIMUM 24-HR AVERAGE:	10.4	KPH			ON DAY(S)	12	
CALMS (≤ 0 KPH)	2.15	%	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	3.58		MONTHLY AVERAGE:		5.38	KPH	



JOB #: 2833-13-07-01-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	2	2.9	2.9	2.4	3.5	2.6	6.8	7.4	7.9	6.9	8.1	10.1	10.8	12.3	12.4	13.2	11.1	8.9	7.3	4.2	4.5	3	2.4	3	13.2
2	3.8	5.1	5.4	4.6	7.1	6.9	11.9	11.7	13.7	15.3	18.4	22.9	19.9	20.4	19.7	18.1	15.9	16.4	12.1	8.7	7.4	6.5	31.5	31.2	31.5
3	24.2	14.3	11.3	5.8	9.1	12.7	15	14.1	16.5	16.1	16.4	17.3	16.7	23.6	19.1	20.1	16.7	15.6	15.8	14.2	10.2	7.4	6	6.6	24.2
4	6.7	5.8	1.6	5.1	5.5	6.4	8.2	8.7	11.2	10.8	15.5	14.1	13.8	14.4	13.3	15.7	14	16.1	12.1	6.1	4.1	4.2	5.6	4	16.1
5	3.9	11.5	12.2	12.3	12.5	13	9.1	7	9.3	8.2	12.5	12.7	15.2	12.1	13.2	11.9	12.1	11.5	13.4	11.8	10.1	9.1	5.2	4.7	15.2
6	4	4	3.4	3.3	3.6	3.7	3.7	8.4	10.5	8.6	9	10.5	10.4	10	15.9	14.1	14.2	10.7	10.5	8.7	13.6	7	7	5.3	15.9
7	3.4	5.2	9.1	5.8	4.2	5.4	5.8	8.7	10.6	11.9	11.4	9.1	6.7	7	10.1	7.7	10.8	10.8	8.1	7.8	5.2	2.5	2.6	2.7	11.9
8	3.5	3.1	4.2	3.2	4.3	6.5	8.3	7.4	7.6	9.3	8.7	8.3	7.5	9.9	10.9	12.9	12.2	10.1	7.6	2.7	2.7	2.3	3.3	2	12.9
9	2.2	3	3.2	2.6	1.6	2.6	5.8	9.5	8.7	10.9	10.1	12.8	13.9	13	16.1	20	18.2	17.1	13.4	8.3	5.3	6.7	5.1	5.9	20
10	3.8	7.2	4	7.3	8.2	4.3	5.3	7.4	7.8	10.4	15	16.2	16.5	14.8	14.5	12.7	13.3	14.9	13.8	11.6	8.3	11.7	11.4	24.3	24.3
11	20.2	10.6	8.2	15.1	14.1	7.1	13.6	10.8	11.4	10.8	11.5	10.8	10.8	12.3	21.2	26.5	21.2	20.9	16.7	21.9	19.4	12.1	12.2	7.6	26.5
12	7.4	8	8.8	7.7	8	11.3	13.6	20.5	20.6	31.4	24.8	28.4	26.7	22.8	25.4	22.3	22.3	22.6	19.8	21.5	14.9	5.6	4.9	6.1	31.4
13	4.5	4.3	4.6	5.4	6.9	7.2	7.7	13.8	17.4	18.6	18.6	20.1	19.2	18.7	16	17.7	17.7	13.6	10.5	7.9	5.8	3.2	1.5	2	20.1
14	1.9	3.9	7.6	7.4	5.8	9.2	8.3	9.4	9.1	7	6.2	7.8	4.9	6.7	8.4	11.6	12.5	12.9	9.8	7.4	4.7	7	11.9	7.2	12.9
15	7.4	4	4.6	4.2	4.4	6.5	8.8	11.9	14.5	15.7	10.1	11.5	11.7	10.5	9.3	14.7	9.4	12.7	6.3	8.1	6.6	4	6.7	7	15.7
16	6.5	6.8	8.5	7.2	4.6	6	7.3	9.1	12.7	14	15.7	20	19.5	17.2	17.1	18.2	15.7	19.2	13.6	7.3	3.8	1.8	3.7	2.9	20
17	2.2	1.6	1.9	1.4	3.2	4.2	5.3	8.8	9.1	12.7	14.2	13	13.7	12.4	16.8	13.3	14.2	8.9	7.6	5.5	3.7	3.1	3	5	16.8
18	2.5	3	2.3	2.2	4.4	5.3	5.9	8.4	7.7	9.4	9.9	8.1	9	12.7	14.4	14.8	17.2	14.6	8.2	20.2	3.3	3.4	3.8	1.9	20.2
19	19.7	8.1	8.7	4.4	4.8	4.3	6.8	10	11.7	12.4	11.6	10.9	9.6	12.2	12.1	13.7	9.2	8.8	5.2	7	3.6	2.4	2.1	3	19.7
20	5.1	6.3	7.2	6.9	6.2	8.4	7.8	9.6	8.7	12.6	13.7	13.2	15.3	12.7	10.8	10.1	11	10.6	8.7	8.5	6.8	7.7	6.5	7.6	15.3
21	11.1	8.1	9.6	11.4	10.3	11.5	9.8	14.6	12.2	16.9	16.7	14.4	12.8	13.9	9.7	10.7	9.6	9.4	5	3	2	1.5	3.3	2.8	16.9
22	1.9	1.8	2.3	2.1	2.5	3.4	3.3	3.8	4.1	6.5	7.9	5	6.5	6.7	8.7	7.9	9.8	9.2	13.1	6.6	3.3	7.3	8.3	5.9	13.1
23	4.1	2	3.4	4.4	4.3	3.2	9.7	12.4	12.9	14	17.1	22.6	24.7	17.5	15.4	14.8	12.7	9.2	12	11.9	4.5	1.9	3.1	3.8	24.7
24	3.1	2.7	3.4	2.9	4.1	4.8	5.5	8.8	10.3	12.2	17	18.6	11.6	11.7	8	10.7	10.9	9.6	7.8	4.3	6.7	4.7	4.5	3.9	18.6
25	2.8	2.6	2.7	2.6	2.5	3.4	3.1	3.4	5	7.2	7.3	14.7	12.7	13.9	13	14.4	15.7	16	13.8	8.2	8.5	8.9	9.2	7.7	16
26	6.7	4.5	2.7	7.7	8.2	10.2	9.6	10.6	16.5	17.6	20.2	24.1	22.6	24.7	20.9	21.8	21	20.3	21.9	13.2	9.8	10.8	11.1	10.9	24.7
27	15.9	19.9	19.2	17.3	10	13.8	7.3	9.8	11.4	17.3	25.8	14.5	10.3	8.8	5.5	5.9	16	17.8	9.5	8.8	11.6	13	8.2	9.5	25.8
28	12.3	8.8	6.6	7.7	8.6	7.4	11.2	13.5	13	18.1	17	18.6	22.6	18.3	19	20.4	20.4	21.1	15.3	20.2	14	14.7	12.6	9.8	22.6
29	9.2	12.3	13.6	9.4	16.3	13	19	21.2	17.7	16.1	17.3	22.5	16.2	17.6	19.3	17.7	**51.3**	15.8	13.9	6.8	6.1	5	8.7	3.5	**51.3**
30	4.5	4.7	4.6	5.4	5.4	7.3	9	9.9	11.7	14.6	14.9	15.2	13.1	13.9	15.3	17.4	16.5	14.5	12.8	10.9	6.7	4.9	5.1	4.9	17.4
31	4.2	5.1	4.9	5.6	7	8.3	7.3	5.8	9.2	15.7	15.3	12.2	13.4	13.6	9.1	15	13.6	15.5	17.7	4.7	4.5	4	6.7	4.5	17.7
PEAK	24.2	19.9	19.2	17.3	16.3	13.8	19.0	21.2	20.6	31.4	25.8	28.4	26.7	24.7	25.4	26.5	51.3	22.6	21.9	21.9	19.4	14.7	31.5	31.2	

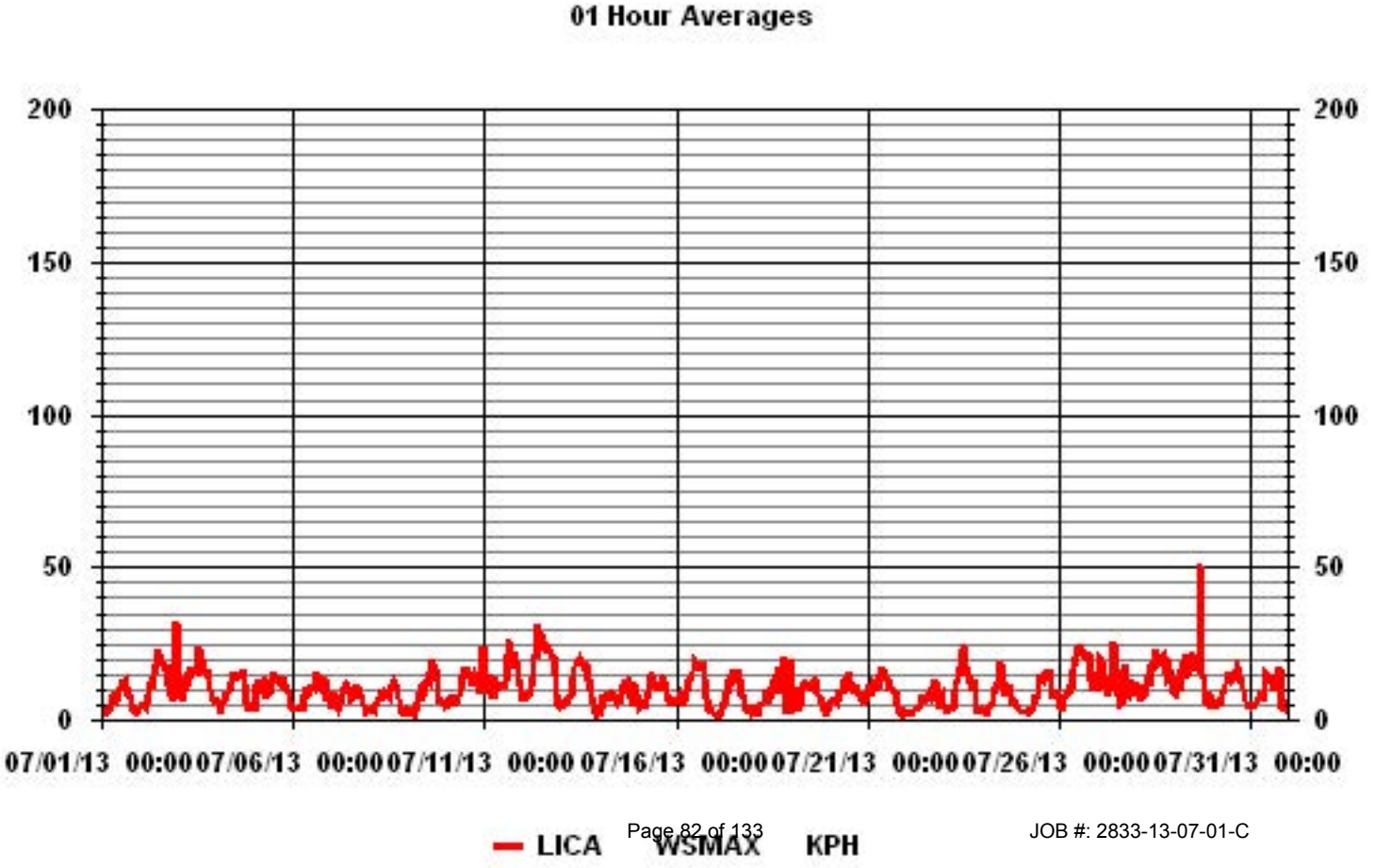
STATUS FLAG CODES

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	51.3	KPH	@ HOUR(S)	16
			ON DAY(S)	29

JOB #: 2833-13-07-01-C



JOB #: 2833-13-07-01-C

LICA
WSP / WD Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	2.15	3.09	2.95	2.28	1.47	2.28	6.85	2.82	1.74	3.49	6.04	12.09	5.64	2.68	2.01	1.47	59.13
<	12.0	.26	1.74	2.41	.26	.26	.67	4.97	2.15	.00	.00	1.88	2.15	5.51	4.56	4.56	1.34	32.79
<	20.0	.13	.00	.00	.00	.00	.00	1.20	.67	.00	.00	.00	.94	1.34	1.20	.13	.26	5.91
<	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	2.55	4.83	5.37	2.55	1.74	2.95	13.03	5.64	1.74	3.49	7.93	15.18	12.50	8.46	6.72	3.09	

Calm : 2.15 %

Total # Operational Hours : 744

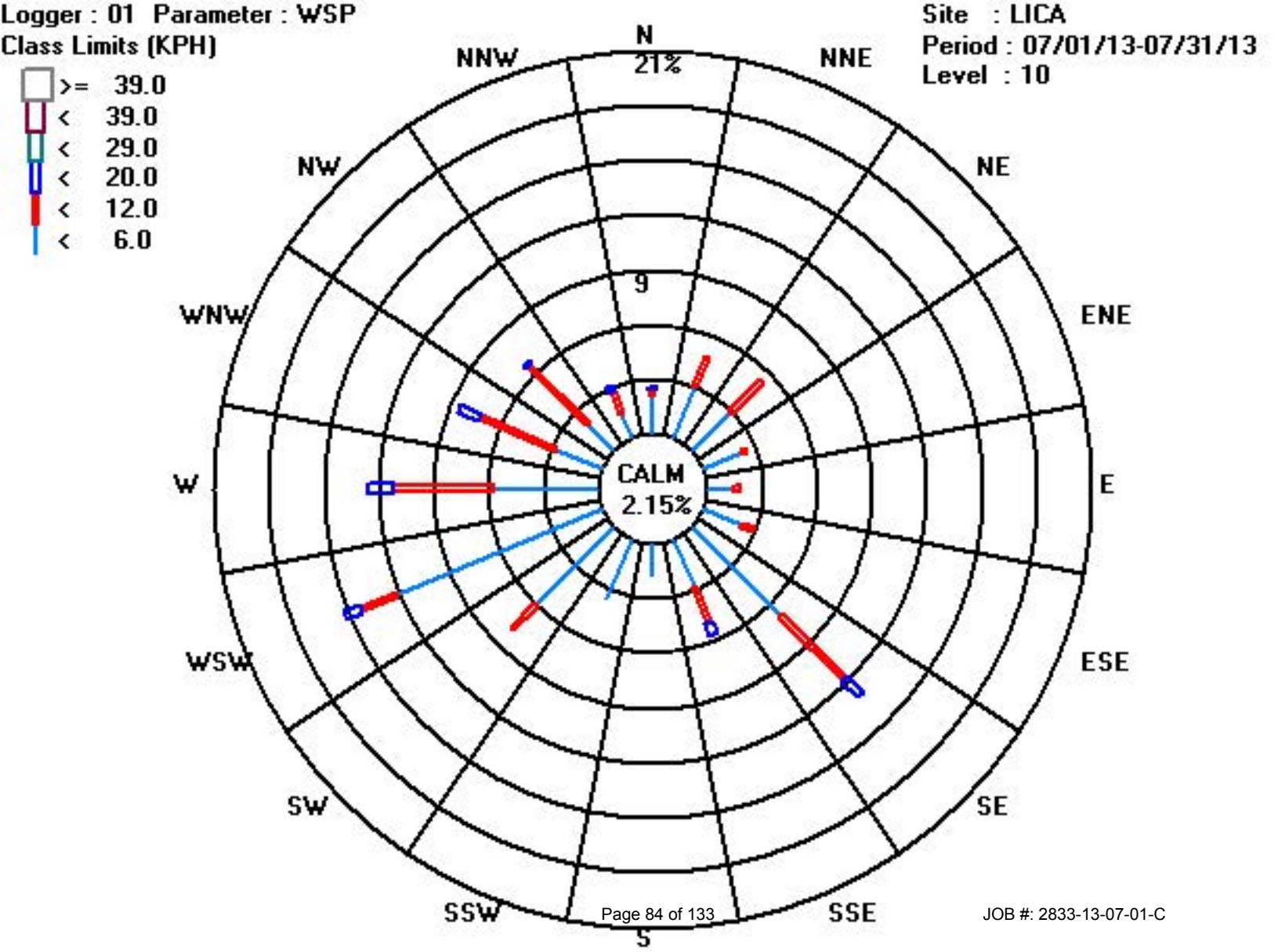
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	16	23	22	17	11	17	51	21	13	26	45	90	42	20	15	11	440
<	12.0	2	13	18	2	2	5	37	16			14	16	41	34	34	10	244
<	20.0	1						9	5				7	10	9	1	2	44
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	19	36	40	19	13	22	97	42	13	26	59	113	93	63	50	23	

Calm : 2.15 %

Total # Operational Hours : 744



JOB #: 2833-13-07-01-C

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

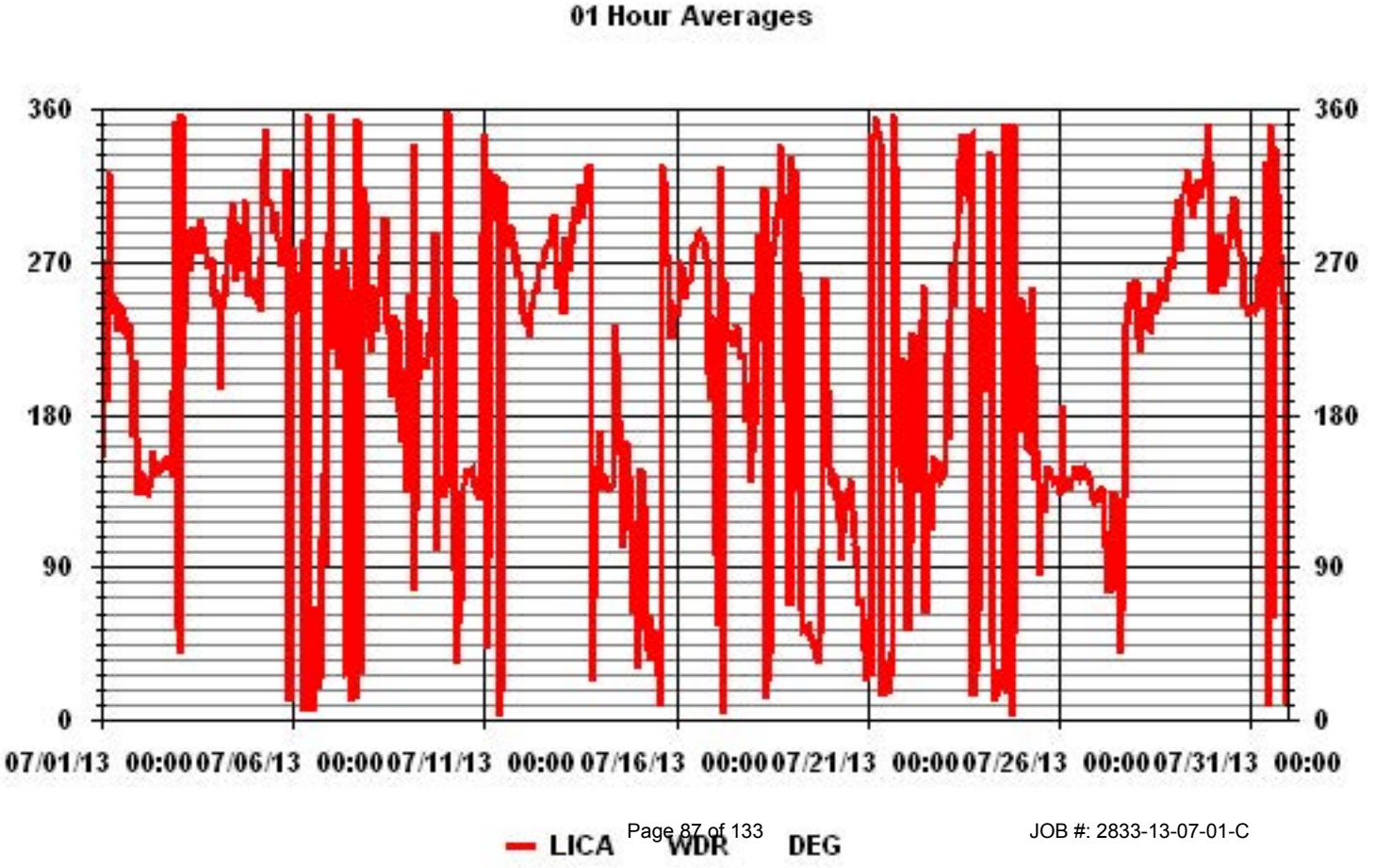
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	157	228	272	187	229	323	251	246	250	241	228	246	239	243	238	229	225	234	217	173	167	212	167	132	231	SW	24
2	138	147	138	136	135	141	140	143	159	148	152	146	146	147	148	152	152	153	155	149	142	195	321	353	146	SE	24
3	55	39	357	207	234	289	272	264	280	281	291	289	282	274	295	292	280	278	272	266	268	273	250	255	285	WNW	24
4	244	250	194	243	243	250	262	269	283	296	306	289	258	294	268	264	275	277	307	288	250	260	256	257	273	W	24
5	248	251	246	240	273	323	330	348	308	303	305	297	286	299	285	284	268	270	280	281	324	12	12	279	292	WNW	24
6	239	265	241	244	240	261	283	4	24	357	16	27	4	56	56	67	18	24	107	145	91	278	279	288	27	NNE	24
7	357	218	260	266	206	252	259	266	277	269	29	30	11	254	232	12	354	30	43	27	314	305	243	225	319	NW	24
8	255	217	256	229	242	249	252	274	251	294	294	235	229	190	221	239	233	234	231	182	165	165	206	133	241	WSW	24
9	206	249	249	75	339	123	200	235	215	212	211	207	214	228	224	249	243	287	99	139	142	142	131	136	214	SSW	24
10	256	359	247	250	249	89	33	58	58	70	135	139	143	148	145	148	149	143	138	134	130	139	148	286	141	SE	24
11	345	42	95	325	296	294	308	321	319	1	43	16	318	279	282	286	292	280	269	282	275	264	263	255	296	WNW	24
12	241	233	240	233	225	243	246	252	253	258	266	270	266	272	277	280	283	279	297	295	298	262	254	268	267	W	24
13	248	239	252	284	272	264	280	293	302	292	302	310	315	296	304	312	315	325	327	22	72	124	150	143	302	WNW	24
14	171	135	141	145	136	138	137	138	138	199	233	216	178	157	101	129	139	165	144	113	63	80	117	110	138	SE	24
15	30	53	148	113	128	56	40	62	34	44	53	38	25	37	7	328	297	318	275	269	249	224	244	243	8	N	24
16	238	241	271	268	252	250	250	257	260	261	270	279	281	287	288	282	286	284	283	273	205	188	238	234	273	W	24
17	157	98	73	55	326	3	259	234	222	230	225	220	223	229	233	228	214	214	216	199	176	180	199	139	222	SW	24
18	157	251	173	286	222	247	269	314	12	23	49	39	273	282	285	296	306	340	308	308	234	187	246	67	313	NW	24
19	332	135	324	288	266	250	66	53	54	54	55	49	52	48	42	45	37	34	50	101	151	261	210	195	47	NE	24
20	150	140	137	145	129	136	119	93	110	119	134	129	136	143	125	109	104	92	71	67	71	40	60	22	113	ESE	24
21	52	35	25	344	345	356	343	347	341	14	20	31	34	15	25	40	357	327	288	203	150	139	213	203	8	N	24
22	101	52	193	104	229	148	134	144	142	207	236	256	62	110	145	111	136	155	139	152	145	141	142	144	147	SE	24
23	151	216	164	235	268	244	267	282	278	298	330	345	335	311	312	306	344	345	14	37	29	64	243	236	319	NW	24
24	220	193	240	233	254	335	46	12	14	16	18	30	21	22	351	15	42	41	2	352	51	251	241	169	18	NNE	24
25	249	181	242	210	161	160	222	255	210	141	159	84	108	137	136	122	144	150	143	143	140	141	142	140	140	SE	24
26	140	133	186	143	139	139	135	141	142	150	148	146	147	144	146	148	146	148	143	140	132	132	130	133	143	SE	24
27	132	135	136	134	101	110	109	75	102	113	135	122	117	77	39	64	131	147	233	246	244	258	245	244	138	SE	24
28	260	226	217	220	235	243	230	233	232	252	243	240	240	244	250	259	250	255	246	258	266	273	271	266	249	WSW	24
29	280	297	307	276	291	310	315	314	325	317	305	301	295	304	316	319	307	314	319	316	331	352	330	257	309	NW	24
30	258	251	258	276	284	284	256	262	268	278	280	284	298	306	306	290	280	277	274	268	245	243	238	241	276	W	24
31	241	244	245	242	244	263	244	268	273	325	329	8	351	60	307	338	305	311	276	257	245	251	9	201	295	WNW	24
HOURLY AVG	357	359	357	344	345	356	343	348	341	357	330	345	351	311	351	338	357	345	327	352	331	352	330	353			

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:	744	HRS
STANDARD DEVIATION:	92.47		AMD OPERATION UPTIME:	100.0	%
			MONTHLY AVERAGE:	266	DEG



JOB #: 2833-13-07-01-C

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

JULY 2013

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

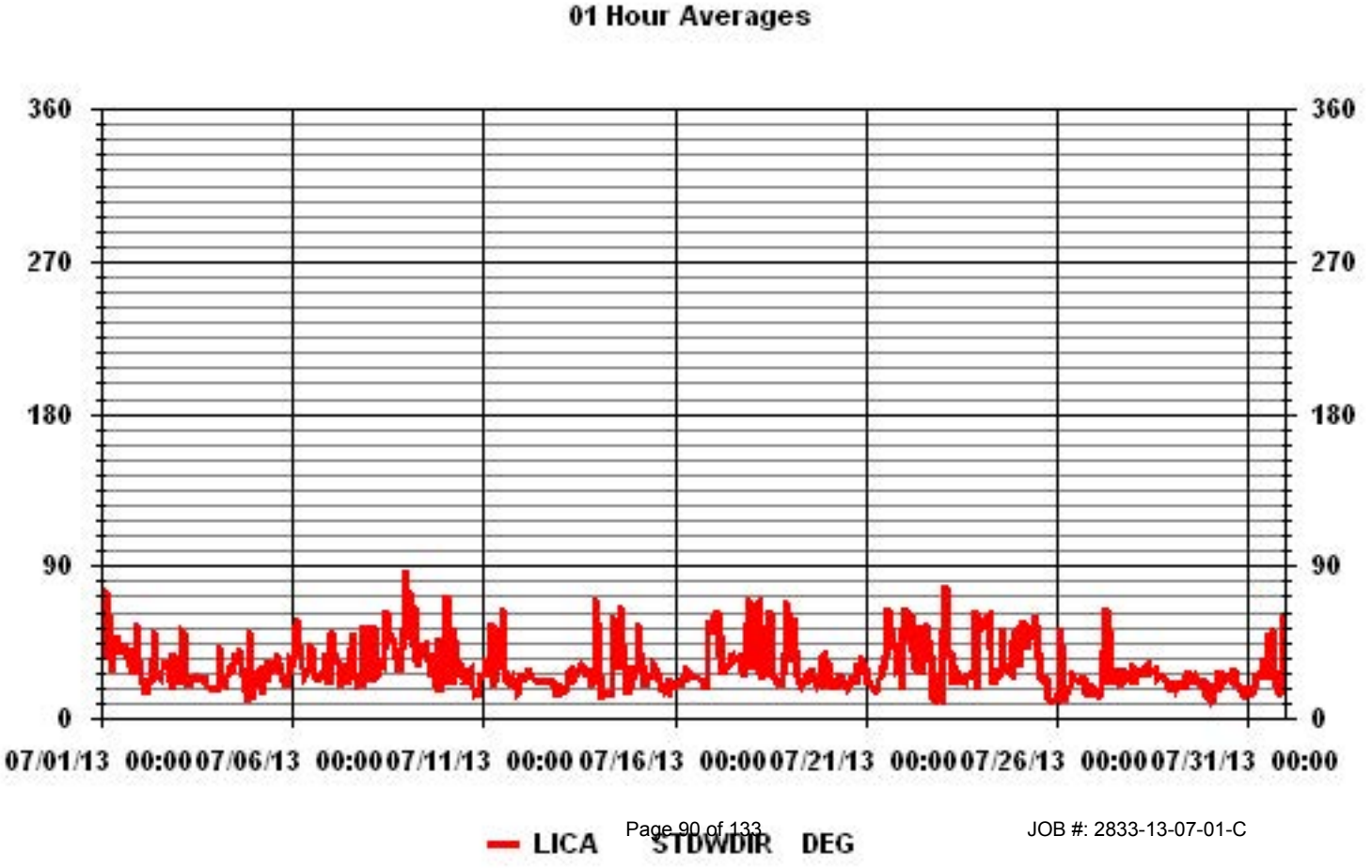
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	56	34	76	75	48	62	40	27	38	44	49	41	37	44	39	44	40	36	32	25	41	27	56	35
2	27	22	19	20	14	23	20	21	36	52	30	26	25	24	28	32	32	32	30	23	16	38	26	20
3	28	26	26	52	51	21	20	20	23	23	23	25	27	23	23	24	23	25	20	18	18	18	17	17
4	18	16	43	18	22	21	20	25	26	29	29	32	38	36	40	40	31	25	18	16	10	52	12	14
5	22	19	27	28	21	14	27	25	21	34	27	28	31	34	38	32	34	27	23	20	20	18	25	36
6	35	55	40	59	44	38	30	24	25	28	30	42	41	40	26	25	22	26	23	28	39	26	22	22
7	50	52	31	38	35	22	23	19	25	21	32	20	28	41	50	25	25	20	21	22	18	55	32	28
8	21	55	29	55	42	26	27	30	33	32	41	64	52	46	48	46	34	42	29	29	32	40	54	87
9	64	76	48	42	64	67	35	30	37	38	43	44	40	35	31	25	28	39	20	16	48	15	19	45
10	57	73	39	22	22	53	48	24	29	34	26	24	20	29	21	28	29	18	14	15	17	12	27	25
11	26	24	36	27	51	57	19	22	26	40	33	54	66	30	23	22	21	22	24	21	19	15	16	22
12	26	22	25	25	30	27	27	24	24	23	22	22	23	22	23	22	22	23	22	22	20	18	13	17
13	20	17	14	17	18	21	27	28	23	24	25	28	30	27	32	31	24	27	30	19	22	20	71	49
14	56	26	12	14	15	14	14	14	17	61	42	32	28	56	67	45	38	33	14	20	16	26	23	31
15	28	57	27	38	33	19	23	24	25	27	33	32	26	27	23	16	20	17	19	17	16	23	18	18
16	21	21	20	20	23	22	25	31	28	26	28	24	24	24	24	24	24	23	21	17	21	50	57	52
17	49	60	52	64	36	50	25	30	30	31	31	36	35	37	35	36	37	34	28	25	29	56	71	51
18	29	52	54	67	68	27	23	55	31	24	30	53	63	46	26	25	22	18	22	19	25	38	69	63
19	36	34	60	58	41	25	21	19	21	21	24	23	26	26	30	26	23	20	22	22	21	36	37	29
20	34	20	17	23	22	17	19	22	26	24	19	22	18	19	22	25	22	22	22	33	26	37	30	32
21	30	20	24	20	18	18	17	19	23	28	27	29	37	35	65	41	55	46	41	45	29	30	16	53
22	49	65	44	60	60	41	31	30	55	36	32	26	55	49	56	47	33	38	13	12	27	11	14	13
23	48	47	78	55	38	38	20	23	25	27	24	21	21	23	22	26	24	24	28	23	26	64	16	51
24	59	55	52	59	60	61	41	28	20	22	23	30	24	29	54	28	31	30	28	27	46	36	51	52
25	38	30	49	57	51	41	51	55	46	52	61	56	34	40	25	24	23	25	13	11	11	10	11	13
26	12	15	53	45	11	11	14	18	19	27	27	25	23	22	22	24	24	24	16	14	14	18	21	18
27	18	15	14	16	19	40	38	65	47	48	20	26	26	29	20	28	18	21	29	23	24	21	26	32
28	19	28	28	25	30	24	27	30	31	24	28	28	28	29	23	24	25	23	27	23	23	21	19	16
29	21	21	18	20	22	18	18	19	19	24	26	26	24	23	25	22	25	22	20	21	18	20	22	13
30	12	10	11	16	20	28	21	19	20	26	25	25	23	23	22	30	24	21	20	17	15	14	17	16
31	17	14	14	16	20	26	24	27	25	35	23	34	41	50	46	54	24	19	23	15	13	28	61	55

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: 744 HRS



JOB #: 2833-13-07-01-C

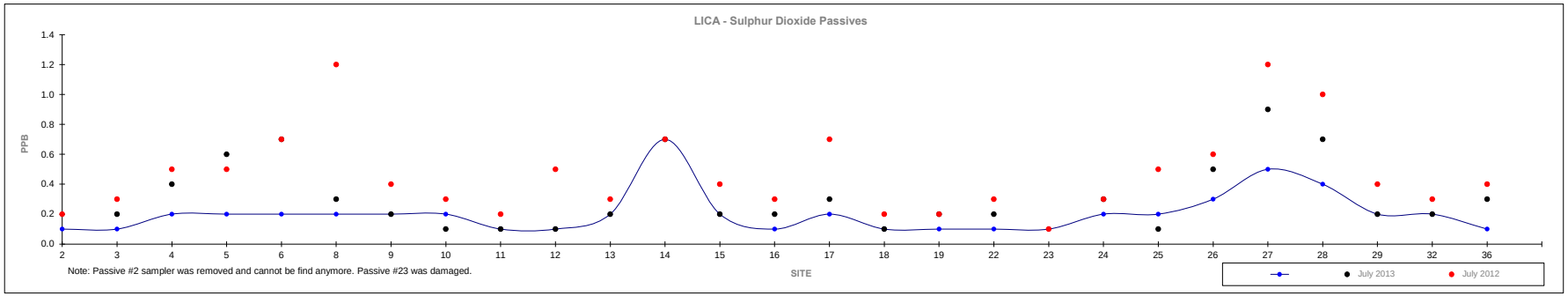
Non-Continuous Monitoring

Passive Summary Results for July 2013

Lakeland Industry & Community Association

Sulphur Dioxide
ppb

	2012																										July2013	
	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	0.39	-
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	0.2	VAR
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	1.0	#14



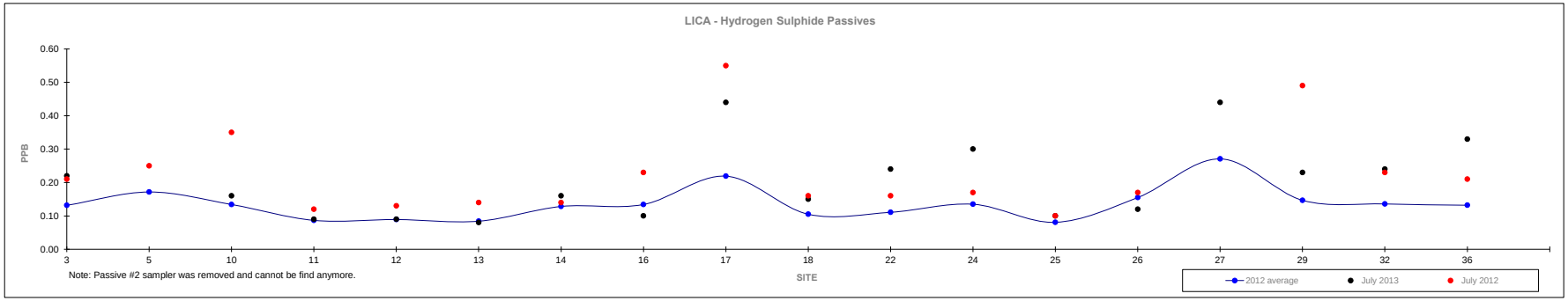
Note: Passive #2 sampler was removed and cannot be find anymore. Passive #23 was damaged.

Passive Summary Results for July 2013

Lakeland Industry & Community Association

Hydrogen Sulphide
ppb

	2012																		July2013	
	3	5	10	11	12	13	14	16	17	18	22	24	25	26	27	29	32	36	Reading	Site
Mean	0.13	0.17	0.13	0.09	0.09	0.08	0.13	0.13	0.22	0.11	0.11	0.14	0.08	0.16	0.27	0.15	0.14	0.13	0.12	-
Minimum	0.09	0.06	0.08	0.04	0.02	0.02	0.06	0.09	0.09	0.06	0.06	0.07	0.03	0.07	0.02	0.06	0.09	0.07	0.03	#12
Maximum	0.21	0.38	0.35	0.15	0.16	0.16	0.20	0.23	0.55	0.16	0.18	0.24	0.17	0.28	0.74	0.49	0.23	0.23	0.26	#17



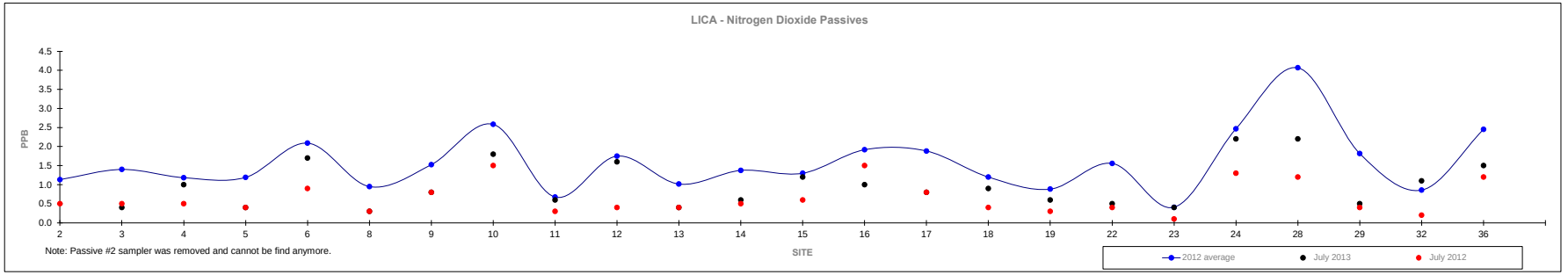
Note: Passive #2 sampler was removed and cannot be find anymore.

Passive Summary Results for July 2013

Lakeland Industry & Community Association

Nitrogen Dioxide
ppb

	2012																							July2013	
	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	0.8	-
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	0.2	#11
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	1.5	#24, #28



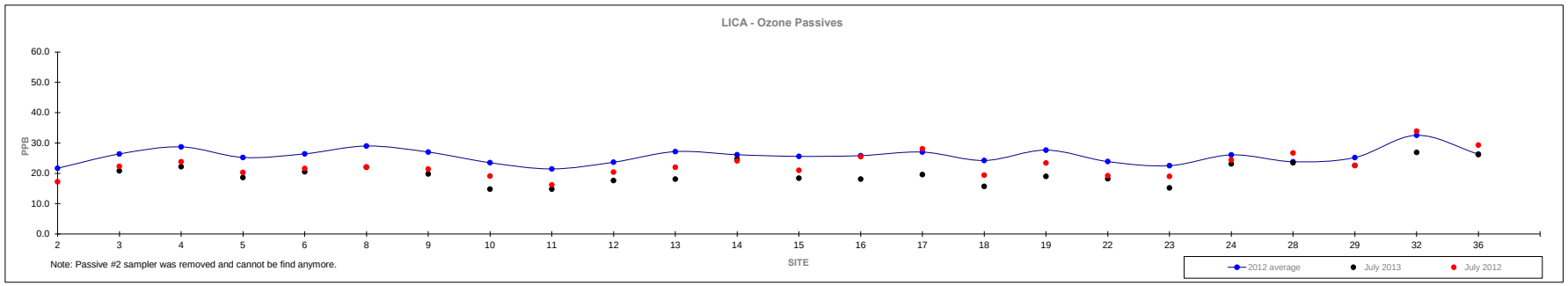
Note: Passive #2 sampler was removed and cannot be find anymore.

Passive Summary Results for July 2013

Lakeland Industry & Community Association

Ozone
ppb

	2012																							July2013	
	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	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	23.5	-
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	18.3	#10
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	31.0	#32



Note: Passive #2 sampler was removed and cannot be find anymore.

Calibration Reports

Sulphur Dioxide

SO2 Calibration Report

Station Information

Calibration Date	July 7, 2013	Previous Calibration	June 5, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake South		
Start Time (MST)	11:20	End Time (MST)	14:30
Reason:	Monthly calibration		
Barometric Pressure	29.01 in HG	Station Temperature	23 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-10 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	Thermo 43i	S/N :	806528242	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	A3485K		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0-500 ppb					
Sample Flow / Box Temp	448 ccm		28.2 Deg C		448 ccm		28.2 Deg C	
HVPS / Lamp Setting	-632		725		-632		724	
PMT / RxCell Temp	OK Deg C		45.2 Deg C		OK Deg C		45.1 Deg C	
Converter / IZS Temp	N/A Deg C		45 Deg C		N/A Deg C		45.0 Deg C	
Offset / Slope	6.1		1.042		6.3		1.073	

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	39.9	396	380	1.0427
4955	39.9	396	397	0.9980
4975	19.8	197	202	0.9734
4985	9.9	98	103	0.9544
4995	0	0	3	N/A
			Sum of Least Squares	0.9912
			New Correction Factor	0.9980

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	370.4	380.0
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0427
Percent Change:	-4.1%

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

Change sample filter

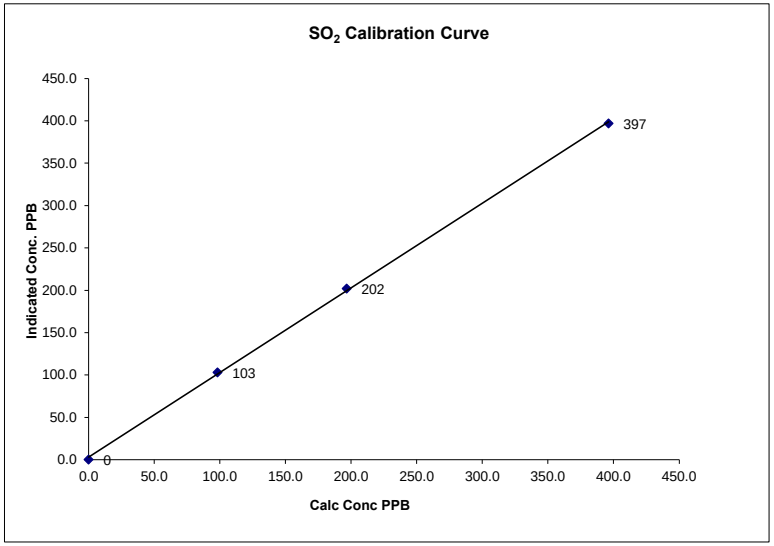
Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

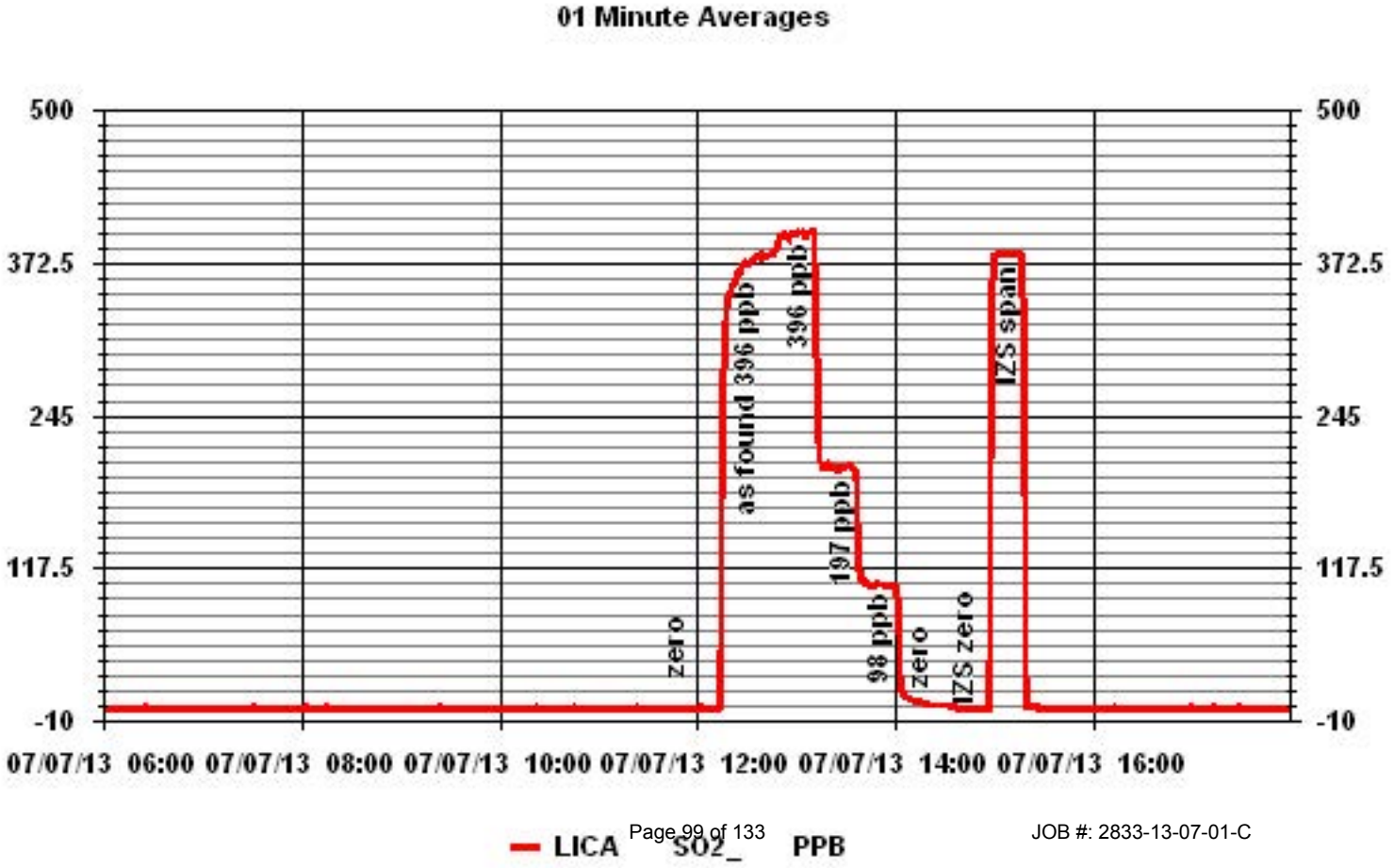
Calibration Date	July 7, 2013		
Company	Lakeland Industry & Community Association		
Plant / Location	Cold Lake South		
Start Time (MST)	11:20	End Time (MST)	14:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
98	103	0.9544
197	202	0.9734
396	397	0.9980

Correlation Coefficient	(≥ 0.995)	0.999743
Slope	(0.85 to 1.15)	0.999474
Intercept	(± 3% F.S.)	2.805652



Notes:



JOB #: 2833-13-07-01-C

Total Reduced Sulphur

TRS Calibration Report

Station Information

Calibration Date	July 7, 2013		Previous Calibration	June 5, 2013	
Company	Lakeland Industry & Community Association				
Plant / Location	Cold Lake South				
Start Time (MST)	11:20		End Time (MST)	14:25	
Reason:	Monthly calibration				
Barometric Pressure	29.01	in HG	Station Temperature	23	Deg C
Cal Gas	10.1 ppm	Gas Cyl. #	BLM005049	Cal Gas Expiry date	December 25, 2015
DAS Output Voltage	0-10 Volts	Chart Rec. Output	N/A	Volts	

Equipment Information

Analyzer Make / Model:	Thermo 450i	S/N :	812728560	Method:	Fluorescent
Converter Make / Model:	CND 101	S/N :	501		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	A3485K		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0-100 ppb							
Sample Flow / Box Temp	483 ccm	31.4 Deg C			483 ccm	31.1 Deg C		
HVPS / Lamp Setting	-650.8	742			-650.8	742		
PMT / RxCell Temp	OK Deg C	45 Deg C			OK Deg C	45.2 Deg C		
Converter / IZS Temp	810 Deg C	45 Deg C			810 Deg C	45.0 Deg C		
Offset / Slope	12.2	0.885			13.4	0.917		

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	81	77	1.0494
4960	40.0	81	81	1.0000
4980	20.0	40	41	0.9854
4990	11.5	23	24	0.9676
5000	0.0	0	0	N/A
			Sum of Least Squares	0.9933
			New Correction Factor	1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	34.75	33.0
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0100
Current Correction Factor Before Span Adjust:	1.0494
Percent Change:	-3.7%

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

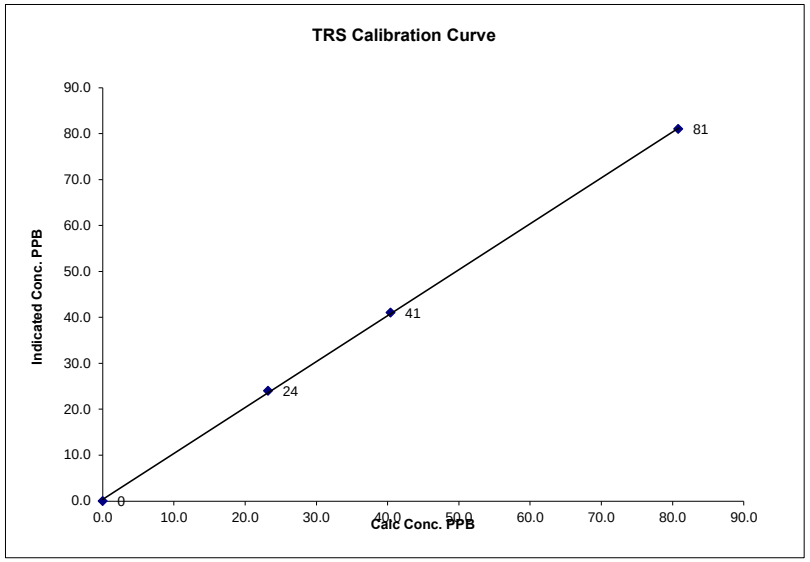
Change sample filter

Calibration Performed by: Waseem Ahmed

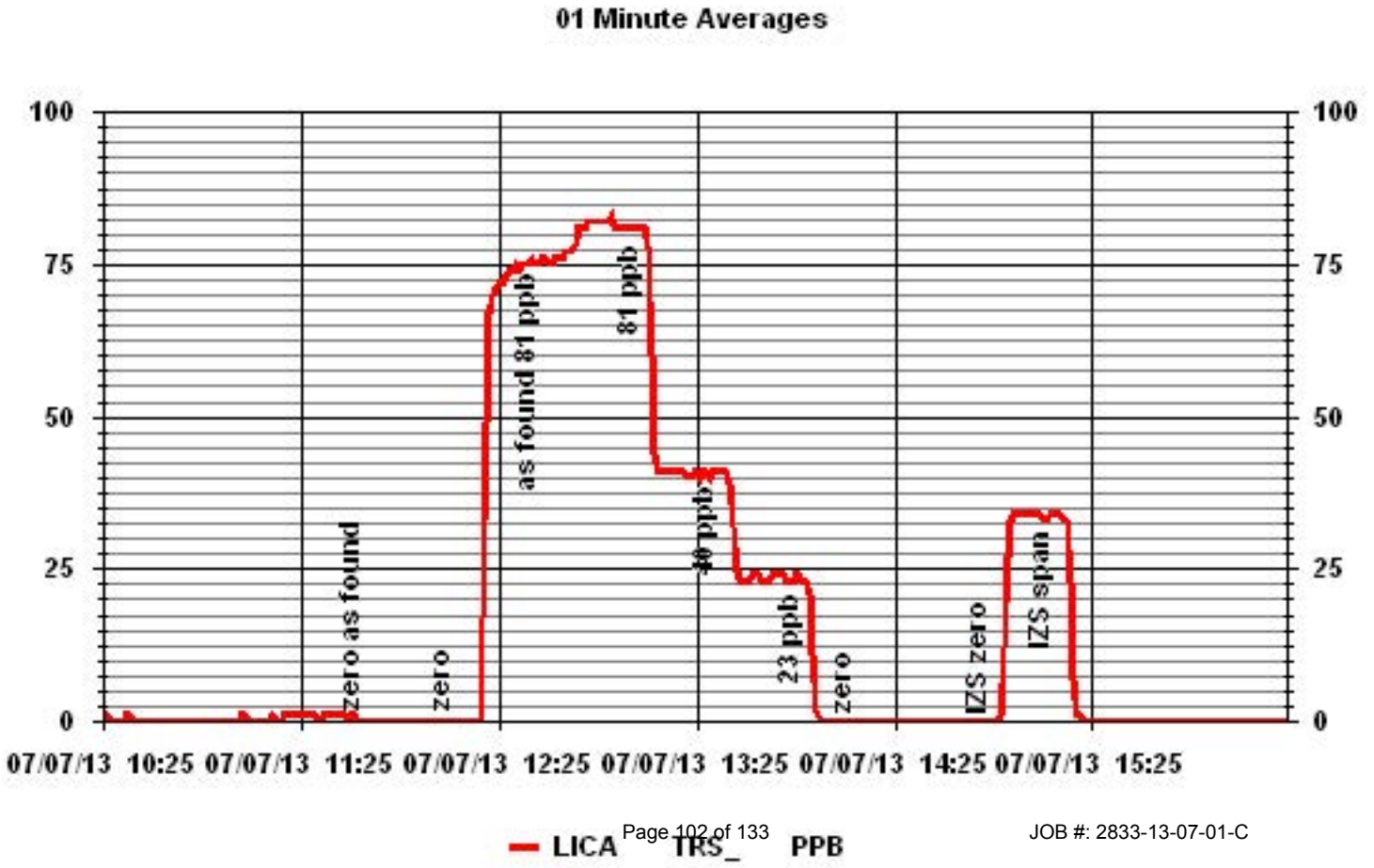
TRS Calibration Curve

Calibration Date	July 7, 2013			
Company	Lakeland Industry & Community Association			
Plant / Location	Cold Lake South			
Start Time (MST)	11:20	End Time (MST)	14:25	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor			
0	0	N/A	Correlation Coefficient	(≥ 0.995)	0.999891
23	24	0.9676	Slope	(0.85 to 1.15)	1.000432
40	41	0.9854	Intercept	(± 3% F.S.)	0.378642
81	81	1.0000			



Notes:



JOB #: 2833-13-07-01-C

TRS Calibration Report

Station Information

Calibration Date	July 25, 2013		Previous Calibration	July 7, 2013	
Company	**Lakeland Industry & Community Association**				
Plant / Location	**Cold Lake South**				
Start Time (MST)	8:01		End Time (MST)	8:45	
Reason:	As Found Point				
Barometric Pressure	28.4	in HG	Station Temperature	21	Deg C
Cal Gas	10.1 ppm	Gas Cyl. #	BLM005049	Cal Gas Expiry date	December 25, 2015
DAS Output Voltage	0-10 Volts	Chart Rec. Output	N/A Volts		

Equipment Information

Analyzer Make / Model:	Thermo 450i	S/N :	812728560	Method:	Fluorescent
Converter Make / Model:	CND 101	S/N :	501		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	A3485K		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0-100 ppb					
Sample Flow / Box Temp	492 ccm	30.9 Deg C			490 ccm	30.9 Deg C		
HVPS / Lamp Setting	-650.8	742			-650.8	742		
PMT / RxCell Temp	OK Deg C	45 Deg C			OK Deg C	45 Deg C		
Converter / IZS Temp	810 Deg C	44.38 Deg C			810 Deg C	44.4 Deg C		
Offset / Slope	13.3	0.917			13.3	0.917		

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.			
4960	40.0	81	81	1.0000
		Sum of Least Squares		
		New Correction Factor		1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	33.0	33.0
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	0.0%

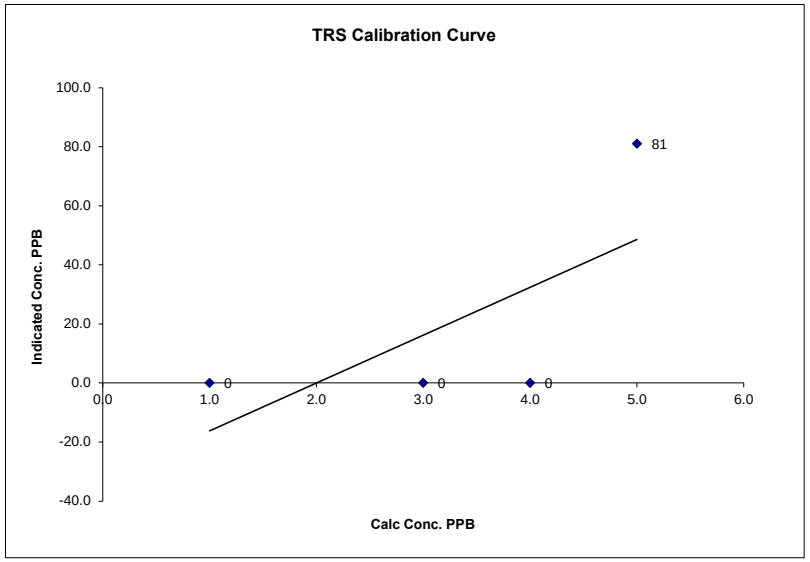
Notes: **N/A : Not applicable**

Calibration Performed by: Waseem Ahmed

TRS Calibration Curve

Calibration Date	July 25, 2013				
Company	**Lakeland Industry & Community Association**				
Plant / Location	**Cold Lake South**				
Start Time (MST)	8:01		End Time (MST)	8:45	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0	0	N/A	Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)
81	81	1.0000	



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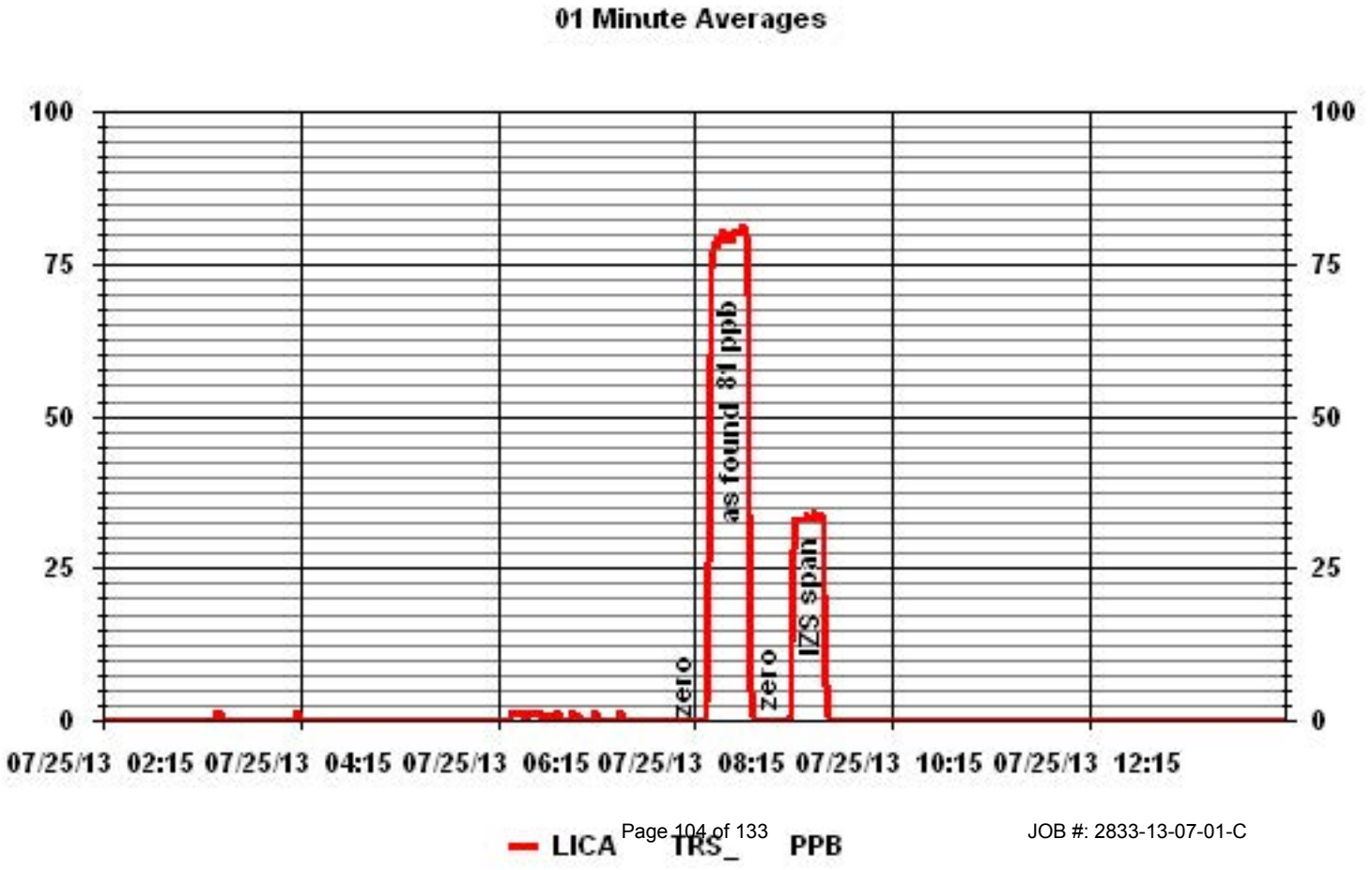


JOB #: 2833-13-07-01-C

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	July 8, 2013		Previous Calibration	June 5, 2013	
Company:	**Lakeland Industry & Community Association**				
Plant / Location:	**Cold Lake South**				
Start Time (MST)	7:35		End Time (MST)	10:47	
Reason:	Monthly calibration				
Barometric Pressure:	28.17	in HG	Station Temperature:	23	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 :	A3485K	
Chart Recorder:	N/A		S/N:	N/A	
Output Voltage Range:	0-10	VDC	Chart Speed:	N/A	mm/hr

Analyzer Information

Make / Model	Thermo 51C-LT	S/N :	427408718	Method	Flame Ionization

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0-50	ppm	0-50	ppm
Sample Pressure	6.5	psi	6.5	psi
Hydrogen Pressure	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	0.1	N/A
2000	0.0	0.0	0.0	N/A
2000	74.0	41.4	41.3	1.0030
	No Span Adj.			
2000	37.0	21.1	20.8	1.0139
2000	20.0	11.5	11.3	1.0173
2000	0.0	0.0	0.1	N/A
			New Correction Factor:	1.0030

Percent Change

Previous Calibration Correction Factor:	0.9958
Current Correction Factor Before Span Adjust:	1.0030
Percent Change:	-0.7%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	36.35	36.35
Sample Lines Connected		**Yes**

Cylinder Pressures

Span 1200 psi Hydrogen 600 psi Zero Air 34 psi

Notes: **N/A : Not Applicable**
Change sample filter
Spare cylinder H2=1

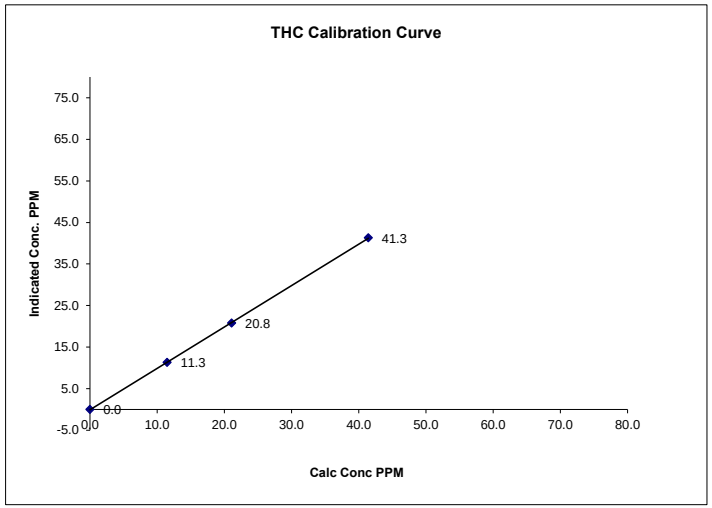
Calibration Performed by: Waseem Ahmed

THC Calibration Curve

Calibration Date	July 8, 2013		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**Cold Lake South**		
Start Time (MST)	7:35	End Time (MST)	10:47

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	N/A
11.5	11.3	1.0173
21.1	20.8	1.0139
41.4	41.3	1.0030

Correlation Coefficient	(≥ 0.995)	0.999955
Slope	(0.85 to 1.15)	0.997387
Intercept	(± 3% F.S.)	-0.10108



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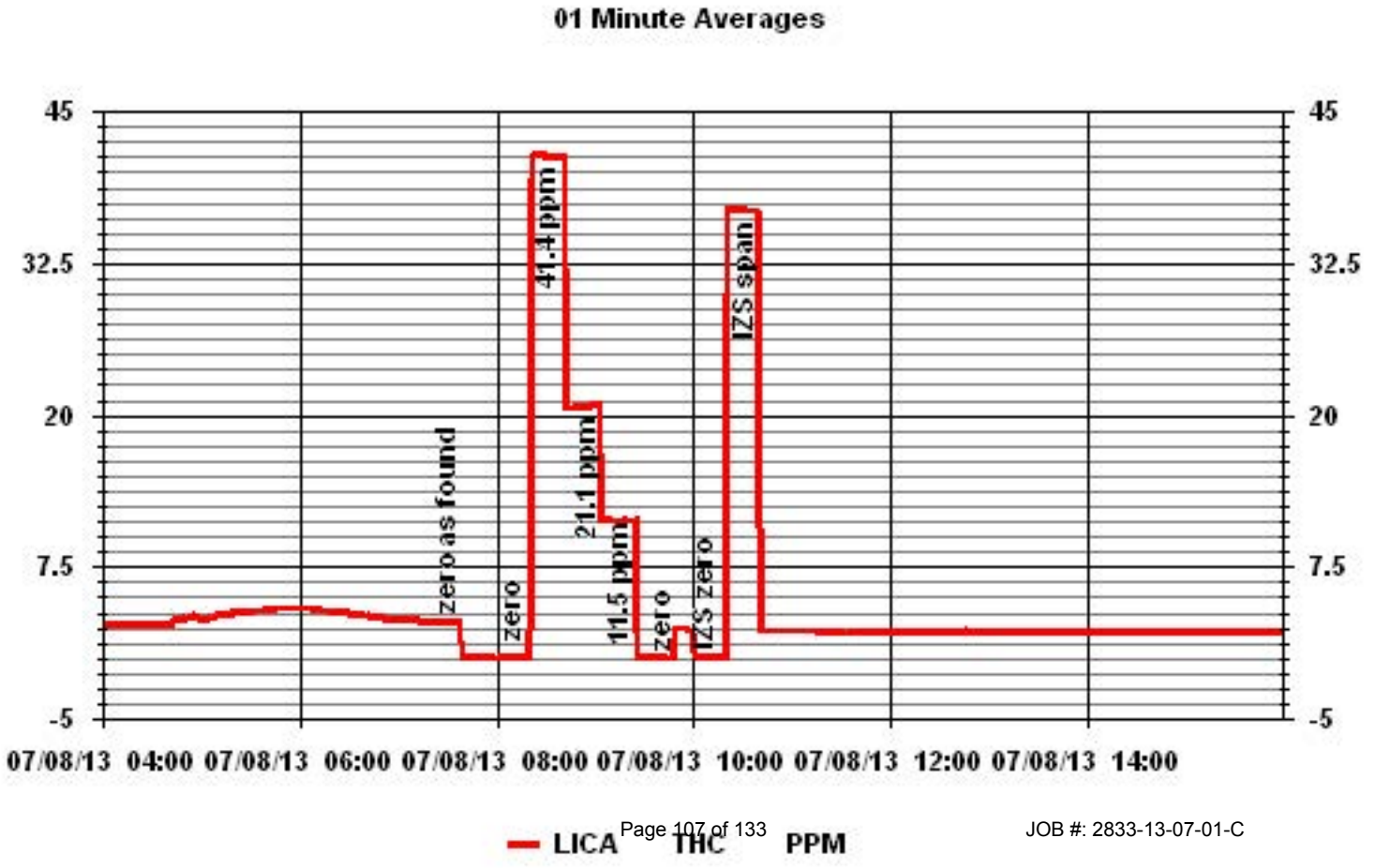


JOB #: 2833-13-07-01-C

Particulate Matter 2.5

TEOM 1405F Audit

Station		Audit Transfer Standard	
Date:	July 8, 2013	Make/Model:	Streamline FTS
Station Name:	LICA 1	Serial Number:	LO 091099, HI 091001
Location:	Cold Lake South	Cell s/n:	N/A
Operator:	LICA	Thermometer s/n:	Station Temp. Sensor

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo TEOM 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 (%)	26.1%
Firmware Ver.	1.52	K_o Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	19.7
		Press (ATM)	0.940

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.005	Warnings	None
Pump Vacuum **<0.40atm**	0.37	Pump Gauge (inHg)	N/A

Temperature/Pressure

Measured Temp **(± 2 °C)**	20.0	**D °C**	-0.3
Measured Press **(± 0.01atm)**	0.936	**DATM**	0.004

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	1.01%
Measured Main Flow (l/min)	2.99	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	0.78%
Measured Bypass Flow (l/min)	13.70	Flow Adjusted to Measured?	Yes

Leak Check

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

Instrument Setup

Flow Control=Active

Report Conditions=Actual

K_o Factor

Measured	N/A
K_o Difference **(± 2.5%)**	N/A

Start Time: 11:00 **Finish Time:** 12:00

Sample Inlet Cleaned: No **New Filters Installed:** NA

New Filter Loading %: NA

Comments:

Auditor/s: Waseem Ahmed

TEOM 1405F Audit

Station		Audit Transfer Standard	
Date:	July 30, 2013	Make/Model:	Streamline FTS
Station Name:	LICA 1	Serial Number:	LO 091099, HI 091001
Location:	Cold Lake South	Cell s/n:	N/A
Operator:	LICA	Thermometer s/n:	Station Temp. Sensor

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo TEOM 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 (%)	30.3%
Firmware Ver.	1.52	K_o Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	14.4
		Press (ATM)	0.944

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.003	Warnings	None
Pump Vacuum **<0.40atm**	0.38	Pump Gauge (inHg)	N/A

Temperature/Pressure

Measured Temp **(± 2 °C)**	14.6	**D °C**	-0.2
Measured Press **(± 0.01atm)**	0.940	**DATM**	0.004

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	1.44%
Measured Main Flow (l/min)	3.01	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	0.01%
Measured Bypass Flow (l/min)	13.77	Flow Adjusted to Measured?	Yes

Leak Check

Main **(< 0.15 l/min)**	Base= 0.00 Ref = 0.00
Aux **(< 0.6 l/min)**	Base=0.00 Ref = 0.00

Instrument Setup

Flow Control=Active
Report Conditions=Actual

K_o Factor

Measured	N/A
K_o Difference **(± 2.5%)**	N/A

Start Time: 8:45 **Finish Time:** 10:15

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

New Filter Loading %: 16.1%

Comments:

Auditor/s: Waseem Ahmed

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 7, 2013		Previous Calibration	June 5, 2013	
Company	LICA		Plant/Location	Cold Lake South	
Start Time (MST)	11:30		End Time (MST)	16:10	
Reason:	Monthly calibration				
Barometric Pressure	29.01	in HG	Station Temperature	23	Deg C
Cal Gas Concentration	NOx 49.3	ppm	NO 49.2	ppm	
Cal Gas Cylinder #	BAL3031				
DAS Output Voltage	0-10	Volts	Chart Rec. Output	N/A	Volts

MFCF N/A

Cal Gas Expiry date December 29, 2016

Equipment Information

Analyzer Make / Model:	Thermo 42C	S/N :	427408716	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	A3485K		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range						ppb			
Sample Flow/Conv. Temp	715	ccm	318	Deg C		715	ccm	317	Deg C
Ozone Flow / Vacuum	OK	ccm	183.2	"Hg-A		OK	ccm	183.3	"Hg-A
HVPS / A ZERO	-821	Volts	N/A	MV		-821	Volts	N/A	MV
Rx/ Temp / PMT Temp	50.1	Deg C	-2.5	Deg C		49.5	Deg C	-2.5	Deg C
Box Temp / IZS Temp	26.9	Deg C	OK	Deg C		26.9	Deg C	OK	Deg C
Offset	4.1	NOx	3.5	NO		6.2	NOx	4.5	NO
Slope	1.006	NOx	0.937	NO		1.000	NOx	0.985	NO
NO_2 COEF / Conv Efficency	0.998	NO2	N/A			0.998	NO2	N/A	

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	2	1	1	NA	NA
4995	0.0	NA	0	0	NA	0	0	0	NA	NA
4955	39.9	NA	394	393	NA	377	374	3	1.0502	1.0537
4955	39.9	NA	394	393	NA	394	393	1	1.0000	1.0000
4975	19.8	NA	195	195	NA	199	198	1	0.9920	0.9900
4985	9.9	NA	98	98	NA	102	101	1	0.9771	0.9752
4995	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			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4955	39.9	NA	394	393	NA	396	395	1	NA	NA
4955	39.9	350	394	NA	303	395	93	302	1.0066	99.67%
	No. span adj.									
4955	39.9	150	394	NA	131	397	265	132	1.0000	100.77%
4955	39.9	75	394	NA	65	396	331	65	1.0156	100.00%

Linearity			Sum of Least Squares	NOx=	0.994	NO=	0.996	NO2= 1.002
OK?	Yes	No	Correction Factors:	NOx=	1.0000	NO=	1.0000	NO2= 1.0066
						Average Converter Efficiency=		100.15%

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	364	NOx	360	NO2		364	NOx	360	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	1.007	1.010	1.000
Current Correction Factor Before Span Adjust	1.050	1.054	1.007
Percent Change	-4.2%	-4.2%	-0.7%

Notes

NA : Not Applicable

Change sample filter

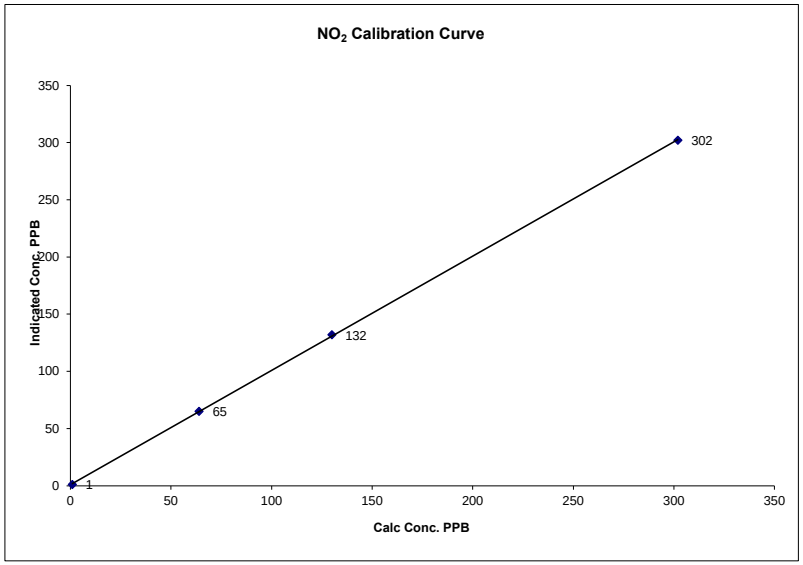
Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 7, 2013		
Company	LICA		
Plant / Location	Cold Lake South		
Start Time (MST)	11:30	End Time (MST)	16:10

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
1	1	NA
64	65	0.9846
130	132	0.9848
302	302	1.0000

Correlation Coefficient	(≥ 0.995)	0.999946
Slope	(0.85 to 1.15)	0.999034
Intercept	(± 3% F.S.)	0.87007



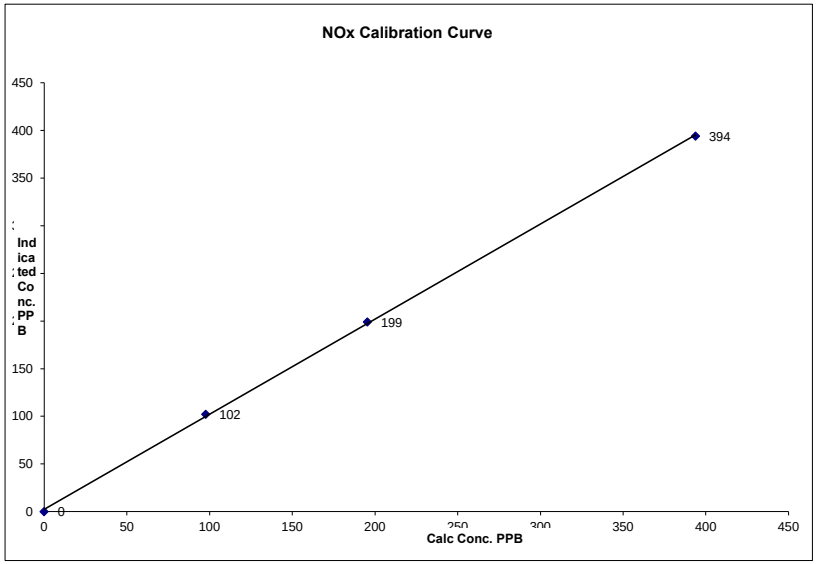
Notes:

NOx Calibration Curve

Calibration Date	July 7, 2013		
Company	LICA		
Plant / Location	Cold Lake South		
Start Time (MST)	11:30	End Time (MST)	16:10

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
98	102	0.9771
195	199	0.9920
394	394	1.0000

Correlation Coefficient	(≥ 0.995)	0.999828
Slope	(0.85 to 1.15)	0.997739
Intercept	(± 3% F.S.)	2.39809



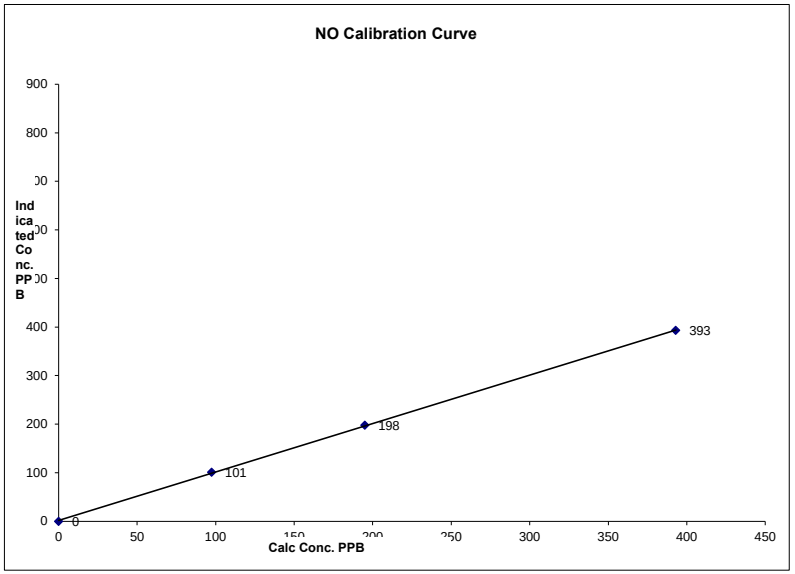
Notes:

NO Calibration Curve

Calibration Date	July 7, 2013		
Company	LICA		
Plant / Location	Cold Lake South		
Start Time (MST)	11:30	End Time (MST)	16:10

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
98	101	0.9752
195	198	0.9900
393	393	1.0000

Correlation Coefficient	(≥ 0.995)	0.999879
Slope	(0.85 to 1.15)	0.997739
Intercept	(± 3% F.S.)	1.99569



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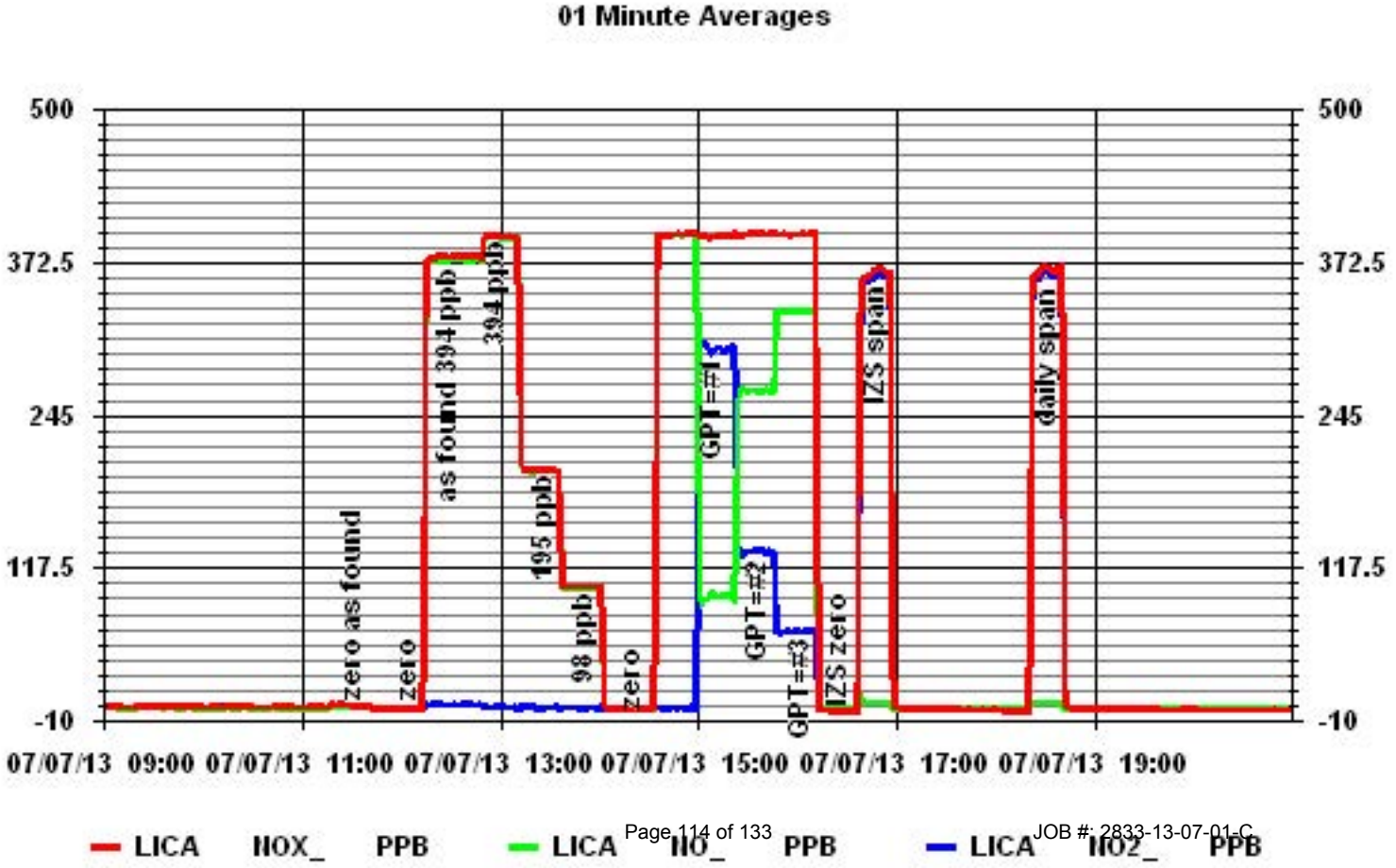

01 Minute Averages
500
372.5
245
117.5
-10
zero as found
zero
as found 394 ppb
394 ppb
195 ppb
98 ppb
zero
GPT=#1
GPT=#2
GPT=#3
IZS zero
IZS span
daily span
07/07/13 09:00 07/07/13 11:00 07/07/13 13:00 07/07/13 15:00 07/07/13 17:00 07/07/13 19:00
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	July 8, 2013		Previous Calibration	June 5, 2013	
Company	Lakeland Industry & Community Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	7:35		End Time (MST)	10:45	
Reason:	Monthly Calibration				
Barometric Pressure	28.17	inHg	Station Temperature	23	Deg C
DAS Output Voltage	0 - 10	Volts			

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 -500	ppb				
Cell A Flow / Cell B Flow	712	LPM	752	LPM	712	LPM	753	LPM
O_3 Set Level	705		mmHg		705		mmHg	
Bench Lamp	29.2		Deg C		28.1		Deg C	
O3 Lamp / Box Temp	53.5	Deg	67.5	Deg C	53.5	Deg C	67.5	Deg C
Offset / Slope	-0.1		1.046		1.3		1.08	

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	1	NA
4995	0	0	0	NA
4995	350	308	310	0.9935
	No Span Adj.			
4995	150	132	134	0.9851
4995	75	63	68	0.9265
4995	0	0	3	NA
			Sum of Least Squares	0.9898
			New Correction Factor	0.9935

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	277	277
Sample Lines Connected		YES
Previous Calibration Correction Factor:		0.9840
Current Correctio Factor Before Span Adjust:		0.9935
Percent Change:		-1.0%

Note: **NA : Not Applicable**

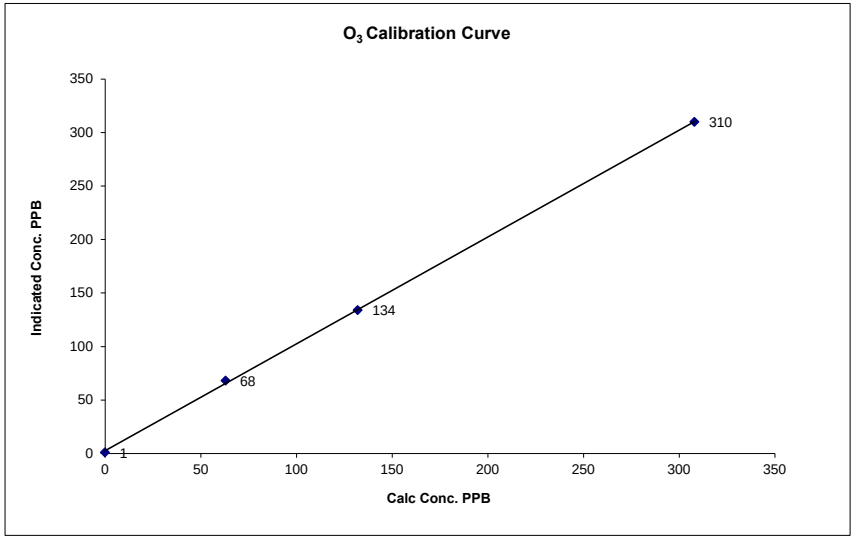
Calibration Performed by: Waseem Ahmed

O_3 Calibration Curve

Calibration Date	July 8, 2013			
Company	Lakeland Industry & Community Association			
Plant / Location	LICA 1 - Cold Lake South			
Start Time (MST)	7:35	End Time (MST)	10:45	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	1	n/a
63	68	0.9265
132	134	0.9851
308	310	0.9935

Correlation Coefficient	(≥ 0.995)	0.999831
Slope	(0.85 to 1.15)	0.998821
Intercept	(± 3% F.S.)	2.648277



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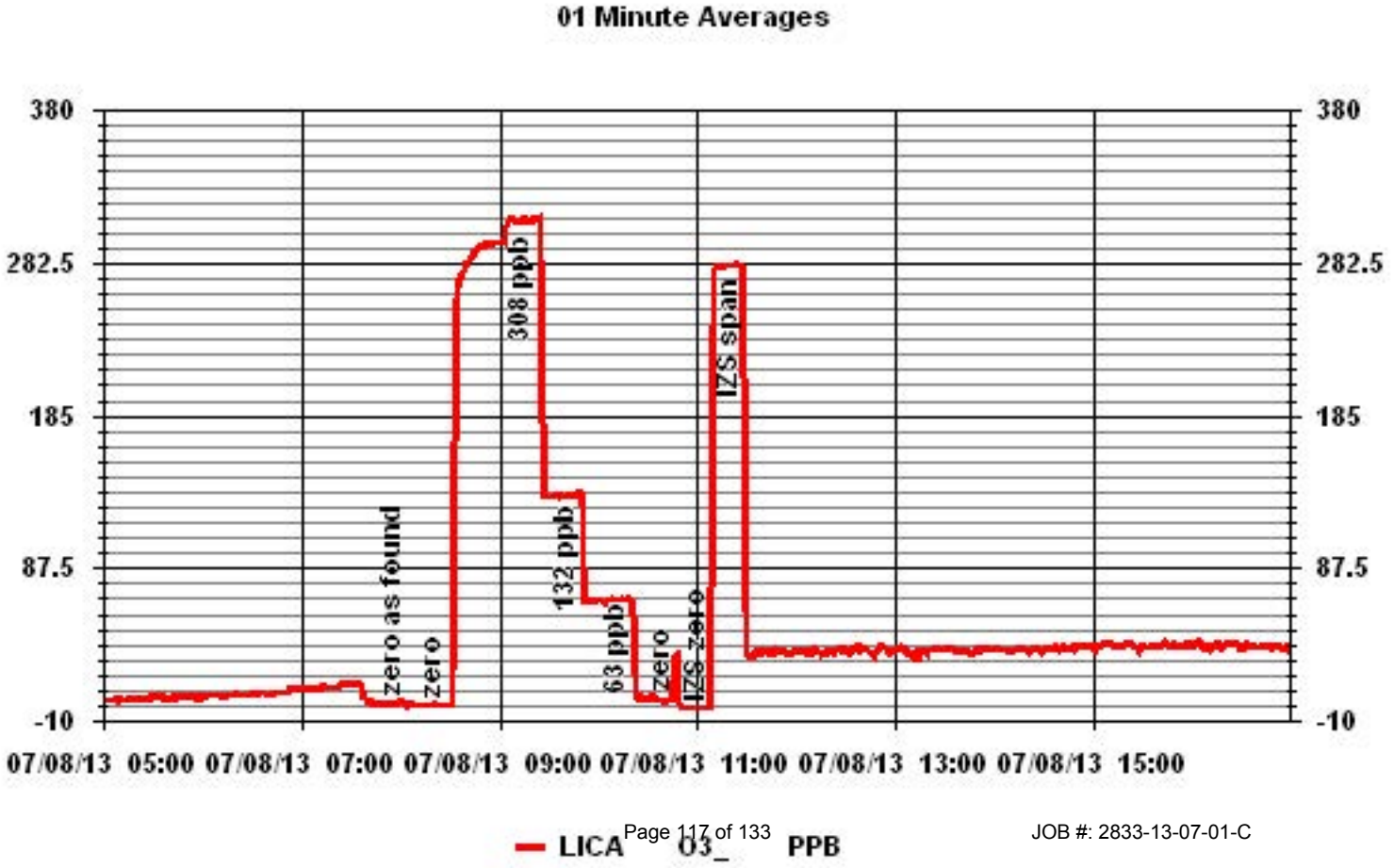


JOB #: 2833-13-07-01-C

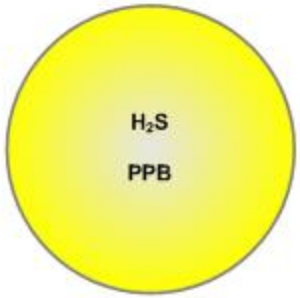
Passive Bubble Maps

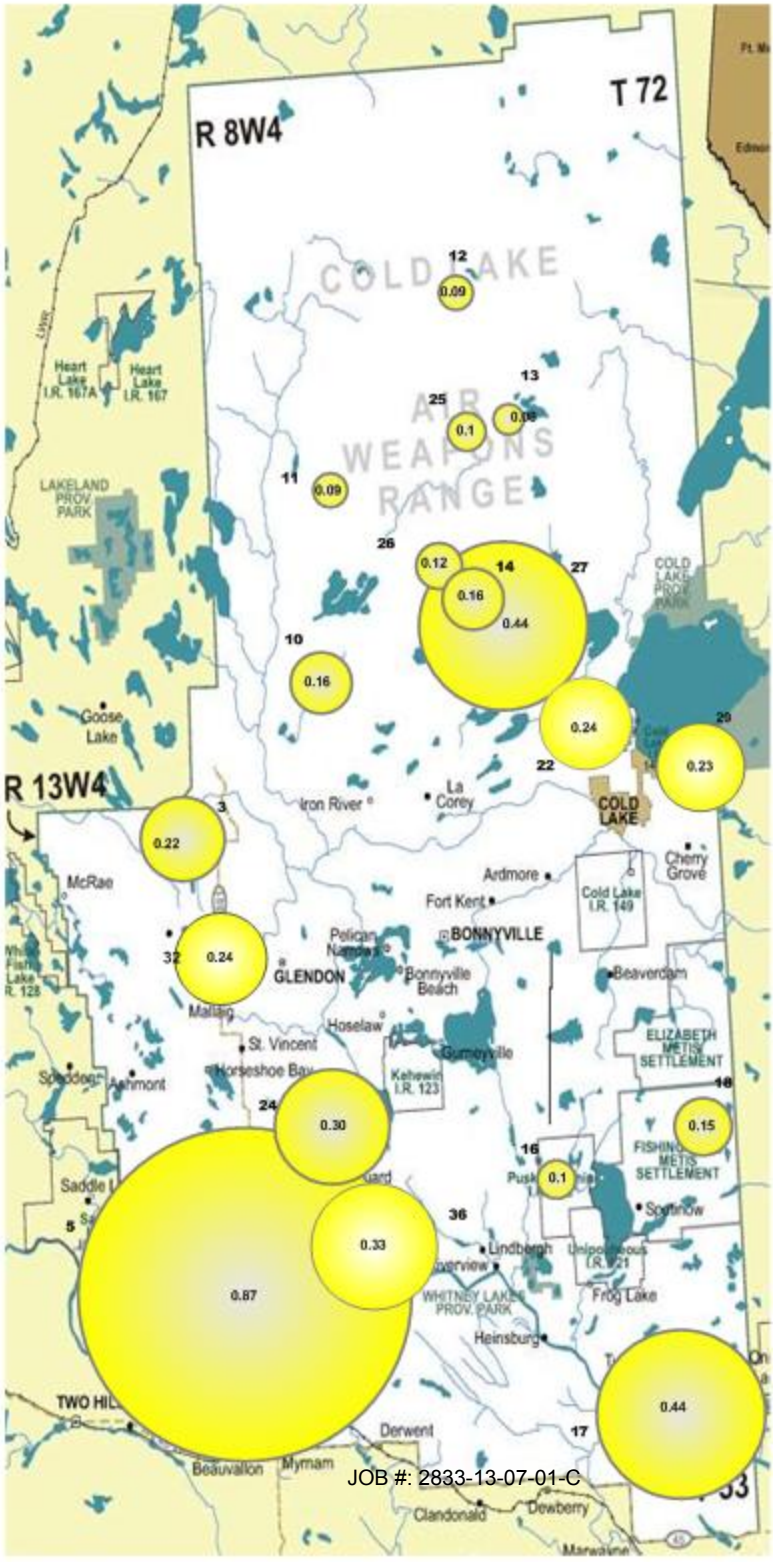
Lakeland Industry & Community Association
H_2S Passive Bubble Map

JULY 2013

PASSIVE STATIONS

		DUPLICATE
3 – Therien	0.22 PPB	NA
5 – Lake Eliza	0.87 PPB	NA
10 – La Corey	0.16 PPB	NA
11 – Wolf Lake	0.09 PPB	NA
12 – Foster Creek	0.09 PPB	0.08 PPB
13 – Primrose	0.08 PPB	0.07 PPB
14 – Maskwa	0.16 PPB	NA
16 – Frog Lake	0.10 PPB	NA
17 – Clear Range	0.44 PPB	NA
18 – Fishing Lake	0.15 PPB	NA
22 – Cold Lake South	0.24 PPB	NA
24 – Fort George	0.30 PPB	NA
25 – Burnt Lake	0.10 PPB	NA
26 – Mahihkan	0.12 PPB	NA
27 – Mahkeses	0.44 PPB	NA
29 – Cold Lake South 2	0.23 PPB	NA
32 – St. Lina	0.24 PPB	NA
36 – Elk Point	0.33 PPB	NA





Summary

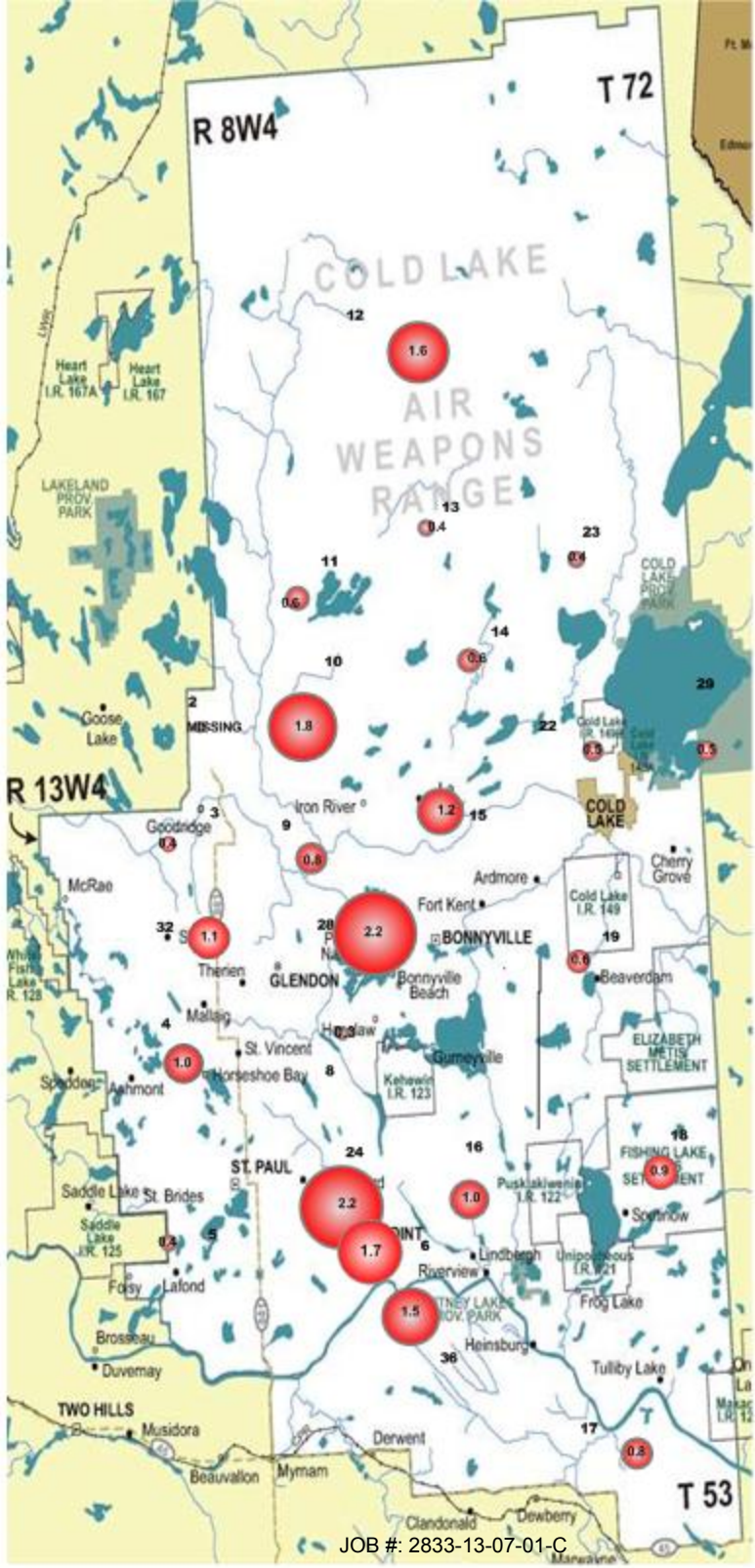
Minimum : 0.08 PPB – Primrose
Maximum: 0.87 PPB – Lake Eliza
Average: 0.24 PPB (Includes Duplicates)

Lakeland Industry & Community Association
NO_2 Passive Bubble Map

JULY 2013

PASSIVE STATIONS

		DUPLICATE
2 – Sand River	MISSING	NA
3 – Therien	0.4 PPB	NA
4 – Flat Lake	1.0 PPB	NA
5 – Lake Eliza	0.4 PPB	NA
6 – Telegraph Creek	1.7 PPB	NA
8 – Muriel-Kehewin	0.3 PPB	NA
9 – Dupre	0.8 PPB	NA
10 – La Corey	1.8 PPB	NA
11 – Wolf Lake	0.6 PPB	NA
12 – Foster Creek	1.6 PPB	NA
13 – Primrose	0.4 PPB	NA
14 – Maskwa	0.6 PPB	NA
15 – Ardmore	1.2 PPB	NA
16 – Frog Lake	1.0 PPB	NA
17 – Clear Range	0.8 PPB	NA
18 – Fishing Lake	0.7 PPB	1.1 PPB
19 – Beaverdam	0.7 PPB	0.4 PPB
22 – Cold Lake South	0.5 PPB	NA
23 – Medley-Martineau	0.4 PPB	NA
24 – Fort George	2.2 PPB	NA
28 – Town of Bonnyville	2.2 PPB	NA
29 – Cold Lake South 2	0.5 PPB	NA
32 – St. Lina	1.1 PPB	NA
36 – Elk Point	1.5 PPB	NA



Summary

Minimum : 0.3 PPB – Muriel-Kehewin
Maximum: 2.2 PPB – Fort George and Town of Bonnyville
Average: 1.0 PPB *Includes Duplicates

Lakeland Industry & Community Association
O_3 Passive Bubble Map

JULY 2013

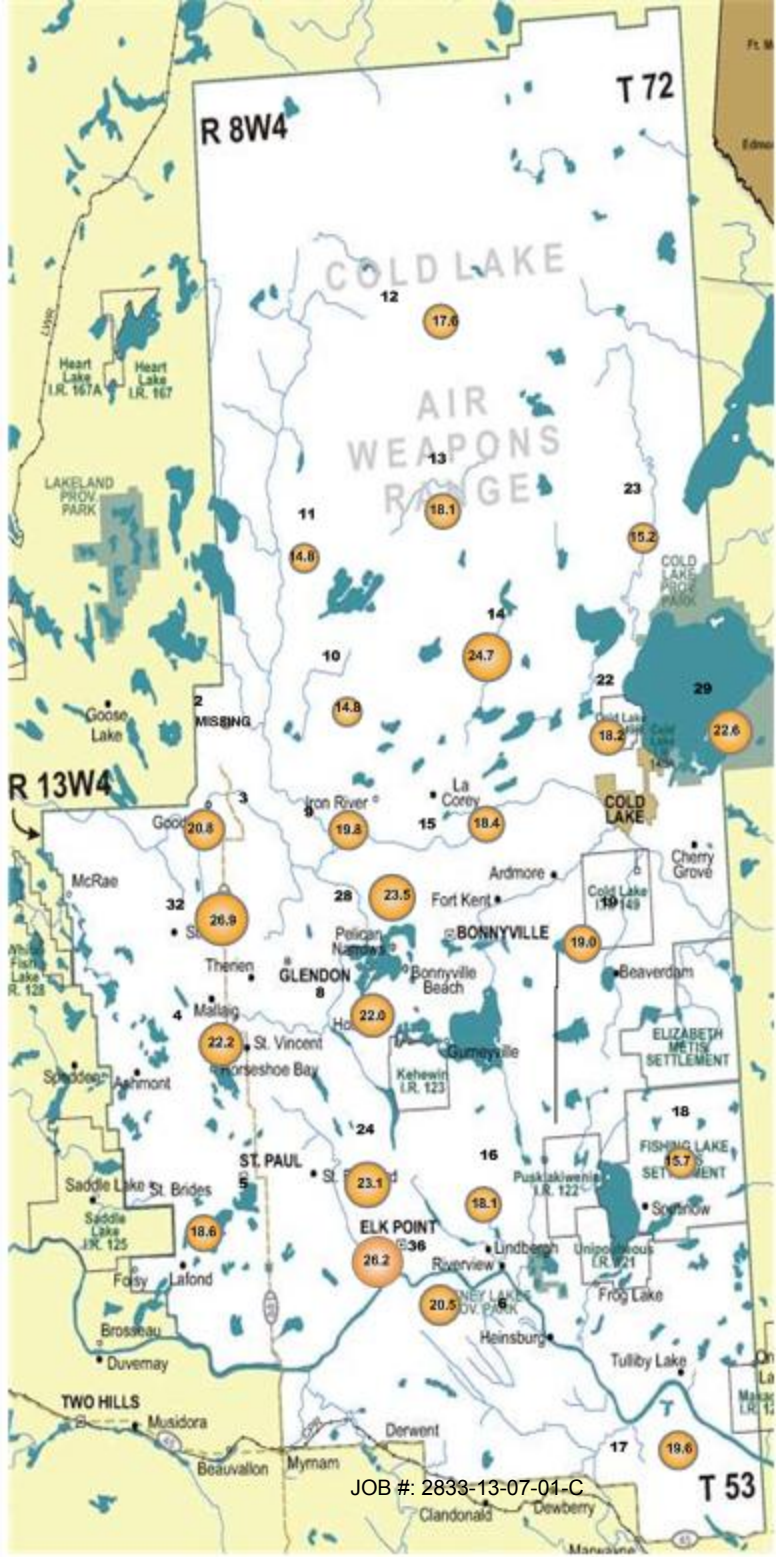
PASSIVE STATIONS

		DUPLICATE
2 – Sand River	MISSING	NA
3 – Therien	20.8 PPB	NA
4 – Flat Lake	22.2 PPB	NA
5 – Lake Eliza	18.6 PPB	NA
6 – Telegraph Creek	20.5 PPB	NA
8 – Muriel-Kehewin	22.0 PPB	NA
9 – Dupre	19.8 PPB	NA
10 – La Corey	14.8 PPB	NA
11 – Wolf Lake	14.8 PPB	NA
12 – Foster Creek	17.6 PPB	NA
13 – Primrose	18.1 PPB	NA
14 – Maskwa	24.7 PPB	NA
15 – Ardmore	18.4 PPB	NA
16 – Frog Lake	18.1 PPB	NA
17 – Clear Range	19.6 PPB	NA
18 – Fishing Lake	16.4 PPB	14.9 PPB
19 – Beaverdam	19.2 PPB	18.7 PPB
22 – Cold Lake South	18.2 PPB	NA
23 – Medley-Martineau	15.2 PPB	NA
24 – Fort George	23.1 PPB	NA
28 – Town of Bonnyville	23.5 PPB	NA
29 – Cold Lake South 2	22.6 PPB	NA
32 – St. Lina	26.9 PPB	NA
36 – Elk Point	26.2 PPB	NA

O_3 PPB

Summary

Minimum : 14.8 PPB – La Corey and Wolf Lake
Maximum: 31.0 PPB – St. Lina
Average: 20.0 PPB *Includes Duplicates



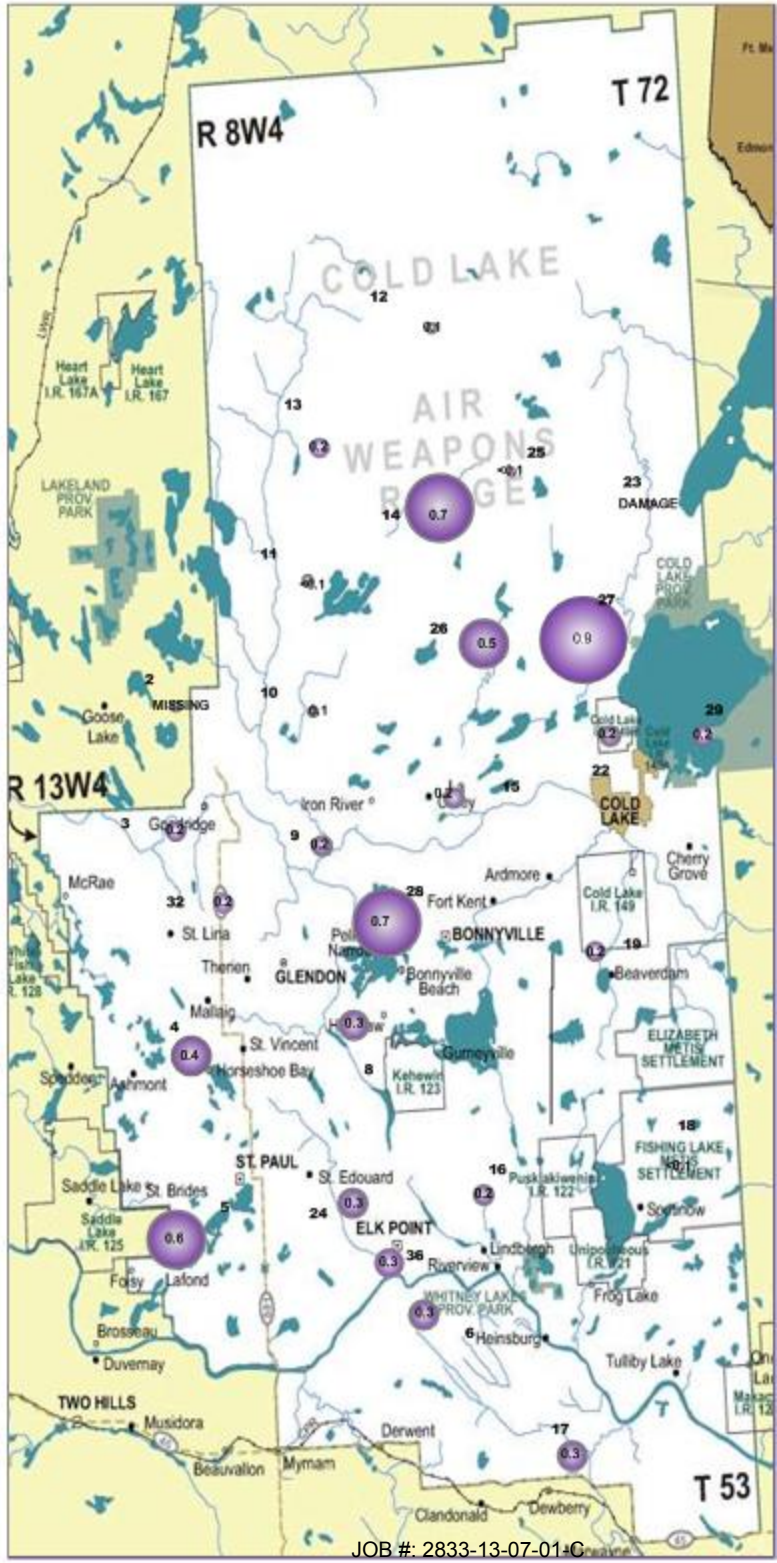
Lakeland Industry & Community Association
SO_2 Passive Bubble Map

JULY 2013

PASSIVE STATIONS		DUPLICATE
2 – Sand River	MISSING	NA
3 – Therien	0.2 PPB	NA
4 – Flat Lake	0.4 PPB	0.4 PPB
5 – Lake Eliza	0.6 PPB	0.6 PPB
6 – Telegraph Creek	0.5 PPB	0.8 PPB
8 – Muriel-Kehewin	0.3 PPB	NA
9 – Dupre	0.2 PPB	NA
10 – La Corey	0.1 PPB	NA
11 – Wolf Lake	<0.1 PPB	NA
12 – Foster Creek	0.1 PPB	NA
13 – Primrose	0.2 PPB	NA
14 – Maskwa	0.7 PPB	NA
15 – Ardmore	0.2 PPB	NA
16 – Frog Lake	0.2 PPB	NA
17 – Clear Range	0.3 PPB	NA
18 – Fishing Lake	<0.1 PPB	NA
19 – Beaverdam	0.2 PPB	NA
22 – Cold Lake South	0.2 PPB	NA
23 – Medley-Martineau	DAMAGE	NA
24 – Fort George	0.3 PPB	NA
25 – Burnt Lake	<0.1 PPB	NA
26 – Mahikan	0.5 PPB	NA
27 – Mahkeses	0.9 PPB	NA
28 – Town of Bonnyville	0.7 PPB	NA
29 – Cold Lake South 2	0.2 PPB	NA
32 – St. Lina	0.2 PPB	NA
36 – Elk Point	0.3 PPB	NA

Summary

Minimum : <0.1 PPB –Various stations
Maximum: 0.9 PPB –Mahkeses
Average: 0.32 PPB *Includes Duplicates



JOB #: 2833-13-07-01-C

Passive Field Data

Field Notes

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
2	$SO_2/NO_2/O_3$	NA	NA	NA	NA	All samplers had been removed and samples are missing.
3	$H_2S/SO_2/NO_2/O_3$	07/02/2013	16:00	08/08/2013	09:30	
4	$SO_2/NO_2/O_3$	07/02/2013	15:20	08/07/2013	14:34	
5	$H_2S/SO_2/NO_2/O_3$	07/02/2013	14:40	08/072013	13:35	
6	$SO_2/NO_2/O_3$	07/02/2013	12:30	08/07/2013	11:43	
8	$SO_2/NO_2/O_3$	06/28/2013	13:05	08/08/2013	11:05	
9	$SO_2/NO_2/O_3$	07/02/2013	16:40	08/08/2013	08:52	
10	$H_2S/SO_2/NO_2/O_3$	07/03/2013	10:17	08/06/2013	16:38	
11	$H_2S/SO_2/NO_2/O_3$	07/03/2013	11:05	08/06/2013	13:05	
12	$H_2S/SO_2/NO_2/O_3$	07/03/2013	13:05	08/06/2013	14:40	
13	$H_2S/SO_2/NO_2/O_3$	06/26/2013	15:35	08/06/2013	10:55	
14	$H_2S/SO_2/NO_2/O_3$	06/26/2013	16:15	08/06/2013	10:20	
15	$SO_2/NO_2/O_3$	06/26/2013	17:05	08/06/2013	17:32	
16	$H_2S/SO_2/NO_2/O_3$	07/02/2013	09:45	08/07/2013	08:56	
17	$H_2S/SO_2/NO_2/O_3$	07/02/2013	11:40	08/07/2013	10:50	
18	$H_2S/SO_2/NO_2/O_3$	07/02/2013	10:28	08/07/2013	09:33	
19	$SO_2/NO_2/O_3$	07/02/2013	09:00	08/07/2013	08:15	
22	$H_2S/SO_2/NO_2/O_3$	06/28/2013	11:15	08/08/2013	13:55	
23	$SO_2/NO_2/O_3$	06/26/2013	14:25	08/08/2013	12:50	**SO2 sample was found on the ground.**
24	$H_2S/SO_2/NO_2/O_3$	06/28/2013	13:48	08/07/2013	12:15	
25	H_2S/SO_2	07/03/2013	14:25	08/06/2013	15:48	
26	H_2S/SO_2	06/26/2013	1:05	08/06/2013	11:27	
27	H_2S/SO_2	06/26/2013	16:35	08/06/2013	11:48	
28	$SO_2/NO_2/O_3$	07/02/2013	17:00	08/08/2013	11:35	
29	$H_2S/SO_2/NO_2/O_3$	06/28/2013	11:20	08/08/2013	14:00	
32	$H_2S/SO_2/NO_2/O_3$	06/28/2013	17:05	08/08/2013	10:07	
36	$H_2S/SO_2/NO_2/O_3$	06/28/2013	14:00	08/08/2013	12:28	

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
Duplicate # 04	SO_2	07/02/2013	15:20	08/07/2013	14:34	
Duplicate # 05	SO_2	07/02/2013	14:40	08/072013	13:35	
Duplicate # 06	SO_2	07/02/2013	12:30	08/07/2013	11:43	
Duplicate # 12	H_2S	07/03/2013	13:05	08/06/2013	14:40	
Duplicate # 13	H_2S	06/26/2013	15:35	08/06/2013	10:55	
Duplicate # 18	$NO_{2,}$	07/02/2013	10:28	08/07/2013	09:33	
Duplicate # 19	NO_2	07/02/2013	09:00	08/07/2013	08:15	
Duplicate # 18	O_3	07/02/2013	10:28	08/07/2013	09:33	
Duplicate # 19	O_3	07/02/2013	09:00	08/07/2013	08:15	

Passive Network Laboratory Analysis

Your Project #: 2013/07/02 - 2013/08/06
Site Location: LICA

Attention: MICHAEL BISAGA

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

Report Date: 2013/08/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B370005
Received: 2013/08/12, 11:34

Sample Matrix: Air
Samples Received: 33

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	20	2013/08/19	2013/08/20	EINDSOP-00150	Tang.Passive H2S in
NO2 Passive Analysis (1)	25	2013/08/20	2013/08/20	EINDSOP-00148	Tang Passive NO2 in
O3 Passive Analysis (1)	25	2013/08/18	2013/08/20	EINDSOP-00197	EPA 300 R2.1
SO2 Passive Analysis (1)	10	2013/08/19	2013/08/20	EINDSOP-00149	Tang Passive SO2 in
SO2 Passive Analysis (1)	19	2013/08/20	2013/08/20	EINDSOP-00149	Tang Passive SO2 in

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

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

Encryption Key

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

Levi Manchak, 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 Job #: B370005
Report Date: 2013/08/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2013/07/02 - 2013/08/06
Site Location: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		HD8378	HD8379	HD8380	HD8382	HD8383		
Sampling Date		2013/07/02 16:00	2013/07/02 15:20	2013/07/02 14:40	2013/07/02 12:30	2013/06/28 13:05		
	UNITS	**3**	**4**	**5**	**6**	**8**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.22		0.87			0.02	7091359
Calculated NO2	ppb	0.4	1.0	0.4	1.7	0.3	0.1	7094302
Calculated O3	ppb	20.8	22.2	18.6	20.5	22.0	0.1	7088984
Calculated SO2	ppb	0.2	0.4	0.6	0.5	0.3	0.1	7094481

RDL = Reportable Detection Limit

Maxxam ID		HD8384	HD8385	HD8386	HD8387	HD8388		
Sampling Date		2013/07/02 16:40	2013/07/03 10:17	2013/07/03 11:05	2013/07/03 13:05	2013/06/26 15:35		
	UNITS	**9**	**10**	**11**	**12**	**13**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb		0.16	0.09	0.09	0.08	0.02	7091359
Calculated NO2	ppb	0.8	1.8	0.6	1.6	0.4	0.1	7094302
Calculated O3	ppb	19.8	14.8	14.8	17.6	18.1	0.1	7088984
Calculated SO2	ppb	0.2	0.1	<0.1	0.1	0.2	0.1	7094481

RDL = Reportable Detection Limit

Maxxam ID		HD8389	HD8390	HD8391	HD8392	HD8393		
Sampling Date		2013/06/26 16:15	2013/06/26 17:05	2013/07/02 09:45	2013/07/02 11:40	2013/07/02 10:28		
	UNITS	**14**	**15**	**16**	**17**	**18**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.16		0.10	0.44	0.15	0.02	7091359
Calculated NO2	ppb	0.6	1.2	1.0	0.8	0.7	0.1	7094302
Calculated O3	ppb	24.7	18.4	18.1	19.6	16.4	0.1	7088984
Calculated SO2	ppb	0.7	0.2	0.2	0.3	<0.1	0.1	7094481

RDL = Reportable Detection Limit

Maxxam Job #: B370005
Report Date: 2013/08/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2013/07/02 - 2013/08/06
Site Location: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		HD8394		HD8395	HD8403		HD8404		
Sampling Date		2013/07/02 09:00		2013/06/28 11:15	2013/06/26 14:25		2013/06/28 13:48		
	UNITS	**19**	**QC Batch**	**22**	**23**	**QC Batch**	**24**	**RDL**	**QC Batch**
Passive Monitoring									
Calculated H2S	ppb		7091359	0.24		7091359	0.30	0.02	7091359
Calculated NO2	ppb	0.7	7094302	0.5	0.4	7094302	2.2	0.1	7094347
Calculated O3	ppb	19.2	7088984	18.2	15.2	7088984	23.1	0.1	7088986
Calculated SO2	ppb	0.2	7094481	0.2	DAMAGED	7091707	0.3	0.1	7091707

RDL = Reportable Detection Limit

Maxxam ID		HD8405	HD8406	HD8407	HD8408	HD8409		
Sampling Date		2013/07/03 14:25	2013/06/26 16:05	2013/06/26 16:35	2013/07/02 17:00	2013/06/28 11:20		
	UNITS	**25**	**26**	**27**	**28**	**29**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb	0.10	0.12	0.44		0.23	0.02	7091359
Calculated NO2	ppb				2.2	0.5	0.1	7094347
Calculated O3	ppb				23.5	22.6	0.1	7088986
Calculated SO2	ppb	<0.1	0.5	0.9	0.7	0.2	0.1	7091707

RDL = Reportable Detection Limit

Maxxam ID		HD8410	HD8411	HD8414	HD8415		
Sampling Date		2013/06/28 17:05	2013/06/28 14:00	2013/07/02 10:28	2013/07/02 09:00		
	UNITS	**32**	**36**	**18 DUP**	**19 DUP**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb	0.24	0.33			0.02	7091359
Calculated NO2	ppb	1.1	1.5	1.1	0.4	0.1	7094347
Calculated O3	ppb	26.9	26.2	14.9	18.7	0.1	7088986
Calculated SO2	ppb	0.2	0.3			0.1	7091707

RDL = Reportable Detection Limit

Maxxam Job #: B370005
Report Date: 2013/08/20

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2013/07/02 - 2013/08/06
Site Location: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		HD8416	HD8417	HD8419	HD8420	HD8421		
Sampling Date		2013/07/02 15:20	2013/07/02 14:40	2013/07/02 12:30	2013/07/03 13:05	2013/06/26 15:35		
	UNITS	**04 DUP**	**05 DUP**	**06 DUP**	**12 DUP**	**13 DUP**	**RDL**	**QC Batch**
Passive Monitoring								
Calculated H2S	ppb				0.08	0.07	0.02	7091359
Calculated SO2	ppb	0.4	0.6	0.8			0.1	7094481

RDL = Reportable Detection Limit

General Comments

Sample: HD8403 (#23) for NO2 parameter was returned to the lab damaged. - DF

Results relate only to the items tested.

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Attention: MICHAEL BISAGA
Client Project #: 2013/07/02 - 2013/08/06
P.O. #:
Site Location: LICA

Quality Assurance Report

Maxxam Job Number: PB370005

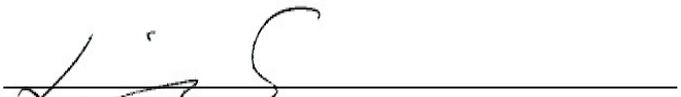
QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
7088984	OZ	Calibration Check	Calculated O3	2013/08/18		100	%	91 - 107
		Spiked Blank	Calculated O3	2013/08/18		101	%	96 - 103
		Method Blank	Calculated O3	2013/08/18	<0.1		ppb	
7088986	OZ	Calibration Check	Calculated O3	2013/08/18		100	%	91 - 107
		Spiked Blank	Calculated O3	2013/08/18		101	%	96 - 103
		Method Blank	Calculated O3	2013/08/18	<0.1		ppb	
7091359	WC6	Calibration Check	Calculated H2S	2013/08/19		103	%	80 - 120
		Spiked Blank	Calculated H2S	2013/08/19		100	%	N/A
7091707	DF4	Calibration Check	Calculated SO2	2013/08/19		102	%	95 - 105
		Spiked Blank	Calculated SO2	2013/08/19		103	%	N/A
		Method Blank	Calculated SO2	2013/08/19	<0.1		ppb	
7094302	DF4	Calibration Check	Calculated NO2	2013/08/20		98	%	76 - 118
		Spiked Blank	Calculated NO2	2013/08/20		99	%	93 - 105
		Method Blank	Calculated NO2	2013/08/20	<0.1		ppb	
7094347	DF4	Calibration Check	Calculated NO2	2013/08/20		100	%	76 - 118
		Spiked Blank	Calculated NO2	2013/08/20		100	%	93 - 105
		Method Blank	Calculated NO2	2013/08/20	<0.1		ppb	
7094481	DF4	Calibration Check	Calculated SO2	2013/08/20		101	%	95 - 105
		Spiked Blank	Calculated SO2	2013/08/20		102	%	N/A
		Method Blank	Calculated SO2	2013/08/20	<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.

Validation Signature Page

Maxxam Job #: B370005

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



Linda Lin, Supervisor, Centre for Passive Sampling Technology

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Lakeland Industry & Community Association

Maskwa Monitoring Site
Ambient Air Monitoring
Data Report
For
July 2013

Prepared By:

September 4, 2013

JOB #: 2833-13-07-30-C

Lakeland Industry & Community Association
Ambient Air Monitoring
Maskwa

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Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Maskwa
Data Period: July 2013

The monthly ambient data report:

- Prepared by Lili Zhou
- Reviewed by Lily Lin

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 t he 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 – July 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	0.30	9	31	8	5.9	319(NW)	1.7	29	96.6
H2S (PPB)	10	3	0	0	0.14	5	27	4	5.9	116(ESE)	0.6	17, 20	94.8
THC (PPM)	-	-	-	-	2.16	3.6	18	4	1.1	231(SW)	2.5	22	100.0
NOx (PPB)	-	-	-	-	1.71	22.2	16	6	3	278(W)	4.1	29	100.0
NO (PPB)	-	-	-	-	0.36	12.4	8	8	2.6	249(WSW)	1.1	8, 29	100.0
NO_2 (PPB)	159	-	0	-	1.36	10.1	30	1	4	313(NW)	3.0	29	100.0
VECTOR WS (KPH)	-	-	-	-	4.70	12.8	2	12	-	161(SSE)	7.5	26	100.0
VECTOR WD (DEGREES)	-	-	-	-	233(SW)	-	-	-	-	-	-	-	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	71.37	93	VAR	VAR	VAR	VAR	87.9	20	100.0
TEMPERATURE (DEG C)	-	-	-	-	16.14	32.6	2	15	11.3	167(SSE)	25.5	2	100.0
BAROMETRIC PRESSURE (MILIBAR)	-	-	-	-	944	954	25	VAR	VAR	VAR	952.3	25	100.0
PRECIPITATION (MM)	-	-	-	-	0.09	6.4	20	18	4.6	55(NE)	20.9	20	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

The monthly calibration attempted to be performed on July 15th. However, the display on the analyzer was not working. The calibration was aborted. On July 17th, temporary installed the screen that was taken from the H2S analyzer on the analyzer, and then performed an as found points check to verify the analyzer's functionality. The result was within the acceptable range (-1.6%). The analyzer displayed a Dark Cal Warning during the multi-points calibration. Deleted the warning and restarted the calibration. The analyzer started reading incorrectly after the warning. The analyzer was left in the Maintenance mode overnight. The screen for the analyzer was replaced and both the UV lamp and analog output were calibrated before a post repair calibration was started on July 18th. Data was corrected using daily zero information.

Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E, S/N: 511 changed to API 101A, S/N: 722

Following an as found points check on July 17th, the sample pump was rebuilt. After the pump rebuilt, the flow showed its instability and the screen displayed a Dark Cal warning. The channel was left the Maintenance mode overnight. On July 18th, maintenance were performed: both the scrubber material and the sinter filter were changed, the orifice sinter filer and the switch valve were checked, the relay board was changed and the UV lamp and the analog output were calibrated. A post repair calibration was then performed. The calibration result showed a poor linearity. The analyzer was replaced to an API 101E, S/N 722 on July 19th. An installation calibration was performed following the analyzer replacement. Data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – Maskwa

Total Hydrocarbon (PPM)

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

No operational issues were observed during the month. The monthly calibration was performed on July 17th. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

Nitrogen Dioxide (PPB)

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

No operational issues were observed during the month. Following the as found points check on July 17th, the sample flow was checked. After that, the 3-points calibration was performed. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

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

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

The wind system is reported as vector wind speed and v ector wind direction. The last wind system calibration was performed by manufacturer on December 20th, 2011.
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

The manifold was cleaned on July 18th.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2013

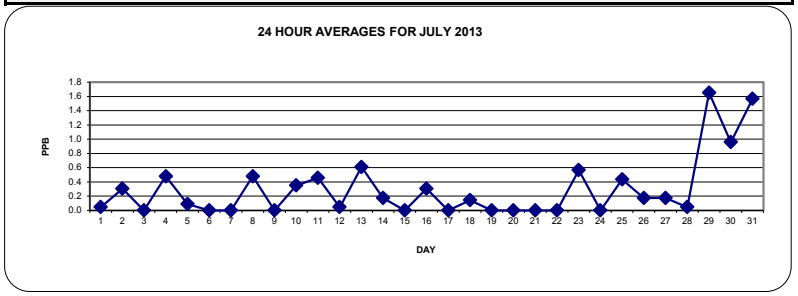
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	1	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
2	0	0	0	0	0	0	0	1	0	**S**	0	0	0	0	0	1	0	0	1	0	1	1	1	1	1	0.3	24
3	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
4	0	0	0	0	0	0	0	**S**	1	5	2	0	0	0	0	0	0	0	1	0	0	1	0	1	5	0.5	24
5	1	0	0	0	0	0	**S**	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
6	0	0	0	0	0	**S**	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	**S**	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	**S**	0	0	0	1	6	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	6	0.5	24
9	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
10	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	4	4	0.3	24
11	**S**	0	0	0	0	0	1	0	1	0	2	1	2	2	0	0	1	0	0	0	0	0	0	**S**	2	0.5	24
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**S**	0	1	0.0	24
13	0	0	0	0	0	0	0	3	2	0	1	0	1	1	2	2	2	0	0	0	0	**S**	0	0	3	0.6	24
14	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2	0	**S**	0	0	0	2	0.2	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**C**	**C**	**S**	0	0	0	0	0	0.0	24
16	0	0	1	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	4	0.3	24
17	0	0	0	0	0	0	0	0	0	**C**	**C**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	0	0.0	11
18	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**C**	**C**	**C**	**C**	**C**	0	1	0	0	0	0	0	1	0.1	12
19	0	0	0	0	0	0	0	0	0	**S**	**S**	0	0	0	0	**S**	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	**S**	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	**S**	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	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	24
23	0	0	0	0	0	0	0	3	3	4	0	**S**	1	1	1	0	0	0	0	0	0	0	0	0	4	0.6	24
24	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
25	0	0	0	0	0	0	0	1	3	**S**	3	1	1	1	0	0	0	0	0	0	0	0	0	0	3	0.4	24
26	1	0	0	0	1	1	1	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
27	0	0	0	0	0	0	0	**S**	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
28	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.0	24
29	0	3	2	1	3	**S**	7	1	0	1	5	3	3	2	2	1	2	1	1	0	0	0	0	0	7	**1.7**	24
30	5	5	3	2	**S**	0	0	0	0	0	0	0	0	4	2	1	0	0	0	0	0	0	0	0	5	1.0	24
31	0	0	0	**S**	0	0	0	3	**9**	2	0	2	2	1	4	0	7	2	3	1	0	0	0	0	**9**	1.6	24
HOURLY MAX	5	5	3	2	3	1	7	3	9	5	5	3	3	4	4	2	7	2	3	1	1	1	1	4			
HOURLY AVG	0.2	0.3	0.2	0.1	0.1	0.0	0.5	0.6	0.9	0.6	0.7	0.3	0.4	0.4	0.4	0.2	0.4	0.2	0.3	0.0	0.1	0.1	0.1	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



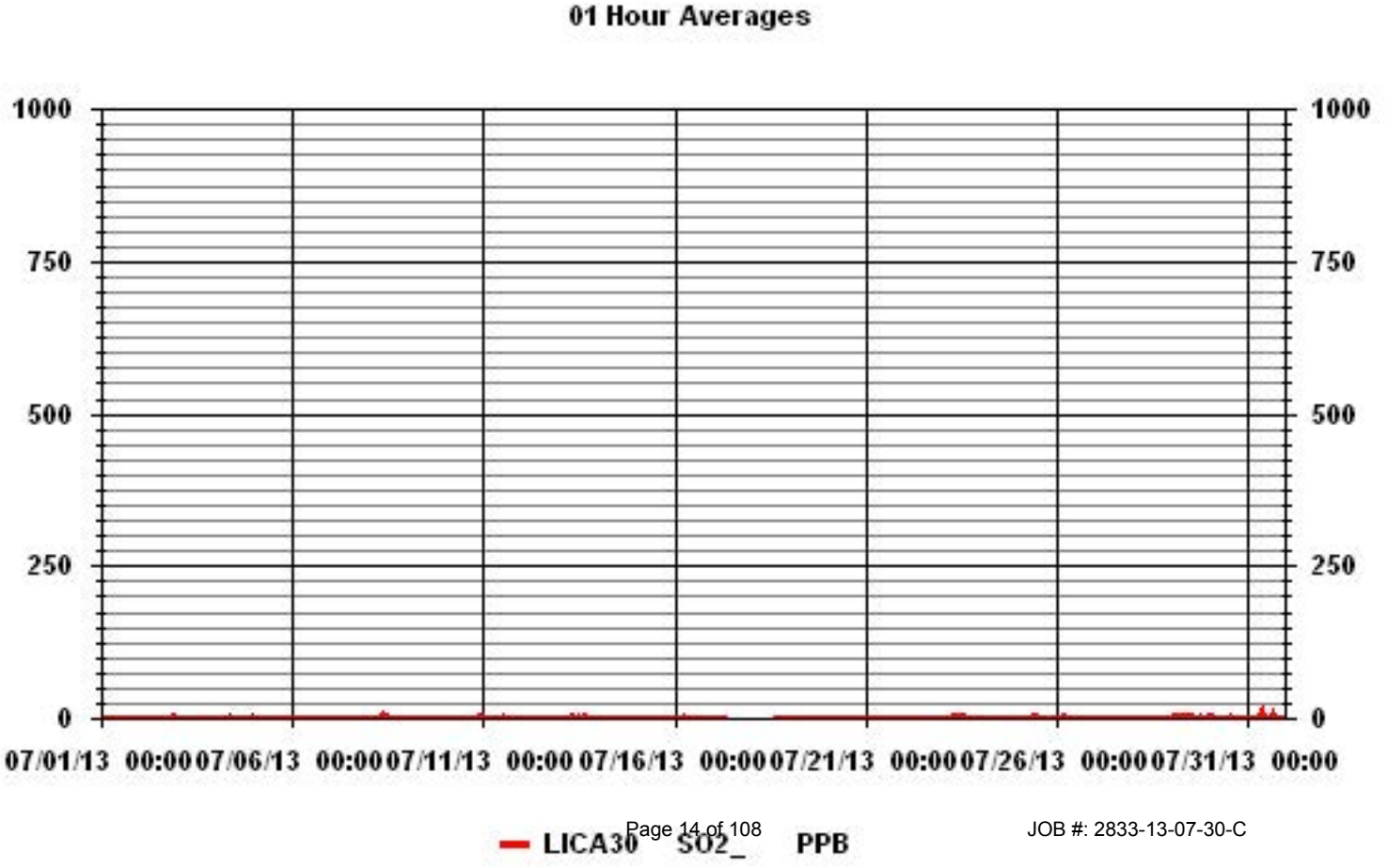
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 48 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	104					
MAXIMUM 1-HR AVERAGE:	9	PPB	@ HOUR(S)	8	ON DAY(S)	31
MAXIMUM 24-HR AVERAGE:	1.7	PPB			ON DAY(S)	29

IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:	719	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	96.6	%
STANDARD DEVIATION:	0.93		MONTHLY AVERAGE:	0.30	PPB

JOB #: 2833-13-07-30-C



JOB #: 2833-13-07-30-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

JULY 2013

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

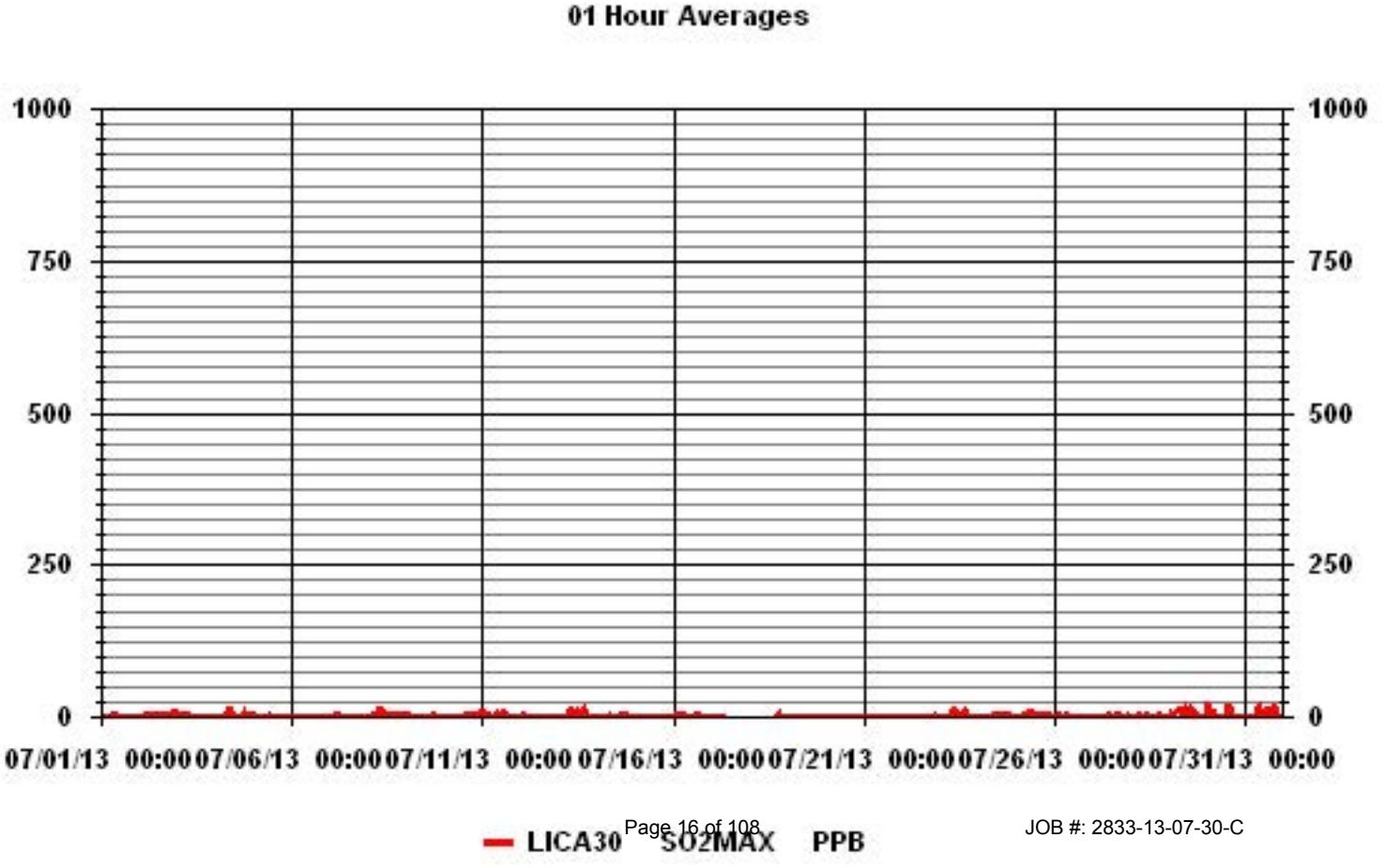
HOUR START / HOUR END / DAY	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
1	0	0	0	0	0	0	1	1	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
2	0	0	0	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	6	6	6	1.3	24
3	1	1	1	1	1	1	1	1	S	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0.4	24
4	0	0	0	0	0	0	4	S	5	16	6	3	0	0	1	0	0	0	6	0	0	3	4	4	16	2.3	24
5	3	1	1	0	0	2	S	0	0	1	2	2	0	0	0	0	0	0	0	1	0	0	0	0	3	0.6	24
6	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.0	24
7	0	0	0	0	S	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.1	24
8	0	0	0	S	1	1	1	6	15	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	15	1.8	24
9	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0.2	24
10	0	S	0	0	0	0	0	0	1	2	1	0	1	1	1	1	1	1	1	1	2	3	2	9	9	1.2	24
11	S	1	1	1	1	2	2	1	4	1	7	5	8	7	1	2	1	1	0	0	0	0	0	S	8	2.1	24
12	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	3	1	S	0	3	0.4	24
13	0	0	0	0	0	0	2	9	16	6	10	3	4	5	6	7	12	3	0	0	0	S	0	0	16	3.6	24
14	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	1	1	3	5	3	S	0	1	0	5	0.8	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	C	C	S	0	0	0	0	1	0.0	24
16	0	0	5	2	1	3	6	5	0	1	0	0	0	0	3	5	0	0	S	0	0	0	0	0	6	1.3	24
17	0	0	0	0	0	0	0	0	C	C	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	0	0.0	11
18	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	C	C	C	C	C	0	5	0	0	0	0	0	5	0.7	12
19	0	0	0	0	0	0	0	0	0	S	S	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	0	1	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.0	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	0	0	0	0	0	0	0	0	1	0.0	24
22	0	0	0	0	0	0	0	0	S	S	0	0	S	0	0	0	0	0	0	0	0	1	1	0	1	0.1	24
23	0	0	0	0	0	0	1	10	9	15	4	S	4	5	9	0	5	0	1	0	0	0	0	0	15	2.7	24
24	0	0	0	0	0	0	0	0	0	0	S	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0.4	24
25	1	0	1	0	1	1	1	2	8	S	7	2	1	1	1	1	1	1	1	1	1	1	1	1	8	1.6	24
26	2	1	1	1	1	2	1	1	S	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0.5	24
27	0	0	0	0	1	0	0	S	1	3	3	4	2	1	1	0	3	3	1	0	0	0	1	1	4	1.1	24
28	0	0	0	0	1	1	S	0	0	1	1	1	0	0	1	0	1	1	1	1	1	3	1	2	3	0.7	24
29	1	8	5	6	8	S	14	13	2	6	14	9	13	7	13	10	9	8	6	0	0	0	1	4	14	6.8	24
30	23	14	10	9	S	1	0	0	0	0	2	1	0	15	15	8	4	0	0	0	0	0	0	0	23	4.4	24
31	0	0	0	S	0	1	0	13	17	12	0	10	12	11	16	2	14	16	15	3	1	0	0	0	17	6.2	24
HOURLY MAX	23	14	10	9	8	3	14	13	17	16	14	10	13	15	16	10	14	16	15	3	3	3	6	9			
HOURLY AVG	1.1	1.0	0.9	0.8	0.6	0.6	1.3	2.3	3.1	2.8	2.4	1.5	1.7	2.1	2.6	1.5	1.9	1.4	1.6	0.6	0.4	0.5	0.7	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:	280					
MAXIMUM INSTANTANEOUS VALUE:	23	PPB	@ HOUR(S)	0	ON DAY(S)	30
IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:		719	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	3.12					



JOB #: 2833-13-07-30-C

LICA30
SO2_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	4.43	8.72	5.76	3.40	2.36	2.66	6.50	6.95	7.24	11.09	11.39	5.62	7.98	6.50	5.47	3.84	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	4.43	8.72	5.76	3.40	2.36	2.66	6.50	6.95	7.24	11.09	11.39	5.62	7.98	6.50	5.47	3.84	

Calm : .00 %

Total # Operational Hours : 676

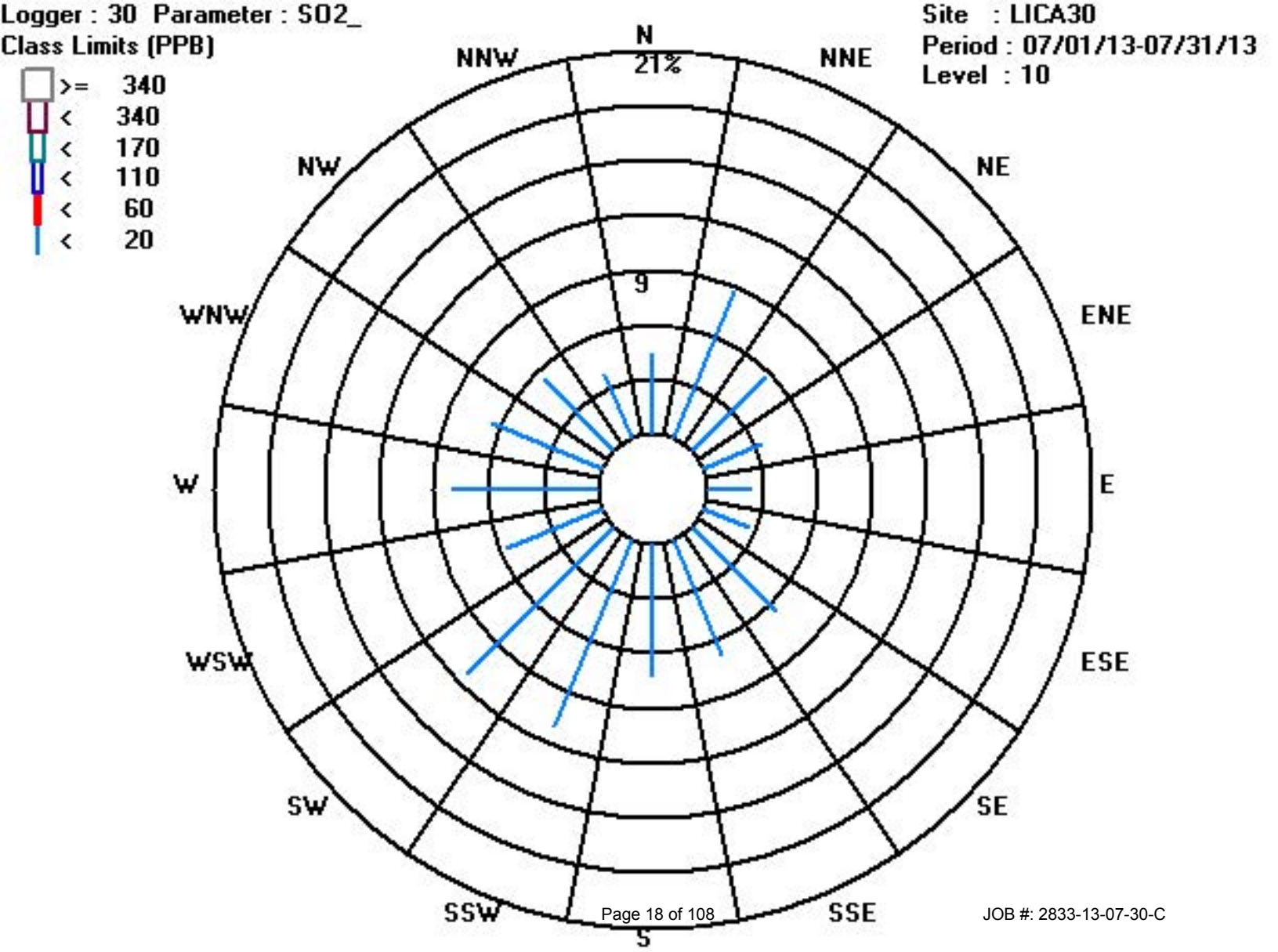
Distribution By Samples

Direction

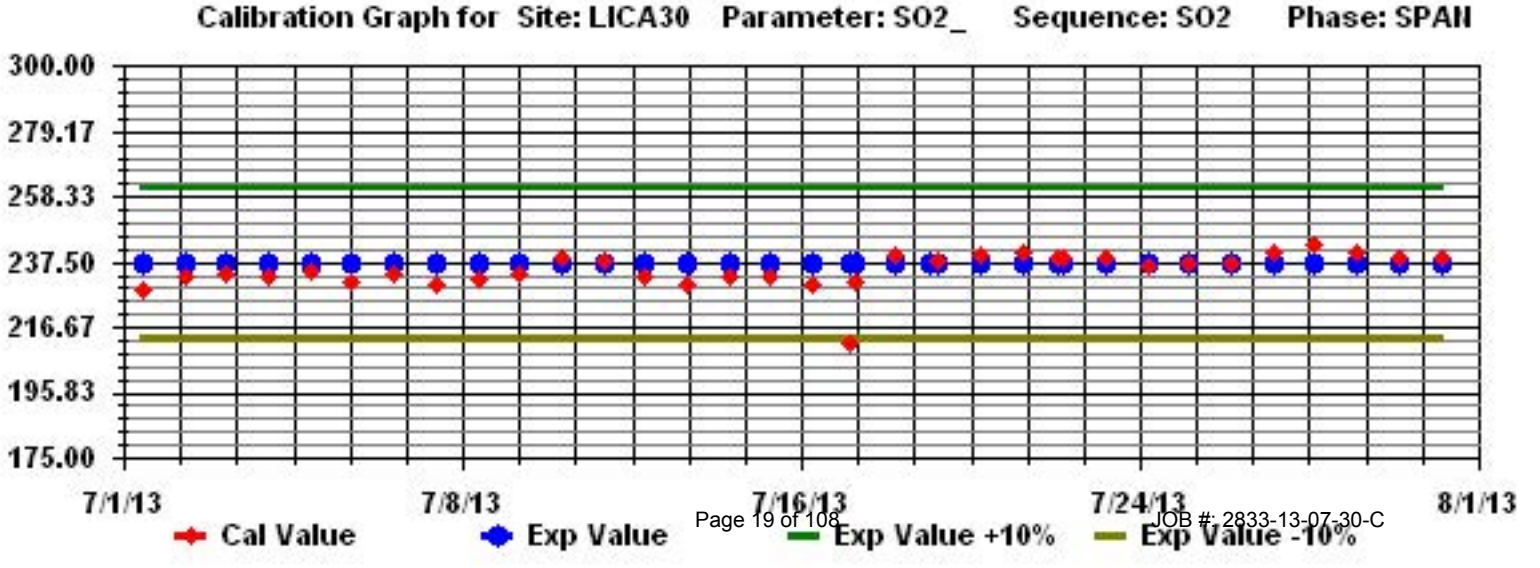
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	30	59	39	23	16	18	44	47	49	75	77	38	54	44	37	26	676
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	30	59	39	23	16	18	44	47	49	75	77	38	54	44	37	26	

Calm : .00 %

Total # Operational Hours : 676



JOB #: 2833-13-07-30-C


Calibration Graph for Site: LICA30 Parameter: SO2_ Sequence: SO2 Phase: SPAN
300.00
279.17
258.33
237.50
216.67
195.83
175.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2013

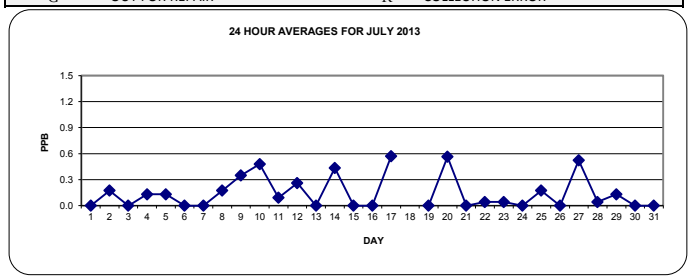
HYDROGEN SULPHIDE (H_2S) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
2	0	0	0	0	0	1	1	1	1	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
3	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
4	0	0	0	0	0	0	0	**S**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.1	24
5	1	1	0	0	0	0	**S**	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
6	0	0	0	0	0	**S**	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	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8	1	0	1	**S**	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
9	0	1	**S**	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	24
10	1	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	1	1	4	0.5	24
11	**S**	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	**S**	1	0.1	24
12	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	1	0.3	24
13	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
14	0	0	0	0	0	1	0	4	2	0	0	1	0	0	0	0	0	1	1	0	**S**	0	0	0	4	0.4	24
15	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
16	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
17	0	0	0	0	0	0	0	0	**S**	**S**	3	1	1	1	1	1	**S**	**C**	**C**	**Y**	**Y**	**Y**	**Y**	**Y**	3	**0.6**	19
18	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**C**	**C**	**C**	**C**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**			4
19	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0.0	10
20	0	0	1	0	1	0	1	1	2	1	1	1	1	1	**S**	2	0	0	0	0	0	0	0	0	2	**0.6**	24
21	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
22	0	0	0	0	0	0	0	1	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	1	0.0	24
23	0	0	0	0	0	1	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
24	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	0	0	2	0	0	1	0	0	0	**S**	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0.2	24
26	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
27	0	0	0	3	**5**	2	1	**S**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**	0.5	24
28	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.0	24
29	0	1	1	0	1	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
30	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	0	0	0	**S**	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	2	3	5	2	1	4	2	1	3	1	1	1	1	2	1	1	1	1	3	4	1	1			
HOURLY AVG	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.0	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1			

STATUS FLAG CODES

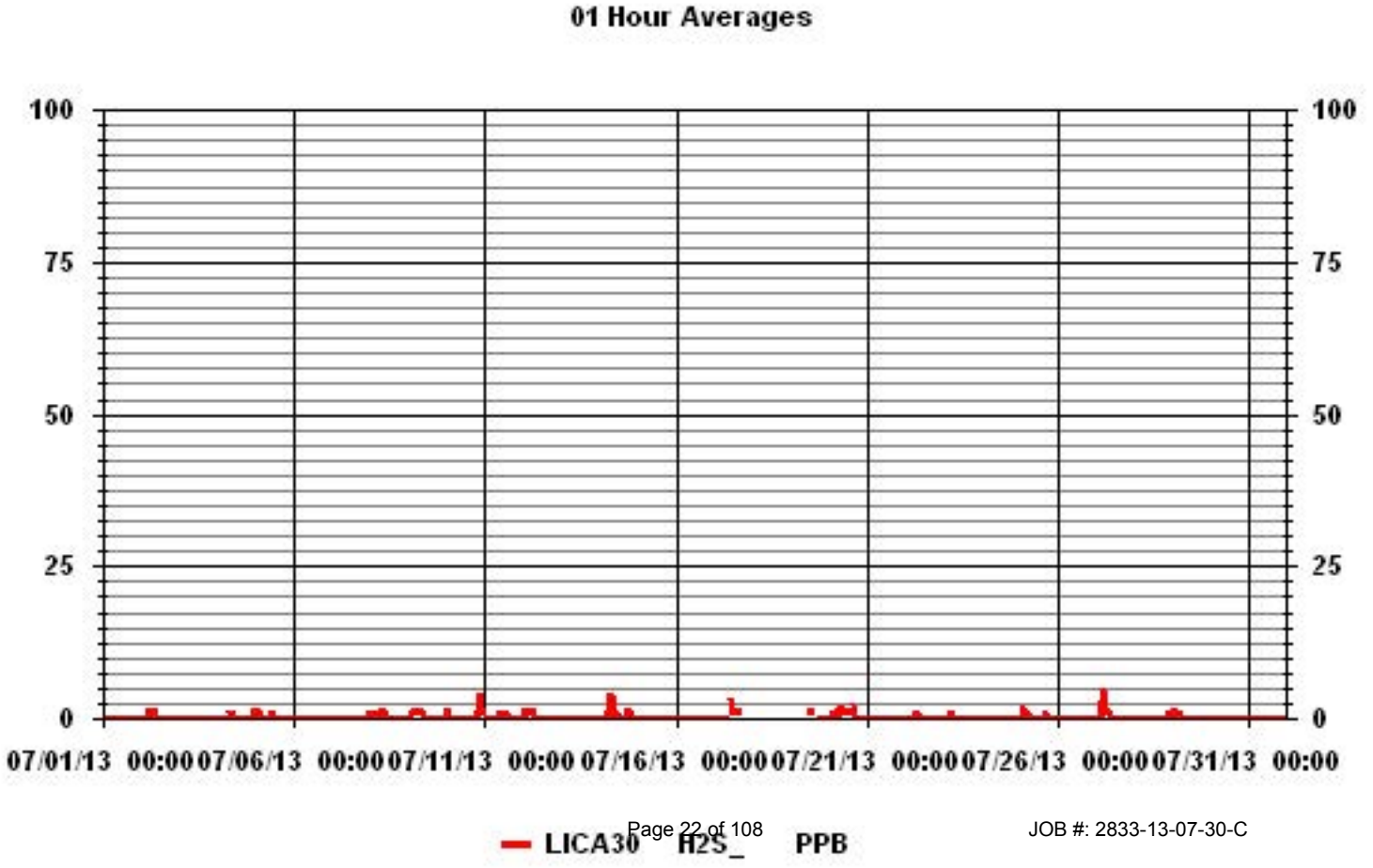
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0						
NUMBER OF 24-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	73						
MAXIMUM 1-HR AVERAGE:	5	PPB	@ HOUR(S)	4	ON DAY(S)	27	
MAXIMUM 24-HR AVERAGE:	0.6	PPB			ON DAY(S)	17, 20	
					VAR-VARIOUS		
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		705	HRS	
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:		94.8	%	
STANDARD DEVIATION:	0.48		MONTHLY AVERAGE:		0.14	PPB	



JOB #: 2833-13-07-30-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

JULY 2013

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	1	0	1	0	0	**S**	0	0	0	0	1	0	0	0	1	1	0	0	1	1	0.3	24
2	0	0	1	1	1	1	1	1	1	**S**	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0.8	24
3	0	1	0	0	1	1	1	1	**S**	1	1	1	0	0	1	1	1	0	0	0	1	1	0	0	1	0.6	24
4	1	0	1	1	1	1	1	**S**	1	1	1	0	1	1	0	1	1	1	1	1	0	1	1	1	1	0.8	24
5	1	1	1	0	1	1	**S**	1	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0	0	1	0.4	24
6	0	1	0	0	0	**S**	0	1	1	0	1	0	1	0	1	1	0	0	0	1	0	1	1	0	1	0.4	24
7	0	0	1	1	**S**	2	1	1	1	1	1	2	0	0	1	0	0	0	0	0	0	0	1	1	2	0.6	24
8	1	1	1	**S**	1	1	0	2	1	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	2	0.5	24
9	0	1	**S**	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	1	0	0	1	1	1	1	0.7	24
10	1	**S**	0	0	1	1	0	0	0	1	0	0	1	0	0	1	1	1	0	2	8	8	1	1	8	1.2	24
11	**S**	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	**S**	1	0.9	24
12	1	1	1	2	1	1	1	1	1	1	1	0	0	1	1	0	1	0	2	0	1	1	**S**	1	2	0.9	24
13	0	0	1	0	0	0	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	**S**	0	0	1	0.3	24
14	0	0	0	0	0	1	3	6	8	1	0	1	1	0	0	0	1	1	1	1	**S**	1	1	1	8	1.2	24
15	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	**S**	1	1	0	0	1	0.3	24
16	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	1	0.0	24
17	0	0	0	0	0	0	0	**S**	**S**	**S**	**9**	2	2	2	2	1	**S**	**C**	**C**	**Y**	**Y**	**Y**	**Y**	**Y**	**9**	1.4	19
18	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**C**	**C**	**C**	**C**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**			4
19	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**C**	**C**	**C**	**C**	**C**	1	1	1	1	1	1	1.0	10
20	1	1	1	1	1	1	1	3	3	1	2	2	2	3	**S**	4	2	0	0	0	0	0	0	0	4	1.3	24
21	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
22	0	0	0	0	0	0	0	1	0	0	0	0	**S**	1	1	1	1	1	0	0	0	0	1	0	1	0.3	24
23	0	0	0	1	1	1	1	1	1	1	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24
24	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	1	2	0	0	0	0	0	0	1	0	2	0.2	24
25	0	1	3	2	2	2	2	0	0	**S**	1	1	1	0	0	1	2	1	0	0	0	1	0	0	3	0.9	24
26	0	0	0	1	0	1	1	3	**S**	1	0	0	0	2	0	1	0	0	1	1	1	0	1	1	3	0.7	24
27	1	1	1	6	6	4	6	**S**	6	0	0	1	1	2	0	0	1	1	0	0	0	0	0	0	6	1.6	24
28	0	0	0	0	0	0	**S**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	0.8	24
29	1	1	1	1	1	**S**	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	2	0	0	2	0.7	24
30	1	1	0	0	**S**	1	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	1	0.3	24
31	0	0	0	**S**	0	0	0	1	1	0	0	0	0	1	1	1	2	1	0	0	0	0	0	0	2	0.3	24
HOURLY MAX	1	1	3	6	6	4	6	6	8	1	9	2	2	3	2	4	2	1	2	2	8	8	1	1			
HOURLY AVG	0.3	0.5	0.5	0.7	0.7	0.9	0.9	1.1	1.2	0.6	0.9	0.6	0.6	0.7	0.6	0.8	0.6	0.3	0.4	0.3	0.6	0.9	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

MONTHLY SUMMARY

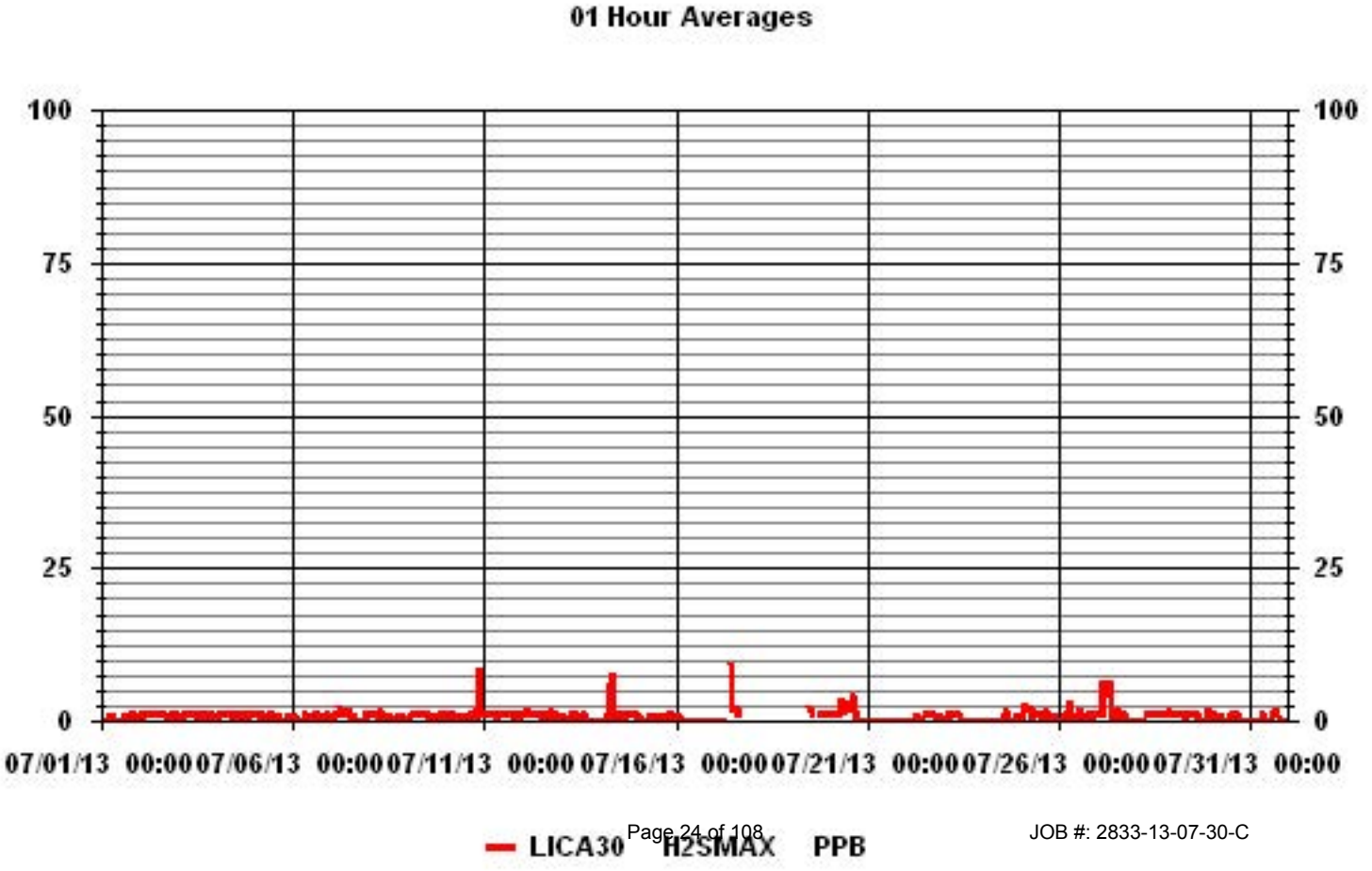
NUMBER OF NON-ZERO READINGS: 322

MAXIMUM INSTANTANEOUS VALUE: 9 PPB @ HOUR(S) 10 ON DAY(S) 17

IZS CALIBRATION TIME: 33 HRS OPERATIONAL TIME: 705 HRS

MONTHLY CALIBRATION TIME: 11 HRS

STANDARD DEVIATION: 0.99



JOB #: 2833-13-07-30-C

LICA30
H2S_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	4.21	8.73	4.81	3.16	2.25	2.25	6.32	7.07	7.22	11.74	11.44	5.72	7.83	6.77	5.72	3.76	99.09
<	10	.00	.00	.00	.00	.00	.45	.30	.00	.00	.00	.15	.00	.00	.00	.00	.00	.90
<	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	4.21	8.73	4.81	3.16	2.25	2.71	6.62	7.07	7.22	11.74	11.59	5.72	7.83	6.77	5.72	3.76	

Calm : .00 %

Total # Operational Hours : 664

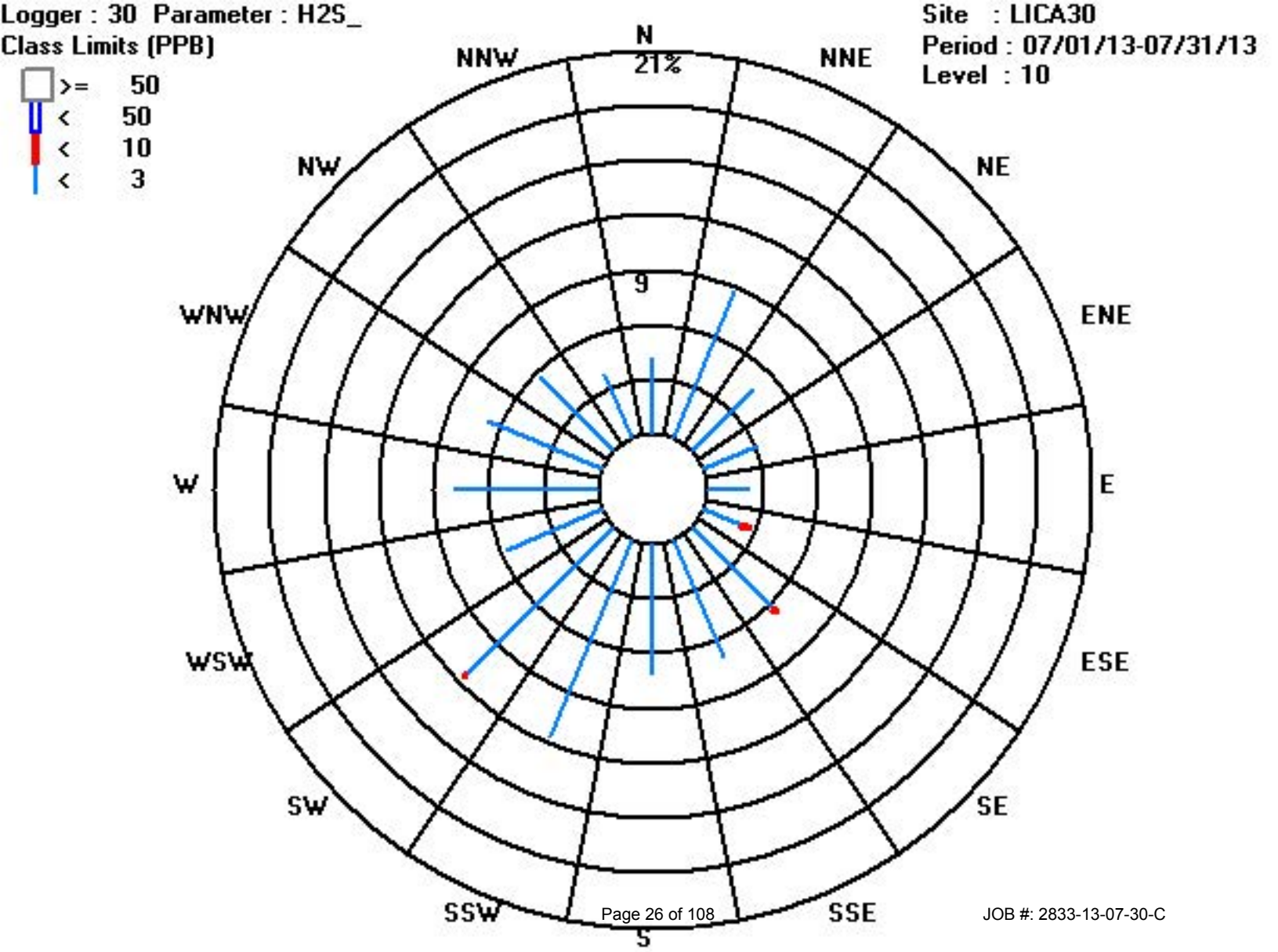
Distribution By Samples

Direction

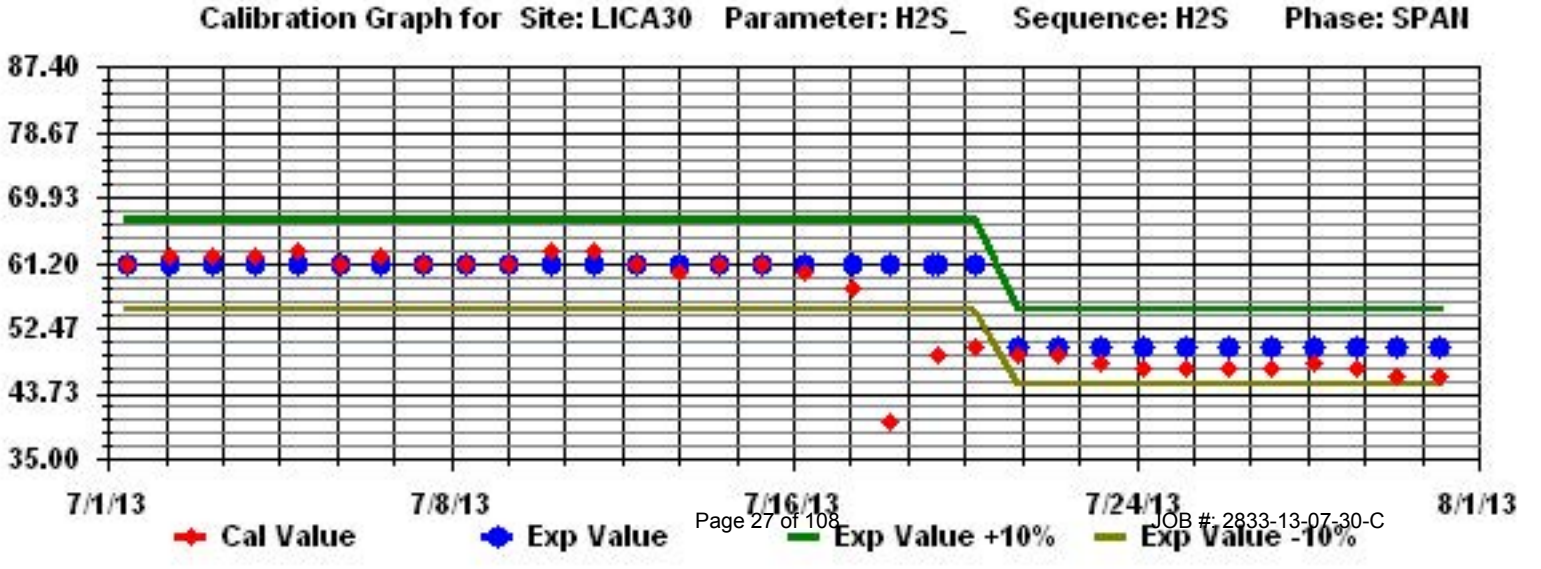
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	28	58	32	21	15	15	42	47	48	78	76	38	52	45	38	25	658
<	10						3	2				1						6
<	50																	
>=	50																	
	Totals	28	58	32	21	15	18	44	47	48	78	77	38	52	45	38	25	

Calm : .00 %

Total # Operational Hours : 664



JOB #: 2833-13-07-30-C


Calibration Graph for Site: LICA30 Parameter: H2S_ Sequence: H2S Phase: SPAN
87.40
78.67
69.93
61.20
52.47
43.73
35.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -MASKWA

JULY 2013

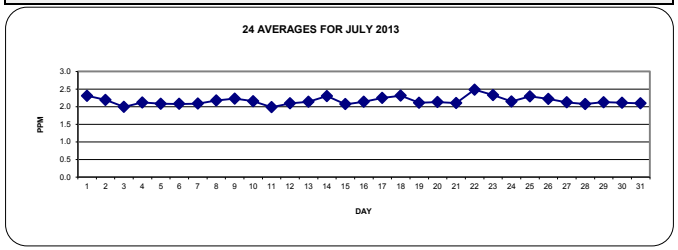
TOTAL HYDROCARBONS hourly averages in ppm

MST

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

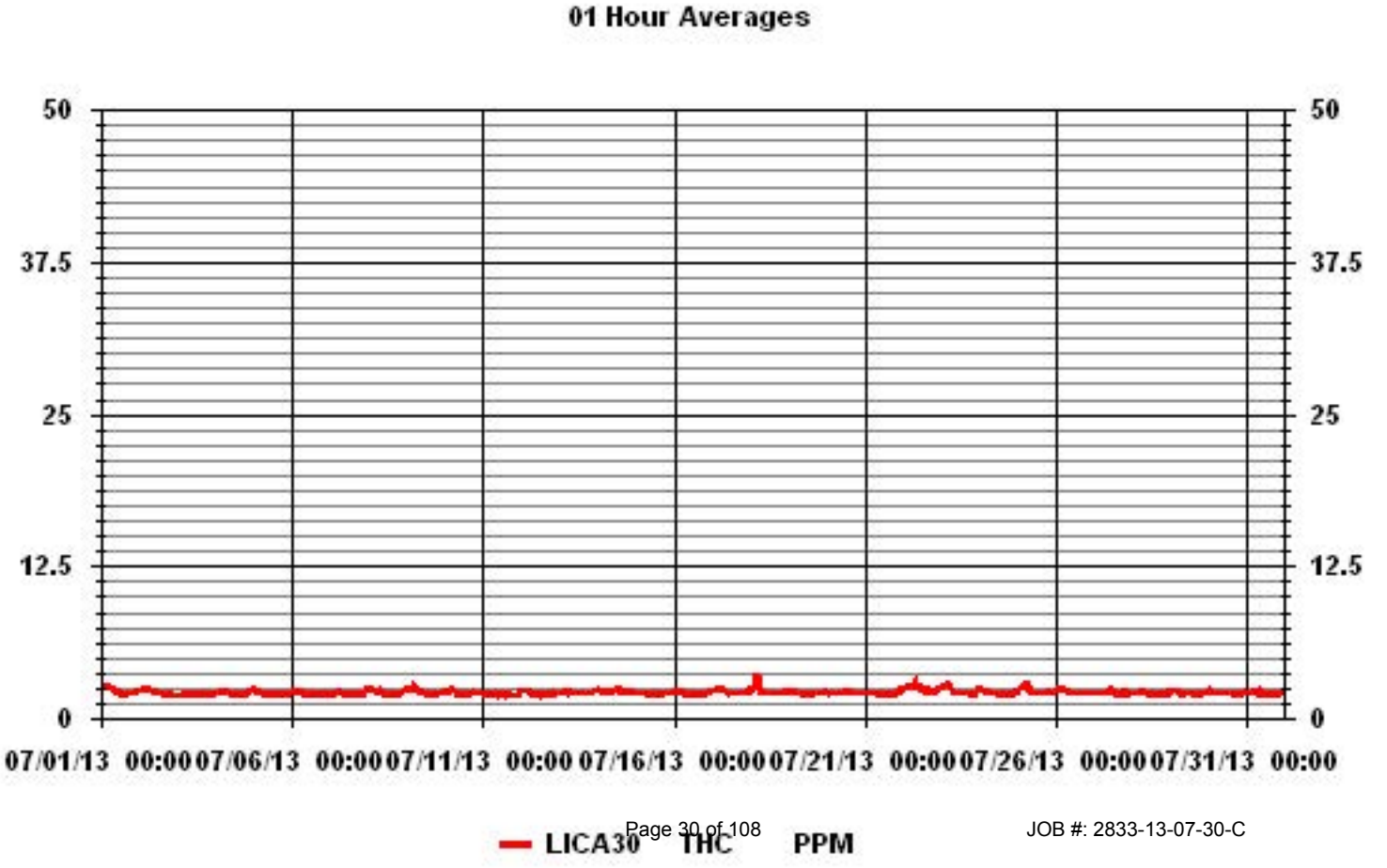
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	709					
MAXIMUM 1-HR AVERAGE:	3.6	PPM	@ HOUR(S)	4	ON DAY(S)	18
MAXIMUM 24-HR AVERAGE:	2.5	PPM			ON DAY(S)	22
					VAR- VARIOUS	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.19		MONTHLY AVERAGE:		2.16	PPM



JOB #: 2833-13-07-30-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

JULY 2013

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

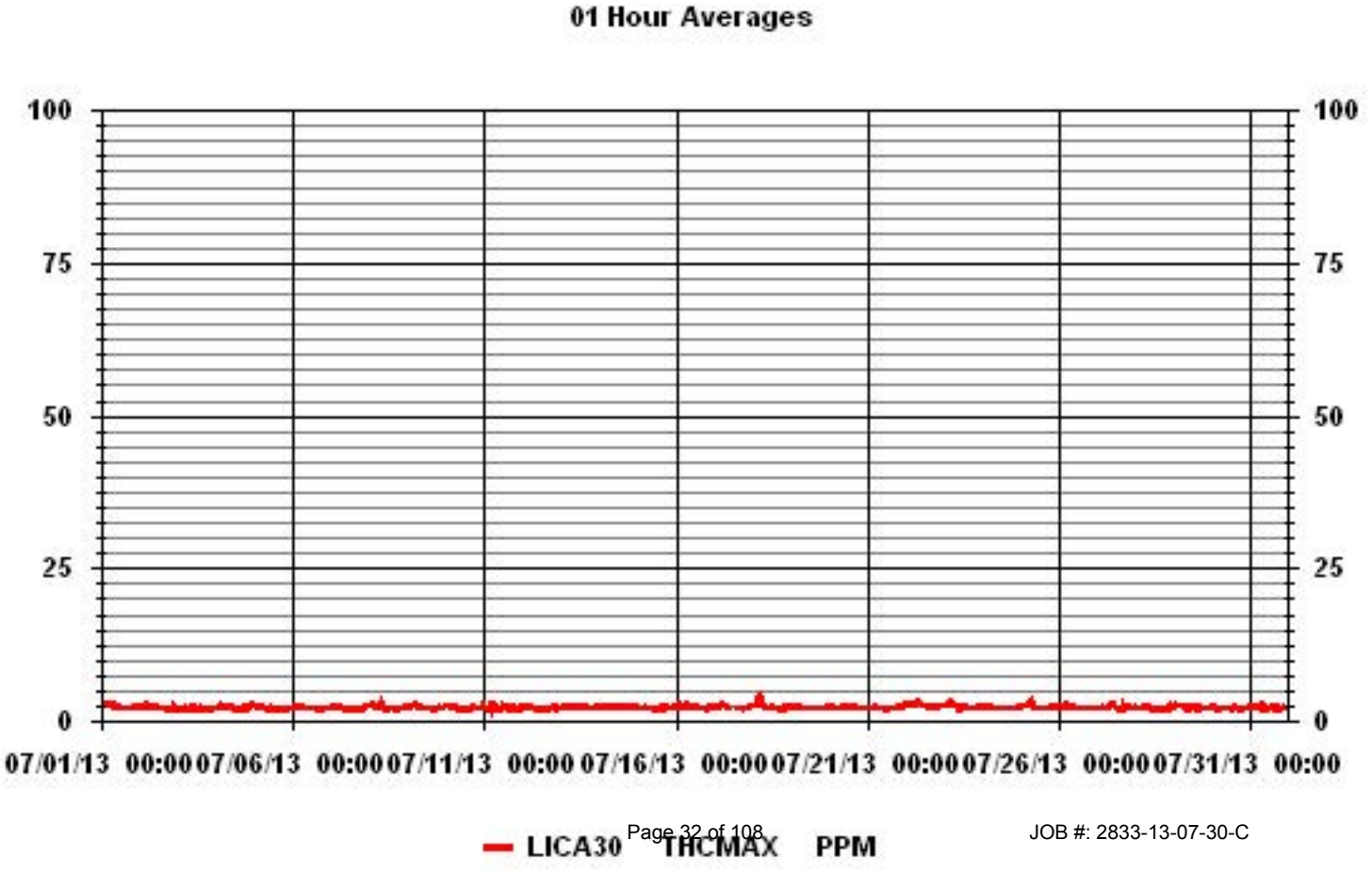
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.5	2.6	2.7	2.9	3	2.9	2.6	2.6	2.6	2.4	**S**	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	3	2.4	24
2	2.3	2.3	2.4	2.4	2.6	2.6	2.6	2.5	2.4	**S**	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2	2.1	2	2	2.5	2.1	2.2	2.6	2.3	24
3	2	2.1	1.9	2	2.2	2.2	2	2.1	**S**	2.2	2.2	2.3	2	2	2.4	2.1	2.2	2	2	2	2	2	2.1	2.2	2.4	2.1	24
4	2.1	2.1	2.6	2.3	2.3	2.3	2.5	**S**	2.4	2.3	2.3	2	2	2.1	2.1	2	2	2.3	2.3	2	2.2	2.4	2.7	2.7	2.7	2.3	24
5	2.7	2.5	2.5	2.3	2.2	2.5	**S**	2	2.1	2.1	2.2	2.2	2	2	2	2	2	2	2	2.2	2	2	2.1	2.1	2.7	2.2	24
6	2.3	2.3	2.2	2.3	2.7	**S**	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.3	2.1	2.1	2	2	2	2.3	2.1	2.1	2.1	2.2	2.7	2.2	24
7	2.2	2.3	2.2	2.3	**S**	2.7	2.4	2.2	2.1	2	2	2	2	2	2	2.1	2	2	2	2	2.1	2.2	2.4	2.7	2.7	2.2	24
8	2.6	2.6	2.6	**S**	2.5	2.3	2.3	3.1	2.6	2.3	2.1	2	2.1	2.1	2.1	2.1	2.1	2	2	2.1	2.1	2.2	2.3	2.4	3.1	2.3	24
9	2.4	2.5	**S**	2.7	2.8	2.8	2.6	2.4	2.5	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2	2.1	2.2	2.2	2.1	2.2	2.4	2.8	2.3	24
10	2.5	**S**	2.5	2.6	2.5	2.6	2.5	2.3	2.1	2.3	2	2	2	2	2	2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.9	2.9	2.3	24
11	**S**	2.2	2.1	2.6	2.1	3	2.1	2.2	2	2	2.3	2.8	2.5	2.7	2.3	2.6	2.3	2.9	1.9	1.9	1.9	1.9	2	**S**	3	2.3	24
12	2.3	2.3	2.4	2.3	2.3	2.3	2.2	2.1	2.1	2	2	2	2	2	2	2	2.2	2.1	2.3	2.3	2.5	2.2	**S**	2.1	2.5	2.2	24
13	2.1	2.2	2.3	2.2	2.2	2.2	2.5	2.4	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	**S**	2.6	2.3	2.6	2.2	24
14	2.5	2.7	2.4	2.4	2.5	2.6	2.4	2.3	2.2	2.2	2.4	2.4	2.5	2.5	2.4	2.2	2.4	2.5	2.3	2.3	**S**	2.3	2.3	2.2	2.7	2.4	24
15	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2	2	2	2	2.1	2.5	2.1	2.3	2.3	**S**	2.1	2.1	2.2	2.2	2.5	2.1	24
16	2.2	2.2	2.9	2.7	2.6	2.4	2.7	2.2	2.1	2.2	2.2	2.2	2.4	2.3	2.2	2.3	2.1	2.1	**S**	2.1	2.2	2.2	2.3	2.4	2.9	2.3	24
17	2.4	2.4	2.3	2.6	2.8	2.5	2.5	2.4	2.3	2.4	**C**	**C**	**C**	**C**	**C**	2.1	2.1	**S**	2.1	2.2	2.1	2.2	2.2	2.4	2.8	2.3	24
18	2.5	2.5	2.7	3.9	**4.2**	3.5	2.9	2.4	2.2	2.1	2.2	2.1	2.2	2.3	2.1	2.1	**S**	2.1	2.3	2.1	2.3	2.3	2.2	2.3	**4.2**	2.5	24
19	2.5	2.4	2.2	2.2	2.3	2.3	2.2	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	2.3	2.2	2.5	2.2	24
20	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.2	2.2	**S**	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	24
21	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2	2.1	**S**	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.4	2.7	2.7	2.2	24
22	2.8	2.7	2.9	2.7	2.6	2.7	3	3.2	3.1	3.2	2.8	2.7	**S**	2.3	2.4	2.5	2.4	2.2	2.3	2.3	2.3	2.4	2.5	2.5	3.2	2.6	24
23	2.5	2.7	2.7	3	3	3	2.7	2.7	2.5	2.3	2.1	**S**	2.7	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.6	3	2.4	24
24	2.5	2.6	2.4	2.3	2.3	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	2.4	2.2	2.6	2.2	24
25	2.3	2.4	2.7	2.9	2.8	3	3.3	2.6	2.3	**S**	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	3.3	2.4	24
26	2.3	2.4	2.4	2.5	2.6	2.6	2.6	2.5	**S**	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6	2.2	24
27	2.1	2.1	2.1	2.2	2.2	2.1	2.2	**S**	2.6	2.7	2.9	2.7	2.2	2.4	2.2	2	2.7	2.2	2.2	2.3	2.2	2.1	2.1	2.2	2.9	2.3	24
28	2.2	2.1	2.1	2.1	2.2	2.3	**S**	2.2	2.2	2.2	2.1	2	2	2	2	2	2	2	2	2	2.3	2.6	2.1	2.4	2.6	2.1	24
29	2.4	2.6	2.6	2.5	2.6	**S**	2.5	2	2	2.3	2.3	2.3	2.3	2.3	2.3	2.1	2.4	2.4	2.1	2.1	2.2	2.1	2.1	2.3	2.6	2.3	24
30	2.7	2.5	2.2	2.1	**S**	2.3	2.1	2.2	2.1	2.1	2.2	2.4	2.2	2.5	2.4	2.3	2.1	2	2	2.1	2.1	2.1	2.2	2.2	2.7	2.2	24
31	2.2	2.2	2.2	**S**	2.3	2.6	2.3	2.9	2.6	2.2	2	2.1	2.1	2.2	2.3	2	2.4	2.4	2	2.1	2.1	2.2	2.3	2.2	2.9	2.3	24
HOURLY MAX	2.8	2.7	2.9	3.9	4.2	3.5	3.3	3.2	3.1	3.2	2.9	2.8	2.7	2.7	2.4	2.6	2.7	2.9	2.3	2.3	2.5	2.6	2.7	2.9			
HOURLY AVG	2.4	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.2	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:	707						
MAXIMUM INSTANTANEOUS VALUE:	4.2	PPM	@ HOUR(S)	4	ON DAY(S)	18	
IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	744	HRS		
MONTHLY CALIBRATION TIME:	5	HRS					
STANDARD DEVIATION:	0.26						



JOB #: 2833-13-07-30-C

LICA30
THC / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	4.23	8.60	5.78	3.52	2.25	2.53	6.20	6.62	6.91	12.27	11.14	5.64	7.61	6.48	5.92	3.80	99.57
<	10.0	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.14	.00	.14	.00	.00	.00	.42
<	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	4.23	8.60	5.92	3.52	2.25	2.53	6.20	6.62	6.91	12.27	11.28	5.64	7.75	6.48	5.92	3.80	

Calm : .00 %

Total # Operational Hours : 709

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	30	61	41	25	16	18	44	47	49	87	79	40	54	46	42	27	706
<	10.0			1								1		1				3
<	50.0																	
>=	50.0																	
	Totals	30	61	42	25	16	18	44	47	49	87	80	40	55	46	42	27	

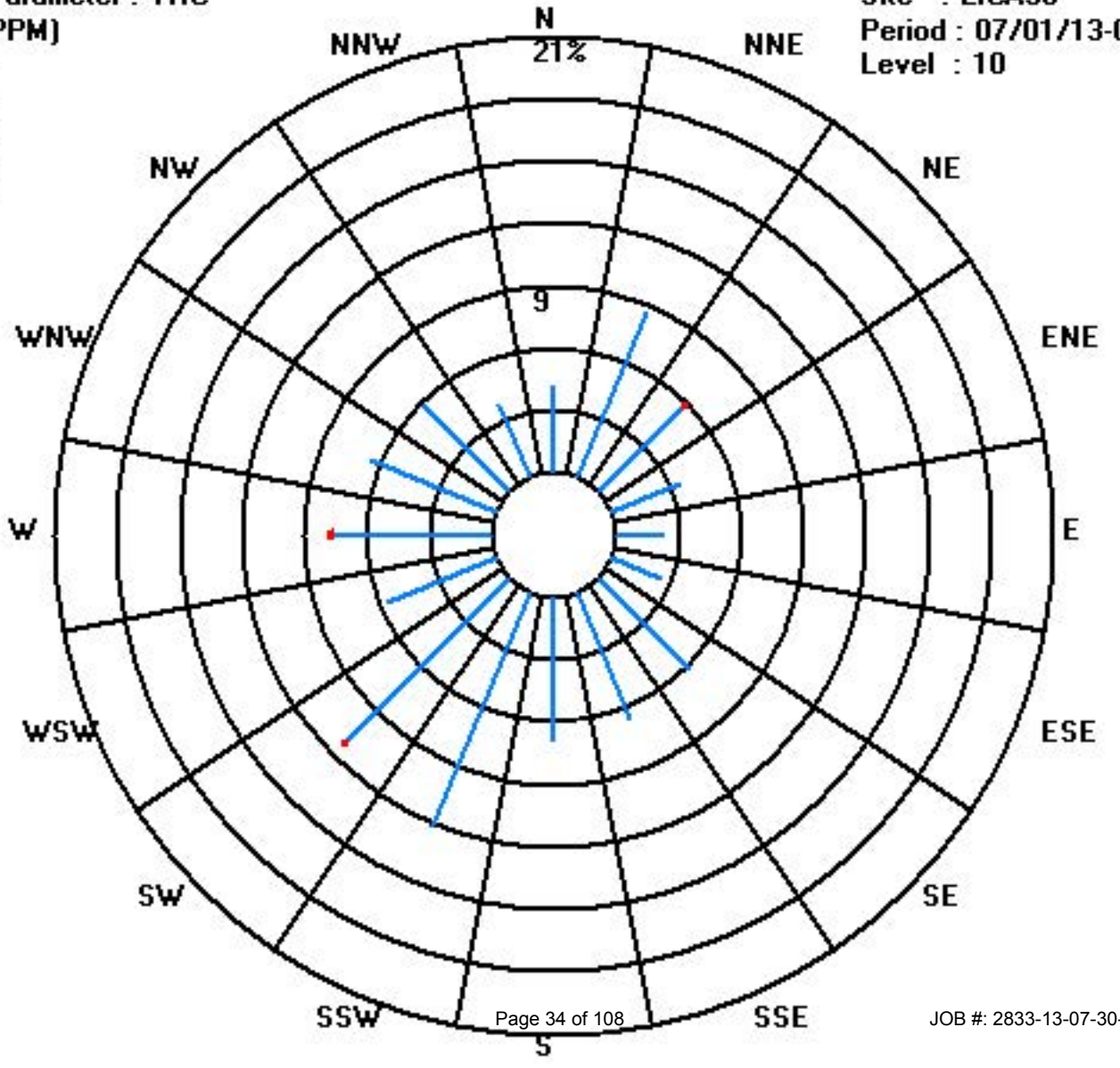
Calm : .00 %

Total # Operational Hours : 709

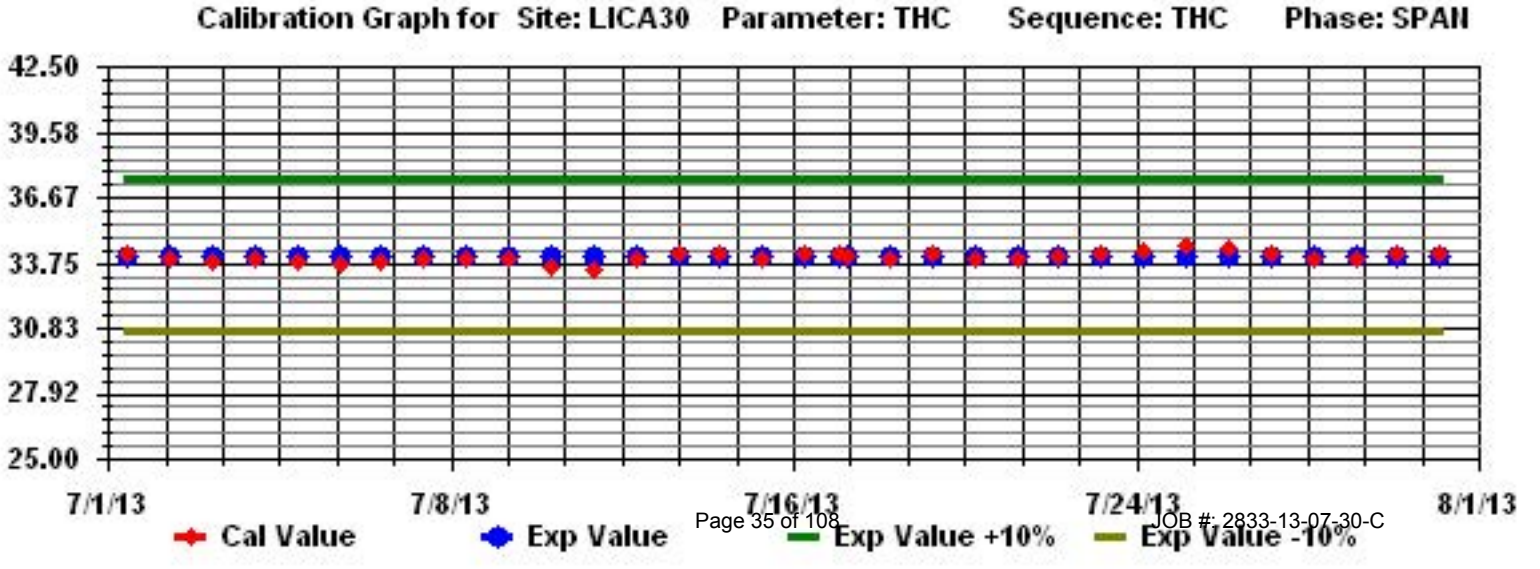
Logger : 30 Parameter : THC
Class Limits (PPM)

>= 50.0
< 50.0
< 10.0
< 3.0

Site : LICA30
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-30-C


Calibration Graph for Site: LICA30 Parameter: THC Sequence: THC Phase: SPAN
42.50
39.58
36.67
33.75
30.83
27.92
25.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2013

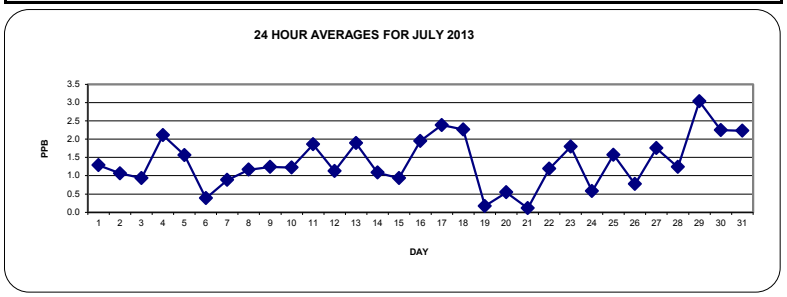
NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.9	0.9	0.9	1.9	1.4	2.7	2.2	3.6	2.9	1.8	**S**	1.3	0.5	0.6	0.5	0.5	0.7	0.5	0.5	0.7	0.5	0.8	1.3	1.9	3.6	1.3	24
2	1.8	1.1	1.5	1.9	2.2	2.3	1.7	1.7	0.7	**S**	0.9	0.9	0.7	0.7	0.6	0.6	0.3	0	0.2	0.3	0.2	0.5	1.3	2.3	2.3	1.1	24
3	0.4	0.1	0.2	0	1.6	1.9	1.8	1.2	**S**	0.6	0.6	0.8	0.2	0.3	0.9	0.8	0.6	0.1	0	0.1	0.1	0.1	3.7	5.4	5.4	0.9	24
4	0.3	0.4	1.7	2.3	0.6	1.3	8.9	**S**	5.6	6.1	3.8	0.8	0	0.2	0.4	0	0	0	2.4	0.1	0.4	3.9	3	6.2	8.9	2.1	24
5	6.5	3.6	2.8	1.5	1.1	2.7	**S**	1.7	1.1	1.3	3.2	2.4	1	1.3	0.7	0.3	0.5	0.4	0.3	1.1	0.4	0.5	0.6	0.9	6.5	1.6	24
6	0.7	0.5	0.3	0.4	0.6	**S**	0.8	0.6	0	0	0	0	0	2.8	1.6	0	0	0	0	0.5	0	0	0	0	2.8	0.4	24
7	0.5	0.9	1.7	4.3	**S**	3.5	3	1.6	0.7	0	0	0	0	0.5	0.3	0	0	0	0	0	0.2	0.4	1.4	1.3	4.3	0.9	24
8	2.4	3	4.2	**S**	0.8	0	0	2.1	8.6	2.6	1.5	0.3	0.3	0	0	0	0	0	0	0	0	0	0.1	0.9	8.6	1.2	24
9	0.9	1.2	**S**	1.3	2.2	2.5	3.1	1.9	2.1	1.7	1.3	0.8	0.5	0.7	0.7	1.3	0.1	0.7	2.3	0.7	0.4	0.7	0.7	0.7	3.1	1.2	24
10	0.4	**S**	0.6	0.6	1.3	1.3	1.5	2	1	1.9	0.9	0.4	0.8	0.4	0.4	0.5	0.2	0.5	0.5	0.4	1.8	1.3	0.9	8.5	8.5	1.2	24
11	**S**	1	2.3	2	1.4	3.9	4	1.5	1.5	1.1	3.2	2.5	3.6	3.8	1.3	2.8	3.8	0.5	0.1	0	0.1	0.1	0.3	**S**	4.0	1.9	24
12	2.4	1.8	2	2.1	1.7	1.7	1.1	1.2	0.7	0.3	0.3	0.2	0.2	0.2	0	0	0	0.6	0	1.7	3.6	3.4	**S**	0.7	3.6	1.1	24
13	1.1	1.3	1.9	1.8	1.4	1.7	2.8	5.7	3.3	1.6	2.2	1.7	2	2.6	3.4	2.8	2.9	1	0.6	0.3	0.5	**S**	0.6	0.3	5.7	1.9	24
14	0.9	0.2	0.2	0.2	0.2	0.5	0.7	2.3	0.7	0.7	0.8	1.3	1.1	1.1	1	0.8	0.9	3.2	3.7	1.2	**S**	0.7	1.8	0.7	3.7	1.1	24
15	0.5	0.4	0.4	0.3	0.3	0.3	0.7	0.2	0.3	0	0	0.2	0	0.1	0.4	1.7	1.4	5.1	7.9	**S**	0.1	0.1	0.2	0.8	7.9	0.9	24
16	0.4	0.4	3.7	3.4	6.7	5	9.9	5.1	0.6	0.5	0.5	0.3	0.1	0.3	1.8	0.9	0	0	**S**	0.1	0.4	0.5	1.4	2.8	9.9	1.9	24
17	3.1	2.2	2.5	3.5	2.7	3.9	4	2.9	2.9	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0.6	0.9	0.9	0.9	4.0	2.4	24
18	0.9	1.3	1.4	2	7.6	7.2	3.7	0.6	0	0	0.9	2.5	4.2	2.2	2.3	1.7	**S**	0.9	5.9	0.8	1	1.8	1.9	1.2	7.6	2.3	24
19	0.9	2.1	0.4	0.1	0.1	0.3	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	2.1	0.2	24
20	0	0.4	1.1	0	0	0	0.5	0.7	2	3.1	0.6	0.5	0.5	0.6	**S**	1.1	1.3	0	0.1	0	0	0	0	0	3.1	0.5	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0.3	0.5	0.4	0.2	0	0.2	0.2	0.2	0.1	0.4	0.5	0.1	24
22	0.8	0.4	0.6	0.7	0.8	1	0.7	1.5	2.5	3.6	3.5	2.8	**S**	0.8	0.6	0.6	0.6	0	0.2	0	0	1	3	1.7	3.6	1.2	24
23	1.1	1.4	1.8	1.5	2.2	3.9	2.5	5.9	3.9	4	0.5	**S**	1.9	2	2.7	1.2	1	0.4	0.8	0.3	0.3	1.3	0.2	0.4	5.9	1.8	24
24	0.6	2	2	1.5	0.8	0.4	0.5	0.8	0.5	0.2	**S**	0.6	0.5	0.4	0.6	0.5	0.2	0	0	0	0	0.1	0.4	0.6	2.0	0.6	24
25	1	2	3.1	2.2	1.1	1.2	3.5	3.1	4.1	**S**	4.2	2.5	1.4	1	0.6	1.2	1	0.3	0.2	0.1	0.2	0.4	0.4	1.3	4.2	1.6	24
26	2	2	1.9	1.4	3	2.4	1.4	1	**S**	0.7	0.4	0.2	0	0	0	0.3	0.1	0	0	0.8	0.1	0	0	0	3.0	0.8	24
27	0	0	0	1.4	2.1	0.8	0.8	**S**	1.9	6.5	5.9	2.1	1.9	2.7	0.9	0.6	3.2	1.1	0.7	1.3	1.3	0.3	3.2	1.6	6.5	1.8	24
28	1.4	0.8	0.5	0.5	1.9	3.4	**S**	1	1.1	0.9	0.3	0.8	0.3	0.2	0.4	0.4	0.1	0	0	0	2.6	9	0.6	2.2	9.0	1.2	24
29	5	7	8.6	4.8	7.7	**S**	8.9	1.3	0.4	1.4	4.5	3.6	3	2.7	2.8	1.4	2.2	1.5	0.8	0	0	0.4	0.5	1.3	8.9	**3.0**	24
30	8.6	**10.1**	4	2.8	**S**	3.3	2.9	1.6	0.7	0.5	0.9	1.6	0.2	4.9	3.8	2.4	0.9	0	0	0	0.1	0.3	1.1	0.9	**10.1**	2.2	24
31	0.5	0.5	0.7	**S**	2.1	7.3	2	7.4	5.7	1.5	0.3	1.5	1.6	1.7	3.4	0.2	5.8	2.8	3.6	2.2	0.4	0.1	0	0	7.4	2.2	24
HOURLY MAX	8.6	10.1	8.6	4.8	7.7	7.3	9.9	7.4	8.6	6.5	5.9	3.6	4.2	4.9	3.8	2.8	5.8	5.1	7.9	2.2	3.6	9.0	3.7	8.5			
HOURLY AVG	1.5	1.6	1.8	1.6	1.9	2.3	2.5	2.1	1.9	1.5	1.5	1.1	0.9	1.2	1.1	0.9	1.0	0.7	1.1	0.4	0.5	1.0	1.0	1.5			

STATUS FLAG CODES

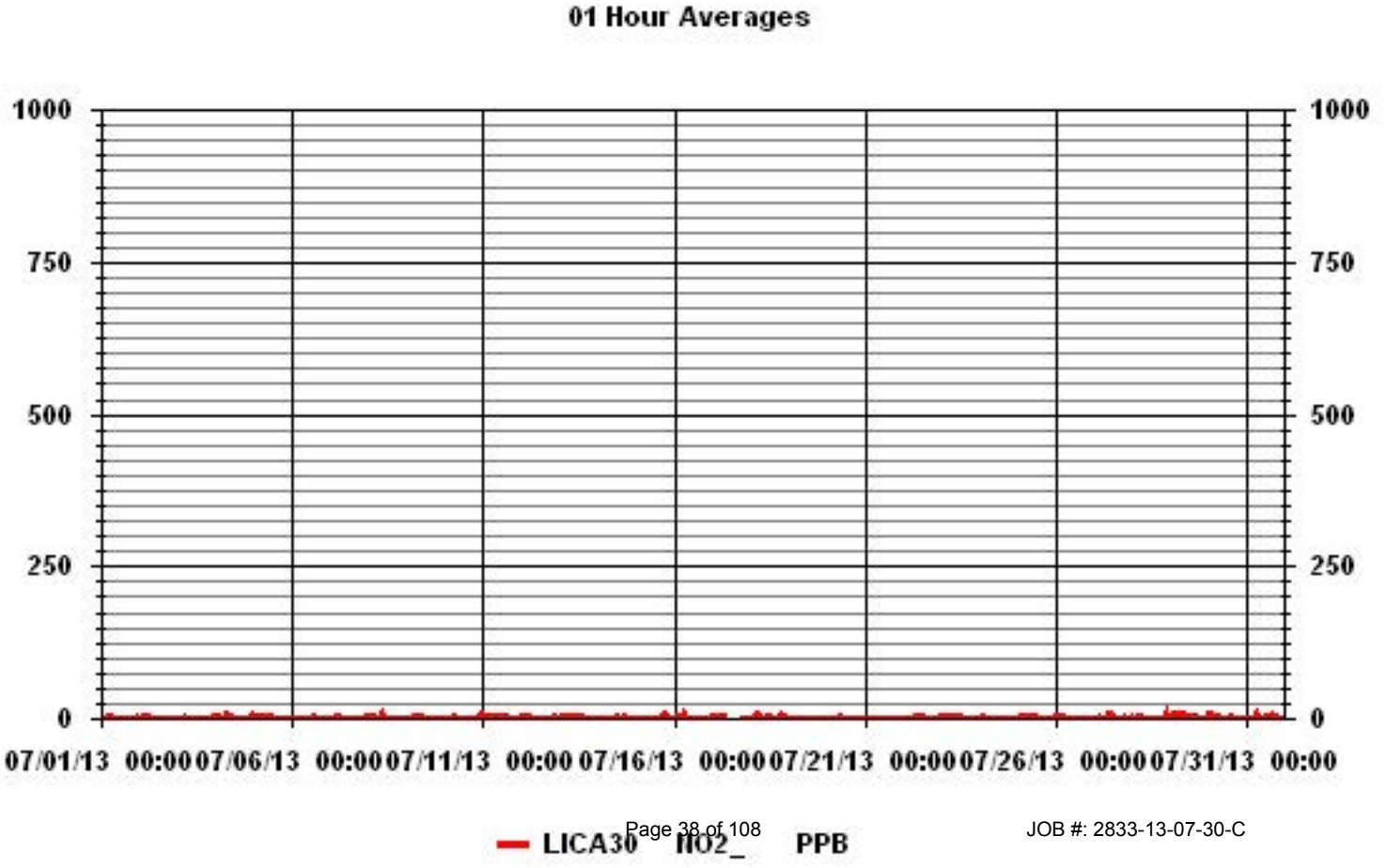
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 159 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	581						
MAXIMUM 1-HR AVERAGE:	10.1	PPB	@ HOUR(S)	1	ON DAY(S)	30	
MAXIMUM 24-HR AVERAGE:	3.0	PPB			ON DAY(S)	29	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	1.68		MONTHLY AVERAGE:		1.36	PPB	



JOB #: 2833-13-07-30-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

JULY 2013

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

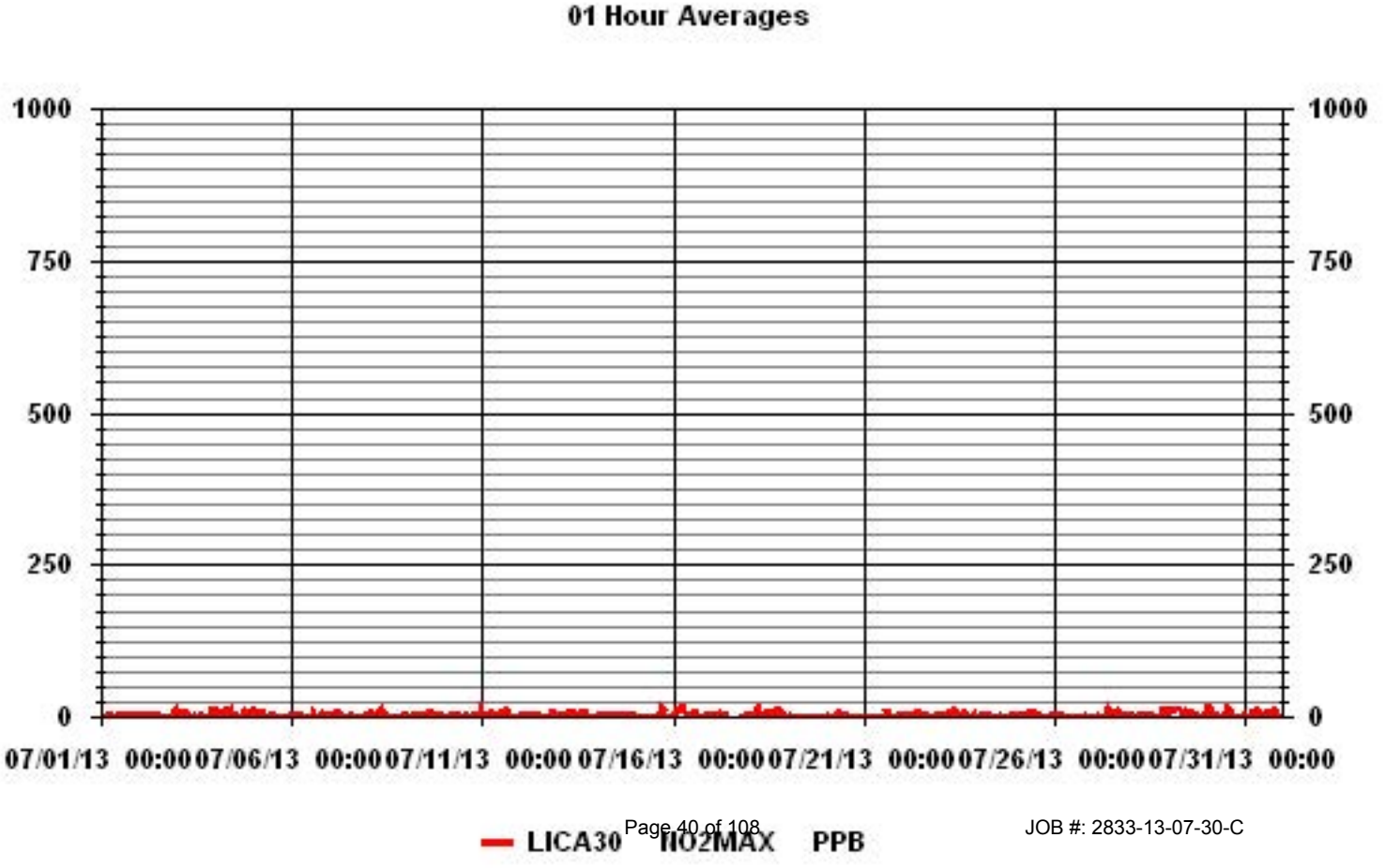
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1.9	1.4	1.3	3.1	2.8	3.7	3.3	4.2	3.3	2.5	**S**	2.1	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.2	1	1.8	2	2.6	4.2	2.0	24
2	2.6	1.7	2.5	2.5	2.9	3.2	2.4	2.2	1.4	**S**	1.2	1.1	1.1	1.1	0.9	1.1	0.8	0.6	0.8	0.8	0.7	1.2	8.4	12	12	2.3	24
3	2.4	0.9	0.6	0.6	2.9	11.3	2.4	1.5	**S**	0.8	1.4	1.3	0.7	0.8	2.4	1.9	2.2	0.6	0.6	0.6	0.6	0.6	13.3	13.4	13.4	2.8	24
4	0.7	0.8	5.7	7.3	1.6	2.4	14.3	**S**	10.4	13.4	7.4	3.7	0.9	1.7	1.6	1	0.5	0.5	7.4	0.7	1.4	7.2	6.3	10.6	14.3	4.7	24
5	10.1	7.2	6.4	2.3	1.7	8.3	**S**	3.5	1.6	2.5	5.5	4	1.9	2.6	1.8	0.9	1	0.8	0.7	3	1.2	0.9	0.9	1.8	10.1	3.1	24
6	1.4	1.3	1.3	1.4	2.1	**S**	1.2	1.1	0.5	0.9	1.1	0.4	1.9	7.9	4	1.9	0.6	0.1	0	4.5	0.3	1.2	0.9	3.6	7.9	1.7	24
7	4.2	2.2	2.8	8.3	**S**	5.9	5.8	3.4	1.2	0.3	0.3	0.1	0.1	2.4	1.6	0.4	0.1	0.3	0.3	0.4	0.4	1.2	2.5	2.4	8.3	2.0	24
8	4	6.8	6.8	**S**	4.1	1.8	1	10.8	13.8	5.4	5.1	1.5	1.5	0.5	0.8	1.5	0.2	0.1	0	0	0.1	0.4	1.2	1.7	13.8	3.0	24
9	1.4	2.2	**S**	2.1	2.9	3.4	4.8	2.7	2.5	2.3	2.9	1.9	1.5	1.6	1.8	12.4	1	3.8	3.3	2.1	1.8	1.7	1.9	1.6	12.4	2.8	24
10	1.3	**S**	0.9	1.3	1.9	1.9	1.9	3	1.7	4	1.6	0.9	1.4	1.2	1	1	0.9	1.2	1	1.1	3.1	3.3	2.1	18.4	18.4	2.4	24
11	**S**	4.5	4.8	2.7	3.8	8.8	7.4	2.6	4.3	2.2	7.7	3.8	7.3	7.7	2.8	10.9	8.5	2.2	0.6	0.5	0.7	0.7	0.9	**S**	10.9	4.3	24
12	3.3	2.4	3.4	3	2.5	2.6	2	2.9	1.6	1	1.2	1	1	1.3	0.6	0.6	0.6	2.5	0.9	4.6	8.4	10.4	**S**	1.1	10.4	2.6	24
13	1.4	1.3	2.2	2.1	1.5	4.3	7	9.8	11.2	6.2	5.6	2.6	4.1	5.2	5.3	7.4	9.4	2.8	0.9	0.5	0.8	**S**	1.6	1	11.2	4.1	24
14	2.3	1.6	1.2	1.2	1.4	1.9	3	4.9	2.6	1.5	1.6	2.4	1.6	1.8	1.4	1.1	2.5	6.1	7.3	4.8	**S**	3.3	5.2	1.3	7.3	2.7	24
15	1	0.9	0.8	1	0.9	0.8	1.8	0.9	0.7	0.6	0.6	0.6	0.5	0.9	0.8	4.3	1.7	17.5	14.7	**S**	1	0.7	1	1.4	17.5	2.4	24
16	1.1	0.9	11	10.2	8.2	8.7	**20**	11	2.3	2	2.3	1.7	0.7	1.2	10.7	4.1	0.4	0.4	**S**	0.7	1	1.2	2.8	3.9	**20**	4.6	24
17	3.8	2.8	3.6	4.1	3.7	6.8	6.4	3.6	3.1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1.2	1.4	2.2	2.1	6.8	3.4	24
18	2.1	2.2	2.2	2.7	12.6	14.7	9.8	1.8	0.3	0.4	3.9	6.2	6.9	4.7	8.3	7	**S**	1.3	15.4	3	2.8	3.3	2.6	2.1	15.4	5.1	24
19	2	3.9	0.9	0.9	0.5	0.6	0.3	0.5	0.2	0.2	0.4	0.4	0.1	0.2	0.3	**S**	0.2	0.4	0.7	0.3	0.3	0.4	0.5	0.8	3.9	0.7	24
20	0.7	1.6	1.8	1	0.5	0.8	2.8	2	5.2	5.2	2	1.2	1	1.2	**S**	2.1	3.6	0.7	0.7	0.5	0.3	0.4	0.3	0.4	5.2	1.6	24
21	0.4	0.4	0.4	0.3	0.2	0.3	0.5	0.3	0.1	0.1	0	0	0	**S**	8.1	1.5	1	1.1	1	0.8	1.1	1	1.1	1	8.1	0.9	24
22	1.7	1.3	1.4	1.4	1.7	2	1.5	2	3.8	8	5.2	5.2	**S**	1.3	1.1	1.4	1.2	0.6	0.7	0.8	0.7	3.7	3.8	3	8	2.3	24
23	1.8	2.2	2.4	3	3.5	6.5	6.2	11.1	7.9	13.5	2.8	**S**	4.3	4.8	7.1	2.9	4.1	0.9	1.9	0.5	0.5	4.8	0.7	1	13.5	4.1	24
24	1.3	2.7	2.7	2.4	1.5	1.1	1.5	1.7	1.1	0.8	**S**	1.2	0.9	1.1	1.3	1.2	0.9	0.7	0.9	0.5	1	1.1	1.2	2	2.7	1.3	24
25	2.3	3.8	4	3.2	1.9	1.9	5.5	4.4	7.5	**S**	8.2	3.8	2.4	1.8	1.4	2.4	1.9	0.9	1.1	0.7	0.9	1	1	2.5	8.2	2.8	24
26	2.8	3	2.9	1.9	4.2	3.3	2.6	1.9	**S**	1	0.7	0.9	0.6	0.7	0.7	0.8	0.8	0.5	0.5	1.5	1.1	0.5	0.5	0.4	4.2	1.5	24
27	0.4	0.3	0.5	3.7	3.8	1.8	1.5	**S**	6.6	14.8	9.6	6.3	5.8	7.5	3.5	2	10.5	8.6	1.4	1.9	1.8	1.5	4.9	4.1	14.8	4.5	24
28	3.5	1.4	1.1	1.2	4.1	4.2	**S**	1.7	1.7	1.4	0.6	2.6	1.6	0.9	1.1	1	0.4	0.3	0.3	0.4	12.5	13.9	4.8	6.4	13.9	2.9	24
29	9	12.1	10.7	10.5	14.2	**S**	14.7	13.7	2	3.9	10	6.2	5.7	6.3	9.3	6.3	7.5	5.2	4	0.5	0.8	1.1	1.9	6.6	14.7	7.1	24
30	18.2	17.4	9.6	8.2	**S**	6.5	4	2.6	1.4	1	2.9	3.6	1.8	14.1	12.2	8.8	3.9	0.2	0.2	0.6	0.6	0.9	1.4	1.5	18.2	5.3	24
31	1	1	1.8	**S**	2.8	11.7	2.5	11	11.4	5.5	0.9	4.7	5.6	6.6	8.5	1.4	8.4	11.4	11	3.5	1.1	0.8	0.8	0.6	11.7	5.0	24
HOURLY MAX	18.2	17.4	11.0	10.5	14.2	14.7	20.0	13.7	13.8	14.8	10.0	6.3	7.3	14.1	12.2	12.4	10.5	17.5	15.4	4.8	12.5	13.9	13.3	18.4			
HOURLY AVG	3.0	3.1	3.3	3.2	3.3	4.5	4.8	4.2	3.8	3.6	3.3	2.5	2.2	3.1	3.5	3.1	2.6	2.4	2.7	1.4	1.6	2.4	2.6	3.7			

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

NUMBER OF NON-ZERO READINGS:	696					
MAXIMUM INSTANTANEOUS VALUE:	20.0	PPB	@ HOUR(S)	6	ON DAY(S)	16
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	3.42					



JOB #: 2833-13-07-30-C

LICA30
NO2_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	4.27	8.68	5.98	3.56	2.27	2.56	6.26	6.69	6.98	11.68	11.11	5.69	7.83	6.55	5.98	3.84	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	4.27	8.68	5.98	3.56	2.27	2.56	6.26	6.69	6.98	11.68	11.11	5.69	7.83	6.55	5.98	3.84	

Calm : .00 %

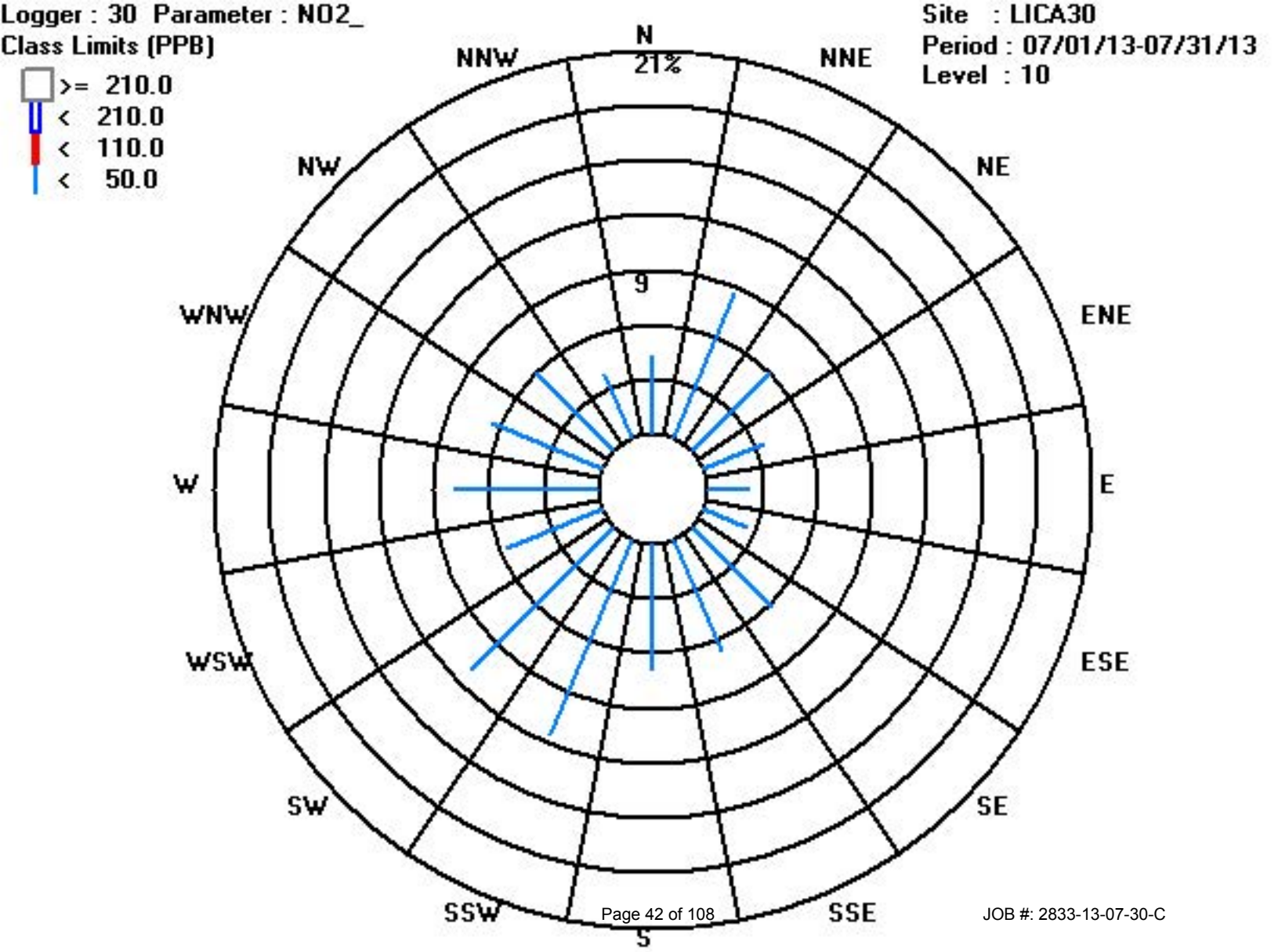
Total # Operational Hours : 702

Distribution By Samples

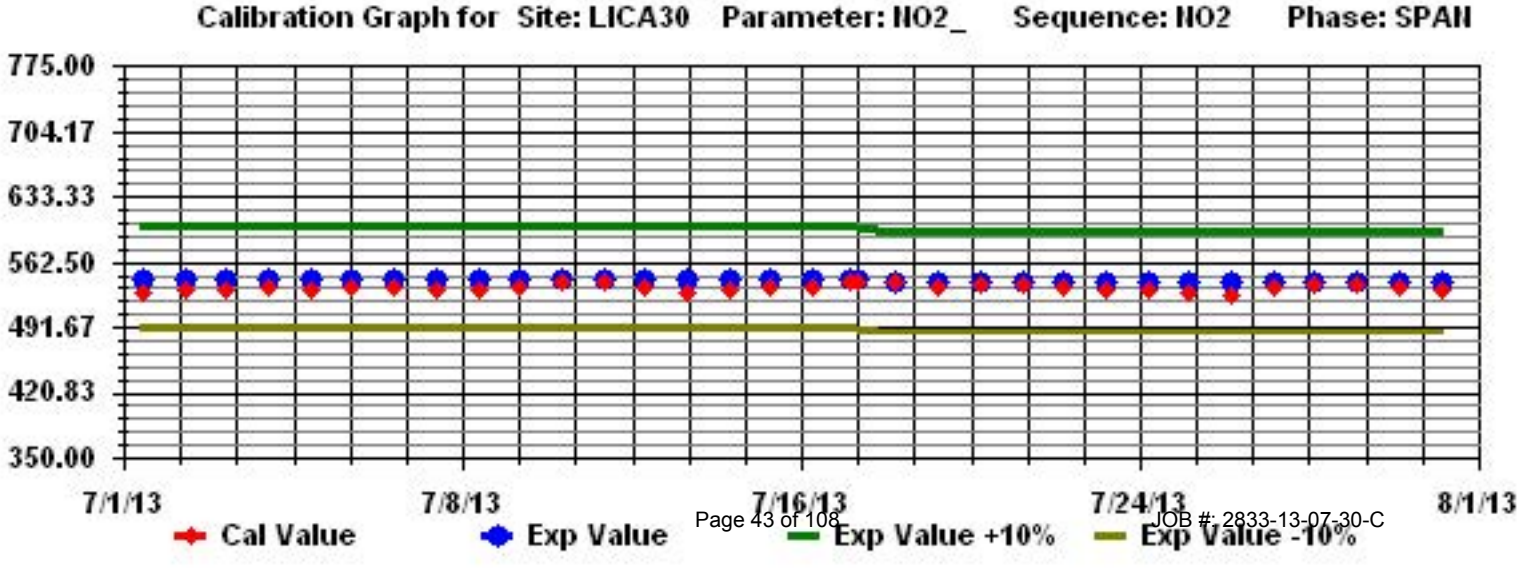
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	30	61	42	25	16	18	44	47	49	82	78	40	55	46	42	27	702
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	30	61	42	25	16	18	44	47	49	82	78	40	55	46	42	27	

Calm : .00 %

Total # Operational Hours : 702



JOB #: 2833-13-07-30-C


Calibration Graph for Site: LICA30 Parameter: NO2_ Sequence: NO2 Phase: SPAN
775.00
704.17
633.33
562.50
491.67
420.83
350.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSCOICATION - MASKWA

JULY 2013

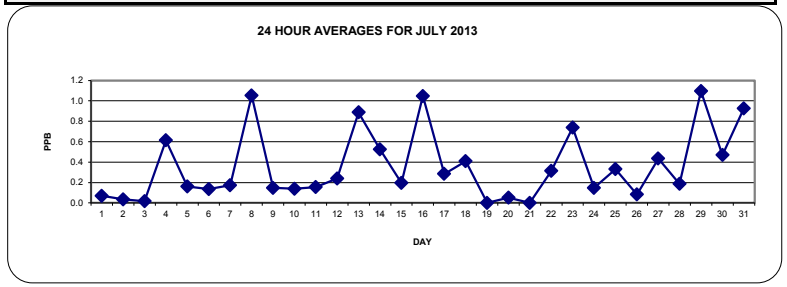
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0.5	0.1	0.7	0.1	0	**S**	0	0	0	0.1	0	0	0	0	0	0	0	0.1	0	0.7	0.1	24
2	0	0	0	0.1	0.2	0.4	0.1	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.0	24
3	0	0	0	0	0	0.3	0.1	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.0	24
4	0	0	0.1	0.3	0.5	0.8	7.3	**S**	2	2.3	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	7.3	0.6	24
5	0	0	0	0	0	0	**S**	0.4	0.3	0.3	1	0.6	0.1	0	0.2	0.2	0	0	0.1	0	0	0.1	0.1	0.3	1.0	0.2	24
6	0.4	0.6	0.7	0.6	0.8	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0.1	24
7	0	0	0	0	**S**	1.1	1.3	0.9	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	1.3	0.2	24
8	0.5	0.7	0.9	**S**	0.9	0.8	1	4	**12.4**	2.2	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	**12.4**	**1.1**	24
9	0	0	**S**	0	0.1	0.6	1.6	0.7	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0.1	24
10	0	**S**	0	0	0	0.8	0.6	0.7	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1.0	0.1	24
11	**S**	0	0	0	0	0	0.6	0.1	0.3	0	0.3	0.1	0.7	0.5	0	0.2	0.6	0	0	0	0	0	0	**S**	0.7	0.2	24
12	0	0	0.1	0.1	0.4	0.8	1.1	1.2	0.6	0.3	0.2	0	0	0	0	0	0	0	0	0	0.7	0	**S**	0	1.2	0.2	24
13	0	0	0	0	0	0.8	1.7	5.3	3.3	0.8	1.4	0.3	0.5	1.2	1.9	1.1	1.1	0	0	0	0	**S**	0.6	0.4	5.3	0.9	24
14	0.6	0.7	0.8	0.8	0.9	0.8	1.1	1.4	0.9	0.8	0.4	0.7	0.4	0.5	0.3	0	0	0.5	0.5	0	**S**	0	0	0	1.4	0.5	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	3.1	**S**	0	0	0	0	3.1	0.2	24
16	0	0	2	0.6	1.1	2.7	12.3	4.5	0.4	0.2	0	0	0	0	0.3	0	0	0	**S**	0	0	0	0	0	12.3	1.0	24
17	0	0	0	0	0.3	1.1	1.4	0.7	0.2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	1.4	0.3	24
18	0	0	0	0	0.4	6.9	0	0	0	0	0	0	0.5	0.1	0.5	0	**S**	0	1	0	0	0	0	0	6.9	0.4	24
19	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	0.0	24
20	0	0	0	0	0	0	0	0	0.3	0.8	0	0	0	0	**S**	0	0.1	0	0	0	0	0	0	0	0.8	0.1	24
21	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
22	0.2	0	0	0	0	0.6	0.7	1.2	1.3	2.2	0.7	0.3	**S**	0	0	0	0	0	0	0	0	0	0	0	2.2	0.3	24
23	0	0.1	0	0	0.2	1.4	1.7	5.1	2.3	2.7	0.1	**S**	1	1	0.9	0	0	0	0	0	0	0.3	0.2	0	5.1	0.7	24
24	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.4	0.2	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0.1	24
25	0	0	0	0	0	0.7	2.9	1.3	1.3	**S**	1.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	2.9	0.3	24
26	0	0	0	0	0.1	0.5	0.7	0.6	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0.1	24
27	0	0	0	0	0	0	0	**S**	0.2	4.6	3.6	0.9	0.4	0.2	0	0	0.1	0	0	0	0	0	0	0	4.6	0.4	24
28	0	0.1	0.1	0.1	0	0.9	**S**	0.8	0.6	0.3	0	0	0	0	0	0	0	0	0	0	0	0.9	0	0.5	0.9	0.2	24
29	0.3	4.5	2.6	1.2	5.3	**S**	3.8	0.1	0	0.5	3.4	1.6	1	0.4	0.5	0	0	0	0	0	0	0	0	0	5.3	**1.1**	24
30	2.2	2.8	0.8	0.3	**S**	0.3	0.7	0.6	0.4	0	0	0	0	1.8	0.9	0	0	0	0	0	0	0	0	0	2.8	0.5	24
31	0	0	0	**S**	0	1.1	0	6.5	7.7	0.5	0	0	0	0	2	0	3.3	0.2	0	0	0	0	0	0	7.7	0.9	24
HOURLY MAX	2.2	4.5	2.6	1.2	5.3	6.9	12.3	6.5	12.4	4.6	3.6	1.6	1.0	1.8	2.0	1.1	3.3	1.4	3.1	0.0	0.7	0.9	0.6	1.0			
HOURLY AVG	0.2	0.3	0.3	0.2	0.4	0.8	1.4	1.3	1.2	0.7	0.5	0.2	0.2	0.2	0.3	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.1			

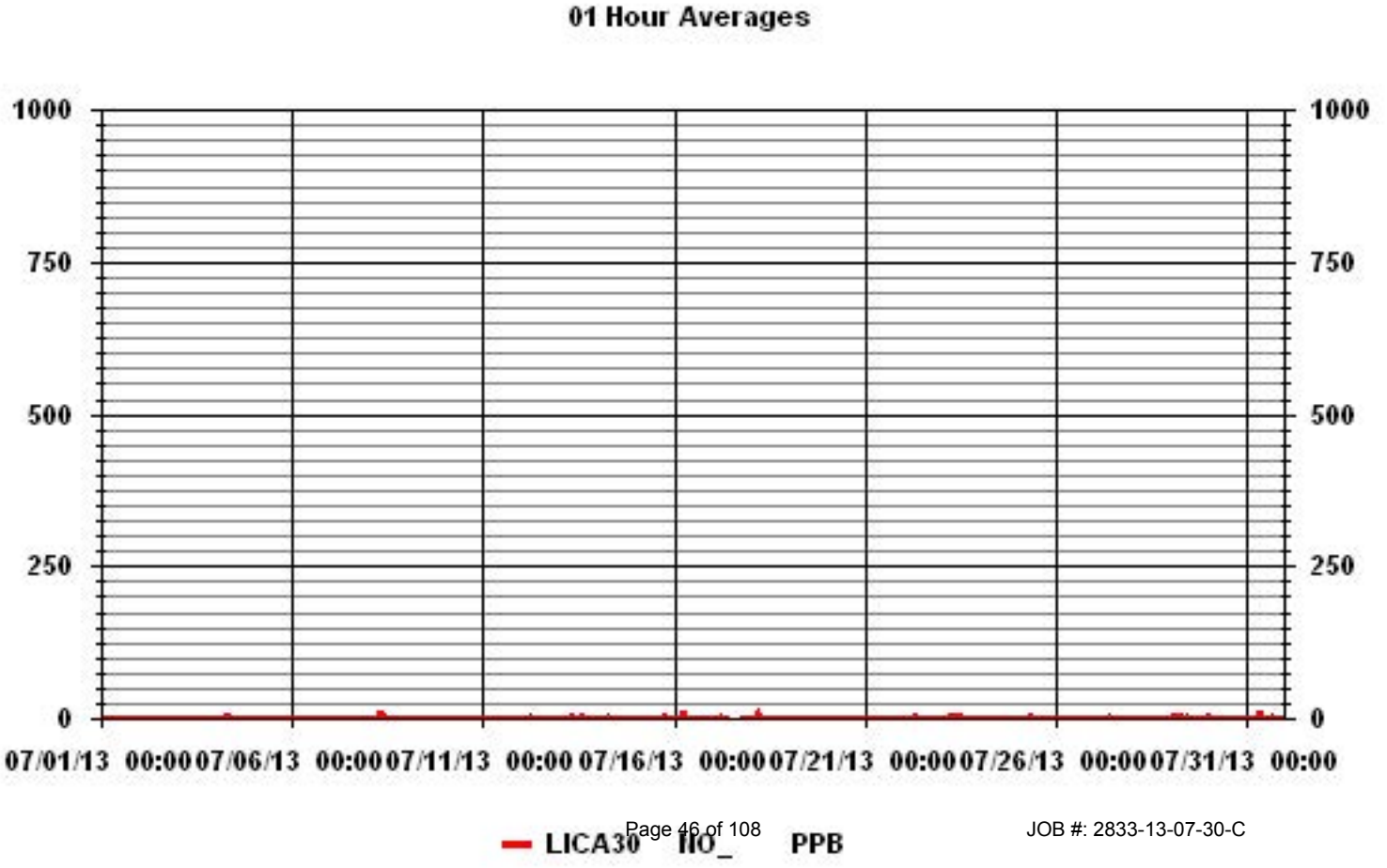
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	225						
MAXIMUM 1-HR AVERAGE:	12.4	PPB	@ HOUR(S)	8	ON DAY(S)	8	
MAXIMUM 24-HR AVERAGE:	1.1	PPB			ON DAY(S)	8, 29	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		744	HRS	
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	1.08		MONTHLY AVERAGE:		0.36	PPB	



JOB #: 2833-13-07-30-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

JULY 2013

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.2	0.2	0	0.2	0.5	2.9	0.9	1.8	0.8	0.4	**S**	0.5	0.4	0.6	0.8	0.8	0.7	0.4	0.2	0.5	0.4	0.6	0.6	0.5	2.9	0.6	24
2	0.5	0.5	0.5	0.6	0.7	0.8	0.7	0.6	0.3	**S**	0.5	0.3	0.2	0.1	0.1	0	0	0	0	0	0	0	1.8	6.5	6.5	0.6	24
3	0.1	0	0.2	0	0	23.1	1.1	0.3	**S**	0.4	0.4	0.6	0.4	0.4	1.3	0.7	0.7	0.5	0	0.3	0.3	0	0.7	0.7	23.1	1.4	24
4	0.4	0.5	0.7	0.8	1	1.5	13.1	**S**	5.2	9.9	3.6	1.2	0	0.3	0.1	0.2	0	0	1.2	0	0	0	1	0	13.1	1.8	24
5	0	0	0	0	0	2.2	**S**	1.1	0.8	0.9	2.6	1.8	0.7	0.6	0.9	0.8	0.6	0.4	0.7	0.5	0.4	0.5	0.7	0.9	2.6	0.7	24
6	1	1.1	1.2	1.2	1.4	**S**	0.7	0.6	0	0	0	0	0	0.4	0.1	0.1	0	0	0	0	0	0	0	0	1.4	0.3	24
7	0	0	0	0.5	**S**	2.7	3.1	4.2	0.8	0.3	0.2	0.4	0.3	0.4	1.7	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.6	1	4.2	0.8	24
8	1.7	1.8	1.7	**S**	2.2	1.4	1.6	16.9	23.2	4.2	3.4	0.5	0.6	0	0.1	0.8	0.2	0	0	0.1	0	0	0	0.2	23.2	2.6	24
9	0	0.1	**S**	0.7	0.5	1.6	3.2	1.8	1.5	0.6	1	0.1	0	0.3	0.3	15.1	0	0.6	0.8	0.3	0.1	0.2	0.1	0.2	15.1	1.3	24
10	0.3	**S**	0.6	0.5	0.5	3.7	1.4	2.1	0.5	1.4	0.5	0.1	0.3	0	0.1	0.1	0.1	0	0.1	0	0.1	0	0.2	4.7	4.7	0.8	24
11	**S**	0.3	0	0.2	0	1.3	2.5	1.4	2.9	0.8	2.9	2.5	2.7	2.4	0.6	2.7	3.2	0.4	0	0.2	0.1	0	0	**S**	3.2	1.2	24
12	0.3	0.4	0.6	0.7	0.9	1.7	1.9	2.7	1.5	0.9	1.7	0.7	0.8	1	0.1	0.3	0.1	1.9	0.3	0.7	4.1	0.8	**S**	0.2	4.1	1.1	24
13	0.8	0.5	0.5	0.5	0.5	3.9	6	12.6	17.3	8.4	6.9	2.2	3.4	4.4	4.5	5.6	7	1.6	0.2	0.2	0.2	**S**	1.2	1	17.3	3.9	24
14	1.2	1.2	1.3	1.4	1.4	1.3	2	2.7	1.6	1.3	1.1	1.3	1	1	1.1	0.6	0.5	1.9	2	0.5	**S**	0	0	0	2.7	1.1	24
15	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	1.1	0.2	10.6	10	**S**	0.1	0.1	0.2	0.2	10.6	1.0	24
16	0.3	0.7	8.9	2.7	1.9	11.1	37.1	10.9	3.6	1.2	2.1	0.9	0.7	0.3	3.5	2.1	0.1	0	**S**	0.2	0.4	0.2	0.3	0.3	37.1	3.9	24
17	0.4	0.5	0.4	0.5	0.9	3.6	3.8	1.5	0.7	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0.2	0.1	0	0	3.8	1.0	24
18	0	0	0	0.3	2.4	**55.3**	1	0.2	0	0	1.3	2.2	2.4	1.7	3.8	1.8	**S**	0.4	22.9	0.3	0.1	0.1	0	0.1	**55.3**	4.2	24
19	0.3	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0	0	0.1	0.2	0.2	0.1	0.1	**S**	0.4	0.4	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.2	24
20	0.6	0.6	0.3	0.2	0.3	0.4	0.6	0.4	1.6	1.9	0.5	0.4	0.6	0.4	**S**	0.5	1.2	0.3	0.3	0.3	0.4	0.3	0.3	0.2	1.9	0.5	24
21	0.6	0.3	0.4	0.3	0.2	0.5	0.2	0.6	0.6	0.3	0.1	0	0.1	**S**	3.7	0.1	0.2	0.2	0	0.3	0.1	0.1	0	0.5	3.7	0.4	24
22	5	0.4	0.2	0.4	0.3	5.3	1.5	2.3	2.5	46.7	1.8	1.5	**S**	0.5	0.2	0.2	0.2	0.2	0.6	0.1	0.3	0.3	0.5	0.5	46.7	3.1	24
23	0.6	0.6	0.5	0.5	0.9	6.2	5.1	13.5	6	11.4	1.5	**S**	2.8	3	4	1	2.1	0.4	0.4	0.5	0.6	1.6	0.6	0.7	13.5	2.8	24
24	0.8	0.8	0.9	0.8	0.8	0.8	1.1	1.4	1.2	0.8	**S**	0.4	0.3	0.3	0.4	0.3	0.2	0.1	0.2	-0.2	-0.3	0.2	0.2	0.7	1.4	0.5	24
25	0.2	0.2	0.2	0.4	0.5	2.6	5.3	3.1	3.7	**S**	3.9	1.2	0.3	0.2	0.2	0.7	0.2	0.3	0.1	0.1	0	0.2	0.2	0.2	5.3	1.0	24
26	0.4	0.4	0.3	0.4	0.7	1.2	1.1	1.4	**S**	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	0.3	24
27	0	0	0	0.2	0	0.1	0.5	**S**	3.3	15.3	8.3	5.7	2.4	2	0.6	0	2.6	1.8	0.1	0.4	0.2	0.1	0.2	0.4	15.3	1.9	24
28	0.5	0.6	0.7	0.6	0.7	2	**S**	1.5	1.3	1.3	0.3	2.2	2.1	0.5	0.2	0	0	0.1	0.2	0	1.3	4.1	0.1	6.7	6.7	1.2	24
29	1.3	13.6	7.8	10.4	13.5	**S**	10.1	5.5	1.8	2.7	10.7	4.5	4.5	3.2	8.1	4.2	2.1	1.5	0.9	0	0	0	0	0.2	13.6	4.6	24
30	14.6	12.7	4.4	3	**S**	1.2	3	1.4	1.2	1.3	1.9	0.9	0	8.5	6.6	2.4	0.4	0	0	0	0	0	0.2	0.2	14.6	2.8	24
31	0.4	0.5	0.5	**S**	0.1	3.3	0.6	19	18.5	6.8	0	3.9	5	6.7	9.9	0.1	7.8	6.4	5.4	0	0	0	0	0	19.0	4.1	24
HOURLY MAX	14.6	13.6	8.9	10.4	13.5	55.3	37.1	19.0	23.2	46.7	10.7	5.7	5.0	8.5	9.9	15.1	7.8	10.6	22.9	0.7	4.1	4.1	1.8	6.7			
HOURLY AVG	1.1	1.3	1.1	1.0	1.1	4.9	3.8	3.8	3.5	4.3	2.0	1.2	1.1	1.4	1.8	1.5	1.1	1.0	1.6	0.2	0.3	0.3	0.3	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

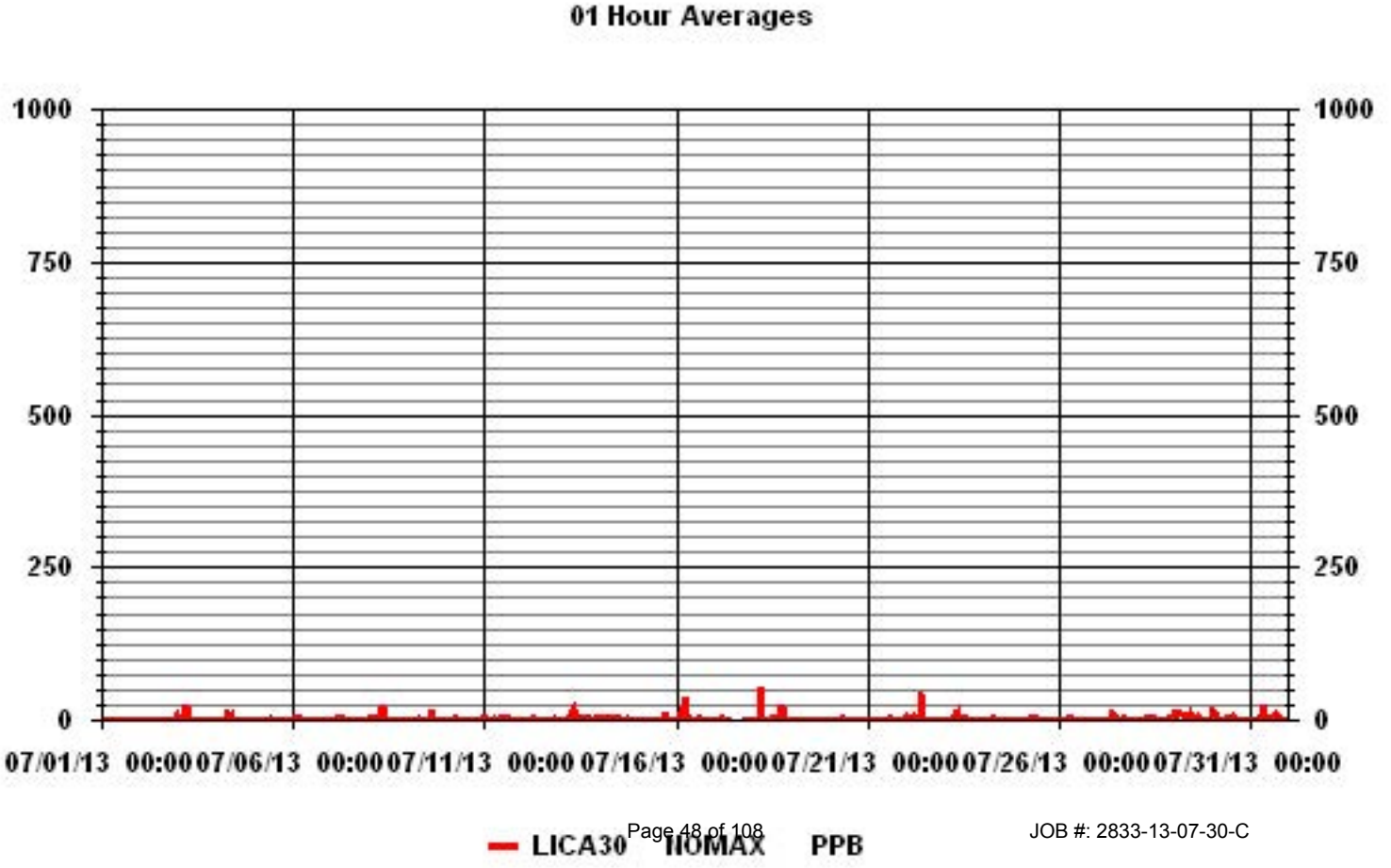
NUMBER OF NON-ZERO READINGS: 571

MAXIMUM INSTANTANEOUS VALUE: 55.3 PPB @ HOUR(S) 5 ON DAY(S) 18

IZS CALIBRATION TIME: 31 HRS OPERATIONAL TIME: 744 HRS

MONTHLY CALIBRATION TIME: 11 HRS

STANDARD DEVIATION: 4.23



JOB #: 2833-13-07-30-C

LICA30
NO_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	4.27	8.68	5.98	3.56	2.27	2.56	6.26	6.69	6.98	11.68	11.11	5.69	7.83	6.55	5.98	3.84	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	4.27	8.68	5.98	3.56	2.27	2.56	6.26	6.69	6.98	11.68	11.11	5.69	7.83	6.55	5.98	3.84	

Calm : .00 %

Total # Operational Hours : 702

Distribution By Samples

Direction

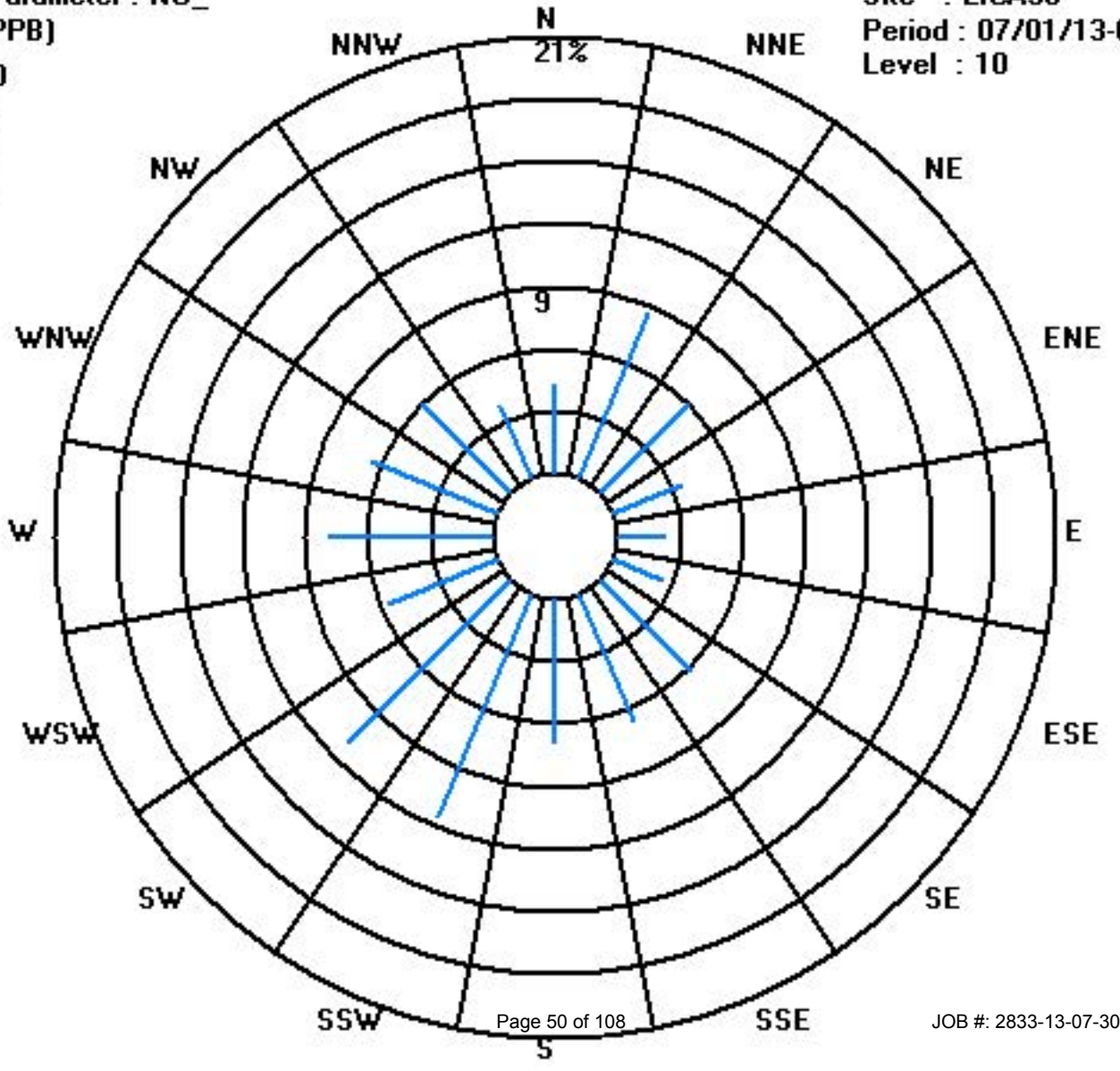
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	30	61	42	25	16	18	44	47	49	82	78	40	55	46	42	27	702
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	30	61	42	25	16	18	44	47	49	82	78	40	55	46	42	27	

Calm : .00 %

Total # Operational Hours : 702

Logger : 30 Parameter : NO_
Class Limits (PPB)
>= 210.0
< 210.0
< 110.0
< 50.0

Site : LICA30
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-30-C

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

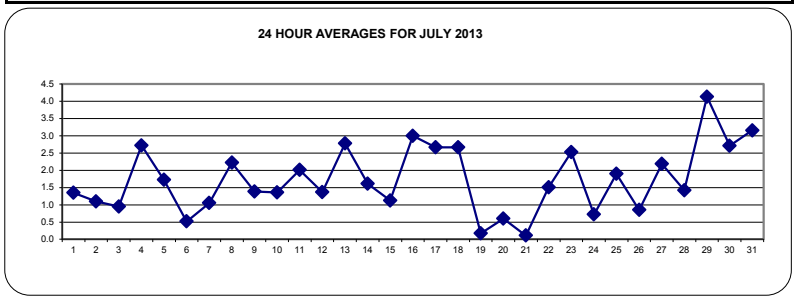
JULY 2013

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.9	0.9	0.9	1.9	1.4	3.2	2.3	4.3	3	1.8	**S**	1.3	0.5	0.6	0.6	0.5	0.7	0.5	0.5	0.7	0.5	0.8	1.4	1.9	4.3	1.4	24
2	1.8	1.1	1.5	2	2.4	2.7	1.8	1.7	0.7	**S**	0.9	0.9	0.7	0.7	0.6	0.6	0.3	0	0.2	0.3	0.2	0.5	1.3	2.3	2.7	1.1	24
3	0.4	0.1	0.2	0	1.6	2.2	1.9	1.2	**S**	0.6	0.6	0.8	0.2	0.3	0.9	0.8	0.6	0.1	0	0.1	0.1	0.1	3.7	5.4	5.4	1.0	24
4	0.3	0.4	1.8	2.6	1.1	2.1	16.2	**S**	7.6	8.4	4.6	0.8	0	0.2	0.4	0	0	0	2.4	0.1	0.4	3.9	3	6.2	16.2	2.7	24
5	6.5	3.6	2.8	1.5	1.1	2.7	**S**	2.1	1.4	1.6	4.2	3	1.1	1.3	0.9	0.5	0.5	0.4	0.4	1.1	0.4	0.6	0.7	1.2	6.5	1.7	24
6	1.1	1.1	1	1	1.4	**S**	0.8	0.6	0	0	0	0	0	2.8	1.6	0	0	0	0	0.5	0	0	0	0	2.8	0.5	24
7	0.5	0.9	1.7	4.3	**S**	4.6	4.3	2.5	0.8	0	0	0	0	0.5	0.3	0	0	0	0	0	0.2	0.4	1.6	1.7	4.6	1.1	24
8	2.9	3.7	5.1	**S**	1.7	0.8	1	6.1	21	4.8	2.3	0.3	0.3	0	0	0	0	0	0	0	0	0	0.1	0.9	21	2.2	24
9	0.9	1.2	**S**	1.3	2.3	3.1	4.7	2.6	2.5	1.7	1.3	0.8	0.5	0.7	0.7	1.3	0.1	0.7	2.3	0.7	0.4	0.7	0.7	0.7	4.7	1.4	24
10	0.4	**S**	0.6	0.6	1.3	2.1	2.1	2.7	1	2	0.9	0.4	0.8	0.4	0.4	0.5	0.2	0.5	0.5	0.4	1.8	1.3	0.9	9.5	9.5	1.4	24
11	**S**	1	2.3	2	1.4	3.9	4.6	1.6	1.8	1.1	3.5	2.6	4.3	4.3	1.3	3	4.4	0.5	0.1	0	0.1	0.1	0.3	**S**	4.6	2.0	24
12	2.4	1.8	2.1	2.2	2.1	2.5	2.2	2.4	1.3	0.6	0.5	0.2	0.2	0.2	0	0	0	0.6	0	1.7	4.3	3.4	**S**	0.7	4.3	1.4	24
13	1.1	1.3	1.9	1.8	1.4	2.5	4.5	11	6.6	2.4	3.6	2	2.5	3.8	5.3	3.9	4	1	0.6	0.3	0.5	**S**	1.2	0.7	11	2.8	24
14	1.5	0.9	1	1	1.1	1.3	1.8	3.7	1.6	1.5	1.2	2	1.5	1.6	1.3	0.8	0.9	3.7	4.2	1.2	**S**	0.7	1.8	0.7	4.2	1.6	24
15	0.5	0.4	0.4	0.3	0.3	0.3	0.7	0.2	0.3	0	0	0.2	0	0.1	0.4	1.7	1.4	6.5	11	**S**	0.1	0.1	0.2	0.8	11	1.1	24
16	0.4	0.4	5.7	4	7.8	7.7	**22.2**	9.6	1	0.7	0.5	0.3	0.1	0.3	2.1	0.9	0	0	**S**	0.1	0.4	0.5	1.4	2.8	**22.2**	3.0	24
17	3.1	2.2	2.5	3.5	3	5	5.4	3.6	3.1	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0.6	0.9	0.9	0.9	5.4	2.7	24
18	0.9	1.3	1.4	2	8	14.1	3.7	0.6	0	0	0.9	2.5	4.7	2.3	2.8	1.7	**S**	0.9	6.9	0.8	1	1.8	1.9	1.2	14.1	2.7	24
19	0.9	2.1	0.4	0.1	0.1	0.3	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	2.1	0.2	24
20	0	0.4	1.1	0	0	0	0.5	0.7	2.3	3.9	0.6	0.5	0.5	0.6	**S**	1.1	1.4	0	0.1	0	0	0	0	0	3.9	0.6	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0.3	0.5	0.4	0.2	0	0.2	0.2	0.2	0.1	0.4	0.5	0.1	24
22	1	0.4	0.6	0.7	0.8	1.6	1.4	2.7	3.8	5.8	4.2	3.1	**S**	0.8	0.6	0.6	0.6	0	0.2	0	0	1	3	1.7	5.8	1.5	24
23	1.1	1.5	1.8	1.5	2.4	5.3	4.2	11	6.2	6.7	0.6	**S**	2.9	3	3.6	1.2	1	0.4	0.8	0.3	0.3	1.6	0.4	0.4	11	2.5	24
24	0.9	2.3	2.3	1.8	1.1	0.7	0.9	1.4	0.9	0.4	**S**	0.6	0.5	0.4	0.6	0.5	0.2	0	0	0	0	0.1	0.4	0.6	2.3	0.7	24
25	1	2	3.1	2.2	1.1	1.9	6.4	4.4	5.4	**S**	5.4	2.7	1.4	1	0.6	1.2	1	0.3	0.2	0.1	0.2	0.4	0.4	1.3	6.4	1.9	24
26	2	2	1.9	1.4	3.1	2.9	2.1	1.6	**S**	0.7	0.4	0.2	0	0	0	0.3	0.1	0	0	0.8	0.1	0	0	0	3.1	0.9	24
27	0	0	0	1.4	2.1	0.8	0.8	**S**	2.1	11.1	9.5	3	2.3	2.9	0.9	0.6	3.3	1.1	0.7	1.3	1.3	0.3	3.2	1.6	11.1	2.2	24
28	1.4	0.9	0.6	0.6	1.9	4.3	**S**	1.8	1.7	1.2	0.3	0.8	0.3	0.2	0.4	0.4	0.1	0	0	0	2.6	9.9	0.6	2.7	9.9	1.4	24
29	5.3	11.5	11.2	6	13	**S**	12.7	1.4	0.4	1.9	7.9	5.2	4	3.1	3.3	1.4	2.2	1.5	0.8	0	0	0.4	0.5	1.3	13	**4.1**	24
30	10.8	12.9	4.8	3.1	**S**	3.6	3.6	2.2	1.1	0.5	0.9	1.6	0.2	6.7	4.7	2.4	0.9	0	0	0	0.1	0.3	1.1	0.9	12.9	2.7	24
31	0.5	0.5	0.7	**S**	2.1	8.4	2	13.9	13.4	2	0.3	1.5	1.6	1.7	5.4	0.2	9.1	3	3.6	2.2	0.4	0.1	0	0	13.9	3.2	24
HOURLY MAX	10.8	12.9	11.2	6.0	13.0	14.1	22.2	13.9	21.0	11.1	9.5	5.2	4.7	6.7	5.4	3.9	9.1	6.5	11.0	2.2	4.3	9.9	3.7	9.5			
HOURLY AVG	1.7	2.0	2.0	1.8	2.3	3.1	4.0	3.4	3.1	2.2	2.0	1.3	1.1	1.4	1.4	0.9	1.2	0.7	1.2	0.4	0.5	1.0	1.0	1.6			

STATUS FLAG CODES

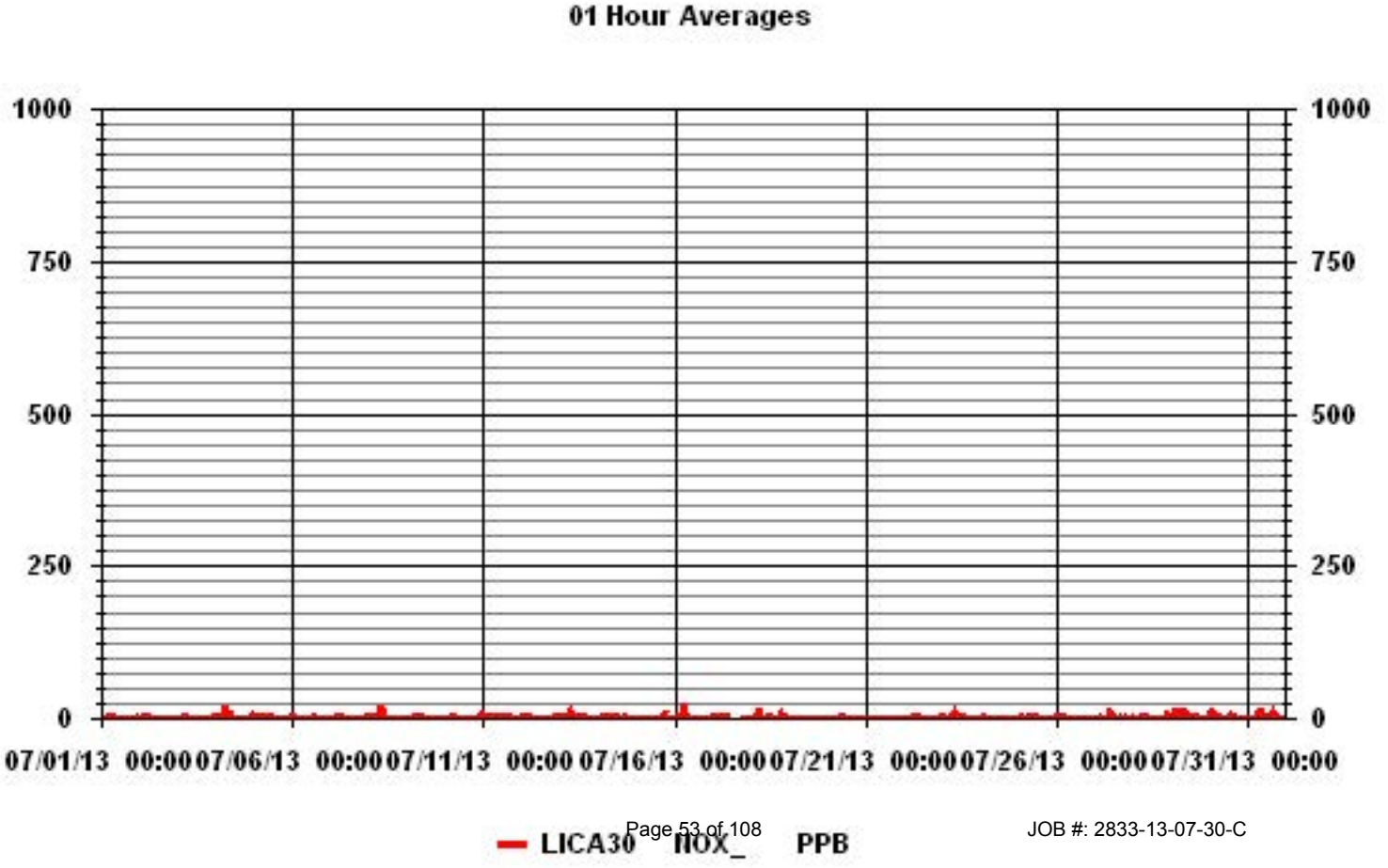
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	583					
MAXIMUM 1-HR AVERAGE:	22.2	PPB	@ HOUR(S)	6	ON DAY(S)	16
MAXIMUM 24-HR AVERAGE:	4.1	PPB			ON DAY(S)	29

IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	2.54		MONTHLY AVERAGE:	1.71	PPB



JOB #: 2833-13-07-30-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

JULY 2013

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

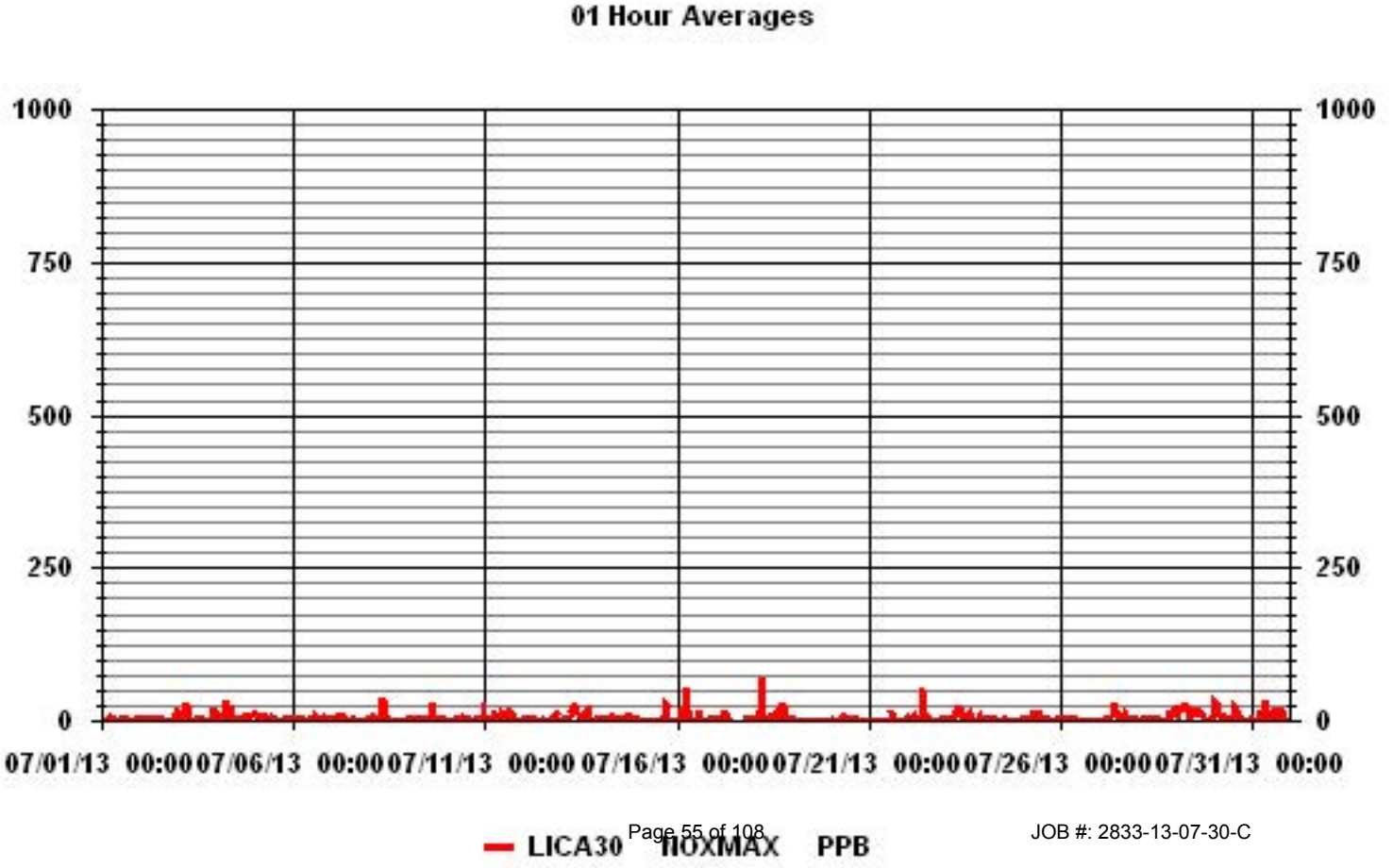
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.1	1.5	1.6	3.1	2.9	6.7	4.5	5.8	4.4	3.1	**S**	2.6	1.1	1.4	1.7	1.1	1.7	1.1	0.9	1.1	0.9	1.7	1.9	2.5	6.7	2.4	24
2	2.6	1.7	2.3	2.6	3.2	3.5	3	2.4	1.2	**S**	1.7	1.5	1.2	1.4	1.3	1.3	0.8	0.6	0.8	0.8	0.8	1.2	10.8	18.6	18.6	2.8	24
3	2.7	0.9	0.7	0.6	3	27.4	3.6	2	**S**	1.4	1.9	2.2	1.1	1.2	3.6	2.5	3	0.9	0.5	0.7	0.7	0.6	14	14.1	27.4	3.9	24
4	0.8	1.1	5.9	7.5	1.9	3.2	26.9	**S**	15.8	23.8	11.6	5.2	0.7	2.1	2	1.4	0.3	0.3	9.1	0.6	1.4	7.3	7.6	11.2	26.9	6.4	24
5	10.5	7.2	6.4	2.3	1.6	10.6	**S**	4.5	2	2.9	8	5.8	2.4	3.1	2.1	1.2	1	0.9	1	3.7	1	1.2	1.4	2	10.6	3.6	24
6	1.8	1.7	1.5	1.5	2.6	**S**	1.5	1.5	0.3	1.3	1.1	0.9	2.2	9.4	4.7	2.6	0.5	0	0	4.7	0.1	0.9	0.7	3.3	9.4	1.9	24
7	4	1.9	2.6	8.8	**S**	8.5	8.1	7.5	1.8	0.4	0.4	0.4	0.4	2.5	3.6	0.7	0.2	0.3	0.4	0.5	0.7	1.4	2.6	2.6	8.8	2.6	24
8	5.1	7.5	7.7	**S**	5.2	2.2	1.5	27	36	9	8.2	1.7	1.7	0.4	0.6	2.3	0.1	0	0.1	0	0	0.2	1	1.6	36.0	5.2	24
9	1.4	1.8	**S**	1.9	2.8	4.4	6.9	4.3	3.9	2.8	4.1	2.1	1.8	1.8	2.2	26.7	0.8	4.3	3.8	2	1.5	1.3	1.5	1.3	26.7	3.7	24
10	0.9	**S**	1.2	1.4	2.2	5.1	3.2	5.1	2.2	5.6	2	0.9	1.9	1.2	1	1.1	0.9	1.2	1	1.2	3.1	3.4	2	23.2	23.2	3.1	24
11	**S**	4.6	5	2.9	3.8	10.4	10	3.7	7.7	3.1	11.2	6.8	10.6	10.4	3.8	14.1	11.7	3	0.6	0.6	0.7	0.5	0.8	**S**	14.1	5.7	24
12	3.2	2.6	3.4	2.9	2.7	3.5	3.1	4.5	2.1	1.1	2.4	0.7	1.7	1.9	0.6	0.6	0.6	4.4	0.9	5.3	12.7	11.1	**S**	1.5	12.7	3.2	24
13	2.3	1.7	2.8	2.5	1.8	8.2	13.3	22.3	28.5	15.2	12.9	5	8	10.4	10.3	13.6	16.9	4.6	1.4	0.8	1.1	**S**	1.8	1.2	28.5	8.1	24
14	2.7	1.8	1.6	1.5	2	2.4	4.2	6.9	3.4	2.1	2.1	3.3	2.1	2.4	2.1	1.4	2.9	8.2	9	5.6	**S**	3.8	5.5	1.2	9.0	3.4	24
15	1.1	0.9	0.9	1	0.9	0.8	2.1	1	0.9	0.7	0.6	0.9	0.5	0.9	1.1	5.8	2.3	28.6	25	**S**	1	0.7	0.8	1.5	28.6	3.5	24
16	0.9	1	19.5	12.8	9.6	19.6	55.2	21.3	5.5	3.4	4.2	2.1	1.1	1.6	14.5	6.2	0.2	0.3	**S**	0.8	1	1.3	2.9	3.9	55.2	8.2	24
17	3.8	2.8	3.7	4.2	4	10.2	9.9	4.9	3.7	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1.5	1.6	2.1	1.9	10.2	4.2	24
18	1.9	2	2	3.1	14.9	**68**	11	2	0.2	0.1	5.3	8.5	9.3	6.2	12.4	8.7	**S**	1.7	30.4	3.6	3.1	3.7	2.7	2	**68.0**	8.8	24
19	2.6	4.2	1.1	0.9	0.7	0.7	0.4	0.5	0.3	0.4	0.5	0.5	0.3	0.3	0.3	**S**	0.1	0.3	0.3	0.1	0.1	0.3	0.2	0.7	4.2	0.7	24
20	0.8	1.3	1.8	0.6	0.4	0.5	2.8	2	6.4	6.7	2.1	1.1	1.1	1.3	**S**	2.6	4.8	0.5	0.7	0.5	0.3	0.7	0.1	0.5	6.7	1.7	24
21	0.5	0.6	0.4	0.3	0	0.3	0.7	0.5	0.3	0.2	0	0	0.1	**S**	11.8	1.5	0.9	0.9	0.6	0.9	0.9	0.8	0.7	1.1	11.8	1.0	24
22	6.1	1	1	1.1	1.6	7.1	2.3	4.2	4.7	52.3	6.7	6.4	**S**	1.4	1.2	1.2	1.2	0.6	0.7	0.6	0.7	3.7	3.9	3	52.3	4.9	24
23	1.7	2.3	2.4	3	3.8	11.8	11	24.1	13.7	24.7	4.2	**S**	7.4	7.4	11.4	4.2	6.5	1.2	2	0.8	0.8	6.3	0.9	1	24.7	6.6	24
24	1.6	2.9	3	2.6	1.7	1.6	2.4	2.4	1.8	1.1	**S**	1	1.2	1.2	1.6	1.4	0.8	0.6	0.7	0.2	0.7	0.8	1	2.4	3.0	1.5	24
25	1.9	3.9	3.9	3	1.9	4.3	10.4	7.6	11.6	**S**	11.9	5	2.7	2	1.4	3.1	1.9	0.8	1	0.7	0.7	1	1	2.6	11.9	3.7	24
26	2.7	3	2.9	1.8	4.3	3.5	2.9	2.4	**S**	1.6	1.3	0.8	0.8	0.9	0.8	1	1.1	0.5	0.8	1.4	1	0.4	0.5	0.4	4.3	1.6	24
27	0.3	0.4	0.4	4.2	4	2	2.3	**S**	9.5	30.1	16.8	11.9	8.1	9.5	4.3	2	13.1	10.8	1.4	2.1	1.8	1.5	5.1	3.8	30.1	6.3	24
28	3.5	1.4	1	1.4	4.2	5.3	**S**	2.8	2.5	2.4	0.8	4.7	3.4	1.6	1.5	1	0.6	0.5	0.6	0.4	14.2	15.7	5.1	13.5	15.7	3.8	24
29	10.5	25.3	18.6	20.9	27.4	**S**	24.9	19.5	3.5	6.1	20.9	10.3	10.1	9.5	18	11.1	10	7.3	5.8	0.3	0.5	1.1	1.7	6.7	27.4	11.7	24
30	32.7	29.7	14	11.5	**S**	7.6	7	3.8	2	1.8	4.9	4.8	2.3	22.4	19.3	12	4.9	0.2	0.4	0.8	0.6	0.9	1.8	1.7	32.7	8.1	24
31	1	1	2.1	**S**	2.7	14.8	3	29.8	28.9	13	1.3	9.6	11.6	14.2	18.9	2	16.7	18.5	17.2	4	1	0.7	0.5	0.5	29.8	9.3	24
HOURLY MAX	32.7	29.7	19.5	20.9	27.4	68.0	55.2	29.8	36.0	52.3	20.9	11.9	11.6	22.4	19.3	26.7	16.9	28.6	30.4	5.6	14.2	15.7	14.0	23.2			
HOURLY AVG	3.8	4.0	4.0	3.9	4.1	8.8	8.2	7.8	7.1	7.7	5.3	3.7	3.3	4.5	5.5	4.6	3.7	3.4	4.0	1.5	1.8	2.5	2.8	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:	694					
MAXIMUM INSTANTANEOUS VALUE:	68.0	PPB	@ HOUR(S)	5	ON DAY(S)	18
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	6.87					



JOB #: 2833-13-07-30-C

LICA30
NOX_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	4.27	8.68	5.98	3.56	2.27	2.56	6.26	6.69	6.98	11.68	11.11	5.69	7.83	6.55	5.98	3.84	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	4.27	8.68	5.98	3.56	2.27	2.56	6.26	6.69	6.98	11.68	11.11	5.69	7.83	6.55	5.98	3.84	

Calm : .00 %

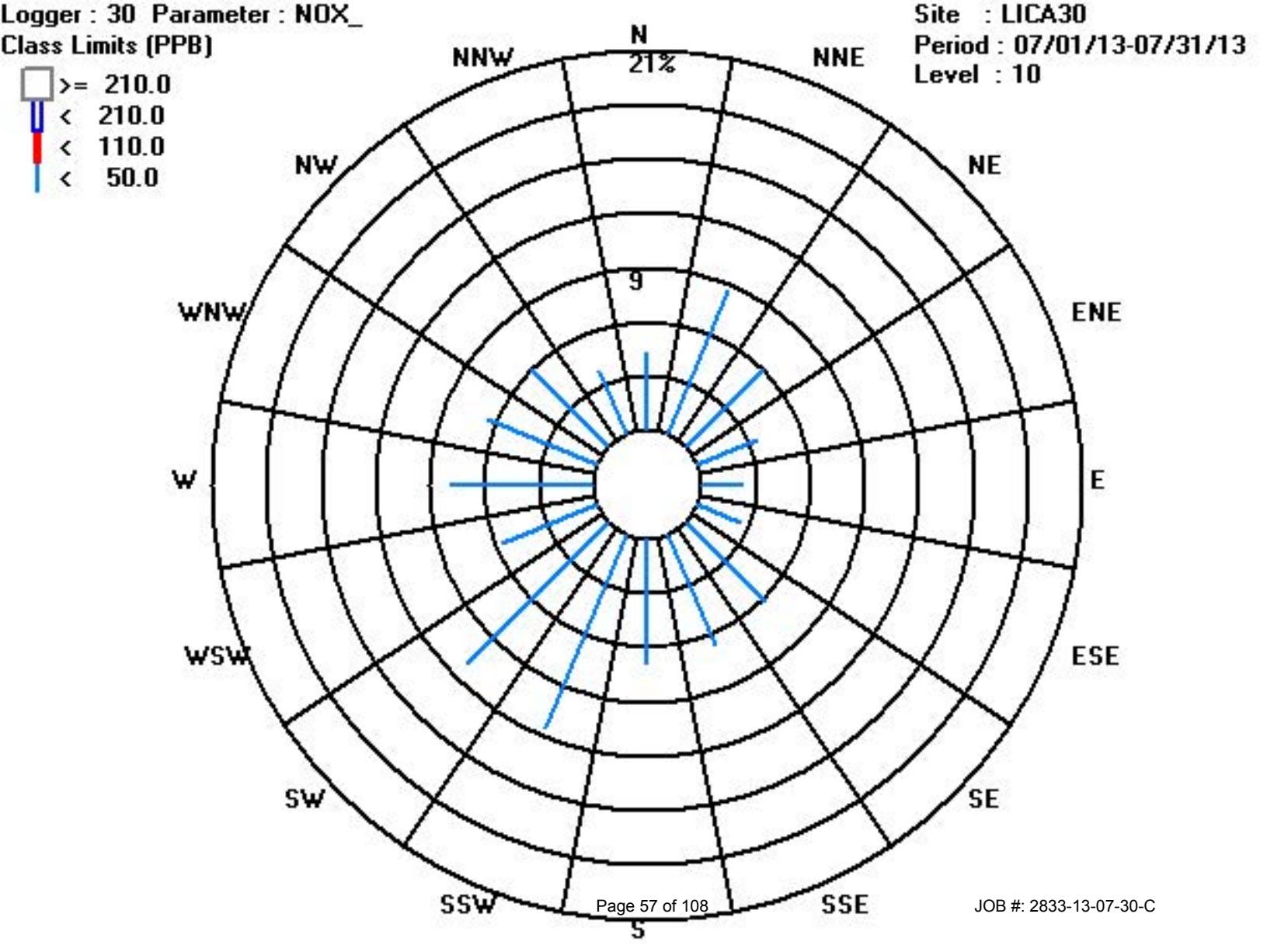
Total # Operational Hours : 702

Distribution By Samples

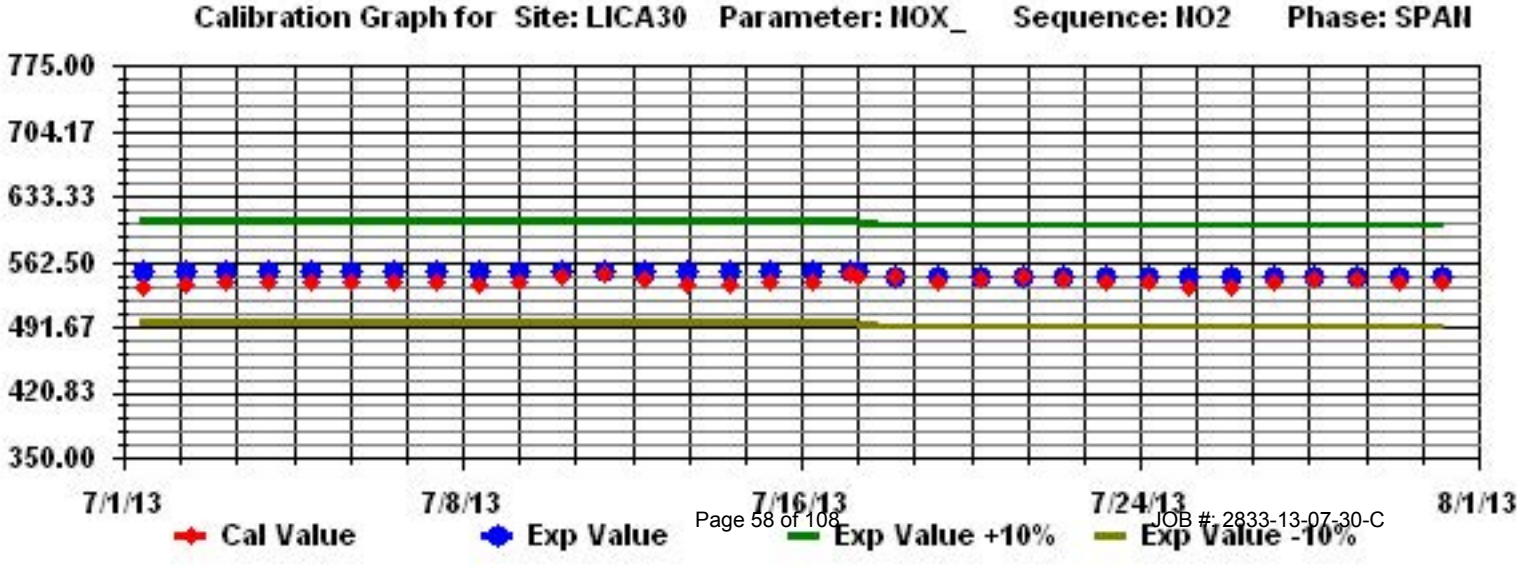
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	30	61	42	25	16	18	44	47	49	82	78	40	55	46	42	27	702
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	30	61	42	25	16	18	44	47	49	82	78	40	55	46	42	27	

Calm : .00 %

Total # Operational Hours : 702



JOB #: 2833-13-07-30-C


Calibration Graph for Site: LICA30 Parameter: NOX_ Sequence: NO2 Phase: SPAN
775.00
704.17
633.33
562.50
491.67
420.83
350.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2013

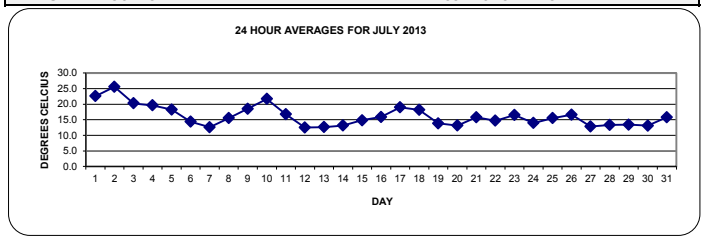
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	13.6	13.2	13.1	13.5	12.9	16	19.6	22.5	24.9	27.1	28.2	28.7	29.5	29.7	30.1	29.9	29.6	29.4	28.7	26.7	21.5	18.8	17.8	17.8	30.1	22.6	24
2	17.9	18.3	18.2	17.8	18.1	20.1	21.8	23.7	25.8	28	29.3	30.4	31.1	31.8	32.3	**32.6**	32.3	31.7	31.2	29	26.8	25.9	21.4	17.2	**32.6**	**25.5**	24
3	16.8	16.2	15.7	15	15.3	16.5	17.9	17.6	19.3	22	21.3	23.5	25.3	25.7	25.7	25.8	26.2	26	25	22.9	19.9	17.6	15.3	13.8	26.2	20.3	24
4	11.5	10.7	10.2	10.2	10.4	14.5	17.8	19.4	23	24.7	25.6	26.4	27	26.7	28.1	26.7	26.3	24.6	22	20.2	16.3	16	16.6	16.5	28.1	19.6	24
5	15.7	15	16.4	15.6	14.7	14.3	15.2	16.1	17.7	20.4	22.4	22	22.1	22.5	23.4	24.3	24.2	22.4	21.7	20.2	16.6	13.7	11.3	10	24.3	18.2	24
6	9	8.3	8.3	7.8	7.6	9.8	11.6	13.4	16.3	19	20	22.2	20.9	20.4	18.9	15.8	14.8	15.8	15.7	14.8	13.9	14	13.5	12.5	22.2	14.3	24
7	12	12.1	12.2	11.6	11.4	12.1	12.9	14.2	14.9	14.4	14.1	14.2	16.6	17	14.2	14.4	13.5	12.8	12.4	12.5	10	8.6	7.6	7.1	17.0	12.6	24
8	7.3	6.9	7	6.7	6.3	9	10.9	13.6	17.4	19.3	20.4	21.4	22.1	21.8	21.5	22.4	22.5	21.9	21.1	18.7	15.5	13.2	12.6	12.4	22.5	15.5	24
9	12.4	11.9	12.3	11.8	12.2	13.7	14.9	17.5	20	21.7	23.2	24.4	25.5	26.4	27.1	26.3	25.8	18.6	19.7	21.4	16.8	14.6	13.7	12.7	27.1	18.5	24
10	12	12.2	12.5	12.7	13.9	14.5	17	20.1	23.1	25.2	26.4	27.2	28.1	28.3	28.3	28.5	28.5	28.3	27.4	24.1	21.6	21.2	20.4	18.5	28.5	21.7	24
11	16	14.9	14.8	14.4	14.3	14.4	14.8	16.4	17.9	20	23.3	22.4	22.9	22.1	20.6	18	17.3	17.8	17.7	15.5	13.2	11.8	11	10.6	23.3	16.8	24
12	10.1	9.3	8.4	7.9	7.6	9.4	11.1	12.9	14.4	15.4	15.2	15.3	15.9	16.3	16.4	16.9	17.4	16.5	14.8	13.2	11.3	8.7	7.7	7.8	17.4	12.5	24
13	7.3	7.1	5.8	4.6	**4.2**	7.6	10.2	12	13.8	14.8	16	17.2	18.1	18.7	19.2	19.6	19.6	19.1	17.8	16.1	11.9	9.2	7	6.3	19.6	12.6	24
14	6	5.4	6	7.1	8.1	9.1	11	13.2	13.3	14.8	14.1	13.5	13.6	14	18	19.2	17.9	18.5	18.9	16.9	14.8	13.8	14	13.8	19.2	13.1	24
15	13.2	13.6	13.3	13	12.3	12.5	13.3	15.3	15.9	17.4	18.5	18.7	19.7	18.3	15.6	15.1	16	16.9	16.1	16.8	13.7	11.4	10.1	9.3	19.7	14.8	24
16	8.8	9.2	9.9	8.7	7.4	9.9	13.2	15.9	18	19.1	19.3	20	20.8	22.1	22.3	22.4	21.8	22.3	21.4	18.8	14.2	11.9	11.8	12.1	22.4	15.9	24
17	11.6	11.1	10.9	9.8	8.7	12.5	14.9	17.8	20.9	22.7	24.3	25.5	26	26.5	26.5	26.7	26.4	25.7	24.9	22.2	18.5	15.8	13.1	12.2	26.7	19.0	24
18	11.5	10.7	10.2	10.2	10.3	11.8	13.7	16.5	18.4	21.5	24.3	25.6	26.1	26.3	26.2	24.7	25	23.4	20.3	18	16.6	15.3	14.8	14.6	26.3	18.2	24
19	15.1	14.2	13.1	12	12.2	12.2	12.2	12.4	12	13.3	14.2	15	15.5	17.3	17.5	17.3	15.6	14.6	13.8	13.5	12.6	11.9	12	12.2	17.5	13.8	24
20	12.1	11.8	11.6	11.6	11.6	11.8	12.1	12.1	12.5	13	13	13.7	15.1	14.9	15	15.1	14.6	13.9	13.5	13.5	13.4	13.2	13	12.9	15.1	13.1	24
21	12.8	12.6	12.3	12.1	12.1	12.5	12.9	14.4	16.3	17	18.1	19.5	19.8	20.4	20.9	21.1	20.7	21.4	18.8	15.8	13.9	12.2	10.9	10.1	21.4	15.8	24
22	10.1	9.6	9	8.5	8.9	9.9	11.2	12.9	14.6	15.8	15.6	16.1	17	18.7	19.5	19.8	20.6	21	20.5	16.4	15	14.4	14.1	13.1	21.0	14.7	24
23	12.1	11.8	11.3	11.4	11.4	12.4	15.2	17.7	19.7	20.7	20.1	20	20.5	21.4	21.8	19.9	21.4	21.6	19.4	17	14.9	11.9	11.2	11.3	21.8	16.5	24
24	11.6	11.8	11.4	11.3	11.5	11.6	12.4	13.4	13.1	13.4	14.1	13.2	15.6	17.7	17.8	18.7	19.4	19.5	17.7	16.2	12.7	10.6	10.1	9.9	19.5	13.9	24
25	7.8	6.8	6.4	5.9	6	7.3	10.7	16.3	19.1	21.1	22.5	21.1	22.7	22.7	22.8	20.4	19.3	19.6	20.4	17.6	14.9	14.3	13.5	12.7	22.8	15.5	24
26	12.1	11.4	10.8	10.5	9.9	11.3	12.8	15.3	17.4	19.2	20.8	21.1	21.3	22	22.1	22.1	21.8	21.4	20.2	17.3	14.8	14.5	14.5	14.1	22.1	16.6	24
27	13.8	13.5	13	11.8	11.9	12.2	11.6	10.9	10.7	11.7	13.1	15.6	14.7	14.3	14.5	14.3	14.4	14.6	13.9	13.4	12.9	11	10.2	9.8	15.6	12.8	24
28	9.6	9.5	9.3	9.1	9	9.6	10.8	12	12.3	14.9	15.4	17.1	16.8	17.3	18.1	17.9	17.3	16.2	15	13.7	13.1	12.6	11.5	11.6	18.1	13.3	24
29	11.3	10.9	10.8	10.4	10.2	10.1	10.1	10.4	11.8	14.1	15.5	17.1	17.7	18.1	18.3	18.3	16.9	17.3	16.4	14.3	11	11.3	10.2	9	18.3	13.4	24
30	7.5	7.1	7.3	8.4	8.4	8.4	8.8	10.3	12.6	15.8	16.9	16.4	17	17.8	18.1	18.5	18.8	19.7	18.6	14.6	12.6	11.2	10	9.2	19.7	13.1	24
31	9.2	8.2	8.1	9.5	10.1	10.5	11.3	13	16.9	19.2	20.5	21.6	22.6	21.9	22.1	22.7	23.5	19.7	21	17.5	14.5	12.8	12.2	11	23.5	15.8	24
HOURLY MAX	17.9	18.3	18.2	17.8	18.1	20.1	21.8	23.7	25.8	28.0	29.3	30.4	31.1	31.8	32.3	32.6	32.3	31.7	31.2	29.0	26.8	25.9	21.4	18.5			
HOURLY AVG	11.5	11.1	11.0	10.7	10.6	11.9	13.4	15.1	16.9	18.6	19.5	20.2	20.9	21.3	21.4	21.1	20.9	20.4	19.5	17.7	15.1	13.7	12.7	12.0			

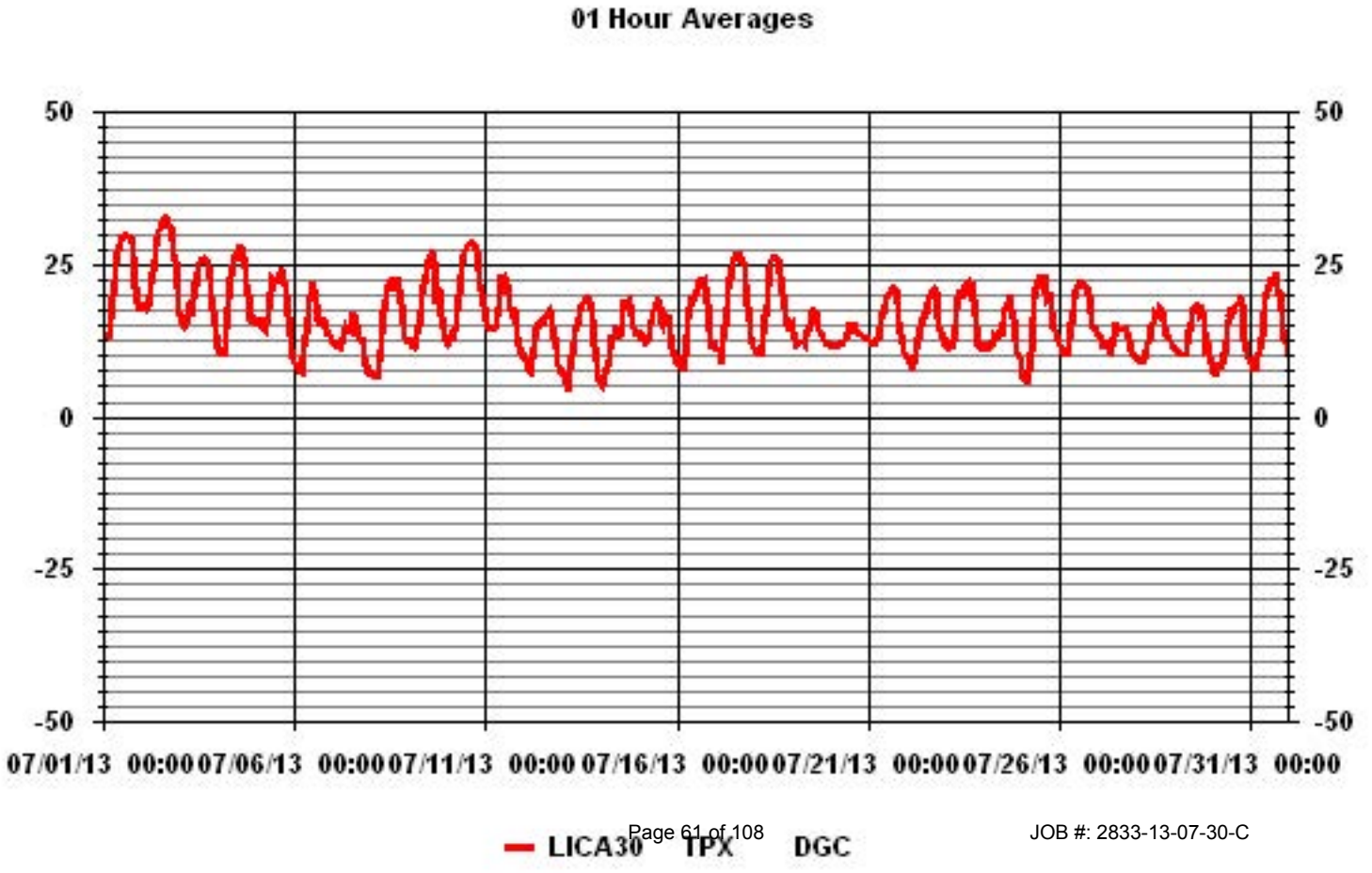
STATUS FLAG CODES

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

MINIMUM 1-HR AVERAGE:	4.2	^{O}C	@ HOUR(S)	4	ON DAY(S)	13	
MAXIMUM 1-HR AVERAGE:	32.6	^{O}C	@ HOUR(S)	15	ON DAY(S)	2	
MAXIMUM 24-HR AVERAGE:	25.5	^{O}C			ON DAY(S)	2	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		744	HRS	
			AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	5.56		MONTHLY AVERAGE:		16.14	^{O}C	



JOB #: 2833-13-07-30-C

Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2013

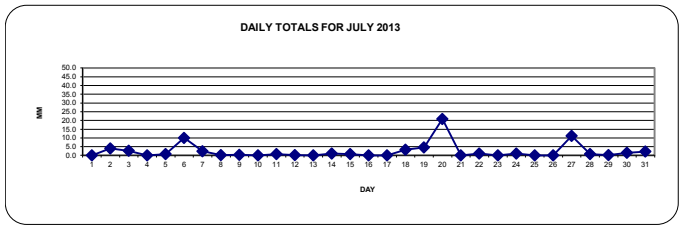
PRECIPITATION hourly averages (mm)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	TOTAL	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.9	1.1	2.9	4.0	24
3	1	1	0	0.2	0.3	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	1.0	2.6	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
5	0	0	0	0	0.6	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0.7	24
6	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.2	5.4	2.1	0	0	0.5	0.2	0.4	0.8	0.3	5.4	10.0	24
7	0	0	0	0	0	0	0	0	0	0	0.5	0.1	0.2	0.9	0.3	0.2	0.1	0	0.1	0	0	0	0	0	0.9	2.4	24
8	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
9	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0.2	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	24
11	0.2	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	0.3	0	0	0	0	0	0	0	0.3	0.8	24
12	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
14	0	0	0	0	0.1	0	0	0	0	0	0.1	0.4	0.3	0.2	0	0	0	0	0	0	0	0	0	0	0.4	1.1	24
15	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0.4	0.1	0.1	0	0	0	0	0	0	0	0.4	0.7	24
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
18	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.2	3	0	0	0	0	0	3.0	3.3	24
19	3.6	0.2	0	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	3.6	4.5	24
20	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0.1	0.9	4.1	**6.4**	1.3	4.9	2.6	0.3	0.2	**6.4**	**20.9**	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
22	0	0	0	0	0	0	0	0	0	0.3	0.6	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0.6	1.1	24
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
24	0	0	0	0	0.7	0	0.1	0	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0.7	1.0	24
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
27	0	0	0	0	0	0	0	2.8	4.2	0	0	0.1	0.4	0.3	0	0	0	0.2	2.5	0.7	0	0	0	0	4.2	11.2	24
28	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	0.1	0	0	0.5	0.8	24
29	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
30	0	0	0	0.3	1.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	1.5	24
31	0	0	0	0	0	0.8	0.2	0	0	0	0	0	0	0	0.9	0	0	0.3	0	0	0	0	0	0	0.9	2.2	24
HOURLY MAX	3.6	1.0	0.1	0.3	1.1	0.8	0.2	2.8	4.2	0.3	0.6	0.4	0.4	0.9	0.9	5.4	2.1	4.1	6.4	1.3	4.9	2.6	2.9	1.1			

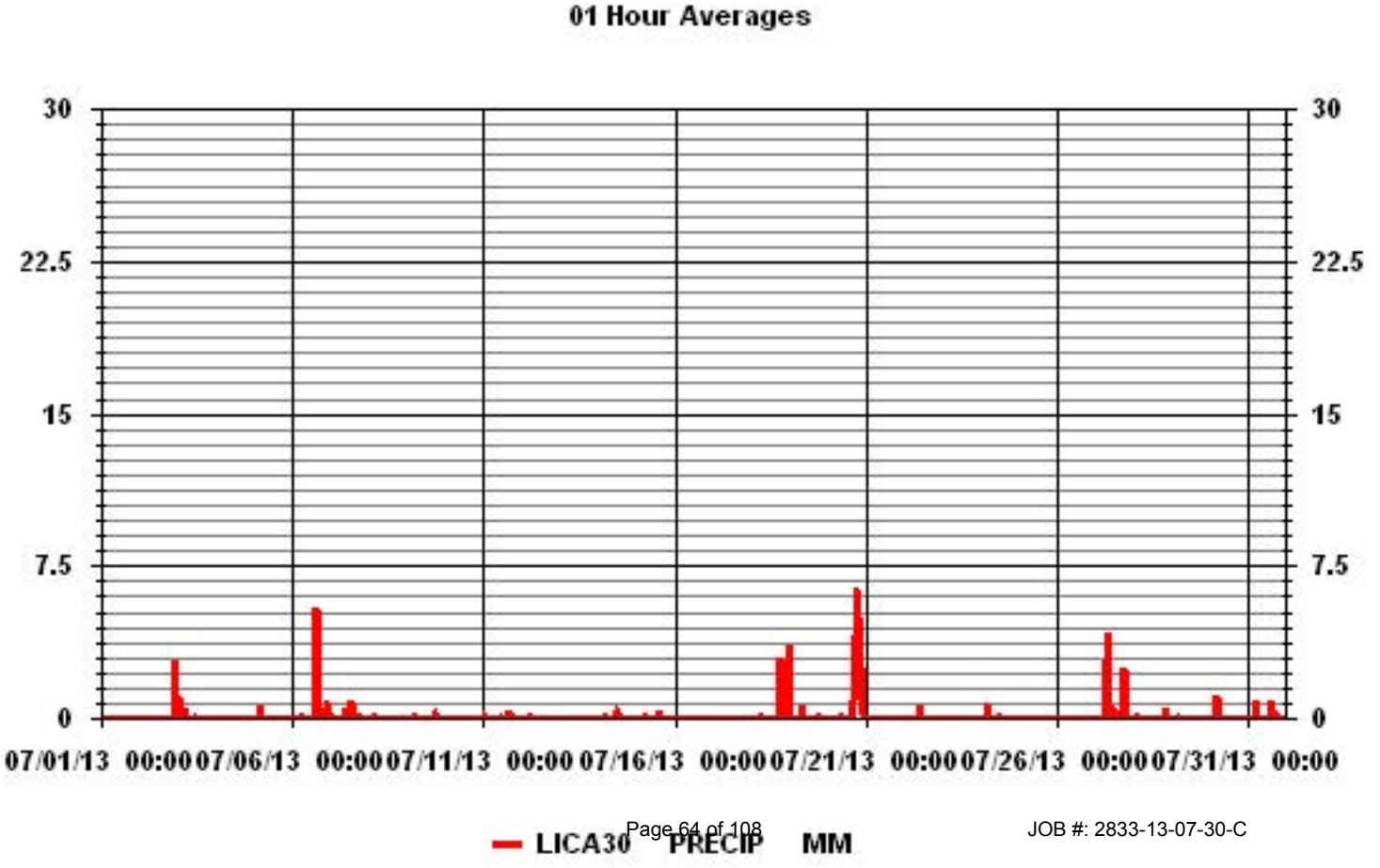
STATUS FLAG CODES

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

MAXIMUM 1-HR AVERAGE:	6.4	MM	HOUR(S)	18	ON DAY(S) 20
MAXIMUM DAILY TOTAL	20.9	MM			ON DAY(S) 20
MONTHLY TOTAL	69.4	MM			
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	0.51		MONTHLY AVERAGE:	0.09	MM



JOB #: 2833-13-07-30-C

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2013

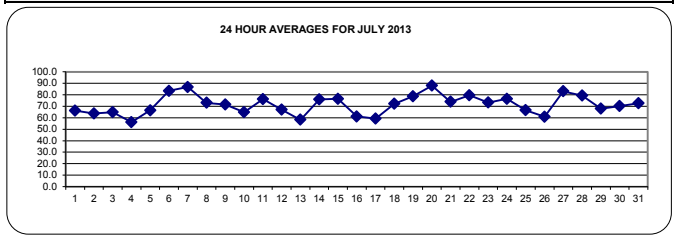
RELATIVE HUMIDITY hourly averages (%)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	93	93	93	93	93	93	82	72	66	60	55	50	42	42	39	37	37	36	39	52	72	82	84	81	93	66.1	24
2	77	75	75	77	78	74	69	67	63	59	55	52	50	48	48	49	51	53	56	60	65	66	75	88	88	63.8	24
3	88	90	91	91	92	89	85	87	80	67	65	55	41	36	40	42	41	41	43	50	58	58	62	65	92	64.9	24
4	73	76	80	82	84	72	63	60	47	39	36	35	33	32	29	32	34	39	48	59	73	76	74	72	84	56.2	24
5	76	80	70	76	82	86	81	77	71	63	56	54	52	51	47	44	43	49	50	56	72	79	87	91	91	66.4	24
6	92	92	92	93	93	93	93	93	83	69	64	54	58	61	72	86	88	84	88	90	89	91	91	91	93	83.3	24
7	92	92	92	92	93	93	92	89	84	83	83	83	75	71	87	83	84	83	85	81	89	91	92	92	93	86.7	24
8	93	93	93	92	93	93	93	86	70	62	58	55	53	53	51	47	47	50	55	68	80	87	89	90	93	73.0	24
9	90	91	90	91	91	85	82	73	65	60	54	49	45	43	42	46	44	74	73	67	85	90	91	92	92	71.4	24
10	93	93	93	93	93	93	85	69	57	49	44	43	45	43	45	45	41	44	48	59	67	68	71	73	93	64.8	24
11	82	87	89	90	90	90	87	80	75	68	58	65	64	64	72	76	78	68	62	67	75	79	81	81	90	76.2	24
12	82	86	87	88	85	76	68	62	58	56	58	58	57	56	55	54	51	53	55	58	65	77	81	81	88	67.0	24
13	82	83	86	88	89	76	67	56	50	43	40	38	36	35	33	32	32	34	38	45	64	77	85	89	89	58.3	24
14	90	89	89	87	85	86	79	70	70	66	72	82	84	84	66	56	63	63	62	68	76	79	79	80	90	76.0	24
15	81	80	80	81	88	88	86	77	73	67	64	60	57	62	78	83	72	69	74	69	80	87	89	90	90	76.5	24
16	90	91	88	87	91	85	75	66	57	51	48	45	40	36	36	34	36	35	36	47	67	74	76	74	91	61.0	24
17	77	80	83	87	89	78	71	63	55	51	46	43	39	36	36	34	32	33	38	49	62	72	83	87	89	59.3	24
18	89	91	92	92	92	92	86	75	65	54	46	43	43	43	44	49	49	56	74	87	90	92	92	93	93	72.0	24
19	90	91	92	92	93	91	83	81	82	79	71	67	66	59	59	57	63	72	76	80	84	87	87	87	93	78.7	24
20	88	89	88	87	87	86	86	87	89	87	87	85	80	82	83	85	88	91	92	92	92	93	93	93	93	**87.9**	24
21	92	92	92	92	92	92	90	82	74	69	63	55	53	49	47	48	49	47	59	78	84	90	91	92	92	73.8	24
22	93	92	93	93	93	93	93	92	90	80	83	81	78	66	65	63	58	52	55	71	77	81	83	85	93	79.6	24
23	87	87	88	90	90	91	83	74	66	61	63	62	58	54	53	60	55	52	59	70	81	90	92	92	92	73.3	24
24	93	92	92	92	91	90	88	84	83	82	74	81	71	60	59	54	49	46	53	62	77	84	89	87	93	76.4	24
25	90	91	92	92	92	92	90	68	56	48	44	46	41	41	42	52	57	57	53	61	70	71	74	76	92	66.5	24
26	76	79	80	80	82	77	72	65	60	55	47	45	43	41	42	44	44	45	48	57	68	69	70	71	82	60.8	24
27	73	73	73	77	76	75	79	86	90	88	82	73	80	85	85	85	85	86	90	91	90	90	90	90	91	83.0	24
28	89	89	89	89	90	89	87	84	84	76	73	67	66	65	60	62	62	68	73	85	88	89	91	90	91	79.4	24
29	88	89	88	89	90	89	83	78	72	63	56	51	48	45	45	44	47	47	51	65	77	73	75	77	90	67.9	24
30	83	85	85	85	89	90	89	86	79	66	58	55	55	51	52	48	48	44	49	65	74	78	82	85	90	70.0	24
31	83	86	87	81	81	85	89	86	75	68	59	55	52	54	58	52	46	65	54	71	84	89	90	91	91	72.5	24
HOURLY MAX	93	93	93	93	93	93	93	93	90	88	87	85	84	85	87	86	88	91	92	92	92	93	93	93			
HOURLY AVG	86.0	87.0	87.2	87.7	88.6	86.5	82.5	76.6	70.6	64.2	60.1	57.6	55.0	53.2	53.9	54.3	54.0	56.0	59.2	67.1	76.6	80.9	83.5	84.7			

STATUS FLAG CODES

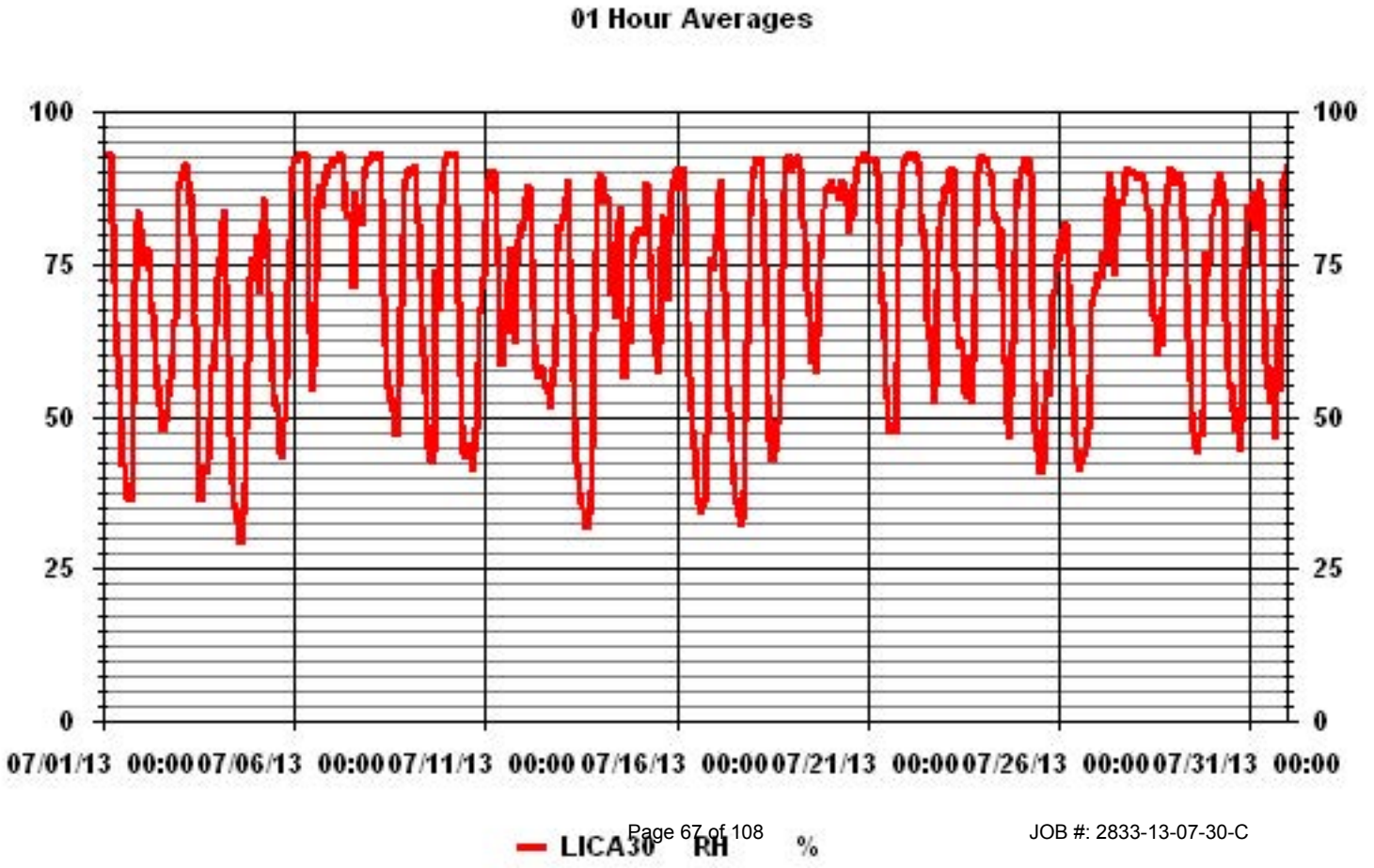
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	93	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	87.9	%			ON DAY(S)	20
				VAR-VARIOUS		

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	17.69		MONTHLY AVERAGE:	71.37	%



JOB #: 2833-13-07-30-C

Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

JULY 2013

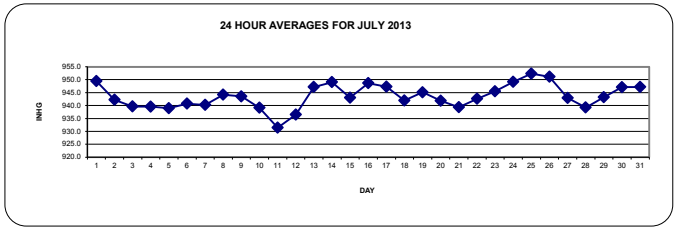
BAROMETRIC PRESSURE hourly averages (milliBar)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	949	949	949	949	949	950	951	951	951	951	951	951	951	950	950	950	949	949	949	948	948	947	947	947	951	949.4	24
2	947	947	946	946	946	946	946	945	945	944	944	943	942	942	941	940	939	939	938	937	936	936	939	939	947	942.2	24
3	938	939	938	938	938	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	939.6	24
4	940	940	940	940	940	940	941	941	941	941	941	940	940	940	939	939	939	939	939	938	938	938	938	938	941	939.6	24
5	938	938	938	939	939	938	938	938	939	939	940	939	939	939	939	939	939	939	939	939	940	940	939	940	940	938.9	24
6	939	939	939	940	940	940	940	941	942	942	942	942	942	941	941	941	941	940	941	941	941	941	941	940	942	940.7	24
7	940	940	939	939	939	939	939	939	939	940	940	940	940	940	940	941	941	941	941	942	942	941	942	942	942	940.3	24
8	942	943	943	942	943	944	945	945	945	946	945	945	945	945	945	945	945	944	944	944	944	944	944	944	946	944.2	24
9	944	944	944	944	944	944	944	945	945	945	945	945	944	944	943	943	943	942	942	942	942	942	942	942	945	943.5	24
10	942	942	942	942	942	942	942	942	942	942	942	941	941	940	939	938	937	936	936	935	934	933	933	934	942	939.1	24
11	933	932	932	933	932	932	931	932	931	930	930	930	930	930	931	931	931	931	931	932	932	932	932	932	933	931.4	24
12	932	932	932	933	933	933	934	934	934	935	935	936	936	937	938	938	939	939	940	940	941	941	941	942	942	936.5	24
13	942	943	943	943	944	945	946	946	947	947	947	948	948	948	949	948	949	949	949	950	950	950	950	950	950	947.1	24
14	950	950	950	950	950	950	950	950	951	951	950	950	950	950	950	949	948	948	947	947	947	946	946	946	951	949.0	24
15	945	945	944	944	944	943	943	942	942	942	942	942	942	942	942	942	941	943	943	944	944	944	944	944	945	943.0	24
16	944	944	945	946	947	948	948	949	950	950	950	950	950	950	950	950	950	950	950	950	949	949	949	949	950	948.6	24
17	949	949	949	949	949	949	949	950	950	950	949	949	948	948	947	947	946	945	945	945	944	943	943	942	950	947.3	24
18	942	941	941	941	941	941	941	942	943	943	943	943	943	943	942	942	942	942	942	941	942	942	941	942	943	941.9	24
19	943	942	943	942	943	944	944	944	945	945	946	946	946	947	947	947	947	946	946	946	946	946	946	946	947	945.1	24
20	946	946	945	945	945	944	944	944	944	943	943	942	942	941	941	940	940	939	939	938	938	938	938	938	946	941.8	24
21	936	937	937	937	937	938	938	939	939	939	939	940	940	940	940	940	940	941	941	941	941	941	941	941	941	939.3	24
22	941	941	941	940	941	941	941	942	942	943	943	944	944	944	944	943	943	944	944	944	943	943	943	943	944	942.6	24
23	943	943	943	943	943	943	944	944	945	946	946	946	946	947	947	947	947	947	947	947	947	947	947	947	947	945.5	24
24	947	948	948	947	948	948	948	948	949	949	949	950	950	950	950	950	950	950	950	950	950	951	950	950	951	949.2	24
25	950	951	951	951	951	952	952	953	954	954	954	954	953	953	953	953	952	952	952	952	952	952	952	952	**954**	**952.3**	24
26	952	952	952	952	952	952	953	953	953	953	953	952	952	952	951	951	950	950	950	949	948	948	948	948	953	951.1	24
27	948	947	946	945	945	946	946	945	944	943	943	943	943	942	942	941	941	941	940	940	940	940	940	939	948	942.9	24
28	939	939	939	939	939	939	939	939	939	940	940	940	939	939	939	939	939	939	939	939	939	940	940	940	940	939.3	24
29	940	941	941	941	941	942	942	942	943	943	943	944	944	944	944	944	944	944	945	945	945	945	945	945	945	943.2	24
30	945	945	946	946	946	947	947	948	948	948	948	948	948	948	948	948	947	947	947	947	947	947	947	947	948	947.1	24
31	947	946	946	946	947	947	947	947	947	948	948	948	948	948	948	948	947	948	947	947	947	946	947	947	948	947.2	24
HOURLY MAX	952	952	952	952	952	952	953	953	954	954	954	954	953	953	953	953	952	952	952	952	952	952	952	952			
HOURLY AVG	943	943	943	943	943	943	944	944	944	944	944	944	944	944	944	944	943	943	943	943	943	943	943	943			

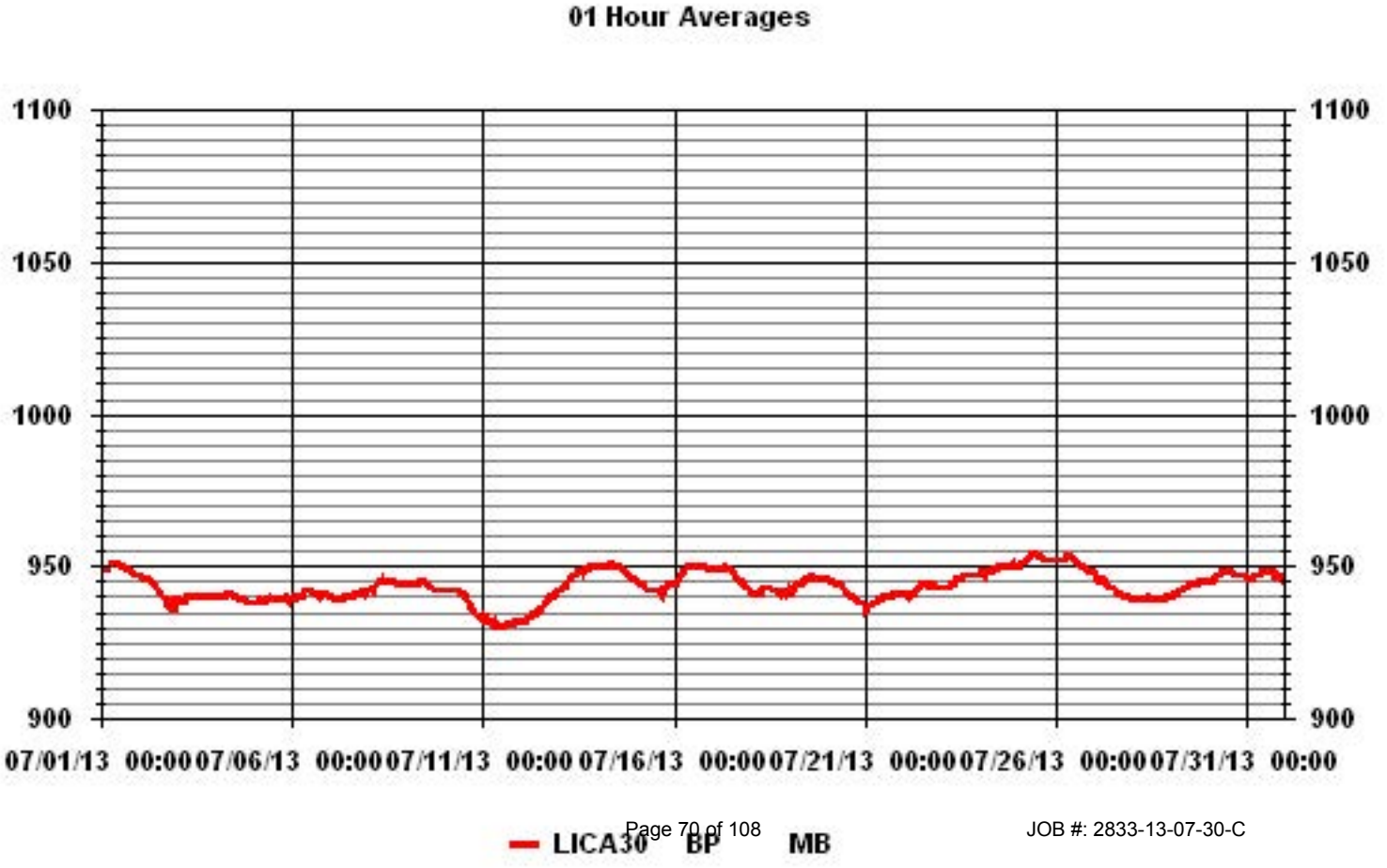
STATUS FLAG CODES

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:		954	MB	@ HOUR(S)	VAR	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:		952.3	MB			ON DAY(S)	25
					VAR-VARIOUS		
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		744	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	4.90			MONTHLY AVERAGE:		944	MB



JOB #: 2833-13-07-30-C

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2013

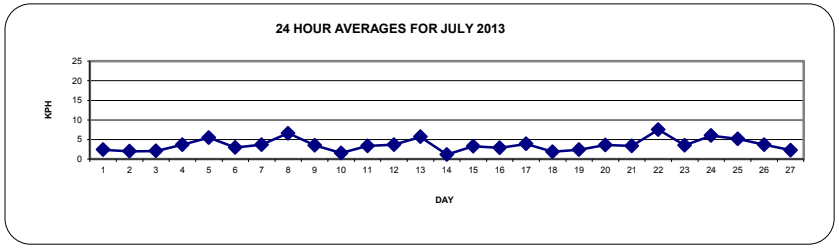
WIND SPEED hourly averages (km/hr)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.4	1.6	0.8	2.1	0.7	2.3	3.9	3.9	4.2	5.3	7.5	9.7	8	9.7	7.9	9.2	8.8	7.6	5.8	3.6	2.3	3.3	3.4	3.7	9.7	4.7	24
2	4.2	4.5	4.8	4.8	5.2	6	7.5	8.8	9.4	9.2	10.2	10.1	**12.8**	12.3	12.5	11.3	11.2	8.8	7.4	8.9	8.4	2.1	11.2	6.6	**12.8**	6.7	24
3	11.3	6	5.1	1.6	1.3	3.4	4.5	5.2	5.6	5.6	7.9	5.2	7.6	8.6	10	7.5	6.4	6	5.2	4.1	3.8	3.8	2.6	2.6	11.3	3.9	24
4	2.7	2.7	1.9	3.5	2.8	2.5	2.8	3.1	3.7	4.9	3.9	3.5	4.8	4.1	3.9	5	5.2	7.1	3.6	2.9	2	4.2	2.8	2	7.1	2.8	24
5	1.2	2.3	5.3	4.9	4.4	3.8	4.6	4.8	3.3	3	4.6	3.8	4.3	4.5	2.7	3.3	5.1	4.8	4.9	4.2	8.6	4.8	1.8	1.1	8.6	2.4	24
6	1.1	1.4	1.1	1.3	0.8	2.4	4.1	5.6	3.5	4	1.9	0.5	3.3	2	4.4	7.2	7.2	5.7	3.7	3	2.6	2.9	2.9	1	7.2	2	24
7	2.9	2	1.7	1.7	1.1	1.5	2.2	2.5	5.3	5.8	6.5	4.9	1.5	0.6	1.2	4	8.7	8.9	7.5	4.6	1	2.3	0.9	2.3	8.9	2.1	24
8	2	2.4	2.2	1.6	2.9	1.8	2.8	2.8	2.6	2.1	3.2	4.4	5.7	8.1	9.5	5.6	6.1	4.8	4.9	3.3	3.4	4.5	5	5	9.5	3.7	24
9	5.9	6.1	6.6	5.9	7.1	7.7	6.6	7.1	6.2	7.8	9	10.1	11.8	11.1	10.4	9.5	4.9	1.7	0.8	0.3	1.4	1.3	0.6	0.7	11.8	5.5	24
10	1	1.1	0.5	1.5	1.6	0.7	2.8	4.8	3.9	3.1	4.2	5.8	6.7	7.3	7.7	6.4	8.9	7.6	5.7	5.2	5.1	5.6	5.6	7.8	8.9	3	24
11	8.6	4.4	2.7	1.6	1.8	2.5	3.9	4.4	4.9	5.8	3	6.2	7	5.9	6.1	8.7	8.7	7.1	6.5	7.1	4.2	4.3	3.5	4.2	8.7	3.7	24
12	6.6	6.1	6.3	6.6	5.2	6.8	7.1	9.2	9.3	7.8	7.9	7.9	8.2	9.2	10	11	9.7	9.9	9.3	7.5	5.9	3.3	3.6	3.5	11	6.6	24
13	3.2	4.8	3	2.5	3.1	3.6	5.7	7.5	7.3	9.9	7.3	6.9	6.6	6	6.3	6.1	5.3	6.3	5.1	5.5	2.5	1.9	1	2	9.9	3.5	24
14	2.6	1.6	0.8	2.1	2.4	2.5	2.2	2.4	2.7	2.5	4.9	1.7	1.9	4	2.8	3.3	4.1	4.4	4.5	3.2	2.3	3	3.7	6.8	6.8	1.6	24
15	4.5	5	4.3	4.2	3.4	2.9	5.3	8.1	5.8	7	8.3	9.9	8.6	9.7	6.6	3.3	3.6	4.3	3.7	3.9	2.7	2.4	2.6	2.7	9.9	3.4	24
16	2	2.7	3.3	1.4	2.6	2.2	3	4.1	4.4	5.9	6.6	6.3	6.4	6.9	5.4	6.8	5	5.2	4.4	2.8	4.3	4.6	4.9	4.9	6.9	3.7	24
17	5.2	5.3	5.1	3.2	3	4.5	5.8	5.2	5.3	7.2	7.6	8.2	11.2	8.9	6.4	6.2	9	8.3	4.5	4.5	5.3	3.2	2.7	2.3	11.2	5.7	24
18	0.8	0.9	1.7	0.9	1.1	1.8	2.2	3.7	3.6	4	2.3	3.6	2.7	2.9	5.5	3.4	6	3.6	2.3	1.8	1.9	0.9	2.5	1	6	1.2	24
19	0.4	2	1.3	0.2	0.4	3.7	5.6	8	6	5.9	5.7	6.5	7	6.3	5.1	7.2	4.8	3.1	4.5	2.7	0.9	0.5	2.6	2.5	8	3.3	24
20	2.3	2.8	2.9	2.9	3.3	3.5	4.4	4.7	3.8	4.2	4.5	5.4	5.1	4.4	4.7	3.2	3.3	6	4.6	4.7	5.2	4.4	5.2	6	6	2.9	24
21	6.2	6.7	4.5	3.1	2.9	2.6	5.1	7.4	6.9	7.6	8.1	7.2	6.1	6.1	4.6	6.2	4.3	3.5	1.4	2.8	1.3	1.6	0.6	1.1	8.1	3.9	24
22	1.1	1.1	0.2	0.7	0.5	0.5	0.6	0.8	0.7	1.3	1.2	0.7	0.9	2.5	4	4.4	6.1	4.8	4.6	3.5	3.4	3.2	5.1	3.4	6.1	1.9	24
23	3	4	2.7	1.7	3.9	3.3	3.4	5.5	6.2	6.6	8.2	7.7	7.3	5.8	5	4.6	5	4.9	4.2	3.9	1.7	0.8	1.6	1.5	8.2	2.4	24
24	1.5	1.3	0.8	0.2	1.9	1.9	2.3	4	6.2	8.1	11.5	6.6	6.4	4.7	5.6	6.4	6.3	6.4	5.1	4.1	3	0.8	2	1.2	11.5	3.6	24
25	2.5	1.4	1	3.2	1.8	1.2	0.6	1.1	1.9	1.5	3.6	5.1	4.3	5.3	7.2	5.7	5	5.3	6.2	5.8	5.5	7.4	7.1	5.9	7.4	3.4	24
26	5.6	4.6	4.6	5.4	5.7	5.2	6.5	7.3	8.2	9.5	9.8	10.6	11.5	10.8	11.3	10.6	10.2	9.9	8.2	6.5	4.6	5.9	6.8	5.9	11.5	**7.5**	24
27	5.7	7.8	8	5.7	5.9	4.4	4.8	1.9	6.3	9.6	5.3	3.3	1.5	1.8	4.1	4.1	3.6	4.6	3.9	6	6.1	4.7	5.7	5.1	9.6	3.5	24
28	8.6	7.9	5.4	7	6.9	4.1	6.2	8.2	6.5	7.8	6.6	8.2	8.4	8.1	9.8	7.3	7.2	5.4	4.9	3.9	5.3	4.2	3.8	5.4	9.8	6	24
29	5.5	5.3	6.3	5.9	5.3	6.7	6.2	6.1	6.7	7.1	8.3	7.6	7.5	7.1	6.6	5.5	4.5	5	5.1	3.3	3.2	4.1	3.3	2.9	8.3	5.2	24
30	3.3	4	4.8	6.8	4.2	1.9	2.8	3.2	4	4.6	5	6.5	5.6	6.2	4.9	5.5	4.4	5.5	4.5	2.7	3	3	2.6	2.5	6.8	3.7	24
31	2.8	2.5	3.8	4.9	3.2	2.5	2.3	3.8	5.9	6.2	7.6	5.7	5.9	5.9	4.8	5.8	5.8	4.8	2.9	2.8	3	1.1	1	0.5	7.6	2.3	24
HOURLY MAX	11.3	7.9	8.0	7.0	7.1	7.7	7.5	9.2	9.4	9.9	11.5	10.6	12.8	12.3	12.5	11.3	11.2	9.9	9.3	8.9	8.6	7.4	11.2	7.8			
HOURLY AVG	3.7	3.6	3.3	3.2	3.1	3.2	4.1	5.0	5.2	5.8	6.2	6.1	6.3	6.3	6.4	6.3	6.3	5.8	4.8	4.2	3.7	3.2	3.5	3.4			

STATUS FLAG CODES

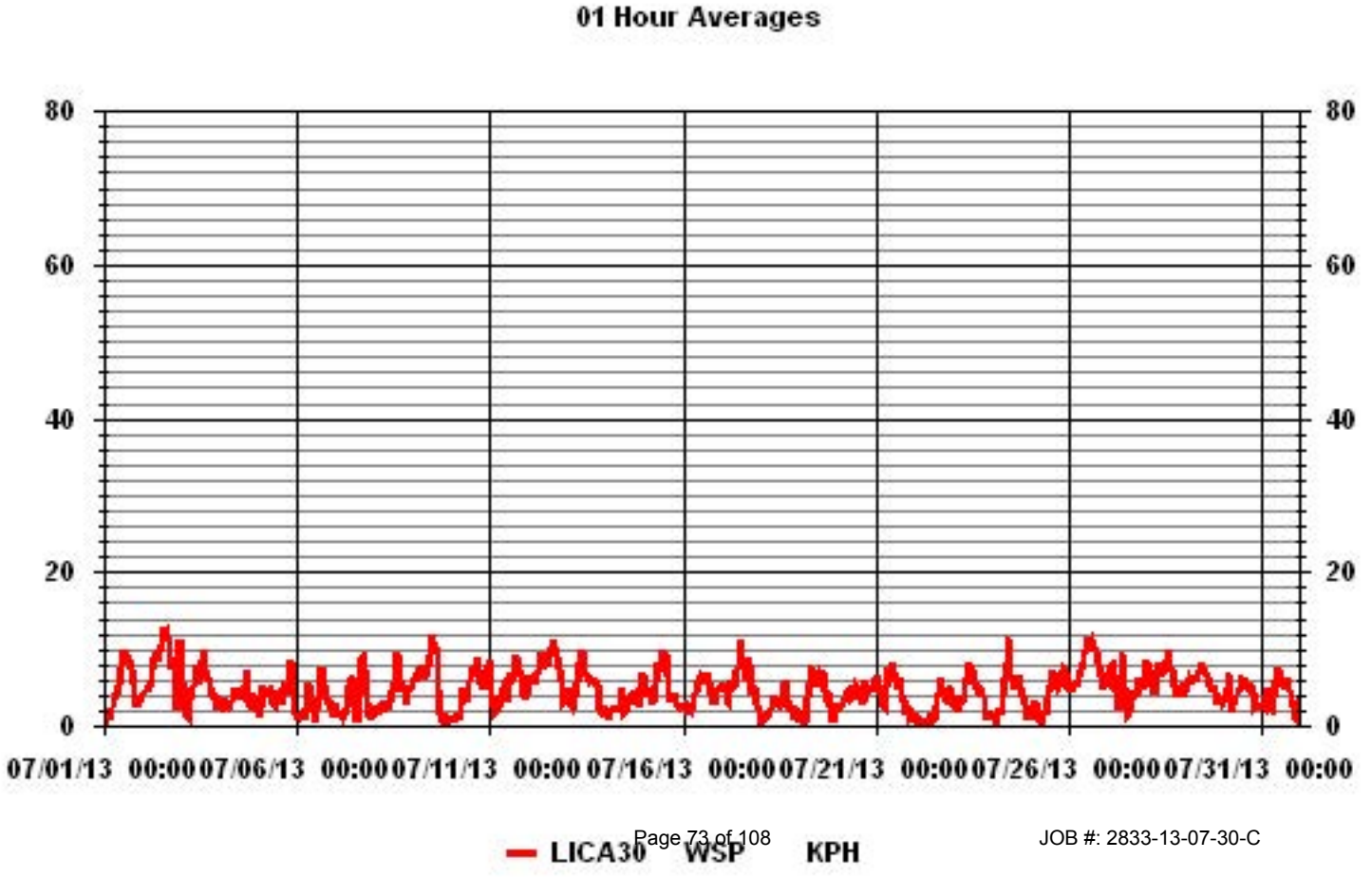
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



LAST CALIBRATION: December 20, 2011

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		12.8	KPH	@ HOUR(S)	12	ON DAY(S)	2
MAXIMUM 24-HR AVERAGE:		7.5	KPH			ON DAY(S)	26
CALMS (≤ 1 KPH)	4.44	%		OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	0	HRS		AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	2.54			MONTHLY AVERAGE:		4.70	KPH



JOB #: 2833-13-07-30-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

JULY 2013

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

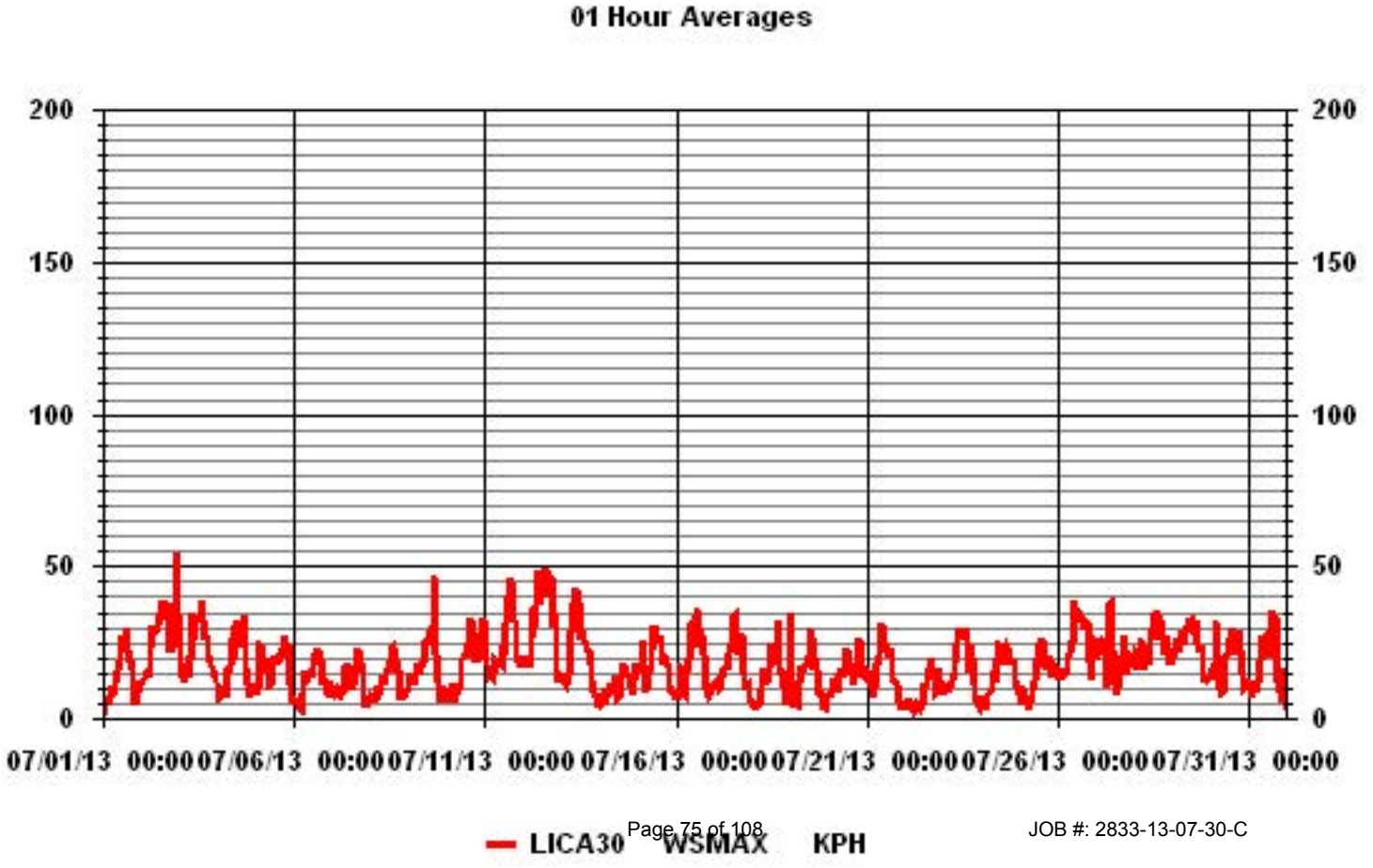
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	2.4	7.2	5.7	6.4	4.4	6.9	10.9	10	11.7	15.8	19.2	23.4	26.7	22.9	22	29.9	22.9	19.4	16.5	9.3	4.3	6.9	8.2	11.3	29.9
2	11.5	13.1	14.8	14.4	14.4	16.8	23.6	30.8	28.1	28.6	30.5	34.9	38.4	32.2	37	38.7	36.7	36.1	21.4	25.8	23.3	38	**54.2**	33.6	**54.2**
3	33.2	19.2	14.1	12	15	14.8	20.3	19.2	34.5	25.8	32.2	32.5	33.3	37.9	37.9	33.1	26.9	26.7	19.5	19.7	18	16.2	14.4	12.2	37.9
4	7.1	7.4	10.2	8.2	7.6	7.6	16.3	14.8	17.6	26.4	18.7	30.1	32.1	27	23.5	24.6	24.4	33.8	17	11.4	7.2	9.3	10	11.3	33.8
5	7.4	9.9	24.5	24.1	15.2	19.2	18.8	17.7	11.1	11.5	19.8	18.5	20.5	17.7	18.7	21.1	23.1	20.1	26.9	24.8	24.3	12	7.8	5.9	26.9
6	4.2	6.4	5.1	4.3	3.7	8	10.9	15.5	11.5	15.5	13.2	16.4	17.9	21	19.6	22.9	21.6	19.6	11.5	12.6	10.2	10.9	12.6	6.9	22.9
7	10.7	8.7	9.8	8.7	8.2	7.8	9.3	9.3	17	14.4	17.9	12.8	9.3	16.2	10.5	17.8	23.2	19	18.3	16.1	5	4.7	7.6	5.6	23.2
8	7.6	6.9	6.7	5.8	10.4	7.6	8.7	13.1	13	11.1	15.7	15.7	18.5	23.3	24	20.7	19.8	15.9	15.8	7.2	6.8	7.2	8.9	9.8	24
9	11.6	14.4	12.7	11.3	14.4	17.8	14.9	15.9	17.4	18.5	25.1	24.2	26.4	28.2	28.6	30.2	47	21.6	12.8	8	5.4	9.1	10.9	6.3	47
10	6.3	9.1	7.6	6.7	11.8	5.4	7.4	9.8	11.8	19.8	20.7	21.1	21.1	24.4	22.7	32.8	27.5	27.7	18.7	20.5	20.3	19	27.5	32.8	32.8
11	29	18.3	14.1	14.6	13.9	20.1	19.6	17.5	18.5	18.6	17.9	24.2	20.9	31.2	40.3	46.2	45.1	37.9	32.3	31.9	21.4	19.2	16.8	20.9	46.2
12	17.9	19.9	16.6	19.4	19	26.2	36.5	29.7	37.1	48.8	36.9	39.8	48.8	42.2	49.2	42.2	44.1	39.3	46.8	29.9	34.3	12	15.3	14.2	49.2
13	13.1	13.7	11.8	11	13.4	14.6	28.5	36.1	35.4	42.6	35.4	39.1	26	28.8	24.9	24.7	21.6	23.3	18.5	13.3	9.1	7.8	3.6	6.3	42.6
14	6.9	4.8	5.4	5.5	9.6	6.7	11.3	8.2	8.2	10	13.9	6.5	7.1	11.1	15	17.7	13.3	14.8	13.9	10.9	7.6	13.1	13.3	17.7	17.7
15	16.6	16.6	15.5	25.8	11.5	8.9	13.9	17.4	15.2	22	30.8	28.4	26.6	26	27.3	21.9	17.3	20.6	16.9	18	9.9	9.6	9.1	8	30.8
16	5.8	8.9	17.7	11.5	8.9	8.2	13.3	15.2	19.4	30.8	31.7	29	33.3	36	23.3	29.7	28.1	21.8	20.9	10.2	7.4	8	9.8	11.1	36
17	11.5	11.8	12.6	9.8	10.3	13.4	15.8	16.4	16.7	21.6	24.2	25.7	33.6	34.3	24.2	20.5	24.9	27.9	15.2	10.6	10.6	11.3	6.5	6.1	34.3
18	4.5	3	5.2	5	3.9	9.5	10.7	16.6	11.3	12.4	13.5	17	24.9	18.5	21.1	17.4	32.3	14.6	16.6	11.3	8	5.6	5.6	5.2	32.3
19	34.7	10	6.5	4.7	4.4	11.9	16.7	16.6	15.2	17.9	19	18.3	29.9	23.8	26.4	20.9	16.6	8.2	9.8	7.4	3.9	3.6	6.1	7.4	34.7
20	7.6	8.9	13.5	10.2	10	9.8	14.4	15.9	13.9	15.7	15.5	23.1	20.7	18.9	15.6	11	16.8	15	16.8	26.2	14.6	14.4	14.1	13.7	26.2
21	15.7	15	10.4	12.4	6.7	9.8	17.9	20.1	22	31	24.7	21.6	24.4	20.3	21.4	22.9	13.1	12.8	12.4	11.1	6.3	3.9	3.4	3.6	31
22	3.4	3.7	6.6	4	3.2	4.3	2.3	3	5.4	5.2	3.6	4.3	11.5	10.7	16.1	15.2	20.1	15.7	13.7	8.5	9.1	16.8	12.4	11.8	20.1
23	7.8	10.9	8.7	10.3	10.6	12.3	14.8	17.9	24.4	27.3	29.7	26.2	27.5	27.5	29.3	15	24.3	21	20.2	11.6	6.2	4.4	3.6	6.1	29.7
24	5.6	6.3	4.7	2.8	8.3	9.1	10	14.4	13.9	20.1	25.1	19.9	19.4	21.8	22	24.2	23.3	17.9	19.2	19	17.9	13.1	10.7	8.5	25.1
25	4.5	7.2	10.5	6.2	5.9	2.6	7.1	5.6	8.9	12.7	20.1	17	24.7	23.2	26.6	19.6	17.9	15.9	20.5	15.7	13.5	18.1	17.7	15.3	26.6
26	14.4	12.8	15.5	15.3	14.8	15.9	20.3	21.4	24.7	25.1	38.5	36.5	35.6	35.1	31.4	34.1	29	32.3	31.9	19	12.6	21.4	27.4	18.8	38.5
27	24.1	24.8	25.6	23.4	24.2	22.3	17.4	10.4	37.6	38	22.9	17.7	8	10.2	14.1	15	20.7	26.9	14.4	15.9	22.3	18.8	19.2	18.6	38
28	22.3	21.8	17.2	19.4	26	15.8	19.1	20.4	19.9	23.6	26.6	29.7	34.3	26	35	30.8	31.9	30.4	26.2	20.5	27.1	23.6	17.9	21.4	35
29	20.9	21.4	26.4	22.9	23.1	28.8	24.4	26	30.2	27.9	32.6	32.8	29.3	29.7	30.4	24.7	23.2	22.7	22.8	11.6	13.2	12.5	13.1	14.6	32.8
30	14.2	16.4	18.1	31.9	21.4	10	8.7	9.1	18.3	20.1	21.4	23.1	26.2	29.9	20.9	28.4	20.9	29.2	22.9	14.8	9.8	10.2	10.4	12.6	31.9
31	11.5	6.8	9.2	10.3	8.3	12.6	11.3	19.2	**26.2**	26.4	27.1	23.8	20.3	27.7	35.8	22	22.9	34.1	12.8	9.1	6.7	5.2	16.4	3.6	35.8
PEAK	34.7	24.8	26.4	31.9	26.0	28.8	36.5	36.1	37.6	48.8	38.5	39.8	48.8	42.2	49.2	46.2	47.0	39.3	46.8	31.9	34.3	38.0	54.2	33.6	

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

MAXIMUM INSTANTANEOUS READING	54.2	KPH	@ HOUR(S)	22
			ON DAY(S)	2



JOB #: 2833-13-07-30-C

LICA30
WSP / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	2.95	4.83	4.70	3.22	2.55	2.28	4.97	3.36	4.43	7.66	9.00	4.83	6.31	3.36	3.62	2.82	70.96
<	12.0	1.47	3.76	1.34	.13	.00	.26	1.07	2.68	2.28	5.10	1.88	.80	1.88	2.82	2.28	.80	28.62
<	20.0	.00	.00	.00	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	.00	.00	.00	.40
<	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	4.43	8.60	6.04	3.36	2.55	2.55	6.04	6.45	6.72	12.76	10.88	5.64	8.19	6.18	5.91	3.62	

Calm : .00 %

Total # Operational Hours : 744

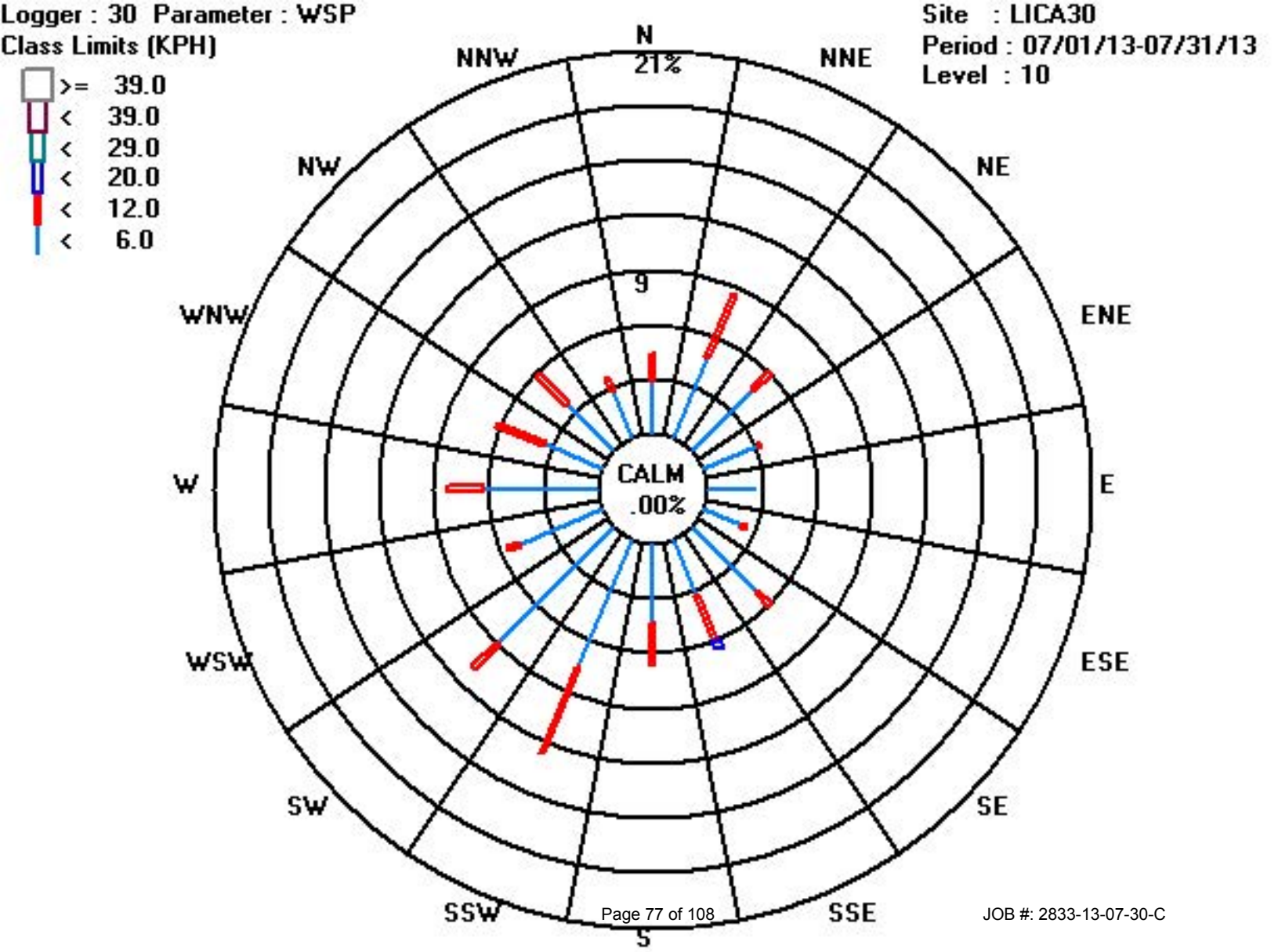
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	22	36	35	24	19	17	37	25	33	57	67	36	47	25	27	21	528
<	12.0	11	28	10	1		2	8	20	17	38	14	6	14	21	17	6	213
<	20.0								3									3
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	33	64	45	25	19	19	45	48	50	95	81	42	61	46	44	27	

Calm : .00 %

Total # Operational Hours : 744



JOB #: 2833-13-07-30-C

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

JULY 2013

WIND DIRECTION hourly averages in degrees

MST

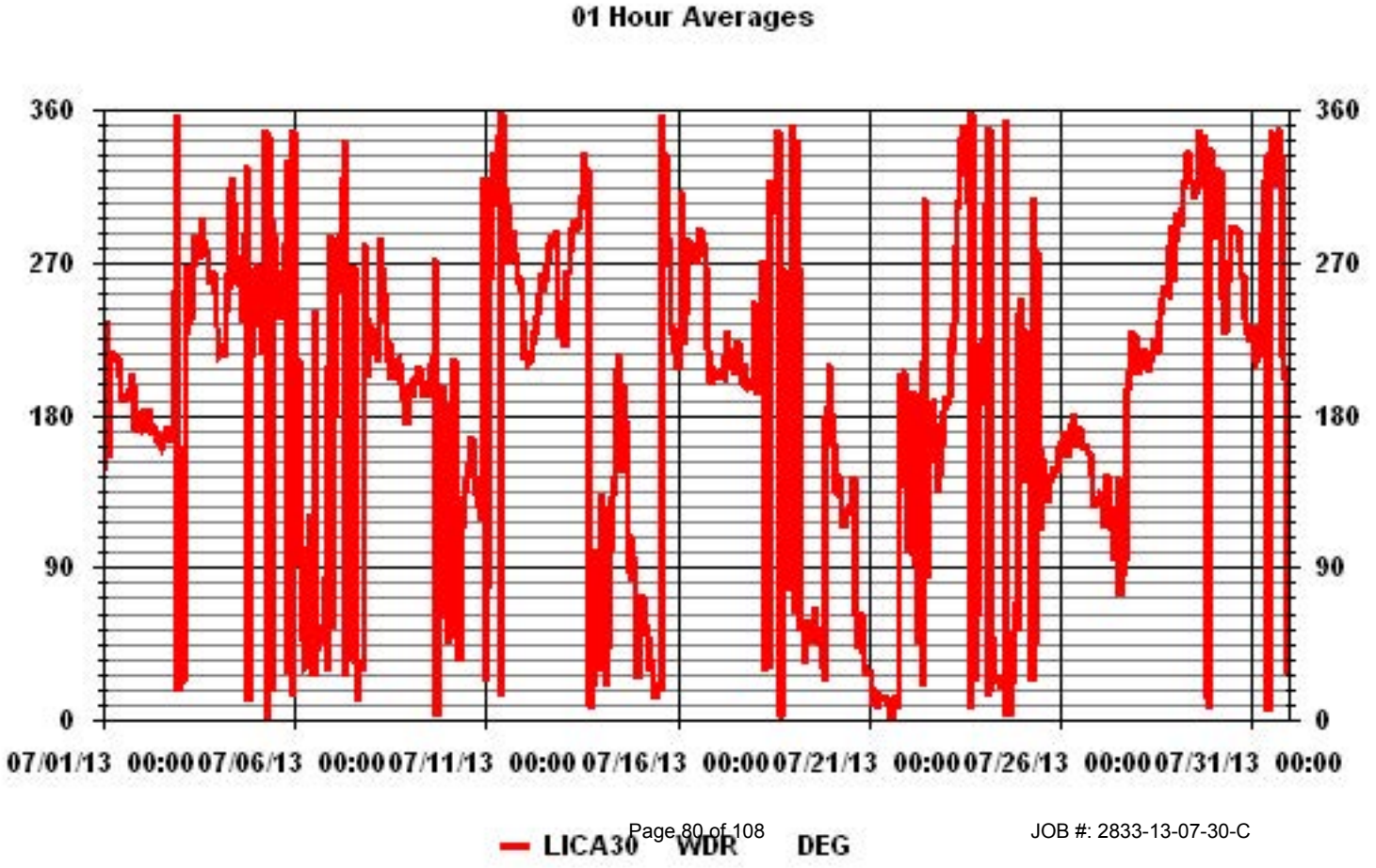
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	149	226	235	217	154	211	217	212	212	215	203	193	188	191	190	192	196	193	204	198	172	169	173	180	196	SSW	24
2	181	183	172	173	172	184	171	174	169	164	170	164	161	163	166	167	173	168	164	168	171	254	357	17	168	SSE	24
3	32	26	22	162	227	269	235	236	267	276	286	277	272	282	296	284	278	274	257	261	263	266	252	233	282	W	24
4	216	217	222	214	218	240	260	259	314	320	307	264	259	256	275	235	256	288	327	11	219	214	262	266	264	W	24
5	270	232	255	254	215	317	349	0	346	16	295	287	264	266	236	251	261	257	282	330	27	37	14	349	300	WNW	24
6	151	91	112	213	104	47	32	33	58	95	121	52	26	241	41	45	57	53	50	85	29	209	239	286	55	NE	24
7	54	178	257	252	274	288	320	343	25	46	38	37	43	269	139	10	35	32	32	29	281	202	237	215	26	NNE	24
8	232	219	226	222	211	234	284	268	249	252	210	224	200	209	200	211	213	214	212	199	190	186	174	192	212	SSW	24
9	198	190	199	199	203	206	209	205	202	192	192	192	194	210	215	213	273	1	198	161	162	197	188	61	203	SSW	24
10	45	48	184	208	214	77	37	35	51	113	131	134	142	151	157	168	158	145	133	127	118	144	176	320	138	SE	24
11	22	77	259	320	335	328	302	345	339	14	359	319	315	305	269	286	286	289	271	275	257	262	253	237	303	WNW	24
12	213	216	210	211	218	221	230	227	239	252	264	261	253	258	270	281	282	286	281	282	289	226	237	248	252	WSW	24
13	241	219	236	266	263	276	291	295	288	290	296	302	310	335	325	322	326	10	7	20	65	101	66	91	308	NW	24
14	134	28	71	19	126	42	100	132	144	168	208	216	145	177	198	165	177	86	109	83	83	97	51	24	116	ESE	24
15	71	66	74	63	57	50	29	32	35	16	12	20	22	21	358	333	335	316	286	269	227	233	217	220	17	NNE	24
16	207	211	313	262	221	239	278	285	270	276	276	281	268	286	290	286	277	278	268	220	200	198	204	206	260	WSW	24
17	204	205	204	206	205	204	215	230	213	206	219	209	203	211	224	209	199	198	210	199	196	197	195	202	207	SSW	24
18	247	209	192	246	231	271	28	41	38	30	319	315	316	298	317	348	4	1	267	234	223	175	198	75	331	NNW	24
19	352	81	63	342	269	54	54	36	34	46	59	48	45	53	66	53	55	44	30	33	23	180	185	210	51	NE	24
20	183	162	165	136	135	145	142	126	115	113	123	125	124	123	144	116	62	41	55	64	41	34	29	26	100	E	24
21	30	27	21	7	18	7	12	14	13	13	15	10	8	14	0	8	14	7	15	204	146	136	204	203	15	NNE	24
22	139	98	131	97	194	93	90	45	72	212	20	308	83	179	177	186	187	177	153	133	149	148	162	182	160	SSE	24
23	191	186	190	226	217	235	280	301	307	322	344	352	328	322	306	6	359	327	22	50	61	222	185	191	319	NW	24
24	225	305	13	350	16	50	26	23	21	25	27	20	20	1	354	4	4	16	21	52	69	52	240	249	18	NNE	24
25	162	139	232	206	226	157	23	309	44	277	133	162	112	156	144	146	127	141	143	144	150	148	148	161	149	SSE	24
26	163	161	170	164	155	164	173	175	181	167	161	169	173	162	165	160	163	157	157	146	132	125	130	130	160	SSE	24
27	127	133	132	114	116	145	122	123	114	113	93	122	144	73	76	85	94	145	195	206	215	230	227	227	138	SE	24
28	204	211	216	206	212	219	213	205	214	211	226	215	218	216	235	239	249	257	253	252	280	292	258	282	228	SW	24
29	283	299	292	292	302	313	318	334	336	320	318	311	307	311	314	349	321	339	346	14	14	7	338	318	320	NW	24
30	283	313	326	320	324	249	231	228	257	259	272	292	287	292	286	291	278	265	263	238	229	228	223	234	277	W	24
31	228	213	210	211	214	233	250	288	319	333	5	335	348	324	336	335	315	350	335	215	210	201	27	57	308	NW	24
HOURLY AVG	352	313	326	350	335	328	349	345	346	333	359	352	348	335	358	349	359	350	346	330	289	292	357	349			

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:	744	HRS
STANDARD DEVIATION:	97.11		AMD OPERATION UPTIME:	100.0	%
			MONTHLY AVERAGE:	233	DEG



JOB #: 2833-13-07-30-C

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *MASKWA*

JULY 2013

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

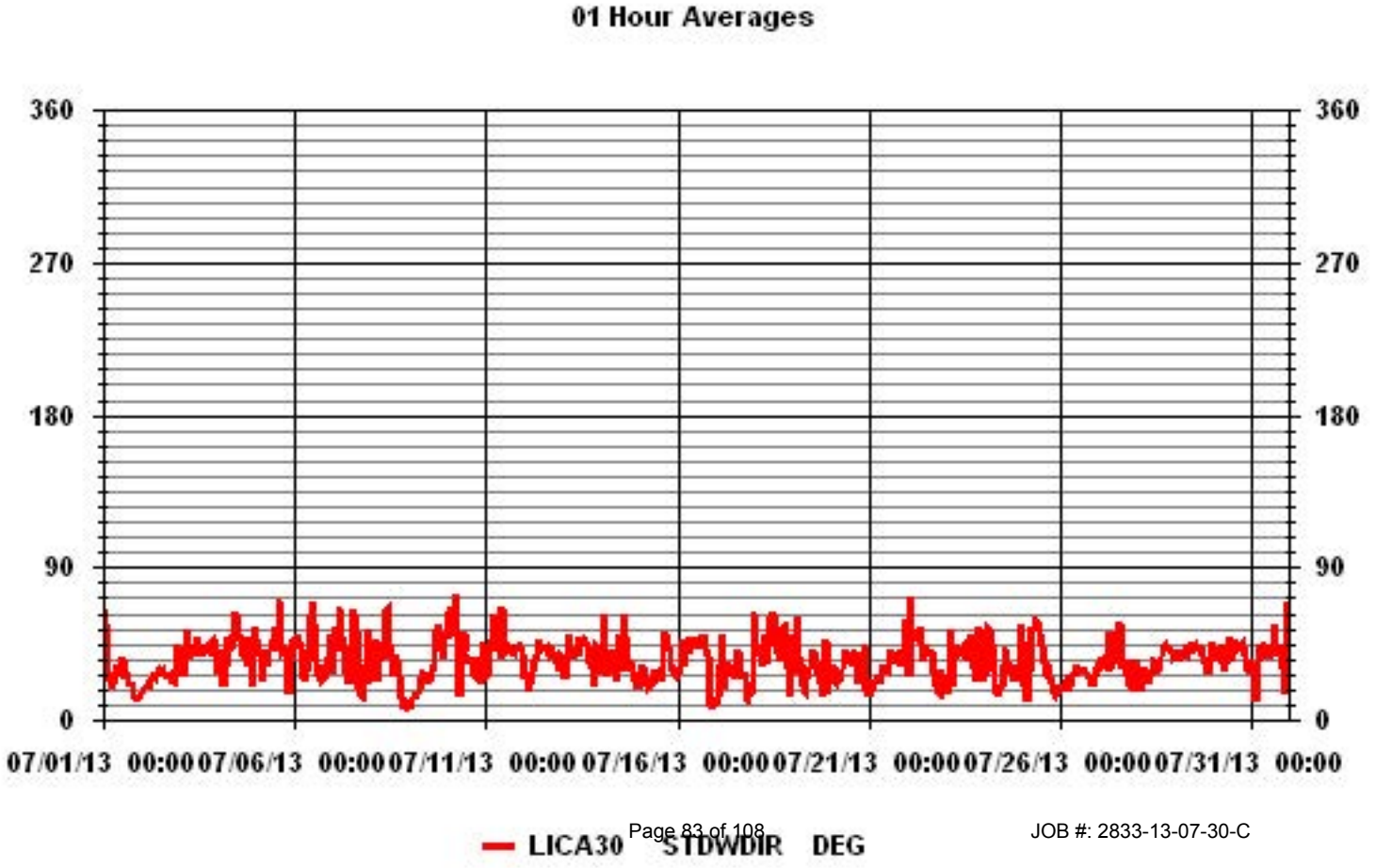
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY									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

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: 744 HRS



JOB #: 2833-13-07-30-C

Calibration Reports

Sulphur Dioxide

SO2 Calibration Report

Station Information

Calibration Date	July 15, 2013	Previous Calibration	June 19, 2013
Company	Lakeland Industry Community Assoication		
Plant / Location	LICA Maskwa		
Start Time (MST)	17:35	End Time (MST)	18:30
Reason:	As found point		
Barometric Pressure	27.84 in HG	Station Temperature	25 Deg C
Cal Gas	49.9 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO791		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0-1000 ppb							
Sample Flow / Box Temp	N/A ccm		N/A Deg C		N/A ccm		N/A Deg C	
HVPS / Lamp Setting	N/A		N/A		N/A		N/A	
PMT / RxCell Temp	N/A Deg C		N/A Deg C		N/A Deg C		N/A Deg C	
Converter / IZS Temp	N/A Deg C		N/A Deg C		N/A Deg C		N/A Deg C	
Offset / Slope	N/A		N/A		N/A		N/A	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	-5	N/A
	No Zero Adj.			
4920	80.0	798	775	1.0302
		Sum of Least Squares		
		New Correction Factor		1.0302

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	237.0	237.0
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0093
Current Correction Factor Before Span Adjust:	1.0302
Percent Change:	-2.0%

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

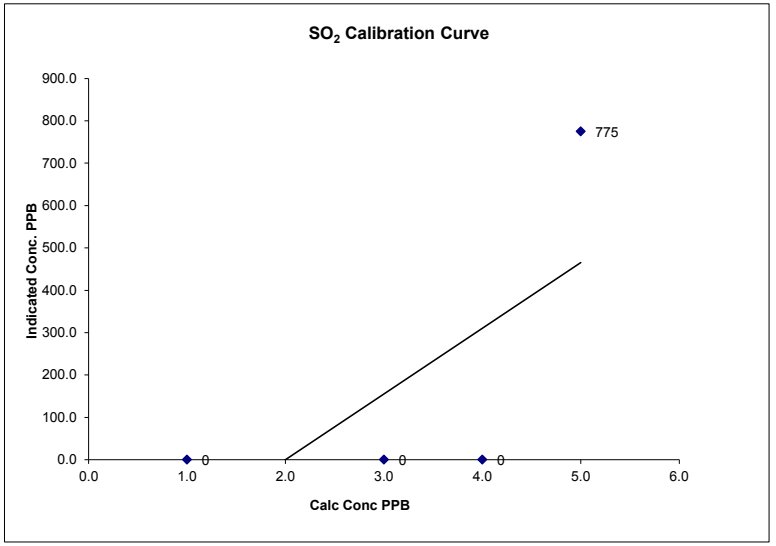
Analyzer LCD is not working. Unable to record before and after calibration data.

Calibration Performed by: Waseem Ahmed

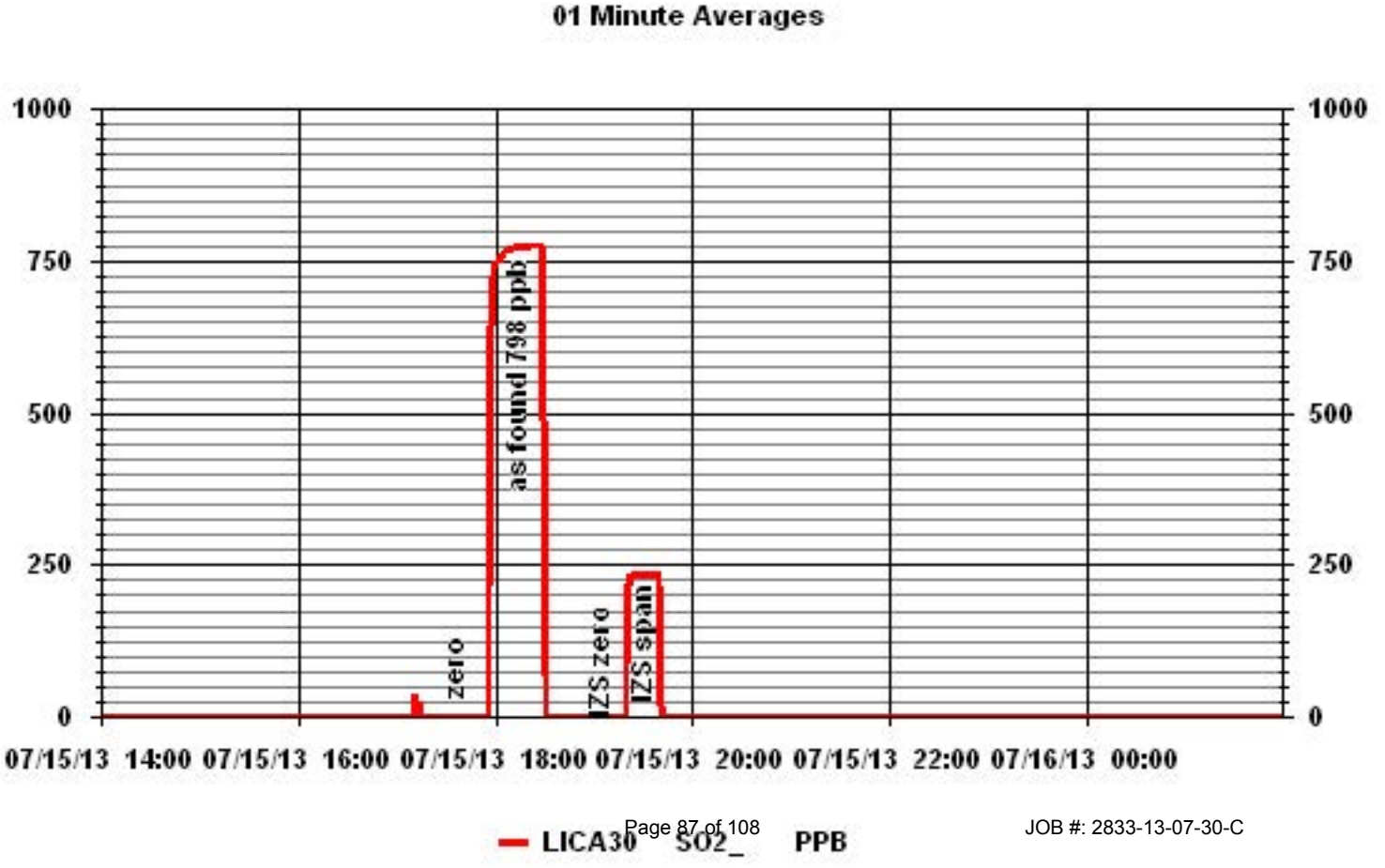
SO_2 Calibration Curve

Calibration Date	July 15, 2013		
Company	Lakeland Industry Community Assoication		
Plant / Location	LICA Maskwa		
Start Time (MST)	17:35	End Time (MST)	18:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0		N/A	Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)
798	775	1.0302	



Notes:



JOB #: 2833-13-07-30-C

SO2 Calibration Report

Station Information

Calibration Date	July 17, 2013	Previous Calibration	June 19, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	LICA Maskwa		
Start Time (MST)	9:35	End Time (MST)	10:30
Reason:	As Found Point		
Barometric Pressure	28.02 in HG	Station Temperature	25 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO791		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0-1000 ppb			
Sample Flow / Box Temp	597 ccm	31.4 Deg C	597 ccm	30.7 Deg C
HVPS / Lamp Setting	491	3435	491	3441
PMT / RxCell Temp	7.7 Deg C	49.9 Deg C	7.7 Deg C	50 Deg C
Converter / IZS Temp	N/A Deg C	45 Deg C	N/A Deg C	45.0 Deg C
Offset / Slope	80.4	0.953	80.4	0.953

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	-7	N/A
	No zero adj.			
4920	80.7	800	780	1.0262
		Sum of Least Squares		
		New Correction Factor		1.0262

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	237.0	237.0
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0093
Current Correction Factor Before Span Adjust:	1.0262
Percent Change:	-1.6%

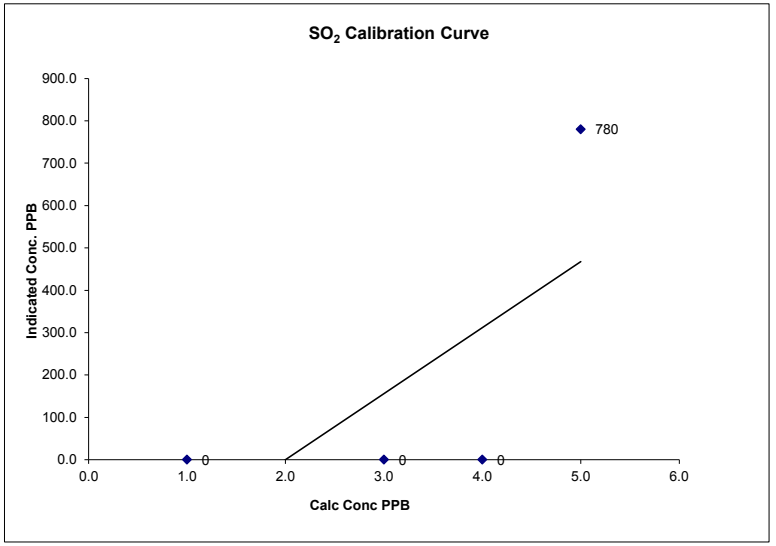
Notes: **N/A : Not applicable**

Calibration Performed by: Waseem Ahmed

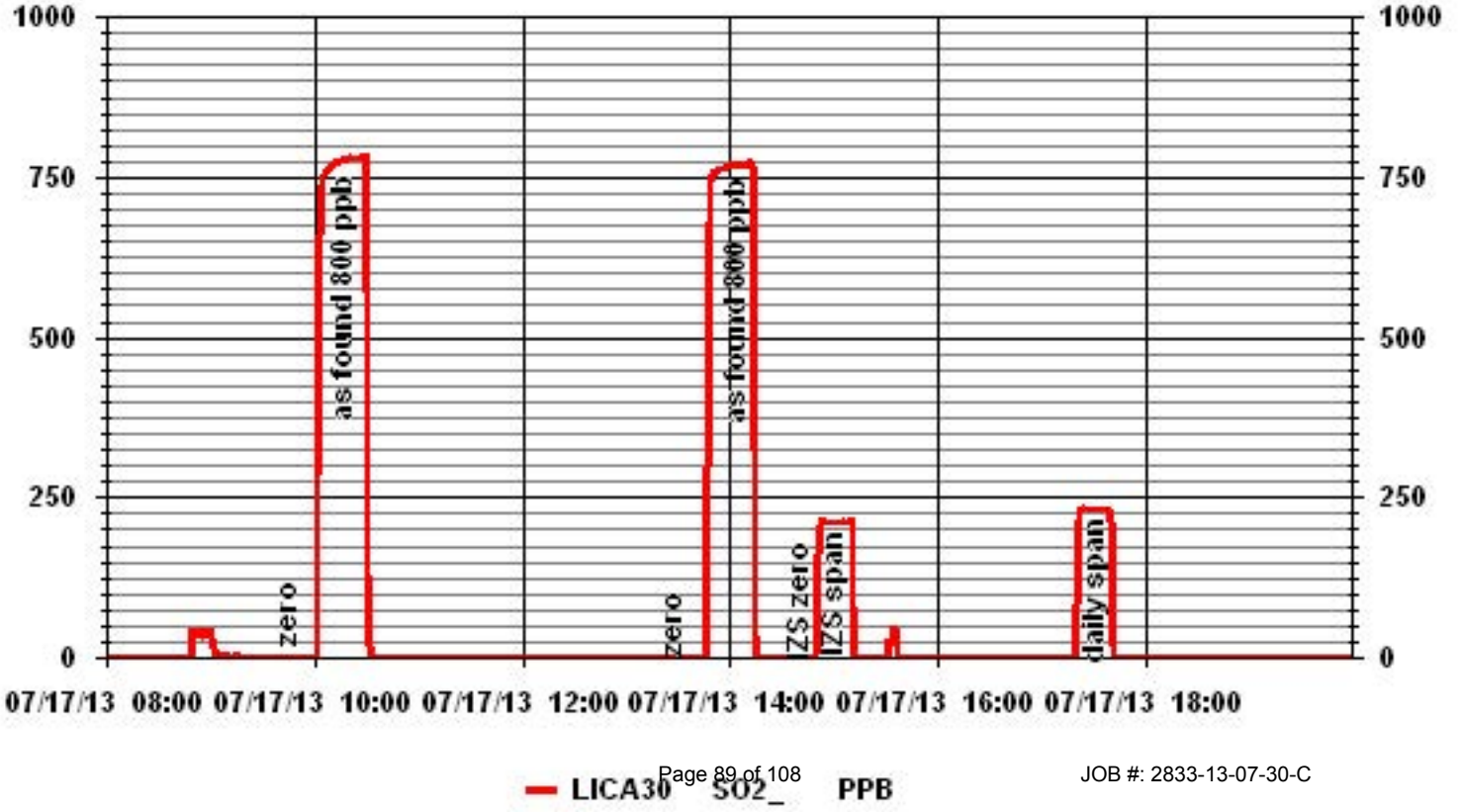
SO_2 Calibration Curve

Calibration Date	July 17, 2013		
Company	Lakeland Industry & Community Association		
Plant / Location	LICA Maskwa		
Start Time (MST)	9:35	End Time (MST)	10:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0		N/A	Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)
800	780	1.0262	



Notes:



JOB #: 2833-13-07-30-C

SO2 Calibration Report

Station Information

Calibration Date	July 18, 2013	Previous Calibration	June 19, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	LICA Maskwa		
Start Time (MST)	13:00	End Time (MST)	15:25
Reason:	Post repair calibration		
Barometric Pressure	27.82 in HG	Station Temperature	25 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO791		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0-1000 ppb					
Sample Flow / Box Temp	597 ccm		29.2 Deg C		596 ccm		28.9 Deg C	
HVPS / Lamp Setting	491		3448		491		3445	
PMT / RxCell Temp	7.7 Deg C		50 Deg C		7.7 Deg C		50 Deg C	
Converter / IZS Temp	N/A Deg C		45 Deg C		N/A Deg C		45.0 Deg C	
Offset / Slope	72.6		0.948		72.6		1.105	

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	80.4	798	800	0.9969
	No span adj.			
4960	40.3	400	401	0.9969
4980	20.0	198	199	0.9970
5000	0	0	0	N/A
			Sum of Least Squares	0.9969
			New Correction Factor	0.9969

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	237.0	237.0
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0093
Current Correction Factor Before Span Adjust:	0.9969
Percent Change:	1.2%

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

Change LCD, calibrate UV lamp and ananlig o/p

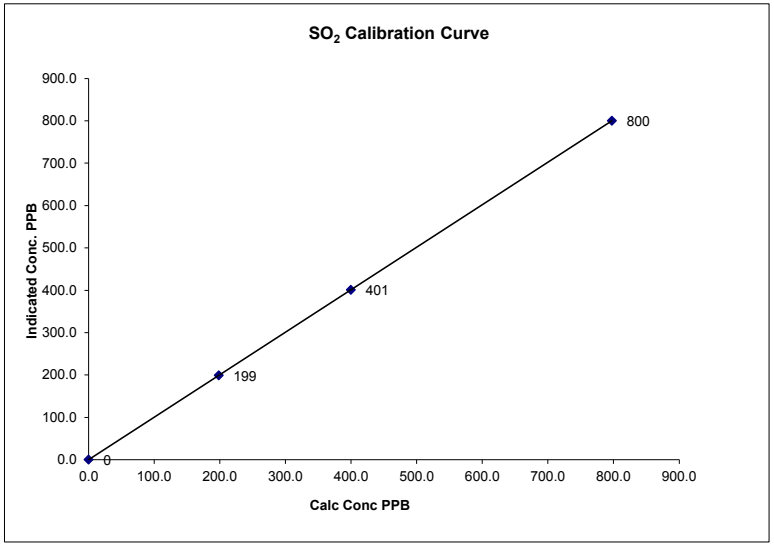
Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

Calibration Date	July 18, 2013		
Company	Lakeland Industry & Community Association		
Plant / Location	LICA Maskwa		
Start Time (MST)	13:00	End Time (MST)	15:25

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
198	199	0.9970
400	401	0.9969
798	800	0.9969

Correlation Coefficient	(≥ 0.995)	1.000000
Slope	(0.85 to 1.15)	1.003138
Intercept	(± 3% F.S.)	-0.008981



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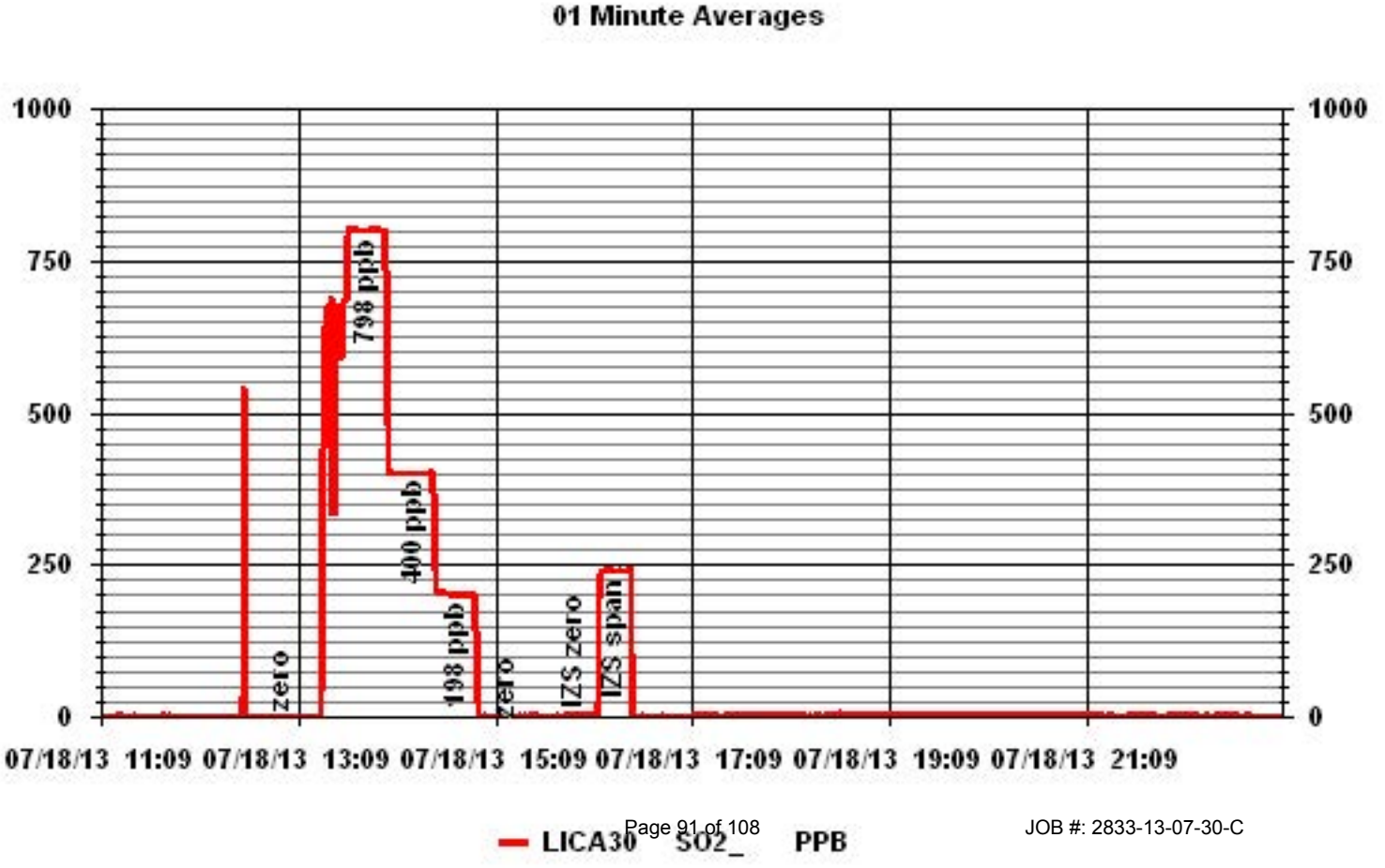


JOB #: 2833-13-07-30-C

Hydrogen Sulphide

H2S Calibration Report

Station Information

Calibration Date	July 17, 2013		Previous Calibration	June 19, 2013	
Company	Lakeland Industry & Community Association				
Plant / Location	LICA Maskwa				
Start Time (MST)	16:35		End Time (MST)	17:40	
Reason:	as found				
Barometric Pressure	27.92	in HG	Station Temperature	25	Deg C
Cal Gas	10.1 ppm		Gas Cyl. #	BLM00504	Cal Gas Expiry date: December 25, 2015
DAS Output Voltage	0-1	Volts	Chart Rec. Output	N/A	Volts

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	511	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO791		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range				0-100 ppb				
Sample Flow / Box Temp	515 ccm		32 Deg C		520 ccm		31.9 Deg C	
HVPS / Lamp Setting	548		2294		548		2292	
PMT / RxCell Temp	7.9 Deg C		50 Deg C		7.9 Deg C		50 Deg C	
Converter / IZS Temp	315 Deg C		45 Deg C		315 Deg C		45.0 Deg C	
Offset / Slope	29.2		1.043		29.2		1.043	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	-3	NA
	No zero adj.			
4960	39.6	80	73	1.0959
		Sum of Least Squares		
		New Correction Factor		1.0959

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	60.6	60.6
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0959
Percent Change:	-8.7%

Notes:

NA : Not Applicable

Highly unstable span response.

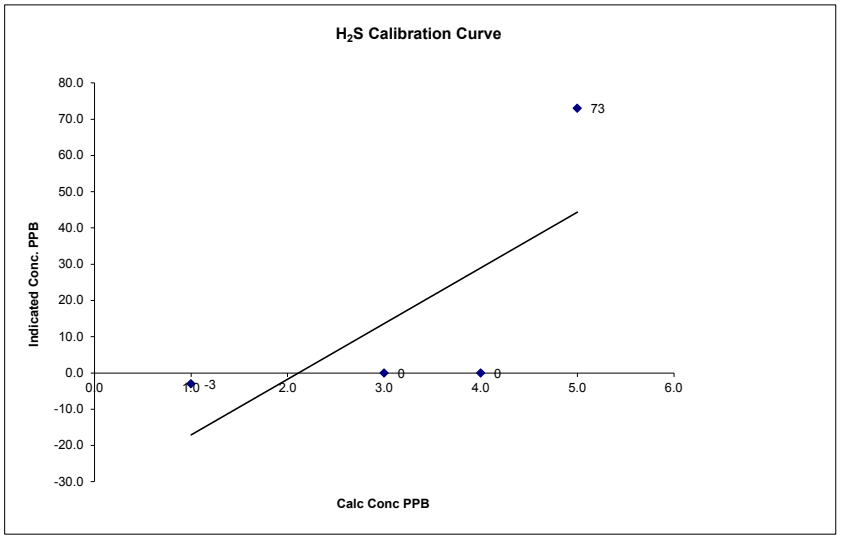
Change sample filter.

Calibration Performed by: Waseem Ahmed

H_2S Calibration Curve

Calibration Date	July 17, 2013				
Company	Lakeland Industry & Community Association				
Plant / Location	LICA Maskwa				
Start Time (MST)	16:35		End Time (MST)	17:40	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	
0	-3	NA	Slope (0.85 to 1.15)	
			Intercept (± 3% F.S.)	
80	73	1.0959		



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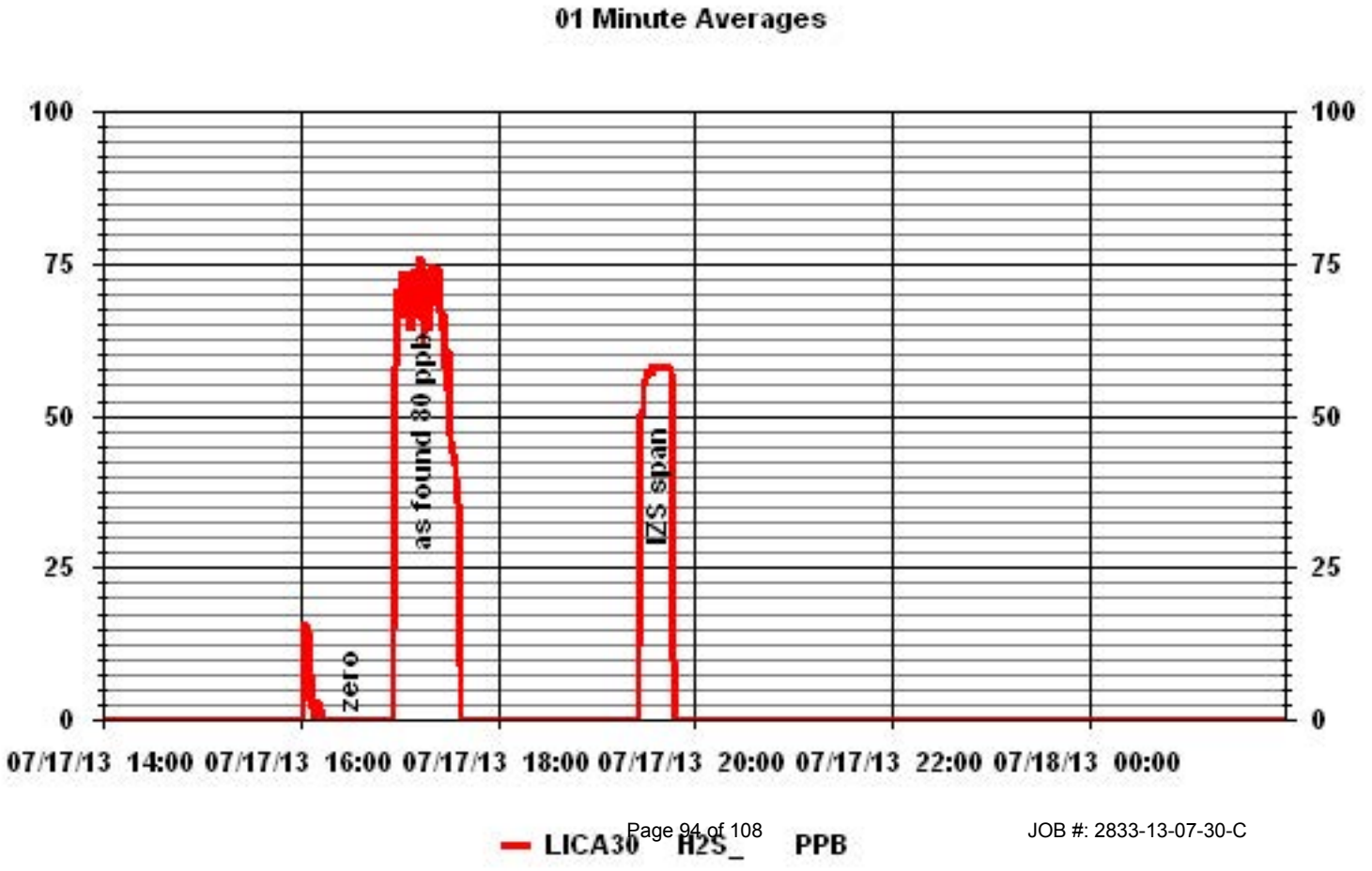


JOB #: 2833-13-07-30-C

H2S Calibration Report

Station Information

Calibration Date	July 18, 2013		Previous Calibration	June 19, 2013	
Company	Lakeland Industry & Community Association				
Plant / Location	LICA Maskwa				
Start Time (MST)	12:45		End Time (MST)	15:50	
Reason:	Post repair calibration				
Barometric Pressure	27.82	in HG	Station Temperature	25	Deg C
Cal Gas	10.1 ppm		Gas Cyl. #	BLM00504	Cal Gas Expiry date: December 25, 2015
DAS Output Voltage	0-1	Volts	Chart Rec. Output	N/A	Volts

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	511	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO791		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0-100	ppb				
Sample Flow / Box Temp	431	ccm	30.4	Deg C	429	ccm	30.2	Deg C
HVPS / Lamp Setting	548		2235		548		2234	
PMT / RxCell Temp	7.8	Deg C	50	Deg C	7.8	Deg C	50	Deg C
Converter / IZS Temp	315.3	Deg C	45	Deg C	315.7	Deg C	45.0	Deg C
Offset / Slope	22.2		0.999		27.1		1.03	

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	81	81	1.0000
	No span adj.			
4980	19.8	40	33	1.2120
4988	12.0	24	18	1.3467
5000	0	0	0	NA
			Sum of Least Squares	1.0500
			New Correction Factor	1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	60.6	60.6
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	0.0%

Notes: **NA : Not Applicable**

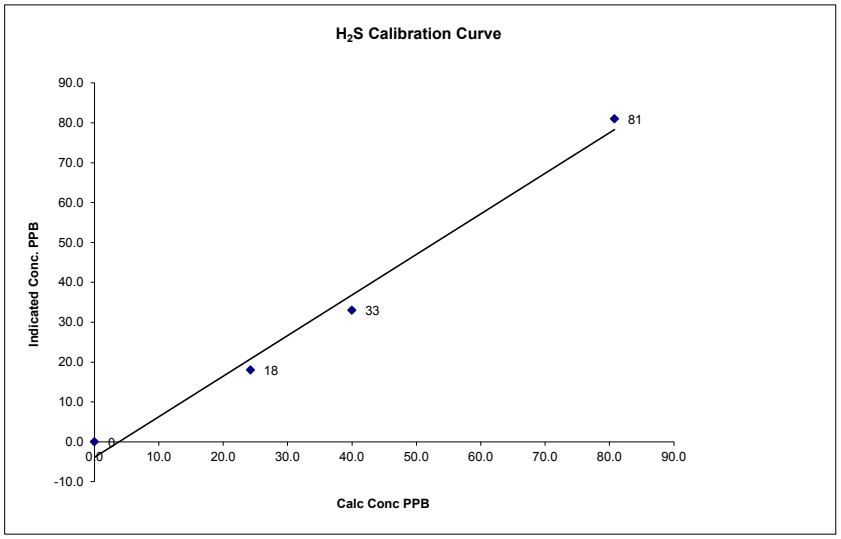
Calibration Performed by: Waseem Ahmed

H_2S Calibration Curve

Calibration Date	July 18, 2013				
Company	Lakeland Industry & Community Association				
Plant / Location	LICA Maskwa				
Start Time (MST)	12:45		End Time (MST)	15:50	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
24	18	1.3467
40	33	1.2120
81	81	0.9975

Correlation Coefficient	(≥ 0.995)	0.987705
Slope	(0.85 to 1.15)	1.016705
Intercept	(± 3% F.S.)	-3.865121



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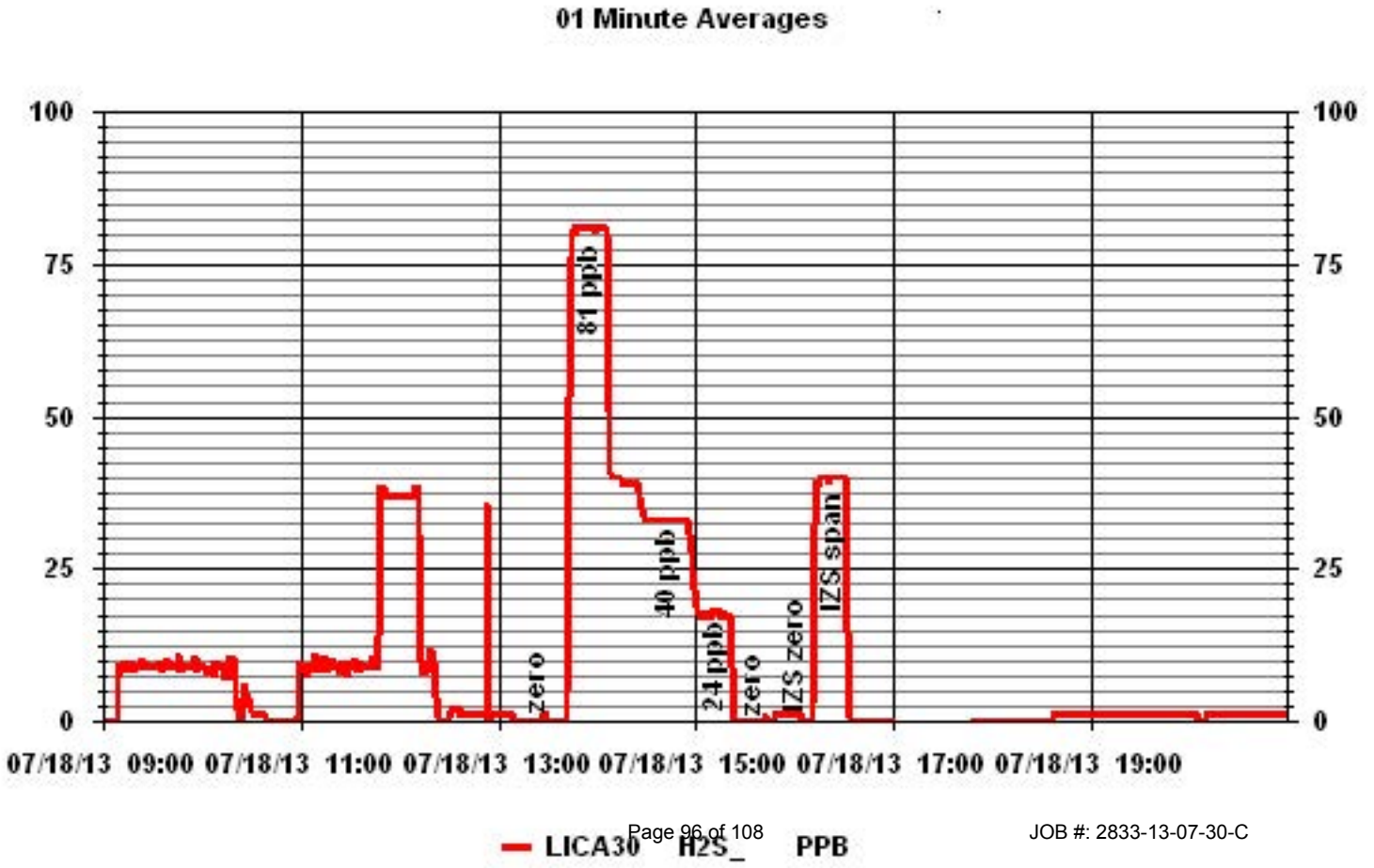


JOB #: 2833-13-07-30-C

H2S Calibration Report

Station Information

Calibration Date	July 19, 2013		Previous Calibration	N/A	
Company	Lakeland Industry & Community Association				
Plant / Location	LICA Maskwa				
Start Time (MST)	15:10		End Time (MST)	17:35	
Reason:	Install calibration				
Barometric Pressure	27.95	in HG	Station Temperature	23	Deg C
Cal Gas	10.1 ppm		Gas Cyl. #	BLM00504	Cal Gas Expiry date: December 25, 2015
DAS Output Voltage	0-1	Volts	Chart Rec. Output	N/A	Volts

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	722	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO791		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0-100	ppb				
Sample Flow / Box Temp	609	ccm	32.1	Deg C	609	ccm	32.7	Deg C
HVPS / Lamp Setting	675		1787		675		1782	
PMT / RxCell Temp	8.2	Deg C	50	Deg C	8.2	Deg C	50	Deg C
Converter / IZS Temp	315.1	Deg C	45	Deg C	314.9	Deg C	45.0	Deg C
Offset / Slope	88.4		0.96		89.3		0.85	

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	81	81	1.0000
	No span adj.			
4980	20.1	41	41	1.0000
4988	12.0	24	24	1.0000
5000	0	0	0	NA
			Sum of Least Squares	0.9970
			New Correction Factor	1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	N/A	0.0
Auto Span	N/A	60.6
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	N/A
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	#VALUE!

Notes:

NA : Not Applicable

First zero is unstable range 1.3 to -1.2

change sample filter.

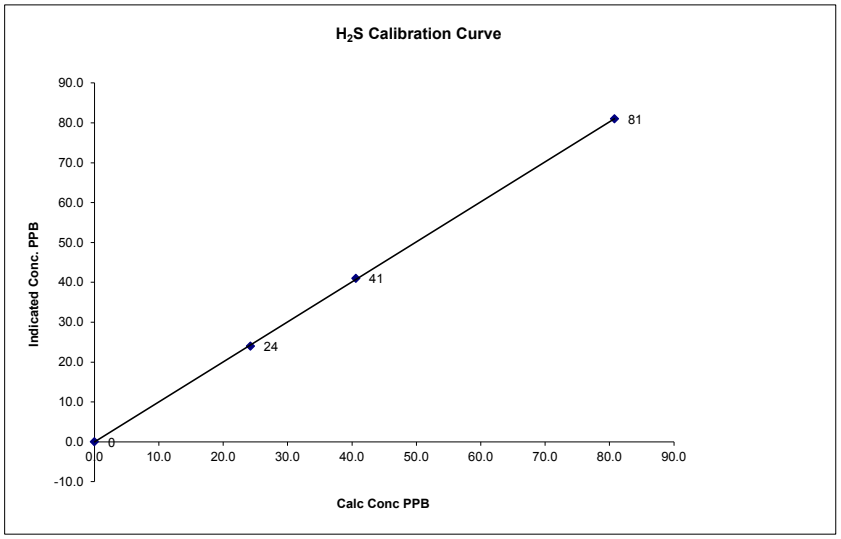
Calibration Performed by: Waseem Ahmed

H_2S Calibration Curve

Calibration Date	July 19, 2013				
Company	Lakeland Industry & Community Association				
Plant / Location	LICA Maskwa				
Start Time (MST)	15:10		End Time (MST)	17:35	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
24	24	1.0100
41	41	0.9903
81	81	0.9975

Correlation Coefficient	(≥ 0.995)	0.999951
Slope	(0.85 to 1.15)	1.003891
Intercept	(± 3% F.S.)	-0.051971



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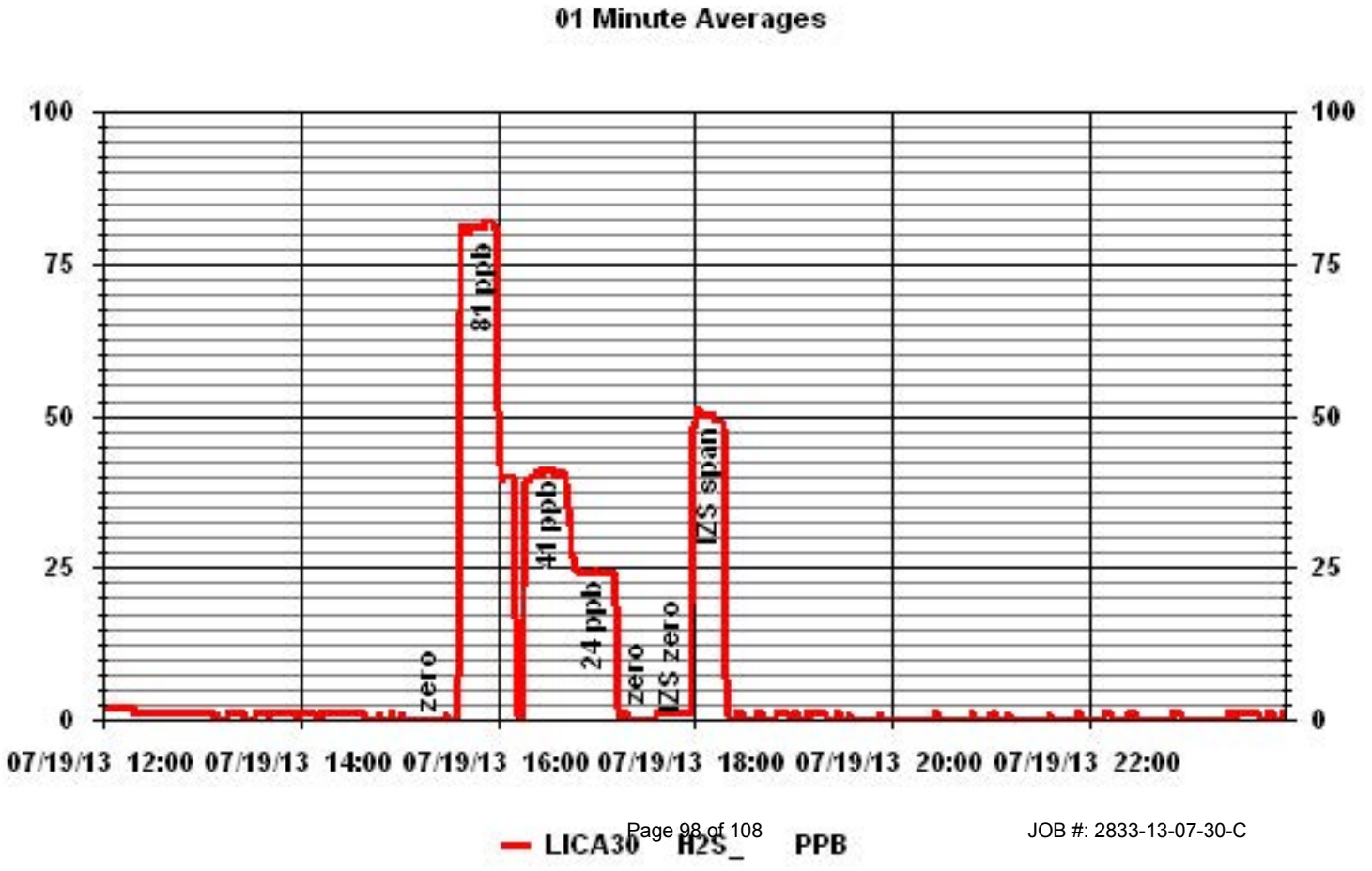


JOB #: 2833-13-07-30-C

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	July 17, 2013		Previous Calibration	June 19, 2013	
Company:	**Lakeland Industry & Community Association**				
Plant / Location:	**LICA Maskwa**				
Start Time (MST)	10:55		End Time (MST)	13:15	
Reason:	Monthly calibration				
Barometric Pressure:	28	atm	Station Temperature:	25	Deg C
Calibrator:	API 700		S/N:	690	
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 :	AO791	
Chart Recorder:	N/A		S/N:	N/A	
Output Voltage Range:	0-10	VDC	Chart Speed:	N/A	mm/hr

Analyzer Information

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

Analyzer Settings

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

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2000	0.0	0.0	0.0	N/A
	No zero adj.			
2000	74.0	41.4	41.3	1.0030
2000	74.0	41.4	41.4	1.0000
2000	36.8	21.0	21.0	1.0000
2000	20.0	11.5	11.3	1.0173
2000	0.0	0.0	0.0	N/A
			New Correction Factor:	1.0000

Percent Change

Previous Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0030
Percent Change:	-0.3%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	34.06	34.06
Sample Lines Connected		**Yes**

Cylinder Pressures

Span 650 psi Hydrogen 1525 psi Zero Air 32 psi

Notes: **N/A : Not Applicable**
Change sample filter
Spare H2=01, Span =01

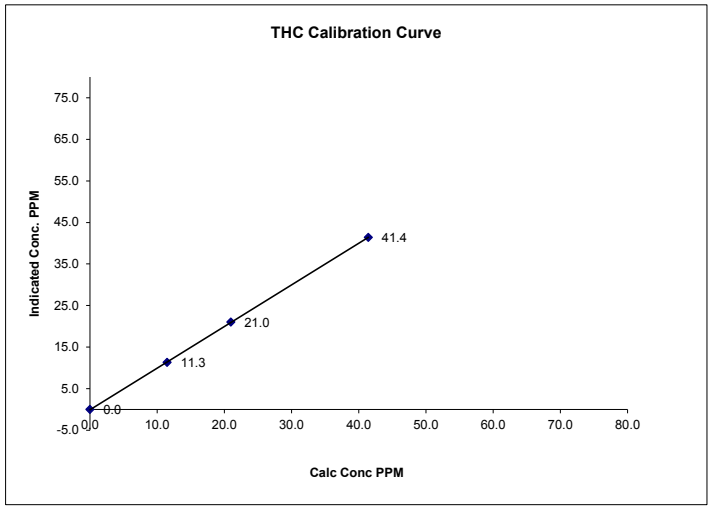
Calibration Performed by: Waseem Ahmed

THC Calibration Curve

Calibration Date	July 17, 2013		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA Maskwa**		
Start Time (MST)	10:55	End Time (MST)	13:15

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	N/A
11.5	11.3	1.0173
21.0	21.0	1.0000
41.4	41.4	1.0000

Correlation Coefficient	(≥ 0.995)	0.999969
Slope	(0.85 to 1.15)	1.000934
Intercept	(± 3% F.S.)	-0.06621



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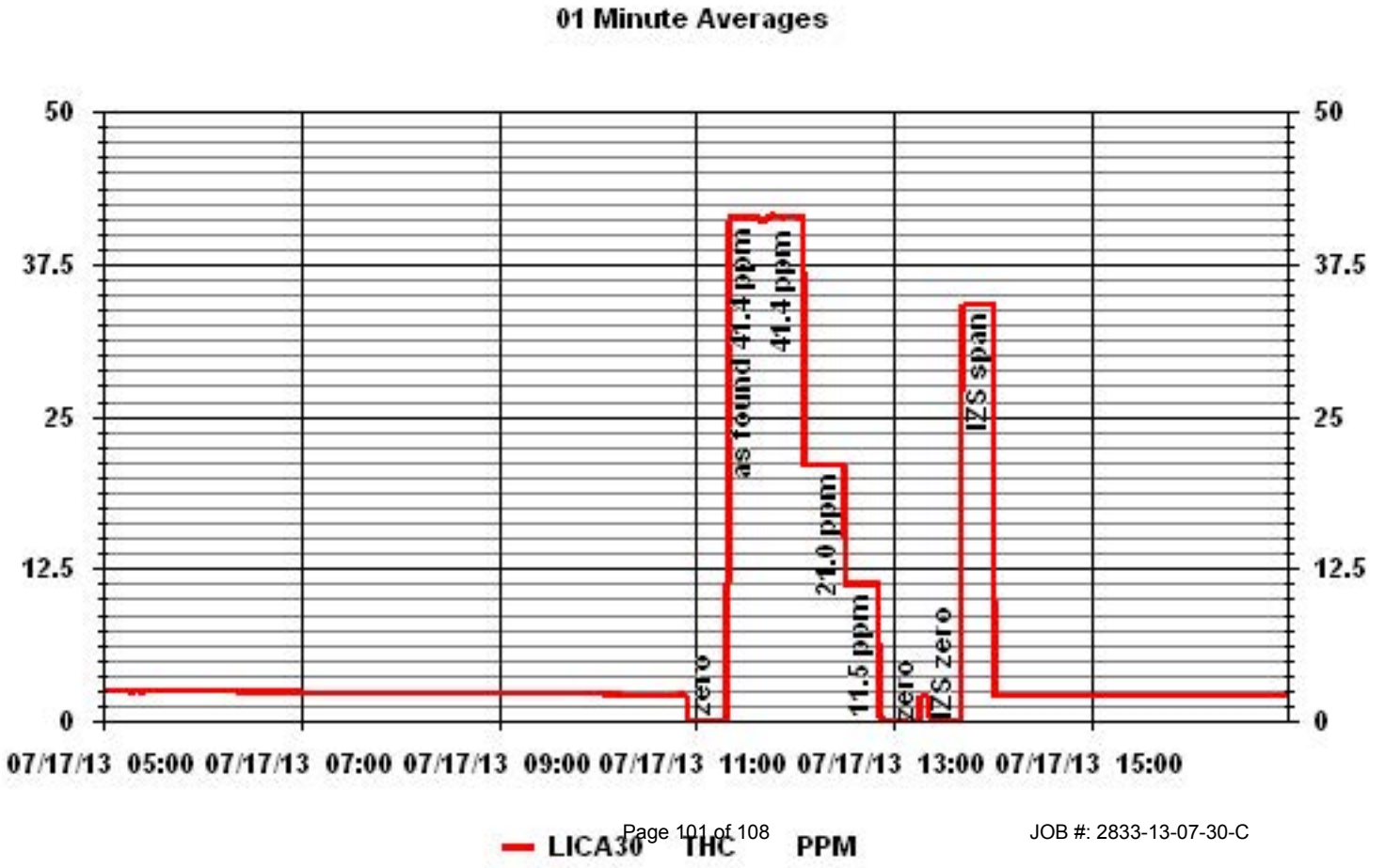


JOB #: 2833-13-07-30-C

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 17, 2013		Previous Calibration	June 19, 2013	
Company	LICA		Plant/Location	LICA Maskwa	
Start Time (MST)	9:35		End Time (MST)	10:30	
Reason:	As Found Point				
Barometric Pressure	28.02 in HG	Station Temperature	25 Deg C	MFCF	N/A
Cal Gas Concentration	NOx 49.6 ppm	NO 49.2 ppm	Cal Gas Expiry date	December 29, 2016	
Cal Gas Cylinder #	BAL 3031				
DAS Output Voltage	0-1 Volts		Chart Rec. Output	N/A Volts	

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	594	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO791		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range				0-1000			ppb		
Sample Flow/Conv. Temp	453	ccm	314	Deg C		453	ccm	313.7	Deg C
Ozone Flow / Vacuum	79	ccm	4.6	"Hg-A		79	ccm	4.6	"Hg-A
HVPS / A ZERO	751	Volts	15.7	MV		751	Volts	15.8	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	32.3	Deg C	42.4	Deg C		32.1	Deg C	42.0	Deg C
Offset	0.4	NOx	0.0	NO		0.4	NOx	0.0	NO
Slope	1.120	NOx	1.117	NO		1.120	NOx	1.117	NO
NO_2 COEF / Conv Efficency	N/A	NO2	0.994			N/A	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
5000	0.0	NA	0	0	NA	0	-1	0	NA	NA
	No zero adj.									
4920	80.7	NA	800	794	NA	797	795	1	1.0043	0.9975

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		

Linearity			Sum of Least Squares	NOx=		NO=	NO2=
OK?	Yes	No	Correction Factors:	NOx=	1.0043	NO= 0.9975	NO2=
				Average Converter Efficiency=			

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	551.9	NOx	545.1	NO2		551.9	NOx	545.1	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	1.007	1.004	
Current Correction Factor Before Span Adjust	1.004	0.997	
Percent Change	0.2%	0.6%	

Notes

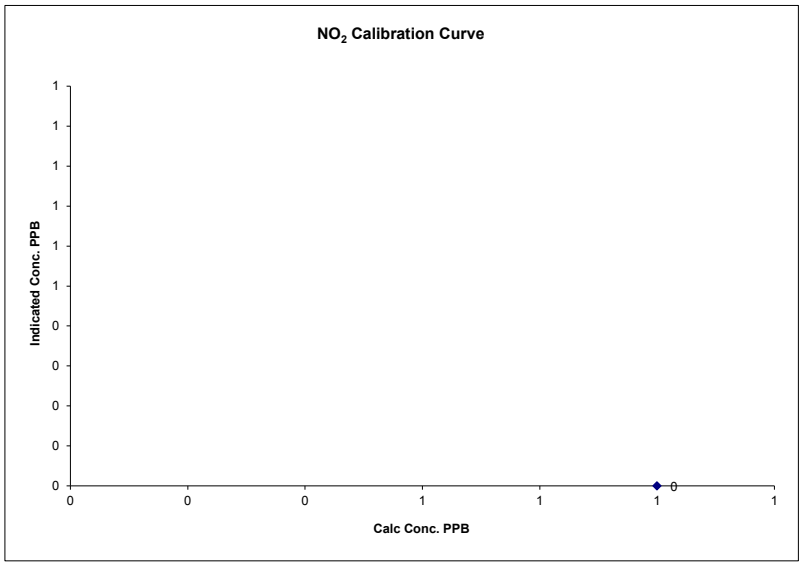
NA : Not Applicable

Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 17, 2013		
Company	**LICA**		
Plant / Location	**LICA Maskwa**		
Start Time (MST)	9:35	End Time (MST)	10:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
1			Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)



Notes:

JOB #: 2833-13-07-30-C

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 17, 2013		Previous Calibration	June 19, 2013	
Company	LICA		Plant/Location	LICA Maskwa	
Start Time (MST)	11:00		End Time (MST)	11:58	
Reason:	As found				
Barometric Pressure	28 in HG	Station Temperature	25 Deg C	MFCF	N/A
Cal Gas Concentration	NOx 49.6 ppm	NO 49.2 ppm	Cal Gas Expiry date	December 29, 2016	
Cal Gas Cylinder #	BAL 3031				
DAS Output Voltage	0-1 Volts		Chart Rec. Output	N/A Volts	

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	594	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO791		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range				0-1000			ppb		
Sample Flow/Conv. Temp	453	ccm	315	Deg C		451	ccm	315	Deg C
Ozone Flow / Vacuum	79	ccm	7.9	"Hg-A		79	ccm	7.9	"Hg-A
HVPS / A ZERO	751	Volts	15.1	MV		751	Volts	15.4	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.6	Deg C		50.0	Deg C	6.6	Deg C
Box Temp / IZS Temp	31.5	Deg C	42.2	Deg C		31.4	Deg C	42.1	Deg C
Offset	0.4	NOx	0.0	NO		0.4	NOx	0.0	NO
Slope	1.120	NOx	1.117	NO		1.120	NOx	1.117	NO
NO_2 COEF / Conv Efficency	N/A	NO2	0.994			N/A	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
5000	0.0	NA	0	0	NA	0	-1	0	NA	NA
	No zero adj.									
4920	80.7	NA	800	794	NA	940	940	0	0.8515	0.8438

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		

Linearity			Sum of Least Squares	NOx=		NO=	NO2=
OK?	Yes	No	Correction Factors:	NOx=	0.8515	NO= 0.8438	NO2=
				Average Converter Efficiency=			

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	551.9	NOx	545.1	NO2		551.9	NOx	545.1	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	1.007	1.004	
Current Correction Factor Before Span Adjust	0.852	0.844	
Percent Change	18.2%	18.9%	

Notes

NA : Not Applicable

Change sample filter.

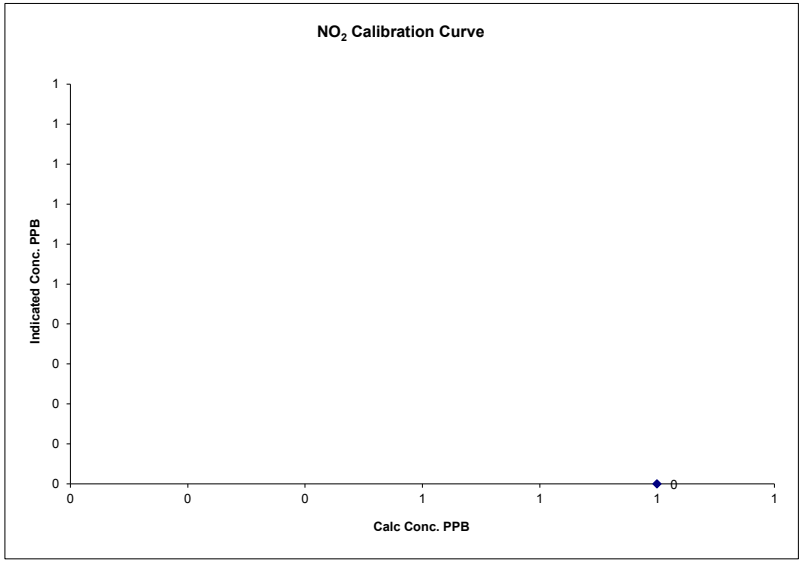
Change NOx in-line filter

Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 17, 2013		
Company	LICA		
Plant / Location	LICA Maskwa		
Start Time (MST)	11:00	End Time (MST)	11:58

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



Notes:

JOB #: 2833-13-07-30-C

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 17, 2013		Previous Calibration	June 19, 2013	
Company	LICA		Plant/Location	LICA Maskwa	
Start Time (MST)	13:25		End Time (MST)	14:12	
Reason:	As found				
Barometric Pressure	27.96 in HG	Station Temperature	25 Deg C	MFCF	N/A
Cal Gas Concentration	NOx 49.6 ppm	NO 49.2 ppm	Cal Gas Expiry date	December 29, 2016	
Cal Gas Cylinder #	BAL 3031				
DAS Output Voltage	0-1 Volts		Chart Rec. Output	N/A Volts	

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	594	Method:	Chemiluminescent
Calibrator Make / Model:	API 700	S/N:	690		
DAS Make / Model:	ESC 8832	S/N :	AO791		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range				0-1000			ppb		
Sample Flow/Conv. Temp	449	ccm	315	Deg C		452	ccm	315	Deg C
Ozone Flow / Vacuum	79	ccm	7.9	"Hg-A		79	ccm	7.9	"Hg-A
HVPS / A ZERO	751	Volts	15.1	MV		751	Volts	15.1	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.6	Deg C		50.0	Deg C	6.6	Deg C
Box Temp / IZS Temp	31.0	Deg C	42.1	Deg C		31.1	Deg C	42.0	Deg C
Offset	0.4	NOx	0.0	NO		0.4	NOx	0.0	NO
Slope	1.120	NOx	1.117	NO		1.120	NOx	1.117	NO
NO_2 COEF / Conv Efficency	N/A	NO2	0.994			N/A	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
5000	0.0	NA	0	0	NA	0	0	0	NA	NA
	No zero adj.									
4920	80.7	NA	800	794	NA	915	913	2	0.8748	0.8696

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		

Linearity			Sum of Least Squares	NOx=		NO=	NO2=
OK?	Yes	No	Correction Factors:	NOx=	0.8748	NO= 0.8696	NO2=
				Average Converter Efficiency=			

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	551.9	NOx	545.1	NO2		551.9	NOx	545.1	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	1.007	1.004	
Current Correction Factor Before Span Adjust	0.875	0.870	
Percent Change	15.1%	15.4%	

Notes **NA : Not Applicable**

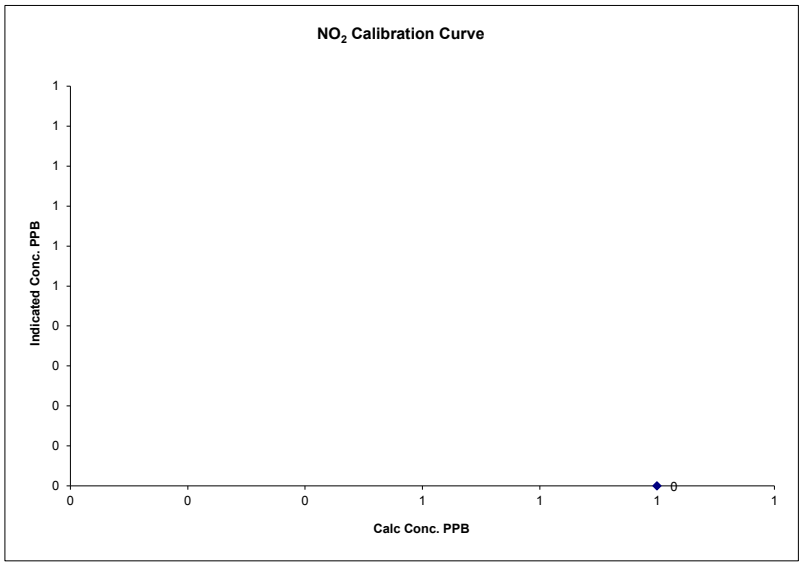
Change sample filter.

Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 17, 2013		
Company	LICA		
Plant / Location	LICA Maskwa		
Start Time (MST)	13:25	End Time (MST)	14:12

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	
2			Slope (0.85 to 1.15)	
			Intercept (± 3% F.S.)	



Notes:

JOB #: 2833-13-07-30-C

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 17, 2013	Previous Calibration	June 19, 2013
Company	LICA	Plant/Location	LICA Maskwa
Start Time (MST)	15:18	End Time (MST)	19:05
Reason:	Monthly calibration		
Barometric Pressure	28.93 in HG	Station Temperature	25 Deg C
Cal Gas Concentration	NOx 49.6 ppm NO 49.2 ppm	Cal Gas Expiry date	December 29, 2016
Cal Gas Cylinder #	BAL 3031		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	594
Calibrator Make / Model:	Environics 6100	S/N:	4760
DAS Make / Model:	ESC 8832	S/N :	AO791
Chart Recorder Make / Model:	N/A	S/N:	N/A
Flow Meter:	Environics 6100	S/N :	4760

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range				0-1000			ppb		
Sample Flow/Conv. Temp	451	ccm	315	Deg C		451	ccm	316	Deg C
Ozone Flow / Vacuum	79	ccm	4.7	"Hg-A		79	ccm	4.7	"Hg-A
HVPS / A ZERO	751	Volts	15.4	MV		751	Volts	15.9	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.6	Deg C		50.0	Deg C	6.6	Deg C
Box Temp / IZS Temp	31.1	Deg C	42.2	Deg C		30.8	Deg C	42.3	Deg C
Offset	0.4	NOx	0.0	NO		0.4	NOx	0.0	NO
Slope	1.120	NOx	1.117	NO		1.109	NOx	1.100	NO
NO_2 COEF / Conv Efficency	N/A	NO2	0.994			N/A	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
5000	0.0	NA	0	0	NA	0	0	0	NA	NA
	No zero adj.									
4920	80.8	NA	801	795	NA	808	806	2	0.9918	0.9863
4920	80.8	NA	801	795	NA	800	795	5	1.0018	1.0000
4960	40.3	NA	400	397	NA	399	395	3	1.0019	1.0039
4980	20.4	NA	202	201	NA	204	202	1	0.9919	0.9937
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			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4920	80.8	NA	801	795	NA	802	796	5	NA	NA
4920	80.8	600	801	NA	505	801	296	505	1.0000	100.00%
	No adj.									
4920	80.8	300	801	NA	257	803	544	258	0.9961	100.40%
4920	80.8	120	801	NA	106	802	695	107	0.9907	100.99%

Linearity			Sum of Least Squares	NOx= 1.001	NO= 1.000	NO2= 0.999
OK?	Yes	No	Correction Factors:	NOx= 1.0018	NO= 1.0000	NO2= 1.0000
				Average Converter Efficiency= 100.46%		

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	551.9	NOx	545.1	NO2		547	NOx	540	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	1.007	1.004	0.996
Current Correction Factor Before Span Adjust	0.992	0.986	1.000
Percent Change	1.5%	1.7%	-0.4%

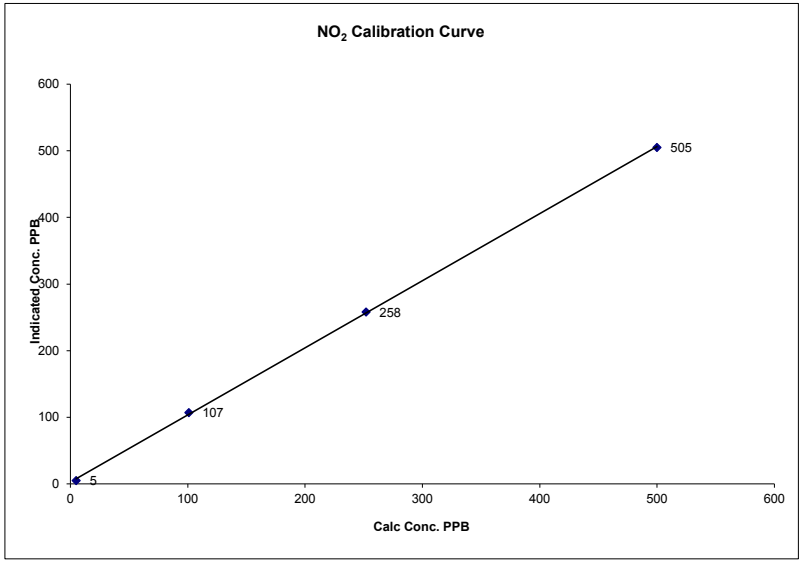
Notes **NA : Not Applicable**

Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 17, 2013		
Company	LICA		
Plant / Location	LICA Maskwa		
Start Time (MST)	15:18	End Time (MST)	19:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999873
			Slope (0.85 to 1.15)	1.006955
5	5	NA	Intercept (± 3% F.S.)	2.75821
101	107	0.9439		
252	258	0.9767		
500	505	0.9901		



Notes:

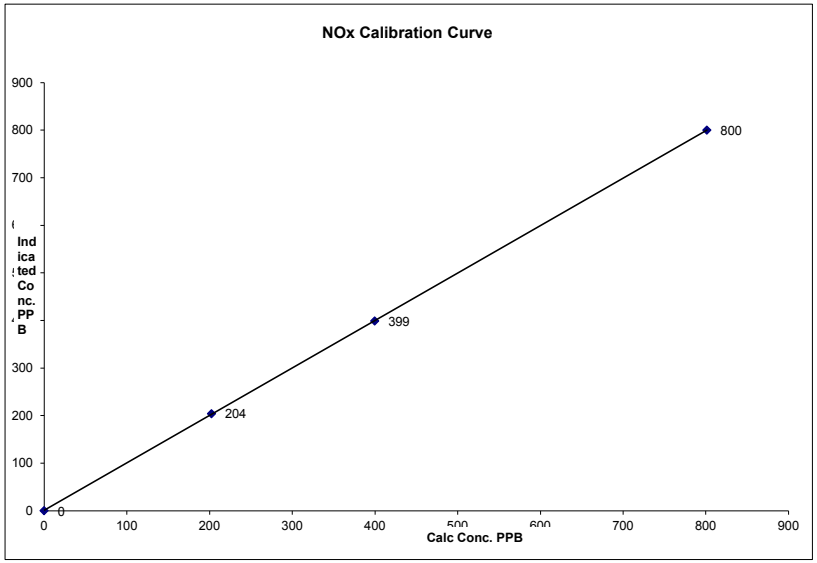
JOB #: 2833-13-07-30-C

NOx Calibration Curve

Calibration Date	July 17, 2013		
Company	LICA		
Plant / Location	LICA Maskwa		
Start Time (MST)	15:18	End Time (MST)	19:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
202	204	0.9919
400	399	1.0019
801	800	1.0018

Correlation Coefficient	(≥ 0.995)	0.999992
Slope	(0.85 to 1.15)	0.997387
Intercept	(± 3% F.S.)	0.78878



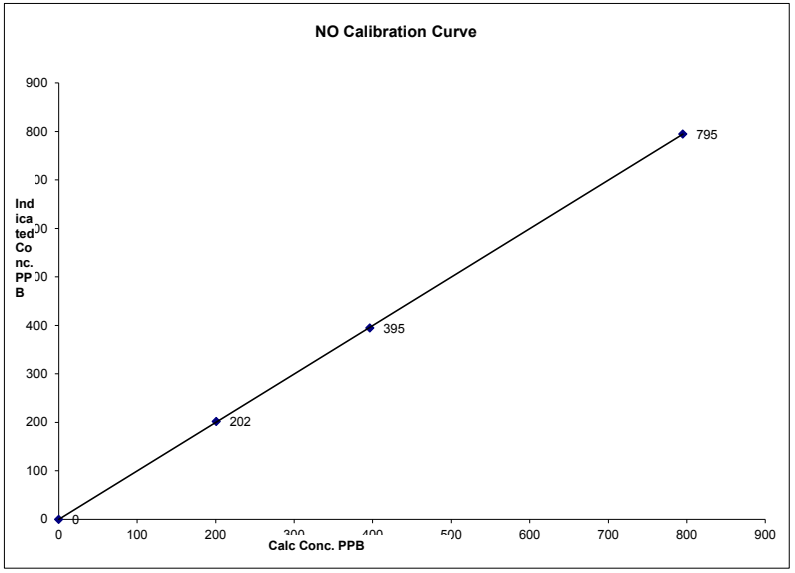
Notes:

NO Calibration Curve

Calibration Date	July 17, 2013		
Company	LICA		
Plant / Location	LICA Maskwa		
Start Time (MST)	15:18	End Time (MST)	19:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
201	202	0.9937
397	395	1.0039
795	795	1.0000

Correlation Coefficient	(≥ 0.995)	0.999989
Slope	(0.85 to 1.15)	0.999310
Intercept	(± 3% F.S.)	0.19194



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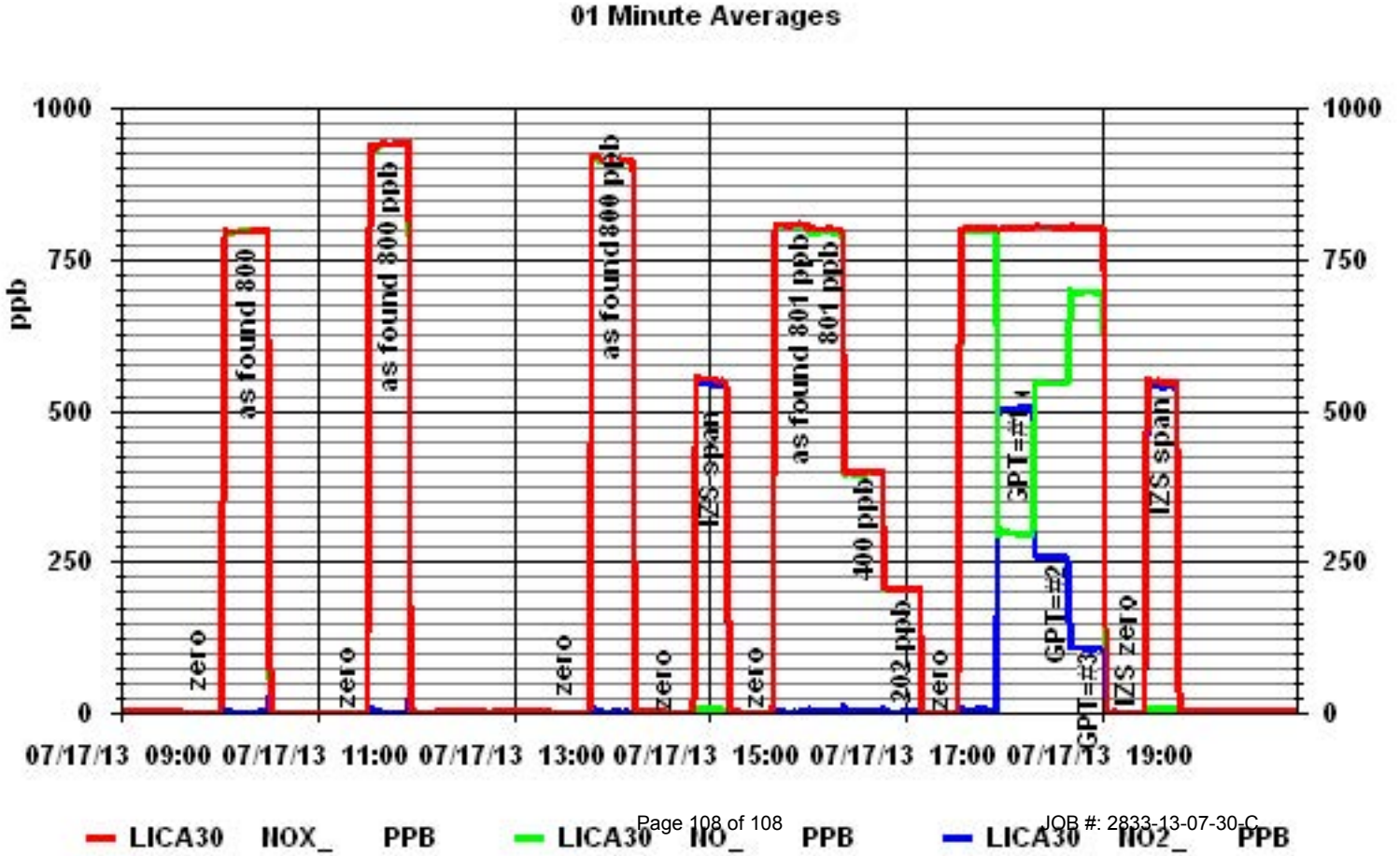
01 Minute Averages
1000
750
500
250
0
ppb
zero
as found 800
as found 800 ppb
as found 800 ppb
IZS span
as found 801 ppb
801 ppb
400 ppb
202 ppb
GPT=#1
GPT=#2
GPT=#3
IZS zero
IZS span
07/17/13 09:00
07/17/13 11:00
07/17/13 13:00
07/17/13 15:00
07/17/13 17:00
07/17/13 19:00
LICA30 NOX_ PPB
LICA30 NO_ PPB
LICA30 NO2_ PPB

Lakeland Industry & Community Association

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

Prepared By:

September 4, 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: July 2013

The monthly ambient data report:

- Prepared by Lili Zhou
- Reviewed by Lily Lin

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 – July 2013

LICA ST. LINA SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO2 (PPB)	172	48	0	0	0.67	14	29	9	12.4	320(NW)	1.6	20	93.4
H2S (PPB)	10	3	0	0	0.74	3	27	5	9.3	122(ESE)	1.4	5	85.1
THC (PPM)	-	-	-	-	2.02	3.6	21	19	1.9	9(N)	2.4	24	98.4
OZONE (PPB)	82	-	0	-	26.2	52	9	14	12.8	235(SW)	36.6	17	98.3
NOx (PPB)	-	-	-	-	0.94	8.0	24	5	3.7	69(ENE)	2.3	24	90.2
NO (PPB)	-	-	-	-	0.20	2.4	8	6	4.6	241(WSW)	0.7	17	90.2
NO_2 (PPB)	159	-	0	-	0.74	6.7	24	5	3.7	69(ENE)	1.9	24	90.2
PM2.5 (ug/m3)	-	30	-	0	1.62	16	2	23	17.1	30(NNE)	4.4	16	46.4
TEMPERATURE (DEGREE C)	-	-	-	-	16.69	31.3	2	14	13.7	200(SSW)	24.8	2	99.3
BP (MILLIBAR)	-	-	-	-	929	938	25	VAR	VAR	VAR	936.9	25	99.3
RH (%)	-	-	-	-	67.82	91	VAR	VAR	VAR	VAR	84.8	20	99.3
PRECIPITATION (MM)	-	-	-	-	0.10	8.4	18	23	15.2	291(WNW)	15.7	19	99.6
VECTOR WS (KPH)	-	-	-	-	8.83	28.3	28	13	-	256(WSW)	15.4	12	99.3
VECTOR WD (DEGREES)	-	-	-	-	270(W)	-	-	-	-	-	-	-	99.3

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 monthly calibration was performed on July 9th. The inlet filter was changed before the monthly calibration was started. The PMT and slope adjustments were performed after the calibration was completed. On July 11th, it was found that the calibrator that was used on July 9th was not working properly. The PMT and Slope was adjusted and a post-repair calibration was performed on July 11th. Data between July 9th during hour 14 and July 11th during hour 8 were invalidated due to this event. 43 hours of data were invalidated. Following the as found points check on July 23rd, the UV lamp was calibrated. A post-repair calibration was performed after the maintenance. During the site visit on July 29th, it was found that a faulty warning appeared on the screen. The warning was unable to be cleared. Performed a hard reset instead. An as found points check was then performed. The result was within the acceptable range. Data between hour 7 and hour 11 on July 31st are missing due to a power failure. Hourly data collected on July 31st at hour 12 was also invalidated as the analyzer was recovering from the power failure. Data was corrected using daily zero information.

Hydrogen Sulphide (PPB)
Analyzer make / model - API 101E, S/N: 510
The monthly calibration was performed on July 9th. The inlet filter was changed before the monthly calibration was started. The PMT and slope adjustments were performed after the calibration was completed. On July 11th, it was found that the calibrator that was used on July 9th was not working properly. The PMT and Slope was adjusted and a post-repair calibration was performed on July 13th. Data between July 9th during hour 14 and July 13th during hour 10 were invalidated due to this event. 94 hours of data were invalidated. The analyzer spanned high on July 16thdue to the sample pump failure. The pump was rebuilt on July 16th, and the post-repair calibration was performed on July 17th. Data between hour 7 and hour 11 on July 31st are missing due to a power failure. 9 hours of data were invalidated. Hourly data collected on July 31st at hour 12 was also invalidated as the analyzer was recovering from the power failure. 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: 04366-09739
No operational issue was observed this month. The channel was put into the maintenance mode for the calibrator verification on July 11th for four hours. The monthly calibration was performed on July 13th. The inlet filter was changed before the monthly calibration was started. The analyzer did not span on July 17th as the span gas pressure was set incorrectly after the gas cylinder replacement. An as found points check was performed on July 19th. The result was good. The gas pressure setting was corrected following the AF check. This issue did not affect the data quality. Data between hour 7 and hour 11 on July 31st are missing due to a power failure. Hourly data collected on July 31st at hour 12 was also invalidated as the analyzer was recovering from the power failure. Data was corrected using daily zero information.

Nitrogen Dioxide (PPB)
Analyzer make / model - API 200E, S/N: 592
The monthly calibration was performed on July 9th. The inlet filter was changed before the monthly calibration was started. The PMT and slope adjustments were performed after the calibration was completed. On July 11th, it was found that the calibrator that was used on July 9th was not working properly. The PMT and Slope was adjusted and a post-repair calibration was performed on July 12th. Data between July 9th during hour 14 and July 12th during hour 7 were invalidated due to this event. 67 hours of data were invalidated. The analyzer did not span on July 30th. An as found points check was performed on August 1st, and the result was within the acceptable range. The pump for the zero/span system was rebuilt on August 1st. No data was invalidated due to this issue. Data between hour 7 and hour 11 on July 31st are missing due to a power failure. Hourly data collected on July 31st at hour 12 was also invalidated as the analyzer was recovering from the power failure. Data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – St. Lina

Ozone (PPB)
Analyzer make / model - Thermo 49i, S/N: 1002240371
No operational issue was observed this month. The monthly calibration was performed on July 12th. The inlet filter was changed before the monthly calibration was started. Some water droplets were observed in the tubing for the zero air between the charcoal scrubber and the analyzer on July 23rd. An as found points check was performed before maintenance was performed on the tubing. A post-repair calibration was performed after the maintenance. Data between hour 7 and hour 11 on July 31st are missing due to a power failure. 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 July 12th and July 15th. The Teom unit did not pass the flow audit on July 15th. On July 16th, troubleshooting was taken the place. However, as the issue could not be solved in the field, the unit was removed from the trailer and sent back to the manufacturer for repair. The channel was left in the Maintenance mode since July 16 at hour 14. 370 hours of data were invalidated due to this event this month. Data was corrected using Alberta air quality guideline. If the data was between 0 to –3, the data was corrected to 0. If the data was below –3, the data was invalidated. A total of 24 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
The temperature sensor was working well throughout the month. Data between hour 7 and hour 11 on July 31st are missing due to a power failure.

Barometric Pressure (Millibar)
Analyzer make / model - Met One 092
The BP sensor was working well throughout the month. Data between hour 7 and hour 11 on July 31st are missing due to a power failure.

General Monthly Summary

AQM STATION – LICA – St. Lina

Relative Humidity (%)
Analyzer make / model - Met One 083
The RH sensor was working well throughout the month. Data between hour 7 and hour 11 on July 31st are missing due to a power failure.

Precipitation (MM)
Analyzer make / model - Met One 387
No issues were recorded this month. Data between hour 8 and hour 10 on July 31st are missing due to a power failure.

Vector Wind Speed (KPH) & Vector Wind Direction (DEG)
System make / model –MetOne 50.5H Sonic, S/N: H12635
The wind system is reported as vector wind speed and vector wind direction. The last wind system calibration was performed on July 12th, 2012 by the manufacturer.
No issues were recorded this month. Data between hour 8 and hour 10 on July 31st are missing due to a power failure.

Datalogger
System make / model - ESC 8832, S/N: AO717
Software make/version - ESC v 5.51a
The station is connected to a modem to allow for daily polling of the station.

Trailer
No issue was recorded this month.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

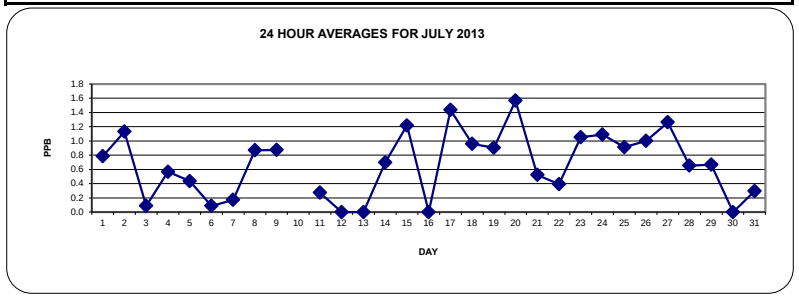
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	0	0	1	1	2	2	2	**S**	1	1	0	1	1	1	1	1	1	1	1	2	0.8	24
2	1	1	1	1	1	1	1	1	1	1	2	**S**	1	1	1	1	2	2	2	2	1	1	0	0	2	1.1	24
3	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0.1	24
4	0	0	0	0	0	0	0	0	0	**S**	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	24
5	1	1	1	0	0	0	0	0	**S**	0	1	0	0	0	1	1	1	1	1	1	0	0	0	0	1	0.4	24
6	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0.1	24
7	0	1	0	0	0	1	**S**	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
8	0	0	0	0	0	**S**	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	2	0.9	24
9	1	1	1	1	**S**	0	0	1	2	**C**	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	2	0.9	13
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**	**C**	**C**	**C**	**C**	1	1	0	0	1	0	0	0	0	0	0	1	0.3	16
12	0	**S**	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
13	**S**	0	0	0	0	0	0	0	0	0	0	0	**C**	0	0	0	0	0	0	0	0	0	0	**S**	0	0.0	24
14	0	1	0	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	**S**	1	1	0.7	24
15	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	2	1	1	1	1	**S**	0	0	2	1.2	24
16	0	0	0	0	0	0	0	0	**S**	**S**	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0.0	24
17	0	0	1	1	1	1	1	1	2	2	2	2	1	1	2	2	3	3	3	**S**	1	1	1	1	3	1.4	24
18	1	2	2	2	2	2	0	0	1	2	1	1	1	1	1	1	1	1	**S**	0	0	0	0	0	2	1.0	24
19	1	1	1	1	1	1	1	1	1	1	**C**	**C**	1	1	0	0	1	**S**	1	1	1	1	1	1	1	0.9	24
20	1	2	2	2	1	1	2	2	2	2	2	2	2	2	2	2	**S**	1	1	1	1	1	1	1	2	**1.6**	24
21	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	**S**	0	0	0	0	0	0	0	0	1	0.5	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	1	1	1	1	1	1	1	1	1	1	0.4	24
23	1	1	1	1	2	2	1	1	1	**C**	**C**	**C**	**C**	**C**	0	1	1	1	1	1	1	1	1	1	2	1.1	24
24	1	1	1	1	1	1	1	2	2	2	1	1	**S**	1	1	1	1	1	1	0	1	1	1	1	2	1.1	24
25	1	1	1	1	1	1	1	1	1	1	1	**S**	1	1	1	1	1	1	1	0	0	1	1	1	1	0.9	24
26	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
27	1	1	1	2	1	2	2	2	2	**S**	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.3	24
28	1	2	1	2	3	4	2	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.7	24
29	0	0	0	0	0	0	0	**S**	0	**14**	**C**	**C**	0	0	0	0	0	0	0	0	0	0	0	0	**14**	0.7	24
30	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
31	1	1	1	1	1	**S**	0	**P**	**P**	**P**	**P**	**P**	**X**	0	0	0	0	0	0	0	0	0	0	0	1	0.3	18
HOURLY MAX	1	2	2	2	3	4	2	2	2	14	2	2	2	2	2	2	3	3	3	2	1	1	1	2			
HOURLY AVG	0.5	0.7	0.6	0.7	0.6	0.7	0.6	0.7	0.9	1.4	0.9	0.8	0.7	0.6	0.6	0.6	0.8	0.8	0.7	0.5	0.5	0.5	0.4	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



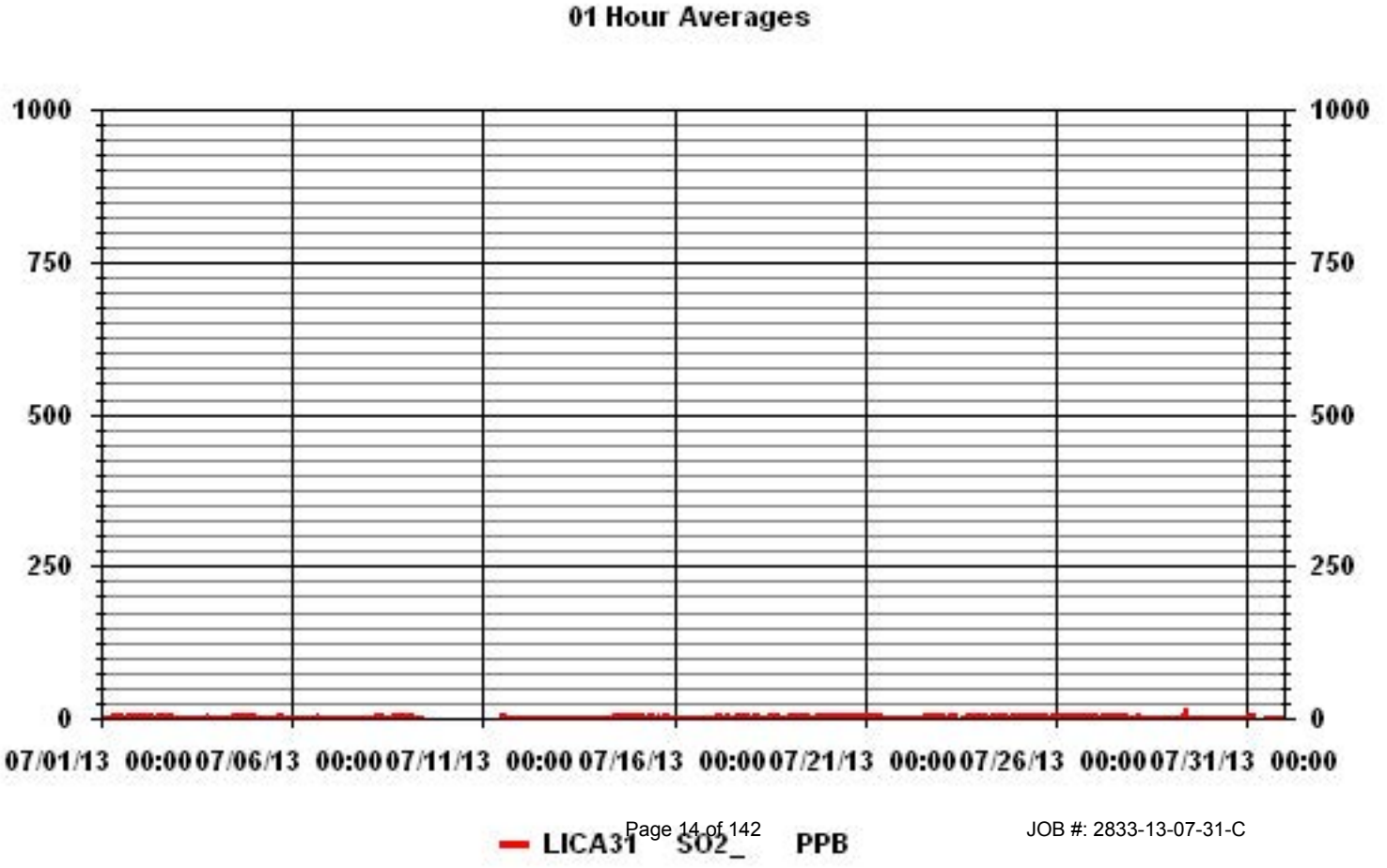
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 48 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	351					
MAXIMUM 1-HR AVERAGE:	14	PPB	@ HOUR(S)	9	ON DAY(S)	29
MAXIMUM 24-HR AVERAGE:	1.6	PPB			ON DAY(S)	20

IZS CALIBRATION TIME:	32	HRS	OPERATIONAL TIME:	695	HRS
MONTHLY CALIBRATION TIME:	19	HRS	AMD OPERATION UPTIME:	93.4	%
STANDARD DEVIATION:	0.86		MONTHLY AVERAGE:	0.67	PPB

JOB #: 2833-13-07-31-C



JOB #: 2833-13-07-31-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	1	1	1	1	1	2	2	4	3	3	**S**	2	1	1	1	2	2	2	2	1	2	2	4	1.7	24
2	2	2	2	2	2	2	2	2	2	2	3	**S**	2	2	2	2	3	3	3	3	3	2	1	1	3	2.2	24
3	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
4	1	1	1	1	1	1	1	1	1	**S**	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	1.5	24
5	2	2	1	1	1	1	1	1	**S**	1	1	1	2	1	1	2	2	2	2	1	2	1	1	1	2	1.3	24
6	1	1	1	1	1	1	1	**S**	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1.0	24
7	1	1	1	1	1	1	**S**	1	2	2	1	2	1	1	1	1	1	2	2	1	1	1	1	1	2	1.2	24
8	1	1	1	1	1	**S**	2	2	2	2	2	3	2	3	3	2	2	2	2	2	2	2	2	2	3	1.9	24
9	2	2	2	2	**S**	1	1	2	3	**C**	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	3	1.9	13
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**	**C**	**C**	**C**	**C**	2	1	1	1	2	1	1	1	1	1	1	2	1.2	16
12	1	**S**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**S**	1	1	1	1	0	1	0	1	0.9	25
13	**S**	1	1	1	1	1	1	1	1	1	2	**S**	**S**	1	1	1	1	1	1	1	1	1	1	**S**	2	1.1	25
14	1	2	1	1	1	1	2	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	**S**	2	2	1.7	24
15	2	2	2	2	2	2	**P**	3	3	3	3	3	2	2	2	2	3	3	2	2	2	**S**	1	1	3	2.2	23
16	1	1	1	1	1	1	1	1	**S**	**S**	1	1	1	1	1	1	1	1	1	1	**S**	1	2	1	2	1.0	22
17	1	2	1	1	2	2	2	2	3	4	3	4	3	3	3	4	4	3	4	**S**	2	2	2	2	4	2.6	24
18	2	3	3	3	3	3	1	2	2	2	2	2	2	2	2	2	2	2	**S**	1	1	1	1	1	3	2.0	24
19	2	2	2	2	2	2	2	2	2	**C**	**C**	**C**	**C**	1	2	1	1	**S**	2	2	2	2	**P**	2	2	1.8	23
20	2	3	2	3	2	2	3	3	3	3	3	3	3	2	3	3	**S**	2	2	2	2	2	2	**P**	3	2.5	23
21	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	**S**	1	1	1	1	1	1	1	1	2	1.6	24
22	1	1	1	2	1	1	2	1	1	1	1	1	1	1	**S**	2	2	2	2	2	2	2	2	2	2	1.5	24
23	2	2	2	2	3	3	2	3	2	**C**	**C**	**C**	**C**	**C**	**C**	2	2	2	2	2	2	2	**P**	2	3	2.2	23
24	2	2	2	2	2	2	3	3	3	3	2	2	**S**	2	2	2	2	2	2	2	2	2	2	2	3	2.2	24
25	2	2	2	2	2	2	2	2	2	2	2	**S**	1	2	2	2	2	2	2	1	1	2	2	2	2	1.9	24
26	2	2	2	2	2	2	2	2	2	2	**S**	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24
27	2	2	2	3	2	3	3	3	3	**S**	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2.3	24
28	3	2	**P**	3	4	**5**	**P**	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**	0.8	22
29	0	0	0	0	0	0	0	**S**	0	**S**	**S**	**S**	1	0	1	1	1	0	1	1	0	0	0	1	1	0.4	21
30	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
31	2	2	2	2	2	**S**	2	**P**	**P**	**P**	**P**	**P**	**X**	1	1	1	1	1	1	1	1	1	1	1	2	1.4	21
HOURLY MAX	3	3	3	3	4	5	3	3	3	4	3	4	3	3	3	4	4	3	4	3	3	2	3	3			
HOURLY AVG	1.5	1.6	1.5	1.6	1.6	1.7	1.6	1.7	1.8	1.9	1.8	1.9	1.6	1.5	1.5	1.6	1.6	1.7	1.7	1.5	1.5	1.3	1.4	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

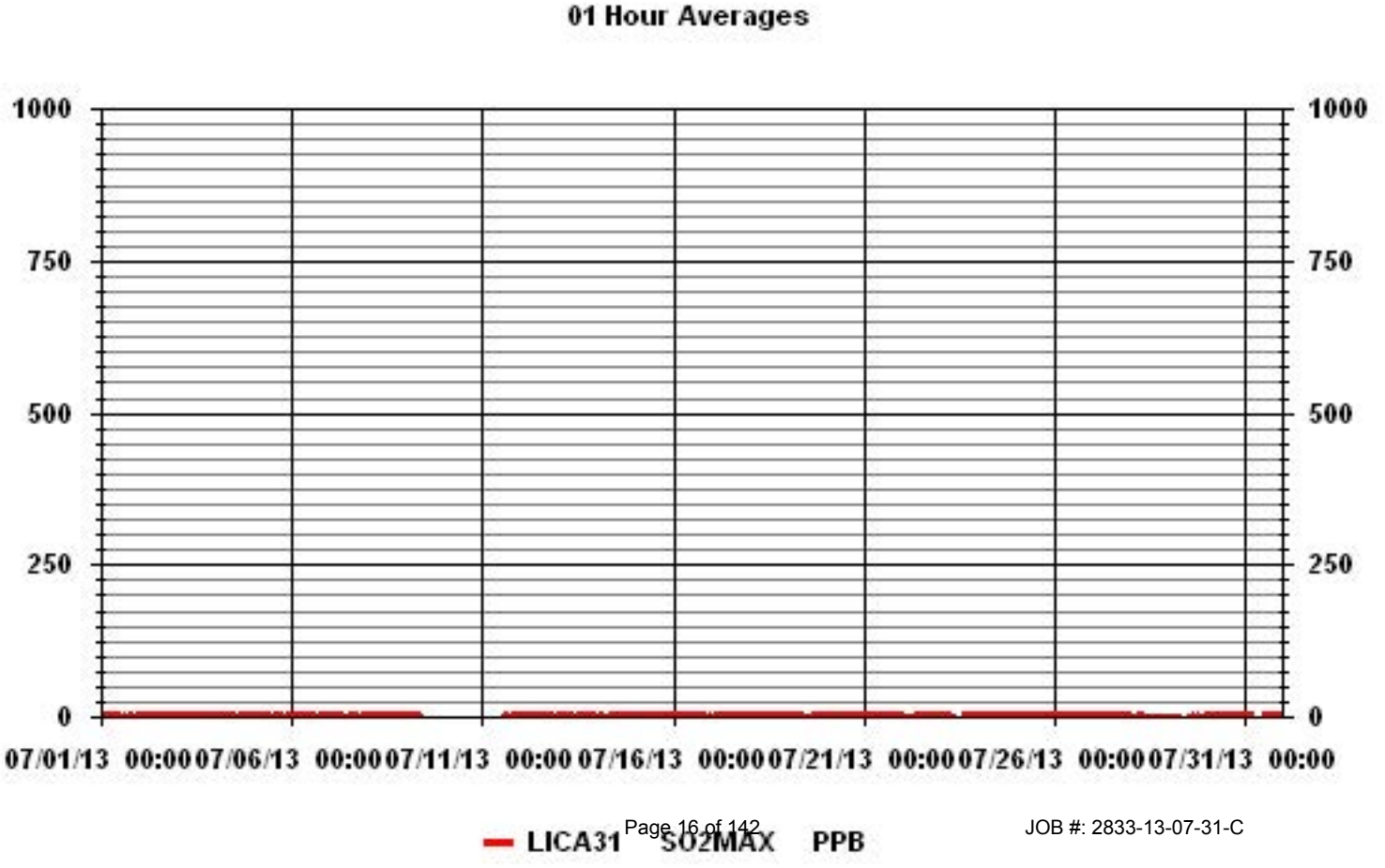
NUMBER OF NON-ZERO READINGS: 602

MAXIMUM INSTANTANEOUS VALUE: 5 PPB @ HOUR(S) 5 ON DAY(S) 28

IZS CALIBRATION TIME: 37 HRS OPERATIONAL TIME: 689 HRS

MONTHLY CALIBRATION TIME: 19 HRS

STANDARD DEVIATION: 0.78



JOB #: 2833-13-07-31-C

LICA31
SO2_ / WDR Joint Frequency Distribution (Percent)

July 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	6.83	2.32	3.72	3.41	2.01	2.48	2.48	5.43	10.09	7.29	4.65	7.60	9.93	13.35	13.66	4.65	100.00
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.83	2.32	3.72	3.41	2.01	2.48	2.48	5.43	10.09	7.29	4.65	7.60	9.93	13.35	13.66	4.65	

Calm : .00 %

Total # Operational Hours : 644

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	44	15	24	22	13	16	16	35	65	47	30	49	64	86	88	30	644
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	44	15	24	22	13	16	16	35	65	47	30	49	64	86	88	30	

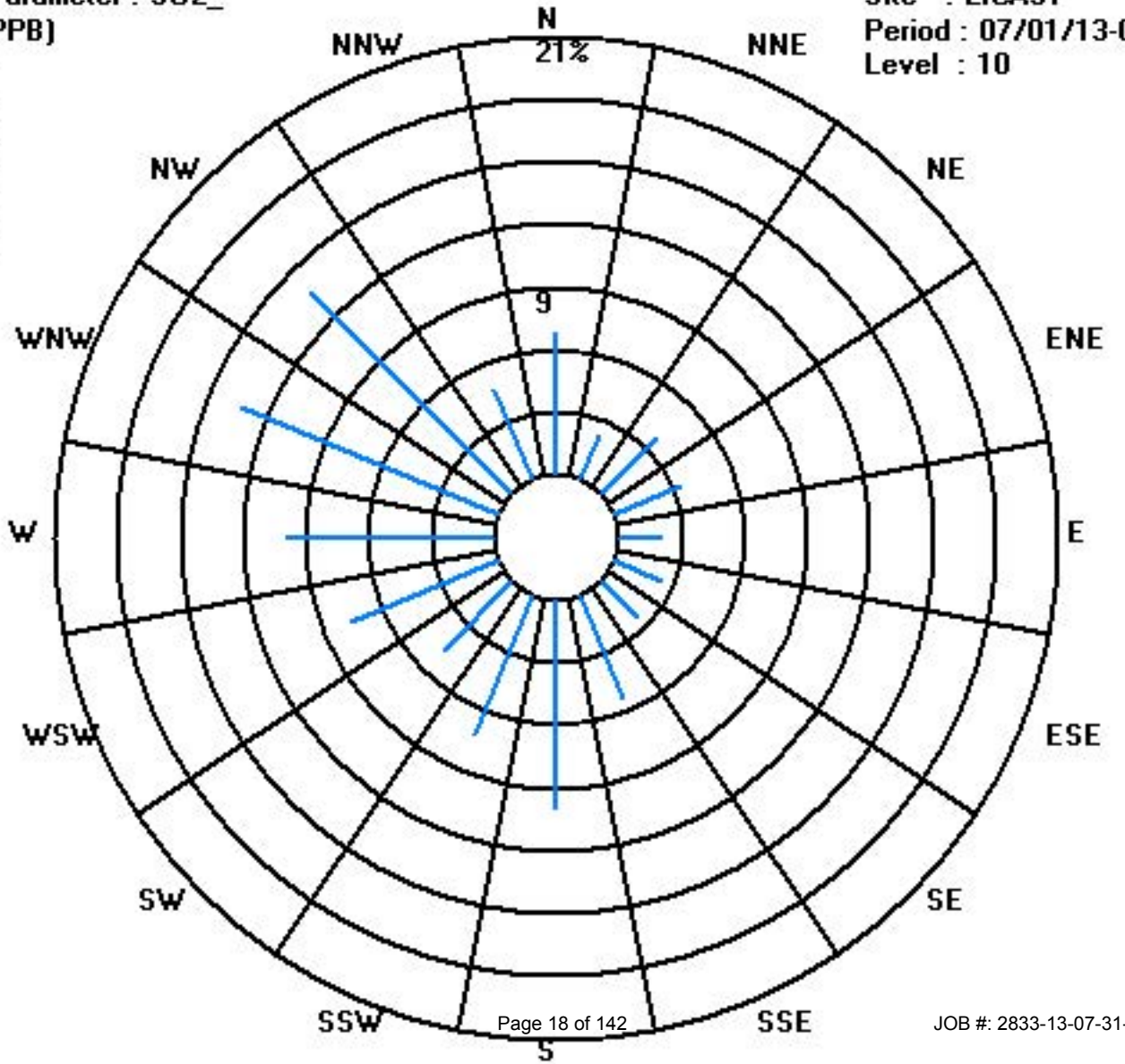
Calm : .00 %

Total # Operational Hours : 644

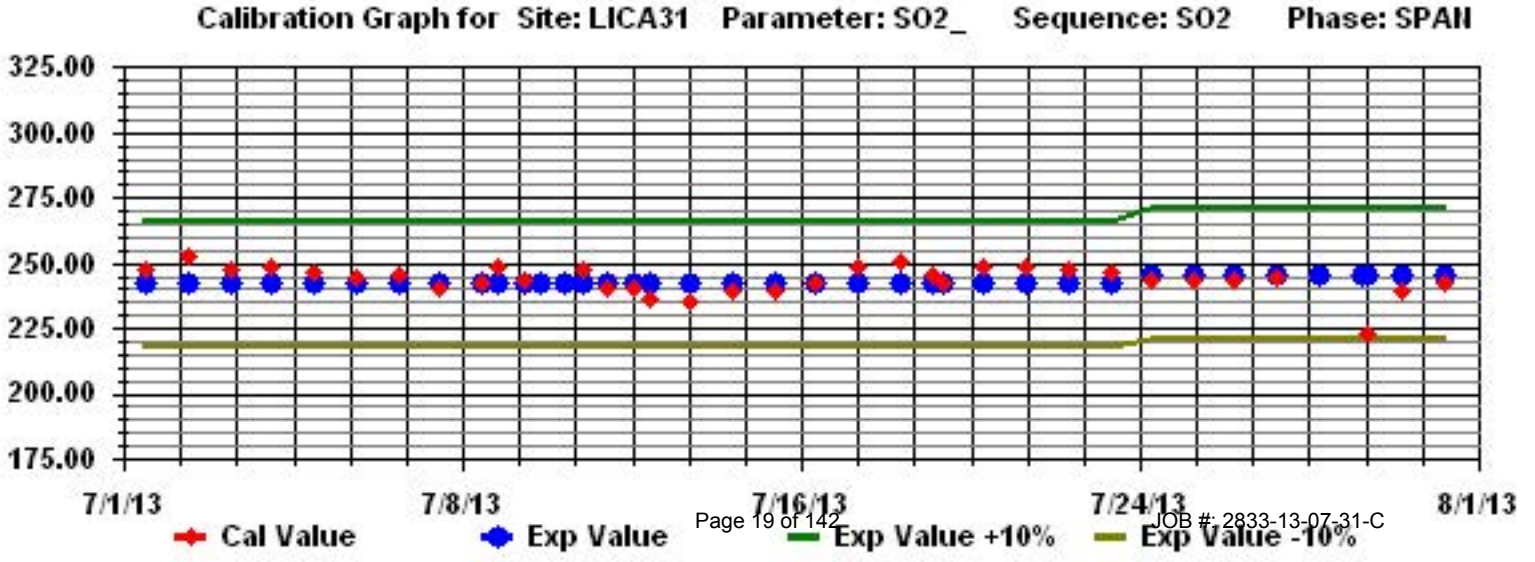
Logger : 31 Parameter : SO2_
Class Limits (PPB)

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

Site : LICA31
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-31-C


Calibration Graph for Site: LICA31 Parameter: SO2_ Sequence: SO2 Phase: SPAN
325.00
300.00
275.00
250.00
225.00
200.00
175.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSCOIATION - ST. LINA

JULY 2013

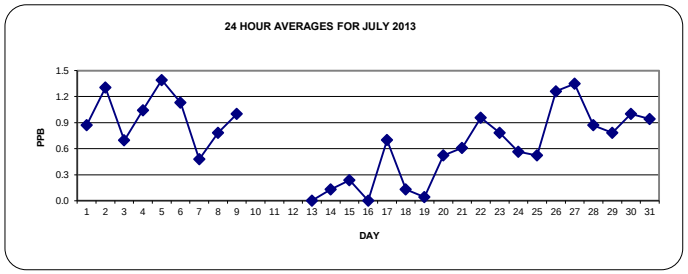
HYDROGEN SULPHIDE (H_2S) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	1	1	1	1	1	1	1	1	1	1	**S**	1	1	1	1	1	1	1	0	0	0	1	1	0.9	24
2	1	1	1	2	2	2	2	2	1	1	1	**S**	2	2	2	2	1	1	2	1	1	0	0	0	2	1.3	24
3	0	0	0	1	1	1	0	0	0	0	**S**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	24
4	1	1	1	1	1	2	1	1	1	**S**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	24
5	1	1	1	1	1	1	1	1	**S**	1	2	1	1	2	2	2	2	2	2	2	2	1	1	1	2	**1.4**	24
6	1	1	1	1	1	1	2	**S**	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	2	1.1	24
7	1	1	1	1	1	1	**S**	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.5	24
8	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	0.8	24
9	1	1	1	1	**S**	1	1	1	1	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	1	1.0	13
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**	**C**	0	**C**	**C**	**C**	0	0	0	0	0	0	0	**S**	0	0.0	13
14	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	2	0.1	24
15	0	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	**S**	**X**	**X**	1	0.2	22
16	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**Y**	**S**	**S**	**X**	0	0	0	0	0	0	0	0	0	**S**	0	0	0	**0**	0.0	15
17	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**C**	**C**	**C**	**S**	0	0	0	0	1	0.7	24
18	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	**S**	0	0	0	0	0	1	0.1	24
19	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	1	0.0	24
20	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	**S**	1	1	1	1	1	1	0	1	0.5	24
21	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	**S**	1	0	1	1	0	0	0	0	1	0.6	24
22	1	1	1	2	1	1	1	1	1	1	1	1	1	1	**S**	1	1	1	1	1	0	0	1	1	2	1.0	24
23	1	1	1	1	1	1	1	1	0	0	0	0	0	**S**	1	1	1	1	1	1	1	1	1	1	1	0.8	24
24	1	1	2	1	1	1	1	1	1	1	1	1	**S**	0	0	0	0	0	0	0	0	0	0	0	2	0.6	24
25	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	0.5	24
26	1	1	1	1	1	2	1	1	2	1	**S**	1	1	1	1	2	2	2	1	2	2	1	0	1	2	1.3	24
27	1	2	2	2	2	**3**	2	2	2	**S**	1	1	1	1	1	1	1	1	1	1	1	0	1	1	**3**	1.3	24
28	1	1	1	1	1	1	1	1	**S**	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	0.9	24
29	0	0	0	0	0	0	0	**S**	1	1	1	1	2	1	1	1	1	1	1	2	1	1	1	1	2	0.8	24
30	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
31	1	2	1	2	2	**S**	2	**P**	**P**	**P**	**P**	**P**	**X**	0	0	0	0	1	1	1	1	1	1	0	2	0.9	18
HOURLY MAX	1	2	2	2	2	3	2	2	2	1	2	1	2	2	2	2	2	2	2	2	2	1	1	1			
HOURLY AVG	0.6	0.7	0.7	0.8	0.8	1.0	0.9	0.9	0.9	0.6	0.7	0.7	0.8	0.8	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.5	0.6	0.5			

STATUS FLAG CODES

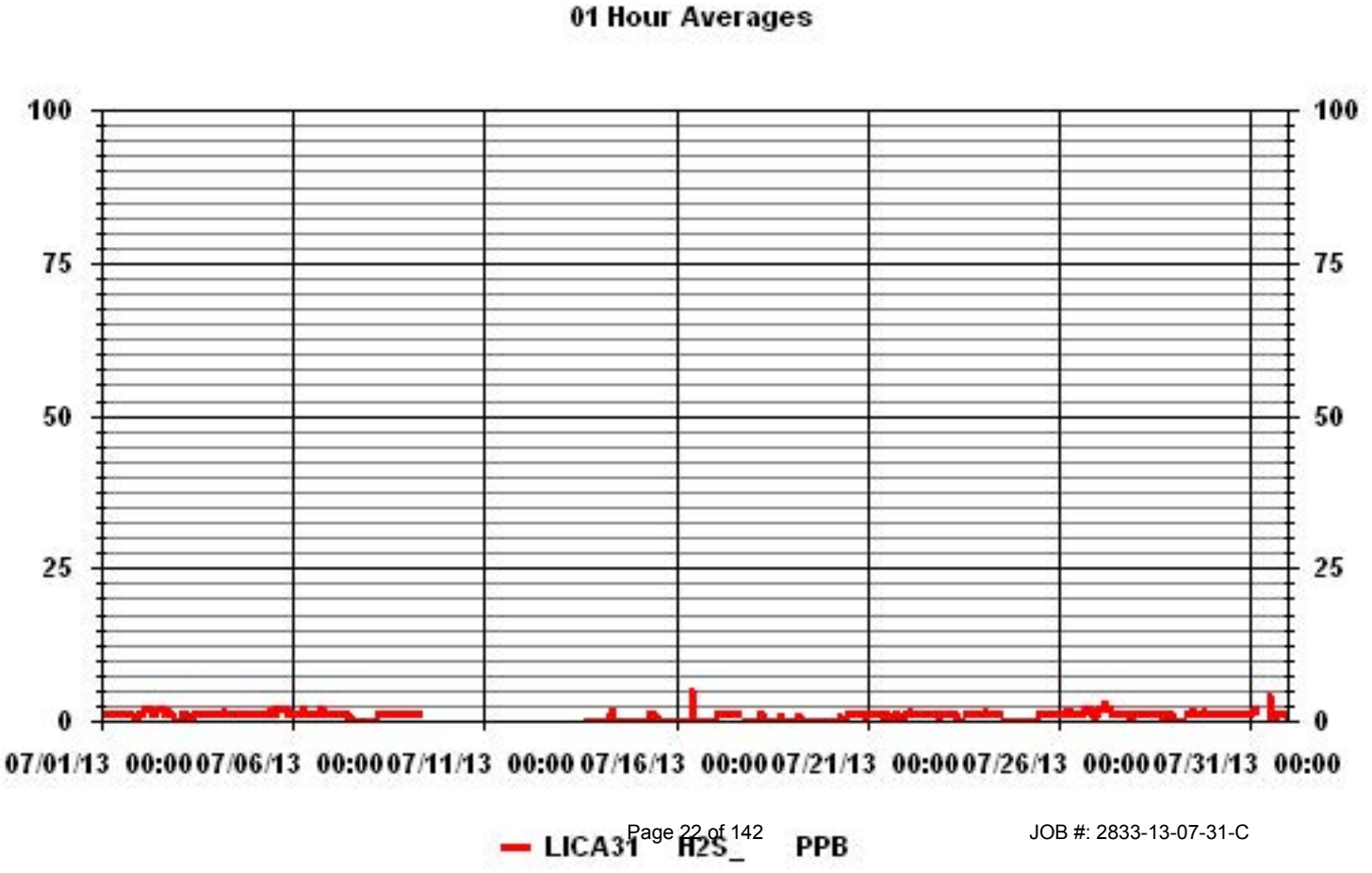
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	391					
MAXIMUM 1-HR AVERAGE:	3	PPB	@ HOUR(S)	5	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:	1.4	PPB			ON DAY(S)	5
					VAR-VARIOUS	
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		633	HRS
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:		85.1	%
STANDARD DEVIATION:	0.60		MONTHLY AVERAGE:		0.74	PPB



JOB #: 2833-13-07-31-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

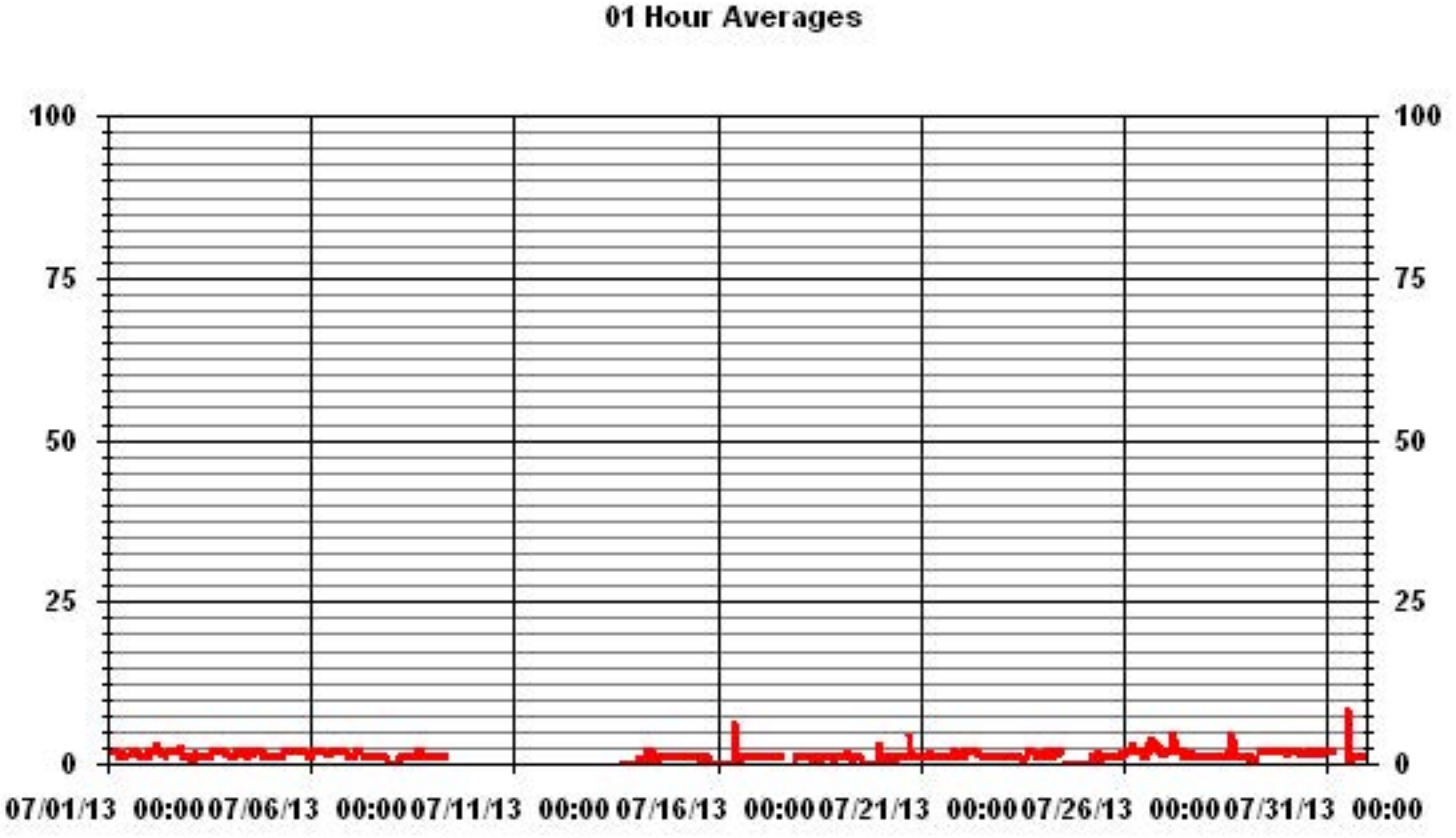
HOUR START / HOUR END	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY																											
1	2	2	2	2	2	2	2	1	1	2	1	1	**S**	2	1	2	2	2	2	1	1	1	1	1	2	1.6	24
2	2	2	2	2	2	3	2	2	1	2	1	**S**	2	2	2	2	2	2	2	3	1	1	1	1	3	1.8	24
3	1	1	0	1	2	1	1	1	1	1	**S**	1	1	2	2	2	2	2	2	2	2	2	1	2	2	1.4	24
4	1	1	1	2	2	2	2	1	2	**S**	1	2	2	1	2	2	2	2	2	2	1	1	1	1	2	1.6	24
5	1	1	1	1	1	1	1	1	**S**	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	1.6	24
6	1	2	2	2	2	2	2	**S**	2	1	2	1	2	2	2	2	2	2	2	2	2	1	1	1	2	1.7	24
7	1	1	2	2	2	2	**S**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	2	1.0	24
8	0	0	0	0	1	**S**	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	2	1.0	24
9	1	1	1	1	**S**	1	1	1	1	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	1	1.0	13
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**	**C**	**C**	1	**C**	**C**	**C**	**C**	0	0	0	0	0	0	**S**	1	0.1	14
14	0	0	1	0	0	0	0	2	2	2	0	0	0	1	1	1	1	1	1	1	1	1	1	**S**	1	0.7	25
15	1	1	1	1	1	1	**P**	1	1	1	1	1	1	1	0	1	1	1	1	0	0	**S**	0	0	1	0.8	23
16	0	0	0	0	0	0	0	**S**	**S**	**S**	**6**	0	0	1	0	1	1	1	1	1	**S**	1	1	1	**6**	0.8	25
17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**C**	**C**	**C**	**C**	**C**	**C**	0	1	1	1	0.9	25
18	1	1	1	1	1	1	1	1	0	0	1	1	1	0	1	1	1	1	**S**	1	1	0	1	1	1	0.8	24
19	1	1	1	1	1	2	1	1	0	1	1	1	1	0	0	0	0	**S**	0	0	0	0	**P**	3	3	0.7	23
20	0	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	**S**	4	1	2	1	1	1	**P**	4	1.0	23
21	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	**S**	1	1	1	2	2	1	1	1	2	1.1	24
22	1	1	2	2	2	2	2	2	2	2	1	2	1	1	**S**	1	1	1	1	1	1	1	1	1	2	1.4	24
23	1	1	1	1	1	1	1	1	1	1	1	1	0	**S**	1	2	2	2	2	2	1	**P**	1	2	2	1.2	23
24	1	1	2	2	2	1	1	2	2	1	2	2	**S**	0	0	0	0	0	0	0	0	0	0	0	2	0.8	24
25	0	0	0	0	0	1	1	0	0	2	0	**S**	1	1	1	1	1	1	1	1	1	1	1	2	2	0.7	24
26	1	2	2	2	2	3	2	2	2	2	**S**	1	1	2	2	3	4	3	3	2	3	2	2	1	4	2.1	24
27	2	2	2	2	2	5	4	2	2	**S**	1	2	2	1	1	2	1	2	1	1	1	1	1	1	5	1.8	24
28	1	1	**P**	1	1	1	**P**	1	**S**	1	1	1	1	1	2	5	3	3	1	1	1	1	1	1	5	1.4	22
29	1	1	0	1	1	0	1	**S**	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.6	24
30	1	2	2	2	2	2	**S**	2	1	2	1	2	1	2	2	1	2	2	2	2	2	1	2	2	2	1.7	24
31	2	2	2	2	2	**S**	2	**P**	**P**	**P**	**P**	**P**	**X**	0	1	1	1	1	1	1	1	1	1	1	2	1.3	18
HOURLY MAX	2	2	2	2	2	5	4	2	2	2	6	2	2	2	2	5	4	4	3	3	3	2	2	3			
HOURLY AVG	1.0	1.1	1.2	1.3	1.3	1.5	1.4	1.3	1.2	1.4	1.3	1.2	1.1	1.2	1.2	1.6	1.5	1.6	1.3	1.3	1.2	0.9	1.0	1.2			

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:	515					
MAXIMUM INSTANTANEOUS VALUE:	6	PPB	@ HOUR(S)	10	ON DAY(S)	16
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		642	HRS
MONTHLY CALIBRATION TIME:	16	HRS				
STANDARD DEVIATION:	0.77					



JOB #: 2833-13-07-31-C

LICA31
H2S_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	7.29	2.48	3.98	3.64	2.48	2.48	2.65	5.80	10.44	7.62	4.97	6.46	9.12	12.43	12.60	4.97	99.50
< 10	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00	.16	.00	.16	.00	.49
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	7.29	2.48	3.98	3.64	2.48	2.65	2.65	5.80	10.44	7.62	4.97	6.46	9.28	12.43	12.76	4.97	

Calm : .00 %

Total # Operational Hours : 603

Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	44	15	24	22	15	15	16	35	63	46	30	39	55	75	76	30	600
< 10						1							1		1		3
< 50																	
>= 50																	
Totals	44	15	24	22	15	16	16	35	63	46	30	39	56	75	77	30	

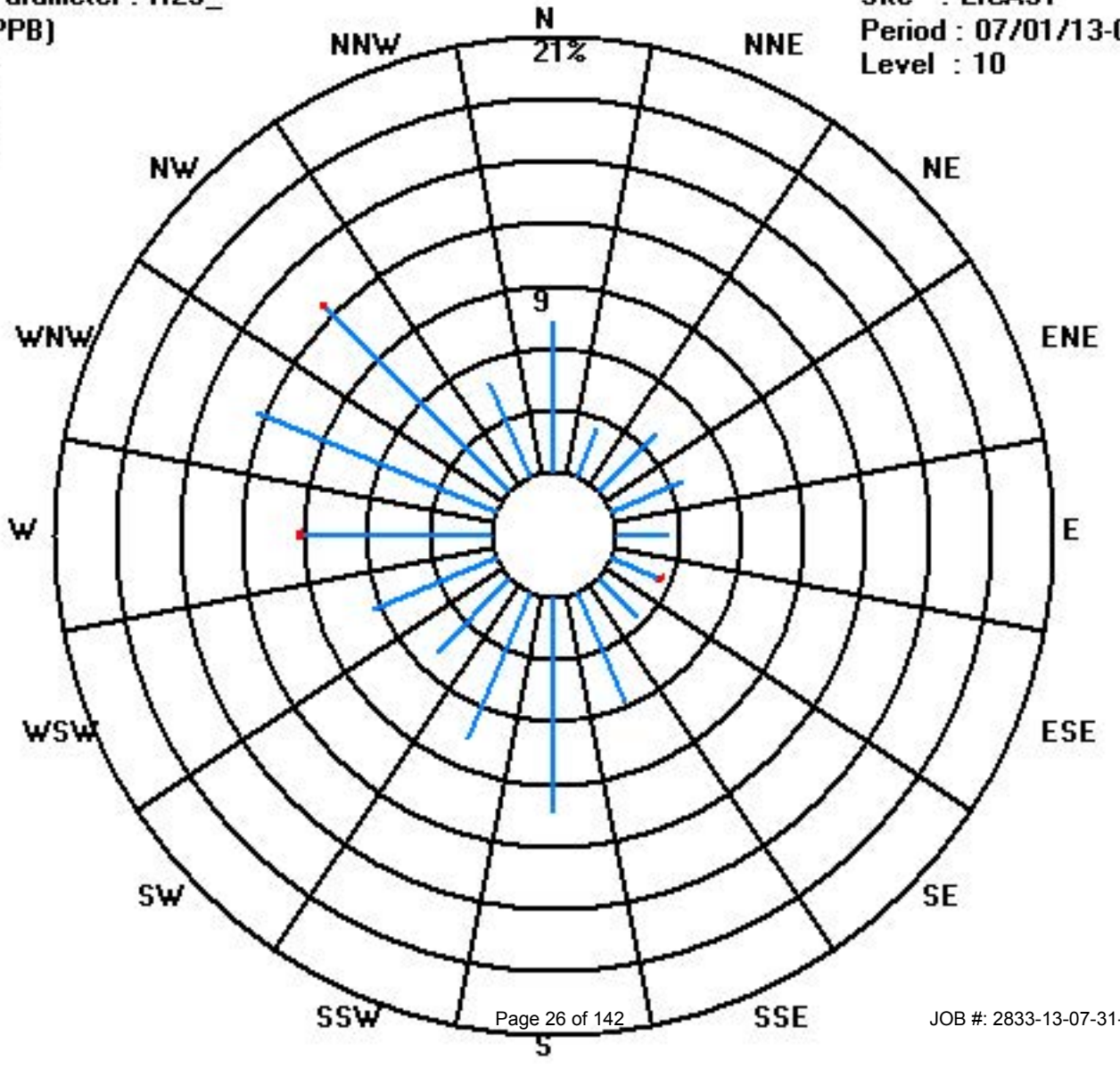
Calm : .00 %

Total # Operational Hours : 603

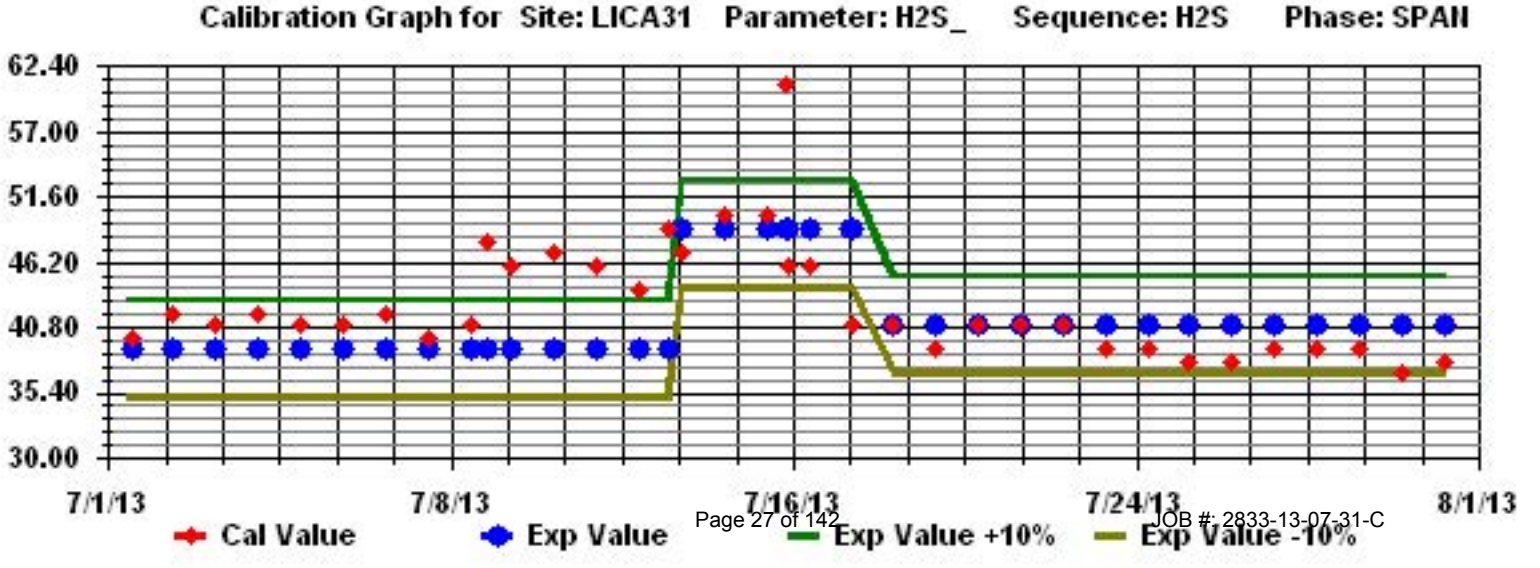
Logger : 31 Parameter : H2S_
Class Limits (PPB)

>= 50
< 50
< 10
< 3

Site : LICA31
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-31-C


Calibration Graph for Site: LICA31 Parameter: H2S_ Sequence: H2S Phase: SPAN
62.40
57.00
51.60
46.20
40.80
35.40
30.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

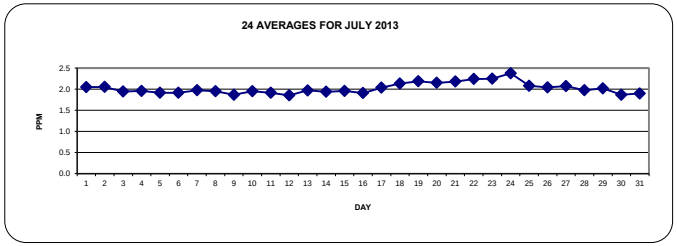
TOTAL HYDROCARBONS hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2	1.9	1.9	**S**	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2	2.1	2.1	2.1	2.3	2.0	24
2	2.2	2.3	2.3	2.4	2.5	2.4	2.3	2.2	2.1	2	1.9	**S**	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2	2	2.5	2.1	24
3	2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	**S**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2.2	1.9	24
4	2	2	2	2	2	2.2	2.2	2	2	**S**	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2	2	2	2.1	2.2	2.0	24
5	2	2	2	2	2	2	2	2	**S**	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2	2	2	2.0	1.9	24
6	2.1	2.1	2.2	2.1	2.2	2.2	2.2	**S**	1.9	1.9	1.8	1.8	1.8	1.7	1.8	1.8	1.7	1.7	1.7	1.7	1.9	1.9	1.9	2	2.2	1.9	24
7	2	2	2.1	2.2	2.1	2.1	**S**	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.1	2	2.1	2.2	2.3	2.3	2.0	24
8	2.1	2.1	2.1	2.3	2.3	**S**	2.2	2.1	2	1.9	1.9	2	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	2	2.1	2.3	2.0	24
9	2.1	2.2	2.2	2.2	**S**	2.1	2.1	2	2	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.7	1.8	1.8	1.8	1.8	2.2	1.9	24
10	1.9	1.9	1.8	**S**	1.9	2	2	2	2	2	2	1.9	2.1	**S**	2	1.9	1.9	1.8	1.8	2	2	2	2	2	2.1	2.0	24
11	2	2.1	**S**	1.9	1.9	1.9	1.9	1.8	1.8	**Y**	**Y**	**Y**	**Y**	1.8	1.9	1.9	1.9	1.8	1.9	1.9	1.9	2	2	2.1	2.1	1.9	20
12	2.1	**S**	1.9	2	2	2	1.9	1.9	1.8	1.8	1.7	1.8	1.7	1.8	1.8	1.8	1.7	1.7	1.7	1.8	1.8	2	2	2	2.1	1.9	24
13	**S**	1.9	2	2	2	2	2.1	2	1.9	1.9	1.8	**C**	**C**	**C**	**C**	1.9	1.9	1.9	1.9	2	2.1	2.1	2.1	**S**	2.1	2.0	24
14	2	2	2.1	2.1	2.1	2.1	2.1	2.1	2	2	1.9	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.7	1.9	1.9	2	**S**	2.4	2.4	1.9	24
15	2.8	2.4	2.1	2	2.2	2.1	2	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	**S**	1.9	1.9	2.8	2.0	24
16	2	2	2	2	2.1	2.1	2.1	2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	**S**	2.1	2.1	2.2	2.2	1.9	24
17	2.2	2.3	2.2	2.3	2.3	2.3	2.2	2.2	2	2	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.8	**S**	2.1	2.2	2.2	2.2	2.3	2.0	24
18	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.2	2.1	2	2	2	2	2	2	2	**S**	2	2.1	2.1	2.1	2.1	2.4	2.1	24
19	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.3	2.2	2.3	**S**	**S**	1.9	2	2.1	2.1	2.1	**S**	2.1	2	2.1	2.1	2.4	2.4	2.4	2.2	22
20	2.1	2.1	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2	2	2.1	2	2	**S**	2.2	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.2	24
21	2.3	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2	2	2	1.9	1.8	2	**S**	1.9	1.9	2.9	**3.6**	2.3	2.1	2.1	2.2	**3.6**	2.2	24
22	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.1	**S**	2	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.4	2.2	24
23	2.3	2.3	2.3	2.4	2.3	2.6	2.6	2.4	2.3	2.2	2.2	2.1	2	**S**	2	2	2.1	2.1	2	2.2	2.1	2.1	2.8	2.3	2.8	2.2	24
24	2.3	2.2	2.9	2.6	2.9	3.2	3.2	2.7	2.7	2.4	2.3	2.1	**S**	1.9	1.9	1.9	1.8	1.8	1.8	1.9	2	2	3.1	3	3.2	**2.4**	24
25	2.2	2.3	2.2	2.2	2.3	2.8	2.5	2.1	2	2	1.9	**S**	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	2	2.1	2.2	2.3	2.8	2.1	24
26	2.3	2.2	2.2	2.3	2.3	2.4	2.4	2.3	2.2	2.1	**S**	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2	2	2.4	2.0	24
27	2	2	2	2	2	2.1	2.1	2.1	2.1	**S**	2	2	2	2.2	2.4	2.1	2.1	2	1.9	2.4	2	2.1	2	2.1	2.4	2.1	24
28	2	2	2.1	2.1	2.1	2.1	2	2	**S**	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2	2.1	2.2	2.3	2.3	2.0	24
29	2.3	2.4	2.3	2.3	2.4	2.4	2.1	**S**	2	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	2.4	2.2	2.1	1.9	2	2.4	2.0	24
30	2	1.9	2.6	2.3	2.4	2.1	**S**	1.9	1.8	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.7	1.7	1.6	1.7	1.8	1.8	1.8	2.6	1.9	24
31	1.9	2	2.1	2.1	2	**S**	2	**P**	**P**	**P**	**P**	**P**	**X**	1.8	1.8	1.8	1.8	1.7	1.7	2	1.7	1.9	1.8	2.2	2.2	1.9	18
HOURLY MAX	2.8	2.4	2.9	2.6	2.9	3.2	3.2	2.7	2.7	2.4	2.3	2.2	2.2	2.2	2.4	2.1	2.1	2.2	2.9	3.6	2.3	2.3	3.1	3.0			
HOURLY AVG	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	2.0	2.0	2.0	2.1	2.2			

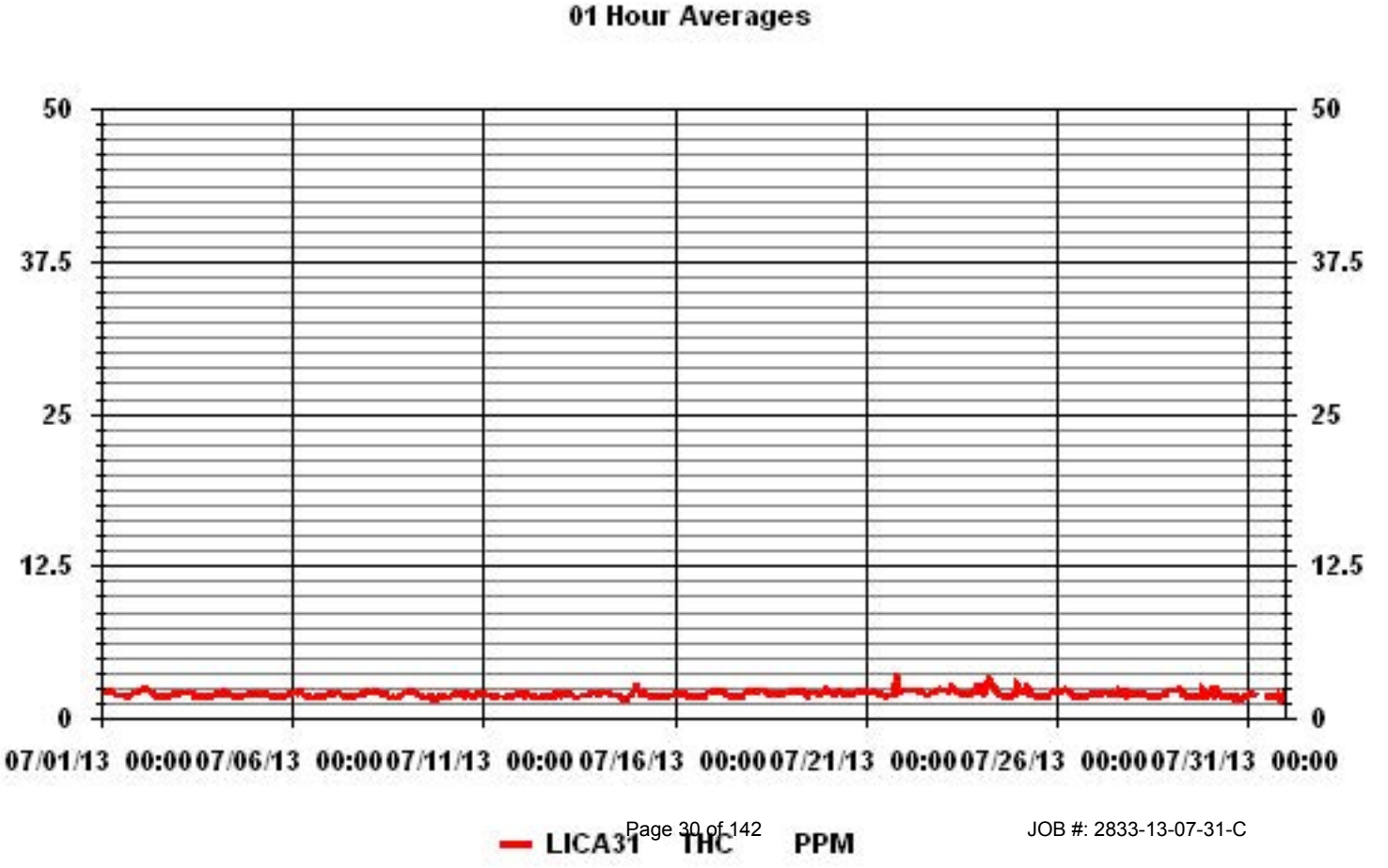
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	695					
MAXIMUM 1-HR AVERAGE:	3.6	PPM	@ HOUR(S)	19	ON DAY(S)	21
MAXIMUM 24-HR AVERAGE:	2.4	PPM			ON DAY(S)	24
					VAR- VARIOUS	
IZS CALIBRATION TIME:	35	HRS	OPERATIONAL TIME:		732	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:		98.4	%
STANDARD DEVIATION:	0.23		MONTHLY AVERAGE:		2.02	PPM



JOB #: 2833-13-07-31-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

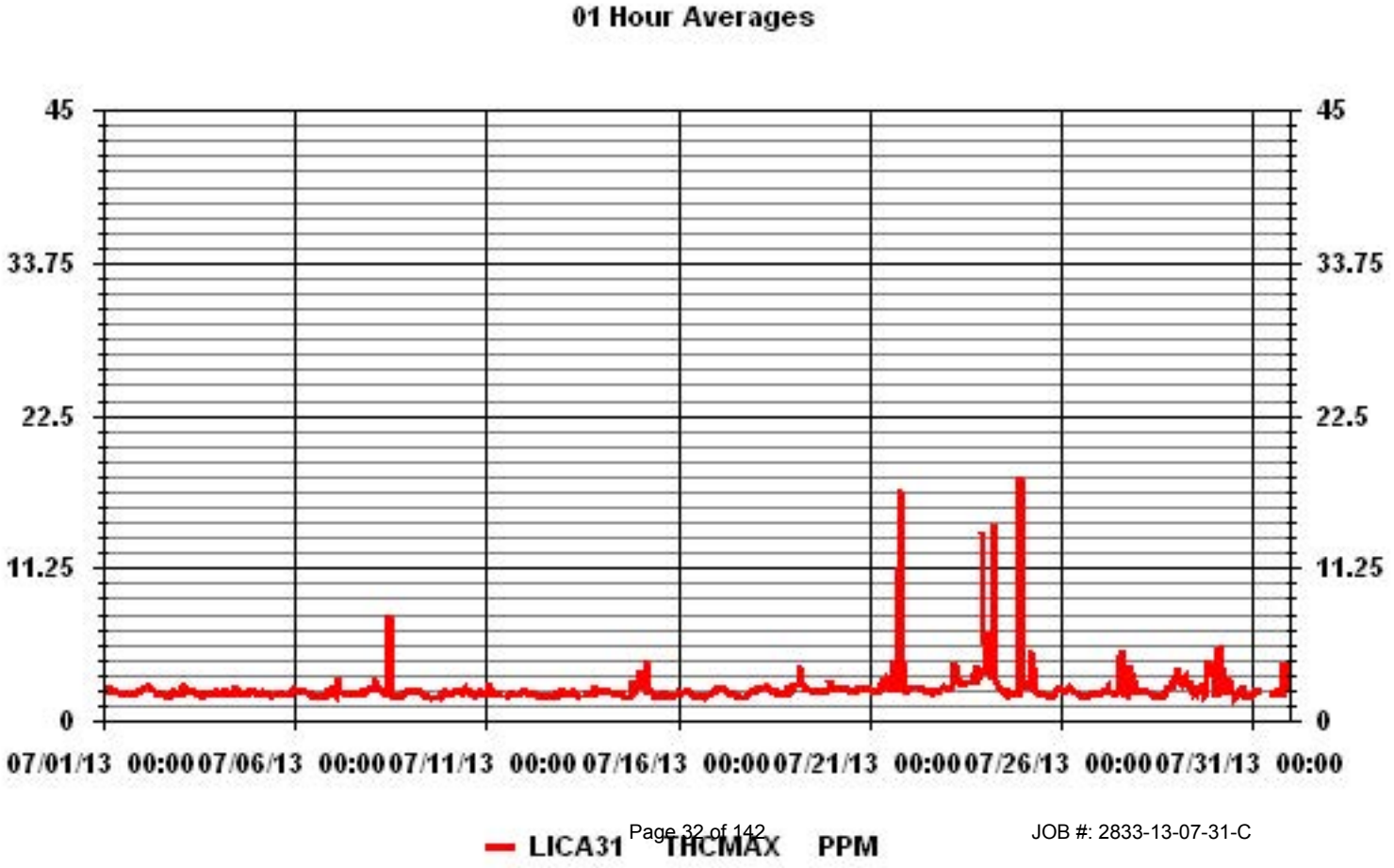
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.3	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	1.9	1.9	**S**	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.2	2.2	2.2	2.3	2.1	24
2	2.3	2.3	2.4	2.4	2.5	2.5	2.4	2.3	2.1	2.1	2	**S**	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	2.2	2.2	2.1	2	2.5	2.1	24
3	2.1	2.4	2.2	2.5	2.4	2.1	2.1	2.1	2.2	2.1	**S**	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.2	2.5	2.1	24
4	2	2	2	2	2.2	2.3	2.2	2.1	2	**S**	1.9	2.6	1.9	2.3	2	1.9	1.9	2	2.2	2	2.1	2.1	2.1	2.1	2.6	2.1	24
5	2.1	2	2	2	2.2	2.1	2	2	**S**	1.9	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2	2	2.2	2.3	2.3	2.0	24
6	2.3	2.3	2.2	2.3	2.2	2.2	2.3	**S**	2.1	1.9	2	1.9	1.9	1.8	1.9	1.8	1.9	1.7	1.7	1.8	2.3	1.9	2	2.3	2.3	2.0	24
7	2.2	2	2.6	3.2	2.4	2.1	**S**	2	2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2	2.4	2.1	2.2	2.4	2.3	3.2	2.1	24
8	2.3	2.4	3.1	2.8	2.4	**S**	2.3	2.2	2.1	2	2.1	7.7	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	2	2.1	2.1	7.7	2.4	24
9	2.2	2.2	2.2	2.2	**S**	2.2	2.1	2.1	2	1.9	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.8	1.7	1.9	2.2	**P**	**P**	2.2	1.9	22
10	2.1	2	2	**S**	2.2	2.1	2.2	2.3	2.2	2.1	2.3	1.9	2.2	**S**	2.1	2	2	1.8	1.9	2	2.1	2.1	2	2	2.3	2.1	24
11	2.1	2.6	**S**	2	2.1	2.1	2	1.9	1.9	**Y**	**Y**	**Y**	**Y**	1.9	2	2	2	1.9	1.9	1.9	2	2	2.1	2.1	2.6	2.0	20
12	2.1	**S**	2	2	2.1	2	2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2	2.1	2.1	2.3	2.3	1.9	24
13	**S**	2	2	2	2	2.1	2.2	2.1	2	1.9	**C**	**C**	**C**	**C**	**C**	2	2	2	2	2	2.5	2.1	2.2	**S**	2.5	2.1	24
14	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2	2	2	2.1	2	2.1	1.8	1.7	1.7	1.7	1.9	2.9	2.3	2.1	**S**	2.6	2.9	2.1	24
15	3.6	2.8	2.6	2.3	4.5	2.1	**P**	2.1	2.1	1.9	1.8	1.8	1.8	1.9	2	2.1	1.9	1.9	1.8	1.8	1.9	**S**	1.9	2	4.5	2.2	23
16	2.2	2.1	2	2.1	2.2	2.2	2.1	2.1	1.9	1.9	1.8	1.9	1.8	1.9	1.8	1.8	1.8	1.7	1.8	1.9	**S**	2.1	2.2	2.2	2.2	2.0	24
17	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2	2	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.8	**S**	2.1	2.3	2.2	2.2	2.3	2.1	24
18	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.3	2.2	2.1	2.1	2.1	2.1	2	2	2.1	**S**	2.1	2.2	2.6	2.1	2.2	2.6	2.2	24
19	2.7	2.4	2.8	2.4	4.1	2.9	2.8	2.3	2.3	**S**	**S**	**S**	**S**	2.2	2.2	2.2	2.2	**S**	2.3	2.1	2.1	2.2	**P**	2.8	4.1	2.5	23
20	2.4	2.3	2.4	2.5	2.3	2.3	2.4	2.3	2.4	2.3	2.3	2.1	2.1	2.1	2.1	2.1	**S**	2.4	2.4	2.4	2.4	2.3	2.3	**P**	2.5	2.3	23
21	2.3	2.3	2.2	2.2	2.2	2.2	2.5	2.2	3.2	2.5	2.5	3	2.8	2	4.2	**S**	3	2.1	11.3	17.1	4.5	2.4	2.2	2.2	17.1	3.6	24
22	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	**S**	2.1	2.2	2.1	2.2	2.2	2.3	2.4	2.5	2.5	2.5	2.3	24
23	2.4	2.3	2.4	2.4	2.7	4.3	3.5	3.3	3.1	2.8	2.7	2.6	2.6	**S**	2.8	2.8	2.8	3.2	3.1	4.1	3.2	**P**	13.7	6.5	13.7	3.6	23
24	5.8	3.4	6.5	4.1	3	3.7	14.5	2.9	2.8	2.6	2.4	2.3	**S**	2	1.9	2.3	2	1.9	1.9	2.1	2	2	**18**	7.9	**18**	4.3	24
25	2.9	2.8	2.2	3	2.3	5.1	4.1	2.3	2.1	2.1	2	**S**	2	1.9	1.9	2	1.9	1.8	1.8	1.9	2.1	2.2	2.3	2.3	5.1	2.4	24
26	2.3	2.3	2.2	2.3	2.4	2.5	2.5	2.4	2.3	2.2	**S**	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2	2	2	2	2.5	2.1	24
27	2	2.1	2.1	2.1	2.2	2.5	2.2	2.2	2.1	**S**	2	2.1	2.1	4.7	5.1	2.3	2.1	2	2.8	4.1	3.7	3.2	2.1	2.1	5.1	2.6	24
28	2.1	2.1	**P**	2.2	2.1	2.1	**P**	2	**S**	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.4	2.3	2.5	2.7	2.6	3.1	3.1	3.1	2.2	22
29	3	3.8	3.1	2.8	3	3.2	2.7	**S**	2.6	2.7	2.1	2.3	2.1	2.4	2.4	2.5	2.2	1.8	1.9	4.2	4.5	3.3	3.9	3.3	4.5	2.9	24
30	2	2	5.2	5.3	4	2.1	**S**	2.1	2.1	3.1	2.8	2.4	1.8	2	2	2.2	1.7	2.3	2.3	1.8	1.8	1.8	1.8	1.8	5.3	2.5	24
31	1.9	2.1	2.1	2.1	2.1	**S**	2.1	**P**	**P**	**P**	**P**	**P**	**X**	1.9	1.9	2.2	2.1	2.3	2.2	4.2	2.1	3	2.4	4.2	4.2	2.4	18
HOURLY MAX	5.8	3.8	6.5	5.3	4.5	5.1	14.5	3.3	3.2	3.1	2.8	7.7	2.8	4.7	5.1	2.8	3.0	3.2	11.3	17.1	4.5	3.3	18.0	7.9			
HOURLY AVG	2.4	2.3	2.5	2.5	2.5	2.5	2.8	2.2	2.2	2.2	2.1	2.3	2.0	2.1	2.2	2.0	2.0	2.0	2.3	2.8	2.4	2.3	3.2	2.7			

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

NUMBER OF NON-ZERO READINGS:	684					
MAXIMUM INSTANTANEOUS VALUE:	18.0	PPM	@ HOUR(S)	22	ON DAY(S)	24
IZS CALIBRATION TIME:	37	HRS	OPERATIONAL TIME:		726	HRS
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	1.27					



JOB #: 2833-13-07-31-C

LICA31
THC / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	6.47	2.30	3.45	3.45	1.87	2.73	2.73	5.61	9.78	7.05	4.74	8.20	10.35	12.37	13.09	5.03	99.28
<	10.0	.14	.00	.14	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.14	.71
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.61	2.30	3.59	3.59	1.87	2.73	2.73	5.61	9.78	7.05	4.74	8.20	10.35	12.37	13.23	5.17	

Calm : .00 %

Total # Operational Hours : 695

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	45	16	24	24	13	19	19	39	68	49	33	57	72	86	91	35	690
<	10.0	1		1	1											1	1	5
<	50.0																	
>=	50.0																	
	Totals	46	16	25	25	13	19	19	39	68	49	33	57	72	86	92	36	

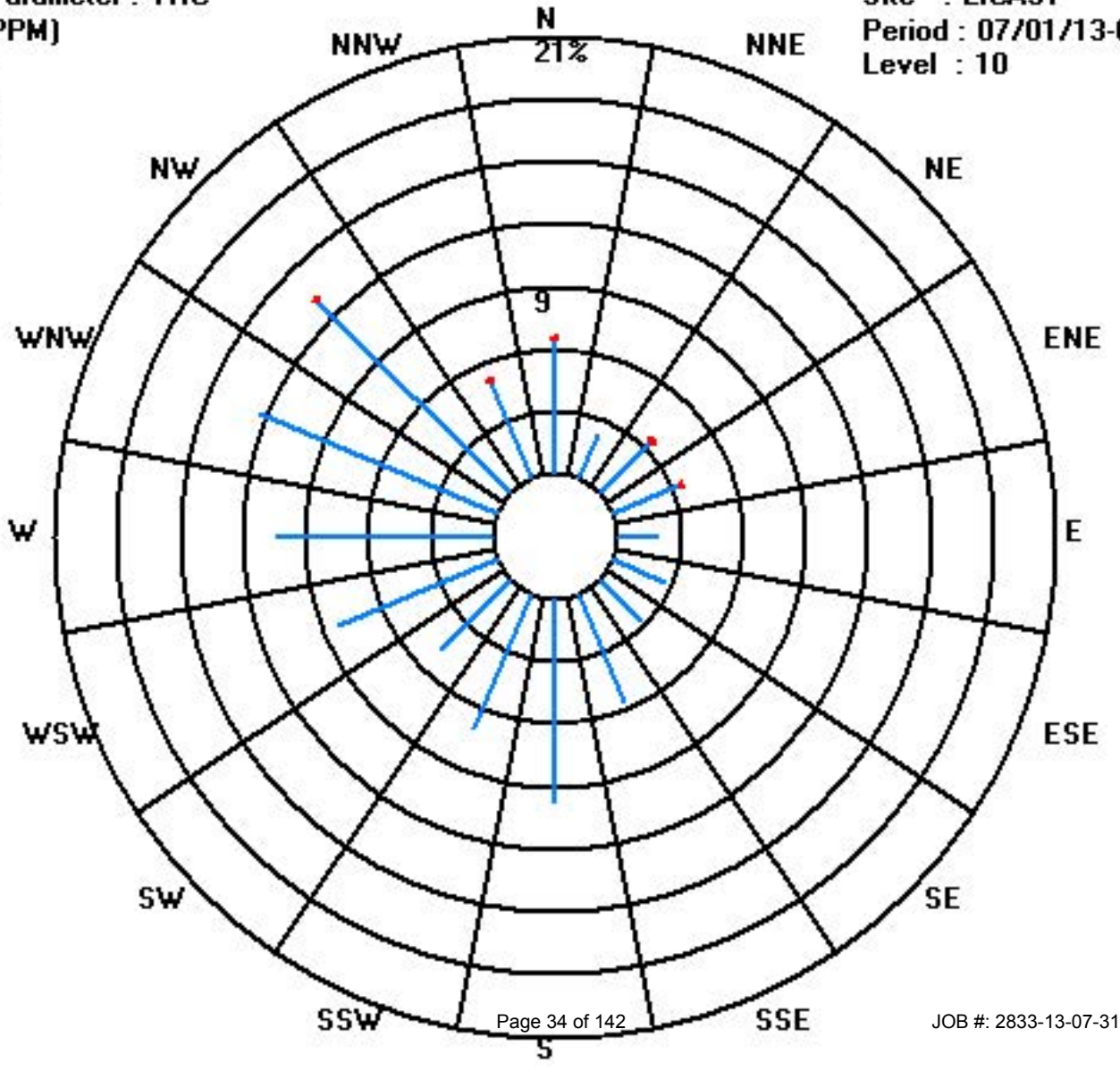
Calm : .00 %

Total # Operational Hours : 695

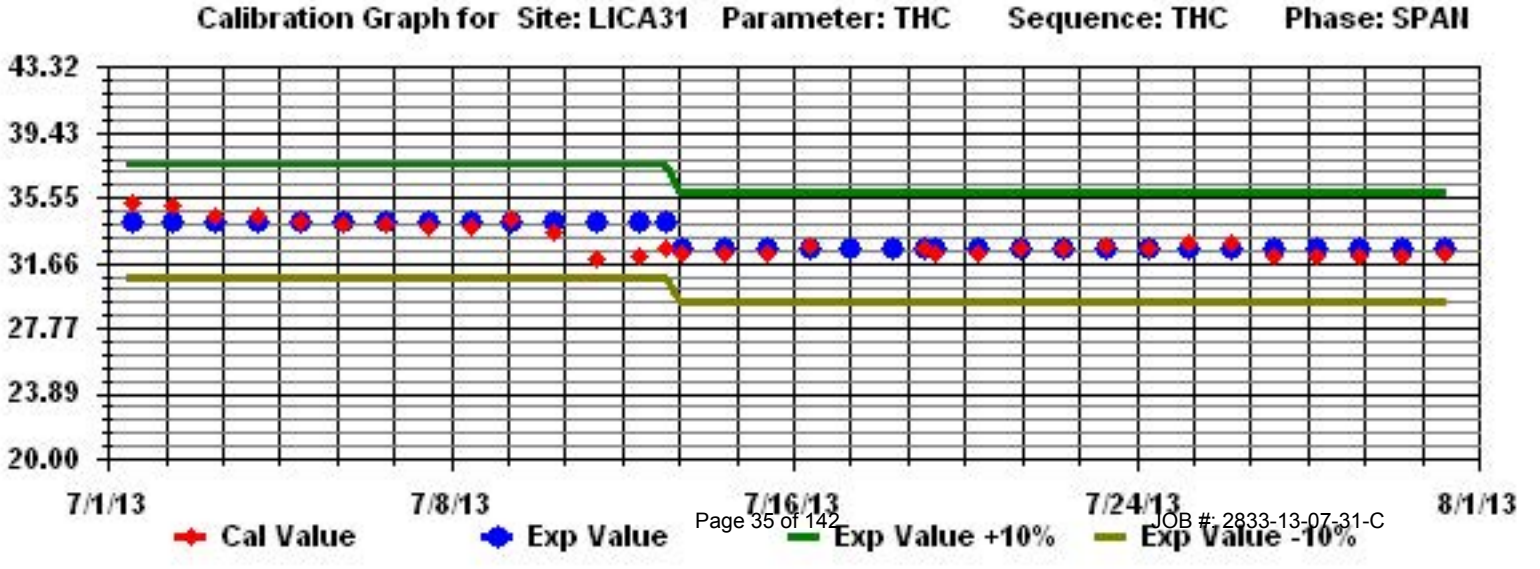
Logger : 31 Parameter : THC
Class Limits (PPM)

>= 50.0
< 50.0
< 10.0
< 3.0

Site : LICA31
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-31-C


Calibration Graph for Site: LICA31 Parameter: THC Sequence: THC Phase: SPAN
43.32
39.43
35.55
31.66
27.77
23.89
20.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

JULY 2013

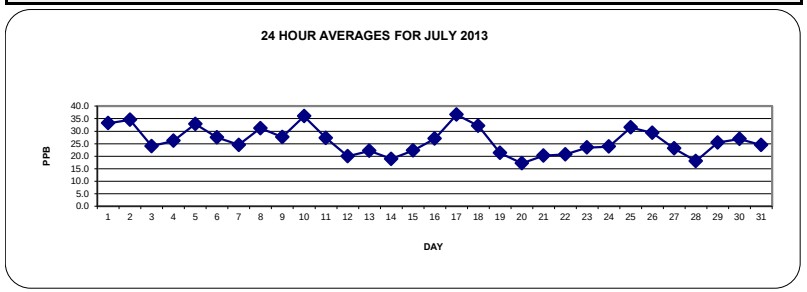
OZONE (O_3) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	23	23	23	24	20	22	24	24	31	40	42	40	**S**	39	39	43	44	44	40	40	36	34	35	33	44	33.2	24
2	30	29	30	29	27	28	29	30	33	35	39	**S**	38	38	37	41	46	45	44	41	36	33	29	28	46	34.6	24
3	23	20	18	16	16	18	20	20	20	22	**S**	26	29	31	29	28	29	29	30	28	26	26	24	25	31	24.0	24
4	24	25	26	25	26	21	18	25	29	**S**	32	32	32	32	31	29	25	25	23	24	24	24	26	24	32	26.2	24
5	22	30	31	34	31	26	26	28	**S**	32	33	35	36	37	37	37	36	37	36	38	34	33	34	33	38	32.9	24
6	31	28	23	21	20	17	16	**S**	21	24	29	33	34	33	26	30	32	33	32	31	29	27	30	34	34	27.6	24
7	34	27	25	23	26	16	**S**	18	21	24	25	26	25	31	29	31	31	31	28	20	17	16	19	21	34	24.5	24
8	28	28	31	24	17	**S**	13	19	23	28	29	31	34	38	41	41	41	39	37	37	39	37	33	29	41	31.2	24
9	26	21	19	16	**S**	15	17	20	24	31	37	39	**S**	**S**	52	48	38	33	29	24	23	24	22	23	52	27.7	22
10	20	20	25	**S**	33	31	28	27	32	38	36	36	**S**	**S**	48	48	48	47	46	43	41	39	37	32	48	36.0	22
11	28	24	**S**	17	16	19	20	22	25	24	26	**S**	26	25	30	31	32	35	39	38	36	31	30	26	39	27.3	23
12	23	**S**	18	17	16	17	19	20	20	22	23	24	21	**C**	**C**	**C**	**C**	20	21	21	19	18	21	20	24	20.0	24
13	**S**	22	22	20	19	17	17	19	23	24	25	25	23	23	22	22	23	25	25	23	22	23	24	**S**	25	22.2	24
14	17	17	13	13	15	12	13	15	15	15	15	16	20	27	29	27	26	25	25	22	21	22	**S**	15	29	18.9	24
15	12	14	20	28	21	19	25	27	29	32	33	29	24	25	24	19	15	17	17	19	22	**S**	23	18	33	22.3	24
16	16	18	19	19	19	21	20	24	26	**S**	32	32	32	33	34	35	35	35	35	32	**S**	28	25	25	35	27.0	23
17	25	24	25	25	26	29	28	31	36	39	42	45	43	45	45	48	46	45	42	**S**	39	38	38	38	48	36.6	24
18	37	36	33	37	30	24	22	24	23	28	34	37	37	38	38	37	36	34	**S**	31	32	33	29	30	38	32.2	24
19	31	31	30	28	24	21	19	26	30	23	21	**S**	24	21	22	21	17	**S**	16	16	15	13	10	10	31	21.3	23
20	14	18	15	15	16	15	15	14	14	16	19	22	22	25	26	24	**S**	20	18	15	12	10	13	16	26	17.1	24
21	15	15	13	12	12	13	14	16	17	18	19	21	22	24	26	**S**	28	26	26	27	25	27	25	24	28	20.2	24
22	23	21	20	20	20	22	20	16	16	15	16	18	19	23	**S**	26	27	26	24	24	24	22	19	16	27	20.7	24
23	15	16	14	13	17	17	16	20	25	**C**	**C**	**C**	**C**	**C**	28	28	28	28	27	26	27	32	35	34	35	23.5	24
24	30	30	16	13	13	11	11	14	15	19	23	24	**S**	25	27	31	31	30	31	28	30	33	33	31	33	23.9	24
25	24	29	24	26	20	24	18	24	29	35	37	**S**	37	38	37	40	40	40	39	36	34	33	32	28	40	31.5	24
26	26	25	26	24	23	22	23	25	28	30	**S**	35	35	36	35	35	35	34	32	31	30	28	28	29	36	29.3	24
27	28	26	26	26	23	20	20	22	22	**S**	25	25	25	24	19	21	22	21	23	26	25	22	21	19	28	23.1	24
28	18	21	17	14	13	11	13	16	**S**	20	22	24	27	26	25	24	20	17	16	18	15	12	12	14	27	18.0	24
29	17	19	21	23	22	21	22	**S**	23	26	27	**S**	27	28	29	32	32	31	30	30	27	27	25	22	32	25.5	23
30	21	24	21	16	19	11	**S**	18	26	28	29	30	31	33	32	34	33	34	34	29	30	29	27	29	34	26.9	24
31	28	18	15	17	19	**S**	15	**P**	**P**	**P**	**P**	**P**	29	28	30	29	29	29	29	27	27	25	24	22	30	24.4	19
HOURLY MAX	37	36	33	37	33	31	29	31	36	40	42	45	43	45	52	48	48	47	46	43	41	39	38	38			
HOURLY AVG	23.6	23.3	22.0	21.2	20.6	19.3	19.3	21.6	24.1	26.5	28.5	29.4	28.9	30.6	32.0	32.4	31.9	31.2	29.8	28.2	27.2	26.6	26.1	24.9			

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



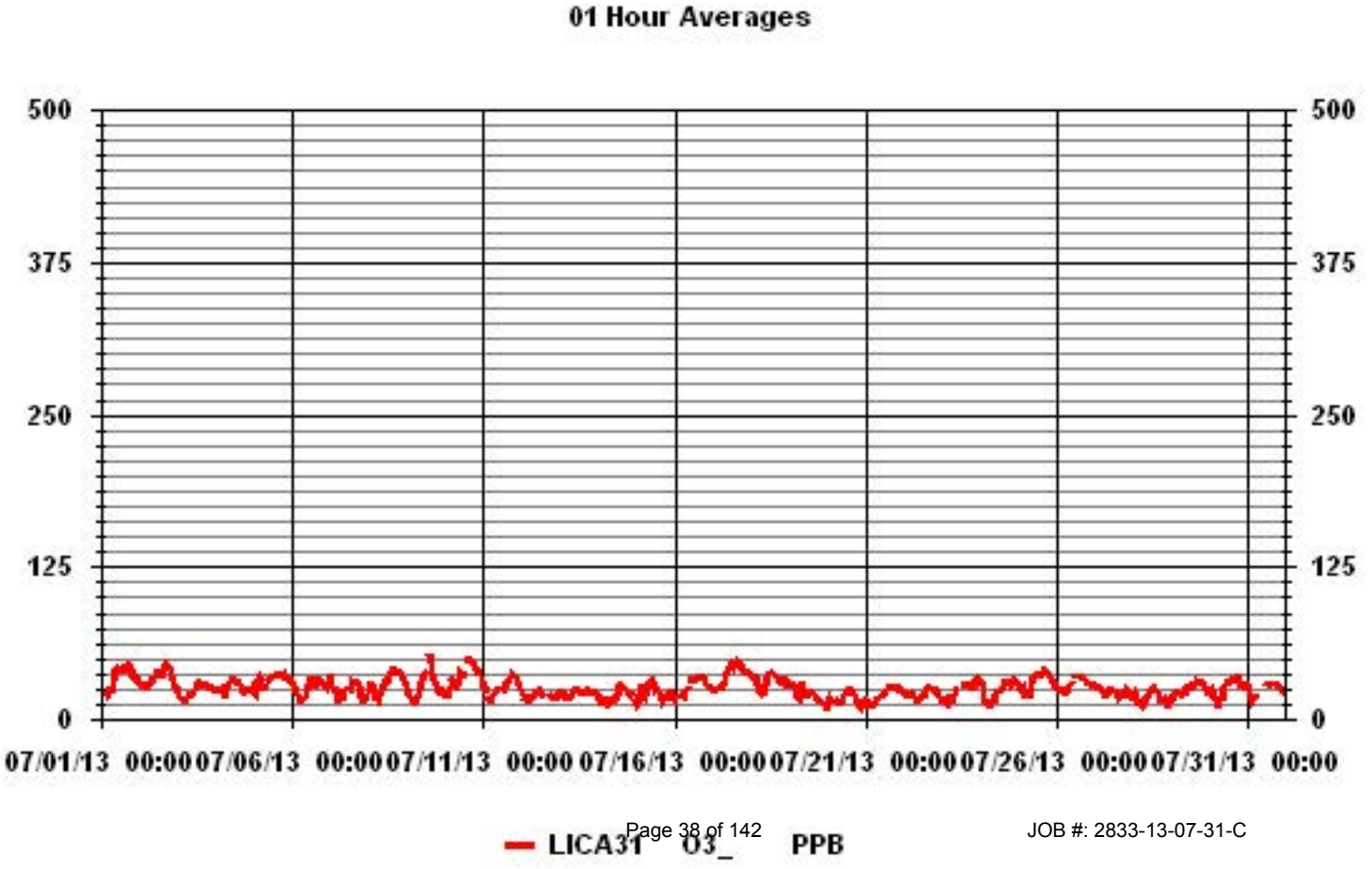
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	691					
MAXIMUM 1-HR AVERAGE:	52	PPB	@ HOUR(S)	14	ON DAY(S)	9
MAXIMUM 24-HR AVERAGE:	36.6	PPB			ON DAY(S)	17
					VAR-VARIOUS	

IZS CALIBRATION TIME:	39	HRS	OPERATIONAL TIME:	731	HRS
MONTHLY CALIBRATION TIME:	9	HRS	AMD OPERATION UPTIME:	98.3	%
STANDARD DEVIATION:	7.91		MONTHLY AVERAGE:	26.2	PPB

JOB #: 2833-13-07-31-C



JOB #: 2833-13-07-31-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

JULY 2013

OZONE MAX instantaneous maximum in ppb

MST

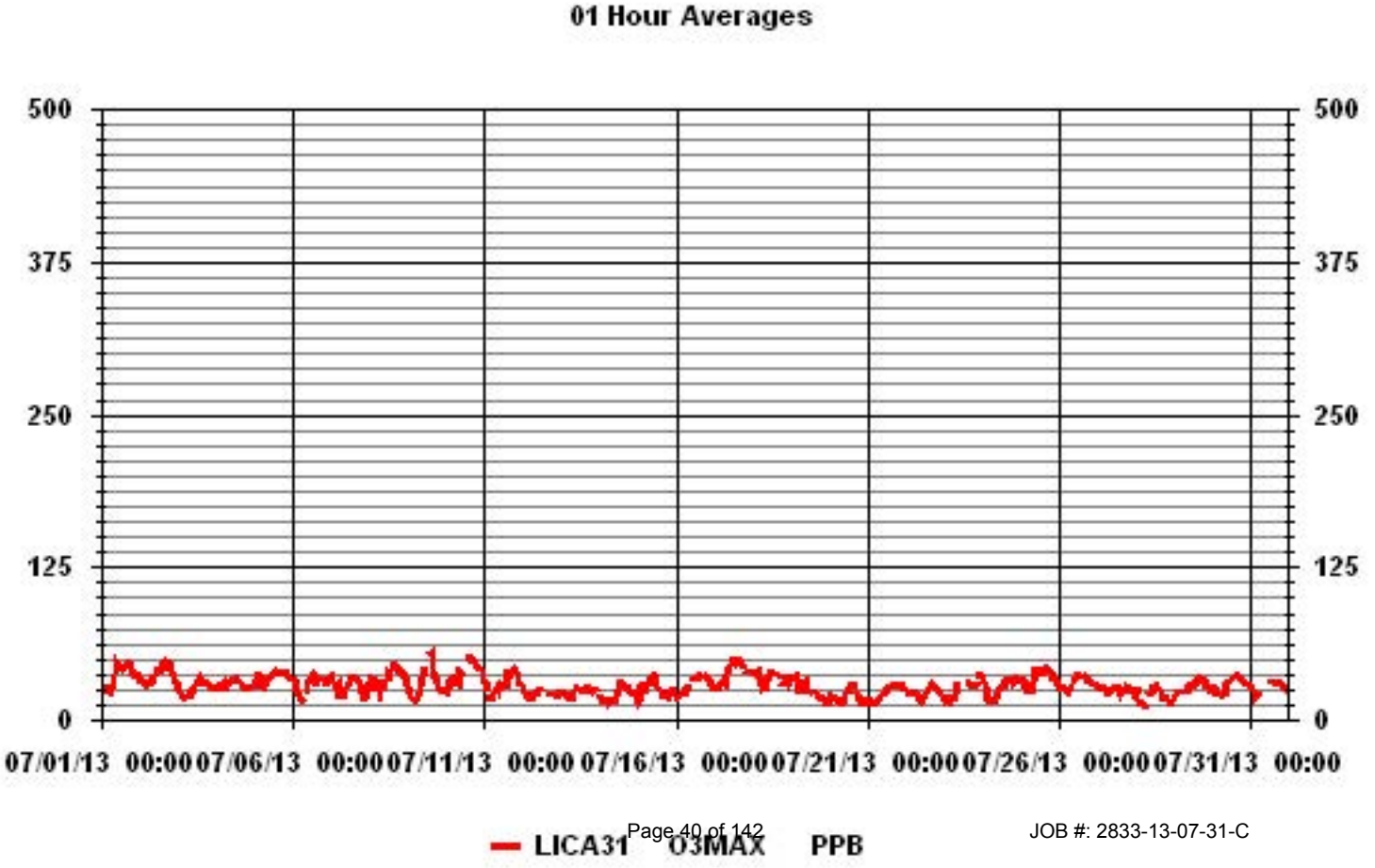
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	25	27	25	27	25	24	29	26	37	47	45	45	**S**	42	43	45	46	47	44	42	39	37	38	37	47	36.6	24
2	33	32	32	31	29	30	30	31	35	37	42	**S**	39	39	40	46	48	46	46	43	40	37	31	31	48	36.9	24
3	26	24	22	20	19	20	22	22	21	25	**S**	30	32	34	30	30	30	30	31	30	28	26	26	26	34	26.3	24
4	26	26	29	28	30	26	23	28	31	**S**	34	33	35	34	33	32	27	27	26	26	26	26	27	28	35	28.7	24
5	28	32	36	36	33	29	28	31	**S**	34	35	37	39	40	40	39	38	39	38	39	36	35	35	34	40	35.3	24
6	33	33	25	22	21	19	17	**S**	23	30	32	35	38	36	28	34	35	35	34	32	32	28	34	35	38	30.0	24
7	36	32	28	27	29	19	**S**	20	23	26	29	30	35	35	31	35	34	33	31	23	19	18	21	24	36	27.7	24
8	31	35	35	34	26	**S**	17	23	26	31	32	39	37	41	44	44	44	42	41	39	41	40	36	30	44	35.1	24
9	28	24	20	18	**S**	17	19	22	28	35	40	40	**S**	**S**	55	**56**	41	36	32	26	25	26	**P**	**P**	**56**	30.9	22
10	23	25	31	**S**	36	35	31	30	40	40	39	**S**	**S**	**S**	50	50	50	48	48	45	43	41	41	34	50	39.0	24
11	32	27	**S**	18	18	21	22	25	28	25	29	**S**	**S**	28	41	38	34	38	41	39	39	32	31	29	41	30.2	24
12	25	**S**	22	18	18	18	20	21	21	24	25	26	**C**	**C**	**C**	**C**	**C**	21	21	21	21	20	23	22	26	21.5	24
13	**S**	23	22	21	20	18	18	22	24	26	26	26	25	24	23	23	26	26	26	25	23	24	25	**S**	26	23.5	24
14	19	19	15	15	16	14	16	16	16	16	17	19	25	30	30	29	28	26	27	24	23	24	**S**	19	30	21.0	24
15	14	15	28	30	29	23	**P**	30	33	34	38	33	27	27	26	22	17	20	19	23	24	**S**	25	21	38	25.4	23
16	18	19	19	20	21	24	23	27	**S**	**S**	33	33	33	34	35	37	36	36	37	35	**S**	32	26	26	37	28.8	24
17	26	26	26	29	29	31	30	36	38	42	44	48	46	48	48	50	49	47	44	**S**	40	39	39	39	50	38.9	24
18	39	38	39	40	36	29	25	26	26	32	37	39	39	39	39	38	37	36	**S**	31	34	35	31	34	40	34.7	24
19	35	34	35	36	33	23	23	29	32	33	24	**S**	**S**	23	24	23	20	**S**	17	17	17	14	**P**	13	36	25.3	23
20	20	20	18	17	17	16	15	14	15	18	22	24	24	28	28	28	**S**	23	22	17	14	11	17	**P**	28	19.5	23
21	16	17	15	13	13	14	15	17	19	20	21	23	25	27	28	**S**	29	28	29	29	28	29	26	25	29	22.0	24
22	25	22	21	21	23	23	23	18	18	16	18	19	22	25	**S**	28	30	28	26	26	24	24	21	18	30	22.6	24
23	16	18	16	15	18	18	18	22	29	**C**	**C**	**C**	**C**	**C**	**C**	30	30	29	28	28	30	**P**	36	36	36	24.5	23
24	33	32	28	17	15	15	15	15	18	22	25	27	**S**	28	31	32	33	32	33	30	32	34	34	33	34	26.7	24
25	32	32	27	29	23	30	22	30	32	40	40	**S**	40	40	39	42	42	42	40	39	35	34	33	30	42	34.5	24
26	27	26	26	26	24	23	25	26	29	33	**S**	36	36	37	37	36	36	35	33	31	31	29	29	29	37	30.4	24
27	29	27	26	26	26	21	21	23	23	**S**	27	28	27	27	22	24	24	24	28	27	26	26	24	21	29	25.1	24
28	20	25	**P**	14	14	12	**P**	19	**S**	22	23	28	29	27	27	25	22	18	18	19	18	13	13	16	29	20.1	22
29	19	20	22	23	23	23	24	**S**	25	28	29	**S**	29	30	31	34	35	33	31	32	29	27	27	24	35	27.2	23
30	23	26	25	19	22	21	**S**	22	29	30	31	32	34	35	35	37	35	35	35	33	32	30	29	29	37	29.5	24
31	29	26	17	18	21	**S**	19	**P**	**P**	**P**	**P**	**P**	31	31	32	30	30	31	31	28	28	26	25	24	32	26.5	19
HOURLY MAX	39	38	39	40	36	35	31	36	40	47	45	48	46	48	55	56	50	48	48	45	43	41	41	39			
HOURLY AVG	26.2	26.1	25.2	23.6	23.6	21.9	21.9	24.0	26.6	29.5	31.0	31.7	32.5	32.9	34.6	35.1	34.0	33.0	31.9	30.0	29.2	28.2	28.7	27.4			

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:	677					
MAXIMUM INSTANTANEOUS VALUE:	56	PPB	@ HOUR(S)	15	ON DAY(S)	9
IZS CALIBRATION TIME:	43	HRS	OPERATIONAL TIME:		730	HRS
MONTHLY CALIBRATION TIME:	11	HRS				
STANDARD DEVIATION:	8.11					



JOB #: 2833-13-07-31-C

LICA31
O3_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	6.65	2.31	3.61	3.61	2.02	2.74	2.60	5.64	9.84	7.09	4.63	7.95	10.13	12.44	13.31	5.20	99.85
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.14
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.65	2.31	3.61	3.61	2.02	2.74	2.60	5.64	9.84	7.09	4.77	7.95	10.13	12.44	13.31	5.20	

Calm : .00 %

Total # Operational Hours : 691

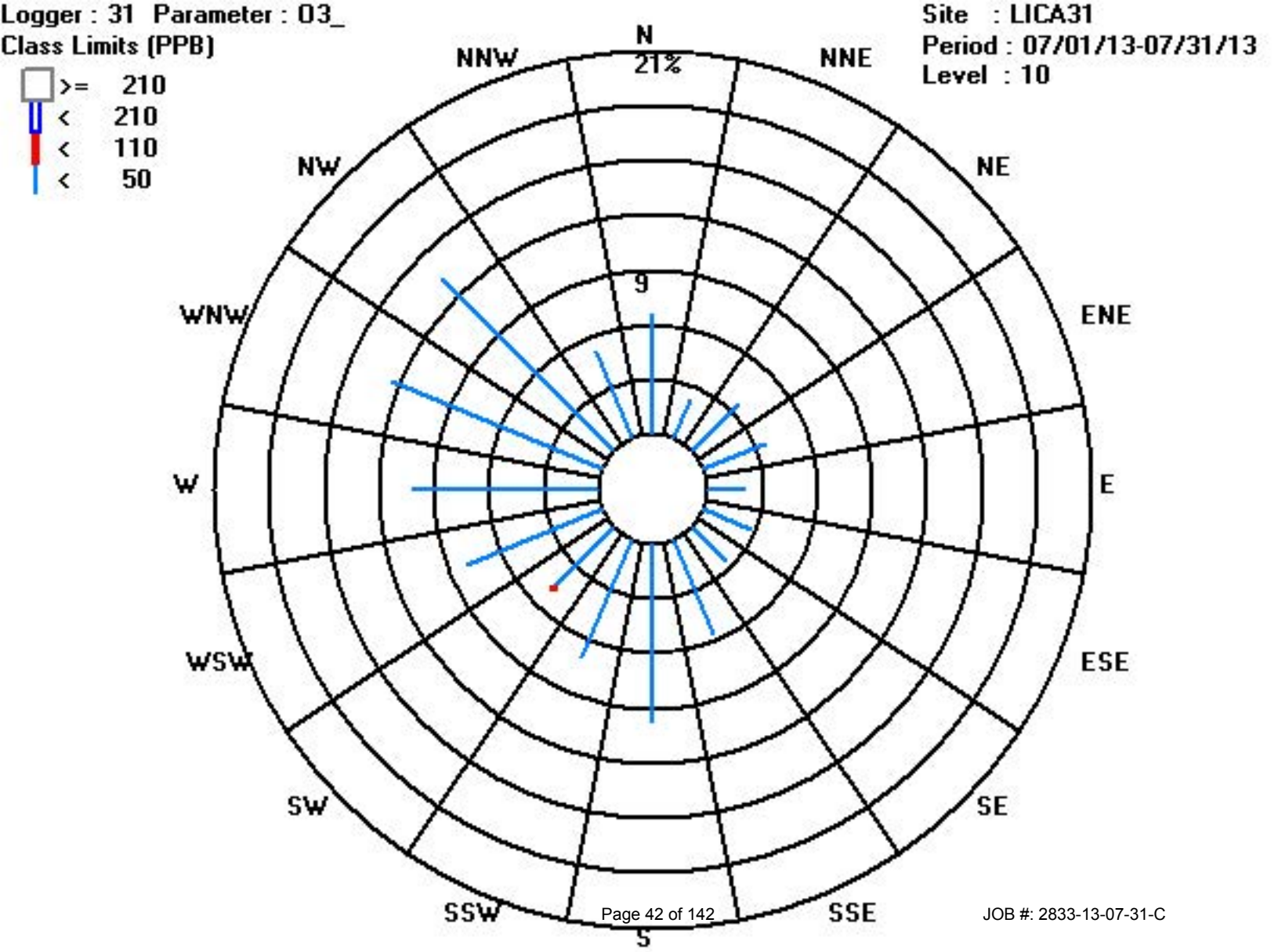
Distribution By Samples

Direction

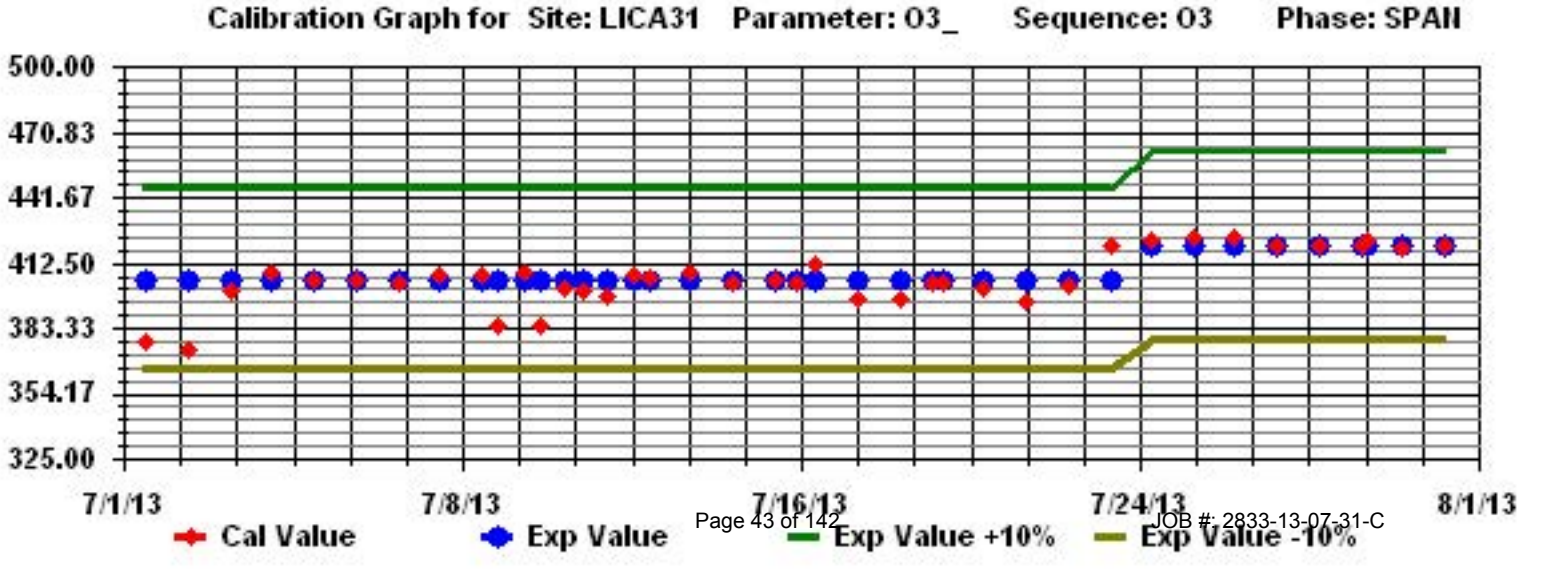
Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	46	16	25	25	14	19	18	39	68	49	32	55	70	86	92	36	690
< 110											1						1
< 210																	
>= 210																	
Totals	46	16	25	25	14	19	18	39	68	49	33	55	70	86	92	36	

Calm : .00 %

Total # Operational Hours : 691



JOB #: 2833-13-07-31-C


Calibration Graph for Site: LICA31 Parameter: O3_ Sequence: O3 Phase: SPAN
500.00
470.83
441.67
412.50
383.33
354.17
325.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

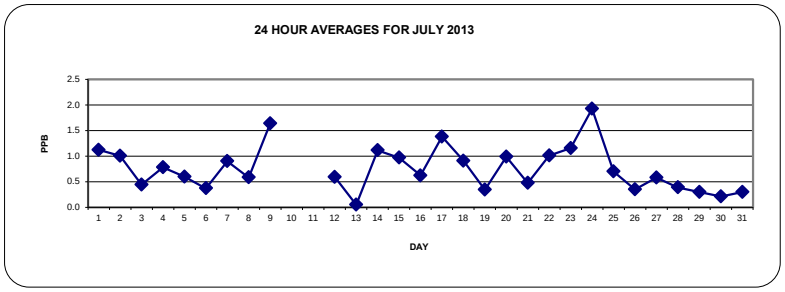
NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2	1.9	1.3	1.8	2.1	1.7	1.3	1	0.6	0.6	0.6	0.7	**S**	0.8	1	0.9	0.6	0.8	1.1	0.7	0.7	1.1	1.2	1.3	2.1	1.1	24
2	2.2	2.2	2	1.9	2	1.8	1.4	1.2	0.6	0.6	0.2	**S**	0.2	0	0	0.4	0.5	0.4	0.6	0.8	2.3	0.5	0.7	0.6	2.3	1.0	24
3	0.6	0.9	0.8	0.8	0.6	0.4	0.3	0.3	0.2	0.1	**S**	0.1	0.2	0.2	0.3	0.4	0.3	0.4	0.3	0.5	0.3	0.6	0.9	0.7	0.9	0.4	24
4	0.8	0.9	0.5	0.6	0.6	1.2	1.1	0.8	0.7	**S**	0.4	0.6	0.9	0.4	0.9	0.3	0.7	0.6	1.4	0.9	0.5	0.7	1	1.5	1.5	0.8	24
5	1.2	2.1	1.3	0.9	1.1	0.9	0.6	0.4	**S**	0.4	0.3	0.3	0.3	0.4	0.5	0.3	0.2	0.4	0.2	0.2	0.2	0.5	0.3	0.7	2.1	0.6	24
6	1	0.8	0.9	0.8	1	0.8	0.8	**S**	0.4	0.1	0.1	0	0.1	0	0.4	0	0	0	0	0.1	0.1	0.3	0.4	0.4	1	0.4	24
7	0.4	0.7	1	0.7	0.5	0.5	**S**	0.7	0.6	0.4	0.7	0.7	0.5	0.5	0.7	0.4	0.5	0.6	0.7	1.2	0.9	1.7	2.7	3.4	3.4	0.9	24
8	2.4	1.5	1.4	1.4	1.5	**S**	1.3	0.8	0	0	0	0	0	0	0	0.3	0.3	0	0.1	0.1	0.2	0.6	0.5	1	2.4	0.6	24
9	0.7	1.1	1.5	1.9	**S**	2.2	2.1	1.7	1.9	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	2.2	1.6	13
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**	**C**	**C**	**C**	**C**	**C**	**C**	0.4	0.1	0.9	0.4	0.4	0.4	0.7	0.7	1	0.9	1	0.6	16
13	**S**	0.1	0	0.1	0.1	0.1	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0.2	0.1	**S**	0.4	0.1	24
14	1.6	1.9	1.7	2	1.9	1.7	1.3	1.3	1	1.4	1.4	0.9	0.8	0.6	0.3	0.1	0.2	0.1	0.3	0.4	0.6	0.9	**S**	3.2	3.2	1.1	24
15	5.1	2.9	1.8	1	1.1	1	0.7	0.7	0.9	0.7	0.5	0.5	0.1	0.1	0.8	0.8	0.4	0.4	0.6	0.4	0.4	**S**	0.6	0.8	5.1	1.0	24
16	0.9	1	0.9	0.5	0.7	0.7	0.6	0.7	0.6	0.7	0.5	0	0.4	0.1	0.6	0.1	0.2	0	0.4	0.1	**S**	1.9	1.5	1.2	1.9	0.6	24
17	1.4	2.2	1.8	1.9	1.9	2.4	1.9	1.4	1.5	1.8	1.6	1.7	0.8	0.8	1.3	1.1	1.2	1	1.1	**S**	0.7	0.6	0.6	1	2.4	1.4	24
18	1	1.2	4.9	1	1.4	1.3	1.1	0.8	0.9	1.1	0.7	0.6	0.7	1.2	0.5	0.4	0.6	0.7	**S**	0.8	0	0	0	0	4.9	0.9	24
19	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	**S**	0.5	0.6	0.6	1	2.5	2.5	2.5	0.3	24
20	1.1	0.3	0.3	0.5	0.7	0.7	0.9	0.9	0.7	0.8	0.7	0.7	0.8	0.9	0.7	0.4	**S**	0.5	1.1	1.4	1.7	2.7	2.2	2	2.7	1.0	24
21	2	1.5	1	0.7	0.7	0.7	0.5	0.5	0.3	0.2	0.2	0.3	0.2	0.1	0.4	**S**	0	0	0.2	0.3	0.2	0.2	0.3	0.4	2	0.5	24
22	0.8	1.1	1.2	1.2	1.1	0.8	1.5	2	1	1.3	0.5	0.3	0.2	0.4	**S**	0.7	0.8	0.9	0.9	1	1	1.1	1.7	1.7	2	1.0	24
23	1.7	1.4	1.4	1.7	2.3	1.7	1	0.9	0.9	0.6	0.7	0.6	0.8	**S**	1.1	0.7	0.5	0.7	0.8	2	2	0.9	0.9	1.3	2.3	1.2	24
24	1.3	1.9	2.3	2	5.1	**6.7**	5.9	4	3.2	2.8	2.3	1.3	**S**	0.7	0.6	0.6	0.4	0.5	0.4	0.9	0.5	0.3	0.3	0.3	**6.7**	**1.9**	24
25	0.6	2	0.7	0.7	1	1.1	0.8	0.7	0.4	0.8	0.5	**S**	0.3	0.3	0.4	0.6	0.5	0.5	0.5	0.5	0.7	0.7	1	0.8	2	0.7	24
26	0.9	0.5	0.6	0.6	0.7	0.8	0.7	0.6	0.5	0.4	**S**	0.2	0	0.1	0	0	0	0	0	0.2	0.1	0.5	0.2	0.4	0.9	0.3	24
27	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.6	**S**	0.4	0.8	0.8	1.2	0.8	0.5	0.9	0.7	0.3	0	0.1	0	0.5	0.8	1.2	0.6	24
28	1.1	0.7	1.4	1	0.9	0.6	0.5	0.2	**S**	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0	0	0	0.3	0.1	0.1	0.2	1.4	0.4	24
29	0.4	0.5	0.1	0.3	0.5	0.5	0.4	**S**	0.5	0.6	0.4	0.4	0.4	0.4	0.1	0.3	0.1	0	0.1	0.1	0.1	0.1	0.3	0.2	0.6	0.3	24
30	0.3	0.1	0.5	1.2	1.2	1.4	**S**	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	0.2	24
31	0	0.9	0.7	1.3	0.3	**S**	1.9	**P**	**P**	**P**	**P**	**P**	**X**	0	0	0	0	0	0	0	0	0	0	0	1.9	0.3	18
HOURLY MAX	5.1	2.9	4.9	2.0	5.1	6.7	5.9	4.0	3.2	2.8	2.3	1.7	0.9	1.2	1.3	1.1	1.2	1.0	1.4	2.0	2.3	2.7	2.7	3.4			
HOURLY AVG	1.2	1.2	1.2	1.0	1.2	1.2	1.1	0.9	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.8	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

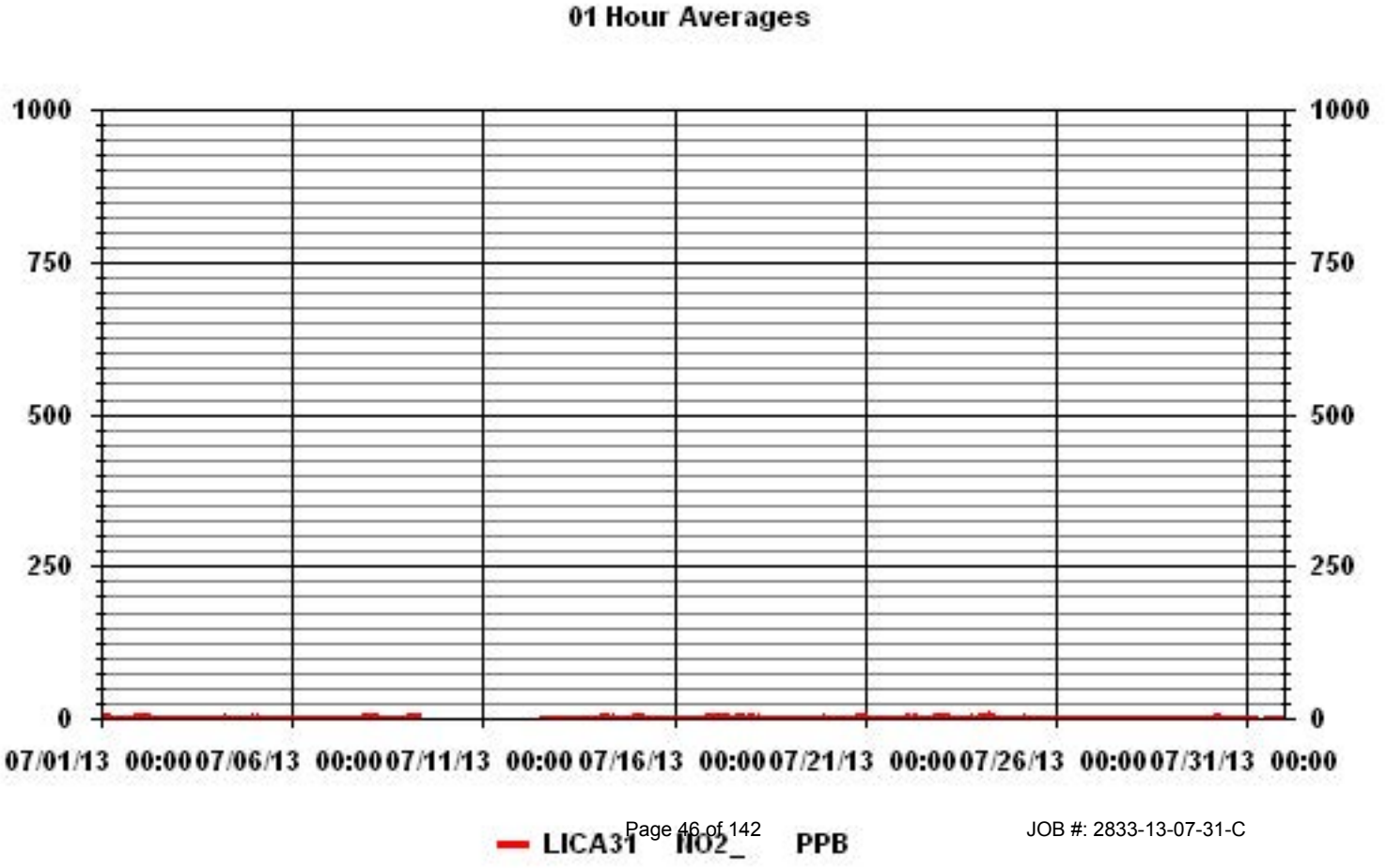


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 159 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	537						
MAXIMUM 1-HR AVERAGE:	6.7	PPB	@ HOUR(S)	5	ON DAY(S)	24	
MAXIMUM 24-HR AVERAGE:	1.9	PPB			ON DAY(S)	24	
IZS CALIBRATION TIME:	29	HRS	OPERATIONAL TIME:		671	HRS	
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:		90.2	%	
STANDARD DEVIATION:	0.76		MONTHLY AVERAGE:		0.74	PPB	

JOB #: 2833-13-07-31-C



JOB #: 2833-13-07-31-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST.LINA*

JULY 2013

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

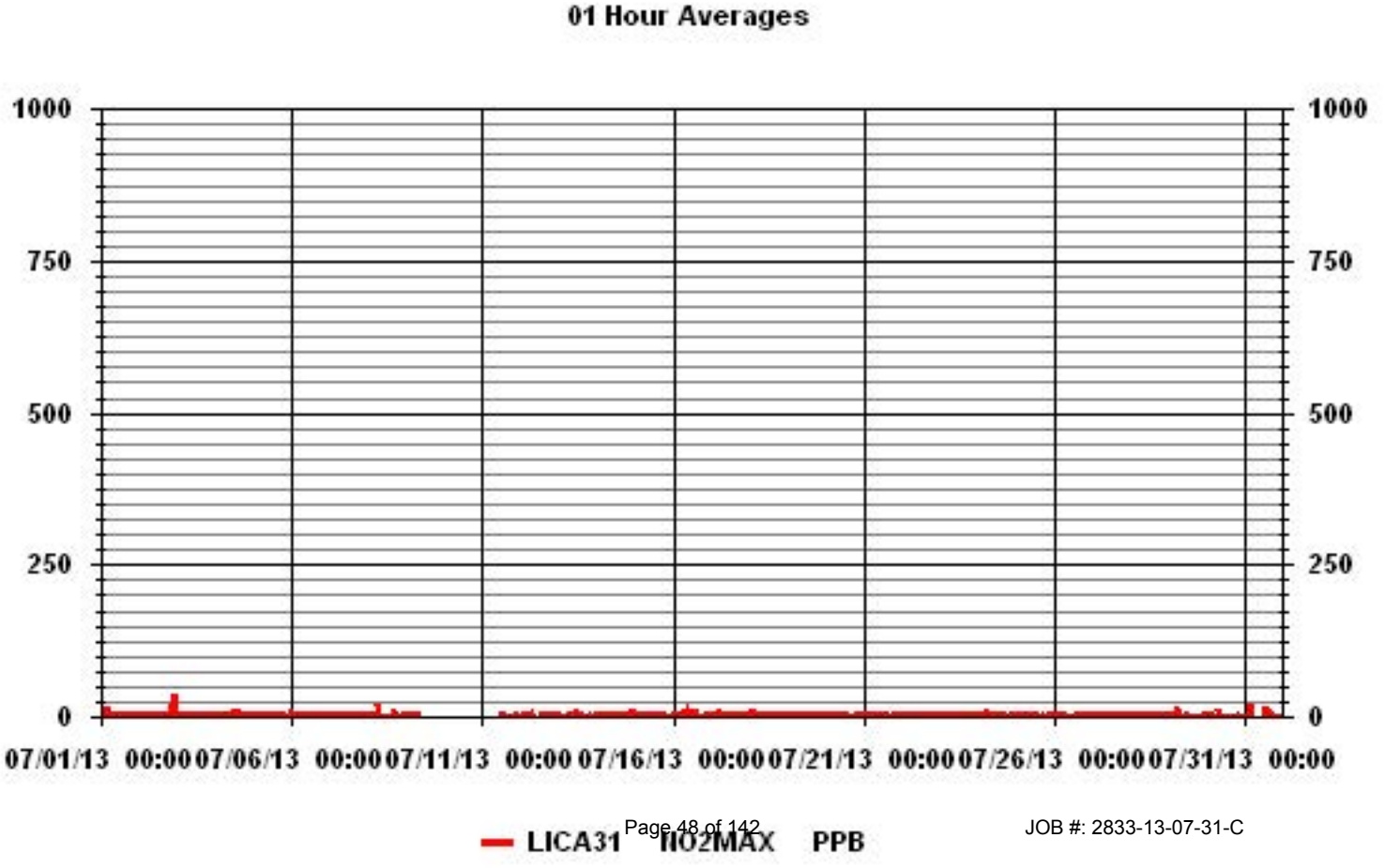
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.9	4.7	2.6	3.2	14.8	3.3	2.6	2.3	2.3	2.2	2	1.8	**S**	1.7	1.9	1.9	1.5	2	3.5	2.6	2.2	2.6	2.6	2.9	14.8	3.1	24
2	3.5	3.5	3.3	3.2	3.3	3.4	2.7	2.6	2.3	2	2	**S**	2.1	2	1.8	1.8	2.3	2.1	2.3	3.4	21.3	3.8	**38.6**	2.1	**38.6**	5.0	24
3	1.8	2.4	2.4	2.2	2.2	2	1.8	2.6	2.3	1.6	**S**	1.1	1.1	1.1	1.2	1.5	1.3	1.3	1.2	1.3	1.4	1.9	1.8	1.9	2.6	1.7	24
4	2.2	2	1.6	1.7	2	2.3	3.1	1.9	1.8	**S**	1.3	2.3	11.7	1.5	11.1	1.9	1.9	1.9	3.9	4.9	3	2.5	2.5	4.1	11.7	3.2	24
5	2.5	3.6	3.1	2.2	3.5	2	2	1.9	**S**	1.5	1	1.2	1.3	1.4	1.9	1	1.3	1.2	1	1	1.2	2.3	1	1.9	3.6	1.8	24
6	12.2	2	1.9	1.9	1.8	2.2	2	**S**	1.5	1.5	1.4	1.5	1.4	1.4	1.6	1.6	1.6	1.6	1.6	1.4	1.8	1.8	2	2	12.2	2.2	24
7	1.8	2.3	2.4	2.1	2.1	2.4	**S**	1.7	1.7	1.4	1.6	1.7	2.6	1.6	1.9	1.7	2	1.7	1.6	2.2	2.3	3.2	4.2	4.7	4.7	2.2	24
8	4.6	2.8	2.5	2.9	4.5	**S**	14.9	1.8	1	0.7	0.7	1.6	0.9	0.8	0.7	2	13.4	1.1	1.8	1.2	1.2	2.1	2.3	3.1	14.9	3.0	24
9	2.1	2.5	2.5	3.3	**S**	3.7	3.2	2.5	2.5	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	3.7	2.8	13
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**	**C**	**C**	**C**	**C**	**C**	**C**	1.6	1.5	2.7	2.3	1.7	1.5	2.9	2.1	2.7	2.3	2.9	2.1	16
13	**S**	0.9	0.8	0.8	0.9	1.3	1.1	1.1	1	1.2	0.8	11.6	1.2	0.4	3.1	0.6	0.6	1.4	0.6	0.5	1.6	1.4	1.1	**S**	11.6	1.5	24
14	2.7	2.8	3.1	3	3	2.6	2.5	2.5	2.1	2.4	2.6	1.9	1.8	1.4	1.4	1.4	1.1	1	1.3	1.7	2	2	**S**	6.6	6.6	2.3	24
15	6.6	4.6	3.4	2	2.4	2.3	**P**	1.9	2.3	1.6	1.7	1.2	1.4	1.5	3.5	2	1.7	1.3	1.5	1.5	1.3	**S**	1.6	1.9	6.6	2.2	23
16	1.9	2	1.8	1.6	1.6	2.1	1.9	12.9	2.6	9.2	2.1	0.8	1.8	0.8	10.8	1.3	1.4	1	2.5	2	**S**	4.9	2.5	2.3	12.9	3.1	24
17	2.8	3.7	3.2	3.4	6.9	7	4	3.6	3.5	3.9	3.4	3.1	2.2	1.7	3.2	1.6	1.8	1.7	1.7	**S**	1.5	1.8	1.8	2.5	7	3.0	24
18	2.4	3.1	11.9	2.9	3.7	2.7	2.9	2.5	3.1	3.5	2.5	2.1	2.5	4.6	6.5	1.8	2.1	1.8	**S**	1.6	2	2.9	2.1	2.1	11.9	3.2	24
19	2.2	2.1	2.2	2.2	2.3	2.2	3.3	2.2	2	2.9	2.3	1.8	2.9	1.9	1.8	2	2.2	**S**	1.5	1.5	1.7	2.5	**P**	4.8	4.8	2.3	23
20	2.5	1.5	1.6	1.8	1.7	1.8	2	2	1.9	1.7	1.8	1.8	1.7	1.8	1.6	1.3	**S**	2	2.5	2.5	3.7	4	3.3	**P**	4	2.1	23
21	3.5	3.1	2.5	2.2	2.1	2.2	2.1	1.9	1.6	1.6	1.3	1.4	1.4	1.3	1.6	**S**	1.3	0.9	2	3	1.8	1.7	2.2	2.2	3.5	2.0	24
22	2.5	2.6	2.7	2.7	2.8	2.3	3.8	5.7	2.5	3.3	2.2	1.7	1.8	1.8	**S**	1.7	1.6	2.4	2.1	2.3	2.2	2.2	2.6	2.8	5.7	2.5	24
23	2.9	2.6	2.7	3.1	3.8	3.4	2.4	3.1	2.3	1.7	1.8	1.6	2	**S**	2.3	1.4	1.5	1.6	1.5	4.5	5.3	**P**	2.1	2.1	5.3	2.5	23
24	3.4	4.6	3.3	3	6.3	10	7.8	5.3	4.5	3.8	3.1	2.7	**S**	1.8	1.8	1.6	1.5	1.5	1.3	2.4	1.4	1.6	1.5	1.5	10	3.3	24
25	2	4.2	2.4	2.3	2.8	3.2	2.4	2.6	1.8	1.9	1.6	**S**	1.3	1.1	1.3	1.4	1	1	0.9	0.6	1.8	1.8	2	1.9	4.2	1.9	24
26	2	2	1.8	2	2.1	2.3	2.3	1.8	1.8	1.5	**S**	1.3	1.6	1.7	1.7	1.6	1.6	1.5	1.4	1.8	2	2.5	2.2	2	2.5	1.8	24
27	2.3	2.5	2.3	2.6	2.6	2.4	2.8	2.7	2.3	**S**	1.6	1.9	2.4	2.4	2.6	1.9	2.4	1.9	1.6	1.5	1.7	1.5	1.7	2	2.8	2.2	24
28	2.6	2	**P**	2.4	2.2	2	**P**	1.5	**S**	1.3	1.2	1.2	1.4	1.1	1.3	1.3	1.2	1.2	1.3	1.4	1.7	1.1	1.1	1.4	2.6	1.5	22
29	1.6	1.3	1.4	1.7	2.6	14.7	2	**S**	1.2	1.4	1	1.3	1.5	1.6	1	1.8	0.8	0.9	0.8	1	1.4	1.1	1.1	1.3	14.7	1.9	24
30	1.6	1.2	1.4	2.3	2.8	2.2	**S**	11.5	5.8	0.2	0.1	0.3	0.2	0	0	0	0	0	0	1.5	2	0.9	0.5	0.2	11.5	1.5	24
31	0.6	2.8	2	21.8	1.5	**S**	**S**	**P**	**P**	**P**	**P**	**P**	**X**	14.3	1.1	1.1	0.3	9	0	1.3	0.7	0.6	1.2	1.1	21.8	3.7	18
HOURLY MAX	12.2	4.7	11.9	21.8	14.8	14.7	14.9	12.9	5.8	9.2	3.4	11.6	11.7	14.3	11.1	2.0	13.4	9.0	3.9	4.9	21.3	4.9	38.6	6.6			
HOURLY AVG	3.0	2.7	2.7	3.1	3.3	3.4	3.3	3.3	2.3	2.3	1.7	2.0	2.1	2.0	2.6	1.5	1.9	1.8	1.6	1.9	2.7	2.2	3.4	2.5			

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:	618					
MAXIMUM INSTANTANEOUS VALUE:	38.6	PPB	@ HOUR(S)	22	ON DAY(S)	2
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		665	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	2.63					



JOB #: 2833-13-07-31-C

LICA31
NO2_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	6.96	2.37	3.79	3.48	2.37	2.53	2.53	5.53	10.28	7.43	4.74	6.32	9.17	13.13	14.24	5.06	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	6.96	2.37	3.79	3.48	2.37	2.53	2.53	5.53	10.28	7.43	4.74	6.32	9.17	13.13	14.24	5.06	

Calm : .00 %

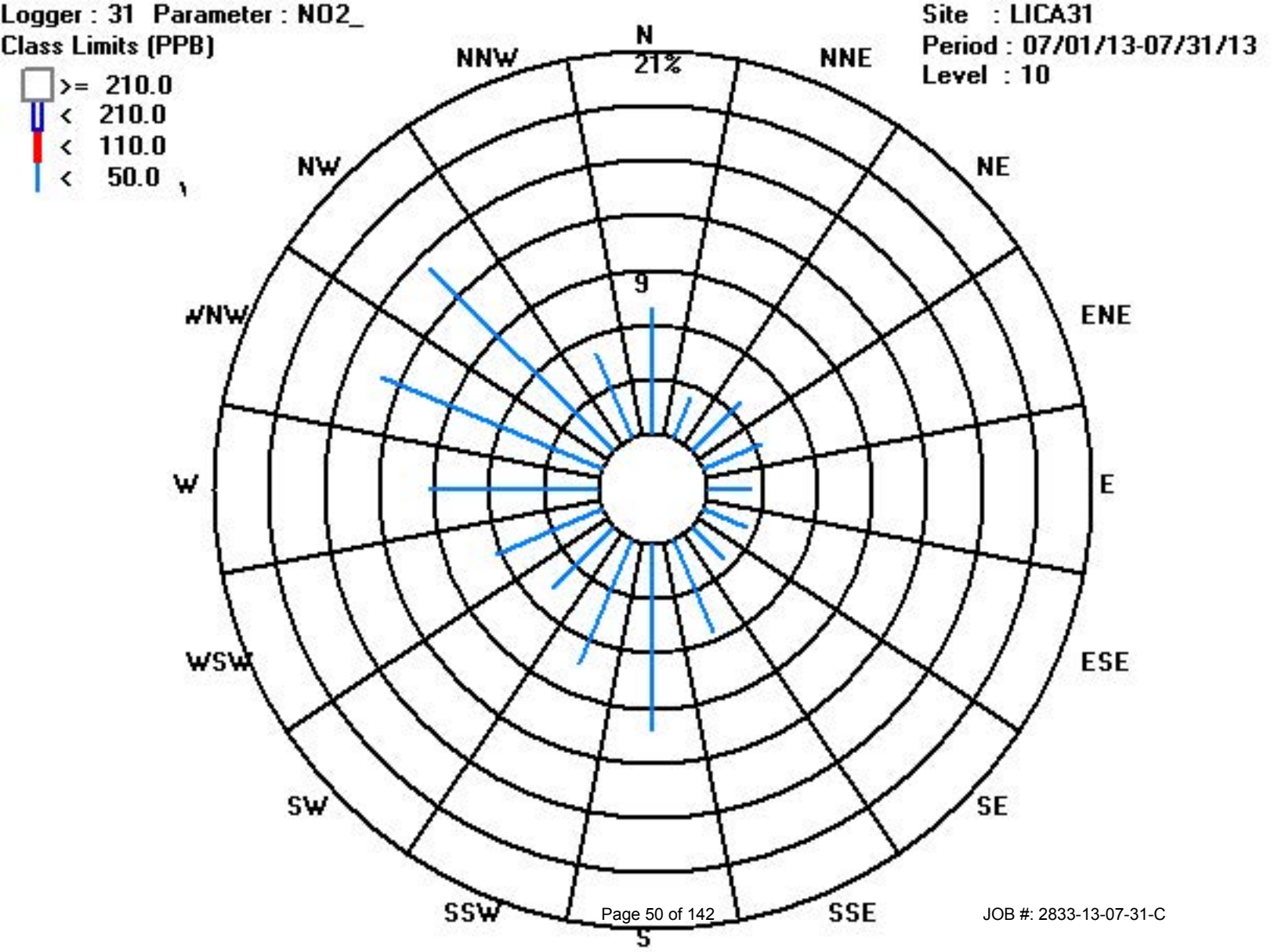
Total # Operational Hours : 632

Distribution By Samples

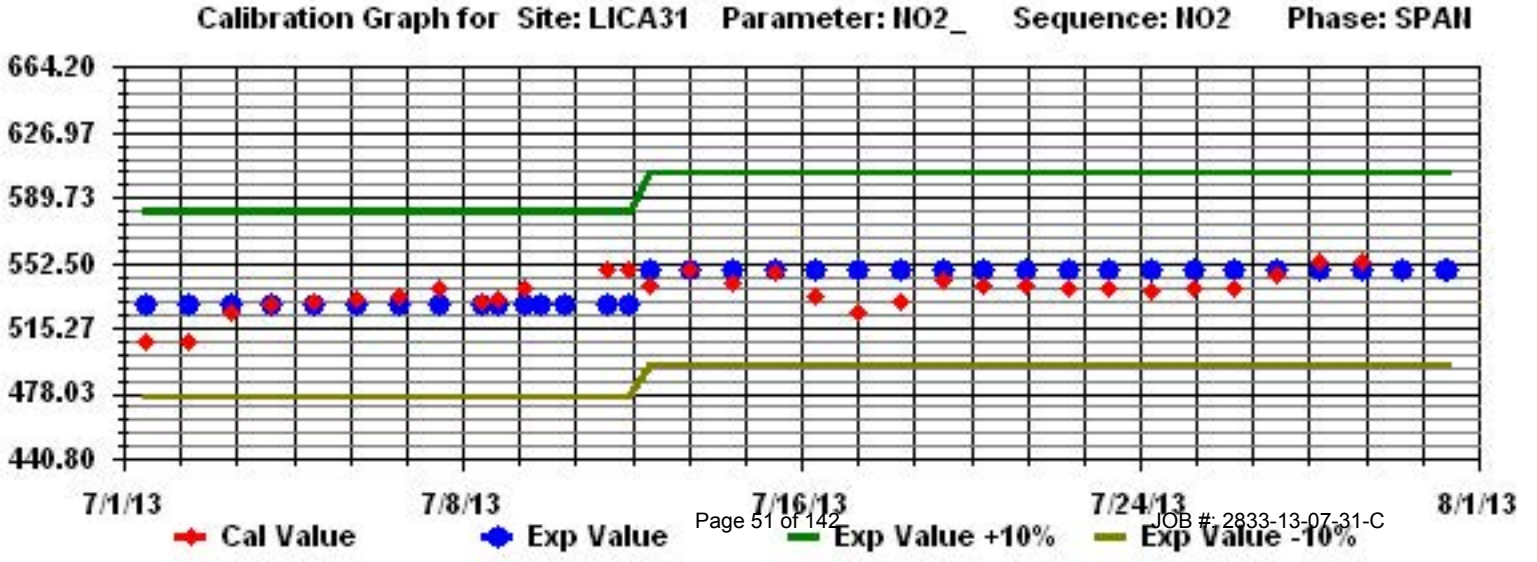
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	44	15	24	22	15	16	16	35	65	47	30	40	58	83	90	32	632
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	44	15	24	22	15	16	16	35	65	47	30	40	58	83	90	32	

Calm : .00 %

Total # Operational Hours : 632



JOB #: 2833-13-07-31-C


Calibration Graph for Site: LICA31 Parameter: NO2_ Sequence: NO2 Phase: SPAN
664.20
626.97
589.73
552.50
515.27
478.03
440.80
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

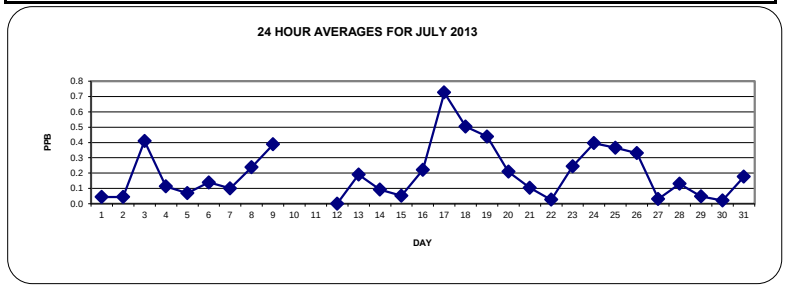
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0.7	0.2	0	0	0	0	0	0	**S**	0.1	0	0	0	0	0	0	0	0	0	0	0.7	0.0	24
2	0	0	0	0.3	0.2	0.1	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0.3	0.1	0.3	0.0	24
3	0.4	0.7	0.8	0.8	1	0.8	1	1.2	1.1	0.9	**S**	0.4	0	0	0.1	0.2	0	0	0	0	0	0	0	0	1.2	0.4	24
4	0	0	0	0.3	0.2	0.3	1	0.5	0.1	**S**	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	1	0.1	24
5	0	0	0	0	0.1	0	0	0.3	**S**	0.5	0.1	0.1	0	0.2	0	0.1	0	0	0	0	0	0	0	0.2	0.5	0.1	24
6	0.2	0.2	0.4	0.3	0.3	0.7	0.5	**S**	0.2	0.3	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0.1	24
7	0.2	0.2	0.2	0.1	0.1	0.4	**S**	0.2	0.2	0.1	0	0	0	0.1	0	0	0.1	0	0	0	0	0.1	0.1	0.2	0.4	0.1	24
8	0.4	0.2	0.4	0.6	1.1	**S**	**2.4**	0.3	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2.4**	0.2	24
9	0	0	0	0	**S**	0.9	1.2	0.7	0.3	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	1.2	0.4	13
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**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	0	0	0.0	16
13	**S**	0.1	0.2	0.2	0.3	0.5	0.7	0.5	0.5	0.5	0.3	0.4	0	0	0	0	0	0	0	0	0	0	0	**S**	0.7	0.2	24
14	0	0	0	0.1	0.1	0.4	0.5	0.4	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0	0	**S**	0.2	0.5	0.1	24
15	0.1	0	0.1	0.1	0.1	0.1	0	0	0.1	0	0	0	0	0	0	0.4	0	0	0	0	0	**S**	0.2	0	0.4	0.1	24
16	0.1	0	0	0	0.3	0.3	0.4	0.6	0.3	0.6	0.2	0	0.1	0	0.1	0	0	0	0	0	**S**	0.8	0.6	0.7	0.8	0.2	24
17	1	1	1.1	1	1.1	1.5	1.1	1.5	1.4	1.1	0.9	0.7	0.6	0.6	0.5	0.2	0	0	0	**S**	0.4	0.2	0.4	0.4	1.5	**0.7**	24
18	0.5	0.6	0.9	0.9	0.7	0.7	0.9	1	1.3	0.7	0.5	0.5	0.3	0.9	0.2	0.3	0.1	0	**S**	0	0.2	0.3	0	0.1	1.3	0.5	24
19	0.2	0.5	0.5	0.4	0.7	0.5	0.5	0.5	0.7	0.4	0.6	0.5	0.6	0.6	0.6	0.7	0.5	**S**	0.3	0.1	0	0.3	0.3	0.1	0.7	0.4	24
20	0.3	0.4	0.3	0.5	0.4	0.4	0.5	0.5	0.8	0.4	0	0.1	0.2	0	0	0	**S**	0	0	0	0	0	0	0	0.8	0.2	24
21	0.2	0.2	0.1	0	0.2	0.3	0.4	0.3	0.4	0.2	0	0.1	0	0	0	**S**	0	0	0	0	0	0	0	0	0.4	0.1	24
22	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	**S**	0.1	0	0	0	0	0	0	0	0.1	0.4	0.0	24
23	0.4	0.2	0.3	0.2	0.5	1	1	1	0.6	0.3	0	0.1	0	**S**	0	0	0	0	0	0	0	0	0	0	1	0.2	24
24	0	0.2	0	0	0.2	1.3	0.7	1.7	1.8	1.2	0.4	0	**S**	0.3	0.1	0.1	0	0	0	0	0.2	0.3	0.4	0.2	1.8	0.4	24
25	0.3	0.4	0.5	0.5	0.6	0.9	0.8	0.5	0.3	0.3	0.2	**S**	0.6	0.2	0.1	0.1	0.2	0.1	0	0.2	0	0.4	0.5	0.7	0.9	0.4	24
26	0.3	0.5	0.6	0.9	0.7	0.8	1.1	0.9	1	0.8	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	0.3	24
27	0	0	0	0	0	0	0	0	0	**S**	0.3	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.3	0.0	24
28	0.2	0.1	0.1	0.3	0.6	0.6	0.5	0.4	**S**	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0.1	24
29	0	0	0	0	0.1	0.3	0.5	**S**	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.0	24
30	0	0	0	0	0	0	**S**	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.0	24
31	0	0	0	0.2	0	**S**	2.2	**P**	**P**	**P**	**P**	**P**	**X**	0.6	0	0	0	0	0	0	0	0	0	0	2.2	0.2	18
HOURLY MAX	1.0	1.0	1.1	1.0	1.1	1.5	2.4	1.7	1.8	1.2	0.9	0.7	0.6	0.9	0.6	0.7	0.5	0.1	0.3	0.2	0.4	0.8	0.6	0.7			
HOURLY AVG	0.2	0.2	0.2	0.3	0.4	0.5	0.7	0.6	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1			

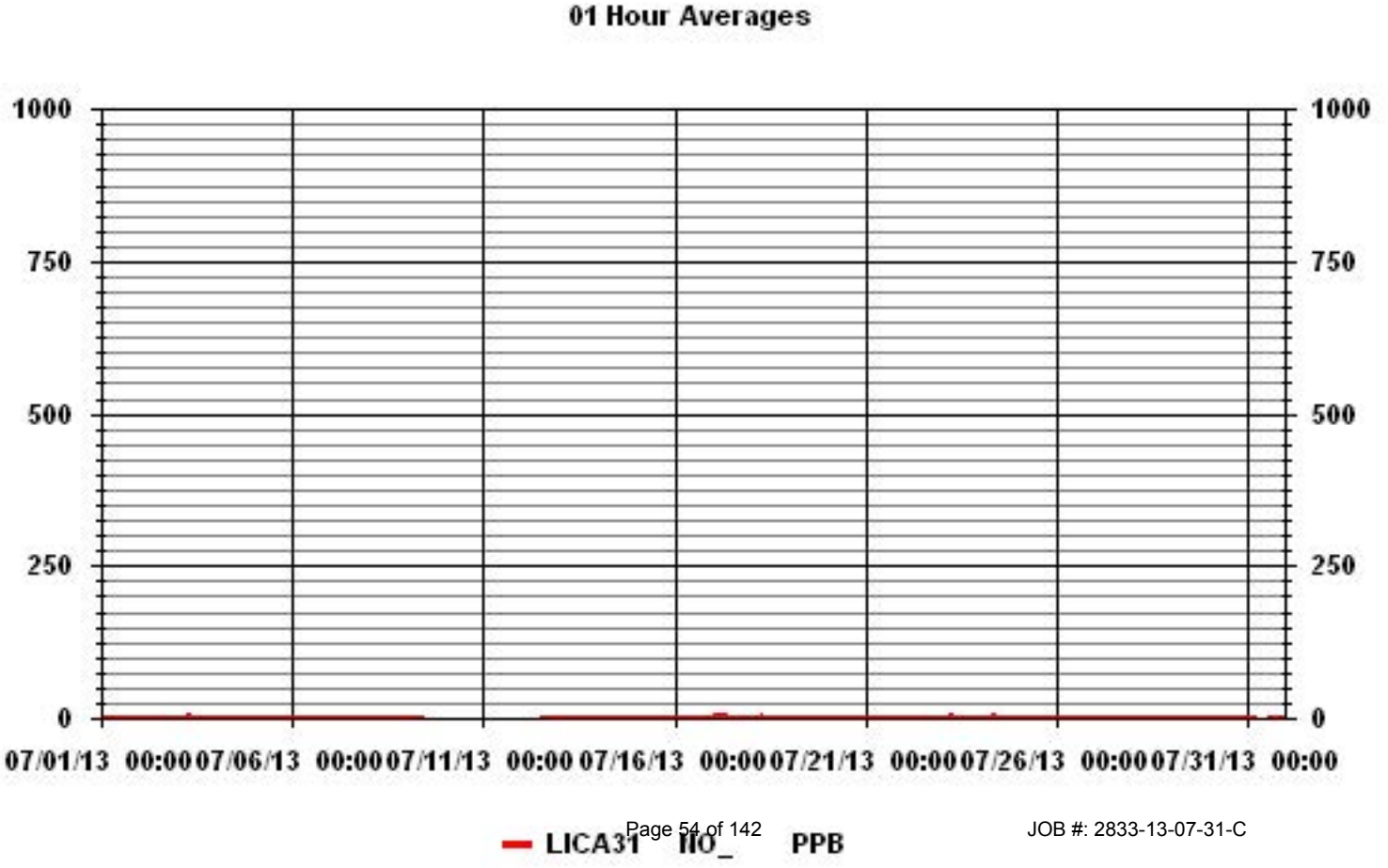
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	277					
MAXIMUM 1-HR AVERAGE:	2.4	PPB	@ HOUR(S)	6	ON DAY(S)	8
MAXIMUM 24-HR AVERAGE:	0.7	PPB			ON DAY(S)	17
IZS CALIBRATION TIME:	29	HRS	OPERATIONAL TIME:		671	HRS
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:		90.2	%
STANDARD DEVIATION:	0.33		MONTHLY AVERAGE:		0.20	PPB



JOB #: 2833-13-07-31-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *ST. LINA*

JULY 2013

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

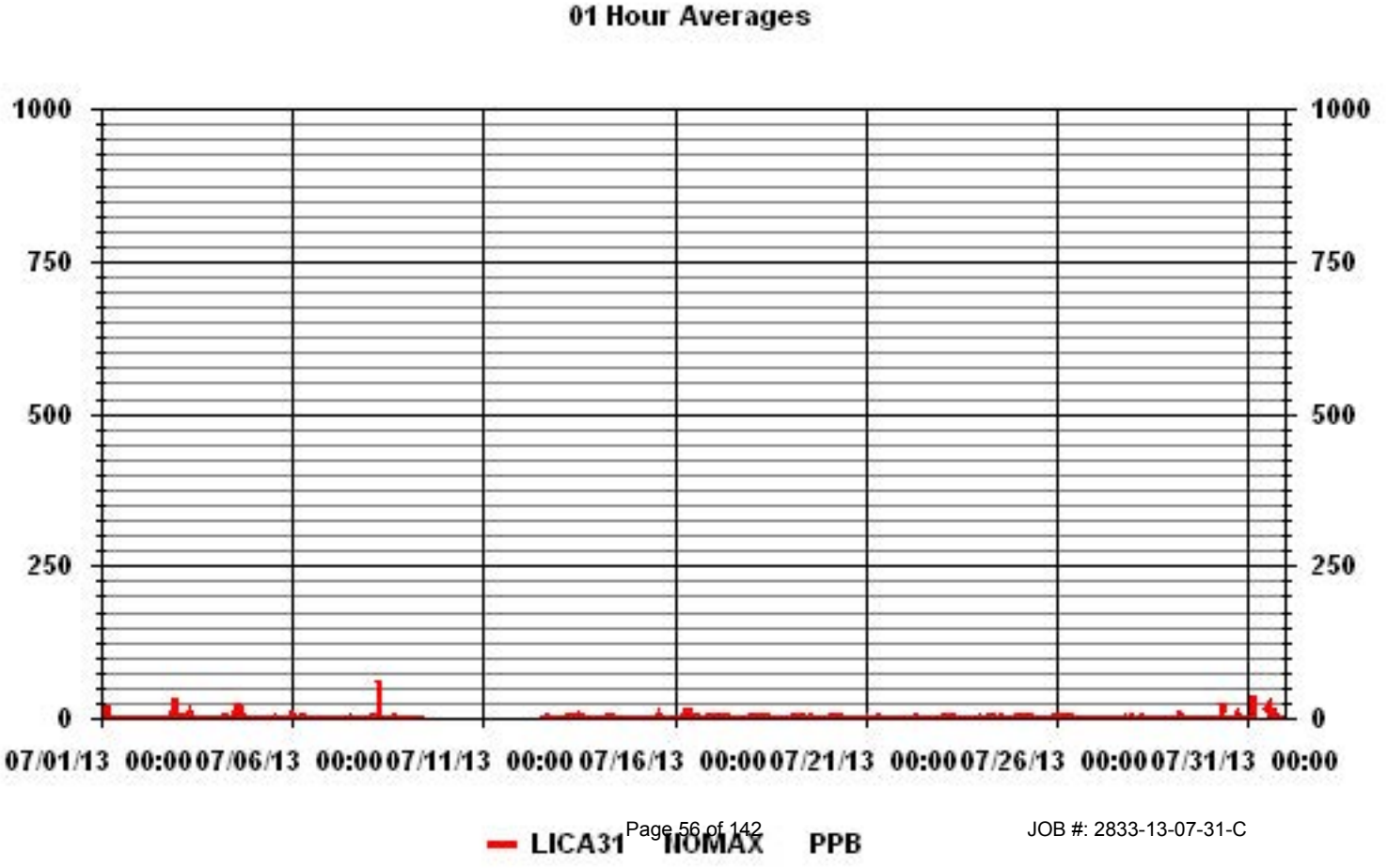
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1.1	1.6	0.3	0.6	19.9	1.1	0.9	0.4	0.1	0	0	0.7	**S**	1.1	0.4	0.3	0.1	0.4	0	0	0	0	0.5	0.3	19.9	1.3	24
2	0.3	0.7	0.8	0.9	0.8	0.9	0.8	0.5	0.2	0.2	0	**S**	0.5	0	0	0	0	0	0	0	13.1	0.8	34.5	1.1	34.5	2.4	24
3	1.3	1.5	1.3	1.7	2.6	1.8	1.9	9	2.3	1.6	**S**	1.2	0.8	0.7	0.9	1.1	0.5	0.8	1	0.6	0.4	0.6	0.6	0.6	9	1.5	24
4	0.5	0.8	0.7	1	1	1.2	3.3	2.1	0.9	**S**	1.1	1.8	13.1	1.2	23.6	0.2	0.8	0.6	1.6	1.4	0.4	0.2	0.2	0.4	23.6	2.5	24
5	0.4	0.4	0.4	0.7	1.8	0.7	0.5	1.1	**S**	1.5	0.7	1.1	0.7	1.8	1.4	0.9	0.6	0.6	0.4	0.5	0.2	0.4	0.5	1	1.8	0.8	24
6	10.1	1	1	0.9	1.2	1.5	1.5	**S**	1.3	1	0.8	1.3	0.8	0.7	0.9	0.7	0.5	0.4	0.2	0.1	0.2	0.2	0.5	0.7	10.1	1.2	24
7	0.8	0.8	1	0.9	0.8	2.2	**S**	1	0.8	0.8	0.9	0.9	1.1	1.1	1	0.6	0.9	0.8	0.7	0.7	0.6	0.8	0.9	0.8	2.2	0.9	24
8	1.2	1	1	1.5	6.8	**S**	**55.1**	2.7	1	0.5	0.8	0.9	0.2	0.3	0.1	0.9	8	0	0.1	0.3	0.3	0.3	0.3	0.1	**55.1**	3.6	24
9	0.4	0.4	0.6	0.5	**S**	2	2.8	1.4	0.9	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	2.8	1.1	13
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**	**C**	**C**	**C**	**C**	**C**	**C**	0.4	0.3	8.2	0.3	1.7	0.3	0.9	0.7	1.4	2.6	8.2	1.7	16
13	**S**	1.6	0.9	0.9	1.8	1.8	2.2	1.6	1.4	1.9	1.1	5.8	1	0.4	8.2	0.3	0.1	1.3	0.2	0.4	1	0.4	0.6	**S**	8.2	1.6	24
14	0.8	0.5	0.8	0.8	0.9	1.2	1.4	1.2	1	1.1	1.3	0.5	0.9	0.5	0.3	0	0.4	0.3	0.1	0.2	0	0.1	**S**	1	1.4	0.7	24
15	0.8	0.7	0.6	0.9	0.6	0.8	**P**	0.9	0.8	0.7	0.7	0.7	0.3	0.1	7.7	1.9	1	0.9	0.9	0.8	0.7	**S**	1	0.7	7.7	1.1	23
16	0.7	0.6	0.6	0.6	1.2	1.6	2.1	14.1	2.4	15.1	1.5	0.4	1.5	0.9	8.8	1.1	0.5	0.2	1.2	0.3	**S**	1.5	1.2	1.4	15.1	2.6	24
17	1.6	1.8	2	1.7	5.2	4.7	2.2	3.3	3.5	2.5	2.8	2.8	1.1	1.1	2.2	0.9	0.6	0.5	0.6	**S**	1.5	0.9	0.9	1.2	5.2	2.0	24
18	1.2	1.4	1.8	1.7	2	1.9	2.1	2.2	2.4	2.1	1.6	1.3	1	2.6	0.8	1.1	1.1	0.8	**S**	1.1	0.9	1.5	0.8	1	2.6	1.5	24
19	0.8	1.3	1.1	1.4	1.4	1.3	1.4	1.4	1.4	1.2	1.3	1.2	2.2	1.3	1.5	1.5	1.3	**S**	1.2	0.7	0.7	1	**P**	0.9	2.2	1.3	23
20	1	1.1	1.1	1.3	1.2	1	1.4	1.5	1.6	1	1	0.6	1	0.5	0.7	0.4	**S**	1.2	0.4	0.6	0.4	0.7	0.8	**P**	1.6	0.9	23
21	1	1.2	1.2	0.7	0.8	0.8	1.1	1	1	1	0.8	1.2	0.7	0.7	0.8	**S**	0.9	0	0	0.2	0.2	0.3	0.4	0.2	1.2	0.7	24
22	0.4	0.6	0.4	0.6	0.4	0.4	0.7	3.6	0.5	0.9	0.4	0.4	0.2	0.5	**S**	1.2	0.7	0.6	0.7	0.4	0.7	0.6	0.9	0.7	3.6	0.7	24
23	1	1	1	0.9	2.4	3.1	3.1	3.4	2.2	1.5	0.8	0.8	1.2	**S**	1.9	0.5	0.4	1.5	0.2	0.7	0.8	P	0.4	0.6	3.4	1.3	23
24	1.8	2.5	0.8	0.8	1.1	3.1	2.5	2.7	2.8	2.4	1.1	0.6	**S**	1.3	1	1.2	0.5	1.7	0.6	0.8	0.8	1.2	1.3	1	3.1	1.5	24
25	1	1.1	1.2	1.1	1.8	2.2	1.9	1.4	1.3	1.2	1	**S**	1.3	0.8	0.8	0.9	0.9	1.4	0.8	0.8	0.9	1.1	1.5	1.5	2.2	1.2	24
26	1.1	1.3	1.6	1.6	1.4	1.6	1.9	1.6	1.6	1.5	**S**	1.1	0	0.2	0.1	0	0.2	0	0	0	0	0	0	0.1	1.9	0.7	24
27	0.4	0.3	0.2	0.2	0.3	0.5	0.4	0.2	0.7	**S**	1.2	0.5	0.5	0.6	0.6	0.1	0.8	0.5	1.2	1.3	0.5	0.4	1.2	1.1	1.3	0.6	24
28	1.1	0.7	**P**	0.9	1.3	1.4	**P**	1.3	**S**	1.5	0.7	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.6	0.6	0.5	0.3	1.5	0.6	22
29	0.6	0.6	0.3	0.5	1.9	12.4	2.5	**S**	1.2	0.7	0.3	0.7	0.5	0.7	0	1.6	0	0.2	0	0	0	0	0	0	12.4	1.1	24
30	0	0	0.1	0.2	2	0.9	**S**	21.8	8	0.1	0.3	0.2	0.6	1	0	0	0.2	6.2	0	1.8	1.8	0.4	0	0	21.8	2.0	24
31	0.1	0.1	0	35	0.1	**S**	**S**	**P**	**P**	**P**	**P**	**X**	**X**	21.5	0.9	1	0.4	7	0.4	0.6	0.3	0.3	0.2	0.4	35	4.3	18
HOURLY MAX	10.1	2.5	2.0	35.0	19.9	12.4	55.1	21.8	8.0	15.1	2.8	5.8	13.1	21.5	23.6	1.9	8.2	7.0	1.7	1.8	13.1	1.5	34.5	2.6			
HOURLY AVG	1.2	1.0	0.8	2.2	2.3	2.0	4.1	3.3	1.7	1.8	0.9	1.1	1.3	1.6	2.4	0.7	1.1	1.1	0.5	0.6	1.0	0.6	2.0	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:	582					
MAXIMUM INSTANTANEOUS VALUE:	55.1	PPB	@ HOUR(S)	69	ON DAY(S)	8
IZS CALIBRATION TIME:	30	HRS	OPERATIONAL TIME:		665	HRS
MONTHLY CALIBRATION TIME:	10	HRS				
STANDARD DEVIATION:	3.68					



JOB #: 2833-13-07-31-C

LICA31
NO_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	6.96	2.37	3.79	3.48	2.37	2.53	2.53	5.53	10.28	7.43	4.74	6.32	9.17	13.13	14.24	5.06	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	6.96	2.37	3.79	3.48	2.37	2.53	2.53	5.53	10.28	7.43	4.74	6.32	9.17	13.13	14.24	5.06	

Calm : .00 %

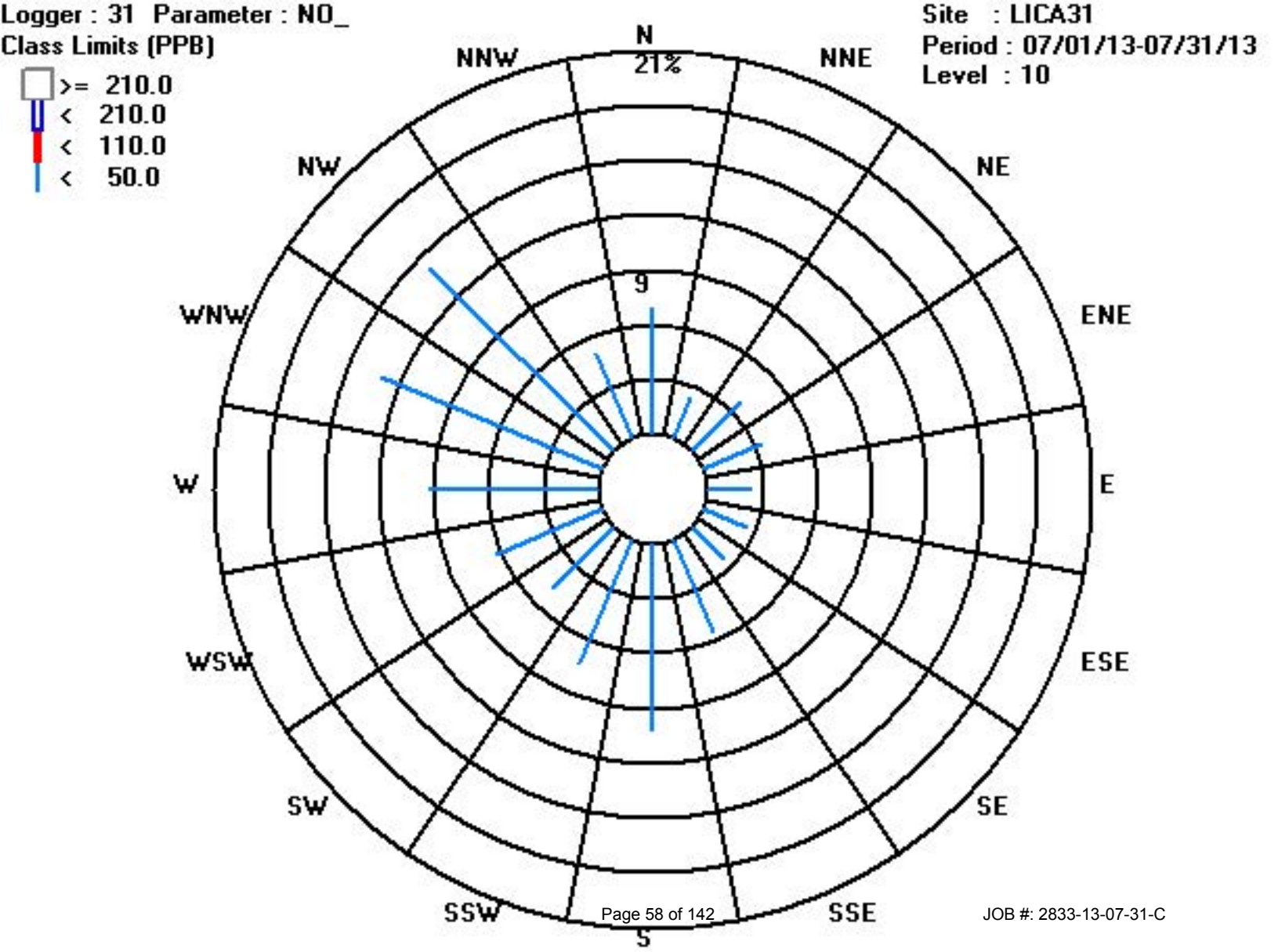
Total # Operational Hours : 632

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	44	15	24	22	15	16	16	35	65	47	30	40	58	83	90	32	632
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	44	15	24	22	15	16	16	35	65	47	30	40	58	83	90	32	

Calm : .00 %

Total # Operational Hours : 632



JOB #: 2833-13-07-31-C

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

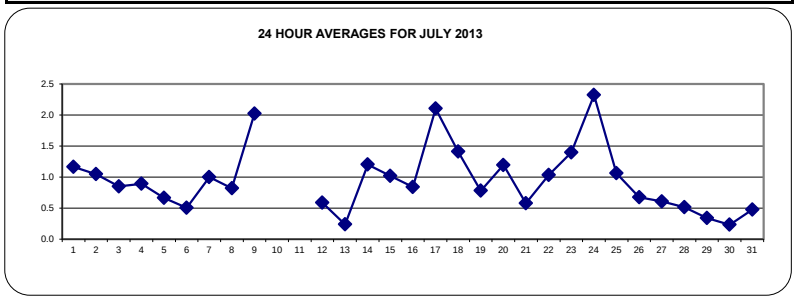
JULY 2013

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2	1.9	1.3	1.8	2.8	1.9	1.3	1	0.6	0.6	0.6	0.7	**S**	0.9	1	0.9	0.6	0.8	1.1	0.7	0.7	1.1	1.2	1.3	2.8	1.2	24
2	2.2	2.2	2	2.2	2.2	1.9	1.4	1.2	0.6	0.6	0.2	**S**	0.2	0	0	0.4	0.5	0.4	0.6	0.8	2.3	0.5	1	0.7	2.3	1.0	24
3	1	1.6	1.6	1.6	1.6	1.2	1.3	1.5	1.3	1	**S**	0.5	0.2	0.2	0.4	0.6	0.3	0.4	0.3	0.5	0.3	0.6	0.9	0.7	1.6	0.9	24
4	0.8	0.9	0.5	0.9	0.8	1.5	2.1	1.3	0.8	**S**	0.5	0.6	0.9	0.4	1	0.3	0.7	0.6	1.4	0.9	0.5	0.7	1	1.5	2.1	0.9	24
5	1.2	2.1	1.3	0.9	1.2	0.9	0.6	0.7	**S**	0.9	0.4	0.4	0.3	0.6	0.5	0.4	0.2	0.4	0.2	0.2	0.2	0.5	0.3	0.9	2.1	0.7	24
6	1.2	1	1.3	1.1	1.3	1.5	1.3	**S**	0.6	0.4	0.1	0.1	0.1	0	0.4	0	0	0	0	0.1	0.1	0.3	0.4	0.4	1.5	0.5	24
7	0.6	0.9	1.2	0.8	0.6	0.9	**S**	0.9	0.8	0.5	0.7	0.7	0.5	0.6	0.7	0.4	0.6	0.6	0.7	1.2	0.9	1.8	2.8	3.6	3.6	1.0	24
8	2.8	1.7	1.8	2	2.6	**S**	3.7	1.1	0.1	0	0	0	0	0	0	0.3	0.3	0	0.1	0.1	0.2	0.6	0.5	1	3.7	0.8	24
9	0.7	1.1	1.5	1.9	**S**	3.1	3.3	2.4	2.2	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	3.3	2.0	13
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**	**C**	**C**	**C**	**C**	**C**	**C**	0.4	0.1	0.9	0.4	0.4	0.4	0.7	0.7	1	0.9	1	0.6	16
13	**S**	0.2	0.2	0.3	0.4	0.6	0.7	0.5	0.5	0.5	0.3	0.8	0	0	0	0	0	0	0	0	0	0.2	0.1	**S**	0.8	0.2	24
14	1.6	1.9	1.7	2.1	2	2.1	1.8	1.7	1.2	1.4	1.6	0.9	0.8	0.6	0.3	0.1	0.2	0.1	0.3	0.4	0.6	0.9	**S**	3.4	3.4	1.2	24
15	5.2	2.9	1.9	1.1	1.2	1.1	0.7	0.7	1	0.7	0.5	0.5	0.1	0.1	0.8	1.2	0.4	0.4	0.6	0.4	0.4	**S**	0.8	0.8	5.2	1.0	24
16	1	1	0.9	0.5	1	1	1	1.3	0.9	1.3	0.7	0	0.5	0.1	0.7	0.1	0.2	0	0.4	0.1	**S**	2.7	2.1	1.9	2.7	0.8	24
17	2.4	3.2	2.9	2.9	3	3.9	3	2.9	2.9	2.9	2.5	2.4	1.4	1.4	1.8	1.3	1.2	1	1.1	**S**	1.1	0.8	1	1.4	3.9	2.1	24
18	1.5	1.8	5.8	1.9	2.1	2	2	1.8	2.2	1.8	1.2	1.1	1	2.1	0.7	0.7	0.7	0.7	**S**	0.8	0.2	0.3	0	0.1	5.8	1.4	24
19	0.2	0.5	0.5	0.4	0.7	0.5	0.7	0.5	0.7	0.4	0.6	0.5	0.6	0.6	0.6	0.7	0.5	**S**	0.8	0.7	0.6	1.3	2.8	2.6	2.8	0.8	24
20	1.4	0.7	0.6	1	1.1	1.1	1.4	1.4	1.5	1.2	0.7	0.8	1	0.9	0.7	0.4	**S**	0.5	1.1	1.4	1.7	2.7	2.2	2	2.7	1.2	24
21	2.2	1.7	1.1	0.7	0.9	1	0.9	0.8	0.7	0.4	0.2	0.4	0.2	0.1	0.4	**S**	0	0	0.2	0.3	0.2	0.2	0.3	0.4	2.2	0.6	24
22	0.8	1.1	1.2	1.2	1.1	0.8	1.5	2.4	1	1.3	0.5	0.3	0.2	0.4	**S**	0.8	0.8	0.9	0.9	1	1	1.1	1.7	1.8	2.4	1.0	24
23	2.1	1.6	1.7	1.9	2.8	2.7	2	1.9	1.5	0.9	0.7	0.7	0.8	**S**	1.1	0.7	0.5	0.7	0.8	2	2	0.9	0.9	1.3	2.8	1.4	24
24	1.3	2.1	2.3	2	5.3	**8**	6.6	5.7	5	4	2.7	1.3	**S**	1	0.7	0.7	0.4	0.5	0.4	0.9	0.7	0.6	0.7	0.5	**8**	**2.3**	24
25	0.9	2.4	1.2	1.2	1.6	2	1.6	1.2	0.7	1.1	0.7	**S**	0.9	0.5	0.5	0.7	0.7	0.6	0.5	0.7	0.7	1.1	1.5	1.5	2.4	1.1	24
26	1.2	1	1.2	1.5	1.4	1.6	1.8	1.5	1.5	1.2	**S**	0.2	0	0.1	0	0	0	0	0	0.2	0.1	0.5	0.2	0.4	1.8	0.7	24
27	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.6	**S**	0.7	0.8	0.8	1.2	0.8	0.5	0.9	0.7	0.3	0	0.1	0	0.7	1	1.2	0.6	24
28	1.3	0.8	1.5	1.3	1.5	1.2	1	0.6	**S**	0.7	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0	0	0	0.3	0.1	0.1	0.2	1.5	0.5	24
29	0.4	0.5	0.1	0.3	0.6	0.8	0.9	**S**	0.7	0.6	0.4	0.4	0.4	0.4	0.1	0.3	0.1	0	0.1	0.1	0.1	0.1	0.3	0.2	0.9	0.3	24
30	0.3	0.1	0.5	1.2	1.2	1.4	**S**	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	0.2	24
31	0	0.9	0.7	1.5	0.3	**S**	4.1	**P**	**P**	**P**	**P**	**P**	**X**	0.6	0	0	0	0	0	0	0	0	0	0	4.1	0.5	18
HOURLY MAX	5.2	3.2	5.8	2.9	5.3	8.0	6.6	5.7	5.0	4.0	2.7	2.4	1.4	2.1	1.8	1.3	1.2	1.0	1.4	2.0	2.3	2.7	2.8	3.6			
HOURLY AVG	1.4	1.4	1.4	1.3	1.6	1.7	1.8	1.4	1.2	1.0	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.8	0.9	1.1			

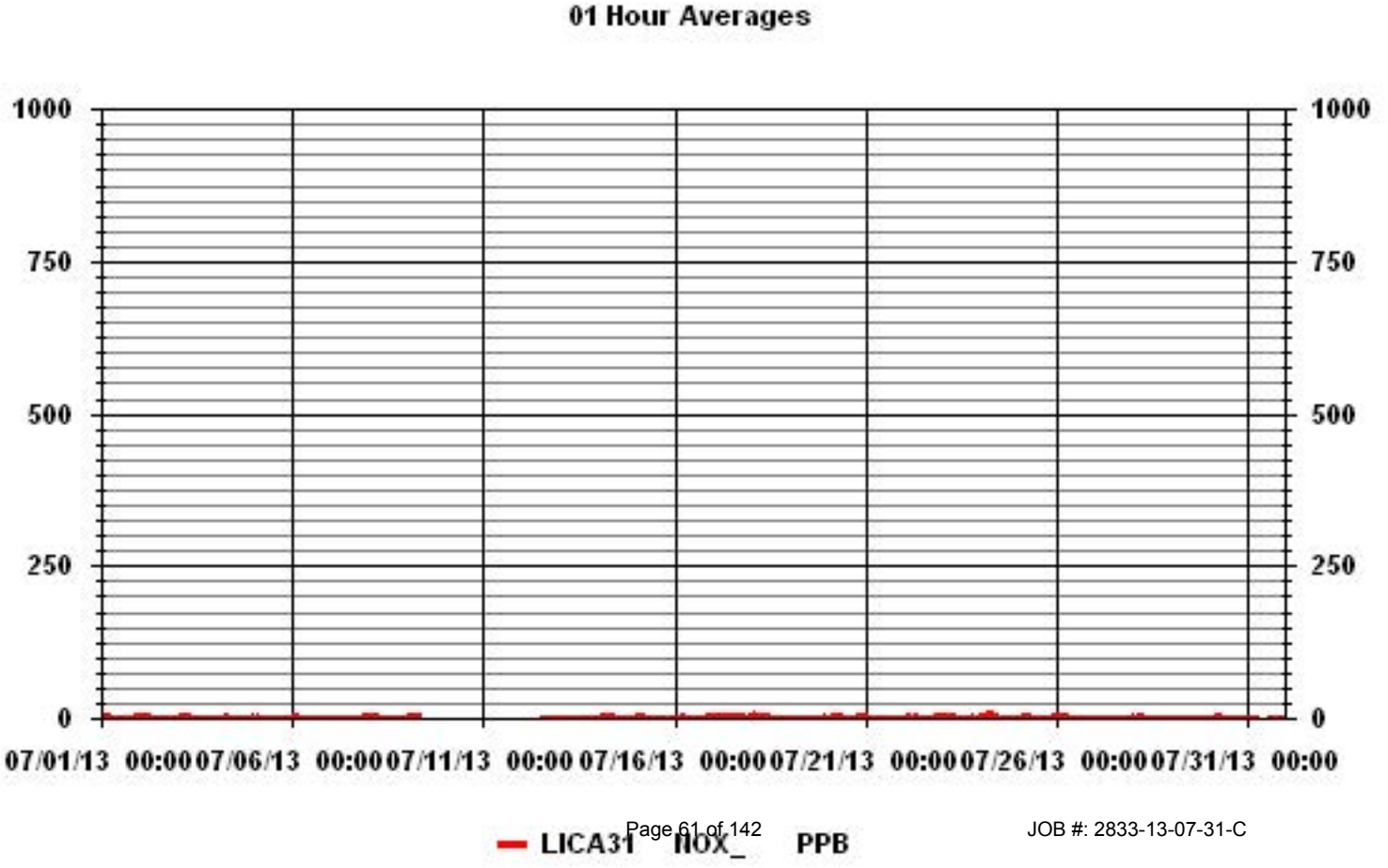
STATUS FLAG CODES

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:	565						
MAXIMUM 1-HR AVERAGE:	8.0	PPB	@ HOUR(S)	5	ON DAY(S)	24	
MAXIMUM 24-HR AVERAGE:	2.3	PPB			ON DAY(S)	24	
IZS CALIBRATION TIME:	29	HRS	OPERATIONAL TIME:		671	HRS	
MONTHLY CALIBRATION TIME:	10	HRS	AMD OPERATION UPTIME:		90.2	%	
STANDARD DEVIATION:	0.93		MONTHLY AVERAGE:		0.94	PPB	



JOB #: 2833-13-07-31-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3.7	5.3	1.9	3	33.6	3.4	2.5	1.7	1.8	1.5	1.3	1.9	**S**	1.9	2	1.6	1.3	1.6	3.3	2.4	1.6	2	2.2	2.3	33.6	3.6	24
2	3.2	3.1	2.8	2.9	2.9	2.7	2.2	2.1	1.3	1.4	1.3	**S**	1.1	0.7	0.7	1.6	1.5	1.1	1.5	2.9	34.1	2.8	40.4	1.9	40.4	5.1	24
3	1.7	2.4	2.2	2.3	3.3	2.5	2.3	6.2	3.1	2.1	**S**	1.3	1	1.2	1.6	1.9	1.3	1.4	1.7	1.5	1.5	1.9	1.6	1.3	6.2	2.1	24
4	1.5	1.8	1.4	1.9	2	2.6	5	3.2	2.1	**S**	1.6	3.7	23.9	2	31.4	1.5	2.2	2.1	5	6	2.8	2.2	1.9	3.7	31.4	4.8	24
5	2	2.9	2.6	1.8	4.2	1.6	1.3	2	**S**	2.3	1.2	1.2	1.2	2.2	2.9	1.5	1.6	1.5	1.3	1.4	1	2.4	1	1.9	4.2	1.9	24
6	21.7	1.7	2.1	1.9	2	2.8	2.3	**S**	1.8	1.2	0.8	1.7	0.8	0.9	1.4	1.5	0.8	0.9	0.9	0.7	1.1	0.9	1.1	1.2	21.7	2.3	24
7	1.4	1.7	1.9	1.7	1.5	2.6	**S**	1.8	1.5	1.2	1.6	1.9	3	1.6	2	0.9	2	1.4	1.7	1.8	1.5	2.8	4.1	4.3	4.3	2.0	24
8	4.5	2.7	2.6	2.9	10	**S**	**65.8**	4.1	0.9	0.4	1	1.7	0.6	0.6	0.6	2.8	21.6	0.9	1.5	1.2	1.3	1.8	1.5	2	**65.8**	5.8	24
9	1.6	1.7	2.3	2.8	**S**	4.9	5.2	3	3	**C**	**C**	**C**	**C**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	5.2	3.1	13
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**	**C**	**C**	**C**	**C**	**C**	**C**	1.2	1	10.4	2.3	2.8	1.2	3.1	1.8	3.5	3.9	10.4	3.1	16
13	**S**	1.4	0.7	1	2.1	2.3	2.4	2	1.7	2.7	1.5	13.3	1.1	0.5	11.9	0.9	0.6	2.6	0.6	0.8	2.3	1.3	1.1	**S**	13.3	2.5	24
14	2.3	2.6	2.9	2.7	2.9	3	2.7	2.6	2.2	2.7	3.1	1.7	1.6	1.2	1.1	0.8	1.1	1	1.1	1.1	1.5	1.8	**S**	6.1	6.1	2.2	24
15	6.5	4.1	2.9	1.7	2.1	1.9	**P**	1.9	2.2	1.4	1.2	1.4	0.8	0.8	10.8	3	1.9	1.8	1.6	1.6	1.2	**S**	1.7	1.4	10.8	2.5	23
16	1.7	1.7	1.7	1.4	2.2	2.8	3.1	25.3	4.4	21.8	3.1	0.7	2.9	1.2	17	1.9	1.4	0.7	3.1	1.9	**S**	5.6	2.9	2.5	25.3	4.8	24
17	3.3	4.1	3.8	3.7	11	10.7	5.2	5.5	6.1	5.6	5	5	2.8	2.3	4.8	2	2.2	2	1.9	**S**	2.3	1.6	1.6	2.5	11	4.1	24
18	2.4	3.2	12.2	2.9	4.3	3.3	3.9	3.3	4	4.4	3.1	1.8	2.6	6	6.5	2	1.8	1.7	**S**	0.6	1	2.3	0.6	0.6	12.2	3.2	24
19	0.6	0.6	0.7	0.5	1.1	0.8	2.5	1.1	0.9	1.4	1	1.1	3	1	0.8	1	0.9	**S**	1.8	1.3	1.4	2.1	**P**	3.9	3.9	1.3	23
20	2.5	1.6	1.4	1.8	1.8	1.8	2.1	2.2	2.3	2	1.3	1.6	1.8	1.5	1.5	1.2	**S**	1.6	2	2.3	3.1	3.6	3	**P**	3.6	2.0	23
21	2.8	2.8	2.1	1.7	1.8	1.6	1.5	1.8	1.5	1.3	1	1.6	1	1	1.6	**S**	0.9	0.6	1.5	2.9	1.1	0.9	1.1	1.3	2.9	1.5	24
22	1.5	1.7	2	2.2	2	1.5	3.4	8.5	1.8	3.3	1.2	0.9	0.9	1.1	**S**	1.6	1.5	2	1.7	1.7	1.7	1.9	2.4	2.4	8.5	2.1	24
23	3	2.4	2.4	2.8	5.4	4.9	4.3	4.3	3.3	2.2	1.8	1.5	2.4	**S**	4.1	1.6	1.4	2.9	1.8	5.3	6.2	**P**	1.9	2.2	6.2	3.1	23
24	5.5	6.8	3.2	3.2	6.7	12.8	8.6	6.7	6.2	5.8	3.5	3	**S**	1.9	1.9	2.1	1.2	2.1	1.2	2.4	1.5	1.5	1.8	1	12.8	3.9	24
25	1.4	3.7	2.3	2.2	3.1	4.1	3.3	2.7	1.6	1.7	1.4	**S**	2	1.2	1.3	2.3	1.6	1.8	1.1	1.2	1.6	1.8	2.4	2.3	4.1	2.1	24
26	1.8	1.6	1.8	2.1	2.2	2.4	2.5	2.1	2.2	2	**S**	0.8	0.4	0.9	0.6	0.3	0.9	0.5	0.5	0.8	0.9	1.2	1	1	2.5	1.3	24
27	1.4	1.4	1.4	1.4	1.3	1.2	1.5	1.4	1.4	**S**	1.4	1.4	1.9	2.5	2.9	1.2	1.7	1.6	1.4	1.7	1	0.9	1.7	1.7	2.9	1.5	24
28	2.4	1.5	**P**	2.1	2.1	2.1	**P**	1.4	**S**	1.6	1.2	1.1	0.9	1	1.1	1	1	0.8	0.9	1.4	1.2	0.9	0.7	0.9	2.4	1.3	22
29	1.6	1.1	0.9	1.2	3.5	20.2	3.7	**S**	1.6	2	1	1.9	1.9	1.9	1.2	3.9	1.2	1.4	0.8	1.3	1.4	0.8	1	0.8	20.2	2.4	24
30	1	0.8	1.4	2.4	4.6	2.8	**S**	27.8	10.7	0.1	0	0.1	0.3	1	0	0	0.4	5.9	0	3.8	4	1.4	0.7	0	27.8	3.0	24
31	0.3	2.2	1.2	55.8	1.2	**S**	**S**	**P**	**P**	**P**	**P**	**P**	**X**	34.7	1.1	0.8	0	11.4	0.4	1.8	0.7	0.4	0.6	0.3	55.8	7.1	18
HOURLY MAX	21.7	6.8	12.2	55.8	33.6	20.2	65.8	27.8	10.7	21.8	5.0	13.3	23.9	34.7	31.4	3.9	21.6	11.4	5.0	6.0	34.1	5.6	40.4	6.1			
HOURLY AVG	3.1	2.5	2.4	4.1	4.5	4.0	6.0	5.0	2.8	3.0	1.7	2.2	2.5	2.8	4.2	1.6	2.4	2.1	1.6	2.0	3.0	1.9	3.2	2.1			

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: 619

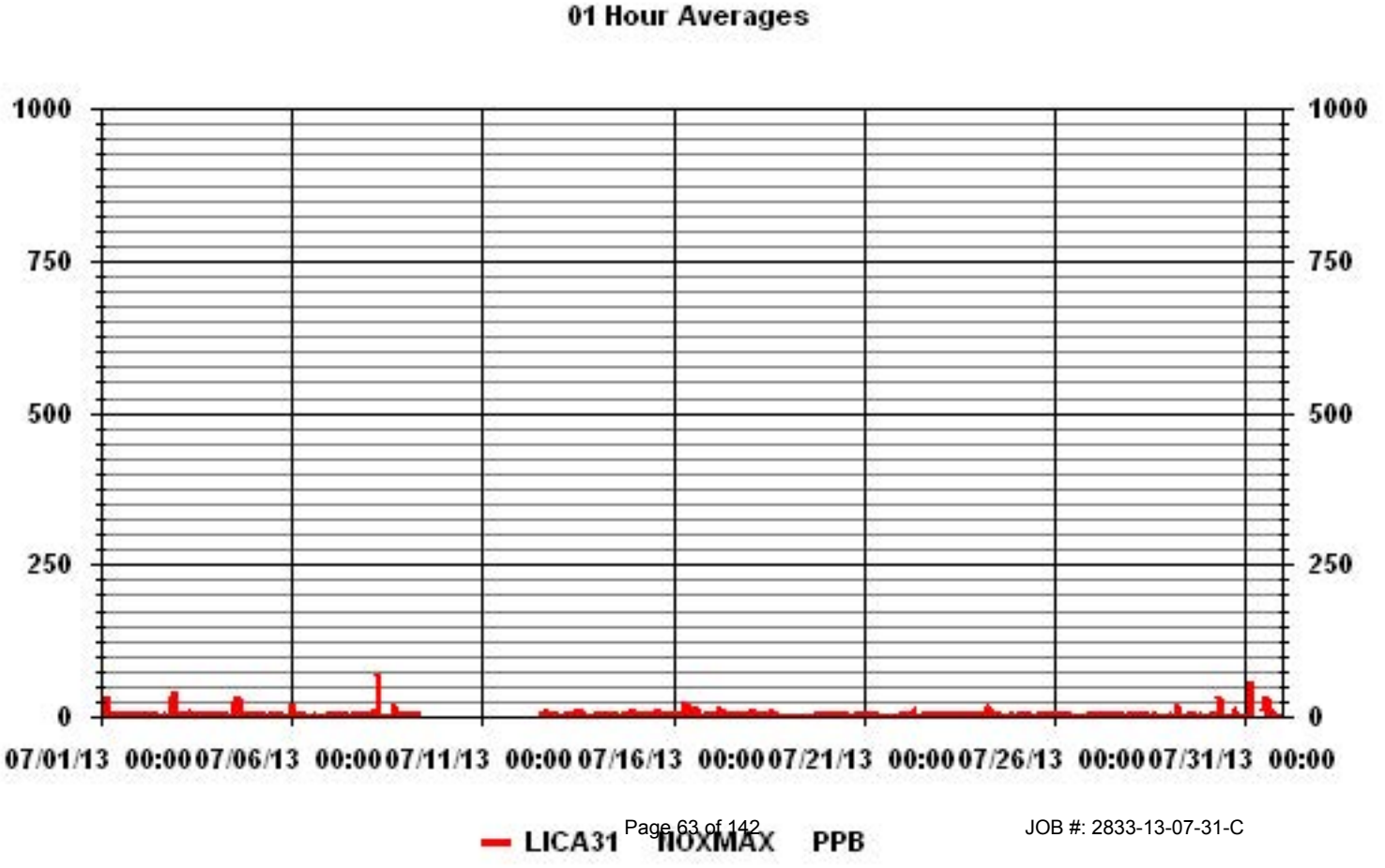
MAXIMUM INSTANTANEOUS VALUE: 65.8 PPB @ HOUR(S) 6 ON DAY(S) 8

IZS CALIBRATION TIME: 30 HRS OPERATIONAL TIME: 665 HRS

MONTHLY CALIBRATION TIME: 10 HRS

STANDARD DEVIATION: 5.25

JOB #: 2833-13-07-31-C



JOB #: 2833-13-07-31-C

LICA31
NOX_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	6.96	2.37	3.79	3.48	2.37	2.53	2.53	5.53	10.28	7.43	4.74	6.32	9.17	13.13	14.24	5.06	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	6.96	2.37	3.79	3.48	2.37	2.53	2.53	5.53	10.28	7.43	4.74	6.32	9.17	13.13	14.24	5.06	

Calm : .00 %

Total # Operational Hours : 632

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	44	15	24	22	15	16	16	35	65	47	30	40	58	83	90	32	632
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	44	15	24	22	15	16	16	35	65	47	30	40	58	83	90	32	

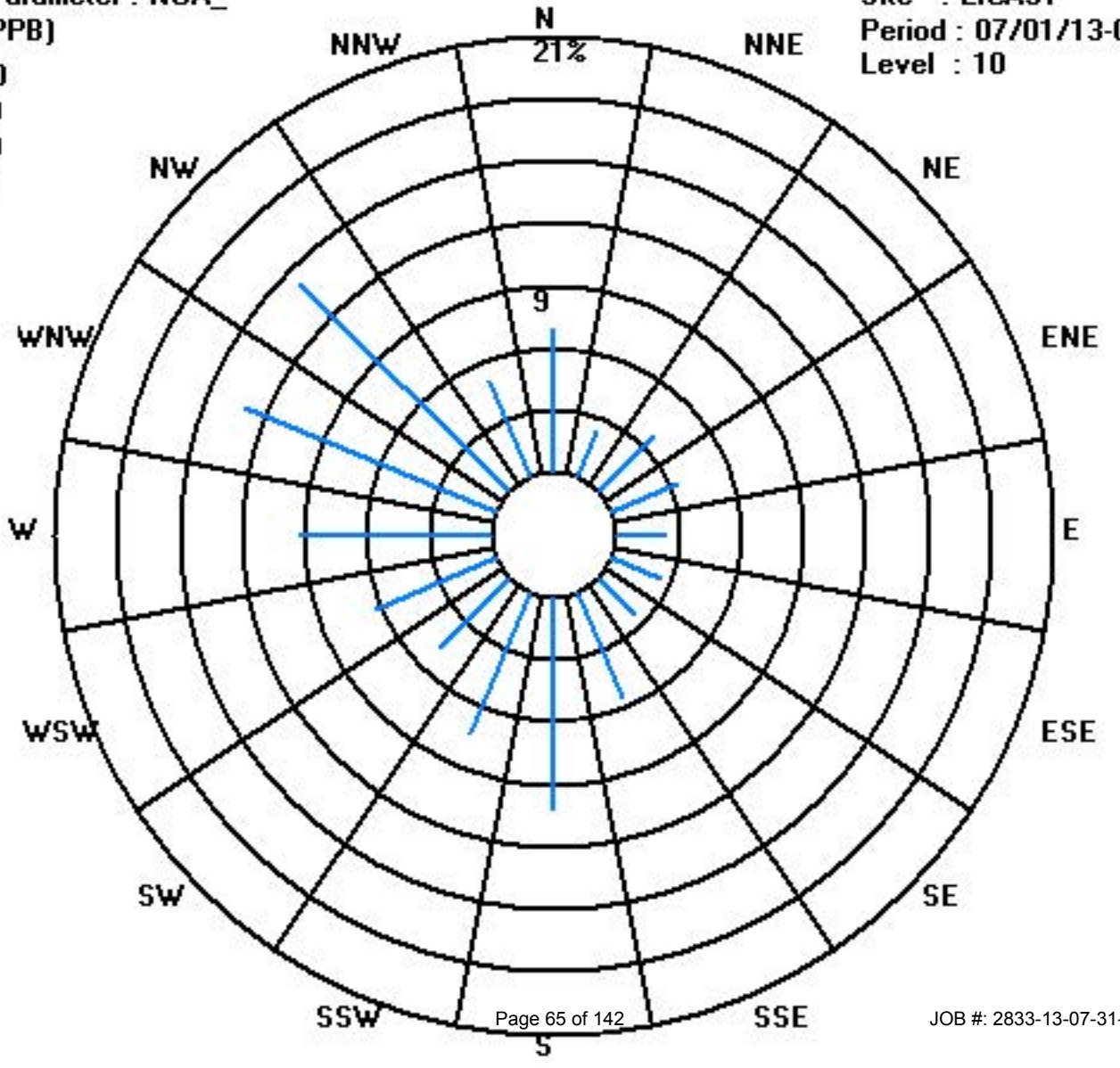
Calm : .00 %

Total # Operational Hours : 632

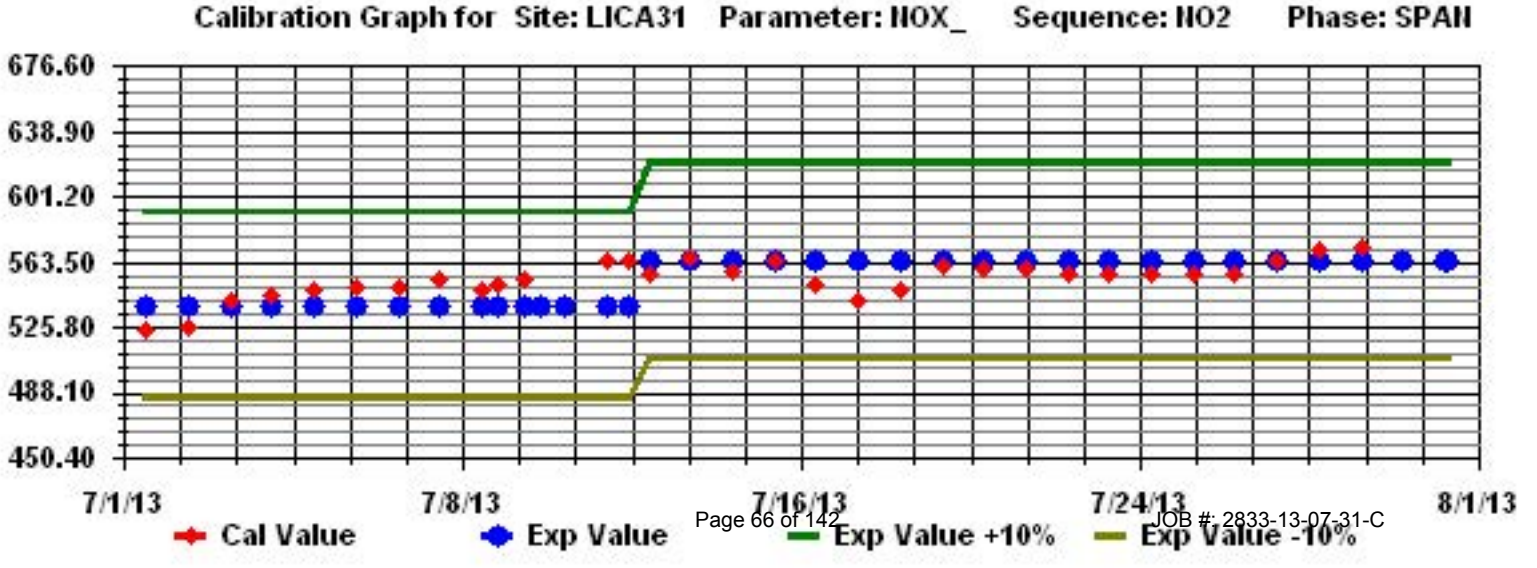
Logger : 31 Parameter : NOX_
Class Limits (PPB)

>= 210.0
< 210.0
< 110.0
< 50.0

Site : LICA31
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-31-C


Calibration Graph for Site: LICA31 Parameter: NOX_ Sequence: NO2 Phase: SPAN
676.60
638.90
601.20
563.50
525.80
488.10
450.40
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

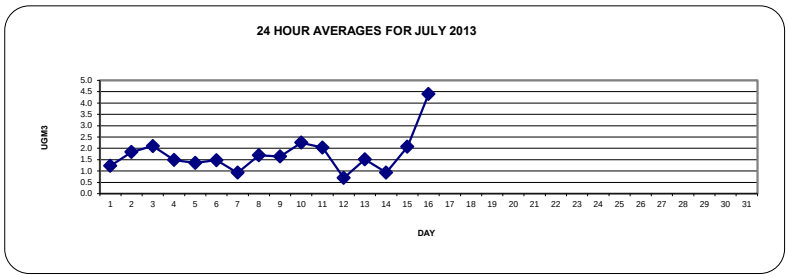
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	2	3	0	3	0	0	0	5	0	3	8	0	0	0	0	0	0	2	2	1	2	0	8	1.2	24
2	2	0	0	1	2	0	1	2	2	0	0	0	0	0	8	2	1	2	3	2	**X**	**X**	**X**	**16**	**16**	1.8	21
3	4	**X**	**X**	12	0	**X**	1	1	0	0	3	2	0	**X**	1	3	0	0	1	0	3	0	0	13	13	2.1	20
4	3	0	0	0	0	4	0	0	0	0	1	0	0	8	2	3	1	1	0	3	4	**X**	4	3	8	1.5	23
5	2	3	3	0	1	0	4	4	0	3	1	1	6	0	0	0	0	0	5	1	2	1	0	0	6	1.4	24
6	2	1	3	1	0	0	1	3	1	2	3	0	1	0	1	0	3	3	0	1	**X**	5	0	5	5	1.5	23
7	0	0	1	1	0	1	0	3	4	1	2	2	0	**X**	1	2	0	0	0	4	0	1	1	1	4	0.9	23
8	2	2	0	1	1	1	1	5	6	0	1	0	2	2	2	0	0	0	0	3	13	0	2	2	13	1.7	24
9	3	0	1	3	0	0	**X**	4	**X**	2	0	0	3	2	1	7	1	6	0	1	3	0	2	1	7	1.6	22
10	0	2	1	0	0	1	5	5	1	0	0	3	3	**X**	0	4	8	0	1	5	**X**	1	**X**	9	9	2.3	21
11	2	1	4	10	9	2	0	0	0	**X**	0	3	0	2	0	2	7	0	2	1	4	1	0	0	10	2.0	23
12	0	0	0	0	0	0	2	3	2	**X**	**X**	0	1	1	**C**	**C**	2	0	2	0	0	2	1	0	3	0.7	22
13	0	1	2	3	1	1	2	0	2	3	0	1	4	0	3	1	1	4	0	**X**	**X**	4	**X**	0	4	1.5	21
14	1	2	**X**	5	1	5	2	0	0	0	1	0	0	0	0	0	**X**	1	**X**	0	0	3	0	0	5	0.9	21
15	1	2	0	0	2	3	1	0	2	0	1	**C**	**C**	**C**	**C**	1	5	6	4	6	3	2	0	5	6	2.1	24
16	4	5.5	5.5	3.6	2.6	3.6	6.1	4.6	4	**Y**	**Y**	**Y**	**Y**	**Y**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	6	**4.4**	9
17	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
18	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
19	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
20	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
21	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
22	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
23	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
24	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
25	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
26	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
27	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
28	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
29	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
30	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
31	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**			0
HOURLY MAX	4	6	6	12	9	5	6	5	6	5	3	3	8	8	8	7	8	6	5	6	13	5	4	16			
HOURLY AVG	1.5	1.3	1.5	2.6	1.1	1.5	1.5	2.0	1.5	1.2	0.8	0.9	1.9	1.3	1.2	1.7	2.0	1.4	1.1	1.8	2.9	1.6	0.9	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

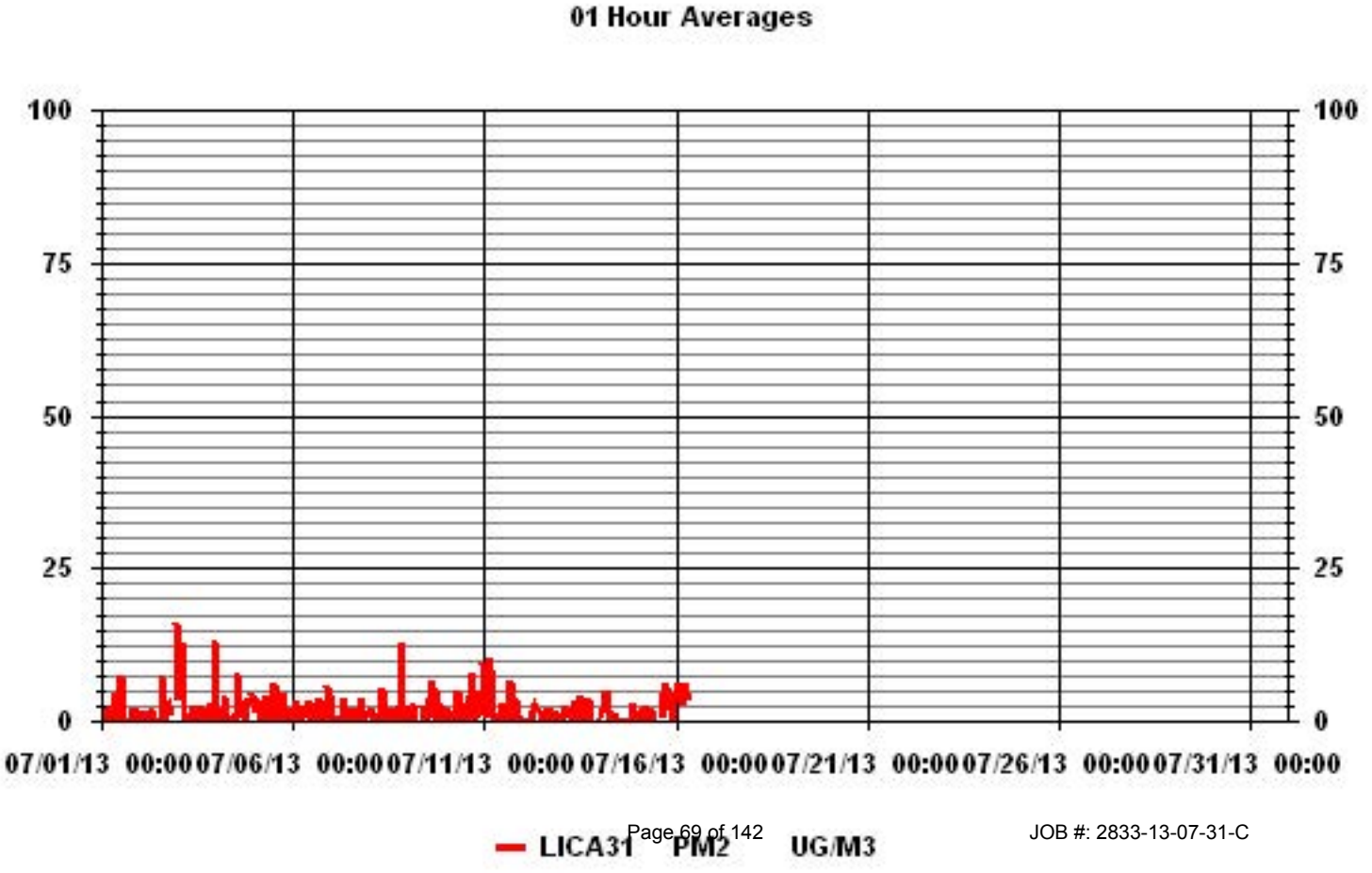


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - ug/m3 | 24-HR 30 ug/m3

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-						
NUMBER OF 24-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	209						
MAXIMUM 1-HR AVERAGE:	16	UG/M^3	@ HOUR(S)	23	ON DAY(S)	2	
MAXIMUM 24-HR AVERAGE:	4.4	UG/M^3			ON DAY(S)	16	
					OPERATIONAL TIME:	345	HRS
MONTHLY CALIBRATION TIME:	6	HRS			AMD OPERATION UPTIME:	46.4	%
STANDARD DEVIATION:	2.26				MONTHLY AVERAGE:	1.62	UG/M^3

JOB #: 2833-13-07-31-C



JOB #: 2833-13-07-31-C

LICA31
PM2 / WDR Joint Frequency Distribution (Percent)

July 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
<	30.0	4.12	2.06	2.94	2.65	1.76	1.17	1.17	2.94	9.73	7.96	4.71	10.61	11.79	17.99	13.56	4.71	100.00
<	60.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	80.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	120.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	4.12	2.06	2.94	2.65	1.76	1.17	1.17	2.94	9.73	7.96	4.71	10.61	11.79	17.99	13.56	4.71	

Calm : .00 %

Total # Operational Hours : 339

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	14	7	10	9	6	4	4	10	33	27	16	36	40	61	46	16	339
<	60.0																	
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	14	7	10	9	6	4	4	10	33	27	16	36	40	61	46	16	

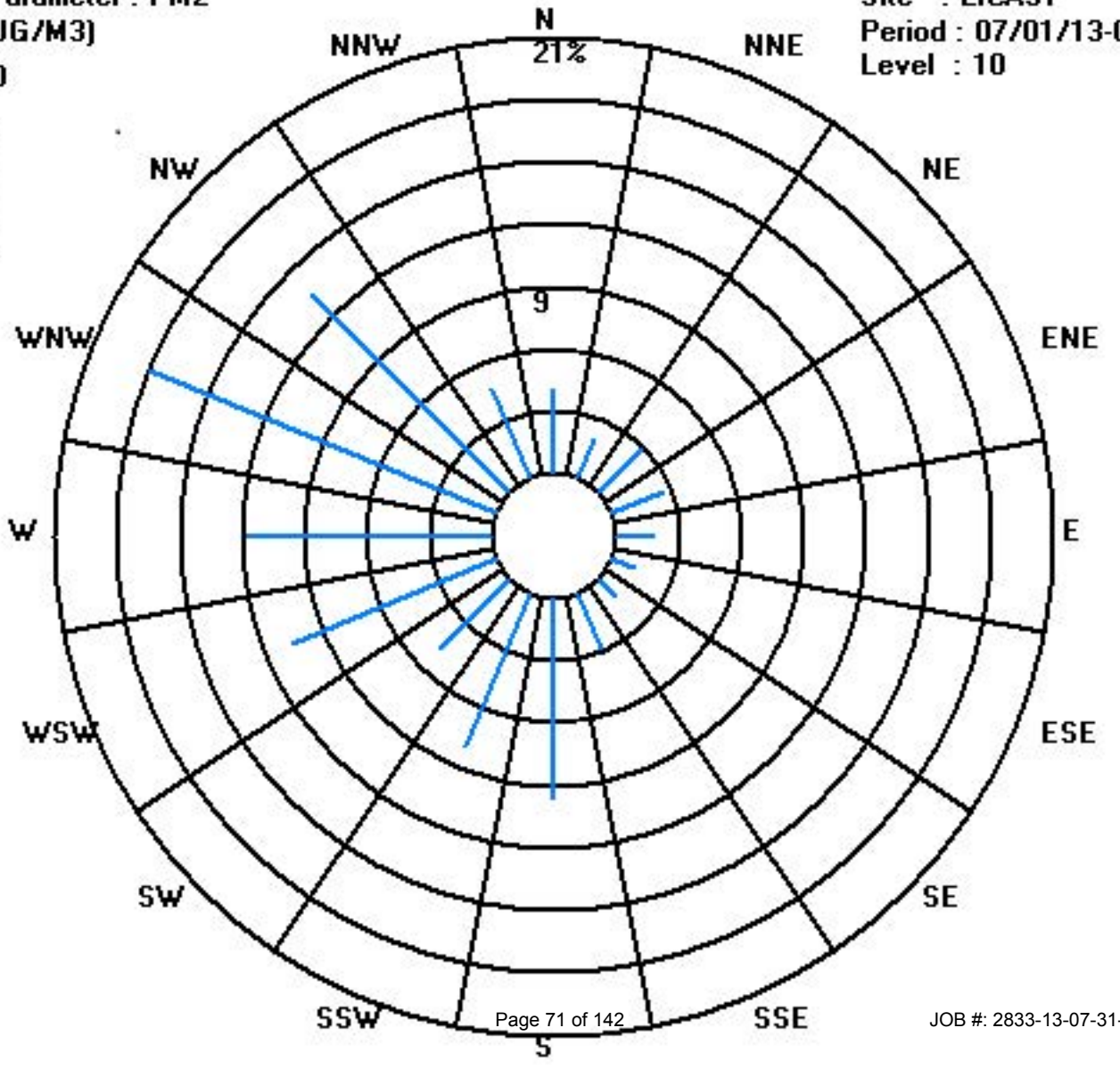
Calm : .00 %

Total # Operational Hours : 339

Logger : 31 Parameter : PM2
Class Limits (UG/M3)

>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0

Site : LICA31
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-31-C

Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

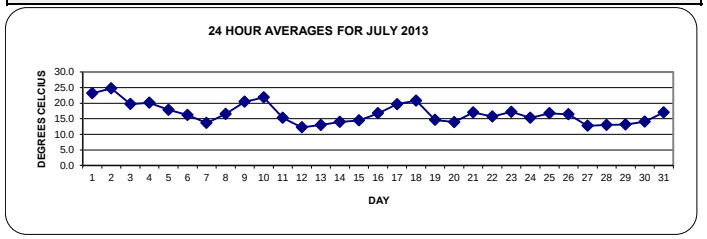
AMBIENT TEMPERATURE hourly averages (Degrees C)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	16.1	16	15.5	15.5	15.3	18.1	21.7	24.1	26.1	26.7	27.3	27.5	27.9	27.9	28.3	28.6	27.8	27.4	26.7	25.7	23.6	22	21	20.4	28.6	23.2	24
2	19.7	18.9	18.8	18.4	18.1	19.7	21.3	23	25	26.4	27.6	28.6	29.5	30.2	**31.3**	31.2	31.2	30.8	29.9	28.5	26.6	24.8	18.1	16.6	**31.3**	**24.8**	24
3	16.6	16.2	15.6	15.6	15.6	16.1	17.8	17.5	18.5	20.2	20.9	22.7	23.7	24.3	24.5	24.4	24.4	23.9	22.9	21.7	19.7	18.1	16.3	16.1	24.5	19.7	24
4	15.4	14.8	14.9	14.1	13.7	15.5	18.5	21.3	23.8	24.3	25.5	26.1	26.6	25.9	24.9	23.5	21.9	21.2	21.3	20.3	18.1	17.7	17.5	16.4	26.6	20.1	24
5	16.4	15.5	14.3	13.8	13.6	14.4	16.2	17.6	18.7	19.4	20	20.9	21.1	22.2	21.5	22.2	21.3	21.3	20.2	18.7	16.6	14.6	13.8	13.2	22.2	17.8	24
6	12.8	12.2	11.4	10.7	10.4	10.9	11.4	13.2	15.8	19	21.2	21.6	22.2	20.5	18.6	21.1	21.7	22	20.1	18.7	15.1	13.9	12.8	12	22.2	16.2	24
7	11.8	11.5	11.3	10.5	11.3	11.9	12.6	13.1	14	15.4	15.5	15.6	17.9	15.5	18.1	15.9	14.8	16.1	14.6	13.7	13	12.2	10.6	10	18.1	13.6	24
8	9.8	9.4	9.5	8.7	7.7	8.7	12.3	15.9	17.9	19.8	20.4	21.1	22.2	22.3	22	22.5	22.3	21.8	20.8	18.5	17.1	16.4	15.4	14.7	22.5	16.6	24
9	13.8	12.5	12	11.5	11.1	11.9	15.3	17	19.3	21.8	23.3	25.7	27.7	28.4	28.6	27.9	27.1	26	25.2	23.9	21.4	19.8	19.7	19.5	28.6	20.4	24
10	18.1	17.3	15.6	15.5	15.4	15.7	19	21.5	23.1	24.3	24.5	25.6	26.2	26.7	27.5	27.7	27.5	27.4	26.7	24.5	22.7	21	16.3	14.9	27.7	21.9	24
11	14.2	14	13.8	13.6	13.5	13.7	14.6	16.7	19.1	18.9	21	21.2	19.8	17.3	15.2	15.5	16.4	17.1	16.1	14.9	12.8	10.2	9.4	8.5	21.2	15.3	24
12	8.1	8	7.2	6.6	6.4	9.1	11.6	13.1	14.3	15.3	15.4	15.3	15.4	15.7	17	16.9	16.6	16.1	15.1	13.9	11.3	9.2	8.5	7.9	17.0	12.3	24
13	7.2	7.3	6.8	6.1	**5.7**	7.3	9.9	12.7	13.8	15.2	16.3	16.8	17.2	17.9	18.6	18.1	17.6	17.4	16.6	14.5	12.7	12.1	12.7	11.2	18.6	13.0	24
14	9.9	10.9	10.2	10.1	10	10	11.2	11.9	12.1	12.1	12.5	13.1	16.4	18.1	18.6	19	18.9	18.6	18.7	16.3	15.2	14.8	13.7	12.7	19.0	14.0	24
15	12.4	12.4	12.1	12.1	11.8	12.5	14.2	15.7	18.4	18.4	19.7	18.7	17	13.6	12.8	13.3	15.7	16.8	16	15.9	13.5	12	11.2	10.7	19.7	14.5	24
16	10.2	10.3	9.9	9.3	8.8	10.7	13.1	15.6	18	19.7	20.5	20.9	21.6	21.9	22.1	22	21.9	21.7	20.9	19.9	18	16	14.5	14.1	22.1	16.7	24
17	13.6	13.1	12.6	11.5	11.3	13	15.4	17.6	20.4	22.5	23.8	24.8	26	26.2	26.1	25.5	25.1	23.7	22.7	21.7	20.1	18.9	18.4	18.1	26.2	19.7	24
18	17.3	16.2	15.6	15.9	15	14.9	15.7	16	18.2	23.4	25.9	26.6	27.1	26.6	26.9	26.7	25.3	24.6	23.4	21.7	20.3	19.4	18.8	17.4	27.1	20.8	24
19	15.1	14.7	14.4	14.2	13.9	13.8	14.2	15.4	17.9	16.2	17.1	19.6	18.6	16.8	16.6	15.6	13.4	12.6	11.9	11.8	11.8	11.6	11.7	11.7	19.6	14.6	24
20	11.5	11.2	11.2	11.1	10.8	11	11.3	11.7	12.4	13.7	14.5	15.3	15.9	16.9	17.3	17.6	18	17.2	16.3	15	14.3	13.6	13.3	12.9	18.0	13.9	24
21	13	12.9	12.8	12.5	12.4	12.2	13	13.3	15.5	17.3	19	20.3	21.2	21.7	22.1	22.4	22.5	21.7	20.1	18.3	16.9	16.5	16.2	15.2	22.5	17.0	24
22	14.8	14	13.5	13.2	12.8	13.3	13.4	12.8	13	14.5	15.3	16	17.6	18.7	18.8	19.8	20.2	18.7	18.3	17.8	16.3	15.6	14.4	13.2	20.2	15.7	24
23	12.5	12.6	12.1	11.5	11.9	12.9	14.9	17	18.9	20.4	21.3	21.9	21	20	22	22.2	21.3	20.6	19.3	17.8	16	15.2	15.2	14.4	22.2	17.2	24
24	13.4	13.3	12.8	11.9	11.7	13.1	12.7	14	16.8	18.1	17.9	17.2	16.3	18.3	17.3	18.5	19.4	17.6	17.5	16.1	14.2	13.6	13.3	12.8	19.4	15.3	24
25	10.5	12.7	10.3	10.7	10	12.3	16	18.5	20.3	20.6	20.6	20.3	20.6	20.8	21.5	21.6	20.6	20.2	19.1	17.7	15.6	14.8	14.1	13.1	21.6	16.8	24
26	12.4	12	11.9	11.2	10.6	11.2	13.4	15	16.7	17.7	18.7	19.6	20.4	20.7	21.1	20.7	20.5	19.6	18.8	17.7	16.7	16.2	16	15.8	21.1	16.4	24
27	15.1	14.3	13.7	13.5	12.8	11.1	10.7	10.7	12.4	13.5	14.5	14.2	14.4	14.8	14.1	13.3	13	14.1	13.8	12.2	10.7	9.8	9.4	9.2	15.1	12.7	24
28	9.4	9.4	8.8	8.5	8.6	9.1	11.8	14.2	15.4	16.1	16.6	17.4	17.7	16.8	17.6	16.7	14.4	13.4	13.1	12.4	11.6	11.5	11.1	10.8	17.7	13.0	24
29	10.3	9.9	9.6	9.4	9.4	9.4	10.4	12	13.4	15	15.2	16.7	17.3	17.8	17.7	18.6	17.1	15.6	15.3	13.5	12	11.1	10.2	8.9	18.6	13.2	24
30	7.9	8.7	8.1	8	8.1	7.9	9.3	12.1	15.5	16.8	17.7	17.3	18.3	19.4	19.3	19.5	19.4	18.9	17.9	16.5	14.2	13.2	12	11.9	19.5	14.1	24
31	11.2	9.8	9	9.2	10.1	11.3	12.5	**P**	**P**	**P**	**P**	**P**	23.1	23.5	23.3	23.7	23.6	22.7	21.6	20.1	18.2	17.2	16.8	16.3	23.7	17.0	19
HOURLY MAX	19.7	18.9	18.8	18.4	18.1	19.7	21.7	24.1	26.1	26.7	27.6	28.6	29.5	30.2	31.3	31.2	31.2	30.8	29.9	28.5	26.6	24.8	21.0	20.4			
HOURLY AVG	12.9	12.6	12.1	11.8	11.5	12.3	14.0	15.7	17.5	18.8	19.7	20.3	20.9	20.9	21.0	21.0	20.7	20.2	19.4	18.1	16.3	15.3	14.3	13.6			

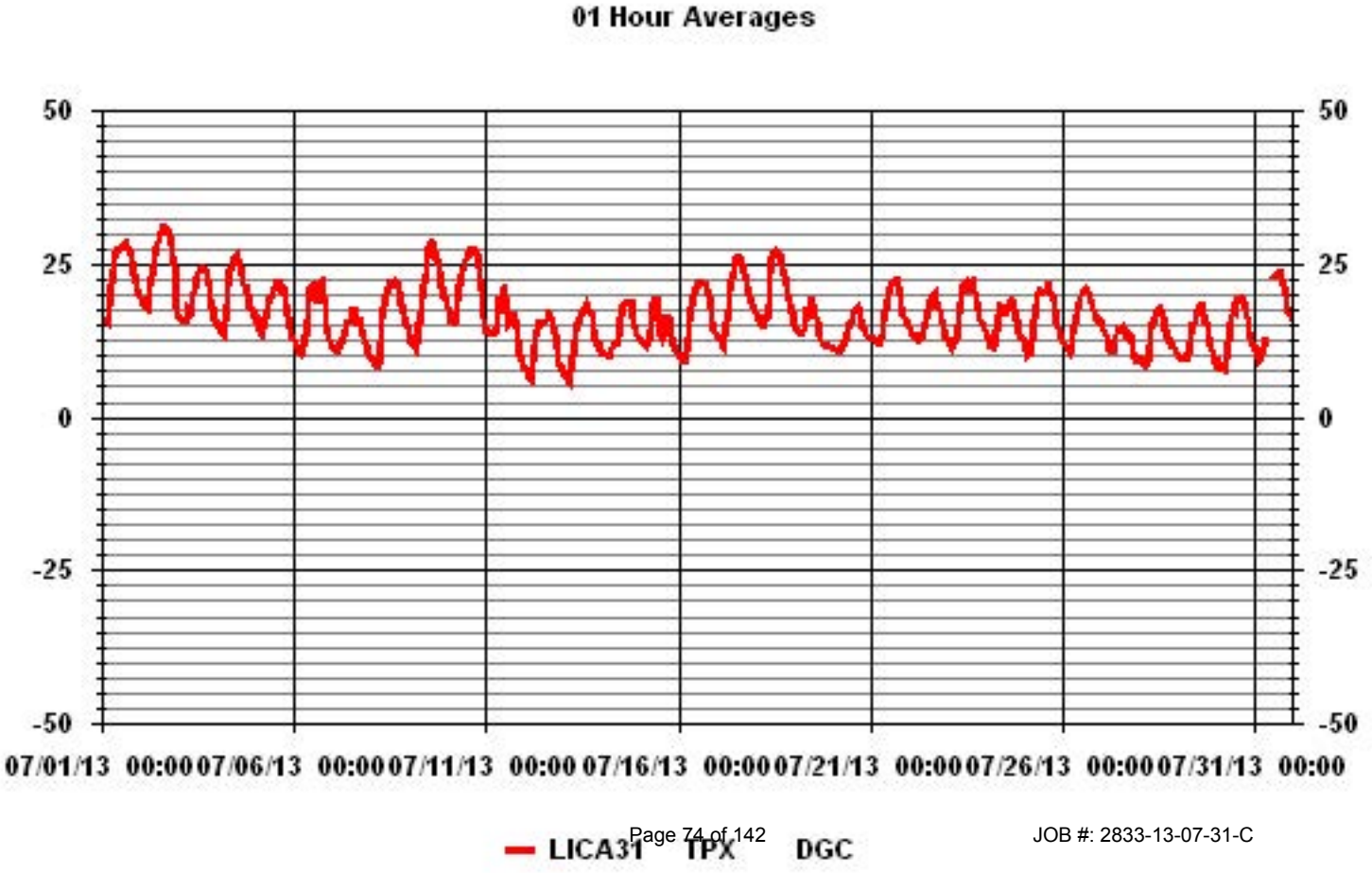
STATUS FLAG CODES

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

MINIMUM 1-HR AVERAGE:	5.7	^{O}C	@ HOUR(S)	4	ON DAY(S)	13	
MAXIMUM 1-HR AVERAGE:	31.3	^{O}C	@ HOUR(S)	14	ON DAY(S)	2	
MAXIMUM 24-HR AVERAGE:	24.8	^{O}C			ON DAY(S)	2	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		739	HRS	
			AMD OPERATION UPTIME:		99.3	%	
STANDARD DEVIATION:	5.04		MONTHLY AVERAGE:		16.69	^{O}C	



JOB #: 2833-13-07-31-C

Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

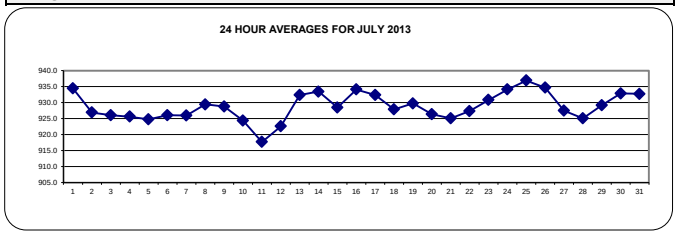
BAROMETRIC PRESSURE hourly averages (millibar)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	934	934	934	934	934	935	935	936	936	936	936	936	936	935	935	935	935	934	934	933	933	933	932	932	936	934.5	24
2	932	931	931	931	930	930	930	929	929	928	928	927	927	926	926	925	925	924	923	922	922	923	924	923	932	926.9	24
3	924	925	924	925	925	926	926	926	926	926	926	926	927	927	927	927	927	926	927	927	927	926	926	926	927	926.0	24
4	926	926	926	926	926	926	926	927	927	927	927	926	926	926	926	926	925	925	924	925	924	924	924	924	927	925.6	24
5	924	925	925	924	924	924	924	924	925	925	925	925	925	925	925	925	925	925	925	925	925	925	925	925	925	924.8	24
6	925	925	925	925	925	925	926	926	927	927	927	927	927	927	927	926	927	926	926	926	926	926	926	925	927	926.0	24
7	925	925	925	925	925	925	925	925	925	926	926	925	926	926	926	926	926	927	927	927	927	928	928	928	928	926.0	24
8	928	928	928	928	929	929	929	930	930	930	930	930	930	931	930	930	930	930	930	930	930	929	929	929	931	929.5	24
9	929	929	929	929	929	929	929	929	929	930	930	930	929	929	929	929	928	928	928	928	928	928	928	928	930	928.8	24
10	928	929	928	927	927	927	927	927	927	927	927	926	926	925	924	923	922	921	921	920	919	919	920	919	929	924.4	24
11	918	918	918	918	917	918	918	918	917	916	916	916	917	917	917	918	918	918	919	919	919	919	918	918	919	917.7	24
12	918	918	919	919	919	919	920	920	920	921	921	922	923	923	924	924	925	926	926	927	927	927	927	927	927	922.6	24
13	928	928	929	929	929	930	930	931	932	932	932	933	933	934	934	934	934	935	935	935	935	935	935	935	935	932.4	24
14	935	935	935	935	935	935	935	935	935	935	934	934	934	934	934	933	933	932	932	931	931	931	930	930	935	933.5	24
15	929	929	929	928	928	928	927	928	927	927	928	928	927	927	928	928	929	929	929	930	930	930	930	930	930	928.5	24
16	930	931	931	932	932	933	933	934	934	935	935	935	935	936	936	936	936	935	935	935	935	935	935	935	936	934.1	24
17	935	934	934	934	934	934	934	934	934	934	934	934	933	933	932	932	931	931	930	930	930	929	929	928	935	932.4	24
18	928	927	927	927	927	927	927	928	928	928	929	929	929	928	928	928	928	928	928	928	928	928	928	929	929	927.9	24
19	928	928	928	929	929	927	928	929	929	930	930	931	931	931	931	931	931	930	930	930	931	931	931	930	931	929.8	24
20	930	930	930	929	929	929	928	928	928	928	927	927	926	926	926	925	925	924	924	923	923	923	923	922	930	926.4	24
21	923	923	923	922	923	923	924	924	924	925	925	926	926	926	926	926	927	927	927	927	927	926	926	926	927	925.1	24
22	926	926	926	926	926	926	926	927	926	927	928	928	928	928	928	928	928	928	928	929	929	928	928	928	929	927.3	24
23	928	928	928	928	929	929	929	930	930	931	931	932	932	932	932	932	932	932	932	933	932	932	933	933	933	930.8	24
24	932	932	932	932	932	932	933	933	933	934	934	934	935	935	935	935	935	935	936	936	936	936	936	936	936	934.1	24
25	936	936	936	936	936	936	937	938	938	938	938	938	938	938	938	937	937	937	937	937	936	936	936	936	**938**	**936.9**	24
26	936	936	936	936	936	936	936	936	936	936	936	936	935	935	935	934	934	934	933	933	932	932	932	932	936	934.7	24
27	931	930	929	929	930	929	928	928	927	928	928	928	927	927	927	926	926	926	926	926	926	926	926	926	931	927.5	24
28	926	925	925	924	925	924	924	925	925	925	925	925	925	925	925	925	925	925	925	926	926	926	926	926	926	925.1	24
29	927	927	927	927	927	928	928	928	929	929	929	929	930	930	930	930	930	930	931	931	931	930	931	931	931	929.2	24
30	931	931	931	931	932	932	932	933	933	933	934	934	933	934	934	934	934	934	934	933	933	933	933	933	934	932.9	24
31	932	932	932	932	932	932	932	**P**	**P**	**P**	**P**	**P**	934	934	934	933	933	933	933	933	933	932	933	933	934	932.7	19
HOURLY MAX	936	936	936	936	936	936	937	938	938	938	938	938	938	938	938	937	937	937	937	937	936	936	936	936			
HOURLY AVG	928	928	928	928	928	928	929	929	929	929	929	929	929	929	929	929	929	929	929	929	929	929	929	928			

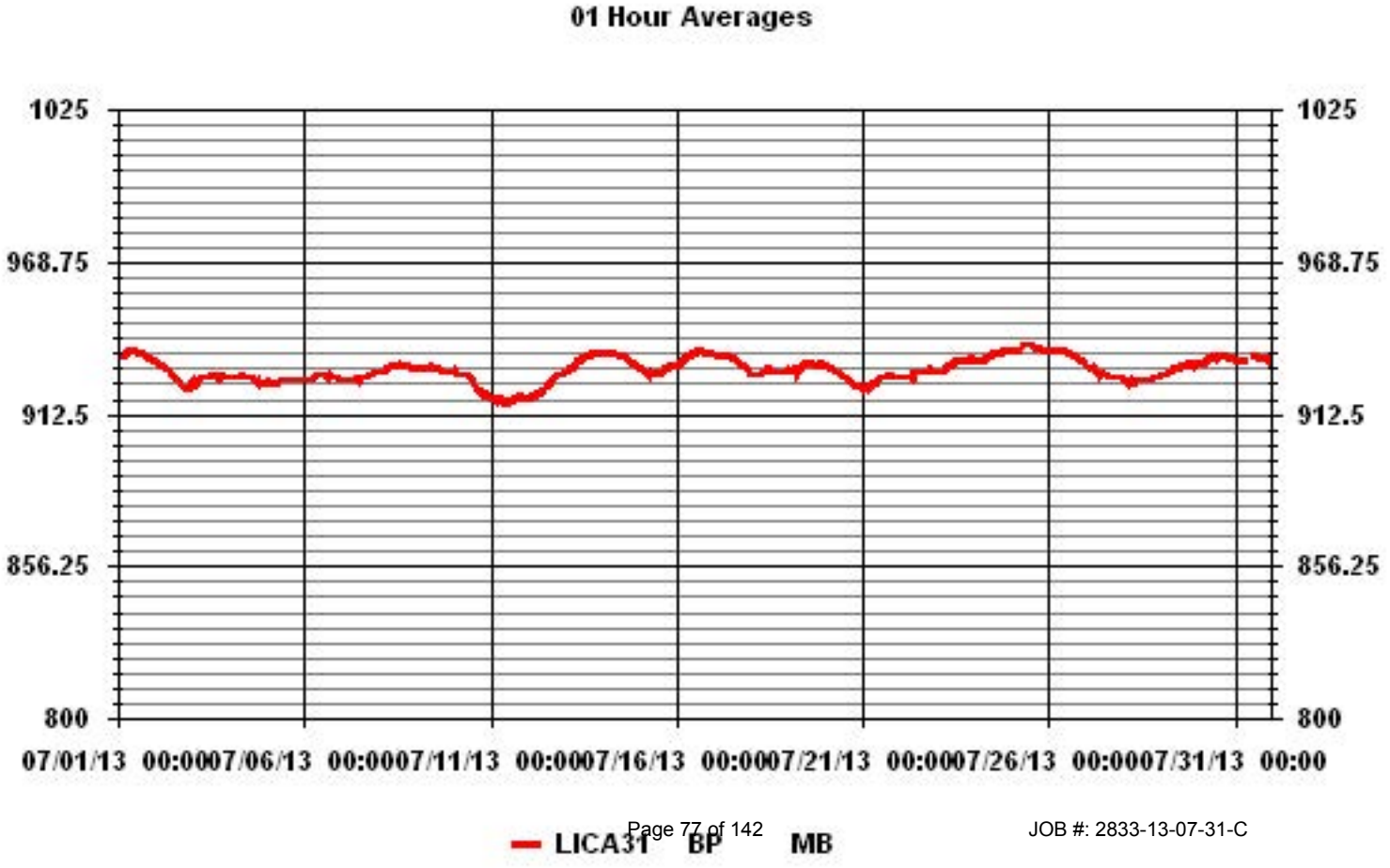
STATUS FLAG CODES

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:		938	MB	@ HOUR(S)	VAR	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:		936.9	MB			ON DAY(S)	25
					VAR-VARIOUS		
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		739	HRS
				AMD OPERATION UPTIME:		99.3	%
STANDARD DEVIATION:	4.51			MONTHLY AVERAGE:		929	MB



JOB #: 2833-13-07-31-C

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

RELATIVE HUMIDITY hourly averages (%)

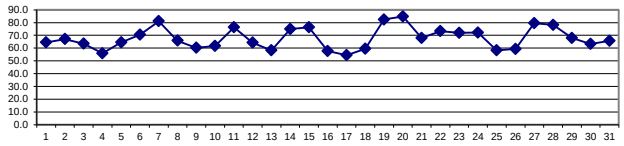
MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	88	87	89	90	90	82	71	67	61	58	55	50	47	46	45	43	45	47	52	56	65	69	70	74	90	64.5	24
2	75	77	76	78	80	75	72	69	65	62	58	56	56	56	55	54	55	56	60	65	71	67	83	88	88	67.0	24
3	88	89	90	91	91	90	83	80	72	62	55	49	42	40	40	40	41	41	41	46	54	61	69	69	91	63.5	24
4	71	71	67	69	67	64	61	53	45	43	38	37	36	38	40	47	56	57	60	59	66	67	63	67	71	55.9	24
5	70	79	82	81	84	82	74	69	65	62	60	54	53	48	48	47	50	50	53	55	67	72	71	74	84	64.6	24
6	76	81	86	88	89	89	88	83	74	65	56	52	48	53	67	54	51	49	54	59	79	85	83	82	89	70.5	24
7	81	84	86	88	88	87	86	85	82	76	76	80	71	75	68	72	77	72	79	83	84	87	90	90	90	81.1	24
8	90	90	89	89	90	90	81	72	64	54	52	50	47	46	45	44	47	50	55	58	60	66	73	78	90	65.8	24
9	81	86	88	89	89	86	76	71	65	58	52	47	43	39	35	34	36	39	44	52	55	59	62	61	89	60.3	24
10	70	72	82	78	76	76	68	63	58	53	59	54	53	51	45	42	43	44	49	58	64	64	77	84	84	61.8	24
11	86	87	89	90	90	88	83	75	69	69	63	64	67	76	85	77	66	61	62	65	70	81	83	85	90	76.3	24
12	84	82	83	82	83	72	63	58	56	54	54	54	56	54	52	50	53	53	54	58	66	74	72	76	84	64.3	24
13	80	76	76	80	81	76	68	58	50	45	43	42	44	43	44	45	47	46	49	56	61	62	57	71	81	58.3	24
14	83	82	85	87	88	88	85	82	83	85	85	83	73	62	57	54	51	52	57	68	74	75	78	82	88	75.0	24
15	84	85	85	86	88	86	80	75	64	62	58	61	70	84	86	86	80	69	71	67	71	74	77	82	88	76.3	24
16	83	82	82	84	85	77	71	65	58	52	46	43	41	39	37	35	36	37	38	46	48	61	70	71	85	57.8	24
17	70	71	72	75	78	72	67	63	54	49	44	41	35	33	34	36	41	43	46	51	55	58	59	61	78	54.5	24
18	63	67	66	66	75	76	76	76	71	57	45	43	42	40	40	42	48	52	58	61	62	62	66	76	76	59.6	24
19	85	84	86	87	89	91	91	87	77	81	73	65	67	70	68	70	83	88	89	90	89	89	89	90	91	82.4	24
20	89	89	90	90	90	90	90	90	88	84	80	78	76	73	72	75	77	82	84	87	89	90	91	91	91	**84.8**	24
21	91	91	91	91	91	91	87	85	76	68	60	54	51	49	46	45	45	49	53	57	64	61	65	68	91	67.9	24
22	70	75	77	79	79	75	76	82	83	81	80	75	70	64	62	57	57	62	66	69	74	77	82	87	87	73.3	24
23	89	90	91	91	91	89	81	75	70	63	60	57	62	64	55	55	57	58	64	69	74	74	71	75	91	71.9	24
24	82	82	89	90	90	87	87	85	76	70	68	69	73	66	65	57	53	58	56	63	67	65	65	70	90	72.2	24
25	80	69	82	80	86	75	68	60	52	48	46	47	45	44	42	41	44	42	46	52	58	61	63	69	86	58.3	24
26	73	74	73	75	76	74	68	63	59	55	51	48	46	46	46	47	47	49	53	59	61	62	61	60	76	59.4	24
27	63	65	68	68	76	88	89	88	82	77	72	74	73	74	80	85	88	85	83	85	86	86	87	88	89	79.6	24
28	88	87	87	89	89	87	79	74	70	68	65	62	59	62	60	61	77	84	86	85	89	89	90	89	90	78.2	24
29	89	89	90	90	89	86	80	73	68	61	58	52	51	49	49	43	47	52	56	61	68	71	76	82	90	67.9	24
30	85	77	81	85	83	86	84	74	59	54	51	51	48	44	45	43	44	45	49	57	65	68	72	70	86	63.3	24
31	72	83	87	86	83	81	79	**P**	**P**	**P**	**P**	**P**	50	49	48	46	46	48	52	58	64	70	72	75	87	65.7	19
HOURLY MAX	91	91	91	91	91	91	91	90	88	85	85	83	76	84	86	86	88	88	89	90	89	90	91	91			
HOURLY AVG	80.0	80.7	82.7	83.6	84.6	82.5	77.8	73.3	67.2	62.5	58.8	56.4	54.7	54.1	53.6	52.5	54.5	55.5	58.7	63.1	68.4	71.2	73.8	76.9			

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

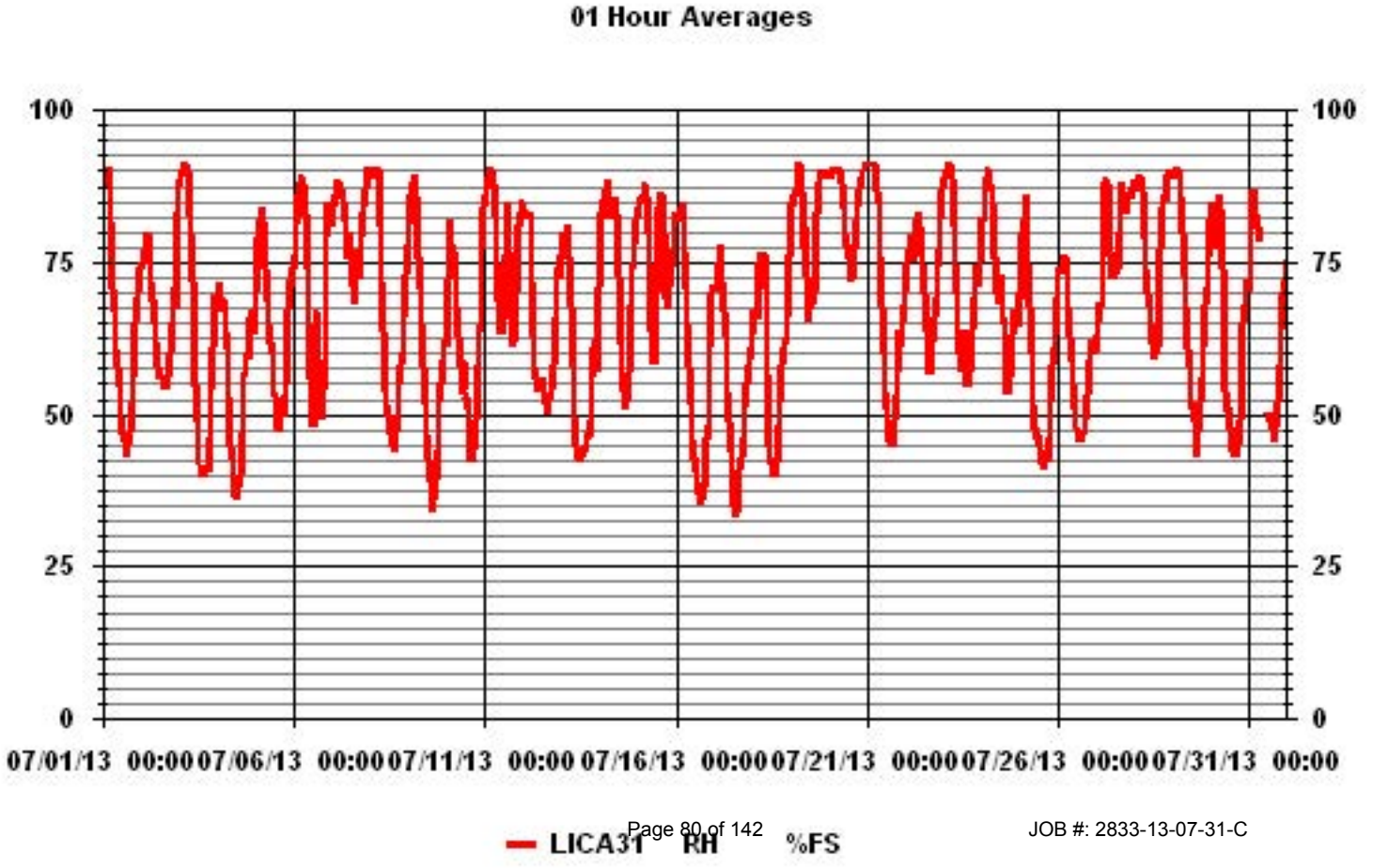
24 HOUR AVERAGES FOR JULY 2013



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	91	%	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	84.8	%			ON DAY(S)	20
				VAR-VARIOUS		

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	739	HRS
			AMD OPERATION UPTIME:	99.3	%
STANDARD DEVIATION:	15.59		MONTHLY AVERAGE:	67.82	%



JOB #: 2833-13-07-31-C

Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

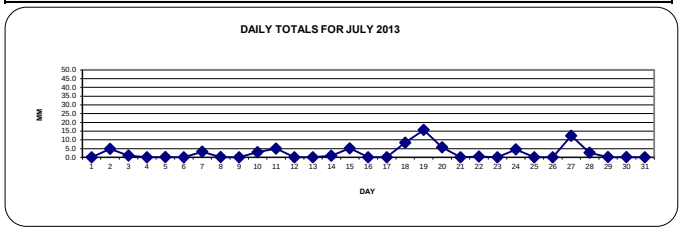
PRECIPITATION hourly averages (mm)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	TOTAL	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	4	0.2	4.0	4.9	24
3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	1.0	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
5	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
7	0	0	0	0	0	0	0	0	0	0	2.2	0.1	0	0.1	0	0.8	0	0	0	0	0	0	0	0	2.2	3.2	24
8	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
10	0	0	2.2	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	2.2	2.9	24
11	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	3.4	0.1	0	0	0	0	0	0	0	0	3.4	5.0	24
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
14	0	0	0	0	0	0	0	0	0	0.7	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0.9	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	2.5	1	0	0	0	0	0	0	0	0	2.5	5.1	24
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**8.4**	**8.4**	8.4	24
19	2.9	0	0	1.6	4.4	0.1	0.1	0	0	0	0	0	0	0	0	0	2.5	0.9	2.8	0.1	0	0.1	0.1	0.1	4.4	**15.7**	24
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	3.2	2.4	0	0	3.2	5.7	24
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
22	0	0	0	0	0	0	0	0.4	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	24
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
24	0	0	0	0	0	0.2	4.1	0	0	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	4.1	4.5	24
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
27	0	0	0	0	4.4	4.3	2.4	0	0	0	0	0	0	0	0.1	0.1	1.1	0	0	0	0	0	0	0	4.4	12.4	24
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	1.5	0	0	0	0.2	0.2	0.1	1.5	2.7	24
29	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
30	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
31	0	0	0	0	0	0	0	0	**P**	**P**	**P**	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	21
HOURLY MAX	2.9	0.0	2.2	1.6	4.4	4.3	4.1	0.4	0.1	0.7	2.2	0.2	0.0	1.6	3.4	1.0	2.5	1.5	2.8	0.1	3.2	2.4	4.0	8.4			

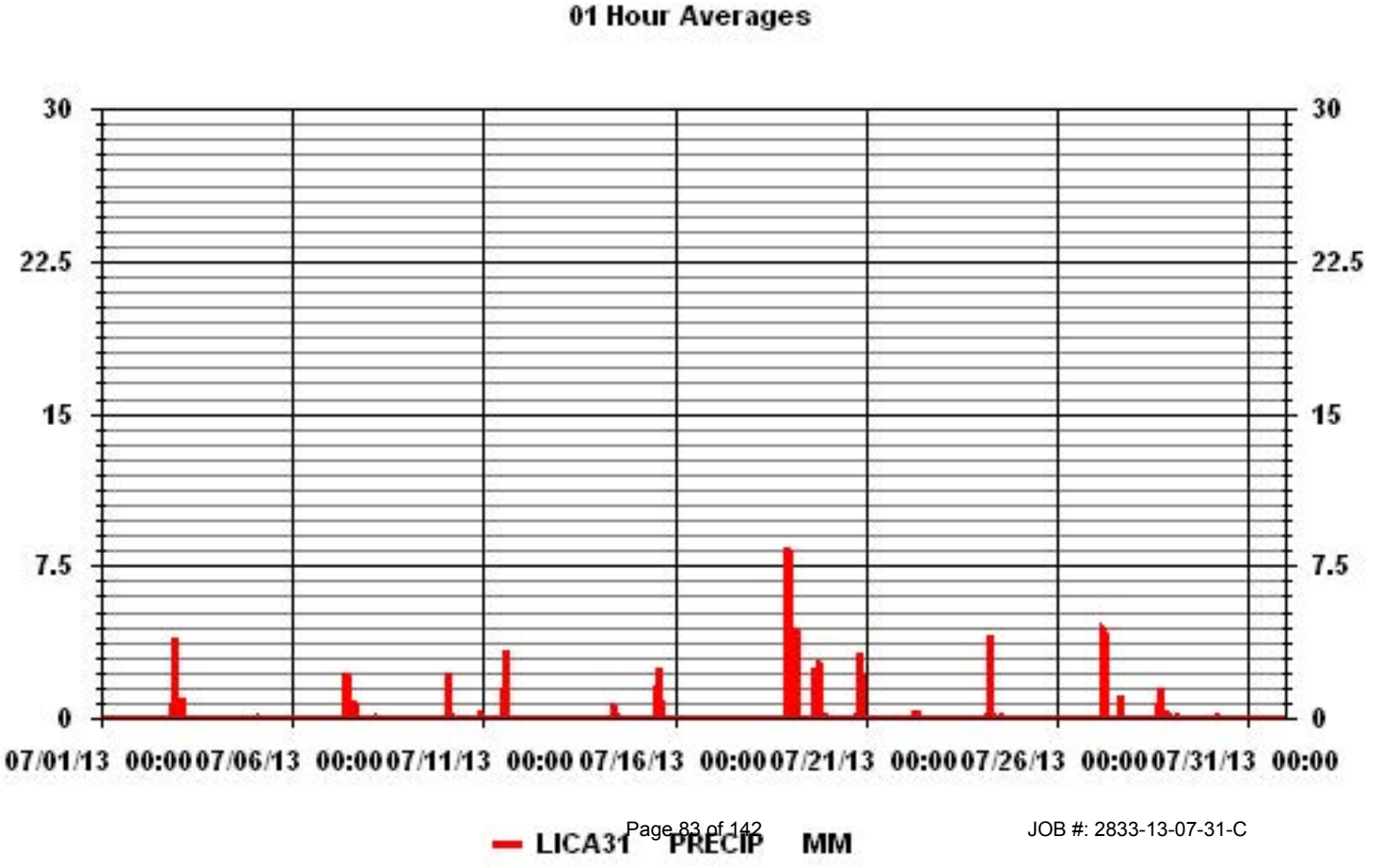
STATUS FLAG CODES

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

MAXIMUM 1-HR AVERAGE:	8.4	MM	HOUR(S)	23	ON DAY(S)	18
MAXIMUM DAILY TOTAL	15.7	MM			ON DAY(S)	19
MONTHLY TOTAL	73.3	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		741	HRS
			AMD OPERATION UPTIME:		99.6	%
STANDARD DEVIATION:	0.57		MONTHLY AVERAGE:		0.10	MM



JOB #: 2833-13-07-31-C

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

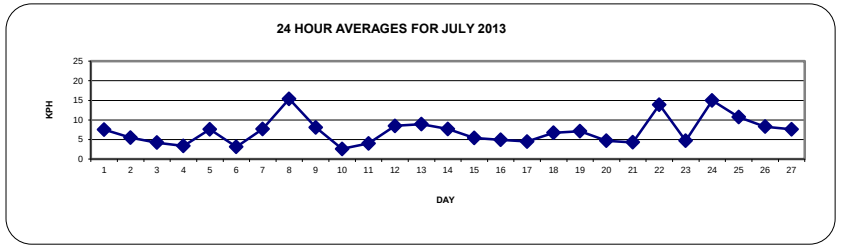
WIND SPEED hourly averages (km/hr)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6.7	6.8	8.1	8.8	7.6	7.3	4	4.1	2.5	3.4	5.9	7.8	7.4	8.5	9.2	9	9.4	7.3	5.4	4.6	7	7.6	8.3	8.8	9.4	6.1	24
2	8.6	10.1	10.7	9.9	10.3	11.7	13.1	15.3	15.3	15.3	17.6	19.4	18.4	17	13.7	15.8	13.8	13.6	12.3	8.8	4.6	21.6	19.4	17.1	21.6	9.3	24
3	7.5	5.6	5.3	4.3	8.4	13.3	12.9	13.5	12.1	14.7	13.3	14.3	15.7	14.1	14.9	14.3	14	12.2	11.4	7.8	7.1	8.3	6.5	8.4	15.7	9.5	24
4	7.7	7.9	8.8	8.6	7.4	6.2	6.4	5.7	4.7	5.4	6.9	7.2	5.3	6.6	7.6	8.2	7.6	7.1	4.7	4.8	6.4	6.3	7.2	2.5	8.8	5.9	24
5	14.7	14.6	7.8	5.7	7	6.5	8.5	9.8	8.4	7.5	8.4	11.8	11.4	7.8	10.3	8.7	7.1	9.1	8.5	7.9	6.5	6.6	7.1	6.6	14.7	7.5	24
6	8.1	9	10.2	11	12.2	8.2	8.4	7.7	8.4	6.6	5.6	3.6	2.6	7.9	11.5	9	7	13.4	15.4	7	7.8	7.9	9.9	6.3	15.4	5.5	24
7	3.9	6.2	4.7	3.7	6.3	7.7	8.1	9	9.1	8.8	12.1	12.9	11.2	9.6	11	9.1	5.7	6.2	4.8	5.9	5.1	5.9	3.8	3.6	12.9	4.2	24
8	3.7	2.9	5.3	3	5.6	4.9	4.6	4.8	4.5	2	1.4	3	3	7.2	6.3	6.1	6.1	5.3	6.7	5.8	4.7	5.9	6.7	7.3	7.3	3.4	24
9	8.1	6.9	6.7	7.7	6.4	5.7	6	7.3	7.6	8.7	10.9	10.3	13.4	13.9	12.8	14.1	12.9	12	8.8	5	4.8	5.4	3.6	4.2	14.1	7.6	24
10	6.9	16.5	7.2	15.1	7.7	5.9	4.7	4.3	4.4	2.8	6.3	7.5	8.4	9.4	10.1	12.3	11.5	10.6	7.1	6.5	7.5	7.5	19.4	10.6	19.4	3.1	24
11	5	4.4	4.7	5.9	7.1	5.1	7.4	9	7.9	8	9.4	10.7	11.7	10	8.9	17.8	11.3	11.1	15.8	14.6	10.2	11.4	10.4	10.1	17.8	7.7	24
12	12.2	13.4	12.3	13.8	13	15	21.4	27.2	27.6	26.6	22.9	23.2	21.8	23.9	19.9	20.1	17.6	15.5	16.1	12.1	7.6	7.6	9.2	7.2	27.6	**15.4**	24
13	7.8	8.8	9.1	8.5	8.4	8.1	8	7.3	9.1	10.8	10.9	14	13.8	15	11.4	11.3	11.6	8.5	6.3	5.1	5	4.1	2.2	4.3	15	8.1	24
14	6.4	7.2	4.1	2.4	4.3	4.1	2.2	4.2	3.7	5.5	4.8	0.9	5.7	8.6	9.6	11.8	9.6	7.6	6.1	5.8	7.2	8.2	6.7	6.9	11.8	2.6	24
15	7.7	7.9	6.3	3.7	3.5	4.2	4.3	6.1	6.5	5.8	7.7	11.5	12.2	12.7	7.7	6.9	8.3	9.5	9	10.7	9.6	10.8	10.5	11.6	12.7	4	24
16	9.3	10.9	9.8	9.7	8.2	6.7	7.2	8.4	10.4	13.1	13.4	14.4	13.6	14.3	12.9	13	11.9	9.8	7	3.3	4.3	5.7	5.9	7.1	14.4	8.5	24
17	8	8.6	9.5	8.8	7.9	8.7	8.4	9.5	10.6	10.2	10.3	11.8	12.6	12	10.7	11.8	10.4	9.9	7.6	5.5	6.4	6.2	6.9	6.4	12.6	8.9	24
18	6	6	7.3	9.1	7.9	7	6	7.1	6.6	7	7.4	8.6	8	14.1	15.1	14.1	11.8	7.8	6.7	7.7	6.6	5.5	9	15.2	15.2	7.7	24
19	6.6	1.2	4.5	5.2	2.6	5.6	3.2	3.6	3.7	7.4	8.7	6.9	9	9.5	10.2	8.1	8.7	8.7	8.8	8.3	7.2	6.7	4.1	5.1	10.2	5.4	24
20	6.2	6	4.7	6.7	5.5	5.5	5.2	4	3.9	4.7	5.8	7	6.2	4.9	4.2	4.3	4	7.9	8.9	9.2	7.1	9.4	10.1	8.9	10.1	4.9	24
21	6.5	6.6	6.5	7.3	7.5	6.8	7.8	8.4	9	8.4	8	7.7	7.7	6.9	4.6	4.6	4.3	3.8	1.7	1.9	1	2.8	5.1	6.3	9	4.5	24
22	6.9	6.7	6.7	6.7	6	7.4	7.3	7.8	6.1	5.2	4.2	5.5	8	9.4	8.6	10.2	9.7	6.6	6.3	5.5	5.1	7.1	7.9	7	10.2	6.7	24
23	9.1	10.2	7.6	8.9	8.3	7.4	9.4	9.3	8.5	11.3	11.3	12.1	10.7	10.3	10.4	9.4	9.6	9.2	7.1	5.1	5.5	6	6	4.6	12.1	7.1	24
24	3	2.4	4.2	3.6	5.4	3.7	3.5	5.1	5.3	6.7	6.8	7.1	7.3	7	8.2	10.6	8.4	6.4	6.5	4.9	6	6.3	5.5	6.5	10.6	4.7	24
25	6.3	2.6	6.9	7.8	7.9	5	1	1.8	2.7	3.6	2.5	2.9	4.4	6.3	7.7	9.9	10	10.5	9.9	8.7	9	11.1	11.4	10.8	11.4	4.3	24
26	10.3	10.3	11.7	10.1	10.6	10.8	11.8	12.3	14.5	18.8	19.6	17.4	16.3	16.7	17.7	16.5	17.9	16.8	15.5	11.8	13.6	13.8	12.9	15.6	19.6	13.9	24
27	13.4	12.7	15.1	13.6	4.9	9.3	14.9	9.1	8.9	11.2	8.9	8.2	5	4.3	1.8	4.3	5.7	4.4	14.2	7.4	7.5	5.7	5.1	5.3	15.1	4.7	24
28	5.7	7.9	8.2	10.7	10.4	8	11	13.8	19.4	19	22.4	23.4	25.4	**28.3**	23.6	26.7	21.1	19.4	14.7	14.7	12	11.4	12	13.2	**28.3**	15	24
29	11.6	11.3	12.7	12.6	11.2	11.8	12.4	12	12.3	12.4	15.7	14	10.6	11.1	9.4	8.7	9.5	11.2	9	7.7	8.4	9.5	9	6.9	15.7	10.7	24
30	6.5	5.9	5.8	6.5	7	6.3	7.4	9.6	12.8	12.1	12.5	11.6	15	12.8	14.5	12	11.6	10.3	8.5	4.6	6.1	7.7	7.6	7.8	15	8.3	24
31	7.7	6.9	8.2	7.8	8.6	9.3	7.6	**P**	**P**	**P**	**P**	**P**	12.4	10.8	12.5	11.1	10.9	9.9	7.4	6.5	6.9	7.1	8.4	8.7	12.5	7.6	19
HOURLY MAX	14.7	16.5	15.1	15.1	13.0	15.0	21.4	27.2	27.6	26.6	22.9	23.4	25.4	28.3	23.6	26.7	21.1	19.4	16.1	14.7	13.6	21.6	19.4	17.1			
HOURLY AVG	7.7	7.9	7.8	8.0	7.6	7.5	7.9	8.6	8.9	9.4	10.1	10.6	10.8	11.3	10.9	11.3	10.3	9.7	9.0	7.3	6.9	8.0	8.3	8.1			

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

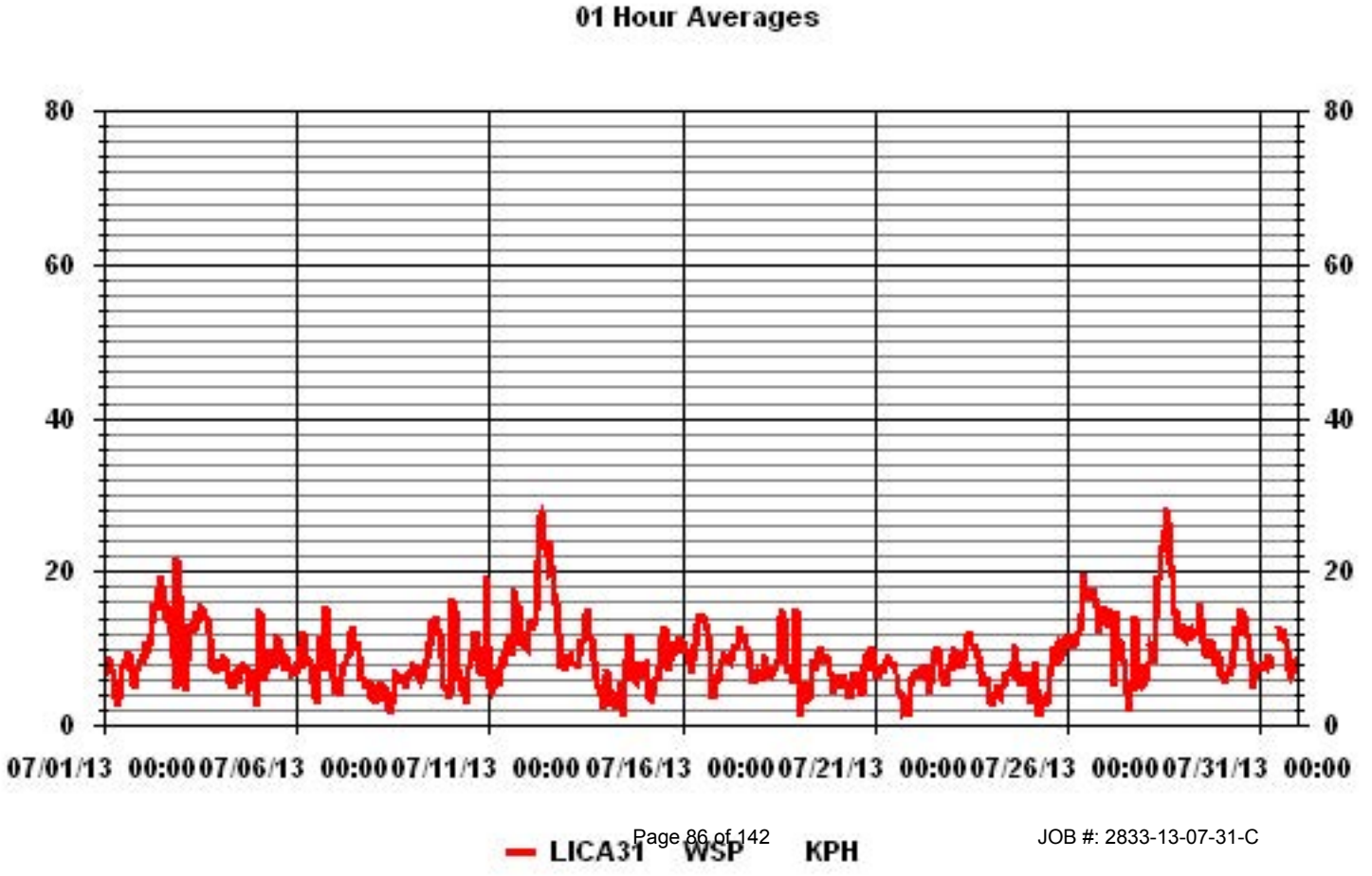


LAST CALIBRATION: June 12, 2012

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	28.3	KPH	@ HOUR(S)	13	ON DAY(S)	28
MAXIMUM 24-HR AVERAGE:	15.4	KPH			ON DAY(S)	12

CALMS (≤ 0 KPH)	0.00	%	OPERATIONAL TIME:	739	HRS
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME:	99.3	%
STANDARD DEVIATION:	4.24		MONTHLY AVERAGE:	8.89	KPH



JOB #: 2833-13-07-31-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST. LINA

JULY 2013

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

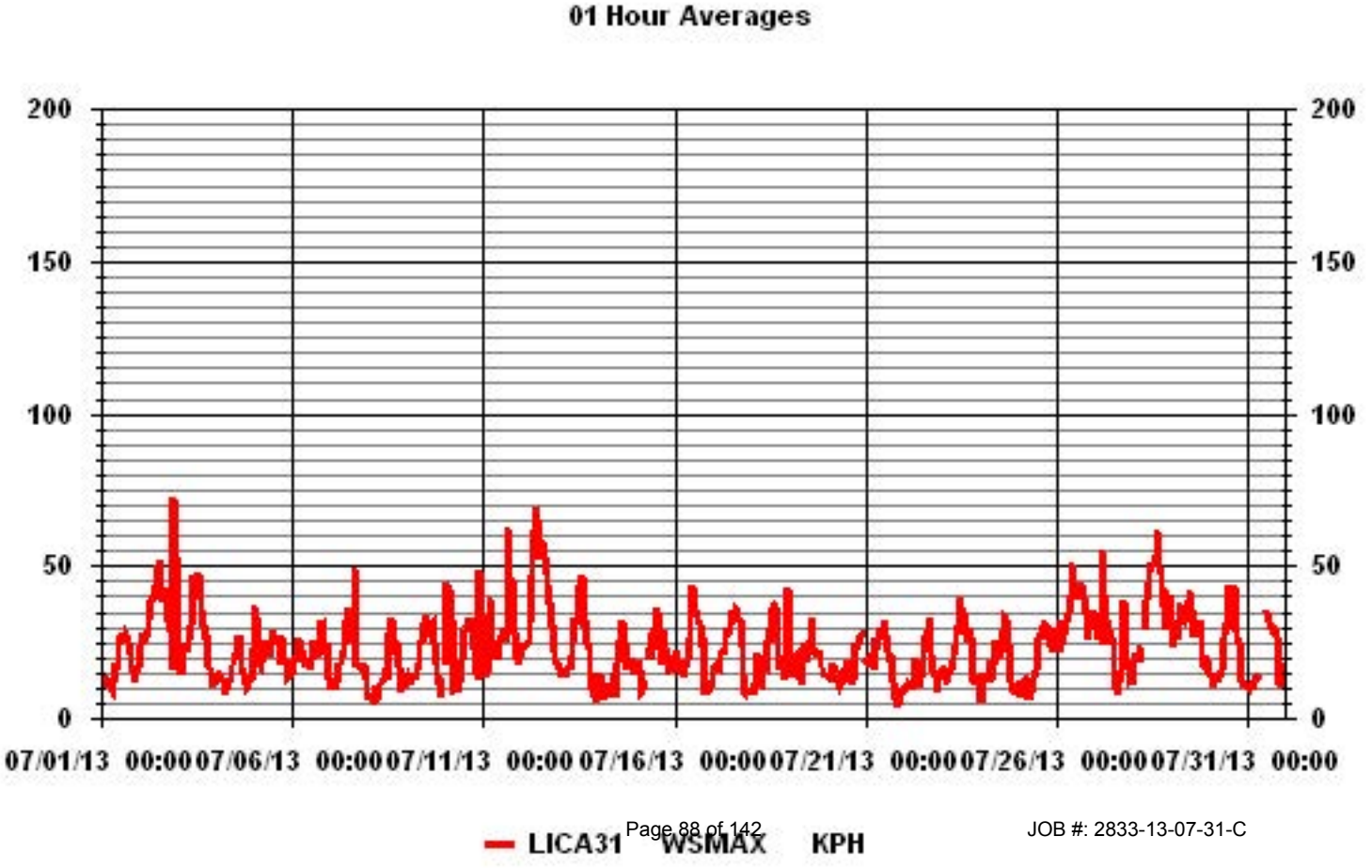
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	12.3	11.2	10.1	13.6	10.1	11.6	9.9	9	11.8	17.7	16.2	24.5	26.3	26.9	27.2	28.5	27.6	25.4	21.2	15.3	17.5	12	15.1	16.4	28.5
2	23.6	25.2	27.4	26	26.7	28.7	32.4	38.1	39.4	39.6	43.3	50.5	45.5	51.7	38.5	41.3	43.1	34.6	32.6	28.9	15.6	**72.2**	57.3	53.2	**72.2**
3	26.9	14.9	14.9	16.4	23.2	24.7	21.9	25.4	30.7	36.6	46.6	43	38.5	48.1	41.6	35.9	30.9	26.9	26.9	17.4	16.6	15.3	10.3	13.4	48.1
4	12.7	13.4	15.1	13.6	12.7	7.7	12.5	10.7	11.8	13.4	17.1	20.8	20.6	26.9	20.1	27.1	16.7	14.9	12.1	10.3	11.2	12.9	13.1	23	27.1
5	37	33.9	17.7	17.7	16.9	18.6	24.3	25.4	23	20	21.7	25.8	29.1	27.8	26.7	25	17.1	27.4	23.2	20.1	12.9	13.4	14.7	13.8	37
6	18.2	18.8	20.2	22.8	26.5	21	19.1	20	18.2	17.7	17.3	17.1	18.8	24.5	24.1	20	25.2	30.7	30.2	30.9	24.1	20.6	25	13.6	30.9
7	9.7	11.2	11	9	11.6	17.8	18	19.7	22.1	23.9	32.4	36.1	34.7	26.1	26.3	49.7	17.5	17.5	15.8	17.5	15.3	17.8	13.4	6.2	49.7
8	7.5	6.8	8.1	7.5	10.3	7.3	8.1	11.4	12.3	12.7	16	12.5	28	31.3	33.1	22.5	20.8	25.2	25	17.5	8.8	9.6	10.5	12.7	33.1
9	14	12.6	11	14.5	13.6	12.5	17.1	17.3	24.6	25.2	29.6	28.9	33.5	31.1	31.5	30.7	31.4	25.2	18.6	10.7	13.6	8.1	**P**	**P**	33.5
10	18.6	44.2	31.8	43.1	32.6	9.4	9.7	9.7	13.4	13.1	19.3	28.7	28.9	31.1	30.2	30.9	32.8	31.1	23.2	15.1	12.5	47.9	47.7	34.7	47.9
11	19.7	13.6	15.1	30	39.9	19.7	20.4	25.6	24.5	19.5	25.4	26.9	29.6	26.3	25.2	63	44.9	27.4	46.2	33.5	28.5	20.2	18	19.7	63
12	22.6	23.9	24.5	24.3	24.5	31.3	46.6	58.4	61.9	68.9	65.7	52.1	56	58.2	53.6	47.9	44.4	37.2	38.8	30.9	22.1	17.3	19.1	16.9	68.9
13	13.6	15.1	16.4	13.4	14.9	16.4	16.7	20.6	24.7	33.3	32	32.9	43.3	45.5	47.1	30.3	32.9	25	22.8	13.4	10.5	7.9	5.1	14.5	47.1
14	12.9	14.5	7.9	5.7	8	9.1	6.8	11.2	9.7	12.7	11.8	7.1	18	25.4	27.1	32	27.4	25.2	17.1	17.3	18.8	19.1	14.7	16.9	32
15	18	18.4	16.7	8.8	9.4	11.4	**P**	20.2	23.2	19.1	28	29.8	36.6	35.3	22.8	17.8	21.9	28.5	21.2	22.8	16.4	16.9	15.4	18.6	36.6
16	20.6	21.9	19.7	16.2	15.1	14.5	14.9	16.4	19.3	26.7	34.2	43.3	33.3	36.3	34.6	32.6	31.1	23	26.9	9	8.1	12.3	11.2	12.3	43.3
17	15.1	16.9	17.3	17.8	17.1	21.9	20.8	23.2	26.3	29.3	27.4	30.4	34.2	33.9	36.6	36.1	33.3	32.6	23.6	14.5	9	8.1	9.4	9	36.6
18	9.6	9.2	11.6	14.7	21.2	11.2	11	18.2	18.2	17.5	25.4	29.3	24.9	36.3	37.4	36.6	30.4	21.3	16.4	18	18.4	12.9	16.4	42.7	42.7
19	26.3	13	18.6	19.9	20.6	14.9	13.6	11.4	13.4	24.7	20.8	20.4	24.7	25.8	32.9	23.9	21.7	21.5	20.8	20.8	17.3	15.1	**P**	14.1	32.9
20	13.6	14	12.1	18.4	14.9	12.5	12.6	10.3	11.2	14.2	13.8	16.7	19.1	16.5	18.9	11.4	12.7	24.7	23.4	24.1	26.5	27.2	28.3	**P**	28.3
21	19.3	19.9	16.9	18.8	20.8	16	26.6	22.8	25.6	29.4	26.9	31.3	31.5	28	22.4	18.8	21.4	12.7	6.6	4	5.9	5.8	7.9	9.2	31.5
22	10.8	10.3	11.4	10.5	9.4	12.3	17.3	19.3	14.7	13.6	10.3	13.2	25	24.3	27.6	28.5	33.3	21.7	15.8	14.5	8.2	13.8	12.7	16	33.3
23	15.8	17.5	12.3	12.6	14.5	16	18.6	21.2	23.9	29.6	29.2	39.6	36.3	35	32	27.4	25.4	29.6	27.1	12.8	12.1	**P**	12.3	12.9	39.6
24	6.8	6.6	11.8	13.2	12.3	12.3	19.3	12.3	17.3	25.6	19.7	21.9	21.2	21.9	29.1	33.5	32.9	21.4	24.7	12.3	9.3	8.8	9.6	11	33.5
25	12.5	6.4	10.5	12.9	13.2	12.1	6.2	10.8	8.6	13.2	15.3	16.2	25.8	27.1	25.8	30.2	31.5	29.6	29.8	25.2	24.5	21.7	25.4	29.4	31.5
26	27.6	21.9	32	24.5	28	29.1	31.3	34.6	40.5	51.3	47.1	42.5	39	43.1	42.9	44.4	41	40.3	34.4	25.6	28.9	30.2	35.7	34.8	51.3
27	33.5	25.8	34.4	31.5	54.9	24.3	40.7	32.5	31.1	29.4	27.2	25.2	14.2	10.5	7.5	12.1	15.6	20.2	38.5	19.7	18	12.5	13.2	11.2	54.9
28	18.8	20.6	**P**	21.7	23.4	19.7	**P**	30.2	38.8	44.4	47.9	50.3	51	53.7	51.6	61.7	50.1	48.2	36.3	42.5	30.1	30	31.8	40.5	61.7
29	31.1	23.4	30.7	31.2	25.8	38.1	34	32.9	34.6	32.7	39	41.8	31.3	36.6	26.5	30.7	29.1	31.2	31.1	17.5	17.1	20.6	16.7	17.3	41.8
30	14.5	11.2	11.2	12.1	14.7	11.9	13.4	16	26.3	27.2	30.9	29.1	43.6	36.3	35.5	43.3	29.4	26.7	25	12.9	10.1	11.8	11.2	10.5	43.6
31	10.3	9.7	11	9.9	13.5	13.9	13.2	**P**	**P**	**P**	**P**	X	34.2	30.2	30.4	30.3	27.6	30.2	27.1	12.1	11.2	11.6	17.1	16.9	34.2
PEAK	37.0	44.2	34.4	43.1	54.9	38.1	46.6	58.4	61.9	68.9	65.7	52.1	56.0	58.2	53.6	63.0	50.1	48.2	46.2	42.5	30.1	72.2	57.3	53.2	

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	72.2	KPH	@ HOUR(S)	21
			ON DAY(S)	2



JOB #: 2833-13-07-31-C

LICA31
WSP / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	2.57	1.08	1.48	1.48	.94	1.62	.40	1.08	1.75	1.89	2.16	1.48	1.21	.94	1.21	1.08	22.46
<	12.0	3.51	.81	2.16	2.16	1.08	.81	1.08	3.24	6.35	4.46	2.16	3.51	5.41	8.52	8.93	3.92	58.18
<	20.0	.27	.27	.00	.00	.00	.13	1.21	1.35	1.62	.67	.27	2.16	2.43	2.84	3.38	.40	17.05
<	29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.08	.94	.13	.13	.00	2.30
<	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.35	2.16	3.65	3.65	2.02	2.57	2.70	5.68	9.74	7.03	4.60	8.25	10.01	12.44	13.66	5.41	

Calm : .00 %

Total # Operational Hours : 739

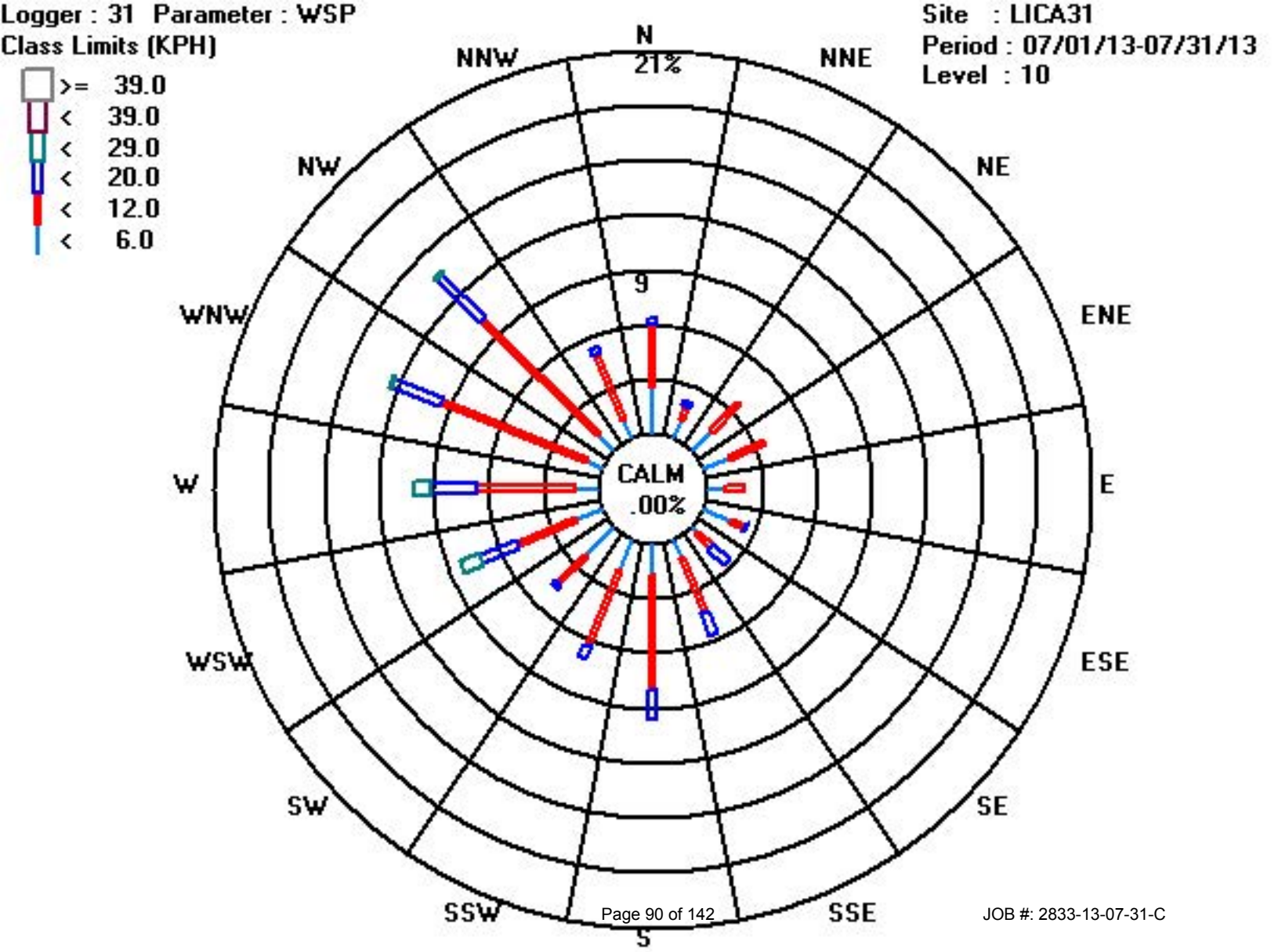
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	19	8	11	11	7	12	3	8	13	14	16	11	9	7	9	8	166
<	12.0	26	6	16	16	8	6	8	24	47	33	16	26	40	63	66	29	430
<	20.0	2	2				1	9	10	12	5	2	16	18	21	25	3	126
<	29.0												8	7	1	1		17
<	39.0																	
>=	39.0																	
	Totals	47	16	27	27	15	19	20	42	72	52	34	61	74	92	101	40	

Calm : .00 %

Total # Operational Hours : 739



JOB #: 2833-13-07-31-C

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION -ST. LINA

JULY 2013

WIND DIRECTION hourly averages in degrees

MST

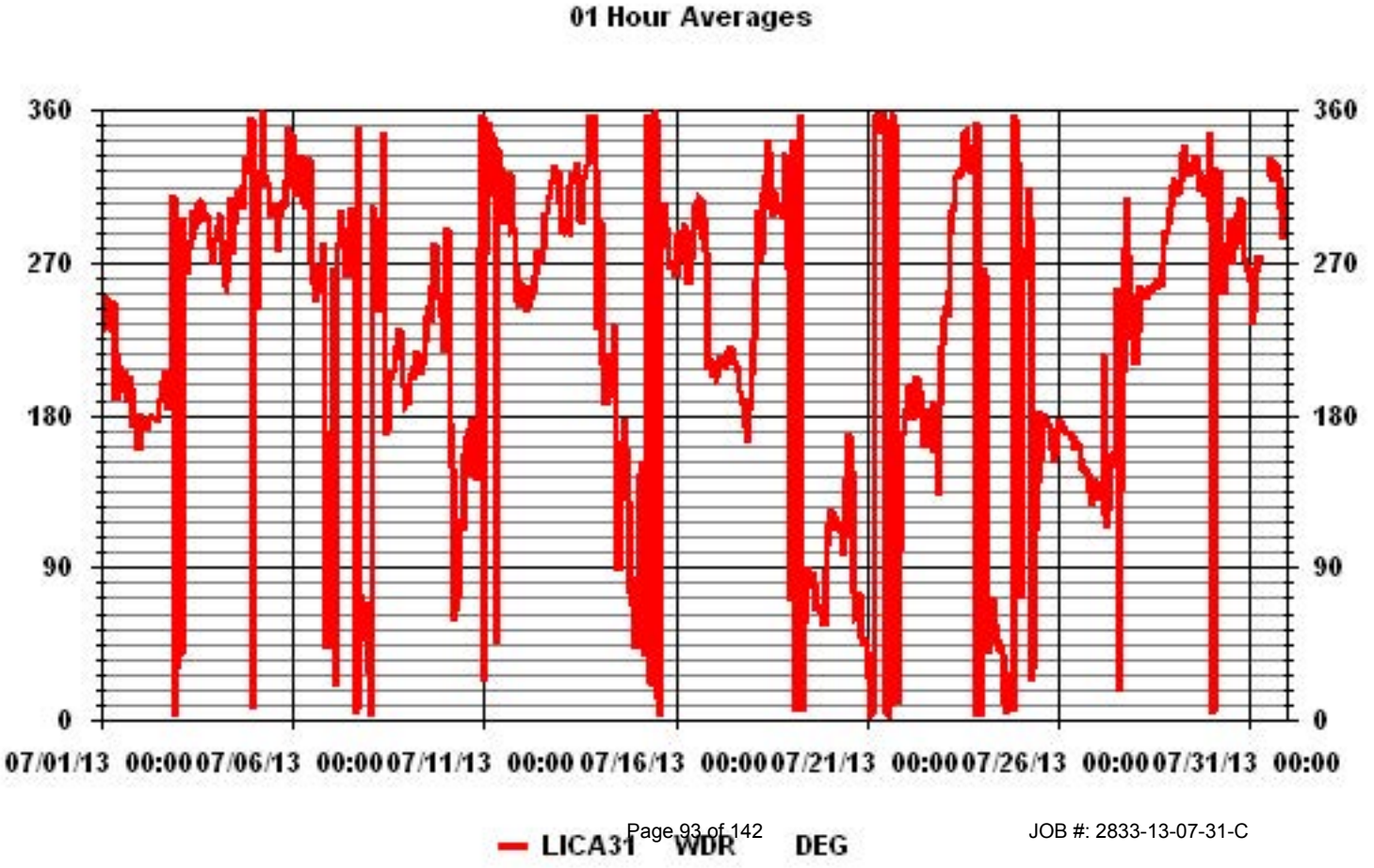
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	229	230	241	251	242	247	237	228	247	188	217	210	200	193	203	206	187	190	203	197	175	174	165	159	207	SSW	24
2	181	177	175	176	171	177	178	179	180	179	177	177	187	190	200	204	204	196	183	187	236	310	1	30	188	S	24
3	50	51	38	296	282	269	262	278	283	289	301	290	292	305	307	306	298	297	298	297	284	279	268	283	294	WNW	24
4	284	292	299	284	272	258	256	259	275	309	274	293	299	312	301	305	301	315	322	332	328	345	356	6	299	WNW	24
5	244	244	269	320	325	360	323	315	319	301	302	299	300	306	279	277	297	303	306	302	319	350	340	347	301	WNW	24
6	316	309	316	322	314	334	319	306	302	323	332	303	271	258	247	253	268	256	265	282	76	41	64	83	303	WNW	24
7	170	234	267	20	282	279	301	285	291	283	262	267	271	302	299	4	6	350	46	74	51	53	70	54	304	WNW	24
8	29	1	304	292	277	249	241	256	297	347	168	192	171	200	205	206	212	221	229	229	220	198	186	187	227	SW	24
9	187	199	202	202	209	212	218	211	203	209	213	222	238	245	235	257	273	281	276	253	250	239	217	244	232	SW	24
10	278	291	264	177	150	58	64	71	110	119	111	157	144	167	172	176	176	168	144	142	152	279	313	357	177	S	24
11	22	275	308	353	341	343	340	331	45	338	328	323	304	292	306	305	323	289	290	288	270	248	245	245	305	WNW	24
12	257	256	241	249	246	248	254	254	263	274	273	277	275	278	298	299	307	310	316	319	327	321	325	306	278	W	24
13	287	290	297	289	290	289	316	321	321	321	329	308	296	293	319	322	327	328	358	354	334	357	326	230	311	NW	24
14	289	295	210	201	188	188	216	190	196	234	219	100	88	122	158	165	178	162	130	76	68	71	54	42	150	SSE	24
15	84	86	145	153	80	37	357	21	31	20	357	359	356	13	1	305	294	305	292	280	273	266	268	263	331	NNW	24
16	263	286	289	283	285	293	271	273	257	259	272	289	303	307	305	309	308	284	298	277	206	210	213	204	281	W	24
17	204	201	202	211	215	208	211	210	215	214	220	214	219	213	210	207	195	187	187	189	174	164	183	190	204	SSW	24
18	204	224	260	281	301	271	274	311	321	311	343	336	302	297	312	306	299	301	300	296	335	309	266	291	297	WNW	24
19	70	180	342	4	216	95	357	5	28	57	87	90	83	77	88	82	64	68	67	65	61	55	89	102	69	ENE	24
20	116	125	111	118	120	118	117	110	115	97	107	143	167	167	148	123	76	61	62	75	49	43	47	47	95	E	24
21	42	26	3	4	5	357	348	358	346	349	358	355	5	4	349	8	359	56	352	9	100	148	170	168	6	N	24
22	176	184	196	198	177	180	199	203	187	196	179	164	161	174	178	183	176	188	158	162	132	173	186	221	181	S	24
23	239	245	237	254	286	300	304	319	321	323	320	324	346	347	332	332	325	323	336	339	2	353	340	2	316	NW	24
24	45	267	263	38	73	69	53	72	58	47	44	45	41	39	11	3	9	28	19	4	358	356	331	321	23	NNE	24
25	71	181	260	277	277	315	297	23	30	112	161	139	182	153	172	181	179	175	175	173	160	151	156	166	175	S	24
26	175	178	173	174	172	169	169	169	166	160	162	164	161	161	155	149	148	148	146	135	129	127	136	142	156	SSE	24
27	139	131	131	132	216	122	113	123	156	148	157	159	182	255	17	135	205	216	279	309	275	252	224	234	161	SSE	24
28	209	219	229	257	254	251	255	249	251	254	254	256	256	256	261	258	255	270	280	288	289	293	302	315	262	W	24
29	320	312	309	315	310	318	335	339	324	320	324	329	325	325	333	322	325	311	321	308	318	320	294	347	321	NW	24
30	13	4	326	320	321	251	255	251	256	280	281	295	268	280	277	296	299	306	306	282	273	272	264	268	285	WNW	24
31	259	233	241	242	264	272	272	**P**	**P**	**P**	**P**	**P**	323	332	318	325	319	329	321	303	288	284	290	311	296	WNW	19
HOURLY AVG	320	312	342	353	341	360	357	358	346	349	358	359	356	347	349	332	359	350	358	354	358	357	356	357			

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:	739	HRS
STANDARD DEVIATION:	94.97		AMD OPERATION UPTIME:	99.3	%
			MONTHLY AVERAGE:	270	DEG



JOB #: 2833-13-07-31-C

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - ST.LINA

JULY 2013

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

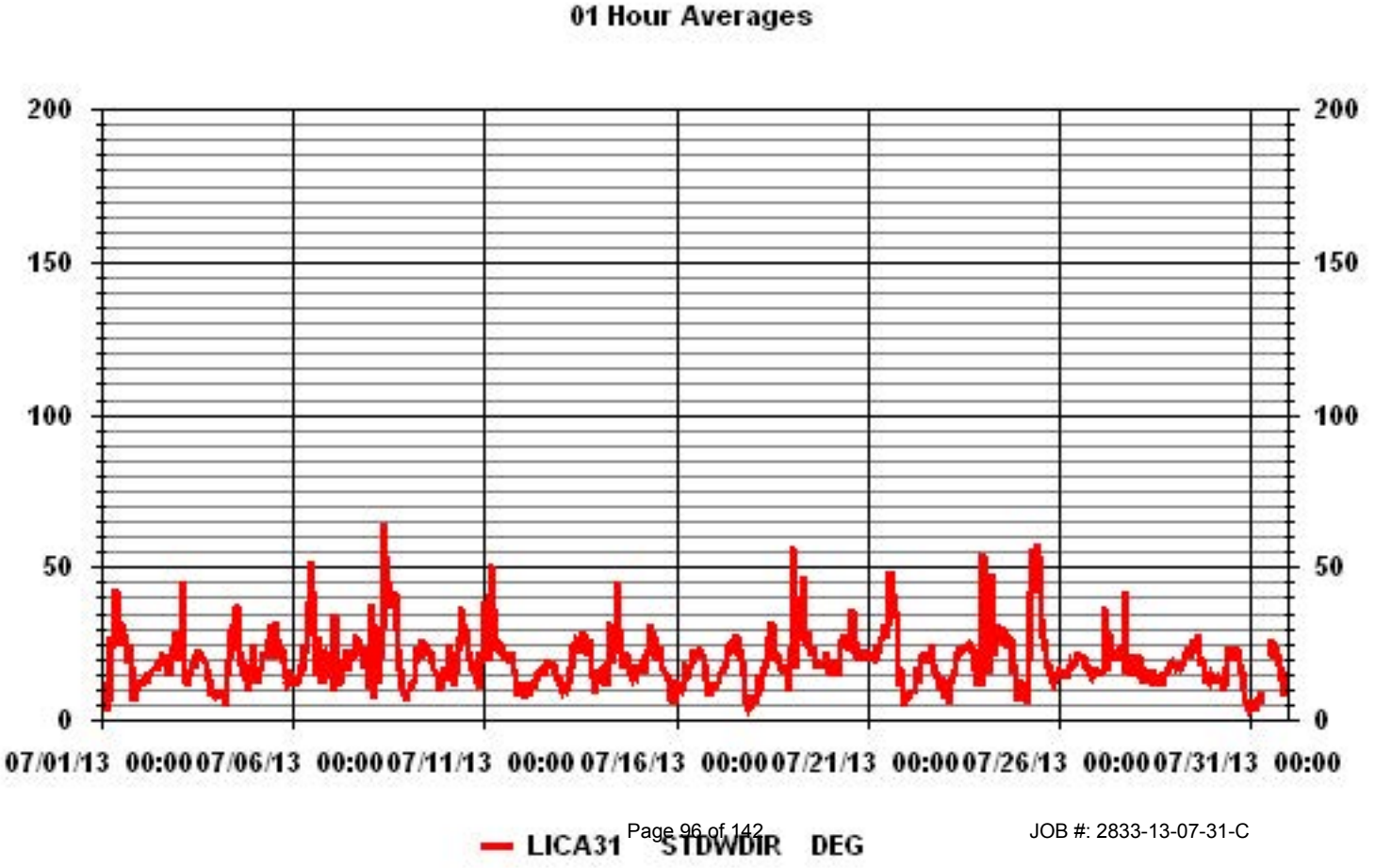
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY									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

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: 739 HRS



JOB #: 2833-13-07-31-C

Calibration Reports

Sulphur Dioxide

SO2 Calibration Report

Station Information

Calibration Date	July 9, 2013	Previous Calibration	June 20, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	13:35	End Time (MST)	14:26
Reason:	As found		
Barometric Pressure	27.6 in HG	Station Temperature	31 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 1000 ppb					
Sample Flow / Box Temp	559 ccm		40.1 Deg C		562 ccm		37.7 Deg C	
HVPS / Lamp Setting	540		2094		540		2095	
PMT / RxCell Temp	7.9 Deg C		50 Deg C		7.9 Deg C		50 Deg C	
Converter / IZS Temp	N/A Deg C		40 Deg C		N/A Deg C		40.0 Deg C	
Offset / Slope	112.7		0.981		112.7		0.981	

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.			
4915	79.6	790	867	0.9117
		Sum of Least Squares		
		New Correction Factor		0.9117

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	241.8	241.8
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	0.9117
Percent Change:	9.7%

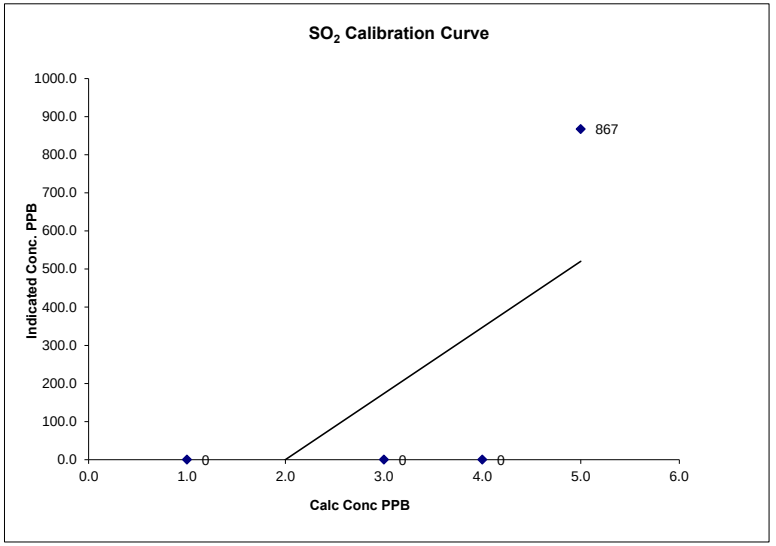
Notes: **N/A : Not applicable**

Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

Calibration Date	July 9, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	13:35	End Time (MST)	14:26

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0		N/A	Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)
790	867	0.9117	



Notes:

SO2 Calibration Report

Station Information

Calibration Date	July 9, 2013	Previous Calibration	June 20, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:30	End Time (MST)	12:35
Reason:	Monthly calibration		
Barometric Pressure	27.63 in HG	Station Temperature	24 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 1000 ppb					
Sample Flow / Box Temp	563 ccm		34.6 Deg C		562 ccm		37.7 Deg C	
HVPS / Lamp Setting	540		2100		540		2095	
PMT / RxCell Temp	7.8 Deg C		50 Deg C		7.9 Deg C		50 Deg C	
Converter / IZS Temp	N/A Deg C		40 Deg C		N/A Deg C		40.0 Deg C	
Offset / Slope	109.4		0.985		112.7		0.981	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4995	0	0	2	N/A
4995	0	0	0	N/A
4915	79.6	790	793	0.9968
4915	79.6	790	794	0.9956
4955	39.8	395	452	0.8744
4975	19.9	198	228	0.8667
4995	0	0	3	N/A
			Sum of Least Squares	0.9633
			New Correction Factor	0.9956

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	241.8	241.8
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	0.9968
Percent Change:	0.3%

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

Change sample filter.

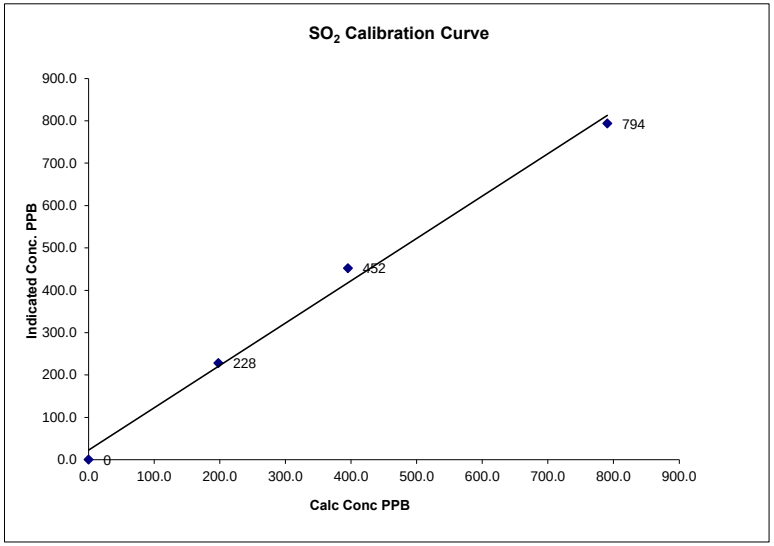
Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

Calibration Date	July 9, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:30	End Time (MST)	12:35

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
198	228	0.8667
395	452	0.8744
790	794	0.9956

Correlation Coefficient	(≥ 0.995)	0.993877
Slope	(0.85 to 1.15)	0.999598
Intercept	(± 3% F.S.)	22.808548



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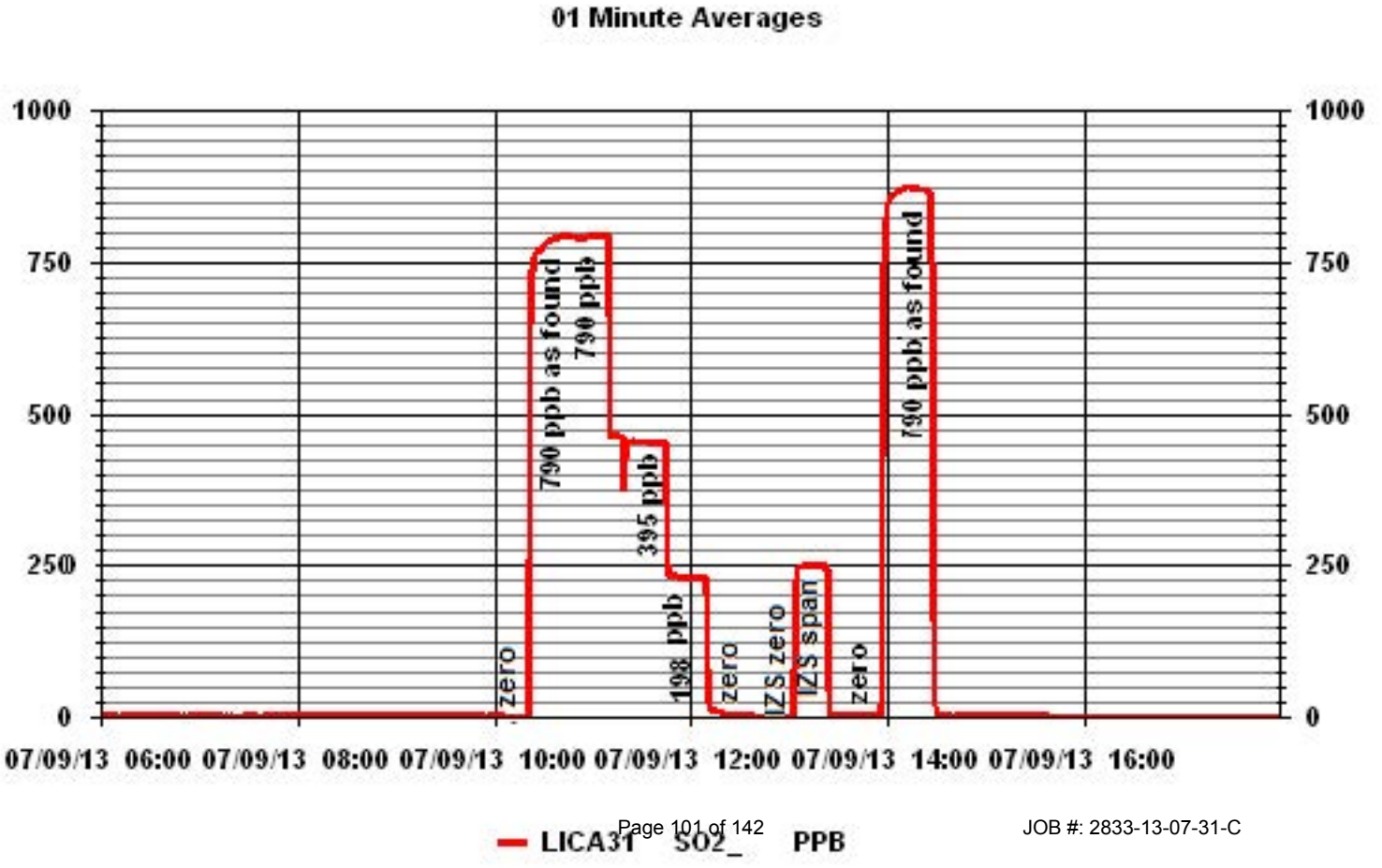


JOB #: 2833-13-07-31-C

SO2 Calibration Report

Station Information

Calibration Date	July 11, 2013	Previous Calibration	June 20, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:00	End Time (MST)	11:17
Reason:	Redo Monthly calibration		
Barometric Pressure	27.23 in HG	Station Temperature	21 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 1000 ppb			
Sample Flow / Box Temp	564 ccm	31.7 Deg C	566 ccm	33.7 Deg C
HVPS / Lamp Setting	540	2102	540	2100
PMT / RxCell Temp	7.9 Deg C	50 Deg C	7.9 Deg C	50 Deg C
Converter / IZS Temp	N/A Deg C	40 Deg C	N/A Deg C	40 Deg C
Offset / Slope	112.7	0.604	112.7	0.971

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	2	N/A
	No Zero Adj.			
4915	79.8	792	792	1.0000
4955	39.9	396	393	1.0082
4980	20.0	198	199	0.9970
5000	0.0	0	4	0.0000
			Sum of Least Squares	
			New Correction Factor	1.0082

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	241.8	241.8
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	0.0%

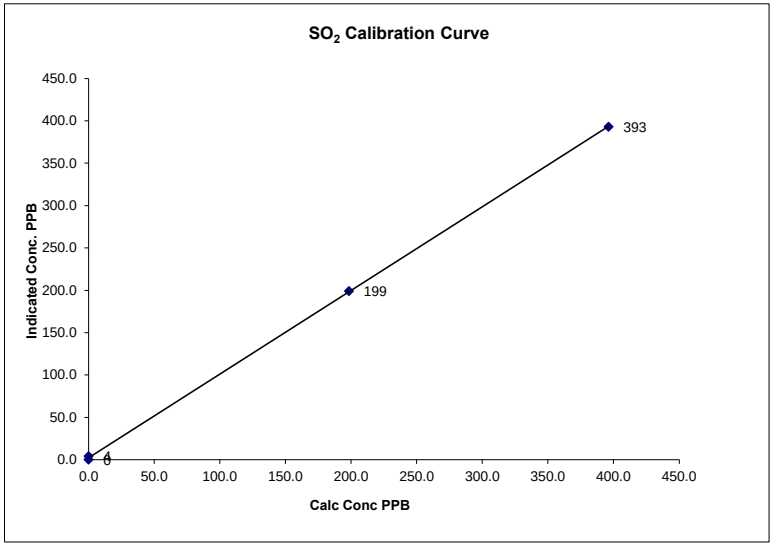
Notes: **N/A : Not applicable**

Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

Calibration Date	July 11, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:00	End Time (MST)	11:17

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0		N/A	Slope (0.85 to 1.15)
0	4	0.0000	Intercept (± 3% F.S.)
198	199	0.9970	
396	393	1.0082	



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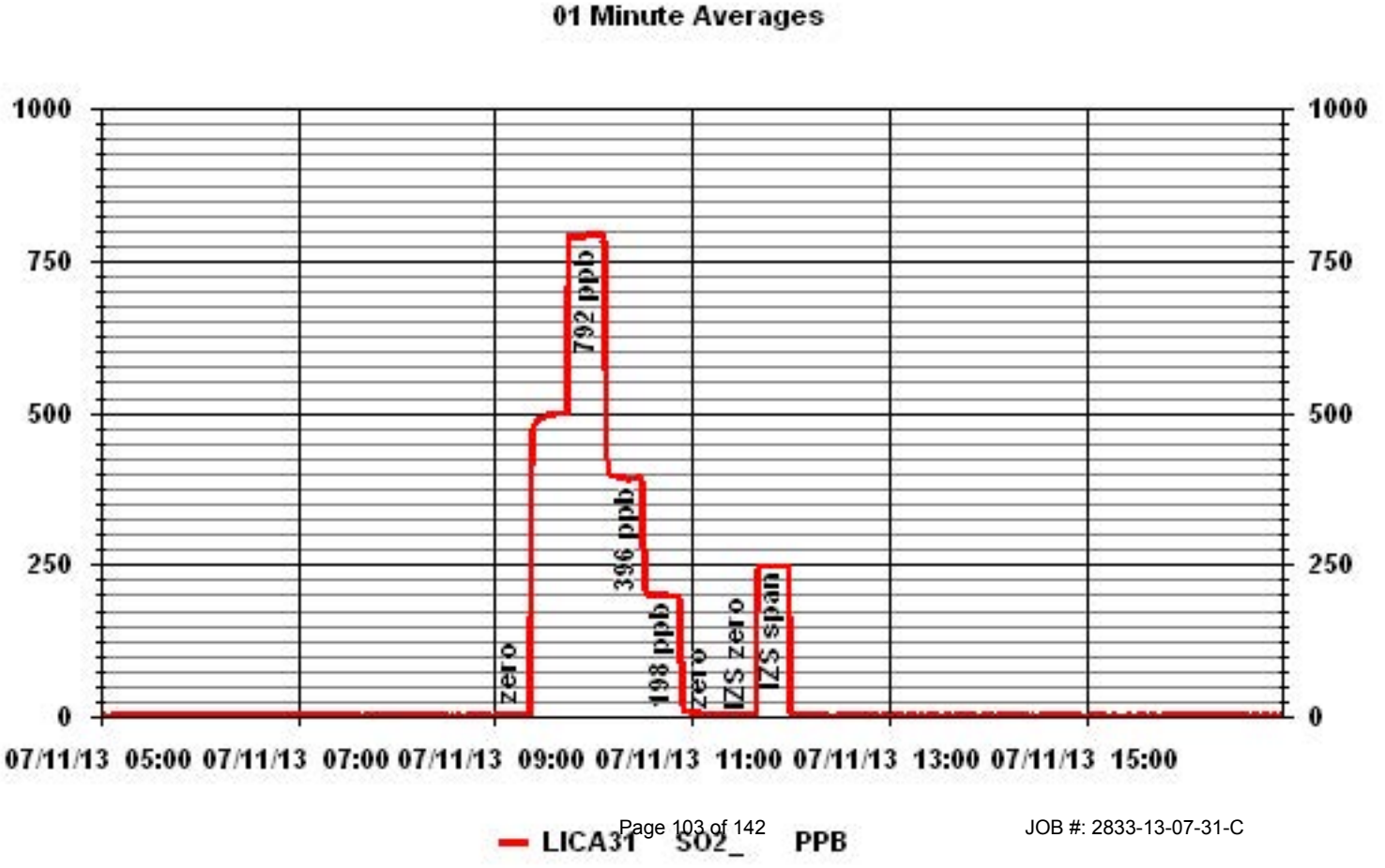


JOB #: 2833-13-07-31-C

SO2 Calibration Report

Station Information

Calibration Date	July 13, 2013		Previous Calibration	July 11, 2013	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	12:00		End Time (MST)	12:55	
Reason:	As found				
Barometric Pressure	27.73	in HG	Station Temperature	21	Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031	Cal Gas Expiry date	December 29, 2016
DAS Output Voltage	0-1	Volts	Chart Rec. Output	N/A	Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 - 1000 ppb				0 - 1000 ppb			
Sample Flow / Box Temp	576	ccm	30.1	Deg C	575	ccm	31.1	Deg C
HVPS / Lamp Setting	540		2101		540		2102	
PMT / RxCell Temp	7.9	Deg C	50	Deg C	7.9	Deg C	50	Deg C
Converter / IZS Temp	N/A	Deg C	40	Deg C	N/A	Deg C	40	Deg C
Offset / Slope	112.7		0.971		112.7		0.971	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	1	N/A
	No Zero Adj.			
4915	80.0	794	764	1.0398
		Sum of Least Squares		
		New Correction Factor		1.0398

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	241.8	241.8
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0398
Percent Change:	-3.8%

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

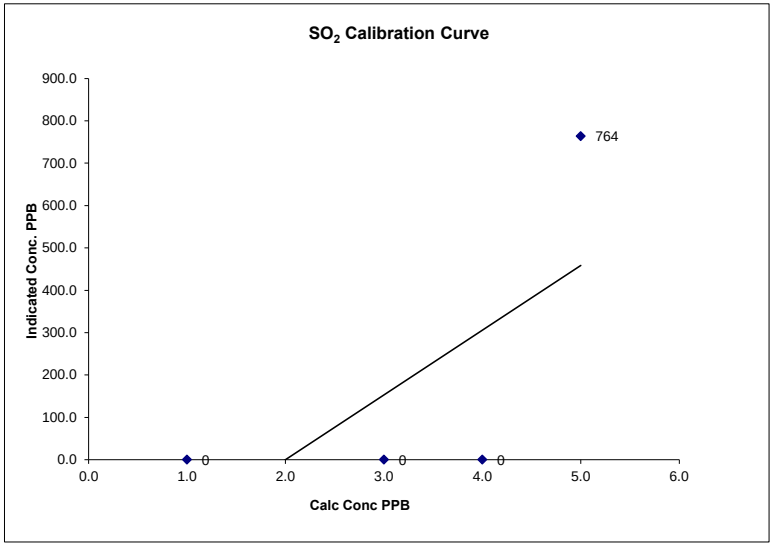
First zero: Anlazer reading =0.2, DAS recorded = 1

Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

Calibration Date	July 13, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	12:00	End Time (MST)	12:55

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0		N/A	Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)
794	764	1.0398	



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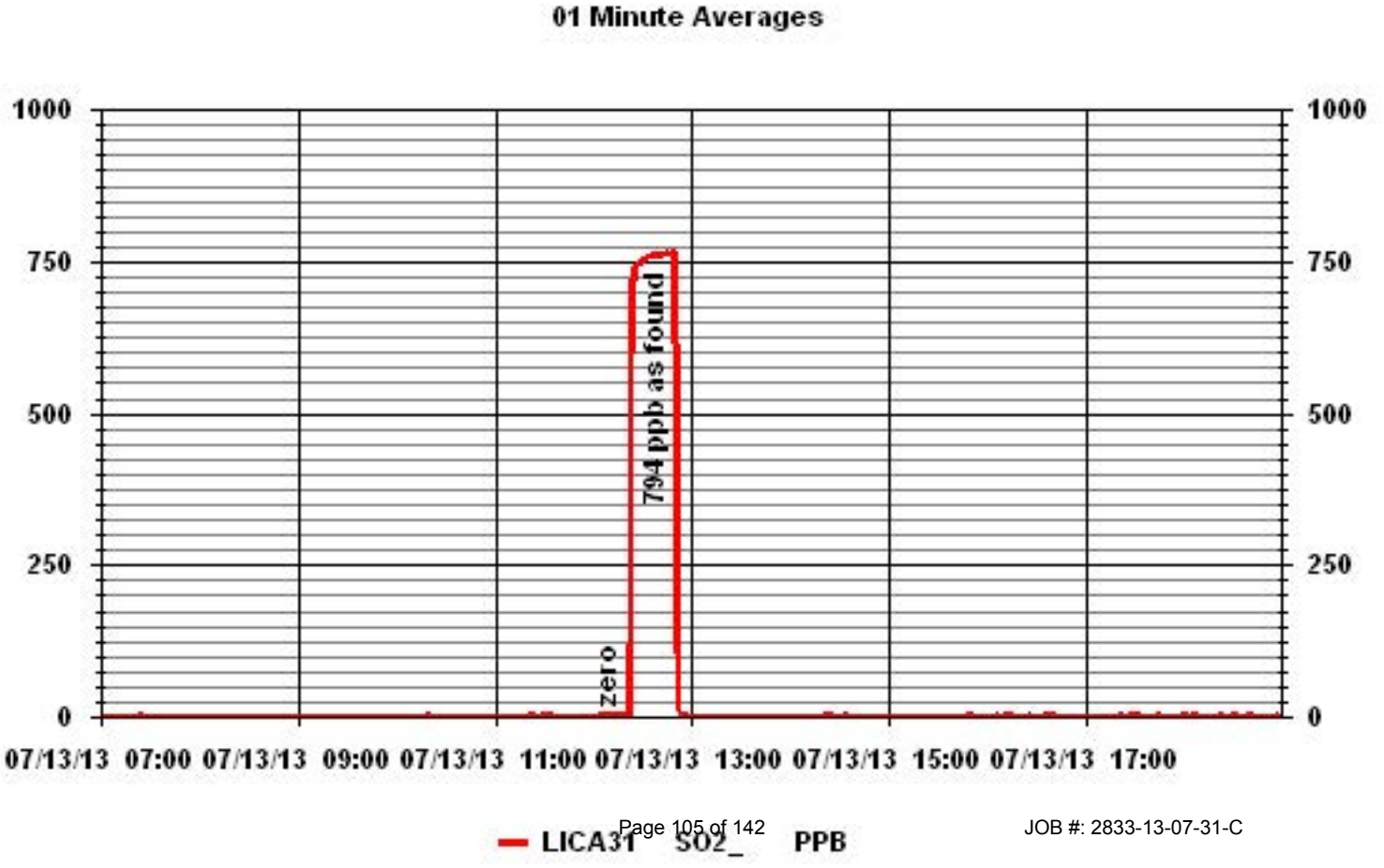


JOB #: 2833-13-07-31-C

SO2 Calibration Report

Station Information

Calibration Date	July 19, 2013	Previous Calibration	July 11, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	10:00	End Time (MST)	10:50
Reason:	As found Point		
Barometric Pressure	27.65 in HG	Station Temperature	20 Deg C
Cal Gas	49.6 ppm	Gas Cyl. # BAL3031	Cal Gas Expiry date December 29, 2016
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 1000 ppb					
Sample Flow / Box Temp	573 ccm		30.4 Deg C		576 ccm		32.7 Deg C	
HVPS / Lamp Setting	540		2093		540		2094	
PMT / RxCell Temp	7.9 Deg C		50 Deg C		7.9 Deg C		50 Deg C	
Converter / IZS Temp	N/A Deg C		40 Deg C		N/A Deg C		40 Deg C	
Offset / Slope	112.7		0.971		112.7		0.971	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	7	N/A
	No Zero Adj.			
4920	80.6	799	792	1.0094
			Sum of Least Squares	
			New Correction Factor	1.0094

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	241.8	241.8
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0094
Percent Change:	-0.9%

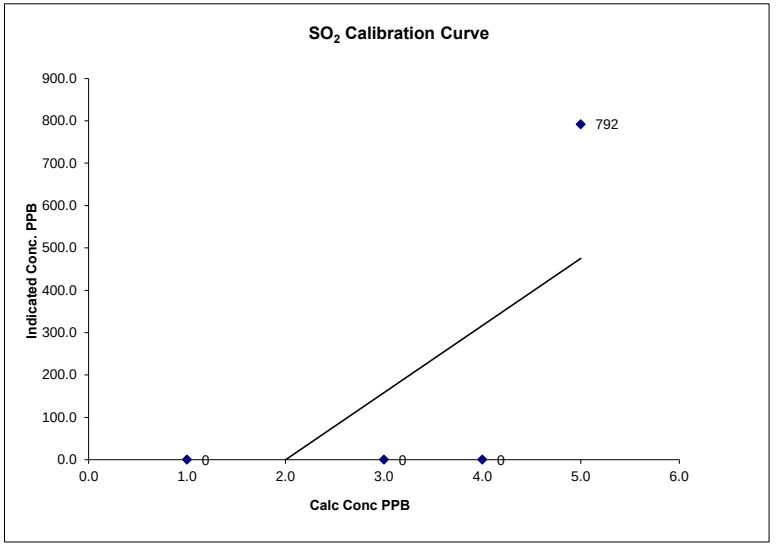
Notes: **N/A : Not applicable**

Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

Calibration Date	July 19, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	10:00	End Time (MST)	10:50

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0		N/A	Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)
799	792	1.0094	



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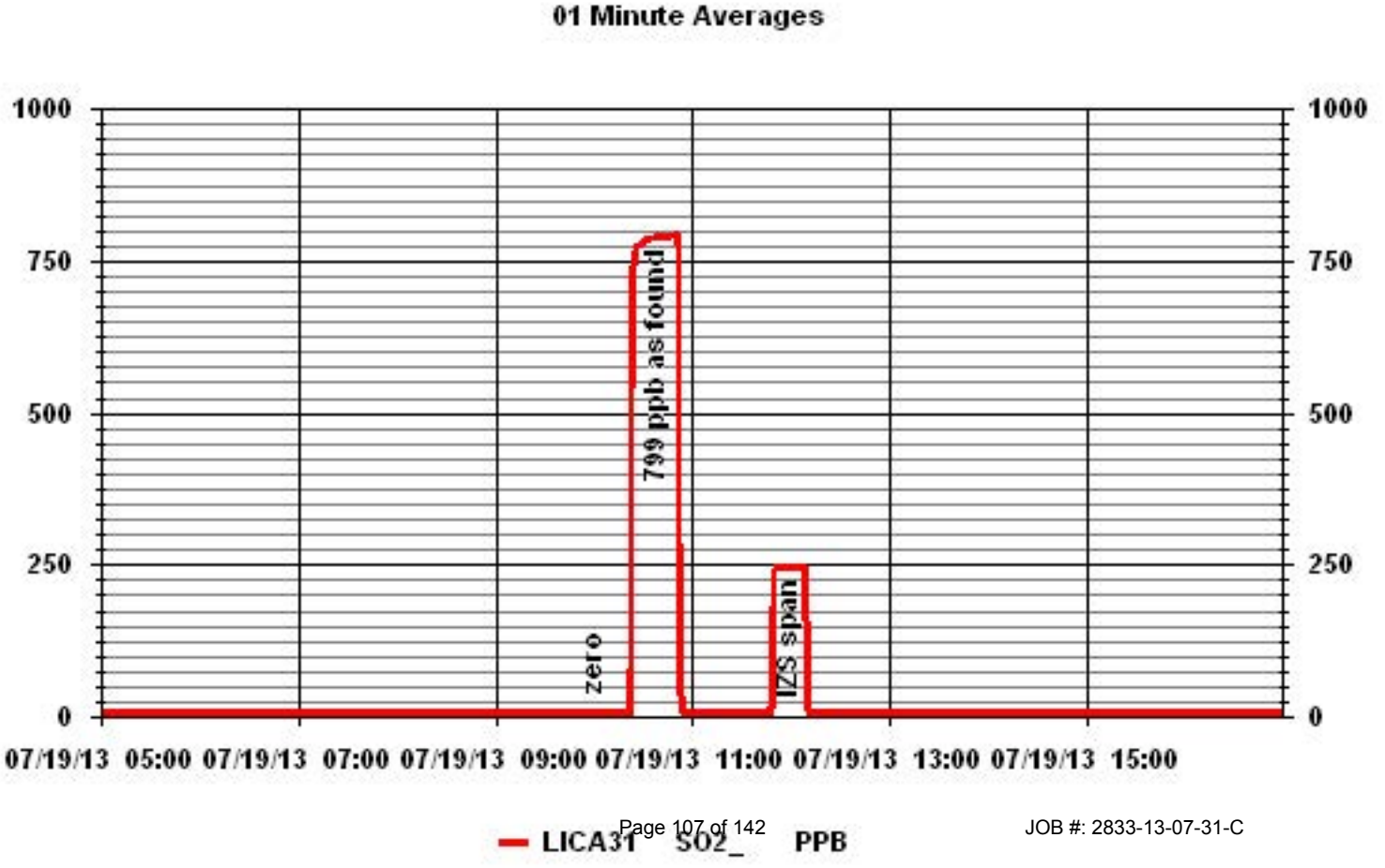


JOB #: 2833-13-07-31-C

SO2 Calibration Report

Station Information

Calibration Date	July 23, 2013	Previous Calibration	July 11, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:30	End Time (MST)	10:20
Reason:	As Found Point		
Barometric Pressure	27.68 in HG	Station Temperature	22 Deg C
Cal Gas	49.6 ppm	Gas Cyl. # BAL3031	Cal Gas Expiry date December 29, 2016
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 1000 ppb			
Sample Flow / Box Temp	573 ccm	30.9 Deg C	573 ccm	32.1 Deg C
HVPS / Lamp Setting	540	2090	540	2091
PMT / RxCell Temp	7.9 Deg C	50 Deg C	7.9 Deg C	50 Deg C
Converter / IZS Temp	N/A Deg C	40 Deg C	N/A Deg C	40 Deg C
Offset / Slope	112.7	0.971	112.7	0.971

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	7	N/A
	No Zero Adj.			
4920	80.7	800	778	1.0288
		Sum of Least Squares		
		New Correction Factor		1.0288

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	241.8	241.8
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0288
Percent Change:	-2.8%

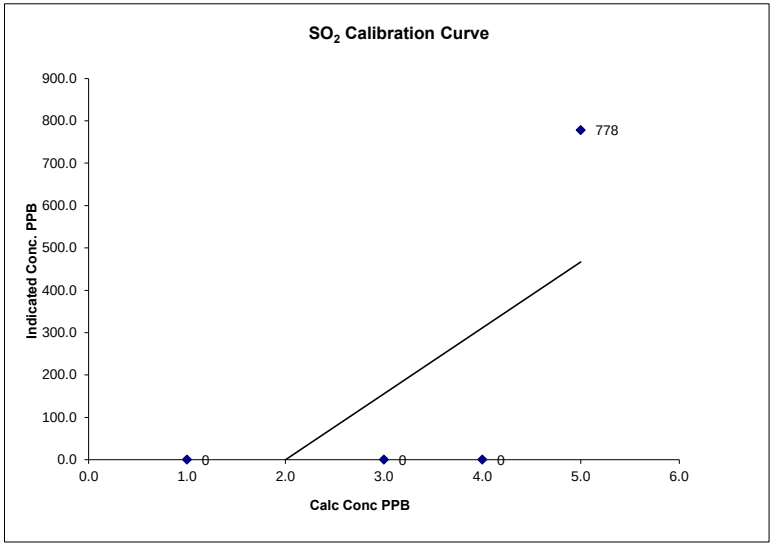
Notes: **N/A : Not applicable**

Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

Calibration Date	July 23, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:30	End Time (MST)	10:20

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0		N/A	Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)
800	778	1.0288	



Notes:

SO2 Calibration Report

Station Information

Calibration Date	July 23, 2013	Previous Calibration	N/A
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	11:05	End Time (MST)	13:15
Reason:	Post repair calibration		
Barometric Pressure	27.68 in HG	Station Temperature	22 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 1000 ppb					
Sample Flow / Box Temp	573 ccm		32.1 Deg C		572 ccm		32.3 Deg C	
HVPS / Lamp Setting	540		2091		540		2091 (100%)	
PMT / RxCell Temp	7.9 Deg C		50 Deg C		7.9 Deg C		50 Deg C	
Converter / IZS Temp	N/A Deg C		40 Deg C		N/A Deg C		40 Deg C	
Offset / Slope	112.7		0.971		112.3		1.129	

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	80.7	800	800	1.0000
	No Span Adj.			
4960	40.3	400	399	1.0019
4980	20.2	200	198	1.0120
5000	0	0	0	N/A
			Sum of Least Squares	1.0013
			New Correction Factor	1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	241.8	246.0
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	N/A
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	#VALUE!

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

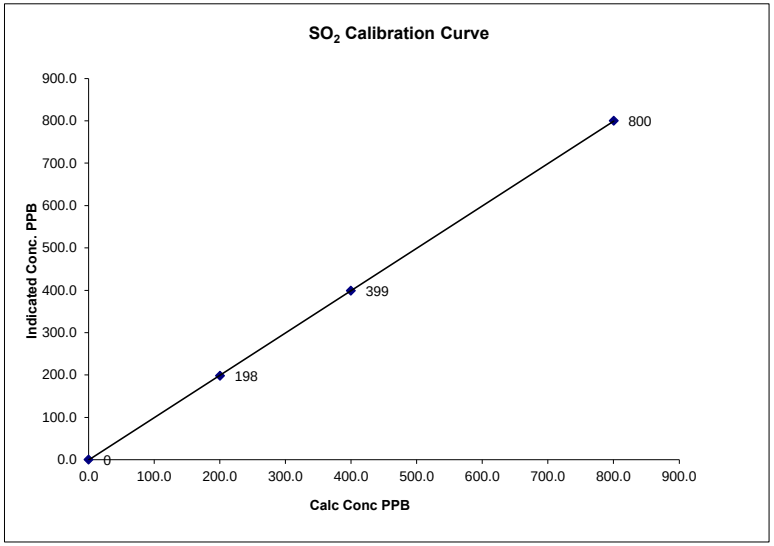
Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

Calibration Date	July 23, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	11:05	End Time (MST)	13:15

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
200	198	1.0120
400	399	1.0019
800	800	1.0000

Correlation Coefficient	(≥ 0.995)	0.999991
Slope	(0.85 to 1.15)	1.000354
Intercept	(± 3% F.S.)	-1.013974



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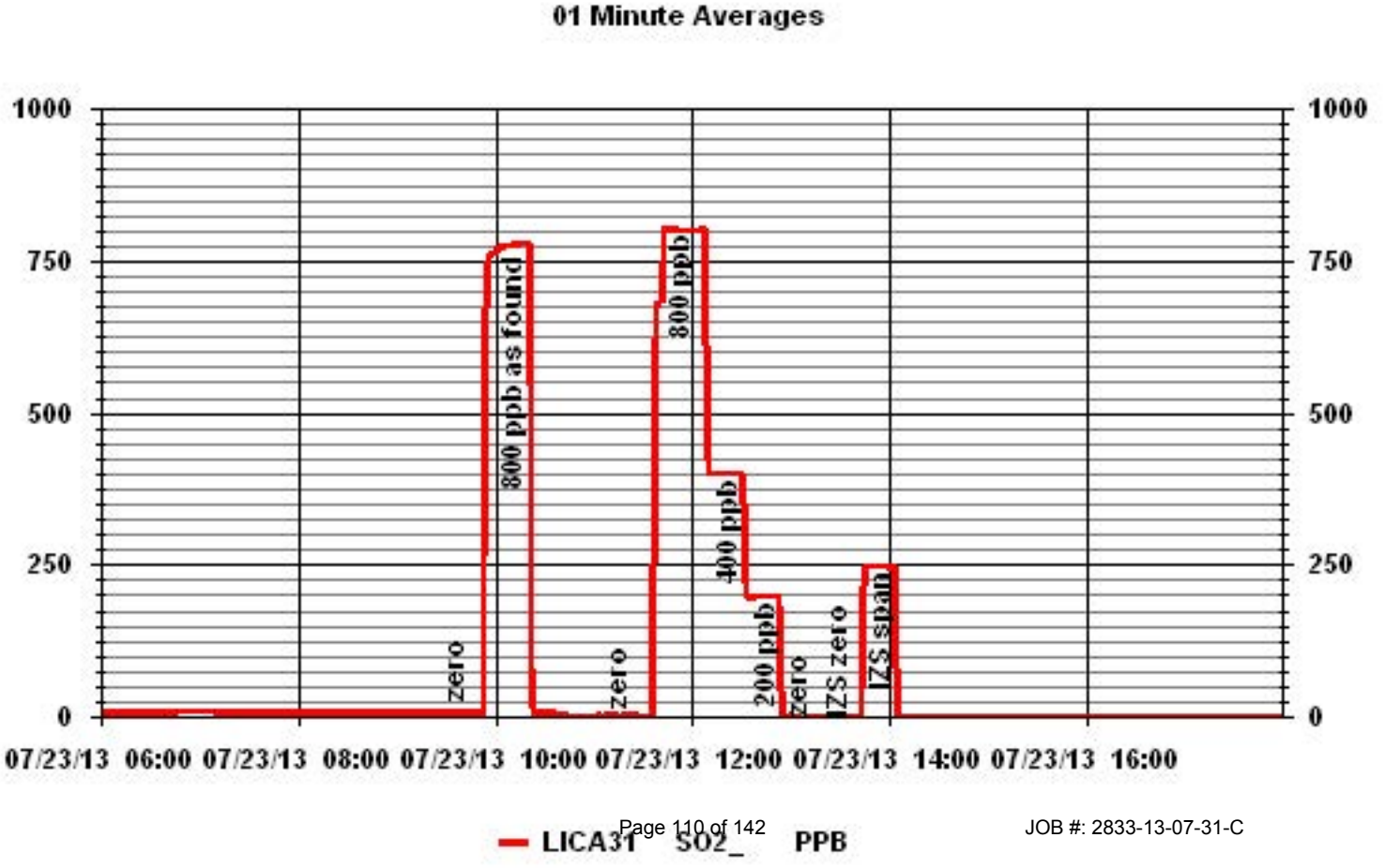


JOB #: 2833-13-07-31-C

SO2 Calibration Report

Station Information

Calibration Date	July 29, 2013	Previous Calibration	July 23, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	10:05	End Time (MST)	10:53
Reason:	A/F Point		
Barometric Pressure	27.63 in HG	Station Temperature	17.5 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	468	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 - 1000 ppb							
Sample Flow / Box Temp	578 ccm	25.6 Deg C			585 ccm	27.2 Deg C		
HVPS / Lamp Setting	540	2103			540	2101		
PMT / RxCell Temp	7.9 Deg C	50 Deg C			7.9 Deg C	50 Deg C		
Converter / IZS Temp	N/A Deg C	40 Deg C			N/A Deg C	40 Deg C		
Offset / Slope	112.3	1.129			112.3	1.129		

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	80.7	800	785	1.0197
		Sum of Least Squares		
		New Correction Factor		1.0197

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	246.0	246.0
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0197
Percent Change:	-1.9%

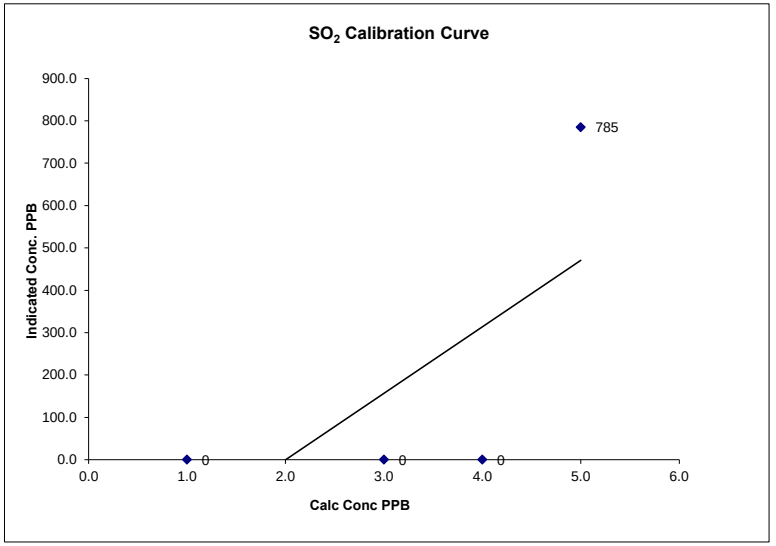
Notes: **N/A : Not applicable**

Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

Calibration Date	July 29, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	10:05	End Time (MST)	10:53

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0		N/A	Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)
800	785	1.0197	



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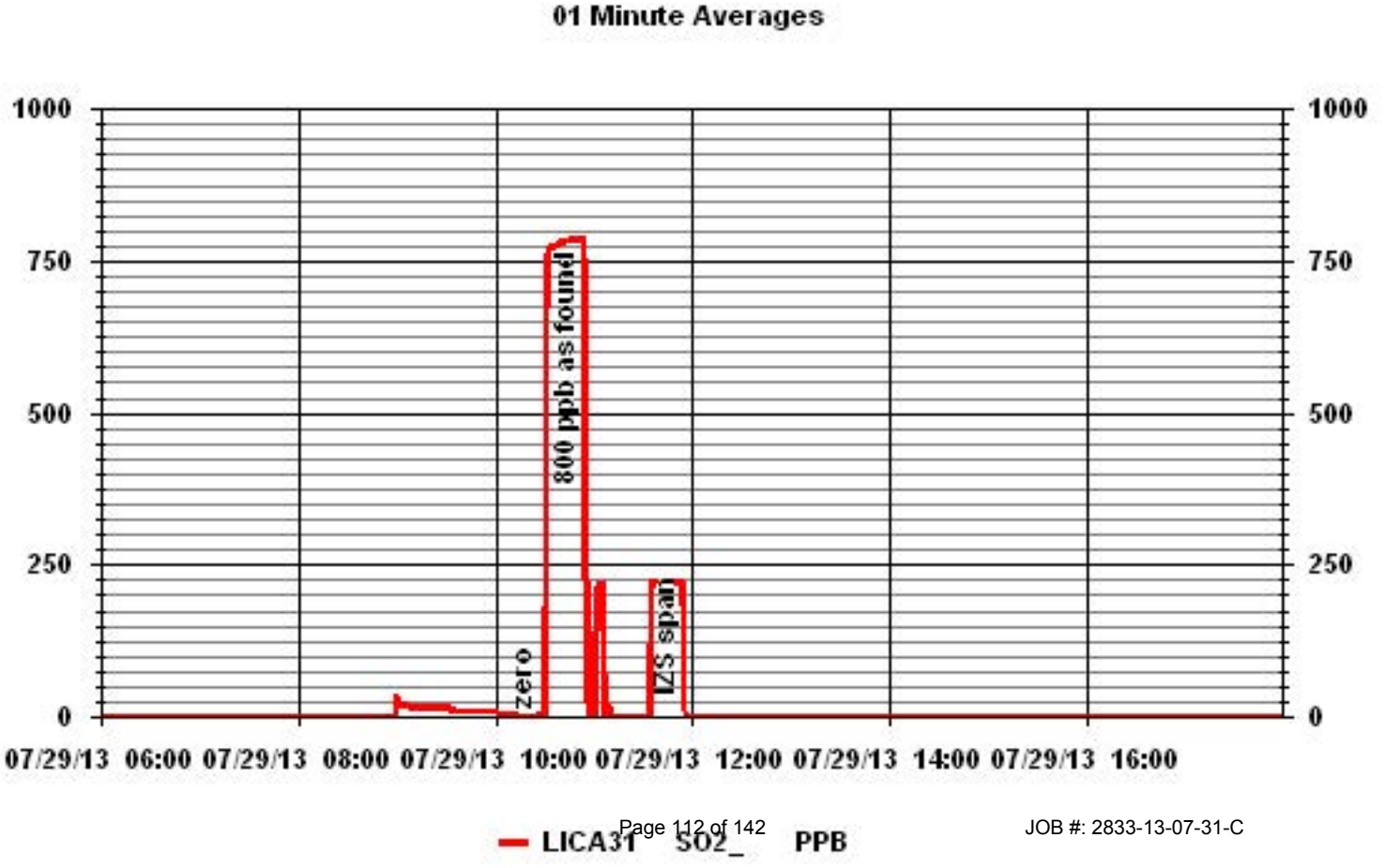


JOB #: 2833-13-07-31-C

Hydrogen Sulphide

H2S Calibration Report

Station Information

Calibration Date	July 9, 2013		Previous Calibration	June 20, 2013	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	9:30		End Time (MST)	12:25	
Reason:	Monthly calibration				
Barometric Pressure	27.63	in HG	Station Temperature	24	Deg C
Cal Gas	10.1 ppm		Gas Cyl. #	BLM00504	Cal Gas Expiry date: December 25, 2015
DAS Output Voltage	0-1	Volts	Chart Rec. Output	N/A	Volts

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 - 100 ppb							
Sample Flow / Box Temp	433	ccm	37.8	Deg C	435	ccm	42	Deg C
HVPS / Lamp Setting	526		1998		526		1988	
PMT / RxCell Temp	8.4	Deg C	50	Deg C	8.5	Deg C	50	Deg C
Converter / IZS Temp	315	Deg C	45	Deg C	315	Deg C	45.0	Deg C
Offset / Slope	112.8		1.07		106.8		1.082	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	-3	NA
5000	0	0	0	NA
4960	40.0	81	77	1.0494
4960	40.0	81	81	1.0000
4980	20.0	40	41	0.9854
4988	12.0	24	25	0.9696
5000	0	0	1	NA
			Sum of Least Squares	0.9933
			New Correction Factor	1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	38.5	38.5
Sample Lines Connected		YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0494
Percent Change:	-4.7%

Notes: **NA : Not Applicable**

Change sample filter

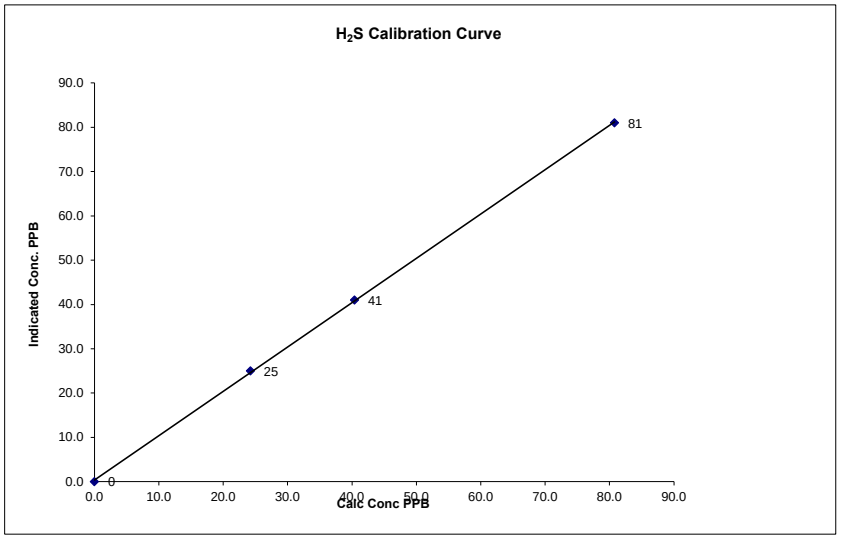
Calibration Performed by: Waseem Ahmed

H_2S Calibration Curve

Calibration Date	July 9, 2013				
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	9:30		End Time (MST)	12:25	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
24	25	0.9696
40	41	0.9854
81	81	0.9975

Correlation Coefficient	(≥ 0.995)	0.999894
Slope	(0.85 to 1.15)	1.000607
Intercept	(± 3% F.S.)	0.367925



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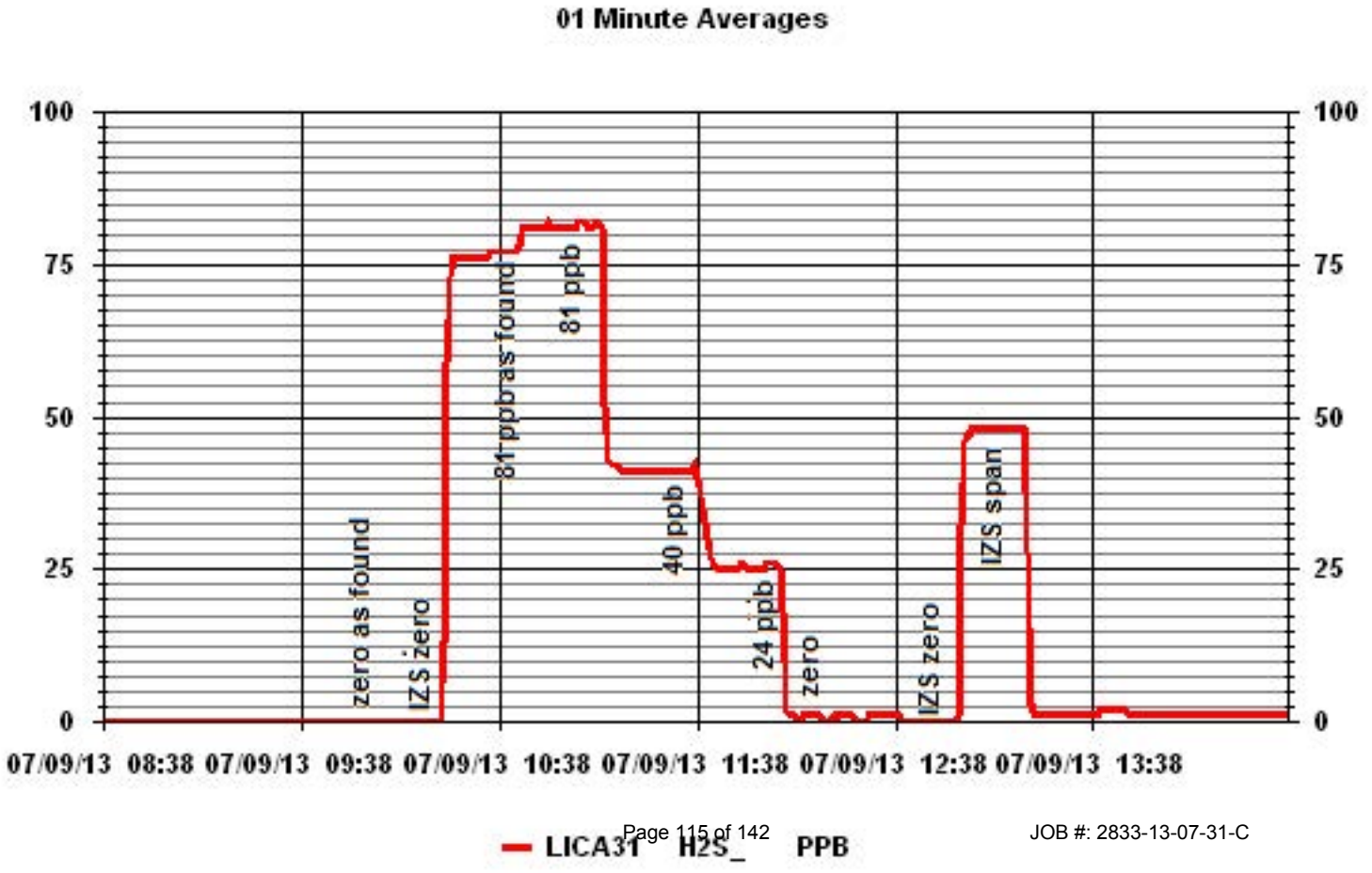


JOB #: 2833-13-07-31-C

H2S Calibration Report

Station Information

Calibration Date	July 13, 2013		Previous Calibration	June 20, 2013	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	11:05		End Time (MST)	11:50	
Reason:	As found point				
Barometric Pressure	27.73	in HG	Station Temperature	20	Deg C
Cal Gas	10.1 ppm		Gas Cyl. #	BLM00504	Cal Gas Expiry date: December 25, 2015
DAS Output Voltage	0-1	Volts	Chart Rec. Output	N/A	Volts

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	510	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 100	ppb				
Sample Flow / Box Temp	439	ccm	30.6	Deg C	436	ccm	31.7	Deg C
HVPS / Lamp Setting	526		1998		526		1994	
PMT / RxCell Temp	8.4	Deg C	50	Deg C	8.4	Deg C	50	Deg C
Converter / IZS Temp	315	Deg C	45	Deg C	315	Deg C	45.0	Deg C
Offset / Slope	106.8		1.082		106.8		1.082	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	-2	NA
	No zero adj.			
4960	40.0	81	74	1.0919
		Sum of Least Squares		
		New Correction Factor		1.0919

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	38.5	38.5
Sample Lines Connected		YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0919
Percent Change:	-8.4%

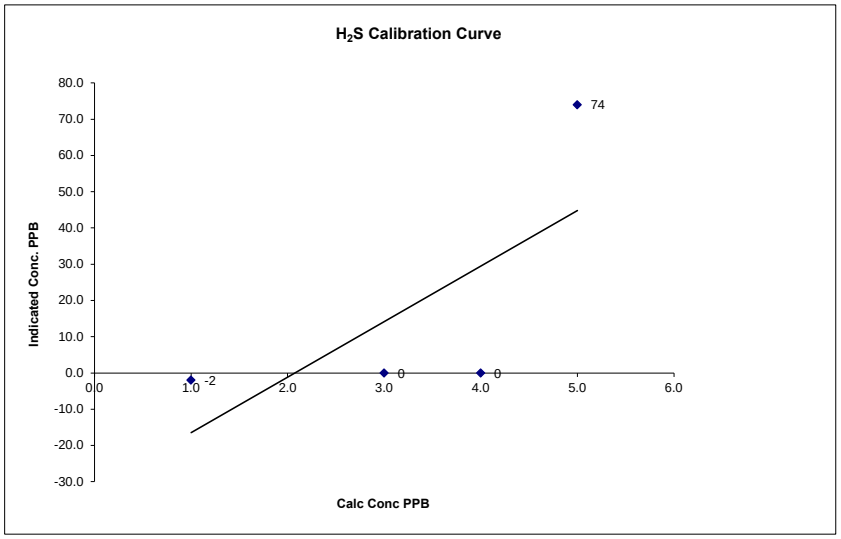
Notes: **NA : Not Applicable**

Calibration Performed by: Waseem Ahmed

H_2S Calibration Curve

Calibration Date	July 13, 2013				
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	11:05		End Time (MST)	11:50	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0	-2	NA	Slope (0.85 to 1.15)
81	74	1.0919	Intercept (± 3% F.S.)



Notes:

H2S Calibration Report

Station Information

Calibration Date	July 13, 2013		Previous Calibration	June 20, 2013	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	13:05		End Time (MST)	15:25	
Reason:	Monthly calibration				
Barometric Pressure	27.75	in HG	Station Temperature	22	Deg C
Cal Gas	10.1 ppm		Gas Cyl. #	BLM00504	Cal Gas Expiry date: December 25, 2015
DAS Output Voltage	0-1	Volts	Chart Rec. Output	N/A	Volts

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	510	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	690	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	API 700	S/N :	690		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 100	ppb				
Sample Flow / Box Temp	437	ccm	33.1	Deg C	438	ccm	33.7	Deg C
HVPS / Lamp Setting	526		1993		526		1990	
PMT / RxCell Temp	8.4	Deg C	50	Deg C	8.4	Deg C	50	Deg C
Converter / IZS Temp	315	Deg C	45	Deg C	315	Deg C	45.0	Deg C
Offset / Slope	106.8		1.082		103.3		1.149	

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	81	81	1.0000
	No span adj.			
4980	20.0	40	40	1.0000
4985	10.0	20	20	1.0000
5000	0	0	0	NA
			Sum of Least Squares	1.0005
			New Correction Factor	1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	38.5	48.6
Sample Lines Connected		YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	0.0%

Notes: **NA : Not Applicable**

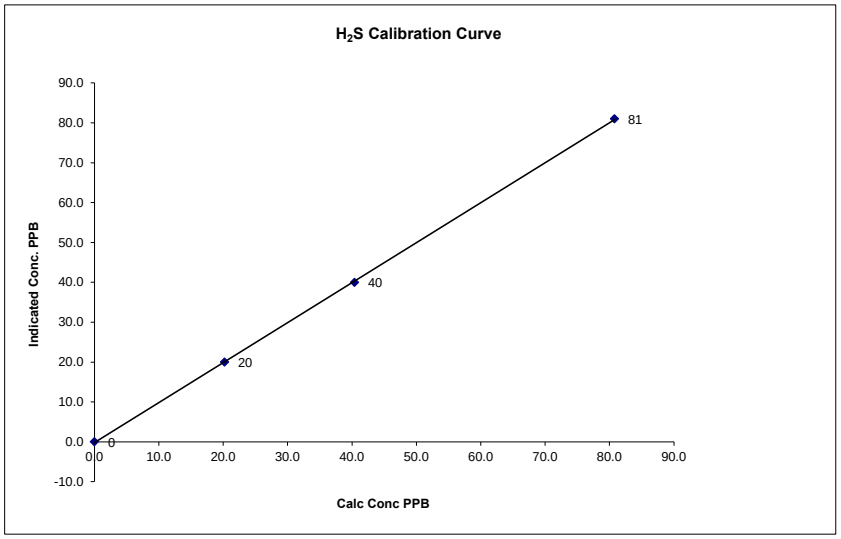
Calibration Performed by: Waseem Ahmed

H_2S Calibration Curve

Calibration Date	July 13, 2013				
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	13:05		End Time (MST)	15:25	

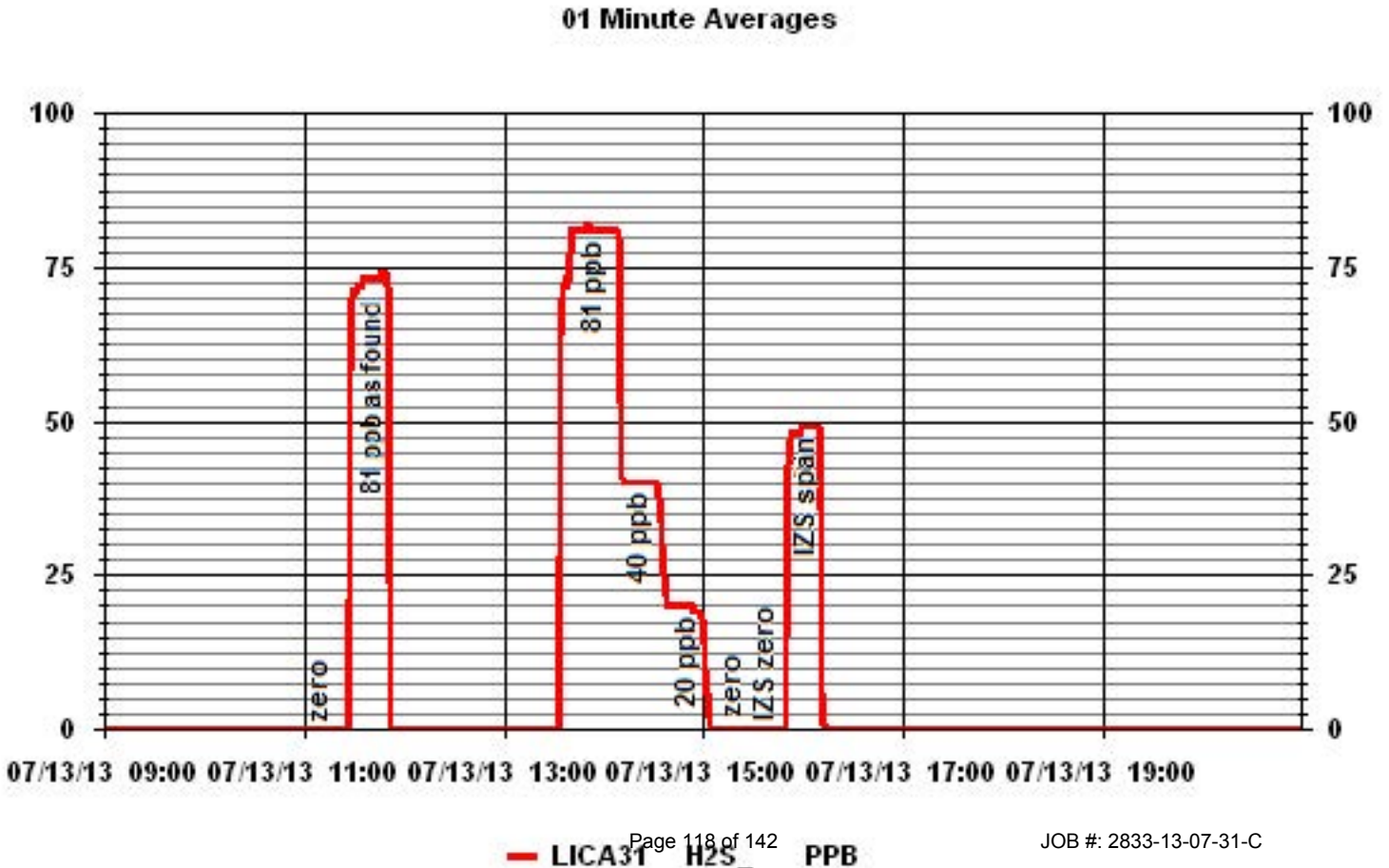
Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
20	20	1.0110
40	40	1.0100
81	81	0.9975

Correlation Coefficient	(≥ 0.995)	0.999952
Slope	(0.85 to 1.15)	1.002915
Intercept	(± 3% F.S.)	-0.208097



Notes:

JOB #: 2833-13-07-31-C



JOB #: 2833-13-07-31-C

H2S Calibration Report

Station Information

Calibration Date	July 17, 2013		Previous Calibration	July 13, 2013	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	16:00		End Time (MST)	16:50	
Reason:	As found point				
Barometric Pressure	27.64	inHG	Station Temperature	26	Deg C
Cal Gas	9.58 ppm	Gas Cyl. #	BLM5217	Cal Gas Expiry date	December 25, 2015
DAS Output Voltage	0 - 1	Volts	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	ppb				
Sample Flow / Box Temp	533	ccm	40.5	Deg C	533	ccm	40.4	Deg C
HVPS / Lamp Setting	526		1967(96.5%)		526		1967(96.5%)	
PMT / RxCell Temp	8.5	Deg C	50	Deg C	8.5	Deg C	50	Deg C
Converter / IZS Temp	315.4	Deg C	45	Deg C	315.3	Deg C	45.0	Deg C
Offset / Slope	103.3		1.149		103.3		1.149	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	6	0.0000
4958	41.8	80	88	0.9101
		Sum of Least Squares		
		New Correction Factor		

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	48.6	48.6
Sample Lines Connected		YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	0.9101
Percent Change:	9.9%

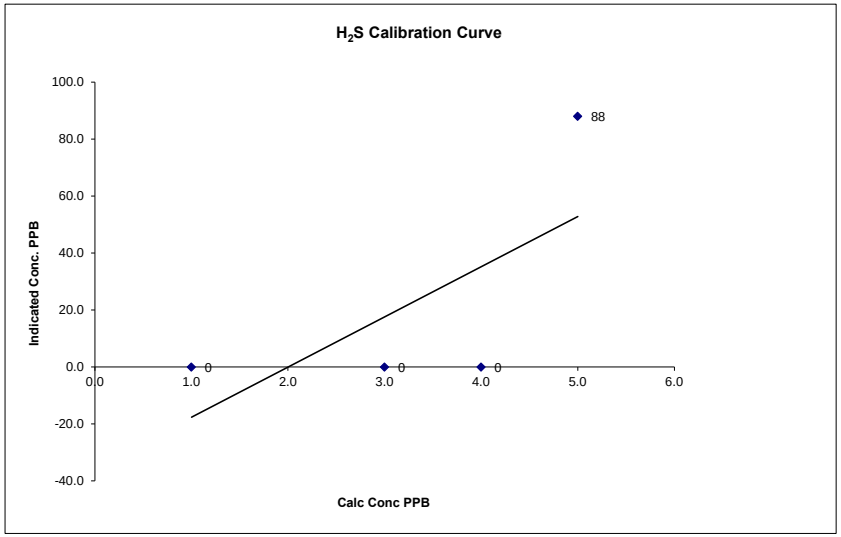
Notes: **After as found point, adjust PMT voltage. Redo calibration.**

Calibration Performed by: Limin Li

H_2S Calibration Curve

Calibration Date	July 17, 2013				
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	16:00		End Time (MST)	16:50	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor			
	0		Correlation Coefficient	(≥ 0.995)	#DIV/0!
	0	#VALUE!	Slope	(0.85 to 1.15)	#DIV/0!
	0	#VALUE!	Intercept	(± 3% F.S.)	#DIV/0!
80	88	0.9101			



Notes:

H2S Calibration Report

Station Information

Calibration Date	July 17, 2013		Previous Calibration	July 13, 2013	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	17:00		End Time (MST)	20:15	
Reason:	Post repair				
Barometric Pressure	27.64	inHG	Station Temperature	27	Deg C
Cal Gas	9.58 ppm	Gas Cyl. #	BLM5217	Cal Gas Expiry date	December 25, 2015
DAS Output Voltage	0 - 1	Volts	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	ppb				
Sample Flow / Box Temp	533	ccm	40.5	Deg C	533	ccm	41.5	Deg C
HVPS / Lamp Setting	526		1967(96.5%)		530		1967(96.5%)	
PMT / RxCell Temp	8.5	Deg C	50	Deg C	8.5	Deg C	50	Deg C
Converter / IZS Temp	315.4	Deg C	45	Deg C	315.3	Deg C	45.0	Deg C
Offset / Slope	103.3		1.149		120.2		1.03	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	0.0000
4958	41.8	80	80	1.0000
4979	20.9	40	40	1.0000
4987	12.5	24	23	1.0414
5000	0	0	0	0.0000
			Sum of Least Squares	1.0037
			New Correction Factor	

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	48.6	48.6
Sample Lines Connected		YES

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0000
Percent Change:	0.0%

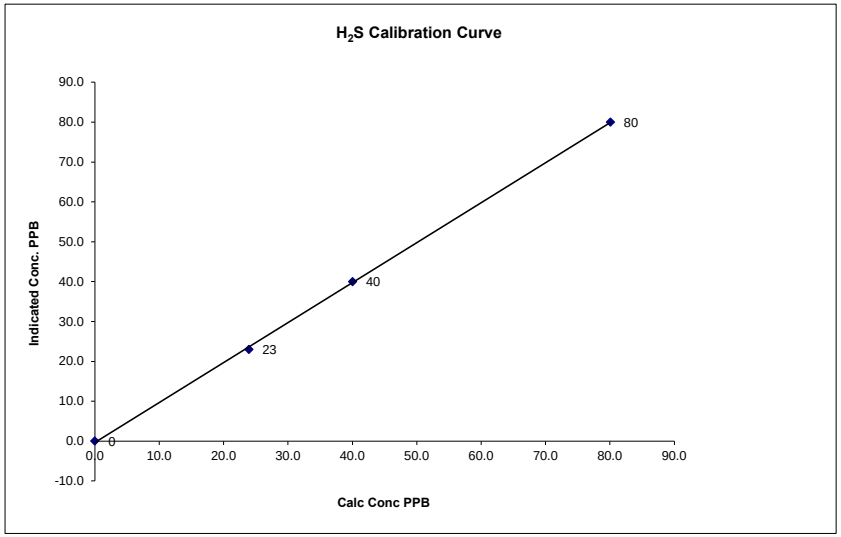
Notes: **Adjust PMT voltage.**

Calibration Performed by: Limin Li

H_2S Calibration Curve

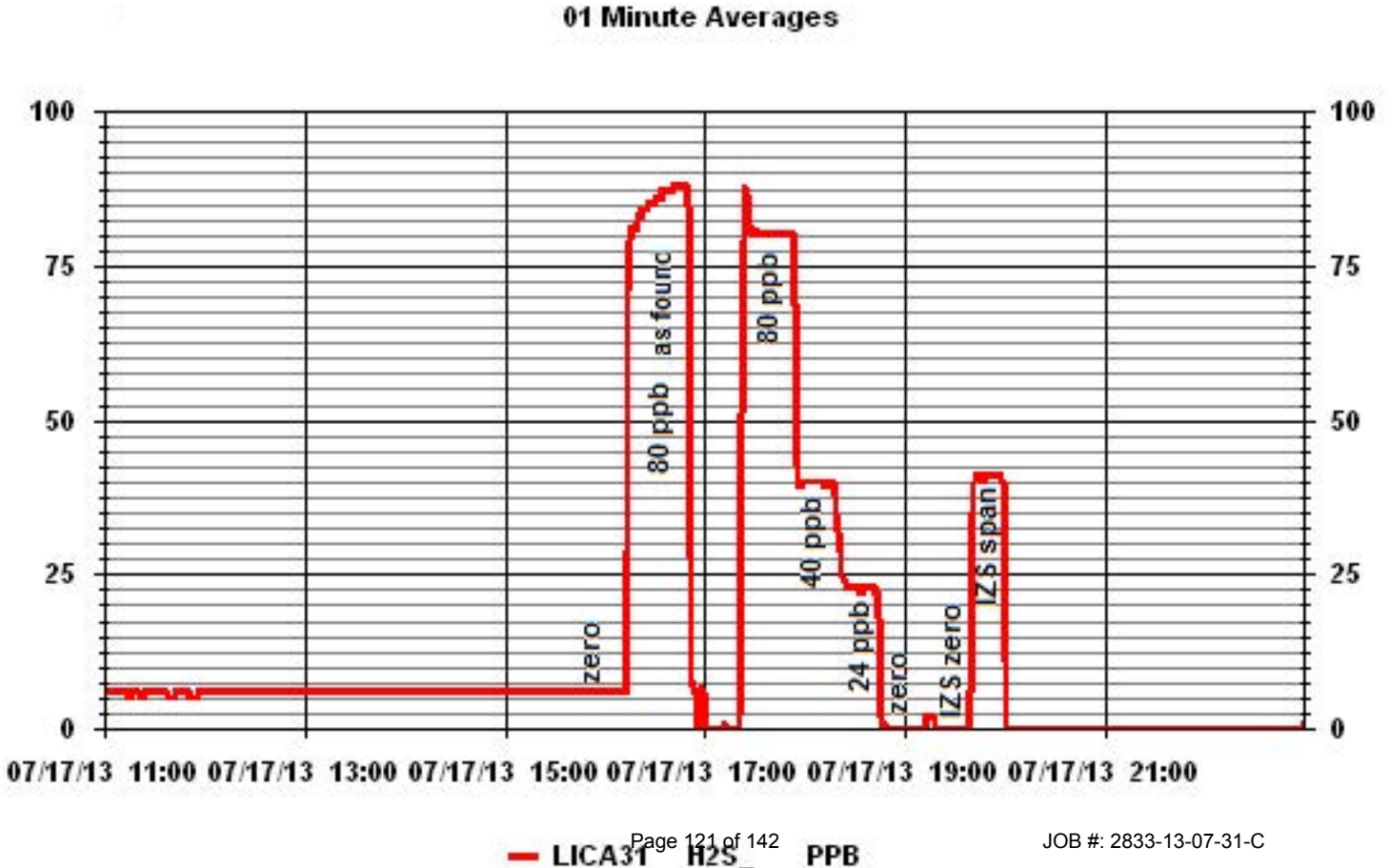
Calibration Date	July 17, 2013				
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST.LINA				
Start Time (MST)	17:00		End Time (MST)	20:15	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor			
0	0		Correlation Coefficient	(≥ 0.995)	0.999823
24	23	1.0414	Slope	(0.85 to 1.15)	1.002134
40	40	1.0011	Intercept	(± 3% F.S.)	-0.349272
80	80	1.0012			



Notes:

JOB #: 2833-13-07-31-C



JOB #: 2833-13-07-31-C

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	July 13, 2013		Previous Calibration	June 20, 2013	
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location:	ST. LINA				
Start Time (MST)	11:05		End Time (MST)	13:45	
Reason:	Monthly calibration				
Barometric Pressure:	27.73	in HG	Station Temperature:	20	Deg C
Calibrator:	Environics 6100		S/N:	4760	
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:	N/A		S/N:	N/A	
Output Voltage Range:	0-10	VDC	Chart Speed:	N/A	mm/hr

Analyzer Information

Make / Model	Thermo 51C-LT	S/N :	043669739	Method	Flame Ionization

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0-50	ppm	0-50	ppm
Sample Pressure	6.8	psi	6.8	psi
Hydrogen Pressure	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	0.2	N/A
2000	0.0	0.0	0.0	N/A
1992	71.1	40.0	40.2	0.9953
	No span adj.			
1941	34.1	20.0	19.9	1.0073
1960	17.0	10.0	9.9	1.0084
2000	0.0	0.0	0.0	N/A
			New Correction Factor:	0.9953

Percent Change

Previous Calibration Correction Factor:	0.9980
Current Correction Factor Before Span Adjust:	0.9953
Percent Change:	0.3%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	34.1	32.5
Sample Lines Connected		**Yes**

Cylinder Pressures

Span 1900 psi Hydrogen 2000 psi Zero Air 32 psi

Notes: **N/A : Not Applicable**

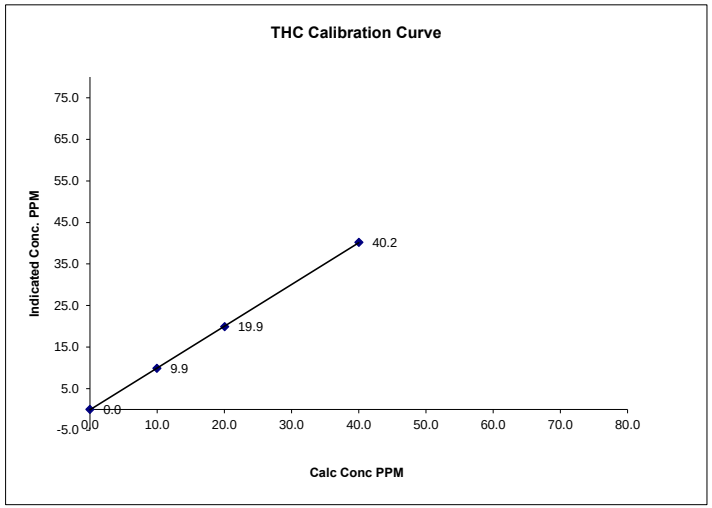
Calibration Performed by: Waseem Ahmed

THC Calibration Curve

Calibration Date	July 13, 2013				
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	ST. LINA				
Start Time (MST)	11:05	End Time	(MST)	13:45	

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	N/A
10.0	9.9	1.0084
20.0	19.9	1.0073
40.0	40.2	0.9953

Correlation Coefficient	(≥ 0.995)	0.999955
Slope	(0.85 to 1.15)	1.005147
Intercept	(± 3% F.S.)	-0.09990



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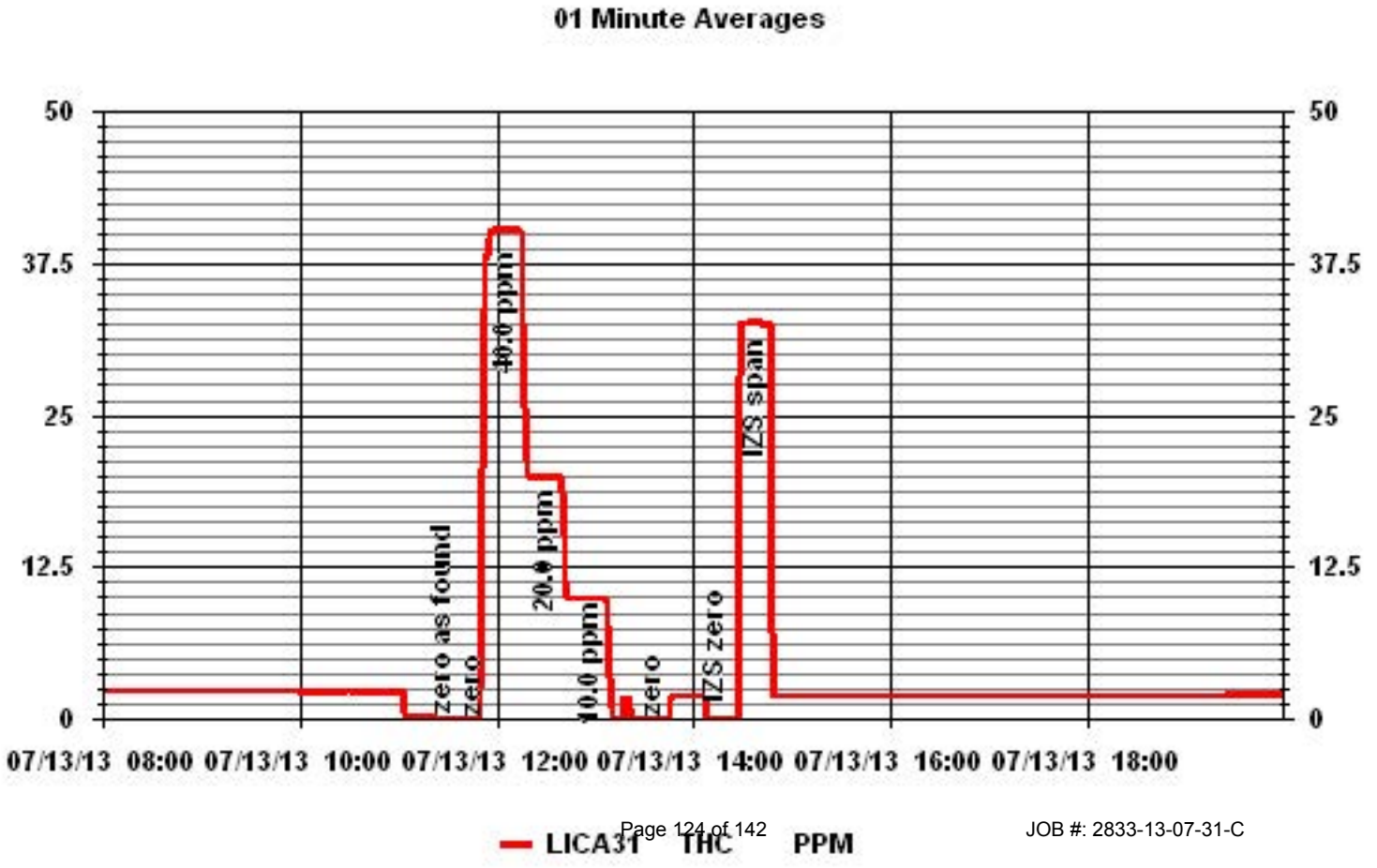


JOB #: 2833-13-07-31-C

THC Calibration Report

Station Information

Calibration Date:	July 19, 2013		Previous Calibration	July 13, 2013	
Company:	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location:	ST. LINA				
Start Time (MST)	10:00		End Time (MST)	10:45	
Reason:	As Found Point				
Barometric Pressure:	27.65	in HG	Station Temperature:	20	Deg C
Calibrator:	API 700		S/N:	690	
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:	N/A		S/N:	N/A	
Output Voltage Range:	0-10	VDC	Chart Speed:	N/A	mm/hr

Analyzer Information

Make / Model	Thermo 51C-LT	S/N :	043669739	Method	Flame Ionization

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0-50	ppm	0-50	ppm
Sample Pressure	6.8	psi	6.8	psi
Hydrogen Pressure	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	0.0	N/A
	No adj.			
2000	72.0	40.3	39.8	1.0137
			New Correction Factor:	1.0137

Percent Change

Previous Calibration Correction Factor:	0.9953
Current Correction Factor Before Span Adjust:	1.0137
Percent Change:	-1.8%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	32.5	32.5
Sample Lines Connected		**Yes**

Cylinder Pressures

Span 1850 psi Hydrogen 1850 psi Zero Air 32 psi

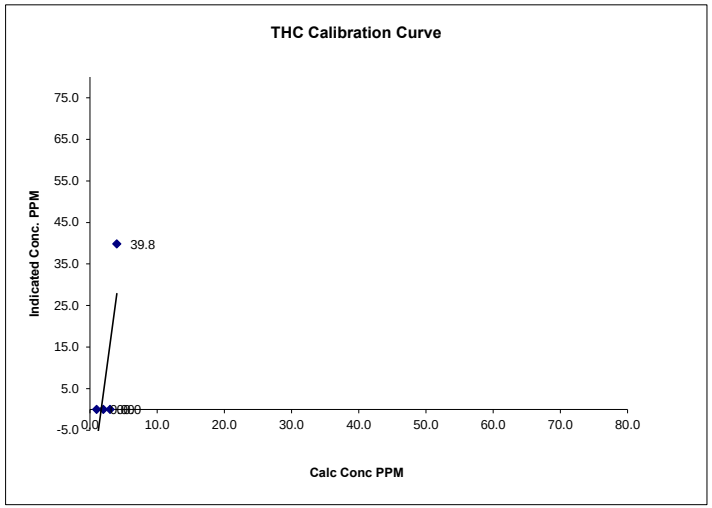
Notes: **N/A : Not Applicable**

Calibration Performed by: Waseem Ahmed

THC Calibration Curve

Calibration Date	July 19, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	10:00	End Time (MST)	10:45

Calculated Conc. ppm	Indicated Response ppm	Correction Factor	Correlation Coefficient (≥ 0.995)
			Slope (0.85 to 1.15)
0.0	0.0	N/A	Intercept (± 3% F.S.)
40.3	39.8	1.0137	



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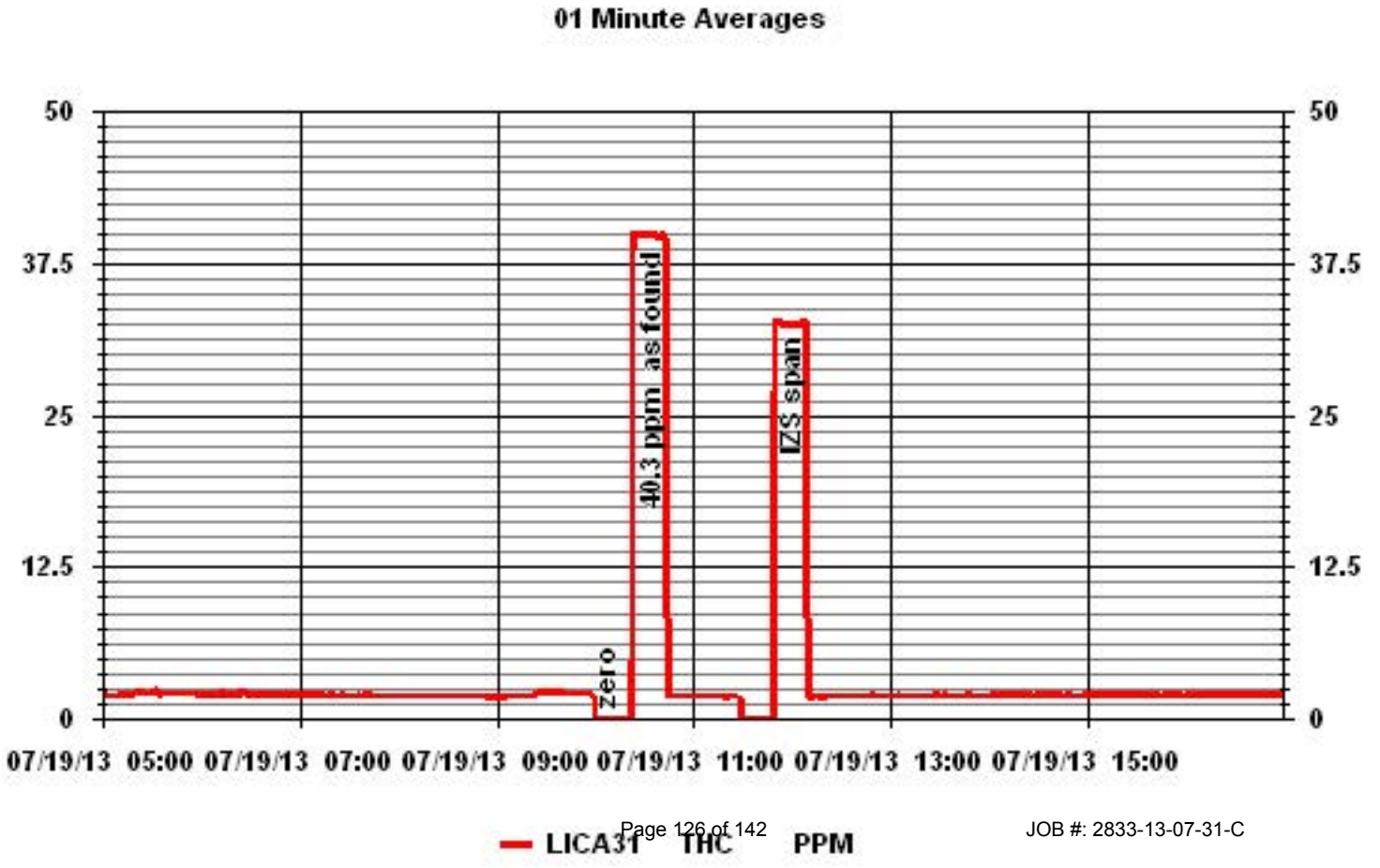


JOB #: 2833-13-07-31-C

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 9, 2013		Previous Calibration	June 20, 2013	
Company	LICA		Plant/Location	St. Lina	
Start Time (MST)	9:30		End Time (MST)	12:35	
Reason:	Monthly calibration				
Barometric Pressure	27.63	in HG	Station Temperature	24	Deg C
Cal Gas Concentration	NOx 49.3	ppm	NO 49.2	ppm	
Cal Gas Cylinder #	BAL3031				
DAS Output Voltage	0-1	Volts	Chart Rec. Output	N/A	Volts

MFCF: N/A

Cal Gas Expiry date: December 29, 2013

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	592	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration				
Concentration Range				0 - 1000	ppb					
Sample Flow/Conv. Temp	472	ccm	315	Deg C		472	ccm	314	Deg C	
Ozone Flow / Vacuum	74	ccm	6.1	"Hg-A		73	ccm	6.0	"Hg-A	
HVPS / A ZERO	637	Volts	21.9	MV		637	Volts	24.5	MV	
Rx/ Temp / PMT Temp	50.0	Deg C	6.9	Deg C		50.0	Deg C	6.9	Deg C	
Box Temp / IZS Temp	32.4	Deg C	45.1	Deg C		36.3	Deg C	45.2	Deg C	
Offset	-0.6	NOx	-1.0	NO		0.8	NOx	-1.4	NO	
Slope	1.240	NOx	1.235	NO		1.280	NOx	1.275	NO	
NO_2 COEF / Conv Efficency	N/A	NO2	0.993			N/A	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	1	0	1	NA	NA
4995	0.0	NA	0	0	NA	0	0	0	NA	NA
4915	79.6	NA	786	784	NA	764	759	5	1.0298	1.0331
4915	79.6	NA	786	784	NA	788	782	6	0.9984	1.0027
4955	39.8	NA	393	392	NA	443	435	7	0.8888	0.9012
4975	19.9	NA	196	196	NA	224	218	6	0.8808	0.8992
4995	0.0	NA	0	0	NA	3	0	2	NA	NA

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		

Linearity			Sum of Least Squares	NOx= 0.968	NO= 0.976	NO2=	
OK?	Yes	No	Correction Factors:	NOx= 0.9984	NO= 1.0027	NO2=	
				Average Converter Efficiency=			

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	534.4	NOx	525.4	NO2		534.4	NOx	525	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	1.000	1.000	
Current Correction Factor Before Span Adjust	1.030	1.033	
Percent Change	-2.9%	-3.2%	

Notes

NA : Not Applicable

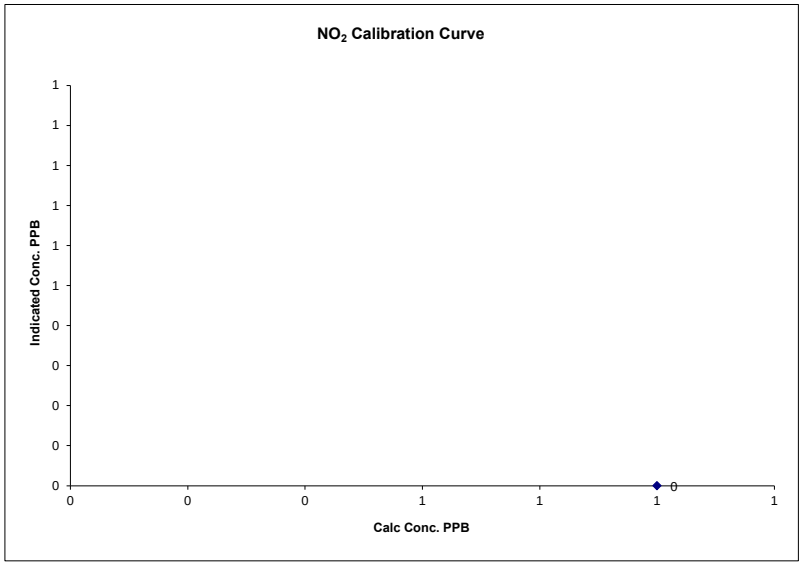
Change sample filter

Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 9, 2013		
Company	LICA		
Plant / Location	St. Lina		
Start Time (MST)	9:30	End Time (MST)	12:35

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
6			Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)

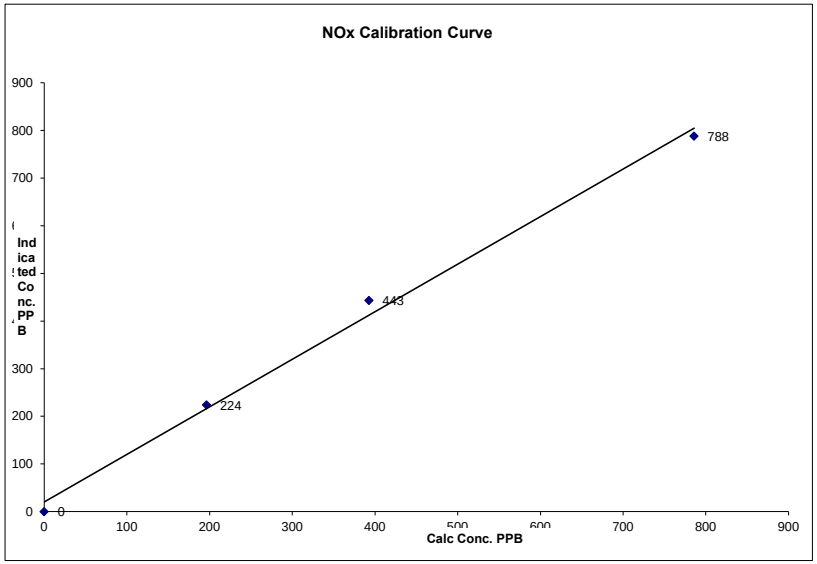


Notes:

NOx Calibration Curve

Calibration Date	July 9, 2013				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	9:30	End Time (MST)	12:35		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.995032
			Slope	(0.85 to 1.15)	0.998262
0	0	NA	Intercept	(± 3% F.S.)	20.60842
196	224	0.8808			
393	443	0.8888			
786	788	0.9984			

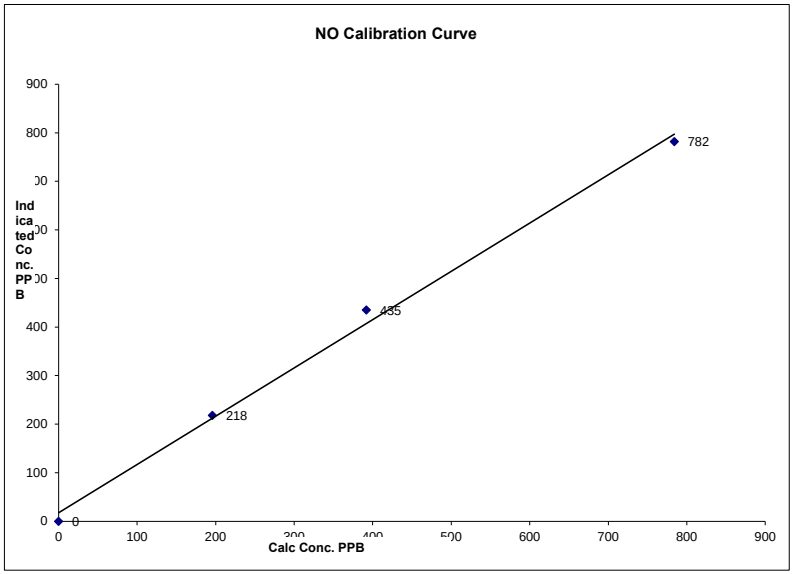


Notes:

NO Calibration Curve

Calibration Date	July 9, 2013				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	9:30	End Time (MST)	12:35		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.996000
			Slope	(0.85 to 1.15)	0.993878
0	0	NA	Intercept	(± 3% F.S.)	17.80831
196	218	0.8992			
392	435	0.9012			
784	782	1.0027			



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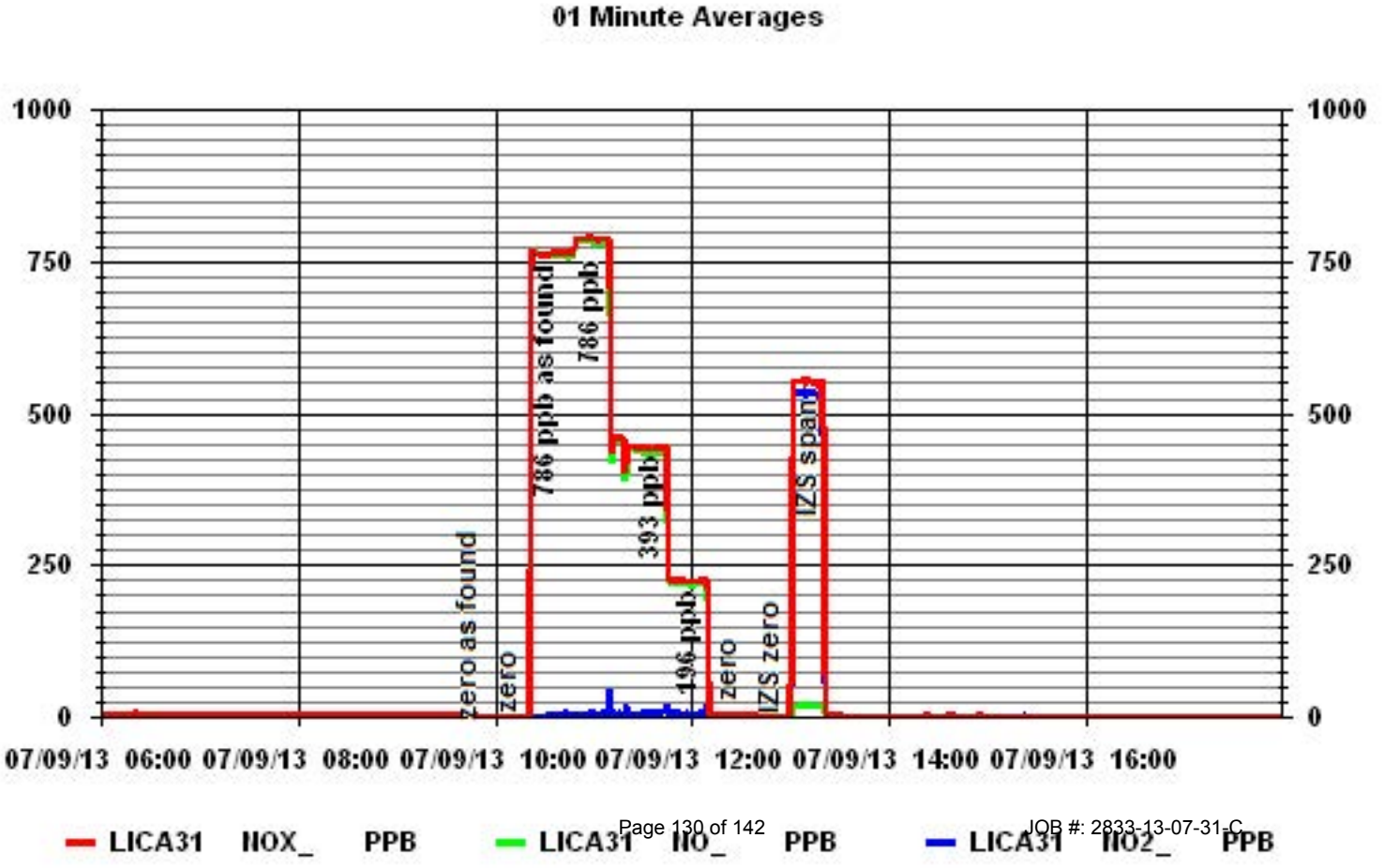

01 Minute Averages
1000
750
500
250
0
zero as found
zero
786 ppb as found
786 ppb
393 ppb
196 ppb
zero
IZS zero
IZS span
07/09/13 06:00
07/09/13 08:00
07/09/13 10:00
07/09/13 12:00
07/09/13 14:00
07/09/13 16:00
LICA31 NOX_ PPB
LICA31 NO_ PPB
LICA31 NO2_ PPB

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 12, 2013		Previous Calibration	June 20, 2013	
Company	LICA		Plant/Location	St. Lina	
Start Time (MST)	8:55		End Time (MST)	12:45	
Reason:	Redo Monthly calibration				
Barometric Pressure	27.38 in HG	Station Temperature	18 Deg C	MFCF	N/A
Cal Gas Concentration	NOx 49.3 ppm	NO 49.2 ppm	Cal Gas Expiry date	December 29, 2013	
Cal Gas Cylinder #	BAL3031				
DAS Output Voltage	0-1 Volts		Chart Rec. Output	N/A Volts	

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	592	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration					After Calibration			
Concentration Range				0 - 1000			ppb		
Sample Flow/Conv. Temp	468	ccm	316	Deg C		475	ccm	315	Deg C
Ozone Flow / Vacuum	73	ccm	5.9	"Hg-A		73	ccm	5.6	"Hg-A
HVPS / A ZERO	638	Volts	18.8	MV		638	Volts	19.0	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.8	Deg C		50.0	Deg C	6.8	Deg C
Box Temp / IZS Temp	25.8	Deg C	45.0	Deg C		28.7	Deg C	45.1	Deg C
Offset	0.8	NOx	-1.4	NO		0.8	NOx	-1.4	NO
Slope	1.271	NOx	1.268	NO		1.271	NOx	1.268	NO
NO_2 COEF / Conv Efficency	N/A	NO2	0.993			N/A	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	1	1	0	NA	NA
	No zero adj.									
4915	79.8	NA	788	786	NA	788	786	4	1.0000	1.0000
	No span adj.									
4955	39.9	NA	394	393	NA	393	392	1	1.0046	1.0052
4975	19.9	NA	196	196	NA	201	198	2	0.9821	0.9950
5000	0.0	NA	0	0	NA	2	1	1	NA	NA

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4915	79.8	NA	788	786	NA	797	790	6	NA	NA
4915	79.8	600	788	NA	519	797	277	520	0.9981	100.19%
	No span adj.									
4915	79.8	300	788	NA	267	796	529	268	0.9963	100.38%
4915	79.8	120	788	NA	109	797	687	111	0.9820	101.94%

Linearity			Sum of Least Squares	NOx= 0.999	NO= 1.000	NO2= 0.997		
OK?	Yes	No	Correction Factors:	NOx= 1.0000	NO= 1.0000	NO2= 0.9981		
				Average Converter Efficiency= 100.84%				

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	538.4	NOx	528.7	NO2		564	NOx	549	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	1.000	1.000	1.000
Current Correction Factor Before Span Adjust	1.000	1.000	0.998
Percent Change	0.0%	0.0%	0.2%

Notes **NA : Not Applicable**

Flow= 4915, span= 79.8, O3=450 Nox= 800 NO=398 NO2= 402

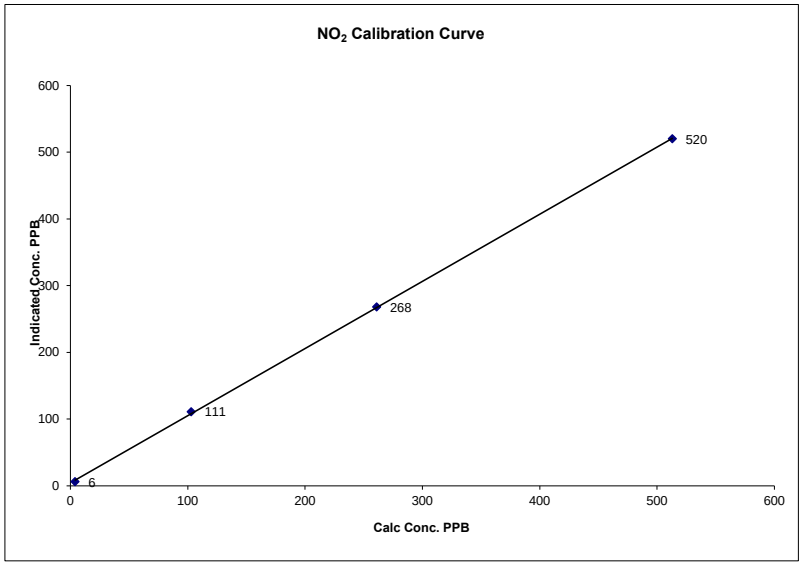
Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 12, 2013				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	8:55	End Time	(MST)	12:45	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
4	6	NA
103	111	0.9279
261	268	0.9739
513	520	0.9865

Correlation Coefficient	(≥ 0.995)	0.999895
Slope	(0.85 to 1.15)	1.006519
Intercept	(± 3% F.S.)	4.56418



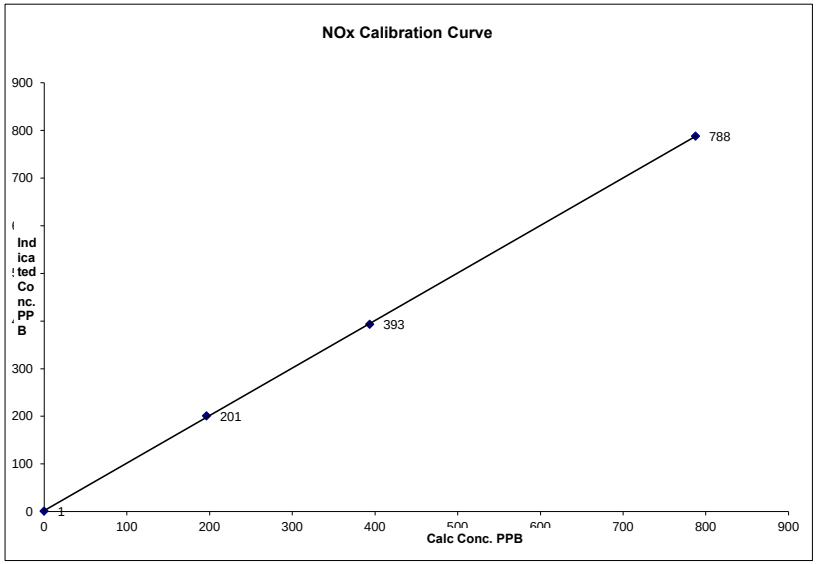
Notes:

JOB #: 2833-13-07-31-C

NOx Calibration Curve

Calibration Date	July 12, 2013				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	8:55	End Time (MST)	12:45		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999959
			Slope	(0.85 to 1.15)	0.997327
0	1	NA	Intercept	(± 3% F.S.)	2.20147
196	201	0.9821			
394	393	1.0046			
788	788	1.0000			

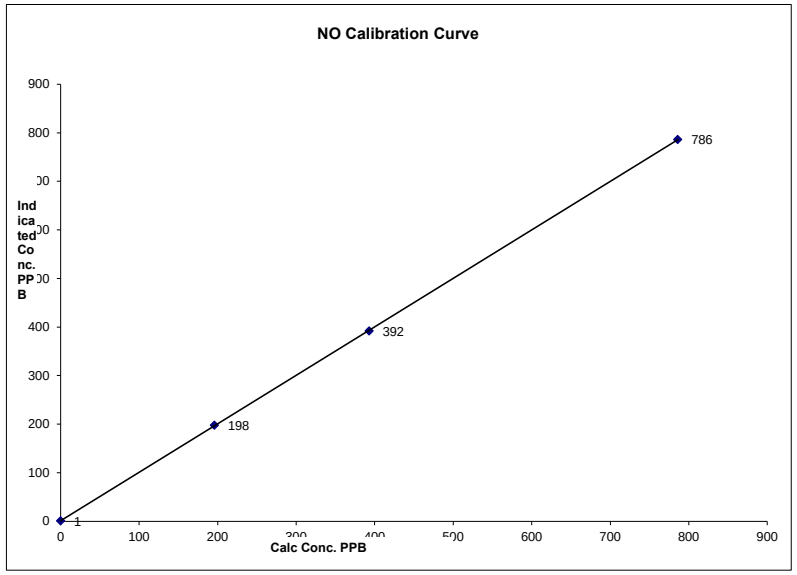


Notes:

NO Calibration Curve

Calibration Date	July 12, 2013				
Company	LICA				
Plant / Location	St. Lina				
Start Time (MST)	8:55	End Time (MST)	12:45		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999989
			Slope	(0.85 to 1.15)	0.997903
0	1	NA	Intercept	(± 3% F.S.)	1.20032
196	198	0.9950			
393	392	1.0052			
786	786	1.0000			



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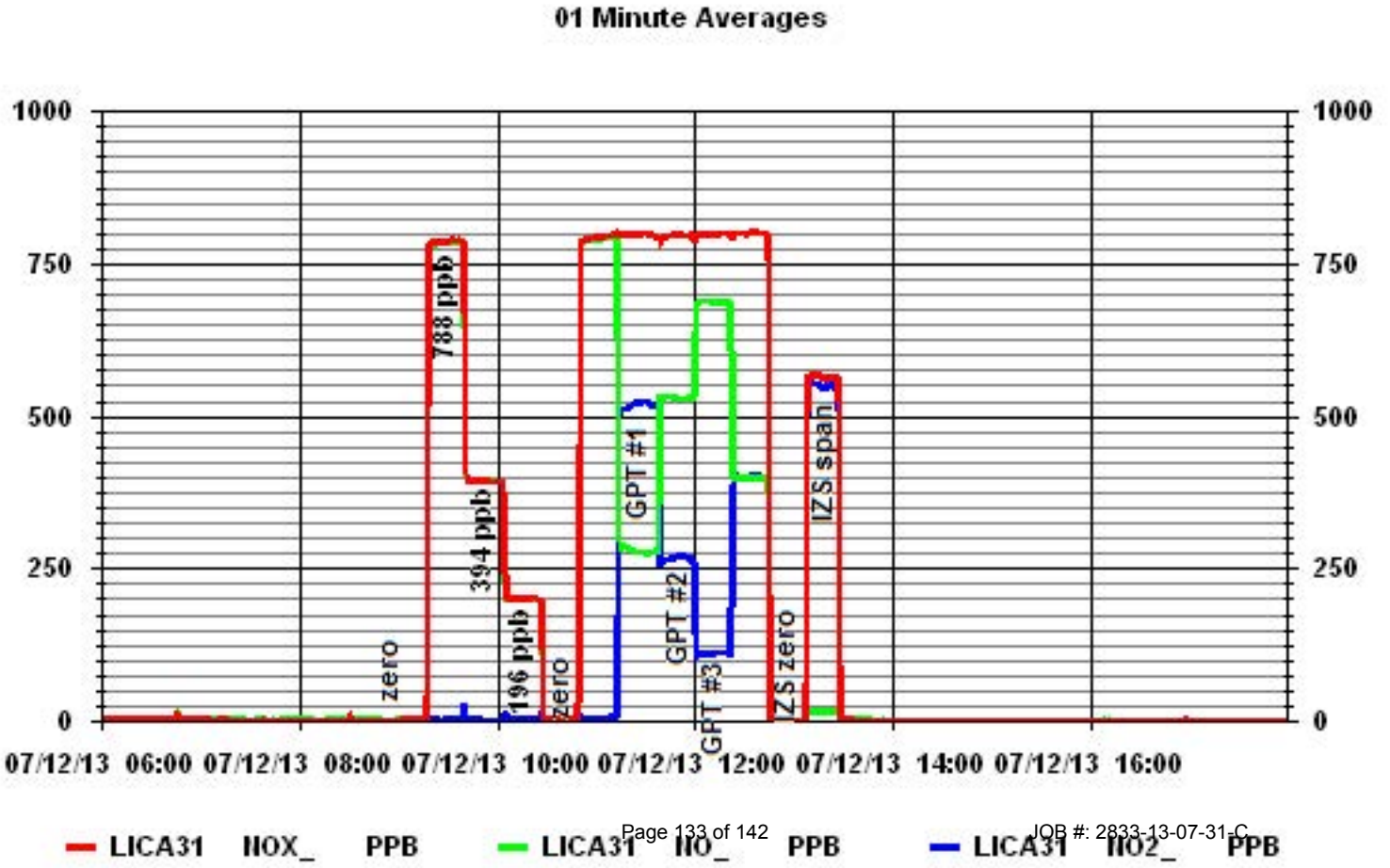
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750
500
250
0
788 ppb
394 ppb
196 ppb
zero
zero
GPT #1
GPT #2
GPT #3
IZS zero
IZS span
07/12/13 06:00
07/12/13 08:00
07/12/13 10:00
07/12/13 12:00
07/12/13 14:00
07/12/13 16:00
LICA31 NOX_ PPB
LICA31 NO_ PPB
LICA31 NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	July 12, 2013	Previous Calibration	June 20, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	14:05	End Time (MST)	16:02
Reason:	Monthly Calibration		
Barometric Pressure	27.46 in HG	Station Temperature	20 Deg C
DAS Output Voltage	0-10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240371	Method:	Photometric
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO717		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0-500 ppb			
Cell A Flow / Cell B Flow	736 LPM	716 LPM	736 LPM	716 LPM
O_3 Set Level	675 mmHg		675 mmHg	
Bench Lamp	53.5 Deg C		53.6 Deg C	
O3 Lamp / Box Temp	67.8 Deg	27.5 Deg C	67.8 Deg C	27.8 Deg C
Offset / Slope	-0.2	0.986	-0.2	0.986

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4994	0	0	0	N/A
	No zero adj			
4995	450	392	391	1.0026
	No span adj			
4995	300	261	261	1.0000
4994	120	103	104	0.9904
4994	0	0	0	N/A
			Sum of Least Squares	1.0012
			New Correction Factor	1.0026

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0
Auto Span	405	405
Sample Lines Connected		Yes
Previous Calibration Correction Factor:		1.0026
Current Correctio Factor Before Span Adjust:		1.0026
Percent Change:		0.0%

Note: **N/A : Not Applicable**

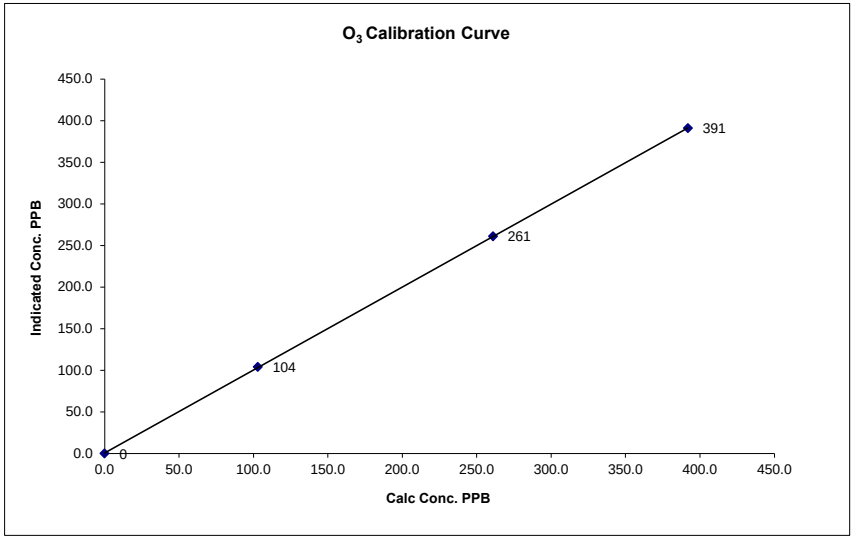
Calibration Performed by: Waseem Ahmed

O_3 Calibration Curve

Calibration Date	July 12, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	14:05	End Time (MST)	16:02

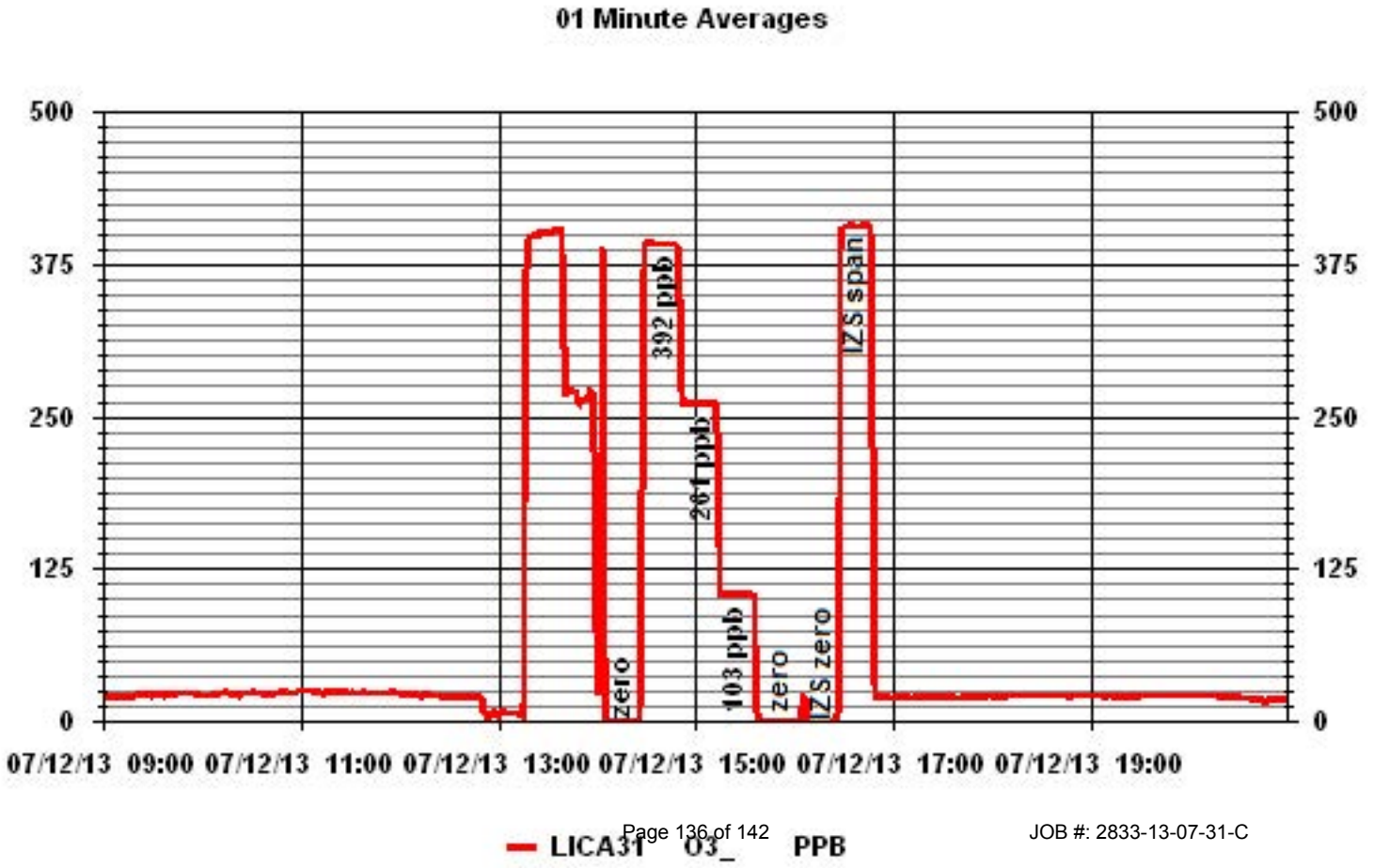
Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
103	104	0.9904
261	261	1.0000
392	391	1.0026

Correlation Coefficient	(≥ 0.995)	0.999988
Slope	(0.85 to 1.15)	0.996771
Intercept	(± 3% F.S.)	0.610222



Notes:

JOB #: 2833-13-07-31-C



JOB #: 2833-13-07-31-C

O_3 Calibration Report

Station Information

Calibration Date	July 23, 2013	Previous Calibration	July 12, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:40	End Time (MST)	10:20
Reason:	As Found Point		
Barometric Pressure	27.67 in HG	Station Temperature	22 Deg C
DAS Output Voltage	0-10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240371	Method:	Photometric
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO717		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0-500 ppb			
Cell A Flow / Cell B Flow	739 LPM	719 LPM	739 LPM	719 LPM
O_3 Set Level	679 mmHg		679 mmHg	
Bench Lamp	53.6 Deg C		53.7 Deg C	
O3 Lamp / Box Temp	67.8 Deg	28.1 Deg C	67.9 Deg C	30 Deg C
Offset / Slope	-0.2	0.986	-0.2	0.986

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4994	0	0	0	N/A
	No zero adj			
4995	450	392	370	1.0595
			Sum of Least Squares	
			New Correction Factor	1.0595

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0
Auto Span	405	405
Sample Lines Connected		Yes
Previous Calibration Correction Factor:		1.0026
Current Correctio Factor Before Span Adjust:		1.0595
Percent Change:		-5.4%

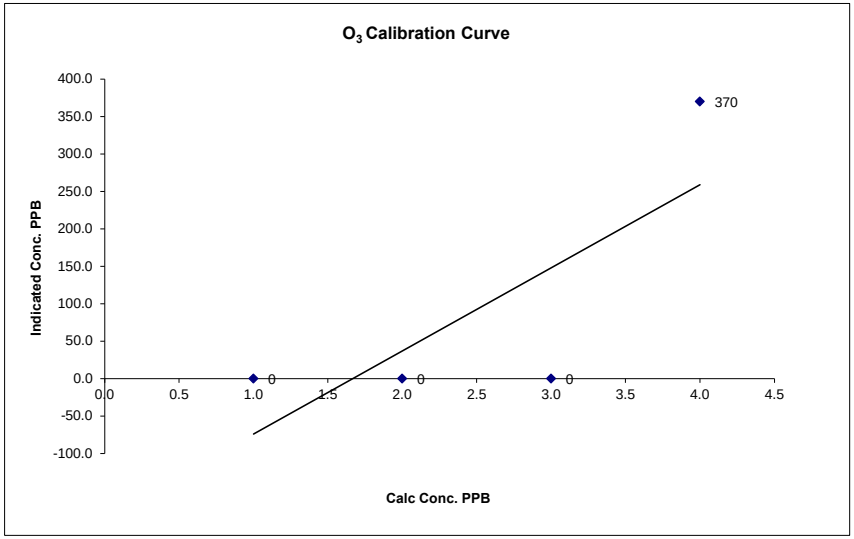
Note: **N/A : Not Applicable**

Calibration Performed by: Waseem Ahmed

O_3 Calibration Curve

Calibration Date	July 23, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	9:40	End Time (MST)	10:20

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
0	0	N/A	Slope (0.85 to 1.15)
392	370	1.0595	Intercept (± 3% F.S.)



Notes:

O_3 Calibration Report

Station Information

Calibration Date	July 23, 2013	Previous Calibration	N/A
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	11:05	End Time (MST)	13:15
Reason:	Post repair calibration		
Barometric Pressure	27.68 in HG	Station Temperature	22 Deg C
DAS Output Voltage	0-10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240371	Method:	Photometric
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO717		

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0-500 ppb			
Cell A Flow / Cell B Flow	739 LPM	719 LPM	739 LPM	719 LPM
O_3 Set Level	681 mmHg		679 mmHg	
Bench Lamp	53.7 Deg C		53.7 Deg C	
O3 Lamp / Box Temp	67.9 Deg	30.2 Deg C	67.9 Deg C	30.4 Deg C
Offset / Slope	-0.2	0.986	0.4	1.014

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4994	0	0	0	N/A
	No zero adj			
4995	450	392	395	0.9924
	No span adj.			
4995	300	261	264	0.9886
4995	120	103	105	0.9810
4995	0	0	0	N/A
			Sum of Least Squares	0.9908
			New Correction Factor	0.9924

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0
Auto Span	405	420
Sample Lines Connected		yes
Previous Calibration Correction Factor:		N/A
Current Correctio Factor Before Span Adjust:		0.9924
Percent Change:		#VALUE!

Note: **N/A : Not Applicable**

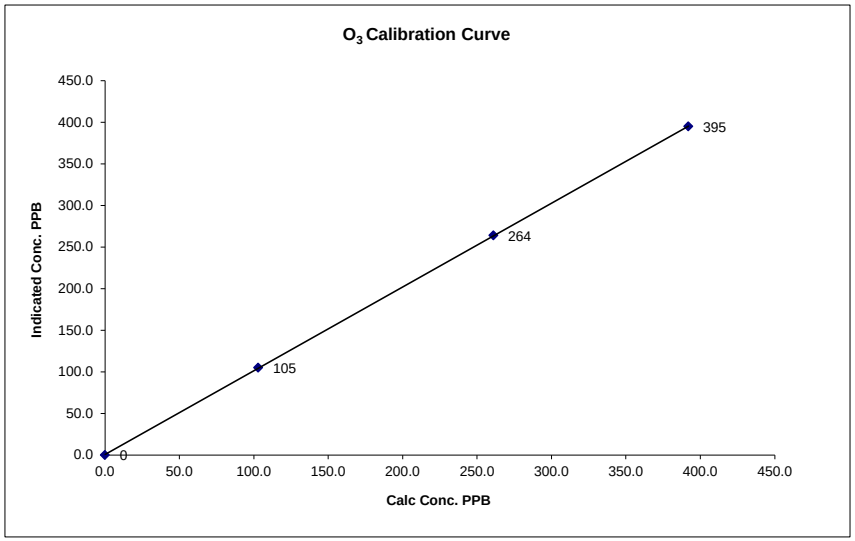
Calibration Performed by: Waseem Ahmed

O_3 Calibration Curve

Calibration Date	July 23, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	ST. LINA		
Start Time (MST)	11:05	End Time (MST)	13:15

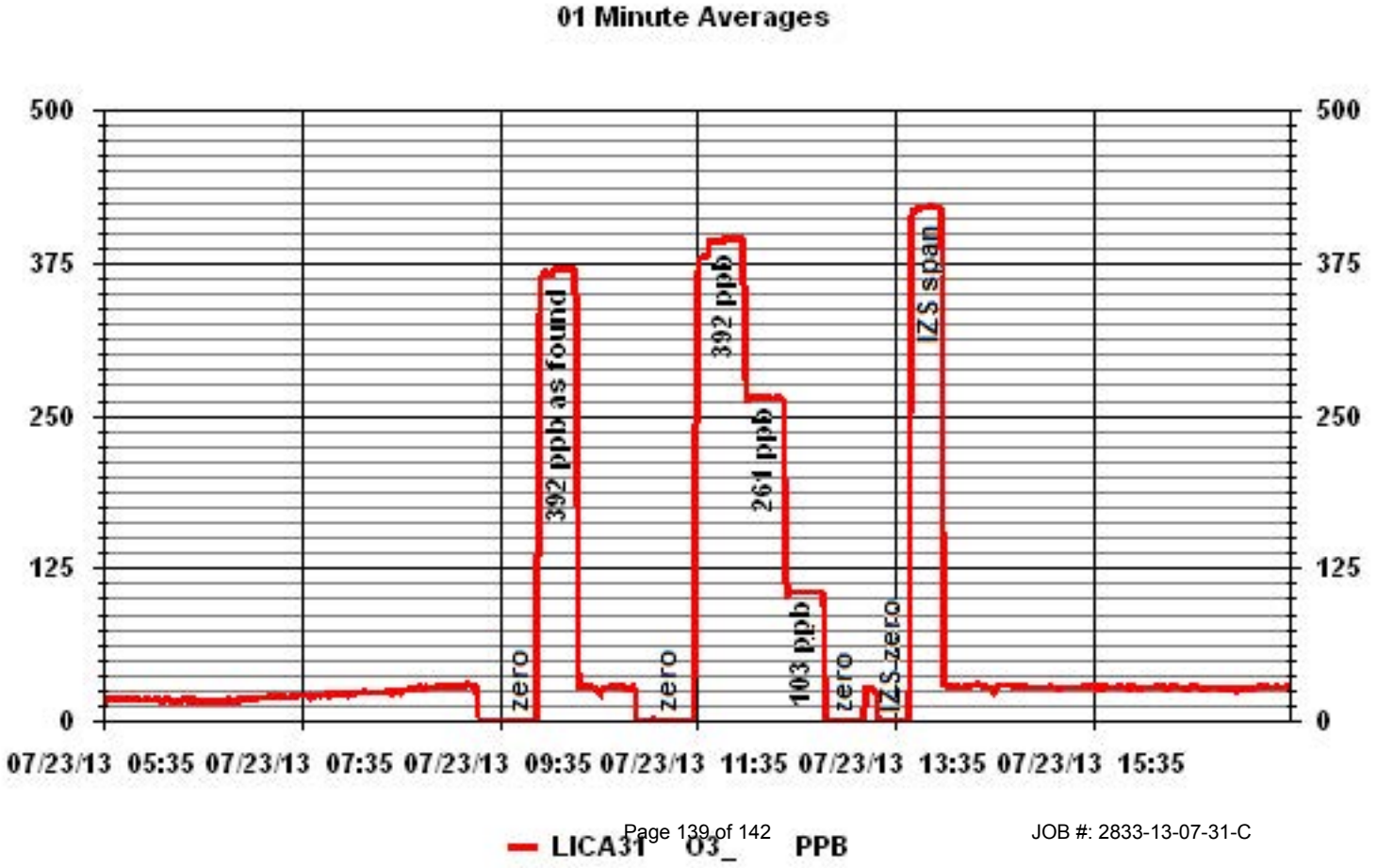
Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
103	105	0.9810
261	264	0.9886
392	395	0.9924

Correlation Coefficient	(≥ 0.995)	0.999986
Slope	(0.85 to 1.15)	1.007295
Intercept	(± 3% F.S.)	0.621193



Notes:

JOB #: 2833-13-07-31-C



JOB #: 2833-13-07-31-C

Particulate Matter 2.5

TEOMÒ 1405F Audit

Station		Audit Transfer Standard	
Date:	July 12, 2013	Make/Model:	Streamline FTS
Station Name:	Lica St. Lina (CASA # 31)	Serial Number:	Hi 091001,Lo 091099
Location:	St. Lina Station	Cell s/n:	na
Operator:	LICA	Thermometer s/	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 #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A207691003	Filter Load (%)	33.1%
Firmware Ver.	1.55	K_o Factor	15634.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	16.94
		Press (ATM)	0.918

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.005	Warnings	FDMS valve position
Pump Vacuum **<0.4atm**	0.29	Pump Gauge (inHg)	-20

Temperature/Pressure

Measured Temp **(± 2 °C)**	17.22	**D °C**	-0.3
Measured Press **(± 0.01atm)**	0.919	**DATM**	-0.001

Flow Audit

Indicated Main Flow (l/min)	3.01	Main Flow Drift **(±10.0%)**	3.12%
Measured Main Flow (l/min)	2.72	Flow Adjusted to Measured?	YES
Indicated Bypass Flow (l/min)	13.65	Bypass Flow Drift **(±10.0%)**	0.43%
Measured Bypass Flow (l/min)	13.59	Flow Adjusted to Measured?	YES

Leak Check

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

Instrument Setup

Flow Control = Active

Report Conditions = Actual

K_o Factor

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

Start Time: 14:55:00 PM **Finish Time:** 16:00:00 PM

Sample Inlet Cleaned: N/A **New Filters Installed:** N/A

New Filter Loading %: N/A

Comments:

Auditor/s: Waseem Ahmed

TEOMÒ 1405F Audit

Station		Audit Transfer Standard	
Date:	July 15, 2013	Make/Model:	Streamline FTS
Station Name:	Lica St. Lina (CASA # 31)	Serial Number:	Hi 091001,Lo 091099
Location:	St. Lina Station	Cell s/n:	na
Operator:	LICA	Thermometer s/	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 #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A207691003	Filter Load (%)	41.3%
Firmware Ver.	1.55	K_o Factor	15634.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	13.08
		Press (ATM)	0.922

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.007	Warnings	No warnings
Pump Vacuum **<0.4atm**	0.29	Pump Gauge (inHg)	-20

Temperature/Pressure

Measured Temp **(± 2 °C)**	14.03	**D °C**	-0.950
Measured Press **(± 0.01atm)**	0.921	**DATM**	0.001

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	17.16%
Measured Main Flow (l/min)	3.66	Flow Adjusted to Measured?	YES
Indicated Bypass Flow (l/min)	13.65	Bypass Flow Drift **(±10.0%)**	2.11%
Measured Bypass Flow (l/min)	13.56	Flow Adjusted to Measured?	YES

Leak Check

Main **(< 0.15 l/min)**	Base=-0.01 Ref=-0.01
Aux **(< 0.6 l/min)**	Base=0.00 Ref=0.00

Instrument Setup

Flow Control = Active

Report Conditions = Actual

K_o Factor

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

Start Time: 12:45 **Finish Time:** 15:30:00 PM

Sample Inlet Cleaned: N/A **New Filters Installed:** Yes

New Filter Loading %: 23.5%

Comments: Flow deviate >10%, three point calibration required.

Cannot do it today b/c of raining.

Auditor/s: Waseem Ahmed

Lakeland Industry & Community Association

Portable / Elk Point Airport Monitoring Site
Ambient Air Monitoring Data Report
For
July 2013

Prepared By:

September 4, 2013

JOB #: 2833-13-07-35-C

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

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Introduction

The following Ambient Air Monitoring report was prepared for:

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

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

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Lili Zhou

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 – July 2013

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PORTABLE / ELK POINT AIRPORT SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO_2 (PPB)	172	48	0	0	0.19	2	VAR	VAR	VAR	VAR	1.7	11	99.7
H_2S (PPB)	10	3	0	0	0.13	5	4	3	11.7	246(WSW)	0.9	4	99.7
THC (PPM)	-	-	-	-	2.86	11.7	1	5	1.2	110(ESE)	4.6	1	99.7
THC (55i) (PPM)	-	-	-	-	2.61	10.4	1	5	1.2	110(ESE)	4.26	1	99.6
Methane (PPM)	-	-	-	-	2.56	10.1	1	5	1.2	110(ESE)	4.10	1	99.6
NMHC (PPM)	-	-	-	-	0.05	0.4	VAR	VAR	VAR	VAR	0.15	1	99.6
NO_2 (PPB)	159	-	0	-	4.24	30.8	10	0	2.5	281(W)	8.8	9	99.5
NO (PPB)	-	-	-	-	2.20	59.0	25	5	3.4	278(W)	8.6	25	99.5
NOx (PPB)	-	-	-	-	6.44	66.7	25	5	3.4	278(W)	14.2	25	99.5
O_3 (PPB)	82	-	0	-	22.50	55	17	14	13.7	212(SSW)	32.2	5	99.7
PM 2.5 (UG/M^3)	-	30	-	0	6.33	42	30	4	9.5	282(W)	12.3	20	39.7
VECTOR WS (KPH)	-	-	-	-	11.39	37.6	12	13	-	281(W)	22.4	12	99.7
VECTOR WD (DEGREES)	-	-	-	-	283(W)	-	-	-	-	-	-	-	99.7

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 – PORTABLE

Sulphur Dioxide (PPB)
- Analyzer make / model – API 100E, S/N: 467

The analyzer was working well throughout the month. The monthly calibration was performed on July 4th. The inlet filter was changed before the month calibration was started. Two hours of data are missing due to a power failure on July 3rd. 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 monthly calibration was performed on July 4th. The inlet filter was changed before the month calibration was started. Two hours of data are missing due to a power failure on July 3rd. Data was corrected using daily zero information.

THC (PPM)
- Analyzer make / model –Thermo 51C, S/N: 77021-384

The analyzer was working well throughout the month. The monthly calibration was performed on July 4th. The inlet filter was changed before the month calibration was started. Two hours of data are missing due to a power failure on July 3rd. Data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – PORTABLE

THC 55i (PPM)

- Analyzer make / model –Thermo 55i, S/N: (12)36656107

The analyzer was working well throughout the month. Following the as found points check on July 5th, the H2 gas cylinder was changed. The monthly calibration was performed after the gas cylinder replacement. The inlet filter was changed before the month calibration was started. The span gas was changed on July 8th. Following the gas change, a daily calibration was run to verify the analyzer's functionality. Two hours of data are missing due to a power failure on July 3rd. Data was corrected using daily zero information.

Below are the canister events occurring in July; a total of fifteen canisters were collected.

Date	Time	Concentration	Date	Time	Concentration
07/03/2013	22:10	0.18	07/22/2013	11:35	0.16
07/06/2013	01:30	0.19	07/22/2013	20:30	0.17
07/08/2013	03:55	0.15	07/23/2013	19:05	0.19
07/09/2013	00:00	0.16	07/24/2013	00:40	0.19
07/10/2013	17:45	0.18	07/26/2013	00:40	0.15
07/15/2013	20:45	0.15	07/27/2013	23:35	0.18
07/16/2013	20:20	0.16	07/31/2013	05:45	0.16
07/18/2013	20:50	0.15			

General Monthly Summary

AQM STATION – LICA – PORTABLE

Nitrogen Dioxide (PPB)

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

The analyzer was working well throughout the month. The monthly calibration was performed on July 4th. The inlet filter was changed before the month calibration was started. An as found points check was performed on July 26th to verify the analyzer's functionality. The result was within the acceptable range (+3.0% difference). Following the as found points check, the sample pump was rebuilt, and then the slop was adjusted. A post-repair calibration was performed after the maintenance. The calibration result was within the acceptable range. It was noticed that the intercept for the NO2 calibration was outside the manufacture's specs. Further maintenance will be performed on the analyzer during the next visit. Two hours of data are missing due to a power failure on July 3rd. 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 monthly calibration was performed on July 4th. The inlet filter was changed before the month calibration was started. Two hours of data are missing due to a power failure on July 3rd. Data was corrected using daily zero information.

Particulate Matter 2.5 (ug/m^3)

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

After the maintenance performed on June 27th, the Teom unit appeared a warning of "Temp/RH sensor not detected". As the spare Temp/RH sensor was not available, the PM2.5 channel was put into the Maintenance mode. A new Temp/RH sensor was installed on July 18th. A routine Teom audit was performed following the part installation. The PM2.5 channel was brought back online on July 18th at hour 18. 425 hours of data were invalidated due to this event. Another Teom audit was performed on July 30th. A flow audit was performed, and the sample inlet was cleaned on July 18th. 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. Twenty-four hours of data were invalidated as the data were below -3 ug/m3. The operational uptime for the month was 39.7%.

General Monthly Summary

AQM STATION – LICA – PORTABLE

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.

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

The manifold system was cleaned on July 5th.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JULY 2013

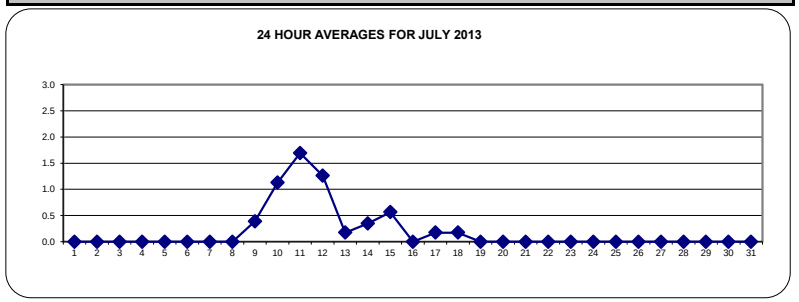
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	**S**	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	**S**	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	**S**	0	**P**	**P**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	22
4	0	**S**	0	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	0	0.0	24
5	**S**	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
6	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
7	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
8	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
9	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	1	**S**	1	1	1	1	1	0.4	24
10	1	1	1	0	1	1	1	0	0	1	1	1	1	2	2	2	2	2	**S**	2	1	1	1	1	2	1.1	24
11	2	1	1	1	2	2	1	2	2	2	2	2	2	2	2	2	2	**S**	1	2	2	1	2	1	2	**1.7**	24
12	1	1	1	2	2	2	2	2	1	2	1	1	1	1	1	1	**S**	1	1	1	1	1	1	1	2	1.3	24
13	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	1	0.2	24
14	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**S**	0	0	1	1	1	1	1	1	1	1	0.3	24
15	1	1	1	1	1	1	1	1	1	1	1	1	1	**S**	0	0	0	0	0	0	0	0	0	0	1	0.6	24
16	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
17	0	0	0	0	0	0	0	0	0	0	0	**S**	0	1	2	1	0	0	0	0	0	0	0	0	2	0.2	24
18	0	0	0	0	1	1	0	1	0	1	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
19	0	0	0	0	0	0	0	0	0	**S**	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	**S**	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	**S**	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	**S**	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	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
24	0	0	0	0	**S**	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	**S**	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	**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
27	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
28	**S**	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
29	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
30	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
31	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
HOURLY MAX	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	1	2	1			
HOURLY AVG	0.2	0.2	0.1	0.1	0.3	0.3	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	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

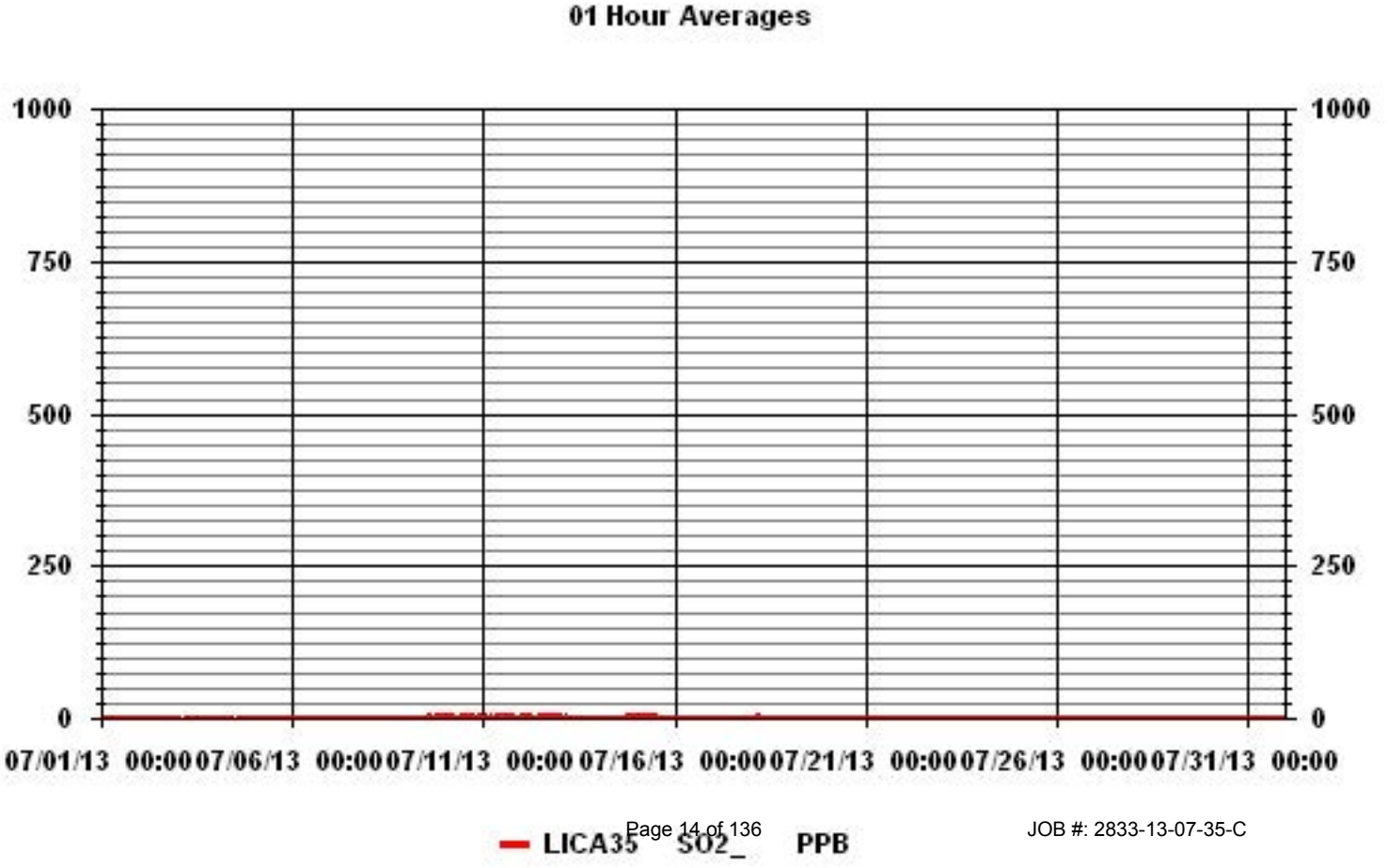


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 48 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	107					
MAXIMUM 1-HR AVERAGE:	2	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	1.7	PPB			ON DAY(S)	11

IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	742	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	99.7	%
STANDARD DEVIATION:	0.49		MONTHLY AVERAGE:	0.19	PPB



JOB #: 2833-13-07-35-C

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

JULY 2013

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

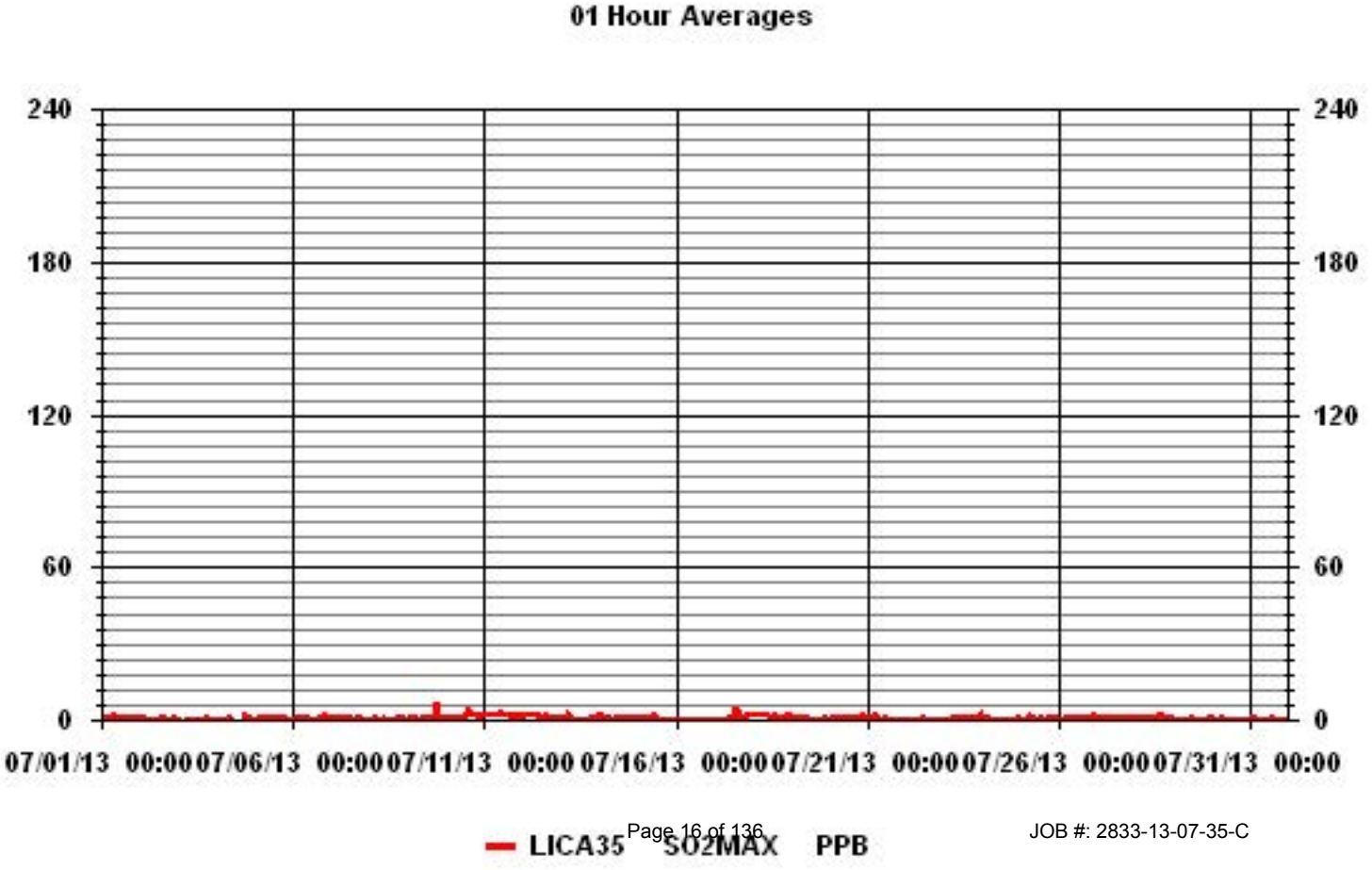
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	1	1	**S**	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	24
2	1	1	1	**S**	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	2	0.3	24
3	0	0	**S**	**P**	**P**	**P**	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.1	21
4	0	**S**	0	0	0	0	0	0	1	0	**C**	**C**	**C**	**C**	**C**	1	**S**	1	3	1	1	1	1	0	3	0.6	24
5	**S**	0	0	1	0	1	0	1	0	1	1	1	1	1	1	**Y**	0	1	0	1	0	0	0	**S**	1	0.5	23
6	0	0	1	0	1	1	1	1	0	1	1	0	0	0	0	0	0	1	0	1	3	1	**S**	1	3	0.6	24
7	1	1	1	1	1	1	1	0	1	0	0	1	1	1	0	0	1	1	1	0	0	**S**	0	0	1	0.6	24
8	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	**S**	1	0	0	1	0.2	24
9	0	1	0	0	1	1	0	0	0	1	1	1	0	1	1	1	1	1	**6**	**S**	1	1	1	1	**6**	0.9	24
10	1	1	1	1	1	1	1	1	0	1	1	1	2	2	5	3	2	2	**S**	2	2	1	2	2	5	1.6	24
11	2	2	2	2	2	2	2	2	2	2	4	2	2	2	2	2	2	**S**	1	2	2	2	2	1	4	2.0	24
12	2	2	2	2	2	2	2	2	2	2	2	1	1	1	2	1	**S**	1	1	1	1	1	1	1	2	1.5	24
13	1	1	1	0	2	1	1	1	0	0	0	0	0	0	0	**S**	0	0	1	0	0	1	0	0	2	0.4	24
14	0	3	0	0	0	0	1	0	0	0	0	1	1	1	**S**	1	1	1	1	1	1	1	1	1	3	0.7	24
15	1	1	1	1	1	1	1	1	1	1	2	2	1	**S**	0	0	0	0	0	0	0	0	0	0	2	0.7	24
16	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
17	0	0	0	0	0	0	0	0	0	1	0	**S**	1	4	4	2	1	1	1	1	2	2	2	2	4	1.0	24
18	2	2	2	2	2	2	2	2	2	2	**S**	1	1	1	3	1	1	1	1	1	1	1	1	3	3	1.6	24
19	0	0	1	1	1	1	1	1	1	**S**	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0.4	24
20	0	1	1	1	1	0	1	1	**S**	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	3	1.0	24
21	1	1	1	1	1	2	1	**S**	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4	24
22	0	0	0	0	0	0	**S**	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
23	0	0	0	0	0	**S**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0	2	0.8	24
24	1	1	1	1	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.2	24
25	0	0	0	**S**	1	2	1	1	1	0	0	0	0	1	0	0	0	1	1	1	0	0	1	1	2	0.5	24
26	0	0	**S**	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	2	1	2	0.8	24
27	1	**S**	0	0	1	1	0	1	0	0	1	1	0	1	1	0	1	1	0	0	1	1	0	1	1	0.6	24
28	**S**	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	3	1	1	1	1	1	1	**S**	3	1.0	24
29	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	**S**	1	1	0.1	24
30	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	1	0.1	24
31	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	**S**	0	0	0	1	0.1	24
HOURLY MAX	2	3	2	2	2	2	2	2	2	2	4	2	2	4	5	3	3	2	6	2	3	3	2	3			
HOURLY AVG	0.6	0.7	0.7	0.6	0.8	0.7	0.7	0.6	0.5	0.6	0.6	0.7	0.6	0.7	0.9	0.6	0.6	0.6	0.8	0.6	0.7	0.8	0.8	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:	368					
MAXIMUM INSTANTANEOUS VALUE:	6	PPB	@ HOUR(S)	18	ON DAY(S)	9
IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:		740	HRS
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION:	0.77					



JOB #: 2833-13-07-35-C

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

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	2.98	1.27	.99	2.55	4.82	6.39	7.38	4.97	3.69	3.55	2.55	7.10	14.20	16.90	15.34	5.25	100.00
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.98	1.27	.99	2.55	4.82	6.39	7.38	4.97	3.69	3.55	2.55	7.10	14.20	16.90	15.34	5.25	

Calm : .00 %

Total # Operational Hours : 704

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	21	9	7	18	34	45	52	35	26	25	18	50	100	119	108	37	704
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	21	9	7	18	34	45	52	35	26	25	18	50	100	119	108	37	

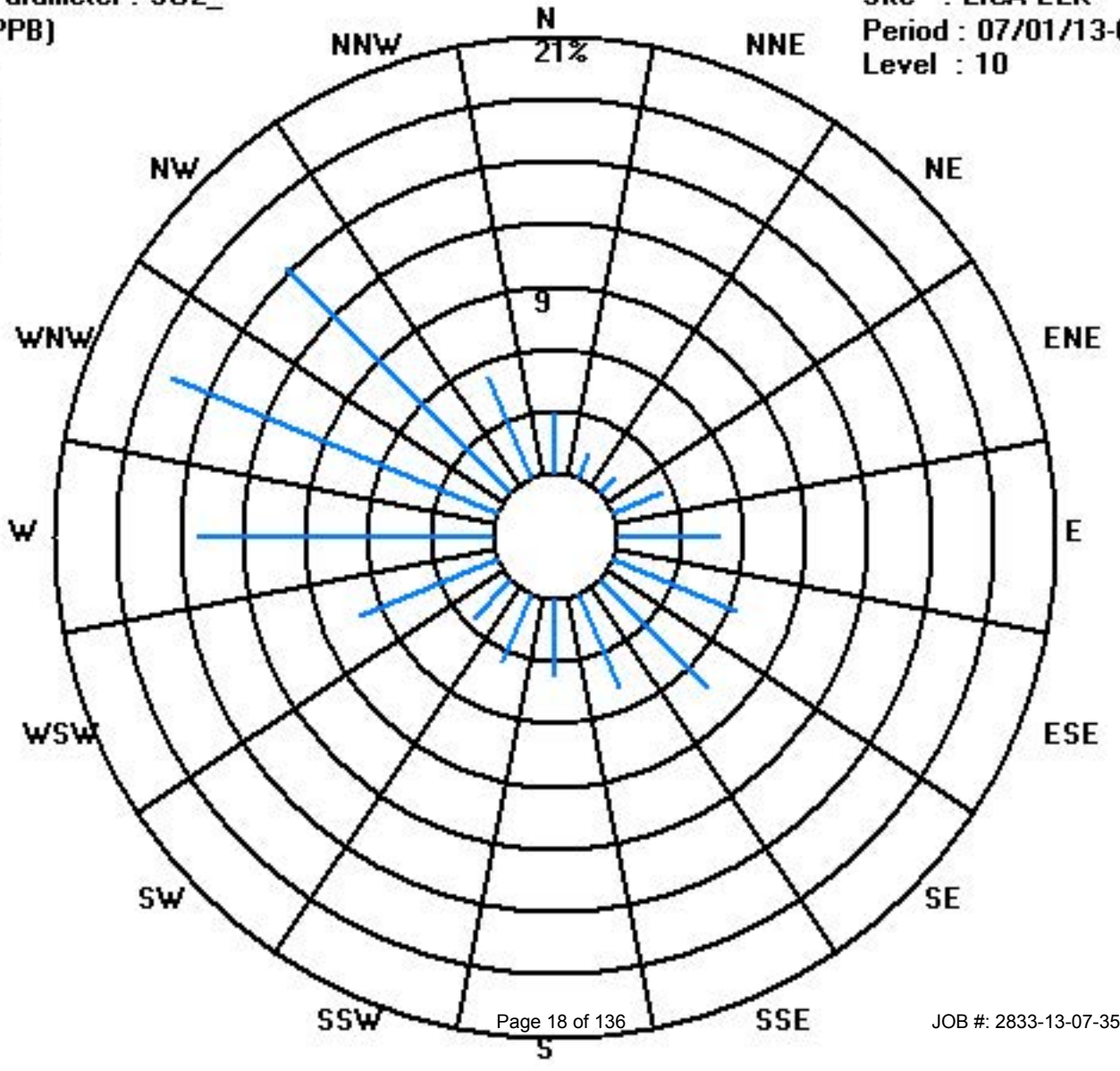
Calm : .00 %

Total # Operational Hours : 704

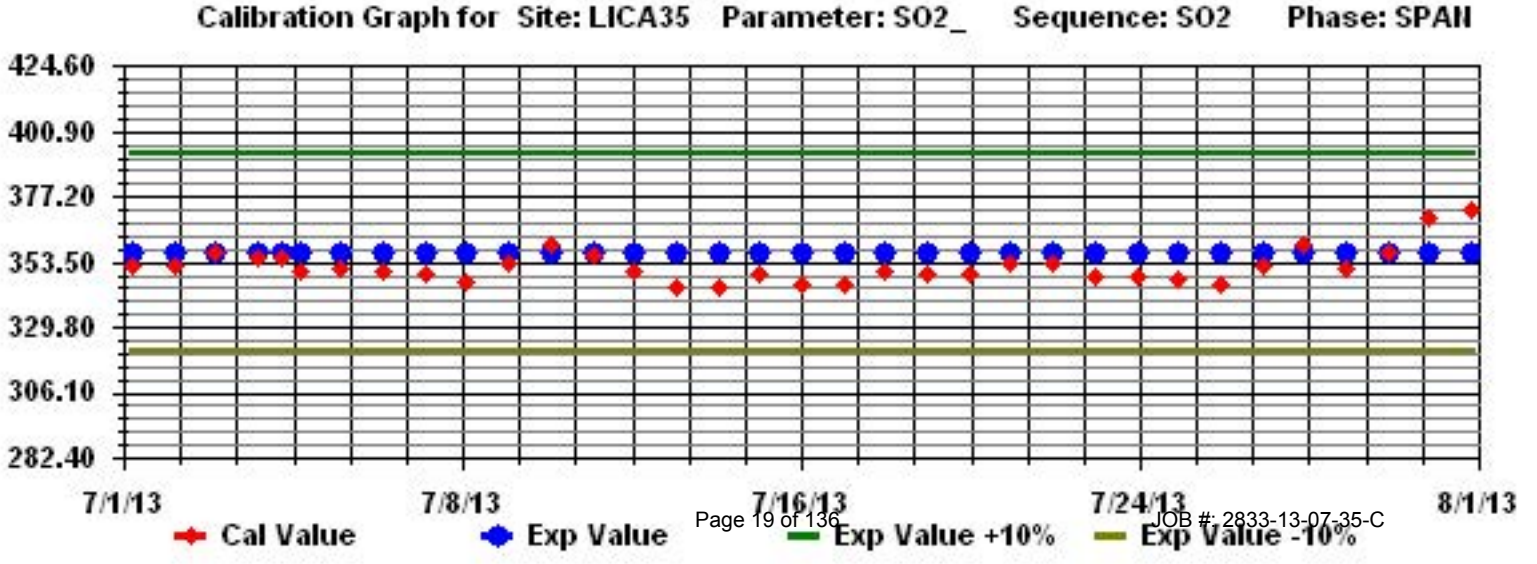
Logger : 35 Parameter : SO2_
Class Limits (PPB)

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

Site : LICA-ELK
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-35-C


Calibration Graph for Site: LICA35 Parameter: SO2_ Sequence: SO2 Phase: SPAN
424.60
400.90
377.20
353.50
329.80
306.10
282.40
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE - Elk Point Airport

JULY 2013

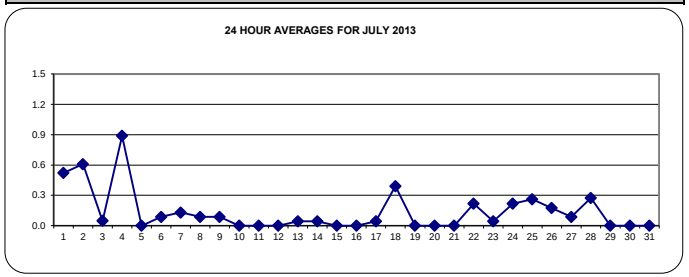
HYDROGEN SULPHIDE (H_2S) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1	1	2	2	**S**	2	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0.5	24
2	1	1	1	**S**	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0.6	24
3	0	1	**S**	0	**P**	**P**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	22
4	0	**S**	1	**5**	4	3	2	1	0	0	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	**5**	**0.9**	24
5	**S**	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
6	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	1	0.1	24
7	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	1	0.1	24
8	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	1	0.1	24
9	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	1	0.1	24
10	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
11	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
12	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
13	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	1	0.0	24
14	0	0	0	0	0	0	0	0	1	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	1	0.0	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
17	0	0	0	0	0	0	1	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
18	0	1	1	2	1	1	1	1	1	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4	24
19	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
20	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
21	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	0.0	24
22	0	0	0	0	0	1	**S**	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
23	0	0	0	0	0	**S**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
24	0	1	0	0	**S**	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
25	1	1	1	**S**	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24
26	0	0	**S**	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	24
27	0	**S**	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
28	**S**	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**S**	1	0.3	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0.0	24
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0.0	24
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0.0	24
HOURLY MAX	1	1	2	5	4	3	2	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1			
HOURLY AVG	0.1	0.2	0.2	0.4	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

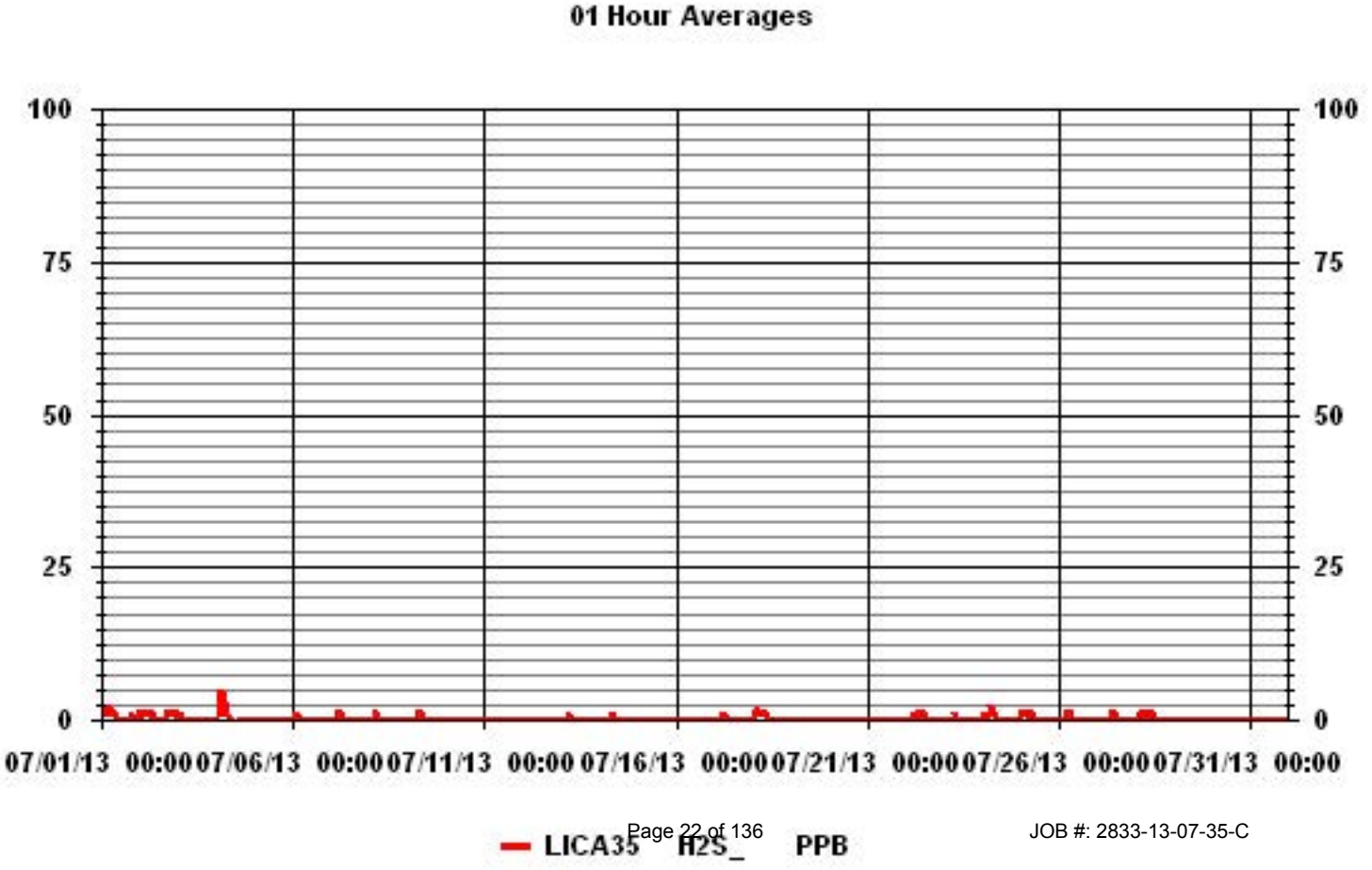
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0						
NUMBER OF 24-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	78						
MAXIMUM 1-HR AVERAGE:	5	PPB	@ HOUR(S)	3	ON DAY(S)	4	
MAXIMUM 24-HR AVERAGE:	0.9	PPB			ON DAY(S)	4	
					VAR-VARIOUS		
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:			742	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:			99.7	%
STANDARD DEVIATION:	0.43		MONTHLY AVERAGE:			0.13	PPB



JOB #: 2833-13-07-35-C

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

JULY 2013

HYDROGEN SULPHIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2	2	3	3	**S**	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	3	1.3	24
2	2	2	2	**S**	2	2	2	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.3	24
3	1	1	**S**	**P**	**P**	**P**	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	0	3	0.5	21
4	0	**S**	5	8	**9**	6	4	1	0	0	**C**	**C**	**C**	**C**	**C**	0	**S**	0	0	0	0	0	0	0	**9**	1.9	24
5	**S**	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**Y**	0	0	0	0	0	0	0	**S**	2	0.1	23
6	0	3	0	7	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	1	7	0.7	24
7	0	1	1	1	8	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	8	0.7	24
8	0	0	1	5	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	5	0.5	24
9	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	0	**S**	0	0	0	0	1	0.3	24
10	1	1	1	0	0	1	1	0	0	0	0	0	0	0	1	1	0	1	**S**	0	0	0	0	0	1	0.3	24
11	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**S**	0	0	0	0	1	3	3	0.3	24
12	2	2	0	1	0	1	1	1	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	2	0.3	24
13	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	1	1	0.2	24
14	1	0	0	2	0	0	0	1	2	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	2	0.3	24
15	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
16	0	0	0	0	1	1	1	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
17	0	1	1	0	1	1	1	1	1	0	0	**S**	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	24
18	1	1	2	4	2	1	2	1	1	1	**S**	1	1	0	1	0	1	1	1	1	1	1	1	1	4	1.2	24
19	1	1	1	0	0	1	1	1	0	**S**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	24
20	0	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0.1	24
21	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	0.0	24
22	0	0	0	0	0	1	**S**	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	2	0.4	24
23	0	0	0	0	0	**S**	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
24	1	4	0	0	**S**	3	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	2	4	0.8	24
25	3	2	4	**S**	3	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.8	24
26	0	0	**S**	1	1	2	2	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	0.8	24
27	1	**S**	0	0	1	1	0	1	1	2	2	0	0	0	1	1	1	1	1	1	1	1	0	1	2	0.8	24
28	**S**	1	1	1	2	2	1	1	1	2	1	1	0	0	1	0	0	1	1	0	0	1	0	**S**	2	0.8	24
29	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	1	1	0.1	24
30	0	1	1	2	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0	**S**	0	0	2	0.4	24
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0	1	1	1	0.1	24
HOURLY MAX	3	4	5	8	9	6	4	2	2	2	2	1	1	1	1	1	1	1	1	2	1	1	2	3			
HOURLY AVG	0.6	0.9	0.9	1.3	1.3	1.2	1.1	0.7	0.4	0.4	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.5			

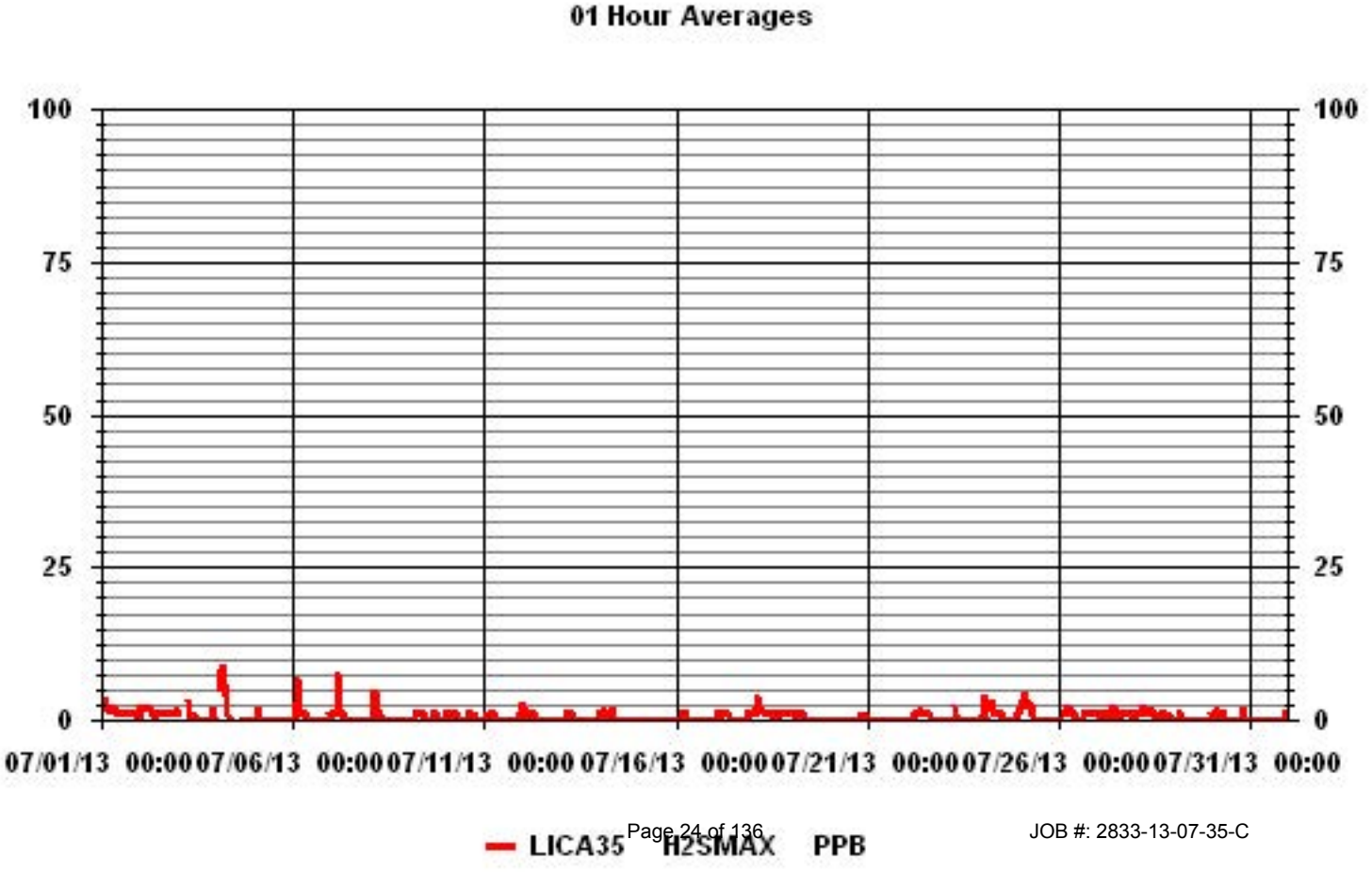
STATUS FLAG CODES

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:	241						
MAXIMUM INSTANTANEOUS VALUE:	9	PPB	@ HOUR(S)	4	ON DAY(S)	4	
				VAR - VARIOUS			
IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:			740	HRS
MONTHLY CALIBRATION TIME:	5	HRS					
STANDARD DEVIATION:	0.97						

JOB #: 2833-13-07-35-C



JOB #: 2833-13-07-35-C

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

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	2.98	1.27	.99	2.55	4.82	6.39	7.38	4.97	3.69	3.55	2.55	6.67	14.20	16.90	15.34	5.25	99.57
<	10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.42	.00	.00	.00	.00	.42
<	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.98	1.27	.99	2.55	4.82	6.39	7.38	4.97	3.69	3.55	2.55	7.10	14.20	16.90	15.34	5.25	

Calm : .00 %

Total # Operational Hours : 704

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3	21	9	7	18	34	45	52	35	26	25	18	47	100	119	108	37	701
<	10												3					3
<	50																	
>=	50																	
	Totals	21	9	7	18	34	45	52	35	26	25	18	50	100	119	108	37	

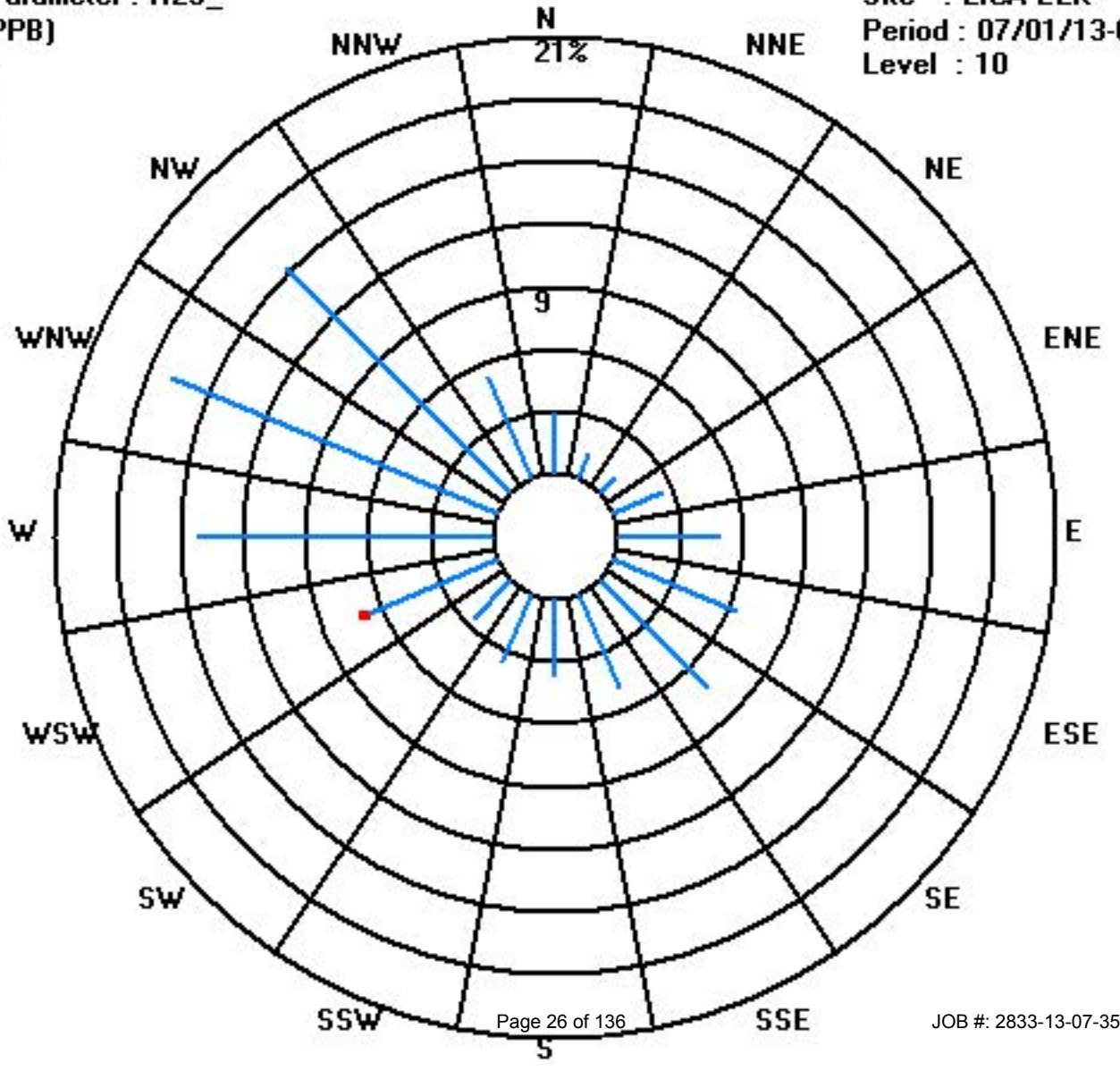
Calm : .00 %

Total # Operational Hours : 704

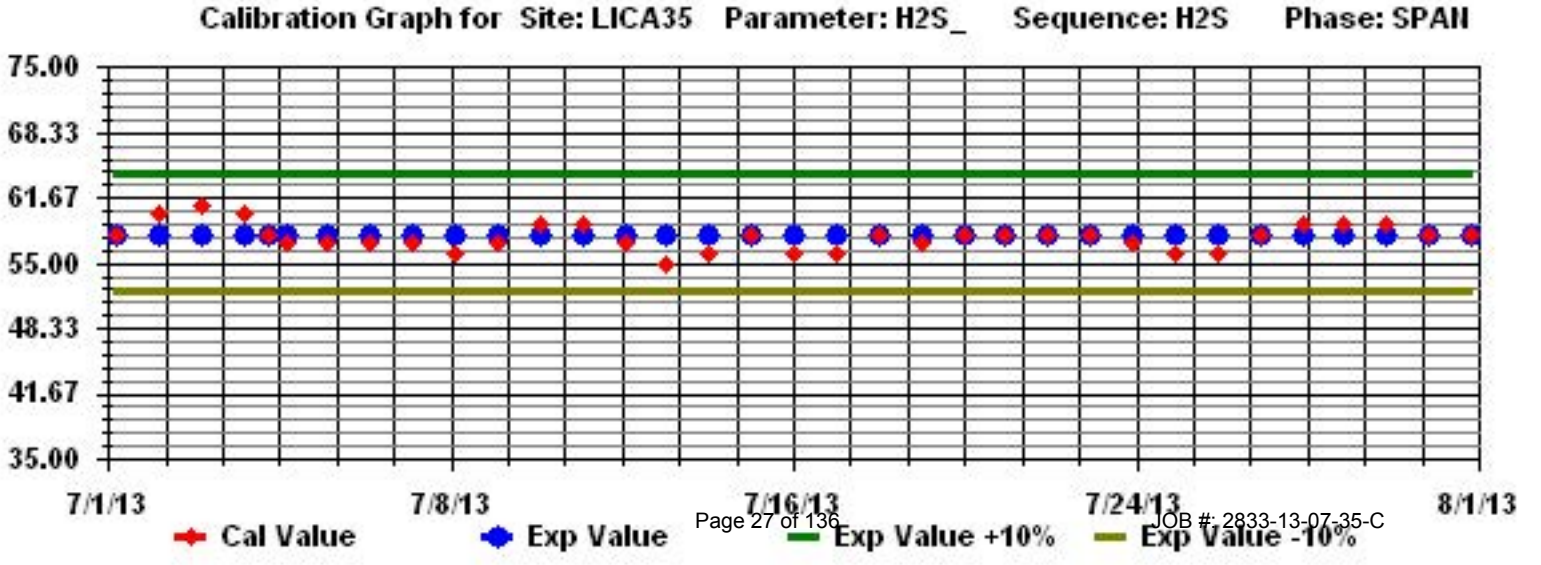
Logger : 35 Parameter : H2S_
Class Limits (PPB)

>= 50
< 50
< 10
< 3

Site : LICA-ELK
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-35-C


Calibration Graph for Site: LICA35 Parameter: H2S_ Sequence: H2S Phase: SPAN
75.00
68.33
61.67
55.00
48.33
41.67
35.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

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

JULY 2013

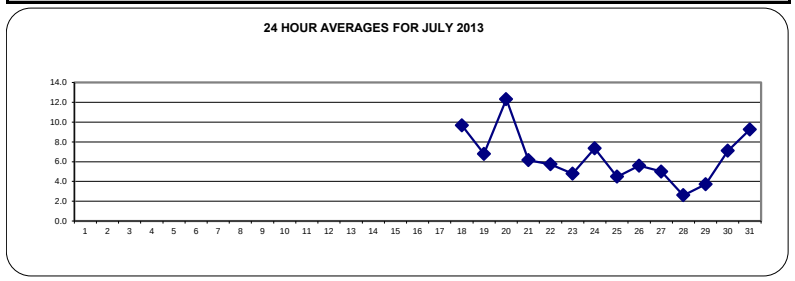
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	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	X	X	X	X	X	X	X	X	X	X	X	X			0
15	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
16	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
17	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
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	**C**	5	11	13	9	12	8	13	9.7	7
19	12	11	6	5	4	12	6	13	14	14	10	0	6	12	3	7	0	11	8	0	0	0	4	5	14	6.8	24
20	1	3	14	12	19	18	19	17	13	15	15	10	22	16	6	9	15	16	5	10	10	7	14	10	22	**12.3**	24
21	1	X	0	5	0	X	10	30	16	X	4	2	13	3	X	3	1	0	1	12	1	3	3	15	30	6.2	20
22	1	4	4	2	X	1	7	3	13	4	7	0	6	9	6	0	16	3	6	8	10	13	9	0	16	5.7	23
23	13	1	3	5	9	2	5	7	5	3	1	4	1	X	9	2	1	4	7	6	4	1	7	10	13	4.8	23
24	4	11	5	8	8	11	9	19	12	8	10	12	5	9	5	0	5	9	6	4	X	3	1	5	19	7.3	23
25	0	2	5	3	4	3	5	0	0	7	8	13	5	2	5	2	X	3	1	8	6	9	4	8	13	4.5	23
26	6	6	6	6	7	7	4	11	1	14	2	18	9	3	4	7	4	0	7	1	1	0	3	7	18	5.6	24
27	4	5	6	8	4	1	11	X	0	3	12	4	2	7	0	4	8	5	7	8	5	5	X	1	12	5.0	22
28	X	X	2	12	0	7	X	1	3	1	7	0	6	0	X	1	4	1	4	0	0	1	2	0	12	2.6	20
29	0	0	2	0	0	4	6	1	3	1	9	16	X	X	X	4	7	4	2	0	5	1	8	5	16	3.7	21
30	0	8	5	X	**42**	4	0	8	6	3	0	X	6	5	**C**	X	1	4	4	5	7	19	3	12	**42**	7.1	21
31	9	22	8	9	X	5	15	15	12	7	11	6	X	7	8	8	10	3	X	X	5	10	15	0	22	9.3	20
HOURLY MAX	13	22	14	12	42	18	19	30	16	15	15	18	22	16	9	9	16	16	8	12	13	19	15	15			
HOURLY AVG	4.3	6.6	5.1	6.3	8.8	6.3	8.1	10.4	7.5	6.7	7.4	7.1	7.4	6.6	5.1	3.9	6.0	4.8	4.8	5.6	5.2	5.8	6.5	6.1			

STATUS FLAG CODES

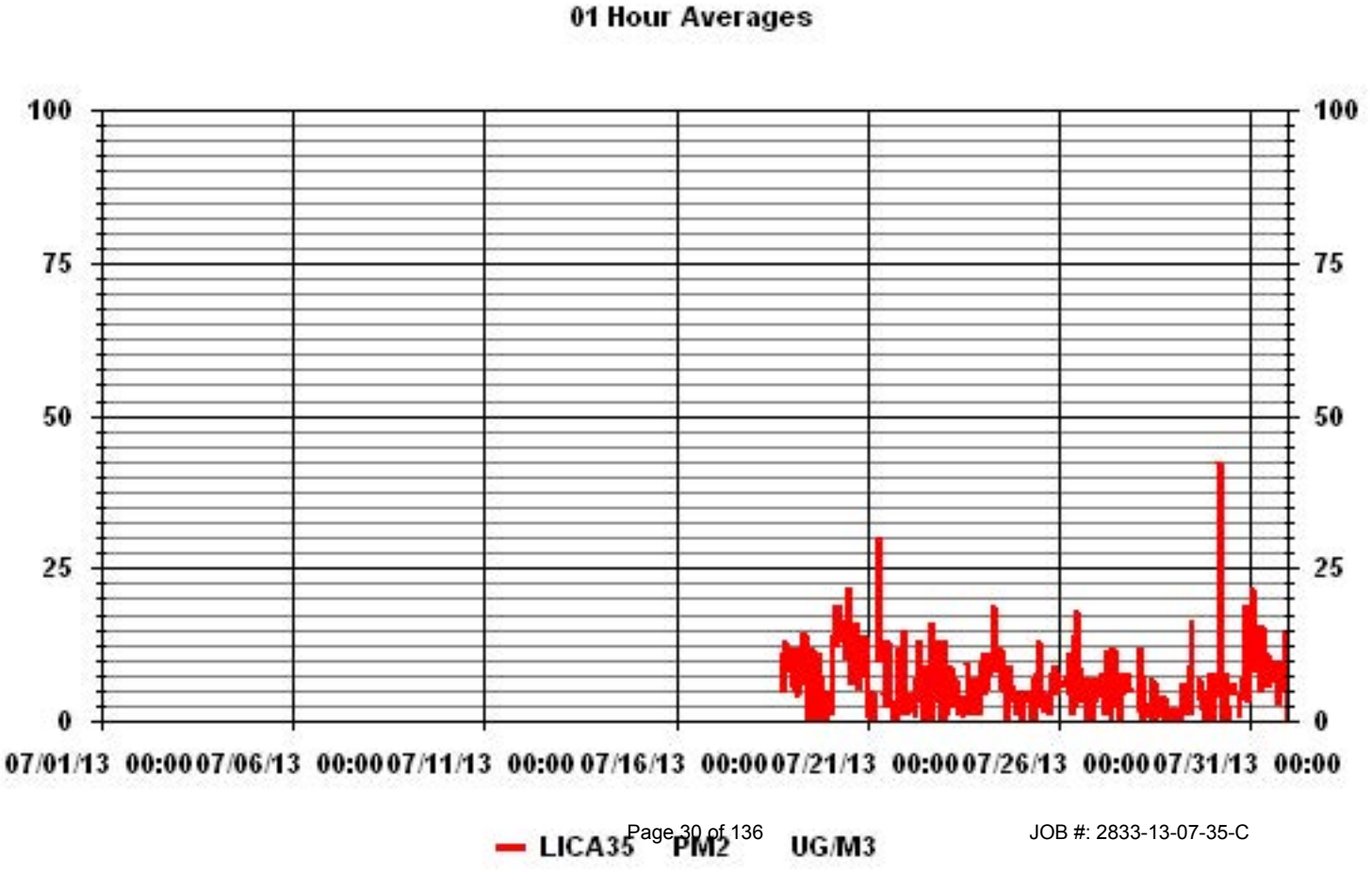
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - PPB | 24-HR 30 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	259					
MAXIMUM 1-HR AVERAGE:	42	UG/M^3	@ HOUR(S)	4	ON DAY(S)	30
MAXIMUM 24-HR AVERAGE:	12.3	UG/M^3			ON DAY(S)	20
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		295	HRS
MONTHLY CALIBRATION TIME:	2	HRS	AMD OPERATION UPTIME:		39.7	%
STANDARD DEVIATION:	5.45		MONTHLY AVERAGE:		6.33	UG/M^3



JOB #: 2833-13-07-35-C

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

July 2013

Distribution By % Of Samples

Logger Id : 35
Site Name : LICA-ELK
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	4.09	1.36	1.02	4.77	6.48	9.89	10.92	4.77	1.70	1.02	1.02	5.80	14.33	13.99	12.28	5.80	99.31
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.34	.00	.34	.68
<	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	4.09	1.36	1.02	4.77	6.48	9.89	10.92	4.77	1.70	1.02	1.02	5.80	14.33	14.33	12.28	6.14	

Calm : .00 %

Total # Operational Hours : 293

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30	12	4	3	14	19	29	32	14	5	3	3	17	42	41	36	17	291
<	60														1		1	2
<	80																	
<	120																	
<	240																	
>=	240																	
	Totals	12	4	3	14	19	29	32	14	5	3	3	17	42	42	36	18	

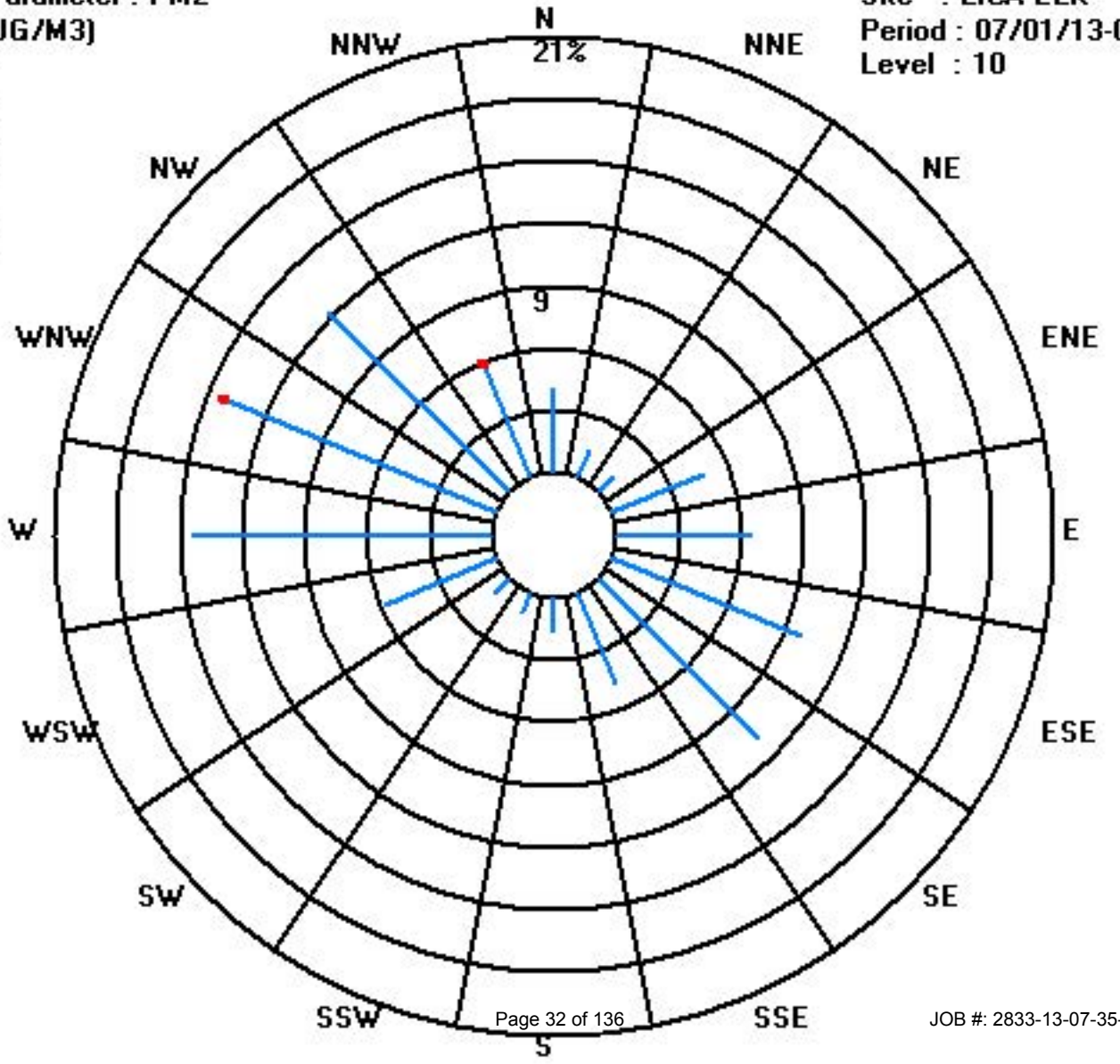
Calm : .00 %

Total # Operational Hours : 293

Logger : 35 Parameter : PM2
Class Limits (UG/M3)

>= 240
< 240
< 120
< 80
< 60
< 30

Site : LICA-ELK
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-35-C

Nitrogen Dioxide

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

JULY 2013

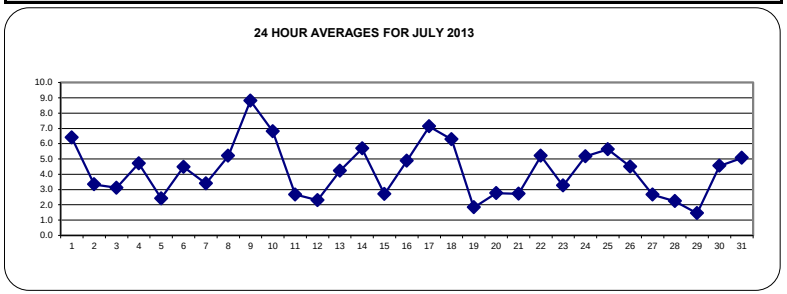
NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	10.4	12.1	10.4	11.4	**S**	7.3	5.8	11.7	17.3	8.2	2.1	1.6	1.2	1.5	1.2	1.4	1.5	1.6	2.6	7.9	6.9	6.9	6.6	9.4	17.3	6.4	24
2	10.4	8.7	7	**S**	6	5.5	5.1	2.4	1.6	3.1	1.4	1.4	1.3	1.2	1.8	2.3	2.3	2.4	1.1	1.8	2.6	4.3	2.7	0.2	10.4	3.3	24
3	0.5	0.9	**S**	0.8	**P**	**P**	3.3	3.1	2.7	2	1.2	1.4	1.8	1.8	2.8	2.5	1.9	2.5	2.6	1.5	5.2	10.1	7	9.7	10.1	3.1	22
4	8.1	**S**	8.7	8.1	8	6.6	4.5	6.3	6.4	3.5	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0.9	1.4	0.6	3.9	2.4	1.8	4.1	8.7	4.7	24
5	**S**	1.7	5	2.9	0.5	1.1	2	1.1	1.4	1.8	1.6	1.6	2.4	2.1	1.9	1.3	1.6	3.6	2	2.9	2.6	1.5	10.6	**S**	10.6	2.4	24
6	3.3	7.8	14.2	10.9	13.5	11	4.1	2.8	4	4.6	8.4	2.2	0.8	0.8	0.5	0.6	1	1.2	0.9	1.1	1.4	6.2	**S**	1.8	14.2	4.5	24
7	3.2	6.7	10.4	15.9	13.1	9.9	3.8	1.5	1.1	1	1.2	1.1	0.7	0.2	0.3	2.2	1	0.2	0.5	0.3	0.9	**S**	0.9	1.8	15.9	3.4	24
8	3.7	2.1	4.8	5.6	11.1	11	9.6	7.9	7.7	4.1	3.2	4	2.3	2.9	2.4	2.7	2.4	2.4	1.7	2	**S**	8.2	7.5	10.3	11.1	5.2	24
9	10.9	11.3	10.2	11.7	13.1	11.8	9.1	5.3	5.5	3.5	3	3.1	3.1	3.2	1.7	3.3	2.6	2.3	2.3	**S**	9.3	17.2	28.5	30.7	30.7	**8.8**	24
10	**30.8**	28.6	10.2	1.5	3.9	14.9	12.9	4	3.5	2	2.5	3	2.1	2	1.9	1.8	1.7	2.1	**S**	3	5.9	9	7.6	1.5	**30.8**	6.8	24
11	0.8	3.7	4.6	6.9	2.9	3.2	2.1	0.7	0.4	0.7	0.7	0.7	1.4	1.6	1.3	1	0.7	**S**	0.9	1.3	1	9.8	7.8	7.2	9.8	2.7	24
12	3.4	4.6	8.5	7.6	4.2	4.1	3.1	1.9	1.4	3.8	0.4	0.5	0.3	0.5	0.4	0.4	**S**	0.4	0.8	0.9	0.4	0.7	0.4	4.3	8.5	2.3	24
13	7.5	9.6	5.8	8.3	10.3	7.6	4	0.3	0.2	0.3	0.2	0.1	0.3	0.3	0.3	**S**	0	0	0	0	3	13.6	11.2	14.3	14.3	4.2	24
14	12.1	12.1	12.7	11.5	9.9	10.1	7.9	8.8	8.2	3.7	3.3	2.3	2	1	**S**	1	1.3	1.6	1.5	1.6	2.4	4.3	6.3	5	12.7	5.7	24
15	5.8	4.6	3.2	5	3.7	1.5	0.8	0.8	0.4	0.5	3.8	0.4	0.6	**S**	0.9	0.9	0.9	4.5	3.2	3.3	4.4	8	3.4	1.5	8	2.7	24
16	4	4.5	4.6	5.8	6.3	6.4	5.3	3.4	1.6	1.5	1.2	0.6	**S**	0.7	1.5	0.6	0.7	0.4	1.2	4.7	11.3	12.6	17.4	15.8	17.4	4.9	24
17	14.9	11	11.9	9.9	9.1	8.1	8.1	9.3	5.7	2.3	2.2	**S**	1.8	2.2	1.5	1.9	2.8	2.1	3	7.8	7.4	17.3	12.8	10.7	17.3	7.1	24
18	11	8.7	9.4	12.2	17	15.6	9.4	4.8	7.3	3.2	**S**	0.8	0.7	0.7	0.7	1	0.5	0.4	0.5	4.8	10.2	13.6	6.7	5.3	17	6.3	24
19	3	0.5	2.9	3.8	7.8	2.6	3.9	1.9	1.3	**S**	0.5	0.3	0.3	0.4	0.2	0.5	0.5	1.1	1.6	1.7	1.4	1.4	2.5	2	7.8	1.8	24
20	1.8	2.2	2.2	3.6	3	2.2	3	2.9	**S**	2.1	2	1.9	1.7	1.5	1.6	1.8	3	2.8	4	3.5	7.6	5.3	2	1.7	7.6	2.8	24
21	1.4	1.4	0.8	0.6	0.5	1.2	1.6	**S**	0.9	0.9	0.8	0.5	0.6	0.7	0.4	0.5	0.6	0.6	2.3	2.3	9.5	12.8	9.5	12	12.8	2.7	24
22	8.9	7.7	7.8	5.2	5	4.8	**S**	7.5	7.5	5.7	3.9	3.9	3	2.3	1.8	1.1	1.6	1.8	2.7	5.3	7.5	10.3	6.4	7.8	10.3	5.2	24
23	8.7	7.1	7.2	10.2	8.5	**S**	5.3	3.8	1.1	0.7	0.8	0.6	0.5	0.7	0.7	0.4	0.3	0.2	0.7	1	1.7	6.2	5.4	3	10.2	3.3	24
24	7.6	14	12.7	10.9	**S**	7.5	7.3	11.6	7.3	2.3	0.9	1.2	0.7	0.6	0.3	0.4	0.5	0.5	0.3	0.4	9	7	9.9	6	14	5.2	24
25	11.2	11.5	11.1	**S**	7.1	7.7	9	9.3	8.6	3.6	2.5	1.9	1.6	1.2	1.3	1.3	1	1.6	1.7	3.5	5.4	11.8	6.7	8.7	11.8	5.6	24
26	8.9	9.1	**S**	6.8	6.5	7	3.4	2.6	1.5	**C**	**C**	**Y**	**Y**	**C**	**C**	**C**	**C**	**C**	0.8	5	6.4	1.9	1.2	1.8	9.1	4.5	22
27	1.1	**S**	1.7	3.7	1.9	2.7	2.7	1.9	1.7	1.3	1.7	1.3	1.1	1	1	1.6	2.5	3.2	2.5	2.1	4.5	5.4	4.5	10.1	10.1	2.7	24
28	**S**	7	7.4	6.6	4.6	3.8	2.7	1.8	1.1	1	0.9	1	0.8	0.7	0.7	0.8	1	1	0.6	0.9	1.2	1.6	2.1	**S**	7.4	2.2	24
29	1.6	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.8	0.7	1.4	10.8	**S**	11.6	11.6	1.5	24
30	1.6	6.1	12.6	10.9	10.2	6.8	6.4	5.3	2	1.1	0.3	0.3	0.4	0.3	0.6	0.4	0.4	0.3	0.2	2.4	11.3	**S**	11.3	13.4	13.4	4.5	24
31	9.8	7	8.2	11	7.2	9.7	8.5	4.5	5.1	1.3	0.4	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.5	**S**	13.6	17.7	11	17.7	5.1	24
HOURLY MAX	30.8	28.6	14.2	15.9	17.0	15.6	12.9	11.7	17.3	8.2	8.4	4.0	3.1	3.2	2.8	3.3	3.0	4.5	4.0	7.9	11.3	17.3	28.5	30.7			
HOURLY AVG	7.1	7.3	7.5	7.2	7.0	6.6	5.2	4.3	3.8	2.4	1.8	1.4	1.2	1.2	1.1	1.2	1.2	1.5	1.5	2.5	5.0	8.1	7.5	7.7			

STATUS FLAG CODES

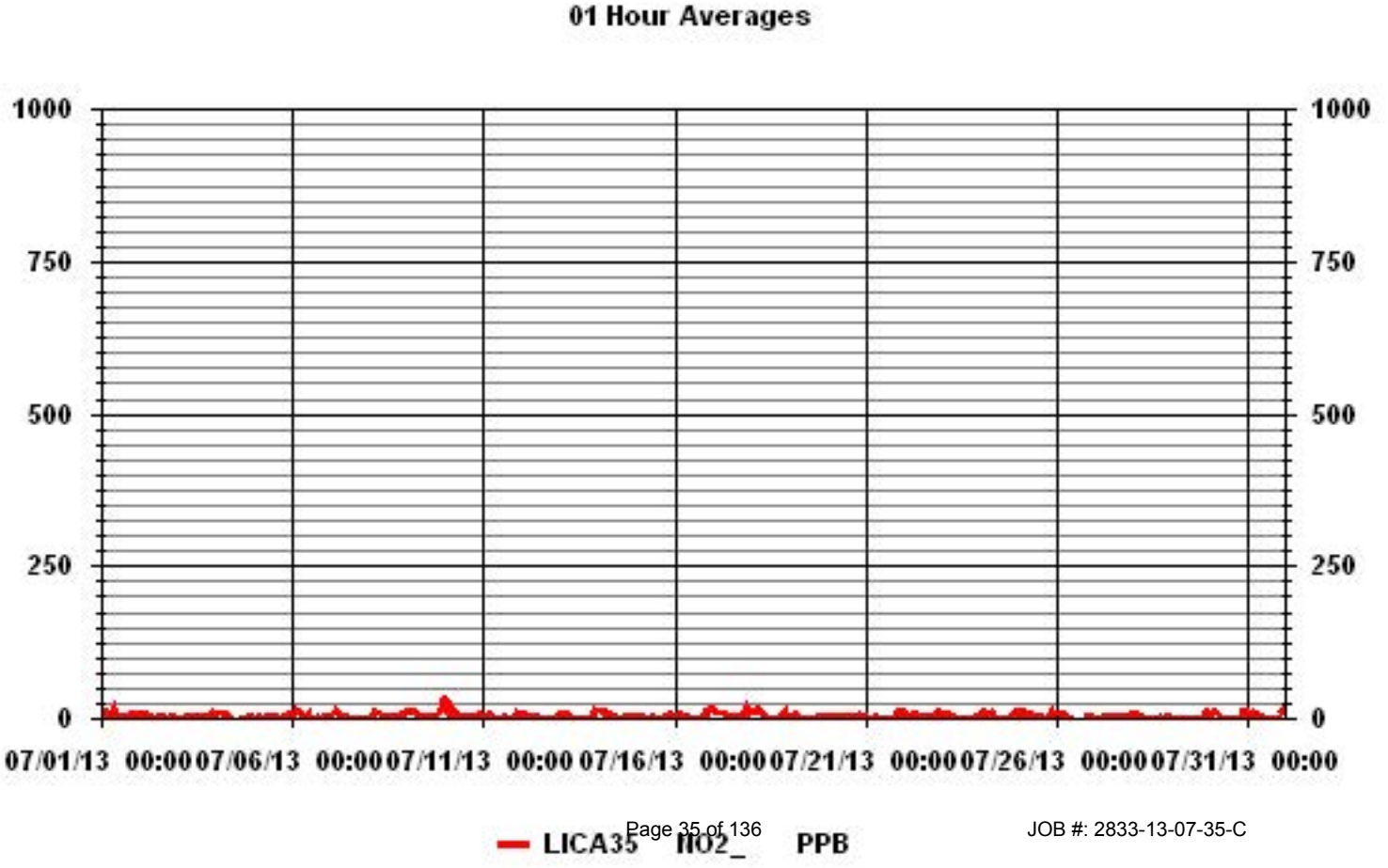
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 159 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	689						
MAXIMUM 1-HR AVERAGE:	30.8	PPB	@ HOUR(S)	0	ON DAY(S)	10	
MAXIMUM 24-HR AVERAGE:	8.8	PPB			ON DAY(S)	9	
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		740	HRS	
MONTHLY CALIBRATION TIME:	14	HRS	AMD OPERATION UPTIME:		99.5	%	
STANDARD DEVIATION:	4.39		MONTHLY AVERAGE:		4.24	PPB	



JOB #: 2833-13-07-35-C

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

JULY 2013

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

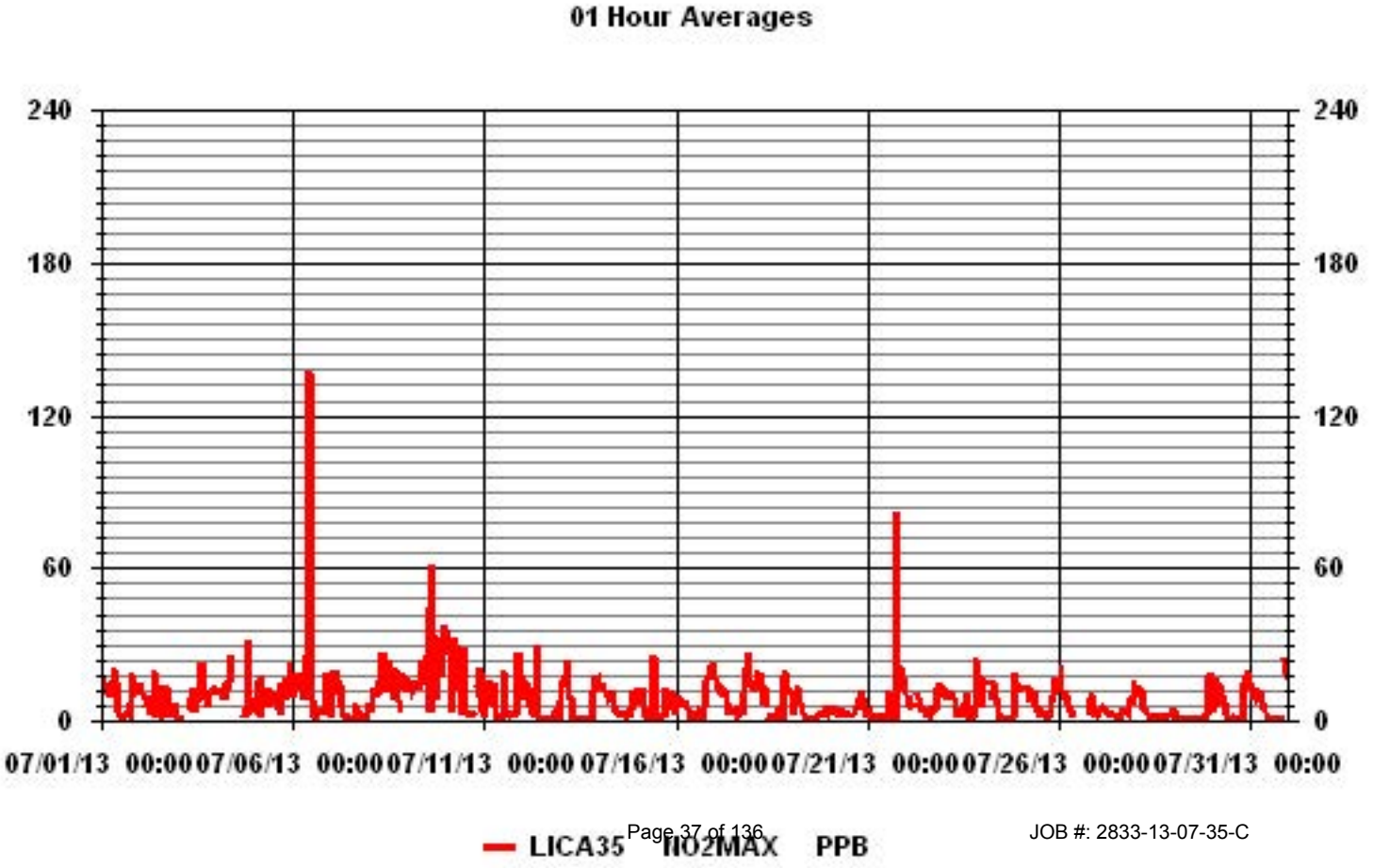
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	13.7	14.7	12.9	13.8	**S**	13.2	9	15.6	20.5	16.2	4.3	2.7	1.9	2.5	2.1	2.5	2.8	2.5	6.7	19.2	9.6	10.8	11.3	13.6	20.5	9.7	24
2	13.9	10.9	9.5	**S**	6.9	9.6	7.9	3.4	2.3	20.1	2.1	2	2	1.9	13.6	3.6	4	14.3	1.9	3.6	3.9	6.1	6.2	1	20.1	6.6	24
3	1.2	1.3	**S**	**P**	**P**	**P**	5.4	8.7	6.4	13.3	3.1	5.8	7.4	11	22	22.2	8.6	11.4	5.7	6.7	10.3	12.7	10.1	13.3	22.2	9.3	21
4	11.1	**S**	12.4	9.8	10.1	8.5	14.3	12.4	15.4	24.8	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2.9	4.6	1.7	31.9	4.4	4.6	7.6	31.9	11.0	24
5	**S**	3.7	15.4	16	1.4	8	9.7	12.7	5	6.6	6.7	10.9	10.1	7.6	6.1	**S**	3.7	15.1	11.9	8	16.7	9.6	21.3	**S**	21.3	9.8	24
6	11	12.6	18.6	16.2	16.9	14.5	10.9	8.6	26	49.3	**137.3**	12.4	8.6	2.4	1.9	2.3	2.9	3.6	3.9	4.1	3.9	17.1	**S**	2.5	**137.3**	16.8	24
7	11.4	10.1	19.5	19.3	16.2	14.5	6.1	2.8	1.9	1.8	2	1.7	1.3	0.9	1.4	6.6	2.1	1	2.3	1.1	1.7	**S**	1.5	3.6	19.5	5.7	24
8	6.5	3.3	10.1	12	12.8	15.4	11.1	11.5	25.6	25.6	15	11.2	23.9	12.8	16.5	8.1	20.4	16.9	8.5	4.7	**S**	17.7	13.1	11.8	25.6	13.7	24
9	15.7	15.4	11.7	12.8	15.4	15.1	13.7	13.8	23.8	17.1	14.6	17.9	25.6	45	3.4	61.1	11.9	33.6	9.2	**S**	18.6	24.4	37.6	36.5	61.1	21.5	24
10	36	33.4	26.6	3.6	12	32.4	30.4	16.8	14.2	4	3.9	28.7	3.7	2.9	2.8	2.8	2.5	3.1	**S**	12.8	8.9	20.6	19.4	4.6	36	14.2	24
11	1.8	9.3	8.7	16.1	7.4	6.9	14.5	1.8	1.2	1.8	2.2	1.8	20.2	3.2	2.9	3.2	2.2	**S**	3.4	2.6	2.8	27.2	23.5	19.2	27.2	8.0	24
12	8.1	10.5	14.2	13.2	6.6	5.8	4.1	3.1	1.9	29.3	1.6	1.1	1.1	1.1	1.3	1.1	**S**	0.9	1.8	2.8	0.9	1.4	0.9	8.1	29.3	5.3	24
13	14.6	16.4	15.5	17.6	24.2	10.3	9.1	0.8	0.7	0.8	0.7	0.5	0.7	0.7	0.9	**S**	0.5	0.5	0.5	0.7	11.4	17.3	16	17.1	24.2	7.7	24
14	15.3	13.7	14	12.6	10.8	12.1	9.2	10	11.3	6.5	4.2	3.7	3.4	3	**S**	3	2.5	3.5	2.8	2.7	4.1	11.3	11.5	6.5	15.3	7.7	24
15	12.9	9.7	6.9	12.7	5.6	2.5	1.4	1.3	0.9	1	25.8	1	1.1	**S**	1.8	2.4	1.4	12.5	6.6	4.3	6.3	11.4	5.5	2.7	25.8	6.0	24
16	5.1	10.1	7.5	6.8	7.8	7.6	7.2	5.4	2.2	2.4	2.6	1.3	**S**	1.9	4.1	3.1	2.2	1.4	5.5	15.9	17.5	21.8	20.2	22.7	22.7	7.9	24
17	17.2	13.9	14.2	11.6	11	9.6	12.3	11.6	7.9	4.3	4.1	**S**	4.7	5	2.5	3.3	4.4	4.1	10.8	18.5	20.7	26.9	16.3	14.6	26.9	10.8	24
18	13.8	13.2	14.3	18.8	18.8	17.9	14.8	6.4	12.3	6.1	**S**	1.5	1.3	1.2	1.7	3	1.1	1.3	1.5	17.6	19.2	15.7	12	11.9	19.2	9.8	24
19	10.8	2.4	6.5	9.6	14	8.7	7.2	3.8	2	**S**	1	0.8	0.7	0.8	0.7	1.6	1.3	1.9	2.8	2.7	3.1	2.8	5.6	3.7	14	4.1	24
20	4.9	4.2	4.2	4.8	3.7	3.1	3.9	4.1	**S**	2.6	2.5	2.4	2.6	2.1	2.3	2.6	5	5.6	9.1	6.9	11.8	9.7	5	2.4	11.8	4.6	24
21	2.4	3.4	1.2	0.9	0.9	1.9	1.9	**S**	1.1	2.9	0.8	0.8	0.9	12.2	0.7	0.8	1.1	0.9	82	10.6	21.5	18	15.9	15.7	82	8.6	24
22	11.1	8.6	9.9	5.8	5.9	6	**S**	10.5	9.3	7.1	4.7	4.6	4.4	2.9	2.6	1.9	4.8	4.6	5.1	12.6	13.4	13.3	9.1	13.3	13.4	7.5	24
23	12.6	10.2	9.9	11.7	9.8	**S**	8	5.7	2.3	2.3	3.3	1.9	6.3	7.2	11.3	0.9	0.9	0.8	3	1.7	24.6	10.7	9.6	4.9	24.6	6.9	24
24	16.3	15.8	15	15.1	**S**	9.2	11.4	16.1	10.2	6.7	2	2.3	1.5	1.2	1.2	1.2	1.2	1.2	1.2	1.6	18.3	11.6	12.9	11.3	18.3	8.0	24
25	13.4	13	13.2	**S**	8.1	13.3	10.7	10.6	10.8	6.5	3.8	4.5	3.9	2.5	2.6	2.5	2.2	3.6	3.3	7.2	9.9	17	14.2	17	17	8.4	24
26	11.5	20.3	**S**	11	8.2	8.6	6.5	4.4	2.2	**C**	**C**	**Y**	**Y**	**C**	**C**	**C**	**C**	**C**	3.2	8.4	10.4	4	2.6	2.9	20.3	7.4	22
27	2	**S**	5	5.8	4.8	3.7	4.1	3.3	3.1	2.3	2.5	2.2	1.7	1.7	1.7	3.9	3.5	4.3	4.5	3.7	8.3	9.2	8.6	15	15	4.6	24
28	**S**	11.7	13.7	10.9	11	5.4	4.3	3.4	2	1.8	1.9	1.9	1.5	1.7	1.5	1.9	1.8	2	1.2	1.9	2.2	2.8	3.8	**S**	13.7	4.1	24
29	3.8	1.2	1	0.9	1.2	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.9	0.7	0.7	1.1	1.7	1.3	2.6	16.5	**S**	18	18	2.6	24
30	3	9.3	16.6	12.5	14.6	9	9.9	7.6	3.3	2.2	1.4	1.2	1.4	1.3	1.6	1.3	1.3	1.1	1	14.9	16.9	**S**	18.3	15.1	18.3	7.2	24
31	13.1	9.7	10.1	12.9	9.5	10.6	10.8	6	6.4	4.2	1	0.8	1	0.8	1	0.8	0.8	0.8	0.9	1.2	**S**	23.3	19.2	17.4	23.3	7.1	24
HOURLY MAX	36.0	33.4	26.6	19.3	24.2	32.4	30.4	16.8	26.0	49.3	137.3	28.7	25.6	45.0	22.0	61.1	20.4	33.6	82.0	19.2	31.9	27.2	37.6	36.5			
HOURLY AVG	10.8	10.8	11.7	11.2	9.8	9.8	9.0	7.4	7.8	9.3	9.1	4.6	5.1	4.9	4.0	5.5	3.5	5.4	6.9	6.7	11.4	13.6	12.3	11.5			

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:	691						
MAXIMUM INSTANTANEOUS VALUE:	137.3	PPB	@ HOUR(S)	10	ON DAY(S)	6	
IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:			739	HRS
MONTHLY CALIBRATION TIME:	14	HRS					
STANDARD DEVIATION:	9.39						



JOB #: 2833-13-07-35-C

LICA-ELK
NO2_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

Logger Id : 35
Site Name : LICA-ELK
Parameter : NO2_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	3.03	1.29	1.01	2.59	4.90	6.49	6.63	4.61	3.75	3.60	2.59	7.21	14.43	16.88	15.58	5.33	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	3.03	1.29	1.01	2.59	4.90	6.49	6.63	4.61	3.75	3.60	2.59	7.21	14.43	16.88	15.58	5.33	

Calm : .00 %

Total # Operational Hours : 693

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	21	9	7	18	34	45	46	32	26	25	18	50	100	117	108	37	693
<	110.0																	
<	210.0																	
>=	210.0																	
	Totals	21	9	7	18	34	45	46	32	26	25	18	50	100	117	108	37	

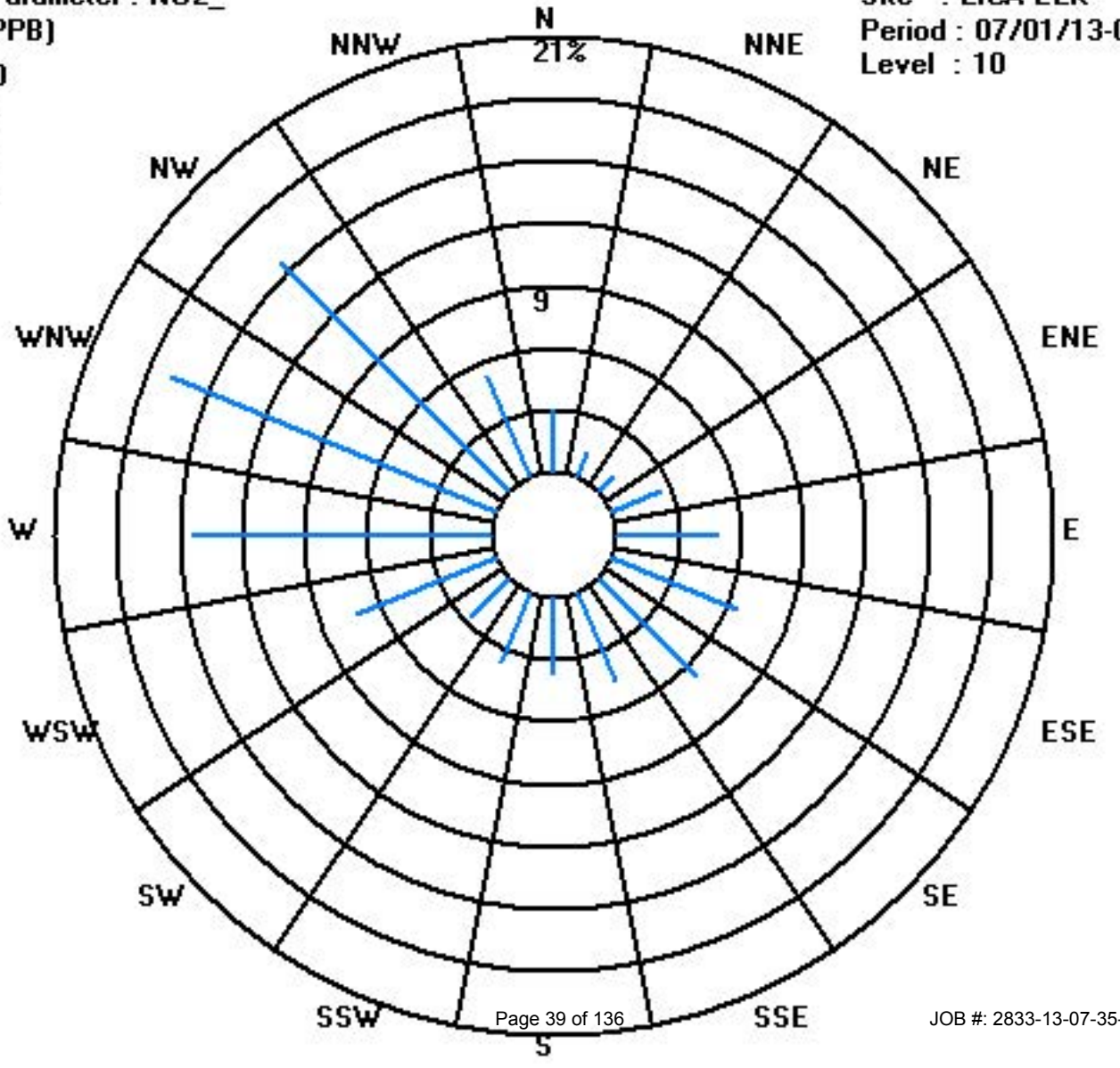
Calm : .00 %

Total # Operational Hours : 693

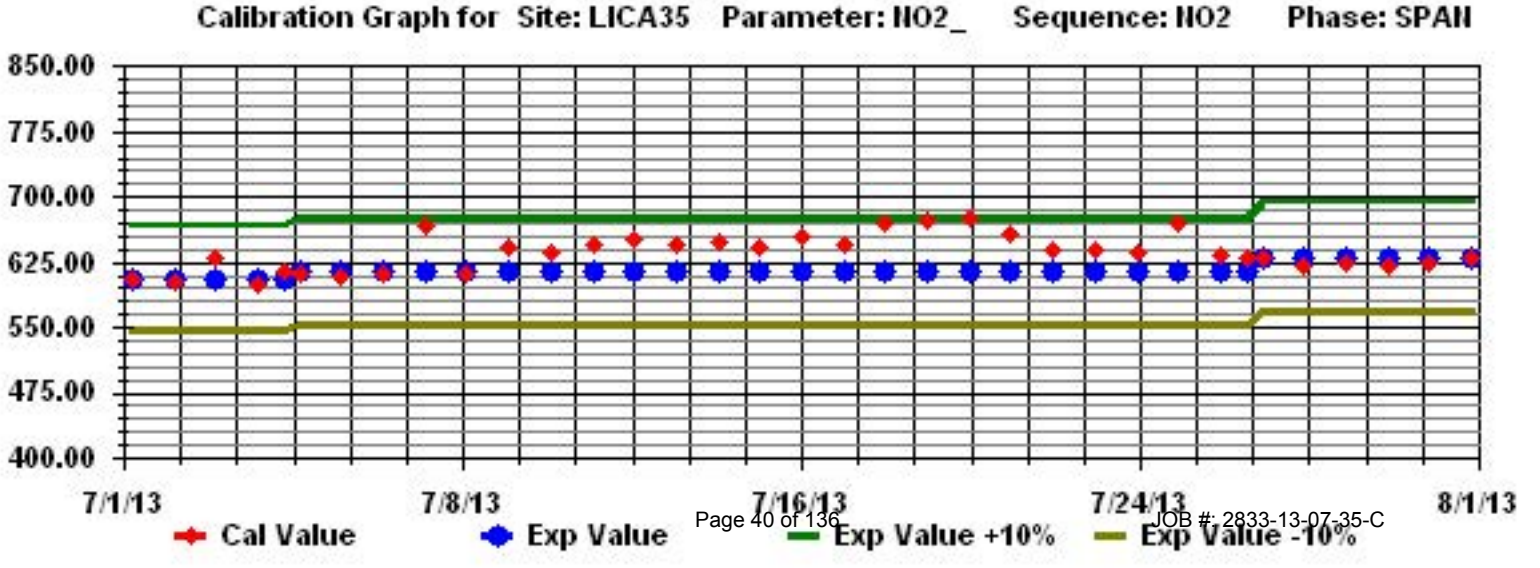
Logger : 35 Parameter : NO2_
Class Limits (PPB)

>= 210.0
< 210.0
< 110.0
< 50.0

Site : LICA-ELK
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-35-C


Calibration Graph for Site: LICA35 Parameter: NO2_ Sequence: NO2 Phase: SPAN
850.00
775.00
700.00
625.00
550.00
475.00
400.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

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

JULY 2013

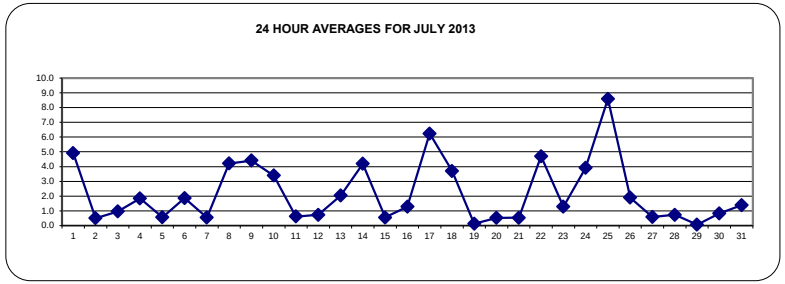
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.4	6.2	5	17.2	**S**	32.8	13.3	13.8	15.6	3.8	0.2	0.2	0	0.1	0.1	0.1	0	0.1	0.4	1	0	0.1	0.3	0.3	32.8	4.9	24
2	0.5	0.2	0	**S**	0.7	1.8	2.3	0.7	0.3	2.4	0.3	0.2	0	0	0	0.4	0.4	1.3	0	0	0	0	0	0	2.4	0.5	24
3	0	0	**S**	0.2	**P**	**P**	0.3	2	2.4	2	0.7	1	1.4	0.9	1.6	1.7	1.3	2.6	1.1	0.1	0.3	0.2	0.2	0.2	2.6	1.0	22
4	0.1	**S**	2.1	1.1	1.9	4.6	3.9	5.8	4.6	1.7	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0.1	0	0	3.5	0	0	0	5.8	1.8	24
5	**S**	0.4	0.2	0.3	0	0.2	1	0.3	0.9	0.8	0.5	0.2	0.5	0.8	0.9	0	0.1	1.6	0.5	0.4	0.6	0	2.4	**S**	2.4	0.6	24
6	1	0.3	7.4	2.3	6	3.4	2.3	1.6	4.5	4.9	5.9	2.2	0.5	0	0	0	0	0	0	0	0	0.3	**S**	0.4	7.4	1.9	24
7	0	0.1	1	1.4	3	3.4	1.1	0.6	0.2	0	0.2	0.2	0.1	0	0	0.1	0.2	0	0	0	0	**S**	0.6	0.2	3.4	0.5	24
8	0.3	0.1	3.2	1.3	28.5	19.6	12.9	8.1	6.9	3.1	2.4	1.8	0.8	1.4	1.8	1.4	1	0.3	0.5	0.4	**S**	0.8	0.1	0.1	28.5	4.2	24
9	0.7	1	0.7	8.4	15.7	22.9	21.5	2.6	3.1	2	1.3	1.1	1	0.9	0.1	0.8	0.5	0.1	0	**S**	0.8	0.5	2.8	12.9	22.9	4.4	24
10	14.7	21	12	0.3	0.9	7.6	10.4	2.4	1.9	0.6	0.7	1.6	0.7	0.4	0.1	0	0.1	0.2	**S**	0.7	0.2	0.6	0.8	0.1	21	3.4	24
11	0	0	0.1	0.3	0.1	0.9	1.8	0.3	0.2	0	0.2	0	0.4	0.6	0.5	0.4	0.2	**S**	0.7	0	0	4.3	2.5	0.6	4.3	0.6	24
12	0	0	0.3	0.4	0.4	1.5	1.9	1.2	1	6.3	0.3	0.2	M	0.2	0.1	0.2	**S**	0.7	0.4	0.5	0	0	0	0.4	6.3	0.7	24
13	1.1	2.9	2.2	2.9	20.3	3	2.7	0.1	0.1	0	0	0	0.1	0.1	0.1	**S**	0.7	0.5	0.4	0.5	1.4	1.6	1.9	4.1	20.3	2.0	24
14	4.7	6.6	9.1	6.2	9	17.7	11.5	10.5	7.3	2.1	1.4	1	0.8	1	**S**	1.4	1.2	1.2	1	0.5	0.3	0.8	0.6	0.4	17.7	4.2	24
15	0.7	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	3	0.2	0.3	**S**	0.3	0.1	0	1.7	0.7	0.7	0.6	1.2	0	0	3	0.6	24
16	0	0.6	0	0	0.4	3.5	3.6	2	0.4	0	0	0	**S**	1	0.8	0.3	0.3	0.2	0.2	1.2	2.2	3.5	2.4	6.7	6.7	1.3	24
17	9.6	14.1	23	23	23.7	12.9	10.2	10.6	3.1	0.8	0.7	**S**	1.3	0.9	0.3	0.4	0.7	0.5	0.6	1.1	0.6	3.6	0.3	1.5	23.7	6.2	24
18	1.6	1.1	0.9	9.6	38.1	24.4	4.2	1.5	2.1	0.5	**S**	0.3	0	0	0	0	0	0	0	0	0.5	0.3	0	0	38.1	3.7	24
19	0	0	0	0.1	0.6	0.3	0.1	0	0	**S**	0.6	0.2	0.1	0	0.2	0.2	0	0	0.1	0.2	0	0	0.1	0	0.6	0.1	24
20	0.1	0.2	0	0	0	0	0.2	0.8	**S**	1.6	1.3	0.7	0.7	0.4	0.5	0.5	0.9	0.9	1	0.5	1.4	0.4	0	0	1.6	0.5	24
21	0	0.1	0	0	0	0.1	0.5	**S**	1	0.4	0.1	0.1	0	0.2	0	0	0	0	0.3	0.6	2.9	1.5	2.6	1.8	2.9	0.5	24
22	2.9	2.5	8.1	10.7	20.4	18.8	**S**	12.5	10.9	5.8	3.4	2.3	2.1	1.3	0.8	0.4	0.7	0.6	0.4	0.7	0.7	1.1	0.5	0.5	20.4	4.7	24
23	0.4	0.2	2.1	6.9	6.3	**S**	6.6	3.6	0.3	0.7	0.3	0	0	0.3	0.3	0	0	0	0.1	0	0.3	0.8	0.1	0	6.9	1.3	24
24	0.6	7.6	9.1	16.2	**S**	14.4	16.5	17.3	3.9	0.7	0	0.1	0	0	0	0	0	0	0	0	1.2	0.5	1.1	0.8	17.3	3.9	24
25	14.8	19.9	22.7	**S**	16.5	**59**	23.3	15.6	14.7	1.8	1.1	0.6	0.6	0.4	0.6	0.5	0.6	0.6	0.5	0.5	0.3	0.4	0.7	1.8	**59**	**8.6**	24
26	1.8	2.7	**S**	3.5	1.3	5	3.3	2.2	1.2	**C**	**C**	**Y**	**Y**	**C**	**C**	**C**	**C**	**C**	0.8	2.1	2.3	0.3	0	0	5	1.9	22
27	0	**S**	0.9	1.9	0.6	0.4	0.3	0.5	0.7	0.7	0.9	0.5	0.5	0.4	0.4	0.5	0.4	0.5	1.1	0.4	0.3	0.2	0.3	0.9	1.9	0.6	24
28	**S**	0.8	0.6	0.8	1.6	1.3	1.9	1.4	1	0.9	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.4	0.2	0.2	0.1	0.2	0.5	**S**	1.9	0.7	24
29	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	**S**	0.9	0.9	0.1	24
30	0	0.4	5.5	0.3	1	0.8	2.4	2.6	1.3	0.5	0.2	0.1	0	0	0	0.1	0	0	0	0.3	0.8	**S**	1.1	1.4	5.5	0.8	24
31	0	0	0	0.5	0.2	8.9	9.3	3.6	3.8	0.4	0.1	0	0.1	0.1	0	0	0	0	0	0	**S**	1.7	2.4	0.8	9.3	1.4	24
HOURLY MAX	14.8	21.0	23.0	23.0	38.1	59.0	23.3	17.3	15.6	6.3	5.9	2.3	2.1	1.4	1.8	1.7	1.3	2.6	1.1	2.1	3.5	4.3	2.8	12.9			
HOURLY AVG	2.0	3.1	4.0	4.0	7.1	9.3	5.7	4.2	3.1	1.5	1.0	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.7	0.9	0.8	1.3			

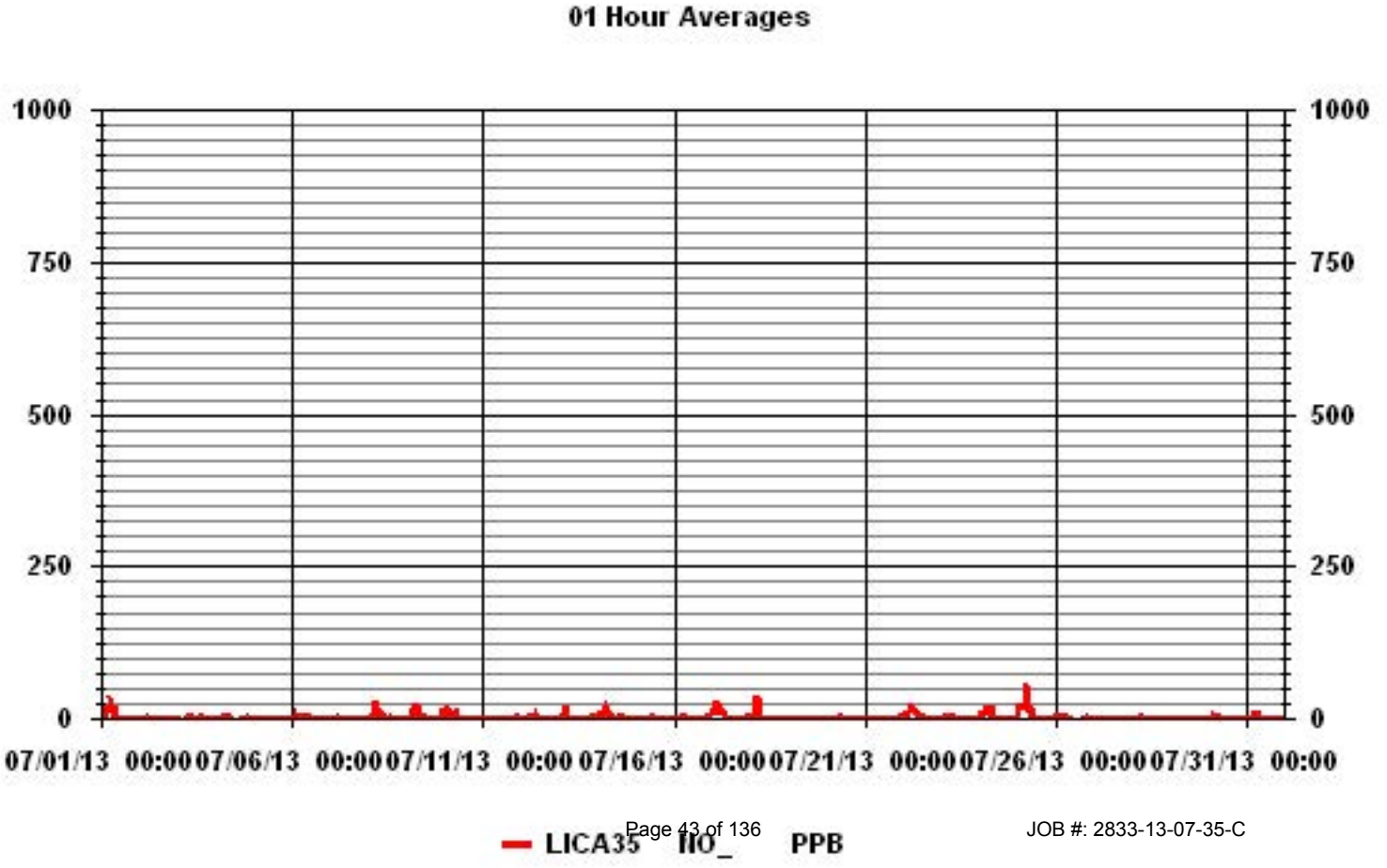
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	536						
MAXIMUM 1-HR AVERAGE:	59.0	PPB	@ HOUR(S)	5	ON DAY(S)	25	
MAXIMUM 24-HR AVERAGE:	8.6	PPB			ON DAY(S)	25	
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		740	HRS	
MONTHLY CALIBRATION TIME:	14	HRS	AMD OPERATION UPTIME:		99.5	%	
STANDARD DEVIATION:	5.12		MONTHLY AVERAGE:		2.20	PPB	



JOB #: 2833-13-07-35-C

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

JULY 2013

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

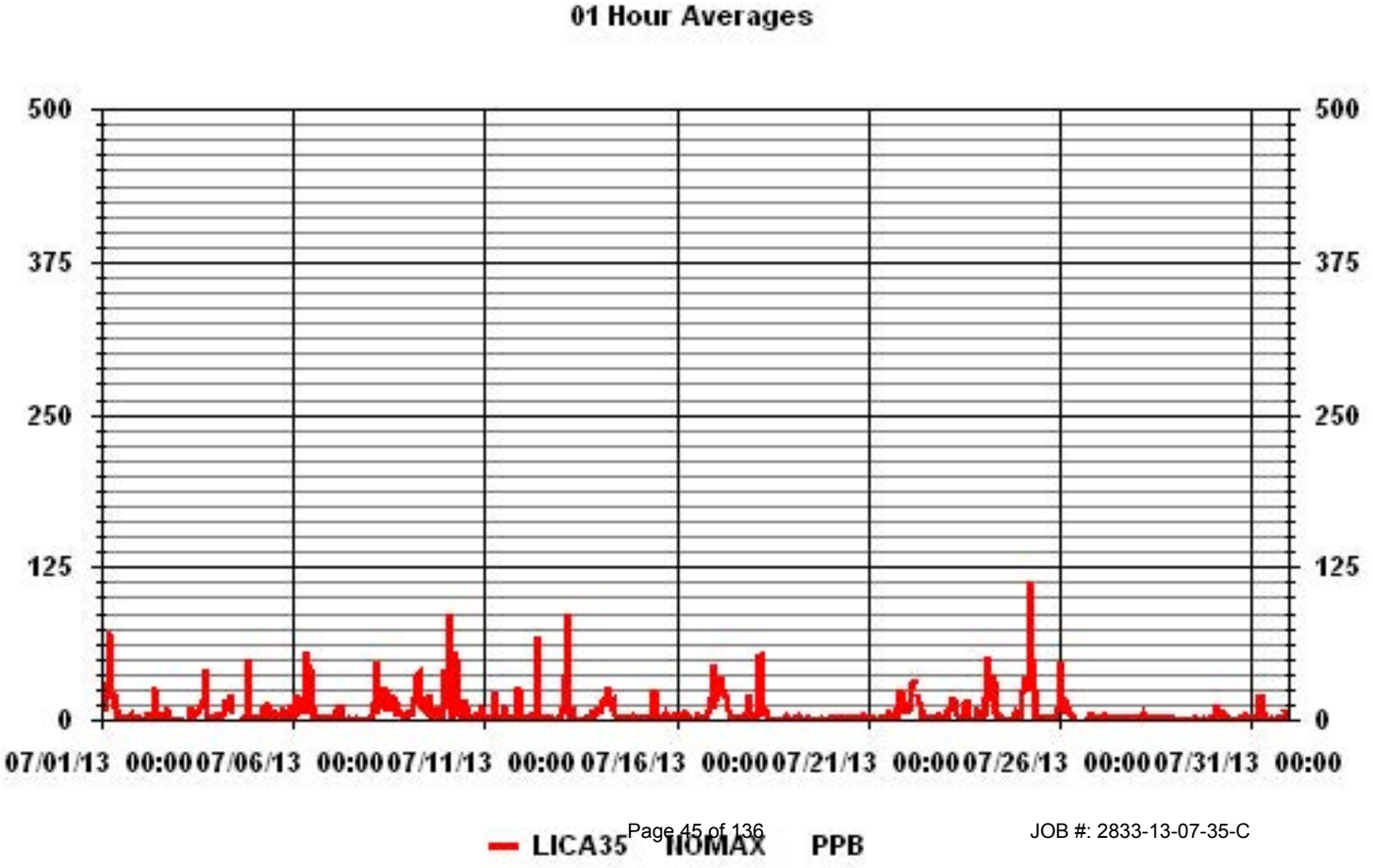
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	12.9	10.7	7.3	28.3	**S**	69.3	24.7	18.5	21.6	10.2	1	0.8	0.6	0.7	0.8	0.7	0.6	0.8	1.5	3.7	0.6	1.1	1.4	1.2	69.3	9.5	24
2	2.2	0.8	0.6	**S**	1.4	4.4	4.7	1.5	1	25.8	1.3	0.9	0.9	0.5	5.1	2	2.5	10.9	0.3	0.1	0.3	0.2	1.3	0.1	25.8	3.0	24
3	0.3	0.2	**S**	**P**	**P**	**P**	2	7.3	6.2	10.4	2.3	3.4	5.4	8.7	14.3	13.3	14.2	41	2.9	1.5	2.1	1.1	1.7	1.2	41	7.0	21
4	1	**S**	4.4	1.8	3.2	8	15.1	10.8	9.6	18.3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	1.8	0.1	49.7	0.4	0.2	0.9	49.7	7.9	24
5	**S**	1.3	1.2	1.8	0.4	9.2	4	11.5	14.7	3.2	3.3	1.9	7.6	3.6	3.9	**Y**	1.2	7.8	8.1	1.8	5	3.1	11	**S**	14.7	5.0	23
6	6.6	1.6	20	6.3	18.7	7.6	8.2	4.6	56.2	45.1	43.2	25.8	12.6	1.5	0.4	0.7	1	1	1	0.9	0.4	3	**S**	1.4	56.2	11.6	24
7	0.9	0.9	6.5	5.5	10.6	10.9	2	1.7	0.7	0.5	0.9	0.8	0.6	0.3	0.3	1.1	0.9	0.3	1.4	0.3	0.3	**S**	1.5	0.8	10.9	2.2	24
8	1	0.7	14.4	5.1	48.3	29.6	18.4	15.7	18.6	23.7	26	7.4	12.9	19.1	18.4	8.8	17.4	1.8	9.1	5.8	**S**	4.3	1	1	48.3	13.4	24
9	6.4	6.4	3.7	13.1	18.4	35.8	37.6	14.1	20	12	9.5	7.8	9.8	20.2	1	8.9	7	7.9	1.3	**S**	8	1.3	8.2	42	42	13.1	24
10	20.5	28.6	86.9	0.8	4.8	55.7	50.3	14.2	5.5	2.2	1.9	17	11.8	1.1	1	0.8	1.2	1.7	**S**	4.8	0.9	6	13.2	0.8	86.9	14.4	24
11	0.3	0.5	0.9	1.5	1	3.2	21.7	0.9	0.7	0.6	0.7	0.5	12.8	1.9	1.6	1.2	1.1	**S**	1.7	0.6	0.7	26.7	13.7	4.9	26.7	4.3	24
12	0.3	0.5	1.2	1.2	2	3.3	3.1	2.2	1.9	67.1	1.1	0.9	0.9	1	0.8	0.8	**S**	1.9	1.2	1.8	0.5	0.4	0.4	2.4	67.1	4.2	24
13	5.5	9.5	18.8	37.2	87	6.1	7.2	0.6	0.7	0.5	0.6	0.4	0.7	0.5	0.8	**S**	1.4	1.1	0.9	1	8.1	3.9	7.6	7.2	87	9.0	24
14	7	15.4	17	10.8	15.5	25.6	15.5	12.6	14.6	4.7	2.5	1.9	1.9	2.3	**S**	3.1	2.2	2.4	1.6	1.2	0.7	4.1	3.2	0.9	25.6	7.2	24
15	2.6	0.9	0.9	1.5	0.9	0.8	0.9	0.9	1	1.1	24.4	0.8	0.7	**S**	1.2	0.8	0.5	4.7	1.6	1.3	1.3	2.9	0.8	0.1	24.4	2.3	24
16	0.2	5.6	0.5	0.5	1.4	5.8	5.8	3.6	0.8	0.6	1.1	0.2	**S**	3.2	2.9	1.5	1.2	1.6	1.6	5.9	7.4	18.7	8.2	44.4	44.4	5.3	24
17	15.1	19.5	35.2	29.1	31	25.4	21.9	18.1	9	1.7	2	**S**	2.3	1.9	0.9	1.2	1.6	1.4	2.7	3.7	2.1	19.6	0.8	5.6	35.2	10.9	24
18	4.2	2.7	2.3	52.2	53	41.4	12.1	2.8	7	1.7	**S**	1	0.5	0.5	0.4	0.9	0.4	0.2	0	1.6	3.6	1.9	0.6	0.4	53	8.3	24
19	1.3	0.2	0.1	2.4	3.2	3.2	2.3	0.4	0.5	**S**	1.7	1	0.4	0.5	0.5	0.7	0.5	0.4	0.9	0.8	0.5	0.4	1.5	0.6	3.2	1.0	24
20	1.1	0.9	0.8	0.9	0.6	0.6	0.9	1.6	**S**	3.2	2.2	1.3	1.6	1.1	1.3	1.3	2.1	2.6	3.2	1.9	3.5	1.3	0.5	0.5	3.5	1.5	24
21	0.5	2.4	0.5	0.5	0.5	0.5	1.1	**S**	2	1.7	0.7	0.8	0.5	7	0.4	0.4	0.5	0.5	10.8	4.1	24.4	3.9	11.6	4.2	24.4	3.5	24
22	7.9	8	14.8	26.2	29.8	32.3	**S**	19	15	10.4	4.4	3	3.2	2.4	1.3	1.3	2.1	2	1.8	2.9	3	3	1.6	1.5	32.3	8.6	24
23	1.5	1.1	7.9	10.1	16.1	**S**	15.7	5.5	0.9	1.8	1.8	0.8	4.8	12.9	16.5	0.5	0.4	0.4	1.2	0.5	10	2.4	1.5	0.4	16.5	5.0	24
24	3	17.4	13.7	48	**S**	27.6	37.6	33	6.5	3.6	0.5	1.6	0.3	0.4	0.4	0.4	0.4	0.6	0.2	0.4	5.4	2.6	2.4	7.3	48	9.3	24
25	22.3	23.6	33.1	**S**	31.2	**114.1**	51.3	24.2	26.1	3.9	2	1.8	1.5	1.3	1.5	1	1.6	1.6	1.2	1.1	0.9	1.1	8.6	10.9	**114.1**	15.9	24
26	7.9	44.8	**S**	15.4	4	8.9	6.5	5.1	2	**C**	**C**	**Y**	**Y**	**C**	**C**	**C**	**C**	**C**	2.3	3.4	4.3	1.3	0.4	0.4	44.8	7.6	22
27	0.1	**S**	2.9	3.3	3.1	1.4	1.4	1.2	1.6	1.4	1.6	1.4	1	0.8	1.1	1.5	1.2	1.4	2.2	1.2	0.8	1.1	1.1	2.9	3.3	1.6	24
28	**S**	2	1.6	1.6	5.4	2.2	3.7	2.3	1.9	1.6	1.5	1.6	1.2	1.3	1	1.3	1.1	1	0.7	0.6	0.6	0.7	1.6	**S**	5.4	1.7	24
29	1.3	0.4	0.7	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4	2	**S**	3	3	0.6	24
30	0.8	1.6	12	1.7	5.6	1.5	7.2	4.4	2.7	1.5	0.8	0.7	0.4	0.4	0.7	0.5	0.5	0.5	0.4	2.8	3.6	**S**	3.2	3.6	12	2.5	24
31	0.5	0.6	0.6	1.1	2.2	18.3	18.9	6	5.8	2.5	0.6	0.5	0.7	0.6	0.5	0.4	0.5	0.5	0.5	0.5	**S**	7.1	5.3	3.1	18.9	3.4	24
HOURLY MAX	22.3	44.8	86.9	52.2	87.0	114.1	51.3	33.0	56.2	67.1	43.2	25.8	12.9	20.2	18.4	13.3	17.4	41.0	10.8	5.9	49.7	26.7	13.7	44.4			
HOURLY AVG	4.7	7.2	10.7	11.0	14.3	19.1	13.4	8.2	8.5	9.0	5.0	3.1	3.5	3.4	2.8	2.1	2.3	3.4	2.2	1.9	5.1	4.3	3.9	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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	690					
MAXIMUM INSTANTANEOUS VALUE:	114.1	PPB	@ HOUR(S)	5	ON DAY(S)	25
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		738	HRS
MONTHLY CALIBRATION TIME:	14	HRS				
STANDARD DEVIATION:	11.77					



JOB #: 2833-13-07-35-C

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

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	3.03	1.29	1.01	2.59	4.90	6.49	6.63	4.61	3.75	3.60	2.59	7.21	14.28	16.88	15.58	5.33	99.85
<	110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.14
<	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	3.03	1.29	1.01	2.59	4.90	6.49	6.63	4.61	3.75	3.60	2.59	7.21	14.43	16.88	15.58	5.33	

Calm : .00 %

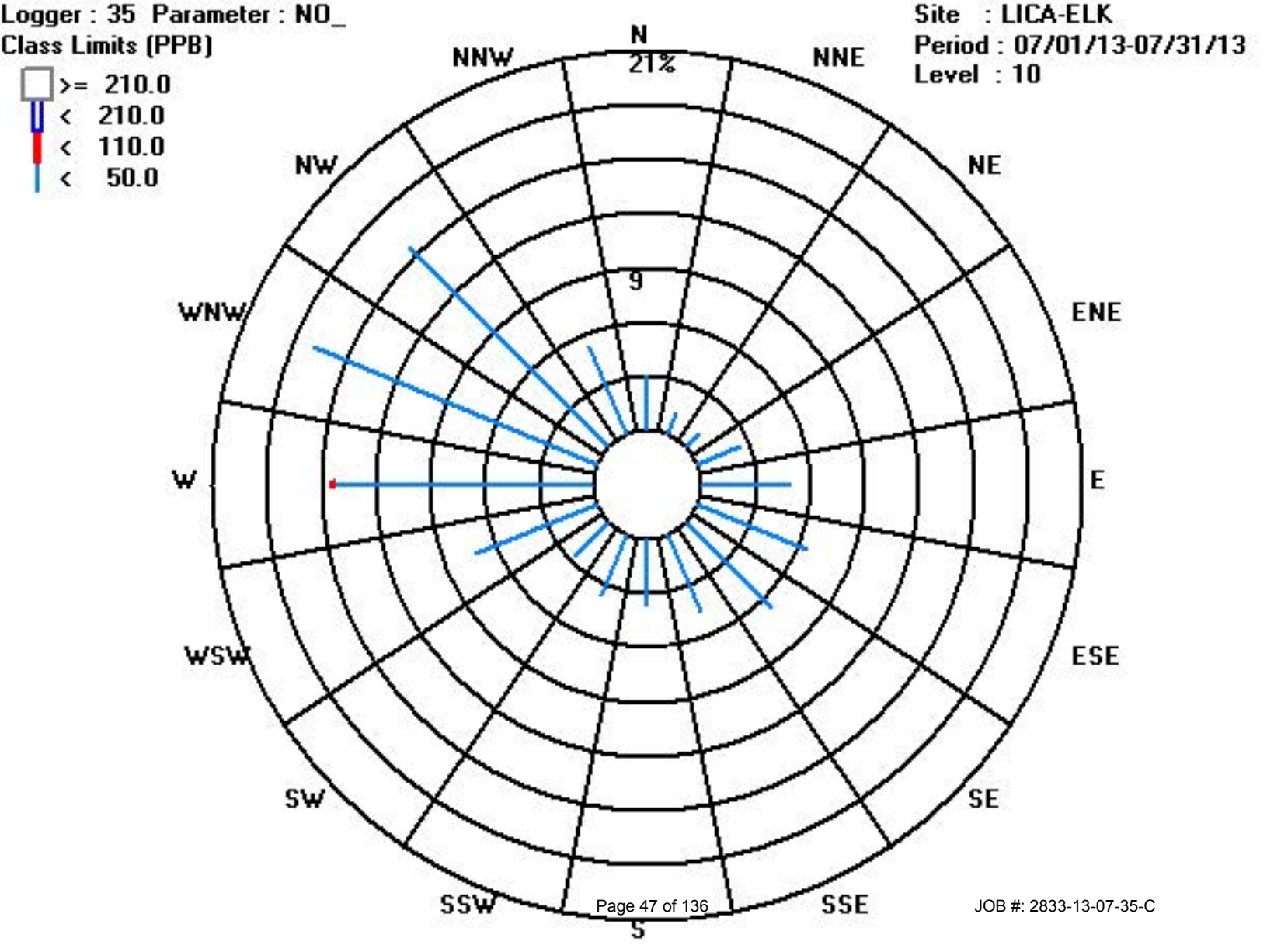
Total # Operational Hours : 693

Distribution By Samples

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	21	9	7	18	34	45	46	32	26	25	18	50	99	117	108	37	692
<	110.0													1				1
<	210.0																	
>=	210.0																	
	Totals	21	9	7	18	34	45	46	32	26	25	18	50	100	117	108	37	

Calm : .00 %

Total # Operational Hours : 693



JOB #: 2833-13-07-35-C

Oxides of Nitrogen

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

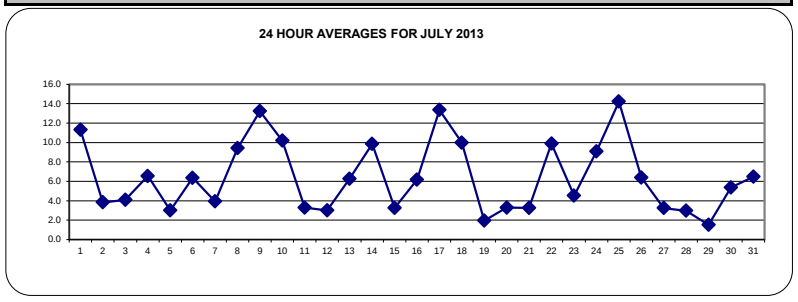
JULY 2013

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	12.8	18.3	15.4	28.6	**S**	40.1	19.1	25.5	32.9	12	2.3	1.8	1.2	1.6	1.3	1.5	1.5	1.7	3	8.9	6.9	7	6.9	9.7	40.1	11.3	24
2	10.9	8.9	7	**S**	6.7	7.3	7.4	3.1	1.9	5.5	1.7	1.6	1.3	1.2	1.8	2.7	2.7	3.7	1.1	1.8	2.6	4.3	2.7	0.2	10.9	3.8	24
3	0.5	0.9	**S**	1	**P**	**P**	3.6	5.1	5.1	4	1.9	2.4	3.2	2.7	4.4	4.2	3.2	5.1	3.7	1.6	5.5	10.3	7.2	9.9	10.3	4.1	22
4	8.2	**S**	10.8	9.2	9.9	11.2	8.4	12.1	11	5.2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	1.4	0.6	7.4	2.4	1.8	4.1	12.1	6.5	24
5	**S**	2.1	5.2	3.2	0.5	1.3	3	1.4	2.3	2.6	2.1	1.8	2.9	2.9	2.8	1.3	1.7	5.2	2.5	3.3	3.2	1.5	13	**S**	13	3.0	24
6	4.3	8.1	21.6	13.2	19.5	14.4	6.4	4.4	8.5	9.5	14.3	4.4	1.3	0.8	0.5	0.6	1	1.2	0.9	1.1	1.4	6.5	**S**	2.2	21.6	6.4	24
7	3.2	6.8	11.4	17.3	16.1	13.3	4.9	2.1	1.3	1	1.4	1.3	0.8	0.2	0.3	2.3	1.2	0.2	0.5	0.3	0.9	**S**	1.5	2	17.3	3.9	24
8	4	2.2	8	6.9	39.6	30.6	22.5	16	14.6	7.2	5.6	5.8	3.1	4.3	4.2	4.1	3.4	2.7	2.2	2.4	**S**	9	7.6	10.4	39.6	9.4	24
9	11.6	12.3	10.9	20.1	28.8	34.7	30.6	7.9	8.6	5.5	4.3	4.2	4.1	4.1	1.8	4.1	3.1	2.4	2.3	**S**	10.1	17.7	31.3	43.6	43.6	13.2	24
10	45.5	49.6	22.2	1.8	4.8	22.5	23.3	6.4	5.4	2.6	3.2	4.6	2.8	2.4	2	1.8	1.8	2.3	**S**	3.7	6.1	9.6	8.4	1.6	49.6	10.2	24
11	0.8	3.7	4.7	7.2	3	4.1	3.9	1	0.6	0.7	0.9	0.7	1.8	2.2	1.8	1.4	0.9	**S**	1.6	1.3	1	14.1	10.3	7.8	14.1	3.3	24
12	3.4	4.6	8.8	8	4.6	5.6	5	3.1	2.4	10.1	0.7	0.7	0.4	0.7	0.5	0.6	**S**	1.1	1.2	1.4	0.4	0.7	0.4	4.7	10.1	3.0	24
13	8.6	12.5	8	11.2	30.6	10.6	6.7	0.4	0.3	0.3	0.2	0.1	0.4	0.4	0.4	**S**	0.7	0.5	0.4	0.5	4.4	15.2	13.1	18.4	30.6	6.3	24
14	16.8	18.7	21.8	17.7	18.9	27.8	19.4	19.3	15.5	5.8	4.7	3.3	2.8	2	**S**	2.4	2.5	2.8	2.5	2.1	2.7	5.1	6.9	5.4	27.8	9.9	24
15	6.5	4.9	3.5	5.4	4.1	1.9	1.2	1.1	0.7	0.9	6.8	0.6	0.9	**S**	1.2	1	0.9	6.2	3.9	4	5	9.2	3.4	1.5	9.2	3.3	24
16	4	5.1	4.6	5.8	6.7	9.9	8.9	5.4	2	1.5	1.2	0.6	**S**	1.7	2.3	0.9	1	0.6	1.4	5.9	13.5	16.1	19.8	22.5	22.5	6.1	24
17	24.5	25.1	34.9	32.9	32.8	21	18.3	19.9	8.8	3.1	2.9	**S**	3.1	3.1	1.8	2.3	3.5	2.6	3.6	8.9	8	20.9	13.1	12.2	34.9	13.4	24
18	12.6	9.8	10.3	21.8	55.1	40	13.6	6.3	9.4	3.7	**S**	1.1	0.7	0.7	0.7	1	0.5	0.4	0.5	4.8	10.7	13.9	6.7	5.3	55.1	10.0	24
19	3	0.5	2.9	3.9	8.4	2.9	4	1.9	1.3	**S**	1.1	0.5	0.4	0.4	0.4	0.7	0.5	1.1	1.7	1.9	1.4	1.4	2.6	2	8.4	2.0	24
20	1.9	2.4	2.2	3.6	3	2.2	3.2	3.7	**S**	3.7	3.3	2.6	2.4	1.9	2.1	2.3	3.9	3.7	5	4	9	5.7	2	1.7	9	3.3	24
21	1.4	1.5	0.8	0.6	0.5	1.3	2.1	**S**	1.9	1.3	0.9	0.6	0.6	0.9	0.4	0.5	0.6	0.6	2.6	2.9	12.4	14.3	12.1	13.8	14.3	3.2	24
22	11.8	10.2	15.9	15.9	25.4	23.6	**S**	20	18.4	11.5	7.3	6.2	5.1	3.6	2.6	1.5	2.3	2.4	3.1	6	8.2	11.4	6.9	8.3	25.4	9.9	24
23	9.1	7.3	9.3	17.1	14.8	**S**	11.9	7.4	1.4	1.4	1.1	0.6	0.5	1	1	0.4	0.3	0.2	0.8	1	2	7	5.5	3	17.1	4.5	24
24	8.2	21.6	21.8	27.1	**S**	21.9	23.8	28.9	11.2	3	0.9	1.3	0.7	0.6	0.3	0.4	0.5	0.5	0.3	0.4	10.2	7.5	11	6.8	28.9	9.1	24
25	26	31.4	33.8	**S**	23.6	**66.7**	32.3	24.9	23.3	5.4	3.6	2.5	2.2	1.6	1.9	1.8	1.6	2.2	2.2	4	5.7	12.2	7.4	10.5	**66.7**	**14.2**	24
26	10.7	11.8	**S**	10.3	7.8	12	6.7	4.8	2.7	**C**	**C**	**Y**	**Y**	**C**	**C**	**C**	**C**	**C**	1.6	7.1	8.7	2.2	1.2	1.8	12	6.4	22
27	1.1	**S**	2.6	5.6	2.5	3.1	3	2.4	2.4	2	2.6	1.8	1.6	1.4	1.4	2.1	2.9	3.7	3.6	2.5	4.8	5.6	4.8	11	11	3.2	24
28	**S**	7.8	8	7.4	6.2	5.1	4.6	3.2	2.1	1.9	1.7	1.8	1.3	1.2	1.2	1.3	1.5	1.4	0.8	1.1	1.3	1.8	2.6	**S**	8	3.0	24
29	2	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.8	0.7	1.4	11.2	**S**	12.5	12.5	1.5	24
30	1.6	6.5	18.1	11.2	11.2	7.6	8.8	7.9	3.3	1.6	0.5	0.4	0.4	0.3	0.6	0.5	0.4	0.3	0.2	2.7	12.1	**S**	12.4	14.8	18.1	5.4	24
31	9.8	7	8.2	11.5	7.4	18.6	17.8	8.1	8.9	1.7	0.5	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.5	**S**	15.3	20.1	11.8	20.1	6.5	24
HOURLY MAX	45.5	49.6	34.9	32.9	55.1	66.7	32.3	28.9	32.9	12.0	14.3	6.2	5.1	4.3	4.4	4.2	3.9	6.2	5.0	8.9	13.5	20.9	31.3	43.6			
HOURLY AVG	9.1	10.4	11.5	11.2	14.0	15.9	10.8	8.5	7.0	4.0	2.8	1.9	1.7	1.6	1.4	1.6	1.6	1.9	1.9	2.9	5.8	8.9	8.4	8.9			

STATUS FLAG CODES

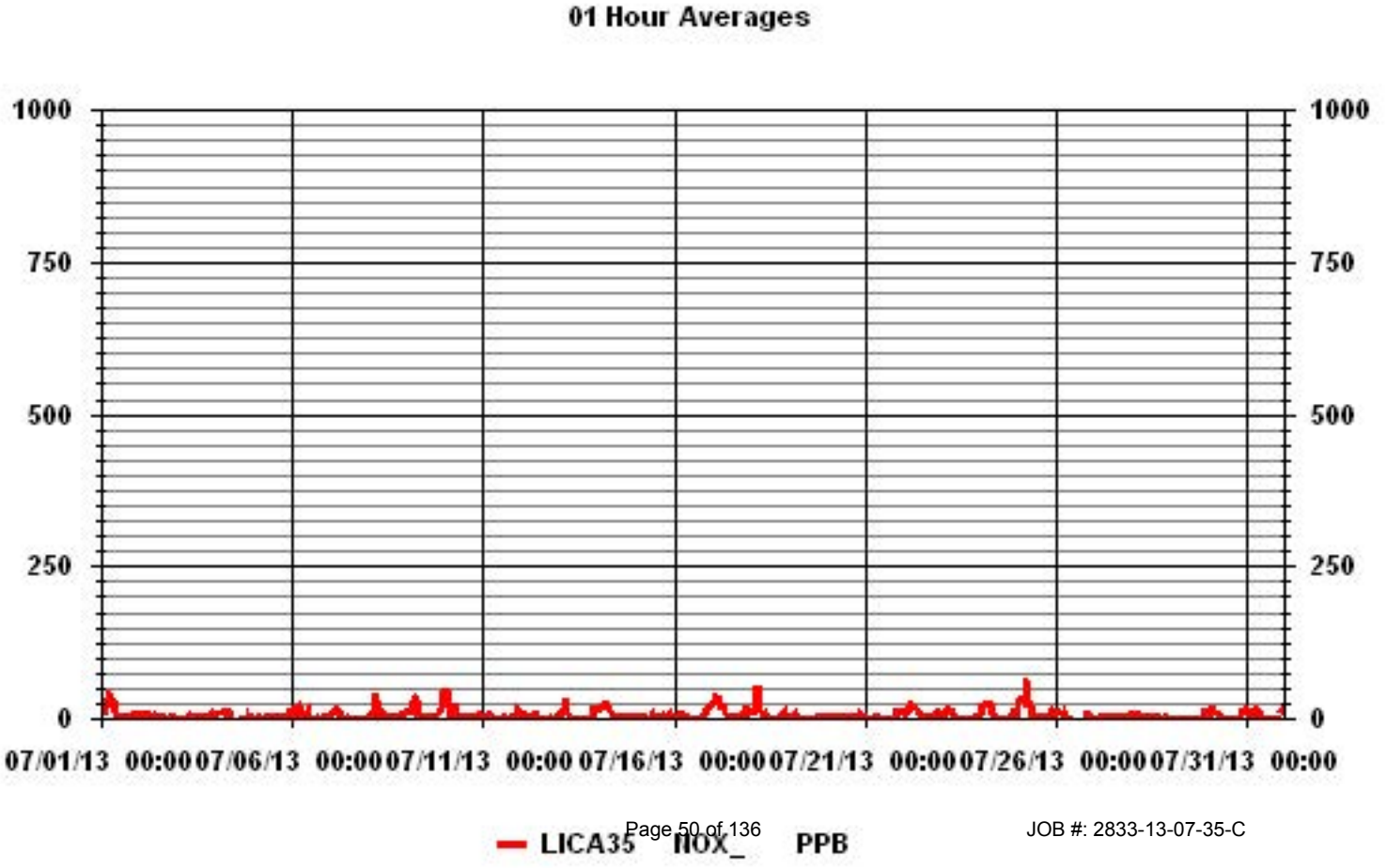
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	693					
MAXIMUM 1-HR AVERAGE:	66.7	PPB	@ HOUR(S)	5	ON DAY(S)	25
MAXIMUM 24-HR AVERAGE:	14.2	PPB			ON DAY(S)	25

IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	740	HRS
MONTHLY CALIBRATION TIME:	14	HRS	AMD OPERATION UPTIME:	99.5	%
STANDARD DEVIATION:	8.26		MONTHLY AVERAGE:	6.44	PPB



JOB #: 2833-13-07-35-C

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

JULY 2013

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	26.9	23.7	20.4	42	**S**	78.6	31.2	31.5	41.9	26.1	4.7	3.1	2.1	2.6	2.3	3.1	3.1	3.1	8.1	22.6	9.8	11.1	12.2	14.5	78.6	18.5	24
2	15.8	11.1	9.4	**S**	7.8	14	12.2	4.6	3	38.2	2.8	2.5	2.6	2.1	19.2	4.8	6.8	25.1	1.9	3.9	4.2	6.2	7.6	0.6	38.2	9.0	24
3	1.2	1.4	**S**	**P**	**P**	**P**	6.7	11.2	12.5	15.7	5	6.7	12.1	13.6	35.1	35.2	17.2	43.1	8.2	7.9	12.1	12.7	11.1	14	43.1	14.1	21
4	11.6	**S**	16.6	11.1	12.8	16.5	17.3	22.8	20.2	32.3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	3.4	5.9	1.1	62.9	4	4.3	7.7	62.9	15.7	24
5	**S**	4.8	16.2	17.4	1.1	11.3	11.7	22.2	18	9.2	9.9	12.4	10.5	9.5	8.4	**Y**	4	22.7	14.7	9.4	21.5	12.2	32.1	**S**	32.1	13.3	23
6	17.8	13.3	38.3	21.9	35.4	21	18.9	11.3	77.8	74.7	**159.1**	35.8	21	3.1	2	2.9	3.5	4.2	4.4	4.5	3.6	19.9	**S**	3.4	**159.1**	26.0	24
7	11.8	10.7	26	24.7	24.4	25.4	7.8	3.6	2.5	1.8	2.4	2.3	1.3	0.9	1.2	7.3	2.3	0.8	3	0.9	1.6	**S**	2	3.8	26	7.3	24
8	7	3.8	24.3	16.9	58.4	42.3	29.1	27.1	42.9	48.9	37.2	18.6	36.8	27	33.1	16.7	37.9	18.6	11.4	5.8	**S**	22	13.2	12.5	58.4	25.7	24
9	22.4	21.9	13.7	26.1	33.3	50.4	49.8	27.7	44	26.2	21.4	20.2	27.2	65.5	4.4	63.8	14	41.7	10.4	**S**	22.4	25.2	43.8	75.7	75.7	32.7	24
10	53.2	55.9	109.7	4	16.5	84.5	76.1	28.1	19.1	5.6	5.4	36.8	13.9	3.6	3.8	3.6	3.2	4	**S**	17	9.2	26.2	32.1	4.7	109.7	26.8	24
11	1.3	9.3	9.2	17	7.5	7.9	32.2	2	1.4	1.7	2	1.5	32.6	4.2	3.9	3.7	2.1	**S**	4.7	2.5	3.4	52.8	37.4	24	52.8	11.5	24
12	8.3	11	15.4	14.3	8.1	7.3	7.1	4.9	3.4	78.3	2.1	1.5	1.4	1.8	1.9	1.6	**S**	2.7	2.6	4.4	0.9	1.6	0.9	9	78.3	8.3	24
13	19.9	25.7	31.1	55	102.3	16.2	16.7	0.9	0.9	1.1	1.1	0.5	1.2	1	1.3	**S**	1.3	1.1	1.1	1.1	18.8	21.1	23.1	24.2	102.3	15.9	24
14	20.6	28.3	29.7	22.5	25.8	37.5	23.7	22.5	25.7	10.3	6.6	5	4.2	4.7	**S**	5.9	4.3	5.4	4	3.4	4.4	14.6	14.2	6.9	37.5	14.4	24
15	14.2	10.1	7.7	14	6.2	2.9	1.8	1.5	1.3	1.6	36.7	1.2	1.4	**S**	2.3	2.8	1.4	15.2	7.7	5.2	7.1	14.2	6.2	2.5	36.7	7.2	24
16	5.1	15.8	7.6	6.9	8.5	12.4	12.9	8.4	2.8	2.7	3.3	1.3	**S**	4.6	6.7	4.1	3.3	2	6.7	21.4	24.5	38.6	27.1	59.5	59.5	12.4	24
17	30.8	32.6	49	40.6	41.8	34.2	34.1	29.9	16.3	5.7	5.8	**S**	6.4	6.3	3.3	3.6	5.5	4.7	13.2	21.9	22.6	46.6	16.6	20	49	21.4	24
18	17.8	15.6	15.8	70.8	71.4	57.3	27.1	8.4	19	7.4	**S**	2.3	1.5	1.5	1.8	4	1.2	1.2	1.2	19.2	23	17.5	11.9	11.7	71.4	17.8	24
19	11.8	2.4	6.5	11.8	14.9	11.8	9.1	4.1	2.2	**S**	2	1.2	0.7	0.8	0.9	1.8	1.5	1.8	3.4	3.3	3.2	2.8	6.3	4.1	14.9	4.7	24
20	6.1	4.7	4.5	5.5	3.9	3.3	4.5	5.4	**S**	5.8	4.6	3.3	4.1	2.8	3.3	3.6	7	7.9	12.3	8.7	15.2	10.3	5.4	2.6	15.2	5.9	24
21	2.6	5.7	1.4	1.2	1.1	2.3	2.8	**S**	2.9	4.4	1.3	1.1	1.1	19.3	0.9	1	1.3	1.1	90.2	14.8	46.1	21.9	27.6	17.7	90.2	11.7	24
22	16	15.5	22.1	31.8	34.8	37	**S**	28.8	23.4	17.5	8.4	7.4	6.9	4.8	3.5	2.7	6.7	6.1	6.7	15.6	16.1	15.8	9.7	14.5	37	15.3	24
23	13.6	11	17.7	20.3	24.5	**S**	23.6	10.2	2.7	3.1	4.4	2.4	9	20	25.7	0.7	0.9	0.8	3	1.8	34.3	11.7	10.1	4.7	34.3	11.1	24
24	18.6	33	26.3	58.3	**S**	35.9	48.4	46.7	15.7	10	2	3.4	1.4	1	0.9	0.9	1.1	1	0.9	1.1	23.1	13.7	15	18.7	58.3	16.4	24
25	35.5	36.3	42.9	**S**	38.4	121.3	60.8	32.3	36.1	10	5.2	5.7	4.8	3.4	3.7	3.1	3.3	4.8	3.8	7.8	10.6	17.6	23	27.8	121.3	23.4	24
26	18.9	62.4	**S**	26.2	11.4	16	12.4	9.1	3.8	**C**	**C**	**Y**	**Y**	**C**	**C**	**C**	**C**	**C**	5	11.5	14.3	4.8	2.3	2.7	62.4	14.3	22
27	1.7	**S**	7.5	8.6	8	4.6	5.5	4.2	3.4	3.5	3.8	3.1	2.2	1.9	1.9	5	3.9	4.7	6.1	3.9	9	10.2	9.9	17.8	17.8	5.7	24
28	**S**	13.3	15.3	12.3	16.4	7.8	7.8	5.5	3.3	2.7	2.9	2.9	2	2	1.8	2.5	2.2	2.6	1.5	1.9	2.5	2.8	4.6	**S**	16.4	5.3	24
29	5.1	1.2	1.2	1.2	1.2	1.1	0.9	0.9	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.6	1.1	1.7	1.2	2.7	18.4	**S**	21.2	21.2	2.8	24
30	3.3	9.7	28.3	13.9	20.1	9.7	16.8	11.6	5.2	3.1	1.6	1	1.1	0.9	1.7	1.2	1.1	1	1	17.2	17.1	**S**	21	17.9	28.3	8.9	24
31	13.5	10.4	10.6	13.7	10.9	28.8	29.7	11.9	11.9	6.3	1	0.6	1	1	1	0.4	0.4	0.5	0.8	1	**S**	30.6	23.4	20.8	30.6	10.0	24
HOURLY MAX	53.2	62.4	109.7	70.8	102.3	121.3	76.1	46.7	77.8	78.3	159.1	36.8	36.8	65.5	35.1	63.8	37.9	43.1	90.2	22.6	62.9	52.8	43.8	75.7			
HOURLY AVG	14.9	17.3	21.5	21.8	23.1	27.6	21.3	14.6	15.5	15.7	12.3	6.6	7.5	7.5	6.3	6.9	5.0	8.0	8.2	8.1	15.4	17.5	15.7	16.0			

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

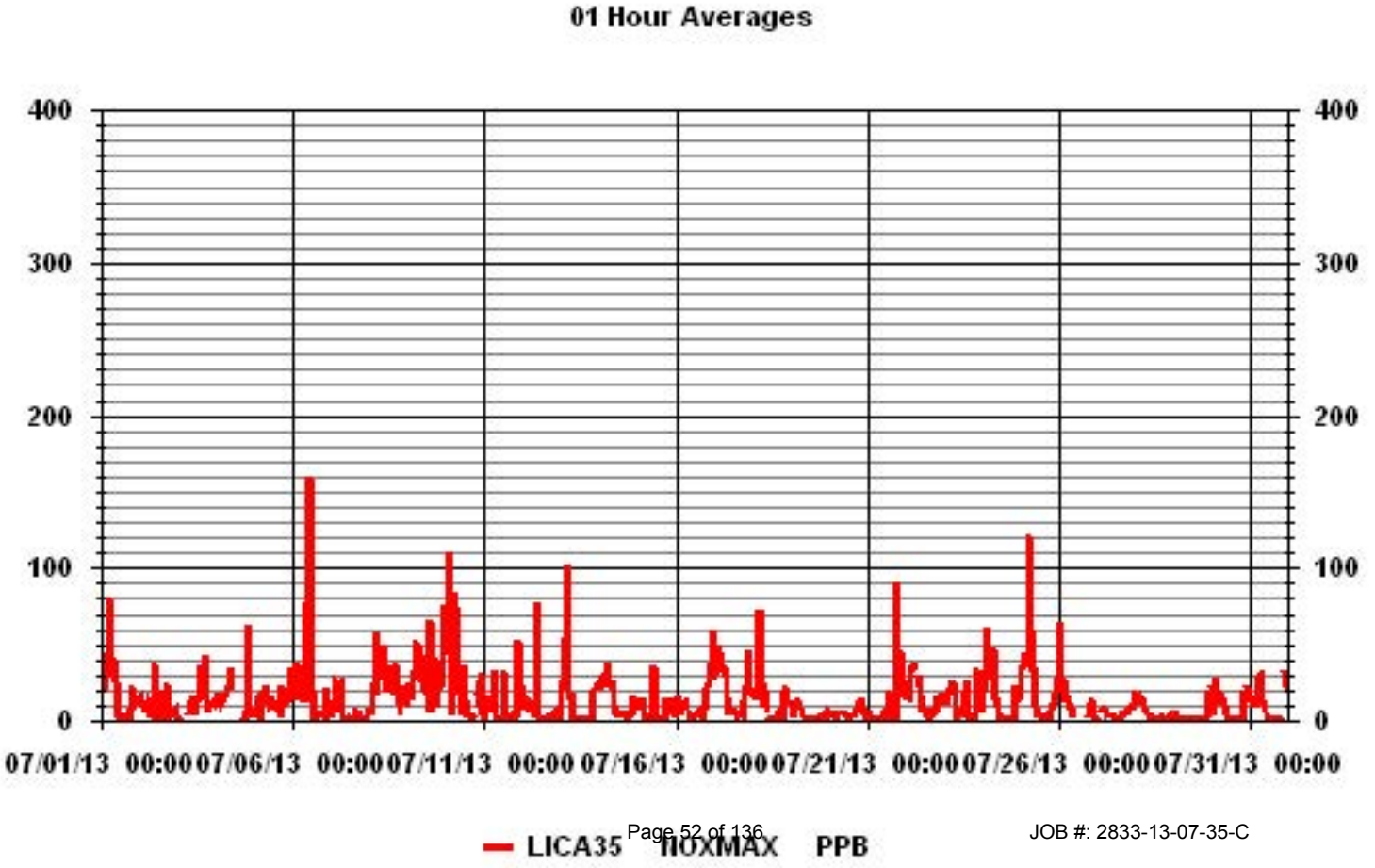
NUMBER OF NON-ZERO READINGS: 691

MAXIMUM INSTANTANEOUS VALUE: 159.1 PPB @ HOUR(S) 10 ON DAY(S) 6

IZS CALIBRATION TIME: 33 HRS OPERATIONAL TIME: 738 HRS

MONTHLY CALIBRATION TIME: 14 HRS

STANDARD DEVIATION: 17.26



JOB #: 2833-13-07-35-C

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

July 2013

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	3.03	1.29	1.01	2.59	4.90	6.49	6.63	4.61	3.75	3.60	2.59	7.21	14.14	16.88	15.58	5.33	99.71
<	110.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28	.00	.00	.00	.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	3.03	1.29	1.01	2.59	4.90	6.49	6.63	4.61	3.75	3.60	2.59	7.21	14.43	16.88	15.58	5.33	

Calm : .00 %

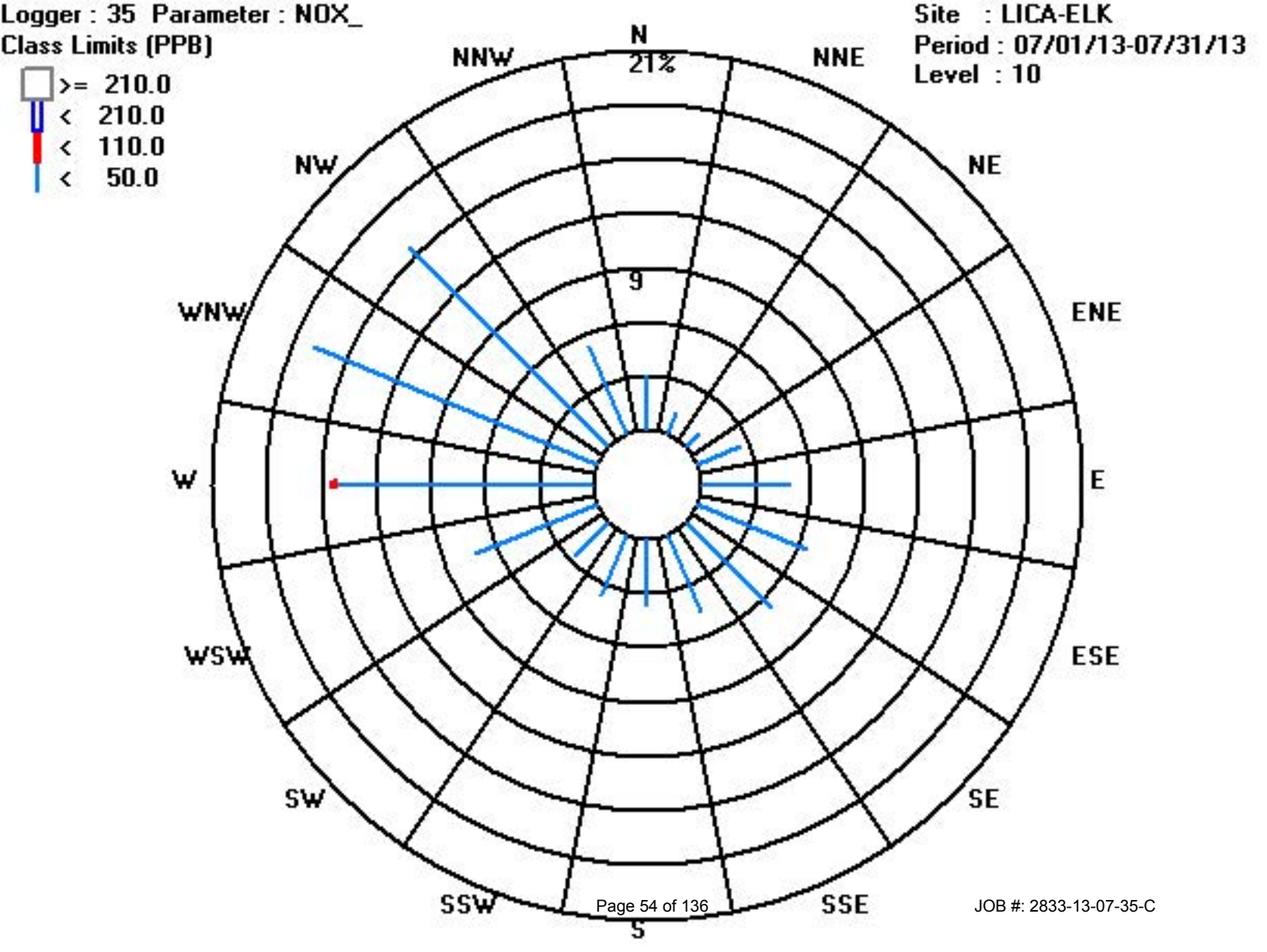
Total # Operational Hours : 693

Distribution By Samples

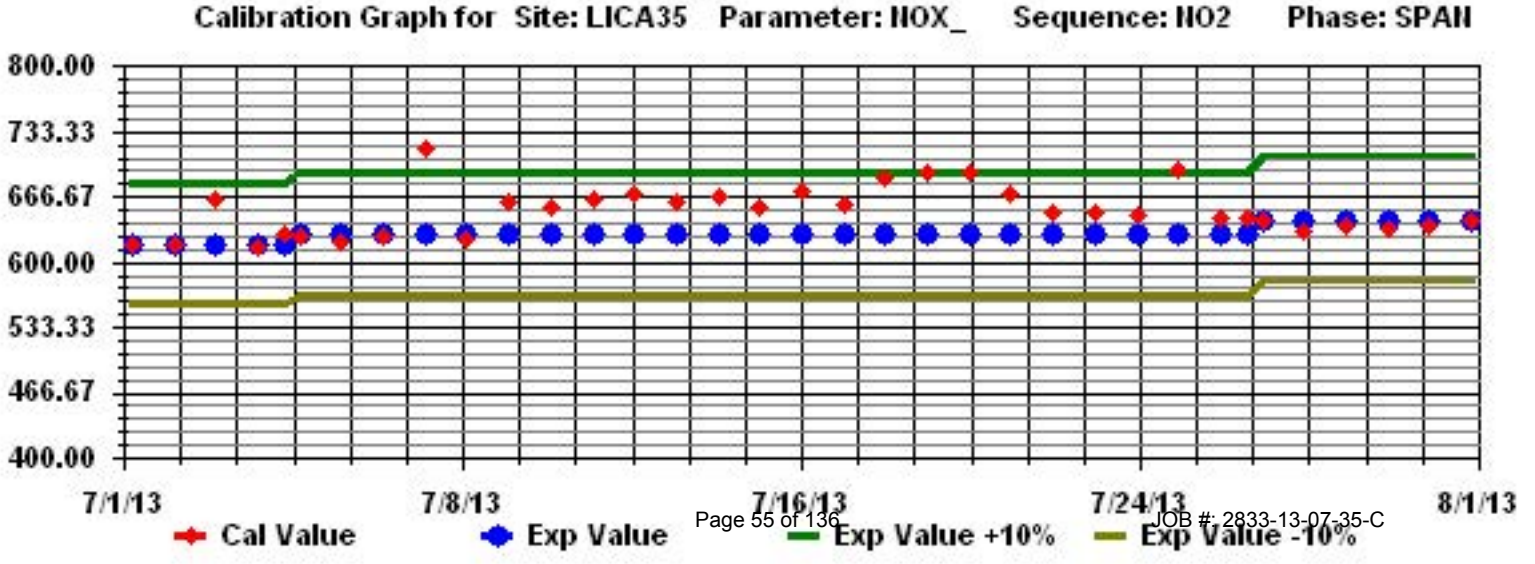
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50.0	21	9	7	18	34	45	46	32	26	25	18	50	98	117	108	37	691
<	110.0													2				2
<	210.0																	
>=	210.0																	
	Totals	21	9	7	18	34	45	46	32	26	25	18	50	100	117	108	37	

Calm : .00 %

Total # Operational Hours : 693



JOB #: 2833-13-07-35-C


Calibration Graph for Site: LICA35 Parameter: NOX_ Sequence: NO2 Phase: SPAN
800.00
733.33
666.67
600.00
533.33
466.67
400.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

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

JULY 2013

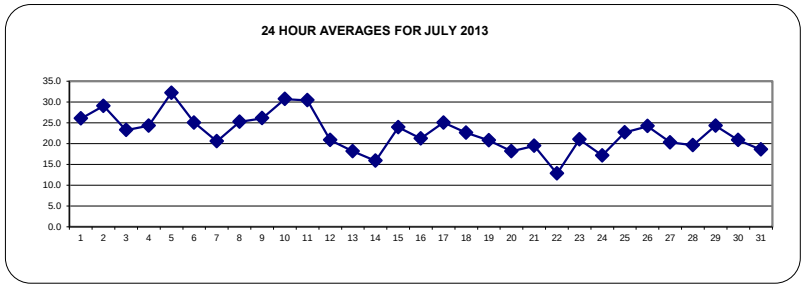
OZONE (O_3) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3	0	0	0	**S**	1	4	10	15	33	42	42	42	43	45	45	46	45	43	36	32	28	26	17	46	26.0	24
2	12	11	11	**S**	12	13	18	27	33	34	37	39	39	39	38	40	40	40	40	35	30	25	26	29	40	29.0	24
3	27	25	**S**	23	**P**	**P**	14	17	22	24	24	25	27	30	32	32	28	28	27	25	20	13	15	10	32	23.2	22
4	10	**S**	6	7	7	9	13	15	26	34	36	34	34	36	38	38	40	33	29	28	23	20	23	20	40	24.3	24
5	**S**	32	31	31	32	29	27	30	35	36	**C**	**C**	**C**	**C**	**C**	42	40	38	38	33	30	28	15	**S**	42	**32.2**	24
6	17	12	5	6	6	8	16	17	19	22	31	38	40	40	40	38	36	35	34	31	33	26	**S**	26	40	25.0	24
7	21	15	9	4	4	9	10	15	18	18	20	25	30	33	33	32	34	30	31	26	22	**S**	17	17	34	20.6	24
8	13	12	5	5	1	2	5	11	18	28	36	41	43	44	43	44	46	43	43	38	**S**	25	21	13	46	25.2	24
9	8	3	2	0	1	2	6	23	30	38	43	47	48	47	47	45	44	44	51	**S**	38	25	7	1	51	26.1	24
10	1	1	13	23	24	13	13	22	25	32	41	43	46	52	52	51	50	50	**S**	38	29	22	26	39	52	30.7	24
11	39	32	30	24	25	22	25	22	25	28	36	37	35	30	32	38	34	**S**	37	38	38	24	24	24	39	30.4	24
12	25	23	17	16	19	18	19	22	22	22	22	24	25	25	25	22	**S**	22	21	20	20	18	18	14	25	20.8	24
13	11	10	15	9	8	11	15	22	23	26	27	28	26	25	24	**S**	25	25	26	25	20	8	6	2	28	18.1	24
14	3	1	1	1	1	1	2	4	9	18	21	27	29	28	**S**	28	27	28	28	26	23	19	15	25	29	15.9	24
15	28	23	27	25	23	26	28	30	33	35	37	38	30	**S**	30	28	24	18	14	11	8	5	13	16	38	23.9	24
16	12	12	12	11	9	9	13	20	27	31	33	34	**S**	35	34	34	35	36	35	28	15	9	3	1	36	21.2	24
17	1	0	0	0	1	3	7	11	29	41	44	**S**	46	52	**55**	51	46	46	44	35	29	14	12	9	**55**	25.0	24
18	6	7	4	2	1	3	18	21	17	26	**S**	38	41	41	41	40	39	38	35	26	18	14	20	24	41	22.6	24
19	27	30	25	19	15	21	18	19	23	**S**	28	28	27	28	25	25	24	18	15	13	13	13	12	12	30	20.8	24
20	14	14	14	15	16	16	13	12	**S**	15	16	21	25	27	30	30	26	26	23	20	12	11	12	9	30	18.1	24
21	8	10	12	17	15	15	13	**S**	18	21	23	27	28	29	29	29	32	33	32	27	12	8	7	2	33	19.4	24
22	1	1	0	0	0	1	**S**	3	2	5	7	10	14	20	24	31	33	32	31	24	17	10	15	13	33	12.8	24
23	8	5	3	0	1	**S**	8	16	27	31	34	34	33	32	31	33	32	31	29	27	23	15	16	14	34	21.0	24
24	8	0	0	0	**S**	2	3	3	15	23	26	26	27	28	29	32	33	34	34	32	16	11	6	6	34	17.1	24
25	0	0	0	**S**	1	1	4	8	14	29	35	39	39	39	39	40	39	40	40	35	30	20	19	11	40	22.7	24
26	8	7	**S**	8	6	8	13	19	24	31	34	35	36	36	35	34	33	33	32	25	23	26	26	24	36	24.2	24
27	24	**S**	24	22	23	21	18	18	19	23	23	25	25	24	20	18	20	20	20	21	20	15	16	7	25	20.3	24
28	**S**	8	12	13	10	9	11	14	18	24	26	30	30	32	34	33	30	24	19	16	14	13	11	**S**	34	19.6	24
29	10	14	16	18	20	21	22	25	28	26	29	30	30	31	32	32	34	33	31	29	24	13	**S**	10	34	24.3	24
30	15	8	4	8	9	12	11	12	19	26	30	31	32	32	34	36	34	34	33	28	15	**S**	11	5	36	20.8	24
31	9	9	8	6	7	3	5	13	17	26	25	28	30	32	32	33	34	31	31	28	**S**	10	2	8	34	18.6	24
HOURLY MAX	39	32	31	31	32	29	28	30	35	41	44	47	48	52	55	51	50	50	51	38	38	28	26	39			
HOURLY AVG	12.7	11.2	10.6	10.8	10.6	10.7	13.1	16.7	21.7	26.9	29.9	31.9	33.0	34.1	34.6	35.1	34.6	32.9	31.5	27.5	22.3	16.8	15.2	14.1			

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



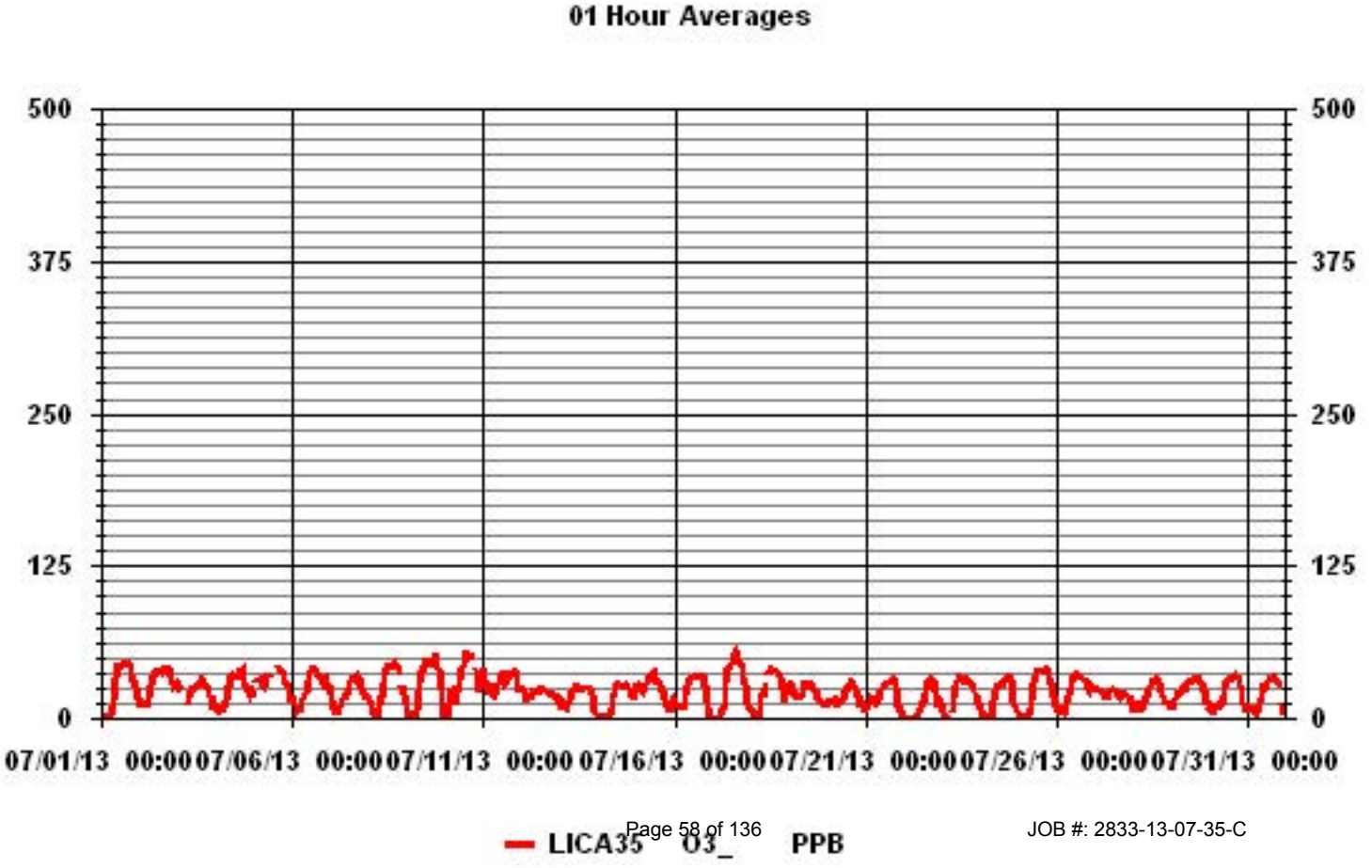
OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 82 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	687					
MAXIMUM 1-HR AVERAGE:	55	PPB	@ HOUR(S)	14	ON DAY(S)	17
MAXIMUM 24-HR AVERAGE:	32.2	PPB			ON DAY(S)	5
					VAR-VARIOUS	

IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	742	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:	99.7	%
STANDARD DEVIATION:	12.40		MONTHLY AVERAGE:	22.50	PPB

JOB #: 2833-13-07-35-C



JOB #: 2833-13-07-35-C

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

JULY 2013

OZONE MAX instantaneous maximum in ppb

MST

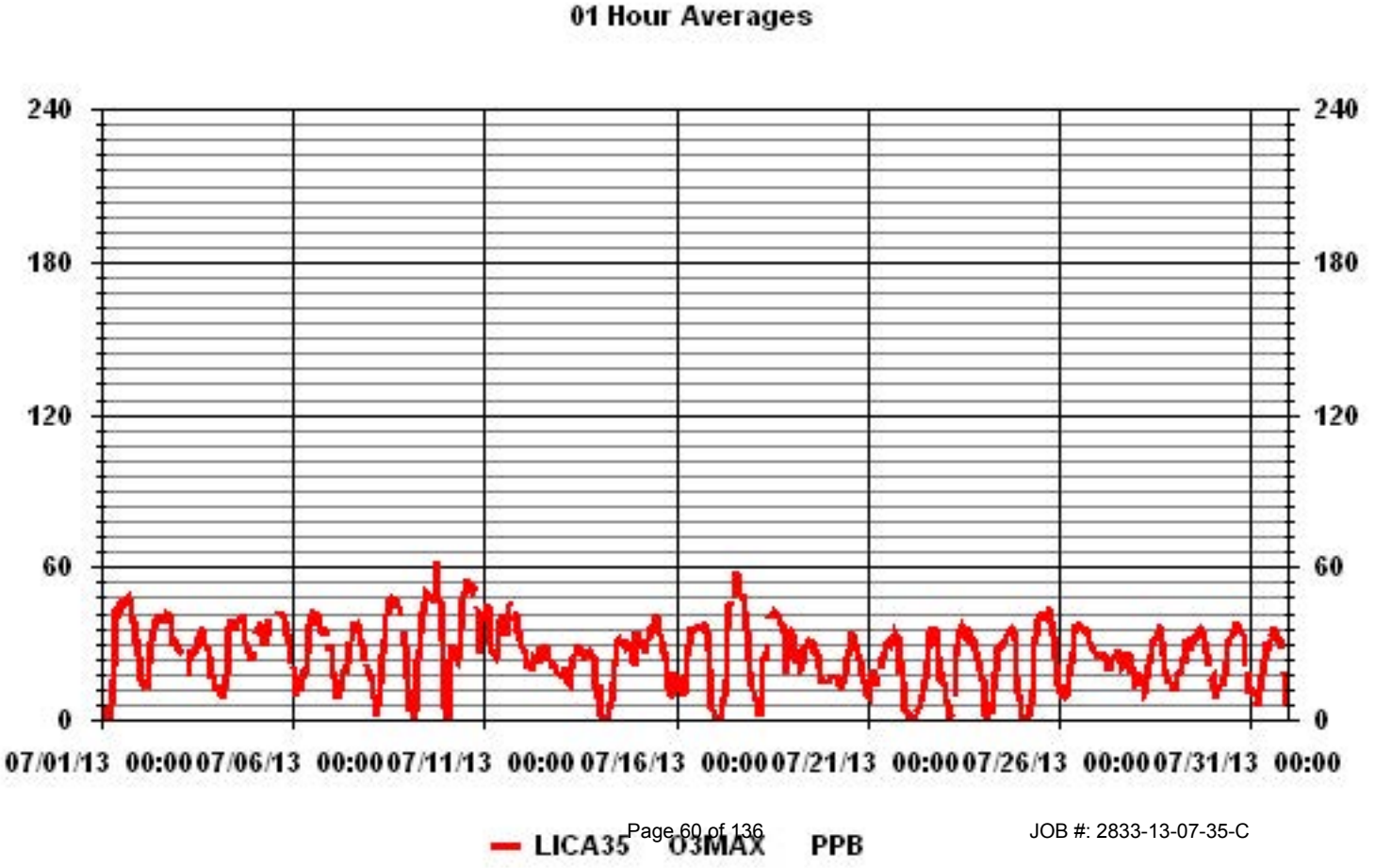
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6	1	1	1	**S**	2	6	16	21	43	44	45	43	44	46	47	48	46	46	41	39	31	31	26	48	29.3	24
2	16	14	13	**S**	14	16	22	31	35	36	39	40	40	39	39	41	42	41	41	39	31	29	31	30	42	31.3	24
3	28	27	**S**	**P**	**P**	**P**	18	23	26	26	27	27	28	32	34	36	31	30	29	28	26	16	18	12	36	26.1	21
4	13	**S**	11	9	9	12	17	18	36	39	37	37	35	38	39	40	**S**	40	31	29	27	23	27	25	40	26.9	24
5	**S**	35	36	38	34	32	29	33	38	**C**	**C**	**C**	**C**	**C**	**C**	**C**	42	41	41	39	34	31	23	**S**	42	35.1	24
6	20	18	9	15	14	11	20	19	21	26	37	41	42	42	41	41	38	37	35	33	36	34	**S**	28	42	28.6	24
7	28	20	17	9	9	12	12	19	19	19	22	30	31	37	37	36	37	35	32	30	24	**S**	21	20	37	24.2	24
8	18	16	10	9	1	6	7	14	26	32	41	46	46	47	45	46	48	46	45	42	**S**	34	30	17	48	29.2	24
9	13	4	5	1	2	3	24	28	34	42	46	50	49	49	48	47	47	46	**61**	**S**	46	32	17	5	**61**	30.4	24
10	1	1	24	26	30	24	25	24	29	36	47	49	50	55	53	53	51	52	**S**	43	34	26	41	41	55	35.4	24
11	41	39	45	31	27	26	26	25	27	35	39	41	39	33	40	45	46	**S**	40	41	41	35	32	29	46	35.8	24
12	28	27	21	21	21	19	21	24	23	23	23	29	28	28	28	24	**S**	23	22	21	21	19	19	18	29	23.1	24
13	16	18	21	16	16	15	20	24	25	28	28	28	27	26	25	**S**	26	26	27	26	25	13	12	8	28	21.6	24
14	14	2	1	1	1	2	4	7	15	22	22	31	32	30	**S**	31	29	30	29	28	25	23	21	35	35	18.9	24
15	32	29	31	29	26	29	31	32	36	37	40	40	35	**S**	33	31	27	24	17	13	10	9	18	18	40	27.3	24
16	14	14	15	12	11	10	16	25	30	35	35	36	**S**	36	36	36	36	37	37	35	28	21	5	4	37	24.5	24
17	2	1	1	1	1	6	9	16	36	45	46	**S**	49	57	57	53	50	48	48	43	36	24	20	14	57	28.8	24
18	12	10	8	5	1	8	25	23	26	29	**S**	41	42	43	42	41	41	39	38	35	24	18	24	34	43	26.5	24
19	35	34	29	23	24	26	21	22	28	**S**	30	31	30	30	26	28	26	21	18	15	15	15	15	15	35	24.2	24
20	17	17	17	17	17	17	14	13	**S**	16	18	25	27	30	33	33	30	28	26	24	18	15	15	10	33	20.7	24
21	9	12	13	20	18	17	15	**S**	21	24	26	29	30	31	30	32	33	35	34	33	19	20	16	4	35	22.7	24
22	3	3	1	1	1	1	**S**	4	5	7	10	12	16	23	28	34	36	34	36	30	26	15	20	15	36	15.7	24
23	14	8	7	1	2	**S**	10	25	30	34	35	37	36	33	32	36	33	31	31	28	27	24	20	17	37	24.0	24
24	16	2	1	1	**S**	4	7	12	19	28	29	30	29	30	31	33	34	35	36	35	32	18	11	8	36	20.9	24
25	1	1	1	**S**	1	2	6	12	30	33	39	40	40	41	41	41	40	43	43	39	34	25	23	14	43	25.7	24
26	11	10	**S**	13	10	11	17	22	27	34	36	36	37	37	36	35	35	35	34	31	28	28	27	25	37	26.7	24
27	25	**S**	26	25	25	24	20	20	22	24	25	26	26	26	23	21	22	22	22	25	25	18	21	13	26	22.9	24
28	**S**	14	19	16	15	11	12	16	22	26	29	31	32	34	36	36	32	26	21	18	15	15	13	**S**	36	22.2	24
29	13	15	18	19	20	23	23	30	30	27	31	31	32	32	33	35	36	35	33	31	27	22	**S**	18	16	26.6	24
30	17	13	8	11	13	14	14	17	23	29	31	32	34	34	37	37	37	35	35	34	22	**S**	18	10	37	24.1	24
31	12	11	**X**	8	11	5	11	18	24	28	27	30	31	34	33	35	35	33	32	29	**S**	18	5	12	35	21.9	23
HOURLY MAX	41	39	45	38	34	32	31	33	38	45	47	50	50	57	57	53	51	52	61	43	46	35	41	41			
HOURLY AVG	16.4	14.3	14.6	13.5	13.4	13.4	16.7	20.4	26.1	29.8	32.4	34.5	35.0	36.2	36.6	37.4	36.8	35.1	34.0	31.3	27.4	22.4	20.5	18.0			

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:	699					
MAXIMUM INSTANTANEOUS VALUE:	61	PPB	@ HOUR(S)	18	ON DAY(S)	9
IZS CALIBRATION TIME:	34	HRS	OPERATIONAL TIME:		740	HRS
MONTHLY CALIBRATION TIME:	7	HRS				
STANDARD DEVIATION:	12.33					



JOB #: 2833-13-07-35-C

LICA-ELK
O3_ / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

Logger Id : 35
Site Name : LICA-ELK
Parameter : O3_
Units : PPB

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	2.98	1.27	.99	2.55	4.82	6.39	6.81	4.82	3.69	3.12	2.55	7.10	14.06	17.04	15.19	5.25	98.72
<	110	.00	.00	.00	.00	.00	.00	.56	.14	.00	.42	.00	.00	.14	.00	.00	.00	1.27
<	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	2.98	1.27	.99	2.55	4.82	6.39	7.38	4.97	3.69	3.55	2.55	7.10	14.20	17.04	15.19	5.25	

Calm : .00 %

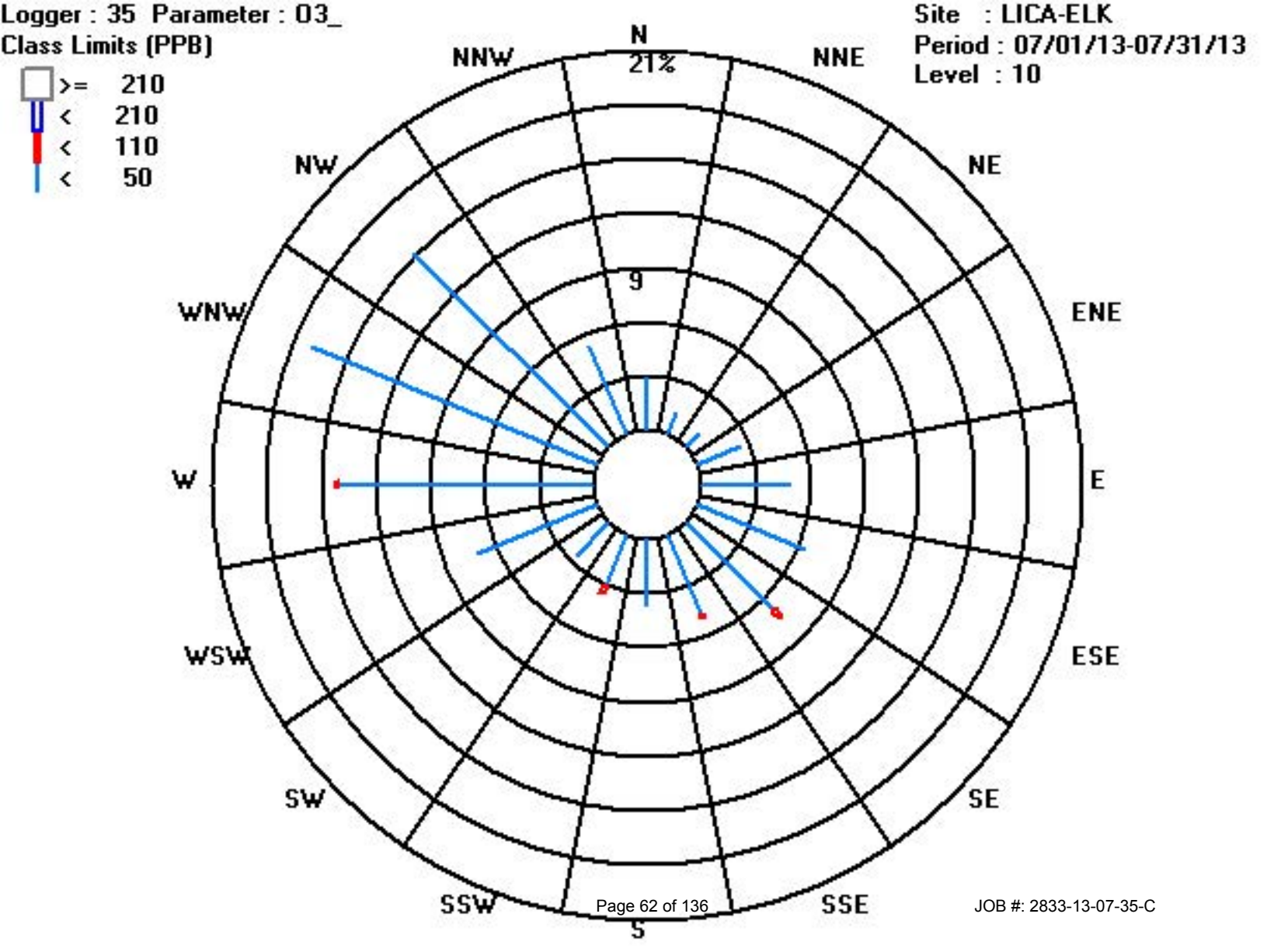
Total # Operational Hours : 704

Distribution By Samples

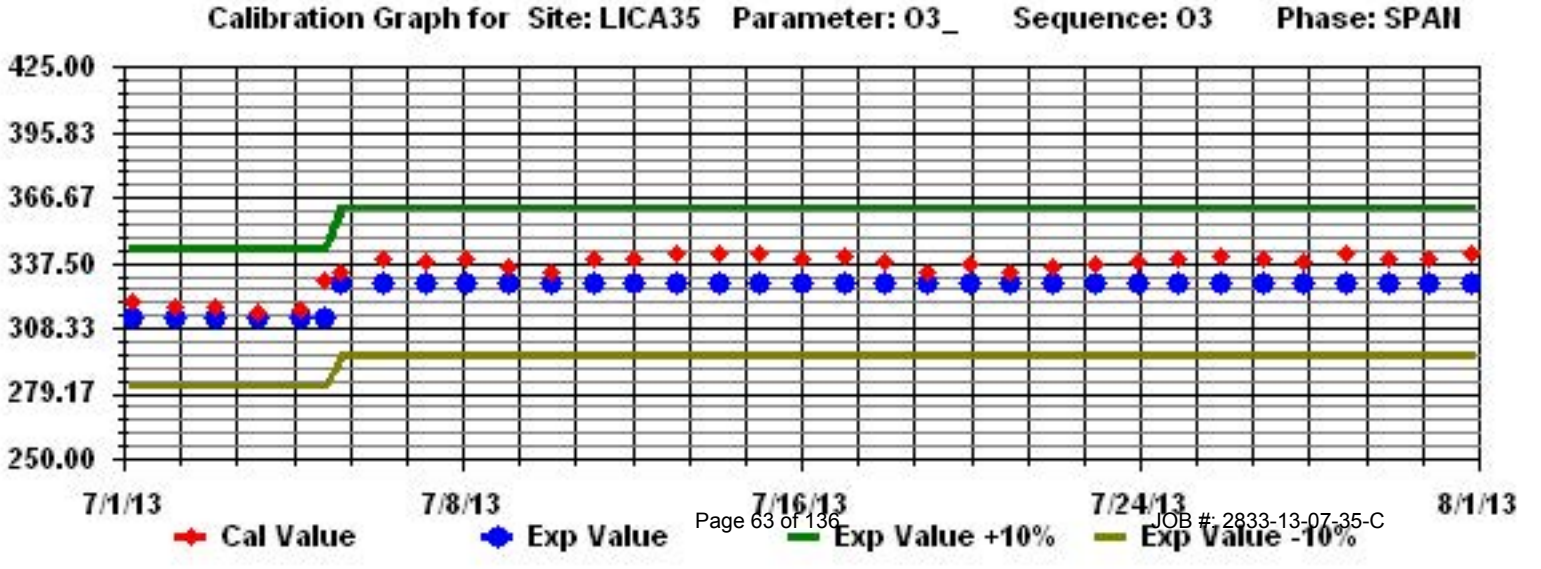
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	21	9	7	18	34	45	48	34	26	22	18	50	99	120	107	37	695
<	110							4	1		3			1				9
<	210																	
>=	210																	
	Totals	21	9	7	18	34	45	52	35	26	25	18	50	100	120	107	37	

Calm : .00 %

Total # Operational Hours : 704



JOB #: 2833-13-07-35-C


Calibration Graph for Site: LICA35 Parameter: O3_ Sequence: O3 Phase: SPAN
425.00
395.83
366.67
337.50
308.33
279.17
250.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

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

JULY 2013

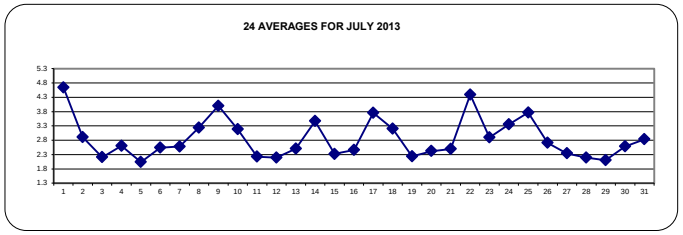
TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6.9	6.7	6.3	8.8	**S**	**11.7**	9.8	7.6	7	3.6	2.5	2.2	2.1	2.1	2	2.1	2.1	2.2	2.8	3.9	3.3	3.1	2.6	5.3	**11.7**	**4.6**	24
2	6.4	5.2	4	**S**	3.9	5.2	3.6	2.5	2.1	2.1	2.1	2.1	2	2	2.1	2.2	2.1	2	1.9	2.2	2.5	4.1	2.5	2	6.4	2.9	24
3	1.9	2	**S**	2	**P**	**P**	2.4	2.1	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.5	3	3.1	3.2	3.2	2.2	22
4	3.8	**S**	4.4	4.2	4.3	4.2	2.6	2.5	2.5	2.3	2	2	2	2	2	2	2	2	2	2.1	2.1	2.3	2.2	2.4	4.4	2.6	24
5	**S**	2	2.3	2.1	2	1.9	2	2	1.9	1.9	**C**	**C**	**C**	**C**	1.9	1.9	2	2	2	2.1	2.2	2.1	2.4	**S**	2.4	2.0	24
6	2.4	3.2	4	3.9	4.6	3.5	2.3	2.3	2.2	2.2	2.1	2.1	2	2	2	2	2.1	2	2	2.1	2.3	2.7	**S**	2.4	4.6	2.5	24
7	2.5	2.6	3.7	5.1	5.2	3.9	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2	2	2.1	2.1	2.1	2	2.1	2.1	**S**	2.3	2.4	5.2	2.6	24
8	2.5	2.6	2.6	3.1	7.9	6.1	4.3	3.9	3.4	2.4	2.4	2.5	**S**	**S**	2.2	2.4	2.4	2.1	2.1	2.2	**S**	3.9	3.1	3.9	7.9	3.2	24
9	4.4	5.1	5.6	6.7	10.4	8.8	6.1	3.2	2.5	2.2	2.2	2.2	2.1	2.1	2	2	2	2	2.1	**S**	2.7	3.6	4.9	7.1	10.4	4.0	24
10	7.8	7.9	4.9	2.2	2.2	3.6	3.1	2.7	2.7	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.2	**S**	2.8	4	4.2	2.9	2.1	7.9	3.2	24
11	2.1	2.4	2.9	3.1	2.4	2.4	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2	2	2	**S**	2	2	2	2.3	2.1	2.5	3.1	2.2	24
12	2.4	2.5	2.7	2.5	2.6	2.6	2.3	2.1	2	2	2	2	2	2	2	2	**S**	2	2.1	2	2	2	2.1	2.5	2.7	2.2	24
13	2.8	2.9	2.4	3.7	2.8	3.1	2.6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**S**	2	2	2	2	2.2	3.1	3.2	4	4.0	2.5	24
14	4.7	4.7	5.1	4.4	4.7	5.9	5.9	4.7	4.4	2.9	2.7	2.3	2.3	2.1	**S**	2.1	2.2	2.3	2.2	2.5	2.5	2.7	3.5	3	5.9	3.5	24
15	2.6	2.6	2.4	2.7	2.6	2.3	2.1	2.1	2	2	1.9	1.9	2	**S**	2.1	2.1	2.1	2.2	2.4	2.4	2.8	3.3	2.7	2.1	3.3	2.3	24
16	2.6	2.5	2.4	2.6	2.6	2.6	2.6	2.4	2.2	2.2	2.1	2.1	**S**	2	2	2	2	2	2	2.2	2.7	2.9	3.5	4.4	4.4	2.5	24
17	5.1	5.7	6.8	6.7	6.8	5.5	5.2	5	3.4	2.5	2.2	**S**	2	2.1	2	2	2.1	2.1	2.2	2.5	3.3	3.8	3.6	3.7	6.8	3.8	24
18	3.8	3.8	3.9	5.5	9.5	6.9	3.4	2.9	2.8	2.2	**S**	2	2	1.9	1.9	1.9	1.9	1.9	2	2.2	2.7	3.4	2.6	2.5	9.5	3.2	24
19	2.1	2.1	2.3	2.2	3.1	2.1	2.4	2.2	2.2	**S**	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.3	2.2	2.4	2.5	3.1	2.2	24
20	2.3	2.4	2.5	2.4	2.3	2.4	2.7	2.6	**S**	2.7	2.6	2.4	2.3	2.2	2.1	2.1	2.2	2.2	2.4	2.4	3.1	2.9	2.3	2.2	3.1	2.4	24
21	2.1	2.1	2	2	2	2.1	2.1	**S**	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	3.8	3.5	3.4	7.1	7.1	2.5	24
22	5.3	6.2	6.3	7.1	9.5	7.2	**S**	5.2	5.4	4.5	4	3.6	3.2	2.9	2.6	2.4	2.2	2.3	2.5	2.8	3.5	4.8	3.8	3.7	9.5	4.4	24
23	4.3	4.5	4.4	5.3	5.3	**S**	3.9	2.8	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.5	2.8	2.7	5.3	2.9	24
24	3.5	5.4	6.9	7.1	**S**	5.5	5.3	4.7	2.7	2.3	2.3	2.3	2	2	2	2	2	2	2	2.1	2.5	3	3.7	3.9	7.1	3.4	24
25	6.5	7.4	7.9	**S**	6.8	6.5	4.4	5	4.3	2.8	2.5	2.3	2.2	2.2	2.1	2.1	2.1	2.3	2.2	2.4	2.6	3.4	3	3.6	7.9	3.8	24
26	4.4	4	**S**	3.9	4.1	4.1	3.4	2.9	2.6	2.3	2.2	2.1	2.1	2.1	2	2	2.1	2.1	2.1	2.5	2.3	2.2	2.3	2.5	4.4	2.7	24
27	2.4	**S**	2.2	2.3	2.2	2.3	2.4	2.3	2.4	2.3	2.2	2.3	2.3	2.2	2.3	2.2	2.3	2.3	2.3	2.2	2.5	2.5	2.4	3.1	3.1	2.3	24
28	**S**	3.1	2.8	2.6	2.4	2.3	2.2	2.1	2.1	2.1	2	2	2	2	2	2	2	2.1	2	2.1	2.1	2.1	2.2	**S**	3.1	2.2	24
29	2.2	2	2	2	2	2.1	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.1	2.1	2.2	2.5	**S**	2.8	2.8	2.1	24
30	2.4	3	4.2	3.2	3	2.5	2.5	2.5	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.9	**S**	3.5	4.2	4.2	2.6	24	
31	3.7	3.7	4	3.8	3.3	4.6	3.8	2.6	2.6	2.2	2.1	2.1	2	2	2	2	2	2	2	2.1	**S**	3.1	3.8	3.7	4.6	2.8	24
HOURLY MAX	7.8	7.9	7.9	8.8	10.4	11.7	9.8	7.6	7.0	4.5	4.0	3.6	3.2	2.9	2.6	2.4	2.4	2.3	2.8	3.9	4.0	4.8	4.9	7.1			
HOURLY AVG	3.7	3.8	3.9	3.9	4.3	4.3	3.4	3.0	2.8	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.6	3.0	2.9	3.4			

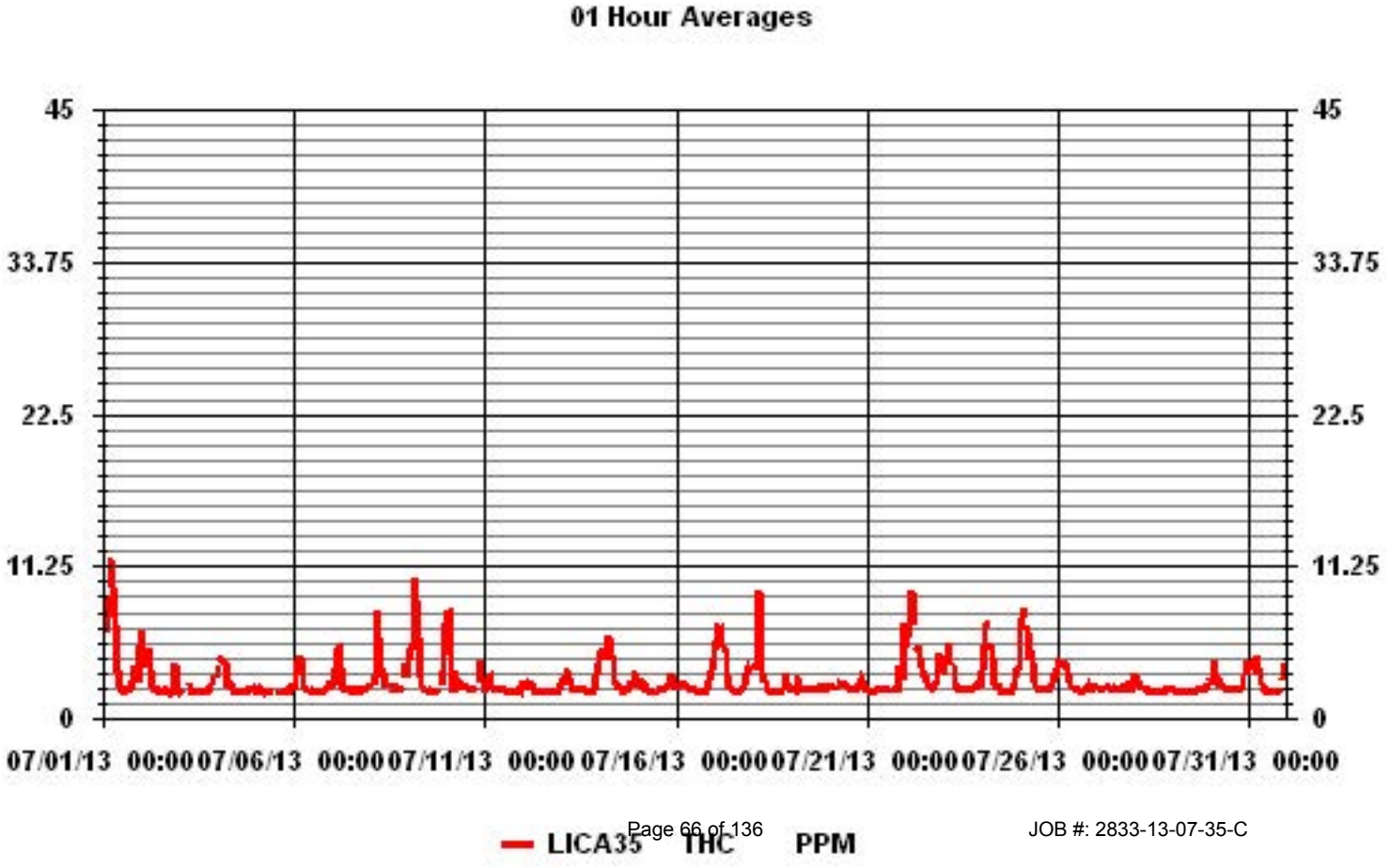
STATUS FLAG CODES

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:	703						
MAXIMUM 1-HR AVERAGE:	11.7	PPM	@ HOUR(S)	5	ON DAY(S)	1	
MAXIMUM 24-HR AVERAGE:	4.6	PPM			ON DAY(S)	1	
IZS CALIBRATION TIME:	35	HRS	OPERATIONAL TIME:		742	HRS	
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:		99.7	%	
STANDARD DEVIATION:	1.39		MONTHLY AVERAGE:		2.86	PPM	



JOB #: 2833-13-07-35-C

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

JULY 2013

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	**41.1**	22.4	11.7	41.4	**S**	14.4	11.6	10.5	9.3	5.5	3.2	2.7	2.6	2.8	2.6	3.3	3.9	3.7	8.3	10.2	3.8	4.2	3	25.7	**41.4**	10.8	24
2	9.7	7	6.4	**S**	4.3	10	4.4	3.7	2.3	2.2	2.4	2.4	2.1	3.6	3.7	3.7	4.2	3.8	2	4.3	4.5	5.9	3.8	2	10	4.3	24
3	2	2	**S**	**P**	**P**	**P**	2.7	2.3	2.2	2.1	2.1	2.1	2.1	2.3	2.4	2.3	2.4	2.4	2.6	2.5	4.6	3.2	4.4	3.6	4.6	2.6	21
4	4.7	**S**	7.8	5.1	5	5.1	3.2	2.7	2.9	2.7	2.1	2.1	2.1	2.2	2	2.2	**S**	2.2	2.3	2.2	2.7	2.4	2.3	4.3	7.8	3.2	24
5	**S**	2.2	3.4	3	2.2	2	2	2	2	**C**	**C**	**C**	**C**	**C**	2	**Y**	2.2	2.4	2.2	2.4	2.8	2.6	2.5	**S**	3.4	2.4	23
6	3	4.7	5.3	6.1	6.3	3.9	2.6	2.6	2.4	2.9	2.2	2.1	2.1	2.1	2.1	2.4	2.4	2.2	2.1	2.8	3.2	4.2	**S**	2.6	6.3	3.1	24
7	3.8	3.2	5.9	9.1	7.4	6.3	2.9	2.3	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.4	2.2	2.2	2.1	2.2	2.2	**S**	2.3	2.5	9.1	3.2	24
8	2.8	2.9	2.7	5.2	10.4	7.7	4.7	4.9	3.9	2.7	2.6	3.3	**S**	**S**	2.5	3.9	3.8	2.3	2.3	2.2	**S**	16.7	4.2	5.6	16.7	4.6	24
9	6.2	5.5	7.9	18.4	16.7	11.9	8	3.7	2.9	3.2	3.4	3	2.4	2.7	2.1	2.1	2.1	2.1	2.3	**S**	3.6	4.6	7.4	11.9	18.4	5.8	24
10	13	9.9	12.2	2.5	3.1	5.3	5.1	3.6	3.6	2.8	2.5	2.5	2.4	2.5	3	3.2	2.7	3.4	**S**	4.4	9.3	7.6	4.1	2.2	13	4.8	24
11	2.1	3.6	6.2	4.3	2.8	2.8	2.2	2.5	7.6	2.3	2.2	2.2	2.1	2.4	2.2	2.1	2.1	**S**	2.2	2.3	2.2	3.3	2.4	3.1	7.6	2.9	24
12	3.2	3.1	3.2	3.1	3.3	2.9	2.5	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	**S**	2.2	2.2	2.4	2.1	2.1	2.2	3.2	3.3	2.5	24
13	3.9	4	3	7.2	3.5	3.9	3.5	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.1	**S**	2	2	2	2	2.9	3.8	5.3	4.9	7.2	3.1	24
14	6.3	6.3	7.1	4.8	5.8	9.3	7.4	5.7	5.5	3.6	2.9	2.6	2.5	2.6	**S**	2.6	2.7	2.8	2.8	2.9	2.8	4.9	4.9	4.8	9.3	4.5	24
15	4.7	3.2	3.1	3.8	3.2	2.4	2.2	2.1	2.1	2.1	2	2	2.1	**S**	2.1	2.1	2.2	3.4	3.4	2.8	3.2	3.9	3.2	2.2	4.7	2.8	24
16	3	3.5	2.8	2.7	2.7	2.8	3	3.1	2.3	2.3	2.2	2.2	**S**	2.3	2.1	2.1	2.1	3.8	2.1	2.4	4.2	4.6	5.4	6	6	3.0	24
17	6	13.6	10.9	7.5	7.8	6.8	8	6	4.8	3.1	4.4	**S**	2.3	2.5	2.6	2.3	2.5	2.6	3.2	3.2	6.4	6.2	4.2	4	13.6	5.3	24
18	4.2	4.1	4.3	11.5	11.3	9.8	4.3	4.3	3.5	2.3	**S**	2.1	2	2	2	2	1.9	1.9	2	3	3.3	4	3	3.1	11.5	4.0	24
19	2.9	4.2	3.5	2.7	4.8	3.4	4.1	2.4	2.2	**S**	2.2	2.4	2.4	2.1	2.1	2.6	2.2	2.2	2.6	2.4	2.6	2.4	2.5	2.7	4.8	2.8	24
20	2.5	3.2	3.4	3.1	3.2	3.6	3.5	3.2	**S**	3.1	2.7	2.6	2.6	2.5	2.9	2.3	2.5	2.7	3.1	3	4.3	4.2	2.8	2.4	4.3	3.0	24
21	2.4	2.2	2.1	2.1	2.1	2.2	2.1	**S**	2.8	4.8	2.2	2.1	2.1	2.1	2.1	2.1	5.8	2.2	2.4	4.2	14	7.8	4.8	16.4	16.4	4.0	24
22	7.5	7.9	8.6	11	15.8	9.4	**S**	6.4	6.1	5	4.3	4.3	4	3.2	3.2	2.6	2.6	2.7	2.8	3.4	4.4	7	5.2	4.8	15.8	5.7	24
23	7.4	5.8	4.9	12.4	6.9	**S**	6.1	4.2	5	4.5	4.2	2.2	2.2	3.1	2.2	2.1	2.1	2.2	3.7	7.9	3.5	3	3.2	3	12.4	4.4	24
24	4.8	6.8	12.5	10.3	**S**	6.7	8.2	7.4	3.5	2.6	3.3	4.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	4	6	8.1	6.2	12.5	4.9	24
25	10.1	8.8	11.7	**S**	11.5	9.5	6.9	5.8	6.5	3.2	2.8	2.4	2.7	2.6	2.7	2.3	2.3	4.2	3.9	2.7	3	4.3	3.7	4.7	11.7	5.1	24
26	5.7	5.1	**S**	5.4	4.8	5.8	4.1	3.5	2.8	3.2	3.1	3	2.2	2.2	2.5	2.3	3.8	3.3	2.8	4.5	3.2	3.4	2.4	2.8	5.8	3.6	24
27	2.7	**S**	2.9	3.1	2.6	2.7	3	2.7	2.5	2.5	2.4	2.5	2.3	2.3	2.4	2.5	2.4	2.4	2.5	2.4	2.9	2.7	2.6	4	4	2.7	24
28	**S**	3.8	3.8	3.2	3.1	2.7	2.4	2.3	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.3	2.4	**S**	3.8	2.4	24
29	2.4	2.1	2.1	2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.4	2.7	**S**	3.5	3.5	2.2	24
30	2.9	3.7	6.1	3.6	3.7	2.9	3	2.9	2.3	2.3	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.7	3.4	**S**	4.5	5	6.1	3.0	24
31	4.6	4.7	4.7	4.2	3.7	5.4	5.3	3.3	2.9	2.5	2.1	2.1	2.1	2.1	2.1	2	2	2.1	2.1	2.2	**S**	3.8	4.3	4.5	5.4	3.3	24
HOURLY MAX	41.1	22.4	12.5	41.4	16.7	14.4	11.6	10.5	9.3	5.5	4.4	4.4	4.0	3.6	3.7	3.9	5.8	4.2	8.3	10.2	14.0	16.7	8.1	25.7			
HOURLY AVG	6.1	5.5	5.9	7.1	5.7	5.6	4.4	3.8	3.5	2.9	2.6	2.5	2.3	2.4	2.3	2.4	2.6	2.6	2.7	3.2	3.9	4.6	3.8	5.2			

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

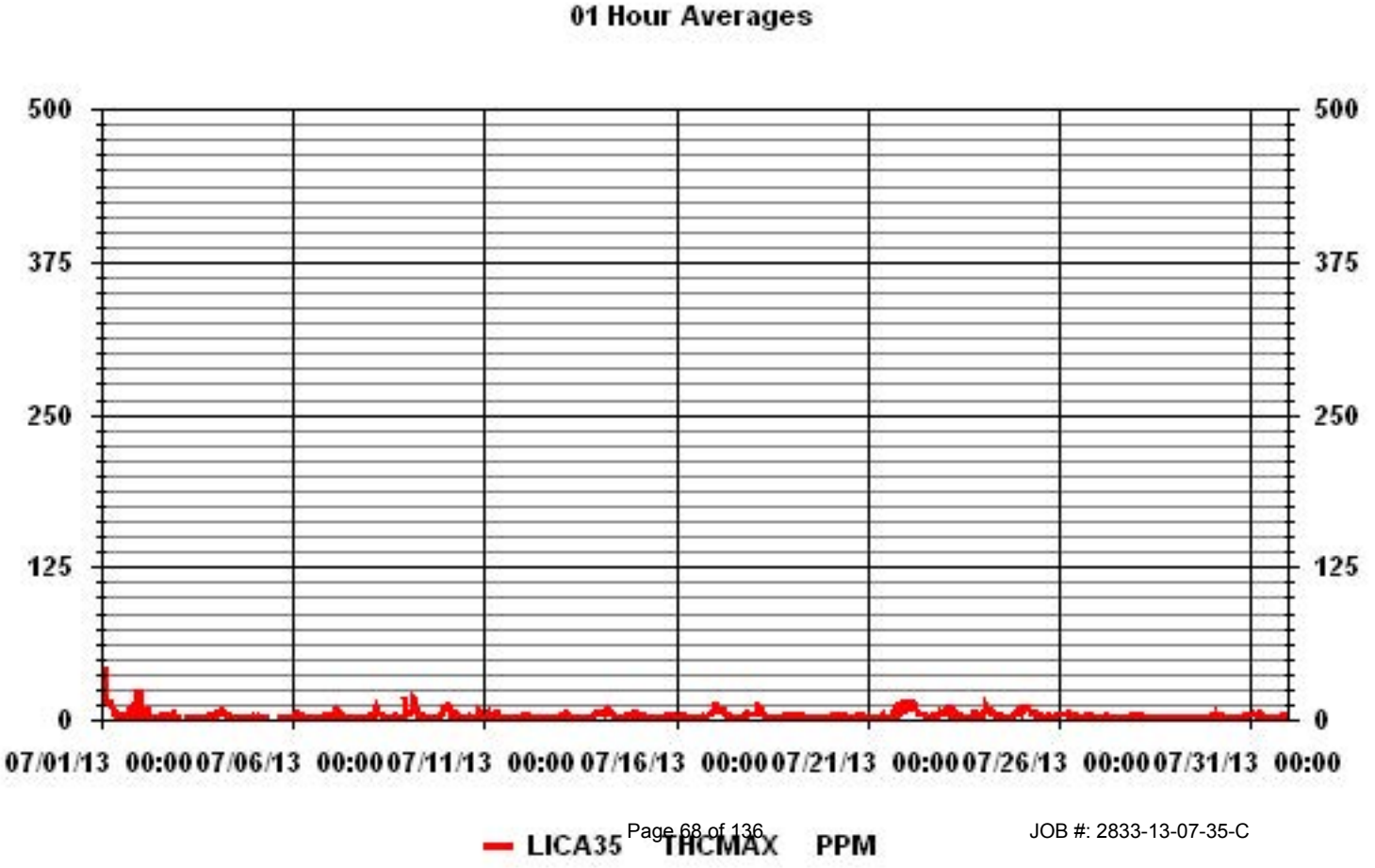
NUMBER OF NON-ZERO READINGS: 699

MAXIMUM INSTANTANEOUS VALUE: 41.4 PPB @ HOUR(S) 0 ON DAY(S) 1

IZS CALIBRATION TIME: 36 HRS OPERATIONAL TIME: 740 HRS

MONTHLY CALIBRATION TIME: 5 HRS

STANDARD DEVIATION: 3.34



JOB #: 2833-13-07-35-C

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

July 2013

Distribution By % Of Samples

Logger Id : 35
Site Name : LICA-ELK
Parameter : THC
Units : PPM

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	2.84	1.28	.99	2.13	2.41	2.84	5.83	3.41	2.70	2.70	1.84	4.83	8.96	12.51	14.22	5.12	74.67
<	10.0	.14	.00	.00	.42	2.41	3.41	1.56	1.42	.85	.85	.56	2.27	5.26	4.69	.99	.14	25.03
<	50.0	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.28
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.98	1.28	.99	2.56	4.83	6.40	7.39	4.83	3.55	3.55	2.56	7.11	14.22	17.21	15.22	5.26	

Calm : .00 %

Total # Operational Hours : 703

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	20	9	7	15	17	20	41	24	19	19	13	34	63	88	100	36	525
<	10.0	1			3	17	24	11	10	6	6	4	16	37	33	7	1	176
<	50.0						1					1						2
>=	50.0																	
	Totals	21	9	7	18	34	45	52	34	25	25	18	50	100	121	107	37	

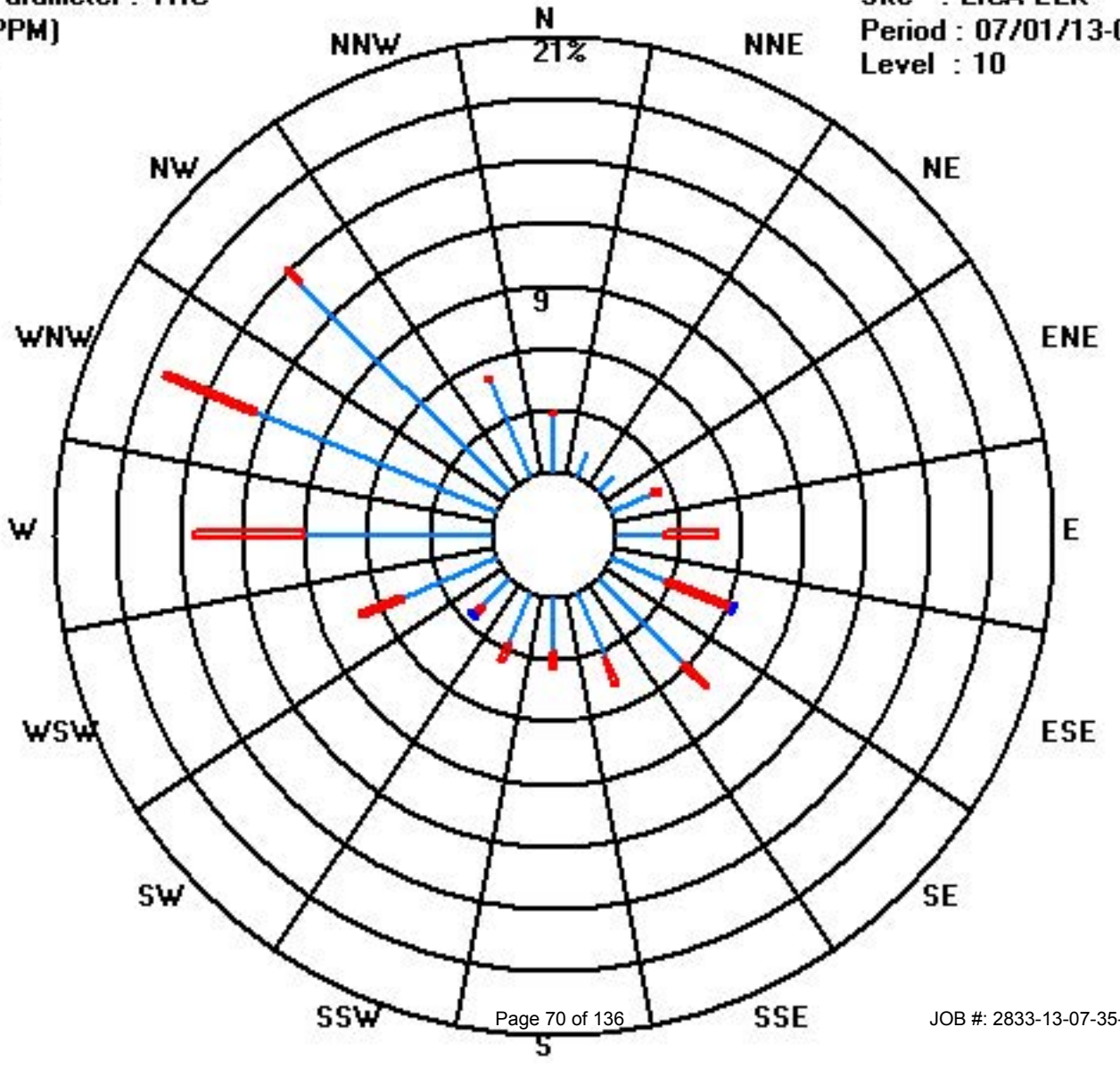
Calm : .00 %

Total # Operational Hours : 703

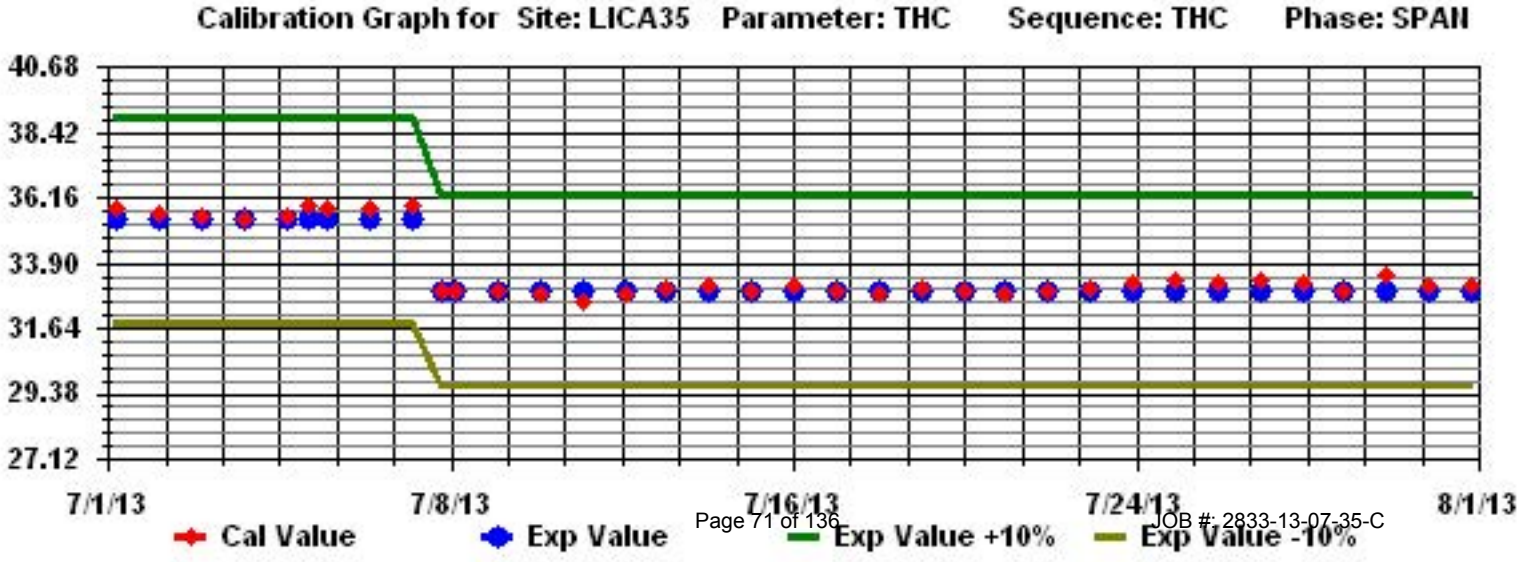
Logger : 35 Parameter : THC
Class Limits (PPM)

>= 50.0
< 50.0
< 10.0
< 3.0

Site : LICA-ELK
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-35-C


Calibration Graph for Site: LICA35 Parameter: THC Sequence: THC Phase: SPAN
40.68
38.42
36.16
33.90
31.64
29.38
27.12
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons (55i)

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JULY 2013

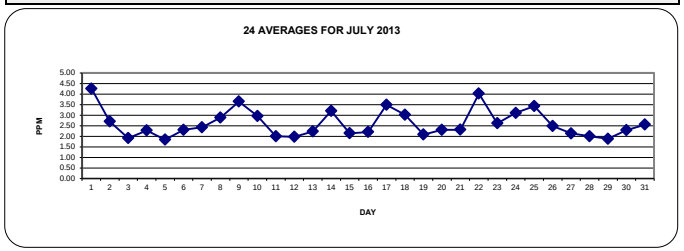
TOTAL HYDROCARBONS (55i) hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	6.2	6.0	5.7	7.6	**S**	**10.4**	8.7	6.9	6.5	3.5	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.6	3.7	3.2	3.0	2.4	4.9	**10.4**	**4.26**	24
2	5.8	4.9	3.8	**S**	3.5	4.7	3.3	2.3	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.0	1.9	2.1	2.4	3.8	2.4	1.7	5.8	2.70	24
3	1.7	1.8	**S**	1.8	**P**	**P**	2.1	1.8	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	2.2	2.6	2.7	2.9	2.9	1.92	22
4	3.4	**S**	4.0	3.8	3.9	3.7	2.3	2.1	2.1	2.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	2.0	1.9	2.1	4.0	2.28	24
5	**S**	1.8	2.1	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	**C**	**C**	**C**	1.8	1.8	1.8	1.9	2.0	1.9	2.2	**S**	2.2	1.84	24
6	2.2	2.9	3.8	3.5	4.3	3.2	2.1	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	2.1	2.4	**S**	2.2	4.3	2.31	24
7	2.3	2.4	3.3	4.7	4.8	3.7	2.3	2.0	1.9	2.0	**Y**	**S**	**S**	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	**S**	2.1	2.1	4.8	2.43	23
8	2.3	2.3	2.3	2.7	7.1	5.6	4.0	3.6	3.1	2.1	2.1	2.3	2.1	2.3	2.0	2.2	2.2	2.0	2.0	2.0	**S**	3.6	2.8	3.6	7.1	2.88	24
9	4.0	4.7	5.1	6.0	9.4	8.0	5.7	2.9	2.3	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	**S**	2.5	3.3	4.5	6.5	9.4	3.64	24
10	7.3	7.2	4.7	2.0	2.0	3.3	2.9	2.4	2.5	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.1	**S**	2.6	3.8	3.9	2.7	1.9	7.3	2.96	24
11	1.8	2.1	2.7	2.8	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	**S**	1.8	1.9	1.8	2.1	1.9	2.3	2.8	2.00	24
12	2.2	2.3	2.4	2.3	2.4	2.3	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**S**	1.8	1.8	1.8	1.8	1.8	1.9	2.2	2.4	1.97	24
13	2.5	2.6	2.1	3.3	2.5	2.8	2.3	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	**S**	1.8	1.8	1.8	1.8	2.0	2.8	2.9	3.6	3.6	2.23	24
14	4.4	4.3	4.7	4.1	4.3	5.4	5.4	4.4	4.1	2.7	2.5	2.1	2.1	1.9	**S**	1.9	2.0	2.1	2.0	2.3	2.3	2.5	3.2	2.8	5.4	3.20	24
15	2.4	2.4	2.3	2.5	2.4	2.1	2.0	2.0	1.9	1.9	1.8	1.9	1.9	**S**	1.9	1.9	1.9	1.9	2.2	2.1	2.5	3.1	2.4	1.9	3.1	2.14	24
16	2.3	2.2	2.1	2.2	2.3	2.3	2.3	2.1	1.9	1.9	1.9	1.8	**S**	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.5	2.7	3.3	4.1	4.1	2.20	24
17	4.8	5.2	6.2	6.2	6.2	5.2	4.9	4.7	3.2	2.3	2.0	**S**	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.3	3.1	3.7	3.4	3.5	6.2	3.49	24
18	3.6	3.6	3.6	5.0	8.8	6.5	3.3	2.8	2.7	2.1	**S**	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.1	2.6	3.2	2.4	2.4	8.8	3.02	24
19	2.0	1.9	2.2	2.0	2.9	2.0	2.2	2.1	2.0	**S**	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.2	2.2	2.1	2.1	2.2	2.4	2.9	2.08	24
20	2.1	2.3	2.3	2.2	2.2	2.3	2.5	2.4	**S**	2.6	2.4	2.3	2.2	2.1	2.1	2.0	2.1	2.1	2.3	2.3	3.0	2.8	2.3	2.2	3.0	2.31	24
21	2.1	2.0	2.0	2.0	2.0	2.0	2.0	**S**	2.0	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	3.5	3.2	3.1	6.5	6.5	2.31	24
22	4.9	5.7	5.8	6.5	8.7	6.5	**S**	4.8	5.0	4.2	3.7	3.3	2.9	2.6	2.4	2.2	2.0	2.1	2.2	2.5	3.2	4.5	3.5	3.4	8.7	4.03	24
23	4.0	4.1	4.0	4.9	4.8	**S**	3.6	2.5	2.1	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.1	2.1	2.2	2.6	2.4	4.9	2.61	24
24	3.2	4.9	6.3	6.5	**S**	5.2	5.0	4.5	2.5	2.2	2.1	2.1	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	2.2	2.8	3.5	3.6	6.5	3.10	24
25	5.9	6.8	7.2	**S**	6.3	5.9	4.1	4.6	4.0	2.6	2.3	2.1	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.4	3.1	2.7	3.3	7.2	3.43	24
26	4.0	3.7	**S**	3.5	3.8	3.8	3.1	2.6	2.4	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.3	2.2	2.0	2.1	2.3	4.0	2.48	24
27	2.2	**S**	2.0	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.0	2.3	2.3	2.2	2.8	2.8	2.14	24
28	**S**	2.8	2.6	2.3	2.2	2.2	2.0	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.0	**S**	2.8	2.00	24
29	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.3	**S**	2.5	2.5	1.88	24
30	2.2	2.8	3.8	2.9	2.7	2.2	2.2	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	2.6	**S**	3.1	3.8	3.8	2.29	24
31	3.4	3.3	3.7	3.5	3.0	4.1	3.5	2.3	2.3	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**S**	2.8	3.5	3.4	4.1	2.55	24
HOURLY MAX	7.3	7.2	7.2	7.6	9.4	10.4	8.7	6.9	6.5	4.2	3.7	3.3	2.9	2.6	2.4	2.2	2.2	2.2	2.6	3.7	3.8	4.5	4.5	6.5			
HOURLY AVG	3.4	3.5	3.6	3.5	3.9	3.9	3.1	2.8	2.5	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.4	2.8	2.7	3.1			

STATUS FLAG CODES

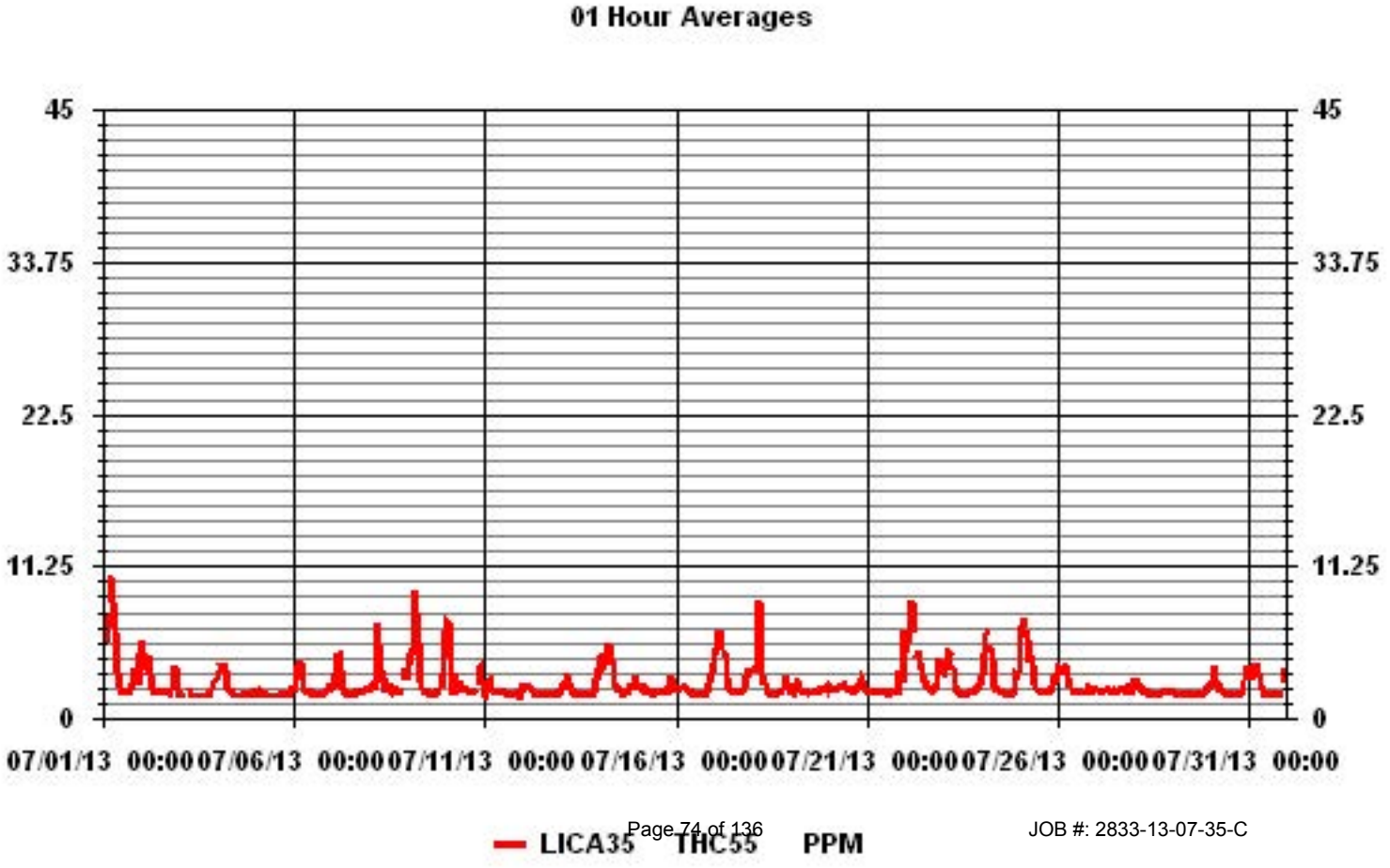
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	703					
MAXIMUM 1-HR AVERAGE:	10.4	PPM	@ HOUR(S)	5	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	4.26	PPM			ON DAY(S)	1

IZS CALIBRATION TIME:	35	HRS	OPERATIONAL TIME:	741	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:	99.6	%
STANDARD DEVIATION:	1.27		MONTHLY AVERAGE:	2.61	PPM



JOB #: 2833-13-07-35-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JULY 2013

TOTAL HYDROCARBONS (THC) MAX instantaneous maximum in ppm

MST

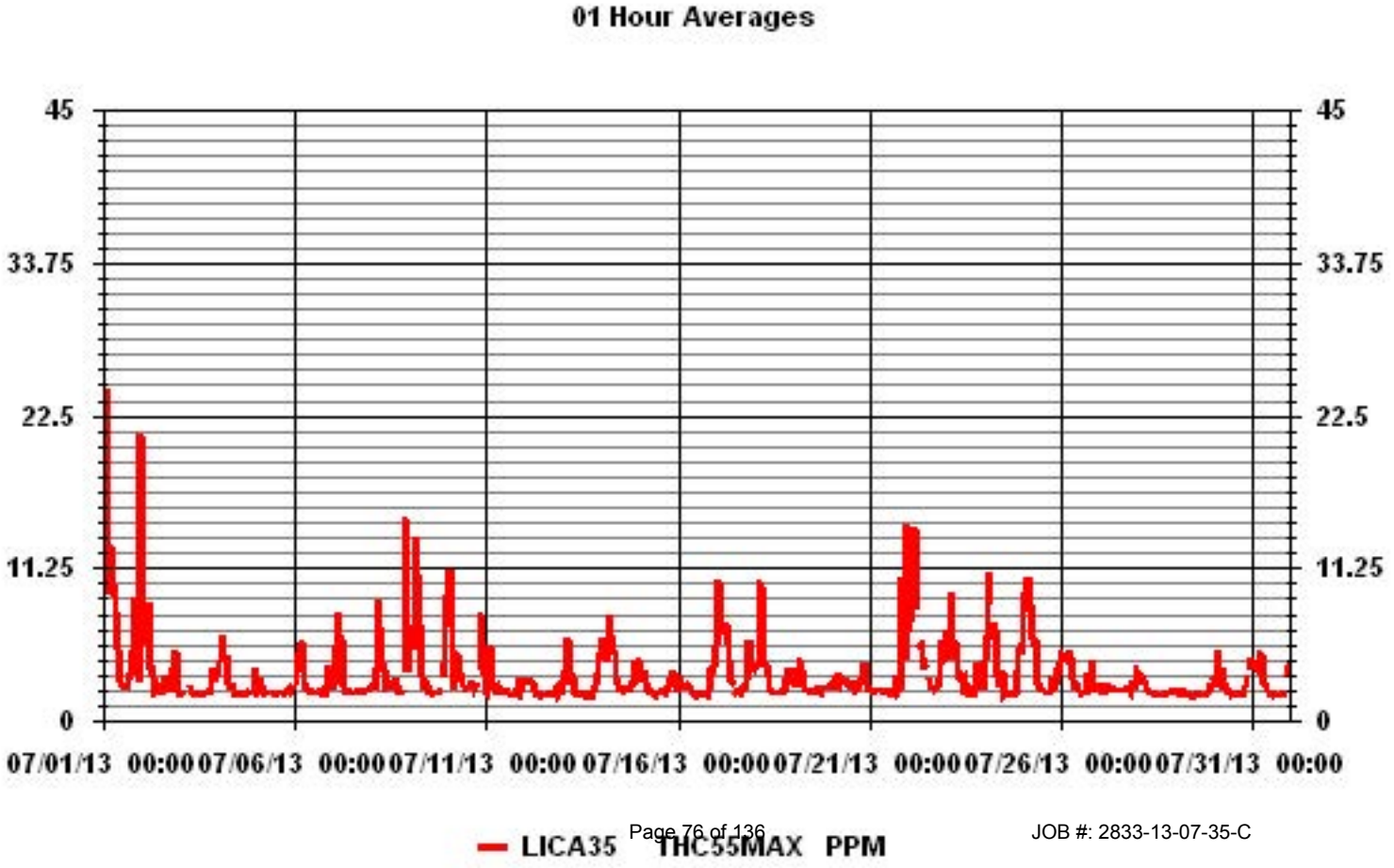
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	22.93	18.50	9.22	**24.28**	**S**	12.69	10.26	9.37	8.16	5.39	2.96	2.63	2.53	2.45	2.49	2.52	3.04	3.43	5.21	9.05	3.67	3.97	2.85	21.11	**24.28**	8.20	24
2	8.51	6.40	5.81	**S**	4.01	8.79	4.18	3.39	2.13	2.23	2.19	2.23	2.20	2.70	2.89	3.35	2.91	2.80	2.16	3.87	4.23	5.20	3.56	2.01	8.79	3.82	24
3	2.00	2.07	**S**	**P**	**P**	**P**	2.52	2.10	2.08	1.98	2.04	2.05	1.92	1.91	1.95	1.96	2.02	2.02	2.25	2.20	3.82	2.90	3.91	3.26	3.91	2.35	21
4	4.25	**S**	6.17	4.53	4.53	4.60	2.87	2.52	2.58	2.53	2.01	1.98	1.98	1.97	1.91	1.95	**S**	2.06	2.20	2.03	2.03	2.28	2.20	3.62	6.17	2.85	24
5	**S**	2.11	3.14	2.82	2.09	1.99	2.06	2.06	2.04	2.02	2.02	1.99	**C**	**C**	**C**	**C**	2.15	2.06	2.12	2.31	2.46	2.23	2.48	**S**	3.14	2.23	24
6	2.87	4.08	4.90	5.62	5.86	3.70	2.89	2.43	2.23	2.24	2.06	2.09	2.09	2.06	2.07	2.19	2.16	2.02	2.00	2.53	2.88	3.80	**S**	2.51	5.86	2.93	24
7	3.18	3.07	5.51	7.99	6.51	6.02	2.71	2.25	2.21	2.25	**Y**	**S**	**S**	2.08	2.11	2.23	2.24	2.11	2.16	2.12	2.12	**S**	2.33	2.40	7.99	3.18	23
8	2.54	2.63	2.59	3.87	8.98	6.97	4.39	4.27	3.79	2.43	2.51	2.85	2.75	2.61	2.26	3.22	2.79	2.20	2.22	2.15	**S**	14.83	3.62	4.97	14.83	3.98	24
9	5.36	5.36	7.09	11.77	13.44	10.94	7.14	3.45	2.78	2.28	2.81	2.63	2.08	2.06	2.02	2.07	2.06	2.08	2.27	**S**	3.45	4.22	6.94	9.33	13.44	4.94	24
10	11.04	8.88	11.10	2.33	2.88	4.93	4.88	3.15	3.45	2.63	2.44	2.51	2.44	2.44	2.60	2.99	2.44	2.66	**S**	3.93	7.96	7.02	3.59	2.18	11.10	4.37	24
11	2.06	3.27	5.57	3.79	2.85	2.53	2.12	2.12	2.49	2.27	2.11	2.11	2.17	2.26	2.09	2.08	2.02	**S**	2.15	2.15	2.01	3.06	2.16	2.77	5.57	2.53	24
12	2.90	2.99	2.98	2.91	2.94	2.85	2.33	2.05	2.09	1.88	1.94	1.95	2.01	1.91	1.93	1.94	**S**	2.03	2.00	2.24	1.88	2.04	2.06	2.91	2.99	2.29	24
13	3.39	3.73	2.63	6.17	3.23	3.52	3.25	2.06	2.07	1.88	1.87	2.00	1.96	1.98	1.89	**S**	2.02	1.93	1.86	2.08	2.63	3.44	4.91	4.49	6.17	2.83	24
14	5.84	5.83	5.90	4.42	4.84	7.87	6.45	5.16	5.00	3.38	2.78	2.41	2.45	2.16	**S**	2.35	2.36	2.47	2.39	2.91	2.68	4.35	4.40	4.41	7.87	4.04	24
15	4.00	3.06	3.03	3.60	2.96	2.37	2.20	2.18	2.06	2.06	1.91	2.08	2.14	**S**	2.19	2.19	2.10	2.60	3.10	2.49	3.13	3.60	2.98	2.13	4.00	2.62	24
16	2.68	3.25	2.60	2.49	2.53	2.60	2.79	2.69	2.11	2.14	2.06	1.91	**S**	2.03	2.04	2.00	2.01	2.01	1.93	2.23	3.73	3.69	4.04	5.51	5.51	2.66	24
17	5.62	10.31	9.64	6.85	6.78	6.36	7.27	5.86	4.65	3.04	2.81	**S**	2.06	2.16	2.28	2.11	2.36	2.40	2.75	2.97	5.78	5.79	3.97	3.81	10.31	4.68	24
18	4.07	4.00	4.11	10.41	10.01	9.11	4.26	4.10	3.39	2.35	**S**	2.21	2.06	2.06	2.04	2.06	2.09	2.12	2.20	2.98	3.15	3.88	2.98	3.01	10.41	3.85	24
19	2.79	2.91	3.86	2.43	4.54	3.14	3.75	2.43	2.33	**S**	2.23	2.16	2.22	2.12	2.10	2.39	2.27	2.15	2.42	2.41	2.41	2.42	2.53	2.66	4.54	2.64	24
20	2.33	2.85	3.15	2.87	2.68	3.27	3.29	2.92	**S**	3.03	2.75	2.53	2.48	2.46	2.88	2.32	2.43	2.43	3.00	2.95	4.14	4.16	2.81	2.43	4.16	2.88	24
21	2.33	2.22	2.22	2.10	2.18	2.27	2.28	**S**	2.15	2.25	2.21	2.16	1.91	1.90	2.11	2.09	3.37	2.01	2.13	2.35	10.66	5.22	4.48	14.38	14.38	3.35	24
22	6.51	7.35	7.54	8.80	14.25	8.39	**S**	5.54	5.66	4.72	4.07	3.99	**Y**	2.98	2.59	2.50	2.33	2.45	2.57	3.19	4.05	5.92	4.78	4.44	14.25	5.21	23
23	6.68	5.33	4.44	9.53	5.83	**S**	5.64	3.12	3.30	3.04	3.22	2.12	2.09	2.72	2.05	2.08	2.09	2.06	2.39	4.35	2.79	2.70	2.99	2.86	9.53	3.63	24
24	4.39	6.33	11.03	8.82	**S**	6.21	7.24	6.91	3.40	2.53	3.03	3.79	1.99	2.12	2.06	1.94	1.99	1.98	1.94	2.06	3.79	5.28	5.24	5.79	11.03	4.34	24
25	9.42	7.92	10.38	**S**	10.31	8.63	6.17	5.37	6.04	2.90	2.53	2.26	2.24	2.25	2.23	2.12	2.11	3.04	2.96	2.53	2.70	3.85	3.36	4.22	10.38	4.59	24
26	5.22	4.48	**S**	4.60	4.52	5.20	4.85	3.18	2.65	2.73	2.66	2.35	2.00	2.08	2.13	2.14	3.47	2.67	2.31	4.41	2.91	2.50	2.45	2.66	5.22	3.22	24
27	2.61	**S**	2.26	2.66	2.37	2.43	2.72	2.32	2.35	2.27	2.27	2.33	2.25	2.25	2.30	2.38	2.36	2.45	2.48	2.25	2.71	2.61	2.41	3.78	3.78	2.47	24
28	**S**	3.64	3.50	2.92	2.92	2.57	2.34	2.08	2.05	2.04	1.96	2.03	1.92	1.96	1.91	2.02	2.02	2.00	2.04	2.11	2.23	2.25	2.22	**S**	3.64	2.31	24
29	2.29	2.12	2.10	2.01	2.00	2.15	2.00	2.09	1.89	1.89	1.96	1.87	1.98	2.00	2.04	1.89	1.87	1.92	2.11	2.00	2.22	2.55	**S**	2.94	2.94	2.08	24
30	2.50	3.34	5.20	3.31	3.46	2.58	2.65	2.62	2.17	2.13	1.91	2.00	2.01	2.02	2.00	1.92	1.92	1.91	2.02	2.48	3.23	**S**	4.04	4.60	5.20	2.70	24
31	4.16	4.13	4.26	3.82	3.52	4.96	4.88	2.91	2.69	2.25	2.04	1.97	2.03	1.84	1.96	2.00	1.90	1.96	2.01	2.01	**S**	3.52	3.93	4.15	4.96	3.00	24
HOURLY MAX	22.93	18.50	11.10	24.28	14.25	12.69	10.26	9.37	8.16	5.39	4.07	3.99	2.75	2.98	2.89	3.35	3.47	3.43	5.21	9.05	10.66	14.83	6.94	21.11			
HOURLY AVG	5.0	4.9	5.2	5.6	5.1	5.2	4.1	3.4	3.1	2.6	2.4	2.3	2.1	2.2	2.2	2.2	2.3	2.3	2.4	2.8	3.5	4.1	3.5	4.7			

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

NUMBER OF NON-ZERO READINGS:	699						
MAXIMUM INSTANTANEOUS VALUE:	24.28	PPM	@ HOUR(S)	3	ON DAY(S)		1
IZS CALIBRATION TIME:	36	HRS	OPERATIONAL TIME:			739	HRS
MONTHLY CALIBRATION TIME:	4	HRS					
STANDARD DEVIATION:	2.47						



JOB #: 2833-13-07-35-C

LICA35
THC55 / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

Logger Id : 35
Site Name : LICA35
Parameter : THC55
Units : PPM

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	2.84	1.28	.99	2.13	2.56	2.99	6.12	3.56	2.84	2.84	1.85	5.55	9.82	13.24	14.24	4.98	77.92
<	10.0	.14	.00	.00	.42	2.27	3.27	1.28	1.42	.85	.71	.71	1.56	3.98	4.13	.99	.14	21.93
<	50.0	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.99	1.28	.99	2.56	4.84	6.41	7.40	4.98	3.70	3.56	2.56	7.12	13.81	17.37	15.24	5.12	

Calm : .00 %

Total # Operational Hours : 702

Distribution By Samples

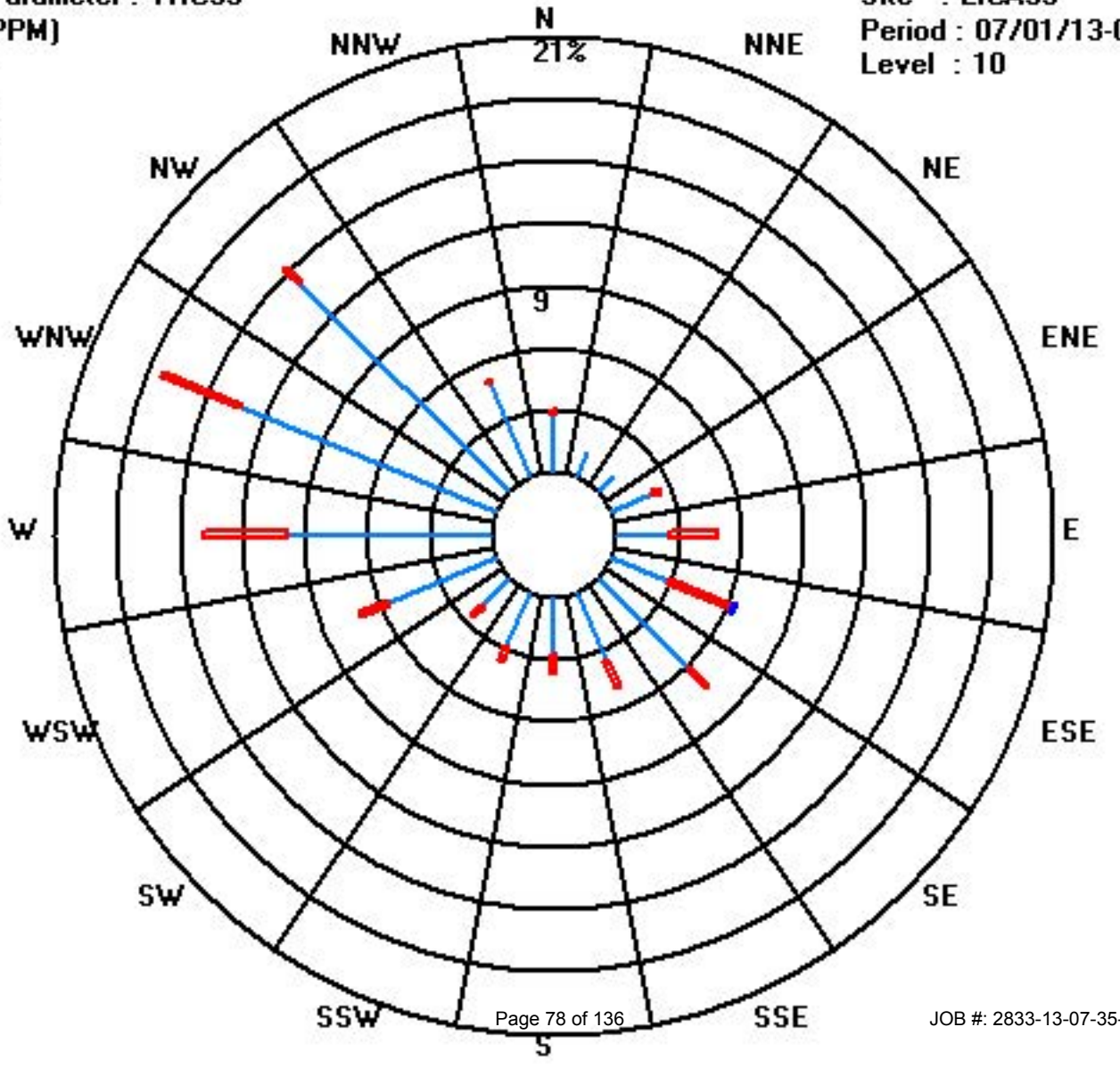
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	20	9	7	15	18	21	43	25	20	20	13	39	69	93	100	35	547
<	10.0	1			3	16	23	9	10	6	5	5	11	28	29	7	1	154
<	50.0						1											1
>=	50.0																	
	Totals	21	9	7	18	34	45	52	35	26	25	18	50	97	122	107	36	

Calm : .00 %

Total # Operational Hours : 702

Logger : 35 Parameter : THC55
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0

Site : LICA35
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-35-C

Methane

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JULY 2013

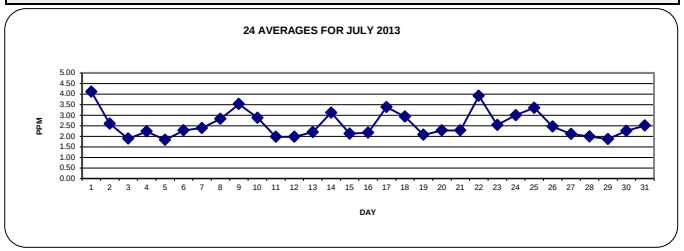
METHANE hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	5.8	5.7	5.4	7.2	**S**	**10.1**	8.5	6.8	6.2	3.4	2.3	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.5	3.5	3.0	2.8	2.4	4.8	**10.1**	**4.10**	24
2	5.6	4.6	3.6	**S**	3.4	4.5	3.2	2.2	1.9	1.9	1.8	1.8	1.8	1.8	1.9	2.0	2.0	1.9	1.8	2.0	2.3	3.6	2.3	1.7	5.6	2.59	24
3	1.7	1.7	**S**	1.8	**P**	**P**	2.0	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	2.1	2.5	2.6	2.8	2.8	1.89	22
4	3.2	**S**	3.7	3.6	3.7	3.6	2.3	2.1	2.1	2.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	2.0	1.9	2.1	3.7	2.23	24
5	**S**	1.8	2.0	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	**C**	**C**	**C**	1.8	1.8	1.8	1.9	2.0	1.9	2.1	**S**	2.1	1.83	24
6	2.2	2.8	3.6	3.4	4.1	3.1	2.1	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	2.1	2.4	**S**	2.2	4.1	2.27	24
7	2.3	2.4	3.2	4.5	4.6	3.6	2.2	2.0	1.9	1.9	**Y**	**S**	**S**	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	**S**	2.1	2.1	4.6	2.39	23
8	2.2	2.3	2.3	2.7	6.8	5.4	3.8	3.5	3.0	2.1	2.1	2.3	2.1	2.3	2.0	2.2	2.2	2.0	2.0	2.0	**S**	3.5	2.7	3.4	6.8	2.82	24
9	3.9	4.5	4.9	5.8	9.1	7.8	5.5	2.9	2.2	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	**S**	2.4	3.1	4.2	6.2	9.1	3.53	24
10	6.9	6.9	4.5	2.0	1.9	3.2	2.9	2.4	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	**S**	2.5	3.6	3.8	2.6	1.9	6.9	2.88	24
11	1.8	2.1	2.6	2.7	2.1	2.1	1.9	1.9	1.8	1.8	1.9	1.8	1.9	1.8	1.8	1.8	1.8	**S**	1.8	1.9	1.8	2.1	1.9	2.3	2.7	1.97	24
12	2.2	2.3	2.4	2.3	2.4	2.3	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**S**	1.8	1.8	1.8	1.8	1.8	1.9	2.2	2.4	1.97	24
13	2.5	2.5	2.1	3.2	2.5	2.7	2.3	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**S**	1.8	1.8	1.8	1.8	2.0	2.8	2.8	3.5	3.5	2.20	24
14	4.2	4.2	4.5	3.9	4.2	5.2	5.3	4.2	3.9	2.6	2.5	2.1	2.1	1.9	**S**	1.9	2.0	2.1	2.0	2.2	2.3	2.5	3.1	2.8	5.3	3.12	24
15	2.4	2.4	2.3	2.5	2.4	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.9	**S**	1.9	1.9	1.9	1.9	2.2	2.1	2.5	2.9	2.4	1.9	2.9	2.13	24
16	2.2	2.2	2.1	2.2	2.2	2.3	2.3	2.1	1.9	1.9	1.9	1.8	**S**	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.4	2.6	3.1	3.9	3.9	2.17	24
17	4.5	5.0	6.0	5.9	6.0	5.0	4.6	4.5	3.1	2.3	2.0	**S**	1.9	1.9	1.8	1.9	1.9	1.9	2.0	2.3	3.0	3.5	3.3	3.4	6.0	3.38	24
18	3.5	3.5	3.5	4.8	8.4	6.3	3.2	2.7	2.6	2.0	**S**	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.5	3.1	2.4	2.3	8.4	2.93	24
19	2.0	1.9	2.2	2.0	2.8	2.0	2.2	2.1	2.0	**S**	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2.1	2.1	2.2	2.3	2.8	2.07	24
20	2.1	2.2	2.3	2.2	2.2	2.3	2.5	2.4	**S**	2.6	2.4	2.3	2.2	2.1	2.0	2.0	2.1	2.1	2.2	2.3	2.9	2.7	2.2	2.2	2.9	2.28	24
21	2.1	2.0	2.0	2.0	2.0	2.0	2.0	**S**	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	3.4	3.1	3.0	6.2	6.2	2.28	24
22	4.7	5.4	5.6	6.3	8.4	6.3	**S**	4.6	4.8	4.0	3.6	3.3	2.9	2.6	2.4	2.2	2.0	2.1	2.2	2.5	3.1	4.3	3.4	3.3	8.4	3.91	24
23	3.9	4.0	3.9	4.7	4.7	**S**	3.5	2.5	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.2	2.5	2.4	4.7	2.54	24
24	3.1	4.7	6.0	6.2	**S**	5.0	4.7	4.3	2.5	2.1	2.0	2.1	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.9	2.2	2.7	3.3	3.4	6.2	3.00	24
25	5.7	6.5	6.8	**S**	6.0	5.7	4.0	4.4	3.9	2.6	2.3	2.1	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.3	3.1	2.7	3.2	6.8	3.35	24
26	3.9	3.6	**S**	3.5	3.7	3.7	3.0	2.6	2.3	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.3	2.2	2.0	2.1	2.3	3.9	2.46	24
27	2.2	**S**	2.0	2.1	2.0	2.0	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.3	2.3	2.2	2.8	2.8	2.11	24
28	**S**	2.8	2.5	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.0	**S**	2.8	1.99	24
29	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.2	**S**	2.5	2.5	1.87	24
30	2.2	2.7	3.6	2.9	2.7	2.2	2.2	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.6	**S**	3.0	3.7	3.7	2.26	24
31	3.3	3.3	3.6	3.4	2.9	4.0	3.4	2.3	2.3	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**S**	2.7	3.3	3.3	4.0	2.51	24
HOURLY MAX	6.9	6.9	6.8	7.2	9.1	10.1	8.5	6.8	6.2	4.0	3.6	3.3	2.9	2.6	2.4	2.2	2.2	2.1	2.5	3.5	3.6	4.3	4.2	6.2			
HOURLY AVG	3.25	3.38	3.48	3.44	3.82	3.80	3.05	2.73	2.45	2.11	2.00	1.95	1.92	1.89	1.87	1.88	1.89	1.89	1.93	2.06	2.36	2.70	2.61	3.00			

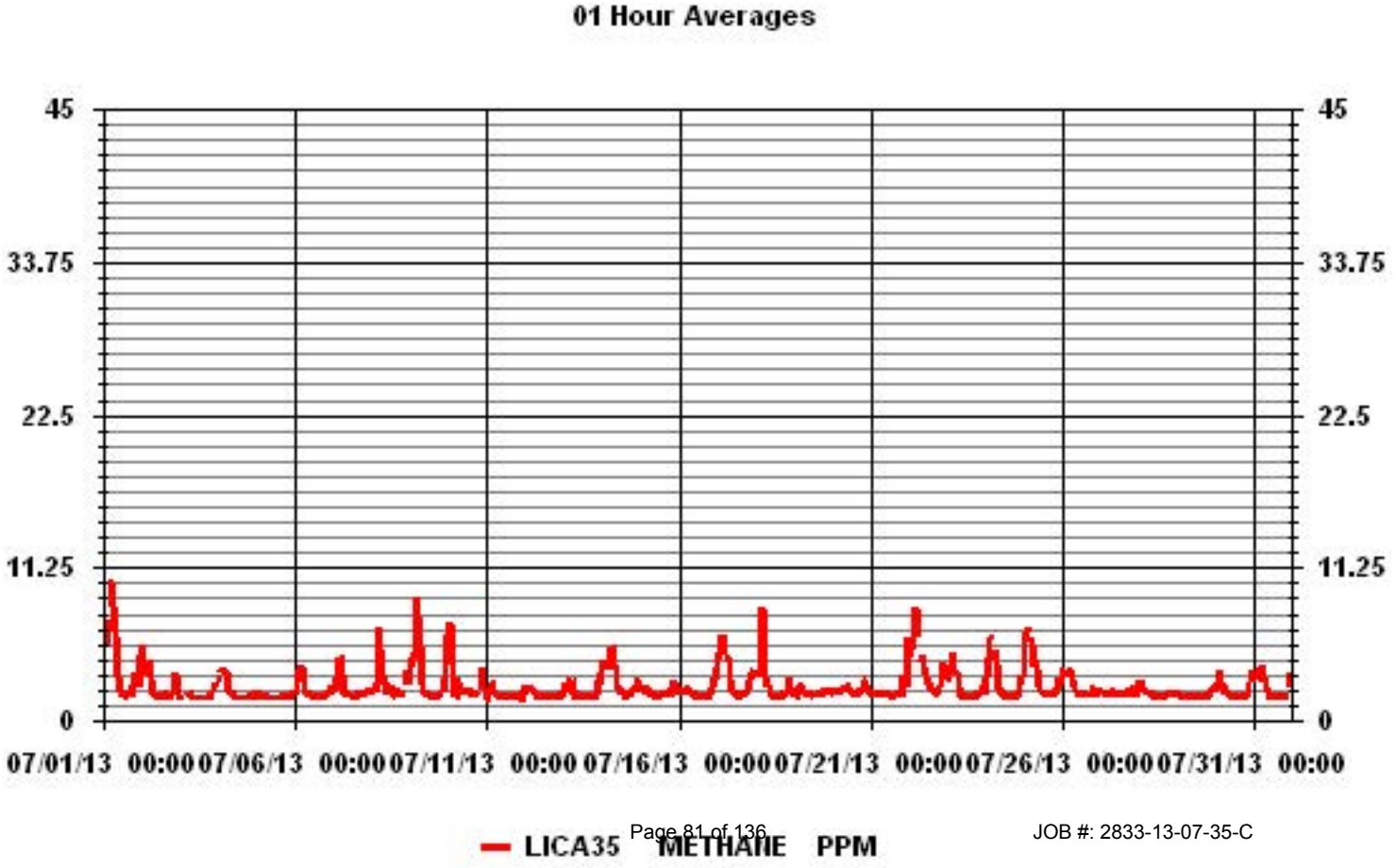
STATUS FLAG CODES

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:	703					
MAXIMUM 1-HR AVERAGE:	10.1	PPM	@ HOUR(S)	5	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	4.10	PPM			ON DAY(S)	1
IZS CALIBRATION TIME:	35	HRS	OPERATIONAL TIME:		741	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:		99.6	%
STANDARD DEVIATION:	1.21		MONTHLY AVERAGE:		2.56	PPM



JOB #: 2833-13-07-35-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JULY 2013

METHANE MAX instantaneous maximum in ppm

MST

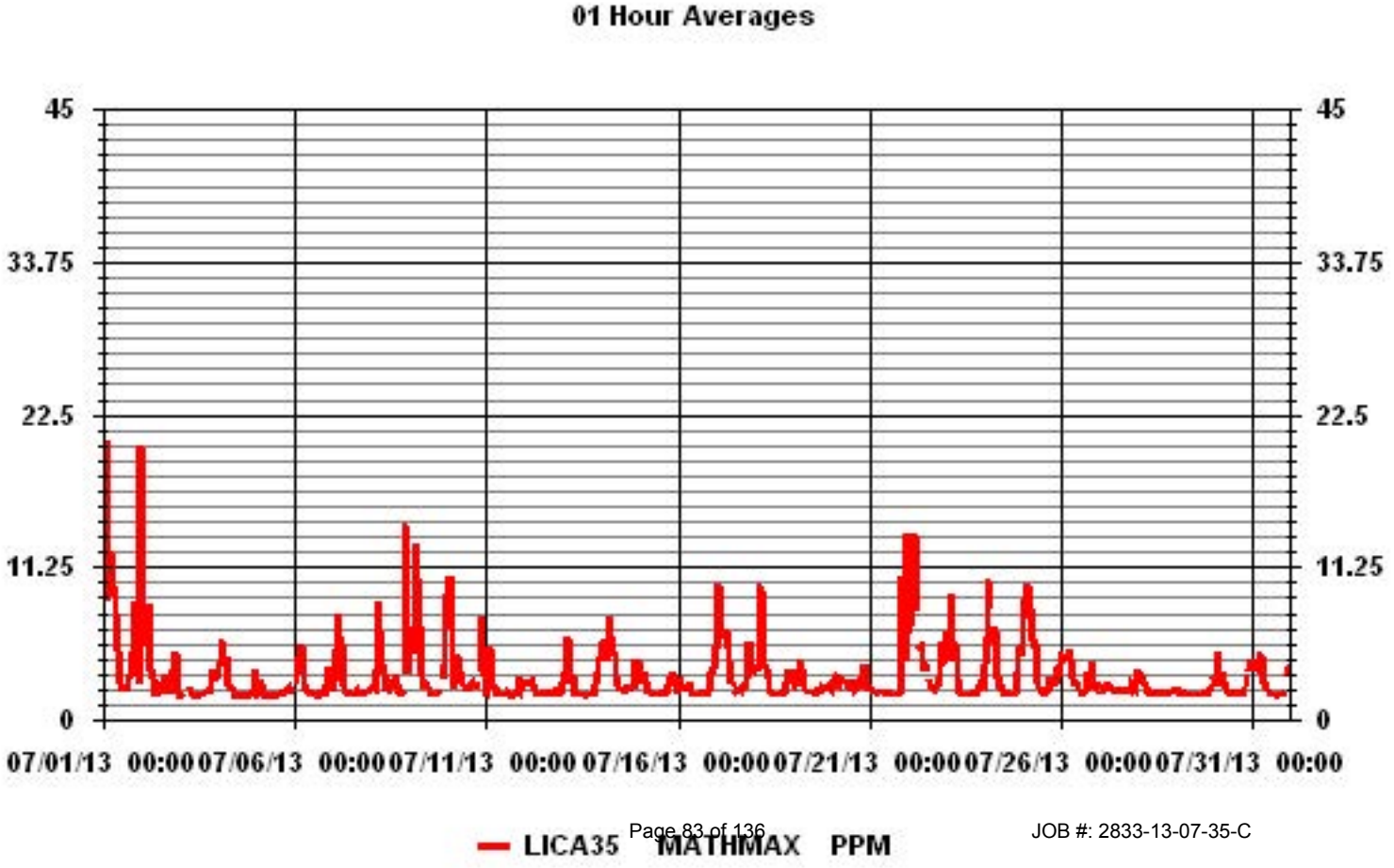
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	20.28	17.51	8.72	20.28	**S**	12.14	10.02	9.21	7.95	5.14	2.81	2.41	2.28	2.34	2.49	2.43	3.04	3.24	5.00	8.71	3.45	3.78	2.68	20.28	**20.28**	7.66	24
2	8.27	6.33	5.71	**S**	3.73	8.61	3.93	3.19	2.01	1.95	1.96	2.23	1.89	2.46	2.62	3.36	2.78	2.52	1.90	3.61	4.06	5.07	3.27	1.76	8.61	3.62	24
3	1.77	1.85	**S**	**P**	**P**	**P**	2.33	2.03	1.93	1.78	1.82	1.84	1.78	1.85	1.87	1.92	2.02	2.02	2.26	2.20	3.71	2.74	3.74	3.09	3.74	2.23	21
4	4.02	**S**	5.66	4.28	4.30	4.36	2.72	2.38	2.48	2.32	1.82	1.79	1.78	1.89	1.79	1.90	**S**	1.87	1.96	1.87	1.94	2.08	1.98	3.46	5.66	2.67	24
5	**S**	2.05	3.02	2.69	2.04	1.82	1.85	1.83	1.81	1.79	1.81	1.87	**C**	**C**	**C**	**C**	2.01	1.98	2.05	2.19	2.46	2.23	2.33	**S**	3.02	2.10	24
6	2.87	3.92	4.65	5.40	5.60	3.51	2.70	2.36	2.11	2.00	1.95	1.90	1.90	1.93	1.88	2.09	2.15	2.02	1.97	2.53	2.88	3.70	**S**	2.36	5.60	2.80	24
7	3.07	2.83	5.25	7.72	6.18	5.75	2.71	2.16	2.07	2.05	**Y**	**S**	**S**	1.90	1.92	2.24	2.02	2.00	1.95	2.00	2.00	**S**	2.15	2.28	7.72	3.01	23
8	2.51	2.58	2.47	3.68	8.75	6.70	4.18	4.06	3.57	2.43	2.34	2.84	2.75	2.54	2.25	3.23	2.79	2.19	2.07	2.13	**S**	14.25	3.43	4.79	14.25	3.85	24
9	5.21	5.19	6.88	11.46	12.88	10.48	6.99	3.30	2.69	2.28	2.70	2.55	1.93	1.96	1.92	1.89	1.91	1.96	2.05	**S**	3.25	3.99	6.67	9.18	12.88	4.75	24
10	10.47	8.44	10.60	2.27	2.78	4.83	4.66	3.14	3.26	2.64	2.32	2.35	2.26	2.29	2.60	2.79	2.33	2.66	**S**	3.76	7.67	6.85	3.40	1.95	10.60	4.19	24
11	1.89	3.16	5.41	3.63	2.59	2.51	2.01	1.98	1.90	1.89	1.93	1.90	1.93	2.14	2.03	1.85	1.87	**S**	2.02	2.15	2.02	3.06	2.16	2.77	5.41	2.38	24
12	2.90	2.82	2.86	2.79	2.91	2.61	2.33	1.98	1.92	1.89	1.94	1.92	1.95	1.91	1.93	1.94	**S**	1.98	2.00	2.16	1.88	1.90	1.98	2.75	2.91	2.23	24
13	3.40	3.55	2.64	6.12	3.10	3.37	3.25	1.95	1.91	1.88	1.87	1.87	1.96	1.88	1.86	**S**	1.86	1.87	1.86	1.87	2.64	3.44	4.71	4.27	6.12	2.74	24
14	5.59	5.67	5.72	4.26	4.64	7.64	6.37	5.09	4.76	3.38	2.63	2.41	2.29	2.12	**S**	2.25	2.37	2.46	2.39	2.69	2.62	4.21	4.24	4.23	7.64	3.91	24
15	3.86	2.90	2.91	3.46	2.96	2.25	2.12	2.01	1.96	1.97	1.91	1.92	1.98	**S**	1.98	1.95	1.98	2.60	3.11	2.47	2.85	3.44	2.84	1.99	3.86	2.50	24
16	2.58	3.12	2.42	2.36	2.34	2.44	2.63	2.69	2.06	2.05	1.94	1.91	**S**	1.90	1.93	1.92	1.90	1.91	1.93	2.17	3.47	3.57	3.86	5.21	5.21	2.54	24
17	5.33	9.95	9.38	6.57	6.53	6.09	6.64	5.38	4.39	2.90	2.81	**S**	2.07	2.17	2.29	2.13	2.37	2.39	2.75	2.97	5.60	5.63	3.73	3.59	9.95	4.51	24
18	3.89	3.81	3.90	9.94	9.54	8.75	4.11	3.89	3.27	2.20	**S**	2.00	1.90	1.89	1.89	1.89	1.92	1.91	1.97	2.71	2.97	3.69	2.85	2.82	9.94	3.64	24
19	2.61	2.91	3.65	2.36	4.36	2.98	3.75	2.28	2.14	**S**	2.06	2.07	2.03	2.00	1.98	2.39	2.10	2.07	2.42	2.27	2.40	2.30	2.38	2.57	4.36	2.53	24
20	2.34	2.84	3.14	2.87	2.69	3.24	3.18	2.92	**S**	2.85	2.56	2.46	2.35	2.38	2.88	2.20	2.35	2.43	2.86	2.73	3.93	3.98	2.71	2.33	3.98	2.79	24
21	2.33	2.17	2.08	2.05	2.03	2.10	2.09	**S**	2.03	2.02	1.99	1.92	1.91	1.90	1.91	1.92	1.99	1.92	1.93	1.98	10.60	5.08	4.29	13.80	13.80	3.13	24
22	6.32	6.93	7.28	8.63	13.64	8.14	**S**	5.37	5.46	4.46	3.89	3.85	**Y**	2.86	2.60	2.37	2.26	2.45	2.52	3.07	3.86	5.65	4.64	4.23	13.64	5.02	23
23	6.45	5.14	4.26	9.27	5.66	**S**	5.50	3.09	2.14	2.00	1.99	1.89	1.90	1.88	1.91	1.89	1.90	1.90	1.98	1.97	2.22	2.58	2.85	2.68	9.27	3.18	24
24	4.16	6.03	10.37	8.50	**S**	5.90	6.91	6.62	3.22	2.45	2.23	2.36	1.98	1.92	1.99	1.94	1.90	1.90	1.94	1.98	3.59	5.07	5.00	5.52	10.37	4.06	24
25	8.95	7.38	9.79	**S**	9.69	8.26	6.04	5.18	5.82	2.89	2.53	2.24	2.10	2.26	2.24	2.06	2.12	2.93	2.96	2.44	2.70	3.85	3.18	4.07	9.79	4.42	24
26	5.06	4.36	**S**	4.60	4.34	5.08	4.64	3.16	2.46	2.73	2.67	2.36	2.01	2.08	2.01	2.14	3.47	2.67	2.30	4.21	2.91	2.50	2.33	2.61	5.08	3.16	24
27	2.52	**S**	2.22	2.49	2.36	2.42	2.72	2.32	2.24	2.21	2.15	2.17	2.11	2.07	2.19	2.30	2.22	2.20	2.33	2.22	2.71	2.55	2.40	3.58	3.58	2.38	24
28	**S**	3.52	3.37	2.84	2.77	2.53	2.21	2.08	1.98	1.93	1.96	1.98	1.92	1.90	1.91	1.92	1.93	2.00	1.94	1.99	2.02	2.11	2.22	**S**	3.52	2.23	24
29	2.20	1.93	1.91	1.91	1.92	1.92	1.91	1.90	1.89	1.89	1.87	1.87	1.87	1.87	1.88	1.89	1.87	1.92	1.93	1.95	2.20	2.42	**S**	2.91	2.91	1.99	24
30	2.50	3.21	4.96	3.20	3.31	2.59	2.59	2.56	2.09	2.03	1.91	1.92	1.91	1.93	1.94	1.92	1.92	1.91	1.91	2.39	3.07	**S**	3.91	4.42	4.96	2.61	24
31	4.04	4.05	4.14	3.71	3.36	4.76	4.70	2.88	2.56	2.26	1.90	1.86	1.85	1.84	1.84	1.83	1.83	1.84	1.86	2.02	**S**	3.42	3.73	3.95	4.76	2.88	24
HOURLY MAX	20.28	17.51	10.60	20.28	13.64	12.14	10.02	9.21	7.95	5.14	3.89	3.85	2.75	2.86	2.88	3.36	3.47	3.24	5.00	8.71	10.60	14.25	6.67	20.28			
HOURLY AVG	4.74	4.69	5.01	5.33	4.89	4.96	3.93	3.30	2.87	2.41	2.22	2.16	2.02	2.07	2.09	2.16	2.18	2.19	2.27	2.65	3.37	3.97	3.30	4.46			

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:	699						
MAXIMUM INSTANTANEOUS VALUE:	20.28	PPM	@ HOUR(S)	VAR	ON DAY(S)	1	
IZS CALIBRATION TIME:	36	HRS	OPERATIONAL TIME:			739	HRS
MONTHLY CALIBRATION TIME:	4	HRS					
STANDARD DEVIATION:	2.33						



JOB #: 2833-13-07-35-C

LICA35
METHANE / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

Logger Id : 35
Site Name : LICA35
Parameter : METHANE
Units : PPM

Wind Parameter : WDR
Instrument Height : 10 Meters

		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	2.84	1.28	.99	2.13	2.56	3.13	6.12	3.70	2.84	2.84	1.85	5.69	9.82	13.39	14.24	4.98	78.49
<	10.0	.14	.00	.00	.42	2.27	3.13	1.28	1.28	.85	.71	.71	1.42	3.98	3.98	.99	.14	21.36
<	50.0	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.99	1.28	.99	2.56	4.84	6.41	7.40	4.98	3.70	3.56	2.56	7.12	13.81	17.37	15.24	5.12	

Calm : .00 %

Total # Operational Hours : 702

Distribution By Samples

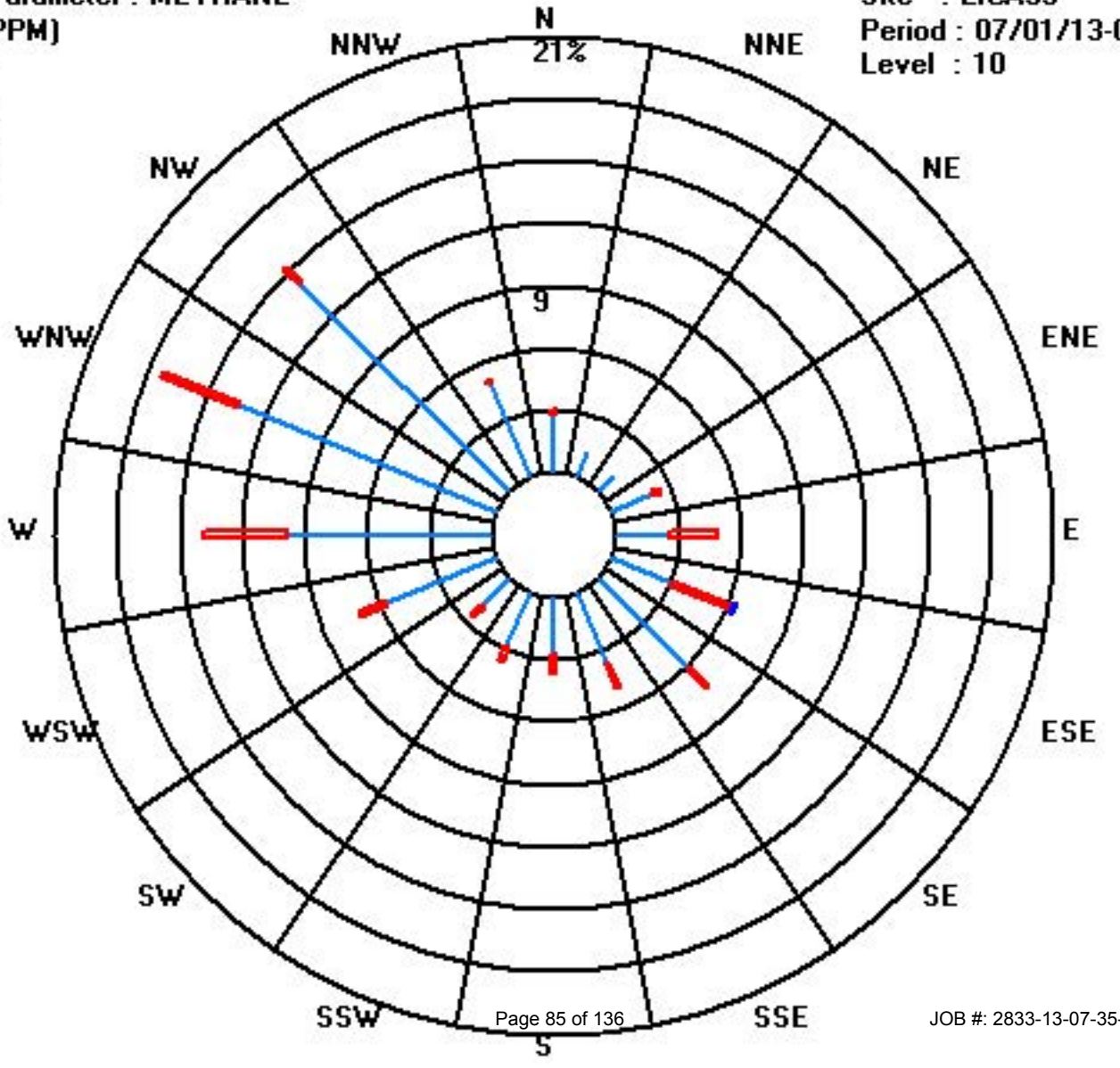
		Direction																
	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	20	9	7	15	18	22	43	26	20	20	13	40	69	94	100	35	551
<	10.0	1			3	16	22	9	9	6	5	5	10	28	28	7	1	150
<	50.0						1											1
>=	50.0																	
	Totals	21	9	7	18	34	45	52	35	26	25	18	50	97	122	107	36	

Calm : .00 %

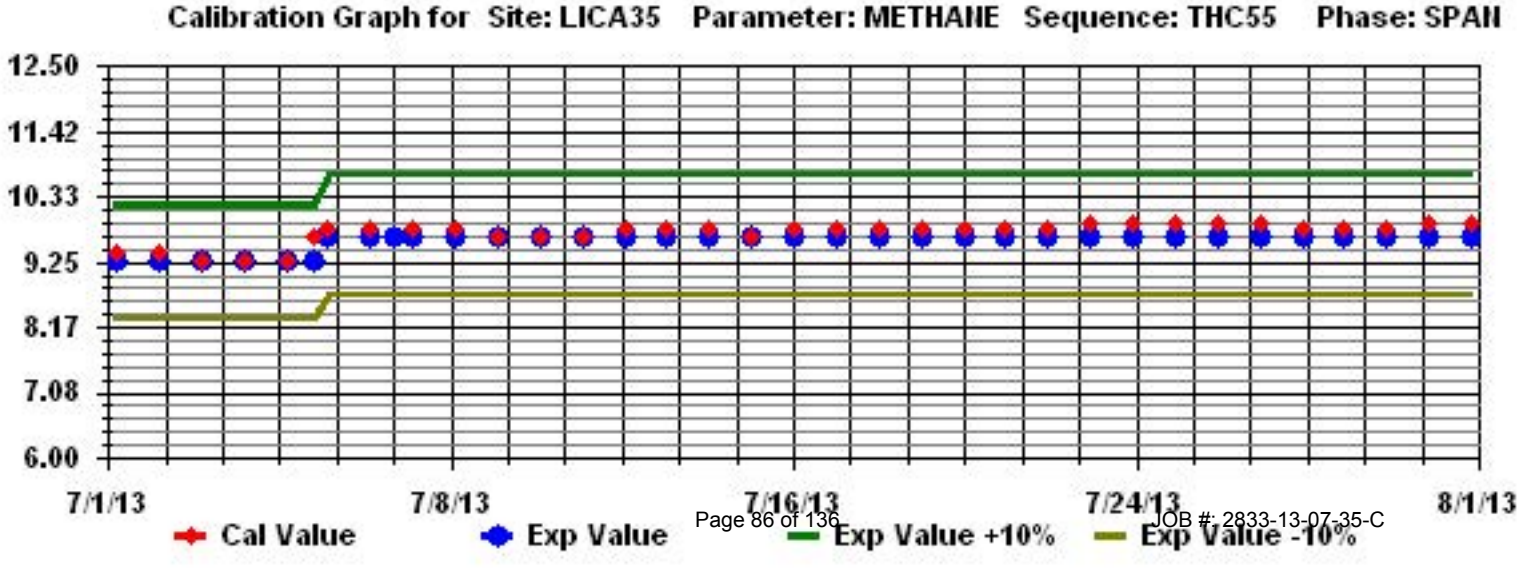
Total # Operational Hours : 702

Logger : 35 Parameter : METHANE
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0

Site : LICA35
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-35-C


Calibration Graph for Site: LICA35 Parameter: METHANE Sequence: THC55 Phase: SPAN
12.50
11.42
10.33
9.25
8.17
7.08
6.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Non-Methane Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JULY 2013

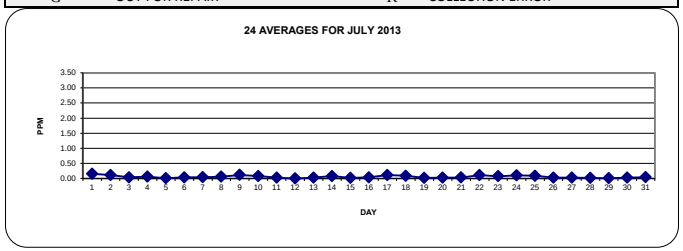
NON-METHANE HYDROCARBONS hourly averages in ppm

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.4	0.3	0.3	0.4	**S**	0.3	0.2	0.1	0.3	0.1	0.1	0	0	0	0.1	0	0	0.1	0.1	0.2	0.2	0.2	0	0.1	0.4	**0.15**	24
2	0.2	0.3	0.2	**S**	0.1	0.2	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.2	0.1	0	0.3	0.11	24
3	0	0.1	**S**	0	**P**	**P**	0.1	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.03	22
4	0.2	**S**	0.3	0.2	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0	0	0	0	0.3	0.06	24
5	**S**	0	0.1	0	0	0	0	0	0	0	0	0	0	**C**	**C**	**C**	0	0	0	0	0	0	0.1	**S**	0.1	0.01	24
6	0	0.1	0.2	0.1	0.2	0.1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	**S**	0	0.2	0.03	24
7	0	0	0.1	0.2	0.2	0.1	0.1	0	0	0.1	**Y**	**S**	**S**	0	0	0	0	0	0	0	0	**S**	0	0	0.2	0.04	23
8	0.1	0	0	0	0.3	0.2	0.2	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	**S**	0.1	0.1	0.2	0.3	0.06	24
9	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0	0.1	0	0.1	0	0	0.1	0	0	0	0.1	0	**S**	0.1	0.2	0.3	0.3	0.3	0.12	24
10	0.4	0.3	0.2	0	0.1	0.1	0	0	0.1	0	0	0	0	0.1	0	0	0	0	**S**	0.1	0.2	0.1	0.1	0	0.4	0.08	24
11	0	0	0.1	0.1	0	0	0	0	0.1	0.1	0	0.1	0	0.1	0	0	0	**S**	0	0	0	0	0	0	0.1	0.03	24
12	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	0.00	24
13	0	0.1	0	0.1	0	0.1	0	0	0.1	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0.1	0.1	0.1	0.03	24
14	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0	0	0	0	**S**	0	0	0	0	0.1	0	0	0.1	0	0.2	0.08	24
15	0	0	0	0	0	0	0	0.1	0	0	0	0.1	0	**S**	0	0	0	0	0	0	0	0.2	0	0	0.2	0.02	24
16	0.1	0	0	0	0.1	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0	0.1	0.1	0.2	0.2	0.2	0.03	24
17	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0	0	**S**	0	0	0.1	0	0	0	0	0	0.1	0.2	0.1	0.1	0.3	0.11	24
18	0.1	0.1	0.1	0.2	0.4	0.2	0.1	0.1	0.1	0.1	**S**	0	0	0	0	0	0.1	0	0	0.1	0.1	0.1	0	0.1	0.4	0.09	24
19	0	0	0	0	0.1	0	0	0	0	**S**	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.1	0.1	0.01	24
20	0	0.1	0	0	0	0	0	0	**S**	0	0	0	0	0	0.1	0	0	0	0.1	0	0.1	0.1	0.1	0	0.1	0.03	24
21	0	0	0	0	0	0	0	**S**	0	0	0	0	0	0	0.1	0	0	0	0	0	0.1	0.1	0.1	0.3	0.3	0.03	24
22	0.2	0.3	0.2	0.2	0.3	0.2	**S**	0.2	0.2	0.2	0.1	0	0	0	0	0	0	0	0	0	0.1	0.2	0.1	0.1	0.3	0.11	24
23	0.1	0.1	0.1	0.2	0.1	**S**	0.1	0	0.1	0	0.2	0.1	0	0	0	0	0.1	0.1	0	0.2	0.1	0	0.1	0	0.2	0.07	24
24	0.1	0.2	0.3	0.3	**S**	0.2	0.3	0.2	0	0.1	0.1	0	0	0.1	0	0	0	0	0	0	0	0.1	0.2	0.2	0.3	0.10	24
25	0.2	0.3	0.4	**S**	0.3	0.2	0.1	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0.4	0.09	24
26	0.1	0.1	**S**	0	0.1	0.1	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.03	24
27	0	**S**	0	0	0	0.1	0	0	0	0	0	0.1	0.1	0	0.1	0.1	0	0.1	0	0	0	0	0	0	0.1	0.03	24
28	**S**	0	0.1	0	0	0.1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	**S**	0.1	0.01	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	**S**	0	0.1	0.01	24
30	0	0.1	0.2	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	**S**	0.1	0.1	0.2	0.03	24
31	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**	0.1	0.2	0.1	0.2	0.04	24
HOURLY MAX	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3			
HOURLY AVG	0.10	0.10	0.12	0.10	0.11	0.10	0.07	0.05	0.06	0.03	0.02	0.03	0.01	0.02	0.02	0.01	0.01	0.02	0.01	0.03	0.06	0.08	0.08	0.08			

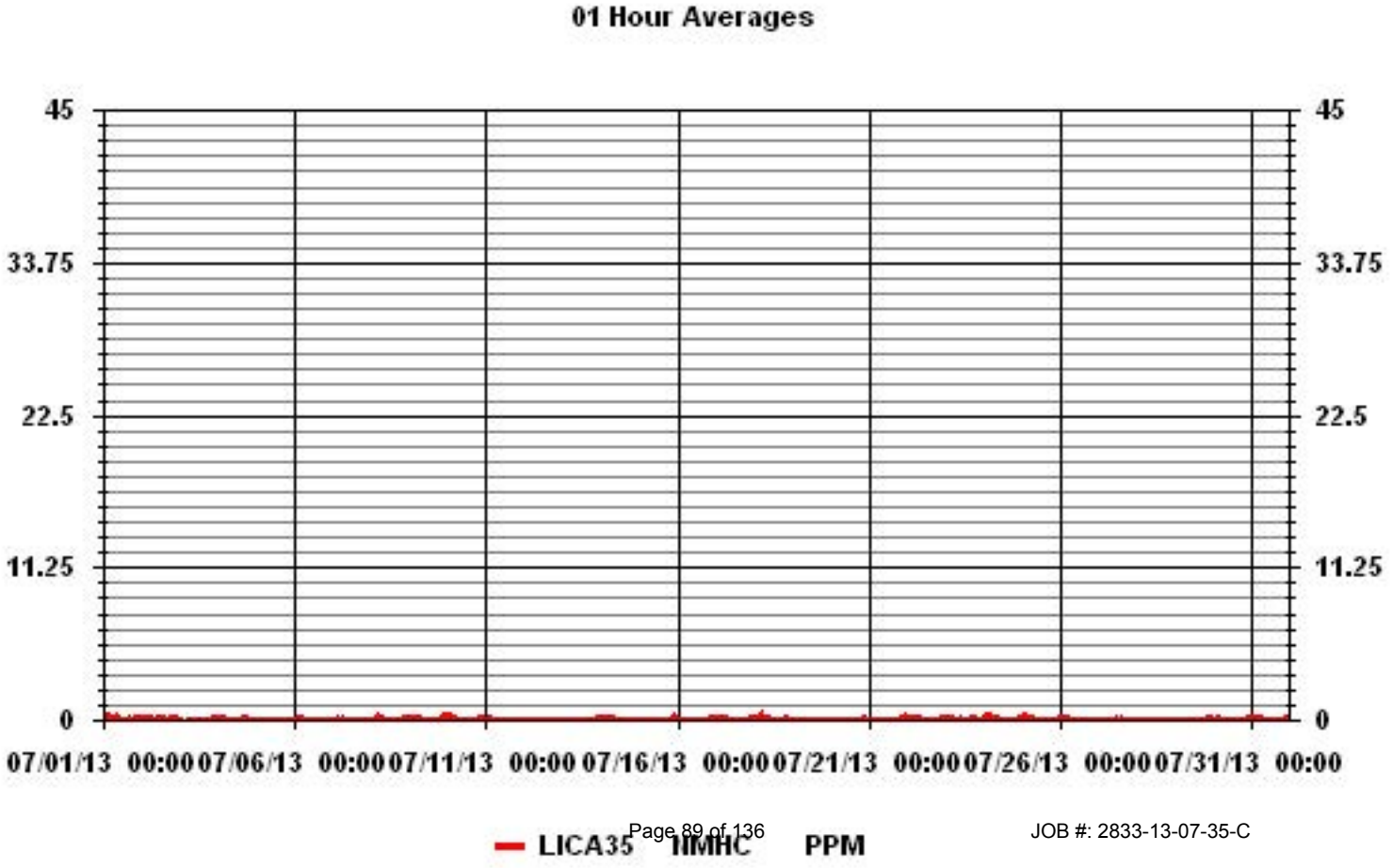
STATUS FLAG CODES

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:	258					
MAXIMUM 1-HR AVERAGE:	0.4	PPM	@ HOUR(S)	VAR	ON DAY(S)	VAR
MAXIMUM 24-HR AVERAGE:	0.15	PPM			ON DAY(S)	1
IZS CALIBRATION TIME:	35	HRS	OPERATIONAL TIME:		741	HRS
MONTHLY CALIBRATION TIME:	3	HRS	AMD OPERATION UPTIME:		99.6	%
STANDARD DEVIATION:	0.08		MONTHLY AVERAGE:		0.05	PPM



JOB #: 2833-13-07-35-C

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - PORTABLE SITE

JULY 2013

NON-METHANE HYDROCARBONS MAX instantaneous maximum in ppm

MST

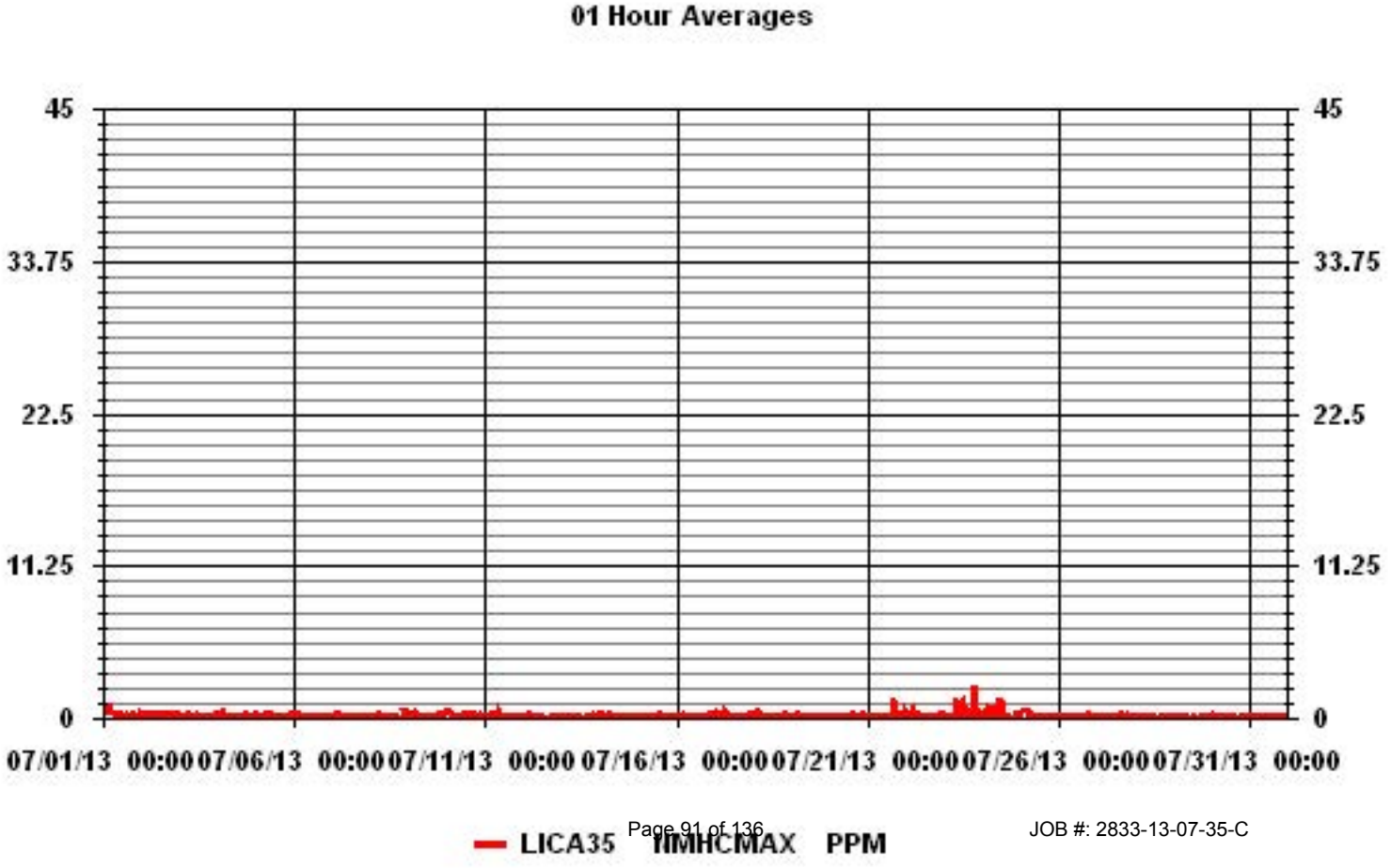
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0.48	0.96	0.53	0.97	**S**	0.54	0.56	0.40	0.46	0.32	0.22	0.28	0.26	0.23	0.25	0.26	0.18	0.21	0.29	0.35	0.31	0.25	0.23	0.46	0.97	0.39	24
2	0.30	0.30	0.30	**S**	0.28	0.31	0.30	0.32	0.21	0.30	0.32	0.31	0.36	0.32	0.40	0.29	0.32	0.36	0.33	0.36	0.31	0.31	0.31	0.26	0.40	0.31	24
3	0.24	0.23	**S**	**P**	**P**	**P**	0.29	0.28	0.22	0.22	0.28	0.25	0.16	0.15	0.18	0.20	0.16	0.16	0.15	0.15	0.24	0.20	0.32	0.27	0.32	0.22	21
4	0.28	**S**	0.53	0.30	0.28	0.24	0.21	0.20	0.21	0.29	0.21	0.22	0.21	0.22	0.13	0.18	**S**	0.28	0.25	0.21	0.21	0.30	0.24	0.24	0.53	0.25	24
5	**S**	0.16	0.14	0.23	0.16	0.16	0.24	0.24	0.25	0.25	0.24	0.21	**C**	**C**	**C**	**C**	0.18	0.24	0.23	0.19	0.23	0.24	0.27	**S**	0.27	0.21	24
6	0.15	0.33	0.27	0.29	0.32	0.22	0.18	0.26	0.22	0.30	0.17	0.23	0.22	0.18	0.20	0.22	0.26	0.14	0.14	0.13	0.24	0.13	**S**	0.26	0.33	0.22	24
7	0.18	0.25	0.31	0.33	0.40	0.29	0.23	0.16	0.24	0.23	**Y**	**S**	**S**	0.19	0.24	0.27	0.24	0.17	0.25	0.19	0.17	**S**	0.18	0.19	0.40	0.24	23
8	0.27	0.23	0.15	0.27	0.38	0.31	0.22	0.22	0.21	0.14	0.18	0.19	0.19	0.16	0.13	0.24	0.12	0.11	0.17	0.09	**S**	0.60	0.23	0.26	0.60	0.22	24
9	0.28	0.26	0.30	0.31	0.56	0.47	0.30	0.18	0.18	0.18	0.18	0.28	0.16	0.18	0.13	0.20	0.17	0.19	0.24	**S**	0.28	0.27	0.34	0.41	0.56	0.26	24
10	0.57	0.45	0.50	0.26	0.26	0.21	0.22	0.23	0.22	0.31	0.27	0.21	0.25	0.29	0.18	0.26	0.24	0.27	**S**	0.27	0.35	0.28	0.27	0.24	0.57	0.29	24
11	0.18	0.20	0.21	0.25	0.25	0.28	0.15	0.18	0.62	0.39	0.23	0.22	0.25	0.23	0.24	0.22	0.18	**S**	0.22	0.19	0.14	0.20	0.21	0.19	0.62	0.24	24
12	0.14	0.25	0.19	0.24	0.24	0.24	0.14	0.09	0.18	0.00	0.00	0.10	0.16	0.00	0.00	0.00	**S**	0.17	0.00	0.14	0.00	0.16	0.15	0.21	0.25	0.12	24
13	0.18	0.18	0.14	0.24	0.20	0.15	0.14	0.15	0.16	0.00	0.00	0.15	0.00	0.13	0.03	**S**	0.17	0.07	0.00	0.23	0.00	0.18	0.19	0.27	0.27	0.13	24
14	0.26	0.39	0.27	0.24	0.22	0.34	0.28	0.24	0.31	0.20	0.16	0.18	0.24	0.20	**S**	0.24	0.14	0.26	0.15	0.25	0.17	0.22	0.20	0.27	0.39	0.24	24
15	0.13	0.22	0.22	0.18	0.18	0.18	0.13	0.21	0.16	0.16	0.00	0.19	0.23	**S**	0.24	0.24	0.16	0.21	0.16	0.18	0.30	0.21	0.17	0.19	0.30	0.18	24
16	0.14	0.23	0.21	0.16	0.30	0.30	0.17	0.22	0.16	0.16	0.16	0.00	**S**	0.16	0.16	0.14	0.16	0.16	0.00	0.16	0.34	0.32	0.24	0.32	0.34	0.19	24
17	0.37	0.51	0.41	0.32	0.35	0.28	0.65	0.50	0.26	0.25	0.18	**S**	0.13	0.14	0.22	0.17	0.21	0.12	0.16	0.12	0.21	0.25	0.28	0.26	0.65	0.28	24
18	0.28	0.25	0.30	0.48	0.48	0.37	0.24	0.20	0.21	0.21	**S**	0.29	0.18	0.19	0.17	0.20	0.21	0.23	0.24	0.28	0.28	0.25	0.22	0.24	0.48	0.26	24
19	0.22	0.21	0.20	0.24	0.26	0.26	0.24	0.31	0.26	**S**	0.22	0.17	0.23	0.16	0.17	0.16	0.20	0.21	0.19	0.19	0.22	0.23	0.23	0.21	0.31	0.22	24
20	0.10	0.14	0.22	0.23	0.18	0.24	0.19	0.15	**S**	0.25	0.29	0.22	0.21	0.18	0.24	0.23	0.24	0.22	0.22	0.23	0.24	0.27	0.30	0.16	0.30	0.22	24
21	0.23	0.18	0.24	0.09	0.17	0.23	0.20	**S**	0.15	0.25	0.22	0.25	0.00	0.00	0.23	0.21	1.39	0.10	0.22	0.43	0.36	0.24	0.23	0.58	1.39	0.27	24
22	0.34	0.43	0.34	0.30	0.60	0.32	**S**	0.24	0.29	0.25	0.21	0.21	**Y**	0.19	0.20	0.21	0.12	0.15	0.20	0.16	0.21	0.29	0.25	0.28	0.60	0.26	23
23	0.26	0.26	0.21	0.29	0.24	**S**	0.26	0.21	1.18	1.06	1.23	0.25	0.22	0.85	0.17	0.21	0.22	0.17	0.41	**2.40**	0.87	0.25	0.22	0.25	**2.40**	0.51	24
24	0.24	0.32	0.65	0.38	**S**	0.36	0.93	0.31	0.24	0.16	0.80	1.42	0.00	0.22	0.14	0.06	0.10	0.10	0.00	0.13	0.27	0.29	0.36	0.30	1.42	0.34	24
25	0.47	0.59	0.59	**S**	0.62	0.39	0.30	0.28	0.29	0.20	0.19	0.22	0.20	0.14	0.15	0.12	0.10	0.11	0.21	0.14	0.19	0.18	0.19	0.20	0.62	0.26	24
26	0.25	0.23	**S**	0.19	0.23	0.24	0.20	0.18	0.21	0.14	0.13	0.21	0.05	0.08	0.14	0.20	0.24	0.12	0.24	0.24	0.16	0.15	0.21	0.16	0.25	0.18	24
27	0.20	**S**	0.23	0.17	0.21	0.19	0.18	0.15	0.22	0.20	0.18	0.21	0.16	0.19	0.22	0.32	0.16	0.25	0.29	0.27	0.21	0.20	0.06	0.27	0.32	0.21	24
28	**S**	0.19	0.22	0.26	0.17	0.22	0.18	0.14	0.10	0.14	0.09	0.16	0.00	0.10	0.00	0.14	0.14	0.09	0.14	0.16	0.28	0.24	0.15	**S**	0.28	0.15	24
29	0.21	0.23	0.21	0.13	0.12	0.25	0.10	0.22	0.00	0.00	0.10	0.01	0.10	0.14	0.18	0.00	0.00	0.00	0.21	0.10	0.21	0.18	**S**	0.20	0.25	0.13	24
30	0.19	0.24	0.26	0.22	0.24	0.13	0.16	0.10	0.15	0.20	0.01	0.12	0.10	0.13	0.09	0.00	0.00	0.00	0.14	0.09	0.18	**S**	0.19	0.28	0.28	0.14	24
31	0.21	0.21	0.19	0.27	0.22	0.22	0.22	0.16	0.15	0.15	0.17	0.12	0.19	0.00	0.13	0.18	0.08	0.13	0.18	0.13	**S**	0.24	0.26	0.22	0.27	0.18	24
HOURLY MAX	0.57	0.96	0.65	0.97	0.62	0.54	0.93	0.50	1.18	1.06	1.23	1.42	0.36	0.85	0.40	0.32	1.39	0.36	0.41	2.40	0.87	0.60	0.36	0.58			
HOURLY AVG	0.25	0.30	0.29	0.28	0.29	0.27	0.26	0.22	0.26	0.23	0.23	0.24	0.17	0.18	0.17	0.19	0.21	0.17	0.19	0.27	0.25	0.25	0.23	0.26			

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:	669					
MAXIMUM INSTANTANEOUS VALUE:	2.40	PPM	@ HOUR(S)	19	ON DAY(S)	23
IZS CALIBRATION TIME:	36	HRS	OPERATIONAL TIME:		739	HRS
MONTHLY CALIBRATION TIME:	4	HRS				
STANDARD DEVIATION:	0.17					



JOB #: 2833-13-07-35-C

LICA35
NMHC / WDR Joint Frequency Distribution (Percent)

July 2013

Distribution By % Of Samples

Logger Id : 35
Site Name : LICA35
Parameter : NMHC
Units : PPM

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	.2	2.99	1.28	.99	2.56	4.55	6.26	7.40	4.70	3.56	3.41	2.42	6.83	12.67	16.38	14.95	5.12	96.15
<	.5	.00	.00	.00	.00	.28	.14	.00	.28	.14	.14	.14	.28	1.13	.99	.28	.00	3.84
<	1.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	2.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	4.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	4.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	2.99	1.28	.99	2.56	4.84	6.41	7.40	4.98	3.70	3.56	2.56	7.12	13.81	17.37	15.24	5.12	

Calm : .00 %

Total # Operational Hours : 702

Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	.2	21	9	7	18	32	44	52	33	25	24	17	48	89	115	105	36	675
<	.5					2	1		2	1	1	1	2	8	7	2		27
<	1.0																	
<	2.0																	
<	4.0																	
>=	4.0																	
	Totals	21	9	7	18	34	45	52	35	26	25	18	50	97	122	107	36	

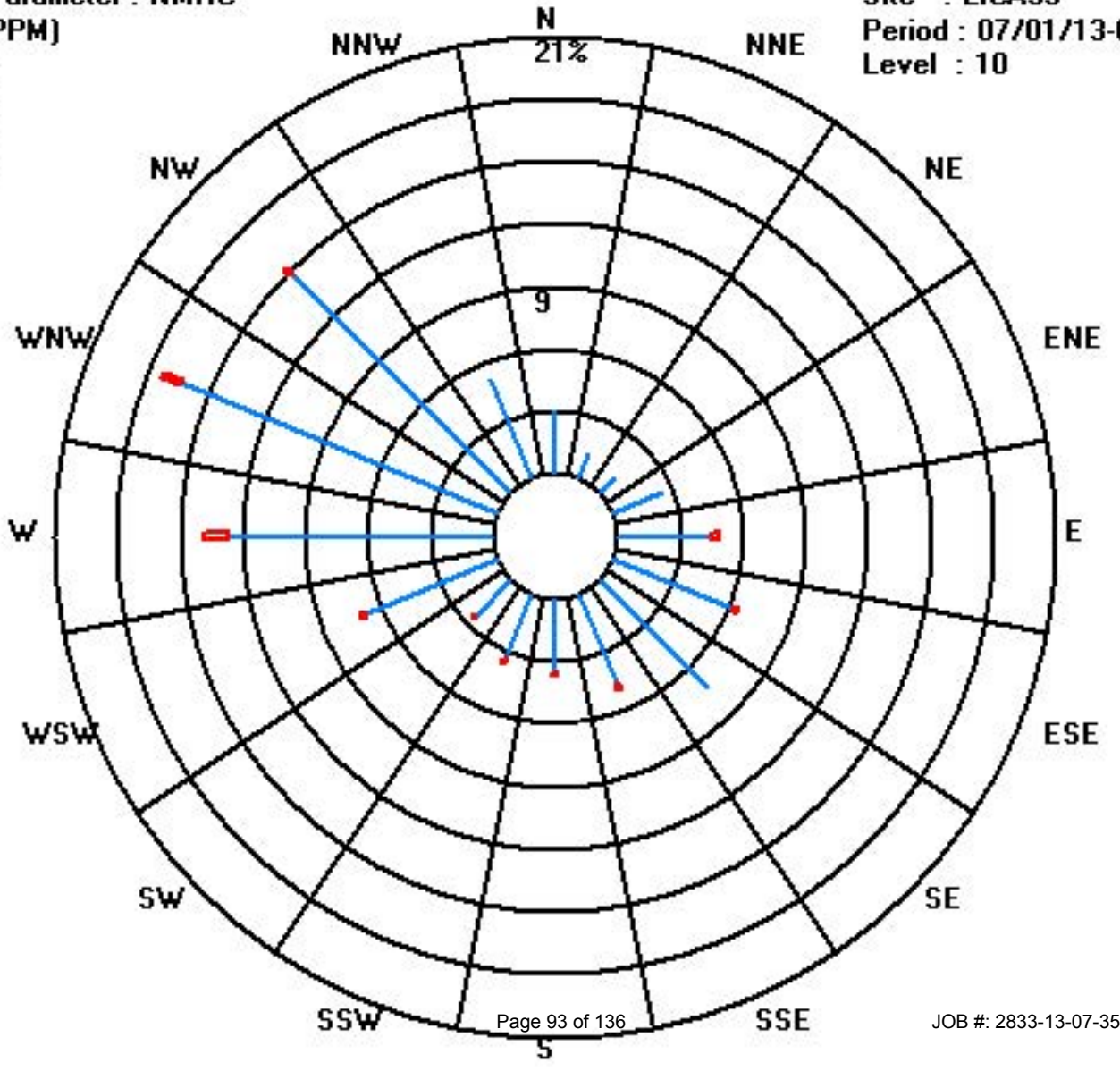
Calm : .00 %

Total # Operational Hours : 702

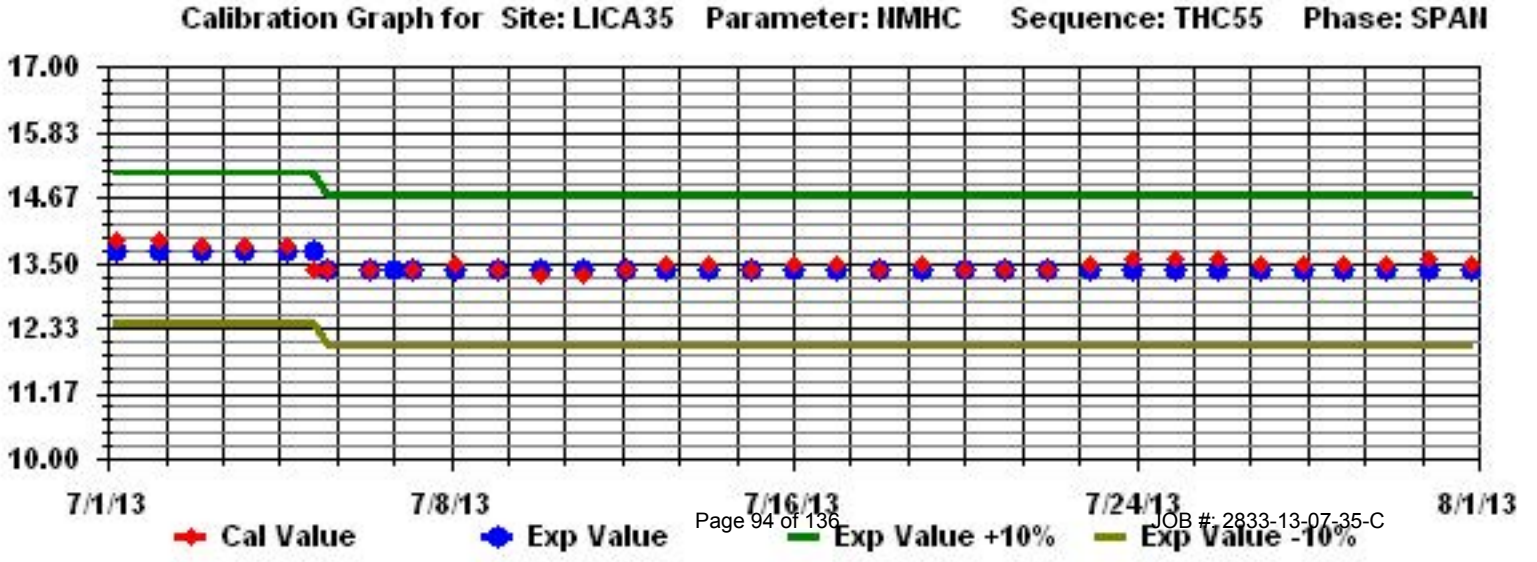
Logger : 35 Parameter : NMHC
Class Limits (PPM)

>= 4.0
< 4.0
< 2.0
< 1.0
< .5
< .2

Site : LICA35
Period : 07/01/13-07/31/13
Level : 10



JOB #: 2833-13-07-35-C


Calibration Graph for Site: LICA35 Parameter: NMHC Sequence: THC55 Phase: SPAN
17.00
15.83
14.67
13.50
12.33
11.17
10.00
7/1/13
7/8/13
7/16/13
7/24/13
8/1/13
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Vector Wind Speed

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

JULY 2013

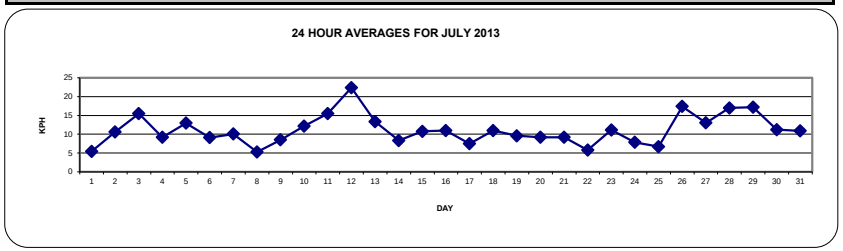
VECTOR WIND SPEED (WS) hourly averages (km/hr)

MST

HOUR START / HOUR END	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	DAILY MAX.	24-HOUR AVG.	RDGS.
DAY																											
1	1.9	1.4	1.2	0.9	1.8	1.2	1.3	1.6	1.6	2.9	5.6	7.6	7.5	9.9	10.6	10.6	11.3	11.2	11.7	7.1	7.8	10.5	9.8	8.6	11.7	5.4	24
2	7.1	6.1	5.7	6.1	5.7	8.8	9.6	16.3	19.6	19.1	21.7	23.1	25.1	23.9	23	22.9	24.2	18.3	15.7	13.6	11.4	3.5	21.5	24.3	25.1	10.6	24
3	21.4	13.4	7.6	5	**P**	**P**	13.9	16.8	25.4	23.7	23.8	25	23.5	27.4	25	23.4	22.2	22.4	19.3	14.2	7.3	8.1	11	7.4	27.4	15.5	22
4	8.1	7.5	8.8	11.7	14	12	10.5	5	6.2	5.7	11.1	12.5	15.2	15.5	16.1	14	12.7	16.2	15.5	9.4	7.9	3.5	4.1	6.3	16.2	9.2	24
5	18	16	11.2	11.1	14.1	16.2	13.3	14.1	14.9	10.6	13.3	14.6	15.7	13.4	12.3	11.7	15.7	13.9	14.4	10	10.8	9.1	8.4	8	18.0	13.0	24
6	8.4	7.6	8.5	7.1	8.6	8.6	11	14.1	12.3	9.7	7	6.7	6.6	4.2	4.2	12.7	15	15.9	15.4	10.1	12.2	5.2	2.2	5.1	15.9	9.1	24
7	3.5	2.4	2.4	1.9	4.6	7.8	11.5	15.7	18.4	18.3	14.6	16	17.8	17	22.2	11.6	14.1	8.7	7.1	5.8	5.9	6.3	5.9	2.1	22.2	10.1	24
8	2.2	4.3	3.6	4.4	3.7	5	2.2	1.9	2.2	2.8	0.4	5.6	9	9.3	6	8.2	11.1	9.3	9.8	7.8	7.1	8.1	1.6	1.2	11.1	5.3	24
9	2.6	2.8	1.3	0.6	0.4	1.6	2	6.4	11.1	12.9	14.3	14.4	15.8	14.8	15.2	15.8	16.8	15.7	14.2	9.3	6.2	4	3.3	3	16.8	8.5	24
10	2.5	1.8	14.1	12.2	8.4	1.9	2.9	7.6	11.3	10.3	13	14.1	17.3	17.2	19.2	18	21.3	23.3	19.1	12.6	10.1	7	11	16.3	23.3	12.2	24
11	10.2	3	5.1	2.2	10.8	8.2	13.5	18.8	17.2	10	6.6	11.9	18.1	24.4	33	27.2	31.2	22.7	21.3	23.4	20.9	13.9	11	6.8	33.0	15.5	24
12	8.5	15.3	13.1	13.5	15	16	14.1	21.2	27.2	33.1	36	36.5	35.9	**37.6**	34.9	33.3	30.1	29.3	27.3	16.2	12.2	13.5	11.6	6.5	**37.6**	**22.4**	24
13	8.8	10.1	8.3	9.7	7.1	8.2	8.3	11.7	14.8	19.4	17.5	19.4	20.5	24.2	22.4	21.9	18.3	17.8	16.2	10.7	9.6	7.3	3.5	4.9	24.2	13.4	24
14	3.4	2.6	2.3	0.5	0.3	0.2	2.1	7.1	5.1	7.5	3.6	4	6.6	16.9	17.6	15.8	16.1	19.1	21.1	15.7	11.2	10.4	4.8	5	21.1	8.3	24
15	6.2	7.7	11.2	3.6	6.7	7.3	7.3	11	11.5	9.3	10.3	15	13.4	10.3	7	28.3	21	15.9	9.1	9	7.3	7.6	10.2	12.4	28.3	10.8	24
16	10.2	8.9	11	9.9	9.6	10.3	8.8	11.8	10.4	10.3	11.3	16.4	19.2	21.6	19.1	17.2	16.2	14.1	12	6.7	4	3.5	0.7	0.2	21.6	11.0	24
17	2.7	1.2	1.4	0.2	2.2	3.5	3.3	1.5	8.4	13.6	16.1	15.4	14.6	13.3	13.7	12.3	13.3	10	10.9	7.5	6.6	2.8	1.2	4.3	16.1	7.5	24
18	3.5	3.6	3	3.4	5.9	6.9	6.5	10.4	11.7	12.2	9.6	14.1	15.5	19.4	21.9	23.7	22.1	17.6	11	6.8	6.8	7.5	10.9	10	23.7	11.0	24
19	20.9	17.4	2.5	9.1	13.3	5.7	5	8.6	7.3	10.6	9.3	9.7	11.6	11.6	12.5	11.9	9.5	7.1	7.5	9.3	8.9	6.6	5.9	7.9	20.9	9.6	24
20	10	11.4	10.6	12	11.1	8.9	6.2	4.2	4.4	4.1	5.3	7.2	8.5	11.9	11.8	12.7	13.9	12.6	11.7	9.9	7.4	6.8	10.3	7.1	13.9	9.2	24
21	7.3	4.6	7.4	11	10.1	11.6	12.1	15.7	16.9	15.3	14.6	15.3	16.4	16	11.4	10.5	7.1	7.1	1.6	1.1	4.6	2.4	0.6	0.5	16.9	9.2	24
22	0.4	0.1	0.9	1	1.3	4	4.3	2.9	7.4	6	5.2	6.6	6.3	6.7	8.6	10	10.6	9.3	9.9	8.5	5.3	6.5	8.5	8.5	10.6	5.8	24
23	1.9	4	3	1.5	2.3	5.7	9.4	12.2	11.8	15.6	20.2	19	18.7	19.7	20.5	21.2	18.7	15.9	12.1	9.4	5.4	4.1	8	6.3	21.2	11.1	24
24	6.2	3.1	0.9	3.3	2.5	2.4	4.2	4.2	2.7	6.4	8.7	13.3	15.1	15.5	16.3	18.3	17.7	15.3	12	6.6	0.9	4	3.4	5.3	18.3	7.8	24
25	3.2	2.9	4.1	3.6	4.1	3.4	2.3	0.2	3.2	3	6	6.1	8.2	9.3	10.4	9.4	10.1	12.3	12.2	8.3	8	9.3	10.8	10.3	12.3	6.7	24
26	10.1	8.5	8.5	10.5	8.5	9.7	11	14.5	16.5	20.4	21.8	22.1	21.3	24.2	23.1	25.5	26.3	23.8	22.4	18.9	19.5	19.2	15.1	15.9	26.3	17.4	24
27	18.4	20.3	20.7	24.8	26.3	4.6	11.8	9.8	16.5	22.2	18.4	11	5.5	4.2	8.4	12.1	16.5	7.6	11	10.6	9.2	10.2	6.9	5.8	26.3	13.0	24
28	10.6	7.6	10	16.3	12.5	11.5	12	11.7	15.8	15.9	18.3	18.3	20.4	22.6	23.5	23.8	20.3	25.3	24.5	18.4	16.3	15.5	19.7	17.3	25.3	17.0	24
29	14.5	18.4	17.7	18	20	21.6	20.7	23.9	18.4	19.5	23	20.9	21.3	18.6	20	19.1	16.9	16.2	14.3	12.6	8.4	9.4	10.4	8.2	23.9	17.2	24
30	7.1	5.9	5.3	8	9.5	8.3	6.5	6.8	7.5	10.6	15.8	15.7	17.3	19.3	16.7	20.5	18.8	18.5	14.3	7.7	9.3	11.5	6	1.9	20.5	11.2	24
31	4.4	3.7	5.5	5.5	5.7	5.3	5.3	6.6	7.1	16.3	19.4	20.2	18.3	19.8	19	19.4	18.2	17.4	13	6.6	5.2	6	5.6	8.4	20.2	10.9	24
HOURLY MAX	21.4	20.3	20.7	24.8	26.3	21.6	20.7	23.9	27.2	33.1	36.0	36.5	35.9	37.6	34.9	33.3	31.2	29.3	27.3	23.4	20.9	19.2	21.5	24.3			
HOURLY AVG	7.9	7.2	7.0	7.4	8.2	7.5	8.2	10.1	11.8	12.8	13.6	14.8	15.7	16.8	17.0	17.5	17.3	15.8	14.1	10.4	8.8	7.8	7.9	7.6			

STATUS FLAG CODES

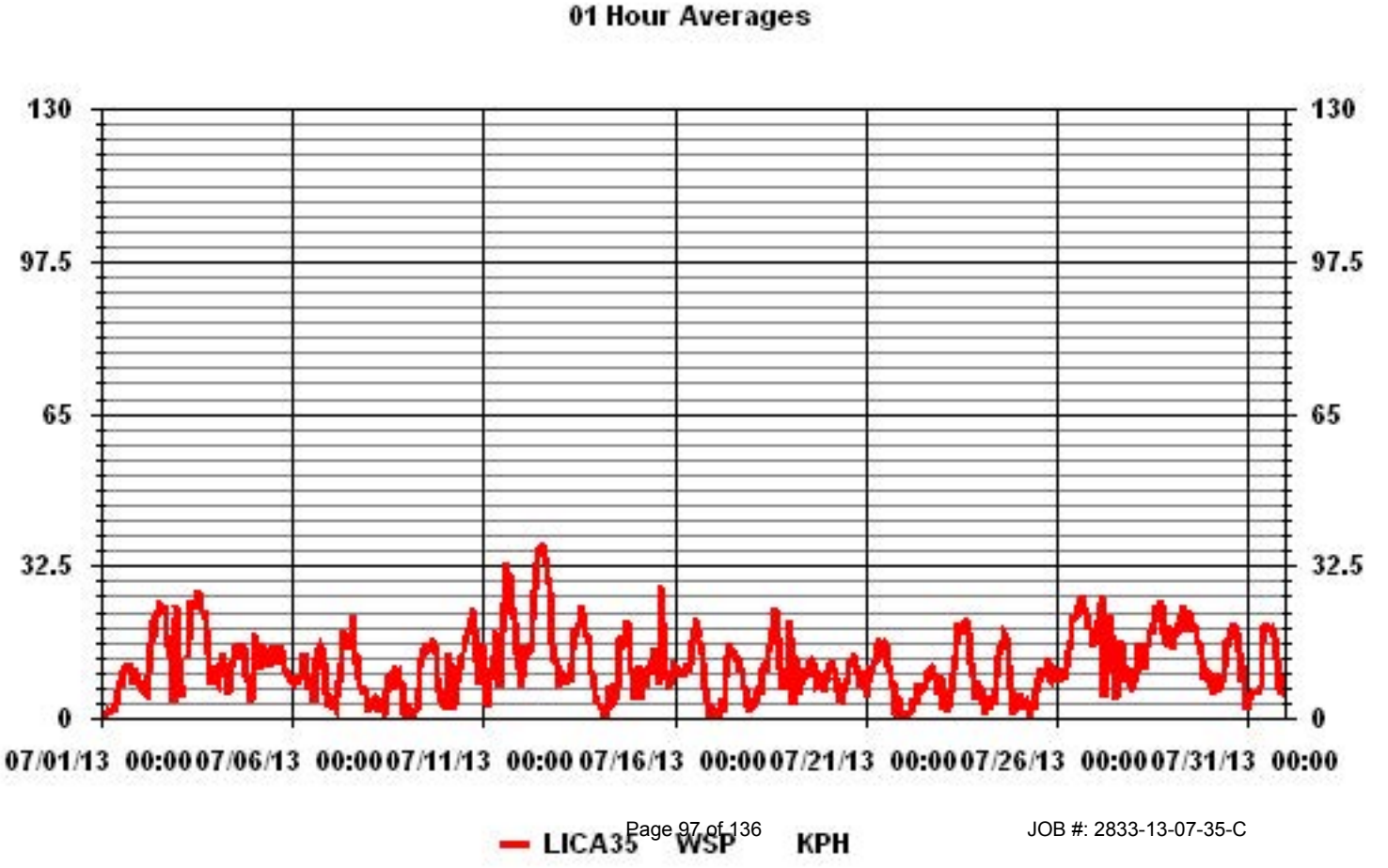
C	- CALIBRATION	Q	- QUALITY ASSURANCE
Y	- MAINTENANCE	R	- RECOVERY
S	- DAILY ZERO/SPAN CHECK	X	- MACHINE MALFUNCTION
P	- POWER FAILURE	O	- OPERATOR ERROR
G	- OUT FOR REPAIR	K	- COLLECTION ERROR



LAST CALIBRATION: November 24, 2011

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	37.6	KPH	@ HOUR(S)	13	ON DAY(S)	12	
MAXIMUM 24-HR AVERAGE:	22.4	KPH			ON DAY(S)	12	
CALMS (≤ 0 KPH)	0.81	%	OPERATIONAL TIME:		742	HRS	
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME:		99.7	%	
STANDARD DEVIATION:	6.92		MONTHLY AVERAGE:		11.39	KPH	



JOB #: 2833-13-07-35-C

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

JULY 2013

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	6.8	4.3	4.4	4	5.2	5	5.1	5.9	7.5	13.5	18.9	22.9	19.9	23.6	28.1	24.9	25.8	20.8	21.9	13.8	13.2	16.6	15.1	13.7	28.1
2	10	8.4	9.5	10.2	9.3	15.3	16.4	32.2	38.8	36.1	44.4	40.9	44.4	43.4	45.8	40.9	43.1	34.8	32.9	25	25.4	13.6	**64.3**	56.9	**64.3**
3	51.6	31.5	18.9	**P**	**P**	**P**	21.8	28.7	43.6	35.1	40.1	37.7	39.1	45.8	42.9	41.3	37.1	35.2	31.1	24.8	14.8	13.5	18.1	11.2	51.6
4	13.9	12	15.4	15.2	18.5	17.2	17	14.2	15.9	18.8	23.5	28.8	30.5	36.8	33.9	27.4	0	27.1	25.6	14.8	14	7.1	12.1	30.9	36.8
5	34.5	40.7	25.7	17.1	30	29.3	23.5	26.1	26.1	20.6	24.8	28.1	31	30.6	29.8	24.5	30.5	22.3	23.9	17.7	15.2	14.7	12.1	12.1	40.7
6	13.2	11.8	11	12.1	13.8	15.2	18.5	21.3	21.3	19.1	19	19.3	29.3	10.5	16.4	31.8	27.8	26.4	28.7	30.6	23.8	11.8	11.1	9.4	31.8
7	11.4	6.4	8.9	8.8	10.9	15	20.5	28.8	27.2	26.7	26.8	26.5	30.9	37	42.9	28.7	47.5	16.9	12.6	13.9	11.5	11.5	11.2	10.8	47.5
8	6.8	6.8	7	8.6	9.7	11.3	6.7	6.4	10.2	14.5	12.3	18.1	26.7	27.1	19.4	20.4	28.1	20	18.3	14.3	9.7	12	9.8	6.4	28.1
9	7	6.7	4.7	3.6	2.8	5.4	10.9	14.2	21	27	28.4	29	30.1	37.9	30.2	29.2	32.5	29.3	24.1	17.1	11.2	6.9	6.6	6.8	37.9
10	6.2	7.5	26.2	38.2	29.1	19.7	10.9	13.8	20.1	19.6	26.5	27.8	33.1	33.1	37.5	35.5	36.1	35.9	35.7	22.2	14.2	12	39	45.9	45.9
11	26.6	26.3	33.9	20.6	27.3	15.7	22.5	31.2	32.9	19.6	20.8	22.6	30.5	39.5	50.8	44.5	57.6	45.6	40.5	36.7	35.7	19.2	18.7	13.1	57.6
12	23.2	24.8	24.8	22.3	24	25.7	26.5	43.8	51.8	62.6	61.7	61.8	56.9	61.7	58	54.6	46.9	49.3	45.4	31.6	24.8	24.5	22.3	16.5	62.6
13	12.3	13.7	20.1	13.1	12.5	13.6	15.8	22.3	25.6	35.9	33.8	39.7	40	40.5	46.9	37	34.5	32.1	27.6	21.6	14.3	11.7	6.8	14.7	46.9
14	13.4	9.1	6.3	4.1	3.5	5.2	7.2	12.9	11.7	17.6	11.2	10.5	30.2	33.7	36.3	28.5	27.7	33.8	32.6	27	20.8	18.6	12.8	14.1	36.3
15	16.3	16.4	19.5	10.9	14.4	25.5	20.3	20.9	22.9	16.5	25.6	27.7	25.5	21.6	18.5	48.8	34.5	31.3	15.5	16.1	14.1	16.6	24	23.1	48.8
16	18.7	16.9	19.8	17.5	13.2	14	15.3	17.7	16.9	21.3	29.1	36.6	35.7	39.1	30.6	32.1	32.7	26.6	20	13	6.2	6.9	4.1	2.5	39.1
17	5.7	9.5	7.4	3.8	5	5.8	7.2	8.1	18.2	24.5	28.4	31.6	30.5	27	30	24.6	28.4	24.5	21	13.5	11.9	8.2	3.9	7.2	31.6
18	6.6	6.2	6.3	7.5	10.4	18.9	14.5	16.1	21.8	20	17.2	26.8	28.6	35	38.3	40.2	39.2	32.3	20.4	11.1	12.8	12.6	22.1	35	40.2
19	52.1	48.1	13.9	21.2	32.1	19.4	15.5	18.7	16.9	19.6	20.3	20.1	21.8	20.7	24.4	20.5	17.2	19.8	14.3	16.5	18.6	15.4	11.9	14.2	52.1
20	17	20	16.3	18.9	16.1	14.9	11.8	8.7	9.5	9.9	12.1	14.8	19.9	22	24.5	23	23.4	22.9	19.2	19.3	11.3	12.4	36	14.9	36
21	19.7	11.9	13.8	23	18.4	20.1	21.1	27.5	28.8	27.2	30.4	26	31.7	29.8	27.1	18.4	22.1	16.2	6.1	4.9	6.6	5.3	3.8	3.2	31.7
22	3.2	3.2	5	5.7	5.4	6.6	9.6	9.5	13	11.3	9.7	10.8	11.8	15.9	19.5	22.1	22.5	15.6	17.7	13.6	11	10.2	15.5	14.1	22.5
23	7.8	7.4	6.9	3.8	7	9.7	16.7	22.9	20.3	27.2	33.3	32.2	32.7	35.5	33.6	37.5	35.8	27.6	22.4	15.9	11.4	8.4	10.2	9.8	37.5
24	10	7.6	5.2	7.8	8	6.5	11	17.5	9.3	12.7	24.3	22.6	27	28.6	29.5	37.6	33.3	26	23.4	17.3	4.7	7.7	7.1	9.7	37.6
25	8.9	7.2	8.3	6.7	7.5	6.7	5.3	7.5	8.9	11.4	14.5	19.5	24.2	25.8	24.4	25.9	24.2	24.4	27.2	16.1	12.1	14	15.2	13.5	27.2
26	14.4	11.9	13.1	16	15.4	16.6	19	24.8	31.2	40.5	38.9	42	44.5	41.9	45.4	46	51.2	42.7	40.3	31.1	33.4	31.3	27	26.2	51.2
27	31	35.5	33.2	41.6	45.5	26.4	21.2	21.2	30.4	38.5	33.4	24.7	12	10.4	13.9	21	26.9	17.8	21.3	20.5	15.3	16.3	16.6	15	45.5
28	19.7	16.9	21.2	27.4	22.7	23.2	23.5	22	33	29.3	33.9	36.1	40.3	43.4	46.3	44.7	38.6	43.3	46.6	31.6	29.7	29.4	33.1	28.8	46.6
29	29.2	29.9	29.2	28	30.7	34.1	36	46.9	32.9	38	40.2	36.1	37.9	34.7	39.2	35.5	32.1	29.4	26.7	21.1	12.3	12.1	14.6	12.8	46.9
30	10.7	9.5	8.6	12.5	15.1	14.5	11.7	14	18	24.7	28.7	36.7	32.6	30.3	31.7	32.6	36.1	35.3	28.9	13.6	12.4	16.4	14.8	6.1	36.7
31	7.6	5.8	9.6	9.5	7.9	8.3	9.9	11.5	16.1	31.7	31.3	34.3	32.6	34	34.1	33.3	33.1	26.6	25.8	10.9	7	8.6	11.7	16.8	34.3
PEAK	52.1	48.1	33.9	41.6	45.5	34.1	36.0	46.9	51.8	62.6	61.7	61.8	56.9	61.7	58.0	54.6	57.6	49.3	46.6	36.7	35.7	31.3	64.3	56.9	

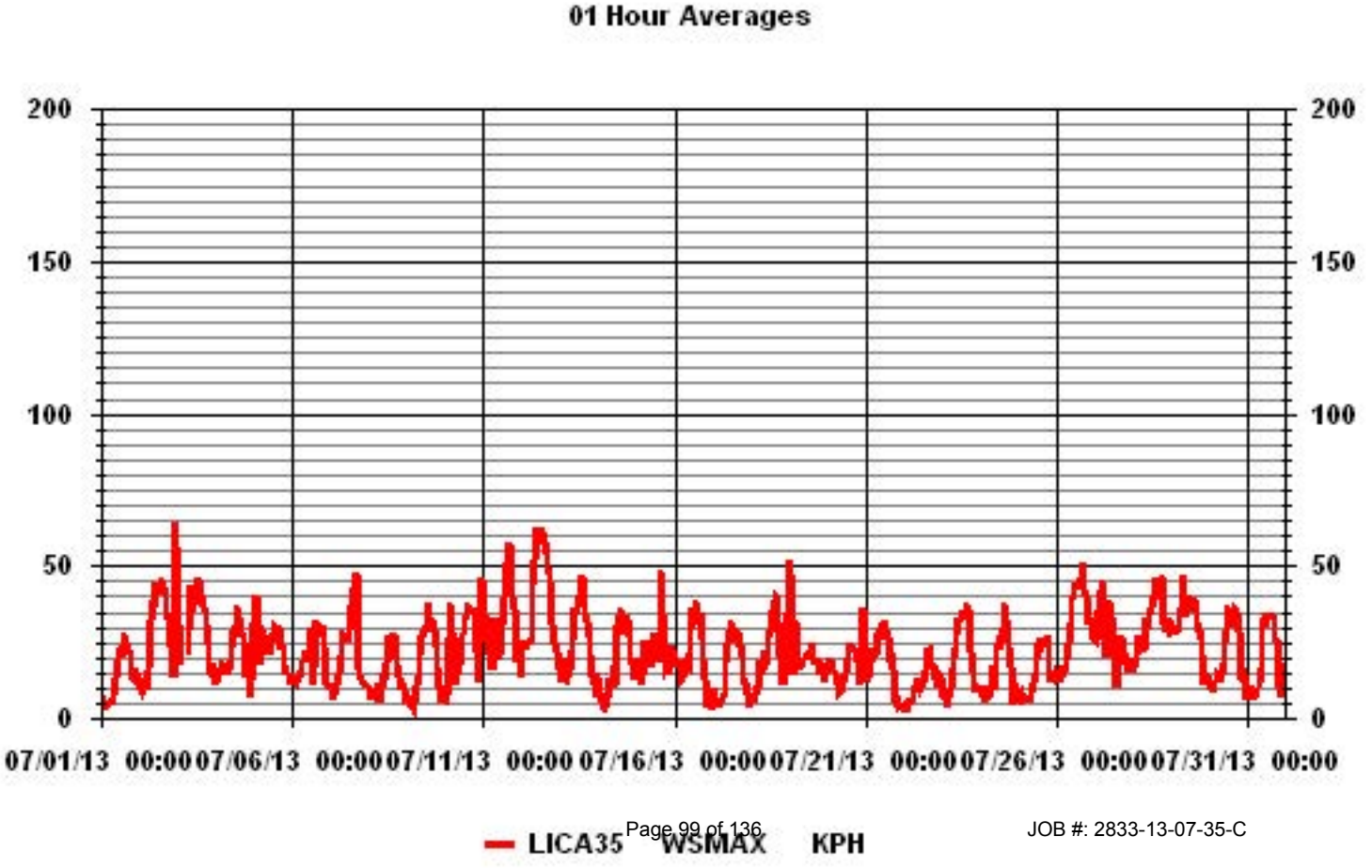
STATUS FLAG CODES

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 INSTANTANEOUS READING	64.3	KPH	@ HOUR(S)	22
			ON DAY(S)	2

JOB #: 2833-13-07-35-C



JOB #: 2833-13-07-35-C

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

July 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	.67	.26	.40	.67	2.02	2.29	1.21	.94	.67	.80	1.21	1.34	4.04	4.04	1.48	.80	22.91
<	12.0	1.48	.67	.53	1.61	2.42	2.69	2.29	1.88	2.15	1.48	.80	3.09	5.92	3.90	3.90	1.88	36.79
<	20.0	.94	.26	.00	.26	.13	1.21	2.15	1.07	.40	1.21	.53	2.56	2.42	6.06	6.73	2.15	28.16
<	29.0	.13	.13	.00	.00	.13	.40	1.48	.94	.40	.00	.00	.26	.94	2.69	2.83	.26	10.64
<	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.67	.80	.00	.00	1.48
>=	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	3.23	1.34	.94	2.56	4.71	6.60	7.14	4.85	3.63	3.50	2.56	7.27	14.01	17.52	14.95	5.12	

Calm : .00 %

Total # Operational Hours : 742

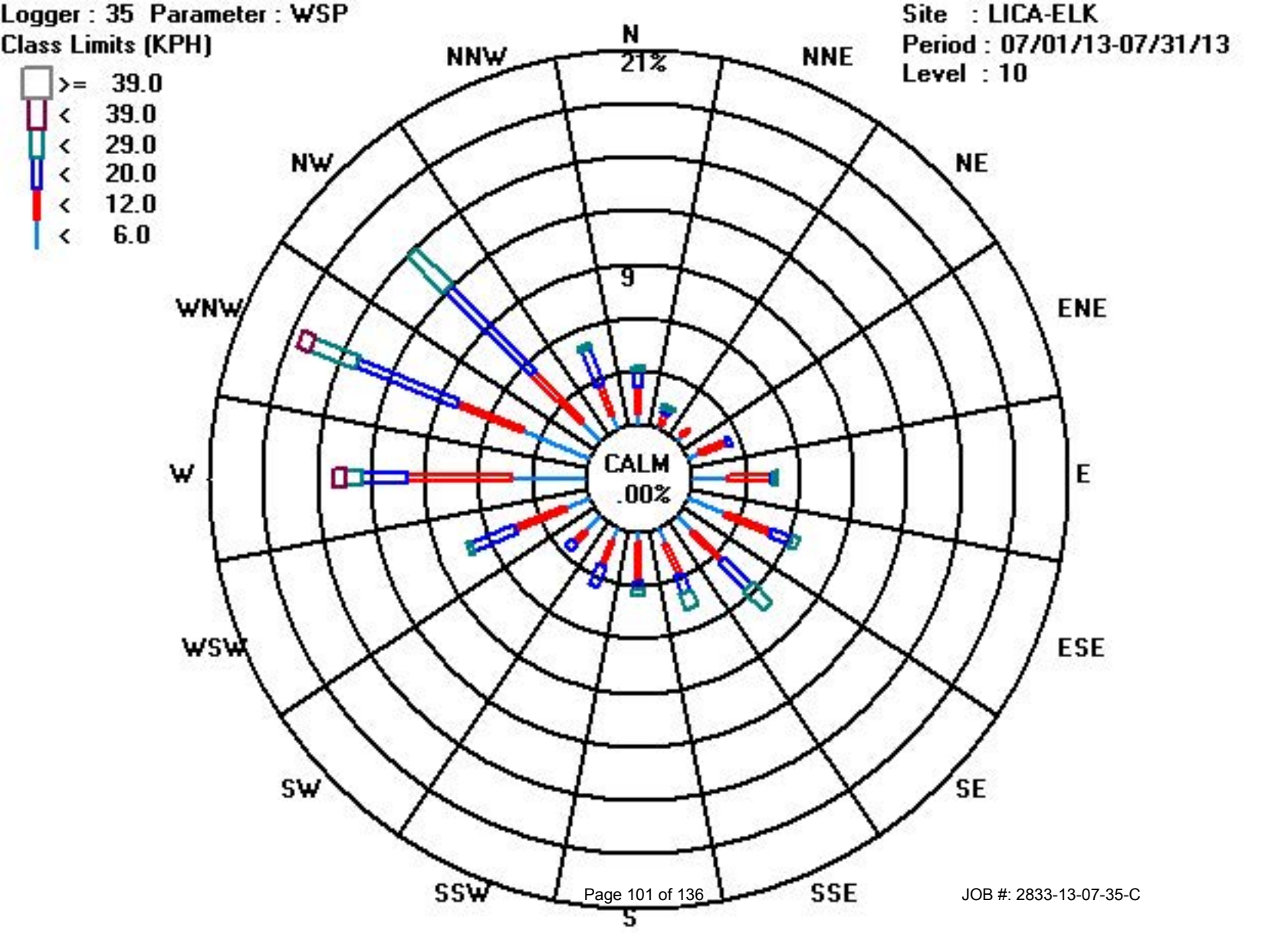
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	5	2	3	5	15	17	9	7	5	6	9	10	30	30	11	6	170
<	12.0	11	5	4	12	18	20	17	14	16	11	6	23	44	29	29	14	273
<	20.0	7	2		2	1	9	16	8	3	9	4	19	18	45	50	16	209
<	29.0	1	1			1	3	11	7	3			2	7	20	21	2	79
<	39.0													5	6			11
>=	39.0																	
	Totals	24	10	7	19	35	49	53	36	27	26	19	54	104	130	111	38	

Calm : .00 %

Total # Operational Hours : 742



JOB #: 2833-13-07-35-C

Vector Wind Direction

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

JULY 2013

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

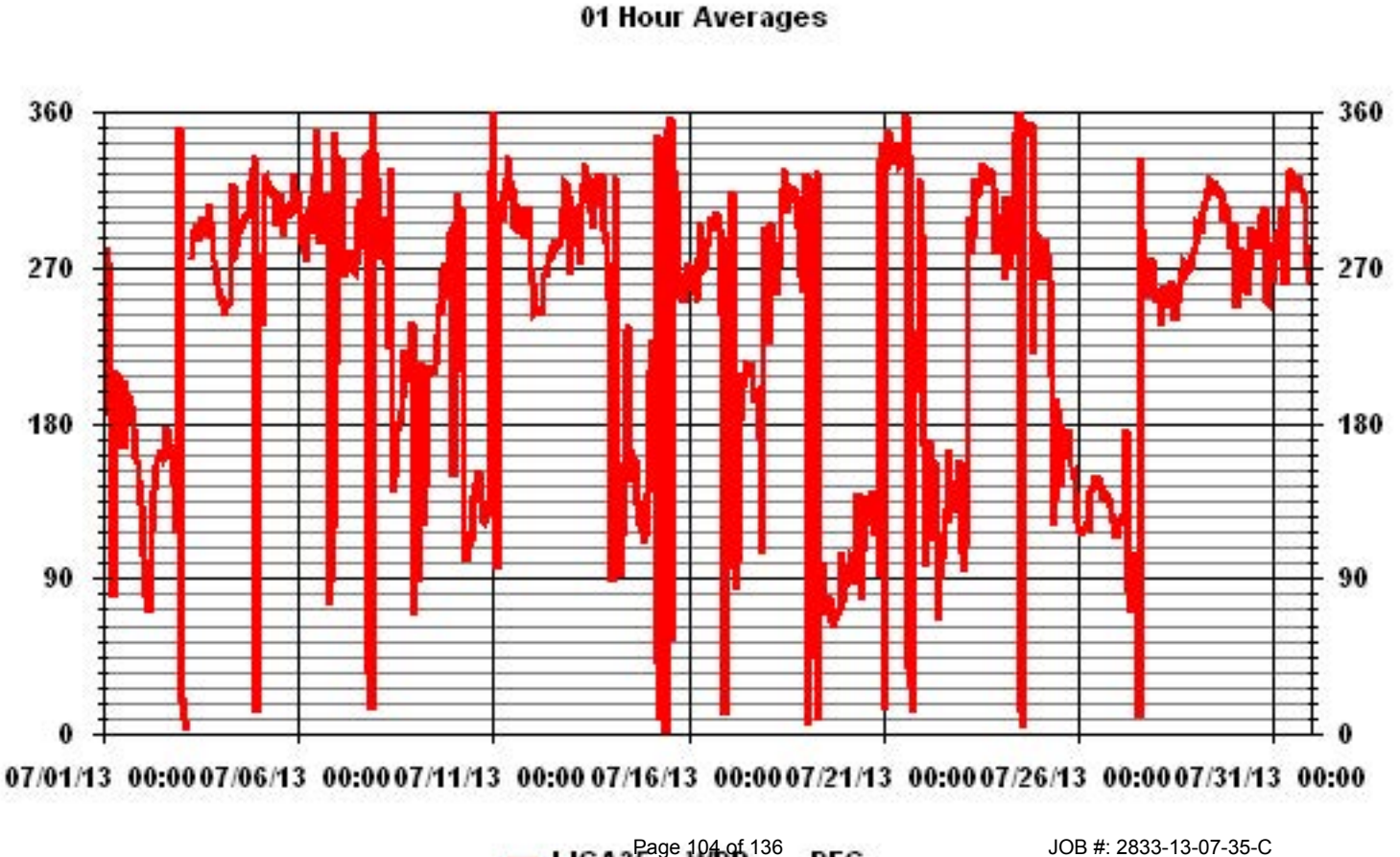
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	279	249	281	274	186	110	79	132	211	174	208	190	165	204	184	180	197	190	187	178	160	157	148	133	179	S	24
2	104	94	80	80	70	101	117	141	155	160	163	163	160	162	171	177	174	169	161	146	137	116	324	352	152	SSE	24
3	20	20	9	4	**P**	**P**	277	290	291	295	285	291	299	288	291	294	299	306	298	288	275	271	262	259	298	WNW	22
4	254	250	242	246	247	249	250	273	319	274	282	293	290	293	298	300	298	302	309	320	327	335	12	278	285	WNW	24
5	241	236	272	323	324	321	314	313	316	315	294	298	298	312	301	288	298	306	304	299	309	324	307	301	300	WNW	24
6	314	283	301	280	283	273	304	289	311	316	323	350	334	283	311	292	283	294	313	75	87	118	349	337	307	NW	24
7	213	293	267	333	264	268	271	272	280	276	268	267	272	305	310	281	300	335	336	34	58	14	359	338	292	WNW	24
8	323	311	290	275	300	271	281	223	300	328	139	148	164	176	180	187	195	221	221	212	211	203	239	68	214	SSW	24
9	119	87	100	120	215	120	143	212	214	207	209	209	214	231	242	249	244	268	272	263	252	290	294	149	233	SW	24
10	281	297	313	295	306	210	118	100	110	109	112	128	137	143	143	153	135	124	123	127	134	127	304	326	130	SE	24
11	360	248	95	279	308	297	314	318	322	335	309	320	317	295	294	307	300	305	290	286	291	294	306	271	304	WNW	24
12	262	243	244	243	243	243	247	267	264	271	278	274	281	281	285	282	283	284	286	304	320	319	312	266	276	W	24
13	282	292	305	303	284	271	307	319	331	307	314	323	302	293	306	318	320	324	320	324	292	285	263	251	307	NW	24
14	273	88	254	323	149	93	93	115	157	214	234	237	146	164	161	160	134	134	122	118	110	125	114	140	142	SE	24
15	211	228	154	165	40	347	8	24	37	12	0	348	348	357	53	327	315	300	269	253	257	250	258	258	322	NW	24
16	272	267	267	261	255	250	275	296	277	268	269	284	284	295	300	293	293	301	301	294	244	230	11	279	282	W	24
17	287	231	172	315	96	83	99	117	181	209	201	217	207	211	212	207	191	198	199	178	172	104	289	292	200	SSW	24
18	293	291	225	296	273	274	253	270	285	316	304	327	320	302	307	310	315	315	313	293	267	266	256	263	298	WNW	24
19	324	4	323	311	281	43	86	326	7	70	93	99	68	73	70	80	65	61	69	67	69	72	106	76	47	NE	24
20	86	87	97	104	103	99	86	99	140	135	77	106	130	120	136	136	134	140	130	114	120	90	332	343	110	ESE	24
21	14	335	327	350	346	330	334	338	342	330	331	342	334	338	359	37	337	29	12	233	198	231	321	284	342	NNW	24
22	285	168	96	119	171	123	111	159	113	96	66	89	101	115	128	127	165	148	129	133	141	127	149	159	128	SE	24
23	105	93	109	141	300	285	277	288	322	312	313	319	320	328	328	322	318	322	327	320	317	277	301	300	316	NW	24
24	282	287	263	311	275	269	282	312	277	348	358	359	12	358	3	352	349	347	351	354	219	289	291	285	343	NNW	24
25	285	262	281	278	286	278	264	208	121	135	194	189	168	142	172	175	173	174	161	156	151	152	141	124	169	SSE	24
26	117	120	114	119	120	122	121	140	143	150	143	148	150	141	145	137	134	140	138	133	128	123	118	113	135	SE	24
27	118	121	124	128	122	176	83	72	72	101	105	88	52	9	333	293	271	274	252	267	269	275	259	258	118	ESE	24
28	249	257	236	241	246	259	246	250	253	263	247	239	251	251	259	268	262	274	273	273	268	269	277	281	260	WSW	24
29	283	296	295	294	302	303	308	315	323	320	315	312	320	318	317	310	314	297	299	307	297	281	283	292	306	NW	24
30	297	247	250	258	282	**262**	255	267	253	268	291	291	290	291	281	285	301	297	305	293	251	250	284	261	281	W	24
31	284	289	290	275	284	305	281	260	290	325	327	320	316	316	319	321	323	316	314	309	285	272	261	270	308	NW	24
HOURLY AVG	360	335	327	350	346	347	334	338	342	348	358	359	348	358	359	352	349	347	351	354	327	335	359	352			

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:	742	HRS
STANDARD DEVIATION:	89.11		AMD OPERATION UPTIME:	99.7	%
			MONTHLY AVERAGE:	283	DEG



JOB #: 2833-13-07-35-C

Standard Deviation Wind Direction

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

JULY 2013

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	28	7	29	15	25	48	39	39	51	50	39	36	35	31	30	24	21	16	15	11	7	8	7	6
2	7	8	7	8	12	10	11	12	14	15	14	14	14	15	16	14	12	13	13	12	12	39	40	19
3	20	16	17	18	**P**	**P**	7	9	9	9	9	10	13	11	12	12	13	9	8	6	10	8	8	7
4	8	5	8	3	4	7	10	16	25	33	19	18	16	17	17	14	15	10	8	8	8	14	21	32
5	10	16	12	11	7	9	9	9	11	22	16	12	16	17	23	16	14	14	11	10	6	9	4	4
6	5	8	5	12	6	9	10	9	11	18	24	31	33	18	47	16	12	12	18	27	14	42	39	10
7	29	23	23	39	10	13	10	11	10	8	13	16	16	15	11	10	18	11	11	17	11	10	17	32
8	20	9	16	15	12	13	18	24	36	53	61	46	43	30	42	27	23	13	15	10	5	5	21	54
9	46	34	59	44	30	44	36	20	15	17	19	19	20	24	22	18	16	13	11	9	14	7	32	21
10	15	15	8	12	24	39	24	16	15	21	21	18	17	17	17	17	13	11	10	8	5	11	16	17
11	16	53	73	41	26	30	9	9	10	23	32	18	13	9	10	10	11	9	10	8	7	5	7	10
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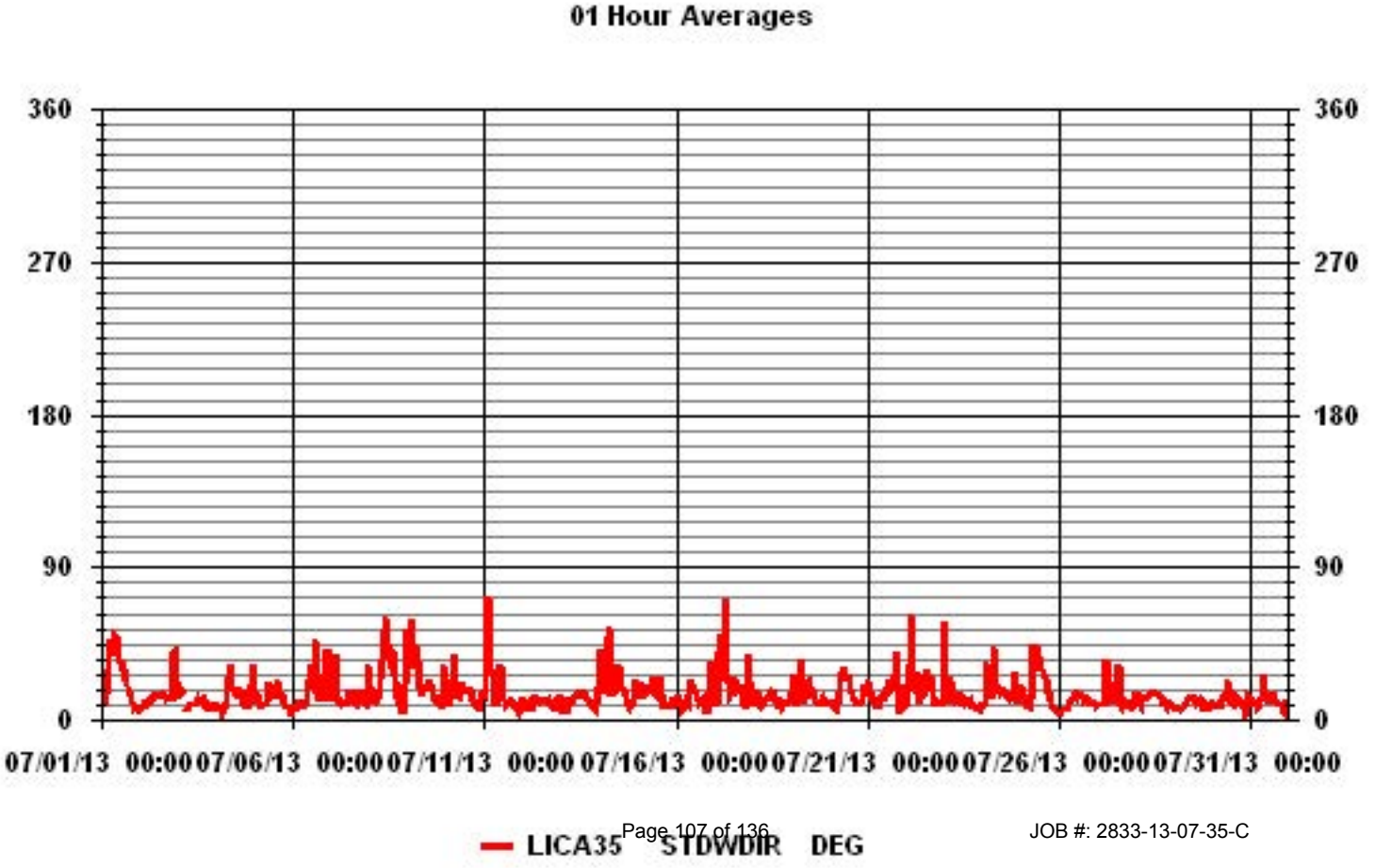
13	5	5	9	4	13	10	10	11	14	15	16	16	16	13	17	14	13	12	10	9	7	6	9	19
14	26	42	15	24	39	49	55	13	22	16	18	24	33	17	19	18	15	13	10	8	10	10	19	23
15	18	19	12	15	15	19	21	16	21	19	25	16	14	15	25	16	8	8	9	9	10	7	12	12
16	10	15	10	10	6	7	10	9	15	23	21	19	17	12	10	11	13	14	9	4	9	16	34	16
17	8	10	40	24	50	22	36	71	22	14	15	19	23	23	18	19	18	20	10	9	7	39	23	8
18	10	10	18	10	9	12	10	11	12	12	14	16	14	17	14	10	11	9	7	8	11	8	12	14
19	13	18	27	8	13	15	36	10	16	16	22	23	16	17	17	12	11	10	10	12	9	13	10	10
20	9	9	10	8	7	9	16	28	22	31	28	23	27	18	17	13	11	12	11	10	11	16	21	13
21	23	21	11	13	11	8	8	9	13	13	16	19	17	15	23	20	26	17	40	11	4	15	21	13
22	7	21	32	63	22	18	16	28	9	14	17	13	23	29	23	27	18	15	10	8	12	8	11	9
23	58	9	15	25	23	13	11	12	16	12	11	13	11	13	12	10	12	10	9	7	7	7	6	8
24	9	11	34	16	17	16	13	43	20	16	18	16	17	17	17	15	13	15	14	16	28	14	10	12
25	21	13	12	13	9	8	12	45	43	43	36	36	31	30	26	26	24	17	13	9	8	7	6	4
26	4	5	6	6	6	7	11	12	13	15	16	14	16	15	15	12	13	13	11	9	9	9	10	8
27	9	9	9	9	9	35	13	24	11	11	12	15	22	32	9	7	9	12	12	11	9	8	9	16
28	10	16	10	8	11	13	13	14	15	16	16	17	16	15	15	15	14	10	10	8	10	10	8	8
29	8	7	7	7	6	7	9	9	12	12	13	14	13	15	10	11	13	12	7	7	6	6	7	9
30	10	8	8	8	8	11	13	13	16	23	15	17	11	10	15	14	11	12	10	8	3	4	15	14
31	12	9	9	12	7	8	12	12	26	15	11	11	14	14	15	13	11	10	9	9	5	4	10	10

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: 742 HRS



JOB #: 2833-13-07-35-C

Calibration Reports

Sulphur Dioxide

SO2 Calibration Report

Station Information

Calibration Date	July 4, 2013	Previous Calibration	June 14, 2013
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	Portable / ELK Point Airport		
Start Time (MST)	10:30	End Time (MST)	13:40
Reason:	Monthly calibration		
Barometric Pressure	27.8 in HG	Station Temperature	25 Deg C
Cal Gas	49.6 ppm	Gas Cyl. #	BAL3031
Cal Gas Expiry date	December 29, 2016		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	N/A Volts

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	467	Method:	Fluorescent
Converter Make / Model:	N/A	S/N :	N/A		
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO717		
Chart Recorder Make / Model:	N/A	S/N:	N/A		
Flow Meter:	Environics 6100	S/N :	4760		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0-1000 ppb					
Sample Flow / Box Temp	627 ccm		33.7 Deg C		626 ccm		33.6 Deg C	
HVPS / Lamp Setting	612		1467		612		1466	
PMT / RxCell Temp	8.2 Deg C		50 Deg C		8.2 Deg C		50 Deg C	
Converter / IZS Temp	N/A Deg C		45 Deg C		N/A Deg C		45.0 Deg C	
Offset / Slope	119.1		1.195		122.6		1.185	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4994	0	0	2	N/A
4994	0	0	0	N/A
4915	79.8	792	800	0.9906
4915	79.8	792	794	0.9980
4955	39.9	396	396	1.0000
4975	19.8	197	199	0.9880
5000	0	0	0	N/A
			Sum of Least Squares	0.9980
			New Correction Factor	0.9980

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	356.9	356.9
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	0.9906
Percent Change:	1.0%

Notes:
N/A : Not applicable
Change sample filter

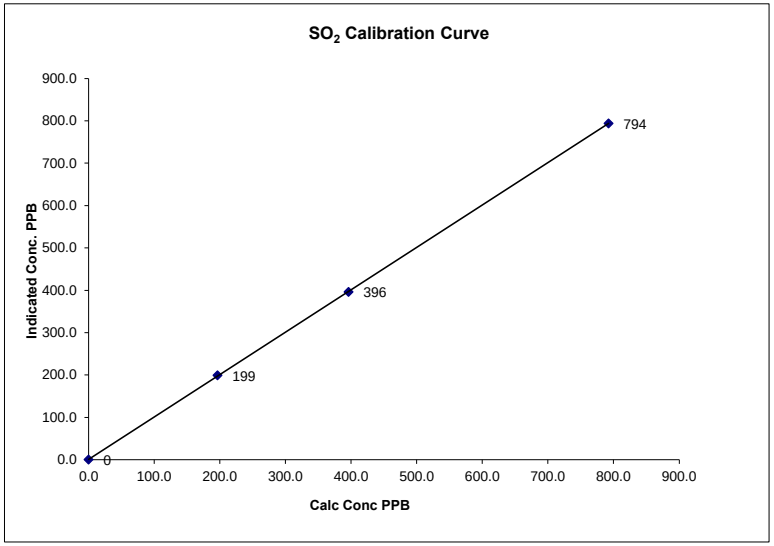
Calibration Performed by: Waseem Ahmed

SO_2 Calibration Curve

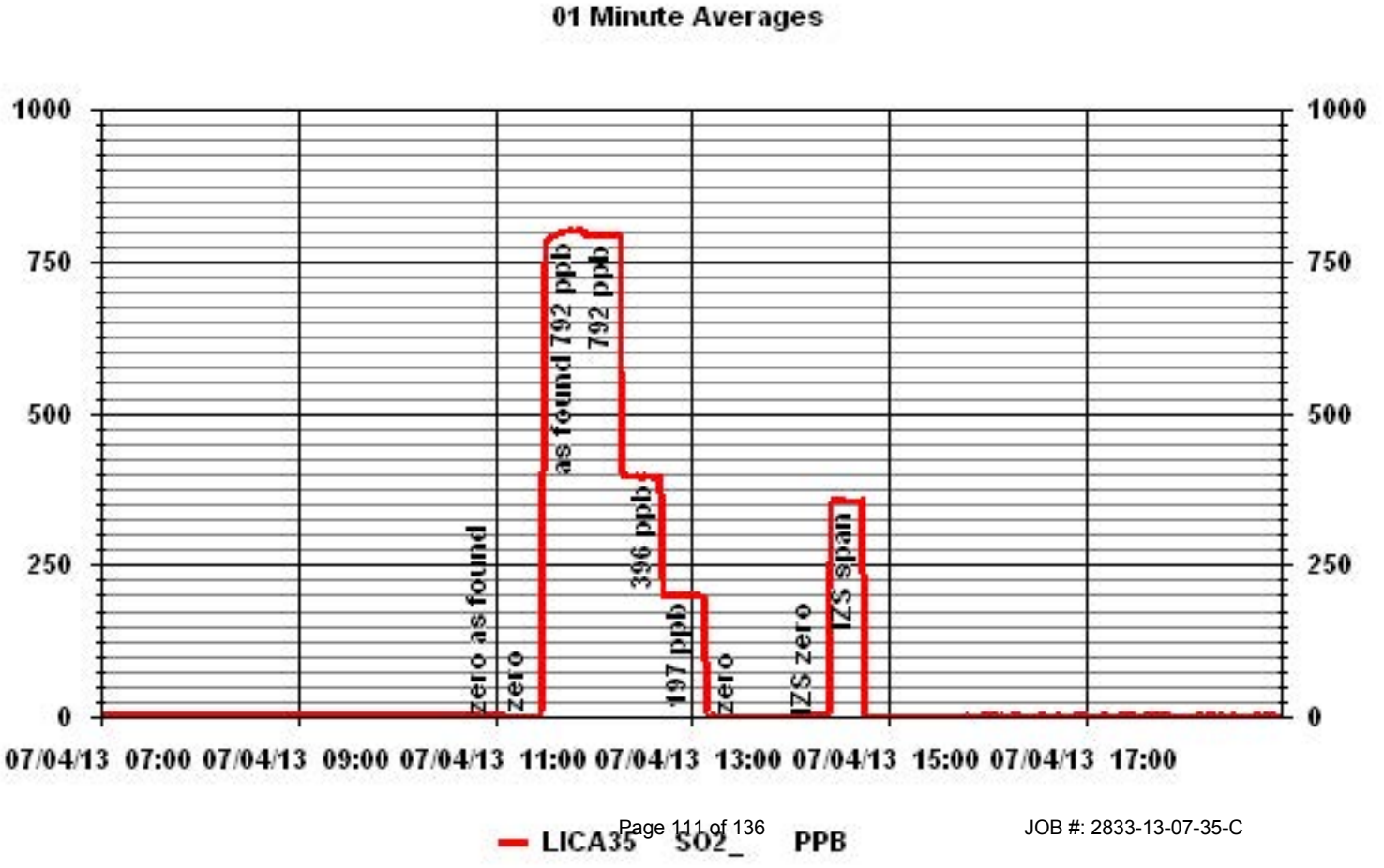
Calibration Date	July 4, 2013		
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION		
Plant / Location	Portable / ELK Point Airport		
Start Time (MST)	10:30	End Time (MST)	13:40

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
197	199	0.9880
396	396	1.0000
792	794	0.9980

Correlation Coefficient	(≥ 0.995)	0.999987
Slope	(0.85 to 1.15)	1.000957
Intercept	(± 3% F.S.)	0.600361



Notes:



JOB #: 2833-13-07-35-C

Hydrogen Sulphide

H2S Calibration Report

Station Information

Calibration Date	July 4, 2013		Previous Calibration	June 7, 2013	
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION				
Plant / Location	Portable / ELK Point Airport				
Start Time (MST)	10:30		End Time (MST)	13:40	
Reason:	Monthly calibration				
Barometric Pressure	27.8	in HG	Station Temperature	25	Deg C
Cal Gas	10.1 ppm		Gas Cyl. # BLM0059	Cal Gas Expiry date	December 25, 2015
DAS Output Voltage	0-1	Volts	Chart Rec. Output	NA	Volts

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	509	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC8832	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	ppb				
Sample Flow / Box Temp	508	ccm	33.2	Deg C	507	ccm	33.4	Deg C
HVPS / Lamp Setting	540		1707		540		1706	
PMT / RxCell Temp	7.9	Deg C	50	Deg C	7.9	Deg C	50	Deg C
Converter / IZS Temp	325	Deg C	45	Deg C	315	Deg C	45.0	Deg C
Offset / Slope	110.7		0.983		114.4		0.962	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	2	NA
5000	0	0	0	NA
4960	40.0	81	84	0.9619
4960	40.0	81	81	1.0000
4977	20.0	40	41	0.9860
4988	12.0	24	25	0.9696
5000	0	0	0	NA
			Sum of Least Squares	0.9934
			New Correction Factor	1.0000

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	57.97	57.97
Sample Lines Connected		Yes

Percent Change

Previous Month's Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	0.9619
Percent Change:	4.0%

Notes: **NA : Not Applicable**

Change sample filter

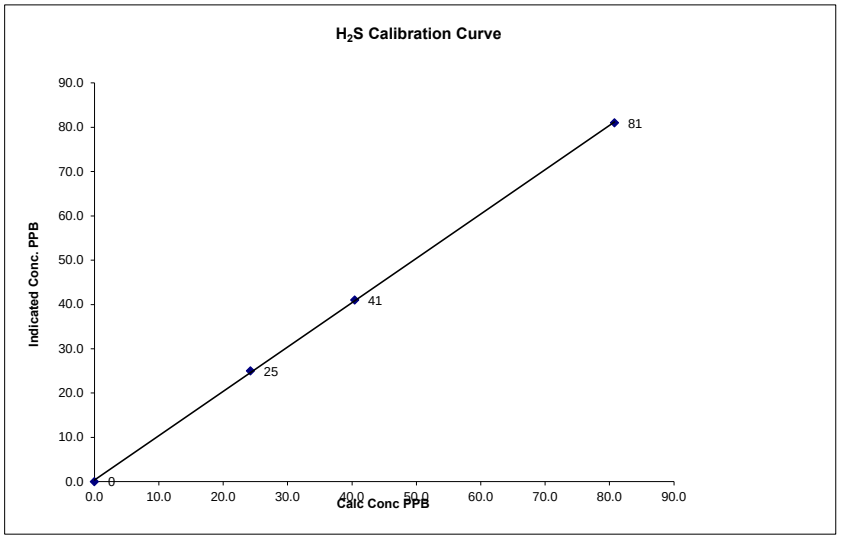
Calibration Performed by: Waseem Ahmed

H_2S Calibration Curve

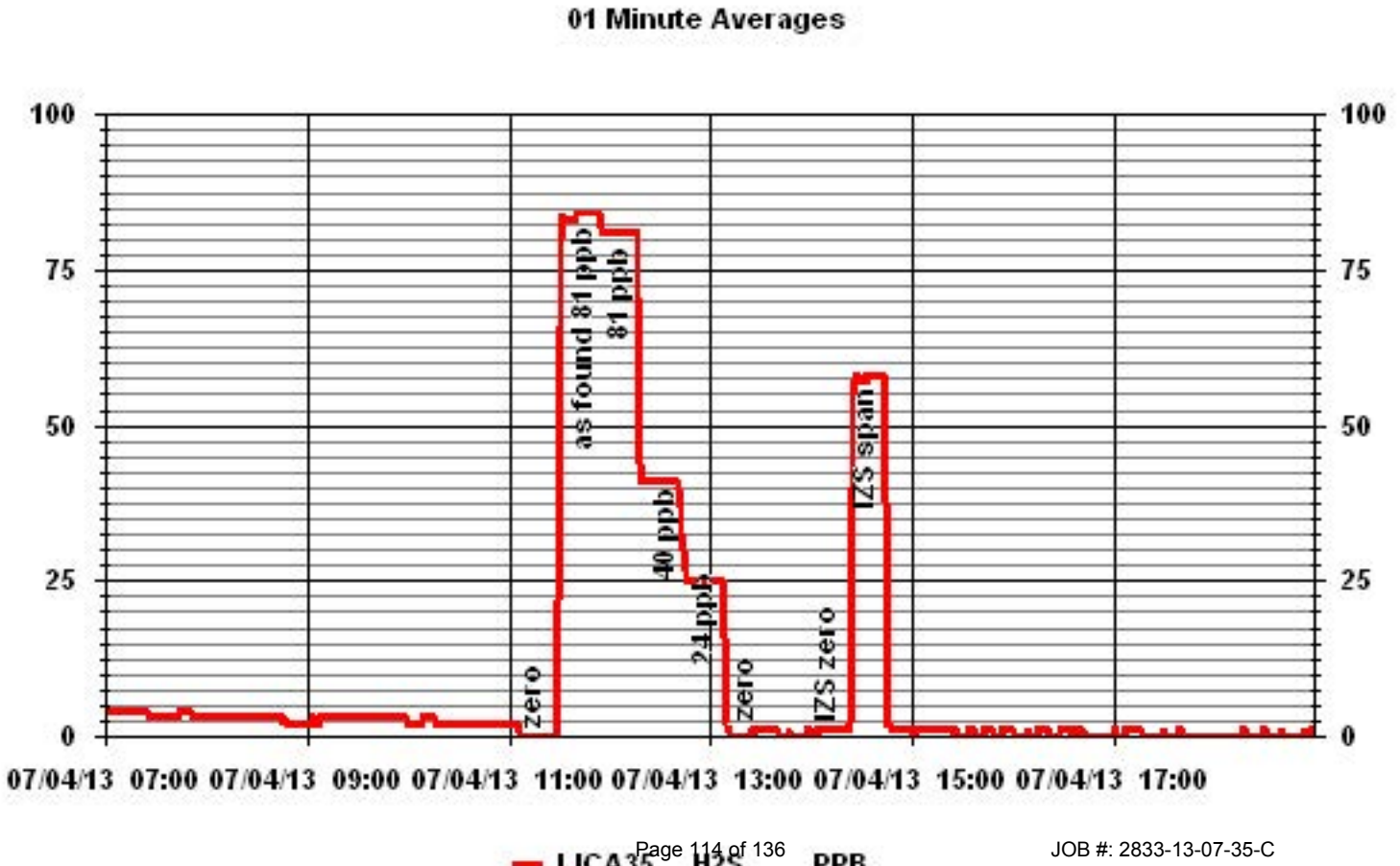
Calibration Date	July 4, 2013			
Company	LAKELAND INDUSTRY & COMMUNITY ASSOCIATION			
Plant / Location	Portable / ELK Point Airport			
Start Time (MST)	10:30	End Time (MST)	13:40	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
24	25	0.9696
40	41	0.9860
81	81	0.9975

Correlation Coefficient	(≥ 0.995)	0.999897
Slope	(0.85 to 1.15)	1.000580
Intercept	(± 3% F.S.)	0.362839



Notes:



JOB #: 2833-13-07-35-C

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	July 5, 2013		Previous Calibration	June 10, 2013	
Company:	**Lakeland Industry & Community Association**				
Plant / Location:	**ELK Point Airport**				
Start Time (MST)	10:15		End Time (MST)	12:46	
Reason:	Monthly calibration				
Barometric Pressure:	27.78	in HG	Station Temperature:	23	Deg C
Calibrator:	API700		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:	ESC8832		S/N :	AO717	
Chart Recorder:	NA		S/N:	NA	
Output Voltage Range:	0-10	VDC	Chart Speed:	NA	mm/hr

Analyzer Information

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

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0-50	ppm	0-50	ppm
Sample Pressure	6.9	psi	6.9	psi
Hydrogen Pressure	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	N/A
2000	0.0	0.0	0.0	N/A
2000	74.0	41.4	41.1	1.0084
2000	74.0	41.4	41.4	1.0000
2000	37.0	21.1	20.9	1.0090
2000	20.0	11.5	11.4	1.0048
2000	0.0	0.0	-0.1	N/A
			New Correction Factor:	1.0000

Percent Change

Previous Calibration Correction Factor:	1.0000
Current Correction Factor Before Span Adjust:	1.0084
Percent Change:	-0.8%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	35.36	35.36
Sample Lines Connected		

Cylinder Pressures

Span 225 psi Hydrogen 1400 psi Zero Air 16 psi

Notes: **N/A : Not Applicable**
Change sample filter
Spare cylinder: H2=1

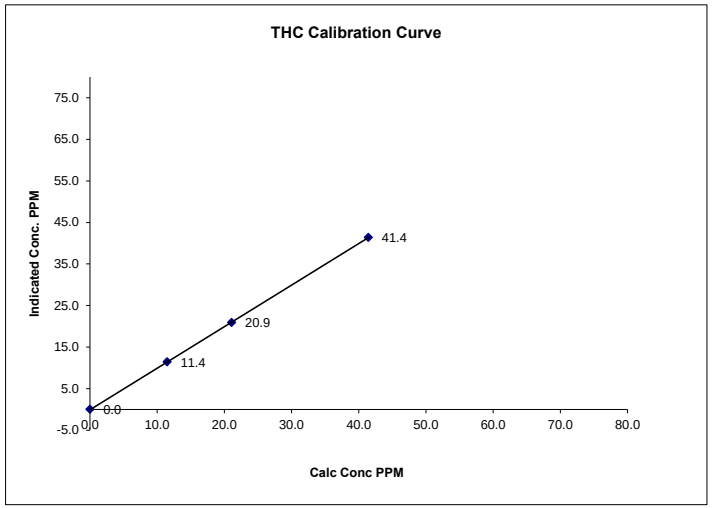
Calibration Performed by: Waseem Ahmed

THC Calibration Curve

Calibration Date	July 5, 2013		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**ELK Point Airport**		
Start Time (MST)	10:15	End Time (MST)	12:46

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	N/A
11.5	11.4	1.0048
21.1	20.9	1.0090
41.4	41.4	1.0000

Correlation Coefficient	(≥ 0.995)	0.999975
Slope	(0.85 to 1.15)	0.998886
Intercept	(± 3% F.S.)	-0.04132



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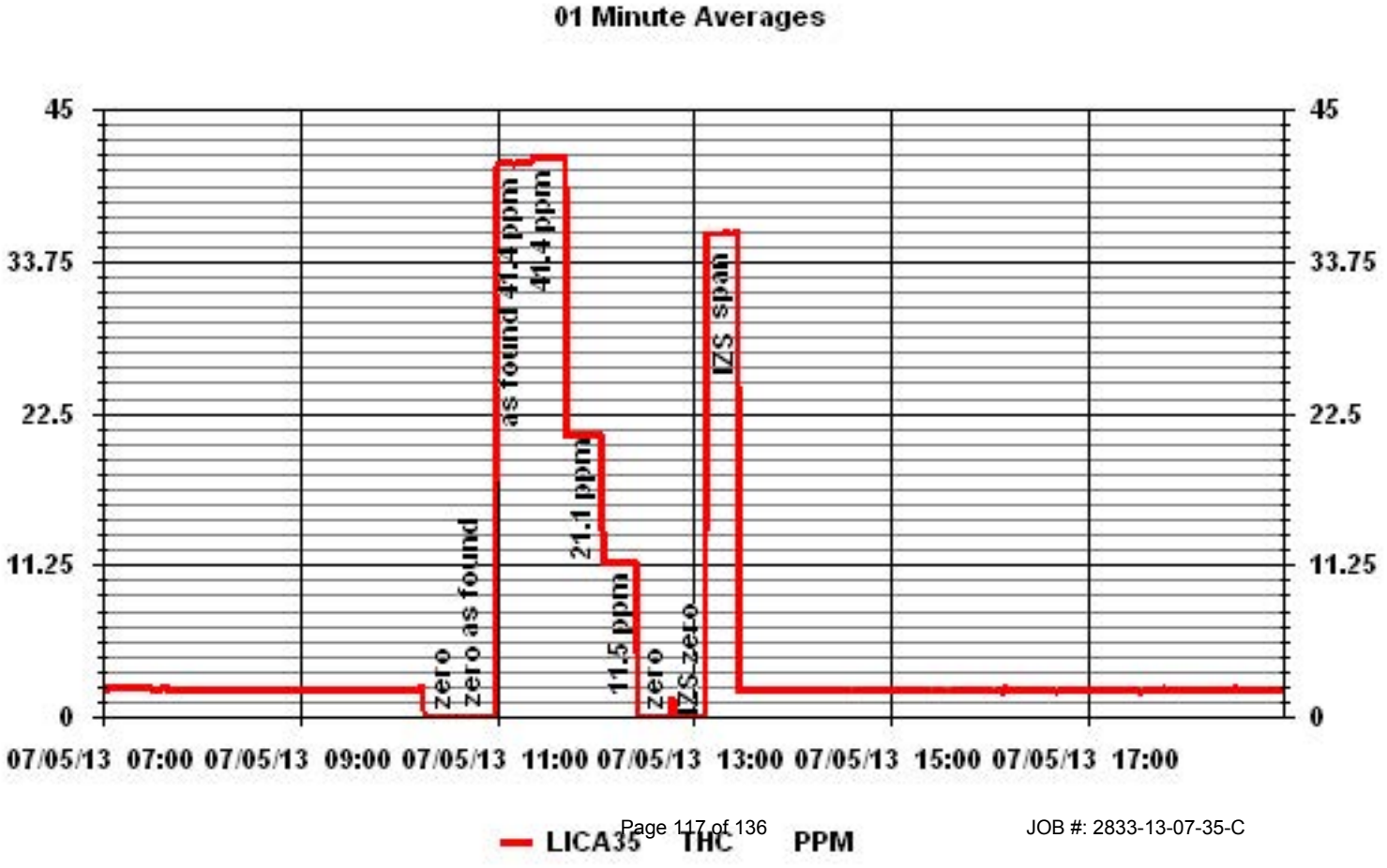


JOB #: 2833-13-07-35-C

Total Hydrocarbons (55i)

Methane - Non Methane Hydrocarbon Calibration Report

Station Information

Calibration Date:	July 5, 2013		Previous Calibration	June 14, 2013	
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**ELK Point Airport**				
Start Time (MST)	12:48		End Time (MST)	13:20	
Reason:	As Found				
Barometric Pressure:	27.77	inHg	Station Temperature:	24.0	Deg C
Calibrator:	API700		S/N:	831	
Cal Gas Concentration:	CH4 600 PPM		C3H8 204 PPM=	561	CH4
	Cyl. # LL155310		Cal Gas Expiry Date:	September 9, 2013	
DAS make & Model:	ESC8832		S/N :	AO717	
Chart Recorder:	N/A		S/N:	N/A	
Output Voltage Range:	0-10		Chart Speed:	N/A	cm/hr

Analyzer Information

Make / Model	Thermo 55i	S/N :	1236656107	Method:	GC FID

Analyzer Settings

Concentration Range (PPM)	CH4= 0-20	NMHC= 0-20	THC = 0-40

	Befor Calibration		After Calibration	
Hydrogen Pressure	40.3	psi	40.3	psi
Air Pressure	32.4	psi	32.4	psi
Carrier Pressure	31.1	psi	31.1	psi
Detector Oven	175	Deg C	175	Deg C
Filter Temp	175	Deg C	175	Deg C
Column Oven Temp	75	Deg C	75	Deg C
Flame Temp	377	Deg C	377	Deg C
Box Temp	38.4	Deg C	38.4	Deg C

Calibration Data

Gas Flows (sccm)		Calculated Concentration		Actual Concentration		Correction factors	
Dilution Flow	Cal Gas Flow	CH4	NMHC	CH4	NMHC	CH4	NMHC
3000	0.00	0.00	0.00	0.00	0.00	0.000	0.000
	No Zero Adj.						
2982	18.00	3.60	3.37	3.40	3.51	1.0588	0.9590
				Correction Factors:		1.0588	0.9590

Percent Change from Previous Calibration

	CH4	NMHC
Previous Calibration Correction Factor:	1.0000	1.0002
Current Correction Factor Before Span Adjust:	0.9863	0.9757
Percent Change:	1.4%	2.5%

IZS Calibration Data

		Before Calibration				After Calibration			
Auto Zero	(ppm)	CH4	0.00	NMHC	0.00	CH4	0.00	NMHC	0.00
Auto Span	(ppm)	CH4	9.32	NMHC	13.79	CH4	9.32	NMHC	13.79
Sample Lines Connected						YES			

Notes: Cylinder Pressures

Span	1700	psi
Hydrogen	2000	psi
Zero Air	45	psi
Nitrogen	1950	psi

Notes: Change sample filter

Calibration Performed by: Waseem ahmed

Methane - Non Methane Hydrocarbon Calibration Report

Station Information

Calibration Date:	July 5, 2013		Previous Calibration	June 14, 2013	
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**ELK Point Airport**				
Start Time (MST)	13:40		End Time (MST)	15:10	
Reason:	Monthly calibration				
Barometric Pressure:	27.77	inHg	Station Temperature:	24.0	Deg C
Calibrator:	API700		S/N:	831	
Cal Gas Concentration:	CH4 600 PPM		C3H8 204 PPM=	561	CH4
	Cyl. # LL155310		Cal Gas Expiry Date:	September 9, 2013	
DAS make & Model:	ESC8832		S/N :	AO717	
Chart Recorder:	N/A		S/N:	N/A	
Output Voltage Range:	0-10		Chart Speed:	N/A	cm/hr

Analyzer Information

Make / Model	Thermo 55i	S/N :	1236656107	Method:	GC FID

Analyzer Settings

Concentration Range (PPM)	CH4= 0-20	NMHC= 0-20	THC = 0-40

	Befor Calibration		After Calibration	
Hydrogen Pressure	40.3	psi	40.3	psi
Air Pressure	32.4	psi	32.4	psi
Carrier Pressure	31.1	psi	31.1	psi
Detector Oven	175	Deg C	175	Deg C
Filter Temp	175	Deg C	175	Deg C
Column Oven Temp	75	Deg C	75.3	Deg C
Flame Temp	377	Deg C	378	Deg C
Box Temp	38.4	Deg C	39.7	Deg C

Calibration Data

Gas Flows (sccm)		Calculated Concentration		Actual Concentration		Correction factors	
Dilution Flow	Cal Gas Flow	CH4	NMHC	CH4	NMHC	CH4	NMHC
3000	0.00	0.00	0.00	0.00	0.00	0.000	0.000
	No Zero Adj.						
2982	18.00	3.60	3.37	3.40	3.50	1.0588	0.9617
2982	18.00	3.60	3.37	3.58	3.40	1.0056	1.0000
2964	36.00	7.20	6.73	7.08	6.57	1.0169	1.0247
2991	9.00	1.80	1.68	1.88	1.86	0.9574	0.9048
3000	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000
				Correction Factors:		1.0056	1.0000

Percent Change from Previous Calibration

	CH4	NMHC
Previous Calibration Correction Factor:	1.0000	1.0002
Current Correction Factor Before Span Adjust:	0.9863	0.9757
Percent Change:	1.4%	2.5%

IZS Calibration Data

		Before Calibration				After Calibration			
Auto Zero	(ppm)	CH4	0.00	NMHC	0.00	CH4	0.00	NMHC	0.00
Auto Span	(ppm)	CH4	9.32	NMHC	13.79	CH4	9.76	NMHC	13.43
Sample Lines Connected						YES			

Notes: Cylinder Pressures

Span	1700	psi
Hydrogen	2000	psi
Zero Air	45	psi
Nitrogen	1950	psi

Notes:

Install H2 cylinder after as found point
Spare cylinders: N2=1, H2=1 & Span =1

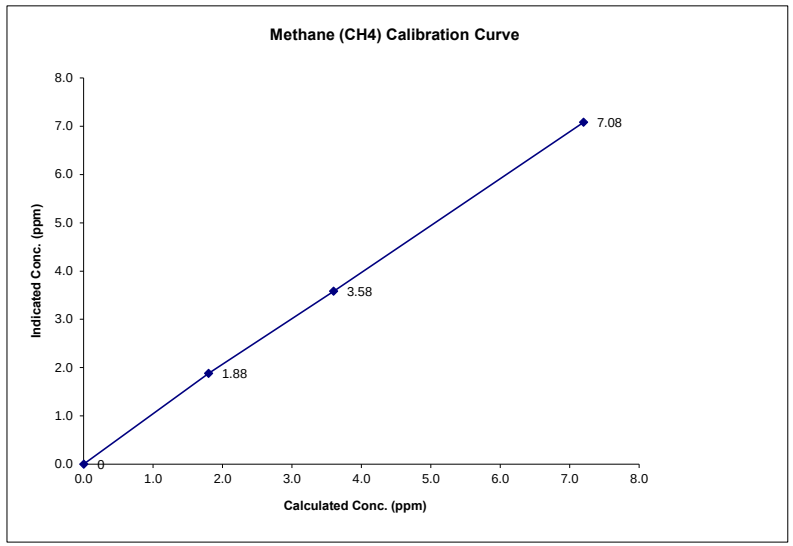
Calibration Performed by: Waseem ahmed

Methane (CH4) Calibration Curve

Calibration Date	July 5, 2013		
Company	Lakeland Industry and Community Association		
Plant / Location	ELK Point Airport		
Start Time (MST)	13:40	End Time (MST)	15:10

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0	0	0.0000
1.80	1.88	0.9574
3.60	3.58	1.0588
7.20	7.08	1.0169

Correlation Coefficient	(≥ 0.995)	0.999725
Slope	(0.85 to 1.15)	0.978730
Intercept	(± 3% F.S.)	0.052000



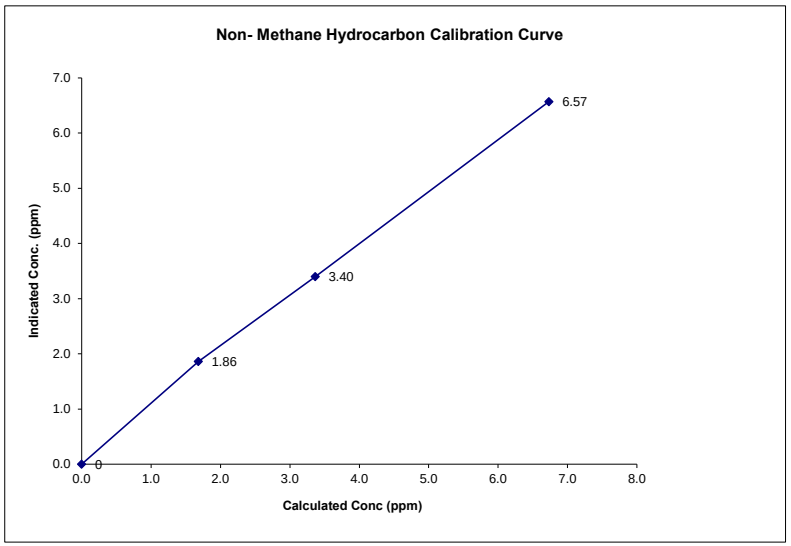
Notes:

Non-Methane Hydrocarbon Calibration Curve

Calibration Date	July 5, 2013		
Company	Lakeland Industry and Community Association		
Plant / Location	ELK Point Airport		
Start Time (MST)	13:40	End Time (MST)	15:10

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0	0	0.0000
1.68	1.86	0.9048
3.37	3.40	0.9617
6.73	6.57	1.0247

Correlation Coefficient	(≥ 0.995)	0.998671
Slope	(0.85 to 1.15)	0.966811
Intercept	(± 3% F.S.)	0.110000



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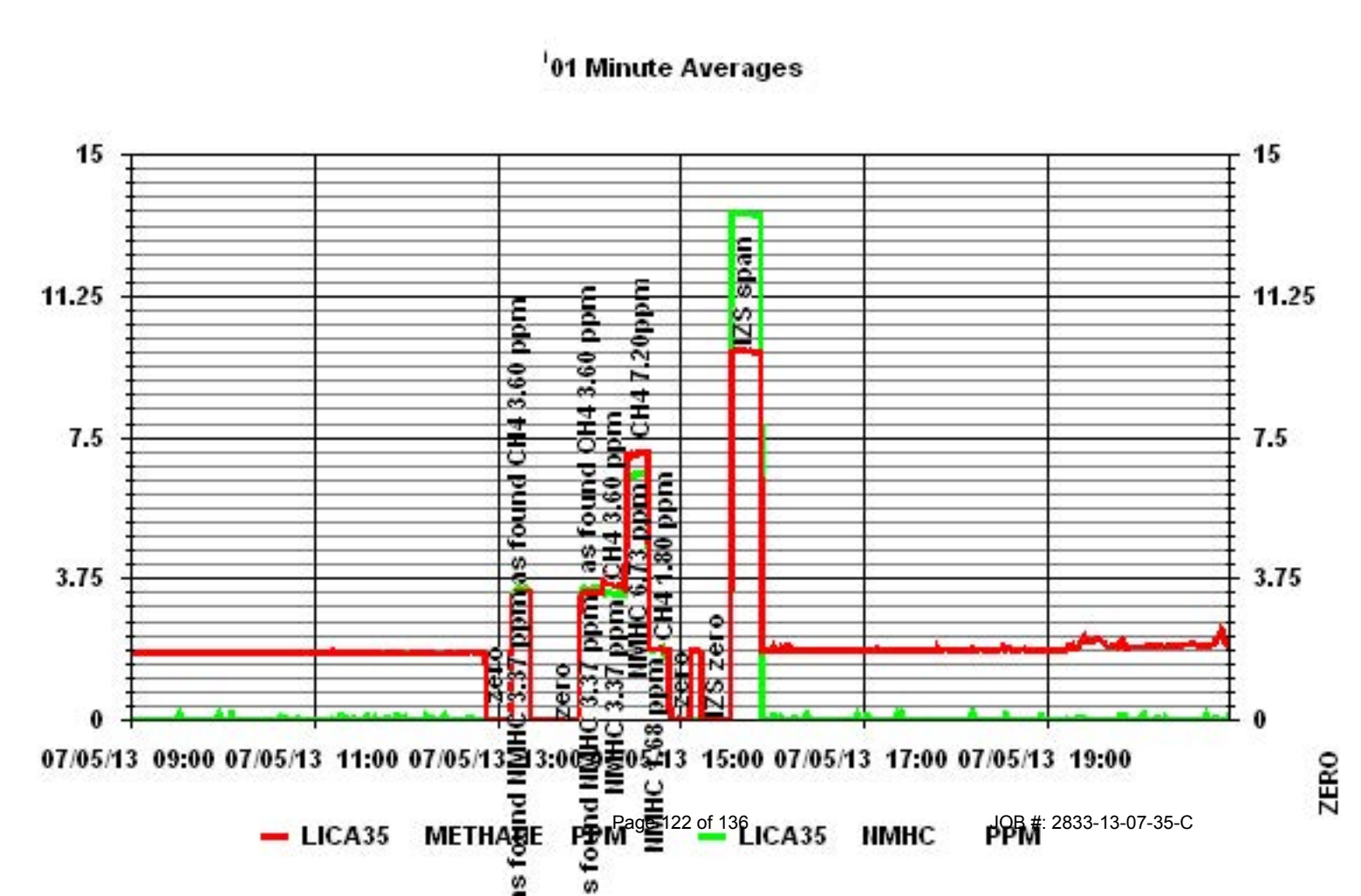
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7.5
3.75
0
07/05/13 09:00
07/05/13 11:00
07/05/13 13:00
07/05/13 15:00
07/05/13 17:00
07/05/13 19:00
zero
as found CH4 3.60 ppm
NMHC 3.37 ppm
zero
as found CH4 3.60 ppm
NMHC 3.37 ppm
CH4 3.60 ppm
NMHC 6.73 ppm
CH4 7.20ppm
NMHC 1.68 ppm
CH4 1.80 ppm
zero
IZS zero
IZS span
LICA35 METHANE PPM
LICA35 NMHC PPM
ZERO

Particulate Matter 2.5

TEOM 1405F Audit

Station		Audit Transfer Standard	
Date:	July 18, 2013	Make/Model:	Streamline FTS
Station Name:	Lica Portable (CASA # 35)	Serial Number:	Hi 091001,Lo 091099
Location:	Devon Wellsite 13-16-62-5 W4M	Cell s/n:	NA
Operator:	LICA	Thermometer s/n:	Fluke 87V/99300071

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	NA	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A207691003	Filter Load (%)	26.1%
Firmware Ver.	1.52	K_o Factor	13125.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	26.1
		Press (ATM)	0.930

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.003	Warnings	None
Pump Vacuum **<0.40atm**	0.35	Pump Gauge (inHg)	-18

Temperature/Pressure

Measured Temp **(± 2 °C)**	26.1	**D °C**	0.0
Measured Press **(± 0.01atm)**	0.934	**DATM**	-0.004

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	0.03%
Measured Main Flow (l/min)	2.98	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	2.26%
Measured Bypass Flow (l/min)	13.67	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: 17:20 **Finish Time:** 18:00

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

New Filter Loading %: 17.0%

Comments:

Auditor/s: Limin Li/Michael Espiritu

JOB #: 2833-13-07-35-C

TEOM 1405F Audit

Station		Audit Transfer Standard	
Date:	July 30, 2013	Make/Model:	Fisher Brand
Station Name:	LICA Portable (CASA # 35)	Serial Number:	15-021B
Location:	ELK Point Air Port	Cell s/n:	N/A
Operator:	LICA	Thermometer s/n:	N/A

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	N/A	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A208301003	Filter Load (%)	20.4%
Firmware Ver.	1.52	K_o Factor	13125.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	20.0
		Press (ATM)	0.937

Conversion from mmHg or "Hg to ATM (Atmospheres)

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

Note: Tolerances are noted as BOLD in Brackets

Audit

Status

Noise **<0.10*u* g**	0.006	Warnings	None
Pump Vacuum **<0.40atm**	0.36	Pump Gauge (inHg)	-18

Temperature/Pressure

Measured Temp **(± 2 °C)**	19.23	**D °C**	0.8
Measured Press **(± 0.01atm)**	0.940	**DATM**	-0.003

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	0.00%
Measured Main Flow (l/min)	2.99	Flow Adjusted to Measured?	Yes
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	2.26%
Measured Bypass Flow (l/min)	13.65	Flow Adjusted to Measured?	Yes

Leak Check

Main **(< 0.15 l/min)**	Base=-0.04, Ref.=-0.04
Aux **(< 0.6 l/min)**	Base=0.00, Ref.=0.00

Instrument Setup

Flow Control = Active

Report Condition = Actual

K_o Factor

Measured	N/A
K_o Difference **(± 2.5%)**	N/A

Start Time: 14:10 **Finish Time:** 15:40

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

New Filter Loading %: 21.0%

Comments:

Auditor/s: Waseem Ahmed

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 4, 2013		Previous Calibration	June 7, 2013	
Company	LICA		Plant/Location	ELK Point Airport	
Start Time (MST)	10:30		End Time (MST)	15:35	
Reason:	Monthly calibration				
Barometric Pressure	27.8	in HG	Station Temperature	25	Deg C
Cal Gas Concentration	NOx 49.3	ppm	NO 49.2	ppm	
Cal Gas Cylinder #	BAL3031				
DAS Output Voltage	0-1	Volts	Chart Rec. Output	NA	Volts

MFCF	N/A								
Cal Gas Expiry date	December 29, 2016								

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
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/Conv. Temp	486	ccm	315	Deg C		478	ccm	314	Deg C
Ozone Flow / Vacuum	78	ccm	5.5	"Hg-A		77	ccm	4.7	"Hg-A
HVPS / A ZERO	638	Volts	7.3	MV		638	Volts	7.0	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.8	Deg C		50.0	Deg C	6.8	Deg C
Box Temp / IZS Temp	33.9	Deg C	45.0	Deg C		34.5	Deg C	45.2	Deg C
Offset	0.5	NOx	0.2	NO		3.1	NOx	1.2	NO
Slope	1.362	NOx	1.343	NO		1.380	NOx	1.363	NO
NO_2 COEF / Conv Efficency	NA	NO2	0.996			NA	NO2	0.996	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4994	0.0	NA	0	0	NA	1	0	1	NA	NA
4994	0.0	NA	0	0	NA	0	0	0	NA	NA
4915	79.8	NA	788	786	NA	779	774	5	1.0124	1.0156
4915	79.8	NA	788	786	NA	791	788	3	0.9970	0.9975
4955	39.9	NA	394	393	NA	396	392	4	0.9970	1.0026
4975	19.8	NA	195	195	NA	201	197	4	0.9772	0.9900
5000	0.0	NA	0	0	NA	6	1	5	NA	NA

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4915	79.8	NA	788	786	NA	794	791	3	NA	NA
4915	79.8	600	788	NA	504	794	290	504	1.0020	100.00%
	No span adj.									
4915	79.8	300	788	NA	252	794	542	252	1.0040	100.00%
4915	79.8	120	788	NA	104	794	690	104	1.0097	100.00%

Linearity			Sum of Least Squares	NOx=	0.994	NO=	0.998	NO2= 1.000
OK?	Yes	No	Correction Factors:	NOx=	0.9970	NO=	0.9975	NO2= 1.0020
					Average Converter Efficiency=		100.00%	

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	618	NOx	606	NO2		628	NOx	614	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	0.997	0.996	0.998
Current Correction Factor Before Span Adjust	1.012	1.016	1.002
Percent Change	-1.5%	-1.9%	-0.4%

Notes

NA : Not Applicable

Change sample filter

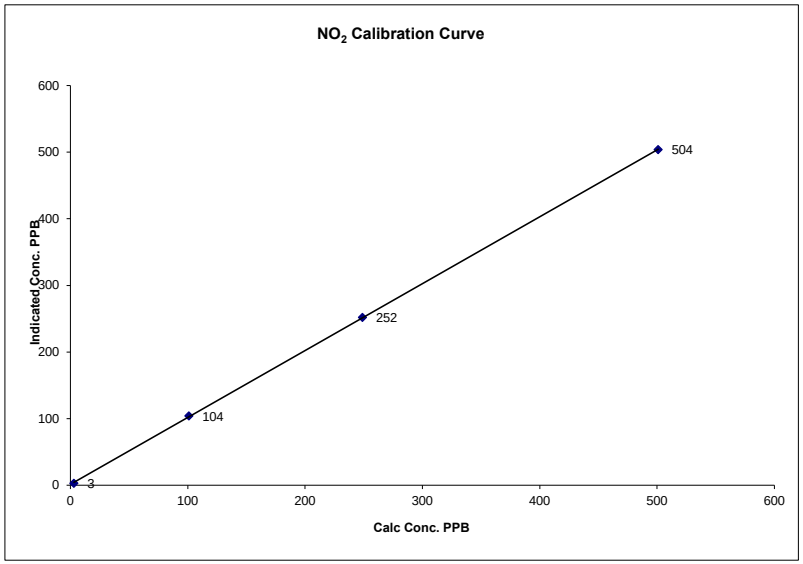
Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 4, 2013				
Company	LICA				
Plant / Location	ELK Point Airport				
Start Time (MST)	10:30	End Time (MST)	15:35		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
3	3	NA
101	104	0.9712
249	252	0.9881
501	504	0.9940

Correlation Coefficient	(≥ 0.995)	0.999972
Slope	(0.85 to 1.15)	1.004482
Intercept	(± 3% F.S.)	1.29300



Notes:

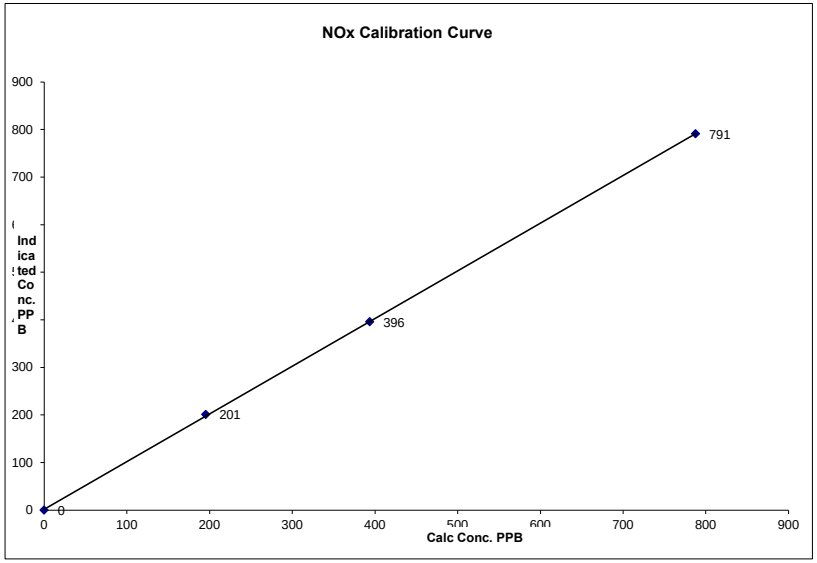
JOB #: 2833-13-07-35-C

NOx Calibration Curve

Calibration Date	July 4, 2013		
Company	LICA		
Plant / Location	ELK Point Airport		
Start Time (MST)	10:30	End Time (MST)	15:35

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
195	201	0.9772
394	396	0.9970
788	791	0.9970

Correlation Coefficient	(≥ 0.995)	0.999958
Slope	(0.85 to 1.15)	1.002256
Intercept	(± 3% F.S.)	1.99983



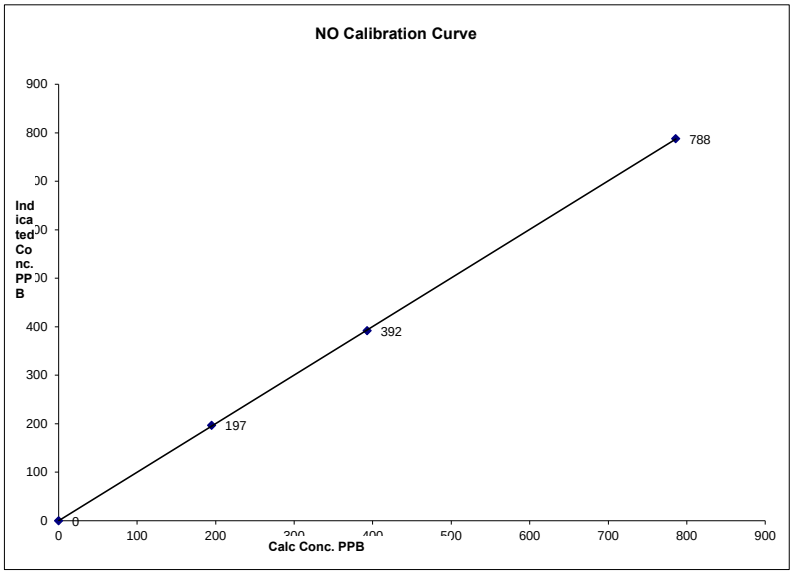
Notes:

NO Calibration Curve

Calibration Date	July 4, 2013		
Company	LICA		
Plant / Location	ELK Point Airport		
Start Time (MST)	10:30	End Time (MST)	15:35

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
195	197	0.9900
393	392	1.0026
786	788	0.9975

Correlation Coefficient	(≥ 0.995)	0.999983
Slope	(0.85 to 1.15)	1.001540
Intercept	(± 3% F.S.)	0.19570



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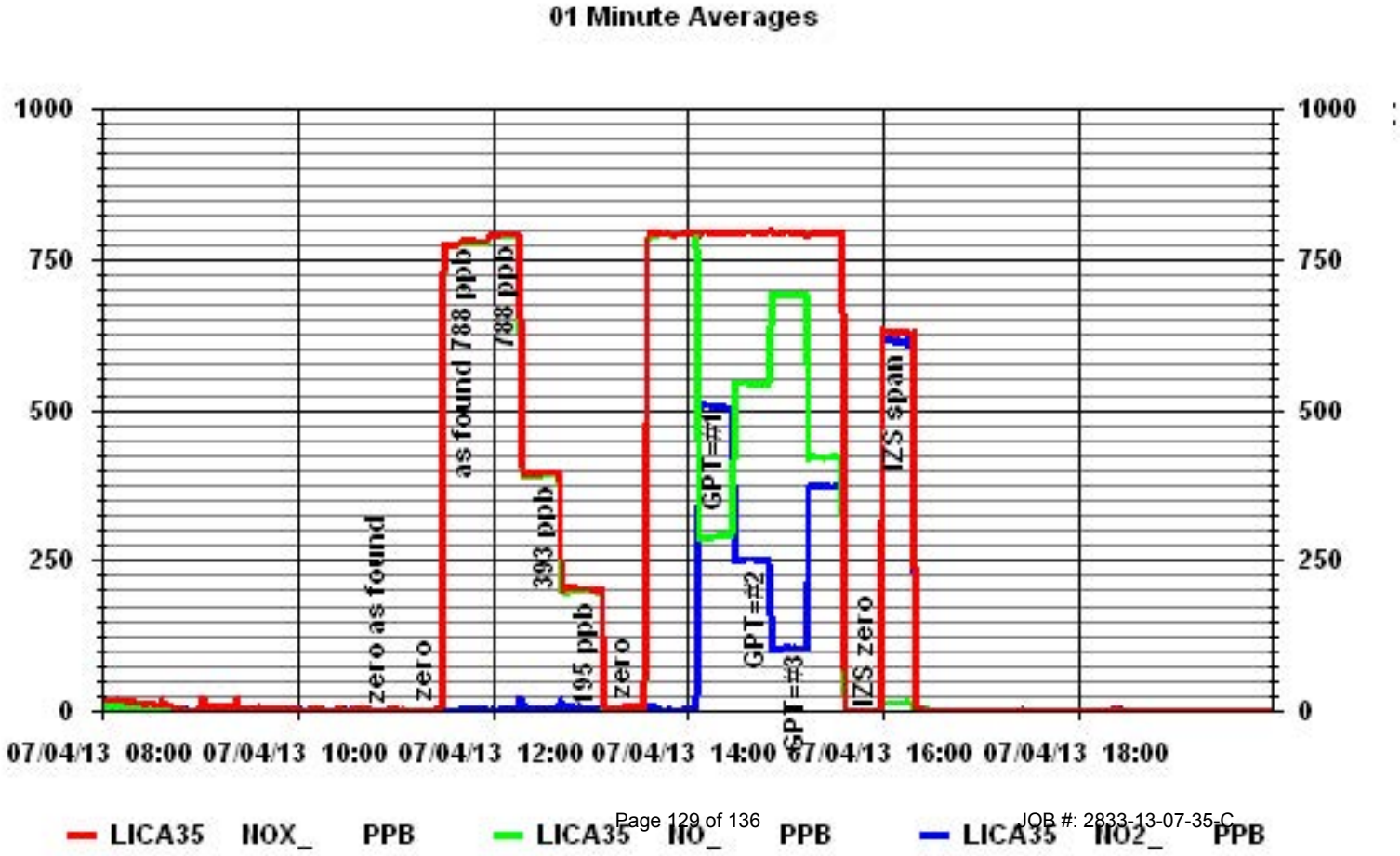

01 Minute Averages
1000
750
500
250
0
zero as found
zero
as found 788 ppb
788 ppb
393 ppb
195 ppb
zero
GPT=#1
GPT=#2
GPT=#3
IZS zero
IZS span
07/04/13 08:00
07/04/13 10:00
07/04/13 12:00
07/04/13 14:00
07/04/13 16:00
07/04/13 18:00
LICA35 NOX_ PPB
LICA35 NO_ PPB
LICA35 NO2_ PPB

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 26, 2013		Previous Calibration	July 4, 2013	
Company	LICA		Plant/Location	ELK Point Airport	
Start Time (MST)	9:40		End Time (MST)	10:24	
Reason:	As Found Point				
Barometric Pressure	28.16	in HG	Station Temperature	22	Deg C
Cal Gas Concentration	NOx 49.3	ppm	NO 49.2	ppm	Cal Gas Expiry date: December 29, 2016
Cal Gas Cylinder #	BAL3031				
DAS Output Voltage	0-1	Volts	Chart Rec. Output	NA	Volts

MFCF: N/A

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	593	Method:	Chemiluminescent
Calibrator Make / Model:	Environics 6100	S/N:	4760		
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/Conv. Temp	481	ccm	315	Deg C		480	ccm	315	Deg C
Ozone Flow / Vacuum	78	ccm	6.2	"Hg-A		78	ccm	6.4	"Hg-A
HVPS / A ZERO	638	Volts	6.6	MV		638	Volts	6.8	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.7	Deg C		50.0	Deg C	6.7	Deg C
Box Temp / IZS Temp	30.8	Deg C	45.0	Deg C		31.4	Deg C	45.3	Deg C
Offset	3.1	NOx	1.2	NO		3.1	NOx	1.2	NO
Slope	1.380	NOx	1.363	NO		1.380	NOx	1.363	NO
NO_2 COEF / Conv Efficency	NA	NO2	0.996			NA	NO2	0.996	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
4994	0.0	NA	0	0	NA	-2	-1	-1	NA	NA
	No zero adj.									
4915	79.8	NA	788	786	NA	814	811	4	0.9653	0.9680

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		

Linearity			Sum of Least Squares	NOx=		NO=	NO2=
OK?	Yes	No	Correction Factors:	NOx=	0.9653	NO= 0.9680	NO2=
				Average Converter Efficiency=			

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	628	NOx	614	NO2		628	NOx	614	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	0.997	0.998	
Current Correction Factor Before Span Adjust	0.965	0.968	
Percent Change	3.3%	3.0%	

Notes

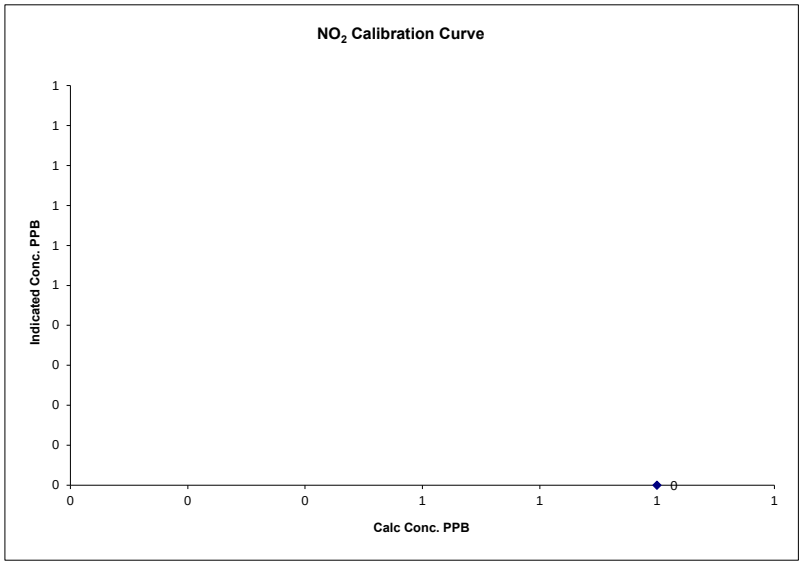
NA : Not Applicable

Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 26, 2013		
Company	LICA		
Plant / Location	ELK Point Airport		
Start Time (MST)	9:40	End Time (MST)	10:24

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)
4			Slope (0.85 to 1.15)
			Intercept (± 3% F.S.)



Notes:

JOB #: 2833-13-07-35-C

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	July 26, 2013	Previous Calibration	N/A
Company	LICA	Plant/Location	ELK Point Airport
Start Time (MST)	13:20	End Time (MST)	16:46
Reason:	Post Repair Calibration		
Barometric Pressure	28.13 in HG	Station Temperature	22 Deg C
Cal Gas Concentration	NOx 49.3 ppm NO 49.2 ppm	Cal Gas Expiry date	December 29, 2016
Cal Gas Cylinder #	BAL3031		
DAS Output Voltage	0-1 Volts	Chart Rec. Output	NA Volts

Equipment Information

Analyzer Make / Model:	API 200E	S/N :	593
Calibrator Make / Model:	Environics 6100	S/N:	4760
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/Conv. Temp	480	ccm	314	Deg C		480	ccm	314.5	Deg C
Ozone Flow / Vacuum	78	ccm	4.0	"Hg-A		78	ccm	4.0	"Hg-A
HVPS / A ZERO	674	Volts	12.5	MV		674	Volts	9.6	MV
Rx/ Temp / PMT Temp	50.0	Deg C	6.7	Deg C		50.1	Deg C	6.7	Deg C
Box Temp / IZS Temp	29.9	Deg C	45.3	Deg C		33.0	Deg C	45.2	Deg C
Offset	0.4	NOx	0.5	NO		0.4	NOx	0.5	NO
Slope	1.043	NOx	1.032	NO		1.043	NOx	1.032	NO
NO_2 COEF / Conv Efficency	NA	NO2	0.996			NA	NO2	0.996	

Dilution Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration			Indicated Concentration			Correction Factor	
			NOx	NO	NO2	NOx	NO	NO2	NOx	NO
5000	0.0	NA	0	0	NA	0	0	0	NA	NA
	No zero adj.									
4920	81.3	NA	801	800	NA	803	800	3	0.9980	1.0000
	No span adj.									
4960	40.6	NA	400	399	NA	399	398	1	1.0032	1.0037
4980	20.3	NA	200	200	NA	200	200	1	1.0000	1.0000
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			NO_2 Correction Factor	NO2 Conv Efficency
			NOx	NO	NO2	NOx	NO	NO2		
4920	81.3	NA	801	800	NA	800	798	2	NA	NA
4920	81.3	600	801	NA	504	800	296	504	1.0000	100.00%
	No span adj.									
4920	81.3	300	801	NA	254	806	546	261	0.9732	102.78%
4920	81.3	120	801	NA	101	806	699	107	0.9439	106.06%

Linearity			Sum of Least Squares	NOx=	0.999	NO=	1.000	NO2= 0.993
OK?	Yes	No	Correction Factors:	NOx=	0.9980	NO=	1.0000	NO2= 1.0000
					Average Converter Efficiency=		102.95%	

IZS Calibration Data

	Before Calibration					After Calibration			
Auto Zero	0.0	NOx	0.0	NO2		0.0	NOx	0.0	NO2
Auto Span	628	NOx	614	NO2		644	NOx	631	NO2
					Sample Lines Connected	YES			

Percent Change

	NOx	NO	NO2
Previous Month's Calibration Correction Factor	N/A	N/A	N/A
Current Correction Factor Before Span Adjust	0.998	1.000	1.000
Percent Change	#VALUE!	#VALUE!	#VALUE!

Notes

NA : Not Applicable

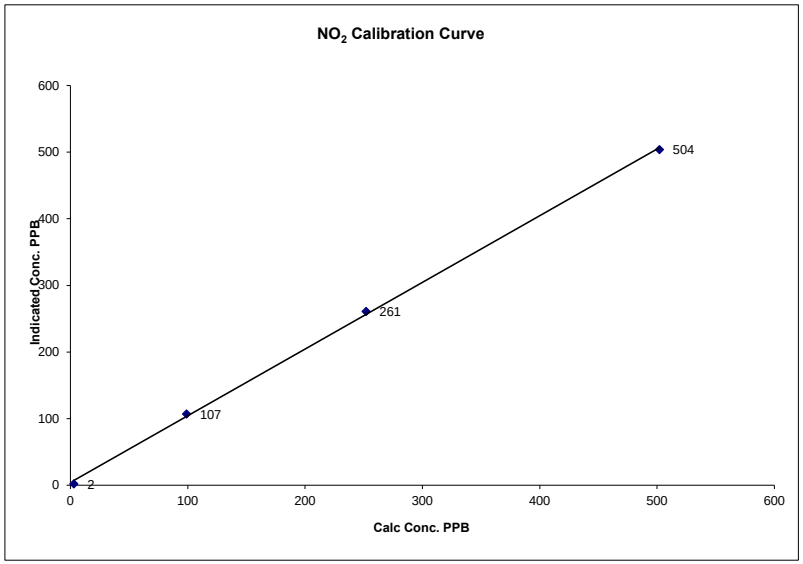
Calibration Performed by: Waseem Ahmed

NO_2 Calibration Curve

Calibration Date	July 26, 2013		
Company	LICA		
Plant / Location	ELK Point Airport		
Start Time (MST)	13:20	End Time (MST)	16:46

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
3	2	NA
99	107	0.9252
252	261	0.9655
502	504	0.9960

Correlation Coefficient	(≥ 0.995)	0.999518
Slope	(0.85 to 1.15)	1.001470
Intercept	(± 3% F.S.)	4.18533



Notes:

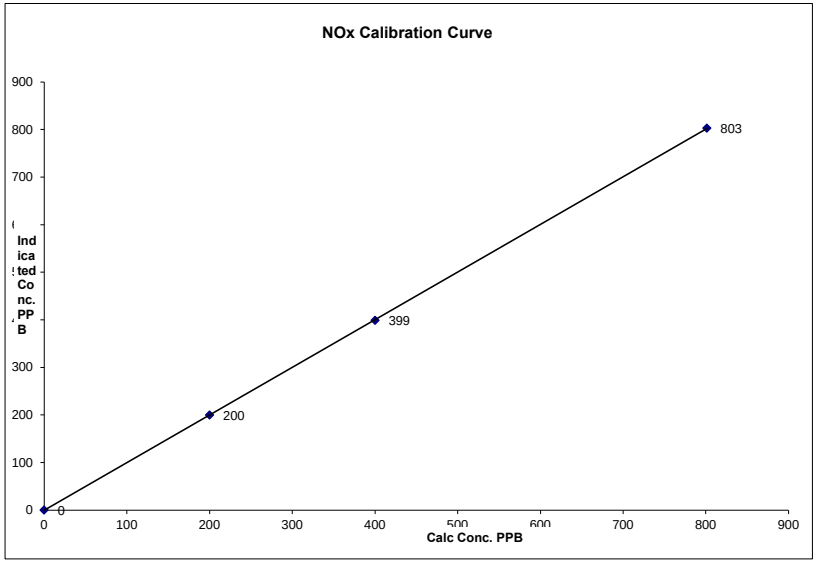
JOB #: 2833-13-07-35-C

NOx Calibration Curve

Calibration Date	July 26, 2013		
Company	LICA		
Plant / Location	ELK Point Airport		
Start Time (MST)	13:20	End Time (MST)	16:46

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
200	200	1.0000
400	399	1.0032
801	803	0.9980

Correlation Coefficient	(≥ 0.995)	0.999992
Slope	(0.85 to 1.15)	1.001924
Intercept	(± 3% F.S.)	-0.63033



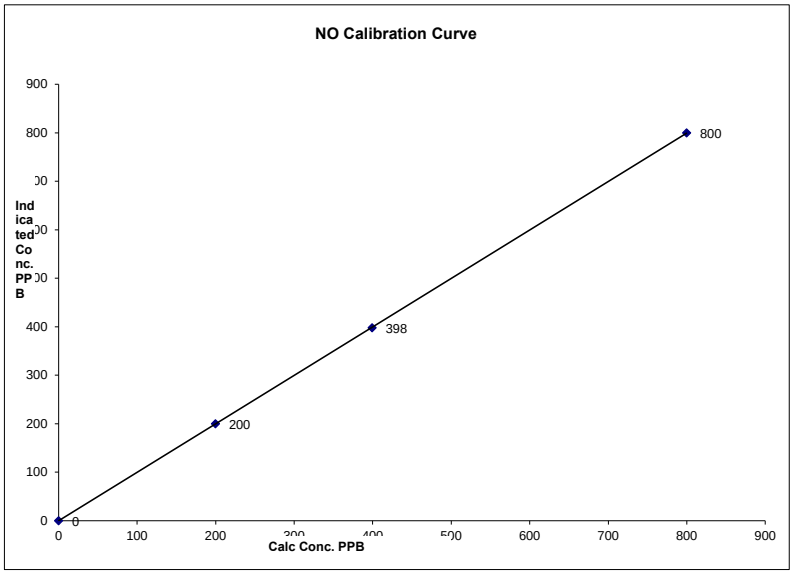
Notes:

NO Calibration Curve

Calibration Date	July 26, 2013		
Company	LICA		
Plant / Location	ELK Point Airport		
Start Time (MST)	13:20	End Time (MST)	16:46

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	NA
200	200	1.0000
399	398	1.0037
800	800	1.0000

Correlation Coefficient	(≥ 0.995)	0.999994
Slope	(0.85 to 1.15)	0.999959
Intercept	(± 3% F.S.)	-0.23084



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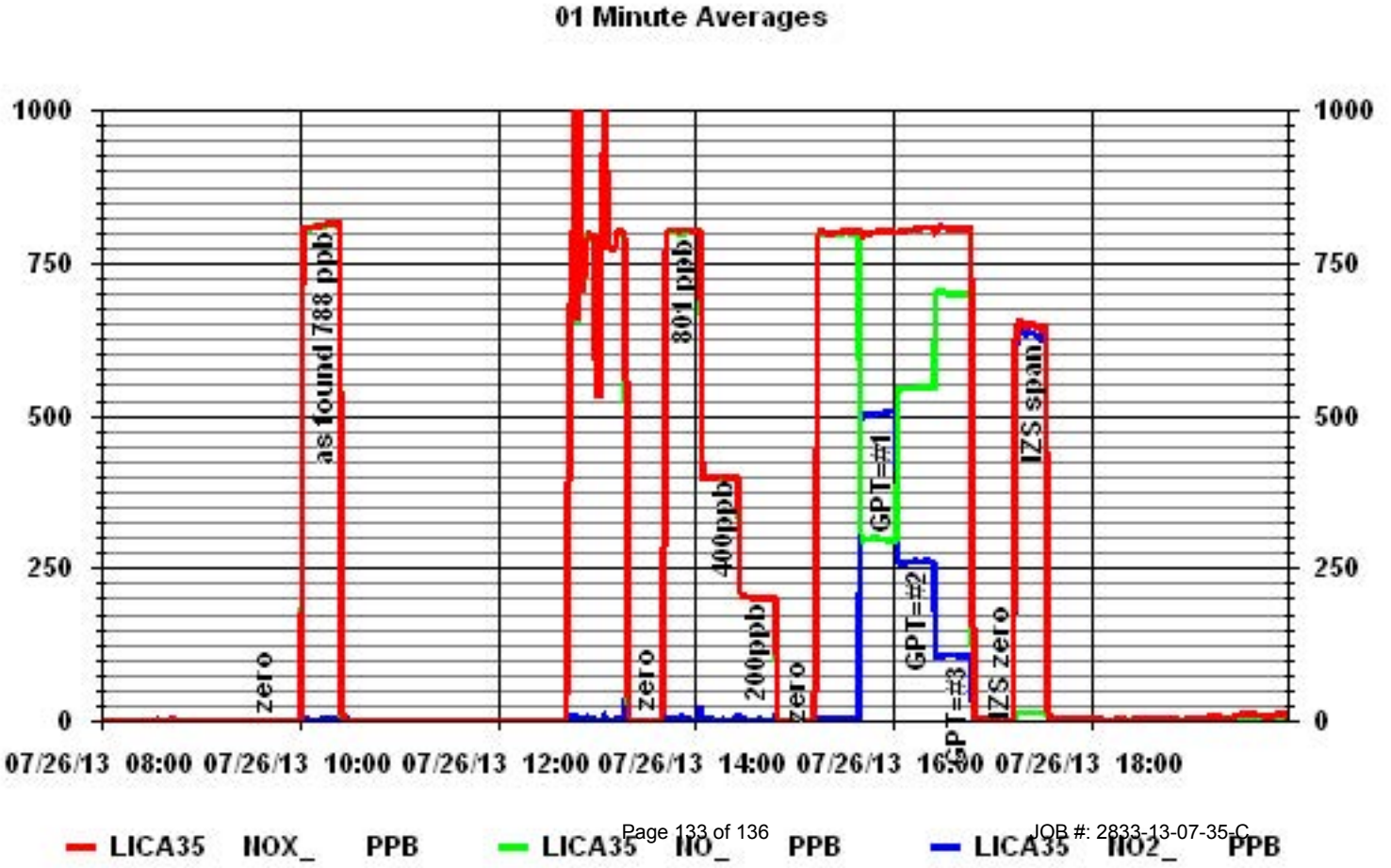
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1000
750
500
250
0
zero
as found 788 ppb
zero
801 ppb
400ppb
200ppb
zero
GPT=#1
GPT=#2
GPT=#3
IZS zero
IZS span
07/26/13 08:00
07/26/13 10:00
07/26/13 12:00
07/26/13 14:00
07/26/13 16:00
07/26/13 18:00
LICA35 NOX_ PPB
LICA35 NO_ PPB
LICA35 NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	July 5, 2013	Previous Calibration	June 10, 2013
Company	Lakeland Industry & Community Association		
Plant / Location	EIK Point Airport		
Start Time (MST)	10:00	End Time (MST)	14:05
Reason:	Monthly Calibration		
Barometric Pressure	27.78 in HG	Station Temperature	23 Deg C
DAS Output Voltage	0-10 Volts		

Equipment Information

Analyzer Make / Model:	Thermo 49i	S/N :	1002240372	Method:	Photometric
Calibrator Make / Model:	Environics 6100	S/N :	4760	Method:	GPT
DAS Make / Model:	ESC 8832	S/N :	AO717		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0-500	ppb				
Cell A Flow / Cell B Flow	750	LPM	758	LPM	750	LPM	758	LPM
O_3 Set Level	691	mmHg			693	mmHg		
Bench Lamp	54.1	Deg C			54.1	Deg C		
O3 Lamp / Box Temp	68.2	Deg	31.4	Deg C	68.2	Deg C	34.2	Deg C
Offset / Slope	-0.2		0.976		-0.2		1.033	

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4994	0	0	2	N/A
	No zero adj			
4994	450	371	350	1.0600
4994	450	371	377	0.9841
4994	300	249	252	0.9881
4994	120	101	102	0.9902
4994	0	0	5	N/A
			Sum of Least Squares	0.9856
			New Correction Factor	0.9841

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	313	329
Sample Lines Connected		Yes
Previous Calibration Correction Factor:		1.0267
Current Correctio Factor Before Span Adjust:		1.0600
Percent Change:		-3.1%

Note:

N/A : Not Applicable

Change sample filter

Zero was unstable, check sample tube.

Leak detected in sample tube, replace sample tube and continue calibration.

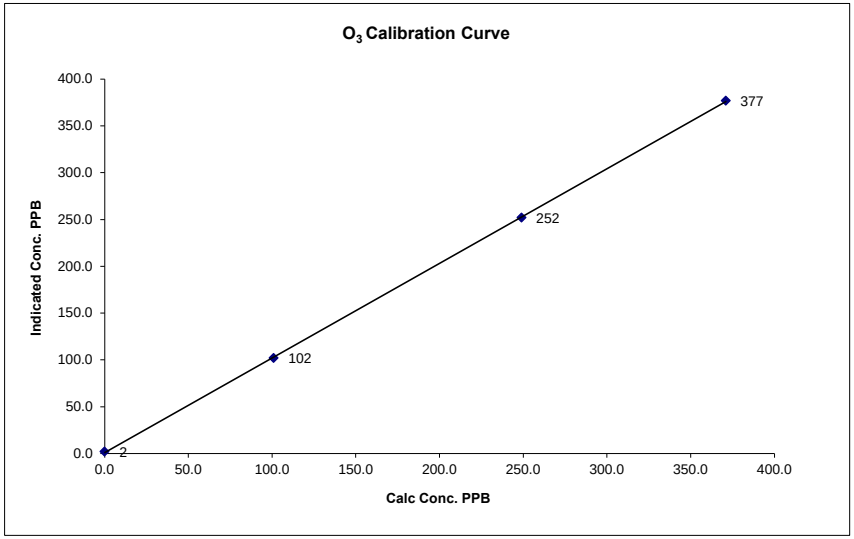
Calibration Performed by: Waseem Ahmed

O_3 Calibration Curve

Calibration Date	July 5, 2013		
Company	Lakeland Industry & Community Association		
Plant / Location	EIK Point Airport		
Start Time (MST)	10:00	End Time (MST)	14:05

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	2	N/A
101	102	0.9902
249	252	0.9881
371	377	0.9841

Correlation Coefficient	(≥ 0.995)	0.999956
Slope	(0.85 to 1.15)	1.011404
Intercept	(± 3% F.S.)	0.944390



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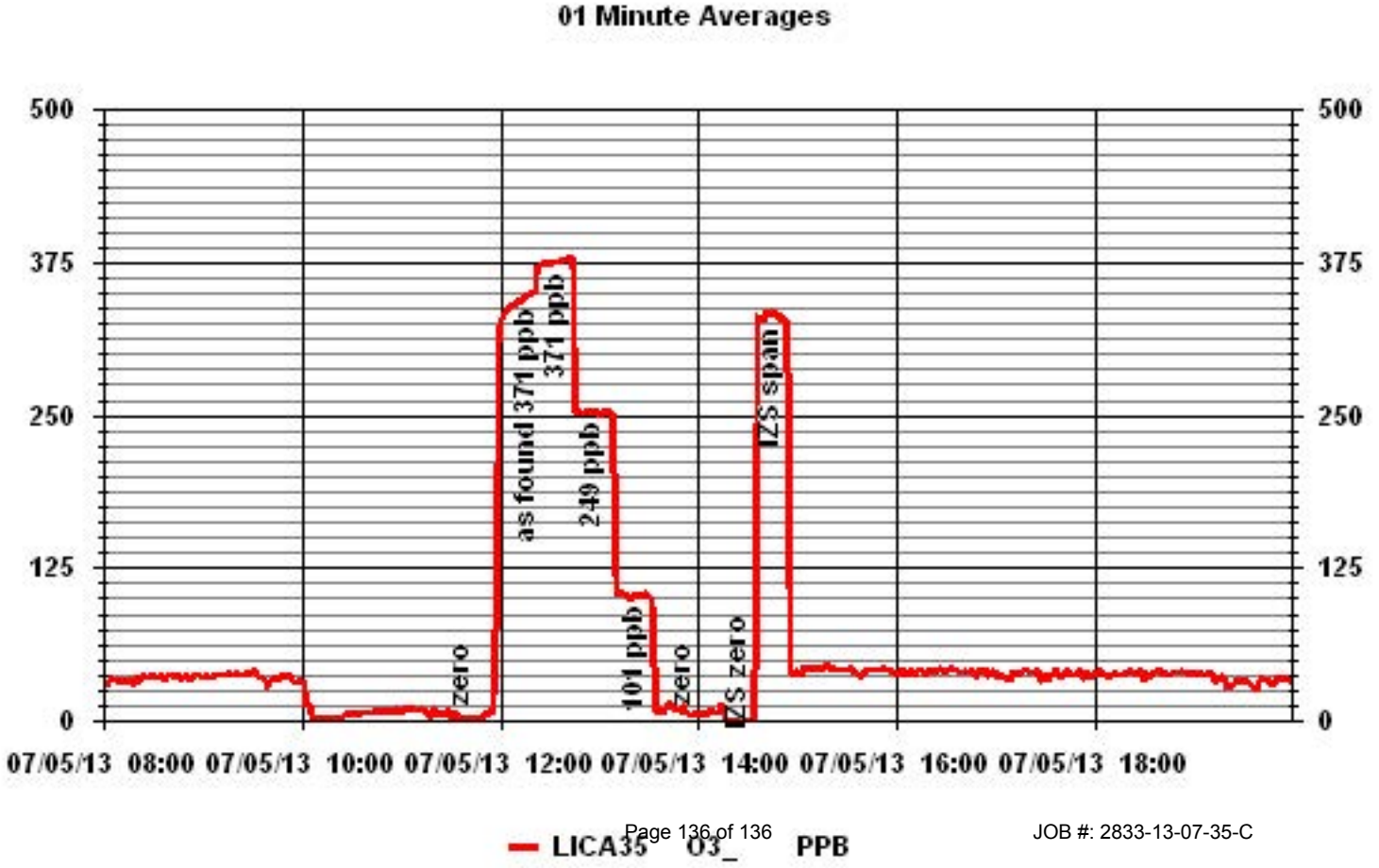

JOB #: 2833-13-07-35-C