Lakeland Industry & Community Association

FEBRUARY 2023

Monthly Ambient Air Quality Monitoring Report

LICA-202302

Operation and Maintenance:

Bureau Veritas Canada

Data Validation and Report:

Lakeland Industry & Community Association

March 10, 2023

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March 10, 2023

Alberta Environment and Protected Areas (EPA)
11th Floor, Oxbridge Place
9820 106 Street
Edmonton, AB, T5K 2J6

RE: LICA – February 2023 Monthly Ambient Air Quality Monitoring Report

Enclosed is the February 2023 Monthly Ambient Air Quality Monitoring Report for the continuous ambient air quality monitoring stations of the Lakeland Industry & Community Association (LICA) regional air quality monitoring network.

The representative of the Person Responsible for this monitoring program is

LICA Airshed
Michael Bisaga, Monitoring Programs Manager
5107 50 Street
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Phone #: 780-226-7068
E-mail: monitoring@lica.ca

This report has been reviewed by Michael Bisaga of the LICA Airshed.

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LIST OF ACRONYMS

AAAQOs	Alberta Ambient Air Quality Objectives
AEP	Alberta Environment and Parks
AMD	Air Monitoring Directive
AT	Ambient Temperature
BP	Barometric Pressure
CH4	Methane
EPEA	Environmental Protection and Enhancement Act
H2S	Hydrogen Sulphide
kph	kilometers per hour
LICA	Lakeland Industry & Community Association
mb	millibar
mm	millimeter
NMHC	Non-Methane Hydrocarbons
NO	Nitric Oxide
NO2	Nitrogen Dioxide
NOx	Oxide of Nitrogen
PAC	Polycyclic Aromatic Compounds
ppb	parts per billion
ppm	parts per million
RH	Relative Humidity
SO2	Sulphur Dioxide
ST	Station Temperature
STDWD	Standard Deviation Wind Direction
THC	Total Hydrocarbons
TRS	Total Reduced Sulphur
VWD	Vector Wind Direction
VWS	Vector Wind Speed
WD	Wind Direction
WS	Wind Speed
°C	Degrees Celsius

NETWORK STATION SUMMARY

Listing of Continuous Monitoring Stations and Integrated Sampling Stations

	Station Name	Cold Lake South	Tamarack	St. Lina	Lac La Biche
	Station ID	1174	1248	1250	1690
	Coordinates	54.41402	54.604935	54.215961	54.76516
		-110.23316	-110.452637	-111.503304	-111.9714490
Continuous Monitoring Parameter	SO2	√	√	√	√
	H2S		√	√	√
	TRS	√			
	NOX	√	√	√	√
	NOX	√	√	√	√
	NO2	√	√	√	√
	O3	√	√	√	√
	THC	√	√	√	√
	CH4	√	√	√	√
	NMHC	√	√	√	√
	RH	√	√	√	√
	BP	√	√	√	√
	AT	√	√	√	√
	ST	√	√	√	√
	PRECEIPITATION		√	√	
	WS	√	√	√	√
	WD	√	√	√	√
	STDWD	√	√	√	√
Integrated Sampling	VOCs	√			
	PAHs	√			
	Partisol	√			
	Passive	√			√
	NMHC Canister				√
	PAC			√	

List of Contractors performing air monitoring activities

Sampling Program	Monitoring Activities Conducted By	Sample Analysis Conducted By	Data/Report Prepared By	Electronic Submission Conducted By
Continuous Monitoring Station	Bureau Veritas Canada	Bureau Veritas Canada	LICA / Bureau Veritas Canada	LICA
Intermittent (VOCs/PAHs)	Bureau Veritas Canada	InnoTech Alberta Inc	InnoTech Alberta Inc	LICA
Partisol	Bureau Veritas Canada	InnoTech Alberta Inc	InnoTech Alberta Inc	LICA
Passive	Bureau Veritas Canada	Bureau Veritas Canada	Bureau Veritas Canada	LICA
PAC	Bureau Veritas Canada	ECCC	AEP	Not Applicable
NMHC Canister	Bureau Veritas Canada	InnoTech Alberta Inc	InnoTech Alberta Inc	Not Applicable

Monitoring Notes during the Month of February 2023

Cold Lake South

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable.
- All parameters met the 90% operational uptime requirement, except Nox/NO/NO2 (88.8%). **Alberta EPA reference #: 410432**.
- **NOx/NO/NO2**: Due to a marked change in sample flow rate, a shut-down calibration was performed in order to rebuild the sample pump on February 21. The analyzer failed at the low GPT-point check. Following the pump maintenance on February 21, a successful post-repair calibration was completed. After reviewing diagnostic data, data were invalidated back to the point the issue occurred, which was February 18 hour 18. Seventy-five hours of down time were recorded due to this event.

Tamarack

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable.
- No major events were identified this month.

St. Lina Station

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable.
- All parameters met the 90% operational uptime requirement.
- No major events were identified this month.

Lac La Biche Station

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable.
- All parameters met the 90% operational uptime requirement.
- No major events were identified this month.

Integrated Sampling

All the integrated sampling analytical results are included in the February 2023 Integrated Sampling Report.

- **VOCs Sampling System:**
  - The VOC sampler is programed to collect a 24-hour sample of air every sixth day as per the National Air Pollution Surveillance schedule (NAPS).
  - Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
  - Four samples were collected this month: on February 5, 11, 17 and 23.
- **PAHs Sampling System:**
  - The PUF sampler is programed to collect a 24-hour sample of air every sixth day as per the National Air Pollution Surveillance schedule (NAPS).
  - Four samples were collected this month: on February 5, 11, 17 and 23.
- **Partisol Sampling System:**
  - The Partisol sampler is programed to collect a 24-hour sample of air every sixth day as per National Air Pollution Surveillance schedule (NAPS).
  - Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
  - Four samples were collected this month: on February 5, 11, 17 and 23.
- **Passive Sampling System:**
  - There were no exceedances of the AAAQOs for all monitored parameters at any of the passive stations during this month.
  - The passive sample filters were installed at the stations January 29 and January 31, and were removed between February 27 and March 1.
  - A total of 13 duplicate samples were collected: 2 for H2S, 3 for SO2, 2 for NO2, 2 for O3, 2 for HNO3 and 2 for NH3.
- **PAC Sampling System**:
  - The PAC sampling program began in December 2019, and is designed to collect a 2-month integrated sample.
  - The media for the January/February monitoring period were installed between December 29, 2022 and January 3, 2023. They were removed between February 27 and March 1. The

media for March/April sampling period were installed at the time the January/February media were removed.

- **NMHC canister Sampling System**:
  - The canister sampling program collects a 1-hour sample of air when the continuously non-methane hydrocarbon (NMHC) concentration reaches a specified trigger point. The current trigger point is 0.3 ppm and is based on real-time monitoring data that are averaged over a 5-minute period.
  - Two canisters were collected this month.

Station	Parameter	Date	Time	Concentration (ppm)
Lac La Biche	Non-methane HC	14-Feb	07:50	0.55
Lac La Biche	Non-methane HC	23-Feb	07:40	0.50

Revisions to Alberta's Ambient Air Quality Data Warehouse

No revisions to historical data previously submitted to the Alberta's Ambient Air Quality Data Warehouse were made this month.

Deviations from Authorized Monitoring Methods

No deviations from authorized monitoring methods were recorded this month.

Disclaimer

Baseline correction were performed on the 1-minute data. 5-minute and hourly data were calculated based on the post-baseline correction 1-minute data set. Data verification/validation were then performed on the 5-minute and hourly data. Hourly data that are included in this report are the post-validation hourly data set.

Equipment calibration / maintenance records were provided by Bureau Veritas Canada.

Certification

This report was prepared and submitted by Lily Lin in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

Lily Lin, Data & Reporting Specialist, LICA Airshed

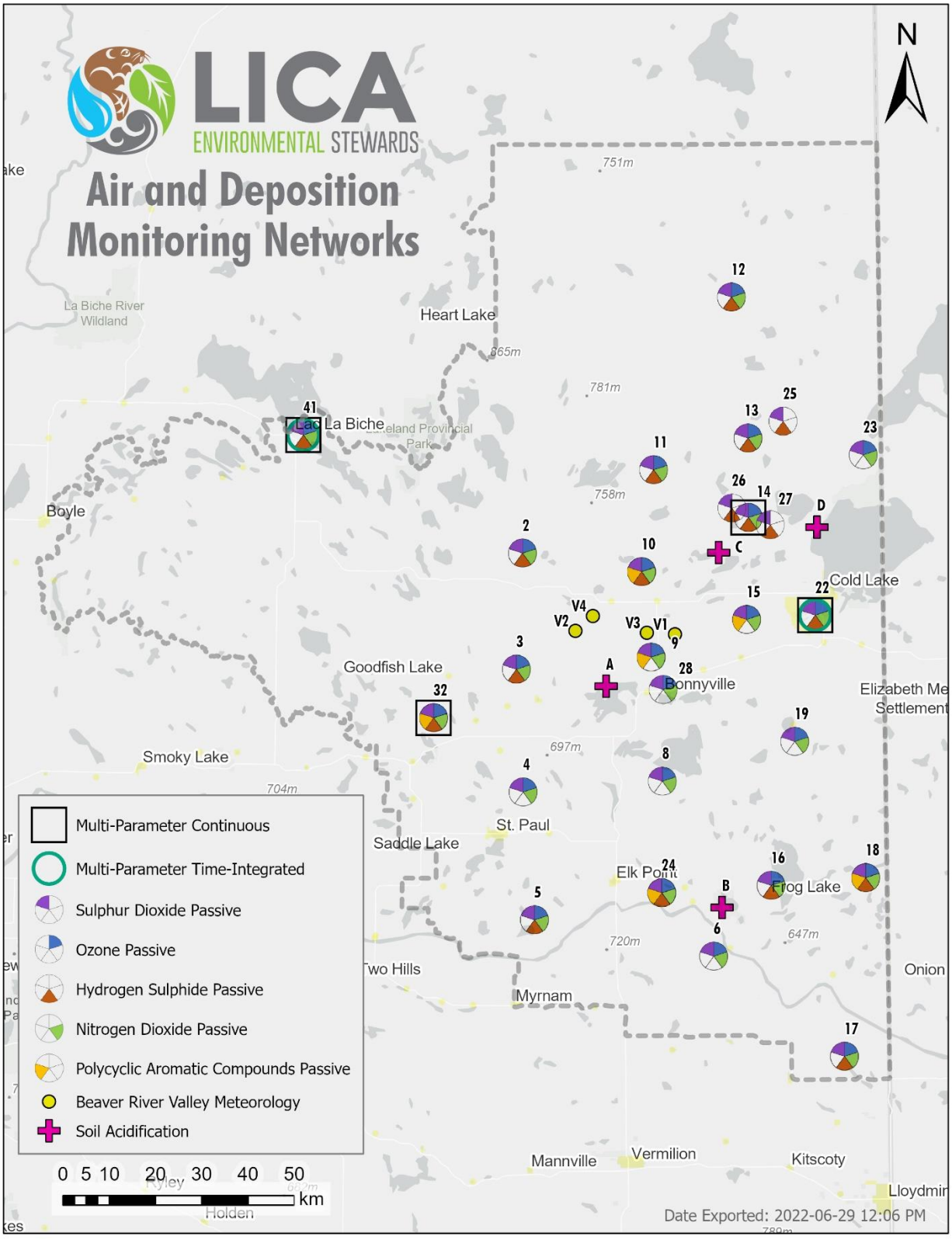
This report was reviewed by Michael Bisaga in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization and reporting requirements. I also certify that at the time of this report's submission, all air data have been electronically uploaded to Alberta's Ambient Air Quality Data Warehouse as required by the AMD. Uploading of VOC data from the canister sampling program was not required at the time of completing this report.

Michael Bisaga, Monitoring Programs Manager, LICA Airshed

March 10, 2023

Map of LICA Continuous Monitoring Network



CONTINUOUS NETWORK EQUIPMENT AND MONITORING RESULTS SUMMARY

Cold Lake South Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i-TLE #1180260018	February 5, 2023	• No operational issues were recorded this month.
TRS Thermo 450i #812728560	February 5, 2023	• No operational issues were recorded this month.
NOx/NO/NO2 Thermo 42i #1505664393	February 21, 2023	• A successfully monthly calibration was completed on February 5. • Due to a marked change in sample flow rate, a shut-down calibration was performed in order to rebuild the sample pump on Feb 21. The analyzer failed at the low GPT-point check. Following the pump maintenance on Feb 21, a successful post-repair calibration was completed. After reviewing diagnostic data, data were invalidated back to the point the issue occurred, which was February 18 hour 18. Seventy-five hours of down time were recorded due to this event.
O3 Thermo 49iQ #12208316585	February 6, 2023	• No operational issues were recorded this month.
THC/CH4/NMHC Thermo 55i #1180930025	February 6, 2023	• No operational issues were recorded this month. • The hydrogen generator was service; the deionizer was renewed on Feb 6. • The span gas cylinder was replaced on Feb 21. A repeat zero-span check was completed afterward to obtain a new expected span value. One hour of downtime was recorded as a result.
PM2.5 Teledyne T640 #575	February 6, 2023	• A new sample pump was installed and tested on Feb 6.
Parameter	**Verification Date**	**Equipment Operational Summary**
RH Rotronic HC2A-S3 #20257103	February 6, 2023	• No operational issues were recorded this month.

Parameter	Verification Date	Equipment Operational Summary
BP Met One 092 #Y23368	February 6, 2023	• No operational issues were recorded this month.
AT Rotronic HC2A-S3 #20257103	February 6, 2023	• No operational issues were recorded this month.
ST COMET #NA	February 6, 2023	• No operational issues were recorded this month.
WS/WD/STDWD RM Young 05305AQ #177354	February 6, 2023	• Wind direction data contained in this report represents where the wind is coming from. • An annual wind system calibration was completed on July 6, 2022. • No issues were identified this month.

Monitored Data Summary for Cold Lake South Station

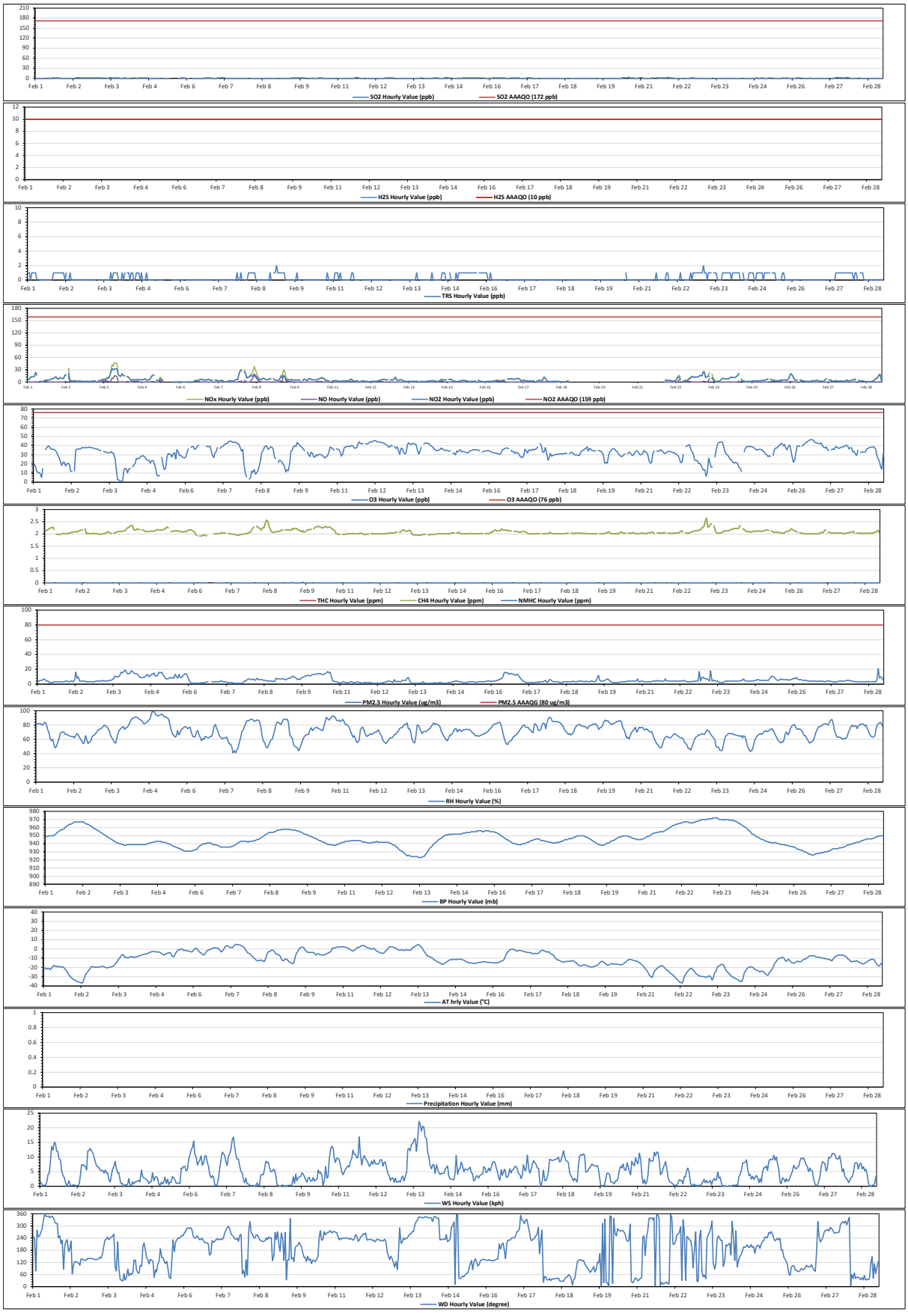
Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.4	0	3	Feb 11 at hr 14	9.7	SW	1.0	Feb 21	100.0	94.8
TRS (ppb)	-	-	-	-	-	-	0.3	0	2	Feb 9 at hr 3	0.2	SSW	1.0	Feb 15	100.0	94.8
NOx (ppb)	-	-	-	-	-	-	6.4	0	47	Feb 3 at hr 20	0.5	E	15.7	Feb 8	88.8	83.8
NO (ppb)	-	-	-	-	-	-	0.7	0	18	Feb 8 at hr 10	4.1	WSW	3.5	Feb 3	88.8	83.8
NO2 (ppb)	159	-	-	0	-	-	5.7	0	33	Feb 3 at hr 18	0.9	ENE	12.3	Feb 8	88.8	83.8
O3 (ppb)	76	-	-	0	-	-	32.1	1.1	46.6	Feb 26 at hr 14	8.4	ESE	42.0	Feb 12	100.0	94.9
THC (ppm)	-	-	-	-	-	-	2.08	1.92	2.66	Feb 23 at hr 4	1.6	NE	2.22	Feb 8	99.9	94.8
CH4 (ppm)	-	-	-	-	-	-	2.08	1.92	2.66	Feb 23 at hr 4	1.6	NE	2.22	Feb 8	99.9	94.8
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.03	Feb 9 at hr 15	2.9	ESE	0.00	Feb 9	99.9	94.8
PM2.5 (µg/m3)	80	29	-	0	0	-	5.1	1	21	Feb 28 at hr 19	0.1	NE	12.4	Feb 4	100.0	99.7
RH (%)	-	-	-	-	-	-	70.9	41	99	Feb 4 at hr 20	3.1	ESE	88.2	Feb 4	100.0	100.0
BP (millibar)	-	-	-	-	-	-	946	923	972	Feb 23 at hr 7	2	SW	970	Feb 23	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	-11.6	-36.8	5.1	Feb 7 at hr 10	16	WNW	1.1	Feb 11	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	22.7	20.6	24.5	Feb 5 at hr 17	6.2	SW	23.6	Feb 22	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	1.2	0.0	22.2	Feb 13 at hr 16	22.2	NW	12.3	Feb 13	100.0	100.0
WDV (sector)	-	-	-	-	-	-	265 (W)	-	-	-	-	-	-	-	100.0	100.0

1- Date/ Time given is the first minimum and maximum value that was recorded

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Feb 2023 - Cold Lake South Station



Tamarack Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i-TLE #1180930031	February 11, 2023	• Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. A zero-span check was completed afterward to confirm the analyzer's functionality. Thirteen hours of downtime were recorded due to this event.
H2S Thermo 450i #CM17360005	February 11, 2023	• The analyzer failed the daily span check on Feb 23-24 due to cold weather, which affected the efficiency of the SO2 scrubber material. The span results improved once the ambient temperatures raised. Data Quality was not affected by this issue. • Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. A zero-span check was completed afterward to confirm the analyzer's functionality. Thirteen hours of downtime were recorded due to this event.
NOx/NO/NO2 Thermo 42i #1180930025	February 11, 2023	• Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. A zero-span check was completed afterward to confirm the analyzer's functionality. Thirteen hours of downtime were recorded due to this event.
O3 Thermo 49iQ #1202068570	February 12, 2023	• Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. A zero-span check was completed afterward to confirm the analyzer's functionality. Thirteen hours of downtime were recorded due to this event.
THC/CH4/NMHC Thermo 55i #1180930026	February 12, 2023	• The analyzer failed the span check on Feb 23-24 due to the span gas depletion. The span gas cylinder was replaced on Feb 24. A repeat zero-span check was completed afterward to obtain a new expected span value. One hour of downtime was recorded. • Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. A zero-span check was completed afterward to confirm the analyzer's functionality. Thirteen hours of downtime were recorded due to this event.

Parameter	Calibration Date	Equipment Operational Summary
PM2.5 Thermo Sharp 5030 #CM2209	February 12, 2023	• Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. Thirteen hours of downtime were recorded due to this event.
Parameter	**Verification Date**	**Equipment Operational Summary**
RH Rotronic HC2A-S3 #20433166	February 12, 2023	• Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. Thirteen hours of downtime were recorded due to this event.
BP Met One 090D #F4497	February 12, 2023	• Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. Thirteen hours of downtime were recorded due to this event.
AT Rotronic HC2A-S3 #20433166	February 12, 2023	• Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. Thirteen hours of downtime were recorded due to this event.
ST COMET #NA	February 12, 2023	• Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. Thirteen hours of downtime were recorded due to this event.
Precipitation MetOne 387 #C13580	February 12, 2023	• Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. Thirteen hours of downtime were recorded due to this event.
WS/WD/STDWD RM Young 05305VK #161465	February 12, 2023	• Wind direction data contained in this report represents where the wind is coming from. • An annual wind system calibration was completed on July 26, 2022. • Due to polling issues, data recorded between Feb 27 hour 14 and Feb 28 hour 28 were missing. The problem corrected itself spontaneously. The datalogger was reset on Feb 28 hour 9. Thirteen hours of downtime were recorded due to this event.

Monitored Data Summary for Tamarack Site

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	1.1	0	21	Feb 8 at hr 10	3.7	WNW	2.3	Feb 21	98.1	92.8
H2S (ppb)	10	3	-	0	0	-	0.0	0	1	Feb 7 at hr 20	6.1	SSW	0.0	Feb 1	98.1	92.8
NOx (ppb)	-	-	-	-	-	-	5.0	0	29	Feb 27 at hr 8	6.4	WNW	9.5	Feb 9	98.1	92.5
NO (ppb)	-	-	-	-	-	-	0.5	0	12	Feb 27 at hr 8	6.4	WNW	1.2	Feb 8	98.1	92.5
NO2 (ppb)	159	-	-	0	-	-	4.5	0	19	Feb 27 at hr 6	7.8	W	8.6	Feb 9	98.1	92.5
O3 (ppb)	76	-	-	0	-	-	32.4	10.5	45.9	Feb 26 at hr 13	10.4	E	41.4	Feb 26	98.1	93.0
THC (ppm)	-	-	-	-	-	-	2.08	1.98	2.33	Feb 27 at hr 8	6.4	WNW	2.18	Feb 5	97.9	92.8
CH4 (ppm)	-	-	-	-	-	-	2.08	1.98	2.33	Feb 27 at hr 8	6.4	WNW	2.18	Feb 5	97.9	92.8
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.08	Feb 13 at hr 2	4	WNW	0.00	Feb 13	97.9	92.8
PM2.5 (µg/m3)	80	29	-	0	0	-	3.2	1	14	Feb 24 at hr 6	0.1	ENE	7.1	Feb 4	98.1	97.8
RH (%)	-	-	-	-	-	-	74.8	31	100	Feb 4 at hr 20	1.9	SSE	94.3	Feb 4	98.1	98.1
BP (millibar)	-	-	-	-	-	-	931	909	956	Feb 23 at hr 6	0	ESE	954	Feb 23	98.1	98.1
Ext. Temp. (°C)	-	-	-	-	-	-	-11.8	-37.6	3.9	Feb 7 at hr 9	17	WNW	0.8	Feb 7	98.1	98.1
Stn. Temp. (°C)	-	-	-	-	-	-	21.6	21.0	23.5	Feb 12 at hr 11	7.5	W	22.9	Feb 7	98.1	98.1
Precipitation (mm)*	-	-	-	-	-	-	8.0	0.0	1.3	Feb 10 at hr 19	11.1	W	3.6	Feb 10	98.1	97.9
WSV (km/hr)	-	-	-	-	-	-	1.5	0.0	17.8	Feb 7 at hr 10	17.8	WNW	9.8	Feb 13	98.1	98.1
WDV (sector)	-	-	-	-	-	-	248 (WSW)	-	-	-	-	-	-	-	98.1	98.1

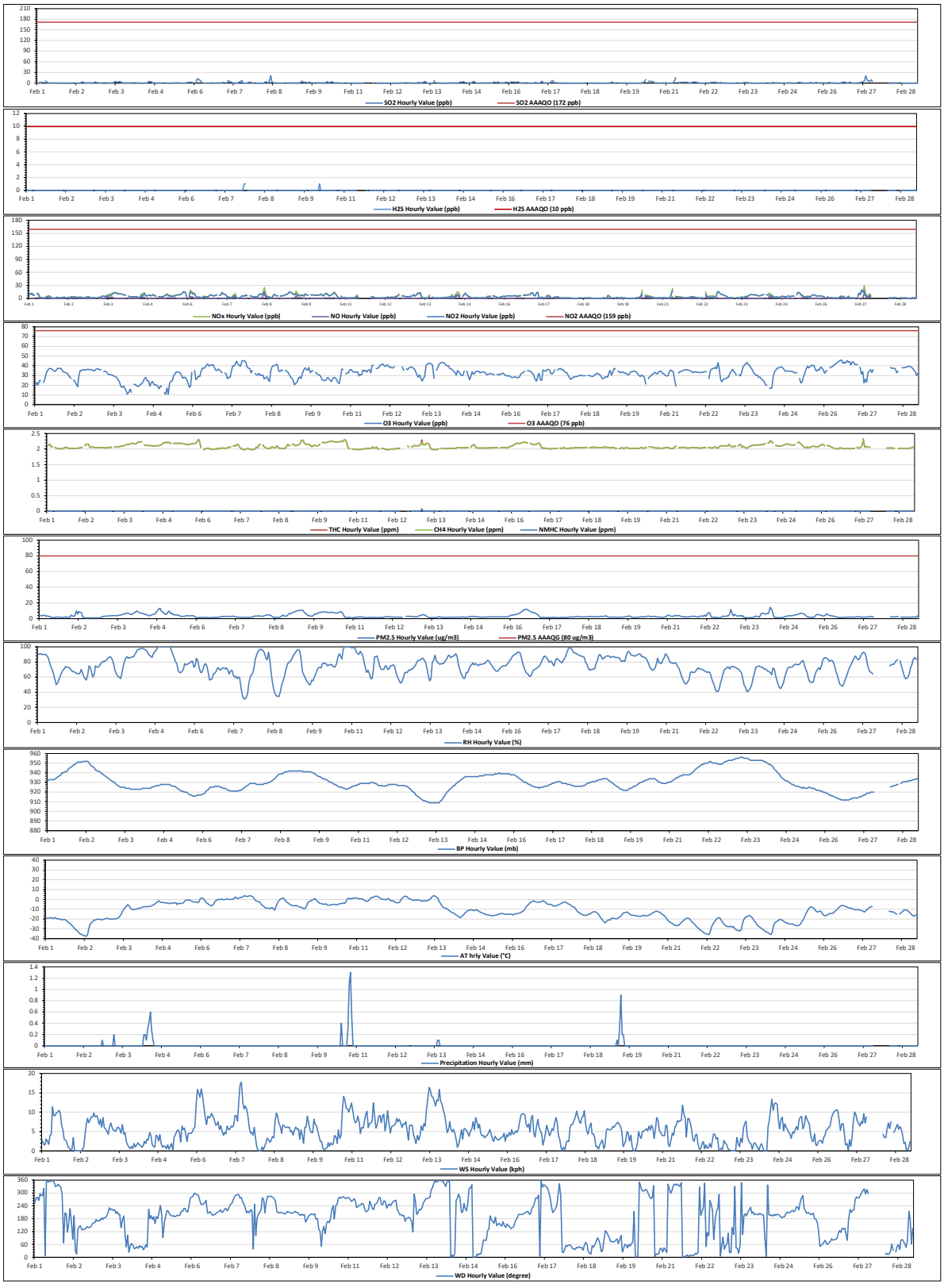
1- Date/ Time given is the first minimum and maximum value that was recorded

* Data represents the total (sum) for the indicated time frame

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Feb 2023 - Tamarack Site



St. Lina Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i-TLE #1180930030	February 18, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.
H2S Thermo 450i #CM18010058	February 18, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded. • The analyzer failed the daily span check on Feb 22-23 due to cold weather, which affected the efficiency of the SO2 scrubber material. The span results improved once the ambient temperatures raised. Data Quality was not affected by this issue.
NOx/NO/NO2 Thermo 42i #1180930029	February 18, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.
O3 Thermo 49iQ #12208316586	February 19, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.
THC/CH4/NMHC Thermo 55i #1180030034	February 19, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded. • The analyzer failed the daily span check on Feb 14-15 due to the span gas depletion. The span gas cylinder was replaced on Feb 16. A repeat zero-span check was triggered but did not execute properly. A new expected span value was obtained after the scheduled daily zero-span check was completed at hour 21. One hour of downtime was recorded.

Parameter	Calibration Date	Equipment Operational Summary
PM2.5 Thermo Sharp 5030i #CM17091001	February 19, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.
Parameter	**Verification Date**	**Equipment Operational Summary**
RH Rotronic HC2A-S3 #20404750	February 19, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.
BP Met One 090D #F4498	February 19, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.
AT Rotronic HC2A-S3 #20404750	February 19, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.
ST COMET #NA	February 19, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.
Precipitation MetOne 387D #A23775	February 19, 2023	• Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.
WS/WD/STDWD RM Young 05305VK #161466	February 19, 2023	• Wind direction data contained in this report represents where the wind is coming from. • An annual wind system calibration was completed on July 22, 2022. • Intermittent polling issues occurred on Feb 7 during hour 12, 13 and 20-23. One hour of data was lost due to this event. Troubleshooting was taken on Feb 8 hour 10. Polling issue was traced to memory issue. Datalogger was reset to correct the problem. Seven hours of downtime were recorded.

Monitored Data Summary for St. Lina Site

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.5	0	7	Feb 11 at hr 12	21	WSW	1.3	Feb 21	99.0	93.9
H2S (ppb)	10	3	-	0	0	-	0.0	0	1	Feb 4 at hr 19	10	S	0.0	Feb 1	99.0	93.9
NOx (ppb)	-	-	-	-	-	-	3.5	0	23	Feb 3 at hr 20	7	SW	9.1	Feb 3	99.0	93.6
NO (ppb)	-	-	-	-	-	-	0.2	0	4	Feb 11 at hr 12	21	WSW	0.6	Feb 3	99.0	93.6
NO2 (ppb)	159	-	-	0	-	-	3.2	0	23	Feb 3 at hr 20	7	SW	8.5	Feb 3	99.0	93.6
O3 (ppb)	76	-	-	0	-	-	36.2	16.8	46.8	Feb 13 at hr 5	18.2	W	43.6	Feb 26	99.0	94.0
THC (ppm)	-	-	-	-	-	-	2.10	2.01	2.35	Feb 4 at hr 0	6.2	SW	2.20	Feb 3	99.0	94.0
CH4 (ppm)	-	-	-	-	-	-	2.10	2.01	2.35	Feb 4 at hr 0	6.2	SW	2.20	Feb 3	99.0	94.0
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.02	Feb 18 at hr 9	12.6	ENE	0.00	Feb 18	99.0	94.0
PM2.5 (µg/m3)	80	29	-	0	0	-	3.1	0	18	Feb 4 at hr 0	6.2	SW	9.7	Feb 16	99.0	98.7
RH (%)	-	-	-	-	-	-	72.6	36	99	Feb 4 at hr 6	1.6	SW	94.1	Feb 4	99.0	99.0
BP (millibar)	-	-	-	-	-	-	914	895	937	Feb 23 at hr 6	10.5	E	936	Feb 23	99.0	99.0
Ext. Temp. (°C)	-	-	-	-	-	-	-10.6	-32.3	4.2	Feb 10 at hr 19	21.4	WNW	2.5	Feb 7	99.0	99.0
Stn. Temp. (°C)	-	-	-	-	-	-	22.4	21.5	24.4	Feb 18 at hr 15	7.6	NE	23.2	Feb 4	99.0	99.0
Precipitation (mm)*	-	-	-	-	-	-	4.7	0.0	1.3	Feb 4 at hr 6	1.6	SW	4.5	Feb 4	99.0	99.0
WSV (km/hr)	-	-	-	-	-	-	4.1	0.7	28.2	Feb 13 at hr 16	28.2	NNW	20.0	Feb 13	99.0	99.0
WDV (sector)	-	-	-	-	-	-	253 (WSW)	-	-	-	-	-	-	-	99.0	99.0

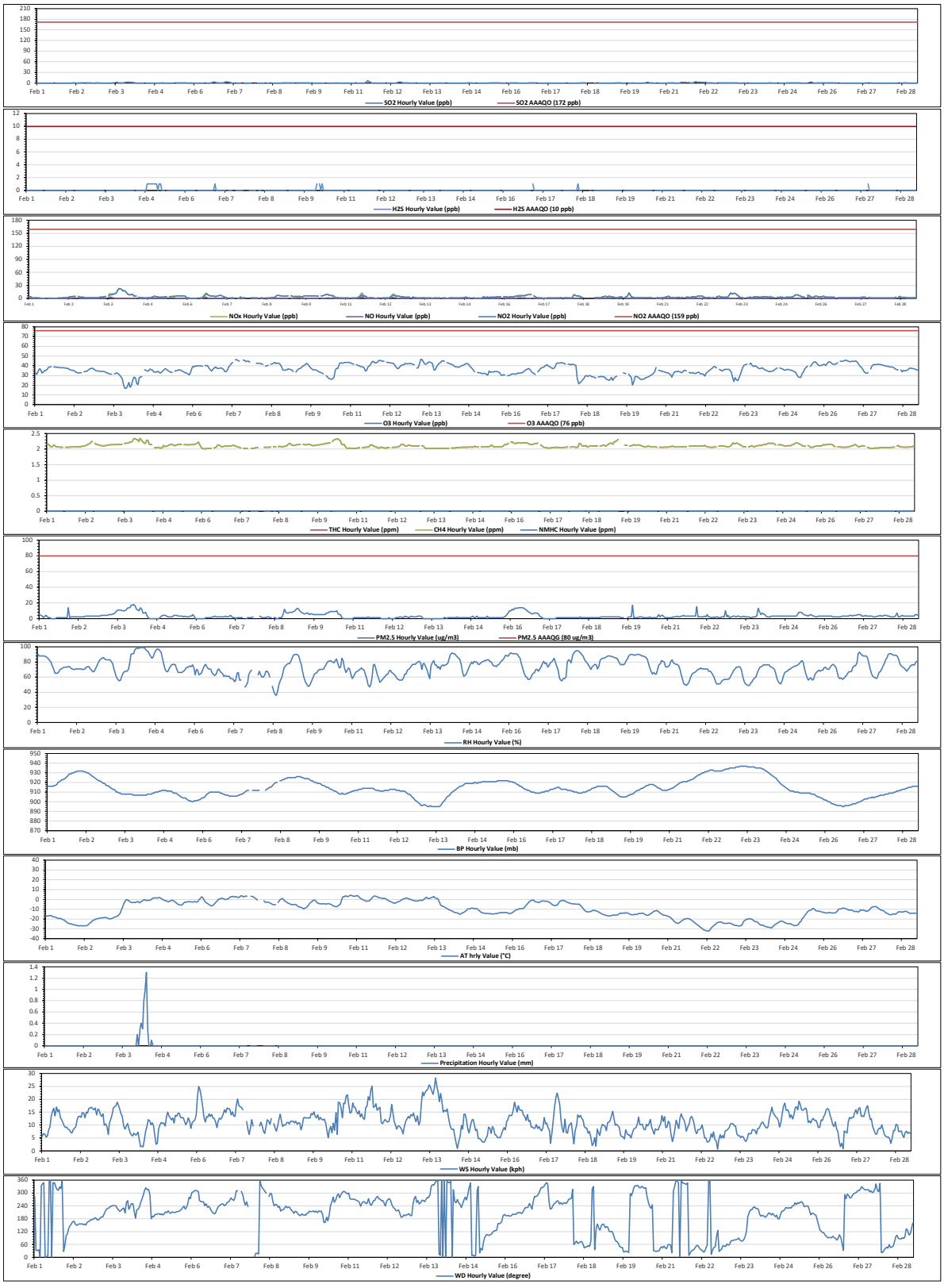
1- Date/ Time given is the first minimum and maximum value that was recorded

* Data represents the total (sum) for the indicated time frame

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Feb 2023 - St. Lina Site



Lac La Biche Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i-TLE #1180320043	February 17, 2023	• No operational issues were recorded this month.
H2S API 101A #324	February 17, 2023	• The analyzer failed the daily span check on Feb 22-23 due to cold weather, which affected the efficiency of the SO2 scrubber material. The span results improved once the ambient temperatures raised. Data Quality was not affected by this issue.
NOx/NO/NO2 Thermo 42i #1180930027	February 17, 2023	• No operational issues were recorded this month.
O3 Thermo 49i #1002240372	February 16, 2023	• No operational issues were recorded this month.
THC/CH4/NMHC Thermo 55i #1180030044	February 16, 2023	• No operational issues were recorded this month.
PM2.5 Thermo Sharp 5030i #CM17071016	February 17, 2023	• No operational issues were recorded this month.
Parameter	**Verification Date**	**Equipment Operational Summary**
RH Rotronic HC2A-S3 #0020357518	February 17, 2023	• No operational issues were recorded this month.
BP Met One 092 #Y23360	February 17, 2023	• No operational issues were recorded this month.
AT Rotronic HC2A-S3 #0020357518	February 17, 2023	• No operational issues were recorded this month.
ST COMET #NA	February 17, 2023	• No operational issues were recorded this month.

Parameter	Verification Date	Equipment Operational Summary
WS/WD/STDWD RM Young 05305VK #56778	February 17, 2023	• Wind direction data contained in this report represents where the wind is coming from. • The last annual wind system calibration was completed on May 9, 2022. • No operational issues were recorded this month.

Monitored Data Summary for Lac La Biche Station

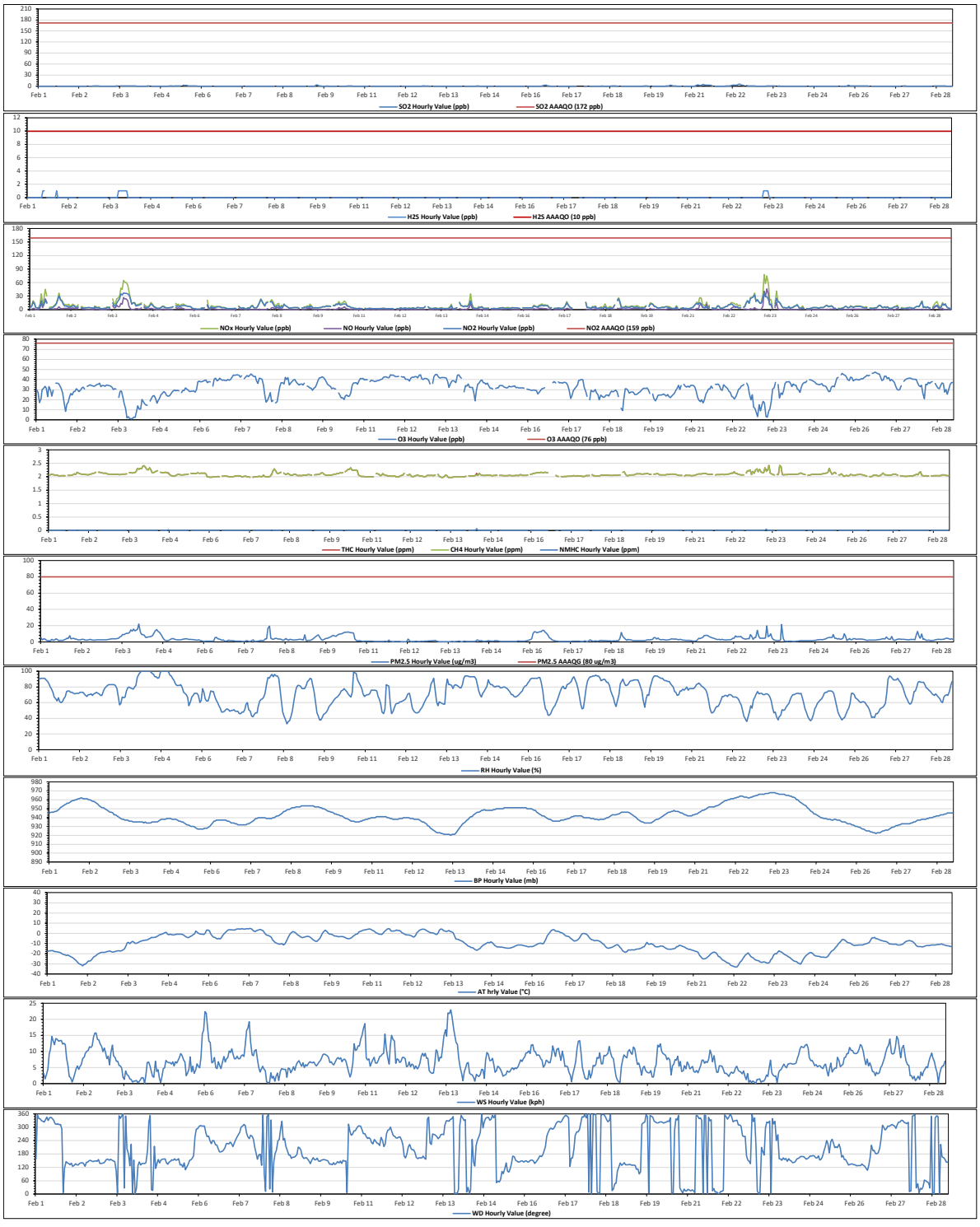
Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.3	0	6	Feb 22 at hr 11	4.8	NNW	2.0	Feb 22	100.0	94.9
H2S (ppb)	10	3	-	0	0	-	0.0	0	1	Feb 1 at hr 11	13.2	NNW	0.0	Feb 1	100.0	94.9
NOx (ppb)	-	-	-	-	-	-	8.4	1	78	Feb 23 at hr 7	0.8	S	26.2	Feb 23	100.0	94.6
NO (ppb)	-	-	-	-	-	-	1.7	0	46	Feb 23 at hr 9	1.3	WNW	9.3	Feb 23	100.0	94.6
NO2 (ppb)	159	-	-	0	-	-	6.7	1	37	Feb 3 at hr 20	0.8	S	17.0	Feb 23	100.0	94.6
O3 (ppb)	76	-	-	0	-	-	32.2	1.0	47.5	Feb 26 at hr 14	5.5	SSE	42.8	Feb 26	100.0	94.9
THC (ppm)	-	-	-	-	-	-	2.08	1.97	2.42	Feb 23 at hr 9	1.3	WNW	2.18	Feb 23	100.0	94.9
CH4 (ppm)	-	-	-	-	-	-	2.08	1.97	2.42	Feb 23 at hr 9	1.3	WNW	2.18	Feb 23	100.0	94.9
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.07	Feb 14 at hr 7	2.7	N	0.00	Feb 14	100.0	94.9
PM2.5 (µg/m3)	80	29	-	0	0	-	3.3	0	22	Feb 4 at hr 0	1.3	SSE	8.1	Feb 3	100.0	99.9
RH (%)	-	-	-	-	-	-	71.1	33	100	Feb 4 at hr 3	0.1	SE	97.7	Feb 4	100.0	100.0
BP (millibar)	-	-	-	-	-	-	942	920	968	Feb 23 at hr 7	0.8	S	966	Feb 23	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	-10.1	-33.3	4.9	Feb 7 at hr 6	12.1	W	1.9	Feb 11	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	23.4	20.5	25.1	Feb 9 at hr 5	6.3	SSE	24.2	Feb 4	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	1.0	0.1	23.0	Feb 13 at hr 15	23	NNW	11.6	Feb 13	100.0	100.0
WDV (sector)	-	-	-	-	-	-	243 (WSW)	-	-	-	-	-	-	-	100.0	100.0

1- Date/ Time given is the first minimum and maximum value that was recorded

Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Feb 2023 - Lac La Biche Station



TABLES AND CHARTS

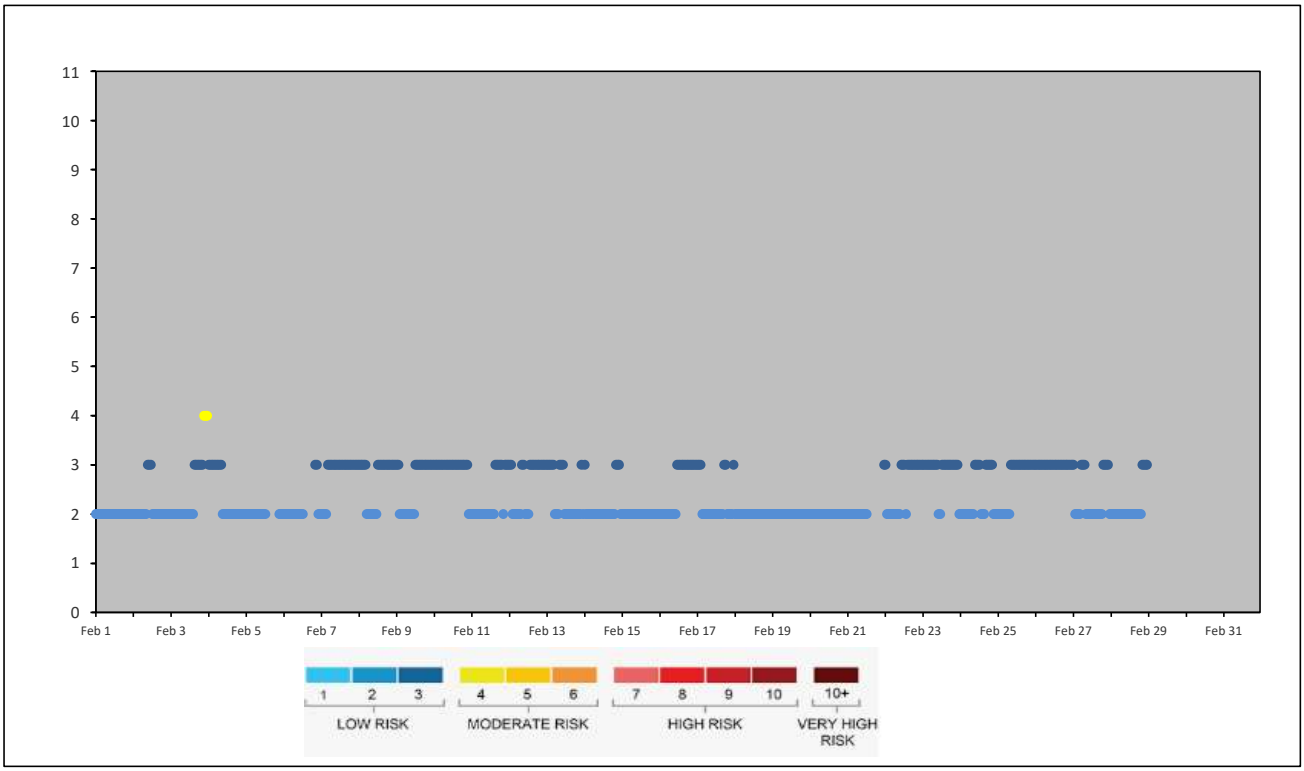
COLD LAKE SOUTH STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Cold Lake South Station - February 2023

AIR QUALITY HEALTH INDEX

Day	Hourly Period Starting at (MST)																						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Feb 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2
Feb 3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4
Feb 4	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 5	2	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	2	2	2
Feb 6	2	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	3	3	2	2
Feb 7	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 8	3	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3
Feb 9	3	3	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3
Feb 10	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2
Feb 11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3
Feb 12	3	3	2	2	2	2	2	2	3	3	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Feb 13	3	3	3	3	3	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	3	2
Feb 14	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2
Feb 15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 16	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 17	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2	3
Feb 18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 21	2	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	3
Feb 22	3	2	2	2	2	2	2	2	2	2	3	3	3	2	3	3	3	3	3	3	3	3	3	3
Feb 23	3	3	3	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	2
Feb 24	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2	2	3	3	3	3	3	2	2	2
Feb 25	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 26	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 27	3	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2
Feb 28	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

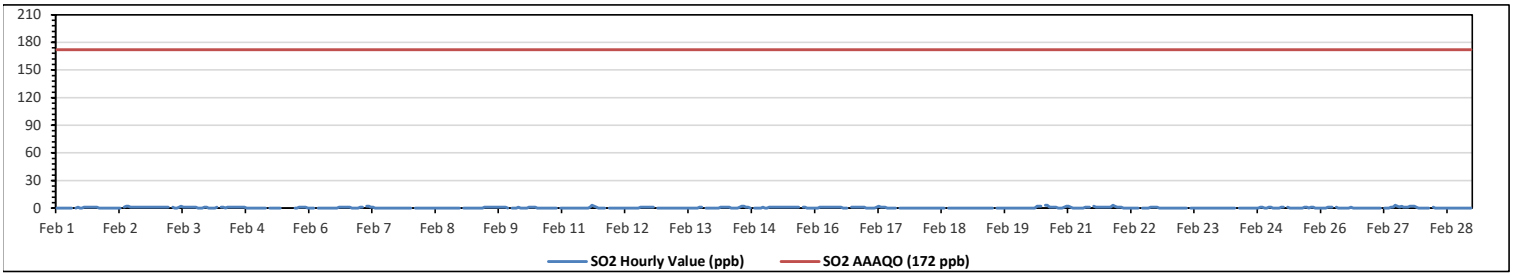
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

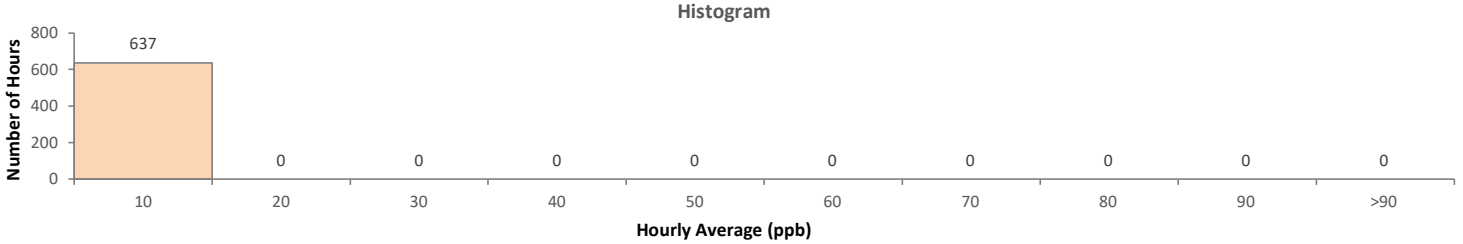
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0	
Maximum Hourly Value:	3	ppb	on Feb 11 at hr 14	Hours in Service:	672	
Maximum Daily Value:	1.0	ppb	on Feb 21	Hours of Data:	637	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	0	
Minimum Daily Value:	0.0	ppb	on Feb 8	Hours of Calibration:	35	
Monthly Average:	0.4	ppb		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	0	0	0	S	0	1	0	0	1	1	1	1	1	1	1	0	0	0	0	0	1	0.3
Feb 2	0	0	0	0	0	0	0	S	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	2	0.8
Feb 3	1	1	1	1	1	1	S	1	0	0	1	2	1	1	1	1	1	1	1	0	0	0	1	1	0	2	0.8
Feb 4	0	0	0	0	1	S	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0.5
Feb 5	0	0	0	0	S	0	0	0	0	0	0	C	C	C	C	C	C	0	0	1	1	1	1	0	0	1	NA
Feb 6	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1	0.3
Feb 7	1	1	S	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3
Feb 8	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 9	S	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	S	0	1	0.5
Feb 10	0	0	0	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.2
Feb 11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	2	1	0	0	0	0	S	0	0	0	3	0.3
Feb 12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	S	0	0	0	0	1	0.3
Feb 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	S	0	0	0	0	0	1	0.1
Feb 14	0	0	0	1	1	1	1	1	0	0	0	0	1	2	2	1	1	0	S	0	0	0	0	1	0	2	0.6
Feb 15	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	0	0	0	0	0	1	0.7
Feb 16	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	S	1	1	1	1	1	1	1	0	1	0.8
Feb 17	0	0	0	0	0	1	2	1	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	2	0.3
Feb 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 19	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 20	0	0	0	0	0	0	0	0	0	2	2	2	S	3	3	1	1	1	1	0	0	0	1	2	0	3	0.8
Feb 21	2	1	0	0	0	0	0	0	1	1	1	S	2	1	1	1	1	1	1	1	1	3	2	1	0	3	1.0
Feb 22	1	1	0	0	0	0	0	0	0	0	S	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	0.3
Feb 23	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 24	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0.1
Feb 25	1	0	0	0	0	1	1	S	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	1	0.3
Feb 26	0	0	0	1	1	1	S	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 27	0	0	0	0	0	S	0	0	0	1	1	3	2	1	2	1	1	1	2	2	2	1	0	0	0	3	0.9
Feb 28	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Diurnal Maximum	2	1	1	2	2	1	2	1	1	2	2	3	2	3	3	2	1	1	2	2	2	3	2	2			
Diurnal Average	0.2	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.6	0.8	0.6	0.6	0.5	0.5	0.5	0.3	0.3	0.3	0.3			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



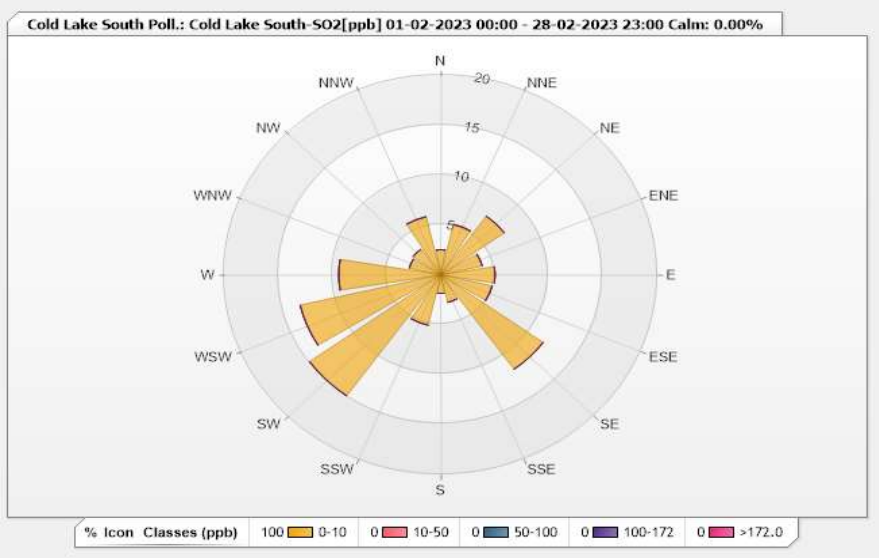


Station: Cold Lake South Poll.: Cold Lake South-SO2[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.79% Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	2.51	0	0	0	0	2.51
NNE	5.18	0	0	0	0	5.18
NE	7.22	0	0	0	0	7.22
ENE	3.92	0	0	0	0	3.92
E	5.02	0	0	0	0	5.02
ESE	4.87	0	0	0	0	4.87
SE	11.62	0	0	0	0	11.62
SSE	2.83	0	0	0	0	2.83
S	1.88	0	0	0	0	1.88
SSW	5.18	0	0	0	0	5.18
SW	14.91	0	0	0	0	14.91
WSW	13.34	0	0	0	0	13.34
W	9.42	0	0	0	0	9.42
WNW	2.98	0	0	0	0	2.98
NW	3.14	0	0	0	0	3.14
NNW	5.97	0	0	0	0	5.97
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

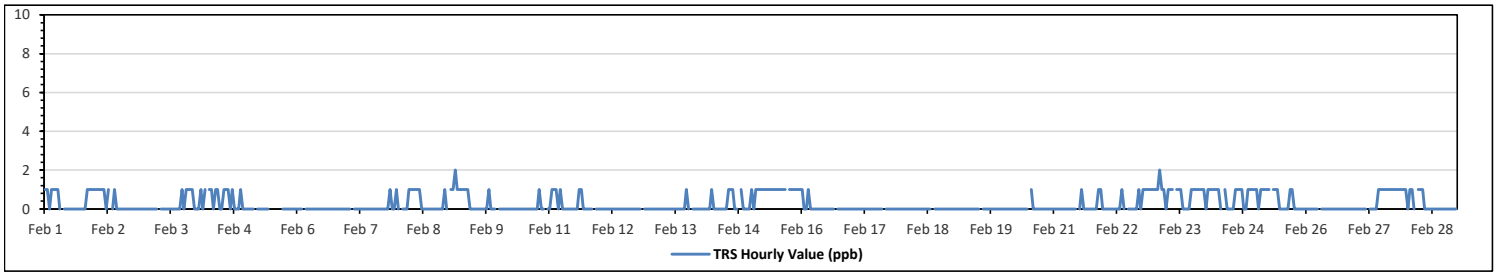
TOTAL REDUCED SULPHUR (TRS) in ppb

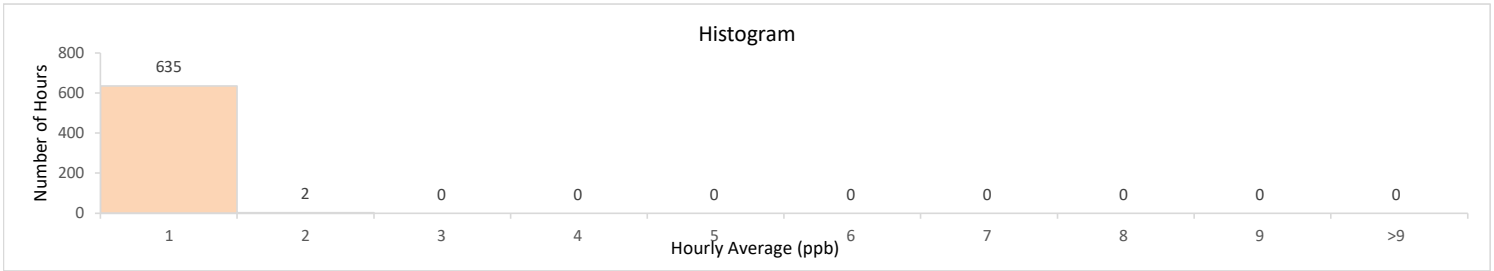
Maximum Hourly Value:	2	ppb	on Feb 9 at hr 3	Hours in Service:	672
Maximum Daily Value:	1.0	ppb	on Feb 15	Hours of Data:	637
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 2	Hours of Missing Data:	0
Minimum Daily Value:	0.0	ppb	on Feb 6	Hours of Calibration:	35
Monthly Average:	0.3	ppb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	1	1	0	1	1	1	1	0	S	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0.4
Feb 2	1	1	1	1	1	0	1	S	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3
Feb 3	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0	0	1	0.2
Feb 4	0	0	1	0	1	S	1	1	0	1	1	0	0	1	1	1	0	1	0	0	0	1	0	0	0	1	0.5
Feb 5	0	0	0	0	S	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	NA
Feb 6	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 7	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0.1
Feb 8	0	S	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.3
Feb 9	S	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	S	0	2	0.5
Feb 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	S	0	0	1	0.0
Feb 11	0	1	1	1	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	S	0	0	0	1	0.3
Feb 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0
Feb 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	S	0	0	0	0	0	1	0.0
Feb 14	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	0	S	1	0	0	0	0	0	1	0.2
Feb 15	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	0	1	1.0
Feb 16	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	0.1
Feb 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0
Feb 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 19	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 20	0	0	0	0	0	0	0	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 21	0	0	0	0	0	0	0	0	0	0	0	S	0	1	0	0	0	0	0	0	0	1	1	0	0	1	0.1
Feb 22	0	0	0	0	0	0	0	0	1	0	S	0	0	0	0	0	1	0	1	1	1	1	1	1	0	1	0.3
Feb 23	1	1	2	1	1	0	1	1	1	S	1	1	1	0	0	0	0	1	1	1	1	1	1	1	0	2	0.8
Feb 24	0	1	1	1	1	1	1	0	S	1	0	0	0	0	1	1	1	1	0	0	1	1	1	1	0	1	0.7
Feb 25	1	0	1	1	1	1	1	S	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0.5
Feb 26	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 27	0	0	0	0	0	S	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6
Feb 28	0	1	1	0	S	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Diurnal Maximum	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Diurnal Average	0.2	0.3	0.4	0.4	0.3	0.3	0.4	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.3	0.3	0.3	0.3	0.3			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



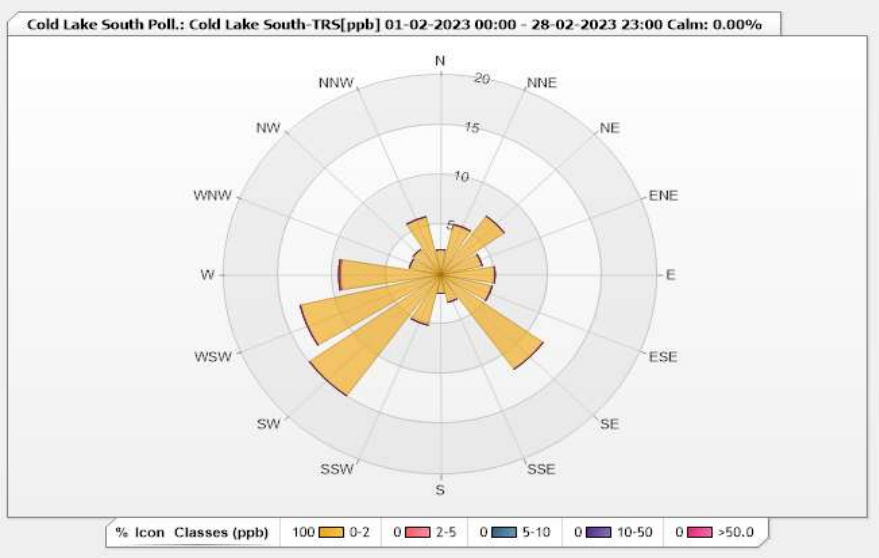


Station: Cold Lake South Poll.: Cold Lake South-TRS[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.79% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	2.51	0	0	0	0	2.51
NNE	5.18	0	0	0	0	5.18
NE	7.22	0	0	0	0	7.22
ENE	3.92	0	0	0	0	3.92
E	5.02	0	0	0	0	5.02
ESE	4.87	0	0	0	0	4.87
SE	11.62	0	0	0	0	11.62
SSE	2.83	0	0	0	0	2.83
S	1.88	0	0	0	0	1.88
SSW	5.18	0	0	0	0	5.18
SW	14.91	0	0	0	0	14.91
WSW	13.34	0	0	0	0	13.34
W	9.26	0.16	0	0	0	9.42
WNW	2.98	0	0	0	0	2.98
NW	3.14	0	0	0	0	3.14
NNW	5.97	0	0	0	0	5.97
Summary	100	0.16	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

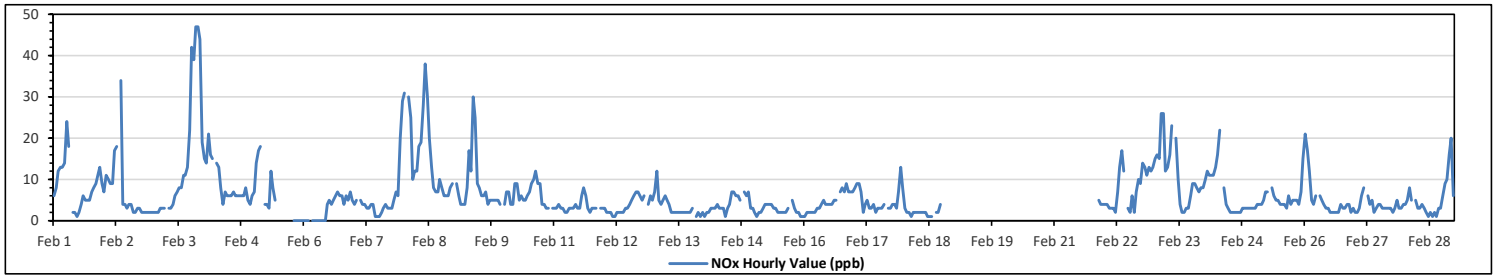
OXIDES OF NITROGEN (NOx) in ppb

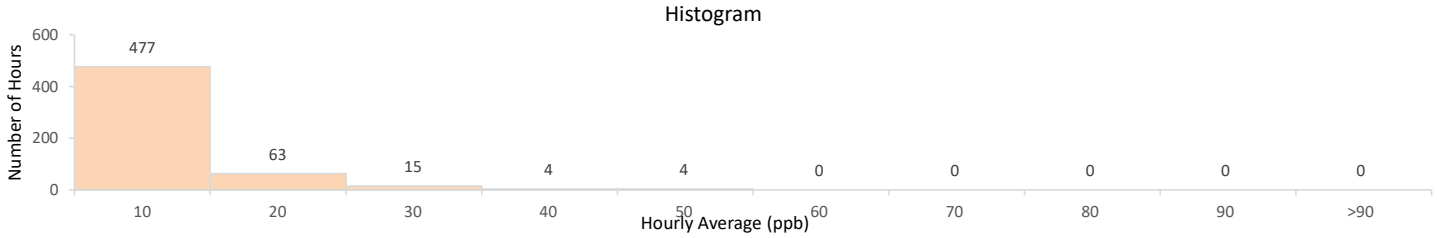
Maximum Hourly Value:	47	ppb	on Feb 3 at hr 20	Hours in Service:	672	
Maximum Daily Value:	15.7	ppb	on Feb 8	Hours of Data:	563	
Minimum Hourly Value:	0	ppb	on Feb 5 at hr 19	Hours of Missing Data:	75	
Minimum Daily Value:	2.6	ppb	on Feb 15	Hours of Calibration:	34	
Monthly Average:	6.4	ppb		Operational Uptime:	88.8	

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	6	8	12	13	13	14	24	18	S	2	2	1	2	4	6	5	5	5	7	8	9	11	13	9	1	24	8.6
Feb 2	7	11	10	9	9	17	18	S	34	4	4	3	4	4	2	2	3	3	2	2	2	2	2	2	2	34	6.8
Feb 3	2	2	2	3	3	3	S	3	3	4	6	7	8	8	11	11	13	22	42	39	47	47	44	19	2	47	15.2
Feb 4	15	14	21	16	15	S	14	13	8	4	7	6	6	6	7	6	6	6	6	6	8	5	4	6	4	21	8.9
Feb 5	7	14	17	18	S	4	4	3	12	8	5	C	C	C	C	C	C	C	C	0	0	0	0	0	0	18	NA
Feb 6	0	0	0	S	0	0	0	0	0	0	0	4	5	4	5	6	7	6	6	4	6	5	7	5	0	7	3.0
Feb 7	4	5	S	5	4	4	3	3	4	4	1	1	1	2	3	4	3	3	3	5	7	6	20	29	1	29	5.4
Feb 8	31	S	30	25	10	12	12	18	19	28	38	30	20	13	8	7	7	10	8	6	6	6	8	9	6	38	15.7
Feb 9	S	9	6	4	4	4	8	17	12	30	25	9	8	6	6	7	4	5	5	5	5	5	4	S	4	30	8.5
Feb 10	4	7	7	4	4	9	9	5	6	5	5	6	7	9	10	12	9	9	4	4	3	3	S	3	3	12	6.3
Feb 11	3	3	4	3	3	2	2	3	3	3	4	3	3	6	8	6	3	2	3	3	3	S	3	3	2	8	3.4
Feb 12	3	2	2	2	1	1	2	2	2	2	3	3	4	5	6	7	7	6	5	6	S	4	6	5	1	7	3.7
Feb 13	7	12	5	4	5	6	5	4	2	2	2	2	2	2	2	2	2	2	3	S	1	2	1	2	1	12	3.3
Feb 14	1	2	2	3	3	3	4	3	3	3	1	3	4	7	7	6	6	5	S	7	6	7	3	3	1	7	4.0
Feb 15	2	1	2	2	3	4	4	4	4	3	3	2	2	2	2	2	3	S	5	3	2	2	1	1	1	5	2.6
Feb 16	1	2	2	2	2	2	3	3	4	5	4	4	4	4	5	5	S	7	8	7	9	7	7	7	1	9	4.5
Feb 17	8	9	9	7	2	4	5	3	3	4	2	3	3	3	4	S	3	3	4	4	3	7	13	8	2	13	5.0
Feb 18	3	2	2	1	2	2	2	2	2	2	2	1	1	1	S	2	2	4	X	X	X	X	X	X	1	4	NA
Feb 19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Feb 20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Feb 21	X	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	5	4	4	4	5	NA
Feb 22	4	4	3	3	3	2	7	13	17	12	S	3	2	6	2	7	10	9	14	13	11	13	12	13	2	17	8.0
Feb 23	15	16	15	26	26	12	13	16	23	S	20	10	4	2	2	3	3	6	9	9	8	7	8	8	2	26	11.3
Feb 24	10	12	11	11	11	13	16	22	S	8	4	3	2	2	2	2	2	2	3	3	3	3	3	3	2	22	6.6
Feb 25	3	4	4	4	5	7	7	S	8	6	5	5	4	4	4	3	6	4	5	5	5	4	7	15	3	15	5.4
Feb 26	21	17	12	5	4	6	S	6	5	4	3	3	2	2	2	2	2	4	3	3	4	4	2	3	2	21	5.2
Feb 27	2	2	3	6	8	S	6	4	5	2	3	4	4	3	3	3	3	3	2	3	5	3	3	4	2	8	3.7
Feb 28	4	5	8	5	S	5	3	3	4	3	2	1	2	1	2	1	3	3	6	9	10	16	20	6	1	20	5.3
Diurnal Maximum	31	17	30	26	26	17	24	22	34	30	38	30	20	13	11	12	13	22	42	39	47	47	44	29			
Diurnal Average	6.8	6.8	7.9	7.5	6.1	5.9	7.4	7.3	8.0	6.2	6.3	4.9	4.3	4.4	4.7	4.8	4.9	5.6	7.0	6.7	7.1	7.3	8.1	7.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



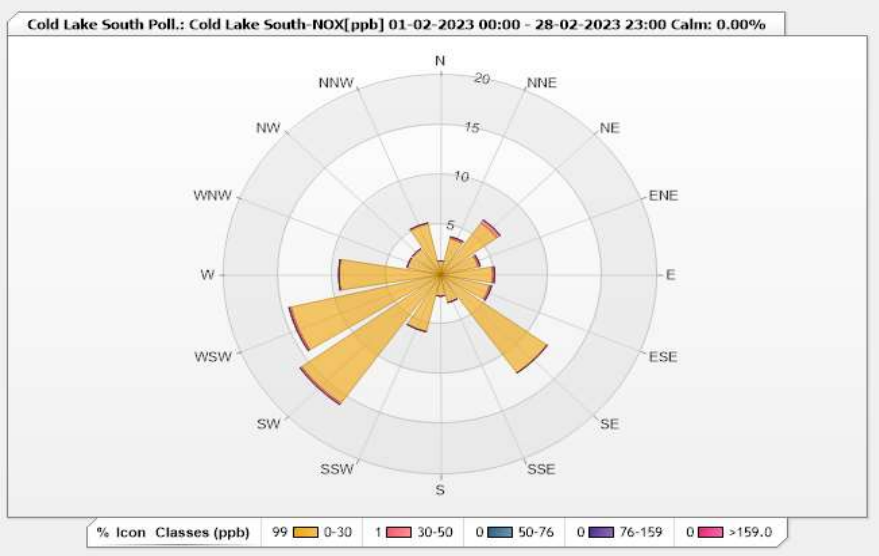


Station: Cold Lake South Poll.: Cold Lake South-NOX[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 83.78% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.42	0	0	0	0	1.42
NNE	3.73	0.18	0	0	0	3.91
NE	6.39	0.36	0	0	0	6.75
ENE	3.55	0.18	0	0	0	3.73
E	4.8	0.18	0	0	0	4.98
ESE	4.62	0.18	0	0	0	4.8
SE	12.08	0	0	0	0	12.08
SSE	2.84	0	0	0	0	2.84
S	2.13	0	0	0	0	2.13
SSW	5.86	0	0	0	0	5.86
SW	15.81	0.18	0	0	0	15.99
WSW	14.21	0.18	0	0	0	14.39
W	9.41	0	0	0	0	9.41
WNW	3.2	0	0	0	0	3.2
NW	3.2	0	0	0	0	3.2
NNW	5.33	0	0	0	0	5.33
Summary	98.58	1.44	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

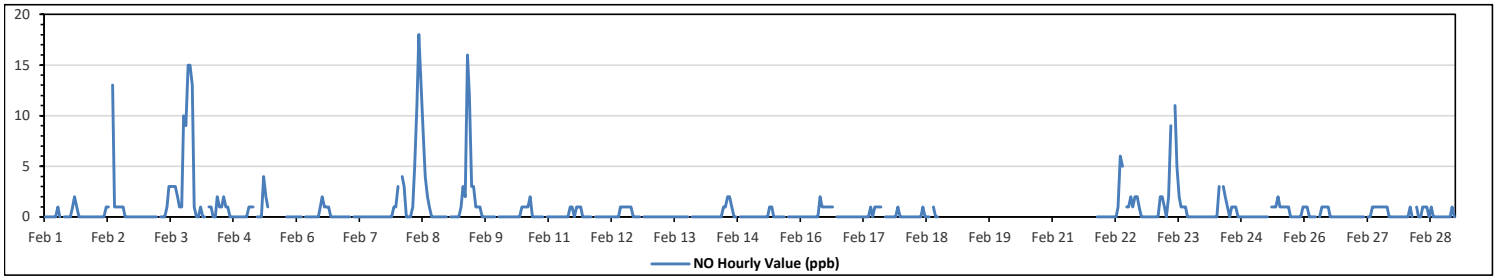
NITRIC OXIDE (NO) in ppb

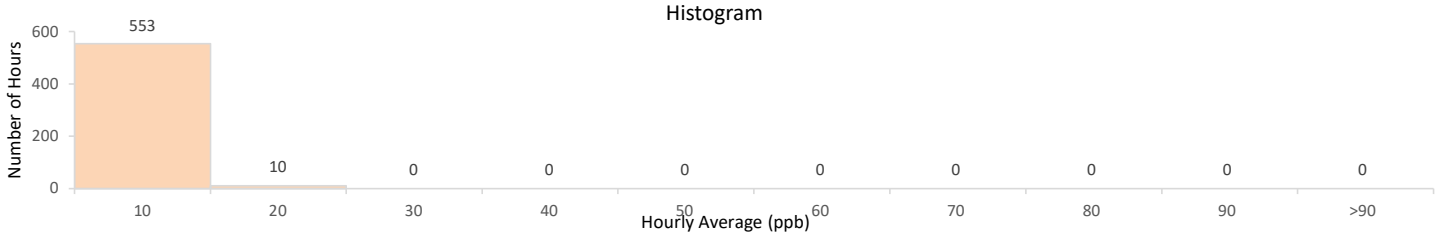
Maximum Hourly Value:	18	ppb	on Feb 8 at hr 10	Hours in Service:	672
Maximum Daily Value:	3.5	ppb	on Feb 3	Hours of Data:	563
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	75
Minimum Daily Value:	0.0	ppb	on Feb 13	Hours of Calibration:	34
Monthly Average:	0.7	ppb		Operational Uptime:	88.8

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	0	1	0	S	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	2	0.2
Feb 2	0	0	0	0	0	1	1	S	13	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	13	0.9
Feb 3	0	0	0	0	0	0	S	0	0	0	1	3	3	3	3	2	1	1	10	9	15	15	13	1	0	15	**3.5**
Feb 4	0	0	1	0	0	S	1	1	0	0	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	2	0.5
Feb 5	0	1	1	1	S	0	0	0	4	2	1	C	C	C	C	C	C	C	C	0	0	0	0	0	0	4	NA
Feb 6	0	0	0	S	0	0	0	0	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	2	0.3
Feb 7	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.1
Feb 8	3	S	4	3	0	0	0	1	5	11	**18**	13	8	4	2	1	0	0	0	0	0	0	0	0	0	**18**	3.2
Feb 9	S	0	0	0	0	0	1	3	2	16	12	3	3	1	1	1	0	0	0	0	0	0	0	S	0	16	2.0
Feb 10	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	0	0	0	0	0	0	S	0	0	2	0.3
Feb 11	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0	S	0	0	0	1	0.2
Feb 12	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	S	0	0	0	0	1	0.3
Feb 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0
Feb 14	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	1	0	0	S	0	0	0	0	0	0	2	0.3
Feb 15	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0.1
Feb 16	0	0	0	0	0	0	0	0	0	2	1	1	1	1	1	1	S	0	0	0	0	0	0	0	0	2	0.3
Feb 17	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	S	0	0	0	0	0	0	1	0	0	1	0.3
Feb 18	0	0	0	0	0	0	0	0	0	0	1	0	0	0	S	1	0	0	X	X	X	X	X	X	0	1	NA
Feb 19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Feb 20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Feb 21	X	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	0	0	0	0	0	NA
Feb 22	0	0	0	0	0	0	0	1	6	5	S	1	1	2	1	2	2	1	0	0	0	0	0	0	0	6	1.0
Feb 23	0	0	0	2	2	1	0	2	9	S	11	5	2	1	1	1	0	0	0	0	0	0	0	0	0	11	1.6
Feb 24	0	0	0	0	0	0	0	3	S	3	2	1	0	1	1	1	0	0	0	0	0	0	0	0	0	3	0.5
Feb 25	0	0	0	0	0	0	0	S	1	1	1	2	1	1	1	1	1	0	0	0	0	0	0	1	0	2	0.5
Feb 26	1	1	0	0	0	0	S	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3
Feb 27	0	0	0	0	0	S	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.3
Feb 28	0	0	1	0	S	1	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0.3
Diurnal Maximum	3	1	4	3	2	1	1	3	13	16	18	13	8	4	3	2	2	1	10	9	15	15	13	1			
Diurnal Average	0.2	0.1	0.3	0.3	0.1	0.1	0.2	0.5	1.9	1.9	2.4	1.6	1.2	1.1	1.0	0.9	0.2	0.1	0.5	0.4	0.7	0.6	0.7	0.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



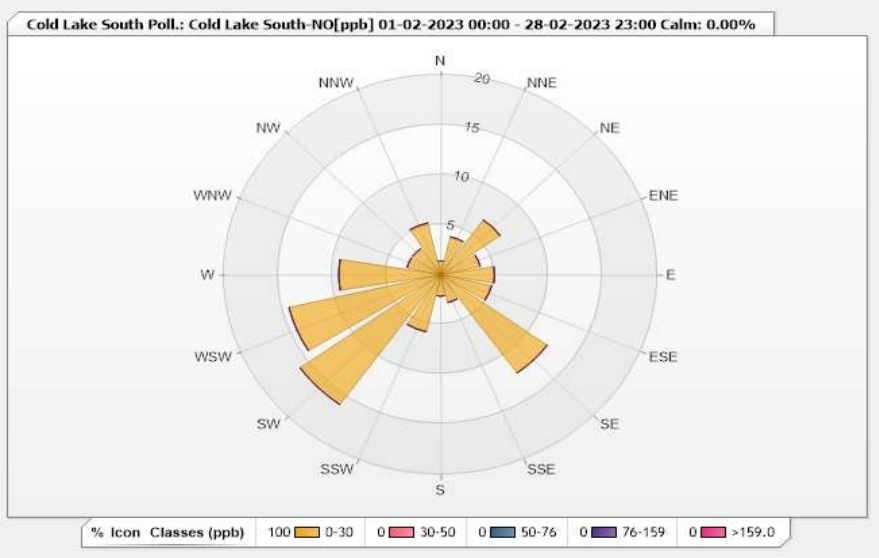


Station: Cold Lake South Poll.: Cold Lake South-NO[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 83.78% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.42	0	0	0	0	1.42
NNE	3.91	0	0	0	0	3.91
NE	6.75	0	0	0	0	6.75
ENE	3.73	0	0	0	0	3.73
E	4.97	0	0	0	0	4.97
ESE	4.8	0	0	0	0	4.8
SE	12.08	0	0	0	0	12.08
SSE	2.84	0	0	0	0	2.84
S	2.13	0	0	0	0	2.13
SSW	5.86	0	0	0	0	5.86
SW	15.99	0	0	0	0	15.99
WSW	14.39	0	0	0	0	14.39
W	9.41	0	0	0	0	9.41
WNW	3.2	0	0	0	0	3.2
NW	3.2	0	0	0	0	3.2
NNW	5.33	0	0	0	0	5.33
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb

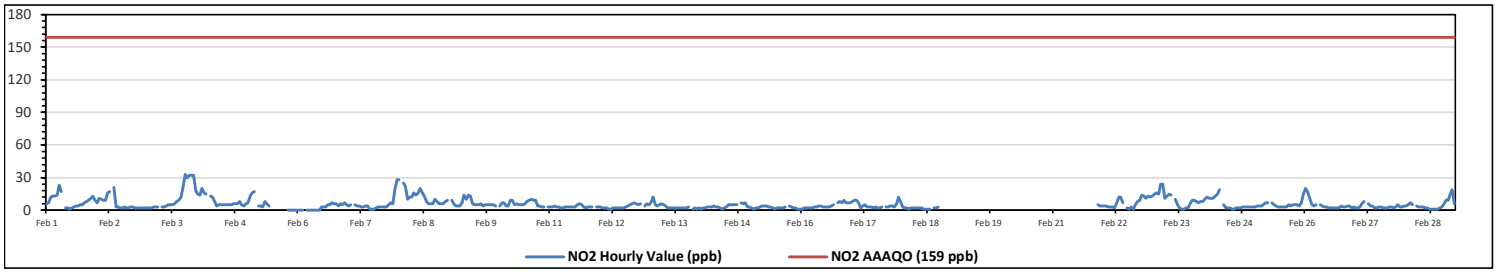
Number of 1-Hour Exceedances: 0

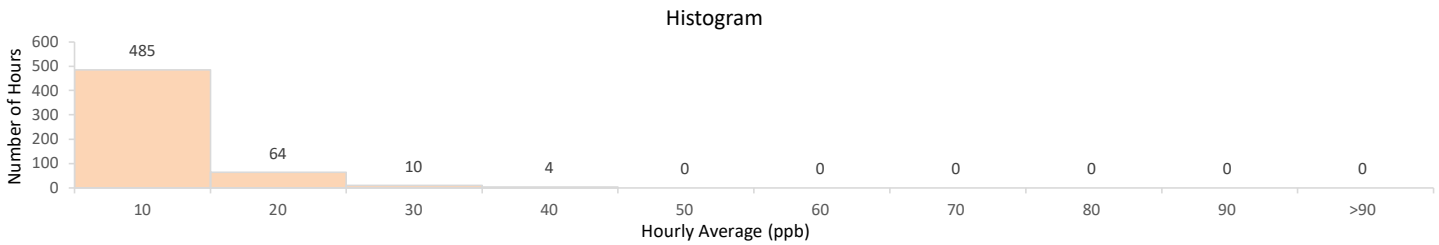
Maximum Hourly Value:	33	ppb	on Feb 3 at hr 18	Hours in Service:	672
Maximum Daily Value:	12.3	ppb	on Feb 8	Hours of Data:	563
Minimum Hourly Value:	0	ppb	on Feb 5 at hr 19	Hours of Missing Data:	75
Minimum Daily Value:	2.4	ppb	on Feb 15	Hours of Calibration:	34
Monthly Average:	5.7	ppb		Operational Uptime:	88.8

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	6	7	12	13	13	14	23	17	S	2	2	1	2	3	4	4	5	5	7	8	9	11	13	9	1	23	8.3
Feb 2	7	11	10	9	9	16	17	S	21	3	3	2	2	3	2	2	3	3	2	2	2	2	2	2	2	21	5.9
Feb 3	2	2	2	3	3	3	S	3	3	4	5	5	5	6	8	9	12	21	33	30	32	32	32	18	2	33	11.9
Feb 4	15	14	20	16	15	S	13	12	8	4	5	5	5	5	5	5	5	6	6	6	8	5	4	6	4	20	8.4
Feb 5	7	13	16	17	S	4	4	3	8	6	4	C	C	C	C	C	C	C	C	0	0	0	0	0	0	17	NA
Feb 6	0	0	0	S	0	0	0	0	0	0	0	3	3	3	5	5	7	6	6	4	6	5	7	5	0	7	2.8
Feb 7	4	5	S	5	4	4	3	3	4	4	1	1	1	2	3	3	3	3	3	5	7	6	19	28	1	28	5.3
Feb 8	28	S	25	22	10	12	12	16	14	16	20	16	13	8	6	6	6	10	8	6	6	6	8	9	6	28	12.3
Feb 9	S	9	6	4	4	4	7	14	10	14	13	6	5	5	5	6	4	5	5	5	5	5	4	S	4	14	6.6
Feb 10	4	7	7	4	4	9	9	5	6	5	5	5	6	8	9	10	9	9	4	4	3	3	S	3	3	10	6.0
Feb 11	3	3	4	3	3	2	2	3	3	3	3	3	3	5	6	5	3	2	3	3	3	S	3	3	2	6	3.2
Feb 12	3	2	2	2	1	1	2	2	2	2	2	2	3	4	5	6	7	6	5	6	S	4	6	5	1	7	3.5
Feb 13	7	12	5	4	5	6	5	4	2	2	2	2	2	2	2	2	2	2	3	S	1	2	1	2	1	12	3.3
Feb 14	1	2	2	3	3	3	4	3	3	2	1	2	3	5	5	5	5	5	S	7	6	7	3	3	1	7	3.6
Feb 15	2	1	2	2	3	4	4	4	3	3	2	1	2	2	2	2	3	S	4	3	2	2	1	1	1	4	2.4
Feb 16	1	2	2	2	2	2	3	3	4	4	3	3	3	3	4	5	S	7	8	7	9	7	7	7	1	9	4.3
Feb 17	8	9	9	7	2	4	5	3	3	3	2	3	2	2	3	S	3	3	4	4	3	6	12	8	2	12	4.7
Feb 18	3	2	2	1	2	2	2	2	2	2	1	1	1	1	S	2	2	3	X	X	X	X	X	X	1	3	NA
Feb 19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Feb 20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Feb 21	X	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	5	4	4	4	5	NA
Feb 22	4	4	3	3	3	2	7	12	12	7	S	2	1	3	1	5	8	9	14	13	11	13	12	13	1	14	7.0
Feb 23	15	16	15	24	24	11	13	15	14	S	10	5	2	1	1	2	2	6	9	9	8	7	8	8	1	24	9.8
Feb 24	10	12	11	11	11	13	15	19	S	5	2	2	2	1	1	2	2	2	3	3	3	3	3	3	1	19	6.0
Feb 25	3	4	4	4	5	7	7	S	7	5	4	3	3	3	3	3	5	4	5	5	5	4	7	15	3	15	5.0
Feb 26	20	17	11	5	4	5	S	5	4	3	3	2	2	2	2	2	2	4	3	3	4	4	2	3	2	20	4.9
Feb 27	2	2	3	6	8	S	6	4	4	2	2	3	3	2	2	2	3	3	2	3	5	3	3	4	2	8	3.3
Feb 28	4	5	7	5	S	4	3	3	3	2	2	1	1	1	1	1	2	3	6	9	9	15	19	6	1	19	4.9
Diurnal Maximum	28	17	25	24	24	16	23	19	21	16	20	16	13	8	9	10	12	21	33	30	32	32	32	28			
Diurnal Average	6.6	6.7	7.5	7.3	6.0	5.7	7.2	6.7	6.1	4.3	4.0	3.3	3.1	3.3	3.7	4.1	4.5	5.5	6.5	6.3	6.4	6.5	7.5	6.9			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



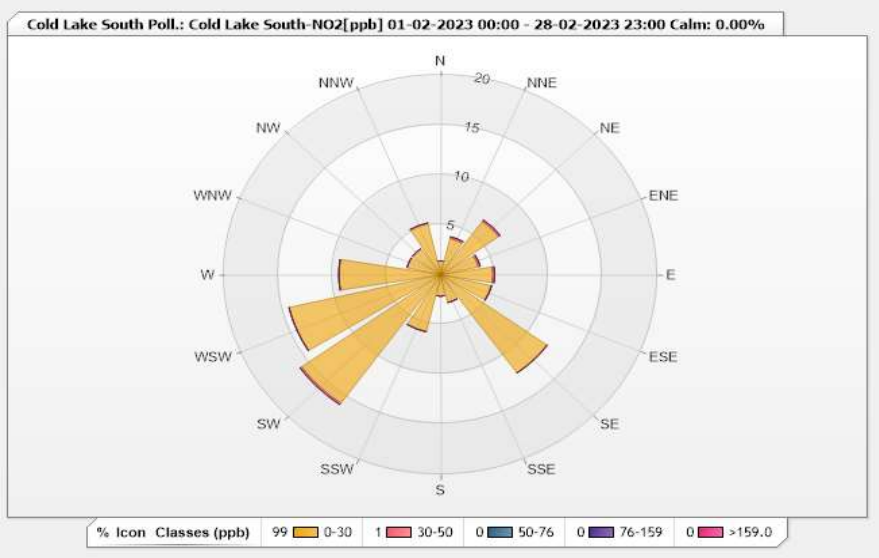


Station: Cold Lake South Poll.: Cold Lake South-NO2[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 83.78% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.42	0	0	0	0	1.42
NNE	3.73	0.18	0	0	0	3.91
NE	6.57	0.18	0	0	0	6.75
ENE	3.55	0.18	0	0	0	3.73
E	4.8	0.18	0	0	0	4.98
ESE	4.8	0	0	0	0	4.8
SE	12.08	0	0	0	0	12.08
SSE	2.84	0	0	0	0	2.84
S	2.13	0	0	0	0	2.13
SSW	5.86	0	0	0	0	5.86
SW	15.81	0.18	0	0	0	15.99
WSW	14.39	0	0	0	0	14.39
W	9.41	0	0	0	0	9.41
WNW	3.2	0	0	0	0	3.2
NW	3.2	0	0	0	0	3.2
NNW	5.33	0	0	0	0	5.33
Summary	99.12	0.9	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

OZONE (O_3) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb

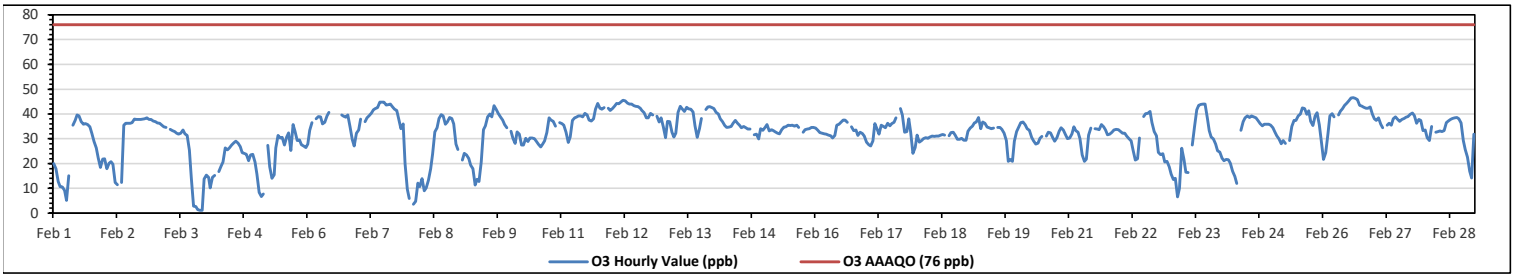
Number of 1-Hour Exceedances: 0

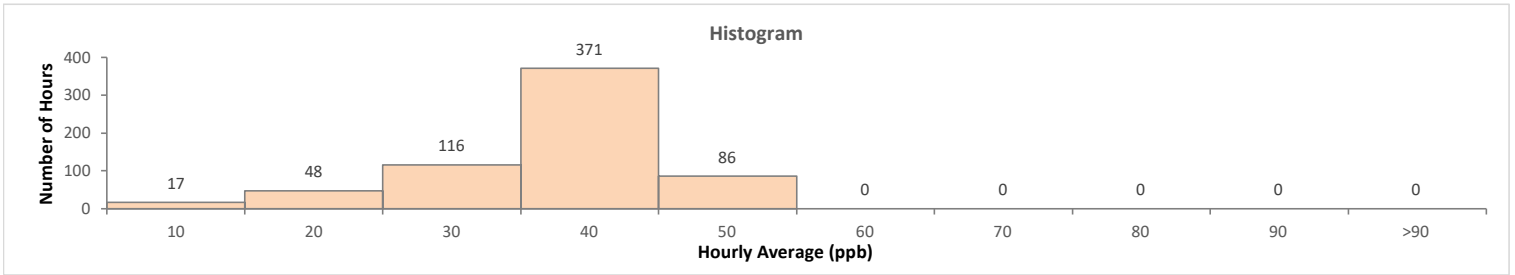
Maximum Hourly Value:	46.6	ppb	on Feb 26 at hr 14	Hours in Service:	672	
Maximum Daily Value:	42.0	ppb	on Feb 12	Hours of Data:	638	
Minimum Hourly Value:	1.1	ppb	on Feb 3 at hr 21	Hours of Missing Data:	0	
Minimum Daily Value:	22.0	ppb	on Feb 4	Hours of Calibration:	34	
Monthly Average:	32.1	ppb		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	20	18	12.7	10.7	10.5	9.2	5.2	15.1	S	35.5	37.3	39.5	39.3	36.9	35.8	36.1	35.7	34.8	32.2	28.9	26.4	22.3	18.4	21.8	5.2	39.5	25.3
Feb 2	22	18	20.1	20.7	19.8	12.4	11.5	S	12.3	35.5	36.2	36.3	36.3	36.5	37.9	37.7	37.7	37.7	37.9	38	38.4	37.8	37.7	37.2	11.5	38.4	30.2
Feb 3	36.9	36.4	36.3	35.4	34.8	34.6	S	33.8	33.3	32.9	32.2	31.9	32.3	33.5	32	31.3	25.4	14.1	2.9	2.7	1.3	1.1	1.1	13.8	**1.1**	36.9	24.8
Feb 4	15.3	14.4	10.2	14.4	15.2	S	16.8	19	20.6	26.3	25.5	26.3	27.4	28.4	29	28.2	26.8	24.4	24.2	23.8	21.1	23.5	23.7	20.6	10.2	29.0	**22.0**
Feb 5	15.7	8.4	6.7	7.7	S	27.3	18.6	14	15.5	26.3	31.3	30.3	30.6	27.4	30.7	32.4	25.3	35.7	33	29.2	29.5	27.6	27.1	26.5	6.7	35.7	24.2
Feb 6	27.8	33.4	36.5	S	38.1	39	38.9	36	36.7	39.3	40.7	C	C	C	C	C	39.5	39.1	38.7	39.6	34.8	29.6	27.1	32.3	27.1	40.7	36.0
Feb 7	33.5	37.9	S	36.9	38.4	39.4	40.4	41.6	42.1	42.6	44.7	44.7	44.8	43.6	43.7	43.9	42.9	41.9	41.5	38	34.1	36	19.9	9.6	9.6	44.8	38.4
Feb 8	5.9	S	3.5	4.8	12.1	10.7	13.9	9	10.1	13.3	17.9	23.9	32.8	34.4	38.2	39.7	39.3	35.8	36.8	38.6	38.2	36	27.9	25.6	3.5	39.7	23.8
Feb 9	S	21.4	24.1	23.4	22.1	19.4	18	11.4	13.7	12.7	20.6	33.7	35.2	38.9	39.9	38.9	43.4	41.7	40.2	38.9	37.5	35.7	34.4	S	11.4	43.4	29.3
Feb 10	33	30.2	28.1	32.8	31.8	27.4	27.4	30.2	28.9	30.3	30.3	30	29	27.7	26.7	27.9	29.1	32.5	38.5	37.5	37.1	35.1	S	36.5	26.7	38.5	31.2
Feb 11	36.1	35.4	32.7	28.5	30.7	37.4	38.4	38.7	39.2	39.3	38.9	40.2	39.5	37.5	37.2	38	41.9	44.2	42.3	41.9	42.6	S	42.3	41.5	28.5	44.2	38.5
Feb 12	42.1	43.3	44.2	44.1	44.9	45.6	45.3	44.3	44	44	43.4	43.1	43	42.3	41.4	40.5	38.5	38.5	40.2	39.5	S	39.1	36.8	38.4	36.8	45.6	**42.0**
Feb 13	34.8	30.4	37.1	36.9	32.7	30.8	32.2	40.6	43.1	42	41	42.7	42	41.9	40.8	35.2	30.6	34	38.2	S	41.8	42.9	43	42.5	30.4	43.1	38.1
Feb 14	42.1	40.6	39.9	38.1	36.9	35.3	34.6	34.7	35	36.2	37.3	36.2	35.4	34.4	35	34.4	33.9	33.9	S	31.6	31.9	29.9	34.1	33.4	29.9	42.1	35.4
Feb 15	34.6	35.7	33.1	33.6	33.3	32.8	32.2	32	33.7	34.7	34.9	35.5	35.3	35.5	35.1	35.4	34.6	S	32.6	33.6	33.9	34.1	34.6	34.6	32.0	35.7	34.1
Feb 16	34.3	33.4	32.5	32.3	32	31.8	31.5	31.2	30.3	31.3	35.5	35.8	36.8	37.5	37.5	36.7	S	34.8	33.3	33.5	31.3	32.6	32.1	31.1	30.3	37.5	33.4
Feb 17	28.7	27.6	27.1	29.1	36.1	33.9	31.9	35.4	35	34.4	36.2	35.2	36.1	36.7	38.5	S	42.1	39.6	32.6	32.9	38	32.7	24.1	26.5	24.1	42.1	33.5
Feb 18	31.4	28.7	29.3	30	30.4	30.2	30.8	31	30.9	31	31.1	31.4	31.7	31.4	S	31.2	32.5	32.6	31.4	29.8	29.8	30.2	29.4	29.4	28.7	32.6	30.7
Feb 19	33	34.3	35.1	36.4	36.8	38.6	34.1	36.8	36.2	34.7	34.4	34.1	34.3	S	34.6	34.6	33.8	32.2	29.2	20.9	21.7	20.8	29	32.9	20.8	38.6	32.5
Feb 20	34.8	36.5	36.8	35.6	34	33.4	30.6	29.1	27.9	28.3	30.2	30.9	S	31.1	32.7	32.4	30.4	29	30.4	33	34.5	33.5	31.6	30	27.9	36.8	32.0
Feb 21	30.3	32	34.9	33.2	32.7	30	23.5	20.8	21.8	31.5	34.3	S	34	33.9	33.7	35.7	34.8	33.5	31.6	31.8	32.7	33.5	33.8	33.6	20.8	35.7	31.6
Feb 22	33	32.3	32.2	31	30.1	29.1	25.4	21.4	21.9	30.3	S	39	40.1	40.2	41	36.5	32.9	31.2	24.5	23.6	24	20.6	20.8	18.7	18.7	41.0	29.6
Feb 23	15.7	13.5	14	6.5	10	26.2	21.7	16.5	16.4	S	27.5	34.9	41.6	43.5	43.8	43.9	43.9	38.4	33.3	30.7	29.9	27.8	25.1	24.6	6.5	43.9	27.4
Feb 24	22.2	21.1	21.7	21.5	20.2	16.9	14.8	12	S	33.4	36.9	38.4	39.3	38.6	39.2	38.8	38.4	37.3	36.1	35.2	35.8	35.8	35.8	35.5	12.0	39.3	30.6
Feb 25	34.5	32.8	31.2	29.9	28	29.2	28.1	S	29.3	35	37.3	37.4	39.2	40	42.4	42.1	39.8	41.3	37.1	35.3	39.3	40.5	35.6	28.3	28.0	42.4	35.4
Feb 26	21.7	24.4	32	39.3	40.1	38.9	S	39.6	41.2	42	43.5	44.3	45.3	46.4	**46.6**	46.3	45.8	43.5	43.2	42.7	42.3	42.3	42.8	39.8	21.7	**46.6**	40.6
Feb 27	38.1	37.4	38.4	35.8	34.4	S	35.4	36.3	35.5	38	38.9	37.7	37	37.7	38.2	38.7	39	39.8	40.4	39.4	36.3	37.8	37.3	33.3	33.3	40.4	37.4
Feb 28	33.5	30.5	29.3	35	S	32.7	32.9	33.1	32.9	33.2	36.5	37.2	37.7	38.2	38.4	38.6	38	36.4	29.3	25.6	22.5	16.9	14.2	31.8	14.2	38.6	31.9
Diurnal Maximum	42.1	43.3	44.2	44.1	44.9	45.6	45.3	44.3	44.0	44.0	44.7	44.7	45.3	46.4	46.6	46.3	45.8	44.2	43.2	42.7	42.6	42.9	43.0	42.5			
Diurnal Average	29.3	29.2	28.1	28.3	29.5	29.7	27.5	28.6	29.5	33.1	34.6	35.8	36.8	36.7	37.3	36.7	36.1	35.5	33.8	32.5	32.1	31.0	29.6	30.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



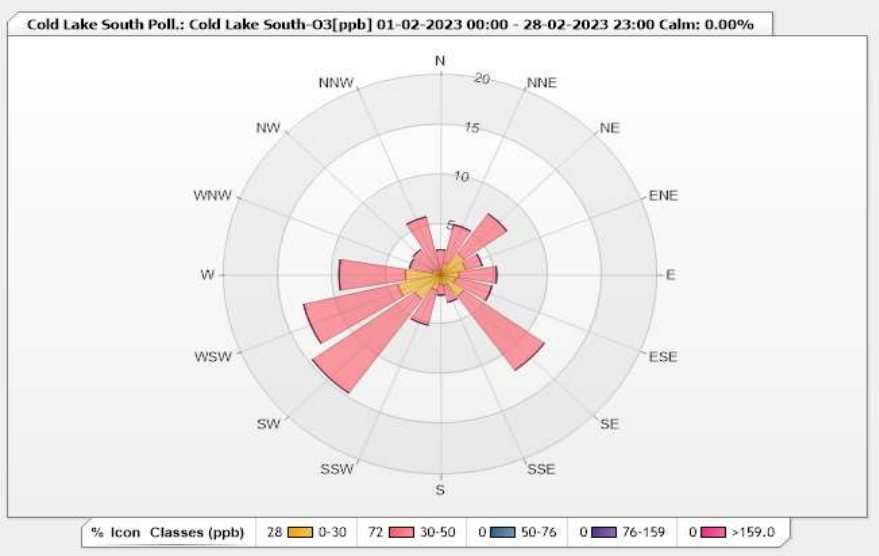


Station: Cold Lake South Poll.: Cold Lake South-O3[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.94% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	0.47	2.04	0	0	0	2.51
NNE	1.25	3.92	0	0	0	5.17
NE	2.66	4.86	0	0	0	7.52
ENE	2.35	1.57	0	0	0	3.92
E	1.72	3.45	0	0	0	5.17
ESE	1.41	3.45	0	0	0	4.86
SE	2.66	9.09	0	0	0	11.75
SSE	1.1	1.72	0	0	0	2.82
S	0.94	1.1	0	0	0	2.04
SSW	1.57	3.61	0	0	0	5.18
SW	2.98	11.6	0	0	0	14.58
WSW	4.08	8.93	0	0	0	13.01
W	3.29	6.11	0	0	0	9.4
WNW	0.78	2.19	0	0	0	2.97
NW	0.63	2.51	0	0	0	3.14
NNW	0.16	5.8	0	0	0	5.96
Summary	28.05	71.95	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

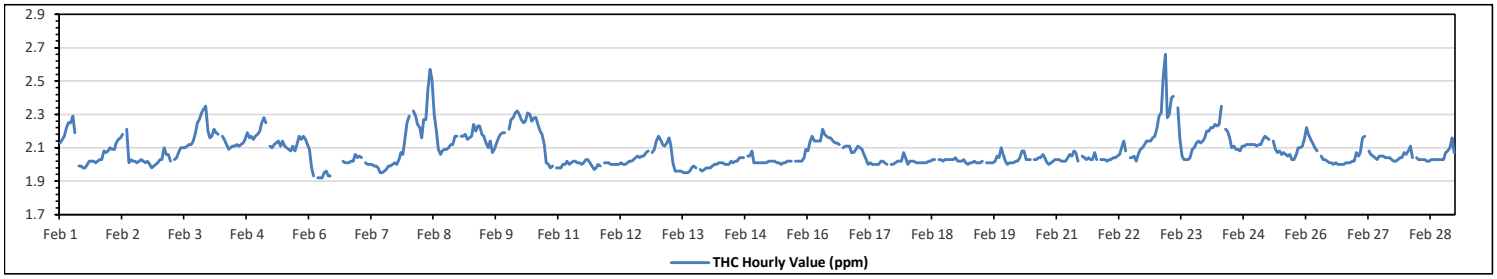
TOTAL HYDROCARBONS (THC) in ppm

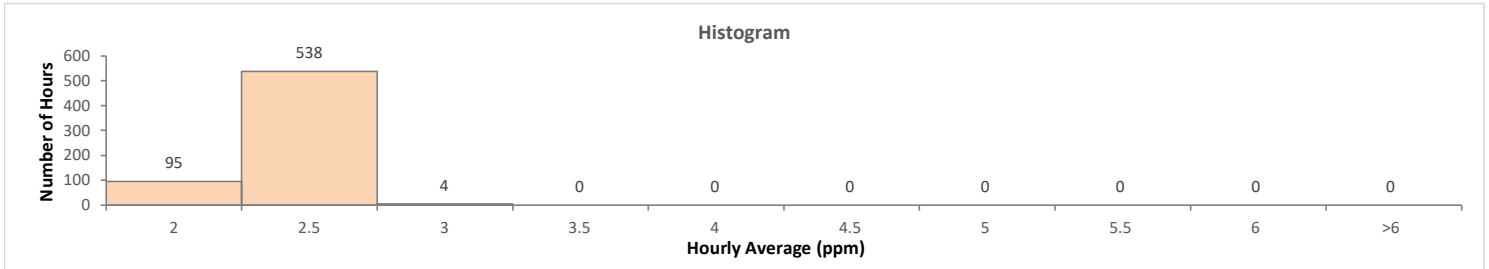
Maximum Hourly Value:	2.66	ppm	on Feb 23 at hr 4	Hours in Service:	672
Maximum Daily Value:	2.22	ppm	on Feb 8	Hours of Data:	637
Minimum Hourly Value:	1.92	ppm	on Feb 6 at hr 4	Hours of Missing Data:	1
Minimum Daily Value:	1.98	ppm	on Feb 6	Hours of Calibration:	34
Monthly Average:	2.08	ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	2.13	2.15	2.17	2.22	2.25	2.25	2.29	2.19	S	1.99	1.99	1.98	1.98	2.00	2.02	2.02	2.02	2.01	2.02	2.03	2.03	2.08	2.07	2.08	1.98	2.29	2.09
Feb 2	2.10	2.09	2.09	2.13	2.15	2.16	2.18	S	2.21	2.01	2.03	2.02	2.02	2.01	2.02	2.03	2.02	2.01	2.02	2.00	1.98	1.99	2.00	2.01	1.98	2.21	2.06
Feb 3	2.03	2.03	2.10	2.06	2.06	2.02	S	2.03	2.04	2.07	2.10	2.10	2.10	2.11	2.12	2.12	2.14	2.18	2.25	2.27	2.31	2.33	2.35	2.20	2.02	2.35	2.14
Feb 4	2.16	2.17	2.21	2.19	2.18	S	2.17	2.15	2.12	2.09	2.10	2.11	2.11	2.12	2.11	2.12	2.13	2.15	2.19	2.16	2.17	2.15	2.17	2.18	2.09	2.21	2.15
Feb 5	2.20	2.25	2.28	2.25	S	2.11	2.10	2.12	2.13	2.14	2.11	2.14	2.11	2.10	2.09	2.08	2.11	2.08	2.12	2.17	2.15	2.17	2.15	2.12	2.08	2.28	2.14
Feb 6	2.09	1.98	1.93	S	1.92	1.92	1.92	1.95	1.96	1.93	1.93	C	C	C	C	C	2.02	2.01	2.01	2.01	2.02	2.02	2.06	2.04	1.92	2.09	1.98
Feb 7	2.05	2.04	S	2.01	2.00	2.00	2.00	1.99	1.99	1.98	1.95	1.95	1.96	1.97	1.99	1.99	2.00	2.01	2.00	2.03	2.07	2.06	2.16	2.25	1.95	2.25	2.02
Feb 8	2.29	S	2.32	2.29	2.24	2.22	2.16	2.27	2.27	2.44	2.57	2.51	2.30	2.20	2.09	2.06	2.08	2.09	2.09	2.10	2.12	2.12	2.17	2.17	2.06	2.57	**2.22**
Feb 9	S	2.17	2.17	2.18	2.15	2.16	2.17	2.24	2.20	2.23	2.23	2.18	2.17	2.13	2.10	2.14	2.07	2.09	2.13	2.16	2.18	2.19	2.19	S	2.07	2.24	2.17
Feb 10	2.21	2.27	2.28	2.31	2.32	2.30	2.27	2.25	2.26	2.31	2.30	2.26	2.28	2.28	2.24	2.20	2.18	2.12	2.01	2.00	1.98	1.99	S	1.98	1.98	2.32	2.20
Feb 11	1.98	1.98	2.00	2.00	2.02	2.00	2.01	2.02	2.02	2.01	2.01	2.00	2.01	2.03	2.03	2.01	1.99	1.97	1.98	2.00	1.99	S	2.01	2.01	1.97	2.03	2.00
Feb 12	2.01	2.00	2.00	2.00	2.00	2.00	2.01	2.00	2.00	2.01	2.02	2.02	2.03	2.04	2.05	2.04	2.05	2.05	2.07	2.08	S	2.07	2.09	2.14	2.00	2.14	2.03
Feb 13	2.17	2.15	2.12	2.11	2.13	2.16	2.12	2.01	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.98	1.99	1.98	S	1.97	1.96	1.97	1.98	1.95	2.17	2.02
Feb 14	1.98	1.98	1.99	2.00	2.00	2.01	2.01	2.01	2.00	2.00	2.00	2.02	2.01	2.02	2.02	2.04	2.04	2.04	S	2.05	2.05	2.08	2.01	2.01	1.98	2.08	2.02
Feb 15	2.01	2.01	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.01	2.01	2.00	2.01	2.01	2.02	2.02	2.02	S	2.02	2.02	2.02	2.02	2.04	2.09	2.00	2.09	2.02
Feb 16	2.08	2.14	2.17	2.14	2.14	2.14	2.14	2.21	2.18	2.17	2.16	2.16	2.14	2.13	2.13	2.12	S	2.10	2.11	2.11	2.11	2.07	2.07	2.09	2.07	2.21	2.13
Feb 17	2.11	2.10	2.09	2.06	2.03	2.00	2.01	2.00	2.00	2.00	2.00	2.02	2.02	2.01	2.00	S	2.00	2.00	2.01	2.02	2.02	2.02	2.07	2.04	2.00	2.11	2.03
Feb 18	2.00	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.02	2.03	2.03	S	2.03	2.03	2.02	2.03	2.03	2.03	2.03	2.03	2.04	2.00	2.04	2.02
Feb 19	2.02	2.02	2.02	2.03	2.01	2.00	2.01	2.01	2.02	2.01	2.01	2.01	2.02	S	2.01	2.01	2.01	2.01	2.02	2.05	2.04	2.10	2.06	2.02	2.00	2.10	2.02
Feb 20	2.00	2.01	2.01	2.01	2.02	2.02	2.04	2.08	2.08	2.03	2.03	2.03	S	2.03	2.03	2.04	2.04	2.06	2.04	2.01	2.00	2.01	2.02	2.03	2.00	2.08	2.03
Feb 21	2.03	2.03	2.02	2.02	2.02	2.04	2.06	2.05	2.08	2.07	2.02	S	2.05	2.04	2.03	2.04	2.03	2.03	2.07	2.03	NRM	2.03	2.03	2.03	2.02	2.08	2.04
Feb 22	2.02	2.03	2.03	2.04	2.04	2.05	2.06	2.10	2.14	2.08	S	2.04	2.04	2.05	2.02	2.06	2.09	2.10	2.12	2.14	2.14	2.14	2.16	2.17	2.02	2.17	2.08
Feb 23	2.22	2.29	2.31	2.52	**2.66**	2.28	2.30	2.40	2.41	S	2.34	2.16	2.05	2.03	2.03	2.03	2.04	2.09	2.10	2.13	2.14	2.13	2.14	2.16	2.03	**2.66**	2.22
Feb 24	2.20	2.20	2.22	2.22	2.24	2.23	2.24	2.35	S	2.21	2.20	2.16	2.10	2.11	2.09	2.09	2.08	2.11	2.11	2.12	2.12	2.12	2.12	2.12	2.08	2.35	2.16
Feb 25	2.11	2.12	2.12	2.15	2.17	2.16	2.15	S	2.14	2.09	2.07	2.08	2.06	2.07	2.06	2.05	2.06	2.03	2.03	2.06	2.10	2.10	2.11	2.15	2.03	2.17	2.10
Feb 26	2.22	2.18	2.15	2.13	2.10	2.08	S	2.05	2.03	2.03	2.02	2.01	2.01	2.00	2.01	2.00	2.00	2.00	2.00	2.01	2.01	2.01	2.02	2.02	2.00	2.22	2.05
Feb 27	2.07	2.05	2.07	2.16	2.17	S	2.08	2.06	2.05	2.04	2.03	2.05	2.05	2.05	2.04	2.04	2.04	2.03	2.02	2.02	2.03	2.04	2.04	2.07	2.02	2.17	2.06
Feb 28	2.06	2.08	2.11	2.04	S	2.04	2.03	2.03	2.03	2.03	2.02	2.02	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.07	2.08	2.10	2.16	2.07	2.02	2.16	2.05
Diurnal Maximum	2.29	2.29	2.32	2.52	2.66	2.30	2.30	2.40	2.41	2.44	2.57	2.51	2.30	2.28	2.24	2.20	2.18	2.18	2.25	2.27	2.31	2.33	2.35	2.25			
Diurnal Average	2.09	2.09	2.11	2.12	2.12	2.09	2.10	2.10	2.09	2.07	2.08	2.08	2.06	2.06	2.05	2.05	2.05	2.05	2.06	2.07	2.07	2.08	2.09	2.08			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



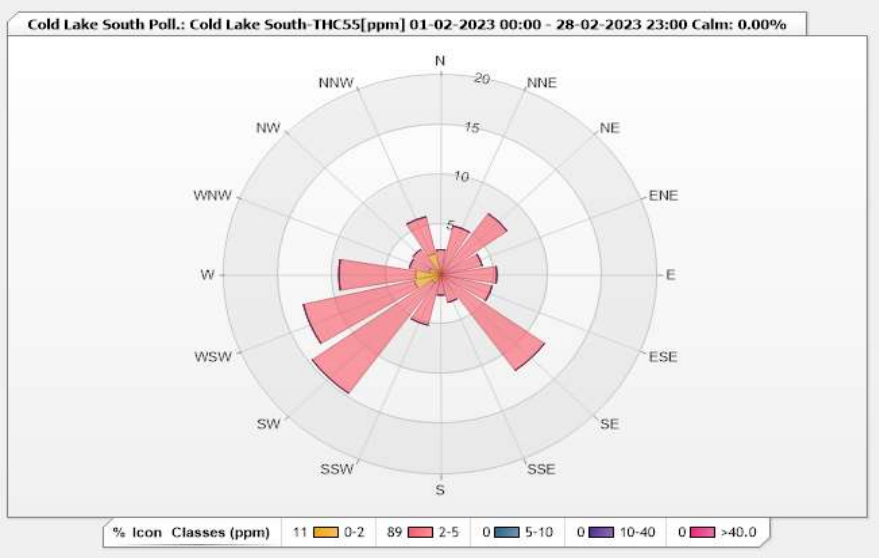


Station: Cold Lake South Poll.: Cold Lake South-THC55[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.79% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0.31	2.2	0	0	0	2.51
NNE	0.16	4.87	0	0	0	5.03
NE	0	7.54	0	0	0	7.54
ENE	0	3.92	0	0	0	3.92
E	0.16	5.02	0	0	0	5.18
ESE	0	4.87	0	0	0	4.87
SE	0.63	11.15	0	0	0	11.78
SSE	0	2.83	0	0	0	2.83
S	0	2.04	0	0	0	2.04
SSW	0	5.18	0	0	0	5.18
SW	0.94	13.66	0	0	0	14.6
WSW	2.51	10.52	0	0	0	13.03
W	2.35	7.06	0	0	0	9.41
WNW	1.1	1.88	0	0	0	2.98
NW	0.31	2.83	0	0	0	3.14
NNW	2.2	3.77	0	0	0	5.97
Summary	10.67	89.34	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

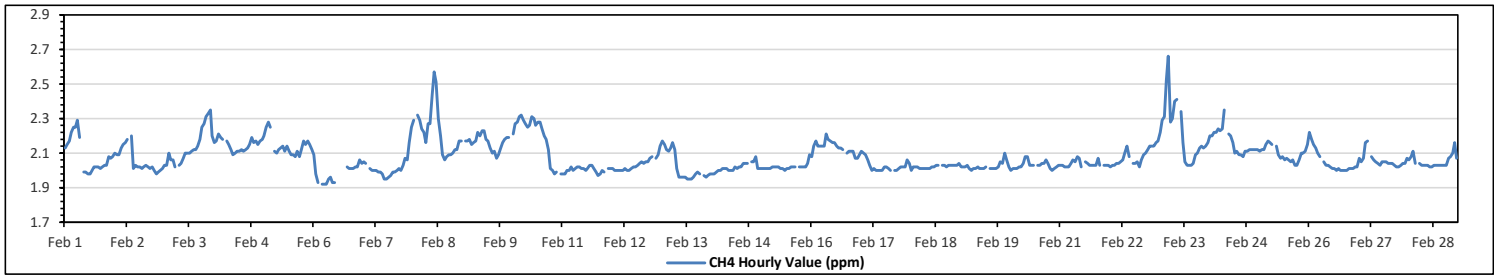
METHANE (CH4) in ppm

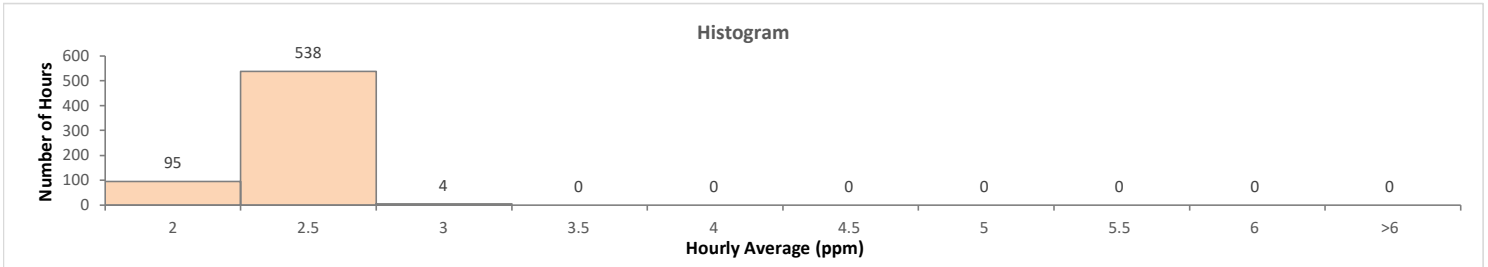
Maximum Hourly Value:	2.66	ppm	on Feb 23 at hr 4	Hours in Service:	672
Maximum Daily Value:	2.22	ppm	on Feb 8	Hours of Data:	637
Minimum Hourly Value:	1.92	ppm	on Feb 6 at hr 4	Hours of Missing Data:	1
Minimum Daily Value:	1.98	ppm	on Feb 6	Hours of Calibration:	34
Monthly Average:	2.08	ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	2.13	2.15	2.17	2.22	2.25	2.25	2.29	2.19	S	1.99	1.99	1.98	1.98	2.00	2.02	2.02	2.02	2.01	2.02	2.03	2.03	2.08	2.07	2.08	1.98	2.29	2.09
Feb 2	2.10	2.09	2.09	2.13	2.15	2.16	2.18	S	2.20	2.01	2.03	2.02	2.02	2.01	2.02	2.03	2.02	2.01	2.02	2.00	1.98	1.99	2.00	2.01	1.98	2.20	2.06
Feb 3	2.03	2.03	2.10	2.06	2.06	2.02	S	2.03	2.04	2.07	2.10	2.10	2.10	2.11	2.12	2.12	2.14	2.18	2.25	2.27	2.31	2.33	2.35	2.20	2.02	2.35	2.14
Feb 4	2.16	2.17	2.21	2.19	2.18	S	2.17	2.15	2.12	2.09	2.10	2.11	2.11	2.12	2.11	2.12	2.13	2.15	2.19	2.16	2.17	2.15	2.17	2.18	2.09	2.21	2.15
Feb 5	2.20	2.25	2.28	2.25	S	2.11	2.10	2.12	2.13	2.14	2.11	2.14	2.11	2.09	2.09	2.08	2.11	2.08	2.12	2.17	2.15	2.17	2.15	2.12	2.08	2.28	2.14
Feb 6	2.09	1.98	1.93	S	1.92	1.92	1.92	1.95	1.96	1.93	1.93	C	C	C	C	C	2.02	2.01	2.01	2.01	2.02	2.02	2.06	2.04	1.92	2.09	1.98
Feb 7	2.05	2.04	S	2.01	2.00	2.00	2.00	1.99	1.99	1.98	1.95	1.95	1.96	1.97	1.99	1.99	2.00	2.01	2.00	2.03	2.07	2.06	2.16	2.25	1.95	2.25	2.02
Feb 8	2.29	S	2.32	2.29	2.24	2.22	2.16	2.27	2.27	2.44	2.57	2.51	2.30	2.20	2.09	2.06	2.08	2.09	2.09	2.10	2.12	2.12	2.17	2.17	2.06	2.57	**2.22**
Feb 9	S	2.17	2.17	2.18	2.15	2.16	2.17	2.22	2.20	2.23	2.23	2.18	2.17	2.13	2.10	2.11	2.07	2.09	2.13	2.16	2.18	2.19	2.19	S	2.07	2.23	2.16
Feb 10	2.21	2.27	2.28	2.31	2.32	2.29	2.27	2.25	2.26	2.31	2.30	2.26	2.28	2.28	2.24	2.20	2.18	2.12	2.01	2.00	1.98	1.99	S	1.98	1.98	2.32	2.20
Feb 11	1.98	1.98	2.00	2.00	2.02	2.00	2.01	2.02	2.02	2.01	2.01	2.00	2.01	2.03	2.03	2.01	1.99	1.97	1.98	2.00	1.99	S	2.01	2.01	1.97	2.03	2.00
Feb 12	2.01	2.00	2.00	2.00	2.00	2.00	2.01	2.00	2.00	2.01	2.02	2.02	2.03	2.04	2.05	2.04	2.05	2.05	2.07	2.08	S	2.07	2.09	2.14	2.00	2.14	2.03
Feb 13	2.17	2.15	2.12	2.11	2.13	2.16	2.12	2.01	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.98	1.99	1.98	S	1.97	1.96	1.97	1.98	1.95	2.17	2.02
Feb 14	1.98	1.98	1.99	2.00	2.00	2.01	2.01	2.01	2.00	2.00	2.00	2.02	2.01	2.02	2.02	2.04	2.04	2.04	S	2.05	2.05	2.08	2.01	2.01	1.98	2.08	2.02
Feb 15	2.01	2.01	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.01	2.01	2.00	2.01	2.01	2.02	2.02	2.02	S	2.02	2.02	2.02	2.02	2.04	2.09	2.00	2.09	2.02
Feb 16	2.08	2.14	2.17	2.14	2.14	2.14	2.14	2.21	2.18	2.17	2.16	2.16	2.14	2.13	2.13	2.12	S	2.10	2.11	2.11	2.11	2.07	2.07	2.09	2.07	2.21	2.13
Feb 17	2.11	2.10	2.09	2.06	2.03	2.00	2.01	2.00	2.00	2.00	2.00	2.02	2.02	2.01	2.00	S	2.00	2.00	2.01	2.02	2.02	2.02	2.06	2.04	2.00	2.11	2.03
Feb 18	2.00	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.02	2.03	2.03	S	2.03	2.03	2.02	2.03	2.03	2.03	2.03	2.03	2.04	2.00	2.04	2.02
Feb 19	2.02	2.02	2.02	2.03	2.01	2.00	2.01	2.01	2.02	2.01	2.01	2.01	2.02	S	2.01	2.01	2.01	2.01	2.02	2.05	2.04	2.10	2.06	2.02	2.00	2.10	2.02
Feb 20	2.00	2.01	2.01	2.01	2.02	2.02	2.04	2.08	2.08	2.03	2.03	2.03	S	2.03	2.03	2.04	2.04	2.06	2.04	2.01	2.00	2.01	2.02	2.03	2.00	2.08	2.03
Feb 21	2.03	2.03	2.02	2.02	2.02	2.04	2.06	2.05	2.08	2.07	2.02	S	2.05	2.04	2.03	2.03	2.03	2.03	2.07	2.03	NRM	2.03	2.03	2.03	2.02	2.08	2.04
Feb 22	2.02	2.03	2.03	2.04	2.04	2.05	2.06	2.10	2.14	2.08	S	2.04	2.04	2.05	2.02	2.06	2.09	2.10	2.12	2.14	2.14	2.14	2.16	2.17	2.02	2.17	2.08
Feb 23	2.22	2.29	2.31	2.52	**2.66**	2.28	2.30	2.40	2.41	S	2.34	2.16	2.05	2.03	2.03	2.03	2.04	2.09	2.10	2.13	2.14	2.13	2.14	2.16	2.03	**2.66**	2.22
Feb 24	2.20	2.20	2.22	2.22	2.24	2.23	2.24	2.35	S	2.21	2.20	2.16	2.10	2.11	2.09	2.09	2.08	2.11	2.11	2.12	2.12	2.12	2.12	2.12	2.08	2.35	2.16
Feb 25	2.11	2.12	2.12	2.15	2.17	2.16	2.15	S	2.14	2.09	2.07	2.08	2.06	2.07	2.06	2.05	2.06	2.03	2.03	2.06	2.10	2.10	2.11	2.15	2.03	2.17	2.10
Feb 26	2.22	2.18	2.15	2.13	2.10	2.08	S	2.05	2.03	2.03	2.02	2.01	2.01	2.00	2.01	2.00	2.00	2.00	2.00	2.01	2.01	2.01	2.02	2.02	2.00	2.22	2.05
Feb 27	2.07	2.05	2.07	2.16	2.17	S	2.08	2.06	2.05	2.04	2.03	2.05	2.05	2.05	2.04	2.04	2.04	2.03	2.02	2.02	2.03	2.04	2.04	2.07	2.02	2.17	2.06
Feb 28	2.06	2.08	2.11	2.04	S	2.04	2.03	2.03	2.03	2.03	2.02	2.02	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.07	2.08	2.10	2.16	2.07	2.02	2.16	2.05
Diurnal Maximum	2.29	2.29	2.32	2.52	2.66	2.29	2.30	2.40	2.41	2.44	2.57	2.51	2.30	2.28	2.24	2.20	2.18	2.18	2.25	2.27	2.31	2.33	2.35	2.25			
Diurnal Average	2.09	2.09	2.11	2.12	2.12	2.09	2.10	2.10	2.09	2.07	2.08	2.08	2.06	2.06	2.05	2.05	2.05	2.05	2.06	2.07	2.07	2.08	2.09	2.08			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



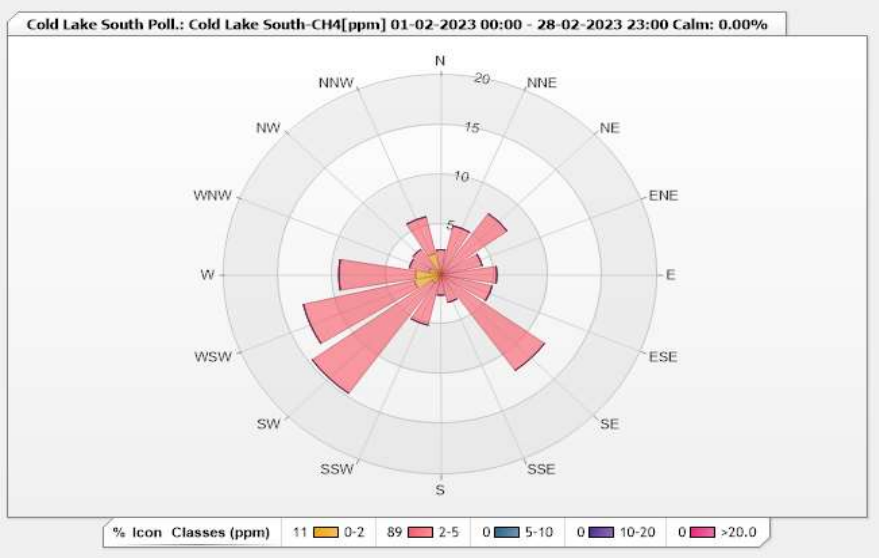


Station: Cold Lake South Poll.: Cold Lake South-CH4[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.79% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0.31	2.2	0	0	0	2.51
NNE	0.16	4.87	0	0	0	5.03
NE	0	7.54	0	0	0	7.54
ENE	0	3.92	0	0	0	3.92
E	0.16	5.02	0	0	0	5.18
ESE	0	4.87	0	0	0	4.87
SE	0.63	11.15	0	0	0	11.78
SSE	0	2.83	0	0	0	2.83
S	0	2.04	0	0	0	2.04
SSW	0	5.18	0	0	0	5.18
SW	0.94	13.66	0	0	0	14.6
WSW	2.51	10.52	0	0	0	13.03
W	2.35	7.06	0	0	0	9.41
WNW	1.1	1.88	0	0	0	2.98
NW	0.31	2.83	0	0	0	3.14
NNW	2.2	3.77	0	0	0	5.97
Summary	10.67	89.34	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

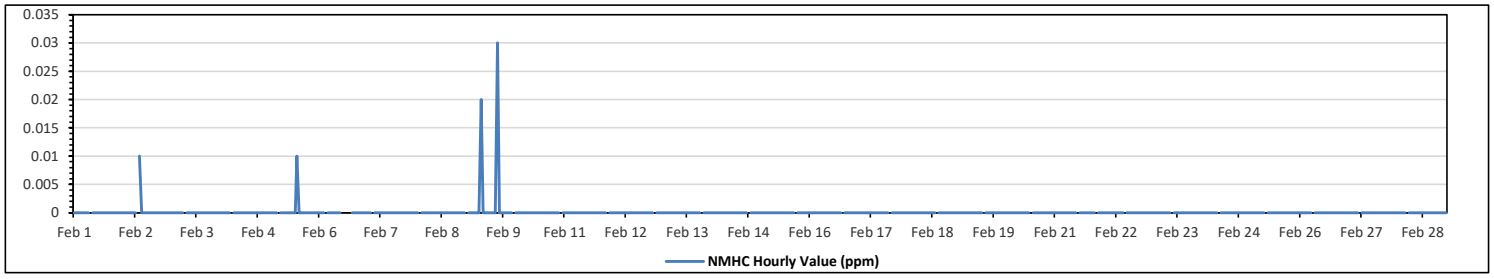
NON-METHANE HYDROCARBONS (NMHC) in ppm

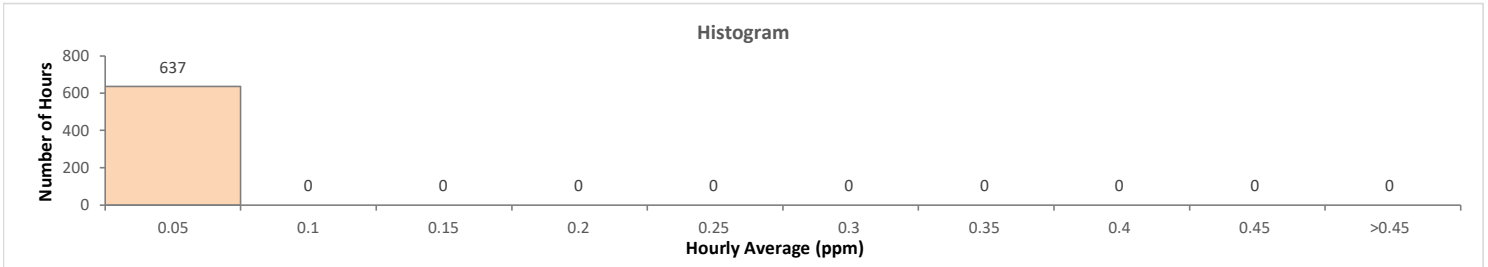
Maximum Hourly Value:	0.03	ppm	on Feb 9 at hr 15	Hours in Service:	672
Maximum Daily Value:	0.00	ppm	on Feb 9	Hours of Data:	637
Minimum Hourly Value:	0.00	ppm	on Feb 1 at hr 0	Hours of Missing Data:	1
Minimum Daily Value:	0.00	ppm	on Feb 1	Hours of Calibration:	34
Monthly Average:	0.00	ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Feb 3	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 4	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 5	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Feb 6	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	C	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 7	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 8	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 9	S	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.03	0.00
Feb 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00
Feb 11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Feb 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00
Feb 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NRM	0.00	0.00	0.00	0.00	0.00	0.00
Feb 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 26	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 27	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 28	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Diurnal Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



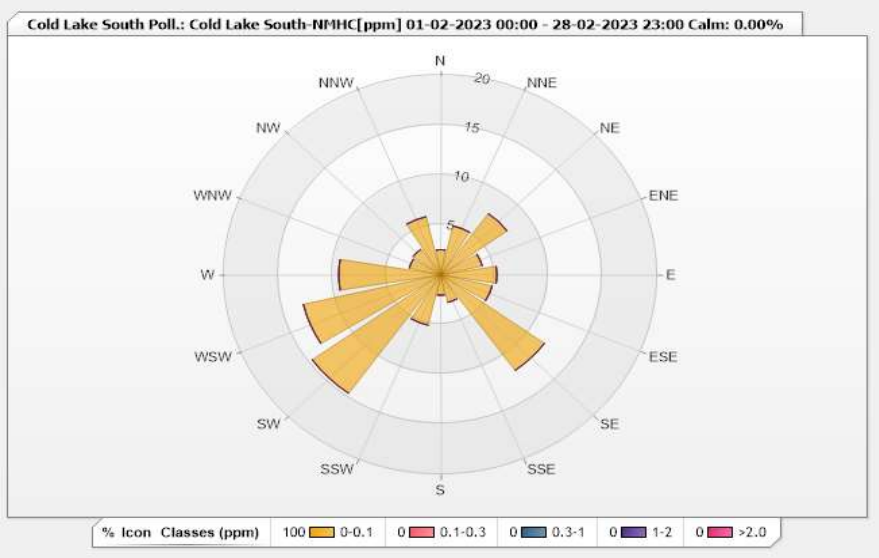


Station: Cold Lake South Poll.: Cold Lake South-NMHC[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.79% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	2.51	0	0	0	0	2.51
NNE	5.02	0	0	0	0	5.02
NE	7.54	0	0	0	0	7.54
ENE	3.92	0	0	0	0	3.92
E	5.18	0	0	0	0	5.18
ESE	4.87	0	0	0	0	4.87
SE	11.77	0	0	0	0	11.77
SSE	2.83	0	0	0	0	2.83
S	2.04	0	0	0	0	2.04
SSW	5.18	0	0	0	0	5.18
SW	14.6	0	0	0	0	14.6
WSW	13.03	0	0	0	0	13.03
W	9.42	0	0	0	0	9.42
WNW	2.98	0	0	0	0	2.98
NW	3.14	0	0	0	0	3.14
NNW	5.97	0	0	0	0	5.97
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

PARTICULATE MATTER 2.5 ($PM_{2.5}$) in µg/m^3

Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m3, Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m3

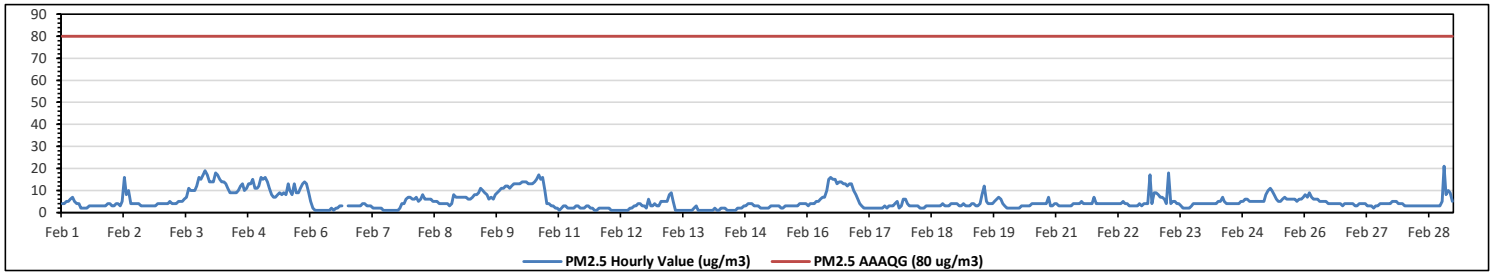
Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0

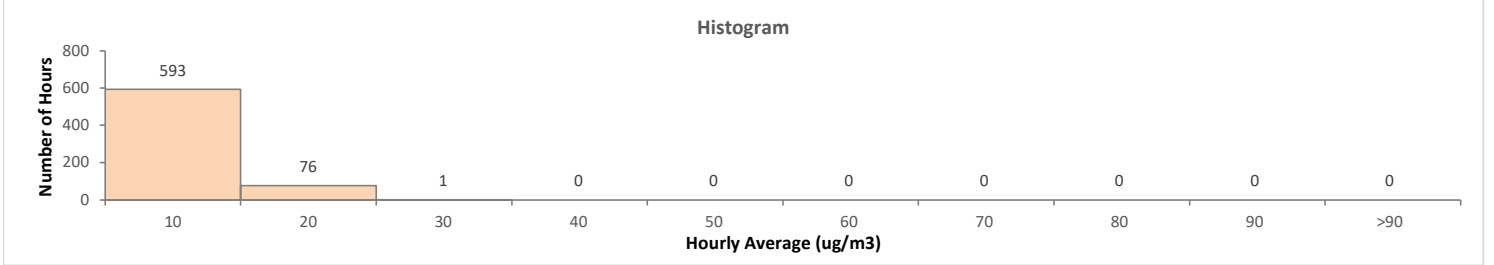
Maximum Hourly Value:	21	µg/m^3 on Feb 28 at hr 19	Hours in Service:	672
Maximum Daily Value:	12.4	µg/m^3 on Feb 4	Hours of Data:	670
Minimum Hourly Value:	1	µg/m^3 on Feb 6 at hr 2	Hours of Missing Data:	0
Minimum Daily Value:	2	µg/m^3 on Feb 14	Hours of Calibration:	2
Monthly Average:	5.1	µg/m^3	Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	4	4	5	5	6	7	5	4	4	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	2	7	3.6
Feb 2	3	3	4	4	3	5	16	8	10	4	4	4	4	4	3	3	3	3	3	3	3	3	4	4	3	16	4.5
Feb 3	4	4	4	4	5	4	4	4	5	5	5	6	7	11	10	10	10	12	16	15	17	19	17	14	4	19	8.8
Feb 4	14	14	18	17	15	14	14	13	11	9	9	9	9	10	12	13	10	11	13	13	15	11	11	12	9	18	**12.4**
Feb 5	16	15	16	14	11	8	7	7	8	9	8	9	8	13	10	8	13	9	9	11	13	14	13	9	7	16	10.8
Feb 6	5	2	1	1	1	1	1	1	1	1	2	1	2	2	3	3	C	C	3	3	3	3	3	3	**1**	5	2.1
Feb 7	3	4	4	3	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	2	4	4	6	7	**1**	7	2.5
Feb 8	7	6	6	7	5	6	8	6	6	6	6	5	5	5	4	4	4	4	4	3	4	8	7	7	3	8	5.5
Feb 9	7	7	7	7	6	6	7	8	8	9	11	10	9	8	6	7	6	8	9	10	11	11	12	12	6	12	8.4
Feb 10	11	12	13	13	13	13	14	14	14	13	13	13	14	15	17	15	16	10	4	4	3	3	2	2	2	17	10.9
Feb 11	1	2	3	3	2	2	2	2	3	3	2	2	2	3	3	2	2	1	1	2	2	2	2	2	**1**	3	2.1
Feb 12	2	1	1	1	1	1	1	1	1	1	2	2	3	3	4	4	3	3	2	6	3	3	4	3	**1**	6	2.3
Feb 13	3	5	5	5	5	8	9	5	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1	**1**	9	2.7
Feb 14	1	1	1	2	1	1	2	2	2	1	1	1	1	1	2	2	2	3	3	4	4	4	3	3	**1**	4	**2.0**
Feb 15	3	2	2	2	2	2	3	3	3	3	3	2	2	3	3	3	3	3	3	3	4	4	4	4	2	4	2.9
Feb 16	3	4	4	4	5	5	6	7	7	10	15	16	15	15	13	14	14	13	13	12	13	13	10	8	3	16	10.0
Feb 17	6	4	3	2	2	2	2	2	2	2	2	2	2	3	2	3	3	3	4	5	2	3	6	6	2	6	3.0
Feb 18	4	3	3	3	3	3	2	2	2	3	3	3	3	3	3	3	3	4	3	3	3	4	4	4	2	4	3.1
Feb 19	4	3	3	4	3	3	3	4	4	3	3	4	8	12	5	4	4	4	5	6	7	6	4	3	3	12	4.5
Feb 20	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4	4	4	7	3	3	4	2	7	3.3
Feb 21	4	3	3	3	3	3	3	3	4	4	4	4	5	4	4	4	4	4	7	4	4	4	4	4	3	7	3.9
Feb 22	4	4	4	4	4	4	4	4	5	4	4	3	3	3	3	3	4	3	4	4	4	17	4	9	3	17	4.5
Feb 23	9	8	7	7	6	4	18	4	5	5	4	4	3	2	2	2	2	3	4	4	4	4	4	4	2	18	5.0
Feb 24	4	4	4	4	4	4	5	5	7	5	4	4	4	4	4	4	4	5	5	6	6	5	5	5	4	7	4.6
Feb 25	5	5	5	5	5	8	10	11	10	8	6	5	5	6	7	6	6	6	6	6	5	6	6	7	5	11	6.5
Feb 26	8	7	9	7	6	6	6	5	5	5	5	4	4	4	4	4	4	4	3	4	4	4	4	4	3	9	5.0
Feb 27	3	3	4	4	4	4	3	3	3	2	3	3	4	4	4	4	4	4	5	5	5	4	4	4	2	5	3.8
Feb 28	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	**21**	8	10	9	5	3	**21**	4.7
Diurnal Maximum	16	15	18	17	15	14	18	14	14	13	15	16	15	15	17	15	16	13	16	21	17	19	17	14			
Diurnal Average	5.1	4.8	5.1	5.0	4.6	4.7	5.8	4.9	5.0	4.5	4.6	4.5	4.8	5.4	5.0	4.9	5.0	4.9	5.2	6.0	5.8	6.3	5.7	5.5			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



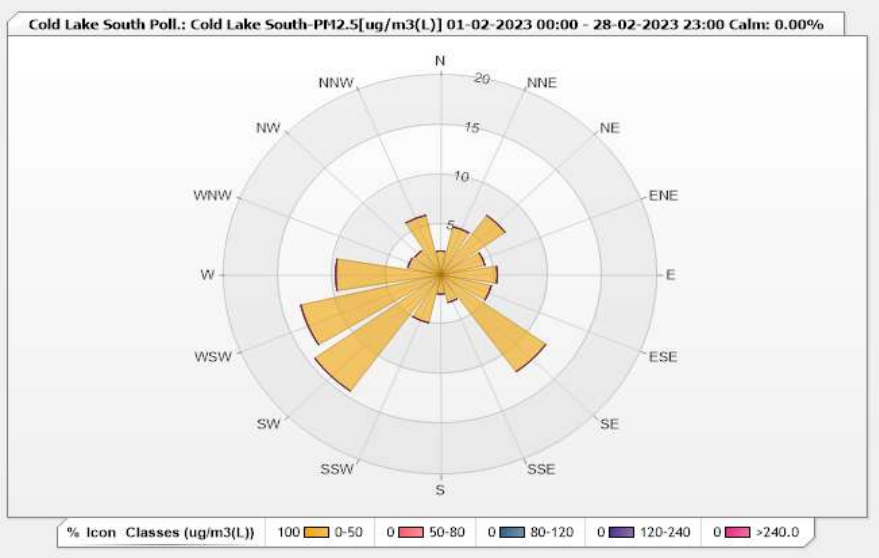


Station: Cold Lake South Poll.: Cold Lake South-PM2.5[ug/m3(L)] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 99.70% Calm Avg: 0.00 [ppm]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	2.39	0	0	0	0	2.39
NNE	4.93	0	0	0	0	4.93
NE	7.31	0	0	0	0	7.31
ENE	4.18	0	0	0	0	4.18
E	5.22	0	0	0	0	5.22
ESE	4.78	0	0	0	0	4.78
SE	11.94	0	0	0	0	11.94
SSE	2.84	0	0	0	0	2.84
S	1.94	0	0	0	0	1.94
SSW	4.93	0	0	0	0	4.93
SW	14.33	0	0	0	0	14.33
WSW	13.28	0	0	0	0	13.28
W	9.7	0	0	0	0	9.7
WNW	3.13	0	0	0	0	3.13
NW	2.99	0	0	0	0	2.99
NNW	6.12	0	0	0	0	6.12
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

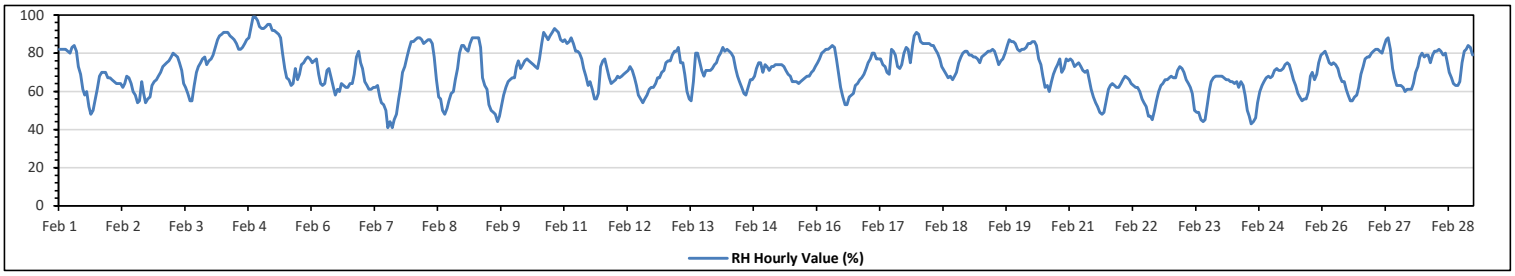
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	99	%	on Feb 4 at hr 20	Hours in Service:	672	
Maximum Daily Value:	88.2	%	on Feb 4	Hours of Data:	672	
Minimum Hourly Value:	41	%	on Feb 7 at hr 12	Hours of Missing Data:	0	
Minimum Daily Value:	59.8	%	on Feb 22	Hours of Calibration:	0	
Monthly Average:	70.9	%		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																						Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	82	82	82	82	81	80	83	84	81	73	69	61	58	60	52	48	50	56	61	68	70	70	70	67	48	84	69.6
Feb 2	67	66	65	64	64	64	62	64	68	67	64	60	58	54	55	65	59	54	56	57	63	65	66	68	54	68	62.3
Feb 3	70	73	74	75	76	78	80	79	78	75	71	64	62	59	55	55	63	70	73	75	77	78	74	76	55	80	71.3
Feb 4	77	79	83	87	89	90	91	91	91	89	88	87	85	82	82	83	85	87	88	94	**99**	**99**	97	94	77	**99**	**88.2**
Feb 5	93	93	94	95	95	92	92	91	90	88	80	72	67	66	63	64	72	66	69	74	75	77	78	77	63	95	80.1
Feb 6	75	76	77	69	64	63	64	71	72	67	62	58	61	60	64	63	62	62	64	64	69	78	81	75	58	81	67.5
Feb 7	72	65	63	61	61	62	62	63	57	54	53	50	**41**	44	**41**	45	48	56	62	70	73	78	82	86	**41**	86	60.4
Feb 8	86	87	88	88	87	85	86	87	87	85	78	66	57	56	50	48	51	55	59	60	66	72	80	84	48	88	72.8
Feb 9	84	82	81	85	88	88	88	88	83	67	63	61	53	50	49	48	44	47	53	58	62	65	66	67	44	88	67.5
Feb 10	67	73	76	72	74	76	77	76	75	74	73	72	77	85	91	89	87	89	91	93	92	91	87	86	67	93	81.0
Feb 11	87	85	86	88	85	81	81	80	77	72	68	63	65	61	56	56	59	73	76	77	72	67	64	65	56	88	72.7
Feb 12	66	68	67	68	69	70	71	73	71	67	63	58	56	54	56	58	61	62	62	64	67	67	70	71	54	73	65.0
Feb 13	75	76	76	79	81	81	83	75	75	69	60	56	55	65	80	80	76	71	68	71	71	71	72	74	55	83	72.5
Feb 14	75	78	80	83	81	82	81	80	78	72	68	65	62	59	58	62	66	66	68	72	75	75	70	74	58	83	72.1
Feb 15	73	71	73	73	74	74	74	74	73	71	69	68	65	65	65	64	65	66	67	68	68	70	71	73	64	74	69.8
Feb 16	75	77	80	81	82	82	83	84	83	77	69	62	57	53	53	57	58	59	63	64	66	67	69	72	53	84	69.7
Feb 17	75	77	80	80	77	77	77	74	73	70	69	82	81	79	73	72	74	80	83	82	75	84	89	91	69	91	78.1
Feb 18	90	86	85	85	85	85	84	84	82	80	77	73	71	69	67	68	66	68	70	75	78	80	81	81	66	90	77.9
Feb 19	79	79	78	78	77	75	78	79	80	81	81	82	81	78	74	76	77	80	84	87	86	86	85	82	74	87	80.1
Feb 20	81	82	82	83	85	85	86	86	84	77	74	68	62	63	60	65	69	72	74	77	70	72	77	76	60	86	75.4
Feb 21	77	76	73	74	75	73	71	70	71	66	61	57	54	52	49	48	49	55	61	63	64	63	62	62	48	77	63.6
Feb 22	64	66	68	67	66	64	63	62	62	60	56	54	52	47	47	45	50	55	60	63	64	66	66	67	45	68	**59.8**
Feb 23	68	67	67	71	73	72	70	66	64	62	59	50	49	49	45	44	45	53	61	65	67	68	68	68	44	73	61.3
Feb 24	68	67	66	66	65	65	64	65	62	65	63	58	50	47	43	44	46	54	60	63	65	67	68	67	43	68	60.3
Feb 25	68	71	72	71	71	72	74	75	74	70	66	63	59	57	55	56	56	60	68	70	66	69	75	79	55	79	67.4
Feb 26	80	81	78	75	74	75	74	72	68	65	65	61	58	55	55	57	58	62	69	73	77	78	78	80	55	81	69.5
Feb 27	81	82	82	81	80	84	87	88	82	72	67	63	63	63	62	60	61	61	61	64	70	73	78	80	60	88	72.7
Feb 28	78	79	79	75	79	81	81	82	81	79	80	76	70	67	64	63	63	65	75	81	82	84	83	79	63	84	76.1
Diurnal Maximum	93	93	94	95	95	92	92	91	91	89	88	87	85	85	91	89	87	89	91	94	99	99	97	94			
Diurnal Average	76.2	76.6	77.0	77.0	77.1	77.0	77.4	77.3	75.8	71.9	68.4	64.6	61.8	60.7	59.4	60.1	61.4	64.4	68.1	71.1	72.5	74.3	75.3	75.8			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

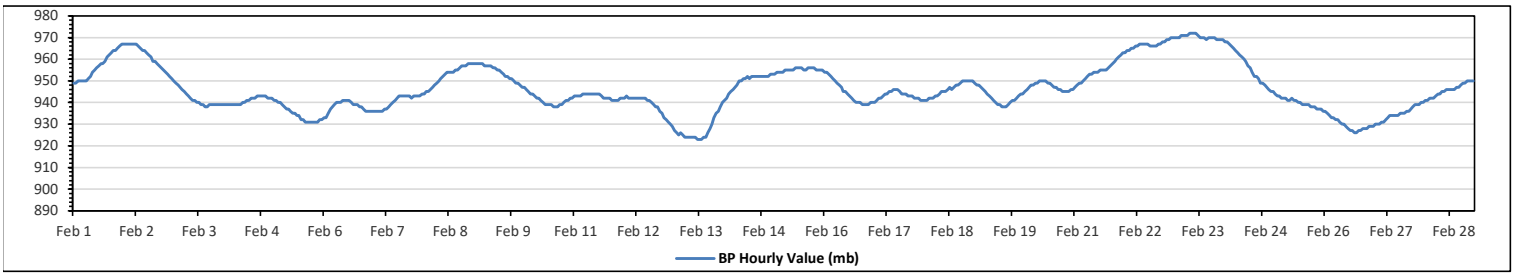
Maximum Hourly Value:	972 mb	on Feb 23 at hr 7	Hours in Service:	672		
Maximum Daily Value:	970 mb	on Feb 23	Hours of Data:	672		
Minimum Hourly Value:	923 mb	on Feb 13 at hr 11	Hours of Missing Data:	0		
Minimum Daily Value:	927 mb	on Feb 13	Hours of Calibration:	0		
Monthly Average:	946 mb		Operational Uptime:	100.0		

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	949	949	950	950	950	950	950	951	952	954	955	956	957	958	958	959	961	962	963	964	964	965	966	967	949	967	957
Feb 2	967	967	967	967	967	967	967	966	965	964	964	963	962	961	959	959	958	957	956	955	954	953	952	951	951	967	961
Feb 3	950	949	948	947	946	945	944	943	942	941	941	940	940	939	939	938	938	939	939	939	939	939	939	939	938	950	942
Feb 4	939	939	939	939	939	939	939	939	939	940	940	941	941	942	942	942	943	943	943	943	943	942	942	942	939	943	941
Feb 5	941	941	940	940	939	938	937	937	936	935	935	934	934	932	932	931	931	931	931	931	931	931	932	932	931	941	935
Feb 6	933	933	935	937	938	939	940	940	940	941	941	941	941	940	939	939	939	938	938	937	936	936	936	936	933	941	938
Feb 7	936	936	936	936	936	937	937	938	939	940	941	942	943	943	943	943	943	943	942	943	943	943	943	944	936	944	940
Feb 8	944	945	945	946	947	948	949	950	951	952	953	954	954	954	954	955	955	956	957	957	957	958	958	958	944	958	952
Feb 9	958	958	958	958	958	957	957	957	957	956	956	955	955	954	953	952	952	951	951	950	949	949	948	947	947	958	954
Feb 10	947	946	945	944	944	943	942	942	941	940	939	939	939	939	938	938	938	939	939	940	941	941	942	942	938	947	941
Feb 11	943	943	943	943	944	944	944	944	944	944	944	944	944	943	942	942	942	942	941	941	941	941	942	942	941	944	943
Feb 12	942	943	942	942	942	942	942	942	942	942	942	941	941	940	939	938	938	936	935	933	932	931	930	929	929	943	939
Feb 13	927	926	925	926	925	924	924	924	924	924	924	**923**	**923**	**923**	924	924	926	928	930	933	935	936	938	940	**923**	940	**927**
Feb 14	941	942	944	945	946	947	948	950	950	951	951	952	951	952	952	952	952	952	952	952	952	952	953	953	941	953	950
Feb 15	953	954	954	954	954	955	955	955	955	955	956	956	956	956	955	955	956	956	956	956	955	955	955	955	953	956	955
Feb 16	954	954	953	952	951	950	949	948	947	945	945	944	943	942	941	940	940	940	939	939	939	939	940	940	939	954	945
Feb 17	940	941	942	942	943	944	944	945	945	946	946	946	945	944	944	944	943	943	943	942	942	942	941	941	940	946	943
Feb 18	941	941	942	942	942	943	943	944	945	945	945	946	947	946	947	948	948	949	950	950	950	950	950	950	941	950	946
Feb 19	949	948	948	947	946	945	944	943	942	941	940	939	939	938	938	938	939	940	941	941	942	943	944	944	938	949	942
Feb 20	945	946	947	948	948	949	949	950	950	950	950	949	949	948	947	947	946	946	945	945	945	945	946	946	945	950	947
Feb 21	947	948	949	949	950	951	952	953	953	954	954	954	955	955	955	955	956	957	958	959	960	961	962	963	947	963	955
Feb 22	963	964	964	965	965	966	966	967	967	967	967	967	966	966	966	966	967	967	968	968	969	969	970	970	963	970	967
Feb 23	970	970	970	971	971	971	971	**972**	**972**	**972**	**972**	971	970	970	970	969	970	970	970	970	969	969	969	969	969	**972**	**970**
Feb 24	968	968	967	966	965	964	963	962	961	960	959	957	956	954	952	952	951	949	949	948	947	946	945	945	945	968	956
Feb 25	944	943	943	942	942	942	941	941	942	941	941	940	940	939	939	939	939	938	938	938	937	937	937	936	936	944	940
Feb 26	936	935	934	933	933	932	932	931	930	930	929	928	927	927	926	926	927	927	928	928	928	929	929	929	926	936	930
Feb 27	930	930	930	931	931	932	933	934	934	934	934	934	935	935	935	936	936	937	938	939	939	939	940	940	930	940	935
Feb 28	941	941	942	942	942	943	944	944	945	945	946	946	946	946	946	947	947	948	949	949	950	950	950	950	941	950	946
Diurnal Maximum	970	970	970	971	971	971	971	972	972	972	972	971	970	970	970	969	970	970	970	970	969	969	970	970			
Diurnal Average	946	946	947	947	947	947	947	947	947	947	947	947	946	946	946	946	946	946	946	946	946	946	946	946			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

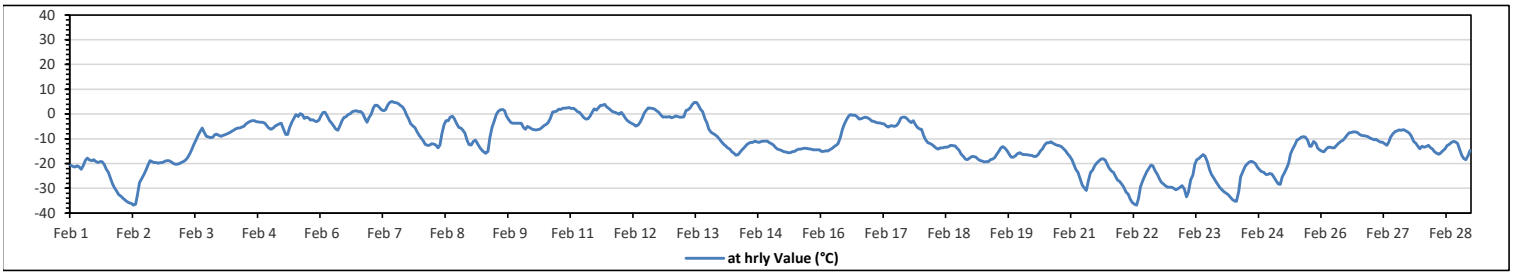
Maximum Hourly Value:	5.1	°C	on Feb 7 at hr 10	Hours in Service:	672	
Maximum Daily Value:	1.1	°C	on Feb 11	Hours of Data:	672	
Minimum Hourly Value:	-36.8	°C	on Feb 2 at hr 6	Hours of Missing Data:	0	
Minimum Daily Value:	-28.5	°C	on Feb 22	Hours of Calibration:	0	
Monthly Average:	-11.6	°C		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	-20.6	-21.2	-21.5	-20.9	-21.3	-22.3	-20.7	-18.7	-17.8	-18.6	-18.9	-18.5	-19.1	-19.6	-19.2	-19.3	-20.4	-22.2	-23.6	-25.9	-28.3	-29.8	-31	-32.6	-32.6	-17.8	-22.2
Feb 2	-33.1	-33.9	-34.7	-35.4	-35.9	-36	**-36.8**	-36.4	-32.4	-27.7	-26.1	-24.4	-22.7	-20.5	-18.8	-19.2	-19.6	-19.6	-19.8	-19.7	-19.6	-19.1	-18.8	-18.8	**-36.8**	-18.8	-26.2
Feb 3	-19.2	-19.8	-20.2	-20.2	-19.9	-19.6	-19.2	-18.6	-17.6	-16.1	-14.5	-12.3	-10.7	-8.7	-6.9	-5.7	-7.3	-9	-9.2	-9.5	-9.4	-8.4	-8.1	-8.7	-20.2	-5.7	-13.3
Feb 4	-9	-8.7	-8.4	-8	-7.6	-7.1	-6.6	-6.1	-5.6	-5.6	-5.2	-4.8	-4.1	-3.5	-2.9	-2.7	-2.7	-3	-3.2	-3.3	-3.3	-3.7	-4.7	-5.7	-9.0	-2.7	-5.2
Feb 5	-6.2	-5.7	-4.9	-4.4	-4	-3.7	-6	-8.3	-8.2	-5.5	-3.3	-1.7	-0.2	-1	0.1	-0.2	-1.8	-1.2	-1.7	-2.4	-2.3	-2.8	-3.1	-2.4	-8.3	0.1	-3.4
Feb 6	-0.7	0.6	0.7	-0.9	-2.6	-3.6	-4.6	-6.1	-6.6	-4.9	-2.7	-1.4	-1.1	-0.2	0.1	0.9	1.2	1.3	1	1.1	0.1	-1.7	-3.3	-1.5	-6.6	1.3	-1.5
Feb 7	-0.1	2.5	3.5	3.5	2.6	1.8	1.4	1.7	3.7	4.6	**5.1**	4.6	4.5	4.3	3.6	2.9	1.8	-0.4	-1.9	-3.9	-4.7	-5.5	-7	-8.4	-8.4	**5.1**	0.8
Feb 8	-9.6	-10.8	-12.2	-12.7	-12.6	-12	-12.1	-12.5	-13.6	-12.5	-8	-4.3	-2.7	-2.6	-1.2	-0.9	-2	-3.9	-5.4	-5.6	-6.5	-7.7	-10.7	-12.4	-13.6	-0.9	-8.1
Feb 9	-12.5	-11.1	-10.6	-11.9	-13.4	-14.4	-15.2	-15.9	-15.1	-9.5	-5.2	-3	-0.2	1.1	1.7	1.9	1.3	-0.9	-2.3	-3.4	-3.7	-3.7	-3.7	-3.7	-15.9	1.9	-6.4
Feb 10	-3.7	-5.4	-6.2	-5	-5.4	-6.1	-6.4	-6.5	-6.4	-6.1	-5.4	-4.6	-4.1	-3.4	-1.8	0.8	1	1.2	2	1.9	2.3	2.3	2.5	2.6	-6.5	2.6	-2.5
Feb 11	2.2	2.3	1.7	0.9	0.7	-0.3	-1.4	-2.1	-1.9	-0.9	0.5	2.1	1.6	2.4	3.5	3.6	3.9	2.9	2.2	1.5	0.9	0.6	0.2	-0.1	-2.1	3.9	**1.1**
Feb 12	0.7	-0.3	-1.8	-2.6	-3.3	-3.8	-4.3	-4.8	-4.5	-3.2	-1.7	0.2	1.6	2.5	2.3	2.2	2	1.4	0.7	-0.4	-1.3	-1.1	-1.2	-1	-4.8	2.5	-0.9
Feb 13	-1.6	-1.3	-0.7	-1	-1.3	-1.2	-1.1	1.5	1.7	2.5	3.8	4.6	4.7	3.6	2	0.9	-1.9	-3.5	-6	-7.3	-7.9	-8.4	-9.1	-10	-10.0	4.7	-1.5
Feb 14	-11.1	-12.1	-12.9	-13.7	-14.2	-15.2	-15.9	-16.6	-16.4	-15.3	-14.4	-13.5	-12.5	-11.8	-11.5	-11.5	-11	-11.2	-11.4	-11.1	-11	-11	-11	-11.6	-16.6	-11.0	-12.8
Feb 15	-12	-12.5	-13.5	-14.2	-14.5	-14.8	-15.2	-15.4	-15.6	-15.5	-15.2	-15.1	-14.6	-14.2	-14.2	-13.9	-13.8	-13.9	-14	-14.2	-14.4	-14.5	-14.5	-14.5	-15.6	-12.0	-14.3
Feb 16	-15.1	-15.1	-14.9	-15	-14.5	-13.9	-13.2	-12.7	-12	-9.5	-6	-4	-2.2	-0.8	-0.2	-0.5	-0.4	-1	-2.1	-2	-1.6	-1.3	-1.6	-2.1	-15.1	-0.2	-6.7
Feb 17	-2.8	-2.9	-3.3	-3.6	-3.6	-3.8	-4	-4.7	-5.2	-4.7	-4.7	-5	-4.6	-3.5	-1.7	-1.3	-1.3	-2	-2.8	-3.4	-2.7	-4.1	-5.4	-6	-6.0	-1.3	-3.6
Feb 18	-6.2	-8.9	-10.4	-11.6	-11.9	-12.4	-13.2	-13.8	-14.2	-13.6	-13.7	-13.4	-13.3	-13.2	-12.7	-12.8	-12.9	-13.8	-14.6	-16.2	-17.2	-18.1	-18.5	-17.7	-18.5	-6.2	-13.5
Feb 19	-17.2	-17.2	-17.4	-18.2	-18.7	-19	-19.4	-19.3	-19.2	-18.5	-18.2	-17.6	-16.3	-15	-13.6	-13.2	-13.8	-15	-16.2	-17.5	-17.5	-16.9	-16	-15.6	-19.4	-13.2	-16.9
Feb 20	-16.1	-16.4	-16.4	-16.5	-16.6	-16.8	-17.2	-17	-16.2	-14.9	-14.1	-12.7	-11.6	-11.6	-11.2	-11.7	-12.3	-12.7	-12.8	-13.2	-14	-14.8	-16	-17.1	-17.2	-11.2	-14.6
Feb 21	-18.4	-20.4	-22.3	-23.6	-26	-28.6	-30	-30.8	-27.1	-23.6	-22.5	-20.9	-19.8	-19	-18.2	-18	-18.6	-20.2	-21.8	-22.9	-23.7	-25.1	-26.6	-27.2	-30.8	-18.0	-23.1
Feb 22	-28.5	-29.6	-31.5	-32.4	-34.3	-35.6	-36.4	**-36.8**	-34.1	-29.4	-26.9	-25.2	-23.3	-21.9	-20.7	-20.9	-23	-24.3	-26.1	-27.5	-28.3	-29	-29.5	-29.6	**-36.8**	-20.7	**-28.5**
Feb 23	-29.6	-30.1	-30.6	-30.1	-29.6	-28.9	-30.3	-33.4	-31.5	-26.5	-24.6	-20.2	-18.5	-17.9	-17.1	-16.4	-17	-19.3	-22.4	-24.4	-25.8	-27.1	-28.3	-29.7	-33.4	-16.4	-25.4
Feb 24	-30.7	-31.4	-31.9	-32.6	-33.5	-34.5	-35.1	-35.2	-31.4	-25.5	-23.3	-21.2	-20.3	-19.5	-19.1	-19.4	-20	-21.6	-22.4	-23.2	-23.5	-24.3	-24.3	-24	-35.2	-19.1	-26.2
Feb 25	-24.2	-25.7	-26.9	-28.3	-28.4	-25.5	-23.8	-21.8	-19.8	-16.1	-14	-12.4	-10.6	-10	-9.4	-9.1	-9.3	-10.5	-13	-13.1	-11.1	-11.8	-13.8	-14.6	-28.4	-9.1	-16.8
Feb 26	-15.1	-15.2	-14.2	-13.4	-13.4	-13.7	-13.7	-12.7	-11.7	-11.1	-10.6	-9.7	-8.7	-7.6	-7.4	-7.2	-7.2	-7.5	-8.2	-8.6	-8.8	-8.9	-9.1	-9.6	-15.2	-7.2	-10.6
Feb 27	-10	-10.4	-10.2	-10.8	-11.3	-11.3	-12	-12.7	-11.3	-9.2	-8	-7	-6.8	-6.5	-6.6	-6.4	-6.7	-7.2	-7.9	-9	-11.1	-11.8	-13	-14	-14.0	-6.4	-9.6
Feb 28	-13.1	-13.3	-13.2	-12.6	-13.5	-14.2	-15.2	-15.9	-16.2	-15.7	-14.8	-14.1	-12.8	-12.2	-11.4	-11.1	-11.2	-11.8	-14.5	-16.7	-17.9	-18.5	-16.8	-14.7	-18.5	-11.1	-14.2
Diurnal Maximum	2.2	2.5	3.5	3.5	2.6	1.8	1.4	1.7	3.7	4.6	5.1	4.6	4.7	4.3	3.6	3.6	3.9	2.9	2.2	1.9	2.3	2.3	2.5	2.6			
Diurnal Average	-13.0	-13.4	-13.7	-14.1	-14.6	-14.9	-15.3	-15.4	-14.5	-12.6	-11.2	-9.8	-8.9	-8.2	-7.6	-7.4	-8.0	-8.9	-9.9	-10.7	-11.2	-11.7	-12.2	-12.5			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

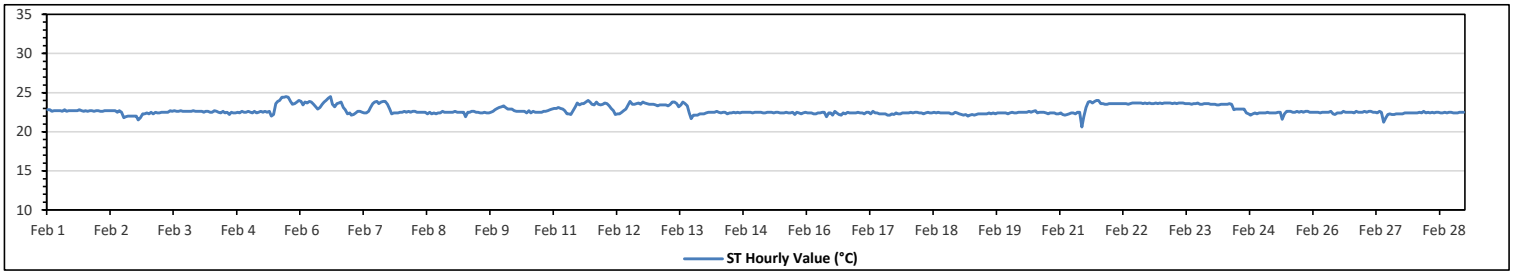
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	24.5	°C	on Feb 5 at hr 17	Hours in Service:	672	
Maximum Daily Value:	23.6	°C	on Feb 22	Hours of Data:	672	
Minimum Hourly Value:	20.6	°C	on Feb 21 at hr 10	Hours of Missing Data:	0	
Minimum Daily Value:	22.3	°C	on Feb 19	Hours of Calibration:	0	
Monthly Average:	22.7	°C		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	22.8	22.8	22.6	22.7	22.7	22.7	22.7	22.6	22.8	22.6	22.7	22.7	22.7	22.7	22.7	22.8	22.7	22.6	22.7	22.6	22.7	22.7	22.6	22.7	22.6	22.8	22.7
Feb 2	22.7	22.6	22.6	22.7	22.7	22.7	22.7	22.7	22.7	22.5	22.7	22.5	21.8	21.9	22.0	22.0	22.0	22.0	22.0	21.5	21.8	22.3	22.3	22.4	21.5	22.7	22.3
Feb 3	22.3	22.5	22.3	22.5	22.4	22.4	22.5	22.5	22.5	22.5	22.7	22.6	22.7	22.6	22.6	22.7	22.6	22.6	22.6	22.6	22.6	22.7	22.6	22.6	22.3	22.7	22.6
Feb 4	22.6	22.6	22.5	22.6	22.6	22.5	22.5	22.7	22.6	22.5	22.4	22.6	22.4	22.5	22.2	22.5	22.4	22.4	22.5	22.4	22.6	22.5	22.5	22.6	22.2	22.7	22.5
Feb 5	22.5	22.4	22.6	22.4	22.5	22.6	22.5	22.6	22.5	22.6	22.0	22.2	23.6	23.9	24.0	24.4	24.4	**24.5**	24.4	23.9	23.5	23.6	23.8	24.0	22.0	**24.5**	23.2
Feb 6	23.9	23.4	23.8	23.7	23.9	23.8	23.5	23.2	22.9	23.1	23.5	23.8	24.0	24.3	**24.5**	23.5	23.2	23.6	23.7	23.8	23.1	22.8	22.3	22.4	22.3	**24.5**	23.5
Feb 7	22.1	22.2	22.4	22.6	22.6	22.5	22.4	22.4	22.6	23.1	23.6	23.8	23.9	23.6	23.8	23.9	23.9	23.5	22.9	22.3	22.4	22.4	22.4	22.5	22.1	23.9	22.9
Feb 8	22.5	22.6	22.5	22.6	22.5	22.6	22.6	22.5	22.5	22.5	22.5	22.5	22.3	22.5	22.3	22.4	22.3	22.4	22.4	22.6	22.5	22.5	22.5	22.5	22.3	22.6	22.5
Feb 9	22.5	22.6	22.5	22.5	22.5	22.5	21.9	22.5	22.5	22.6	22.6	22.5	22.5	22.4	22.4	22.5	22.4	22.4	22.5	22.6	22.8	23.0	23.1	23.2	21.9	23.2	22.6
Feb 10	23.3	23.1	22.9	22.9	22.9	22.7	22.6	22.6	22.6	22.6	22.6	22.4	22.7	22.4	22.6	22.5	22.5	22.5	22.5	22.6	22.6	22.7	22.8	22.9	22.4	23.3	22.7
Feb 11	23.0	23.0	23.1	23.0	22.9	22.7	22.3	22.3	22.2	22.7	23.2	23.7	23.4	23.6	23.6	23.8	24.0	23.8	23.5	23.4	23.8	23.5	23.4	23.5	22.2	24.0	23.2
Feb 12	23.7	23.6	23.3	23.0	22.7	22.2	22.3	22.3	22.5	22.7	22.9	23.4	23.9	23.5	23.5	23.6	23.7	23.5	23.8	23.7	23.6	23.5	23.5	23.5	22.2	23.9	23.2
Feb 13	23.4	23.3	23.4	23.4	23.4	23.4	23.3	23.5	23.8	23.8	23.6	23.2	23.4	23.8	23.6	23.3	22.4	21.7	22.1	22.1	22.1	22.3	22.3	22.3	21.7	23.8	23.0
Feb 14	22.4	22.5	22.5	22.5	22.5	22.6	22.5	22.4	22.5	22.5	22.3	22.4	22.4	22.5	22.4	22.5	22.4	22.5	22.5	22.5	22.5	22.5	22.4	22.5	22.3	22.6	22.5
Feb 15	22.5	22.5	22.5	22.4	22.4	22.5	22.5	22.5	22.4	22.5	22.5	22.4	22.4	22.4	22.5	22.4	22.4	22.5	22.2	22.5	22.4	22.3	22.4	22.5	22.2	22.5	22.4
Feb 16	22.4	22.4	22.4	22.3	22.3	22.4	22.4	22.5	22.5	21.9	22.4	22.4	22.1	22.6	22.4	22.2	22.1	22.4	22.3	22.5	22.4	22.4	22.4	22.4	21.9	22.6	22.4
Feb 17	22.5	22.4	22.4	22.3	22.5	22.5	22.3	22.6	22.4	22.4	22.3	22.3	22.3	22.3	22.1	22.1	22.3	22.2	22.4	22.3	22.3	22.4	22.4	22.4	22.1	22.6	22.4
Feb 18	22.4	22.5	22.4	22.5	22.5	22.4	22.4	22.3	22.4	22.5	22.4	22.4	22.5	22.4	22.5	22.4	22.4	22.4	22.4	22.4	22.3	22.3	22.5	22.4	22.3	22.5	22.4
Feb 19	22.3	22.2	22.1	22.2	22.0	22.1	22.2	22.1	22.2	22.3	22.3	22.3	22.3	22.3	22.4	22.3	22.4	22.3	22.4	22.4	22.4	22.4	22.4	22.3	22.0	22.4	**22.3**
Feb 20	22.4	22.5	22.4	22.4	22.5	22.5	22.5	22.5	22.5	22.6	22.5	22.6	22.7	22.4	22.5	22.5	22.5	22.4	22.3	22.4	22.4	22.4	22.3	22.3	22.3	22.7	22.5
Feb 21	22.4	22.2	22.1	22.2	22.3	22.4	22.4	22.3	22.5	22.5	**20.6**	21.9	23.1	23.8	23.9	23.7	23.9	24.0	24.0	23.6	23.6	23.5	23.5	23.6	**20.6**	24.0	22.9
Feb 22	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.5	23.6	23.7	23.7	23.7	23.7	23.7	23.6	23.7	23.6	23.7	23.6	23.6	23.7	23.6	23.7	23.5	23.7	**23.6**
Feb 23	23.6	23.7	23.7	23.7	23.7	23.6	23.7	23.6	23.7	23.7	23.7	23.6	23.6	23.6	23.5	23.6	23.6	23.7	23.5	23.5	23.6	23.6	23.6	23.5	23.5	23.7	23.6
Feb 24	23.5	23.5	23.4	23.4	23.5	23.5	23.5	23.5	23.6	23.5	22.8	22.9	22.9	22.9	22.9	22.9	22.4	22.3	22.1	22.3	22.4	22.3	22.4	22.4	22.1	23.6	23.0
Feb 25	22.4	22.4	22.5	22.4	22.4	22.4	22.4	22.5	22.5	21.6	22.3	22.6	22.6	22.6	22.5	22.5	22.6	22.5	22.6	22.5	22.6	22.6	22.5	22.5	21.6	22.6	22.5
Feb 26	22.5	22.5	22.5	22.4	22.5	22.5	22.5	22.5	22.6	22.3	22.2	22.4	22.4	22.4	22.6	22.5	22.5	22.5	22.5	22.4	22.6	22.5	22.5	22.5	22.2	22.6	22.5
Feb 27	22.6	22.5	22.6	22.6	22.5	22.5	22.4	22.6	22.5	21.2	21.8	22.2	22.3	22.2	22.2	22.3	22.3	22.3	22.3	22.4	22.4	22.4	22.4	22.4	21.2	22.6	22.3
Feb 28	22.4	22.4	22.5	22.4	22.6	22.4	22.5	22.4	22.5	22.4	22.5	22.5	22.4	22.4	22.5	22.4	22.5	22.5	22.4	22.4	22.4	22.5	22.5	22.5	22.4	22.6	22.5
Diurnal Maximum	23.9	23.7	23.8	23.7	23.9	23.8	23.7	23.6	23.8	23.8	23.7	23.8	24.0	24.3	24.5	24.4	24.4	24.5	24.4	23.9	23.8	23.7	23.8	24.0			
Diurnal Average	22.8	22.7	22.7	22.7	22.7	22.7	22.6	22.7	22.7	22.6	22.6	22.7	22.8	22.9	22.9	22.9	22.8	22.8	22.8	22.7	22.7	22.7	22.7	22.8			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

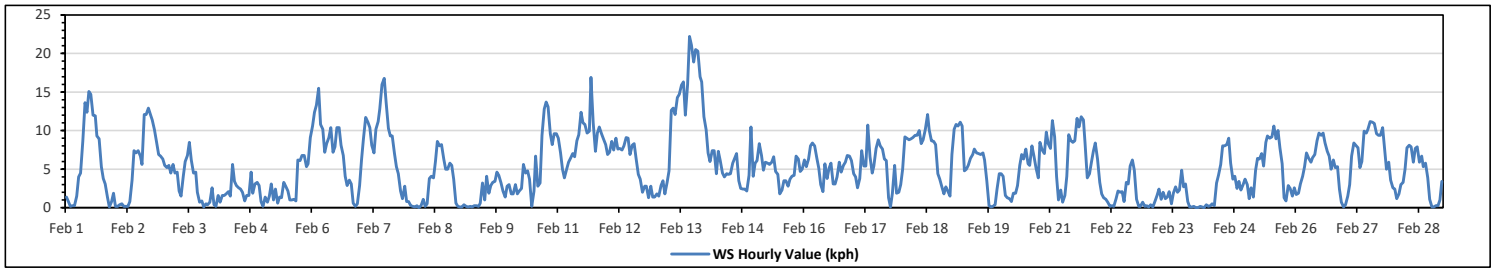
VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	22.2	kph	on Feb 13 at hr 16	Hours in Service:	672	
Maximum Daily Value:	12.3	kph	on Feb 13	Hours of Data:	672	
Minimum Hourly Value:	0.0	kph	on Feb 8 at hr 4	Hours of Missing Data:	0	
Minimum Daily Value:	1.4	kph	on Feb 23	Hours of Calibration:	0	
Monthly Average:	1.2	kph		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	1.4	0.8	0.2	0.3	0.3	1.5	4.0	4.5	8.6	13.6	12.4	15.1	14.7	12.0	11.9	9.3	8.9	5.3	3.8	3.1	1.4	0.1	0.8	1.9	0.1	15.1	5.7
Feb 2	0.2	0.2	0.4	0.5	0.2	0.2	0.2	0.8	3.6	7.4	7.1	7.4	6.7	5.6	12.1	12.1	12.9	12.0	11.4	10.1	8.4	6.9	6.7	6.3	0.2	12.9	5.8
Feb 3	5.5	5.2	5.5	4.5	5.6	4.5	4.6	2.2	1.5	4.1	6.0	6.8	8.5	6.2	4.5	4.6	2.0	0.7	0.9	0.1	0.5	0.4	0.7	2.6	0.1	8.5	3.7
Feb 4	0.4	0.2	1.6	0.7	1.6	1.6	1.8	2.1	1.5	5.6	3.4	2.9	2.6	2.4	2.0	0.9	1.6	1.6	4.6	1.9	3.1	3.3	2.9	0.8	0.2	5.6	2.1
Feb 5	0.2	1.4	0.7	1.5	3.1	1.0	2.4	0.6	1.4	1.3	3.3	2.8	2.2	1.0	1.0	1.1	0.9	6.2	6.1	6.8	6.8	5.3	5.7	9.1	0.2	9.1	3.0
Feb 6	10.6	12.4	13.3	15.5	10.8	10.2	7.2	8.3	9.1	10.4	7.2	7.9	10.4	10.4	8.1	6.8	4.1	2.9	3.6	3.1	0.6	0.2	0.5	2.9	0.2	15.5	7.4
Feb 7	6.2	8.9	11.7	11.1	10.4	8.1	7.1	10.2	11.2	12.8	16.0	16.8	13.6	10.3	9.3	9.3	7.0	5.3	4.4	2.2	1.2	2.8	0.8	0.8	0.8	16.8	8.2
Feb 8	0.3	0.2	0.1	0.3	**0.0**	0.3	1.1	0.2	0.5	3.8	4.1	3.9	6.0	8.6	8.0	8.2	6.3	5.0	5.0	5.8	5.5	3.7	0.6	0.2	**0.0**	8.6	3.2
Feb 9	0.1	0.1	0.4	0.2	0.1	0.2	0.1	0.3	0.3	0.2	0.6	3.2	1.0	4.1	1.9	2.9	3.3	3.4	4.6	4.2	3.2	2.2	1.4	2.8	0.1	4.6	1.7
Feb 10	3.0	1.8	1.8	3.0	1.8	2.2	2.5	5.6	4.5	4.8	3.7	0.2	2.2	6.7	2.8	3.2	9.4	12.8	13.7	13.1	9.6	8.2	9.6	9.6	0.2	13.7	5.7
Feb 11	9.0	7.1	5.0	3.9	5.0	5.9	6.5	7.0	6.6	8.7	9.5	12.4	11.0	10.8	9.7	9.9	16.9	11.0	7.3	9.7	10.5	9.6	8.9	8.2	3.9	16.9	8.8
Feb 12	6.9	7.2	8.6	7.5	9.0	7.6	7.7	7.5	8.0	9.1	9.0	6.9	8.1	8.3	6.4	4.3	3.7	2.0	2.8	2.8	1.3	2.8	1.4	1.4	1.3	9.1	5.8
Feb 13	1.8	1.5	2.9	3.5	1.8	3.3	4.8	12.6	12.9	12.1	14.3	14.7	15.9	16.3	12.0	16.0	**22.2**	21.1	18.9	20.5	20.3	17.0	16.3	11.8	1.5	**22.2**	**12.3**
Feb 14	10.1	7.1	6.0	7.4	7.4	4.4	7.3	6.1	4.5	4.0	4.4	4.3	4.4	5.8	6.4	7.0	3.5	2.5	2.4	2.4	2.2	4.2	10.5	4.1	2.2	10.5	5.4
Feb 15	5.8	6.1	8.3	6.8	4.9	5.9	5.8	5.6	5.9	6.6	4.7	4.3	1.8	2.3	3.5	3.5	2.8	3.7	4.1	4.2	6.7	6.3	4.7	5.0	1.8	8.3	5.0
Feb 16	6.2	5.3	6.3	8.0	8.4	8.0	6.4	5.1	3.0	2.1	5.7	3.8	5.1	5.8	3.1	3.1	4.0	5.9	4.6	5.5	5.9	6.8	6.7	6.1	2.1	8.4	5.5
Feb 17	4.4	4.0	2.6	3.8	7.4	5.4	5.4	10.7	6.6	4.5	5.4	7.7	8.8	8.0	7.6	6.3	6.1	1.3	0.1	1.9	5.5	1.9	2.0	3.0	0.1	10.7	5.0
Feb 18	5.0	9.2	9.0	8.8	8.9	9.1	9.4	9.4	10.0	8.3	8.8	10.2	12.1	10.1	8.7	8.6	8.2	4.4	3.7	2.8	1.8	2.7	2.2	1.5	1.5	12.1	7.2
Feb 19	6.9	10.2	10.8	10.6	11.1	10.6	4.8	5.0	5.5	6.4	6.9	7.6	7.1	7.0	6.9	7.1	6.2	3.5	0.3	0.1	0.2	0.4	2.4	4.4	0.1	11.1	5.9
Feb 20	4.4	4.1	1.6	1.3	1.2	0.8	1.9	1.9	2.9	5.5	6.9	6.3	7.6	5.7	5.5	8.0	6.8	5.1	3.9	8.5	7.5	7.0	9.8	8.3	0.8	9.8	5.1
Feb 21	7.7	11.3	9.2	4.1	1.0	2.3	0.7	1.6	4.1	9.5	8.7	8.5	8.7	11.6	10.5	11.8	11.4	8.4	3.9	4.4	5.9	7.3	8.4	6.3	0.7	11.8	7.0
Feb 22	3.3	1.8	1.3	1.1	0.7	0.2	0.3	0.2	1.2	2.2	2.0	2.1	0.8	3.3	3.1	5.4	6.2	4.9	1.1	0.2	0.2	0.7	0.2	0.3	0.2	6.2	1.8
Feb 23	0.1	0.4	0.1	0.9	1.6	2.4	1.1	2.0	1.2	1.4	2.1	0.5	1.9	2.7	2.0	2.3	4.9	2.7	3.1	0.8	0.1	0.1	0.2	**0.0**	**0.0**	4.9	**1.4**
Feb 24	**0.0**	0.2	0.1	**0.0**	0.4	0.2	0.3	0.5	0.3	3.2	4.2	5.6	8.0	8.0	8.2	9.0	5.8	3.7	4.1	2.5	3.4	2.3	3.0	3.7	**0.0**	9.0	3.2
Feb 25	3.0	1.2	2.6	1.4	4.9	6.4	6.3	7.0	5.4	8.5	9.3	9.0	9.2	10.6	8.9	10.0	7.8	5.7	1.3	0.9	2.9	2.5	1.5	2.6	0.9	10.6	5.4
Feb 26	1.7	1.9	3.1	4.1	5.3	7.1	6.4	5.9	6.5	6.9	8.7	9.7	9.4	9.7	8.4	7.3	6.7	5.0	6.2	5.2	5.3	2.4	0.7	0.1	0.1	9.7	5.6
Feb 27	0.4	1.5	3.0	6.7	8.4	8.1	7.8	5.2	6.0	9.9	9.7	10.2	11.2	11.1	10.9	9.6	9.4	9.4	10.4	7.7	5.0	5.9	3.6	2.6	0.4	11.2	7.2
Feb 28	2.4	1.2	1.8	3.0	3.3	5.0	7.8	8.1	7.9	5.9	7.7	7.9	5.9	6.7	5.3	5.8	3.9	1.1	0.1	0.1	0.3	0.3	1.0	3.4	0.1	8.1	4.0
Diurnal Maximum	10.6	12.4	13.3	15.5	11.1	10.6	9.4	12.6	12.9	13.6	16.0	16.8	15.9	16.3	12.1	16.0	22.2	21.1	18.9	20.5	20.3	17.0	16.3	11.8			
Diurnal Average	3.8	4.0	4.2	4.3	4.5	4.4	4.3	4.9	5.0	6.4	6.9	7.1	7.3	7.5	6.7	6.9	6.9	5.6	4.9	4.7	4.5	4.0	4.0	3.9			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance			
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P**	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

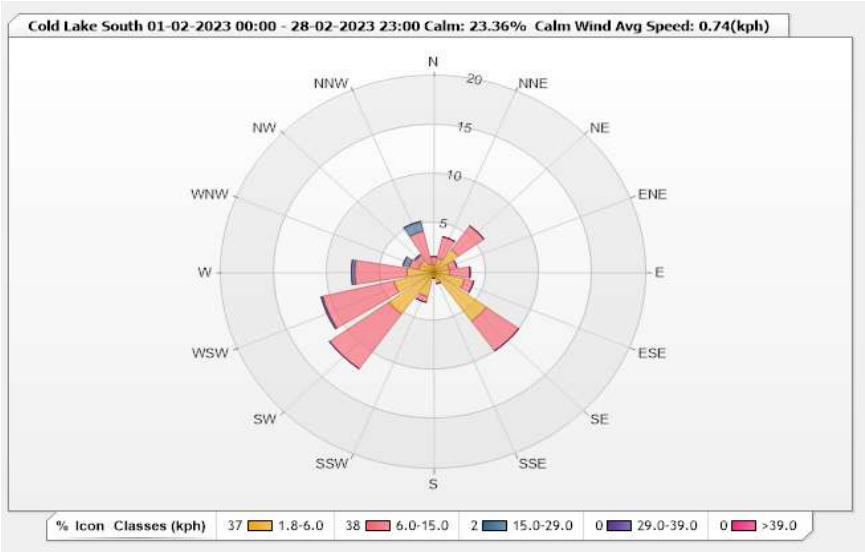


Station: Cold Lake South Monitor: WDS [kph] Monthly: 02-2023

Type: Wind Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm (WS<1.8kph): 23.36% Valid Data: 100.00%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	0.74	0.89	0	0	0	1.63
NNE	1.49	2.23	0	0	0	3.72
NE	2.83	2.98	0	0	0	5.81
ENE	1.49	0.74	0	0	0	2.23
E	1.49	1.93	0	0	0	3.42
ESE	2.98	0.89	0	0	0	3.87
SE	6.1	3.72	0	0	0	9.82
SSE	1.19	0	0	0	0	1.19
S	0.6	0	0	0	0	0.6
SSW	2.53	0.6	0	0	0	3.13
SW	5.21	6.85	0	0	0	12.06
WSW	3.87	6.85	0.15	0	0	10.87
W	2.53	4.91	0.3	0	0	7.74
WNW	1.49	0.89	0.6	0	0	2.98
NW	1.49	0.6	0.15	0	0	2.24
NNW	0.89	3.42	1.04	0	0	5.35
Summary	36.92	37.5	2.24	0	0	76.66



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

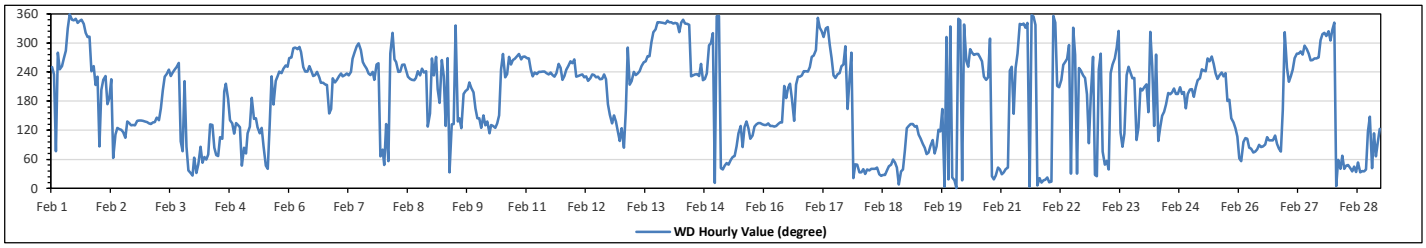
WIND DIRECTION (VWD) in sector

Monthly Average:	265 (W)	degree	
		Hours in Service:	672
		Hours of Data:	672
		Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																						Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Feb 1	WSW	SW	ENE	W	WSW	WSW	W	WNW	NNW	N	NNW	NNW	N	NNW	NNW	NNW	NNW	NW	NW	NW	WSW	WSW	SSW	SW	336	NNW
Feb 2	E	SSW	SW	SW	S	S	SW	ENE	ESE	SE	ESE	ESE	ESE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	131	SE
Feb 3	SE	SE	SE	SE	SE	SE	SE	SSE	SSW	SW	SW	WSW	SW	WSW	WSW	WSW	WSW	E	ENE	SW	E	NE	NNE	NNE	191	S
Feb 4	ENE	NNE	NE	E	NE	ENE	ENE	ENE	SE	SE	E	ENE	ENE	ESE	E	SSW	SW	S	SE	SE	ESE	SE	SE	SE	109	ESE
Feb 5	NE	E	ENE	ESE	SE	S	SE	SE	SE	ESE	SE	E	NE	NE	SE	SW	S	SW	SW	WSW	SW	WSW	WSW	WSW	216	SW
Feb 6	W	W	WNW	WNW	WNW	WNW	W	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	SW	SW	SW	SSW	SSW	SSE	SSE	SW	SW	257	WSW
Feb 7	SW	SW	SW	SW	SW	SW	SW	WSW	W	W	WNW	WNW	WNW	W	WSW	WSW	SW	SW	WSW	SW	WSW	WSW	ENE	E	256	WSW
Feb 8	NE	SE	NE	W	NW	W	W	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	WSW	SW	WSW	WSW	WSW	SE	SSE	235	SW
Feb 9	W	SW	W	SSW	S	W	SW	SE	W	NNE	SE	SE	NNW	SE	SE	ESE	SSW	SSW	SSW	SW	SSW	SSW	SSE	SE	178	S
Feb 10	SE	SE	SSE	SE	SE	ESE	SE	SE	SE	SE	SSE	WSW	W	SW	SW	W	WSW	W	W	W	W	W	W	W	247	WSW
Feb 11	W	W	WSW	SW	WSW	SW	WSW	WSW	WSW	WSW	SW	SW	WSW	SW	SW	SW	WSW	WSW	SW	SW	WSW	WSW	W	WSW	244	WSW
Feb 12	W	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	S	SSE	SE	SSE	SE	ESE	E	226	SW
Feb 13	ESE	E	SSE	WNW	SSW	SW	WSW	SW	SW	WSW	WSW	WSW	W	W	W	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	301	WNW
Feb 14	NNW	NNW	NNW	NNW	NNW	NW	NNW	NNW	NNW	NNW	NNW	SW	SW	SW	SW	SW	WSW	SW	SW	SW	WNW	WNW	NW	NNE	311	NW
Feb 15	N	N	NE	NE	NE	NE	NE	ENE	ENE	ENE	E	ESE	SE	E	SE	SE	ESE	E	ESE	SE	SE	SE	SE	SE	81	E
Feb 16	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSW	S	SSW	SW	S	SE	SSW	SW	SW	SW	WSW	WSW	WSW	WSW	180	S
Feb 17	W	W	WNW	N	NNW	NW	NW	NNW	NNW	WNW	W	SW	SW	SW	SW	WSW	WSW	WNW	SSE	SW	W	NNE	NE	NE	283	W
Feb 18	NNE	NNE	NE	NNE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NNE	NE	NE	NE	ENE	NE	NE	N	NE	NE	ENE	38	NE
Feb 19	ESE	SE	SE	SE	SE	SE	ESE	ESE	E	E	ENE	ENE	E	E	ENE	E	ESE	ESE	SSE	N	NW	NNE	NNW	NNE	106	ESE
Feb 20	NNE	N	N	NNW	NNE	NNW	W	WSW	WNW	W	W	W	W	W	W	SW	SW	SW	NW	NNE	NNE	NNE	NE	NE	315	NW
Feb 21	NNE	NNE	NE	NE	WSW	WSW	SSE	WSW	W	NNW	NNW	NNW	NNW	NNW	N	N	N	NNW	N	NNE	NNE	NNE	NNE	NNE	359	N
Feb 22	NNE	NNE	N	NNW	SSW	SSW	SW	WSW	W	W	WNW	NNE	NNW	W	NNE	WSW	WSW	SW	SW	SSW	E	S	W	NNE	278	W
Feb 23	NNE	WSW	W	ENE	NE	ENE	NE	SW	WSW	W	WNW	NW	ESE	E	ESE	SW	WSW	WSW	SW	SW	E	SE	SSW	SSW	233	SW
Feb 24	SSW	SSW	SSE	NW	WSW	SE	W	E	SE	SSE	SSE	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSE	SSW	SSW	192	S
Feb 25	SSW	S	SSW	SW	SW	WSW	WSW	WSW	W	W	W	WSW	SW	SW	SW	WSW	SW	SW	S	S	SE	SE	ESE	ESE	236	SW
Feb 26	ENE	NE	E	ESE	E	E	E	ENE	ENE	E	E	E	E	E	ESE	E	E	E	ESE	E	E	ENE	SSE	NW	90	E
Feb 27	WSW	SW	SW	WSW	W	W	W	W	W	WNW	WNW	W	W	W	W	W	W	NW	NW	NW	NW	NW	WNW	NW	283	W
Feb 28	NNW	N	ENE	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NE	NE	NE	ESE	SE	NE	ESE	ENE	E	ESE	44	NE

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Machine Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED					
Maximum Hourly Value:	22.2	kph	on Feb 13 at hr 16	Hours in Service:	672
Maximum Daily Value:	12.3	kph	on Feb 13	Hours of Data:	672
Minimum Hourly Value:	0.0	kph	on Feb 8 at hr 4	Hours of Missing Data:	0
Minimum Daily Value:	1.4	kph	on Feb 23	Hours of Calibration:	0
Monthly Average:	1.2	kph		Operational Uptime:	100.0

WIND DIRECTION

Monthly Average: 265 degree (W)

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	1.4	0.8	0.2	0.3	0.3	1.5	4.0	4.5	8.6	13.6	12.4	15.1	14.7	12.0	11.9	9.3	8.9	5.3	3.8	3.1	1.4	0.1	0.8	1.9	0.1	15.1	5.7
	WSW	SW	ENE	W	WSW	WSW	W	WNW	NNW	N	NNW	NNW	N	NNW	NNW	NNW	NNW	NW	NW	NW	WSW	WSW	SSW	SW			
Feb 2	0.2	0.2	0.4	0.5	0.2	0.2	0.2	0.8	3.6	7.4	7.1	7.4	6.7	5.6	12.1	12.1	12.9	12.0	11.4	10.1	8.4	6.9	6.7	6.3	0.2	12.9	5.8
	E	SSW	SW	SW	S	S	SW	ENE	ESE	SE	ESE	ESE	ESE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE			
Feb 3	5.5	5.2	5.5	4.5	5.6	4.5	4.6	2.2	1.5	4.1	6.0	6.8	8.5	6.2	4.5	4.6	2.0	0.7	0.9	0.1	0.5	0.4	0.7	2.6	0.1	8.5	3.7
	SE	SE	SE	SE	SE	SE	SE	SSE	SSW	SW	SW	WSW	SW	WSW	WSW	WSW	WSW	E	ENE	SW	E	NE	NNE	NNE			
Feb 4	0.4	0.2	1.6	0.7	1.6	1.6	1.8	2.1	1.5	5.6	3.4	2.9	2.6	2.4	2.0	0.9	1.6	1.6	4.6	1.9	3.1	3.3	2.9	0.8	0.2	5.6	2.1
	ENE	NNE	NE	E	NE	ENE	ENE	ENE	SE	SE	E	ENE	ENE	ESE	E	SSW	SW	S	SE	SE	ESE	SE	SE	SE			
Feb 5	0.2	1.4	0.7	1.5	3.1	1.0	2.4	0.6	1.4	1.3	3.3	2.8	2.2	1.0	1.0	1.1	0.9	6.2	6.1	6.8	6.8	5.3	5.7	9.1	0.2	9.1	3.0
	NE	E	ENE	ESE	SE	S	SE	SE	SE	ESE	SE	E	NE	NE	SE	SW	S	SW	SW	WSW	SW	WSW	WSW	WSW			
Feb 6	10.6	12.4	13.3	15.5	10.8	10.2	7.2	8.3	9.1	10.4	7.2	7.9	10.4	10.4	8.1	6.8	4.1	2.9	3.6	3.1	0.6	0.2	0.5	2.9	0.2	15.5	7.4
	W	W	WNW	WNW	WNW	WNW	W	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	SW	SW	SW	SSW	SSW	SSE	SSE	SW	SW			
Feb 7	6.2	8.9	11.7	11.1	10.4	8.1	7.1	10.2	11.2	12.8	16.0	16.8	13.6	10.3	9.3	9.3	7.0	5.3	4.4	2.2	1.2	2.8	0.8	0.8	0.8	16.8	8.2
	SW	SW	SW	SW	SW	SW	SW	WSW	W	W	WNW	WNW	WNW	W	WSW	WSW	SW	SW	WSW	SW	WSW	WSW	ENE	E			
Feb 8	0.3	0.2	0.1	0.3	**0.0**	0.3	1.1	0.2	0.5	3.8	4.1	3.9	6.0	8.6	8.0	8.2	6.3	5.0	5.0	5.8	5.5	3.7	0.6	0.2	**0.0**	8.6	3.2
	NE	SE	NE	W	NW	W	W	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	WSW	SW	WSW	WSW	WSW	SE	SSE			
Feb 9	0.1	0.1	0.4	0.2	0.1	0.2	0.1	0.3	0.3	0.2	0.6	3.2	1.0	4.1	1.9	2.9	3.3	3.4	4.6	4.2	3.2	2.2	1.4	2.8	0.1	4.6	1.7
	W	SW	W	SSW	S	W	SW	SE	W	NNE	SE	SE	NNW	SE	SE	ESE	SSW	SSW	SSW	SW	SSW	SSW	SSE	SE			
Feb 10	3.0	1.8	1.8	3.0	1.8	2.2	2.5	5.6	4.5	4.8	3.7	0.2	2.2	6.7	2.8	3.2	9.4	12.8	13.7	13.1	9.6	8.2	9.6	9.6	0.2	13.7	5.7
	SE	SE	SSE	SE	SE	ESE	SE	SE	SE	SE	SSE	WSW	W	SW	SW	W	WSW	W	W	W	W	W	W	W			
Feb 11	9.0	7.1	5.0	3.9	5.0	5.9	6.5	7.0	6.6	8.7	9.5	12.4	11.0	10.8	9.7	9.9	16.9	11.0	7.3	9.7	10.5	9.6	8.9	8.2	3.9	16.9	8.8
	W	W	WSW	SW	WSW	SW	WSW	WSW	WSW	WSW	SW	SW	WSW	SW	SW	SW	WSW	WSW	SW	SW	WSW	WSW	W	WSW			
Feb 12	6.9	7.2	8.6	7.5	9.0	7.6	7.7	7.5	8.0	9.1	9.0	6.9	8.1	8.3	6.4	4.3	3.7	2.0	2.8	2.8	1.3	2.8	1.4	1.4	1.3	9.1	5.8
	W	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	S	SSE	SE	SSE	SE	ESE	E			
Feb 13	1.8	1.5	2.9	3.5	1.8	3.3	4.8	12.6	12.9	12.1	14.3	14.7	15.9	16.3	12.0	16.0	**22.2**	21.1	18.9	20.5	20.3	17.0	16.3	11.8	1.5	**22.2**	**12.3**
	ESE	E	SSE	WNW	SSW	SW	WSW	SW	SW	WSW	WSW	WSW	W	W	W	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW			
Feb 14	10.1	7.1	6.0	7.4	7.4	4.4	7.3	6.1	4.5	4.0	4.4	4.3	4.4	5.8	6.4	7.0	3.5	2.5	2.4	2.4	2.2	4.2	10.5	4.1	2.2	10.5	5.4
	NNW	NNW	NNW	NNW	NNW	NW	NNW	NNW	NNW	NNW	NNW	SW	SW	SW	SW	SW	WSW	SW	SW	SW	WNW	WNW	NW	NNE			
Feb 15	5.8	6.1	8.3	6.8	4.9	5.9	5.8	5.6	5.9	6.6	4.7	4.3	1.8	2.3	3.5	3.5	2.8	3.7	4.1	4.2	6.7	6.3	4.7	5.0	1.8	8.3	5.0
	N	N	NE	NE	NE	NE	NE	ENE	ENE	ENE	E	ESE	SE	E	SE	SE	ESE	E	ESE	SE	SE	SE	SE	SE			
Feb 16	6.2	5.3	6.3	8.0	8.4	8.0	6.4	5.1	3.0	2.1	5.7	3.8	5.1	5.8	3.1	3.1	4.0	5.9	4.6	5.5	5.9	6.8	6.7	6.1	2.1	8.4	5.5
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSW	S	SSW	SW	S	SE	SSW	SW	SW	SW	WSW	WSW	WSW	WSW			
Feb 17	4.4	4.0	2.6	3.8	7.4	5.4	5.4	10.7	6.6	4.5	5.4	7.7	8.8	8.0	7.6	6.3	6.1	1.3	0.1	1.9	5.5	1.9	2.0	3.0	0.1	10.7	5.0
	W	W	WNW	N	NNW	NW	NW	NNW	NNW	WNW	W	SW	SW	SW	SW	WSW	WSW	WNW	SSE	SW	W	NNE	NE	NE			
Feb 18	5.0	9.2	9.0	8.8	8.9	9.1	9.4	9.4	10.0	8.3	8.8	10.2	12.1	10.1	8.7	8.6	8.2	4.4	3.7	2.8	1.8	2.7	2.2	1.5	1.5	12.1	7.2
	NNE	NNE	NE	NNE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NNE	NE	NE	NE	ENE	NE	NE	N	NE	NE	ENE			
Feb 19	6.9	10.2	10.8	10.6	11.1	10.6	4.8	5.0	5.5	6.4	6.9	7.6	7.1	7.0	6.9	7.1	6.2	3.5	0.3	0.1	0.2	0.4	2.4	4.4	0.1	11.1	5.9
	ESE	SE	SE	SE	SE	SE	ESE	ESE	E	E	ENE	ENE	E	E	ENE	E	ESE	ESE	SSE	N	NW	NNE	NNW	NNE			
Feb 20	4.4	4.1	1.6	1.3	1.2	0.8	1.9	1.9	2.9	5.5	6.9	6.3	7.6	5.7	5.5	8.0	6.8	5.1	3.9	8.5	7.5	7.0	9.8	8.3	0.8	9.8	5.1
	NNE	N	N	NNW	NNE	NNW	W	WSW	WNW	W	W	W	W	W	W	SW	SW	SW	NW	NNE	NNE	NNE	NE	NE			
Feb 21	7.7	11.3	9.2	4.1	1.0	2.3	0.7	1.6	4.1	9.5	8.7	8.5	8.7	11.6	10.5	11.8	11.4	8.4	3.9	4.4	5.9	7.3	8.4	6.3	0.7	11.8	7.0
	NNE	NNE	NE	NE	WSW	WSW	SSE	WSW	W	NNW	NNW	NNW	NNW	NNW	N	N	N	NNW	N	NNE	NNE	NNE	NNE	NNE			
Feb 22	3.3	1.8	1.3	1.1	0.7	0.2	0.3	0.2	1.2	2.2	2.0	2.1	0.8	3.3	3.1	5.4	6.2	4.9	1.1	0.2	0.2	0.7	0.2	0.3	0.2	6.2	1.8
	NNE	NNE	N	NNW	SSW	SSW	SW	WSW	W	W	WNW	NNE	NNW	W	NNE	WSW	WSW	SW	SW	SSW	E	S	W	NNE			
Feb 23	0.1	0.4	0.1	0.9	1.6	2.4	1.1	2.0	1.2	1.4	2.1	0.5	1.9	2.7	2.0	2.3	4.9	2.7	3.1	0.8	0.1	0.1	0.2	**0.0**	**0.0**	4.9	**1.4**
	NNE	WSW	W	ENE	NE	ENE	NE	SW	WSW	W	WNW	NW	ESE	E	ESE	SW	WSW	WSW	SW	SW	E	SE	SSW	SSW			
Feb 24	**0.0**	0.2	0.1	**0.0**	0.4	0.2	0.3	0.5	0.3	3.2	4.2	5.6	8.0	8.0	8.2	9.0	5.8	3.7	4.1	2.5	3.4	2.3	3.0	3.7	**0.0**	9.0	3.2
	SSW	SSW	SSE	NW	WSW	SE	W	E	SE	SSE	SSE	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSE	SSW	SSW			
Feb 25	3.0	1.2	2.6	1.4	4.9	6.4	6.3	7.0	5.4	8.5	9.3	9.0	9.2	10.6	8.9	10.0	7.8	5.7	1.3	0.9	2.9	2.5	1.5	2.6	0.9	10.6	5.4
	SSW	S	SSW	SW	SW	WSW	WSW	WSW	W	W	W	WSW	SW	SW	SW	WSW	SW	SW	S	S	SE	SE	ESE	ESE			
Feb 26	1.7	1.9	3.1	4.1	5.3	7.1	6.4	5.9	6.5	6.9	8.7	9.7	9.4	9.7	8.4	7.3	6.7	5.0	6.2	5.2	5.3	2.4	0.7	0.1	0.1	9.7	5.6
	ENE	NE	E	ESE	E	E	E	ENE	ENE	E	E	E	E	E	ESE	E	E	E	ESE	E	E	ENE	SSE	NW			
Feb 27	0.4	1.5	3.0	6.7	8.4	8.1	7.8	5.2	6.0	9.9	9.7	10.2	11.2	11.1	10.9	9.6	9.4	9.4	10.4	7.7	5.0	5.9	3.6	2.6	0.4	11.2	7.2
	WSW	SW	SW	WSW	W	W	W	W	W	WNW	WNW	W	W	W	W	W	W	NW	NW	NW	NW	NW	WNW	NW			
Feb 28	2.4	1.2	1.8	3.0	3.3	5.0	7.8	8.1	7.9	5.9	7.7	7.9	5.9	6.7	5.3	5.8	3.9	1.1	0.1	0.1	0.3	0.3	1.0	3.4	0.1	8.1	4.0
	NNW	N	ENE	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NE	NE	NE	ESE	SE	NE	ESE	ENE	E	ESE			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance			
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P**	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Lakeland Industry & Community Association

Cold Lake South Station - February 2023

Summary of Hour Standard Deviations

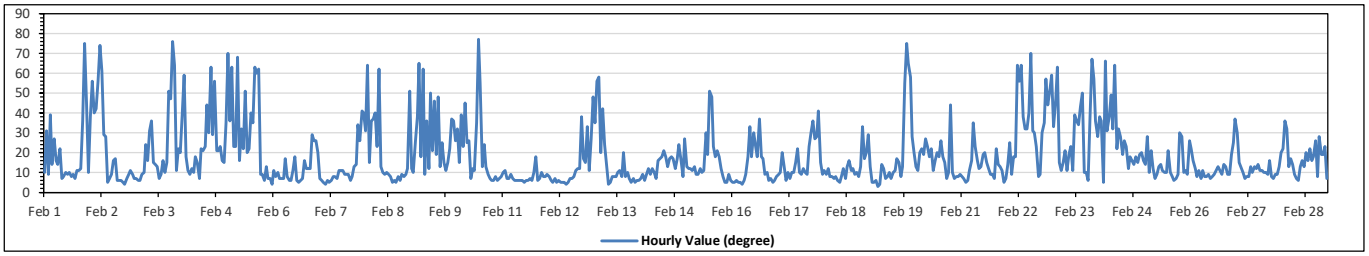
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	77 degree on Feb 10 at hr 11	Hours in Service:	672
		Hours of Data:	672
Minimum Hourly Value:	3 degree on Feb 19 at hr 4	Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
Feb 1	10	31	9	39	14	27	16	14	22	7	8	10	9	10	8	9	7	11	11	12	36	75	45	10	7	75
Feb 2	38	56	40	42	56	74	61	29	28	5	7	9	16	17	6	6	6	5	4	7	9	11	9	7	4	74
Feb 3	7	6	6	9	10	24	16	31	36	15	14	13	7	9	16	10	15	51	47	76	64	11	22	20	6	76
Feb 4	39	59	18	11	9	12	10	18	15	7	22	21	23	44	30	63	29	56	21	21	23	16	15	35	7	63
Feb 5	70	36	63	23	23	68	16	32	22	51	20	22	40	35	63	60	62	9	9	6	13	7	7	4	4	70
Feb 6	11	8	10	7	7	7	17	8	6	6	11	18	6	5	6	7	16	12	12	12	29	26	26	20	5	29
Feb 7	7	6	5	4	6	5	6	8	8	7	11	11	11	9	9	9	6	8	13	14	34	26	41	40	4	41
Feb 8	31	64	15	36	37	40	23	62	13	10	9	10	9	8	5	6	5	8	6	9	8	9	12	51	5	64
Feb 9	12	10	26	38	65	18	62	9	36	12	50	21	46	19	48	13	25	15	11	15	22	37	36	26	9	65
Feb 10	32	15	39	23	45	25	26	7	12	11	35	77	55	13	24	13	9	7	6	6	8	6	7	8	6	77
Feb 11	10	11	7	7	9	7	6	6	6	6	6	5	6	6	7	6	10	18	6	7	10	8	8	9	5	18
Feb 12	8	6	5	7	5	6	5	5	5	4	5	7	7	8	11	12	12	38	17	15	33	11	27	48	4	48
Feb 13	35	56	58	20	42	24	14	4	5	8	8	8	10	11	8	20	8	10	7	5	7	5	6	6	4	58
Feb 14	7	9	6	9	12	9	12	10	7	16	17	18	21	18	13	17	18	17	12	17	24	16	8	27	6	27
Feb 15	13	12	12	11	13	9	9	12	10	11	30	19	51	48	23	18	21	18	12	8	5	5	9	6	5	51
Feb 16	5	5	6	5	5	4	6	9	18	33	18	30	23	18	37	18	17	9	10	6	7	5	6	8	4	37
Feb 17	9	10	20	12	6	10	7	10	10	15	22	10	9	12	10	9	23	30	36	27	28	41	15	9	6	41
Feb 18	11	9	12	8	8	7	8	6	5	8	12	7	13	16	11	12	9	10	8	13	33	17	20	29	5	33
Feb 19	13	5	5	6	3	4	14	12	7	8	10	7	10	11	17	15	8	13	55	75	65	58	28	20	3	75
Feb 20	13	11	20	22	19	27	23	18	22	11	16	20	18	26	18	15	7	10	44	10	7	8	8	9	7	44
Feb 21	8	7	5	6	11	16	35	23	16	12	13	19	20	15	12	9	9	7	22	14	13	11	5	7	5	35
Feb 22	14	25	9	18	18	64	56	64	38	32	32	40	70	31	30	23	8	9	30	35	57	44	52	59	8	70
Feb 23	33	47	63	15	11	15	21	11	19	23	11	39	36	34	43	50	10	10	6	38	67	57	36	28	6	67
Feb 24	38	36	5	66	31	38	49	32	64	22	32	28	19	26	23	12	18	16	14	18	15	19	20	16	5	66
Feb 25	14	28	10	21	12	7	9	13	14	11	10	10	21	10	8	6	7	9	30	28	10	11	9	26	6	30
Feb 26	22	16	12	8	11	7	11	8	8	9	7	8	9	11	13	11	9	14	13	9	9	19	25	37	7	37
Feb 27	30	15	13	10	7	8	8	13	10	13	12	14	11	11	10	10	9	16	8	7	9	9	13	20	7	30
Feb 28	22	36	32	13	17	14	9	7	6	13	16	13	20	16	22	16	18	26	8	28	19	19	23	7	6	36
Diurnal Minimum	5	5	5	4	3	4	5	4	5	4	5	5	6	5	5	6	5	5	4	5	5	5	5	4		
Diurnal Maximum	70	64	63	66	65	74	62	64	64	51	50	77	70	48	63	63	62	56	55	76	67	75	52	59		

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Machine Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



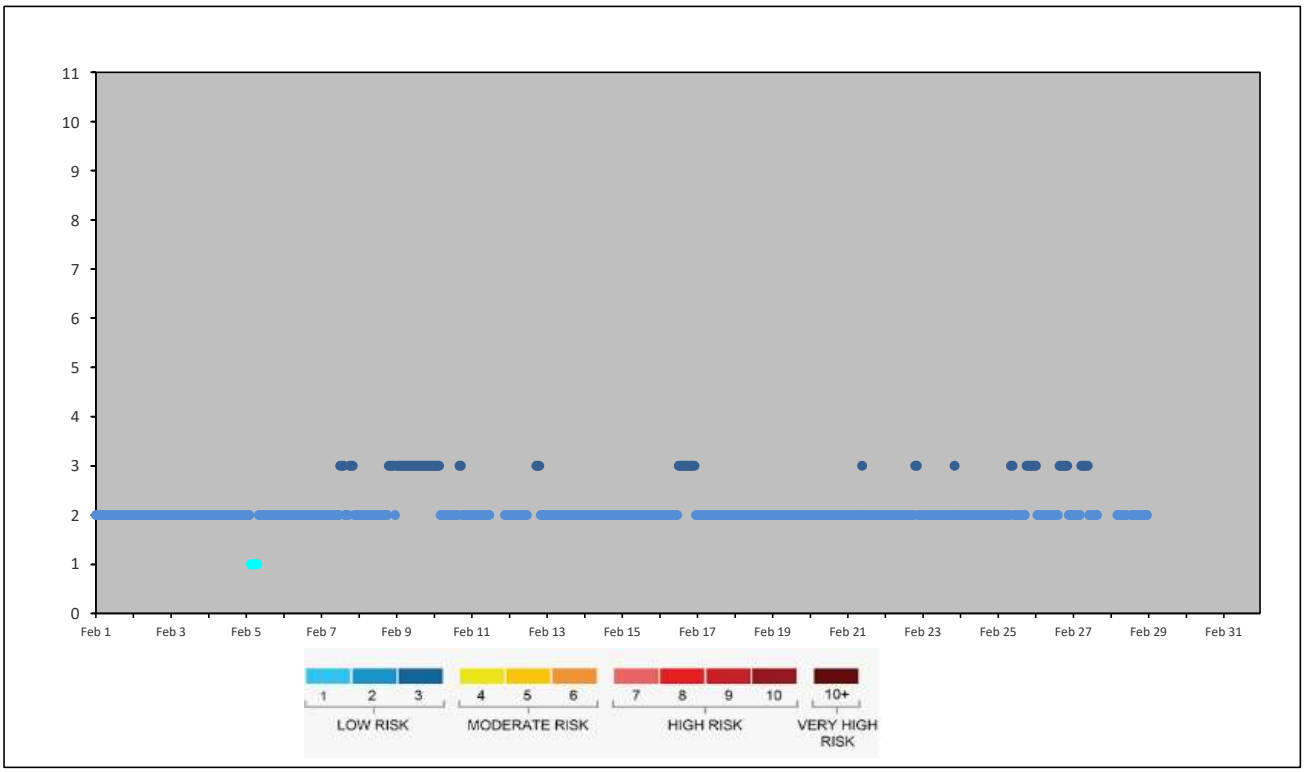
TAMARACK STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - February 2023

AIR QUALITY HEALTH INDEX

Day	Hourly Period Starting at (MST)																						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Feb 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 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
Feb 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
Feb 4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 5	2	2	2	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1
Feb 7	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	3	3	3	2	2	2
Feb 8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2
Feb 9	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 10	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2
Feb 11	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	2	2	2
Feb 12	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	3	3	3	2	2	2	2
Feb 13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 16	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	2
Feb 17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 21	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 22	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2
Feb 23	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2
Feb 24	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 25	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	3	3	3	3	3	3
Feb 26	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2	2	2
Feb 27	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	2	-	-	-	-	-	-	-	-
Feb 28	-	-	-	-	2	2	2	2	2	2	2	-	-	2	2	2	2	2	2	2	2	2	2	2



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

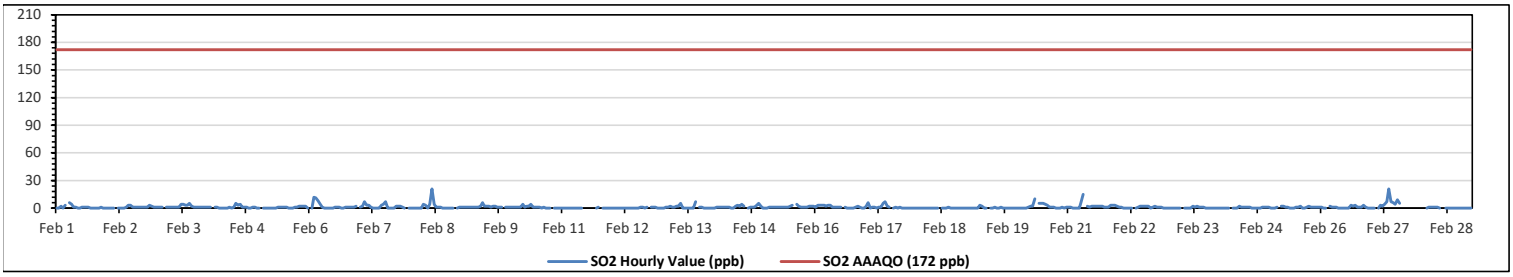
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

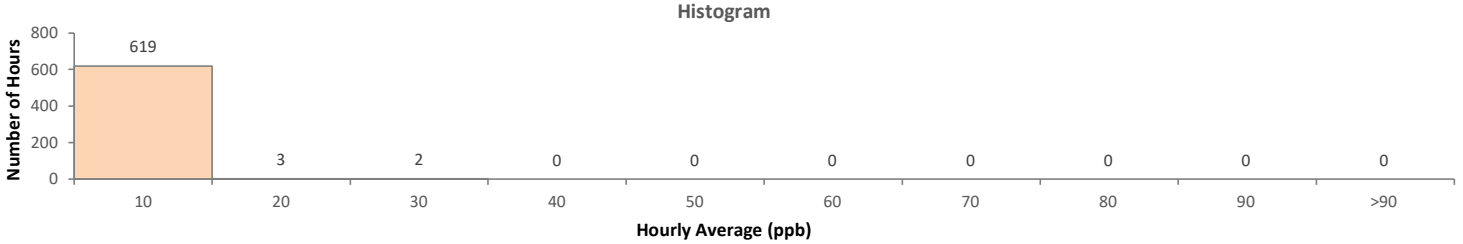
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0	
Maximum Hourly Value:	21	ppb	on Feb 8 at hr 10	Hours in Service:	672	
Maximum Daily Value:	2.3	ppb	on Feb 21	Hours of Data:	624	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	13	
Minimum Daily Value:	0.0	ppb	on Feb 18	Hours of Calibration:	35	
Monthly Average:	1.1	ppb		Operational Uptime:	98.1	

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	2	0	3	S	6	4	1	1	0	0	1	1	1	1	0	0	0	0	0	1	0	0	0	6	1.0
Feb 2	0	0	0	0	S	0	0	0	0	1	3	3	1	1	1	1	1	1	1	1	3	2	1	1	0	3	1.0
Feb 3	1	1	1	S	1	1	1	1	1	1	1	4	4	3	3	5	2	1	1	1	1	1	1	1	1	5	1.7
Feb 4	1	1	S	1	1	0	0	0	0	0	1	0	1	5	3	4	1	1	1	0	0	1	1	0	0	5	1.0
Feb 5	0	S	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	2	2	2	2	0	0	2	0.7
Feb 6	S	0	12	11	8	4	1	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1	2	S	0	12	2.1
Feb 7	1	2	7	3	3	1	0	0	0	0	3	4	7	0	0	0	0	2	2	2	1	0	S	0	0	7	1.7
Feb 8	0	0	0	0	0	0	4	3	0	4	21	4	1	1	1	0	0	0	0	0	0	S	0	1	0	21	1.7
Feb 9	1	1	1	1	1	1	1	1	1	2	6	2	2	2	1	2	2	1	1	1	S	1	1	1	1	6	1.5
Feb 10	1	1	1	1	1	4	1	2	2	4	1	1	1	1	0	1	0	0	0	S	0	0	0	0	0	4	1.0
Feb 11	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	1	S	0	0	0	0	0	0	1	NA
Feb 12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	S	1	1	1	0	0	0	0	1	0.3
Feb 13	0	1	1	2	1	1	2	2	5	0	0	0	0	0	0	7	S	1	1	0	0	0	0	0	0	7	1.0
Feb 14	0	1	1	1	1	1	1	1	0	0	2	3	2	4	2	S	0	1	1	1	3	5	2	0	0	5	1.4
Feb 15	0	0	1	1	1	1	1	1	1	1	1	1	2	3	S	4	2	1	1	1	1	2	2	2	0	4	1.3
Feb 16	1	3	3	3	3	2	3	3	1	1	1	1	1	S	1	0	0	0	0	1	2	1	0	0	0	3	1.3
Feb 17	2	6	0	1	1	0	1	1	5	7	2	1	S	0	1	0	1	0	0	0	0	0	0	0	0	7	1.3
Feb 18	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.0
Feb 19	0	0	0	0	0	0	3	2	0	0	S	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0.3
Feb 20	0	0	0	0	0	1	2	2	10	S	5	5	5	4	3	1	1	1	0	0	0	1	0	1	0	10	1.8
Feb 21	1	1	0	0	0	0	6	15	S	2	1	2	2	2	2	2	2	1	1	1	3	3	3	2	0	15	2.3
Feb 22	1	1	0	0	0	0	0	S	0	1	2	2	2	2	2	0	1	2	1	1	1	0	0	0	0	2	0.8
Feb 23	0	0	0	0	0	0	S	0	0	0	0	2	1	2	1	1	1	0	0	0	0	0	0	0	0	2	0.3
Feb 24	0	0	0	0	0	S	0	0	0	0	2	1	1	1	1	0	0	0	0	0	1	1	1	1	0	2	0.5
Feb 25	0	0	0	1	S	2	2	1	1	0	0	0	1	1	2	0	0	1	2	1	1	1	1	1	0	2	0.8
Feb 26	1	0	0	S	2	1	1	1	0	0	0	0	0	0	3	2	3	1	1	1	3	1	0	0	0	3	0.9
Feb 27	0	0	S	0	3	2	4	7	21	7	6	4	9	5	K	K	K	K	K	K	K	K	K	K	0	21	NA
Feb 28	K	K	0	1	1	1	1	1	0	NRM	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3
Diurnal Maximum	2	6	12	11	8	4	6	15	21	7	21	5	9	5	3	7	3	2	2	2	3	5	3	2			
Diurnal Average	0.4	0.7	1.2	1.0	1.2	0.9	1.5	1.8	1.8	1.3	2.3	1.6	1.8	1.6	1.2	1.3	0.7	0.7	0.7	0.6	0.9	0.9	0.7	0.4			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



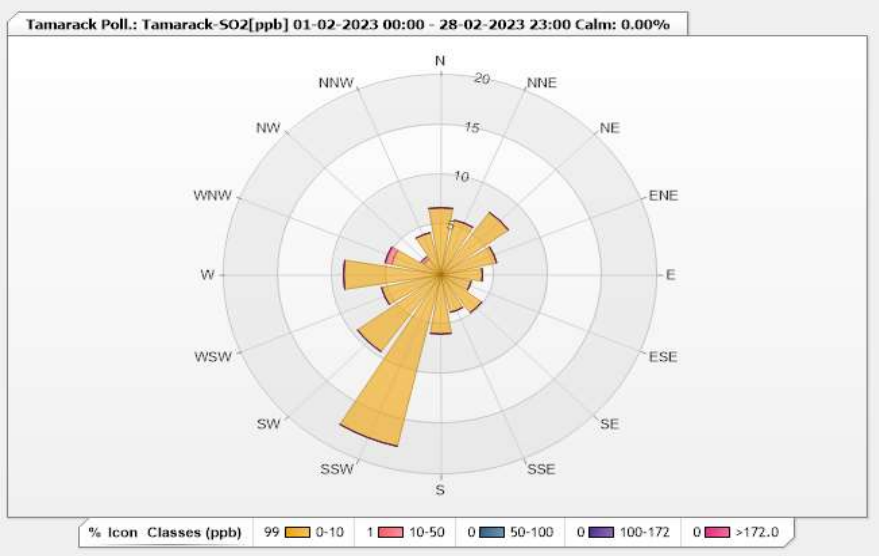


Station: Tamarack Poll.: Tamarack-SO2[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 92.86% Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	6.73	0	0	0	0	6.73
NNE	5.61	0	0	0	0	5.61
NE	7.69	0	0	0	0	7.69
ENE	5.29	0	0	0	0	5.29
E	3.85	0	0	0	0	3.85
ESE	2.88	0	0	0	0	2.88
SE	4.65	0	0	0	0	4.65
SSE	3.85	0	0	0	0	3.85
S	5.93	0	0	0	0	5.93
SSW	17.63	0	0	0	0	17.63
SW	9.46	0	0	0	0	9.46
WSW	5.61	0	0	0	0	5.61
W	8.97	0	0	0	0	8.97
WNW	4.65	0.64	0	0	0	5.29
NW	1.92	0.32	0	0	0	2.24
NNW	4.33	0	0	0	0	4.33
Summary	99.05	0.96	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

HYDROGEN SULPHIDE (H_2S) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb

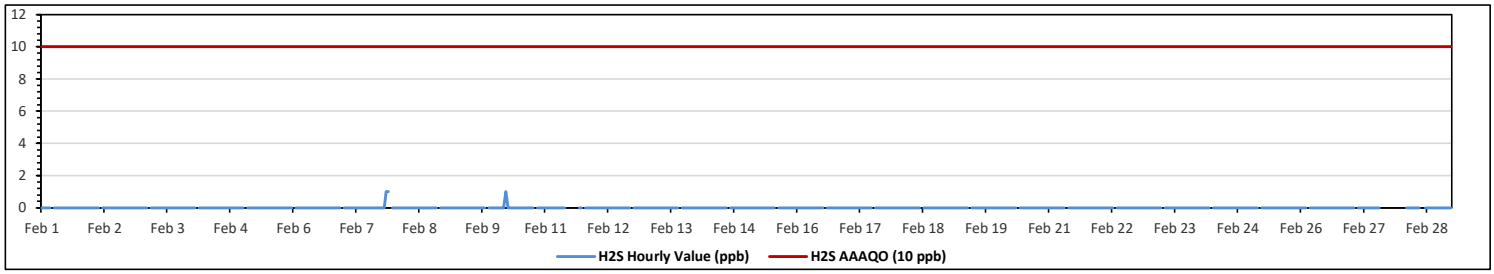
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0

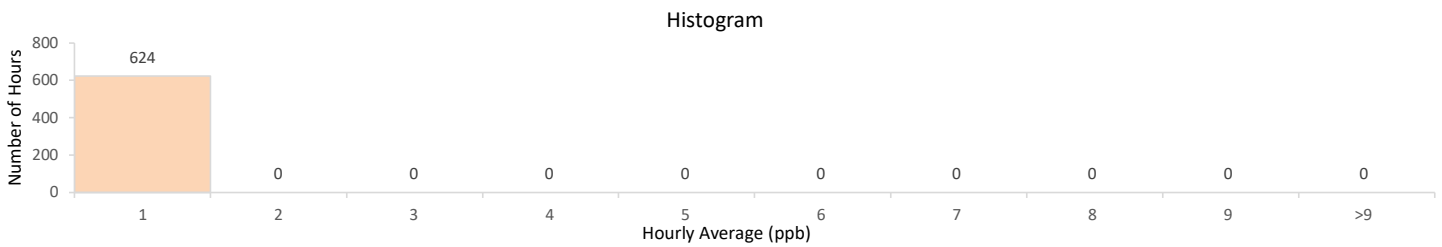
Maximum Hourly Value:	1	ppb	on Feb 7 at hr 20	Hours in Service:	672
Maximum Daily Value:	0.0	ppb	on Feb 1	Hours of Data:	624
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	13
Minimum Daily Value:	0.0	ppb	on Feb 1	Hours of Calibration:	35
Monthly Average:	0.0	ppb		Operational Uptime:	98.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 2	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 3	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 4	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 5	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 6	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0.0	0.0	0.0
Feb 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	S	0	0.0	1.0	0.0
Feb 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0	0.0	0.0
Feb 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0.0	0.0	0.0
Feb 10	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0	1.0	0.0
Feb 11	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	0	S	0	0	0	0	0	0.0	0.0	-
Feb 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0	0.0	0.0
Feb 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 16	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 17	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 18	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 19	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 20	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 21	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 22	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 23	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 24	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 25	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 26	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 27	0	0	S	0	0	0	0	0	0	0	0	0	0	0	K	K	K	K	K	K	K	K	K	K	0.0	0.0	-
Feb 28	K	K	0	0	0	0	0	0	0	NRM	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Diurnal Maximum	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



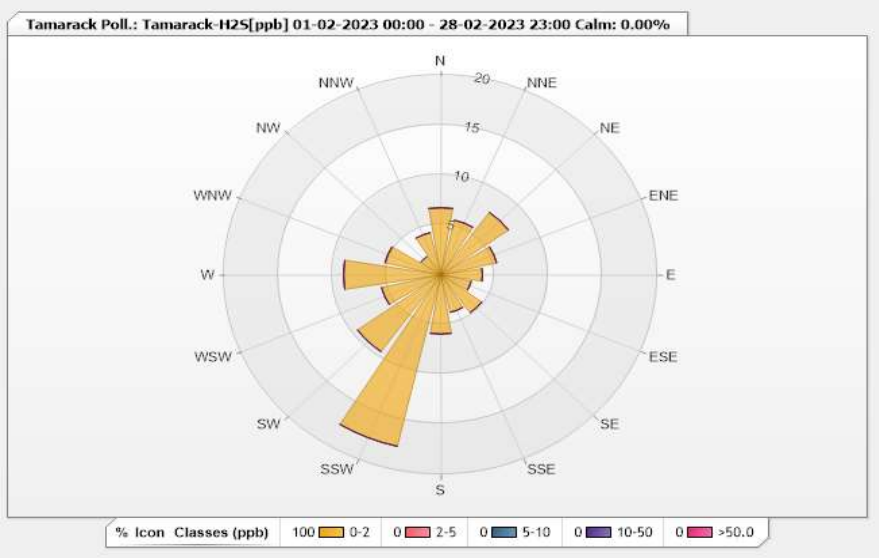


Station: Tamarack Poll.: Tamarack-H2S[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 92.86% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	6.73	0	0	0	0	6.73
NNE	5.61	0	0	0	0	5.61
NE	7.69	0	0	0	0	7.69
ENE	5.29	0	0	0	0	5.29
E	3.85	0	0	0	0	3.85
ESE	2.88	0	0	0	0	2.88
SE	4.65	0	0	0	0	4.65
SSE	3.85	0	0	0	0	3.85
S	5.93	0	0	0	0	5.93
SSW	17.63	0	0	0	0	17.63
SW	9.46	0	0	0	0	9.46
WSW	5.61	0	0	0	0	5.61
W	8.97	0	0	0	0	8.97
WNW	5.29	0	0	0	0	5.29
NW	2.24	0	0	0	0	2.24
NNW	4.33	0	0	0	0	4.33
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

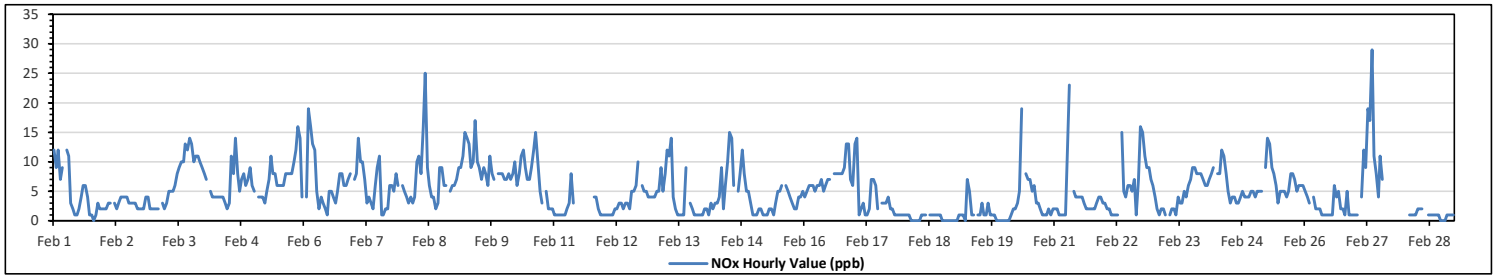
OXIDES OF NITROGEN (NOx) in ppb

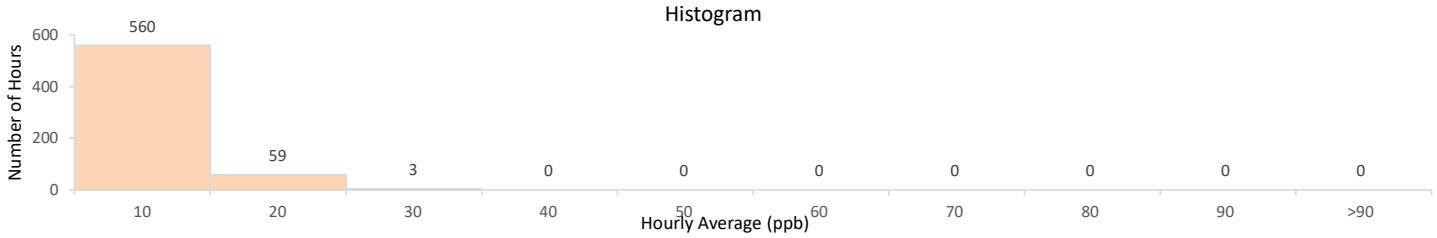
Maximum Hourly Value:	29	ppb	on Feb 27 at hr 8	Hours in Service:	672	
Maximum Daily Value:	9.5	ppb	on Feb 9	Hours of Data:	622	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 19	Hours of Missing Data:	13	
Minimum Daily Value:	0.5	ppb	on Feb 18	Hours of Calibration:	37	
Monthly Average:	5.0	ppb		Operational Uptime:	98.1	

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	12	9	12	7	9	S	12	11	3	2	1	1	2	4	6	6	4	1	1	0	1	3	2	2	0	12	4.8
Feb 2	2	2	3	3	S	3	2	3	4	4	4	4	3	3	3	3	2	2	2	2	4	4	2	2	2	4	2.9
Feb 3	2	2	2	S	3	2	3	5	5	5	6	8	9	10	10	13	12	14	13	10	11	11	10	9	2	14	7.6
Feb 4	8	7	S	5	4	4	4	4	4	4	3	2	3	11	8	14	8	5	7	8	6	7	9	6	2	14	6.1
Feb 5	5	S	4	4	4	3	5	7	11	8	8	6	6	6	6	8	8	8	8	10	12	16	14	4	3	16	7.4
Feb 6	S	4	19	16	13	12	5	2	4	3	2	1	5	5	4	3	5	8	8	6	6	7	8	S	1	19	6.6
Feb 7	7	8	14	10	10	7	3	4	3	2	6	9	11	1	1	2	2	6	6	5	8	6	S	6	1	14	6.0
Feb 8	5	4	3	4	3	4	10	11	8	16	25	9	6	4	4	2	3	9	9	6	6	S	5	6	2	25	7.0
Feb 9	6	7	9	9	11	15	14	13	9	10	17	10	9	7	9	8	6	11	8	7	S	8	8	8	6	17	**9.5**
Feb 10	7	7	8	7	8	10	6	8	11	12	9	7	7	9	12	15	10	5	3	S	5	2	2	2	2	15	7.5
Feb 11	1	1	1	1	1	1	2	3	8	3	C	C	C	C	C	C	C	C	S	4	4	2	1	1	1	8	NA
Feb 12	1	1	1	1	1	2	2	3	3	2	3	3	2	5	5	6	10	S	6	5	5	4	4	4	1	10	3.4
Feb 13	4	5	5	9	5	8	12	11	14	4	2	1	1	1	1	9	S	3	2	1	1	1	1	1	1	14	4.4
Feb 14	2	2	1	3	2	3	3	4	9	2	6	10	15	14	6	S	5	8	12	8	5	5	3	1	1	15	5.6
Feb 15	1	1	2	2	1	1	1	2	2	1	3	5	5	6	S	6	5	4	3	2	2	4	4	5	1	6	3.0
Feb 16	4	5	6	6	6	5	6	6	7	5	6	7	7	S	8	8	8	8	8	9	13	13	7	6	4	13	7.1
Feb 17	13	14	1	2	3	1	1	2	7	7	6	2	S	3	3	3	4	2	2	1	1	1	1	1	1	14	3.5
Feb 18	1	1	1	0	0	0	0	0	1	1	1	S	1	1	1	1	1	1	0	0	0	0	0	0	**0**	1	**0.5**
Feb 19	0	0	1	1	1	0	7	5	1	1	S	1	1	3	1	1	3	1	1	1	0	0	0	0	**0**	7	1.3
Feb 20	0	0	0	1	2	2	3	5	19	S	8	7	7	5	6	3	3	2	1	1	1	2	1	2	**0**	19	3.5
Feb 21	2	2	1	1	1	1	12	23	S	5	4	4	4	4	3	2	2	2	2	2	3	4	4	3	1	23	4.0
Feb 22	3	2	2	1	1	1	1	S	15	5	4	6	6	5	7	1	7	16	15	11	9	9	7	6	1	16	6.1
Feb 23	4	2	1	2	2	1	S	1	2	2	1	4	3	3	5	4	6	7	9	9	8	8	8	7	1	9	4.3
Feb 24	6	6	7	8	9	S	8	8	12	11	8	5	3	4	4	3	3	4	5	4	4	4	5	5	3	12	5.9
Feb 25	4	5	5	5	S	9	14	13	9	8	6	3	5	5	5	4	5	8	8	7	5	6	6	6	3	14	6.6
Feb 26	5	4	3	S	4	2	2	2	1	1	1	1	1	1	6	4	5	2	2	1	5	1	1	1	1	6	2.4
Feb 27	1	1	S	4	12	9	19	17	**29**	11	8	4	11	7	K	K	K	K	K	K	K	K	K	K	1	**29**	NA
Feb 28	K	K	1	1	1	1	2	2	2	NRM	S	1	1	1	1	1	1	0	0	0	1	1	1	1	**0**	2	1.0
Diurnal Maximum	13	14	19	16	13	15	19	23	29	16	25	10	15	14	12	15	12	16	15	11	13	16	14	9			
Diurnal Average	4.1	3.9	4.3	4.3	4.5	4.1	5.9	6.5	7.5	5.2	5.9	4.7	5.2	4.9	5.0	5.2	5.1	5.5	5.4	4.6	4.8	5.0	4.4	3.7			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



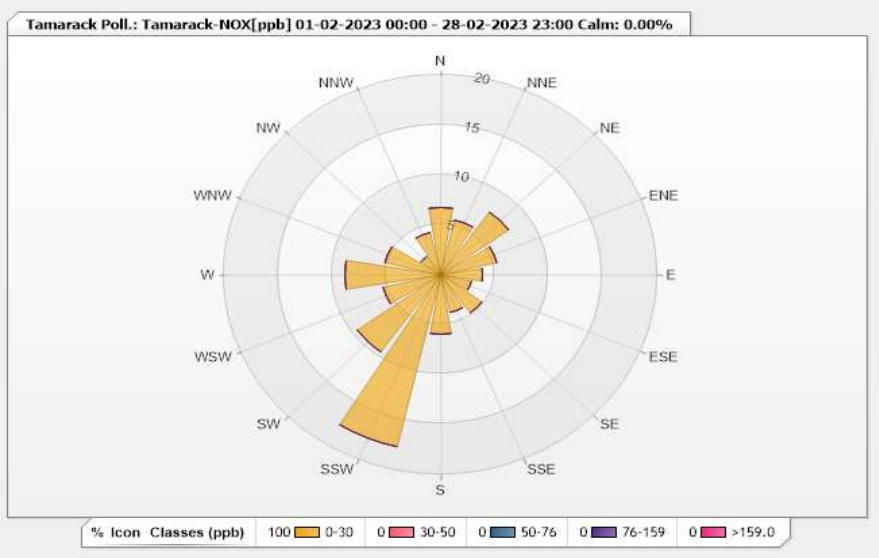


Station: Tamarack Poll.: Tamarack-NOX[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 92.56% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	6.75	0	0	0	0	6.75
NNE	5.63	0	0	0	0	5.63
NE	7.72	0	0	0	0	7.72
ENE	5.31	0	0	0	0	5.31
E	3.86	0	0	0	0	3.86
ESE	2.89	0	0	0	0	2.89
SE	4.66	0	0	0	0	4.66
SSE	3.86	0	0	0	0	3.86
S	5.95	0	0	0	0	5.95
SSW	17.68	0	0	0	0	17.68
SW	9.49	0	0	0	0	9.49
WSW	5.47	0	0	0	0	5.47
W	8.84	0	0	0	0	8.84
WNW	5.31	0	0	0	0	5.31
NW	2.25	0	0	0	0	2.25
NNW	4.34	0	0	0	0	4.34
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

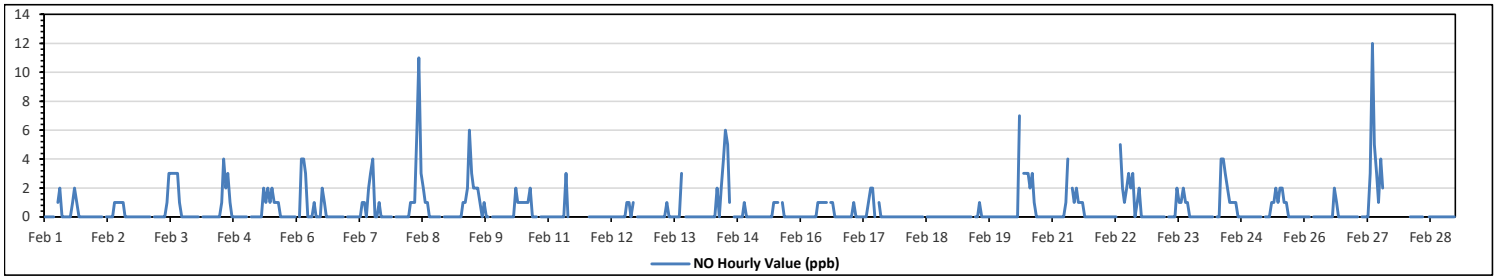
NITRIC OXIDE (NO) in ppb

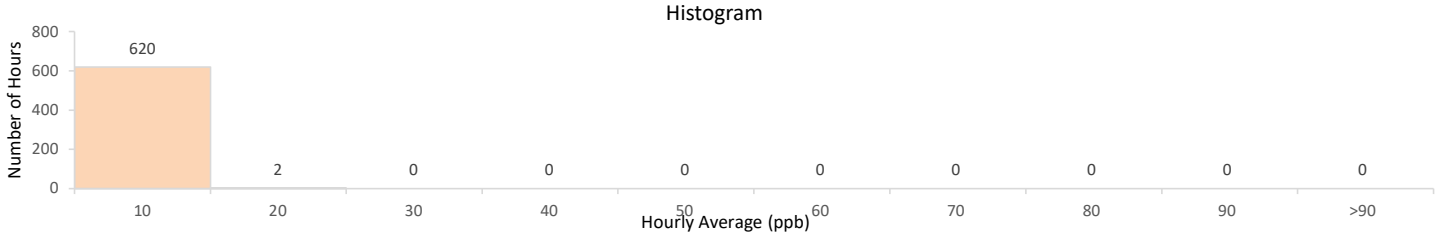
Maximum Hourly Value:	12	ppb	on Feb 27 at hr 8	Hours in Service:	672
Maximum Daily Value:	1.2	ppb	on Feb 8	Hours of Data:	622
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	13
Minimum Daily Value:	0.0	ppb	on Feb 18	Hours of Calibration:	37
Monthly Average:	0.5	ppb		Operational Uptime:	98.1

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	S	1	2	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	2	0.3
Feb 2	0	0	0	0	S	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 3	0	0	0	S	0	0	0	0	0	0	1	3	3	3	3	3	1	0	0	0	0	0	0	0	0	3	0.7
Feb 4	0	0	S	0	0	0	0	0	0	0	0	0	1	4	2	3	1	0	0	0	0	0	0	0	0	4	0.5
Feb 5	0	S	0	0	0	0	0	0	2	1	2	1	2	1	1	1	0	0	0	0	0	0	0	0	0	2	0.5
Feb 6	S	0	4	4	3	0	0	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	S	0	4	0.7
Feb 7	0	0	0	0	0	0	0	1	1	0	2	3	4	0	0	1	0	0	0	0	0	0	S	0	0	4	0.5
Feb 8	0	0	0	0	0	0	1	1	1	6	11	3	2	1	1	0	0	0	0	0	0	S	0	0	0	11	1.2
Feb 9	0	0	0	0	0	0	0	1	1	2	6	3	2	2	2	1	0	1	0	0	S	0	0	0	0	6	0.9
Feb 10	0	0	0	0	0	0	0	0	2	1	1	1	1	1	1	2	0	0	0	S	0	0	0	0	0	2	0.4
Feb 11	0	0	0	0	0	0	0	0	3	0	C	C	C	C	C	C	C	C	S	0	0	0	0	0	0	3	NA
Feb 12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	S	0	0	0	0	0	0	0	1	0.1
Feb 13	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	S	0	0	0	0	0	0	0	0	3	0.2
Feb 14	0	0	0	0	0	0	0	0	2	0	2	4	6	5	1	S	0	0	0	0	0	1	0	0	0	6	0.9
Feb 15	0	0	0	0	0	0	0	0	0	0	0	1	1	1	S	1	0	0	0	0	0	0	0	0	0	1	0.2
Feb 16	0	0	0	0	0	0	0	0	1	1	1	1	1	S	1	1	0	0	0	0	0	0	0	0	0	1	0.3
Feb 17	0	1	0	0	0	0	0	0	1	2	2	0	S	1	0	0	0	0	0	0	0	0	0	0	0	2	0.3
Feb 18	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 19	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 20	0	0	0	0	0	0	0	0	7	S	3	3	3	2	3	1	0	0	0	0	0	0	0	0	0	7	1.0
Feb 21	0	0	0	0	0	0	1	4	S	2	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	4	0.6
Feb 22	0	0	0	0	0	0	0	S	5	2	1	2	3	2	3	0	1	2	0	0	0	0	0	0	0	5	0.9
Feb 23	0	0	0	0	0	0	S	0	0	0	0	2	1	1	2	1	1	0	0	0	0	0	0	0	0	2	0.3
Feb 24	0	0	0	0	0	S	0	0	4	4	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	4	0.7
Feb 25	0	0	0	0	S	0	0	0	1	1	2	1	2	2	1	1	0	0	0	0	0	0	0	0	0	2	0.5
Feb 26	0	0	0	S	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	2	0.1
Feb 27	0	0	S	0	0	0	0	3	12	5	3	1	4	2	K	K	K	K	K	K	K	K	K	K	0	12	NA
Feb 28	K	K	0	0	0	0	0	0	0	NRM	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Diurnal Maximum	0	1	4	4	3	0	1	4	12	6	11	4	6	5	3	3	1	2	0	0	0	1	0	0			
Diurnal Average	0.0	0.0	0.2	0.2	0.1	0.0	0.1	0.4	1.7	1.1	1.7	1.3	1.6	1.3	1.1	0.9	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



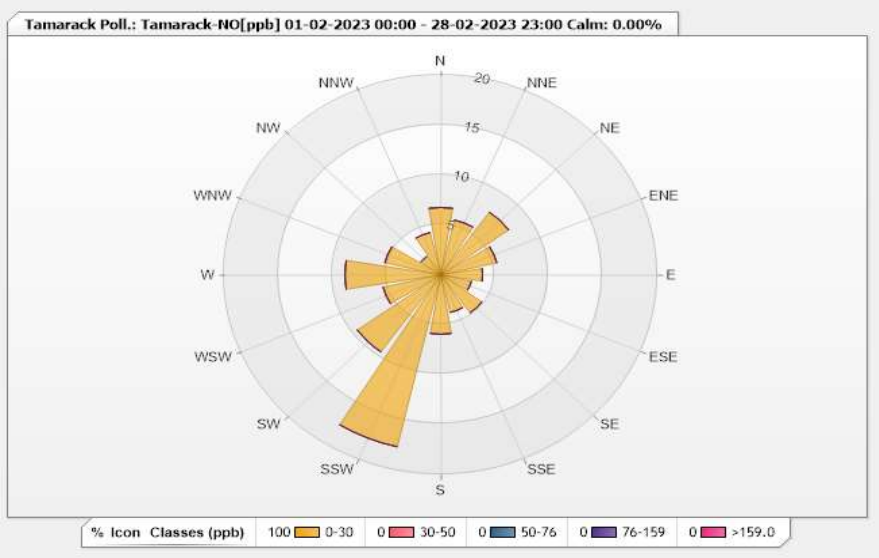


Station: Tamarack Poll.: Tamarack-NO[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 92.56% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	6.75	0	0	0	0	6.75
NNE	5.63	0	0	0	0	5.63
NE	7.72	0	0	0	0	7.72
ENE	5.31	0	0	0	0	5.31
E	3.86	0	0	0	0	3.86
ESE	2.89	0	0	0	0	2.89
SE	4.66	0	0	0	0	4.66
SSE	3.86	0	0	0	0	3.86
S	5.95	0	0	0	0	5.95
SSW	17.68	0	0	0	0	17.68
SW	9.49	0	0	0	0	9.49
WSW	5.47	0	0	0	0	5.47
W	8.84	0	0	0	0	8.84
WNW	5.31	0	0	0	0	5.31
NW	2.25	0	0	0	0	2.25
NNW	4.34	0	0	0	0	4.34
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb

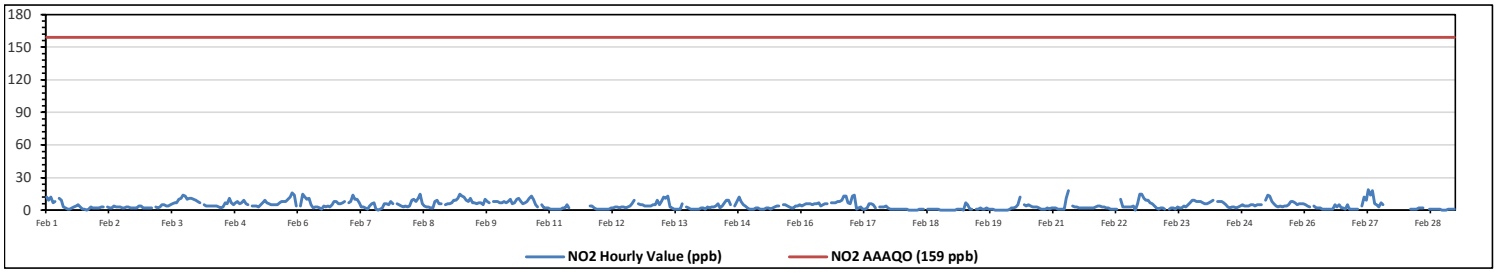
Number of 1-Hour Exceedances: 0

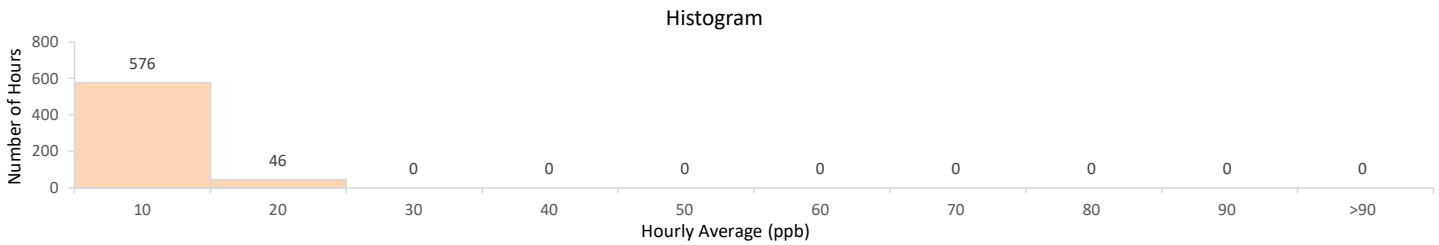
Maximum Hourly Value:	19	ppb	on Feb 27 at hr 6	Hours in Service:	672	
Maximum Daily Value:	8.6	ppb	on Feb 9	Hours of Data:	622	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 19	Hours of Missing Data:	13	
Minimum Daily Value:	0.5	ppb	on Feb 18	Hours of Calibration:	37	
Monthly Average:	4.5	ppb		Operational Uptime:	98.1	

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	12	9	12	7	8	S	11	9	3	2	1	1	2	3	4	5	3	1	1	0	1	3	2	2	0	12	4.4
Feb 2	2	2	3	3	S	3	2	2	4	3	3	3	2	2	3	3	2	2	2	2	4	4	2	2	2	4	2.6
Feb 3	2	2	2	S	3	2	3	5	5	4	4	5	6	7	7	10	11	14	13	10	11	11	10	9	2	14	6.8
Feb 4	8	7	S	5	4	4	4	4	4	4	3	2	3	7	6	11	7	5	7	8	6	7	9	6	2	11	5.7
Feb 5	5	S	4	4	4	3	5	7	9	7	6	5	5	5	5	7	8	8	8	10	12	16	14	4	3	16	7.0
Feb 6	S	4	15	12	10	11	5	2	3	3	2	1	4	3	4	3	5	8	8	6	6	7	8	S	1	15	5.9
Feb 7	7	8	14	10	10	7	3	3	2	1	4	6	7	1	0	1	2	6	6	5	8	6	S	6	0	14	5.3
Feb 8	5	4	3	4	3	4	9	10	8	11	15	6	4	3	3	2	2	8	9	6	6	S	5	6	2	15	5.9
Feb 9	6	7	9	9	11	15	13	12	9	8	11	7	7	6	7	7	5	10	8	7	S	8	8	8	5	15	**8.6**
Feb 10	7	7	8	7	8	10	6	7	10	11	8	6	7	8	11	13	10	5	3	S	5	2	2	2	2	13	7.1
Feb 11	1	1	1	1	1	1	2	2	5	2	C	C	C	C	C	C	C	C	S	4	4	2	1	1	1	5	NA
Feb 12	1	1	1	1	1	2	2	3	3	2	3	3	2	3	4	6	9	S	6	5	5	4	4	4	1	9	3.3
Feb 13	4	5	5	9	5	8	12	11	13	3	2	1	1	1	1	6	S	3	2	1	1	1	1	1	1	13	4.2
Feb 14	2	2	1	3	2	3	3	4	6	2	4	7	9	9	5	S	4	8	12	8	5	4	2	1	1	12	4.6
Feb 15	1	1	2	2	1	1	1	2	2	1	2	3	4	4	S	5	5	4	3	2	2	4	4	5	1	5	2.7
Feb 16	4	5	6	6	6	5	6	6	7	4	5	6	6	S	7	7	7	8	8	9	13	13	7	6	4	13	6.8
Feb 17	13	14	1	2	3	1	1	2	6	6	5	2	S	3	3	3	4	2	1	1	1	1	1	1	1	14	3.3
Feb 18	1	1	1	0	0	0	0	0	1	1	1	S	1	1	1	1	1	1	0	0	0	0	0	0	0	1	**0.5**
Feb 19	0	0	1	1	1	0	7	5	1	1	S	1	1	2	1	1	2	1	1	1	0	0	0	0	0	7	1.2
Feb 20	0	0	0	1	2	2	3	5	12	S	5	4	5	4	3	3	3	2	1	1	1	2	1	2	0	12	2.7
Feb 21	2	2	1	1	1	1	11	18	S	4	3	3	2	2	2	2	2	2	2	2	3	4	4	3	1	18	3.3
Feb 22	3	2	2	1	1	1	1	S	10	3	3	3	3	3	4	0	6	15	15	11	9	9	7	6	0	15	5.1
Feb 23	4	2	1	2	2	1	S	1	2	2	1	3	2	2	4	3	5	7	9	9	8	8	8	7	1	9	4.0
Feb 24	6	6	7	8	9	S	8	8	8	7	5	3	2	3	3	2	3	4	5	4	4	4	5	5	2	9	5.2
Feb 25	4	5	5	5	S	9	14	13	8	6	4	3	4	3	4	4	5	8	8	7	5	6	6	6	3	14	6.2
Feb 26	5	4	3	S	4	2	2	2	1	1	1	1	1	1	5	3	5	2	2	1	5	1	1	1	1	5	2.3
Feb 27	1	1	S	4	12	9	**19**	14	18	6	5	3	7	5	K	K	K	K	K	K	K	K	K	K	1	**19**	NA
Feb 28	K	K	1	1	1	1	2	2	2	NRM	S	1	1	1	1	1	1	0	0	0	1	1	1	1	0	2	1.0
Diurnal Maximum	13	14	15	12	12	15	19	18	18	11	15	7	9	9	11	13	11	15	15	11	13	16	14	9			
Diurnal Average	4.1	3.9	4.2	4.2	4.3	4.1	5.7	5.9	6.0	4.0	4.2	3.4	3.8	3.5	3.9	4.4	4.7	5.4	5.4	4.6	4.8	4.9	4.3	3.7			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



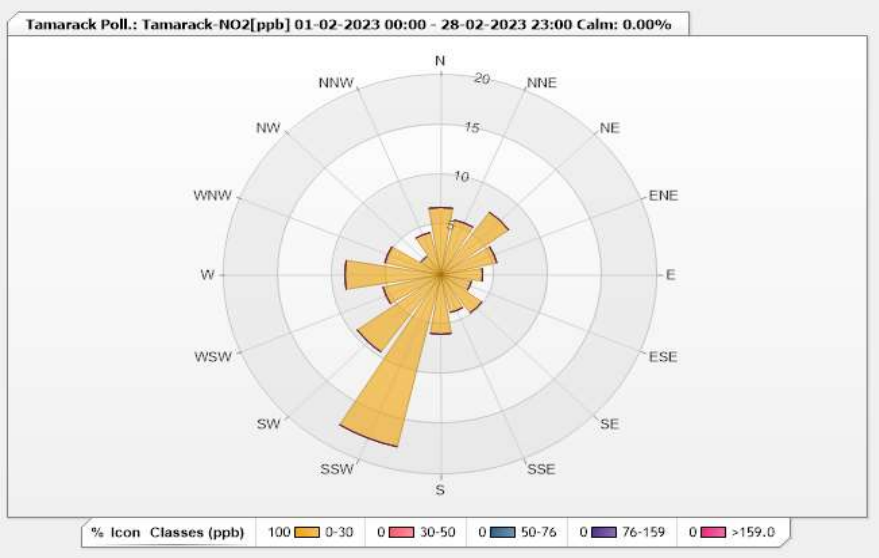


Station: Tamarack Poll.: Tamarack-NO2[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 92.56% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	6.75	0	0	0	0	6.75
NNE	5.63	0	0	0	0	5.63
NE	7.72	0	0	0	0	7.72
ENE	5.31	0	0	0	0	5.31
E	3.86	0	0	0	0	3.86
ESE	2.89	0	0	0	0	2.89
SE	4.66	0	0	0	0	4.66
SSE	3.86	0	0	0	0	3.86
S	5.95	0	0	0	0	5.95
SSW	17.68	0	0	0	0	17.68
SW	9.49	0	0	0	0	9.49
WSW	5.47	0	0	0	0	5.47
W	8.84	0	0	0	0	8.84
WNW	5.31	0	0	0	0	5.31
NW	2.25	0	0	0	0	2.25
NNW	4.34	0	0	0	0	4.34
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

OZONE (O_3) in ppb

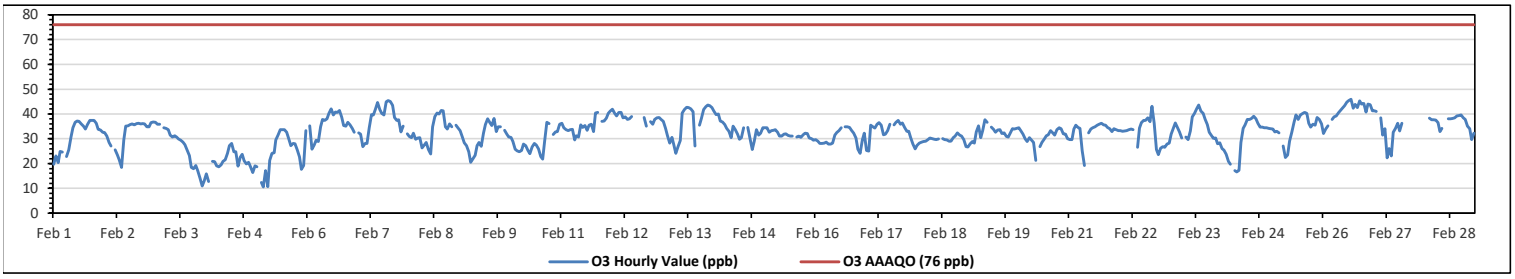
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb

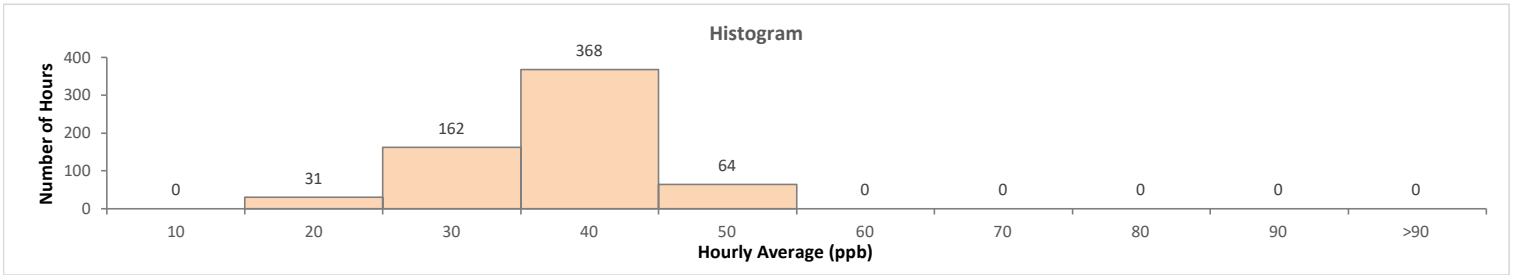
Number of 1-Hour Exceedances:	0				
Maximum Hourly Value:	45.9	ppb	on Feb 26 at hr 13	Hours in Service:	672
Maximum Daily Value:	41.4	ppb	on Feb 26	Hours of Data:	625
Minimum Hourly Value:	10.5	ppb	on Feb 5 at hr 3	Hours of Missing Data:	13
Minimum Daily Value:	20.8	ppb	on Feb 4	Hours of Calibration:	34
Monthly Average:	32.4	ppb		Operational Uptime:	98.1

Day	Hourly Period Starting at (MST)																						Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	19.8	23.1	20.3	24.8	24.6	S	22.8	25.5	30.8	34.5	36.6	37.2	37.1	36	35.1	33.9	35.9	37.4	37.3	37.4	36.3	33.8	33.5	32.6	19.8	37.4	31.6
Feb 2	32.5	31	28.5	27.1	S	25.5	23.5	21.4	18.4	29.5	35.1	35.2	35.7	36	35.6	36.1	36.3	36	36.1	36	34.8	34.8	36.5	36.8	18.4	36.8	32.1
Feb 3	36.6	35.9	35.8	S	34.4	34.2	33.7	31.4	30.8	31.2	30.7	29.9	29.4	28.7	27.6	25.4	23.2	18.4	17.9	19.2	17.1	14.1	10.9	12.9	10.9	36.6	26.5
Feb 4	15.9	12.7	S	20.8	20.7	19.1	18.6	19.5	20.9	21.6	24.2	27.2	28.1	24.7	24.7	19	22.5	23.8	21.2	19.9	20.4	18.6	16.3	19.1	12.7	28.1	**20.8**
Feb 5	18.7	S	12.3	10.5	17.1	10.7	21.3	24.1	24.4	29.5	31.4	33.6	33.6	33.6	32.7	30.2	27.2	28.1	28	25.5	22.6	17.7	19.2	33.3	**10.5**	33.6	24.6
Feb 6	S	35.2	25.8	27.4	29.4	28.9	34.9	37.8	37.4	38.1	40.3	42	39.6	40.8	40.7	41.4	38.7	35.3	35.1	36.7	35.6	34.2	32.7	S	25.8	42.0	35.8
Feb 7	32.4	31.8	26.8	28.1	28.1	34.5	39.7	39.5	41.8	44.6	41.8	40.2	39.5	44.9	45.4	45	43.5	38.6	37.4	37.6	32.8	35.1	S	32	26.8	45.4	37.4
Feb 8	30.9	30.4	32.3	29.8	30.3	30.4	26.4	27.4	28.6	25.7	23.9	34.8	39	40.4	39.9	41.4	41.3	34.9	33.9	36	34.8	S	35.4	34.4	23.9	41.4	33.1
Feb 9	33.2	30.8	28.4	27.2	24.7	20.4	22	23.3	27.2	28.5	26.9	32.3	35.7	38	36.5	35.3	38.2	32.9	34.9	34.8	S	33.4	31.8	30.7	20.4	38.2	30.7
Feb 10	30.6	28.8	25.8	25.1	24.7	25.3	27.8	27.2	25.2	24	26.7	28.1	27.5	25.9	22.8	21.8	28.8	36.7	36.1	S	31.7	32.8	32.9	35.9	21.8	36.7	28.4
Feb 11	36.2	34.5	33.6	33.2	33.7	33.8	29.5	31.2	30.7	35.6	34.6	35.3	33.4	35.5	35.8	32.9	40.4	40.6	S	37.1	37.2	38.3	40.2	41.2	29.5	41.2	35.4
Feb 12	41.9	40.3	39.3	40.6	40.6	38.4	38.9	37.7	38	39	C	C	C	C	C	38.6	35.1	S	36.9	35.9	37.7	38.5	38.6	37.8	35.1	41.9	38.5
Feb 13	37.1	34.2	31.2	28.3	30.6	27.4	24.2	26.8	29.2	40.4	41.7	42.7	42.5	42	40.9	27	S	35.4	38.2	41.8	43	43.6	43.4	42.6	24.2	43.6	36.3
Feb 14	41.2	39.7	39.9	37.2	36.8	35.7	34.2	33	30.4	35.1	33.7	31.8	29.8	30.4	34.5	S	34.6	30.1	25.7	28.9	33.7	31.5	32.2	34.4	25.7	41.2	33.7
Feb 15	34.4	34.5	32.7	33.2	33.4	33.6	32.6	31	31	31.8	32	31.3	31.1	31	S	30.8	31.1	30.6	31.6	32.3	32.1	30.3	30	29.4	29.4	34.5	31.8
Feb 16	29.7	29	28.1	28.1	28.3	28.7	27.8	27.8	28.3	31.5	32.5	33.3	34.4	S	34.8	34.9	34.6	33.4	32.3	30.3	25.8	24.2	29.5	32.2	24.2	34.9	30.4
Feb 17	25.3	25	35.5	34.9	34.3	35.9	36.5	35.4	31.6	31.8	33.3	35.8	S	35.6	36.6	37.4	35.9	36.4	34.6	33	33	30.5	27.9	25.9	25.0	37.4	33.1
Feb 18	27.3	28.3	28.7	28.9	29	29.6	30.3	30	29.8	29.6	29.9	S	30.1	29.7	29.5	29	29	30.4	31.1	32.4	31.4	31	29.6	26.8	26.8	32.4	29.6
Feb 19	26.7	28	28.8	28.2	32.8	35.2	30.4	33.3	37.6	36.7	S	34.7	33.8	32.7	33.5	33.6	32.1	32.4	30.9	30.7	32.2	34	33.9	34.2	26.7	37.6	32.5
Feb 20	34.4	33.3	31.8	29.9	28.9	30.5	29.4	28.6	21.3	S	26.8	28.6	29.8	31.2	31.6	33.2	32.4	31.5	33.6	34.5	34	32	31.8	30	21.3	34.5	30.8
Feb 21	29.6	29.6	33.9	35.5	34.6	34.2	25.1	19.2	S	32.4	33.9	34.4	34.8	35.5	35.9	36.2	35.6	35.4	34.6	34.1	32.9	34.1	33.6	33.3	19.2	36.2	33.0
Feb 22	33.2	33	33.1	33.3	33.6	33.9	33.7	S	26.6	34.3	36.5	37.3	37.3	38.4	36.9	43.1	36.3	25.6	23.6	26.2	26.8	26.6	27.9	28.2	23.6	43.1	32.4
Feb 23	31.9	34.3	36.4	34.4	32.8	30.3	S	30.8	29.6	33.1	38.9	40.3	42.1	43.6	41.2	40.3	37.9	35.7	32.7	31.5	30.2	30.3	28	28.4	28.0	43.6	34.6
Feb 24	26.1	25.4	23.8	20.8	19.8	S	17.1	16.6	17.3	28.6	34.2	35.6	37.7	37.7	38.2	39.1	38.1	36.3	34.7	34.7	34.5	34.5	34.2	34	16.6	39.1	30.4
Feb 25	33.9	32.8	33	32.4	S	27.1	22.4	23.4	29	32.6	36.6	39.5	37.7	39.5	40.1	40.7	40.3	36.3	34.7	35.9	35.5	38.6	37.7	36	22.4	40.7	34.6
Feb 26	32.1	33.9	35.2	S	37.7	38.9	39.2	40.5	41.5	42.3	43.4	44.7	45.5	**45.9**	42.3	43.8	42.6	45.3	44	44.2	40.8	43.9	43.7	41.3	32.1	**45.9**	**41.4**
Feb 27	41.3	41.1	S	38.5	31.5	34.1	22.3	26.1	23	32.7	34.2	36.2	33.1	36.2	K	K	K	K	K	K	K	K	K	K	22.3	41.3	NA
Feb 28	K	K	38.3	37.6	37.6	37.5	36.5	32.9	34.2	NRM	S	38	38	38.2	38.4	39.3	39.4	39.6	38.5	37.8	35.1	34.1	29.7	32.3	29.7	39.6	36.7
Diurnal Maximum	41.9	41.1	39.9	40.6	40.6	38.9	39.7	40.5	41.8	44.6	43.4	44.7	45.5	45.9	45.4	45.0	43.5	45.3	44.0	44.2	43.0	43.9	43.7	42.6			
Diurnal Average	31.3	31.4	30.7	29.8	30.4	30.5	28.9	28.9	29.4	32.9	33.6	35.4	35.2	35.9	35.6	35.0	35.0	33.7	32.9	33.2	32.4	31.9	31.6	32.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



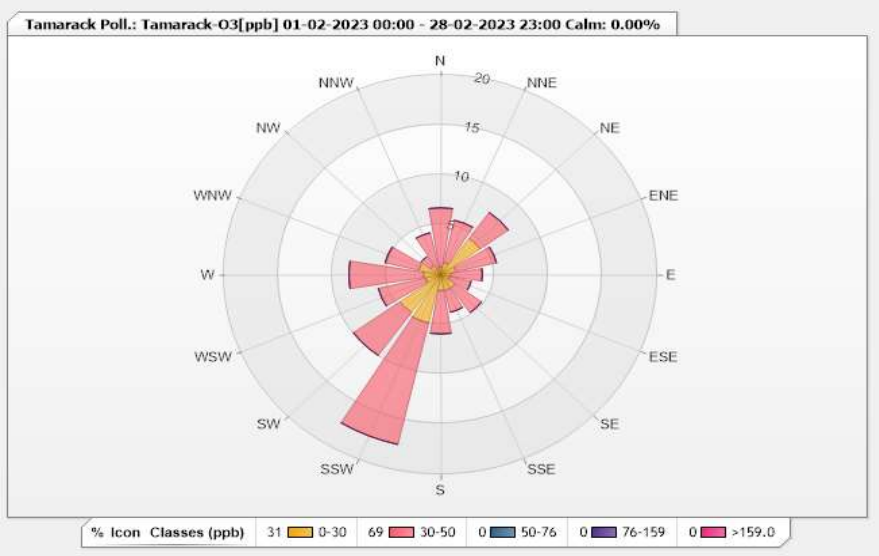


Station: Tamarack Poll.: Tamarack-O3[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 93.01% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	0.8	5.92	0	0	0	6.72
NNE	1.28	4.32	0	0	0	5.6
NE	4.48	3.2	0	0	0	7.68
ENE	1.44	3.84	0	0	0	5.28
E	0.96	2.88	0	0	0	3.84
ESE	0.8	2.08	0	0	0	2.88
SE	1.6	3.04	0	0	0	4.64
SSE	1.6	2.24	0	0	0	3.84
S	1.6	4.32	0	0	0	5.92
SSW	4.96	12.48	0	0	0	17.44
SW	4.64	5.28	0	0	0	9.92
WSW	1.44	4.48	0	0	0	5.92
W	1.6	6.88	0	0	0	8.48
WNW	2.08	3.2	0	0	0	5.28
NW	1.12	1.12	0	0	0	2.24
NNW	0.48	3.84	0	0	0	4.32
Summary	30.88	69.12	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

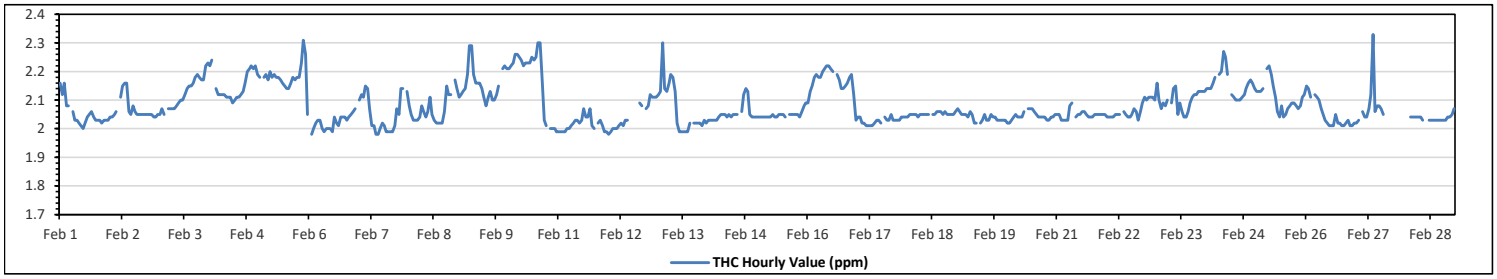
TOTAL HYDROCARBONS (THC) in ppm

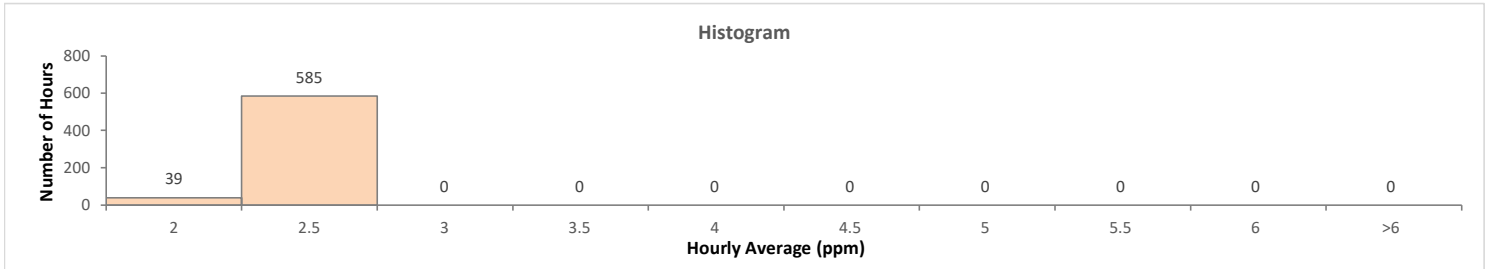
Maximum Hourly Value:	2.33	ppm	on Feb 27 at hr 8	Hours in Service:	672
Maximum Daily Value:	2.18	ppm	on Feb 5	Hours of Data:	624
Minimum Hourly Value:	1.98	ppm	on Feb 6 at hr 1	Hours of Missing Data:	14
Minimum Daily Value:	2.02	ppm	on Feb 11	Hours of Calibration:	34
Monthly Average:	2.08	ppm		Operational Uptime:	97.9

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	2.16	2.12	2.16	2.08	2.08	S	2.06	2.03	2.03	2.02	2.01	2.00	2.02	2.04	2.05	2.06	2.04	2.03	2.03	2.03	2.02	2.03	2.03	2.03	2.00	2.16	2.05
Feb 2	2.04	2.04	2.05	2.06	S	2.11	2.15	2.16	2.16	2.06	2.05	2.08	2.06	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.04	2.04	2.05	2.04	2.16	2.07
Feb 3	2.05	2.07	2.05	S	2.07	2.07	2.07	2.07	2.08	2.09	2.10	2.10	2.12	2.14	2.15	2.15	2.16	2.18	2.19	2.18	2.17	2.17	2.22	2.23	2.05	2.23	2.13
Feb 4	2.22	2.24	S	2.14	2.12	2.12	2.12	2.12	2.11	2.11	2.11	2.09	2.10	2.11	2.11	2.12	2.13	2.16	2.20	2.21	2.22	2.21	2.22	2.19	2.09	2.24	2.15
Feb 5	2.18	S	2.18	2.19	2.17	2.20	2.18	2.19	2.18	2.18	2.17	2.16	2.15	2.14	2.14	2.16	2.18	2.17	2.18	2.18	2.23	2.31	2.26	2.05	2.05	2.31	**2.18**
Feb 6	S	1.98	2.00	2.02	2.03	2.03	2.00	1.99	2.00	2.00	2.00	1.99	2.04	2.02	2.01	2.04	2.04	2.04	2.03	2.04	2.05	2.06	2.07	S	1.98	2.07	2.02
Feb 7	2.10	2.12	2.11	2.15	2.14	2.07	2.01	2.01	1.98	1.98	2.00	2.02	2.01	1.99	1.99	1.99	1.99	2.01	2.07	2.05	2.14	2.14	S	2.13	1.98	2.15	2.05
Feb 8	2.08	2.05	2.03	2.03	2.03	2.04	2.08	2.06	2.04	2.06	2.11	2.05	2.03	2.02	2.02	2.02	2.02	2.06	2.15	2.12	2.12	S	2.17	2.14	2.02	2.17	2.07
Feb 9	2.11	2.12	2.13	2.14	2.19	2.29	2.29	2.19	2.16	2.16	2.16	2.14	2.11	2.08	2.11	2.13	2.10	2.10	2.12	2.15	S	2.21	2.22	2.21	2.08	2.29	2.16
Feb 10	2.21	2.22	2.23	2.26	2.26	2.25	2.24	2.22	2.23	2.23	2.23	2.25	2.24	2.25	2.30	2.30	2.18	2.03	2.01	S	2.00	2.00	2.00	1.99	1.99	2.30	**2.18**
Feb 11	1.99	1.99	1.99	1.99	2.00	2.00	2.01	2.02	2.03	2.03	2.02	2.03	2.07	2.04	2.04	2.07	2.01	2.00	S	2.02	2.03	2.01	1.99	1.99	1.99	2.07	2.02
Feb 12	1.98	1.99	2.00	2.00	2.00	2.01	2.02	2.01	2.03	2.03	C	C	C	C	C	2.09	2.08	S	2.07	2.08	2.12	2.11	2.11	2.11	1.98	2.12	2.05
Feb 13	2.12	2.13	2.30	2.14	2.13	2.16	2.19	2.18	2.13	2.02	1.99	1.99	1.99	1.99	1.99	2.02	S	2.02	2.02	2.02	2.02	2.01	2.03	2.02	1.99	2.30	2.07
Feb 14	2.03	2.03	2.03	2.03	2.03	2.04	2.05	2.05	2.05	2.04	2.05	2.04	2.05	2.05	2.05	S	2.06	2.12	2.14	2.13	2.05	2.04	2.04	2.04	2.03	2.14	2.05
Feb 15	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.04	2.04	2.05	2.05	2.05	2.04	S	2.05	2.05	2.05	2.05	2.05	2.04	2.06	2.08	2.09	2.04	2.09	2.05
Feb 16	2.09	2.13	2.15	2.18	2.19	2.18	2.18	2.20	2.21	2.22	2.22	2.21	2.20	S	2.19	2.17	2.14	2.14	2.15	2.16	2.18	2.19	2.12	2.03	2.03	2.22	2.17
Feb 17	2.04	2.04	2.02	2.02	2.01	2.01	2.01	2.01	2.02	2.03	2.03	2.02	S	2.04	2.03	2.03	2.05	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.01	2.05	2.03
Feb 18	2.04	2.05	2.05	2.05	2.05	2.04	2.05	2.05	2.05	2.05	2.05	S	2.05	2.05	2.06	2.06	2.06	2.05	2.06	2.05	2.05	2.05	2.05	2.06	2.04	2.06	2.05
Feb 19	2.07	2.06	2.05	2.05	2.05	2.04	2.06	2.05	2.02	2.02	S	2.02	2.03	2.05	2.03	2.03	2.05	2.04	2.04	2.03	2.03	2.03	2.03	2.04	2.02	2.07	2.04
Feb 20	2.02	2.02	2.03	2.04	2.05	2.04	2.04	2.04	2.06	S	2.07	2.07	2.07	2.06	2.05	2.04	2.04	2.04	2.04	2.03	2.03	2.04	2.04	2.05	2.02	2.07	2.04
Feb 21	2.05	2.05	2.03	2.03	2.03	2.03	2.08	2.09	S	2.04	2.05	2.05	2.06	2.06	2.05	2.04	2.04	2.04	2.05	2.05	2.05	2.05	2.05	2.05	2.03	2.09	2.05
Feb 22	2.04	2.04	2.04	2.04	2.05	2.05	2.05	S	2.06	2.05	2.04	2.04	2.05	2.07	2.06	2.03	2.06	2.09	2.11	2.10	2.11	2.11	2.11	2.10	2.03	2.11	2.07
Feb 23	2.16	2.10	2.07	2.09	2.08	2.10	S	2.09	2.14	2.15	2.05	2.09	2.06	2.04	2.04	2.06	2.09	2.11	2.12	2.12	2.13	2.13	2.13	2.13	2.04	2.16	2.10
Feb 24	2.14	2.14	2.14	2.16	2.18	S	2.19	2.20	2.27	2.25	2.19	NRM	2.12	2.11	2.10	2.10	2.10	2.11	2.12	2.14	2.16	2.17	2.16	2.14	2.10	2.27	2.15
Feb 25	2.13	2.13	2.13	2.14	S	2.21	2.22	2.19	2.15	2.11	2.06	2.04	2.08	2.04	2.05	2.07	2.08	2.09	2.09	2.08	2.07	2.08	2.11	2.12	2.04	2.22	2.11
Feb 26	2.15	2.14	2.11	S	2.12	2.11	2.10	2.07	2.05	2.03	2.02	2.01	2.01	2.01	2.05	2.02	2.02	2.01	2.01	2.02	2.03	2.01	2.01	2.02	2.01	2.15	2.05
Feb 27	2.02	2.03	S	2.06	2.04	2.04	2.07	2.12	**2.33**	2.06	2.08	2.08	2.07	2.05	K	K	K	K	K	K	K	K	K	K	2.02	**2.33**	NA
Feb 28	K	K	2.04	2.04	2.04	2.04	2.04	2.04	2.03	NRM	S	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04	2.05	2.07	2.03	2.07	2.04
Diurnal Maximum	2.22	2.24	2.30	2.26	2.26	2.29	2.29	2.22	2.33	2.25	2.23	2.25	2.24	2.25	2.30	2.30	2.18	2.18	2.20	2.21	2.23	2.31	2.26	2.23			
Diurnal Average	2.09	2.08	2.08	2.08	2.08	2.09	2.10	2.09	2.10	2.08	2.08	2.07	2.07	2.06	2.07	2.07	2.07	2.07	2.08	2.08	2.08	2.09	2.09	2.08			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



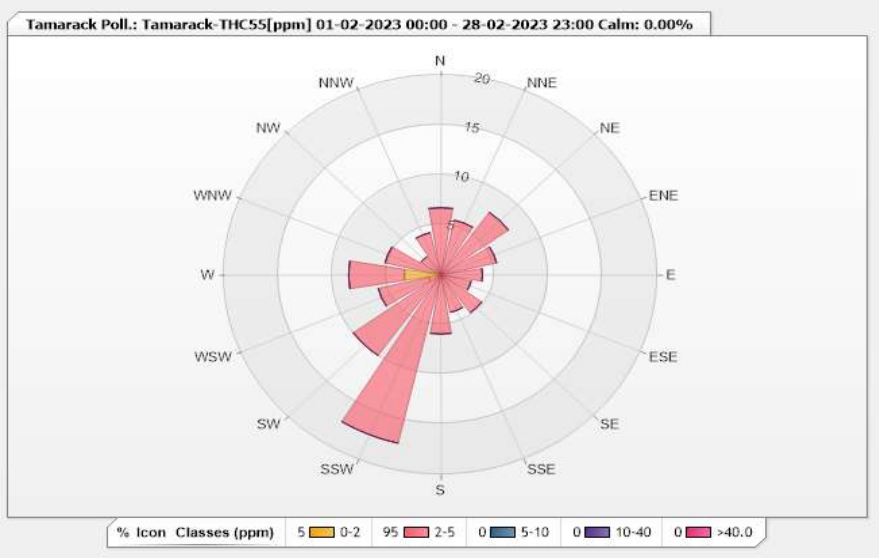


Station: Tamarack Poll.: Tamarack-THC55[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 92.86% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0	6.73	0	0	0	6.73
NNE	0	5.61	0	0	0	5.61
NE	0	7.69	0	0	0	7.69
ENE	0	5.29	0	0	0	5.29
E	0	3.85	0	0	0	3.85
ESE	0	2.88	0	0	0	2.88
SE	0	4.65	0	0	0	4.65
SSE	0	3.85	0	0	0	3.85
S	0	5.93	0	0	0	5.93
SSW	0	17.31	0	0	0	17.31
SW	0	9.94	0	0	0	9.94
WSW	1.12	4.81	0	0	0	5.93
W	3.37	5.13	0	0	0	8.5
WNW	0.48	4.81	0	0	0	5.29
NW	0	2.24	0	0	0	2.24
NNW	0	4.33	0	0	0	4.33
Summary	4.97	95.05	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

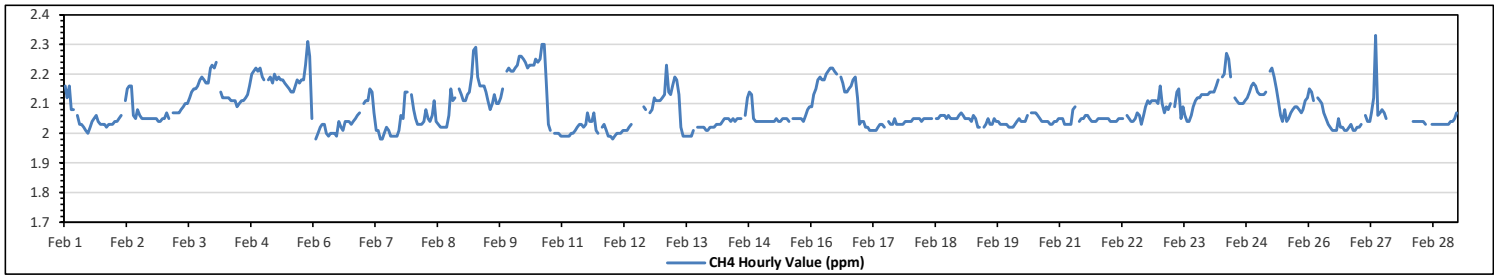
METHANE (CH4) in ppm

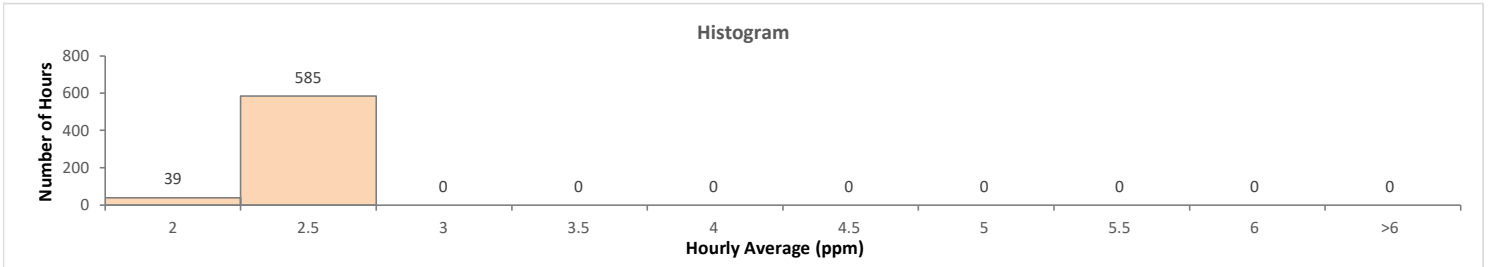
Maximum Hourly Value:	2.33	ppm	on Feb 27 at hr 8	Hours in Service:	672
Maximum Daily Value:	2.18	ppm	on Feb 5	Hours of Data:	624
Minimum Hourly Value:	1.98	ppm	on Feb 6 at hr 1	Hours of Missing Data:	14
Minimum Daily Value:	2.02	ppm	on Feb 11	Hours of Calibration:	34
Monthly Average:	2.08	ppm		Operational Uptime:	97.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	2.16	2.12	2.16	2.08	2.08	S	2.06	2.03	2.03	2.02	2.01	2.00	2.02	2.04	2.05	2.06	2.04	2.03	2.03	2.03	2.02	2.03	2.03	2.03	2.00	2.16	2.05
Feb 2	2.04	2.04	2.05	2.06	S	2.11	2.15	2.16	2.16	2.06	2.05	2.08	2.06	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.04	2.04	2.05	2.04	2.16	2.07
Feb 3	2.05	2.07	2.05	S	2.07	2.07	2.07	2.07	2.08	2.09	2.10	2.10	2.12	2.14	2.15	2.15	2.16	2.18	2.19	2.18	2.17	2.17	2.22	2.23	2.05	2.23	2.13
Feb 4	2.22	2.24	S	2.14	2.12	2.12	2.12	2.12	2.11	2.11	2.11	2.09	2.10	2.11	2.11	2.12	2.13	2.16	2.20	2.21	2.22	2.21	2.22	2.19	2.09	2.24	2.15
Feb 5	2.18	S	2.18	2.19	2.17	2.20	2.18	2.19	2.18	2.18	2.17	2.16	2.15	2.14	2.14	2.16	2.18	2.17	2.18	2.18	2.23	2.31	2.26	2.05	2.05	2.31	**2.18**
Feb 6	S	1.98	2.00	2.02	2.03	2.03	2.00	1.99	2.00	2.00	2.00	1.99	2.04	2.02	2.01	2.04	2.04	2.04	2.03	2.04	2.05	2.06	2.07	S	1.98	2.07	2.02
Feb 7	2.10	2.11	2.11	2.15	2.14	2.07	2.01	2.01	1.98	1.98	2.00	2.02	2.01	1.99	1.99	1.99	1.99	2.01	2.06	2.05	2.14	2.14	S	2.13	1.98	2.15	2.05
Feb 8	2.08	2.05	2.03	2.03	2.03	2.04	2.08	2.05	2.04	2.06	2.11	2.04	2.03	2.02	2.02	2.02	2.02	2.06	2.15	2.11	2.12	S	2.15	2.13	2.02	2.15	2.06
Feb 9	2.11	2.11	2.13	2.14	2.19	2.28	2.29	2.19	2.16	2.16	2.16	2.14	2.11	2.08	2.10	2.13	2.10	2.10	2.12	2.15	S	2.21	2.22	2.21	2.08	2.29	2.16
Feb 10	2.21	2.22	2.23	2.26	2.26	2.25	2.24	2.22	2.23	2.23	2.23	2.25	2.24	2.25	2.30	2.30	2.18	2.03	2.01	S	2.00	2.00	2.00	1.99	1.99	2.30	**2.18**
Feb 11	1.99	1.99	1.99	1.99	2.00	2.00	2.01	2.02	2.03	2.03	2.02	2.03	2.07	2.04	2.04	2.07	2.01	2.00	S	2.02	2.03	2.01	1.99	1.99	1.99	2.07	2.02
Feb 12	1.98	1.99	2.00	2.00	2.00	2.01	2.01	2.01	2.02	2.03	C	C	C	C	C	2.09	2.08	S	2.07	2.08	2.12	2.11	2.11	2.11	1.98	2.12	2.05
Feb 13	2.12	2.13	2.23	2.14	2.13	2.16	2.19	2.18	2.13	2.02	1.99	1.99	1.99	1.99	1.99	2.01	S	2.02	2.02	2.02	2.02	2.01	2.01	2.02	1.99	2.23	2.07
Feb 14	2.02	2.02	2.03	2.03	2.03	2.04	2.05	2.05	2.05	2.04	2.05	2.04	2.05	2.05	2.05	S	2.06	2.12	2.14	2.13	2.05	2.04	2.04	2.04	2.02	2.14	2.05
Feb 15	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.04	2.04	2.05	2.05	2.05	2.04	S	2.05	2.05	2.05	2.05	2.05	2.04	2.06	2.08	2.09	2.04	2.09	2.05
Feb 16	2.09	2.13	2.15	2.18	2.19	2.18	2.18	2.20	2.21	2.22	2.22	2.21	2.20	S	2.19	2.17	2.14	2.14	2.15	2.16	2.18	2.19	2.12	2.03	2.03	2.22	2.17
Feb 17	2.04	2.04	2.02	2.02	2.01	2.01	2.01	2.01	2.02	2.03	2.03	2.02	S	2.04	2.03	2.03	2.05	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.01	2.05	2.03
Feb 18	2.04	2.05	2.05	2.05	2.05	2.04	2.05	2.05	2.05	2.05	2.05	S	2.05	2.05	2.06	2.06	2.06	2.05	2.06	2.05	2.05	2.05	2.05	2.06	2.04	2.06	2.05
Feb 19	2.07	2.06	2.05	2.05	2.05	2.04	2.06	2.05	2.02	2.02	S	2.02	2.03	2.05	2.03	2.03	2.05	2.04	2.04	2.03	2.03	2.03	2.03	2.02	2.02	2.07	2.04
Feb 20	2.02	2.02	2.03	2.04	2.05	2.04	2.04	2.04	2.06	S	2.07	2.07	2.07	2.06	2.05	2.04	2.04	2.04	2.04	2.03	2.03	2.04	2.04	2.05	2.02	2.07	2.04
Feb 21	2.05	2.05	2.03	2.03	2.03	2.03	2.08	2.09	S	2.04	2.05	2.05	2.06	2.06	2.05	2.04	2.04	2.04	2.05	2.05	2.05	2.05	2.05	2.05	2.03	2.09	2.05
Feb 22	2.04	2.04	2.04	2.04	2.05	2.05	2.05	S	2.06	2.05	2.04	2.04	2.05	2.07	2.06	2.03	2.06	2.09	2.11	2.10	2.11	2.11	2.11	2.10	2.03	2.11	2.07
Feb 23	2.16	2.10	2.07	2.09	2.08	2.10	S	2.09	2.14	2.15	2.05	2.09	2.06	2.04	2.04	2.06	2.09	2.11	2.12	2.12	2.13	2.13	2.13	2.13	2.04	2.16	2.10
Feb 24	2.14	2.14	2.14	2.16	2.18	S	2.19	2.20	2.27	2.25	2.19	NRM	2.12	2.11	2.10	2.10	2.10	2.11	2.12	2.14	2.16	2.17	2.16	2.14	2.10	2.27	2.15
Feb 25	2.13	2.13	2.13	2.14	S	2.21	2.22	2.19	2.15	2.11	2.06	2.04	2.08	2.04	2.05	2.07	2.08	2.09	2.09	2.08	2.07	2.08	2.11	2.12	2.04	2.22	2.11
Feb 26	2.15	2.14	2.11	S	2.12	2.11	2.10	2.07	2.05	2.03	2.02	2.01	2.01	2.01	2.05	2.02	2.02	2.01	2.01	2.02	2.03	2.01	2.01	2.02	2.01	2.15	2.05
Feb 27	2.02	2.03	S	2.06	2.04	2.04	2.07	2.12	**2.33**	2.06	2.07	2.08	2.07	2.05	K	K	K	K	K	K	K	K	K	K	2.02	**2.33**	NA
Feb 28	K	K	2.04	2.04	2.04	2.04	2.04	2.04	2.03	NRM	S	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.04	2.05	2.07	2.03	2.07	2.04
Diurnal Maximum	2.22	2.24	2.23	2.26	2.26	2.28	2.29	2.22	2.33	2.25	2.23	2.25	2.24	2.25	2.30	2.30	2.18	2.18	2.20	2.21	2.23	2.31	2.26	2.23			
Diurnal Average	2.09	2.08	2.08	2.08	2.08	2.09	2.10	2.09	2.10	2.08	2.08	2.07	2.07	2.06	2.07	2.07	2.07	2.07	2.08	2.08	2.08	2.09	2.09	2.08			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



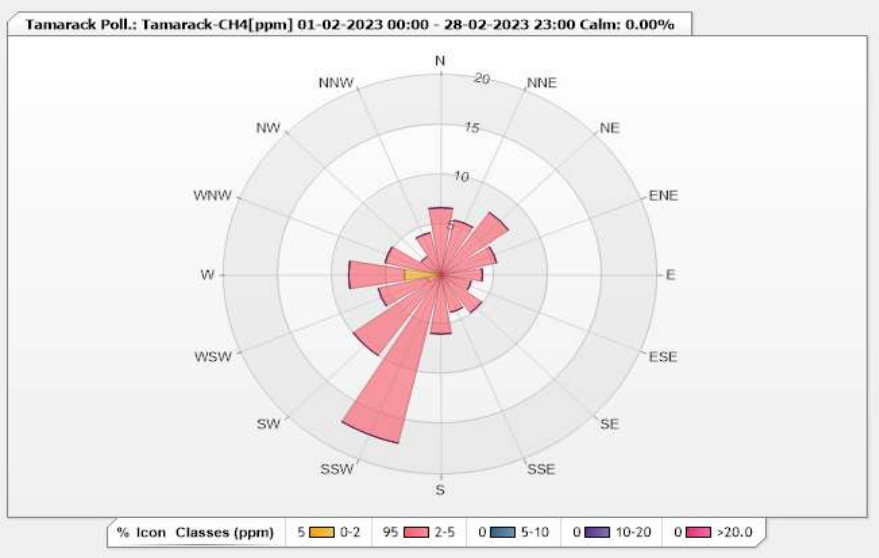


Station: Tamarack Poll.: Tamarack-CH4[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 92.86% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0	6.73	0	0	0	6.73
NNE	0	5.61	0	0	0	5.61
NE	0	7.69	0	0	0	7.69
ENE	0	5.29	0	0	0	5.29
E	0	3.85	0	0	0	3.85
ESE	0	2.88	0	0	0	2.88
SE	0	4.65	0	0	0	4.65
SSE	0	3.85	0	0	0	3.85
S	0	5.93	0	0	0	5.93
SSW	0	17.31	0	0	0	17.31
SW	0	9.94	0	0	0	9.94
WSW	1.28	4.65	0	0	0	5.93
W	3.37	5.13	0	0	0	8.5
WNW	0.48	4.81	0	0	0	5.29
NW	0	2.24	0	0	0	2.24
NNW	0	4.33	0	0	0	4.33
Summary	5.13	94.89	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

Maximum Hourly Value:	0.08	ppm	on Feb 13 at hr 2	Hours in Service:	672
Maximum Daily Value:	0.00	ppm	on Feb 13	Hours of Data:	624
Minimum Hourly Value:	0.00	ppm	on Feb 1 at hr 0	Hours of Missing Data:	14
Minimum Daily Value:	0.00	ppm	on Feb 1	Hours of Calibration:	34
Monthly Average:	0.00	ppm		Operational Uptime:	97.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 2	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 3	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 4	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 5	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 6	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00
Feb 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	S	0.00	0.00	0.01	0.00
Feb 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	S	0.02	0.01	0.00	0.02	0.00
Feb 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.01	0.00
Feb 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 12	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	C	C	C	C	C	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Feb 13	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	S	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.08	0.00
Feb 14	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Feb 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 23	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 24	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	NRM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 25	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 26	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 27	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	K	K	K	K	K	K	K	K	K	K	0.00	0.00	NA
Feb 28	K	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NRM	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Maximum	0.00	0.01	0.08	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.02	0.01			
Diurnal Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

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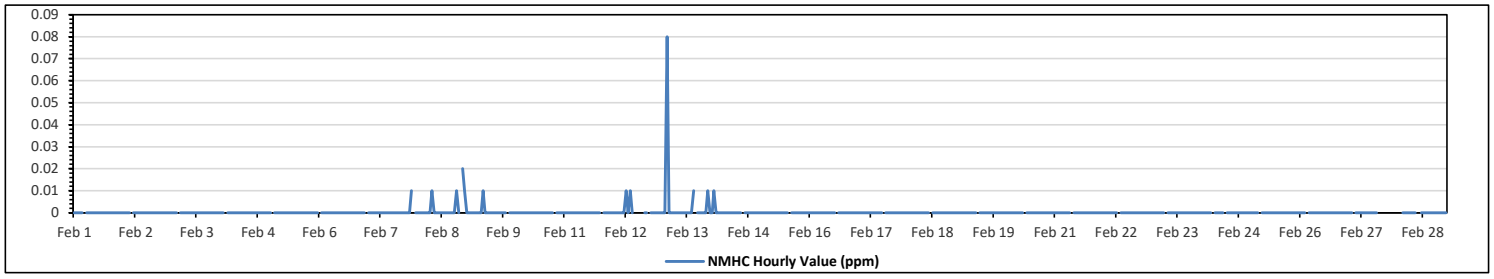
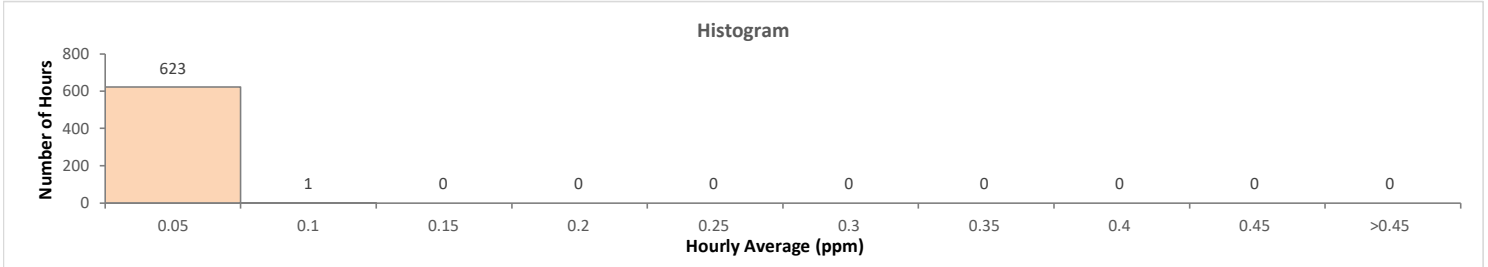
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



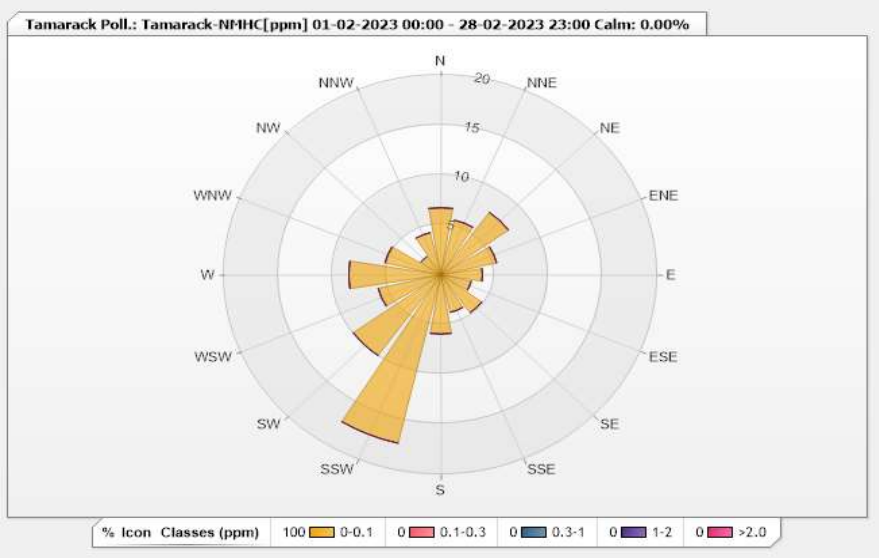


Station: Tamarack Poll.: Tamarack-NMHC[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 92.86% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	6.73	0	0	0	0	6.73
NNE	5.61	0	0	0	0	5.61
NE	7.69	0	0	0	0	7.69
ENE	5.29	0	0	0	0	5.29
E	3.85	0	0	0	0	3.85
ESE	2.88	0	0	0	0	2.88
SE	4.65	0	0	0	0	4.65
SSE	3.85	0	0	0	0	3.85
S	5.93	0	0	0	0	5.93
SSW	17.31	0	0	0	0	17.31
SW	9.94	0	0	0	0	9.94
WSW	5.93	0	0	0	0	5.93
W	8.49	0	0	0	0	8.49
WNW	5.29	0	0	0	0	5.29
NW	2.24	0	0	0	0	2.24
NNW	4.33	0	0	0	0	4.33
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

PARTICULATE MATTER 2.5 ($PM_{2.5}$) in µg/m^3

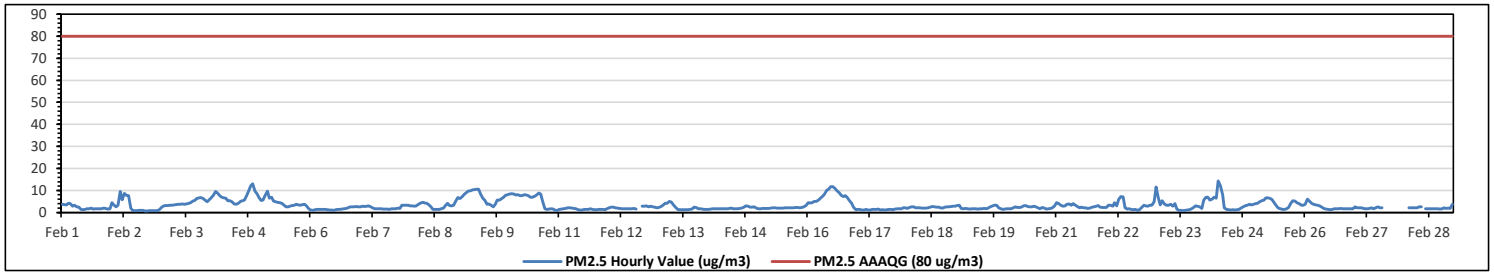
Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m3, Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m3

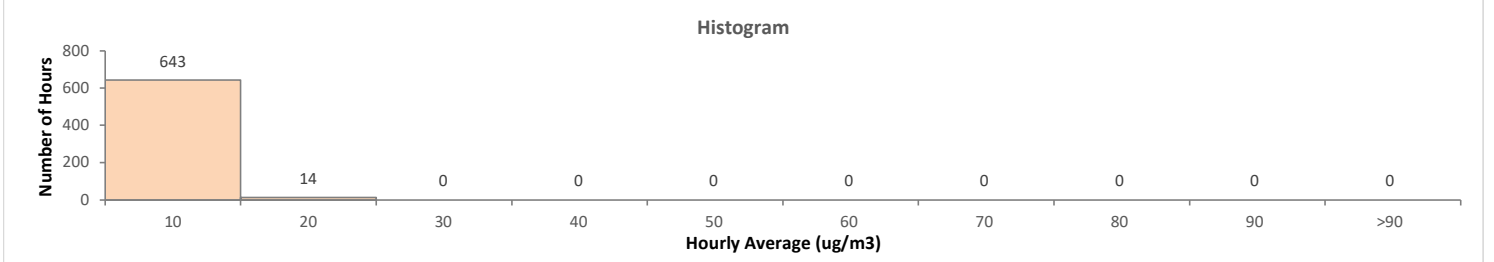
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0
Maximum Hourly Value:	14 µg/m^3 on Feb 24 at hr 6	Hours in Service:	672
Maximum Daily Value:	7.1 µg/m^3 on Feb 4	Hours of Data:	657
Minimum Hourly Value:	1 µg/m^3 on Feb 2 at hr 16	Hours of Missing Data:	13
Minimum Daily Value:	1 µg/m^3 on Feb 17	Hours of Calibration:	2
Monthly Average:	3.2 µg/m^3	Operational Uptime:	98.1

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	4	4	4	4	4	3	3	3	2	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1	4	2.3
Feb 2	5	3	3	3	10	6	9	8	8	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**1**	10	2.8
Feb 3	2	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	6	6	7	7	6	6	5	6	2	7	4.4
Feb 4	7	8	10	9	8	7	7	7	5	5	5	4	4	4	5	5	6	8	10	12	13	10	8	7	4	13	**7.1**
Feb 5	6	6	8	10	6	7	5	5	5	5	4	4	3	3	3	3	3	4	4	3	4	4	3	2	2	10	4.4
Feb 6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	1	3	1.6
Feb 7	3	3	3	3	3	3	2	2	2	2	2	2	2	2	1	2	2	2	2	2	3	3	3	3	1	3	2.2
Feb 8	3	3	3	3	4	4	5	4	4	4	3	1	1	1	1	2	2	3	4	3	3	3	5	7	1	7	3.2
Feb 9	6	7	8	9	10	10	10	10	11	11	8	7	6	4	4	3	3	4	6	6	6	7	8	8	3	11	7.1
Feb 10	8	9	8	8	8	8	8	8	8	8	7	7	7	8	9	8	5	2	1	2	2	2	1	1	1	9	5.9
Feb 11	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	2	1.5
Feb 12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	**C**	**C**	3	3	3	3	3	3	2	2	2	3	2.2
Feb 13	2	3	3	4	4	5	5	4	2	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	5	2.3
Feb 14	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	3	2	1	3	2.0
Feb 15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	3	2.1
Feb 16	4	4	4	5	5	6	6	7	8	10	11	12	12	11	10	9	8	7	8	7	5	4	2	1	1	12	7.0
Feb 17	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	2	2	2	2	1	2	**1.4**
Feb 18	2	2	3	3	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2	3	3	3	3	3	2	3	2.3
Feb 19	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2	1	2	1	3	2.1
Feb 20	2	2	2	2	3	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	3	2	3	2.3
Feb 21	4	4	3	3	3	4	4	3	4	3	3	2	2	2	2	2	2	2	3	3	3	2	2	2	2	4	2.9
Feb 22	2	3	3	3	5	3	6	7	7	2	2	2	1	1	1	1	1	2	3	3	3	3	3	5	1	7	3.1
Feb 23	12	7	4	5	4	3	3	4	3	4	2	1	1	1	1	1	1	2	2	3	3	3	2	6	1	12	3.1
Feb 24	7	7	6	6	7	7	**14**	12	8	2	1	1	1	1	1	1	1	2	3	3	3	4	4	4	1	**14**	4.4
Feb 25	4	4	5	5	6	7	7	6	6	4	3	2	2	1	1	2	2	4	5	5	4	4	3	3	1	7	4.0
Feb 26	4	6	5	4	4	4	3	3	2	2	2	1	1	1	2	2	2	2	2	2	2	2	2	2	1	6	2.5
Feb 27	3	2	2	2	2	2	2	2	2	2	2	3	2	2	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	2	3	NA
Feb 28	**K**	**K**	2	2	2	2	2	3	3	**NRM**	2	2	2	2	2	2	2	2	2	2	2	2	2	4	2	4	2.0
Diurnal Maximum	12	9	10	10	10	10	14	12	11	11	11	12	12	11	10	9	8	8	10	12	13	10	8	8			
Diurnal Average	3.7	3.8	3.6	3.9	4.0	3.8	4.3	4.2	3.9	3.2	2.8	2.6	2.5	2.4	2.6	2.6	2.5	2.8	3.2	3.2	3.2	3.0	2.9	3.2			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



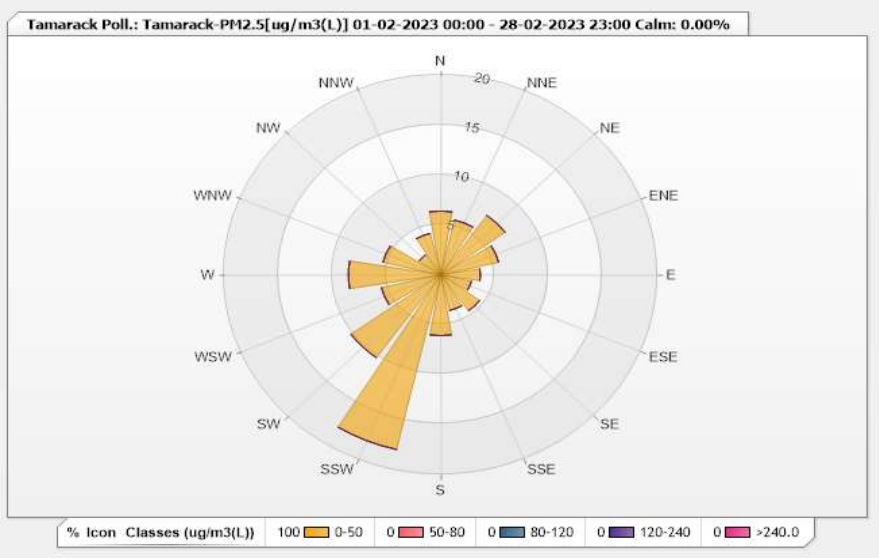


Station: Tamarack Poll.: Tamarack-PM2.5[ug/m3(L)] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 97.77% Calm Avg: 0.00 [ppm]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	6.39	0	0	0	0	6.39
NNE	5.63	0	0	0	0	5.63
NE	7.31	0	0	0	0	7.31
ENE	5.48	0	0	0	0	5.48
E	3.65	0	0	0	0	3.65
ESE	2.89	0	0	0	0	2.89
SE	4.41	0	0	0	0	4.41
SSE	3.65	0	0	0	0	3.65
S	6.09	0	0	0	0	6.09
SSW	17.96	0	0	0	0	17.96
SW	10.2	0	0	0	0	10.2
WSW	5.63	0	0	0	0	5.63
W	8.52	0	0	0	0	8.52
WNW	5.48	0	0	0	0	5.48
NW	2.44	0	0	0	0	2.44
NNW	4.26	0	0	0	0	4.26
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

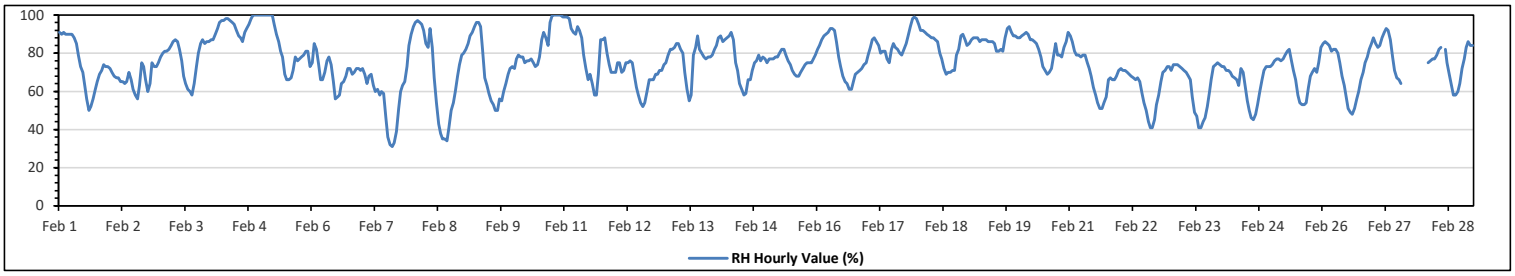
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100	%	on Feb 4 at hr 20	Hours in Service:	672
Maximum Daily Value:	94.3	%	on Feb 4	Hours of Data:	659
Minimum Hourly Value:	31	%	on Feb 7 at hr 14	Hours of Missing Data:	13
Minimum Daily Value:	58.6	%	on Feb 7	Hours of Calibration:	0
Monthly Average:	74.8	%		Operational Uptime:	98.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	91	90	91	90	90	90	90	88	85	79	73	70	63	56	50	52	56	61	65	69	71	74	73	73	50	91	74.6
Feb 2	72	70	68	67	67	65	65	64	65	70	66	61	58	56	63	75	73	66	60	64	75	73	73	75	56	75	67.1
Feb 3	78	80	81	81	82	84	86	87	86	82	76	68	64	61	60	58	64	73	80	85	87	85	86	86	58	87	77.5
Feb 4	87	87	90	93	96	97	97	98	98	97	96	95	92	89	88	86	91	93	95	98	**100**	**100**	**100**	**100**	86	**100**	**94.3**
Feb 5	**100**	**100**	**100**	**100**	**100**	**100**	95	90	86	81	78	69	66	66	67	71	78	76	77	78	79	81	81	73	66	**100**	83.0
Feb 6	75	85	82	74	66	66	70	76	78	74	65	56	57	58	64	65	68	72	72	69	70	72	72	71	56	85	69.9
Feb 7	72	69	64	68	69	63	60	61	58	60	59	46	36	32	**31**	33	39	51	60	63	65	73	84	90	**31**	90	**58.6**
Feb 8	94	96	97	96	95	92	85	83	93	83	67	54	43	38	35	35	34	41	50	54	60	68	74	79	34	97	68.6
Feb 9	80	82	85	89	91	94	96	96	94	82	67	63	59	55	53	50	50	56	55	60	64	69	72	73	50	96	72.3
Feb 10	72	77	79	78	78	75	76	76	77	75	73	74	78	87	91	88	84	96	**100**	**100**	**100**	**100**	**100**	99	72	**100**	84.7
Feb 11	99	99	98	93	91	90	94	92	88	79	72	66	69	64	58	58	69	87	87	88	80	74	70	70	58	99	80.6
Feb 12	70	75	75	70	71	75	75	76	75	68	62	58	54	52	54	60	66	66	66	69	69	71	71	74	52	76	67.6
Feb 13	75	79	82	82	83	85	85	82	80	70	61	55	58	79	83	89	82	80	78	77	78	78	79	82	55	89	77.6
Feb 14	84	88	89	86	87	88	89	91	87	75	71	64	61	58	59	66	66	71	75	76	79	76	78	77	58	91	76.7
Feb 15	75	77	77	77	78	78	80	82	82	79	76	74	71	69	68	68	70	72	74	75	75	75	77	79	68	82	75.3
Feb 16	82	84	87	89	90	91	93	93	92	86	78	73	68	65	64	61	61	65	69	70	71	72	74	75	61	93	77.2
Feb 17	79	83	87	88	86	84	80	81	81	77	75	82	85	83	82	80	79	82	85	89	94	98	99	98	75	99	84.9
Feb 18	95	92	92	91	90	89	88	88	87	86	80	77	72	69	70	70	71	71	79	82	89	90	87	84	69	95	82.9
Feb 19	85	87	88	88	88	86	87	87	87	86	86	86	85	81	81	82	81	88	93	94	91	89	89	88	81	94	86.8
Feb 20	88	89	90	91	90	87	87	86	85	82	78	73	71	69	70	72	78	85	79	79	78	83	86	91	69	91	82.0
Feb 21	89	86	81	79	79	78	79	79	75	72	68	62	58	54	51	51	54	57	66	67	66	66	68	71	51	89	69.0
Feb 22	72	71	71	70	69	68	67	66	67	65	59	54	50	44	41	41	45	53	58	65	70	71	73	73	41	73	61.8
Feb 23	71	74	74	74	73	72	71	70	68	66	57	49	47	41	41	44	46	52	60	66	73	74	75	74	41	75	63.0
Feb 24	73	73	71	71	70	68	67	66	63	72	70	63	55	50	46	45	48	53	60	66	71	73	73	73	45	73	64.2
Feb 25	74	76	77	77	76	77	79	81	82	76	71	66	58	54	53	53	54	62	68	70	72	70	75	83	53	83	70.2
Feb 26	85	86	85	84	81	82	82	80	75	68	63	57	51	49	48	51	56	60	66	70	75	78	82	85	48	86	70.8
Feb 27	88	85	83	84	88	91	93	92	87	78	71	67	66	64	K	K	K	K	K	K	K	K	K	K	64	93	NA
Feb 28	K	K	75	76	77	77	79	82	83	NRM	82	75	69	63	58	58	60	64	72	77	83	86	84	84	58	86	74.5
Diurnal Maximum	100	100	100	100	100	100	97	98	98	97	96	95	92	89	91	89	91	96	100	100	100	100	100	100			
Diurnal Average	81.7	83.0	82.8	82.4	82.2	81.9	82.0	81.9	80.9	76.6	71.4	66.3	63.0	60.9	60.3	61.6	63.8	68.6	72.2	74.8	77.2	78.5	79.8	80.7			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

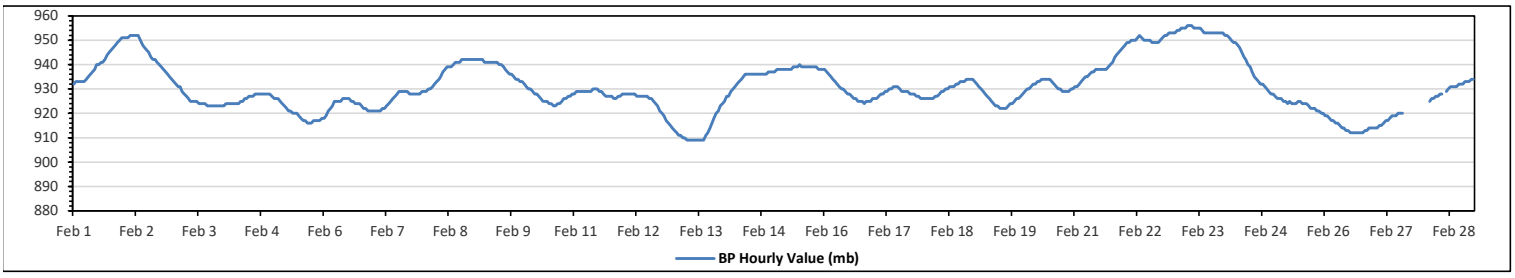
BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	956 mb	on Feb 23 at hr 6	Hours in Service:	672	
Maximum Daily Value:	954 mb	on Feb 23	Hours of Data:	659	
Minimum Hourly Value:	909 mb	on Feb 13 at hr 6	Hours of Missing Data:	13	
Minimum Daily Value:	913 mb	on Feb 13	Hours of Calibration:	0	
Monthly Average:	931 mb		Operational Uptime:	98.1	

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	932	933	933	933	933	933	934	935	936	937	938	940	940	941	941	942	944	945	946	947	948	949	950	951	932	951	940
Feb 2	951	951	951	952	952	952	952	952	950	948	947	946	945	943	942	942	941	940	939	938	937	936	935	934	934	952	945
Feb 3	933	932	931	931	929	928	927	926	925	925	925	925	924	924	924	924	923	923	923	923	923	923	923	923	923	933	926
Feb 4	923	924	924	924	924	924	924	924	925	925	926	926	927	927	927	928	928	928	928	928	928	928	928	927	923	928	926
Feb 5	926	926	926	925	924	923	922	921	921	920	920	920	919	918	917	917	916	916	916	917	917	917	917	918	916	926	920
Feb 6	918	919	921	922	923	925	925	925	925	926	926	926	926	925	925	924	924	924	923	922	922	921	921	921	918	926	923
Feb 7	921	921	921	921	922	922	923	924	925	926	927	928	929	929	929	929	929	928	928	928	928	928	928	929	921	929	926
Feb 8	929	929	930	930	931	932	933	934	935	937	938	939	939	939	940	941	941	941	942	942	942	942	942	942	929	942	937
Feb 9	942	942	942	942	942	941	941	941	941	941	941	941	940	940	939	938	937	936	936	935	934	934	933	933	933	942	939
Feb 10	932	931	930	930	929	928	928	927	926	925	925	925	924	924	923	923	924	924	925	926	926	927	927	928	923	932	927
Feb 11	928	929	929	929	929	929	929	929	929	930	930	930	929	929	928	927	927	927	927	926	926	927	927	928	926	930	928
Feb 12	928	928	928	928	928	928	927	927	927	927	927	927	926	926	925	924	923	921	920	919	917	916	915	914	914	928	924
Feb 13	913	912	911	911	910	910	**909**	**909**	**909**	**909**	**909**	**909**	**909**	**909**	**909**	911	912	914	916	918	920	921	923	924	**909**	924	**913**
Feb 14	925	927	927	929	930	931	932	933	934	935	936	936	936	936	936	936	936	936	936	936	936	937	937	937	925	937	934
Feb 15	937	938	938	938	938	938	938	938	938	939	939	939	940	939	939	939	939	939	939	939	939	938	938	938	937	940	939
Feb 16	938	937	936	935	934	933	932	931	930	930	929	928	928	927	926	926	925	925	925	924	925	925	925	926	924	938	929
Feb 17	926	926	927	928	928	929	929	930	930	931	931	931	930	929	929	929	929	928	928	928	927	927	926	926	926	931	928
Feb 18	926	926	926	926	926	927	927	928	929	929	930	930	931	931	931	932	932	933	933	933	934	934	934	934	926	934	930
Feb 19	933	932	931	930	929	928	927	926	925	924	923	923	922	922	922	922	923	924	924	925	926	926	927	928	922	933	926
Feb 20	929	930	930	931	932	932	933	933	934	934	934	934	934	933	932	931	930	930	929	929	929	929	930	930	929	934	931
Feb 21	931	931	932	933	934	935	935	936	937	937	938	938	938	938	938	938	939	940	941	943	944	945	946	947	931	947	938
Feb 22	948	949	949	950	950	950	951	952	951	950	950	950	950	949	949	949	949	950	951	952	952	953	953	953	948	953	950
Feb 23	953	954	954	955	955	955	**956**	**956**	**956**	955	955	955	955	954	953	953	953	953	953	953	953	953	953	953	953	**956**	**954**
Feb 24	952	952	951	950	949	949	948	947	945	943	942	940	939	937	935	934	933	932	932	931	930	929	928	928	928	952	940
Feb 25	927	926	926	926	925	925	924	925	924	924	924	925	925	924	924	924	923	922	922	922	921	921	920	920	920	927	924
Feb 26	919	919	918	917	917	916	916	915	914	914	913	913	912	912	912	912	912	912	912	913	913	914	914	914	912	919	914
Feb 27	914	914	915	915	916	917	917	918	919	919	919	920	920	920	K	K	K	K	K	K	K	K	K	K	914	920	NA
Feb 28	K	K	925	926	926	927	927	928	928	NRM	929	930	931	931	931	931	932	932	932	933	933	933	934	934	925	934	930
Diurnal Maximum	953	954	954	955	955	955	956	956	956	955	955	955	955	954	953	953	953	953	953	953	953	953	953	953			
Diurnal Average	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	930	931	931	931	931	931	931			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

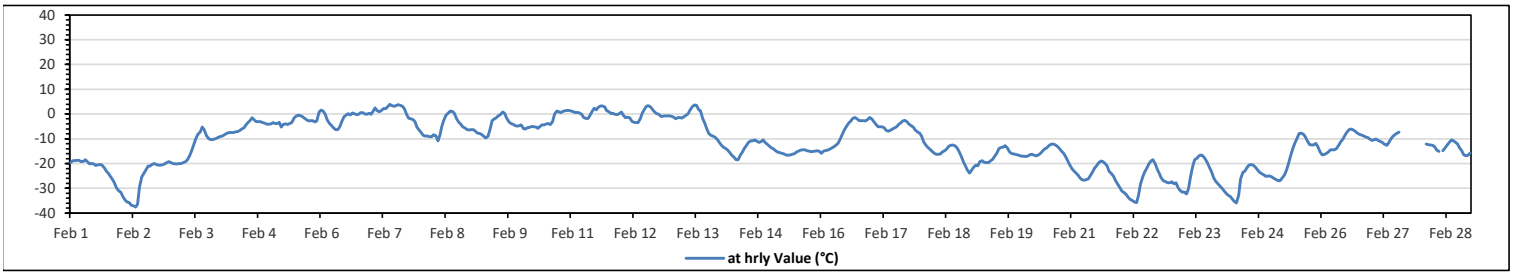
Maximum Hourly Value:	3.9	°C	on Feb 7 at hr 9	Hours in Service:	672	
Maximum Daily Value:	0.8	°C	on Feb 7	Hours of Data:	659	
Minimum Hourly Value:	-37.6	°C	on Feb 2 at hr 7	Hours of Missing Data:	13	
Minimum Daily Value:	-27.5	°C	on Feb 22	Hours of Calibration:	0	
Monthly Average:	-11.8	°C		Operational Uptime:	98.1	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	-19.6	-18.9	-18.9	-18.7	-18.7	-19.3	-19.1	-18.5	-19.3	-20.1	-19.9	-20.1	-20.8	-20.5	-20.4	-20.7	-21.7	-23	-24.1	-25.1	-26.4	-27.9	-29.8	-31	-31.0	-18.5	-21.8
Feb 2	-31.6	-33.3	-34.7	-35.5	-35.8	-36.8	-37.1	**-37.6**	-36.4	-29.5	-25.4	-23.9	-22.5	-21.1	-21	-20.4	-20	-20.3	-20.6	-20.6	-20.5	-20.1	-19.6	-19.2	**-37.6**	-19.2	-26.8
Feb 3	-19.6	-20	-20.1	-20.1	-20	-19.9	-19.7	-19.2	-18.4	-16.8	-14.8	-12.2	-9.9	-8.1	-7.2	-5.3	-6.4	-8.6	-9.9	-10.3	-10.3	-10	-9.8	-9.3	-20.1	-5.3	-13.6
Feb 4	-9	-8.8	-8.2	-7.7	-7.4	-7.4	-7.4	-7.2	-7.1	-6.7	-6	-5.5	-4.5	-3.5	-2.5	-1.5	-2.4	-3	-3.1	-3.1	-3.5	-3.7	-4.1	-4.2	-9.0	-1.5	-5.3
Feb 5	-4	-3.5	-3.8	-3.8	-3.3	-5.2	-4.2	-4	-4.3	-3.9	-3.5	-1.7	-0.8	-0.4	-0.6	-1	-1.7	-2.3	-2.8	-2.7	-2.7	-3.2	-2.8	0.6	-5.2	0.6	-2.7
Feb 6	1.6	1.2	0	-2.4	-3.8	-4.6	-5.5	-6.4	-6.3	-5.1	-2.8	-1.1	-0.5	0.1	-0.3	0.4	0.1	-0.2	-0.1	0.5	0.5	0	-0.1	0.3	-6.4	1.6	-1.4
Feb 7	-0.1	1.3	2.4	1.3	0.9	1.5	2.2	2.1	3	**3.9**	3.4	3.1	3.4	3.8	3.6	3.1	2.1	-0.2	-1.7	-1.9	-2.2	-3.1	-5.2	-6.4	-6.4	**3.9**	**0.8**
Feb 8	-7.5	-8.7	-8.9	-8.9	-9.1	-9.1	-8.4	-8.8	-10.8	-8.5	-4.9	-2.2	-0.5	0.4	1.2	1.1	0.3	-1.9	-3.3	-4.1	-5.1	-5.7	-6.4	-6.5	-10.8	1.2	-5.3
Feb 9	-6.4	-6.3	-6.9	-7.7	-7.9	-8.2	-8.9	-9.7	-9	-6.5	-2.7	-2.1	-1.6	-0.7	-0.2	0.8	0.3	-1.6	-3	-3.9	-4.2	-4.6	-4.9	-4.7	-9.7	0.8	-4.6
Feb 10	-4.4	-5.9	-6	-5.5	-5.4	-5	-5.1	-5.3	-5.8	-5	-4.4	-4.4	-4	-3.8	-4.3	-3	-0.1	1.2	0.9	0.5	1.1	1.3	1.5	1.5	-6.0	1.5	-2.9
Feb 11	1.2	0.9	0.5	0.7	0.4	-0.1	-1.4	-1.8	-1.8	-0.5	1	2.3	1.8	2.7	3.2	3.2	2.8	1.4	0.9	0.1	0.2	-0.1	-0.2	0.1	-1.8	3.2	0.7
Feb 12	0.8	-0.5	-1.5	-1.3	-1.6	-2.9	-3.3	-3.5	-3.4	-1.9	0.3	1.7	3.1	3.4	2.9	1.7	0.8	0.1	-0.1	-1	-0.8	-0.7	-0.7	-0.7	-3.5	3.4	-0.4
Feb 13	-0.9	-1.3	-1.9	-1.5	-1.4	-1.7	-1.1	-0.4	0	1.7	2.9	3.7	3.5	1.9	1.4	-1.8	-3.9	-6	-7.9	-8.6	-8.9	-9.4	-10.3	-11.4	-11.4	3.7	-2.6
Feb 14	-12.5	-13.3	-13.9	-14.6	-15.6	-16.6	-17.4	-18.4	-18.4	-16.5	-15.6	-13.9	-12.6	-11.5	-10.9	-10.9	-10.5	-11	-11.4	-11.1	-10.5	-11.5	-12.3	-13	-18.4	-10.5	-13.5
Feb 15	-13.6	-14.1	-14.9	-15.4	-15.6	-15.8	-16.1	-16.5	-16.7	-16.5	-16.3	-16	-15.4	-15	-14.6	-14.5	-14.5	-14.8	-15	-15.2	-15.1	-15	-14.9	-15.1	-16.7	-13.6	-15.3
Feb 16	-15.9	-15	-14.7	-14.6	-14.2	-13.7	-13.2	-12.5	-11.8	-10.1	-8	-6.3	-4.9	-3.7	-2.9	-1.8	-1.4	-2	-2.7	-2.6	-2.7	-2.8	-2.3	-1.4	-15.9	-1.4	-7.6
Feb 17	-1.9	-2.9	-4.2	-5.1	-5.1	-5.1	-5.5	-6.6	-6.9	-6.6	-6	-5.6	-5.1	-4.2	-3.6	-2.8	-2.5	-3.2	-4.1	-4.7	-5.2	-6.5	-7.2	-7.7	-7.7	-1.9	-4.9
Feb 18	-8.9	-11.3	-12.5	-13.5	-14.2	-15.1	-15.8	-16.2	-16.2	-16.1	-15.3	-14.8	-14.2	-13	-12.6	-12.5	-12.9	-13.7	-15.1	-17.1	-19.4	-20.9	-22.6	-23.9	-23.9	-8.9	-15.3
Feb 19	-22.6	-21.4	-20.7	-20.9	-19.2	-18.9	-19.5	-19.6	-19.7	-19	-18.3	-17.2	-15.8	-13.9	-13.5	-13.3	-12.8	-13.7	-15.1	-15.9	-16.1	-16.3	-16.5	-16.8	-22.6	-12.8	-17.4
Feb 20	-17	-17.1	-17.2	-16.9	-16.4	-16.2	-16.6	-16.9	-16.5	-15.8	-15	-14.2	-13.6	-12.8	-12.3	-12.1	-12.4	-13.1	-13.8	-15	-15.8	-17.2	-18.7	-20.5	-20.5	-12.1	-15.5
Feb 21	-22	-23	-23.8	-24.6	-25.8	-26.6	-26.7	-26.4	-26.2	-24.7	-23.2	-21.9	-20.9	-19.7	-19	-19.2	-19.9	-21.1	-23.1	-24	-25.2	-26.8	-28.2	-29.6	-29.6	-19.0	-23.8
Feb 22	-31.1	-31.6	-32.4	-33.7	-34.5	-34.9	-35.5	-35.8	-32.9	-28.4	-25.4	-23.5	-21.9	-19.9	-19	-18.5	-20	-22.4	-24	-25.8	-26.9	-27.4	-27.7	-27.7	-35.8	-18.5	**-27.5**
Feb 23	-27.3	-28.2	-27.8	-29.8	-30.8	-31.5	-31.5	-32.3	-30.3	-25	-20.8	-18.3	-17.9	-16.9	-16.5	-17	-18	-19.6	-21.7	-23.3	-25.8	-27.1	-28	-29	-32.3	-16.5	-24.8
Feb 24	-30	-30.9	-31.9	-32.9	-33.3	-34.4	-35.3	-35.9	-32.8	-26.3	-23.7	-22.9	-21.8	-20.7	-20.3	-20.7	-21.5	-22.6	-23.5	-24	-24.5	-25.2	-25	-25	-35.9	-20.3	-26.9
Feb 25	-25.4	-26.1	-26.4	-26.9	-26.8	-25.9	-24.6	-22.4	-19.8	-17.1	-14	-11.6	-9.9	-7.8	-7.7	-8.1	-9.1	-11	-12.4	-12.5	-12.5	-11.8	-13.1	-15.3	-26.9	-7.7	-16.6
Feb 26	-16.5	-16.4	-16	-15.4	-14.4	-14.4	-14.4	-13.9	-12.5	-11.2	-10.1	-8.7	-7.3	-6.4	-6.1	-6.5	-6.9	-7.7	-8.2	-8.5	-8.9	-9.2	-9.5	-10.2	-16.5	-6.1	-10.8
Feb 27	-10.7	-10.3	-10.1	-10.7	-11.1	-11.5	-12.2	-12.7	-11.6	-10.2	-9	-8.2	-7.7	-7.3	K	K	K	K	K	K	K	K	K	K	-12.7	-7.3	NA
Feb 28	K	K	-12.1	-12.4	-12.5	-12.7	-13.2	-14.6	-15.1	NRM	-14.8	-13.7	-12.6	-11.4	-10.4	-10.8	-11.3	-12.1	-13.8	-14.9	-16.4	-16.9	-16.6	-15.7	-16.9	-10.4	-13.5
Diurnal Maximum	1.6	1.3	2.4	1.3	0.9	1.5	2.2	2.1	3.0	3.9	3.4	3.7	3.5	3.8	3.6	3.2	2.8	1.4	0.9	0.5	1.1	1.3	1.5	1.5			
Diurnal Average	-13.1	-13.5	-13.8	-14.2	-14.4	-14.7	-14.9	-15.0	-14.5	-12.7	-11.2	-10.0	-9.1	-8.2	-7.9	-7.9	-8.3	-9.3	-10.3	-10.9	-11.4	-11.9	-12.4	-12.7			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

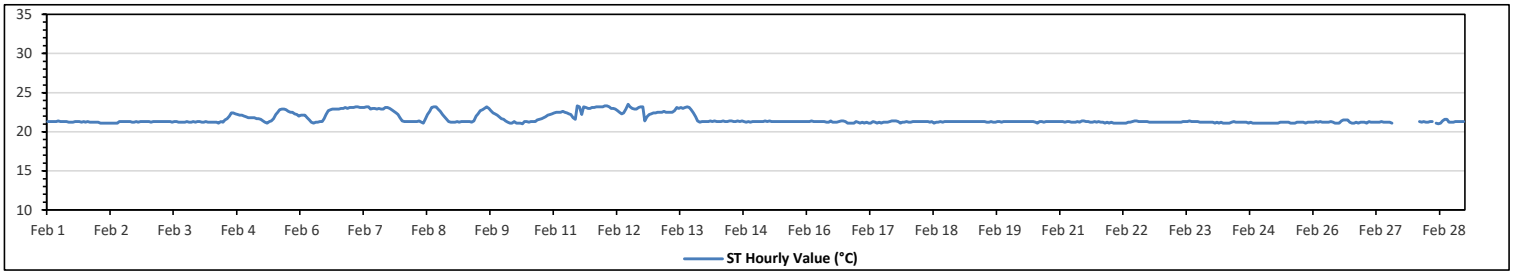
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	23.5	°C	on Feb 12 at hr 11	Hours in Service:	672	
Maximum Daily Value:	22.9	°C	on Feb 7	Hours of Data:	659	
Minimum Hourly Value:	21.0	°C	on Feb 10 at hr 9	Hours of Missing Data:	13	
Minimum Daily Value:	21.2	°C	on Feb 25	Hours of Calibration:	0	
Monthly Average:	21.6	°C		Operational Uptime:	98.1	

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	21.3	21.3	21.3	21.3	21.3	21.4	21.3	21.3	21.3	21.3	21.2	21.2	21.2	21.3	21.3	21.3	21.2	21.3	21.2	21.3	21.2	21.2	21.2	21.2	21.2	21.4	21.3
Feb 2	21.2	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.3	21.3	21.3	21.3	21.3	21.3	21.2	21.2	21.3	21.2	21.3	21.3	21.3	21.3	21.1	21.3	21.2
Feb 3	21.3	21.2	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.2	21.3	21.3	21.2	21.2	21.2	21.2	21.3	21.2	21.2	21.3	21.2	21.3	21.2	21.3	21.3
Feb 4	21.3	21.2	21.2	21.3	21.2	21.2	21.2	21.2	21.2	21.1	21.3	21.2	21.5	21.7	22.0	22.4	22.4	22.3	22.2	22.1	22.1	22.0	21.9	21.8	21.1	22.4	21.6
Feb 5	21.8	21.8	21.8	21.7	21.7	21.6	21.4	21.2	21.1	21.3	21.4	21.7	22.2	22.5	22.8	22.9	22.9	22.8	22.6	22.5	22.5	22.3	22.2	22.0	21.1	22.9	22.0
Feb 6	22.1	22.1	22.1	21.8	21.5	21.2	21.1	21.2	21.2	21.3	21.3	21.7	22.2	22.7	22.8	22.9	22.9	22.9	22.9	23.0	23.0	23.1	23.0	23.1	21.1	23.1	22.2
Feb 7	23.1	23.1	23.2	23.2	23.1	23.1	23.1	23.2	23.2	22.9	23.0	23.0	22.9	23.0	22.9	22.9	23.1	23.1	23.0	22.8	22.6	22.4	22.2	21.8	21.8	23.2	**22.9**
Feb 8	21.4	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.4	21.2	21.1	21.6	22.2	22.6	23.1	23.2	23.2	22.9	22.6	22.2	21.9	21.6	21.3	21.2	21.1	23.2	21.8
Feb 9	21.2	21.2	21.3	21.2	21.3	21.3	21.3	21.3	21.3	21.2	21.4	22.0	22.3	22.7	22.8	23.0	23.2	23.0	22.7	22.4	22.3	22.1	21.9	21.7	21.2	23.2	21.9
Feb 10	21.6	21.4	21.2	21.1	21.1	21.3	21.1	21.1	21.1	**21.0**	21.3	21.3	21.2	21.3	21.3	21.3	21.5	21.6	21.7	21.8	21.9	22.1	22.2	22.3	**21.0**	22.3	21.5
Feb 11	22.4	22.5	22.5	22.5	22.6	22.5	22.4	22.3	22.2	21.8	21.6	23.3	23.2	22.2	23.2	23.1	23.0	23.0	23.1	23.1	23.2	23.2	23.2	23.2	21.6	23.3	22.7
Feb 12	23.3	23.3	23.2	23.0	23.0	22.9	22.7	22.5	22.3	22.4	22.9	**23.5**	23.2	23.0	22.9	22.9	23.1	23.2	23.2	21.4	21.9	22.2	22.3	22.4	21.4	**23.5**	22.8
Feb 13	22.4	22.5	22.5	22.5	22.6	22.5	22.5	22.5	22.5	22.7	23.1	23.0	23.1	23.0	23.1	23.2	23.1	22.8	22.4	21.9	21.4	21.2	21.3	21.3	21.2	23.2	22.5
Feb 14	21.3	21.3	21.4	21.3	21.4	21.3	21.3	21.3	21.4	21.3	21.3	21.4	21.4	21.3	21.3	21.4	21.3	21.4	21.3	21.2	21.3	21.2	21.3	21.3	21.2	21.4	21.3
Feb 15	21.3	21.3	21.3	21.3	21.4	21.3	21.4	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.4	21.3
Feb 16	21.3	21.3	21.4	21.3	21.3	21.3	21.3	21.3	21.3	21.2	21.2	21.4	21.2	21.2	21.2	21.3	21.4	21.4	21.3	21.1	21.1	21.1	21.1	21.3	21.1	21.4	21.3
Feb 17	21.2	21.1	21.2	21.1	21.2	21.1	21.1	21.3	21.2	21.1	21.2	21.1	21.2	21.2	21.2	21.3	21.4	21.4	21.4	21.3	21.1	21.2	21.2	21.3	21.1	21.4	21.2
Feb 18	21.2	21.2	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.2	21.3	21.1	21.2	21.2	21.3	21.2	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.1	21.3	21.3
Feb 19	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.2	21.2	21.3	21.2	21.2	21.3	21.3	21.2	21.3	21.3	21.3	21.2	21.3	21.3
Feb 20	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.2	21.1	21.3	21.3	21.2	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.1	21.3	21.3
Feb 21	21.3	21.3	21.2	21.3	21.3	21.2	21.2	21.2	21.3	21.2	21.4	21.4	21.3	21.3	21.2	21.2	21.3	21.2	21.3	21.2	21.2	21.1	21.2	21.1	21.1	21.4	21.2
Feb 22	21.2	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.2	21.2	21.3	21.4	21.4	21.3	21.3	21.3	21.3	21.3	21.2	21.2	21.2	21.2	21.2	21.2	21.1	21.4	21.2
Feb 23	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.3	21.3	21.3	21.4	21.3	21.3	21.3	21.3	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.4	21.2
Feb 24	21.2	21.1	21.2	21.1	21.2	21.1	21.1	21.1	21.1	21.2	21.3	21.2	21.2	21.2	21.2	21.2	21.2	21.1	21.2	21.1	21.1	21.1	21.1	21.1	21.1	21.3	21.2
Feb 25	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.2	21.2	21.2	21.2	21.2	21.1	21.1	21.1	21.2	21.2	21.2	21.2	21.1	21.2	21.2	21.2	21.1	21.2	**21.2**
Feb 26	21.2	21.3	21.2	21.3	21.2	21.2	21.2	21.2	21.3	21.2	21.1	21.1	21.1	21.4	21.5	21.5	21.5	21.2	21.1	21.1	21.2	21.1	21.2	21.2	21.1	21.5	21.2
Feb 27	21.2	21.1	21.3	21.2	21.2	21.2	21.2	21.2	21.3	21.2	21.2	21.2	21.2	21.1	K	K	K	K	K	K	K	K	K	K	21.1	21.3	NA
Feb 28	K	K	21.3	21.2	21.3	21.2	21.2	21.3	21.3	NRM	21.1	**21.0**	21.1	21.4	21.6	21.6	21.2	21.2	21.2	21.3	21.3	21.3	21.3	21.3	**21.0**	21.6	21.3
Diurnal Maximum	23.3	23.3	23.2	23.2	23.1	23.1	23.1	23.2	23.2	22.9	23.1	23.5	23.2	23.0	23.2	23.2	23.2	23.2	23.2	23.1	23.2	23.2	23.2	23.2			
Diurnal Average	21.5	21.5	21.5	21.5	21.5	21.5	21.4	21.4	21.4	21.4	21.5	21.6	21.7	21.7	21.8	21.9	21.9	21.8	21.8	21.6	21.6	21.6	21.6	21.6			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

PRECIPITATION in mm

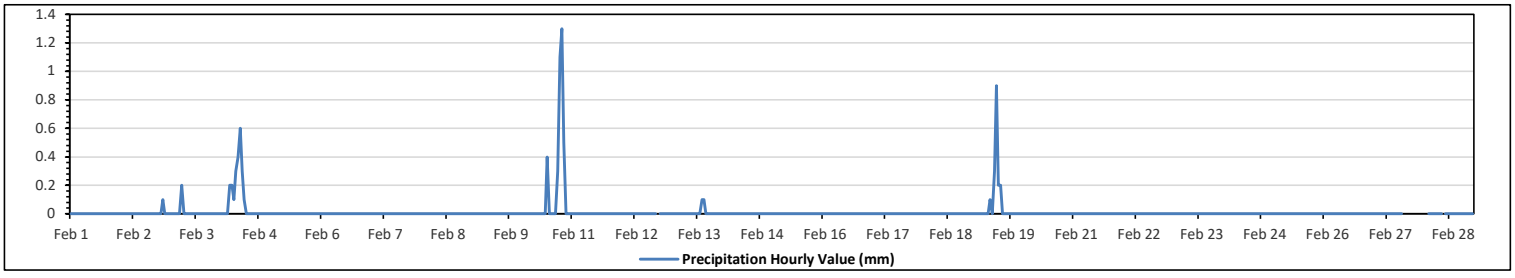
Maximum Hourly Value:	1.3	mm	on Feb 10 at hr 19	Hours in Service:	672	
Maximum Daily Value:	3.6	mm	on Feb 10	Hours of Data:	658	
Minimum Hourly Value:	0.0	mm	on Feb 1 at hr 0	Hours of Missing Data:	13	
Minimum Daily Value:	0.0	mm	on Feb 1	Hours of Calibration:	1	
Monthly Total:	8.0	mm		Operational Uptime:	98.1	

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.0	0.1	0.1
Feb 3	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.2
Feb 4	0	0	0	0	0.2	0.2	0.1	0.3	0.4	0.6	0.3	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.6	2.2
Feb 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 10	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0.3	1.1	**1.3**	0.5	0	0	0	0.0	**1.3**	**3.6**
Feb 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**C**	0	0	0	0	0	0	0.0	0.0	0.0
Feb 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0.0	0.1	0.2
Feb 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 19	0	0	0	0	0	0	0	0	0.1	0	0.3	0.9	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0.0	0.9	1.7
Feb 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	0.0	0.0	NA
Feb 28	**K**	**K**	0	0	0	0	0	0	0	**NRM**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Diurnal Maximum	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.3	0.4	0.6	0.3	0.9	0.4	0.2	0.1	0.1	0.0	0.3	1.1	1.3	0.5	0.0	0.0	0.0			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance		
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P**	Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)				

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

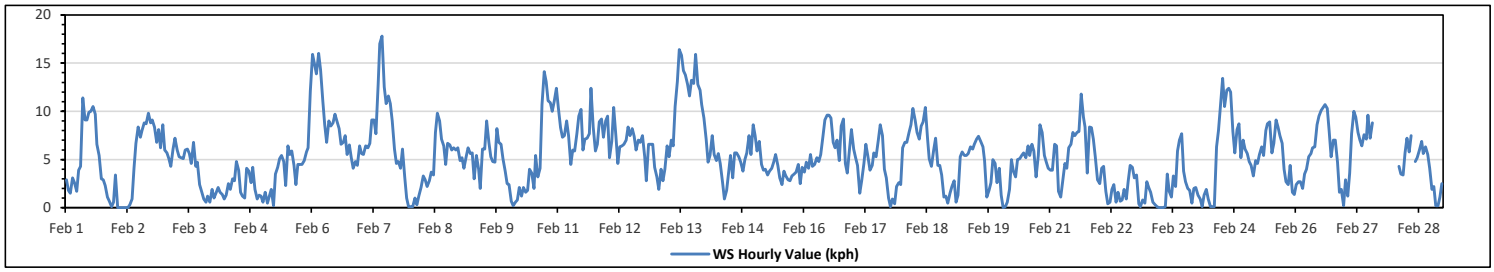
VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	17.8	kph	on Feb 7 at hr 10	Hours in Service:	672	
Maximum Daily Value:	9.8	kph	on Feb 13	Hours of Data:	659	
Minimum Hourly Value:	0.0	kph	on Feb 2 at hr 1	Hours of Missing Data:	13	
Minimum Daily Value:	2.0	kph	on Feb 22	Hours of Calibration:	0	
Monthly Average:	1.5	kph		Operational Uptime:	98.1	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	2.9	1.8	1.5	3.1	2.6	1.7	3.9	4.3	11.4	9.1	9.1	9.9	10.0	10.5	9.7	6.6	5.4	3.0	2.9	2.3	1.1	0.7	0.1	0.6	0.1	11.4	4.8
Feb 2	3.4	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.3	0.9	4.1	6.7	8.4	7.3	8.0	8.8	8.7	9.8	8.8	9.1	8.4	6.8	8.1	6.2	8.6	**0.0**	9.8	5.1
Feb 3	6.0	5.7	5.1	4.3	6.1	7.2	6.0	5.3	5.2	5.1	6.0	6.1	5.6	4.6	6.8	4.3	4.7	2.4	1.6	0.9	0.6	1.2	0.6	1.9	0.6	7.2	4.3
Feb 4	1.0	1.5	2.1	1.6	1.4	0.9	1.3	2.5	1.9	3.0	2.8	4.8	3.9	1.6	1.2	1.0	4.1	3.8	2.6	4.2	1.9	0.9	1.3	1.2	0.9	4.8	2.2
Feb 5	0.6	1.6	0.5	1.2	1.9	0.2	3.5	4.2	5.1	5.4	4.8	2.3	6.4	5.5	5.9	4.4	2.4	4.5	4.5	4.5	4.9	5.8	6.2	12.1	0.2	12.1	4.1
Feb 6	15.9	14.9	13.9	16.0	14.3	11.1	8.6	6.8	9.0	8.5	8.8	9.7	9.0	8.2	6.6	6.8	7.5	5.5	6.5	5.2	4.1	4.8	4.4	6.4	4.1	16.0	8.9
Feb 7	5.6	5.5	6.4	6.2	6.7	9.1	9.1	7.7	12.8	17.0	**17.8**	12.5	10.8	11.6	10.8	9.0	6.1	4.6	4.8	4.1	6.1	3.2	1.0	0.1	0.1	**17.8**	7.9
Feb 8	0.1	0.1	1.0	0.3	1.2	2.1	3.3	2.9	2.2	2.8	3.7	3.4	7.8	9.8	9.0	7.1	6.4	4.5	6.7	6.5	6.0	6.2	6.0	6.2	0.1	9.8	4.4
Feb 9	4.9	5.2	4.1	5.3	6.2	5.6	5.7	3.0	5.4	4.0	2.0	6.1	6.1	9.0	6.8	5.3	4.8	4.7	8.2	6.8	6.6	5.1	3.8	2.5	2.0	9.0	5.3
Feb 10	2.4	0.7	0.2	0.6	0.8	2.1	1.2	2.1	1.6	1.8	4.0	3.6	2.0	5.4	3.2	4.1	10.7	14.1	13.1	11.1	10.9	10.0	11.0	12.4	0.2	14.1	5.4
Feb 11	10.4	8.3	7.3	7.5	9.0	7.5	4.5	6.0	5.9	7.7	9.5	10.2	6.0	7.1	7.2	7.7	12.4	8.4	5.9	6.6	8.9	9.2	7.3	9.0	4.5	12.4	7.9
Feb 12	9.5	5.2	6.9	10.4	7.4	4.6	6.3	6.4	6.6	7.0	8.4	7.5	8.2	7.4	6.0	7.0	6.8	7.5	5.3	2.8	6.6	6.6	6.6	4.2	2.8	10.4	6.7
Feb 13	3.2	1.9	4.0	2.8	4.0	6.4	5.3	7.0	6.4	10.5	13.1	16.4	15.8	14.2	13.8	12.8	11.6	13.2	12.9	15.9	12.8	12.2	10.7	9.3	1.9	16.4	**9.8**
Feb 14	7.1	4.7	5.4	7.5	5.5	4.9	5.6	4.6	2.7	0.9	1.8	3.6	5.4	3.1	5.7	5.7	5.3	4.7	3.8	5.0	5.7	7.5	5.5	8.6	0.9	8.6	5.0
Feb 15	7.5	5.9	6.9	4.5	3.9	4.0	3.4	3.8	4.1	4.7	5.5	4.4	3.1	2.4	3.8	3.3	2.9	2.8	3.3	3.5	3.7	4.5	2.5	4.2	2.4	7.5	4.1
Feb 16	3.7	4.7	4.1	5.5	4.3	4.5	5.2	4.8	5.5	7.4	9.1	9.6	9.6	9.3	6.8	6.2	7.0	4.9	8.5	9.2	4.6	3.6	6.1	8.1	3.6	9.6	6.3
Feb 17	6.1	5.2	4.4	1.5	2.8	4.6	6.6	5.4	3.9	4.4	5.7	5.3	7.0	8.6	7.5	4.0	3.1	1.0	0.1	0.9	0.4	2.2	2.6	2.4	0.1	8.6	4.0
Feb 18	6.2	6.8	6.8	7.8	8.6	10.3	9.1	7.8	7.1	8.5	8.9	10.4	7.1	5.1	4.3	6.0	7.2	4.4	4.4	3.4	1.1	1.2	0.5	1.5	0.5	10.4	6.0
Feb 19	2.2	2.8	0.6	1.3	5.3	5.8	5.4	5.4	5.6	6.3	6.1	6.6	7.1	7.4	6.9	6.3	4.9	1.1	1.8	2.6	5.0	4.6	2.6	4.1	0.6	7.4	4.5
Feb 20	1.3	**0.0**	0.1	0.6	1.9	5.0	3.8	3.2	5.0	5.1	5.4	5.7	5.2	6.4	5.4	6.6	5.9	3.2	5.4	8.6	7.8	5.4	4.7	4.1	**0.0**	8.6	4.4
Feb 21	3.9	3.9	6.6	6.4	1.7	1.1	2.7	4.6	4.1	6.2	6.6	7.8	7.5	7.8	7.9	11.8	9.4	8.4	3.6	8.4	8.3	7.1	5.3	2.9	1.1	11.8	6.0
Feb 22	2.5	4.1	4.3	1.7	0.4	0.6	1.9	2.4	0.6	1.6	0.7	0.8	1.9	0.9	2.8	4.4	4.2	3.1	3.4	0.4	0.1	0.8	0.5	2.7	0.1	4.4	**2.0**
Feb 23	2.1	1.6	0.6	0.3	0.1	**0.0**	**0.0**	**0.0**	0.1	3.5	1.7	1.1	3.3	2.2	5.9	7.0	7.7	3.8	2.7	2.0	1.8	0.5	2.0	2.1	**0.0**	7.7	2.2
Feb 24	1.3	0.9	0.1	1.3	1.9	0.9	0.1	0.1	0.1	6.3	8.0	10.9	13.4	10.5	12.2	12.4	12.0	7.9	5.7	8.1	8.7	5.2	7.0	6.1	0.1	13.4	5.9
Feb 25	5.6	4.8	4.4	3.3	4.9	4.6	5.5	6.3	5.4	8.0	8.7	8.9	5.7	6.7	9.1	8.4	7.5	6.7	4.0	2.7	2.4	4.4	1.6	1.4	1.4	9.1	5.5
Feb 26	2.4	2.7	2.7	2.0	3.5	4.0	5.3	5.6	6.2	6.3	8.6	9.5	10.1	10.4	10.7	10.3	7.9	5.3	7.0	7.0	4.7	1.6	1.9	0.2	0.2	10.7	5.7
Feb 27	2.9	1.2	3.6	7.7	10.0	9.4	7.8	7.0	6.4	7.6	7.1	9.6	7.2	8.8	K	K	K	K	K	K	K	K	K	K	1.2	10.0	NA
Feb 28	K	K	4.3	3.5	3.4	5.7	7.2	5.8	7.5	NRM	4.8	5.2	6.0	6.9	5.6	6.3	5.5	4.1	1.9	2.2	0.2	0.2	1.1	2.5	0.2	7.5	4.3
Diurnal Maximum	15.9	14.9	13.9	16.0	14.3	11.1	9.1	7.8	12.8	17.0	17.8	16.4	15.8	14.2	13.8	12.8	12.4	14.1	13.1	15.9	12.8	12.2	11.0	12.4			
Diurnal Average	4.5	3.8	3.9	4.1	4.3	4.4	4.6	4.5	5.0	6.0	6.6	7.2	7.1	7.1	7.1	6.8	6.8	5.4	5.2	5.3	4.9	4.5	4.0	4.6			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance		
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)				

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

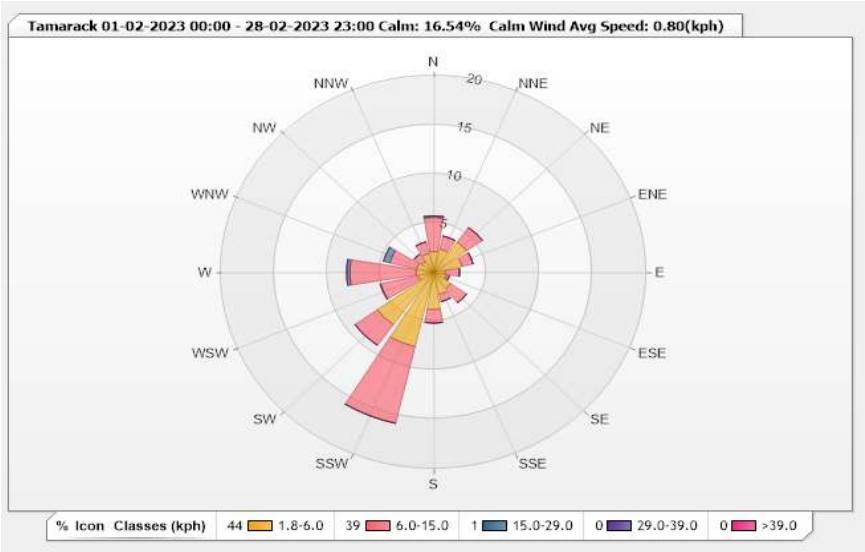


Station: Tamarack Monitor: WDS [kph] Monthly: 02-2023

Type: Wind Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm (WS<1.8kph): 16.54% Valid Data: 98.07%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	2.12	3.49	0.15	0	0	5.76
NNE	2.43	1.37	0	0	0	3.8
NE	3.79	1.82	0	0	0	5.61
ENE	2.73	1.06	0	0	0	3.79
E	1.06	1.37	0	0	0	2.43
ESE	1.21	0.3	0	0	0	1.51
SE	1.97	1.82	0	0	0	3.79
SSE	2.28	0.76	0	0	0	3.04
S	3.79	1.37	0	0	0	5.16
SSW	7.74	8.04	0	0	0	15.78
SW	6.53	2.58	0	0	0	9.11
WSW	1.52	3.64	0	0	0	5.16
W	1.67	6.22	0.3	0	0	8.19
WNW	1.67	2.58	0.61	0	0	4.86
NW	1.37	0.91	0	0	0	2.28
NNW	1.97	1.21	0	0	0	3.18
Summary	43.85	38.54	1.06	0	0	83.45



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

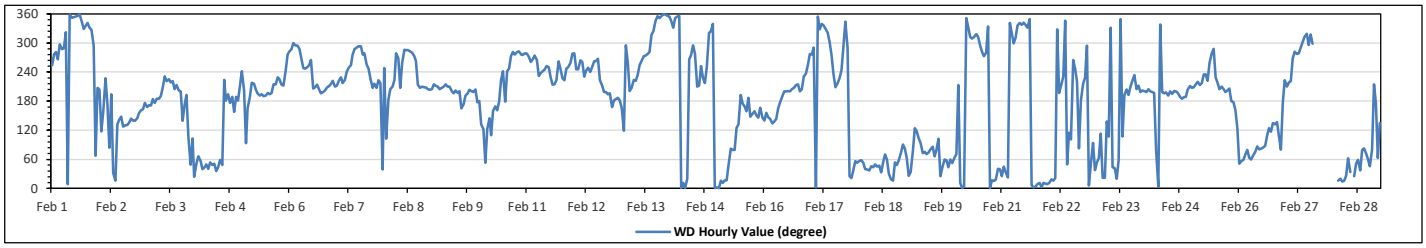
Monthly Average: 248 (WSW) degree

Hours in Service: 672
Hours of Data: 659
Hours of Missing Data: 13
Hours of Calibration: 0
Operational Uptime: 98.1

Day	Hourly Period Starting at (MST)																						Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Feb 1	WSW	W	W	W	WNW	WNW	WNW	NW	N	N	N	N	N	N	N	NNW	NNW	NNW	NNW	NNW	NW	WNW	ENE	SSW	342	NNW
Feb 2	SSW	ESE	SSE	SW	S	E	SSW	NNE	NNE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	S	146	SE
Feb 3	SSE	S	S	S	S	S	S	S	SSW	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SE	S	S	ESE	NE	ESE	195	SSW
Feb 4	NNE	NE	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	NE	SW	S	SSW	S	S	SSE	S	S	SSW	87	E
Feb 5	WSW	SSW	E	SSE	S	SW	SW	SSW	SSW	S	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SW	SW	SSW	SSW	WSW	W	214	SSW
Feb 6	W	WNW	WNW	WNW	WNW	WNW	W	WSW	WSW	WSW	WSW	W	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SSW	254	WSW
Feb 7	SSW	SW	SW	SW	SW	WSW	WSW	WSW	W	WNW	WNW	WNW	WNW	W	W	WSW	WSW	SW	SSW	SW	SSW	SW	SW	NE	259	WSW
Feb 8	WSW	E	S	SSW	SSW	SW	W	W	SSW	WSW	WNW	WNW	WNW	W	W	W	W	SSW	SSW	SSW	SSW	SSW	SSW	SSW	245	WSW
Feb 9	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSE	S	S	SSW	SSW	SSW	SSW	SSW	S	201	SSW
Feb 10	S	SE	ESE	NE	ESE	SE	ESE	SSE	SSE	SSE	S	SW	WSW	S	WSW	WSW	W	W	W	W	W	W	W	W	262	W
Feb 11	W	W	W	W	W	W	SW	SW	WSW	WSW	WSW	WSW	SW	SSW	SSW	SW	W	WSW	SW	SW	WSW	WSW	WSW	W	250	WSW
Feb 12	W	WSW	WSW	W	W	SW	WSW	WSW	WSW	WSW	W	W	W	SW	SSW	SSW	SSW	SSW	SSW	SSE	S	S	S	S	231	SW
Feb 13	SSE	ESE	WNW	WSW	SSW	SSW	SW	SW	SW	WSW	W	W	W	W	W	NW	NW	NNW	N	N	N	N	N	N	302	WNW
Feb 14	N	NNW	NNW	N	N	N	N	NNE	N	NNE	W	W	WNW	W	SSW	SSW	WSW	SW	SW	WSW	NW	NW	NNW	N	318	NW
Feb 15	N	N	NNE	NNE	NNE	NNE	NE	E	ENE	ENE	SE	SE	S	S	SSE	SSE	S	SE	SSE	SSE	SSE	SE	SSE	SE	99	E
Feb 16	SE	SSE	SE	SE	SE	SE	SE	SSE	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	WSW	W	195	SSW
Feb 17	W	WNW	N	N	NNW	NNW	NNW	NNW	NW	WNW	W	SW	SSW	SW	SW	WSW	WNW	NNW	WNW	NNE	NNE	NE	NE	NE	288	WNW
Feb 18	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NE	ENE	ENE	NNE	NNE	NNE	NE	NE	ENE	ENE	E	E	45	NE
Feb 19	ENE	NNE	NE	ENE	ESE	ESE	ESE	E	ENE	ENE	ENE	ENE	E	E	ENE	E	E	NNE	NE	ENE	ENE	NE	ENE	NE	77	ENE
Feb 20	ENE	ENE	SSW	NNE	N	N	N	NNW	NW	NW	NW	NW	NW	WNW	W	W	W	NNW	N	NNE	NNE	NNE	NE	NE	336	NNW
Feb 21	NNE	NE	NE	NNE	NNW	NW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	N	N	N	N	NNE	N	NNE	N	N	358	N
Feb 22	NNE	NNE	NNE	NNE	NNW	SSW	SSW	SW	NNW	NE	ESE	E	W	WSW	SW	E	S	SW	SW	WNW	N	NE	E	NE	20	NNE
Feb 23	NE	ENE	ESE	NNE	NNE	SE	ESE	NNW	NE	NE	NNE	ENE	NNW	ESE	S	SSW	S	SSW	SW	SW	SSW	SSW	SSW	SSW	191	S
Feb 24	SSW	SSW	SSW	SSW	SSW	SSW	ENE	N	NNW	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	SSW	S	S	S	S	SSW	SSW	196	SSW
Feb 25	SSW	SSW	SSW	SW	SSW	SW	SW	SW	SW	WSW	W	WNW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	S	S	SSE	ESE	222	SW
Feb 26	NE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	E	E	E	E	E	ESE	ESE	ESE	SE	SE	SE	ESE	E	S	SW	95	E
Feb 27	SSW	SW	SW	W	W	W	W	WNW	WNW	NW	NW	WNW	NW	WNW	K	K	K	K	K	K	K	K	K	K	NA	NA
Feb 28	K	K	NNE	NNE	NNE	NNE	NNE	ENE	NE	NRM	NNE	NE	ENE	NE	ENE	E	ENE	ENE	NE	E	SSW	S	ENE	SE	48	NE

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Machine Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED

Maximum Hourly Value:	17.8	kph	on Feb 7 at hr 10	Hours in Service:	672
Maximum Daily Value:	9.8	kph	on Feb 13	Hours of Data:	659
Minimum Hourly Value:	0.0	kph	on Feb 2 at hr 1	Hours of Missing Data:	13
Minimum Daily Value:	2.0	kph	on Feb 22	Hours of Calibration:	0
Monthly Average:	1.5	kph		Operational Uptime:	98.1

WIND DIRECTION

Monthly Average: 248 degree (WSW)

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	2.9	1.8	1.5	3.1	2.6	1.7	3.9	4.3	11.4	9.1	9.1	9.9	10.0	10.5	9.7	6.6	5.4	3.0	2.9	2.3	1.1	0.7	0.1	0.6	0.1	11.4	4.8
	WSW	W	W	W	WNW	WNW	WNW	NW	N	N	N	N	N	N	N	NNW	NNW	NNW	NNW	NNW	NW	WNW	ENE	SSW			
Feb 2	3.4	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.3	0.9	4.1	6.7	8.4	7.3	8.0	8.8	8.7	9.8	8.8	9.1	8.4	6.8	8.1	6.2	8.6	**0.0**	9.8	5.1
	SSW	ESE	SSE	SW	S	E	SSW	NNE	NNE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	S			
Feb 3	6.0	5.7	5.1	4.3	6.1	7.2	6.0	5.3	5.2	5.1	6.0	6.1	5.6	4.6	6.8	4.3	4.7	2.4	1.6	0.9	0.6	1.2	0.6	1.9	0.6	7.2	4.3
	SSE	S	S	S	S	S	S	S	SSW	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SE	S	S	ESE	NE	ESE			
Feb 4	1.0	1.5	2.1	1.6	1.4	0.9	1.3	2.5	1.9	3.0	2.8	4.8	3.9	1.6	1.2	1.0	4.1	3.8	2.6	4.2	1.9	0.9	1.3	1.2	0.9	4.8	2.2
	NNE	NE	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	NE	SW	S	SSW	S	S	SSE	S	S	SSW			
Feb 5	0.6	1.6	0.5	1.2	1.9	0.2	3.5	4.2	5.1	5.4	4.8	2.3	6.4	5.5	5.9	4.4	2.4	4.5	4.5	4.5	4.9	5.8	6.2	12.1	0.2	12.1	4.1
	WSW	SSW	E	SSE	S	SW	SW	SSW	SSW	S	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SW	SW	SSW	SSW	WSW	W			
Feb 6	15.9	14.9	13.9	16.0	14.3	11.1	8.6	6.8	9.0	8.5	8.8	9.7	9.0	8.2	6.6	6.8	7.5	5.5	6.5	5.2	4.1	4.8	4.4	6.4	4.1	16.0	8.9
	W	WNW	WNW	WNW	WNW	WNW	W	WSW	WSW	WSW	WSW	W	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SSW			
Feb 7	5.6	5.5	6.4	6.2	6.7	9.1	9.1	7.7	12.8	17.0	**17.8**	12.5	10.8	11.6	10.8	9.0	6.1	4.6	4.8	4.1	6.1	3.2	1.0	0.1	0.1	**17.8**	7.9
	SSW	SW	SW	SW	SW	WSW	WSW	WSW	W	WNW	WNW	WNW	WNW	W	W	WSW	WSW	SW	SSW	SW	SSW	SW	SW	NE			
Feb 8	0.1	0.1	1.0	0.3	1.2	2.1	3.3	2.9	2.2	2.8	3.7	3.4	7.8	9.8	9.0	7.1	6.4	4.5	6.7	6.5	6.0	6.2	6.0	6.2	0.1	9.8	4.4
	WSW	E	S	SSW	SSW	SW	W	W	SSW	WSW	WNW	WNW	WNW	W	W	W	W	SSW	SSW	SSW	SSW	SSW	SSW	SSW			
Feb 9	4.9	5.2	4.1	5.3	6.2	5.6	5.7	3.0	5.4	4.0	2.0	6.1	6.1	9.0	6.8	5.3	4.8	4.7	8.2	6.8	6.6	5.1	3.8	2.5	2.0	9.0	5.3
	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSE	S	S	SSW	SSW	SSW	SSW	SSW	S			
Feb 10	2.4	0.7	0.2	0.6	0.8	2.1	1.2	2.1	1.6	1.8	4.0	3.6	2.0	5.4	3.2	4.1	10.7	14.1	13.1	11.1	10.9	10.0	11.0	12.4	0.2	14.1	5.4
	S	SE	ESE	NE	ESE	SE	ESE	SSE	SSE	SSE	S	SW	WSW	S	WSW	WSW	W	W	W	W	W	W	W	W			
Feb 11	10.4	8.3	7.3	7.5	9.0	7.5	4.5	6.0	5.9	7.7	9.5	10.2	6.0	7.1	7.2	7.7	12.4	8.4	5.9	6.6	8.9	9.2	7.3	9.0	4.5	12.4	7.9
	W	W	W	W	W	W	SW	SW	WSW	WSW	WSW	WSW	SW	SSW	SSW	SW	W	WSW	SW	SW	WSW	WSW	WSW	W			
Feb 12	9.5	5.2	6.9	10.4	7.4	4.6	6.3	6.4	6.6	7.0	8.4	7.5	8.2	7.4	6.0	7.0	6.8	7.5	5.3	2.8	6.6	6.6	6.6	4.2	2.8	10.4	6.7
	W	WSW	WSW	W	W	SW	WSW	WSW	WSW	WSW	W	W	W	SW	SSW	SSW	SSW	SSW	SSW	SSE	S	S	S	S			
Feb 13	3.2	1.9	4.0	2.8	4.0	6.4	5.3	7.0	6.4	10.5	13.1	16.4	15.8	14.2	13.8	12.8	11.6	13.2	12.9	15.9	12.8	12.2	10.7	9.3	1.9	16.4	**9.8**
	SSE	ESE	WNW	WSW	SSW	SSW	SW	SW	SW	WSW	W	W	W	W	W	NW	NW	NNW	N	N	N	N	N	N			
Feb 14	7.1	4.7	5.4	7.5	5.5	4.9	5.6	4.6	2.7	0.9	1.8	3.6	5.4	3.1	5.7	5.7	5.3	4.7	3.8	5.0	5.7	7.5	5.5	8.6	0.9	8.6	5.0
	N	NNW	NNW	N	N	N	N	NNE	N	NNE	W	W	WNW	W	SSW	SSW	WSW	SW	SW	WSW	NW	NW	NNW	N			
Feb 15	7.5	5.9	6.9	4.5	3.9	4.0	3.4	3.8	4.1	4.7	5.5	4.4	3.1	2.4	3.8	3.3	2.9	2.8	3.3	3.5	3.7	4.5	2.5	4.2	2.4	7.5	4.1
	N	N	NNE	NNE	NNE	NNE	NE	E	ENE	ENE	SE	SE	S	S	SSE	SSE	S	SE	SSE	SSE	SSE	SE	SSE	SE			
Feb 16	3.7	4.7	4.1	5.5	4.3	4.5	5.2	4.8	5.5	7.4	9.1	9.6	9.6	9.3	6.8	6.2	7.0	4.9	8.5	9.2	4.6	3.6	6.1	8.1	3.6	9.6	6.3
	SE	SSE	SE	SE	SE	SE	SE	SSE	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	WSW	W			
Feb 17	6.1	5.2	4.4	1.5	2.8	4.6	6.6	5.4	3.9	4.4	5.7	5.3	7.0	8.6	7.5	4.0	3.1	1.0	0.1	0.9	0.4	2.2	2.6	2.4	0.1	8.6	4.0
	W	WNW	N	N	NNW	NNW	NNW	NNW	NW	WNW	W	SW	SSW	SW	SW	WSW	WNW	NNW	WNW	NNE	NNE	NE	NE	NE			
Feb 18	6.2	6.8	6.8	7.8	8.6	10.3	9.1	7.8	7.1	8.5	8.9	10.4	7.1	5.1	4.3	6.0	7.2	4.4	4.4	3.4	1.1	1.2	0.5	1.5	0.5	10.4	6.0
	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NE	ENE	ENE	NNE	NNE	NNE	NE	NE	ENE	ENE	E	E			
Feb 19	2.2	2.8	0.6	1.3	5.3	5.8	5.4	5.4	5.6	6.3	6.1	6.6	7.1	7.4	6.9	6.3	4.9	1.1	1.8	2.6	5.0	4.6	2.6	4.1	0.6	7.4	4.5
	ENE	NNE	NE	ENE	ESE	ESE	ESE	E	ENE	ENE	ENE	ENE	E	E	ENE	E	E	NNE	NE	ENE	ENE	NE	ENE	NE			
Feb 20	1.3	**0.0**	0.1	0.6	1.9	5.0	3.8	3.2	5.0	5.1	5.4	5.7	5.2	6.4	5.4	6.6	5.9	3.2	5.4	8.6	7.8	5.4	4.7	4.1	**0.0**	8.6	4.4
	ENE	ENE	SSW	NNE	N	N	N	NNW	NW	NW	NW	NW	NW	WNW	W	W	W	NNW	N	NNE	NNE	NNE	NE	NE			
Feb 21	3.9	3.9	6.6	6.4	1.7	1.1	2.7	4.6	4.1	6.2	6.6	7.8	7.5	7.8	7.9	11.8	9.4	8.4	3.6	8.4	8.3	7.1	5.3	2.9	1.1	11.8	6.0
	NNE	NE	NE	NNE	NNW	NW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	N	N	N	N	NNE	N	NNE	N	N			
Feb 22	2.5	4.1	4.3	1.7	0.4	0.6	1.9	2.4	0.6	1.6	0.7	0.8	1.9	0.9	2.8	4.4	4.2	3.1	3.4	0.4	0.1	0.8	0.5	2.7	0.1	4.4	**2.0**
	NNE	NNE	NNE	NNE	NNW	SSW	SSW	SW	NNW	NE	ESE	E	W	WSW	SW	E	S	SW	SW	WNW	N	NE	E	NE			
Feb 23	2.1	1.6	0.6	0.3	0.1	**0.0**	**0.0**	**0.0**	0.1	3.5	1.7	1.1	3.3	2.2	5.9	7.0	7.7	3.8	2.7	2.0	1.8	0.5	2.0	2.1	**0.0**	7.7	2.2
	NE	ENE	ESE	NNE	NNE	SE	ESE	NNW	NE	NE	NNE	ENE	NNW	ESE	S	SSW	S	SSW	SW	SW	SSW	SSW	SSW	SSW			
Feb 24	1.3	0.9	0.1	1.3	1.9	0.9	0.1	0.1	0.1	6.3	8.0	10.9	13.4	10.5	12.2	12.4	12.0	7.9	5.7	8.1	8.7	5.2	7.0	6.1	0.1	13.4	5.9
	SSW	SSW	SSW	SSW	SSW	SSW	ENE	N	NNW	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	SSW	S	S	S	S	SSW	SSW			
Feb 25	5.6	4.8	4.4	3.3	4.9	4.6	5.5	6.3	5.4	8.0	8.7	8.9	5.7	6.7	9.1	8.4	7.5	6.7	4.0	2.7	2.4	4.4	1.6	1.4	1.4	9.1	5.5
	SSW	SSW	SSW	SW	SSW	SW	SW	SW	SW	WSW	W	WNW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	S	S	SSE	ESE			
Feb 26	2.4	2.7	2.7	2.0	3.5	4.0	5.3	5.6	6.2	6.3	8.6	9.5	10.1	10.4	10.7	10.3	7.9	5.3	7.0	7.0	4.7	1.6	1.9	0.2	0.2	10.7	5.7
	NE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	E	E	E	E	E	ESE	ESE	ESE	SE	SE	SE	ESE	E	S	SW			
Feb 27	2.9	1.2	3.6	7.7	10.0	9.4	7.8	7.0	6.4	7.6	7.1	9.6	7.2	8.8	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	1.2	10.0	NA
	SSW	SW	SW	W	W	W	W	WNW	WNW	NW	NW	WNW	NW	WNW	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**	**K**			
Feb 28	**K**	**K**	4.3	3.5	3.4	5.7	7.2	5.8	7.5	**NRM**	4.8	5.2	6.0	6.9	5.6	6.3	5.5	4.1	1.9	2.2	0.2	0.2	1.1	2.5	0.2	7.5	4.3
	K	**K**	NNE	NNE	NNE	NNE	NNE	ENE	NE	**NRM**	NNE	NE	ENE	NE	ENE	E	ENE	ENE	NE	E	SSW	S	ENE	SE			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance			
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P**	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Lakeland Industry & Community Association

Tamarack Site - February 2023

Summary of Hour Standard Deviations

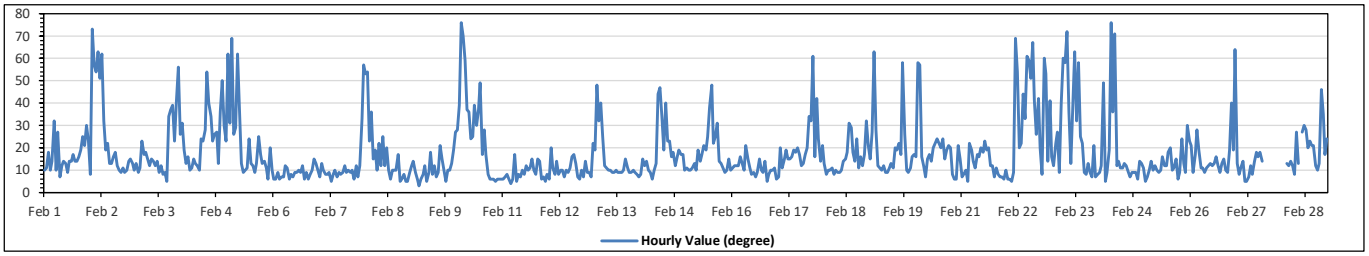
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	76 degree on Feb 10 at hr 2	Hours in Service:	672
		Hours of Data:	659
Minimum Hourly Value:	3 degree on Feb 9 at hr 4	Hours of Missing Data:	13
		Hours of Calibration:	0
		Operational Uptime:	98.1

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
Feb 1	10	11	18	10	14	32	10	27	7	12	14	13	9	14	14	17	14	14	16	19	25	21	30	23	7	32
Feb 2	8	73	57	54	63	51	62	32	19	22	13	13	16	18	12	10	9	11	9	10	14	15	13	10	8	73
Feb 3	13	9	11	23	17	18	15	12	15	14	12	14	9	12	8	9	5	34	37	39	23	41	56	26	5	56
Feb 4	31	19	13	16	10	11	15	13	12	10	24	23	28	54	40	34	23	26	27	13	36	50	30	23	10	54
Feb 5	62	31	69	26	29	62	37	13	9	10	11	24	13	12	9	13	25	17	13	14	11	6	20	10	6	69
Feb 6	6	6	9	6	7	7	12	11	6	8	7	9	9	10	9	12	6	9	6	8	10	15	13	10	6	15
Feb 7	7	13	10	8	8	9	5	8	10	7	9	8	9	12	9	10	9	10	6	12	7	12	33	57	5	57
Feb 8	53	54	23	36	15	19	10	22	12	25	12	20	10	6	10	10	10	17	5	6	8	5	5	9	5	54
Feb 9	12	14	9	6	**3**	6	8	12	5	9	18	8	12	7	9	21	15	10	5	10	10	13	19	27	**3**	27
Feb 10	28	39	**76**	70	59	37	36	24	25	39	30	37	49	17	28	17	8	6	6	6	5	6	6	6	5	**76**
Feb 11	6	7	8	6	4	6	17	5	8	7	10	8	12	10	11	15	10	8	15	14	6	7	5	8	4	17
Feb 12	6	20	11	8	14	8	10	10	7	10	9	11	16	17	13	7	6	10	7	14	9	9	7	22	6	22
Feb 13	19	48	32	40	25	12	11	10	10	9	9	10	9	9	9	10	15	11	9	9	10	9	8	7	7	48
Feb 14	8	15	12	14	10	9	6	10	13	44	47	34	19	40	23	23	16	18	12	16	19	17	17	10	6	47
Feb 15	11	10	10	11	13	10	19	14	17	21	19	25	38	48	22	25	31	14	13	11	9	10	15	10	9	48
Feb 16	11	12	12	12	16	13	10	21	15	11	8	9	7	9	15	10	9	14	5	8	10	10	11	6	5	21
Feb 17	7	20	11	15	19	15	15	16	19	18	20	17	12	13	17	20	34	32	61	16	42	24	14	21	7	61
Feb 18	13	8	10	10	11	8	10	9	9	10	14	15	18	31	29	18	14	24	11	16	12	17	32	21	8	32
Feb 19	15	27	63	28	12	11	10	12	9	9	11	13	11	20	19	22	17	58	26	10	9	11	16	17	9	63
Feb 20	16	58	57	16	12	7	15	17	14	20	22	24	22	20	24	15	19	21	20	8	6	6	21	15	6	58
Feb 21	7	8	10	5	22	19	14	11	17	16	20	18	23	19	20	12	12	7	11	8	7	7	6	10	5	23
Feb 22	6	6	5	9	69	54	20	22	44	33	61	59	51	67	41	26	42	20	8	60	53	14	41	16	5	69
Feb 23	12	22	27	9	40	60	58	72	36	13	38	63	32	58	25	22	9	8	13	9	7	21	7	8	7	72
Feb 24	9	12	49	5	9	19	**76**	36	71	12	14	11	11	13	12	9	7	9	9	9	6	14	13	11	5	**76**
Feb 25	5	7	10	14	10	12	10	9	10	16	12	12	18	20	10	11	15	6	9	24	13	9	30	23	5	30
Feb 26	21	9	17	28	19	11	11	9	11	12	13	12	13	16	12	9	13	15	10	9	19	40	19	64	9	64
Feb 27	13	8	11	14	5	5	7	12	8	14	18	16	18	14	K	K	K	K	K	K	K	K	K	K	5	18
Feb 28	K	K	13	12	14	12	8	27	13	NRM	27	30	28	20	23	21	21	12	10	13	46	35	17	24	8	46
Diurnal Minimum	5	6	5	5	3	5	5	5	5	7	7	8	7	6	8	7	5	6	5	6	5	5	5	6		
Diurnal Maximum	62	73	76	70	69	62	76	72	71	44	61	63	51	67	41	34	42	58	61	60	53	50	56	64		

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Machine Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



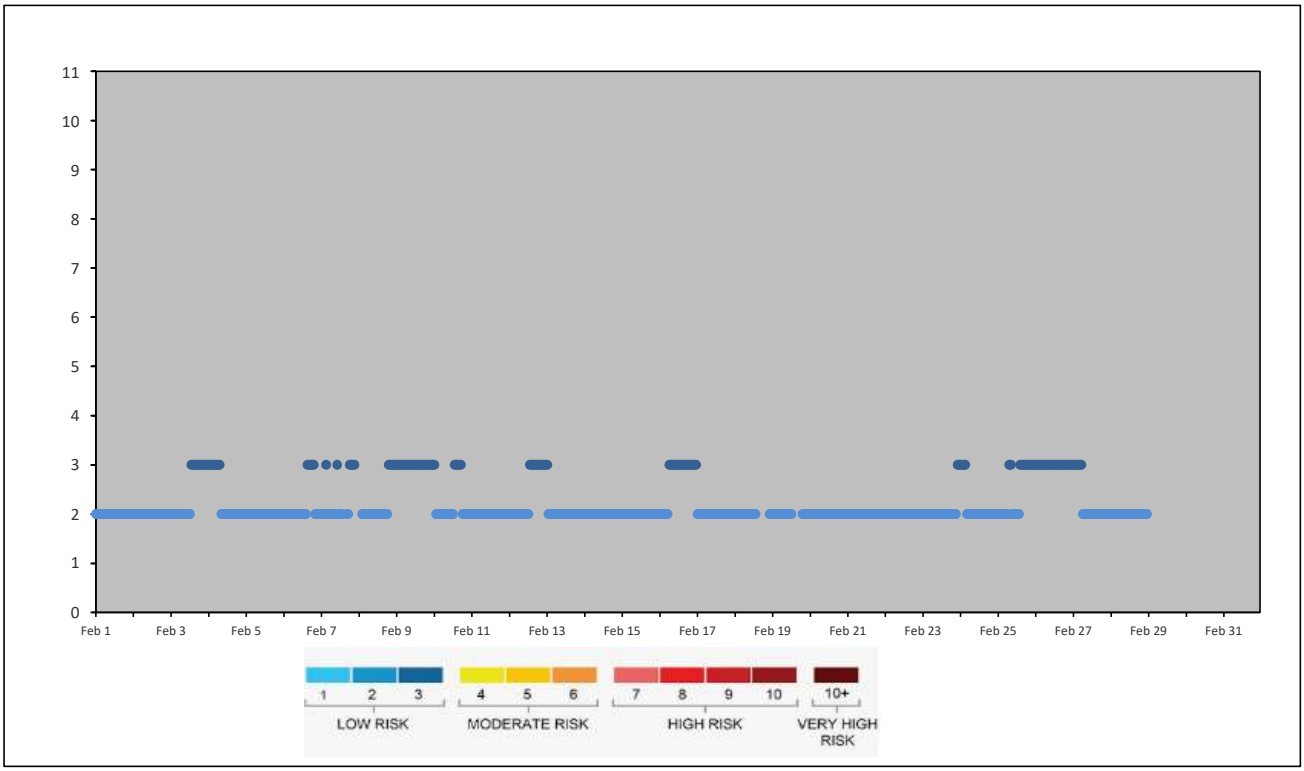
ST. LINA STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - February 2023

AIR QUALITY HEALTH INDEX

Day	Hourly Period Starting at (MST)																						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Feb 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	-	2	2	2	2	2	2	2
Feb 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
Feb 3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Feb 4	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2
Feb 7	2	2	2	3	2	2	2	2	2	2	3	2	2	2	-	-	2	2	3	3	3	3	-	-
Feb 8	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
Feb 9	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 10	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	2
Feb 11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 12	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Feb 13	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 16	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	2	2
Feb 19	2	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	2	2	2	2	2
Feb 20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 21	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 22	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 23	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3
Feb 24	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 25	2	2	2	2	2	2	2	3	3	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3
Feb 26	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 27	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 28	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

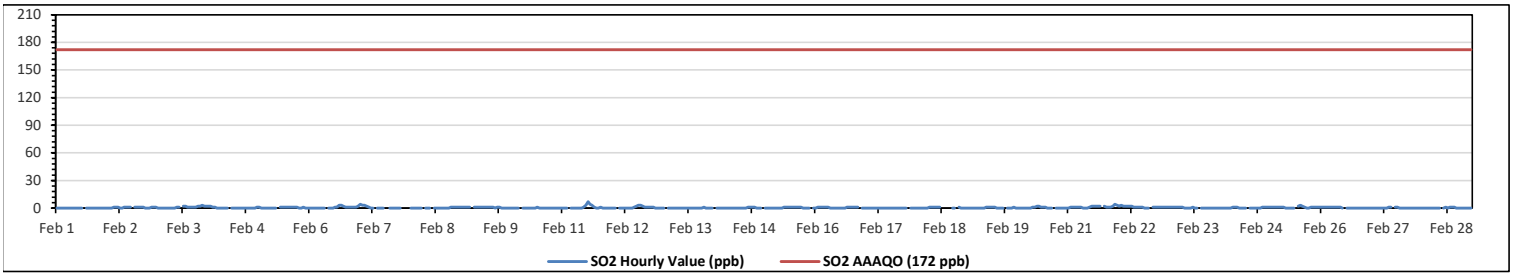
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

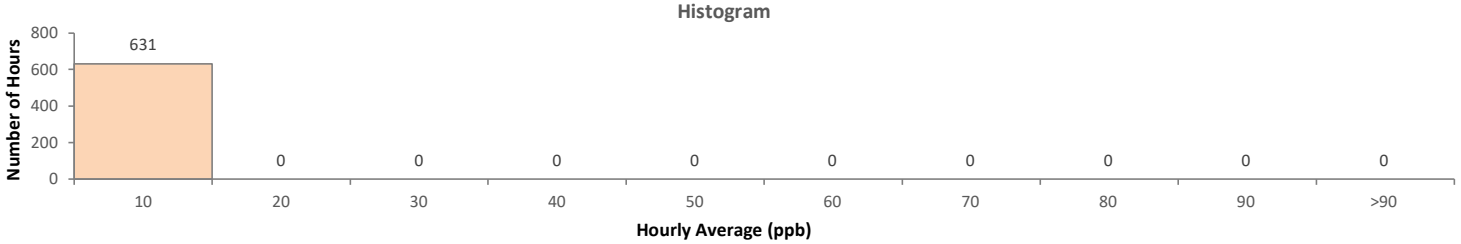
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0		
Maximum Hourly Value:	7 ppb	on Feb 11 at hr 12		Hours in Service:	672		
Maximum Daily Value:	1.3 ppb	on Feb 21		Hours of Data:	631		
Minimum Hourly Value:	0 ppb	on Feb 1 at hr 0		Hours of Missing Data:	7		
Minimum Daily Value:	0.0 ppb	on Feb 1		Hours of Calibration:	34		
Monthly Average:	0.5 ppb			Operational Uptime:	99.0		

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 2	0	0	0	1	1	1	0	0	1	1	1	1	S	1	1	1	1	1	0	0	0	1	1	1	0	1	0.7
Feb 3	0	0	0	0	0	0	0	0	0	1	1	S	2	2	1	1	1	1	1	2	2	3	2	2	0	3	1.0
Feb 4	2	2	1	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0.3
Feb 5	1	0	0	0	0	0	0	0	0	S	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	1	0.5
Feb 6	0	0	0	0	0	0	0	0	S	0	0	0	1	1	3	3	2	1	1	1	1	1	1	2	0	3	0.8
Feb 7	4	3	3	2	1	0	0	S	0	0	0	0	K	K	0	0	0	0	0	0	K	K	K	K	0	4	NA
Feb 8	0	0	0	0	0	0	S	0	0	0	NRM	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0.2
Feb 9	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	1	0.7
Feb 10	0	0	0	0	S	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 11	0	0	0	S	0	0	0	0	0	0	1	3	7	4	3	1	0	0	1	0	0	0	0	0	0	7	0.9
Feb 12	0	0	S	0	0	0	0	0	0	0	1	2	3	3	2	1	1	1	1	1	0	0	0	0	0	3	0.7
Feb 13	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.0
Feb 14	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	S	0	1	0.2
Feb 15	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	S	0	0	1	0.4
Feb 16	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	S	0	0	0	1	0.5
Feb 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0
Feb 18	0	0	0	0	0	0	1	1	1	1	1	1	C	C	C	C	C	0	0	S	1	0	0	0	0	1	0.4
Feb 19	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	S	0	0	0	1	0	0	1	0.3
Feb 20	0	0	0	0	0	0	0	1	1	2	2	1	1	1	0	0	0	S	0	0	0	0	0	0	0	2	0.4
Feb 21	0	1	1	1	1	1	1	0	0	0	1	2	2	2	2	2	S	2	1	1	1	2	4	3	0	4	1.3
Feb 22	2	3	2	2	2	2	2	1	1	1	1	1	0	0	0	S	1	1	1	1	1	1	1	1	0	3	1.2
Feb 23	1	1	1	1	1	1	1	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	1	0.3
Feb 24	0	0	0	0	0	0	1	1	1	0	0	0	0	S	0	0	0	0	0	0	1	1	1	1	0	1	0.3
Feb 25	1	1	1	1	1	1	1	0	0	0	0	0	S	2	3	2	1	0	0	1	1	1	1	1	0	3	0.9
Feb 26	1	1	1	1	1	1	1	1	1	1	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4
Feb 27	0	0	0	0	0	0	0	0	1	1	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 28	0	0	0	0	0	0	0	0	0	S	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0.2
Diurnal Maximum	4	3	3	2	2	2	2	1	1	2	2	3	7	4	3	3	2	2	1	2	2	3	4	3			
Diurnal Average	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.2	0.3	0.4	0.5	0.7	0.9	0.9	0.7	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



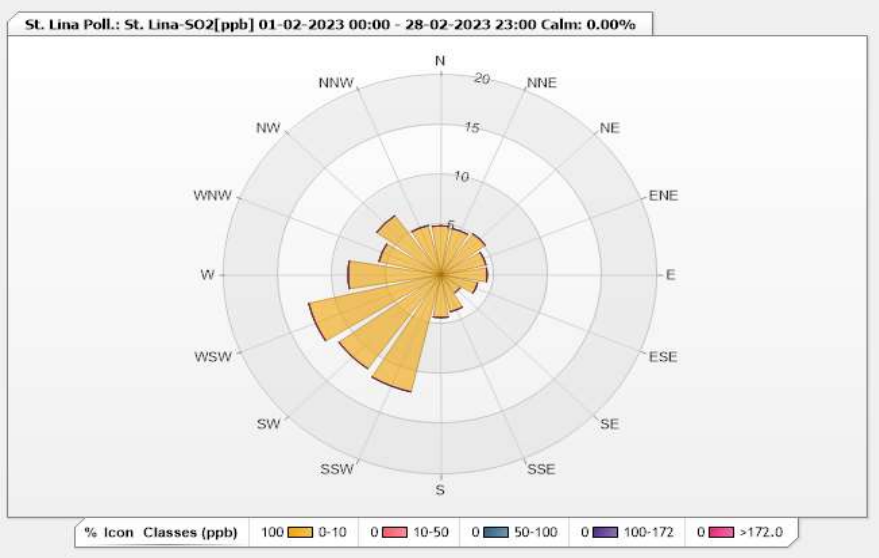


Station: St. Lina Poll.: St. Lina-SO2[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 93.90% Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	4.91	0	0	0	0	4.91
NNE	4.75	0	0	0	0	4.75
NE	5.07	0	0	0	0	5.07
ENE	4.28	0	0	0	0	4.28
E	4.28	0	0	0	0	4.28
ESE	3.49	0	0	0	0	3.49
SE	2.22	0	0	0	0	2.22
SSE	3.8	0	0	0	0	3.8
S	4.28	0	0	0	0	4.28
SSW	12.04	0	0	0	0	12.04
SW	11.57	0	0	0	0	11.57
WSW	12.52	0	0	0	0	12.52
W	8.56	0	0	0	0	8.56
WNW	5.86	0	0	0	0	5.86
NW	7.29	0	0	0	0	7.29
NNW	5.07	0	0	0	0	5.07
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

HYDROGEN SULPHIDE (H_2S) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb

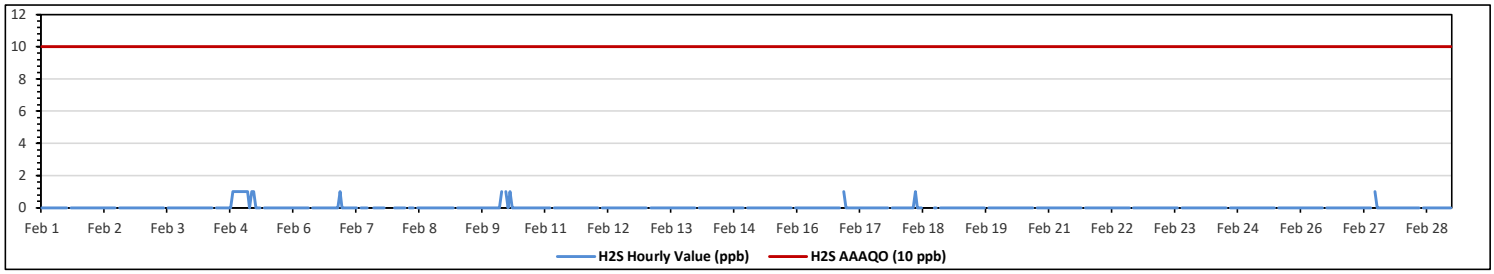
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0

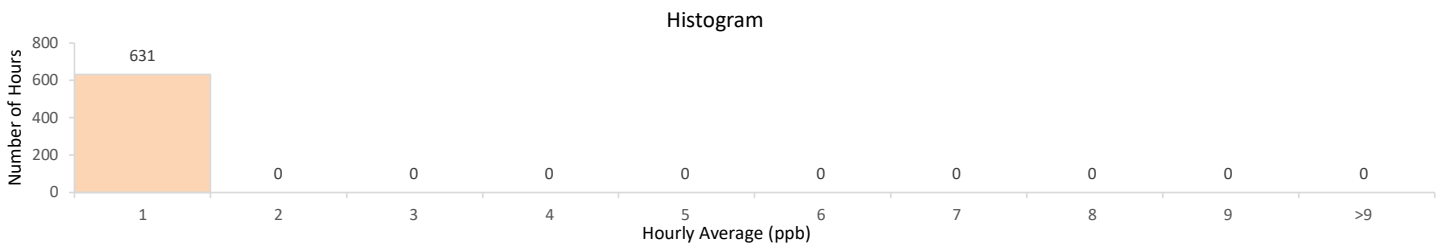
Maximum Hourly Value:	1	ppb	on Feb 4 at hr 19	Hours in Service:	672
Maximum Daily Value:	0.0	ppb	on Feb 1	Hours of Data:	631
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	7
Minimum Daily Value:	0.0	ppb	on Feb 1	Hours of Calibration:	34
Monthly Average:	0.0	ppb		Operational Uptime:	99.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 2	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 3	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 4	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	1	1	1	1	0.0	1.0	0.0
Feb 5	1	1	1	0	1	1	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	1.0	0.0
Feb 6	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0	1.0	0.0
Feb 7	0	0	0	0	0	0	0	S	0	0	0	0	K	K	0	0	0	0	0	0	K	K	K	K	0.0	0.0	-
Feb 8	0	0	0	0	0	0	S	0	0	0	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 9	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 10	0	0	0	1	S	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	1.0	0.0
Feb 11	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 12	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 13	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 14	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0.0	0.0	0.0
Feb 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0.0	0.0	0.0
Feb 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	0	0.0	1.0	0.0
Feb 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0.0	0.0	0.0
Feb 18	0	0	0	0	0	0	0	0	1	0	0	0	C	C	C	C	C	0	0	S	0	0	0	0	0.0	1.0	0.0
Feb 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0	0.0	0.0
Feb 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0	0.0	0.0
Feb 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 24	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 25	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 26	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 27	0	0	0	0	0	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0.0	1.0	0.0
Feb 28	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Diurnal Maximum	1	1	1	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



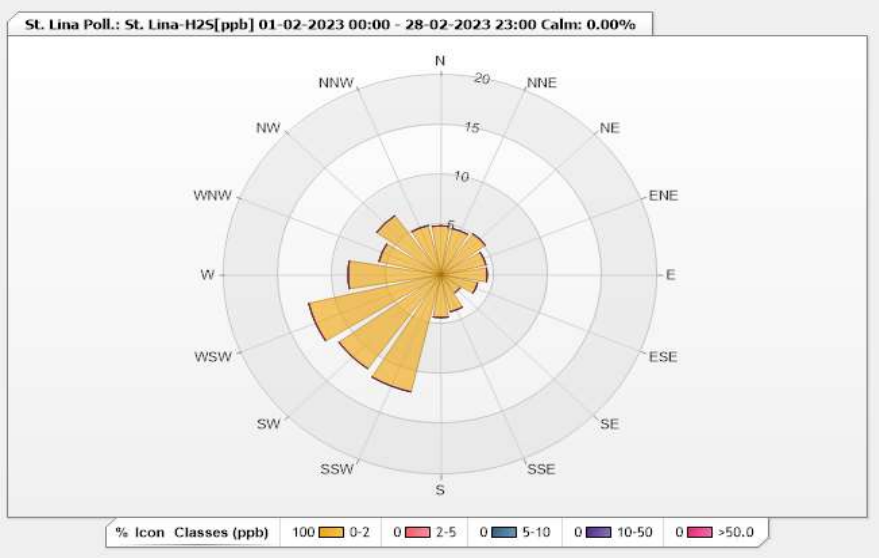


Station: St. Lina Poll.: St. Lina-H2S[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 93.90% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	4.91	0	0	0	0	4.91
NNE	4.75	0	0	0	0	4.75
NE	5.07	0	0	0	0	5.07
ENE	4.28	0	0	0	0	4.28
E	4.28	0	0	0	0	4.28
ESE	3.49	0	0	0	0	3.49
SE	2.22	0	0	0	0	2.22
SSE	3.8	0	0	0	0	3.8
S	4.28	0	0	0	0	4.28
SSW	12.04	0	0	0	0	12.04
SW	11.57	0	0	0	0	11.57
WSW	12.52	0	0	0	0	12.52
W	8.56	0	0	0	0	8.56
WNW	5.86	0	0	0	0	5.86
NW	7.29	0	0	0	0	7.29
NNW	5.07	0	0	0	0	5.07
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

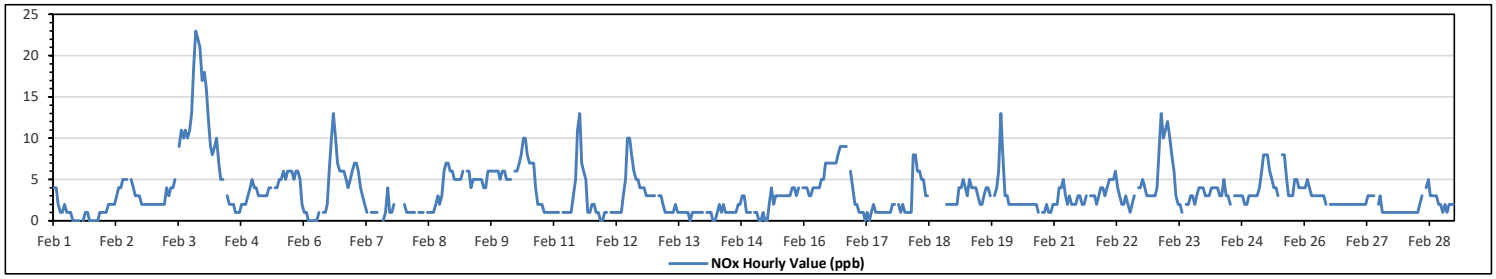
OXIDES OF NITROGEN (NOx) in ppb

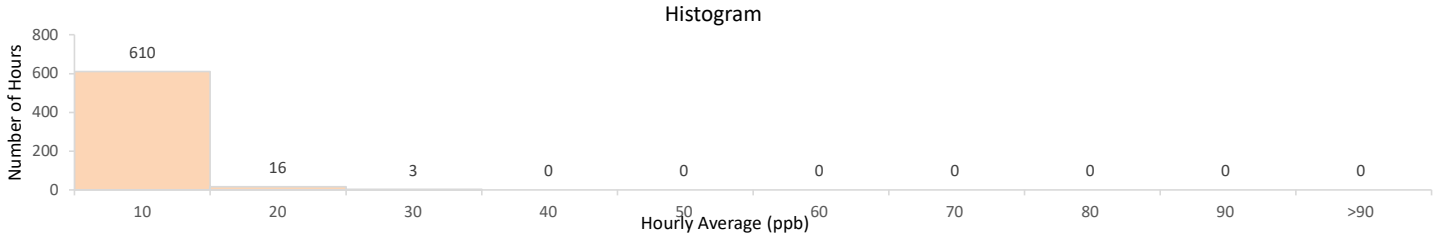
Maximum Hourly Value:	23	ppb	on Feb 3 at hr 20	Hours in Service:	672
Maximum Daily Value:	9.1	ppb	on Feb 3	Hours of Data:	629
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 9	Hours of Missing Data:	7
Minimum Daily Value:	0.9	ppb	on Feb 1	Hours of Calibration:	36
Monthly Average:	3.5	ppb		Operational Uptime:	99.0

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	4	4	2	1	1	2	1	1	1	0	0	0	0	S	0	1	1	0	0	0	0	0	1	1	0	4	0.9
Feb 2	1	1	2	2	2	2	3	4	4	5	5	5	S	5	4	3	3	3	2	2	2	2	2	2	1	5	2.9
Feb 3	2	2	2	2	2	2	4	3	4	4	5	S	9	11	10	11	10	11	13	19	23	22	21	17	2	23	9.1
Feb 4	18	16	12	9	8	9	10	7	5	5	S	3	2	2	2	1	1	1	2	2	2	3	4	5	1	18	5.6
Feb 5	4	4	3	3	3	3	3	4	4	S	4	4	5	5	6	5	6	6	6	5	6	6	5	2	2	6	4.4
Feb 6	1	1	0	0	0	0	0	1	S	1	1	2	6	10	13	10	7	6	6	6	5	4	5	6	0	13	4.0
Feb 7	7	7	6	4	3	2	1	S	1	1	1	1	K	K	0	1	4	1	1	2	K	K	K	K	0	7	NA
Feb 8	2	1	1	1	1	1	S	1	1	1	NRM	1	1	1	1	2	3	2	3	6	7	7	6	6	1	7	2.5
Feb 9	5	5	5	5	6	S	6	6	4	5	5	5	5	5	4	4	6	6	6	6	6	6	5	6	4	6	5.3
Feb 10	6	5	5	5	S	6	6	7	8	10	10	8	7	7	7	4	2	2	2	1	1	1	1	1	1	10	4.9
Feb 11	1	1	1	S	1	1	1	1	1	3	5	11	13	7	6	5	1	1	2	2	1	1	0	0	0	13	2.9
Feb 12	1	1	S	1	1	1	1	1	1	3	5	10	10	8	6	5	5	4	4	4	3	3	3	3	1	10	3.7
Feb 13	3	S	3	3	2	1	1	1	1	1	2	1	1	1	1	1	1	0	1	1	1	1	1	1	0	3	1.3
Feb 14	S	1	1	1	0	0	1	2	1	2	1	1	1	1	1	1	2	2	3	3	1	1	1	S	0	3	1.3
Feb 15	1	1	0	0	1	0	0	2	4	2	3	3	3	3	3	3	3	3	4	4	3	4	S	4	0	4	2.3
Feb 16	4	4	3	3	4	4	4	4	5	5	7	7	7	7	7	7	8	9	9	9	9	S	6	4	3	9	5.9
Feb 17	2	2	1	1	1	0	1	0	1	2	1	1	1	1	1	1	1	1	2	2	S	2	1	2	0	2	1.2
Feb 18	1	1	1	1	8	8	6	6	5	5	3	3	C	C	C	C	C	C	C	S	2	2	2	2	1	8	NA
Feb 19	2	2	4	4	5	4	3	5	4	4	4	3	2	2	3	4	4	3	S	3	4	6	13	8	2	13	4.2
Feb 20	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	S	1	1	2	1	1	2	1	3	1.9
Feb 21	2	2	4	4	5	3	2	3	2	2	2	3	3	2	2	3	S	3	3	3	2	3	4	4	2	5	2.9
Feb 22	3	4	5	5	5	6	4	3	2	2	3	2	1	2	3	S	4	4	5	4	3	3	3	3	1	6	3.4
Feb 23	3	4	9	13	10	11	12	10	8	6	3	2	2	1	S	2	2	3	3	2	3	4	4	4	1	13	5.3
Feb 24	3	3	3	4	4	4	4	3	3	5	3	3	2	S	3	3	3	3	3	2	2	3	3	3	2	5	3.1
Feb 25	3	3	4	6	8	8	8	6	5	4	4	3	S	8	8	5	3	3	3	5	5	4	4	4	3	8	5.0
Feb 26	4	5	4	3	3	3	3	3	3	3	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	5	2.6
Feb 27	2	2	2	2	2	2	3	3	3	3	S	2	3	1	1	1	1	1	1	1	1	1	1	1	1	3	1.7
Feb 28	1	1	1	1	1	1	1	2	3	S	4	5	3	3	3	3	2	2	1	2	1	2	2	2	1	5	2.0
Diurnal Maximum	18	16	12	13	10	11	12	10	8	10	10	11	13	11	13	11	10	11	13	19	23	22	21	17			
Diurnal Average	3.3	3.2	3.2	3.2	3.3	3.2	3.4	3.4	3.2	3.3	3.4	3.5	3.8	4.0	3.8	3.5	3.3	3.2	3.4	3.7	3.7	3.6	3.9	3.7			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



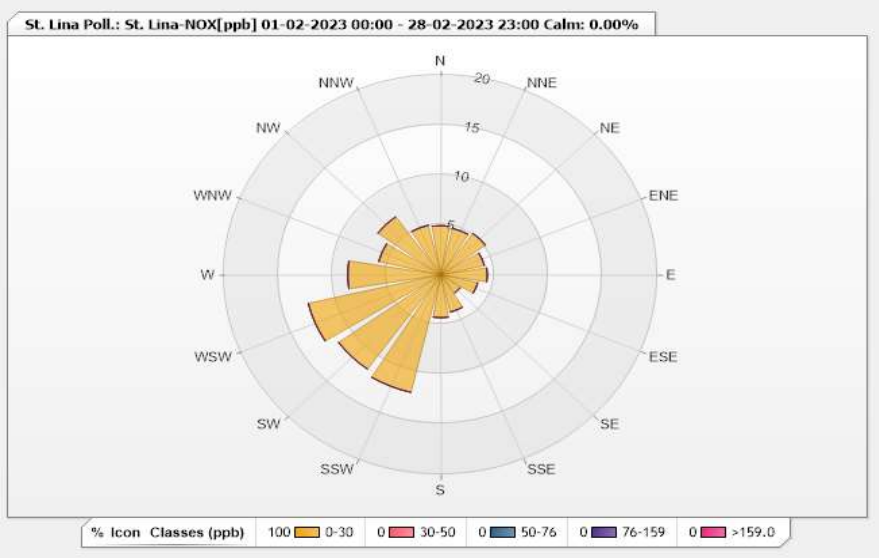


Station: St. Lina Poll.: St. Lina-NOX[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 93.60% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	4.93	0	0	0	0	4.93
NNE	4.77	0	0	0	0	4.77
NE	5.09	0	0	0	0	5.09
ENE	4.13	0	0	0	0	4.13
E	4.29	0	0	0	0	4.29
ESE	3.5	0	0	0	0	3.5
SE	2.23	0	0	0	0	2.23
SSE	3.82	0	0	0	0	3.82
S	4.29	0	0	0	0	4.29
SSW	12.08	0	0	0	0	12.08
SW	11.61	0	0	0	0	11.61
WSW	12.56	0	0	0	0	12.56
W	8.59	0	0	0	0	8.59
WNW	5.88	0	0	0	0	5.88
NW	7.15	0	0	0	0	7.15
NNW	5.09	0	0	0	0	5.09
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

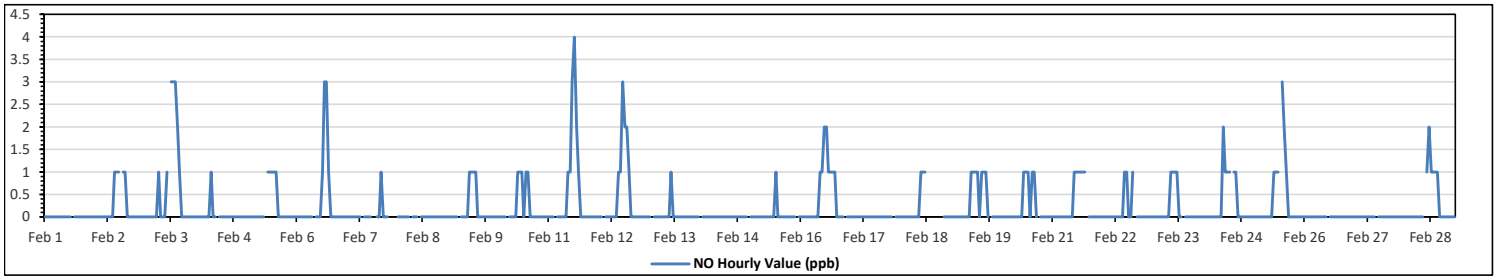
NITRIC OXIDE (NO) in ppb

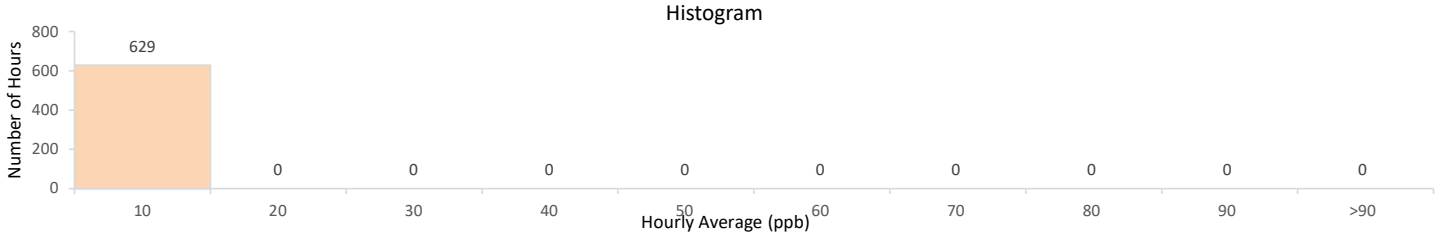
Maximum Hourly Value:	4	ppb	on Feb 11 at hr 12	Hours in Service:	672
Maximum Daily Value:	0.6	ppb	on Feb 3	Hours of Data:	629
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	7
Minimum Daily Value:	0.0	ppb	on Feb 1	Hours of Calibration:	36
Monthly Average:	0.2	ppb		Operational Uptime:	99.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 2	0	0	0	0	0	0	0	0	0	1	1	1	S	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 3	0	0	0	0	0	0	1	0	0	0	1	S	3	3	3	2	1	0	0	0	0	0	0	0	0	3	**0.6**
Feb 4	0	0	0	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 5	0	0	0	0	0	0	0	0	0	S	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 6	0	0	0	0	0	0	0	0	S	0	0	0	1	3	3	1	0	0	0	0	0	0	0	0	0	3	0.3
Feb 7	0	0	0	0	0	0	0	S	0	0	0	0	K	K	0	0	1	0	0	0	K	K	K	K	0	1	NA
Feb 8	0	0	0	0	0	0	S	0	0	0	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 9	0	0	0	0	0	S	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 10	0	0	0	0	S	0	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 11	0	0	0	S	0	0	0	0	0	1	1	3	4	2	1	0	0	0	0	0	0	0	0	0	0	**4**	0.5
Feb 12	0	0	S	0	0	0	0	0	0	1	1	3	2	2	1	0	0	0	0	0	0	0	0	0	0	3	0.4
Feb 13	0	S	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 14	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0
Feb 15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	S	0	0	1	0.0
Feb 16	0	0	0	0	0	0	0	0	0	1	1	2	2	1	1	1	1	0	0	0	0	S	0	0	0	2	0.4
Feb 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0
Feb 18	0	0	0	0	0	0	0	0	0	1	1	1	C	C	C	C	C	C	C	S	0	0	0	0	0	1	NA
Feb 19	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	0	S	0	0	0	0	0	0	1	0.3
Feb 20	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	S	0	0	0	0	0	0	0	1	0.2
Feb 21	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	S	0	0	0	0	0	0	0	0	1	0.3
Feb 22	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	S	0	0	0	0	0	0	0	0	0	1	0.1
Feb 23	0	0	0	0	0	0	0	0	1	1	1	1	0	0	S	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 24	0	0	0	0	0	0	0	0	0	2	1	1	1	S	1	1	0	0	0	0	0	0	0	0	0	2	0.3
Feb 25	0	0	0	0	0	0	0	0	0	1	1	1	S	3	2	1	0	0	0	0	0	0	0	0	0	3	0.4
Feb 26	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 27	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 28	0	0	0	0	0	0	0	0	0	S	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	2	0.3
Diurnal Maximum	0	0	0	0	0	0	1	1	1	2	1	3	4	3	3	2	1	0	0	0	0	0	0	0			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.8	0.8	0.8	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



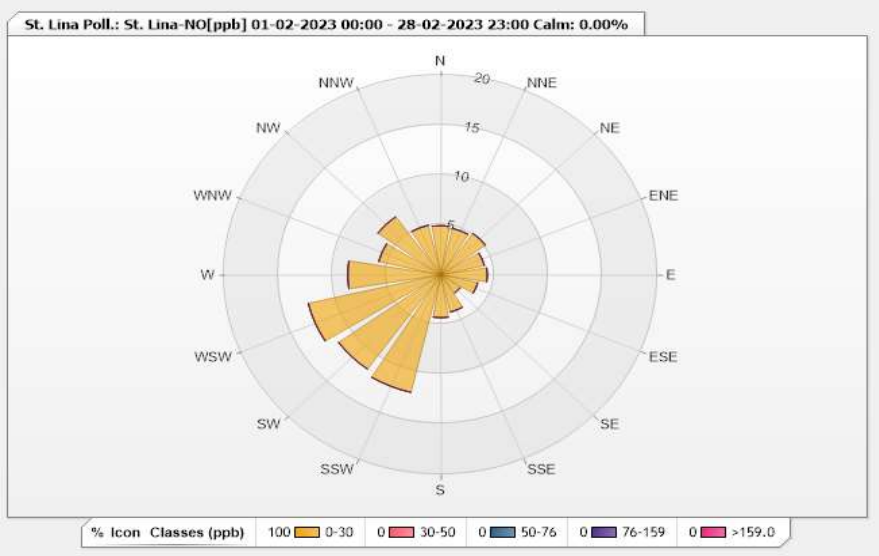


Station: St. Lina Poll.: St. Lina-NO[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 93.60% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	4.93	0	0	0	0	4.93
NNE	4.77	0	0	0	0	4.77
NE	5.09	0	0	0	0	5.09
ENE	4.13	0	0	0	0	4.13
E	4.29	0	0	0	0	4.29
ESE	3.5	0	0	0	0	3.5
SE	2.23	0	0	0	0	2.23
SSE	3.82	0	0	0	0	3.82
S	4.29	0	0	0	0	4.29
SSW	12.08	0	0	0	0	12.08
SW	11.61	0	0	0	0	11.61
WSW	12.56	0	0	0	0	12.56
W	8.59	0	0	0	0	8.59
WNW	5.88	0	0	0	0	5.88
NW	7.15	0	0	0	0	7.15
NNW	5.09	0	0	0	0	5.09
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb

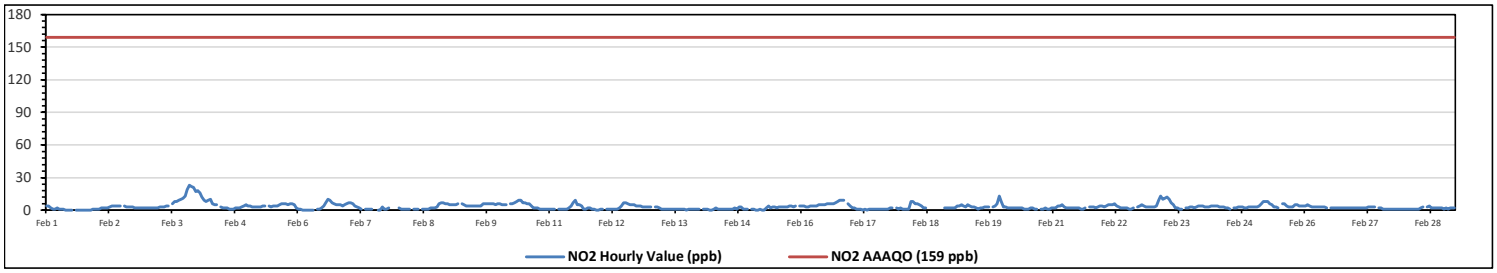
Number of 1-Hour Exceedances: 0

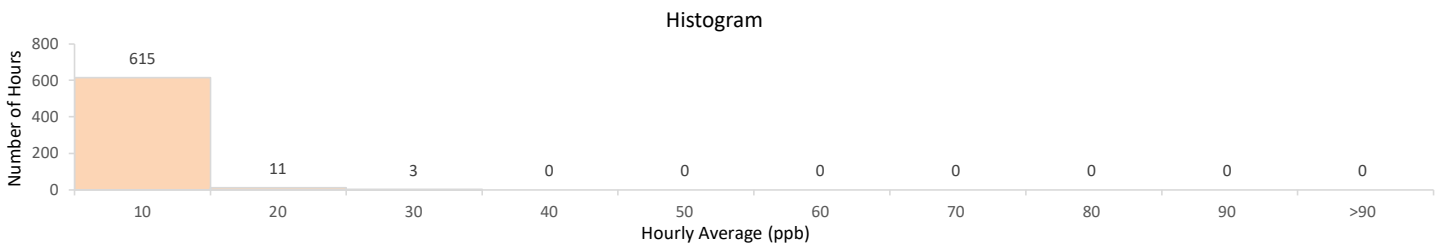
Maximum Hourly Value:	23	ppb	on Feb 3 at hr 20	Hours in Service:	672	
Maximum Daily Value:	8.5	ppb	on Feb 3	Hours of Data:	629	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 9	Hours of Missing Data:	7	
Minimum Daily Value:	0.8	ppb	on Feb 1	Hours of Calibration:	36	
Monthly Average:	3.2	ppb		Operational Uptime:	99.0	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	4	4	2	1	1	2	1	1	1	0	0	0	0	S	0	0	0	0	0	0	0	0	1	1	0	4	0.8
Feb 2	1	1	2	2	2	2	3	4	4	4	4	4	S	4	3	3	3	3	2	2	2	2	2	2	1	4	2.7
Feb 3	2	2	2	2	2	2	3	3	3	4	4	S	6	8	8	9	10	11	13	19	23	22	21	17	2	23	8.5
Feb 4	18	16	12	9	8	9	10	6	5	5	S	3	2	2	2	1	1	1	2	2	2	3	4	5	1	18	5.6
Feb 5	4	4	3	3	3	3	3	4	4	S	4	3	4	4	4	5	6	6	6	5	6	6	5	2	2	6	4.2
Feb 6	1	1	0	0	0	0	0	0	S	1	1	2	4	7	10	9	7	6	5	5	5	4	5	6	0	10	3.4
Feb 7	7	7	6	4	3	2	1	S	1	1	1	1	K	K	0	0	3	1	1	2	K	K	K	K	0	7	NA
Feb 8	2	1	1	1	1	1	S	1	1	1	NRM	1	1	1	1	2	2	2	3	6	7	7	6	6	1	7	2.5
Feb 9	5	5	5	5	6	S	6	5	4	4	4	4	4	4	4	4	6	6	6	6	6	6	5	6	4	6	5.0
Feb 10	6	5	5	5	S	6	6	7	8	9	9	7	7	6	6	4	2	2	2	1	1	1	1	1	1	9	4.7
Feb 11	1	1	1	S	1	1	1	1	1	2	4	7	9	5	5	4	1	1	2	2	1	1	0	0	0	9	2.3
Feb 12	1	1	S	1	1	1	1	1	1	2	4	7	7	6	5	5	5	4	4	4	3	3	3	3	1	7	3.2
Feb 13	3	S	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	3	1.3
Feb 14	S	1	1	1	0	0	1	2	1	1	1	1	1	1	1	1	2	1	3	3	1	1	1	S	0	3	1.2
Feb 15	1	1	0	0	1	0	0	2	4	2	3	3	2	3	3	3	3	3	4	4	3	4	S	4	0	4	2.3
Feb 16	4	4	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	8	9	9	9	S	6	4	3	9	5.5
Feb 17	2	2	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	2	2	S	2	1	2	0	2	1.2
Feb 18	1	1	1	1	8	8	6	6	5	4	2	2	C	C	C	C	C	C	C	S	2	2	2	2	1	8	NA
Feb 19	2	2	4	4	5	4	3	5	4	3	3	2	1	2	2	3	3	3	S	3	4	6	13	8	1	13	3.9
Feb 20	3	3	2	2	2	2	2	2	2	2	1	1	1	2	2	1	1	S	1	1	2	1	1	2	1	3	1.7
Feb 21	2	2	4	4	5	3	2	2	2	2	2	2	2	1	1	2	S	3	3	3	2	3	4	4	1	5	2.6
Feb 22	3	4	5	5	5	6	4	3	2	2	2	2	1	1	2	S	3	4	5	4	3	3	3	3	1	6	3.3
Feb 23	3	4	9	13	10	11	12	10	7	5	2	2	1	1	S	2	2	3	3	2	3	4	4	4	1	13	5.1
Feb 24	3	3	3	4	4	4	4	3	3	3	2	2	1	S	2	2	3	3	3	2	2	3	3	3	1	4	2.8
Feb 25	3	3	4	6	8	8	8	6	5	3	3	2	S	6	6	4	3	3	3	5	5	4	4	4	2	8	4.6
Feb 26	4	5	4	3	3	3	3	3	3	3	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	5	2.6
Feb 27	2	2	2	2	2	2	3	3	3	3	S	2	2	1	1	1	1	1	1	1	1	1	1	1	1	3	1.7
Feb 28	1	1	1	1	1	1	1	2	3	S	3	4	2	2	2	2	2	2	1	2	1	2	2	2	1	4	1.8
Diurnal Maximum	18	16	12	13	10	11	12	10	8	9	9	7	9	8	10	9	10	11	13	19	23	22	21	17			
Diurnal Average	3.3	3.2	3.2	3.2	3.3	3.2	3.3	3.2	3.1	2.8	2.7	2.7	2.8	3.2	3.1	3.0	3.1	3.1	3.3	3.6	3.7	3.6	3.9	3.7			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



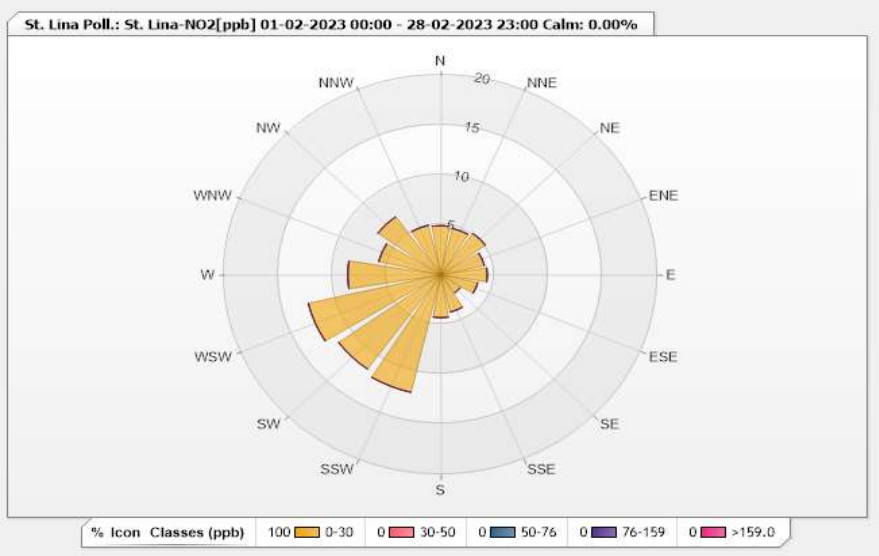


Station: St. Lina Poll.: St. Lina-NO2[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 93.60% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	4.93	0	0	0	0	4.93
NNE	4.77	0	0	0	0	4.77
NE	5.09	0	0	0	0	5.09
ENE	4.13	0	0	0	0	4.13
E	4.29	0	0	0	0	4.29
ESE	3.5	0	0	0	0	3.5
SE	2.23	0	0	0	0	2.23
SSE	3.82	0	0	0	0	3.82
S	4.29	0	0	0	0	4.29
SSW	12.08	0	0	0	0	12.08
SW	11.61	0	0	0	0	11.61
WSW	12.56	0	0	0	0	12.56
W	8.59	0	0	0	0	8.59
WNW	5.88	0	0	0	0	5.88
NW	7.15	0	0	0	0	7.15
NNW	5.09	0	0	0	0	5.09
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

OZONE (O_3) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb

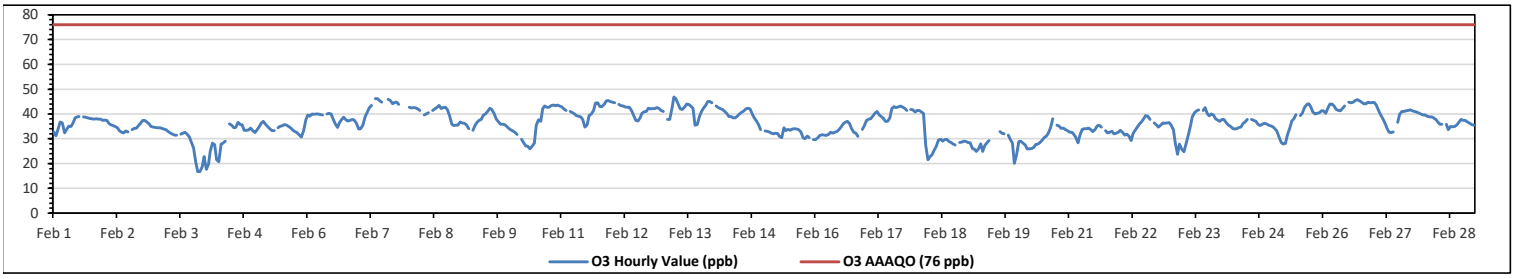
Number of 1-Hour Exceedances: 0

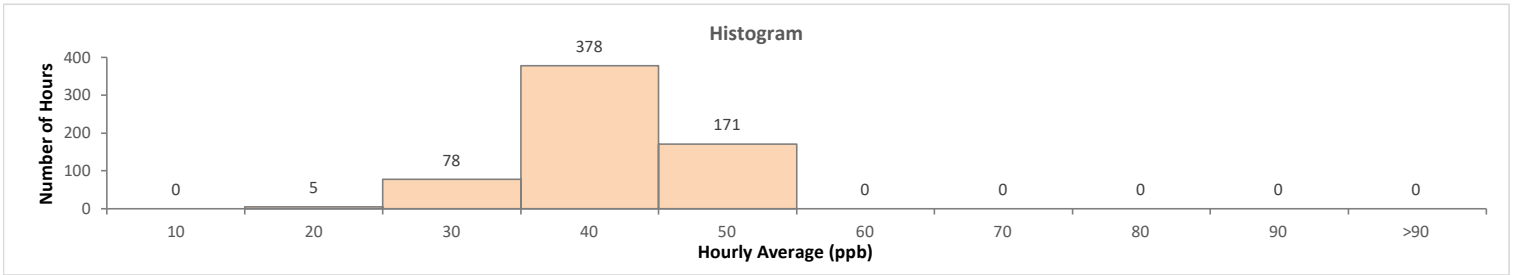
Maximum Hourly Value:	46.8	ppb	on Feb 13 at hr 5	Hours in Service:	672
Maximum Daily Value:	43.6	ppb	on Feb 26	Hours of Data:	632
Minimum Hourly Value:	16.8	ppb	on Feb 3 at hr 20	Hours of Missing Data:	7
Minimum Daily Value:	27.8	ppb	on Feb 19	Hours of Calibration:	33
Monthly Average:	36.2	ppb		Operational Uptime:	99.0

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	32.8	31.2	34	36.8	36.4	32.4	33.6	35.1	35	36.3	38.4	38.9	39	S	38.8	38.7	38.4	38.2	38.1	37.9	38	37.9	37.9	37.4	31.2	39.0	36.6
Feb 2	37.5	37.3	36.1	35.6	35.3	35	34.5	33.3	32.6	32.4	33.1	32.8	S	33.7	34.2	34.3	35.3	36.4	37.3	37.4	36.8	36	35	34.7	32.4	37.5	35.1
Feb 3	34.6	34.4	34.4	34.2	33.9	33.7	32.9	32.4	31.8	31.4	31.4	S	31.8	32.2	32.7	31.8	30.7	28.7	26.4	20.4	16.8	16.8	18.6	22.8	**16.8**	34.6	29.3
Feb 4	17.7	19.9	24.9	28.3	27.6	21.6	20.7	27.9	28.3	29	S	36	35.4	34.5	34.6	36.6	35.7	35.6	33.4	33.4	33.5	34.3	33.3	32.5	17.7	36.6	30.2
Feb 5	33.5	34.8	36.4	37	35.9	34.8	34.1	33.3	33.2	S	34.4	35.1	35.2	35.7	35.5	35	34.3	33.4	32.9	32.4	31.4	30.7	33.3	37.6	30.7	37.6	34.3
Feb 6	39.6	39.1	39.9	39.8	39.9	40	39.7	39.5	S	39.9	40.2	40	37.6	36	34.6	36.5	37.8	38.7	37.6	37.2	37.4	37.7	37.5	36.2	34.6	40.2	38.4
Feb 7	33.9	34.1	35.4	38.9	40.5	42.4	43.5	S	46.1	46.2	45.3	44.8	K	K	45.9	45.5	44.1	44.6	44.8	43.8	K	K	K	K	33.9	46.2	NA
Feb 8	42.7	42.4	42.5	42.4	42	41.4	S	39.6	39.9	40.5	NRM	41.5	42	42.7	43.5	42.2	42.6	42.7	41.7	39.4	35.9	35.3	35.5	35.5	35.3	43.5	40.6
Feb 9	36.8	36.4	36.2	35.6	34	S	33.4	35.4	36.7	37.3	37.8	39.6	39.9	41.1	42.3	41.8	40.2	37.9	37	35.9	35.9	35.7	35	34.2	33.4	42.3	37.2
Feb 10	33.5	33.1	32.5	31.7	S	29.8	28.6	27.1	26.9	25.9	26.9	28.3	35.4	37.6	37.1	42	43.3	42.7	42.7	43.4	43.6	43.4	43.6	43.2	25.9	43.6	35.8
Feb 11	42.9	42	41.5	S	41.1	40.5	39.9	39.4	39.1	38.9	37.7	34.7	35.6	39.4	39.9	41.5	44.3	44.5	43	43	43.8	45.3	45.5	45.1	34.7	45.5	41.2
Feb 12	44.7	44.5	S	43.8	43.4	43.3	42.9	42.7	42.7	41.3	39.2	37.3	37.2	38.6	40.2	40.9	41	42.3	42	42.1	42.2	42.5	42.1	41.4	37.2	44.7	41.7
Feb 13	41.1	S	37.7	37.8	42.1	**46.8**	46.1	44.1	42	41.8	42.7	43.9	43.8	43.3	42.2	35.5	35.7	39	40.9	42.4	43.6	45	45	44.5	35.5	**46.8**	42.0
Feb 14	S	43.2	42.6	42.1	41.8	41.1	40.3	39	39	38.5	38.4	39.2	39.9	40.6	41.2	42	42.3	42	40	38.5	37.2	35.6	33.7	S	33.7	43.2	39.9
Feb 15	33.1	33	32.8	32.3	32	32.2	32.1	30.9	30.5	34.5	33.2	33.8	33.4	33.9	34	33.9	33.6	32.8	30.3	30.1	31	30.5	S	29.7	29.7	34.5	32.3
Feb 16	29.7	30.4	31.3	31.6	31.4	31.3	31.7	32.6	32.3	32.6	32.9	33.7	34.9	36	36.7	37.1	36.1	34.2	32.6	32.2	30.9	S	33.8	35.2	29.7	37.1	33.1
Feb 17	37.3	37.9	38.1	39.3	40.3	41	39.7	39	38.2	37.1	37.1	38.4	42.1	43	42.6	42.8	43.2	42.9	42.3	41.5	S	41.7	41.6	40.8	37.1	43.2	40.3
Feb 18	41.5	41.4	40.8	40.2	27.3	21.5	22.6	23.6	25.5	26.9	29.5	29.8	29	29.7	29.8	28.9	28.6	27.9	27.5	S	28.5	28.7	29	28.9	21.5	41.5	29.9
Feb 19	28.6	28.4	26.1	25.8	24.9	26	28	24.9	27.3	28.6	29.3	C	C	C	C	32.9	32.3	32	S	31.4	29.8	28.3	20.1	23.6	20.1	32.9	**27.8**
Feb 20	28.8	29	28.2	27.4	25.9	26	26.1	26.5	27.7	27.9	28.6	29.3	30.5	31.1	32.2	34.4	38.1	S	35.4	35.1	34.2	34.3	33.7	33.3	25.9	38.1	30.6
Feb 21	32.7	32.7	31.7	30.6	28.4	31.5	33.8	34.1	34.1	34.3	33.7	32.9	33.6	35.2	35.4	34.7	S	33.2	32.4	32.7	33	32	32.2	32.6	28.4	35.4	32.9
Feb 22	33.4	32.7	31.5	31.8	31.1	29.2	32.1	33.5	34.9	36	36.8	38	39.4	39.1	37.7	S	36.4	35.6	34.7	35.4	36.4	36.2	36.4	36.5	29.2	39.4	35.0
Feb 23	35.5	33.6	28.2	23.7	27.8	25.8	24.7	27.7	31.2	35	38.9	40.5	41.3	41.6	S	41.5	42.6	40.1	39.3	39.9	39.5	38.1	37.5	37	23.7	42.6	35.3
Feb 24	37.8	37.7	36.5	35.5	35.1	34.2	33.9	34	34.6	34.7	36.2	36.8	37.7	S	37.8	37.3	37	35.8	35.3	35.9	36.3	36	35.5	35.2	33.9	37.8	35.9
Feb 25	34.8	34.1	33.1	30.8	28.5	27.9	28.1	31.9	34	37.2	38.2	39.7	S	39.4	40.4	42.7	43.8	44.1	43	40.8	40	40.2	40.5	41.3	27.9	44.1	37.2
Feb 26	41.3	40.3	42.4	43.9	43.9	43.3	41.8	41.5	41.3	42.1	43.2	S	44.8	44.5	44.8	45.4	45.8	45.3	44.7	44.1	44.1	44.7	44.5	44.6	40.3	45.8	**43.6**
Feb 27	44.6	43.6	41.5	39.5	38.2	36.4	34	32.6	32.5	32.8	S	36.6	39.8	41.1	41.1	41.3	41.4	41.6	41.3	41.1	40.8	40.4	40	39.5	32.5	44.6	39.2
Feb 28	39.6	39.1	38.8	38.9	38.5	37.8	36.6	35.8	35.9	S	35.8	33.7	35	34.9	35	35.6	36.7	37.8	37.4	37.3	36.8	36.3	35.7	35.4	33.7	39.6	36.7
Diurnal Maximum	44.7	44.5	42.6	43.9	43.9	46.8	46.1	44.1	46.1	46.2	45.3	44.8	44.8	44.5	45.9	45.5	45.8	45.3	44.8	44.1	44.1	45.3	45.5	45.1			
Diurnal Average	35.9	35.8	35.4	35.4	35.1	34.3	33.9	34.0	34.6	35.4	36.0	36.6	37.3	37.7	38.1	38.3	38.6	38.1	37.6	37.2	36.1	36.3	36.0	36.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



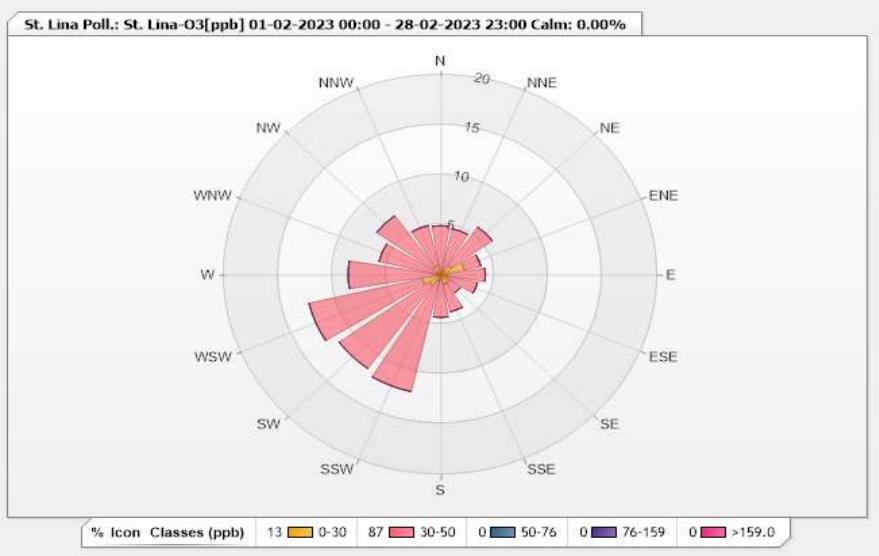


Station: St. Lina Poll.: St. Lina-O3[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.05% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	0	4.91	0	0	0	4.91
NNE	0.47	4.27	0	0	0	4.74
NE	1.11	4.75	0	0	0	5.86
ENE	2.22	1.58	0	0	0	3.8
E	0.32	3.8	0	0	0	4.12
ESE	0.63	2.85	0	0	0	3.48
SE	0.95	1.27	0	0	0	2.22
SSE	0.95	2.85	0	0	0	3.8
S	0.47	3.8	0	0	0	4.27
SSW	0.63	11.39	0	0	0	12.02
SW	1.27	10.28	0	0	0	11.55
WSW	1.74	10.76	0	0	0	12.5
W	0.16	8.39	0	0	0	8.55
WNW	0.32	5.54	0	0	0	5.86
NW	0.95	6.33	0	0	0	7.28
NNW	0.95	4.11	0	0	0	5.06
Summary	13.14	86.88	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

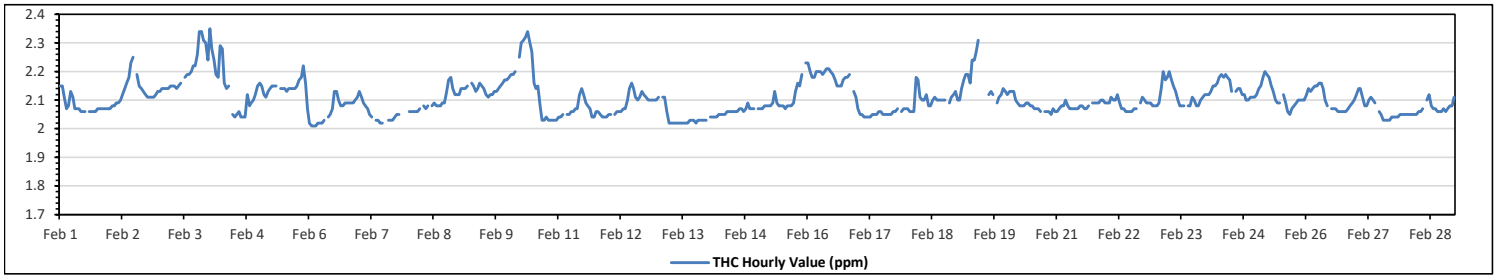
TOTAL HYDROCARBONS (THC) in ppm

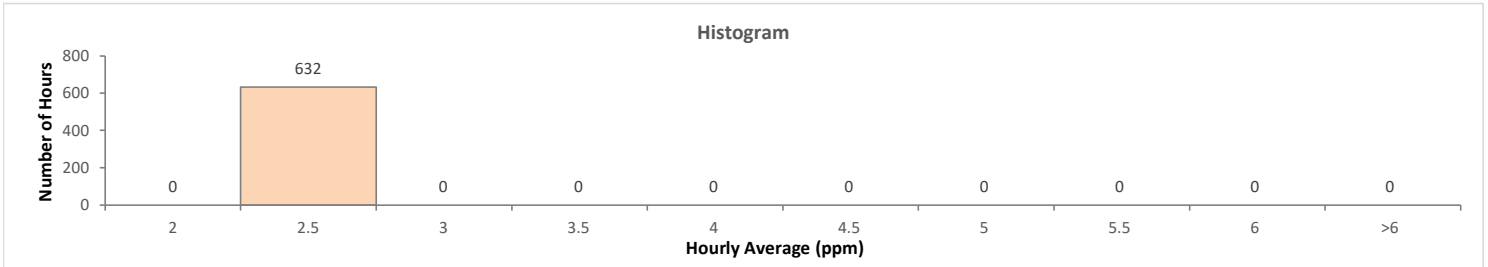
Maximum Hourly Value:	2.35	ppm	on Feb 4 at hr 0	Hours in Service:	672	
Maximum Daily Value:	2.20	ppm	on Feb 3	Hours of Data:	632	
Minimum Hourly Value:	2.01	ppm	on Feb 6 at hr 1	Hours of Missing Data:	7	
Minimum Daily Value:	2.04	ppm	on Feb 13	Hours of Calibration:	33	
Monthly Average:	2.10	ppm		Operational Uptime:	99.0	

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	2.15	2.15	2.11	2.07	2.08	2.13	2.11	2.07	2.07	2.07	2.06	2.06	2.06	S	2.06	2.06	2.06	2.06	2.07	2.07	2.07	2.07	2.07	2.07	2.06	2.15	2.08
Feb 2	2.07	2.08	2.08	2.09	2.09	2.10	2.12	2.14	2.16	2.18	2.23	2.25	S	2.19	2.15	2.14	2.13	2.12	2.11	2.11	2.11	2.11	2.12	2.13	2.07	2.25	2.13
Feb 3	2.13	2.14	2.14	2.14	2.14	2.15	2.15	2.15	2.14	2.15	2.16	S	2.18	2.19	2.19	2.20	2.22	2.22	2.26	2.34	2.34	2.31	2.30	2.24	2.13	2.34	**2.20**
Feb 4	**2.35**	2.28	2.24	2.19	2.18	2.29	2.28	2.16	2.14	2.15	S	2.05	2.04	2.05	2.06	2.04	2.04	2.04	2.12	2.08	2.09	2.10	2.12	2.15	2.04	**2.35**	2.14
Feb 5	2.16	2.15	2.12	2.11	2.13	2.14	2.15	2.15	2.15	S	2.14	2.14	2.14	2.13	2.14	2.14	2.14	2.14	2.15	2.17	2.18	2.22	2.16	2.07	2.07	2.22	2.14
Feb 6	2.02	2.01	2.01	2.01	2.02	2.02	2.02	2.03	S	2.04	2.05	2.07	2.13	2.13	2.10	2.08	2.08	2.09	2.09	2.09	2.09	2.09	2.10	2.11	2.01	2.13	2.06
Feb 7	2.13	2.11	2.09	2.08	2.07	2.05	2.04	S	2.03	2.03	2.02	2.02	K	K	2.03	2.03	2.03	2.04	2.05	2.05	K	K	K	K	2.02	2.13	NA
Feb 8	2.06	2.06	2.06	2.06	2.06	2.07	S	2.08	2.07	2.08	NRM	2.08	2.09	2.08	2.08	2.08	2.09	2.09	2.13	2.17	2.18	2.14	2.12	2.12	2.06	2.18	2.09
Feb 9	2.12	2.14	2.14	2.14	2.15	S	2.16	2.15	2.13	2.14	2.16	2.15	2.14	2.12	2.11	2.12	2.12	2.13	2.13	2.14	2.15	2.16	2.17	2.17	2.11	2.17	2.14
Feb 10	2.18	2.19	2.19	2.20	S	2.25	2.30	2.31	2.32	2.34	2.30	2.27	2.16	2.14	2.15	2.08	2.03	2.03	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.34	2.16
Feb 11	2.04	2.04	2.05	S	2.05	2.05	2.06	2.06	2.07	2.07	2.12	2.14	2.12	2.09	2.08	2.07	2.04	2.04	2.06	2.06	2.05	2.04	2.04	2.04	2.04	2.14	2.06
Feb 12	2.05	2.05	S	2.05	2.06	2.06	2.06	2.07	2.07	2.10	2.14	2.16	2.14	2.11	2.10	2.11	2.13	2.12	2.11	2.10	2.10	2.10	2.10	2.10	2.05	2.16	2.10
Feb 13	2.11	S	2.11	2.11	2.06	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.03	2.03	2.02	2.03	2.03	2.03	2.03	2.03	2.02	2.11	2.04
Feb 14	S	2.04	2.04	2.04	2.04	2.05	2.05	2.05	2.05	2.06	2.06	2.06	2.06	2.06	2.06	2.07	2.07	2.06	2.07	2.09	2.07	2.07	2.07	S	2.04	2.09	2.06
Feb 15	2.07	2.07	2.07	2.08	2.08	2.08	2.08	2.09	2.13	2.09	2.08	2.08	2.08	2.07	2.08	2.08	2.08	2.09	2.13	2.16	2.15	2.19	S	2.23	2.07	2.23	2.10
Feb 16	2.23	2.20	2.18	2.18	2.20	2.20	2.20	2.19	2.20	2.21	2.21	2.20	2.19	2.17	2.15	2.15	2.15	2.17	2.18	2.18	2.19	S	2.13	2.11	2.11	2.23	2.18
Feb 17	2.07	2.05	2.05	2.04	2.04	2.04	2.04	2.05	2.05	2.05	2.06	2.06	2.05	2.05	2.05	2.05	2.05	2.06	2.06	2.07	S	2.06	2.07	2.07	2.04	2.07	2.05
Feb 18	2.07	2.06	2.06	2.06	2.18	2.17	2.11	2.10	2.10	2.12	2.08	2.08	2.10	2.11	2.10	2.10	2.10	2.10	2.10	S	2.09	2.11	2.12	2.13	2.06	2.18	2.10
Feb 19	2.10	2.10	2.14	2.17	2.19	2.19	2.16	2.24	2.24	2.27	2.31	C	C	C	C	2.12	2.13	2.12	S	2.09	2.11	2.12	2.14	2.13	2.09	2.31	2.16
Feb 20	2.12	2.13	2.13	2.13	2.10	2.09	2.08	2.08	2.08	2.09	2.09	2.08	2.08	2.07	2.07	2.07	2.06	S	2.06	2.06	2.06	2.05	2.07	2.06	2.05	2.13	2.08
Feb 21	2.06	2.07	2.08	2.08	2.10	2.08	2.07	2.07	2.07	2.07	2.07	2.08	2.08	2.07	2.07	2.08	S	2.09	2.09	2.09	2.09	2.10	2.10	2.09	2.06	2.10	2.08
Feb 22	2.09	2.09	2.11	2.10	2.10	2.12	2.09	2.07	2.07	2.06	2.06	2.06	2.06	2.07	2.07	S	2.09	2.11	2.10	2.09	2.09	2.09	2.08	2.08	2.06	2.12	2.08
Feb 23	2.08	2.09	2.14	2.20	2.17	2.18	2.20	2.17	2.15	2.13	2.10	2.08	2.08	2.08	S	2.08	2.08	2.11	2.10	2.08	2.08	2.10	2.11	2.12	2.08	2.20	2.12
Feb 24	2.12	2.12	2.13	2.15	2.15	2.16	2.18	2.19	2.18	2.19	2.18	2.17	2.13	S	2.13	2.14	2.14	2.12	2.12	2.10	2.10	2.11	2.11	2.11	2.10	2.19	2.14
Feb 25	2.12	2.14	2.15	2.18	2.20	2.19	2.18	2.15	2.13	2.10	2.09	2.09	S	2.12	2.09	2.06	2.05	2.07	2.08	2.09	2.10	2.10	2.10	2.10	2.05	2.20	2.12
Feb 26	2.12	2.14	2.13	2.14	2.15	2.15	2.16	2.16	2.14	2.10	2.08	S	2.07	2.07	2.07	2.06	2.06	2.06	2.06	2.06	2.07	2.08	2.09	2.10	2.06	2.16	2.10
Feb 27	2.12	2.14	2.14	2.11	2.08	2.08	2.10	2.11	2.10	2.09	S	2.06	2.05	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.04	2.05	2.05	2.05	2.03	2.14	2.07
Feb 28	2.05	2.05	2.05	2.05	2.05	2.05	2.06	2.06	2.07	S	2.10	2.12	2.08	2.07	2.07	2.06	2.06	2.06	2.07	2.06	2.07	2.08	2.08	2.11	2.05	2.12	2.07
Diurnal Maximum	2.35	2.28	2.24	2.20	2.20	2.29	2.30	2.31	2.32	2.34	2.31	2.27	2.19	2.19	2.19	2.20	2.22	2.22	2.26	2.34	2.34	2.31	2.30	2.24			
Diurnal Average	2.11	2.11	2.11	2.11	2.11	2.12	2.12	2.12	2.12	2.12	2.12	2.11	2.10	2.10	2.09	2.09	2.08	2.09	2.10	2.10	2.11	2.10	2.10	2.11			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



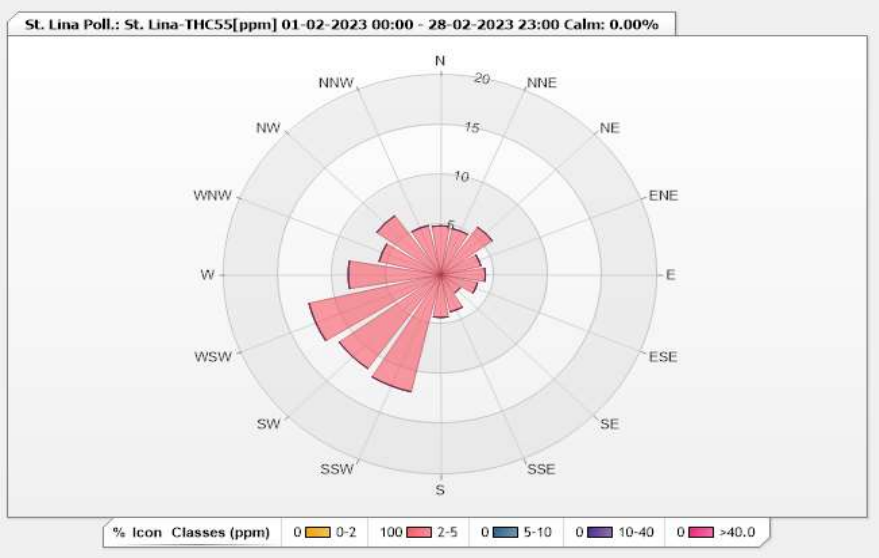


Station: St. Lina Poll.: St. Lina-THC55[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.05% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0	4.91	0	0	0	4.91
NNE	0	4.75	0	0	0	4.75
NE	0	5.85	0	0	0	5.85
ENE	0	3.8	0	0	0	3.8
E	0	4.11	0	0	0	4.11
ESE	0	3.48	0	0	0	3.48
SE	0	2.22	0	0	0	2.22
SSE	0	3.8	0	0	0	3.8
S	0	4.27	0	0	0	4.27
SSW	0	12.03	0	0	0	12.03
SW	0	11.55	0	0	0	11.55
WSW	0	12.5	0	0	0	12.5
W	0	8.54	0	0	0	8.54
WNW	0	5.85	0	0	0	5.85
NW	0	7.28	0	0	0	7.28
NNW	0	5.06	0	0	0	5.06
Summary	0	100	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

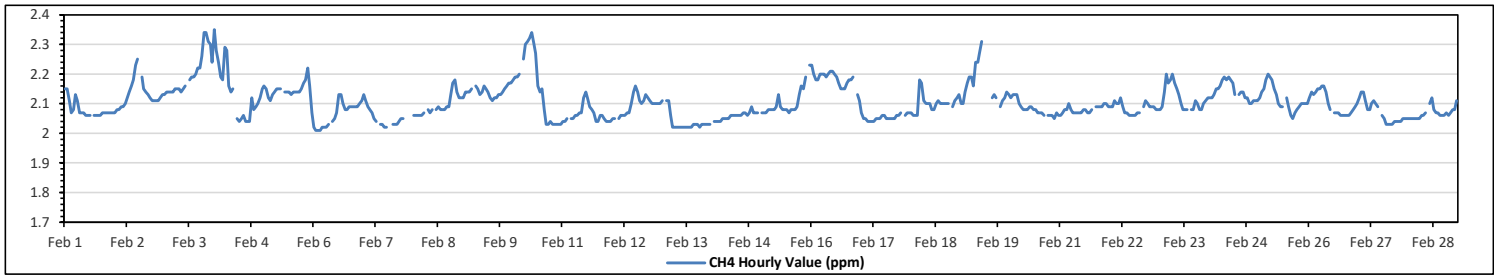
METHANE (CH4) in ppm

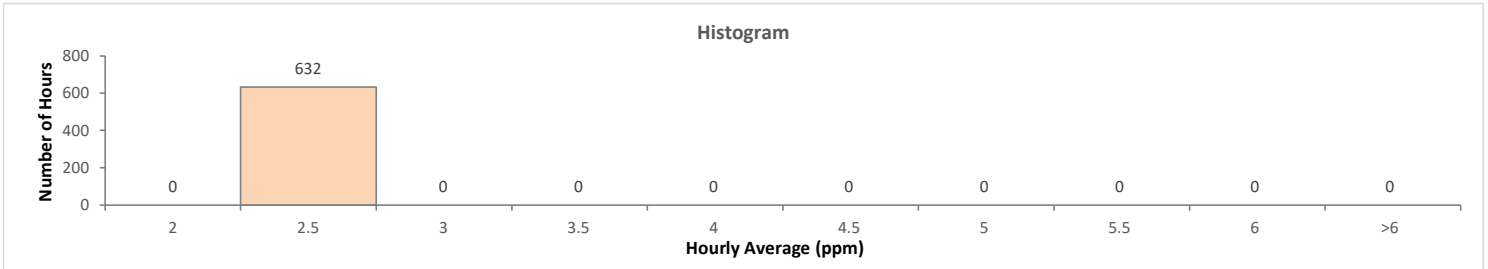
Maximum Hourly Value:	2.35	ppm	on Feb 4 at hr 0	Hours in Service:	672
Maximum Daily Value:	2.20	ppm	on Feb 3	Hours of Data:	632
Minimum Hourly Value:	2.01	ppm	on Feb 6 at hr 1	Hours of Missing Data:	7
Minimum Daily Value:	2.04	ppm	on Feb 13	Hours of Calibration:	33
Monthly Average:	2.10	ppm		Operational Uptime:	99.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	2.15	2.15	2.11	2.07	2.08	2.13	2.11	2.07	2.07	2.07	2.06	2.06	2.06	S	2.06	2.06	2.06	2.06	2.07	2.07	2.07	2.07	2.07	2.07	2.06	2.15	2.08
Feb 2	2.07	2.08	2.08	2.09	2.09	2.10	2.12	2.14	2.16	2.18	2.23	2.25	S	2.19	2.15	2.14	2.13	2.12	2.11	2.11	2.11	2.11	2.12	2.13	2.07	2.25	2.13
Feb 3	2.13	2.14	2.14	2.14	2.14	2.15	2.15	2.15	2.14	2.15	2.16	S	2.18	2.19	2.19	2.20	2.22	2.22	2.26	2.34	2.34	2.31	2.30	2.24	2.13	2.34	**2.20**
Feb 4	**2.35**	2.28	2.24	2.19	2.18	2.29	2.28	2.16	2.14	2.15	S	2.05	2.04	2.05	2.06	2.04	2.04	2.04	2.12	2.08	2.09	2.10	2.12	2.15	2.04	**2.35**	2.14
Feb 5	2.16	2.15	2.12	2.11	2.13	2.14	2.15	2.15	2.15	S	2.14	2.14	2.14	2.13	2.14	2.14	2.14	2.14	2.15	2.17	2.18	2.22	2.16	2.07	2.07	2.22	2.14
Feb 6	2.02	2.01	2.01	2.01	2.02	2.02	2.02	2.03	S	2.04	2.05	2.07	2.13	2.13	2.10	2.08	2.08	2.09	2.09	2.09	2.09	2.09	2.10	2.11	2.01	2.13	2.06
Feb 7	2.13	2.11	2.09	2.08	2.07	2.05	2.04	S	2.03	2.03	2.02	2.02	K	K	2.03	2.03	2.03	2.04	2.05	2.05	K	K	K	K	2.02	2.13	NA
Feb 8	2.06	2.06	2.06	2.06	2.06	2.07	S	2.08	2.07	2.08	NRM	2.08	2.09	2.08	2.08	2.08	2.09	2.09	2.13	2.17	2.18	2.14	2.12	2.12	2.06	2.18	2.09
Feb 9	2.12	2.14	2.14	2.14	2.15	S	2.16	2.15	2.13	2.14	2.16	2.15	2.14	2.12	2.11	2.12	2.12	2.13	2.13	2.14	2.15	2.16	2.17	2.17	2.11	2.17	2.14
Feb 10	2.18	2.19	2.19	2.20	S	2.25	2.30	2.31	2.32	2.34	2.30	2.27	2.16	2.14	2.15	2.08	2.03	2.03	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.34	2.16
Feb 11	2.04	2.04	2.05	S	2.05	2.05	2.06	2.06	2.07	2.07	2.12	2.14	2.12	2.09	2.08	2.07	2.04	2.04	2.06	2.06	2.05	2.04	2.04	2.04	2.04	2.14	2.06
Feb 12	2.05	2.05	S	2.05	2.06	2.06	2.06	2.07	2.07	2.10	2.14	2.16	2.14	2.11	2.10	2.11	2.13	2.12	2.11	2.10	2.10	2.10	2.10	2.10	2.05	2.16	2.10
Feb 13	2.11	S	2.11	2.11	2.06	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.03	2.03	2.02	2.03	2.03	2.03	2.03	2.03	2.02	2.11	2.04
Feb 14	S	2.04	2.04	2.04	2.04	2.05	2.05	2.05	2.05	2.06	2.06	2.06	2.06	2.06	2.06	2.07	2.07	2.06	2.07	2.09	2.07	2.07	2.07	S	2.04	2.09	2.06
Feb 15	2.07	2.07	2.07	2.08	2.08	2.08	2.08	2.09	2.13	2.09	2.08	2.08	2.08	2.07	2.08	2.08	2.08	2.09	2.13	2.16	2.15	2.19	S	2.23	2.07	2.23	2.10
Feb 16	2.23	2.20	2.18	2.18	2.20	2.20	2.20	2.19	2.20	2.21	2.21	2.20	2.19	2.17	2.15	2.15	2.15	2.17	2.18	2.18	2.19	S	2.13	2.11	2.11	2.23	2.18
Feb 17	2.07	2.05	2.05	2.04	2.04	2.04	2.04	2.05	2.05	2.05	2.06	2.06	2.05	2.05	2.05	2.05	2.05	2.06	2.06	2.07	S	2.06	2.07	2.07	2.04	2.07	2.05
Feb 18	2.07	2.06	2.06	2.06	2.18	2.17	2.11	2.10	2.10	2.10	2.08	2.08	2.10	2.11	2.10	2.10	2.10	2.10	2.10	S	2.09	2.11	2.12	2.13	2.06	2.18	2.10
Feb 19	2.10	2.10	2.14	2.17	2.19	2.19	2.16	2.24	2.24	2.27	2.31	C	C	C	C	2.12	2.13	2.12	S	2.09	2.11	2.12	2.14	2.13	2.09	2.31	2.16
Feb 20	2.12	2.13	2.13	2.13	2.10	2.09	2.08	2.08	2.08	2.09	2.09	2.08	2.08	2.07	2.07	2.07	2.06	S	2.06	2.06	2.06	2.05	2.07	2.06	2.05	2.13	2.08
Feb 21	2.06	2.07	2.08	2.08	2.10	2.08	2.07	2.07	2.07	2.07	2.07	2.08	2.08	2.07	2.07	2.08	S	2.09	2.09	2.09	2.09	2.10	2.10	2.09	2.06	2.10	2.08
Feb 22	2.09	2.09	2.11	2.10	2.10	2.12	2.09	2.07	2.07	2.06	2.06	2.06	2.06	2.07	2.07	S	2.09	2.11	2.10	2.09	2.09	2.09	2.08	2.08	2.06	2.12	2.08
Feb 23	2.08	2.09	2.14	2.20	2.17	2.18	2.20	2.17	2.15	2.13	2.10	2.08	2.08	2.08	S	2.08	2.08	2.11	2.10	2.08	2.08	2.10	2.11	2.12	2.08	2.20	2.12
Feb 24	2.12	2.12	2.13	2.15	2.15	2.16	2.18	2.19	2.18	2.19	2.18	2.17	2.13	S	2.13	2.14	2.14	2.12	2.12	2.10	2.10	2.11	2.11	2.11	2.10	2.19	2.14
Feb 25	2.12	2.14	2.15	2.18	2.20	2.19	2.18	2.15	2.13	2.10	2.09	2.09	S	2.12	2.09	2.06	2.05	2.07	2.08	2.09	2.10	2.10	2.10	2.10	2.05	2.20	2.12
Feb 26	2.12	2.14	2.13	2.14	2.15	2.15	2.16	2.16	2.14	2.10	2.08	S	2.07	2.07	2.07	2.06	2.06	2.06	2.06	2.06	2.07	2.08	2.09	2.10	2.06	2.16	2.10
Feb 27	2.12	2.14	2.14	2.11	2.08	2.08	2.10	2.11	2.10	2.09	S	2.06	2.05	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.04	2.05	2.05	2.05	2.03	2.14	2.07
Feb 28	2.05	2.05	2.05	2.05	2.05	2.05	2.06	2.06	2.07	S	2.10	2.12	2.08	2.07	2.07	2.06	2.06	2.06	2.07	2.06	2.07	2.08	2.08	2.11	2.05	2.12	2.07
Diurnal Maximum	2.35	2.28	2.24	2.20	2.20	2.29	2.30	2.31	2.32	2.34	2.31	2.27	2.19	2.19	2.19	2.20	2.22	2.22	2.26	2.34	2.34	2.31	2.30	2.24			
Diurnal Average	2.11	2.11	2.11	2.11	2.11	2.12	2.12	2.12	2.12	2.11	2.12	2.11	2.10	2.10	2.09	2.09	2.08	2.09	2.10	2.10	2.11	2.10	2.10	2.11			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



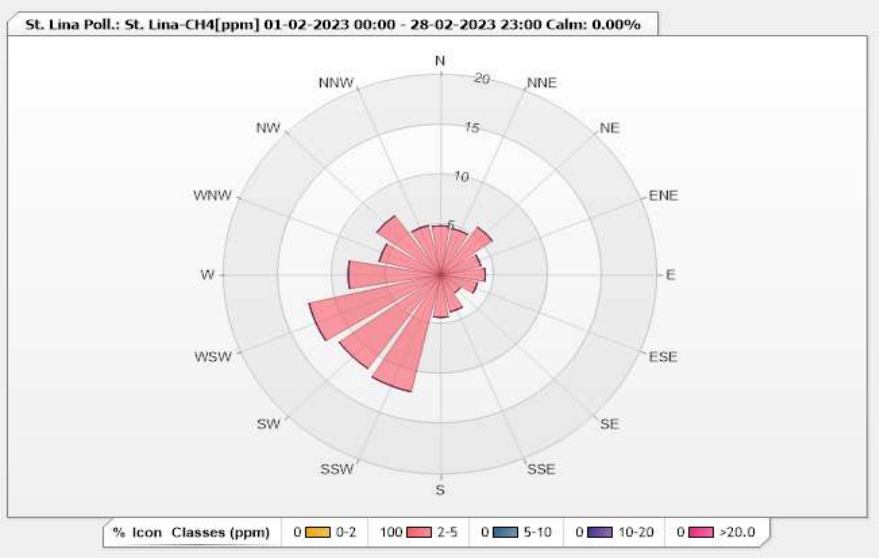


Station: St. Lina Poll.: St. Lina-CH4[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.05% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0	4.91	0	0	0	4.91
NNE	0	4.75	0	0	0	4.75
NE	0	5.85	0	0	0	5.85
ENE	0	3.8	0	0	0	3.8
E	0	4.11	0	0	0	4.11
ESE	0	3.48	0	0	0	3.48
SE	0	2.22	0	0	0	2.22
SSE	0	3.8	0	0	0	3.8
S	0	4.27	0	0	0	4.27
SSW	0	12.03	0	0	0	12.03
SW	0	11.55	0	0	0	11.55
WSW	0	12.5	0	0	0	12.5
W	0	8.54	0	0	0	8.54
WNW	0	5.85	0	0	0	5.85
NW	0	7.28	0	0	0	7.28
NNW	0	5.06	0	0	0	5.06
Summary	0	100	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

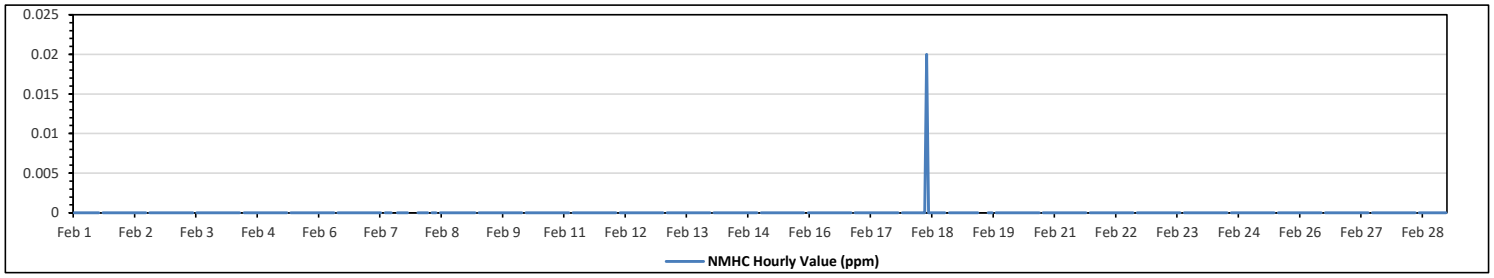
NON-METHANE HYDROCARBONS (NMHC) in ppm

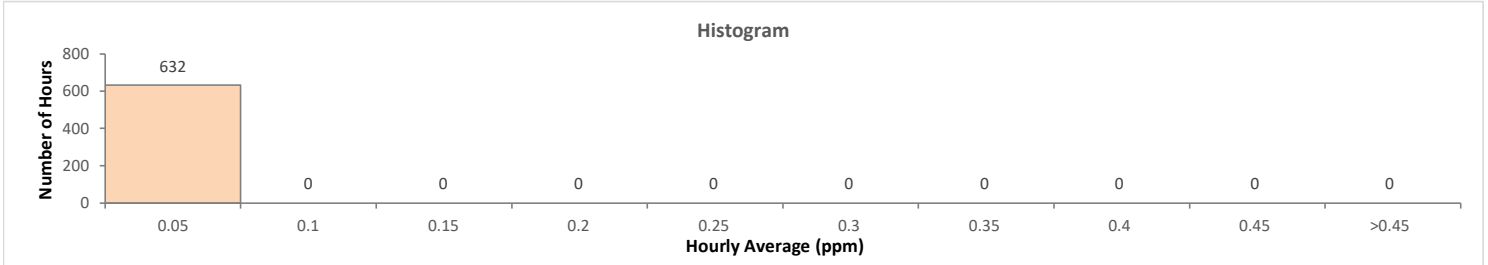
Maximum Hourly Value:	0.02	ppm	on Feb 18 at hr 9	Hours in Service:	672
Maximum Daily Value:	0.00	ppm	on Feb 18	Hours of Data:	632
Minimum Hourly Value:	0.00	ppm	on Feb 1 at hr 0	Hours of Missing Data:	7
Minimum Daily Value:	0.00	ppm	on Feb 1	Hours of Calibration:	33
Monthly Average:	0.00	ppm		Operational Uptime:	99.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	K	K	0.00	0.00	0.00	0.00	0.00	0.00	K	K	K	K	0.00	0.00	NA
Feb 8	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	NRM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 9	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 10	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 11	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 12	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 13	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 14	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00
Feb 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00
Feb 16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Feb 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00
Feb 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	**0.02**	**0.00**
Feb 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	C	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Diurnal Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



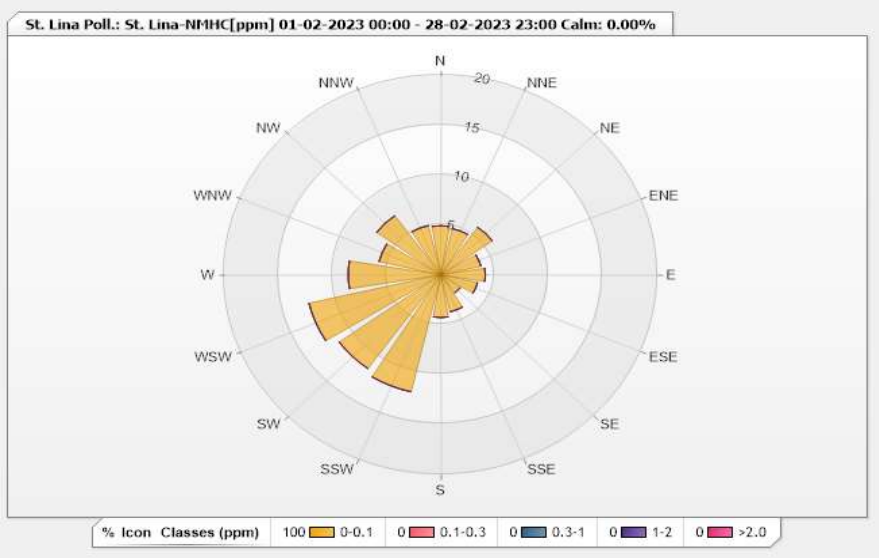


Station: St. Lina Poll.: St. Lina-NMHC[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.05% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	4.91	0	0	0	0	4.91
NNE	4.75	0	0	0	0	4.75
NE	5.85	0	0	0	0	5.85
ENE	3.8	0	0	0	0	3.8
E	4.11	0	0	0	0	4.11
ESE	3.48	0	0	0	0	3.48
SE	2.22	0	0	0	0	2.22
SSE	3.8	0	0	0	0	3.8
S	4.27	0	0	0	0	4.27
SSW	12.03	0	0	0	0	12.03
SW	11.55	0	0	0	0	11.55
WSW	12.5	0	0	0	0	12.5
W	8.54	0	0	0	0	8.54
WNW	5.85	0	0	0	0	5.85
NW	7.28	0	0	0	0	7.28
NNW	5.06	0	0	0	0	5.06
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

PARTICULATE MATTER 2.5 ($PM_{2.5}$) in µg/m^3

Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m3, Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m3

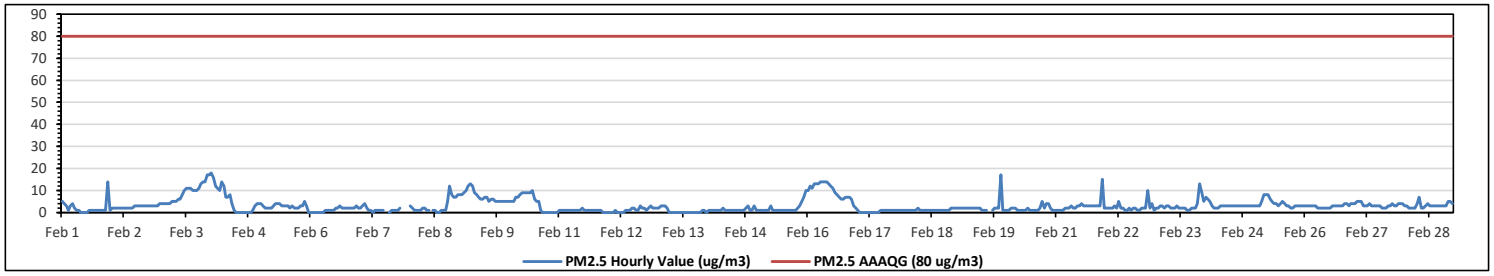
Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0

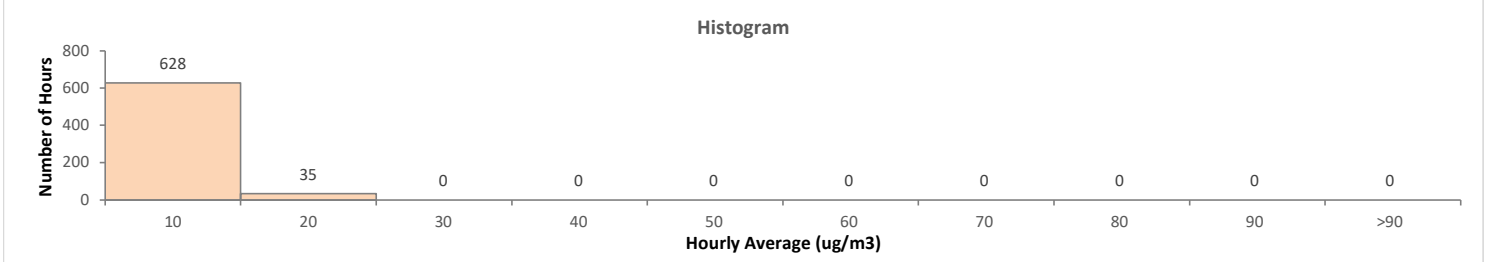
Maximum Hourly Value:	18	µg/m^3 on Feb 4 at hr 0	Hours in Service:	672
Maximum Daily Value:	9.7	µg/m^3 on Feb 16	Hours of Data:	663
Minimum Hourly Value:	0	µg/m^3 on Feb 1 at hr 9	Hours of Missing Data:	7
Minimum Daily Value:	1	µg/m^3 on Feb 17	Hours of Calibration:	2
Monthly Average:	3.1	µg/m^3	Operational Uptime:	99.0

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	5	4	3	1	3	4	2	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	14	1	0	14	2.0
Feb 2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	2	4	2.6
Feb 3	4	4	4	4	4	5	5	5	6	6	8	10	11	11	11	10	10	10	11	13	14	14	17	17	4	17	8.9
Feb 4	18	16	12	11	10	14	12	7	7	8	4	1	0	0	0	0	0	0	0	0	1	3	4	4	0	18	5.5
Feb 5	4	3	2	2	2	2	3	4	4	4	3	3	3	3	2	3	2	2	2	3	3	5	3	0	0	5	2.8
Feb 6	0	0	0	0	0	0	0	1	1	1	1	1	2	2	3	2	2	2	2	2	2	2	3	2	0	3	1.3
Feb 7	2	3	4	2	1	1	0	1	1	1	1	1	K	K	0	1	1	1	1	2	K	K	K	K	0	4	1.3
Feb 8	3	2	1	1	1	1	2	2	1	1	NRM	1	1	0	0	1	1	1	5	12	8	7	7	8	0	12	2.9
Feb 9	8	8	9	10	12	13	12	9	8	7	6	6	7	7	5	6	6	5	5	5	5	5	5	5	5	13	7.3
Feb 10	5	5	5	7	7	8	9	9	9	9	9	10	6	5	5	1	0	0	0	0	0	0	0	0	0	10	4.5
Feb 11	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0	0	0	0	2	0.9
Feb 12	0	0	0	1	0	0	0	0	1	1	1	2	2	1	1	3	2	2	1	2	3	2	2	2	0	3	1.2
Feb 13	2	3	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	0.6
Feb 14	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2	3	1	1	3	1	1	3	1.3
Feb 15	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	2	3	5	7	10	1	10	2.0
Feb 16	10	12	11	13	13	13	14	14	14	14	13	12	11	9	8	7	6	6	7	7	7	6	3	2	2	14	9.7
Feb 17	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6
Feb 18	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	2	1.2
Feb 19	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	C	C	1	2	2	2	17	1	1	1	17	2.4
Feb 20	1	1	2	2	2	1	1	1	1	1	2	1	1	1	1	1	2	5	2	4	4	2	1	1	1	5	1.7
Feb 21	1	1	1	1	2	2	2	3	2	2	3	3	4	3	3	3	3	3	3	3	3	3	15	2	1	15	3.0
Feb 22	2	2	2	2	3	2	5	2	2	1	1	2	1	2	2	1	1	2	2	2	10	2	4	1	1	10	2.3
Feb 23	2	2	3	3	2	3	3	2	2	2	3	2	2	2	2	1	1	2	2	2	4	13	9	5	1	13	3.1
Feb 24	7	6	5	3	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	7	3.3
Feb 25	3	3	3	5	8	8	8	6	5	4	4	3	4	5	4	3	3	2	2	3	3	3	3	3	2	8	4.1
Feb 26	3	3	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3	3	3	4	4	3	4	4	2	4	2.9
Feb 27	4	5	5	5	3	3	3	4	3	3	3	3	3	2	2	2	3	3	4	3	3	4	4	4	2	5	3.4
Feb 28	3	3	2	2	2	2	4	7	2	2	3	4	3	3	3	3	3	3	3	3	3	5	5	4	2	7	3.2
Diurnal Maximum	18	16	12	13	13	14	14	14	14	14	13	12	11	11	11	10	10	10	11	13	14	17	17	17			
Diurnal Average	3.4	3.4	3.1	3.2	3.2	3.4	3.5	3.3	3.0	2.9	2.9	2.9	2.8	2.7	2.4	2.3	2.3	2.3	2.5	3.1	3.4	4.2	4.6	3.2			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



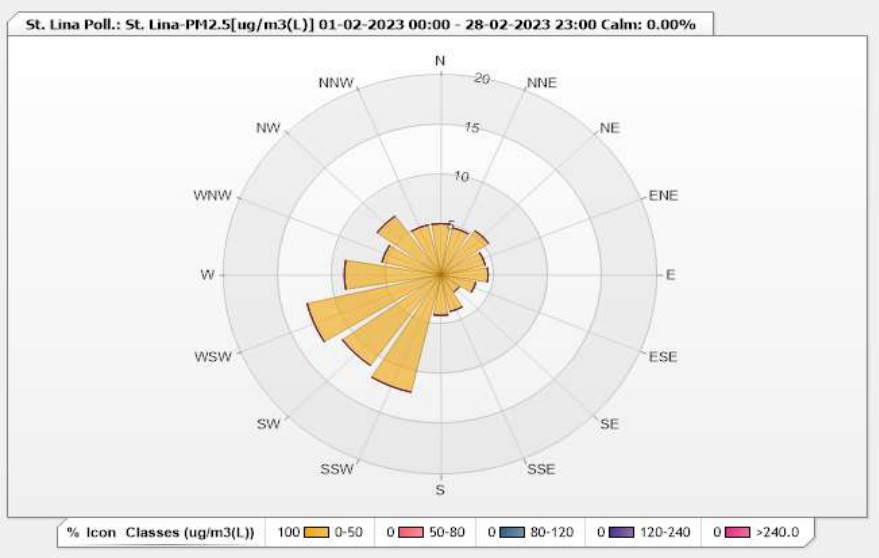


Station: St. Lina Poll.: St. Lina-PM2.5[ug/m3(L)] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 98.66% Calm Avg: 0.00 [ppm]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	5.13	0	0	0	0	5.13
NNE	4.83	0	0	0	0	4.83
NE	5.43	0	0	0	0	5.43
ENE	4.22	0	0	0	0	4.22
E	4.37	0	0	0	0	4.37
ESE	3.32	0	0	0	0	3.32
SE	2.11	0	0	0	0	2.11
SSE	3.77	0	0	0	0	3.77
S	4.07	0	0	0	0	4.07
SSW	12.07	0	0	0	0	12.07
SW	11.16	0	0	0	0	11.16
WSW	12.67	0	0	0	0	12.67
W	8.9	0	0	0	0	8.9
WNW	5.58	0	0	0	0	5.58
NW	7.24	0	0	0	0	7.24
NNW	5.13	0	0	0	0	5.13
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

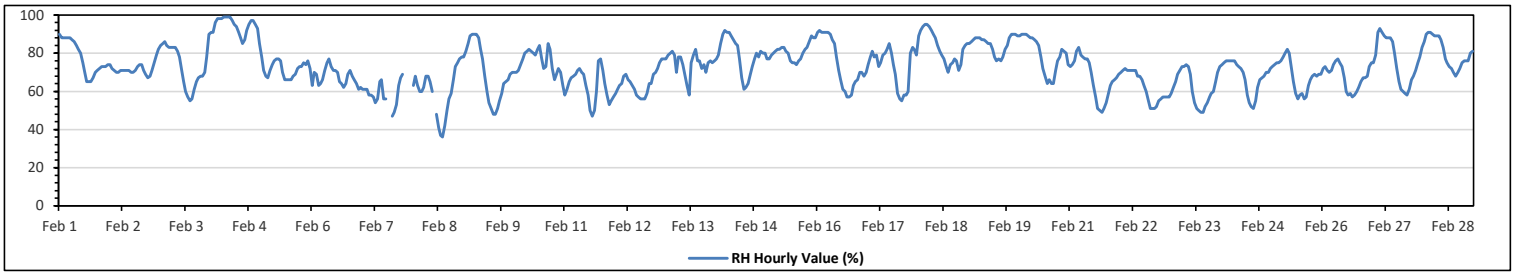
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	99	%	on Feb 4 at hr 6	Hours in Service:	672	
Maximum Daily Value:	94.1	%	on Feb 4	Hours of Data:	665	
Minimum Hourly Value:	36	%	on Feb 8 at hr 14	Hours of Missing Data:	7	
Minimum Daily Value:	58.7	%	on Feb 7	Hours of Calibration:	0	
Monthly Average:	72.6	%		Operational Uptime:	99.0	

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	90	88	88	88	88	88	87	86	84	82	80	75	70	65	65	65	67	70	71	72	73	73	73	74	65	90	77.6
Feb 2	74	72	71	70	70	71	71	71	71	71	70	70	71	73	74	74	71	69	67	68	71	75	79	82	67	82	71.9
Feb 3	84	85	86	84	83	83	83	83	81	78	71	65	60	57	55	56	61	65	67	68	68	70	78	90	55	90	73.4
Feb 4	91	91	96	98	98	98	**99**	**99**	**99**	**99**	97	95	94	91	88	85	87	92	95	97	97	95	93	85	85	**99**	**94.1**
Feb 5	78	71	68	67	71	74	76	77	77	76	70	66	66	66	66	68	69	72	73	73	75	74	76	72	66	78	71.7
Feb 6	63	70	69	63	64	66	71	75	77	73	71	71	70	65	64	62	64	69	71	68	66	64	61	62	61	77	67.5
Feb 7	61	61	61	58	58	57	54	56	65	66	56	56	K	K	47	49	53	63	67	69	K	K	K	K	47	69	**58.7**
Feb 8	63	68	63	60	60	62	68	68	65	60	NRM	48	41	37	**36**	42	50	56	59	66	73	75	77	78	**36**	78	59.8
Feb 9	78	81	85	89	90	90	90	88	82	77	68	60	54	51	48	48	51	55	59	64	65	66	69	70	48	90	69.9
Feb 10	70	70	71	74	77	80	81	82	81	80	79	82	84	77	72	73	85	82	72	66	69	72	70	63	63	85	75.5
Feb 11	58	61	65	67	68	69	71	72	70	69	63	58	50	47	50	60	76	77	71	64	58	53	55	57	47	77	62.9
Feb 12	59	61	63	64	68	69	66	65	63	61	58	57	56	56	56	59	64	64	69	70	72	75	77	77	56	77	64.5
Feb 13	77	79	80	81	79	70	78	78	74	69	63	58	75	79	82	76	76	72	74	70	75	76	75	76	58	82	74.7
Feb 14	77	79	85	90	92	91	91	89	87	85	84	77	67	61	62	64	69	73	77	80	78	81	80	80	61	92	79.1
Feb 15	77	77	79	80	81	82	82	83	83	81	80	76	75	75	74	76	77	80	82	83	86	89	88	88	74	89	80.6
Feb 16	91	92	91	91	91	91	90	87	85	78	71	66	61	60	57	57	58	63	65	66	70	70	68	70	57	92	74.5
Feb 17	74	78	81	78	79	73	75	79	80	82	85	80	74	69	59	56	55	58	58	60	80	83	82	79	55	85	73.2
Feb 18	89	92	94	95	95	94	92	90	88	84	81	79	77	73	70	74	75	77	76	71	74	82	84	85	70	95	83.0
Feb 19	85	86	87	88	88	88	87	87	86	85	85	82	78	76	77	76	78	82	84	88	90	90	90	89	76	90	84.7
Feb 20	89	90	90	90	89	88	88	87	86	84	78	72	68	64	66	64	64	71	76	78	82	81	80	74	64	90	79.1
Feb 21	73	74	76	81	83	79	78	77	77	75	70	63	57	51	50	49	51	54	59	63	65	66	67	69	49	83	67.0
Feb 22	70	71	72	71	71	71	71	71	68	68	66	63	60	55	51	51	51	52	55	56	57	57	57	57	51	72	62.2
Feb 23	59	62	65	69	71	73	73	74	73	69	60	54	51	50	49	49	52	54	57	59	60	65	70	73	49	74	62.1
Feb 24	74	75	76	76	76	76	76	74	73	72	70	66	58	54	52	51	55	62	66	67	68	70	70	72	51	76	67.9
Feb 25	73	74	75	75	76	78	80	82	80	72	65	59	56	58	59	56	57	63	66	68	69	68	69	69	56	82	68.6
Feb 26	72	73	71	70	71	74	76	77	75	73	67	60	58	59	57	58	60	62	65	67	67	68	73	75	57	77	67.8
Feb 27	75	79	91	93	91	89	88	88	88	86	80	72	65	61	60	59	58	61	66	68	71	75	78	83	58	93	76.0
Feb 28	86	90	91	91	90	89	89	89	87	83	77	75	73	72	70	68	70	72	75	76	76	76	80	81	68	91	80.3
Diurnal Maximum	91	92	96	98	98	98	99	99	99	99	97	95	94	91	88	85	87	92	95	97	97	95	93	90			
Diurnal Average	75.4	76.8	78.2	78.6	79.2	79.0	79.7	79.8	78.8	76.4	72.8	68.0	65.5	63.0	61.3	61.6	64.4	67.5	69.4	70.2	72.4	73.7	74.8	75.2			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

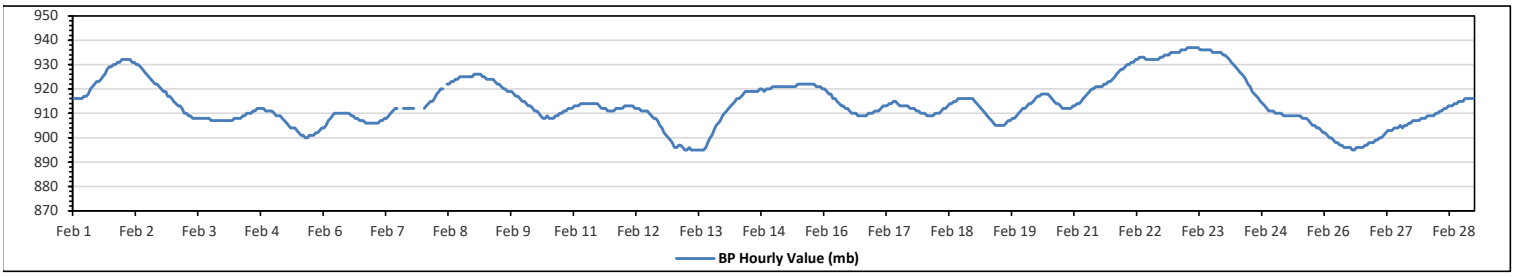
BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	937	mb	on Feb 23 at hr 6	Hours in Service:	672	
Maximum Daily Value:	936	mb	on Feb 23	Hours of Data:	665	
Minimum Hourly Value:	895	mb	on Feb 13 at hr 5	Hours of Missing Data:	7	
Minimum Daily Value:	897	mb	on Feb 26	Hours of Calibration:	0	
Monthly Average:	914	mb		Operational Uptime:	99.0	

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	916	916	916	916	916	917	917	918	920	921	922	923	923	924	925	926	928	929	929	930	930	931	931	932	916	932	923
Feb 2	932	932	932	932	931	931	930	930	929	928	927	926	925	924	923	922	922	921	920	919	919	917	917	916	916	932	925
Feb 3	915	914	913	913	912	910	910	909	909	908	908	908	908	908	908	908	908	908	907	907	907	907	907	907	907	915	909
Feb 4	907	907	907	907	907	908	908	908	908	909	909	910	910	910	911	911	912	912	912	912	911	911	911	911	907	912	910
Feb 5	910	909	909	909	908	907	906	905	904	904	904	903	902	901	901	900	900	901	901	901	902	902	903	904	900	910	904
Feb 6	904	905	907	908	909	910	910	910	910	910	910	910	910	909	909	908	908	907	907	907	906	906	906	906	904	910	908
Feb 7	906	906	906	907	907	908	908	909	910	911	912	912	K	K	912	912	912	912	912	912	K	K	K	K	906	912	910
Feb 8	912	913	914	915	915	916	918	919	920	920	NRM	922	922	923	923	924	924	925	925	925	925	925	925	925	912	925	921
Feb 9	926	926	926	926	925	925	924	924	924	924	923	922	922	921	920	920	919	919	919	918	917	917	916	915	915	926	922
Feb 10	915	914	913	913	912	911	911	910	909	908	908	909	908	908	908	909	909	910	910	911	911	912	912	912	908	915	911
Feb 11	913	913	913	914	914	914	914	914	914	914	914	914	913	912	912	912	911	911	911	911	912	912	912	912	911	914	913
Feb 12	913	913	913	913	913	912	912	912	911	911	911	911	910	909	908	908	907	905	904	902	901	900	899	898	898	913	908
Feb 13	896	896	897	897	896	**895**	**895**	896	**895**	**895**	**895**	**895**	**895**	**895**	**895**	896	898	900	901	903	905	906	907	909	**895**	909	898
Feb 14	910	911	912	913	914	915	916	916	917	918	919	919	919	919	919	919	919	920	920	919	920	920	920	921	910	921	917
Feb 15	921	921	921	921	921	921	921	921	921	921	921	922	922	922	922	922	922	922	922	922	921	921	921	920	920	922	921
Feb 16	920	919	918	918	916	916	915	914	913	913	912	912	911	910	910	910	909	909	909	909	909	910	910	910	909	920	913
Feb 17	911	911	911	912	913	913	913	914	914	915	915	914	913	913	913	913	913	912	912	912	911	911	910	910	910	915	912
Feb 18	910	909	909	909	909	910	910	910	911	912	912	913	914	914	915	915	916	916	916	916	916	916	916	916	909	916	913
Feb 19	915	914	913	912	911	910	909	908	907	906	905	905	905	905	905	906	907	907	908	908	909	910	911	912	905	915	909
Feb 20	912	913	914	914	915	916	917	917	918	918	918	918	917	916	915	914	914	913	912	912	912	912	912	913	912	918	915
Feb 21	913	914	914	915	916	917	918	919	920	920	921	921	921	921	922	922	923	923	924	925	926	927	928	928	913	928	921
Feb 22	929	930	930	931	931	932	932	933	933	933	932	932	932	932	932	932	932	933	933	934	934	934	935	935	929	935	932
Feb 23	935	935	935	936	936	936	**937**	**937**	**937**	**937**	**937**	**937**	936	936	936	936	936	936	935	935	935	935	935	934	934	**937**	**936**
Feb 24	934	933	932	931	930	929	928	927	926	925	924	922	921	919	918	917	916	915	914	913	912	911	911	911	911	934	922
Feb 25	910	910	910	910	909	909	909	909	909	909	909	909	909	908	908	908	907	906	905	905	904	904	903	902	902	910	908
Feb 26	902	901	900	900	899	898	898	897	897	896	896	896	896	**895**	**895**	896	896	896	896	897	897	898	898	898	**895**	902	**897**
Feb 27	899	899	900	900	901	902	903	903	903	904	904	904	905	904	905	905	906	906	907	907	907	907	908	908	899	908	904
Feb 28	908	909	909	909	909	910	910	911	911	912	912	913	913	913	914	914	915	915	915	916	916	916	916	916	908	916	913
Diurnal Maximum	935	935	935	936	936	936	937	937	937	937	937	937	936	936	936	936	936	936	935	935	935	935	935	935			
Diurnal Average	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

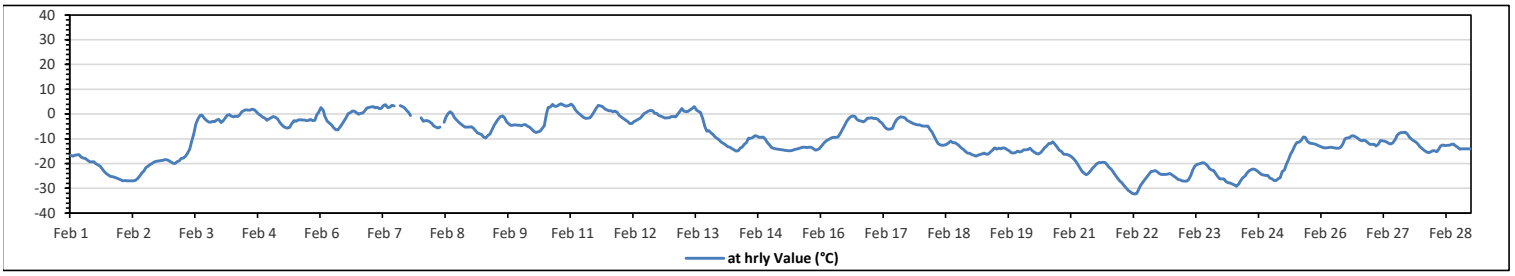
Maximum Hourly Value:	4.2	°C	on Feb 10 at hr 19	Hours in Service:	672	
Maximum Daily Value:	2.5	°C	on Feb 7	Hours of Data:	665	
Minimum Hourly Value:	-32.3	°C	on Feb 22 at hr 6	Hours of Missing Data:	7	
Minimum Daily Value:	-26.9	°C	on Feb 22	Hours of Calibration:	0	
Monthly Average:	-10.6	°C		Operational Uptime:	99.0	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	-16.6	-17	-16.7	-16.5	-16.4	-17.5	-17.7	-17.9	-18.6	-19.3	-19.4	-19.3	-20	-20.5	-21	-22	-23.2	-24.1	-24.6	-25.1	-25.3	-25.6	-25.9	-26.2	-26.2	-16.4	-20.7
Feb 2	-26.5	-27	-26.8	-26.9	-27	-26.9	-27	-26.7	-26.1	-25.2	-23.9	-23	-21.7	-21	-20.3	-19.9	-19.4	-19.1	-19	-18.8	-18.7	-18.5	-18.4	-18.8	-27.0	-18.4	-22.8
Feb 3	-19.4	-19.8	-19.9	-19.3	-18.8	-17.9	-17.7	-17	-15.8	-14.2	-11.1	-7.8	-4.2	-1.9	-0.4	-0.4	-1.7	-2.5	-3.2	-3.3	-2.9	-3.1	-2.4	-2.2	-19.9	-0.4	-9.5
Feb 4	-3.5	-2.8	-1.8	-0.5	-0.2	-0.8	-1.1	-0.8	-1	-0.3	0.9	1.5	1.7	1.6	1.6	2	1.7	0.9	0	-0.5	-1.3	-1.7	-2.5	-2.1	-3.5	2.0	-0.4
Feb 5	-1.5	-1	-1.2	-1.9	-3.1	-4.2	-5	-5.5	-5.7	-5.4	-3.9	-2.7	-2.9	-2.4	-2.3	-2.4	-2.4	-2.6	-2.5	-2.2	-2.6	-2.5	-0.3	0.9	-5.7	0.9	-2.7
Feb 6	2.6	1.6	-1.1	-2.9	-3.7	-4.4	-5.4	-6.3	-6.5	-5.4	-4.2	-2.8	-1.7	0.1	0.5	1.2	1.2	0.5	-0.1	0.2	0.4	1.3	2.4	2.6	-6.5	2.6	-1.2
Feb 7	2.9	3	2.5	2.7	2.1	2.3	3.6	3.8	2.6	2.7	3.5	3.3	K	K	3.4	3	2.4	1.5	0.6	-0.6	K	K	K	K	-0.6	3.8	**2.5**
Feb 8	-1.5	-2.9	-2.7	-2.7	-3.1	-3.7	-4.7	-5.3	-5.6	-5.3	NRM	-3.3	-1.1	0.3	0.9	0.1	-1.4	-2.4	-3.3	-4	-4.6	-5.2	-5.2	-5.3	-5.6	0.9	-3.1
Feb 9	-5.1	-5.6	-6.7	-7.6	-8	-8.2	-9.3	-9.7	-8.7	-8.1	-6.4	-4.6	-3.2	-2.1	-1	-0.7	-1.6	-3.1	-4	-4.6	-4.5	-4.4	-4.5	-4.5	-9.7	-0.7	-5.3
Feb 10	-4.7	-4.4	-4.3	-4.8	-5.3	-6.2	-6.9	-7.5	-7.2	-6.9	-5.9	-4.7	0.1	2.6	2.8	3.9	3.1	3.1	3.7	**4.2**	3.8	3.3	3.2	3.6	-7.5	**4.2**	-1.3
Feb 11	4.1	3.1	1.6	0.6	0	-0.7	-1.4	-1.8	-1.7	-1.6	-0.4	0.9	2.4	3.6	3.2	3	2.1	1.8	1.4	1.3	1	1.2	0.6	-0.4	-1.8	4.1	1.0
Feb 12	-1.3	-1.8	-2.4	-2.9	-3.8	-3.9	-3.1	-2.7	-2.2	-1.7	-0.7	0.1	0.7	1.2	1.5	1.3	0.3	0.3	-0.6	-0.8	-1.3	-1.7	-1.6	-1.5	-3.9	1.5	-1.2
Feb 13	-1	-1	-1.1	-0.2	0.9	2.2	1.2	0.9	1.1	1.7	2.2	3	1.6	1.1	0.6	-1.8	-5.1	-6.9	-6.7	-7.6	-8.3	-9.2	-9.9	-10.6	-10.6	3.0	-2.2
Feb 14	-11.3	-11.8	-12.5	-13.2	-13.4	-13.9	-14.5	-15	-14.8	-13.6	-13.4	-12.3	-11.5	-9.8	-9.8	-9.5	-8.8	-8.9	-9.4	-9.4	-9.3	-10.1	-11.5	-12.5	-15.0	-8.8	-11.7
Feb 15	-13.5	-13.8	-14	-14.2	-14.3	-14.5	-14.6	-14.7	-14.8	-14.9	-14.7	-14.3	-14.2	-13.9	-13.6	-13.4	-13.3	-13.5	-13.3	-13.4	-13.9	-14.6	-14.5	-13.9	-14.9	-13.3	-14.1
Feb 16	-13.1	-11.9	-11	-10.5	-10.1	-9.5	-9.4	-9.4	-9.2	-7.9	-6.2	-4.7	-2.9	-2	-1.1	-0.7	-1	-2.2	-2.6	-2.8	-3.2	-2.7	-1.7	-1.7	-13.1	-0.7	-5.7
Feb 17	-1.6	-1.8	-1.8	-2.2	-3	-3.6	-4.9	-5.8	-6.2	-6	-5.8	-3.9	-2.3	-1.5	-1.1	-1.2	-1.5	-2.5	-2.9	-3.4	-3.9	-4.2	-4.4	-4.4	-6.2	-1.1	-3.3
Feb 18	-4.7	-4.8	-4.9	-4.8	-6.2	-7.3	-9.1	-10.7	-12	-12.5	-12.7	-12.5	-12.2	-11.6	-11	-11.6	-11.6	-12.1	-12.8	-13.6	-14.3	-15.1	-15.7	-15.8	-15.8	-4.7	-10.8
Feb 19	-16.4	-16.6	-17	-16.7	-16.4	-16.1	-15.7	-16.3	-16.1	-15.4	-14.6	-13.7	-14.2	-13.8	-14	-13.6	-13.8	-14.4	-14.8	-15.5	-15.7	-15.6	-15	-15.4	-17.0	-13.6	-15.3
Feb 20	-15.1	-14.5	-14.5	-14.3	-13.8	-14.7	-15.4	-16	-16.1	-15.6	-14.7	-13.7	-12.9	-11.8	-11.8	-11.2	-12.2	-13.3	-14.6	-15.1	-16.2	-16.2	-16.4	-16.8	-16.8	-11.2	-14.5
Feb 21	-17.4	-18.1	-19.1	-20.5	-21.8	-23.2	-24.1	-24.5	-24	-23	-21.8	-21	-20.1	-19.7	-19.6	-19.5	-19.7	-20.5	-21.6	-22.3	-23.7	-24.8	-25.8	-26.9	-26.9	-17.4	-21.8
Feb 22	-27.7	-28.8	-29.8	-30.8	-31.4	-32	**-32.3**	-32.2	-30.6	-28.9	-27.6	-26.5	-25.4	-24.2	-23.3	-23.1	-22.8	-23.4	-24.1	-24.3	-24.4	-24.4	-24.2	-24.1	**-32.3**	-22.8	**-26.9**
Feb 23	-24.5	-25.2	-25.7	-26.4	-26.6	-26.9	-27.1	-27.1	-26.6	-24.9	-22.4	-21.1	-20.4	-20.1	-19.8	-19.7	-20	-20.8	-22	-22.5	-22.8	-24	-25.2	-26.2	-27.1	-19.7	-23.7
Feb 24	-26.2	-26.2	-27.2	-27.8	-27.9	-28.3	-28.6	-29.2	-28.3	-26.9	-25.7	-25	-24	-23	-22.4	-22.1	-22.4	-23.1	-23.8	-24.3	-24.6	-24.7	-24.8	-25.8	-29.2	-22.1	-25.5
Feb 25	-26.2	-26.8	-26.8	-26.1	-25.7	-23.3	-22.5	-19.9	-18.3	-16.2	-14.7	-12.7	-11.5	-11.3	-10.7	-9.3	-9.4	-11.1	-11.7	-11.8	-12	-12.2	-12.7	-13	-26.8	-9.3	-16.5
Feb 26	-13.4	-13.7	-13.7	-13.5	-13.4	-13.5	-13.7	-13.8	-13.8	-13.3	-12	-10	-9.7	-9.6	-8.9	-8.8	-9.1	-9.6	-10.5	-10.8	-10.6	-10.8	-11.6	-12.2	-13.8	-8.8	-11.7
Feb 27	-12.3	-12.3	-12.9	-12.2	-10.7	-10.9	-11	-11.3	-11.9	-12.1	-11.6	-10.3	-8.7	-7.9	-7.4	-7.4	-7.3	-8.3	-9.4	-10.2	-10.8	-11.3	-12.1	-13.2	-13.2	-7.3	-10.6
Feb 28	-13.9	-14.7	-15.3	-15.6	-15.4	-14.9	-14.9	-15.2	-14.1	-12.9	-12.5	-12.8	-12.6	-12.7	-12.3	-12.1	-12.8	-13.4	-14.2	-14.1	-14.1	-14.1	-14.1	-14.1	-15.6	-12.1	-13.9
Diurnal Maximum	4.1	3.1	2.5	2.7	2.1	2.3	3.6	3.8	2.6	2.7	3.5	3.3	2.4	3.6	3.4	3.9	3.1	3.1	3.7	4.2	3.8	3.3	3.2	3.6			
Diurnal Average	-11.0	-11.3	-11.7	-11.8	-12.0	-12.2	-12.6	-12.8	-12.6	-11.9	-11.1	-9.8	-9.3	-8.5	-7.8	-7.7	-8.2	-8.9	-9.5	-9.8	-10.5	-10.8	-10.9	-11.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

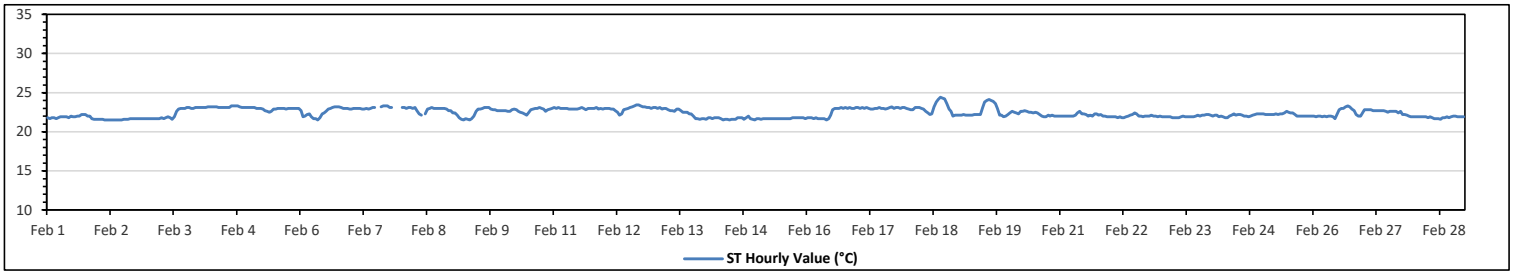
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	24.4	°C	on Feb 18 at hr 15	Hours in Service:	672	
Maximum Daily Value:	23.2	°C	on Feb 4	Hours of Data:	665	
Minimum Hourly Value:	21.5	°C	on Feb 2 at hr 3	Hours of Missing Data:	7	
Minimum Daily Value:	21.6	°C	on Feb 2	Hours of Calibration:	0	
Monthly Average:	22.4	°C		Operational Uptime:	99.0	

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	21.8	21.7	21.8	21.8	21.7	21.8	21.9	21.9	21.9	21.9	21.8	22.0	21.9	21.9	22.0	22.0	22.2	22.2	22.2	22.0	22.0	21.7	21.6	21.6	21.6	22.2	21.9
Feb 2	21.6	21.6	21.6	**21.5**	**21.5**	**21.5**	**21.5**	**21.5**	**21.5**	**21.5**	**21.5**	**21.5**	21.6	21.6	21.6	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	**21.5**	21.7	**21.6**
Feb 3	21.7	21.7	21.7	21.7	21.7	21.7	21.8	21.7	21.8	21.9	21.8	21.6	21.9	22.6	22.9	23.0	23.0	23.0	23.1	23.1	23.0	23.0	23.1	23.1	21.6	23.1	22.3
Feb 4	23.1	23.1	23.1	23.1	23.2	23.2	23.2	23.2	23.2	23.1	23.1	23.1	23.1	23.1	23.1	23.3	23.3	23.3	23.3	23.2	23.1	23.1	23.1	23.1	23.1	23.3	**23.2**
Feb 5	23.1	23.1	23.1	23.0	23.0	23.0	22.9	22.7	22.6	22.5	22.6	22.9	22.9	23.0	23.0	23.0	23.0	22.9	23.0	23.0	23.0	23.0	23.0	23.0	22.5	23.1	22.9
Feb 6	22.7	21.9	22.0	22.2	22.3	21.9	21.7	21.7	**21.5**	21.8	22.3	22.4	22.6	22.9	23.0	23.1	23.2	23.2	23.2	23.1	23.0	23.0	23.0	22.9	**21.5**	23.2	22.5
Feb 7	22.9	23.0	23.0	23.0	23.0	22.9	22.9	23.0	22.9	23.0	23.1	23.1	K	K	23.2	23.3	23.3	23.3	23.1	23.1	K	K	K	K	22.9	23.3	23.1
Feb 8	23.1	23.1	23.0	23.1	23.1	23.0	23.1	22.7	22.3	22.1	NRM	22.3	22.9	23.0	23.1	23.0	23.0	23.0	23.0	23.0	23.0	22.9	22.7	22.7	22.1	23.1	22.9
Feb 9	22.4	22.4	22.1	21.8	21.6	**21.5**	21.7	21.6	**21.5**	21.7	22.0	22.6	22.9	22.9	23.0	23.1	23.1	23.1	22.9	22.8	22.8	22.7	22.7	22.7	**21.5**	23.1	22.4
Feb 10	22.7	22.7	22.6	22.6	22.8	22.9	22.8	22.6	22.5	22.4	22.3	22.1	22.5	22.8	22.9	23.0	23.0	23.1	23.0	22.9	22.6	22.8	22.9	23.0	22.1	23.1	22.7
Feb 11	23.1	23.0	23.1	23.0	23.0	23.0	23.0	22.9	22.9	22.9	22.9	22.9	23.0	23.1	23.0	22.8	23.0	23.0	23.0	23.0	23.1	22.9	23.0	22.9	22.8	23.1	23.0
Feb 12	23.0	23.0	23.0	22.9	22.9	22.7	22.5	22.1	22.3	22.8	22.9	23.0	23.1	23.2	23.3	23.4	23.4	23.3	23.2	23.2	23.1	23.1	23.0	23.1	22.1	23.4	23.0
Feb 13	23.1	23.0	23.1	22.9	23.0	23.0	22.8	22.7	22.7	22.6	22.9	22.9	22.7	22.5	22.5	22.5	22.3	22.3	22.0	21.7	21.7	21.6	21.7	21.7	21.6	23.1	22.5
Feb 14	21.6	21.8	21.8	21.7	21.8	21.8	21.8	21.7	**21.5**	21.6	21.6	**21.5**	21.6	21.6	21.6	21.8	21.8	21.8	21.6	21.8	22.0	21.7	21.6	**21.5**	**21.5**	22.0	21.7
Feb 15	21.7	21.7	21.6	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.8	21.8	21.8	21.8	21.8	21.8	21.7	21.6	21.8	21.7
Feb 16	21.8	21.8	21.8	21.7	21.8	21.7	21.7	21.7	21.7	**21.5**	21.7	22.1	22.8	23.0	23.0	23.0	23.1	23.0	23.1	23.0	23.1	23.0	23.0	23.1	**21.5**	23.1	22.4
Feb 17	23.1	23.0	23.1	23.0	23.1	23.0	22.9	22.9	23.0	23.0	23.1	23.0	23.0	22.9	23.0	23.1	23.2	23.0	23.1	23.1	23.0	23.1	23.1	23.0	22.9	23.2	23.0
Feb 18	22.9	22.8	22.8	23.1	23.1	23.1	23.0	22.9	22.6	22.4	22.2	22.3	23.2	23.8	24.1	**24.4**	24.3	24.2	23.6	22.9	22.6	22.0	22.1	22.1	22.0	**24.4**	23.0
Feb 19	22.1	22.1	22.2	22.1	22.1	22.1	22.1	22.2	22.2	22.2	22.2	23.1	23.8	24.0	24.1	24.0	23.9	23.6	23.0	22.1	22.1	21.9	22.0	22.2	21.9	24.1	22.6
Feb 20	22.4	22.6	22.5	22.4	22.3	22.6	22.6	22.7	22.6	22.5	22.5	22.4	22.5	22.4	22.2	22.0	21.9	21.9	22.1	22.0	22.1	22.0	22.0	22.0	21.9	22.7	22.3
Feb 21	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.1	22.4	22.6	22.3	22.3	22.2	22.0	22.1	22.0	22.3	22.3	22.1	22.2	22.0	22.0	21.9	21.9	21.9	22.6	22.1
Feb 22	21.9	21.9	21.9	21.8	21.9	21.8	21.8	21.9	22.0	22.1	22.2	22.4	22.3	22.0	22.0	21.9	22.0	22.0	22.0	22.1	22.0	22.0	21.9	22.0	21.8	22.4	22.0
Feb 23	21.9	21.9	21.9	21.9	21.9	21.8	21.8	21.8	21.8	21.9	22.0	21.9	21.9	21.9	21.9	21.9	22.0	22.1	22.0	22.1	22.1	22.2	22.2	22.1	21.8	22.2	22.0
Feb 24	22.0	22.1	22.1	21.9	22.0	21.9	21.8	21.8	22.0	22.1	22.3	22.1	22.2	22.2	22.1	22.0	22.0	21.9	22.0	22.1	22.2	22.3	22.3	22.3	21.8	22.3	22.1
Feb 25	22.3	22.2	22.2	22.2	22.2	22.2	22.3	22.2	22.3	22.3	22.4	22.6	22.5	22.4	22.4	22.2	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.6	22.2
Feb 26	22.0	21.9	22.0	22.0	21.9	22.0	21.9	22.0	22.0	21.9	21.7	22.3	22.8	23.0	23.0	23.2	23.3	23.2	22.9	22.7	22.2	22.0	22.0	22.4	21.7	23.3	22.3
Feb 27	22.8	22.8	22.8	22.8	22.7	22.7	22.7	22.7	22.7	22.7	22.6	22.5	22.6	22.6	22.6	22.6	22.4	22.6	22.2	22.2	22.1	22.0	21.9	21.9	21.9	22.8	22.5
Feb 28	21.9	21.9	21.9	21.9	21.9	21.9	21.8	21.9	21.8	21.7	21.7	21.7	21.6	21.8	21.8	21.9	21.8	21.9	22.0	22.0	21.9	21.9	21.9	21.9	21.6	22.0	21.9
Diurnal Maximum	23.1	23.1	23.1	23.1	23.2	23.2	23.2	23.2	23.2	23.1	23.1	23.1	23.8	24.0	24.1	24.4	24.3	24.2	23.6	23.2	23.1	23.1	23.1	23.1			
Diurnal Average	22.4	22.4	22.4	22.3	22.3	22.3	22.3	22.2	22.2	22.2	22.3	22.4	22.5	22.6	22.7	22.7	22.7	22.7	22.6	22.5	22.4	22.3	22.3	22.4			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

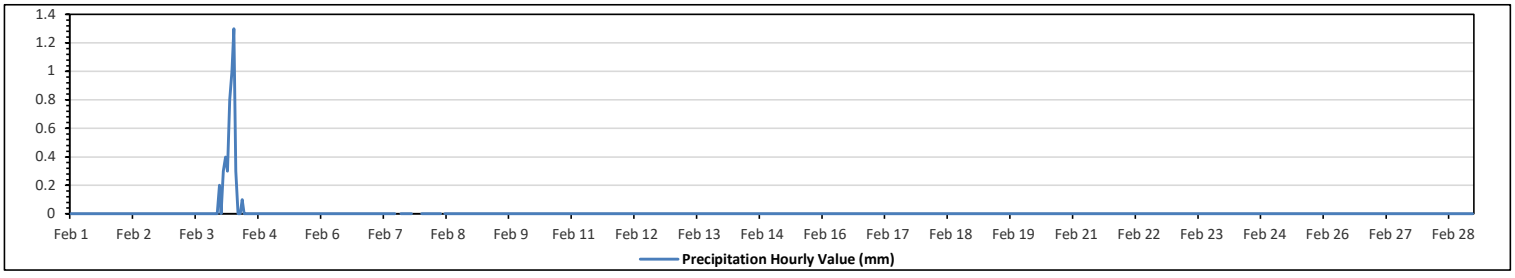
PRECIPITATION in mm

Maximum Hourly Value:	1.3	mm	on Feb 4 at hr 6	Hours in Service:	672	
Maximum Daily Value:	4.5	mm	on Feb 4	Hours of Data:	665	
Minimum Hourly Value:	0.0	mm	on Feb 1 at hr 0	Hours of Missing Data:	7	
Minimum Daily Value:	0.0	mm	on Feb 1	Hours of Calibration:	0	
Monthly Total:	4.7	mm		Operational Uptime:	99.0	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 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
Feb 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.0	0.2	0.2
Feb 4	0	0.3	0.4	0.3	0.8	1	**1.3**	0.3	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	**1.3**	**4.5**
Feb 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 7	0	0	0	0	0	0	0	0	0	0	0	0	K	K	0	0	0	0	0	0	K	K	K	K	0.0	0.0	0.0
Feb 8	0	0	0	0	0	0	0	0	0	0	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Diurnal Maximum	0.0	0.3	0.4	0.3	0.8	1.0	1.3	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

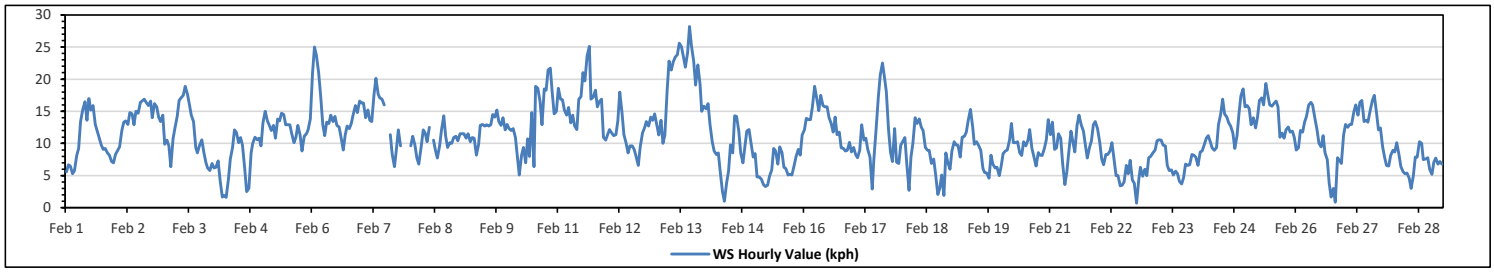
VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	28.2	kph	on Feb 13 at hr 16	Hours in Service:	672	
Maximum Daily Value:	20.0	kph	on Feb 13	Hours of Data:	665	
Minimum Hourly Value:	0.7	kph	on Feb 22 at hr 18	Hours of Missing Data:	7	
Minimum Daily Value:	6.0	kph	on Feb 22	Hours of Calibration:	0	
Monthly Average:	4.1	kph		Operational Uptime:	99.0	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	5.6	6.7	6.5	5.3	5.8	8.1	9.2	13.4	15.3	16.5	13.6	17.0	15.2	15.9	13.0	12.1	10.9	9.7	9.1	9.2	8.5	8.2	7.2	7.0	5.3	17.0	10.4
Feb 2	8.3	8.9	9.5	12.0	13.3	13.5	13.0	14.8	14.6	12.9	15.0	14.7	16.4	16.6	16.9	16.4	15.9	16.6	14.0	16.2	15.7	14.1	13.4	14.4	8.3	16.9	14.0
Feb 3	9.9	10.5	9.6	6.4	10.7	12.4	14.2	16.7	17.1	17.5	18.9	17.7	16.1	14.4	13.4	9.4	8.5	9.7	10.6	8.7	7.0	6.2	5.8	6.9	5.8	18.9	11.6
Feb 4	6.2	6.3	7.3	4.3	1.7	1.9	1.6	4.4	7.6	9.4	12.1	11.7	10.1	10.9	9.7	6.1	2.5	3.0	8.5	10.0	11.0	10.6	10.8	9.6	1.6	12.1	7.4
Feb 5	13.2	15.0	13.5	12.8	12.0	12.8	10.8	13.8	13.5	14.7	14.5	12.9	12.9	12.9	11.5	10.1	11.0	12.8	11.3	8.8	11.1	11.5	12.1	13.8	8.8	15.0	12.5
Feb 6	21.0	25.0	23.7	21.0	17.6	12.9	11.2	13.3	13.1	14.4	13.4	14.2	12.8	12.6	11.0	9.0	11.3	12.7	12.3	13.1	14.5	15.9	14.8	16.6	9.0	25.0	14.9
Feb 7	16.3	16.3	14.0	15.2	13.6	13.4	17.6	20.1	17.7	17.1	16.9	16.0	K	K	11.4	8.3	6.4	9.1	12.1	9.6	K	K	K	K	6.4	20.1	14.0
Feb 8	9.6	11.1	9.7	7.7	6.8	9.3	12.1	11.6	10.3	12.5	NRM	10.5	8.9	7.7	9.6	12.1	14.3	11.1	9.4	10.1	10.0	10.9	11.1	10.4	6.8	14.3	10.3
Feb 9	11.5	11.5	11.5	10.8	11.5	10.3	10.9	10.8	8.2	9.9	12.8	13.0	12.7	12.9	12.7	12.9	14.5	14.1	15.2	13.4	12.8	14.0	12.1	13.0	8.2	15.2	12.2
Feb 10	12.3	12.0	12.3	10.9	8.0	5.1	8.1	9.4	7.0	10.7	8.0	14.8	6.4	18.9	18.6	16.5	12.9	18.5	18.3	21.4	21.7	17.9	14.6	15.0	5.1	21.7	13.3
Feb 11	18.6	16.9	16.8	15.2	14.4	15.6	13.2	14.4	12.7	12.2	16.9	17.3	21.0	19.7	23.6	25.1	16.9	17.2	18.3	15.7	16.5	16.9	11.0	10.5	10.5	25.1	16.5
Feb 12	11.4	12.2	11.6	11.2	11.4	13.5	18.0	14.8	11.4	10.0	8.5	9.6	9.6	9.1	8.0	6.6	9.5	11.6	12.5	13.4	12.7	14.1	13.6	14.6	6.6	18.0	11.6
Feb 13	12.8	11.3	13.6	10.0	11.3	18.2	22.8	21.4	22.7	23.4	23.8	25.6	25.0	23.5	21.9	24.1	**28.2**	25.2	22.8	19.1	22.2	19.2	15.0	15.8	10.0	**28.2**	**20.0**
Feb 14	15.4	16.2	13.0	10.3	8.8	8.3	8.5	5.6	2.5	1.0	3.9	5.7	9.8	8.5	14.3	14.2	11.9	8.5	7.0	9.5	11.9	12.2	10.1	7.9	1.0	16.2	9.4
Feb 15	8.4	4.8	4.8	4.4	3.6	3.3	3.5	4.9	5.9	9.2	8.8	6.8	9.5	8.6	6.3	6.1	5.1	5.2	5.1	6.6	8.0	9.1	8.2	11.3	3.3	11.3	6.6
Feb 16	12.1	13.9	13.7	13.7	15.7	18.9	16.9	15.1	17.5	15.9	15.7	15.7	14.0	13.2	11.8	14.1	11.4	11.8	9.3	9.2	8.8	8.9	10.2	8.7	8.7	18.9	13.2
Feb 17	9.4	8.3	7.8	9.0	12.9	10.5	10.8	9.1	7.9	2.9	7.5	12.2	17.2	20.6	22.5	20.4	18.1	12.1	8.7	7.2	12.3	7.1	6.9	9.7	2.9	22.5	11.3
Feb 18	10.3	10.9	6.8	2.7	7.9	10.0	14.0	13.1	13.8	12.6	12.0	9.4	8.9	8.9	6.9	7.6	5.2	2.1	3.0	5.1	1.9	8.5	7.1	6.0	1.9	14.0	8.1
Feb 19	8.8	10.3	9.8	9.7	7.9	11.0	11.1	11.8	13.6	15.3	12.5	9.9	10.3	9.7	9.0	6.1	5.5	5.4	4.6	8.2	6.8	6.2	6.3	5.0	4.6	15.3	9.0
Feb 20	6.5	8.4	8.8	9.0	10.5	13.1	10.1	10.1	10.3	8.5	8.1	10.3	9.6	10.6	12.2	9.2	8.0	6.5	8.6	8.2	8.1	9.2	10.6	13.7	6.5	13.7	9.5
Feb 21	11.4	13.3	9.1	9.3	11.5	10.8	6.9	3.6	5.5	8.5	11.9	10.3	8.7	12.8	14.4	12.9	11.9	10.1	7.7	9.4	10.4	12.9	13.4	12.3	3.6	14.4	10.4
Feb 22	10.2	7.6	6.7	8.3	8.3	8.8	10.1	7.8	5.0	5.0	3.4	3.5	4.0	6.6	5.3	7.4	4.3	3.8	**0.7**	4.4	6.3	4.9	6.0	5.0	**0.7**	10.2	**6.0**
Feb 23	7.8	8.0	8.5	9.0	10.4	10.6	10.5	9.7	9.6	6.6	5.8	5.9	5.1	5.7	5.3	4.1	3.7	4.7	6.8	6.6	6.7	8.3	8.2	7.9	3.7	10.6	7.3
Feb 24	6.6	8.7	8.8	9.7	10.8	11.2	10.2	9.3	8.9	9.4	12.9	14.6	16.9	14.6	14.1	13.2	12.7	11.6	9.2	11.2	14.6	17.4	18.5	15.7	6.6	18.5	12.1
Feb 25	15.9	15.4	12.9	14.0	12.4	14.1	16.7	17.1	16.0	19.3	17.9	16.0	15.8	16.2	16.6	15.7	11.0	11.6	10.8	12.1	12.6	11.8	11.9	10.9	10.8	19.3	14.4
Feb 26	9.0	9.3	12.0	11.8	13.3	14.2	16.0	16.4	16.0	14.0	12.1	10.0	9.5	11.2	8.5	7.5	3.8	1.7	3.0	0.9	7.8	7.4	6.9	11.3	0.9	16.4	9.7
Feb 27	13.0	12.5	13.0	13.0	14.9	16.0	14.4	16.4	16.7	13.4	13.6	13.3	15.1	16.7	17.5	14.7	12.1	12.4	9.5	7.9	6.6	6.5	8.1	8.9	6.5	17.5	12.8
Feb 28	8.7	10.1	8.3	6.4	5.6	5.3	5.4	4.6	3.0	5.0	7.9	7.9	10.3	10.0	7.5	7.6	7.8	6.0	5.2	7.1	7.7	6.8	7.2	6.8	3.0	10.3	7.0
Diurnal Maximum	21.0	25.0	23.7	21.0	17.6	18.9	22.8	21.4	22.7	23.4	23.8	25.6	25.0	23.5	23.6	25.1	28.2	25.2	22.8	21.4	22.2	19.2	18.5	16.6			
Diurnal Average	11.1	11.5	10.8	10.1	10.5	11.2	11.7	11.9	11.6	11.7	12.2	12.4	12.3	12.9	12.6	11.8	10.5	10.2	9.8	10.1	10.9	11.0	10.4	10.7			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

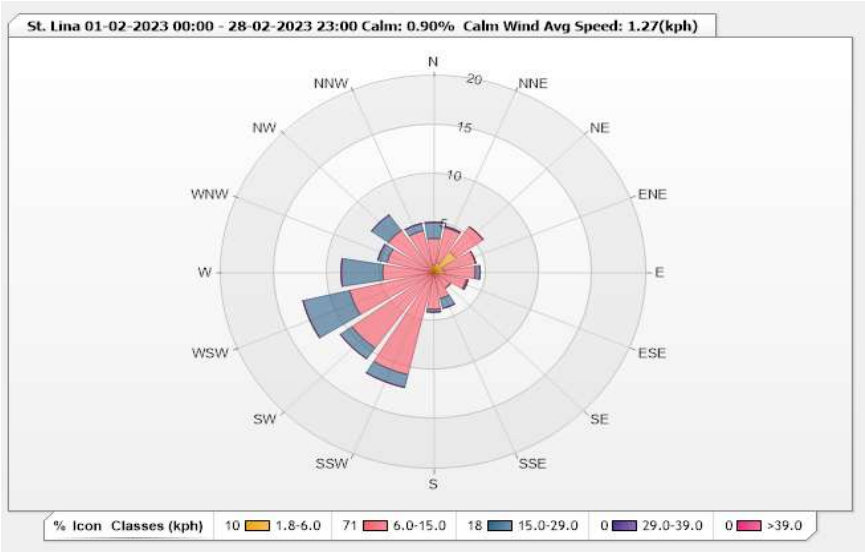


Station: St. Lina Monitor: WDS [kph] Monthly: 02-2023

Type: Wind Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm (WS<1.8kph): 0.90% Valid Data: 98.96%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	0.75	2.71	1.65	0	0	5.11
NNE	1.05	3.61	0.15	0	0	4.81
NE	2.56	3.16	0	0	0	5.72
ENE	0.9	3.16	0	0	0	4.06
E	1.05	2.86	0.45	0	0	4.36
ESE	0.15	3.01	0.15	0	0	3.31
SE	0.45	1.5	0	0	0	1.95
SSE	0.3	2.41	1.05	0	0	3.76
S	0.45	3.31	0.3	0	0	4.06
SSW	0	10.68	1.35	0	0	12.03
SW	0.15	9.32	1.35	0	0	10.82
WSW	0.45	7.67	4.51	0	0	12.63
W	0.3	4.51	3.91	0	0	8.72
WNW	0.45	4.06	0.9	0	0	5.41
NW	0.75	4.51	1.95	0	0	7.21
NNW	0.3	4.06	0.75	0	0	5.11
Summary	10.06	70.54	18.47	0	0	99.07



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

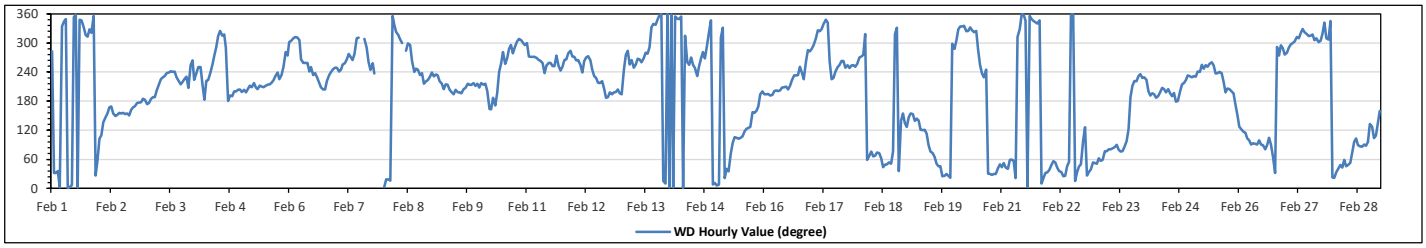
Monthly Average: 253 (WSW) degree

Hours in Service: 672
Hours of Data: 665
Hours of Missing Data: 7
Hours of Calibration: 0
Operational Uptime: 99.0

Day	Hourly Period Starting at (MST)																						Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Feb 1	W	NNE	NNE	NE	N	NNW	NNW	NNW	N	N	N	N	N	N	NNW	NNW	NNW	NW	NW	NNW	NW	N	NNE	ENE	353	N
Feb 2	E	ESE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	S	S	159	SSE
Feb 3	S	S	S	S	S	SSW	SSW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	SW	SW	SSW	SW	SW	SW	SSW	WSW	W	222	SW
Feb 4	SW	SW	WSW	WSW	SSW	S	SW	SW	SW	WSW	W	WNW	NW	NW	NW	NW	WNW	S	S	S	SSW	SSW	SSW	SSW	244	WSW
Feb 5	SSW	SSW	SSW	SSW	SSW	SSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	WSW	SW	SW	WSW	W	W	220	SW
Feb 6	WNW	WNW	NW	NW	NW	NW	W	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SSW	SSW	SSW	SW	SW	WSW	WSW	WSW	261	W
Feb 7	WSW	WSW	WSW	WSW	WSW	W	W	W	W	W	NW	NW	**K**	**K**	NW	WNW	W	WSW	WSW	SW	**K**	**K**	**K**	**K**	268	W
Feb 8	N	NNE	NNE	NNE	N	NNW	NW	NW	NW	WNW	**NRM**	WNW	WNW	WNW	W	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	283	W
Feb 9	WSW	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SSW	SSW	SW	SSW	SW	212	SSW
Feb 10	SSW	SW	SSW	SW	SSW	SSE	SSE	S	S	SSW	WSW	WSW	W	WSW	W	WNW	WNW	W	WNW	WNW	NW	NW	WNW	WNW	263	W
Feb 11	WNW	W	W	W	W	W	W	W	WSW	SW	WSW	WSW	WSW	WSW	WSW	W	WSW	WSW	WSW	W	W	W	WNW	W	264	W
Feb 12	W	W	W	WSW	WSW	W	W	W	W	WSW	SW	SW	SW	SW	SW	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW	230	SW
Feb 13	SSW	WSW	W	WNW	WSW	W	WSW	WSW	W	W	WSW	W	W	W	WNW	NNW	NNW	NNW	NNW	N	N	NNE	N	N	298	WNW
Feb 14	N	N	N	N	N	NNW	N	N	NW	WSW	WSW	W	WSW	WSW	SW	WSW	W	W	W	WNW	NW	NNW	N	NNE	317	NW
Feb 15	N	N	NW	NNW	NNE	NE	NE	ENE	E	ESE	ESE	E	ESE	ESE	ESE	ESE	SE	SE	SSE	SSE	SSE	SSE	SSW	SSW	118	ESE
Feb 16	SSW	SSW	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	SW	WSW	WSW	SW	W	WNW	W	215	SSW
Feb 17	WNW	WNW	NW	NW	NW	NNW	NNW	NNW	NNW	W	SW	SW	WSW	WSW	WSW	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	271	W
Feb 18	W	W	W	NW	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	NE	ENE	NW	NNW	NE	SE	SSE	SE	62	ENE
Feb 19	SE	SE	SSE	SSE	SE	SE	SE	ESE	ESE	ESE	ESE	E	ENE	ENE	ENE	NE	NE	NE	NNE	NNE	NNE	NNE	NNE	WNW	101	E
Feb 20	WNW	WNW	NNW	NNW	NNW	NNW	NW	NW	NNW	NW	NW	NW	WNW	WSW	SW	SW	WSW	NNE	NNE	NNE	NNE	NNE	NE	NE	331	NNW
Feb 21	NE	NE	NE	NE	ENE	ENE	ENE	NNE	NW	NNW	N	N	NNW	N	N	NNW	NNW	NNW	NNW	NNW	N	NNE	NNE	NNE	14	NNE
Feb 22	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NE	NE	N	N	NNE	NNE	NE	NE	E	SE	NNE	NE	NE	NE	NE	40	NE
Feb 23	NE	ENE	ENE	ENE	ENE	ENE	E	E	E	E	E	E	ENE	ENE	E	E	ESE	S	SSW	SW	SW	SW	SW	SW	94	E
Feb 24	SW	SW	SSW	S	SSW	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW	S	SSW	S	S	SSW	SSW	SW	SW	SW	SW	205	SSW
Feb 25	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	SW	SW	SSW	SSW	SSW	SSW	SSW	S	SSE	232	SW
Feb 26	SE	ESE	ESE	ESE	ESE	E	E	E	E	E	E	E	E	E	E	ESE	E	ENE	NNE	WNW	W	WNW	WNW	W	97	E
Feb 27	W	WNW	WNW	WNW	WNW	NW	NW	NW	NNW	NW	NW	NW	NW	NW	NW	NW	WNW	WNW	NW	NNW	NW	NW	NNW	NNE	313	NW
Feb 28	NNE	NNE	NE	NE	NE	ENE	NE	NE	NE	ENE	E	ESE	E	E	E	E	E	E	SE	SE	ESE	ESE	SE	SSE	82	E

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Machine Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED					
Maximum Hourly Value:	28.2	kph	on Feb 13 at hr 16	Hours in Service:	672
Maximum Daily Value:	20.0	kph	on Feb 13	Hours of Data:	665
Minimum Hourly Value:	0.7	kph	on Feb 22 at hr 18	Hours of Missing Data:	7
Minimum Daily Value:	6.0	kph	on Feb 22	Hours of Calibration:	0
Monthly Average:	4.1	kph		Operational Uptime:	99.0
WIND DIRECTION					
Monthly Average:	253	degree	(WSW)		

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	5.6	6.7	6.5	5.3	5.8	8.1	9.2	13.4	15.3	16.5	13.6	17.0	15.2	15.9	13.0	12.1	10.9	9.7	9.1	9.2	8.5	8.2	7.2	7.0	5.3	17.0	10.4
	W	NNE	NNE	NE	N	NNW	NNW	NNW	N	N	N	N	N	N	NNW	NNW	NNW	NW	NW	NNW	NW	N	NNE	ENE			
Feb 2	8.3	8.9	9.5	12.0	13.3	13.5	13.0	14.8	14.6	12.9	15.0	14.7	16.4	16.6	16.9	16.4	15.9	16.6	14.0	16.2	15.7	14.1	13.4	14.4	8.3	16.9	14.0
	E	ESE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	S	S			
Feb 3	9.9	10.5	9.6	6.4	10.7	12.4	14.2	16.7	17.1	17.5	18.9	17.7	16.1	14.4	13.4	9.4	8.5	9.7	10.6	8.7	7.0	6.2	5.8	6.9	5.8	18.9	11.6
	S	S	S	S	S	SSW	SSW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	SW	SW	SSW	SW	SW	SW	SSW	WSW	W			
Feb 4	6.2	6.3	7.3	4.3	1.7	1.9	1.6	4.4	7.6	9.4	12.1	11.7	10.1	10.9	9.7	6.1	2.5	3.0	8.5	10.0	11.0	10.6	10.8	9.6	1.6	12.1	7.4
	SW	SW	WSW	WSW	SSW	S	SW	SW	SW	WSW	W	WNW	NW	NW	NW	NW	WNW	S	S	S	SSW	SSW	SSW	SSW			
Feb 5	13.2	15.0	13.5	12.8	12.0	12.8	10.8	13.8	13.5	14.7	14.5	12.9	12.9	12.9	11.5	10.1	11.0	12.8	11.3	8.8	11.1	11.5	12.1	13.8	8.8	15.0	12.5
	SSW	SSW	SSW	SSW	SSW	SSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	WSW	SW	SW	WSW	W	W			
Feb 6	21.0	25.0	23.7	21.0	17.6	12.9	11.2	13.3	13.1	14.4	13.4	14.2	12.8	12.6	11.0	9.0	11.3	12.7	12.3	13.1	14.5	15.9	14.8	16.6	9.0	25.0	14.9
	WNW	WNW	NW	NW	NW	NW	W	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SSW	SSW	SSW	SW	SW	WSW	WSW	WSW			
Feb 7	16.3	16.3	14.0	15.2	13.6	13.4	17.6	20.1	17.7	17.1	16.9	16.0	**K**	**K**	11.4	8.3	6.4	9.1	12.1	9.6	**K**	**K**	**K**	**K**	6.4	20.1	14.0
	WSW	WSW	WSW	WSW	WSW	W	W	W	W	W	NW	NW	**K**	**K**	NW	WNW	W	WSW	WSW	SW	**K**	**K**	**K**	**K**			
Feb 8	9.6	11.1	9.7	7.7	6.8	9.3	12.1	11.6	10.3	12.5	**NRM**	10.5	8.9	7.7	9.6	12.1	14.3	11.1	9.4	10.1	10.0	10.9	11.1	10.4	6.8	14.3	10.3
	N	NNE	NNE	NNE	N	NNW	NW	NW	NW	WNW	**NRM**	WNW	WNW	WNW	W	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW			
Feb 9	11.5	11.5	11.5	10.8	11.5	10.3	10.9	10.8	8.2	9.9	12.8	13.0	12.7	12.9	12.7	12.9	14.5	14.1	15.2	13.4	12.8	14.0	12.1	13.0	8.2	15.2	12.2
	WSW	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SSW	SSW	SW	SSW	SW			
Feb 10	12.3	12.0	12.3	10.9	8.0	5.1	8.1	9.4	7.0	10.7	8.0	14.8	6.4	18.9	18.6	16.5	12.9	18.5	18.3	21.4	21.7	17.9	14.6	15.0	5.1	21.7	13.3
	SSW	SW	SSW	SW	SSW	SSE	SSE	S	S	SSW	WSW	WSW	W	WSW	W	WNW	WNW	W	WNW	WNW	NW	NW	WNW	WNW			
Feb 11	18.6	16.9	16.8	15.2	14.4	15.6	13.2	14.4	12.7	12.2	16.9	17.3	21.0	19.7	23.6	25.1	16.9	17.2	18.3	15.7	16.5	16.9	11.0	10.5	10.5	25.1	16.5
	WNW	W	W	W	W	W	W	W	WSW	SW	WSW	WSW	WSW	WSW	WSW	W	WSW	WSW	WSW	W	W	W	WNW	W			
Feb 12	11.4	12.2	11.6	11.2	11.4	13.5	18.0	14.8	11.4	10.0	8.5	9.6	9.6	9.1	8.0	6.6	9.5	11.6	12.5	13.4	12.7	14.1	13.6	14.6	6.6	18.0	11.6
	W	W	W	WSW	WSW	W	W	W	W	WSW	SW	SW	SW	SW	SW	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW			
Feb 13	12.8	11.3	13.6	10.0	11.3	18.2	22.8	21.4	22.7	23.4	23.8	25.6	25.0	23.5	21.9	24.1	**28.2**	25.2	22.8	19.1	22.2	19.2	15.0	15.8	10.0	**28.2**	**20.0**
	SSW	WSW	W	WNW	WSW	W	WSW	WSW	W	W	WSW	W	W	W	WNW	NNW	NNW	NNW	NNW	N	N	NNE	N	N			
Feb 14	15.4	16.2	13.0	10.3	8.8	8.3	8.5	5.6	2.5	1.0	3.9	5.7	9.8	8.5	14.3	14.2	11.9	8.5	7.0	9.5	11.9	12.2	10.1	7.9	1.0	16.2	9.4
	N	N	N	N	N	NNW	N	N	NW	WSW	WSW	W	WSW	WSW	SW	WSW	W	W	W	WNW	NW	NNW	N	NNE			
Feb 15	8.4	4.8	4.8	4.4	3.6	3.3	3.5	4.9	5.9	9.2	8.8	6.8	9.5	8.6	6.3	6.1	5.1	5.2	5.1	6.6	8.0	9.1	8.2	11.3	3.3	11.3	6.6
	N	N	NW	NNW	NNE	NE	NE	ENE	E	ESE	ESE	E	ESE	ESE	ESE	ESE	SE	SE	SSE	SSE	SSE	SSE	SSW	SSW			
Feb 16	12.1	13.9	13.7	13.7	15.7	18.9	16.9	15.1	17.5	15.9	15.7	15.7	14.0	13.2	11.8	14.1	11.4	11.8	9.3	9.2	8.8	8.9	10.2	8.7	8.7	18.9	13.2
	SSW	SSW	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	SW	WSW	WSW	SW	W	WNW	W			
Feb 17	9.4	8.3	7.8	9.0	12.9	10.5	10.8	9.1	7.9	2.9	7.5	12.2	17.2	20.6	22.5	20.4	18.1	12.1	8.7	7.2	12.3	7.1	6.9	9.7	2.9	22.5	11.3
	WNW	WNW	NW	NW	NW	NNW	NNW	NNW	NNW	W	SW	SW	WSW	WSW	WSW	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW			
Feb 18	10.3	10.9	6.8	2.7	7.9	10.0	14.0	13.1	13.8	12.6	12.0	9.4	8.9	8.9	6.9	7.6	5.2	2.1	3.0	5.1	1.9	8.5	7.1	6.0	1.9	14.0	8.1
	W	W	W	NW	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	NE	ENE	NW	NNW	NE	SE	SSE	SE			
Feb 19	8.8	10.3	9.8	9.7	7.9	11.0	11.1	11.8	13.6	15.3	12.5	9.9	10.3	9.7	9.0	6.1	5.5	5.4	4.6	8.2	6.8	6.2	6.3	5.0	4.6	15.3	9.0
	SE	SE	SSE	SSE	SE	SE	SE	ESE	ESE	ESE	ESE	E	ENE	ENE	ENE	NE	NE	NE	NNE	NNE	NNE	NNE	NNE	WNW			
Feb 20	6.5	8.4	8.8	9.0	10.5	13.1	10.1	10.1	10.3	8.5	8.1	10.3	9.6	10.6	12.2	9.2	8.0	6.5	8.6	8.2	8.1	9.2	10.6	13.7	6.5	13.7	9.5
	WNW	WNW	NNW	NNW	NNW	NNW	NW	NW	NNW	NW	NW	NW	WNW	WSW	SW	SW	WSW	NNE	NNE	NNE	NNE	NNE	NE	NE			
Feb 21	11.4	13.3	9.1	9.3	11.5	10.8	6.9	3.6	5.5	8.5	11.9	10.3	8.7	12.8	14.4	12.9	11.9	10.1	7.7	9.4	10.4	12.9	13.4	12.3	3.6	14.4	10.4
	NE	NE	NE	NE	ENE	ENE	ENE	NNE	NW	NNW	N	N	NNW	N	N	NNW	NNW	NNW	NNW	NNW	N	NNE	NNE	NNE			
Feb 22	10.2	7.6	6.7	8.3	8.3	8.8	10.1	7.8	5.0	5.0	3.4	3.5	4.0	6.6	5.3	7.4	4.3	3.8	**0.7**	4.4	6.3	4.9	6.0	5.0	**0.7**	10.2	**6.0**
	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NE	NE	N	N	NNE	NNE	NE	NE	E	SE	NNE	NE	NE	NE	NE			
Feb 23	7.8	8.0	8.5	9.0	10.4	10.6	10.5	9.7	9.6	6.6	5.8	5.9	5.1	5.7	5.3	4.1	3.7	4.7	6.8	6.6	6.7	8.3	8.2	7.9	3.7	10.6	7.3
	NE	ENE	ENE	ENE	ENE	ENE	E	E	E	E	E	E	ENE	ENE	E	E	ESE	S	SSW	SW	SW	SW	SW	SW			
Feb 24	6.6	8.7	8.8	9.7	10.8	11.2	10.2	9.3	8.9	9.4	12.9	14.6	16.9	14.6	14.1	13.2	12.7	11.6	9.2	11.2	14.6	17.4	18.5	15.7	6.6	18.5	12.1
	SW	SW	SSW	S	SSW	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW	S	SSW	S	S	SSW	SSW	SW	SW	SW	SW			
Feb 25	15.9	15.4	12.9	14.0	12.4	14.1	16.7	17.1	16.0	19.3	17.9	16.0	15.8	16.2	16.6	15.7	11.0	11.6	10.8	12.1	12.6	11.8	11.9	10.9	10.8	19.3	14.4
	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	SW	SW	SSW	SSW	SSW	SSW	SSW	S	SSE			
Feb 26	9.0	9.3	12.0	11.8	13.3	14.2	16.0	16.4	16.0	14.0	12.1	10.0	9.5	11.2	8.5	7.5	3.8	1.7	3.0	0.9	7.8	7.4	6.9	11.3	0.9	16.4	9.7
	SE	ESE	ESE	ESE	ESE	E	E	E	E	E	E	E	E	E	E	ESE	E	ENE	NNE	WNW	W	WNW	WNW	W			
Feb 27	13.0	12.5	13.0	13.0	14.9	16.0	14.4	16.4	16.7	13.4	13.6	13.3	15.1	16.7	17.5	14.7	12.1	12.4	9.5	7.9	6.6	6.5	8.1	8.9	6.5	17.5	12.8
	W	WNW	WNW	WNW	WNW	NW	NW	NW	NNW	NW	NW	NW	NW	NW	NW	NW	WNW	WNW	NW	NNW	NW	NW	NNW	NNE			
Feb 28	8.7	10.1	8.3	6.4	5.6	5.3	5.4	4.6	3.0	5.0	7.9	7.9	10.3	10.0	7.5	7.6	7.8	6.0	5.2	7.1	7.7	6.8	7.2	6.8	3.0	10.3	7.0
	NNE	NNE	NE	NE	NE	ENE	NE	NE	NE	ENE	E	ESE	E	E	E	E	E	E	SE	SE	ESE	ESE	SE	SSE			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance			
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P**	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Lakeland Industry & Community Association

St. Lina Site - February 2023

Summary of Hour Standard Deviations

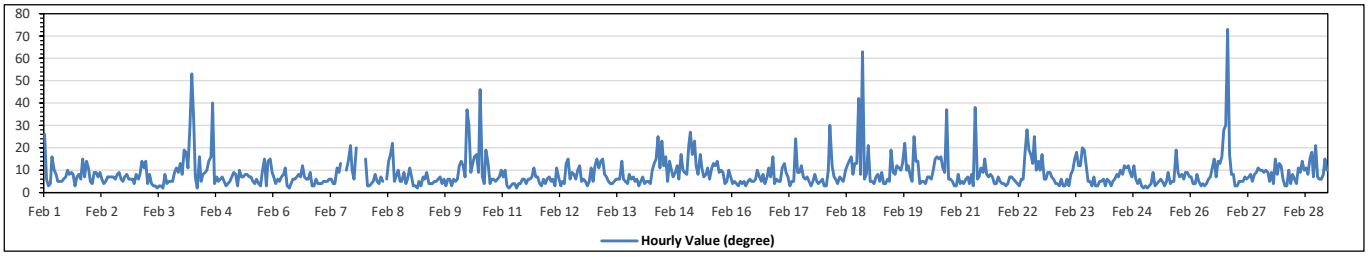
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	73 degree on Feb 26 at hr 19	Hours in Service:	672
		Hours of Data:	665
Minimum Hourly Value:	2 degree on Feb 3 at hr 11	Hours of Missing Data:	7
		Hours of Calibration:	0
		Operational Uptime:	99.0

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
Feb 1	26	6	3	4	16	10	8	5	5	5	6	7	10	8	9	8	3	7	8	6	15	7	14	11	3	26
Feb 2	5	4	9	9	7	9	6	4	5	7	7	7	7	6	8	9	6	5	7	8	6	6	6	4	4	9
Feb 3	8	6	8	14	11	14	4	8	4	3	3	**2**	3	3	**2**	8	4	5	5	5	9	11	9	13	**2**	14
Feb 4	8	19	18	11	29	53	32	7	**2**	16	5	8	9	10	14	16	40	4	7	5	6	7	5	3	**2**	53
Feb 5	4	5	7	9	8	3	10	7	7	8	8	7	7	5	4	6	4	3	9	15	3	14	15	9	3	15
Feb 6	7	4	6	5	7	8	11	3	**2**	4	6	6	7	8	7	12	7	6	6	9	3	3	6	4	**2**	12
Feb 7	4	4	5	5	5	6	6	4	4	11	9	13	**K**	**K**	10	14	21	10	6	20	**K**	**K**	**K**	**K**	4	21
Feb 8	15	3	3	4	5	8	5	4	7	5	**NRM**	6	14	17	22	5	7	10	5	5	9	4	6	11	3	22
Feb 9	7	3	3	**2**	5	3	7	6	9	4	4	4	5	5	6	7	4	6	3	6	6	3	6	5	**2**	9
Feb 10	6	12	14	12	7	37	30	9	13	16	17	9	46	7	4	19	13	4	6	6	5	6	7	10	4	46
Feb 11	7	10	3	**2**	3	4	4	**2**	4	4	6	6	4	6	6	7	11	7	7	4	3	6	4	6	**2**	11
Feb 12	7	5	6	3	11	7	3	5	4	13	15	6	9	8	6	10	12	5	6	5	3	5	11	5	3	15
Feb 13	12	15	11	14	15	8	7	5	4	4	5	6	6	6	14	6	5	4	8	6	7	5	6	3	3	15
Feb 14	5	7	4	5	5	4	10	13	15	25	11	23	12	16	5	14	10	7	9	12	6	17	10	9	4	25
Feb 15	8	21	27	17	23	12	8	17	11	7	8	11	6	11	13	12	14	9	10	9	4	5	10	7	4	27
Feb 16	4	5	4	3	5	4	5	3	5	6	5	5	6	10	7	5	8	4	7	11	7	16	4	6	3	16
Feb 17	5	5	11	13	9	7	3	5	5	24	9	9	12	7	6	7	5	3	5	8	5	4	5	6	3	24
Feb 18	3	3	10	30	12	7	6	4	7	6	5	10	12	14	16	8	13	13	42	8	63	6	8	21	3	63
Feb 19	5	5	4	7	8	5	9	4	4	6	5	19	9	8	12	11	10	13	22	10	12	7	5	25	4	25
Feb 20	14	14	4	5	5	4	7	7	6	10	15	16	15	16	11	9	37	6	6	5	3	3	8	4	3	37
Feb 21	5	4	6	7	4	8	3	38	6	7	11	9	15	8	7	8	7	4	4	7	5	4	4	3	3	38
Feb 22	4	7	7	6	5	4	3	6	6	18	28	19	17	13	25	10	14	10	17	6	6	9	9	7	3	28
Feb 23	6	4	4	3	6	3	3	6	3	8	10	15	18	12	12	20	19	12	5	5	3	7	3	3	3	20
Feb 24	5	5	6	3	6	5	3	5	6	8	7	10	8	12	11	12	9	7	12	6	4	6	3	**2**	**2**	12
Feb 25	3	**2**	3	4	9	3	4	5	6	5	3	5	9	4	5	5	19	9	7	8	6	9	9	7	**2**	19
Feb 26	7	4	4	8	5	3	4	3	4	6	7	11	15	7	14	13	16	28	30	**73**	17	8	8	3	3	**73**
Feb 27	3	5	5	5	7	6	7	8	5	8	9	11	10	10	9	10	9	5	9	4	15	8	13	12	3	15
Feb 28	6	3	3	10	4	8	6	4	11	9	14	10	11	8	15	18	7	21	7	6	6	8	15	10	3	21
Diurnal Minimum	3	2	3	2	3	3	3	2	2	3	3	2	3	3	2	5	3	3	3	4	3	3	3	2		
Diurnal Maximum	26	21	27	30	29	53	32	38	15	25	28	23	46	17	25	20	40	28	42	73	63	17	15	25		

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Machine Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



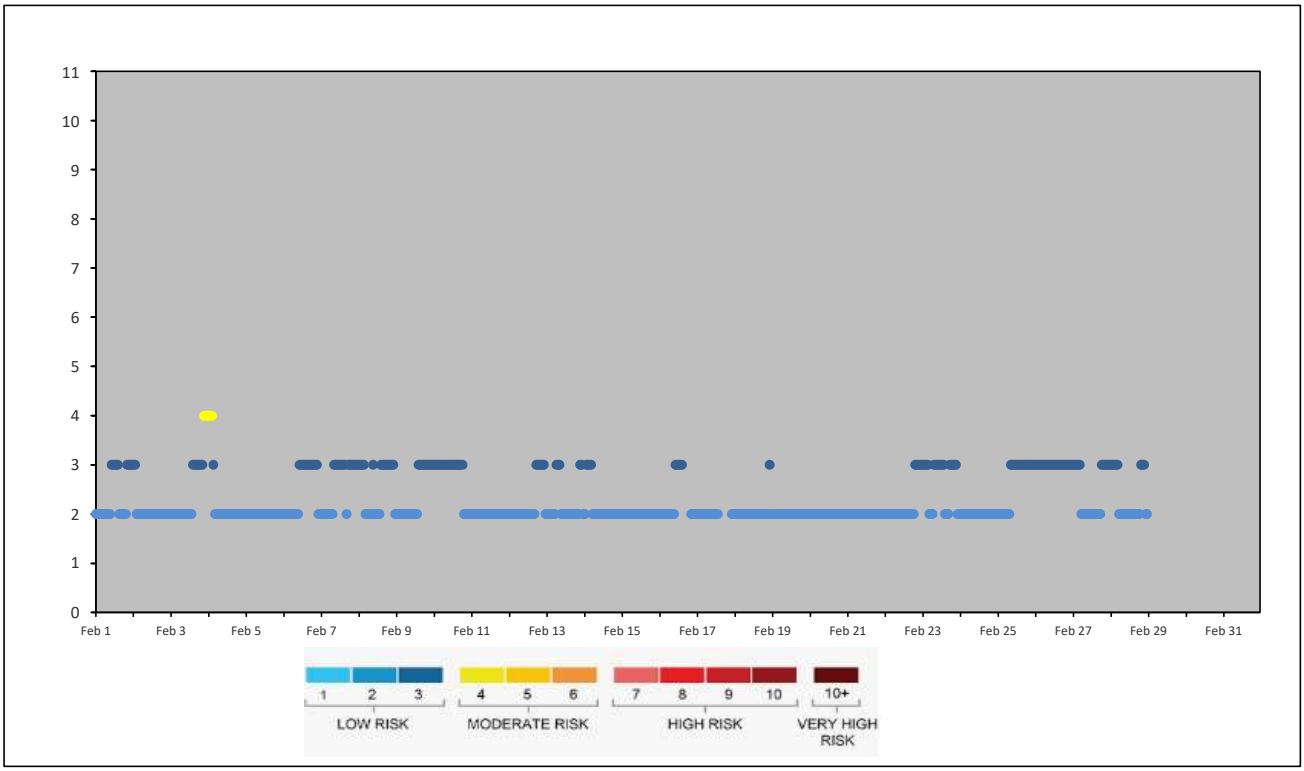
LAC LA BICHE STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - February 2023

AIR QUALITY HEALTH INDEX

Day	Hourly Period Starting at (MST)																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Feb 1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	3	3	3	3
Feb 2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4
Feb 4	4	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 6	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	2	2
Feb 7	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3
Feb 8	3	3	3	3	2	2	2	2	2	3	2	2	2	2	3	3	3	3	3	3	3	3	3	2
Feb 9	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3
Feb 10	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2
Feb 11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2
Feb 13	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2
Feb 14	2	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 16	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	-	-	-	-	-	2	2	2	2
Feb 17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	2	2
Feb 18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2
Feb 19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 21	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 22	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
Feb 23	3	3	3	3	2	2	2	3	3	3	3	3	3	3	2	2	2	3	3	3	3	3	2	2
Feb 24	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 25	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 26	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 27	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3
Feb 28	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

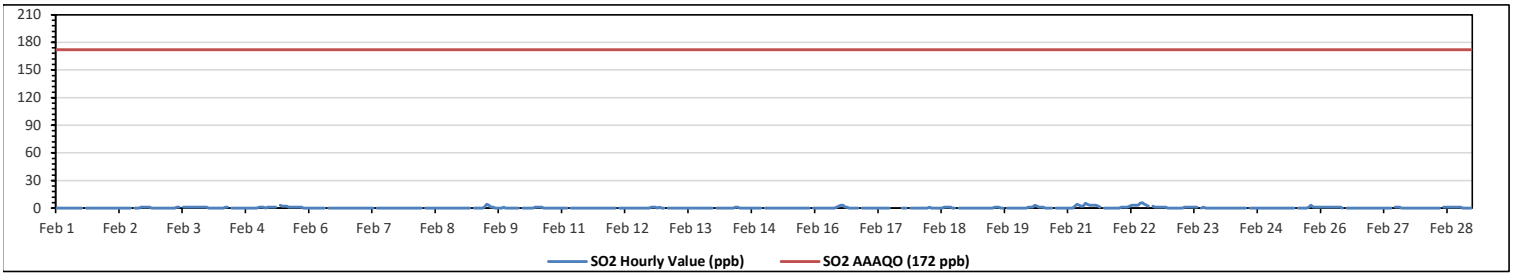
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

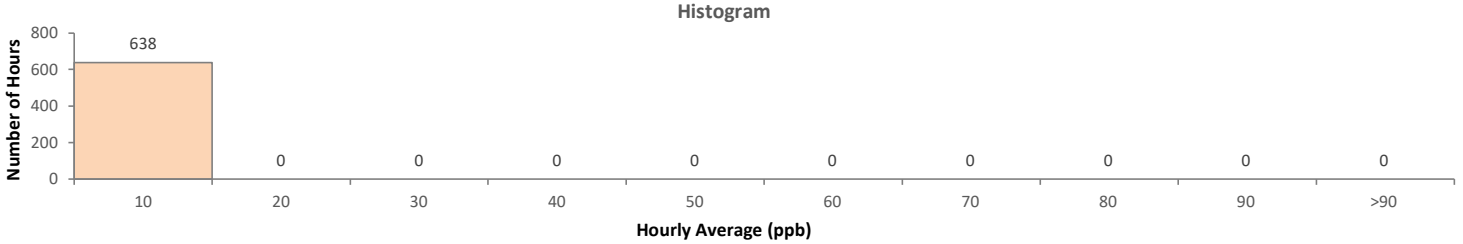
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0		
Maximum Hourly Value:	6 ppb	on Feb 22 at hr 11		Hours in Service:	672		
Maximum Daily Value:	2.0 ppb	on Feb 22		Hours of Data:	638		
Minimum Hourly Value:	0 ppb	on Feb 1 at hr 0		Hours of Missing Data:	0		
Minimum Daily Value:	0.0 ppb	on Feb 1		Hours of Calibration:	34		
Monthly Average:	0.3 ppb			Operational Uptime:	100.0		

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 2	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	1	1	1	1	0	0	0	0	1	0.2
Feb 3	0	0	0	0	0	0	0	0	0	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6
Feb 4	0	0	0	0	0	0	0	0	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Feb 5	1	1	1	0	1	1	1	1	1	S	3	2	2	2	1	1	1	1	1	1	1	0	0	0	0	3	1.0
Feb 6	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 7	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 8	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 9	0	0	0	0	0	S	0	0	0	0	0	1	4	3	1	1	0	0	0	0	1	0	0	0	0	4	0.5
Feb 10	0	0	0	0	S	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 11	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 12	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	1	0.2
Feb 13	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 14	S	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	S	0	1	0.1
Feb 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0.0
Feb 16	0	0	0	0	0	0	0	0	0	0	1	2	3	3	1	1	0	0	0	0	0	S	0	0	0	3	0.5
Feb 17	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	S	0	0	0	0	0	0.0
Feb 18	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	0	S	0	0	0	0	0	1	0.2
Feb 19	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	S	0	0	0	0	0	0	1	0.1
Feb 20	0	0	0	0	0	1	1	1	3	2	1	1	1	0	0	0	0	S	0	0	0	0	0	0	0	3	0.5
Feb 21	0	0	0	2	4	3	2	2	5	4	3	3	3	3	2	1	S	0	0	0	0	0	0	0	0	5	1.6
Feb 22	0	1	1	1	1	2	3	3	3	3	5	6	4	3	2	S	2	1	1	1	1	1	1	0	0	6	2.0
Feb 23	0	0	0	0	0	0	0	1	1	1	1	1	1	1	S	0	1	0	0	0	0	0	0	0	0	1	0.3
Feb 24	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 25	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	3	1	1	1	1	3	0.3
Feb 26	1	1	1	1	1	1	1	1	1	1	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4
Feb 27	0	0	0	0	0	0	0	0	0	0	S	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Feb 28	0	0	0	0	0	0	0	0	0	S	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.4
Diurnal Maximum	1	1	1	2	4	3	3	3	5	4	5	6	4	3	2	1	2	1	1	3	1	1	1	1			
Diurnal Average	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.6	0.5	0.7	0.8	0.9	0.8	0.5	0.3	0.3	0.2	0.3	0.3	0.3	0.1	0.1	0.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



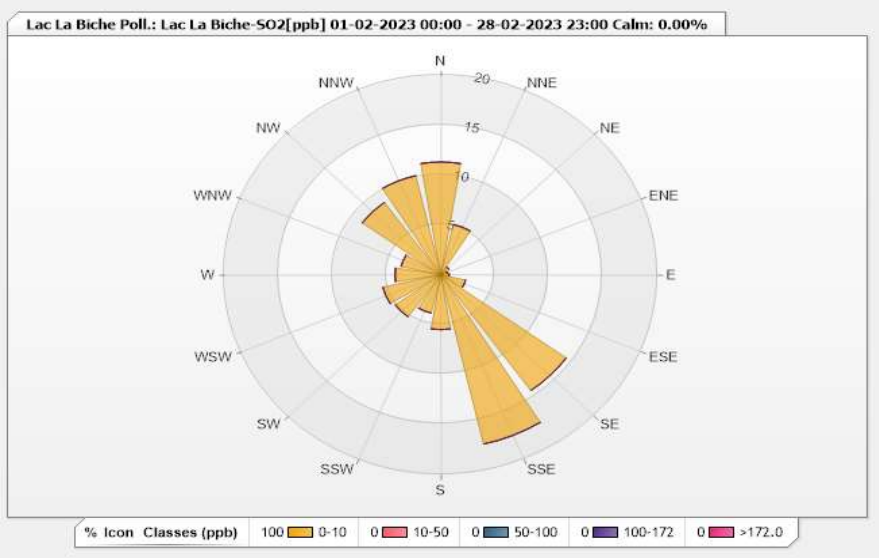


Station: Lac La Biche Poll.: Lac La Biche-SO2[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.94% Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	11.29	0	0	0	0	11.29
NNE	5.17	0	0	0	0	5.17
NE	0.94	0	0	0	0	0.94
ENE	0.63	0	0	0	0	0.63
E	0.78	0	0	0	0	0.78
ESE	2.35	0	0	0	0	2.35
SE	14.26	0	0	0	0	14.26
SSE	17.4	0	0	0	0	17.4
S	5.49	0	0	0	0	5.49
SSW	3.92	0	0	0	0	3.92
SW	5.17	0	0	0	0	5.17
WSW	5.49	0	0	0	0	5.49
W	4.23	0	0	0	0	4.23
WNW	3.76	0	0	0	0	3.76
NW	8.93	0	0	0	0	8.93
NNW	10.19	0	0	0	0	10.19
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

HYDROGEN SULPHIDE (H_2S) in ppb

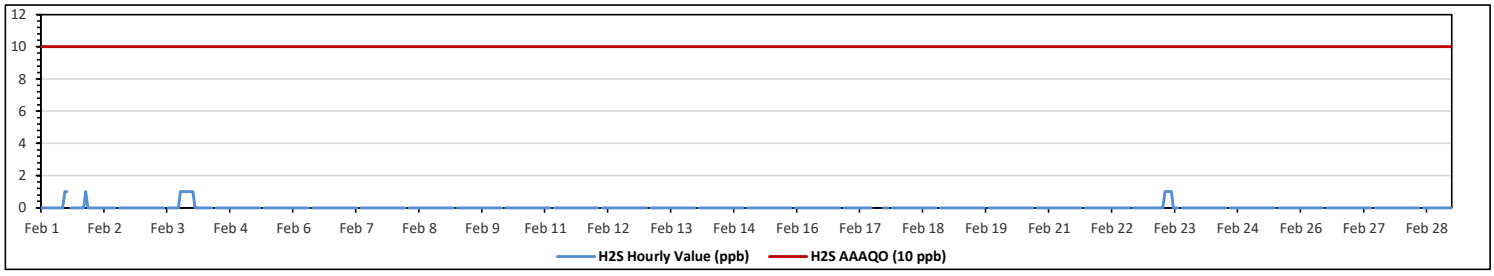
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb

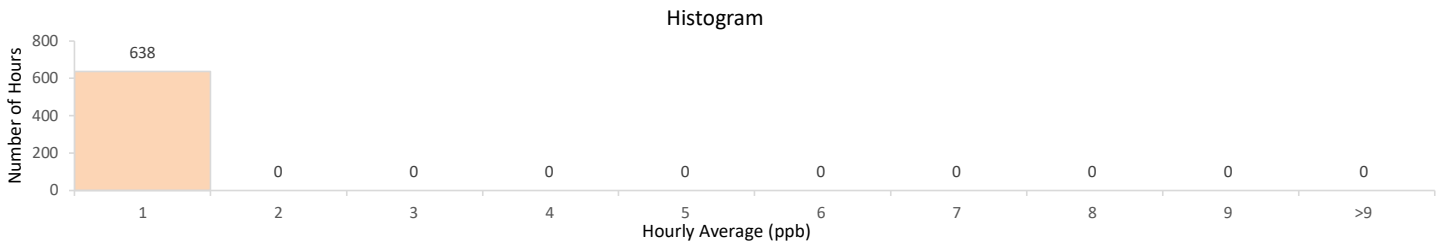
Number of 1-Hour Exceedances:	0		Number of 24-Hour Exceedances:	0		
Maximum Hourly Value:	1	ppb	on Feb 1 at hr 11	Hours in Service:	672	
Maximum Daily Value:	0.0	ppb	on Feb 1	Hours of Data:	638	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	0	
Minimum Daily Value:	0.0	ppb	on Feb 1	Hours of Calibration:	34	
Monthly Average:	0.0	ppb		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	0	0	0	0	0	0	0	0	0	0	1	1	S	0	0	0	0	0	0	0	1	0	0	0.0	1.0	0.0
Feb 2	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 3	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	1	1	1	1	1	0.0	1.0	0.0
Feb 4	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	1.0	0.0
Feb 5	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 6	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 7	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 8	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 9	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 10	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 11	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 12	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 13	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 14	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0.0	0.0	0.0
Feb 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0.0	0.0	0.0
Feb 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0	0.0	0.0
Feb 17	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	S	0	0	0	0	0.0	0.0	0.0
Feb 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0.0	0.0	0.0
Feb 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0	0.0	0.0
Feb 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0	0.0	0.0
Feb 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 23	0	0	0	0	0	0	0	1	1	1	1	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0	1.0	0.0
Feb 24	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 25	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 26	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 27	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 28	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Diurnal Maximum	1	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



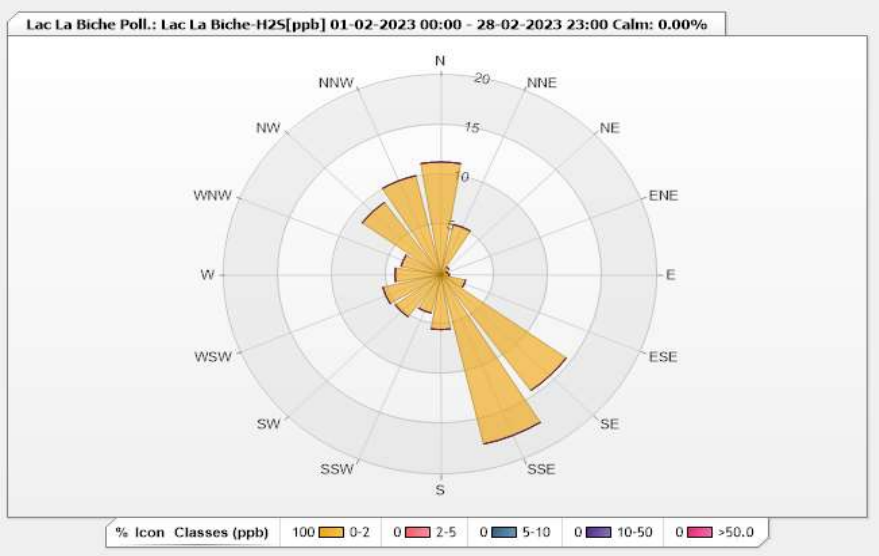


Station: Lac La Biche Poll.: Lac La Biche-H2S[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.94% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	11.29	0	0	0	0	11.29
NNE	5.17	0	0	0	0	5.17
NE	0.94	0	0	0	0	0.94
ENE	0.63	0	0	0	0	0.63
E	0.78	0	0	0	0	0.78
ESE	2.35	0	0	0	0	2.35
SE	14.26	0	0	0	0	14.26
SSE	17.4	0	0	0	0	17.4
S	5.49	0	0	0	0	5.49
SSW	3.92	0	0	0	0	3.92
SW	5.17	0	0	0	0	5.17
WSW	5.49	0	0	0	0	5.49
W	4.23	0	0	0	0	4.23
WNW	3.76	0	0	0	0	3.76
NW	8.93	0	0	0	0	8.93
NNW	10.19	0	0	0	0	10.19
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

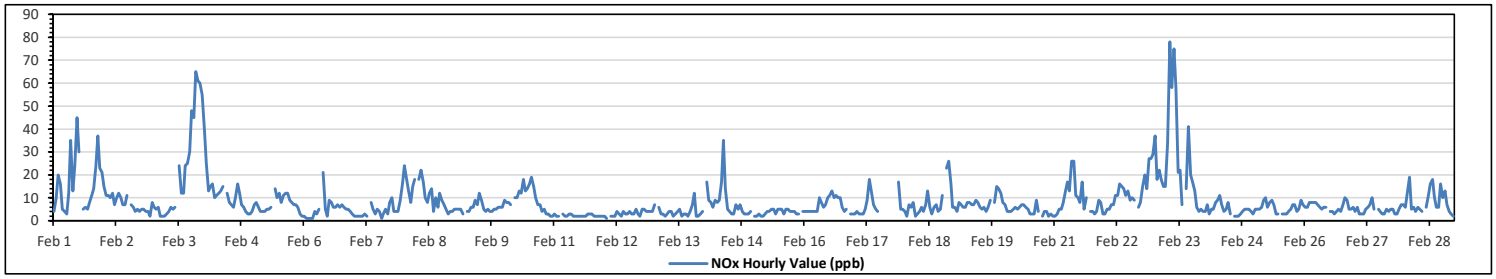
OXIDES OF NITROGEN (NOx) in ppb

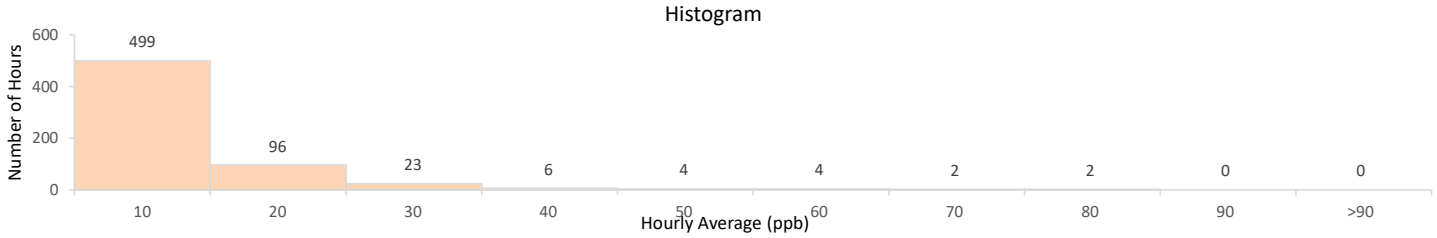
Maximum Hourly Value:	78	ppb	on Feb 23 at hr 7	Hours in Service:	672	
Maximum Daily Value:	26.2	ppb	on Feb 23	Hours of Data:	636	
Minimum Hourly Value:	1	ppb	on Feb 6 at hr 1	Hours of Missing Data:	0	
Minimum Daily Value:	2.3	ppb	on Feb 11	Hours of Calibration:	36	
Monthly Average:	8.4	ppb		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	4	10	20	16	5	4	3	12	35	13	24	45	30	S	5	6	5	8	11	14	24	37	23	21	3	45	16.3
Feb 2	15	11	11	10	12	7	10	12	10	7	7	11	S	7	6	4	5	4	5	5	4	4	2	8	2	15	7.7
Feb 3	6	5	6	2	2	2	3	4	6	5	6	S	24	12	12	24	25	30	48	45	65	61	60	55	2	65	22.1
Feb 4	40	25	13	15	16	10	11	12	13	15	S	12	8	7	6	10	16	12	7	6	4	3	3	4	3	40	11.7
Feb 5	7	8	6	4	4	4	5	5	6	S	14	10	12	8	11	12	12	9	8	7	7	6	3	2	2	14	7.4
Feb 6	2	1	1	1	1	4	3	5	S	21	5	2	9	8	6	6	7	6	7	6	5	5	4	3	1	21	5.1
Feb 7	2	2	2	2	2	3	2	S	8	5	3	5	4	1	3	5	3	8	10	4	4	4	9	16	1	16	4.7
Feb 8	24	18	13	8	15	18	S	18	22	17	10	8	12	14	4	10	6	12	9	7	5	3	4	4	3	24	11.3
Feb 9	5	5	5	5	3	S	4	4	6	6	9	7	12	9	5	4	5	4	4	5	5	6	6	6	3	12	5.7
Feb 10	9	8	8	7	S	10	10	13	12	18	13	14	16	19	15	10	7	7	4	5	3	3	2	2	2	19	9.3
Feb 11	3	2	2	S	3	2	2	3	3	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	3	2.3
Feb 12	2	1	S	2	2	2	4	3	2	4	3	3	4	3	3	5	3	2	5	5	4	4	4	4	1	5	3.2
Feb 13	7	S	6	3	3	2	3	4	4	2	3	4	5	2	3	3	2	4	7	12	2	2	3	4	2	12	3.9
Feb 14	S	17	9	8	6	9	8	9	17	35	14	5	4	3	3	7	5	7	4	3	3	3	4	S	3	35	8.3
Feb 15	2	2	3	2	2	3	4	4	5	5	3	5	5	5	3	5	5	4	4	4	3	3	S	4	2	5	3.7
Feb 16	4	4	4	4	4	4	4	10	8	6	7	10	11	13	10	11	10	10	6	4	5	S	3	3	3	13	6.7
Feb 17	3	4	3	3	3	5	9	18	13	7	5	4	C	C	C	C	C	C	C	14	S	17	5	5	3	18	NA
Feb 18	4	2	7	6	8	2	3	4	6	4	7	13	6	3	6	7	4	5	11	S	23	26	16	6	2	26	7.8
Feb 19	6	4	8	7	6	6	8	8	7	7	9	8	6	5	6	4	6	9	S	8	15	14	12	8	4	15	7.7
Feb 20	7	4	4	4	5	6	5	6	7	7	6	5	3	3	3	9	4	S	2	4	4	2	3	2	2	9	4.6
Feb 21	2	3	5	5	8	13	17	13	26	26	11	10	8	17	5	10	S	4	4	3	4	9	8	3	2	26	9.3
Feb 22	3	5	5	7	7	11	11	16	15	14	11	13	9	10	9	S	6	8	15	20	14	27	27	29	3	29	12.7
Feb 23	37	18	22	18	15	15	34	78	58	75	58	21	22	7	S	14	41	20	17	13	6	4	5	4	4	78	26.2
Feb 24	4	7	3	5	5	8	9	11	7	4	5	8	3	S	2	2	2	3	4	5	5	5	4	3	2	11	5.0
Feb 25	5	5	5	6	9	10	6	8	9	7	3	3	S	3	3	3	4	5	7	7	4	5	9	7	3	10	5.8
Feb 26	6	6	8	8	8	8	7	6	5	6	6	S	4	4	3	4	5	4	7	10	9	5	5	6	3	10	6.1
Feb 27	4	6	3	3	3	5	6	7	10	5	S	5	4	3	3	5	4	5	5	3	3	5	7	7	3	10	4.8
Feb 28	6	12	19	5	6	4	6	5	4	S	6	11	16	18	10	6	6	16	10	13	7	4	3	2	2	19	8.5
Diurnal Maximum	40	25	22	18	16	18	34	78	58	75	58	45	30	19	15	24	41	30	48	45	65	61	60	55			
Diurnal Average	8.1	7.2	7.4	6.1	6.0	6.6	7.3	11.0	12.0	12.4	9.6	9.4	9.6	7.4	5.7	7.2	7.7	8.0	8.6	8.7	8.9	10.0	8.7	8.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



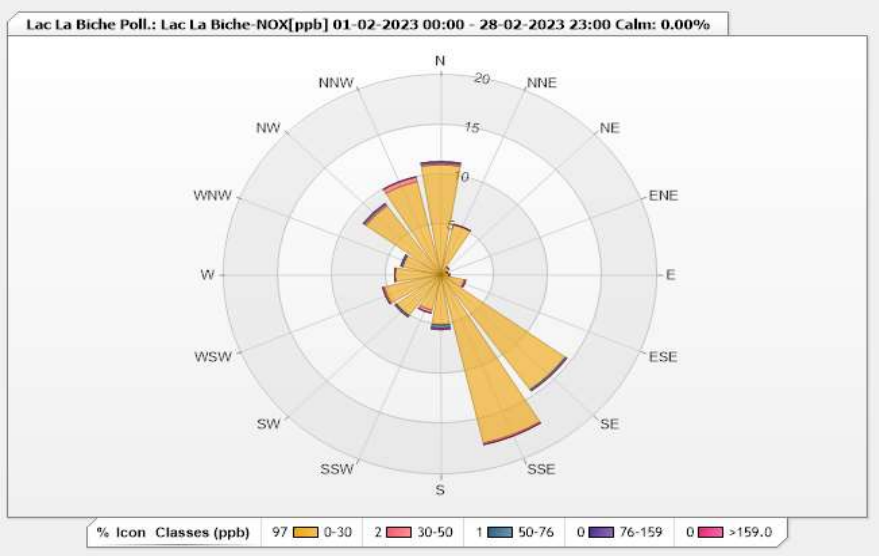


Station: Lac La Biche Poll.: Lac La Biche-NOX[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.64% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	11.01	0.16	0.16	0	0	11.33
NNE	5.19	0	0	0	0	5.19
NE	0.94	0	0	0	0	0.94
ENE	0.63	0	0	0	0	0.63
E	0.79	0	0	0	0	0.79
ESE	2.2	0.16	0	0	0	2.36
SE	14.15	0	0.16	0	0	14.31
SSE	17.3	0.16	0	0	0	17.46
S	5.03	0	0.31	0.16	0	5.5
SSW	3.62	0.31	0	0	0	3.93
SW	5.03	0	0.16	0	0	5.19
WSW	5.35	0.16	0	0	0	5.51
W	4.25	0	0	0	0	4.25
WNW	3.62	0	0.16	0	0	3.78
NW	8.49	0.16	0.16	0	0	8.81
NNW	9.59	0.47	0	0	0	10.06
Summary	97.19	1.58	1.11	0.16	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

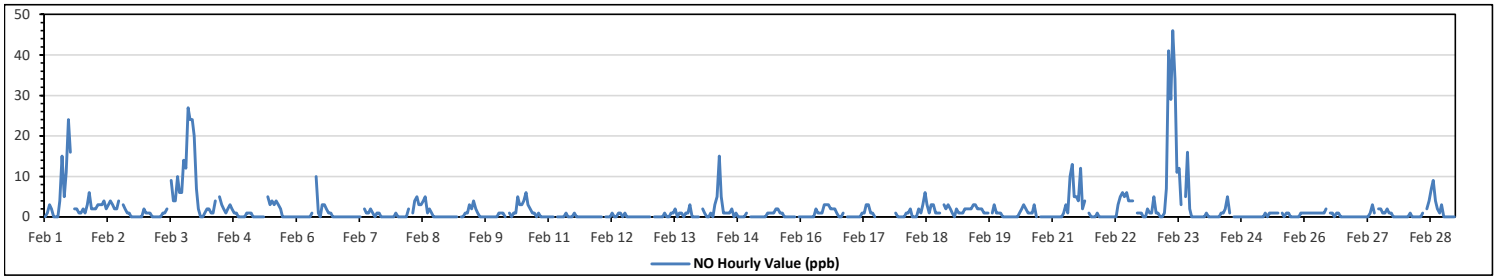
NITRIC OXIDE (NO) in ppb

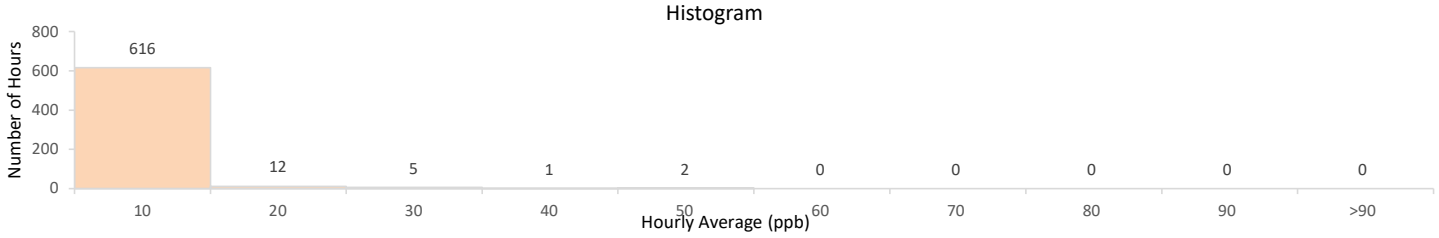
Maximum Hourly Value:	46	ppb	on Feb 23 at hr 9	Hours in Service:	672
Maximum Daily Value:	9.3	ppb	on Feb 23	Hours of Data:	636
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	0
Minimum Daily Value:	0.1	ppb	on Feb 11	Hours of Calibration:	36
Monthly Average:	1.7	ppb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0	1	3	2	0	0	0	4	15	5	11	24	16	S	2	2	1	1	2	1	3	6	2	2	0	24	4.5
Feb 2	2	3	3	3	4	2	3	4	3	2	2	4	S	3	2	1	1	0	0	0	0	0	0	2	0	4	1.9
Feb 3	1	1	1	0	0	0	0	0	1	1	2	S	9	4	4	10	6	6	14	12	27	24	24	20	0	27	7.3
Feb 4	7	2	0	0	1	2	2	1	1	4	S	5	3	2	1	2	3	2	1	1	0	0	0	0	0	7	1.7
Feb 5	1	1	1	0	0	0	0	0	0	S	5	3	4	3	4	3	2	0	0	0	0	0	0	0	0	5	1.2
Feb 6	0	0	0	0	0	0	0	1	S	10	1	0	3	3	2	1	1	0	0	0	0	0	0	0	0	10	1.0
Feb 7	0	0	0	0	0	0	0	S	2	1	1	2	1	0	1	1	0	0	0	0	0	0	0	1	0	2	0.4
Feb 8	0	0	0	0	0	2	S	1	4	5	3	3	4	5	1	2	1	0	0	0	0	0	0	0	0	5	1.3
Feb 9	0	0	0	0	0	S	0	0	1	1	3	2	4	2	1	0	0	0	0	0	0	0	0	0	0	4	0.6
Feb 10	1	1	1	0	S	1	0	1	1	5	3	3	4	6	3	2	1	1	0	1	0	0	0	0	0	6	1.5
Feb 11	0	0	0	S	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Feb 12	0	0	S	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 13	0	S	0	0	0	0	0	1	0	0	1	1	2	0	1	1	0	1	1	3	0	0	0	0	0	3	0.5
Feb 14	S	2	1	0	0	1	0	3	5	15	5	1	1	1	1	2	0	1	0	0	0	0	1	S	0	15	1.8
Feb 15	0	0	0	0	0	0	0	0	1	1	1	1	2	2	1	1	0	0	0	0	0	0	S	0	0	2	0.4
Feb 16	0	0	0	0	0	0	0	2	1	1	1	3	3	3	2	2	2	1	0	0	1	S	0	0	0	3	1.0
Feb 17	0	0	0	0	0	1	1	3	3	1	1	0	C	C	C	C	C	C	C	1	S	1	0	0	0	3	NA
Feb 18	0	0	1	1	2	0	0	0	2	1	3	6	3	1	3	3	1	1	1	S	3	2	3	2	0	6	1.7
Feb 19	1	0	2	1	1	1	2	2	2	2	3	3	2	2	2	1	1	1	S	1	3	1	1	1	0	3	1.6
Feb 20	0	0	0	0	0	0	0	0	1	2	3	2	1	1	1	3	0	S	0	0	0	0	0	0	0	3	0.6
Feb 21	0	0	0	0	0	1	3	1	10	13	5	5	4	12	2	4	S	1	0	0	0	1	0	0	0	13	2.7
Feb 22	0	0	0	0	0	0	0	3	5	6	5	6	4	4	4	S	1	1	1	0	0	2	1	1	0	6	1.9
Feb 23	5	1	1	0	0	1	7	41	29	46	34	11	12	3	S	5	16	2	0	0	0	0	0	0	0	46	9.3
Feb 24	0	1	0	0	0	0	0	0	1	1	2	5	1	S	0	0	0	0	0	0	0	0	0	0	0	5	0.5
Feb 25	0	0	0	0	0	1	0	1	1	1	1	1	S	1	0	1	1	0	0	0	0	0	1	1	0	1	0.5
Feb 26	1	1	1	1	1	1	1	1	1	1	2	S	1	1	0	1	1	0	0	0	0	0	0	0	0	2	0.7
Feb 27	0	0	0	0	0	0	0	1	3	1	S	2	2	1	1	2	1	1	0	0	0	0	0	0	0	3	0.7
Feb 28	0	0	1	0	0	0	0	0	1	S	2	4	7	9	4	2	1	3	0	0	0	0	0	0	0	9	1.5
Diurnal Maximum	7	3	3	3	4	2	7	41	29	46	34	24	16	12	4	10	16	6	14	12	27	24	24	20			
Diurnal Average	0.7	0.5	0.6	0.3	0.3	0.5	0.7	2.6	3.5	4.9	3.9	3.7	3.8	2.8	1.7	2.0	1.6	0.9	0.8	0.7	1.4	1.4	1.2	1.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



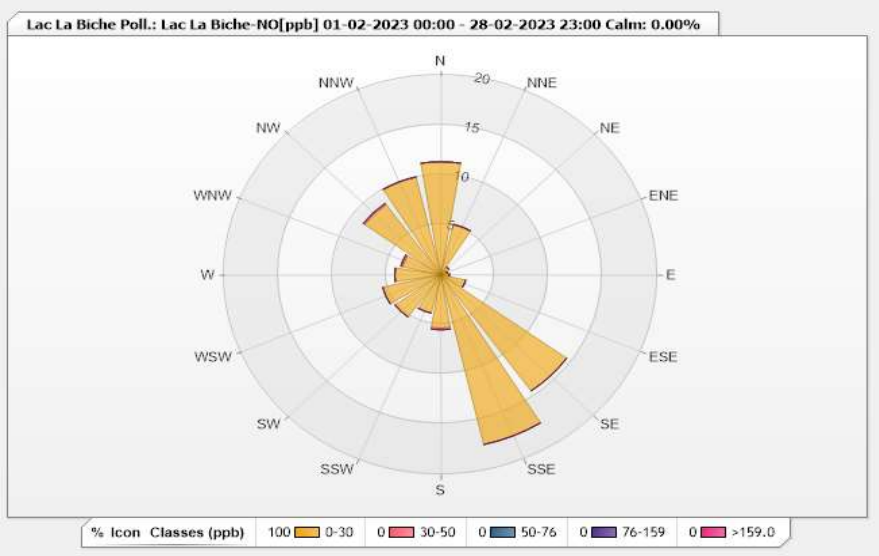


Station: Lac La Biche Poll.: Lac La Biche-NO[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.64% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	11.32	0	0	0	0	11.32
NNE	5.19	0	0	0	0	5.19
NE	0.94	0	0	0	0	0.94
ENE	0.63	0	0	0	0	0.63
E	0.79	0	0	0	0	0.79
ESE	2.36	0	0	0	0	2.36
SE	14.31	0	0	0	0	14.31
SSE	17.45	0	0	0	0	17.45
S	5.35	0.16	0	0	0	5.51
SSW	3.93	0	0	0	0	3.93
SW	5.19	0	0	0	0	5.19
WSW	5.5	0	0	0	0	5.5
W	4.25	0	0	0	0	4.25
WNW	3.62	0.16	0	0	0	3.78
NW	8.65	0.16	0	0	0	8.81
NNW	10.06	0	0	0	0	10.06
Summary	100	0.48	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb

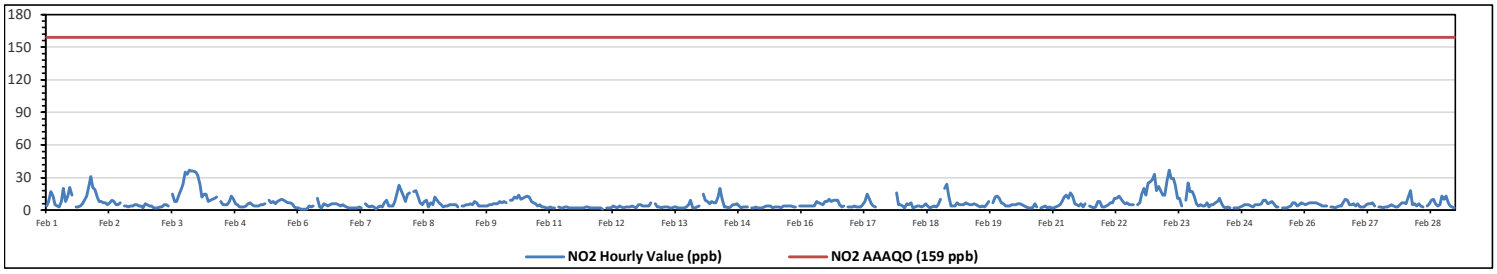
Number of 1-Hour Exceedances: 0

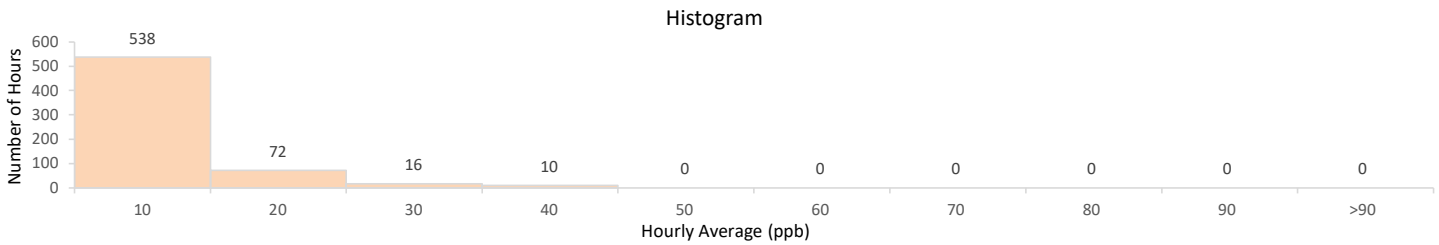
Maximum Hourly Value:	37	ppb	on Feb 3 at hr 20	Hours in Service:	672	
Maximum Daily Value:	17.0	ppb	on Feb 23	Hours of Data:	636	
Minimum Hourly Value:	1	ppb	on Feb 6 at hr 1	Hours of Missing Data:	0	
Minimum Daily Value:	2.3	ppb	on Feb 11	Hours of Calibration:	36	
Monthly Average:	6.7	ppb		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	4	8	17	13	5	4	3	8	20	8	13	21	14	S	3	3	4	6	9	13	21	31	21	19	3	31	11.7
Feb 2	12	8	8	7	7	5	7	9	8	5	5	7	S	4	4	3	4	4	5	5	4	4	2	6	2	12	5.8
Feb 3	5	4	4	2	2	2	3	3	5	5	4	S	15	8	8	14	19	24	35	33	37	36	36	35	2	37	14.7
Feb 4	32	24	12	15	15	8	9	10	11	12	S	8	5	5	5	8	13	10	6	5	3	3	3	4	3	32	9.8
Feb 5	6	7	5	4	4	4	5	5	6	S	9	7	8	6	8	9	10	9	8	7	7	6	3	2	2	10	6.3
Feb 6	2	1	1	1	1	4	3	4	S	11	3	2	6	5	4	5	6	6	6	5	4	5	4	3	1	11	4.0
Feb 7	2	2	2	2	2	3	2	S	6	4	3	4	3	1	3	4	3	7	9	4	4	4	8	16	1	16	4.3
Feb 8	23	18	13	8	15	16	S	17	18	12	7	5	8	9	3	7	5	12	9	7	5	3	4	4	3	23	9.9
Feb 9	5	5	5	5	3	S	4	4	5	5	6	5	8	7	4	4	4	4	4	5	5	6	6	6	3	8	5.0
Feb 10	8	7	8	7	S	9	9	12	11	14	10	11	12	13	12	8	7	6	4	5	3	3	2	2	2	14	8.0
Feb 11	3	2	2	S	3	2	2	3	3	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	3	2.3
Feb 12	2	1	S	2	2	2	4	3	2	4	3	2	3	3	3	4	3	2	5	5	4	4	4	4	1	5	3.1
Feb 13	7	S	6	3	3	2	3	3	3	2	2	3	3	2	2	2	2	3	5	9	2	2	3	4	2	9	3.3
Feb 14	S	15	9	8	6	8	7	7	12	20	10	3	3	2	3	5	5	6	4	2	3	3	3	S	2	20	6.5
Feb 15	2	2	3	2	2	2	3	4	4	4	2	3	3	3	2	4	4	4	4	4	3	3	S	4	2	4	3.1
Feb 16	4	4	4	4	4	4	4	8	7	6	5	8	8	10	8	9	9	9	5	3	4	S	3	3	3	10	5.8
Feb 17	3	4	3	3	3	5	8	15	11	6	4	3	C	C	C	C	C	C	C	13	S	16	5	5	3	16	NA
Feb 18	4	2	6	5	7	2	3	4	4	3	4	6	4	2	3	4	3	5	10	S	20	24	13	4	2	24	6.2
Feb 19	4	4	7	5	5	5	7	6	5	5	6	5	4	3	4	3	5	8	S	7	12	13	11	7	3	13	6.1
Feb 20	6	4	4	4	5	5	5	6	6	5	4	3	2	2	2	6	3	S	2	3	4	2	3	2	2	6	3.8
Feb 21	2	3	4	5	8	12	14	11	16	13	6	5	4	6	3	6	S	4	3	2	3	8	8	3	2	16	6.5
Feb 22	3	4	5	7	7	11	11	13	11	8	6	7	5	5	5	S	5	7	15	20	14	25	26	28	3	28	10.8
Feb 23	33	18	22	18	14	14	27	37	29	29	23	11	11	4	S	9	25	17	17	13	6	4	5	4	4	37	17.0
Feb 24	4	7	3	5	5	7	8	11	6	3	2	3	2	S	2	2	2	3	4	5	5	5	4	3	2	11	4.4
Feb 25	5	5	5	6	9	9	6	7	8	6	3	3	S	2	2	2	3	4	7	7	4	5	7	6	2	9	5.3
Feb 26	5	6	7	7	7	7	6	5	4	4	4	S	3	3	2	3	4	4	7	10	9	5	5	6	2	10	5.3
Feb 27	4	6	3	3	3	5	6	6	7	4	S	3	3	2	3	3	4	5	4	3	3	5	7	7	2	7	4.3
Feb 28	6	12	18	5	6	4	6	4	3	S	4	6	9	10	6	4	5	13	10	13	7	4	3	2	2	18	7.0
Diurnal Maximum	33	24	22	18	15	16	27	37	29	29	23	21	15	13	12	14	25	24	35	33	37	36	36	35			
Diurnal Average	7.3	6.8	6.9	5.8	5.7	6.0	6.5	8.3	8.6	7.7	5.8	5.6	5.9	4.8	4.1	5.1	6.1	7.1	7.7	7.8	7.3	8.6	7.4	7.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



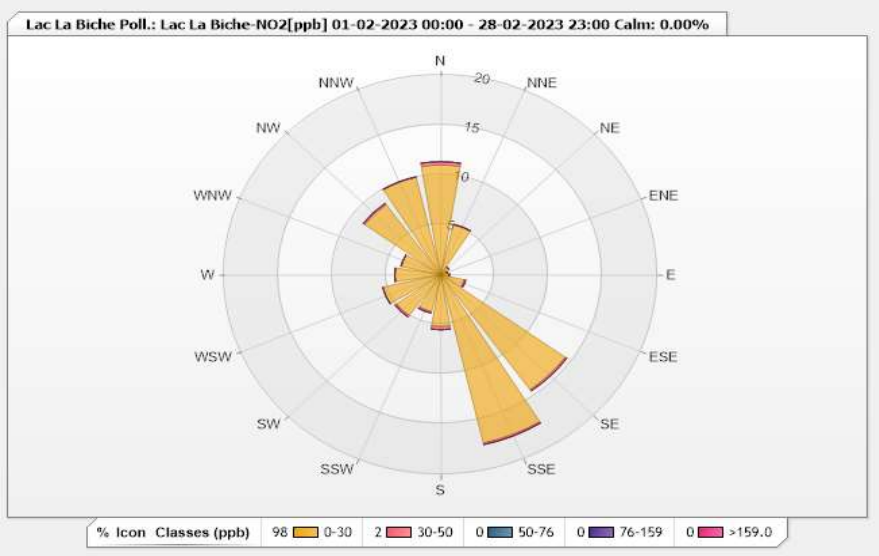


Station: Lac La Biche Poll.: Lac La Biche-NO2[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.64% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	11.01	0.31	0	0	0	11.32
NNE	5.19	0	0	0	0	5.19
NE	0.94	0	0	0	0	0.94
ENE	0.63	0	0	0	0	0.63
E	0.79	0	0	0	0	0.79
ESE	2.2	0.16	0	0	0	2.36
SE	14.15	0.16	0	0	0	14.31
SSE	17.3	0.16	0	0	0	17.46
S	5.19	0.31	0	0	0	5.5
SSW	3.77	0.16	0	0	0	3.93
SW	5.03	0.16	0	0	0	5.19
WSW	5.5	0	0	0	0	5.5
W	4.25	0	0	0	0	4.25
WNW	3.77	0	0	0	0	3.77
NW	8.65	0.16	0	0	0	8.81
NNW	10.06	0	0	0	0	10.06
Summary	98.43	1.58	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

OZONE (O_3) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb

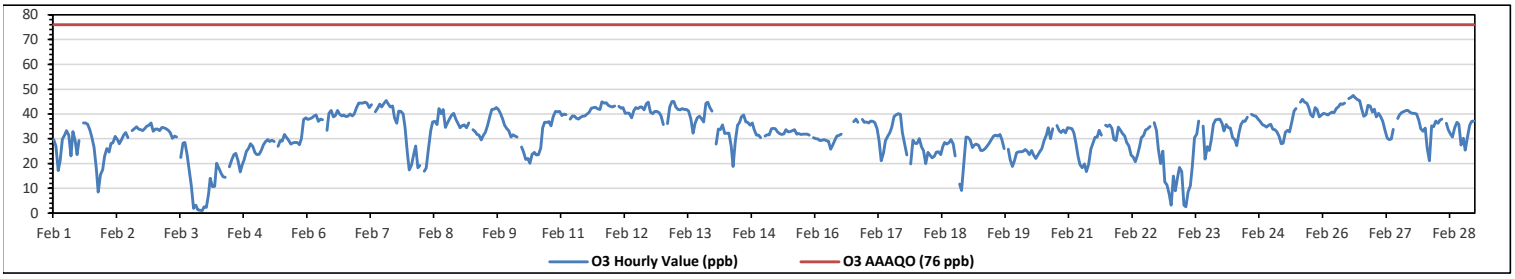
Number of 1-Hour Exceedances: 0

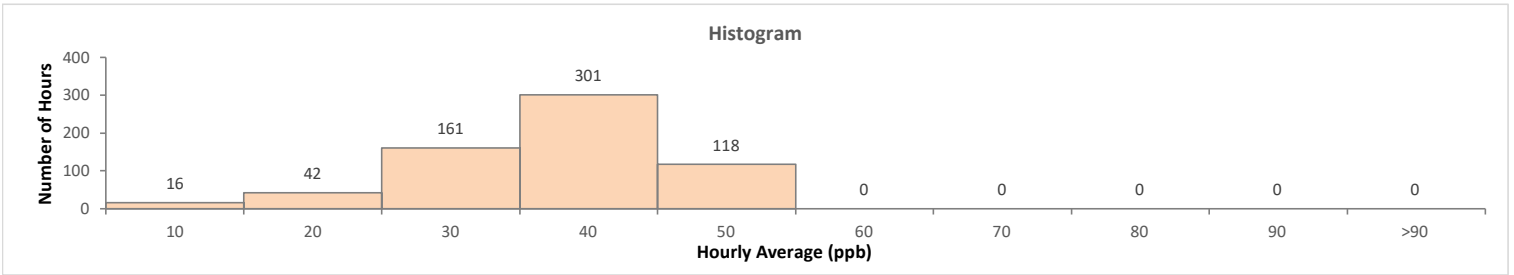
Maximum Hourly Value:	47.5	ppb	on Feb 26 at hr 14	Hours in Service:	672
Maximum Daily Value:	42.8	ppb	on Feb 26	Hours of Data:	638
Minimum Hourly Value:	1.0	ppb	on Feb 3 at hr 22	Hours of Missing Data:	0
Minimum Daily Value:	18.5	ppb	on Feb 4	Hours of Calibration:	34
Monthly Average:	32.2	ppb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	29.6	26.9	17.1	21	29.8	31.5	33.3	31.4	23	32.9	29.2	23.6	29.2	S	36.4	36.4	35.9	33.5	30.8	26.6	18.1	8.5	15.5	17.5	8.5	36.4	26.9
Feb 2	22.9	26.1	24.6	28.1	28.4	30.9	29.6	28	29.7	31.6	32.5	30.5	S	33.2	34.1	34.8	33.9	33.7	33.3	34.1	35.1	35.5	36.4	33	22.9	36.4	31.3
Feb 3	33.9	33.9	33.2	34.6	34.4	34.1	33.4	32.5	30.2	31	30.7	S	22.4	28.3	28.6	23.4	16.7	11.1	1.9	3.2	1.3	1.1	1	2.6	**1.0**	34.6	21.9
Feb 4	2.3	7.8	14	10.7	10.8	20.1	18.1	16.1	14.7	14.4	S	18.6	21.4	23.6	24.2	21.1	16.6	19.5	21.5	24.8	26.2	28	26.9	24.4	2.3	28.0	**18.5**
Feb 5	23.6	23.7	25.4	27.4	28.8	29.7	28.9	29.4	28.8	S	26.9	29.2	29	31.7	30.4	29.4	27.9	28.4	28.5	28.5	27.6	30.1	37.7	38.5	23.6	38.5	29.1
Feb 6	37.7	38	38.4	39.2	39.5	37	37.9	37.6	S	33.4	40.3	41.5	38.8	39.4	41.5	40	39.3	39.5	39	39.1	39.9	39.3	39.9	42.4	33.4	42.4	39.1
Feb 7	44.4	44.3	44.4	44.7	44.3	42.5	43.7	S	40.9	42.3	44	42.8	44.2	45.4	44.1	42.8	43.2	38.5	36.2	41.2	41.1	40	34.5	24.5	24.5	45.4	41.5
Feb 8	17.4	19.3	23	27.1	18.2	19.2	S	16.9	18.1	25.9	33.1	36.8	37	35.7	42.1	40.1	41.8	34.6	36.3	38.1	39.5	40.2	37.7	36.2	16.9	42.1	31.1
Feb 9	34.5	35.3	35.6	34.5	36.4	S	33.6	32.9	31.7	31.4	29.5	31.5	32.6	35.4	39.1	41.7	41.9	42.6	41.9	40.3	37.9	35.5	34.1	33.3	29.5	42.6	35.8
Feb 10	30.8	31.6	31	30.7	S	26.7	24.7	21.7	22.1	20.2	23.8	24.5	23.5	23.6	26.4	34.5	36.6	36.6	36.9	35.2	39	41	40.9	41.1	20.2	41.1	30.6
Feb 11	39.4	39.9	39.7	S	37.9	39.2	39.1	38.3	37.9	38.7	39.1	39.3	40	40.7	42.3	42.6	42.7	42	41.8	44.9	44.3	44.5	43.5	43.1	37.9	44.9	40.9
Feb 12	42.8	43.2	S	43.1	42.3	42.6	40.3	40.4	40.2	38.5	41.4	42.5	42.1	42.8	42.9	41.6	44.1	44.8	40.6	40.1	41.1	41.1	40.5	39.3	38.5	44.8	41.7
Feb 13	35.7	S	36.1	42.9	45	45	42.9	41.7	41.6	42.2	41.8	41.8	41.2	38	32.3	36.1	38.5	39.1	38.2	36.8	44.2	44.7	42.7	41.2	32.3	45.0	40.4
Feb 14	S	27.8	33.9	33.6	35.6	32.1	32.3	32.3	27.2	18.8	29	35.4	36.5	38.9	39.6	36.8	36.7	35.4	36.4	33.7	31.5	31.4	30.5	S	18.8	39.6	33.0
Feb 15	31.1	31.6	31.6	34.1	34.2	34.1	32.8	32.1	31.7	32	33.6	32.8	32.9	33.2	33.7	31.9	32.1	31.7	31.8	31.8	31.8	31.5	S	30.5	30.5	34.2	32.4
Feb 16	30.1	29.9	29.3	29.4	29.6	29.2	29	25.8	27.3	29.4	31	31.3	31.9	C	C	C	C	C	36.9	37.9	36.7	S	37.7	36.7	25.8	37.9	31.6
Feb 17	36.8	36.4	37.2	37.1	36.5	34.1	29.4	21.2	24.3	29.1	30.9	32.5	34.7	39	39.6	40.1	39.8	32.5	28	23.4	S	19.9	29.4	28.1	19.9	40.1	32.2
Feb 18	28.1	30.1	26.7	25.3	20	24.5	23.5	22.3	22.9	24.6	24.7	23.6	26.7	28.5	27.8	28.5	29.6	27.8	23.1	S	11.7	9.1	20	30.8	9.1	30.8	24.3
Feb 19	30.6	29.5	26.5	27.5	27.8	27.3	25.2	25.2	26	27	28.1	29.7	31	31.4	31.1	31.7	29.7	26.1	S	25.8	21.5	18.8	21	24.4	18.8	31.7	27.1
Feb 20	24.7	24.7	24.9	25.7	25	23.6	25.2	23.4	22.1	23.6	24.8	26.1	29.2	31.5	34.4	30.1	34	S	35.3	33.3	32.5	33.5	32.4	34.4	22.1	35.3	28.5
Feb 21	34.3	34.1	32.4	28.6	22.9	19.6	18.2	19.9	16.8	19.6	25.8	28	30.6	30.7	33.4	31.5	S	35.4	35	35.6	34.2	29.8	29.2	34.7	16.8	35.6	28.7
Feb 22	33.5	32.1	31.1	28.6	27	23.3	22.6	20.7	23.4	26.7	30.4	31.3	33.5	34.1	35	S	36.5	33.4	25.8	20	25	12.6	11.3	7.5	7.5	36.5	26.3
Feb 23	3.2	15	9	14.4	18.4	16.7	3.2	2.6	8.6	11.1	18.6	30.4	31.9	37.2	S	35.1	21.8	26.8	25.3	29.2	35.9	37.6	37.8	37.9	2.6	37.9	22.1
Feb 24	36.2	33.1	35.7	34.5	34.3	30.5	29.6	27.2	32.4	35.7	37.2	37	38.7	S	39.8	39.4	39.1	38.1	37.1	35.7	35.3	34.7	35.5	35.9	27.2	39.8	35.3
Feb 25	33.8	33.7	32.9	31	28	28.3	32.6	33.4	32.8	36.8	41.2	42.2	S	44.8	45.9	44.8	44.3	42.6	39.7	38.9	42.5	41.8	38.8	39.5	28.0	45.9	37.8
Feb 26	40.3	40	39.5	40.2	40.8	40.5	42.1	43	44.1	43.8	44.3	S	46.2	46.7	**47.5**	46.6	45.8	45.4	42.1	39.1	39.7	43.5	43.3	40.8	39.1	**47.5**	**42.8**
Feb 27	41.9	38.8	40.2	38.9	37.2	33.5	30.3	29.7	29.9	33.8	S	38.2	39.7	40.7	41.1	41.4	41.5	40.7	40.3	40.3	39.9	37.4	34	33	29.7	41.9	37.5
Feb 28	34.3	26.3	21.1	35.2	34.9	37.2	36.2	37.5	37.9	S	36.2	33.7	31.8	30.8	34.4	36.6	35.9	27.5	30.2	25.4	30.8	35.5	37	37.2	21.1	37.9	33.2
Diurnal Maximum	44.4	44.3	44.4	44.7	45.0	45.0	43.7	43.0	44.1	43.8	44.3	42.8	46.2	46.7	47.5	46.6	45.8	45.4	42.1	44.9	44.3	44.7	43.5	43.1			
Diurnal Average	30.9	30.9	30.2	31.4	31.4	30.9	30.3	28.3	28.4	29.8	32.6	32.9	33.7	35.4	36.5	36.1	35.6	34.1	33.1	32.7	32.8	31.4	32.2	32.2			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



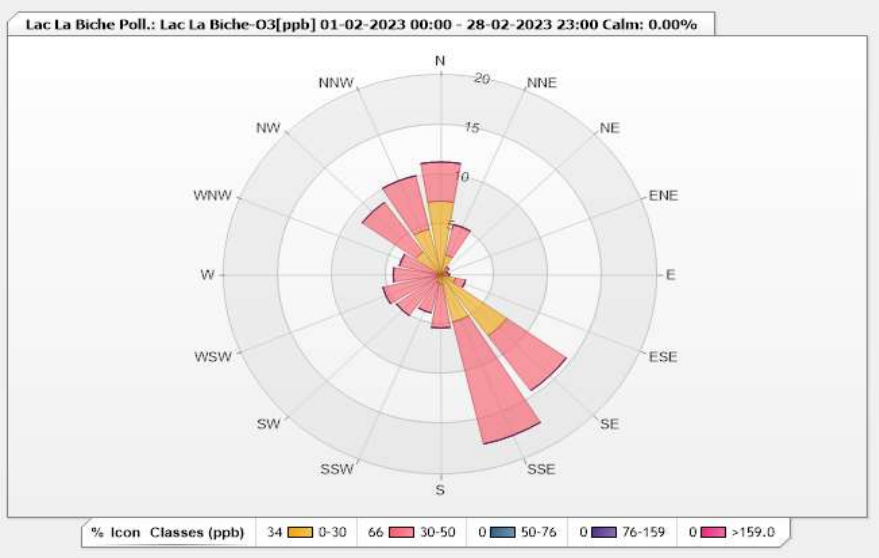


Station: Lac La Biche Poll.: Lac La Biche-O3[ppb] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.94% Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	7.37	3.92	0	0	0	11.29
NNE	2.04	3.13	0	0	0	5.17
NE	0.31	0.63	0	0	0	0.94
ENE	0	0.63	0	0	0	0.63
E	0.16	0.63	0	0	0	0.79
ESE	1.41	0.94	0	0	0	2.35
SE	7.52	6.74	0	0	0	14.26
SSE	4.86	12.54	0	0	0	17.4
S	0.94	4.39	0	0	0	5.33
SSW	0.78	3.13	0	0	0	3.91
SW	0.47	4.55	0	0	0	5.02
WSW	0.31	5.17	0	0	0	5.48
W	0.31	4.08	0	0	0	4.39
WNW	0.31	3.61	0	0	0	3.92
NW	2.82	6.11	0	0	0	8.93
NNW	4.7	5.49	0	0	0	10.19
Summary	34.31	65.69	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

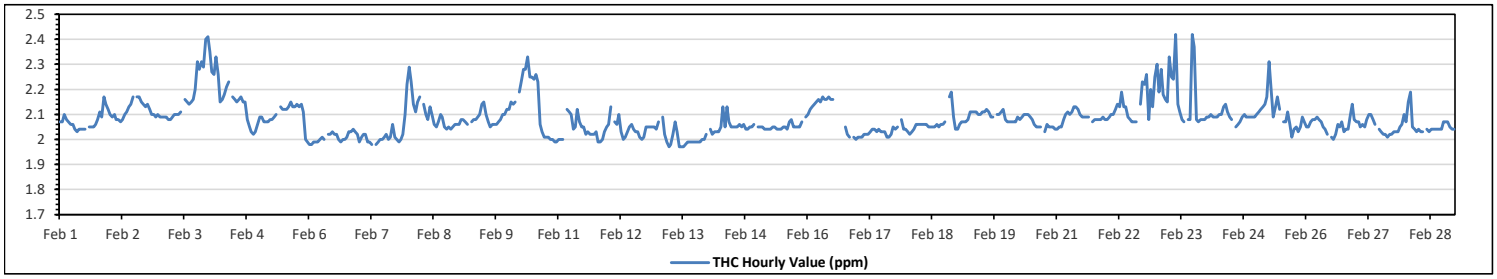
TOTAL HYDROCARBONS (THC) in ppm

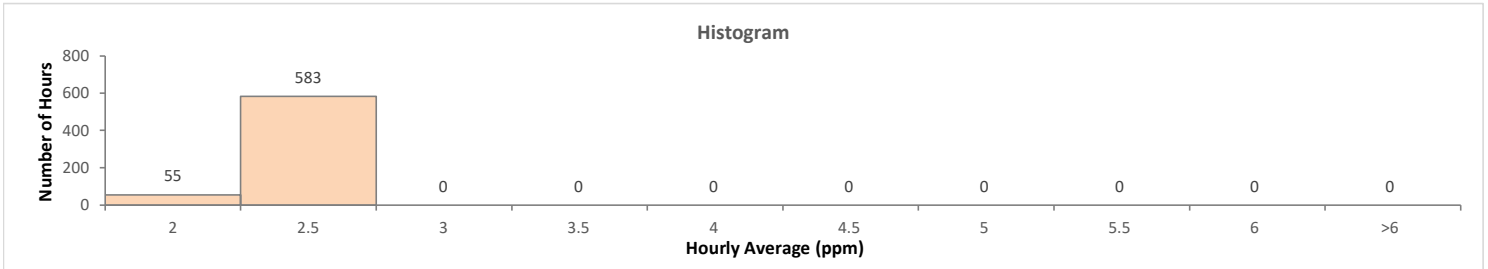
Maximum Hourly Value:	2.42	ppm	on Feb 23 at hr 9	Hours in Service:	672
Maximum Daily Value:	2.18	ppm	on Feb 23	Hours of Data:	638
Minimum Hourly Value:	1.97	ppm	on Feb 13 at hr 5	Hours of Missing Data:	0
Minimum Daily Value:	2.00	ppm	on Feb 13	Hours of Calibration:	34
Monthly Average:	2.08	ppm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	2.07	2.07	2.10	2.08	2.07	2.06	2.06	2.04	2.03	2.04	2.04	2.04	2.04	S	2.05	2.05	2.05	2.06	2.08	2.11	2.09	2.17	2.14	2.12	2.03	2.17	2.07
Feb 2	2.10	2.09	2.10	2.08	2.08	2.07	2.08	2.10	2.11	2.13	2.14	2.17	S	2.17	2.17	2.15	2.14	2.13	2.14	2.12	2.10	2.10	2.09	2.10	2.07	2.17	2.12
Feb 3	2.09	2.09	2.09	2.09	2.08	2.08	2.09	2.10	2.10	2.10	2.11	S	2.16	2.15	2.14	2.15	2.16	2.20	2.31	2.28	2.31	2.29	2.40	2.41	2.08	2.41	2.17
Feb 4	2.35	2.27	2.26	2.33	2.26	2.15	2.16	2.18	2.21	2.23	S	2.17	2.16	2.15	2.16	2.17	2.15	2.15	2.08	2.05	2.03	2.02	2.03	2.06	2.02	2.35	2.16
Feb 5	2.09	2.09	2.07	2.07	2.07	2.08	2.08	2.09	2.10	S	2.13	2.12	2.12	2.12	2.13	2.15	2.13	2.13	2.14	2.13	2.14	2.11	2.00	1.99	1.99	2.15	2.10
Feb 6	1.98	1.98	1.99	1.99	1.99	2.00	2.01	2.00	S	2.02	2.02	2.03	2.02	2.02	2.00	1.99	2.00	2.00	2.01	2.03	2.03	2.04	2.03	2.02	1.98	2.04	2.01
Feb 7	1.99	2.01	2.02	2.02	1.99	1.99	1.98	S	1.98	1.99	2.00	2.00	2.01	2.02	2.00	2.01	2.06	2.01	2.00	1.99	2.00	2.02	2.10	2.22	1.98	2.22	2.02
Feb 8	2.29	2.23	2.14	2.11	2.15	2.17	S	2.14	2.10	2.08	2.13	2.10	2.06	2.05	2.07	2.10	2.09	2.05	2.04	2.05	2.04	2.05	2.06	2.06	2.04	2.29	2.10
Feb 9	2.06	2.08	2.08	2.07	2.06	S	2.07	2.08	2.08	2.09	2.10	2.14	2.15	2.10	2.07	2.05	2.06	2.06	2.06	2.07	2.08	2.10	2.10	2.12	2.05	2.15	2.08
Feb 10	2.12	2.15	2.14	2.15	S	2.19	2.23	2.28	2.28	2.33	2.25	2.25	2.24	2.26	2.23	2.06	2.03	2.01	2.01	2.01	2.00	2.00	1.99	1.99	1.99	2.33	2.14
Feb 11	2.00	2.00	2.00	S	2.12	2.11	2.10	2.04	2.05	2.12	2.07	2.05	2.05	2.02	2.03	2.02	2.02	2.02	2.03	1.99	1.99	2.00	2.03	2.05	1.99	2.12	2.04
Feb 12	2.06	2.13	S	2.07	2.06	2.10	2.03	2.00	2.01	2.03	2.05	2.06	2.04	2.03	2.03	2.01	2.00	2.01	2.05	2.05	2.05	2.05	2.05	2.04	2.00	2.13	2.04
Feb 13	2.07	S	2.09	2.02	1.99	1.97	1.98	2.02	2.07	2.03	1.97	1.97	1.97	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	2.02	1.97	2.09	2.00
Feb 14	S	2.04	2.02	2.03	2.03	2.03	2.05	2.13	2.05	2.13	2.07	2.05	2.05	2.05	2.05	2.06	2.05	2.06	2.04	2.04	2.05	2.05	2.06	S	2.02	2.13	2.05
Feb 15	2.05	2.05	2.05	2.04	2.04	2.04	2.04	2.05	2.05	2.04	2.04	2.04	2.05	2.05	2.04	2.07	2.08	2.05	2.05	2.05	2.05	2.07	S	2.09	2.04	2.09	2.05
Feb 16	2.10	2.12	2.13	2.14	2.15	2.16	2.15	2.17	2.16	2.16	2.17	2.16	2.16	C	C	C	C	C	2.05	2.02	2.01	S	2.01	2.00	2.00	2.17	2.11
Feb 17	2.01	2.01	2.01	2.02	2.02	2.02	2.03	2.04	2.04	2.03	2.04	2.03	2.03	2.03	2.01	2.01	2.02	2.05	2.04	2.05	S	2.08	2.04	2.04	2.01	2.08	2.03
Feb 18	2.03	2.02	2.03	2.04	2.06	2.06	2.06	2.06	2.06	2.06	2.05	2.05	2.05	2.05	2.06	2.05	2.06	2.06	2.07	S	2.17	2.19	2.09	2.04	2.02	2.19	2.06
Feb 19	2.04	2.06	2.07	2.07	2.07	2.08	2.11	2.11	2.11	2.11	2.10	2.10	2.11	2.11	2.12	2.11	2.09	2.09	S	2.10	2.10	2.11	2.12	2.08	2.04	2.12	2.09
Feb 20	2.07	2.07	2.07	2.07	2.07	2.09	2.08	2.09	2.10	2.10	2.10	2.09	2.08	2.06	2.05	2.05	2.05	S	2.03	2.06	2.05	2.05	2.05	2.04	2.03	2.10	2.07
Feb 21	2.04	2.05	2.05	2.08	2.10	2.11	2.10	2.11	2.13	2.13	2.12	2.10	2.09	2.09	2.09	2.09	S	2.07	2.08	2.08	2.08	2.08	2.09	2.08	2.04	2.13	2.09
Feb 22	2.08	2.09	2.10	2.10	2.12	2.14	2.13	2.19	2.13	2.13	2.09	2.08	2.07	2.07	2.07	S	2.14	2.23	2.22	2.26	2.08	2.20	2.13	2.25	2.07	2.26	2.13
Feb 23	2.30	2.19	2.28	2.18	2.16	2.15	2.33	2.25	2.24	**2.42**	2.14	2.11	2.08	2.07	S	2.08	2.08	**2.42**	2.37	2.08	2.07	2.08	2.08	2.08	2.07	**2.42**	**2.18**
Feb 24	2.09	2.09	2.10	2.09	2.09	2.09	2.10	2.10	2.13	2.14	2.11	2.09	2.08	S	2.05	2.06	2.07	2.09	2.10	2.09	2.09	2.09	2.09	2.09	2.05	2.14	2.09
Feb 25	2.10	2.11	2.12	2.13	2.14	2.17	2.31	2.19	2.09	2.13	2.17	2.12	S	2.07	2.07	2.11	2.06	2.01	2.04	2.05	2.03	2.05	2.09	2.07	2.01	2.31	2.11
Feb 26	2.05	2.05	2.07	2.08	2.08	2.09	2.08	2.07	2.05	2.04	2.02	S	2.01	2.00	2.02	2.06	2.05	2.07	2.03	2.04	2.04	2.09	2.14	2.08	2.00	2.14	2.06
Feb 27	2.07	2.07	2.05	2.06	2.05	2.08	2.10	2.10	2.08	2.06	S	2.04	2.03	2.02	2.02	2.01	2.02	2.02	2.03	2.03	2.03	2.05	2.06	2.10	2.01	2.10	2.05
Feb 28	2.07	2.15	2.19	2.05	2.04	2.03	2.04	2.03	2.03	S	2.04	2.03	2.04	2.04	2.04	2.04	2.04	2.04	2.07	2.07	2.07	2.05	2.04	2.04	2.03	2.19	2.06
Diurnal Maximum	2.35	2.27	2.28	2.33	2.26	2.19	2.33	2.28	2.28	2.42	2.25	2.25	2.24	2.26	2.23	2.17	2.16	2.42	2.37	2.28	2.31	2.29	2.40	2.41			
Diurnal Average	2.09	2.09	2.09	2.08	2.08	2.09	2.10	2.10	2.10	2.11	2.09	2.08	2.08	2.07	2.07	2.07	2.07	2.08	2.08	2.07	2.07	2.08	2.08	2.08			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



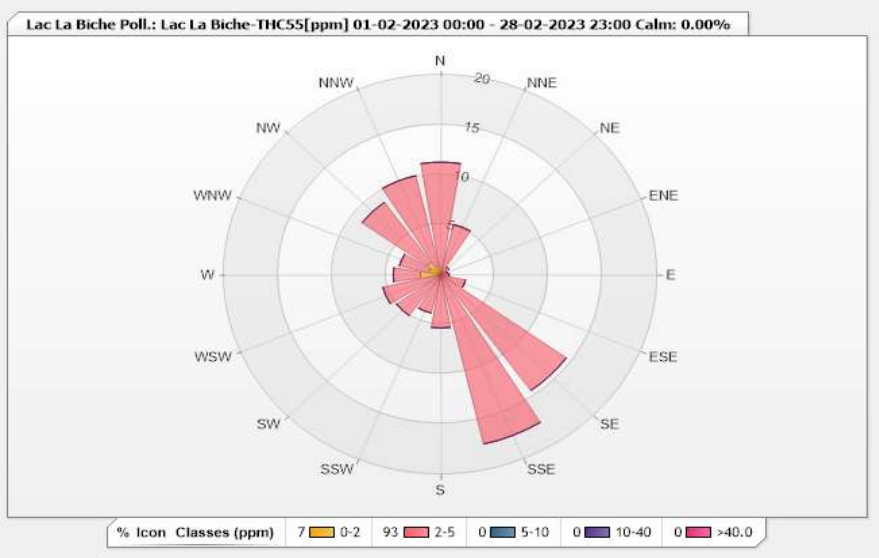


Station: Lac La Biche Poll.: Lac La Biche-THC55[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.94% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0.31	10.97	0	0	0	11.28
NNE	0	5.17	0	0	0	5.17
NE	0	0.94	0	0	0	0.94
ENE	0	0.63	0	0	0	0.63
E	0	0.78	0	0	0	0.78
ESE	0	2.35	0	0	0	2.35
SE	0	14.26	0	0	0	14.26
SSE	0.16	17.24	0	0	0	17.4
S	0.47	4.86	0	0	0	5.33
SSW	0.16	3.76	0	0	0	3.92
SW	0.16	4.86	0	0	0	5.02
WSW	0.16	5.33	0	0	0	5.49
W	1.88	2.51	0	0	0	4.39
WNW	1.1	2.82	0	0	0	3.92
NW	1.57	7.37	0	0	0	8.94
NNW	0.94	9.25	0	0	0	10.19
Summary	6.91	93.1	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

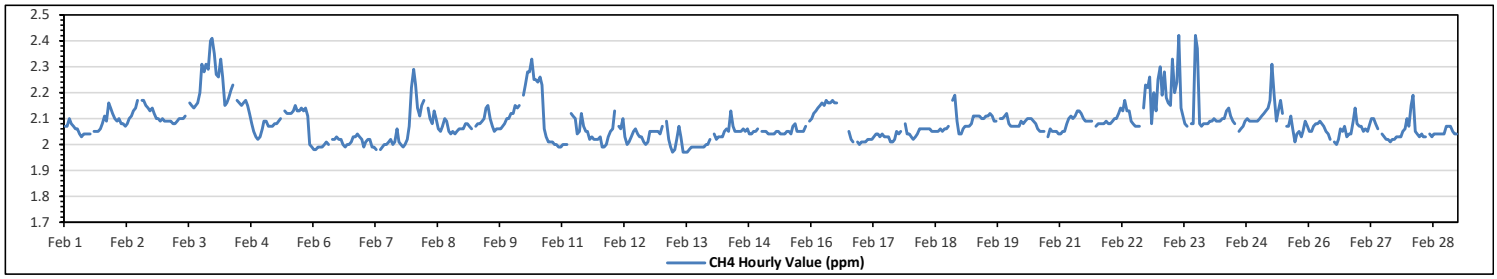
METHANE (CH4) in ppm

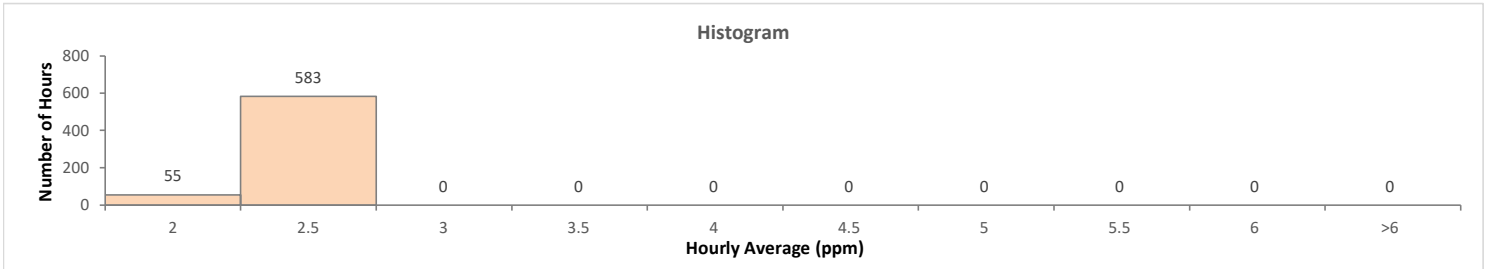
Maximum Hourly Value:	2.42	ppm	on Feb 23 at hr 9	Hours in Service:	672	
Maximum Daily Value:	2.18	ppm	on Feb 23	Hours of Data:	638	
Minimum Hourly Value:	1.97	ppm	on Feb 13 at hr 5	Hours of Missing Data:	0	
Minimum Daily Value:	2.00	ppm	on Feb 13	Hours of Calibration:	34	
Monthly Average:	2.08	ppm		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	2.07	2.07	2.10	2.08	2.07	2.06	2.06	2.04	2.03	2.04	2.04	2.04	2.04	S	2.05	2.05	2.05	2.06	2.08	2.11	2.09	2.16	2.14	2.12	2.03	2.16	2.07
Feb 2	2.10	2.09	2.10	2.08	2.08	2.07	2.08	2.10	2.11	2.13	2.14	2.17	S	2.17	2.17	2.15	2.14	2.13	2.14	2.12	2.10	2.10	2.09	2.10	2.07	2.17	2.12
Feb 3	2.09	2.09	2.09	2.09	2.08	2.08	2.09	2.10	2.10	2.10	2.11	S	2.16	2.15	2.14	2.15	2.16	2.20	2.31	2.28	2.31	2.29	2.40	2.41	2.08	2.41	2.17
Feb 4	2.35	2.27	2.26	2.33	2.26	2.15	2.16	2.18	2.21	2.23	S	2.17	2.16	2.15	2.16	2.17	2.15	2.12	2.08	2.05	2.03	2.02	2.03	2.06	2.02	2.35	2.16
Feb 5	2.09	2.09	2.07	2.07	2.07	2.08	2.08	2.09	2.10	S	2.13	2.12	2.12	2.12	2.13	2.15	2.13	2.13	2.14	2.13	2.14	2.11	2.00	1.99	1.99	2.15	2.10
Feb 6	1.98	1.98	1.99	1.99	1.99	2.00	2.01	2.00	S	2.02	2.02	2.03	2.02	2.02	2.00	1.99	2.00	2.00	2.01	2.03	2.03	2.04	2.03	2.02	1.98	2.04	2.01
Feb 7	1.99	2.01	2.02	2.02	1.99	1.99	1.98	S	1.98	1.99	2.00	2.00	2.01	2.02	2.00	2.01	2.06	2.01	2.00	1.99	2.00	2.02	2.07	2.22	1.98	2.22	2.02
Feb 8	2.29	2.23	2.14	2.11	2.15	2.17	S	2.14	2.10	2.08	2.13	2.10	2.06	2.05	2.07	2.10	2.09	2.05	2.04	2.05	2.04	2.05	2.06	2.06	2.04	2.29	2.10
Feb 9	2.06	2.08	2.08	2.07	2.06	S	2.07	2.08	2.08	2.09	2.10	2.14	2.15	2.10	2.07	2.05	2.06	2.06	2.06	2.07	2.08	2.10	2.10	2.12	2.05	2.15	2.08
Feb 10	2.12	2.15	2.14	2.15	S	2.19	2.23	2.28	2.28	2.33	2.25	2.25	2.24	2.26	2.23	2.06	2.03	2.01	2.01	2.01	2.00	2.00	1.99	1.99	1.99	2.33	2.14
Feb 11	2.00	2.00	2.00	S	2.12	2.11	2.10	2.04	2.05	2.12	2.07	2.05	2.05	2.02	2.03	2.02	2.02	2.02	2.03	1.99	1.99	2.00	2.03	2.05	1.99	2.12	2.04
Feb 12	2.06	2.13	S	2.07	2.06	2.10	2.03	2.00	2.01	2.03	2.05	2.06	2.04	2.03	2.03	2.01	2.00	2.01	2.05	2.05	2.05	2.05	2.05	2.04	2.00	2.13	2.04
Feb 13	2.07	S	2.09	2.02	1.99	1.97	1.98	2.02	2.07	2.03	1.97	1.97	1.97	1.98	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.00	2.00	2.02	1.97	2.09	2.00
Feb 14	S	2.04	2.02	2.03	2.03	2.03	2.05	2.06	2.05	2.13	2.07	2.05	2.05	2.05	2.05	2.06	2.05	2.06	2.04	2.04	2.05	2.05	2.06	S	2.02	2.13	2.05
Feb 15	2.05	2.05	2.05	2.04	2.04	2.04	2.04	2.05	2.05	2.04	2.04	2.04	2.05	2.05	2.04	2.07	2.08	2.05	2.05	2.05	2.05	2.07	S	2.09	2.04	2.09	2.05
Feb 16	2.10	2.12	2.13	2.14	2.15	2.16	2.15	2.17	2.16	2.16	2.17	2.16	2.16	C	C	C	C	C	2.05	2.02	2.01	S	2.01	2.00	2.00	2.17	2.11
Feb 17	2.01	2.01	2.01	2.02	2.02	2.02	2.03	2.04	2.04	2.03	2.04	2.03	2.03	2.03	2.01	2.01	2.02	2.05	2.04	2.05	S	2.08	2.04	2.04	2.01	2.08	2.03
Feb 18	2.03	2.02	2.03	2.04	2.06	2.06	2.06	2.06	2.06	2.06	2.05	2.05	2.05	2.05	2.06	2.05	2.06	2.06	2.07	S	2.17	2.19	2.09	2.04	2.02	2.19	2.06
Feb 19	2.04	2.06	2.07	2.07	2.07	2.08	2.11	2.11	2.11	2.11	2.10	2.10	2.11	2.11	2.12	2.11	2.09	2.09	S	2.10	2.10	2.11	2.12	2.08	2.04	2.12	2.09
Feb 20	2.07	2.07	2.07	2.07	2.07	2.09	2.08	2.09	2.10	2.10	2.10	2.09	2.08	2.06	2.05	2.05	2.05	S	2.03	2.06	2.05	2.05	2.05	2.04	2.03	2.10	2.07
Feb 21	2.04	2.05	2.05	2.08	2.10	2.11	2.10	2.11	2.13	2.13	2.12	2.10	2.09	2.09	2.09	2.09	S	2.07	2.08	2.08	2.08	2.08	2.09	2.08	2.04	2.13	2.09
Feb 22	2.08	2.09	2.10	2.10	2.12	2.14	2.13	2.17	2.13	2.13	2.09	2.08	2.07	2.07	2.07	S	2.14	2.23	2.22	2.26	2.08	2.20	2.13	2.25	2.07	2.26	2.13
Feb 23	2.30	2.19	2.28	2.18	2.16	2.15	2.33	2.20	2.24	**2.42**	2.14	2.11	2.08	2.07	S	2.08	2.08	**2.42**	2.37	2.08	2.07	2.08	2.08	2.08	2.07	**2.42**	**2.18**
Feb 24	2.09	2.09	2.10	2.09	2.09	2.09	2.10	2.10	2.13	2.14	2.11	2.09	2.08	S	2.05	2.06	2.07	2.09	2.10	2.09	2.09	2.09	2.09	2.09	2.05	2.14	2.09
Feb 25	2.10	2.11	2.12	2.13	2.14	2.17	2.31	2.19	2.09	2.13	2.17	2.12	S	2.07	2.07	2.11	2.06	2.01	2.04	2.05	2.03	2.05	2.09	2.07	2.01	2.31	2.11
Feb 26	2.05	2.05	2.07	2.08	2.08	2.09	2.08	2.07	2.05	2.04	2.02	S	2.01	2.00	2.02	2.06	2.05	2.07	2.03	2.04	2.04	2.09	2.14	2.08	2.00	2.14	2.06
Feb 27	2.07	2.07	2.05	2.06	2.05	2.08	2.10	2.10	2.08	2.06	S	2.04	2.03	2.02	2.02	2.01	2.02	2.02	2.03	2.03	2.03	2.05	2.06	2.10	2.01	2.10	2.05
Feb 28	2.07	2.15	2.19	2.05	2.04	2.03	2.04	2.03	2.03	S	2.04	2.03	2.04	2.04	2.04	2.04	2.04	2.04	2.07	2.07	2.07	2.05	2.04	2.04	2.03	2.19	2.06
Diurnal Maximum	2.35	2.27	2.28	2.33	2.26	2.19	2.33	2.28	2.28	2.42	2.25	2.25	2.24	2.26	2.23	2.17	2.16	2.42	2.37	2.28	2.31	2.29	2.40	2.41			
Diurnal Average	2.09	2.09	2.09	2.08	2.08	2.09	2.10	2.10	2.10	2.11	2.09	2.08	2.08	2.07	2.07	2.07	2.07	2.08	2.08	2.07	2.07	2.08	2.08	2.08			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance			
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



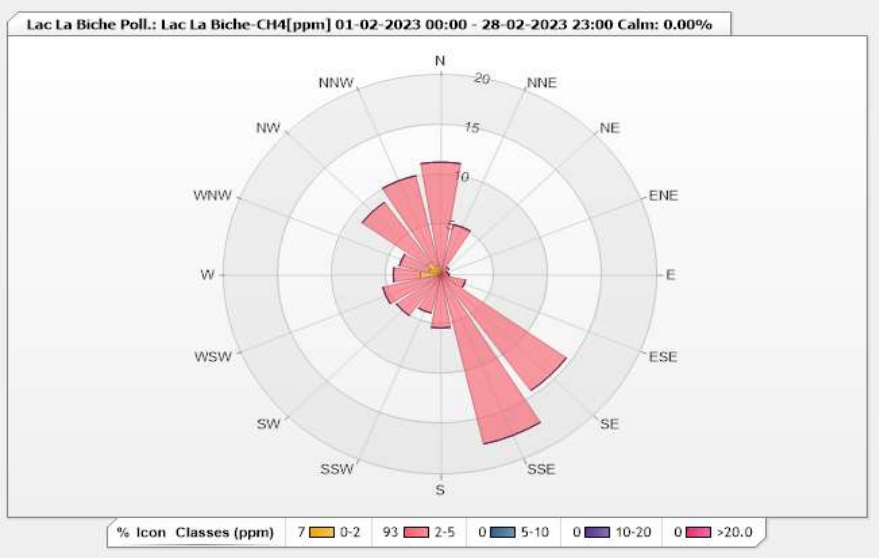


Station: Lac La Biche Poll.: Lac La Biche-CH4[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.94% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0.31	10.97	0	0	0	11.28
NNE	0	5.17	0	0	0	5.17
NE	0	0.94	0	0	0	0.94
ENE	0	0.63	0	0	0	0.63
E	0	0.78	0	0	0	0.78
ESE	0	2.35	0	0	0	2.35
SE	0	14.26	0	0	0	14.26
SSE	0.16	17.24	0	0	0	17.4
S	0.47	4.86	0	0	0	5.33
SSW	0.16	3.76	0	0	0	3.92
SW	0.16	4.86	0	0	0	5.02
WSW	0.16	5.33	0	0	0	5.49
W	1.88	2.51	0	0	0	4.39
WNW	1.1	2.82	0	0	0	3.92
NW	1.57	7.37	0	0	0	8.94
NNW	0.94	9.25	0	0	0	10.19
Summary	6.91	93.1	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

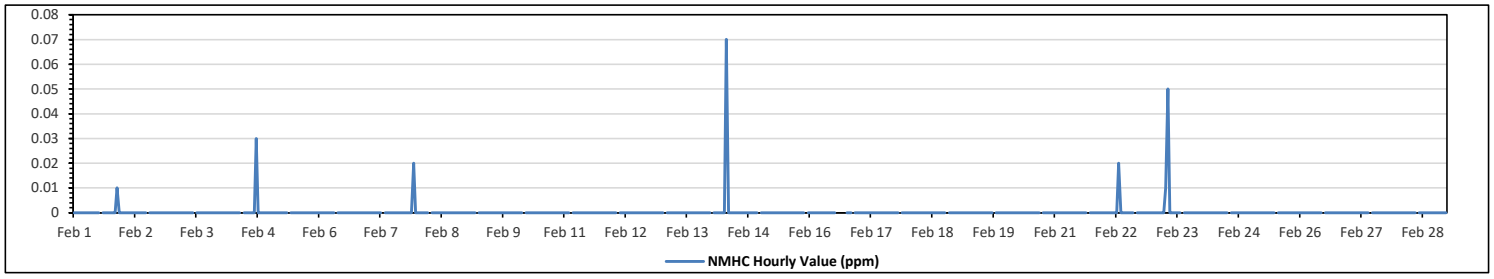
NON-METHANE HYDROCARBONS (NMHC) in ppm

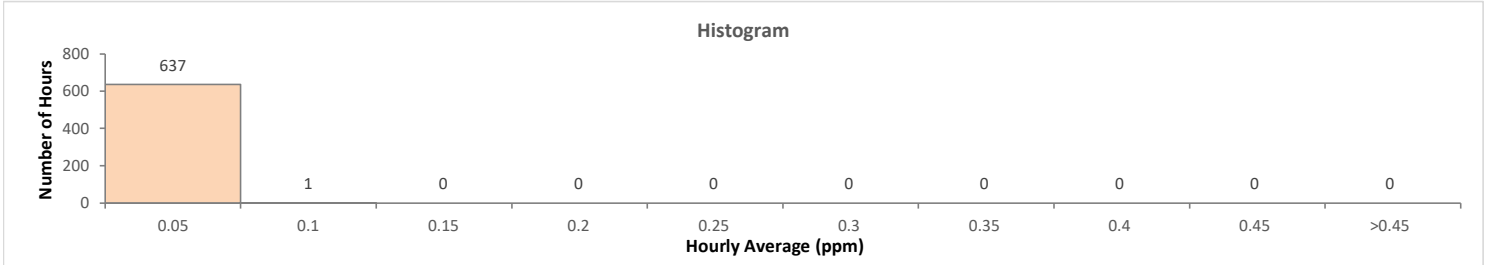
Maximum Hourly Value:	0.07	ppm	on Feb 14 at hr 7	Hours in Service:	672
Maximum Daily Value:	0.00	ppm	on Feb 14	Hours of Data:	638
Minimum Hourly Value:	0.00	ppm	on Feb 1 at hr 0	Hours of Missing Data:	0
Minimum Daily Value:	0.00	ppm	on Feb 2	Hours of Calibration:	34
Monthly Average:	0.00	ppm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
Feb 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Feb 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.00
Feb 8	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 9	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 10	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 11	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 12	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 13	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 14	S	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.07	0.00
Feb 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00
Feb 16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	C	C	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Feb 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00
Feb 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Feb 23	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
Feb 24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.01	0.02	0.00			
Diurnal Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



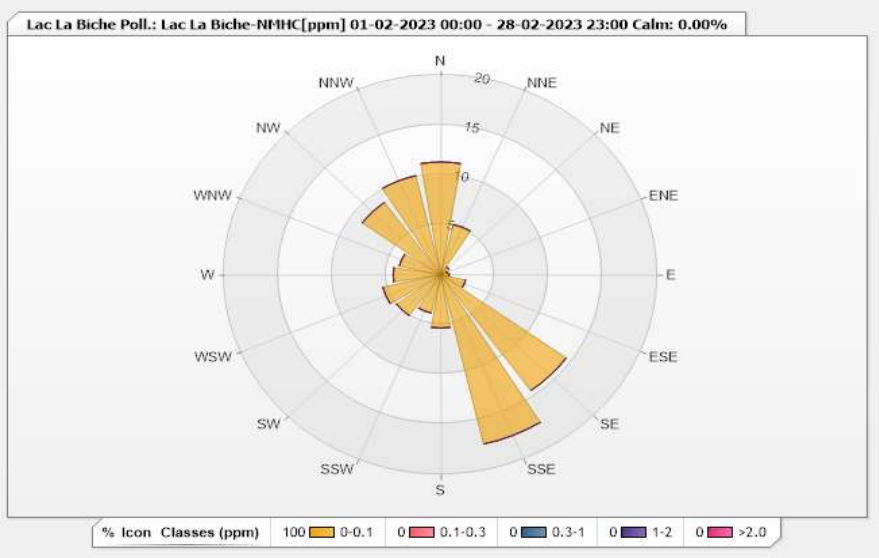


Station: Lac La Biche Poll.: Lac La Biche-NMHC[ppm] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 94.94% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	11.29	0	0	0	0	11.29
NNE	5.17	0	0	0	0	5.17
NE	0.94	0	0	0	0	0.94
ENE	0.63	0	0	0	0	0.63
E	0.78	0	0	0	0	0.78
ESE	2.35	0	0	0	0	2.35
SE	14.26	0	0	0	0	14.26
SSE	17.4	0	0	0	0	17.4
S	5.33	0	0	0	0	5.33
SSW	3.92	0	0	0	0	3.92
SW	5.02	0	0	0	0	5.02
WSW	5.49	0	0	0	0	5.49
W	4.39	0	0	0	0	4.39
WNW	3.92	0	0	0	0	3.92
NW	8.93	0	0	0	0	8.93
NNW	10.19	0	0	0	0	10.19
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

PARTICULATE MATTER 2.5 ($PM_{2.5}$) in µg/m^3

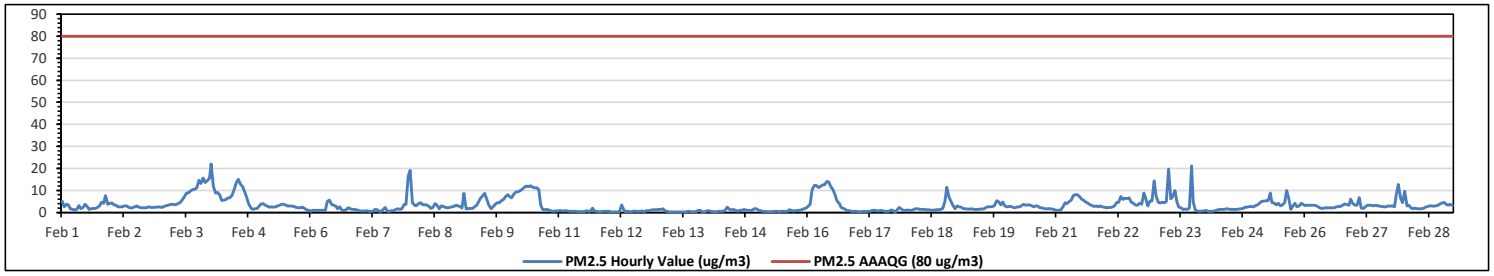
Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m3, Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m3

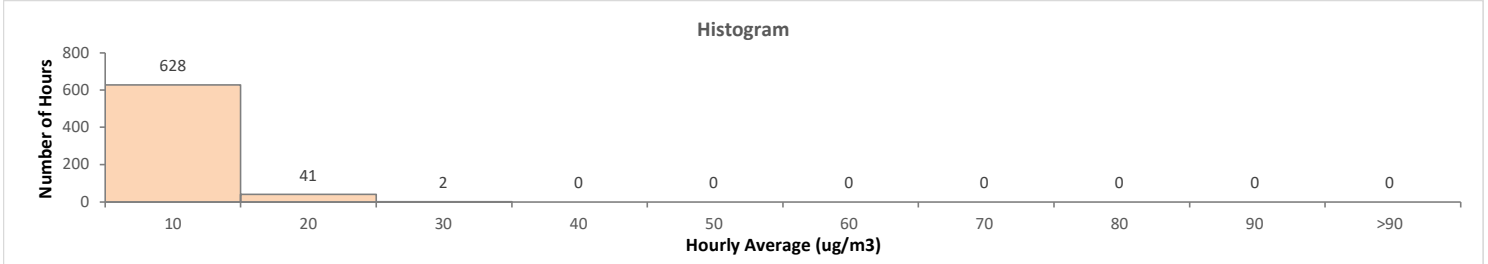
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0
Maximum Hourly Value:	22 µg/m^3 on Feb 4 at hr 0	Hours in Service:	672
Maximum Daily Value:	8.1 µg/m^3 on Feb 3	Hours of Data:	671
Minimum Hourly Value:	0 µg/m^3 on Feb 12 at hr 3	Hours of Missing Data:	0
Minimum Daily Value:	1 µg/m^3 on Feb 13	Hours of Calibration:	1
Monthly Average:	3.3 µg/m^3	Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	5	3	4	4	2	1	1	1	3	2	2	4	3	1	2	2	2	2	3	5	4	8	4	4	1	8	2.9
Feb 2	4	4	3	3	3	3	3	3	2	2	2	3	3	2	2	2	2	2	3	2	2	2	2	3	2	4	2.6
Feb 3	2	3	3	3	4	4	4	4	4	5	6	7	9	9	10	11	11	11	15	13	16	14	15	16	2	16	**8.1**
Feb 4	**22**	12	9	9	8	6	6	6	6	7	8	10	14	15	13	12	10	7	4	2	1	2	2	3	1	**22**	8.0
Feb 5	4	4	3	3	2	3	2	3	3	3	4	4	3	3	3	3	3	2	2	2	2	2	1	1	1	4	2.7
Feb 6	1	1	1	1	1	1	1	1	5	6	4	3	3	2	3	1	1	1	2	2	1	1	1	1	1	6	1.8
Feb 7	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	1	2	4	4	17	1	17	1.9
Feb 8	19	5	3	3	4	5	4	4	4	3	2	2	4	3	2	3	3	2	2	2	3	3	3	3	2	19	3.7
Feb 9	3	2	9	2	2	2	2	3	3	5	6	8	9	6	3	2	3	4	4	4	5	6	7	8	2	9	4.4
Feb 10	7	7	8	9	9	10	11	11	12	12	12	12	11	11	10	3	1	1	1	1	1	1	1	1	1	12	6.8
Feb 11	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	2	1	1	0	0	1	1	1	0	2	0.6
Feb 12	1	0	0	0	0	0	4	1	0	1	0	0	1	1	1	1	1	0	1	1	1	1	1	1	**0**	4	0.7
Feb 13	1	1	2	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	1	0	2	**0.6**
Feb 14	1	1	0	0	0	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	0	2	1.0
Feb 15	1	1	1	1	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	2	2	0	2	0.8
Feb 16	3	4	10	12	12	11	12	13	13	14	14	12	11	8	5	4	2	2	1	1	1	1	1	1	1	14	6.9
Feb 17	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	C	1	2	2	1	1	0	2	0.8
Feb 18	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	2	5	11	7	5	3	2	1	11	2.3
Feb 19	3	3	2	2	2	2	2	2	1	1	1	2	2	2	2	3	3	3	3	5	5	4	5	3	1	5	2.5
Feb 20	3	3	3	2	2	3	3	3	4	3	4	4	3	3	3	3	2	2	2	2	2	2	2	1	1	4	2.5
Feb 21	1	1	1	3	4	4	5	6	8	8	8	7	6	6	5	4	4	3	3	3	3	3	3	2	1	8	4.1
Feb 22	2	2	2	3	3	5	5	7	6	6	6	7	5	4	4	3	4	4	9	7	3	5	5	14	2	14	5.0
Feb 23	8	5	4	5	5	5	20	6	7	10	5	2	2	1	2	1	2	21	5	1	1	1	1	1	1	21	4.9
Feb 24	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	2	2	2	2	3	3	3	1	3	1.5
Feb 25	3	4	4	5	5	5	5	9	4	4	4	4	3	4	5	10	7	1	3	4	3	3	4	4	1	10	4.4
Feb 26	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	3	3	3	3	4	4	3	6	4	2	6	3.0
Feb 27	3	3	7	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	8	13	7	5	2	13	3.9
Feb 28	10	3	3	2	2	2	2	2	2	2	2	3	3	3	3	3	3	4	4	5	4	3	4	3	2	10	3.1
Diurnal Maximum	22	12	10	12	12	11	20	13	13	14	14	12	14	15	13	12	11	21	15	13	16	14	15	17			
Diurnal Average	4.0	2.7	3.2	2.9	2.9	2.9	3.6	3.4	3.6	3.8	3.6	3.7	3.8	3.4	3.1	3.0	2.7	3.1	3.1	3.1	3.1	3.3	3.1	3.7			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



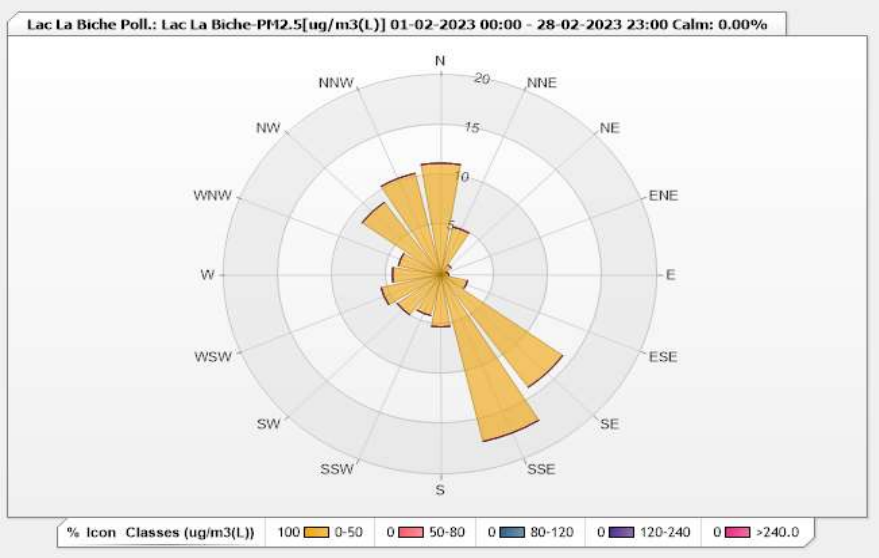


Station: Lac La Biche Poll.: Lac La Biche-PM2.5[ug/m3(L)] Monthly: 02-2023

Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 99.85% Calm Avg: 0.00 [ppm]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	11.18	0	0	0	0	11.18
NNE	4.92	0	0	0	0	4.92
NE	1.19	0	0	0	0	1.19
ENE	0.6	0	0	0	0	0.6
E	0.75	0	0	0	0	0.75
ESE	2.53	0	0	0	0	2.53
SE	13.86	0	0	0	0	13.86
SSE	17.14	0	0	0	0	17.14
S	5.22	0	0	0	0	5.22
SSW	4.17	0	0	0	0	4.17
SW	4.92	0	0	0	0	4.92
WSW	5.66	0	0	0	0	5.66
W	4.47	0	0	0	0	4.47
WNW	4.02	0	0	0	0	4.02
NW	8.94	0	0	0	0	8.94
NNW	10.43	0	0	0	0	10.43
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

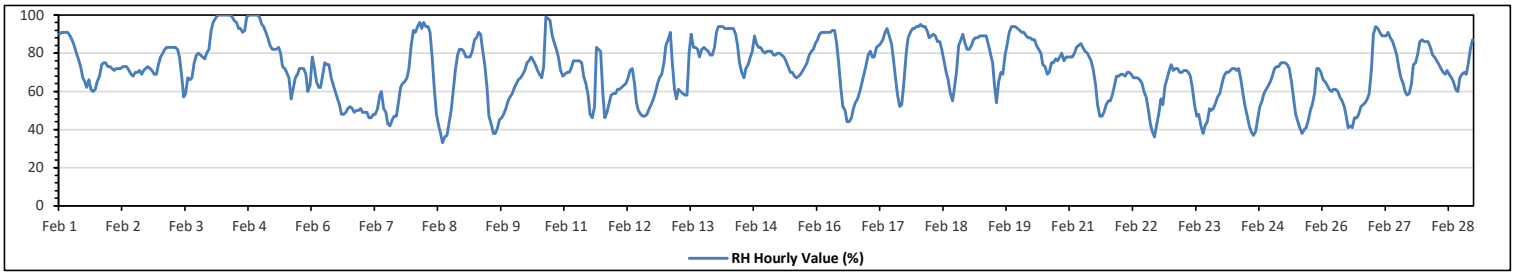
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100	%	on Feb 4 at hr 3	Hours in Service:	672	
Maximum Daily Value:	97.7	%	on Feb 4	Hours of Data:	672	
Minimum Hourly Value:	33	%	on Feb 8 at hr 14	Hours of Missing Data:	0	
Minimum Daily Value:	54.0	%	on Feb 7	Hours of Calibration:	0	
Monthly Average:	71.1	%		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	90	91	91	91	91	89	87	84	80	77	73	67	65	62	66	61	60	61	65	68	74	75	75	73	60	91	75.7
Feb 2	73	72	71	72	72	72	73	73	73	71	69	68	70	70	71	69	71	72	73	72	71	69	69	74	68	74	71.3
Feb 3	78	80	82	83	83	83	83	83	82	78	68	57	59	67	66	67	75	79	80	79	78	77	80	82	57	83	76.2
Feb 4	92	96	98	**100**	**100**	**100**	**100**	**100**	**100**	**100**	99	97	96	93	93	91	92	99	**100**	**100**	**100**	**100**	**100**	99	91	**100**	**97.7**
Feb 5	95	94	91	88	84	82	82	82	83	80	73	72	70	67	56	61	67	69	72	72	72	69	60	63	56	95	75.2
Feb 6	78	73	65	62	62	68	75	74	74	67	63	60	56	53	48	48	49	51	52	51	49	50	50	51	48	78	59.5
Feb 7	49	49	49	46	46	48	48	51	58	60	51	49	43	42	45	47	47	55	62	64	65	67	72	84	42	84	**54.0**
Feb 8	92	91	94	96	93	96	94	94	91	77	62	48	42	38	**33**	36	37	43	50	61	71	79	82	82	**33**	96	70.1
Feb 9	81	78	78	78	81	87	88	91	90	82	74	62	47	43	38	38	41	45	46	48	51	55	57	59	38	91	64.1
Feb 10	62	64	66	67	69	71	75	76	78	76	74	71	69	67	73	99	98	97	89	85	82	78	71	68	62	99	76.0
Feb 11	69	70	70	72	76	76	76	76	75	68	64	58	48	46	52	83	82	81	59	46	49	54	58	59	46	83	65.3
Feb 12	59	61	61	62	63	64	67	71	72	64	54	50	48	47	47	48	51	53	56	60	64	67	69	75	47	75	59.7
Feb 13	84	87	91	75	61	56	61	60	59	58	58	81	90	83	83	82	78	82	83	82	81	79	79	83	56	91	75.7
Feb 14	91	94	94	94	93	93	93	93	93	90	84	75	70	67	72	74	78	81	89	85	83	83	81	80	67	94	84.6
Feb 15	81	81	81	79	79	80	80	79	78	76	73	70	70	68	67	68	69	71	73	75	79	81	82	85	67	85	76.0
Feb 16	87	90	91	91	91	91	91	92	92	86	75	63	52	50	44	44	46	51	54	56	60	64	69	74	44	92	71.0
Feb 17	79	81	78	78	83	84	85	87	91	93	89	85	77	68	58	52	53	65	80	88	91	93	93	94	52	94	80.2
Feb 18	94	95	94	94	92	88	89	90	89	86	86	82	76	70	66	59	55	62	70	84	87	90	85	82	55	95	81.9
Feb 19	82	84	87	88	88	89	89	89	89	85	80	75	63	54	65	70	69	79	85	91	94	94	94	93	54	94	82.3
Feb 20	92	91	91	89	88	88	87	87	84	82	80	74	73	69	70	75	75	77	76	78	80	76	78	78	69	92	80.8
Feb 21	78	78	80	83	84	85	83	81	80	78	76	71	63	53	47	47	49	53	55	55	58	63	68	68	47	85	68.2
Feb 22	69	69	68	70	70	69	67	67	67	66	64	60	57	50	43	39	36	42	48	56	53	63	67	71	36	71	59.6
Feb 23	74	71	72	72	70	70	71	71	70	68	62	53	47	48	42	38	42	44	51	50	51	54	57	59	38	74	58.6
Feb 24	64	68	70	70	71	72	72	71	72	66	58	52	47	42	39	37	39	45	52	55	59	61	63	65	37	72	58.8
Feb 25	68	72	73	73	75	75	75	74	72	65	57	48	44	41	38	40	41	45	50	53	59	72	72	70	38	75	60.5
Feb 26	66	65	63	61	60	61	61	60	57	55	52	47	41	42	41	46	46	48	52	53	54	56	59	72	41	72	54.9
Feb 27	90	94	93	91	89	89	89	91	88	86	83	79	72	67	64	60	58	59	64	74	75	80	86	87	58	94	79.5
Feb 28	86	86	86	83	79	78	76	74	72	70	69	71	69	67	65	61	60	67	69	70	69	74	82	87	60	87	73.8
Diurnal Maximum	95	96	98	100	100	100	100	100	100	100	99	97	96	93	93	99	98	99	100	100	100	100	100	99			
Diurnal Average	78.7	79.5	79.6	78.9	78.3	78.7	79.2	79.3	78.9	75.4	70.4	65.9	61.6	58.4	56.9	58.6	59.4	63.4	66.3	68.3	70.0	72.3	73.5	75.6			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

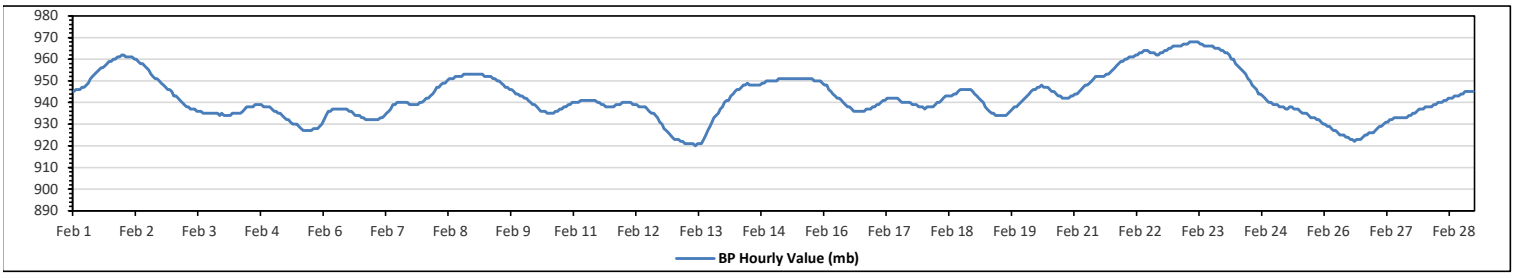
Maximum Hourly Value:	968	mb	on Feb 23 at hr 7	Hours in Service:	672	
Maximum Daily Value:	966	mb	on Feb 23	Hours of Data:	672	
Minimum Hourly Value:	920	mb	on Feb 13 at hr 10	Hours of Missing Data:	0	
Minimum Daily Value:	925	mb	on Feb 26	Hours of Calibration:	0	
Monthly Average:	942	mb		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	945	946	946	946	947	947	948	949	951	952	953	954	955	956	956	957	958	959	959	960	960	961	961	962	945	962	954
Feb 2	962	961	961	961	961	960	960	959	958	958	957	956	955	953	952	951	951	950	949	948	947	946	946	945	945	962	954
Feb 3	943	943	942	941	940	939	938	938	937	937	937	936	936	936	935	935	935	935	935	935	935	935	934	935	934	943	937
Feb 4	934	934	934	934	935	935	935	935	935	936	937	938	938	938	938	939	939	939	939	938	938	938	938	937	934	939	937
Feb 5	936	936	935	935	934	933	932	932	931	930	930	930	929	928	927	927	927	927	927	928	928	928	929	930	927	936	930
Feb 6	932	934	936	936	937	937	937	937	937	937	937	937	936	936	935	934	934	934	933	933	932	932	932	932	932	937	935
Feb 7	932	932	932	933	933	934	935	936	937	939	939	940	940	940	940	940	940	939	939	939	939	939	940	940	932	940	937
Feb 8	941	942	942	943	944	945	947	947	948	949	949	950	951	951	951	952	952	952	952	953	953	953	953	953	941	953	949
Feb 9	953	953	953	953	953	952	952	952	952	951	951	950	950	949	948	947	947	946	946	945	944	944	943	943	943	953	949
Feb 10	942	942	941	940	939	939	938	937	936	936	936	935	935	935	935	936	936	937	937	938	938	939	939	940	935	942	938
Feb 11	940	940	940	941	941	941	941	941	941	941	941	940	940	939	939	938	938	938	938	938	939	939	939	940	938	941	940
Feb 12	940	940	940	940	939	939	939	938	938	938	938	937	936	935	935	934	933	931	930	928	927	926	925	924	924	940	935
Feb 13	923	923	923	922	922	921	921	921	921	921	**920**	921	921	921	923	925	927	929	931	933	934	935	937	938	**920**	938	926
Feb 14	940	941	941	943	944	945	946	946	947	948	948	949	948	948	948	948	948	948	949	949	950	950	950	950	940	950	947
Feb 15	950	950	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	950	950	950	950	949	949	951	951
Feb 16	948	948	946	945	944	943	942	942	941	940	939	938	938	937	936	936	936	936	936	936	937	937	937	938	936	948	940
Feb 17	938	939	939	940	941	941	942	942	942	942	942	942	941	940	940	940	940	940	939	939	939	938	938	938	938	942	940
Feb 18	937	938	938	938	938	939	940	940	941	942	943	943	943	943	944	944	945	946	946	946	946	946	946	945	937	946	942
Feb 19	944	943	942	941	940	938	937	936	935	935	934	934	934	934	934	934	935	936	937	938	938	939	940	941	934	944	937
Feb 20	942	943	944	945	946	946	947	947	948	947	947	947	946	945	945	944	943	943	942	942	942	942	943	943	942	948	945
Feb 21	944	944	945	946	947	948	948	949	950	951	952	952	952	952	952	953	953	954	955	956	957	958	959	959	944	959	952
Feb 22	960	960	961	961	961	962	962	963	963	964	964	964	963	963	963	962	962	963	963	964	964	965	965	966	960	966	963
Feb 23	966	966	966	966	967	967	967	**968**	**968**	**968**	**968**	**968**	967	967	966	966	966	966	966	965	965	965	964	964	964	**968**	**966**
Feb 24	963	963	962	960	960	958	957	956	955	954	953	951	950	948	947	946	944	944	943	942	941	940	940	939	939	963	951
Feb 25	939	939	938	938	938	937	937	938	938	937	937	937	936	935	935	935	934	933	933	933	932	932	931	930	930	939	936
Feb 26	930	929	929	928	927	927	926	925	925	925	924	924	923	923	922	923	923	923	924	925	925	926	926	926	922	930	**925**
Feb 27	927	928	929	929	930	931	931	932	932	933	933	933	933	933	933	933	934	934	935	935	936	937	937	937	927	937	933
Feb 28	938	938	938	938	939	939	940	940	940	941	941	942	942	942	943	943	943	944	944	945	945	945	945	945	938	945	942
Diurnal Maximum	966	966	966	966	967	967	967	968	968	968	968	968	967	967	966	966	966	966	966	965	965	965	965	966			
Diurnal Average	942	943	943	943	943	943	943	943	943	943	943	943	942	942	942	942	942	942	942	942	942	942	942	942			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

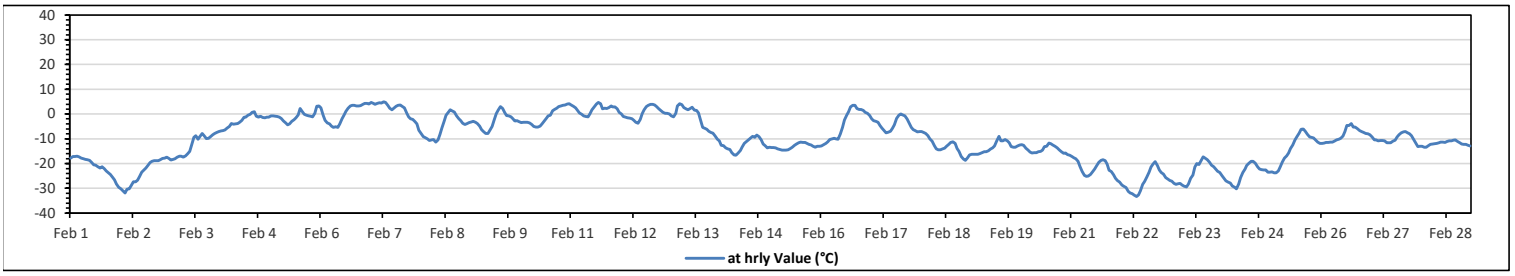
Maximum Hourly Value:	4.9	°C	on Feb 7 at hr 6	Hours in Service:	672	
Maximum Daily Value:	1.9	°C	on Feb 11	Hours of Data:	672	
Minimum Hourly Value:	-33.3	°C	on Feb 22 at hr 7	Hours of Missing Data:	0	
Minimum Daily Value:	-27.0	°C	on Feb 22	Hours of Calibration:	0	
Monthly Average:	-10.1	°C		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																								Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	-17.8	-17.2	-17.2	-17	-17.3	-17.8	-18	-18.3	-18.5	-18.7	-19.6	-20.5	-20.7	-21.3	-21.8	-21.3	-22	-22.9	-23.8	-24.4	-25.6	-26.6	-28.3	-29.6	-29.6	-17.0	-21.1
Feb 2	-30.3	-30.9	-31.9	-30.4	-30.3	-28.9	-27.4	-27.3	-26.7	-25.3	-23.5	-22.5	-21.8	-20.6	-19.7	-19.1	-18.8	-18.8	-18.8	-18.4	-17.9	-17.7	-17.4	-17.9	-31.9	-17.4	-23.4
Feb 3	-18.6	-18.3	-18	-17.4	-17.1	-17.1	-17.4	-16.9	-16.1	-15.1	-12.5	-9.4	-8.8	-10.2	-8.9	-7.9	-8.8	-9.9	-9.8	-9.1	-8.4	-7.8	-7.4	-7	-18.6	-7.0	-12.4
Feb 4	-6.8	-6.7	-6.5	-5.6	-5	-3.9	-4.1	-4	-3.9	-3.3	-2.5	-1.3	-1.2	-0.5	-0.1	0.7	1	-0.8	-1.3	-0.8	-1.4	-1.6	-1.3	-1.2	-6.8	1.0	-2.6
Feb 5	-0.7	-0.7	-0.8	-1	-1.2	-1.8	-2.8	-3.6	-4.4	-4	-2.9	-2.3	-1.5	-0.3	2.2	0.9	-0.1	-0.5	-0.7	-0.9	-1.1	0.2	3.1	3.3	-4.4	3.3	-0.9
Feb 6	2.4	-0.5	-2.5	-3.6	-4	-4.8	-5.4	-5.1	-5.4	-4	-2	-0.4	1.1	2.3	3.3	3.6	3.5	3.3	3.2	3.4	4	4.3	4.3	4.1	-5.4	4.3	0.2
Feb 7	4.7	4.3	4	4.3	4.5	4.4	**4.9**	4.7	3.6	2.3	1.8	2.5	3.1	3.6	3.7	3	2.5	0.4	-1.1	-1.9	-2.2	-3	-4	-6.6	-6.6	**4.9**	1.8
Feb 8	-7.9	-9.1	-9.5	-10.1	-10.7	-10.4	-10.3	-11.3	-10.5	-8.3	-5.6	-2.9	-0.5	0.6	1.8	1.2	0.8	-0.7	-2	-2.6	-3.7	-4.3	-3.9	-3.5	-11.3	1.8	-5.1
Feb 9	-3.2	-2.9	-3.3	-3.9	-4.9	-6.4	-7	-7.9	-7.8	-6.6	-5	-2.5	0.1	1.6	3	2.2	0.7	-0.6	-0.7	-1.1	-1.9	-2.8	-2.7	-3	-7.9	3.0	-2.8
Feb 10	-3.4	-3.3	-3.3	-3.3	-3.6	-4.3	-5	-5.3	-5.3	-4.8	-4	-2.8	-1.7	-0.7	-0.5	1.3	1.9	2.3	3	3.2	3.6	3.7	4.1	4.2	-5.3	4.2	-1.0
Feb 11	3.7	3.1	2.4	1.5	0.4	-0.1	-0.7	-1	-1.1	0.1	1.7	2.8	4.1	4.6	4.2	2.1	2.3	2.2	2.6	3.2	2.9	2.8	2.1	0.7	-1.1	4.6	**1.9**
Feb 12	0	-1	-1.3	-1.6	-1.7	-2	-2.5	-3.3	-3.7	-2.2	0.1	1.7	3	3.5	3.9	4	3.7	3	2.1	1.4	0.7	0.3	0.3	0	-3.7	4.0	0.4
Feb 13	-0.7	-1.1	0.3	3.2	4.2	3.8	2.6	2.1	1.7	2.2	2.7	1.6	1.5	0.4	-2.3	-5.4	-5.8	-6.2	-6.9	-7.4	-7.7	-8.9	-10.2	-10.9	-10.9	4.2	-2.0
Feb 14	-12.6	-12.8	-13.7	-14.1	-14.3	-15.5	-16.5	-16.6	-15.7	-14.7	-13.3	-11.9	-11.1	-10.5	-9.7	-9	-9.4	-8.5	-9.1	-10.4	-12.1	-12.8	-13.6	-13.4	-16.6	-8.5	-12.6
Feb 15	-13.5	-13.5	-13.7	-14.1	-14.3	-14.6	-14.6	-14.6	-14.4	-13.9	-13.4	-12.6	-12.1	-11.6	-11.3	-11.4	-11.5	-11.9	-12.2	-12.5	-13	-13.3	-13	-13.1	-14.6	-11.3	-13.1
Feb 16	-12.9	-12.4	-11.8	-11.2	-10.3	-10	-9.8	-10.1	-10.2	-8.1	-5.4	-2.4	-0.4	1	2.9	3.6	3.6	2.2	1.9	1.9	1.5	0.7	0.3	-0.6	-12.9	3.6	-4.0
Feb 17	-1.9	-2.7	-2.9	-3.3	-4.6	-5.6	-6.7	-7.6	-7.3	-6.9	-5.8	-4.4	-1.8	-0.4	0	-0.3	-0.7	-2.1	-3.6	-5.4	-6.3	-6.7	-7.2	-7.1	-7.6	0.0	-4.2
Feb 18	-7	-7.4	-7.9	-8.8	-10.1	-11	-12.8	-14.1	-14.5	-14.5	-14	-13.8	-13.1	-12.3	-11.5	-11.2	-11.9	-13.9	-15.1	-17.2	-18.2	-18.7	-17.8	-16.5	-18.7	-7.0	-13.1
Feb 19	-16.3	-16.3	-16.2	-16.3	-16	-15.5	-15.3	-15.3	-14.9	-14.2	-13.6	-12.9	-10.9	-9	-10.8	-10.8	-10.3	-10.8	-11.6	-13.2	-13.4	-13.4	-12.9	-12.5	-16.3	-9.0	-13.4
Feb 20	-12.4	-12.7	-13.8	-14.6	-15.4	-15.7	-15.6	-15.6	-15.3	-15.1	-14.6	-13.2	-13	-11.7	-12	-12.5	-13.1	-13.6	-14.5	-15.2	-15.8	-15.7	-16.4	-16.6	-16.6	-11.7	-14.3
Feb 21	-17.2	-17.6	-18	-19.1	-21.2	-23.2	-24.7	-25.2	-25	-24.3	-23.3	-22.1	-20.9	-19.5	-18.7	-18.4	-18.9	-20.2	-22.7	-23.2	-24.5	-26	-26.8	-27.5	-27.5	-17.2	-22.0
Feb 22	-28.6	-29.1	-29.7	-31.2	-31.9	-32.2	-32.9	**-33.3**	-32.7	-30.9	-28.5	-27.2	-25.5	-23.5	-21.5	-20.2	-19.2	-20.8	-22.5	-23.6	-24.2	-25.7	-26.3	-26.8	**-33.3**	-19.2	**-27.0**
Feb 23	-27.1	-28	-28.5	-28.2	-28	-28.6	-29.2	-29.4	-28.3	-26	-24.6	-21.4	-19.9	-20.3	-18.7	-17.3	-17.8	-18.5	-19.5	-20.7	-21.3	-22.1	-23.1	-23.6	-29.4	-17.3	-23.8
Feb 24	-24.9	-26	-27	-27.5	-27.9	-29	-29.6	-30.3	-28.3	-25.7	-23.7	-22.2	-20.8	-19.8	-19.1	-19.1	-19.8	-21.3	-22.2	-22.4	-22.5	-22.6	-23.5	-23.5	-30.3	-19.1	-24.1
Feb 25	-23.4	-23.8	-23.8	-23	-21.3	-19.5	-17.7	-16.9	-15.7	-13.9	-12.5	-10.4	-9.1	-7.7	-6.2	-6	-6.9	-8.2	-9.2	-9.4	-9.7	-10.6	-11.3	-11.9	-23.8	-6.0	-13.7
Feb 26	-11.8	-11.7	-11.5	-11.4	-11.3	-11.3	-11	-10.5	-10.2	-9.8	-8.9	-7.1	-4.6	-4.6	-3.9	-5.3	-5.3	-5.9	-6.7	-7	-7.4	-7.8	-8	-8.4	-11.8	-3.9	-8.4
Feb 27	-9.2	-10.4	-10.5	-10.8	-10.7	-10.7	-10.8	-11.6	-11.6	-11.6	-11	-10.6	-9.3	-8.4	-7.6	-7.2	-7	-7.6	-8	-8.8	-10.3	-11.9	-13.2	-13.1	-13.2	-7.0	-10.1
Feb 28	-13.1	-13.3	-13.3	-12.8	-12.2	-12.1	-12	-11.9	-11.6	-11.3	-11.3	-11.4	-11.1	-10.9	-10.9	-10.6	-10.5	-11.1	-11.6	-12.1	-12.2	-12.2	-12.7	-12.9	-13.3	-10.5	-11.9
Diurnal Maximum	4.7	4.3	4.0	4.3	4.5	4.4	4.9	4.7	3.6	2.3	2.7	2.8	4.1	4.6	4.2	4.0	3.7	3.3	3.2	3.4	4.0	4.3	4.3	4.2			
Diurnal Average	-11.1	-11.5	-11.8	-11.8	-12.0	-12.3	-12.6	-12.9	-12.6	-11.7	-10.5	-9.3	-8.1	-7.4	-6.8	-6.8	-7.1	-7.9	-8.6	-9.1	-9.6	-10.0	-10.2	-10.5			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

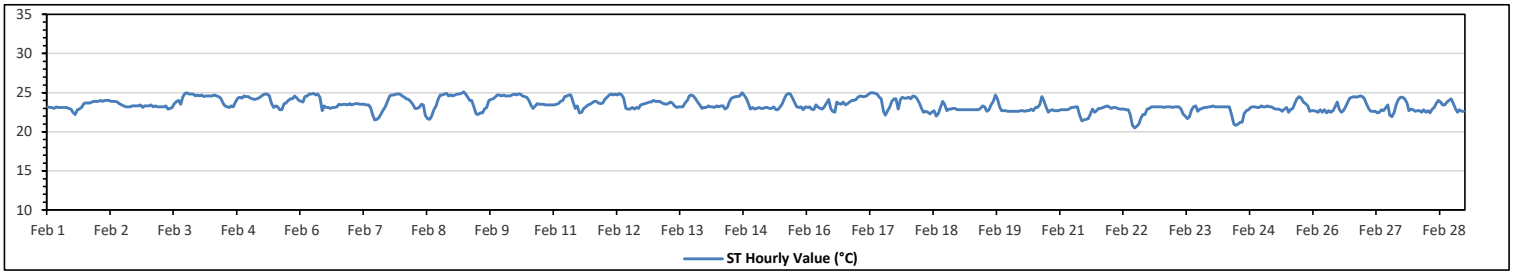
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	25.1	°C	on Feb 9 at hr 5	Hours in Service:	672	
Maximum Daily Value:	24.2	°C	on Feb 4	Hours of Data:	672	
Minimum Hourly Value:	20.5	°C	on Feb 22 at hr 11	Hours of Missing Data:	0	
Minimum Daily Value:	22.5	°C	on Feb 22	Hours of Calibration:	0	
Monthly Average:	23.4	°C		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	23.2	23.1	23.1	23.0	23.2	23.1	23.1	23.1	23.1	23.1	23.0	22.9	22.5	22.2	22.8	22.9	23.1	23.6	23.7	23.7	23.7	23.8	23.9	23.9	22.2	23.9	23.2
Feb 2	23.9	24.0	23.9	24.0	24.0	24.0	23.9	23.9	23.9	23.8	23.6	23.4	23.3	23.2	23.2	23.2	23.3	23.3	23.3	23.3	23.4	23.1	23.3	23.3	23.1	24.0	23.6
Feb 3	23.3	23.4	23.2	23.3	23.2	23.2	23.2	23.2	23.3	22.9	23.0	23.1	23.6	23.9	24.0	23.5	24.4	24.9	25.0	24.8	24.8	24.8	24.6	24.7	22.9	25.0	23.8
Feb 4	24.6	24.7	24.5	24.6	24.6	24.6	24.6	24.7	24.6	24.5	24.3	23.7	23.3	23.2	23.1	23.3	23.2	23.8	24.3	24.4	24.3	24.6	24.5	24.5	23.1	24.7	**24.2**
Feb 5	24.3	24.2	24.1	24.2	24.3	24.5	24.7	24.8	24.8	24.6	23.7	23.1	23.3	23.2	22.8	22.8	23.6	23.7	24.0	24.2	24.2	24.6	24.3	24.0	22.8	24.8	24.0
Feb 6	23.9	23.8	24.5	24.6	24.8	24.8	24.9	24.7	24.8	24.4	22.7	23.3	23.1	23.1	23.0	23.1	23.1	23.2	23.5	23.4	23.5	23.5	23.4	23.6	22.7	24.9	23.8
Feb 7	23.4	23.5	23.6	23.6	23.5	23.5	23.5	23.4	23.4	23.1	22.1	21.5	21.6	21.8	22.3	22.8	23.2	23.9	24.6	24.7	24.7	24.8	24.8	24.8	21.5	24.8	23.4
Feb 8	24.6	24.4	24.2	24.1	23.9	23.5	23.0	23.0	23.1	23.5	23.4	22.1	21.7	21.6	22.0	22.8	23.3	24.1	24.7	24.7	24.8	24.9	24.6	24.7	21.6	24.9	23.6
Feb 9	24.6	24.7	24.8	24.8	24.9	**25.1**	24.8	24.4	24.0	24.0	23.2	22.3	22.2	22.4	22.4	22.9	23.1	24.0	24.1	24.2	24.4	24.7	24.7	24.6	22.2	**25.1**	24.0
Feb 10	24.7	24.6	24.6	24.6	24.7	24.8	24.7	24.8	24.8	24.6	24.5	24.4	24.0	23.4	23.0	23.3	23.6	23.5	23.5	23.5	23.4	23.4	23.4	23.4	23.0	24.8	24.1
Feb 11	23.4	23.5	23.6	23.9	24.0	24.5	24.6	24.7	24.7	23.8	23.0	23.3	22.4	22.5	23.0	23.2	23.4	23.5	23.7	23.9	23.9	23.7	23.6	23.7	22.4	24.7	23.6
Feb 12	24.1	24.4	24.7	24.8	24.7	24.8	24.7	24.9	24.7	24.3	23.0	22.9	22.9	23.1	22.9	23.1	23.0	23.4	23.5	23.6	23.7	23.8	23.8	24.0	22.9	24.9	23.9
Feb 13	23.9	23.9	23.9	23.7	23.6	23.5	23.6	23.8	23.7	23.3	23.1	23.2	23.2	23.2	23.7	24.0	24.6	24.7	24.6	24.2	23.8	23.4	23.0	23.1	23.0	24.7	23.7
Feb 14	23.1	23.3	23.2	23.2	23.1	23.3	23.2	23.3	23.3	22.9	23.1	23.9	24.3	24.4	24.5	24.5	24.6	25.0	24.7	24.3	23.6	22.9	23.1	22.9	22.9	25.0	23.7
Feb 15	23.0	23.1	23.0	23.0	23.1	23.1	23.0	23.0	23.2	22.8	22.8	23.2	23.6	24.1	24.7	24.9	24.8	24.3	23.7	23.2	23.1	23.2	22.8	23.2	22.8	24.9	23.4
Feb 16	23.1	23.2	22.9	22.8	23.4	23.2	23.0	22.9	23.2	23.7	24.1	23.0	22.6	22.5	23.8	23.6	23.5	23.8	23.4	23.6	23.8	24.0	24.0	24.1	22.5	24.1	23.4
Feb 17	24.4	24.6	24.5	24.5	24.6	24.8	25.0	25.0	24.9	24.8	24.4	24.2	22.6	22.1	22.7	23.2	23.9	24.2	24.2	22.9	24.1	24.4	24.3	24.3	22.1	25.0	24.1
Feb 18	24.4	24.2	24.6	24.5	24.2	23.7	23.0	22.5	22.6	22.5	22.3	22.5	22.7	22.0	22.3	23.1	23.9	23.5	22.7	22.9	22.9	23.0	23.0	22.8	22.0	24.6	23.2
Feb 19	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	23.0	23.3	23.2	22.6	22.8	23.4	23.9	24.7	24.2	23.2	22.7	22.7	22.7	22.6	22.6	24.7	23.0
Feb 20	22.6	22.6	22.6	22.6	22.6	22.7	22.7	22.6	22.7	22.7	22.9	22.7	23.1	23.1	23.4	24.5	24.0	23.2	22.5	22.7	22.8	22.7	22.7	22.7	22.5	24.5	22.9
Feb 21	22.8	22.8	22.8	22.8	22.9	23.1	23.1	23.2	23.2	22.1	21.4	21.5	21.6	21.7	22.2	22.9	22.5	22.7	23.0	23.0	23.1	23.2	23.3	23.2	21.4	23.3	22.7
Feb 22	23.0	23.1	23.1	23.0	22.9	22.9	22.9	22.8	22.8	22.2	20.8	**20.5**	20.7	21.0	21.8	22.2	22.2	22.9	23.0	23.2	23.2	23.2	23.2	23.2	**20.5**	23.2	**22.5**
Feb 23	23.2	23.1	23.2	23.2	23.2	23.1	23.2	23.2	23.2	22.9	22.3	22.0	21.7	21.9	22.8	23.2	23.3	22.6	22.9	23.0	23.1	23.1	23.2	23.2	21.7	23.3	22.9
Feb 24	23.3	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	22.1	21.0	20.8	21.0	21.2	21.2	22.3	22.7	22.8	23.1	23.2	23.2	23.1	23.1	23.3	20.8	23.3	22.6
Feb 25	23.2	23.2	23.3	23.2	23.2	23.0	22.9	22.9	22.8	22.6	22.9	23.1	22.5	22.8	23.0	23.7	24.2	24.5	24.3	23.8	23.6	23.3	22.6	22.7	22.5	24.5	23.2
Feb 26	22.7	22.6	22.5	22.8	22.5	22.8	22.4	22.7	22.5	22.7	23.2	23.8	22.9	22.5	22.7	23.2	23.8	24.3	24.4	24.5	24.4	24.5	24.6	24.5	22.4	24.6	23.3
Feb 27	24.2	23.5	22.9	22.6	22.6	22.6	22.4	22.5	22.8	22.7	23.1	23.4	22.1	21.9	22.5	23.4	24.1	24.4	24.4	24.2	23.7	22.7	22.9	22.8	21.9	24.4	23.1
Feb 28	22.6	22.7	22.7	22.5	22.8	22.5	22.7	22.4	22.9	23.1	23.6	24.0	23.8	23.4	23.4	23.8	24.0	24.2	23.6	23.0	22.5	22.8	22.6	22.6	22.4	24.2	23.1
Diurnal Maximum	24.7	24.7	24.8	24.8	24.9	25.1	25.0	25.0	24.9	24.8	24.5	24.4	24.3	24.4	24.7	24.9	24.8	25.0	25.0	24.8	24.8	24.9	24.8	24.8			
Diurnal Average	23.6	23.6	23.6	23.6	23.6	23.6	23.5	23.5	23.5	23.3	23.0	22.9	22.7	22.6	22.9	23.3	23.6	23.8	23.8	23.7	23.7	23.6	23.6	23.6			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

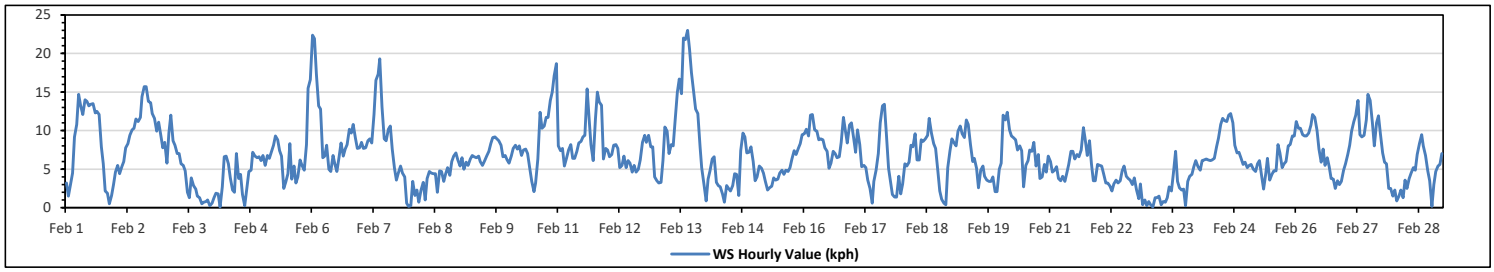
VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	23.0	kph	on Feb 13 at hr 15	Hours in Service:	672	
Maximum Daily Value:	11.6	kph	on Feb 13	Hours of Data:	672	
Minimum Hourly Value:	0.1	kph	on Feb 4 at hr 3	Hours of Missing Data:	0	
Minimum Daily Value:	2.5	kph	on Feb 23	Hours of Calibration:	0	
Monthly Average:	1.0	kph		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Feb 1	3.2	1.5	2.9	4.5	9.2	10.8	14.7	13.3	12.1	14.0	13.8	13.2	13.4	13.5	12.3	12.5	12.1	7.9	5.7	2.2	1.9	0.5	1.6	3.0	0.5	14.7	8.3
Feb 2	4.6	5.5	4.4	5.3	6.0	7.8	8.3	9.4	10.1	10.3	11.5	11.2	11.7	14.4	15.7	15.7	13.8	13.6	12.2	11.6	9.9	11.1	9.6	7.8	4.4	15.7	10.1
Feb 3	8.5	5.8	9.7	12.0	8.7	8.1	7.0	7.0	5.7	5.5	4.8	2.0	1.3	3.9	2.9	2.4	1.5	1.3	0.5	0.7	0.8	1.0	0.3	0.6	0.3	12.0	4.3
Feb 4	1.3	1.9	1.8	**0.1**	2.7	6.6	6.7	5.7	3.9	2.3	2.0	7.0	3.8	4.3	1.7	0.3	2.3	4.7	4.9	7.2	6.7	6.5	6.6	6.1	**0.1**	7.2	4.0
Feb 5	6.8	5.5	6.8	6.4	7.2	8.1	9.3	8.8	7.4	6.7	2.5	3.3	4.4	8.3	3.7	5.4	3.2	4.0	6.2	5.5	4.9	8.2	15.5	16.6	2.5	16.6	6.9
Feb 6	22.4	21.9	17.3	13.2	12.8	6.5	6.7	8.1	5.0	4.7	6.8	5.6	4.7	6.6	8.4	6.7	7.6	8.2	10.2	9.7	10.8	9.0	7.7	7.8	4.7	22.4	9.5
Feb 7	8.5	7.7	7.8	8.7	8.9	8.4	12.1	16.5	17.3	19.3	13.1	8.9	8.7	10.2	10.6	7.6	5.1	3.6	4.5	5.4	4.5	4.0	0.6	0.2	0.2	19.3	8.4
Feb 8	0.3	3.4	1.6	2.3	0.7	2.3	3.3	1.0	3.8	4.7	4.5	4.4	4.4	2.0	4.8	4.7	3.4	4.4	5.2	4.2	6.0	6.7	7.1	6.2	0.3	7.1	3.8
Feb 9	5.4	6.5	5.0	5.9	5.5	6.3	6.8	6.6	6.5	6.7	6.0	5.5	6.1	6.7	7.3	8.3	9.1	9.2	8.9	8.7	8.1	6.6	6.8	6.2	5.0	9.2	6.9
Feb 10	5.8	6.7	7.7	8.1	7.6	8.0	6.8	7.5	7.6	7.0	5.3	3.4	2.1	3.2	6.3	12.4	10.3	10.6	11.7	11.7	13.9	15.0	17.1	18.7	2.1	18.7	8.9
Feb 11	8.0	7.4	7.7	5.4	6.5	7.5	8.2	6.4	6.4	7.3	8.4	8.6	9.2	9.4	15.4	11.1	8.2	6.1	11.5	15.0	13.7	13.3	6.3	7.7	5.4	15.4	8.9
Feb 12	7.5	6.6	6.9	8.1	8.2	7.7	5.2	5.5	6.7	5.2	6.1	5.8	4.6	5.5	4.6	5.0	6.2	8.5	9.4	8.5	9.4	7.9	7.9	4.0	4.0	9.4	6.7
Feb 13	3.5	3.2	3.3	6.1	10.5	9.9	7.0	8.2	8.0	11.3	15.0	16.7	14.8	22.0	21.8	**23.0**	20.6	17.5	15.0	12.8	12.2	7.9	5.2	3.1	3.1	**23.0**	**11.6**
Feb 14	0.9	3.7	4.8	6.3	6.6	3.3	2.9	2.7	1.8	0.7	2.9	2.5	2.2	2.9	4.4	4.3	1.6	7.4	9.7	9.2	7.1	7.2	7.9	6.0	0.7	9.7	4.5
Feb 15	3.5	4.0	5.4	5.1	4.5	3.4	2.3	2.6	2.8	3.9	3.6	3.7	4.5	4.9	4.3	4.9	4.7	5.2	6.3	7.4	6.9	7.7	8.3	9.5	2.3	9.5	5.0
Feb 16	9.6	10.2	9.3	12.0	12.1	10.1	9.9	8.8	8.9	8.8	7.8	7.3	5.1	5.8	7.3	7.0	6.5	6.6	8.5	11.7	10.0	8.4	10.7	11.0	5.1	12.1	8.9
Feb 17	9.0	7.2	10.1	8.2	5.3	5.5	5.2	3.6	2.5	0.6	3.4	4.9	7.0	11.0	13.2	13.4	9.7	5.1	3.4	1.7	1.4	1.4	4.1	1.8	0.6	13.4	5.8
Feb 18	3.1	5.7	5.4	5.9	8.1	7.9	9.6	6.2	6.2	8.8	8.6	8.9	9.4	11.6	9.7	8.3	7.7	4.8	2.2	1.1	0.6	0.4	5.2	7.4	0.4	11.6	6.4
Feb 19	8.9	8.4	8.0	9.9	10.6	9.6	9.1	11.4	10.8	8.2	6.0	6.4	5.1	2.6	4.9	5.4	4.1	3.6	3.4	3.4	4.0	2.1	2.1	5.0	2.1	11.4	6.4
Feb 20	5.8	12.0	11.4	12.4	10.1	9.3	9.1	8.8	7.5	8.0	7.4	2.7	5.5	6.1	7.5	7.3	8.5	5.4	6.9	3.8	4.0	5.6	4.6	6.7	2.7	12.4	7.4
Feb 21	6.0	4.6	4.9	5.3	3.8	3.5	4.1	3.4	4.5	5.6	7.3	7.3	6.3	6.9	6.6	7.5	10.4	9.0	6.8	8.7	5.7	3.5	3.5	5.6	3.4	10.4	5.9
Feb 22	5.5	5.4	4.4	3.2	3.2	2.8	2.2	3.1	3.6	3.2	3.5	4.8	5.4	4.1	3.8	3.6	3.0	3.9	2.3	1.2	3.1	0.4	1.0	0.3	0.3	5.5	3.2
Feb 23	0.8	0.4	**0.1**	1.3	1.3	1.5	0.4	0.8	0.7	1.3	2.7	2.2	4.4	7.3	3.4	2.6	2.3	2.4	0.3	3.4	4.1	4.3	5.3	6.1	**0.1**	7.3	**2.5**
Feb 24	5.3	4.9	6.1	6.2	6.3	6.2	6.1	6.2	6.4	7.9	9.0	10.8	11.6	11.3	11.2	12.0	12.2	11.0	8.1	7.1	7.2	6.5	5.6	5.9	4.9	12.2	8.0
Feb 25	5.2	5.5	5.6	5.0	4.7	5.7	6.1	4.1	2.4	4.5	6.4	3.6	4.3	4.8	4.8	8.2	7.1	5.2	5.7	6.0	8.0	8.2	9.3	9.3	2.4	9.3	5.8
Feb 26	11.2	10.3	10.3	9.5	9.3	9.3	9.7	10.7	12.1	11.7	10.0	7.6	5.9	7.6	5.5	6.5	5.3	3.8	3.7	2.5	3.5	3.0	3.4	4.9	2.5	12.1	7.4
Feb 27	5.7	6.9	8.1	9.9	11.2	12.0	13.9	9.5	9.2	9.4	11.4	14.7	13.9	11.0	8.0	11.0	11.9	9.6	7.1	5.9	5.7	2.5	2.5	1.5	1.5	14.7	8.9
Feb 28	2.3	0.9	1.5	2.3	1.3	3.6	2.5	3.8	4.5	5.2	4.9	6.9	8.3	9.5	8.0	6.8	4.8	3.5	0.2	3.0	4.7	5.4	5.6	7.0	0.2	9.5	4.4
Diurnal Maximum	22.4	21.9	17.3	13.2	12.8	12.0	14.7	16.5	17.3	19.3	15.0	16.7	14.8	22.0	21.8	23.0	20.6	17.5	15.0	15.0	13.9	15.0	17.1	18.7			
Diurnal Average	6.0	6.2	6.4	6.7	6.9	6.8	7.0	6.8	6.6	6.9	7.0	6.8	6.7	7.8	7.8	8.0	7.3	6.6	6.4	6.4	6.4	5.9	6.1	6.3			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance		
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P**	Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)				

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

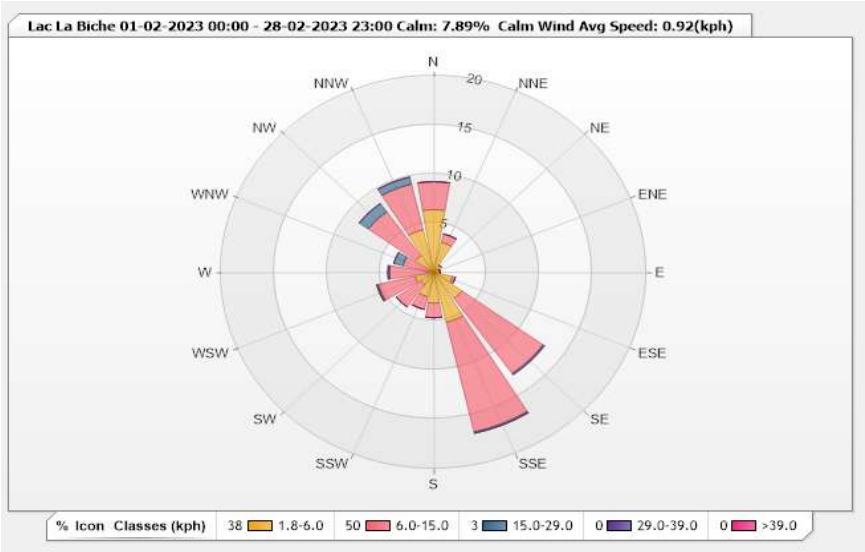


Station: Lac La Biche Monitor: WDS [kph] Monthly: 02-2023

Type: Wind Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm (WS<1.8kph): 7.89% Valid Data: 100.00%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	6.4	2.83	0	0	0	9.23
NNE	3.13	0.89	0	0	0	4.02
NE	0.89	0	0	0	0	0.89
ENE	0.6	0	0	0	0	0.6
E	0.6	0	0	0	0	0.6
ESE	1.79	0.3	0	0	0	2.09
SE	3.27	9.38	0.15	0	0	12.8
SSE	5.21	11.46	0.15	0	0	16.82
S	3.13	1.49	0	0	0	4.62
SSW	2.53	1.34	0	0	0	3.87
SW	1.49	2.83	0	0	0	4.32
WSW	1.79	3.57	0.15	0	0	5.51
W	0.6	3.57	0.15	0	0	4.32
WNW	0.45	2.53	0.89	0	0	3.87
NW	2.08	5.51	1.04	0	0	8.63
NNW	4.46	4.76	0.74	0	0	9.96
Summary	38.42	50.46	3.27	0	0	92.15



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

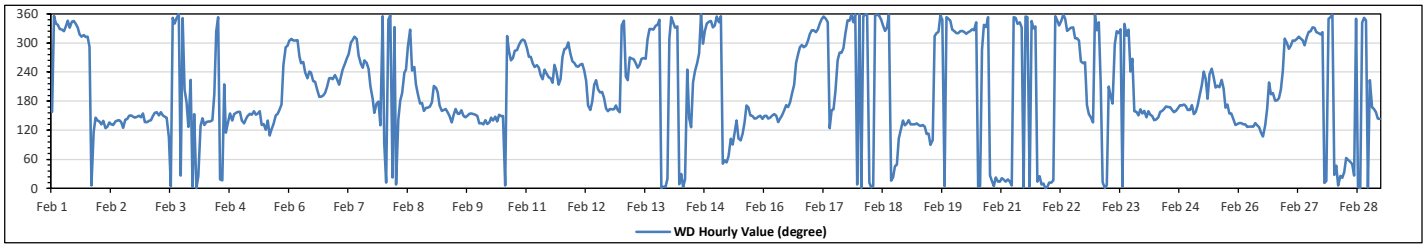
WIND DIRECTION (VWD) in sector

Monthly Average:	243 (WSW) degree	Hours in Service:	672
		Hours of Data:	672
		Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																						Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Feb 1	SSE	N	NNW	NNW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NW	NW	NW	NW	WNW	N	ESE	SE	SE	330	NNW
Feb 2	SE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SE	SE	SE	SSE	SE	SSE	SE	141	SE
Feb 3	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	ESE	N	N	NNW	N	N	NNE	N	SSW	S	SE	SW	N	143	SE
Feb 4	SSE	N	NNE	SE	SE	SE	SE	SE	SE	SE	SSW	NW	N	NNE	NNE	SSW	ESE	SE	SSE	SE	SSE	SSE	SSE	SSE	137	SE
Feb 5	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	ESE	SE	ESE	ESE	SE	SSE	SSE	SSE	S	WSW	WNW	WNW	162	SSE
Feb 6	WNW	NW	WNW	WNW	NW	W	WSW	W	WSW	SW	WSW	WSW	SW	SW	SSW	S	S	S	SSW	SSW	SW	SW	SW	SW	255	WSW
Feb 7	SW	SSW	SW	WSW	WSW	W	W	WNW	NW	NW	NW	W	WSW	WSW	W	WSW	WSW	SSW	S	SSE	S	S	SE	N	265	W
Feb 8	E	NNE	NNW	N	NNE	NNW	N	SE	S	SSW	WSW	WSW	WNW	NW	WSW	WSW	SSW	SSW	S	S	SSE	SSE	SSE	SSE	203	SSW
Feb 9	S	SSW	SSW	SSW	S	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	160	SSE
Feb 10	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	N	NW	W	W	W	WNW	WNW	WNW	WNW	NW	WNW	257	WSW
Feb 11	WNW	W	W	WSW	WSW	WSW	WSW	SW	SW	WSW	SW	SW	SW	SW	WSW	WSW	SSW	SW	W	WNW	WNW	WNW	W	W	256	WSW
Feb 12	WSW	WSW	WSW	WSW	WSW	WSW	SW	S	SSE	S	SSW	SW	SSW	SSW	SSW	S	SSE	SSE	SSE	SSE	SSE	S	SSE	SSE	197	SSW
Feb 13	NNW	NNW	SW	SW	W	W	W	WSW	WSW	WSW	W	W	W	NW	NNW	NNW	NW	NNW	NNW	NNW	N	N	N	NNE	306	NW
Feb 14	NW	N	NNW	NNW	NNW	N	NNE	N	NNE	WSW	SE	SE	SW	WSW	WSW	W	N	WNW	NW	NNW	NNW	NNW	NNW	NNW	330	NNW
Feb 15	N	NNW	N	NE	ENE	NE	ENE	E	E	ESE	SE	ESE	E	ESE	SE	S	SSE	SSE	SSE	SE	SE	SE	SSE	SE	122	ESE
Feb 16	SSE	SSE	SE	SE	SSE	SSE	SSE	SE	SE	SSE	SSE	S	SSE	S	SSW	SSW	WSW	W	WNW	WNW	WNW	WNW	WNW	NW	188	S
Feb 17	NW	NW	NW	NNW	NNW	NNW	N	N	NNW	ESE	SSE	SSE	SSW	W	W	W	WNW	NW	NNW	NNW	N	NNW	N	N	308	NW
Feb 18	N	N	N	N	N	NNE	N	N	N	N	N	NNW	NNW	NW	NNW	N	NNE	NNE	NE	NE	ESE	ESE	SE	SE	360	N
Feb 19	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	ESE	E	E	NW	NW	NW	N	NNW	N	N	N	NNW	NW	115	ESE
Feb 20	NW	NW	NW	NW	NW	NW	NW	NW	NW	NNW	NW	NNW	N	N	WNW	NNW	NNW	N	NNE	NNE	N	NNE	NNE	NNE	336	NNW
Feb 21	NNE	NNE	NNE	NNE	NNE	N	N	N	NNW	NNW	NNW	N	N	N	N	NNW	NNW	NNW	NNE	NNE	N	N	N	N	358	N
Feb 22	NNE	NNE	NNE	N	NNW	NNW	NNW	N	N	NW	NNW	NNW	NNW	NW	NW	WNW	W	WSW	WSW	S	SSE	SE	SE	N	334	NNW
Feb 23	NW	NNW	SW	NNE	N	N	SSW	S	S	WNW	NW	NW	NNW	N	NNW	NW	NW	WSW	W	SSE	SSE	SSE	SSE	SSE	306	NW
Feb 24	SSE	SE	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	SSE	SSE	SSE	161	SSE
Feb 25	S	SSE	SSE	S	SSW	SSW	WSW	SW	S	SW	WSW	SW	SSW	SSW	SSW	SW	SSW	SSE	S	SSE	SSE	SE	SE	SE	184	S
Feb 26	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	ESE	SE	SSE	SW	SSW	SSW	S	S	S	SSW	WSW	NW	141	SE
Feb 27	WNW	WNW	WNW	WNW	WNW	NW	NW	NW	NW	WNW	NW	NW	NW	NNW	NNW	NW	NW	NW	NW	NNE	NNE	N	N	N	317	NW
Feb 28	NNE	NE	N	NNE	NNE	NE	ENE	ENE	NE	NE	NNE	N	N	N	NNW	N	NNW	N	SW	SSE	SSE	SSE	SE	SE	30	NNE

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P Power Failure
X	InValid Data (Machine Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED					
Maximum Hourly Value:	23.0	kph	on Feb 13 at hr 15	Hours in Service:	672
Maximum Daily Value:	11.6	kph	on Feb 13	Hours of Data:	672
Minimum Hourly Value:	0.1	kph	on Feb 4 at hr 3	Hours of Missing Data:	0
Minimum Daily Value:	2.5	kph	on Feb 23	Hours of Calibration:	0
Monthly Average:	1.0	kph		Operational Uptime:	100.0

WIND DIRECTION

Monthly Average: 243 degree (WSW)

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Feb 1	3.2	1.5	2.9	4.5	9.2	10.8	14.7	13.3	12.1	14.0	13.8	13.2	13.4	13.5	12.3	12.5	12.1	7.9	5.7	2.2	1.9	0.5	1.6	3.0	0.5	14.7	8.3
	SSE	N	NNW	NNW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NW	NW	NW	NW	WNW	N	ESE	SE	SE			
Feb 2	4.6	5.5	4.4	5.3	6.0	7.8	8.3	9.4	10.1	10.3	11.5	11.2	11.7	14.4	15.7	15.7	13.8	13.6	12.2	11.6	9.9	11.1	9.6	7.8	4.4	15.7	10.1
	SE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SE	SE	SE	SSE	SE	SSE	SE			
Feb 3	8.5	5.8	9.7	12.0	8.7	8.1	7.0	7.0	5.7	5.5	4.8	2.0	1.3	3.9	2.9	2.4	1.5	1.3	0.5	0.7	0.8	1.0	0.3	0.6	0.3	12.0	4.3
	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	ESE	N	N	NNW	N	N	NNE	N	SSW	S	SE	SW	N			
Feb 4	1.3	1.9	1.8	**0.1**	2.7	6.6	6.7	5.7	3.9	2.3	2.0	7.0	3.8	4.3	1.7	0.3	2.3	4.7	4.9	7.2	6.7	6.5	6.6	6.1	**0.1**	7.2	4.0
	SSE	N	NNE	SE	SE	SE	SE	SE	SE	SE	SSW	NW	N	NNE	NNE	SSW	ESE	SE	SSE	SE	SSE	SSE	SSE	SSE			
Feb 5	6.8	5.5	6.8	6.4	7.2	8.1	9.3	8.8	7.4	6.7	2.5	3.3	4.4	8.3	3.7	5.4	3.2	4.0	6.2	5.5	4.9	8.2	15.5	16.6	2.5	16.6	6.9
	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	ESE	SE	ESE	ESE	SE	SSE	SSE	SSE	S	WSW	WNW	WNW			
Feb 6	22.4	21.9	17.3	13.2	12.8	6.5	6.7	8.1	5.0	4.7	6.8	5.6	4.7	6.6	8.4	6.7	7.6	8.2	10.2	9.7	10.8	9.0	7.7	7.8	4.7	22.4	9.5
	WNW	NW	WNW	WNW	NW	W	WSW	W	WSW	SW	WSW	WSW	SW	SW	SSW	S	S	S	SSW	SSW	SW	SW	SW	SW			
Feb 7	8.5	7.7	7.8	8.7	8.9	8.4	12.1	16.5	17.3	19.3	13.1	8.9	8.7	10.2	10.6	7.6	5.1	3.6	4.5	5.4	4.5	4.0	0.6	0.2	0.2	19.3	8.4
	SW	SSW	SW	WSW	WSW	W	W	WNW	NW	NW	NW	W	WSW	WSW	W	WSW	WSW	SSW	S	SSE	S	S	SE	N			
Feb 8	0.3	3.4	1.6	2.3	0.7	2.3	3.3	1.0	3.8	4.7	4.5	4.4	4.4	2.0	4.8	4.7	3.4	4.4	5.2	4.2	6.0	6.7	7.1	6.2	0.3	7.1	3.8
	E	NNE	NNW	N	NNE	NNW	N	SE	S	SSW	WSW	WSW	WNW	NW	WSW	WSW	SSW	SSW	S	S	SSE	SSE	SSE	SSE			
Feb 9	5.4	6.5	5.0	5.9	5.5	6.3	6.8	6.6	6.5	6.7	6.0	5.5	6.1	6.7	7.3	8.3	9.1	9.2	8.9	8.7	8.1	6.6	6.8	6.2	5.0	9.2	6.9
	S	SSW	SSW	SSW	S	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE			
Feb 10	5.8	6.7	7.7	8.1	7.6	8.0	6.8	7.5	7.6	7.0	5.3	3.4	2.1	3.2	6.3	12.4	10.3	10.6	11.7	11.7	13.9	15.0	17.1	18.7	2.1	18.7	8.9
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	N	NW	W	W	W	WNW	WNW	WNW	WNW	NW	WNW			
Feb 11	8.0	7.4	7.7	5.4	6.5	7.5	8.2	6.4	6.4	7.3	8.4	8.6	9.2	9.4	15.4	11.1	8.2	6.1	11.5	15.0	13.7	13.3	6.3	7.7	5.4	15.4	8.9
	WNW	W	W	WSW	WSW	WSW	WSW	SW	SW	WSW	SW	SW	SW	SW	WSW	WSW	SSW	SW	W	WNW	WNW	WNW	W	W			
Feb 12	7.5	6.6	6.9	8.1	8.2	7.7	5.2	5.5	6.7	5.2	6.1	5.8	4.6	5.5	4.6	5.0	6.2	8.5	9.4	8.5	9.4	7.9	7.9	4.0	4.0	9.4	6.7
	WSW	WSW	WSW	WSW	WSW	WSW	SW	S	SSE	S	SSW	SW	SSW	SSW	SSW	S	SSE	SSE	SSE	SSE	SSE	S	SSE	SSE			
Feb 13	3.5	3.2	3.3	6.1	10.5	9.9	7.0	8.2	8.0	11.3	15.0	16.7	14.8	22.0	21.8	**23.0**	20.6	17.5	15.0	12.8	12.2	7.9	5.2	3.1	3.1	**23.0**	**11.6**
	NNW	NNW	SW	SW	W	W	W	WSW	WSW	WSW	W	W	W	NW	NNW	NNW	NW	NNW	NNW	NNW	N	N	N	NNE			
Feb 14	0.9	3.7	4.8	6.3	6.6	3.3	2.9	2.7	1.8	0.7	2.9	2.5	2.2	2.9	4.4	4.3	1.6	7.4	9.7	9.2	7.1	7.2	7.9	6.0	0.7	9.7	4.5
	NW	N	NNW	NNW	NNW	N	NNE	N	NNE	WSW	SE	SE	SW	WSW	WSW	W	N	WNW	NW	NNW	NNW	NNW	NNW	NNW			
Feb 15	3.5	4.0	5.4	5.1	4.5	3.4	2.3	2.6	2.8	3.9	3.6	3.7	4.5	4.9	4.3	4.9	4.7	5.2	6.3	7.4	6.9	7.7	8.3	9.5	2.3	9.5	5.0
	N	NNW	N	NE	ENE	NE	ENE	E	E	ESE	SE	ESE	E	ESE	SE	S	SSE	SSE	SSE	SE	SE	SE	SSE	SE			
Feb 16	9.6	10.2	9.3	12.0	12.1	10.1	9.9	8.8	8.9	8.8	7.8	7.3	5.1	5.8	7.3	7.0	6.5	6.6	8.5	11.7	10.0	8.4	10.7	11.0	5.1	12.1	8.9
	SSE	SSE	SE	SE	SSE	SSE	SSE	SE	SE	SSE	SSE	S	SSE	S	SSW	SSW	WSW	W	WNW	WNW	WNW	WNW	WNW	NW			
Feb 17	9.0	7.2	10.1	8.2	5.3	5.5	5.2	3.6	2.5	0.6	3.4	4.9	7.0	11.0	13.2	13.4	9.7	5.1	3.4	1.7	1.4	1.4	4.1	1.8	0.6	13.4	5.8
	NW	NW	NW	NNW	NNW	NNW	N	N	NNW	ESE	SSE	SSE	SSW	W	W	W	WNW	NW	NNW	NNW	N	NNW	N	N			
Feb 18	3.1	5.7	5.4	5.9	8.1	7.9	9.6	6.2	6.2	8.8	8.6	8.9	9.4	11.6	9.7	8.3	7.7	4.8	2.2	1.1	0.6	0.4	5.2	7.4	0.4	11.6	6.4
	N	N	N	N	N	NNE	N	N	N	N	N	NNW	NNW	NW	NNW	N	NNE	NNE	NE	NE	ESE	ESE	SE	SE				
Feb 19	8.9	8.4	8.0	9.9	10.6	9.6	9.1	11.4	10.8	8.2	6.0	6.4	5.1	2.6	4.9	5.4	4.1	3.6	3.4	3.4	4.0	2.1	2.1	5.0	2.1	11.4	6.4
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	ESE	E	E	NW	NW	NW	N	NNW	N	N	N	NNW	NW			
Feb 20	5.8	12.0	11.4	12.4	10.1	9.3	9.1	8.8	7.5	8.0	7.4	2.7	5.5	6.1	7.5	7.3	8.5	5.4	6.9	3.8	4.0	5.6	4.6	6.7	2.7	12.4	7.4
	NW	NW	NW	NW	NW	NW	NW	NW	NW	NNW	NW	NNW	N	N	WNW	NNW	NNW	N	NNE	NNE	N	NNE	NNE	NNE			
Feb 21	6.0	4.6	4.9	5.3	3.8	3.5	4.1	3.4	4.5	5.6	7.3	7.3	6.3	6.9	6.6	7.5	10.4	9.0	6.8	8.7	5.7	3.5	3.5	5.6	3.4	10.4	5.9
	NNE	NNE	NNE	NNE	NNE	N	N	N	NNW	NNW	NNW	N	N	N	N	NNW	NNW	NNW	NNE	NNE	N	N	N	N			
Feb 22	5.5	5.4	4.4	3.2	3.2	2.8	2.2	3.1	3.6	3.2	3.5	4.8	5.4	4.1	3.8	3.6	3.0	3.9	2.3	1.2	3.1	0.4	1.0	0.3	0.3	5.5	3.2
	NNE	NNE	NNE	N	NNW	NNW	NNW	N	N	NW	NNW	NNW	NNW	NW	NW	WNW	W	WSW	WSW	S	SSE	SE	SE	N			
Feb 23	0.8	0.4	**0.1**	1.3	1.3	1.5	0.4	0.8	0.7	1.3	2.7	2.2	4.4	7.3	3.4	2.6	2.3	2.4	0.3	3.4	4.1	4.3	5.3	6.1	**0.1**	7.3	**2.5**
	NW	NNW	SW	NNE	N	N	SSW	S	S	WNW	NW	NW	NNW	N	NNW	NW	NW	WSW	W	SSE	SSE	SSE	SSE	SSE			
Feb 24	5.3	4.9	6.1	6.2	6.3	6.2	6.1	6.2	6.4	7.9	9.0	10.8	11.6	11.3	11.2	12.0	12.2	11.0	8.1	7.1	7.2	6.5	5.6	5.9	4.9	12.2	8.0
	SSE	SE	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	SSE	SSE	SSE			
Feb 25	5.2	5.5	5.6	5.0	4.7	5.7	6.1	4.1	2.4	4.5	6.4	3.6	4.3	4.8	4.8	8.2	7.1	5.2	5.7	6.0	8.0	8.2	9.3	9.3	2.4	9.3	5.8
	S	SSE	SSE	S	SSW	SSW	WSW	SW	S	SW	WSW	SW	SSW	SSW	SSW	SW	SSW	SSE	S	SSE	SSE	SE	SE	SE			
Feb 26	11.2	10.3	10.3	9.5	9.3	9.3	9.7	10.7	12.1	11.7	10.0	7.6	5.9	7.6	5.5	6.5	5.3	3.8	3.7	2.5	3.5	3.0	3.4	4.9	2.5	12.1	7.4
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	ESE	SE	SSE	SW	SSW	SSW	S	S	S	SSW	WSW	NW			
Feb 27	5.7	6.9	8.1	9.9	11.2	12.0	13.9	9.5	9.2	9.4	11.4	14.7	13.9	11.0	8.0	11.0	11.9	9.6	7.1	5.9	5.7	2.5	2.5	1.5	1.5	14.7	8.9
	WNW	WNW	WNW	WNW	WNW	NW	NW	NW	NW	WNW	NW	NW	NW	NNW	NNW	NW	NW	NW	NW	NNE	NNE	N	N	N			
Feb 28	2.3	0.9	1.5	2.3	1.3	3.6	2.5	3.8	4.5	5.2	4.9	6.9	8.3	9.5	8.0	6.8	4.8	3.5	0.2	3.0	4.7	5.4	5.6	7.0	0.2	9.5	4.4
	NNE	NE	N	NNE	NNE	NE	ENE	ENE	NE	NE	NNE	N	N	N	NNW	N	NNW	N	SW	SSE	SSE	SSE	SE	SE			

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance			
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P**	Power Failure	
X	InValid Data (Equipment Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

Lakeland Industry & Community Association

Lac La Biche Station - February 2023

Summary of Hour Standard Deviations

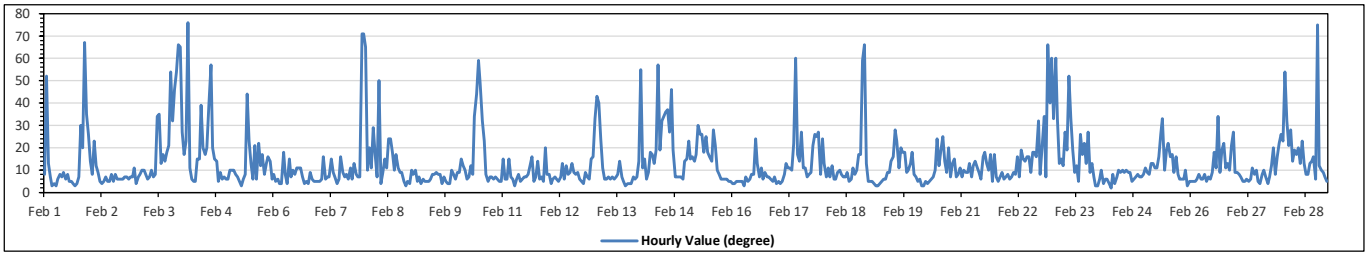
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	76 degree on Feb 4 at hr 3	Hours in Service:	672
		Hours of Data:	672
Minimum Hourly Value:	2 degree on Feb 24 at hr 6	Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
Feb 1	8	52	13	7	3	4	3	6	8	7	9	6	8	5	5	4	3	4	7	30	20	67	35	26	3	67
Feb 2	14	8	23	12	9	5	4	5	7	5	5	8	5	8	6	6	6	6	7	7	6	7	7	11	4	23
Feb 3	4	7	8	10	10	8	6	7	10	7	8	34	35	13	17	14	18	21	54	32	46	54	66	65	4	66
Feb 4	27	17	23	**76**	11	6	5	5	15	15	39	20	17	20	38	57	20	15	14	5	9	6	7	6	5	**76**
Feb 5	6	10	10	10	8	7	5	3	6	8	44	23	13	6	21	6	22	12	17	8	13	16	14	6	3	44
Feb 6	8	5	6	4	4	18	8	4	15	7	10	8	11	11	11	7	4	5	4	9	6	5	5	5	4	18
Feb 7	5	6	16	6	7	7	15	9	7	4	6	16	9	7	8	6	11	6	13	8	7	7	71	71	4	71
Feb 8	65	10	20	11	29	17	7	50	4	9	15	11	24	24	18	10	17	11	9	9	5	3	5	4	3	65
Feb 9	10	8	10	5	7	4	6	5	5	5	6	8	8	9	8	8	4	7	5	4	4	10	8	6	4	10
Feb 10	9	9	15	12	10	6	7	12	8	34	44	59	49	32	23	8	5	7	7	6	7	6	5	5	5	59
Feb 11	15	6	6	15	7	6	3	6	8	5	6	7	7	8	12	16	5	7	14	6	7	5	20	8	3	20
Feb 12	8	4	6	7	6	5	7	13	6	12	8	9	13	9	8	9	6	5	4	9	7	6	15	16	4	16
Feb 13	33	43	40	24	11	6	6	7	6	7	6	7	8	14	7	5	3	4	4	4	7	6	7	14	3	43
Feb 14	55	11	15	6	9	18	17	13	19	57	19	32	34	36	37	27	46	19	7	7	7	7	6	14	6	57
Feb 15	15	23	15	16	14	17	30	26	26	18	25	18	16	14	28	21	10	8	6	6	6	6	5	5	5	30
Feb 16	4	4	5	5	5	5	3	7	5	6	8	8	24	13	7	11	6	9	7	7	6	5	7	4	3	24
Feb 17	5	4	5	8	13	11	11	10	22	60	17	14	27	11	11	7	8	9	21	26	25	27	8	24	4	60
Feb 18	13	7	11	7	12	6	6	9	10	8	7	7	9	5	6	11	8	10	17	17	59	66	13	5	5	66
Feb 19	5	5	4	3	3	4	5	6	6	9	9	14	16	28	23	11	20	18	18	9	10	13	18	8	3	28
Feb 20	7	5	6	3	3	5	4	5	6	7	10	24	12	19	25	14	9	20	7	13	15	7	8	11	3	25
Feb 21	7	10	9	9	13	7	12	14	11	9	6	16	18	13	10	17	5	17	7	5	7	9	6	7	5	18
Feb 22	8	6	7	9	8	16	7	19	15	14	16	16	9	18	18	16	32	8	20	34	7	66	40	60	6	66
Feb 23	33	60	33	13	15	12	27	19	52	33	19	9	12	5	26	17	22	13	27	9	13	7	3	3	3	60
Feb 24	6	10	4	6	6	4	**2**	8	4	7	10	9	10	9	10	9	9	5	6	7	8	7	7	8	**2**	10
Feb 25	11	9	8	13	13	11	11	16	26	33	10	19	22	16	17	9	16	8	6	6	6	10	3	5	3	33
Feb 26	5	5	5	6	8	6	6	8	5	7	6	9	18	11	34	9	19	22	11	13	10	21	27	9	5	34
Feb 27	9	8	7	5	5	6	5	6	11	8	10	5	4	8	10	7	4	7	12	20	8	16	22	26	4	26
Feb 28	23	54	32	21	28	14	19	17	20	13	23	13	8	8	13	14	16	6	75	12	10	9	7	5	5	75
Diurnal Minimum	4	4	4	3	3	4	2	3	4	4	5	5	4	5	5	4	3	4	4	4	4	3	3	3		
Diurnal Maximum	65	60	40	76	29	18	30	50	52	60	44	59	49	36	38	57	46	22	75	34	59	67	71	71		

C	Monthly Calibration	**S**	Daily Zero-Span Check	**Q**	Quality Assurance	
K	Collection Error	**ND**	No Data (Machine Not in Service)	**Y**	Routine Maintenance	**P** Power Failure
X	InValid Data (Machine Malfunction /Recovery)	**NRM**	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)			

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



END OF REPORT

This page, 155 of 155 ends the February 2023 Monthly Ambient Air Quality Monitoring Report.

Lakeland Industry & Community Association

FEBRUARY 2023

Ambient Air Monitoring Calibration Report

- COLD LAKE SOUTH STATION-

CAL-LICA-202302-01174

Station Operation and Maintenance:
Bureau Veritas Canada

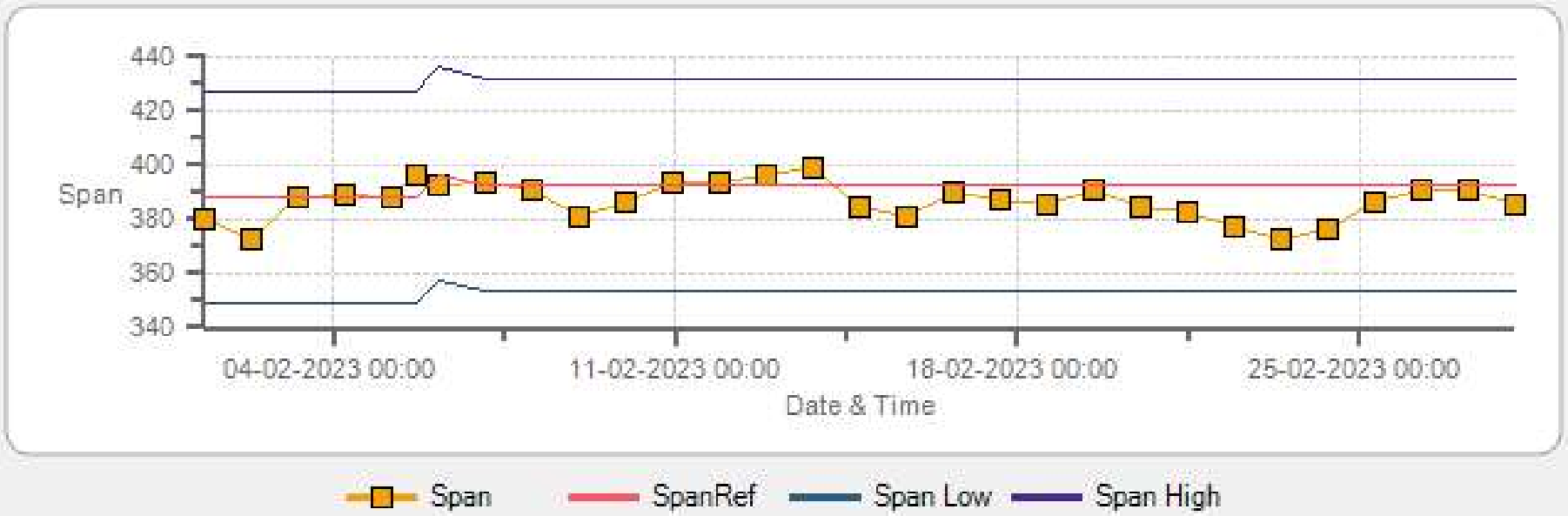
Data Validation and Report:
LICA / Bureau Veritas Canada

March 10, 2023

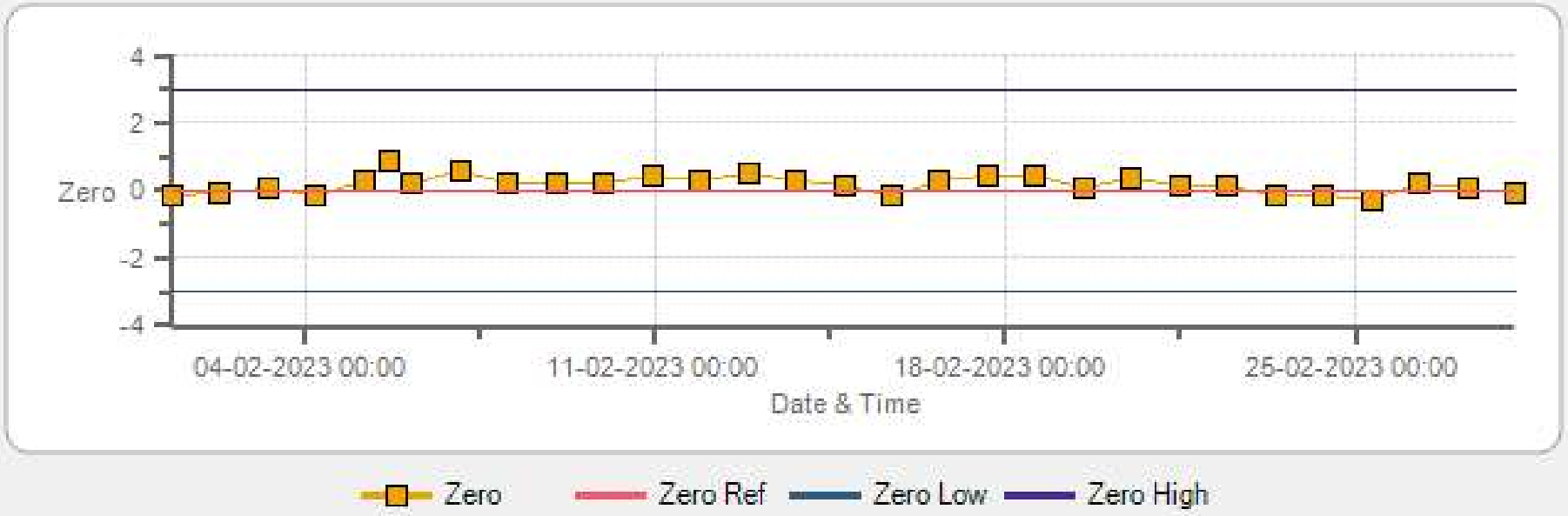
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Zero

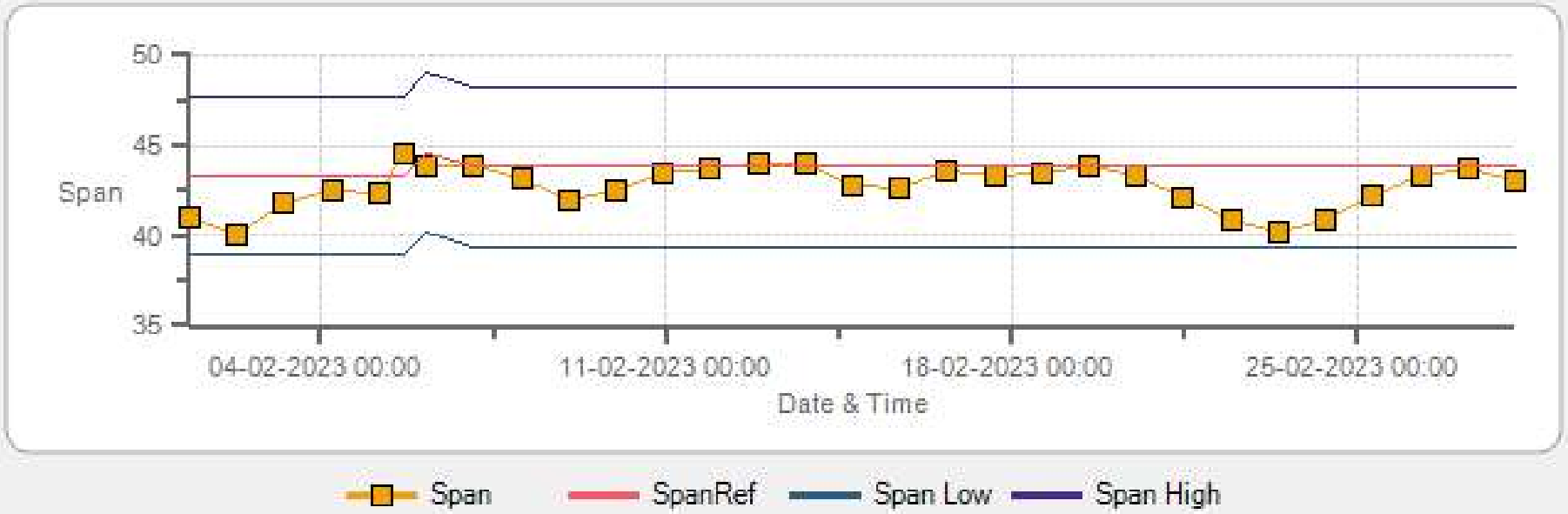
SO2[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Span

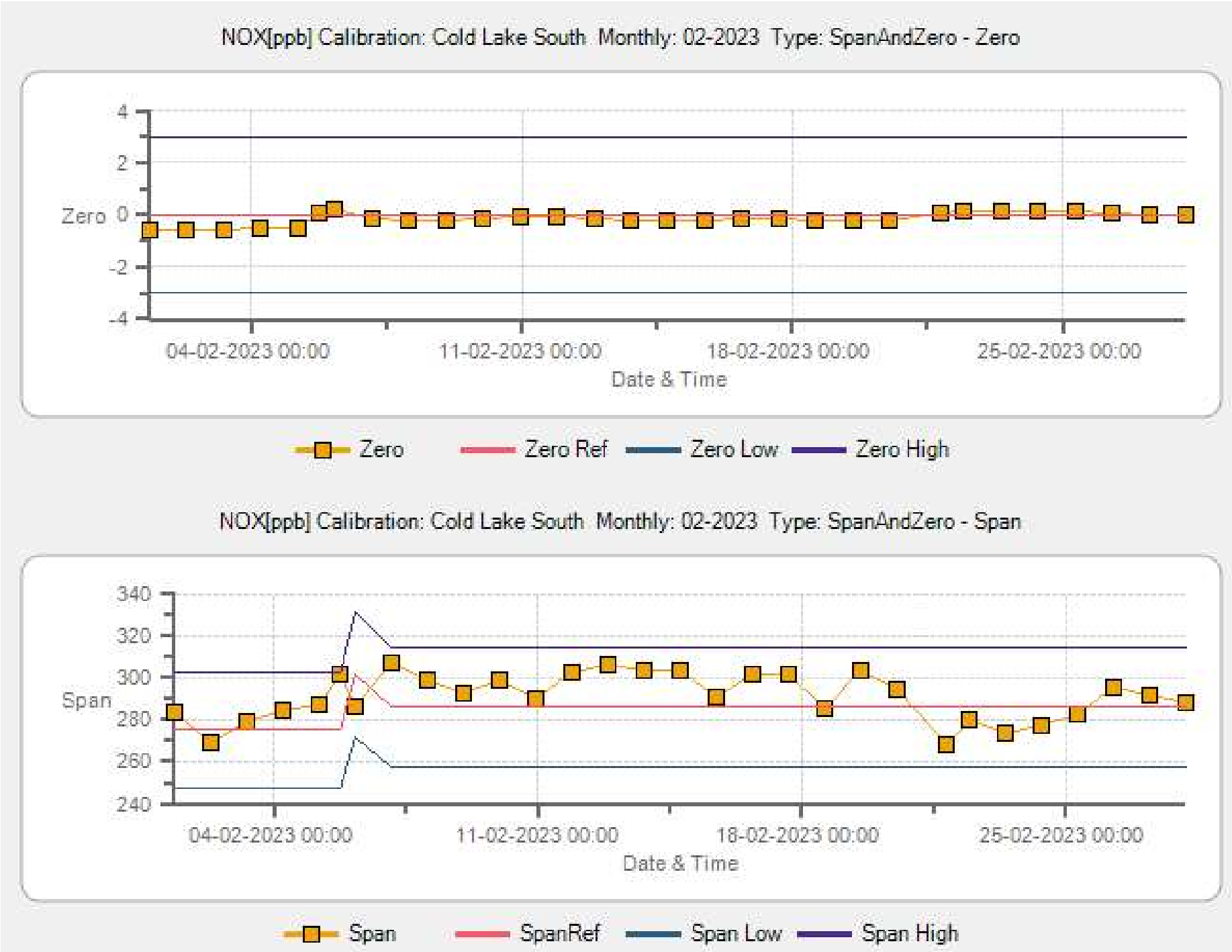


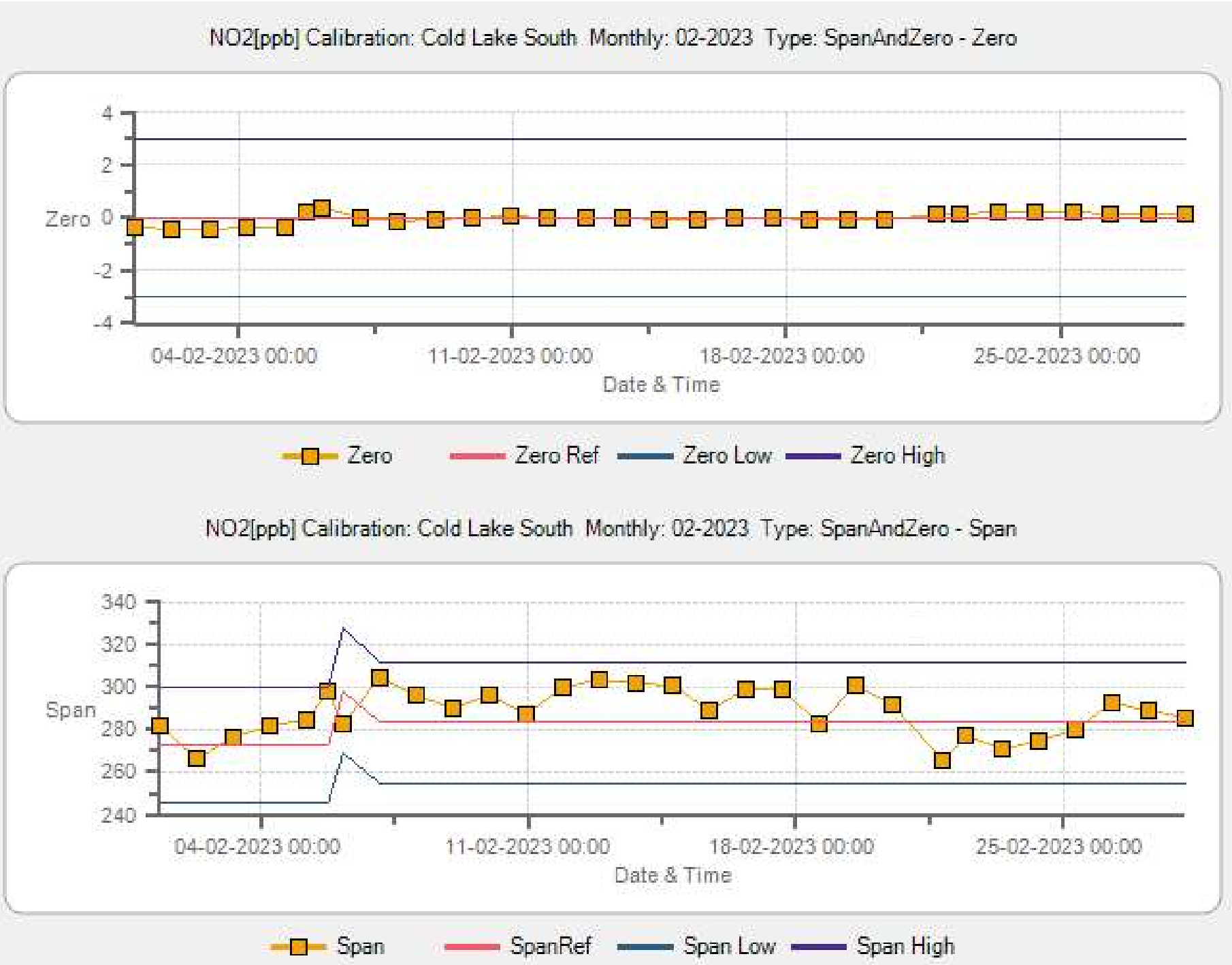
TRS[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Zero

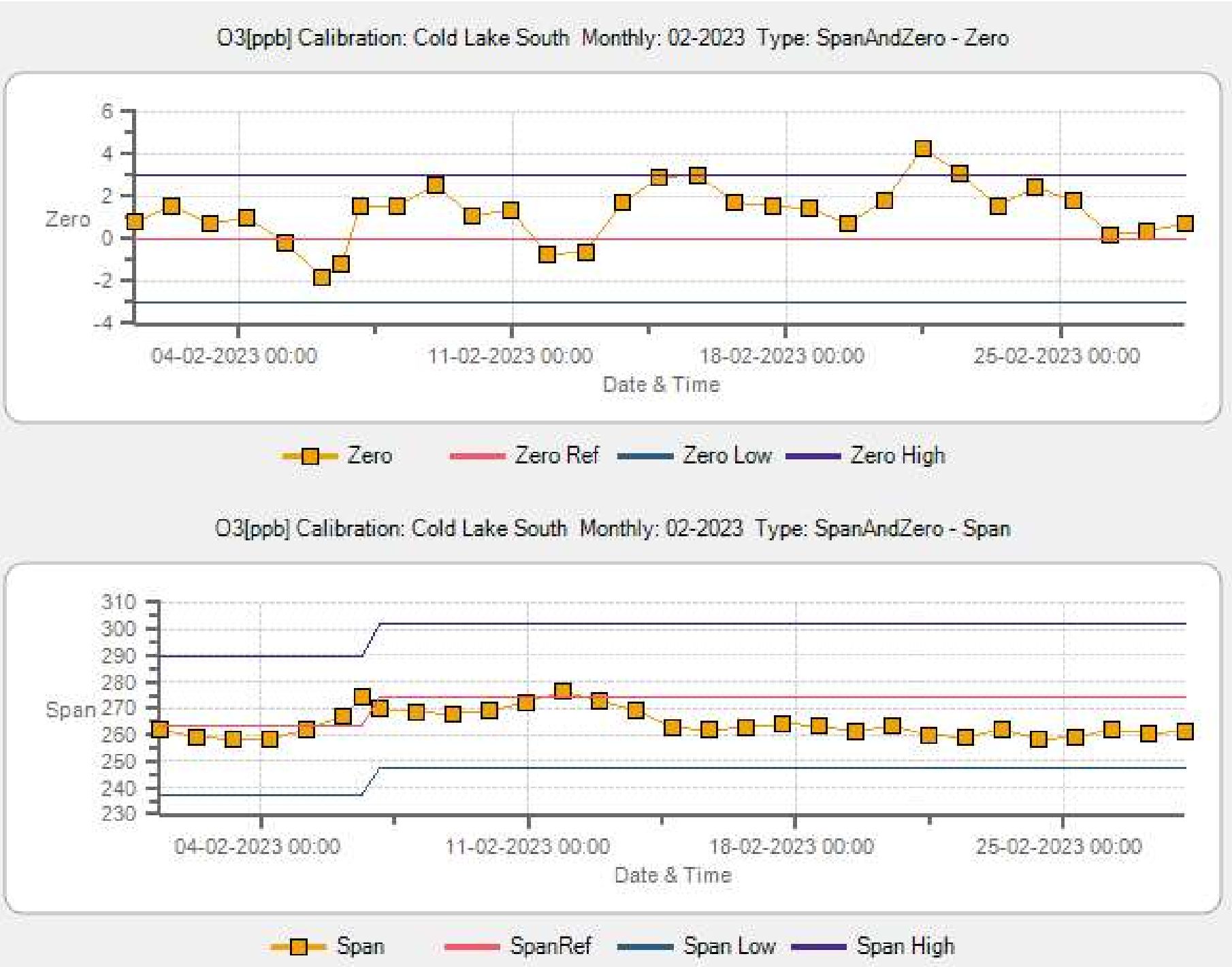


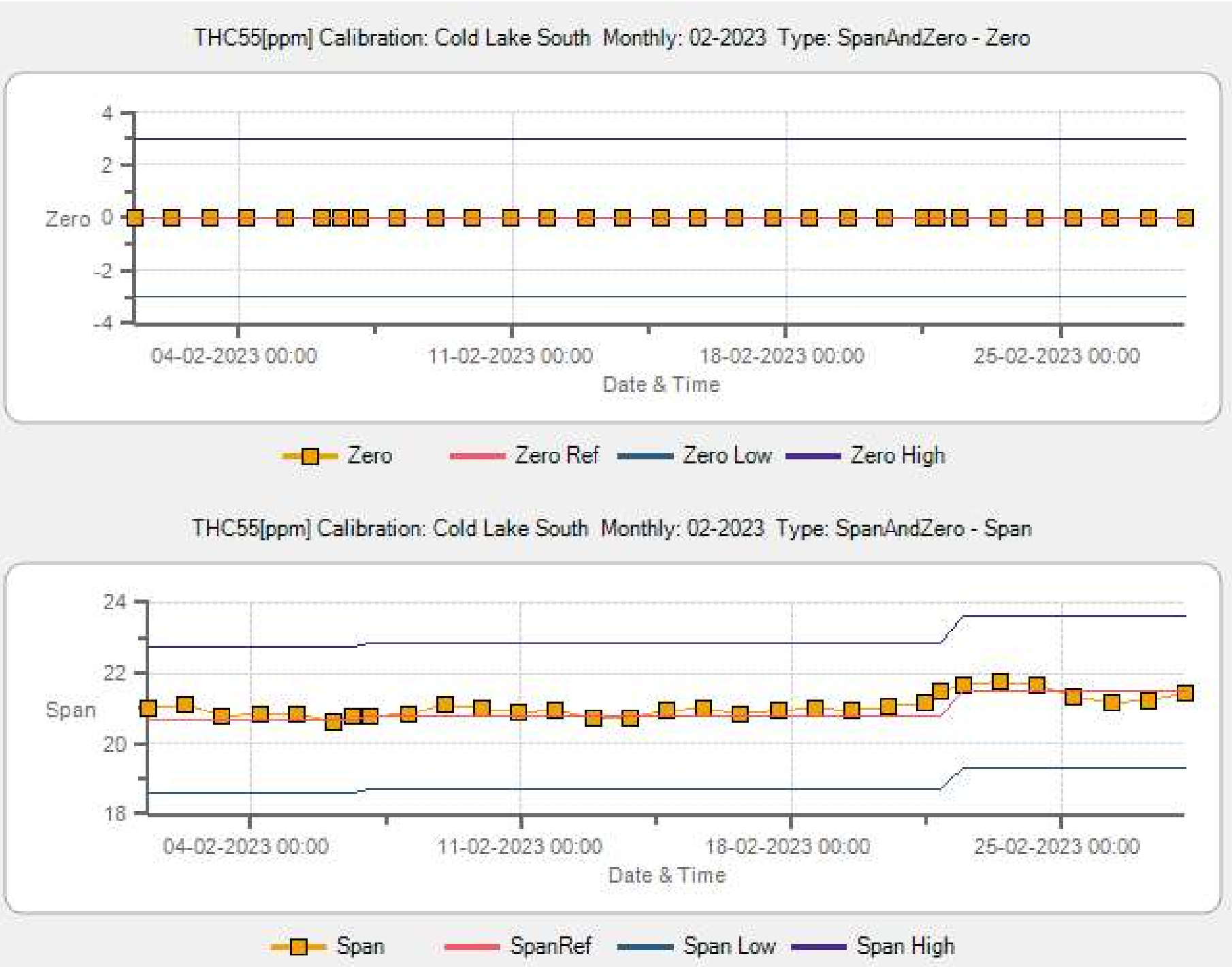
TRS[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Span

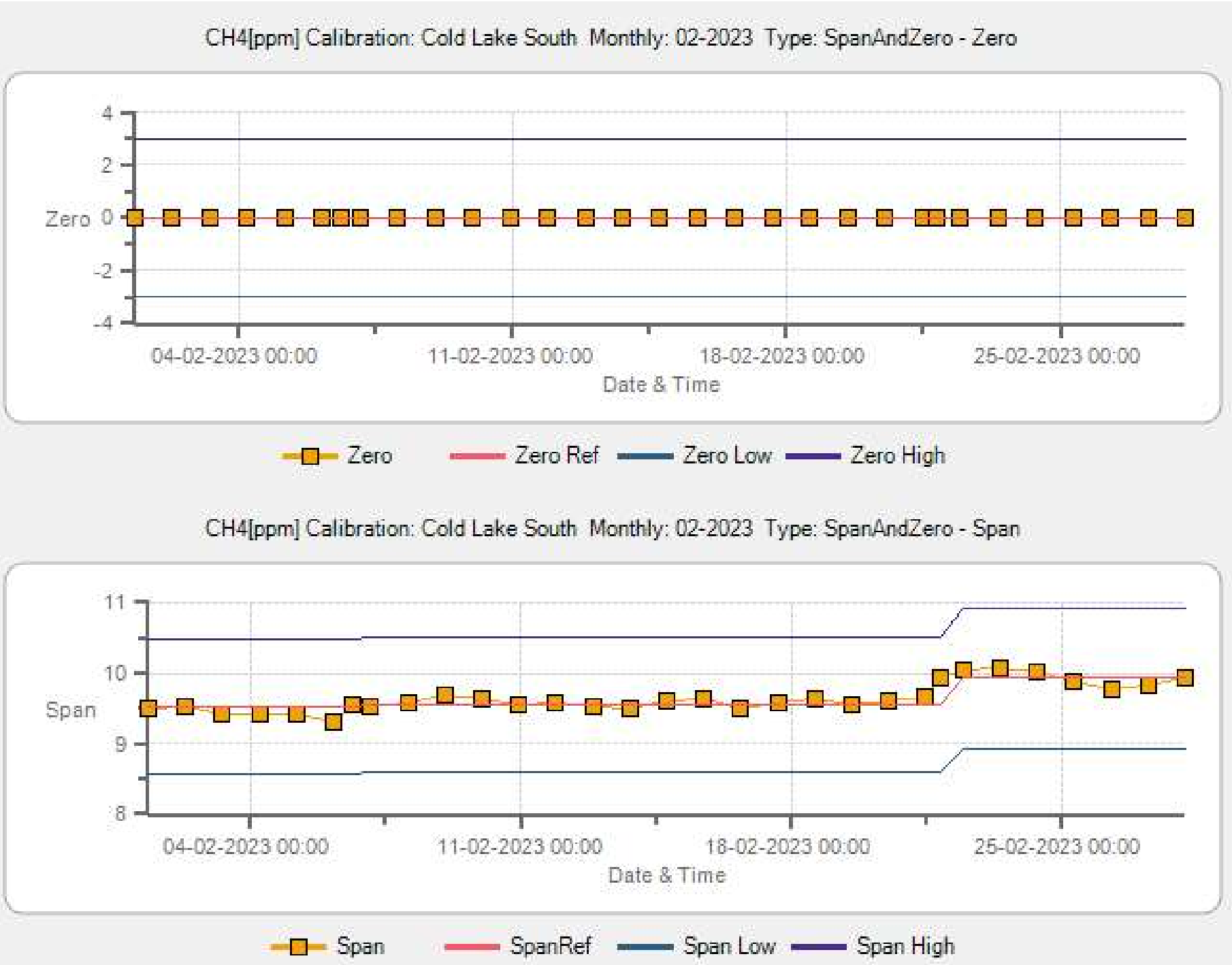



NOX[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NOX[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Span
340
320
300
Span
280
260
240
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NO2[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NO2[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Span
340
320
300
Span
280
260
240
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High

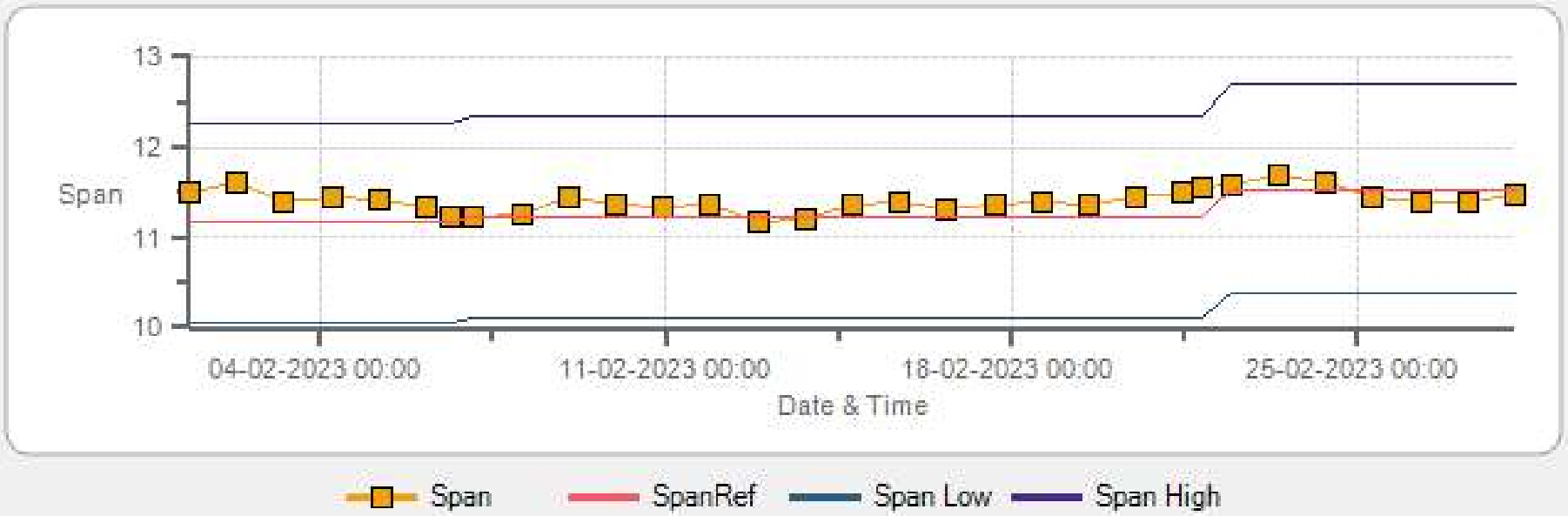

O3[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Zero
Zero
6
4
2
0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Span
Span
310
300
290
280
270
260
250
240
230
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High


THC55[ppm] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Span
24
22
Span
20
18
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High


CH4[ppm] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4[ppm] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Span
11
10
Span
9
8
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High

NMHC[ppm] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Zero

NMHC[ppm] Calibration: Cold Lake South Monthly: 02-2023 Type: SpanAndZero - Span



MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	05-Feb-2023	PREVIOUS CALIBRATION DATE:	08-Jan-2023
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	935
PURPOSE	Routine	START TIME (MST):	11:32
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:34

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180260018	FLOW (mL/min)	430
INITIAL		FINAL	
BKG/OFFSET	2.55	BKG/OFFSET	2.43
COEF/SLOPE	1.013	COEF/SLOPE	1.019
Expected (reference) Value	388.3	Expected (reference) Value	392.9

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	132
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL 127895	HIGH ID	n/a
CONC (ppm):	50.40	EXPIRY DATE	n/a
CYLINDER (psi):	1900	LOW ID	n/a
EXPIRY DATE	27-Oct-2030	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	390	190	95
RANGE	300 - 400	150 - 200	50 - 100

SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

CALIBRATION:

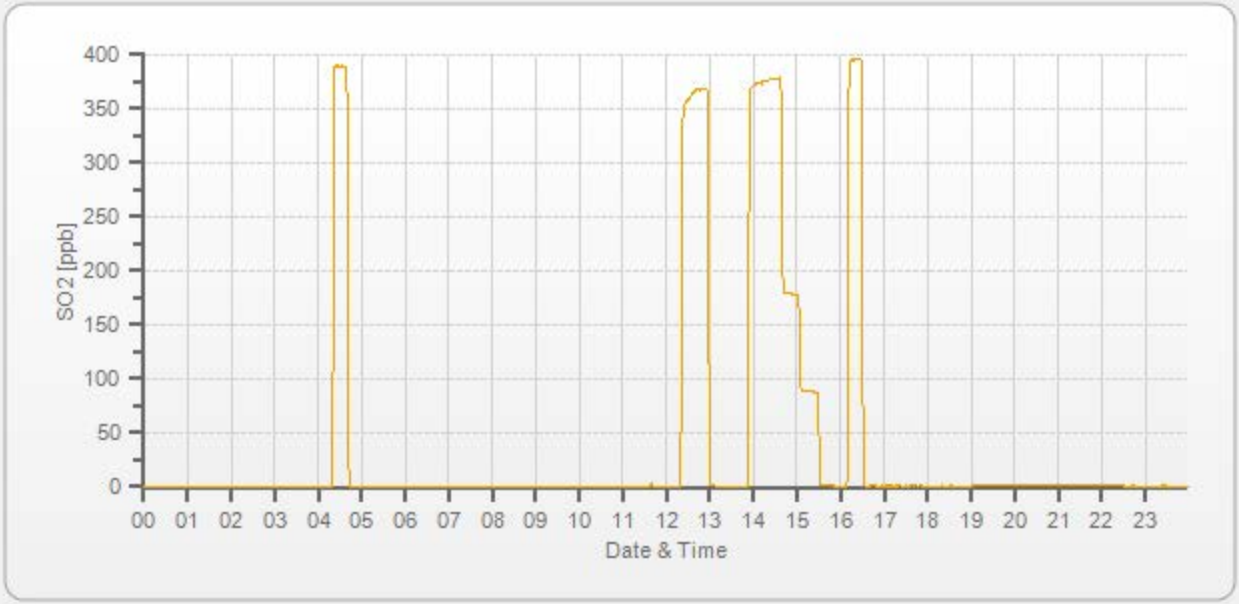
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.00	-0.2	0		
4961	37.20	4998	375.13	367.2	377.3	1.021	0.994
4982	17.60	5000	177.41	n/a	177.7	n/a	0.998
4990	8.80	4999	88.72	n/a	87.9	n/a	1.009

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.007	-0.1%

COMMENTS:

Sample inlet filter was changed.


SO2[ppb] Station: Cold Lake South Daily: 05-02-2023 Type: AVG 1 Min. [1 Min.]
SO2 [ppb]
400
350
300
250
200
150
100
50
0
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
SO2 [ppb]

TRS Analyzer Calibration by Dilution

DATE:	05-Feb-2023	PREVIOUS CALIBRATION DATE:	08-Jan-2023
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	0.998
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	935
PURPOSE	Routine	START TIME (MST):	11:30
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:34

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	812728560	FLOW (mL/min)	484
INITIAL		FINAL	
BKG/OFFSET	25.1	BKG/OFFSET	25.9
COEF/SLOPE	1.132	COEF/SLOPE	1.165
Expected (reference) Value	43.3	Expected (reference) Value	43.8

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	21-Oct-2022	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY 0002287	HIGH ID	n/a
CONC (ppm):	10.10	EXPIRY DATE	n/a
CYLINDER (psi):	1500	LOW ID	n/a
EXPIRY DATE	14-Sep-2024	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	11:42	SO2 Conc (ppb)	380
END TIME:	11:57	Analyzer Response (ppb)	0.0

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	0	0		
7442	57.90	7500	77.97	76.8	78.8	1.015	0.989
7472	28.20	7500	37.98	n/a	37.9	n/a	1.002
7486	14.10	7500	18.99	n/a	19.5	n/a	0.974

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.009	0.0%

COMMENTS:

Sample inlet filter was changed.
Converter: CDN - 101, #501.
14:33 = operator error switching between high and mid points. Calibration was continued as normal.

TRS[ppb] Station: Cold Lake South Daily: 05-02-2023 Type: AVG 1 Min. [1 Min.]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

DATE:	05-Feb-2023	PREVIOUS CALIBRATION DATE:	08-Jan-2023
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	935
PURPOSE	Routine	START TIME (MST):	11:34
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:24

ANALYZER:

MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
SERIAL #:	1505664393	NOx	1.002
FLOW (mL/min)	680	NO	1.002
RANGE (ppb)	500	NO2	1.000
GPT FOR O3?		No	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 127895		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	51.1	51.6	HIGH EXPIRY:	n/a
ID:	17100415	ID:	132	CYLINDER (psi):	1900		LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a	EXPIRY DATE	27-Oct-2030		LOW EXPIRY:	n/a

CALIBRATION SETTINGS:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	5.2	4.6	n/a	BKG/OFFSET:	5	4.8	n/a
SLOPE/COEF/CE:	1.008	0.995	0.999	SLOPE/COEF/CE:	1.008	1.036	0.999

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	275.0	2.4	272.6		286.0	2.8	283.2

CALIBRATION PARAMETERS:

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	380	250	230-265	n/a
MID	180	125	115-150	n/a
LOW	90	45	40-55	n/a
EXTRA 1	n/a	n/a	n/a	n/a

NO/NOx CALIBRATION:

FLOW RATE			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
5000		5000	0.0	0.0	0.0	0.0	-0.4	-0.3	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	366.0	369.8	3.8	379.7	383.3	3.5	1.039	1.037		1.002	1.002	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.4	181.3	1.8	n/a	n/a		1.003	1.002	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	89.2	90.4	1.1	n/a	n/a		1.008	1.005	

GPT CALIBRATION:

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	379.0	382.6	3.6				
AS-FOUND HIGH	37.20	4998	235	127.0	382.4	255.4	252	251.8	1.001	99.92%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	37.20	4998	110	259.8	382.0	122.1	119.2	118.5	1.006	99.41%
LOW	37.20	4998	40	332.7	382.1	49.4	46.3	45.8	1.011	98.92%
NO2 adjustment not required.									AVERAGE:	99.42%

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.999	-0.06%
NOx	1.000	0.998	-0.02%
NO2	1.000	1.002	-0.14%

COMMENTS:

Sample inlet filter was changed.

Station: Cold Lake South Daily: 05-02-2023 Type: AVG 1 Min. [1 Min.]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

DATE:	21-Feb-2023	PREVIOUS CALIBRATION DATE:	05-Feb-2023
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	954
PURPOSE	Removal/Shut-down	START TIME (MST):	10:58
PERFORMED BY:	Alex Yakupov	END TIME (MST):	14:51

ANALYZER:

MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
SERIAL #:	1505664393	NOx	1.002
FLOW (mL/min)	622	NO	1.002
RANGE (ppb)	500	NO2	1.001
GPT FOR O3?		No	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 127895		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	51.1	51.6	HIGH EXPIRY:	n/a
ID:	17100415	ID:	132	CYLINDER (psi):	1900		LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a	EXPIRY DATE	27-Oct-2030		LOW EXPIRY:	n/a

CALIBRATION SETTINGS:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	5	4.8	n/a	BKG/OFFSET:	n/a	n/a	n/a
SLOPE/COEF/CE:	1.008	1.036	0.999	SLOPE/COEF/CE:	n/a	n/a	n/a

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	286.0	2.8	283.2		n/a	n/a	n/a

CALIBRATION PARAMETERS:

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	380	250	230-265	n/a
MID	180	125	115-150	n/a
LOW	90	45	40-55	n/a
EXTRA 1	n/a	n/a	n/a	n/a

NO/NOx CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
5000		5000	0.0	0.0	0.0	-0.1	-0.1	-0.2	n/a	n/a	n/a						
4961	37.20	4998	380.3	384.1	3.7	364.4	368.6	4.2	n/a	n/a	n/a	1.043	1.042		n/a	n/a	
4982	17.60	5000	179.9	181.6	1.8	173.3	175.5	2.1	n/a	n/a	n/a	1.037	1.034		n/a	n/a	
4990	8.80	4999	90.0	90.8	0.9	86.2	87.1	0.8	n/a	n/a	n/a	1.042	1.042		n/a	n/a	

GPT CALIBRATION:

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	371.4	375.5	4.0				
AS-FOUND HIGH	37.20	4998	235	116.8	373.7	256.9	254.6	252.9	1.007	99.33%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	37.20	4998	110	252.7	378.9	126.1	118.7	122.1	0.972	102.86%
LOW	37.20	4998	40	328.2	382.1	53.9	43.2	49.9	**0.866**	115.51%
NO2 adjustment not required.									AVERAGE:	**105.90%**

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.959	0.03%
NOx	1.000	0.960	0.03%
NO2	1.000	0.961	1.66%

COMMENTS:

Shutdown calibration was completed to rebuild a sample pump. Reason: sample flow is low and triggers alarm.

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

DATE:	21-Feb-2023	PREVIOUS CALIBRATION DATE:	n/a
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	954
PURPOSE	Install/Post-Repair	START TIME (MST):	16:03
PERFORMED BY:	Alex Yakupov	END TIME (MST):	20:44

ANALYZER:

MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
SERIAL #:	1505664393	NOx	n/a
FLOW (mL/min)	706	NO	n/a
RANGE (ppb)	500	NO2	n/a
GPT FOR O3?		No	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 127895	HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	51.1 51.6	HIGH EXPIRY:	n/a
ID:	17100415	ID:	132	CYLINDER (psi):	1900	LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a	EXPIRY DATE	27-Oct-2030	LOW EXPIRY:	n/a

CALIBRATION SETTINGS:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	n/a	n/a	n/a	BKG/OFFSET:	4.6	4.6	n/a
SLOPE/COEF/CE:	n/a	n/a	n/a	SLOPE/COEF/CE:	1.008	1.01	1.011

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	n/a	n/a	n/a		286.0	2.8	283.2

CALIBRATION PARAMETERS:

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	380	250	230-265	n/a
MID	180	125	115-150	n/a
LOW	90	45	40-55	n/a
EXTRA 1	n/a	n/a	n/a	n/a

NO/NOx CALIBRATION:

FLOW RATE			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
5000		5000	0.0	0.0	0.0	n/a	n/a	n/a	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	n/a	n/a	n/a	379.8	383.4	3.5	n/a	n/a		1.001	1.002	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	180.2	181.9	1.6	n/a	n/a		0.998	0.999	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	89.9	90.8	0.9	n/a	n/a		1.001	1.000	

GPT CALIBRATION:

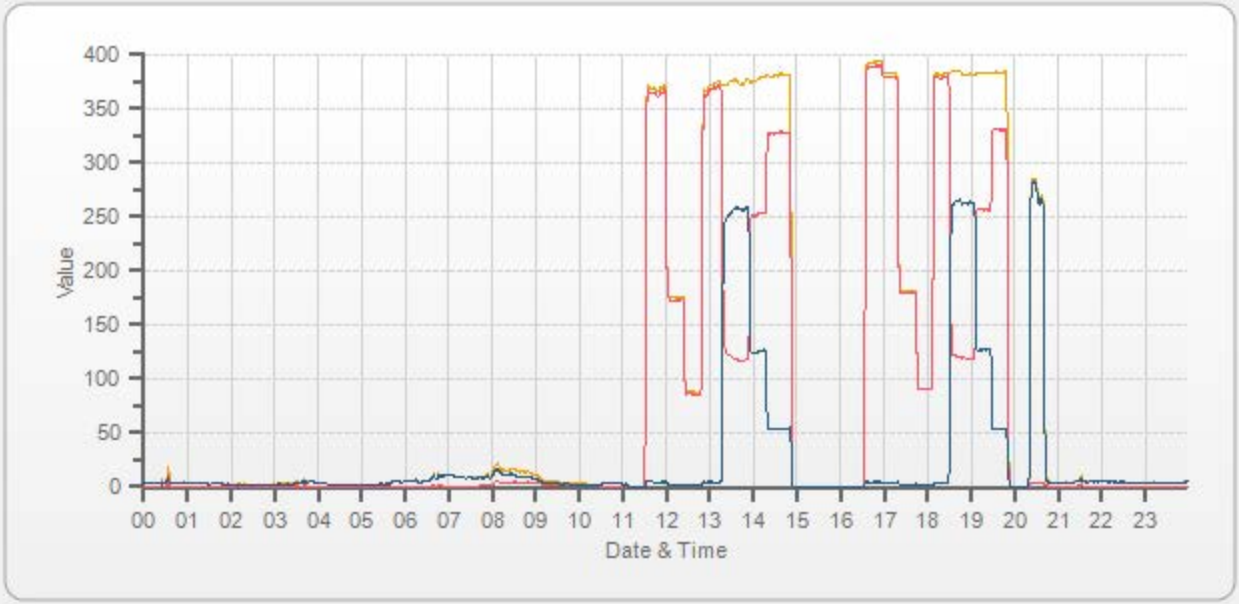
Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	378.7	382.3	3.5				
AS-FOUND HIGH	37.20	4998	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
ADJUSTED HIGH	n/a	n/a	n/a	119.2	381.9	262.8	259.5	259.3	1.001	99.92%
MID	37.20	4998	110	256.5	383.3	126.8	122.2	123.3	0.991	100.90%
LOW	37.20	4998	40	330.4	384.1	53.7	48.3	50.2	0.962	103.93%
NO2 adjustment not required.									AVERAGE:	102.42%

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.999	0.03%
NOx	1.000	0.998	0.03%
NO2	1.000	0.989	0.48%

COMMENTS:

A sample pump was rebuilt. Pump repair kit SK 61732 was used.


Station: Cold Lake South Daily: 21-02-2023 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
Value
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
NOX [ppb]
NO [ppb]
NO2 [ppb]

Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	06-Feb-2023	PREVIOUS CALIBRATION DATE:	08-Jan-2023
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.002
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	941
PURPOSE	Routine	START TIME (MST):	11:13
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:36

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	12208316585	FLOW (mL/min)	1270
INITIAL		FINAL	
BKG/OFFSET	1.2	BKG/OFFSET	0.1
COEF/SLOPE	1.042	COEF/SLOPE	1.066
Expected (reference) Value	263.3	Expected (reference) Value	274.7

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	21-Oct-2022	OXIDIZER ID:	n/a
CALIBRATION METHOD:		Photometer (Varying UV Lamp)	
GPT DATE:	n/a	GPT END TIME:	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
RANGE	300 - 400	150 - 200	50 - 100

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	-0.4	0.0		
5000		5000	378.0	366.9	376.7	1.029	1.003
5000		5000	180.0	n/a	180.3	n/a	0.998
5000		5000	61.0	n/a	61.3	n/a	0.995

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.996	0.1%

COMMENTS:

Sample inlet filter was changed.


O3[ppb] Station: Cold Lake South Daily: 06-02-2023 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	06-Feb-2023	PREVIOUS CALIBRATION DATE:	07-Jan-2023
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	941
PURPOSE	Routine	START TIME (MST):	11:14
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:36

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1180930025	1131
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.001	1.000	1.000

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 23593		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	CH_4/C_3H_8 (ppm):	603.0	204.0	HIGH EXPIRY:	n/a
ID:	17100415	ID:	134	CYLINDER (psi):	1400		LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a	EXPIRY DATE	18-Aug-2029		LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH4/NMHC)	HIGH	MID	LOW	CH4 EQUIVILANCE	
TARGET	14	7	3.5	C_3H_8 as CH_4	561.0
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1164.0

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	9.52	11.16	20.68		9.56	11.23	20.79

CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC
3100		3100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3025	74.60	3100	14.51	13.50	28.01	14.18	13.60	27.78	14.52	13.51	28.03	1.023	0.993	1.008	0.999	0.999	0.999
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.14	6.79	13.93	n/a	n/a	n/a	1.016	0.994	1.005
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.53	3.41	6.95	n/a	n/a	n/a	1.025	0.987	1.005

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.002	-0.3%
NMHC	1.000	1.000	0.1%
THC	1.000	1.001	-0.1%

Comments:

Sample inlet filter was changed.
H2 generator maintenance: deionizer was renewed

Use Zero Chrom? **No**

Station: Cold Lake South Daily: 06-02-2023 Type: AVG 1 Min. [1 Min.]

Teledyne T640 Audit/Calibration

Date/Previous Audit Date:	February 6, 2023	January 9, 2023	**Weather Conditions:**	A few clouds	
Company:	LICA		**Start Time (mst):**	16:35	
Station:	Cold Lake South		**End Time (mst):**	17:49	
Parameter:	PM 2.5		**Performed By/Reviewer:**	Alex Yakupov	Chris Wesson
Instrument Data:					
Make/Model:	Teledyne T640		**Serial Number:**	575	
Owner:	LICA		**Alarms (detail in comments):**	No	
Reference Standards/I.D./Expiry Date:					

Flow Standard: DeltaCal DC1 S/N 177246 / Sep 03, 2023
Digital Manometer: DeltaCal DC1 S/N 177246 / Sep 03, 2023
Temperature: Vaisala / HM70 / #T1640130/ Jun 14, 2023
Pressure: Fisher Scientific / FB 61291 / #130168457/ Feb 17, 2023

DIAGNOSTICS:

Ambient Pressure (mmHg)	702.9	Ambient Temp (°C)	1.4	ASC Heater Duty (%)	0.0
Box Temp (°C)	28.7	Current PMT HV (V)	1441	LED Temp (°C)	37.58
P3 Value	49	PMT Setting (V)	1444	Pump PWM (%)	43
Sample Flow (L/min)	5.01	Sample RH (%RH)	11.4	Sample Temp (°C)	25.7

Monthly Audit/Calibration:

Item:	As-found		As-left		Tolerance
	Reference	T640x	Reference	T640x	
Zero Test (Leak Check)	PM10	0.0	PM10	0.0	0.0 to 0.2
	PM2.5	0.0	PM2.5	0.0	
Ambient Pressure (mmHg)	702.9	703.5	703	703.5	+/- 10 mm Hg
Ambient Temperature (°C)	-12.40	12.3	n/a		+/- 2°C
Sample Flow (L/min)	5.01	5	5.00	5	+/-5% of T640x (e.g., 4.75 – 5.25 lpm)
Additional Monthly Maintenance :					***Completed***
				Inlet cleaned?	Yes
				Sample tubing inspected (inner and outer)?	Yes

Comments:

A new sample pump was installed and tested. No issues.

Meteorological System Checklist

Date:	February 6, 2023		
Technician:	Alex Yakupov		
Station:	Cold Lake South		
Unit:	**Make:**	**Model:**	**Serial #:**
Temperature Sensor:	Rotronic	HC2A-S3	20257103
Barometric Pressure Sensor:	MetOne	92	Y23368
Relative Humidity Sensor:	Rotronic	HC2A-S3	20257103
Anemometer:	RM Young	05305AQ	177354
AMBIENT TEMPERATURE SENSOR CHECK			
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	Vaisala / HM70 / #T1640130/ Jun 14, 2023		
Reference Temperature (°C):	1.6		
Station - Ambient Temperature (°C):	1.4		
Temperature Difference (°C):	0.2		
BAROMETRIC PRESSURE SENSOR CHECK			
Reference Barometer ID:	Fisher Scientific / FB 61291 / #130168457/ Feb 17, 2023		
Reference Pressure - Units/Reading:	millibar	938	
Station Pressure - Units/Reading:	millibar	939	
Pressure Tolerance +/- 15% of error:	797 - 1079	-0.11%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Reference Hygrometer ID:	Vaisala HMP76B #T1640130, Exp. Date: Jun 14, 2023		
Reference Hygrometer % RH- Reading:	61.80		
Station Hygrometer % RH- Reading:	61.20		
RH Tolerance +/- 15% of difference:	52.53 - 71.07	1.0%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	January 9, 2023	Previous check date:	January 9, 2023
Wind Speed Observed (kph):	0 - 10	Wind Direction Observed:	S
Wind speed on Data Logger (kph):	3.1	Wind Direction on Data Logger:	S
	Annual audit: Jul 6, 2022	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge: 23.5 vs 23.2, passed. Wind system: Model 05305AQ. Signal box # 32400

Meteorological Sensor Audit/Calibration

Location Information

Company:	LICA	**Performed By:**	Alex Yakupov
Audit Location:	Cold Lake South	**Reviewed By:**	Chris Wesson
Audit Date:	July 6, 2022	**Start/End Time (mst):**	15:54 / 17:48
Calibration Purpose:	routine annual	**Weather Conditions:**	A few clouds

Wind Sensor Information

Sensor ID Data:		**Sensor Outputs:**	
Sensor Make:	RM Young	**Velocity Voltage Output Range:**	n/a
Sensor Model:	05305AQ	**Velocity Unit Output Range:**	0-200
Serial #:	177354	**Direction Voltage Output Range:**	n/a
Previous Cal/Audit Date:	April 20, 2021	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA4744 expires Aug 6, 2022

Wind Speed Audit Data **+/- 2% of the average correction factor is the limit**

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.0	0.0	-
1000	18.4	18.2	18.2	1.013
2000	36.9	36.6	36.6	1.007
3000	55.3	55.1	55.1	1.003
4000	73.7	73.5	73.5	1.003
5000	92.2	92.1	92.0	1.001
6000	110.6	110.4	110.3	1.002
7000	129.0	128.8	128.8	1.002
8000	147.4	147.3	147.3	1.001
9000	165.9	165.6	165.6	1.002
10000	184.3	184.2	184.2	1.001
		The audit meets AMD requirements.	**Average Correction Factor=**	**1.003**

Wind Direction Audit Data **+/- 3° of the absolute average degrees difference for all points is the limit**

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	0	355	0.1	0.0	0.1
30	330	27	329	2.7	1.4	2.0
60	300	58	298	2.4	1.9	2.1
90	270	89	268	1.1	2.1	1.6
120	240	119	239	0.9	1.1	1.0
150	210	148	208	1.6	2.1	1.8
180	180	178	180	2.4	-0.2	1.3
210	150	208	149	2.3	1.1	1.7
240	120	239	119	1.3	0.6	1.0
270	90	268	91	2.2	-1.2	1.7
300	60	298	58	2.3	1.9	2.1
330	30	329	28	1.3	2.5	1.9
355	0	355	0	-0.1	0.1	0.1
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**1.4**

Comments:

Output via RMY32400 Serial Interface

End of Report

Lakeland Industry & Community Association

FEBRUARY 2023

Ambient Air Monitoring Calibration Report

- TAMARACK STATION-

CAL-LICA-202302-01248

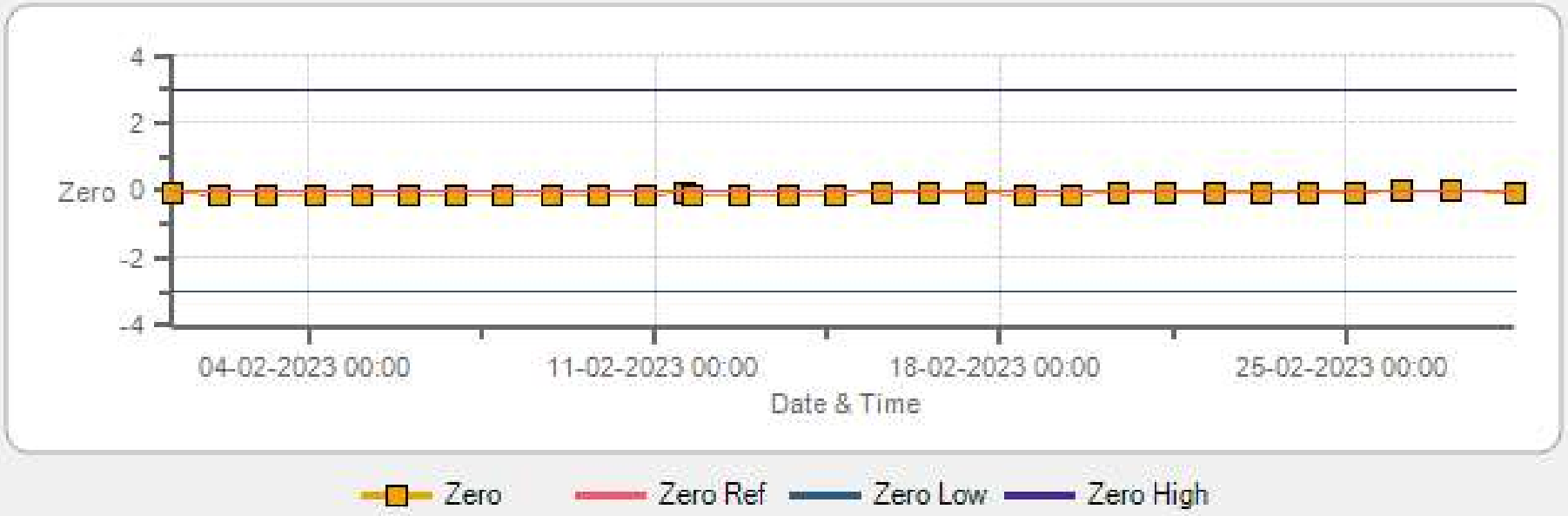
Station Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
LICA / Bureau Veritas Canada

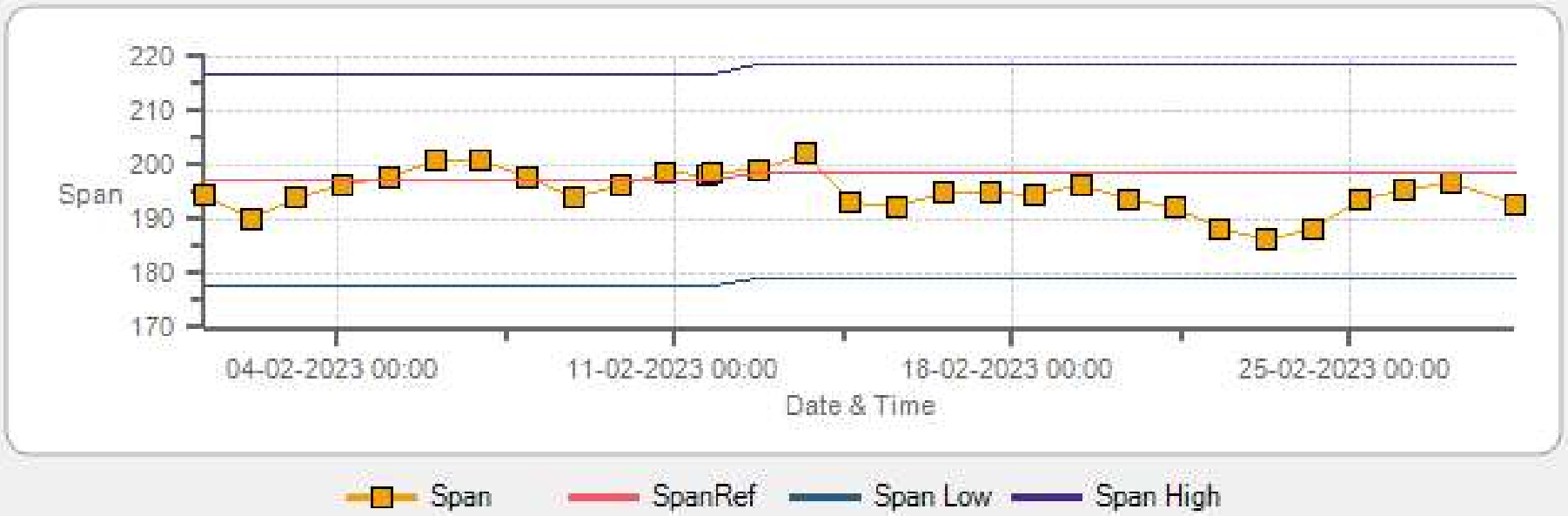
March 10, 2023

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

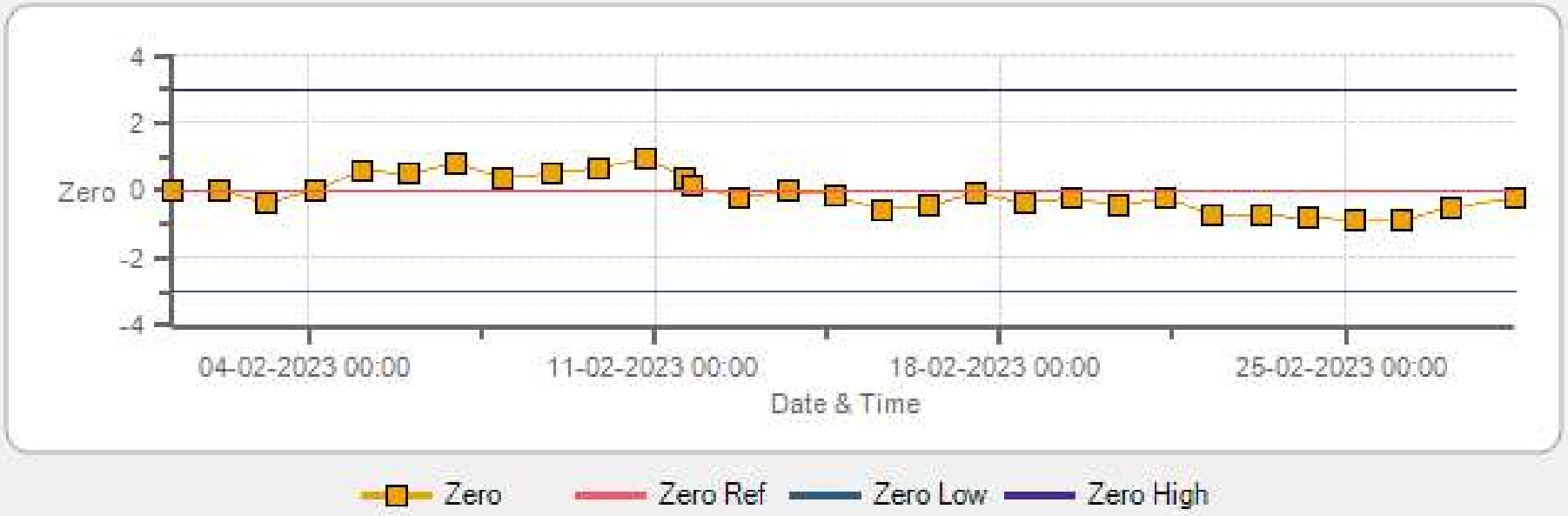
SO2[ppb] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Zero



SO2[ppb] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Span



H2S[ppb] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Zero



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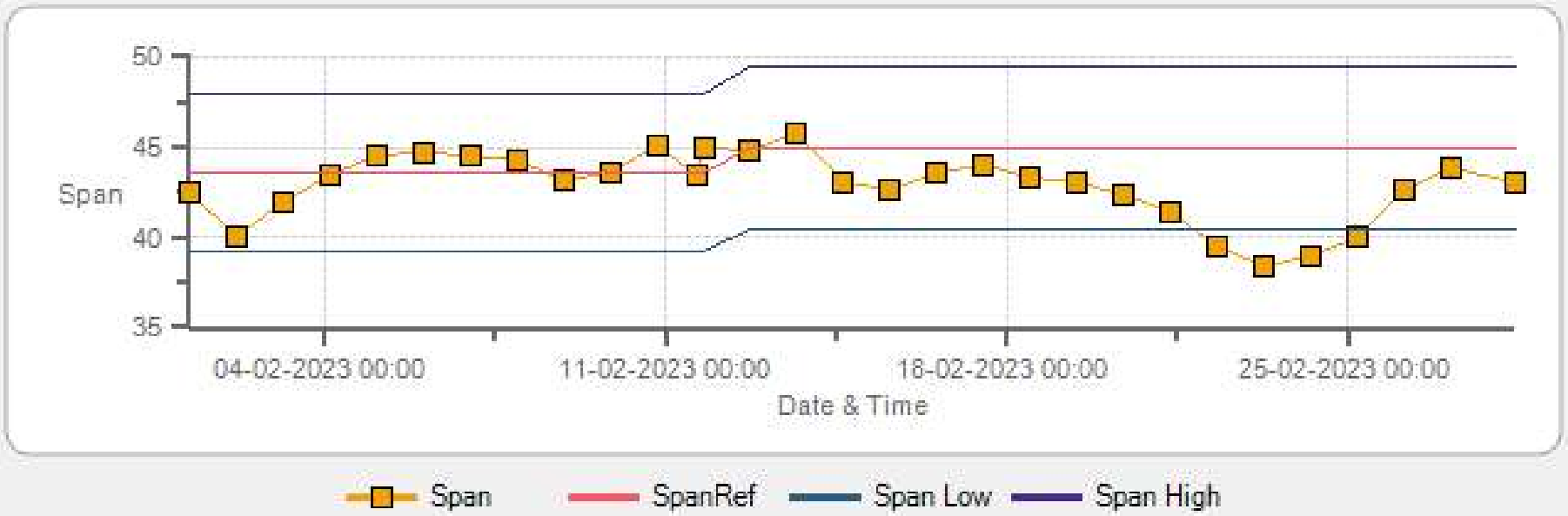
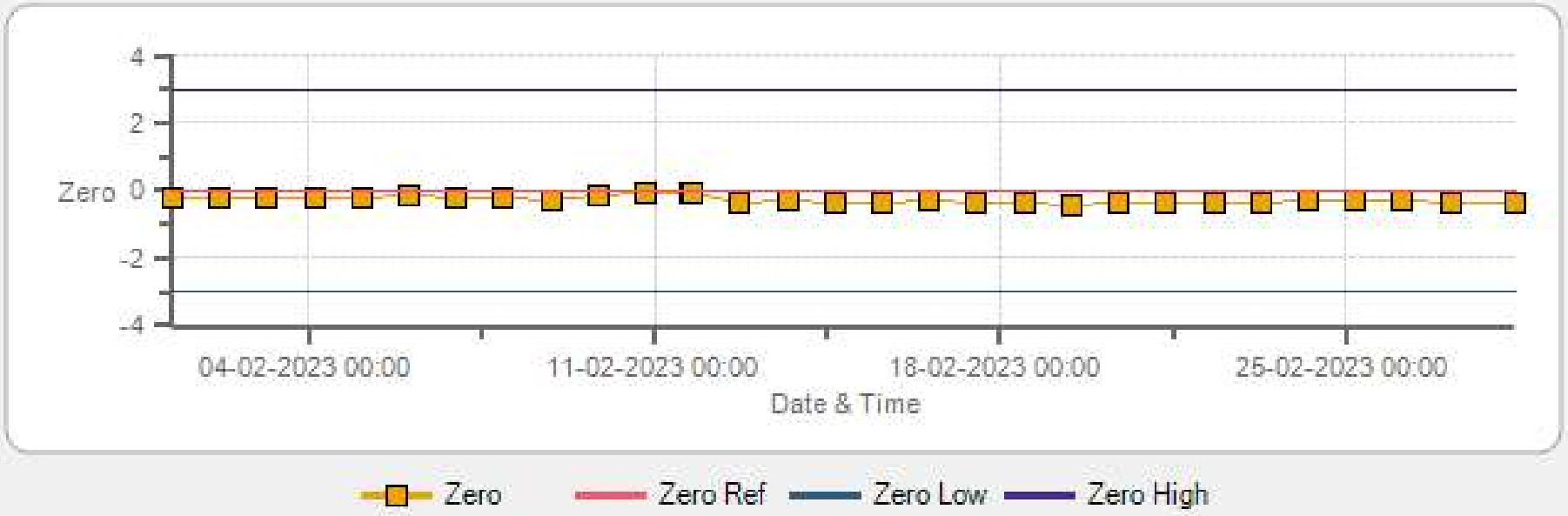
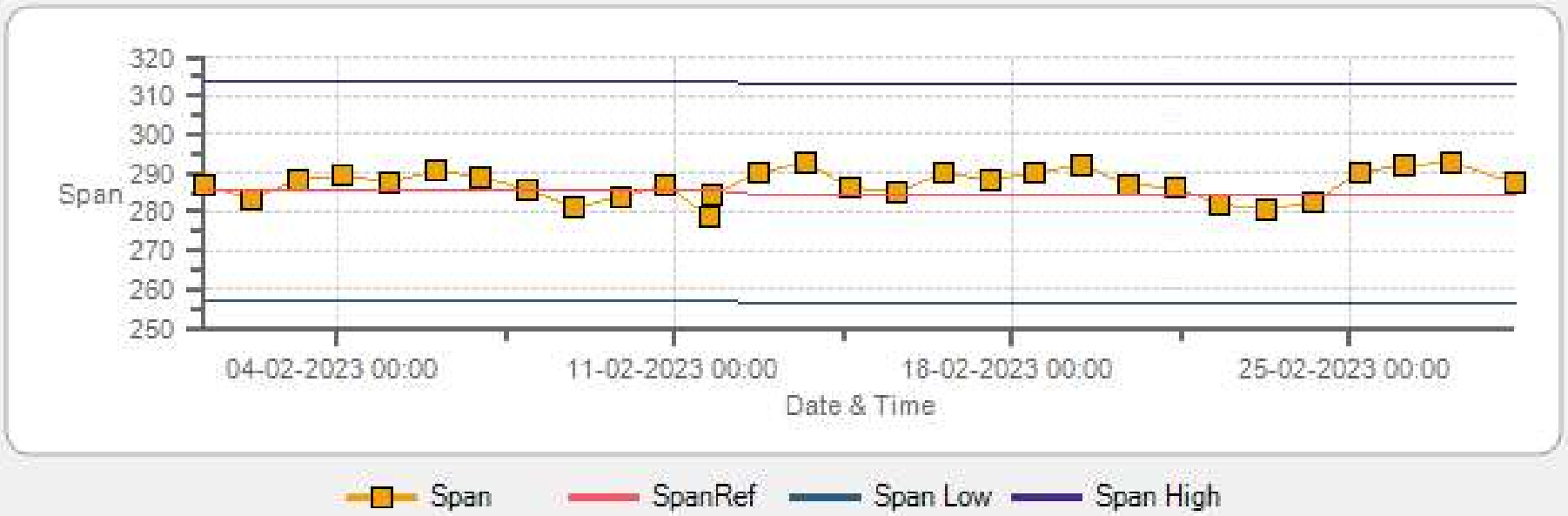


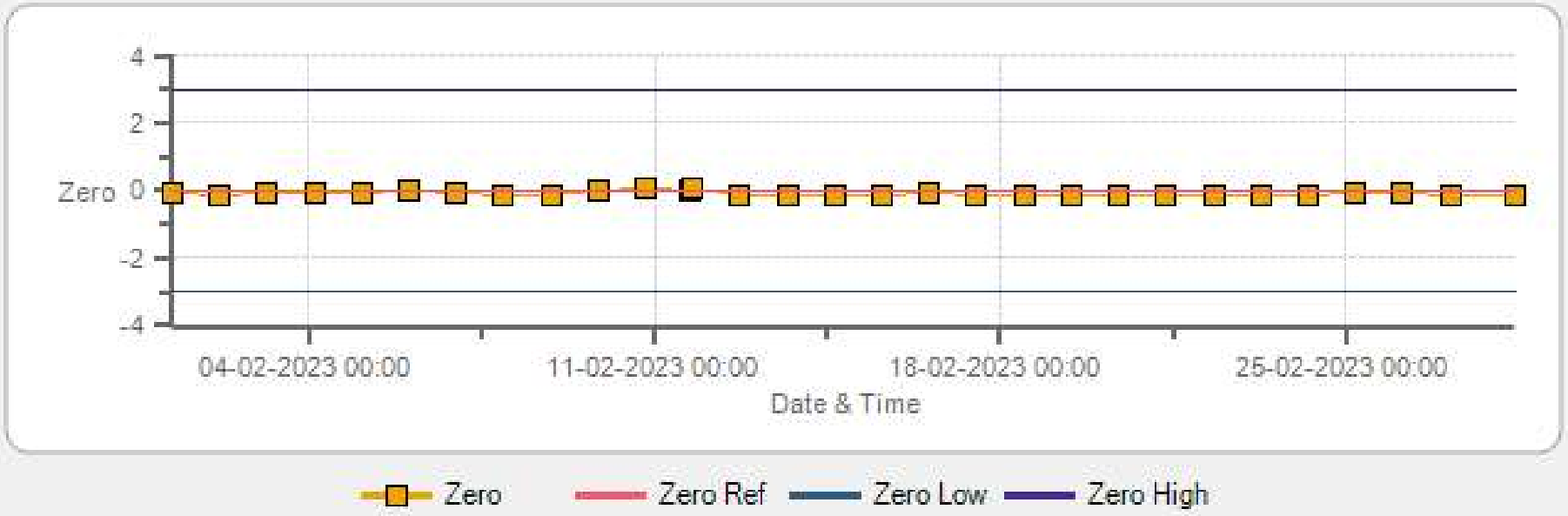
NOX[ppb] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Zero



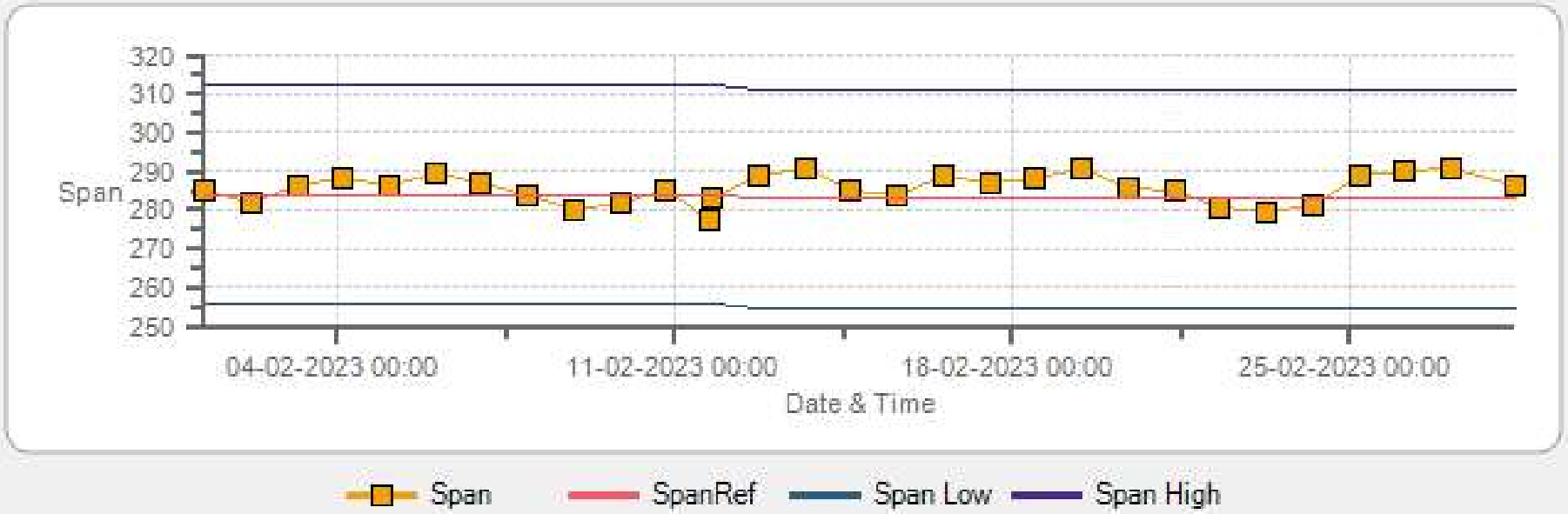
NOX[ppb] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Span

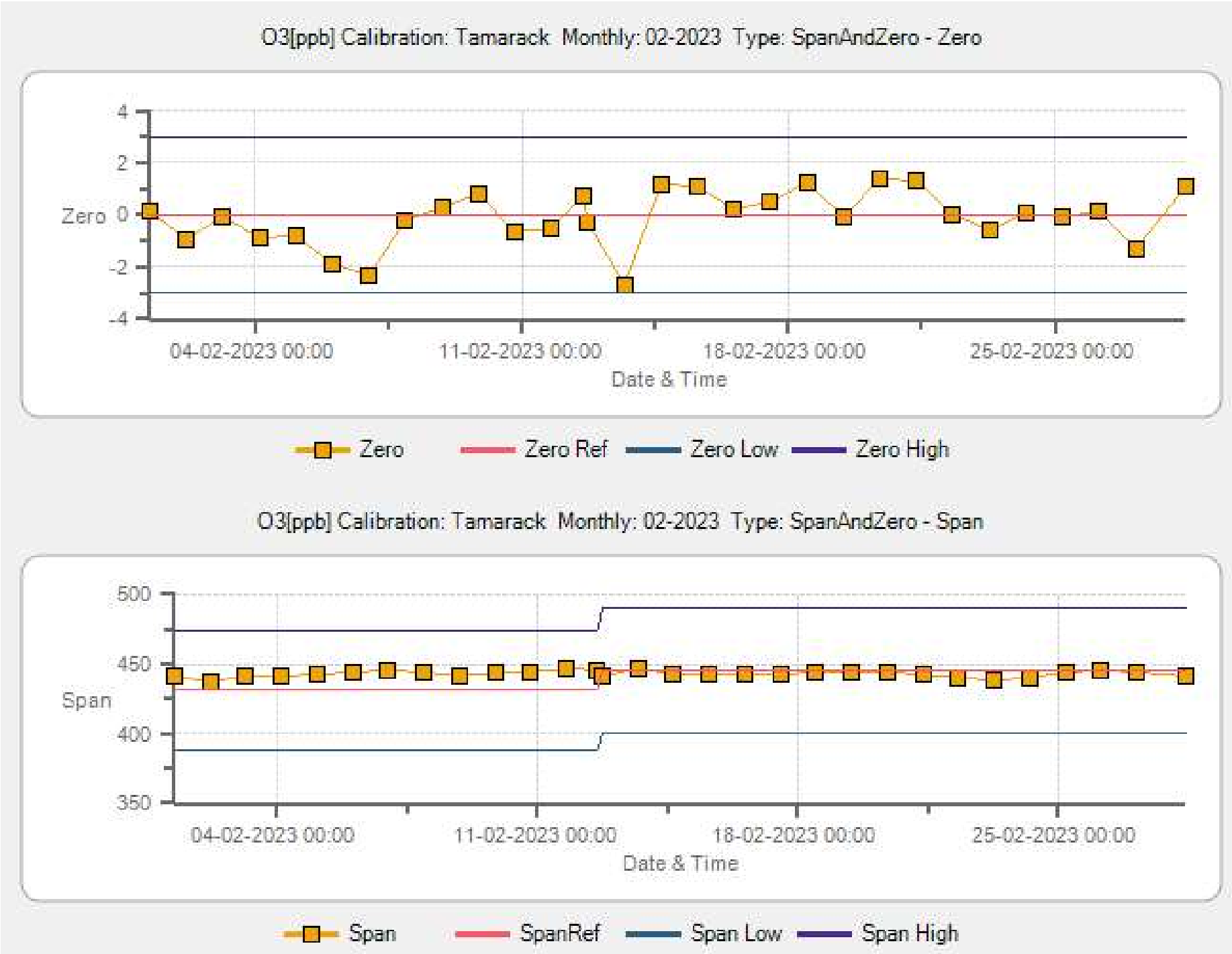


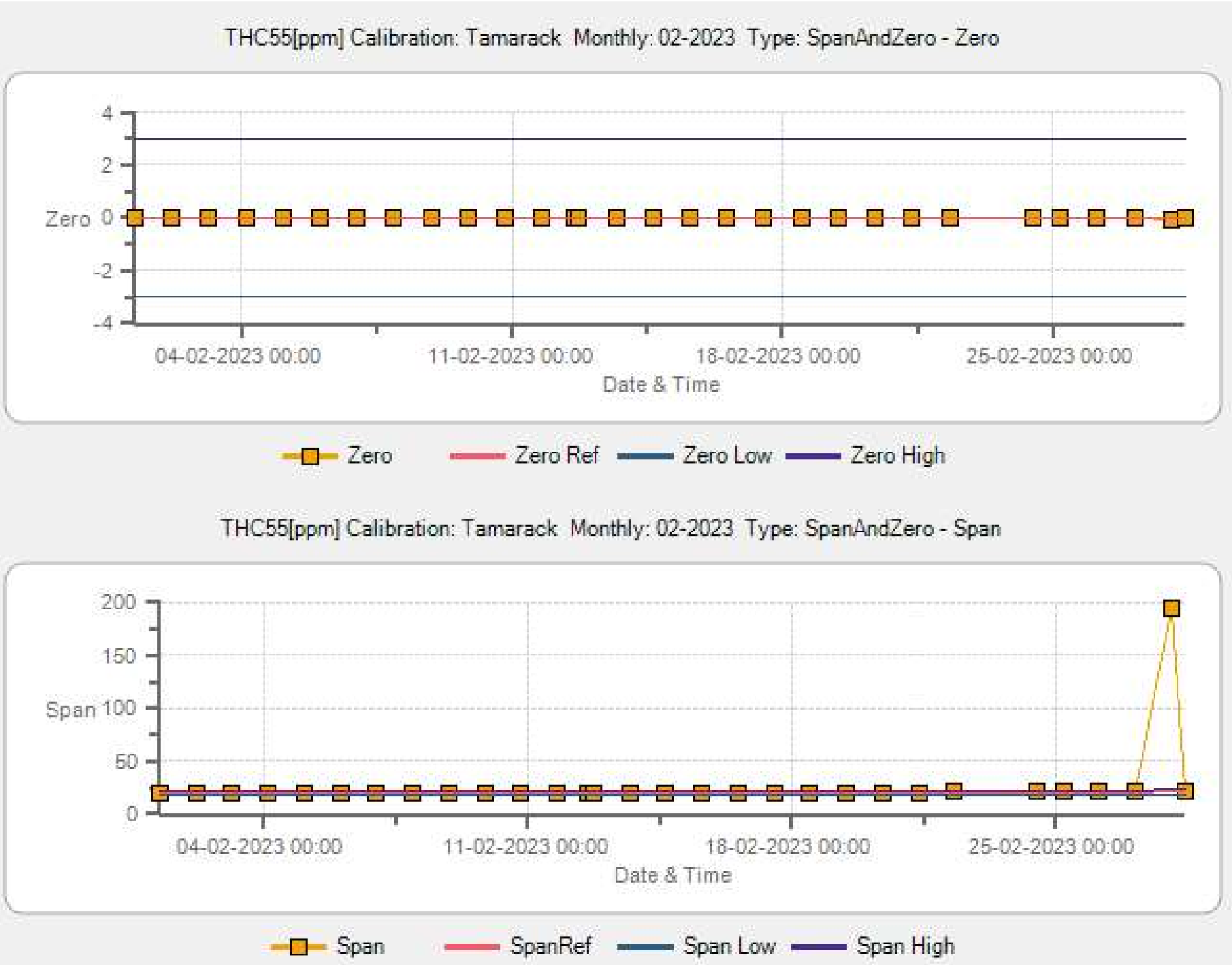
NO2[ppb] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Zero



NO2[ppb] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Span

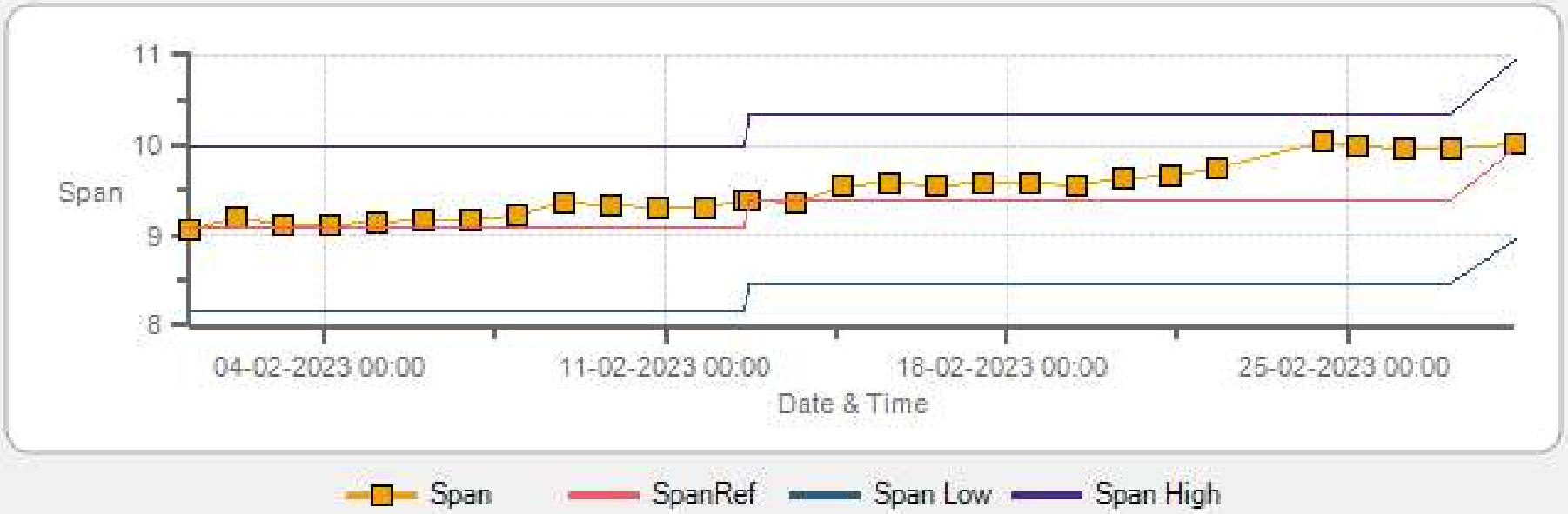


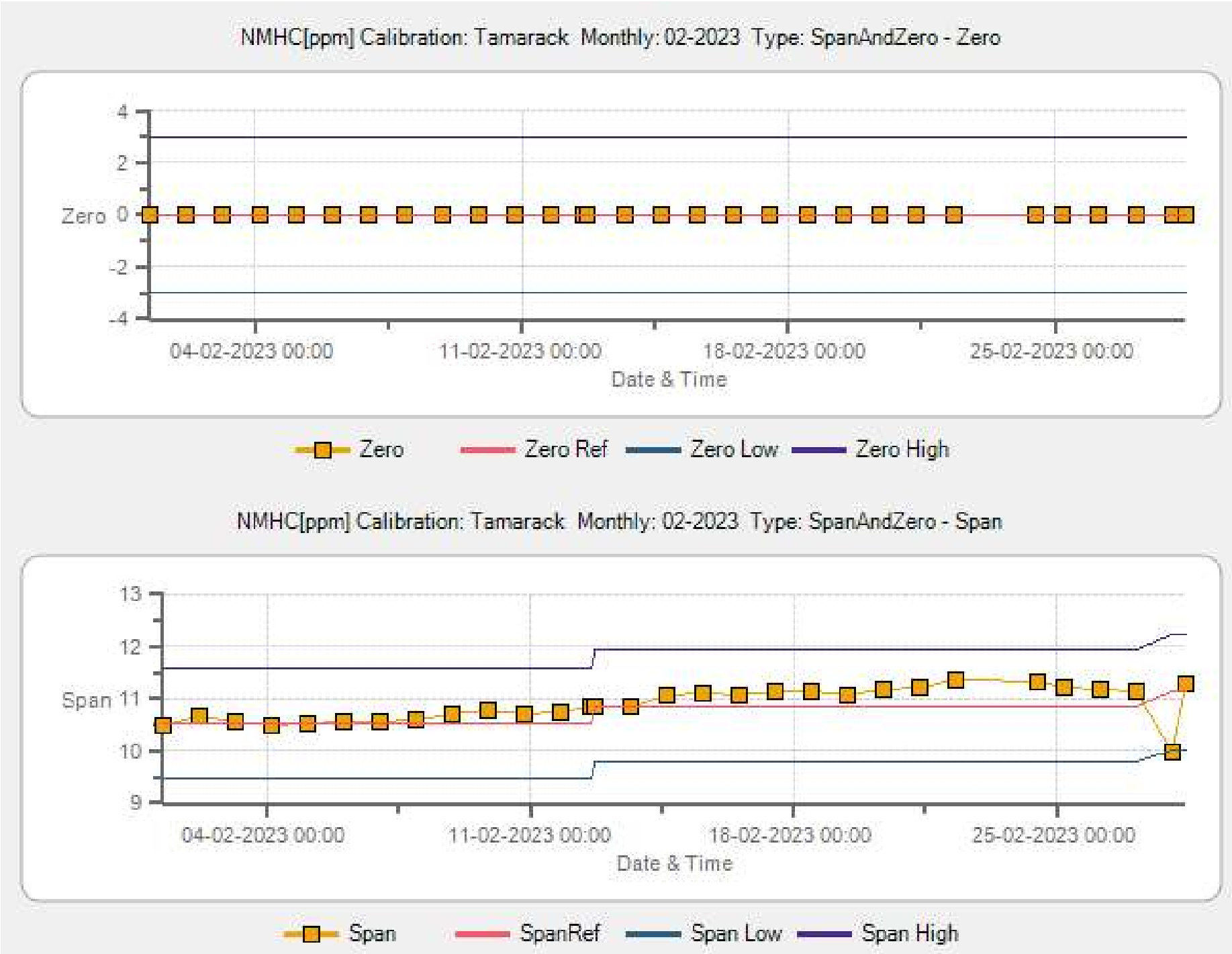

O3[ppb] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Zero
Zero
4
2
0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Span
Span
500
450
400
350
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High


THC55[ppm] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Span
200
150
Span 100
50
0
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High

CH4[ppm] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Zero

CH4[ppm] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Span




NMHC[ppm] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC[ppm] Calibration: Tamarack Monthly: 02-2023 Type: SpanAndZero - Span
13
12
Span 11
10
9
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	11-Feb-2023	PREVIOUS CALIBRATION DATE:	06-Jan-2023
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	930
PURPOSE	Routine	START TIME (MST):	10:45
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:27

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180930031	FLOW (mL/min)	442
INITIAL		FINAL	
BKG/OFFSET	2.86	BKG/OFFSET	2.82
COEF/SLOPE	1.034	COEF/SLOPE	1.025
Expected (reference) Value	197.3	Expected (reference) Value	198.8

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	132
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL 127895	HIGH ID	n/a
CONC (ppm):	50.40	EXPIRY DATE	n/a
CYLINDER (psi):	1900	LOW ID	n/a
EXPIRY DATE	27-Oct-2030	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	390	190	95
RANGE	300 - 400	150 - 200	50 - 100

SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

CALIBRATION:

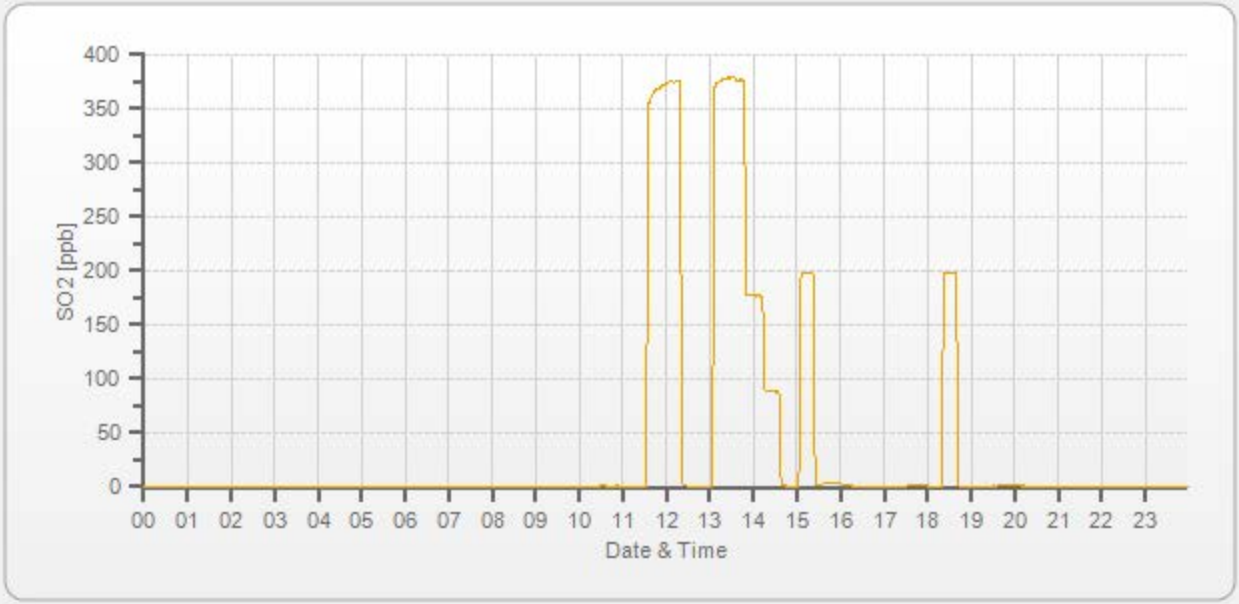
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.00	-0.1	0		
4961	37.20	4998	375.13	374	376	1.003	0.998
4982	17.60	5000	177.41	n/a	176.7	n/a	1.004
4990	8.80	4999	88.72	n/a	87.5	n/a	1.014

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.003	-0.2%

COMMENTS:

Sample inlet filter was changed.


SO2[ppb] Station: Tamarack Daily: 11-02-2023 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
SO2 [ppb]
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
SO2 [ppb]

H2S Analyzer Calibration by Dilution

DATE:	11-Feb-2023	PREVIOUS CALIBRATION DATE:	06-Jan-2023
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	0.993
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	930
PURPOSE	Routine	START TIME (MST):	10:43
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:27

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM 17360005	FLOW (mL/min)	910
INITIAL		FINAL	
BKG/OFFSET	32.3	BKG/OFFSET	33.4
COEF/SLOPE	0.785	COEF/SLOPE	0.795
Expected (reference) Value	43.6	Expected (reference) Value	44.9

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	134
MFC CALIBRATION DATE:	21-Oct-2022	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY 0002287	HIGH ID	n/a
CONC (ppm):	10.10	EXPIRY DATE	n/a
CYLINDER (psi):	1100	LOW ID	n/a
EXPIRY DATE	14-Sep-2024	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	10:53	SO2 Conc (ppb)	380
END TIME:	11:08	Analyzer Response (ppb)	0.0

CALIBRATION:

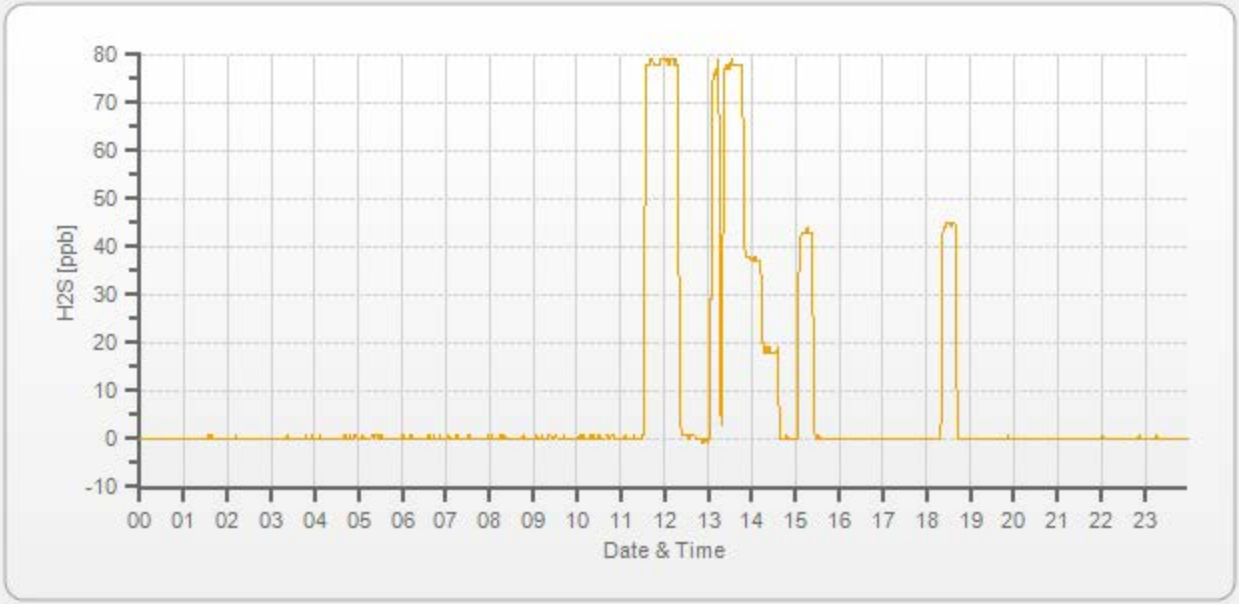
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	0.7	0		
7442	57.90	7500	77.97	79.2	78.1	0.993	0.998
7472	28.20	7500	37.98	n/a	37.5	n/a	1.013
7486	14.10	7500	18.99	n/a	18.7	n/a	1.015

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.2%

COMMENTS:

13:14- Calibration was paused to correct a leaking calibration line.
Sample inlet filter was changed.


H2S[ppb] Station: Tamarack Daily: 11-02-2023 Type: AVG 1 Min. [1 Min.]
H2S [ppb]
80
70
60
50
40
30
20
10
0
-10
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
H2S [ppb]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

DATE:	11-Feb-2023	PREVIOUS CALIBRATION DATE:	06-Jan-2023
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	930
PURPOSE	Routine	START TIME (MST):	10:46
PERFORMED BY:	Alex Yakupov	END TIME (MST):	17:18

ANALYZER:

MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
SERIAL #:	1180930028	NOx	1.000
FLOW (mL/min)	831	NO	1.000
RANGE (ppb)	500	NO2	0.998
GPT FOR O3?		No	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 127895		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	51.1	51.6	HIGH EXPIRY:	n/a
ID:	17100415	ID:	134	CYLINDER (psi):	1900		LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a	EXPIRY DATE	27-Oct-2030		LOW EXPIRY:	n/a

CALIBRATION SETTINGS:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	1.9	1.7	n/a	BKG/OFFSET:	2.1	1.8	n/a
SLOPE/COEF/CE:	1.009	1.017	1	SLOPE/COEF/CE:	1.01	1.024	1

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	285.4	1.6	283.8		284.6	1.7	283.0

CALIBRATION PARAMETERS:

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	380	250	230-265	n/a
MID	180	125	115-150	n/a
LOW	90	45	40-55	n/a
EXTRA 1	n/a	n/a	n/a	n/a

NO/NOx CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
5000		5000	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	376.6	380.9	4.2	380.1	384.2	4.0	1.010	1.009		1.001	1.000	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.8	181.8	1.9	n/a	n/a		1.000	0.999	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	89.8	90.9	1.1	n/a	n/a		1.002	0.999	

GPT CALIBRATION:

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	380.0	383.6	3.6				
AS-FOUND HIGH	37.20	4998	235	127.3	383.6	256.3	252.7	252.7	1.000	100.00%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	37.20	4998	110	259.4	384.2	124.8	120.6	121.2	0.995	100.50%
LOW	37.20	4998	40	330.8	384.3	53.5	49.2	49.9	0.986	101.42%
NO2 adjustment not required.									AVERAGE:	100.64%

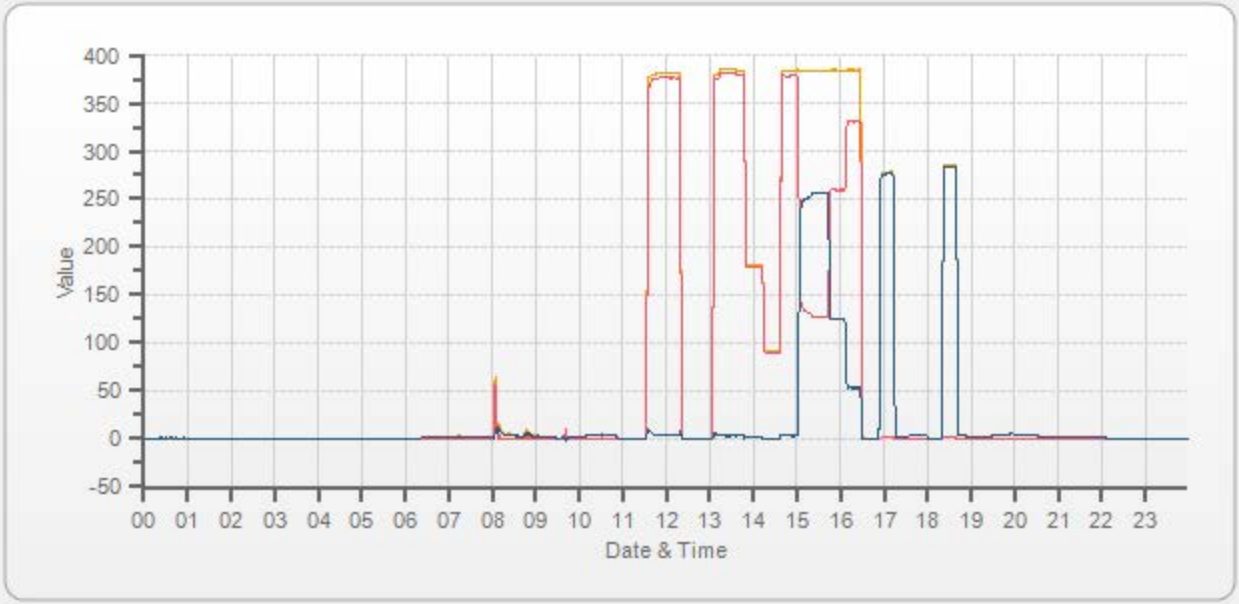
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.999	-0.01%
NOx	1.000	1.000	0.01%
NO2	1.000	0.996	0.19%

COMMENTS:

Sample inlet filter was changed.

Station: Tamarack Daily: 11-02-2023 Type: AVG 1 Min. [1 Min.]



Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	12-Feb-2023	PREVIOUS CALIBRATION DATE:	05-Jan-2023
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.003
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	927
PURPOSE	Routine	START TIME (MST):	10:32
PERFORMED BY:	Alex Yakupov	END TIME (MST):	14:39

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	1202068570	FLOW (mL/min)	1360
INITIAL		FINAL	
BKG/OFFSET	4.5	BKG/OFFSET	3.8
COEF/SLOPE	1.027	COEF/SLOPE	1.027
Expected (reference) Value	431.4	Expected (reference) Value	445.6

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	134
MFC CALIBRATION DATE:	21-Oct-2022	OXIDIZER ID:	n/a
CALIBRATION METHOD:		Photometer (Varying UV Lamp)	
GPT DATE:	n/a	GPT END TIME:	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
RANGE	300 - 400	150 - 200	50 - 100

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	-0.5	0.0		
5000		5000	378.0	376.8	377.3	1.002	1.002
5000		5000	180.0	n/a	181.1	n/a	0.994
5000		5000	61.0	n/a	62.2	n/a	0.981

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.997	0.2%

COMMENTS:

Sample inlet filter was changed.


O3[ppb] Station: Tamarack Daily: 12-02-2023 Type: AVG 1 Min. [1 Min.]
500
450
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	12-Feb-2023	PREVIOUS CALIBRATION DATE:	28-Jan-2023
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	927
PURPOSE	Routine	START TIME (MST):	10:33
PERFORMED BY:	Alex Yakupov	END TIME (MST):	14:39

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1180930026	1210
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	0.999	1.000	1.000

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 23593		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	CH_4/C_3H_8 (ppm):	603.0	204.0	HIGH EXPIRY:	n/a
ID:	17100415	ID:	132	CYLINDER (psi):	1400		LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	115	EXPIRY DATE	18-Aug-2029		LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH4/NMHC)	HIGH	MID	LOW	CH4 EQUIVILANCE	
TARGET	14	7	3.5	C_3H_8 as CH_4	561.0
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1164.0

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	9.08	10.52	19.60		9.40	10.87	20.27

CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC
3100		3100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3025	74.60	3100	14.51	13.50	28.01	14.49	13.38	27.87	14.53	13.56	28.09	1.001	1.009	1.005	0.999	0.996	0.997
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.25	6.73	13.98	n/a	n/a	n/a	1.001	1.003	1.002
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.63	3.37	7.00	n/a	n/a	n/a	0.997	0.999	0.998

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.001	0.0%
NMHC	1.000	1.004	-0.1%
THC	1.000	1.003	0.0%

Comments:

Sample inlet filter was changed.

Use Zero Chrom? **Yes**

Station: Tamarack Daily: 12-02-2023 Type: AVG 1 Min. [1 Min.]

Thermo 5030 SHARP Monitor Monthly Check

Date:	February 12, 2023	**Performed By/Reviewer:**	Alex Yakupov / Chris Wesson
Company:	LICA	**Start Time (mst):**	14:47
Station Name/Location:	Tamarack	**End Time (mst):**	16:11
Previous Audit Date:	January 6, 2023	**Calibration Purpose:**	routine monthly
Parameter:	PM 2.5	**Weather Conditions:**	A few clouds

SHARP Information and Status:

Serial Number:	CM-2209	**Status:**	0.00
Approx Tape remaining:	5/10	**Error Code:**	0.00

Reference Standards:

	Air Flow			
	Manometer	**Orifice**	**Pressure:**	**Temperature:**
Make:	DeltaCal	DeltaCal	Fisher Scientific	Vaisala
Model:	DC1	DC1	FB 61291	HM70
Serial Number:	177246	177246	#130168457	T1640130
Calibration Expiration Date:	September 7, 2023	September 7, 2023	February 17, 2023	June 14, 2023

As found temperature and pressure:

Tolerance +/- 4°C		**Tolerance +/- 13.33 hPa**	
SHARP T1 °C:	3.0	**SHARP P3 (hPa):**	928.000
Reference °C:	2.6	**Reference (hPa):**	926.000
Difference °C:	-0.4	**Difference (hPa) :**	2.000

As left temperature and pressure (same as above if as found adequate):

Tolerance +/- 4°C		**Tolerance +/- 13.33 hPa**	
SHARP T1 °C:	3.0	**SHARP P3 (hPa):**	928.000
Reference °C:	2.6	**Reference (hPa):**	926.000
Difference °C:	-0.4	**Difference :**	2.000

As found flows:

Targets: 1000 l/hr / <90%		**Flow Tolerance 16.67 lpm +/- 0.67 lpm**	
SHARP AirFlow l/hr	1000.00	**SHARP Airflow (l/min)**	16.67
Pump Voltage (%)	51.30	**Reference AirFlow (l/min)**	16.65
		Difference (l/min)	-0.02

As left flows (same as above if as found adequate):

Targets: 1000 l/hr / <90%		**Flow Tolerance 16.67 lpm +/- 0.67 lpm**	
SHARP AirFlow l/hr	1000.00	**SHARP Airflow (l/min)**	16.67
Pump Voltage (%)	51.30	**Reference AirFlow (l/min)**	16.65
		Difference (l/min)	-0.02

Inlet Assembly:

	Yes/No?	**If No, give reason**
PM10 Inlet Cleaned	yes	
PM2.5 Cyclone Cleaned	yes	

Comments:

Leak check: 16.55 vs 16.62, 0.07 < 0.80 lpm, passed.

Meteorological System Checklist

Date:	February 12, 2023		
Technician:	Alex Yakupov		
Station:	Tamarack / Audit time: 17:11 - 18:20		
Unit:	**Make:**	**Model:**	**Serial #:**
Precipitation Sampler:	Met One	387 D	C 13580
Temperature Sensor:	Rotronic	HC2A-S3	20433166
Barometric Pressure Sensor:	MetOne	090D	F4497
Relative Humidity Sensor:	Rotronic	HC2A-S3	20433166
Anemometer:	RM Young	05305VK	161465

PRECIPITATION SENSOR CHECK

Checklist:	Reply:	Comments:
Is the sensor Level?	yes	
Is the heater operating properly?	yes	
Are the bucket drain holes clean?	yes	
Is the screen on the housing? (screen should be on between July and September	no	17:18 - test with water and snow. Response is timely and accurate.
Is the housing clean?	yes	
Is the area around the housing clean and free from obstacles?	yes	

TIP TEST - Slowly pour water until 10 tip are heard. (10 tips = 1 ml)

# of Tips	Data Logger Response (mm):	Manual Specification = +/- 0.2 mm
10	1.00	0.00

AMBIENT TEMPERATURE SENSOR CHECK

Parameter:	Temperature @ 2 metres
Reference Thermometer ID:	Vaisala HMP76B #T1640130, Exp. Date: Jun 14, 2023
Reference Temperature (^{o}C):	0.2
Station - Ambient Temperature (^{o}C):	0.6
Temperature Difference (^{o}C):	0.4

BAROMETRIC PRESSURE SENSOR CHECK

Reference Barometer ID:	Fisher Scientific / FB 61291 / #130168457 / Exp. Date: Feb 17, 2023	
Reference Pressure - Units/Reading:	millibar	922
Station Pressure - Units/Reading:	millibar	925
Pressure Tolerance +/- 15% of error:	784 - 1060	-0.33%

RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Reference Hygrometer ID:	Vaisala HMP76B #T1640130, Exp. Date: Jun 14, 2023	
Reference Hygrometer % RH- Reading:	76.40	
Station Hygrometer % RH- Reading:	67.30	
RH Tolerance +/- 15% of difference:	64.94 - 87.86	11.9%

ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Previous check date:	January 6, 2023	Previous check date:	January 6, 2023
Wind Speed Observed (kph):	1 to 10	Wind Direction Observed:	S
Wind speed on Data Logger (kph):	4.8	Wind Direction on Data Logger:	S
	Annual audit: Jul 26, 2022	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge temperature: 23.1 vs 23.7, difference = 0.6 => Passed.

Meteorological Sensor Audit/Calibration

Location Information

Company:	LICA	**Performed By:**	Alex Yakupov
Audit Location:	Tamarack	**Reviewed By:**	Chris Wesson
Audit Date:	July 26, 2022	**Start/End Time (mst):**	16:01 / 17:14
Calibration Purpose:	routine annual	**Weather Conditions:**	Mix of sun and clouds

Wind Sensor Information

Sensor ID Data:		**Sensor Outputs:**	
Sensor Make:	RM Young	**Velocity Voltage Output Range:**	0-1
Sensor Model:	05305VK	**Velocity Unit Output Range:**	0-200
Serial #:	161465	**Direction Voltage Output Range:**	0-1
Previous Cal/Audit Date:	September 20, 2021	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: Model 18860-90/18802 SN: CA 4744, expires - Aug 6, 2022

Wind Speed Audit Data **+/- 2% of the average correction factor is the limit**

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.1	0.1	-
1000	18.4	18.5	18.5	0.996
2000	36.9	36.9	36.9	0.999
3000	55.3	55.4	55.4	0.998
4000	73.7	73.9	73.9	0.998
5000	92.2	92.5	92.4	0.997
6000	110.6	111.0	111.0	0.996
7000	129.0	129.5	129.5	0.996
8000	147.4	148.1	148.1	0.996
9000	165.9	166.7	166.7	0.995
10000	184.3	185.2	185.2	0.995
		The audit meets AMD requirements.	**Average Correction Factor=**	**0.997**

Wind Direction Audit Data **+/- 3° of the absolute average degrees difference for all points is the limit**

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	3	355	2.7	-0.1	1.4
30	330	34	331	-4.1	-1.3	2.7
60	300	64	301	-4.3	-1.0	2.7
90	270	95	272	-4.7	-1.5	3.1
120	240	125	242	-4.6	-2.2	3.4
150	210	154	213	-4.4	-3.4	3.9
180	180	184	185	-4.4	-4.6	4.5
210	150	213	153	-2.7	-3.2	2.9
240	120	242	125	-1.6	-4.6	3.1
270	90	270	94	-0.1	-4.0	2.1
300	60	300	63	0.2	-3.3	1.7
330	30	330	32	-0.4	-1.6	1.0
355	0	355	3	-0.1	2.7	1.4
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**2.6**

Comments:

n/a

End of Report

Lakeland Industry & Community Association

FEBRUARY 2023

Ambient Air Monitoring Calibration Report

- ST. LINA STATION-

CAL-LICA-202302-01250

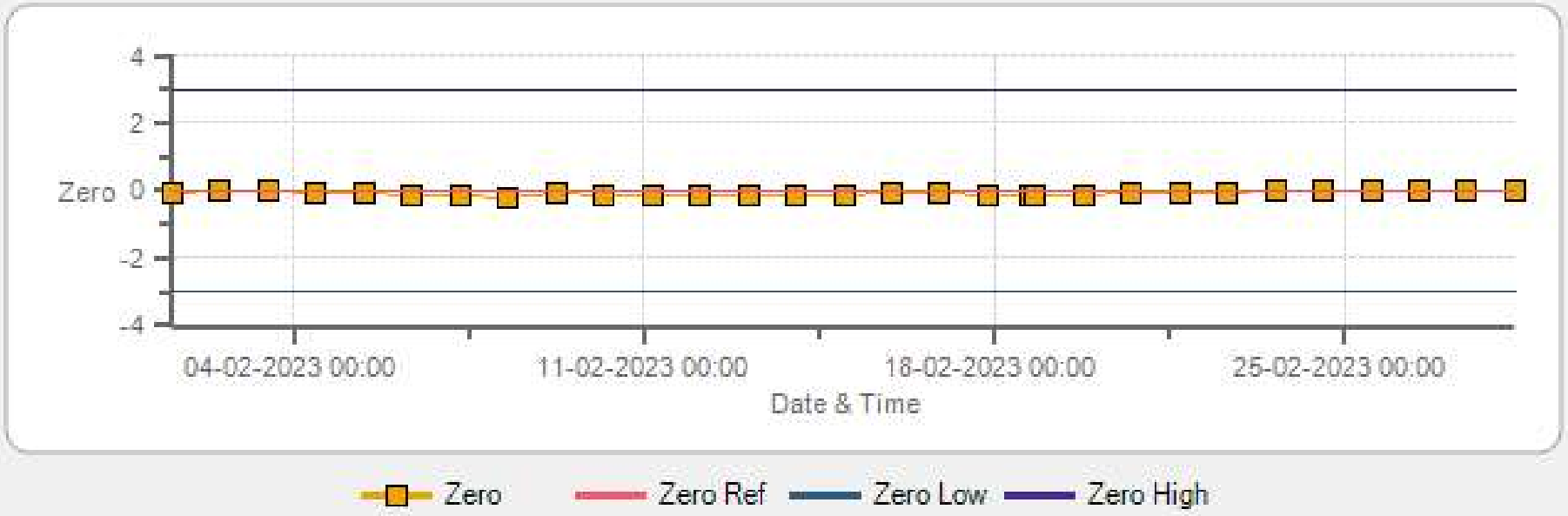
Station Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
LICA / Bureau Veritas Canada

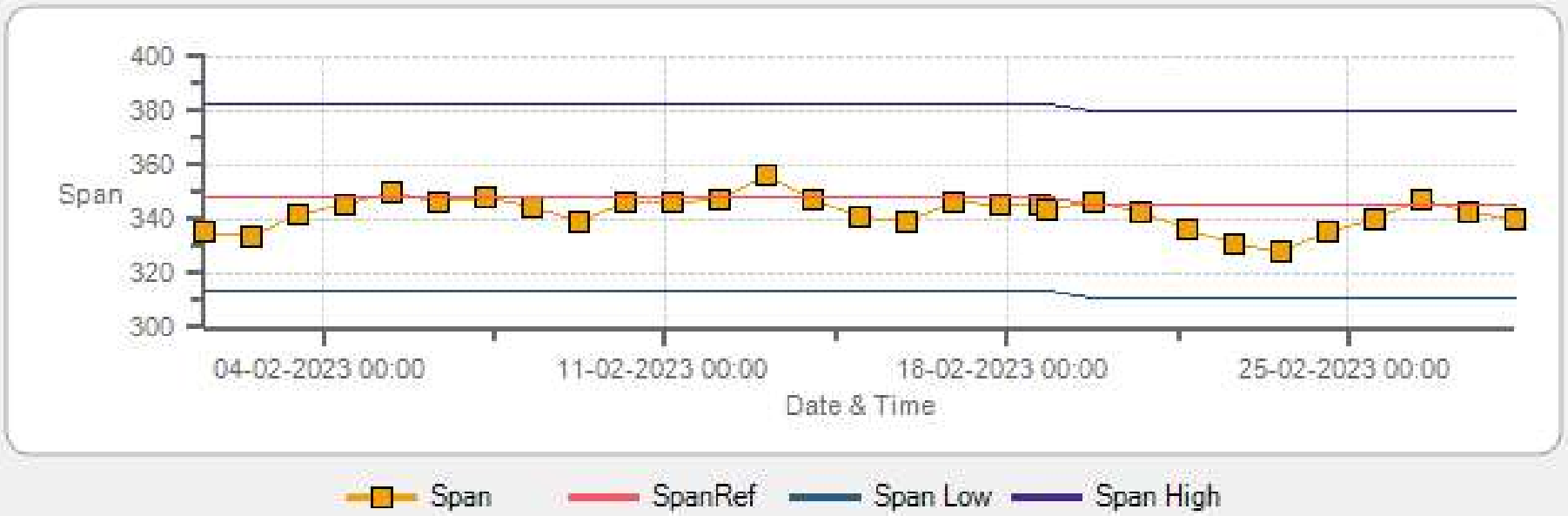
March 10, 2023

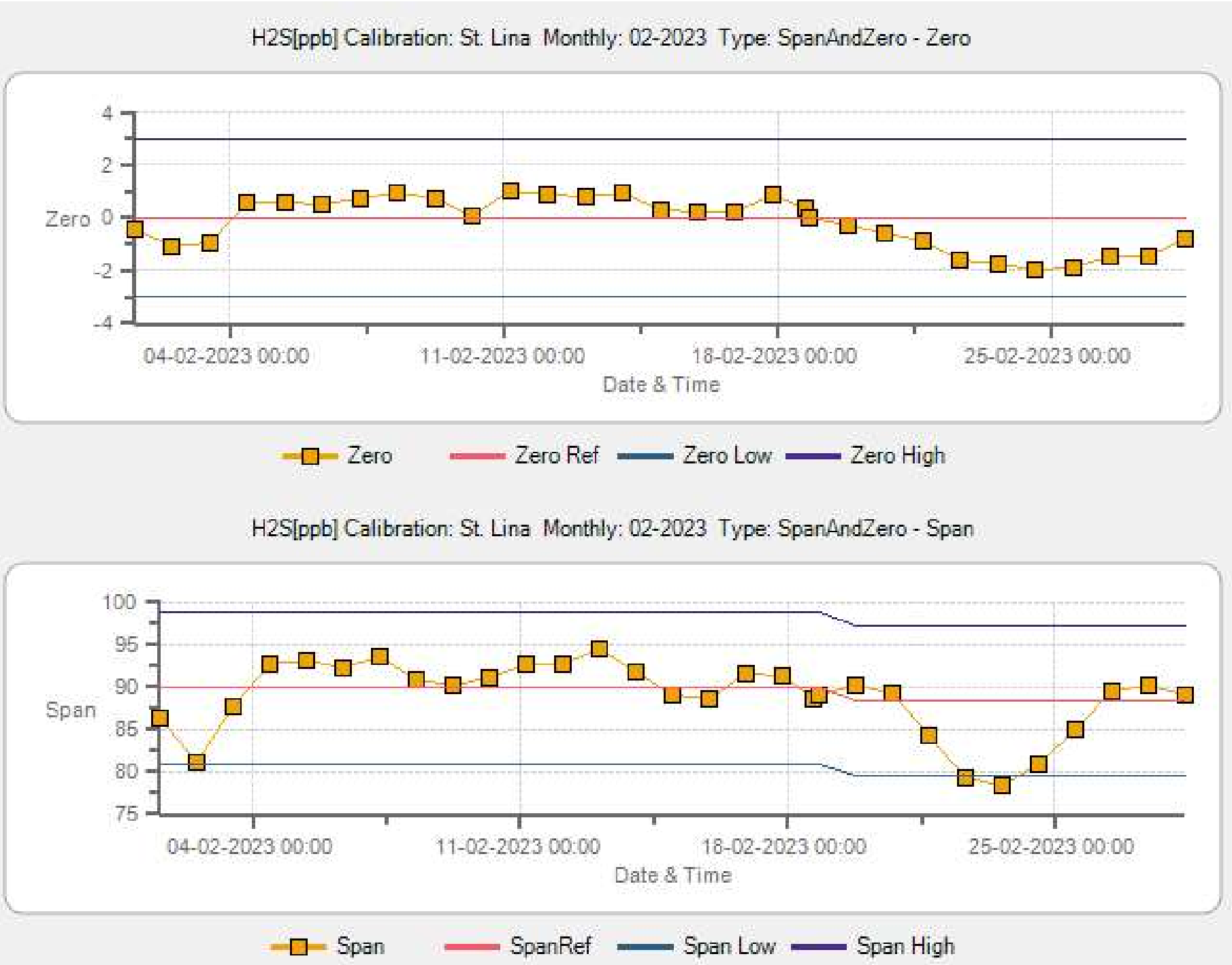
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Zero

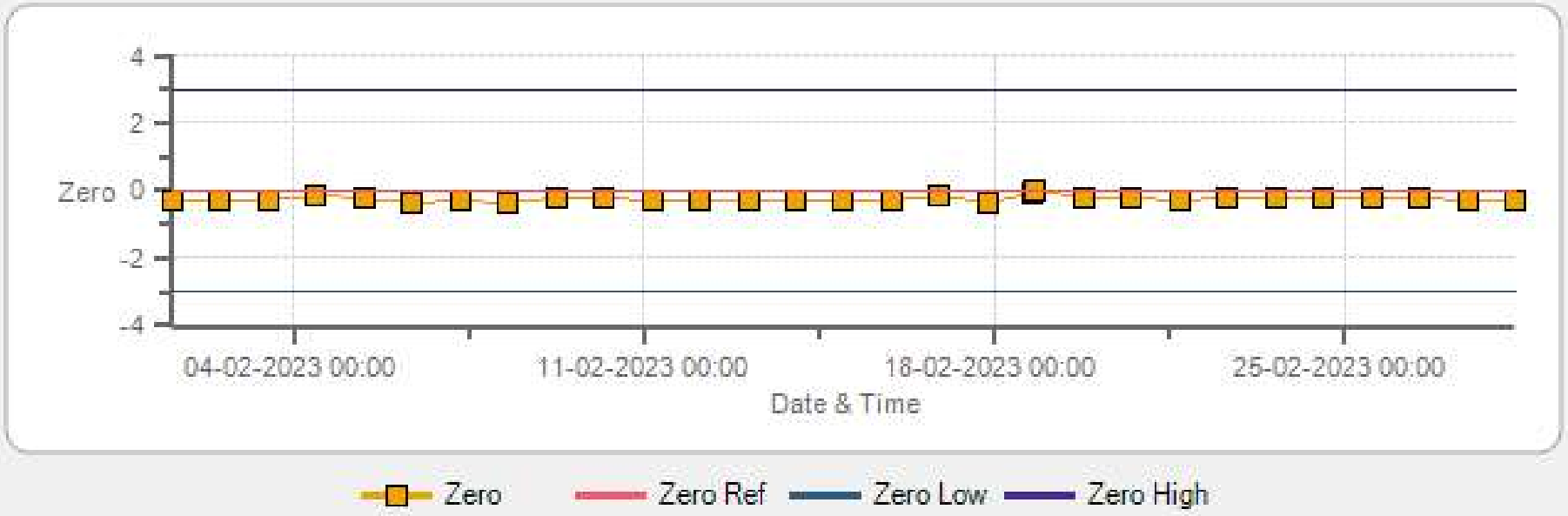


SO2[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Span

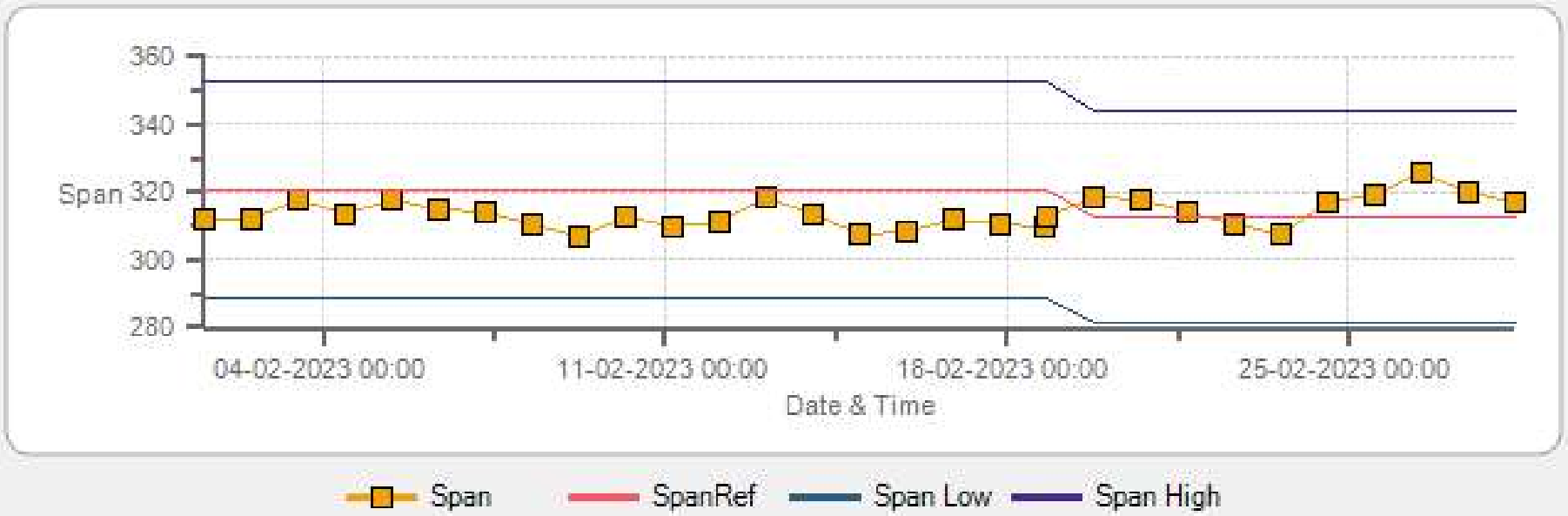



H2S[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Zero
Zero
4
2
0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
H2S[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Span
Span
100
95
90
85
80
75
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High

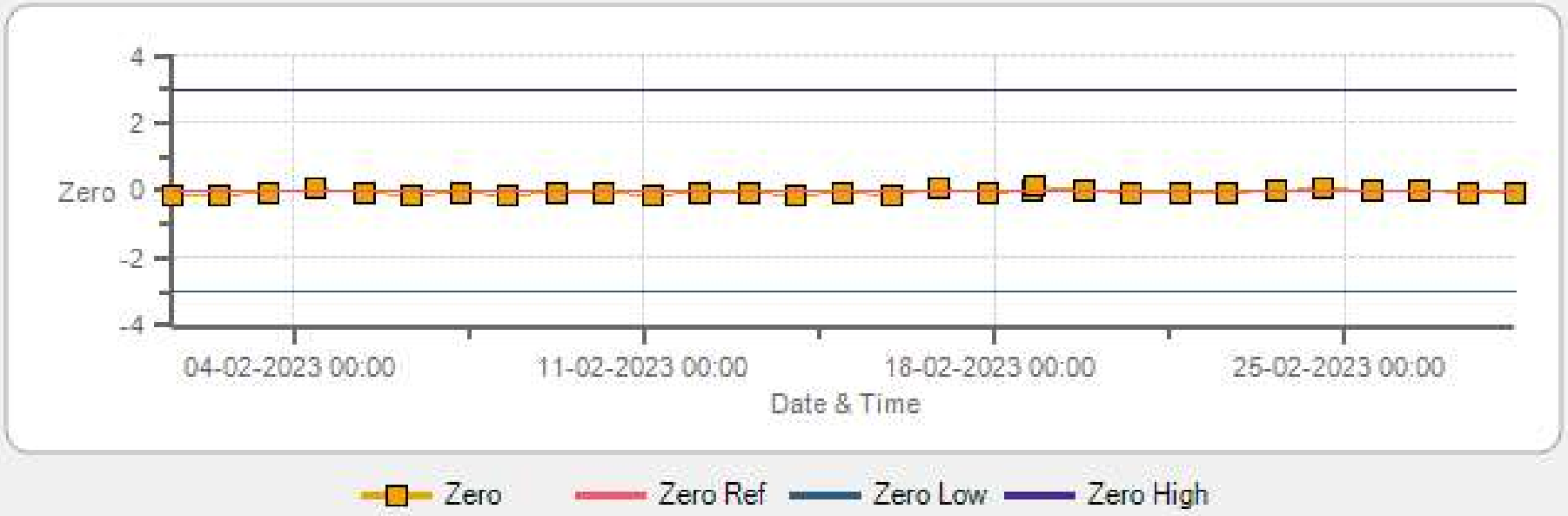
NOX[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Zero



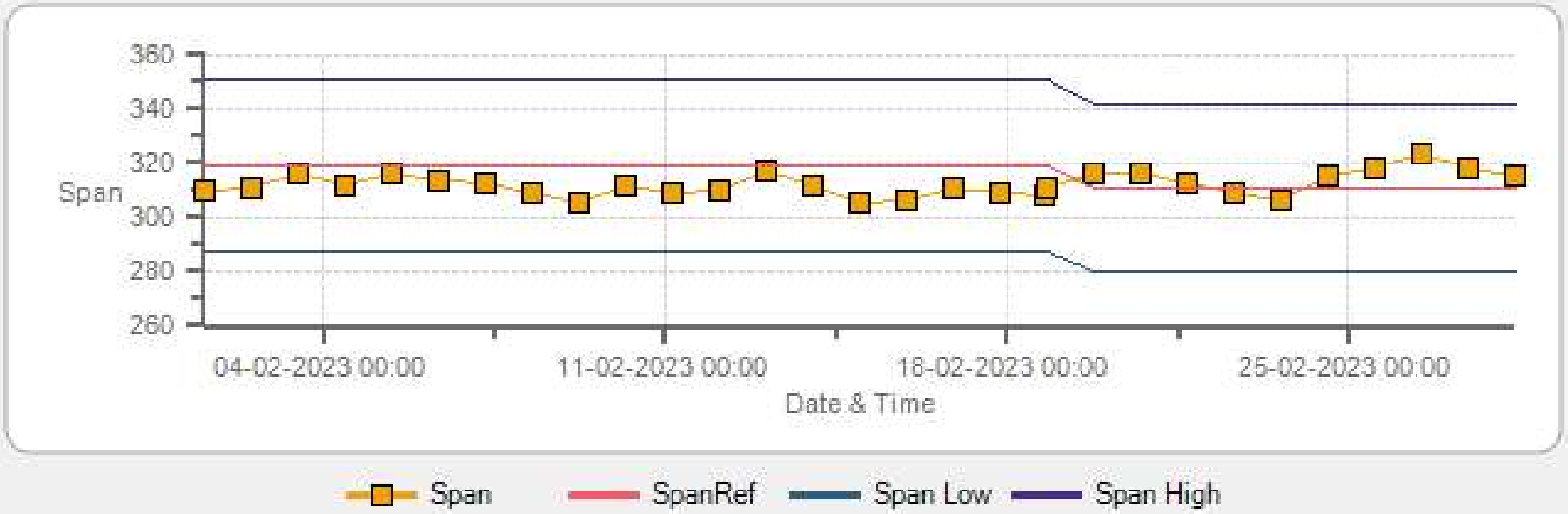
NOX[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Span

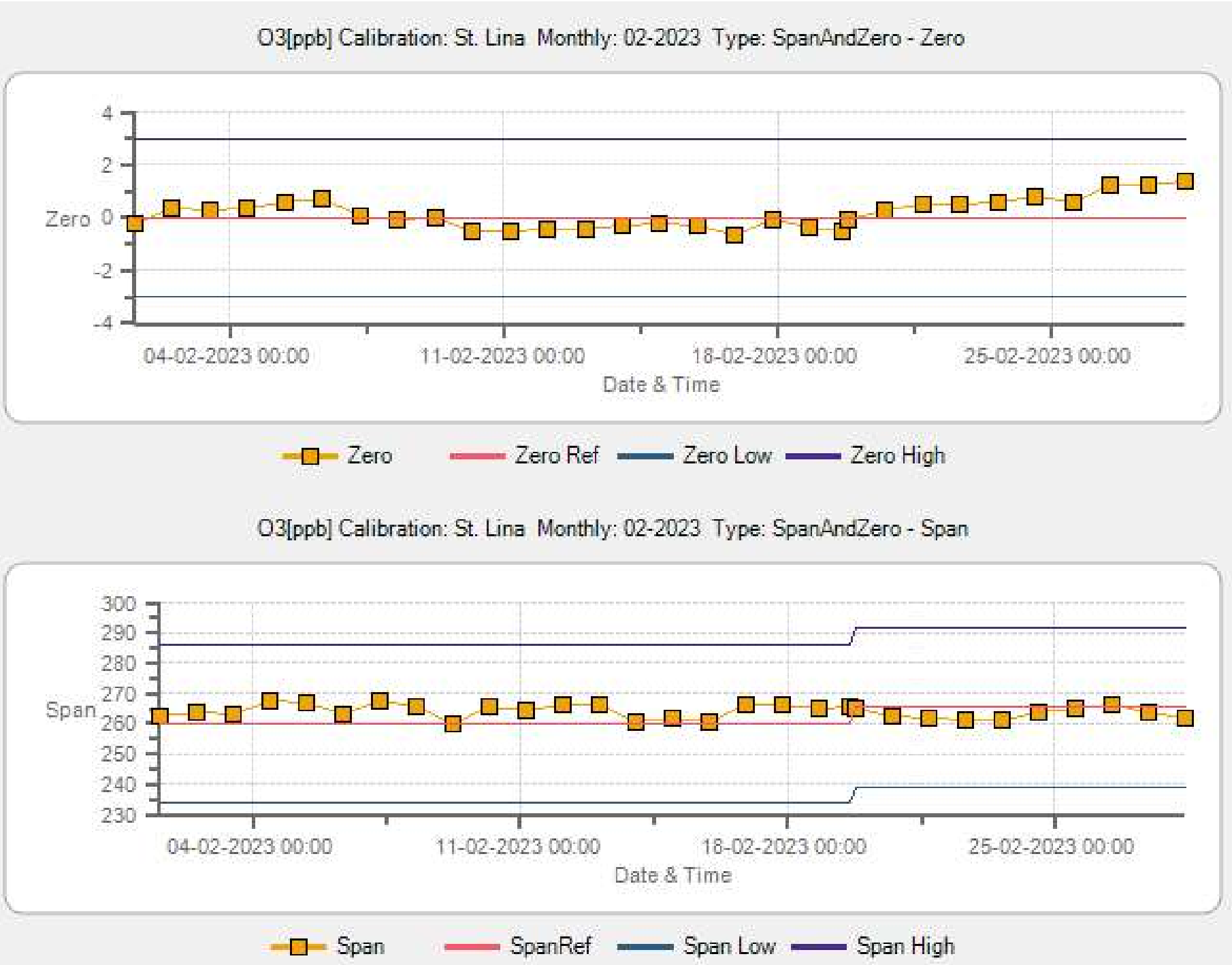


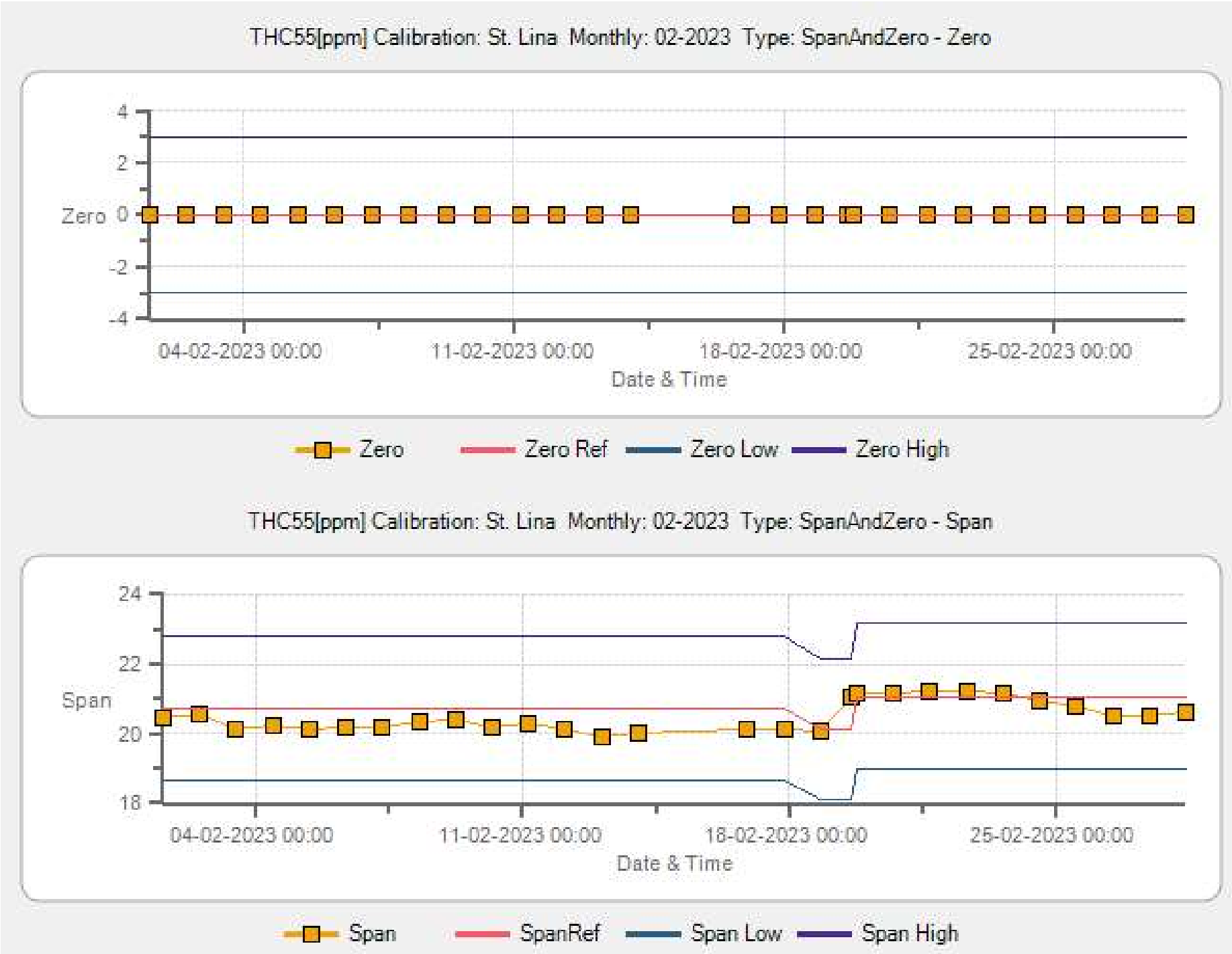
NO2[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Zero

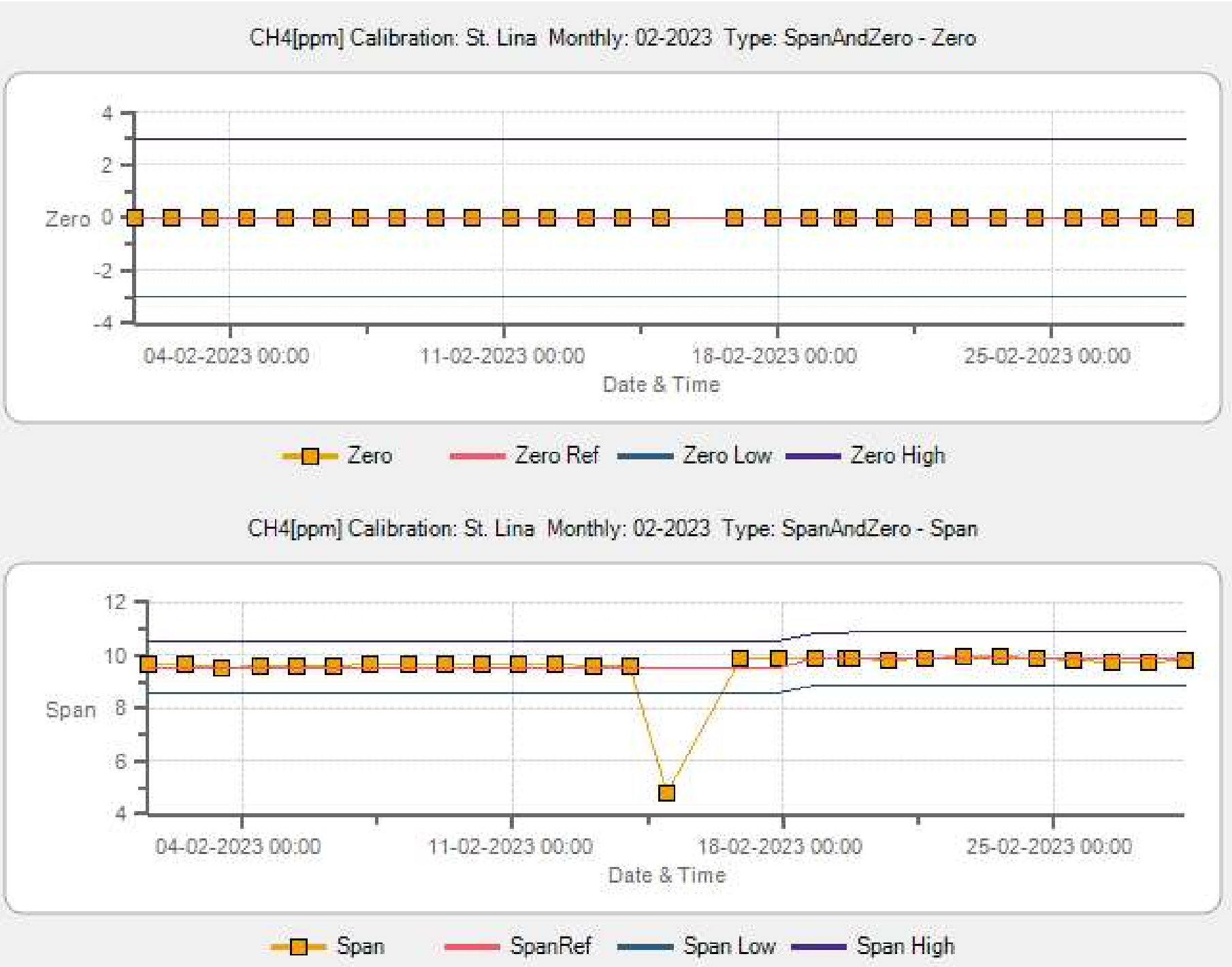


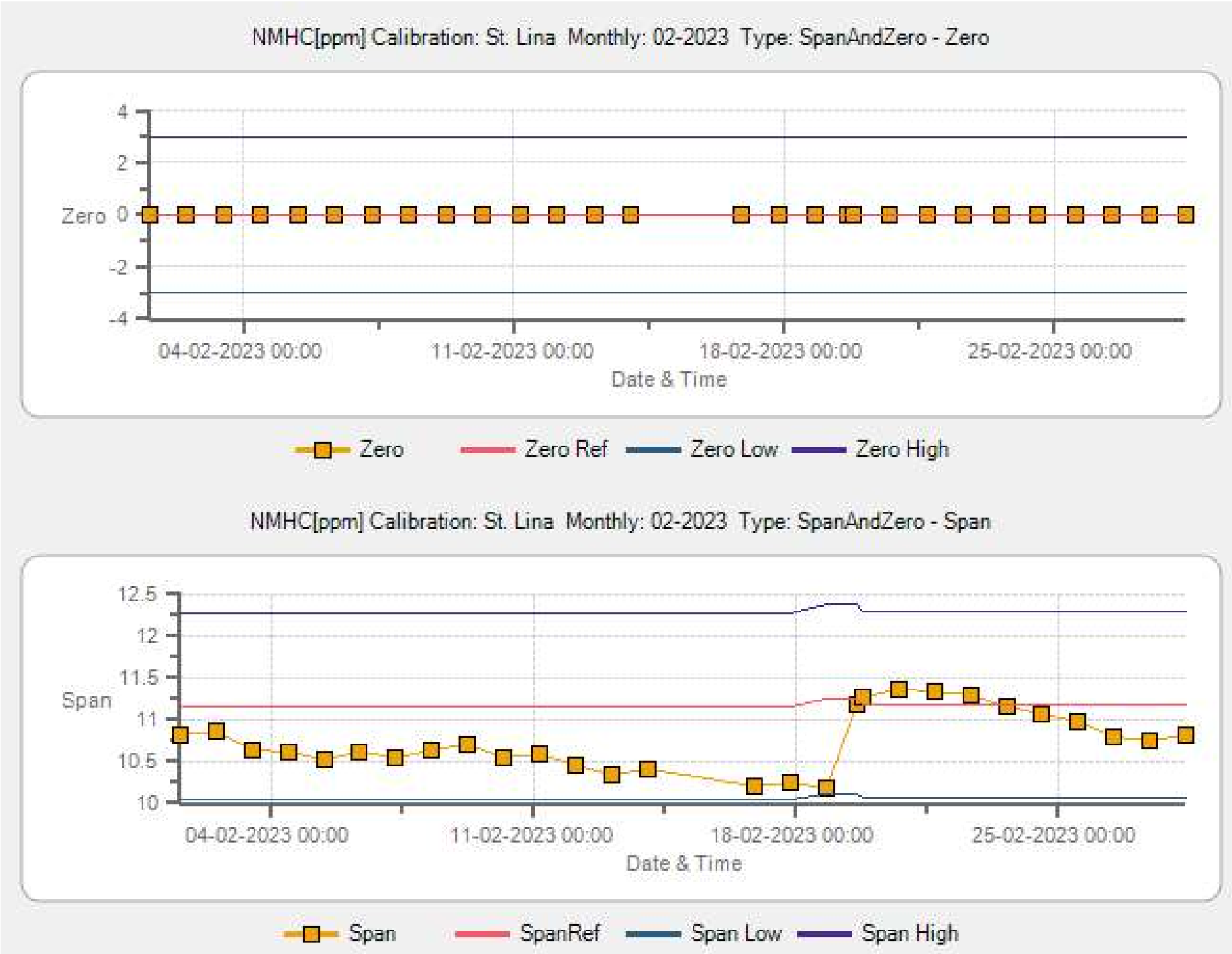
NO2[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Span




O3[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Zero
Zero
4
2
0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Span
Span
300
290
280
270
260
250
240
230
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High


THC55[ppm] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Span
24
22
Span
20
18
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High


CH4[ppm] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4[ppm] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Span
12
10
Span 8
6
4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NMHC[ppm] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC[ppm] Calibration: St. Lina Monthly: 02-2023 Type: SpanAndZero - Span
12.5
12
11.5
Span
11
10.5
10
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	18-Feb-2023	PREVIOUS CALIBRATION DATE:	14-Jan-2023
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	913
PURPOSE	Routine	START TIME (MST):	11:55
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:30

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180930030	FLOW (mL/min)	431
INITIAL		FINAL	
BKG/OFFSET	5.26	BKG/OFFSET	5.2
COEF/SLOPE	1.23	COEF/SLOPE	1.229
Expected (reference) Value	348	Expected (reference) Value	348

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	132
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL 127895	HIGH ID	n/a
CONC (ppm):	50.40	EXPIRY DATE	n/a
CYLINDER (psi):	1900	LOW ID	n/a
EXPIRY DATE	27-Oct-2030	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	390	190	95
RANGE	300 - 400	150 - 200	50 - 100

SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.00	-0.1	0		
4961	37.20	4998	375.13	373.3	376.4	1.005	0.997
4982	17.60	5000	177.41	n/a	177.1	n/a	1.002
4990	8.80	4999	88.72	n/a	87.1	n/a	1.019

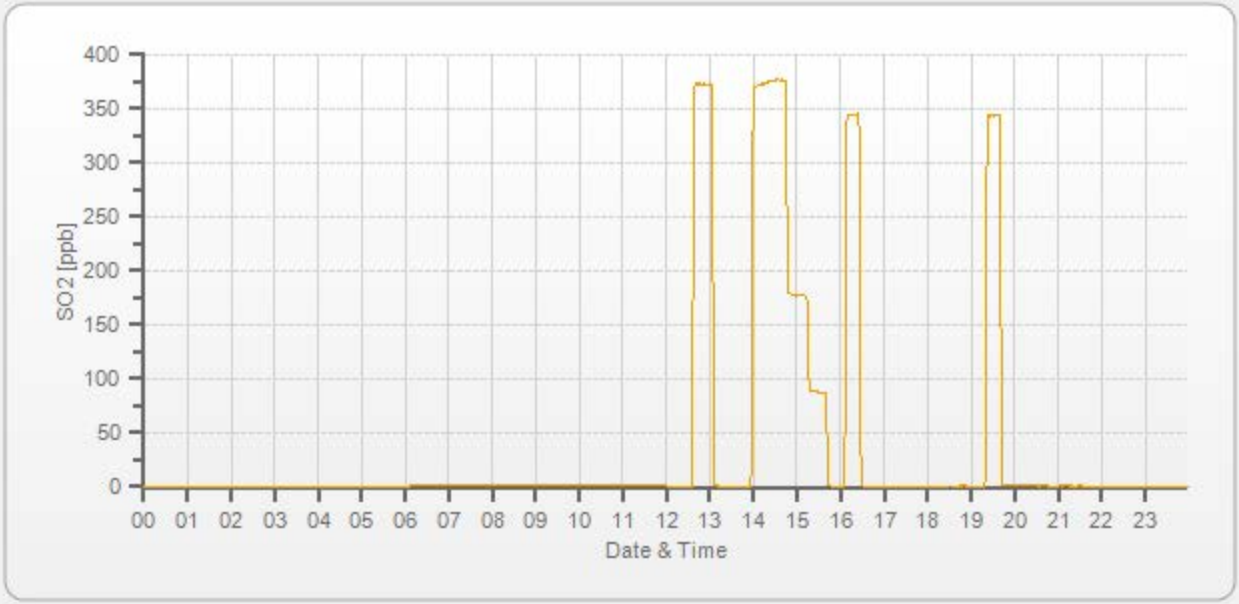
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.005	-0.2%

COMMENTS:

Sample inlet filter was changed.

SO2[ppb] Station: St. Lina Daily: 18-02-2023 Type: AVG 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	18-Feb-2023	PREVIOUS CALIBRATION DATE:	14-Jan-2023
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	0.998
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	913
PURPOSE	Routine	START TIME (MST):	11:56
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:31

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM18010058	FLOW (mL/min)	792
INITIAL		FINAL	
BKG/OFFSET	53.6	BKG/OFFSET	53.9
COEF/SLOPE	0.995	COEF/SLOPE	1.003
Expected (reference) Value	89.9	Expected (reference) Value	89.9

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	21-Oct-2022	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY 0002287	HIGH ID	n/a
CONC (ppm):	10.10	EXPIRY DATE	n/a
CYLINDER (psi):	900	LOW ID	n/a
EXPIRY DATE	14-Sep-2024	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	11:58	SO2 Conc (ppb)	380
END TIME:	12:13	Analyzer Response (ppb)	0.0

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	0.7	0		
7442	57.90	7500	77.97	78.2	77.6	1.006	1.005
7472	28.20	7500	37.98	n/a	37.7	n/a	1.007
7486	14.10	7500	18.99	n/a	19.1	n/a	0.994

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.994	0.1%

COMMENTS:

Sample inlet filter was changed.

H2S[ppb] Station: St. Lina Daily: 18-02-2023 Type: AVG 1 Min. [1 Min.]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

DATE:	18-Feb-2023	PREVIOUS CALIBRATION DATE:	14-Jan-2023
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	913
PURPOSE	Routine	START TIME (MST):	11:51
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:26

ANALYZER:

MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
SERIAL #:	1180930029	NOx	1.003
FLOW (mL/min)	814	NO	1.003
RANGE (ppb)	500	NO2	0.997
GPT FOR O3?		No	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 127895		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	51.1	51.6	HIGH EXPIRY:	n/a
ID:	17100415	ID:	132	CYLINDER (psi):	1900		LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a	EXPIRY DATE	27-Oct-2030		LOW EXPIRY:	n/a

CALIBRATION SETTINGS:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	4.3	4.1	n/a	BKG/OFFSET:	4.3	4.1	n/a
SLOPE/COEF/CE:	1.009	0.86	1	SLOPE/COEF/CE:	1.011	0.874	1

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	320.6	1.5	319.1		320.6	1.5	319.1

CALIBRATION PARAMETERS:

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	380	250	230-265	n/a
MID	180	125	115-150	n/a
LOW	90	45	40-55	n/a
EXTRA 1	n/a	n/a	n/a	n/a

NO/NOx CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
5000		5000	0.0	0.0	0.0	-0.1	-0.2	-0.1	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	373.1	377.0	3.9	379.2	383.9	4.7	1.019	1.018		1.003	1.000	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.7	181.7	2.1	n/a	n/a		1.001	1.000	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	89.3	90.4	1.1	n/a	n/a		1.007	1.005	

GPT CALIBRATION:

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	380.4	384.1	3.7				
AS-FOUND HIGH	37.20	4998	240	126.9	383.9	257.0	253.5	253.3	1.001	99.92%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	37.20	4998	125	259.6	383.9	124.2	120.8	120.5	1.002	99.75%
LOW	37.20	4998	45	331.7	384.1	52.4	48.7	48.7	1.000	100.00%
NO2 adjustment not required.									AVERAGE:	99.89%

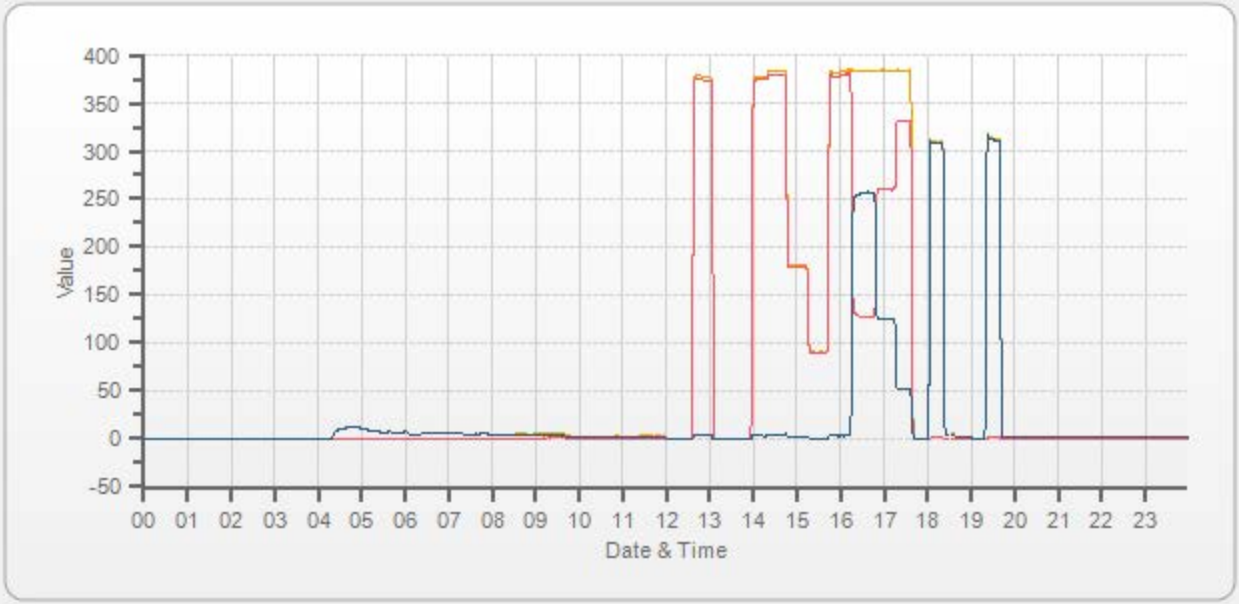
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.997	-0.02%
NOx	1.000	1.000	-0.03%
NO2	1.000	0.999	-0.01%

COMMENTS:

Sample inlet filter was changed.

Station: St. Lina Daily: 18-02-2023 Type: AVG 1 Min. [1 Min.]



Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	19-Feb-2023	PREVIOUS CALIBRATION DATE:	15-Jan-2023
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.001
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	906
PURPOSE	Routine	START TIME (MST):	11:10
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:03

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	12208316586	FLOW (mL/min)	1310
INITIAL		FINAL	
BKG/OFFSET	0.3	BKG/OFFSET	0.3
COEF/SLOPE	1.023	COEF/SLOPE	1.016
Expected (reference) Value	260.1	Expected (reference) Value	265.4

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	21-Oct-2022	OXIDIZER ID:	n/a
CALIBRATION METHOD:		Photometer (Varying UV Lamp)	
GPT DATE:	n/a	GPT END TIME:	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
RANGE	300 - 400	150 - 200	50 - 100

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	0.2	0.0		
5000		5000	378.0	381.6	377.2	0.991	1.002
5000		5000	180.0	n/a	179.8	n/a	1.001
5000		5000	60.0	n/a	60.4	n/a	0.993

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.997	0.1%

COMMENTS:

Sampe inlet filter was changed.


O3[ppb] Station: St. Lina Daily: 19-02-2023 Type: AVG 1 Min. [1 Min.]
O3 [ppb]
450
400
350
300
250
200
150
100
50
0
-50
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:				ANALYZER:			
DATE:	19-Feb-2023	PREVIOUS CALIBRATION DATE:	15-Jan-2023	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	LICA	TEMPERATURE (°C):	22.0		Thermo 55i	1180030034	1022
LOCATION:	St. Lina	BAROMETRIC (mBar):	905	PARAMETER:	CH4	NMHC	THC
PURPOSE	Routine	START TIME (MST):	11:11	RANGE (ppm):	20	20	40
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:03	PREVIOUS CF:	1.001	0.998	1.000

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 23593		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	CH_4/C_3H_8 (ppm):	603.0	204.0	HIGH EXPIRY:	n/a
ID:	17100415	ID:	132	CYLINDER (psi):	1400		LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	115	EXPIRY DATE	18-Aug-2029		LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH4/NMHC)	HIGH	MID	LOW	CH4 EQUIVILANCE	
TARGET	14	7	3.5	C_3H_8 as CH_4	561.0
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1164.0

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	9.56	11.16	20.73		11.18	9.89	21.07

CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC
3100		3100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3025	74.60	3100	14.51	13.50	28.01	14.49	12.32	26.81	14.53	13.48	28.01	1.001	1.096	1.045	0.999	1.001	1.000
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.30	6.78	14.08	n/a	n/a	n/a	0.994	0.996	0.995
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.67	3.49	7.17	n/a	n/a	n/a	0.986	0.964	0.974

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.000	0.1%
NMHC	1.000	0.996	0.3%
THC	1.000	0.998	0.2%

Comments:

Sample inlet filter was changed.

Use Zero Chrom? **Yes**

Station: St. Lina Daily: 19-02-2023 Type: AVG 1 Min. [1 Min.]

Thermo 5030i SHARP Monitor Monthly Check

Date:	February 19, 2023	**Performed By/Reviewer:**	Alex Yakupov / Chris Wesson
Company:	LICA	**Start Time (mst):**	15:13
Station Name/Location:	St. Lina	**End Time (mst):**	16:24
Previous Audit Date:	January 15, 2023	**Calibration Purpose:**	routine monthly
Parameter:	PM 2.5	**Weather Conditions:**	A few clouds

SHARP 5030i Information and Status:

Serial Number: CM 17091001 **Filter Tape Counter** 97

Reference Standards:

	Air Flow			
	Manometer	**Orifice**	**Pressure:**	**Temp / RH:**
Make:	DeltaCal	DeltaCal	Fisher Scientific	Vaisala HMP76B
Model:	DC1	DC1	FB 61291	HMP 76B
Serial Number:	177246	177246	130168457	T1640130
Calibration Expiration Date:	September 7, 2023	September 7, 2023	February 17, 2023	June 14, 2023

Ambient Temperature (°C)

	Reference	**SHARP**	**Difference**
#1	-11.90	-11.5	-0.4

Range	Action
< ± 2°C	OK
2-3 °C	Recalibrate
> 3°C	*Fail*

Ambient Relative Humidity (%RH)

As Found:

	Reference	**SHARP**	**Difference**
#1	70.20	71.3	-1.1

Range	Action
< ± 2 %RH	OK
2-5 %RH	Recalibrate
> 5 %RH	*Fail*

Barometric Pressure (mmHg)

As Found:

	Reference	**SHARP**	**Difference**
#1	679.0	678.0	1.0

Range	Action
< ± 10 mmHg	OK
10-12 mmHg	Recalibrate
> 12 mmHg	*Fail*

Flow Audit (L/min)

As Found:

	Reference	**SHARP**			
#1	16.64	16.67		% Difference	0.18%
#2	16.64	16.67			
#3	16.64	16.67			
Average	16.64	16.67			

Range	Action
< ± 4%	OK
4-5%	Recalibrate
>5%	*Fail*

Leak Check (L/min)

	Without Leak Check Adapter			**With leak Check Adapter**			
	Reference	**SHARP**	**Difference**	**Reference**	**SHARP**	**Difference**	
#1	16.64	16.67	-0.03	16.52	16.61	-0.09	*Leak Limit: 0.80 L/min*
					LEAK RATE:	**-0.06**	

Meteorological System Checklist

Date:	February 19, 2023		
Technician:	Alex Yakupov / Audit time: 16:51 - 17:36		
Reviewer:	Chris Wesson		
Station:	St. Lina		
Unit:	**Make:**	**Model:**	**Serial #:**
Temperature Sensor:	Rotronic	HC2-S3	20404750
Barometric Pressure Sensor:	Met One	O90D	F4498
Relative Humidity Sensor:	Rotronic	HC2-S3	20404750
Anemometer:	RM Young	05305VK	161466

PRECIPITATION SENSOR CHECK

Checklist:	**Reply:**	**Comments:**
Is the sensor Level?	yes	
Is the heater operating properly?	yes	
Are the bucket drain holes clean?	yes	16:55 - tested with snow and water. No issues.
Is the screen on the housing? (screen should be on between July and September	no	
Is the housing clean?	yes	
Is the area around the housing clean and free from obstacles?	yes	

TIP TEST - Slowly pour water until 10 tip are heard. (10 tips = 1 ml)

# of Tips	**Data Logger Response (mm):**	**Manual Specification = +/- 0.2 mm**
10	1.00	TRUE

AMBIENT TEMPERATURE SENSOR CHECK

Parameter:	Temperature @ 2 metres
Reference Thermometer ID:	Vaisala / HM70 / #T1640130/ Jun 14, 2023
Reference Temperature (^{o}C):	-13.8
Station - Ambient Temperature (^{o}C):	-14.1
Temperature Difference (^{o}C):	0.3

BAROMETRIC PRESSURE SENSOR CHECK

Reference Barometer ID:	Fisher Scientific #130168457, Exp. Date: Feb 17, 2023	
Reference Pressure - Units/Reading:	millibar	905
Station Pressure - Units/Reading:	millibar	906
Pressure Tolerance +/- 15% of error:	769 - 1041	-0.11%

RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Reference Hygrometer ID:	Vaisala / HM70 / #T1640130/ Jun 14, 2023	
Reference Hygrometer % RH- Reading:	79.50	
Station Hygrometer % RH- Reading:	81.10	
RH Tolerance +/- 15% of difference:	67.58 - 91.43	-2.0%

ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Previous check date:	January 15, 2023	Previous check date:	January 15, 2023
Wind Speed Observed (kph):	1-10	Wind Direction Observed:	N
Wind speed on Data Logger (kph):	4.2	Wind Direction on Data Logger:	N
	Annual audit: Jul 22, 2022	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge temperature: 23.5 vs 23.9

Meteorological Sensor Audit/Calibration

Location Information

Company:	LICA	**Performed By:**	Alex Yakupov
Audit Location:	St. Lina	**Reviewed By:**	Chris Wesson
Audit Date:	July 22, 2022	**Start/End Time (mst):**	15:07 / 16:23
Calibration Purpose:	routine annual	**Weather Conditions:**	A few clouds

Wind Sensor Information

Sensor ID Data:		**Sensor Outputs:**	
Sensor Make:	RM Young	**Velocity Voltage Output Range:**	0-1
Sensor Model:	05305VK	**Velocity Unit Output Range:**	0-200
Serial #:	161466	**Direction Voltage Output Range:**	0-1
Previous Cal/Audit Date:	March 16, 2021	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: Model 18860-90/18802 SN: CA 4744, expires - Aug 6, 2022

Wind Speed Audit Data **+/- 2% of the average correction factor is the limit**

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.1	0.1	-
1000	18.4	18.5	18.5	0.996
2000	36.9	36.9	37.0	0.998
3000	55.3	55.4	55.5	0.997
4000	73.7	74.1	74.1	0.995
5000	92.2	92.5	92.4	0.997
6000	110.6	111.0	111.0	0.996
7000	129.0	129.4	129.4	0.997
8000	147.4	148.1	148.1	0.996
9000	165.9	166.6	166.6	0.996
10000	184.3	185.1	185.1	0.996
		The audit meets AMD requirements.	**Average Correction Factor=**	**0.996**

Wind Direction Audit Data **+/- 3° of the absolute average degrees difference for all points is the limit**

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	0	355	0.4	0.0	0.2
30	330	31	331	-0.6	-0.8	0.7
60	300	62	301	-2.1	-0.6	1.4
90	270	93	270	-2.7	-0.1	1.4
120	240	123	241	-2.9	-1.2	2.1
150	210	152	212	-2.1	-2.1	2.1
180	180	182	183	-2.0	-2.9	2.5
210	150	211	153	-1.2	-2.8	2.0
240	120	241	123	-0.8	-3.1	2.0
270	90	270	93	-0.3	-3.0	1.7
300	60	301	62	-0.8	-2.3	1.6
330	30	331	30	-0.5	-0.4	0.4
355	0	355	1	0.0	0.5	0.3
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**1.4**

Comments:

n/a

End of Report

Lakeland Industry & Community Association

FEBRUARY 2023

Ambient Air Monitoring Calibration Report

- LAC LA BICHE STATION-

CAL-LICA-202302-01690

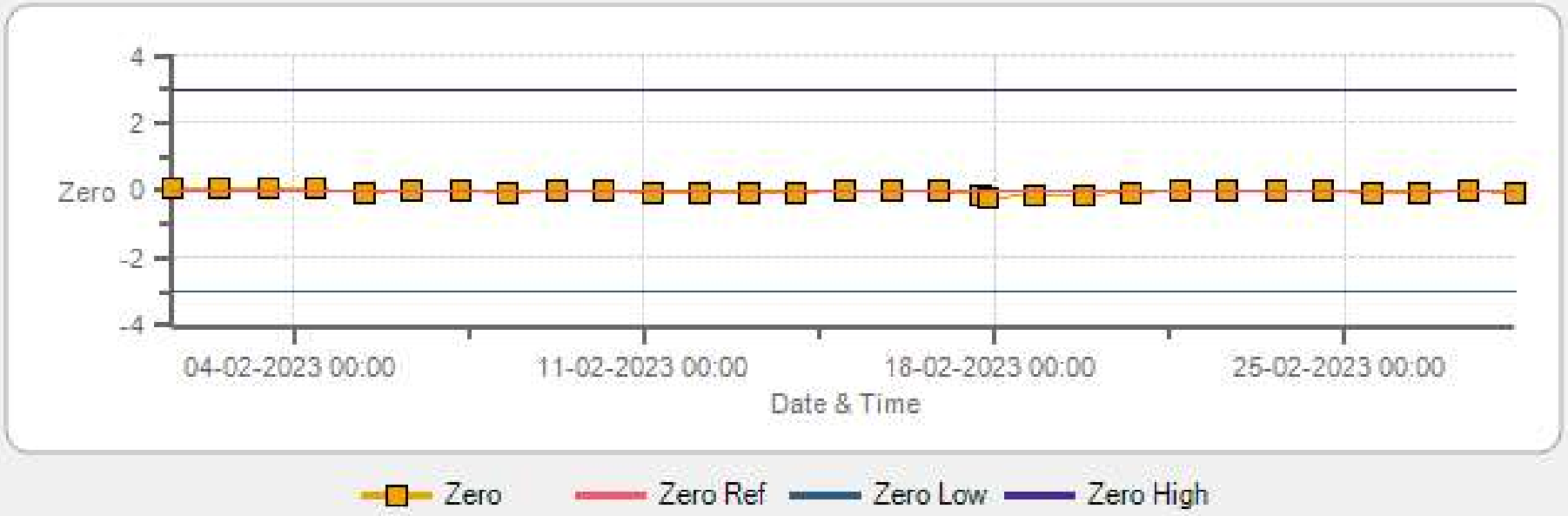
Station Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
LICA / Bureau Veritas Canada

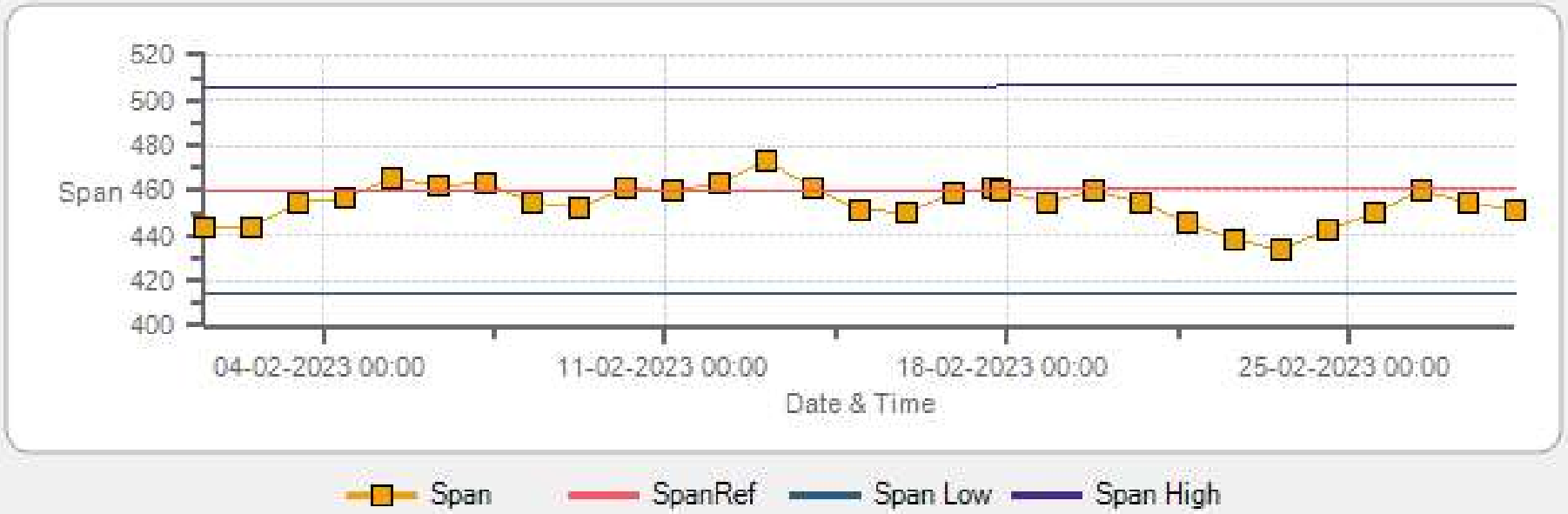
March 10, 2023

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

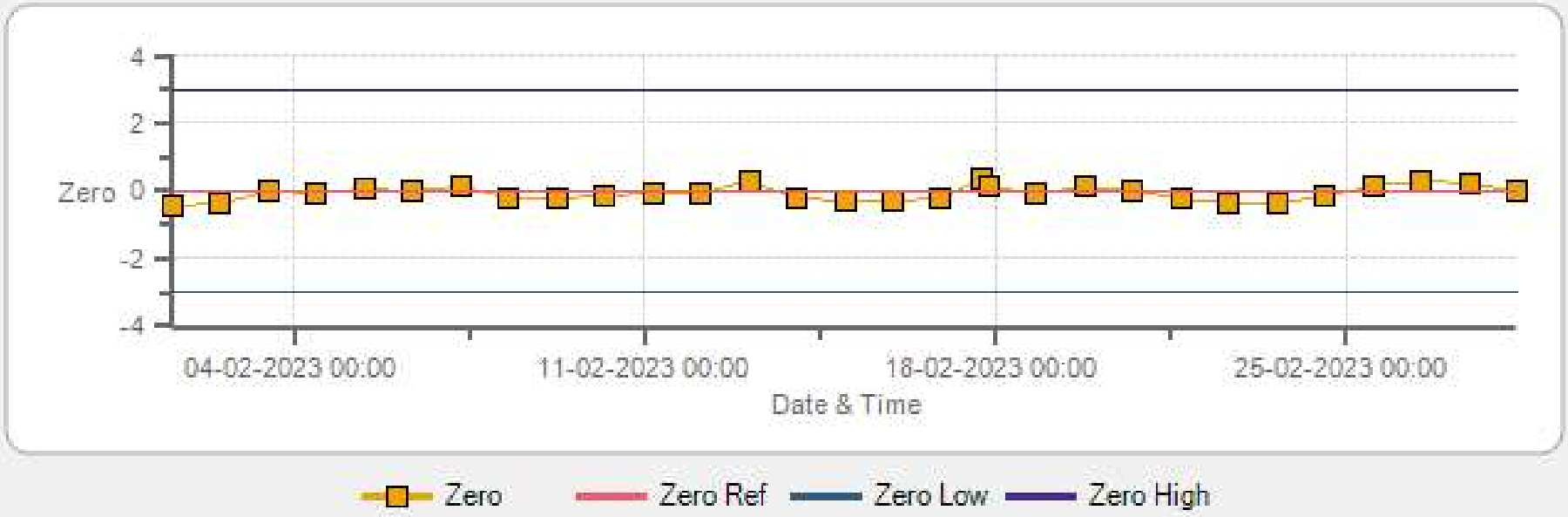
SO2[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Zero



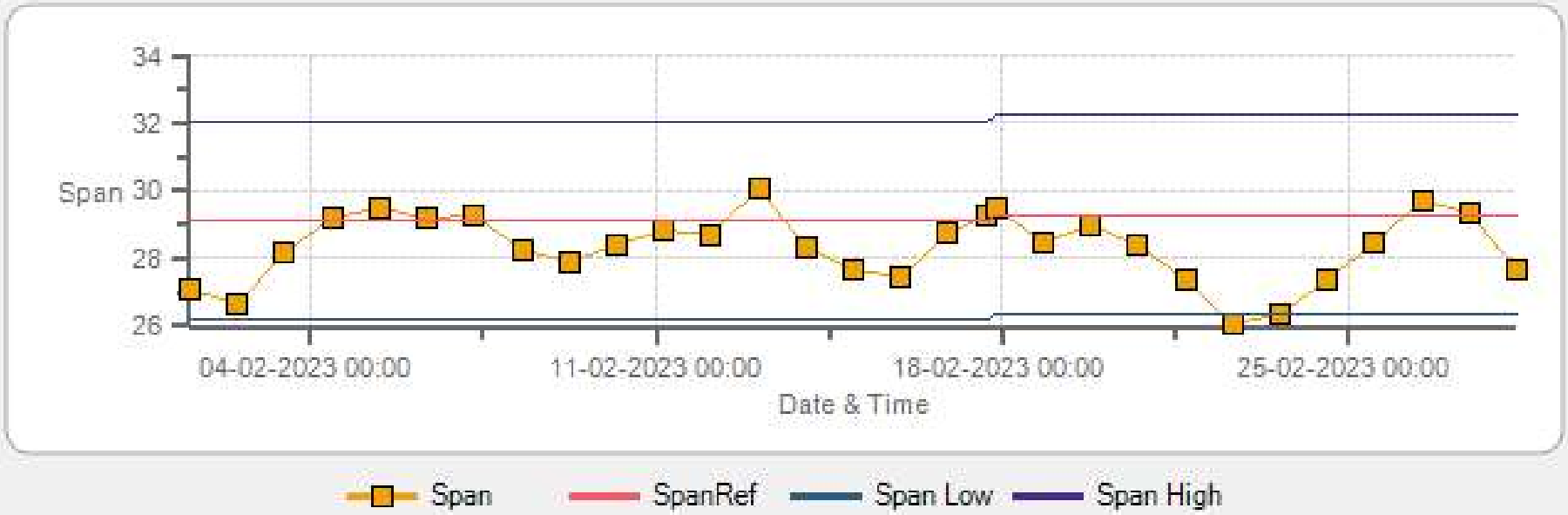
SO2[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Span



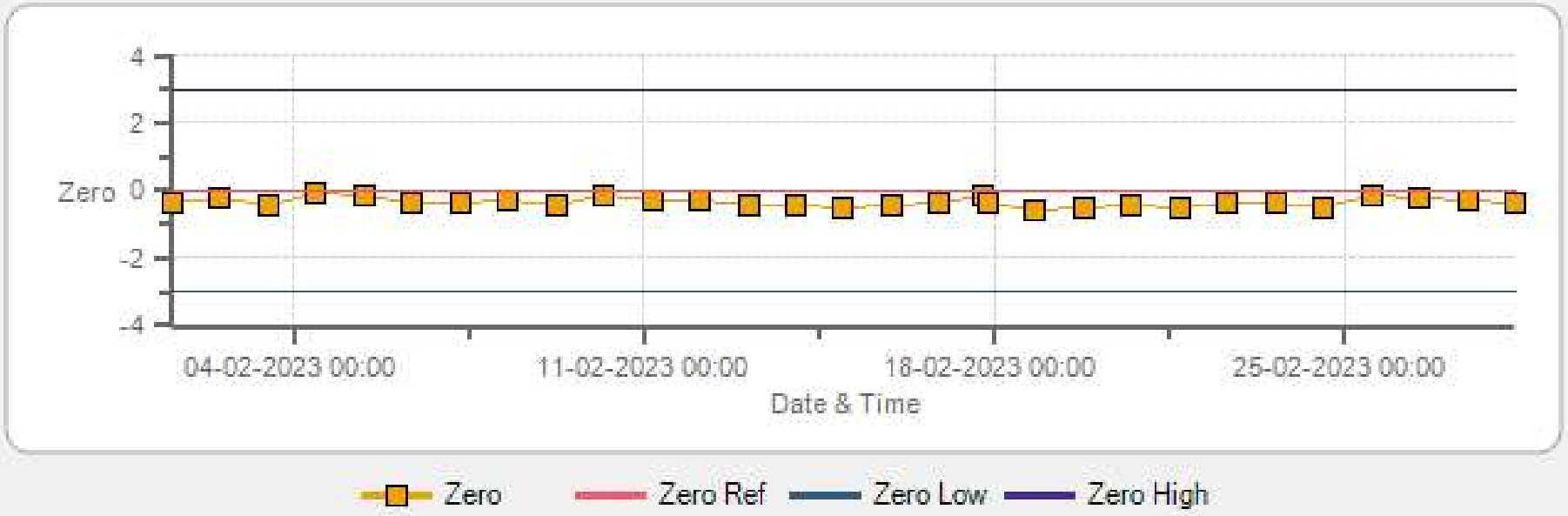
H2S[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Zero



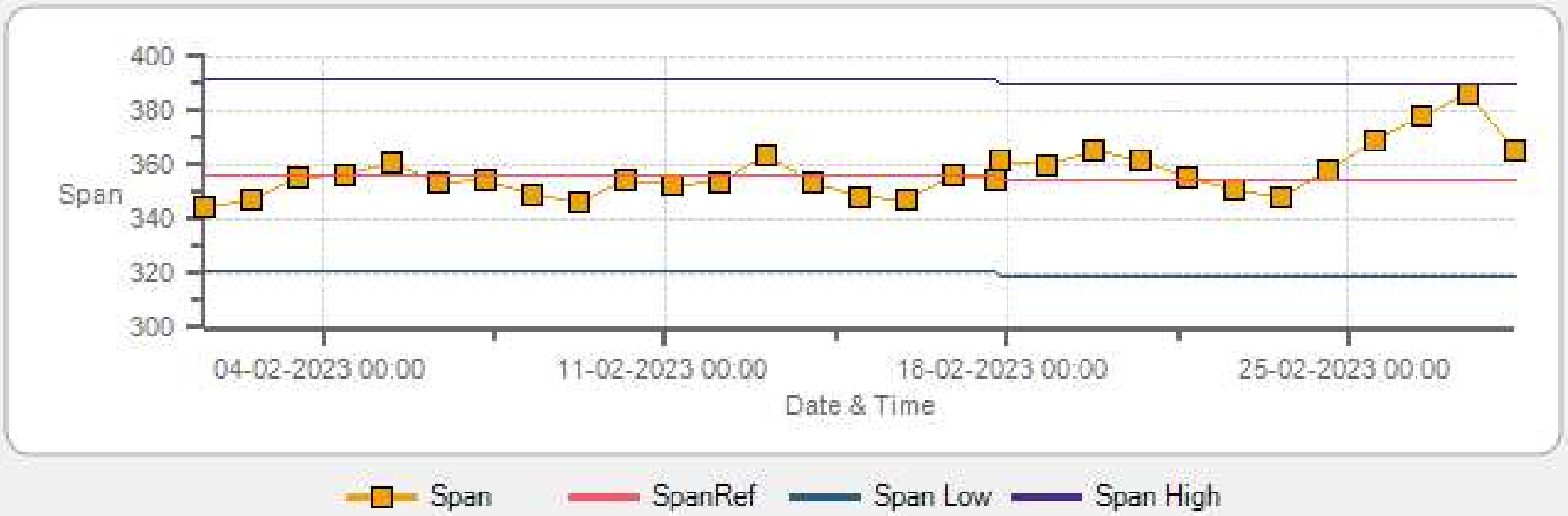
H2S[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Span



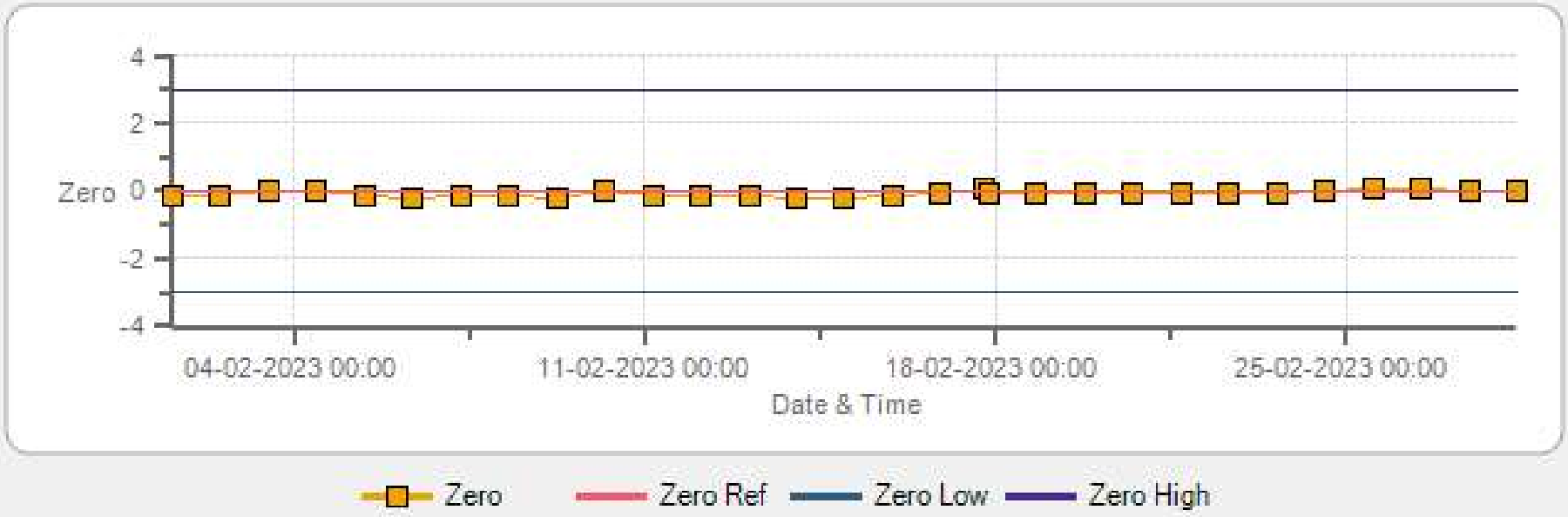
NOX[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Zero



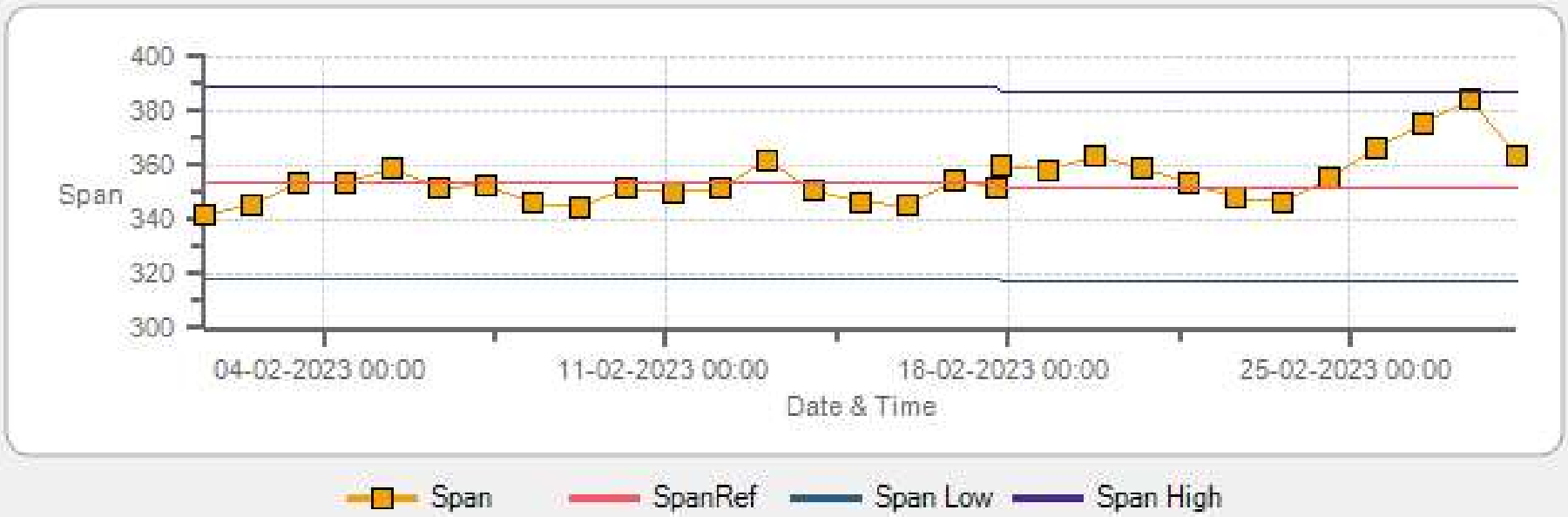
NOX[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Span



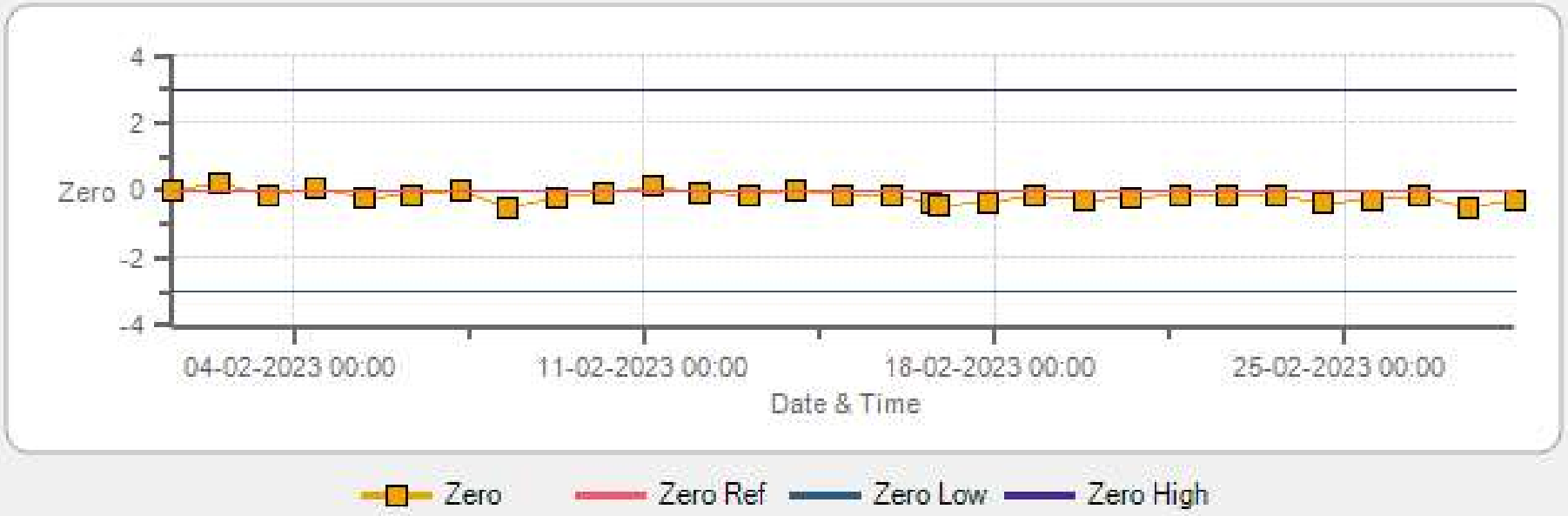
NO2[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Zero



NO2[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Span



O3[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Zero

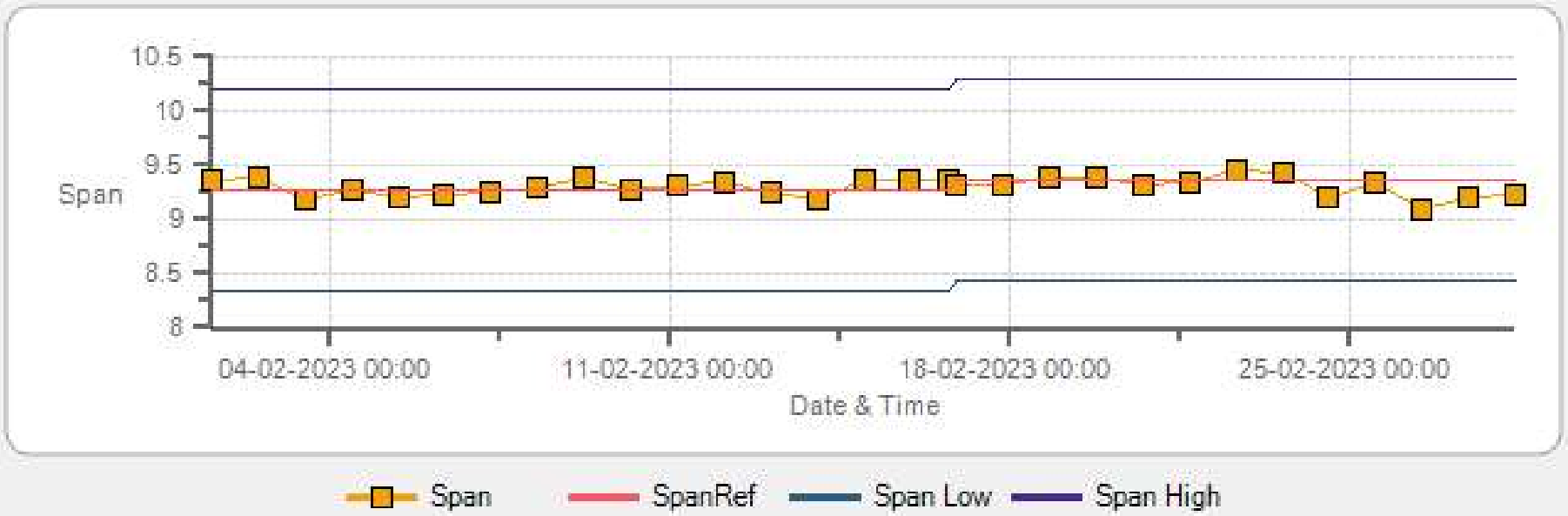


O3[ppb] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Span


THC55[ppm] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Span
23
22
21
Span
20
19
18
04-02-2023 00:00
11-02-2023 00:00
18-02-2023 00:00
25-02-2023 00:00
Date & Time
Span
SpanRef
Span Low
Span High

CH4[ppm] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Zero

CH4[ppm] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Span



NMHC[ppm] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Zero

NMHC[ppm] Calibration: Lac La Biche Monthly: 02-2023 Type: SpanAndZero - Span

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	17-Feb-2023	PREVIOUS CALIBRATION DATE:	13-Jan-2023
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	942
PURPOSE	Routine	START TIME (MST):	12:01
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:53

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180320043	FLOW (mL/min)	455
INITIAL		FINAL	
BKG/OFFSET	6.76	BKG/OFFSET	6.9
COEF/SLOPE	1.196	COEF/SLOPE	1.197
Expected (reference) Value	460	Expected (reference) Value	460.6

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	26801218	ID:	132
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL 127895	HIGH ID	n/a
CONC (ppm):	50.40	EXPIRY DATE	n/a
CYLINDER (psi):	1900	LOW ID	n/a
EXPIRY DATE	27-Oct-2030	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	390	190	95
RANGE	300 - 400	150 - 200	50 - 100

SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.00	0.06	0		
4961	37.20	4998	375.13	372.57	376.77	1.007	0.996
4982	17.60	5000	177.41	n/a	176.31	n/a	1.006
4990	8.80	4999	88.72	n/a	87.26	n/a	1.017

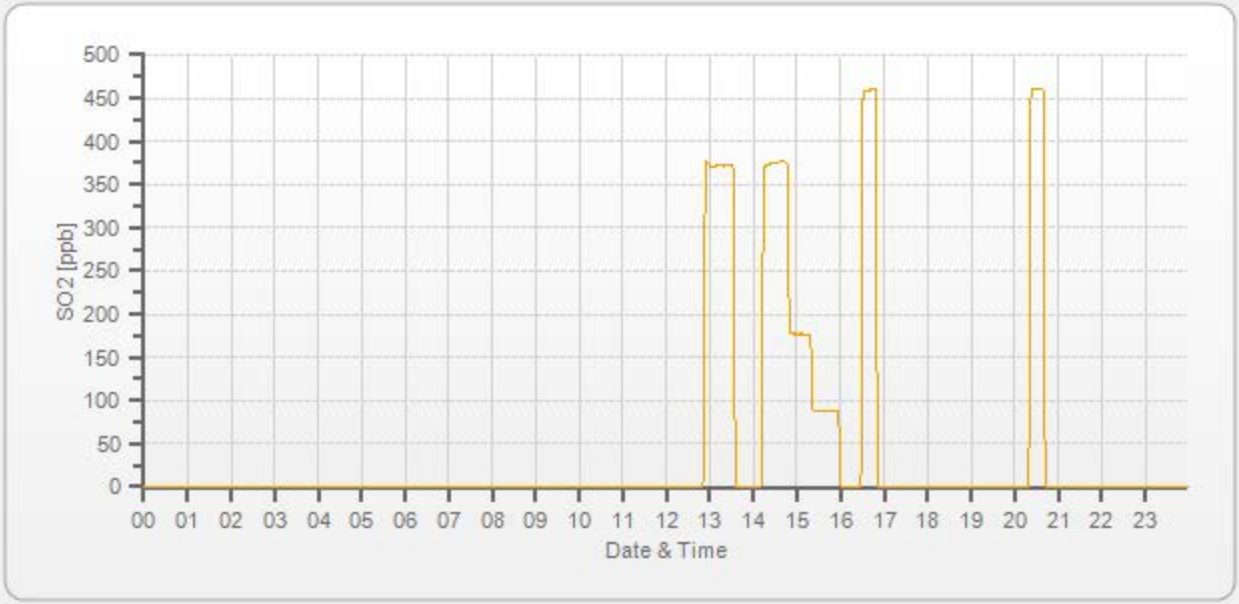
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.006	-0.2%

COMMENTS:

Sample inlet filter was changed.

SO2[ppb] Station: Lac La Biche Daily: 17-02-2023 Type: AVG 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	17-Feb-2023	PREVIOUS CALIBRATION DATE:	13-Jan-2023
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	942
PURPOSE	Routine	START TIME (MST):	12:00
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:53

ANALYZER:

MAKE/MODEL	API 101A	RANGE	100 ppb
SERIAL #	324	FLOW (mL/min)	505
INITIAL		FINAL	
BKG/OFFSET	31.4	BKG/OFFSET	31
COEF/SLOPE	1.02	COEF/SLOPE	1.037
Expected (reference) Value	29.1	Expected (reference) Value	29.3

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	21-Oct-2022	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY 0002287	HIGH ID	n/a
CONC (ppm):	10.10	EXPIRY DATE	n/a
CYLINDER (psi):	900	LOW ID	n/a
EXPIRY DATE	14-Sep-2024	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	12:09	SO2 Conc (ppb)	380
END TIME:	12:24	Analyzer Response (ppb)	0.0

CALIBRATION:

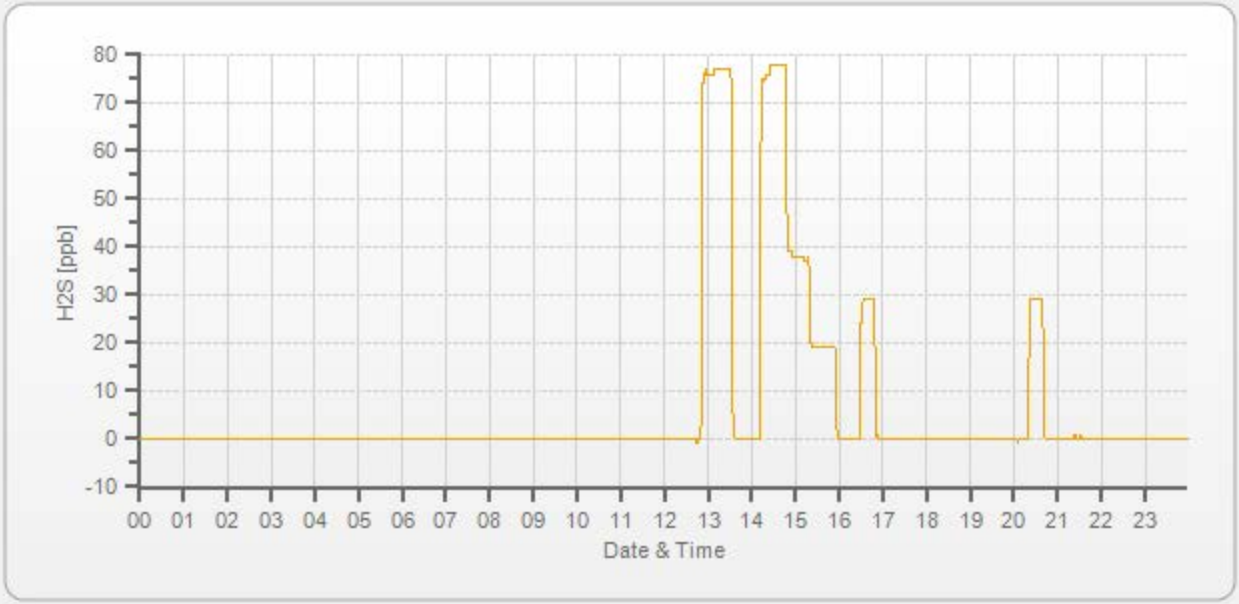
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	-0.2	0		
7442	57.90	7500	77.97	77.1	78.4	1.009	0.995
7472	28.20	7500	37.98	n/a	37.7	n/a	1.007
7486	14.10	7500	18.99	n/a	19.1	n/a	0.994

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.005	-0.1%

COMMENTS:

Sample inlet filter was changed.


H2S[ppb] Station: Lac La Biche Daily: 17-02-2023 Type: AVG 1 Min. [1 Min.]
H2S [ppb]
80
70
60
50
40
30
20
10
0
-10
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
H2S [ppb]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

DATE:	17-Feb-2023	PREVIOUS CALIBRATION DATE:	13-Jan-2023
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	942
PURPOSE	Routine	START TIME (MST):	12:02
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:38

ANALYZER:

MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
SERIAL #:	1180930027	NOx	1.001
FLOW (mL/min)	688	NO	1.001
RANGE (ppb)	500	NO2	0.997
GPT FOR O3?		No	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 127895		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	51.1	51.6	HIGH EXPIRY:	n/a
ID:	26801218	ID:	132	CYLINDER (psi):	1900		LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a	EXPIRY DATE	27-Oct-2030		LOW EXPIRY:	n/a

CALIBRATION SETTINGS:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	8.7	8.4	n/a	BKG/OFFSET:	9	8.7	n/a
SLOPE/COEF/CE:	1.009	0.88	1.002	SLOPE/COEF/CE:	1.009	0.896	1.002

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	356.1	2.3	353.8		354.4	2.2	352.2

CALIBRATION PARAMETERS:

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	380	250	230-265	n/a
MID	180	125	115-150	n/a
LOW	90	45	40-55	n/a
EXTRA 1	n/a	n/a	n/a	n/a

NO/NOx CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
5000		5000	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	372.1	375.8	3.7	379.5	383.6	4.1	1.022	1.022		1.002	1.001	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	178.6	180.2	1.7	n/a	n/a		1.007	1.008	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	88.1	89.0	0.9	n/a	n/a		1.021	1.021	

GPT CALIBRATION:

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	379.1	382.4	3.3				
AS-FOUND HIGH	37.20	4998	235	129.3	383.5	253.8	249.8	250.5	0.997	100.28%
ADJUSTED HIGH	37.20	4998	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	37.20	4998	110	264.9	384.8	119.9	114.2	116.6	0.979	102.10%
LOW	37.20	4998	40	337.0	384.6	46.8	42.1	43.5	0.968	103.33%
NO2 adjustment not required.									AVERAGE:	101.90%

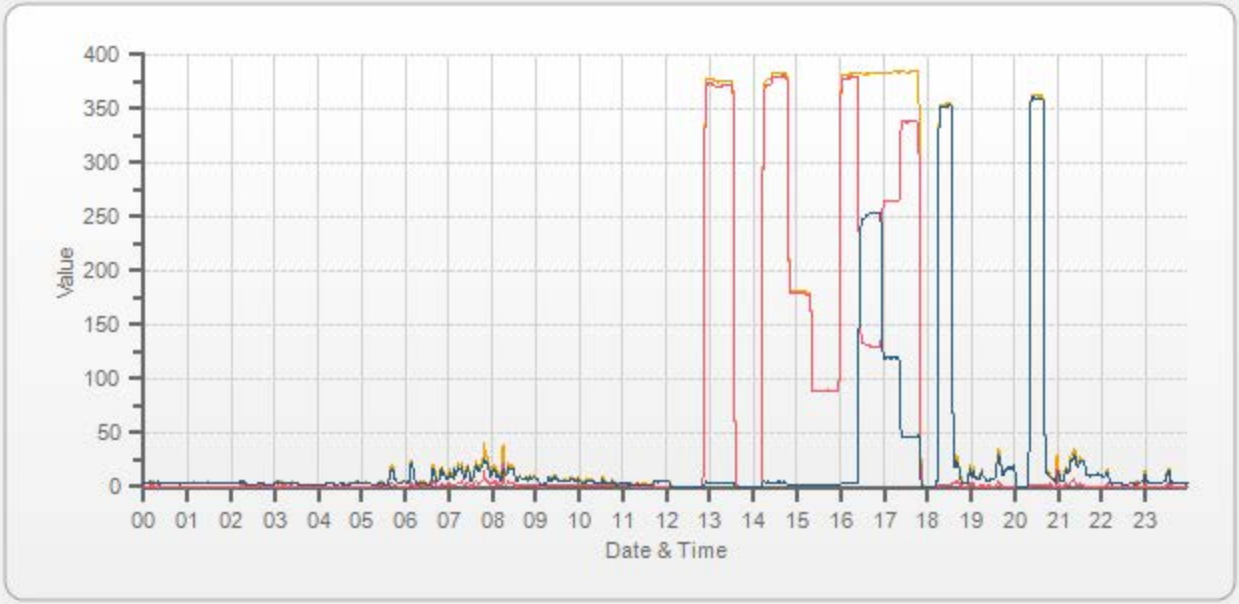
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.999	-0.17%
NOx	1.000	1.000	-0.19%
NO2	1.000	0.995	0.42%

COMMENTS:

Sample inlet filter was changed.

Station: Lac La Biche Daily: 17-02-2023 Type: AVG 1 Min. [1 Min.]



Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	16-Feb-2023	PREVIOUS CALIBRATION DATE:	12-Jan-2023
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	0.995
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	936
PURPOSE	Routine	START TIME (MST):	13:43
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:06

ANALYZER:

MAKE/MODEL	Thermo 49i	RANGE	500 ppb
SERIAL #	1002240372	FLOW (mL/min)	1441
INITIAL		FINAL	
BKG/OFFSET	0	BKG/OFFSET	0.1
COEF/SLOPE	1.047	COEF/SLOPE	1.037
Expected (reference) Value	258	Expected (reference) Value	261

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	21-Oct-2022	OXIDIZER ID:	n/a
CALIBRATION METHOD:		Photometer (Varying UV Lamp)	
GPT DATE:	n/a	GPT END TIME:	n/a

CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
RANGE	300 - 400	150 - 200	50 - 100

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	0.0	0.0		
5000		5000	378.0	380.8	375.1	0.993	1.008
5000		5000	180.0	n/a	179.4	n/a	1.003
5000		5000	60.0	n/a	60.1	n/a	0.998

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.992	0.1%

COMMENTS:

Sample inlet filter was changed.


O3[ppb] Station: Lac La Biche Daily: 16-02-2023 Type: AVG 1 Min. [1 Min.]
450
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	16-Feb-2023	PREVIOUS CALIBRATION DATE:	12-Jan-2023
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	936
PURPOSE	Routine	START TIME (MST):	13:45
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:06

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1180320044	1022
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.001	0.994	0.998

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 23593		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	CH_4/C_3H_8 (ppm):	603.0	204.0	HIGH EXPIRY:	n/a
ID:	17100415	ID:	134	CYLINDER (psi):	1400		LOW ID:	n/a
MFC CALIBRATION DATE:	02-Sep-2022	OXIDIZER ID:	n/a	EXPIRY DATE	18-Aug-2029		LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:

POINT (CH4/NMHC)	HIGH	MID	LOW	CH4 EQUIVILANCE	
TARGET	14	7	3.5	C_3H_8 as CH_4	561.0
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1164.0

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	9.28	10.84	20.12		9.36	10.95	20.31

CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC	CH4	NMHC	THC
3100		3100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
3025	74.60	3100	14.51	13.50	28.01	14.46	13.24	27.69	14.51	13.56	28.06	1.004	1.020	1.012	1.000	0.996	0.998
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.22	6.73	13.96	n/a	n/a	n/a	1.005	1.003	1.003
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.61	3.35	6.95	n/a	n/a	n/a	1.002	1.005	1.005

LINEAR REGRESSION ANALYSIS:

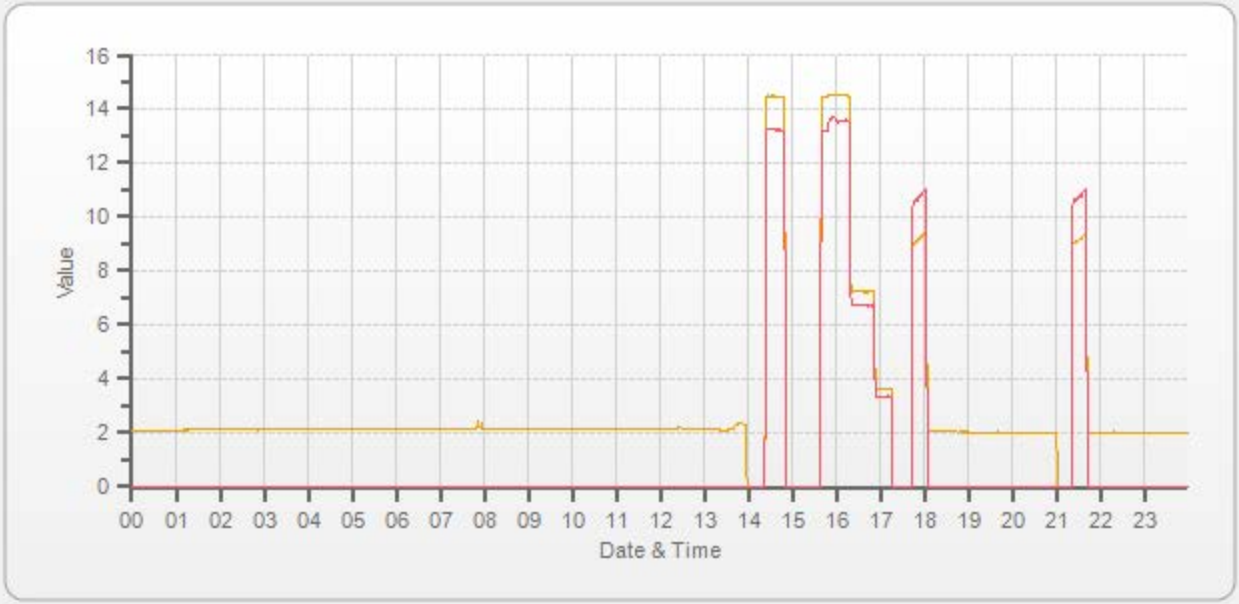
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.000	-0.1%
NMHC	1.000	1.005	-0.1%
THC	1.000	1.002	-0.1%

Comments:

Sample inlet filter was changed.

Use Zero Chrom? **Yes**

Station: Lac La Biche Daily: 16-02-2023 Type: AVG 1 Min. [1 Min.]



Thermo 5030i SHARP Monitor Monthly Check

Date:	February 17, 2023	**Performed By/Reviewer:**	Alex Yakupov / Chris Wesson
Company:	LICA	**Start Time (mst):**	17:58
Station Name/Location:	Lac La Biche	**End Time (mst):**	18:42
Previous Audit Date:	January 13, 2022	**Calibration Purpose:**	routine monthly
Parameter:	PM 2.5	**Weather Conditions:**	A few clouds

SHARP 5030i Information and Status:

Serial Number: CM 17071016 **Filter Tape Counter** 241

Reference Standards:

	Air Flow			
	Manometer	**Orifice**	**Pressure:**	**Temp / RH:**
Make:	DeltaCal	DeltaCal	Fisher Scientific	Vaisala HMP76B
Model:	DC1	DC1	FB 61291	HMP 76B
Serial Number:	177246	177246	130168457	T1640130
Calibration Expiration Date:	September 7, 2023	September 7, 2023	February 17, 2023	June 14, 2023

Ambient Temperature (°C)

	Reference	**SHARP**	**Difference**
#1	-2.20	-1.8	-0.4

Range	Action
< ± 2°C	OK
2-3 °C	Recalibrate
> 3°C	*Fail*

Ambient Relative Humidity (%RH)

As Found:

	Reference	**SHARP**	**Difference**
#1	69.20	67.3	1.9

Range	Action
< ± 2 %RH	OK
2-5 %RH	Recalibrate
> 5 %RH	*Fail*

Barometric Pressure (mmHg)

As Found:

	Reference	**SHARP**	**Difference**
#1	705.4	705.2	0.2

Range	Action
< ± 10 mmHg	OK
10-12 mmHg	Recalibrate
> 12 mmHg	*Fail*

Flow Audit (L/min)

As Found:

	Reference	**SHARP**
#1	16.71	16.67
#2	16.71	16.67
#3	16.70	16.67
Average	16.71	16.67

% Difference -0.22%

Range	Action
< ± 4%	OK
4-5%	Recalibrate
>5%	*Fail*

Leak Check (L/min)

	Without Leak Check Adapter			**With leak Check Adapter**		
	Reference	**SHARP**	**Difference**	**Reference**	**SHARP**	**Difference**
#1	16.71	16.67	0.04	16.55	16.61	-0.06
					LEAK RATE:	**-0.10**

Leak Limit: 0.80 L/min

Meteorological System Checklist

Date:	February 17, 2023		
Technician:	Alex Yakupov		
Station:	Lac La Biche		
Unit:	**Make:**	**Model:**	**Serial #:**
Temperature Sensor:	Rotronic	HC2A-S3	20357518
Barometric Pressure Sensor:	MetOne	92	Y23360
Relative Humidity Sensor:	Rotronic	HC2A-S3	20357518
Anemometer:	RM Young	05305VK	56778
AMBIENT TEMPERATURE SENSOR CHECK			
Parameter:	Temperature @ 2 metres		
Reference Thermometer ID:	Vaisala / HM70 / #T1640130/ Jun 14, 2023		
Reference Temperature (°C):	-2.2		
Station - Ambient Temperature (°C):	-2.7		
Temperature Difference (°C):	0.5		
BAROMETRIC PRESSURE SENSOR CHECK			
Reference Barometer ID:	Fisher Scientific / FB 61291 / #130168457/ Feb 17, 2023		
Reference Pressure - Units/Reading:	millibar	941	
Station Pressure - Units/Reading:	millibar	940	
Pressure Tolerance +/- 15% of error:	800 - 1082	0.11%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Reference Hygrometer ID:	Vaisala / HM70 / #T1640130/ Jun 14, 2023		
Reference Hygrometer % RH- Reading:	74.40		
Station Hygrometer % RH- Reading:	72.30		
RH Tolerance +/- 15% of difference:	63.24 - 85.56	2.8%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	January 13, 2023	Previous check date:	January 13, 2023
Wind Speed Observed (kph):	1-10	Wind Direction Observed:	NW
Wind speed on Data Logger (kph):	5.2	Wind Direction on Data Logger:	NW
	Annual audit: May 09, 2022	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge: 23.5 vs 23.9 - passed.

Meteorological Sensor Audit/Calibration

Location Information

Company:	LICA	**Performed By:**	Alex Yakupov
Audit Location:	Lac La Biche	**Reviewed By:**	Chris Wesson
Audit Date:	May 9, 2022	**Start/End Time (mst):**	17:47/18:45
Calibration Purpose:	installation	**Weather Conditions:**	A few clouds

Wind Sensor Information

Sensor ID Data:		**Sensor Outputs:**	
Sensor Make:	RM Young	**Velocity Voltage Output Range:**	0-1
Sensor Model:	05305VK	**Velocity Unit Output Range:**	0-200
Serial #:	56778	**Direction Voltage Output Range:**	0-1
Previous Cal/Audit Date:	n/a	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA 4744 expires August 6, 2022

Wind Speed Audit Data **+/- 2% of the average correction factor is the limit**

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.1	0.1	-
1000	18.4	18.4	18.4	1.002
2000	36.9	36.9	36.9	0.999
3000	55.3	55.3	55.3	1.000
4000	73.7	73.8	73.8	0.999
5000	92.2	92.2	92.2	0.999
6000	110.6	110.6	110.6	1.000
7000	129.0	129.1	129.1	0.999
8000	147.4	147.5	147.5	1.000
9000	165.9	165.9	166.0	1.000
10000	184.3	184.3	184.4	1.000
		The audit meets AMD requirements.	**Average Correction Factor=**	**1.000**

Wind Direction Audit Data **+/- 3° of the absolute average degrees difference for all points is the limit**

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	1	356	1.0	-1.0	1.0
30	330	30	331	-0.4	-1.4	0.9
60	300	61	301	-1.1	-1.2	1.2
90	270	92	272	-2.1	-1.7	1.9
120	240	121	240	-1.4	-0.2	0.8
150	210	152	211	-2.1	-1.3	1.7
180	180	182	181	-2.0	-1.3	1.7
210	150	212	153	-2.1	-2.5	2.3
240	120	241	122	-1.4	-2.3	1.9
270	90	271	92	-1.4	-2.1	1.7
300	60	300	61	-0.1	-1.2	0.7
330	30	330	31	-0.2	-1.2	0.7
355	0	356	1	-1.0	0.6	0.8
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**1.3**

Comments:

No issues.

End of Report

Parameter	Method & Procedure
SULPHUR DIOXIDE (SO_2)	Bureau Veritas EMS SOP-00209: Ambient Sulphur Monitoring
HYDROGEN SULPHIDE (H_2S)	Bureau Veritas EMS SOP-00209: Ambient Sulphur Monitoring
TOTAL HYDROCARBONS (THC), METHANE (CH4), NON-METHANE(NMHC)	Bureau Veritas EMS SOP-00001: Methane, Non-Methane Hydrocarbon Analyzer Monitoring
OXIDES OF NITROGEN (NOx), NITRIC OXIDE (NO) & NITROGEN DIOXIDE (NO_2)	Bureau Veritas EMS SOP-00213: Ambient NO/NO_2/NOx Monitoring
OZONE (O3)	Bureau Veritas EMS SOP-00212: Ambient O3 Monitoring
PARTICULATE MATTER < 2.5 MICRONS ($PM_{2.5}$)	Bureau Veritas EMS SOP-00010: Thermo Model 5030 SHARP Monitor & EMS SOP-00015: Teledyne API PM Monitor Model T640
WIND SPEED (WS) & WIND DIRECTION (WD)	Bureau Veritas EMS SOP-00013: RM Young Wind Monitor Calibration
RELATIVE HUMIDITY (RH)	Operation Manual
BAROMETRIC PRESSURE (BP)	Operation Manual
AMBIENT TEMPERATURE (AmbTPX)	Operation Manual
STATION TEMPERATURE (StnTPX)	Operation Manual
PRECIPITATION	Bureau Veritas EMS SOP-00242: Precipitation Collector Installation / Maintenance