Lakeland Industry & Community Association

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

Prepared By:

Maxxam Analytics

Driven by Service and Science

June 25, 2009

Lakeland Industry & Community Association
Ambient Air Monitoring

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: May 2009

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

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

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 – May 2009

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION COLD LAKE SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO_2 (PPB)	172	57	0	0	0.02	4	2	10	11.5	323(NW)	0.7	2	99.9
TRS (PPB)	-	-	-	-	0.00	0	ALL	ALL	VAR	VAR	0.0	ALL	99.9
NO_2 (PPB)	212	106	0	0	1.66	17	3, 5	5, 6	1.4, 0.8	53(NE), 103(ESE)	3.7	3	99.7
NO (PPB)	-	-	-	-	0.18	22	3	5	1.4	53(NE)	1.7	3	99.7
NOx (PPB)	-	-	-	-	2.03	39	3	5	1.4	53(NE)	5.6	3	99.7
O_3 (PPB)	82	-	0	-	35.34	63	24	17	7.7	270(W)	49.7	24	99.9
THC (PPM)	-	-	-	-	2.01	3.2	1	6	2.1	239(SW)	2.2	3	99.9
PM 2.5 (UG/M^3)	-	30	-	0	6.00	40.8	26	3	0.7	285(WNW)	16.2	26	99.3
TEMPERATURE (DEG C)	-	-	-	-	8.44	24.5	24	13	7.3	234(SW)	15.8	24	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	52.90	97.8	27	1	6.7	235(SW)	78.8	27	100.0
VECTOR WS (KPH)	-	-	-	-	6.70	19.7	12	16	-	358(N)	11.2	12	100.0
VECTOR WD (DEGREES)	-	-	-	-	2(N)	-	-	-	-	-	-	-	100.0

VAR-VARIOUS

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

Passive Ambient Monitoring Network – May 2009

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION PASSIVE NETWORK			
NETWORK MAXIMUM			NETWORK AVERAGE
PARAMETER	STATION	READING (PPB)	READING (PPB)
NO_2	#28	3.7	1.4
SO_2	#14	0.5	0.3
H_2S	#5	0.14	0.07
O_3	#16	34.5	30.2

Note: All samples at station #12 were found on the ground. The samples are damaged and cannot be tested.
SO2 and O3 samples at station #23 were found on the ground. The samples are damaged and cannot be tested.

General Monthly Summary - Cold Lake

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

AQM STATION – LICA – COLD LAKE

Sulphur Dioxide (PPB)
- Analyzer make / model – Thermo 43i

No operational issues observed during the month. The sample pump was rebuilt and the inlet filter was changed before the monthly calibration was started on May 8th. Data was corrected using daily zero information.

Total Reduced Sulphur (PPB)
- Analyzer make / model –TEI 450i
- Converter - CD NOVA CDN 101

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

Nitrogen Dioxide (PPB)
- Analyzer make / model - TECO 42C

The monthly calibration was performed on May 8th. During the first GPT point, the concentration changed slightly after about 18 minutes; allowed the point to run long to ensure stability. The analyzer spanned 10% low on May 27th. After putting the as found points, it was noticed that the response was 7.5% low; the pressure had risen to 198inHg from 189in Hg, and the flow had decreased to 675 cc/min from 704 cc/min on the May 8th calibration. The technician also could smell ozone in the pump closet. Suspected ozone is getting through the exhaust scrubber, that was refilled on November 13th, 2008, and damaged the rubber components inside the pump. On May 28th, the scrubbing material was changed and the scrubbers were repositioned so they are mounted vertically in the pump closet following the as found points. The sample pump was rebuilt and the analyzer was allowed to stabilize for a little while, and then a post repair calibration was performed. No issue was discovered. Data was corrected using daily zero information.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Total HydroCarbon (PPM)

- Analyzer make / model -TECO 51C-LT

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

Ozone (PPB)

- Analyzer make / model - TECO 49I

No operational issues observed during the month. The inlet filter was changed before the monthly calibration was started on May 21st. On May 28th, a daily calibration program was run on the analyzer to ensure that nothing had happened to the exhaust lines in the pump closet during the changes to the scrubber due to the issue occurred on the NO2 analyzer. No issue was discovered. The ozone exhaust scrubber was repositioned vertically but the exhaust lines were not disconnected on the same day.

Particulate Matter 2.5 (ug/m^3)

- Analyzer make / model –TEOM1405F

No operational issues observed during this month. It was noticed that the Teom took a long time to stabilize following the audit on May 21st; was negative for a while. The analyzer was left in maintenance mode until stable. Several high readings were recorded on May 26th. It is likely due to apartment fire making a lot of smoke near the station. Five hours of data were invalidated as it was below –3.0 ug/m^3.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

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

- System make / model – Met One 50.5

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

Relative Humidity (PERCENT)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

Ambient Temperature (DEGC)

- System make / model - Rotronic Hygroclip-S3

No operational issues observed during the month.

Trailer Temperature (DEGC)

- System make / model - R&R 61

No operational issues observed during the month.

General Monthly Summary - Cold Lake

AQM STATION – LICA – COLD LAKE

Datalogger

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

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

Trailer

No issue was observed during this month.

Air Quality Index (AQI)

The AQI data was adjusted to reflect regular monthly and daily calibrations, maintenance, and downtime. 79 hours of fair AQI values recorded in May 2009, and 76 hours of fair AQI were due to Ozone, and three hours of fair AQI were due to PM2.5. The highest hourly concentration of PM2.5 was 40.8 UG/M3 and an AQI value of 31 on May 26th, hour 3. The highest hourly concentration of Ozone was 63 ppb and an AQI value of 36 on May 24th, hour 17.

Passive Network

The post and samplers at the Foster Creek station (CASA#12) were on the ground, the samplers had fallen out of the weather shield. The existing passive shelters were smashed, and a new post was arrived but has not been pounded in place; Encana said it would be installed prior to the June deployment.
The original Cold Lake South Site (CASA#22) was decommissioned at clients request.
The Medley Martineau site (CASA#23) was leaning over and the post is now bent. The ozone and NO2 samplers had fallen out and were found on the ground. The post was removed then pounded back into the ground so it will stand upright. This post requires replacement to ensure the samplers don't fall out again. Added a passive sampler shelter to this site.

Continuous Monitoring

Cold Lake

Monthly Summaries, Graphs & Wind Roses

Air Quality Index

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

AIR QUALITY INDEX (AQI)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	12	9	7	6	-	9	11	14	19	23	24	25	24	25	26	26	25	24	24	23	17	17	23	24	26
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
2	24	23	21	-	13	11	15	23	25	24	25	25	25	27	27	26	25	25	24	21	17	14	11	18	27
	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_
3	12	11	-	15	13	15	15	21	25	27	28	28	28	27	28	27	26	28	29	27	22	19	20	23	29
	PM2	PM2	**NA**	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
4	16	-	12	11	14	17	20	24	25	25	27	27	26	26	27	28	29	30	28	26	23	17	14	13	30
	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
5	-	10	8	8	7	7	7	19	22	29	32	33	33	33	33	34	33	34	33	32	23	18	16	-	34
	NA	O3_	O3_	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	NA	O3_
6	15	15	15	14	13	13	12	12	12	12	-	12	11	11	13	15	17	16	15	14	14	12	-	8	17
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_
7	6	8	6	6	4	3	6	8	8	8	11	11	13	15	15	16	18	20	18	18	16	-	14	12	20
	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_
8	12	12	12	10	5	5	16	-	-	-	-	-	-	-	-	23	23	23	22	18	-	16	20	20	23
	O3_	O3_	O3_	O3_	O3_	PM2	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	PM2	O3_	O3_
9	20	18	16	15	11	7	12	15	17	19	20	20	21	21	21	22	21	21	21	-	20	18	13	-	22
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	**NA**	O3_
10	6	7	12	6	4	7	7	10	17	20	21	22	23	24	24	24	24	24	-	22	17	17	16	25	25
	O3_	PM2	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
11	24	20	17	-	14	10	16	19	22	24	25	25	25	25	25	25	25	-	25	25	24	25	25	24	25
	O3_	O3_	O3_	**NA**	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_
12	24	23	22	21	20	18	17	18	19	22	24	24	22	18	14	12	-	10	9	9	9	10	11	-	24
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
13	15	15	14	15	16	16	16	16	16	16	16	16	17	19	20	-	21	21	21	19	15	14	10	15	21
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
14	16	16	16	16	15	15	15	16	17	18	20	21	20	20	-	21	21	20	20	19	17	13	9	10	21
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
15	11	8	7	8	6	7	10	14	18	20	20	21	21	-	23	23	25	24	22	18	19	18	18	17	25
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
16	18	18	15	15	14	16	16	15	18	18	20	21	-	25	28	28	28	27	27	26	24	18	21	18	28
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
17	11	12	10	8	9	19	18	19	19	19	19	-	17	16	16	15	12	12	17	11	13	13	11	11	19
	O3_	O3_	O3_	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	PM2	PM2	O3_	O3_	O3_	O3_	O3_
18	12	13	13	13	13	14	15	16	16	16	-	16	18	18	18	19	20	20	20	18	18	16	17	18	20
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
19	19	18	17	16	16	15	15	15	16	-	18	19	18	17	17	16	15	15	15	15	14	15	15	15	19
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
20	14	13	12	11	12	12	13	16	-	17	19	22	22	21	21	21	22	22	22	22	21	18	13	14	22
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
21	12	10	10	8	7	11	16	-	20	-	-	-	-	-	-	-	-	-	-	18	18	17	16	13	20
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_
22	10	6	4	2	2	5	-	13	17	19	20	21	22	22	23	25	27	26	25	25	20	13	13	12	27
	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
23	10	8	7	14	14	-	14	20	21	26	28	29	29	31	31	32	33	33	33	29	21	21	25	23	33
	O3_	O3_	O3_	PM2	PM2	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
24	23	17	15	17	-	13	19	23	24	25	28	33	34	33	33	33	33	36	34	30	28	28	27	22	36
	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
25	17	17	17	-	16	16	16	18	21	21	21	21	22	22	22	22	23	23	23	21	17	15	18	19	23
	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
26	18	26	-	31	28	23	20	19	20	21	23	24	26	28	25	25	22	22	23	23	22	20	19	15	31
	O3_	PM2	**NA**	PM2	PM2	PM2	PM2	PM2	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
27	14	-	13	13	14	15	16	14	12	11	14	16	16	15	17	-	-	17	16	14	11	9	12	11	17
	O3_	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_
28	-	15	14	11	11	10	10	-	-	-	-	-	-	-	-	21	21	23	24	24	23	20	20	-	24
	NA	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_
29	15	13	12	10	13	15	16	17	18	19	20	21	23	24	24	23	23	23	22	21	19	19	-	21	24
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_
30	21	22	21	20	20	19	20	21	22	22	22	22	21	22	23	26	28	26	27	28	19	-	14	17	28
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_
31	19	14	12	10	9	14	16	16	18	19	20	19	19	19	18	18	19	17	15	14	-	12	10	9	20
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	**NA**	O3_	O3_	O3_	O3_
PEAK	24	26	22	31	28	23	20	24	25	29	32	33	34	33	33	34	33	36	34	32	28	28	27	25	
	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	O3_	

STATUS FLAG CODES	NA - NOT APPLICABLE

V - VARIOUS

AQI CLASS	OZONE (O_3)					PARTICULATE MATTER 2.5 (PM2)					NITROGEN DIOXIDE (NO_2)					SULPHUR DIOXIDE (SO_2)					FREQUENCY	
	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%	MAX AQI	HR	DAY	HRS	%
VERY POOR (101-255)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
POOR (51-100)	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	0	0.0%
FAIR (26-50)	76	10.2%	36	17	24	3	0.4%	31	3	26	0	0.0%	-	-	-	0	0.0%	-	-	-	79	10.6%
GOOD (1-25)	573	77.0%	-	-	-	27	3.6%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	600	80.6%
OVERALL	649	87.2%	-	-	-	30	4.0%	-	-	-	0	0.0%	-	-	-	0	0.0%	-	-	-	679	91.3%
UNAVAILABLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	8.7%

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

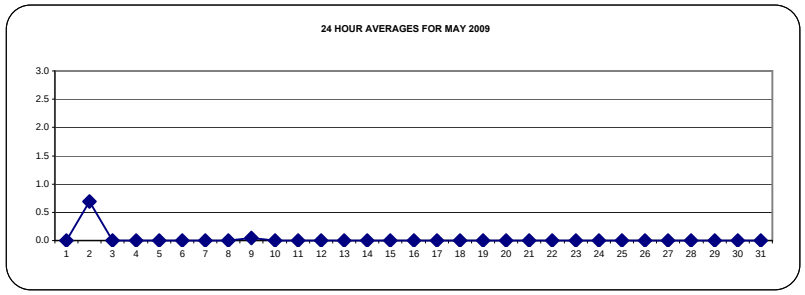
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

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	**IZS**	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	**IZS**	0	0	0	0	1	2	**4**	1	0	1	2	2	1	1	1	0	0	0	0	0	**4**	**0.7**	24
3	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0.0	24
6	0	0	0	0	0	0	0	0	0	0	**M**	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0.0	23
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
8	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	**IZS**	0	0	0	0	0.0	24
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**IZS**	0	0	0	0	1	0.0	24
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0.0	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
27	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0.0	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0.0	24
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0.0	24
HOURLY MAX	0	0	0	0	0	0	NA	0	1	2	4	1	0	1	2	2	1	1	1	0	0	0	0	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

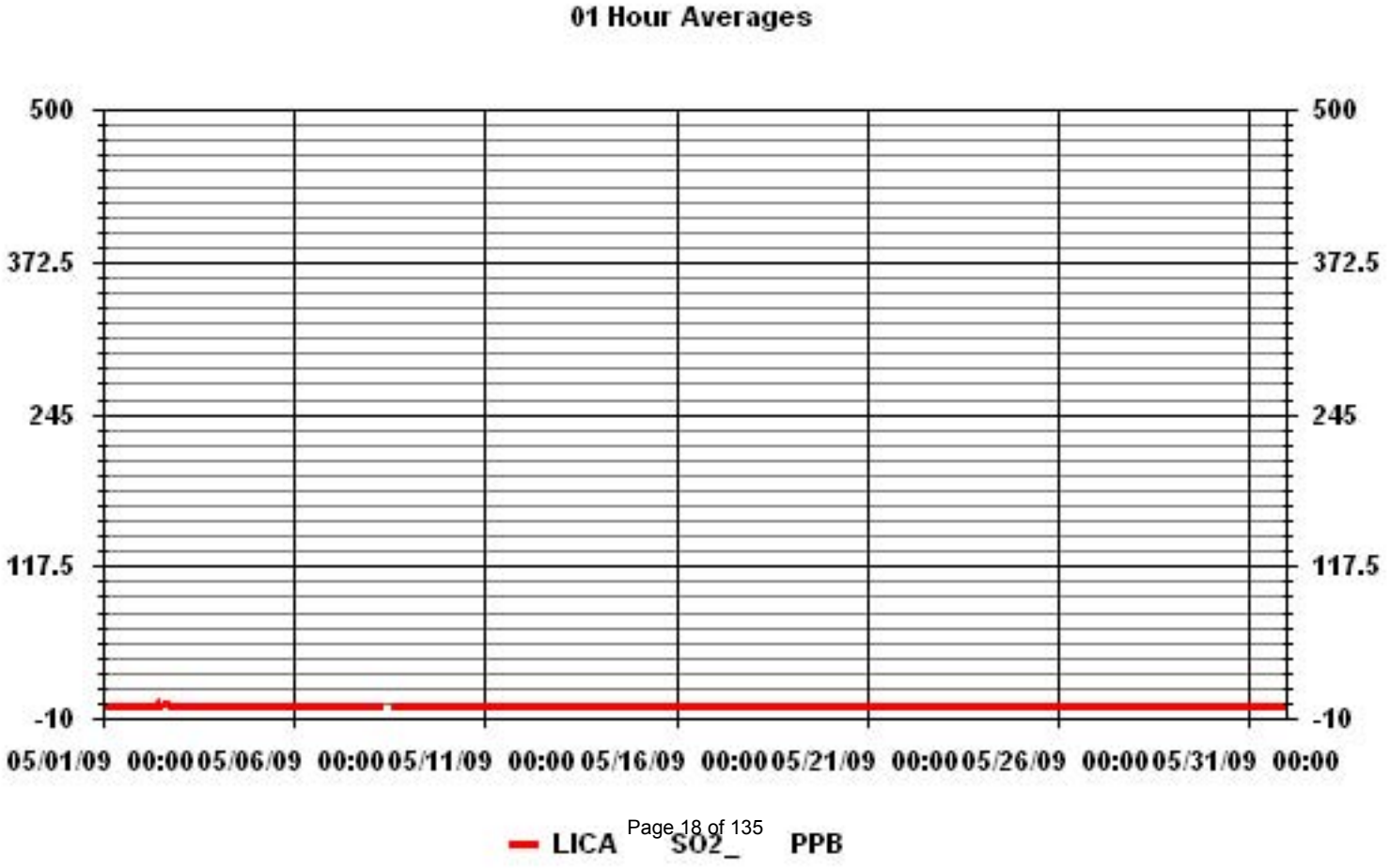
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	11					
MAXIMUM 1-HR AVERAGE:	4	PPB	@ HOUR(S)	10	ON DAY(S)	2
MAXIMUM 24-HR AVERAGE:	0.7	PPB			ON DAY(S)	2
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	0.22		MONTHLY AVERAGE:		0.02	PPB


01 Hour Averages
500
372.5
245
117.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA SO2_ PPB

LICA
SO2_ / WDR Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

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

Wind Parameter : WDR
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	5.69	9.25	10.96	6.69	6.41	7.26	8.68	2.42	1.99	2.99	7.26	6.26	8.83	6.41	5.12	3.70	100.00
<	60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	170	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	340	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.69	9.25	10.96	6.69	6.41	7.26	8.68	2.42	1.99	2.99	7.26	6.26	8.83	6.41	5.12	3.70	

Calm : .00 %

Total # Operational Hours : 702

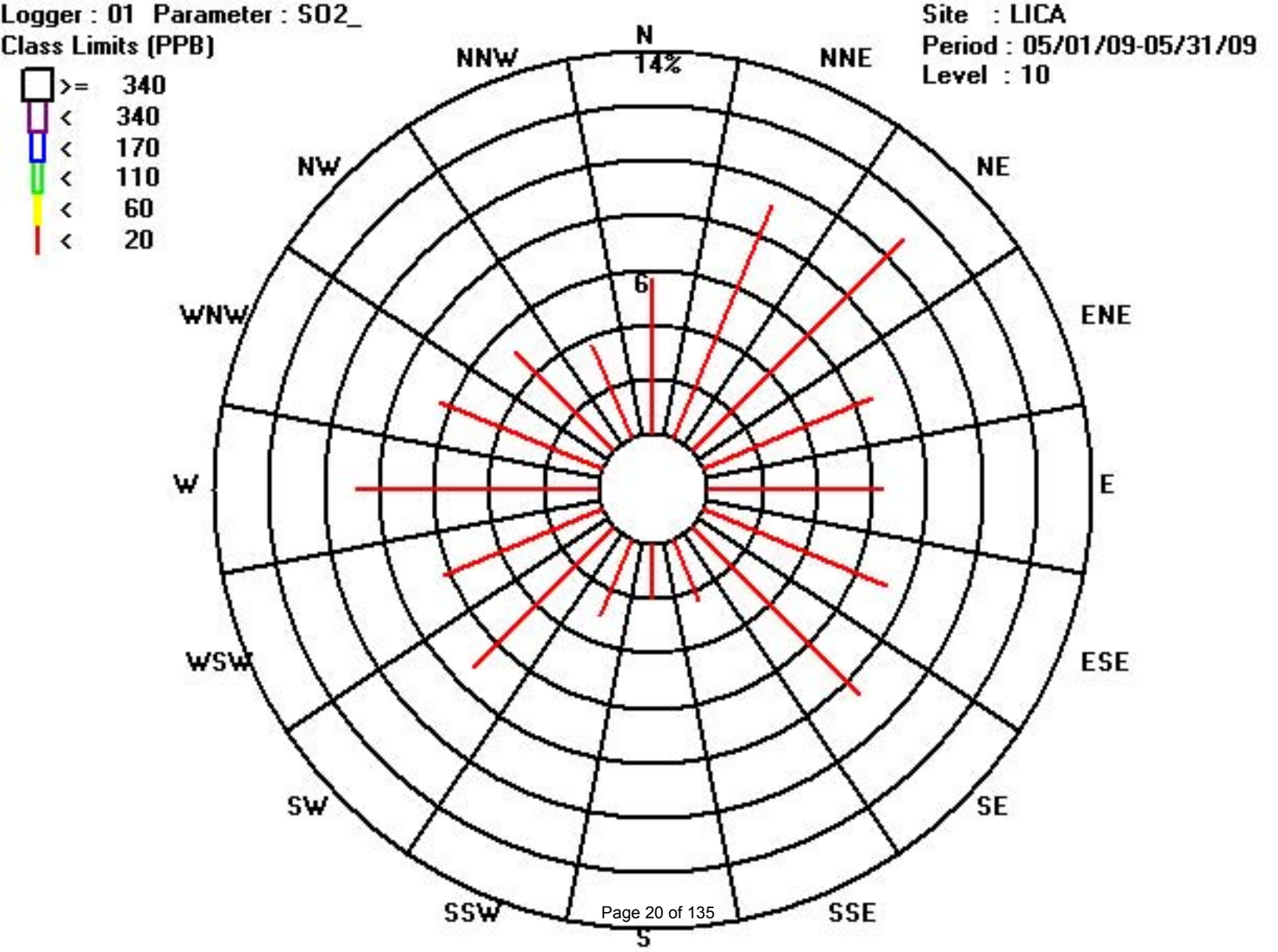
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	20	40	65	77	47	45	51	61	17	14	21	51	44	62	45	36	26	702
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	40	65	77	47	45	51	61	17	14	21	51	44	62	45	36	26	

Calm : .00 %

Total # Operational Hours : 702


Logger : 01 Parameter : SO2_
Class Limits (PPB)
>= 340
< 340
< 170
< 110
< 60
< 20
Site : LICA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

SULPHUR DIOXIDE MAX instantaneous maximum in ppb

MST

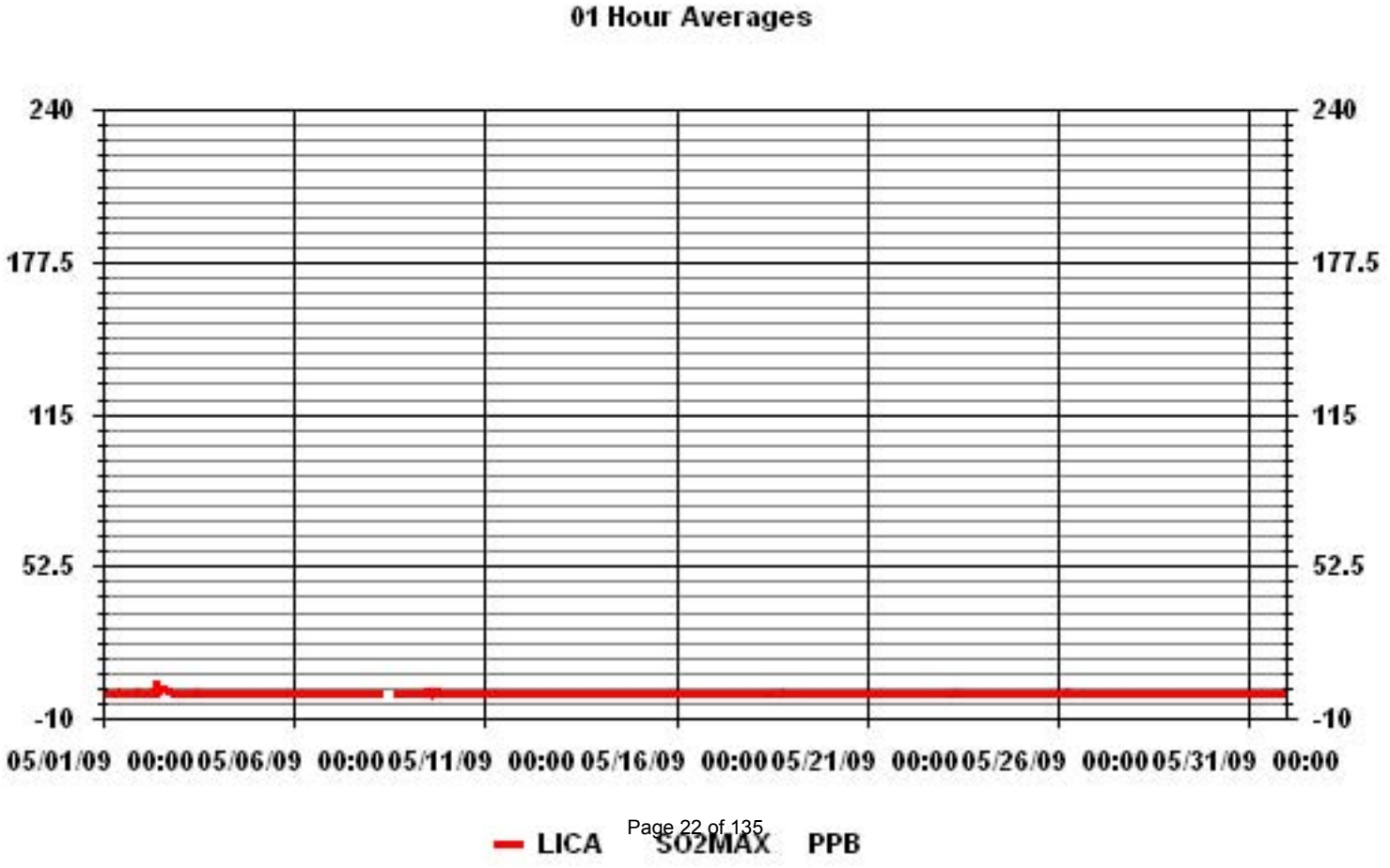
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	**IZS**	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.1	24
2	0	0	0	**IZS**	0	0	0	0	2	3	**5**	3	1	2	2	2	2	1	1	1	0	0	0	0	**5**	1.1	24
3	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
4	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0.0	24
6	0	0	0	0	0	0	0	0	0	0	**M**	**M**	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0.0	22
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
8	0	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	**IZS**	1	0	0	1	0.1	24
9	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	**IZS**	0	0	0	0	1	0.3	24
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0.0	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.0	24
19	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
20	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	**IZS**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
24	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26	0	0	**IZS**	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
27	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0.0	24
29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	1	0.0	24
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0.0	24
HOURLY MAX	1	0	0	0	0	0	1	1	2	3	5	3	1	2	2	2	2	1	1	1	0	1	1	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0			

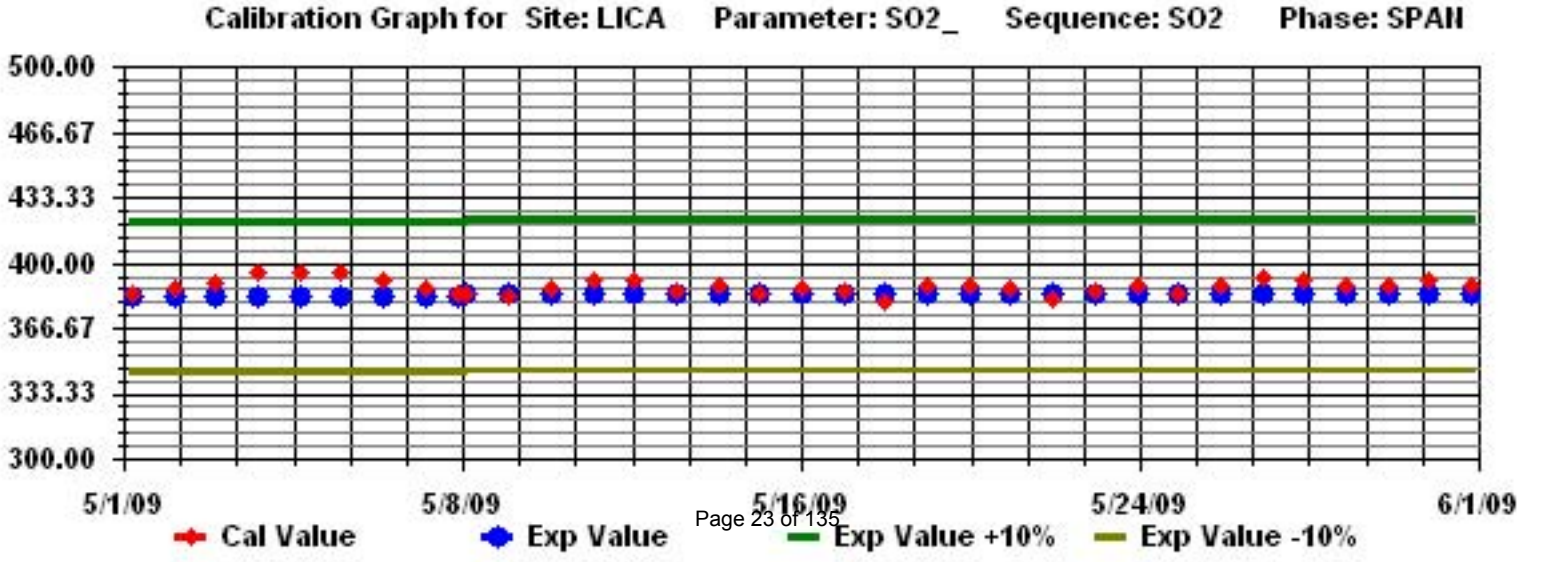
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	29					
MAXIMUM INSTANTANEOUS VALUE:	5	PPB	@ HOUR(S)	10	ON DAY(S)	2
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	9	HRS				
STANDARD DEVIATION:	0.34					


01 Hour Averages
240
177.5
115
52.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA SO2MAX PPB


Calibration Graph for Site: LICA Parameter: SO2_ Sequence: SO2 Phase: SPAN
500.00
466.67
433.33
400.00
366.67
333.33
300.00
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Reduced Sulphur

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

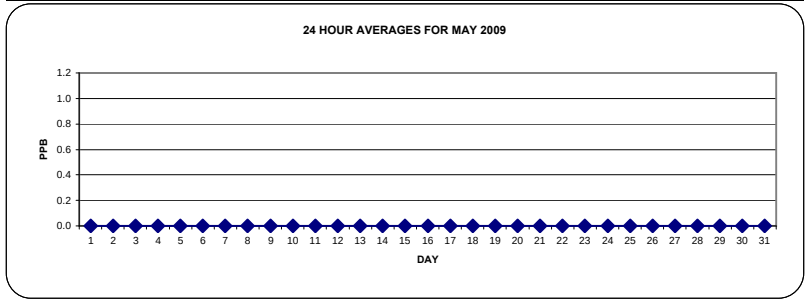
TOTAL REDUCED SULPHUR (TRS) hourly averages in ppb

MST

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

STATUS FLAG CODES

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

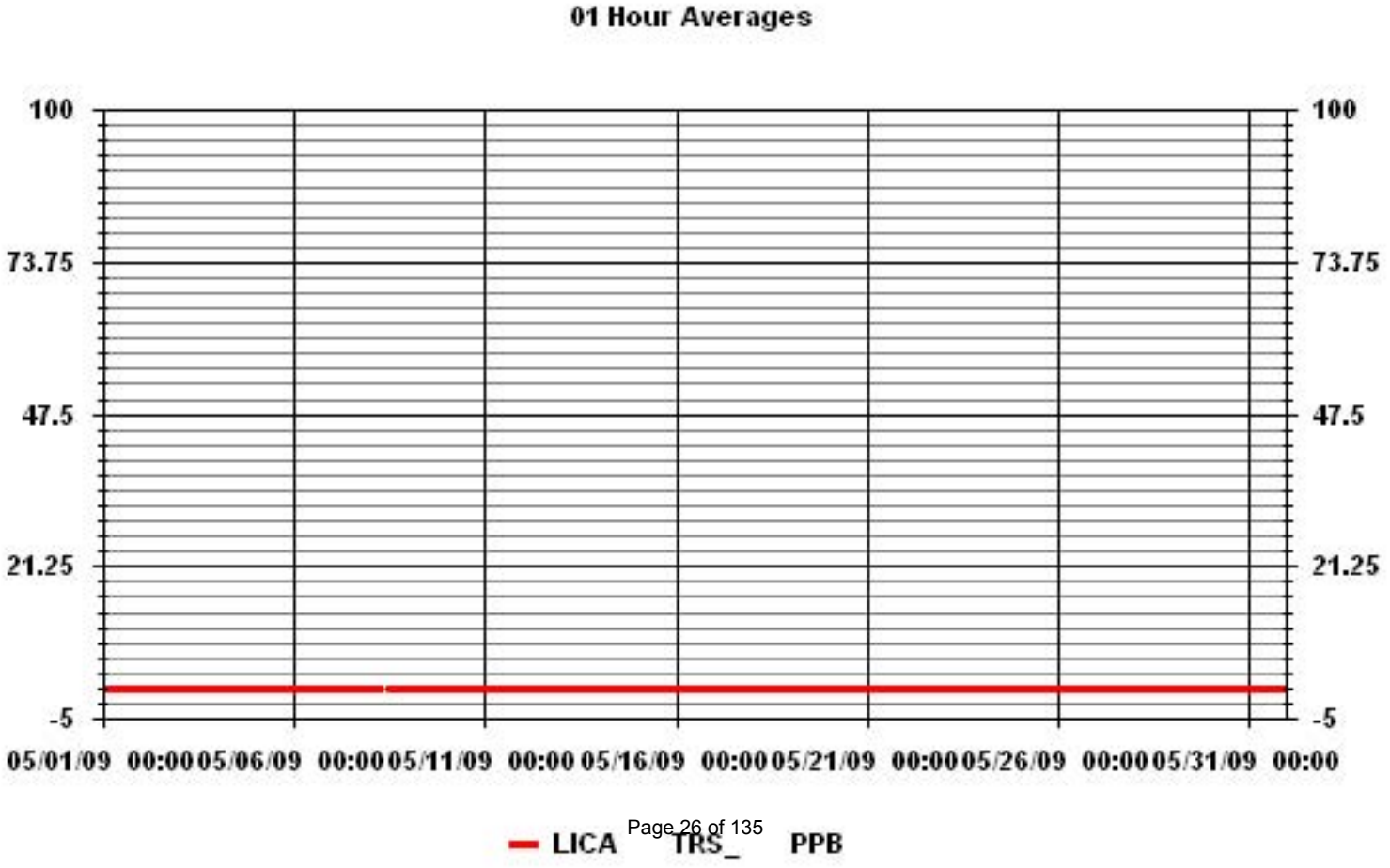


OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR 172 PPB | 24-HR 57 PPB

MONTHLY SUMMARY

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

IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:	743	HRS
MONTHLY CALIBRATION TIME:	4	HRS	AMD OPERATION UPTIME:	99.9	%
STANDARD DEVIATION:	0.00		MONTHLY AVERAGE:	0.00	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA TRS_ PPB

LICA
TRS_ / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	5.66	9.49	11.04	6.65	6.37	7.36	8.64	2.40	1.98	2.97	7.22	6.23	8.78	6.37	5.09	3.68	100.00
< 10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	5.66	9.49	11.04	6.65	6.37	7.36	8.64	2.40	1.98	2.97	7.22	6.23	8.78	6.37	5.09	3.68	

Calm : .00 %

Total # Operational Hours : 706

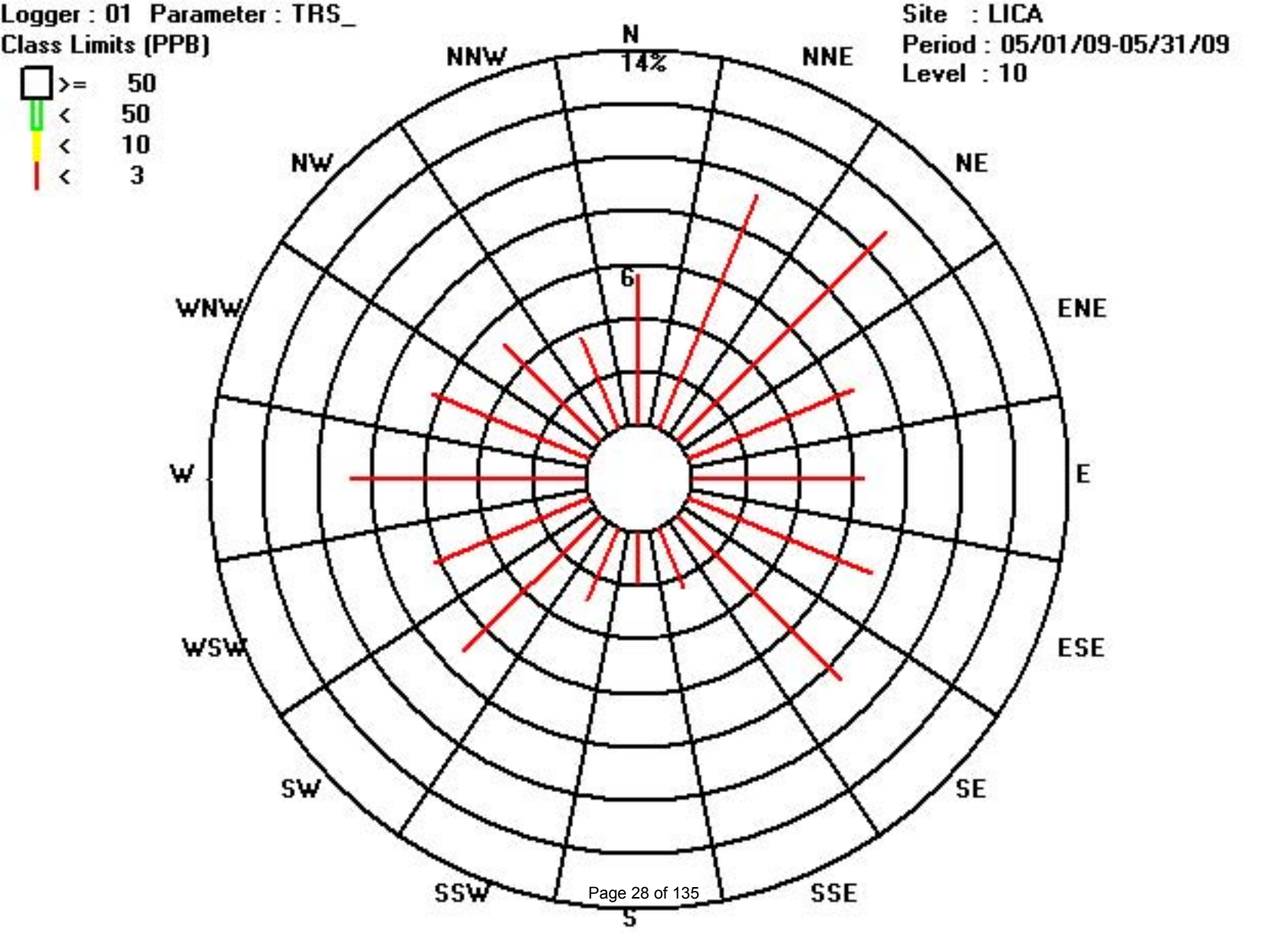
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	40	67	78	47	45	52	61	17	14	21	51	44	62	45	36	26	706
< 10																	
< 50																	
>= 50																	
Totals	40	67	78	47	45	52	61	17	14	21	51	44	62	45	36	26	

Calm : .00 %

Total # Operational Hours : 706


Logger : 01 Parameter : TRS_
Class Limits (PPB)
>= 50
< 50
< 10
< 3
Site : LICA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

TOTAL REDUCED SULPHUR MAX instantaneous maximum in ppb

MST

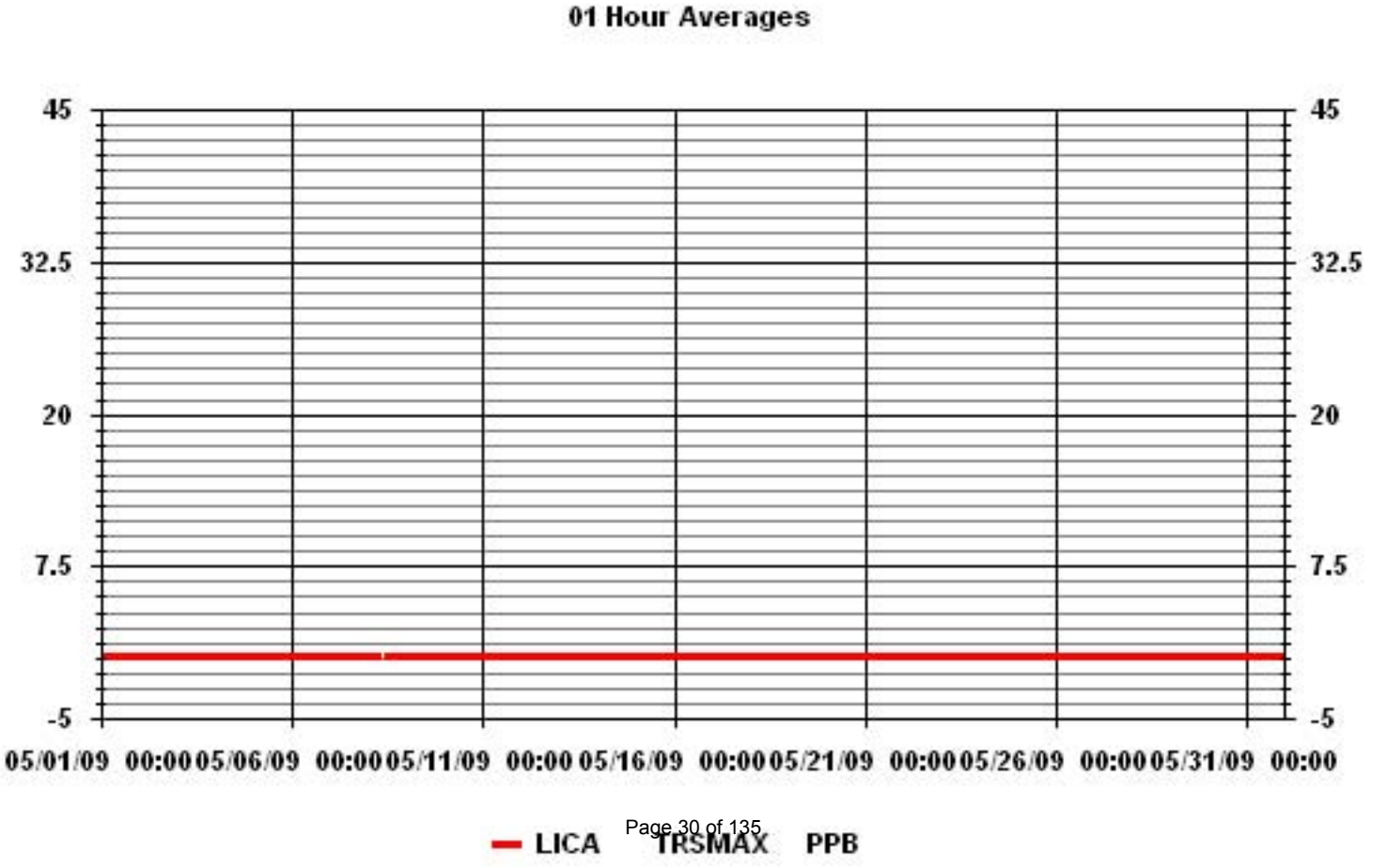
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY 24-HOUR		
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00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

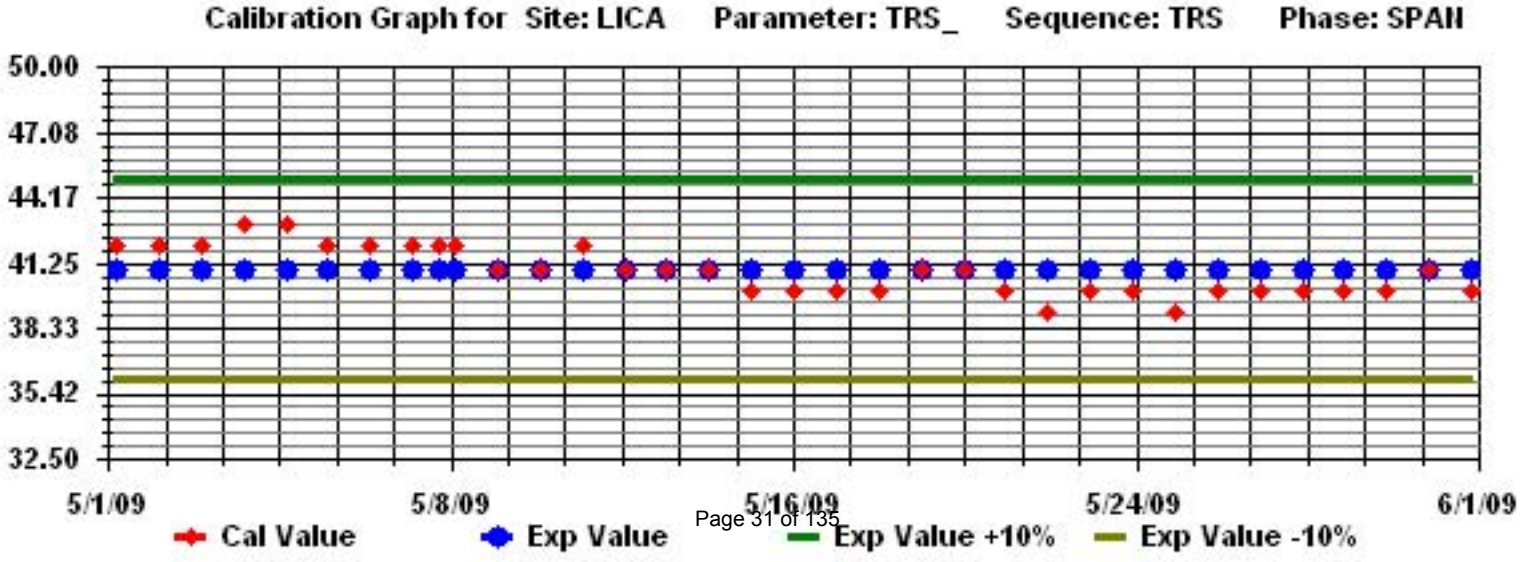
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	0					
MAXIMUM INSTANTANEOUS VALUE:	0	PPB	@ HOUR(S)	VAR	ON DAY(S)	VAR
				VAR - VARIOUS		
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	4	HRS				
STANDARD DEVIATION:	0.00					


01 Hour Averages
45
32.5
20
7.5
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA
TRSMAX
PPB


Calibration Graph for Site: LICA Parameter: TRS_ Sequence: TRS Phase: SPAN
50.00
47.08
44.17
41.25
38.33
35.42
32.50
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

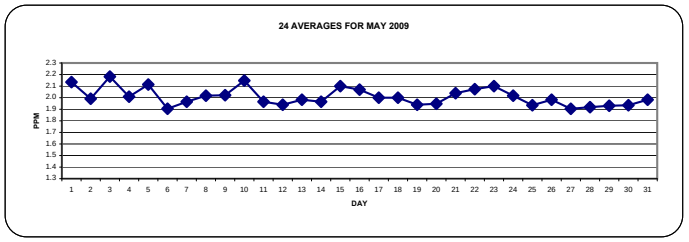
TOTAL HYDROCARBONS (THC) hourly averages in ppm

MST

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

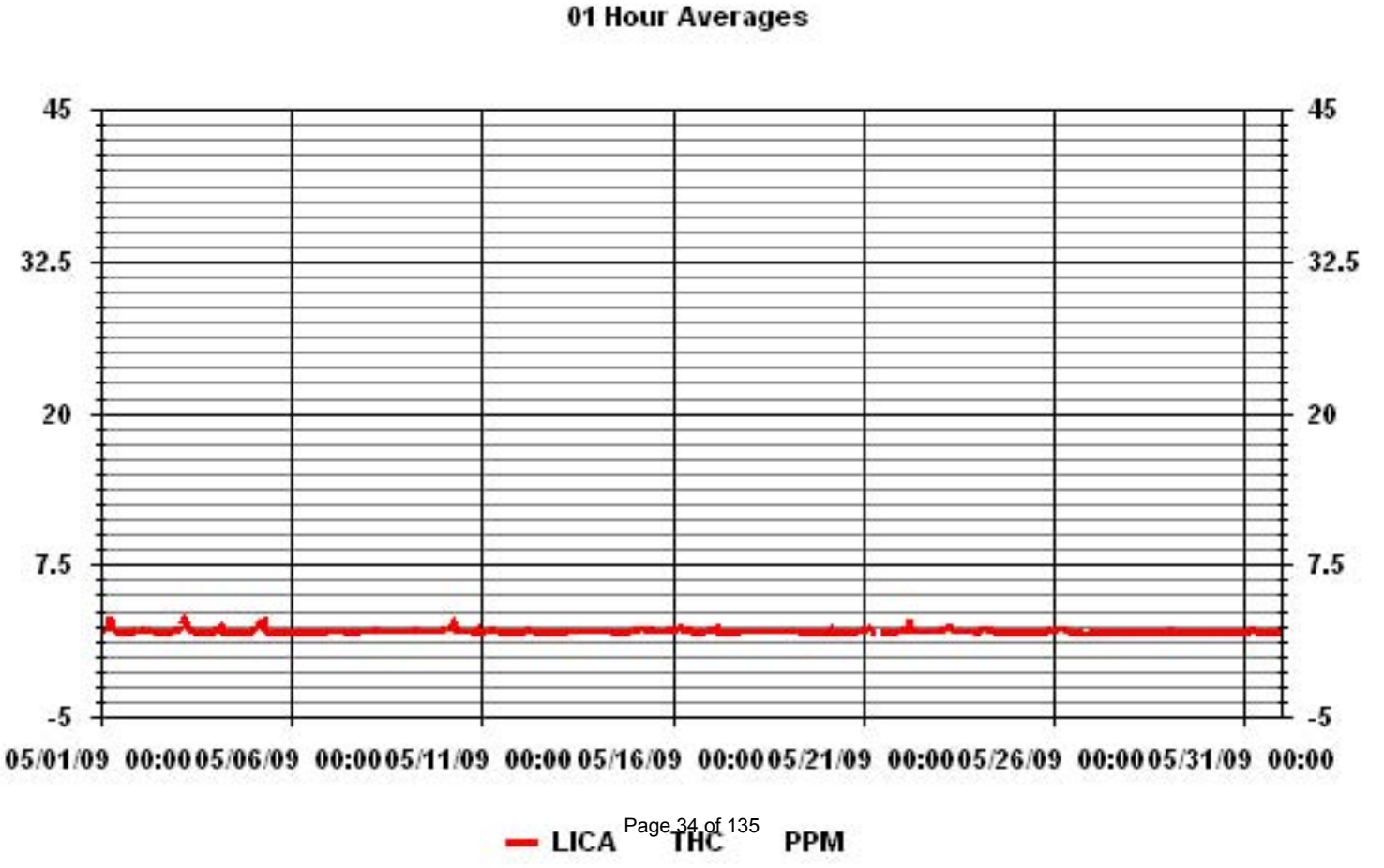
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	705					
MAXIMUM 1-HR AVERAGE:	3.2	PPM	@ HOUR(S)	6	ON DAY(S)	1
MAXIMUM 24-HR AVERAGE:	2.2	PPM			ON DAY(S)	3
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	5	HRS	AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	0.16		MONTHLY AVERAGE:		2.01	PPM


01 Hour Averages
45
32.5
20
7.5
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA THC PPM

LICA
THC / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	5.81	9.36	10.63	6.52	6.38	7.51	8.65	2.41	1.98	2.97	7.23	6.09	8.79	6.24	5.10	3.68	99.43
<	10.0	.00	.00	.14	.14	.14	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.56
<	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.81	9.36	10.78	6.66	6.52	7.51	8.65	2.41	1.98	2.97	7.23	6.24	8.79	6.24	5.10	3.68	

Calm : .00 %

Total # Operational Hours : 705

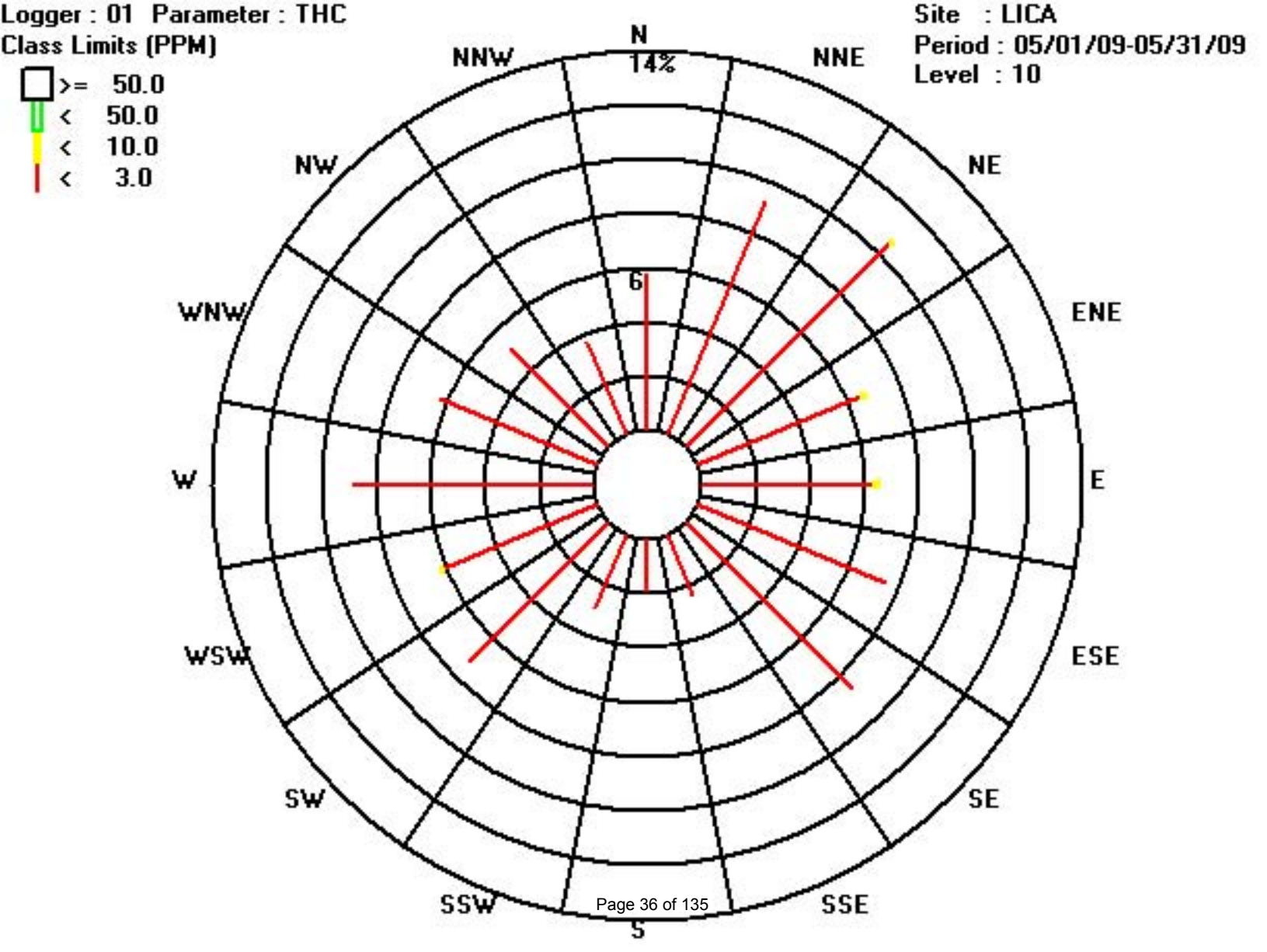
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	41	66	75	46	45	53	61	17	14	21	51	43	62	44	36	26	701
<	10.0			1	1	1							1					4
<	50.0																	
>=	50.0																	
	Totals	41	66	76	47	46	53	61	17	14	21	51	44	62	44	36	26	

Calm : .00 %

Total # Operational Hours : 705


Logger : 01 Parameter : THC
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0
Site : LICA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

TOTAL HYDROCARBONS MAX instantaneous maximum in ppm

MST

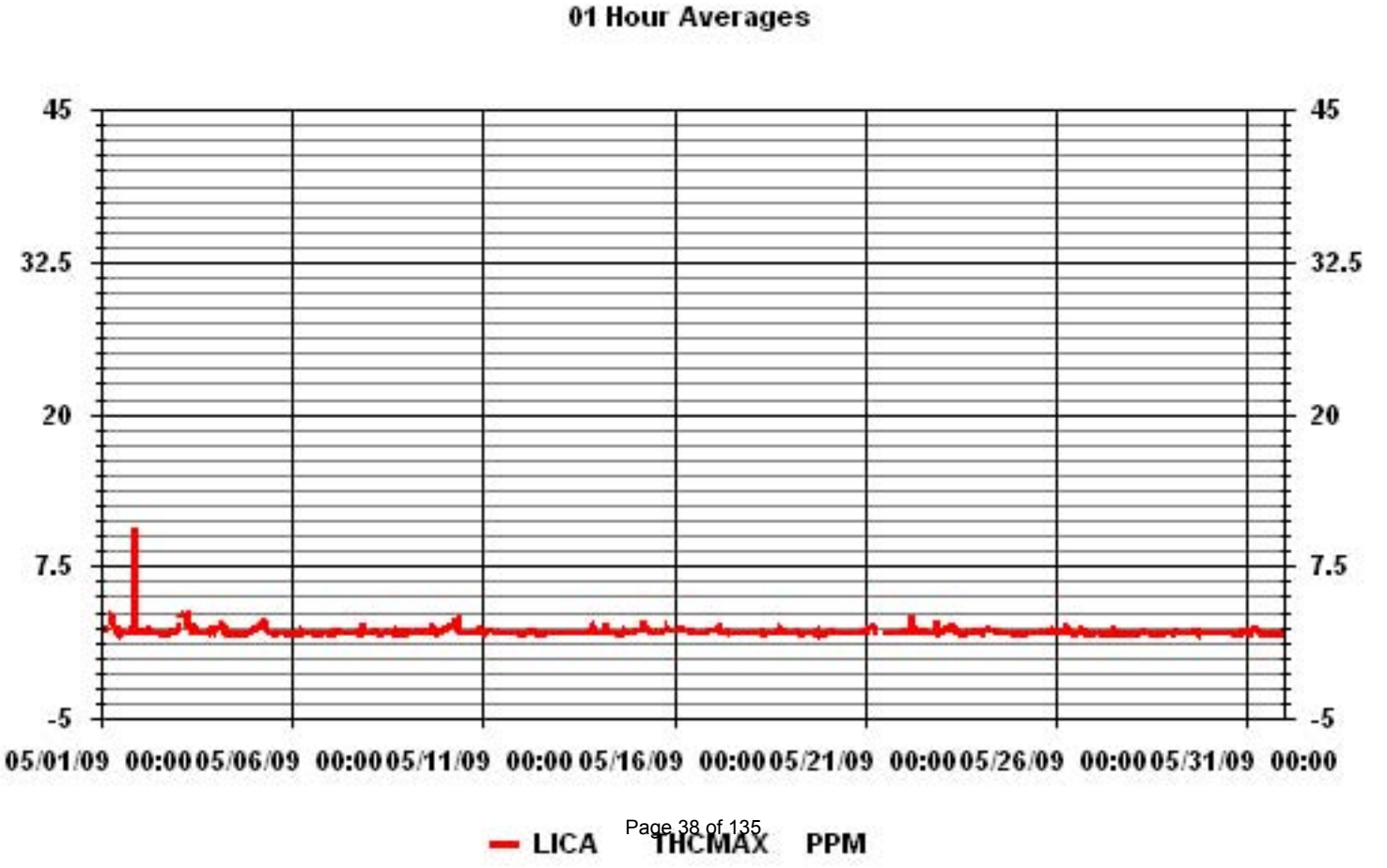
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	2.2	2.3	2.3	2.4	**IZS**	2.9	3.5	3.4	2.7	2.3	2.4	2	2.2	2	2	2	2	2	2	2	2.6	**10.6**	2	2	**10.6**	2.7	24
2	2	2.2	2.2	**IZS**	2.1	2.2	2.4	2.2	2	2	2	2	2.1	2	2	1.9	1.9	2.1	2	2.1	2.2	2.2	2.3	2.2	2.4	2.1	24
3	2.5	2.5	**IZS**	3.6	3.5	3.6	2.8	2.5	2.3	2.2	2.8	2.2	2	2	2	2	2	2	2.1	2.3	2.1	2.3	2.3	2.1	3.6	2.4	24
4	2.4	**IZS**	2.5	2.7	2.7	2.6	2.1	2	1.9	1.9	1.9	1.9	1.9	1.9	2	2	1.9	1.9	1.9	2	2	2	2.3	2.4	2.7	2.1	24
5	**IZS**	2.4	2.5	2.5	2.7	2.9	3.2	2.7	2.4	2	2	2	2	2	1.9	2	2	2	2	2	2	1.9	1.9	**IZS**	3.2	2.2	24
6	1.9	1.9	1.9	1.9	1.9	2.2	2	2	2	2.1	**M**	**M**	2	2	1.9	2	2	1.9	1.9	2	2	2	**IZS**	2	2.2	2.0	22
7	2.1	2	2.1	2.1	2.1	2.2	2	2	2.1	2	2	2	2	2	2	2	2	2.1	2.1	2	2.6	**IZS**	2	2	2.6	2.1	24
8	2	2	2.1	2.1	2.2	2.3	2.1	2	2.1	2	2	2.1	2.1	2	2	2	2.3	2.1	2	2.3	**IZS**	2.2	2.3	2.1	2.3	2.1	24
9	2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2	2	2.4	2	2	2.1	2.7	2.1	2	**IZS**	2.2	2.1	2.2	2.3	2.7	2.1	24
10	2.3	2.3	2.4	2.6	2.6	2.6	3.1	3.2	2.4	2.1	2.1	2	2	2	2	2	2	2	**IZS**	2.1	2.2	2.2	2.6	2.1	3.2	2.3	24
11	2	2.1	2.1	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2	2	2	2	2	2	**IZS**	2	2	2	2	2	1.9	2.3	2.1	24
12	1.9	1.9	2	2	2.1	2.2	2.2	2.1	2.1	2.1	2	1.9	1.9	1.9	1.9	2.1	**IZS**	2.1	2	2	2	2	2	2	2.2	2.0	24
13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	**IZS**	2	2	2	2.2	2.5	2.1	2.1	2.1	2.5	2.0	24
14	2	2	2	2	2	2.7	2	2	2.1	2	2	2	2.1	2	**IZS**	2	2.3	2.1	2	2	2	2	2	2.2	2.7	2.1	24
15	2.2	2.2	2.2	2.4	3.1	2.3	2.6	2.3	2.2	2.1	2.1	2.1	2.2	**IZS**	2	2	2	2.4	2	2.5	2.3	2.2	2.2	2.2	3.1	2.3	24
16	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.3	2.2	2.2	2.1	2.2	**IZS**	2.1	2	2	2	2	2	2	2.1	2.1	2.2	2.3	2.4	2.2	24
17	2.2	2.2	2.3	2.4	2.5	2.1	2	2	2	2.2	2	**IZS**	2.1	2	2	2	2	2	2	2	2	2	2	2	2.5	2.1	24
18	2	2	2	2	2	2	2	2.1	2.1	2	**IZS**	2	2	2	2	2	2.1	2.1	2.4	2.2	2.1	2.1	2.1	2.1	2.4	2.1	24
19	2	2	2	2	2	2	2.2	2.1	2	**IZS**	2	2	2	2	2	2	2.1	2	2.2	1.9	2	2	1.9	2	2.2	2.0	24
20	2	2	2.2	2.3	2	2	2	2	**IZS**	2	2	2	2	2	2	2	2	2	2	2	2	2.1	2.1	2.1	2.3	2.0	24
21	2.1	2.1	2.4	2.4	2.5	2.5	2.1	**IZS**	2	**C**	**C**	**C**	**C**	**C**	2	2	2	2	2	2.1	2	2	2	2.1	2.5	2.1	24
22	2.1	2.1	2.1	2.1	2.1	3.3	**IZS**	2.5	2.1	2.1	2.1	2.1	2	2	2.2	2	2	2	2	2	2.2	3	2.1	2.2	3.3	2.2	24
23	2.3	2.2	2.3	2.3	2.3	**IZS**	2.6	2.6	2.4	2.2	2.1	2.1	2.1	2	2.1	2	2.2	2.1	2	2	2.2	2.1	2.1	2.1	2.6	2.2	24
24	2.1	2.2	2.1	2.3	**IZS**	2.4	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2	2	2.1	2	2	2	2	2	2	1.9	1.9	2.4	2.1	24
25	1.9	1.9	2	**IZS**	1.9	2	2.1	2	2	2	2	2.1	2	2	2	2.2	2	2	2.1	2.1	2.3	2.1	2.1	2.1	2.3	2.0	24
26	2.1	2.2	**IZS**	2.3	2.2	2.3	2.7	2.2	2.1	2.1	2.1	2	2.1	2	2	2	2.3	2.3	2.2	1.9	1.9	1.9	1.9	2	2.7	2.1	24
27	2	**IZS**	2	2	2	1.9	1.9	1.9	2	1.9	1.9	1.9	2.6	2.1	1.9	1.9	1.9	2	1.9	1.9	2	2.1	1.9	1.9	2.6	2.0	24
28	**IZS**	2.1	2	1.9	2	2	2.1	2.1	2	2	2	2	1.9	2	2	2	1.9	1.9	1.9	1.9	2	2	2.1	**IZS**	2.1	2.0	24
29	2.1	2	2.3	2.2	2.1	2.1	2	2	2	2	2	2	2.1	2.2	2	2	2.2	2	2.2	2	2	2	**IZS**	2	2.3	2.1	24
30	2	2	2	2	2	2	2.1	2	2	2	2	2	2	2	2	2	1.9	1.9	1.9	1.9	2.2	**IZS**	2.1	2.3	2.3	2.0	24
31	2.2	2.1	2	2.3	2.4	2.3	2.3	2.2	2.1	2	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	1.9	**IZS**	2	2.1	2	2.4	2.0	24
HOURLY MAX	3	3	3	4	4	4	4	3	3	2	3	2	3	2	2	2	3	2	2	3	3	11	3	2			
HOURLY AVG	2.1	2.1	2.1	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.4	2.1	2.1			

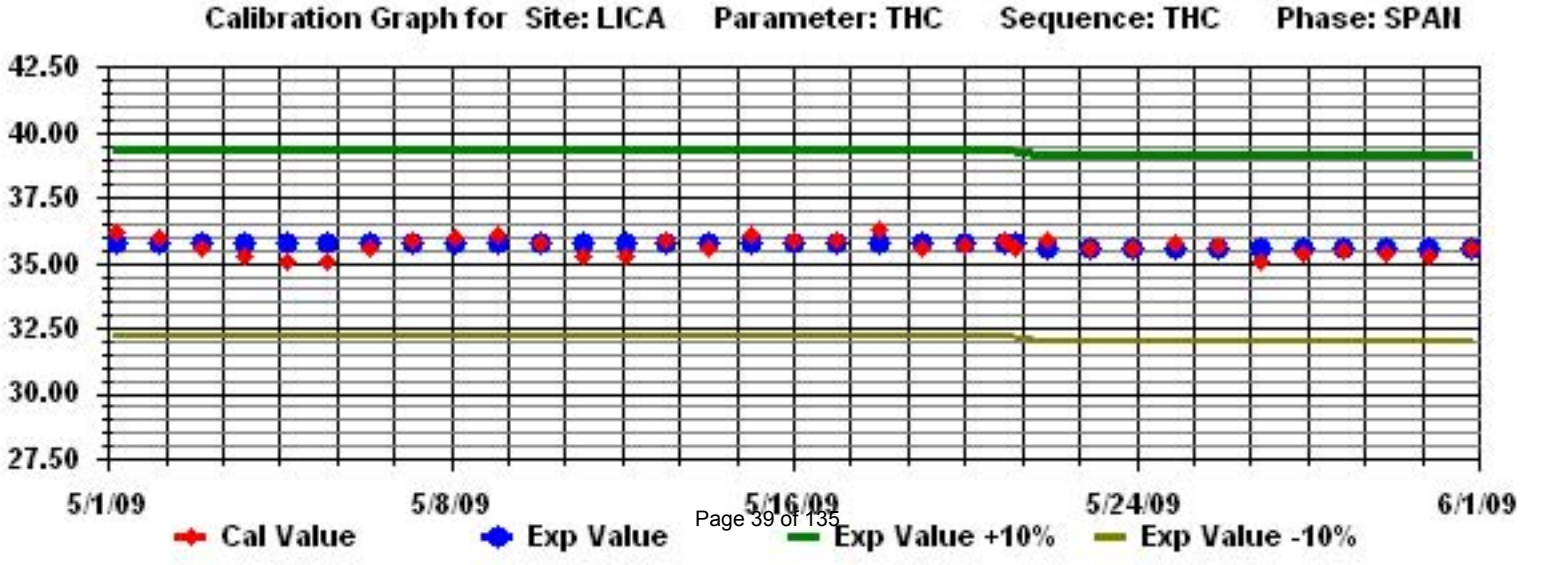
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	704						
MAXIMUM INSTANTANEOUS VALUE:	10.6	PPM	@ HOUR(S)	21	ON DAY(S)	1	
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:			742	HRS
MONTHLY CALIBRATION TIME:	5	HRS					
STANDARD DEVIATION:	0.39						


01 Hour Averages
45
32.5
20
7.5
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA THCMAX PPM


Calibration Graph for Site: LICA Parameter: THC Sequence: THC Phase: SPAN
42.50
40.00
37.50
35.00
32.50
30.00
27.50
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Particulate Matter 2.5

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

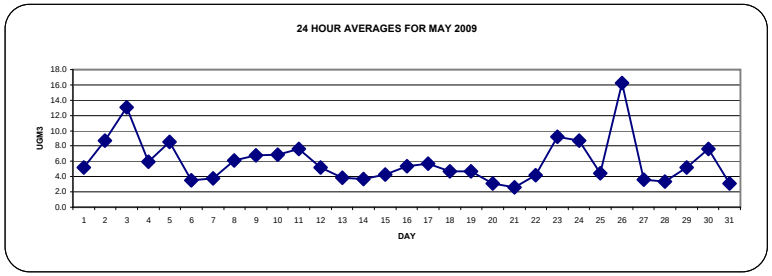
PARTICULATE MATTER 2.5 (PM2.5) hourly averages in ug/m^3

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	6.5	5.8	6.2	5.4	3.9	6.4	6.7	7.2	5.1	4.1	3.8	3.4	0.6	3.2	4.2	4.8	2	4.8	4.4	4.4	6.8	12.1	7.2	5.2	12.1	5.2	24
2	5.8	5.5	7.9	7	5.2	6	3.6	6.2	6.6	4.5	3.9	7.7	6	10.7	10.4	8.3	9.2	8.3	9.6	16.7	16	10	12.8	21.6	21.6	8.7	24
3	14.3	12.9	5.7	18.1	16	17.4	17.7	13.5	11.1	9.7	7.7	9.6	7.5	9	10.2	8.5	17	26.8	14	15.3	13.7	13.1	14.9	10.1	26.8	13.1	24
4	11.5	9.5	13.6	6.2	5.6	7.7	1.8	0	1.1	4.2	4.1	3.5	2.3	2.5	7	4.7	6.5	5	3.5	6.2	3.2	16.7	8.6	7.1	16.7	5.9	24
5	8.9	10.8	8.5	3.9	3.6	7.5	8.6	11.1	6.7	10.2	9.8	10.7	8.7	7.7	5.2	4.8	5.7	5.4	14.1	12.6	11.1	8	14.6	6.8	14.6	8.5	24
6	7.7	7.4	4.8	5.8	4.7	0.5	0	0	0	0	4.2	0.8	3.5	1.8	2.1	4.7	4.5	5.1	8.1	6.8	5.8	0	0	5.8	8.1	3.5	24
7	7.7	2.5	0.2	2.8	2.8	3.3	2.6	0.9	4.5	4.5	5.4	4.2	0	4	4.3	5.3	5.1	4.6	6.1	5.2	4.1	5.1	0	5	7.7	3.8	24
8	3.1	5.4	3	0.7	4.9	6.5	2.7	5.3	0	1.8	4.9	5.8	4.5	4.1	5.3	0.6	3.4	6	4.4	1.8	14.2	16.1	23.4	18	23.4	6.1	24
9	14.1	11.3	9	5.5	0	0	0	0	7.5	6.2	4.7	6	3.9	11.5	9.1	12.5	8.6	6.1	8	7.6	9.8	8.1	7	**N**	14.1	6.8	23
10	1.5	8.2	14.6	7.2	5.2	8.7	8.7	4.2	8	7	3.8	8.2	9.1	5.9	4.6	5.9	4.6	11.6	3.6	3.8	7.1	5.1	7.2	11.4	14.6	6.9	24
11	5.9	10.1	10.8	**N**	9.6	12.3	3.4	6	6.1	4.8	5.5	7.7	7.8	7.2	9.5	4.9	5.6	11.3	9.9	9.5	9.4	5.8	7.4	4.8	12.3	7.6	23
12	10.3	6.8	6.3	7.1	4.7	7.9	11.2	8.4	7.4	9	9.4	7.9	6.3	3.2	0.7	2.2	3.2	3.9	1.7	0	0	0.1	0.9	**N**	11.2	5.2	23
13	1.8	0.3	5.5	3.6	3.7	5.4	1.7	3.7	3.6	1.4	4.2	1.2	0	3.3	5.3	5.7	5.1	5.6	5.4	4.2	3.7	2	7.6	8	8.0	3.8	24
14	7.9	1.8	4.9	6.6	11.6	9	0.9	0.7	1.5	0	4.2	1.3	4.5	3.9	2.8	5.2	3.7	2.4	2.5	3.4	3	1	0.8	4.3	11.6	3.7	24
15	0.9	4.1	4.2	2.9	5.7	1.5	0.1	4.3	4.5	2.8	3.3	2.5	2.3	4.2	9.1	7.9	4	2.4	6.9	6.6	5.3	5	5.7	7.2	9.1	4.3	24
16	7.2	3.7	7.7	8.4	6.9	5.7	4.9	4.7	3.7	5.9	4.7	5.2	3.1	5.9	7.1	6.7	6.7	4.2	2	4.4	4.1	3.2	9.4	3.7	9.4	5.4	24
17	3.7	6.8	8.5	9.8	4.3	2.8	2.2	**N**	1	5.8	5.9	8.5	7.6	5.1	7.1	1.4	0	2.3	20.2	13.3	3	4	8.6	0	20.2	5.7	23
18	4.5	3.2	4.7	6.7	0	0	1.7	1.8	3.5	9.2	6.7	6.7	4.4	2.8	0.4	3	3.3	6.6	6.7	2.5	3.9	7.2	13.3	8.9	13.3	4.7	24
19	2.3	2.8	4.5	2.4	6	6.9	4.9	6.5	0	0	5.7	8.6	7.8	6.1	7.2	3.7	5.5	7.6	3.9	8	3.8	2.3	4.7	1.7	8.6	4.7	24
20	2.1	3.2	2.9	0.5	1	4	3.8	0	0	5.6	2.8	4.7	0	2.4	0.6	4.5	5.3	4.7	0.2	4.7	5.9	6.3	3.4	5	6.3	3.1	24
21	2.7	0.3	1.8	3.7	0.9	2.5	3.6	9.7	0.5	0	1.6	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	3.7	0	3.1	3.7	4.1	9.7	2.6	24
22	2.7	0.7	0.5	0.1	1.5	5.9	4.8	3.6	0.6	3.7	3.4	3.4	7.8	7.5	8.4	7.9	7.9	7.6	2.8	2.5	2.1	4.5	4.3	5.3	8.4	4.1	24
23	7	3.3	5.8	16.5	17.2	16.7	11.3	6.4	8.7	10.3	7.8	2	5.1	10	9.1	6.7	3.2	1.9	6.6	7.9	12.2	24.6	11.3	8.6	24.6	9.2	24
24	6.8	17	16.3	15.9	7.3	8	9.6	7	4.3	4.9	6.5	11.5	8.7	11.4	6	6.5	9.1	7.5	9.1	12.4	6.1	7	3.6	6.4	17.0	8.7	24
25	10.1	7.3	6.7	4.2	0.4	3.7	1.8	0	5.2	2.2	2.7	2.9	4.7	3.2	4.6	7.8	6.1	1.7	7.1	5.1	7.8	4.5	6	0.9	10.1	4.4	24
26	20.7	30.1	33.6	**40.8**	34.6	27.6	23.5	22.7	10.7	7.1	5	7.4	6.6	21.5	24	14.8	9.7	10.4	12.6	7.9	5.6	6.7	2.3	3	40.8	16.2	24
27	4.8	2.4	4.9	5.5	16	2	0	5.1	3.1	6.7	0.7	0.9	0	1.4	2.2	1.4	0.1	3.3	2.2	4.6	5.3	6.1	8.4	0	16.0	3.6	24
28	0	2.9	1.8	2.2	4.4	3.9	7.4	10.2	7	0.5	0.9	2.5	0.9	4	3.9	3.3	0.6	0	4	5.8	0.4	3.9	3.8	6.2	10.2	3.4	24
29	8.4	11.5	4.3	0.6	0	0	5.6	4.8	3.5	9.3	0	0.2	2.4	4.8	2.2	6	6.8	0.6	5.3	8.8	7.4	12.5	12.2	6.8	12.5	5.2	24
30	3.8	2.9	10.5	6.1	10.9	6.5	9.4	4.5	0	17	18.5	5.7	3.3	4.6	2.6	8.7	7.4	6.2	0.9	2.5	8	8.2	15	18.9	18.9	7.6	24
31	0.8	2.3	7.3	7.7	6.7	0	0	0	6	1	3	6.4	2.3	0	3.8	7.4	5.4	2.8	0	1.9	**N**	0	0.7	4.9	7.7	3.1	23
HOURLY MAX	21	30	34	41	35	28	24	23	11	17	19	12	9	22	24	15	17	27	20	17	16	25	23	22			
HOURLY AVG	6.3	6.5	7.3	7.1	6.6	6.3	5.3	5.3	4.2	5.1	5.0	5.2	4.4	5.8	6.0	5.9	5.5	5.9	6.2	6.5	6.3	6.8	7.4	6.9			

STATUS FLAG CODES

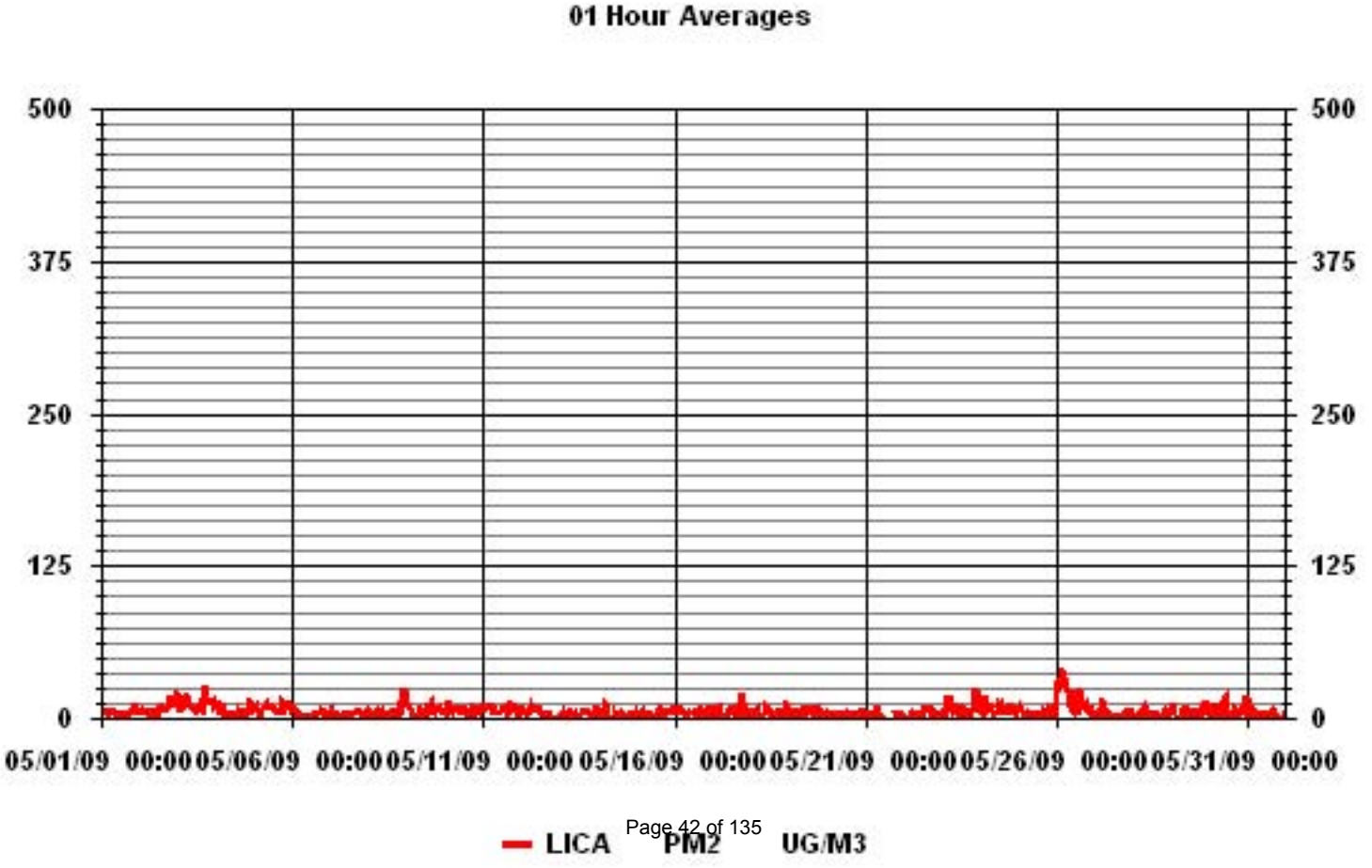
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



OBJECTIVE LIMIT: **ALBERTA ENVIRONMENT:** 1-HR - PPB 24-HR 30 PPB

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	-					
NUMBER OF 24-HR EXCEEDENCES:	0	PROPOSED CANADA WIDE GUIDELINE				
NUMBER OF NON-ZERO READINGS:	686					
MAXIMUM 1-HR AVERAGE:	40.8	UG/M^3	@ HOUR(S)	3	ON DAY(S)	26
MAXIMUM 24-HR AVERAGE:	16.2	UG/M^3			ON DAY(S)	26
IZS CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		739	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:		99.3	%
STANDARD DEVIATION:	4.87		MONTHLY AVERAGE:		6.00	UG/M^3


01 Hour Averages
500
375
250
125
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA PM2 UG/M3

LICA
PM2 / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	5.60	8.89	10.80	6.70	6.83	7.52	8.48	2.46	1.64	3.28	7.66	6.01	8.61	6.01	5.33	3.55	99.45
<	60.0	.00	.00	.00	.13	.00	.00	.13	.00	.13	.00	.00	.00	.00	.13	.00	.00	.54
<	80.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	120.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	240.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.60	8.89	10.80	6.83	6.83	7.52	8.61	2.46	1.77	3.28	7.66	6.01	8.61	6.15	5.33	3.55	

Calm : .00 %

Total # Operational Hours : 731

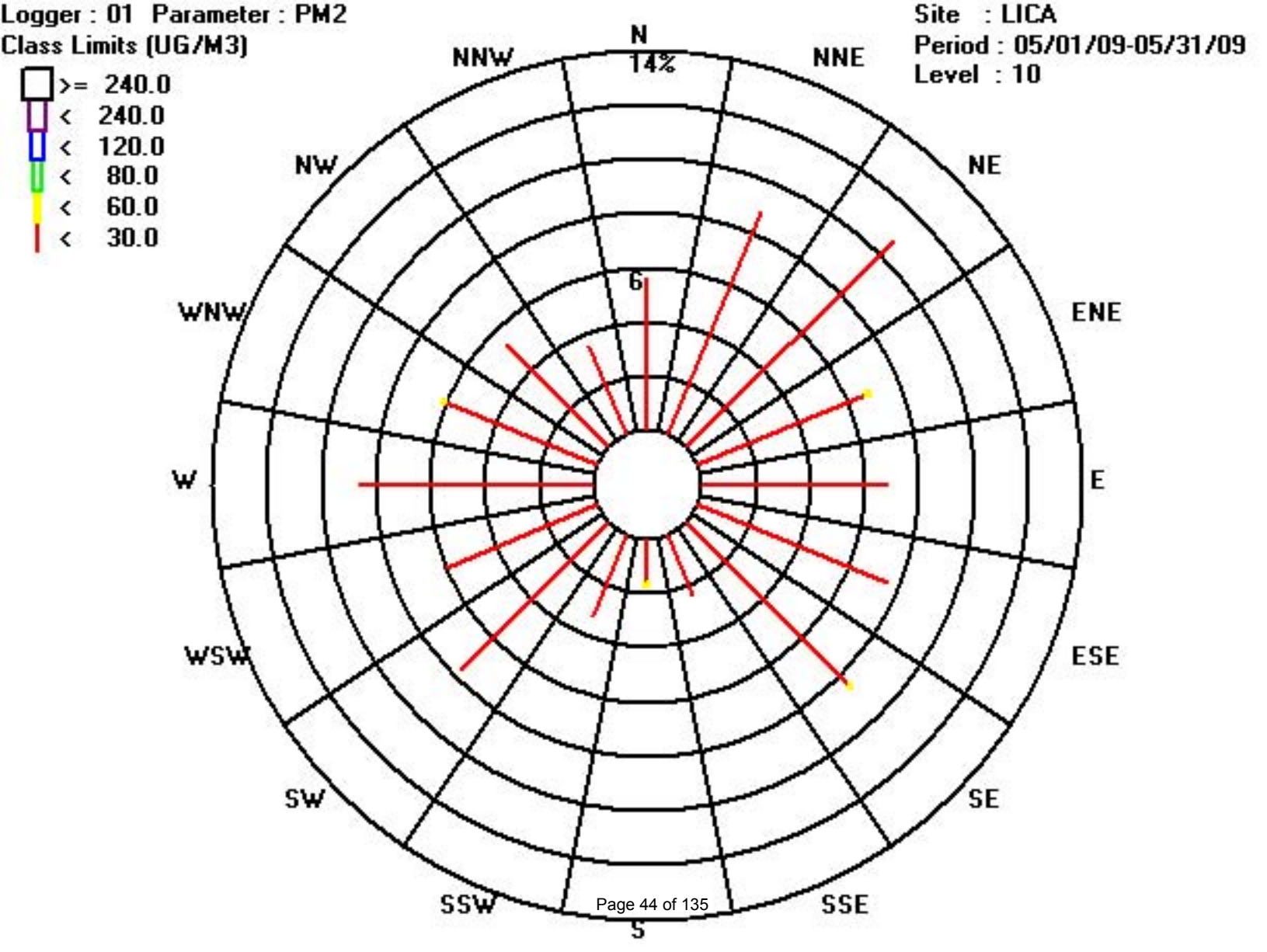
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	30.0	41	65	79	49	50	55	62	18	12	24	56	44	63	44	39	26	727
<	60.0				1			1		1					1			4
<	80.0																	
<	120.0																	
<	240.0																	
>=	240.0																	
	Totals	41	65	79	50	50	55	63	18	13	24	56	44	63	45	39	26	

Calm : .00 %

Total # Operational Hours : 731


Logger : 01 Parameter : PM2
Class Limits (UG/M3)
>= 240.0
< 240.0
< 120.0
< 80.0
< 60.0
< 30.0
Site : LICA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

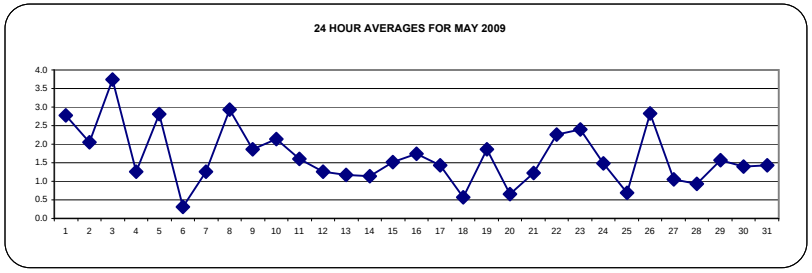
NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3	4	5	6	**IZS**	6	9	8	4	2	2	0	0	0	0	0	0	0	0	0	6	7	2	0	9	2.8	24
2	0	1	3	**IZS**	3	4	5	3	2	1	1	1	0	0	0	0	0	0	1	3	4	3	6	6	6	2.0	24
3	9	4	**IZS**	10	14	**17**	11	2	1	1	1	1	0	0	0	0	0	0	1	1	4	6	2	1	**17**	**3.7**	24
4	2	**IZS**	4	2	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3	4	4	1.3	24
5	**IZS**	3	4	6	6	8	**17**	5	5	1	0	0	0	1	0	1	1	1	2	1	0	0	0	**IZS**	**17**	2.8	24
6	0	0	0	0	0	0	0	0	0	0	**M**	0	0	1	0	0	0	0	0	1	1	2	**IZS**	2	2	0.3	23
7	3	2	3	3	4	6	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3	**IZS**	1	2	6	1.3	24
8	0	0	2	2	9	14	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	1	1	5	**IZS**	6	4	1	14	2.9	24
9	1	3	1	2	2	4	4	2	1	1	1	1	1	1	1	1	1	1	1	**IZS**	2	2	4	5	5	1.9	24
10	4	4	4	4	3	4	4	5	2	1	1	1	0	0	0	0	0	0	**IZS**	1	4	3	3	1	5	2.1	24
11	1	1	3	2	1	5	4	3	1	1	1	1	0	0	1	1	3	**IZS**	2	1	2	1	1	1	5	1.6	24
12	1	1	1	1	2	4	6	5	3	2	1	1	1	0	0	0	**IZS**	0	0	0	0	0	0	0	6	1.3	24
13	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	**IZS**	1	1	1	3	6	5	5	2	6	1.2	24
14	0	0	0	1	2	3	2	1	1	1	1	1	1	1	**IZS**	1	1	1	0	0	1	3	3	1	3	1.1	24
15	2	1	2	2	3	2	3	2	1	1	1	1	1	**IZS**	1	1	0	0	1	3	2	2	1	2	3	1.5	24
16	2	2	2	2	3	2	2	2	2	2	2	1	**IZS**	1	1	1	1	1	0	1	2	3	2	3	3	1.7	24
17	6	3	4	6	8	2	1	1	0	0	0	**IZS**	1	1	0	0	0	0	0	0	0	0	0	0	8	1.4	24
18	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	1	1	2	2	4	2	1	4	0.6	24
19	1	1	1	1	2	4	3	3	2	**IZS**	2	2	2	2	2	2	2	1	1	1	3	2	1	2	4	1.9	24
20	1	0	0	1	0	0	1	0	**IZS**	1	1	0	0	1	0	0	0	1	0	0	1	2	3	2	3	0.7	24
21	2	2	2	3	4	4	3	**IZS**	2	0	1	1	1	0	0	0	0	0	0	0	1	1	1	0	4	1.2	24
22	2	3	3	3	2	6	**IZS**	4	2	1	1	1	0	2	0	1	1	1	0	1	4	8	3	3	8	2.3	24
23	3	2	3	6	4	**IZS**	7	4	4	2	0	1	0	0	0	0	1	0	1	2	8	5	1	1	8	2.4	24
24	1	1	4	3	**IZS**	5	3	2	1	1	1	1	1	0	1	1	2	1	1	1	1	1	1	0	5	1.5	24
25	0	0	0	**IZS**	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	2	4	5	1	1	5	0.7	24
26	2	2	**IZS**	2	3	5	14	4	1	1	2	1	1	1	3	2	7	4	2	2	1	2	1	2	14	2.8	24
27	1	**IZS**	1	1	1	1	1	2	1	0	0	0	1	1	1	**C**	**M**	1	1	1	2	3	1	1	3	1.0	23
28	**IZS**	1	1	1	1	1	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	1	2	2	**IZS**	3	0.9	24
29	3	4	3	5	2	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	3	3	**IZS**	1	5	1.6	24
30	1	0	1	1	1	1	1	1	1	1	2	2	2	1	1	0	0	0	0	0	5	**IZS**	5	5	5	1.4	24
31	3	4	3	4	4	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	1	3	4	1.4	24
HOURLY MAX	9	4	5	10	14	17	17	8	5	2	2	2	2	2	3	2	7	4	2	5	8	8	6	6			
HOURLY AVG	1.9	1.7	2.1	2.8	3.0	3.9	3.8	2.2	1.4	0.8	0.9	0.7	0.5	0.6	0.5	0.5	0.8	0.6	0.6	1.2	2.6	2.9	2.1	1.8			

STATUS FLAG CODES

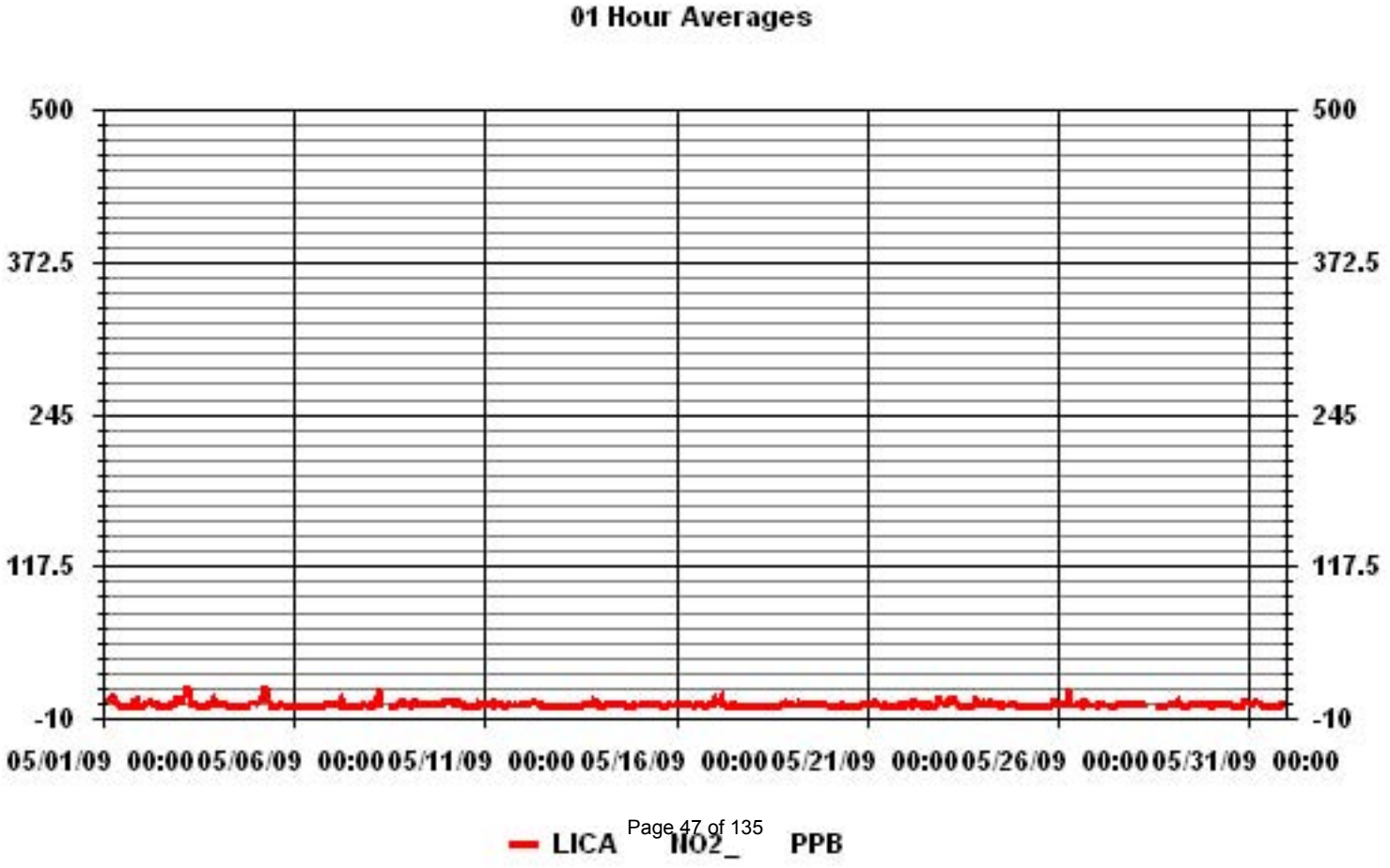
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	475					
MAXIMUM 1-HR AVERAGE:	17	PPB	@ HOUR(S)	5, 6	ON DAY(S)	3, 5
MAXIMUM 24-HR AVERAGE:	3.7	PPB			ON DAY(S)	3
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	16	HRS	AMD OPERATION UPTIME:		99.7	%
STANDARD DEVIATION:	2.11		MONTHLY AVERAGE:		1.66	PPB


01 Hour Averages
500
372.5
245
117.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA NO2_ PPB

LICA
NO2_ / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	5.77	9.52	10.82	6.78	6.49	7.35	8.80	2.45	2.02	3.03	7.35	6.20	8.22	6.20	5.19	3.75	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.77	9.52	10.82	6.78	6.49	7.35	8.80	2.45	2.02	3.03	7.35	6.20	8.22	6.20	5.19	3.75	

Calm : .00 %

Total # Operational Hours : 693

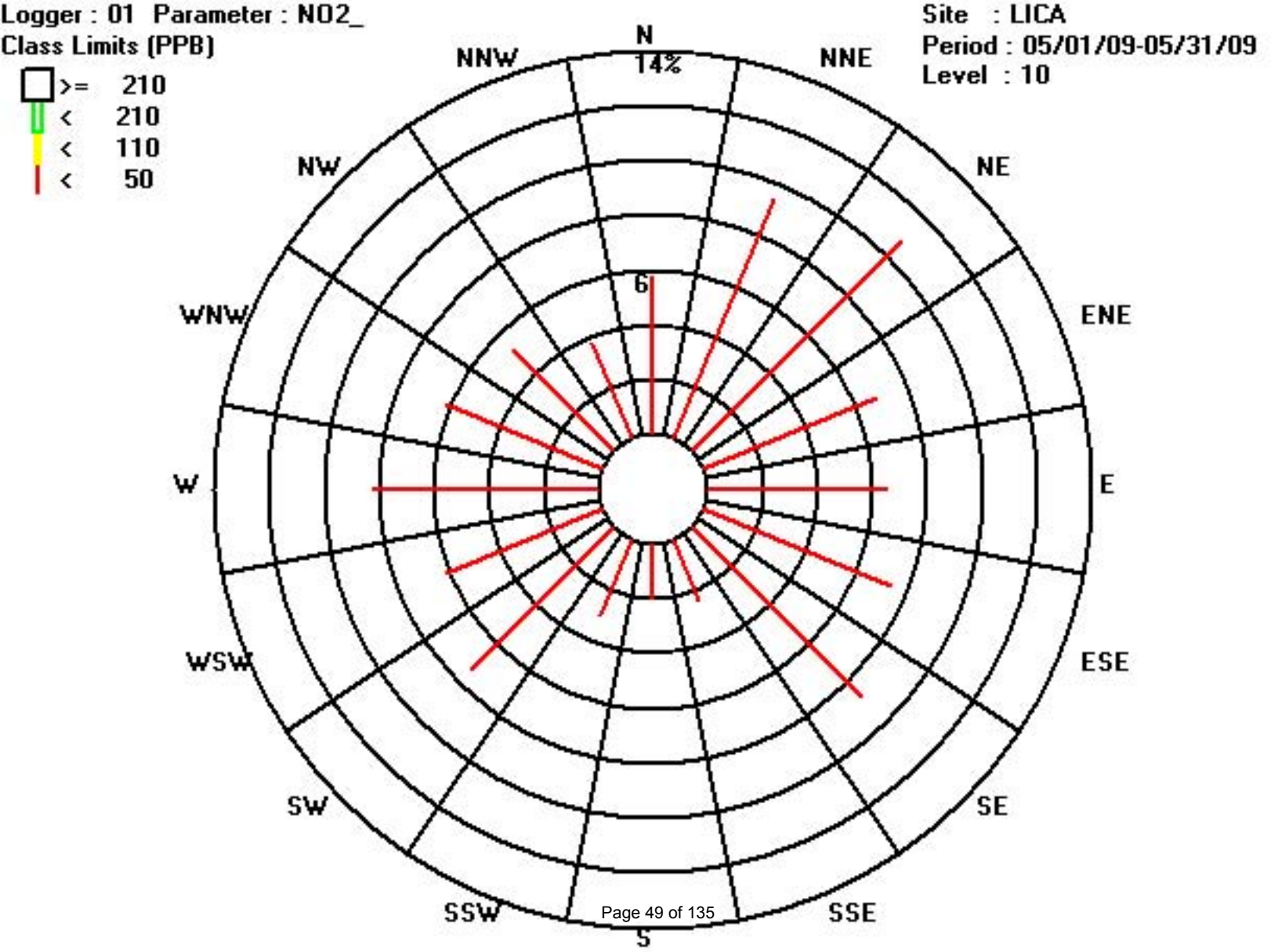
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	40	66	75	47	45	51	61	17	14	21	51	43	57	43	36	26	693
<	110																	
<	210																	
>=	210																	
	Totals	40	66	75	47	45	51	61	17	14	21	51	43	57	43	36	26	

Calm : .00 %

Total # Operational Hours : 693


Logger : 01 Parameter : NO2_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

NITROGEN DIOXIDE MAX instantaneous maximum in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	5	6	8	12	**IZS**	8	12	10	7	3	15	2	1	1	1	1	1	1	2	1	34	26	4	1	34	7.0	24
2	1	4	8	**IZS**	6	6	8	6	3	2	2	1	3	1	2	2	1	2	3	13	9	10	20	9	20	5.3	24
3	29	7	**IZS**	15	44	31	17	5	2	2	1	4	1	1	1	1	1	2	6	11	8	22	5	2	44	9.5	24
4	3	**IZS**	5	4	5	4	5	1	0	1	1	1	1	1	1	1	1	1	1	3	5	7	5	7	7	2.8	24
5	**IZS**	5	9	12	16	18	23	12	11	2	2	4	2	2	2	2	6	3	3	4	2	1	2	**IZS**	23	6.5	24
6	0	0	0	0	0	2	2	3	1	1	**M**	**M**	2	15	1	2	4	1	4	4	4	4	**IZS**	4	15	2.6	22
7	4	4	5	6	7	**53**	5	2	1	1	3	1	1	11	1	1	1	2	7	3	8	**IZS**	3	5	**53**	5.9	24
8	1	3	6	4	15	26	11	**C**	**C**	**C**	**C**	**C**	**C**	**C**	2	2	1	4	2	19	**IZS**	13	9	4	26	7.6	24
9	2	6	4	3	3	9	7	4	2	2	2	2	3	2	2	2	2	3	2	**IZS**	4	6	8	17	17	4.2	24
10	7	8	5	5	4	7	7	11	3	1	1	3	1	1	1	1	1	1	**IZS**	4	13	10	10	2	13	4.7	24
11	2	2	6	7	4	12	19	4	3	2	2	7	1	2	3	14	17	**IZS**	6	3	4	2	10	7	19	6.0	24
12	2	1	1	2	3	11	11	10	5	3	1	2	2	3	3	3	**IZS**	1	1	2	0	1	0	0	11	3.0	24
13	0	0	0	0	0	0	2	0	3	1	1	28	5	5	5	**IZS**	2	4	7	10	10	7	7	5	28	4.4	24
14	1	1	1	1	30	12	10	5	13	18	10	2	3	9	**IZS**	4	3	6	4	3	2	6	5	3	30	6.6	24
15	3	2	3	4	4	5	13	3	9	4	3	1	2	**IZS**	2	2	2	1	3	5	4	8	4	3	13	3.9	24
16	2	7	5	4	4	3	2	7	7	4	2	2	**IZS**	3	2	2	3	1	1	1	5	6	3	6	7	3.6	24
17	12	6	9	10	11	5	1	1	1	3	2	**IZS**	4	3	1	2	1	0	1	4	4	0	0	0	12	3.5	24
18	0	0	0	1	1	1	1	1	2	1	**IZS**	1	0	2	1	2	3	2	7	7	6	12	5	2	12	2.5	24
19	2	2	1	2	2	10	4	5	12	**IZS**	4	3	3	5	3	3	15	4	3	3	4	6	3	4	15	4.5	24
20	4	0	2	1	0	1	3	1	**IZS**	9	1	1	6	3	1	2	1	2	1	1	2	3	5	4	9	2.3	24
21	3	5	4	4	6	6	5	**IZS**	3	2	2	4	10	9	10	1	1	6	1	2	2	2	2	1	10	4.0	24
22	4	5	4	6	4	9	**IZS**	8	13	2	2	4	2	31	7	1	1	2	2	2	15	16	6	6	31	6.6	24
23	5	4	6	8	6	**IZS**	11	9	5	3	1	8	1	1	2	1	9	1	2	7	25	15	6	5	25	6.1	24
24	2	5	7	4	**IZS**	8	6	2	2	2	1	2	12	1	2	3	9	1	5	2	3	2	1	1	12	3.6	24
25	0	0	0	**IZS**	1	6	2	5	2	1	1	6	1	1	3	2	3	2	13	12	18	9	5	2	18	4.1	24
26	3	3	**IZS**	4	8	11	27	10	2	4	37	3	4	2	7	4	14	21	6	2	2	4	8	4	37	8.3	24
27	2	**IZS**	3	1	3	2	2	3	2	1	1	1	5	10	12	**M**	**M**	2	9	2	4	11	3	2	12	3.9	22
28	**IZS**	2	6	2	2	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	3	1	1	1	1	1	6	6	**IZS**	6	2.6	24
29	6	5	5	9	3	6	3	1	1	2	3	4	9	1	7	3	4	1	6	3	12	22	**IZS**	1	22	5.1	24
30	1	1	2	1	1	3	1	2	2	2	3	3	4	8	2	2	1	0	0	0	11	**IZS**	11	8	11	3.0	24
31	7	13	6	6	5	8	3	3	2	2	1	1	1	0	0	1	1	1	0	1	**IZS**	2	3	4	13	3.1	24
HOURLY MAX	29	13	9	15	44	53	27	12	13	18	37	28	12	31	12	14	17	21	13	19	34	26	20	17			
HOURLY AVG	3.9	3.7	4.2	4.8	6.8	9.5	7.7	4.8	4.3	2.9	3.9	3.7	3.2	4.8	3.0	2.4	3.8	2.6	3.6	4.5	7.6	8.2	5.5	4.1			

STATUS FLAG CODES

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

MONTHLY SUMMARY

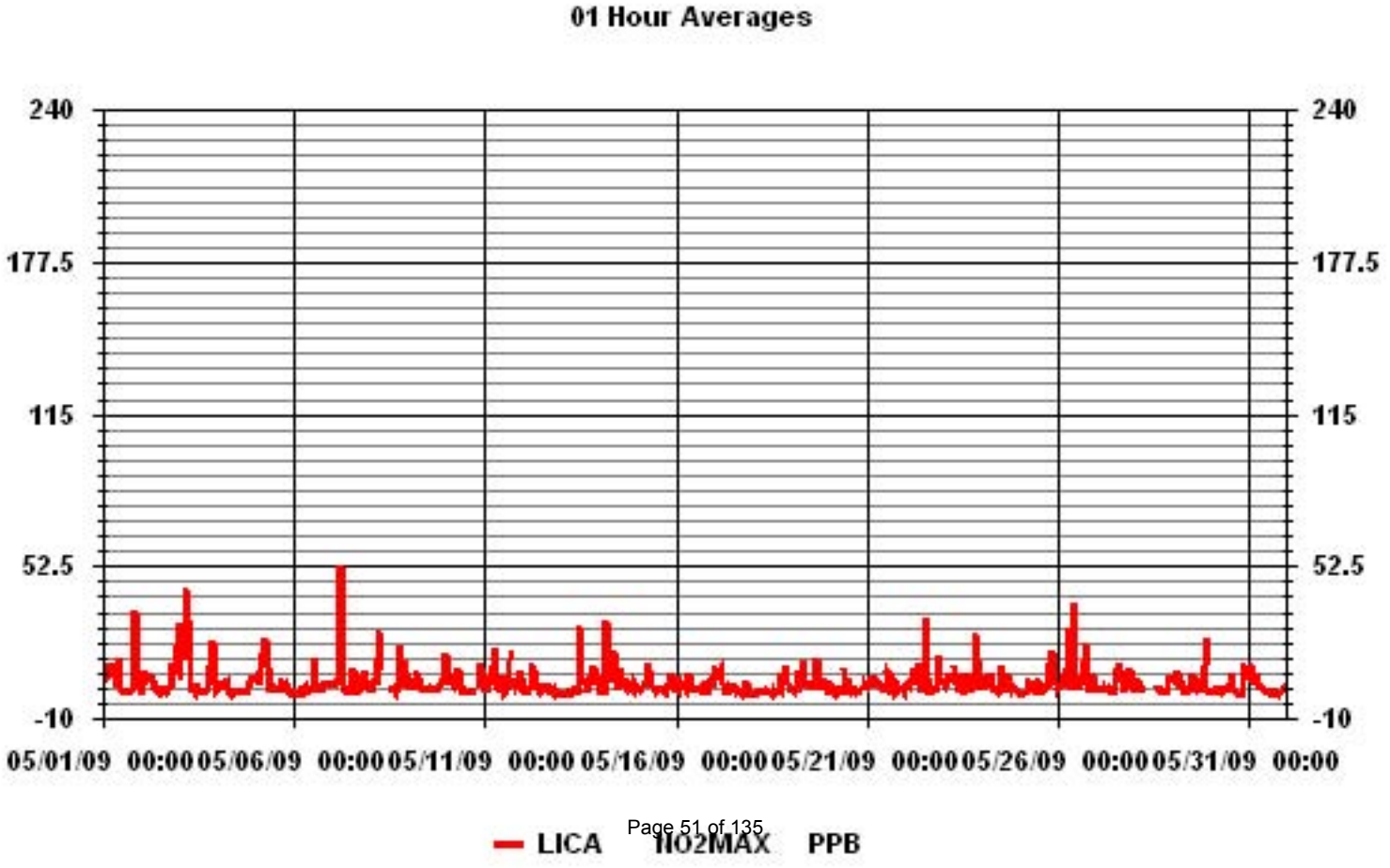
NUMBER OF NON-ZERO READINGS: 656

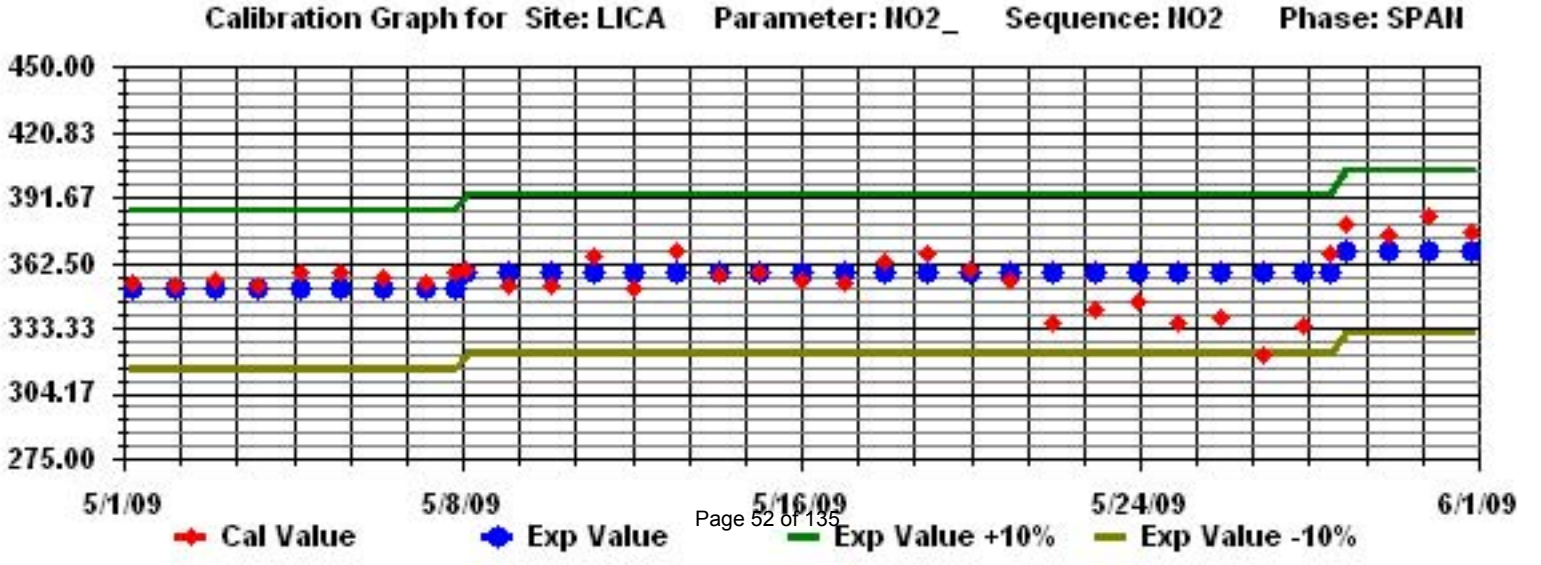
MAXIMUM INSTANTANEOUS VALUE: 53 PPB @ HOUR(S) 5 ON DAY(S) 7

IZS CALIBRATION TIME: 33 HRS OPERATIONAL TIME: 740 HRS

MONTHLY CALIBRATION TIME: 16 HRS

STANDARD DEVIATION 5.60


01 Hour Averages
240
177.5
115
52.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA
NO2MAX
PPB


Calibration Graph for Site: LICA Parameter: NO2_ Sequence: NO2 Phase: SPAN
450.00
420.83
391.67
362.50
333.33
304.17
275.00
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

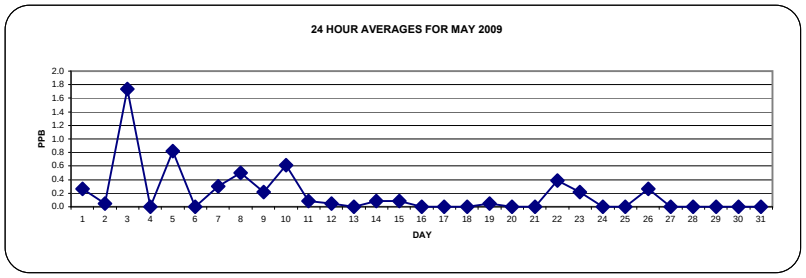
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	**IZS**	0	1	2	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0.3	24
2	0	0	0	**IZS**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
3	2	0	**IZS**	1	5	**22**	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**22**	**1.7**	24
4	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5	**IZS**	0	0	0	0	2	13	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	13	0.8	24
6	0	0	0	0	0	0	0	0	0	0	**M**	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0.0	23
7	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	**IZS**	0	0	4	0.3	24
8	0	0	0	0	1	7	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	**IZS**	0	0	0	7	0.5	24
9	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	2	2	0.2	24
10	0	0	0	0	2	5	4	3	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	5	0.6	24
11	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	1	0.1	24
12	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	1	0.0	24
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0.0	24
14	0	0	0	0	1	0	1	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	1	0.1	24
15	0	0	0	0	0	0	1	0	1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	1	0.1	24
16	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.0	24
20	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	1	3	**IZS**	2	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	3	0.4	24
23	0	0	0	0	0	**IZS**	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0.2	24
24	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
26	0	0	**IZS**	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.3	24
27	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	**C**	**M**	0	0	0	0	0	0	0	0	0.0	23
28	**IZS**	0	0	0	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	**IZS**	0	0.0	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0.0	24
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0.0	24
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	0.0	24
HOURLY MAX	2	0	0	1	5	22	13	3	2	0	1	0	0	1	0	0	0	0	1	0	1	1	0	2			
HOURLY AVG	0.1	0.0	0.0	0.0	0.3	1.6	1.3	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1			

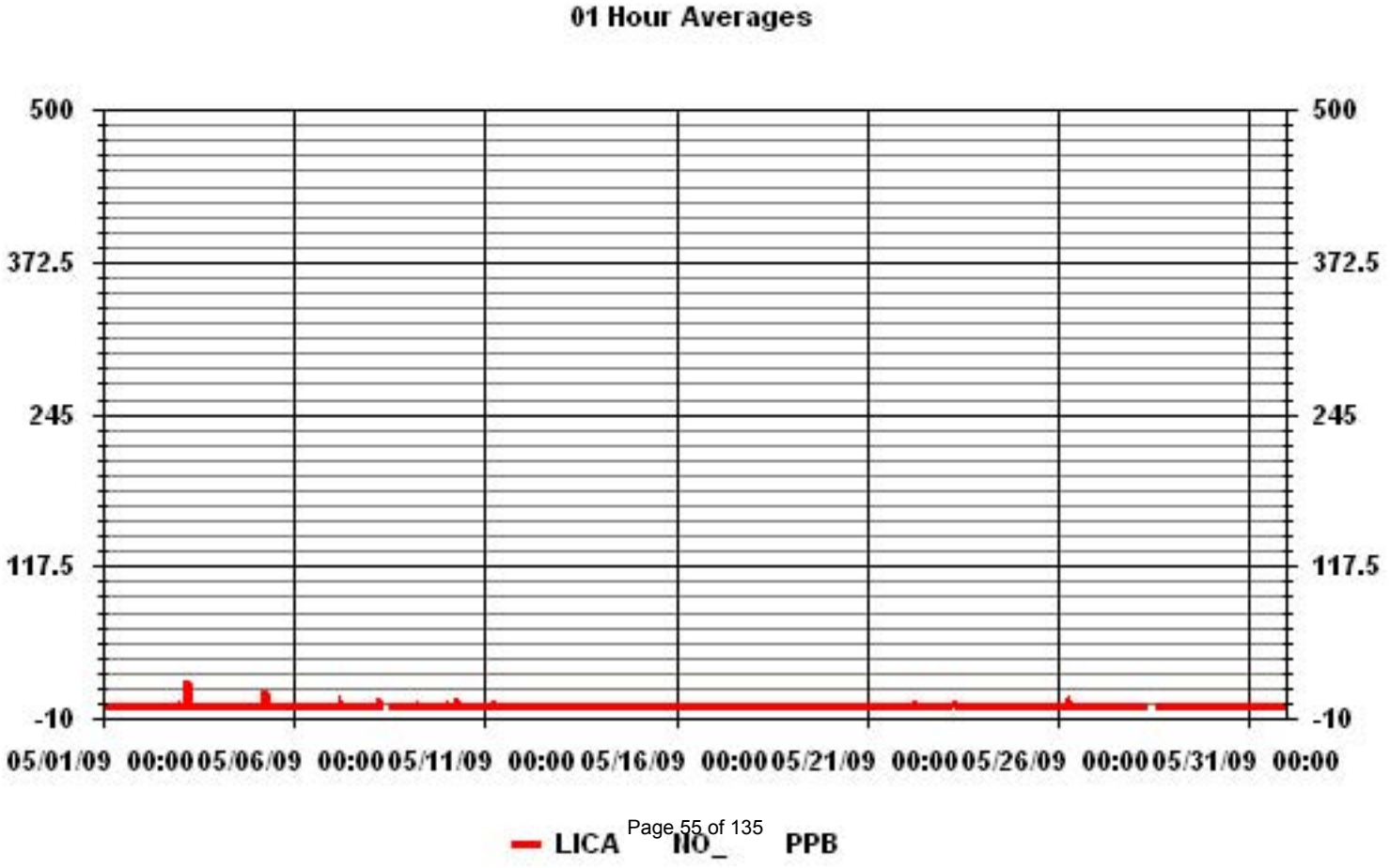
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:			49				
MAXIMUM 1-HR AVERAGE:			22	PPB	@ HOUR(S)	5	ON DAY(S) 3
MAXIMUM 24-HR AVERAGE:			1.7	PPB			ON DAY(S) 3
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:			742	HRS
MONTHLY CALIBRATION TIME:	16	HRS	AMD OPERATION UPTIME:			99.7	%
STANDARD DEVIATION:	1.18		MONTHLY AVERAGE:			0.18	PPB


01 Hour Averages
500
372.5
245
117.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA NO_ PPB

LICA
NO_ / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	5.77	9.52	10.82	6.78	6.49	7.35	8.80	2.45	2.02	3.03	7.35	6.20	8.22	6.20	5.19	3.75	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.77	9.52	10.82	6.78	6.49	7.35	8.80	2.45	2.02	3.03	7.35	6.20	8.22	6.20	5.19	3.75	

Calm : .00 %

Total # Operational Hours : 693

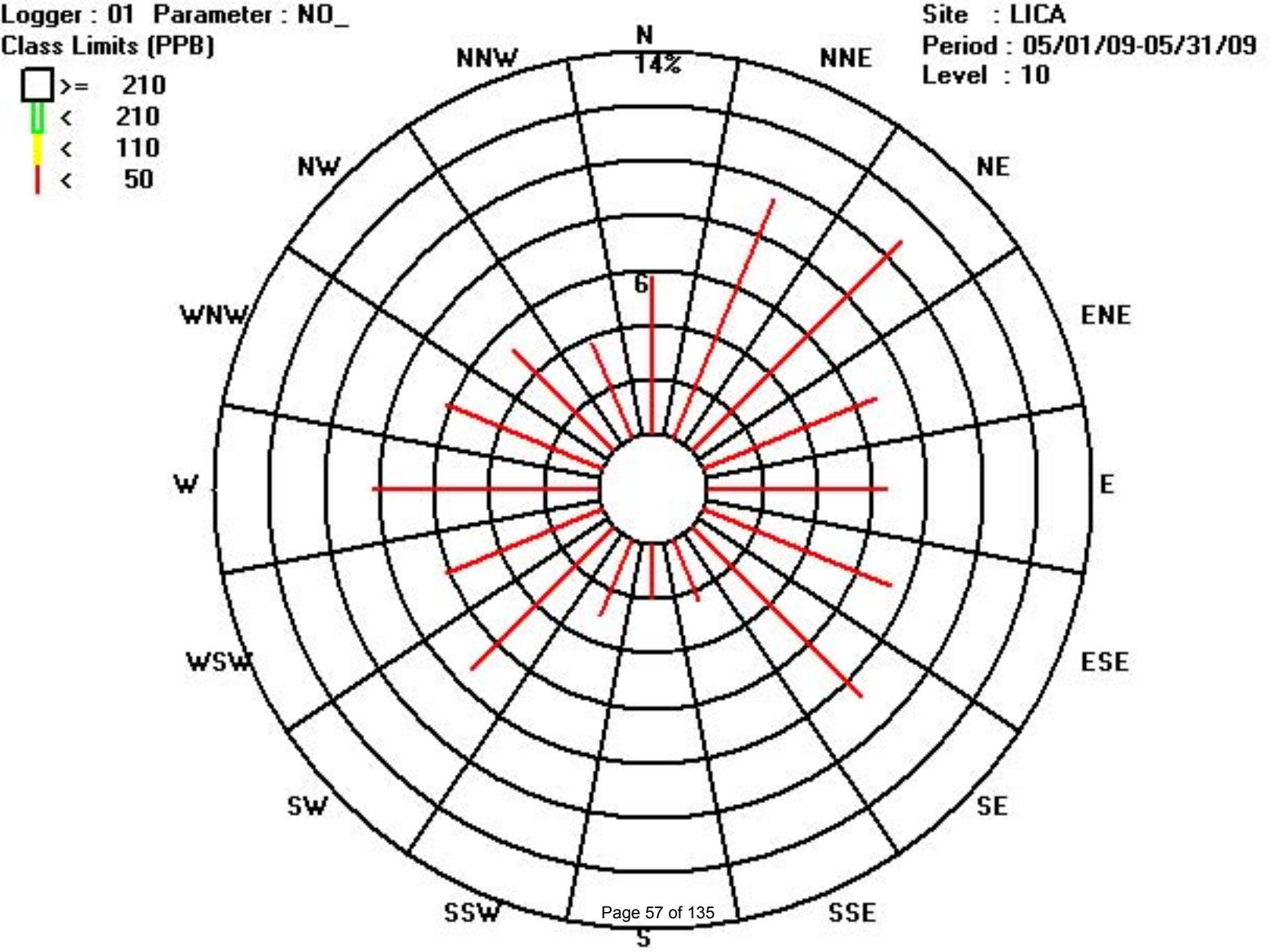
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	40	66	75	47	45	51	61	17	14	21	51	43	57	43	36	26	693
<	110																	
<	210																	
>=	210																	
	Totals	40	66	75	47	45	51	61	17	14	21	51	43	57	43	36	26	

Calm : .00 %

Total # Operational Hours : 693


Logger : 01 Parameter : NO_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

NITRIC OXIDE MAX instantaneous maximum in ppb

MST

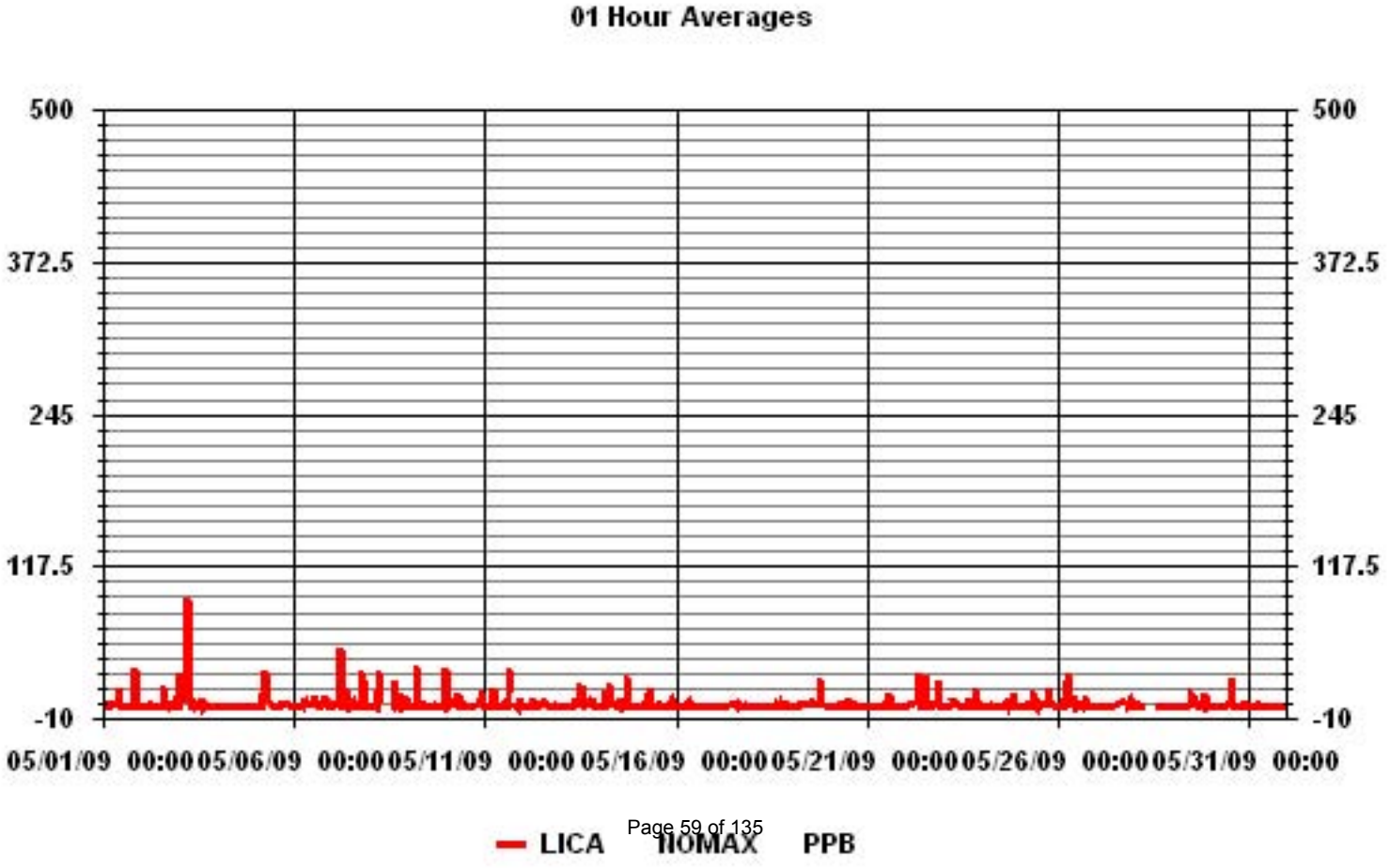
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	1	3	**IZS**	1	2	3	2	0	16	0	0	0	0	0	0	0	0	0	32	6	0	0	32	2.9	24
2	0	0	0	**IZS**	0	1	1	1	0	0	0	0	0	0	17	0	0	4	0	2	0	0	8	0	17	1.5	24
3	28	0	**IZS**	5	35	**91**	22	0	0	6	0	1	0	0	6	0	2	0	1	0	1	0	0	0	**91**	8.6	24
4	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
5	**IZS**	0	0	0	10	13	30	4	7	1	1	1	0	1	0	0	1	5	0	3	3	0	1	**IZS**	30	3.7	24
6	0	0	0	0	0	3	1	4	0	4	**M**	**M**	1	8	0	5	1	0	2	7	7	1	**IZS**	0	8	2.1	22
7	0	2	3	3	2	48	3	1	0	16	5	0	1	4	0	0	0	1	29	2	19	**IZS**	0	0	48	6.0	24
8	0	0	1	0	13	30	5	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	22	0	1	0	9	**IZS**	5	9	0	30	5.9	24
9	0	0	0	0	0	34	2	1	0	2	2	1	0	0	0	1	2	0	0	**IZS**	0	0	2	31	34	3.4	24
10	0	1	1	1	5	7	5	10	1	0	0	2	0	1	0	0	1	0	**IZS**	2	7	4	14	0	14	2.7	24
11	0	0	0	0	0	13	13	1	0	0	1	3	0	0	0	31	15	**IZS**	1	0	2	0	6	2	31	3.8	24
12	0	0	0	0	0	7	2	7	0	0	0	1	1	5	4	3	**IZS**	0	0	2	0	0	0	0	7	1.4	24
13	0	0	0	0	0	0	0	0	6	1	1	19	3	2	15	**IZS**	1	1	5	3	4	0	0	1	19	2.7	24
14	0	0	0	0	14	11	20	1	1	2	2	1	0	5	**IZS**	2	0	25	0	0	0	0	0	0	25	3.7	24
15	0	0	0	0	0	4	11	1	15	0	0	0	0	**IZS**	1	1	0	0	0	0	4	6	2	0	15	2.0	24
16	0	0	0	0	1	0	0	3	5	2	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	5	0.5	24
17	0	0	0	0	0	0	0	0	0	1	2	**IZS**	2	2	0	3	0	0	0	2	1	0	0	0	3	0.6	24
18	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	0	3	1	0	4	1	2	3	0	0	4	0.6	24
19	0	0	0	0	0	2	1	1	1	**IZS**	1	1	3	4	1	1	1	1	24	11	1	1	2	1	24	2.5	24
20	0	0	0	0	0	0	2	1	**IZS**	3	0	0	7	0	0	1	2	0	0	0	0	0	0	0	7	0.7	24
21	0	0	0	0	1	0	0	**IZS**	0	0	0	1	1	3	11	0	0	1	0	1	0	0	0	0	11	0.8	24
22	0	0	1	1	3	4	**IZS**	5	27	0	0	3	2	25	0	0	0	1	1	1	6	21	0	0	27	4.4	24
23	0	0	0	1	0	**IZS**	6	3	2	2	0	1	0	1	0	0	7	0	0	0	15	0	3	1	15	1.8	24
24	0	0	0	0	**IZS**	2	1	0	0	0	0	0	1	0	0	3	4	0	3	0	11	0	0	0	11	1.1	24
25	0	0	0	**IZS**	0	2	2	2	13	1	0	6	0	2	2	2	2	0	16	6	4	0	1	0	16	2.7	24
26	0	0	**IZS**	0	6	21	27	5	2	1	9	0	1	3	3	1	4	8	3	0	0	1	0	0	27	4.1	24
27	0	**IZS**	0	0	0	0	0	0	0	0	0	1	2	2	4	**M**	**M**	5	4	1	3	6	2	0	6	1.4	22
28	**IZS**	0	4	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	**IZS**	4	0.3	24
29	0	0	0	0	0	1	0	0	0	0	1	9	7	0	4	1	2	0	1	0	10	5	**IZS**	0	10	1.8	24
30	0	0	0	0	0	0	0	1	0	0	1	1	1	23	0	0	0	0	0	0	3	**IZS**	0	0	23	1.3	24
31	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	**IZS**	0	0	0	1	0.2	24
HOURLY MAX	28	2	4	5	35	91	30	10	27	16	16	19	7	25	17	31	15	25	29	11	32	21	14	31			
HOURLY AVG	1.0	0.1	0.4	0.5	3.1	9.9	5.4	2.0	2.9	1.5	1.6	1.9	1.2	3.3	2.3	2.8	1.6	1.8	3.1	1.8	4.7	2.0	1.7	1.2			

STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	295					
MAXIMUM INSTANTANEOUS VALUE:	91	PPB	@ HOUR(S)	5	ON DAY(S)	3
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		740	HRS
MONTHLY CALIBRATION TIME:	16	HRS				
STANDARD DEVIATION	6.47					


01 Hour Averages
500
372.5
245
117.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA
NOMAX
PPB

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

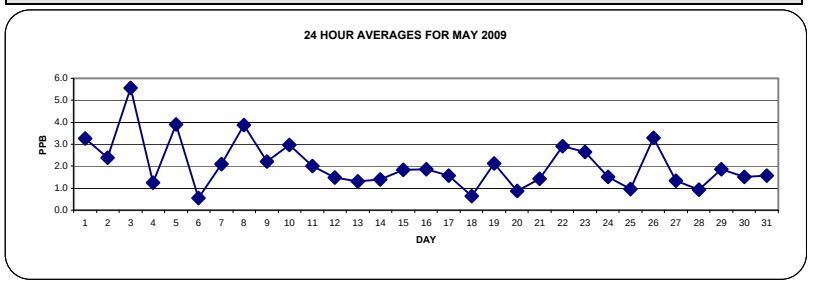
OXIDES OF NITROGEN hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	3	4	5	7	**IZS**	6	11	10	6	2	4	0	0	0	0	0	0	0	0	0	8	7	2	0	11	3.3	24
2	0	1	3	**IZS**	3	4	7	4	3	1	2	1	0	0	1	0	0	1	1	3	4	3	7	6	7	2.4	24
3	11	4	**IZS**	11	20	**39**	22	2	1	1	1	1	0	0	0	0	0	0	1	1	4	6	2	1	**39**	**5.6**	24
4	2	**IZS**	4	2	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3	4	4	1.3	24
5	**IZS**	3	5	6	7	10	31	7	8	1	0	1	0	1	0	1	1	1	2	1	0	0	0	**IZS**	31	3.9	24
6	0	0	0	0	0	0	0	0	0	0	**M**	0	0	1	0	0	1	1	1	2	2	2	**IZS**	2	2	0.5	23
7	3	3	4	4	5	11	2	1	1	1	1	0	0	1	0	0	1	1	1	1	4	**IZS**	1	2	11	2.1	24
8	0	0	3	2	10	21	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	1	1	1	1	6	**IZS**	7	5	1	21	3.9	24
9	1	3	1	2	2	6	5	3	2	1	1	1	1	1	1	1	1	2	1	**IZS**	2	2	4	7	7	2.2	24
10	4	5	4	4	5	9	9	9	3	1	1	1	0	0	0	0	0	0	**IZS**	1	4	3	4	1	9	3.0	24
11	1	1	3	2	1	7	6	3	2	2	1	1	0	1	1	2	3	**IZS**	2	1	2	1	2	1	7	2.0	24
12	1	1	1	1	2	5	7	6	3	2	1	1	1	1	1	0	**IZS**	0	0	0	0	0	0	0	7	1.5	24
13	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	**IZS**	1	1	1	3	6	5	5	3	6	1.3	24
14	0	0	0	1	3	4	4	2	1	2	1	1	1	1	**IZS**	1	1	1	0	0	1	3	3	1	4	1.4	24
15	2	1	2	2	3	3	5	3	2	1	1	1	1	**IZS**	1	1	1	0	1	3	2	2	2	2	5	1.8	24
16	2	2	2	2	3	2	2	3	2	3	2	2	**IZS**	2	1	1	1	1	0	0	2	3	2	3	3	1.9	24
17	6	3	4	6	8	2	1	1	1	1	1	**IZS**	1	1	0	0	0	0	0	0	0	0	0	0	8	1.6	24
18	0	0	0	0	0	0	1	0	0	0	**IZS**	0	0	0	0	0	1	1	1	2	2	4	2	1	4	0.7	24
19	1	1	1	1	2	4	3	3	3	**IZS**	2	2	2	2	2	2	3	2	2	2	3	2	2	2	4	2.1	24
20	1	0	0	1	0	0	1	0	**IZS**	2	1	0	1	1	0	1	1	1	1	0	1	2	3	2	3	0.9	24
21	2	2	2	3	4	5	3	**IZS**	2	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0	5	1.4	24
22	2	3	3	3	4	9	**IZS**	6	3	1	1	1	1	4	1	1	1	1	1	1	4	10	3	3	10	2.9	24
23	3	2	3	6	4	**IZS**	9	6	5	2	1	1	0	0	0	0	1	0	0	2	9	5	1	1	9	2.7	24
24	1	1	4	3	**IZS**	6	3	2	1	1	1	1	1	0	1	1	2	1	1	1	1	1	1	0	6	1.5	24
25	0	0	0	**IZS**	0	1	1	1	0	0	0	1	0	0	0	1	1	1	1	3	4	5	1	1	5	1.0	24
26	2	2	**IZS**	2	4	6	18	5	1	1	3	1	1	1	3	2	8	5	3	2	1	2	1	2	18	3.3	24
27	1	**IZS**	1	1	1	1	2	2	1	1	0	1	1	2	1	**C**	**M**	1	1	1	3	4	1	1	4	1.3	23
28	**IZS**	1	1	0	1	1	3	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	1	0	0	0	0	1	2	2	**IZS**	3	0.9	24
29	2	4	3	5	2	2	1	1	1	1	1	2	2	1	1	1	1	1	1	1	4	4	**IZS**	1	5	1.9	24
30	1	0	1	1	1	1	1	1	1	1	2	2	3	2	1	0	0	0	0	0	0	5	**IZS**	6	6	1.5	24
31	3	4	3	4	4	5	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**IZS**	1	1	3	5	1.6	24
HOURLY MAX	11	5	5	11	20	39	31	10	8	3	4	2	3	4	3	2	8	5	3	6	9	10	7	7			
HOURLY AVG	1.9	1.8	2.2	2.8	3.5	5.8	5.6	3.0	1.9	1.1	1.1	0.9	0.7	0.9	0.7	0.6	1.1	0.8	0.8	1.3	2.8	3.1	2.3	1.9			

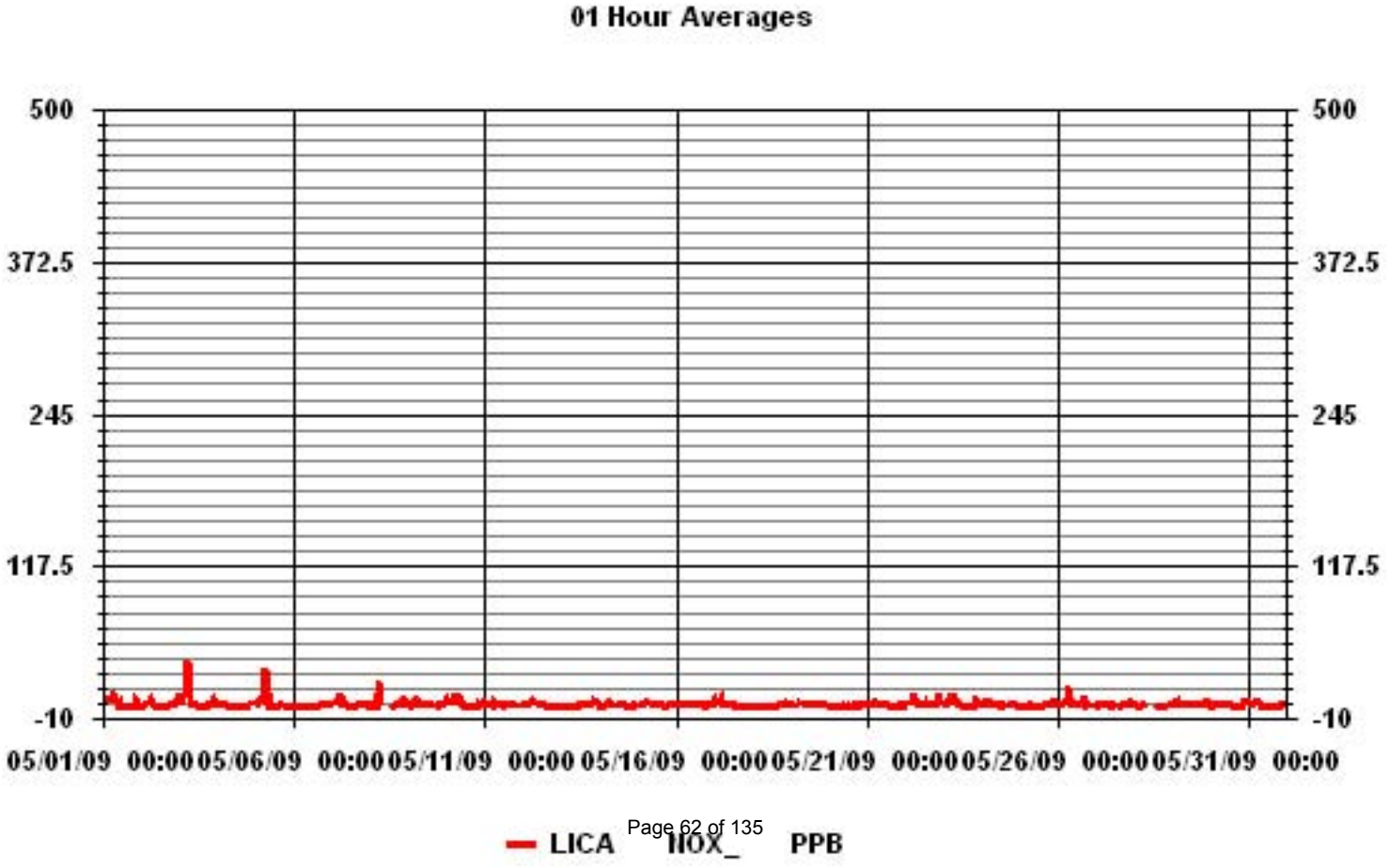
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	521					
MAXIMUM 1-HR AVERAGE:	39	PPB	@ HOUR(S)	5	ON DAY(S)	3
MAXIMUM 24-HR AVERAGE:	5.6	PPB			ON DAY(S)	3
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		742	HRS
MONTHLY CALIBRATION TIME:	16	HRS	AMD OPERATION UPTIME:		99.7	%
STANDARD DEVIATION:	3.05		MONTHLY AVERAGE:		2.03	PPB


01 Hour Averages
500
372.5
245
117.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA NOX_ PPB

LICA
NOX_ / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	5.77	9.52	10.82	6.78	6.49	7.35	8.80	2.45	2.02	3.03	7.35	6.20	8.22	6.20	5.19	3.75	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	5.77	9.52	10.82	6.78	6.49	7.35	8.80	2.45	2.02	3.03	7.35	6.20	8.22	6.20	5.19	3.75	

Calm : .00 %

Total # Operational Hours : 693

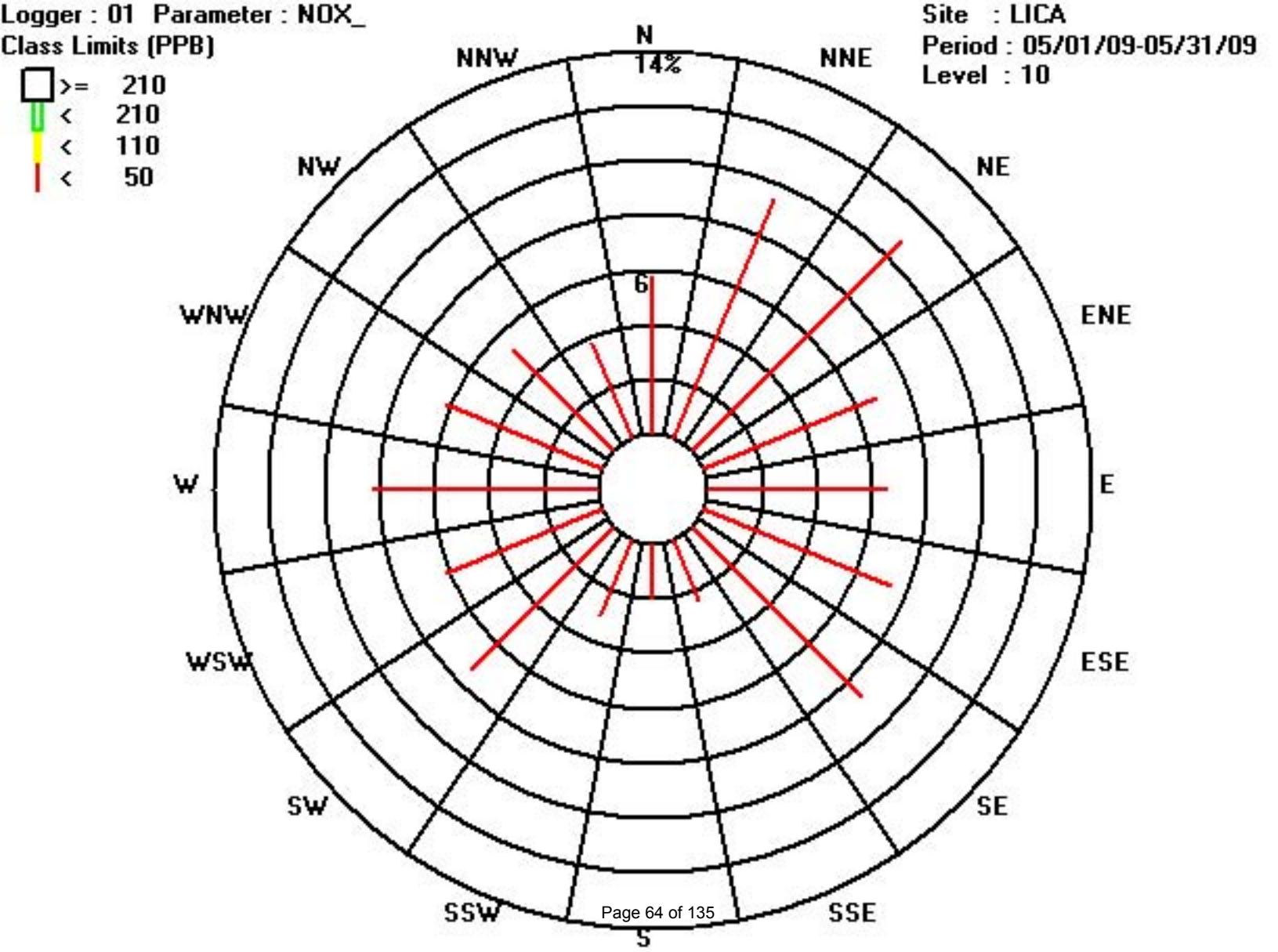
Distribution By Samples

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	40	66	75	47	45	51	61	17	14	21	51	43	57	43	36	26	693
< 110																	
< 210																	
>= 210																	
Totals	40	66	75	47	45	51	61	17	14	21	51	43	57	43	36	26	

Calm : .00 %

Total # Operational Hours : 693


Logger : 01 Parameter : NOX_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

OXIDES OF NITROGEN MAX instantaneous maximum in ppb

MST

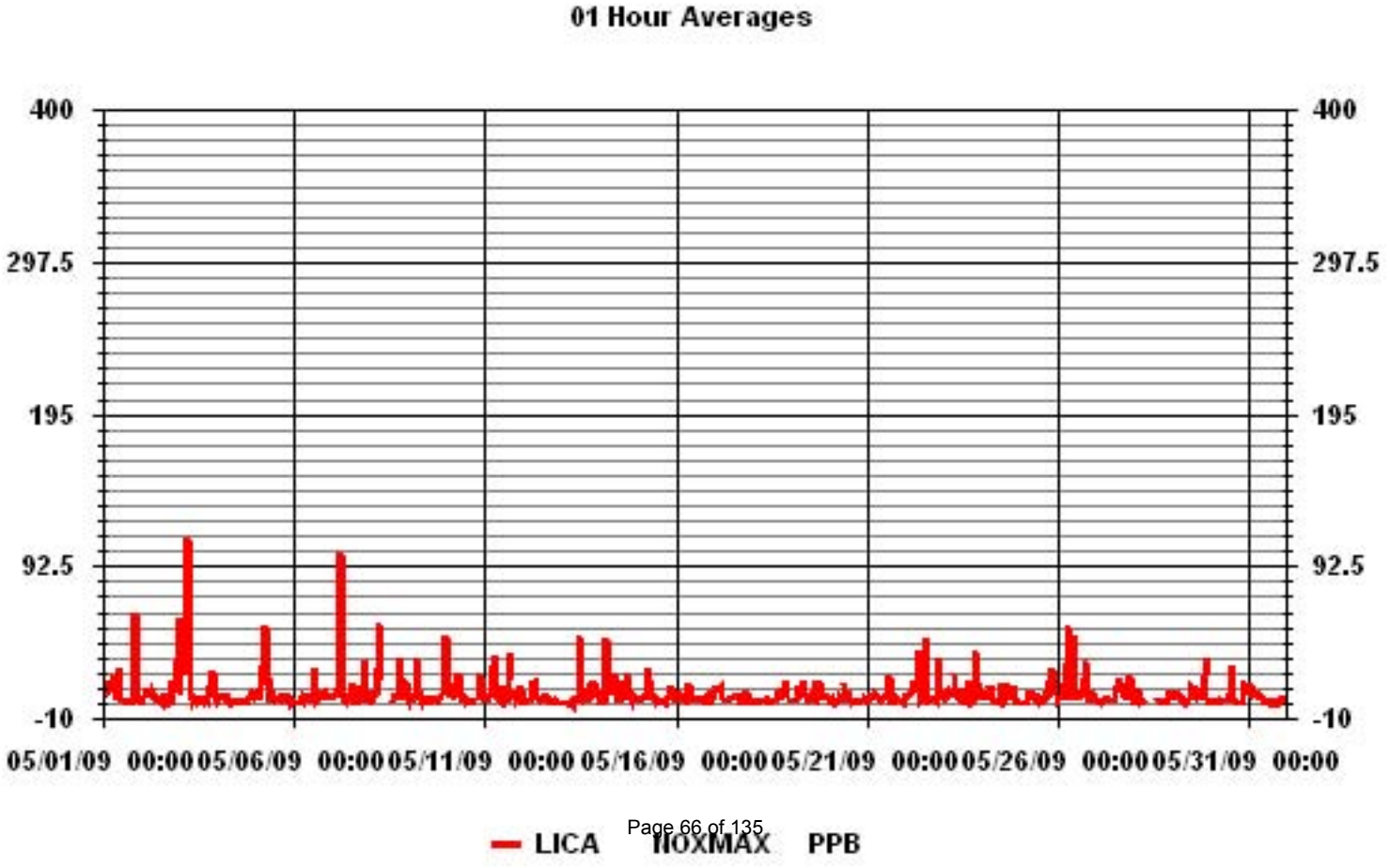
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	5	6	10	14	**IZS**	10	15	13	9	3	24	2	2	2	2	1	1	1	3	1	61	32	4	1	61	9.7	24
2	1	4	8	**IZS**	6	7	10	8	4	3	3	2	3	1	6	2	1	4	3	16	9	10	28	9	28	6.4	24
3	57	8	**IZS**	21	80	**112**	39	6	2	4	2	5	1	1	3	1	3	2	8	12	9	22	5	2	**112**	17.6	24
4	4	**IZS**	6	5	5	4	5	1	0	1	1	1	1	1	1	1	1	1	1	3	5	7	5	8	8	3.0	24
5	**IZS**	5	9	13	25	31	53	16	16	3	3	5	2	3	2	2	6	3	4	4	4	1	3	**IZS**	53	9.7	24
6	0	0	0	0	1	5	3	6	1	5	**M**	**M**	3	23	2	3	5	2	7	8	5	5	**IZS**	4	23	4.2	22
7	4	5	7	10	9	102	8	4	2	5	5	2	2	13	2	1	2	2	12	3	26	**IZS**	3	5	102	10.2	24
8	2	3	7	5	23	55	17	**C**	**C**	**C**	**C**	**C**	**C**	**C**	3	6	2	5	2	28	**IZS**	16	15	4	55	12.1	24
9	2	7	4	3	4	30	9	6	2	4	3	2	3	3	2	3	3	4	2	**IZS**	5	6	10	45	45	7.0	24
10	7	9	7	6	9	14	12	21	5	2	2	6	1	2	1	1	1	1	**IZS**	4	20	12	18	2	21	7.1	24
11	2	2	6	7	4	25	33	5	3	3	2	11	1	3	3	15	32	**IZS**	7	3	5	2	12	10	33	8.5	24
12	2	1	1	2	3	16	13	14	6	4	2	3	3	5	6	5	**IZS**	1	1	3	1	1	0	0	16	4.0	24
13	0	0	0	0	1	0	2	0	5	2	2	46	9	6	9	**IZS**	3	5	12	13	15	7	8	7	46	6.6	24
14	1	1	1	2	44	19	22	6	14	21	13	3	3	14	**IZS**	5	3	21	4	4	2	6	5	3	44	9.4	24
15	3	3	3	5	5	7	24	4	16	4	4	1	2	**IZS**	2	3	2	1	4	5	7	12	7	3	24	5.5	24
16	3	8	5	5	5	4	3	11	11	6	3	3	**IZS**	3	2	2	3	1	1	1	5	6	4	6	11	4.4	24
17	12	7	10	11	12	5	2	2	2	4	3	**IZS**	6	5	2	6	1	1	1	6	6	0	0	0	12	4.5	24
18	1	1	1	1	1	2	2	2	3	1	**IZS**	1	1	2	2	6	5	3	10	7	7	16	5	2	16	3.6	24
19	2	2	2	2	3	12	5	6	13	**IZS**	5	3	5	7	5	4	16	5	15	6	5	7	6	5	16	6.1	24
20	4	0	3	1	0	1	5	3	**IZS**	12	2	2	9	4	1	2	2	2	1	1	2	3	5	4	12	3.0	24
21	3	5	4	4	8	7	6	**IZS**	4	2	3	6	11	10	19	1	1	6	2	3	2	2	2	1	19	4.9	24
22	5	5	6	7	8	13	**IZS**	12	35	2	3	5	4	44	7	2	2	3	3	2	18	30	6	7	44	10.0	24
23	5	4	6	9	7	**IZS**	18	12	8	4	2	10	1	1	3	1	15	1	2	8	35	15	9	7	35	8.0	24
24	2	6	7	5	**IZS**	11	7	3	3	2	1	2	13	1	2	6	14	2	7	2	11	2	1	1	14	4.8	24
25	0	0	0	**IZS**	1	9	3	8	5	3	2	7	1	2	5	3	5	3	15	16	23	9	7	2	23	5.6	24
26	3	4	**IZS**	5	13	27	53	12	2	6	46	4	4	4	9	5	17	29	9	3	3	5	8	4	53	12.0	24
27	2	**IZS**	3	1	3	2	2	4	3	2	2	2	7	11	15	**M**	**M**	6	13	3	7	18	5	2	18	5.4	22
28	**IZS**	2	10	2	3	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	3	1	1	1	1	1	6	6	**IZS**	10	3.0	24
29	6	5	5	9	4	7	3	2	1	3	4	12	11	2	11	5	6	2	7	3	19	28	**IZS**	1	28	6.8	24
30	1	1	2	1	1	3	2	3	2	2	5	5	5	26	3	2	1	0	0	0	14	**IZS**	12	8	26	4.3	24
31	7	13	6	6	6	9	4	4	2	3	1	1	2	1	0	1	1	1	0	1	**IZS**	3	3	4	13	3.4	24
HOURLY MAX	57	13	10	21	80	112	53	21	35	21	46	46	13	44	19	15	32	29	15	28	61	32	28	45			
HOURLY AVG	5.0	4.0	4.8	5.6	10.1	18.4	13.1	6.9	6.4	4.1	5.5	5.6	4.1	7.1	4.5	3.4	5.3	4.0	5.2	5.7	11.4	10.0	7.0	5.4			

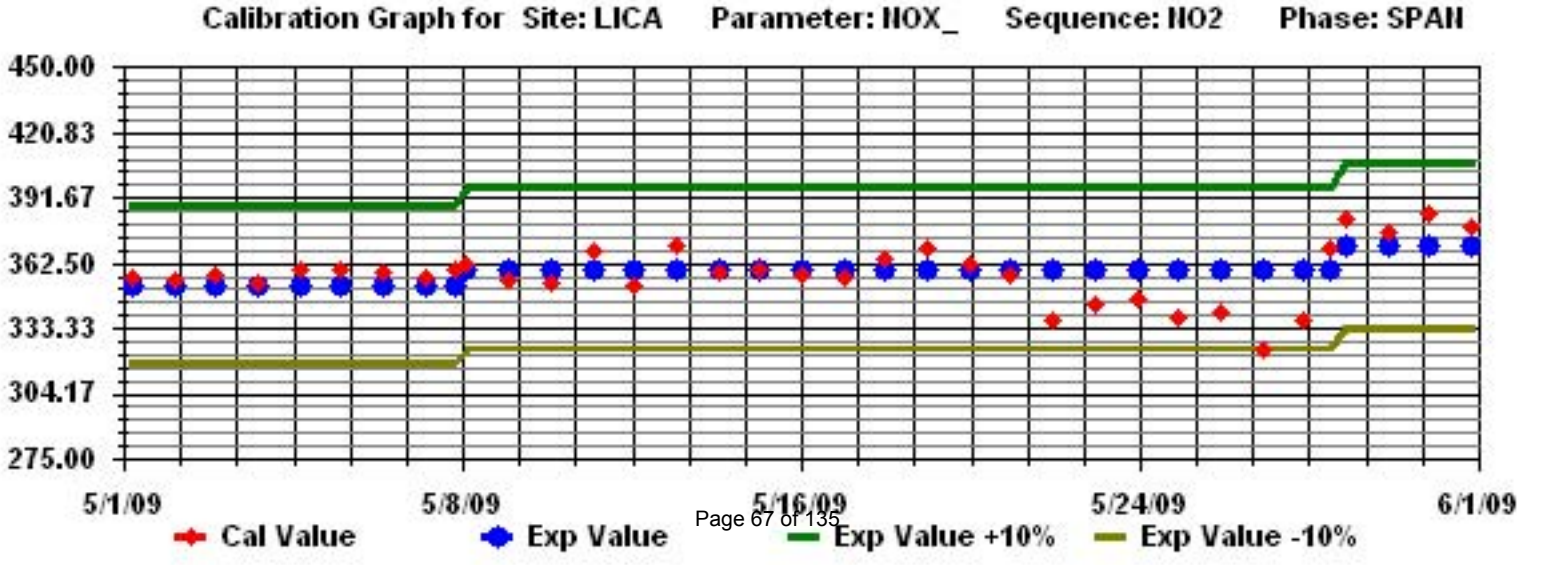
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	665					
MAXIMUM INSTANTANEOUS VALUE:	112	PPB	@ HOUR(S)	5	ON DAY(S)	3
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		740	HRS
MONTHLY CALIBRATION TIME:	16	HRS				
STANDARD DEVIATION	10.12					


01 Hour Averages
400
297.5
195
92.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA
NOXMAX
PPB


Calibration Graph for Site: LICA Parameter: NOX_ Sequence: NO2 Phase: SPAN
450.00
420.83
391.67
362.50
333.33
304.17
275.00
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ozone

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

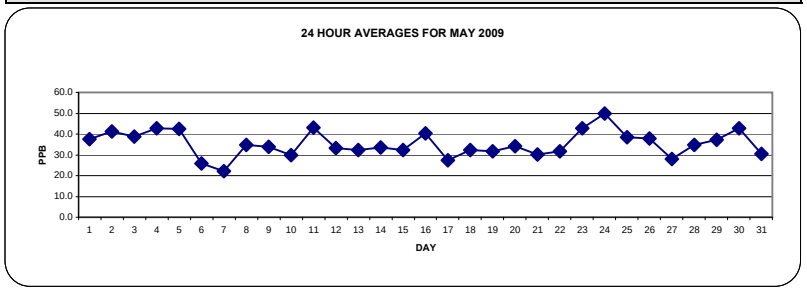
OZONE (O_3) hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	24	17	14	11	**IZS**	17	22	28	38	46	48	49	48	50	51	51	49	47	47	45	34	34	45	47	51	37.5	24
2	48	45	41	**IZS**	26	22	30	46	49	48	49	50	50	52	52	51	49	49	48	42	34	28	19	19	52	41.2	24
3	14	16	**IZS**	4	2	3	14	42	49	52	53	54	54	52	53	52	51	53	55	52	44	37	40	45	55	38.7	24
4	32	**IZS**	23	21	28	33	39	48	50	50	52	52	51	51	52	53	55	56	54	51	45	34	27	25	56	42.7	24
5	**IZS**	19	16	15	14	13	12	38	44	55	58	60	60	59	60	61	60	61	59	58	45	36	32	**IZS**	61	42.5	24
6	29	29	29	27	26	25	24	24	24	23	**M**	24	21	21	26	30	33	32	30	27	27	24	**IZS**	15	33	25.9	23
7	11	15	11	11	7	6	12	15	16	16	21	22	26	30	29	31	36	39	36	35	32	**IZS**	27	23	39	22.0	24
8	23	24	23	20	9	8	32	35	35	39	44	52	46	43	44	45	45	45	44	36	**IZS**	31	37	40	52	34.8	24
9	39	36	32	30	21	14	23	30	34	37	39	40	42	42	42	43	42	41	42	**IZS**	39	35	25	14	43	34.0	24
10	11	6	4	2	1	2	8	20	33	39	42	44	45	47	48	48	48	48	**IZS**	44	34	34	32	49	49	30.0	24
11	47	40	33	26	28	15	31	38	44	47	49	50	50	50	49	50	49	**IZS**	50	49	48	49	49	48	50	43.0	24
12	47	46	44	41	39	35	33	36	38	43	47	47	44	35	28	24	**IZS**	20	18	17	17	20	22	25	47	33.3	24
13	29	29	28	29	32	31	31	31	32	32	31	32	34	37	39	**IZS**	42	42	42	38	29	27	19	30	42	32.4	24
14	31	32	32	32	30	29	30	32	33	35	39	41	40	40	**IZS**	41	41	40	40	38	33	26	18	19	41	33.6	24
15	22	15	13	15	12	13	20	27	36	40	40	42	41	**IZS**	46	46	49	47	44	36	38	36	35	33	49	32.4	24
16	36	35	30	29	27	32	31	30	35	36	39	41	**IZS**	50	54	53	53	52	52	51	47	36	41	35	54	40.2	24
17	22	23	19	13	18	37	36	37	38	38	37	**IZS**	33	32	32	30	24	24	25	22	25	25	22	21	38	27.5	24
18	24	26	25	25	26	28	30	31	31	32	**IZS**	32	35	36	36	37	39	40	39	36	35	31	34	36	40	32.3	24
19	37	35	33	32	31	29	30	29	31	**IZS**	36	37	36	34	33	32	30	30	30	30	28	29	30	29	37	31.8	24
20	28	25	23	22	24	23	26	31	**IZS**	34	38	44	43	42	42	42	43	44	43	43	41	35	25	27	44	34.3	24
21	24	20	20	15	14	22	32	**IZS**	40	**C**	**C**	**C**	**C**	**C**	39	40	41	38	37	35	35	34	32	26	41	30.2	24
22	19	11	8	4	3	10	**IZS**	25	33	38	40	42	43	43	46	49	52	51	50	49	40	26	26	23	52	31.8	24
23	19	16	14	16	16	**IZS**	27	39	41	51	54	55	55	57	57	58	59	60	60	55	41	41	49	46	60	42.9	24
24	45	34	30	33	**IZS**	26	37	45	47	50	54	59	61	60	60	59	60	**63**	61	56	54	54	52	43	**63**	**49.7**	24
25	34	33	33	**IZS**	32	32	32	35	41	42	41	42	43	43	44	44	45	46	46	42	34	30	36	38	46	38.6	24
26	36	28	**IZS**	20	22	19	13	33	39	41	45	48	51	53	49	50	43	44	45	45	43	39	37	30	53	38.0	24
27	27	**IZS**	26	25	28	30	31	28	24	21	28	31	31	30	34	36	35	33	31	28	22	18	23	22	36	27.9	24
28	**IZS**	30	27	22	22	19	20	22	**C**	33	34	37	38	40	41	41	42	45	47	48	45	40	39	**IZS**	48	34.9	24
29	29	26	24	20	25	30	32	34	36	38	39	42	45	47	47	46	46	45	44	42	38	37	**IZS**	42	47	37.1	24
30	42	43	42	39	39	37	39	41	43	44	43	43	42	43	46	51	53	51	52	53	37	**IZS**	28	34	53	42.8	24
31	37	28	23	19	18	27	31	32	35	38	39	38	38	37	36	36	37	33	30	27	**IZS**	23	19	17	39	30.3	24
HOURLY MAX	48	46	44	41	39	37	39	48	50	55	58	60	61	60	60	61	60	63	61	58	54	54	52	49			
HOURLY AVG	29.9	27.0	24.8	21.3	21.4	22.2	26.9	32.7	36.9	39.2	42.1	43.1	43.0	43.3	43.8	44.3	45.0	44.0	43.4	41.0	36.7	32.7	31.7	31.1			

STATUS FLAG CODES

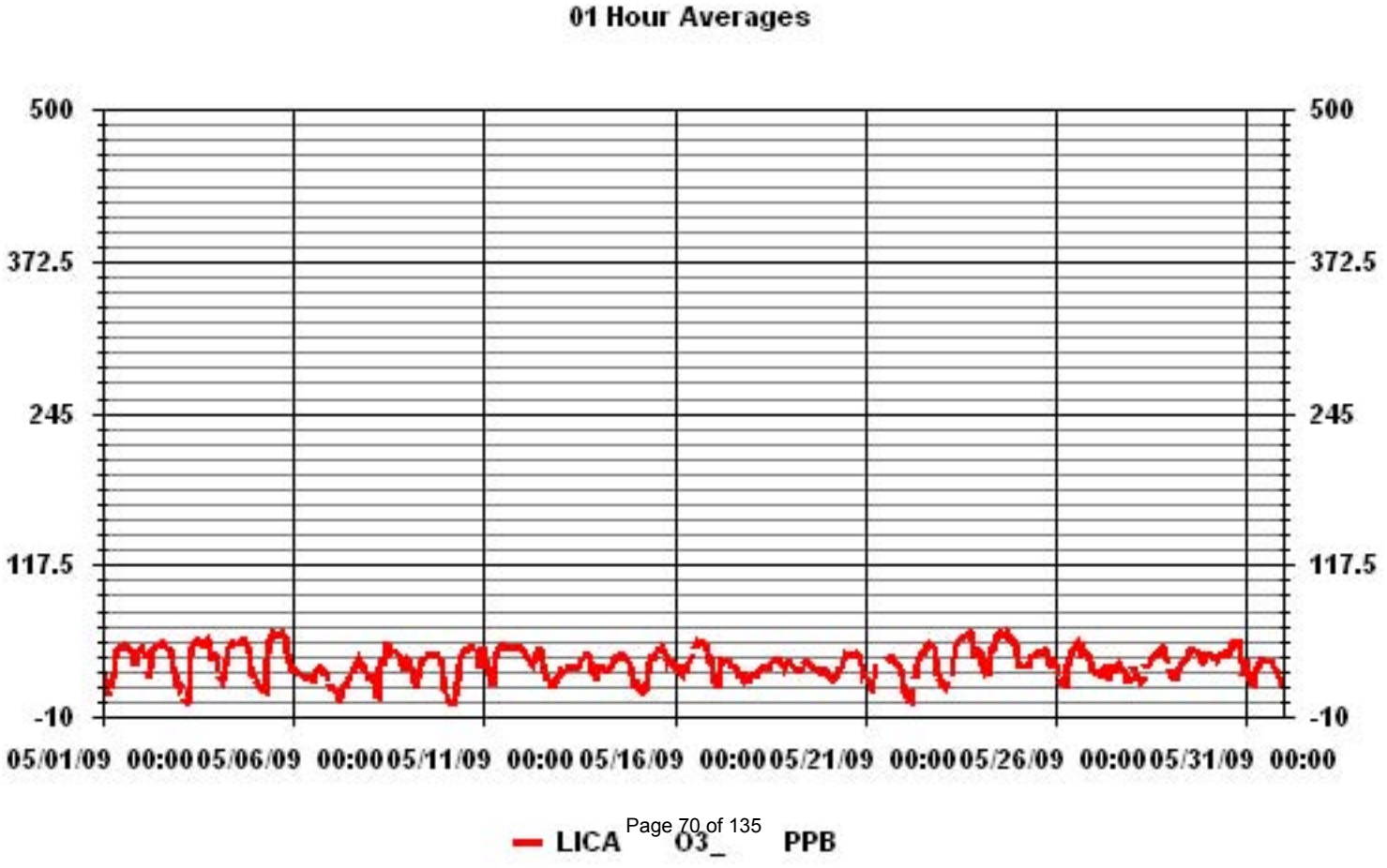
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	704					
MAXIMUM 1-HR AVERAGE:	63	PPB	@ HOUR(S)	17	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:	49.7	PPB			ON DAY(S)	24
					VAR-VARIOUS	
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME		99.9	%
STANDARD DEVIATION	12.29		MONTHLY AVERAGE		35.34	PPB


01 Hour Averages
500
372.5
245
117.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA O3_ PPB

LICA
O3_ / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	5.39	7.67	10.08	6.67	6.39	6.96	8.09	1.98	1.42	2.41	6.10	5.39	6.53	4.40	4.11	3.40	87.07
<	110	.42	1.70	.71	.00	.14	.56	.56	.42	.56	.56	1.13	.85	2.13	1.84	.99	.28	12.92
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	5.82	9.37	10.79	6.67	6.53	7.52	8.66	2.41	1.98	2.98	7.24	6.25	8.66	6.25	5.11	3.69	

Calm : .00 %

Total # Operational Hours : 704

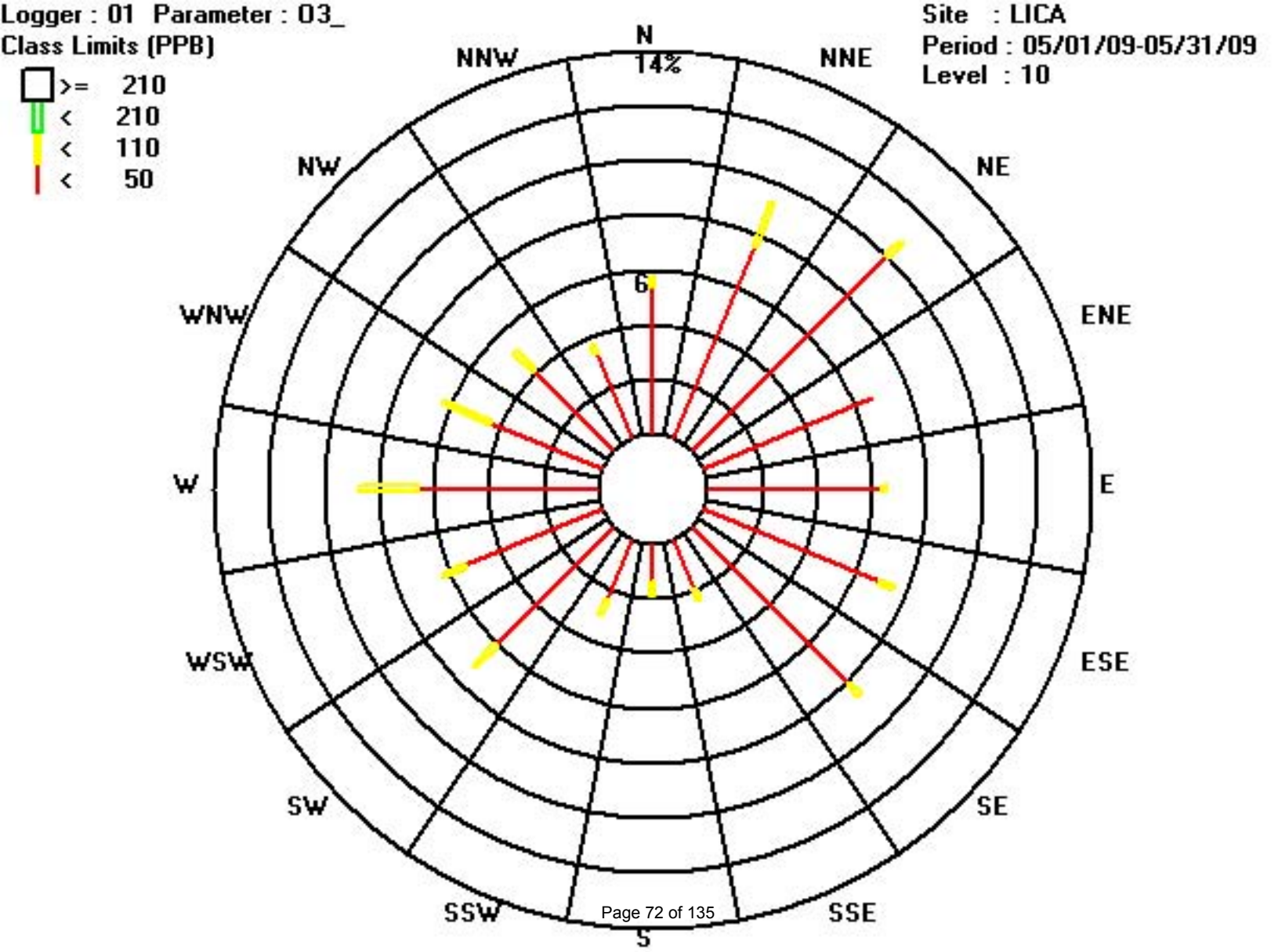
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	38	54	71	47	45	49	57	14	10	17	43	38	46	31	29	24	613
<	110	3	12	5		1	4	4	3	4	4	8	6	15	13	7	2	91
<	210																	
>=	210																	
	Totals	41	66	76	47	46	53	61	17	14	21	51	44	61	44	36	26	

Calm : .00 %

Total # Operational Hours : 704


Logger : 01 Parameter : 03_
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : LICA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

OZONE MAX instantaneous maximum in ppb

MST

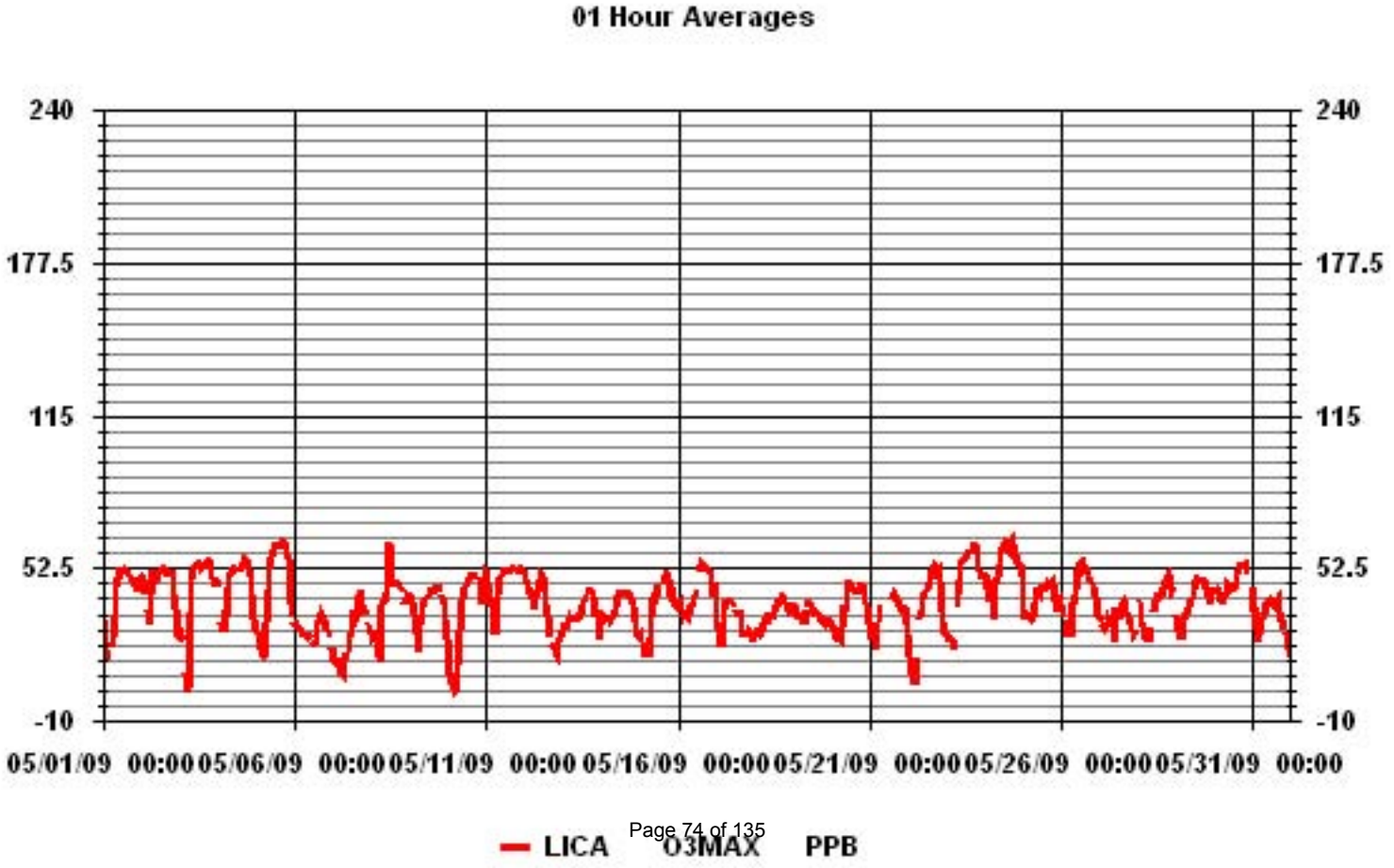
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	31	20	16	16	**IZS**	22	24	33	45	48	51	51	52	50	52	52	50	48	48	47	46	43	46	48	52	40.8	24
2	49	48	43	**IZS**	34	29	42	52	51	49	50	51	52	53	53	52	51	50	50	50	42	36	24	29	53	45.2	24
3	25	24	**IZS**	8	2	4	34	48	51	53	54	55	55	53	54	54	52	55	56	55	49	46	46	48	56	42.7	24
4	46	**IZS**	29	26	34	34	45	50	51	51	53	53	52	52	54	54	57	57	56	53	50	42	32	28	57	46.0	24
5	**IZS**	25	20	19	17	16	30	43	52	57	60	62	62	60	62	63	61	63	62	59	57	39	34	**IZS**	63	46.5	24
6	30	29	29	28	27	26	25	25	24	25	**M**	**M**	22	23	30	31	35	34	32	29	28	26	**IZS**	19	35	27.5	22
7	14	17	14	13	10	9	15	16	17	18	25	25	32	35	32	33	41	43	38	36	35	**IZS**	29	26	43	24.9	24
8	24	25	26	25	17	14	37	38	39	42	48	63	54	45	46	46	46	46	45	44	**IZS**	39	41	41	63	38.7	24
9	41	39	35	33	26	18	29	33	37	39	40	41	43	43	43	44	44	44	44	**IZS**	41	39	32	24	44	37.0	24
10	18	10	6	4	2	3	13	27	39	40	44	45	47	48	49	49	49	49	**IZS**	48	40	38	45	51	51	33.2	24
11	50	46	39	38	40	25	38	42	48	49	51	51	51	51	51	52	53	**IZS**	52	51	51	53	51	51	53	47.1	24
12	47	47	45	43	41	38	36	41	43	47	50	49	47	38	33	26	**IZS**	21	20	18	17	22	24	27	50	35.7	24
13	29	29	29	31	33	32	32	32	33	34	33	34	37	39	41	**IZS**	43	43	43	41	34	33	23	35	43	34.5	24
14	33	32	33	32	32	31	32	33	35	37	41	42	42	43	**IZS**	43	42	42	41	39	37	31	26	25	43	35.8	24
15	26	23	19	20	17	17	24	32	40	42	41	44	44	**IZS**	47	49	50	50	48	41	42	40	38	37	50	36.1	24
16	38	39	36	33	34	33	32	34	37	38	41	43	**IZS**	52	55	54	54	54	53	52	51	41	45	45	55	43.2	24
17	28	30	26	20	29	39	37	38	39	39	38	**IZS**	35	34	34	34	25	25	26	24	27	26	23	23	39	30.4	24
18	26	27	27	26	27	30	31	31	33	33	**IZS**	33	36	36	37	39	40	42	40	39	37	35	36	37	42	33.8	24
19	37	37	34	33	33	31	31	31	34	**IZS**	38	38	37	35	34	34	32	32	32	31	30	31	31	31	38	33.3	24
20	30	27	25	24	25	24	28	36	**IZS**	36	43	48	44	44	43	43	44	45	45	45	43	39	33	34	48	36.9	24
21	31	23	26	21	20	30	36	**IZS**	42	**C**	**C**	**C**	**C**	**C**	41	43	42	40	38	36	35	36	36	30	43	33.7	24
22	26	17	10	7	5	15	**IZS**	33	35	40	42	43	45	45	48	52	54	53	51	52	48	36	31	26	54	35.4	24
23	24	26	22	24	21	**IZS**	38	42	48	55	55	56	57	58	59	60	62	62	62	59	52	51	50	49	62	47.5	24
24	49	45	39	46	**IZS**	33	44	46	49	54	60	60	63	62	61	60	64	**65**	63	59	55	55	54	50	**65**	53.7	24
25	36	33	33	**IZS**	33	32	33	38	43	43	42	44	44	44	46	47	46	47	48	46	40	35	39	40	48	40.5	24
26	38	34	**IZS**	26	31	25	25	38	41	44	50	50	54	55	53	53	51	49	48	47	45	42	41	34	55	42.3	24
27	32	**IZS**	29	28	29	33	32	30	30	22	36	34	34	32	38	39	37	35	33	30	27	25	26	26	39	31.2	24
28	**IZS**	38	30	29	25	24	22	27	**M**	**M**	36	39	41	41	42	42	44	47	49	50	47	43	44	**IZS**	50	38.0	22
29	32	28	27	23	28	32	34	36	37	39	40	44	47	48	48	47	47	47	45	44	42	39	**IZS**	43	48	39.0	24
30	43	44	43	40	40	38	41	42	46	45	44	44	45	45	51	52	55	53	53	54	51	**IZS**	36	43	55	45.6	24
31	43	37	28	22	25	31	32	34	38	39	40	39	39	38	37	40	41	35	32	29	**IZS**	25	20	18	43	33.1	24
HOURLY MAX	50	48	45	46	41	39	45	52	52	57	60	63	63	62	62	63	64	65	63	59	57	55	54	51			
HOURLY AVG	33.7	31.0	28.2	25.4	25.4	25.6	31.7	36.0	39.9	41.4	44.5	45.8	45.3	44.9	45.8	46.2	47.1	45.9	45.1	43.6	41.3	37.4	35.7	35.1			

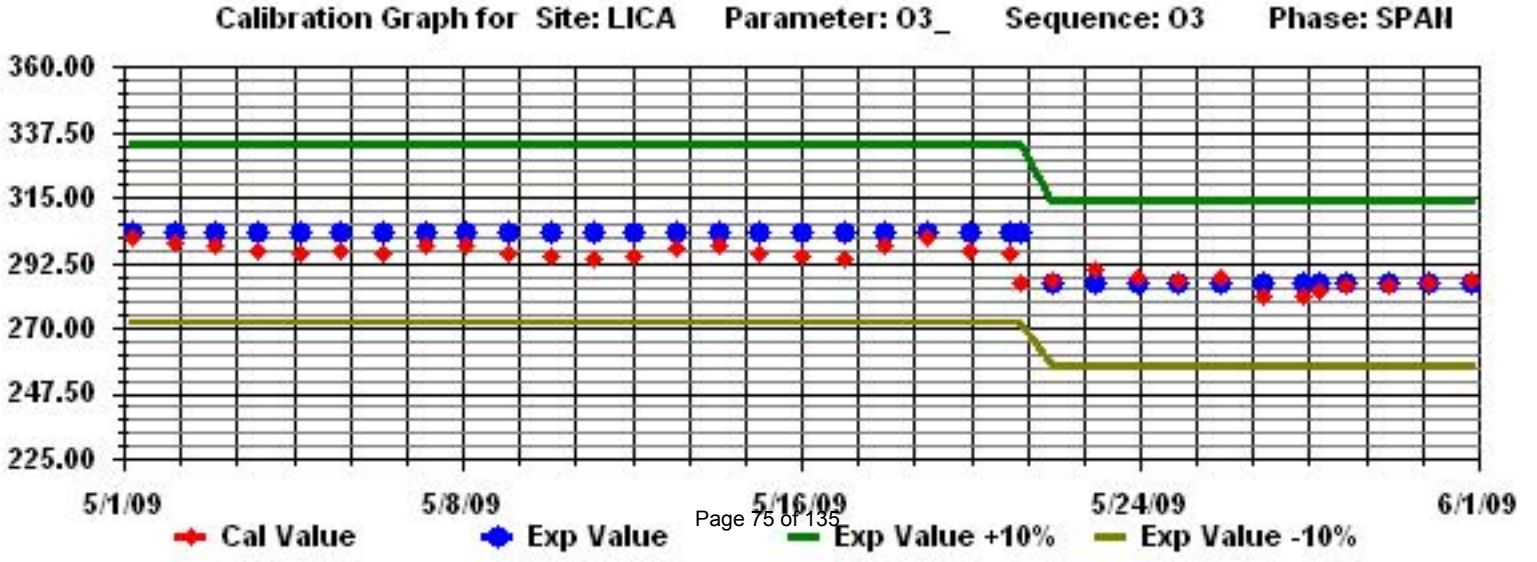
STATUS FLAG CODES

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

MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	702					
MAXIMUM INSTANTANEOUS VALUE:	65	PPB	@ HOUR(S)	17	ON DAY(S)	24
IZS CALIBRATION TIME:	33	HRS	OPERATIONAL TIME:		740	HRS
MONTHLY CALIBRATION TIME:	5	HRS				
STANDARD DEVIATION	11.73					


01 Hour Averages
240
177.5
115
52.5
-10
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA O3MAX PPB


Calibration Graph for Site: LICA Parameter: O3_ Sequence: O3 Phase: SPAN
360.00
337.50
315.00
292.50
270.00
247.50
225.00
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Ambient Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

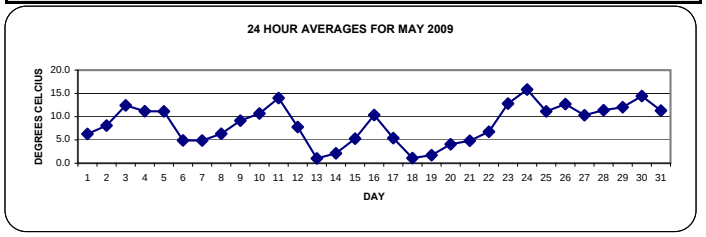
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	-1.9	-2.1	-1.7	-1.8	-2.1	-1.6	0.1	3.1	6.4	8.5	9.7	10.6	11.1	11.3	11.6	12	12.2	12.1	11.5	10.3	8.6	7.4	7.8	7.9	12.2	6.3	24
2	7.2	4.7	2.2	0	-1.8	-1.7	2.1	5.7	7.8	9	10.4	11.7	12.9	13.8	14.6	15.1	15.6	15.6	15.4	13.3	8.7	5.6	3.8	2.3	15.6	8.1	24
3	1.1	0	-0.6	-1.2	-1.6	0.5	5.6	10.4	13.6	15.6	17.3	18.5	19.8	20.8	21.4	21.8	22.1	22	21.2	19.2	15.5	12.7	11.2	11.5	22.1	12.4	24
4	8.1	6.6	5.6	3.8	5.2	7.3	10	11.9	12.6	13.6	14.5	16	16.8	17.3	16.9	16.1	14.9	14.5	13.8	12.9	11	7.5	6.1	5	17.3	11.2	24
5	3.5	1.4	0	-1.1	-1.7	0.4	5.8	10.2	14.4	16.7	18	18.7	18.9	18.3	19.3	19.7	18.9	18.7	16.3	14.5	12.7	9.7	7.6	6.4	19.7	11.1	24
6	5.3	3.6	1.8	1.4	1.2	0.8	0.8	1.8	2.9	3.1	3.4	4.2	5.2	7.3	9.3	10.2	10.8	10.7	10	8.3	6.7	5.1	2.7	0.9	10.8	4.9	24
7	-0.3	0.8	-0.4	-1.1	-2	-1.2	0.7	2.2	3.9	5.2	6.3	7.6	8.7	9.7	10.8	10.9	10.6	10.3	9.7	8.1	6.4	4.9	3.6	1.8	10.9	4.9	24
8	0.2	-0.4	-1	-1.9	-2.7	-0.7	0.7	2	3.7	5	6.6	8	9.3	10.7	11.9	12.8	13.3	13.7	13.3	11.8	10.3	8.5	8.5	8.5	13.7	6.3	24
9	7.6	7.1	5	3.6	2.1	2.2	4.7	7.1	8.8	10.7	12	12.5	13.2	12.7	13.8	14.6	13.7	14.2	13.7	11.7	10.5	8.6	5.5	4.1	14.6	9.2	24
10	2.5	1.4	0.4	-0.2	-0.9	0.1	4.6	7.7	11.3	13.1	15	15.3	16.3	17.6	18	18.4	18.5	18.6	17.9	15.9	11.7	10.5	9.9	12.8	18.6	10.7	24
11	11.1	10	8.7	5.6	4.7	5.1	10.2	13.1	15.2	16.6	17.7	18.4	19.1	19.9	19.7	19.1	18	16.4	16.6	15.9	14.3	13.7	13.7	13.3	19.9	14.0	24
12	12.3	11.2	10	9.2	9.1	9	10.9	12.7	13.6	13.6	14.8	14.8	14.2	12.6	10.7	8.6	5.1	2.8	0.9	-0.7	-1.6	-2.1	-2.5	-2.5	14.8	7.8	24
13	-2.6	-2.8	-2.7	-2.4	-2.6	-2.6	-2.7	-2.6	-2.1	-0.3	0.4	1.9	3.4	4.8	5.4	5.6	6.1	6.2	5.9	4.9	2.6	1.1	-0.2	0.1	6.2	1.0	24
14	0.9	0.5	0.3	0.1	0	0.2	0.6	1.2	1.3	2.3	3	3.6	3.1	3.9	4.5	5	5.2	5.1	5.1	4.5	2.6	0.7	-1	-1.6	5.2	2.1	24
15	-1.4	-2.3	-2.4	-1.9	-2.4	-1	1.4	4.1	6.8	7.5	8.4	8.3	9.9	11.3	12.4	10.9	11.4	9.2	8.4	8.1	6.8	5.4	4.3	3.4	12.4	5.3	24
16	3.2	2.5	1.7	2.1	2.8	4.2	5.4	7.6	9.5	10.5	11.6	14.5	15.8	16.8	17.5	17.4	17.6	16.6	16.3	15.4	12.8	8.9	9.4	8.4	17.6	10.4	24
17	7	6.6	6.1	5.3	5.9	6.7	6	6.8	7.7	8.3	8.6	8.5	8.4	9.8	8.4	6.1	4.8	3.4	2.6	1.8	0.9	0.2	-0.1	-0.4	9.8	5.4	24
18	-1.1	-2	-2.8	-3.3	-3.5	**-3.6**	-3.3	-3.1	-2.3	-1.2	0.3	1.3	2.7	3.8	4.7	5.6	6.1	6.1	5.9	4.9	3.5	2.4	2.6	2.9	6.1	1.1	24
19	3.1	2.6	2.1	1.8	1.8	2	2	2.3	2.8	3	2.9	2.7	2	1.5	1.9	1.8	1.5	1.2	0.9	0.4	0.4	0.4	0.2	0.1	3.1	1.7	24
20	0	-0.3	-0.4	-0.6	-0.6	-0.5	-0.1	0.8	1.2	1.8	3.2	4.8	6.3	7.3	8.7	9.7	9.9	10.7	10.2	7.6	5.7	5.2	3.4	3.7	10.7	4.1	24
21	3.4	3.2	3.5	3.2	2.7	3.3	4.3	5.2	5.6	7.6	5.4	5.6	7.1	7.5	7.4	7.6	7	6	5.2	4.6	3.9	3.3	2.5	0.7	7.6	4.8	24
22	-0.4	-1.6	-2.3	-3.1	-3.3	-1.1	1.6	4.4	7.1	8.7	10	11.1	11.7	12.6	13.4	13.6	14.3	14.9	14.8	13.9	10.4	6.1	3.6	2.1	14.9	6.8	24
23	0.9	0	-1	-1.5	-1.5	2.1	8	11.5	14.3	17.1	18.2	18.7	19.4	20.1	20.9	20.9	21.1	21.4	21.2	19.5	16.1	13.8	14.3	12	21.4	12.8	24
24	10.8	8.5	7.7	7.3	6.5	9.6	14.3	16.4	18.8	20.6	21.6	23	24	**24.5**	20.5	20.2	20.9	22.8	21.2	14.6	12.5	11.7	11.4	10.6	**24.5**	**15.8**	24
25	9.4	8.4	7.1	5.9	5.4	6.3	7.2	8.6	9.9	10.6	11.6	12.6	13.7	14.5	15.3	16	16.2	16.5	16.3	15.1	12.3	9.6	9.4	9.5	16.5	11.1	24
26	8.4	7	5.7	4.7	6.3	7.4	8.3	11.4	13.3	15.4	17.5	18.9	19.9	20.2	21	19.5	12.9	13.7	13.6	13.2	12.7	12	11.3	10.8	21.0	12.7	24
27	10	9.7	9.8	9.6	10	10.1	10.3	10.2	10	9.8	9.8	10.4	11.1	11	11.5	12.9	13.1	12.7	12.2	11.4	9.3	7.9	7.9	6.9	13.1	10.3	24
28	7.2	6.2	5.6	4.3	4.2	4.7	5.9	8.3	9.5	10.5	11.6	12.6	13.7	15.3	16.8	17.5	17.7	18.4	18.3	17.6	15	12.3	10	10.1	18.4	11.4	24
29	10.1	7.9	6.1	4.9	5.7	6.4	7.1	7.5	8.9	10.7	12.1	13.6	14.6	16.2	17.2	17.8	18.3	18.4	18.1	16.9	14.6	12.6	11.7	11.6	18.4	12.0	24
30	10.9	10.9	10.5	9.5	9.5	10.2	12.7	14.5	16.6	17.6	16.6	16.9	16.1	16.4	18.7	19.6	20.2	19.8	19.1	18	13	9.3	9.4	10.4	20.2	14.4	24
31	9.6	6	3.4	2.3	2.7	7	9.8	12.3	14.5	15.8	16.5	16.7	17.6	17	16	15.2	14.8	13.7	13.8	12.9	10.3	8.3	7.8	7.4	17.6	11.3	24
HOURLY MAX	12.3	11.2	10.5	9.6	10.0	10.2	14.3	16.4	18.8	20.6	21.6	23.0	24.0	24.5	21.4	21.8	22.1	22.8	21.2	19.5	16.1	13.8	14.3	13.3			
HOURLY AVG	4.7	3.7	2.8	2.1	1.9	3.0	5.0	6.9	8.6	9.9	10.8	11.7	12.5	13.1	13.6	13.6	13.3	13.1	12.6	11.2	9.0	7.2	6.3	5.8			

STATUS FLAG CODES

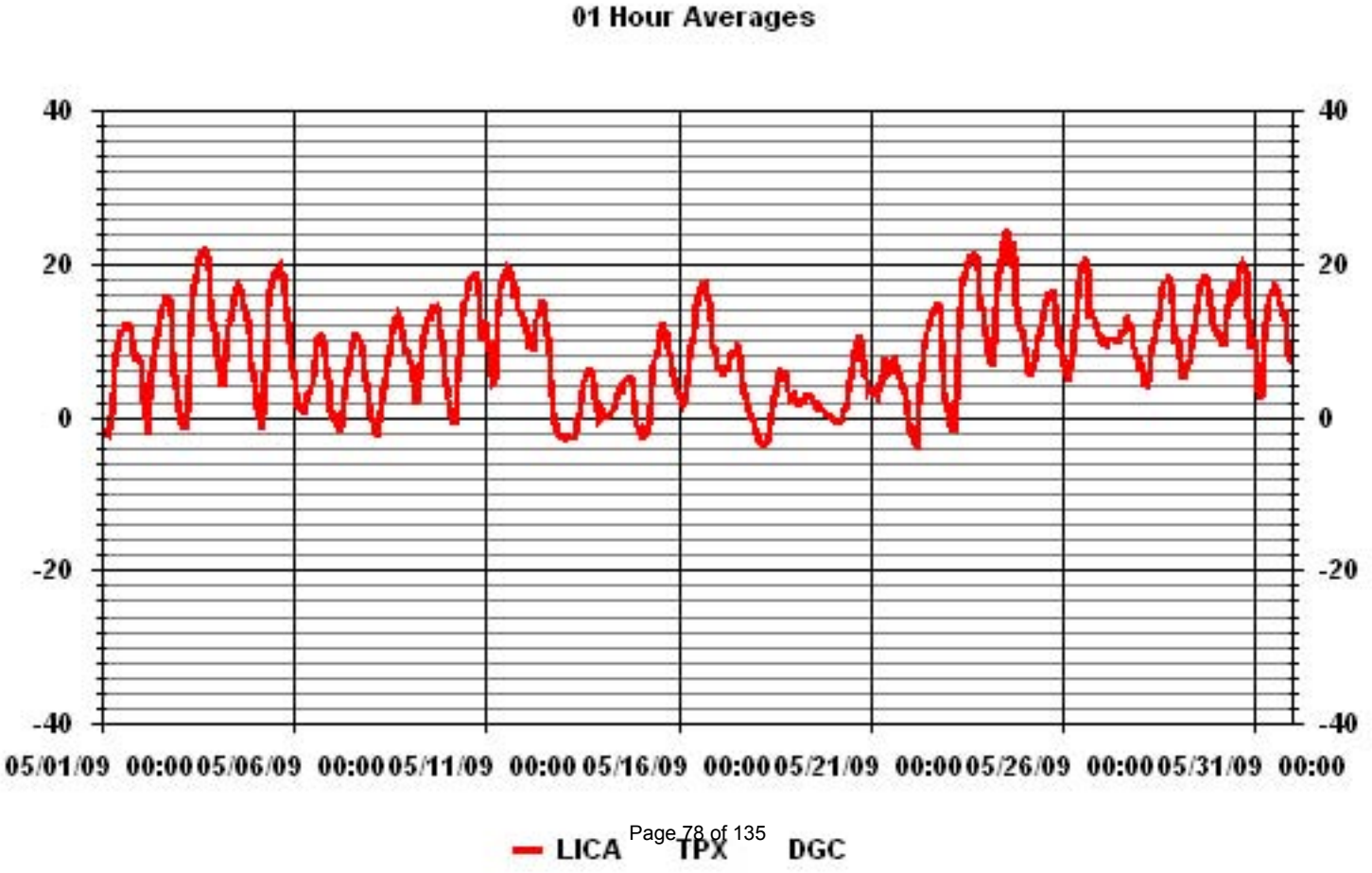
S	- OUT OF SERVICE	OD	- OUTSIDE DECTECTION LIMITS
N	- INVALID DATA	M	- MISSING DATA
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-3.6	^{O}C	@ HOUR(S)	5	ON DAY(S)	18
MAXIMUM 1-HR AVERAGE:	24.5	^{O}C	@ HOUR(S)	13	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:	15.8	^{O}C			ON DAY(S)	24
					VAR-VARIOUS	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		744	HRS
			AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	6.42		MONTHLY AVERAGE:		8.44	^{O}C

*** Outside detection limits of sensor.**


01 Hour Averages
40
20
0
-20
-40
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA
TPX
DGC

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

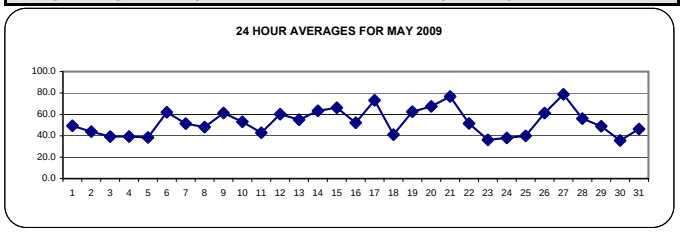
RELATIVE HUMIDITY hourly averages (%)

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	76.1	81.6	78.5	78.1	78.7	75.5	67.1	55.1	41.8	32.9	27.6	29.9	34.9	35.3	35.1	35.3	34.6	36.0	35.2	38.1	44.3	47.8	44.0	40.9	81.6	49.4	24
2	39.6	47.7	56.9	66.7	78.7	79.4	58.6	38.1	32.5	33.9	32.2	32.1	29.5	27.5	26.8	26.4	25.5	25.3	25.8	32.1	45.6	58.9	65.0	68.6	79.4	43.9	24
3	70.7	75.1	78.8	80.3	81.9	72.4	58.4	40.5	29.9	25.7	23.2	22.2	20.8	19.2	18.6	17.5	16.8	17.1	17.9	20.9	28.0	34.5	37.6	34.7	81.9	39.3	24
4	49.6	54.1	57.7	69.2	62.7	56.7	46.3	37.0	35.9	35.2	34.2	32.1	30.1	26.6	25.5	22.8	21.6	20.3	22.1	23.8	28.6	43.3	50.4	58.4	69.2	39.3	24
5	60.0	66.1	71.5	74.1	77.5	69.3	52.5	33.6	23.9	18.2	14.4	12.5	13.0	15.2	12.9	13.0	13.6	13.7	16.8	19.9	40.9	56.5	64.9	68.8	77.5	38.5	24
6	72.5	77.2	82.6	87.9	90.4	87.6	84.5	77.2	69.2	66.3	64.8	62.8	57.8	48.5	40.7	37.5	34.9	34.3	37.0	42.8	48.0	53.3	61.7	69.0	90.4	62.0	24
7	74.3	66.5	71.8	72.3	76.4	74.1	62.6	56.4	50.5	47.9	43.2	40.5	37.9	35.1	32.8	33.0	32.3	30.1	36.1	41.3	46.5	53.2	56.0	62.9	76.4	51.4	24
8	67.6	70.8	74.4	79.8	80.4	73.3	67.9	62.0	55.1	49.5	41.6	29.5	28.5	30.1	27.6	26.6	26.0	26.5	28.9	34.1	42.7	45.8	42.2	43.4	80.4	48.1	24
9	45.9	48.1	73.4	85.0	92.1	92.3	80.1	69.0	67.1	59.4	52.1	50.3	47.8	51.0	45.5	39.6	44.1	43.8	43.5	54.3	59.5	65.0	77.8	84.5	92.3	61.3	24
10	89.0	90.8	94.0	92.5	93.9	93.8	85.7	75.7	57.5	48.1	40.6	38.0	34.1	27.2	24.0	22.3	21.7	22.4	23.2	27.9	38.8	42.1	45.5	45.4	94.0	53.1	24
11	57.7	64.9	69.2	77.0	79.8	76.9	58.4	47.3	39.7	33.0	28.3	24.0	22.5	19.6	19.7	21.2	24.1	36.6	34.2	34.3	38.6	40.8	39.2	41.5	79.8	42.9	24
12	43.8	47.5	51.6	54.6	55.2	56.4	51.7	47.6	47.1	44.1	39.4	41.0	45.3	59.1	62.8	61.4	66.1	69.8	73.2	82.7	83.8	83.4	90.0	87.5	90.0	60.2	24
13	84.0	84.5	80.3	75.9	73.7	74.7	73.4	69.4	61.8	56.4	53.7	47.9	41.6	36.0	32.8	31.5	30.5	29.9	30.5	34.2	45.4	53.1	62.8	56.3	84.5	55.0	24
14	49.4	49.8	49.6	50.9	51.5	51.4	50.9	51.8	63.2	66.8	67.7	66.0	74.2	70.6	62.8	59.1	58.6	62.2	59.7	65.1	75.2	84.1	89.0	91.1	91.1	63.4	24
15	93.1	93.2	92.9	92.9	92.8	90.7	86.4	78.6	61.4	50.8	47.1	48.5	47.2	40.8	34.5	39.2	35.1	49.5	60.9	67.1	63.9	68.6	76.0	78.1	93.2	66.2	24
16	75.1	77.3	81.0	81.5	79.3	75.8	73.3	68.9	58.3	53.4	47.0	39.0	35.2	28.5	25.5	25.8	25.4	28.9	31.4	34.1	41.6	55.8	52.5	58.0	81.5	52.2	24
17	64.5	67.4	70.6	76.3	71.3	70.8	79.8	78.1	74.4	71.3	70.0	74.2	75.9	68.7	74.2	77.9	79.4	79.9	77.6	78.5	76.8	74.4	63.0	61.9	79.9	73.2	24
18	57.5	56.1	51.4	50.3	53.0	55.9	59.2	58.0	53.3	48.6	43.8	39.6	35.5	33.0	30.6	27.1	25.0	23.9	24.8	28.4	30.7	34.5	33.6	32.7	59.2	41.1	24
19	31.8	35.2	38.9	40.9	41.7	43.0	47.0	46.2	45.3	49.3	52.5	57.3	67.3	75.0	74.0	77.7	80.3	84.1	85.9	87.9	86.8	85.0	83.8	83.2	87.9	62.5	24
20	85.9	89.5	92.0	92.3	92.4	92.4	87.4	77.9	74.3	71.1	64.9	56.1	49.4	44.9	38.3	34.5	33.7	32.0	34.8	56.8	73.7	77.0	84.2	84.3	92.4	67.5	24
21	84.7	87.4	89.1	93.2	94.5	93.4	88.5	81.8	76.2	61.6	74.8	72.3	60.7	58.1	60.5	58.2	60.1	64.7	69.7	73.1	78.5	82.7	85.9	91.7	94.5	76.7	24
22	93.7	93.8	93.8	92.8	90.7	88.7	86.2	74.5	56.7	37.0	28.7	26.2	24.9	24.7	23.2	23.0	21.6	20.8	20.1	21.0	30.9	44.1	54.9	64.3	93.8	51.5	24
23	74.2	73.4	76.1	76.0	75.0	62.8	45.0	33.8	30.5	22.1	20.0	19.2	18.5	17.4	16.6	15.8	16.0	16.7	17.5	20.7	28.6	32.1	28.3	33.5	76.1	36.2	24
24	37.5	50.2	53.2	52.6	56.1	48.0	34.7	27.4	24.6	22.3	21.7	20.1	17.4	15.4	27.2	28.9	25.9	21.9	25.8	53.0	58.5	60.9	64.2	64.9	64.9	38.0	24
25	54.2	52.7	57.0	60.0	61.3	58.1	55.3	46.1	36.4	33.7	32.8	29.8	28.0	26.6	25.6	24.9	24.7	24.7	25.4	30.0	38.7	46.6	43.6	43.2	61.3	40.0	24
26	47.3	56.7	64.5	70.4	63.1	64.4	64.9	44.1	38.1	35.8	35.4	36.8	38.0	38.5	36.6	48.6	88.7	83.7	80.9	80.0	83.1	87.2	88.7	94.1	94.1	61.2	24
27	96.3	**97.8**	93.6	92.2	88.8	85.1	81.4	82.2	83.9	79.8	74.3	68.4	66.7	71.5	74.6	64.3	63.0	63.2	64.6	66.7	75.8	82.6	83.0	90.5	**97.8**	**78.8**	24
28	86.9	92.6	89.1	94.5	96.1	95.4	94.9	82.7	64.7	56.6	54.1	50.9	46.2	38.6	33.4	30.8	26.9	22.8	21.3	21.3	27.4	34.5	40.6	44.0	96.1	56.1	24
29	54.9	64.3	69.4	78.0	79.0	73.2	69.0	66.1	59.5	51.9	46.6	40.3	36.5	31.8	30.0	29.2	28.0	28.0	28.6	32.9	40.2	45.9	47.0	43.7	79.0	48.9	24
30	45.0	43.7	45.6	50.5	50.9	50.6	42.6	37.8	33.2	32.0	36.4	38.1	43.2	43.1	36.6	23.3	14.5	14.3	14.3	13.6	27.8	39.6	43.1	35.1	50.9	35.6	24
31	34.1	47.0	59.3	71.5	71.8	50.2	42.7	38.3	31.5	26.8	24.9	25.2	24.5	26.9	32.0	34.7	36.5	42.1	39.3	42.0	61.5	80.4	85.2	83.9	85.2	46.3	24
HOURLY MAX	96.3	97.8	94.0	94.5	96.1	95.4	94.9	82.7	83.9	79.8	74.8	74.2	75.9	75.0	74.6	77.9	88.7	84.1	85.9	87.9	86.8	87.2	90.0	94.1			
HOURLY AVG	64.4	67.8	71.2	74.5	75.2	72.0	65.7	57.5	50.9	45.9	43.2	41.0	39.8	38.2	36.8	35.8	36.6	37.7	38.9	43.8	51.3	57.9	60.8	62.6			

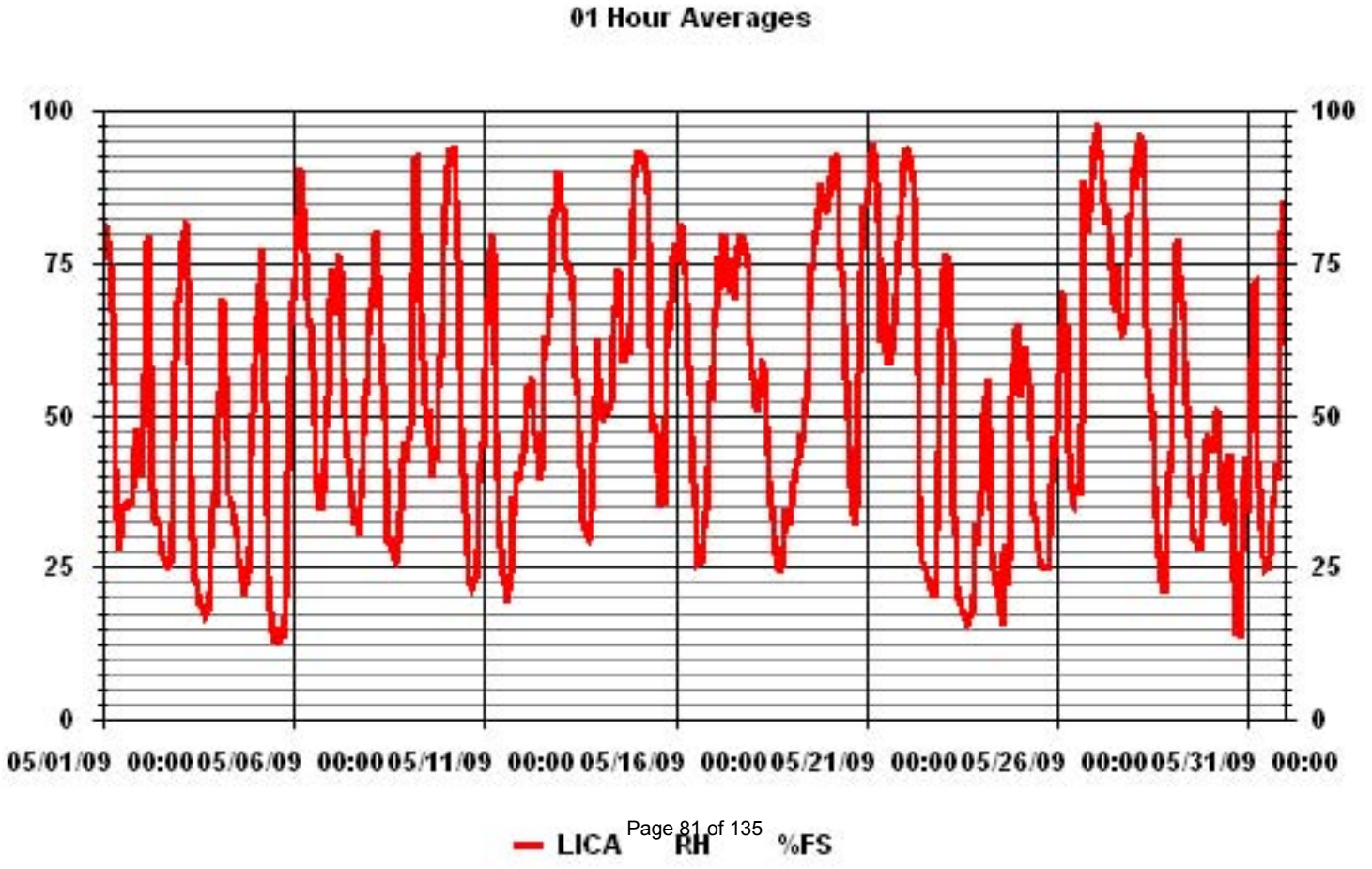
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	97.8	%	@ HOUR(S)	1	ON DAY(S)	27	
MAXIMUM 24-HR AVERAGE:	78.8	%			ON DAY(S)	27	
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		744	HRS	
			AMD OPERATION UPTIME:		100.0	%	
STANDARD DEVIATION:	22.27		MONTHLY AVERAGE:		52.90	%	


01 Hour Averages
100
75
50
25
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA RH %FS

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

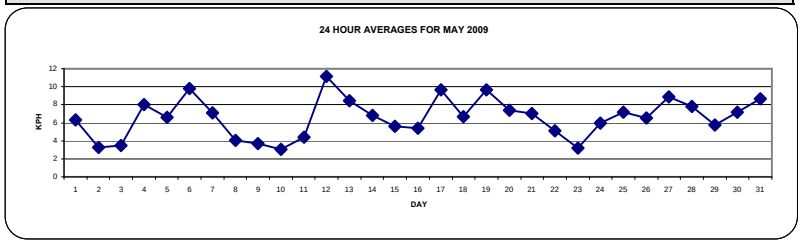
VECTOR WIND SPEED (WS) hourly averages (km/hr)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	1.4	1.4	0.4	0.7	1	2.1	2.1	4.3	6.8	9.8	12.1	15.6	16.7	15.4	16.1	15.3	14.8	13	8.7	4.7	0.8	2.2	4.9	7.7	16.7	6.3	24
2	5.5	2.3	1.6	0.9	0.9	1.8	1.7	5.4	9.4	12.1	11.5	11.4	11.4	6.9	5.2	6.4	5.5	6.3	3	0.6	1.3	1.1	0	0.5	12.1	3.3	24
3	0.5	0.4	0.5	0.7	0.5	1.4	0.9	5.3	6.7	8.4	7.3	6.5	5.4	7.2	7.7	7.2	6.7	6.4	5.5	2.6	3.5	3.5	4.3	5.8	8.4	3.5	24
4	1.2	2.3	0.5	1.2	5.7	6.6	9.2	13.8	14.5	14.9	14.1	13.2	13.4	15.1	14.6	14.5	13.4	13.6	12.3	4.7	2.3	1.8	1.3	2.1	15.1	8	24
5	2.9	0.3	0.3	0.6	0.3	0.2	0.8	1.2	1.9	6.4	7.2	4.1	4.3	10.4	11.8	12.4	11.2	10.2	8.8	7.9	18.1	14.6	13.5	8.4	18.1	6.6	24
6	9	10.1	11.2	10.6	10.6	12.4	12.9	9.9	10.9	13.2	12.7	12.5	10.5	10.6	11.7	11.7	12.4	11.9	9.2	6.6	7.4	3.9	2.4	1.1	13.2	9.8	24
7	1.2	4.4	3	3.2	1.5	1.7	5.8	5.4	3.7	6	8.1	11.8	11.8	10.7	12	12.5	14.4	13.9	10.6	9.3	5.9	4.6	5.2	4.2	14.4	7.1	24
8	4.9	4.2	2.5	0.5	1.5	1.4	4.3	4.5	3.8	4.1	3.9	5.1	8.7	7.8	6.6	6.6	5.9	4.3	4.1	3	0	2.4	2.5	4	8.7	4.0	24
9	3.1	2.5	1.8	2.7	1.1	0.6	1.7	2	4.2	4.9	6.1	4.4	5.4	5.2	5.2	5	6.7	4.4	5.3	6	6.1	2.7	1.2	0.2	6.7	3.7	24
10	1.7	1	0.3	0.6	0.6	0.3	1.6	3.9	2.6	1.4	3.1	2.3	3.1	3.8	4.4	3.7	5.4	5.9	3.9	1.8	1.2	2.1	3.9	15	15.0	3.1	24
11	6.7	0.8	2	1.2	0.8	0.4	0.1	3.8	3.9	1.2	3.4	4.1	6.1	5.7	8.2	8.6	5.2	11.3	4.3	4.3	7.2	2.6	5.9	7.1	11.3	4.4	24
12	6.7	8.2	9.6	7.5	4.5	3.7	2.6	2.5	5.4	7.7	11	12.5	12.5	14.1	15	19.4	**19.7**	18	16.9	13.6	16	15.9	11.5	13.2	**19.7**	**11.2**	24
13	14.9	14	12.2	14.4	14.8	12.5	12.3	14.2	11.9	11.1	8	8.1	7	4.7	6	5.8	6.4	5.1	4.7	4	1.8	2.5	1.3	5.2	14.9	8.5	24
14	9.4	9.4	9.6	8.9	8.3	6.9	6.3	8.2	8.9	6.3	7.8	9.3	9.6	8.9	9.2	6.4	5	6	5.7	6.5	3.8	1.6	0.5	1.5	9.6	6.8	24
15	1.8	1	1.3	0.6	0.2	0.5	3.2	5.9	6.6	8.9	9.5	7	10.6	10.4	12	12.5	9.3	9.4	5.5	3.3	4.8	5.2	2.5	2.6	12.5	5.6	24
16	2	0.6	0.7	0.9	2.2	2.1	2.7	3.2	3.4	3.5	5.3	7.2	8.6	9.8	11	8.8	11.3	10	11.9	8.6	4.3	2.7	5.1	2.9	11.9	5.4	24
17	0.8	0.6	0.3	0.6	1.9	7.5	10.2	11.8	9.9	10.6	9.6	9.1	8.9	10	14.5	15.2	15.7	13.9	13.7	13	12.6	15.3	14	12.7	15.7	9.7	24
18	13.7	11.4	10.4	9.1	9.1	8.7	8.8	9.6	8.4	6.6	6.3	6.2	6.9	6.6	5.2	3.4	3.7	4.6	5	2.6	3.8	2.4	3.4	4.2	13.7	6.7	24
19	6.6	6.6	6.3	6.2	7.9	5.8	8.4	11.1	10.7	12.9	15.5	18.8	15	13.6	13.4	13.2	11.2	10.8	11.8	9.1	4.9	4.6	4.5	3.4	18.8	9.7	24
20	1.7	2	2.9	4.3	5.2	6.1	7.4	10.5	11.1	10.4	9.2	10.5	10.8	9.1	10.3	10.1	10.9	11.9	10.7	12.8	5	1	1.4	2.4	12.8	7.4	24
21	0.9	0.9	1.4	0.9	1.5	4.5	7	7.2	7.8	7.4	6	7.1	10.6	13.3	14.7	15.9	14.7	12.9	11.9	8.2	6.7	4.9	0.3	2.8	15.9	7.1	24
22	2.3	0.7	0.4	0.8	0.4	3.1	3.8	5.9	7.1	7.4	8.4	8.3	10.3	8.1	9	9.2	10.7	9.8	8.4	5.9	1.4	1.1	0.7	0.1	10.7	5.1	24
23	0.3	0.1	0.2	0	0.4	0.3	0.3	2.5	4.3	3.9	4.9	3.8	6.8	5.4	5.3	6.2	4.7	3	2.6	3.4	2.2	5.5	6.1	5	6.8	3.2	24
24	3.9	0.7	1.4	2	2.3	1.4	0.2	5	5.8	7.2	5.8	8.1	6.1	7.3	18.5	6.4	4.8	7.7	3.4	13.5	10.1	7.6	6.4	7.5	18.5	6.0	24
25	8.8	10.1	8.4	6.7	5.1	7.1	8.3	9.6	12	12.2	10.8	10.1	6.7	6.6	6.6	4.5	5.1	5.4	6.1	3.4	2.9	4.4	4.8	5.6	12.2	7.1	24
26	4.8	1.1	0.4	0.7	1.6	1.1	2.5	7.8	9.5	9.9	14.1	14.9	15.3	11.4	9.1	8.5	4.2	6.5	7.6	8.7	4.6	5.7	2.2	3.8	15.3	6.5	24
27	0.5	6.7	11.2	9.4	10.2	13.9	13.3	13.3	14.1	16.3	14.2	12.9	7.2	4.7	5.6	8.2	9.6	11.6	10.2	6.6	3.9	2.6	3	4.6	16.3	8.9	24
28	5.4	5.4	5.9	1.5	1	1	4	7	10.2	12.8	12.3	12.3	11.9	11.2	12.4	11.2	13.1	11.1	10	7.1	5.3	3.7	4.3	8	13.1	7.8	24
29	6.2	4.8	5.7	4.8	5.6	8	9.4	8.7	3.8	3.6	4.5	4.3	4.1	4.1	4.8	6.5	5.5	6.2	7	6	4.4	5	5.7	8.7	9.4	5.7	24
30	8	7.8	9.4	7.2	10.1	9.1	10.5	9	2.4	4.7	5.8	6.5	5.7	2.5	4.2	11.5	15.7	14.3	12.6	8.5	0.6	0.5	0.6	4.2	15.7	7.1	24
31	3.5	3	1.5	2.8	3.2	5.6	6.7	6.5	7.3	11.3	12.7	10.9	10.5	13.8	16.9	12.8	16.8	14	12.7	10.5	7.2	5.3	5.4	6.2	16.9	8.6	24
HOURLY MAX	14.9	14.0	12.2	14.4	14.8	13.9	13.3	14.2	14.5	16.3	15.5	18.8	16.7	15.4	18.5	19.4	19.7	18.0	16.9	13.6	18.1	15.9	14.0	15.0			
HOURLY AVG	4.5	4.0	4.0	3.6	3.9	4.4	5.5	7.1	7.4	8.3	8.7	9.0	9.1	8.9	9.9	9.7	9.7	9.5	8.2	6.7	5.2	4.5	4.2	5.2			

STATUS FLAG CODES

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

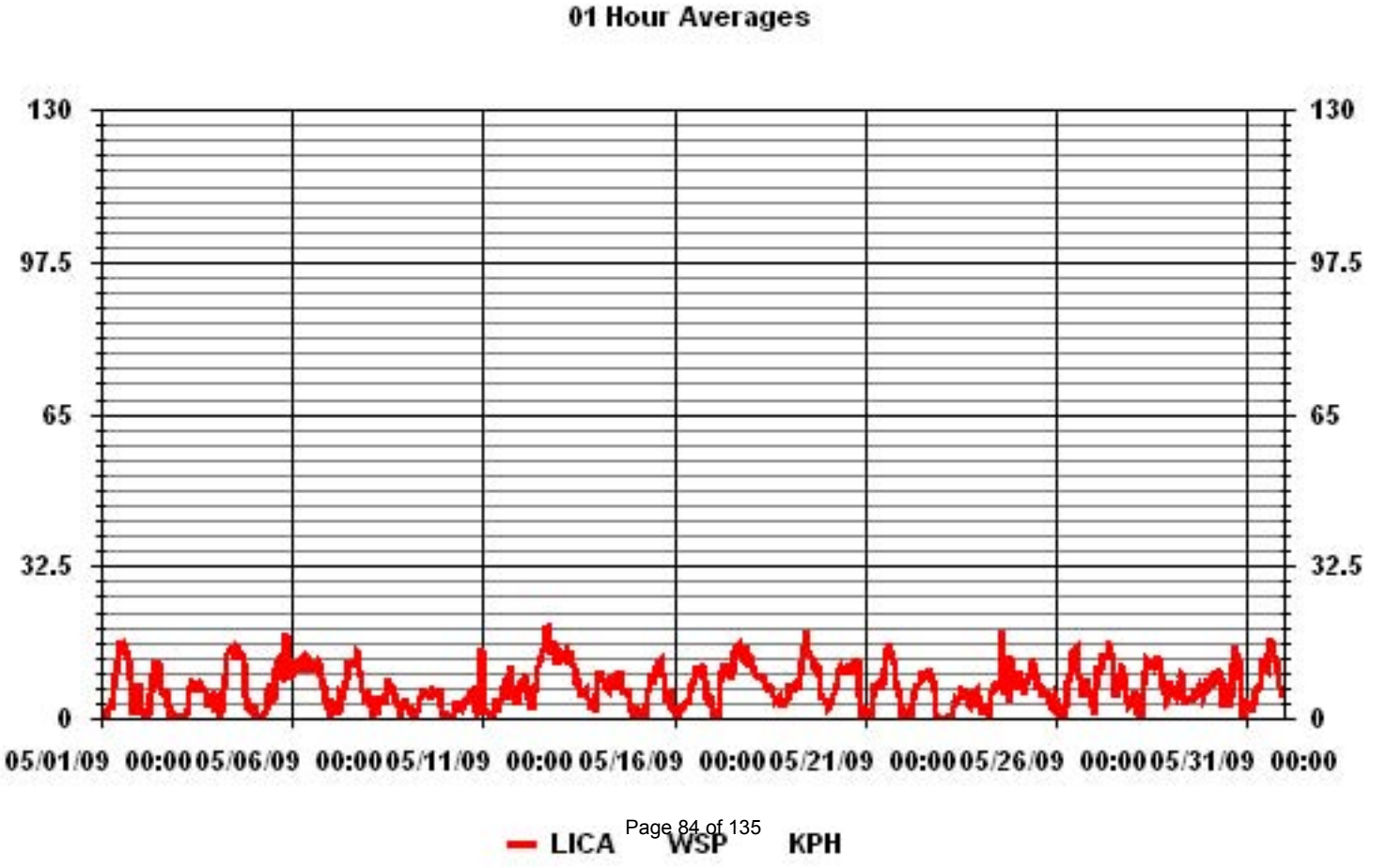


LAST CALIBRATION: November 5, 2008

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	19.7	KPH	@ HOUR(S)	16	ON DAY(S)	12
MAXIMUM 24-HR AVERAGE:	11.2	KPH			ON DAY(S)	12

CALMS (≤ 1 KPH)	2.82	%	OPERATIONAL TIME:	744	HRS
MONTHLY CALIBRATION TIME:	0	HRS	AMD OPERATION UPTIME	100.0	%
STANDARD DEVIATION:	4.41		MONTHLY AVERAGE:	6.70	KPH


01 Hour Averages
130
97.5
65
32.5
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA WSP KPH

LICA
WSP / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

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

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	1.61	1.61	3.22	5.64	3.09	4.30	5.77	2.01	1.20	2.01	4.70	3.49	2.68	1.88	1.74	1.07	46.10
<	12.0	1.74	5.51	5.91	.80	2.41	2.82	2.41	.13	.67	.67	2.15	2.28	3.22	1.88	2.15	1.34	36.15
<	20.0	2.15	2.28	1.74	.26	.67	.13	.26	.00	.00	.00	.26	.00	2.55	2.15	1.47	.94	14.91
<	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	5.51	9.40	10.88	6.72	6.18	7.25	8.46	2.15	1.88	2.68	7.12	5.77	8.46	5.91	5.37	3.36	

Calm : 2.82 %

Total # Operational Hours : 744

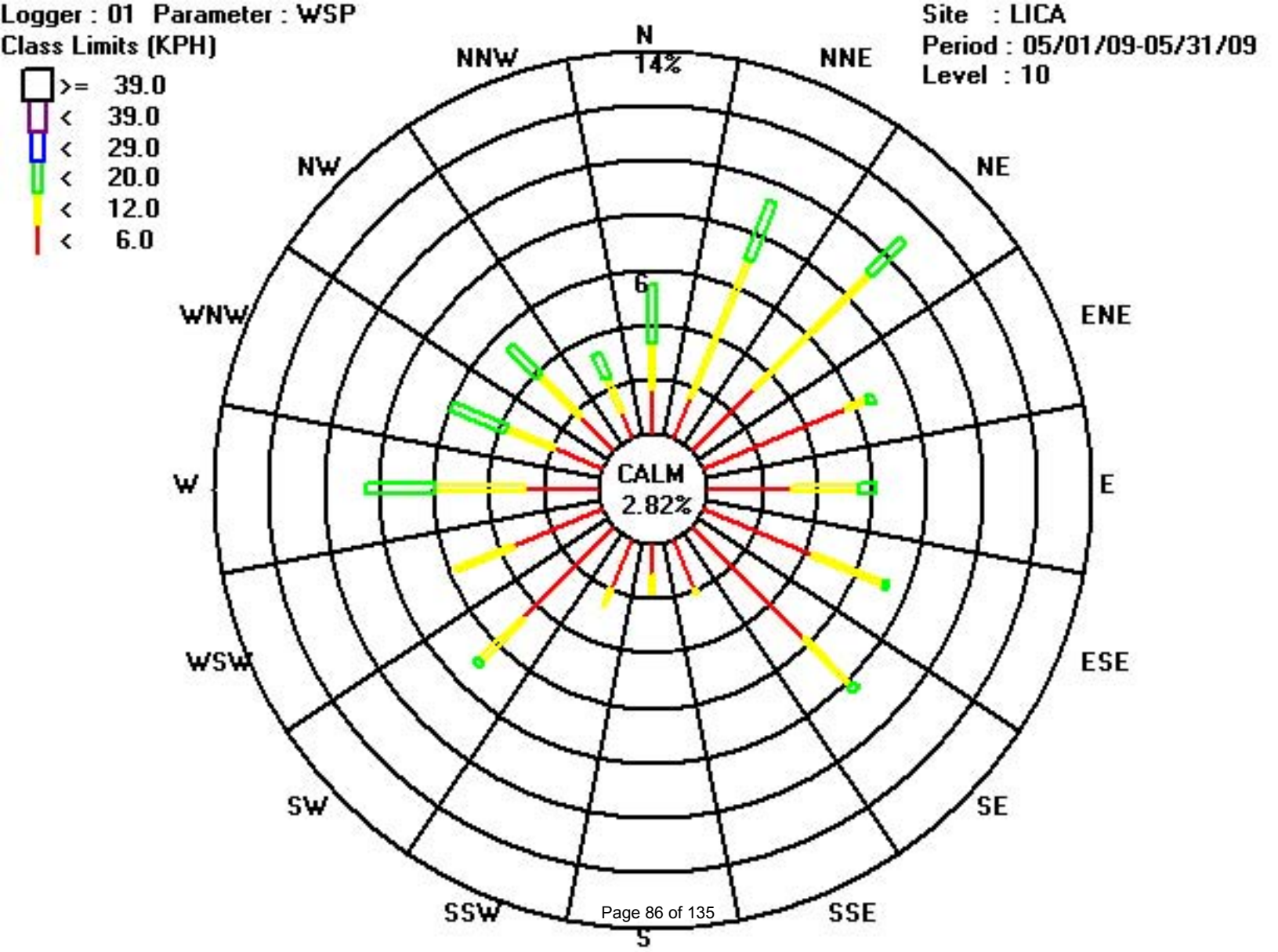
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	12	12	24	42	23	32	43	15	9	15	35	26	20	14	13	8	343
<	12.0	13	41	44	6	18	21	18	1	5	5	16	17	24	14	16	10	269
<	20.0	16	17	13	2	5	1	2				2		19	16	11	7	111
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	41	70	81	50	46	54	63	16	14	20	53	43	63	44	40	25	

Calm : 2.82 %

Total # Operational Hours : 744


Logger : 01 Parameter : WSP
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : LICA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6
CALM
2.82%

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

VECTOR WIND SPEED MAX instantaneous maximum in km/hr

MST

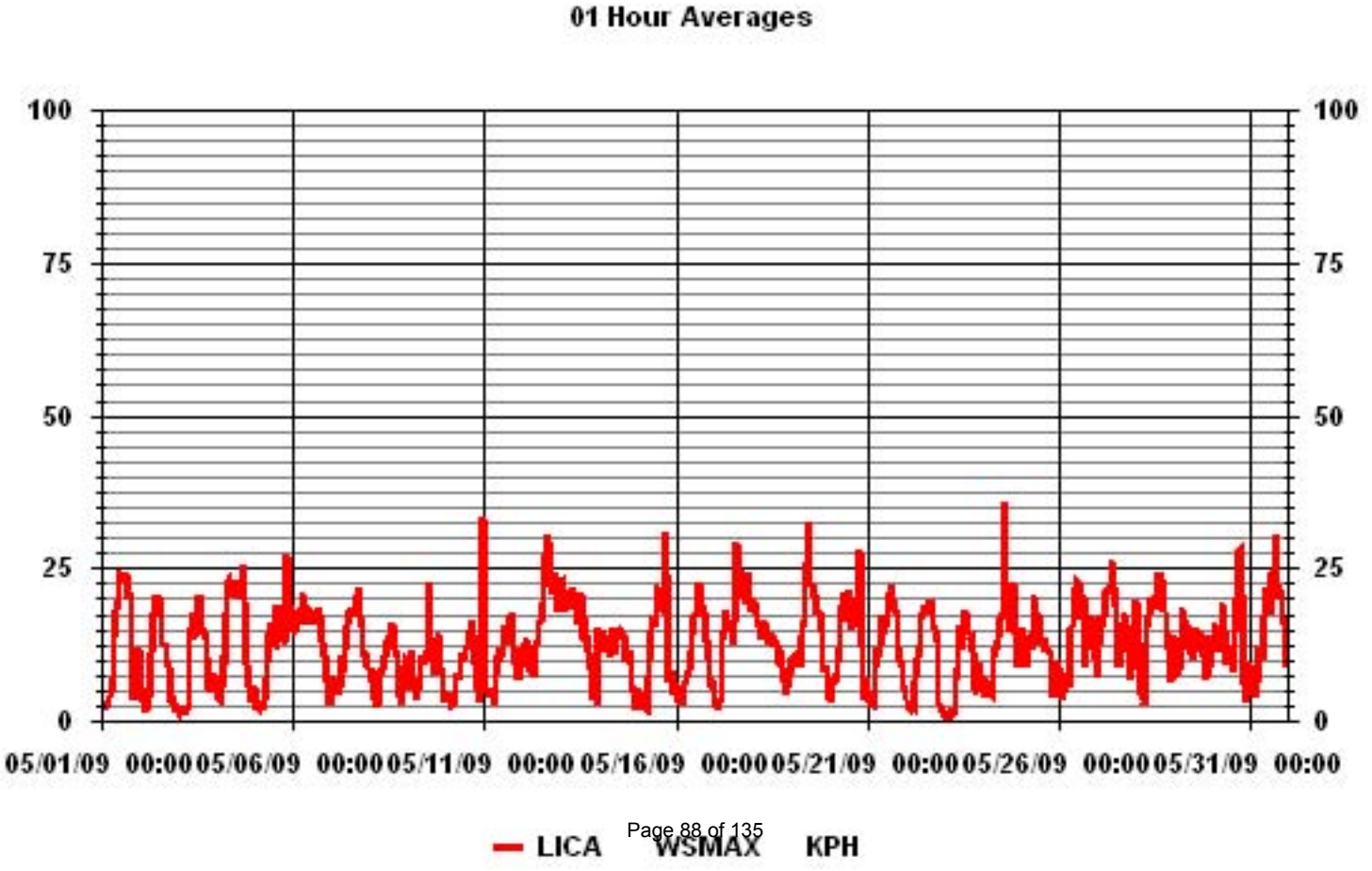
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.
DAY																									
1	2.5	2.7	1.9	3.3	2.3	4.1	4.8	7.1	13.5	18.1	19.9	24.6	23.7	23.5	23.5	23.4	24.2	20.6	20.5	9.3	3.3	4.4	9.8	11.7	24.6
2	9.8	4.7	3.5	2	2.1	5.4	3.7	11.1	17.8	18.9	20.4	19.3	20.5	17.3	12.9	12.6	12.4	10.1	9	3.2	4.6	3.1	1.3	1.9	20.5
3	1.4	2.4	1.5	1.5	1.5	2.3	2.5	14.4	15	17.5	16.7	14.2	14.4	20.3	20.2	15.5	14.5	13.8	10.7	5.7	5.3	5.3	6.5	7.8	20.3
4	5.1	3.9	3.7	5.4	10.8	9.2	17.8	22.7	23.2	22	23.2	20.3	22.6	22.5	20	22	20.9	25.5	19.7	9.4	5.7	4.5	2.8	4.3	25.5
5	5.8	2	2.9	2.3	3.1	1.7	3.2	7.1	9.5	14.5	16.1	12.8	12.6	18.9	18	18.9	17.1	14.9	13.3	12.7	27.2	20.3	19.1	14.5	27.2
6	15.1	14.3	18.1	15.6	17.7	18.3	20.8	15.8	18.8	17.7	17.8	18.1	17.6	15.7	17	17.3	18.6	17.5	13.3	11	10.8	6.5	5	2.7	20.8
7	4.6	7.2	6.1	6.7	4.1	5.3	10.9	10.5	8.1	11.5	15.6	18.2	17	18.5	17.2	17.9	20.5	21.8	17.2	15.6	10.3	11.3	9.2	8.8	21.8
8	7.4	7.7	3.9	2.6	2.6	2.8	8.2	7.8	8.4	10.3	10.6	13	13.9	15.2	16.2	12.2	11.9	10.9	9.4	4.1	2.7	7.4	5.5	10.4	16.2
9	10.2	5.1	11.5	7.1	5.4	3.5	4.9	7	10.5	9.4	10.7	9.5	11.6	22.7	13	12.6	13.3	7.6	13.6	14.5	8.1	8.2	3.5	3.5	22.7
10	4.7	4	3.5	2.6	2.8	4.7	7	7.7	6.8	10.1	11.2	9.8	11.8	12.5	14.8	12.8	16.6	14.4	9.4	5.6	2.9	11.7	17.8	33.3	33.3
11	18.3	5.8	5	3.8	5.5	4.2	2.8	7.4	10.8	9.5	12.1	10.6	15.5	13.9	13.8	12.6	17.1	17.8	9.6	9.6	11.6	6.8	11.9	11	18.3
12	8.7	12.8	13.7	9.7	8.5	8.2	7.5	7.5	12.4	13.2	16.3	16.4	19.2	21.7	27.2	30.3	28.4	29.2	24.4	20.6	24.3	23.8	17.9	22.5	30.3
13	22.9	21.7	17.7	20.7	20.9	19.5	18.4	21.6	18.8	20.1	15.8	16.5	21.1	13.3	17.4	12.9	14.3	11.5	8.9	7.4	3.5	5.1	2.4	15.2	22.9
14	13.8	14.1	14.1	12.5	12.9	11.5	10.3	14	15.4	10.9	12.6	15	14.4	15	14.5	14.2	9.7	10.8	10.3	11.5	6	4.9	1.9	4.7	15.4
15	4.7	3.3	3.6	2.3	2.4	2.1	7.6	9.9	14.7	16.3	16	16	22.3	19.1	18.7	20.8	19.1	30.9	24.4	7.4	7.6	7.7	5.1	5.2	30.9
16	6.1	3.5	3.4	2.7	5.5	6.1	6.4	7	8.2	11.5	14.1	17.3	17.9	17.8	22.7	17	18.4	18.5	18	13.4	10.2	5.6	6.9	5.4	22.7
17	2.1	3.5	2	3.1	3.4	13.5	14.7	18.2	15.6	16.3	14.8	12.5	16.2	16.3	29.1	21.9	23.6	24.8	20.3	19.8	19.2	24.2	20.4	18	29.1
18	19.2	19.9	17.8	15.7	13.6	13.6	15.8	16.5	14	12.6	14.3	13.9	13.9	12.1	13	12.5	10.5	10.8	9.2	6.6	6.1	4.2	5.3	7.3	19.9
19	10	10.3	9.4	10.7	11.6	8.6	14.1	15.5	16.4	21.7	25.8	32.7	21.8	22.8	20.9	20.6	17.8	17.8	18.3	14.7	8.8	8.1	9.1	7.4	32.7
20	3.8	3.2	5.9	6.3	7.8	9.5	11.9	19	16.2	21.2	17.2	18.6	21.3	15.1	17.3	18.7	19.2	20.3	15.3	27.9	12.6	4.4	3.4	6.9	27.9
21	3.1	3.7	2.8	2.6	3.7	8.9	12.1	11.7	12.5	17.3	16.4	15.8	16.7	21.2	19.9	22	20.2	18.5	17.9	12.3	10.1	9.2	5.3	5.9	22
22	3.7	2.3	2	2.7	2.4	6.6	7.1	10.3	12.4	16.7	17.7	18.7	18	18	19.1	18.8	19.7	15.8	15.2	13.3	3.1	2.1	2.2	1	19.7
23	1.1	0.8	0.9	1.4	1	1.2	2	6.5	8.7	12.6	15.5	11.8	17.3	18.1	15.6	14.5	13.3	13.7	11.7	5.5	4.4	8.8	9.3	7.6	18.1
24	5.8	3.6	7.1	5.1	5.2	4.3	4.1	10.3	11.7	12.9	13.7	16.6	17.4	17.5	**35.8**	17.9	15.3	15.1	20.5	22.8	17.5	13	8.9	11	**35.8**
25	14.2	15	13.7	10.3	8.7	13.1	12.8	14.4	20.7	17.9	17.8	17.4	13.2	13	13.1	11.5	12.4	11.1	11.1	5.1	3.9	5.6	7.3	9.7	20.7
26	9	6.2	3.4	4.6	6.7	6.3	5.5	15.1	15.5	16.5	21.7	23.1	22.8	21.7	16.4	20.4	8.6	14.2	13.8	13.9	17.3	11.8	15.2	10.4	23.1
27	7	12.4	16.5	16.3	16.9	21.2	21.6	21.5	22.4	26.5	22.3	19.2	16.5	8.7	9.5	13.3	15.8	17.5	16.2	11.4	6.6	8.2	9.3	12.3	26.5
28	19.8	15.9	13.3	4.5	3.7	2.7	7.1	15.4	17.3	20.1	18.7	18.7	20.5	18.9	23.9	24	23.2	18.4	18.1	13.1	13.4	6.3	8.2	13	24
29	13.9	7.5	7.8	8.4	11.3	18.6	16.7	14.3	11.8	15.7	11	12.3	10.1	11.7	15.1	13.7	11	14.2	11	9.9	7	7.4	8.8	14.2	18.6
30	12.5	15.5	15.3	11.4	13.9	14.6	19.5	15.4	9.2	12.8	9.6	10.8	11.1	7.9	14.4	20.3	27.8	28.1	21.1	16.8	6.1	2.9	6	9.4	28.1
31	5.5	5.9	4.6	3.9	6.1	11.3	11	10.9	17.1	21.8	21.2	19.8	17.2	24.2	24.8	20	30.3	22.8	19.7	21.2	17.8	16.1	8.7	9.6	30.3
PEAK	22.9	21.7	18.1	20.7	20.9	21.2	21.6	22.7	23.2	26.5	25.8	32.7	23.7	24.2	35.8	30.3	30.3	30.9	24.4	27.9	27.2	24.2	20.4	33.3	

STATUS FLAG CODES

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

MONTHLY SUMMARY

MAXIMUM INSTANTANEOUS READING	35.8	KPH	@ HOUR(S)	14
			ON DAY(S)	24


01 Hour Averages
100
75
50
25
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA WSMAX KPH

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

VECTOR WIND DIRECTION (WD) hourly averages in degrees

MST

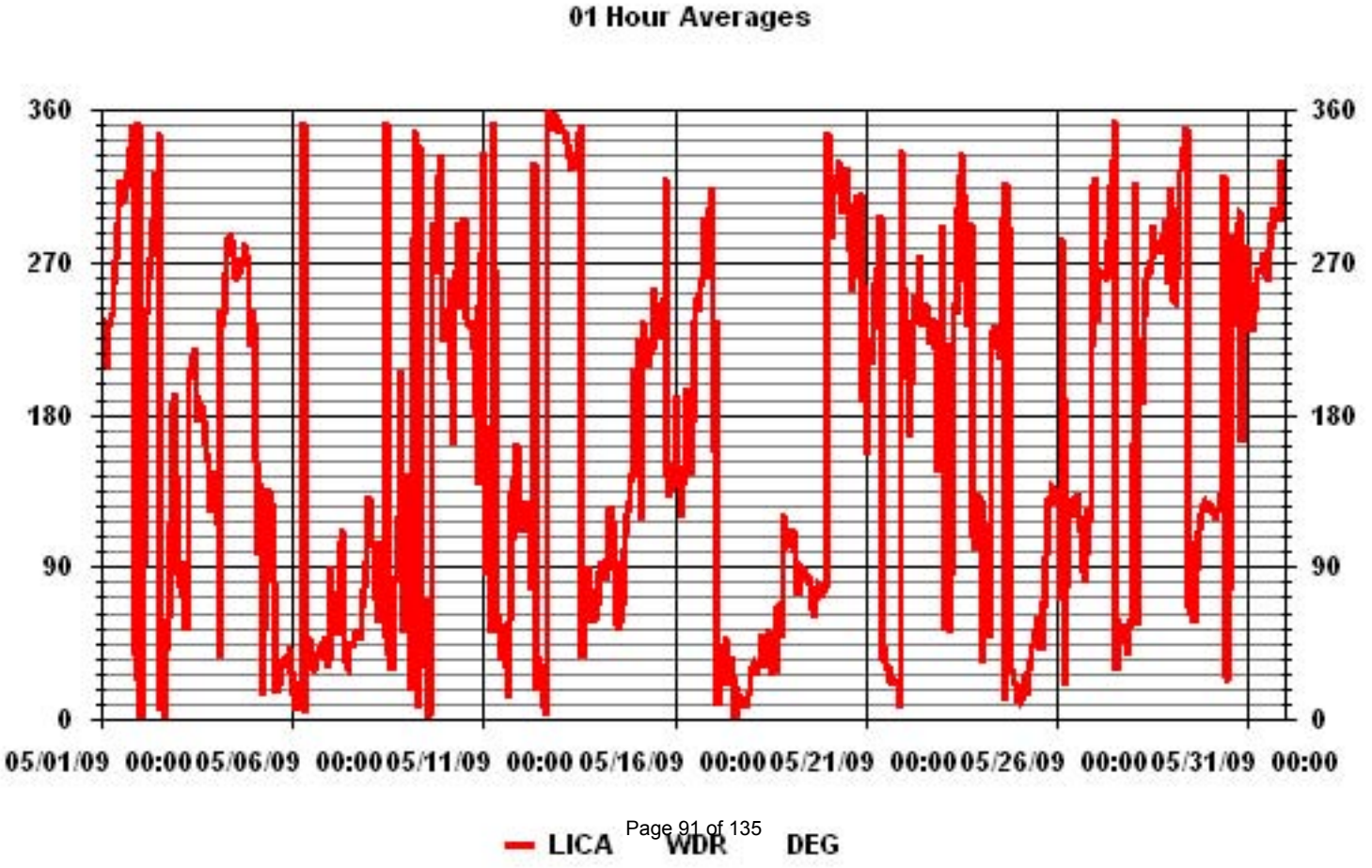
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	236	227	236	214	206	232	239	240	257	272	293	308	319	315	307	308	315	323	338	329	352	39	23	353	309	NW	24
2	3	2	47	91	243	240	259	273	295	311	323	316	347	4	17	36	0	40	59	115	187	181	193	145	339	NNW	24
3	85	89	79	71	94	53	56	208	200	212	211	219	192	175	182	186	178	163	159	153	130	123	125	129	175	S	24
4	147	116	36	242	231	239	264	284	285	276	285	274	261	259	272	262	272	267	282	275	269	219	230	241	269	W	24
5	235	153	97	141	102	13	103	52	118	136	110	129	81	17	17	26	20	30	36	30	37	38	43	29	40	NE	24
6	14	23	9	10	5	7	7	353	3	36	49	48	29	31	28	36	41	40	39	45	49	42	31	34	26	NNE	24
7	91	76	67	63	76	49	105	112	84	34	30	29	42	45	42	51	52	52	47	52	66	77	93	116	55	NE	24
8	132	122	107	103	71	56	105	102	102	96	47	353	39	33	29	56	80	84	120	122	206	51	78	119	74	ENE	24
9	145	77	17	119	285	348	66	6	339	30	56	52	71	0	60	2	293	263	281	316	321	333	223	243	2	N	24
10	224	243	240	260	201	162	262	261	293	245	242	263	296	238	231	236	231	232	219	179	138	244	268	276	249	WSW	24
11	335	85	102	170	174	51	353	257	266	64	57	35	47	40	32	12	58	135	106	143	125	163	124	112	78	ENE	24
12	110	124	127	127	129	121	76	80	329	17	39	33	31	6	14	2	358	358	354	348	351	358	350	351	15	NNE	24
13	346	351	349	340	346	341	333	324	333	335	327	325	347	351	35	71	76	88	91	78	57	66	58	67	353	N	24
14	87	88	92	93	90	82	88	124	126	118	113	95	57	52	56	67	101	109	122	129	140	146	207	143	95	E	24
15	192	225	156	117	236	217	220	225	208	216	218	255	247	233	225	229	224	249	321	144	132	134	139	137	220	SW	24
16	151	192	151	139	119	140	140	143	196	154	144	175	236	249	241	252	255	261	297	289	291	259	303	314	244	WSW	24
17	157	199	236	7	27	33	35	44	49	20	32	31	37	26	0	19	16	13	12	6	11	10	14	17	20	NNE	24
18	31	33	30	25	34	31	40	51	31	33	42	54	37	25	40	27	66	67	47	65	121	101	102	108	42	NE	24
19	104	101	112	99	91	73	79	83	91	90	86	84	86	80	65	60	71	74	80	79	71	75	79	77	82	E	24
20	347	306	284	311	321	313	318	330	312	298	304	324	324	306	277	252	264	261	265	310	296	312	187	256	297	WNW	24
21	156	211	225	217	209	230	258	266	270	298	35	44	35	29	33	23	22	23	23	21	22	6	337	280	10	N	24
22	256	216	202	166	198	235	251	235	236	257	274	236	231	244	246	233	221	230	237	220	173	146	158	197	236	SW	24
23	292	52	82	222	51	84	196	240	246	239	303	322	335	311	263	264	232	275	294	108	99	129	129	133	259	WSW	24
24	130	32	109	116	104	47	94	221	229	233	**219**	224	212	234	297	11	318	270	292	27	29	22	21	10	308	NW	24
25	13	10	11	18	26	14	28	35	42	45	53	60	51	46	40	68	68	96	130	132	127	138	137	129	49	NE	24
26	126	137	70	285	191	19	77	122	130	119	123	124	132	134	110	120	88	80	97	102	125	116	219	315	118	ESE	24
27	320	235	260	266	264	260	262	259	283	300	316	331	355	28	59	48	56	52	53	46	37	54	60	135	315	NW	24
28	163	317	55	164	193	186	225	238	260	266	262	272	292	285	280	277	282	274	280	286	295	270	256	314	274	W	24
29	290	249	248	260	302	324	325	338	341	350	66	71	63	63	56	105	88	111	121	125	126	128	125	126	61	ENE	24
30	128	123	122	118	123	123	133	129	124	322	25	22	75	145	231	286	280	293	299	298	163	199	255	280	170	SSE	24
31	267	238	228	242	242	258	267	263	266	265	276	270	258	277	294	290	303	301	294	301	319	330	296	296	282	W	24
HOURLY AVG	347	351	349	340	346	348	353	353	341	350	327	353	355	351	307	308	358	358	354	348	352	358	350	353			

STATUS FLAG CODES

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

LAST CALIBRATION:	November 5, 2008
DECLINATION :	19 DEGREES FROM MAGNETIC NORTH

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
STANDARD DEVIATION	106.65		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	2	DEG


01 Hour Averages
360
270
180
90
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA WDR DEG

Standard Deviation Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - *COLD LAKE*

MAY 2009

STANDARD DEVIATION WIND DIRECTION (STDWDIR) hourly averages in degrees

MST

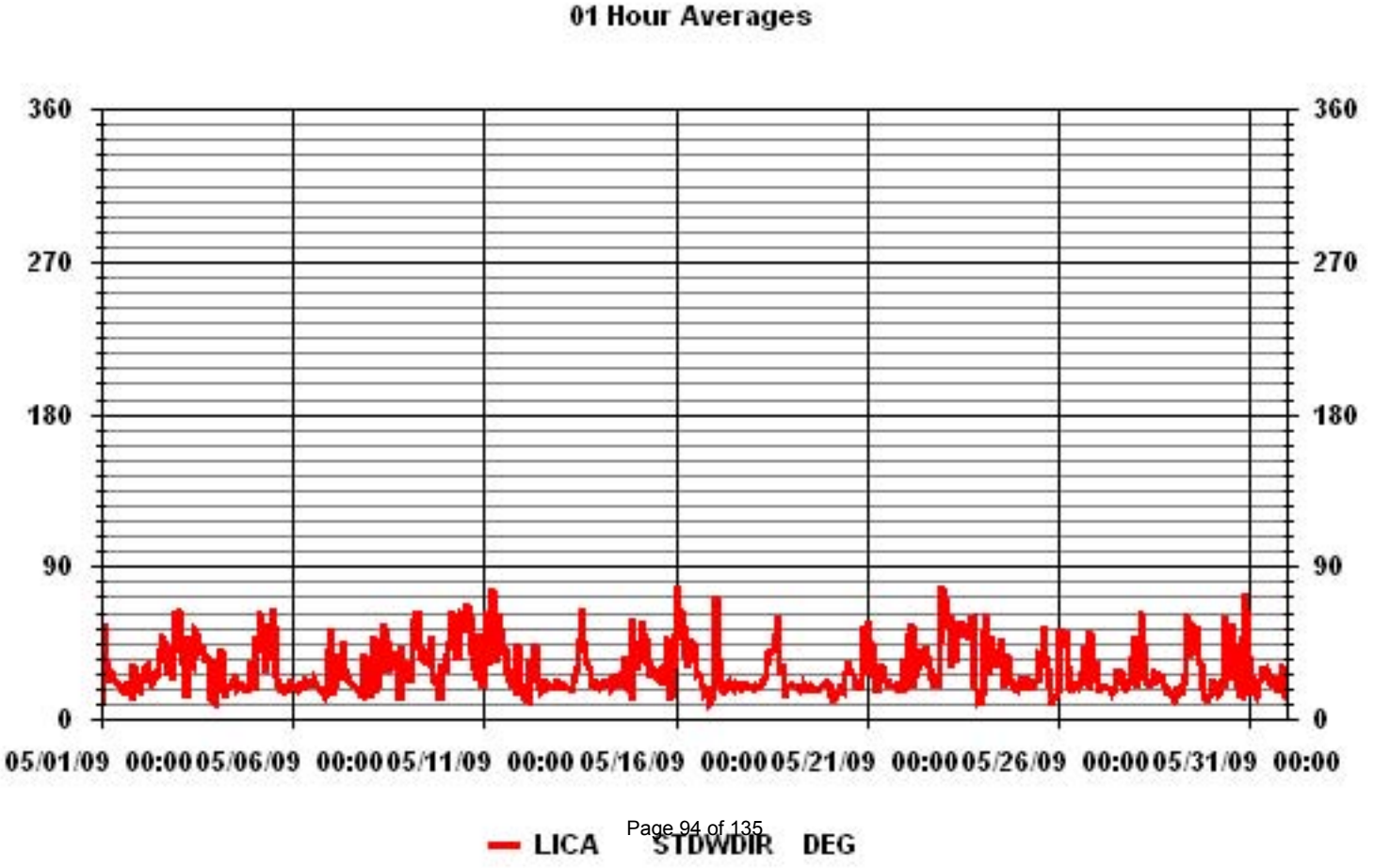
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
DAY																								
1	11	20	56	27	34	21	30	22	24	22	22	20	20	18	20	18	17	17	22	11	32	26	21	18
2	17	26	21	30	31	24	24	22	25	26	24	28	33	42	50	40	47	25	35	44	22	39	64	47
3	51	66	44	31	42	12	49	35	34	32	36	52	51	45	42	45	39	36	36	34	13	11	11	10
4	35	24	34	41	16	13	18	20	19	21	23	25	24	19	21	21	19	19	16	19	15	21	34	20
5	17	49	39	64	49	57	40	27	57	42	35	66	57	26	19	21	18	18	17	21	18	17	17	24
6	22	19	18	17	18	22	17	24	24	21	20	20	22	25	23	20	20	18	17	16	14	15	42	35
7	54	14	18	31	38	25	23	26	46	31	26	23	21	22	21	20	18	17	18	15	14	39	21	18
8	12	15	19	49	15	18	24	27	41	56	54	48	27	29	36	31	34	40	29	10	43	35	24	34
9	31	21	28	40	59	64	42	64	44	36	35	41	32	42	30	49	25	26	20	22	11	32	29	29
10	39	41	45	49	64	47	50	35	49	61	60	51	66	65	67	62	39	31	30	23	31	51	47	17
11	39	63	31	34	46	78	52	32	40	63	55	43	41	43	26	21	28	18	22	29	13	44	16	19
12	19	13	11	11	35	31	34	40	44	23	19	16	18	18	24	19	20	20	19	18	18	18	23	19
13	19	19	20	18	18	18	20	15	21	27	32	39	47	66	44	44	34	33	29	18	22	21	24	20
14	18	20	21	22	20	20	21	18	19	25	25	21	19	23	22	28	37	29	26	17	11	60	47	29
15	34	42	33	58	51	48	34	24	35	28	25	28	26	28	26	19	28	32	48	23	14	14	36	30
16	50	78	47	66	49	56	37	31	39	48	37	46	34	27	28	27	22	20	15	16	17	10	11	17
17	32	73	60	37	20	18	20	18	19	22	19	20	18	21	19	19	19	22	20	20	21	19	19	19
18	19	18	20	19	18	20	20	23	25	32	39	39	40	41	50	47	60	33	26	33	12	16	19	20
19	21	21	19	19	19	19	17	17	21	19	18	18	20	18	18	17	18	19	18	19	20	21	18	22
20	21	13	15	10	12	14	17	20	18	17	25	28	34	27	29	28	22	23	18	19	19	55	34	26
21	38	58	36	46	26	18	18	22	20	32	22	24	21	22	20	20	19	19	19	21	19	18	36	18
22	16	36	50	25	56	18	25	27	29	32	42	37	32	43	39	32	25	24	20	20	20	26	45	78
23	53	72	54	62	30	55	57	54	32	53	53	57	48	53	56	47	52	59	60	20	19	10	11	10
24	13	52	63	43	25	36	50	33	33	35	41	31	48	39	18	29	39	27	22	22	18	19	18	20
25	20	25	18	19	24	19	20	23	20	20	22	22	38	37	36	55	39	32	20	13	9	11	13	14
26	16	54	50	42	47	52	32	18	15	19	18	18	22	20	22	29	43	21	21	20	52	21	25	30
27	33	15	17	19	20	18	18	18	18	16	17	18	27	27	27	27	22	19	18	18	22	22	37	38
28	49	18	23	43	64	46	29	21	20	20	22	22	28	28	27	27	21	26	21	20	14	16	15	14
29	16	11	13	19	17	13	20	27	62	59	36	57	52	53	53	39	32	34	19	15	13	10	12	13
30	14	24	15	17	15	16	22	21	61	46	27	25	23	56	47	24	20	19	14	14	49	75	65	39
31	14	21	25	16	14	18	21	24	31	25	25	29	27	22	18	21	19	16	21	19	32	29	14	12

STATUS FLAG CODES

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

LAST CALIBRATION: November 5, 2008

CALIBRATION TIME: 0 HRS OPERATIONAL TIME: 744 HRS


01 Hour Averages
360
270
180
90
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA STDWDIR DEG

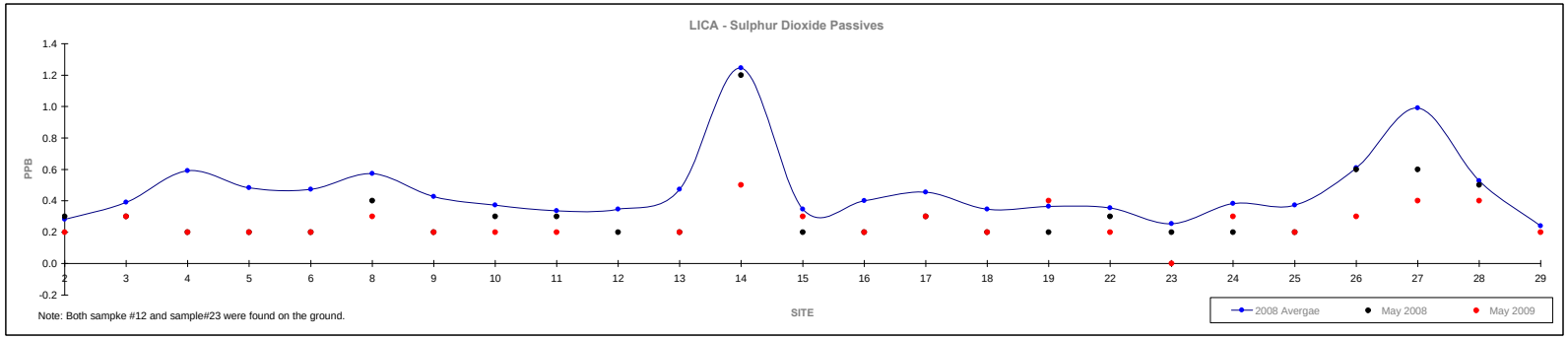
Non-Continuous Monitoring

Passive Summary Results for May 2009

Lakeland Industry & Community Association

Sulphur Dioxide
ppb

	2008																								May 2009	
	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**	**Reading**	**Site**
Mean	0.3	0.4	0.6	0.5	0.5	0.6	0.4	0.4	0.3	0.3	0.5	1.2	0.3	0.4	0.5	0.3	0.4	0.4	0.3	0.4	0.4	0.6	1.0	0.5	0.2	0.3	-
Minimum	0.1	0.1	0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.7	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.6	0.3	0.1	<0.1	#23
Maximum	0.3	0.4	0.5	0.4	0.6	1.4	1.3	1.1	1.0	1.0	1.3	2.1	1.0	1.3	1.2	1.2	1.2	0.8	0.8	1.1	1.3	1.3	1.9	1.1	0.5	0.5	#14



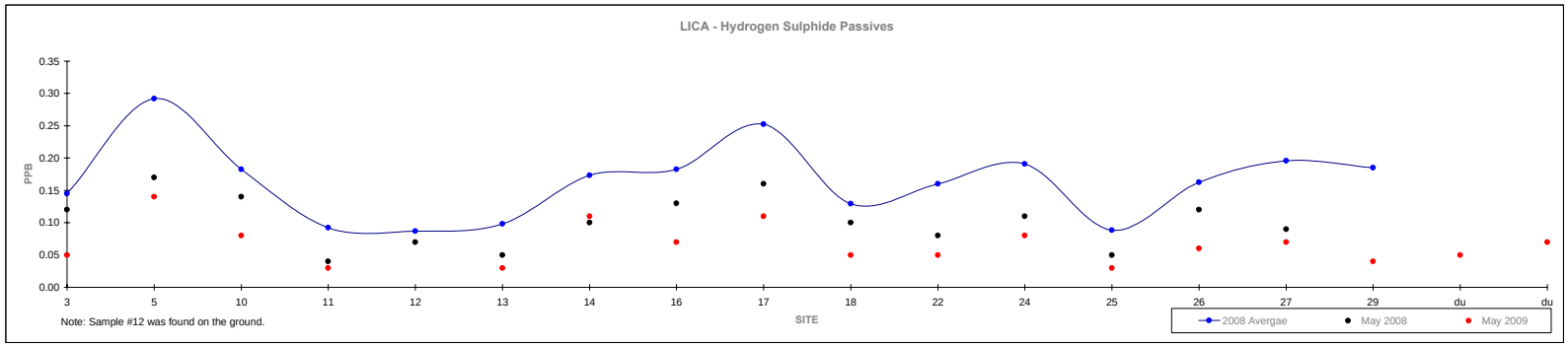
Note: Both sampke #12 and sample#23 were found on the ground.

Passive Summary Results for May 2009

Lakeland Industry & Community Association

Hydrogen Sulphide
ppb

	2008																May 2009	
	3	**5**	**10**	**11**	**12**	**13**	**14**	**16**	**17**	**18**	**22**	**24**	**25**	**26**	**27**	**29**	**Reading**	**Site**
Mean	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.07	-
Minimum	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.03	#13
Maximum	0.3	1.0	0.5	0.2	0.2	0.2	0.3	0.4	0.5	0.2	0.3	0.4	0.2	0.3	0.3	0.3	0.14	#5



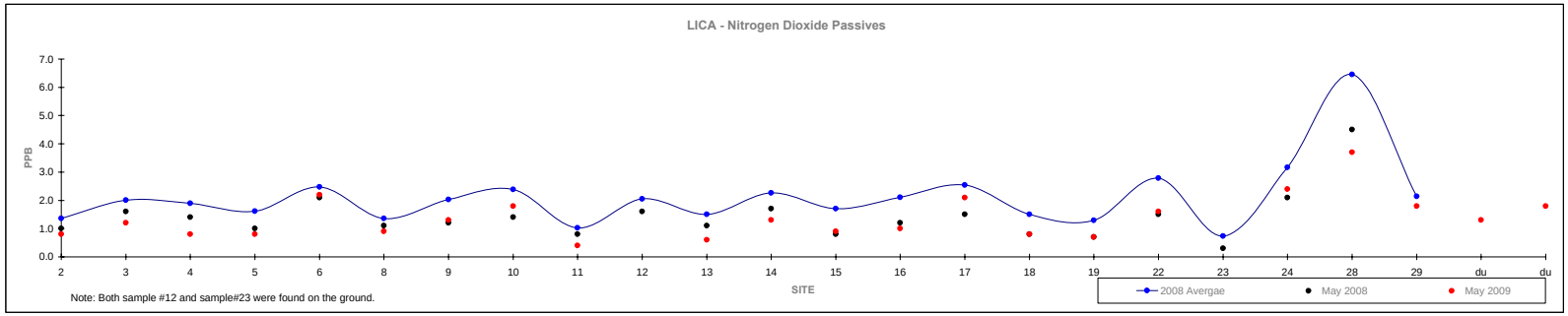
Note: Sample #12 was found on the ground.

Passive Summary Results for May 2009

Lakeland Industry & Community Association

Nitrogen Dioxide
ppb

	2008																					May 2009	
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**22**	**23**	**24**	**28**	**29**	**Reading**	**Site**
Mean	1.4	2.0	1.9	1.6	2.5	1.4	2.0	2.4	1.0	2.0	1.5	2.3	1.7	2.1	2.5	1.5	1.3	2.8	0.7	3.2	6.5	2.1	1.4	-
Minimum	0.5	0.9	0.4	0.6	1.2	0.6	1.0	1.1	0.3	0.9	0.5	1.1	0.8	1.1	0.9	0.8	0.4	0.9	0.2	1.7	3.1	1.2	0.4	#11
Maximum	2.9	4.3	4.8	4.3	4.8	2.9	4.4	5.5	2.3	6.0	3.4	3.8	4.4	4.4	5.1	3.2	3.2	6.8	2.8	6.6	13.2	3.5	3.7	#28



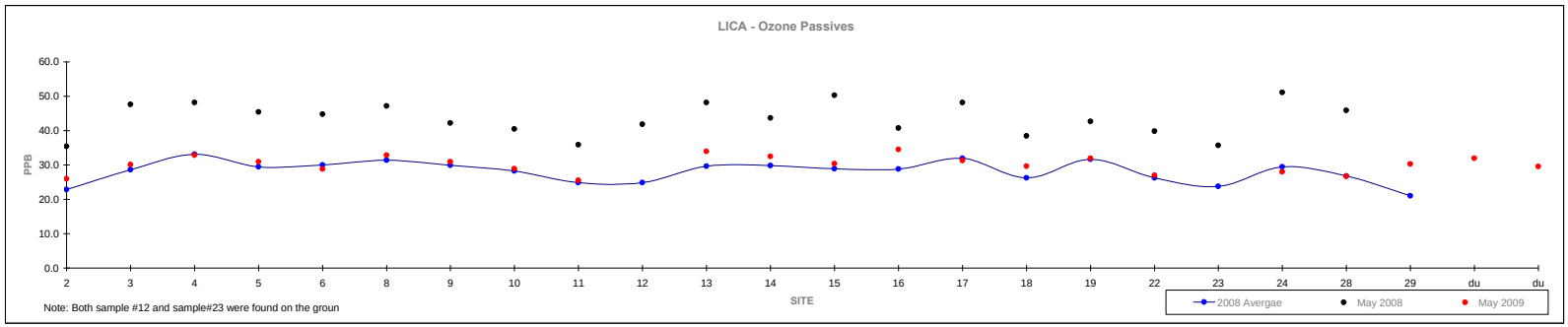
Note: Both sample #12 and sample#23 were found on the ground.

Passive Summary Results for May 2009

Lakeland Industry & Community Association

Ozone
ppb

	2008																					May 2009	
	1	2	3	4	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	25	26	Reading	Site
Mean	22.9	28.6	33.1	29.5	30.0	31.4	29.9	28.3	24.9	24.9	29.6	29.8	28.9	28.8	32.0	26.2	31.7	26.2	23.8	29.5	26.8	21.0	30.2	-
Minimum	12.8	17.8	20.8	17.8	18.2	18.5	19.3	16.3	12.6	14.1	17.2	17.8	16.9	18.8	16.6	13.7	20.9	15.7	13.4	17.7	15.5	17.7	25.5	#11
Maximum	39.1	47.6	54.5	46.9	47.6	47.2	45.4	44.3	40.1	41.9	48.2	43.9	50.3	47.7	52.9	45.4	46.8	40.4	36.9	51.1	45.9	26.8	34.5	#16



Note: Both sample #12 and sample#23 were found on the groun

Calibration Reports

Cold Lake

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	May 8, 2009		Previous Calibration	April 7, 2009	
Company	Lakeland Community and Industry Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	7:05		End Time (MST)	16:00	
Reason:	Monthly Calibration				
Barometric Pressure	715	mmHg	Station Temperature	23	Deg C
Cal Gas	52.2	ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 10	Volts			

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 500	ppb				
Sample Flow / Box Temp	447	ccm	27.7	Deg C	447	ccm	28.9	Deg C
HVPS / Lamp Setting	-631		756		-631		764	
PMT / RxCell Temp	OK	Deg C	45.0	Deg C	OK	Deg C	44.9	Deg C
Converter / IZS Temp	NA	Deg C	45.0	Deg C	NA	Deg C	45.0	Deg C
Offset / Slope	5.1		1.057		5.1		1.057	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4963	38.3	400	403	0.9919
4999	0	0	0	N/A
4963	38.3	400	401	0.9969
4981	19.2	200	202	0.9923
4984	14.4	150	150	1.0026
4999	0	0	0	N/A
			Sum of Least Squares	0.2811
			New Correction Factor	0.9969

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	388.0	384.0
Sample Lines Connected		**YES**
Percent Change from Previous Calibration		0.3%

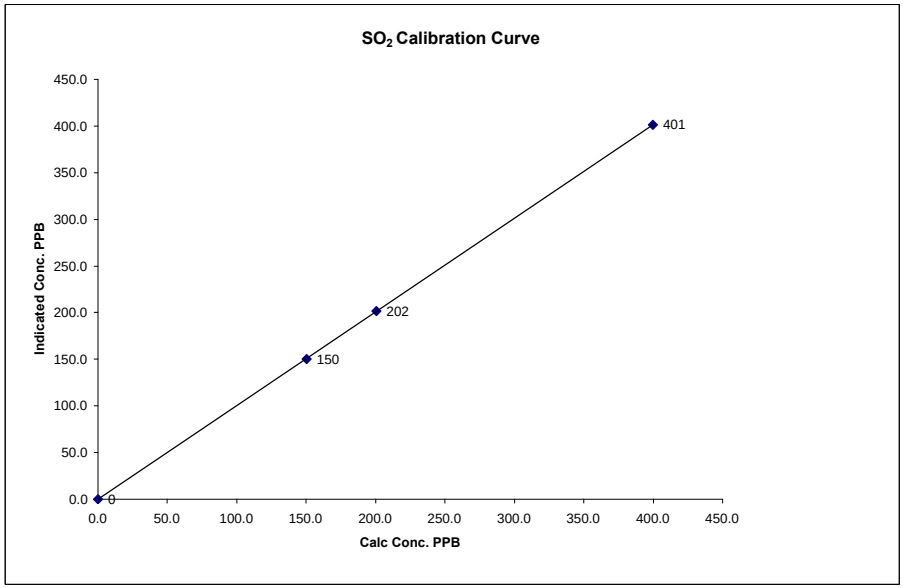
Calibration Performed by: Shea Beaton

SO_2 Calibration Curve

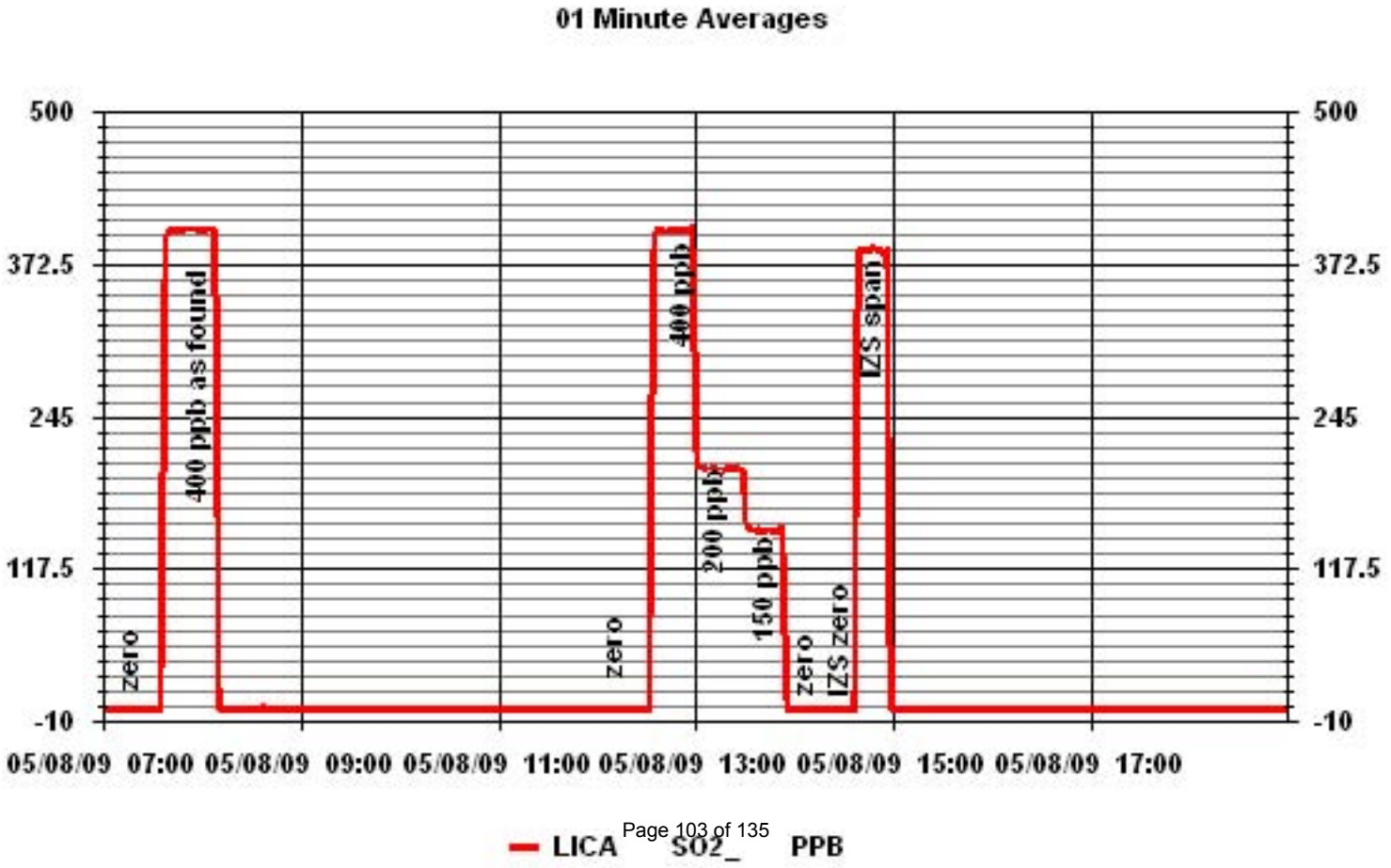
Calibration Date	May 8, 2009		
Company	Lakeland Community and Industry Association		
Plant / Location	LICA 1 - Cold Lake South		
Start Time (MST)	7:05	End Time (MST)	16:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
150	150	1.0026
200	202	0.9923
400	401	0.9969

Correlation Coefficient	(≥ 0.995)	0.999981
Slope	(0.85 to 1.15)	1.003667
Intercept	(± 3% F.S.)	-0.081217



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
zero
400 ppb as found
zero
400 ppb
200 ppb
150 ppb
zero
IZS zero
IZS span
05/08/09 07:00
05/08/09 09:00
05/08/09 11:00
05/08/09 13:00
05/08/09 15:00
05/08/09 17:00
LICA SO2_ PPB

Total Reduced Sulphur

TRS Calibration Report

Station Information

Calibration Date	May 8, 2009		Previous Calibration	April 7, 2009	
Company	Lakeland Industry & Community Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	8:40		End Time (MST)	11:50	
Reason:	Monthly Calibration				
Barometric Pressure	715	mm Hg	Station Temperature	23	Deg C
Cal Gas	10.6	ppm	Cal Gas Expiry date	April 3, 2009	
DAS Output Voltage	0 - 10	Volts			

Equipment Information

Analyzer Make / Model:	TEI 450i	S/N :	812728560	Method:	Fluorescent
Converter Make / Model:	CD Nova CDN 101	S/N :	250		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	263		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range	0 -100 ppb							
Sample Flow / Box Temp	363	ccm	31.2	Deg C	362	ccm	31.5	Deg C
HVPS / Lamp Setting	-622		769		NA		767	
PMT / RxCell Temp	OK	Deg C	45.0	Deg C	OK	Deg C	45.2	Deg C
Converter / IZS Temp	849	Deg C	45.0	Deg C	NA	Deg C	45.0	Deg C
Offset / Slope	11.3		1.187		11.3		1.187	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	0	N/A
4962	37.7	80	80	0.9991
4979	21.2	45	45	0.9987
4988	11.8	25	25	1.0007
4999	0	0	0	N/A
			Sum of Least Squares	0.9991
			New Correction Factor	0.9991

	Before Calibration	After Calibration
Auto Zero	-0.2	-0.1
Auto Span	42.0	43.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.0%

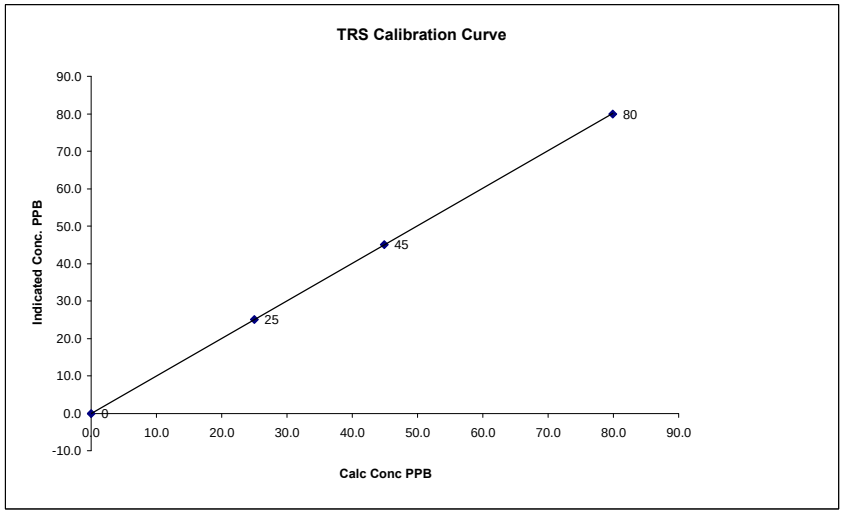
Calibration Performed by: Shea Beaton

TRS Calibration Curve

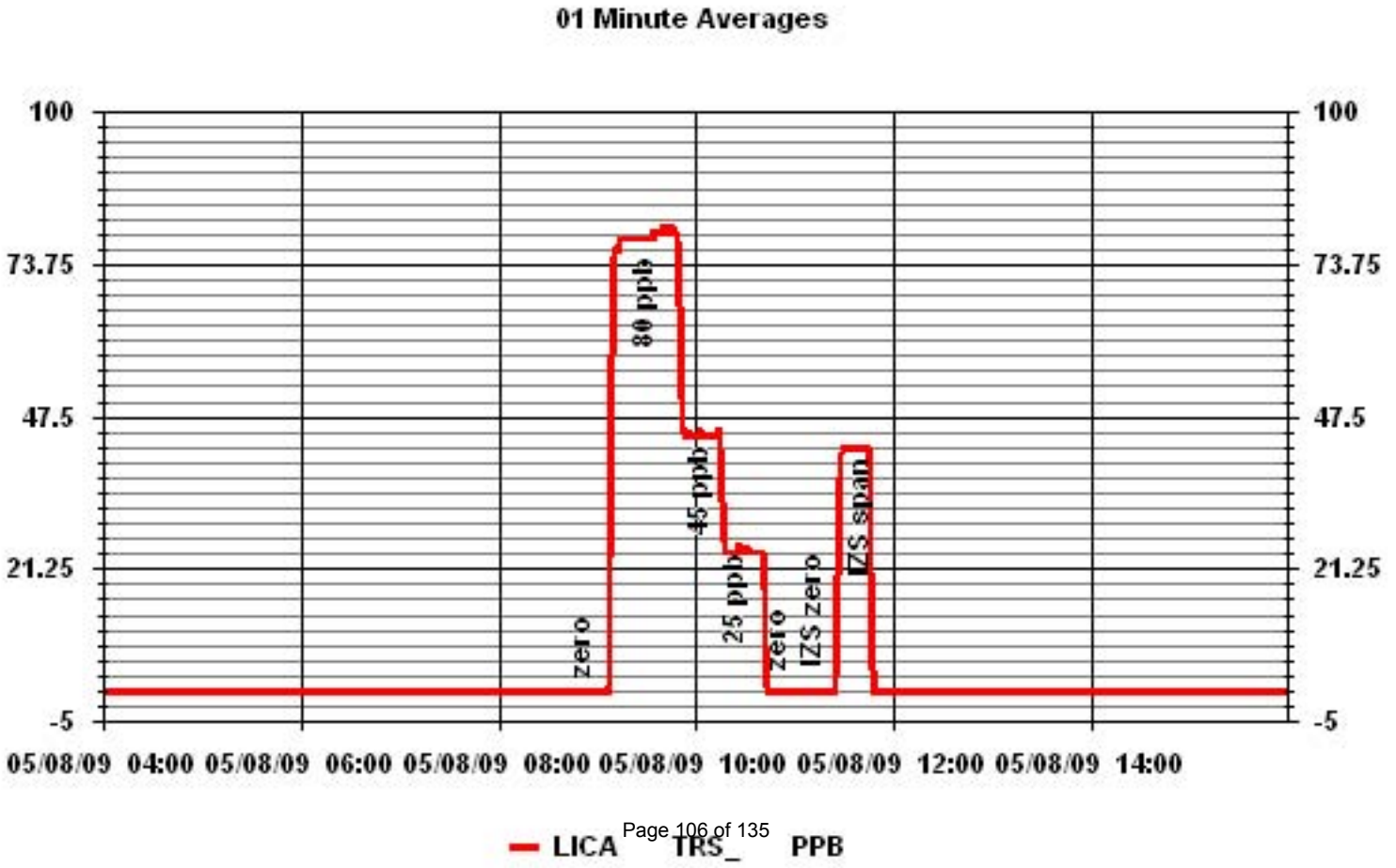
Calibration Date	May 8, 2009				
Company	Lakeland Industry & Community Association				
Plant / Location	LICA 1 - Cold Lake South				
Start Time (MST)	8:40		End Time (MST)	11:50	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
25	25	1.0007
45	45	0.9987
80	80	0.9991

Correlation Coefficient	(≥ 0.995)	1.000000
Slope	(0.85 to 1.15)	1.001073
Intercept	(± 3% F.S.)	-0.012201



Notes:


01 Minute Averages
100
73.75
47.5
21.25
-5
zero
80 ppb
45 ppb
25 ppb
zero
IZS zero
IZS span
05/08/09 04:00
05/08/09 06:00
05/08/09 08:00
05/08/09 10:00
05/08/09 12:00
05/08/09 14:00
LICA TRS_ PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	May 21, 2009		Previous Calibration	April 23, 2009	
Company:	**Lakeland Industry and Community Association**				
Plant / Location:	**LICA1/Cold Lake**				
Start Time (MST)	9:40		End Time (MST)	13:20	
Reason:	Monthly Calibration				
Barometric Pressure:	714	mmHg	Station Temperature:	24	Deg C
Calibrator:	API 700		S/N:	831	
Cal Gas Concentration:	299Prop/1019Meth	ppm	Cal Gas Expiry Date:	8/11/2011	
DAS make & Model:	ESC 8832		S/N :	263	
Output Voltage Range:	0 - 10	VDC			

Analyzer Information

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

Analyzer Settings

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

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
3010	0	0.0	0.0	N/A
3013	65.0	38.9	39.4	0.9873
3013	65.0	38.9	39.0	0.9974
3002	35.4	21.4	20.9	1.0239
2999	20.2	12.3	11.9	1.0336
3005	0	0.0	0.0	N/A
			Correction Factor:	0.9974

Percent Change

Previous Calibration Correction Factor:	0.9975
Current Correction Factor Before Span Adjust:	0.9974
Percent Change:	0.0%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	35.9	35.6
Sample Lines Connected		**YES**

Cylinder Pressures			
Span	500	psi	
Hydrogen	400	psi	
Zero Air	unlimited	psi	Maxxam-owned API 701 zero air supply with catalytic oxidizer

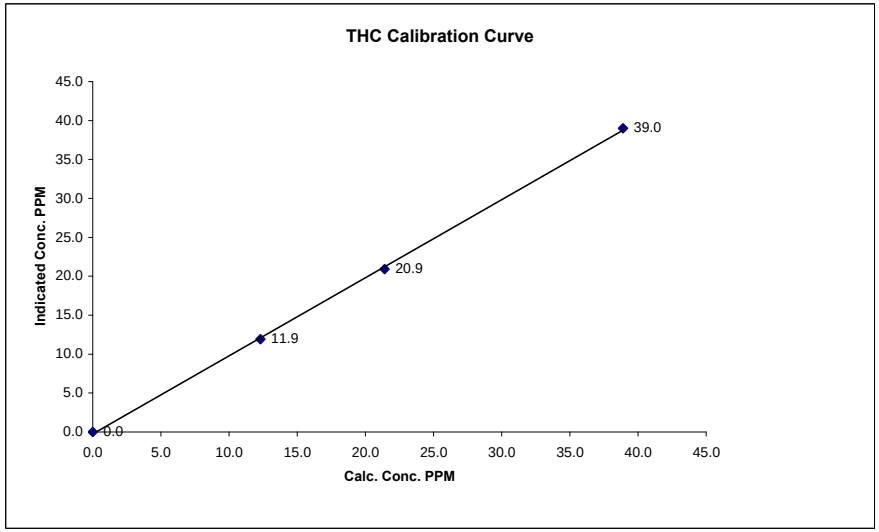
Calibration Performed by: Shea Beaton

THC Calibration Curve

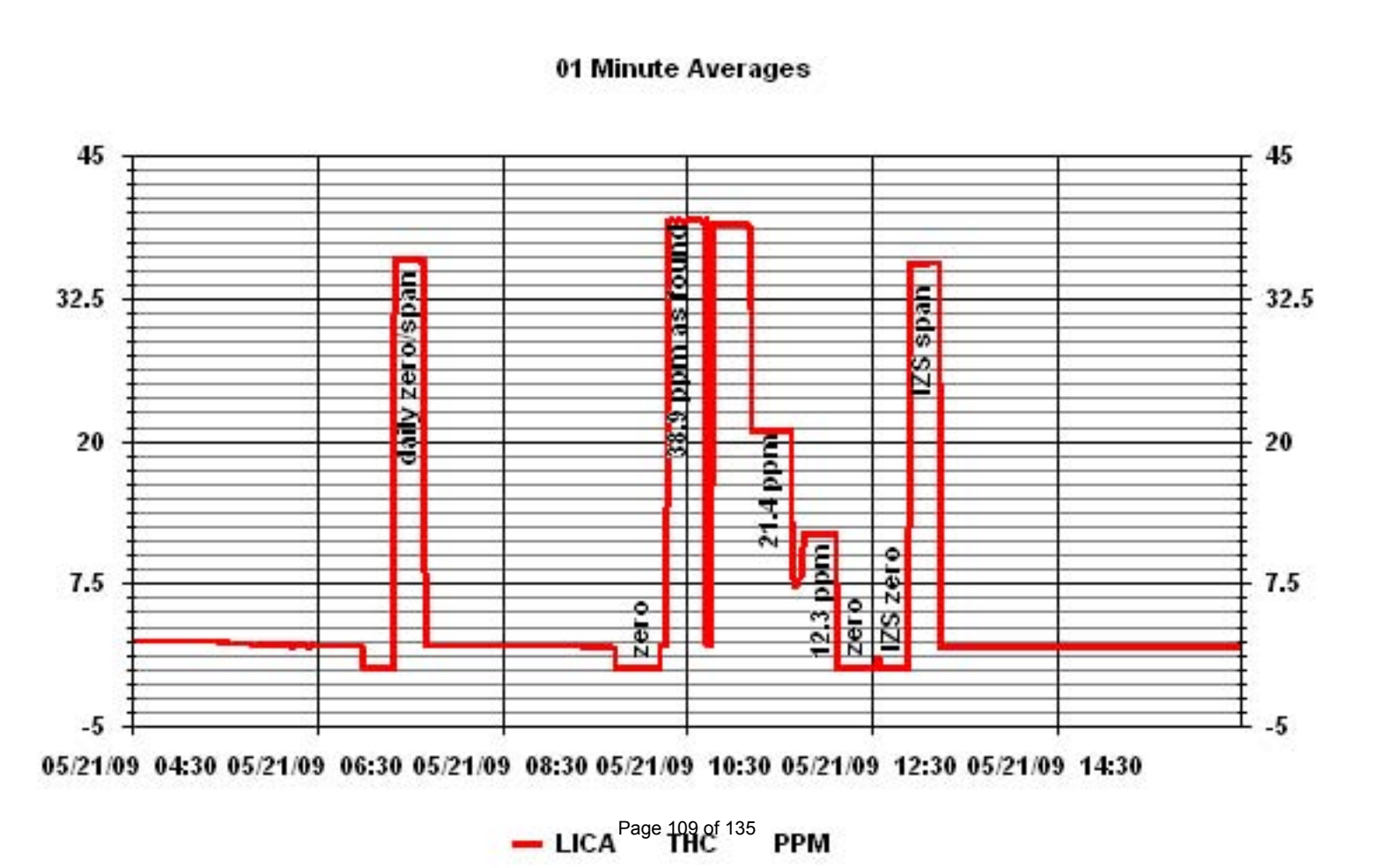
Calibration Date	May 21, 2009				
Company	**Lakeland Industry and Community Association**				
Plant / Location	**LICA1/Cold Lake**				
Start Time (MST)	9:40	End Time	(MST)	13:20	

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
12.3	11.9	1.0336
21.4	20.9	1.0239
38.9	39.0	0.9974

Correlation Coefficient	(≥ 0.995)	0.999691
Slope	(0.85 to 1.15)	1.003467
Intercept	(± 3% F.S.)	-0.262923



Notes:


01 Minute Averages
45
32.5
20
7.5
-5
daily zero/span
zero
38.9 ppm as found
21.4 ppm
12.3 ppm
zero
IZS zero
IZS span
05/21/09 04:30
05/21/09 06:30
05/21/09 08:30
05/21/09 10:30
05/21/09 12:30
05/21/09 14:30
LICA THC PPM

Particulate Matter 2.5

TEOM® 1405F Audit

Station		Audit Transfer Standard	
Date:	May 21, 2009	Make/Model:	Bios DC2
Station Name:	LICA 1	Serial Number:	1193
Location:	Cold Lake South	Cell s/n:	2272
Operator:	LICA	Thermometer s/n:	2178

Sampler		Set-up and current Sampler readings	
Make/Model	Thermo Scientific Series 1405F	F-Main Set Pt (l/min)	3.00
Unit #	AMU 1775	F-Aux Set Pt (l/min)	13.67
Unit s/n	1405A201620804	Filter Load (%)	37%
Firmware Ver.	1.22	K_o Factor	14578.0
Parameter	PM 2.5 (with FDMS)	Temp (^oC)	5.7
		Press (ATM)	0.933

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	0.36 ATM		

Temperature/Pressure

Measured Temp **(± 2 °C)**	5.6	**Δ °C**	0.1
Measured Press **(± 0.01atm)**	0.938	**ΔATM**	-0.005

Flow Audit

Indicated Main Flow (l/min)	3.00	Main Flow Drift **(±10.0%)**	2.26%
Measured Main Flow (l/min)	3.06	Flow Adjusted to Measured?	YES
Indicated Bypass Flow (l/min)	13.67	Bypass Flow Drift **(±10.0%)**	1.85%
Measured Bypass Flow (l/min)	13.96	Flow Adjusted to Measured?	YES

Leak Check

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

Instrument Setup

Flow Control = Active

Report Conditions = Standard (25.0 C and 1atm)

K_o Factor

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

Start Time: 11:05 **Finish Time:** 18:55

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

New Filter Loading %: 28.0%

Comments: Adjusted flows to measured values.

Auditor/s: Shea Beaton

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	May 8, 2009		Previous Calibration	April 7, 2009	
Company	**Lakeland Ind & Comm. Assoc.**		Plant/Location	**LICA 1 - Cold Lake South**	
Start Time (MST)	7:05		End Time (MST)	13:55	
Reason:	Monthly Calibrtion				
Barometric Pressure	715	mmHg	Station Temperature	23.0	Deg C
Cal Gas Concentration	NOx 51.8	ppm NO 51.6 ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 1	Volts	Chart Rec. Output	NA	Volts

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 1000	ppb				
Sample Flow/Conv. Temp	704	ccm	317	Deg C	702	ccm	318	Deg C
Ozone Flow / Vacuum	OK	ccm	189.4	mmHg	OK	ccm	189.0	mmHg
HVPS	-821	Volts			767	Volts		
Rx/ Temp / PMT Temp	49.7	Deg C	-2.4	Deg C	49.6	Deg C	-2.5	Deg C
Box Temp / IZS Temp	27.3	Deg C	OK	Deg C	29.2	Deg C	OK	Deg C
Offset	3.8	NOx	3.6	NO	3.9	NOx	3.7	NO
Slope	1.007	NOx	0.952	NO	1.004	NOx	0.976	NO

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO2	NOx	NO
5003.0	0.0	N/A	0	0	0	0	0	N/A	N/A
4964.0	38.8	N/A	402	400	394	391	2	1.0197	1.0235
4964.0	38.8	N/A	402	400	401	400	1	1.0019	1.0005
4983.0	24.3	N/A	251	250	251	250	1	1.0015	1.0016
4991.0	14.6	N/A	151	151	151	150	0	1.0006	1.0034
5004.0	0.0	N/A	0	0	0	0	0	N/A	N/A
								Converter Efficiency	
4964.0	38.8	N/A	402	400	401	400	1	N/A	
4964.0	38.8	300	402	400	398	132	266	99%	
4964.0	38.8	200	402	400	399	211	188	99%	
4964.0	38.8	100	402	400	400	306	94	99%	
4967.0	38.8	N/A	402	400	400	399	1	N/A	
5006.0	0	N/A	0	0	0	0	0	N/A	N/A
Linearity OK?			**Yes**	No	Sum of Least Squares			1.0016	1.0010
Flows Checked on-site?			Yes	**No**	New Correction Factor			1.0019	1.0005
					Average Converter Efficiency			99%	

	Before Calibration				After Calibration			
Auto Zero	0.1	NOx	0.2	NO2	0.1	NOx	0.1	NO2
Auto Span	357.0	NOx	355.0	NO2	360.0	NOx	358.0	NO2
Sample Lines Connected					YES			
Percent Change from Previous Calibration					*NOx*	-0.3%	*NO*	0.2%

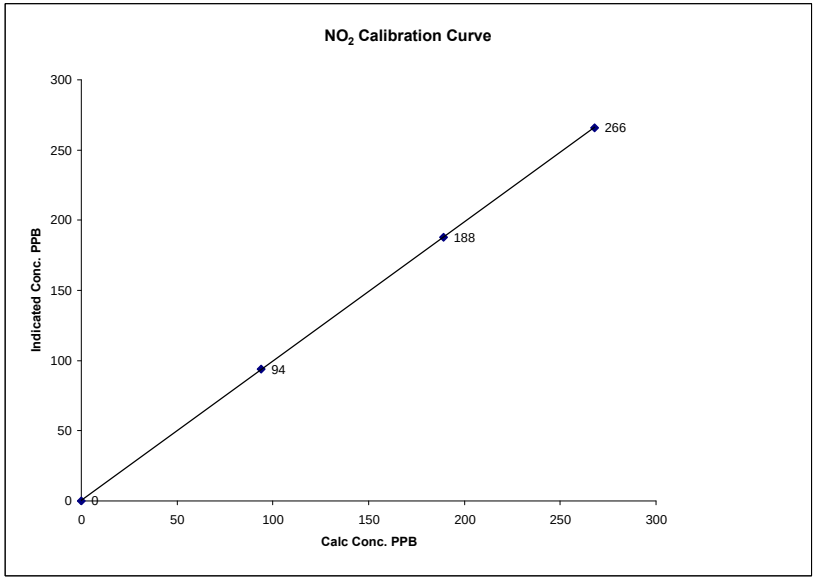
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	May 8, 2009		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	7:05	End Time (MST)	13:55

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
94	94	1.0000
189	188	1.0053
268	266	1.0075

Correlation Coefficient	(≥ 0.995)	0.999991
Slope	(0.85 to 1.15)	0.992299
Intercept	(± 3% F.S.)	0.31084

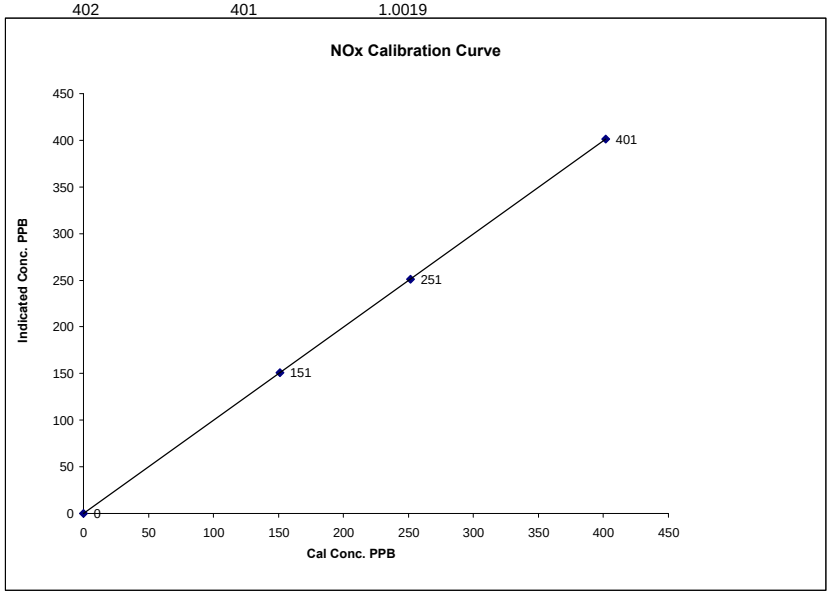


Notes:

NOx Calibration Curve

Calibration Date	May 8, 2009				
Company	**Lakeland Ind & Comm. Assoc.**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	7:05	End Time (MST)	13:55		

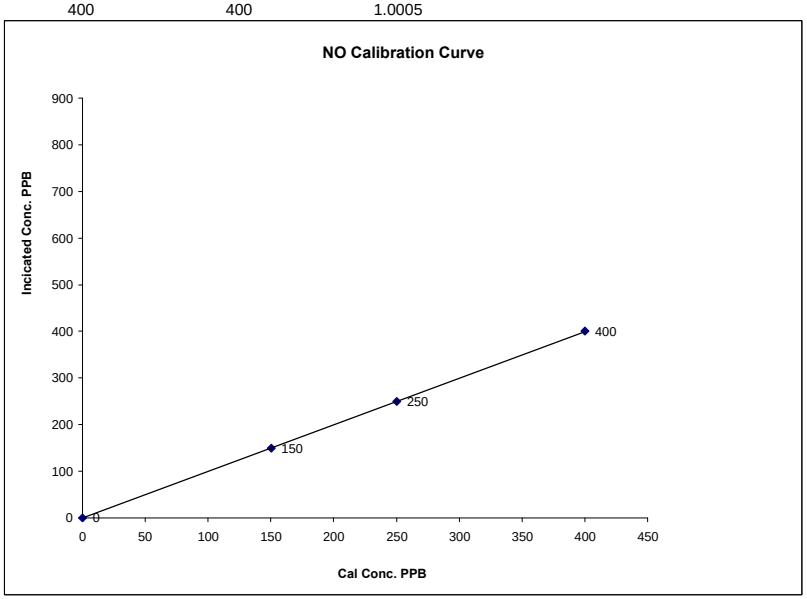
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	1.000000
			Slope	(0.85 to 1.15)	0.998087
0	0	N/A	Intercept	(± 3% F.S.)	0.08182
151	151	1.0006			
251	251	1.0015			
402	401	1.0019			

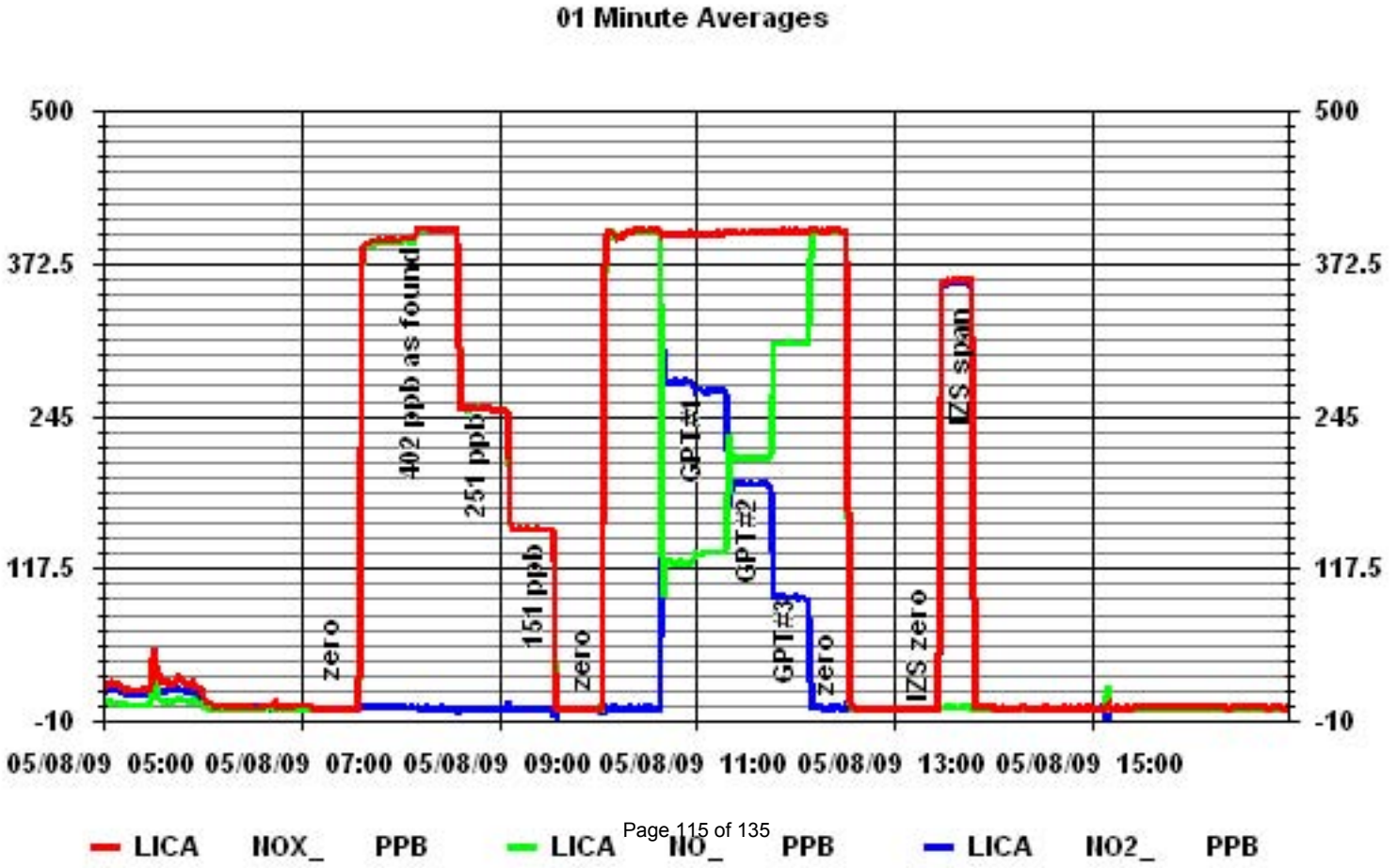


NO Calibration Curve

Calibration Date	May 8, 2009				
Company	**Lakeland Ind & Comm. Assoc.**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	7:05	End Time (MST)	13:55		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999998
			Slope	(0.85 to 1.15)	1.001264
0	0	N/A	Intercept	(± 3% F.S.)	-0.7757
151	150	1.0034			
250	250	1.0016			
400	400	1.0005			




01 Minute Averages
500
372.5
245
117.5
-10
zero
402 ppb as found
251 ppb
151 ppb
zero
GPT#1
GPT#2
GPT#3
zero
IZS zero
IZS span
05/08/09 05:00
05/08/09 07:00
05/08/09 09:00
05/08/09 11:00
05/08/09 13:00
05/08/09 15:00
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	May 28, 2009		Previous Calibration	May 8, 2009	
Company	**Lakeland Ind & Comm. Assoc.**		Plant/Location	**LICA 1 - Cold Lake South**	
Start Time (MST)	6:50		End Time (MST)	14:45	
Reason:	Repair Calibration				
Barometric Pressure	710 mmHg		Station Temperature	24.0	Deg C
Cal Gas Concentration	NOx 51.8 ppm	NO 51.6 ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 1 Volts		Chart Rec. Output	NA	Volts

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 1000	ppb				
Sample Flow/Conv. Temp	681	ccm	318	Deg C	709	ccm	318	Deg C
Ozone Flow / Vacuum	OK	ccm	197.0	mmHg	OK	ccm	184.9	mmHg
HVPS	-821	Volts			767	Volts		
Rx/ Temp / PMT Temp	50.0	Deg C	-2.5	Deg C	49.9	Deg C	-2.5	Deg C
Box Temp / IZS Temp	28.8	Deg C	OK	Deg C	28.2	Deg C	OK	Deg C
Offset	3.9	NOx	3.7	NO	3.9	NOx	3.7	NO
Slope	1.004	NOx	0.976	NO	1.006	NOx	0.989	NO

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration		Indicated Concentration			Correction Factor	
			NOx	NO	NOx	NO	NO2	NOx	NO
5000	0	N/A	0	0	0	0	0	N/A	N/A
4959.0	38.8	N/A	402	401	373	372	1	1.0781	1.0769
4997.0	0.0	N/A	0	0	0	0	0	N/A	N/A
4961.0	38.8	N/A	402	400	403	401	2	0.9975	0.9986
4978.0	24.3	N/A	252	251	252	251	1	0.9985	0.9986
4989.0	14.6	N/A	151	151	152	151	1	0.9944	0.9971
5002.0	0.0	N/A	0	0	0	0	0	N/A	N/A
								Converter Efficiency	
4961.0	38.8	N/A	402	400	408	406	2	N/A	
4961.0	38.8	300	402	400	406	127	280	100%	
4961.0	38.8	200	402	400	408	209	198	99%	
4961.0	38.8	100	402	400	410	309	100	101%	
4961.0	38.8	N/A	402	400	411	409	2	N/A	
5006.0	0	N/A	0	0	0	0	0	N/A	N/A
Linearity OK?			**Yes**	No	Sum of Least Squares			0.9975	0.9985
Flows Checked on-site?			Yes	**No**	New Correction Factor			0.9975	0.9986
					Average Converter Efficiency			100%	

	Before Calibration				After Calibration			
Auto Zero	0.1	NOx	0.2	NO2	0.0	NOx	0.1	NO2
Auto Span	337.0	NOx	335.0	NO2	370.0	NOx	368.0	NO2
Sample Lines Connected					YES			
Percent Change from Previous Calibration					*NOx* 0.4%		*NO* 0.2%	

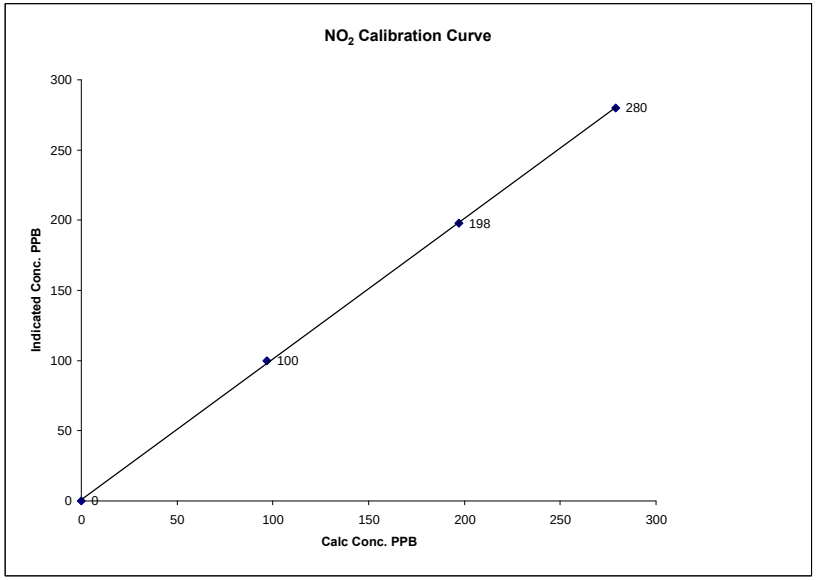
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	May 28, 2009		
Company	**Lakeland Ind & Comm. Assoc.**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	6:50	End Time (MST)	14:45

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	N/A
97	100	0.9700
197	198	0.9949
279	280	0.9964

Correlation Coefficient	(≥ 0.995)	0.999894
Slope	(0.85 to 1.15)	1.001154
Intercept	(± 3% F.S.)	1.08469

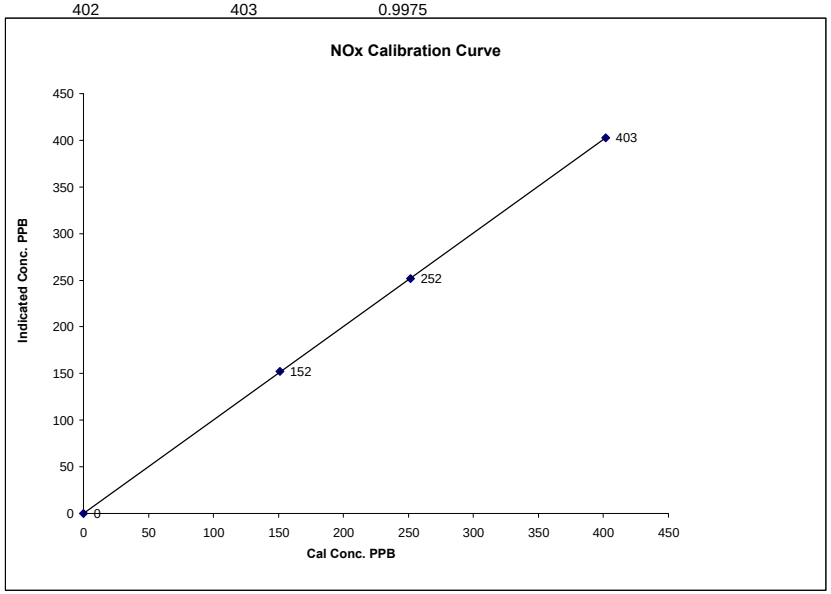


Notes:

NOx Calibration Curve

Calibration Date	May 28, 2009				
Company	**Lakeland Ind & Comm. Assoc.**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	6:50	End Time (MST)	14:45		

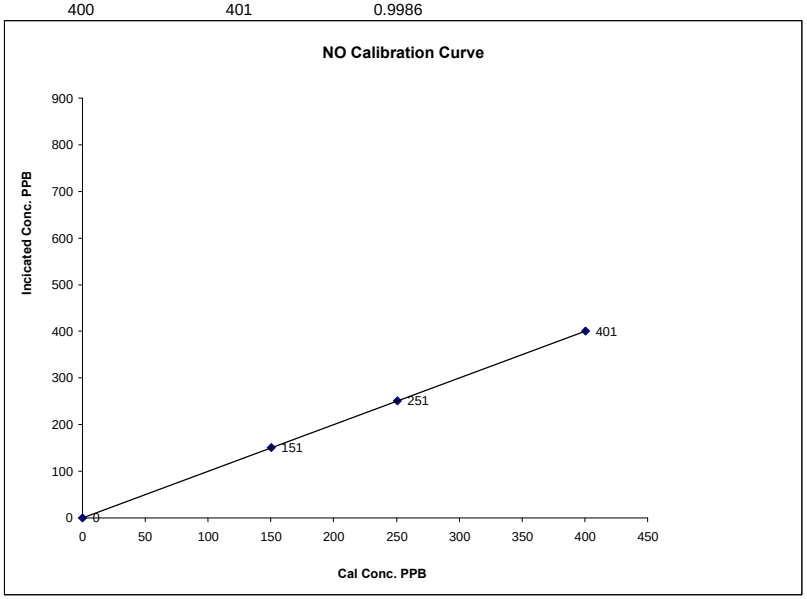
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	0.999997
			Slope	(0.85 to 1.15)	1.002095
0	0	N/A	Intercept	(± 3% F.S.)	0.13759
151	152	0.9944			
252	252	0.9985			
402	403	0.9975			

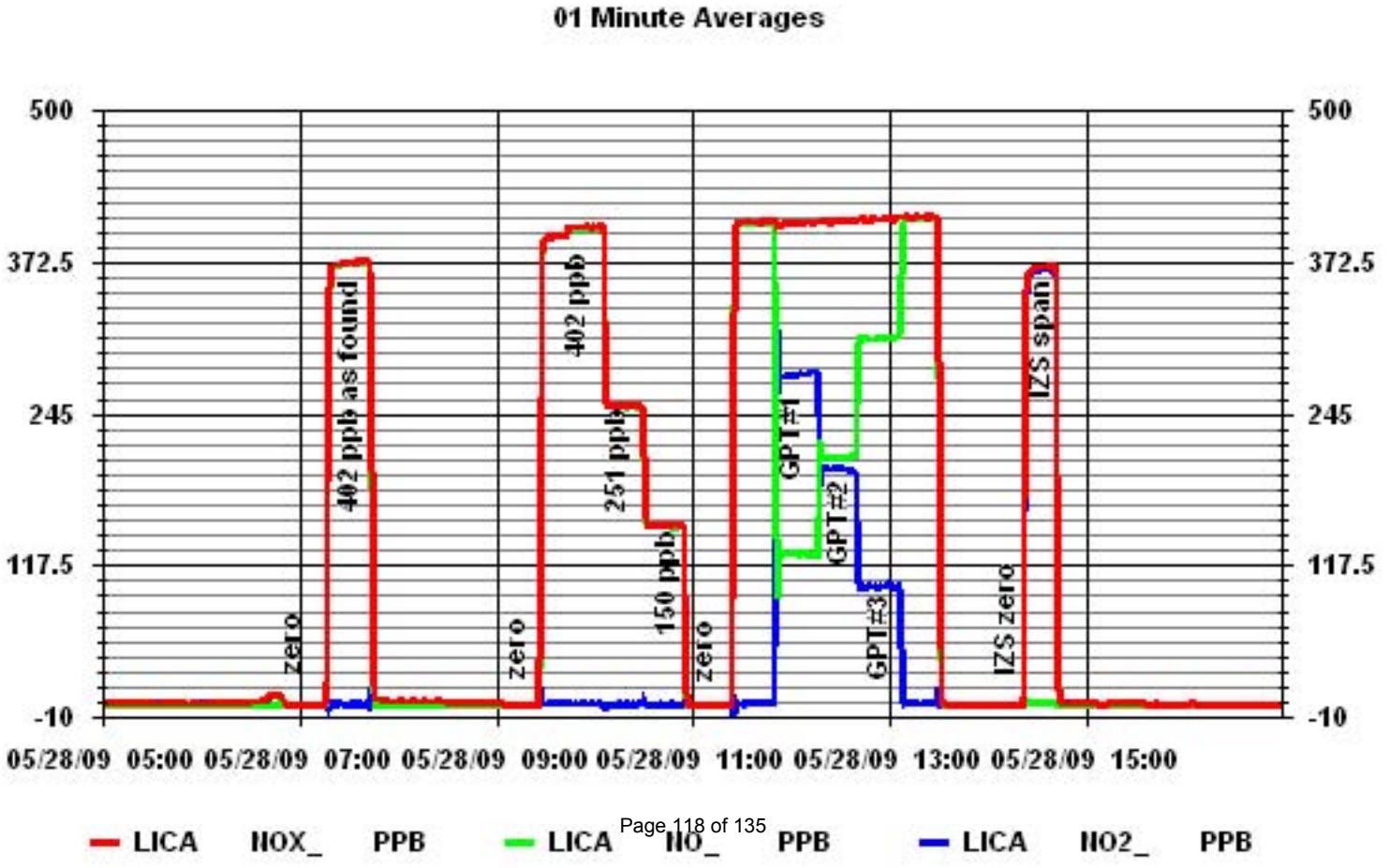


NO Calibration Curve

Calibration Date	May 28, 2009				
Company	**Lakeland Ind & Comm. Assoc.**				
Plant / Location	**LICA 1 - Cold Lake South**				
Start Time (MST)	6:50	End Time (MST)	14:45		

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient	(≥ 0.995)	1.000000
			Slope	(0.85 to 1.15)	1.000605
0	0	N/A	Intercept	(± 3% F.S.)	-0.0434
151	151	0.9971			
251	251	0.9986			
400	401	0.9986			




01 Minute Averages
500
372.5
245
117.5
-10
402 ppb as found
zero
402 ppb
251 ppb
150 ppb
zero
zero
GPT#1
GPT#2
GPT#3
IZS zero
IZS span
05/28/09 05:00 05/28/09 07:00 05/28/09 09:00 05/28/09 11:00 05/28/09 13:00 05/28/09 15:00
LICA NOX_ PPB
LICA NO_ PPB
LICA NO2_ PPB

Ozone

O_3 Calibration Report

Station Information

Calibration Date	May 21, 2009	Previous Calibration	April 23, 2009
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	9:40	End Time (MST)	13:20
Reason:		Monthly Calibration	
Barometric Pressure	714 mm Hg	Station Temperature	24 Deg C
DAS Output Voltage	0 - 10 Volts		

Equipment Information

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

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 - 500 ppb			
Bench Temp/ Pressure	28.2	Deg C	28.7	Deg C
O_3 Set Level	29%		29%	
Bench Lamp/O3 Lamp				
Sample Flow A/B	0.739 LPM	0.753 LPM	0.738 LPM	0.752 LPM
Offset / Slope	0.7	1.058	0.7	1.023

Calibration Data

Dilution Flow Rate	Ozone Set Point	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5003	0	0	0	N/A
5003	400	384	395	0.9722
5004	400	384	383	1.0026
5006	200	192	192	1.0000
5006	100	94	94	1.0000
5006	0	0	0	N/A
			Sum of Least Squares	N/A
			New Correction Factor	1.0026

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	296.0	286.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.0%

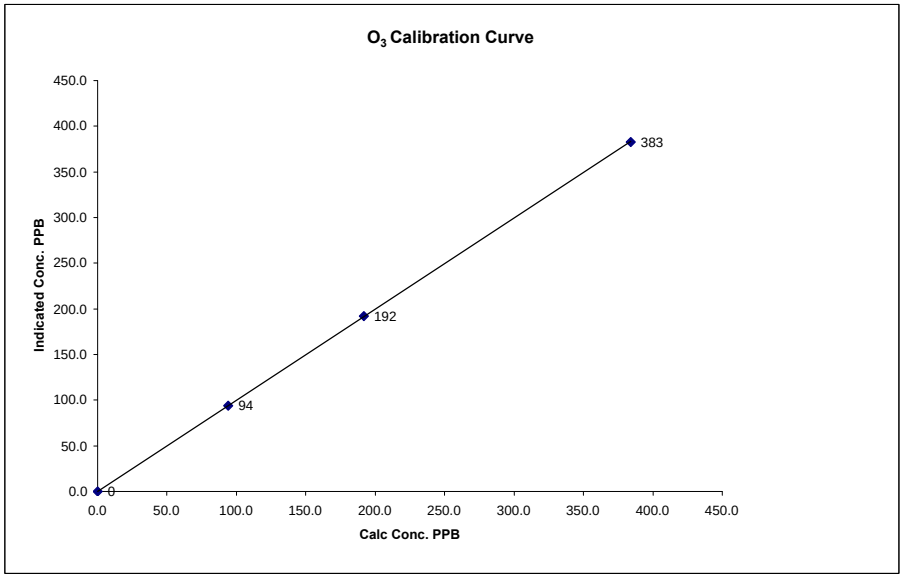
Calibration Performed by: Shea Beaton

O_3 Calibration Curve

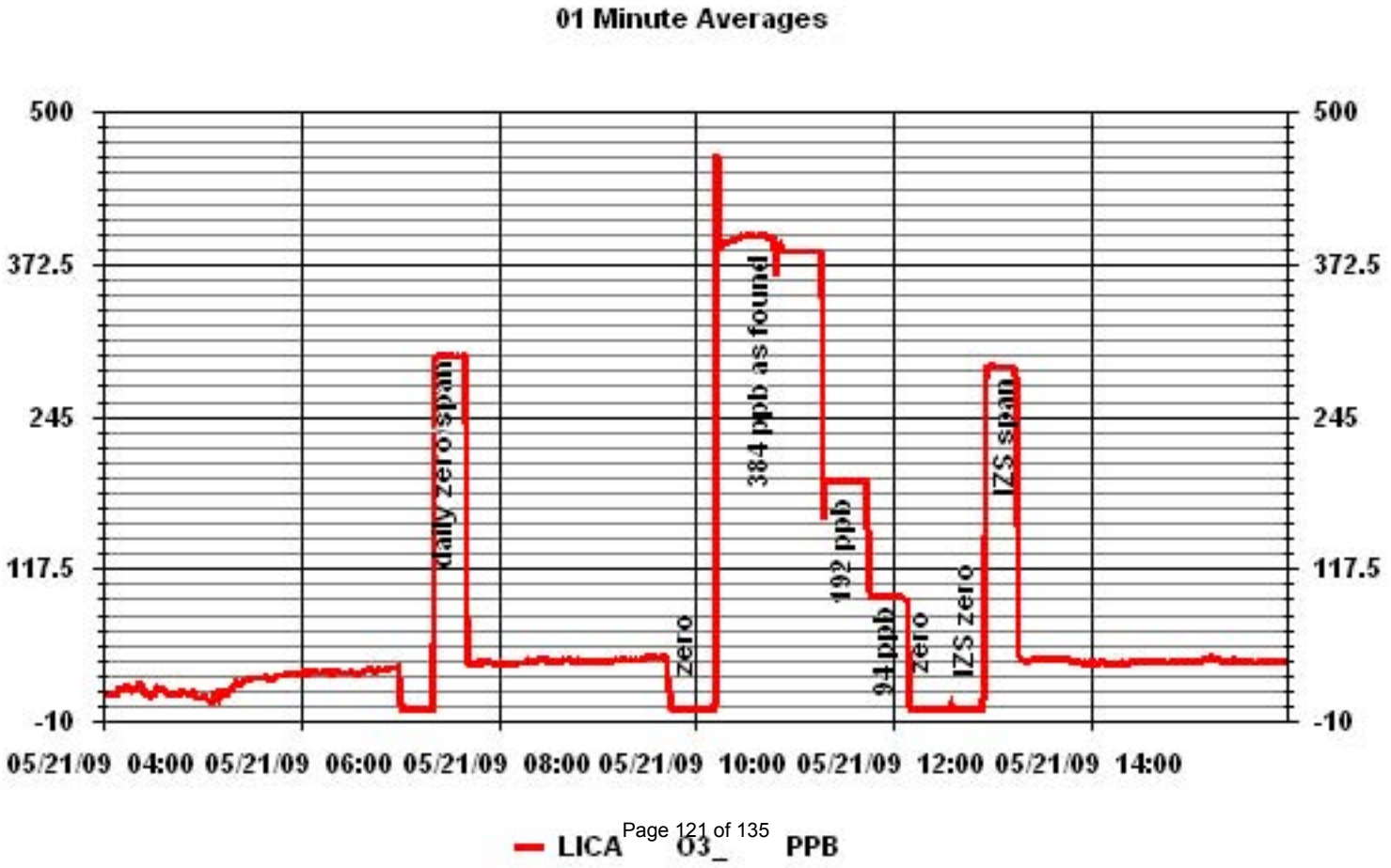
Calibration Date	May 21, 2009		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**LICA 1 - Cold Lake South**		
Start Time (MST)	9:40	End Time (MST)	13:20

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
94	94	1.0000
192	192	1.0000
384	383	1.0026

Correlation Coefficient	(≥ 0.995)	0.999998
Slope	(0.85 to 1.15)	0.997325
Intercept	(± 3% F.S.)	0.198082



Notes:


01 Minute Averages
500
372.5
245
117.5
-10
daily zero/span
zero
384 ppb as found
192 ppb
94 ppb
zero
IZS zero
IZS span
05/21/09 04:00
05/21/09 06:00
05/21/09 08:00
05/21/09 10:00
05/21/09 12:00
05/21/09 14:00
LICA O3_ PPB

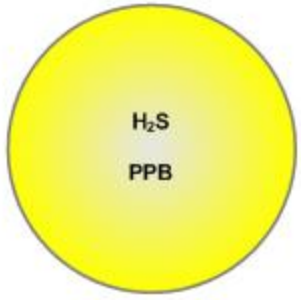
Passive Bubble Maps

Lakeland Industry & Community Association
H_2S Passive Bubble Map

MAY 2009

PASSIVE STATIONS

3 – Therien	0.05 PPB
3A – Therien	0.05 PPB
5 – Lake Eliza	0.14 PPB
10 – La Corey	0.08 PPB
10A – La Corey	0.07 PPB
11 – Wolf Lake	0.03 PPB
12 – Foster Creek	ON GROUND
13 – Primrose	0.03 PPB
14 – Maskwa	0.11 PPB
16 – Frog Lake	0.07 PPB
17 – Clear Range	0.11 PPB
18 – Fishing Lake	0.05 PPB
22 – Cold Lake South	0.05 PPB
24 – Fort George	0.08 PPB
25 – Burnt Lake	0.03 PPB
26 – Mahihkan	0.06 PPB
27 – Hilda Lake	0.07 PPB
29 – Cold Lake South 2	0.04 PPB



Summary

Minimum : 0.03PPB – Primrose
Maximum: 0.14 PPB –Lake Eliza
Average: 0.07 PPB *Includes Duplicates

Lakeland Industry & Community Association
NO_2 Passive Bubble Map

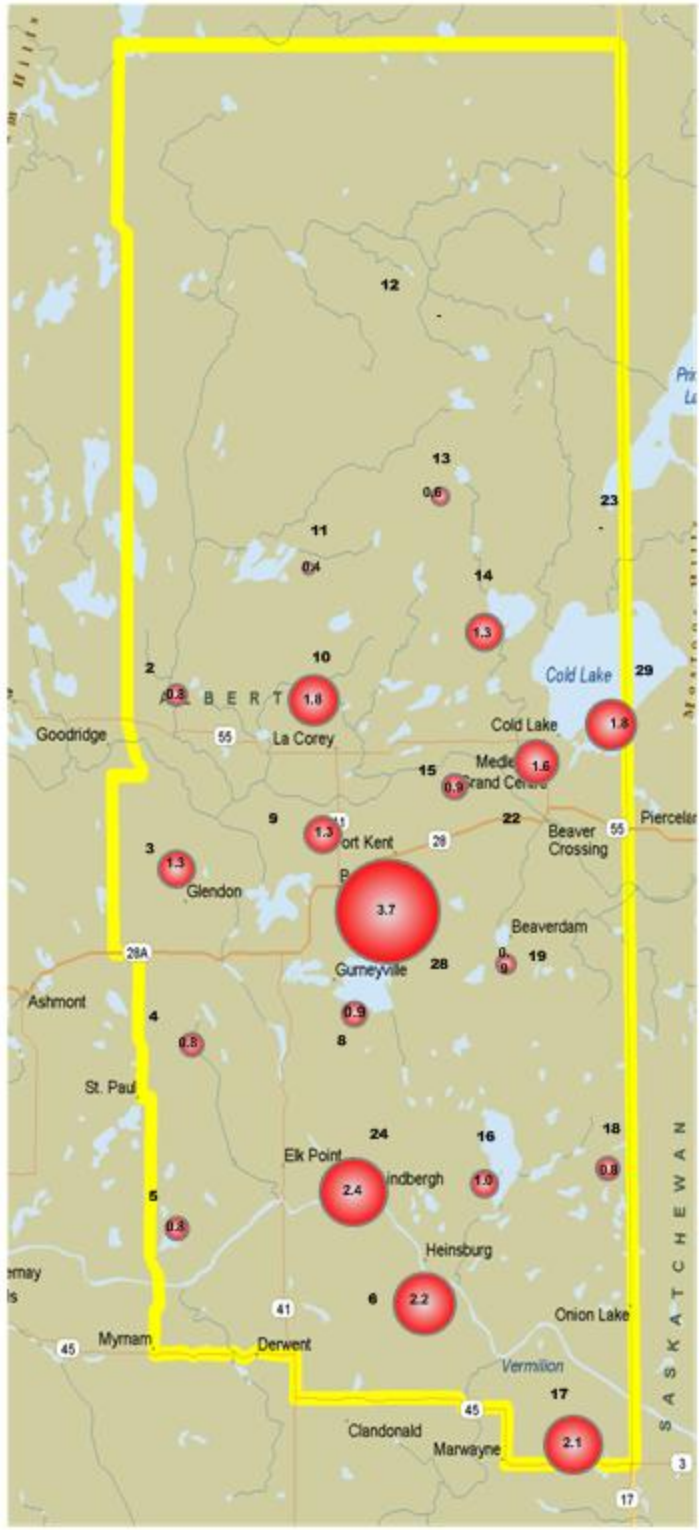
MAY 2009

PASSIVE STATIONS

2 – Sand River	0.8 PPB
3 – Therien	1.2 PPB
3A – Therien	1.3 PPB
4 – Flat Lake	0.8 PPB
5 – Lake Eliza	0.8 PPB
6 – Telegraph Creek	2.2 PPB
8 – Muriel-Kehewin	0.9 PPB
9 – Dupre	1.3 PPB
10 – La Corey	1.8 PPB
10A – La Corey	1.8 PPB
11 – Wolf Lake	0.4 PPB
12 – Foster Creek	ON GROUND
13 – Primrose	0.6 PPB
14 – Maskwa	1.3 PPB
15 – Ardmore	0.9 PPB
16 – Frog Lake	1.0 PPB
17 – Clear Range	2.1 PPB
18 – Fishing Lake	0.8 PPB
19 – Beaverdam	0.7 PPB
22 – Cold Lake South	1.6 PPB
23 – Medley-Martineau	ON GROUND
24 – Fort George	2.4 PPB
28 – Town of Bonnyville	3.7 PPB
29 – Cold Lake South 2	1.8 PPB

Summary

Minimum : 0.4 PPB – Wolf Lake
Maximum: 3.7 PPB – Town of Bonnyville
Average: 1.4 PPB *Includes Duplicates



Lakeland Industry & Community Association
O_3 Passive Bubble Map

MAY 2009

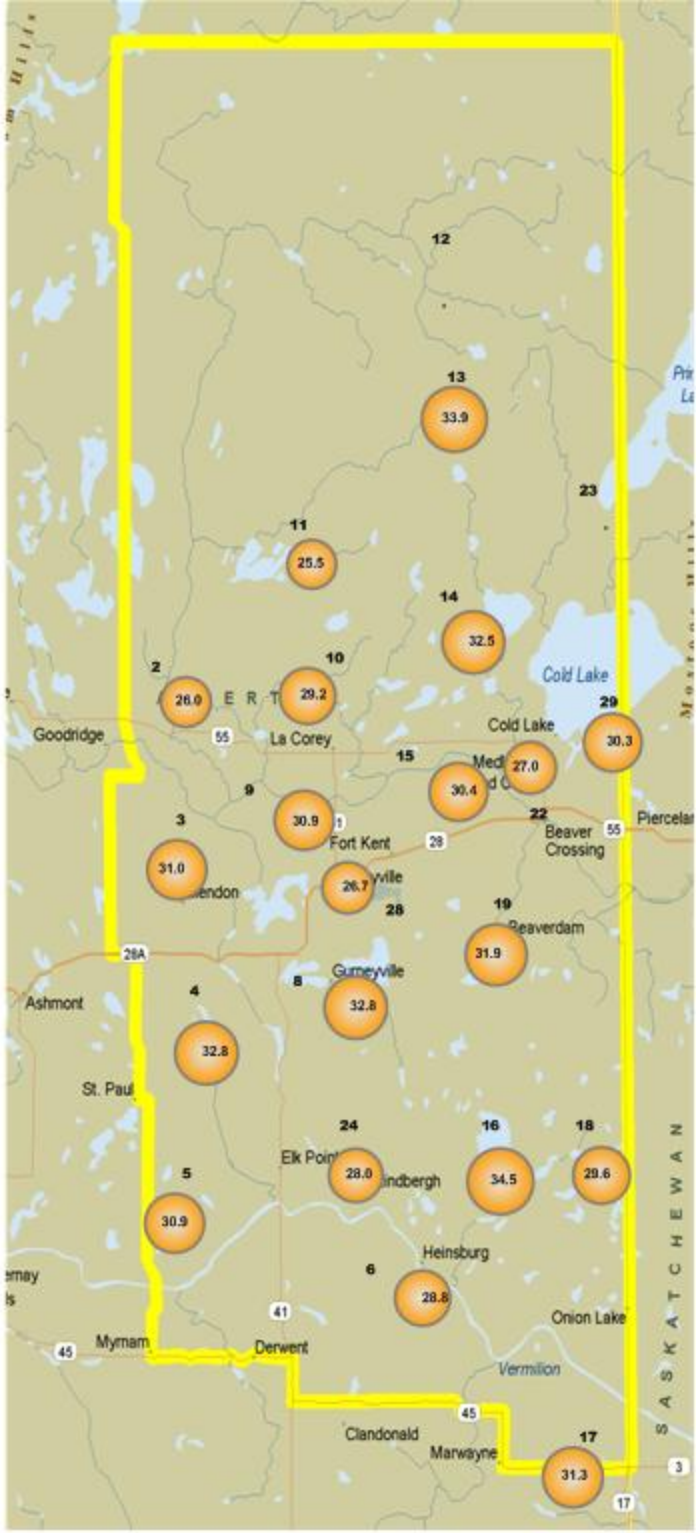
PASSIVE STATIONS

2 – Sand River	26.0 PPB
3 – Therien	30.1 PPB
3A – Therien	31.9 PPB
4 – Flat Lake	32.8 PPB
5 – Lake Eliza	30.9 PPB
6 – Telegraph Creek	28.8 PPB
8 – Muriel-Kehewin	32.8 PPB
9 – Dupre	30.9 PPB
10 – La Corey	28.9 PPB
10A – La Corey	29.5 PPB
11 – Wolf Lake	25.5 PPB
12 – Foster Creek	ON GROUND
13 – Primrose	33.9 PPB
14 – Maskwa	32.5 PPB
15 – Ardmore	30.4 PPB
16 – Frog Lake	34.5 PPB
17 – Clear Range	31.3 PPB
18 – Fishing Lake	29.6 PPB
19 – Beaverdam	31.9 PPB
22 – Cold Lake South	27.0 PPB
23 – Medley-Martineau	ON GROUND
24 – Fort George	28.0 PPB
28 – Town of Bonnyville	26.7 PPB
29 – Cold Lake South 2	30.3 PPB

O_3 PPB

Summary

Minimum : 25.5 PPB –Wolf Lake
Maximum: 34.5 PPB –Frog Lake
Average: 30.2 PPB *Includes Duplicates

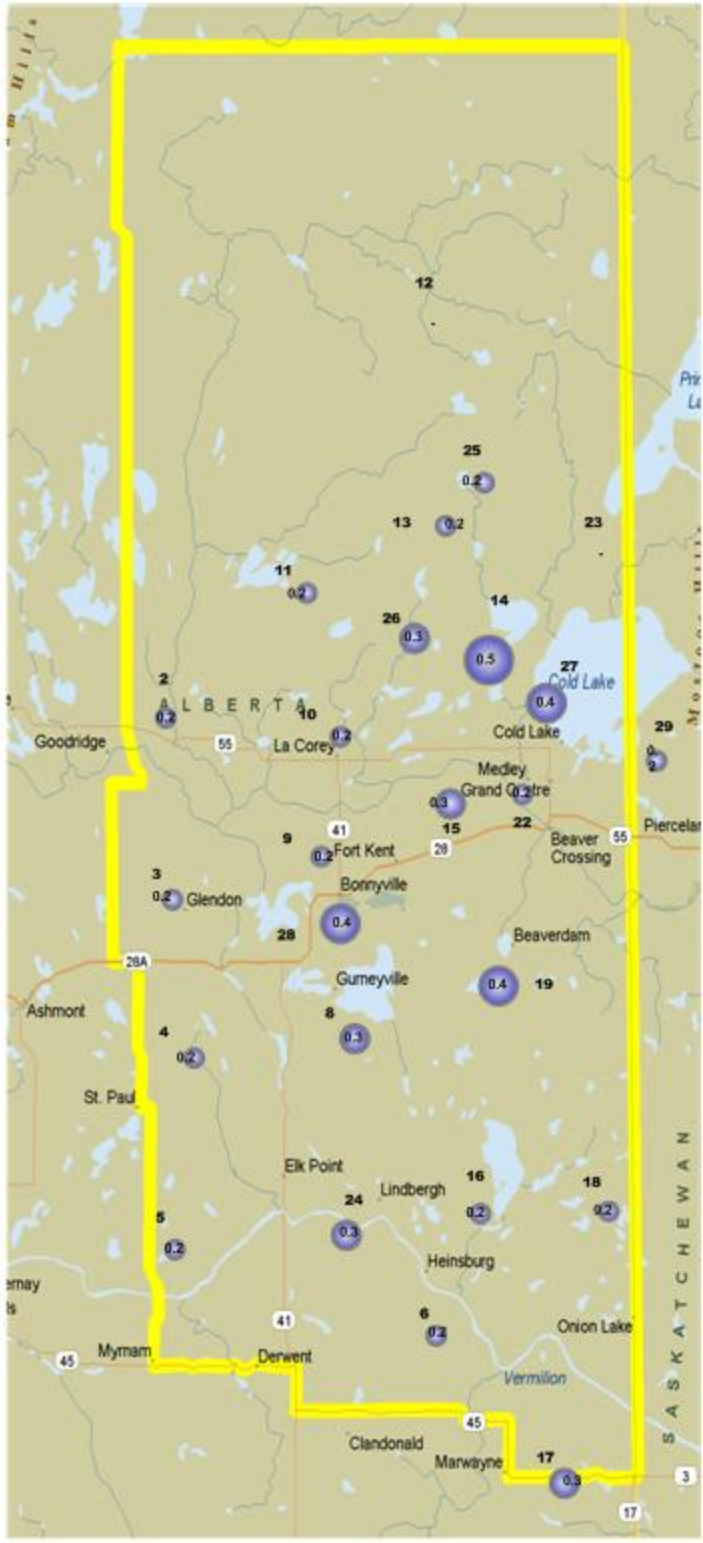


Lakeland Industry & Community Association
SO_2 Passive Bubble Map

MAY 2008

PASSIVE STATIONS

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



Summary

Minimum :< 0.1 PPB – Medley-Martineau
Maximum: 0.5 PPB –Maskwa
Average: 0.3 PPB *Includes Duplicates

Passive Network Laboratory Analysis

Your Project #: 2009/04/28 - 2009/05/29
Site:LICA

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

Report Date: 2009/06/25
This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A926487
Received: 2009/06/03, 09:29

Sample Matrix: Air
Samples Received: 27

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
H2S Passive Analysis (1)	18	2009/06/08	2009/06/23		EDM SOP-0320
NO2 Passive Analysis (1)	1	2009/06/16	2009/06/23		EDM SOP-0318
NO2 Passive Analysis (1)	23	2009/06/17	2009/06/23		EDM SOP-0318
O3 Passive Analysis (1)	24	2009/06/22	2009/06/23		EDM SOP-0317
SO2 Passive Analysis (1)	1	2009/06/10	2009/06/23		EDM SOP-0319
SO2 Passive Analysis (1)	1	2009/06/15	2009/06/23		EDM SOP-0319
SO2 Passive Analysis (1)	25	2009/06/18	2009/06/23		EDM SOP-0319

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

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

Encryption Key

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

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

==========

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

Total cover pages: 1

Maxxam Job #: A926487
Report Date: 2009/06/25

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2009/04/28 - 2009/05/29
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		P06624	P06625		P06626		
Sampling Date		2009/04/28 09:35	2009/04/28 09:05		2009/04/29 12:50		
	Units	**2**	**3**	**QC Batch**	**4**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb		0.05	3179718		0.02	3179718
Calculated NO2	ppb	0.8	1.2	3211019	0.8	0.1	3211019
Calculated O3	ppb	26.0	30.1	3220538	32.8	0.1	3220620
Calculated SO2	ppb	0.2	0.3	3214082	0.2	0.1	3214082

RDL = Reportable Detection Limit

Maxxam ID		P06627	P06628	P06629	P06630		
Sampling Date		2009/04/29 12:15	2009/04/29 11:05	2009/04/29 13:40	2009/04/28 08:25		
	Units	**5**	**6**	**8**	**9**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb	0.14				0.02	3179718
Calculated NO2	ppb	0.8	2.2	0.9	1.3	0.1	3211019
Calculated O3	ppb	30.9	28.8	32.8	30.9	0.1	3220620
Calculated SO2	ppb	0.2	0.2	0.3	0.2	0.1	3214082

RDL = Reportable Detection Limit

Maxxam ID		P06631	P06632	P06633	P06634		
Sampling Date		2009/04/28 10:20	2009/04/28 11:00	2009/04/28 12:25	2009/04/28 13:55		
	Units	**10**	**11**	**12**	**13**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb	0.08	0.03	MISSING	0.03	0.02	3179718
Calculated NO2	ppb	1.8	0.4	MISSING	0.6	0.1	3211019
Calculated O3	ppb	28.9	25.5	MISSING	33.9	0.1	3220620
Calculated SO2	ppb	0.2	0.2	MISSING	0.2	0.1	3214082

RDL = Reportable Detection Limit

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		P06635	P06636	P06637	P06638		
Sampling Date		2009/04/28 14:45	2009/04/28 07:45	2009/04/29 09:35	2009/04/29 10:20		
	Units	**14**	**15**	**16**	**17**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb	0.11		0.07	0.11	0.02	3179718
Calculated NO2	ppb	1.3	0.9	1.0	2.1	0.1	3211019
Calculated O3	ppb	32.5	30.4	34.5	31.3	0.1	3220620
Calculated SO2	ppb	0.5	0.3	0.2	0.3	0.1	3214082

RDL = Reportable Detection Limit

Maxxam ID		P06639	P06640		P06641		
Sampling Date		2009/04/29 08:55	2009/04/29 08:00		2009/04/28 06:10		
	Units	**18**	**19**	**QC Batch**	**22**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb	0.05		3179718	0.05	0.02	3179718
Calculated NO2	ppb	0.8	0.7	3211019	1.6	0.1	3211019
Calculated O3	ppb	29.6	31.9	3220620	27.0	0.1	3220620
Calculated SO2	ppb	0.2	0.4	3214082	0.2	0.1	3214087

RDL = Reportable Detection Limit

Maxxam ID		P06642	P06643	P06646	P06647		
Sampling Date		2009/04/28 16:20	2009/04/29 11:35	2009/04/28 13:35	2009/04/28 14:25		
	Units	**23**	**24**	**25**	**26**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb		0.08	0.03	0.06	0.02	3179718
Calculated NO2	ppb	ON GROUND	2.4			0.1	3211019
Calculated O3	ppb	ON GROUND	28.0			0.1	3220620
Calculated SO2	ppb	<0.1	0.3	0.2	0.3	0.1	3214087

RDL = Reportable Detection Limit

Maxxam Job #: A926487
Report Date: 2009/06/25

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Client Project #: 2009/04/28 - 2009/05/29
Site Reference: LICA
Sampler Initials: SB

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		P06648	P06649	P06650	P06651		
Sampling Date		2009/04/28 15:20	2009/04/28 08:10	2009/04/28 06:00	2009/04/28 09:05		
	Units	**27**	**28**	**29**	**3A**	**RDL**	**QC Batch**
Passive Monitoring							
Calculated H2S	ppb	0.07		0.04	0.05	0.02	3179718
Calculated NO2	ppb		3.7	1.8	1.3	0.1	3211019
Calculated O3	ppb		26.7	30.3	31.9	0.1	3220620
Calculated SO2	ppb	0.4	0.4	0.2	0.2	0.1	3214087

RDL = Reportable Detection Limit

Maxxam ID		P06652		
Sampling Date		2009/04/28 10:20		
	Units	**10A**	**RDL**	**QC Batch**
Passive Monitoring				
Calculated H2S	ppb	0.07	0.02	3179718
Calculated NO2	ppb	1.8	0.1	3211019
Calculated O3	ppb	29.5	0.1	3220620
Calculated SO2	ppb	0.2	0.1	3214087

RDL = Reportable Detection Limit

General Comments

Station #12: Samples not returned to laboratory for analysis.
Station #23: Note on field sheet states 'NO2 + O3 Samples Fell Out'

Results relate only to the items tested.

LAKELAND INDUSTRY AND COMMUNITY ASSOCIATION
Attention: MICHAEL BISAGA
Client Project #: 2009/04/28 - 2009/05/29
P.O. #:
Site Reference: LICA

Quality Assurance Report

Maxxam Job Number: PA926487

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3179718	TM5	Calibration Check	Calculated H2S	2009/06/08		97	%	80 - 120
		SPIKE	Calculated H2S	2009/06/08		99	%	N/A
3211019	DF4	Calibration Check	Calculated NO2	2009/06/17		100	%	76 - 118
		SPIKE	Calculated NO2	2009/06/17		103	%	N/A
		BLANK	Calculated NO2	2009/06/17	<0.1		ppb	
3214082	DF4	Calibration Check	Calculated SO2	2009/06/19		99	%	95 - 105
		SPIKE	Calculated SO2	2009/06/19		102	%	N/A
		BLANK	Calculated SO2	2009/06/19	<0.1		ppb	
3214087	DF4	Calibration Check	Calculated SO2	2009/06/19		100	%	95 - 105
		SPIKE	Calculated SO2	2009/06/19		103	%	N/A
		BLANK	Calculated SO2	2009/06/19	<0.1		ppb	
3220538	DF4	Calibration Check	Calculated O3	2009/06/23		96	%	91 - 107
		SPIKE	Calculated O3	2009/06/23		99	%	N/A
		BLANK	Calculated O3	2009/06/23	<0.1		ppb	
3220620	DF4	Calibration Check	Calculated O3	2009/06/23		96	%	91 - 107
		SPIKE	Calculated O3	2009/06/23		100	%	N/A
		BLANK	Calculated O3	2009/06/23	<0.1		ppb	

N/A = Not Applicable

Passive Field Data

Field Notes

ID	SAMPLER	START		END		NOTES
		DATE	TIME	DATE	TIME	
2	$SO_2/NO_2/O_3$	04/28/09	09:35	05/29/09	09:15	
3	$H_2S/SO_2/NO_2/O_3$	04/28/09	09:05	05/29/09	08:40	
4	$SO_2/NO_2/O_3$	04/29/09	12:50	05/30/09	12:45	
5	$H_2S/SO_2/NO_2/O_3$	04/29/09	12:15	05/30/09	12:10	
6	$SO_2/NO_2/O_3$	04/29/09	11:05	05/30/09	10:55	
8	$SO_2/NO_2/O_3$	04/29/09	13:40	05/30/09	13:35	
9	$SO_2/NO_2/O_3$	04/28/09	08:25	05/29/09	08:05	
10	$H_2S/SO_2/NO_2/O_3$	04/28/09	10:20	05/29/09	10:00	
11	$H_2S/SO_2/NO_2/O_3$	04/28/09	11:00	05/29/09	10:40	
12	$H_2S/SO_2/NO_2/O_3$	04/28/09	12:25	Damaged (found on the ground)		
13	$H_2S/SO_2/NO_2/O_3$	04/28/09	13:55	05/29/09	14:00	
14	$H_2S/SO_2/NO_2/O_3$	04/28/09	14:45	05/29/09	15:00	
15	$SO_2/NO_2/O_3$	04/28/09	07:45	05/29/09	07:15	
16	$H_2S/SO_2/NO_2/O_3$	04/29/09	09:35	05/30/09	09:25	
17	$H_2S/SO_2/NO_2/O_3$	04/29/09	10:20	05/30/09	10:10	
18	$H_2S/SO_2/NO_2/O_3$	04/29/09	08:55	05/30/09	08:40	
19	$SO_2/NO_2/O_3$	04/29/08	08:00	05/30/09	07:45	
22	$H_2S/SO_2/NO_2/O_3$	04/28/09	06:10	05/29/09	06:15	Dicommissioned
23	$SO_2/NO_2/O_3$	04/28/09	16:20	05/29/09	16:10	NO2and O3 fell out
24	$H_2S/SO_2/NO_2/O_3$	04/29/09	11:35	05/30/09	11:30	
25	H_2S/SO_2	04/28/09	13:35	05/29/09	10:35	
26	H_2S/SO_2	04/28/09	14:25	05/29/09	14:40	
27	H_2S/SO_2	04/28/09	15:20	05/29/09	15:20	
28	$SO_2/NO_2/O_3$	04/28/09	08:10	05/29/09	07:45	
29	$H_2S/SO_2/NO_2/O_3$	04/28/09	06:00	05/29/09	06:25	
3A	$H_2S/SO_2/NO_2/O_3$	04/29/09	11:35	05/29/09	08:40	
10A	$H_2S/SO_2/NO_2/O_3$	04/29/09	12:15	05/29/09	10:00	

Lakeland Industry & Community Association

Maskwa Monitoring Site
Ambient Air Monitoring
Data Report
For
May 2009

Prepared By:

Maxxam Analytics

Driven by Service and Science

June 12, 2009

Lakeland Industry & Community Association
Ambient Air Monitoring
Maskwa

Table of Contents

Introduction

The following Ambient Air Monitoring report was prepared for:

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

Monitoring Location: Maskwa
Data Period: May 2009

The monthly ambient data report:

- Prepared by Lily Lin
- Reviewed by Craig Snider

The monthly analytical report for static & passive monitoring:

- Authorized by Levi Manchak

Calibration Procedure

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

- CAL SOP-00196
- CAL SOP-00197
- CAL SOP-00193
- CAL SOP-00194
- CAL SOP-00200

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

MONTHLY CONTINUOUS DATA SUMMARY
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

Continuous Ambient Monitoring – May 2009

LICA MASKWA SITE						MAXIMUM VALUES							OPERATIONAL TIME (PERCENT)
						1-HOUR					24-HOUR		
PARAMETER	OBJECTIVES		EXCEEDENCES		MONTHLY AVERAGE	READING	DAY	HOUR	WIND SPEED (KPH)	WIND DIRECTION (DEGREES)	READING	DAY	
	1-HR	24-HR	1-HR	24-HR									
SO2 (PPB)	172	57	0	0	0.24	5	8, 8	7, 7	1.5, 3.6	121(ESE), 75(ENE)	1.0	2	99.9
H2S (PPB)	10	3	0	0	0.03	3	4	2	0.9	47(NE)	0.2	4	100.0
THC (PPM)	-	-	-	-	2.07	3.3	5	6	1.4	42(NE)	2.2	16	99.9
NOx (PPB)	-	-	-	-	1.20	40	24	6	0.9	21(NNE)	3.0	31	99.9
NO (PPB)	-	-	-	-	0.14	21	24	6	0.9	21(NNE)	0.9	24	99.9
NO_2 (PPB)	212	106	0	0	0.88	18	24	6	0.9	21(NNE)	2.7	26	99.9
VECTOR WS (KPH)	-	-	-	-	6.98	19.2	12	20	-	15(NNE)	9.6	17	100.0
VECTOR WD (DEGREES)	-	-	-	-	8(N)	-	-	-	-	-	-	-	100.0
RELATIVE HUMIDITY (%)	-	-	-	-	52.49	94	27	1	5.3	243(WSW)	77.6	27	100.0
TEMPERATURE (DEG C)	-	-	-	-	8.50	24.9	24	12	8.8	198(SSW)	15.6	24	100.0
BAROMETRIC PRESSURE (MILIBAR)	-	-	-	-	938.46	952	22	7	5.7	298(WNW)	949	18	96.6
PRECIPITATION (MM)	-	-	-	-	0.02	2.2	19	12	12.6	82(E)	4.1	19	100.0

VAR-VARIOUS

General Monthly Summary

Equipment Operation

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

AQM STATION – LICA – Maskwa

Sulphur Dioxide (PPB)

- Analyzer make / model - API 100E

No operational issue was observed during this month. The UV lamp was peaked as per TAPI service Note 004-012 following the as found points on May 19th. After that a lamp calibration and a factory calibration were performed. A multi-point calibration was performed on May 12th. The inlet filter was changed before the monthly calibration was started. The UV lamp voltage has drifted down by approximately 30% during each of the last two months. This lamp and the UV driver board were installed in March of 2009. This issue will be monitored closely to see if the lamp drift continues. An alarm test was performed on May 20th, and proper operation was confirmed. Data was corrected using daily zero information.

Hydrogen Sulphide (PPB)

- Analyzer make / model - API 101E

No operational issues observed during this month. An alarm test was performed on May 20th, and proper operation was confirmed. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

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.

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- Analyzer make / model - API 101E

No operational issues observed during this month. An alarm test was performed on May 20th, and proper operation was confirmed. The inlet filter was changed before the monthly calibration was started. Data was corrected using daily zero information.

General Monthly Summary

AQM STATION – LICA – Maskwa

Precipitation (MM)
- System make / model - Met One 387

No operational issues observed during the month.

Barometric Pressure (inHG)
- System make / model - Met One 092

No operational issues observed during the month.

Ambient Temperature (DEGC)
- System make / model - Met One 060

No operational issues observed during the month.

Trailer Temperature (DEG C)
- System make / model – R&R 61

The sensor will allow monitoring of the trailer temperature.

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

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

Trailer

No issues with the station.

Continuous Monitoring

Monthly Summaries, Graphs & Wind Roses

Sulphur Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

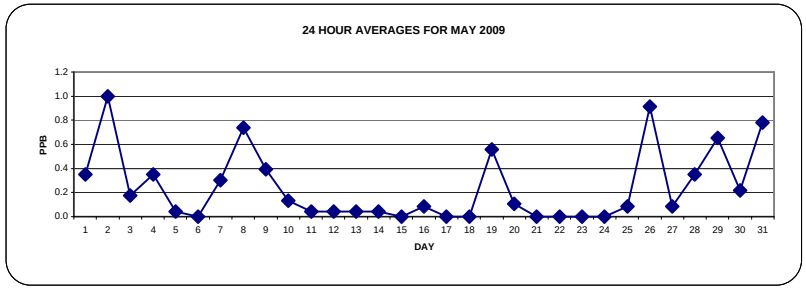
SULPHUR DIOXIDE (SO_2) hourly averages in ppb

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	**IZS**	0	0	0	1	1	1	1	0	2	1	0	0	0	0	0	0	1	0	2	0.3	24
2	0	0	0	0	0	**IZS**	1	4	2	3	1	0	0	1	1	1	2	2	3	1	1	0	0	0	4	**1.0**	24
3	0	0	0	0	0	**IZS**	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0.2	24
4	0	0	0	0	3	**IZS**	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
5	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.0	24
6	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	0	0	0	0	**IZS**	0	**5**	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**	0.3	24
8	0	0	0	0	0	**IZS**	0	2	**5**	4	2	1	2	1	0	0	0	0	0	0	0	0	0	0	**5**	0.7	24
9	0	0	0	0	0	**IZS**	0	0	0	1	1	1	0	1	2	1	1	1	0	0	0	0	0	0	2	0.4	24
10	0	0	0	0	0	**IZS**	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.1	24
11	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.0	24
12	0	0	0	0	0	**IZS**	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
13	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.0	24
14	0	0	0	0	0	**IZS**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
15	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0.1	24
17	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	4	3	1	**IZS**	0	0	0	2	0	**C**	**C**	**M**	**C**	**C**	0	0	0	0	0	0	0	0	4	0.6	23
20	0	0	0	0	0	**IZS**	0	0	0	**C**	**C**	**C**	**C**	1	0	0	0	0	1	0	0	0	0	0	1	0.1	24
21	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0.1	24
26	0	0	0	0	0	**IZS**	0	1	1	0	1	2	4	1	0	2	1	0	4	1	1	1	1	0	4	0.9	24
27	0	0	0	0	0	**IZS**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0.1	24
28	0	0	0	0	0	**IZS**	0	0	0	0	0	1	1	0	0	1	0	0	0	0	2	0	1	2	2	0.3	24
29	0	1	4	1	1	**IZS**	0	0	0	1	0	0	0	0	0	0	0	1	1	2	2	1	0	0	4	0.7	24
30	0	0	2	0	0	**IZS**	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	2	0.2	24
31	3	0	0	0	0	**IZS**	2	2	0	0	0	0	0	0	2	0	2	1	2	2	0	1	1	0	3	0.8	24
HOURLY MAX	3	1	4	3	3	**NA**	2	5	5	4	2	2	4	1	2	2	2	2	4	2	2	1	1	2			
HOURLY AVG	0.1	0.0	0.3	0.1	0.2	**NA**	0.1	0.5	0.4	0.5	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.4	0.2	0.2	0.1	0.2	0.1			

STATUS FLAG CODES

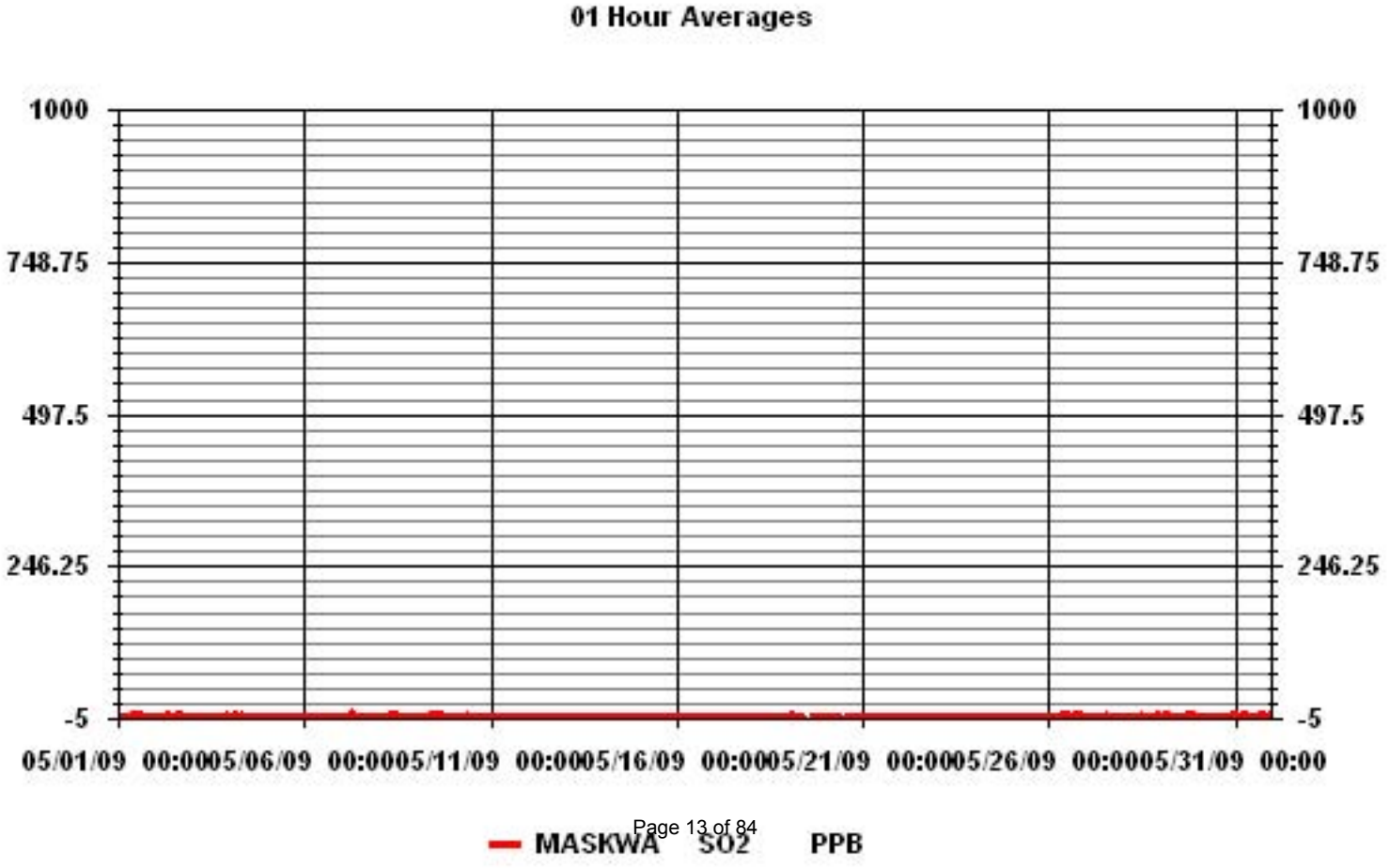
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	104					
MAXIMUM 1-HR AVERAGE:	5	PPB	@ HOUR(S)	7, 7	ON DAY(S)	8, 8
MAXIMUM 24-HR AVERAGE:	1.0	PPB			ON DAY(S)	2
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	8	HRS	AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	0.69		MONTHLY AVERAGE:		0.24	PPB


01 Hour Averages
1000
748.75
497.5
246.25
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA SO2 PPB

MASKWA
SO2 / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

Logger Id : 03
Site Name : MASKWA
Parameter : SO2
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
<	20	6.67	8.23	7.95	9.65	4.40	5.11	5.11	3.97	3.97	8.66	7.81	3.83	3.69	10.51	4.54	5.82	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	6.67	8.23	7.95	9.65	4.40	5.11	5.11	3.97	3.97	8.66	7.81	3.83	3.69	10.51	4.54	5.82	

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	47	58	56	68	31	36	36	28	28	61	55	27	26	74	32	41	704
<	60																	
<	110																	
<	170																	
<	340																	
>=	340																	
	Totals	47	58	56	68	31	36	36	28	28	61	55	27	26	74	32	41	

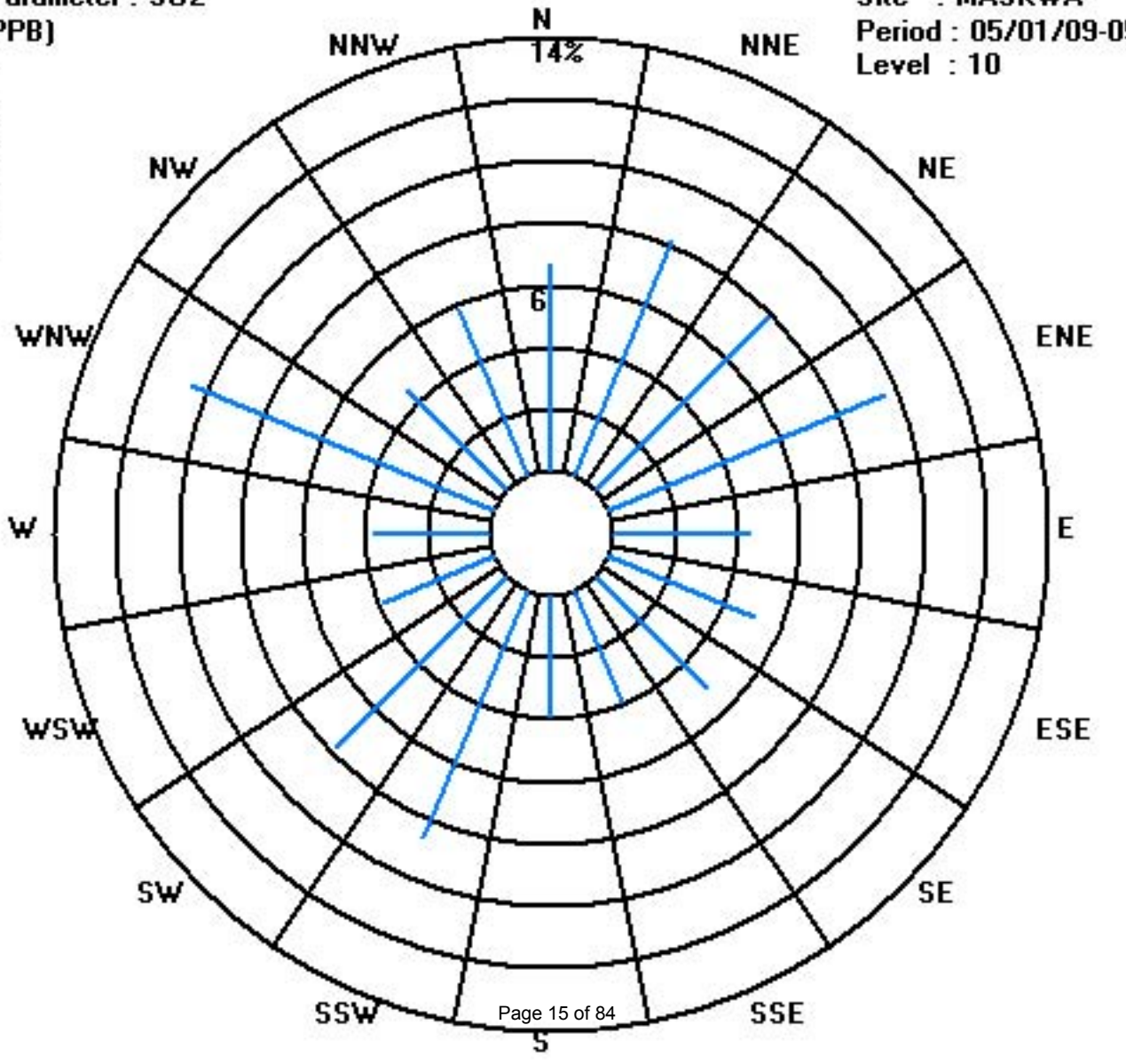
Calm : .00 %

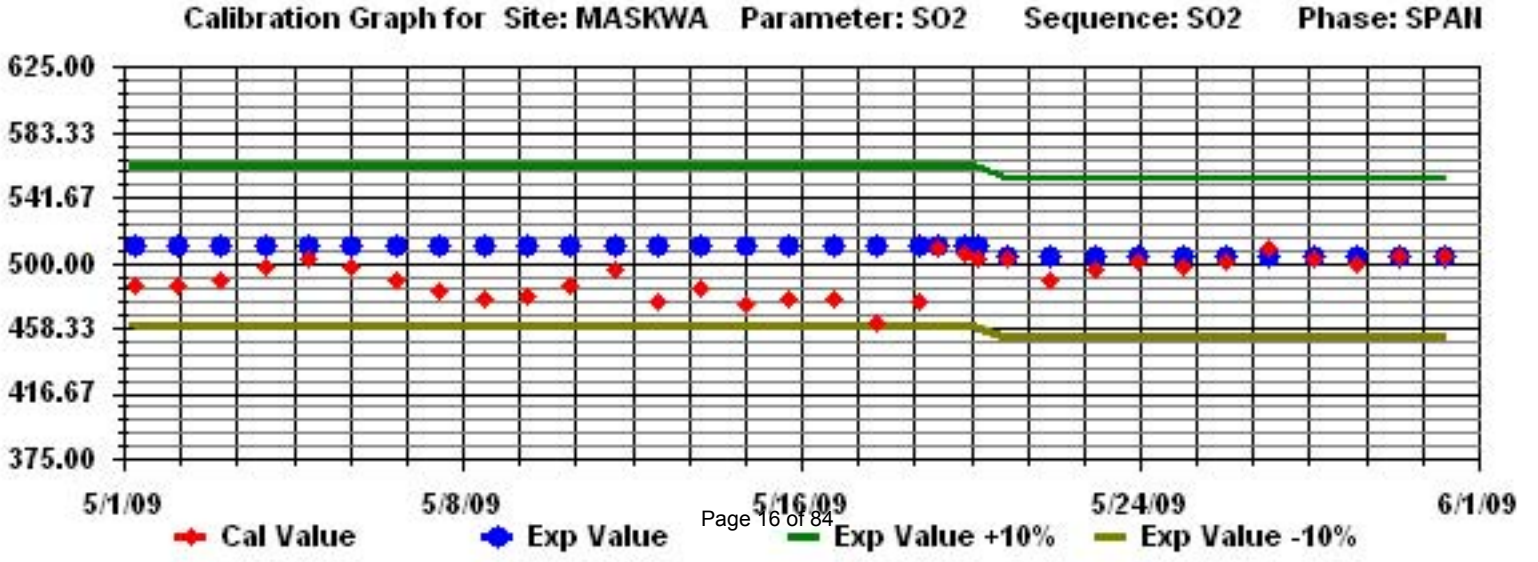
Total # Operational Hours : 704

Logger : 03 Parameter : SO2
Class Limits (PPB)

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

Site : MASKWA
Period : 05/01/09-05/31/09
Level : 10




Calibration Graph for Site: MASKWA Parameter: SO2 Sequence: SO2 Phase: SPAN
625.00
583.33
541.67
500.00
458.33
416.67
375.00
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Hydrogen Sulphide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

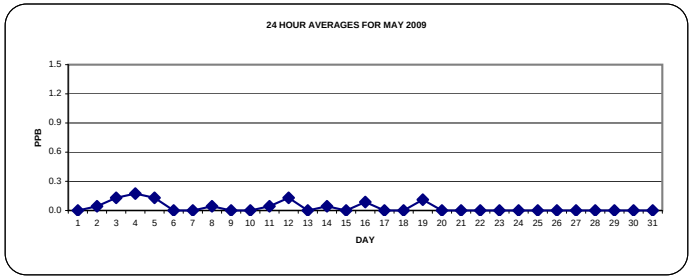
HYDROGEN SULPHIDE (H_2S) hourly averages in ppb

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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.0	24
3	1	1	0	0	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
4	0	0	**3**	1	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	**0.2**	24
5	0	0	0	0	0	**IZS**	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	24
6	0	0	0	0	0	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
8	0	0	0	0	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
9	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
10	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
11	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.0	24
12	0	0	1	1	0	**IZS**	1	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.0	24
15	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
16	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0.1	24
17	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	**IZS**	0	0	0	1	1	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	1	0.1	24
20	0	0	0	0	0	**IZS**	0	0	0	0	0	0	**C**	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
22	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
23	0	0	0	0	0	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
25	0	0	0	0	0	**IZS**	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
28	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
30	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
HOURLY MAX	1	1	3	1	0	**NA**	2	1	0	1	1	0	0	0	1	0	0	1	0	0	1	0	1	1			
HOURLY AVG	0.0	0.0	0.1	0.1	0.0	**NA**	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

STATUS FLAG CODES

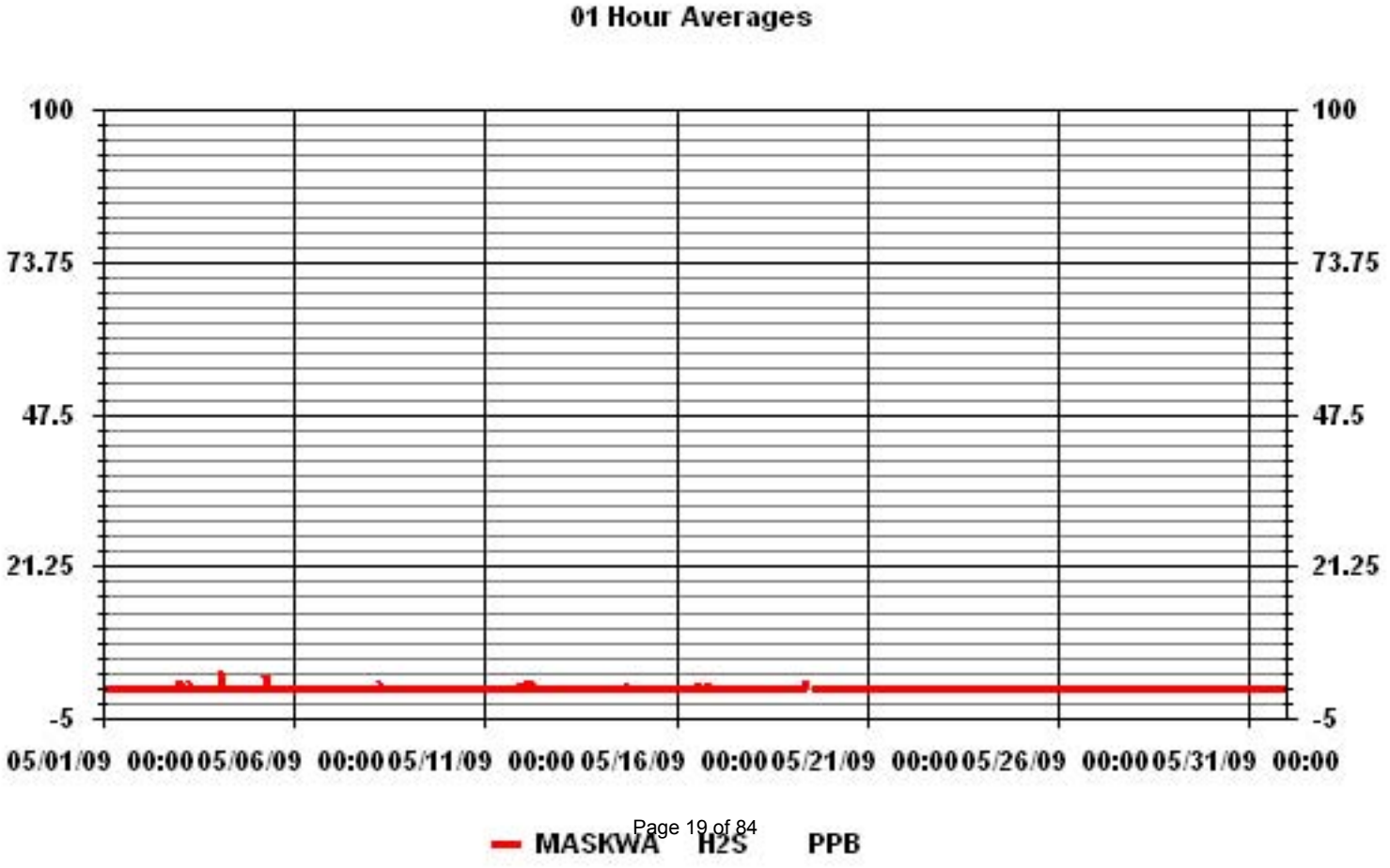
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0						
NUMBER OF 24-HR EXCEEDENCES:	0						
NUMBER OF NON-ZERO READINGS:	18						
MAXIMUM 1-HR AVERAGE:	3	PPB	@ HOUR(S)	2	ON DAY(S)	4	
MAXIMUM 24-HR AVERAGE:	0.2	PPB			ON DAY(S)	4	
					VAR-VARIOUS		
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:			744	HRS
MONTHLY CALIBRATION TIME:	6	HRS	AMD OPERATION UPTIME:			100.0	%
STANDARD DEVIATION:	0.20		MONTHLY AVERAGE:			0.03	PPB


01 Hour Averages
100
73.75
47.5
21.25
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA H2S PPB

MASKWA
H2S / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

Logger Id : 03
Site Name : MASKWA
Parameter : H2S
Units : PPB

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	6.93	8.20	7.77	9.61	4.38	5.09	5.09	3.96	3.96	8.62	7.77	3.81	3.67	10.46	4.66	5.79	99.85
< 10	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
< 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.93	8.20	7.92	9.61	4.38	5.09	5.09	3.96	3.96	8.62	7.77	3.81	3.67	10.46	4.66	5.79	

Calm : .00 %

Total # Operational Hours : 707

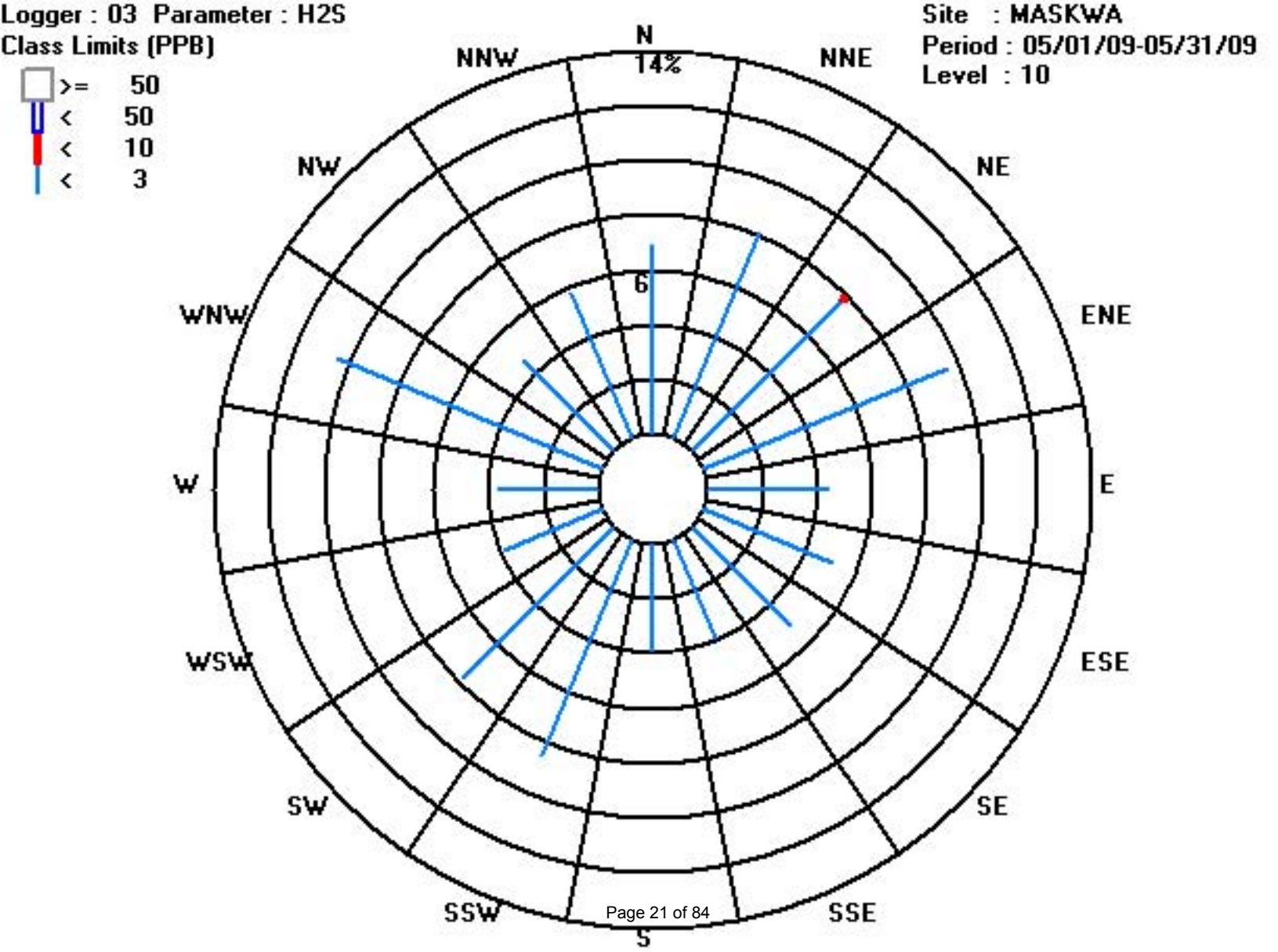
Distribution By Samples

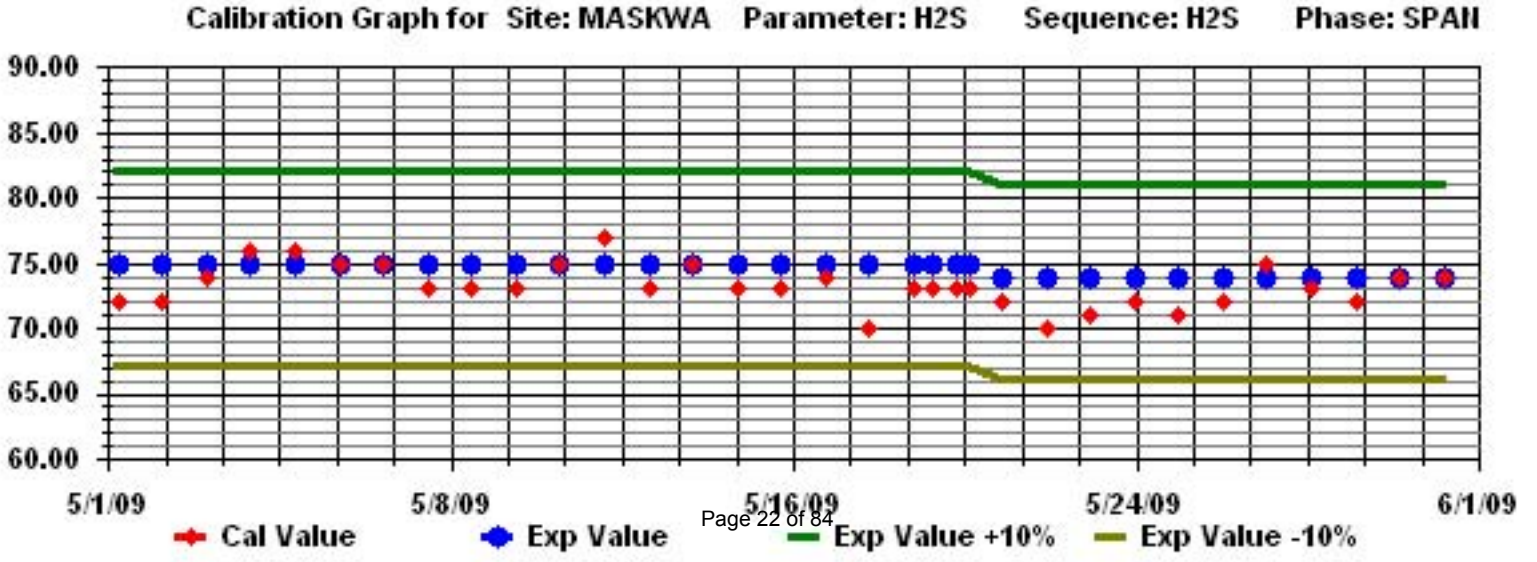
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 3	49	58	55	68	31	36	36	28	28	61	55	27	26	74	33	41	706
< 10			1														1
< 50																	
>= 50																	
Totals	49	58	56	68	31	36	36	28	28	61	55	27	26	74	33	41	

Calm : .00 %

Total # Operational Hours : 707


Logger : 03 Parameter : H2S
Class Limits (PPB)
>= 50
< 50
< 10
< 3
Site : MASKWA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: MASKWA Parameter: H2S Sequence: H2S Phase: SPAN
90.00
85.00
80.00
75.00
70.00
65.00
60.00
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Total Hydrocarbons

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

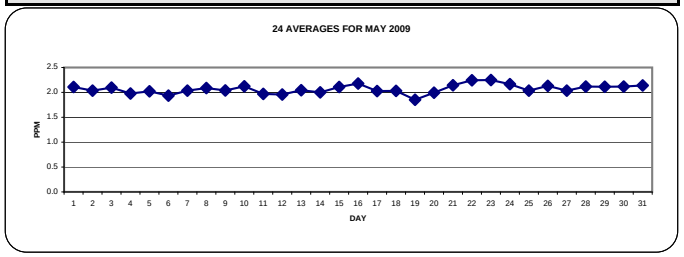
TOTAL HYDROCARBONS hourly averages in ppm

MST

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

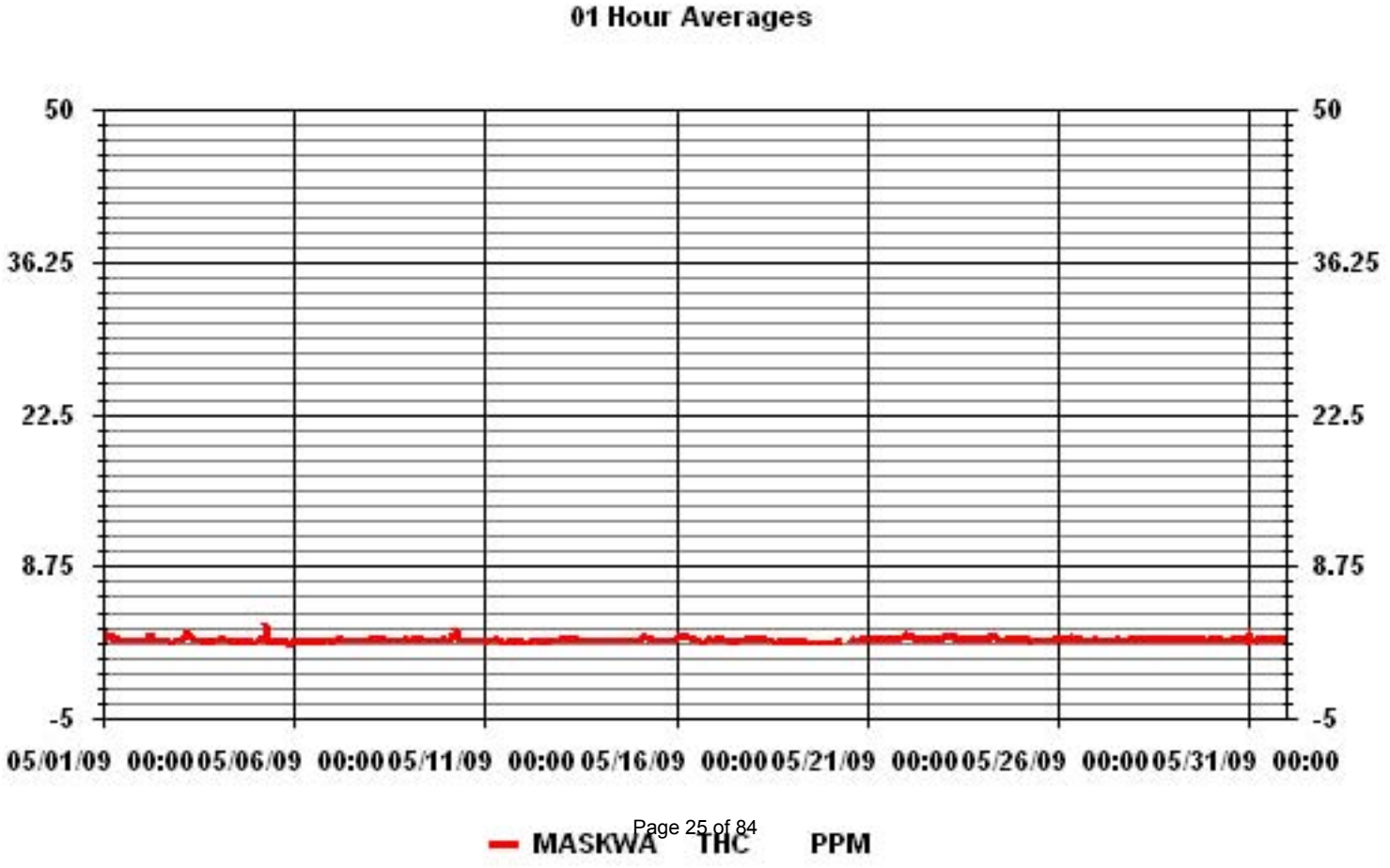
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	705					
MAXIMUM 1-HR AVERAGE:	3.3	PPM	@ HOUR(S)	6	ON DAY(S)	5
MAXIMUM 24-HR AVERAGE:	2.2	PPM			ON DAY(S)	16
					VAR- VARIOUS	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	7	HRS	AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	0.15		MONTHLY AVERAGE:		2.07	PPM


01 Hour Averages
50
36.25
22.5
8.75
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA THC PPM

MASKWA
THC / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

Logger Id : 03
Site Name : MASKWA
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	6.66	8.22	7.80	10.07	4.68	5.10	5.10	3.97	3.97	8.65	7.80	3.82	3.68	10.21	4.39	5.67	99.85
<	10.0	.00	.00	.14	.00	.00	.00	.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
>=	50.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.66	8.22	7.94	10.07	4.68	5.10	5.10	3.97	3.97	8.65	7.80	3.82	3.68	10.21	4.39	5.67	

Calm : .00 %

Total # Operational Hours : 705

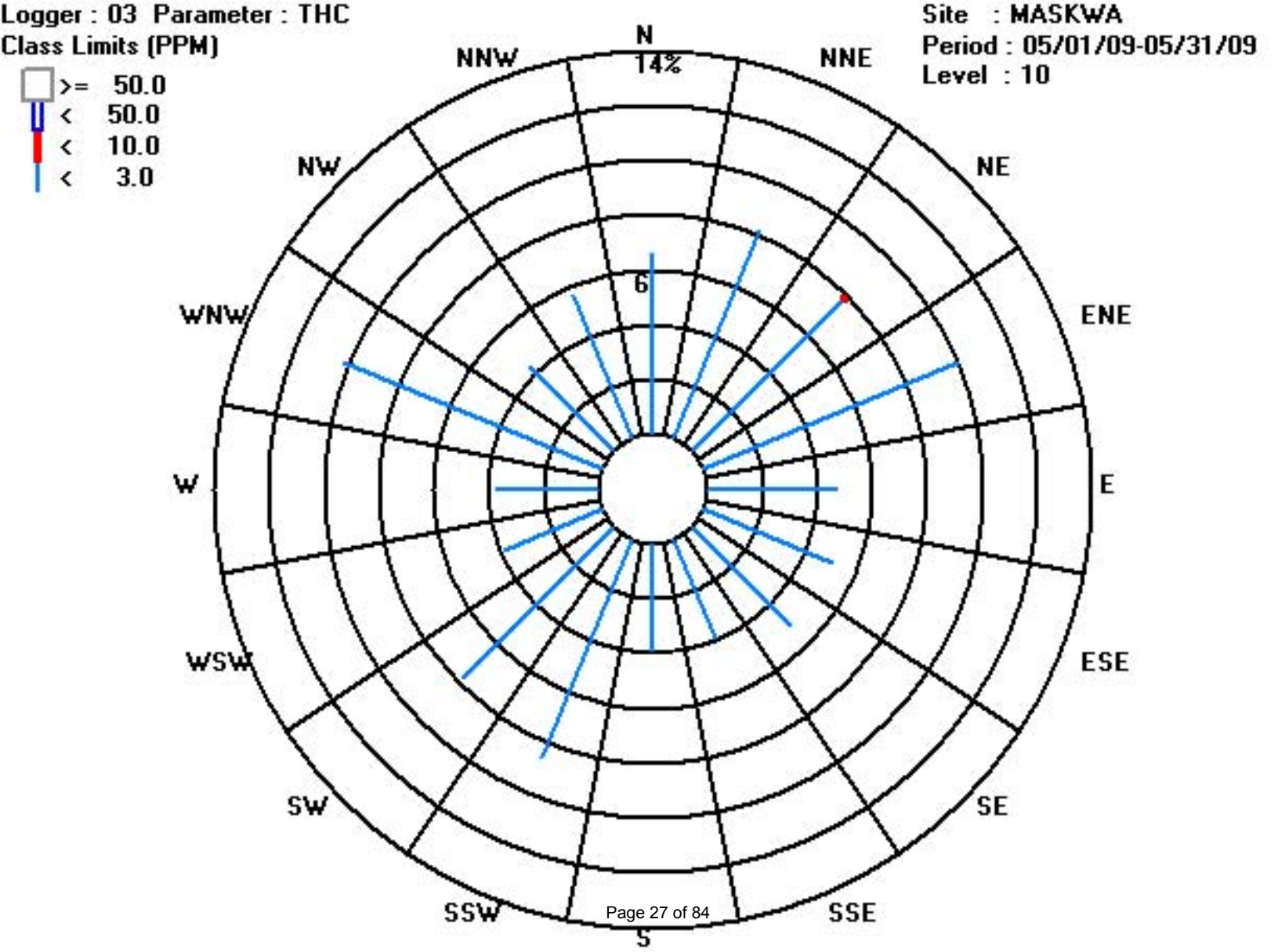
Distribution By Samples

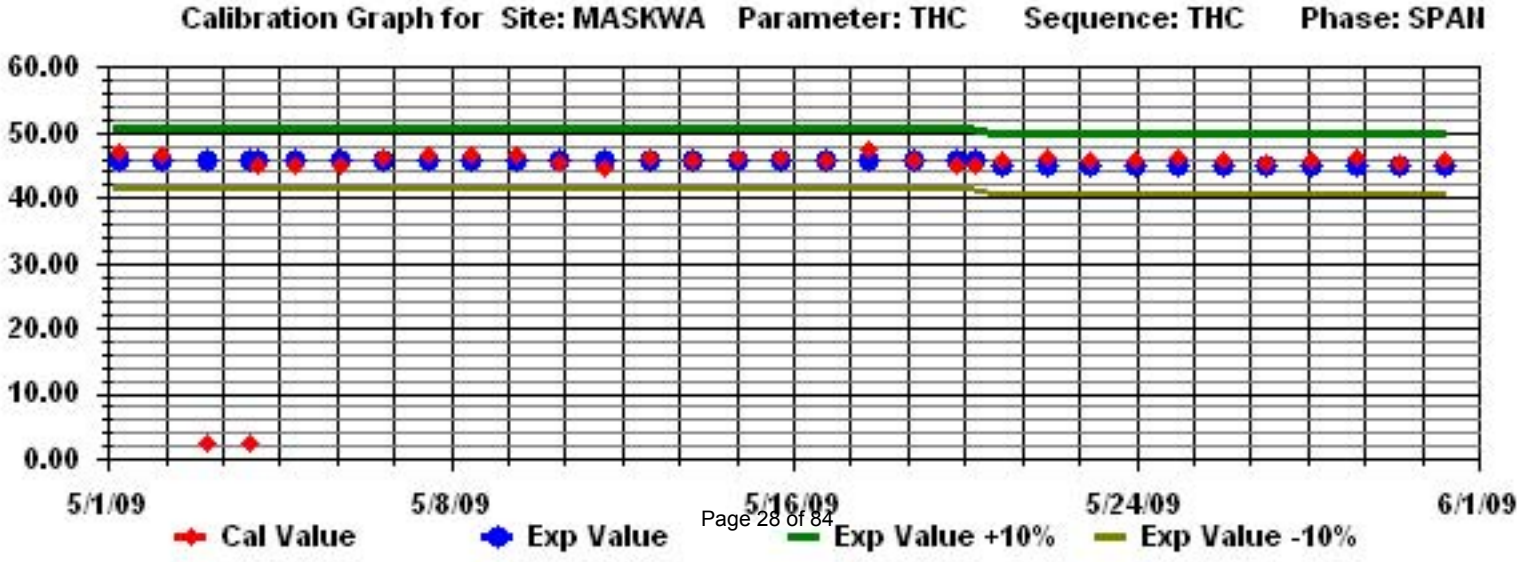
Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	3.0	47	58	55	71	33	36	36	28	28	61	55	27	26	72	31	40	704
<	10.0			1														1
<	50.0																	
>=	50.0																	
	Totals	47	58	56	71	33	36	36	28	28	61	55	27	26	72	31	40	

Calm : .00 %

Total # Operational Hours : 705


Logger : 03 Parameter : THC
Class Limits (PPM)
>= 50.0
< 50.0
< 10.0
< 3.0
Site : MASKWA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: MASKWA Parameter: THC Sequence: THC Phase: SPAN
60.00
50.00
40.00
30.00
20.00
10.00
0.00
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitrogen Dioxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

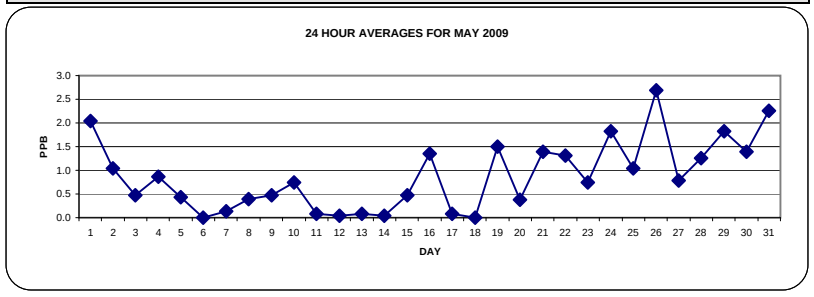
NITROGEN DIOXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	2	5	**IZS**	16	9	1	2	2	2	3	1	3	1	0	0	0	0	0	0	0	0	16	2.0	24
2	0	0	0	0	4	**IZS**	10	8	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	10	1.0	24
3	0	0	0	0	0	**IZS**	1	2	1	1	1	0	0	0	0	0	0	0	0	0	1	0	2	2	2	0.5	24
4	1	1	0	0	11	**IZS**	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0.9	24
5	0	0	0	1	1	**IZS**	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.4	24
6	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	0	0	0	0	**IZS**	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.1	24
8	0	0	0	0	0	**IZS**	0	0	4	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0.4	24
9	0	0	0	0	0	**IZS**	0	0	0	1	0	0	0	1	1	1	0	1	0	0	0	0	0	6	6	0.5	24
10	2	0	0	0	4	**IZS**	4	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.7	24
11	0	0	0	0	1	**IZS**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1	24
12	1	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
13	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0.1	24
14	0	0	0	0	0	**IZS**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
15	0	0	0	0	0	**IZS**	7	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	7	0.5	24
16	0	0	0	0	0	**IZS**	2	2	3	2	2	0	0	0	2	0	0	0	0	4	6	6	2	0	6	1.3	24
17	1	1	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
18	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	1	11	6	2	**IZS**	2	0	0	5	0	**C**	**C**	**M**	**C**	**C**	0	0	0	0	0	0	0	0	11	1.5	23
20	0	0	0	0	0	**IZS**	1	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	1	0	1	2	0	1	2	0.4	24
21	0	1	1	1	1	**IZS**	2	1	1	2	2	2	1	2	2	5	1	0	0	0	1	2	1	3	5	1.4	24
22	5	4	4	7	2	**IZS**	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	7	1.3	24
23	1	1	1	1	1	**IZS**	3	3	2	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	3	0.7	24
24	1	2	6	2	1	**IZS**	**18**	3	1	1	1	0	0	2	2	1	1	0	0	0	0	0	0	0	**18**	1.8	24
25	0	0	0	0	0	**IZS**	2	4	2	3	2	1	0	1	2	0	1	0	4	0	0	0	2	0	4	1.0	24
26	0	0	0	1	2	**IZS**	3	3	3	2	4	4	7	2	1	4	3	1	9	3	2	2	3	3	9	**2.7**	24
27	1	1	0	0	1	**IZS**	2	1	1	1	2	0	2	4	1	1	0	0	0	0	0	0	0	0	4	0.8	24
28	0	0	1	1	1	**IZS**	2	3	1	0	0	1	2	1	0	2	0	0	0	3	4	1	2	4	4	1.3	24
29	0	3	13	1	2	**IZS**	1	1	1	2	1	1	2	2	2	1	1	2	1	2	2	1	0	0	13	1.8	24
30	0	0	4	0	0	**IZS**	1	1	1	2	3	2	2	1	0	1	0	0	0	1	2	1	3	7	7	1.4	24
31	12	5	0	0	0	**IZS**	8	5	0	0	0	0	0	2	4	1	3	2	3	2	1	2	2	0	12	2.3	24
HOURLY MAX	12	5	13	7	11	**NA**	18	9	4	5	4	4	7	4	4	5	3	2	9	4	6	6	3	7			
HOURLY AVG	0.8	0.6	1.3	0.7	1.3	**NA**	3.0	1.9	0.9	1.1	0.7	0.5	0.8	0.7	0.7	0.6	0.4	0.2	0.6	0.5	0.7	0.6	0.6	0.9			

STATUS FLAG CODES

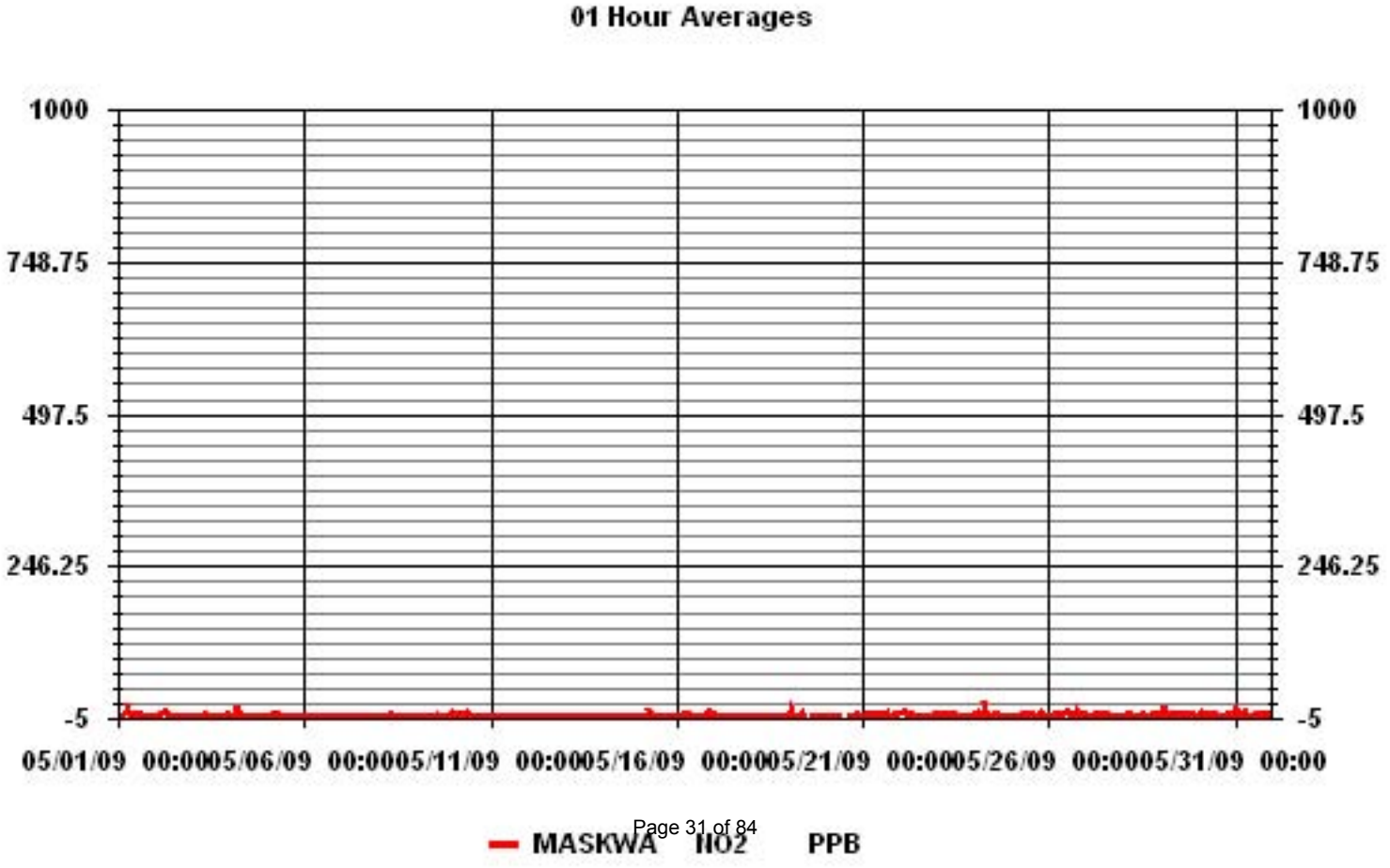
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



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

MONTHLY SUMMARY

NUMBER OF 1-HR EXCEEDENCES:	0					
NUMBER OF 24-HR EXCEEDENCES:	0					
NUMBER OF NON-ZERO READINGS:	248					
MAXIMUM 1-HR AVERAGE:	18	PPB	@ HOUR(S)	6	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:	2.7	PPB			ON DAY(S)	26
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		743	HRS
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:		99.9	%
STANDARD DEVIATION:	1.86		MONTHLY AVERAGE:		0.88	PPB


01 Hour Averages
1000
748.75
497.5
246.25
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA NO2 PPB

MASKWA
NO2 / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

Logger Id : 03
Site Name : MASKWA
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	6.70	8.27	7.98	9.70	4.42	5.13	5.13	3.99	3.99	8.70	7.84	3.85	3.70	10.27	4.42	5.84	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.70	8.27	7.98	9.70	4.42	5.13	5.13	3.99	3.99	8.70	7.84	3.85	3.70	10.27	4.42	5.84	

Calm : .00 %

Total # Operational Hours : 701

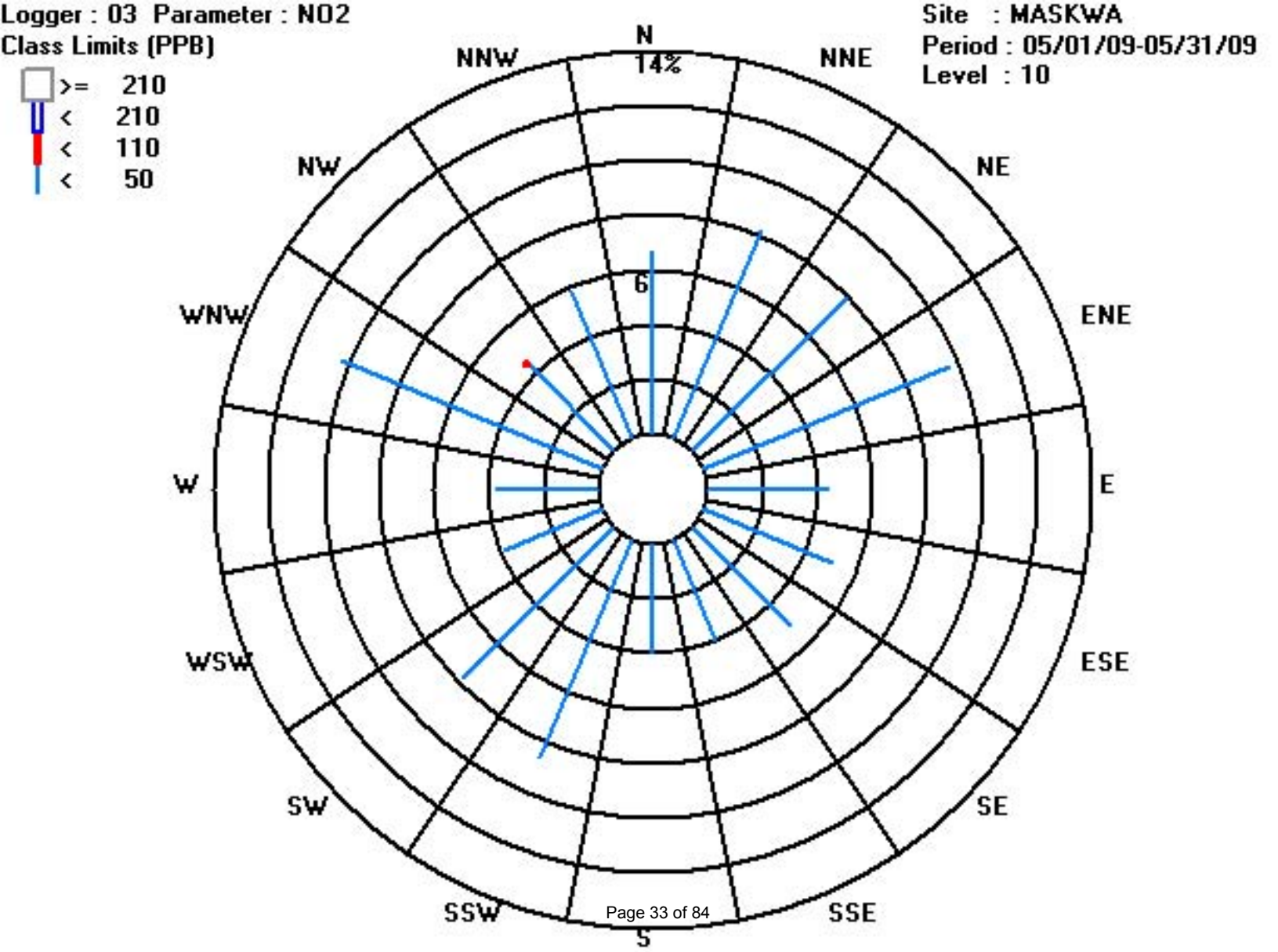
Distribution By Samples

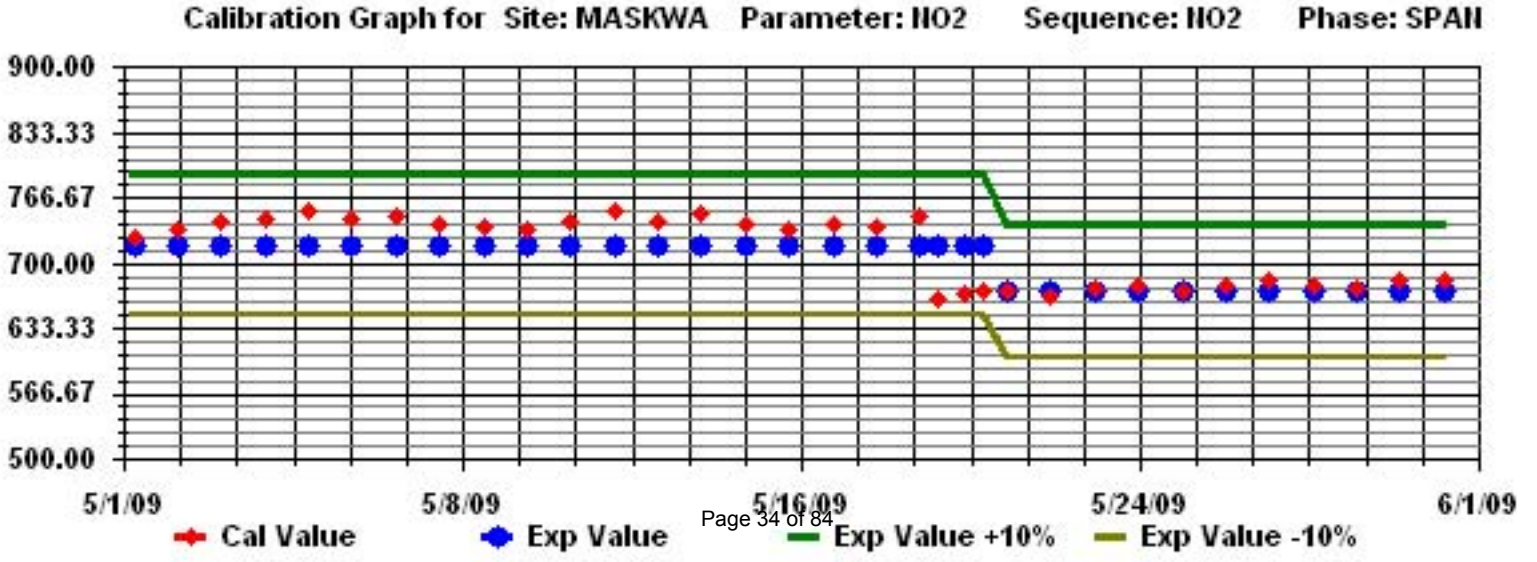
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	47	58	56	68	31	36	36	28	28	61	55	27	26	72	31	41	701
< 110																	
< 210																	
>= 210																	
Totals	47	58	56	68	31	36	36	28	28	61	55	27	26	72	31	41	

Calm : .00 %

Total # Operational Hours : 701


Logger : 03 Parameter : NO2
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : MASKWA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: MASKWA Parameter: NO2 Sequence: NO2 Phase: SPAN
900.00
833.33
766.67
700.00
633.33
566.67
500.00
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Nitric Oxide

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

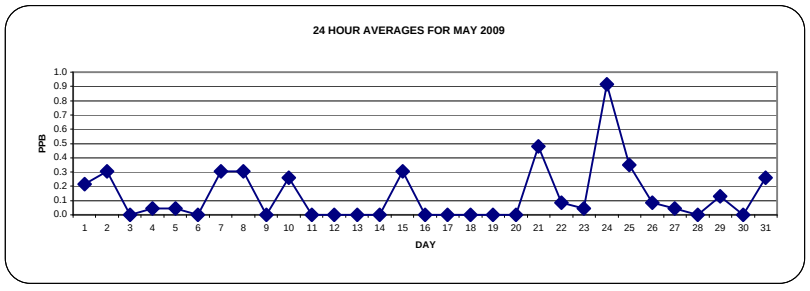
NITRIC OXIDE hourly averages in ppb

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	0	0	**IZS**	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2	24
2	0	0	0	0	2	**IZS**	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
3	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
4	0	0	0	0	0	**IZS**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
5	0	0	0	0	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
6	0	0	0	0	0	**IZS**	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	**IZS**	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.3	24
8	0	0	0	0	0	**IZS**	0	0	3	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
9	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
10	0	0	0	0	0	**IZS**	3	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
11	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
12	0	0	0	0	0	**IZS**	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	**IZS**	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	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
15	0	0	0	0	0	**IZS**	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0.3	24
16	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
17	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
18	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
19	0	0	0	0	0	**IZS**	0	0	0	0	0	**C**	**C**	**M**	**C**	**C**	0	0	0	0	0	0	0	0	0	0.0	23
20	0	0	0	0	0	**IZS**	0	0	0	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	0	0	0	0	0	0	0	0.0	24
21	0	0	0	0	0	**IZS**	0	0	0	0	2	0	0	1	2	6	0	0	0	0	0	0	0	0	6	0.5	24
22	0	0	0	1	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
23	0	0	0	0	0	**IZS**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
24	0	0	0	0	0	**IZS**	**21**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**21**	**0.9**	24
25	0	0	0	0	0	**IZS**	1	3	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	24
26	0	0	0	0	0	**IZS**	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
27	0	0	0	0	0	**IZS**	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	24
28	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
29	0	0	1	0	0	**IZS**	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0.1	24
30	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
31	0	0	0	0	0	**IZS**	3	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0.3	24
HOURLY MAX	0	0	1	1	2	**NA**	21	5	3	2	2	1	1	1	2	6	0	0	0	0	0	0	0	0			
HOURLY AVG	0.0	0.0	0.0	0.0	0.1	**NA**	1.4	0.5	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

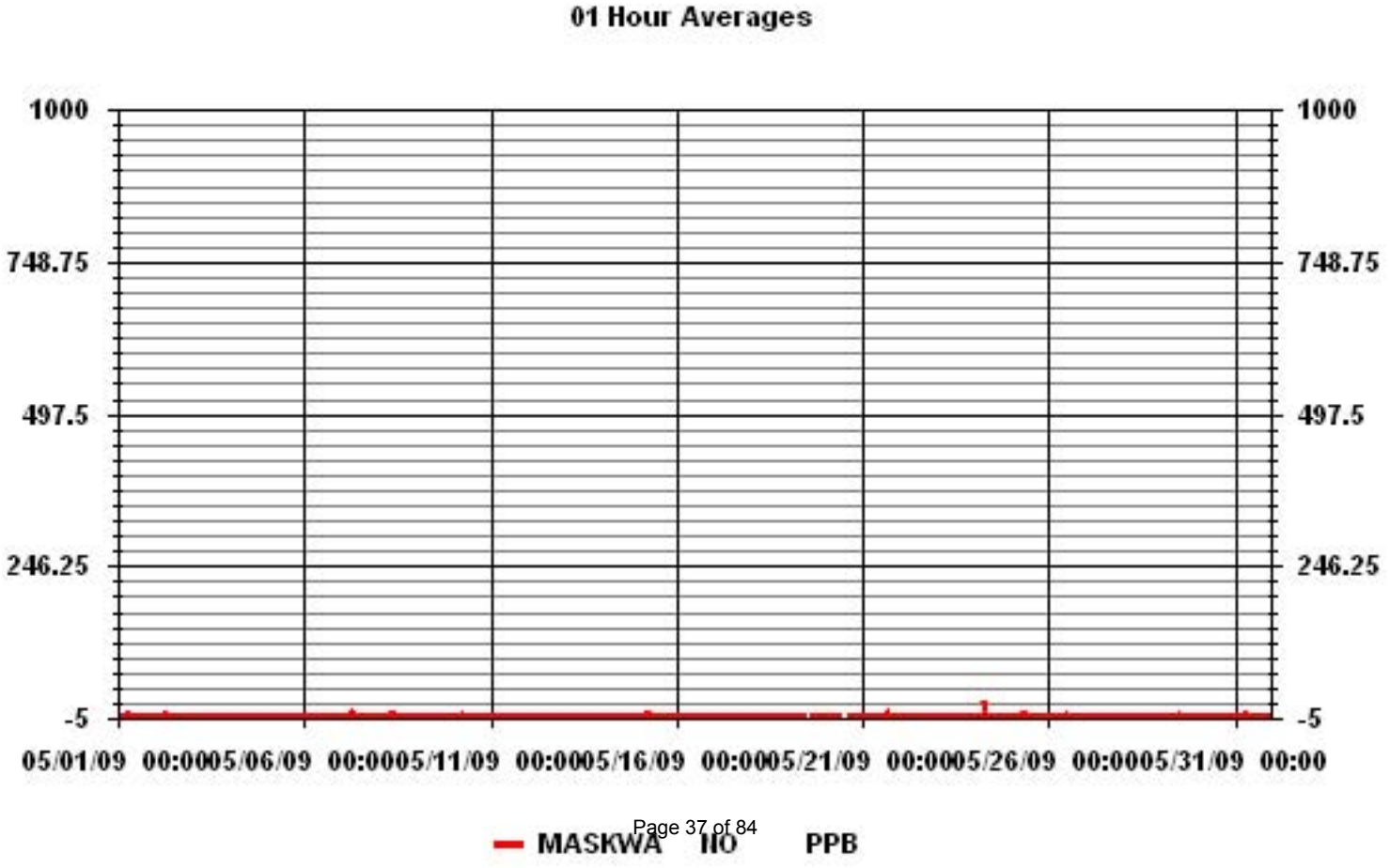
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	40						
MAXIMUM 1-HR AVERAGE:	21	PPB	@ HOUR(S)	6	ON DAY(S)	24	
MAXIMUM 24-HR AVERAGE:	0.9	PPB			ON DAY(S)	24	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		743	HRS	
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:		99.9	%	
STANDARD DEVIATION:	0.95		MONTHLY AVERAGE:		0.14	PPB	


01 Hour Averages
1000
748.75
497.5
246.25
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA NO PPB

MASKWA
NO / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

Logger Id : 03
Site Name : MASKWA
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	6.70	8.27	7.98	9.70	4.42	5.13	5.13	3.99	3.99	8.70	7.84	3.85	3.70	10.27	4.42	5.84	100.00
<	110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.70	8.27	7.98	9.70	4.42	5.13	5.13	3.99	3.99	8.70	7.84	3.85	3.70	10.27	4.42	5.84	

Calm : .00 %

Total # Operational Hours : 701

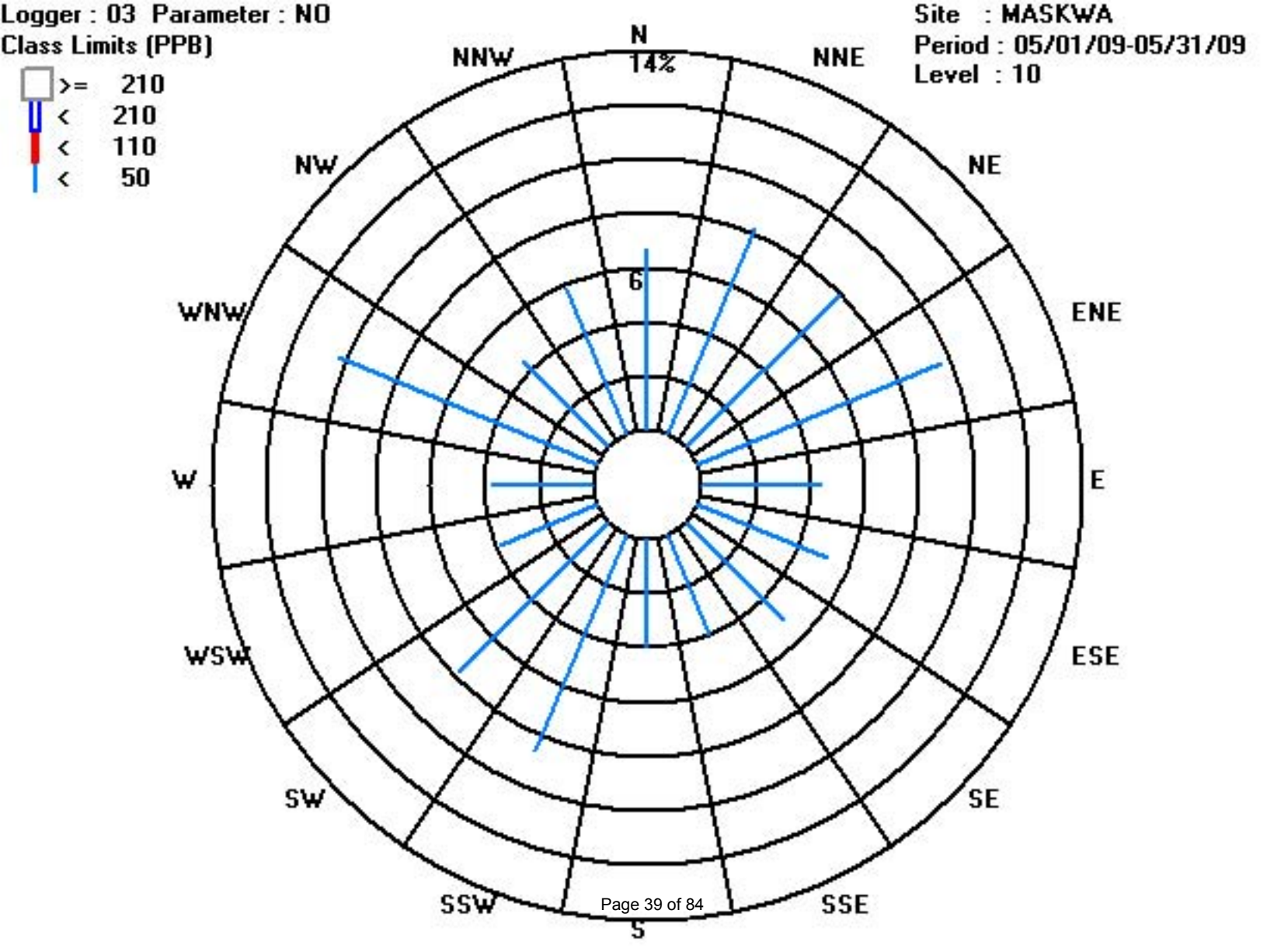
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	50	47	58	56	68	31	36	36	28	28	61	55	27	26	72	31	41	701
<	110																	
<	210																	
>=	210																	
	Totals	47	58	56	68	31	36	36	28	28	61	55	27	26	72	31	41	

Calm : .00 %

Total # Operational Hours : 701


Logger : 03 Parameter : NO
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : MASKWA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6

Oxides of Nitrogen

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

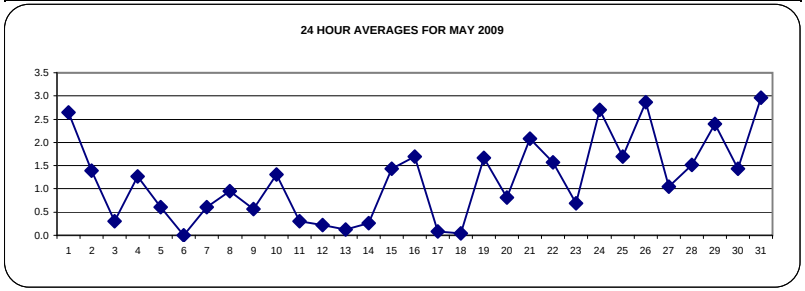
MAY 2009

OXIDES OF NITROGEN hourly averages in ppb

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	24-HOUR	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	AVG.	RDGS.
DAY																											
1	0	0	0	2	6	**IZS**	20	12	2	3	3	3	4	1	4	1	0	0	0	0	0	0	0	0	20	2.7	24
2	0	0	0	0	5	**IZS**	14	11	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	14	1.4	24
3	0	0	0	0	0	**IZS**	1	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0.3	24
4	1	1	0	0	12	**IZS**	3	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	1.3	24
5	0	0	0	1	1	**IZS**	5	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.6	24
6	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	24
7	0	0	0	0	0	**IZS**	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	0.6	24
8	0	0	0	0	0	**IZS**	0	1	8	6	2	0	4	1	0	0	0	0	0	0	0	0	0	0	8	1.0	24
9	0	0	0	0	0	**IZS**	0	0	0	2	0	0	0	2	1	1	0	1	0	0	0	0	0	6	6	0.6	24
10	2	0	0	0	4	**IZS**	9	6	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1.3	24
11	0	0	0	0	3	**IZS**	0	1	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0.3	24
12	2	0	0	0	0	**IZS**	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	24
13	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	1	0.1	24
14	0	0	0	0	0	**IZS**	0	3	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0.3	24
15	1	1	0	1	1	**IZS**	15	4	1	3	2	0	1	1	0	1	0	0	0	0	0	1	0	0	15	1.4	24
16	0	0	0	0	0	**IZS**	3	3	4	2	4	1	1	1	2	0	0	0	0	4	6	6	2	0	6	1.7	24
17	1	1	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	24
18	0	0	0	0	0	**IZS**	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.0	24
19	0	2	12	6	2	**IZS**	2	0	0	6	0	**C**	**C**	**M**	**C**	**C**	0	0	0	0	0	0	0	0	12	1.7	23
20	0	0	0	0	0	**IZS**	4	2	2	**C**	**C**	**C**	**C**	**C**	**C**	**C**	0	0	2	0	1	1	0	1	4	0.8	24
21	0	0	0	1	0	**IZS**	2	1	2	3	5	3	1	4	5	12	2	0	0	0	1	2	1	3	12	2.1	24
22	5	4	4	8	2	**IZS**	5	2	2	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	8	1.6	24
23	1	1	1	1	1	**IZS**	4	4	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0.7	24
24	1	1	6	1	0	**IZS**	**40**	4	1	1	1	0	0	2	2	1	1	0	0	0	0	0	0	0	**40**	2.7	24
25	0	0	0	0	0	**IZS**	5	8	5	6	4	1	0	1	2	1	1	0	4	0	0	0	1	0	8	1.7	24
26	0	0	0	0	1	**IZS**	3	3	3	3	5	6	10	2	1	5	3	1	9	3	2	2	2	2	10	2.9	24
27	0	0	0	0	0	**IZS**	2	1	2	3	4	1	3	5	1	2	0	0	0	0	0	0	0	0	5	1.0	24
28	0	0	0	1	1	**IZS**	3	4	1	0	1	2	4	1	0	3	1	0	0	3	4	0	2	4	4	1.5	24
29	0	3	15	1	2	**IZS**	3	2	2	3	1	1	4	4	3	1	1	3	1	2	2	1	0	0	15	2.4	24
30	0	0	4	0	0	**IZS**	1	1	1	3	4	3	2	1	0	1	0	0	0	0	1	1	3	7	7	1.4	24
31	12	5	0	0	0	**IZS**	12	8	0	0	1	0	1	2	6	2	5	3	4	2	1	2	2	0	12	**3.0**	24
HOURLY MAX	12	5	15	8	12	**NA**	40	12	8	7	5	6	10	5	6	12	5	3	9	4	6	6	3	7			
HOURLY AVG	0.8	0.6	1.4	0.7	1.3	**NA**	5.0	3.3	1.7	1.8	1.4	0.8	1.2	1.0	1.0	1.1	0.5	0.3	0.7	0.5	0.6	0.5	0.5	0.9			

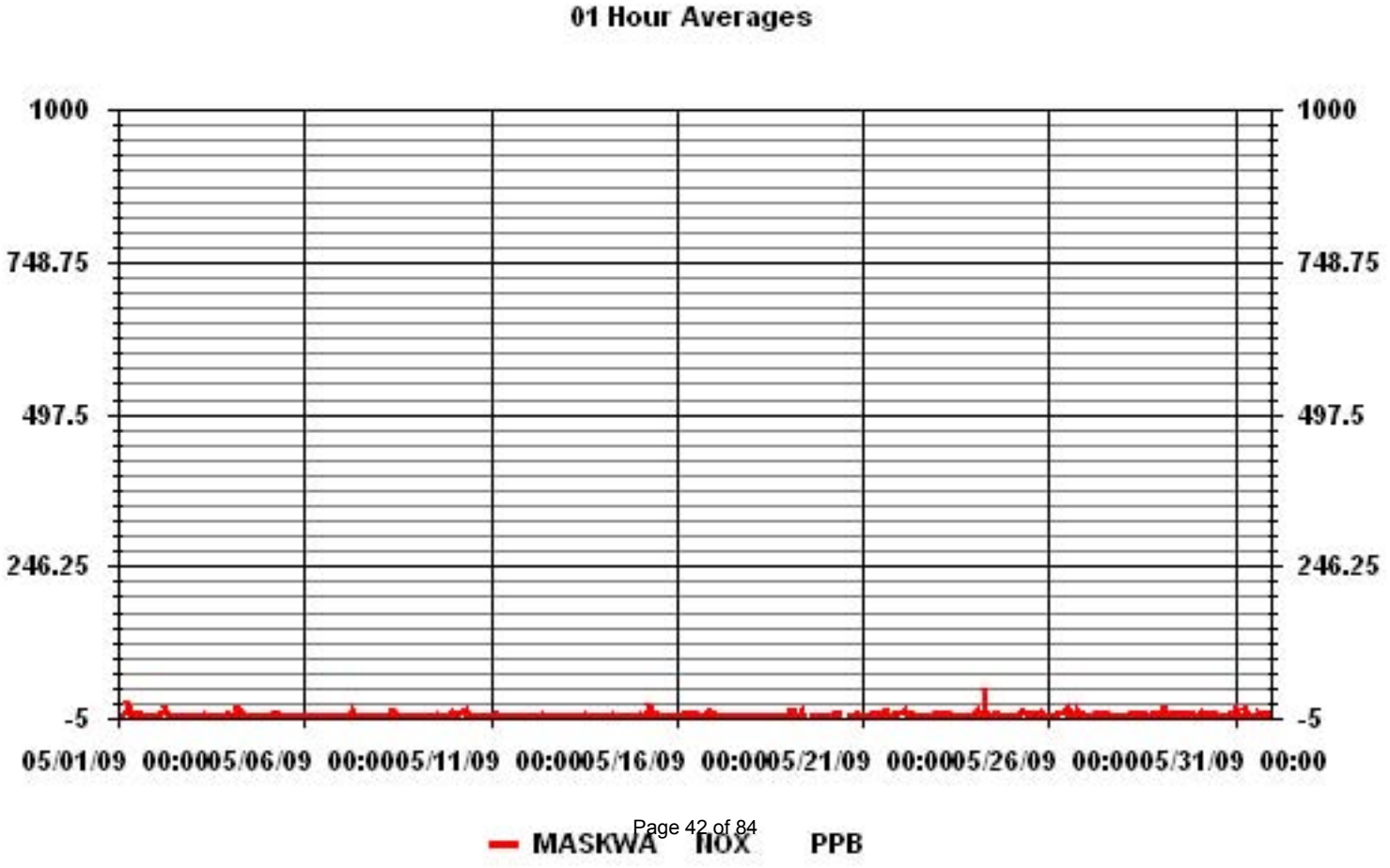
STATUS FLAG CODES

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



MONTHLY SUMMARY

NUMBER OF NON-ZERO READINGS:	268						
MAXIMUM 1-HR AVERAGE:	40	PPB	@ HOUR(S)	6	ON DAY(S)	24	
MAXIMUM 24-HR AVERAGE:	3.0	PPB			ON DAY(S)	31	
IZS CALIBRATION TIME:	31	HRS	OPERATIONAL TIME:		743	HRS	
MONTHLY CALIBRATION TIME:	11	HRS	AMD OPERATION UPTIME:		99.9	%	
STANDARD DEVIATION:	2.72		MONTHLY AVERAGE:		1.20	PPB	


01 Hour Averages
1000
748.75
497.5
246.25
-5
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA NOX PPB

MASKWA
NOX / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

Logger Id : 03
Site Name : MASKWA
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	6.70	8.27	7.98	9.70	4.42	5.13	5.13	3.99	3.99	8.70	7.84	3.85	3.70	10.27	4.42	5.84	100.00
< 110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
< 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>= 210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals	6.70	8.27	7.98	9.70	4.42	5.13	5.13	3.99	3.99	8.70	7.84	3.85	3.70	10.27	4.42	5.84	

Calm : .00 %

Total # Operational Hours : 701

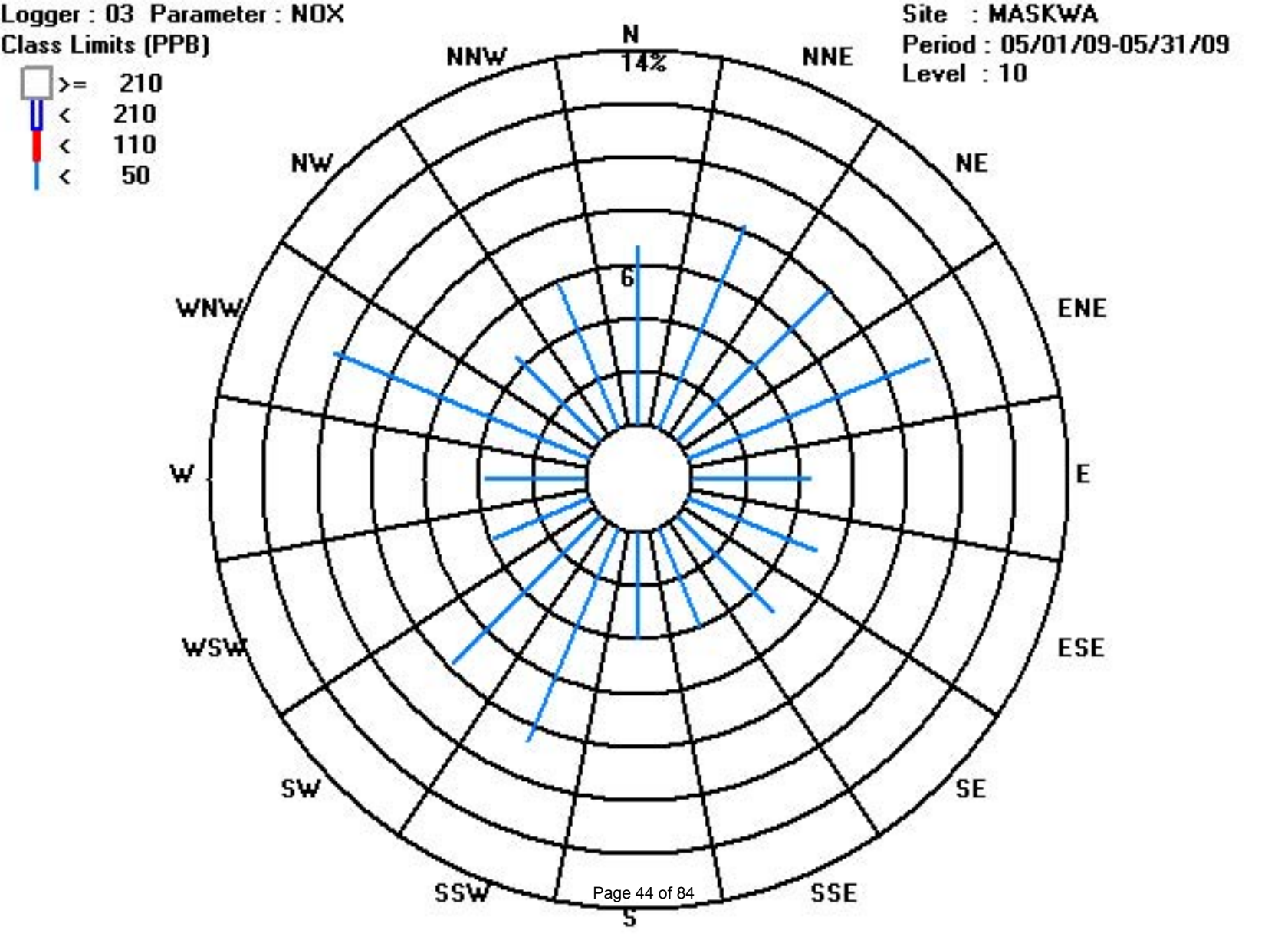
Distribution By Samples

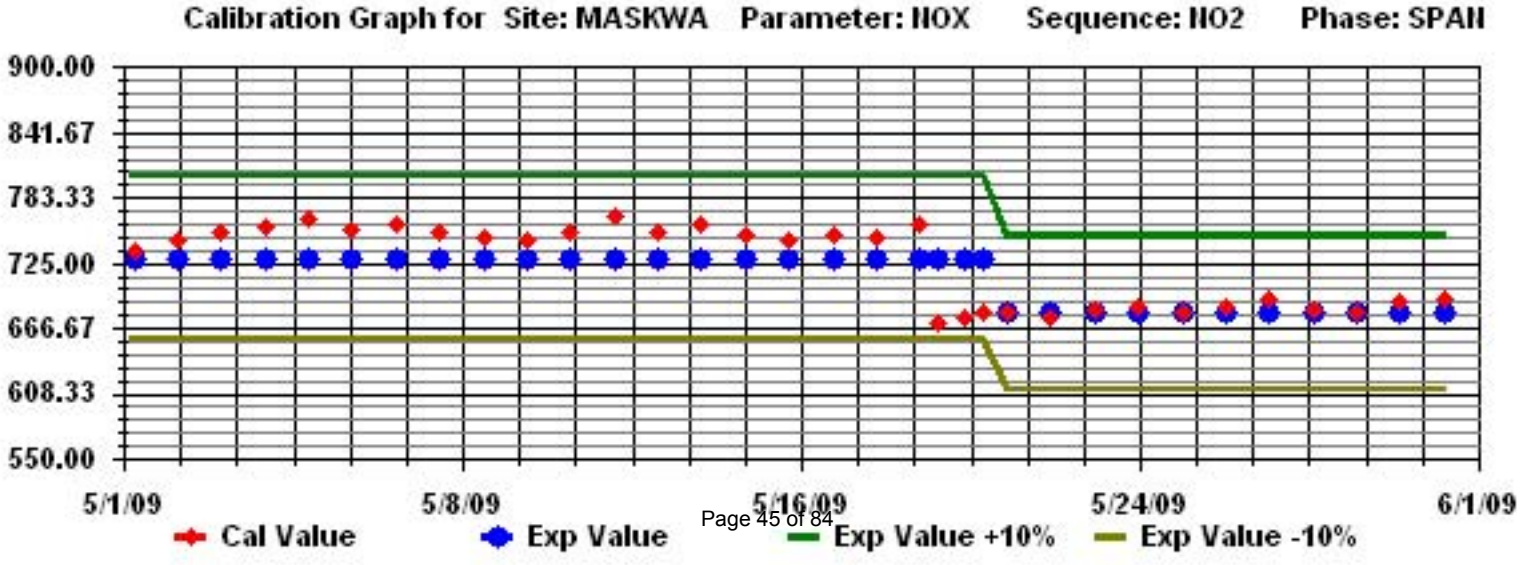
Direction

Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
< 50	47	58	56	68	31	36	36	28	28	61	55	27	26	72	31	41	701
< 110																	
< 210																	
< 210																	
>= 210																	
Totals	47	58	56	68	31	36	36	28	28	61	55	27	26	72	31	41	

Calm : .00 %

Total # Operational Hours : 701


Logger : 03 Parameter : NOX
Class Limits (PPB)
>= 210
< 210
< 110
< 50
Site : MASKWA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6


Calibration Graph for Site: MASKWA Parameter: NOX Sequence: NO2 Phase: SPAN
900.00
841.67
783.33
725.00
666.67
608.33
550.00
5/1/09
5/8/09
5/16/09
5/24/09
6/1/09
Cal Value
Exp Value
Exp Value +10%
Exp Value -10%

Temperature

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

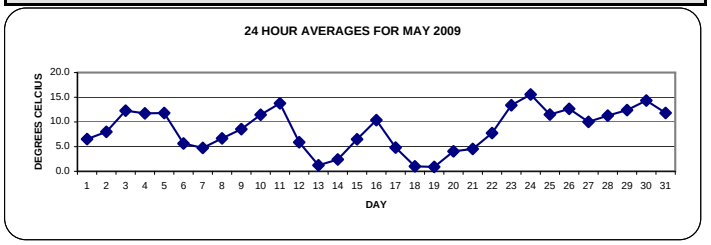
AMBIENT TEMPERATURE hourly averages (Degrees C)

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	-3.1	-2.3	-2	-2	-1.9	-1.5	1.3	5	8.7	10.1	11.3	10.8	12.2	12.1	12.1	12.1	12.2	11.9	11.2	9.6	8.3	7.7	6.7	6.3	12.2	6.5	24
2	4.2	0.8	-0.8	-2.2	-3.1	-1.9	3.9	7.1	9.5	11	12.5	13.7	14.5	15.6	16	16.1	16.7	16.7	15.4	11.4	7.1	4.4	2.4	1	16.7	8.0	24
3	-0.2	-1.2	-1.8	-2.3	-2.8	-0.8	5	11.1	12.7	15.8	17.9	19.6	20.1	21.1	21.6	21.7	22.1	22	20.6	17.9	14.3	12.3	14.4	13.8	22.1	12.3	24
4	12.3	10.2	4.8	4.2	7.5	8.7	11.1	12.7	14.3	15.9	17.2	17.4	17.9	17.8	16.9	15.5	13.9	13.9	13.3	11.4	8.4	6.2	5.1	5.2	17.9	11.7	24
5	5	2.7	-0.3	-1.5	-2	0.1	5.2	13.3	16	18.1	19.9	20.4	20.2	20.2	20.1	20.4	18.7	17.7	16.1	14.5	12.8	10.7	8.5	6.5	20.4	11.8	24
6	4.7	3	1	0.5	0.5	0.4	1	1.8	4	5.4	7	8.1	9	11	12.2	13	12.4	11.8	10.7	7.9	5.2	3.4	1.4	-0.1	13.0	5.6	24
7	-1.2	-2.9	-3.5	-3.8	-4.4	-2.3	0.5	4.1	5.6	6.8	9.3	11.5	12.1	12.3	13.4	12.6	11.3	10.6	9.7	6.9	4.3	2	0	-1.1	13.4	4.7	24
8	-2.4	-3.3	-4.3	-5	**-5.6**	-3	0.4	4.6	7.6	8.2	9.9	12	14.1	14.3	14.3	15.2	15.4	13.6	12.7	10.6	7.6	7.5	7.9	8	15.4	6.7	24
9	7.4	5	3.4	1.3	-0.7	1.5	5.4	9.1	12.1	12.4	13.6	14	14.4	14.8	14.3	12.5	13.7	13.2	10.5	9.4	5.9	4.3	4	3.4	14.8	8.5	24
10	2.8	2	1.2	0.6	0	1.8	7.3	12	14.3	15.7	16.9	16.4	17.8	18.1	18.7	18.6	18.7	18	17.5	14.5	11.4	8.8	10.4	11.4	18.7	11.5	24
11	10.2	8.5	5.4	3.9	3	3.8	9.2	13.3	16.4	18.6	19.8	20.5	21.2	21	21.1	19.3	19	17.6	17.8	16	14	11.9	9.8	9.1	21.2	13.8	24
12	10.8	6.7	3.9	3.3	3.3	4.5	8.4	9.9	11.7	17.3	17.5	15.1	11.8	9.5	9.4	5.6	3.1	1.4	-0.5	-1.3	-2.3	-2.4	-2.5	-2.9	17.5	5.9	24
13	-3	-3.1	-3.1	-3.3	-3.5	-3.6	-3.2	-2.3	-0.5	0.5	2.4	3.6	4.9	6.7	7	7.6	7.5	7.5	6.9	3.7	0.6	-0.7	-1.7	-1.6	7.6	1.2	24
14	-1.3	-1.2	-1	-0.8	-0.6	-0.2	0.5	1.8	2.7	3.6	4.3	5.2	5.4	6.6	5.6	6.1	5.5	6.2	5.4	3.4	0.6	-0.2	0.1	0	6.6	2.4	24
15	-0.6	-1	-1.2	-1.2	-0.9	-0.3	1.9	5.7	7.7	7.9	9.1	10.5	11.6	11.4	13.5	12.9	11.9	11.9	10.6	9.5	7.4	6.7	6	4.9	13.5	6.5	24
16	3.9	3.7	3.6	4	3.8	4.5	5.6	7.5	7.9	9.3	11.8	14.7	16.9	17.8	17.4	17.4	17.3	16.4	16	13.9	11	9.5	8.2	6.8	17.8	10.4	24
17	6.3	5.5	5.7	5.2	5.1	5.8	5.9	6.8	8	8.7	8.7	7.5	8.2	8.6	7.1	5.7	4.2	2.6	1.8	1	0	-0.6	-1.1	-1.2	8.7	4.8	24
18	-2	-3.3	-4.1	-4.5	-4.8	-4.6	-4	-2.6	-0.7	1.3	2.2	3.2	4	4.9	6.3	7	6.8	6.3	6.2	4	1.2	0.6	-0.4	1.3	7.0	1.0	24
19	1.9	2	1.8	1.6	1.4	1.8	1.4	1.7	2.3	2.6	2.1	1	0.2	0.3	0.2	0.1	0	0.3	0.2	0	-0.1	-0.3	-0.4	-0.7	2.6	0.9	24
20	-0.9	-1.1	-1.2	-1.1	-1.1	-0.8	0.3	0.8	1.7	3.3	4.3	5.7	7.9	8.7	10.2	10.8	11.3	10.1	9.2	4.4	3.4	3.7	3.7	3.9	11.3	4.1	24
21	2.7	2.5	2.9	2.3	2.4	3	4.1	5	7.2	7.6	7.3	7.7	7.9	8.1	7.7	7.8	7.2	6	5.4	4.2	2.3	-0.2	-0.8	-1.4	8.1	4.5	24
22	-2.4	-3	-3.4	-3.7	-3.5	0.4	5.3	8.7	10.5	11.7	12.9	13.6	14.1	14.6	14.8	14.9	15.3	15.4	15.6	13.1	8.5	4.5	4	3.9	15.6	7.7	24
23	1.6	0.1	-0.5	-1.4	-1.4	2	9.3	13.5	16.6	18.3	19.9	21	21	21.3	21.4	20.9	21.1	21	20.3	17.6	14.9	13.9	14.8	14	21.4	13.4	24
24	12.4	7.8	5.7	4	2.8	6.7	12.8	18	19.8	21.6	22.9	24.1	**24.9**	22.2	19.8	22.8	23.4	22.7	18.9	15.9	13.4	10.9	10.4	9.6	**24.9**	**15.6**	24
25	8.5	6.8	4.7	4.1	4.1	5.5	7.9	9.9	11.5	13.2	14.5	15.9	16.9	18.2	17.4	17.3	16.4	16	16	14.4	11.1	10.2	10.2	5.3	18.2	11.5	24
26	4.6	3.8	3.6	5.7	9	9.5	10.9	13.2	13.6	15.1	15.9	19.5	19.8	20.3	20.7	20.2	15.5	13.6	13.4	12.5	12.3	10.9	10.1	10	20.7	12.7	24
27	9	8.6	9.3	9.6	9.7	9.4	9.7	9.2	8.9	9.8	10.3	11.4	12.3	12.2	14.2	14.9	14.4	12.2	10.5	9.4	7.5	6.4	6.2	5.4	14.9	10.0	24
28	5.1	4.8	3.6	3.3	3.9	4.9	6.1	7.9	10.1	10.8	12.7	13.3	14.6	16.1	17.9	17.9	18.6	18.7	18.4	16.5	13.8	11.1	10.3	10.3	18.7	11.3	24
29	9.1	7.9	6.4	5.7	4.8	5.6	5.4	9.1	11.3	13.4	15.5	16.6	17.8	18.4	19.2	19.5	19.8	20.1	18.1	15.8	11.7	9.3	7.1	10.1	20.1	12.4	24
30	10.7	10.6	9.4	7	7.9	11	12.9	14.4	17.2	18.2	17.1	14.7	15.2	17.3	19.6	20.9	21.1	19.6	19.6	16.8	10.9	11.2	11.5	9.3	21.1	14.3	24
31	8.1	5.4	4.7	3.7	4.1	8.2	12.4	15.3	16.8	17.8	18.2	18.4	19.4	16.6	15.1	14.9	13.2	14.4	12.8	11.3	9.8	8.1	7.7	7.2	19.4	11.8	24
HOURLY MAX	12.4	10.6	9.4	9.6	9.7	11.0	12.9	18.0	19.8	21.6	22.9	24.1	24.9	22.2	21.6	22.8	23.4	22.7	20.6	17.9	14.9	13.9	14.8	14.0			
HOURLY AVG	4.0	2.8	1.7	1.2	1.2	2.6	5.3	8.0	9.9	11.3	12.4	13.1	13.8	14.1	14.4	14.3	13.8	13.2	12.3	10.2	7.7	6.2	5.6	5.1			

STATUS FLAG CODES

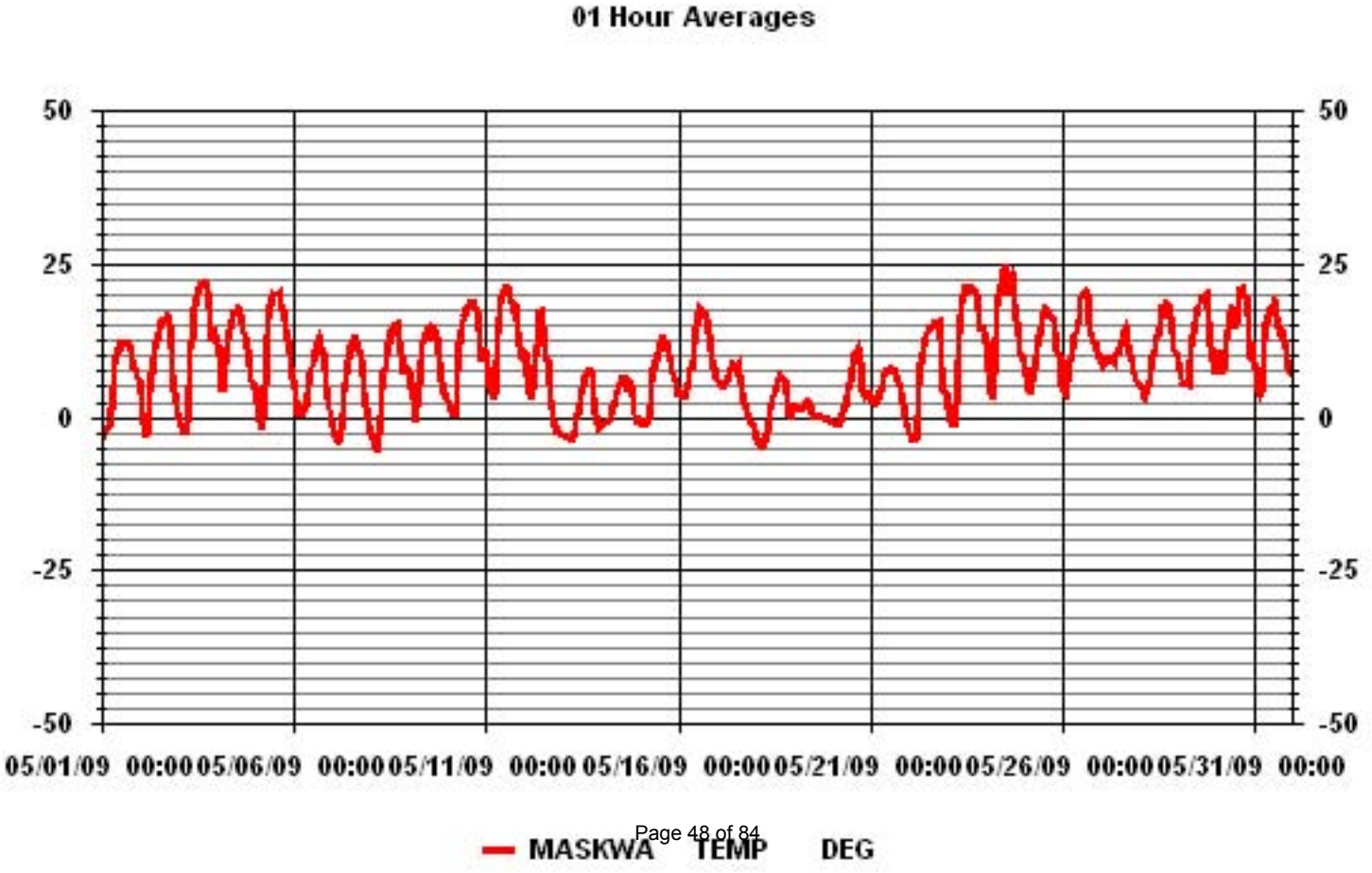
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



MONTHLY SUMMARY

MINIMUM 1-HR AVERAGE:	-5.6	^{O}C	@ HOUR(S)	4	ON DAY(S)	8
MAXIMUM 1-HR AVERAGE:	24.9	^{O}C	@ HOUR(S)	12	ON DAY(S)	24
MAXIMUM 24-HR AVERAGE:	15.6	^{O}C			ON DAY(S)	24

CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
			AMD OPERATION UPTIME:	100.0	%
STANDARD DEVIATION:	6.89		MONTHLY AVERAGE:	8.50	^{O}C


01 Hour Averages
50
25
0
-25
-50
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA TEMP DEG

Precipitation

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

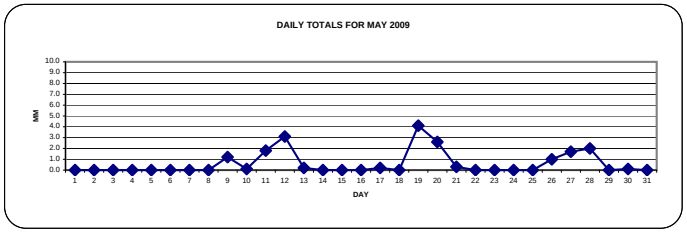
PRECIPITATION hourly averages (mm)

MST

HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DAILY	DAILY	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	MAX.	TOTAL	RDGS.
DAY																											
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
9	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0	0	0.2	0	0	0	0	0	0.9	1.2	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	0.1	0.1	0.1	24
11	0.6	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.2	1.8	24
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.2	0	0	0	0	0.1	1.2	0.3	0.4	0.4	1.2	3.1	24
13	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	24
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
17	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	24
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
19	0	0	0	0	0	0	0	0	0	0	0	0.7	**2.2**	0.7	0.2	0.1	0	0	0.1	0	0	0	0	0.1	**2.2**	**4.1**	24
20	0.1	0.1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0.1	0.2	0	0	0	0.1	2.0	2.6	24
21	0	0.1	0.1	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	24
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0	0	0	0	0.1	0.1	0.8	1.0	24
27	0.1	0	0	0	0	0	0	0.2	0	0	0	0	0	0.1	0	0.2	0	0	0	0	0	0.6	0.5	0	0.6	1.7	24
28	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.0	2.0	24
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
30	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	24
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	24
HOURLY MAX	0.6	2.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	2.0	0.0	0.7	2.2	0.7	0.2	0.9	0.8	0.0	0.2	0.2	1.2	0.6	0.5	0.4			

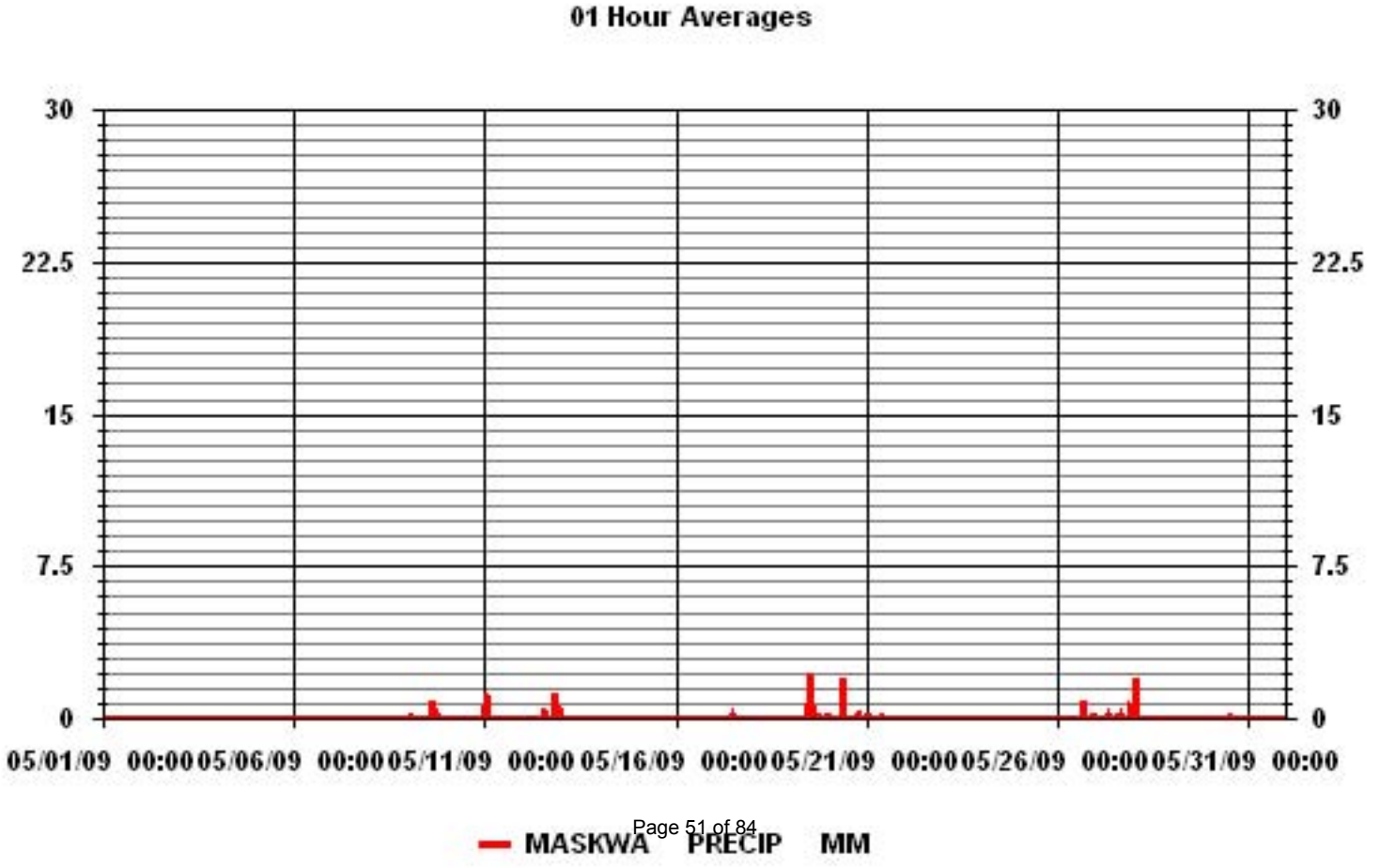
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	2.2	MM	HOUR(S)	12	ON DAY(S)	19
MAXIMUM DAILY TOTAL	4.1	MM			ON DAY(S)	19
MONTHLY TOTAL	18.4	MM				
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		744	HRS
			AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	0.16		MONTHLY AVERAGE:		0.02	MM


01 Hour Averages
30
22.5
15
7.5
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA PRECIP MM

Relative Humidity

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

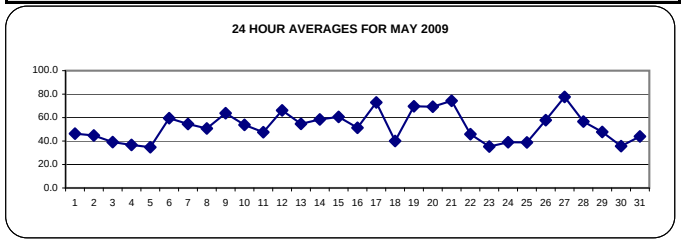
RELATIVE HUMIDITY hourly averages (%)

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	69	67	69	67	65	65	58	47	35	26	27	37	35	36	37	36	37	37	37	41	44	45	47	48	69	46.3	24
2	53	63	70	74	78	74	53	38	33	32	32	30	28	26	25	25	23	23	25	35	46	55	64	69	78	44.8	24
3	75	79	81	83	86	77	59	39	34	29	22	20	20	18	17	16	15	15	17	21	28	33	27	28	86	39.1	24
4	32	38	57	59	56	55	43	36	34	32	31	30	28	25	23	23	24	24	24	28	37	45	49	48	59	36.7	24
5	44	51	66	71	74	69	56	29	17	15	11	9	9	9	8	9	11	13	16	21	44	54	61	67	74	34.8	24
6	72	75	79	84	86	84	80	71	63	58	55	53	50	45	40	35	36	36	38	46	54	57	63	68	86	59.5	24
7	72	78	80	81	83	78	68	54	49	44	37	33	31	32	31	33	37	36	39	46	55	64	73	75	83	54.5	24
8	79	82	84	85	84	79	71	56	45	43	38	32	29	28	28	26	26	27	30	37	46	51	57	55	85	50.8	24
9	48	64	78	82	86	79	63	57	56	55	47	45	43	41	44	61	52	49	66	69	80	86	88	91	91	63.8	24
10	92	93	93	93	93	93	82	62	51	44	38	37	31	31	27	25	23	24	24	32	44	55	50	54	93	53.8	24
11	64	79	92	93	93	92	79	61	43	34	27	20	16	16	17	19	19	25	29	32	38	45	54	54	93	47.5	24
12	47	62	71	73	74	72	64	59	54	34	37	44	59	72	67	68	70	71	76	77	81	83	85	88	88	66.2	24
13	87	87	83	80	79	75	71	66	61	56	49	44	38	33	31	28	28	28	28	38	47	55	60	60	87	54.7	24
14	62	62	59	57	56	57	53	49	51	54	54	52	49	47	53	53	54	50	53	61	71	78	82	85	85	58.4	24
15	88	90	91	91	91	91	86	72	61	55	48	46	44	41	33	36	31	35	41	45	53	57	62	66	91	60.6	24
16	68	69	70	69	72	72	68	62	62	59	54	42	34	29	27	26	26	31	34	41	50	51	55	60	72	51.3	24
17	64	68	69	74	74	75	79	76	71	68	68	77	75	72	76	77	76	76	77	74	73	72	69	70	79	72.9	24
18	62	52	57	59	59	58	54	50	46	41	35	30	30	25	22	20	23	23	23	28	37	38	48	41	62	40.0	24
19	42	42	46	46	47	48	58	52	51	50	60	72	85	88	88	90	89	88	87	88	87	89	89	89	90	69.6	24
20	89	89	89	89	89	86	82	79	75	71	67	60	50	44	39	35	35	39	46	82	86	82	78	82	89	69.3	24
21	89	90	90	91	90	89	86	81	68	67	63	56	54	53	59	54	59	63	66	70	77	87	90	91	91	74.3	24
22	91	91	91	90	90	91	73	50	30	24	21	21	22	21	21	21	20	19	17	22	33	44	47	51	91	45.9	24
23	62	73	76	84	85	75	48	29	23	17	16	15	15	15	15	16	16	16	17	23	28	29	26	28	85	35.3	24
24	33	48	57	61	66	58	44	28	22	22	19	17	14	22	30	22	21	22	37	49	58	68	62	56	68	39.0	24
25	52	56	62	62	62	59	49	37	33	29	27	25	23	22	23	24	25	27	27	30	38	40	41	59	62	38.8	24
26	62	67	68	61	49	53	48	38	40	39	41	32	36	39	38	40	68	81	76	76	77	83	86	90	90	57.8	24
27	92	**94**	91	87	86	89	86	86	83	73	70	66	62	66	61	54	57	68	71	74	81	85	90	91	**94**	**77.6**	24
28	92	91	92	93	92	90	90	83	70	63	54	52	46	38	33	31	26	23	20	23	31	33	39	54	93	56.6	24
29	63	69	76	78	77	74	74	61	53	44	34	29	27	26	24	23	24	25	28	34	45	52	59	47	78	47.8	24
30	44	44	49	58	57	48	44	40	34	33	39	56	54	46	29	18	12	11	9	13	28	30	29	31	58	35.7	24
31	35	45	50	59	58	47	38	33	27	24	23	23	23	31	37	37	47	41	45	51	60	69	74	78	78	44.0	24
HOURLY MAX	92	94	93	93	93	93	90	86	83	73	70	77	85	88	88	90	89	88	87	88	87	89	90	91			
HOURLY AVG	65.3	69.6	73.7	75.3	75.4	72.6	64.7	54.2	47.6	43.1	40.1	38.9	37.4	36.7	35.6	34.9	35.8	37.0	39.5	45.4	53.5	58.5	61.4	63.7			

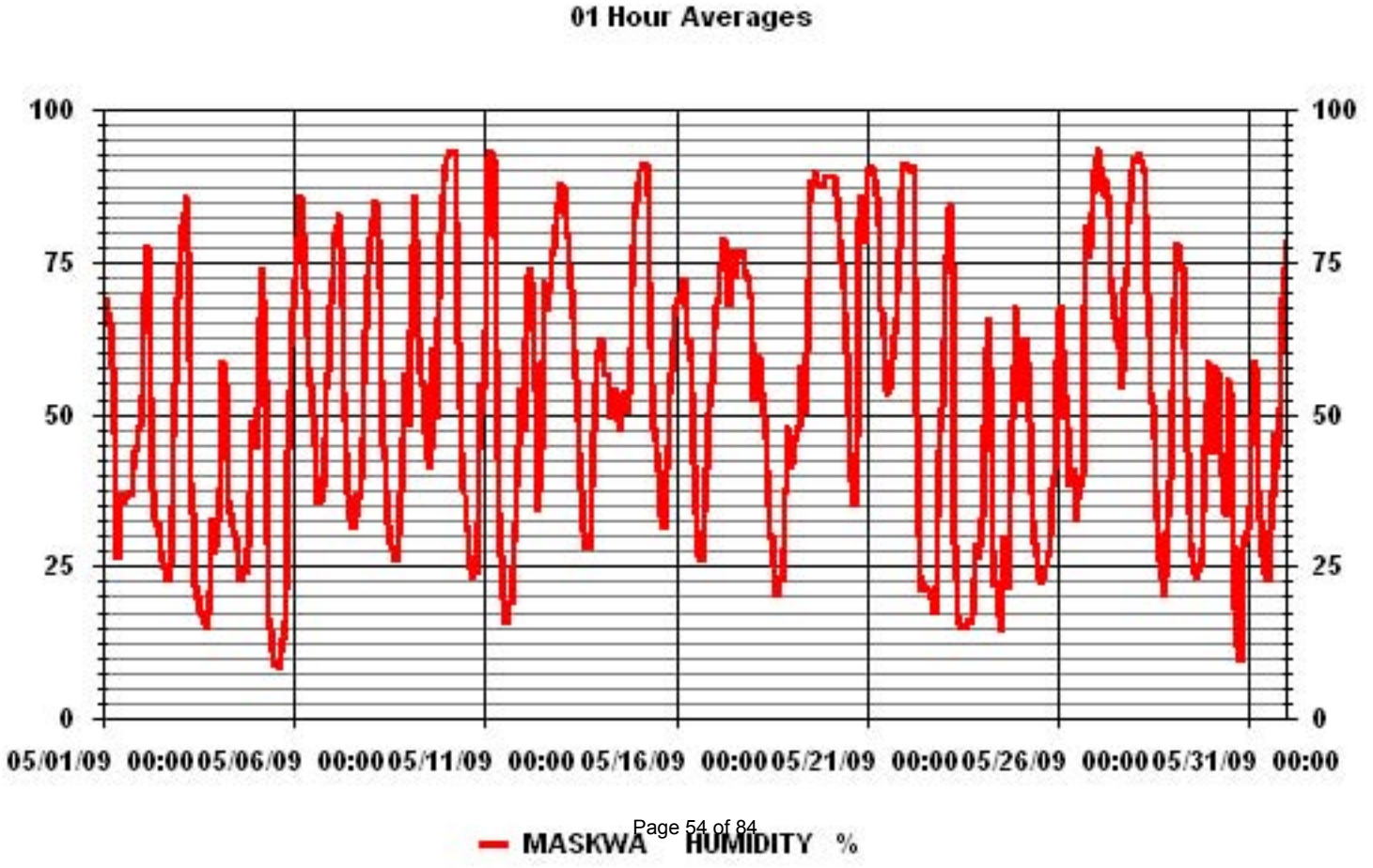
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		94	%	@ HOUR(S)	1	ON DAY(S)	27
MAXIMUM 24-HR AVERAGE:		77.6	%			ON DAY(S)	27
						VAR-VARIOUS	
CALIBRATION TIME:	0	HRS		OPERATIONAL TIME:		744	HRS
				AMD OPERATION UPTIME:		100.0	%
STANDARD DEVIATION:	22.75			MONTHLY AVERAGE:		52.49	%


01 Hour Averages
100
75
50
25
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA HUMIDITY %

Barometric Pressure

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

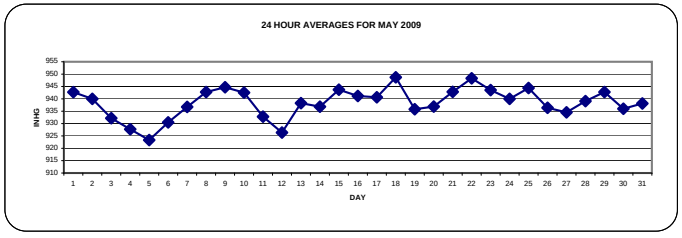
BAROMETRIC PRESSURE hourly averages (milibar)

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	945	945	945	945	944	944	944	944	944	944	944	943	943	942	942	941	941	941	941	940	940	941	941	941	945	943	24
2	941	941	941	941	940	940	942	942	942	942	942	942	941	941	940	940	939	939	939	938	937	937	937	936	942	940	24
3	936	936	935	935	935	935	936	**N**	936	935	935	934	933	932	931	931	930	929	929	928	928	927	927	927	936	932	23
4	926	926	926	925	926	927	928	929	929	929	929	929	929	928	929	928	928	928	928	927	**N**	**N**	**N**	**N**	929	928	20
5	**N**	924	924	923	923	**N**	924	925	925	925	924	924	923	923	922	922	922	922	921	922	923	**N**	924	925	925	923	21
6	925	925	926	927	928	928	929	930	930	931	931	932	932	932	932	**N**	932	932	932	933	933	933	934	934	934	930	23
7	934	934	934	934	934	935	936	937	**N**	937	937	937	937	937	937	937	937	**N**	938	939	939	939	939	940	940	937	22
8	940	940	940	941	941	942	943	944	944	944	944	944	944	944	943	943	943	943	943	943	943	943	944	943	944	943	24
9	943	943	943	943	943	944	945	946	946	946	946	946	945	945	945	945	945	945	945	945	**N**	**N**	**N**	**N**	946	945	20
10	**N**	945	944	944	944	945	946	946	946	946	945	945	944	943	942	941	941	940	940	939	938	938	938	938	946	943	23
11	938	937	936	935	935	935	936	936	936	935	935	934	933	933	932	931	931	930	930	929	929	928	927	926	938	933	24
12	926	925	924	924	923	923	923	923	923	923	923	923	924	924	925	927	928	929	930	931	932	933	933	934	934	926	24
13	935	936	**N**	937	938	938	939	939	940	940	940	940	940	940	940	939	939	938	938	938	937	937	936	936	940	938	23
14	936	936	936	935	935	935	935	935	935	935	936	936	936	937	937	937	938	938	938	939	939	940	940	940	940	937	24
15	941	941	942	942	942	943	944	945	945	945	945	945	945	944	944	944	944	944	944	944	944	944	944	944	945	944	24
16	943	943	943	943	943	942	942	943	942	942	942	942	941	941	940	940	940	940	940	940	939	939	939	939	943	941	24
17	939	939	939	939	939	939	940	940	940	940	939	939	938	938	939	939	940	941	942	943	945	945	946	947	947	941	24
18	948	948	949	950	950	950	950	951	951	951	951	951	950	949	949	949	948	948	947	947	946	946	945	945	951	**949**	24
19	944	943	943	942	941	940	939	938	937	936	935	933	932	933	932	932	932	932	932	932	932	933	933	933	944	936	24
20	933	933	933	933	934	934	935	936	937	937	938	938	938	939	938	939	939	938	938	939	939	939	939	939	939	937	24
21	939	**N**	939	939	939	939	940	940	941	942	942	942	943	943	943	944	944	945	946	946	947	947	947	948	948	943	23
22	948	948	948	**N**	948	949	951	**952**	951	951	951	950	950	949	949	948	948	947	947	946	946	945	945	944	**952**	948	23
23	944	944	944	943	943	944	945	946	946	946	946	945	945	944	944	943	943	942	942	942	941	941	941	941	946	944	24
24	941	940	940	939	939	939	940	941	941	940	940	940	939	939	940	939	939	938	939	940	941	941	942	943	943	940	24
25	943	943	944	944	944	945	946	946	947	947	947	946	946	945	945	944	944	944	944	943	943	942	942	941	947	944	24
26	941	**N**	941	941	941	941	941	941	940	940	939	938	937	936	935	934	934	932	932	931	931	930	930	931	941	936	23
27	930	930	930	930	930	931	931	932	933	934	935	936	936	937	937	937	937	937	937	937	938	938	938	938	938	935	24
28	938	939	938	938	939	939	939	939	940	940	940	940	939	**N**	939	939	939	939	939	939	939	939	939	940	940	939	23
29	940	940	941	942	942	943	**N**	**N**	946	946	946	945	945	944	944	944	943	943	942	**N**	**N**	940	940	939	946	943	20
30	939	939	938	937	936	936	936	936	937	937	937	936	936	936	936	935	935	935	935	934	934	934	935	935	939	936	24
31	935	935	935	935	935	936	937	938	938	937	937	937	937	938	938	939	939	940	940	940	941	942	943	943	943	938	24
HOURLY MAX	948.0	948.0	949.0	950.0	950.0	950.0	951.0	952.0	951.0	951.0	951.0	951.0	950.0	949.0	949.0	949.0	948.0	948.0	947.0	947.0	947.0	947.0	947.0	948.0			
HOURLY AVG	938.3	937.9	938.0	937.5	937.9	938.7	938.7	939.3	939.6	939.5	939.4	939.1	938.7	938.5	938.4	938.4	938.1	938.0	938.0	937.8	938.0	938.6	938.2	938.3			

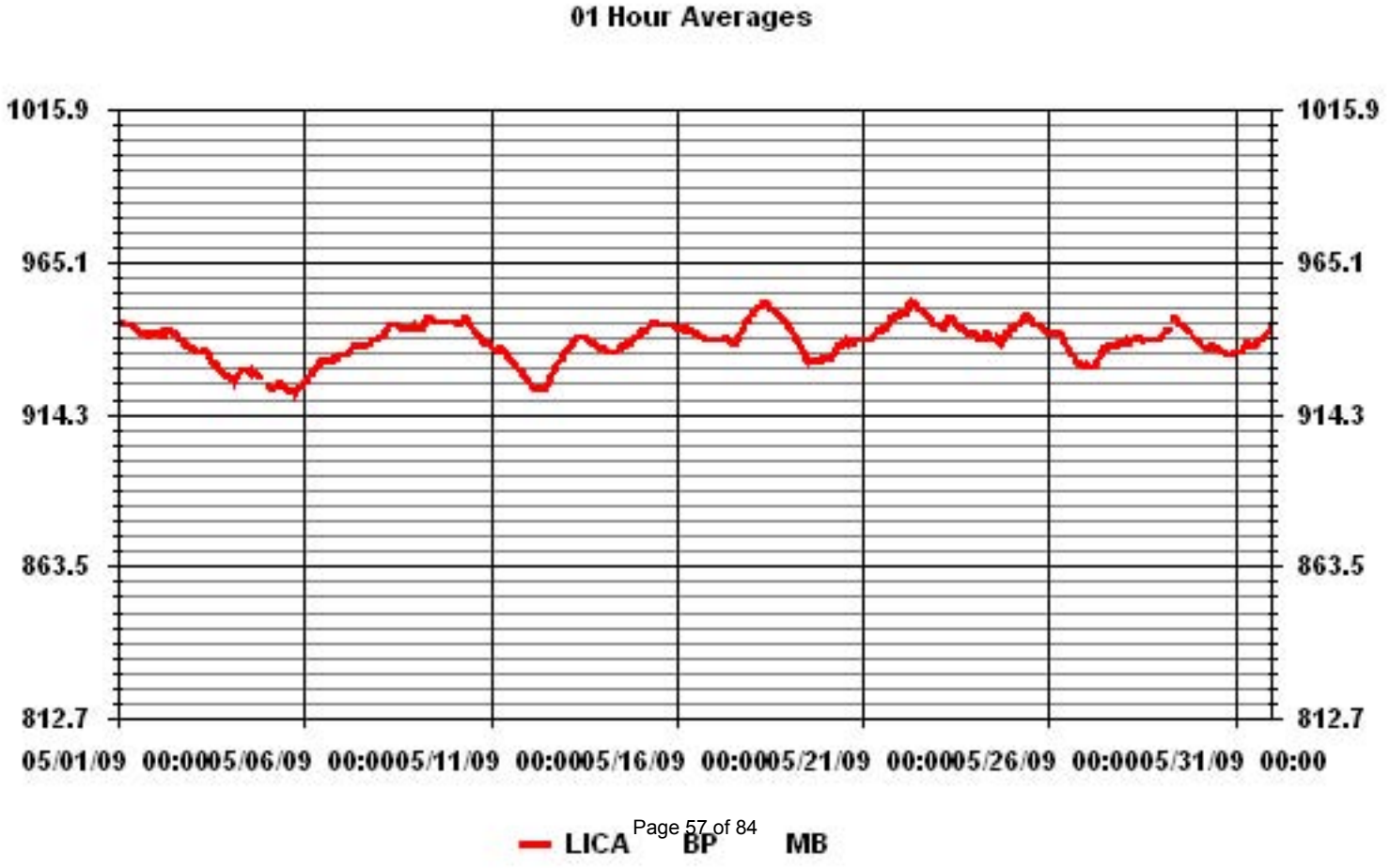
STATUS FLAG CODES

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



MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:	952	INHG	@ HOUR(S)	7	ON DAY(S)	22	
MAXIMUM 24-HR AVERAGE:	949	INHG			ON DAY(S)	18	
					VAR-VARIOUS		
CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:		719	HRS	
			AMD OPERATION UPTIME:		96.6	%	
STANDARD DEVIATION:	6.33		MONTHLY AVERAGE:		938.46	MB	


01 Hour Averages
1015.9
965.1
914.3
863.5
812.7
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
LICA BP MB

Vector Wind Speed

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

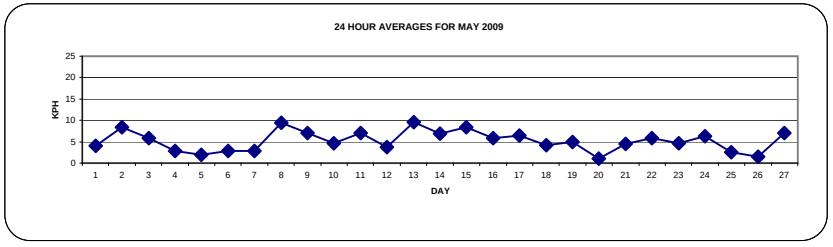
WIND SPEED hourly averages (km/hr)

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	0.5	1.4	1.4	2.5	2.5	2.6	3.9	7.8	10.1	11.3	12.3	13.8	12.3	11.5	13.6	12	10.2	9.6	6.7	5	5.9	4.9	5.2	13.8	6.1	24
2	2.2	2.4	1.5	1.3	1	2.1	3.6	6.7	8.5	10	10.2	9.6	9.9	7.8	7.1	7.4	7.1	6.4	4.9	2.1	2.6	2.3	1.7	1.3	10.2	3.8	24
3	1.8	2	0.6	0.5	0.4	0.5	1.3	8.5	13	10.2	12.6	9.6	10.6	12.1	11.8	12.4	11	11.3	9.8	6	4.6	6.7	8.5	8	13	7	24
4	5.7	4.8	0.9	1.5	6.5	8.4	11.5	13.5	13.1	12.1	11.3	12.3	12.1	14.1	14.3	13.9	12.8	11.5	9.5	5.1	1.9	1.8	1.8	3.9	14.3	7.6	24
5	4.2	3	0.5	0.4	0.3	0.9	1.4	1.5	6.2	7.3	4.6	6.6	4.1	5.2	3.7	7.3	10.6	6.8	7.4	12.4	17.5	13.4	14.6	17.5	17.5	4	24
6	14.1	12.9	10.4	10.8	9.6	8.2	7.4	9.4	9.3	11.8	9.3	9.7	9.6	9.3	8.9	10.3	10.7	11.2	10	7.2	7	6.8	4.6	3.7	14.1	8.4	24
7	4	2	3.1	3.5	3.1	2	4.4	3.6	5.2	8.1	3.2	5.1	6	6.3	9.5	11.5	13	14.5	11.2	7.7	5	3.8	3.1	2.7	14.5	5.8	24
8	2.6	2.7	1.7	1.6	2.3	2.3	3.5	1.1	1.5	3.2	3.6	2	2	7.6	6.7	7.7	9	7.6	6.8	2.7	1.9	1.8	0.5	5.2	9	2.8	24
9	2.2	3.3	1.8	2.4	1.1	0.9	3.6	2.9	5.3	6.7	9.2	6.4	7	5	3.3	3.3	5.5	3.1	3.7	1.7	1.9	0.6	2.7	1.2	9.2	2	24
10	0.6	1	1.4	1.5	1.7	0.8	1.7	2.2	3.4	2.2	3.5	1.9	4.9	4.9	3.5	7.2	4.1	6.7	6.2	4.5	2.2	1.6	3.5	13.3	13.3	2.8	24
11	8.7	4.5	3.8	5.1	1.7	1.3	1.4	1.4	3.4	2.5	4.4	2.9	8	6.3	4.6	5.7	6.8	8.1	9.8	8.3	7	5.7	2.5	6.6	9.8	2.9	24
12	8.1	1.4	2.5	2.6	4.6	2.6	3.6	2.7	6	2.1	9.6	11.8	10.4	12.6	18.2	18.7	18.8	18.8	16.5	15.5	**19.2**	16.2	13.6	12.4	**19.2**	9.5	24
13	12.1	9.6	12.3	12.5	11.4	11.8	11.5	10.4	10.1	9.8	8.4	9.3	8.6	8.4	6.7	4.7	5.7	4.4	0.4	5.1	3.9	4.6	4.7	5.7	12.5	7	24
14	5.7	5.3	7	7.3	6.8	6.9	7.8	6.8	7	5.6	5.8	7.1	9.3	9.5	7.8	7.4	4.4	3.4	4.2	2.9	2.9	4.2	6.1	6.4	9.5	4.6	24
15	5.3	6.1	5.5	6.2	7.2	6.4	6.7	6.7	9	8.6	9.4	13.1	11	9.4	10.8	10.9	5.1	3	6.5	6.1	7.2	8.9	8.9	8.2	13.1	7	24
16	7	8.2	7.4	7.2	2.5	4	3.7	3.9	6.2	3.3	7.5	8.5	5.4	8.2	5.9	8.8	10.7	10.7	9.8	8.4	4.7	5.9	3.5	1.7	10.7	3.8	24
17	0.8	0.6	0.4	0.6	4.5	9.1	11.1	11.2	9.1	9.6	8.8	8.8	9.8	10.4	14.7	17.3	17.1	16.6	15.1	16.5	14.6	15.7	14	11	17.3	**9.6**	24
18	16.9	18.3	9.8	8.8	10.3	10.2	10.3	10	8.3	6.5	7.9	8.9	10.8	11.9	6.4	8.2	8.9	6.1	4.8	3.9	3.9	4.2	3.1	6.1	18.3	6.9	24
19	6.4	8.2	7.9	7.7	6.7	7.2	10.1	9.6	10.3	12.6	14	15.9	12.6	8.7	9	11.3	10.5	10.3	9.7	6.5	5.1	4.8	5.2	7	15.9	8.4	24
20	3.9	3	3.1	3.7	3.5	5.1	5.6	6.4	7.2	9.7	9.5	10.3	7.9	8	8.6	11.1	10.4	10.7	9.7	5.7	1.7	4.3	6.8	4.6	11.1	5.8	24
21	1.4	1.2	2.6	4	2.6	3.4	4.3	5.3	8.1	9.5	12.5	12	12.5	14	18.3	16.9	18.5	18.7	15.8	9.2	4.8	1.9	3.2	2.3	18.7	6.5	24
22	1.6	2.2	2.3	1.7	2.1	2.2	2.9	5.7	8.4	7	6.1	5.9	6.4	8	8.1	9.1	8.3	8.1	6.2	3.6	3.4	3.7	5.1	4.6	9.1	4.2	24
23	2.8	2.4	2.5	2.6	2.1	0.7	2.1	6	6.9	8.1	6.4	3	5.4	8	9.5	8.1	5	6.8	8.8	5.1	5.3	6.3	10.4	9.9	10.4	5	24
24	4.5	3.8	1.6	1.7	2.1	2.2	0.9	5.7	8.8	6.1	7.9	8	8.8	10	7.1	4.2	8.1	8.8	18.6	15.4	10.9	6	10.2	11.4	18.6	1.1	24
25	11.7	9.1	5.5	8.1	8.8	7.7	10.7	13.8	13.1	10.6	9.7	6.1	2.1	4.4	6.3	9.3	7	6.6	7.7	5.3	4.8	6.7	6	1.2	13.8	4.5	24
26	1.8	0.3	1.3	4	10.2	8.2	8.6	9.7	7.9	8.2	8.8	13.1	10.2	9.5	9.7	10.3	10.6	6	8.4	10.6	6.5	5.2	2.5	0.6	13.1	5.8	24
27	0.4	5.3	9.5	10.9	10.3	9.6	9.9	9.8	10.7	11.4	10.6	10	7.1	5.6	7.6	8.9	8	10.5	9.5	7.3	5.2	2.8	2.8	3.1	11.4	4.7	24
28	4	5.7	3.5	5.5	8	8.2	6	5.8	9.7	9.4	9.3	9.6	10	11.3	9.6	9.8	12.6	11.1	12.6	9.1	6.5	7.1	7.2	9.3	12.6	6.3	24
29	7.9	6.4	7	7	5	5.3	8.6	6.3	5.5	4.1	6.3	6.2	6	7.5	3.5	3.5	5	7.1	7.9	5.4	3.9	4.1	4	8.1	8.6	2.5	24
30	8.5	8.7	5.5	5.5	6.4	8.7	7.3	7	3.1	7.2	8	3.8	4.2	6	8.4	11.2	13.4	13.7	10.5	5.3	2	2.9	2.1	5	13.7	1.5	24
31	4.4	3.1	3.4	2.9	3.6	7.4	7.4	5.2	8.4	9.7	10	10	11	12.5	12.3	11.3	12.1	11.8	7.5	7.8	7.8	5.3	5.7	7.9	12.5	7.1	24
HOURLY MAX	16.9	18.3	12.3	12.5	11.4	11.8	11.5	13.8	13.1	12.6	14.0	15.9	13.8	14.1	18.3	18.7	18.8	18.8	18.6	16.5	19.2	16.2	14.6	17.5			
HOURLY AVG	5.2	4.8	4.1	4.5	4.8	5.1	5.9	6.5	7.8	7.8	8.4	8.4	8.3	8.9	8.8	9.7	9.8	9.4	9.0	7.1	5.8	5.5	5.6	6.3			

STATUS FLAG CODES

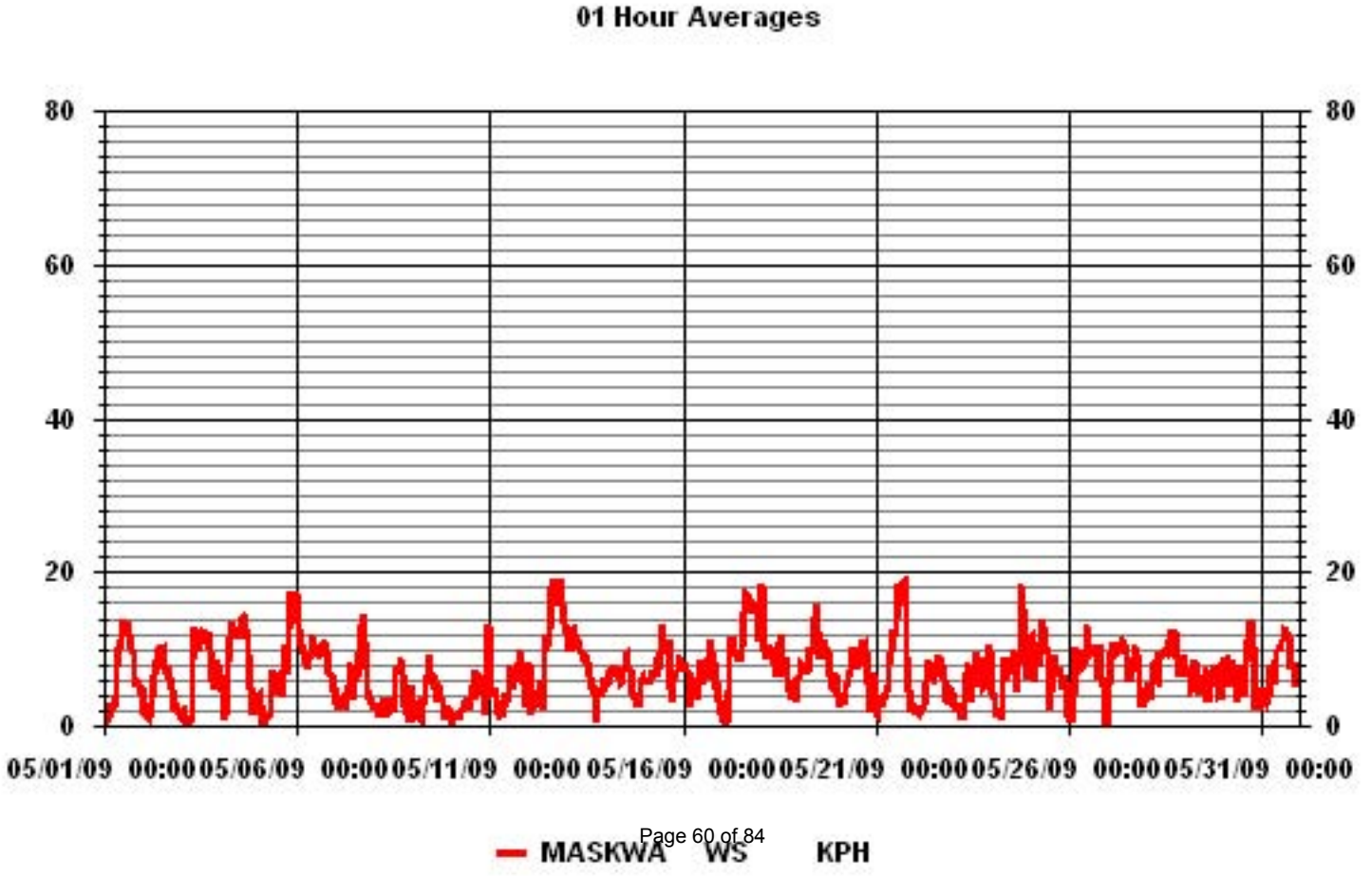
S	- OUT OF SERVICE	IZS	- IZS - DAILY ZERO/SPAN CHECK
N	- INVALID DATA	M	- MAINTENANCE
D	- INSTRUMENT DRIFT	P	- POWER FAILURE
C	- CALIBRATION	NA	- NOT APPLICABLE



LAST CALIBRATION: November 7, 2007

MONTHLY SUMMARY

MAXIMUM 1-HR AVERAGE:		19.2	KPH	@ HOUR(S)	20	ON DAY(S)	12
MAXIMUM 24-HR AVERAGE:		9.6	KPH			ON DAY(S)	17
CALMS (≤ 0 KPH)	2.96	%		OPERATIONAL TIME:		744	HRS
MONTHLY CALIBRATION TIME:	0	HRS		AMD OPERATION UPTIME		100.0	%
STANDARD DEVIATION	3.97			MONTHLY AVERAGE		6.98	KPH


01 Hour Averages
80
60
40
20
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA WS KPH

MASKWA
WS / WD Joint Frequency Distribution (Percent)

May 2009

Distribution By % Of Samples

Logger Id : 03
Site Name : MASKWA
Parameter : WS
Units : KPH

Wind Parameter : WD
Instrument Height : 10 Meters

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	1.47	2.95	2.55	4.70	2.01	2.82	1.74	.80	2.55	2.82	4.03	2.95	1.74	2.55	1.34	1.74	38.84
<	12.0	3.62	2.41	4.03	4.43	2.28	1.88	3.22	2.95	1.20	4.83	2.55	.80	1.61	5.77	2.55	3.36	47.58
<	20.0	1.61	3.09	1.34	.40	.26	.26	.00	.00	.00	.67	.13	.00	.00	1.88	.53	.40	10.61
<	29.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
<	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
>=	39.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Totals	6.72	8.46	7.93	9.54	4.56	4.97	4.97	3.76	3.76	8.33	6.72	3.76	3.36	10.21	4.43	5.51	

Calm : 2.95 %

Total # Operational Hours : 744

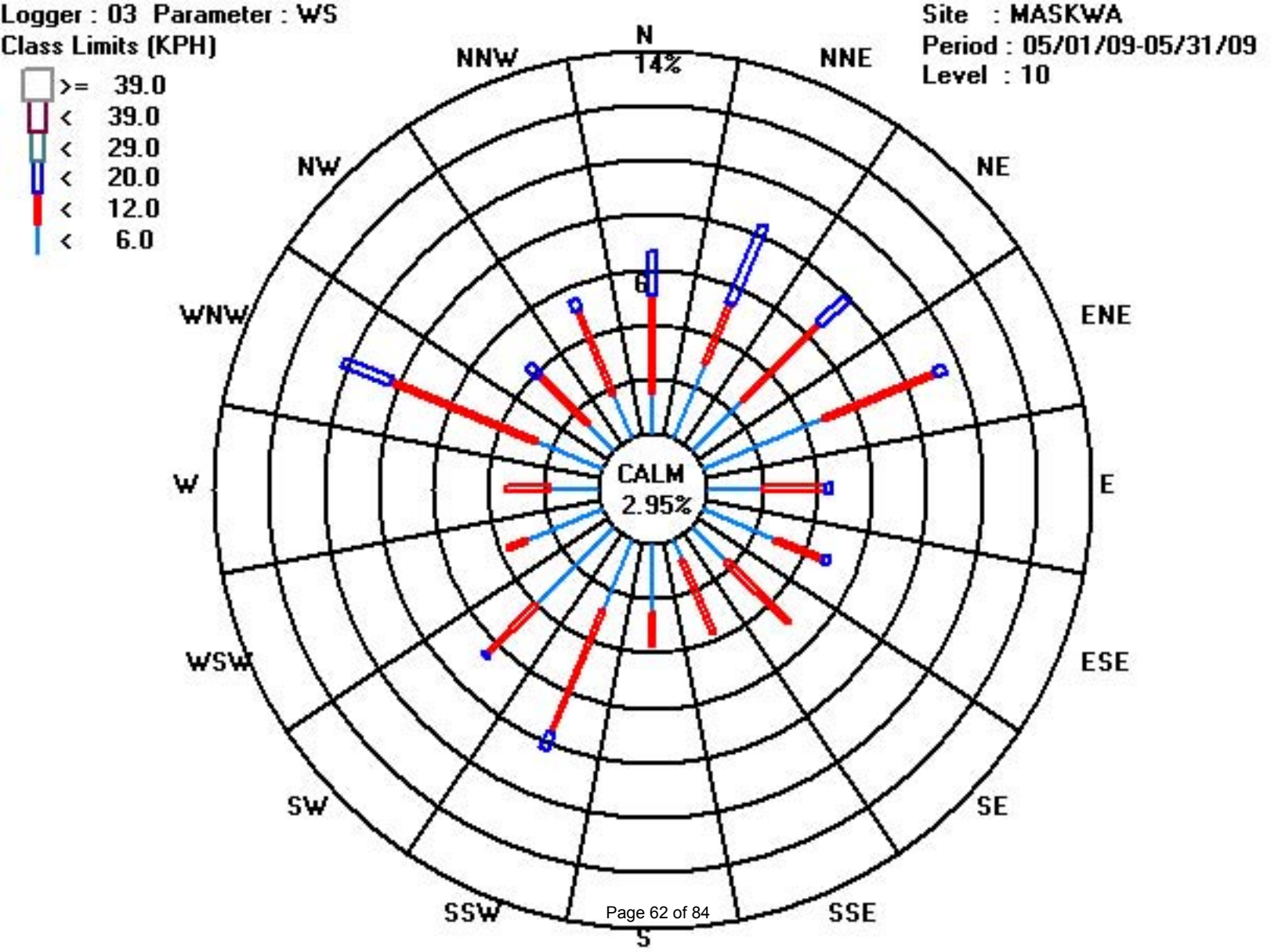
Distribution By Samples

Direction

	Limit	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Freq
<	6.0	11	22	19	35	15	21	13	6	19	21	30	22	13	19	10	13	289
<	12.0	27	18	30	33	17	14	24	22	9	36	19	6	12	43	19	25	354
<	20.0	12	23	10	3	2	2				5	1			14	4	3	79
<	29.0																	
<	39.0																	
>=	39.0																	
	Totals	50	63	59	71	34	37	37	28	28	62	50	28	25	76	33	41	

Calm : 2.95 %

Total # Operational Hours : 744


Logger : 03 Parameter : WS
Class Limits (KPH)
>= 39.0
< 39.0
< 29.0
< 20.0
< 12.0
< 6.0
Site : MASKWA
Period : 05/01/09-05/31/09
Level : 10
N
14%
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
6
CALM
2.95%

Vector Wind Direction

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION - MASKWA

MAY 2009

WIND DIRECTION hourly averages in degrees

MST

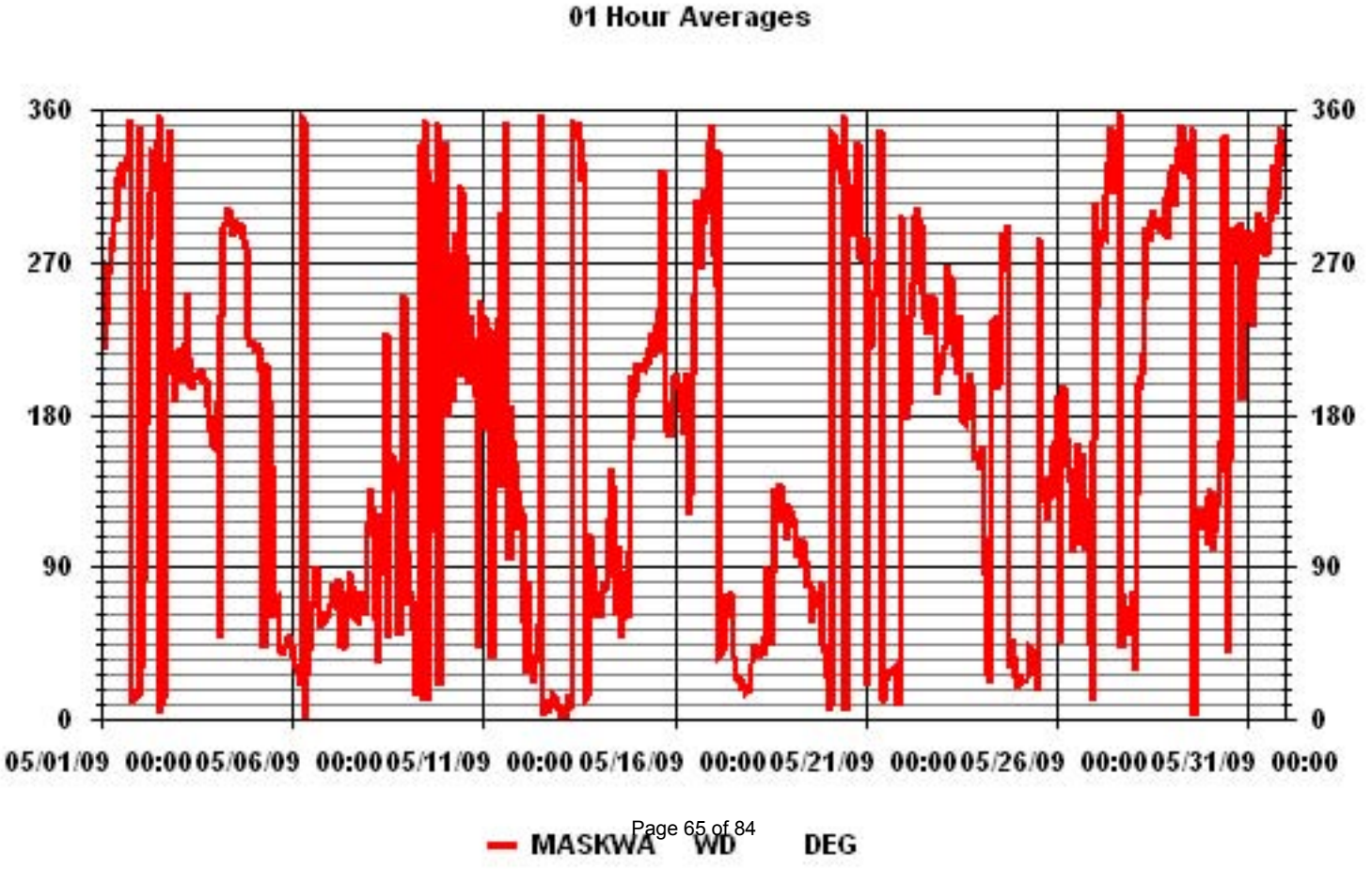
HOUR START	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-HOUR	24-HOUR AVG	
HOUR END	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	AVG.	QUANDRANT	RDGS.
DAY																											
1	235	264	218	233	268	267	282	281	297	294	320	326	315	329	323	329	324	332	355	10	15	14	18	13	326	NW	24
2	350	30	70	82	174	254	284	311	335	334	326	342	357	4	8	12	329	321	324	348	215	205	187	210	337	NNW	24
3	218	220	199	216	220	219	252	215	198	194	200	204	200	204	205	207	201	199	199	185	170	162	161	167	196	SSW	24
4	178	187	47	238	290	292	293	294	302	292	287	287	288	295	288	291	291	286	284	279	226	224	220	223	284	WNW	24
5	218	220	222	205	219	206	42	204	210	185	188	151	60	68	71	72	42	41	37	43	47	47	50	44	60	ENE	24
6	38	32	31	27	32	19	355	354	0	25	40	64	66	70	80	91	74	53	62	56	63	59	60	66	45	NE	24
7	68	80	70	73	64	83	42	75	45	41	61	75	87	60	79	68	60	59	63	76	63	63	72	108	65	ENE	24
8	115	137	126	110	60	48	33	85	121	107	95	229	47	146	157	149	153	137	135	49	73	84	251	127	126	SE	24
9	101	67	76	52	69	13	46	39	338	339	11	355	10	323	110	245	208	283	317	353	20	43	288	257	357	N	24
10	341	277	178	201	187	204	288	212	234	316	202	311	276	244	225	198	239	226	215	191	41	127	247	209	224	SW	24
11	204	239	170	201	232	36	76	198	221	237	136	300	216	269	353	108	93	186	165	161	153	136	111	126	172	S	24
12	123	58	27	65	81	30	33	21	39	33	57	37	358	2	8	9	4	9	12	9	15	14	8	6	17	NNE	24
13	9	1	0	0	3	5	14	6	354	344	349	350	344	317	331	326	13	14	59	110	91	71	60	65	4	N	24
14	66	60	75	81	77	78	84	119	149	139	98	91	61	102	47	58	77	88	59	100	164	203	192	193	93	E	24
15	209	209	208	209	209	208	213	220	210	228	217	215	223	233	241	217	324	266	169	182	177	166	186	195	211	SSW	24
16	203	205	200	196	182	167	180	194	205	120	132	203	250	276	307	270	266	284	293	313	299	302	341	352	246	WSW	24
17	298	275	255	336	37	38	41	48	74	62	73	75	61	38	26	25	23	23	18	18	16	17	21	16	32	NNE	24
18	33	36	45	40	40	37	43	38	49	91	71	56	45	45	86	136	121	125	140	118	118	126	105	128	62	ENE	24
19	122	122	119	115	95	106	97	90	98	106	95	78	82	80	57	67	67	73	74	72	82	45	41	36	85	E	24
20	25	5	8	347	346	336	337	337	327	316	358	5	323	317	294	296	286	288	293	341	273	270	285	283	318	NW	24
21	19	285	221	219	232	250	254	271	333	349	12	10	17	23	29	27	27	30	31	25	10	10	298	288	12	NNE	24
22	220	177	189	186	238	258	256	298	302	296	282	294	252	238	236	228	230	238	251	233	199	192	203	207	245	WSW	24
23	216	219	221	268	233	263	235	214	219	216	203	238	177	176	194	196	198	205	199	178	157	153	155	158	193	S	24
24	147	161	102	84	107	27	21	235	236	216	195	201	198	287	264	281	282	292	30	48	43	38	25	18	337	NNW	24
25	20	26	21	23	23	24	43	42	38	41	27	25	16	284	128	143	136	142	117	129	144	161	164	130	58	ENE	24
26	191	169	45	194	197	190	167	150	141	123	98	117	107	163	130	103	157	125	99	131	128	45	11	165	135	SE	24
27	305	243	279	289	286	286	285	310	329	345	350	340	330	310	341	359	41	75	68	65	57	49	64	75	337	NNW	24
28	58	29	132	199	194	203	216	248	290	284	284	295	300	296	289	294	296	290	289	295	308	283	313	323	285	WNW	24
29	328	316	303	327	338	342	352	324	343	322	327	319	339	350	2	8	117	122	124	119	111	117	103	132	358	N	24
30	136	134	99	110	126	133	145	164	217	343	346	38	153	239	270	291	289	290	292	294	188	257	255	287	251	WSW	24
31	287	234	256	232	261	287	300	297	277	278	277	273	275	293	314	304	327	299	307	339	350	336	327	331	298	WNW	24
HOURLY AVG	350	316	303	347	346	342	355	354	354	349	358	355	358	350	353	359	329	332	355	353	350	336	341	352			

STATUS FLAG CODES

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

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

MONTHLY CALIBRATION TIME:	0	HRS	OPERATIONAL TIME:	744	HRS
STANDARD DEVIATION	108.45		AMD OPERATION UPTIME	100.0	%
			MONTHLY AVERAGE	8	DEG


01 Hour Averages
360
270
180
90
0
05/01/09 00:00
05/06/09 00:00
05/11/09 00:00
05/16/09 00:00
05/21/09 00:00
05/26/09 00:00
05/31/09 00:00
MASKWA WD DEG

Calibration Reports

Sulphur Dioxide

SO_2 Calibration Report

Station Information

Calibration Date	May 19, 2009		Previous Calibration	April 21, 2009	
Company	**Lakeland Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	11:35		End Time (MST)	15:30	
Reason:	As Found				
Barometric Pressure	27.55	inHg	Station Temperature	24	Deg C
Cal Gas	52.2	ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 -1000	ppb				
Sample Flow / Box Temp	605	ccm	35.5	Deg C	612	ccm	35.3	Deg C
HVPS / Lamp Setting	498		2754		522		3534	
PMT / RxCell Temp	7.7	Deg C	50	Deg C	7.7	Deg C	50	Deg C
Converter / IZS Temp	NA	Deg C	45	Deg C	NA	Deg C	45	Deg C
Offset / Slope	59.7		0.995		59.7		1	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
5000	0	0	0	N/A
4949.0	77.9	809	763	1.0602
		Sum of Least Squares		#DIV/0!
		New Correction Factor		0.0000

	Before Calibration	After Calibration
Auto Zero	-0.1	1.6
Auto Span	476.0	510.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		#DIV/0!

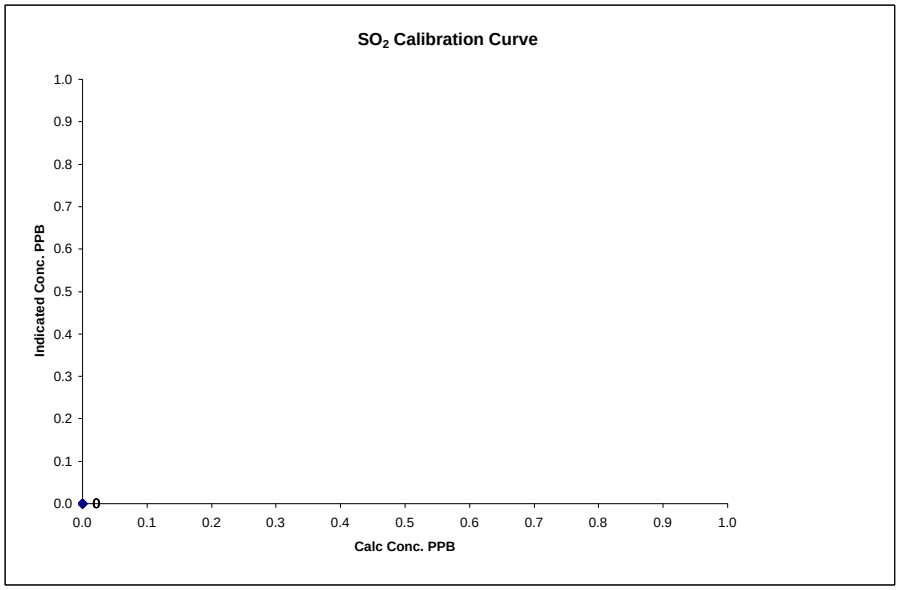
Calibration Performed by: Shea Beaton

SO_2 Calibration Curve

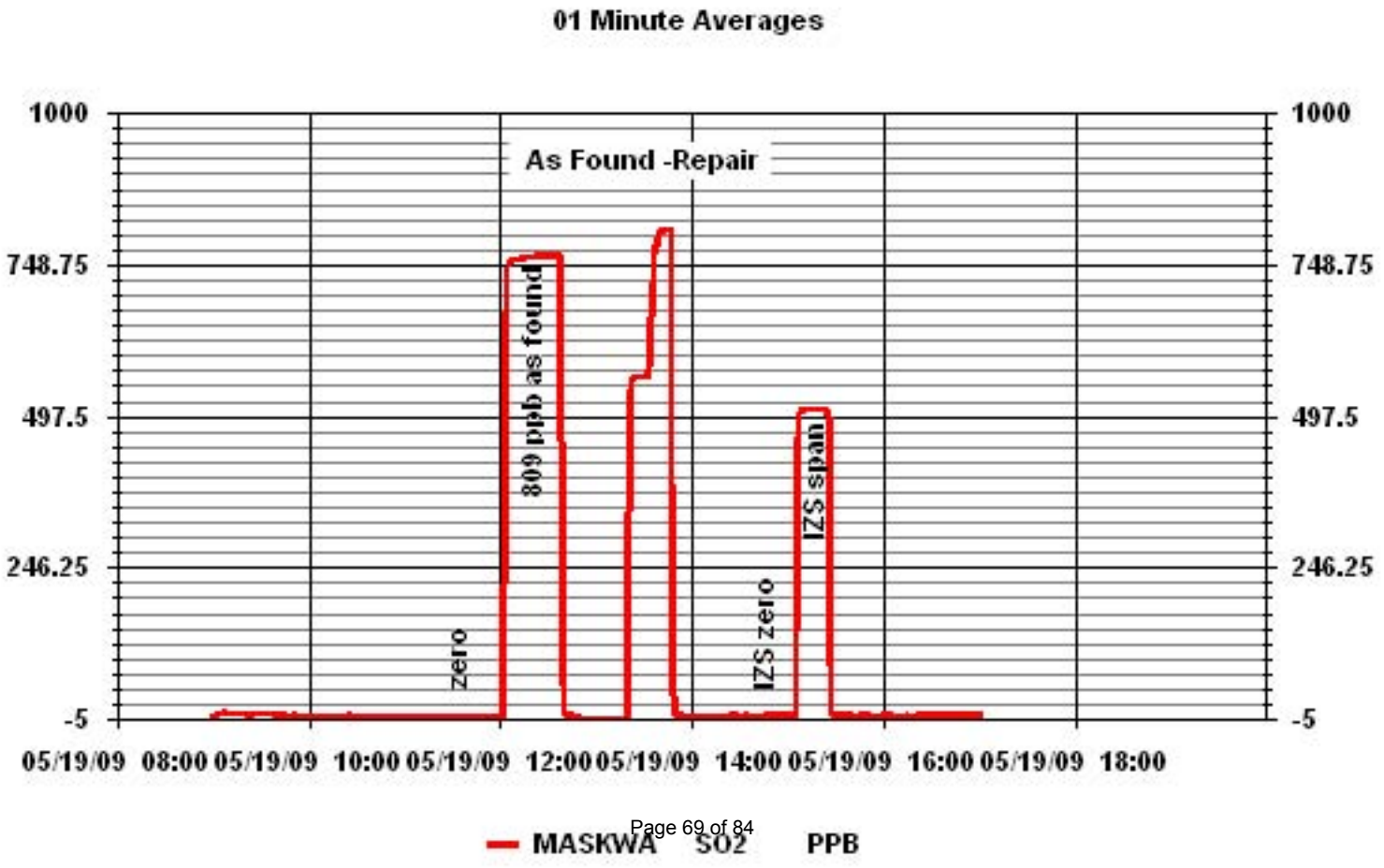
Calibration Date	May 19, 2009			
Company	**Lakeland Industry & Community Association**			
Plant / Location	**Cold Lake - Maskwa**			
Start Time (MST)	11:35	End Time (MST)	15:30	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
0	0	#DIV/0!
0	0	#DIV/0!
0	0	#DIV/0!

Correlation Coefficient	(≥ 0.995)	#DIV/0!
Slope	(0.85 to 1.15)	#DIV/0!
Intercept	(± 3% F.S.)	#DIV/0!



Notes: Following the AF points, the lamp was "peaked" then a lamp cal and factory cal were performed. The offset and span were adjusted. Will perform a full cal tomorrow.


01 Minute Averages
As Found -Repair
1000
748.75
497.5
246.25
-5
809 ppb as found
zero
IZS zero
IZS span
05/19/09 08:00
05/19/09 10:00
05/19/09 12:00
05/19/09 14:00
05/19/09 16:00
05/19/09 18:00
MASKWA SO2 PPB

SO_2 Calibration Report

Station Information

Calibration Date	May 20, 2009		Previous Calibration	April 22, 2009	
Company	**Lakeland Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	9:00		End Time (MST)	12:50	
Reason:	Post Repair Calibration				
Barometric Pressure	27.69	inHg	Station Temperature	24	Deg C
Cal Gas	52.2	ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

Analyzer Make / Model:	API 100E	S/N :	508	Method:	Fluorescent
Converter Make / Model:	-	S/N :	-		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 -1000	ppb				
Sample Flow / Box Temp	609	ccm	34.7	Deg C	609	ccm	34.3	Deg C
HVPS / Lamp Setting	522		3506		522		3501	
PMT / RxCell Temp	7.7	Deg C	50	Deg C	7.7	Deg C	50	Deg C
Converter / IZS Temp	NA	Deg C	45	Deg C	NA	Deg C	45	Deg C
Offset / Slope	59.7		1		61		1.001	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	1	N/A
4999.0	0	0	0	N/A
4921.0	76.6	800	803	0.9964
4961.0	38.3	400	399	1.0023
4978.0	19.1	200	199	1.0026
4999.0	0	0	0	N/A
			Sum of Least Squares	0.9978
			New Correction Factor	0.9964

	Before Calibration	After Calibration
Auto Zero	1.4	0.8
Auto Span	507.0	504.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.2%

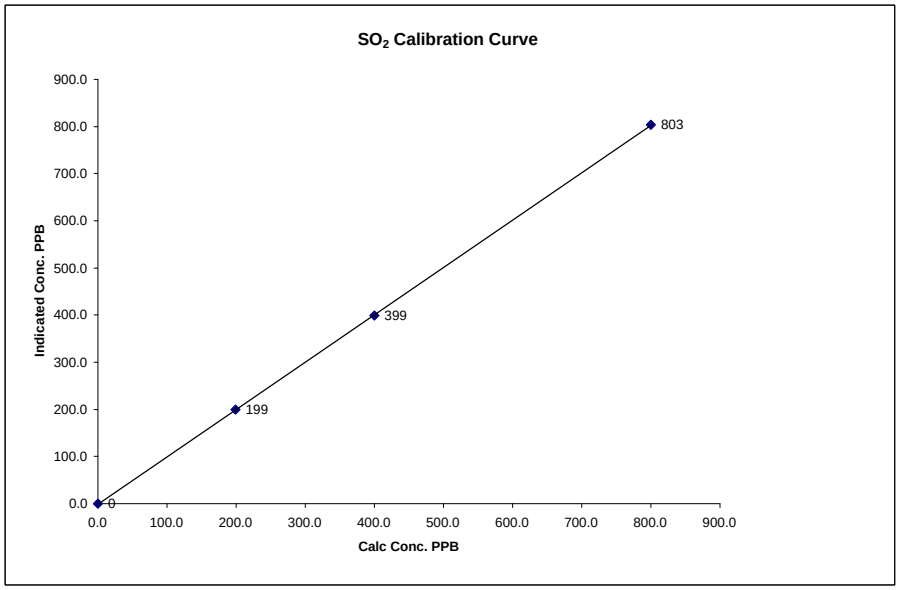
Calibration Performed by: Shea Beaton

SO_2 Calibration Curve

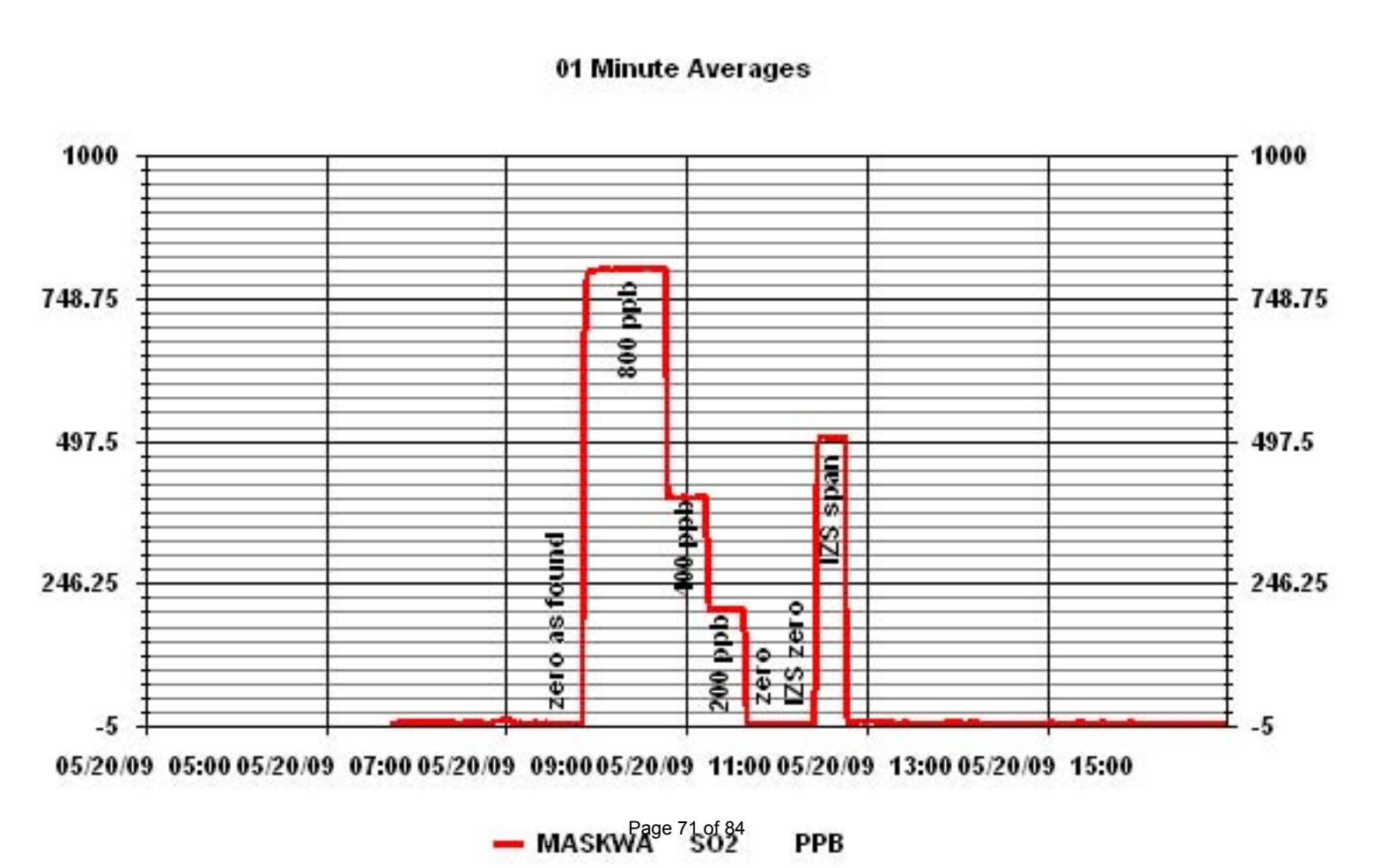
Calibration Date	May 20, 2009				
Company	**Lakeland Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	9:00		End Time (MST)	12:50	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
200	199	1.0026
400	399	1.0023
800	803	0.9964

Correlation Coefficient	(≥ 0.995)	0.999989
Slope	(0.85 to 1.15)	1.003837
Intercept	(± 3% F.S.)	-0.971360



Notes:


01 Minute Averages
1000
748.75
497.5
246.25
-5
zero as found
800 ppb
400 ppb
200 ppb
zero
IZS zero
IZS span
05/20/09 05:00
05/20/09 07:00
05/20/09 09:00
05/20/09 11:00
05/20/09 13:00
05/20/09 15:00
MASKWA SO2 PPB

Hydrogen Sulphide

H_2S Calibration Report

Station Information

Calibration Date	May 19, 2009		Previous Calibration	April 21, 2009	
Company	**Lakelnad Industry & Community Association**				
Plant / Location	**Cold Lake - Maskwa**				
Start Time (MST)	11:35		End Time (MST)	15:30	
Reason:	Monthly Calibration				
Barometric Pressure	27.55	inHg	Station Temperature	25	Deg C
Cal Gas	10.6	ppm	Cal Gas Expiry date	04/03/2009	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

Analyzer Make / Model:	API 101E	S/N :	511	Method:	Fluorescent
Converter Make / Model:	Internal	S/N :	N/A		
Calibrator Make / Model:	API 700	S/N :	831	Method:	Dilution
DAS Make / Model:	ESC 8832	S/N :	AO 791		
Flow Meter:	API 700	S/N :	831		

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range				0 - 100 ppb				
Sample Flow / Box Temp	524	ccm	36.3	Deg C	525	ccm	35.8	Deg C
HVPS / Lamp Setting	524		2442		524		2442	
PMT / RxCell Temp	7.9	Deg C	49.9	Deg C	7.9	Deg C	50	Deg C
Converter / IZS Temp	314.5	Deg C	45	Deg C	315.2	Deg C	45	Deg C
Offset / Slope	69.2		1.103		71.6		1.097	

Calibration Data

Dilution Flow Rate	Source Gas Flow Rate	Calculated Concentration	Indicated Conc. (DAS)	Correction Factor
4999	0	0	1	N/A
4962	37.7	80	81	0.9868
4999	0	0	0	N/A
4962	37.7	80	80	0.9991
4978	21.2	45	45	0.9989
4988	11.8	25	25	1.0007
4999	0	0	0	N/A
			Sum of Least Squares	0.9992
			New Correction Factor	0.9991

	Before Calibration	After Calibration
Auto Zero	0.7	0.1
Auto Span	74.0	74.0
Sample Lines Connected		YES
Percent Change from Previous Calibration		0.1%

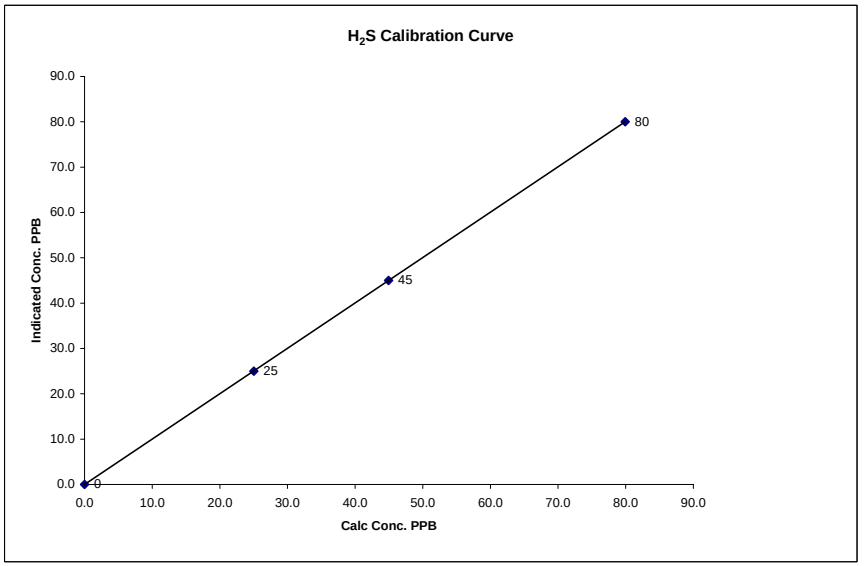
Calibration Performed by: Shea Beaton

H_2S Calibration Curve

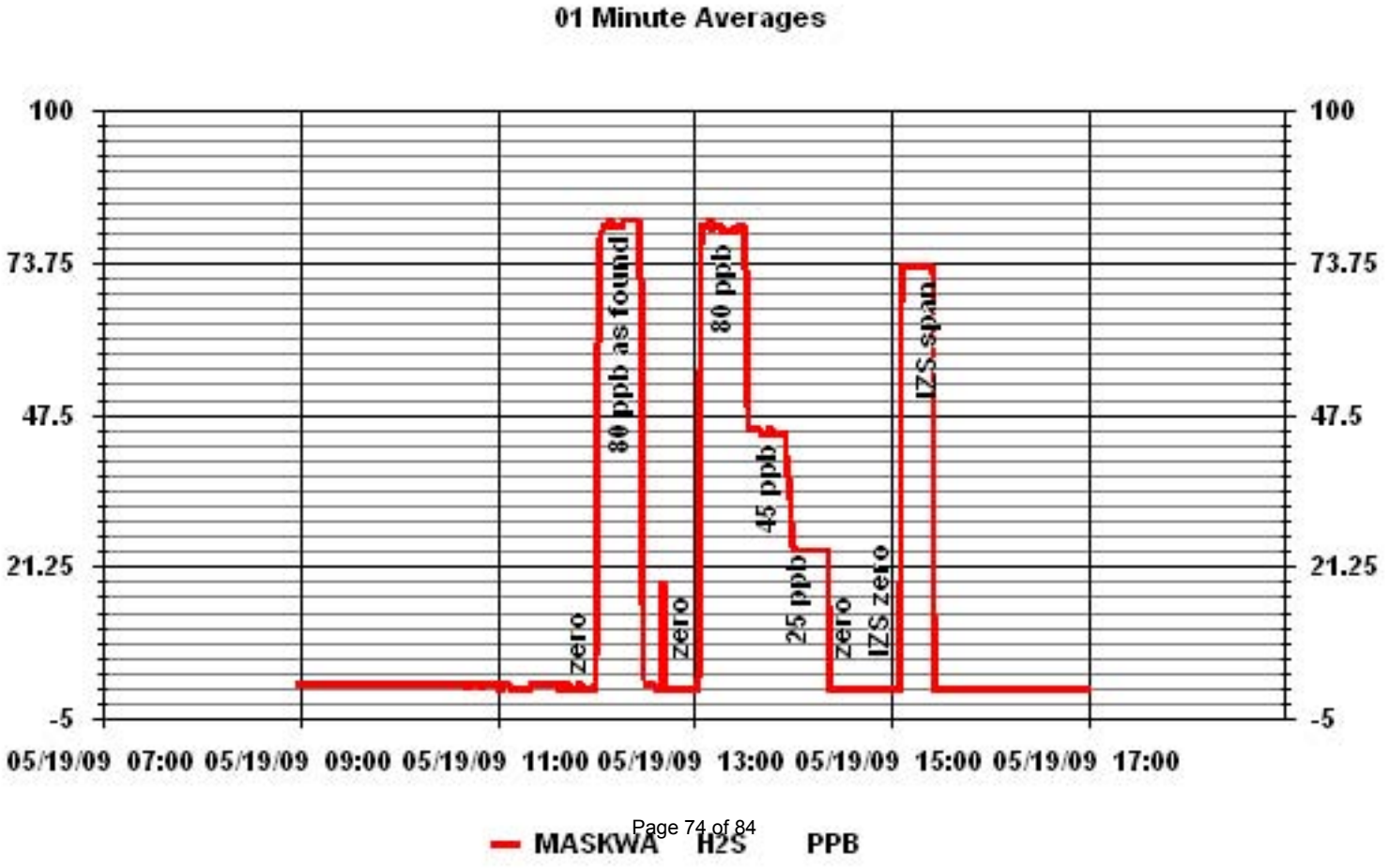
Calibration Date	May 19, 2009		
Company	**Lakelnad Industry & Community Association**		
Plant / Location	**Cold Lake - Maskwa**		
Start Time (MST)	11:35	End Time (MST)	15:30

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	0	n/a
25	25	1.0007
45	45	0.9989
80	80	0.9991

Correlation Coefficient	(≥ 0.995)	1.000000
Slope	(0.85 to 1.15)	1.001053
Intercept	(± 3% F.S.)	-0.013715



Notes:


01 Minute Averages
100
73.75
47.5
21.25
-5
zero
80 ppb as found
zero
80 ppb
45 ppb
25 ppb
zero
IZS zero
IZS span
05/19/09 07:00 05/19/09 09:00 05/19/09 11:00 05/19/09 13:00 05/19/09 15:00 05/19/09 17:00
MASKWA H2S PPB

Total Hydrocarbons

THC Calibration Report

Station Information

Calibration Date:	May 20, 2009	Previous Calibration	April 22, 2009
Company:	**Lakeland Industry & Community Association**		
Plant / Location:	**Cold Lake - Maskwa**		
: (MST)	7:55	End Time (MST)	15:15
Reason:	Monthly Calibration		
Barometric Pressure:	27.67 inHg	Station Temperature:	26 Deg C
Calibrator:	API 700	S/N:	831
Cal Gas Concentration:	299 Prop/ 1019 Meth ppm	Cal Gas Expiry Date:	August 21, 2011
DAS make & Model:	ESC 8832	S/N :	AO 791
Output Voltage Range:	0 - 10 VDC		

Analyzer Information

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

Analyzer Settings

	Before Calibration		After Calibration	
Concentration Range	0 -50	ppm	0 - 50	ppm
Sample Pressure	7.2	psi	7.5	psi
Hydrogen Pressure	7	psi	8	psi
Air Pressure	20	psi	20	psi

Calibration Data

Dilution Flow	Source Gas Flow	Calculated Concentration	Indicated Concentration	Correction Factor
2986	0	0.0	0.0	N/A
2090	65.5	39.4	39.0	1.0103
3017	0.0	0.0	0.0	N/A
3014	65.7	39.4	39.5	0.9975
3016	35.2	21.2	21.2	1.0000
3011	20.3	12.3	12.1	1.0165
3015	0	0.0	0.0	N/A
			Correction Factor:	0.9975

Previous Calibration Correction Factor:	0.9975
Current Correction Factor Before Span Adjust:	0.9975
Percent Change:	0.00%

IZS Calibration Data

	Before Calibration	After Calibration
Auto Zero	0.0	0.0
Auto Span	45.2	45.1
Sample Lines Connected		YES

Cylinder Pressures		
Span	700	psi
Hydrogen	700	psi
Zero Air	750	psi

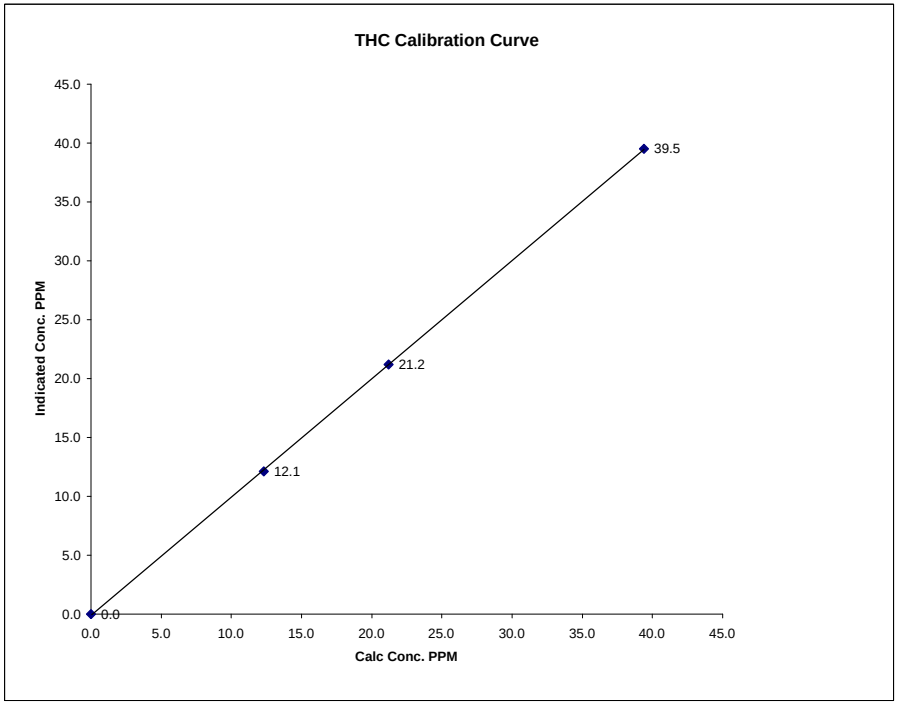
Calibration Performed by: Shea Beaton

THC Calibration Curve

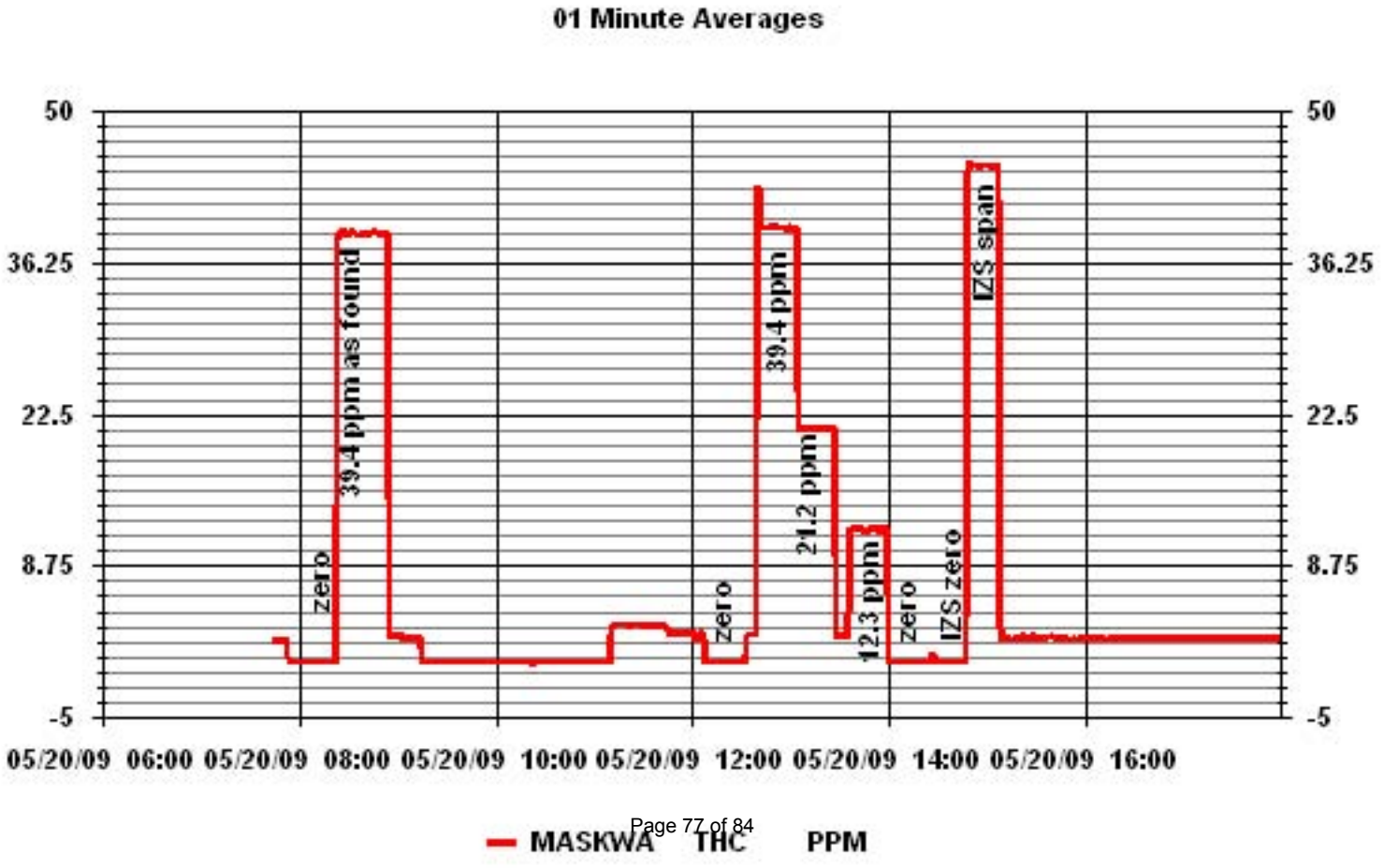
Calibration Date	May 20, 2009		
Company	**Lakeland Industry & Community Association**		
Plant / Location	**Cold Lake - Maskwa**		
Start Time (MST)	7:55	End Time (MST)	15:15

Calculated Conc. ppm	Indicated Response ppm	Correction Factor
0.0	0.0	
12.3	12.1	1.0165
21.2	21.2	1.0000
39.4	39.5	0.9975

Correlation Coefficient	(≥ 0.995)	0.999959
Slope	(0.85 to 1.15)	1.004006
Intercept	(± 3% F.S.)	-0.098001



Notes:


01 Minute Averages
50
36.25
22.5
8.75
-5
zero
39.4 ppm as found
zero
39.4 ppm
21.2 ppm
12.3 ppm
zero
IZS zero
IZS span
05/20/09 06:00 05/20/09 08:00 05/20/09 10:00 05/20/09 12:00 05/20/09 14:00 05/20/09 16:00
MASKWA THC PPM

Nitrogen Dioxide

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	May 19, 2009		Previous Calibration	April 22, 2009	
Company	**LICA**		Plant/Location	**Cold Lake - Maskwa**	
Start Time (MST)	11:00		End Time (MST)	15:30	
Reason:	As Found Calibration				
Barometric Pressure	27.55	inHg	Station Temperature	24.0	Deg C
Cal Gas Concentration	NOx 51.8	ppm NO 51.6 ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range				0 - 1000 ppb				
Sample Flow/Conv. Temp	459	ccm	314.2	Deg C	455	ccm	315.5	Deg C
Ozone Flow / Vacuum	76	ccm	4.1	"Hg-A	76	ccm	4.1	"Hg-A
HVPS	767		Volts		767		Volts	
Rx/ Temp / PMT Temp	50	Deg C	6.6	Deg C	50	Deg C	6.6	Deg C
Box Temp / IZS Temp	33.9	Deg C	45.1	Deg C	35.6	Deg C	45.1	Deg C
Offset	1.2	NOx	0.2	NO	0.1	NOx	0	NO
Slope	1.208	NOx	1.204	NO	1.093	NOx	1.09	NO

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration NOx	Calculated Concentration NO	Indicated Concentration NOx	Indicated Concentration NO	Indicated Concentration NO2	Correction Factor NOx	Correction Factor NO
5000.0	0	N/A	0	0	-1	0	-1	N/A	N/A
4949.0	77.9	N/A	803	800	828	826	1	0.9695	0.9681
								Converter Efficiency	
								Correction Factor	

Linearity OK?	**Yes**	No	Sum of Least Squares	#DIV/0!	#DIV/0!
Flows Checked on-site?	Yes	**No**	New Correction Factor	0.0000	0.0000
			Average Converter Efficiency	#DIV/0!	

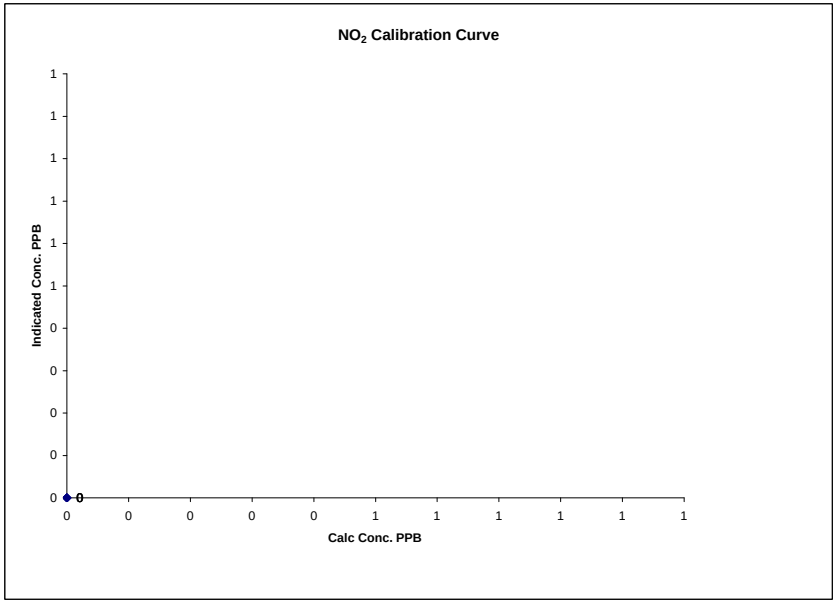
	Before Calibration				After Calibration			
Auto Zero	-1.0	NOx	0.0	NO2	0.0	NOx	0.0	NO2
Auto Span	760.0	NOx	749.0	NO2	672.0	NOx	663.0	NO2
Sample Lines Connected					YES			
Percent Change from Previous Calibration					*NOx*	#DIV/0!	*NO*	#DIV/0!

Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	May 19, 2009		
Company	**LICA**		
Plant / Location	**Cold Lake - Maskwa**		
Start Time (MST)	11:00	End Time (MST)	15:30

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

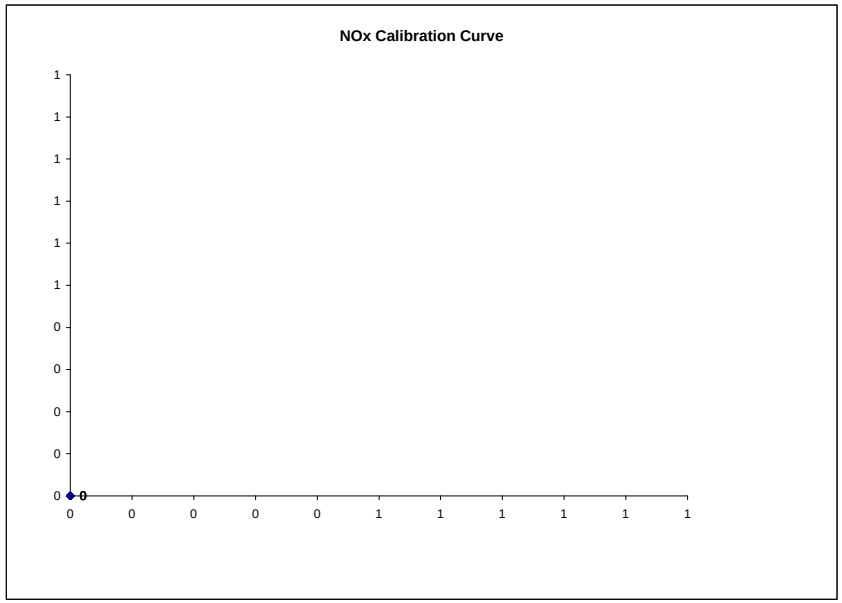


Notes: Following the AF points, the pump was replaced with a recently rebuilt one and a new exhaust scrubber was installed.

NOx Calibration Curve

Calibration Date	May 19, 2009			
Company	LICA			
Plant / Location	Cold Lake - Maskwa			
Start Time (MST)	11:00	End Time (MST)	15:30	

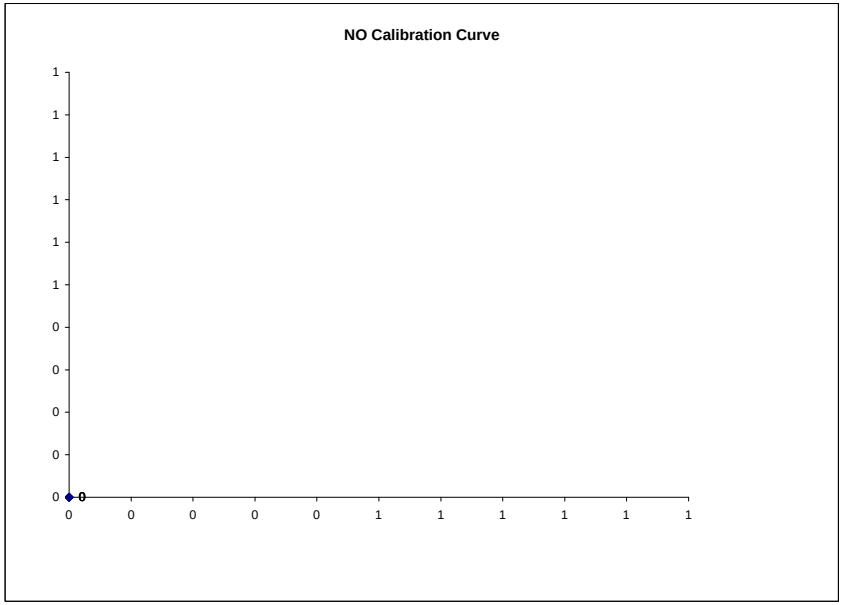
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	#DIV/0!
			Slope (0.85 to 1.15)	#DIV/0!
0	0	N/A	Intercept (± 3% F.S.)	#DIV/0!
0	0	#DIV/0!		
0	0	#DIV/0!		
0	0	#DIV/0!		

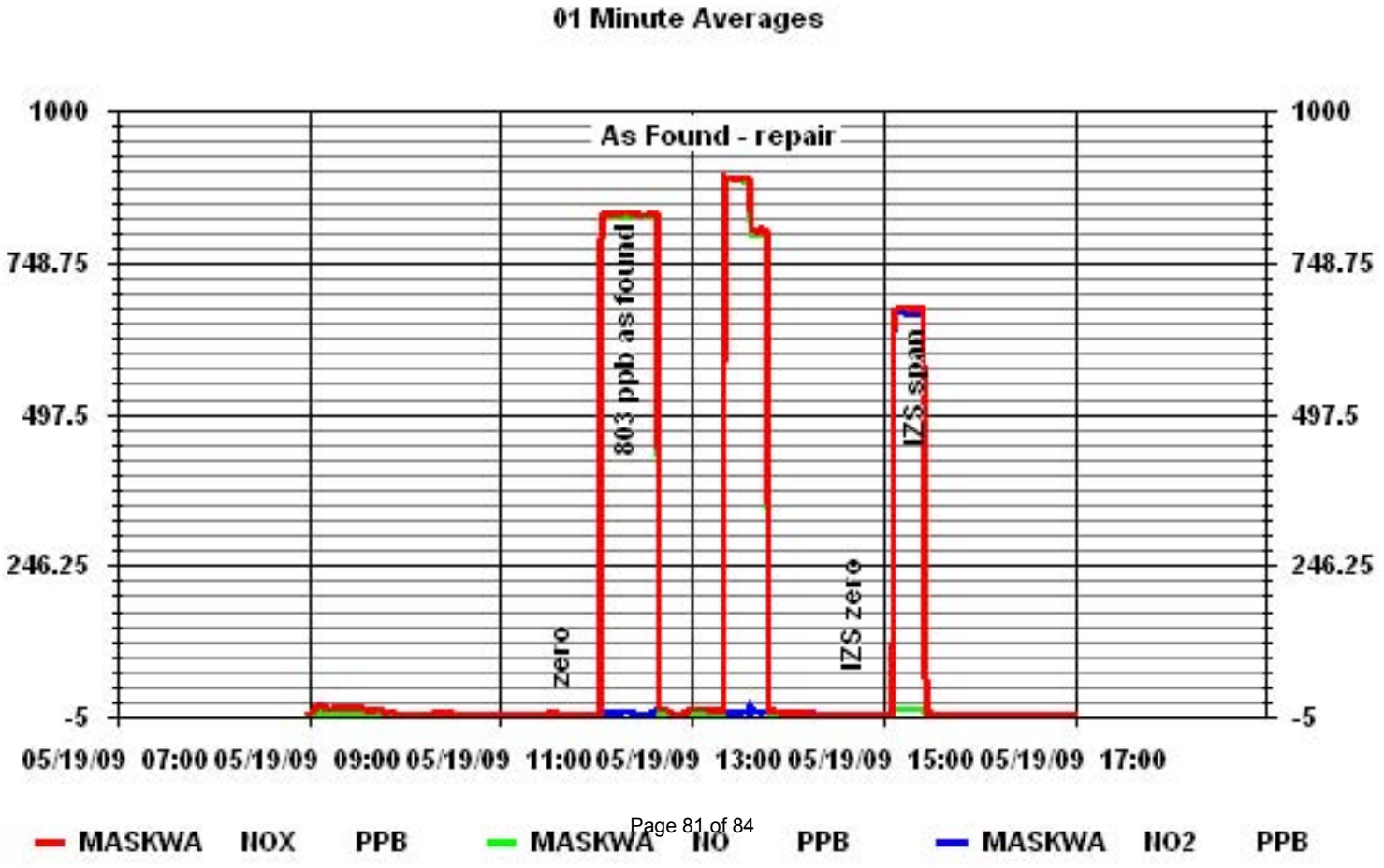


NO Calibration Curve

Calibration Date	May 19, 2009			
Company	LICA			
Plant / Location	Cold Lake - Maskwa			
Start Time (MST)	11:00	End Time (MST)	15:30	

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




01 Minute Averages
As Found - repair
803 ppb as found
zero
IZS zero
IZS span
1000
748.75
497.5
246.25
-5
05/19/09 07:00
05/19/09 09:00
05/19/09 11:00
05/19/09 13:00
05/19/09 15:00
05/19/09 17:00
MASKWA NOX PPB
MASKWA NO PPB
MASKWA NO2 PPB

NOx - NO- NO_2 Calibration Report

Station Information

Calibration Date	May 20, 2009		Previous Calibration	April 22, 2009	
Company	**LICA**		Plant/Location	**Cold Lake - Maskwa**	
Start Time (MST)	9:00		End Time (MST)	16:00	
Reason:	Post Repair Calibration				
Barometric Pressure	27.69	inHg	Station Temperature	24.0	Deg C
Cal Gas Concentration	NOx 51.8	ppm NO 51.6 ppm	Cal Gas Expiry date	12/19/2010	
DAS Output Voltage	0 - 1	Volts			

Equipment Information

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

Analyzer Settings

	Before Calibration				After Calibration			
Concentration Range			0 - 1000	ppb				
Sample Flow/Conv. Temp	458	ccm	315.3	Deg C	458	ccm	314	Deg C
Ozone Flow / Vacuum	76	ccm	4.1	"Hg-A	76	ccm	4.1	"Hg-A
HVPS	767		Volts		767		Volts	
Rx/ Temp / PMT Temp	50	Deg C	6.5	Deg C	50	Deg C	6.6	Deg C
Box Temp / IZS Temp	35.4	Deg C	45.2	Deg C	34.3	Deg C	45.3	Deg C
Offset	0.1	NOx	0	NO	0.1	NOx	0	NO
Slope	1.093	NOx	1.090	NO	1.111	NOx	1.105	NO

Gas Phase Titration Calibration Data

Dilution Air Flow Rate	Source Flow Rate	O3 Set Point	Calculated Concentration NOx	Calculated Concentration NO	Indicated Concentration NOx	Indicated Concentration NO	Indicated Concentration NO2	Correction Factor NOx	Correction Factor NO
4996.0	0	N/A	0	0	0	-1	0	N/A	N/A
4923.0	77.5	N/A	803	800	791	789	1	1.0149	1.0136
4923.0	77.5	N/A	803	800	803	798	4	0.9998	1.0022
4961.0	38.8	N/A	402	400	398	397	1	1.0100	1.0086
4985.0	19.4	N/A	201	200	199	198	0	N/A	N/A
5001.0	0	N/A	0	0	0	0	0		
								Converter Efficiency	
4920.0	77.5	N/A	803	800	807	801	5	N/A	
4923.0	77.5	400	803	N/A	802	417	384	99%	
4923.0	77.5	200	803	N/A	804	609	194	98%	
4923.0	77.5	100	803	N/A	804	707	96	97%	
4923.0	77.5	N/A	803	800	805	801	3	N/A	
								Correction Factor	
5003.0	0	N/A	0	0	0	0	0	N/A	N/A

Linearity OK?	**Yes**	No	Sum of Least Squares	1.0022	1.0038
Flows Checked on-site?	Yes	**No**	New Correction Factor	0.9998	1.0022
			Average Converter Efficiency	98%	

	Before Calibration				After Calibration			
Auto Zero	-0.2	NOx	0.0	NO2	-1.0	NOx	0.0	NO2
Auto Span	678.0	NOx	668.0	NO2	681.0	NOx	672.0	NO2
Sample Lines Connected					YES			
Percent Change from Previous Calibration					*NOx*	-0.1%	*NO*	-0.1%

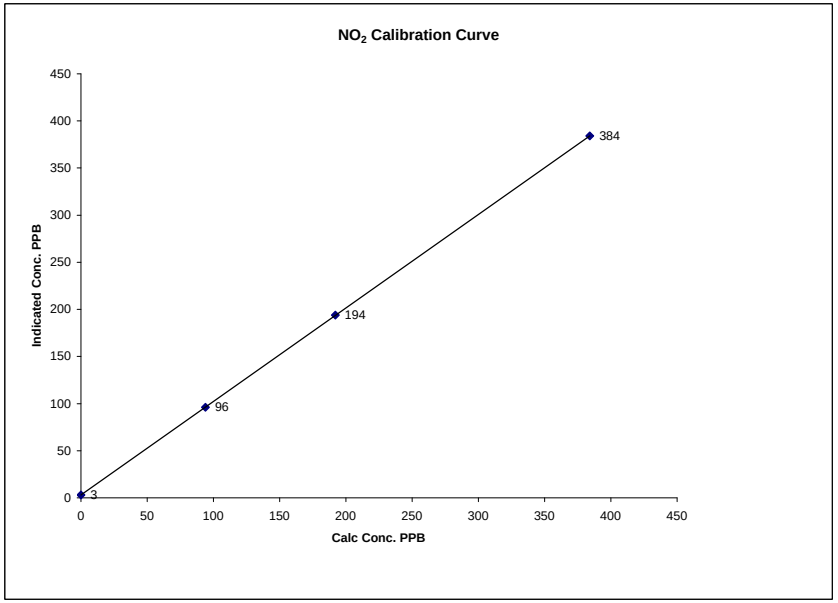
Calibration Performed by: Shea Beaton

NO_2 Calibration Curve

Calibration Date	May 20, 2009		
Company	**LICA**		
Plant / Location	**Cold Lake - Maskwa**		
Start Time (MST)	9:00	End Time (MST)	16:00

Calculated Conc. ppb	Indicated Response ppb	Correction Factor
0	3	N/A
94	96	0.9792
192	194	0.9897
384	384	1.0000

Correlation Coefficient	(≥ 0.995)	0.999996
Slope	(0.85 to 1.15)	0.992580
Intercept	(± 3% F.S.)	2.992833

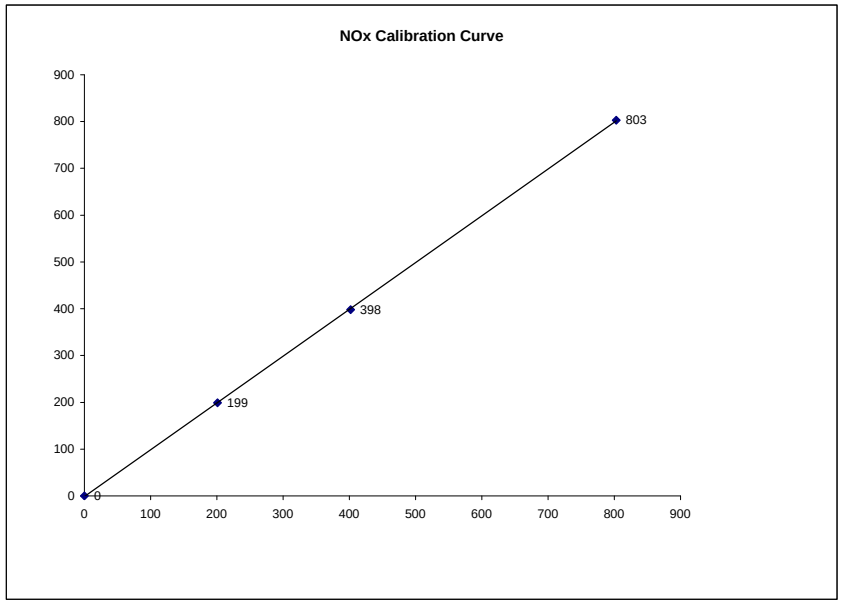


Notes:

NOx Calibration Curve

Calibration Date	May 20, 2009			
Company	LICA			
Plant / Location	Cold Lake - Maskwa			
Start Time (MST)	9:00	End Time (MST)	16:00	

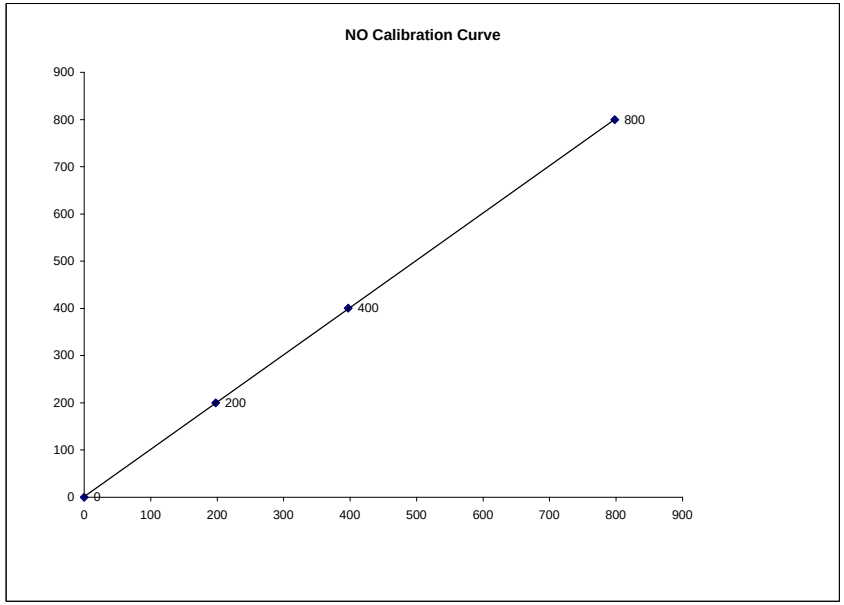
Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999968
			Slope (0.85 to 1.15)	1.000431
0	0	N/A	Intercept (± 3% F.S.)	-1.554331
201	199	1.0091		
402	398	1.0100		
803	803	0.9998		

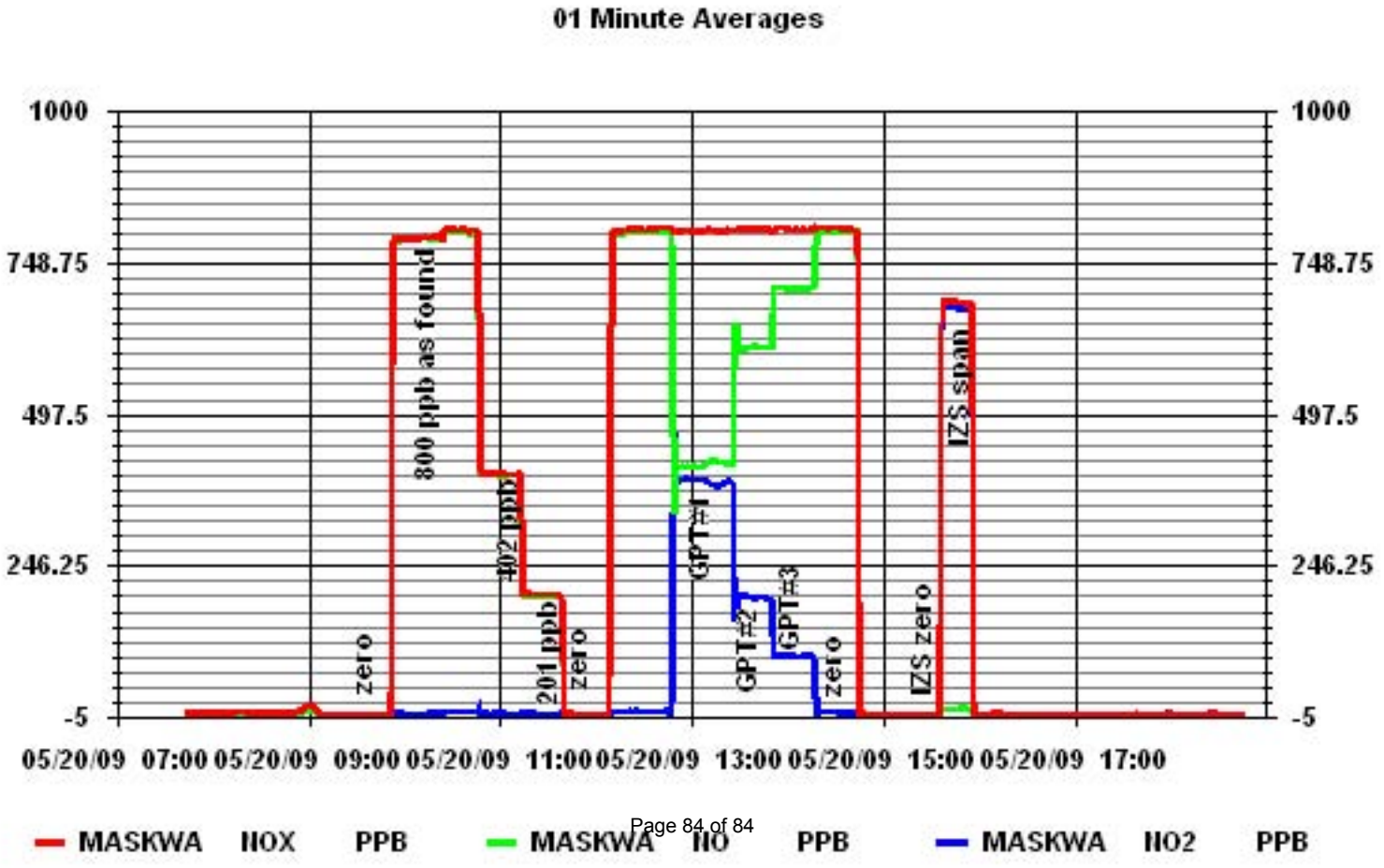


NO Calibration Curve

Calibration Date	May 20, 2009			
Company	LICA			
Plant / Location	Cold Lake - Maskwa			
Start Time (MST)	9:00	End Time (MST)	16:00	

Calculated Conc. ppb	Indicated Response ppb	Correction Factor	Correlation Coefficient (≥ 0.995)	0.999986
			Slope (0.85 to 1.15)	0.998166
0	0	N/A	Intercept (± 3% F.S.)	-1.153967
200	198	1.0103		
400	397	1.0086		
800	798	1.0022		




01 Minute Averages
1000
748.75
497.5
246.25
-5
zero
800 ppb as found
402 ppb
201 ppb
zero
GPT#1
GPT#2
GPT#3
zero
IZS zero
IZS span
05/20/09 07:00
05/20/09 09:00
05/20/09 11:00
05/20/09 13:00
05/20/09 15:00
05/20/09 17:00
MASKWA NOX PPB
MASKWA NO PPB
MASKWA NO2 PPB