Lakeland Industry & Community Association

FEBRUARY 2024

Monthly Ambient Air Quality Monitoring Report

LICA-202402

Operation and Maintenance:

Bureau Veritas Canada

Data Validation and Report:

Lakeland Industry & Community Association

March 14, 2024

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March 14, 2024

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

RE: LICA – February 2024 Monthly Ambient Air Quality Monitoring Report

Enclosed is the February 2024 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
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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
HNO3	Nitric Acid
kph	kilometers per hour
LICA	Lakeland Industry & Community Association
mb	millibar
mm	millimeter
NH3	Ammonia
NMHC	Non-Methane Hydrocarbons
NO	Nitric Oxide
NO2	Nitrogen Dioxide
NOx	Oxide of Nitrogen
O3	Ozone
PAC	Polycyclic Aromatic Compounds
PM2.5	Particulate Matters
ppb	parts per billion
ppm	parts per million
Precip	Precipitation
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 2024

All stations

- **TRS/H2S**: Low ambient temperatures, particularly in the middle of the month, had a marked effect on TRS/H2S span results. This is a perennial problem when the moisture levels in sample air drop very low, causing TRS/H2S analyzer to respond more slowly due to the SO2 scrubber requiring a certain humidity to function optimally. Although daily span check results were often below the requirements, and the daily zero check results were occasionally close to or outside the allowable drift range (while low temperatures were occurring), experience indicates the analyzer's performance remains in compliance with AMD performance criteria, and collected data remain valid.

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 O3 (77.0%). ***DINC0005552***
- **O3:** The analyzer failed the as-found points check on February 7. No specific issues could be identified with the analyzer or the calibration system. The finding was confirmed with an alternate calibrator. The analyzer was calibrated to correct the drift on February 7. In the absence of a clear point-of-failure, data were invalidated back to the last valid calibration check, which was January 30. One hundred sixty hours of downtime were recorded in February. Data collected in January were revised; analyzer operational uptime was revised from 16.1% to 12%. Six hundred fifty-five hours of downtime were recorded in January.

- **AQHI values**: During the monthly data validation, O3 data collected between February 1 and February 7 were invalidated. As NO2, O3 and PM2.5 are the parameters used to calculate the AQHI values, the AQHI values during this period were affected; AQH values were calculated using the raw data, which means data did not go through data validation. As a result, AQHI values presented in this report were kept for *reference use. AQHI values should be used with caution.*

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 operational issues 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, except H2S (74.9%). ***DINC0005554***
- **H2S:**
    - A successful shut-down calibration was completed on BV's Teledyne T101, s/n: 1014 on February 17. LICA's Thermo 450i analyzer, s/n: CM18010058, was installed afterwards. The analyzer was allowed time to stabilize overnight. The installation calibration of Thermo 450i was unsuccessful on February 18. The Teledyne T101 was reinstalled following by an installation calibration on February 18. Twenty-three hours of downtime were recorded due to this event.
    - On February 21, the Teledyne T101, s/n: 1014, was removed, and the Thermo 450i analyzer, s/n: CM18010058, was reinstalled following additional maintenance. The analyzer passed the installation calibration on February 21. Seven hours of downtime were recorded due to this activity.
    - The Thermo 450i analyzer, s/n: CM18010058, showed significant drift after the installation. The analyzer failed the as-found points check on February 23. A repeat calibration was completed to correct the drift on February 23. Data were invalidated back the last valid calibration check, which was February 21. Forty-five hours of downtime were recorded.
    - Marked drift and instability were noted after February 23's calibration. On February 27, the PMT was replaced, and a successful post-repair calibration was completed. Data were invalidated back to February 23's calibration. Ninety-nine hours of downtime were recorded due to this event.

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, except O3 (1.4%). ***DINC0005556***
- **O3**:
    - The analyzer failed the as-found points check on February 2. Calibration was completed on February 2 to correct the drift. A problem with low lamp intensity became apparent overnight. Following a successful shut-down calibration on February 3, the Thermo 49i

analyzer, s/n: 1002240372, was removed. Thermo 49iQ analyzer, s/n: 1202068570, was installed and calibration on February 4. In the absence of a clear point-of-failure, data were invalidated back to the last valid calibration check, which was January 9. Thirty-seven hours of downtime were recorded in February due to this event. Data collected in January were revised; analyzer operational uptime was revised to 28.2%. Five hundred thirty-four hours of downtime were recorded in January.
    - The analyzer failed the March 6's calibration. Problem was traced to an issue with the calibration system. Data were invalidated back to the last valid calibration check, which was February 4. Six hundred forty-nine hours of downtime were recorded in February due to this event.
- **AQHI values**: During the monthly data validation, O3 data collected between January 9 and February 29 were invalidated. As NO2, O3 and PM2.5 are the parameters used to calculate the AQHI values, the AQHI values during this period were affected; AQH values were calculated using the raw data, which means data did not go through data validation. As a result, AQHI values presented in this report were kept for *reference use. AQHI values should be used with caution.*

Integrated Sampling

All the integrated sampling analytical results are included in the February 2024 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 6, 12, 18 and 24.
- **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 6, 12, 18 and 24.
- **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 6, 12, 18 and 24.
- **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 between January 30 and February 2, and were removed between March 1 and March 3.
    - 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.
    - Station 8: NO2 sample was disturbed by horses andNH3 was not found.
    - Station 28: H2S membrane was found damaged and could not be analysis.

- **PAC Sampling System**:
  - The PAC sampling program began in November 2019, and is designed to collect a 2-month integrated sample.
  - The media for the January/February monitoring period were installed between December 30, 2023 and January 2, 2024. The media were removed are scheduled to be removed between March 1 and March 3.
  - The media for the March/April monitoring period were installed between March 1 and March 3. The media are scheduled to be removed by the end April.
- **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.
  - One canister event was recorded this month; the canister system was triggered on February 17 at 08:30 when the NMHC concentration was 0.38ppm at 08:25.

Revisions to Alberta's Ambient Air Quality Data Warehouse

Cold Lake South: O3 data collected between January 30 hour 16 and January 31 hour 23 were deemed invalid after an analyzer check on February 7. The analyzer failed the as-found points check on February 7. No specific issues could be identified with the analyzer or the calibration system. The finding was confirmed with an alternate calibrator. The analyzer was calibrated to correct the drift. In the absence of a clear point-of-failure, data were invalidated back to the last valid calibration check, which was January 30 hour 16. ETS Data Resubmission Request #: 4655422. Notification-LICA-202401-AmendedSubmission ETS Request #: 4662366.

PAMS – Lac La Biche: O3 data collected between January 9 hour 19 and January 31 hour 23 were deemed invalid after an analyzer check on February 2. The analyzer failed the as-found points check on February 2. Calibration was completed on February 2 to correct the drift. In the absence of a clear point-of-failure, data were invalidated back to the last valid calibration check, which was January 9 hour 19. ETS Data Resubmission Request #: 4655422. Notification-LICA-202401-AmendedSubmission ETS Request #: 4662366.

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

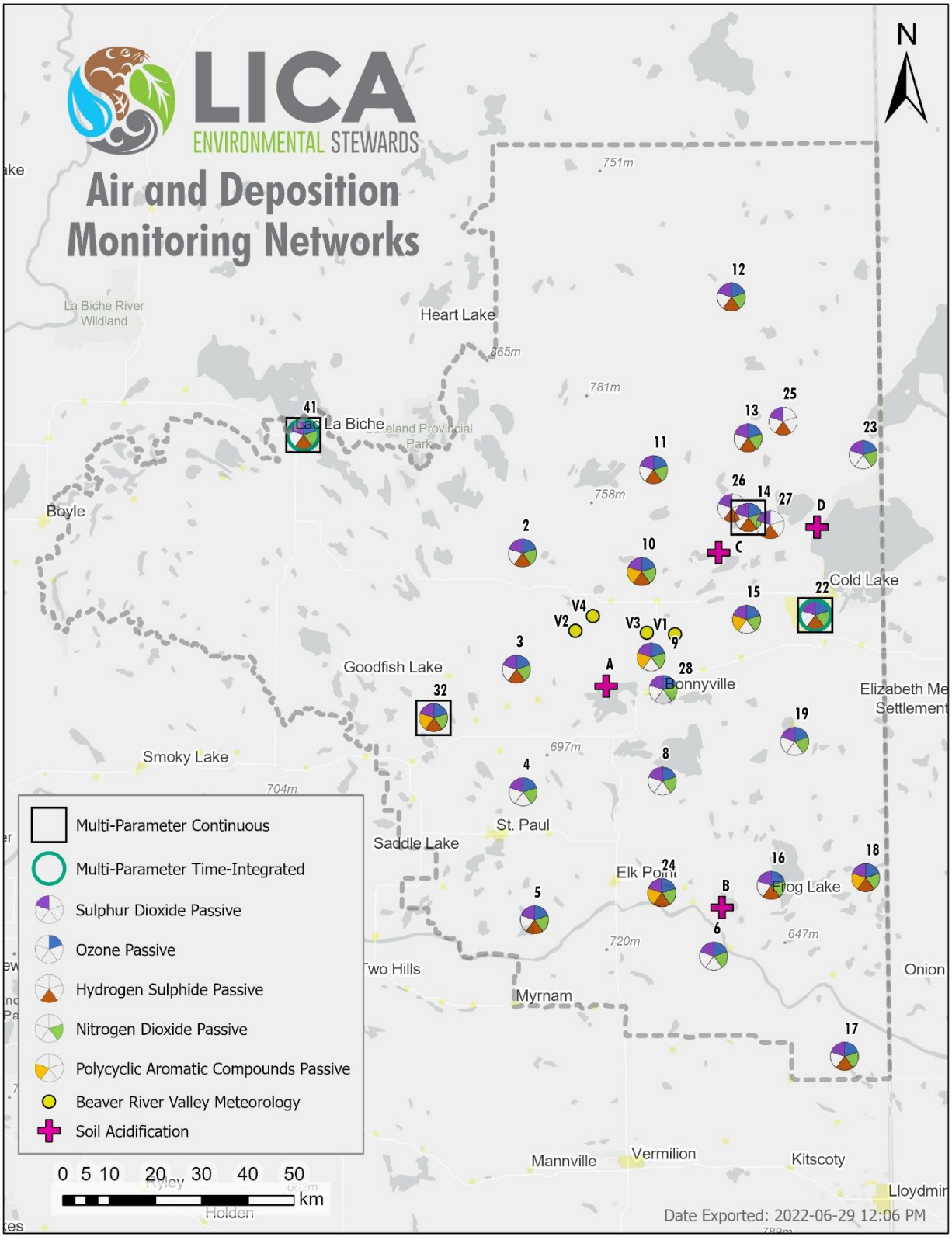
This report was reviewed by Michael Bisaga in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

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 14, 2024

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 6, 2024	• No operational issues were identified.
TRS Thermo 450i #812728560 **TRS convertor** CD Nova CDN-101 #501	February 6, 2024	• No operational issues were identified.
NOx/NO/NO2 Thermo 42i #1505664393	February 6, 2024	• A repeat zero-span check was initiated on February 9 hour 7 to assess span drift. One hour of downtime was recorded due to this additional quality check. • The analyzer was put offline on February 16 to obtain GPT points for O3 calibration. Two hours of downtime were recorded. • Hourly data collected on February 17 hour 9 was invalidated as hourly completeness requirement did not meet which was caused by datalogger polling errors. One hour of downtime was recorded.
O3 Thermo 49iQ #12208316585	February 30, 2024	• The analyzer failed the as-found points check on February 7. No specific issues could be identified with the analyzer or the calibration system. The finding was confirmed with an alternate calibrator. The analyzer was then calibrated to correct the drift. In the absence of a clear point-of-failure, data were invalidated back to the last valid calibration check, which was January 30. One hundred sixty hours of downtime were recorded in February. • The analyzer spanned low on February 10 and failed the daily span check on February 15. A successful repeat calibration was completed on February 16 to correct the drift. Four hours of downtime were recorded due to this additional quality check. • The analyzer failed the daily span check on February 23. A successful repeat zero-span check was completed on February 24. No further issues were identified. One hour of downtime was recorded.

Parameter	Calibration Date	Equipment Operational Summary
THC/CH4/NMHC Thermo 55i #1236656107 **H2 Generator** HG300 #210567071	February 23, 2024	• A successful monthly calibration was completed on February 7. • Bad injections started being recorded on February 18. A repeat zero-span check was completed on February 20 hour 7 to assess analyzer's functionality. A successful shut-down calibration was completed before maintenance on February 23. Maintenance was completed on the support gas supplies (bot N2 and H2). Gas pressures were also adjusted. A post-repair calibration was completed afterwards. 1-minute data collected between February 18 and February 23 were reviewed and discarded if data quality was affected by injection issues. Hourly data were recalculated based on the revised 1-minute data set. Twenty hours of downtime were recorded due to this event; ten hours of data were invalidated as hourly data completeness requirement was not met, and the other ten hours of downtime were due to additional quality checks.
PM2.5 Teledyne T640 #575	February 7, 2024	• No operational issues were identified.

Parameter	Verification Date	Equipment Operational Summary
RH Rotronic HC2A-S3 #20257103	February 7, 2024	• No operational issues were identified.
BP Met One 092 #Y23368	February 7, 2024	• No operational issues were identified.
AT Rotronic HC2A-S3 #20257103	February 7, 2024	• No operational issues were identified.
ST COMET #NA	February 7, 2024	• No operational issues were identified.
WS/WD/STDWD RM Young 05305AQ #177354	February 7, 2024	• Wind direction data contained in this report represents where the wind is coming from. • An annual wind system calibration was completed on December 27, 2023. • No operational issues were identified.

Monitored Data Summary for Cold Lake South Station

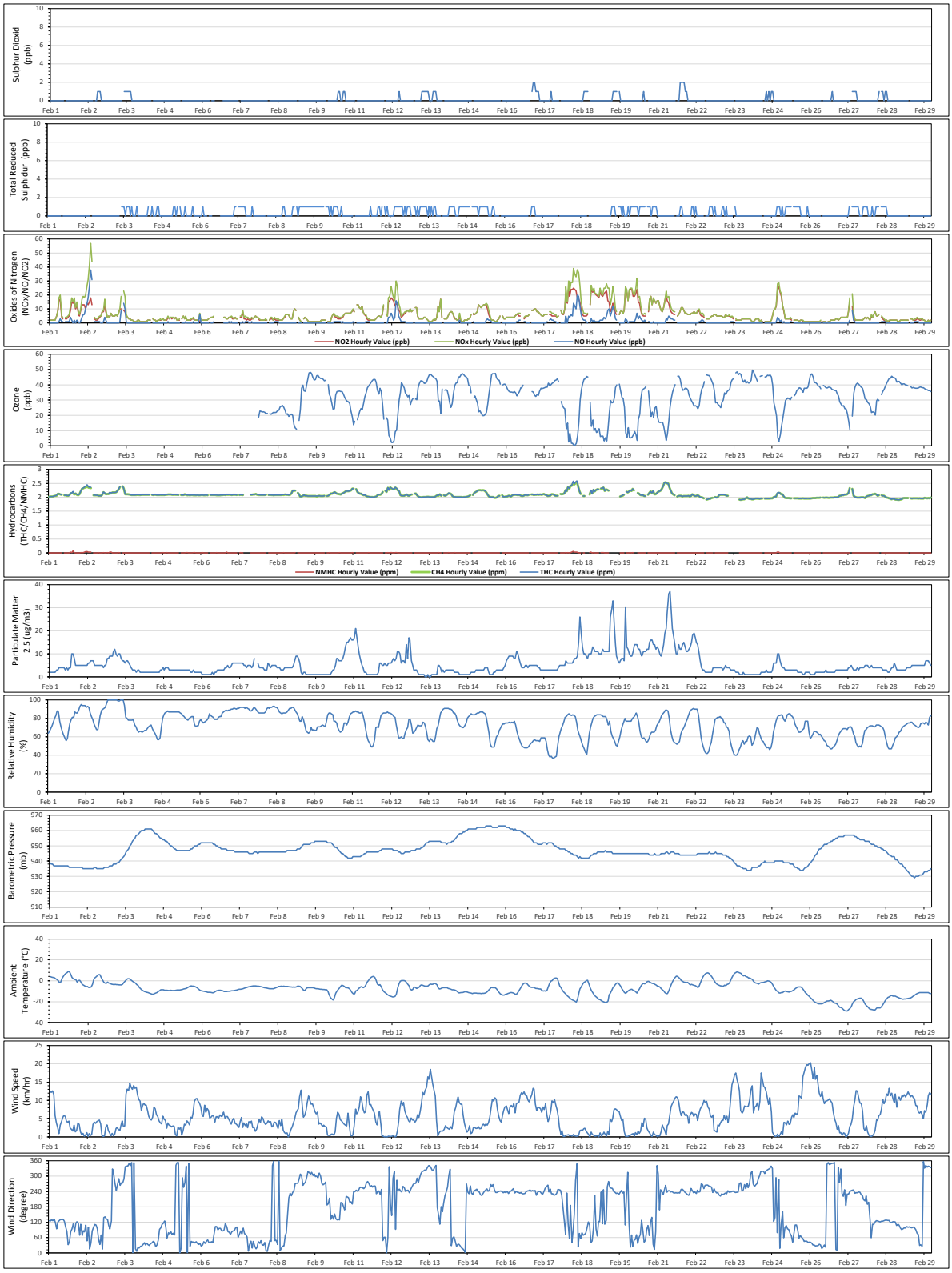
Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.1	0	2	Feb 16 at hr 21	13.3	WSW	0.4	Feb 21	100.0	94.8
TRS (ppb)	-	-	-	-	-	-	0.3	0	1	Feb 3 at hr 10	2.8	W	0.9	Feb 9	100.0	94.8
NOx (ppb)	-	-	-	-	-	-	7.0	0	57	Feb 2 at hr 8	0.4	NNE	22.4	Feb 18	99.4	94.1
NO (ppb)	-	-	-	-	-	-	1.0	0	38	Feb 2 at hr 8	0.4	NNE	7.2	Feb 2	99.4	94.1
NO2 (ppb)	159	-	-	0	-	-	5.9	0	26	Feb 24 at hr 23	0.1	WNW	16.8	Feb 18	99.4	94.1
O3 (ppb)	76	-	-	0	-	-	31.9	0.4	49.6	Feb 24 at hr 2	14	NW	39.4	Feb 23	77.0	72.4
THC (ppm)	-	-	-	-	-	-	2.09	1.91	2.59	Feb 18 at hr 8	0.2	NNW	2.29	Feb 18	97.1	92.2
CH4 (ppm)	-	-	-	-	-	-	2.09	1.91	2.56	Feb 18 at hr 8	0.2	NNW	2.28	Feb 18	97.1	92.2
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.07	Feb 1 at hr 19	3.2	ESE	0.01	Feb 18	97.1	92.2
PM2.5 (µg/m3)	80	29	-	0	0	-	5.4	0	37	Feb 21 at hr 9	5.9	WSW	16.7	Feb 21	100.0	99.7
RH (%)	-	-	-	-	-	-	72.6	37	100	Feb 2 at hr 23	1.1	ESE	90.1	Feb 7	100.0	100.0
BP (millibar)	-	-	-	-	-	-	947	929	963	Feb 15 at hr 8	3.6	WSW	962	Feb 15	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	-7.9	-29.0	9.1	Feb 1 at hr 14	4	E	2.9	Feb 1	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	23.1	21.5	25.4	Feb 23 at hr 14	15.6	SW	23.5	Feb 22	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	1.0	0.0	20.3	Feb 26 at hr 0	20.3	NE	10.7	Feb 26	100.0	100.0
WDV (sector)	-	-	-	-	-	-	304 (WNW)	-	-	-	-	-	-	-	100.0	100.0

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

Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances

The measured ambient air quality was within the AAAQOs and/or AAAQGs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Feb 2024 - Cold Lake South Station



Tamarack Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i-TLE #1180930031	February 13, 2024	• No major operational issues were identified. • Nineteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
H2S Thermo 450i #CM17360005	February 13, 2024	• No major operational issues were identified. • Nineteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
NOx/NO/NO2 Thermo 42i #1180930028	February 13, 2024	• The analyzer was put offline on February 22 to obtain GPT points for O3 calibration. One hour of downtime was recorded. • Nineteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
O3 Thermo 49i #1002240371	February 22, 2024	• The analyzer was put offline after February 22's monthly calibration for calibrator cross-check. One hour of downtime was recorded as a result. • Nineteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
THC/CH4/NMHC Thermo 55i #1505664392	February 22, 2024	• No major operational issues were identified. • Nineteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
PM2.5 Thermo Sharp 5030 #CM2209	February 22, 2024	• No major operational issues were identified. • Sixteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
Parameter	**Verification Date**	**Equipment Operational Summary**
RH Rotronic HC2A-S3 #20433166	February 22, 2024	• No major operational issues were identified. • Twenty-one hours of downtime were recorded due to intermittent polling errors/Windows update this month.

Parameter	Verification Date	Equipment Operational Summary
BP Met One 090D #F4497	February 22, 2024	• No major operational issues were identified. • Twenty-one hours of downtime were recorded due to intermittent polling errors/Windows update this month.
AT Rotronic HC2A-S3 #20433166	February 22, 2024	• No major operational issues were identified. • Twenty-one hours of downtime were recorded due to intermittent polling errors/Windows update this month.
ST COMET #NA	February 22, 2024	• No major operational issues were identified. • Fourteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
Precipitation MetOne 387 #C13580	February 22, 2024	• No major operational issues were identified. • Twenty-one hours of downtime were recorded due to intermittent polling errors/Windows update this month.
WS/WD/STDWD RM Young 05305VK #161465	February 22, 2024	• Wind direction data contained in this report represents where the wind is coming from. • An annual wind system calibration was completed on September 17, 2023. • No major operational issues were identified. • Twenty-one hours of downtime were recorded due to intermittent polling errors/Windows update this month.

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	0.8	0	14	Feb 17 at hr 4	6.3	WNW	3.2	Feb 17	97.3	92.4
H2S (ppb)	10	3	-	0	0	-	0.0	0	1	Feb 1 at hr 6	3	ESE	0.0	Feb 1	97.3	92.4
NOx (ppb)	-	-	-	-	-	-	6.8	0	51	Feb 19 at hr 2	0.3	NNE	18.3	Feb 19	97.1	91.9
NO (ppb)	-	-	-	-	-	-	1.0	0	24	Feb 18 at hr 8	0.7	NE	5.0	Feb 19	97.1	91.9
NO2 (ppb)	159	-	-	0	-	-	5.8	0	30	Feb 19 at hr 2	0.3	NNE	13.3	Feb 19	97.1	91.9
O3 (ppb)	76	-	-	0	-	-	28.5	1.3	46.0	Feb 23 at hr 13	16.7	W	38.8	Feb 23	97.1	92.4
THC (ppm)	-	-	-	-	-	-	2.08	1.88	2.46	Feb 19 at hr 14	9.5	SSW	2.23	Feb 18	97.3	92.5
CH4 (ppm)	-	-	-	-	-	-	2.08	1.88	2.46	Feb 19 at hr 14	9.5	SSW	2.23	Feb 18	97.3	92.5
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.02	Feb 24 at hr 7	8.2	NW	0.00	Feb 24	97.3	92.5
PM2.5 (µg/m3)	80	29	-	0	0	-	3.8	1	49	Feb 27 at hr 21	3.7	SSW	7.9	Feb 10	97.7	97.6
RH (%)	-	-	-	-	-	-	74.5	21	100	Feb 2 at hr 8	2.1	NE	99.1	Feb 7	97.0	97.0
BP (millibar)	-	-	-	-	-	-	932	914	948	Feb 15 at hr 11	7.9	W	946	Feb 15	97.0	97.0
Ext. Temp. (°C)	-	-	-	-	-	-	-8.0	-30.5	9.3	Feb 23 at hr 13	16.7	W	3.0	Feb 1	97.0	97.0
Stn. Temp. (°C)	-	-	-	-	-	-	21.1	19.1	22.6	Feb 13 at hr 13	8.6	NNW	21.8	Feb 13	98.0	98.0
Precipitation (mm)*	-	-	-	-	-	-	10.3	0.0	1.3	Feb 4 at hr 20	1.2	ESE	5.5	Feb 4	97.0	97.0
WSV (km/hr)	-	-	-	-	-	-	1.1	0.0	20.0	Feb 25 at hr 23	20	NE	10.6	Feb 26	97.0	97.0
WDV (sector)	-	-	-	-	-	-	319 (NW)	-	-	-	-	-	-	-	97.0	97.0

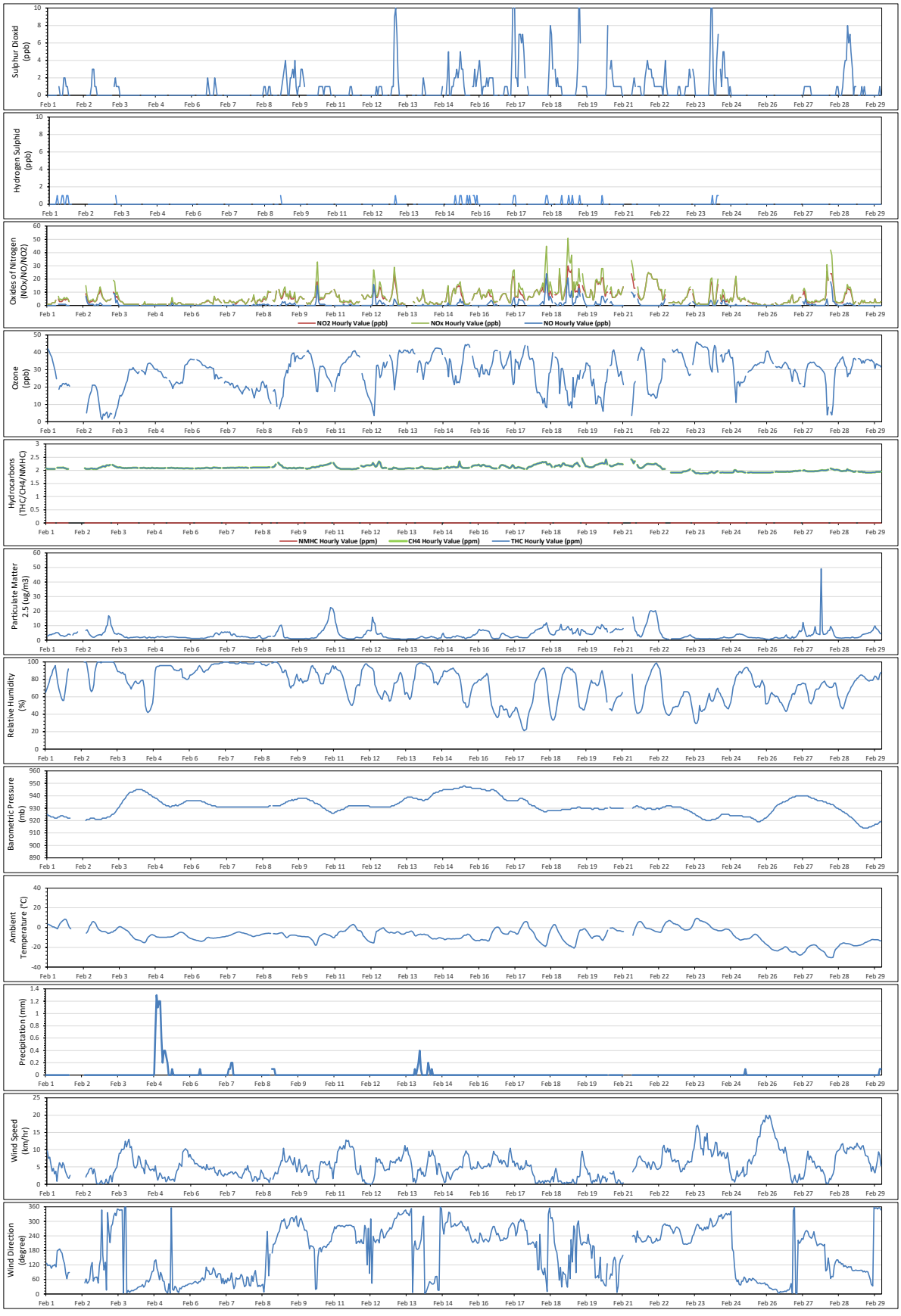
1- Date/ Time given is the first minimum and maximum value that was recorded

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

Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances

The measured ambient air quality was within the AAAQOs and/or AAAQGs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Feb 2024 - Tamarack Site



St. Lina Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i #1226154720	February 17, 2024	• No major operational issues were identified. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.
H2S Teledyne T100 #1014 Thermo 450i #CM18010058	February 27, 2024	• A successful shut-down calibration was completed on BV's Teledyne T101, s/n: 1014 on February 17. LICA's Thermo 450i analyzer, s/n: CM18010058, was installed afterwards. The analyzer was allowed time to stabilize overnight. The installation calibration of Themo 450i was unsuccessful on February 18. The Teledyne T101 was reinstalled following by an installation calibration on February 18. Twenty-three hours of downtime were recorded due to this event. • On February 21, the Teledyne T101, s/n: 1014, was removed, and the Thermo 450i analyzer, s/n: CM18010058, was reinstalled following additional maintenance. The analyzer passed the installation calibration on February 21. Seven hours of downtime were recorded due to this activity. • The Thermo 450i analyzer, s/n: CM18010058, showed significant drift after the installation. The analyzer failed the as-found points check on February 23. A repeat calibration was completed to correct the drift on February 23. Data were invalidated back the last valid calibration check, which was February 21. Forty-five hours of downtime were recorded. • Marked drift and instability were noted after February 23's calibration. On February 27, the PMT was replaced, and a successful post-repair calibration was completed. Data were invalidated back to February 23's calibration. Ninety-nine hours of downtime were recorded due to this event. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.
NOx/NO/NO2 Thermo 42i #1180930029	February 17, 2024	• The analyzer was put offline on February 21 to obtain GPT points for O3 calibration. Three hours of downtime were recorded. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.

Parameter	Calibration Date	Equipment Operational Summary
O3 Thermo 49iQ #12208316586	February 21, 2024	• The analyzer was put offline after February 21's monthly calibration for calibrator cross-check. Five hours of downtime were recorded as a result. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.
THC/CH4/NMHC Thermo 55i # 1180930026	February 18, 2024	• No major operational issues were identified. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.
PM2.5 Thermo Sharp 5030i #CM17091001	February 18, 2024	• No major operational issues were identified. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.
Parameter	**Verification Date**	**Equipment Operational Summary**
RH Rotronic HC2A-S3 #20404750	February 18, 2024	• No major operational issues were identified. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.
BP Met One 090D #F4498	February 18, 2024	• No major operational issues were identified. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.
AT Rotronic HC2A-S3 #20404750	February 18, 2024	• No major operational issues were identified. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.
ST COMET #NA	February 18, 2024	• No major operational issues were identified. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.
Precipitation MetOne 387D #A23775	February 18, 2024	• No major operational issues were identified. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.

Parameter	Verification Date	Equipment Operational Summary
WS/WD/STDWD RM Young 05305VK #161466	February 18, 2024	• Wind direction data contained in this report represents where the wind is coming from. • An annual wind system calibration was completed on December 20, 2023. • No major operational issues were identified. • Data collected on February 5 hour 2 was lost due to intermittent polling issue/logger update. One hour of downtime was recorded as a result.

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	0.2	0	4	Feb 21 at hr 18	12.3	SW	1.0	Feb 18	99.9	94.8
H2S (ppb)	10	3	-	0	0	-	NA	0	1	Feb 2 at hr 22	7.6	SSW	0.0	Feb 1	74.9	70.7
NOx (ppb)	-	-	-	-	-	-	3.5	0	28	Feb 21 at hr 17	12.2	WSW	10.9	Feb 21	99.4	94.1
NO (ppb)	-	-	-	-	-	-	0.2	0	4	Feb 21 at hr 16	15	WSW	0.6	Feb 2	99.4	94.1
NO2 (ppb)	159	-	-	0	-	-	3.3	0	26	Feb 21 at hr 17	12.2	WSW	10.2	Feb 21	99.4	94.1
O3 (ppb)	76	-	-	0	-	-	31.0	3.4	45.3	Feb 18 at hr 16	4	WSW	41.2	Feb 24	99.1	94.4
THC (ppm)	-	-	-	-	-	-	2.03	1.91	2.42	Feb 20 at hr 22	4.5	SW	2.23	Feb 20	99.9	94.9
CH4 (ppm)	-	-	-	-	-	-	2.03	1.91	2.42	Feb 20 at hr 22	4.5	SW	2.23	Feb 20	99.9	94.9
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.00	Feb 1 at hr 0	16.8	SSE	0.00	Feb 1	99.9	94.9
PM2.5 (µg/m3)	80	29	-	0	0	-	5.6	0	45	Feb 27 at hr 23	10.8	SSW	15.8	Feb 21	99.9	99.7
RH (%)	-	-	-	-	-	-	73.5	28	98	Feb 2 at hr 23	5.9	SW	95.4	Feb 8	99.9	99.9
BP (millibar)	-	-	-	-	-	-	915	896	931	Feb 15 at hr 11	11.7	W	930	Feb 15	99.9	99.9
Ext. Temp. (°C)	-	-	-	-	-	-	-7.0	-25.1	8.3	Feb 23 at hr 15	23.4	W	3.1	Feb 23	99.9	99.9
Stn. Temp. (°C)	-	-	-	-	-	-	20.0	18.0	22.2	Feb 17 at hr 17	10.1	SW	21.4	Feb 18	99.9	99.9
Precipitation (mm)*	-	-	-	-	-	-	2.9	0.0	0.7	Feb 25 at hr 6	0.2	SSE	2.8	Feb 25	99.9	99.9
WSV (km/hr)	-	-	-	-	-	-	2.7	0.0	31.7	Feb 23 at hr 14	31.7	W	18.8	Feb 23	99.9	99.9
WDV (sector)	-	-	-	-	-	-	283 (W)	-	-	-	-	-	-	-	99.9	99.9

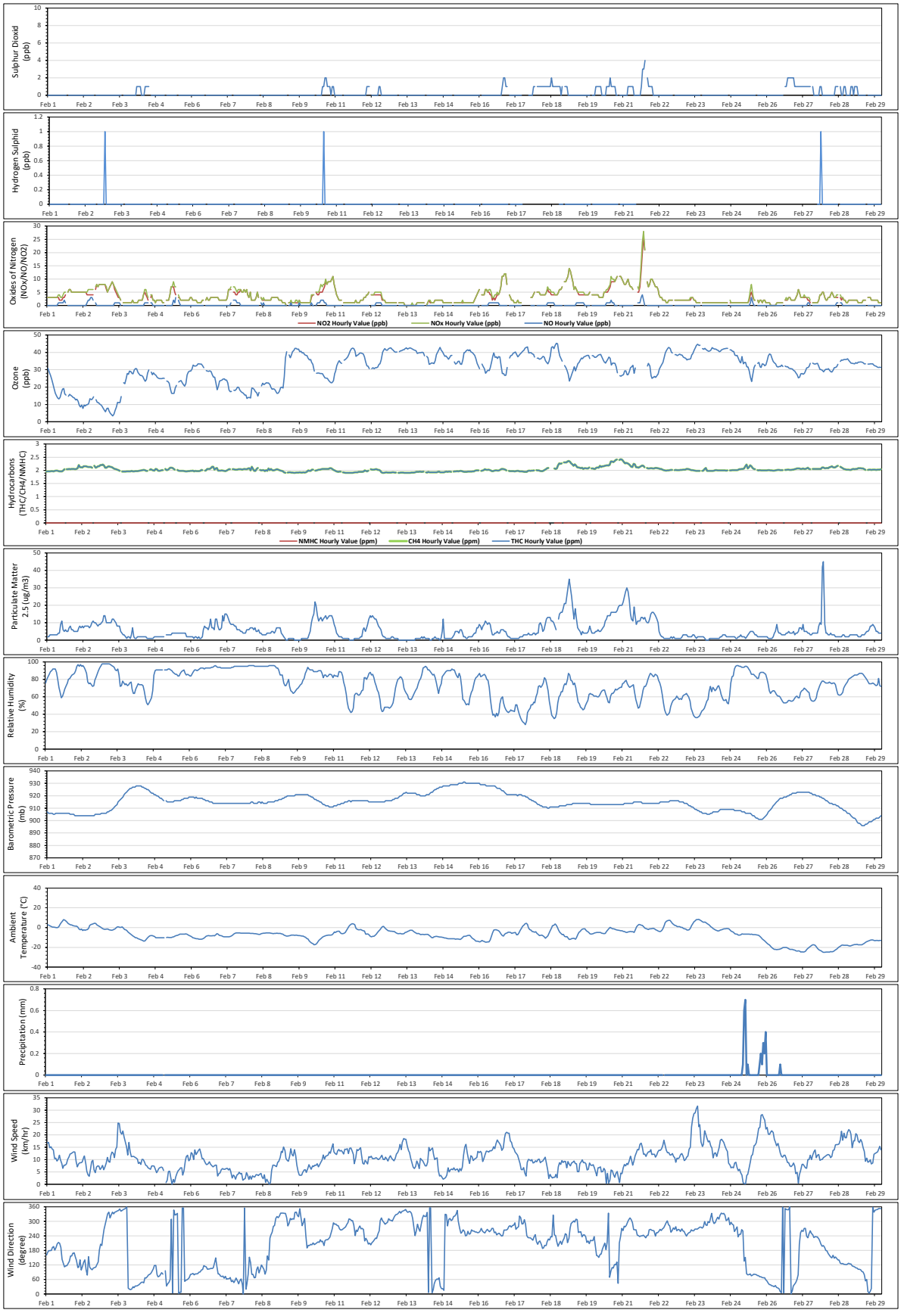
1- Date/ Time given is the first minimum and maximum value that was recorded

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

Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances

The measured ambient air quality was within the AAAQOs and/or AAAQGs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Feb 2024 - St. Lina Site



Lac La Biche Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i-TLE #1180320043	February 3, 2024	• The analyzer failed the daily span check on February 1 due to a permeation tube depletion. A new permeation tube was installed on February 2. As this issue only affected the daily zero-span system, data quality was not affected. No data were discarded as a result.
H2S Thermo 450i #CM17360002	February 3, 2024	• The analyzer failed daily zero-span check on February 26 onwards due to extreme cold weather conditions. A repeat zero-span check was completed on February 27 to assess the zero-span drift. The zero-span check results improved once the ambient temperatures started warming up. The analyzer passed March 5's calibration check. Because the analyzer passed March's calibration, data collected between February 26 and February 29 were considered valid. One hour of downtime was recorded due to the additional quality check.
NOx/NO/NO2 Thermo 42i #1180930027	February 3, 2024	• No operational issues were identified this month.
O3 Thermo 49i #1002240372	February 4, 2024	• The analyzer failed the as-found points check on February 2. Calibration was completed on February 2 to correct the drift. A problem with low lamp intensity became apparent overnight. Following a successful shut-down calibration on February 3, the Thermo 49i analyzer, s/n: 1002240372, was removed. Thermo 49iQ analyzer, s/n: 1202068570, was installed and calibration on February 4. In the absence of a clear point-of-failure, data were invalidated back to the last valid calibration check, which was January 9. Thirty-seven hours of downtime were recorded in February due to this event. • The analyzer failed March 7's calibration. Problem was traced to an issue with the calibration system. In the absence of a clear point-of-failure, data were invalidated back to the last valid calibration check, which was February 4. Six hundred forty-nine hours of downtime were recorded in February due to this event.

Parameter	Calibration Date	Equipment Operational Summary
THC/CH4/NMHC Thermo 55i #1180030044	February 2, 2024	• Maintenance was completed on the H2 generator on February 3. One hour of downtime was recorded. • The analyzer flamed out due to low H2 pressure on February 18. Upon February 20's site visit, it was found that the H2 generator was in error state. The error was cleared, analyzer was relit, and a repeat zero-span check was initiated. Fifty-five hours of downtime were recorded due to this event.
PM2.5 Thermo Sharp 5030i #CM17071016	February 4, 2024	• No operational issues were identified this month.

Parameter	Verification Date	Equipment Operational Summary
RH Rotronic HC2A-S3 #0020357518	February 4, 2024	• No operational issues were recorded this month.
BP Met One 092 #Y23360	February 4, 2024	• No operational issues were recorded this month.
AT Rotronic HC2A-S3 #0020357518	February 4, 2024	• No operational issues were recorded this month.
ST COMET #NA	February 4, 2024	• No operational issues were recorded this month.
WS/WD/STDWD RM Young 05305VK #56778	February 4, 2024	• Wind direction data contained in this report represents where the wind is coming from. • The last annual wind system calibration was completed on September 15, 2023. • 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	0.1	0	3	Feb 26 at hr 11	10.4	N	0.9	Feb 26	100.0	95.1
H2S (ppb)	10	3	-	0	0	-	0.1	0	1	Feb 1 at hr 2	9.8	SE	1.0	Feb 3	99.9	94.9
NOx (ppb)	-	-	-	-	-	-	8.0	1	54	Feb 2 at hr 21	0	N	20.9	Feb 2	100.0	94.9
NO (ppb)	-	-	-	-	-	-	1.6	0	37	Feb 2 at hr 21	0	N	9.9	Feb 2	100.0	94.9
NO2 (ppb)	159	-	-	0	-	-	6.4	1	39	Feb 18 at hr 19	0.3	S	14.4	Feb 20	100.0	94.9
O3 (ppb)	76	-	-	0	-	-	NA	0.9	2.8	Feb 2 at hr 21	0	N	NA	NA	1.4	0.7
THC (ppm)	-	-	-	-	-	-	2.16	1.99	2.60	Feb 2 at hr 21	0	N	2.26	Feb 21	92.0	87.3
CH4 (ppm)	-	-	-	-	-	-	2.16	1.99	2.60	Feb 2 at hr 21	0	N	2.26	Feb 21	92.0	87.3
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.31	Feb 17 at hr 8	0.5	NNW	0.03	Feb 17	92.0	87.3
PM2.5 (µg/m3)	80	29	-	0	0	-	4.4	0	27	Feb 17 at hr 19	2.5	SSE	10.5	Feb 21	100.0	99.7
RH (%)	-	-	-	-	-	-	71.1	23	100	Feb 2 at hr 6	1.4	SE	97.2	Feb 8	100.0	100.0
BP (millibar)	-	-	-	-	-	-	943	926	960	Feb 15 at hr 9	2.9	SW	959	Feb 15	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	-6.4	-23.9	9.4	Feb 23 at hr 13	13.6	W	4.0	Feb 23	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	23.2	19.6	24.6	Feb 3 at hr 19	7.2	N	23.7	Feb 10	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	0.9	0.0	21.7	Feb 3 at hr 13	21.7	NW	12.8	Feb 28	100.0	100.0
WDV (sector)	-	-	-	-	-	-	298 (WNW)	-	-	-	-	-	-	-	100.0	100.0

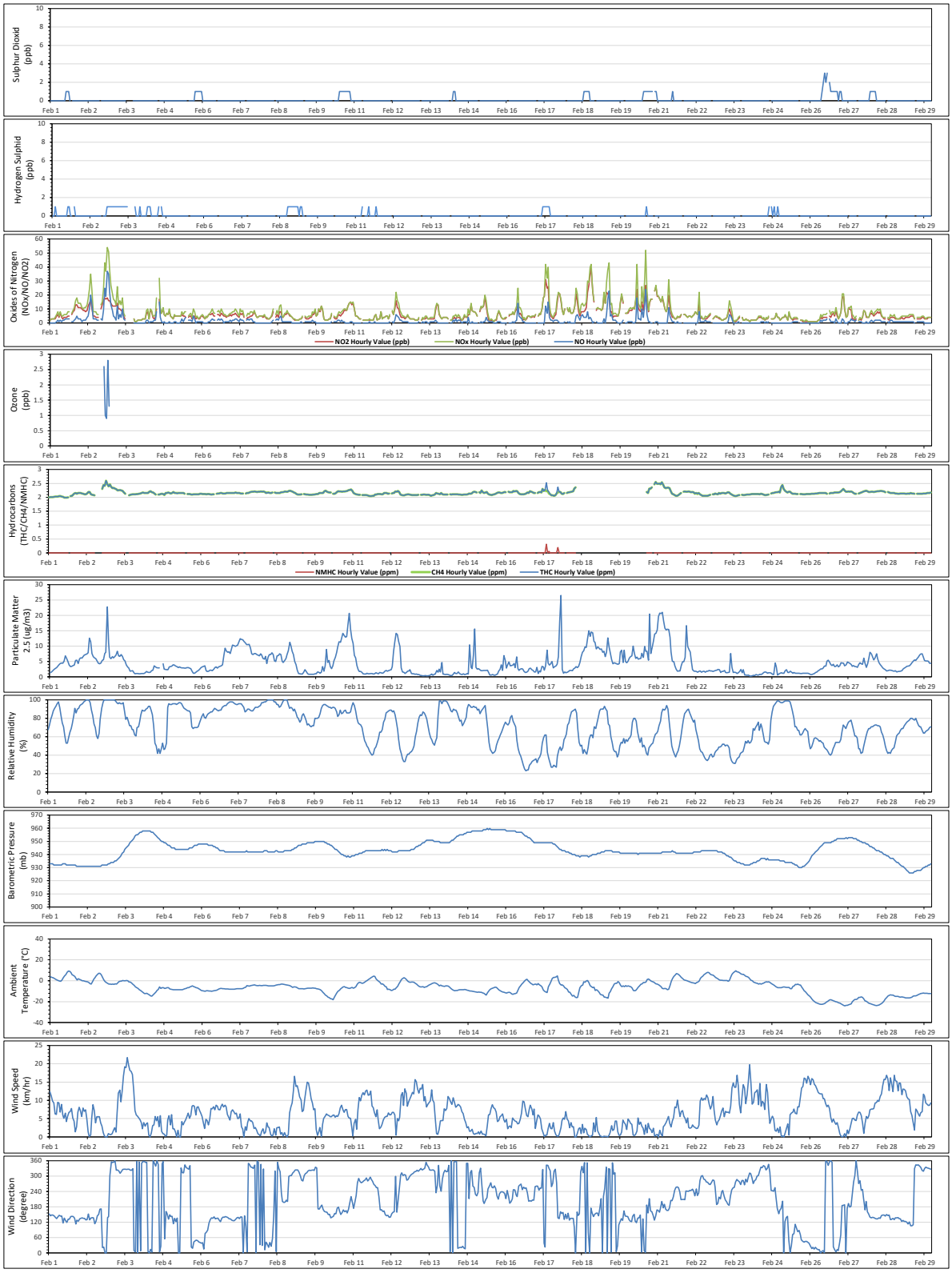
1- Date/ Time given is the first minimum and maximum value that was recorded

NA: Hourly /24-hour /Monthly are not available as less than 75% of valid data for the hour/month were collected.

Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances

The measured ambient air quality was within the AAAQOs and/or AAAQGs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Feb 2024 - Lac La Biche Station



TABLES AND CHARTS

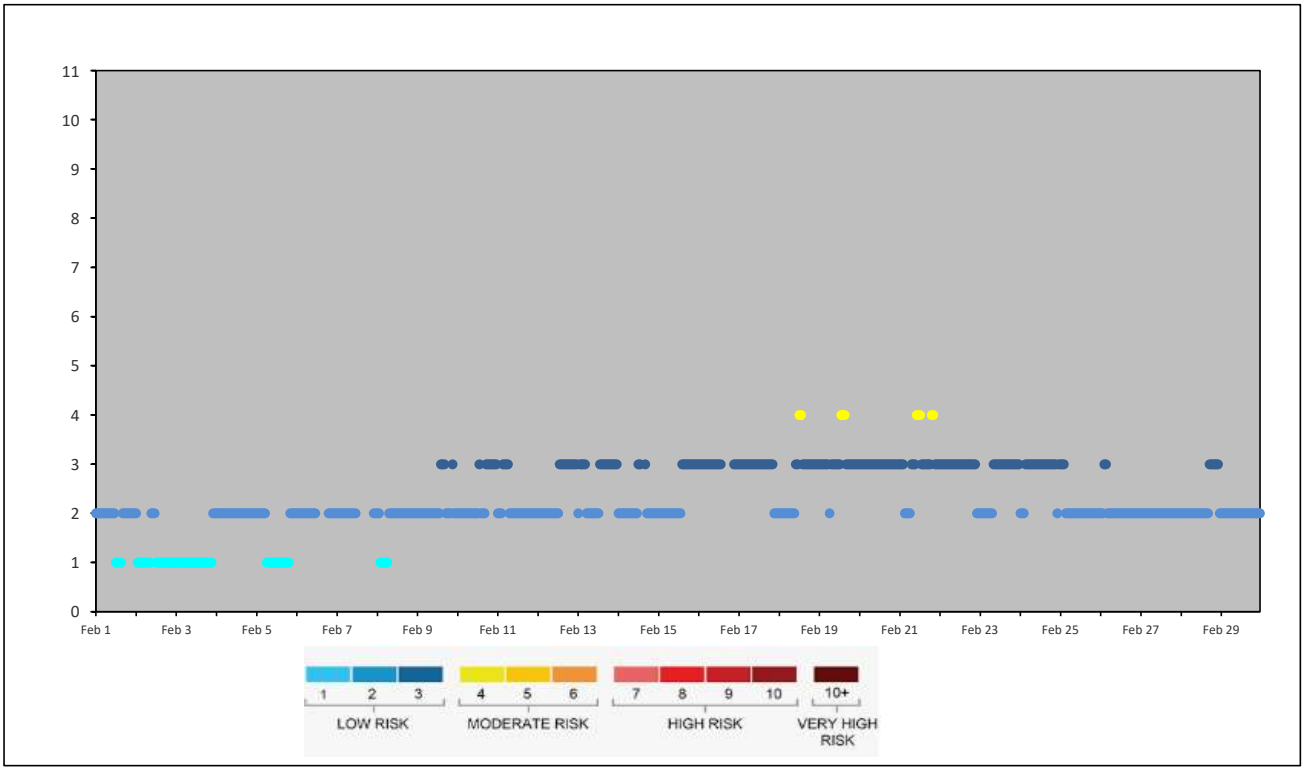
COLD LAKE SOUTH STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Cold Lake South Station - February 2024

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	1	1	1	1	2	2	2	2	2	2	2	2
Feb 2	2	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
Feb 3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	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	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2
Feb 6	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											2	2
Feb 8	2	2	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 9	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	3	2	2
Feb 10	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	3	3	3	3	3	3	3
Feb 11	2	2	2	3	3	3	3	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	2	3	3	3	3	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Feb 14	2	2	2	2	2	2	2	2	2	2	2	2	3	3			3	2	2	2	2	2	2	2
Feb 15	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 16	3	3	3	3	3	3	3	3	3	3	3	3	3	3								3	3	3
Feb 17	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2
Feb 18	2	2	2	2	2	2	2	2	2	2	3	3	**4**	**4**	3	3	3	3	3	3	3	3	3	3
Feb 19	3	3	3	3	3	3	2	3	3	3	3	3	3	**4**	**4**	**4**	3	3	3	3	3	3	3	3
Feb 20	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 21	3	3	3	2	2	2	2	3	3	3	**4**	**4**	**4**	3	3	3	3	3	3	**4**	**4**	3	3	3
Feb 22	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 23	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 24	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3
Feb 25	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 26	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 27	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 28	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 29	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

Cold Lake South Station - February 2024

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

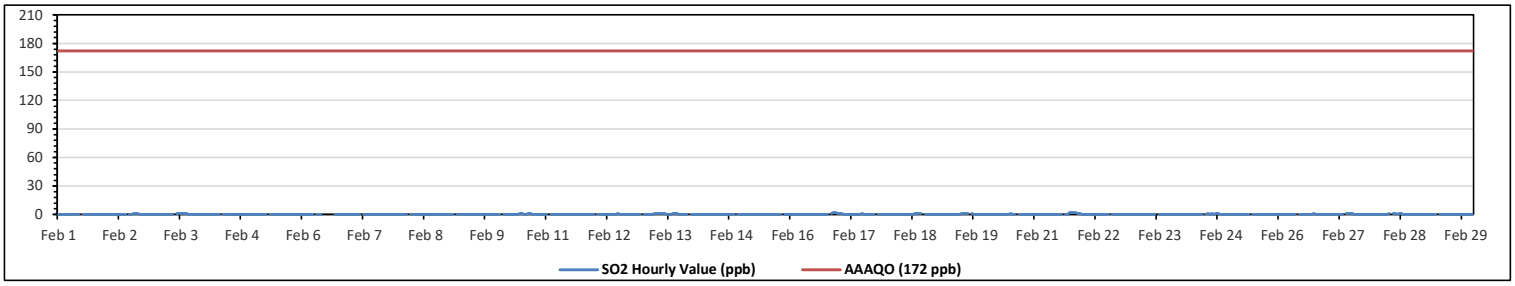
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

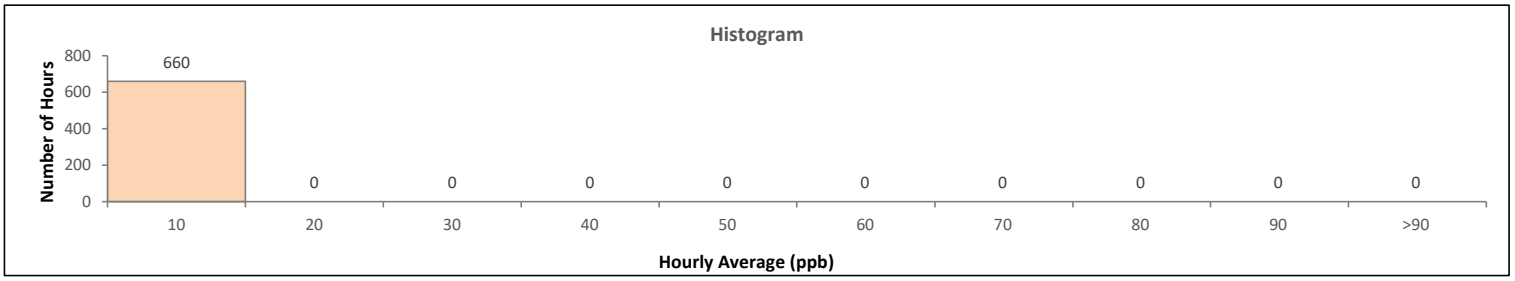
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0	
Maximum Hourly Value:	2 ppb	on Feb 16 at hr 21		Hours in Service:	696	
Maximum Daily Value:	0.4 ppb	on Feb 21		Hours of Data:	660	
Minimum Hourly Value:	0 ppb	on Feb 1 at hr 0		Hours of Missing Data:	0	
Minimum Daily Value:	0.0 ppb	on Feb 1		Hours of Calibration:	36	
Monthly Average:	0.1 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	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	S	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0.1
Feb 3	0	0	0	0	0	0	0	0	0	S	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.3
Feb 4	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 5	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	S	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	NA
Feb 7	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	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	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	S	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0.2
Feb 11	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	S	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	S	0	1	0.0
Feb 13	0	0	0	0	0	1	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	S	0	0	1	0.4
Feb 14	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	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	S	1	2	2	1	0	2	0.3
Feb 17	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.1
Feb 18	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	S	0	0	0	0	0	0	0	1	0.2
Feb 19	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	S	1	0	0	0	0	0	0	0	1	0.2
Feb 20	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	S	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	0	0	0	S	0	0	2	2	2	2	1	1	0	0	2	0.4
Feb 22	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	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	S	0	1	0	1	0	1	1	0	0	0	0	0	0	1	0.2
Feb 25	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	S	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.0
Feb 27	0	0	0	0	0	0	0	0	S	1	1	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	1	S	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 29	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
Diurnal Maximum	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.1	0.1	0.1	0.1	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.



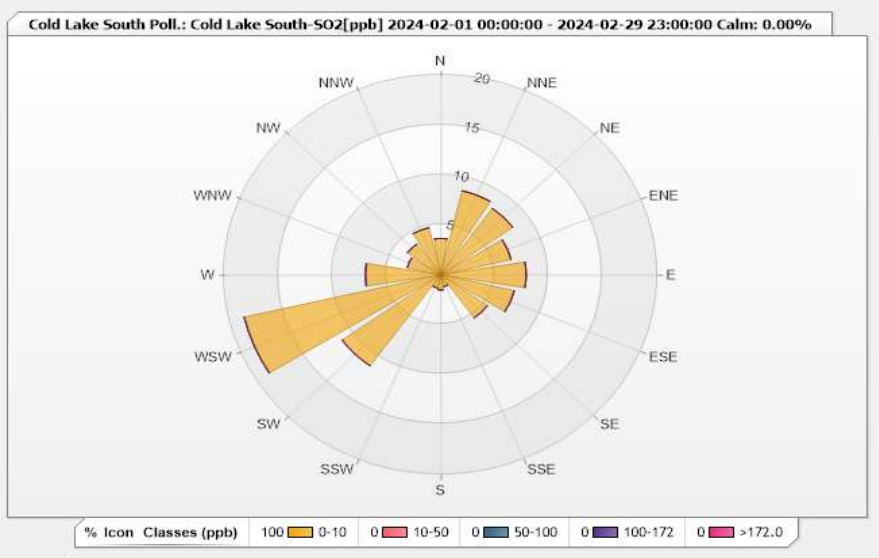


Station: Cold Lake South Poll.: Cold Lake South-SO2[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.83% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	3.64	0	0	0	0	3.64
NNE	8.64	0	0	0	0	8.64
NE	8.18	0	0	0	0	8.18
ENE	6.67	0	0	0	0	6.67
E	7.88	0	0	0	0	7.88
ESE	6.97	0	0	0	0	6.97
SE	5.3	0	0	0	0	5.3
SSE	1.21	0	0	0	0	1.21
S	1.52	0	0	0	0	1.52
SSW	1.36	0	0	0	0	1.36
SW	11.21	0	0	0	0	11.21
WSW	18.64	0	0	0	0	18.64
W	6.97	0	0	0	0	6.97
WNW	3.18	0	0	0	0	3.18
NW	3.79	0	0	0	0	3.79
NNW	4.85	0	0	0	0	4.85
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

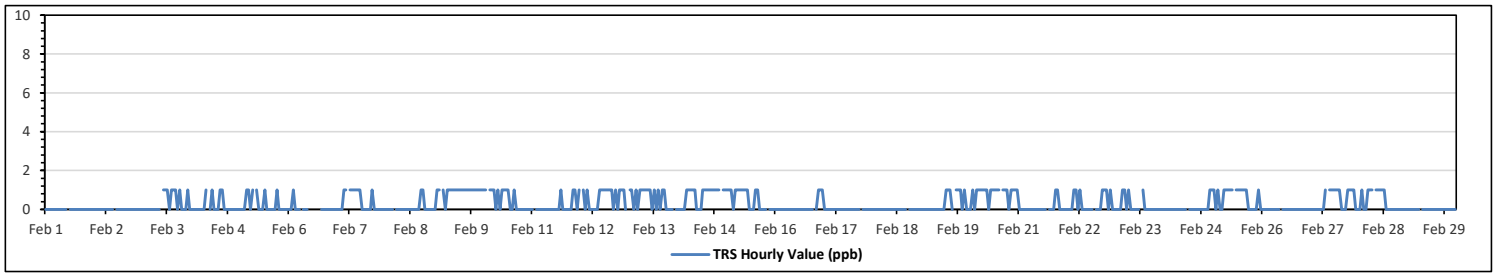
TOTAL REDUCED SULPHUR (TRS) in ppb

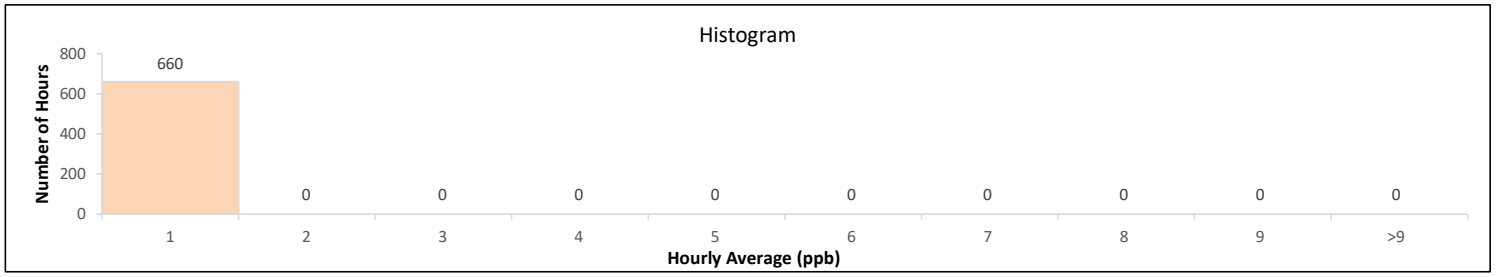
Maximum Hourly Value:	1	ppb	on Feb 3 at hr 10	Hours in Service:	696	
Maximum Daily Value:	0.9	ppb	on Feb 9	Hours of Data:	660	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	0	
Minimum Daily Value:	0.0	ppb	on Feb 1	Hours of Calibration:	36	
Monthly Average:	0.3	ppb		Operational Uptime:	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	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	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	S	1	1	1	0	1	1	1	0	1	0	0	0	1	0	0	1	0.3
Feb 4	0	0	0	0	0	0	0	1	S	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0.2
Feb 5	0	0	0	1	1	0	1	S	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0.3
Feb 6	0	0	1	0	0	0	S	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	1	NA
Feb 7	0	0	0	1	1	S	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.4
Feb 8	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0.1
Feb 9	0	1	1	S	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	**0.9**
Feb 10	1	1	S	1	1	1	0	1	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0.5
Feb 11	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	0	1	0.2
Feb 12	S	1	0	1	0	0	0	0	0	1	1	1	1	1	1	1	0	1	0	1	1	1	0	S	0	1	0.6
Feb 13	1	1	0	1	0	1	1	1	1	1	1	0	1	0	1	0	1	1	0	0	0	0	S	0	0	1	0.6
Feb 14	0	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	S	1	1	0	1	0.7
Feb 15	1	1	1	0	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0	S	0	0	0	0	1	0.5
Feb 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	1	1	0	1	0.1
Feb 17	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	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Feb 19	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	S	1	1	1	0	1	0	0	0	1	0.3
Feb 20	0	1	0	1	1	1	1	1	1	0	1	1	1	1	1	S	1	1	1	0	1	1	1	1	0	1	0.8
Feb 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	1	0	0	0	0	0	1	0.1
Feb 22	0	0	0	1	1	0	1	0	0	0	0	0	0	S	0	0	0	1	1	1	0	1	0	0	0	1	0.3
Feb 23	0	0	0	1	1	0	1	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 24	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.1
Feb 25	1	0	1	0	0	1	1	1	1	1	S	1	1	1	1	1	1	0	0	0	0	0	1	0	0	1	0.6
Feb 26	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	1	S	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0	1	0.5
Feb 28	0	1	0	0	1	1	1	S	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4
Feb 29	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
Diurnal Maximum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Diurnal Average	0.1	0.3	0.1	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.2	0.3	0.4	0.3	0.2	0.3	0.3	0.2			

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.



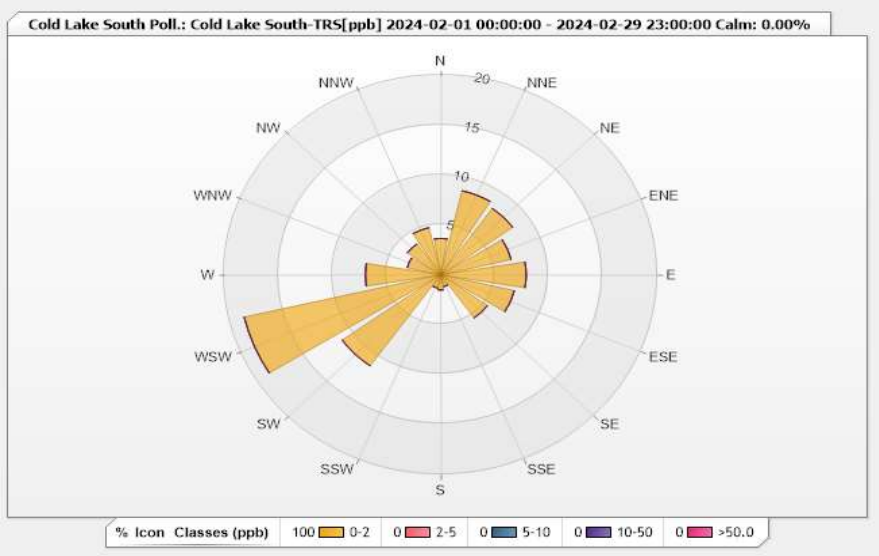


Station: Cold Lake South Poll.: Cold Lake South-TRS[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.83% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	3.64	0	0	0	0	3.64
NNE	8.64	0	0	0	0	8.64
NE	8.18	0	0	0	0	8.18
ENE	6.67	0	0	0	0	6.67
E	7.88	0	0	0	0	7.88
ESE	6.97	0	0	0	0	6.97
SE	5.3	0	0	0	0	5.3
SSE	1.21	0	0	0	0	1.21
S	1.52	0	0	0	0	1.52
SSW	1.36	0	0	0	0	1.36
SW	11.21	0	0	0	0	11.21
WSW	18.64	0	0	0	0	18.64
W	6.97	0	0	0	0	6.97
WNW	3.18	0	0	0	0	3.18
NW	3.79	0	0	0	0	3.79
NNW	4.85	0	0	0	0	4.85
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

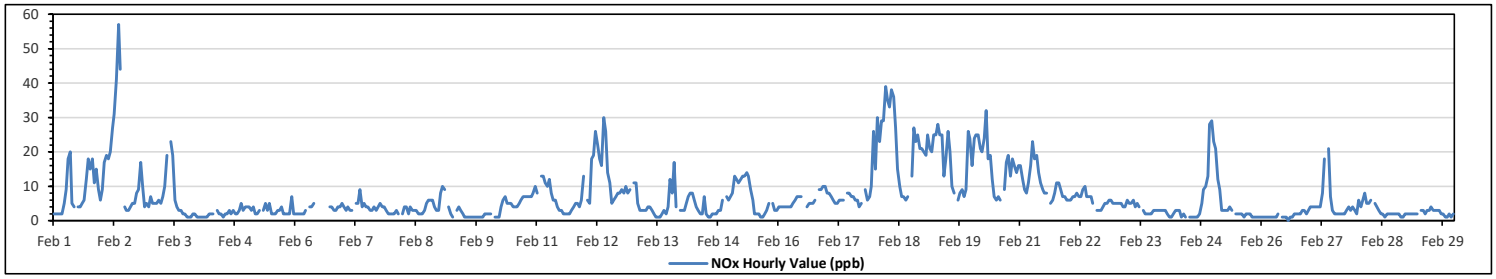
OXIDES OF NITROGEN (NOx) in ppb

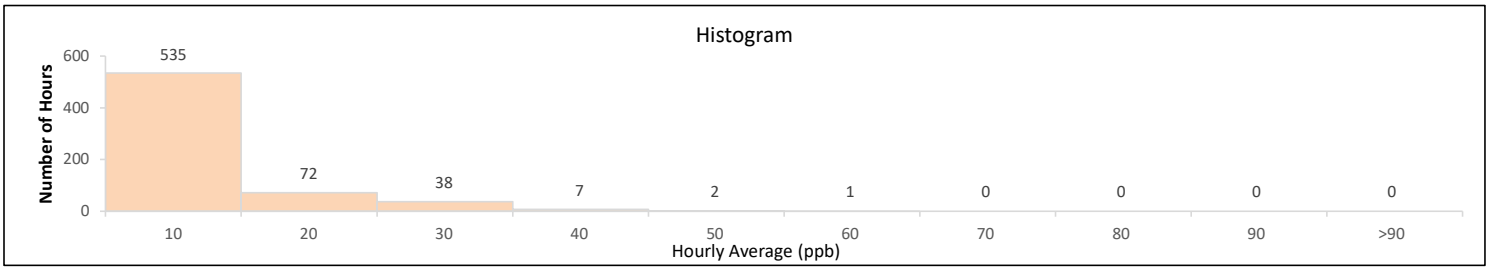
Maximum Hourly Value:	57	ppb	on Feb 2 at hr 8	Hours in Service:	696	
Maximum Daily Value:	22.4	ppb	on Feb 18	Hours of Data:	655	
Minimum Hourly Value:	0	ppb	on Feb 26 at hr 13	Hours of Missing Data:	4	
Minimum Daily Value:	1.5	ppb	on Feb 26	Hours of Calibration:	37	
Monthly Average:	7.0	ppb		Operational Uptime:	99.4	

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	2	2	2	2	5	9	18	20	5	4	S	4	4	5	6	12	18	15	18	11	15	9	6	2	20	8.4
Feb 2	9	17	19	18	20	27	31	41	57	44	S	4	3	3	4	5	5	8	9	17	10	4	5	4	3	57	15.8
Feb 3	7	5	5	5	6	5	7	10	19	S	23	19	6	4	3	3	2	2	1	1	1	2	2	1	1	23	6.0
Feb 4	1	1	1	1	1	2	2	2	S	3	2	2	1	2	2	3	2	3	2	2	3	5	3	4	1	5	2.2
Feb 5	4	4	3	4	2	2	3	S	3	5	3	5	2	2	2	3	3	4	2	2	2	2	7	2	2	7	3.1
Feb 6	2	2	2	2	2	3	S	4	4	5	C	C	C	C	C	C	C	4	4	3	3	4	4	5	2	5	NA
Feb 7	4	3	4	3	3	S	5	5	9	4	5	4	4	3	3	4	3	4	5	4	4	3	2	2	2	9	3.9
Feb 8	2	2	3	2	S	2	4	4	2	4	3	3	3	2	2	2	3	5	6	6	6	4	3	3	2	6	3.3
Feb 9	8	10	9	S	4	2	1	NRM	3	4	3	2	1	1	1	1	1	1	1	1	1	1	2	2	1	10	2.7
Feb 10	2	2	S	1	1	1	4	6	7	5	5	5	4	4	4	5	6	7	7	7	7	7	8	10	1	10	5.0
Feb 11	8	S	13	13	11	10	12	8	6	6	4	3	3	2	2	2	2	3	4	5	5	4	6	13	2	13	6.3
Feb 12	S	6	5	18	19	26	22	18	16	30	26	14	11	5	6	7	8	8	9	8	10	8	9	S	5	30	13.1
Feb 13	11	11	5	3	3	3	3	4	4	3	2	1	1	1	2	3	2	4	12	8	17	4	S	3	1	17	4.8
Feb 14	3	3	5	7	8	8	6	4	3	2	2	7	2	1	1	2	2	2	3	3	6	S	7	6	1	8	4.0
Feb 15	7	8	13	12	11	12	13	13	14	13	9	6	2	2	2	1	1	2	3	5	S	5	3	3	1	14	7.0
Feb 16	4	4	4	4	4	4	4	5	6	7	7	7	Y	Y	4	5	5	5	6	S	9	9	10	10	4	10	5.9
Feb 17	8	8	7	6	5	5	6	6	6	K	8	8	7	7	6	6	4	5	S	9	6	7	10	26	4	26	7.5
Feb 18	15	30	23	29	29	39	35	33	38	36	27	15	10	7	7	6	7	S	13	27	23	25	21	21	6	39	22.4
Feb 19	20	19	25	21	20	25	25	28	25	25	13	18	26	20	10	8	S	6	8	9	7	9	26	24	6	28	18.1
Feb 20	16	24	25	25	21	20	24	32	18	19	12	7	6	7	6	S	9	17	19	13	18	16	14	16	6	32	16.7
Feb 21	16	12	9	8	11	16	23	18	19	14	11	9	8	8	S	5	6	8	11	11	9	7	7	6	5	23	11.0
Feb 22	6	6	7	7	8	7	7	9	10	7	7	7	5	S	3	3	3	4	5	5	6	6	5	5	3	10	6.0
Feb 23	5	5	5	4	4	6	5	5	6	4	5	4	S	3	2	2	2	2	3	3	3	3	3	3	2	6	3.8
Feb 24	3	2	1	1	2	3	3	3	1	2	1	S	1	1	1	1	1	2	5	9	10	13	28	29	1	29	5.3
Feb 25	23	21	12	9	3	3	3	3	4	3	S	2	2	2	2	1	2	2	2	1	1	1	1	1	1	23	4.5
Feb 26	1	1	1	1	1	1	1	1	2	S	1	1	1	0	1	1	2	2	2	2	3	3	2	3	0	3	1.5
Feb 27	4	4	4	4	4	4	8	18	S	21	7	3	2	2	2	2	2	2	3	4	3	4	3	2	2	21	4.9
Feb 28	6	4	6	8	5	5	6	S	5	4	3	2	2	1	2	2	2	2	2	2	2	1	1	2	1	8	3.3
Feb 29	2	2	2	2	2	2	S	3	3	2	3	3	4	3	3	3	3	2	2	1	1	2	1	2	1	4	2.3
Diurnal Maximum	23	30	25	29	29	39	35	41	57	44	27	19	26	20	10	8	12	18	19	27	23	25	28	29			
Diurnal Average	7.1	7.8	7.9	7.9	7.6	8.9	10.1	11.6	11.5	10.7	7.5	6.2	4.7	3.7	3.3	3.4	3.7	4.8	5.9	6.6	6.7	6.2	7.2	7.6			

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.



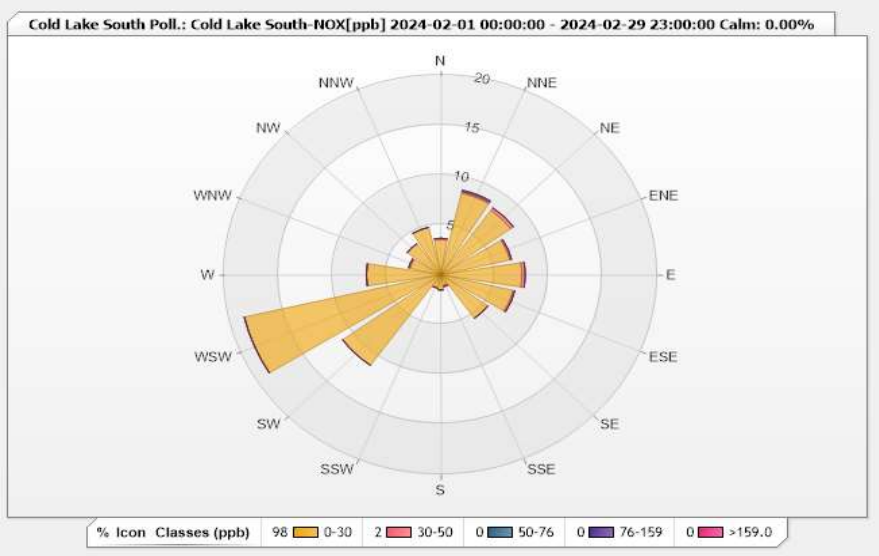


Station: Cold Lake South Poll.: Cold Lake South-NOX[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.11% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.51	0.15	0	0	0	3.66
NNE	8.4	0.15	0.15	0	0	8.7
NE	7.94	0.31	0	0	0	8.25
ENE	6.56	0.15	0	0	0	6.71
E	7.48	0.31	0	0	0	7.79
ESE	6.87	0.15	0	0	0	7.02
SE	5.34	0	0	0	0	5.34
SSE	1.07	0.15	0	0	0	1.22
S	1.53	0	0	0	0	1.53
SSW	1.37	0	0	0	0	1.37
SW	11.15	0	0	0	0	11.15
WSW	18.63	0	0	0	0	18.63
W	6.87	0	0	0	0	6.87
WNW	2.9	0.15	0	0	0	3.05
NW	3.82	0	0	0	0	3.82
NNW	4.89	0	0	0	0	4.89
Summary	98.33	1.52	0.15	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

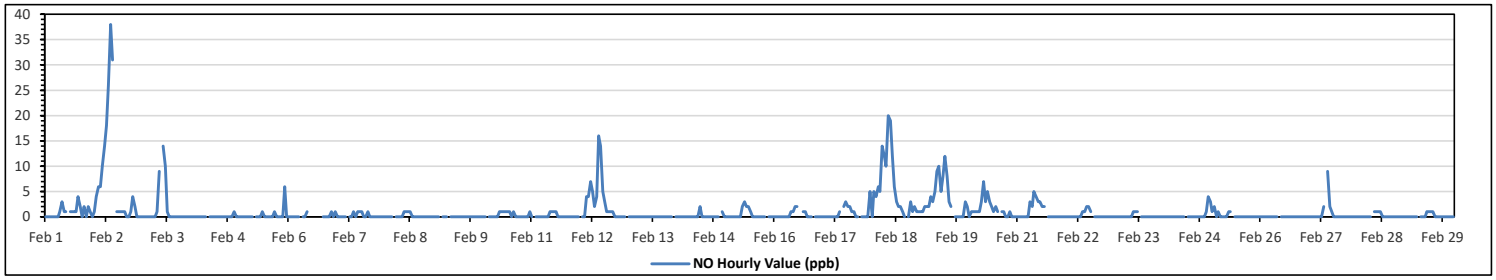
NITRIC OXIDE (NO) in ppb

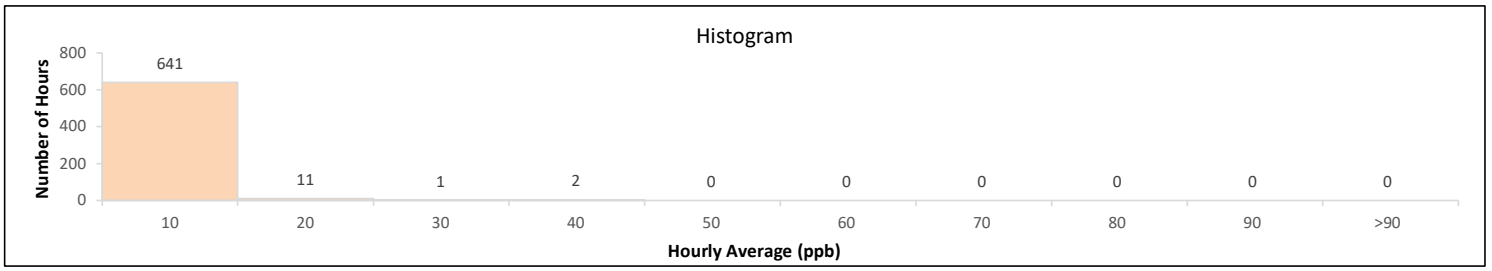
Maximum Hourly Value:	38	ppb	on Feb 2 at hr 8	Hours in Service:	696
Maximum Daily Value:	7.2	ppb	on Feb 2	Hours of Data:	655
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	4
Minimum Daily Value:	0.0	ppb	on Feb 9	Hours of Calibration:	37
Monthly Average:	1.0	ppb		Operational Uptime:	99.4

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	1	3	1	1	S	1	1	1	1	4	2	0	2	0	2	1	0	0	4	0.9
Feb 2	1	4	6	6	10	14	18	26	**38**	31	S	1	1	1	1	1	0	0	1	4	2	0	0	0	0	**38**	**7.2**
Feb 3	0	0	0	0	0	0	0	1	9	S	14	10	1	0	0	0	0	0	0	0	0	0	0	0	0	14	1.5
Feb 4	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.0
Feb 5	0	0	0	0	0	0	0	S	0	0	0	1	0	0	0	0	0	1	0	0	0	0	6	0	0	6	0.3
Feb 6	0	0	0	0	0	0	S	0	0	1	C	C	C	C	C	C	C	0	0	0	0	1	0	1	0	1	NA
Feb 7	0	0	0	0	0	S	0	0	1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0.2
Feb 8	0	0	0	0	S	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 9	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	0.0
Feb 10	0	0	S	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	1	0.3
Feb 11	0	S	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 12	S	0	0	4	4	7	5	2	4	16	14	5	3	1	1	1	1	0	0	0	0	0	0	S	0	16	3.1
Feb 13	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 14	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	S	1	0	0	2	0.1
Feb 15	0	0	0	0	0	0	0	0	2	3	2	2	1	0	0	0	0	0	0	0	S	0	0	0	0	3	0.4
Feb 16	0	0	0	0	0	0	0	0	1	1	2	2	Y	Y	1	1	0	0	0	S	0	0	0	0	0	2	0.4
Feb 17	0	0	0	0	0	0	0	0	1	K	2	3	2	2	1	1	0	0	S	0	0	0	0	5	0	5	0.8
Feb 18	0	5	4	6	5	14	12	10	20	19	12	6	3	2	2	1	0	S	0	3	1	2	1	1	0	20	5.6
Feb 19	1	1	2	2	2	4	3	5	9	10	5	8	12	8	3	2	S	0	0	0	0	0	3	2	0	12	3.6
Feb 20	0	1	1	1	1	1	3	7	3	5	3	2	1	2	1	S	1	1	0	0	1	0	0	0	0	7	1.5
Feb 21	0	0	0	0	0	0	3	2	5	4	3	3	2	2	S	0	0	0	0	0	0	0	0	0	0	5	1.0
Feb 22	0	0	0	0	0	0	0	0	1	1	2	2	1	S	0	0	0	0	0	0	0	0	0	0	0	2	0.3
Feb 23	0	0	0	0	0	0	0	0	0	1	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Feb 24	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	4	3	0	4	0.3
Feb 25	1	2	0	1	0	0	0	0	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3
Feb 26	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	2	S	9	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0.6
Feb 28	0	0	0	0	0	0	0	S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 29	0	0	0	0	0	0	S	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Diurnal Maximum	1	5	6	6	10	14	18	26	38	31	14	10	12	8	3	2	4	2	1	4	2	2	6	5			
Diurnal Average	0.1	0.5	0.5	0.7	0.8	1.4	1.6	2.2	3.7	4.1	2.7	2.1	1.3	0.8	0.4	0.4	0.2	0.1	0.0	0.3	0.1	0.3	0.6	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.



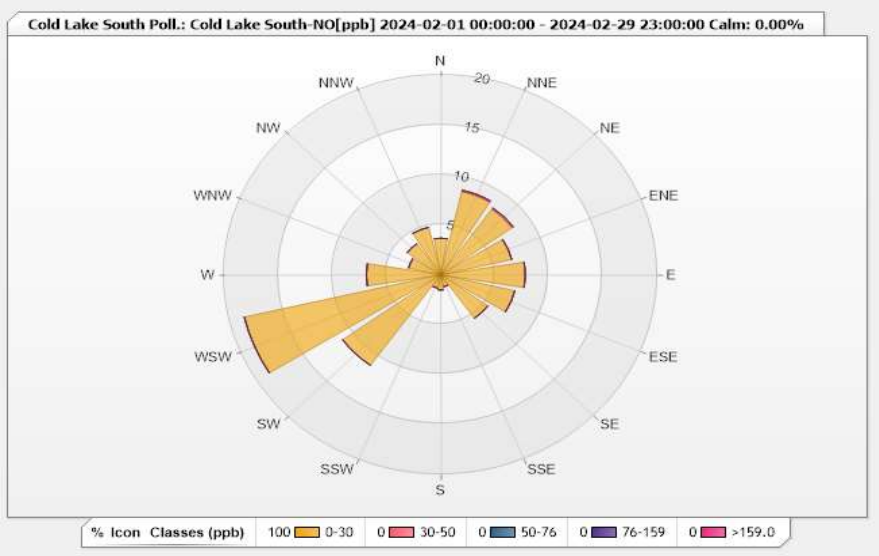


Station: Cold Lake South Poll.: Cold Lake South-NO[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.11% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.66	0	0	0	0	3.66
NNE	8.55	0.15	0	0	0	8.7
NE	8.09	0.15	0	0	0	8.24
ENE	6.72	0	0	0	0	6.72
E	7.79	0	0	0	0	7.79
ESE	7.02	0	0	0	0	7.02
SE	5.34	0	0	0	0	5.34
SSE	1.22	0	0	0	0	1.22
S	1.53	0	0	0	0	1.53
SSW	1.37	0	0	0	0	1.37
SW	11.15	0	0	0	0	11.15
WSW	18.63	0	0	0	0	18.63
W	6.87	0	0	0	0	6.87
WNW	3.05	0	0	0	0	3.05
NW	3.82	0	0	0	0	3.82
NNW	4.89	0	0	0	0	4.89
Summary	100	0.3	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

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

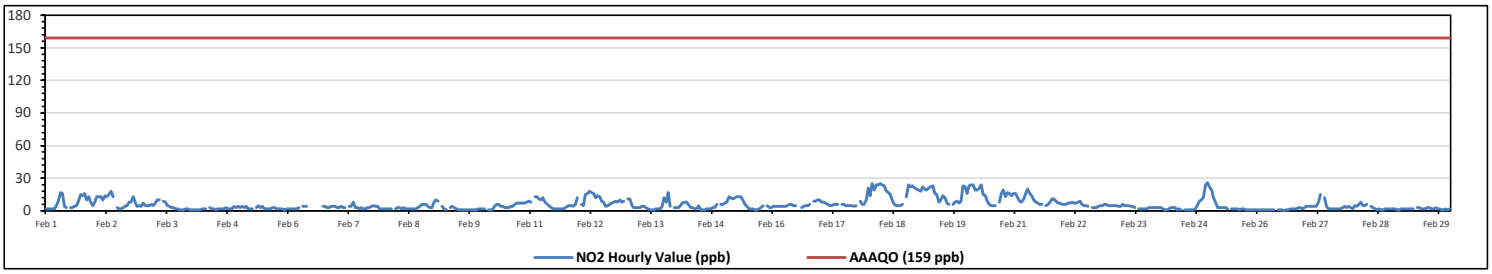
Number of 1-Hour Exceedances: 0

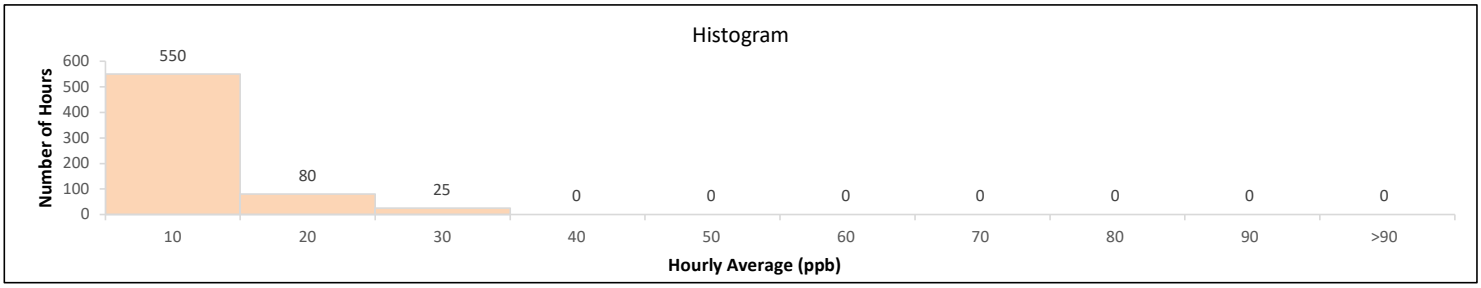
Maximum Hourly Value:	26	ppb	on Feb 24 at hr 23	Hours in Service:	696
Maximum Daily Value:	16.8	ppb	on Feb 18	Hours of Data:	655
Minimum Hourly Value:	0	ppb	on Feb 26 at hr 13	Hours of Missing Data:	4
Minimum Daily Value:	1.4	ppb	on Feb 26	Hours of Calibration:	37
Monthly Average:	5.9	ppb		Operational Uptime:	99.4

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	2	2	2	2	5	9	17	16	4	3	S	3	3	4	5	9	15	14	16	10	13	8	5	2	17	7.3
Feb 2	8	13	13	13	10	14	13	15	18	13	S	3	2	2	3	4	5	8	8	13	8	4	5	4	2	18	8.7
Feb 3	7	5	5	5	6	5	7	10	10	S	9	8	5	4	3	3	2	2	1	1	1	2	2	1	1	10	4.5
Feb 4	1	1	1	1	1	2	2	2	S	3	2	2	1	2	2	2	2	3	2	2	2	4	3	4	1	4	2.0
Feb 5	3	4	3	4	2	2	2	S	3	5	3	4	2	2	2	2	3	3	2	2	2	2	1	2	1	5	2.6
Feb 6	2	2	2	2	2	3	S	4	4	4	C	C	C	C	C	C	C	4	4	3	3	4	4	4	2	4	NA
Feb 7	3	3	4	3	3	S	4	4	8	3	3	2	3	2	2	3	3	4	5	4	4	2	2	2	2	8	3.3
Feb 8	2	2	2	2	S	2	3	3	2	3	2	2	2	2	2	2	3	4	6	6	6	4	3	3	2	6	3.0
Feb 9	8	10	9	S	4	2	1	NRM	3	4	3	2	1	1	1	1	1	1	1	1	1	1	2	2	1	10	2.7
Feb 10	2	2	S	1	1	1	4	6	6	4	4	3	3	3	4	4	6	7	7	7	7	7	8	9	1	9	4.6
Feb 11	8	S	13	13	11	10	12	8	6	5	3	2	2	2	2	2	2	3	4	5	5	4	6	12	2	13	6.1
Feb 12	S	6	5	15	16	18	17	16	12	14	13	9	8	4	5	6	7	8	9	8	10	8	9	S	4	18	10.1
Feb 13	11	11	5	3	3	3	3	4	4	3	2	1	1	1	2	2	2	4	12	8	17	4	S	3	1	17	4.7
Feb 14	3	3	5	7	8	8	6	3	3	2	2	5	1	1	1	2	2	2	3	3	6	S	6	6	1	8	3.8
Feb 15	7	8	13	12	11	12	13	13	13	10	6	4	2	2	2	1	1	2	3	5	S	5	3	3	1	13	6.6
Feb 16	4	4	4	4	4	4	4	5	6	6	5	5	Y	Y	3	4	5	5	6	S	9	9	10	10	3	10	5.5
Feb 17	8	8	7	6	5	5	6	6	6	K	6	6	5	5	5	5	4	5	S	9	6	6	10	21	4	21	6.8
Feb 18	14	25	19	24	24	25	24	23	18	17	15	9	6	5	5	5	6	S	13	24	22	23	21	20	5	25	**16.8**
Feb 19	19	18	22	20	19	21	22	23	16	15	8	10	14	12	7	6	S	6	8	9	7	9	23	22	6	23	14.6
Feb 20	16	23	24	24	19	19	21	24	15	14	9	6	5	5	5	S	8	16	19	13	17	16	14	16	5	24	15.1
Feb 21	16	12	9	8	11	16	20	16	14	10	8	7	6	6	S	5	6	8	11	11	9	7	7	6	5	20	10.0
Feb 22	6	6	7	7	8	7	7	8	9	6	5	5	4	S	3	3	3	4	5	5	6	6	5	5	3	9	5.7
Feb 23	5	5	5	4	4	6	5	5	5	4	4	3	S	2	2	2	2	2	3	3	3	3	3	3	2	6	3.6
Feb 24	3	2	1	1	2	3	3	3	1	2	1	S	1	1	1	1	1	2	5	9	10	12	24	**26**	1	**26**	5.0
Feb 25	22	19	12	8	3	3	3	3	3	2	S	2	2	2	2	1	2	2	1	1	1	1	1	1	1	22	4.2
Feb 26	1	1	1	1	1	1	1	1	1	S	1	1	1	0	1	1	2	2	2	2	3	3	2	3	**0**	3	**1.4**
Feb 27	4	4	4	4	4	4	8	15	S	12	4	2	2	2	2	2	2	2	3	4	3	4	3	2	2	15	4.2
Feb 28	5	4	6	8	5	5	6	S	4	3	2	1	2	1	1	2	2	2	2	2	2	1	1	2	1	8	3.0
Feb 29	2	2	2	2	2	2	S	3	3	2	2	2	3	3	2	2	3	2	2	1	1	2	1	2	1	3	2.1
Diurnal Maximum	22	25	24	24	24	25	24	24	18	17	15	10	14	12	7	6	9	16	19	24	22	23	24	26			
Diurnal Average	6.9	7.3	7.3	7.3	6.8	7.4	8.4	9.2	7.7	6.5	4.8	4.1	3.3	2.9	2.7	2.9	3.5	4.6	5.8	6.3	6.5	5.9	6.7	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.



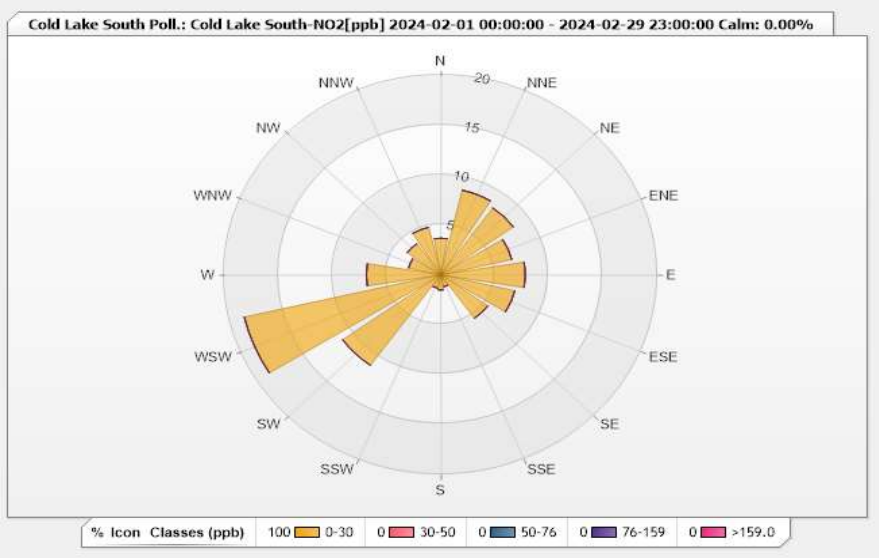


Station: Cold Lake South Poll.: Cold Lake South-NO2[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.11% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.66	0	0	0	0	3.66
NNE	8.7	0	0	0	0	8.7
NE	8.24	0	0	0	0	8.24
ENE	6.72	0	0	0	0	6.72
E	7.79	0	0	0	0	7.79
ESE	7.02	0	0	0	0	7.02
SE	5.34	0	0	0	0	5.34
SSE	1.22	0	0	0	0	1.22
S	1.53	0	0	0	0	1.53
SSW	1.37	0	0	0	0	1.37
SW	11.15	0	0	0	0	11.15
WSW	18.63	0	0	0	0	18.63
W	6.87	0	0	0	0	6.87
WNW	3.05	0	0	0	0	3.05
NW	3.82	0	0	0	0	3.82
NNW	4.89	0	0	0	0	4.89
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

OZONE (O_3) in ppb

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

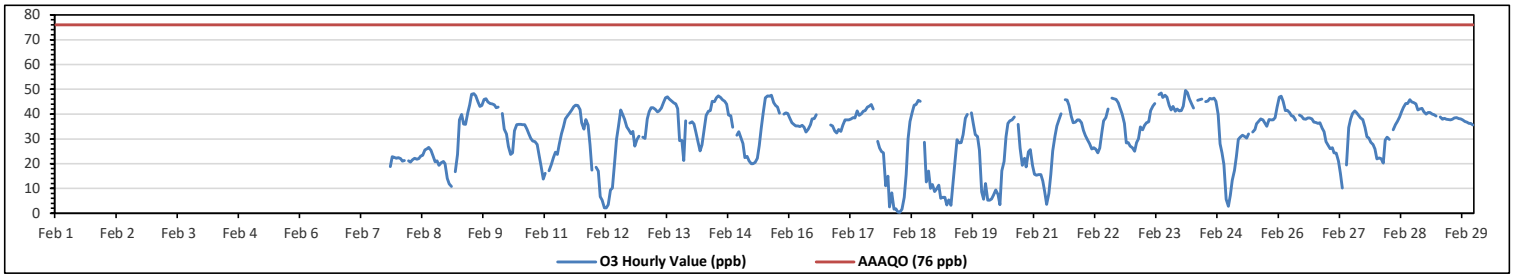
Number of 1-Hour Exceedances: 0

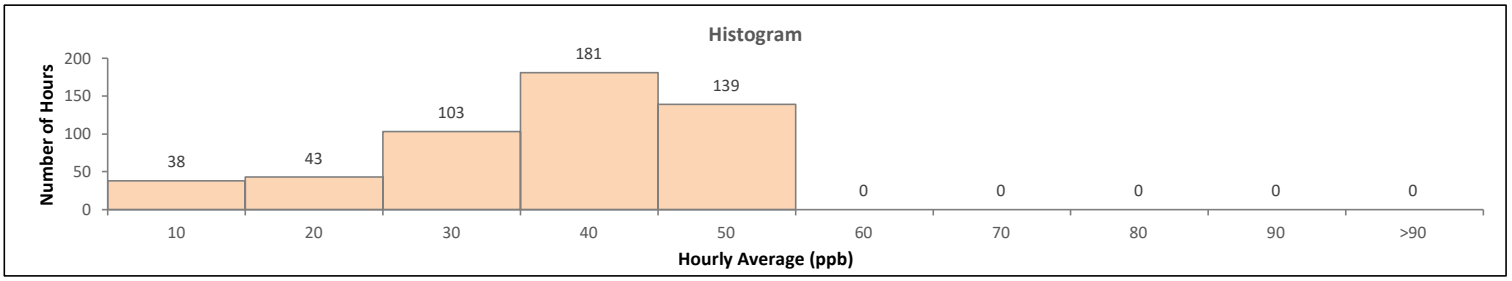
Maximum Hourly Value:	49.6	ppb	on Feb 24 at hr 2	Hours in Service:	696
Maximum Daily Value:	39.4	ppb	on Feb 23	Hours of Data:	504
Minimum Hourly Value:	0.4	ppb	on Feb 18 at hr 6	Hours of Missing Data:	160
Minimum Daily Value:	18.6	ppb	on Feb 18	Hours of Calibration:	32
Monthly Average:	31.9	ppb		Operational Uptime:	77.0

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	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 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 7	X	X	X	X	X	X	X	X	X	X	X	C	C	C	C	C	C	C	C	C	18.8	22.8	22.6	22.2	18.8	22.8	NA
Feb 8	22.4	22	21	21.3	S	21.2	20.6	21.6	22.1	21.8	22	23.1	23.4	25.5	26.1	26.5	25.4	23	20.7	21.1	19.3	20.4	20.9	20	19.3	26.5	22.2
Feb 9	14	11.8	10.9	S	16.7	23.7	37.7	39.8	36	35.8	40.5	43.7	47.9	48.2	47.4	44.9	43.1	43.5	45.9	46.2	44.9	44.2	44.1	43.7	10.9	48.2	37.2
Feb 10	42.6	42.9	S	40.2	34	32	27	23.8	24.4	33.3	35.7	35.8	35.9	35.7	35.7	33.9	32	30.2	29.2	28.8	27.7	23.3	19.1	13.8	13.8	42.9	31.2
Feb 11	16.1	S	17.2	19.6	22.6	24.6	23.8	27.9	32.2	34.8	38.1	39.3	40.4	41.7	43	43.6	43.5	41.8	36.6	34	37.8	35.6	27.8	17.5	16.1	43.6	32.2
Feb 12	S	18.5	17	6.7	5.2	2.2	2.2	3.4	9.4	10.2	20.6	30	35.1	41.6	39.9	37.9	34.8	33.6	32.1	33	27.1	29.8	31	S	2.2	41.6	22.8
Feb 13	30.7	30.2	38	41	42.6	42.6	41.9	40.9	41.2	42.4	44.8	46.6	47	46	45.3	44.5	44.1	42.2	29.3	29.4	21.3	37.2	S	36.4	21.3	47.0	39.4
Feb 14	36.9	36	32.6	28.5	25.1	27.6	34.1	39.4	41.1	41.4	45.2	45.1	46.6	47.4	46.7	45.7	45.2	44	39.6	39.3	34.7	S	31.4	32.8	25.1	47.4	38.5
Feb 15	30.4	28.1	22.4	22.9	21.2	19.9	19.9	20.5	22.1	27.3	34.2	40.2	46.6	47.4	47.2	47.5	44.6	43.4	42.9	40.4	S	40	40.5	40.3	19.9	47.5	34.3
Feb 16	38.4	36.6	35.7	35.2	35.2	34.9	35.5	34.7	32.7	34	35.7	38.1	38.2	39.7	NRM	NRM	NRM	NRM	40.8	S	35.6	35.2	33.1	32.4	32.4	40.8	35.9
Feb 17	33.8	33	35.5	37.7	37.6	37.7	38.1	38.6	38.4	41.2	39.4	40.1	41.1	41.4	42.8	43.2	43.9	42	S	29	26.2	24.9	24.4	11.1	11.1	43.9	35.7
Feb 18	15	2.6	8.3	1.7	1.8	0.5	0.4	1.7	6.5	15.5	30.1	37	40.8	43.6	43.9	45.5	45.2	S	28.6	12.7	17	10	11.5	8.8	**0.4**	45.5	**18.6**
Feb 19	9.8	11.3	6.1	6.4	6.4	3.3	5.4	3.2	11.5	21.4	29.7	28.3	28.5	31.7	38.3	39.9	S	40.5	36	31.8	30.9	25.4	8.7	5.6	3.2	40.5	20.0
Feb 20	11.9	5.2	5.2	5.8	7.3	9.4	7.5	3.5	17.1	20.9	30.8	36.2	37.2	37.7	38.9	S	35.9	26.3	19.4	22.2	18.7	24.8	25.7	19.2	3.5	38.9	20.3
Feb 21	15.7	15.4	15.5	15.5	13.1	8.7	3.6	8	15.6	25.2	31.1	35.2	37.9	40.1	S	45.7	45.6	43.4	39	36.5	36.8	37.7	37.6	36.6	3.6	45.7	27.8
Feb 22	33.4	31.3	29.6	28.1	26	26.4	25.9	24.4	26.3	33	37.2	38.6	42.1	S	46.4	46.2	45.9	44.5	42.6	40	36.3	28.3	28.5	27.1	24.4	46.4	34.3
Feb 23	26.4	25	28.5	30.1	34.8	33.6	35.5	36.5	36.9	41.4	43.2	44.2	S	47.8	48.5	46.7	47.5	46.9	43.5	41.7	43.1	41.1	42.1	41.2	25.0	48.5	**39.4**
Feb 24	41.4	43.2	**49.6**	48.6	46.2	44.1	42.5	NRM	45.5	45.8	46.1	S	45.1	45.3	46.3	46	46.5	45.2	39.8	28	24.4	19.6	5.6	2.8	2.8	**49.6**	38.5
Feb 25	7.2	13.3	17.3	22.9	29.8	30.6	31.4	30.9	30.3	32	S	32.7	33.8	36.1	37.1	38.1	37.7	36.4	35.1	37.8	37.7	37.7	38.6	42.7	7.2	42.7	31.6
Feb 26	46.9	47.2	45.2	41.4	41.5	40.7	39.3	39	37.5	S	39.6	39.1	38.1	37.9	38.5	38.5	38	36.8	36.7	36.3	36.5	34.3	32.8	28.8	28.8	47.2	38.7
Feb 27	27.4	26.1	26.4	24.3	24.2	21	16.1	10.2	S	19.5	34.6	38.1	40.3	41.2	40.5	39.4	38.5	37.8	34.6	30.8	30.4	28.6	27.7	26	10.2	41.2	29.7
Feb 28	21.9	22.3	22	20.2	29.6	30.6	29.8	S	33.6	35.7	37	38.9	40.9	42.7	44.2	44.3	45.7	44.9	44.6	44.1	41.7	42.1	42.3	40.9	20.2	45.7	36.5
Feb 29	40	40.6	40.6	40	39.7	39.2	S	38.9	37.9	38.3	37.9	37.8	37.7	37.9	38.5	38.6	38.2	38	37.6	37	36.8	36.2	36.2	35.6	35.6	40.6	38.2
Diurnal Maximum	46.9	47.2	49.6	48.6	46.2	44.1	42.5	40.9	45.5	45.8	46.1	46.6	47.9	48.2	48.5	47.5	47.5	46.9	45.9	46.2	44.9	44.2	44.1	43.7			
Diurnal Average	26.8	25.8	25.0	25.6	25.7	25.2	24.7	24.3	28.5	31.0	35.9	37.5	39.3	40.8	41.8	41.8	41.1	39.2	35.9	33.3	31.1	30.9	28.7	26.6			

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.



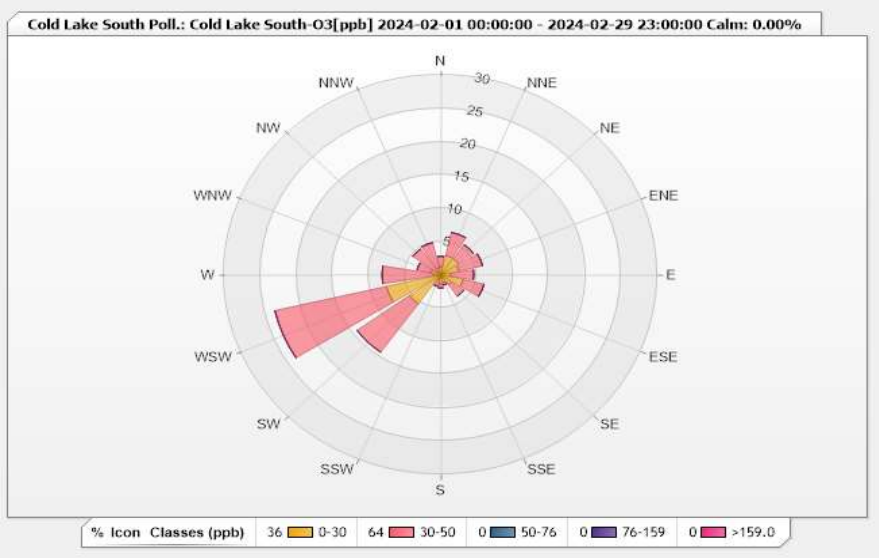


Station: Cold Lake South Poll.: Cold Lake South-O3[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 72.41% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.19	1.59	0	0	0	2.78
NNE	2.98	3.57	0	0	0	6.55
NE	2.98	2.58	0	0	0	5.56
ENE	2.58	3.37	0	0	0	5.95
E	1.39	3.17	0	0	0	4.56
ESE	3.17	2.98	0	0	0	6.15
SE	1.79	2.18	0	0	0	3.97
SSE	1.19	0.4	0	0	0	1.59
S	1.39	0.6	0	0	0	1.99
SSW	0.6	1.19	0	0	0	1.79
SW	5.36	8.93	0	0	0	14.29
WSW	7.74	15.87	0	0	0	23.61
W	0.99	7.14	0	0	0	8.13
WNW	1.39	1.98	0	0	0	3.37
NW	0.6	4.17	0	0	0	4.77
NNW	0.99	3.97	0	0	0	4.96
Summary	36.33	63.69	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

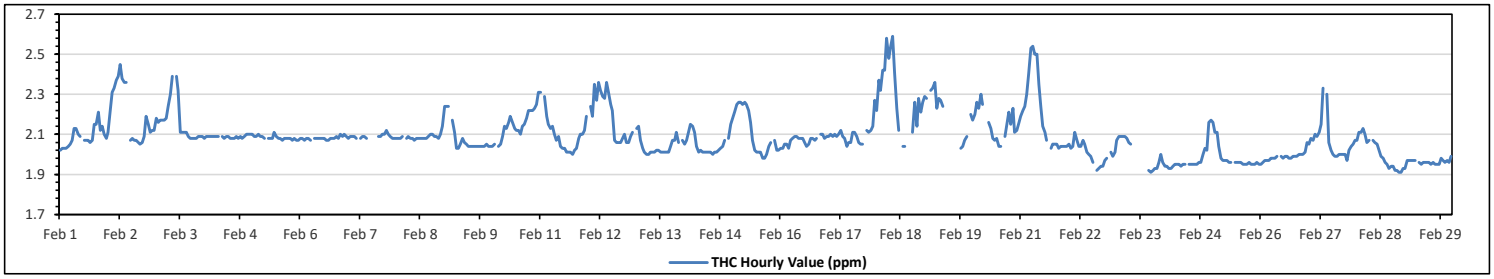
TOTAL HYDROCARBONS (THC) in ppm

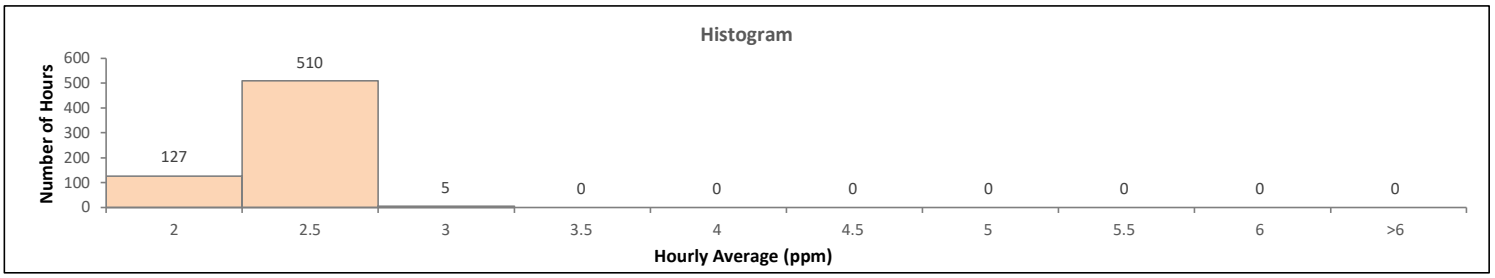
Maximum Hourly Value:	2.59	ppm	on Feb 18 at hr 8	Hours in Service:	696	
Maximum Daily Value:	2.29	ppm	on Feb 18	Hours of Data:	642	
Minimum Hourly Value:	1.91	ppm	on Feb 23 at hr 17	Hours of Missing Data:	20	
Minimum Daily Value:	1.96	ppm	on Feb 29	Hours of Calibration:	34	
Monthly Average:	2.09	ppm		Operational Uptime:	97.1	

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	2.02	2.03	2.03	2.03	2.04	2.05	2.07	2.13	2.13	2.10	2.09	S	2.07	2.07	2.07	2.06	2.07	2.15	2.15	2.21	2.12	2.14	2.10	2.08	2.02	2.21	2.09
Feb 2	2.11	2.22	2.31	2.33	2.37	2.39	2.45	2.38	2.36	2.36	S	2.07	2.08	2.07	2.07	2.06	2.05	2.06	2.09	2.19	2.15	2.11	2.12	2.12	2.05	2.45	2.20
Feb 3	2.18	2.16	2.17	2.17	2.17	2.18	2.24	2.30	2.39	S	2.39	2.32	2.11	2.11	2.11	2.11	2.09	2.08	2.08	2.08	2.08	2.09	2.09	2.09	2.08	2.39	2.16
Feb 4	2.08	2.09	2.09	2.09	2.09	2.09	2.09	2.09	S	2.09	2.08	2.09	2.09	2.08	2.08	2.08	2.09	2.08	2.09	2.08	2.09	2.10	2.10	2.10	2.08	2.10	2.09
Feb 5	2.10	2.09	2.09	2.10	2.09	2.09	2.08	S	2.08	2.08	2.08	2.11	2.09	2.08	2.08	2.07	2.08	2.08	2.08	2.08	2.07	2.08	2.07	2.07	2.07	2.11	2.08
Feb 6	2.08	2.08	2.07	2.08	2.08	2.07	S	2.08	2.08	2.08	2.08	2.08	2.08	2.07	2.07	2.08	2.08	2.08	2.09	2.08	2.10	2.09	2.10	2.09	2.07	2.10	2.08
Feb 7	2.08	2.09	2.09	2.09	2.08	S	2.08	2.09	2.09	2.08	C	C	C	C	C	2.09	2.09	2.10	2.10	2.12	2.10	2.09	2.08	2.08	2.08	2.12	2.09
Feb 8	2.08	2.08	2.08	2.09	S	2.08	2.09	2.08	2.08	2.07	2.08	2.08	2.08	2.08	2.08	2.08	2.09	2.10	2.10	2.09	2.09	2.08	2.10	2.14	2.07	2.14	2.09
Feb 9	2.24	2.24	2.24	S	2.17	2.11	2.03	2.03	2.05	2.08	2.06	2.05	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.04	2.04	2.03	2.24	2.08
Feb 10	2.04	2.05	S	2.04	2.05	2.09	2.14	2.13	2.16	2.19	2.16	2.13	2.12	2.12	2.10	2.14	2.15	2.18	2.22	2.22	2.22	2.23	2.25	2.31	2.04	2.31	2.15
Feb 11	2.31	S	2.29	2.19	2.15	2.13	2.14	2.10	2.07	2.09	2.04	2.03	2.03	2.01	2.01	2.01	2.00	2.02	2.03	2.08	2.10	2.10	2.12	2.19	2.00	2.31	2.10
Feb 12	S	2.24	2.19	2.35	2.27	2.36	2.32	2.29	2.28	2.36	2.31	2.25	2.22	2.07	2.06	2.06	2.06	2.08	2.10	2.06	2.06	2.09	2.11	S	2.06	2.36	2.19
Feb 13	2.13	2.14	2.07	2.03	2.01	2.00	2.00	2.01	2.01	2.01	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.04	2.07	2.07	2.11	2.06	S	2.07	2.00	2.14	2.04
Feb 14	2.05	2.07	2.11	2.15	2.14	2.11	2.04	2.01	2.02	2.01	2.01	2.01	2.01	2.01	2.00	2.01	2.01	2.02	2.03	2.04	2.07	S	2.08	2.15	2.00	2.15	2.05
Feb 15	2.18	2.21	2.25	2.26	2.26	2.25	2.26	2.25	2.22	2.16	2.07	2.02	2.01	2.01	2.01	1.98	1.98	2.00	2.04	2.06	S	2.07	2.02	2.02	1.98	2.26	2.11
Feb 16	2.03	2.03	2.05	2.05	2.03	2.07	2.08	2.09	2.09	2.08	2.08	2.08	2.06	2.04	2.05	2.08	2.08	2.07	2.08	S	2.10	2.10	2.08	2.09	2.03	2.10	2.07
Feb 17	2.09	2.10	2.09	2.10	2.09	2.10	2.12	2.09	2.08	2.04	2.06	2.06	2.11	2.11	2.09	2.06	2.05	2.05	S	2.12	2.11	2.12	2.14	2.27	2.04	2.27	2.10
Feb 18	2.22	2.37	2.32	2.42	2.42	2.58	2.48	2.54	**2.59**	2.41	2.23	2.12	X	2.04	2.04	X	2.03	S	2.11	2.26	2.14	2.28	2.21	2.26	2.03	**2.59**	**2.29**
Feb 19	2.29	2.28	X	2.32	2.33	2.36	2.23	2.28	2.27	2.24	X	X	X	2.36	X	2.07	S	X	2.03	2.04	2.07	2.09	X	2.20	2.03	2.36	NA
Feb 20	2.17	2.20	2.26	2.23	2.30	2.25	NRM	NRM	2.16	2.13	2.08	2.07	2.08	2.04	2.04	S	2.09	2.15	2.21	2.15	2.23	2.11	2.12	2.16	2.04	2.30	2.15
Feb 21	2.19	2.22	2.24	2.30	2.40	2.53	2.54	2.50	2.50	2.35	2.24	2.14	2.11	2.07	S	2.03	2.05	2.05	2.05	2.03	2.04	2.04	2.04	2.04	2.03	2.54	2.20
Feb 22	2.05	2.03	2.04	2.11	2.07	2.04	2.04	2.07	2.05	2.01	2.00	1.99	1.96	S	1.92	1.93	1.94	1.94	1.97	1.98	X	2.01	1.99	2.01	1.92	2.11	2.01
Feb 23	2.07	2.09	2.09	2.09	2.09	2.08	2.06	2.05	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	1.92	1.91	1.92	1.93	1.93	1.96	2.00	1.96	1.91	2.09	NA
Feb 24	1.94	1.94	1.93	1.93	1.94	1.95	1.95	1.95	1.94	1.95	1.95	S	1.95	1.95	1.95	1.95	1.95	1.96	1.96	2.00	2.03	2.02	2.16	2.17	1.93	2.17	1.97
Feb 25	2.16	2.11	2.11	2.04	1.98	1.97	1.97	1.97	1.96	1.96	S	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.95	1.95	1.95	1.96	1.95	1.95	2.16	1.98
Feb 26	1.95	1.96	1.97	1.97	1.97	1.98	1.98	1.98	1.99	S	1.99	1.98	1.99	1.99	1.98	1.98	1.99	1.99	1.99	2.00	2.00	2.00	2.01	2.06	1.95	2.06	1.99
Feb 27	2.05	2.08	2.07	2.10	2.09	2.11	2.15	2.33	S	2.30	2.06	2.02	2.00	1.99	1.99	2.00	2.00	2.00	2.00	1.97	2.02	2.04	2.05	2.07	1.97	2.33	2.06
Feb 28	2.07	2.11	2.11	2.13	2.10	2.06	2.07	S	2.07	2.06	2.05	2.02	1.99	1.98	1.96	1.95	1.93	1.94	1.94	1.92	1.92	1.91	1.91	1.93	1.91	2.13	2.01
Feb 29	1.93	1.97	1.97	1.97	1.97	1.97	S	1.96	1.95	1.96	1.96	1.96	1.96	1.95	1.96	1.95	1.95	1.95	1.98	1.97	1.96	1.97	1.96	1.99	1.93	1.99	1.96
Diurnal Maximum	2.31	2.37	2.32	2.42	2.42	2.58	2.54	2.54	2.59	2.41	2.39	2.32	2.22	2.36	2.11	2.14	2.15	2.18	2.22	2.26	2.23	2.28	2.25	2.31			
Diurnal Average	2.10	2.12	2.12	2.13	2.13	2.14	2.14	2.15	2.14	2.13	2.09	2.07	2.05	2.05	2.03	2.03	2.03	2.04	2.05	2.07	2.07	2.07	2.07	2.10			

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.



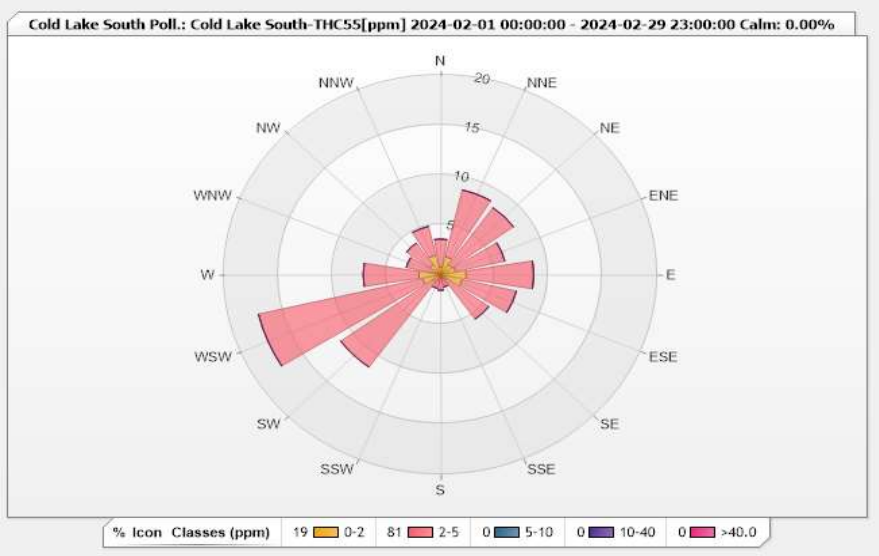


Station: Cold Lake South Poll.: Cold Lake South-THC55[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 92.24% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0.78	2.8	0	0	0	3.58
NNE	1.87	6.85	0	0	0	8.72
NE	1.25	7.01	0	0	0	8.26
ENE	1.4	4.67	0	0	0	6.07
E	2.34	6.23	0	0	0	8.57
ESE	2.02	5.14	0	0	0	7.16
SE	0.47	4.98	0	0	0	5.45
SSE	0	1.25	0	0	0	1.25
S	0	1.56	0	0	0	1.56
SSW	0.31	1.09	0	0	0	1.4
SW	0.78	10.59	0	0	0	11.37
WSW	1.71	15.58	0	0	0	17.29
W	2.02	5.14	0	0	0	7.16
WNW	0.31	2.96	0	0	0	3.27
NW	1.25	2.65	0	0	0	3.9
NNW	2.02	2.96	0	0	0	4.98
Summary	18.53	81.46	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

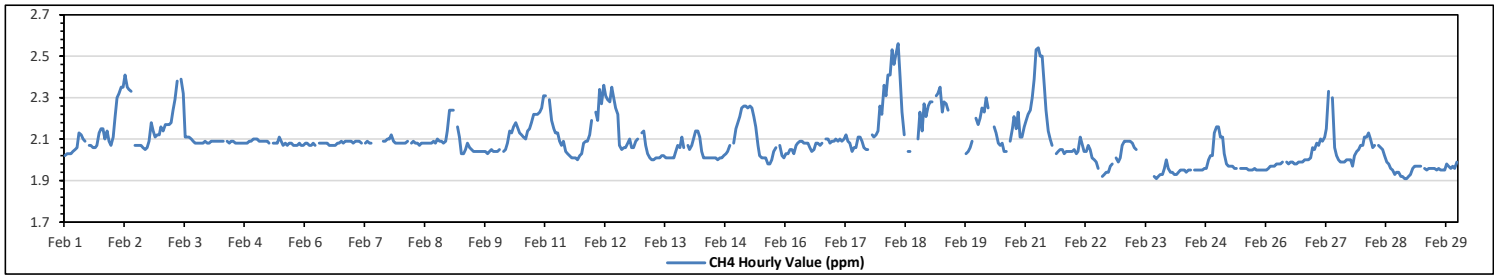
METHANE (CH4) in ppm

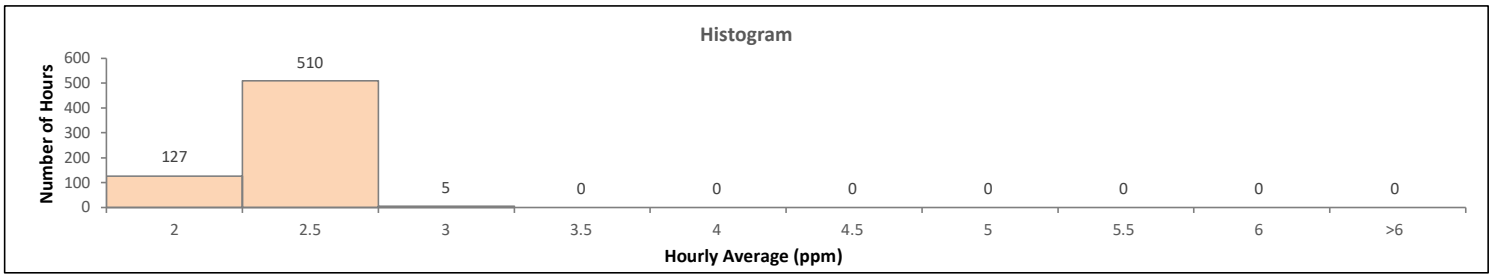
Maximum Hourly Value:	2.56	ppm	on Feb 18 at hr 8	Hours in Service:	696	
Maximum Daily Value:	2.28	ppm	on Feb 18	Hours of Data:	642	
Minimum Hourly Value:	1.91	ppm	on Feb 23 at hr 17	Hours of Missing Data:	20	
Minimum Daily Value:	1.96	ppm	on Feb 29	Hours of Calibration:	34	
Monthly Average:	2.09	ppm		Operational Uptime:	97.1	

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	2.02	2.03	2.03	2.03	2.04	2.05	2.06	2.13	2.12	2.10	2.09	S	2.07	2.07	2.06	2.06	2.07	2.13	2.15	2.15	2.10	2.14	2.09	2.07	2.02	2.15	2.08
Feb 2	2.11	2.21	2.30	2.32	2.35	2.35	2.41	2.35	2.34	2.33	S	2.07	2.07	2.07	2.07	2.06	2.05	2.06	2.09	2.18	2.14	2.11	2.12	2.12	2.05	2.41	2.19
Feb 3	2.16	2.14	2.17	2.17	2.17	2.18	2.24	2.29	2.38	S	2.39	2.32	2.11	2.11	2.11	2.10	2.09	2.08	2.08	2.08	2.08	2.08	2.09	2.08	2.08	2.39	2.16
Feb 4	2.08	2.09	2.09	2.09	2.09	2.09	2.09	2.09	S	2.09	2.08	2.09	2.09	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.09	2.09	2.10	2.10	2.08	2.10	2.09
Feb 5	2.10	2.09	2.09	2.09	2.09	2.09	2.08	S	2.08	2.08	2.08	2.11	2.09	2.07	2.08	2.07	2.08	2.08	2.07	2.07	2.07	2.08	2.07	2.07	2.07	2.11	2.08
Feb 6	2.08	2.08	2.07	2.07	2.08	2.07	S	2.08	2.08	2.08	2.08	2.08	2.07	2.07	2.07	2.07	2.08	2.08	2.09	2.08	2.09	2.09	2.09	2.09	2.07	2.09	2.08
Feb 7	2.08	2.09	2.09	2.09	2.08	S	2.08	2.09	2.08	2.08	C	C	C	C	C	2.09	2.09	2.10	2.10	2.12	2.09	2.08	2.08	2.08	2.08	2.12	2.09
Feb 8	2.08	2.08	2.08	2.09	S	2.08	2.09	2.08	2.08	2.07	2.08	2.08	2.08	2.08	2.08	2.08	2.09	2.08	2.10	2.09	2.09	2.08	2.09	2.14	2.07	2.14	2.09
Feb 9	2.24	2.24	2.24	S	2.16	2.11	2.03	2.03	2.05	2.08	2.06	2.05	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.03	2.04	2.05	2.04	2.04	2.03	2.24	2.08
Feb 10	2.04	2.05	S	2.04	2.05	2.08	2.14	2.13	2.16	2.18	2.16	2.13	2.12	2.11	2.10	2.14	2.15	2.18	2.22	2.22	2.22	2.23	2.25	2.31	2.04	2.31	2.15
Feb 11	2.31	S	2.29	2.19	2.15	2.13	2.13	2.09	2.07	2.09	2.04	2.03	2.02	2.01	2.01	2.01	2.00	2.02	2.03	2.08	2.09	2.09	2.12	2.19	2.00	2.31	2.10
Feb 12	S	2.23	2.19	2.34	2.27	2.36	2.31	2.29	2.28	2.35	2.30	2.25	2.22	2.07	2.05	2.06	2.06	2.08	2.10	2.06	2.06	2.09	2.10	S	2.05	2.36	2.19
Feb 13	2.13	2.14	2.07	2.03	2.01	2.00	2.00	2.01	2.01	2.01	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.04	2.07	2.06	2.11	2.06	S	2.07	2.00	2.14	2.04
Feb 14	2.05	2.07	2.11	2.14	2.14	2.11	2.04	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.00	2.01	2.01	2.02	2.03	2.04	2.07	S	2.08	2.15	2.00	2.15	2.05
Feb 15	2.18	2.21	2.25	2.26	2.26	2.25	2.26	2.25	2.21	2.16	2.07	2.02	2.01	2.01	2.01	1.98	1.98	2.00	2.04	2.06	S	2.07	2.02	2.01	1.98	2.26	2.11
Feb 16	2.03	2.03	2.05	2.05	2.03	2.07	2.08	2.09	2.09	2.08	2.08	2.08	2.06	2.04	2.05	2.08	2.08	2.07	2.08	S	2.10	2.10	2.08	2.09	2.03	2.10	2.07
Feb 17	2.09	2.10	2.09	2.10	2.09	2.10	2.12	2.09	2.08	2.04	2.06	2.06	2.11	2.11	2.09	2.06	2.05	2.05	S	2.12	2.11	2.12	2.14	2.26	2.04	2.26	2.10
Feb 18	2.22	2.36	2.31	2.41	2.41	2.53	2.46	2.51	**2.56**	2.40	2.23	2.12	X	2.04	2.04	X	2.02	S	2.10	2.23	2.14	2.27	2.21	2.26	2.02	**2.56**	**2.28**
Feb 19	2.28	2.28	X	2.31	2.32	2.35	2.23	2.28	2.27	2.24	X	X	X	2.36	X	2.07	S	X	2.03	2.04	2.06	2.09	X	2.20	2.03	2.36	NA
Feb 20	2.17	2.20	2.25	2.23	2.30	2.25	NRM	NRM	2.16	2.13	2.08	2.07	2.08	2.04	2.04	S	2.09	2.15	2.21	2.15	2.23	2.11	2.11	2.16	2.04	2.30	2.15
Feb 21	2.19	2.22	2.24	2.30	2.39	2.53	2.54	2.50	2.50	2.35	2.24	2.14	2.10	2.07	S	2.03	2.04	2.05	2.05	2.03	2.04	2.04	2.04	2.04	2.03	2.54	2.20
Feb 22	2.05	2.03	2.04	2.11	2.07	2.04	2.04	2.07	2.05	2.01	2.00	1.99	1.96	S	1.92	1.93	1.94	1.94	1.97	1.98	X	2.01	1.99	2.01	1.92	2.11	2.01
Feb 23	2.07	2.09	2.09	2.09	2.09	2.08	2.06	2.05	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	1.92	1.91	1.92	1.93	1.93	1.96	2.00	1.96	1.91	2.09	NA
Feb 24	1.94	1.94	1.93	1.93	1.94	1.95	1.95	1.95	1.94	1.95	1.95	S	1.95	1.95	1.95	1.95	1.95	1.96	1.96	2.00	2.02	2.02	2.13	2.16	1.93	2.16	1.97
Feb 25	2.16	2.11	2.11	2.03	1.98	1.97	1.97	1.97	1.96	1.96	S	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.95	1.95	1.95	1.95	1.95	1.95	2.16	1.98
Feb 26	1.95	1.96	1.97	1.97	1.97	1.98	1.98	1.98	1.99	S	1.99	1.98	1.99	1.99	1.98	1.98	1.99	1.99	1.99	2.00	2.00	2.00	2.01	2.06	1.95	2.06	1.99
Feb 27	2.05	2.08	2.07	2.10	2.09	2.11	2.15	2.33	S	2.30	2.06	2.02	2.00	1.99	1.99	1.99	2.00	2.00	2.00	1.97	2.02	2.04	2.05	2.07	1.97	2.33	2.06
Feb 28	2.07	2.11	2.11	2.13	2.10	2.06	2.07	S	2.07	2.06	2.05	2.02	1.99	1.98	1.96	1.95	1.93	1.94	1.94	1.92	1.92	1.91	1.91	1.92	1.91	2.13	2.01
Feb 29	1.93	1.96	1.97	1.97	1.97	1.97	S	1.96	1.95	1.96	1.96	1.96	1.96	1.95	1.96	1.95	1.95	1.95	1.98	1.97	1.96	1.97	1.96	1.99	1.93	1.99	1.96
Diurnal Maximum	2.31	2.36	2.31	2.41	2.41	2.53	2.54	2.51	2.56	2.40	2.39	2.32	2.22	2.36	2.11	2.14	2.15	2.18	2.22	2.23	2.23	2.27	2.25	2.31			
Diurnal Average	2.10	2.12	2.12	2.13	2.13	2.14	2.14	2.14	2.14	2.12	2.09	2.07	2.05	2.05	2.03	2.03	2.03	2.04	2.05	2.06	2.07	2.07	2.07	2.09			

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.



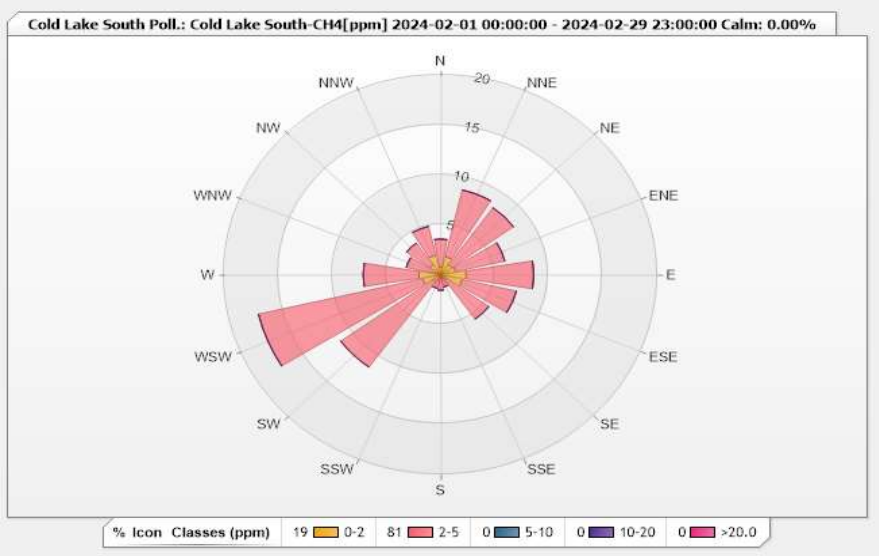


Station: Cold Lake South Poll.: Cold Lake South-CH4[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 92.24% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0.78	2.8	0	0	0	3.58
NNE	1.87	6.85	0	0	0	8.72
NE	1.25	7.01	0	0	0	8.26
ENE	1.4	4.67	0	0	0	6.07
E	2.34	6.23	0	0	0	8.57
ESE	2.02	5.14	0	0	0	7.16
SE	0.47	4.98	0	0	0	5.45
SSE	0	1.25	0	0	0	1.25
S	0	1.56	0	0	0	1.56
SSW	0.31	1.09	0	0	0	1.4
SW	0.78	10.59	0	0	0	11.37
WSW	1.71	15.58	0	0	0	17.29
W	2.02	5.14	0	0	0	7.16
WNW	0.31	2.96	0	0	0	3.27
NW	1.25	2.65	0	0	0	3.9
NNW	2.02	2.96	0	0	0	4.98
Summary	18.53	81.46	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

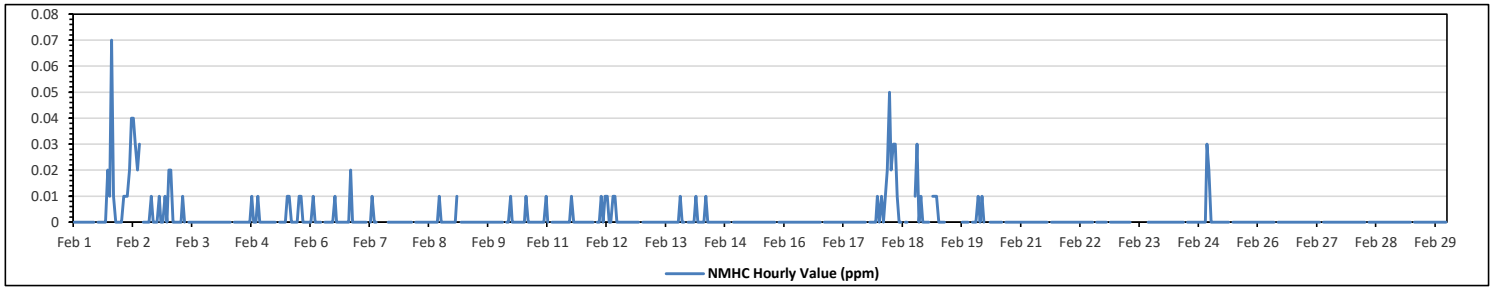
NON-METHANE HYDROCARBONS (NMHC) in ppm

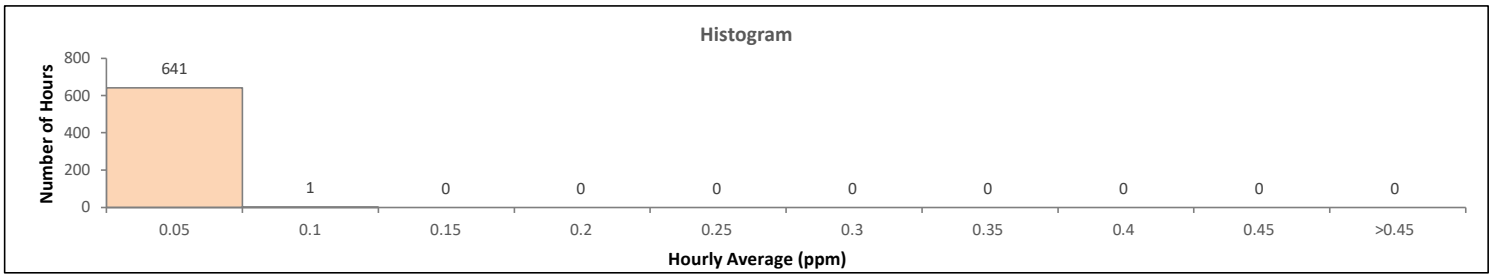
Maximum Hourly Value:	0.07	ppm	on Feb 1 at hr 19	Hours in Service:	696
Maximum Daily Value:	0.01	ppm	on Feb 18	Hours of Data:	642
Minimum Hourly Value:	0.00	ppm	on Feb 1 at hr 0	Hours of Missing Data:	20
Minimum Daily Value:	0.00	ppm	on Feb 15	Hours of Calibration:	34
Monthly Average:	0.00	ppm		Operational Uptime:	97.1

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	0.00	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	0.02	0.01	**0.07**	0.01	0.00	0.00	0.00	0.00	**0.07**	0.00
Feb 2	0.00	0.01	0.01	0.01	0.02	0.04	0.04	0.03	0.02	0.03	S	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.04	0.01
Feb 3	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.01	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	0.02	0.00
Feb 4	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	0.00	0.01	0.00	0.00	0.00	0.01	0.00
Feb 5	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	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Feb 6	0.00	0.01	0.00	0.00	0.00	0.00	S	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	0.02	0.00	0.00	0.00	0.00	0.02	0.00
Feb 7	0.00	0.00	0.00	0.00	0.00	S	0.00	0.01	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	0.01	0.00
Feb 8	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Feb 9	0.00	0.00	0.01	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	0.01	0.00
Feb 10	0.00	0.00	S	0.00	0.00	0.01	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	0.01	0.00	0.01	0.00
Feb 11	0.00	S	0.00	0.00	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	0.00	0.01	0.00
Feb 12	S	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.01	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	S	0.00	0.01	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	0.01	0.00	0.00	S	0.00	0.00	0.01	0.00
Feb 14	0.00	0.00	0.00	0.01	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	S	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	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 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	S	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	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00
Feb 18	0.00	0.01	0.00	0.01	0.02	0.05	0.02	0.03	0.03	0.01	0.00	0.00	X	0.00	0.00	X	0.00	S	0.01	0.03	0.00	0.01	0.00	0.00	0.00	0.05	**0.01**
Feb 19	0.00	0.00	X	0.01	0.01	0.01	0.00	0.00	0.00	0.00	X	X	X	0.00	X	0.00	S	X	0.00	0.00	0.00	0.00	X	0.00	0.00	0.01	NA
Feb 20	0.00	0.00	0.01	0.00	0.01	0.00	NRM	NRM	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 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	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 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	S	0.00	0.00	0.00	0.00	0.00	0.00	X	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	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
Feb 24	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	0.03	0.02	0.00	0.03	0.00
Feb 25	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 26	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 27	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 28	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 29	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
Diurnal Maximum	0.02	0.02	0.01	0.01	0.02	0.05	0.04	0.03	0.03	0.03	0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.02	0.01	0.07	0.02	0.01	0.03	0.02			
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.



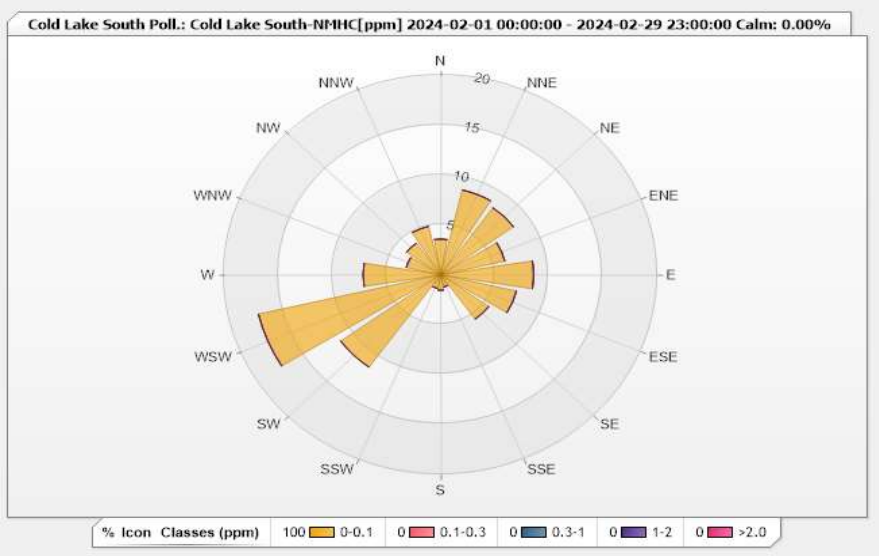


Station: Cold Lake South Poll.: Cold Lake South-NMHC[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 92.24% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	3.58	0	0	0	0	3.58
NNE	8.72	0	0	0	0	8.72
NE	8.26	0	0	0	0	8.26
ENE	6.07	0	0	0	0	6.07
E	8.57	0	0	0	0	8.57
ESE	7.17	0	0	0	0	7.17
SE	5.45	0	0	0	0	5.45
SSE	1.25	0	0	0	0	1.25
S	1.56	0	0	0	0	1.56
SSW	1.4	0	0	0	0	1.4
SW	11.37	0	0	0	0	11.37
WSW	17.29	0	0	0	0	17.29
W	7.17	0	0	0	0	7.17
WNW	3.27	0	0	0	0	3.27
NW	3.89	0	0	0	0	3.89
NNW	4.98	0	0	0	0	4.98
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

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

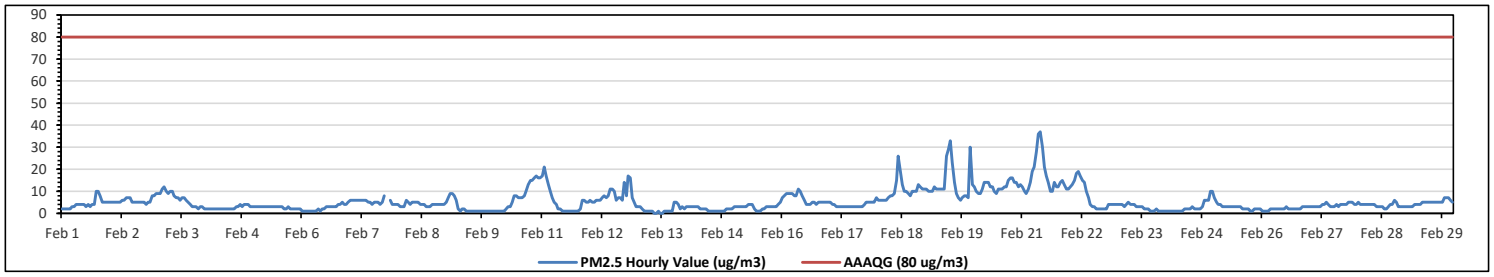
Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0

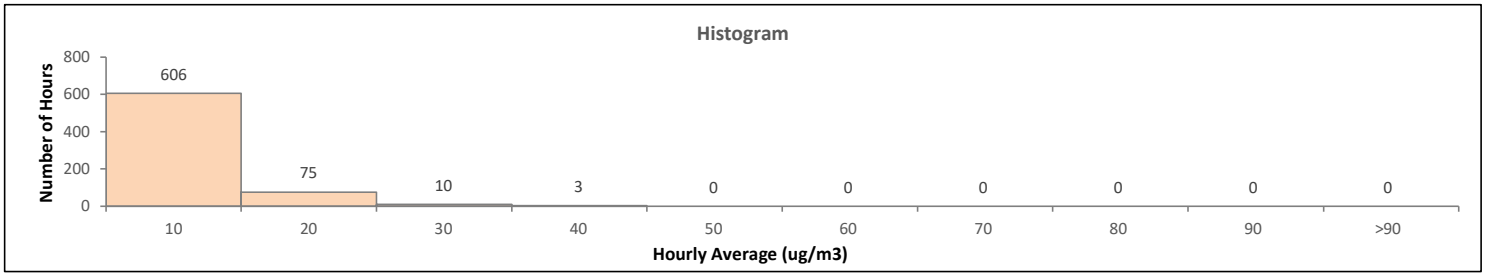
Maximum Hourly Value:	37	µg/m^3 on Feb 21 at hr 9	Hours in Service:	696	
Maximum Daily Value:	16.7	µg/m^3 on Feb 21	Hours of Data:	694	
Minimum Hourly Value:	0	µg/m^3 on Feb 13 at hr 8	Hours of Missing Data:	0	
Minimum Daily Value:	2	µg/m^3 on Feb 13	Hours of Calibration:	2	
Monthly Average:	5.4	µg/m^3	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	2	2	2	2	2	3	3	4	4	4	4	4	3	4	3	4	4	10	10	8	5	5	5	5	2	10	4.3
Feb 2	5	5	5	5	5	5	6	6	7	7	7	5	5	5	5	5	5	5	4	5	5	8	8	9	4	9	5.7
Feb 3	9	9	11	12	10	9	10	10	8	7	7	6	7	7	6	5	4	3	3	3	2	3	3	2	2	12	6.5
Feb 4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	3	4	4	4	3	3	2	4	2.5
Feb 5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	3	2	2	2	2	2	2	2	3	2.7
Feb 6	1	1	1	1	1	1	1	1	2	1	2	2	3	3	3	3	3	3	4	4	5	4	4	5	1	5	2.5
Feb 7	6	6	6	6	6	6	6	6	6	5	5	4	5	5	5	4	5	8	C	C	6	4	4	4	4	8	5.4
Feb 8	4	3	3	3	6	5	4	5	5	5	5	4	4	4	3	3	3	4	4	4	4	4	4	4	3	6	4.0
Feb 9	5	7	9	9	8	6	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	9	2.7
Feb 10	1	1	1	1	1	1	2	3	3	5	8	8	7	7	7	8	10	13	15	15	16	17	16	16	1	17	7.6
Feb 11	17	21	17	13	10	7	5	4	2	2	1	1	1	1	1	1	1	1	1	2	6	6	5	5	1	21	5.5
Feb 12	6	5	5	6	6	6	7	8	7	8	11	11	10	6	7	7	6	14	8	17	16	7	5	3	3	17	8.0
Feb 13	3	3	2	1	1	1	1	1	0	0	1	0	0	1	1	1	1	1	5	5	4	2	3	2	**0**	5	**1.7**
Feb 14	3	3	3	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	1	3	1.9
Feb 15	3	3	3	3	3	3	3	4	4	4	2	1	1	1	2	2	3	3	3	3	3	3	4	5	1	5	2.9
Feb 16	7	8	9	9	9	9	8	8	11	10	8	6	4	4	4	5	5	4	5	5	5	5	5	5	4	11	6.6
Feb 17	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	5	5	5	5	5	7	3	7	3.8
Feb 18	6	6	6	6	6	7	8	8	9	15	26	19	13	10	10	9	8	10	10	10	13	12	11	11	6	26	10.4
Feb 19	11	10	10	10	12	11	11	11	11	11	26	29	33	23	14	9	7	6	7	8	8	7	30	13	6	33	13.7
Feb 20	12	10	9	9	11	14	14	14	12	12	10	9	11	11	11	12	12	15	16	16	14	14	12	13	9	16	12.2
Feb 21	12	10	9	11	14	19	21	28	36	37	30	21	17	14	10	10	14	12	12	14	15	13	11	11	9	**37**	**16.7**
Feb 22	12	13	15	18	19	17	15	14	10	7	4	3	3	2	2	2	2	2	2	4	4	4	4	4	2	19	7.6
Feb 23	4	4	4	3	4	5	4	4	4	3	3	3	3	2	2	2	1	1	1	2	1	1	1	1	1	5	2.6
Feb 24	1	1	1	1	1	1	1	1	1	2	2	2	2	3	2	2	2	2	3	6	6	6	10	10	1	10	2.9
Feb 25	7	5	4	4	3	3	3	3	3	3	3	3	3	3	2	2	2	2	1	1	2	2	2	2	1	7	2.8
Feb 26	1	1	1	1	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	3	3	3	3	1	3	2.0
Feb 27	3	3	3	3	3	3	4	4	5	4	3	3	3	4	3	4	4	4	4	5	5	5	4	4	3	5	3.8
Feb 28	5	4	4	4	4	4	4	4	4	3	3	3	3	2	2	3	4	4	6	5	3	3	3	3	2	6	3.6
Feb 29	3	3	3	3	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	7	7	7	6	5	3	7	4.8
Diurnal Maximum	17	21	17	18	19	19	21	28	36	37	30	29	33	23	14	12	14	15	16	17	16	17	30	16			
Diurnal Average	5.5	5.4	5.3	5.3	5.6	5.6	5.5	5.8	6.0	6.0	6.5	5.7	5.5	4.8	4.2	4.1	4.2	5.1	5.1	5.9	5.9	5.5	6.1	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: 02-2024

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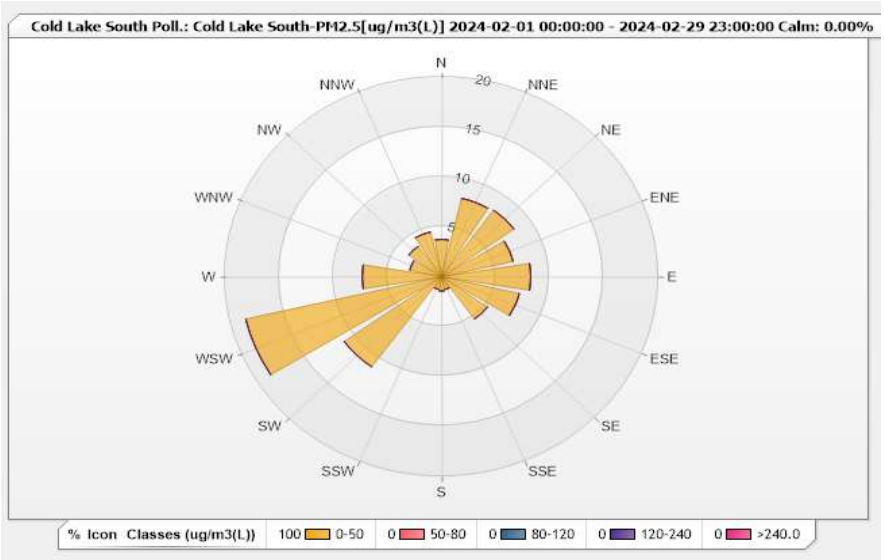
Type: Pollution Rose
Direction: Blowing From (Wind Frequency)
Time Base: 1 - Hour

Calm: 0.00% Valid Data: 99.71% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	3.75	0	0	0	0	3.75
NNE	8.07	0	0	0	0	8.07
NE	8.21	0	0	0	0	8.21
ENE	6.77	0	0	0	0	6.77
E	8.21	0	0	0	0	8.21
ESE	7.35	0	0	0	0	7.35
SE	5.19	0	0	0	0	5.19
SSE	1.3	0	0	0	0	1.3
S	1.44	0	0	0	0	1.44
SSW	1.3	0	0	0	0	1.3
SW	11.1	0	0	0	0	11.1
WSW	18.59	0	0	0	0	18.59
W	7.35	0	0	0	0	7.35
WNW	3.03	0	0	0	0	3.03
NW	3.75	0	0	0	0	3.75
NNW	4.61	0	0	0	0	4.61
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

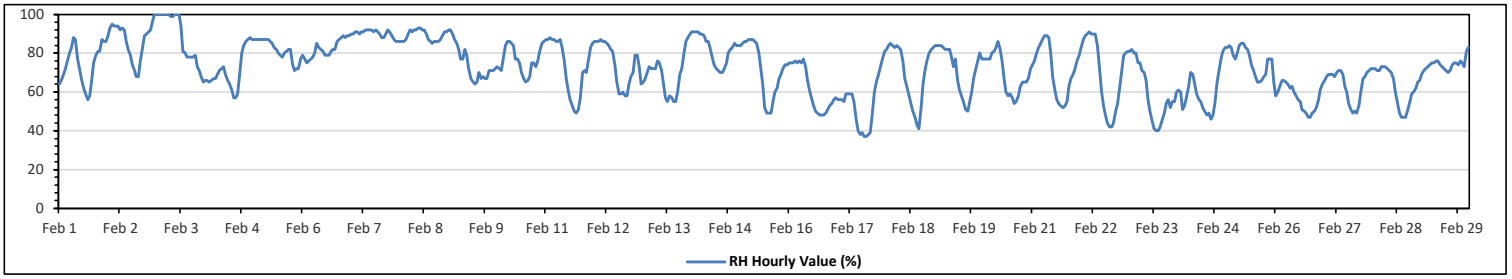
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100	%	on Feb 2 at hr 23	Hours in Service:	696	
Maximum Daily Value:	90.1	%	on Feb 7	Hours of Data:	696	
Minimum Hourly Value:	37	%	on Feb 17 at hr 13	Hours of Missing Data:	0	
Minimum Daily Value:	54.2	%	on Feb 17	Hours of Calibration:	0	
Monthly Average:	72.6	%		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	64	66	69	72	76	80	83	88	87	77	71	66	62	59	56	58	66	75	79	81	81	87	86	86	56	88	74.0
Feb 2	89	93	95	94	94	94	92	93	92	86	82	79	74	71	68	68	76	83	89	90	91	92	97	**100**	68	**100**	86.8
Feb 3	**100**	**100**	**100**	**100**	**100**	**100**	**100**	99	99	**100**	**100**	**100**	94	81	80	78	78	78	78	79	73	71	68	65	65	**100**	88.4
Feb 4	66	66	65	66	67	67	69	71	72	73	69	66	64	61	57	57	59	70	80	84	86	87	88	87	57	88	70.7
Feb 5	87	87	87	87	87	87	87	87	86	85	83	82	80	79	78	80	81	82	82	74	71	72	72	77	71	87	81.7
Feb 6	79	77	75	76	77	78	80	85	83	82	81	79	79	79	81	82	82	86	87	88	89	88	89	89	75	89	82.1
Feb 7	90	90	91	91	90	91	91	92	92	92	92	91	92	91	90	88	88	90	92	91	89	87	86	86	86	92	**90.1**
Feb 8	86	86	86	87	90	92	91	92	92	93	93	92	92	90	87	86	85	86	86	86	87	89	91	91	85	93	89.0
Feb 9	92	92	90	87	85	82	77	77	82	79	72	67	65	64	65	70	67	68	67	67	71	71	71	72	64	92	75.0
Feb 10	73	72	71	77	84	86	86	85	84	77	77	75	70	67	65	66	68	75	75	73	76	81	85	86	65	86	76.4
Feb 11	87	87	88	87	87	86	86	87	83	76	67	61	56	53	50	49	51	57	70	71	70	77	83	85	49	88	73.1
Feb 12	86	86	86	87	86	86	85	84	82	81	74	65	59	59	60	58	58	64	68	70	79	79	73	64	58	87	74.1
Feb 13	65	67	70	73	72	72	72	76	75	71	64	57	55	58	57	55	55	60	69	72	79	86	88	90	55	90	69.1
Feb 14	91	91	91	91	90	90	89	86	86	83	78	74	72	71	70	70	72	75	80	82	83	85	84	84	70	91	82.0
Feb 15	84	85	86	86	87	87	87	86	85	80	72	64	52	49	49	49	55	60	62	67	69	72	74	74	49	87	71.7
Feb 16	75	75	75	76	75	76	75	77	73	66	61	57	53	50	49	48	48	48	49	51	53	54	56	57	48	77	61.5
Feb 17	56	56	56	55	59	59	59	59	55	46	40	38	39	**37**	**37**	38	39	48	60	65	69	73	77	81	**37**	81	**54.2**
Feb 18	82	84	85	84	83	84	83	82	76	67	63	59	54	50	47	43	41	52	64	71	76	80	82	83	41	85	69.8
Feb 19	84	84	84	84	83	82	82	82	78	73	77	66	61	58	55	51	50	55	60	67	72	76	80	77	50	84	71.7
Feb 20	77	77	77	77	80	81	83	86	82	76	66	60	58	59	57	54	55	58	63	65	65	65	67	72	54	86	69.2
Feb 21	74	76	80	83	85	87	89	89	88	80	68	61	56	54	53	52	53	55	63	67	69	72	76	79	52	89	71.2
Feb 22	83	87	89	90	91	90	90	90	84	73	60	53	48	44	42	42	44	50	54	63	71	79	80	81	42	91	69.9
Feb 23	81	82	80	80	75	75	71	70	66	56	50	45	41	40	40	42	46	49	54	56	52	55	55	60	40	82	59.2
Feb 24	61	60	51	53	57	63	70	69	64	59	56	55	52	50	48	49	46	48	54	65	71	77	81	83	46	83	60.1
Feb 25	83	84	83	79	77	80	84	85	85	83	82	79	74	71	68	65	65	66	68	69	77	77	77	65	65	85	76.1
Feb 26	58	60	63	66	66	65	64	62	63	60	58	56	55	51	50	49	47	47	49	50	52	56	61	64	47	66	57.2
Feb 27	66	68	69	69	69	68	70	71	71	69	63	60	54	51	49	50	49	53	61	67	68	70	71	72	49	72	63.7
Feb 28	72	72	71	71	73	73	73	72	71	70	67	60	54	49	47	47	47	51	54	59	60	62	65	66	47	73	62.8
Feb 29	69	71	72	73	74	75	75	76	76	74	73	72	71	70	71	74	75	75	74	76	75	73	81	83	69	83	74.1
Diurnal Maximum	100	100	100	100	100	100	100	99	99	100	100	100	94	91	90	88	88	90	92	91	91	92	97	100			
Diurnal Average	77.9	78.7	78.8	79.3	80.0	80.6	80.8	81.3	79.7	75.4	71.0	66.9	63.3	60.9	59.5	59.2	60.2	64.3	68.7	71.2	73.2	75.6	77.4	77.9			

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.



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

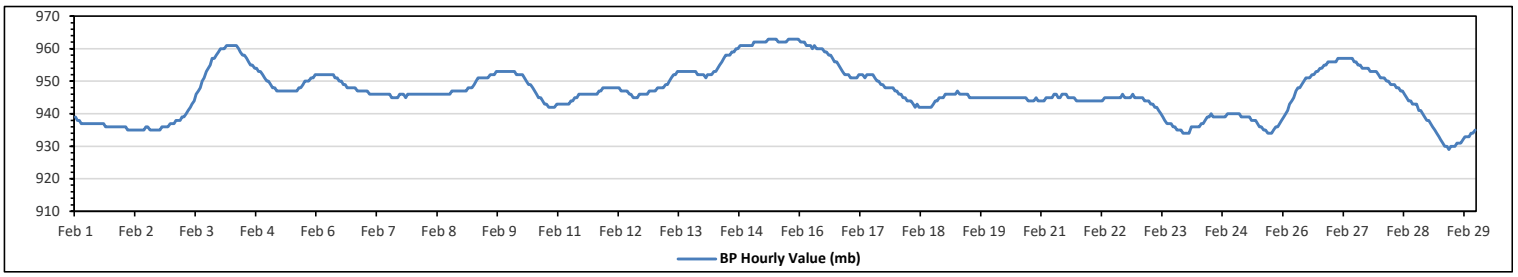
BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	963	mb	on Feb 15 at hr 8	Hours in Service:	696	
Maximum Daily Value:	962	mb	on Feb 15	Hours of Data:	696	
Minimum Hourly Value:	929	mb	on Feb 29 at hr 10	Hours of Missing Data:	0	
Minimum Daily Value:	933	mb	on Feb 29	Hours of Calibration:	0	
Monthly Average:	947	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	939	938	938	937	937	937	937	937	937	937	937	937	937	937	937	936	936	936	936	936	936	936	936	936	936	939	937
Feb 2	936	936	935	935	935	935	935	935	935	935	935	936	936	935	935	935	935	935	935	936	936	936	936	937	935	937	935
Feb 3	937	937	938	938	938	939	939	940	941	942	943	944	946	947	948	950	951	953	954	955	957	957	958	959	937	959	946
Feb 4	960	960	960	961	961	961	961	961	961	960	959	958	958	957	956	955	955	954	954	953	953	952	951	950	950	961	957
Feb 5	950	949	948	948	947	947	947	947	947	947	947	947	947	947	947	948	948	949	950	950	950	951	951	952	947	952	948
Feb 6	952	952	952	952	952	952	952	952	952	951	951	950	950	949	949	948	948	948	948	948	947	947	947	947	947	952	950
Feb 7	947	947	946	946	946	946	946	946	946	946	946	946	946	945	945	945	945	946	946	946	945	946	946	946	945	947	946
Feb 8	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	947	947	947	947	947	946	947	946
Feb 9	947	947	947	948	948	948	949	950	951	951	951	951	951	951	952	952	952	953	953	953	953	953	953	953	947	953	951
Feb 10	953	953	953	952	952	952	952	951	950	949	949	948	947	946	945	945	944	943	943	942	942	942	942	943	942	953	947
Feb 11	943	943	943	943	943	943	944	944	945	945	946	946	946	946	946	946	946	946	946	946	947	947	948	948	943	948	945
Feb 12	948	948	948	948	948	948	948	947	947	947	947	946	946	945	945	945	946	946	946	946	946	947	947	947	945	948	947
Feb 13	947	948	948	948	948	949	949	950	951	952	952	953	953	953	953	953	953	953	953	953	953	952	952	952	947	953	951
Feb 14	952	951	952	952	952	953	953	954	955	956	957	958	958	958	959	959	960	960	961	961	961	961	961	961	951	961	957
Feb 15	961	962	962	962	962	962	962	962	**963**	**963**	**963**	**963**	**963**	962	962	962	962	962	**963**	**963**	**963**	**963**	**963**	**963**	961	**963**	**962**
Feb 16	962	962	962	961	961	961	960	961	960	960	960	960	959	959	958	958	957	956	956	955	954	953	952	952	952	962	958
Feb 17	952	951	951	951	951	952	952	952	951	952	952	952	952	951	950	950	949	949	948	948	948	948	948	947	947	952	950
Feb 18	947	946	946	945	945	944	944	944	943	942	943	942	942	942	942	942	942	942	943	944	944	945	945	945	942	947	944
Feb 19	946	946	946	946	946	946	947	946	946	946	946	946	945	945	945	945	945	945	945	945	945	945	945	945	945	947	946
Feb 20	945	945	945	945	945	945	945	945	945	945	945	945	945	945	945	945	945	944	944	944	944	945	944	944	944	945	945
Feb 21	944	944	945	945	945	945	946	946	945	945	946	946	946	945	945	945	945	944	944	944	944	944	944	944	944	946	945
Feb 22	944	944	944	944	944	944	944	945	945	945	945	945	945	945	945	945	946	945	945	945	945	946	945	945	944	946	945
Feb 23	945	945	945	944	944	944	943	943	942	942	941	940	939	938	937	937	937	936	936	935	935	935	934	934	934	945	940
Feb 24	934	934	936	936	936	936	936	937	937	938	939	939	940	939	939	939	939	939	939	939	940	940	940	940	934	940	938
Feb 25	940	940	940	939	939	939	939	939	938	938	938	937	936	936	935	935	934	934	934	935	936	936	937	938	934	940	937
Feb 26	939	940	941	943	944	945	947	948	948	949	950	951	951	951	952	952	953	953	954	954	955	955	956	956	939	956	949
Feb 27	956	956	956	957	957	957	957	957	957	957	957	956	956	955	955	954	954	954	954	953	953	953	953	952	952	957	955
Feb 28	951	951	951	950	950	949	949	949	948	948	947	947	946	945	944	944	943	943	943	941	941	940	939	938	938	951	946
Feb 29	938	937	936	935	934	933	932	931	930	930	**929**	930	930	930	931	931	931	932	933	933	933	934	934	935	**929**	938	**933**
Diurnal Maximum	962	962	962	962	962	962	962	962	963	963	963	963	963	962	962	962	962	962	963	963	963	963	963	963			
Diurnal Average	947	947	947	947	947	947	947	947	947	947	947	947	947	947	946	946	946	946	947	947	947	947	947	947			

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 2024

Summary of Hourly Averages

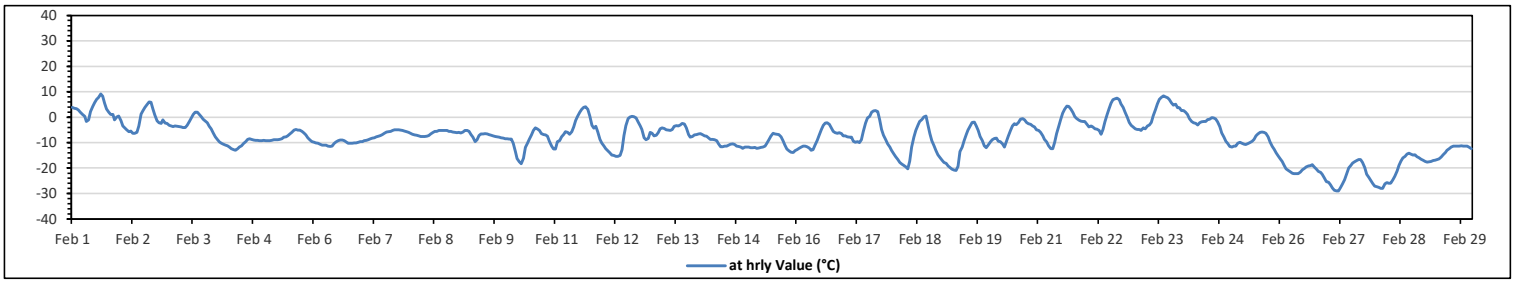
AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	9.1	°C	on Feb 1 at hr 14	Hours in Service:	696	
Maximum Daily Value:	2.9	°C	on Feb 1	Hours of Data:	696	
Minimum Hourly Value:	-29.0	°C	on Feb 27 at hr 4	Hours of Missing Data:	0	
Minimum Daily Value:	-23.1	°C	on Feb 27	Hours of Calibration:	0	
Monthly Average:	-7.9	°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	3.9	3.5	3.3	2.8	2	1.1	0.3	-1.7	-1.1	2.3	4.2	5.7	7	7.8	**9.1**	8.2	5.5	3.2	1.9	1.1	1.1	-1.1	0.1	0.4	-1.7	**9.1**	**2.9**
Feb 2	-1.3	-3.5	-4.2	-4.9	-5.7	-5.4	-6.3	-6.3	-6	-3.4	1.2	2.7	3.9	4.9	6	5.8	3.2	0.9	-1.4	-2.2	-2.5	-1.1	-2.3	-2.5	-6.3	6.0	-1.3
Feb 3	-3.2	-3.5	-3.7	-3.5	-3.6	-3.7	-3.8	-4	-4	-3.2	-1.6	-0.3	1.1	2	1.9	1.1	0.2	-0.8	-1.5	-2.2	-3.6	-4.5	-6.3	-7.7	-7.7	2.0	-2.4
Feb 4	-8.9	-9.7	-10.2	-10.6	-10.9	-11.2	-11.7	-12.3	-12.8	-13	-12.3	-11.8	-11.2	-10.4	-9.5	-8.7	-8.5	-8.7	-9	-9.1	-9.1	-9.2	-9.2	-9.1	-13.0	-8.5	-10.3
Feb 5	-9.2	-9.3	-9.3	-9.1	-8.9	-8.9	-8.8	-8.7	-8.4	-7.9	-7.7	-7.3	-6.6	-5.9	-5.1	-4.8	-5.1	-5.1	-5.6	-6.2	-6.9	-8	-9	-9.5	-9.5	-4.8	-7.6
Feb 6	-9.8	-10.1	-10.3	-10.6	-10.9	-10.9	-10.9	-11.3	-11.5	-11.4	-10.4	-9.7	-9.3	-9	-9	-9.2	-9.7	-10.2	-10.3	-10.2	-10.1	-10.1	-9.8	-9.5	-11.5	-9.0	-10.2
Feb 7	-9.5	-9.3	-9.1	-8.8	-8.4	-8.2	-8	-7.8	-7.5	-7.2	-6.8	-6.3	-5.8	-5.7	-5.5	-5.2	-5	-4.9	-4.9	-5.1	-5.2	-5.4	-5.7	-6	-9.5	-4.9	-6.7
Feb 8	-6.3	-6.7	-6.9	-7.1	-7.4	-7.6	-7.6	-7.6	-7.5	-7.2	-6.6	-6.1	-5.5	-5.5	-5.2	-5.3	-5.2	-5.3	-5.3	-5.5	-5.6	-5.8	-5.9	-6.1	-7.6	-5.2	-6.3
Feb 9	-5.9	-6.2	-5.8	-5.2	-5.2	-5.5	-6.8	-7.9	-9.6	-8.8	-7.2	-6.6	-6.6	-6.5	-6.6	-6.8	-7	-7.4	-7.6	-7.7	-7.9	-8.1	-8.2	-8.4	-9.6	-5.2	-7.1
Feb 10	-8.4	-8.6	-8.6	-10.2	-13.6	-16.2	-17.5	-18.3	-16.1	-11.9	-10.4	-8.7	-6.9	-5.3	-4.2	-4.6	-5.3	-6.5	-6.8	-6.9	-7.5	-9.4	-11.4	-12.5	-18.3	-4.2	-9.8
Feb 11	-12.5	-9.5	-9.2	-7.7	-6.7	-5.7	-6	-6.7	-5.7	-3.8	-1.3	0.3	1.9	3.1	3.9	4.1	3.1	0.6	-3.2	-4.3	-3.6	-5.7	-8.7	-10.3	-12.5	4.1	-3.9
Feb 12	-11.2	-12.3	-13.3	-14	-14.8	-15	-15.4	-15.4	-15	-12.8	-7.2	-3.3	-0.5	0.1	0.3	0.2	-0.2	-1.8	-3.4	-4.8	-8.1	-8.8	-8.3	-5.9	-15.4	0.3	-8.0
Feb 13	-6.3	-7.3	-7	-6.1	-4.5	-4.1	-4.4	-4.9	-5.1	-5.2	-4.8	-3.6	-3.3	-3.4	-3.1	-2.5	-2.7	-4.1	-6.8	-7.9	-7.6	-6.9	-6.8	-6.6	-7.9	-2.5	-5.2
Feb 14	-6.5	-6.8	-7.3	-7.5	-8	-8.7	-8.7	-8.9	-9.3	-10.4	-11.6	-11.6	-11.3	-11.3	-10.9	-10.6	-10.5	-10.7	-11.3	-11.5	-11.8	-12.2	-11.8	-11.7	-12.2	-6.5	-10.0
Feb 15	-11.8	-12	-12	-11.9	-12.2	-12.1	-11.9	-11.8	-11.4	-10.4	-8.9	-7.5	-6.4	-6.6	-6.7	-6.8	-7.7	-9.3	-10.9	-12.5	-13.3	-13.7	-13.8	-13.1	-13.8	-6.4	-10.6
Feb 16	-12.7	-12.2	-11.8	-11.4	-11.3	-11.6	-12.1	-13	-12.8	-11	-9.1	-7.1	-4.8	-3.2	-2.3	-2.2	-2.8	-4.2	-5.5	-6.1	-6.3	-6.1	-6.5	-7.3	-13.0	-2.2	-8.1
Feb 17	-7.3	-7.7	-7.9	-7.9	-9.4	-9.8	-9.6	-10	-8.8	-5.5	-2.3	-0.3	0.3	1.9	2.5	2.6	2.3	-1	-4.8	-7	-8.9	-10.5	-11.7	-13	-13.0	2.6	-5.6
Feb 18	-14.4	-15.5	-16.6	-17.7	-18.4	-18.8	-19.6	-20.3	-17.3	-11.7	-7.9	-5.3	-3.1	-1.7	-0.9	0.1	0.4	-3	-6.5	-9.2	-11.2	-13.2	-14.7	-15.8	-20.3	0.4	-10.9
Feb 19	-16.9	-17.8	-18.2	-19.1	-19.8	-20.4	-20.8	-20.9	-19.3	-13.5	-11.7	-9.2	-6.7	-5.1	-3.5	-2.1	-1.9	-3.4	-5.2	-7.6	-9.2	-11.2	-12	-10.9	-20.9	-1.9	-11.9
Feb 20	-9.7	-8.8	-8.3	-8.2	-9.4	-9.5	-10.5	-11.7	-9.5	-7.5	-5.2	-3.4	-2.6	-2.9	-2.1	-0.8	-0.6	-1.1	-2	-2.6	-2.8	-3.4	-3.9	-4.9	-11.7	-0.6	-5.5
Feb 21	-5.3	-5.9	-7.3	-8.7	-9.7	-11.2	-12.3	-12.3	-9.8	-6.5	-3.4	-0.8	1.5	3.1	4.3	4.2	3.1	1.8	0.2	-0.6	-1.2	-1.5	-1.7	-1.6	-12.3	4.3	-3.4
Feb 22	-2.8	-3.8	-3.5	-3.8	-4.5	-4.7	-5.3	-6.7	-4.8	-1.8	1.1	3.4	5.4	6.8	7.3	7.5	6.9	5.3	3.9	2	0	-2	-3.2	-3.8	-6.7	7.5	0.0
Feb 23	-4.5	-4.8	-4.8	-5.3	-4.2	-4.6	-3.5	-3.1	-2.1	0.6	3	5.3	7	7.8	8.4	8	7.7	7	5.6	4.7	5.2	3.8	3.7	2.6	-5.3	8.4	1.8
Feb 24	2.7	2	1.1	-0.6	-1.7	-2.2	-2.5	-3.1	-2.2	-1.8	-1.7	-1.6	-1	-0.8	-0.1	-0.3	-0.7	-1.8	-3.7	-6.2	-7.9	-9.4	-10.4	-11.5	-11.5	2.7	-2.7
Feb 25	-11.7	-11.3	-11.3	-10.2	-9.9	-10.2	-10.6	-10.7	-10.4	-10	-9.4	-8.7	-7.3	-6.6	-6	-5.8	-6	-6.4	-7.8	-9.7	-11.5	-12.6	-14	-15.1	-15.1	-5.8	-9.7
Feb 26	-16.3	-17.4	-18.8	-20.2	-20.9	-21.4	-22	-22.2	-22.2	-22.2	-21.5	-20.7	-20.1	-19.5	-19.2	-19	-18.7	-19.5	-20.4	-21.3	-21.6	-22.4	-24	-25.4	-25.4	-16.3	-20.7
Feb 27	-25.5	-26.6	-27.8	-28.7	**-29**	**-29**	-27.7	-26.4	-24.6	-22.4	-20	-19	-18	-17.5	-17	-16.7	-16.7	-17.7	-19.8	-22.4	-23.7	-24.7	-26.1	-27.1	**-29.0**	-16.7	**-23.1**
Feb 28	-27.3	-27.6	-28	-28	-26.2	-25.7	-25.9	-25.9	-24.6	-23.1	-21.2	-18.8	-17.3	-16	-15.4	-14.5	-14.1	-14.6	-14.8	-14.7	-15.5	-15.9	-16.5	-16.9	-28.0	-14.1	-20.4
Feb 29	-17.4	-17.6	-17.5	-17.4	-17.1	-16.9	-16.7	-16.3	-15.6	-14.7	-13.9	-13	-12.4	-11.8	-11.4	-11.3	-11.3	-11.3	-11.2	-11.3	-11.3	-11.4	-11.9	-12.4	-17.6	-11.2	-13.9
Diurnal Maximum	3.9	3.5	3.3	2.8	2.0	1.1	0.3	-1.7	-1.1	2.3	4.2	5.7	7.0	7.8	9.1	8.2	7.7	7.0	5.6	4.7	5.2	3.8	3.7	2.6			
Diurnal Average	-9.5	-9.9	-10.1	-10.4	-10.7	-11.0	-11.3	-11.6	-10.9	-9.2	-7.4	-6.0	-4.8	-4.0	-3.4	-3.3	-3.7	-4.8	-6.1	-7.1	-7.8	-8.6	-9.3	-9.7			

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

Cold Lake South Station - February 2024

Summary of Hourly Averages

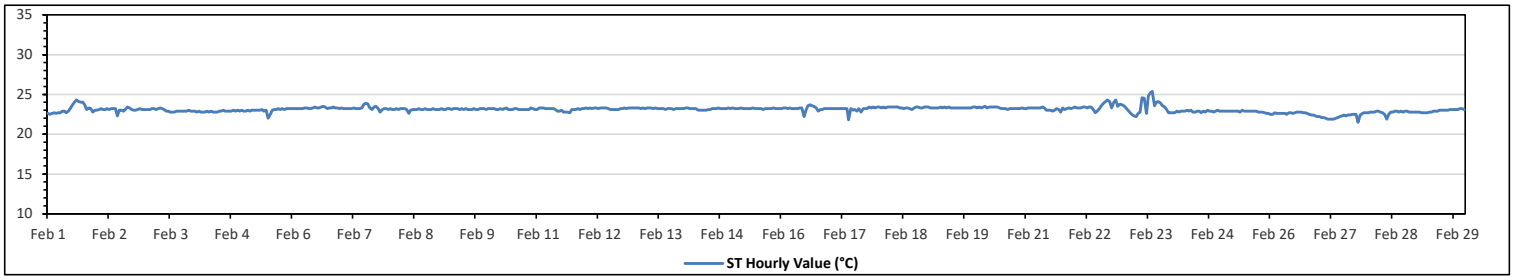
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	25.4	°C	on Feb 23 at hr 14	Hours in Service:	696	
Maximum Daily Value:	23.5	°C	on Feb 22	Hours of Data:	696	
Minimum Hourly Value:	21.5	°C	on Feb 27 at hr 19	Hours of Missing Data:	0	
Minimum Daily Value:	22.2	°C	on Feb 27	Hours of Calibration:	0	
Monthly Average:	23.1	°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	22.6	22.5	22.6	22.7	22.6	22.7	22.7	22.9	22.9	22.7	22.9	23.3	23.7	24.0	24.3	24.1	24.0	24.0	23.7	23.1	23.3	23.2	22.8	23.0	22.5	24.3	23.2
Feb 2	23.0	23.1	23.2	23.1	23.1	23.2	23.1	23.2	23.2	23.2	22.3	23.0	23.0	22.9	23.1	23.4	23.3	23.1	23.0	23.0	23.1	23.2	23.1	23.1	22.3	23.4	23.1
Feb 3	23.1	23.1	23.1	23.2	23.2	23.1	23.2	23.3	23.2	23.1	22.9	22.9	22.8	22.8	22.8	22.9	22.9	22.9	22.9	22.9	22.9	23.0	22.9	22.9	22.8	23.3	23.0
Feb 4	22.9	22.8	22.9	22.8	22.8	22.8	22.9	22.8	22.9	22.8	22.8	22.8	22.9	22.9	23.0	22.9	22.9	22.9	22.9	23.0	22.9	23.0	22.9	23.0	22.8	23.0	22.9
Feb 5	22.9	22.9	23.0	22.9	23.0	23.0	23.0	23.0	23.0	23.1	22.9	23.0	22.0	22.5	23.0	23.1	23.1	23.2	23.1	23.2	23.1	23.2	23.2	23.2	22.0	23.2	23.0
Feb 6	23.2	23.2	23.2	23.2	23.2	23.2	23.3	23.3	23.2	23.2	23.3	23.4	23.3	23.3	23.4	23.5	23.4	23.2	23.3	23.3	23.4	23.3	23.3	23.2	23.2	23.5	23.3
Feb 7	23.3	23.2	23.2	23.2	23.2	23.2	23.3	23.2	23.2	23.2	23.3	23.8	23.9	23.8	23.3	23.1	23.4	23.5	23.2	22.8	23.1	23.2	23.2	23.1	22.8	23.9	23.3
Feb 8	23.2	23.1	23.1	23.2	23.1	23.2	23.2	23.2	23.1	22.6	23.0	23.1	23.1	23.1	23.2	23.1	23.1	23.2	23.1	23.1	23.1	23.2	23.1	23.1	22.6	23.2	23.1
Feb 9	23.1	23.2	23.1	23.1	23.2	23.2	23.1	23.2	23.2	23.2	23.1	23.2	23.1	23.2	23.1	23.1	23.1	23.2	23.1	23.1	23.2	23.2	23.2	23.1	23.1	23.2	23.2
Feb 10	23.2	23.2	23.2	23.2	23.1	23.1	23.2	23.1	23.2	23.3	23.1	23.1	23.1	23.2	23.2	23.1	23.1	23.1	23.1	23.1	23.1	23.3	23.2	23.1	23.1	23.3	23.2
Feb 11	23.1	23.3	23.3	23.3	23.2	23.2	23.2	23.2	23.2	23.1	22.9	22.9	23.0	22.8	22.8	22.8	22.7	23.1	23.1	23.1	23.2	23.1	23.2	23.2	22.7	23.3	23.1
Feb 12	23.3	23.2	23.3	23.2	23.3	23.3	23.2	23.3	23.3	23.3	23.3	23.2	23.1	23.1	23.1	23.1	23.1	23.2	23.2	23.3	23.2	23.3	23.3	23.3	23.1	23.3	23.2
Feb 13	23.3	23.3	23.3	23.2	23.3	23.2	23.3	23.3	23.3	23.2	23.3	23.2	23.2	23.2	23.2	23.1	23.2	23.2	23.2	23.1	23.2	23.2	23.2	23.2	23.1	23.3	23.2
Feb 14	23.2	23.3	23.3	23.2	23.2	23.2	23.2	23.0	23.0	23.0	23.0	23.0	23.1	23.1	23.2	23.2	23.2	23.3	23.2	23.2	23.2	23.2	23.3	23.2	23.0	23.3	23.2
Feb 15	23.3	23.2	23.2	23.2	23.3	23.2	23.2	23.2	23.2	23.2	23.3	23.2	23.2	23.2	23.2	23.1	23.2	23.2	23.2	23.2	23.3	23.2	23.2	23.2	23.1	23.3	23.2
Feb 16	23.2	23.3	23.3	23.2	23.3	23.2	23.2	23.2	23.2	23.3	23.3	22.2	23.0	23.6	23.7	23.6	23.5	23.3	22.9	23.1	23.1	23.2	23.2	23.2	22.2	23.7	23.2
Feb 17	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	21.8	23.2	23.0	23.1	22.9	23.2	22.8	23.2	23.2	23.2	23.4	23.3	23.4	23.3	23.4	21.8	23.4	23.1
Feb 18	23.4	23.3	23.4	23.3	23.4	23.4	23.4	23.4	23.4	23.4	23.3	23.3	23.2	23.3	23.3	23.2	23.1	23.3	23.4	23.4	23.3	23.3	23.4	23.4	23.1	23.4	23.3
Feb 19	23.4	23.3	23.3	23.3	23.3	23.3	23.4	23.3	23.4	23.3	23.4	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.4	23.4	23.3	23.4	23.3
Feb 20	23.3	23.4	23.3	23.4	23.5	23.3	23.4	23.4	23.4	23.4	23.4	23.3	23.2	23.2	23.2	23.1	23.2	23.2	23.2	23.2	23.2	23.2	23.3	23.2	23.1	23.5	23.3
Feb 21	23.2	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.4	23.3	23.0	23.0	23.0	22.9	23.0	23.2	23.1	22.8	23.3	23.1	23.2	23.3	23.2	23.3	22.8	23.4	23.2
Feb 22	23.4	23.3	23.3	23.3	23.4	23.4	23.3	23.4	23.4	23.1	22.7	22.9	23.2	23.6	23.9	24.1	24.3	24.1	23.3	24.0	24.3	23.5	23.8	23.7	22.7	24.3	**23.5**
Feb 23	23.6	23.3	23.0	22.7	22.5	22.3	22.2	22.6	22.8	24.6	24.5	22.6	24.8	25.2	**25.4**	23.6	24.0	24.1	23.9	23.6	23.4	23.1	22.7	22.7	22.2	**25.4**	23.5
Feb 24	22.7	22.7	22.9	22.8	22.9	22.9	22.9	23.0	22.9	23.0	22.8	22.8	22.9	22.9	22.7	22.9	22.8	23.0	22.9	22.9	22.8	22.9	23.0	22.9	22.7	23.0	22.9
Feb 25	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.8	23.0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.8	22.8	22.8	22.7	22.6	22.6	22.6	23.0	22.9
Feb 26	22.5	22.5	22.7	22.6	22.6	22.6	22.6	22.6	22.5	22.7	22.7	22.6	22.7	22.8	22.8	22.8	22.7	22.7	22.6	22.5	22.4	22.4	22.3	22.2	22.2	22.8	22.6
Feb 27	22.2	22.1	22.1	22.0	21.9	21.9	21.9	21.9	22.0	22.1	22.2	22.3	22.4	22.3	22.4	22.4	22.5	22.5	22.5	**21.5**	22.4	22.6	22.7	22.7	**21.5**	22.7	**22.2**
Feb 28	22.7	22.8	22.8	22.8	22.9	22.9	22.8	22.7	22.5	21.9	22.5	22.8	22.8	22.9	22.9	22.8	22.9	22.8	22.9	22.9	22.8	22.8	22.8	22.8	21.9	22.9	22.8
Feb 29	22.8	22.8	22.7	22.7	22.7	22.7	22.8	22.8	22.9	22.9	22.9	23.0	23.0	23.0	23.0	23.0	23.1	23.1	23.1	23.1	23.1	23.2	23.2	23.1	22.7	23.2	22.9
Diurnal Maximum	23.6	23.4	23.4	23.4	23.5	23.4	23.4	23.4	23.4	24.6	24.5	23.8	24.8	25.2	25.4	24.1	24.3	24.1	23.9	24.0	24.3	23.5	23.8	23.7			
Diurnal Average	23.1	23.1	23.1	23.0	23.1	23.0	23.0	23.1	23.1	23.0	23.0	23.0	23.1	23.2	23.2	23.1	23.2	23.2	23.1	23.1	23.1	23.1	23.1	23.1			

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

Cold Lake South Station - February 2024

Summary of Hourly Averages

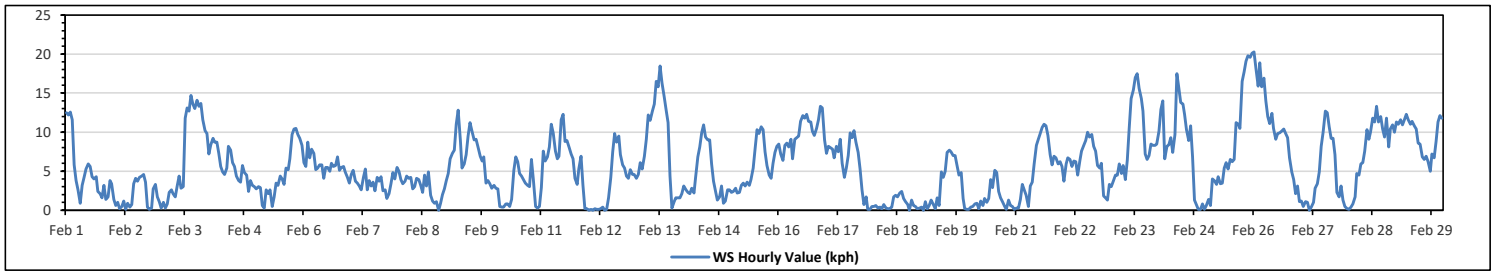
VECTOR WIND SPEED (VWS) in km/hr

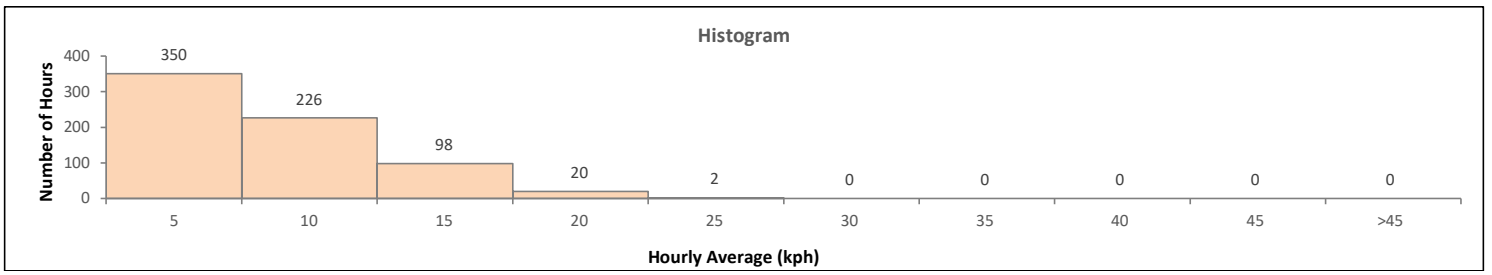
Maximum Hourly Value:	20.3	kph	on Feb 26 at hr 0	Hours in Service:	696	
Maximum Daily Value:	10.7	kph	on Feb 26	Hours of Data:	696	
Minimum Hourly Value:	0.0	kph	on Feb 8 at hr 20	Hours of Missing Data:	0	
Minimum Daily Value:	0.8	kph	on Feb 18	Hours of Calibration:	0	
Monthly Average:	1.0	kph		Operational 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	12.5	12.2	12.6	11.6	5.8	3.8	2.6	0.9	3.2	4.2	5.3	5.9	5.6	4.3	4.0	4.3	2.4	2.1	1.6	3.2	1.4	1.7	3.8	3.4	0.9	12.6	4.9
Feb 2	1.4	0.6	1.0	0.2	0.5	1.2	0.1	0.9	0.4	0.7	3.4	4.1	3.7	4.2	4.4	4.6	3.6	0.4	0.1	0.3	2.7	3.3	1.7	1.1	0.1	4.6	1.9
Feb 3	0.3	1.0	0.3	0.8	2.3	2.6	2.1	1.7	3.1	4.4	2.8	3.0	11.8	13.1	12.7	14.7	13.6	13.0	14.1	13.3	13.7	11.6	10.2	9.8	0.3	14.7	7.3
Feb 4	7.2	8.4	9.2	8.7	8.7	7.3	5.6	4.9	4.6	5.4	8.2	7.7	6.1	5.6	4.4	3.8	3.6	5.7	4.8	4.5	2.4	3.8	3.2	3.0	2.4	9.2	5.7
Feb 5	2.7	3.0	2.9	0.6	0.3	2.6	2.1	2.6	0.5	1.7	3.5	3.2	4.4	4.0	3.3	5.4	5.2	6.6	9.7	10.4	10.5	9.7	9.2	8.3	0.3	10.5	4.7
Feb 6	6.1	5.6	8.7	6.7	7.8	7.3	5.2	5.4	5.8	5.8	4.1	5.5	5.5	5.0	6.0	5.6	5.7	6.8	5.1	5.5	5.6	4.9	4.2	3.5	3.5	8.7	5.7
Feb 7	4.6	5.1	3.7	3.5	3.1	2.6	4.2	5.3	2.6	3.8	3.1	3.6	2.5	4.2	3.7	4.3	2.5	2.6	1.5	2.1	3.4	4.8	4.0	5.5	1.5	5.5	3.6
Feb 8	5.0	3.9	3.4	3.7	4.4	4.1	4.2	2.7	3.0	4.1	3.9	3.2	2.3	4.5	3.1	4.9	1.9	1.2	0.9	1.1	**0.0**	0.9	2.0	2.7	**0.0**	5.0	3.0
Feb 9	3.8	4.7	6.6	7.3	7.7	11.0	12.8	8.9	5.4	5.9	7.1	9.5	11.2	10.0	9.0	9.1	8.1	6.9	6.3	6.8	3.5	3.8	3.4	2.8	2.8	12.8	7.2
Feb 10	3.2	2.8	2.7	0.5	0.4	0.4	0.8	0.8	0.5	1.4	5.1	6.8	6.2	4.7	4.4	3.9	3.5	3.2	3.0	6.5	3.9	0.5	0.3	0.5	0.3	6.8	2.8
Feb 11	2.9	7.6	6.3	6.8	8.1	11.0	9.9	7.6	6.6	6.9	11.6	12.3	8.8	8.9	8.0	7.2	6.6	4.1	3.3	5.3	6.9	3.2	0.2	0.2	0.2	12.3	6.7
Feb 12	**0.0**	0.1	**0.0**	0.2	0.1	0.1	0.2	0.4	**0.0**	0.1	1.6	4.2	7.5	9.8	8.7	9.5	7.1	5.8	5.4	4.4	4.1	5.2	4.6	4.6	**0.0**	9.8	3.5
Feb 13	4.1	4.6	6.1	5.3	6.9	9.1	12.2	11.5	12.7	13.6	16.5	15.8	18.5	16.3	14.5	12.8	11.2	4.4	0.3	1.1	1.6	1.6	1.6	2.1	0.3	18.5	8.5
Feb 14	3.1	2.6	2.3	2.1	2.8	2.2	4.2	6.8	8.1	9.9	10.9	9.4	9.0	9.0	5.9	3.7	2.3	1.3	1.7	3.1	0.9	1.2	2.6	2.6	0.9	10.9	4.5
Feb 15	2.3	2.4	2.8	2.2	2.3	3.2	3.5	3.1	3.6	3.2	3.9	5.4	7.9	10.3	9.8	10.7	10.3	7.5	5.7	4.5	4.1	6.0	7.4	8.2	2.2	10.7	5.4
Feb 16	8.5	7.2	6.4	8.3	8.6	8.1	9.1	6.6	9.1	9.3	9.5	11.4	12.1	11.8	12.3	11.4	11.3	10.1	9.6	10.5	11.6	13.3	13.1	9.0	6.4	13.3	9.9
Feb 17	7.3	8.2	8.0	7.8	6.7	8.2	7.5	9.1	6.0	4.2	5.4	7.0	9.9	9.3	10.2	8.7	7.4	5.3	2.6	0.7	1.7	0.1	0.1	0.5	0.1	10.2	5.9
Feb 18	0.5	0.6	0.3	0.4	0.2	0.7	0.3	0.2	0.2	0.4	1.7	1.9	1.7	2.2	2.4	1.5	1.1	0.7	**0.0**	1.3	0.6	0.5	0.2	0.3	**0.0**	2.4	**0.8**
Feb 19	0.4	**0.0**	1.1	0.2	0.6	1.3	0.7	0.2	1.6	0.6	4.9	4.2	5.0	7.4	7.7	7.5	7.0	7.0	5.7	4.5	4.8	1.5	0.2	0.1	**0.0**	7.7	3.1
Feb 20	0.1	0.4	0.5	0.8	0.9	0.2	1.2	0.6	1.5	1.0	1.5	3.9	2.9	5.1	4.8	2.4	1.6	1.1	0.5	0.1	1.3	0.6	0.5	0.1	0.1	5.1	1.4
Feb 21	0.3	0.3	1.4	3.3	2.5	1.9	0.5	3.1	3.6	5.9	8.3	9.1	9.7	10.6	11.0	10.8	9.6	7.1	5.8	6.9	6.7	5.9	6.2	5.6	0.3	11.0	5.7
Feb 22	3.7	5.9	6.7	6.5	5.6	6.3	6.2	4.5	6.4	7.6	8.3	8.9	10.0	9.4	9.7	8.2	7.6	5.7	5.4	6.0	1.8	1.6	1.3	3.3	1.3	10.0	6.1
Feb 23	3.0	3.8	4.5	4.5	5.9	4.7	5.7	3.9	6.4	10.5	14.3	15.4	17.0	17.5	15.6	14.3	12.7	7.2	6.5	7.0	8.5	8.3	8.3	8.5	3.0	17.5	8.9
Feb 24	10.1	12.9	14.0	6.6	8.2	8.4	9.3	7.4	9.7	17.5	15.7	13.8	13.6	12.3	10.3	8.9	10.8	6.8	1.3	0.6	0.1	0.1	0.8	0.1	0.1	17.5	8.3
Feb 25	0.6	1.4	0.6	4.0	3.8	3.3	4.3	3.4	3.5	5.4	6.1	5.3	6.5	6.2	6.5	11.2	11.0	10.5	16.5	17.7	19.1	19.8	19.6	20.1	0.6	20.1	8.6
Feb 26	**20.3**	18.2	15.9	18.9	15.8	16.9	14.0	12.0	11.1	12.4	10.5	9.1	9.8	9.9	10.1	10.4	9.8	9.3	6.7	4.9	3.9	2.1	3.1	1.1	1.1	**20.3**	**10.7**
Feb 27	1.2	0.5	1.1	1.0	**0.0**	0.4	1.0	2.8	3.4	4.9	8.2	10.0	12.7	12.5	10.7	9.2	9.2	7.1	2.3	1.7	3.1	1.3	0.5	0.2	**0.0**	12.7	4.4
Feb 28	0.1	0.4	0.8	1.7	4.7	4.5	5.9	6.1	7.6	10.3	9.1	10.0	11.8	11.3	13.3	11.3	12.0	10.4	9.4	11.8	8.1	10.4	10.9	10.0	0.1	13.3	8.0
Feb 29	11.3	11.0	11.6	10.9	11.6	12.3	11.6	11.0	11.4	10.8	10.4	8.6	8.5	6.8	6.5	6.9	6.2	5.0	7.2	6.7	8.8	11.3	12.1	11.8	5.0	12.3	9.6
Diurnal Maximum	20.3	18.2	15.9	18.9	15.8	16.9	14.0	12.0	12.7	17.5	16.5	15.8	18.5	17.5	15.6	14.7	13.6	13.0	16.5	17.7	19.1	19.8	19.6	20.1			
Diurnal Average	4.4	4.7	4.9	4.7	4.7	5.0	5.1	4.6	4.9	5.9	7.1	7.5	8.4	8.5	8.0	7.8	7.1	5.7	4.9	5.3	5.0	4.8	4.7	4.4			

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.



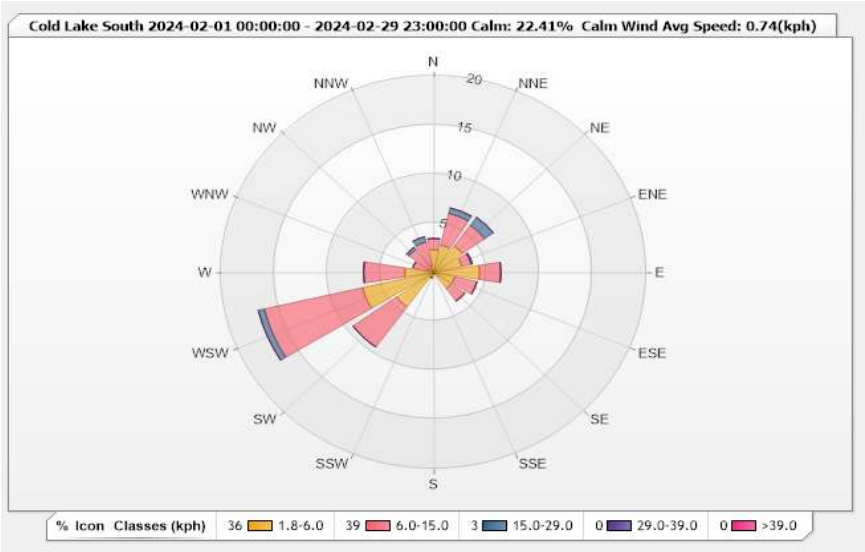


Station: Cold Lake South Monitor: WDS [kph] Monthly: 02-2024

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

Calm (WS<1.8kph): 22.41% 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	2.3	1.15	0	0	0	3.45
NNE	2.87	3.3	0.57	0	0	6.74
NE	3.3	2.59	1.01	0	0	6.9
ENE	2.73	0.86	0.14	0	0	3.73
E	4.31	2.01	0	0	0	6.32
ESE	2.01	2.16	0	0	0	4.17
SE	2.01	1.58	0	0	0	3.59
SSE	0.14	0	0	0	0	0.14
S	0.14	0	0	0	0	0.14
SSW	0.57	0	0	0	0	0.57
SW	4.31	5.03	0	0	0	9.34
WSW	6.9	9.48	0.57	0	0	16.95
W	2.73	3.88	0	0	0	6.61
WNW	0.57	1.44	0	0	0	2.01
NW	0.14	2.73	0.29	0	0	3.16
NNW	0.72	2.44	0.57	0	0	3.73
Summary	35.75	38.65	3.15	0	0	77.55



Lakeland Industry & Community Association

Cold Lake South Station - February 2024

Summary of Hourly Averages

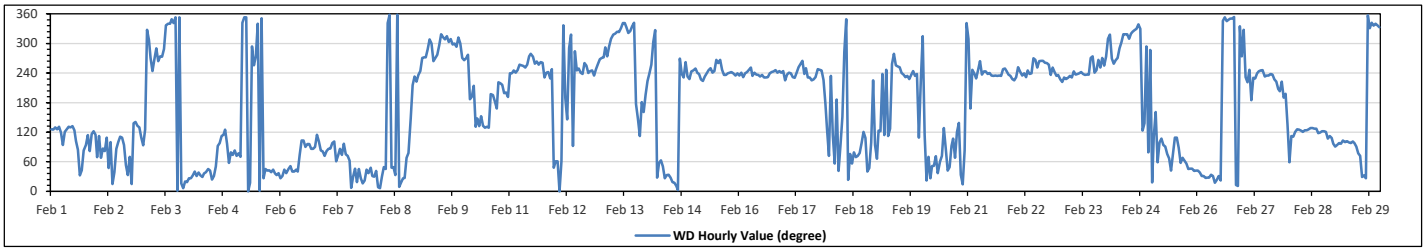
WIND DIRECTION (VWD) in sector

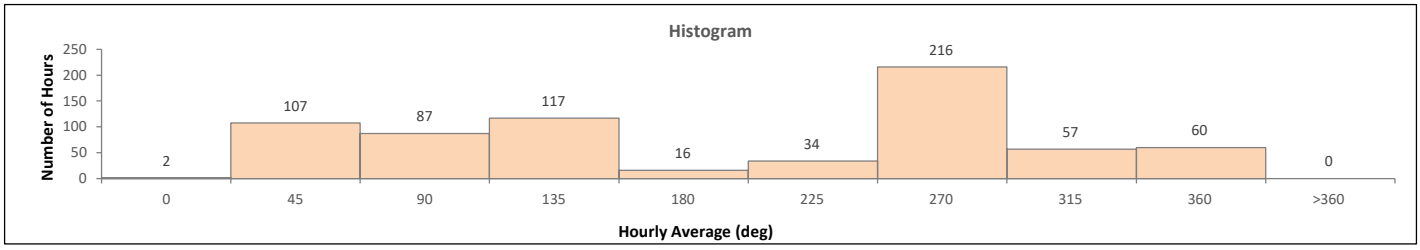
Monthly Average:	304 (WNW) degree	Hours in Service:	696
		Hours of Data:	696
		Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

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	SE	SE	SE	SE	SE	ESE	E	ESE	SE	SE	SE	SE	ESE	E	E	NNE	NE	E	E	ESE	E	ESE	ESE	ESE	118	ESE
Feb 2	ENE	ESE	ENE	E	E	ESE	NE	E	NNE	NE	E	E	ESE	ESE	E	NE	NNE	ENE	NNE	SE	SE	SE	SE	ESE	93	E
Feb 3	E	SE	NNW	NW	W	WSW	W	WNW	W	W	W	WNW	NNW	NNW	NNW	NNW	NNW	N	N	N	NNE	N	NNE	NNE	347	NNW
Feb 4	NNE	NNE	NNE	NE	NNE	NE	NNE	NNE	NE	NE	NE	NE	NNE	NNE	NE	E	E	ESE	ESE	SE	E	ENE	ENE	ENE	48	NE
Feb 5	E	ENE	ENE	ENE	NNW	N	N	N	NNE	WNW	WSW	W	NNW	N	N	NNE	NE	NE	NE	NE	NE	NE	NNE	NE	29	NNE
Feb 6	NNE	NNE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	ESE	ESE	E	E	E	E	E	E	ESE	E	E	E	ENE	68	ENE
Feb 7	E	E	E	E	E	ENE	ENE	E	ENE	E	ENE	ENE	ENE	N	NNE	NE	NNE	NE	NNE	NNE	NNE	NE	NE	NE	60	ENE
Feb 8	NNE	NNE	NE	N	N	NNE	NE	NE	NNW	N	NE	NE	NNE	N	N	NNE	NNE	NNE	ENE	ENE	SE	SSW	SW	SW	22	NNE
Feb 9	SW	WSW	W	W	W	WNW	NW	WNW	W	W	W	WNW	NW	NW	NW	NW	WNW	NW	WNW	WNW	WNW	NW	WNW	W	294	WNW
Feb 10	W	W	W	S	S	SSW	SE	SE	SE	SSE	SE	SE	SE	SE	SSW	SSW	S	SSE	SW	SW	SW	SSW	SSW	S	180	S
Feb 11	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	WSW	W	WSW	W	W	SW	WSW	WSW	SW	WSW	NE	256	WSW
Feb 12	ENE	ENE	N	ENE	NNW	S	SE	WNW	NW	E	WNW	WSW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	SW	WSW	WSW	W	249	WSW
Feb 13	W	W	WNW	W	WNW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NW	NW	NNW	NNW	S	SE	ESE	S	SSE	SSW	322	NW
Feb 14	SW	WSW	WSW	WNW	NW	NNE	ENE	ENE	NE	NNE	NNE	NE	NNE	NNE	NNE	NNE	N	W	SW	SW	W	SW	SW	WSW	20	NNE
Feb 15	WSW	WSW	WSW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	W	WSW	W	WSW	SW	SW	WSW	WSW	WSW	WSW	SW	WSW	245	WSW
Feb 16	SW	WSW	SW	WSW	WSW	WSW	WSW	SW	WSW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	239	WSW
Feb 17	SW	SW	WSW	WSW	SW	SW	WSW	WSW	WSW	W	SW	WSW	SW	SW	SW	SW	SW	WSW	WSW	WSW	SW	S	SE	ENE	237	SW
Feb 18	SW	ESE	NE	S	NE	E	SSE	W	NNW	NNE	ENE	NE	ENE	ENE	ENE	ENE	E	ESE	ESE	NE	NE	E	SW	E	76	ENE
Feb 19	ENE	ESE	ESE	SW	ESE	WSW	ESE	SE	WSW	W	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	WSW	SW	SW	ESE	SW	238	SW
Feb 20	NW	ESE	NNE	ENE	NNE	NE	NE	ENE	NE	ENE	ENE	SE	E	NE	NE	E	ESE	ENE	ESE	SE	NE	NNE	E	NNW	68	ENE
Feb 21	NW	SSE	WSW	WSW	SW	WSW	W	SW	WSW	WSW	SW	WSW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	SW	SW	SW	238	SW
Feb 22	SW	SW	WSW	WSW	SW	WSW	SW	WSW	SW	WSW	W	W	WSW	W	W	W	W	WSW	WSW	SW	WSW	WSW	SW	SW	251	WSW
Feb 23	SW	SW	SW	SW	SW	SW	SW	WSW	SW	SW	WSW	WSW	SW	SW	SW	SW	W	W	WSW	WSW	W	WSW	W	WSW	244	WSW
Feb 24	W	NW	NW	W	WSW	W	W	WNW	WNW	NW	NW	NW	NW	NW	NW	NW	NNW	NNW	NNW	ESE	SE	WNW	ENE	WNW	307	NW
Feb 25	NNE	ESE	SSE	ENE	E	ESE	E	E	ENE	ENE	NE	ENE	ESE	ESE	E	ENE	ENE	ENE	NE	NE	NE	NE	NE	NE	59	ENE
Feb 26	NE	NE	NNE	NNE	NNE	NNE	NNE	NE	NNE	NNE	NNE	NNE	NNE	NNW	N	NNW	NNW	N	N	N	NNE	NNE	NNW	W	19	NNE
Feb 27	NNW	SW	SW	WSW	S	SW	SW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SSW	SSW	SW	S	SSW	SE	234	SW
Feb 28	ENE	ESE	ESE	ESE	SE	SE	ESE	ESE	ESE	ESE	SE	SE	SE	SE	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E	120	ESE
Feb 29	E	E	E	E	ESE	E	E	E	E	E	E	E	ENE	ENE	NNE	NNE	NNE	N	NNW	NNW	NNW	NNW	NNW	NNW	65	ENE

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 2024

Summary of Hourly Averages

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

WIND SPEED

Maximum Hourly Value:	20.3	kph	on Feb 26 at hr 0	Hours in Service:	696
Maximum Daily Value:	10.7	kph	on Feb 26	Hours of Data:	696
Minimum Hourly Value:	0.0	kph	on Feb 8 at hr 20	Hours of Missing Data:	0
Minimum Daily Value:	0.8	kph	on Feb 18	Hours of Calibration:	0
Monthly Average:	1.0	kph		Operational Uptime:	100.0

WIND DIRECTION

Monthly Average: 304 degree (WNW)

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	12.5	12.2	12.6	11.6	5.8	3.8	2.6	0.9	3.2	4.2	5.3	5.9	5.6	4.3	4.0	4.3	2.4	2.1	1.6	3.2	1.4	1.7	3.8	3.4	0.9	12.6	4.9
	SE	SE	SE	SE	SE	ESE	E	ESE	SE	SE	SE	SE	ESE	E	E	NNE	NE	E	E	ESE	E	ESE	ESE	ESE			118(ESE)
Feb 2	1.4	0.6	1.0	0.2	0.5	1.2	0.1	0.9	0.4	0.7	3.4	4.1	3.7	4.2	4.4	4.6	3.6	0.4	0.1	0.3	2.7	3.3	1.7	1.1	0.1	4.6	1.9
	ENE	ESE	ENE	E	E	ESE	NE	E	NNE	NE	E	E	ESE	ESE	E	NE	NNE	ENE	NNE	SE	SE	SE	SE	ESE			93(E)
Feb 3	0.3	1.0	0.3	0.8	2.3	2.6	2.1	1.7	3.1	4.4	2.8	3.0	11.8	13.1	12.7	14.7	13.6	13.0	14.1	13.3	13.7	11.6	10.2	9.8	0.3	14.7	7.3
	E	SE	NNW	NW	W	WSW	W	WNW	W	W	W	WNW	NNW	NNW	NNW	NNW	NNW	N	N	N	NNE	N	NNE	NNE			347(NNW)
Feb 4	7.2	8.4	9.2	8.7	8.7	7.3	5.6	4.9	4.6	5.4	8.2	7.7	6.1	5.6	4.4	3.8	3.6	5.7	4.8	4.5	2.4	3.8	3.2	3.0	2.4	9.2	5.7
	NNE	NNE	NNE	NE	NNE	NE	NNE	NNE	NE	NE	NE	NE	NNE	NNE	NE	E	E	ESE	ESE	SE	E	ENE	ENE	ENE			48(NE)
Feb 5	2.7	3.0	2.9	0.6	0.3	2.6	2.1	2.6	0.5	1.7	3.5	3.2	4.4	4.0	3.3	5.4	5.2	6.6	9.7	10.4	10.5	9.7	9.2	8.3	0.3	10.5	4.7
	E	ENE	ENE	ENE	NNW	N	N	N	NNE	WNW	WSW	W	NNW	N	N	NNE	NE	NE	NE	NE	NE	NE	NNE	NE			29(NNE)
Feb 6	6.1	5.6	8.7	6.7	7.8	7.3	5.2	5.4	5.8	5.8	4.1	5.5	5.5	5.0	6.0	5.6	5.7	6.8	5.1	5.5	5.6	4.9	4.2	3.5	3.5	8.7	5.7
	NNE	NNE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	ESE	ESE	E	E	E	E	E	E	ESE	E	E	E	ENE			68(ENE)
Feb 7	4.6	5.1	3.7	3.5	3.1	2.6	4.2	5.3	2.6	3.8	3.1	3.6	2.5	4.2	3.7	4.3	2.5	2.6	1.5	2.1	3.4	4.8	4.0	5.5	1.5	5.5	3.6
	E	E	E	E	E	ENE	ENE	E	ENE	E	ENE	ENE	ENE	N	NNE	NE	NNE	NE	NNE	NNE	NNE	NE	NE	NE			60(ENE)
Feb 8	5.0	3.9	3.4	3.7	4.4	4.1	4.2	2.7	3.0	4.1	3.9	3.2	2.3	4.5	3.1	4.9	1.9	1.2	0.9	1.1	**0.0**	0.9	2.0	2.7	**0.0**	5.0	3.0
	NNE	NNE	NE	N	N	NNE	NE	NE	NNW	N	NE	NE	NNE	N	N	NNE	NNE	NNE	ENE	ENE	SE	SSW	SW	SW			22(NNE)
Feb 9	3.8	4.7	6.6	7.3	7.7	11.0	12.8	8.9	5.4	5.9	7.1	9.5	11.2	10.0	9.0	9.1	8.1	6.9	6.3	6.8	3.5	3.8	3.4	2.8	2.8	12.8	7.2
	SW	WSW	W	W	W	WNW	NW	WNW	W	W	W	WNW	NW	NW	NW	NW	WNW	NW	WNW	WNW	WNW	NW	WNW	W			294(WNW)
Feb 10	3.2	2.8	2.7	0.5	0.4	0.4	0.8	0.8	0.5	1.4	5.1	6.8	6.2	4.7	4.4	3.9	3.5	3.2	3.0	6.5	3.9	0.5	0.3	0.5	0.3	6.8	2.8
	W	W	W	S	S	SSW	SE	SE	SE	SSE	SE	SE	SE	SE	SSW	SSW	S	SSE	SW	SW	SW	SSW	SSW	S			180(S)
Feb 11	2.9	7.6	6.3	6.8	8.1	11.0	9.9	7.6	6.6	6.9	11.6	12.3	8.8	8.9	8.0	7.2	6.6	4.1	3.3	5.3	6.9	3.2	0.2	0.2	0.2	12.3	6.7
	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	WSW	W	WSW	W	W	SW	WSW	WSW	SW	WSW	NE			256(WSW)
Feb 12	**0.0**	0.1	**0.0**	0.2	0.1	0.1	0.2	0.4	**0.0**	0.1	1.6	4.2	7.5	9.8	8.7	9.5	7.1	5.8	5.4	4.4	4.1	5.2	4.6	4.6	**0.0**	9.8	3.5
	ENE	ENE	N	ENE	NNW	S	SE	WNW	NW	E	WNW	WSW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	SW	WSW	WSW	W			249(WSW)
Feb 13	4.1	4.6	6.1	5.3	6.9	9.1	12.2	11.5	12.7	13.6	16.5	15.8	18.5	16.3	14.5	12.8	11.2	4.4	0.3	1.1	1.6	1.6	1.6	2.1	0.3	18.5	8.5
	W	W	WNW	W	WNW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NW	NW	NNW	NNW	S	SE	ESE	S	SSE	SSW			322(NW)
Feb 14	3.1	2.6	2.3	2.1	2.8	2.2	4.2	6.8	8.1	9.9	10.9	9.4	9.0	9.0	5.9	3.7	2.3	1.3	1.7	3.1	0.9	1.2	2.6	2.6	0.9	10.9	4.5
	SW	WSW	WSW	WNW	NW	NNE	ENE	ENE	NE	NNE	NNE	NE	NNE	NNE	NNE	NNE	N	W	SW	SW	W	SW	SW	WSW			20(NNE)
Feb 15	2.3	2.4	2.8	2.2	2.3	3.2	3.5	3.1	3.6	3.2	3.9	5.4	7.9	10.3	9.8	10.7	10.3	7.5	5.7	4.5	4.1	6.0	7.4	8.2	2.2	10.7	5.4
	WSW	WSW	WSW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	W	WSW	W	WSW	SW	SW	WSW	WSW	WSW	WSW	SW	WSW			245(WSW)
Feb 16	8.5	7.2	6.4	8.3	8.6	8.1	9.1	6.6	9.1	9.3	9.5	11.4	12.1	11.8	12.3	11.4	11.3	10.1	9.6	10.5	11.6	13.3	13.1	9.0	6.4	13.3	9.9
	SW	WSW	SW	WSW	WSW	WSW	WSW	SW	WSW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW			239(WSW)
Feb 17	7.3	8.2	8.0	7.8	6.7	8.2	7.5	9.1	6.0	4.2	5.4	7.0	9.9	9.3	10.2	8.7	7.4	5.3	2.6	0.7	1.7	0.1	0.1	0.5	0.1	10.2	5.9
	SW	SW	WSW	WSW	SW	SW	WSW	WSW	WSW	W	SW	WSW	SW	SW	SW	SW	SW	WSW	WSW	WSW	SW	S	SE	ENE			237(SW)
Feb 18	0.5	0.6	0.3	0.4	0.2	0.7	0.3	0.2	0.2	0.4	1.7	1.9	1.7	2.2	2.4	1.5	1.1	0.7	**0.0**	1.3	0.6	0.5	0.2	0.3	**0.0**	2.4	**0.8**
	SW	ESE	NE	S	NE	E	SSE	W	NNW	NNE	ENE	NE	ENE	ENE	ENE	ENE	E	ESE	ESE	NE	NE	E	SW	E			76(ENE)
Feb 19	0.4	**0.0**	1.1	0.2	0.6	1.3	0.7	0.2	1.6	0.6	4.9	4.2	5.0	7.4	7.7	7.5	7.0	7.0	5.7	4.5	4.8	1.5	0.2	0.1	**0.0**	7.7	3.1
	ENE	ESE	ESE	SW	ESE	WSW	ESE	SE	WSW	W	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	WSW	SW	SW	ESE	SW			238(SW)
Feb 20	0.1	0.4	0.5	0.8	0.9	0.2	1.2	0.6	1.5	1.0	1.5	3.9	2.9	5.1	4.8	2.4	1.6	1.1	0.5	0.1	1.3	0.6	0.5	0.1	0.1	5.1	1.4
	NW	ESE	NNE	ENE	NNE	NE	NE	ENE	NE	ENE	ENE	SE	E	NE	NE	E	ESE	ENE	ESE	SE	NE	NNE	E	NNW			68(ENE)
Feb 21	0.3	0.3	1.4	3.3	2.5	1.9	0.5	3.1	3.6	5.9	8.3	9.1	9.7	10.6	11.0	10.8	9.6	7.1	5.8	6.9	6.7	5.9	6.2	5.6	0.3	11.0	5.7
	NW	SSE	WSW	WSW	SW	WSW	W	SW	WSW	WSW	SW	WSW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	SW	SW	SW			238(SW)
Feb 22	3.7	5.9	6.7	6.5	5.6	6.3	6.2	4.5	6.4	7.6	8.3	8.9	10.0	9.4	9.7	8.2	7.6	5.7	5.4	6.0	1.8	1.6	1.3	3.3	1.3	10.0	6.1
	SW	SW	WSW	WSW	SW	WSW	SW	WSW	SW	WSW	W	W	WSW	W	W	W	W	WSW	WSW	SW	WSW	WSW	SW	SW			251(WSW)
Feb 23	3.0	3.8	4.5	4.5	5.9	4.7	5.7	3.9	6.4	10.5	14.3	15.4	17.0	17.5	15.6	14.3	12.7	7.2	6.5	7.0	8.5	8.3	8.3	8.5	3.0	17.5	8.9
	SW	SW	SW	SW	SW	SW	SW	WSW	SW	SW	WSW	WSW	SW	SW	SW	SW	W	W	WSW	WSW	W	WSW	W	WSW			244(WSW)
Feb 24	10.1	12.9	14.0	6.6	8.2	8.4	9.3	7.4	9.7	17.5	15.7	13.8	13.6	12.3	10.3	8.9	10.8	6.8	1.3	0.6	0.1	0.1	0.8	0.1	0.1	17.5	8.3
	W	NW	NW	W	WSW	W	W	WNW	WNW	NW	NW	NW	NW	NW	NW	NW	NNW	NNW	NNW	ESE	SE	WNW	ENE	WNW			307(NW)
Feb 25	0.6	1.4	0.6	4.0	3.8	3.3	4.3	3.4	3.5	5.4	6.1	5.3	6.5	6.2	6.5	11.2	11.0	10.5	16.5	17.7	19.1	19.8	19.6	20.1	0.6	20.1	8.6
	NNE	ESE	SSE	ENE	E	ESE	E	E	ENE	ENE	NE	ENE	ESE	ESE	E	ENE	ENE	ENE	NE	NE	NE	NE	NE	NE			59(ENE)
Feb 26	**20.3**	18.2	15.9	18.9	15.8	16.9	14.0	12.0	11.1	12.4	10.5	9.1	9.8	9.9	10.1	10.4	9.8	9.3	6.7	4.9	3.9	2.1	3.1	1.1	1.1	**20.3**	**10.7**
	NE	NE	NNE	NNE	NNE	NNE	NNE	NE	NNE	NNE	NNE	NNE	NNE	NNW	N	NNW	NNW	N	N	N	NNE	NNE	NNW	W			19(NNE)
Feb 27	1.2	0.5	1.1	1.0	**0.0**	0.4	1.0	2.8	3.4	4.9	8.2	10.0	12.7	12.5	10.7	9.2	9.2	7.1	2.3	1.7	3.1	1.3	0.5	0.2	**0.0**	12.7	4.4
	NNW	SW	SW	WSW	S	SW	SW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SSW	SSW	SW	S	SSW	SE			234(SW)
Feb 28	0.1	0.4	0.8	1.7	4.7	4.5	5.9	6.1	7.6	10.3	9.1	10.0	11.8	11.3	13.3	11.3	12.0	10.4	9.4	11.8	8.1	10.4	10.9	10.0	0.1	13.3	8.0
	ENE	ESE	ESE	ESE	SE	SE	ESE	ESE	ESE	ESE	SE	SE	SE	SE	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E			120(ESE)
Feb 29	11.3	11.0	11.6	10.9	11.6	12.3	11.6	11.0	11.4	10.8	10.4	8.6	8.5	6.8	6.5	6.9	6.2	5.0	7.2	6.7	8.8	11.3	12.1	11.8	5.0	12.3	9.6
	E	E	E	E	ESE	E	E	E	E	E	E	E	ENE	ENE	NNE	NNE	NNE	N	NNW	NNW	NNW	NNW	NNW	NNW			65(ENE)

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 2024

Summary of Hour Standard Deviations

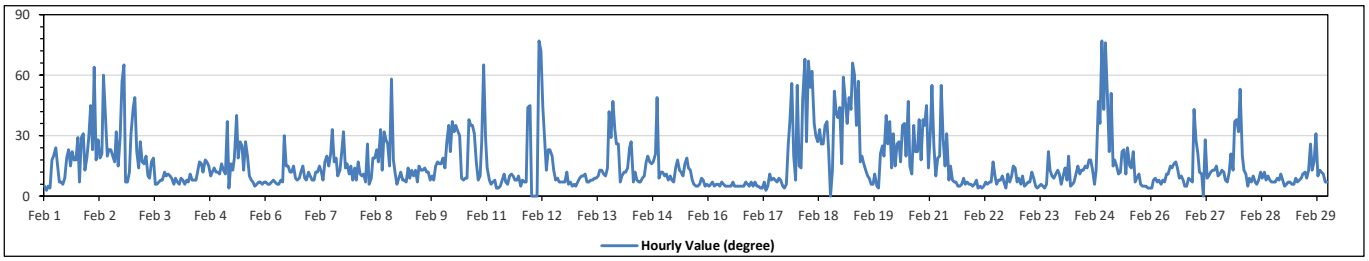
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	77 degree on Feb 12 at hr 4	Hours in Service:	696
		Hours of Data:	696
Minimum Hourly Value:	0 degree on Feb 12 at hr 0	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	5	3	5	4	18	20	24	16	7	7	6	9	19	23	15	22	18	18	29	7	29	31	13	19	3	31
Feb 2	29	45	23	64	18	28	19	21	60	40	20	23	23	20	17	32	15	29	57	65	7	7	12	31	7	65
Feb 3	44	49	22	14	27	17	16	20	10	9	17	19	6	6	7	8	8	12	10	11	10	9	6	9	6	49
Feb 4	7	6	9	8	6	8	7	11	8	8	8	12	17	16	12	18	17	15	10	12	14	12	12	11	6	18
Feb 5	16	13	11	37	4	16	13	19	40	19	27	25	13	27	20	10	8	7	5	6	7	7	6	7	4	40
Feb 6	7	6	6	7	8	7	6	6	8	7	30	15	15	12	12	15	9	8	9	12	15	9	8	12	6	30
Feb 7	10	8	8	12	12	15	12	8	17	20	15	21	33	17	19	10	13	21	32	14	16	11	15	8	8	33
Feb 8	14	8	17	11	10	11	7	26	6	9	19	19	23	17	33	13	32	28	26	15	58	18	12	6	6	58
Feb 9	9	12	8	8	7	14	9	13	10	13	7	15	13	13	14	12	12	8	10	8	15	17	16	16	7	17
Feb 10	19	14	27	35	22	37	32	35	32	30	9	8	9	9	38	35	35	31	17	8	10	27	65	29	8	65
Feb 11	14	8	6	7	8	4	4	5	8	11	7	6	10	11	10	8	8	10	5	8	7	7	44	45	4	45
Feb 12	**0**	**0**	**0**	**0**	**77**	72	44	30	13	23	23	20	13	8	9	7	7	7	7	12	6	7	5	6	**0**	**77**
Feb 13	5	7	9	10	10	11	7	7	8	8	9	9	10	13	13	11	10	14	42	29	47	33	26	26	5	47
Feb 14	7	10	12	12	14	24	27	7	12	8	7	7	9	10	17	20	17	16	17	21	49	9	12	12	7	49
Feb 15	10	11	8	10	8	7	14	18	13	12	10	16	19	14	13	8	6	5	5	6	9	8	5	6	5	19
Feb 16	5	6	7	5	6	6	5	7	6	5	5	5	5	7	5	5	5	5	5	5	7	6	5	7	5	7
Feb 17	5	7	5	5	4	4	7	3	5	11	8	9	8	7	9	8	5	4	6	26	37	56	20	8	3	56
Feb 18	55	15	14	48	68	27	67	54	62	36	30	27	33	26	26	35	37	23	**0**	13	52	41	39	44	**0**	68
Feb 19	16	59	46	36	49	43	66	60	35	57	17	20	16	13	10	9	6	6	11	5	4	21	25	20	4	66
Feb 20	40	26	37	14	31	15	26	27	17	35	36	20	47	15	11	35	22	22	38	18	38	35	45	14	11	47
Feb 21	32	55	25	10	19	20	55	28	15	31	8	15	8	7	7	5	5	6	9	6	7	6	6	5	5	55
Feb 22	6	8	4	5	4	5	7	6	7	7	17	10	6	8	8	10	7	4	11	7	10	15	14	7	4	17
Feb 23	9	6	10	5	6	7	7	12	9	5	4	5	6	5	4	6	22	13	10	9	11	13	11	6	4	22
Feb 24	10	14	8	20	5	6	7	11	15	11	13	13	15	14	18	18	13	6	13	47	36	**77**	43	76	5	**77**
Feb 25	51	22	51	15	18	15	11	12	22	23	11	24	15	14	22	7	9	11	6	5	5	5	4	4	4	51
Feb 26	4	8	9	7	8	6	8	7	11	11	15	14	16	17	14	9	10	8	5	5	9	8	7	43	4	43
Feb 27	28	21	12	11	**0**	28	9	10	12	13	13	15	10	11	13	12	8	7	12	21	13	37	38	32	**0**	38
Feb 28	53	20	13	11	5	9	7	10	7	6	8	12	9	12	8	10	8	7	7	7	9	8	11	8	5	53
Feb 29	5	6	7	7	6	6	9	7	8	9	11	12	9	13	26	13	17	31	10	13	12	11	7	7	5	31
Diurnal Minimum	0	0	0	0	0	4	4	3	5	5	4	5	5	5	4	5	5	4	0	5	4	5	4	4		
Diurnal Maximum	55	59	51	64	77	72	67	60	62	57	36	27	47	27	38	35	37	31	57	65	58	77	65	76		

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.



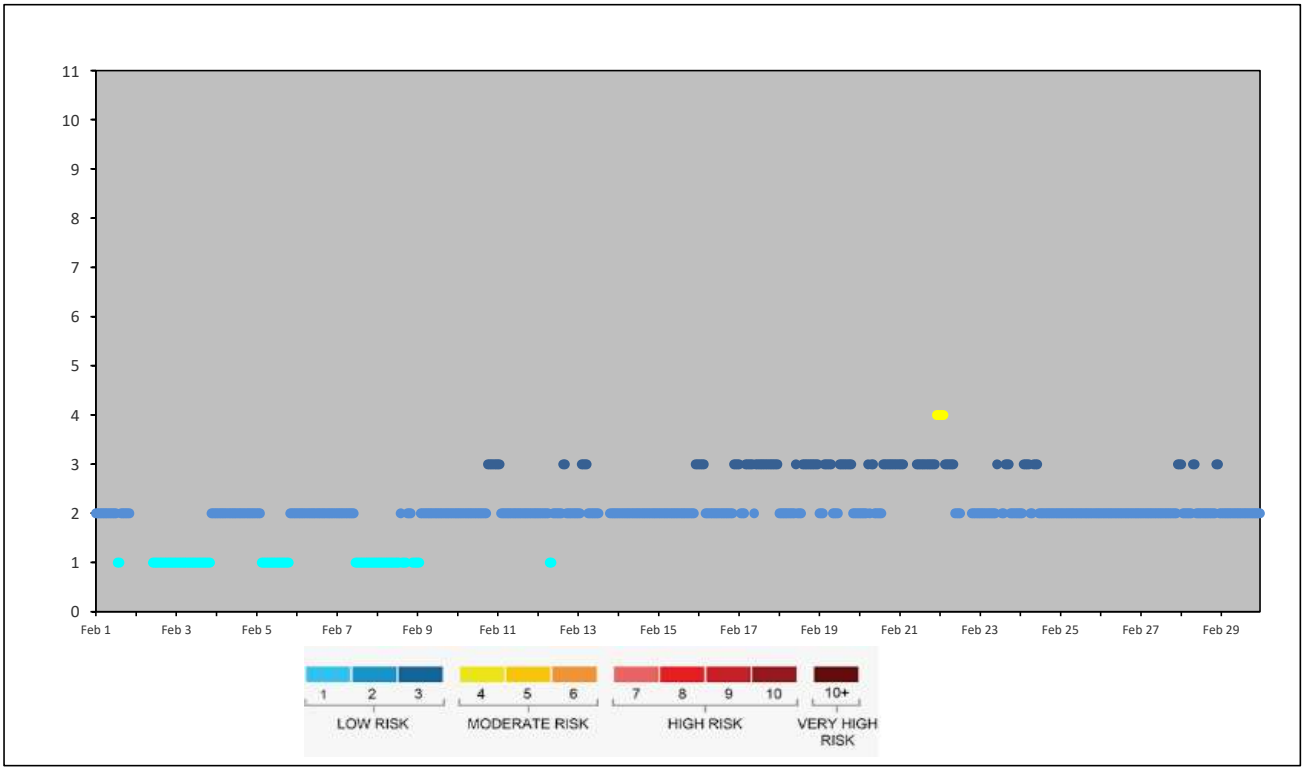
TAMARACK STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - February 2024

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	1	1	2	2	2	2	2	2			
Feb 2											1	1	1	1	1	1	1	1	1	1	1	1	1	1
Feb 3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	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	1	1	1	1	1	1	1	1	1	1	1	1	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	1	1	1	1	1	1	1	1	1	1	1	1	1
Feb 8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	2	1	1	1
Feb 9	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3
Feb 11	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 12	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2
Feb 13	2	2	3	3	3	3	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	3	3
Feb 16	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3
Feb 17	3	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 18	2	2	2	2	2	2	2	2	2	2	3	2	2	2	3	3	3	3	3	3	3	3	3	3
Feb 19	2	2	2	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3	2	2	2	2
Feb 20	2	2	2	2	2	3	2	3	3	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3
Feb 21	3	3	3								3	3	3	3	3	3	3	3	3	3	3	3	4	4
Feb 22	4	4	4	3	3	3	3	3	3	2	2	2	2							2	2	2	2	2
Feb 23	2	2	2	2	2	2	2	2	2	2	3			2	2	3	3	3	2	2	2	2	2	2
Feb 24	2	2	3	3	3	3	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 25	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 26	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 27	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 28	3	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2
Feb 29	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

Tamarack Site - February 2024

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

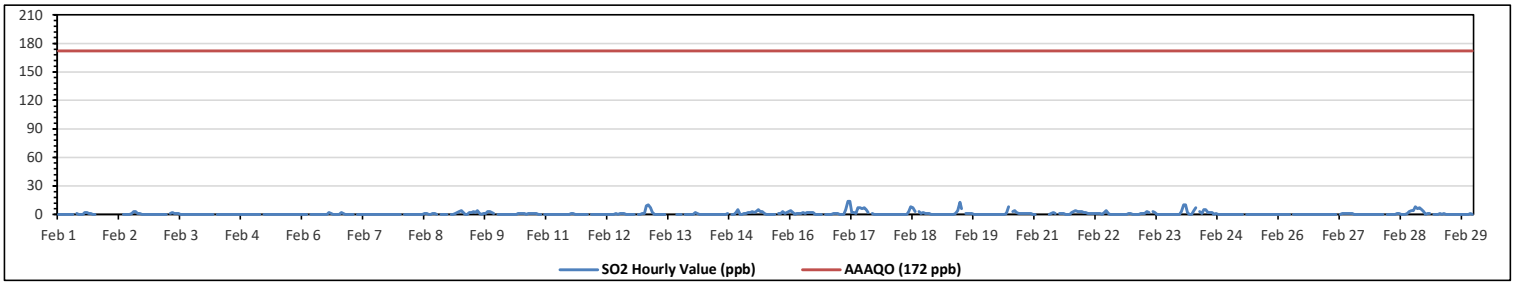
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

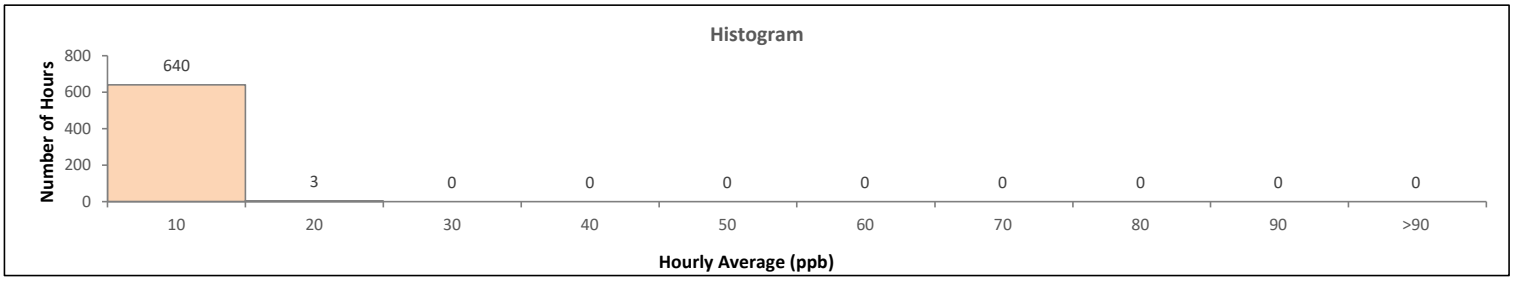
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0	
Maximum Hourly Value:	14	ppb	on Feb 17 at hr 4	Hours in Service:	696	
Maximum Daily Value:	3.2	ppb	on Feb 17	Hours of Data:	643	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	19	
Minimum Daily Value:	0.0	ppb	on Feb 4	Hours of Calibration:	34	
Monthly Average:	0.8	ppb		Operational Uptime:	97.3	

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	1	0	0	0	2	2	1	1	0	0	K	K	K	K	K	0	2	0.4
Feb 2	K	K	K	K	K	K	K	S	0	0	0	0	1	3	3	1	1	0	0	0	0	0	0	0	0	3	NA
Feb 3	0	0	0	0	0	0	S	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3
Feb 4	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 5	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 6	0	0	0	S	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	2	1	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	0	0	0	0	0.0
Feb 8	0	S	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	K	0	0	0	0	0	1	0.2
Feb 9	S	0	0	1	2	3	4	2	0	0	2	2	3	2	4	1	0	1	1	3	3	2	1	S	0	4	1.7
Feb 10	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1	0	0	S	0	0	1	0.4
Feb 11	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	S	0	0	0	1	0.1
Feb 12	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	S	0	0	1	0	1	0.2
Feb 13	1	9	10	7	2	0	0	0	0	0	0	C	C	C	C	C	0	0	0	S	0	0	0	0	0	10	1.6
Feb 14	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S	0	0	2	5	0	0	5	0.5
Feb 15	0	1	1	2	2	3	2	3	5	3	3	1	0	0	0	0	0	S	1	1	3	1	2	3	0	5	1.6
Feb 16	4	2	0	1	1	1	2	1	2	2	2	2	0	0	0	0	S	0	0	0	0	1	1	1	0	4	1.0
Feb 17	0	0	0	5	14	14	2	2	1	7	7	6	7	5	2	S	1	0	0	0	0	0	0	0	0	14	3.2
Feb 18	0	0	0	0	0	0	0	0	0	0	3	8	7	3	S	3	1	2	1	1	1	0	0	0	0	8	1.3
Feb 19	0	0	0	0	0	0	0	0	0	1	4	13	6	S	1	1	1	1	0	0	0	0	0	0	0	13	1.2
Feb 20	0	0	0	0	0	0	0	0	0	0	1	8	S	3	4	2	1	1	1	1	1	1	1	0	0	8	1.1
Feb 21	0	K	K	K	K	K	K	0	1	2	1	S	1	1	1	0	0	0	2	3	4	3	3	3	0	4	NA
Feb 22	2	2	1	1	1	1	1	1	1	0	2	4	1	0	0	0	0	0	0	0	0	0	1	1	0	4	0.8
Feb 23	0	0	0	0	1	1	1	3	2	S	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.6
Feb 24	3	10	10	2	0	0	4	7	S	3	1	5	5	2	2	2	0	1	0	0	0	0	0	0	0	10	2.5
Feb 25	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 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	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3
Feb 28	0	0	0	0	S	0	0	0	0	0	1	1	0	0	0	1	3	4	4	8	6	7	5	3	0	8	1.9
Feb 29	0	1	1	S	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2
Diurnal Maximum	4	10	10	7	14	14	4	7	5	7	7	13	7	5	4	3	3	4	4	8	6	7	5	3			
Diurnal Average	0.4	1.0	0.9	0.8	0.9	0.9	0.6	0.8	0.6	0.8	1.2	2.0	1.3	1.0	0.8	0.5	0.4	0.5	0.4	0.8	0.7	0.6	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.



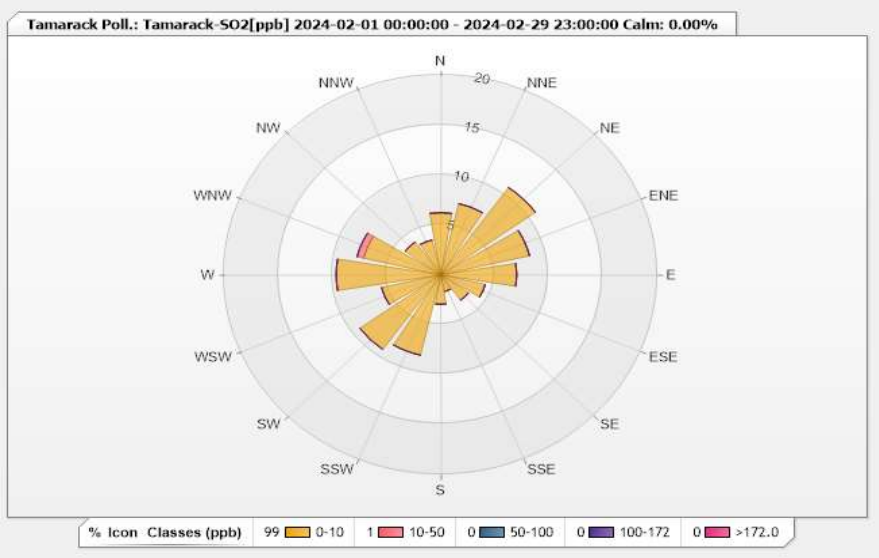


Station: Tamarack Poll.: Tamarack-SO2[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 92.24% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	6.23	0	0	0	0	6.23
NNE	7.32	0	0	0	0	7.32
NE	10.75	0	0	0	0	10.75
ENE	8.41	0	0	0	0	8.41
E	7.01	0	0	0	0	7.01
ESE	4.21	0	0	0	0	4.21
SE	3.12	0	0	0	0	3.12
SSE	1.71	0	0	0	0	1.71
S	2.96	0	0	0	0	2.96
SSW	8.26	0	0	0	0	8.26
SW	9.19	0	0	0	0	9.19
WSW	5.61	0	0	0	0	5.61
W	9.66	0	0	0	0	9.66
WNW	7.32	0.62	0	0	0	7.94
NW	4.05	0	0	0	0	4.05
NNW	3.58	0	0	0	0	3.58
Summary	99.39	0.62	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

HYDROGEN SULPHIDE (H_2S) in ppb

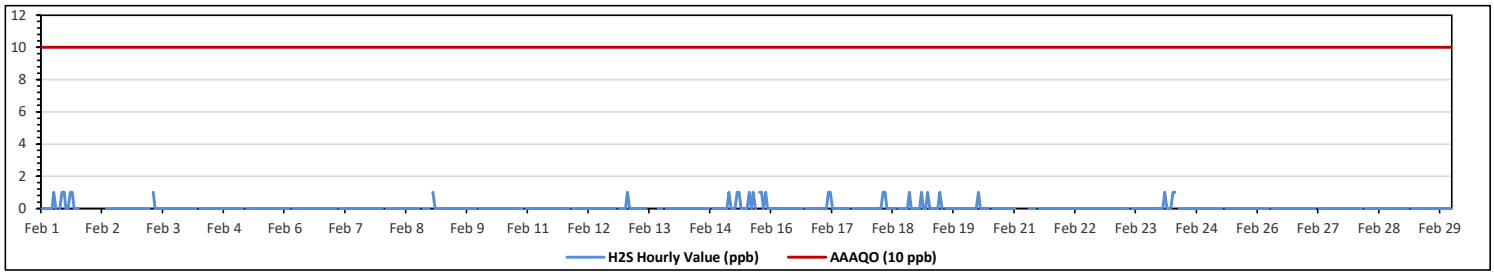
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb

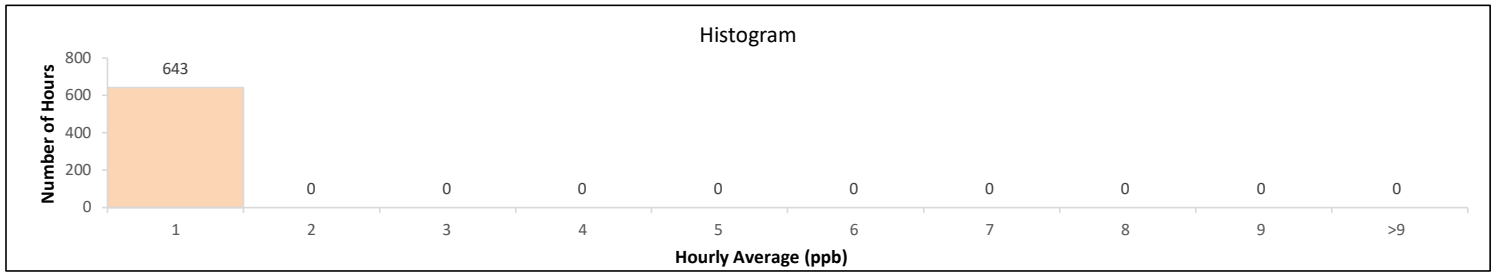
Number of 1-Hour Exceedances:	0		Number of 24-Hour Exceedances:	0	
Maximum Hourly Value:	1	ppb	on Feb 1 at hr 6	Hours in Service:	696
Maximum Daily Value:	0.0	ppb	on Feb 1	Hours of Data:	643
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	19
Minimum Daily Value:	0.0	ppb	on Feb 1	Hours of Calibration:	34
Monthly Average:	0.0	ppb		Operational Uptime:	97.3

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	1	1	0	0	1	1	0	0	0	K	K	K	K	K	0	1	0.0
Feb 2	K	K	K	K	K	K	K	S	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	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 4	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 5	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 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	0	0	0	0	0	0	0.0
Feb 8	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	K	0	0	0	0	0	0	0.0
Feb 9	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	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	S	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	S	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	S	0	0	0	0	0	0.0
Feb 13	0	1	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	S	0	0	0	0	0	1	0.0
Feb 14	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 15	0	0	0	1	0	0	0	1	1	0	0	0	0	1	0	1	0	S	1	1	0	1	0	0	0	1	0.0
Feb 16	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 17	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.0
Feb 18	0	0	0	0	0	0	0	1	1	0	0	0	0	0	S	0	0	0	0	0	1	0	0	0	0	1	0.0
Feb 19	0	0	1	0	0	1	0	0	0	0	0	1	0	S	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 20	0	0	0	0	0	0	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 21	0	K	K	K	K	K	K	0	0	0	0	S	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
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	1	0	0	0	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 25	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 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 28	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 29	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
Diurnal Maximum	0	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	0	0	1	1	1	1	0	0			
Diurnal Average	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

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.



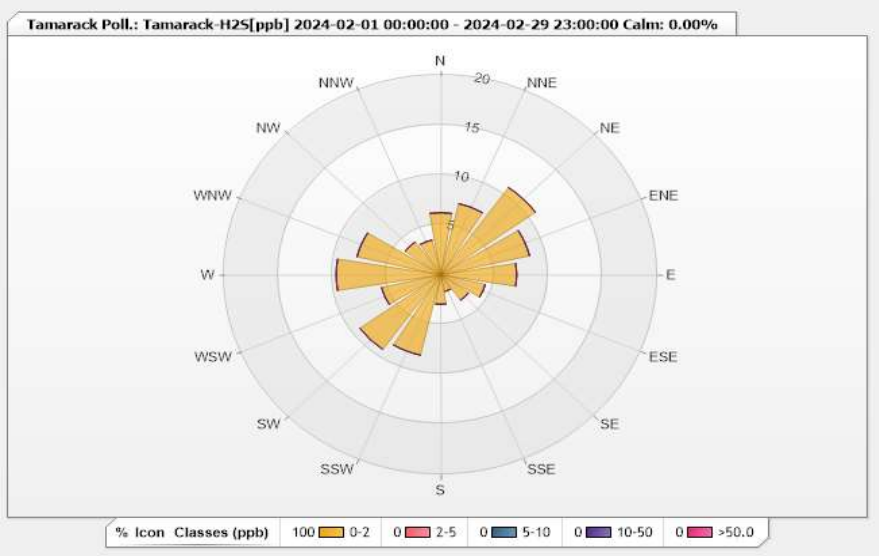


Station: Tamarack Poll.: Tamarack-H2S[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 92.24% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	6.23	0	0	0	0	6.23
NNE	7.32	0	0	0	0	7.32
NE	10.75	0	0	0	0	10.75
ENE	8.41	0	0	0	0	8.41
E	7.01	0	0	0	0	7.01
ESE	4.21	0	0	0	0	4.21
SE	3.12	0	0	0	0	3.12
SSE	1.71	0	0	0	0	1.71
S	2.96	0	0	0	0	2.96
SSW	8.26	0	0	0	0	8.26
SW	9.19	0	0	0	0	9.19
WSW	5.61	0	0	0	0	5.61
W	9.66	0	0	0	0	9.66
WNW	7.94	0	0	0	0	7.94
NW	4.05	0	0	0	0	4.05
NNW	3.58	0	0	0	0	3.58
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

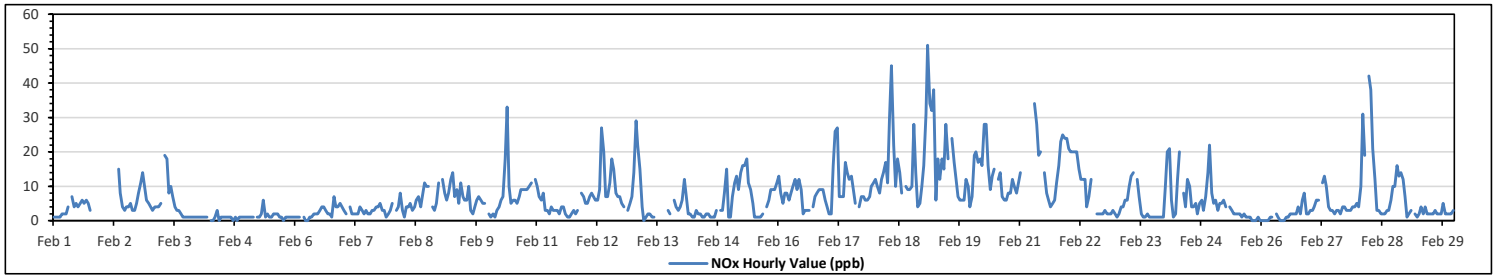
OXIDES OF NITROGEN (NOx) in ppb

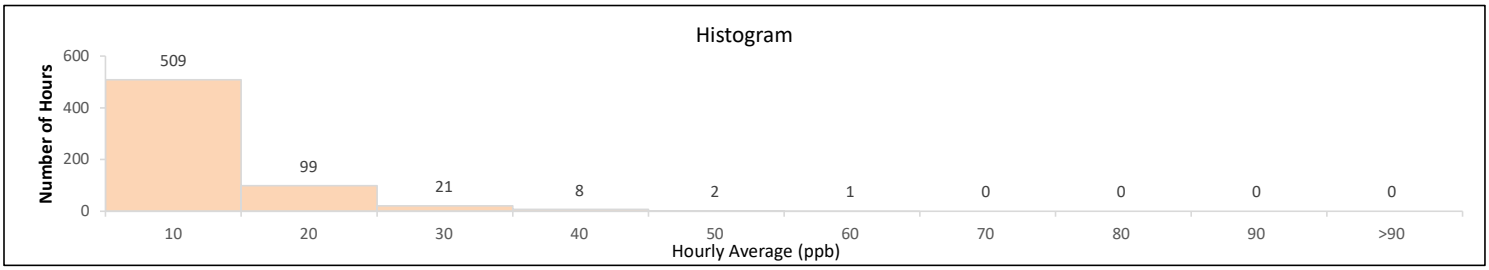
Maximum Hourly Value:	51	ppb	on Feb 19 at hr 2	Hours in Service:	696	
Maximum Daily Value:	18.3	ppb	on Feb 19	Hours of Data:	640	
Minimum Hourly Value:	0	ppb	on Feb 4 at hr 6	Hours of Missing Data:	20	
Minimum Daily Value:	0.9	ppb	on Feb 4	Hours of Calibration:	36	
Monthly Average:	6.8	ppb		Operational Uptime:	97.1	

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	1	1	1	1	2	2	2	4	S	7	4	5	4	5	6	5	6	5	3	K	K	K	K	K	1	7	3.6
Feb 2	K	K	K	K	K	K	K	S	15	8	4	3	4	4	5	3	3	5	8	11	14	10	6	5	3	15	NA
Feb 3	4	3	4	4	4	5	S	19	18	8	10	7	4	3	3	2	1	1	1	1	1	1	1	1	1	19	4.6
Feb 4	1	1	1	1	1	S	0	0	1	3	0	1	1	1	1	1	1	0	1	0	1	1	1	1	**0**	3	**0.9**
Feb 5	1	1	1	1	S	1	1	2	6	1	2	1	1	2	2	2	1	1	0	1	1	1	1	1	**0**	6	1.4
Feb 6	1	1	1	S	1	0	0	1	1	2	2	2	3	4	4	3	2	2	1	7	4	4	5	4	**0**	7	2.4
Feb 7	3	2	S	4	2	2	2	2	4	3	2	3	2	2	3	3	4	4	5	3	3	1	2	3	1	5	2.8
Feb 8	5	S	3	4	8	3	1	4	4	5	3	4	6	7	4	7	11	10	10	K	4	3	5	11	1	11	5.5
Feb 9	S	12	8	6	8	12	14	7	9	5	11	7	6	6	10	3	2	4	6	7	6	5	5	S	2	14	7.2
Feb 10	2	1	2	1	3	4	6	7	18	33	10	5	6	6	5	7	9	9	9	9	10	11	S	12	1	33	8.0
Feb 11	10	7	6	8	3	3	2	4	3	3	3	2	4	4	2	1	1	2	3	2	3	S	8	7	1	10	4.0
Feb 12	5	5	7	8	7	6	6	9	27	20	7	7	11	18	15	8	7	7	5	4	S	3	5	7	3	27	8.9
Feb 13	14	29	22	15	4	0	1	2	2	1	1	C	C	C	C	C	C	3	2	S	6	4	3	4	**0**	29	NA
Feb 14	6	12	7	2	2	1	1	3	2	2	1	1	2	2	1	1	1	3	S	3	3	8	15	1	1	15	3.5
Feb 15	1	7	11	13	9	14	16	16	18	11	9	5	1	1	1	1	2	S	4	6	9	9	9	11	1	18	8.0
Feb 16	13	8	5	8	8	6	8	10	12	9	12	9	2	3	3	3	S	4	7	8	9	9	9	6	2	13	7.4
Feb 17	4	2	2	16	26	27	7	7	7	17	14	12	13	9	5	S	4	7	7	6	6	7	10	11	2	27	9.8
Feb 18	12	10	8	12	14	17	11	30	45	22	10	18	14	8	S	10	9	9	10	28	14	4	5	10	4	45	14.3
Feb 19	16	31	**51**	34	32	38	6	18	12	18	15	28	18	S	24	17	12	7	6	6	6	12	10	4	4	**51**	**18.3**
Feb 20	7	19	20	17	18	16	28	28	16	9	13	15	S	12	14	7	6	6	8	8	12	10	8	11	6	28	13.4
Feb 21	14	K	K	K	K	K	K	34	28	19	20	S	14	8	6	4	5	6	11	16	23	25	24	24	4	34	NA
Feb 22	21	20	20	20	20	15	12	12	12	4	7	12	Y	S	2	2	2	2	3	2	2	2	3	2	2	21	9.0
Feb 23	1	2	4	4	6	6	10	13	14	S	12	7	2	1	1	2	1	1	1	1	1	1	1	1	1	14	4.0
Feb 24	10	20	21	6	1	2	12	20	S	8	4	12	10	4	4	5	2	5	6	3	7	14	22	8	1	22	9.0
Feb 25	5	6	3	5	5	6	4	S	4	3	2	2	2	2	1	2	1	1	1	0	0	0	1	0	**0**	6	2.4
Feb 26	0	0	0	0	1	1	S	2	1	0	0	0	1	1	2	2	2	2	4	2	6	8	2	2	**0**	8	1.7
Feb 27	3	3	4	6	6	S	11	13	10	4	3	3	2	3	3	2	4	4	3	3	3	4	4	5	2	13	4.6
Feb 28	4	10	31	19	S	42	38	21	12	3	3	2	2	2	3	3	6	10	10	16	13	14	12	7	2	42	12.3
Feb 29	1	2	3	S	2	1	2	4	2	4	2	2	2	2	3	2	2	2	5	2	2	2	2	3	1	5	2.3
Diurnal Maximum	21	31	51	34	32	42	38	34	45	33	20	28	18	18	24	17	12	10	11	28	23	25	24	24			
Diurnal Average	6.1	8.3	9.5	8.6	7.7	9.2	8.0	10.8	11.2	8.3	6.4	6.5	5.3	4.6	4.9	4.0	4.0	4.4	5.0	6.0	6.3	6.4	6.6	6.0			

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.



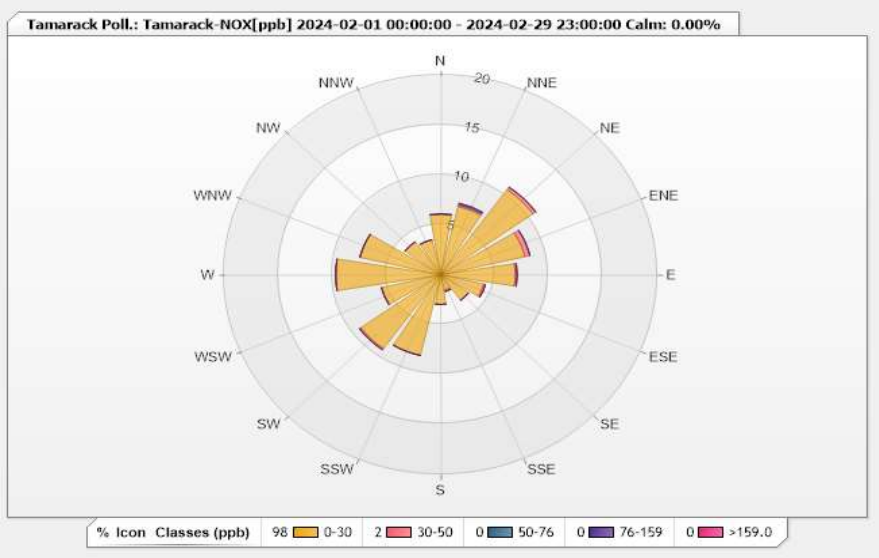


Station: Tamarack Poll.: Tamarack-NOX[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 91.81% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	6.1	0	0	0	0	6.1
NNE	7.04	0.16	0.16	0	0	7.36
NE	10.49	0.31	0	0	0	10.8
ENE	7.98	0.47	0	0	0	8.45
E	6.89	0.16	0	0	0	7.05
ESE	4.07	0.16	0	0	0	4.23
SE	3.13	0	0	0	0	3.13
SSE	1.56	0.16	0	0	0	1.72
S	2.97	0	0	0	0	2.97
SSW	8.29	0	0	0	0	8.29
SW	9.08	0.16	0	0	0	9.24
WSW	5.63	0	0	0	0	5.63
W	9.7	0	0	0	0	9.7
WNW	7.67	0	0	0	0	7.67
NW	4.07	0	0	0	0	4.07
NNW	3.6	0	0	0	0	3.6
Summary	98.27	1.58	0.16	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

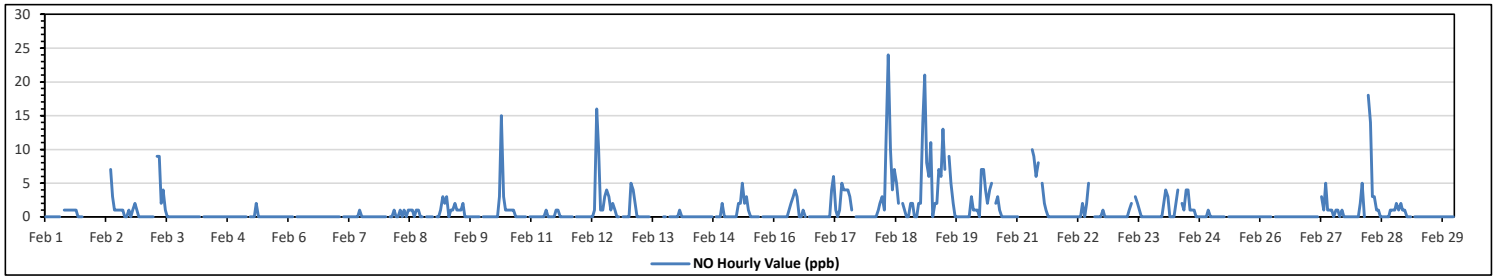
NITRIC OXIDE (NO) in ppb

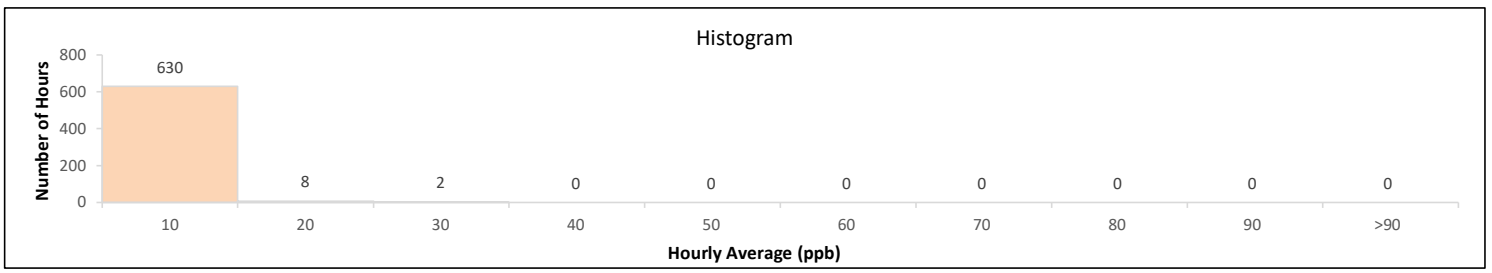
Maximum Hourly Value:	24	ppb	on Feb 18 at hr 8	Hours in Service:	696	
Maximum Daily Value:	5.0	ppb	on Feb 19	Hours of Data:	640	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	20	
Minimum Daily Value:	0.0	ppb	on Feb 4	Hours of Calibration:	36	
Monthly Average:	1.0	ppb		Operational Uptime:	97.1	

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	0	0	0	S	1	1	1	1	1	1	1	0	0	0	K	K	K	K	K	0	1	0.4
Feb 2	K	K	K	K	K	K	K	S	7	3	1	1	1	1	1	0	0	1	0	1	2	1	0	0	0	7	NA
Feb 3	0	0	0	0	0	0	S	9	9	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1.1
Feb 4	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 5	0	0	0	0	S	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1
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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 8	0	S	0	0	1	0	0	1	0	1	0	1	1	1	0	1	1	0	0	K	0	0	0	0	0	1	0.4
Feb 9	S	0	0	1	3	2	3	0	1	1	2	1	1	1	2	0	0	0	0	0	0	0	0	S	0	3	0.8
Feb 10	0	0	0	0	0	0	0	0	3	15	3	1	1	1	1	1	0	0	0	0	0	0	S	0	0	15	1.1
Feb 11	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	S	0	0	0	1	0.1
Feb 12	0	0	0	0	0	0	0	1	16	10	1	1	3	4	3	1	2	1	0	0	S	0	0	0	0	16	1.9
Feb 13	0	5	4	2	0	0	0	0	0	0	0	C	C	C	C	C	C	0	0	S	0	0	0	0	0	5	NA
Feb 14	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	2	0	0	2	0.1
Feb 15	0	0	0	0	0	0	2	2	5	2	3	1	0	0	0	0	0	S	0	0	0	0	0	0	0	5	0.7
Feb 16	0	0	0	0	0	0	0	1	2	3	4	3	0	0	1	0	S	0	0	0	0	0	0	0	0	4	0.6
Feb 17	0	0	0	0	4	6	1	0	1	5	4	4	4	3	1	S	0	0	0	0	0	0	0	0	0	6	1.4
Feb 18	0	0	0	1	2	3	1	11	24	10	4	7	5	2	S	2	1	0	0	2	2	0	0	2	0	24	3.4
Feb 19	2	14	21	8	6	11	0	2	2	7	6	13	7	S	9	5	2	0	0	0	0	0	0	0	0	21	5.0
Feb 20	0	3	1	1	1	0	7	7	4	2	4	5	S	2	3	1	0	0	0	0	0	0	0	0	0	7	1.8
Feb 21	0	K	K	K	K	K	K	10	9	6	8	S	5	2	1	0	0	0	0	0	0	0	0	0	0	10	NA
Feb 22	0	0	0	0	0	0	0	0	2	0	2	5	Y	S	0	0	0	0	1	0	0	0	0	0	0	5	0.5
Feb 23	0	0	0	0	0	0	0	1	2	S	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0.4
Feb 24	2	4	3	0	0	0	2	4	S	2	1	4	4	1	1	1	0	0	0	0	0	0	1	0	0	4	1.3
Feb 25	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 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	3	1	5	1	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	5	0.7
Feb 28	0	2	5	0	S	18	14	3	3	1	1	0	0	0	0	0	1	1	1	2	1	2	1	1	0	18	2.5
Feb 29	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
Diurnal Maximum	2	14	21	8	6	18	14	11	24	15	8	13	7	4	9	5	2	1	1	2	2	2	2	2			
Diurnal Average	0.1	1.1	1.3	0.5	0.7	1.6	1.3	2.0	3.6	2.6	1.8	2.0	1.3	0.8	0.9	0.5	0.3	0.1	0.1	0.2	0.2	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.



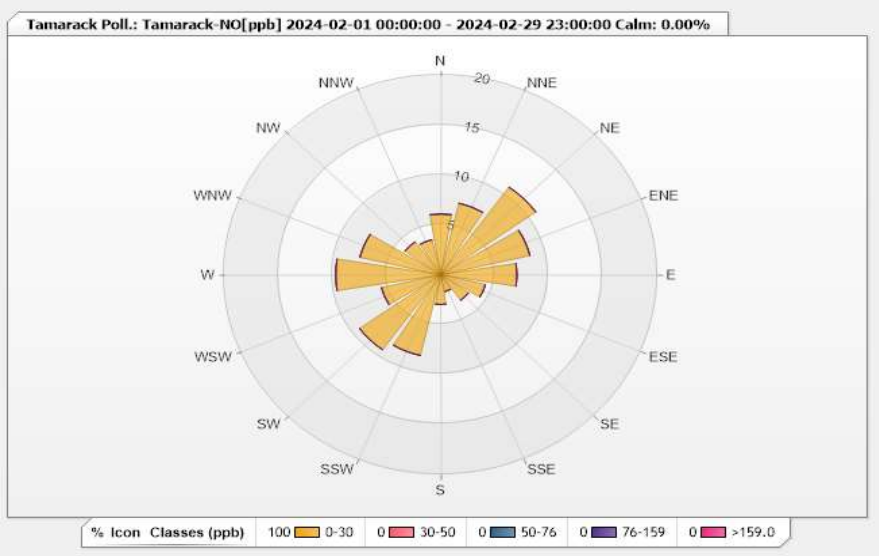


Station: Tamarack Poll.: Tamarack-NO[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 91.81% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	6.1	0	0	0	0	6.1
NNE	7.36	0	0	0	0	7.36
NE	10.8	0	0	0	0	10.8
ENE	8.45	0	0	0	0	8.45
E	7.04	0	0	0	0	7.04
ESE	4.23	0	0	0	0	4.23
SE	3.13	0	0	0	0	3.13
SSE	1.72	0	0	0	0	1.72
S	2.97	0	0	0	0	2.97
SSW	8.29	0	0	0	0	8.29
SW	9.23	0	0	0	0	9.23
WSW	5.63	0	0	0	0	5.63
W	9.7	0	0	0	0	9.7
WNW	7.67	0	0	0	0	7.67
NW	4.07	0	0	0	0	4.07
NNW	3.6	0	0	0	0	3.6
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

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

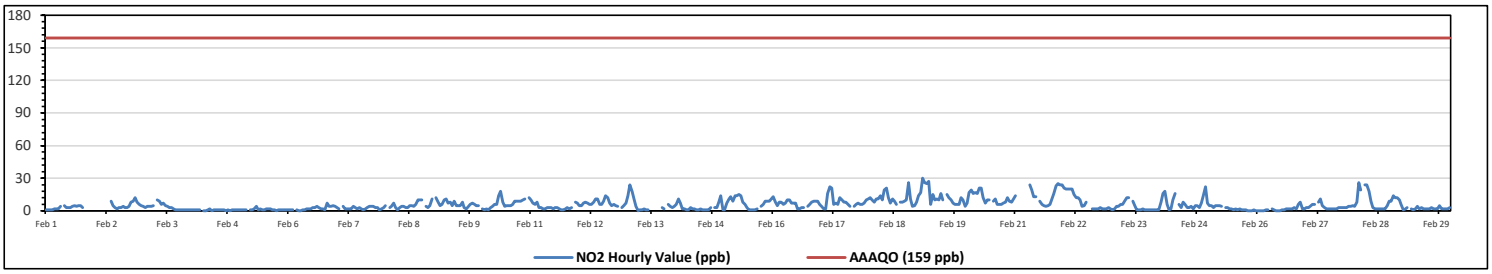
Number of 1-Hour Exceedances: 0

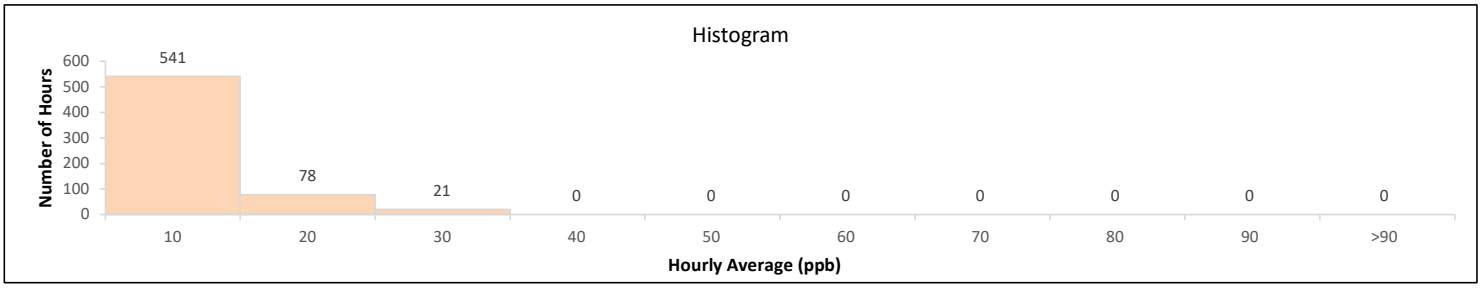
Maximum Hourly Value:	30	ppb	on Feb 19 at hr 2	Hours in Service:	696
Maximum Daily Value:	13.3	ppb	on Feb 19	Hours of Data:	640
Minimum Hourly Value:	0	ppb	on Feb 4 at hr 6	Hours of Missing Data:	20
Minimum Daily Value:	0.8	ppb	on Feb 4	Hours of Calibration:	36
Monthly Average:	5.8	ppb		Operational Uptime:	97.1

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	1	1	1	1	2	2	2	4	S	5	3	3	3	4	5	4	5	5	3	K	K	K	K	K	1	5	3.0
Feb 2	K	K	K	K	K	K	K	S	9	5	3	2	3	3	4	3	3	4	8	9	12	8	6	5	2	12	NA
Feb 3	4	3	4	4	4	5	S	10	9	6	7	5	4	3	3	2	1	1	1	1	1	1	1	1	1	10	3.5
Feb 4	1	1	1	1	1	S	0	0	1	2	0	1	1	1	1	1	1	0	1	0	1	1	1	1	**0**	2	**0.8**
Feb 5	1	1	1	1	S	1	1	2	4	1	2	1	1	2	2	2	1	1	0	1	1	1	1	1	**0**	4	1.3
Feb 6	1	1	1	S	1	0	0	1	1	2	2	2	3	3	4	3	2	2	1	7	4	4	5	4	**0**	7	2.3
Feb 7	3	2	S	4	2	2	2	2	4	3	2	3	2	1	2	3	4	4	4	3	3	1	2	3	1	4	2.7
Feb 8	5	S	3	4	7	3	1	3	4	4	3	3	5	5	4	6	10	10	10	K	4	3	5	11	1	11	5.1
Feb 9	S	12	8	5	6	10	11	7	8	5	9	5	5	5	8	3	2	4	6	7	6	5	5	S	2	12	6.5
Feb 10	2	1	2	1	3	4	6	6	14	18	8	4	5	5	5	6	9	9	9	9	10	11	S	12	1	18	6.9
Feb 11	10	7	6	8	3	3	2	2	3	3	3	2	3	3	2	1	1	2	3	2	3	S	8	7	1	10	3.8
Feb 12	5	5	7	8	7	6	6	8	11	11	6	6	9	14	12	7	5	6	5	4	S	3	5	7	3	14	7.1
Feb 13	14	24	18	12	4	0	1	1	2	1	1	C	C	C	C	C	C	3	2	S	6	4	3	4	**0**	24	NA
Feb 14	6	11	7	2	2	1	1	3	2	2	1	1	2	1	1	1	1	3	S	3	3	8	14	1	1	14	3.3
Feb 15	1	7	11	13	9	14	14	15	14	8	6	3	1	1	1	1	2	S	4	6	9	9	9	11	1	15	7.3
Feb 16	13	8	5	8	8	6	7	10	10	7	7	7	2	2	3	3	S	4	6	8	9	9	9	6	2	13	6.8
Feb 17	4	2	2	16	22	21	6	7	6	12	10	8	8	6	4	S	4	6	7	6	6	7	10	11	2	22	8.3
Feb 18	12	10	8	11	11	14	10	19	21	12	7	11	9	6	S	8	8	9	10	26	11	4	5	8	4	26	10.9
Feb 19	14	17	**30**	26	25	27	6	15	10	11	10	16	10	S	15	12	10	7	6	6	6	12	10	4	4	**30**	**13.3**
Feb 20	7	17	19	16	17	16	21	21	12	7	10	10	S	9	11	6	6	6	7	8	12	9	8	11	6	21	11.6
Feb 21	14	K	K	K	K	K	K	24	19	13	13	S	9	6	5	4	5	6	11	16	23	25	24	24	4	25	NA
Feb 22	21	20	20	20	20	15	12	12	10	4	5	8	Y	S	2	2	2	2	3	2	2	2	3	2	2	21	8.6
Feb 23	1	2	4	4	6	6	9	12	12	S	9	5	1	1	1	2	1	1	1	1	1	1	1	1	1	12	3.6
Feb 24	8	16	18	6	1	2	10	16	S	6	3	8	6	3	3	4	2	5	5	3	7	14	22	7	1	22	7.6
Feb 25	5	5	3	5	5	5	4	S	3	3	2	2	1	2	1	2	1	1	1	0	0	0	1	0	**0**	5	2.3
Feb 26	0	0	0	0	1	1	S	2	1	0	0	0	1	1	2	2	2	2	3	2	6	8	2	2	**0**	8	1.7
Feb 27	3	3	4	6	6	S	8	11	5	3	2	2	2	2	2	2	3	3	3	3	3	4	4	5	2	11	3.9
Feb 28	4	8	26	19	S	24	24	18	9	3	2	2	2	2	2	2	5	9	9	14	12	12	10	6	2	26	9.7
Feb 29	1	2	3	S	2	1	2	4	2	3	2	2	2	2	3	2	2	2	5	2	2	2	2	3	1	5	2.3
Diurnal Maximum	21	24	30	26	25	27	24	24	21	18	13	16	10	14	15	12	10	10	11	26	23	25	24	24			
Diurnal Average	6.0	7.2	8.2	8.0	7.0	7.6	6.6	8.7	7.6	5.7	4.8	4.5	3.8	3.6	4.0	3.5	3.6	4.2	4.8	5.7	6.0	6.2	6.5	5.9			

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.



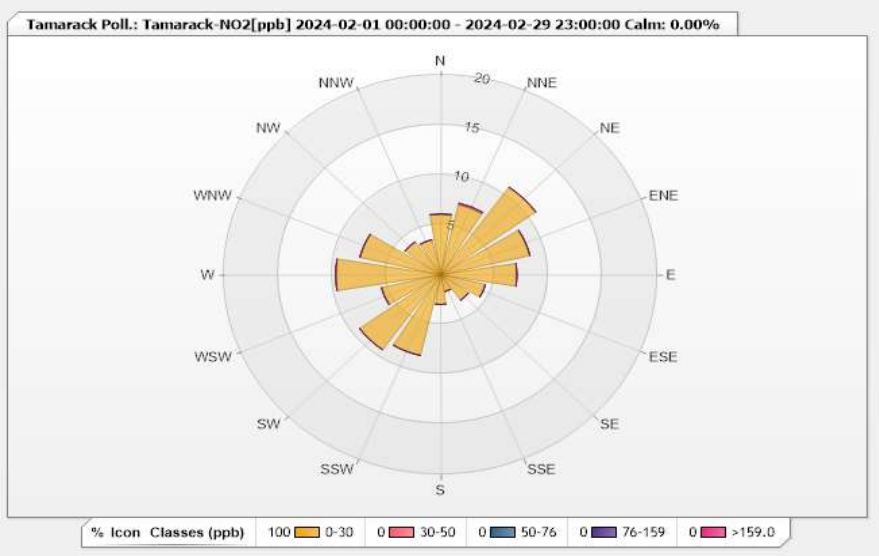


Station: Tamarack Poll.: Tamarack-NO2[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 91.81% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	6.1	0	0	0	0	6.1
NNE	7.2	0.16	0	0	0	7.36
NE	10.8	0	0	0	0	10.8
ENE	8.45	0	0	0	0	8.45
E	7.04	0	0	0	0	7.04
ESE	4.23	0	0	0	0	4.23
SE	3.13	0	0	0	0	3.13
SSE	1.72	0	0	0	0	1.72
S	2.97	0	0	0	0	2.97
SSW	8.29	0	0	0	0	8.29
SW	9.23	0	0	0	0	9.23
WSW	5.63	0	0	0	0	5.63
W	9.7	0	0	0	0	9.7
WNW	7.67	0	0	0	0	7.67
NW	4.07	0	0	0	0	4.07
NNW	3.6	0	0	0	0	3.6
Summary	100	0.16	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

OZONE (O_3) in ppb

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

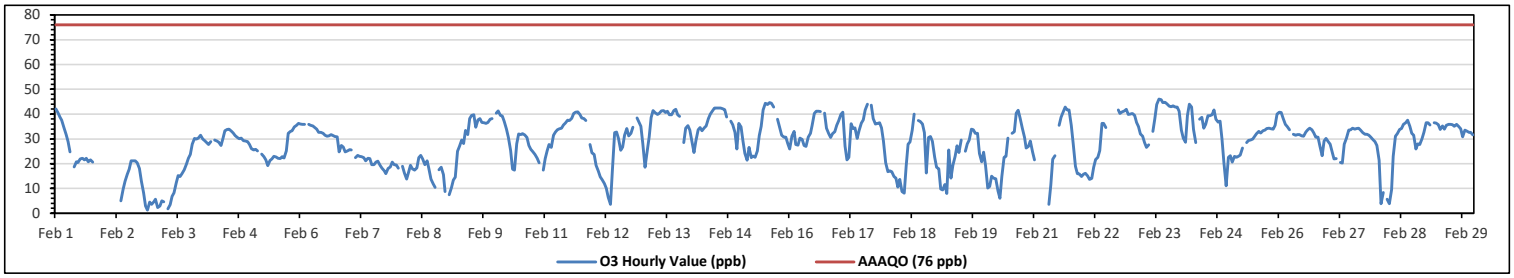
Number of 1-Hour Exceedances: 0

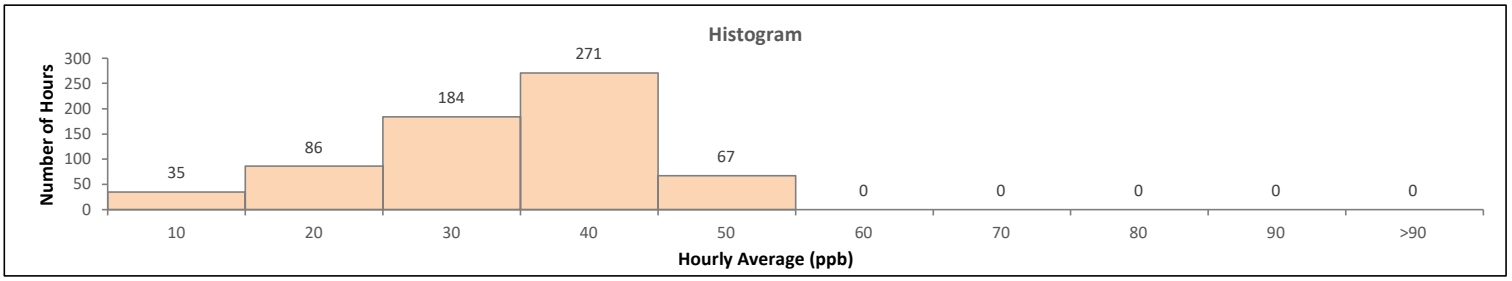
Maximum Hourly Value:	46.0	ppb	on Feb 23 at hr 13	Hours in Service:	696
Maximum Daily Value:	38.8	ppb	on Feb 23	Hours of Data:	643
Minimum Hourly Value:	1.3	ppb	on Feb 2 at hr 21	Hours of Missing Data:	20
Minimum Daily Value:	14.7	ppb	on Feb 3	Hours of Calibration:	33
Monthly Average:	28.5	ppb		Operational Uptime:	97.1

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	42.1	40.6	38.7	37.5	34.6	31.8	28.8	24.8	S	18.7	20.8	20.5	21.9	22.1	21.6	22.2	20.8	21.6	20.6	K	K	K	K	K	18.7	42.1	27.2
Feb 2	K	K	K	K	K	K	K	S	5	9.6	12.9	15.7	17.8	21.1	21.1	21.1	20.3	18	13.1	8.2	2.9	1.3	4.5	3.6	1.3	21.1	NA
Feb 3	4.7	5.7	2.3	2.9	4.9	4.6	S	1.8	3.5	6.8	8.3	12.2	15.3	14.9	16	17.6	19.8	22.2	23.7	27.9	30.2	30	30.3	31.4	1.8	31.4	14.7
Feb 4	30	29.3	28.5	27.8	28.9	S	29.6	29.2	28.6	27.3	30.2	33.2	33.8	33.9	33.1	32.4	31.3	30.5	30.1	30.4	29.3	29.1	28.9	27.7	27.3	33.9	30.1
Feb 5	26.1	25.5	25.8	25.2	S	23.9	22.8	21.5	19.2	21.3	21.9	23	22.7	22.1	22	22.8	22.3	25.2	32.3	33	33.3	34.8	35.5	36.2	19.2	36.2	26.0
Feb 6	36	35.8	35.8	S	35.8	35.4	35.2	34.6	33.9	32.6	32.6	32.3	31.5	31	31.2	31.7	31.3	30.9	30.8	24.7	27.4	26.6	24.8	25.1	24.7	36.0	31.6
Feb 7	25.7	25.5	S	22.4	23.3	23	22.8	22.4	21.1	22.2	22	19.6	19.6	20.6	21	19.4	18.2	17.2	16	18	18.7	20.6	19.6	19.5	16.0	25.7	20.8
Feb 8	18.2	S	19	16.2	13.8	16.5	19.4	17.9	17.5	18.3	22.4	23.3	21.9	19.6	21.1	18.3	13.7	11.8	10.5	K	17.6	18.6	15.6	8.8	8.8	23.3	17.3
Feb 9	S	7.4	10.3	13.4	14.6	25	26.9	29.6	28.1	33.4	31.8	38.2	39.5	39.7	34.7	37.6	38.2	36.7	36.5	36.3	36.7	37.9	38.2	S	7.4	39.7	30.5
Feb 10	40.4	41.3	39.4	39.2	37	33.9	30.5	25.3	17.7	17.4	28	32	31.8	32.1	31.6	30.5	27.4	25.8	24.9	23.8	22.2	20.3	S	17.5	17.4	41.3	29.1
Feb 11	22	25.2	27.8	26.5	31.4	32.7	33.6	34.1	34.3	35.6	36.4	37.5	37.4	38.3	40.3	40.8	40.9	39.7	38.4	38.2	37.4	S	27.8	24.3	22.0	40.9	33.9
Feb 12	23.8	19.3	17	14.7	13.5	11.9	10	6.4	3.6	17.5	32.5	32.7	30.2	25.4	26.7	31.4	34.2	31.2	32.3	34.7	S	38.5	36.8	35	3.6	38.5	24.3
Feb 13	28.1	18.5	25.3	30.8	38.6	41.4	40.5	39.8	40.2	41.2	41.4	40.7	41.1	39.7	39.7	41.4	41.9	39.7	39.1	S	28.5	34.4	35.3	33.5	18.5	41.9	36.6
Feb 14	28.6	24.5	29.3	33.7	34.6	33.3	34.5	35.2	38.2	40	41.1	42.4	42.5	42.5	42.4	42.2	41.8	38.9	S	37.1	35.7	32.6	26	36.3	24.5	42.5	36.2
Feb 15	34.8	29.1	24.1	21.4	26.5	22.4	23.1	22.5	25.2	31.3	35	41.7	44.4	43.9	44.6	44.4	42.9	S	37.9	34.9	31.4	30.6	30.7	28.1	21.4	44.6	32.6
Feb 16	25.9	31	33	27.7	27.5	30.3	29.8	27.4	27	30.6	32.3	35.3	40.3	41.1	41.1	41	S	40.4	34.4	32.2	30.5	32.1	32.9	35.4	25.9	41.1	33.0
Feb 17	37.3	39.9	40.8	27.1	21.5	22.5	36.1	34.2	34.5	30.2	33.4	36.4	37.6	41.6	44	S	43.6	38.2	36	36.3	36.6	34.5	29.1	20.3	20.3	44.0	34.4
Feb 18	16.7	17.1	16.8	14.9	14.1	10.6	13.6	8.8	8.1	19	27.9	28.7	33.5	40	S	37.4	37	36	32.5	16.2	30.5	30.9	29	22.7	8.1	40.0	23.6
Feb 19	18.5	17.9	9.8	9.3	11.5	8	25.6	14.2	19.3	23	27.2	24.5	29.6	S	25	28	29.5	34	33.7	32.3	32.3	24.1	20.7	24.6	8.0	34.0	22.7
Feb 20	19.3	10.2	10.8	15	14.2	13.9	9	6.1	14.9	22.5	23	30.3	S	32.3	32.9	40.4	41.5	38.5	34.4	30.5	26.2	27	29.1	24.7	6.1	41.5	23.8
Feb 21	21.5	K	K	K	K	K	K	3.6	11.3	21.8	23.2	S	35.4	38.8	40.6	42.9	41.6	41.7	35.5	28.1	19	15.9	15.8	14.8	3.6	42.9	NA
Feb 22	15.7	16.1	15.1	13.6	14	18.5	21.7	22.5	25.3	36.3	36.2	34.6	C	C	C	C	Y	41.6	40.2	40.9	41.2	41.9	39.8	40	13.6	41.9	29.2
Feb 23	40.2	39.5	36.7	34.9	32	31.1	28.4	26.5	27.6	S	33	38	43.9	46	45.7	44.6	44.8	44.1	43.2	43	43.3	42.9	42.8	41.1	26.5	46.0	38.8
Feb 24	33.5	30.3	28.6	39.4	44	42.8	33.8	28.5	S	37.9	38.7	34.4	35.8	39.3	39.3	39.7	41.7	37.9	36.8	37.1	30	20.3	11.1	22.6	11.1	44.0	34.1
Feb 25	23.2	20.6	22.9	22.5	22.9	23.5	26.3	S	28.5	29.4	29.5	30	31.2	32.2	33	32.4	33.3	33.5	34.2	34.3	34.1	33.9	35.5	40	20.6	40.0	29.9
Feb 26	40.8	40.6	38.3	35.9	34.9	33.6	S	31.9	31.4	31.8	31.8	31.2	31.1	32.7	33.6	34.4	33.7	32.4	30.6	30.7	27.1	23.2	29.1	30.2	23.2	40.8	32.7
Feb 27	28.8	27.9	24.4	21.9	22	S	20.5	20.2	27.9	30.4	33.5	33.6	34.4	34	34.2	34.4	33.5	32.5	31.9	31.9	31.4	30.7	29.7	28.8	20.2	34.4	29.5
Feb 28	27.4	21.4	3.9	8.4	S	5.6	3.9	9.5	22.9	31	32.2	33.8	34.2	35.9	36.5	37.5	35	32.3	31.4	26	28	27.7	30.1	32.6	3.9	37.5	25.5
Feb 29	36.5	36.6	35.6	S	36.5	36.4	35.7	33.8	35.2	33.9	35.5	35.8	35.9	35.7	35.1	35.8	34.9	34.1	30.8	33.5	33.1	32.6	32.6	31.6	30.8	36.6	34.7
Diurnal Maximum	42.1	41.3	40.8	39.4	44.0	42.8	40.5	39.8	40.2	41.2	41.4	42.4	44.4	46.0	45.7	44.6	44.8	44.1	43.2	43.0	43.3	42.9	42.8	41.1			
Diurnal Average	27.6	26.0	24.6	23.3	25.3	24.5	25.7	22.7	23.3	26.8	29.5	31.1	32.4	33.2	32.9	33.4	33.2	32.4	31.1	30.8	29.4	28.6	28.2	27.3			

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.



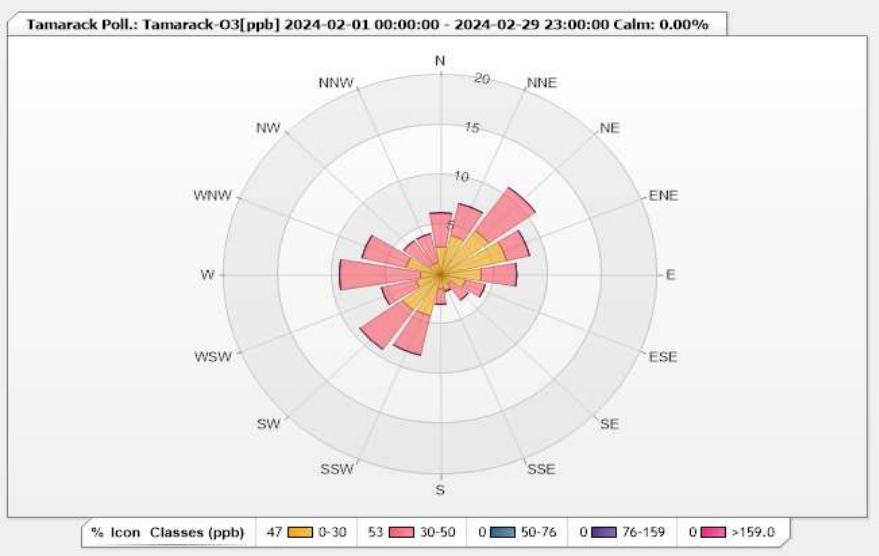


Station: Tamarack Poll.: Tamarack-O3[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 92.24% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	2.8	3.43	0	0	0	6.23
NNE	4.05	3.27	0	0	0	7.32
NE	5.45	5.3	0	0	0	10.75
ENE	6.23	2.18	0	0	0	8.41
E	3.74	3.27	0	0	0	7.01
ESE	2.34	1.87	0	0	0	4.21
SE	1.09	2.02	0	0	0	3.11
SSE	1.56	0.16	0	0	0	1.72
S	1.4	1.56	0	0	0	2.96
SSW	4.21	4.05	0	0	0	8.26
SW	4.36	4.83	0	0	0	9.19
WSW	2.34	3.27	0	0	0	5.61
W	1.87	7.48	0	0	0	9.35
WNW	3.27	4.21	0	0	0	7.48
NW	1.25	2.96	0	0	0	4.21
NNW	1.25	2.96	0	0	0	4.21
Summary	47.21	52.82	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

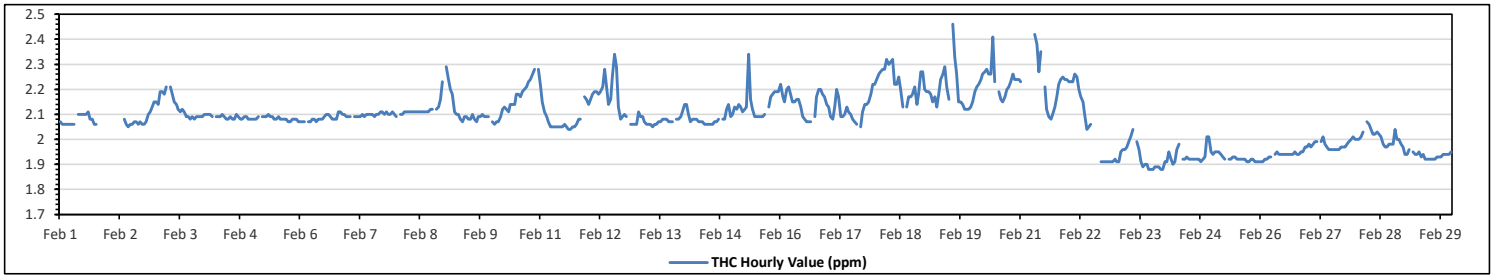
TOTAL HYDROCARBONS (THC) in ppm

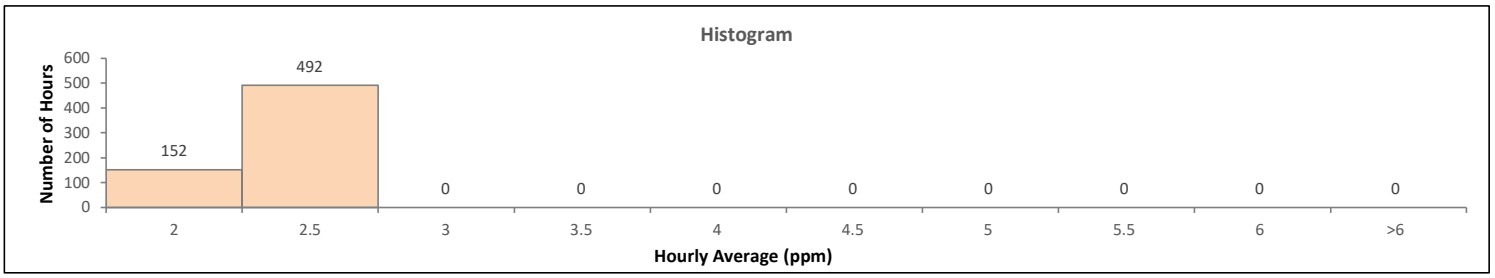
Maximum Hourly Value:	2.46	ppm	on Feb 19 at hr 14	Hours in Service:	696
Maximum Daily Value:	2.23	ppm	on Feb 18	Hours of Data:	644
Minimum Hourly Value:	1.88	ppm	on Feb 23 at hr 16	Hours of Missing Data:	19
Minimum Daily Value:	1.92	ppm	on Feb 25	Hours of Calibration:	33
Monthly Average:	2.08	ppm		Operational Uptime:	97.3

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	2.06	2.06	2.06	2.06	2.06	2.06	2.06	S	2.10	2.10	2.10	2.10	2.10	2.11	2.08	2.08	2.06	2.06	K	K	K	K	K	2.06	2.11	2.08
Feb 2	K	K	K	K	K	K	K	S	2.08	2.06	2.05	2.06	2.06	2.07	2.07	2.06	2.07	2.06	2.06	2.07	2.10	2.11	2.13	2.15	2.05	2.15	NA
Feb 3	2.15	2.14	2.19	2.19	2.18	2.21	S	2.21	2.18	2.15	2.14	2.12	2.11	2.12	2.11	2.09	2.09	2.08	2.09	2.08	2.09	2.09	2.09	2.09	2.08	2.21	2.13
Feb 4	2.10	2.10	2.10	2.10	2.09	S	2.09	2.09	2.09	2.10	2.09	2.08	2.08	2.09	2.08	2.08	2.10	2.09	2.08	2.08	2.09	2.09	2.08	2.08	2.08	2.10	2.09
Feb 5	2.08	2.08	2.08	2.09	S	2.09	2.09	2.09	2.10	2.09	2.09	2.08	2.08	2.09	2.08	2.08	2.08	2.08	2.07	2.07	2.08	2.08	2.08	2.07	2.07	2.10	2.08
Feb 6	2.07	2.07	2.07	S	2.07	2.07	2.08	2.08	2.07	2.08	2.08	2.08	2.09	2.10	2.10	2.09	2.08	2.08	2.08	2.11	2.11	2.10	2.10	2.09	2.07	2.11	2.08
Feb 7	2.09	2.09	S	2.09	2.09	2.09	2.09	2.10	2.09	2.10	2.10	2.10	2.10	2.09	2.10	2.10	2.11	2.11	2.10	2.11	2.10	2.10	2.11	2.10	2.09	2.11	2.10
Feb 8	2.09	S	2.10	2.10	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.12	2.12	K	2.12	2.13	2.16	2.23	2.09	2.23	2.12
Feb 9	S	2.29	2.24	2.20	2.18	2.11	2.10	2.10	2.08	2.07	2.09	2.09	2.08	2.08	2.10	2.08	2.07	2.09	2.09	2.10	2.09	2.09	2.09	S	2.07	2.29	2.11
Feb 10	2.07	2.06	2.07	2.07	2.09	2.12	2.13	2.12	2.11	2.14	2.14	2.14	2.18	2.18	2.17	2.19	2.20	2.21	2.23	2.24	2.26	2.28	S	2.28	2.06	2.28	2.16
Feb 11	2.21	2.15	2.11	2.09	2.07	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.06	2.05	2.04	2.04	2.05	2.05	2.06	2.08	2.08	S	2.17	2.16	2.04	2.21	2.08
Feb 12	2.14	2.16	2.18	2.19	2.19	2.18	2.19	2.21	2.28	2.21	2.14	2.16	2.25	2.34	2.29	2.13	2.08	2.09	2.10	2.09	S	2.06	2.06	2.06	2.06	2.34	2.16
Feb 13	2.06	2.11	2.09	2.09	2.07	2.06	2.06	2.06	2.05	2.06	2.06	2.07	2.07	2.08	2.08	2.08	2.07	2.07	2.07	S	2.08	2.08	2.09	2.11	2.05	2.11	2.07
Feb 14	2.14	2.14	2.10	2.07	2.08	2.08	2.08	2.07	2.07	2.07	2.06	2.06	2.06	2.06	2.06	2.07	2.07	2.08	S	2.08	2.08	2.12	2.14	2.09	2.06	2.14	2.08
Feb 15	2.10	2.13	2.12	2.14	2.13	2.11	2.12	2.13	2.34	2.16	2.12	2.09	2.09	2.09	2.09	2.09	2.10	S	2.13	2.17	2.18	2.19	2.19	2.19	2.09	2.34	2.14
Feb 16	2.22	2.17	2.15	2.20	2.21	2.18	2.15	2.15	2.16	2.16	2.13	2.09	2.08	2.07	2.07	2.07	S	2.09	2.17	2.20	2.20	2.18	2.17	2.14	2.07	2.22	2.15
Feb 17	2.13	2.09	2.08	2.13	2.20	2.17	2.09	2.09	2.10	2.13	2.11	2.10	2.08	2.07	2.06	S	2.05	2.11	2.14	2.14	2.15	2.18	2.22	2.22	2.05	2.22	2.12
Feb 18	2.24	2.26	2.27	2.28	2.28	2.32	2.30	2.31	2.32	2.22	2.22	2.25	2.20	2.13	S	2.13	2.17	2.17	2.18	2.21	2.14	2.18	2.27	2.27	2.13	2.32	2.23
Feb 19	2.20	2.19	2.19	2.18	2.15	2.17	2.13	2.18	2.24	2.26	2.29	2.21	2.16	S	2.46	2.33	2.26	2.15	2.15	2.14	2.12	2.12	2.12	2.13	2.12	2.46	2.20
Feb 20	2.15	2.19	2.21	2.22	2.24	2.26	2.27	2.28	2.26	2.26	2.41	2.23	S	2.19	2.16	2.15	2.17	2.20	2.21	2.23	2.26	2.24	2.24	2.24	2.15	2.41	2.23
Feb 21	2.23	K	K	K	K	K	K	2.42	2.38	2.27	2.35	S	2.21	2.12	2.09	2.08	2.10	2.13	2.17	2.22	2.24	2.25	2.24	2.24	2.08	2.42	NA
Feb 22	2.23	2.23	2.23	2.26	2.25	2.20	2.17	2.15	2.10	2.04	2.05	2.06	C	C	C	C	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.91	2.26	2.06
Feb 23	1.91	1.91	1.95	1.96	1.96	1.97	1.99	2.01	2.04	S	1.99	1.96	1.91	1.89	1.90	1.90	1.88	1.88	1.88	1.89	1.89	1.89	1.88	1.88	1.88	2.04	1.93
Feb 24	1.91	1.91	1.95	1.92	1.90	1.91	1.96	1.98	S	1.92	1.92	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.92	1.93	2.01	2.01	1.95	1.90	2.01	1.93
Feb 25	1.94	1.95	1.95	1.95	1.94	1.93	1.92	S	1.92	1.92	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.92	1.92	1.91	1.91	1.91	1.91	1.95	1.92
Feb 26	1.91	1.91	1.92	1.92	1.93	1.93	S	1.94	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.95	1.95	1.97	1.97	1.91	1.97	1.94
Feb 27	1.98	1.97	1.98	1.99	1.99	S	1.99	2.01	1.98	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.98	1.99	2.00	2.01	2.00	1.96	2.01	1.98
Feb 28	2.00	2.00	2.01	2.03	S	2.07	2.06	2.04	2.02	2.02	2.03	2.02	2.01	1.98	1.97	1.97	1.98	1.98	1.98	2.04	2.00	2.00	1.98	1.97	1.97	2.07	2.01
Feb 29	1.94	1.94	1.96	S	1.95	1.94	1.94	1.95	1.93	1.94	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.95	1.92	1.96	1.94
Diurnal Maximum	2.24	2.29	2.27	2.28	2.28	2.32	2.30	2.42	2.38	2.27	2.41	2.25	2.25	2.34	2.46	2.33	2.26	2.21	2.23	2.24	2.26	2.28	2.27	2.28			
Diurnal Average	2.09	2.09	2.09	2.10	2.10	2.10	2.09	2.11	2.11	2.09	2.09	2.07	2.07	2.07	2.07	2.06	2.06	2.06	2.06	2.08	2.08	2.08	2.09	2.09			

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.



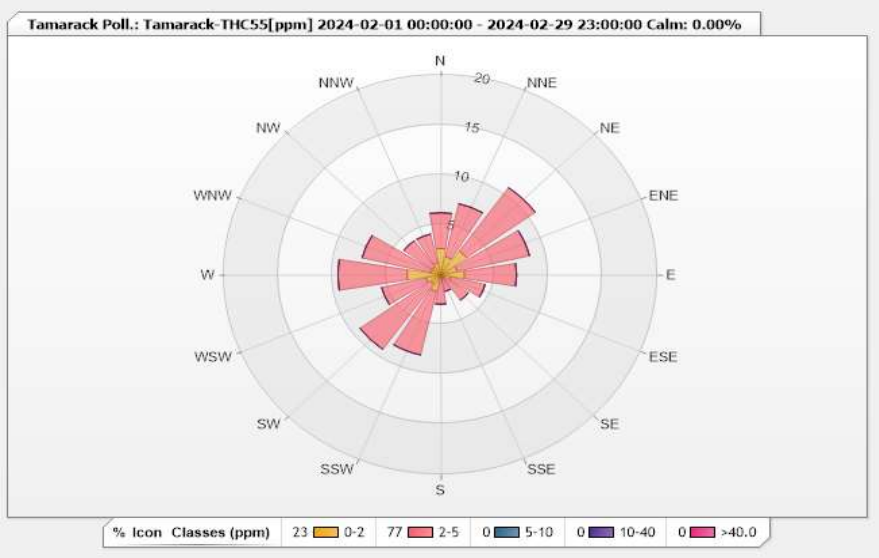


Station: Tamarack Poll.: Tamarack-THC55[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 92.39% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	2.64	3.58	0	0	0	6.22
NNE	1.87	5.44	0	0	0	7.31
NE	2.95	7.78	0	0	0	10.73
ENE	1.56	6.84	0	0	0	8.4
E	2.18	4.82	0	0	0	7
ESE	0.93	3.27	0	0	0	4.2
SE	0.31	2.8	0	0	0	3.11
SSE	0	1.71	0	0	0	1.71
S	0.31	2.64	0	0	0	2.95
SSW	1.71	6.53	0	0	0	8.24
SW	1.09	8.09	0	0	0	9.18
WSW	1.4	4.2	0	0	0	5.6
W	3.11	6.38	0	0	0	9.49
WNW	0.93	6.53	0	0	0	7.46
NW	0.93	3.27	0	0	0	4.2
NNW	1.24	2.95	0	0	0	4.19
Summary	23.16	76.83	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

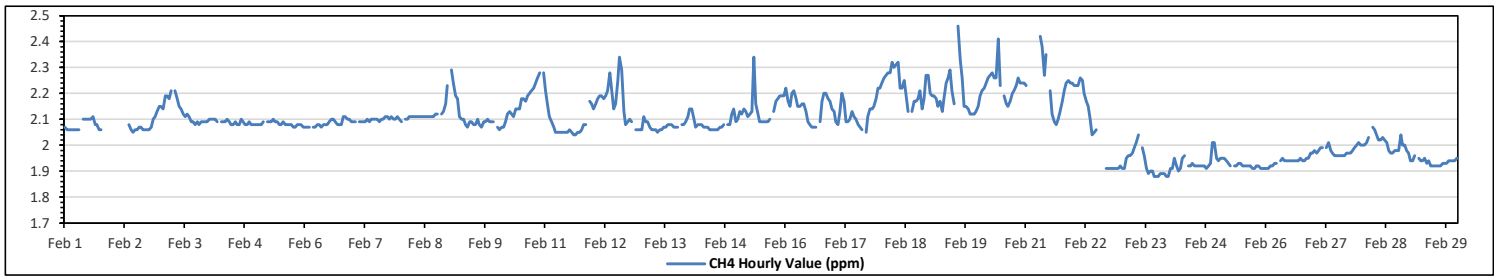
METHANE (CH4) in ppm

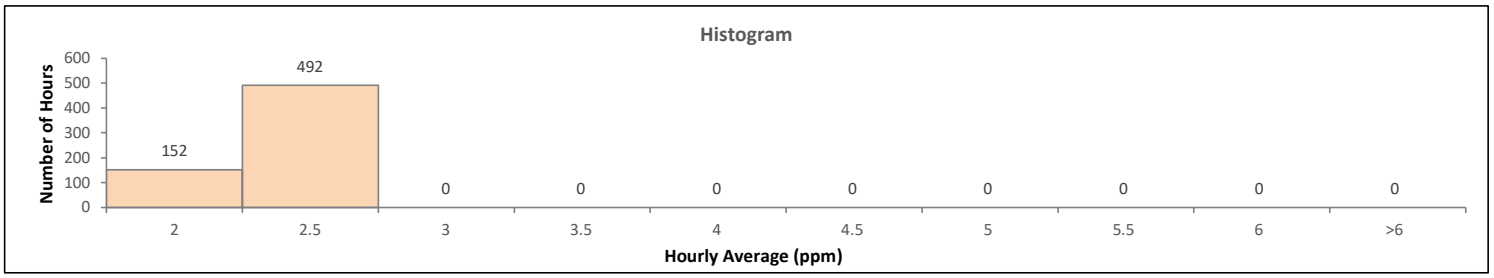
Maximum Hourly Value:	2.46	ppm	on Feb 19 at hr 14	Hours in Service:	696	
Maximum Daily Value:	2.23	ppm	on Feb 18	Hours of Data:	644	
Minimum Hourly Value:	1.88	ppm	on Feb 23 at hr 16	Hours of Missing Data:	19	
Minimum Daily Value:	1.92	ppm	on Feb 25	Hours of Calibration:	33	
Monthly Average:	2.08	ppm		Operational Uptime:	97.3	

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	2.06	2.06	2.06	2.06	2.06	2.06	2.06	S	2.10	2.10	2.10	2.10	2.10	2.11	2.08	2.08	2.06	2.06	K	K	K	K	K	2.06	2.11	2.08
Feb 2	K	K	K	K	K	K	K	S	2.08	2.06	2.05	2.06	2.06	2.07	2.07	2.06	2.06	2.06	2.06	2.07	2.10	2.11	2.13	2.15	2.05	2.15	NA
Feb 3	2.15	2.14	2.19	2.19	2.18	2.21	S	2.21	2.18	2.15	2.14	2.12	2.11	2.12	2.11	2.09	2.09	2.08	2.09	2.08	2.09	2.09	2.09	2.09	2.08	2.21	2.13
Feb 4	2.10	2.10	2.10	2.10	2.09	S	2.09	2.09	2.09	2.10	2.09	2.08	2.08	2.09	2.08	2.08	2.10	2.09	2.08	2.08	2.09	2.08	2.08	2.08	2.08	2.10	2.09
Feb 5	2.08	2.08	2.08	2.09	S	2.09	2.09	2.09	2.10	2.09	2.09	2.08	2.08	2.09	2.08	2.08	2.08	2.08	2.07	2.07	2.08	2.08	2.08	2.07	2.07	2.10	2.08
Feb 6	2.07	2.07	2.07	S	2.07	2.07	2.08	2.08	2.07	2.08	2.08	2.08	2.09	2.10	2.10	2.09	2.08	2.08	2.08	2.11	2.11	2.10	2.10	2.09	2.07	2.11	2.08
Feb 7	2.09	2.09	S	2.09	2.09	2.09	2.09	2.10	2.09	2.10	2.10	2.10	2.10	2.09	2.10	2.10	2.11	2.11	2.10	2.11	2.10	2.10	2.11	2.10	2.09	2.11	2.10
Feb 8	2.09	S	2.10	2.10	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.12	2.12	K	2.12	2.13	2.16	2.23	2.09	2.23	2.12
Feb 9	S	2.29	2.24	2.19	2.18	2.11	2.10	2.10	2.08	2.07	2.09	2.09	2.08	2.08	2.10	2.08	2.07	2.09	2.09	2.10	2.09	2.09	2.09	S	2.07	2.29	2.11
Feb 10	2.07	2.06	2.07	2.07	2.09	2.12	2.13	2.12	2.11	2.14	2.14	2.14	2.18	2.18	2.17	2.19	2.20	2.21	2.22	2.24	2.26	2.28	S	2.28	2.06	2.28	2.16
Feb 11	2.21	2.15	2.11	2.09	2.07	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.06	2.05	2.04	2.04	2.05	2.05	2.06	2.08	2.08	S	2.17	2.16	2.04	2.21	2.08
Feb 12	2.14	2.16	2.18	2.19	2.19	2.18	2.19	2.21	2.28	2.21	2.14	2.16	2.25	2.34	2.29	2.13	2.08	2.09	2.10	2.09	S	2.06	2.06	2.06	2.06	2.34	2.16
Feb 13	2.06	2.11	2.09	2.09	2.07	2.06	2.06	2.06	2.05	2.06	2.06	2.07	2.07	2.08	2.08	2.08	2.07	2.07	2.07	S	2.08	2.08	2.09	2.11	2.05	2.11	2.07
Feb 14	2.14	2.14	2.10	2.07	2.08	2.08	2.08	2.07	2.07	2.07	2.06	2.06	2.06	2.06	2.06	2.07	2.07	2.08	S	2.08	2.08	2.12	2.14	2.09	2.06	2.14	2.08
Feb 15	2.10	2.13	2.12	2.14	2.13	2.11	2.12	2.13	2.34	2.16	2.12	2.09	2.09	2.09	2.09	2.09	2.10	S	2.13	2.17	2.18	2.19	2.19	2.19	2.09	2.34	2.14
Feb 16	2.22	2.17	2.15	2.20	2.21	2.18	2.15	2.15	2.16	2.16	2.13	2.09	2.08	2.07	2.07	2.07	S	2.09	2.17	2.20	2.20	2.18	2.17	2.14	2.07	2.22	2.15
Feb 17	2.13	2.09	2.08	2.13	2.20	2.17	2.09	2.09	2.10	2.13	2.11	2.10	2.08	2.07	2.06	S	2.05	2.11	2.14	2.14	2.15	2.18	2.22	2.22	2.05	2.22	2.12
Feb 18	2.24	2.26	2.27	2.28	2.28	2.32	2.30	2.31	2.32	2.22	2.22	2.25	2.20	2.13	S	2.13	2.17	2.17	2.18	2.21	2.14	2.18	2.27	2.27	2.13	2.32	2.23
Feb 19	2.20	2.19	2.19	2.18	2.15	2.17	2.13	2.18	2.24	2.26	2.29	2.21	2.16	S	2.46	2.33	2.26	2.15	2.15	2.14	2.12	2.12	2.12	2.13	2.12	2.46	2.20
Feb 20	2.15	2.19	2.21	2.22	2.24	2.26	2.27	2.28	2.26	2.26	2.41	2.23	S	2.19	2.16	2.15	2.17	2.20	2.21	2.23	2.26	2.24	2.24	2.24	2.15	2.41	2.23
Feb 21	2.23	K	K	K	K	K	K	2.42	2.38	2.27	2.35	S	2.21	2.12	2.09	2.08	2.10	2.13	2.17	2.21	2.24	2.25	2.24	2.24	2.08	2.42	NA
Feb 22	2.23	2.23	2.23	2.26	2.25	2.20	2.17	2.15	2.10	2.04	2.05	2.06	C	C	C	C	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.91	2.26	2.06
Feb 23	1.91	1.91	1.95	1.96	1.96	1.97	1.99	2.01	2.04	S	1.99	1.96	1.91	1.89	1.90	1.90	1.88	1.88	1.88	1.89	1.89	1.89	1.88	1.88	1.88	2.04	1.93
Feb 24	1.91	1.91	1.95	1.92	1.90	1.91	1.95	1.96	S	1.92	1.92	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.92	1.93	2.01	2.01	1.95	1.90	2.01	1.93
Feb 25	1.94	1.95	1.95	1.95	1.94	1.93	1.92	S	1.92	1.92	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.92	1.92	1.91	1.91	1.91	1.91	1.95	1.92
Feb 26	1.91	1.91	1.92	1.92	1.93	1.93	S	1.94	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.94	1.95	1.95	1.97	1.97	1.91	1.97	1.94
Feb 27	1.98	1.97	1.98	1.99	1.99	S	1.99	2.01	1.98	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.98	1.99	2.00	2.01	2.00	1.96	2.01	1.98
Feb 28	2.00	2.00	2.01	2.03	S	2.07	2.06	2.04	2.02	2.02	2.03	2.02	2.01	1.98	1.97	1.97	1.98	1.98	1.98	2.04	2.00	2.00	1.98	1.97	1.97	2.07	2.01
Feb 29	1.94	1.94	1.96	S	1.95	1.94	1.94	1.95	1.93	1.94	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.95	1.92	1.96	1.94
Diurnal Maximum	2.24	2.29	2.27	2.28	2.28	2.32	2.30	2.42	2.38	2.27	2.41	2.25	2.25	2.34	2.46	2.33	2.26	2.21	2.22	2.24	2.26	2.28	2.27	2.28			
Diurnal Average	2.09	2.09	2.09	2.10	2.10	2.10	2.09	2.11	2.11	2.09	2.09	2.07	2.07	2.07	2.07	2.06	2.06	2.06	2.06	2.08	2.08	2.08	2.09	2.09			

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.



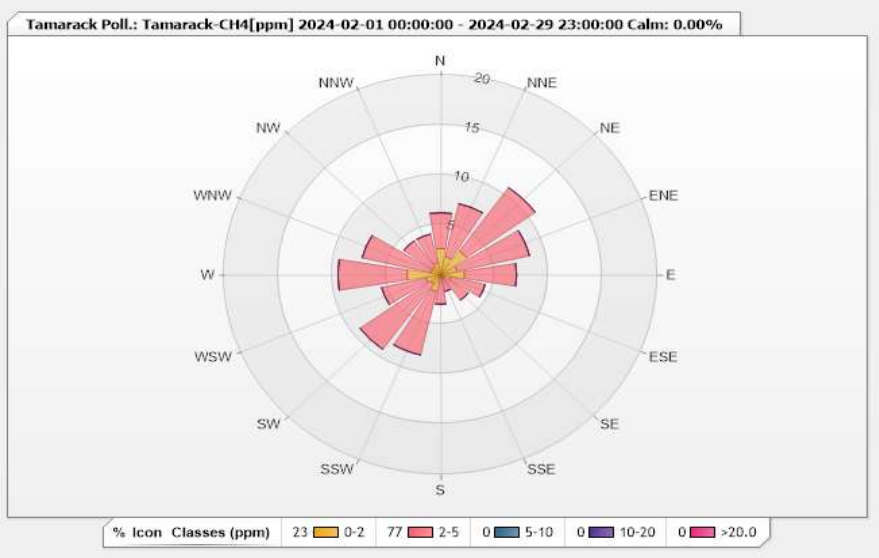


Station: Tamarack Poll.: Tamarack-CH4[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 92.39% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	2.64	3.58	0	0	0	6.22
NNE	1.87	5.44	0	0	0	7.31
NE	2.95	7.78	0	0	0	10.73
ENE	1.56	6.84	0	0	0	8.4
E	2.18	4.82	0	0	0	7
ESE	0.93	3.27	0	0	0	4.2
SE	0.31	2.8	0	0	0	3.11
SSE	0	1.71	0	0	0	1.71
S	0.31	2.64	0	0	0	2.95
SSW	1.71	6.53	0	0	0	8.24
SW	1.09	8.09	0	0	0	9.18
WSW	1.4	4.2	0	0	0	5.6
W	3.11	6.38	0	0	0	9.49
WNW	0.93	6.53	0	0	0	7.46
NW	0.93	3.27	0	0	0	4.2
NNW	1.24	2.95	0	0	0	4.19
Summary	23.16	76.83	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

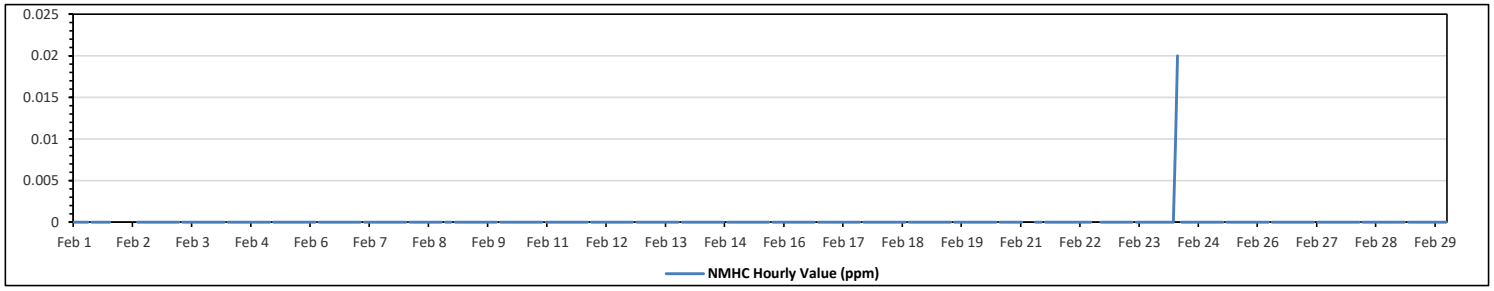
NON-METHANE HYDROCARBONS (NMHC) in ppm

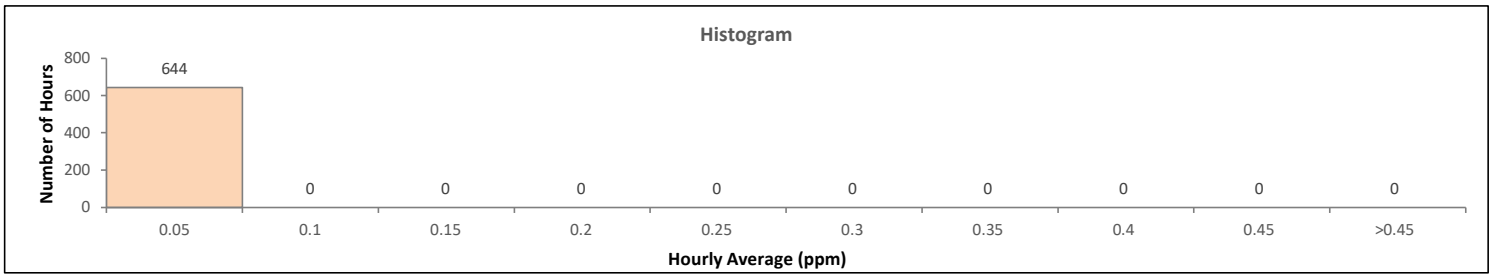
Maximum Hourly Value:	0.02 ppm	on Feb 24 at hr 7	Hours in Service:	696	
Maximum Daily Value:	0.00 ppm	on Feb 24	Hours of Data:	644	
Minimum Hourly Value:	0.00 ppm	on Feb 1 at hr 0	Hours of Missing Data:	19	
Minimum Daily Value:	0.00 ppm	on Feb 1	Hours of Calibration:	33	
Monthly Average:	0.00 ppm		Operational Uptime:	97.3	

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	K	K	K	K	K	0.00	0.00	0.00
Feb 2	K	K	K	K	K	K	K	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	NA
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	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 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	0.00	0.00	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	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 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	K	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	0.00	0.00	0.00	0.00	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 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	K	K	K	K	K	K	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	NA
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	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 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	0.01	**0.02**	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	**0.02**	**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
Feb 29	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
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	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.



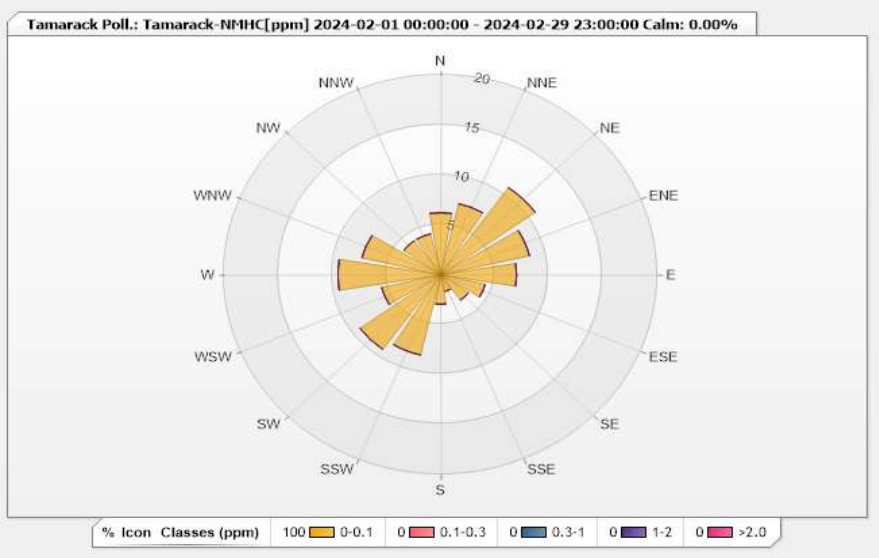


Station: Tamarack Poll.: Tamarack-NMHC[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 92.39% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	6.22	0	0	0	0	6.22
NNE	7.31	0	0	0	0	7.31
NE	10.73	0	0	0	0	10.73
ENE	8.4	0	0	0	0	8.4
E	7	0	0	0	0	7
ESE	4.2	0	0	0	0	4.2
SE	3.11	0	0	0	0	3.11
SSE	1.71	0	0	0	0	1.71
S	2.95	0	0	0	0	2.95
SSW	8.24	0	0	0	0	8.24
SW	9.18	0	0	0	0	9.18
WSW	5.6	0	0	0	0	5.6
W	9.49	0	0	0	0	9.49
WNW	7.47	0	0	0	0	7.47
NW	4.2	0	0	0	0	4.2
NNW	4.2	0	0	0	0	4.2
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

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

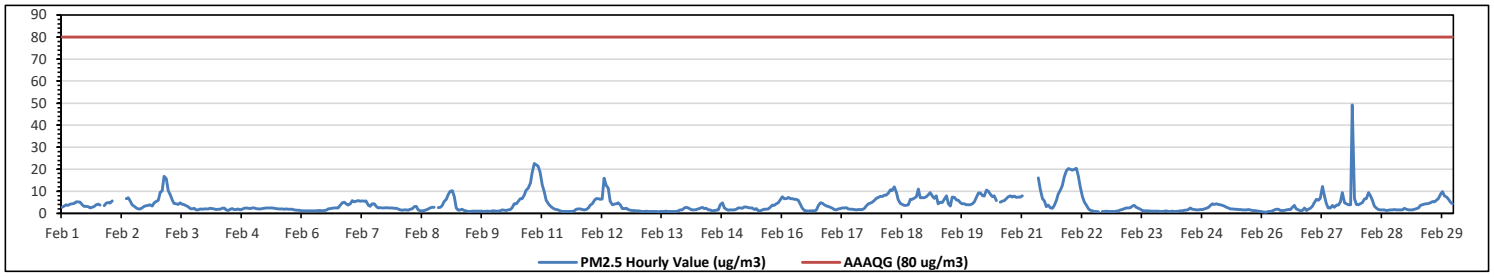
Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m3, Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m3

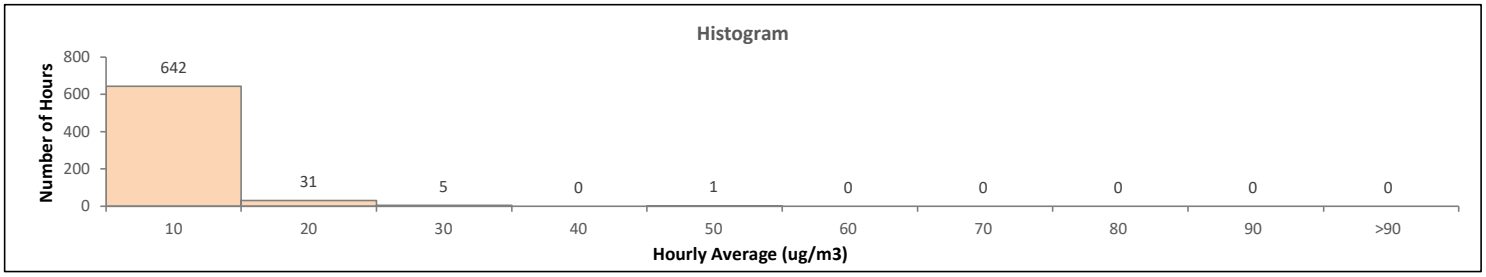
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0
Maximum Hourly Value:	49 µg/m^3 on Feb 27 at hr 21	Hours in Service:	696
Maximum Daily Value:	7.9 µg/m^3 on Feb 10	Hours of Data:	679
Minimum Hourly Value:	1 µg/m^3 on Feb 26 at hr 1	Hours of Missing Data:	16
Minimum Daily Value:	1 µg/m^3 on Feb 13	Hours of Calibration:	1
Monthly Average:	3.8 µg/m^3	Operational Uptime:	97.7

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	3	4	4	4	4	5	5	5	5	4	3	3	3	3	3	3	4	4	4	K	3	5	5	3	5	3.8
Feb 2	5	6	K	K	K	K	K	K	7	7	6	4	3	2	2	2	3	3	3	4	4	3	5	5	2	7	4.0
Feb 3	6	10	10	17	16	10	9	6	5	4	4	5	4	4	3	3	2	2	2	2	2	2	2	2	2	17	5.4
Feb 4	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	3	2	2	2	1	3	2.0
Feb 5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	2	2.0
Feb 6	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2	2	4	5	5	4	4	1	5	2.1
Feb 7	4	6	5	5	6	5	6	5	6	4	3	4	4	3	2	3	2	2	3	2	2	2	2	2	2	6	3.8
Feb 8	2	2	1	2	2	1	2	2	3	3	2	1	1	1	2	2	3	3	3	K	3	3	3	5	1	5	2.2
Feb 9	6	9	10	10	8	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	2.7
Feb 10	1	1	1	1	2	1	1	2	2	3	4	4	5	7	7	8	10	11	14	18	23	22	21	19	1	23	**7.9**
Feb 11	13	10	6	4	3	3	2	2	2	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	13	2.7
Feb 12	4	4	6	7	7	6	7	16	13	11	5	4	4	4	5	4	2	2	2	2	1	1	1	1	1	16	5.0
Feb 13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	2	**1.0**
Feb 14	3	2	2	2	2	2	2	2	3	2	2	2	2	1	1	1	2	4	5	2	2	1	2	2	1	5	2.0
Feb 15	2	2	3	2	2	3	3	3	2	2	2	2	1	1	2	2	2	2	3	4	4	4	5	6	1	6	2.6
Feb 16	8	7	7	7	7	7	6	6	6	4	3	1	1	1	1	1	1	1	4	5	5	4	3	3	1	8	4.1
Feb 17	3	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	3	4	5	5	6	7	2	7	2.7
Feb 18	7	8	8	8	8	9	11	10	12	9	6	5	4	4	4	4	6	6	7	7	11	7	7	7	4	12	7.3
Feb 19	8	9	10	8	7	8	4	5	5	6	8	4	3	7	7	6	6	5	4	4	4	4	4	4	3	10	5.8
Feb 20	5	7	9	9	8	8	11	10	9	8	8	6	K	5	6	6	7	7	8	7	8	7	7	7	5	11	7.5
Feb 21	8	K	K	K	K	K	K	K	16	11	7	6	3	4	2	2	4	6	9	11	13	17	19	20	2	20	NA
Feb 22	20	20	20	20	17	12	7	5	4	2	1	1	1	1	1	C	1	1	1	1	1	1	1	1	1	20	6.0
Feb 23	1	2	2	2	2	2	3	3	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1.7
Feb 24	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	4	4	1	4	1.7
Feb 25	4	4	4	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	4	2.2
Feb 26	1	1	1	1	1	1	2	2	2	1	1	1	2	2	2	3	4	2	2	1	1	3	1	2	**1**	4	1.5
Feb 27	2	3	5	6	6	7	12	8	5	3	3	4	3	4	4	5	9	5	4	4	4	**49**	7	4	2	**49**	6.8
Feb 28	4	4	5	7	7	10	8	6	3	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	1	10	3.2
Feb 29	2	2	2	2	2	2	2	4	4	4	4	5	5	5	5	6	7	9	10	8	7	6	5	4	2	10	4.6
Diurnal Maximum	20	20	20	20	17	12	12	16	16	11	8	6	5	7	7	8	10	11	14	18	23	49	21	20			
Diurnal Average	4.4	4.6	4.7	5.0	4.7	4.3	4.2	4.3	4.4	3.8	3.1	2.6	2.3	2.6	2.5	2.7	3.1	3.2	3.6	3.8	4.1	5.7	4.3	4.4			

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.





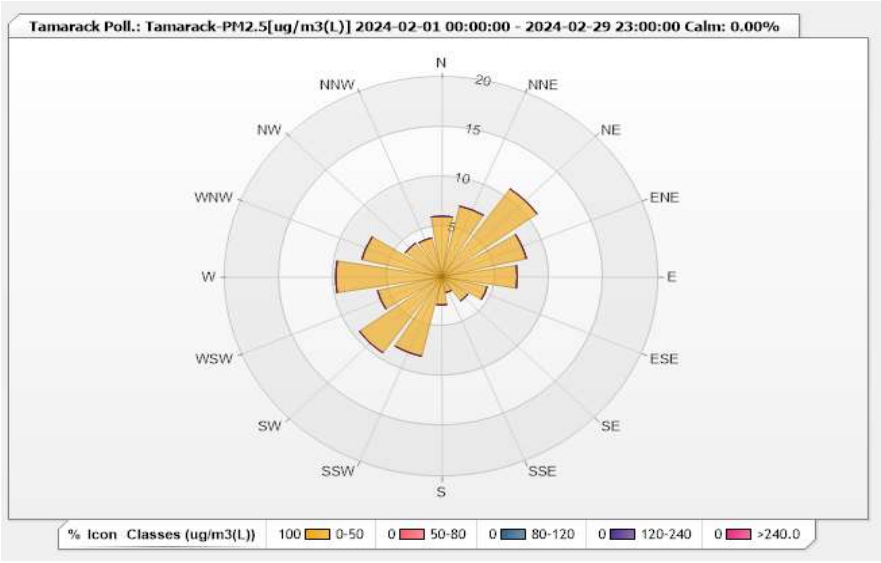
Station: Tamarack Poll.: Tamarack-PM2.5[ug/m3(L)] Monthly: 02-2024

)]

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

Calm: 0.00% Valid Data: 96.84% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	6.08	0	0	0	0	6.08
NNE	7.27	0	0	0	0	7.27
NE	10.83	0	0	0	0	10.83
ENE	8.01	0	0	0	0	8.01
E	6.97	0	0	0	0	6.97
ESE	4.3	0	0	0	0	4.3
SE	2.97	0	0	0	0	2.97
SSE	1.63	0	0	0	0	1.63
S	2.82	0	0	0	0	2.82
SSW	8.16	0	0	0	0	8.16
SW	9.35	0	0	0	0	9.35
WSW	6.08	0	0	0	0	6.08
W	9.79	0	0	0	0	9.79
WNW	7.57	0	0	0	0	7.57
NW	4.15	0	0	0	0	4.15
NNW	4.01	0	0	0	0	4.01
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

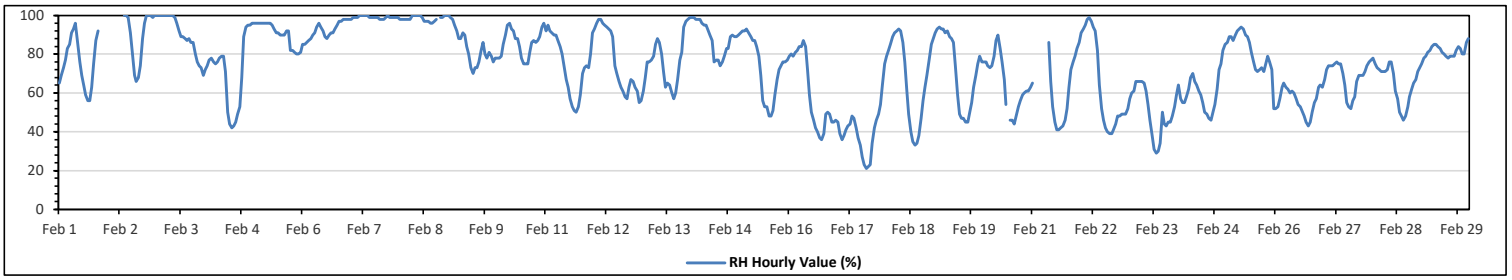
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100	%	on Feb 2 at hr 8	Hours in Service:	696	
Maximum Daily Value:	99.1	%	on Feb 7	Hours of Data:	675	
Minimum Hourly Value:	21	%	on Feb 17 at hr 14	Hours of Missing Data:	21	
Minimum Daily Value:	40.5	%	on Feb 17	Hours of Calibration:	0	
Monthly Average:	74.5	%		Operational Uptime:	97.0	

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	65	69	73	77	83	85	91	93	96	86	76	69	64	59	56	56	63	75	87	92	K	K	K	K	56	96	75.8
Feb 2	K	K	K	K	K	K	K	K	100	100	99	91	81	69	66	68	74	88	96	100	100	100	99	100	66	100	NA
Feb 3	100	100	100	100	100	100	100	100	100	99	96	92	89	89	88	87	88	86	86	80	76	74	73	69	69	100	90.5
Feb 4	72	74	77	78	76	75	76	78	79	79	71	50	44	42	43	45	49	53	68	89	94	95	95	96	42	96	70.8
Feb 5	96	96	96	96	96	96	96	96	96	95	93	91	91	90	90	90	92	92	82	82	81	80	80	81	80	96	90.6
Feb 6	85	85	86	87	88	90	91	94	96	94	92	89	88	90	91	91	93	95	97	97	98	98	98	98	85	98	92.1
Feb 7	98	99	99	99	100	100	100	100	100	99	99	99	99	99	98	98	98	99	100	99	99	99	99	99	98	100	99.1
Feb 8	98	98	98	98	98	98	100	100	100	100	100	99	97	97	97	96	96	97	98	K	99	99	100	100	96	100	98.4
Feb 9	100	99	98	95	92	88	88	91	90	84	80	73	70	73	73	76	82	86	80	78	81	79	76	78	70	100	83.8
Feb 10	78	78	79	85	90	95	96	93	92	88	88	84	78	75	75	75	81	86	87	86	87	89	94	96	75	96	85.6
Feb 11	92	95	92	91	90	90	87	84	80	73	67	63	57	53	51	50	53	59	70	73	74	73	80	91	50	95	74.5
Feb 12	93	96	98	98	96	95	94	93	92	89	74	70	66	63	61	58	57	63	67	66	63	61	55	56	55	98	76.0
Feb 13	61	68	76	76	77	79	85	88	86	80	71	63	65	64	60	57	60	67	77	81	94	97	98	99	57	99	76.2
Feb 14	99	99	98	98	98	96	95	95	92	90	87	76	77	77	74	76	79	83	83	89	90	89	89	90	74	99	88.3
Feb 15	91	92	92	93	91	89	87	87	84	79	69	56	53	53	48	48	51	59	67	72	74	76	76	77	48	93	73.5
Feb 16	79	80	79	81	82	84	84	87	84	72	59	50	46	42	40	37	36	39	49	50	49	45	45	46	36	87	60.2
Feb 17	45	39	36	38	41	43	44	48	47	42	37	33	27	23	21	22	23	34	42	46	49	54	64	75	21	75	40.5
Feb 18	79	82	85	89	91	92	93	92	86	76	62	49	40	35	33	34	38	47	56	63	69	77	85	88	33	93	68.4
Feb 19	91	93	94	93	93	91	92	89	88	86	74	59	49	47	47	45	45	50	55	63	69	75	79	76	45	94	72.6
Feb 20	76	76	74	73	74	79	87	90	83	76	67	54	K	46	46	44	48	53	56	59	60	61	61	63	44	90	65.5
Feb 21	65	K	K	K	K	K	K	K	86	66	53	45	41	41	42	43	46	52	63	72	76	79	83	86	41	86	NA
Feb 22	91	93	95	98	99	97	94	92	82	64	52	46	42	40	39	39	41	44	48	48	49	49	49	52	39	99	64.3
Feb 23	57	60	61	66	66	66	66	65	61	54	46	38	31	29	30	34	50	44	43	45	45	48	53	59	29	66	50.7
Feb 24	64	57	55	55	58	62	68	70	66	64	61	59	55	50	49	47	46	50	54	62	72	75	82	85	46	85	61.1
Feb 25	86	89	89	87	90	92	93	94	93	90	89	86	81	76	72	71	72	73	71	75	79	76	72	52	52	94	81.2
Feb 26	52	53	57	63	65	63	62	60	61	60	57	54	53	51	48	45	43	45	50	55	57	63	64	63	43	65	56.0
Feb 27	67	72	74	74	74	75	76	75	75	70	64	55	53	52	56	58	66	69	69	69	71	74	76	77	52	77	68.4
Feb 28	78	75	73	72	71	71	71	72	76	76	70	61	57	50	48	46	48	53	58	62	65	67	71	73	46	78	65.2
Feb 29	75	78	79	81	82	84	85	85	84	83	81	80	79	78	79	79	79	82	84	83	80	80	86	88	75	88	81.4
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	100	99	99	99	98	98	98	99	100	100	100	100	100	100			
Diurnal Average	79.8	81.3	82.0	83.0	83.7	84.3	85.2	85.6	84.7	79.8	73.6	66.7	63.3	60.4	59.3	59.1	62.0	66.3	70.4	72.7	75.0	76.1	77.9	79.0			

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 2024

Summary of Hourly Averages

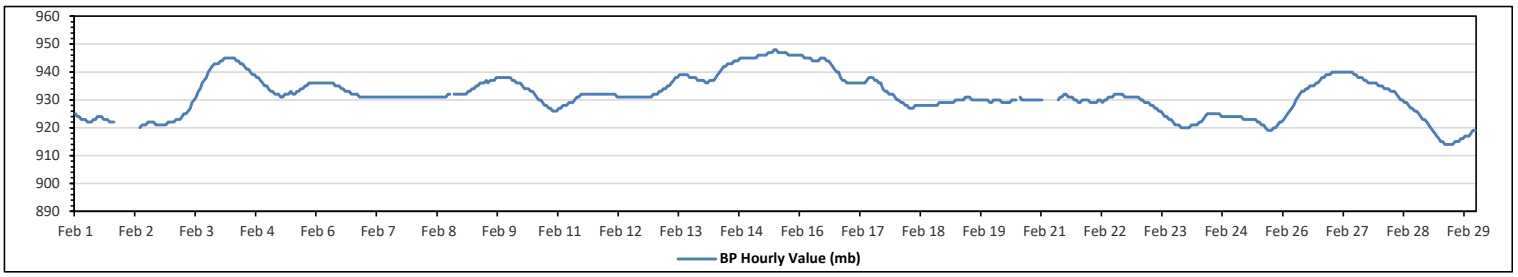
BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	948	mb	on Feb 15 at hr 11	Hours in Service:	696
Maximum Daily Value:	946	mb	on Feb 15	Hours of Data:	675
Minimum Hourly Value:	914	mb	on Feb 29 at hr 8	Hours of Missing Data:	21
Minimum Daily Value:	916	mb	on Feb 29	Hours of Calibration:	0
Monthly Average:	932	mb		Operational Uptime:	97.0

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	925	924	924	923	923	923	922	922	922	923	923	924	924	924	923	923	923	922	922	922	K	K	K	K	922	925	923
Feb 2	K	K	K	K	K	K	K	K	920	921	921	921	922	922	922	922	921	921	921	921	921	921	922	922	920	922	NA
Feb 3	922	922	923	923	923	924	925	925	926	927	929	930	931	933	934	936	937	938	940	941	942	943	943	943	922	943	932
Feb 4	944	944	945	945	945	945	945	945	944	944	943	943	942	941	941	940	939	939	938	938	937	936	935	935	935	945	941
Feb 5	934	933	933	932	932	932	931	931	932	932	932	933	932	932	933	933	934	934	935	935	936	936	936	936	931	936	933
Feb 6	936	936	936	936	936	936	936	936	936	935	935	935	934	934	933	933	933	932	932	932	932	931	931	931	931	936	934
Feb 7	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931
Feb 8	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	932	932	K	932	932	932	932	931	932	931
Feb 9	932	932	932	933	933	934	934	935	935	936	936	936	937	936	937	937	937	938	938	938	938	938	938	938	932	938	936
Feb 10	938	937	937	936	936	936	935	934	934	934	933	933	932	931	930	930	929	928	928	927	927	926	926	926	926	938	932
Feb 11	927	927	928	928	928	929	929	929	930	931	931	932	932	932	932	932	932	932	932	932	932	932	932	932	927	932	931
Feb 12	932	932	932	932	932	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	932	931	932	931
Feb 13	932	932	933	933	934	934	935	935	936	937	938	938	939	939	939	939	939	938	938	938	938	937	937	937	932	939	936
Feb 14	937	936	936	937	937	937	938	939	940	941	942	942	943	943	943	944	944	944	945	945	945	945	945	945	936	945	941
Feb 15	945	945	945	946	946	946	946	946	947	947	947	**948**	**948**	947	947	947	947	947	946	946	946	946	946	946	945	**948**	**946**
Feb 16	946	946	945	945	945	945	944	944	944	944	945	945	945	944	944	943	942	941	940	940	938	937	937	936	936	946	943
Feb 17	936	936	936	936	936	936	936	936	936	937	938	938	938	937	937	936	936	934	933	933	932	932	932	931	931	938	935
Feb 18	930	930	929	929	928	928	927	927	927	928	928	928	928	928	928	928	928	928	928	928	928	929	929	929	927	930	928
Feb 19	929	929	929	929	929	930	930	930	930	930	931	931	931	930	930	930	930	930	930	930	930	930	929	929	929	931	930
Feb 20	930	930	930	930	929	929	929	929	929	930	930	930	K	931	930	930	930	930	930	930	930	930	930	930	929	931	930
Feb 21	930	K	K	K	K	K	K	K	930	931	931	932	932	931	931	931	930	930	929	929	930	930	930	930	929	932	NA
Feb 22	929	929	929	929	930	930	929	930	930	931	931	931	932	932	932	932	932	931	931	931	931	931	931	931	929	932	931
Feb 23	931	930	930	929	929	929	928	928	927	927	926	926	925	924	924	923	923	922	921	921	921	920	920	920	920	931	925
Feb 24	920	920	921	921	921	921	922	922	923	924	925	925	925	925	925	925	925	924	924	924	924	924	924	924	920	925	923
Feb 25	924	924	924	924	923	923	923	923	923	923	923	922	922	921	921	920	919	919	919	920	920	921	922	922	919	924	922
Feb 26	923	924	925	926	927	928	930	931	932	933	933	934	934	935	935	935	936	936	937	938	938	939	939	939	923	939	933
Feb 27	940	940	940	940	940	940	940	940	940	940	940	939	939	938	938	938	937	937	936	936	936	936	936	935	935	940	938
Feb 28	935	935	934	934	934	933	933	933	932	931	930	930	929	929	928	927	927	926	926	925	924	923	923	922	922	935	929
Feb 29	921	920	919	918	917	916	915	915	**914**	**914**	**914**	**914**	**914**	915	915	915	916	916	917	917	917	918	919	919	**914**	921	**916**
Diurnal Maximum	946	946	945	946	946	946	946	946	947	947	947	948	948	947	947	947	947	947	946	946	946	946	946	946			
Diurnal Average	932	932	932	932	932	932	932	932	931	932	932	932	932	932	932	932	932	931	931	931	932	932	932	932			

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 2024

Summary of Hourly Averages

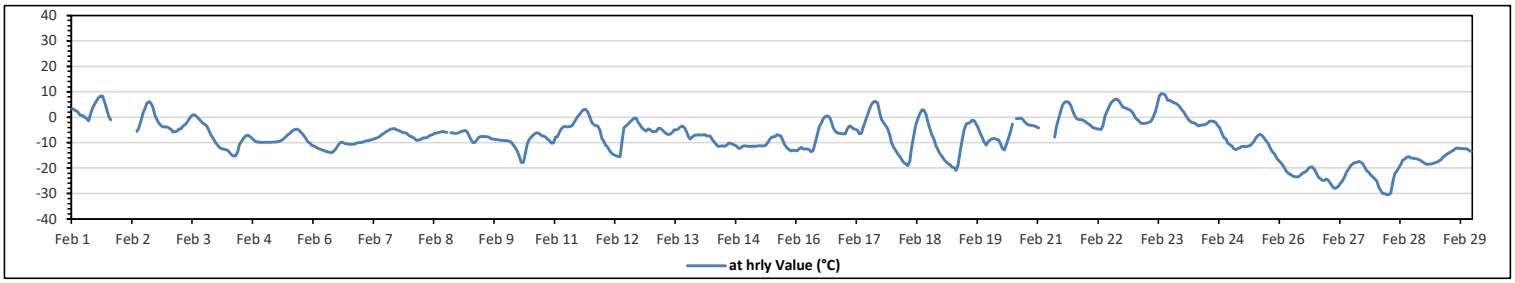
AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	9.3	°C	on Feb 23 at hr 13	Hours in Service:	696	
Maximum Daily Value:	3.0	°C	on Feb 1	Hours of Data:	675	
Minimum Hourly Value:	-30.5	°C	on Feb 28 at hr 5	Hours of Missing Data:	21	
Minimum Daily Value:	-22.3	°C	on Feb 27	Hours of Calibration:	0	
Monthly Average:	-8.0	°C		Operational Uptime:	97.0	

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	3.4	2.8	2.5	1.8	0.7	0.7	0	-0.4	-1.4	1.3	3.8	5.3	6.5	7.6	8.4	8.2	6	3.3	0.3	-1.1	K	K	K	K	-1.4	8.4	**3.0**
Feb 2	K	K	K	K	K	K	K	K	-5.6	-4.2	-1.3	1.5	3.4	5.5	6.1	5.4	3.9	0.9	-1.1	-2.4	-3.3	-3.8	-3.8	-3.9	-5.6	6.1	NA
Feb 3	-4.3	-4.8	-5.8	-5.7	-5.4	-4.5	-4.6	-3.4	-2.9	-1.9	-0.6	0.4	1	0.8	0	-0.8	-1.6	-2.4	-2.9	-3.8	-5.5	-7.1	-8.4	-9.8	-9.8	1.0	-3.5
Feb 4	-11	-11.9	-12.3	-12.5	-12.7	-13	-13.7	-14.7	-15.2	-15.2	-13.6	-10.8	-9.4	-8.3	-7.4	-7.1	-7.5	-8.1	-9	-9.6	-9.7	-9.8	-9.9	-9.9	-15.2	-7.1	-10.9
Feb 5	-9.9	-9.9	-9.9	-9.8	-9.7	-9.7	-9.6	-9.4	-9	-8.5	-7.6	-6.9	-6.3	-5.5	-4.9	-4.7	-4.8	-5.4	-6.4	-7.3	-8.3	-9.6	-10.3	-11.1	-11.1	-4.7	-8.1
Feb 6	-11.4	-11.8	-12.2	-12.5	-12.9	-13.1	-13.4	-13.6	-13.9	-13.8	-13.3	-12.3	-10.9	-10	-9.9	-10.2	-10.5	-10.5	-10.7	-10.6	-10.6	-10.3	-10	-10	-13.9	-9.9	-11.6
Feb 7	-9.9	-9.6	-9.3	-9.2	-9	-8.7	-8.5	-8.2	-7.9	-7.4	-6.7	-6.2	-5.6	-5.2	-4.7	-4.5	-4.4	-4.9	-5.3	-5.5	-5.9	-6.1	-6.3	-7.1	-9.9	-4.4	-6.9
Feb 8	-7.6	-7.7	-8.5	-9.1	-9	-8.7	-8.2	-8	-8	-7.5	-7	-6.8	-6.4	-6.2	-6	-5.8	-5.6	-5.8	-5.9	K	-6.1	-6.2	-6.4	-6.4	-9.1	-5.6	-7.1
Feb 9	-6.1	-5.7	-5.4	-5.2	-5.7	-7.3	-8.9	-10	-9.9	-8.7	-7.9	-7.6	-7.6	-7.6	-7.7	-7.9	-8.4	-8.6	-8.7	-8.8	-9	-9.1	-9.1	-9.2	-10.0	-5.2	-7.9
Feb 10	-9.2	-9.4	-9.8	-10.8	-12.1	-13.2	-15.4	-17.8	-17.7	-14.1	-10.5	-8.7	-7.8	-6.9	-6.3	-6.1	-6.5	-7.2	-7.5	-7.9	-8.6	-9.2	-10.3	-10.1	-17.8	-6.1	-10.1
Feb 11	-7.9	-7.8	-5.7	-4.4	-3.7	-3.7	-3.8	-3.7	-3.5	-2.3	-1.1	0.2	1.3	2.3	2.9	3.1	2.1	0.2	-2.2	-2.9	-3.3	-3.4	-5.2	-8.3	-8.3	3.1	-2.5
Feb 12	-9.4	-10.9	-12	-13.3	-14.3	-14.7	-15.1	-15.4	-15.5	-9.4	-4	-3.5	-2.7	-1.8	-1.2	-0.4	-0.3	-1.9	-3.2	-4.2	-5	-5.4	-4.6	-5	-15.5	-0.3	-7.2
Feb 13	-5.5	-5.7	-5.5	-4.4	-4.3	-5	-5.8	-6.5	-6.8	-6.6	-5.9	-5	-4.9	-4.6	-3.8	-3.4	-4	-5.6	-7.8	-8.6	-7.8	-7.1	-7	-6.8	-8.6	-3.4	-5.8
Feb 14	-7.1	-6.9	-6.8	-7.3	-7.3	-7.5	-9	-9.9	-11	-11.5	-11.4	-11.2	-11.5	-10.9	-10.2	-10.2	-10.6	-11	-11.4	-12.2	-12.1	-11.4	-11.2	-11.4	-12.2	-6.8	-10.0
Feb 15	-11.5	-11.5	-11.4	-11.5	-11.3	-11.2	-11.2	-11.3	-11.1	-10.6	-9.3	-8	-7.7	-7.8	-6.8	-7	-7.5	-9.3	-10.9	-12	-12.8	-13.3	-13	-13.1	-13.3	-6.8	-10.5
Feb 16	-13.3	-12.5	-11.9	-12.5	-12.5	-12.5	-12.8	-13.6	-13.2	-10.4	-6.9	-3.8	-2.3	-0.5	0.2	0.4	0.1	-1.6	-4.1	-5.4	-6.2	-6.3	-6.5	-6.6	-13.6	0.4	-7.3
Feb 17	-6.5	-4.5	-3.4	-3.8	-4.6	-4.7	-5.3	-6.6	-6.4	-3.8	-1.3	0.9	3.3	5.1	6	6.2	5.4	1.8	-0.9	-2.1	-3.3	-4.6	-7	-10	-10.0	6.2	-2.1
Feb 18	-11.9	-13	-14.5	-15.4	-16.6	-17.7	-18.4	-19	-17.5	-11.9	-6.9	-3	-0.4	1.2	2.8	2.8	1.1	-2	-4.6	-6.8	-8.7	-11.2	-12.8	-14.2	-19.0	2.8	-9.1
Feb 19	-15.4	-16.6	-17.5	-18.3	-18.7	-19.7	-19.8	-20.9	-18.9	-13.9	-8.8	-4.9	-2.6	-2.4	-2.1	-1.2	-1.4	-2.8	-4.2	-6.2	-8	-9.8	-11	-9.6	-20.9	-1.2	-10.6
Feb 20	-8.8	-8.5	-8.3	-8.7	-8.9	-10.3	-12.3	-12.9	-10.7	-8.5	-5.7	-2.7	K	-0.6	-0.5	-0.2	-0.8	-1.8	-2.6	-3.1	-3.2	-3.3	-3.4	-3.8	-12.9	-0.2	-5.6
Feb 21	-4.1	K	K	K	K	K	K	K	-7.9	-3.4	-0.2	2.5	4.9	5.8	6.1	5.9	4.5	2.2	0.5	-0.6	-0.9	-0.9	-1.2	-1.5	-7.9	6.1	NA
Feb 22	-2.3	-2.7	-3.4	-4	-4.3	-4.5	-4.7	-4.8	-3.3	0.3	2.5	4.1	5.6	6.4	7.1	7	6.2	5.1	3.9	3.8	3.2	3	2.5	1.5	-4.8	7.1	1.2
Feb 23	-0.1	-1	-1.5	-2.4	-2.5	-2.5	-2.2	-1.9	-1.4	0.1	2.4	5.3	8.3	**9.3**	9.2	8.6	6.7	6.7	6.3	5.7	5.5	5	4.2	3.1	-2.5	**9.3**	3.0
Feb 24	2.1	0.8	-0.4	-1.3	-2	-2.2	-2.6	-3.3	-3.3	-3.1	-3.1	-2.8	-2.3	-1.5	-1.5	-1.7	-2	-3.2	-4.2	-6.2	-8.1	-8.5	-10.2	-10.7	-10.7	2.1	-3.4
Feb 25	-11.3	-12.4	-12.8	-12.3	-12	-11.5	-11.5	-11.6	-11.4	-11.2	-10.4	-9.4	-8.1	-7.2	-6.7	-7.2	-8	-9.2	-10.3	-12	-13.4	-14.3	-15.7	-16.8	-16.8	-6.7	-11.1
Feb 26	-17.6	-18.5	-19.7	-21.1	-22	-22.5	-23	-23.3	-23.4	-23.4	-22.8	-22.1	-21.6	-21.3	-20.1	-19.5	-19.6	-20.4	-21.9	-23.6	-24.2	-24.8	-24.8	-24.3	-24.8	-17.6	-21.9
Feb 27	-24.9	-26.1	-27.2	-28	-27.7	-27.1	-26	-25.1	-23.4	-21.5	-20.2	-19	-18.4	-17.9	-17.7	-17.4	-17.6	-18.2	-19.7	-21	-21.7	-22.7	-23.4	-24.1	-28.0	-17.4	**-22.3**
Feb 28	-25.2	-27.6	-28.8	-29.9	-30.1	**-30.5**	-30.4	-30	-25.2	-22.2	-21.1	-19.7	-18.5	-16.8	-16.3	-15.6	-15.5	-16	-16.1	-16.2	-16.4	-16.7	-17.2	-17.6	**-30.5**	-15.5	-21.7
Feb 29	-18.3	-18.5	-18.4	-18.4	-18.2	-17.9	-17.6	-17.2	-16.6	-15.7	-15	-14.6	-14	-13.5	-13	-12.4	-12.1	-12.2	-12.3	-12.3	-12.4	-12.5	-13.2	-13.4	-18.5	-12.1	-15.0
Diurnal Maximum	3.4	2.8	2.5	1.8	0.7	0.7	0.0	-0.4	-1.4	1.3	3.8	5.3	8.3	9.3	9.2	8.6	6.7	6.7	6.3	5.7	5.5	5.0	4.2	3.1			
Diurnal Average	-9.5	-10.1	-10.4	-10.7	-11.0	-11.2	-11.6	-11.9	-11.1	-9.3	-7.4	-5.8	-4.8	-3.9	-3.4	-3.3	-3.9	-5.1	-6.3	-7.2	-8.1	-8.6	-9.1	-9.6			

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 2024

Summary of Hourly Averages

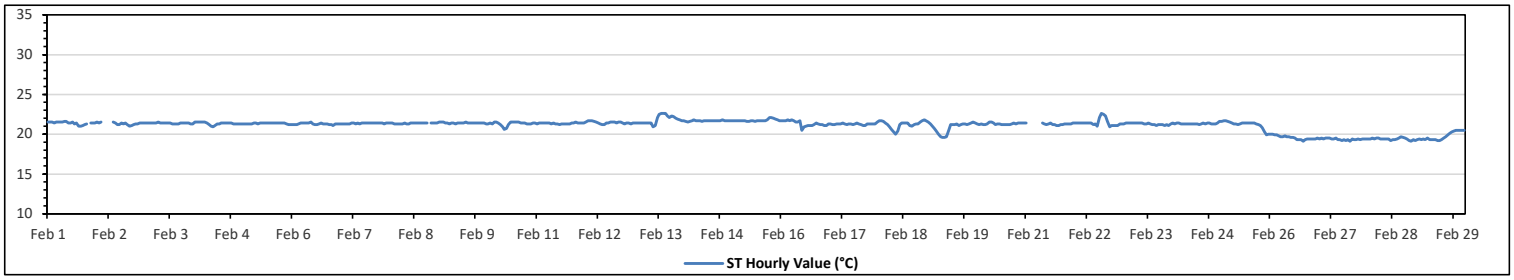
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	22.6	°C	on Feb 13 at hr 13	Hours in Service:	696
Maximum Daily Value:	21.8	°C	on Feb 13	Hours of Data:	682
Minimum Hourly Value:	19.1	°C	on Feb 26 at hr 16	Hours of Missing Data:	14
Minimum Daily Value:	19.4	°C	on Feb 27	Hours of Calibration:	0
Monthly Average:	21.1	°C		Operational Uptime:	98.0

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	21.5	21.5	21.5	21.4	21.5	21.5	21.5	21.5	21.6	21.6	21.4	21.4	21.5	21.3	21.4	21.0	21.0	21.1	21.2	21.3	K	21.4	21.4	21.4	21.0	21.6	21.4
Feb 2	21.5	21.4	21.5	K	K	K	K	K	21.5	21.4	21.2	21.2	21.4	21.3	21.4	21.2	21.0	21.1	21.2	21.3	21.3	21.4	21.4	21.4	21.0	21.5	21.3
Feb 3	21.4	21.4	21.4	21.4	21.4	21.4	21.5	21.4	21.4	21.4	21.4	21.4	21.4	21.3	21.3	21.3	21.3	21.4	21.4	21.4	21.4	21.4	21.3	21.3	21.3	21.5	21.4
Feb 4	21.5	21.5	21.5	21.5	21.5	21.5	21.4	21.2	21.0	20.9	21.1	21.3	21.3	21.4	21.4	21.4	21.4	21.4	21.4	21.3	21.3	21.3	21.3	21.3	20.9	21.5	21.3
Feb 5	21.3	21.3	21.3	21.3	21.3	21.4	21.4	21.3	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.3	21.2	21.2	21.2	21.4	21.4
Feb 6	21.2	21.2	21.2	21.3	21.4	21.4	21.4	21.4	21.4	21.5	21.3	21.2	21.2	21.3	21.4	21.3	21.3	21.3	21.2	21.2	21.1	21.3	21.3	21.3	21.1	21.5	21.3
Feb 7	21.3	21.3	21.3	21.3	21.3	21.4	21.4	21.3	21.4	21.3	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.3	21.4	21.4	21.3	21.4	21.4
Feb 8	21.4	21.4	21.3	21.3	21.3	21.3	21.3	21.4	21.3	21.3	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	K	21.4	21.4	21.4	21.4	21.3	21.4	21.4
Feb 9	21.5	21.5	21.5	21.4	21.4	21.3	21.4	21.4	21.3	21.4	21.4	21.4	21.4	21.5	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.3	21.3	21.5	21.4
Feb 10	21.3	21.4	21.3	21.5	21.5	21.4	21.2	20.9	20.6	20.7	21.2	21.5	21.5	21.5	21.5	21.5	21.4	21.4	21.4	21.3	21.3	21.3	21.4	21.4	20.6	21.5	21.3
Feb 11	21.3	21.4	21.4	21.4	21.4	21.4	21.4	21.3	21.4	21.3	21.3	21.2	21.3	21.3	21.3	21.3	21.3	21.4	21.4	21.5	21.4	21.4	21.4	21.4	21.2	21.5	21.4
Feb 12	21.5	21.7	21.7	21.7	21.6	21.5	21.4	21.3	21.2	21.2	21.4	21.4	21.5	21.5	21.5	21.4	21.5	21.5	21.4	21.3	21.4	21.4	21.3	21.4	21.2	21.7	21.4
Feb 13	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	20.9	21.1	22.1	22.5	**22.6**	**22.6**	**22.6**	22.3	22.1	22.3	22.2	22.0	21.9	21.8	21.7	20.9	**22.6**	**21.8**
Feb 14	21.7	21.6	21.5	21.6	21.7	21.8	21.7	21.7	21.7	21.6	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.8	21.7	21.7	21.7	21.7	21.5	21.8	21.7
Feb 15	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.7	21.7	21.6	21.7	21.7	21.7	21.7	21.7	21.8	22.1	22.1	22.0	21.9	21.8	21.7	21.6	22.1	21.8
Feb 16	21.7	21.7	21.7	21.8	21.7	21.8	21.7	21.5	21.5	21.7	20.5	20.9	21.0	21.1	21.1	21.1	21.2	21.4	21.3	21.2	21.2	21.1	21.1	21.3	20.5	21.8	21.3
Feb 17	21.3	21.2	21.2	21.3	21.3	21.3	21.4	21.3	21.2	21.3	21.3	21.2	21.3	21.4	21.3	21.2	21.1	21.1	21.3	21.3	21.3	21.3	21.3	21.5	21.1	21.5	21.3
Feb 18	21.7	21.7	21.6	21.4	21.2	20.9	20.6	20.3	20.0	20.4	21.2	21.4	21.4	21.4	21.4	21.1	21.0	21.2	21.3	21.3	21.5	21.7	21.8	21.7	20.0	21.8	21.2
Feb 19	21.5	21.3	21.0	20.7	20.4	20.0	19.7	19.6	19.6	19.7	20.5	21.2	21.2	21.2	21.3	21.1	21.2	21.3	21.3	21.2	21.3	21.4	21.5	21.4	19.6	21.5	20.9
Feb 20	21.3	21.2	21.3	21.2	21.2	21.3	21.5	21.5	21.4	21.2	21.3	21.3	21.2	21.2	21.2	21.2	21.2	21.3	21.4	21.3	21.4	21.4	21.4	21.4	21.2	21.5	21.3
Feb 21	21.4	K	K	K	K	K	K	K	21.4	21.3	21.2	21.3	21.4	21.2	21.2	21.1	21.1	21.2	21.2	21.3	21.3	21.3	21.3	21.4	21.1	21.4	NA
Feb 22	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.2	21.3	21.0	22.1	**22.6**	22.5	22.3	21.6	20.9	21.1	21.1	21.1	21.1	21.3	21.3	20.9	**22.6**	21.5
Feb 23	21.3	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.3	21.3	21.4	21.3	21.2	21.2	21.1	21.2	21.2	21.2	21.1	21.2	21.1	21.3	21.1	21.4	21.3
Feb 24	21.4	21.3	21.4	21.4	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.2	21.3	21.4	21.3	21.4	21.4	21.3	21.3	21.3	21.4	21.6	21.2	21.6	21.3
Feb 25	21.6	21.7	21.7	21.6	21.5	21.4	21.3	21.3	21.2	21.3	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.3	21.2	21.1	20.8	20.3	19.9	20.0	19.9	21.7	21.2
Feb 26	20.0	20.0	19.9	19.9	19.8	19.7	19.7	19.8	19.7	19.7	19.6	19.6	19.5	19.3	19.3	19.3	**19.1**	19.3	19.4	19.4	19.4	19.4	19.4	19.5	**19.1**	20.0	19.6
Feb 27	19.4	19.5	19.4	19.5	19.5	19.5	19.4	19.4	19.5	19.3	19.3	19.2	19.3	19.2	19.3	**19.1**	19.4	19.3	19.3	19.4	19.3	19.4	19.4	19.4	**19.1**	19.5	**19.4**
Feb 28	19.4	19.4	19.5	19.4	19.5	19.5	19.4	19.4	19.4	19.4	19.4	19.2	19.3	19.3	19.4	19.5	19.7	19.6	19.5	19.4	19.2	**19.1**	19.3	19.2	**19.1**	19.7	19.4
Feb 29	19.3	19.4	19.3	19.4	19.3	19.5	19.3	19.3	19.3	19.3	19.2	19.2	19.3	19.5	19.7	19.9	20.1	20.3	20.4	20.5	20.5	20.5	20.5	20.5	19.2	20.5	19.7
Diurnal Maximum	21.7	21.7	21.7	21.8	21.7	21.8	21.7	21.7	21.7	21.7	21.7	22.1	22.5	22.6	22.6	22.6	22.3	22.1	22.3	22.2	22.0	21.9	21.8	21.7			
Diurnal Average	21.2	21.2	21.2	21.1	21.1	21.1	21.0	21.0	21.0	21.0	21.0	21.1	21.2	21.2	21.2	21.1	21.1	21.1	21.2	21.1	21.1	21.1	21.1	21.1			

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

Tamarack Site - February 2024

Summary of Hourly Averages

PRECIPITATION in mm

Maximum Hourly Value:	1.3	mm	on Feb 4 at hr 20	Hours in Service:	696	
Maximum Daily Value:	5.5	mm	on Feb 4	Hours of Data:	675	
Minimum Hourly Value:	0.0	mm	on Feb 1 at hr 0	Hours of Missing Data:	21	
Minimum Daily Value:	0.0	mm	on Feb 1	Hours of Calibration:	0	
Monthly Total:	10.3	mm		Operational Uptime:	97.0	

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	K	K	K	K	0.0	0.0	0.0
Feb 2	K	K	K	K	K	K	K	K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	NA
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	0.0	0.0	0.0
Feb 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	1.3	1.1	1.2	1.2	0.0	1.3	5.5
Feb 5	0.6	0.2	0.4	0.4	0.3	0.2	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.6	2.2
Feb 6	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	0.1	0.1
Feb 7	0	0	0	0	0	0	0	0	0.1	0.1	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.6
Feb 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	K	0.1	0.1	0.1	0	0.0	0.1	0.3
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	0.1	0	0.1	0.2	0.4	0.0	0.4	0.8
Feb 14	0.1	0	0	0	0	0	0.2	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.5
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	K	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 21	0	K	K	K	K	K	K	K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	NA
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	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
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
Feb 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.0	0.1	0.2
Diurnal Maximum	0.6	0.2	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.3	1.1	1.2	1.2			
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	0.1	0.0	0.1	0.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
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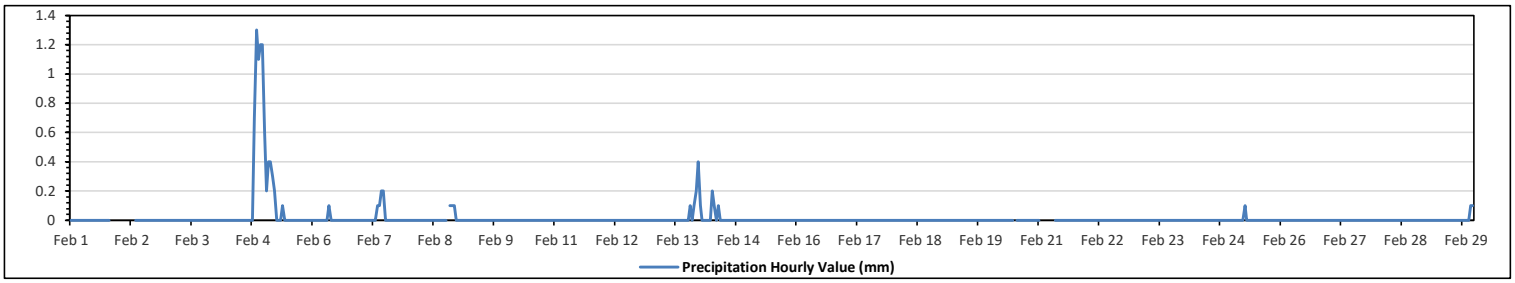


Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

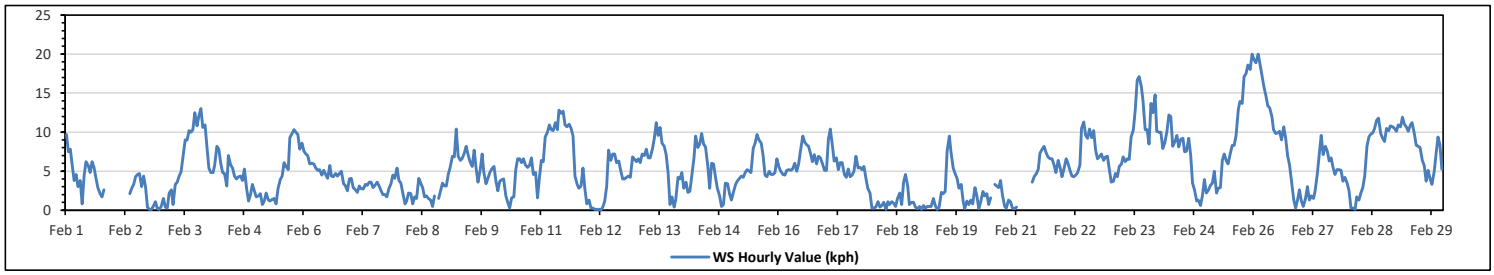
VECTOR WIND SPEED (VWS) in km/hr

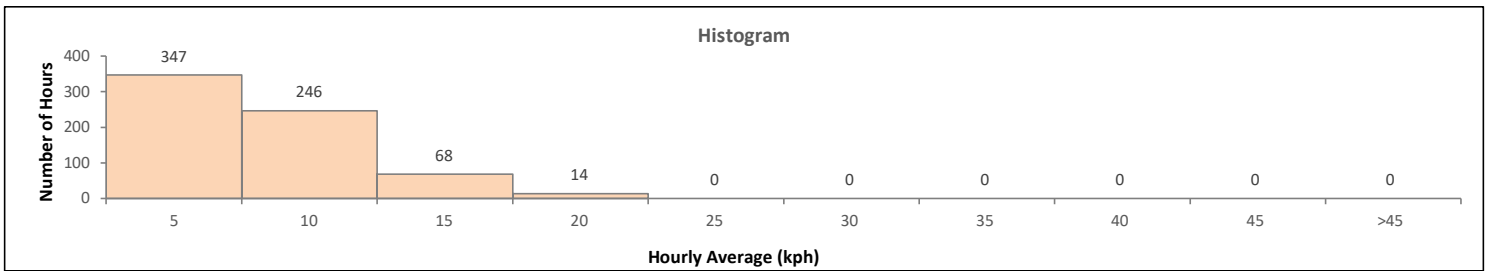
Maximum Hourly Value:	20.0	kph	on Feb 25 at hr 23	Hours in Service:	696	
Maximum Daily Value:	10.6	kph	on Feb 26	Hours of Data:	675	
Minimum Hourly Value:	0.0	kph	on Feb 12 at hr 6	Hours of Missing Data:	21	
Minimum Daily Value:	1.2	kph	on Feb 18	Hours of Calibration:	0	
Monthly Average:	1.1	kph		Operational Uptime:	97.0	

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	9.7	7.5	7.8	5.7	3.8	4.6	3.0	3.8	0.8	4.4	6.2	5.7	4.8	6.2	5.5	3.9	2.9	2.1	1.7	2.6	K	K	K	K	0.8	9.7	4.6
Feb 2	K	K	K	K	K	K	K	K	2.1	2.8	3.3	4.3	4.6	4.7	3.0	4.4	3.0	0.4	0.1	0.1	0.5	1.1	0.2	0.1	0.1	4.7	NA
Feb 3	0.5	1.5	0.4	0.3	2.2	2.6	0.7	3.3	3.6	4.4	4.9	7.1	9.0	9.0	10.2	10.0	10.3	12.5	10.8	12.1	13.0	10.6	10.9	8.1	0.3	13.0	6.6
Feb 4	5.4	4.8	4.8	5.7	8.2	7.8	6.0	4.8	4.7	3.1	7.0	5.8	5.4	4.4	4.0	4.3	4.4	3.8	5.3	2.7	1.2	2.0	3.3	2.5	1.2	8.2	4.6
Feb 5	1.7	1.8	2.1	0.7	1.2	2.2	1.3	1.2	1.4	1.5	0.8	2.7	3.9	4.4	6.1	5.6	5.2	9.3	9.8	10.3	10.0	9.7	7.8	8.6	0.7	10.3	4.6
Feb 6	7.6	7.2	7.0	5.9	6.0	5.9	5.4	5.1	5.2	4.5	5.1	4.6	4.1	5.7	4.4	4.3	4.7	4.4	4.7	5.0	3.4	3.2	2.5	4.0	2.5	7.6	5.0
Feb 7	4.1	2.9	2.6	2.3	3.1	2.7	2.7	3.3	3.2	3.6	3.6	2.9	3.2	3.6	3.1	2.5	2.0	2.0	1.7	2.8	3.4	4.5	4.1	5.4	1.7	5.4	3.1
Feb 8	3.8	3.5	2.2	0.8	1.2	2.2	2.1	0.8	1.7	1.5	4.1	3.5	2.9	1.7	1.8	1.5	1.3	0.5	1.8	K	1.5	2.5	3.5	3.1	0.5	4.1	2.2
Feb 9	3.1	4.6	5.5	6.9	6.8	10.4	6.9	6.4	6.6	7.3	8.2	7.1	6.2	5.6	7.7	5.4	3.6	5.2	7.2	4.9	3.4	4.1	4.8	5.3	3.1	10.4	6.0
Feb 10	5.6	3.7	2.5	3.7	3.9	4.0	1.8	1.0	0.3	1.6	1.7	5.2	6.6	6.6	6.1	6.6	5.8	5.5	5.7	6.7	4.6	4.8	1.6	4.2	0.3	6.7	4.2
Feb 11	6.4	6.2	9.4	10.0	10.9	10.3	10.2	11.2	10.3	12.8	12.4	12.7	10.9	10.7	11.0	10.5	9.5	4.4	3.3	2.8	3.1	5.4	2.7	0.8	0.8	12.8	8.2
Feb 12	1.3	0.3	0.3	0.1	0.1	0.1	0.0	0.4	1.2	3.0	7.7	6.4	7.2	7.2	6.1	6.3	5.3	4.0	4.0	4.2	4.4	4.2	6.8	6.6	0.0	7.7	3.6
Feb 13	6.2	6.6	6.1	7.2	7.0	7.8	6.7	6.7	7.8	9.2	11.2	9.6	10.6	8.6	8.2	7.1	4.8	0.7	1.7	0.4	1.4	4.2	4.0	4.8	0.4	11.2	6.2
Feb 14	2.8	3.6	2.3	2.4	4.4	6.7	9.5	8.0	8.5	9.8	8.5	8.1	5.7	2.8	6.0	5.9	4.0	2.8	1.8	0.5	0.7	3.5	3.4	2.1	0.5	9.8	4.7
Feb 15	1.3	2.3	3.3	3.7	4.1	4.4	4.2	4.8	5.2	5.0	4.8	7.9	8.6	9.7	9.0	8.6	7.0	4.5	4.3	5.0	4.6	4.6	4.8	6.6	1.3	9.7	5.3
Feb 16	5.6	5.0	4.6	4.5	5.1	5.2	5.1	5.3	6.0	5.0	5.9	7.7	9.5	8.7	8.4	8.2	7.1	6.2	7.1	5.9	6.9	6.7	6.0	5.1	4.5	9.5	6.3
Feb 17	5.1	9.1	10.4	8.1	6.3	6.7	5.2	6.1	6.1	4.6	4.2	5.3	4.3	4.5	5.0	6.9	5.4	5.5	5.2	5.6	3.9	2.8	2.2	0.3	0.3	10.4	5.4
Feb 18	0.3	0.4	1.1	0.4	0.6	1.0	0.1	1.1	0.7	1.1	0.9	0.5	1.5	2.2	0.7	3.6	4.6	3.0	0.7	1.0	1.0	0.4	0.2	0.5	0.1	4.6	1.2
Feb 19	0.1	0.6	0.3	0.5	0.5	0.5	1.5	0.6	0.1	0.4	2.3	2.1	2.4	7.6	9.5	7.5	5.4	4.7	4.1	2.8	3.3	1.2	0.2	1.2	0.1	9.5	2.5
Feb 20	0.7	1.3	0.8	2.9	1.8	0.2	1.1	2.4	1.8	2.1	0.7	1.6	K	3.3	3.1	2.9	3.8	1.9	0.5	0.3	1.3	1.1	0.3	0.2	0.2	3.8	1.6
Feb 21	0.4	K	K	K	K	K	K	K	3.6	4.3	4.7	5.3	7.3	7.8	8.2	7.4	6.8	6.6	6.6	5.8	4.8	6.4	5.5	4.3	0.4	8.2	NA
Feb 22	5.3	6.6	6.1	5.1	4.4	4.3	4.5	4.8	5.8	10.5	11.3	9.6	9.2	10.4	9.3	10.2	7.7	6.6	6.9	7.2	6.4	6.8	6.9	5.2	4.3	11.3	7.1
Feb 23	3.6	3.7	4.7	4.3	5.6	5.9	6.8	6.2	6.6	6.5	9.4	10.3	12.9	16.7	17.1	15.8	14.1	10.3	10.3	8.5	13.7	12.5	14.8	10.1	3.6	17.1	9.6
Feb 24	10.0	10.0	7.9	8.6	10.1	12.2	12.0	8.2	8.8	9.6	8.1	9.1	9.2	7.5	7.6	9.2	7.1	3.5	2.6	1.2	1.3	0.6	1.9	3.9	0.6	12.2	7.1
Feb 25	2.2	2.6	3.2	3.5	5.0	2.2	2.8	2.9	6.4	7.2	6.4	5.9	7.3	8.3	8.3	9.6	12.9	13.9	13.7	17.1	17.5	18.6	18.0	20.0	2.2	20.0	9.0
Feb 26	19.3	18.9	20.0	18.9	17.5	15.8	14.7	13.4	13.1	12.0	10.3	9.8	9.9	10.1	9.0	10.7	9.2	7.0	5.8	3.5	1.4	0.3	1.3	2.6	0.3	20.0	10.6
Feb 27	1.2	0.5	1.5	3.0	1.3	1.8	1.5	2.5	4.7	7.2	9.6	7.1	8.2	7.6	6.3	6.7	5.5	4.6	5.2	5.2	5.1	3.7	4.2	3.5	0.5	9.6	4.5
Feb 28	2.5	0.3	0.3	0.1	1.7	1.3	2.2	2.9	4.4	8.2	9.4	9.7	9.9	10.5	11.5	11.8	9.8	9.2	8.8	10.5	10.2	10.8	10.7	10.5	0.1	11.8	7.0
Feb 29	10.1	10.9	10.7	11.9	11.0	10.7	10.1	10.9	11.2	9.8	8.3	8.2	8.0	6.4	5.7	3.7	5.1	3.9	3.3	4.9	7.2	9.4	8.4	5.3	3.3	11.9	8.1
Diurnal Maximum	19.3	18.9	20.0	18.9	17.5	15.8	14.7	13.4	13.1	12.8	12.4	12.7	12.9	16.7	17.1	15.8	14.1	13.9	13.7	17.1	17.5	18.6	18.0	20.0			
Diurnal Average	4.5	4.7	4.7	4.7	5.0	5.2	4.7	4.7	4.9	5.6	6.2	6.4	6.9	7.0	7.0	6.9	6.1	5.1	5.0	5.0	5.0	5.2	5.0	4.8			

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.



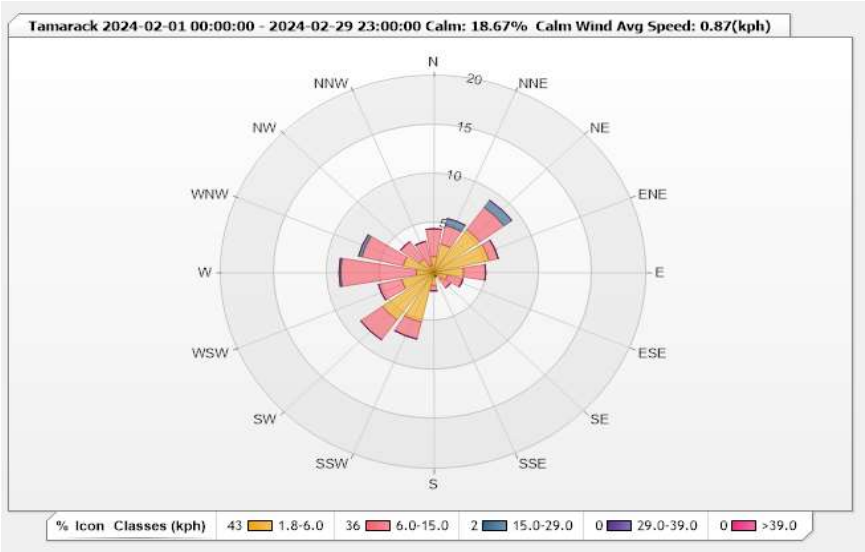


Station: Tamarack Monitor: WDS [kph] Monthly: 02-2024

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

Calm (WS<1.8kph): 18.67% Valid Data: 96.98%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.63	2.81	0	0	0	4.44
NNE	2.96	1.93	0.74	0	0	5.63
NE	5.33	2.81	0.89	0	0	9.03
ENE	5.33	0.89	0	0	0	6.22
E	2.81	2.07	0	0	0	4.88
ESE	1.33	1.48	0	0	0	2.81
SE	0.89	1.04	0	0	0	1.93
SSE	0.3	0.15	0	0	0	0.45
S	1.33	0.59	0	0	0	1.92
SSW	5.19	1.78	0	0	0	6.97
SW	5.93	2.52	0	0	0	8.45
WSW	3.11	2.22	0	0	0	5.33
W	1.63	7.11	0.15	0	0	8.89
WNW	2.96	4	0.3	0	0	7.26
NW	1.63	2.22	0	0	0	3.85
NNW	0.74	2.52	0	0	0	3.26
Summary	43.1	36.14	2.08	0	0	81.32



Lakeland Industry & Community Association

Tamarack Site - February 2024

Summary of Hourly Averages

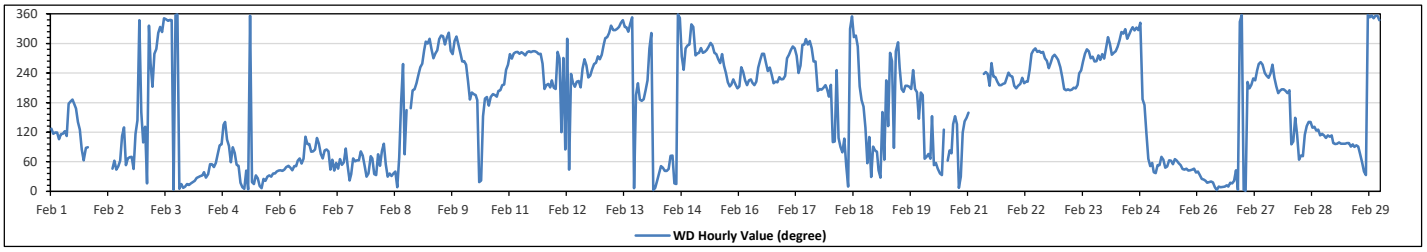
WIND DIRECTION (VWD) in sector

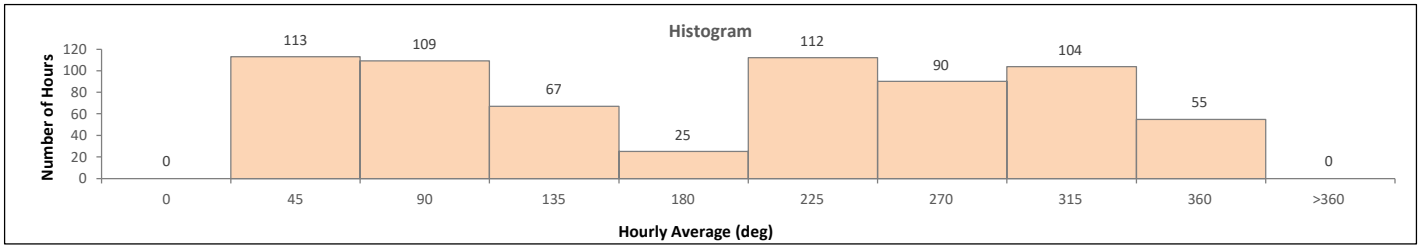
Monthly Average:	319 (NW)	degree	
Hours in Service:	696		
Hours of Data:	675		
Hours of Missing Data:	21		
Hours of Calibration:	0		
Operational Uptime:	97.0		

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	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	S	S	S	S	SSE	SE	SE	E	ENE	E	E	K	K	K	K	134	SE
Feb 2	K	K	K	K	K	K	K	K	NE	ENE	NE	NE	ENE	ESE	SE	NE	ENE	ENE	ENE	NE	ESE	SE	NNW	SSE	NA	NA
Feb 3	E	SE	NNE	NNW	WSW	SSW	W	WNW	NW	NNW	NW	N	NNW	NNW	NNW	NNW	N	N	N	N	NNE	N	N	NNE	355	N
Feb 4	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NE	NNE	NE	NE	NE	NE	ENE	ENE	E	E	SE	SE	ESE	E	ENE	E	48	NE
Feb 5	ENE	NE	NE	NNE	N	N	NE	N	N	NNE	NNE	NNE	NNE	NNE	N	NNE	NNE	NNE	NNE	NNE	NE	NE	NE	NE	30	NNE
Feb 6	NE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	NE	ENE	ESE	E	E	E	E	E	ESE	E	ENE	ENE	E	66	ENE
Feb 7	E	E	NE	ENE	NE	ENE	NE	ENE	NE	ENE	E	NE	NNE	NE	ENE	ENE	ENE	ENE	E	ENE	NE	NNE	NE	ENE	57	ENE
Feb 8	ENE	NE	NNE	ENE	NE	E	E	NE	NNE	NE	NNE	NE	NE	N	ENE	S	WSW	ENE	SSE	K	SSE	SSW	SSW	SW	65	ENE
Feb 9	SW	WSW	WSW	WNW	WNW	WNW	NW	WNW	W	W	WNW	NW	NW	NW	WNW	NW	NW	WNW	W	WNW	NW	WNW	W	W	291	WNW
Feb 10	W	WSW	SW	S	SSW	SSW	SSW	S	NNE	NNE	SSE	S	S	S	S	SSW	SSW	S	SSW	SSW	SSW	SW	WSW	WSW	205	SSW
Feb 11	W	W	W	W	W	W	W	W	W	W	WNW	W	WNW	WNW	W	W	W	WSW	SSW	SSW	SW	SSW	SW	SSW	275	W
Feb 12	SSW	W	W	ESE	W	E	NW	NE	SW	SW	SSW	SW	SW	SSW	WSW	W	WSW	SW	SW	WSW	WSW	W	W	W	242	WSW
Feb 13	W	WNW	NW	NW	NW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	N	N	SSW	SW	S	S	S	SSW	322	NW
Feb 14	SW	WNW	NW	N	N	NNE	NE	NE	NE	NE	NE	NE	ENE	ENE	NNE	NNE	N	N	W	WSW	WNW	WNW	WNW	NNW	23	NNE
Feb 15	NNW	W	W	W	WNW	W	W	WNW	WNW	WNW	WNW	W	W	W	WSW	W	WSW	WSW	SW	SSW	SW	SW	SW	SSW	264	W
Feb 16	SSW	WSW	WSW	SW	SSW	SW	SW	SW	SSW	SW	WSW	W	W	W	W	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	239	WSW
Feb 17	SW	W	W	WNW	WNW	WNW	W	WSW	WSW	WNW	WNW	NW	WNW	WNW	WNW	W	W	SSW	SSW	SSW	SSW	SSW	SSW	S	265	W
Feb 18	SW	E	E	WSW	ESE	E	ENE	ESE	NE	N	NNW	N	NW	NW	WNW	SSW	S	S	SE	ENE	ESE	NNE	E	E	163	SSE
Feb 19	E	NE	NNE	SSE	ENE	SW	SE	W	W	E	WNW	WNW	WSW	SSW	SSW	SSW	SSW	SSW	SSW	WSW	SSW	SSW	SE	SSW	215	SSW
Feb 20	SSW	ENE	ENE	ENE	ENE	SSE	NE	ENE	NE	NE	NNE	SE	K	ENE	E	ENE	SE	SSE	SE	N	NNE	ESE	SE	SSE	82	E
Feb 21	SSE	K	K	K	K	K	K	K	SW	WSW	SW	SSW	WSW	SW	SW	SW	SSW	SSW	SW	SW	SW	WSW	SW	SW	NA	NA
Feb 22	SSW	SSW	SSW	SW	SW	SW	SW	SW	WSW	W	WNW	WNW	W	WNW	W	W	W	W	WSW	W	W	W	W	W	262	W
Feb 23	WSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	WSW	WSW	W	W	WNW	WNW	W	W	W	W	W	W	W	W	258	WSW
Feb 24	WNW	NW	WNW	W	W	WNW	WNW	NW	NW	NW	NNW	NW	NW	NW	NNW	NW	NNW	NW	NNW	S	S	ESE	ENE	NE	310	NW
Feb 25	ENE	NE	NE	NE	NE	ENE	ENE	NE	NE	ENE	ENE	NE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	48	NE
Feb 26	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	N	N	N	NNE	N	NNE	NNE	NNE	NE	N	NNW	N	19	NNE
Feb 27	N	N	SW	SSW	SW	SW	SW	WSW	WSW	W	WSW	WSW	SW	SW	WSW	WSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	232	SW
Feb 28	SSW	E	E	SSE	ESE	ENE	ENE	ENE	ESE	SE	SE	SE	SE	SE	ESE	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E	119	ESE
Feb 29	E	E	E	E	E	E	E	E	E	E	E	E	E	ENE	ENE	NE	NNE	N	N	N	N	N	N	NNW	74	ENE

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 2024

Summary of Hourly Averages

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

WIND SPEED

Maximum Hourly Value:	20.0	kph	on Feb 25 at hr 23	Hours in Service:	696
Maximum Daily Value:	10.6	kph	on Feb 26	Hours of Data:	675
Minimum Hourly Value:	0.0	kph	on Feb 12 at hr 6	Hours of Missing Data:	21
Minimum Daily Value:	1.2	kph	on Feb 18	Hours of Calibration:	0
Monthly Average:	1.1	kph		Operational Uptime:	97.0

WIND DIRECTION

Monthly Average: 319 degree (NW)

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	9.7	7.5	7.8	5.7	3.8	4.6	3.0	3.8	0.8	4.4	6.2	5.7	4.8	6.2	5.5	3.9	2.9	2.1	1.7	2.6	K	K	K	K	0.8	9.7	4.6
	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	S	S	S	S	SSE	SE	SE	E	ENE	E	E	K	K	K	K			134(SE)
Feb 2	K	K	K	K	K	K	K	K	2.1	2.8	3.3	4.3	4.6	4.7	3.0	4.4	3.0	0.4	0.1	0.1	0.5	1.1	0.2	0.1	0.1	4.7	NA
	K	K	K	K	K	K	K	K	NE	ENE	NE	NE	ENE	ESE	SE	NE	ENE	ENE	ENE	NE	ESE	SE	NNW	SSE			NA(NA)
Feb 3	0.5	1.5	0.4	0.3	2.2	2.6	0.7	3.3	3.6	4.4	4.9	7.1	9.0	9.0	10.2	10.0	10.3	12.5	10.8	12.1	13.0	10.6	10.9	8.1	0.3	13.0	6.6
	E	SE	NNE	NNW	WSW	SSW	W	WNW	NW	NNW	NW	N	NNW	NNW	NNW	NNW	N	N	N	N	NNE	N	N	NNE			355(N)
Feb 4	5.4	4.8	4.8	5.7	8.2	7.8	6.0	4.8	4.7	3.1	7.0	5.8	5.4	4.4	4.0	4.3	4.4	3.8	5.3	2.7	1.2	2.0	3.3	2.5	1.2	8.2	4.6
	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NE	NNE	NE	NE	NE	NE	ENE	ENE	E	E	SE	SE	ESE	E	ENE	E			48(NE)
Feb 5	1.7	1.8	2.1	0.7	1.2	2.2	1.3	1.2	1.4	1.5	0.8	2.7	3.9	4.4	6.1	5.6	5.2	9.3	9.8	10.3	10.0	9.7	7.8	8.6	0.7	10.3	4.6
	ENE	NE	NE	NNE	N	N	NE	N	N	NNE	NNE	NNE	NNE	NNE	N	NNE	NNE	NNE	NNE	NNE	NE	NE	NE	NE			30(NNE)
Feb 6	7.6	7.2	7.0	5.9	6.0	5.9	5.4	5.1	5.2	4.5	5.1	4.6	4.1	5.7	4.4	4.3	4.7	4.4	4.7	5.0	3.4	3.2	2.5	4.0	2.5	7.6	5.0
	NE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	NE	ENE	ESE	E	E	E	E	E	ESE	E	ENE	ENE	E			66(ENE)
Feb 7	4.1	2.9	2.6	2.3	3.1	2.7	2.7	3.3	3.2	3.6	3.6	2.9	3.2	3.6	3.1	2.5	2.0	2.0	1.7	2.8	3.4	4.5	4.1	5.4	1.7	5.4	3.1
	E	E	NE	ENE	NE	ENE	NE	ENE	NE	ENE	E	NE	NNE	NE	ENE	ENE	ENE	ENE	E	ENE	NE	NNE	NE	ENE			57(ENE)
Feb 8	3.8	3.5	2.2	0.8	1.2	2.2	2.1	0.8	1.7	1.5	4.1	3.5	2.9	1.7	1.8	1.5	1.3	0.5	1.8	K	1.5	2.5	3.5	3.1	0.5	4.1	2.2
	ENE	NE	NNE	ENE	NE	E	E	NE	NNE	NE	NNE	NE	NE	N	ENE	S	WSW	ENE	SSE	K	SSE	SSW	SSW	SW			65(ENE)
Feb 9	3.1	4.6	5.5	6.9	6.8	10.4	6.9	6.4	6.6	7.3	8.2	7.1	6.2	5.6	7.7	5.4	3.6	5.2	7.2	4.9	3.4	4.1	4.8	5.3	3.1	10.4	6.0
	SW	WSW	WSW	WNW	WNW	WNW	NW	WNW	W	W	WNW	NW	NW	NW	WNW	NW	NW	WNW	W	WNW	NW	WNW	W	W			291(WNW)
Feb 10	5.6	3.7	2.5	3.7	3.9	4.0	1.8	1.0	0.3	1.6	1.7	5.2	6.6	6.6	6.1	6.6	5.8	5.5	5.7	6.7	4.6	4.8	1.6	4.2	0.3	6.7	4.2
	W	WSW	SW	S	SSW	SSW	SSW	S	NNE	NNE	SSE	S	S	S	S	SSW	SSW	S	SSW	SSW	SSW	SW	WSW	WSW			205(SSW)
Feb 11	6.4	6.2	9.4	10.0	10.9	10.3	10.2	11.2	10.3	12.8	12.4	12.7	10.9	10.7	11.0	10.5	9.5	4.4	3.3	2.8	3.1	5.4	2.7	0.8	0.8	12.8	8.2
	W	W	W	W	W	W	W	W	W	W	WNW	W	WNW	WNW	W	W	W	WSW	SSW	SSW	SW	SSW	SW	SSW			275(W)
Feb 12	1.3	0.3	0.3	0.1	0.1	0.1	0.0	0.4	1.2	3.0	7.7	6.4	7.2	7.2	6.1	6.3	5.3	4.0	4.0	4.2	4.4	4.2	6.8	6.6	0.0	7.7	3.6
	SSW	W	W	ESE	W	E	NW	NE	SW	SW	SSW	SW	SW	SSW	WSW	W	WSW	SW	SW	WSW	WSW	W	W	W			242(WSW)
Feb 13	6.2	6.6	6.1	7.2	7.0	7.8	6.7	6.7	7.8	9.2	11.2	9.6	10.6	8.6	8.2	7.1	4.8	0.7	1.7	0.4	1.4	4.2	4.0	4.8	0.4	11.2	6.2
	W	WNW	NW	NW	NW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	N	N	SSW	SW	S	S	S	SSW			322(NW)
Feb 14	2.8	3.6	2.3	2.4	4.4	6.7	9.5	8.0	8.5	9.8	8.5	8.1	5.7	2.8	6.0	5.9	4.0	2.8	1.8	0.5	0.7	3.5	3.4	2.1	0.5	9.8	4.7
	SW	WNW	NW	N	N	NNE	NE	NE	NE	NE	NE	NE	ENE	ENE	NNE	NNE	N	N	W	WSW	WNW	WNW	WNW	NNW			23(NNE)
Feb 15	1.3	2.3	3.3	3.7	4.1	4.4	4.2	4.8	5.2	5.0	4.8	7.9	8.6	9.7	9.0	8.6	7.0	4.5	4.3	5.0	4.6	4.6	4.8	6.6	1.3	9.7	5.3
	NNW	W	W	W	WNW	W	W	WNW	WNW	WNW	WNW	W	W	W	WSW	W	WSW	WSW	SW	SSW	SW	SW	SW	SSW			264(W)
Feb 16	5.6	5.0	4.6	4.5	5.1	5.2	5.1	5.3	6.0	5.0	5.9	7.7	9.5	8.7	8.4	8.2	7.1	6.2	7.1	5.9	6.9	6.7	6.0	5.1	4.5	9.5	6.3
	SSW	WSW	WSW	SW	SSW	SW	SW	SW	SSW	SW	WSW	W	W	W	W	WSW	WSW	SW	SW	SW	SW	SW	SW	SW			239(WSW)
Feb 17	5.1	9.1	10.4	8.1	6.3	6.7	5.2	6.1	6.1	4.6	4.2	5.3	4.3	4.5	5.0	6.9	5.4	5.5	5.2	5.6	3.9	2.8	2.2	0.3	0.3	10.4	5.4
	SW	W	W	WNW	WNW	WNW	W	WSW	WSW	WNW	WNW	NW	WNW	WNW	WNW	W	W	SSW	SSW	SSW	SSW	SSW	SSW	S			265(W)
Feb 18	0.3	0.4	1.1	0.4	0.6	1.0	0.1	1.1	0.7	1.1	0.9	0.5	1.5	2.2	0.7	3.6	4.6	3.0	0.7	1.0	1.0	0.4	0.2	0.5	0.1	4.6	**1.2**
	SW	E	E	WSW	ESE	E	ENE	ESE	NE	N	NNW	N	NW	NW	WNW	SSW	S	S	SE	ENE	ESE	NNE	E	E			163(SSE)
Feb 19	0.1	0.6	0.3	0.5	0.5	0.5	1.5	0.6	0.1	0.4	2.3	2.1	2.4	7.6	9.5	7.5	5.4	4.7	4.1	2.8	3.3	1.2	0.2	1.2	0.1	9.5	2.5
	E	NE	NNE	SSE	ENE	SW	SE	W	W	E	WNW	WNW	WSW	SSW	SSW	SSW	SSW	SSW	SSW	WSW	SSW	SSW	SE	SSW			215(SSW)
Feb 20	0.7	1.3	0.8	2.9	1.8	0.2	1.1	2.4	1.8	2.1	0.7	1.6	K	3.3	3.1	2.9	3.8	1.9	0.5	0.3	1.3	1.1	0.3	0.2	0.2	3.8	1.6
	SSW	ENE	ENE	ENE	ENE	SSE	NE	ENE	NE	NE	NNE	SE	K	ENE	E	ENE	SE	SSE	SE	N	NNE	ESE	SE	SSE			82(E)
Feb 21	0.4	K	K	K	K	K	K	K	3.6	4.3	4.7	5.3	7.3	7.8	8.2	7.4	6.8	6.6	6.6	5.8	4.8	6.4	5.5	4.3	0.4	8.2	NA
	SSE	K	K	K	K	K	K	K	SW	WSW	SW	SSW	WSW	SW	SW	SW	SSW	SSW	SW	SW	SW	WSW	SW	SW			NA(NA)
Feb 22	5.3	6.6	6.1	5.1	4.4	4.3	4.5	4.8	5.8	10.5	11.3	9.6	9.2	10.4	9.3	10.2	7.7	6.6	6.9	7.2	6.4	6.8	6.9	5.2	4.3	11.3	7.1
	SSW	SSW	SSW	SW	SW	SW	SW	SW	WSW	W	WNW	WNW	W	WNW	W	W	W	W	WSW	W	W	W	W	W			262(W)
Feb 23	3.6	3.7	4.7	4.3	5.6	5.9	6.8	6.2	6.6	6.5	9.4	10.3	12.9	16.7	17.1	15.8	14.1	10.3	10.3	8.5	13.7	12.5	14.8	10.1	3.6	17.1	9.6
	WSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	WSW	WSW	W	W	WNW	WNW	W	W	W	W	W	W	W	W			258(WSW)
Feb 24	10.0	10.0	7.9	8.6	10.1	12.2	12.0	8.2	8.8	9.6	8.1	9.1	9.2	7.5	7.6	9.2	7.1	3.5	2.6	1.2	1.3	0.6	1.9	3.9	0.6	12.2	7.1
	WNW	NW	WNW	W	W	WNW	WNW	NW	NW	NW	NNW	NW	NW	NW	NNW	NW	NNW	NW	NNW	S	S	ESE	ENE	NE			310(NW)
Feb 25	2.2	2.6	3.2	3.5	5.0	2.2	2.8	2.9	6.4	7.2	6.4	5.9	7.3	8.3	8.3	9.6	12.9	13.9	13.7	17.1	17.5	18.6	18.0	**20.0**	2.2	**20.0**	9.0
	ENE	NE	NE	NE	NE	ENE	ENE	NE	NE	ENE	ENE	NE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE			48(NE)
Feb 26	19.3	18.9	**20.0**	18.9	17.5	15.8	14.7	13.4	13.1	12.0	10.3	9.8	9.9	10.1	9.0	10.7	9.2	7.0	5.8	3.5	1.4	0.3	1.3	2.6	0.3	**20.0**	**10.6**
	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	N	N	N	NNE	N	NNE	NNE	NNE	NE	N	NNW	N			19(NNE)
Feb 27	1.2	0.5	1.5	3.0	1.3	1.8	1.5	2.5	4.7	7.2	9.6	7.1	8.2	7.6	6.3	6.7	5.5	4.6	5.2	5.2	5.1	3.7	4.2	3.5	0.5	9.6	4.5
	N	N	SW	SSW	SW	SW	SW	WSW	WSW	W	WSW	WSW	SW	SW	WSW	WSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW			232(SW)
Feb 28	2.5	0.3	0.3	0.1	1.7	1.3	2.2	2.9	4.4	8.2	9.4	9.7	9.9	10.5	11.5	11.8	9.8	9.2	8.8	10.5	10.2	10.8	10.7	10.5	0.1	11.8	7.0
	SSW	E	E	SSE	ESE	ENE	ENE	ENE	ESE	SE	SE	SE	SE	SE	ESE	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E			119(ESE)
Feb 29	10.1	10.9	10.7	11.9	11.0	10.7	10.1	10.9	11.2	9.8	8.3	8.2	8.0	6.4	5.7	3.7	5.1	3.9	3.3	4.9	7.2	9.4	8.4	5.3	3.3	11.9	8.1
	E	E	E	E	E	E	E	E	E	E	E	E	E	ENE	ENE	NE	NNE	N	N	N	N	N	N	NNW			74(ENE)

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 2024

Summary of Hour Standard Deviations

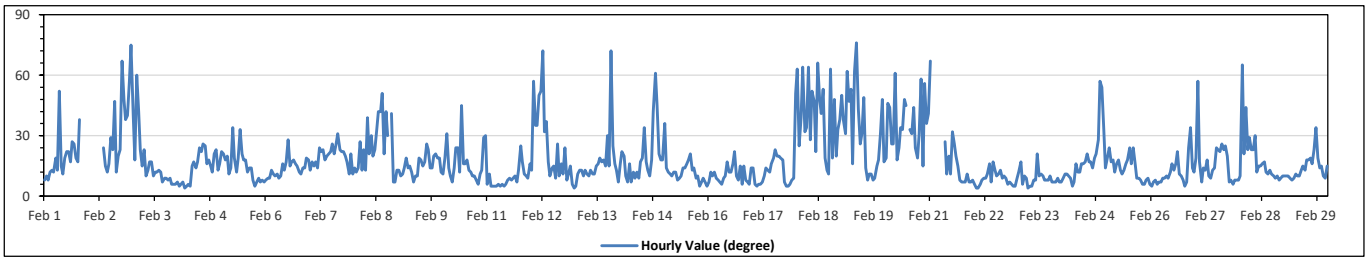
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	76 degree on Feb 19 at hr 8	Hours in Service:	696
		Hours of Data:	675
Minimum Hourly Value:	4 degree on Feb 4 at hr 4	Hours of Missing Data:	21
		Hours of Calibration:	0
		Operational Uptime:	97.0

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	10	8	12	13	12	19	13	52	15	11	19	22	22	17	27	26	19	17	38	K	K	K	K	8	52
Feb 2	K	K	K	K	K	K	K	K	24	15	12	16	29	23	47	12	20	23	67	48	38	40	57	75	12	75
Feb 3	40	18	60	42	23	15	23	10	13	17	17	10	12	12	13	12	7	9	9	8	9	6	6	6	6	60
Feb 4	7	5	6	7	4	5	6	5	15	17	14	17	24	22	26	25	16	18	15	12	21	23	13	16	4	26
Feb 5	22	21	18	20	11	14	34	19	12	19	33	21	18	18	12	14	14	8	5	7	9	7	8	7	5	34
Feb 6	8	9	9	13	11	10	11	9	10	16	13	17	28	15	17	18	16	15	12	11	14	14	19	18	8	28
Feb 7	13	17	15	17	14	24	22	23	18	20	21	22	26	21	26	31	23	22	22	20	17	11	21	11	11	31
Feb 8	14	12	14	27	13	23	13	39	21	30	20	23	33	42	42	51	21	42	30	K	41	7	7	13	7	51
Feb 9	13	10	11	14	19	14	15	12	7	10	10	19	18	15	17	26	23	14	14	20	21	19	19	12	7	26
Feb 10	11	19	31	14	10	7	14	24	24	12	45	16	16	18	13	12	10	10	8	6	11	13	29	30	6	45
Feb 11	6	11	5	5	5	5	6	5	6	5	6	8	9	8	9	10	7	13	25	17	11	10	9	16	5	25
Feb 12	13	57	35	35	50	52	72	32	37	17	10	14	15	9	26	10	16	11	24	8	11	15	6	4	4	72
Feb 13	5	11	13	13	10	13	11	10	13	11	11	15	16	19	17	18	15	30	15	72	25	16	13	7	5	72
Feb 14	16	22	20	10	7	16	7	12	9	12	9	17	19	34	17	13	10	18	42	61	45	21	18	18	7	61
Feb 15	36	14	12	11	10	12	12	8	9	10	14	14	16	18	21	13	14	9	10	5	7	9	7	5	5	36
Feb 16	7	12	10	12	9	8	7	6	9	10	17	12	12	16	22	10	8	15	6	15	8	7	6	14	6	22
Feb 17	14	6	5	6	6	7	10	14	13	12	16	19	23	20	20	19	18	7	5	5	6	8	9	51	5	51
Feb 18	63	25	39	64	32	34	64	28	52	47	22	66	48	41	53	19	13	11	63	19	48	20	33	38	11	66
Feb 19	50	38	31	62	47	53	16	62	76	43	26	31	49	14	8	11	11	8	9	15	18	31	48	17	8	76
Feb 20	19	46	44	26	26	61	18	24	34	33	48	45	K	33	31	44	24	19	31	58	15	56	36	41	15	61
Feb 21	67	K	K	K	K	K	K	K	27	11	20	11	32	26	20	15	8	7	7	7	11	7	7	8	7	67
Feb 22	6	4	4	6	8	9	9	11	16	7	17	13	10	11	13	9	10	9	6	7	6	5	5	9	4	17
Feb 23	12	17	6	10	9	4	5	5	8	8	21	10	11	10	8	8	8	10	7	7	7	9	7	7	4	21
Feb 24	9	11	11	10	9	5	7	16	12	12	16	16	17	21	17	17	14	19	21	28	57	54	33	14	5	57
Feb 25	19	24	17	18	12	16	18	13	11	13	16	18	24	16	24	16	9	9	8	6	6	8	9	6	6	24
Feb 26	5	7	8	6	7	7	9	9	10	9	12	16	13	16	22	11	10	8	5	7	24	34	14	12	5	34
Feb 27	19	57	17	7	14	13	18	10	9	13	14	24	23	22	26	23	25	20	7	8	6	8	8	8	6	57
Feb 28	10	65	21	44	23	29	23	23	30	12	15	15	16	17	12	11	13	11	10	9	10	8	9	10	8	65
Feb 29	10	10	10	9	8	9	11	10	10	13	15	13	18	18	19	16	23	34	19	14	15	10	9	15	8	34
Diurnal Minimum	5	4	4	5	4	4	5	5	6	5	6	8	9	8	8	8	7	7	5	5	6	5	5	4		
Diurnal Maximum	67	65	60	64	50	61	72	62	76	47	48	66	49	42	53	51	26	42	67	72	57	56	57	75		

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.



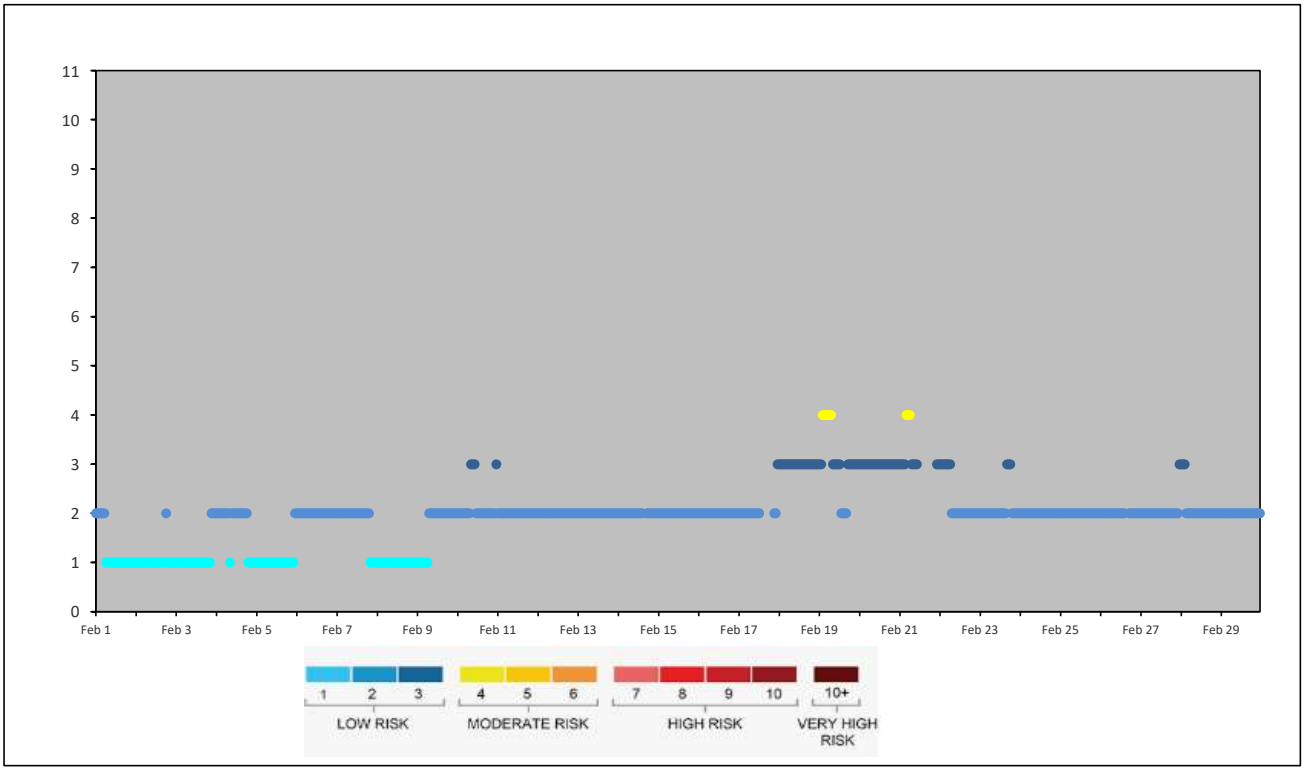
ST. LINA STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - February 2024

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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Feb 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1
Feb 3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2
Feb 4	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1
Feb 5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	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	2	2	2	2	2	2	2	2	1	1	1	1
Feb 8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Feb 9	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 10	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3
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	2	2	2	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
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	2	2	2	2	2	2	2	2	2	2	2	2
Feb 17	2	2	2	2	2	2	2	2	2	2	2	2	2										2	3
Feb 18	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 19	3	3	**4**	**4**	**4**	**4**	**4**	**4**	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	3
Feb 20	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 21	3	3	3	3	**4**	**4**	**4**	3	3	3	3												3	3
Feb 22	3	3	3	3	3	3	3	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	3	3	3	2	2	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	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 26	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2	2	2	2
Feb 27	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
Feb 28	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feb 29	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 2024

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

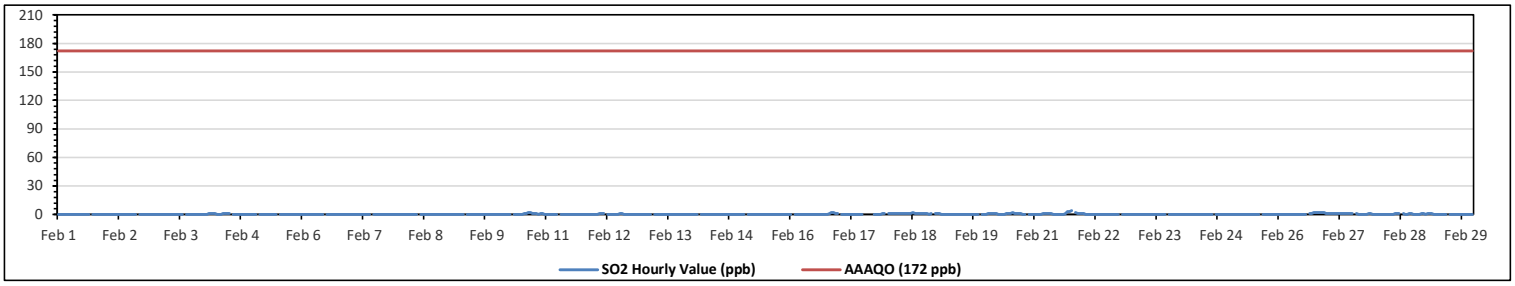
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

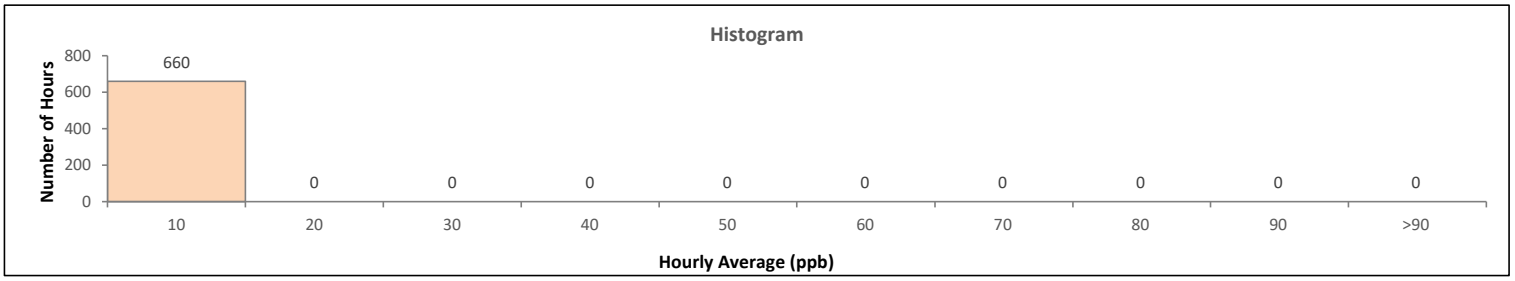
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0			
Maximum Hourly Value:	4 ppb	on Feb 21 at hr 18		Hours in Service:	696			
Maximum Daily Value:	1.0 ppb	on Feb 18		Hours of Data:	660			
Minimum Hourly Value:	0 ppb	on Feb 1 at hr 0		Hours of Missing Data:	1			
Minimum Daily Value:	0.0 ppb	on Feb 1		Hours of Calibration:	35			
Monthly Average:	0.2 ppb			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	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 2	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 3	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 4	0	0	1	1	1	1	0	0	0	1	1	1	1	S	0	0	0	0	0	0	0	0	0	0	0	1	0.3
Feb 5	0	0	K	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 6	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 7	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 8	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 9	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 10	0	0	0	0	0	0	0	S	0	0	0	0	0	1	1	2	2	1	1	1	0	1	1	0	0	2	0.5
Feb 11	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 12	0	0	1	1	1	S	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 13	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 14	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 15	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 16	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	0	2	0.3
Feb 17	S	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	1	1	S	0	1	NA
Feb 18	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	0	1	S	1	0	2	**1.0**
Feb 19	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	0.1
Feb 20	0	1	1	1	1	1	0	0	0	0	1	1	1	2	1	1	1	1	0	0	S	0	0	0	0	2	0.6
Feb 21	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	3	3	**4**	S	2	1	1	1	0	**4**	0.9
Feb 22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.0
Feb 23	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
Feb 24	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 25	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 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	1	2	2	2	2	2	2	1	0	2	0.7
Feb 27	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	0	0	0	0	0	1	1	0	0	0	1	0.7
Feb 28	0	0	0	0	0	0	0	0	0	1	1	1	S	1	0	0	1	1	0	0	0	0	1	1	0	1	0.3
Feb 29	0	1	1	1	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Diurnal Maximum	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	3	3	4	2	2	2	2	1			
Diurnal Average	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2			

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.



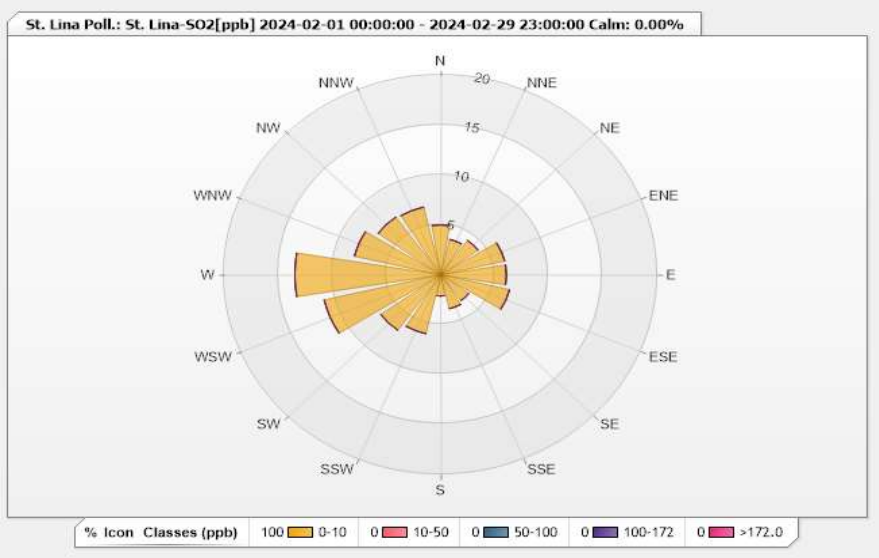


Station: St. Lina Poll.: St. Lina-SO2[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.83% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	5	0	0	0	0	5
NNE	3.64	0	0	0	0	3.64
NE	4.24	0	0	0	0	4.24
ENE	6.06	0	0	0	0	6.06
E	6.06	0	0	0	0	6.06
ESE	6.52	0	0	0	0	6.52
SE	3.18	0	0	0	0	3.18
SSE	3.48	0	0	0	0	3.48
S	2.12	0	0	0	0	2.12
SSW	6.06	0	0	0	0	6.06
SW	6.82	0	0	0	0	6.82
WSW	11.06	0	0	0	0	11.06
W	13.48	0	0	0	0	13.48
WNW	8.18	0	0	0	0	8.18
NW	7.12	0	0	0	0	7.12
NNW	6.97	0	0	0	0	6.97
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

HYDROGEN SULPHIDE (H_2S) in ppb

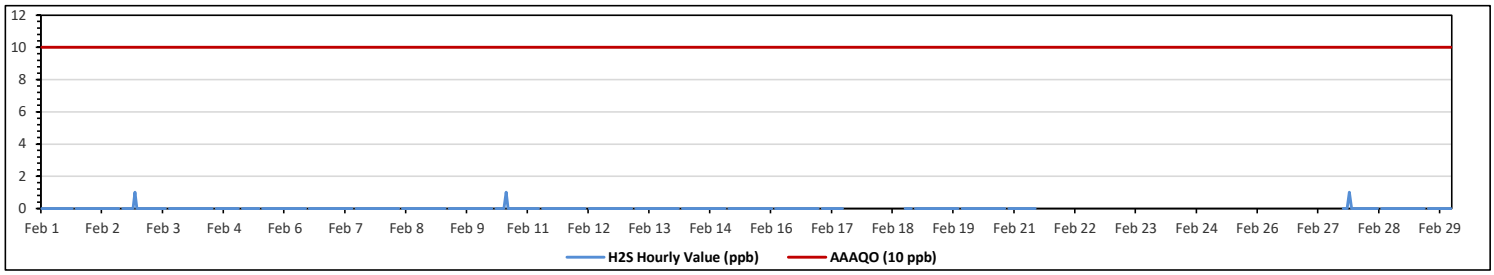
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb

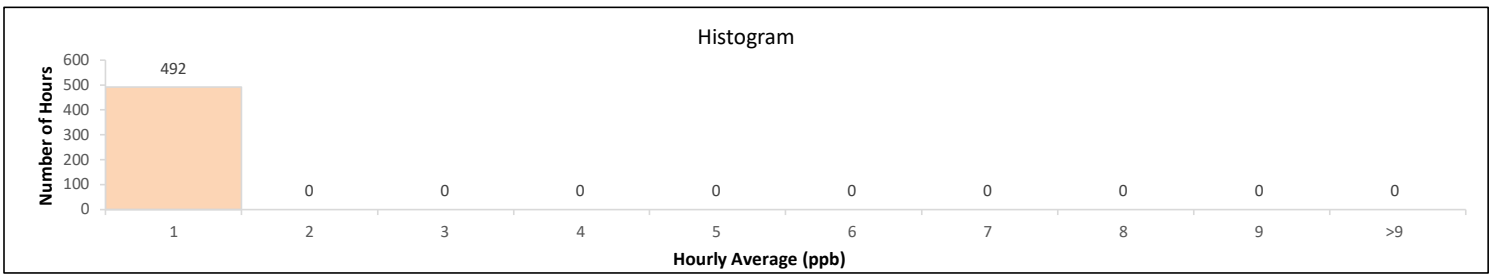
Number of 1-Hour Exceedances:	0		Number of 24-Hour Exceedances:	0	
Maximum Hourly Value:	1	ppb	on Feb 2 at hr 22	Hours in Service:	696
Maximum Daily Value:	0.0	ppb	on Feb 1	Hours of Data:	492
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	175
Minimum Daily Value:	0.0	ppb	on Feb 1	Hours of Calibration:	29
Monthly Average:	NA	ppb		Operational Uptime:	74.9

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	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 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0	0	1	0.0
Feb 3	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 4	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 5	0	0	K	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 6	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 7	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 8	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 9	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 10	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 11	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 12	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 13	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 14	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 15	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 16	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 17	S	0	0	0	0	0	0	0	0	0	0	0	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	0	0	-
Feb 18	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	0	0	0	0	S	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	S	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	S	0	0	0	0	0	0.0
Feb 21	0	0	0	0	0	0	0	0	0	0	0	NRM	NRM	NRM	NRM	NRM	NRM	NRM	X	X	X	X	X	X	0	0	-
Feb 22	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 23	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	NRM	NRM	X	X	X	X	X	X	X	X	X	-	-	-
Feb 24	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 25	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 26	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 27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	0	0	0	1	0	0	0	1	-
Feb 28	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 29	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
Diurnal Maximum	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	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	0.1	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.



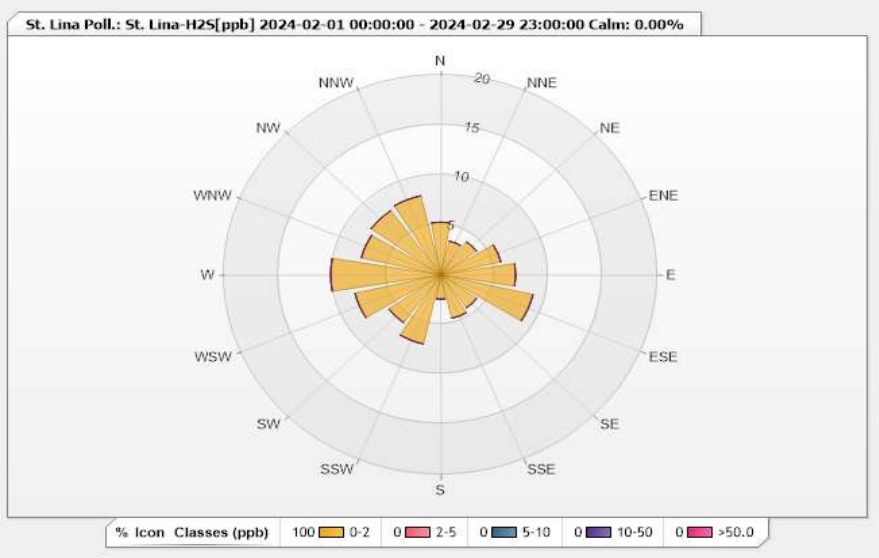


Station: St. Lina Poll.: St. Lina-H2S[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 70.69% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	5.28	0	0	0	0	5.28
NNE	3.46	0	0	0	0	3.46
NE	4.07	0	0	0	0	4.07
ENE	5.69	0	0	0	0	5.69
E	6.91	0	0	0	0	6.91
ESE	8.74	0	0	0	0	8.74
SE	4.07	0	0	0	0	4.07
SSE	4.47	0	0	0	0	4.47
S	2.44	0	0	0	0	2.44
SSW	7.11	0	0	0	0	7.11
SW	5.89	0	0	0	0	5.89
WSW	8.13	0	0	0	0	8.13
W	10.16	0	0	0	0	10.16
WNW	7.52	0	0	0	0	7.52
NW	7.93	0	0	0	0	7.93
NNW	8.13	0	0	0	0	8.13
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

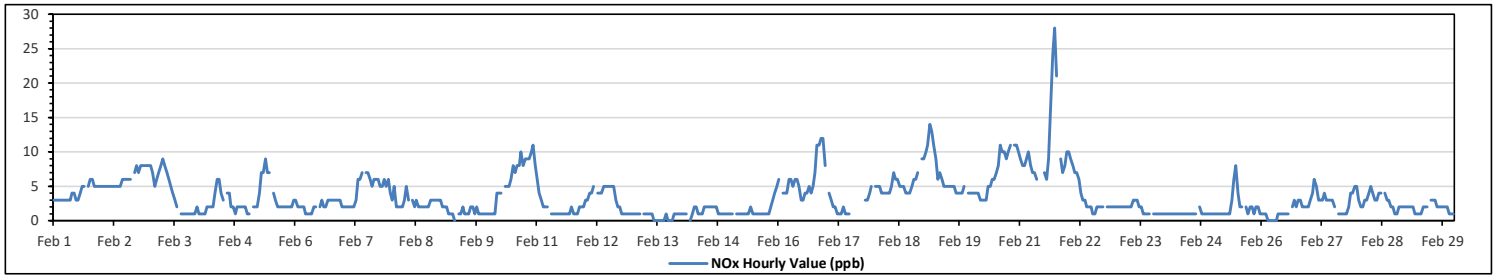
OXIDES OF NITROGEN (NOx) in ppb

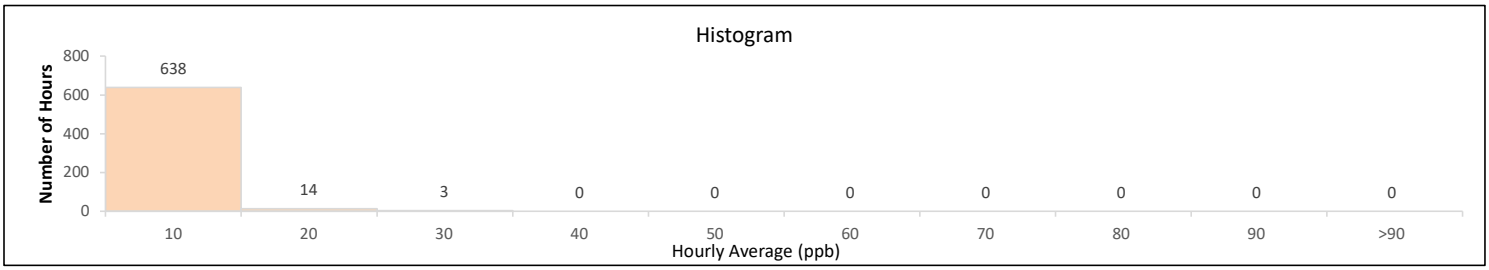
Maximum Hourly Value:	28	ppb	on Feb 21 at hr 17	Hours in Service:	696	
Maximum Daily Value:	10.9	ppb	on Feb 21	Hours of Data:	655	
Minimum Hourly Value:	0	ppb	on Feb 9 at hr 7	Hours of Missing Data:	4	
Minimum Daily Value:	0.6	ppb	on Feb 13	Hours of Calibration:	37	
Monthly Average:	3.5	ppb		Operational Uptime:	99.4	

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	3	3	3	3	3	3	3	3	4	4	3	3	4	5	5	S	5	6	6	5	5	5	5	3	6	4.0
Feb 2	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	S	7	8	7	8	8	8	8	8	5	8	6.2
Feb 3	8	7	5	6	7	8	9	8	7	6	5	4	3	2	S	1	1	1	1	1	1	1	1	2	1	9	4.1
Feb 4	1	1	1	1	2	2	2	2	4	6	6	4	3	S	4	4	2	2	1	2	2	2	2	2	1	6	2.5
Feb 5	1	1	K	2	2	2	4	7	7	9	7	7	S	4	3	2	2	2	2	2	2	2	2	3	1	9	3.4
Feb 6	3	2	2	2	2	1	1	1	1	2	2	S	2	3	2	2	3	3	3	3	3	3	3	2	1	3	2.2
Feb 7	2	2	2	2	2	2	3	6	6	7	S	7	7	6	5	6	6	6	5	5	6	5	6	4	2	7	4.7
Feb 8	3	5	2	2	2	2	3	5	3	S	3	2	3	2	2	2	2	2	2	3	3	3	3	3	2	5	2.7
Feb 9	3	2	2	2	1	1	1	0	S	1	1	2	1	1	1	2	2	1	2	1	1	1	1	1	0	3	1.3
Feb 10	1	1	1	1	4	4	4	S	5	5	5	6	8	7	8	8	10	8	9	9	9	10	11	8	1	11	6.2
Feb 11	6	4	3	2	2	2	S	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	2	1	6	1.7
Feb 12	3	3	4	4	5	S	4	4	4	5	5	5	5	5	5	3	2	2	1	1	1	1	1	1	1	5	3.2
Feb 13	1	1	1	1	S	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	1	0.6
Feb 14	1	1	1	S	0	1	2	2	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	0	2	1.3
Feb 15	1	1	S	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	3	4	5	1	5	1.5
Feb 16	6	S	4	4	4	6	6	5	6	6	5	3	3	4	4	5	4	5	7	11	11	12	12	8	3	12	6.1
Feb 17	S	4	3	2	2	1	1	1	2	1	1	1	C	C	C	C	C	C	C	3	3	4	5	S	1	5	NA
Feb 18	5	5	5	4	4	4	4	4	5	7	6	6	5	5	5	4	4	4	5	6	6	7	S	9	4	9	5.2
Feb 19	9	10	11	14	13	11	9	6	7	6	5	5	5	5	5	5	4	4	4	4	5	S	4	4	4	14	6.7
Feb 20	4	4	4	4	3	3	3	3	5	5	6	6	7	8	11	10	10	9	10	11	S	11	11	10	3	11	6.9
Feb 21	9	8	8	9	10	8	7	7	6	Y	Y	Y	7	6	9	16	24	28	21	S	9	7	8	10	6	28	10.9
Feb 22	10	9	8	7	7	6	4	3	3	2	2	2	1	1	2	2	2	2	S	2	2	2	2	2	1	10	3.6
Feb 23	2	2	2	2	2	2	2	2	3	3	3	2	2	1	1	1	1	S	1	1	1	1	1	1	1	3	1.7
Feb 24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	1	1	1	1	1	1	1	2	1.0
Feb 25	1	1	1	1	1	1	1	1	1	3	6	8	4	2	2	S	2	1	2	2	1	2	2	1	1	8	2.0
Feb 26	1	1	1	0	0	0	0	0	1	1	1	1	1	1	S	2	3	2	3	3	2	2	2	2	0	3	1.3
Feb 27	3	4	6	5	3	3	3	4	3	3	3	3	2	S	1	1	1	1	1	2	4	4	5	5	1	6	3.0
Feb 28	3	2	2	3	3	4	5	4	3	3	4	4	S	4	3	3	2	2	2	1	1	2	2	2	1	5	2.8
Feb 29	2	2	2	2	1	1	1	1	2	2	2	S	3	3	3	2	2	2	2	2	2	1	1	1	1	3	1.8
Diurnal Maximum	10	10	11	14	13	11	9	8	7	9	7	8	8	8	11	16	24	28	21	11	11	12	12	10			
Diurnal Average	3.5	3.3	3.3	3.3	3.3	3.1	3.2	3.1	3.5	3.6	3.4	3.5	3.3	3.3	3.5	3.5	3.9	4.0	3.7	3.3	3.4	3.7	3.8	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.



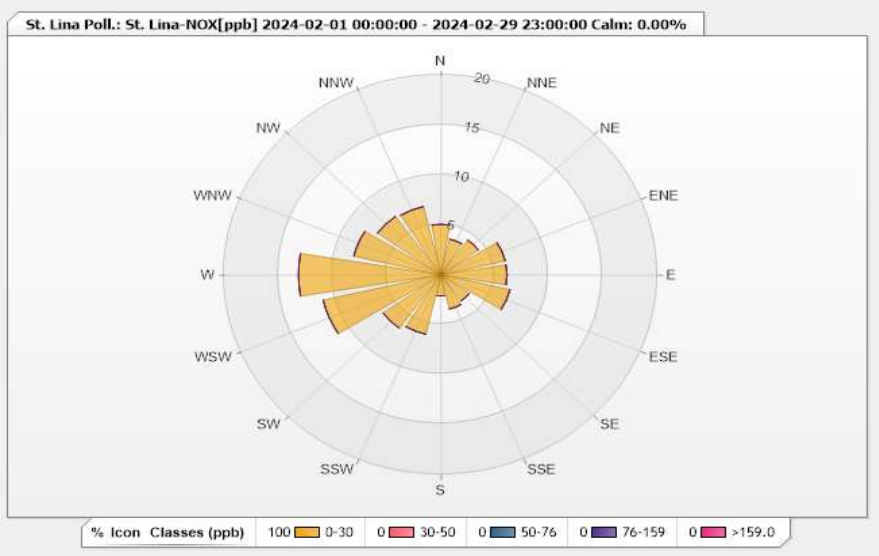


Station: St. Lina Poll.: St. Lina-NOX[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.11% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	5.04	0	0	0	0	5.04
NNE	3.66	0	0	0	0	3.66
NE	4.27	0	0	0	0	4.27
ENE	6.11	0	0	0	0	6.11
E	6.11	0	0	0	0	6.11
ESE	6.56	0	0	0	0	6.56
SE	3.21	0	0	0	0	3.21
SSE	3.51	0	0	0	0	3.51
S	2.14	0	0	0	0	2.14
SSW	6.11	0	0	0	0	6.11
SW	6.56	0	0	0	0	6.56
WSW	11.15	0	0	0	0	11.15
W	13.13	0	0	0	0	13.13
WNW	8.24	0	0	0	0	8.24
NW	7.18	0	0	0	0	7.18
NNW	7.02	0	0	0	0	7.02
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

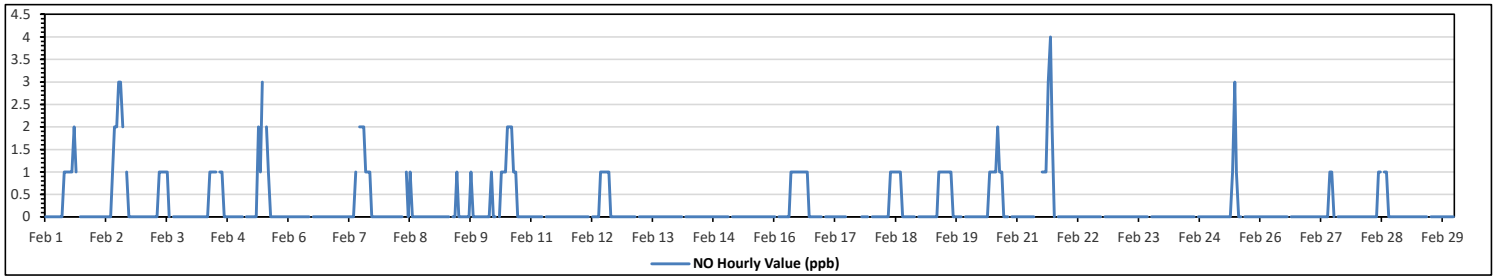
NITRIC OXIDE (NO) in ppb

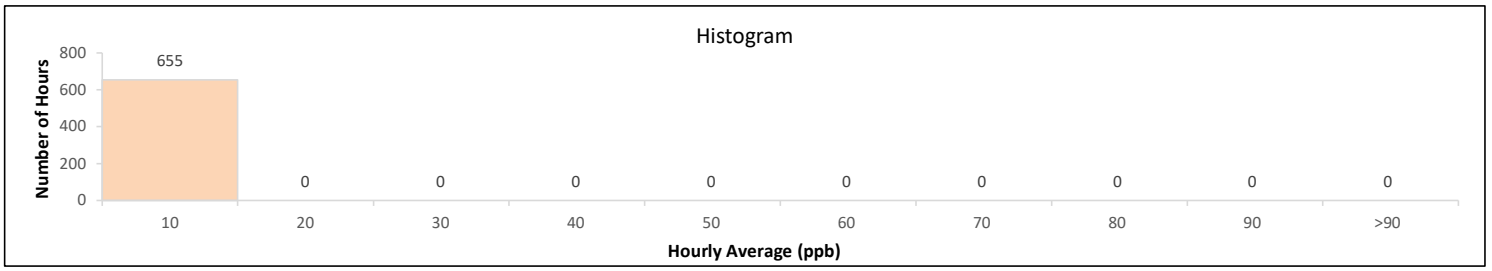
Maximum Hourly Value:	4	ppb	on Feb 21 at hr 16	Hours in Service:	696	
Maximum Daily Value:	0.6	ppb	on Feb 2	Hours of Data:	655	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	4	
Minimum Daily Value:	0.0	ppb	on Feb 6	Hours of Calibration:	37	
Monthly Average:	0.2	ppb		Operational Uptime:	99.4	

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	1	1	1	1	1	2	1	S	0	0	0	0	0	0	0	0	2	0.3
Feb 2	0	0	0	0	0	0	0	0	0	1	2	2	3	3	2	S	1	0	0	0	0	0	0	0	0	3	0.6
Feb 3	0	0	0	0	0	0	0	0	1	1	1	1	1	0	S	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 4	0	0	0	0	0	0	0	0	0	1	1	1	1	S	1	1	0	0	0	0	0	0	0	0	0	1	0.3
Feb 5	0	0	K	0	0	0	0	0	0	2	1	3	S	2	1	0	0	0	0	0	0	0	0	0	0	3	0.4
Feb 6	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 7	0	0	0	0	0	0	0	0	0	1	S	2	2	2	1	1	1	0	0	0	0	0	0	0	0	2	0.4
Feb 8	0	0	0	0	0	0	0	0	0	S	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Feb 9	0	0	0	0	0	0	0	0	S	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.1
Feb 10	0	0	0	0	1	0	0	S	0	1	1	1	2	2	2	1	1	0	0	0	0	0	0	0	0	2	0.5
Feb 11	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 12	0	0	0	0	0	S	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 13	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 14	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 15	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 16	0	S	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.4
Feb 17	S	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	0	0	0	0	S	0	0	NA
Feb 18	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	S	0	0	1	0.3
Feb 19	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	S	0	0	0	1	0.3
Feb 20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	1	1	0	0	0	S	0	0	0	0	2	0.3
Feb 21	0	0	0	0	0	0	0	0	0	Y	Y	Y	1	1	1	3	4	2	0	S	0	0	0	0	0	4	0.6
Feb 22	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 23	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
Feb 24	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 25	0	0	0	0	0	0	0	0	0	0	1	3	1	0	0	S	0	0	0	0	0	0	0	0	0	3	0.2
Feb 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 27	0	0	0	0	0	0	0	0	0	0	1	1	0	S	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	0	1	1	S	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 29	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
Diurnal Maximum	0	0	0	0	1	0	0	0	1	2	2	3	3	3	2	3	4	2	1	0	0	0	0	0			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.6	0.8	0.7	0.7	0.7	0.4	0.3	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.



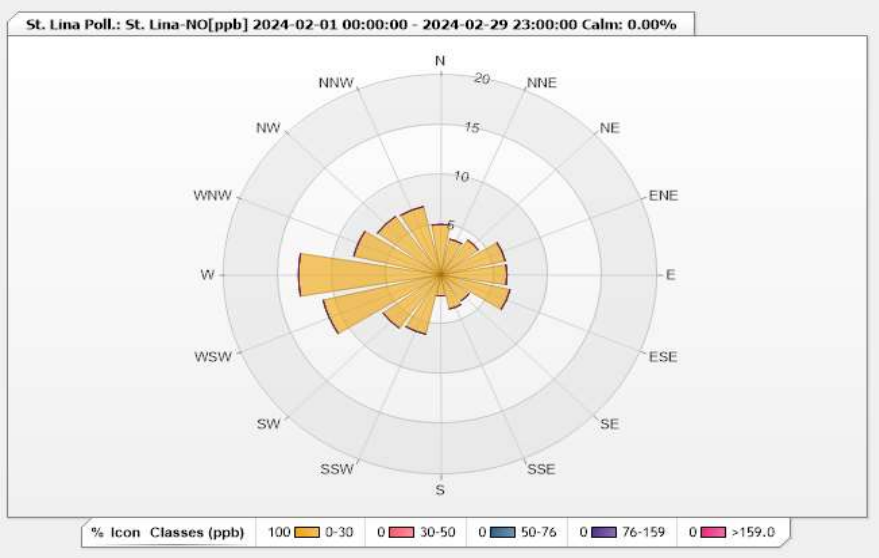


Station: St. Lina Poll.: St. Lina-NO[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.11% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	5.04	0	0	0	0	5.04
NNE	3.66	0	0	0	0	3.66
NE	4.27	0	0	0	0	4.27
ENE	6.11	0	0	0	0	6.11
E	6.11	0	0	0	0	6.11
ESE	6.56	0	0	0	0	6.56
SE	3.21	0	0	0	0	3.21
SSE	3.51	0	0	0	0	3.51
S	2.14	0	0	0	0	2.14
SSW	6.11	0	0	0	0	6.11
SW	6.56	0	0	0	0	6.56
WSW	11.15	0	0	0	0	11.15
W	13.13	0	0	0	0	13.13
WNW	8.24	0	0	0	0	8.24
NW	7.18	0	0	0	0	7.18
NNW	7.02	0	0	0	0	7.02
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

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

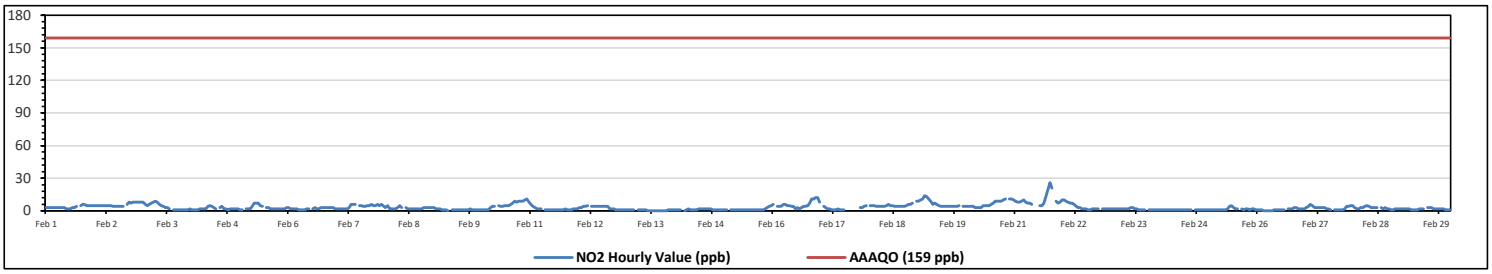
Number of 1-Hour Exceedances: 0

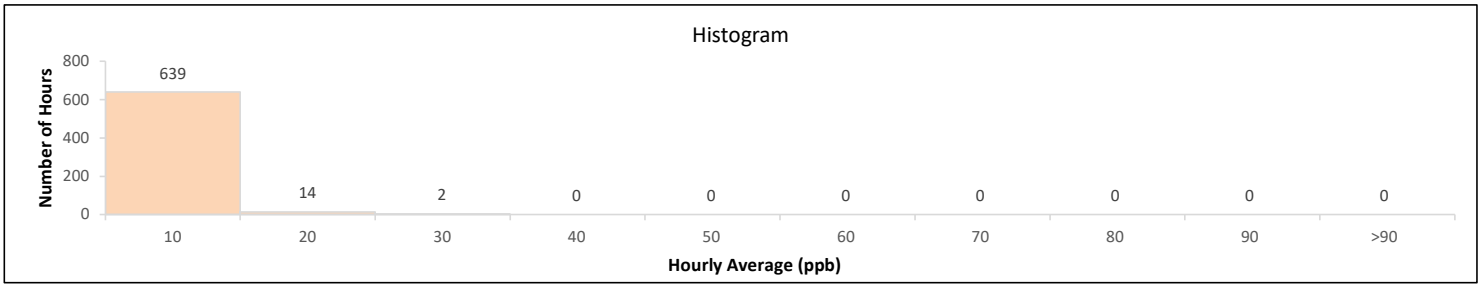
Maximum Hourly Value:	26	ppb	on Feb 21 at hr 17	Hours in Service:	696
Maximum Daily Value:	10.2	ppb	on Feb 21	Hours of Data:	655
Minimum Hourly Value:	0	ppb	on Feb 9 at hr 7	Hours of Missing Data:	4
Minimum Daily Value:	0.6	ppb	on Feb 13	Hours of Calibration:	37
Monthly Average:	3.3	ppb		Operational Uptime:	99.4

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	3	3	3	3	3	3	3	3	3	2	2	2	3	3	4	S	5	6	6	5	5	5	5	2	6	3.6
Feb 2	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	S	6	8	7	8	8	8	8	8	4	8	5.7
Feb 3	8	6	5	6	7	8	9	8	6	5	4	3	3	2	S	1	1	1	1	1	1	1	1	2	1	9	3.9
Feb 4	1	1	1	1	2	2	2	2	4	5	4	3	2	S	3	4	2	2	1	2	2	2	2	2	1	5	2.3
Feb 5	1	1	K	2	2	2	4	7	7	7	5	4	S	3	3	2	2	2	2	2	2	2	2	3	1	7	3.0
Feb 6	3	2	2	2	2	1	1	1	1	2	2	S	2	3	2	2	3	3	3	3	3	3	3	2	1	3	2.2
Feb 7	2	2	2	2	2	2	3	6	6	6	S	5	5	4	4	5	5	6	5	5	6	5	6	4	2	6	4.3
Feb 8	3	5	2	2	2	2	3	5	3	S	3	2	2	2	2	2	2	2	2	3	3	3	3	3	2	5	2.7
Feb 9	3	2	2	2	1	1	1	0	S	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	3	1.2
Feb 10	1	1	1	1	3	4	4	S	5	4	4	5	5	5	6	7	9	8	9	9	9	10	11	8	1	11	5.6
Feb 11	6	4	3	2	2	2	S	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	2	1	6	1.7
Feb 12	3	3	4	4	5	S	4	4	4	4	4	4	4	4	4	2	2	2	1	1	1	1	1	1	1	5	2.9
Feb 13	1	1	1	1	S	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0.6
Feb 14	1	1	1	S	0	1	2	1	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	0	2	1.3
Feb 15	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	4	5	1	5	1.4
Feb 16	6	S	4	4	4	6	6	5	5	4	4	2	3	2	3	4	4	5	7	11	11	12	12	8	2	12	5.7
Feb 17	S	4	3	2	2	1	1	1	2	1	1	1	C	C	C	C	C	C	C	3	3	4	5	S	1	5	NA
Feb 18	5	5	5	4	4	4	4	4	5	6	5	5	4	4	4	4	4	4	5	6	6	7	S	9	4	9	4.9
Feb 19	9	10	11	14	13	11	9	6	7	6	5	4	4	4	4	4	4	4	4	4	5	S	4	4	4	14	6.5
Feb 20	4	4	4	4	3	3	3	3	5	5	5	5	6	7	9	9	9	9	10	11	S	11	11	10	3	11	6.5
Feb 21	9	8	8	9	10	8	7	7	6	Y	Y	Y	5	5	7	13	20	26	21	S	9	7	8	10	5	26	10.2
Feb 22	10	9	8	7	7	6	4	3	3	2	2	2	1	1	2	2	2	2	S	2	2	2	2	2	1	10	3.6
Feb 23	2	2	2	2	2	2	2	2	2	3	3	2	2	1	1	1	1	S	1	1	1	1	1	1	1	3	1.7
Feb 24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1.0
Feb 25	1	1	1	1	1	1	1	1	1	2	4	5	3	2	2	S	2	1	2	2	1	2	2	1	1	5	1.7
Feb 26	1	1	1	0	0	0	0	0	1	1	1	1	1	1	S	2	2	2	3	3	2	2	2	2	0	3	1.3
Feb 27	3	4	6	5	3	3	3	3	3	3	2	2	1	S	1	1	1	1	1	2	4	4	5	5	1	6	2.9
Feb 28	3	2	2	3	3	4	5	4	3	3	3	3	S	3	2	3	2	2	1	1	2	2	2	2	1	5	2.6
Feb 29	2	2	2	2	1	1	1	1	2	2	2	S	3	3	3	2	2	2	2	2	2	1	1	1	1	3	1.8
Diurnal Maximum	10	10	11	14	13	11	9	8	7	7	5	5	6	7	9	13	20	26	21	11	11	12	12	10			
Diurnal Average	3.5	3.3	3.3	3.3	3.3	3.1	3.2	3.1	3.4	3.1	2.7	2.7	2.6	2.7	2.9	3.1	3.5	3.9	3.7	3.3	3.4	3.7	3.8	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.



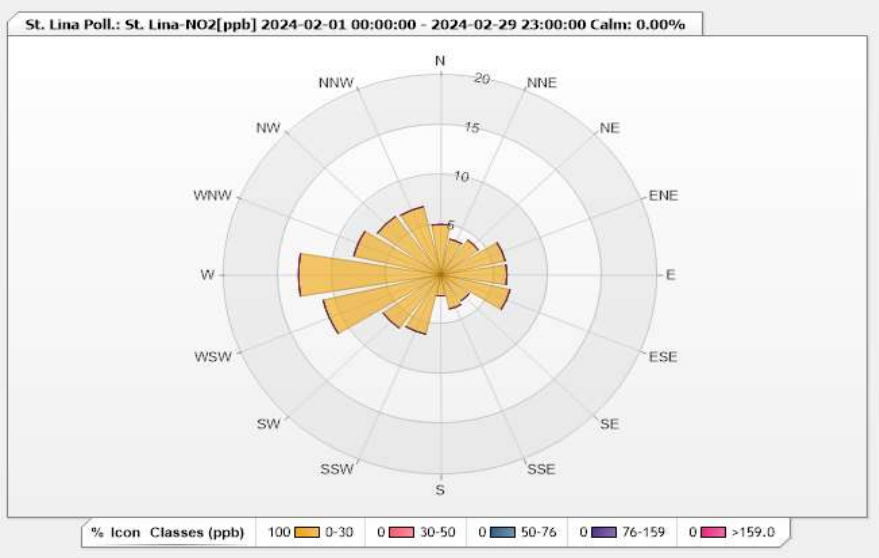


Station: St. Lina Poll.: St. Lina-NO2[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.11% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	5.04	0	0	0	0	5.04
NNE	3.66	0	0	0	0	3.66
NE	4.27	0	0	0	0	4.27
ENE	6.11	0	0	0	0	6.11
E	6.11	0	0	0	0	6.11
ESE	6.56	0	0	0	0	6.56
SE	3.21	0	0	0	0	3.21
SSE	3.51	0	0	0	0	3.51
S	2.14	0	0	0	0	2.14
SSW	6.11	0	0	0	0	6.11
SW	6.56	0	0	0	0	6.56
WSW	11.15	0	0	0	0	11.15
W	13.13	0	0	0	0	13.13
WNW	8.24	0	0	0	0	8.24
NW	7.18	0	0	0	0	7.18
NNW	7.02	0	0	0	0	7.02
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

OZONE (O_3) in ppb

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

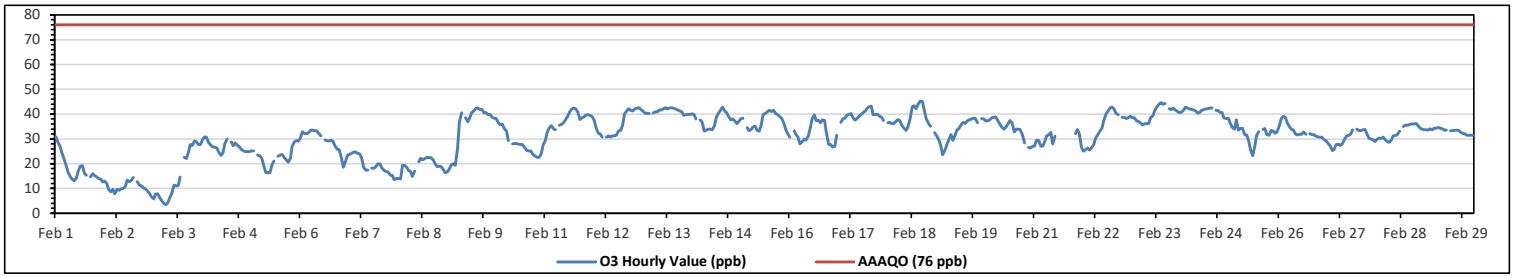
Number of 1-Hour Exceedances: 0

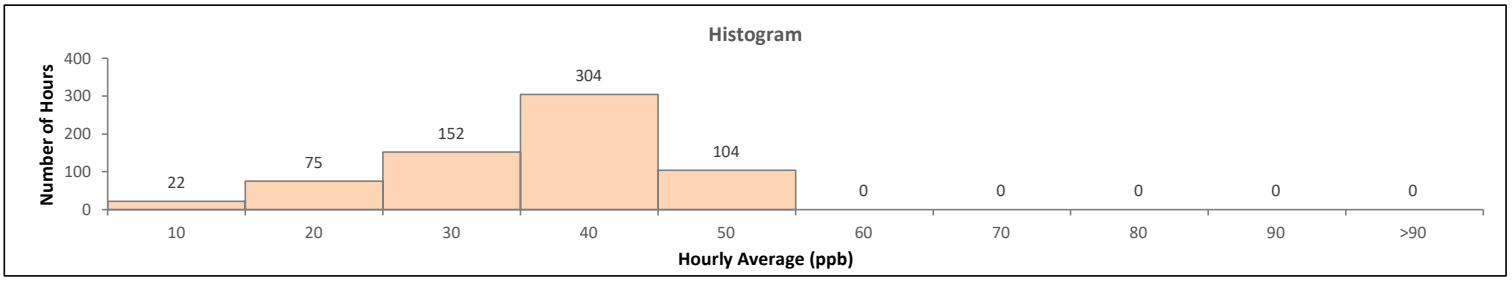
Maximum Hourly Value:	45.3	ppb	on Feb 18 at hr 16	Hours in Service:	696
Maximum Daily Value:	41.2	ppb	on Feb 24	Hours of Data:	657
Minimum Hourly Value:	3.4	ppb	on Feb 3 at hr 6	Hours of Missing Data:	6
Minimum Daily Value:	10.5	ppb	on Feb 2	Hours of Calibration:	33
Monthly Average:	31.0	ppb		Operational Uptime:	99.1

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	30.8	28.7	26.9	24.6	22	19.2	16.5	15	13.7	13.2	14.2	16.8	18.9	19.2	16.1	15.4	S	14.7	15.9	15.3	14.7	14	13.7	12.6	12.6	30.8	17.9
Feb 2	13	11.9	9.5	8.6	9.6	7.8	9.6	9.2	9.8	10	10.6	13.4	12.8	13.2	14.4	S	12.8	11.3	11.1	10.2	9.8	9	7.8	6.6	6.6	14.4	**10.5**
Feb 3	5.8	7.7	7.9	6.2	4.9	4	3.4	4.4	6.6	8.4	11.3	11.1	11.1	14.6	S	22.6	22	24.6	27.8	27.4	29.2	28.9	27.8	27.7	**3.4**	29.2	15.0
Feb 4	29.9	30.8	30.5	28.5	27.5	26.7	26.7	26.2	24.6	23.4	24.4	28.2	29.9	S	28.7	27.2	28.3	27.4	26.8	25.8	25.2	24.9	24.9	24.9	23.4	30.8	27.0
Feb 5	25.2	25.1	K	23.5	23.2	22.3	19	16.4	16.4	16.4	19.5	21	S	22.9	23.5	23.8	22.6	21.5	20.6	22.1	27	28.7	29.3	29.2	16.4	29.3	22.7
Feb 6	30.4	32.8	32.2	32.2	32.5	33.5	33.5	33.3	33.3	32.3	31.2	S	29.5	29.3	29.1	29.4	29	27.2	25.8	25.7	22.4	18.5	20.5	23.5	18.5	33.5	29.0
Feb 7	23.8	24.1	24.6	24.8	24.1	24	22.4	18.4	17.4	17.5	S	18.2	18.1	18.8	20	19.8	18.2	17.3	16.9	16.6	15.4	15.4	13.5	14	13.5	24.8	19.3
Feb 8	14	13.8	19.4	19.3	18.6	17.3	16.9	14.8	17	S	20.7	22.2	21.5	22	22.6	22.4	22.4	21.5	19.9	18.8	19	18.8	17.6	16.4	13.8	22.6	19.0
Feb 9	16.6	17.7	19.7	20	19.4	25.9	36.9	40.5	S	38.6	36.9	38.4	40.5	41.3	42.3	42.4	41.8	41.9	40.5	40.7	39.7	39.8	38.7	38.3	16.6	42.4	34.7
Feb 10	38.2	36.7	35.6	36	34.2	33.1	29.3	S	28	28.2	28.2	27.9	27.8	27.7	26.4	25.3	25.2	25.1	23.9	23.1	22.5	22.6	23.7	27.7	22.5	38.2	28.5
Feb 11	29.2	32.5	34.4	35.3	34.1	33.7	S	35.5	35.9	36.6	37.5	39	40.8	42.1	42.5	42.2	40.8	37.8	38.4	38.9	39.6	39.7	39.4	39.1	29.2	42.5	37.6
Feb 12	37.5	34.5	32.3	32	30.7	S	30.6	31.2	30.6	31.2	31.2	31.6	33.1	33.4	35.6	40.1	41.2	42.2	41.4	41.3	42.1	42.5	42.6	41.8	30.6	42.6	36.1
Feb 13	41.3	40.4	40.2	40.3	S	40.4	40.9	40.9	41.6	41.6	42.2	42.6	42	42.4	42.6	42.3	42	41.6	41.3	40.9	39.5	39.7	39.9	39.8	39.5	42.6	41.1
Feb 14	40.1	39.8	38	S	37.7	36.9	33.1	33.5	34	33.9	33.6	35.3	38.7	40.2	41.5	42.9	41.3	40.5	39	37.7	38	37.1	36.1	37	33.1	42.9	37.6
Feb 15	38.2	38.3	S	34.6	33.2	33.8	34.8	35	33.3	33.1	35.6	39.8	40.2	41	41.5	41	41.5	40.3	39.9	39.1	38.3	36.3	33.7	32.2	32.2	41.5	37.2
Feb 16	30.7	S	33.2	31.9	30.7	28	28.9	29.8	29.5	31.1	34.7	38.1	39.7	37.2	37.5	36.5	37.6	37.4	32.3	27.8	27.8	26.7	26.9	31.4	26.7	39.7	32.4
Feb 17	S	36.7	38.1	38.5	39.6	39.8	40.3	38.6	37.5	38.3	39.2	39.9	40.7	41.2	42.5	43	43.2	39.7	39.8	39.8	39.1	38.9	37.4	S	36.7	43.2	39.6
Feb 18	36.6	36.8	36.1	36.3	37	37.8	37.4	35.3	34.2	33.4	35	37.9	43	43.3	42.2	44.1	**45.3**	45	41.2	38	36.2	35	S	32.5	32.5	**45.3**	38.2
Feb 19	31.3	29.7	27.4	23.6	25.4	27.6	29.5	31.7	29.4	31.5	33.6	34.2	35.7	36.7	36.3	37.3	37.7	38.1	38.3	38.3	36.5	S	38.2	38.1	23.6	38.3	33.3
Feb 20	37.2	37.2	37.7	38.5	38.7	38.9	37.3	35.8	34.7	33.9	34.8	36	37.4	36.6	32.7	33.9	33.9	33.8	31.7	28.3	S	26.5	26.3	26.9	26.3	38.9	34.3
Feb 21	27.1	29.4	29.4	27.1	27.1	28.8	31.2	31.7	32.6	28	31	C	C	C	C	Y	Y	Y	Y	Y	32.1	33.8	32.1	26.5	26.5	33.8	NA
Feb 22	25	25.6	26.2	25.6	26.5	27.6	30.4	31.7	33	34.3	37.1	39.8	41.3	42.4	42.9	42.2	40.2	39.7	S	38.7	38.7	38.2	38.6	39	25.0	42.9	35.0
Feb 23	38.6	38.5	37.3	37	36.6	35.6	36.1	36.1	36.3	38.6	39.3	41.4	42.8	44	44.7	44	44.2	S	42.2	41.8	42.4	41.7	41.1	40.7	35.6	44.7	40.0
Feb 24	40.8	41.4	42.8	42.4	42	41.9	41.6	41.2	40.4	40.7	41.5	41.8	42.1	42.2	42.4	42.4	S	41.5	41.4	40.7	40.6	38.5	38.2	38.3	38.2	42.8	**41.2**
Feb 25	36.3	34.7	34	37.6	33.5	34.2	34.3	31.7	31.6	29.4	25.7	23.2	27.4	31.3	32.8	S	33.8	34.2	31.8	31.4	33.4	33.1	32.3	32.9	23.2	37.6	32.2
Feb 26	35.2	38.1	39.1	38.7	36.6	34.8	34	33.5	31.9	31.6	31.9	31.9	32.7	31.9	S	32.2	31.7	31.8	31.1	30.8	30.6	30.5	29.7	29.3	29.3	39.1	33.0
Feb 27	28.2	27.2	25.3	25.7	27.7	27.9	27.4	28	29.5	31	31.4	31.9	33.7	S	33.9	33.4	33.3	33.6	33.8	32	30.3	30	29.7	28.8	25.3	33.9	30.2
Feb 28	29.8	30.4	30.2	30.6	29.7	28.9	28.6	29.7	31.2	31.3	31.7	33.1	S	34.9	35.6	35.5	35.9	36	36	36.3	35.4	34.5	33.9	33.7	28.6	36.3	32.7
Feb 29	33.6	33.5	34.1	33.7	34.4	34.4	34.6	34.4	34.1	33.5	33.5	S	33.3	33.3	33.4	33.5	33.4	32.6	32.3	32	31.5	31.4	31.5	31.4	31.4	34.6	33.2
Diurnal Maximum	41.3	41.4	42.8	42.4	42.0	41.9	41.6	41.2	41.6	41.6	42.2	42.6	43.0	44.0	44.7	44.1	45.3	45.0	42.2	41.8	42.4	42.5	42.6	41.8			
Diurnal Average	30.2	30.5	30.4	29.8	29.2	29.5	29.5	29.4	28.9	29.7	30.6	31.3	32.9	33.2	34.0	34.4	33.8	32.5	31.9	31.4	31.3	30.5	30.2	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.



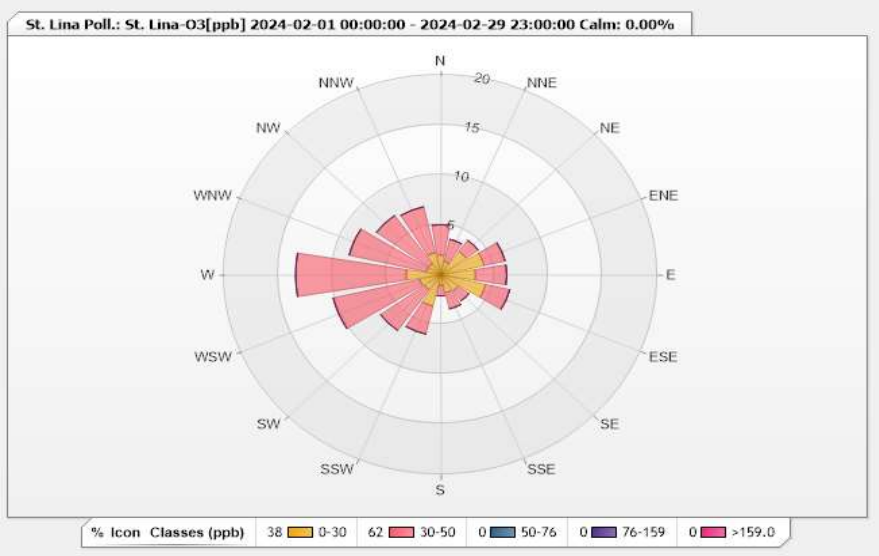


Station: St. Lina Poll.: St. Lina-O3[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.40% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.98	3.04	0	0	0	5.02
NNE	1.37	2.28	0	0	0	3.65
NE	2.89	1.37	0	0	0	4.26
ENE	4.11	1.98	0	0	0	6.09
E	3.2	2.89	0	0	0	6.09
ESE	4.26	2.28	0	0	0	6.54
SE	1.98	1.22	0	0	0	3.2
SSE	1.83	1.67	0	0	0	3.5
S	1.07	1.07	0	0	0	2.14
SSW	3.2	2.89	0	0	0	6.09
SW	1.83	5.02	0	0	0	6.85
WSW	1.98	8.22	0	0	0	10.2
W	3.2	10.2	0	0	0	13.4
WNW	1.37	7.31	0	0	0	8.68
NW	1.37	5.94	0	0	0	7.31
NNW	2.28	4.72	0	0	0	7
Summary	37.92	62.1	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

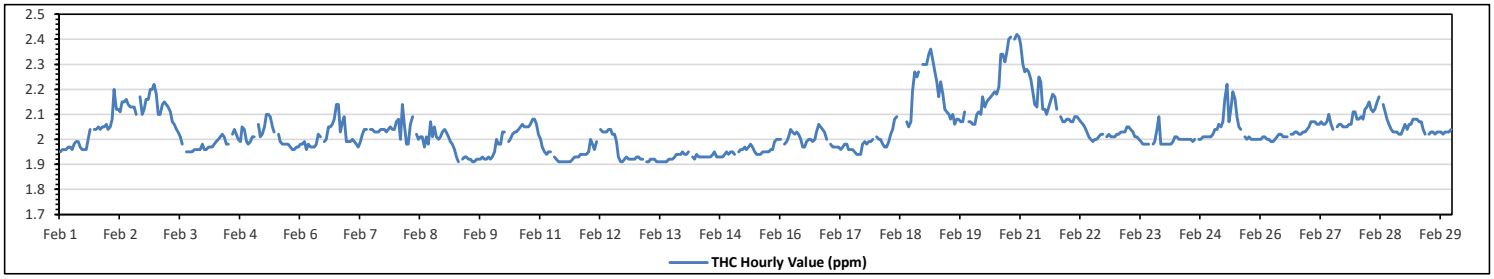
TOTAL HYDROCARBONS (THC) in ppm

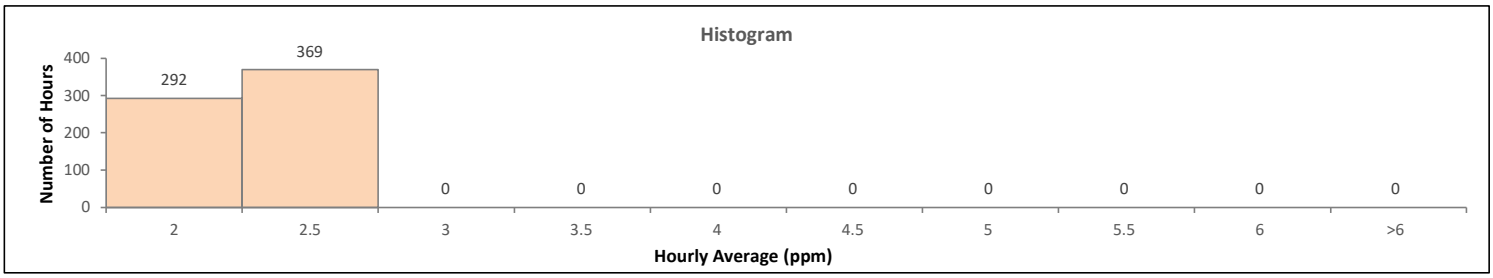
Maximum Hourly Value:	2.42	ppm	on Feb 20 at hr 22	Hours in Service:	696
Maximum Daily Value:	2.23	ppm	on Feb 20	Hours of Data:	661
Minimum Hourly Value:	1.91	ppm	on Feb 9 at hr 7	Hours of Missing Data:	1
Minimum Daily Value:	1.92	ppm	on Feb 13	Hours of Calibration:	34
Monthly Average:	2.03	ppm		Operational 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	1.95	1.96	1.96	1.96	1.97	1.97	1.96	1.98	1.99	1.99	1.97	1.96	1.96	1.96	2.00	2.04	S	2.04	2.04	2.05	2.04	2.05	2.05	2.06	1.95	2.06	2.00
Feb 2	2.04	2.05	2.08	2.20	2.12	2.12	2.11	2.15	2.15	2.16	2.14	2.13	2.13	2.13	2.10	S	2.17	2.10	2.12	2.16	2.16	2.20	2.20	2.22	2.04	2.22	2.14
Feb 3	2.18	2.10	2.10	2.14	2.15	2.14	2.13	2.11	2.07	2.06	2.04	2.03	2.01	1.98	S	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.98	1.95	2.18	2.04
Feb 4	1.96	1.96	1.97	1.97	1.97	1.98	1.99	2.00	2.01	2.02	2.01	1.98	1.98	S	2.02	2.04	2.02	2.00	1.99	2.05	2.04	1.99	1.98	1.99	1.96	2.05	2.00
Feb 5	2.01	2.01	K	2.06	2.01	2.02	2.05	2.10	2.10	2.09	2.05	2.03	S	2.02	1.99	1.98	1.98	1.98	1.98	1.97	1.96	1.96	1.97	1.97	1.96	2.10	2.01
Feb 6	1.98	1.98	1.99	1.96	1.98	1.97	1.97	1.97	1.98	2.02	2.01	S	1.99	2.00	2.05	2.05	2.06	2.08	2.14	2.14	2.03	2.07	2.09	1.99	1.96	2.14	2.02
Feb 7	1.99	1.99	2.00	1.99	1.98	1.97	1.99	2.02	2.04	2.04	S	2.04	2.04	2.03	2.03	2.03	2.04	2.04	2.04	2.03	2.04	2.05	2.04	2.04	1.97	2.05	2.02
Feb 8	2.07	2.08	2.00	2.14	2.06	1.98	1.98	2.06	2.09	S	2.02	2.00	2.01	2.01	1.97	2.01	1.98	2.07	2.01	2.05	2.01	2.00	2.01	2.03	1.97	2.14	2.03
Feb 9	2.04	2.03	2.01	1.99	1.98	1.96	1.93	1.91	S	1.92	1.93	1.93	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.93	1.92	1.92	1.93	1.92	1.91	2.04	1.94
Feb 10	1.93	1.95	2.00	1.98	1.98	2.03	2.03	S	1.99	2.00	2.02	2.03	2.03	2.04	2.05	2.06	2.05	2.05	2.05	2.06	2.08	2.08	2.06	2.02	1.93	2.08	2.02
Feb 11	2.00	1.97	1.95	1.94	1.95	1.95	S	1.93	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.91	2.00	1.93
Feb 12	1.95	2.00	1.98	1.96	1.99	S	2.04	2.03	2.03	2.03	2.04	2.04	2.02	2.02	1.99	1.93	1.91	1.91	1.92	1.93	1.92	1.92	1.92	1.92	1.91	2.04	1.97
Feb 13	1.93	1.93	1.92	1.92	S	1.91	1.91	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.92	1.92	1.93	1.94	1.94	1.94	1.95	1.91	1.95	1.92
Feb 14	1.94	1.94	1.95	S	1.93	1.92	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.93	1.93	1.93	1.93	1.94	1.95	1.94	1.95	1.92	1.95	1.94
Feb 15	1.95	1.94	S	1.95	1.96	1.96	1.97	1.96	1.97	1.98	1.97	1.95	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.96	1.96	1.99	2.00	2.00	1.94	2.00	1.96
Feb 16	2.00	S	1.98	1.99	2.01	2.04	2.03	2.02	2.03	2.02	2.00	1.97	1.97	1.99	2.00	2.00	1.99	2.00	2.03	2.06	2.05	2.04	2.03	2.00	1.97	2.06	2.01
Feb 17	S	1.98	1.97	1.97	1.97	1.97	1.96	1.97	1.98	1.98	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.98	1.99	1.98	1.99	1.99	2.00	S	1.94	2.00	1.97
Feb 18	2.01	2.00	2.00	1.98	1.97	1.97	1.99	2.02	2.04	2.08	2.09	C	C	C	C	2.07	2.05	2.07	2.19	2.27	2.25	2.27	S	2.30	1.97	2.30	2.09
Feb 19	2.30	2.30	2.34	2.36	2.32	2.27	2.23	2.17	2.23	2.18	2.12	2.11	2.10	2.08	2.10	2.06	2.08	2.08	2.07	2.07	2.11	S	2.07	2.07	2.06	2.36	2.17
Feb 20	2.06	2.06	2.10	2.11	2.10	2.17	2.13	2.15	2.16	2.17	2.18	2.19	2.18	2.21	2.34	2.34	2.31	2.35	2.40	2.41	S	2.40	**2.42**	2.41	2.06	**2.42**	**2.23**
Feb 21	2.38	2.30	2.27	2.28	2.27	2.24	2.19	2.14	2.13	2.25	2.23	2.12	2.12	2.10	2.13	2.16	2.18	2.17	2.12	S	2.09	2.07	2.07	2.08	2.07	2.38	2.18
Feb 22	2.08	2.07	2.07	2.09	2.09	2.08	2.07	2.06	2.05	2.03	2.01	2.00	1.99	2.00	2.00	2.01	2.02	2.02	S	2.01	2.02	2.01	2.01	2.01	1.99	2.09	2.03
Feb 23	2.02	2.02	2.03	2.03	2.03	2.05	2.05	2.04	2.03	2.01	2.01	2.00	1.99	1.98	1.98	1.98	1.98	S	1.98	1.99	2.04	2.09	1.98	1.98	1.98	2.09	2.01
Feb 24	1.98	1.98	1.98	1.98	1.99	2.01	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	2.00	S	2.00	2.00	2.01	2.01	2.01	2.01	2.01	1.98	2.01	2.00
Feb 25	2.02	2.04	2.04	2.06	2.05	2.07	2.16	2.22	2.07	2.12	2.19	2.16	2.09	2.05	2.04	S	2.01	2.00	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.22	2.06
Feb 26	2.00	2.01	2.01	2.00	2.00	1.99	1.99	2.00	2.01	2.02	2.02	2.01	2.01	2.01	S	2.02	2.02	2.03	2.03	2.02	2.02	2.03	2.03	2.04	1.99	2.04	2.01
Feb 27	2.05	2.07	2.07	2.07	2.06	2.06	2.07	2.06	2.06	2.07	2.10	2.06	2.04	S	2.05	2.06	2.06	2.05	2.05	2.05	2.06	2.06	2.11	2.11	2.04	2.11	2.07
Feb 28	2.08	2.08	2.09	2.08	2.12	2.13	2.15	2.12	2.11	2.12	2.15	2.17	S	2.14	2.11	2.08	2.06	2.04	2.03	2.03	2.03	2.02	2.02	2.04	2.02	2.17	2.09
Feb 29	2.06	2.04	2.06	2.06	2.08	2.08	2.08	2.07	2.07	2.04	2.02	S	2.02	2.03	2.03	2.02	2.03	2.03	2.03	2.02	2.03	2.03	2.03	2.04	2.02	2.08	2.04
Diurnal Maximum	2.38	2.30	2.34	2.36	2.32	2.27	2.23	2.22	2.23	2.25	2.23	2.19	2.18	2.21	2.34	2.34	2.31	2.35	2.40	2.41	2.25	2.40	2.42	2.41			
Diurnal Average	2.03	2.03	2.03	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.02	2.01	2.01	2.02	2.02	2.02	2.02	2.03	2.04	2.02	2.04	2.03	2.04			

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.



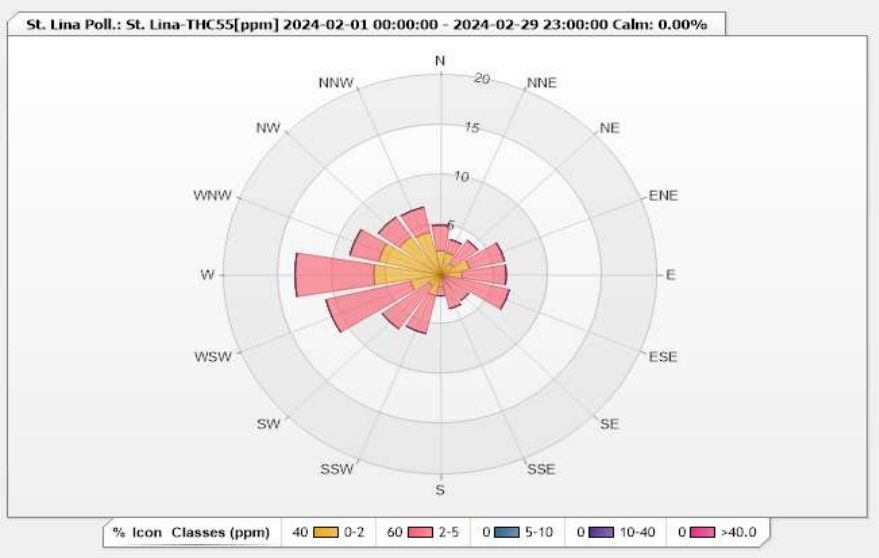


Station: St. Lina Poll.: St. Lina-THC55[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.97% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	2.42	2.57	0	0	0	4.99
NNE	2.27	1.36	0	0	0	3.63
NE	1.36	2.87	0	0	0	4.23
ENE	2.72	3.33	0	0	0	6.05
E	1.97	4.08	0	0	0	6.05
ESE	0.3	6.2	0	0	0	6.5
SE	0.3	2.87	0	0	0	3.17
SSE	0.3	3.18	0	0	0	3.48
S	1.21	0.91	0	0	0	2.12
SSW	2.12	3.93	0	0	0	6.05
SW	1.36	5.3	0	0	0	6.66
WSW	2.87	8.02	0	0	0	10.89
W	6.2	7.26	0	0	0	13.46
WNW	5.9	2.72	0	0	0	8.62
NW	4.69	2.42	0	0	0	7.11
NNW	4.39	2.57	0	0	0	6.96
Summary	40.38	59.59	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

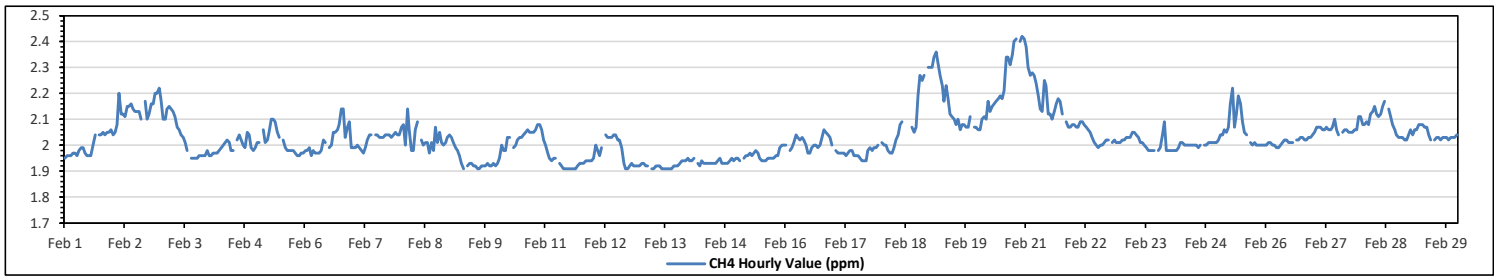
METHANE (CH4) in ppm

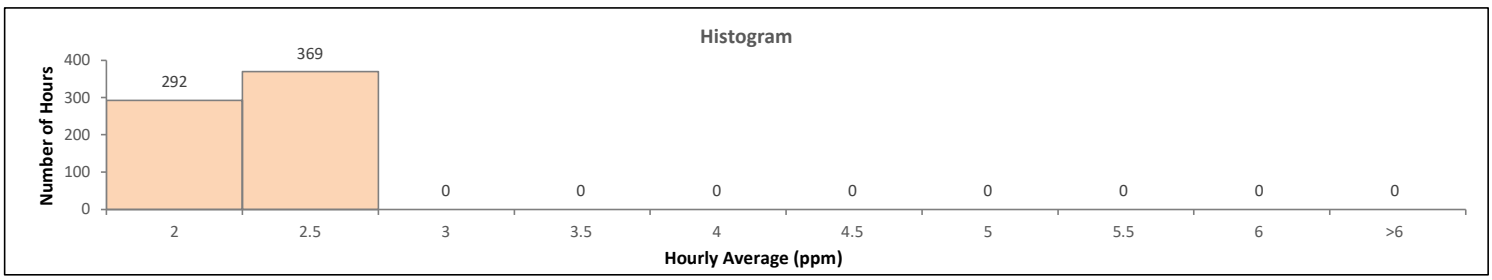
Maximum Hourly Value:	2.42	ppm	on Feb 20 at hr 22	Hours in Service:	696	
Maximum Daily Value:	2.23	ppm	on Feb 20	Hours of Data:	661	
Minimum Hourly Value:	1.91	ppm	on Feb 9 at hr 7	Hours of Missing Data:	1	
Minimum Daily Value:	1.92	ppm	on Feb 13	Hours of Calibration:	34	
Monthly Average:	2.03	ppm		Operational 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	1.95	1.96	1.96	1.96	1.97	1.97	1.96	1.98	1.99	1.99	1.97	1.96	1.96	1.96	2.00	2.04	S	2.04	2.04	2.05	2.04	2.05	2.05	2.06	1.95	2.06	2.00
Feb 2	2.04	2.05	2.08	2.20	2.12	2.12	2.11	2.15	2.15	2.16	2.14	2.13	2.13	2.13	2.10	S	2.17	2.10	2.12	2.16	2.16	2.20	2.20	2.22	2.04	2.22	2.14
Feb 3	2.18	2.10	2.10	2.14	2.15	2.14	2.13	2.11	2.07	2.06	2.04	2.03	2.01	1.98	S	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.98	1.95	2.18	2.04
Feb 4	1.96	1.96	1.97	1.97	1.97	1.98	1.99	2.00	2.01	2.02	2.01	1.98	1.98	S	2.02	2.04	2.02	2.00	1.99	2.05	2.04	1.99	1.98	1.99	1.96	2.05	2.00
Feb 5	2.01	2.01	K	2.06	2.01	2.02	2.05	2.10	2.10	2.09	2.05	2.03	S	2.02	1.99	1.98	1.98	1.98	1.98	1.97	1.96	1.96	1.97	1.97	1.96	2.10	2.01
Feb 6	1.98	1.98	1.99	1.96	1.98	1.97	1.97	1.97	1.98	2.02	2.01	S	1.99	2.00	2.05	2.05	2.06	2.08	2.14	2.14	2.03	2.07	2.09	1.99	1.96	2.14	2.02
Feb 7	1.99	1.99	2.00	1.99	1.98	1.97	1.99	2.02	2.04	2.04	S	2.04	2.04	2.03	2.03	2.03	2.04	2.04	2.04	2.03	2.04	2.05	2.04	2.04	1.97	2.05	2.02
Feb 8	2.07	2.08	2.00	2.14	2.06	1.98	1.98	2.06	2.09	S	2.02	2.00	2.01	2.01	1.97	2.01	1.98	2.07	2.01	2.05	2.01	2.00	2.01	2.03	1.97	2.14	2.03
Feb 9	2.04	2.03	2.01	1.99	1.98	1.96	1.93	1.91	S	1.92	1.93	1.93	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.93	1.92	1.92	1.93	1.92	1.91	2.04	1.94
Feb 10	1.93	1.95	2.00	1.98	1.98	2.03	2.03	S	1.99	2.00	2.02	2.03	2.03	2.04	2.05	2.06	2.05	2.05	2.05	2.06	2.08	2.08	2.06	2.02	1.93	2.08	2.02
Feb 11	2.00	1.97	1.95	1.94	1.95	1.95	S	1.93	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.93	1.93	1.93	1.94	1.94	1.94	1.94	1.91	2.00	1.93
Feb 12	1.95	2.00	1.98	1.96	1.99	S	2.04	2.03	2.03	2.03	2.04	2.04	2.02	2.02	1.99	1.93	1.91	1.91	1.92	1.93	1.92	1.92	1.92	1.92	1.91	2.04	1.97
Feb 13	1.93	1.93	1.92	1.92	S	1.91	1.91	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.92	1.92	1.92	1.93	1.94	1.94	1.94	1.95	1.91	1.95	1.92
Feb 14	1.94	1.94	1.95	S	1.93	1.92	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.93	1.93	1.93	1.93	1.94	1.95	1.94	1.95	1.92	1.95	1.94
Feb 15	1.95	1.94	S	1.95	1.96	1.96	1.97	1.96	1.97	1.98	1.97	1.95	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.96	1.96	1.99	2.00	2.00	1.94	2.00	1.96
Feb 16	2.00	S	1.98	1.99	2.01	2.04	2.03	2.02	2.03	2.02	2.00	1.97	1.97	1.99	2.00	2.00	1.99	2.00	2.03	2.06	2.05	2.04	2.03	2.00	1.97	2.06	2.01
Feb 17	S	1.98	1.97	1.97	1.97	1.97	1.96	1.97	1.98	1.98	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.98	1.99	1.98	1.99	1.99	2.00	S	1.94	2.00	1.97
Feb 18	2.01	2.00	2.00	1.98	1.97	1.97	1.99	2.02	2.04	2.08	2.09	C	C	C	C	2.07	2.05	2.07	2.19	2.27	2.25	2.27	S	2.30	1.97	2.30	2.09
Feb 19	2.30	2.30	2.34	2.36	2.32	2.27	2.23	2.17	2.23	2.18	2.12	2.11	2.10	2.08	2.10	2.06	2.08	2.08	2.07	2.07	2.11	S	2.07	2.07	2.06	2.36	2.17
Feb 20	2.06	2.06	2.10	2.11	2.10	2.17	2.13	2.15	2.16	2.17	2.18	2.19	2.18	2.21	2.34	2.34	2.31	2.35	2.40	2.41	S	2.40	**2.42**	2.41	2.06	**2.42**	**2.23**
Feb 21	2.38	2.30	2.27	2.28	2.27	2.24	2.19	2.14	2.13	2.25	2.23	2.12	2.12	2.10	2.13	2.16	2.18	2.17	2.12	S	2.09	2.07	2.07	2.08	2.07	2.38	2.18
Feb 22	2.08	2.07	2.07	2.09	2.09	2.08	2.07	2.06	2.05	2.03	2.01	2.00	1.99	2.00	2.00	2.01	2.02	2.02	S	2.01	2.02	2.01	2.01	2.01	1.99	2.09	2.03
Feb 23	2.02	2.02	2.03	2.03	2.03	2.05	2.05	2.04	2.03	2.01	2.01	2.00	1.99	1.98	1.98	1.98	1.98	S	1.98	1.99	2.04	2.09	1.98	1.98	1.98	2.09	2.01
Feb 24	1.98	1.98	1.98	1.98	1.99	2.01	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99	2.00	S	2.00	2.00	2.01	2.01	2.01	2.01	2.01	1.98	2.01	2.00
Feb 25	2.02	2.04	2.04	2.06	2.05	2.07	2.16	2.22	2.07	2.12	2.19	2.16	2.09	2.05	2.04	S	2.01	2.00	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.22	2.06
Feb 26	2.00	2.01	2.01	2.00	2.00	1.99	1.99	2.00	2.01	2.02	2.02	2.01	2.01	2.01	S	2.02	2.02	2.03	2.03	2.02	2.02	2.03	2.03	2.04	1.99	2.04	2.01
Feb 27	2.05	2.07	2.07	2.07	2.06	2.06	2.07	2.06	2.06	2.07	2.10	2.06	2.04	S	2.05	2.06	2.06	2.05	2.05	2.05	2.06	2.06	2.11	2.11	2.04	2.11	2.07
Feb 28	2.08	2.08	2.09	2.08	2.12	2.13	2.15	2.12	2.11	2.12	2.15	2.17	S	2.14	2.11	2.08	2.06	2.04	2.03	2.03	2.03	2.02	2.02	2.04	2.02	2.17	2.09
Feb 29	2.06	2.04	2.06	2.06	2.08	2.08	2.08	2.07	2.07	2.04	2.02	S	2.02	2.03	2.03	2.02	2.03	2.03	2.03	2.02	2.03	2.03	2.03	2.04	2.02	2.08	2.04
Diurnal Maximum	2.38	2.30	2.34	2.36	2.32	2.27	2.23	2.22	2.23	2.25	2.23	2.19	2.18	2.21	2.34	2.34	2.31	2.35	2.40	2.41	2.25	2.40	2.42	2.41			
Diurnal Average	2.03	2.03	2.03	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.02	2.01	2.01	2.02	2.02	2.02	2.02	2.03	2.04	2.02	2.04	2.03	2.04			

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.



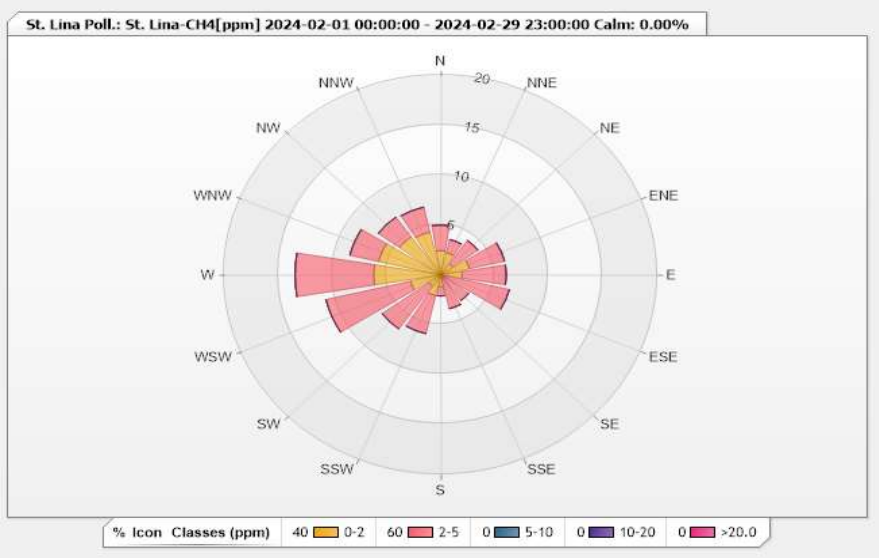


Station: St. Lina Poll.: St. Lina-CH4[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.97% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	2.42	2.57	0	0	0	4.99
NNE	2.27	1.36	0	0	0	3.63
NE	1.36	2.87	0	0	0	4.23
ENE	2.72	3.33	0	0	0	6.05
E	1.97	4.08	0	0	0	6.05
ESE	0.3	6.2	0	0	0	6.5
SE	0.3	2.87	0	0	0	3.17
SSE	0.3	3.18	0	0	0	3.48
S	1.21	0.91	0	0	0	2.12
SSW	2.12	3.93	0	0	0	6.05
SW	1.36	5.3	0	0	0	6.66
WSW	2.87	8.02	0	0	0	10.89
W	6.2	7.26	0	0	0	13.46
WNW	5.9	2.72	0	0	0	8.62
NW	4.69	2.42	0	0	0	7.11
NNW	4.39	2.57	0	0	0	6.96
Summary	40.38	59.59	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

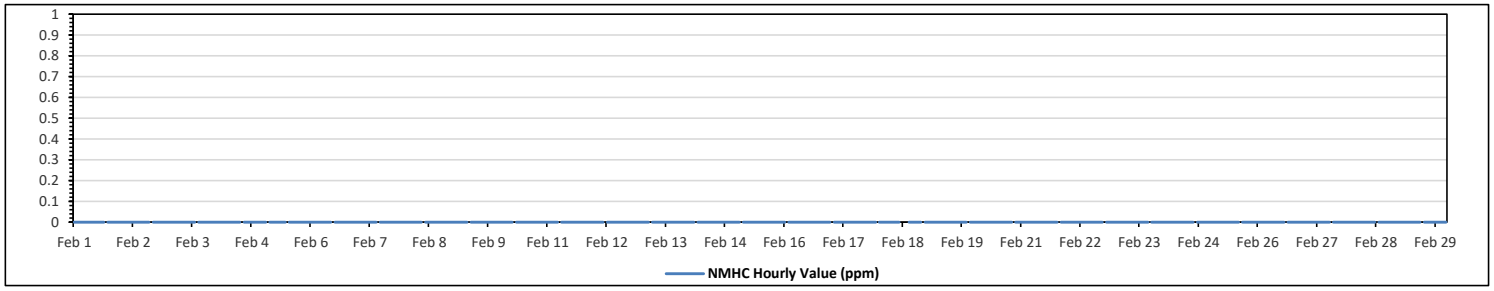
NON-METHANE HYDROCARBONS (NMHC) in ppm

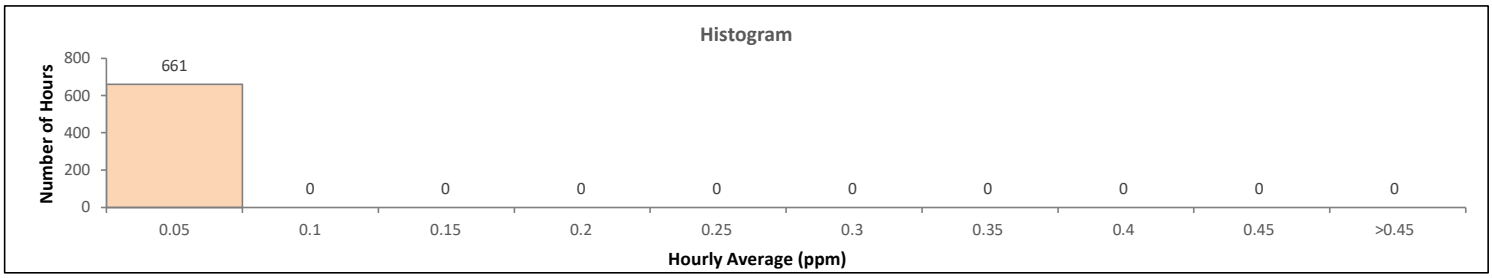
Maximum Hourly Value:	0.00	ppm	on Feb 1 at hr 0	Hours in Service:	696
Maximum Daily Value:	0.00	ppm	on Feb 1	Hours of Data:	661
Minimum Hourly Value:	0.00	ppm	on Feb 1 at hr 0	Hours of Missing Data:	1
Minimum Daily Value:	0.00	ppm	on Feb 1	Hours of Calibration:	34
Monthly Average:	0.00	ppm		Operational 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	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 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	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 3	0.00	0.00	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 4	0.00	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 5	0.00	0.00	K	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 6	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 7	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 8	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 9	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 10	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 11	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 12	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 13	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 14	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 15	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 16	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 17	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 18	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	0.00	0.00	0.00	0.00	S	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	0.00	0.00	0.00	S	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	0.00	0.00	0.00	S	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	0.00	0.00	0.00	S	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	0.00	0.00	0.00	S	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	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 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	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 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	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 26	0.00	0.00	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 27	0.00	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 28	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 29	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
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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.



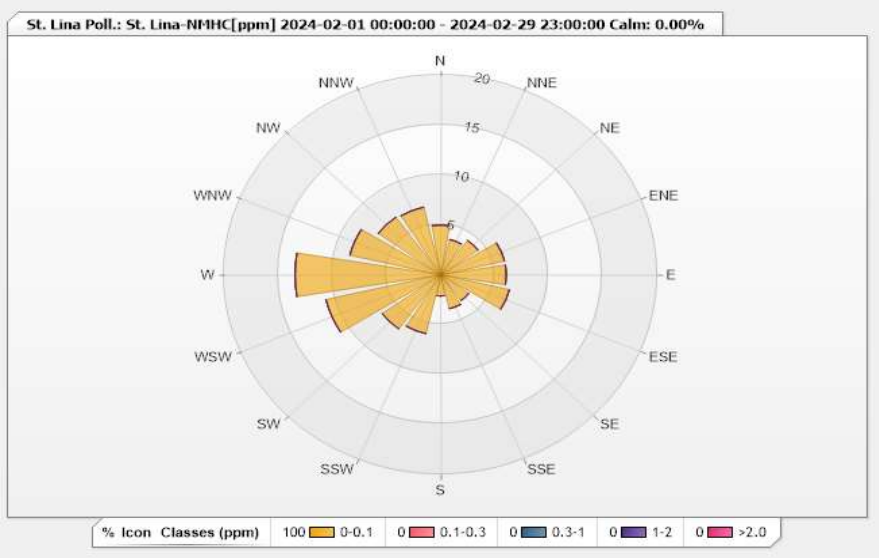


Station: St. Lina Poll.: St. Lina-NMHC[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.97% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	4.99	0	0	0	0	4.99
NNE	3.63	0	0	0	0	3.63
NE	4.24	0	0	0	0	4.24
ENE	6.05	0	0	0	0	6.05
E	6.05	0	0	0	0	6.05
ESE	6.51	0	0	0	0	6.51
SE	3.18	0	0	0	0	3.18
SSE	3.48	0	0	0	0	3.48
S	2.12	0	0	0	0	2.12
SSW	6.05	0	0	0	0	6.05
SW	6.66	0	0	0	0	6.66
WSW	10.89	0	0	0	0	10.89
W	13.46	0	0	0	0	13.46
WNW	8.62	0	0	0	0	8.62
NW	7.11	0	0	0	0	7.11
NNW	6.96	0	0	0	0	6.96
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

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

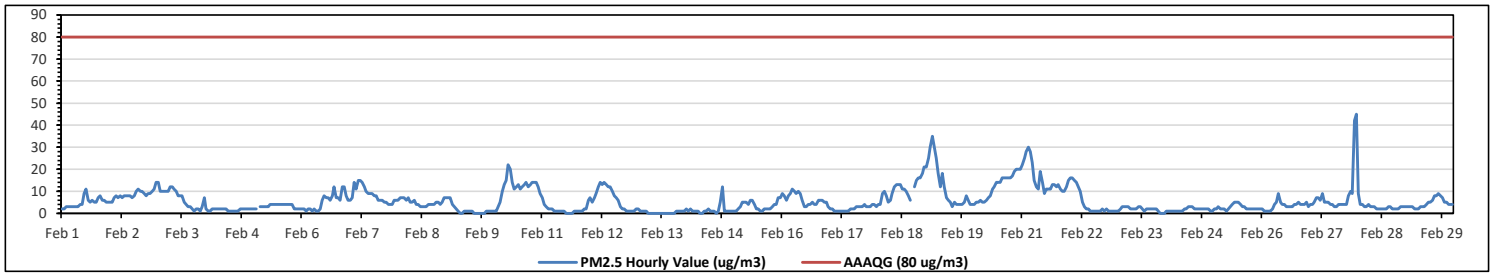
Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0

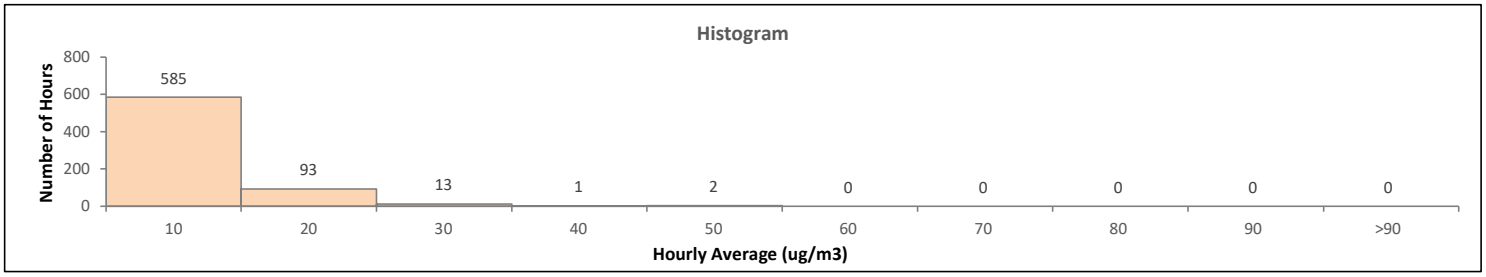
Maximum Hourly Value:	45 µg/m^3 on Feb 27 at hr 23	Hours in Service:	696
Maximum Daily Value:	15.8 µg/m^3 on Feb 21	Hours of Data:	694
Minimum Hourly Value:	0 µg/m^3 on Feb 9 at hr 7	Hours of Missing Data:	1
Minimum Daily Value:	0 µg/m^3 on Feb 13	Hours of Calibration:	1
Monthly Average:	5.6 µg/m^3	Operational 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	2	3	3	3	3	3	3	3	4	4	9	11	6	5	6	5	5	7	8	6	6	5	5	2	11	4.9
Feb 2	5	5	7	8	7	8	7	8	8	8	8	7	8	10	11	10	10	9	8	9	9	10	11	14	5	14	8.5
Feb 3	14	10	10	10	10	10	12	12	11	10	8	8	8	5	4	3	3	2	1	2	2	1	3	7	1	14	6.9
Feb 4	2	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2	2	2	2	2	2	2	1	2	1.7
Feb 5	2	2	K	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2	2	2	4	3.3
Feb 6	2	2	1	2	2	1	2	1	1	2	6	8	7	7	6	8	12	7	7	6	12	12	8	6	1	12	5.3
Feb 7	6	7	14	11	15	15	14	12	10	9	9	9	8	8	6	6	6	5	5	4	4	4	6	6	4	15	8.3
Feb 8	6	7	7	7	6	7	5	5	6	4	4	3	3	3	3	4	4	4	4	5	5	4	5	7	3	7	4.9
Feb 9	7	7	7	4	3	2	1	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	**0**	7	1.7
Feb 10	1	1	3	5	10	13	15	22	20	14	11	12	13	11	12	13	14	12	13	14	14	14	12	9	1	22	11.6
Feb 11	7	4	3	2	2	2	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	2	2	6	**0**	7	1.7
Feb 12	7	5	7	9	12	14	13	14	13	12	12	10	8	7	6	3	2	2	1	1	1	1	1	2	1	14	6.8
Feb 13	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	**0**	2	**0.5**
Feb 14	2	1	2	1	1	1	1	0	0	1	1	2	1	1	1	0	1	5	12	1	1	1	1	1	**0**	12	1.6
Feb 15	1	1	2	3	5	5	5	4	6	6	4	2	2	1	1	2	2	2	2	3	4	4	7	7	1	7	3.4
Feb 16	9	8	6	8	9	11	10	9	10	9	6	3	3	4	4	5	4	4	6	6	6	5	5	3	3	11	6.4
Feb 17	2	2	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	4	3	3	3	4	4	3	1	4	2.3
Feb 18	4	4	9	10	8	5	6	9	12	13	13	13	11	11	10	8	6	C	12	15	16	16	18	21	4	21	10.9
Feb 19	21	25	30	35	30	25	18	12	18	12	7	6	5	3	5	4	4	4	4	5	8	6	4	4	3	35	12.3
Feb 20	4	5	5	6	5	5	6	7	8	11	12	14	14	14	16	16	16	16	16	17	19	20	20	20	4	20	12.2
Feb 21	22	25	28	30	28	23	15	12	11	19	14	9	11	11	11	13	13	12	13	11	10	10	12	15	9	30	**15.8**
Feb 22	16	16	15	14	12	10	5	3	2	2	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1	16	4.6
Feb 23	1	2	3	3	3	3	2	2	2	2	3	3	2	1	2	2	2	2	2	2	1	0	0	0	**0**	3	1.9
Feb 24	1	1	1	1	1	1	1	1	1	2	2	3	3	3	2	2	2	2	2	2	2	2	1	1	1	3	1.7
Feb 25	2	2	3	2	2	2	1	2	3	4	5	5	5	4	3	3	2	2	2	2	2	2	2	2	1	5	2.7
Feb 26	2	1	1	1	1	2	4	5	9	5	4	4	3	3	3	3	4	4	5	4	4	4	5	3	1	9	3.5
Feb 27	4	4	5	7	7	6	9	5	5	5	4	4	3	3	4	4	4	4	4	8	10	9	42	**45**	3	**45**	8.5
Feb 28	9	4	4	3	3	4	3	3	3	2	2	2	2	2	2	3	3	2	2	2	2	3	3	3	2	9	3.0
Feb 29	3	3	3	3	2	2	2	3	3	3	4	5	5	6	8	8	9	8	7	5	5	4	4	4	2	9	4.5
Diurnal Maximum	22	25	30	35	30	25	18	22	20	19	14	14	14	14	16	16	16	16	16	17	19	20	42	45			
Diurnal Average	5.7	5.4	6.5	6.7	6.7	6.4	5.8	5.6	6.0	5.8	5.3	5.2	5.0	4.6	4.6	4.7	4.8	4.5	5.1	5.0	5.3	5.2	6.5	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.





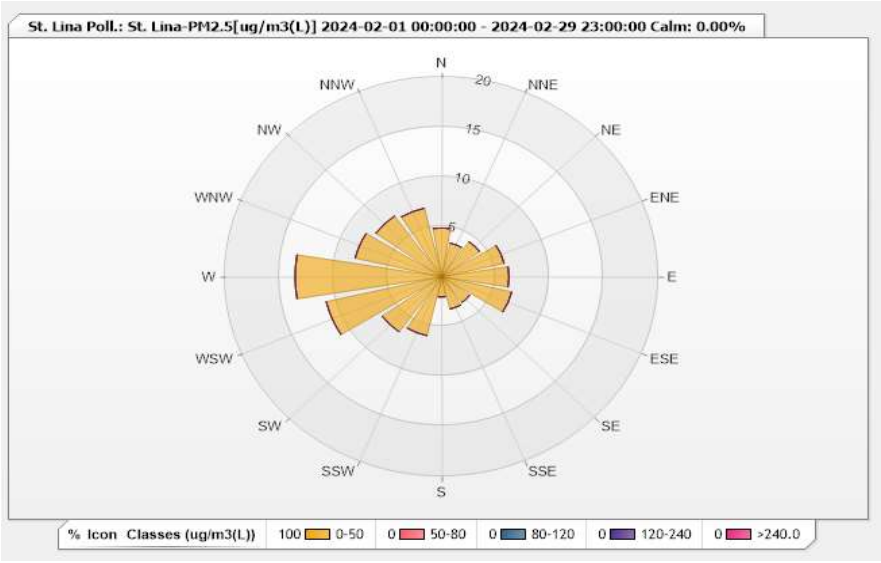
Station: St. Lina Poll.: St. Lina-PM2.5[ug/m3(L)] Monthly: 02-2024

)]

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

Calm: 0.00% Valid Data: 99.71% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	4.9	0	0	0	0	4.9
NNE	3.46	0	0	0	0	3.46
NE	4.32	0	0	0	0	4.32
ENE	5.91	0	0	0	0	5.91
E	6.2	0	0	0	0	6.2
ESE	6.63	0	0	0	0	6.63
SE	3.17	0	0	0	0	3.17
SSE	3.31	0	0	0	0	3.31
S	2.02	0	0	0	0	2.02
SSW	6.05	0	0	0	0	6.05
SW	6.77	0	0	0	0	6.77
WSW	10.95	0	0	0	0	10.95
W	13.54	0	0	0	0	13.54
WNW	8.21	0	0	0	0	8.21
NW	7.49	0	0	0	0	7.49
NNW	7.06	0	0	0	0	7.06
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

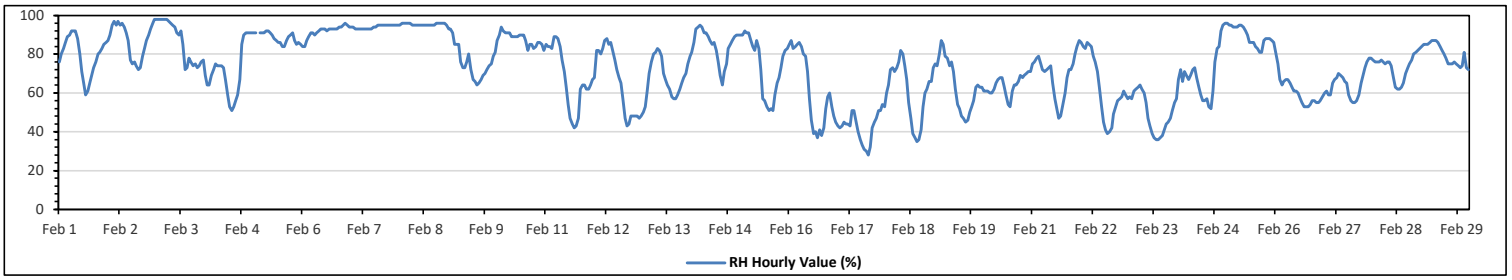
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	98	%	on Feb 2 at hr 23	Hours in Service:	696
Maximum Daily Value:	95.4	%	on Feb 8	Hours of Data:	695
Minimum Hourly Value:	28	%	on Feb 17 at hr 15	Hours of Missing Data:	1
Minimum Daily Value:	42.7	%	on Feb 17	Hours of Calibration:	0
Monthly Average:	73.5	%		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	76	80	83	86	89	90	92	92	92	88	80	71	65	59	61	65	69	73	76	80	81	83	85	86	59	92	79.3
Feb 2	87	90	95	97	95	97	95	96	94	91	87	77	75	76	74	72	73	79	83	87	90	93	96	**98**	72	**98**	87.4
Feb 3	**98**	**98**	**98**	**98**	**98**	**98**	97	96	95	94	91	90	92	85	72	73	78	76	74	75	73	74	76	77	72	**98**	86.5
Feb 4	69	64	64	69	72	75	74	74	74	73	67	59	53	51	53	56	59	67	85	90	91	91	91	91	51	91	71.3
Feb 5	91	91	**K**	91	91	91	92	92	91	90	88	87	86	86	84	84	87	89	90	91	87	85	86	85	84	92	88.5
Feb 6	84	84	87	89	91	91	90	91	92	93	93	93	92	93	93	93	93	93	94	94	95	96	95	94	84	96	91.8
Feb 7	94	94	93	93	93	93	93	93	93	93	93	94	94	95	95	95	95	95	95	95	95	95	95	95	93	95	94.1
Feb 8	95	96	96	96	96	96	95	95	95	95	95	95	95	95	95	95	95	95	96	96	96	96	96	95	95	96	**95.4**
Feb 9	93	93	91	85	85	85	76	73	73	76	80	72	67	66	64	65	67	69	70	72	74	75	79	81	64	93	76.3
Feb 10	87	90	94	92	91	91	91	89	89	89	89	90	90	90	87	82	85	85	83	84	86	86	85	82	82	94	87.8
Feb 11	85	84	84	83	89	89	88	84	77	71	63	54	47	44	42	43	47	62	64	64	62	62	64	67	42	89	67.5
Feb 12	68	82	82	80	83	87	88	85	86	82	77	72	68	65	57	47	43	44	48	48	48	48	47	48	43	88	66.0
Feb 13	50	53	61	70	76	80	81	83	82	79	70	67	64	62	58	57	57	59	62	65	68	70	75	79	50	83	67.8
Feb 14	81	86	93	94	95	94	91	91	89	87	85	86	82	76	69	64	71	75	83	85	87	89	90	90	64	95	84.7
Feb 15	90	90	92	91	91	87	84	82	87	83	72	57	56	53	51	52	51	59	65	68	73	79	82	83	51	92	74.1
Feb 16	85	87	83	84	85	86	84	80	79	71	57	46	39	40	37	41	38	42	52	58	60	53	48	45	37	87	61.7
Feb 17	43	42	43	45	44	44	43	51	51	45	40	36	33	31	30	**28**	32	42	45	47	51	51	54	53	**28**	54	**42.7**
Feb 18	60	64	72	73	71	73	76	82	80	74	67	55	47	39	37	35	36	41	53	60	62	66	66	73	35	82	60.9
Feb 19	75	74	80	87	85	79	78	74	76	71	62	54	52	48	47	45	46	50	53	56	63	64	63	63	45	87	64.4
Feb 20	61	61	61	60	60	62	65	67	68	68	63	59	54	53	61	64	64	66	69	68	69	70	71	71	53	71	64.0
Feb 21	75	76	78	79	75	72	71	72	73	74	65	57	52	47	48	54	60	68	72	72	75	80	84	87	47	87	69.4
Feb 22	86	84	83	86	85	84	79	76	71	63	53	45	41	39	40	42	49	53	56	57	58	61	59	57	39	86	62.8
Feb 23	58	57	61	62	63	64	62	60	55	47	43	39	37	36	36	37	38	41	44	45	47	51	55	57	36	64	49.8
Feb 24	67	72	66	71	69	67	69	72	73	68	63	59	56	56	57	53	52	61	76	83	84	92	95	96	52	96	69.9
Feb 25	96	95	95	94	94	94	95	95	94	92	90	86	86	86	84	83	81	81	87	88	88	88	87	86	81	96	89.4
Feb 26	81	75	67	64	66	67	67	65	63	61	61	60	57	55	53	53	53	54	56	56	55	55	56	58	53	81	60.8
Feb 27	60	61	59	59	65	67	68	70	69	68	66	65	59	56	55	55	56	59	65	69	73	76	78	78	55	78	64.8
Feb 28	77	76	76	76	77	76	75	76	76	74	68	63	62	62	63	65	70	73	75	77	80	81	82	83	62	83	73.5
Feb 29	84	85	85	85	86	87	87	87	86	84	82	80	78	75	75	75	76	75	74	73	74	81	73	72	72	87	80.0
Diurnal Maximum	98	98	98	98	98	98	97	96	95	95	95	95	95	95	95	95	95	95	96	96	96	96	96	98			
Diurnal Average	77.8	78.8	79.4	80.7	81.4	81.6	80.9	80.8	80.1	77.4	72.8	67.9	64.8	62.7	61.3	61.1	62.8	66.4	70.5	72.5	74.0	75.6	76.3	76.9			

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.



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

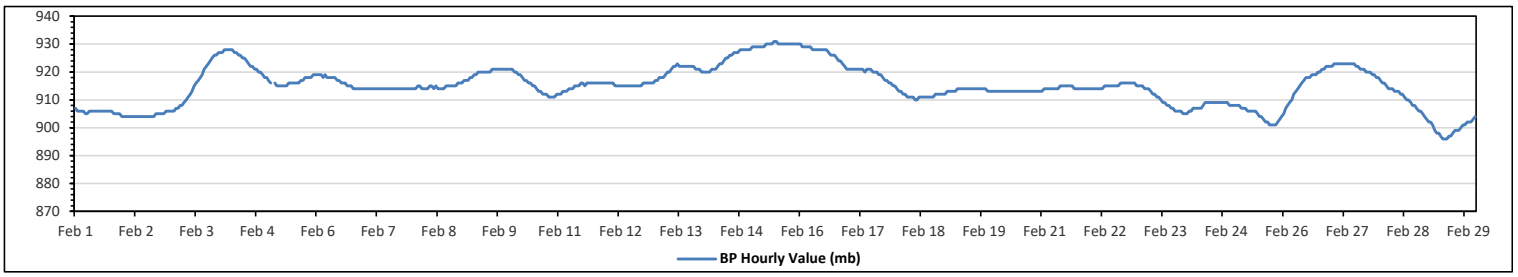
BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	931	mb	on Feb 15 at hr 11	Hours in Service:	696	
Maximum Daily Value:	930	mb	on Feb 15	Hours of Data:	695	
Minimum Hourly Value:	896	mb	on Feb 29 at hr 7	Hours of Missing Data:	1	
Minimum Daily Value:	900	mb	on Feb 29	Hours of Calibration:	0	
Monthly Average:	915	mb		Operational Uptime:	99.9	

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	907	906	906	906	906	905	905	906	906	906	906	906	906	906	906	906	906	906	906	905	905	905	905	904	904	907	906
Feb 2	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904	905	905	905	905	905	906	906	906	904	906	904
Feb 3	906	906	907	907	908	908	909	910	911	912	913	915	916	917	918	919	921	922	923	924	925	926	926	927	906	927	916
Feb 4	927	927	928	928	928	928	928	927	927	926	926	925	925	924	923	922	922	921	921	920	920	919	918	918	918	928	924
Feb 5	917	916	K	916	915	915	915	915	915	915	916	916	916	916	916	916	917	917	918	918	918	918	919	919	915	919	916
Feb 6	919	919	919	918	919	918	918	918	918	918	917	917	916	916	916	915	915	915	914	914	914	914	914	914	914	919	916
Feb 7	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914
Feb 8	914	914	915	915	914	914	914	914	915	915	914	915	914	914	914	914	915	915	915	915	915	915	916	916	914	916	915
Feb 9	916	917	917	917	918	918	919	919	920	920	920	920	920	920	920	921	921	921	921	921	921	921	921	921	916	921	920
Feb 10	921	921	920	920	919	919	918	917	917	916	916	915	915	914	913	913	912	912	912	911	911	911	911	912	911	921	915
Feb 11	912	912	913	913	913	914	914	914	915	915	915	916	916	915	916	916	916	916	916	916	916	916	916	916	912	916	915
Feb 12	916	916	916	916	915	915	915	915	915	915	915	915	915	915	915	915	915	915	916	916	916	916	916	916	915	916	915
Feb 13	917	917	918	918	918	919	920	920	921	922	922	923	922	922	922	922	922	922	922	922	921	921	921	920	917	923	921
Feb 14	920	920	920	920	921	921	921	922	923	923	924	925	925	926	926	927	927	927	928	928	928	928	928	928	920	928	924
Feb 15	929	929	929	929	929	929	929	930	930	930	930	**931**	**931**	930	930	930	930	930	930	930	930	930	930	930	929	**931**	**930**
Feb 16	930	929	929	929	929	929	928	928	928	928	928	928	928	928	927	926	926	926	925	924	924	923	922	921	921	930	927
Feb 17	921	921	921	921	921	921	921	921	920	921	921	921	920	920	920	919	919	918	917	917	916	916	915	915	915	921	919
Feb 18	914	913	913	912	912	911	911	911	911	910	910	911	911	911	911	911	911	911	911	912	912	912	912	912	910	914	912
Feb 19	912	913	913	913	913	913	914	914	914	914	914	914	914	914	914	914	914	914	914	914	914	913	913	913	912	914	914
Feb 20	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913	913
Feb 21	913	914	914	914	914	914	914	914	914	915	915	915	915	915	915	915	914	914	914	914	914	914	914	914	913	915	914
Feb 22	914	914	914	914	914	914	914	915	915	915	915	915	915	915	915	916	916	916	916	916	916	916	916	915	914	916	915
Feb 23	915	915	915	914	914	914	913	912	912	911	911	910	909	909	908	908	907	907	906	906	906	906	905	905	905	915	910
Feb 24	905	906	906	907	907	907	907	907	908	909	909	909	909	909	909	909	909	909	909	909	909	908	908	908	905	909	908
Feb 25	908	908	908	907	907	907	906	906	906	906	906	905	904	904	903	902	902	901	901	901	901	902	903	904	901	908	905
Feb 26	905	907	908	909	910	912	913	914	915	916	917	918	918	918	919	919	919	920	920	921	921	922	922	922	905	922	916
Feb 27	922	923	923	923	923	923	923	923	923	923	923	923	922	922	921	921	921	920	920	920	919	919	918	918	918	923	922
Feb 28	917	916	916	915	914	914	914	913	913	913	912	912	911	910	910	909	908	908	907	906	906	905	904	903	903	917	911
Feb 29	902	902	901	899	898	898	897	**896**	**896**	**896**	897	897	898	899	899	899	900	901	901	902	902	902	903	904	**896**	904	**900**
Diurnal Maximum	930	929	929	929	929	929	929	930	930	930	930	931	931	930	930	930	930	930	930	930	930	930	930	930			
Diurnal Average	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915			

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 2024

Summary of Hourly Averages

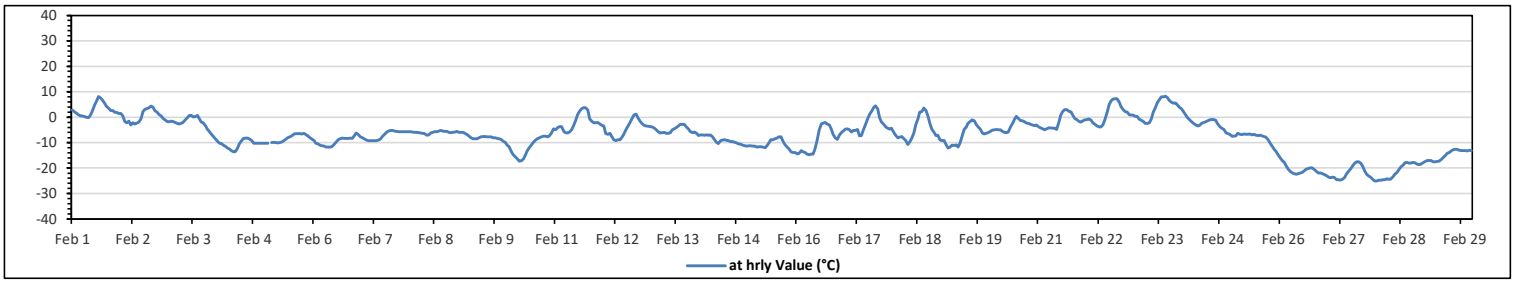
AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	8.3	°C	on Feb 23 at hr 15	Hours in Service:	696	
Maximum Daily Value:	3.1	°C	on Feb 23	Hours of Data:	695	
Minimum Hourly Value:	-25.1	°C	on Feb 27 at hr 23	Hours of Missing Data:	1	
Minimum Daily Value:	-22.1	°C	on Feb 27	Hours of Calibration:	0	
Monthly Average:	-7.0	°C		Operational Uptime:	99.9	

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	2.8	2.1	1.6	1	0.6	0.4	0.2	0	-0.1	0.8	2.8	4.9	6.4	8.1	7.5	6.6	5.4	4.2	3.5	2.7	2.7	2	1.8	1.4	-0.1	8.1	2.9
Feb 2	1.4	0.4	-1.6	-2.2	-1.5	-3	-2.2	-2.7	-2.3	-1.9	-0.5	2.3	3.1	3.4	3.8	4.3	4	2.7	1.9	1.1	0.5	-0.4	-1.1	-1.7	-3.0	4.3	0.3
Feb 3	-1.8	-1.5	-1.6	-2.1	-2.5	-2.7	-2.4	-2	-1.1	-0.2	0.7	0.7	0.1	0.2	0.7	-0.6	-1.9	-2.2	-3.3	-4.7	-5.6	-6.6	-7.6	-8.5	-8.5	0.7	-2.4
Feb 4	-9.4	-10.2	-10.4	-11	-11.5	-12.1	-12.5	-13.1	-13.6	-13.5	-12	-10.5	-9.2	-8.3	-8.2	-8.2	-8.6	-9.1	-10.2	-10.3	-10.2	-10.3	-10.3	-10.3	-13.6	-8.2	-10.5
Feb 5	-10.3	-10.2	K	-10	-9.9	-10	-10.1	-10	-9.7	-9.3	-8.6	-8.1	-7.8	-7.4	-6.6	-6.5	-6.5	-6.5	-6.6	-6.4	-6.8	-7.4	-8.1	-8.6	-10.3	-6.4	-8.3
Feb 6	-9.2	-10.2	-10.5	-11	-11.2	-11.4	-11.7	-11.8	-11.8	-11.5	-10.7	-9.8	-8.9	-8.4	-8.2	-8.3	-8.3	-8.3	-8.2	-8.3	-7.4	-6.2	-6.8	-7.8	-11.8	-6.2	-9.4
Feb 7	-8	-8.4	-9	-9.2	-9.3	-9.2	-9.2	-9.2	-9	-8.6	-7.6	-6.8	-6	-5.4	-5.3	-5.3	-5.4	-5.6	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7	-9.3	-5.3	-7.1
Feb 8	-5.7	-5.8	-5.9	-6	-6.1	-6.2	-6.3	-6.5	-7	-6.9	-6.2	-6	-5.7	-5.7	-5.4	-5.3	-5.4	-5.5	-5.6	-5.9	-6.1	-5.9	-5.8	-5.6	-7.0	-5.3	-5.9
Feb 9	-6	-6	-6	-6.3	-6.8	-7.5	-8.1	-8.5	-8.5	-8.4	-8.1	-7.7	-7.6	-7.6	-7.8	-7.7	-7.8	-8	-8.1	-8.3	-8.5	-8.7	-9.4	-9.9	-9.9	-6.0	-7.8
Feb 10	-11	-11.6	-13.5	-14.7	-15.6	-16.2	-17.3	-17.2	-16.4	-14.8	-13.2	-12	-10.8	-9.8	-9.1	-8.5	-8	-7.8	-7.5	-7.5	-7.7	-7.3	-6.1	-4.5	-17.3	-4.5	-11.2
Feb 11	-4.9	-4.1	-3.7	-3.7	-5.5	-6.1	-6.2	-5.8	-4.8	-3.2	-1.3	1	2.5	3.4	3.8	3.7	2.8	-0.7	-1.7	-2.2	-2.2	-2	-2.7	-3.2	-6.2	3.8	-2.0
Feb 12	-3.5	-6.5	-6.7	-6.3	-7.6	-8.8	-9.3	-8.8	-8.9	-7.9	-6.6	-5	-3.4	-2.1	-0.5	0.9	1.2	-0.2	-1.6	-2.4	-3.2	-3.5	-3.6	-3.7	-9.3	1.2	-4.5
Feb 13	-3.8	-4.1	-5	-5.7	-6.2	-6.1	-5.9	-6.4	-6.4	-6.1	-5	-4.6	-4	-3.5	-2.8	-2.8	-2.8	-3.8	-4.7	-5.5	-6.1	-5.8	-6.3	-7.2	-7.2	-2.8	-5.0
Feb 14	-6.9	-6.9	-7.1	-6.9	-7	-6.9	-7.8	-8.8	-10	-10.4	-9.2	-9	-8.8	-9.1	-9.2	-9.5	-9.6	-9.9	-10.1	-10.5	-10.6	-10.9	-11.2	-11.3	-11.3	-6.9	-9.1
Feb 15	-11.2	-11.2	-11.4	-11.4	-11.7	-11.6	-11.6	-11.7	-12	-11.4	-10.1	-8.9	-8.9	-8.5	-8.2	-7.8	-7.8	-9.4	-10.7	-11.6	-12.5	-13.6	-13.8	-13.9	-13.9	-7.8	-10.9
Feb 16	-14.4	-14.3	-13.1	-13.6	-13.9	-14.6	-14.7	-14.5	-14.5	-12.5	-8.8	-5.1	-2.6	-2.3	-2.1	-2.7	-3.1	-4.7	-6.8	-8	-8.7	-7	-5.9	-5.4	-14.7	-2.1	-8.9
Feb 17	-4.7	-4.6	-4.9	-5.8	-5.3	-5.2	-4.8	-7.4	-7.2	-5.1	-2.8	-0.8	1.3	2.4	3.7	4.5	3.2	-0.3	-1.9	-2.7	-3.8	-4.3	-4.7	-4.3	-7.4	4.5	-2.7
Feb 18	-5.9	-7	-8.1	-7.9	-7.6	-8.3	-9.3	-10.7	-9.7	-8.3	-6.2	-2.9	-0.6	1.9	2.2	3.6	2.6	0.4	-2.5	-4.7	-5.9	-7.2	-7	-8.9	-10.7	3.6	-4.9
Feb 19	-9.3	-9.1	-10.8	-12.1	-11.8	-11	-11.1	-10.8	-11.8	-10.2	-7.4	-4.8	-3.9	-2.5	-1.6	-1.1	-1.4	-2.9	-3.9	-4.6	-6.2	-6.6	-6.4	-6.1	-12.1	-1.1	-7.0
Feb 20	-5.5	-5.1	-5	-4.8	-4.9	-5	-5.6	-5.9	-6.1	-5.8	-3.9	-2.6	-1	0.3	-0.6	-1.3	-1.4	-1.8	-2.3	-2.5	-2.8	-3	-3.3	-3.1	-6.1	0.3	-3.5
Feb 21	-3.8	-4.1	-4.6	-5	-4.5	-4.2	-4.1	-4.3	-4.3	-4.8	-2.1	0.8	2.2	3	2.9	2.4	2.1	0.7	-0.6	-0.9	-1.6	-1.9	-1.4	-1.1	-5.0	3.0	-1.6
Feb 22	-1	-0.7	-1.2	-2.2	-2.8	-3.5	-3.8	-3.8	-2.9	-1	2	4.9	6.4	7.1	7.3	7.2	5.9	4.2	3	2.2	2	1	0.9	0.9	-3.8	7.3	1.3
Feb 23	0.3	0.3	-0.8	-1.2	-1.6	-2.4	-2.4	-2.2	-0.7	2	3.9	5.7	6.9	8	8	**8.3**	7.7	6.7	5.9	5.4	5.6	4.8	3.9	3.3	-2.4	**8.3**	**3.1**
Feb 24	2.1	1	-0.1	-1	-1.8	-2.4	-3	-3.4	-3.2	-2.5	-2.1	-1.8	-1.4	-1.1	-1	-1	-1.2	-2.6	-3.7	-4.3	-4.8	-6.1	-6.5	-6.7	-6.7	2.1	-2.4
Feb 25	-7.5	-7.5	-7.4	-6.4	-6.7	-6.8	-6.6	-6.7	-6.7	-6.6	-6.9	-6.7	-7.1	-7.2	-7.1	-7.3	-7.6	-7.9	-8.8	-10.1	-11.5	-12.6	-13.5	-14.7	-14.7	-6.4	-8.2
Feb 26	-16	-17	-17.6	-19	-20.4	-21.3	-21.9	-22.2	-22.4	-22.2	-21.9	-21.6	-21	-20.4	-20.1	-20	-20	-20.5	-21.3	-21.9	-21.9	-22.2	-22.6	-22.9	-22.9	-16.0	-20.8
Feb 27	-23.6	-23.9	-23.5	-23.7	-24.6	-24.5	-24.7	-24.4	-23.7	-22.3	-21.2	-20.2	-19.1	-18.2	-17.5	-17.5	-18	-19.2	-21.2	-22.4	-23.1	-23.6	-24.4	**-25.1**	**-25.1**	-17.5	**-22.1**
Feb 28	**-25.1**	-24.7	-24.8	-24.6	-24.6	-24.2	-24.4	-24.3	-23.4	-22.5	-21.7	-20.5	-19.6	-18.8	-17.9	-17.7	-18	-18	-17.8	-17.9	-18.4	-18.7	-18.4	-17.9	**-25.1**	-17.7	-21.0
Feb 29	-17.4	-17.1	-17.1	-17	-17.5	-17.5	-17.4	-17.3	-16.6	-15.9	-15	-14.3	-13.8	-13.3	-12.8	-12.6	-12.6	-13	-13.2	-13.1	-13.1	-13.3	-13	-13.1	-17.5	-12.6	-14.9
Diurnal Maximum	2.8	2.1	1.6	1.0	0.6	0.4	0.2	0.0	-0.1	2.0	3.9	5.7	6.9	8.1	8.0	8.3	7.7	6.7	5.9	5.4	5.6	4.8	3.9	3.3			
Diurnal Average	-7.6	-7.9	-8.2	-8.6	-9.0	-9.3	-9.5	-9.7	-9.5	-8.7	-7.2	-5.8	-4.9	-4.2	-3.9	-3.8	-4.2	-5.1	-6.0	-6.6	-7.0	-7.3	-7.6	-7.8			

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

St. Lina Site - February 2024

Summary of Hourly Averages

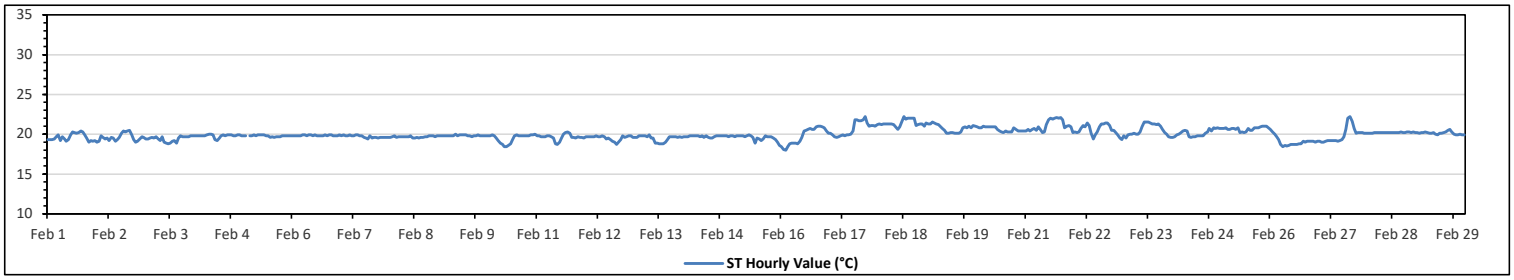
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	22.2	°C	on Feb 17 at hr 17	Hours in Service:	696
Maximum Daily Value:	21.4	°C	on Feb 18	Hours of Data:	695
Minimum Hourly Value:	18.0	°C	on Feb 16 at hr 2	Hours of Missing Data:	1
Minimum Daily Value:	19.1	°C	on Feb 26	Hours of Calibration:	0
Monthly Average:	20.0	°C		Operational Uptime:	99.9

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	19.3	19.3	19.3	19.4	19.7	19.9	19.2	19.7	19.4	19.1	19.3	19.9	20.3	20.2	20.1	20.2	20.4	20.3	19.9	19.5	19.0	19.2	19.1	19.2	19.0	20.4	19.6
Feb 2	19.0	19.1	19.8	19.6	19.4	19.5	19.2	19.6	19.5	19.1	19.3	19.6	20.1	20.4	20.3	20.4	20.5	19.9	19.3	19.0	19.1	19.4	19.7	19.6	19.0	20.5	19.6
Feb 3	19.4	19.4	19.5	19.6	19.5	19.7	19.4	19.2	19.7	19.0	18.9	18.8	18.9	19.1	19.2	18.9	19.5	19.8	19.7	19.7	19.7	19.7	19.8	19.8	18.8	19.8	19.4
Feb 4	19.8	19.8	19.8	19.8	19.8	19.8	19.9	20.0	20.0	19.9	19.3	19.2	19.5	19.8	19.9	19.8	19.9	19.9	19.9	19.8	19.8	19.9	19.9	19.8	19.2	20.0	19.8
Feb 5	19.8	19.8	K	19.8	19.8	19.9	19.8	19.9	19.9	19.9	19.9	19.8	19.8	19.6	19.7	19.6	19.7	19.7	19.7	19.8	19.8	19.8	19.8	19.8	19.6	19.9	19.8
Feb 6	19.8	19.8	19.8	19.8	19.8	19.9	19.9	19.8	19.9	19.9	19.8	19.9	19.8	19.8	19.8	19.8	19.9	19.8	19.9	19.9	19.8	19.8	19.8	19.9	19.8	19.9	19.8
Feb 7	19.8	19.9	19.8	19.8	19.9	19.8	19.8	19.9	19.9	19.8	19.8	19.6	19.5	19.4	19.8	19.5	19.6	19.6	19.5	19.6	19.6	19.6	19.6	19.6	19.4	19.9	19.7
Feb 8	19.6	19.7	19.8	19.6	19.7	19.7	19.7	19.7	19.7	19.7	19.8	19.5	19.5	19.6	19.5	19.6	19.6	19.7	19.7	19.8	19.8	19.8	19.7	19.8	19.5	19.8	19.7
Feb 9	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	20.0	19.8	19.9	19.9	19.9	19.9	19.8	19.8	19.7	19.8	19.8	19.9	19.8	19.8	19.8	19.8	19.7	20.0	19.8
Feb 10	19.8	19.8	19.9	19.8	19.5	19.2	18.9	18.7	18.4	18.4	18.6	18.8	19.3	19.8	19.9	19.8	19.8	19.8	19.8	19.8	19.8	19.9	19.9	20.0	18.4	20.0	19.5
Feb 11	19.8	19.8	19.7	19.7	19.7	19.8	19.8	19.7	19.5	18.8	18.7	19.0	19.5	20.0	20.2	20.3	20.1	19.6	19.6	19.5	19.7	19.6	19.6	19.5	18.7	20.3	19.6
Feb 12	19.7	19.7	19.7	19.7	19.7	19.8	19.7	19.7	19.8	19.7	19.4	19.5	19.3	19.1	19.0	18.7	19.0	19.3	19.8	19.6	19.7	19.8	19.8	19.6	18.7	19.8	19.5
Feb 13	19.6	19.6	19.8	19.8	19.8	19.8	19.7	19.9	19.5	19.5	18.9	18.9	18.8	18.8	18.8	19.0	19.3	19.7	19.7	19.7	19.7	19.6	19.7	19.6	18.8	19.9	19.5
Feb 14	19.7	19.7	19.7	19.8	19.8	19.8	19.8	19.8	19.7	19.8	19.6	19.8	19.6	19.5	19.5	19.7	19.8	19.8	19.8	19.8	19.8	19.8	19.7	19.8	19.5	19.8	19.7
Feb 15	19.8	19.7	19.8	19.8	19.8	19.8	19.7	19.8	19.9	19.8	19.6	18.9	19.5	19.4	19.2	19.4	19.8	19.7	19.7	19.7	19.5	19.3	19.0	18.6	18.6	19.9	19.6
Feb 16	18.4	18.1	**18.0**	18.4	18.8	18.9	18.9	18.9	18.8	19.1	19.6	20.4	20.5	20.6	20.7	20.6	20.6	20.9	21.0	21.0	20.9	20.8	20.4	20.1	**18.0**	21.0	19.8
Feb 17	20.1	19.9	19.7	19.6	19.7	19.8	19.9	19.8	19.9	19.9	20.0	20.4	21.8	21.8	21.7	21.7	21.8	**22.2**	21.4	21.0	21.1	21.1	21.0	21.2	19.6	**22.2**	20.7
Feb 18	21.3	21.2	21.3	21.3	21.3	21.3	21.3	21.2	20.9	20.6	20.9	21.5	**22.2**	21.9	22.0	22.0	22.0	22.0	21.1	21.2	21.3	21.3	21.0	21.4	20.6	**22.2**	**21.4**
Feb 19	21.3	21.3	21.5	21.4	21.3	21.2	20.9	20.7	20.5	20.1	20.1	20.2	20.2	20.1	20.1	20.1	20.3	20.8	20.9	20.8	21.0	20.8	21.1	21.0	20.1	21.5	20.7
Feb 20	20.9	20.8	20.8	21.0	20.9	20.9	20.9	20.9	20.9	20.9	20.6	20.4	20.3	20.2	20.4	20.3	20.3	20.3	20.8	20.6	20.4	20.4	20.4	20.4	20.2	21.0	20.6
Feb 21	20.4	20.6	20.4	20.6	20.7	20.5	20.9	20.6	20.2	20.3	21.2	21.8	22.0	21.9	22.0	22.1	22.0	22.1	21.8	20.8	21.0	21.1	20.9	20.2	20.2	22.1	21.1
Feb 22	20.3	20.2	20.3	20.7	21.1	20.9	21.4	21.1	20.1	19.4	19.9	20.3	20.9	21.3	21.3	21.4	21.4	21.1	20.5	20.5	20.2	19.9	19.5	19.3	19.3	21.4	20.5
Feb 23	19.8	19.5	19.9	20.0	20.0	20.1	20.0	20.0	20.3	20.9	21.5	21.5	21.5	21.4	21.3	21.3	21.2	21.3	21.0	20.6	20.2	20.0	19.7	19.6	19.5	21.5	20.5
Feb 24	19.6	19.7	19.9	20.0	20.2	20.4	20.5	20.4	19.7	19.6	19.7	19.7	19.8	19.8	19.8	19.8	20.1	20.3	20.7	20.4	20.8	20.7	20.8	20.7	19.6	20.8	20.1
Feb 25	20.7	20.7	20.8	20.6	20.6	20.7	20.7	20.6	20.8	20.2	20.3	20.2	20.3	20.7	20.5	20.5	20.8	20.8	20.8	20.9	21.0	21.0	21.0	20.8	20.2	21.0	20.7
Feb 26	20.6	20.3	20.0	19.7	19.3	18.7	18.4	18.6	18.5	18.6	18.7	18.7	18.7	18.7	18.8	18.8	19.1	19.0	19.1	19.1	19.1	19.1	19.0	19.1	18.4	20.6	**19.1**
Feb 27	19.1	19.0	19.0	19.1	19.2	19.2	19.2	19.2	19.2	19.1	19.2	19.3	19.7	20.6	22.0	**22.2**	21.6	20.7	20.1	20.2	20.2	20.2	20.1	20.1	19.0	**22.2**	19.9
Feb 28	20.1	20.1	20.1	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.3	20.2	20.2	20.3	20.3	20.2	20.3	20.2	20.1	20.3	20.2
Feb 29	20.2	20.1	20.2	20.2	20.3	20.2	20.1	20.1	20.2	20.0	19.9	20.1	20.1	20.2	20.3	20.5	20.6	20.3	20.0	19.9	19.9	20.0	19.9	19.9	19.9	20.6	20.1
Diurnal Maximum	21.3	21.3	21.5	21.4	21.3	21.3	21.4	21.2	20.9	20.9	21.5	21.8	22.2	21.9	22.0	22.2	22.0	22.2	21.8	21.2	21.3	21.3	21.1	21.4			
Diurnal Average	19.9	19.9	19.9	20.0	20.0	20.0	19.9	19.9	19.8	19.7	19.7	19.9	20.1	20.1	20.2	20.2	20.3	20.3	20.2	20.1	20.1	20.1	20.0	19.9			

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.



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

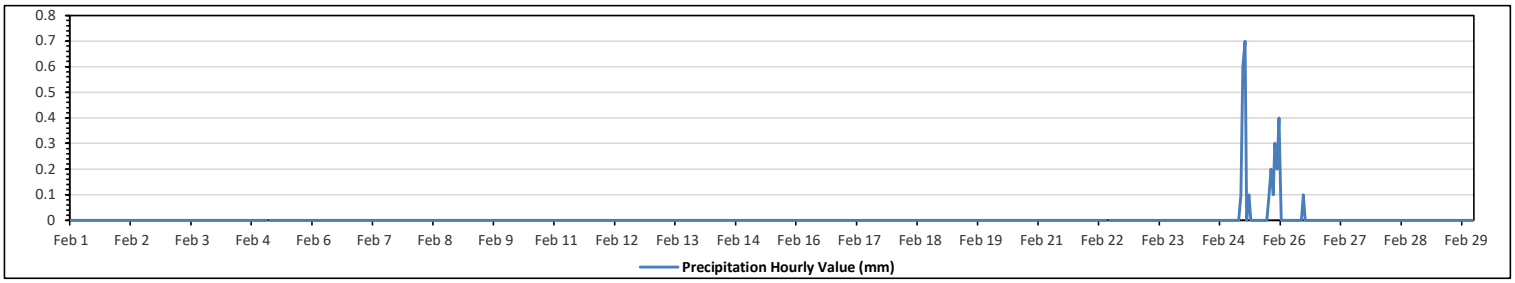
PRECIPITATION in mm

Maximum Hourly Value:	0.7	mm	on Feb 25 at hr 6	Hours in Service:	696	
Maximum Daily Value:	2.8	mm	on Feb 25	Hours of Data:	695	
Minimum Hourly Value:	0.0	mm	on Feb 1 at hr 0	Hours of Missing Data:	1	
Minimum Daily Value:	0.0	mm	on Feb 1	Hours of Calibration:	0	
Monthly Total:	2.9	mm		Operational Uptime:	99.9	

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	0.0	0.0	0.0
Feb 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Feb 5	0	0	K	0	0	0	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	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	0.1	0.6	**0.7**	0	0.1	0	0	0	0	0	0	0	0	0	0.1	0.2	0.1	0.3	0.2	0.4	0.0	**0.7**	**2.8**
Feb 26	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
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
Feb 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Diurnal Maximum	0.0	0.0	0.0	0.0	0.1	0.6	0.7	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.3	0.2	0.4			
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 2024

Summary of Hourly Averages

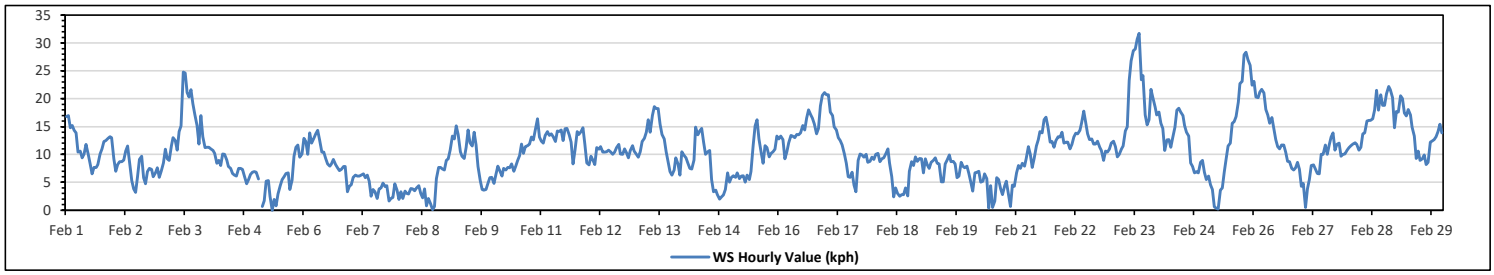
VECTOR WIND SPEED (VWS) in km/hr

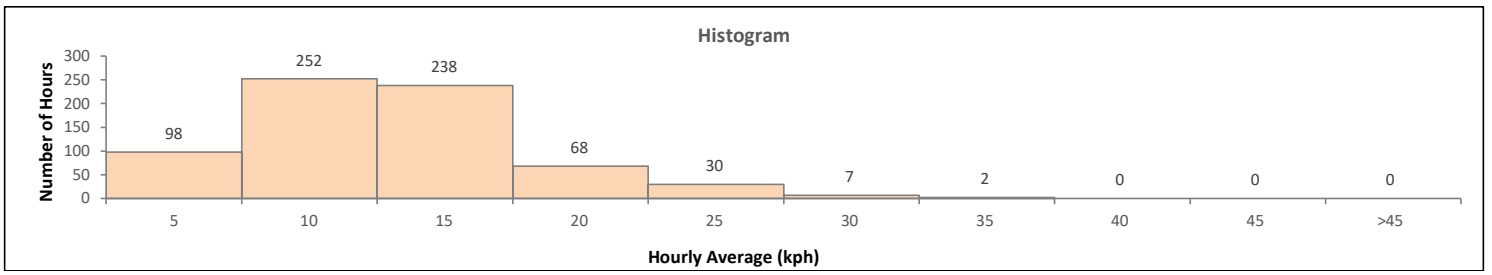
Maximum Hourly Value:	31.7	kph	on Feb 23 at hr 14	Hours in Service:	696	
Maximum Daily Value:	18.8	kph	on Feb 23	Hours of Data:	695	
Minimum Hourly Value:	0.0	kph	on Feb 5 at hr 8	Hours of Missing Data:	1	
Minimum Daily Value:	3.6	kph	on Feb 8	Hours of Calibration:	0	
Monthly Average:	2.7	kph		Operational 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	16.8	17.0	14.8	15.2	14.3	13.9	10.4	10.6	9.4	10.1	11.8	10.0	8.3	6.5	7.7	7.7	8.2	10.1	11.0	12.3	12.5	12.9	13.2	13.0	6.5	17.0	11.6
Feb 2	9.2	7.0	8.2	8.7	8.7	9.0	10.6	11.5	8.2	5.3	3.8	3.2	6.0	9.1	9.7	5.8	4.7	6.9	7.5	7.3	6.0	6.7	7.6	5.9	3.2	11.5	7.4
Feb 3	7.0	8.5	10.9	9.2	8.9	11.6	13.0	12.5	10.8	14.1	15.1	24.8	24.6	21.1	20.3	21.6	19.1	17.2	15.2	11.9	17.0	13.2	11.2	11.3	7.0	24.8	14.6
Feb 4	11.3	11.0	10.7	10.2	8.4	8.9	8.0	10.1	10.0	9.0	7.8	7.5	6.6	6.3	6.1	7.5	7.5	7.3	6.1	4.7	5.5	6.4	6.8	6.9	4.7	11.3	7.9
Feb 5	6.8	5.6	K	0.7	1.7	5.2	5.3	2.5	0.0	1.9	0.8	2.9	4.4	5.5	6.0	6.6	6.7	3.7	5.4	9.7	11.3	11.7	9.5	10.1	0.0	11.7	5.4
Feb 6	12.9	12.3	10.0	13.9	12.0	12.9	13.7	14.3	12.6	10.4	10.4	9.3	8.3	7.9	8.3	9.1	8.2	7.6	7.1	7.3	7.8	7.8	3.3	4.3	3.3	14.3	9.7
Feb 7	4.6	5.9	6.3	6.1	6.1	6.3	6.5	5.8	6.3	5.2	2.5	3.7	3.3	2.1	3.8	4.0	4.9	4.2	4.4	1.6	2.1	2.3	4.7	3.6	1.6	6.5	4.4
Feb 8	1.9	3.3	2.1	3.4	3.0	2.9	3.9	3.8	3.5	4.0	4.4	3.0	2.2	3.8	0.8	2.1	1.1	0.1	0.7	5.7	7.7	7.7	7.4	7.2	0.1	7.7	3.6
Feb 9	8.9	9.2	10.8	13.3	12.8	15.1	13.6	10.5	9.7	9.3	11.3	14.4	12.1	11.5	14.0	11.7	7.8	5.3	3.7	3.6	3.7	4.8	5.8	5.9	3.6	15.1	9.5
Feb 10	4.8	6.4	7.9	7.1	6.1	7.5	7.2	7.7	7.6	8.3	7.0	7.9	8.9	9.8	11.9	10.2	11.4	11.6	11.9	13.1	12.6	14.7	16.4	13.1	4.8	16.4	9.6
Feb 11	12.4	12.0	13.4	14.1	13.4	13.7	13.2	12.3	14.2	14.1	14.4	12.5	14.6	14.7	13.5	12.2	8.3	10.7	14.1	13.6	14.1	14.8	11.8	8.5	8.3	14.8	12.9
Feb 12	8.1	9.7	9.0	8.2	11.2	10.9	11.4	10.4	10.4	10.5	10.8	10.4	10.0	10.4	11.2	11.8	10.1	10.0	11.0	10.3	9.4	10.7	11.6	10.6	8.1	11.8	10.3
Feb 13	10.0	9.5	10.5	12.3	12.9	14.0	16.2	14.0	17.0	18.6	18.2	18.2	15.4	13.6	12.8	10.5	8.7	6.9	6.3	7.2	9.4	8.3	6.3	10.5	6.3	18.6	12.0
Feb 14	9.9	9.4	8.4	7.5	7.4	9.0	14.9	13.5	14.2	14.7	12.2	10.0	10.5	10.7	5.5	3.3	3.6	2.8	2.0	2.4	2.7	3.7	6.7	5.0	2.0	14.9	7.9
Feb 15	5.9	6.2	5.9	6.7	5.7	6.1	6.2	5.0	6.3	5.5	6.9	11.7	15.1	16.2	12.8	10.3	8.4	11.6	11.2	9.6	10.2	10.5	10.9	13.3	5.0	16.2	9.1
Feb 16	12.8	13.3	12.7	9.2	10.4	12.1	13.4	13.3	13.0	13.6	13.5	13.9	15.2	14.4	16.5	18.0	17.1	16.5	15.5	13.7	14.7	18.7	20.6	21.1	9.2	21.1	14.7
Feb 17	20.7	20.7	17.6	17.0	15.0	14.4	13.0	12.5	11.7	10.1	8.4	6.0	5.9	6.8	4.5	3.3	8.9	10.1	9.9	9.5	10.0	8.6	8.8	9.5	3.3	20.7	11.0
Feb 18	9.1	10.0	10.2	8.7	9.2	9.4	10.2	11.0	8.5	6.0	2.4	4.0	3.0	2.5	2.8	2.8	4.0	2.6	7.0	8.7	8.0	9.6	8.8	9.3	2.4	11.0	7.0
Feb 19	9.2	6.7	9.2	8.1	7.5	8.6	8.9	9.4	8.4	8.3	5.1	5.1	8.3	9.0	9.9	8.7	8.8	8.3	5.8	6.1	8.6	7.8	7.6	7.9	5.1	9.9	8.0
Feb 20	6.6	5.0	3.4	6.7	6.8	7.0	5.0	5.2	6.5	5.7	0.4	4.4	0.5	1.6	5.8	5.5	3.9	2.8	4.4	5.2	2.7	0.7	4.5	4.3	0.4	7.0	4.4
Feb 21	6.7	8.0	7.5	8.4	7.9	9.2	11.4	10.0	7.7	9.3	11.5	12.7	14.1	13.9	16.2	16.7	15.0	12.2	12.3	11.3	12.5	13.2	13.1	14.0	6.7	16.7	11.5
Feb 22	12.0	12.2	12.2	11.0	11.8	13.1	13.8	13.7	14.3	15.6	17.8	15.8	13.7	12.7	12.8	11.9	11.9	12.4	11.3	10.7	8.9	10.6	10.4	10.9	8.9	17.8	12.6
Feb 23	12.0	12.4	11.4	9.6	10.0	11.0	11.5	14.2	15.0	23.3	26.8	28.6	28.9	30.7	31.7	23.4	24.1	17.1	15.3	16.2	21.7	20.2	18.5	17.1	9.6	31.7	18.8
Feb 24	17.6	15.6	14.7	10.7	12.6	12.7	11.3	13.0	14.9	17.9	18.3	17.6	17.0	15.2	14.0	13.3	8.5	7.8	6.7	6.9	6.7	8.6	8.9	6.8	6.7	18.3	12.4
Feb 25	5.5	6.1	4.6	3.7	0.6	0.3	0.2	3.6	4.0	6.8	9.2	11.5	12.0	15.6	15.9	16.8	19.4	22.7	23.1	27.9	28.3	27.0	26.0	22.4	0.2	28.3	13.1
Feb 26	23.1	20.3	20.2	21.2	21.7	21.0	18.1	17.1	15.6	16.6	15.0	12.7	11.4	11.0	11.7	11.7	10.4	8.8	8.7	7.5	7.2	7.6	8.6	7.3	7.2	23.1	13.9
Feb 27	4.3	4.8	0.5	3.8	5.5	8.0	8.1	7.5	6.6	6.5	10.0	10.0	11.7	10.0	11.7	13.1	13.9	10.8	11.8	12.0	9.7	10.0	10.1	10.8	0.5	13.9	8.8
Feb 28	11.2	11.6	11.9	12.1	11.8	10.8	11.3	13.7	13.9	16.0	16.1	16.1	16.4	18.0	21.5	17.9	20.7	18.8	18.8	20.9	22.2	21.6	20.2	14.8	10.8	22.2	16.2
Feb 29	17.7	17.6	20.5	20.0	17.4	16.9	18.1	17.1	14.9	13.3	9.3	10.6	8.9	9.2	9.9	8.2	8.6	12.2	12.4	12.7	13.2	14.1	15.4	13.9	8.2	20.5	13.8
Diurnal Maximum	23.1	20.7	20.5	21.2	21.7	21.0	18.1	17.1	17.0	23.3	26.8	28.6	28.9	30.7	31.7	23.4	24.1	22.7	23.1	27.9	28.3	27.0	26.0	22.4			
Diurnal Average	10.3	10.3	10.2	9.9	9.7	10.4	10.6	10.5	10.2	10.7	10.4	11.0	10.9	11.0	11.4	10.5	10.1	9.6	9.7	10.0	10.6	10.8	10.9	10.3			

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.



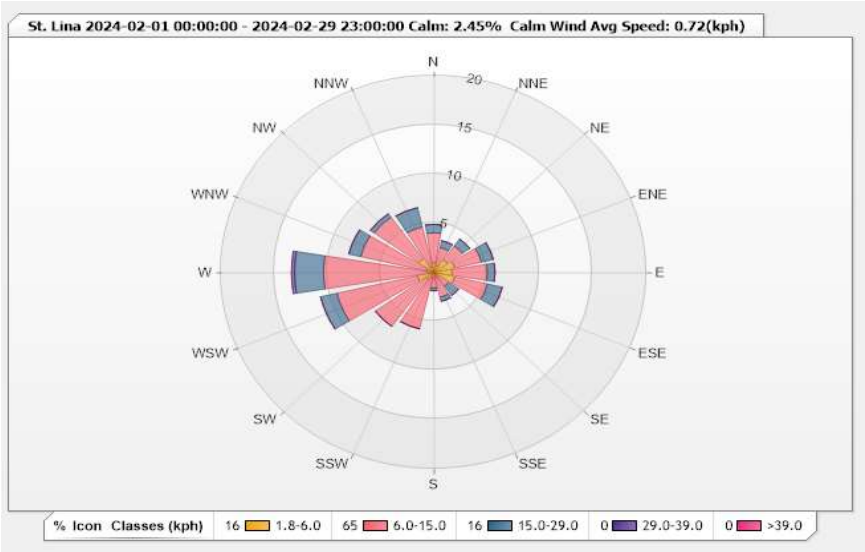


Station: St. Lina Monitor: WDS [kph] Monthly: 02-2024

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

Calm (WS<1.8kph): 2.45% Valid Data: 99.86%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.01	3.02	0.86	0	0	4.89
NNE	0.72	1.87	0.72	0	0	3.31
NE	1.58	1.73	0.86	0	0	4.17
ENE	2.01	2.59	1.15	0	0	5.75
E	1.73	3.31	0.72	0	0	5.76
ESE	2.01	3.17	1.44	0	0	6.62
SE	0.29	1.44	1.15	0	0	2.88
SSE	0.58	2.01	0.43	0	0	3.02
S	0.14	1.44	0.29	0	0	1.87
SSW	0.58	5.32	0	0	0	5.9
SW	0.86	5.9	0	0	0	6.76
WSW	1.58	7.77	1.58	0	0	10.93
W	0.29	10.07	2.73	0.29	0	13.38
WNW	0.72	6.33	1.15	0	0	8.2
NW	1.73	5.18	0.43	0	0	7.34
NNW	0.58	4.17	2.01	0	0	6.76
Summary	16.41	65.32	15.52	0.29	0	97.54



Lakeland Industry & Community Association

St. Lina Site - February 2024

Summary of Hourly Averages

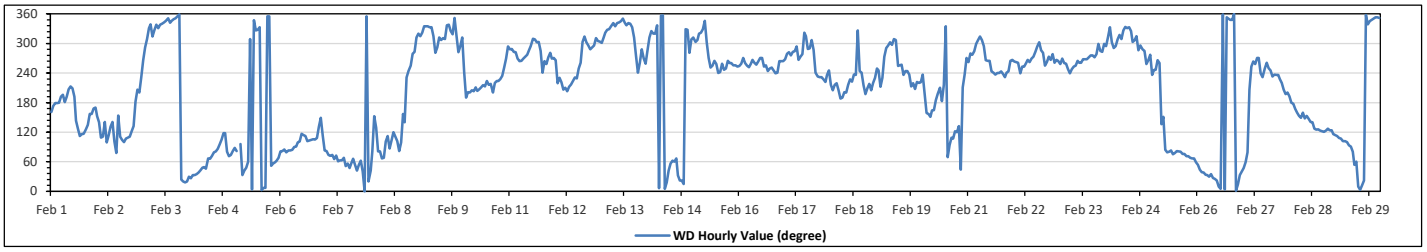
WIND DIRECTION (VWD) in sector

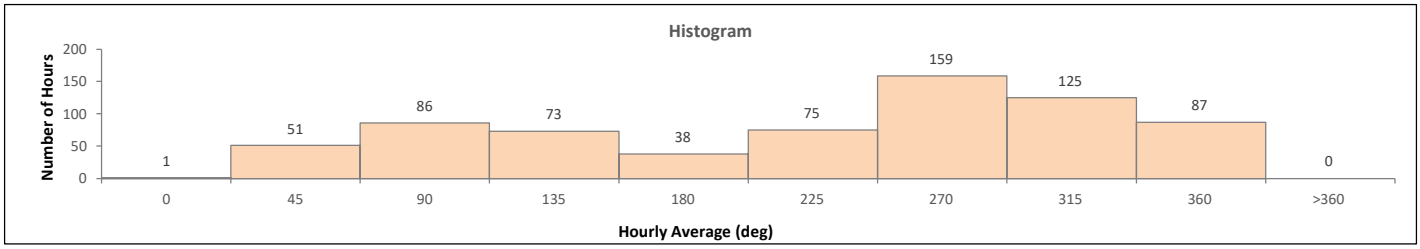
Monthly Average:	283 (W) degree	Hours in Service:	696
		Hours of Data:	695
		Hours of Missing Data:	1
		Hours of Calibration:	0
		Operational Uptime:	99.9

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	S	S	S	S	S	SSW	S	S	SSW	SSW	SSW	S	SE	SE	ESE	ESE	ESE	SE	SE	SSE	SSE	SSE	SSE	169	SSE
Feb 2	SSE	SE	ESE	ESE	SE	E	ESE	SE	SE	E	ENE	SSE	ESE	ESE	E	ESE	ESE	ESE	ESE	SE	S	SSW	SSW	SW	129	SE
Feb 3	W	WNW	NW	NNW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	NNW	N	N	N	NNE	NNE	NNE	NNE	345	NNW
Feb 4	NNE	NNE	NNE	NNE	NE	NE	NE	NE	NE	NE	ENE	ENE	ENE	ENE	E	E	E	ESE	ESE	ESE	E	ENE	ENE	E	60	ENE
Feb 5	E	E	K	E	NNE	NE	NE	ENE	NW	N	NNW	NW	NNW	NNW	N	N	N	N	N	NE	NE	ENE	ENE	ENE	38	NE
Feb 6	E	E	E	ENE	E	E	E	E	E	E	E	ESE	ESE	ESE	E	ESE	ESE	ESE	ESE	ESE	SE	SSE	ESE	E	97	E
Feb 7	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	ENE	NE	NE	NE	ENE	NE	N	N	NNE	NE	59	ENE
Feb 8	E	SSE	SE	E	E	ENE	ENE	E	ESE	E	ESE	ESE	ESE	E	E	E	SSE	SE	SW	WSW	WSW	W	W	NW	112	ESE
Feb 9	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NW	W	WNW	NW	NW	NW	NW	NNW	NNW	NW	NW	N	NW	W	WNW	NW	319	NW
Feb 10	WSW	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	SSW	SW	SW	SW	SW	SW	WSW	W	WNW	225	SW
Feb 11	WNW	WNW	W	W	W	W	W	W	W	W	WNW	WNW	NW	NW	WNW	WNW	WNW	WSW	W	WSW	W	W	W	W	280	W
Feb 12	W	SW	SW	SW	SSW	SSW	SSW	SSW	SW	SW	SW	SW	WSW	W	WNW	NW	WNW	WNW	WNW	WNW	WNW	NW	WNW	WNW	258	WSW
Feb 13	WNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	NNW	NNW	NNW	NW	W	WSW	W	WNW	W	WSW	325	NW
Feb 14	WNW	NW	NW	NW	NW	NNW	N	N	N	N	NNE	NE	NE	ENE	ENE	ENE	NNE	NNE	NNE	NNE	NNW	NNW	W	NW	358	N
Feb 15	NW	WNW	NW	NW	NW	NNW	NNW	WNW	W	WSW	WSW	W	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	WSW	WSW	WSW	WSW	267	W
Feb 16	WSW	WSW	W	WSW	WSW	WSW	WSW	W	W	WSW	W	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	257	WSW
Feb 17	W	W	W	W	W	WNW	WNW	W	W	W	NW	NW	WNW	WNW	NW	WNW	WSW	SW	SW	SW	SW	SW	SW	WSW	269	W
Feb 18	SW	SSW	SW	SW	SSW	S	S	SSW	SSW	SW	SW	SW	SW	SW	NW	WSW	WSW	SSW	SSW	SSW	SW	SSW	SW	SW	212	SSW
Feb 19	WSW	WSW	SSW	SW	W	WNW	WNW	WNW	WNW	NW	NW	WSW	WSW	WSW	SW	WSW	WSW	SW	SSW	SW	SSW	SW	SW	SW	251	WSW
Feb 20	SW	SSW	SSE	SSE	SSE	SSE	SSE	S	SSW	SSW	S	SW	NNW	ENE	E	ESE	ESE	ESE	ESE	SE	NE	SSW	SW	W	167	SSE
Feb 21	W	W	W	WNW	WNW	NW	NW	NW	WNW	W	W	W	WSW	WSW	SW	WSW	WSW	WSW	SW	SW	WSW	WSW	W	W	260	WSW
Feb 22	W	W	W	WSW	WSW	WSW	WSW	W	W	W	W	W	WNW	WNW	WNW	W	WSW	W	W	W	W	W	W	W	268	W
Feb 23	WSW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	W	W	W	W	W	W	W	WNW	WNW	W	WNW	269	W
Feb 24	WNW	NW	NNW	WNW	WNW	WNW	NW	NW	NW	NW	NNW	NNW	NNW	NW	WNW	NW	NW	WNW	WNW	WNW	WNW	WSW	W	W	309	NW
Feb 25	SW	WSW	WSW	W	WSW	SE	SSE	E	ENE	E	E	ENE	ENE	E	E	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	73	ENE
Feb 26	NE	NE	NE	NE	NE	NNE	NNE	NE	NNE	NNE	NNE	N	N	N	N	N	N	NNW	NNW	N	N	NNE	NNE	NE	24	NNE
Feb 27	NE	ENE	ENE	SSW	WSW	W	WSW	W	W	WSW	SW	WSW	W	WSW	WSW	SW	SW	SW	SW	SW	SW	SSW	SSW	SSW	237	SW
Feb 28	S	S	S	SSE	SSE	SSE	SSE	SSE	SE	SSE	SE	SE	SE	SE	SE	SE	ESE	ESE	ESE	ESE	SE	ESE	ESE	ESE	138	SE
Feb 29	ESE	ESE	ESE	ESE	E	E	E	E	E	E	NE	ENE	N	N	NNE	NNE	N	NNW	NNW	NNW	N	N	N	N	57	ENE

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 2024

Summary of Hourly Averages

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

WIND SPEED

Maximum Hourly Value:	31.7	kph	on Feb 23 at hr 14	Hours in Service:	696
Maximum Daily Value:	18.8	kph	on Feb 23	Hours of Data:	695
Minimum Hourly Value:	0.0	kph	on Feb 5 at hr 8	Hours of Missing Data:	1
Minimum Daily Value:	3.6	kph	on Feb 8	Hours of Calibration:	0
Monthly Average:	2.7	kph		Operational Uptime:	99.9

WIND DIRECTION

Monthly Average: 283 degree (W)

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	16.8	17.0	14.8	15.2	14.3	13.9	10.4	10.6	9.4	10.1	11.8	10.0	8.3	6.5	7.7	7.7	8.2	10.1	11.0	12.3	12.5	12.9	13.2	13.0	6.5	17.0	11.6
	SSE	S	S	S	S	S	SSW	S	S	SSW	SSW	SSW	S	SE	SE	ESE	ESE	ESE	SE	SE	SSE	SSE	SSE	SSE			169(SSE)
Feb 2	9.2	7.0	8.2	8.7	8.7	9.0	10.6	11.5	8.2	5.3	3.8	3.2	6.0	9.1	9.7	5.8	4.7	6.9	7.5	7.3	6.0	6.7	7.6	5.9	3.2	11.5	7.4
	SSE	SE	ESE	ESE	SE	E	ESE	SE	SE	E	ENE	SSE	ESE	ESE	E	ESE	ESE	ESE	ESE	SE	S	SSW	SSW	SW			129(SE)
Feb 3	7.0	8.5	10.9	9.2	8.9	11.6	13.0	12.5	10.8	14.1	15.1	24.8	24.6	21.1	20.3	21.6	19.1	17.2	15.2	11.9	17.0	13.2	11.2	11.3	7.0	24.8	14.6
	W	WNW	NW	NNW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	NNW	N	N	N	NNE	NNE	NNE	NNE			345(NNW)
Feb 4	11.3	11.0	10.7	10.2	8.4	8.9	8.0	10.1	10.0	9.0	7.8	7.5	6.6	6.3	6.1	7.5	7.5	7.3	6.1	4.7	5.5	6.4	6.8	6.9	4.7	11.3	7.9
	NNE	NNE	NNE	NNE	NE	NE	NE	NE	NE	NE	ENE	ENE	ENE	ENE	E	E	E	ESE	ESE	ESE	E	ENE	ENE	E			60(ENE)
Feb 5	6.8	5.6	K	0.7	1.7	5.2	5.3	2.5	**0.0**	1.9	0.8	2.9	4.4	5.5	6.0	6.6	6.7	3.7	5.4	9.7	11.3	11.7	9.5	10.1	**0.0**	11.7	5.4
	E	E	K	E	NNE	NE	NE	ENE	NW	N	NNW	NW	NNW	NNW	N	N	N	N	N	NE	NE	ENE	ENE	ENE			38(NE)
Feb 6	12.9	12.3	10.0	13.9	12.0	12.9	13.7	14.3	12.6	10.4	10.4	9.3	8.3	7.9	8.3	9.1	8.2	7.6	7.1	7.3	7.8	7.8	3.3	4.3	3.3	14.3	9.7
	E	E	E	ENE	E	E	E	E	E	E	E	ESE	ESE	ESE	E	ESE	ESE	ESE	ESE	ESE	SE	SSE	ESE	E			97(E)
Feb 7	4.6	5.9	6.3	6.1	6.1	6.3	6.5	5.8	6.3	5.2	2.5	3.7	3.3	2.1	3.8	4.0	4.9	4.2	4.4	1.6	2.1	2.3	4.7	3.6	1.6	6.5	4.4
	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	ENE	NE	NE	NE	ENE	NE	N	N	NNE	NE			59(ENE)
Feb 8	1.9	3.3	2.1	3.4	3.0	2.9	3.9	3.8	3.5	4.0	4.4	3.0	2.2	3.8	0.8	2.1	1.1	0.1	0.7	5.7	7.7	7.7	7.4	7.2	0.1	7.7	**3.6**
	E	SSE	SE	E	E	ENE	ENE	E	ESE	E	ESE	ESE	ESE	E	E	E	SSE	SE	SW	WSW	WSW	W	W	NW			112(ESE)
Feb 9	8.9	9.2	10.8	13.3	12.8	15.1	13.6	10.5	9.7	9.3	11.3	14.4	12.1	11.5	14.0	11.7	7.8	5.3	3.7	3.6	3.7	4.8	5.8	5.9	3.6	15.1	9.5
	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NW	W	WNW	NW	NW	NW	NW	NNW	NNW	NW	NW	N	NW	W	WNW	NW			319(NW)
Feb 10	4.8	6.4	7.9	7.1	6.1	7.5	7.2	7.7	7.6	8.3	7.0	7.9	8.9	9.8	11.9	10.2	11.4	11.6	11.9	13.1	12.6	14.7	16.4	13.1	4.8	16.4	9.6
	WSW	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	SSW	SW	SW	SW	SW	SW	WSW	W	WNW			225(SW)
Feb 11	12.4	12.0	13.4	14.1	13.4	13.7	13.2	12.3	14.2	14.1	14.4	12.5	14.6	14.7	13.5	12.2	8.3	10.7	14.1	13.6	14.1	14.8	11.8	8.5	8.3	14.8	12.9
	WNW	WNW	W	W	W	W	W	W	W	W	WNW	WNW	NW	NW	WNW	WNW	WNW	WSW	W	WSW	W	W	W	W			280(W)
Feb 12	8.1	9.7	9.0	8.2	11.2	10.9	11.4	10.4	10.4	10.5	10.8	10.4	10.0	10.4	11.2	11.8	10.1	10.0	11.0	10.3	9.4	10.7	11.6	10.6	8.1	11.8	10.3
	W	SW	SW	SW	SSW	SSW	SSW	SSW	SW	SW	SW	SW	WSW	W	WNW	NW	WNW	WNW	WNW	WNW	WNW	NW	WNW	WNW			258(WSW)
Feb 13	10.0	9.5	10.5	12.3	12.9	14.0	16.2	14.0	17.0	18.6	18.2	18.2	15.4	13.6	12.8	10.5	8.7	6.9	6.3	7.2	9.4	8.3	6.3	10.5	6.3	18.6	12.0
	WNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	NNW	NNW	NNW	NW	W	WSW	W	WNW	W	WSW			325(NW)
Feb 14	9.9	9.4	8.4	7.5	7.4	9.0	14.9	13.5	14.2	14.7	12.2	10.0	10.5	10.7	5.5	3.3	3.6	2.8	2.0	2.4	2.7	3.7	6.7	5.0	2.0	14.9	7.9
	WNW	NW	NW	NW	NW	NNW	N	N	N	N	NNE	NE	NE	ENE	ENE	ENE	NNE	NNE	NNE	NNE	NNW	NNW	W	NW			358(N)
Feb 15	5.9	6.2	5.9	6.7	5.7	6.1	6.2	5.0	6.3	5.5	6.9	11.7	15.1	16.2	12.8	10.3	8.4	11.6	11.2	9.6	10.2	10.5	10.9	13.3	5.0	16.2	9.1
	NW	WNW	NW	NW	NW	NNW	NNW	WNW	W	WSW	WSW	W	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	WSW	WSW	WSW	WSW			267(W)
Feb 16	12.8	13.3	12.7	9.2	10.4	12.1	13.4	13.3	13.0	13.6	13.5	13.9	15.2	14.4	16.5	18.0	17.1	16.5	15.5	13.7	14.7	18.7	20.6	21.1	9.2	21.1	14.7
	WSW	WSW	W	WSW	WSW	WSW	WSW	W	W	WSW	W	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W			257(WSW)
Feb 17	20.7	20.7	17.6	17.0	15.0	14.4	13.0	12.5	11.7	10.1	8.4	6.0	5.9	6.8	4.5	3.3	8.9	10.1	9.9	9.5	10.0	8.6	8.8	9.5	3.3	20.7	11.0
	W	W	W	W	W	WNW	WNW	W	W	W	NW	NW	WNW	WNW	NW	WNW	WSW	SW	SW	SW	SW	SW	SW	WSW			269(W)
Feb 18	9.1	10.0	10.2	8.7	9.2	9.4	10.2	11.0	8.5	6.0	2.4	4.0	3.0	2.5	2.8	2.8	4.0	2.6	7.0	8.7	8.0	9.6	8.8	9.3	2.4	11.0	7.0
	SW	SSW	SW	SW	SSW	S	S	SSW	SSW	SW	SW	SW	SW	SW	NW	WSW	WSW	SSW	SSW	SSW	SW	SSW	SW	SW			212(SSW)
Feb 19	9.2	6.7	9.2	8.1	7.5	8.6	8.9	9.4	8.4	8.3	5.1	5.1	8.3	9.0	9.9	8.7	8.8	8.3	5.8	6.1	8.6	7.8	7.6	7.9	5.1	9.9	8.0
	WSW	WSW	SSW	SW	W	WNW	WNW	WNW	WNW	NW	NW	WSW	WSW	WSW	SW	WSW	WSW	SW	SSW	SW	SSW	SW	SW	SW			251(WSW)
Feb 20	6.6	5.0	3.4	6.7	6.8	7.0	5.0	5.2	6.5	5.7	0.4	4.4	0.5	1.6	5.8	5.5	3.9	2.8	4.4	5.2	2.7	0.7	4.5	4.3	0.4	7.0	4.4
	SW	SSW	SSE	SSE	SSE	SSE	SSE	S	SSW	SSW	S	SW	NNW	ENE	E	ESE	ESE	ESE	ESE	SE	NE	SSW	SW	W			167(SSE)
Feb 21	6.7	8.0	7.5	8.4	7.9	9.2	11.4	10.0	7.7	9.3	11.5	12.7	14.1	13.9	16.2	16.7	15.0	12.2	12.3	11.3	12.5	13.2	13.1	14.0	6.7	16.7	11.5
	W	W	W	WNW	WNW	NW	NW	NW	WNW	W	W	W	WSW	WSW	SW	WSW	WSW	WSW	SW	SW	WSW	WSW	W	W			260(WSW)
Feb 22	12.0	12.2	12.2	11.0	11.8	13.1	13.8	13.7	14.3	15.6	17.8	15.8	13.7	12.7	12.8	11.9	11.9	12.4	11.3	10.7	8.9	10.6	10.4	10.9	8.9	17.8	12.6
	W	W	W	WSW	WSW	WSW	WSW	W	W	W	W	W	WNW	WNW	WNW	W	WSW	W	W	W	W	W	W	W			268(W)
Feb 23	12.0	12.4	11.4	9.6	10.0	11.0	11.5	14.2	15.0	23.3	26.8	28.6	28.9	30.7	**31.7**	23.4	24.1	17.1	15.3	16.2	21.7	20.2	18.5	17.1	9.6	**31.7**	**18.8**
	WSW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	W	W	W	W	W	W	W	WNW	WNW	W	WNW			269(W)
Feb 24	17.6	15.6	14.7	10.7	12.6	12.7	11.3	13.0	14.9	17.9	18.3	17.6	17.0	15.2	14.0	13.3	8.5	7.8	6.7	6.9	6.7	8.6	8.9	6.8	6.7	18.3	12.4
	WNW	NW	NNW	WNW	WNW	WNW	NW	NW	NW	NW	NNW	NNW	NNW	NW	WNW	NW	NW	WNW	WNW	WNW	WNW	WSW	W	W			309(NW)
Feb 25	5.5	6.1	4.6	3.7	0.6	0.3	0.2	3.6	4.0	6.8	9.2	11.5	12.0	15.6	15.9	16.8	19.4	22.7	23.1	27.9	28.3	27.0	26.0	22.4	0.2	28.3	13.1
	SW	WSW	WSW	W	WSW	SE	SSE	E	ENE	E	E	ENE	ENE	E	E	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE			73(ENE)
Feb 26	23.1	20.3	20.2	21.2	21.7	21.0	18.1	17.1	15.6	16.6	15.0	12.7	11.4	11.0	11.7	11.7	10.4	8.8	8.7	7.5	7.2	7.6	8.6	7.3	7.2	23.1	13.9
	NE	NE	NE	NE	NE	NNE	NNE	NE	NNE	NNE	NNE	N	N	N	N	N	N	NNW	NNW	N	N	NNE	NNE	NE			24(NNE)
Feb 27	4.3	4.8	0.5	3.8	5.5	8.0	8.1	7.5	6.6	6.5	10.0	10.0	11.7	10.0	11.7	13.1	13.9	10.8	11.8	12.0	9.7	10.0	10.1	10.8	0.5	13.9	8.8
	NE	ENE	ENE	SSW	WSW	W	WSW	W	W	WSW	SW	WSW	W	WSW	WSW	SW	SW	SW	SW	SW	SW	SSW	SSW	SSW			237(SW)
Feb 28	11.2	11.6	11.9	12.1	11.8	10.8	11.3	13.7	13.9	16.0	16.1	16.1	16.4	18.0	21.5	17.9	20.7	18.8	18.8	20.9	22.2	21.6	20.2	14.8	10.8	22.2	16.2
	S	S	S	SSE	SSE	SSE	SSE	SSE	SE	SSE	SE	SE	SE	SE	SE	SE	ESE	ESE	ESE	ESE	SE	ESE	ESE	ESE			138(SE)
Feb 29	17.7	17.6	20.5	20.0	17.4	16.9	18.1	17.1	14.9	13.3	9.3	10.6	8.9	9.2	9.9	8.2	8.6	12.2	12.4	12.7	13.2	14.1	15.4	13.9	8.2	20.5	13.8
	ESE	ESE	ESE	ESE	E	E	E	E	E	E	NE	ENE	N	N	NNE	NNE	N	NNW	NNW	NNW	N	N	N	N			57(ENE)

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 2024

Summary of Hour Standard Deviations

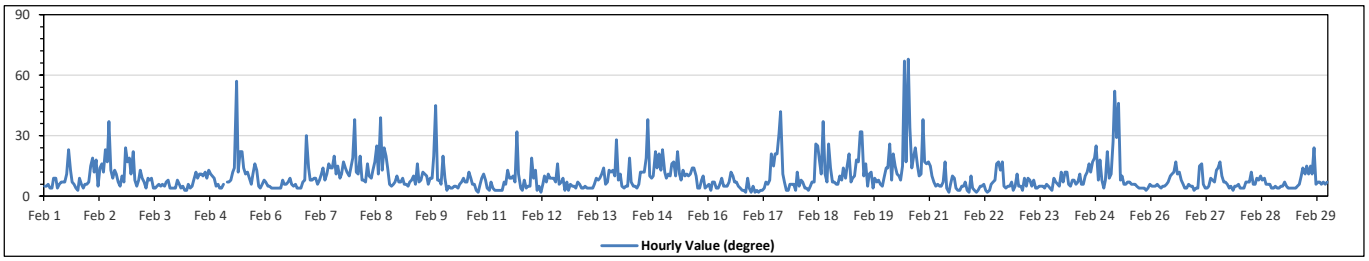
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	68 degree on Feb 20 at hr 12	Hours in Service:	696
		Hours of Data:	695
Minimum Hourly Value:	2 degree on Feb 10 at hr 19	Hours of Missing Data:	1
		Hours of Calibration:	0
		Operational Uptime:	99.9

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	5	5	6	4	4	9	9	4	6	7	7	7	11	23	13	7	6	4	3	9	6	4	6	6	3	23
Feb 2	7	15	19	12	18	5	14	16	12	23	17	37	13	9	13	11	7	5	10	7	24	17	19	11	5	37
Feb 3	22	8	5	8	13	9	7	4	9	8	9	4	4	5	6	5	6	5	7	8	4	4	4	4	4	22
Feb 4	8	6	4	5	3	3	6	4	5	8	12	9	11	11	10	12	9	13	11	10	9	5	6	4	3	13
Feb 5	4	6	K	7	7	8	12	14	57	12	22	22	14	11	12	9	6	11	16	13	5	4	6	8	4	57
Feb 6	7	5	5	4	4	4	4	4	4	8	6	6	7	9	6	5	6	4	4	4	7	8	30	14	4	30
Feb 7	8	8	9	9	6	8	11	14	8	11	16	14	14	20	11	15	9	11	17	14	12	10	14	19	6	20
Feb 8	38	12	11	20	8	8	7	16	10	9	13	17	25	11	39	13	24	20	14	6	5	6	7	10	5	39
Feb 9	7	7	9	6	6	5	7	8	10	6	16	7	8	12	11	10	6	9	9	20	45	8	8	6	5	45
Feb 10	20	9	3	5	4	4	5	5	4	6	7	9	7	7	12	9	6	6	3	**2**	6	9	11	8	**2**	20
Feb 11	4	3	7	4	3	3	3	3	3	7	6	13	9	9	10	7	32	11	4	3	8	4	5	5	3	32
Feb 12	19	9	13	3	5	**2**	6	10	7	11	9	9	9	7	16	6	7	9	3	7	3	6	5	5	**2**	19
Feb 13	4	7	6	4	4	5	4	4	4	4	6	9	8	9	11	14	6	7	13	12	13	10	28	8	4	28
Feb 14	11	5	4	5	5	19	7	5	5	4	6	12	12	12	19	38	10	9	10	22	14	21	13	23	4	38
Feb 15	12	9	11	10	16	17	10	22	11	8	13	10	11	10	11	14	14	10	4	4	8	10	4	5	4	22
Feb 16	6	3	7	7	4	4	6	9	5	5	5	7	12	10	7	7	5	4	3	3	**2**	9	4	**2**	**2**	12
Feb 17	5	**2**	3	**2**	3	3	4	7	6	8	21	15	21	21	31	42	11	7	3	3	6	6	6	3	**2**	42
Feb 18	12	5	8	7	4	4	3	5	7	7	26	25	17	11	37	11	7	26	14	7	7	6	6	10	3	37
Feb 19	8	14	9	15	21	7	9	10	18	17	32	32	10	16	5	11	12	4	9	7	8	6	5	9	4	32
Feb 20	14	14	26	8	21	15	11	10	8	15	67	17	**68**	34	14	20	24	15	10	11	38	17	16	17	8	**68**
Feb 21	15	10	7	5	6	5	5	7	17	4	**2**	6	10	9	4	3	3	5	5	7	3	**2**	10	4	**2**	17
Feb 22	3	**2**	3	5	5	6	3	**2**	3	6	7	8	16	17	13	17	5	4	5	5	7	3	5	11	**2**	17
Feb 23	5	5	3	9	5	9	8	5	8	4	4	5	5	5	4	6	5	4	3	9	7	6	5	12	3	12
Feb 24	7	12	12	6	5	8	8	6	7	11	6	6	10	12	16	12	17	19	25	8	18	8	4	8	4	25
Feb 25	22	9	11	27	52	29	46	8	10	6	6	7	7	6	6	6	5	4	4	4	4	3	4	6	3	52
Feb 26	5	5	5	6	5	4	5	5	6	7	10	11	12	17	11	12	8	6	4	4	6	5	5	3	3	17
Feb 27	4	4	15	16	6	4	4	5	9	8	7	13	14	17	10	7	7	6	4	5	3	5	5	6	3	17
Feb 28	4	4	4	7	7	7	12	6	6	9	8	10	8	9	6	6	6	4	4	5	4	4	5	5	4	12
Feb 29	7	5	4	4	4	4	4	5	6	10	14	11	15	11	15	11	24	6	7	7	6	7	6	7	4	24
Diurnal Minimum	3	2	3	2	3	2	3	2	3	4	2	4	4	5	4	3	3	4	3	2	2	2	4	2		
Diurnal Maximum	38	15	26	27	52	29	46	22	57	23	67	37	68	34	39	42	32	26	25	22	45	21	30	23		

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.



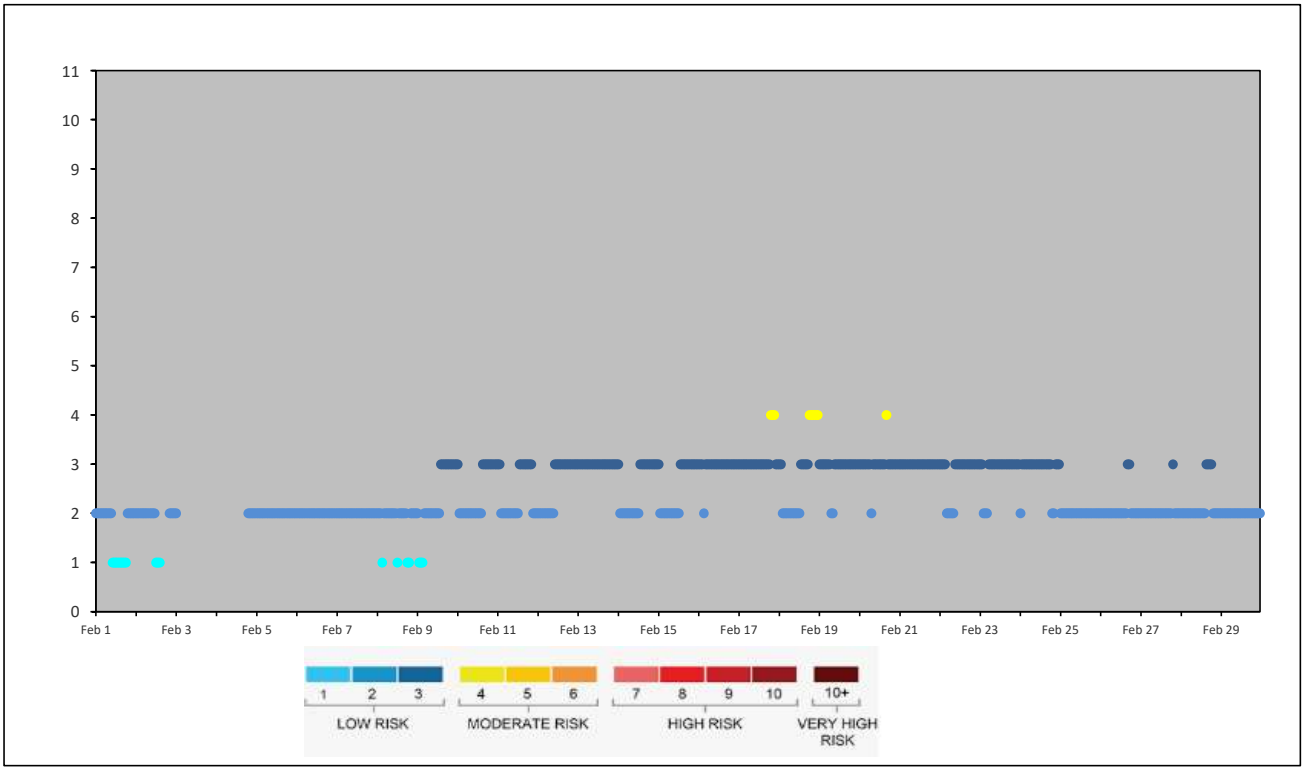
LAC LA BICHE STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - February 2024

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	1	1	1	1	1	1	1	1	1	2	2	2	2	2
Feb 2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1						2	2	2	2
Feb 3	2																							
Feb 4																				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	2	2	2	2	2	2	2	2	2
Feb 7	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 8	2	2	2	1	2	2	2	2	2	2	2	2	1	2	2	2	2	2	1	1	2	2	2	2
Feb 9	2	1	1	1	2	2	2	2	2	2	2	2	2	2	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	2	2	3	3	3	3	3	3	3	3	3
Feb 11	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	2	2	2
Feb 12	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 13	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 14	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Feb 15	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Feb 16	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 17	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3	3
Feb 18	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4
Feb 19	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 20	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3
Feb 21	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 22	3	3	3	3	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 23	3	3	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Feb 24	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	3	3	3
Feb 25	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 26	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2
Feb 27	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2
Feb 28	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2	2	2	2
Feb 29	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

Lac La Biche Station - February 2024

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

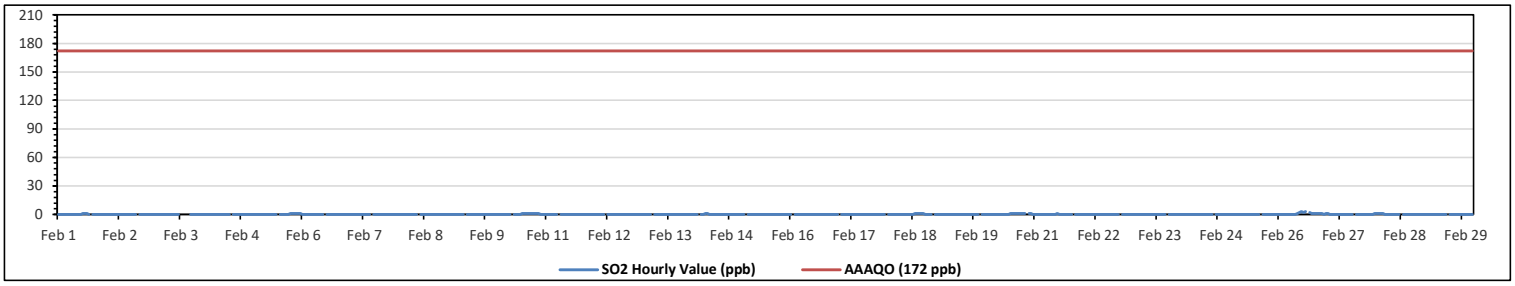
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

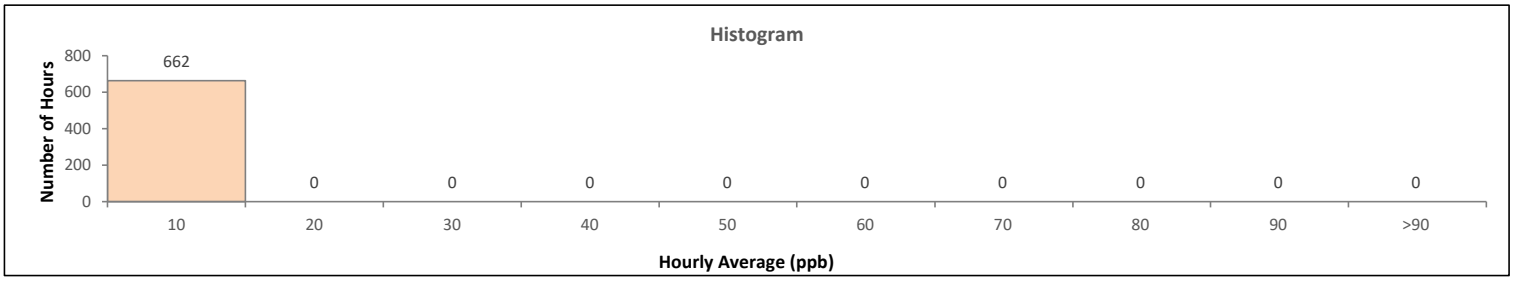
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0		
Maximum Hourly Value:	3	ppb	on Feb 26 at hr 11	Hours in Service:	696		
Maximum Daily Value:	0.9	ppb	on Feb 26	Hours of Data:	662		
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	0		
Minimum Daily Value:	0.0	ppb	on Feb 2	Hours of Calibration:	34		
Monthly Average:	0.1	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	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	S	0	0	0	0	0	0	0	0	1	0.1
Feb 2	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 3	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0
Feb 4	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 5	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	1	1	1	1	1	0	1	0.3
Feb 6	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 7	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 8	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 9	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 10	0	0	0	0	0	0	0	S	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0.4
Feb 11	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 12	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 13	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 14	0	0	0	S	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Feb 15	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 16	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 17	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 18	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	S	0	0	1	0.2
Feb 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Feb 20	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	S	1	1	0	0	1	0.4
Feb 21	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.0
Feb 22	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 23	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
Feb 24	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 25	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 26	0	0	0	0	0	0	0	0	0	1	2	3	2	3	S	2	1	1	1	1	1	1	0	1	0	3	0.9
Feb 27	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0	1	0.1
Feb 28	1	1	1	1	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Feb 29	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
Diurnal Maximum	1	1	1	1	0	0	1	1	0	1	2	3	2	3	1	2	1	1	1	1	1	1	1	1			
Diurnal Average	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	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.



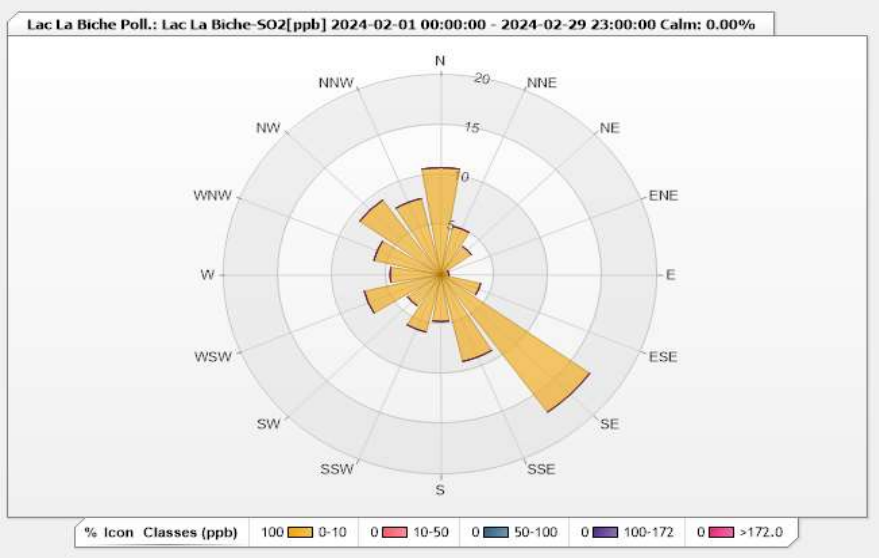


Station: Lac La Biche Poll.: Lac La Biche-SO2[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 95.11% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	10.73	0	0	0	0	10.73
NNE	4.98	0	0	0	0	4.98
NE	3.47	0	0	0	0	3.47
ENE	0.76	0	0	0	0	0.76
E	0.76	0	0	0	0	0.76
ESE	3.78	0	0	0	0	3.78
SE	16.92	0	0	0	0	16.92
SSE	8.91	0	0	0	0	8.91
S	4.68	0	0	0	0	4.68
SSW	5.89	0	0	0	0	5.89
SW	3.78	0	0	0	0	3.78
WSW	7.25	0	0	0	0	7.25
W	4.68	0	0	0	0	4.68
WNW	6.34	0	0	0	0	6.34
NW	9.21	0	0	0	0	9.21
NNW	7.85	0	0	0	0	7.85
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

HYDROGEN SULPHIDE (H_2S) in ppb

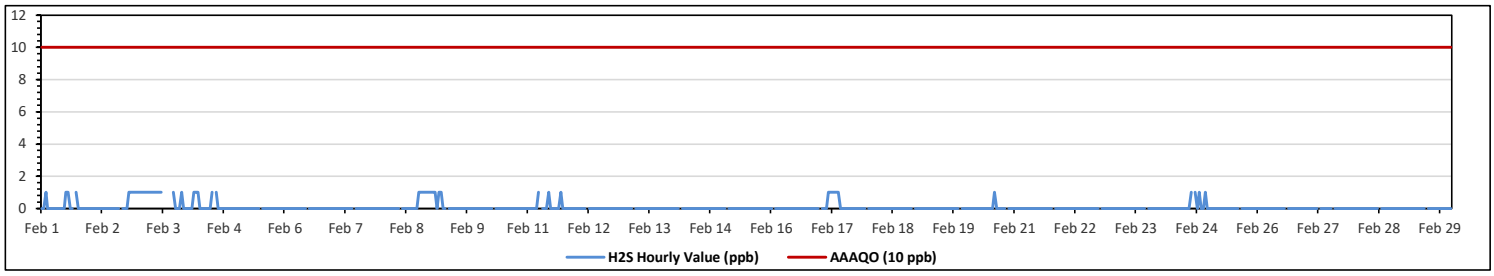
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb

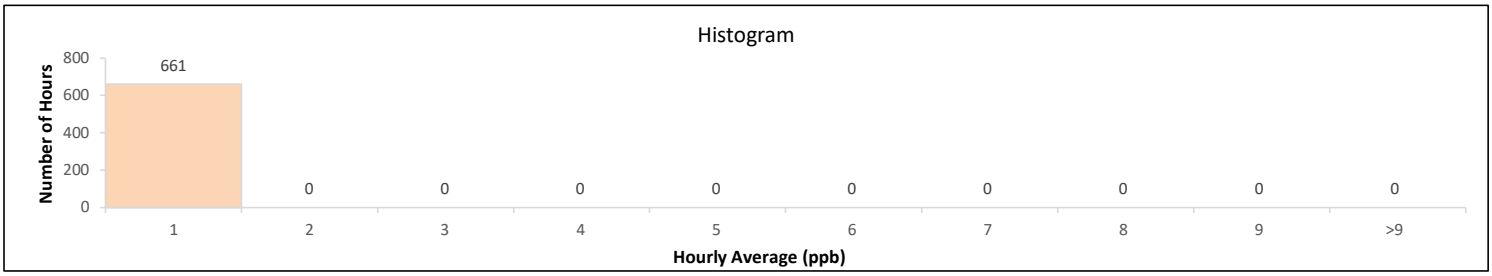
Number of 1-Hour Exceedances:	0		Number of 24-Hour Exceedances:	0	
Maximum Hourly Value:	1	ppb	on Feb 1 at hr 2	Hours in Service:	696
Maximum Daily Value:	1.0	ppb	on Feb 3	Hours of Data:	661
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	1
Minimum Daily Value:	0.0	ppb	on Feb 1	Hours of Calibration:	34
Monthly Average:	0.1	ppb		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	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	S	1	0	0	0	0	0	0	0	1	0.0
Feb 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	1	1	1	1	0	1	0.0
Feb 3	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	C	1	0	0	0	1	0	0	0	1	1.0
Feb 4	0	0	0	1	1	1	0	0	0	0	0	0	1	S	1	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 5	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 6	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 7	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 8	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0.0
Feb 9	1	1	1	0	1	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Feb 10	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 11	0	0	0	0	0	1	S	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.0
Feb 12	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 13	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 14	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 15	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 16	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 17	S	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	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	S	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	S	0	0	0	0	0.0
Feb 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	S	0	0	0	0	1	0.0
Feb 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0
Feb 22	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 23	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
Feb 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S	1	0	1	0	0	1	0	0	1	0.0
Feb 25	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 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 27	0	0	0	0	0	0	NRM	0	0	0	0	0	0	S	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	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Feb 29	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
Diurnal Maximum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Diurnal Average	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	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.



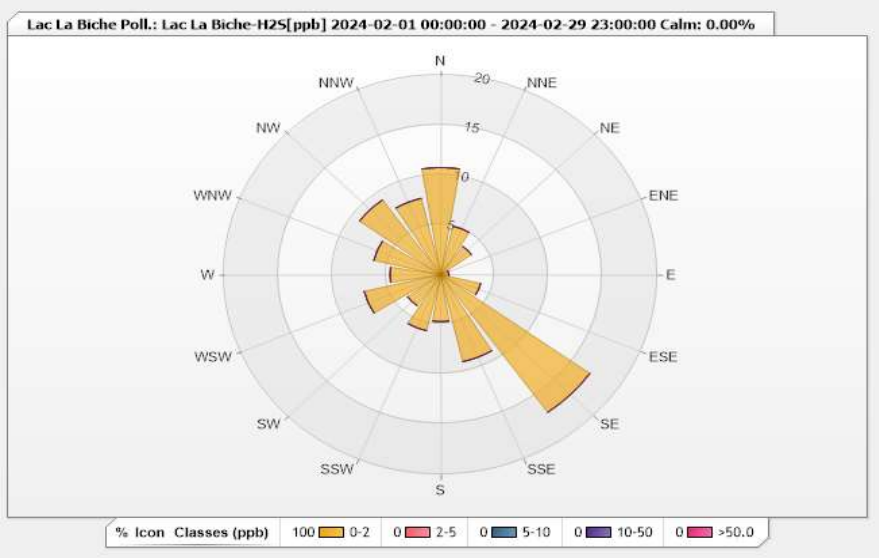


Station: Lac La Biche Poll.: Lac La Biche-H2S[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.97% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	10.74	0	0	0	0	10.74
NNE	4.99	0	0	0	0	4.99
NE	3.48	0	0	0	0	3.48
ENE	0.76	0	0	0	0	0.76
E	0.76	0	0	0	0	0.76
ESE	3.78	0	0	0	0	3.78
SE	16.94	0	0	0	0	16.94
SSE	8.93	0	0	0	0	8.93
S	4.69	0	0	0	0	4.69
SSW	5.75	0	0	0	0	5.75
SW	3.78	0	0	0	0	3.78
WSW	7.26	0	0	0	0	7.26
W	4.69	0	0	0	0	4.69
WNW	6.35	0	0	0	0	6.35
NW	9.23	0	0	0	0	9.23
NNW	7.87	0	0	0	0	7.87
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

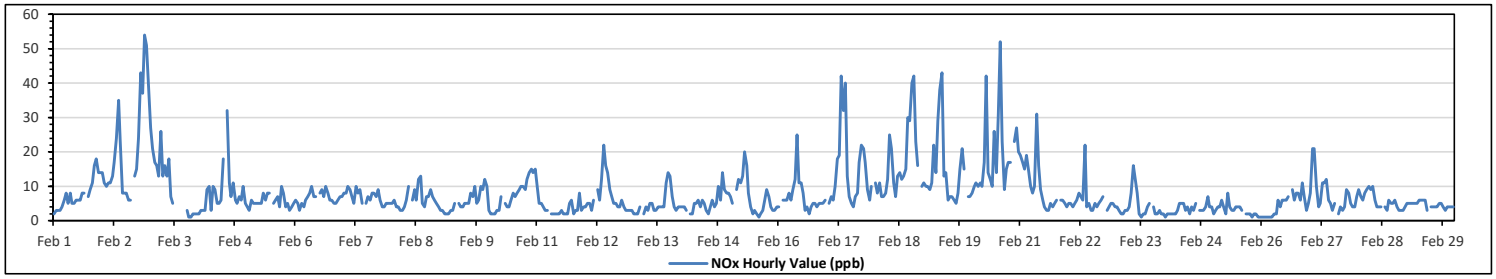
OXIDES OF NITROGEN (NOx) in ppb

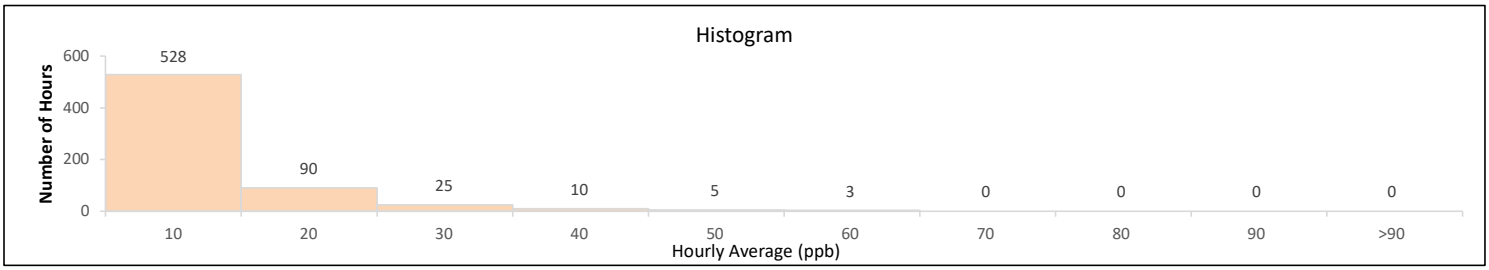
Maximum Hourly Value:	54	ppb	on Feb 2 at hr 21	Hours in Service:	696
Maximum Daily Value:	20.9	ppb	on Feb 2	Hours of Data:	661
Minimum Hourly Value:	1	ppb	on Feb 3 at hr 19	Hours of Missing Data:	0
Minimum Daily Value:	3.1	ppb	on Feb 25	Hours of Calibration:	35
Monthly Average:	8.0	ppb		Operational Uptime:	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	2	3	3	3	4	6	8	5	8	5	5	6	6	6	8	8	S	7	9	11	16	18	14	14	2	18	7.6
Feb 2	14	11	10	11	11	13	17	24	35	23	8	8	8	6	6	S	13	15	24	43	37	54	51	38	6	54	20.9
Feb 3	27	21	17	16	13	26	13	16	13	18	7	5	C	C	C	C	C	C	3	1	1	2	2	2	1	27	11.3
Feb 4	2	3	3	3	9	10	3	10	9	5	5	6	18	S	32	11	7	11	6	5	7	6	10	5	2	32	8.1
Feb 5	4	3	6	5	5	5	5	5	8	6	8	8	S	5	6	7	4	10	8	4	5	3	4	5	3	10	5.6
Feb 6	6	5	3	5	4	6	7	8	10	7	7	S	8	9	7	10	8	6	6	5	5	6	7	7	3	10	6.6
Feb 7	8	8	10	9	7	5	10	8	9	5	S	5	7	6	8	8	7	9	6	4	4	5	5	5	4	10	6.9
Feb 8	5	6	4	4	3	3	4	6	10	S	6	9	6	12	13	5	4	7	7	9	7	6	5	4	3	13	6.3
Feb 9	3	3	2	2	2	3	3	5	S	5	4	4	5	5	5	8	7	10	5	6	10	9	12	10	2	12	5.6
Feb 10	3	2	2	2	3	3	7	S	5	4	4	6	8	7	8	9	10	10	9	12	14	15	14	15	2	15	7.5
Feb 11	10	5	5	4	3	3	S	2	2	2	2	2	3	2	2	2	5	6	2	3	3	8	3	4	2	10	3.6
Feb 12	4	5	5	3	6	S	9	6	12	22	16	14	9	7	5	5	4	4	6	4	3	3	3	3	3	22	6.9
Feb 13	2	2	2	4	S	2	4	3	5	5	3	3	4	4	4	4	11	14	13	7	4	3	4	4	2	14	4.8
Feb 14	4	4	3	S	2	2	5	5	6	4	6	5	3	2	4	6	4	5	10	6	14	9	8	8	2	14	5.4
Feb 15	7	5	S	9	12	11	13	20	16	8	4	2	3	2	1	2	3	6	9	7	4	3	3	4	1	20	6.7
Feb 16	4	S	6	6	6	8	6	9	12	25	11	11	8	3	4	2	4	5	5	4	5	5	5	6	2	25	7.0
Feb 17	S	5	7	6	10	18	19	42	32	40	13	7	5	4	7	8	17	22	21	17	9	6	10	S	4	42	14.8
Feb 18	11	8	11	7	7	8	12	25	21	11	7	13	14	12	13	15	30	29	40	42	23	16	S	10	7	42	16.7
Feb 19	11	10	10	9	11	22	14	29	38	43	13	14	6	7	7	6	5	8	15	21	15	S	7	7	5	43	14.3
Feb 20	8	10	11	10	11	10	17	42	14	12	10	26	14	31	52	23	9	15	17	17	S	23	27	20	8	52	18.7
Feb 21	19	17	15	19	15	10	8	10	31	16	9	6	4	3	3	5	4	5	6	S	6	6	5	4	3	31	9.8
Feb 22	5	5	4	5	6	8	7	6	22	4	5	3	3	5	4	5	6	7	S	3	4	5	5	4	3	22	5.7
Feb 23	4	3	2	2	3	3	4	8	16	12	8	2	1	2	2	4	5	S	4	2	2	3	2	2	1	16	4.2
Feb 24	1	2	2	2	2	2	3	5	5	5	3	4	2	4	3	5	S	3	3	3	4	7	4	4	1	7	3.4
Feb 25	2	3	4	4	6	4	2	8	4	3	3	4	4	4	3	S	2	2	2	1	2	2	1	1	1	8	3.1
Feb 26	1	1	1	1	1	1	2	2	6	4	6	6	6	7	S	9	6	8	8	6	11	7	3	5	1	11	4.7
Feb 27	8	21	21	10	4	5	11	11	12	6	5	3	5	S	2	4	3	4	9	8	5	4	4	7	2	21	7.5
Feb 28	9	7	6	8	9	10	9	10	6	4	4	4	S	4	3	6	5	5	6	4	3	3	3	4	3	10	5.7
Feb 29	5	5	5	5	5	5	6	6	6	6	3	S	4	4	4	4	5	5	4	3	4	4	4	4	3	6	4.6
Diurnal Maximum	27	21	21	19	15	26	19	42	38	43	16	26	18	31	52	23	30	29	40	43	37	54	51	38			
Diurnal Average	6.8	6.5	6.4	6.2	6.4	7.6	8.1	12.0	13.3	11.1	6.6	6.9	6.3	6.3	8.0	7.0	7.2	8.8	9.4	9.2	8.1	8.6	8.0	7.4			

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.



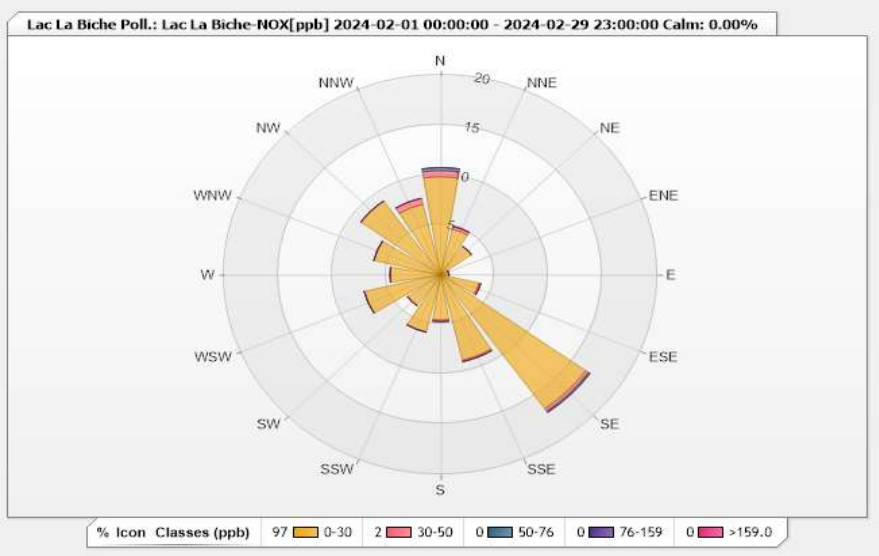


Station: Lac La Biche Poll.: Lac La Biche-NOX[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.97% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	9.83	0.61	0.3	0	0	10.74
NNE	4.69	0.3	0	0	0	4.99
NE	3.48	0	0	0	0	3.48
ENE	0.76	0	0	0	0	0.76
E	0.76	0	0	0	0	0.76
ESE	3.63	0.15	0	0	0	3.78
SE	16.49	0.3	0.15	0	0	16.94
SSE	8.77	0.15	0	0	0	8.92
S	4.54	0.15	0	0	0	4.69
SSW	5.9	0	0	0	0	5.9
SW	3.78	0	0	0	0	3.78
WSW	7.26	0	0	0	0	7.26
W	4.69	0	0	0	0	4.69
WNW	6.35	0	0	0	0	6.35
NW	9.08	0	0	0	0	9.08
NNW	7.26	0.61	0	0	0	7.87
Summary	97.27	2.27	0.45	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

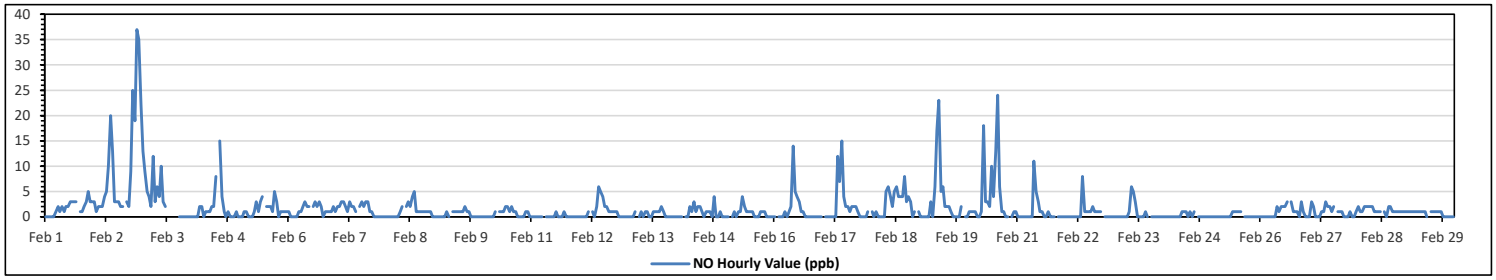
NITRIC OXIDE (NO) in ppb

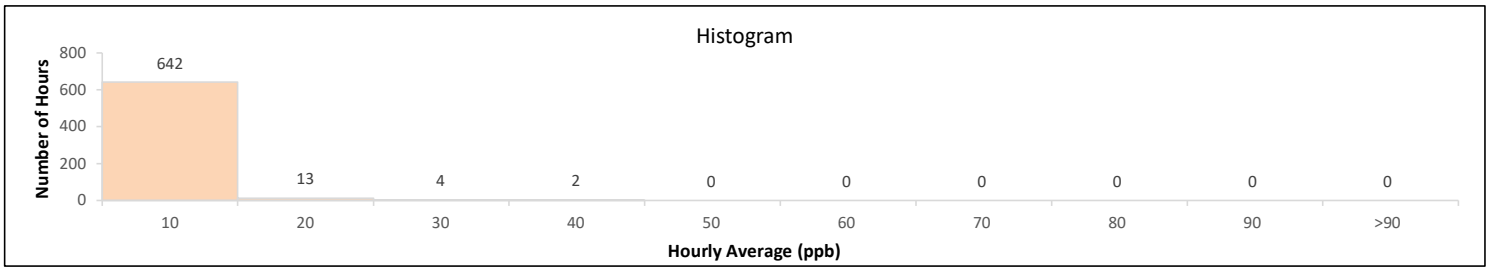
Maximum Hourly Value:	37	ppb	on Feb 2 at hr 21	Hours in Service:	696	
Maximum Daily Value:	9.9	ppb	on Feb 2	Hours of Data:	661	
Minimum Hourly Value:	0	ppb	on Feb 1 at hr 0	Hours of Missing Data:	0	
Minimum Daily Value:	0.1	ppb	on Feb 11	Hours of Calibration:	35	
Monthly Average:	1.6	ppb		Operational 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	1	2	1	2	1	2	2	3	3	3	3	S	1	1	2	3	5	3	3	0	5	1.8
Feb 2	3	1	2	2	2	4	5	10	20	13	3	3	3	2	2	S	3	2	9	25	19	**37**	35	22	1	**37**	**9.9**
Feb 3	13	9	5	4	2	12	3	6	4	10	3	2	C	C	C	C	C	C	0	0	0	0	0	0	0	13	4.1
Feb 4	0	0	0	0	2	2	0	1	1	1	2	2	8	S	15	4	1	0	1	0	0	0	1	0	0	15	1.8
Feb 5	0	0	1	1	0	0	0	1	3	1	3	4	S	2	2	2	1	5	3	0	1	1	1	1	0	5	1.4
Feb 6	1	0	0	0	0	1	1	2	3	2	2	S	2	3	2	3	2	0	1	1	1	1	2	1	0	3	1.3
Feb 7	2	2	3	3	2	1	3	2	2	1	S	2	3	2	3	3	1	1	0	0	0	0	0	0	0	3	1.6
Feb 8	0	0	0	0	0	0	0	1	2	S	2	3	2	4	5	1	1	1	1	1	1	1	1	0	0	5	1.2
Feb 9	0	0	0	0	0	0	1	0	S	1	1	1	1	1	1	2	1	1	0	0	0	0	0	0	0	2	0.5
Feb 10	0	0	0	0	0	0	1	S	1	1	1	2	2	1	2	1	1	0	0	0	0	1	1	0	0	2	0.7
Feb 11	0	0	0	0	0	0	S	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0.1
Feb 12	0	0	0	0	1	S	1	0	2	6	5	4	2	2	1	1	1	1	1	0	0	0	0	0	0	6	1.2
Feb 13	0	0	0	1	S	0	1	0	1	1	0	0	1	1	1	1	2	1	0	0	0	0	0	0	0	2	0.5
Feb 14	0	0	0	S	0	0	2	1	3	1	2	2	1	0	1	1	1	0	4	0	0	1	0	0	0	4	0.9
Feb 15	0	0	S	0	1	0	1	1	4	2	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	4	0.7
Feb 16	0	S	0	0	0	1	0	1	2	14	5	4	3	1	1	0	0	0	0	0	0	0	0	0	0	14	1.4
Feb 17	S	0	0	0	0	0	0	12	7	15	4	2	2	1	2	2	2	1	0	0	0	0	1	S	0	15	2.3
Feb 18	1	0	1	0	0	0	0	5	6	4	2	5	6	4	4	4	8	3	4	3	0	1	S	1	0	8	2.7
Feb 19	0	0	0	0	0	3	0	6	17	23	5	6	2	2	2	1	0	0	0	0	2	S	0	0	0	23	3.0
Feb 20	1	1	1	1	0	0	1	18	3	3	2	10	4	13	24	6	1	1	0	0	S	0	1	1	0	24	4.0
Feb 21	0	0	0	0	0	0	0	0	11	5	3	1	1	0	0	1	0	0	0	S	0	0	0	0	0	11	1.0
Feb 22	0	0	0	0	0	0	0	0	8	1	1	1	1	2	1	1	1	1	S	0	0	0	0	0	0	8	0.8
Feb 23	0	0	0	0	0	0	0	1	6	5	3	0	0	0	0	1	0	S	0	0	0	0	0	0	0	6	0.7
Feb 24	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	1	S	0	0	0	0	0	0	0	0	1	0.2
Feb 25	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	S	0	0	0	0	0	0	0	0	0	1	0.2
Feb 26	0	0	0	0	0	0	0	0	2	1	2	2	2	3	S	3	1	1	1	0	3	1	0	0	0	3	1.0
Feb 27	0	3	2	0	0	0	1	1	3	2	2	1	2	S	1	1	1	0	0	0	1	0	0	1	0	3	1.0
Feb 28	2	1	1	2	2	2	2	2	1	1	1	S	1	0	2	2	1	1	1	1	1	1	1	1	0	2	1.3
Feb 29	1	1	1	1	1	1	1	1	1	1	0	S	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0.7
Diurnal Maximum	13	9	5	4	2	12	5	18	20	23	5	10	8	13	24	6	8	5	9	25	19	37	35	22			
Diurnal Average	0.9	0.6	0.6	0.5	0.5	1.0	0.9	2.6	4.1	4.2	2.1	2.3	2.1	2.0	2.8	1.8	1.3	0.9	1.0	1.2	1.1	1.8	1.7	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.



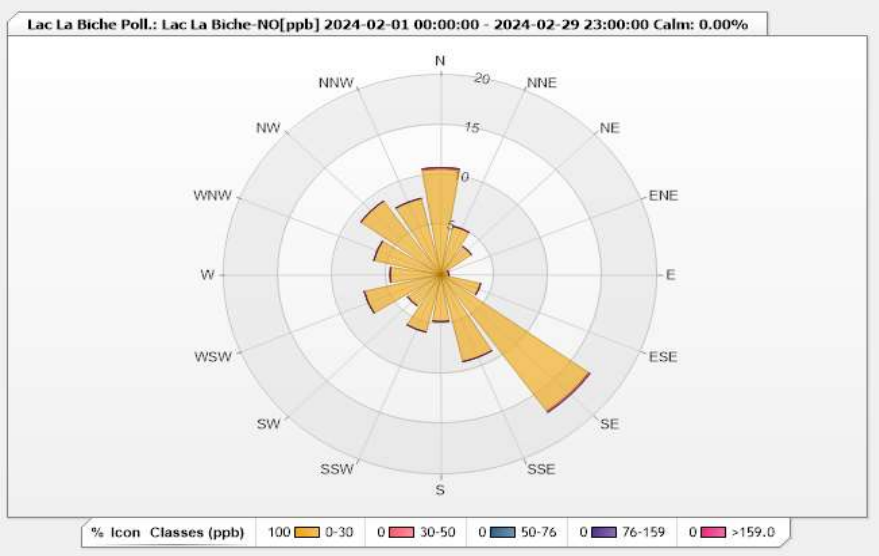


Station: Lac La Biche Poll.: Lac La Biche-NO[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.97% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	10.59	0.15	0	0	0	10.74
NNE	4.99	0	0	0	0	4.99
NE	3.48	0	0	0	0	3.48
ENE	0.76	0	0	0	0	0.76
E	0.76	0	0	0	0	0.76
ESE	3.78	0	0	0	0	3.78
SE	16.79	0.15	0	0	0	16.94
SSE	8.93	0	0	0	0	8.93
S	4.69	0	0	0	0	4.69
SSW	5.9	0	0	0	0	5.9
SW	3.78	0	0	0	0	3.78
WSW	7.26	0	0	0	0	7.26
W	4.69	0	0	0	0	4.69
WNW	6.35	0	0	0	0	6.35
NW	9.08	0	0	0	0	9.08
NNW	7.87	0	0	0	0	7.87
Summary	100	0.3	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

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

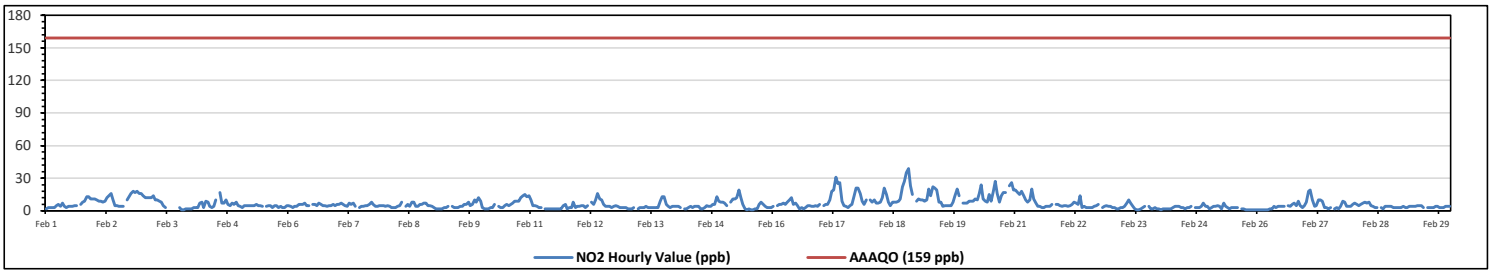
Number of 1-Hour Exceedances: 0

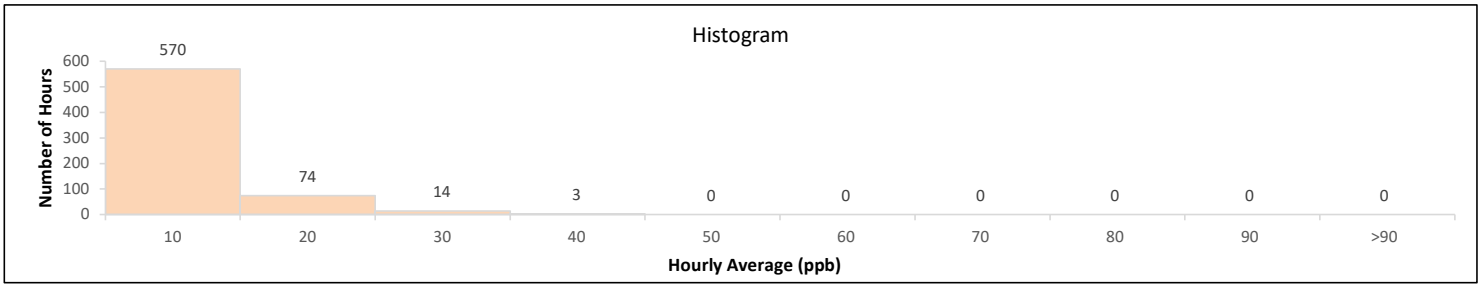
Maximum Hourly Value:	39	ppb	on Feb 18 at hr 19	Hours in Service:	696
Maximum Daily Value:	14.4	ppb	on Feb 20	Hours of Data:	661
Minimum Hourly Value:	1	ppb	on Feb 3 at hr 19	Hours of Missing Data:	0
Minimum Daily Value:	2.7	ppb	on Feb 25	Hours of Calibration:	35
Monthly Average:	6.4	ppb		Operational 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	2	3	3	3	3	5	6	4	7	4	3	4	4	4	5	5	S	6	8	9	13	13	11	11	2	13	5.9
Feb 2	11	10	9	9	8	9	12	14	16	10	5	5	4	4	4	S	10	13	16	18	17	18	16	16	4	18	11.0
Feb 3	14	12	12	12	12	14	10	10	9	8	5	3	C	C	C	C	C	C	3	1	1	2	2	2	1	14	7.3
Feb 4	2	3	3	3	7	8	3	9	8	4	3	4	10	S	17	7	7	10	6	5	7	6	8	5	2	17	6.3
Feb 5	4	3	5	5	5	5	5	5	6	5	5	4	S	4	5	5	3	5	5	3	4	3	3	5	3	6	4.4
Feb 6	5	4	3	4	4	6	6	6	7	5	5	S	6	6	5	7	6	5	5	4	5	5	6	5	3	7	5.2
Feb 7	6	6	7	6	5	4	7	6	7	4	S	3	4	4	5	5	6	8	6	4	4	5	5	5	3	8	5.3
Feb 8	4	5	4	3	3	3	4	5	8	S	4	6	4	8	8	4	4	6	6	7	7	5	5	4	3	8	5.1
Feb 9	3	2	2	2	2	3	3	4	S	4	3	3	3	4	4	6	6	8	5	6	10	8	12	9	2	12	4.9
Feb 10	3	2	2	2	3	3	6	S	4	3	3	5	6	5	6	7	9	9	9	12	14	15	13	14	2	15	6.7
Feb 11	10	5	5	4	3	3	S	2	2	2	2	2	2	2	2	2	5	6	2	3	3	8	3	4	2	10	3.6
Feb 12	4	5	5	3	5	S	8	6	10	16	11	10	6	4	4	4	3	4	5	4	3	3	3	3	3	16	5.6
Feb 13	2	2	2	3	S	2	3	3	3	4	3	3	3	3	3	3	9	13	13	6	4	3	4	4	2	13	4.3
Feb 14	4	4	3	S	2	2	3	4	3	4	4	4	2	2	3	5	4	4	6	6	13	9	8	8	2	13	4.7
Feb 15	7	5	S	8	11	11	12	19	12	6	2	1	2	1	1	2	2	6	8	6	4	3	3	3	1	19	5.9
Feb 16	4	S	5	6	6	7	6	8	10	12	6	7	5	2	3	2	3	5	5	4	4	5	4	6	2	12	5.4
Feb 17	S	5	6	6	10	18	19	31	25	26	9	5	4	3	5	6	14	21	21	16	9	6	10	S	3	31	12.5
Feb 18	10	8	10	7	7	8	12	21	15	8	5	8	8	8	9	11	22	27	35	39	23	15	S	9	5	39	14.1
Feb 19	11	10	10	9	10	20	14	22	21	19	8	8	4	5	5	5	5	8	14	20	14	S	7	7	4	22	11.1
Feb 20	7	9	9	9	11	10	16	24	11	9	8	15	9	18	27	16	8	14	17	17	S	23	26	19	7	27	14.4
Feb 21	19	17	15	18	14	10	8	10	20	11	7	4	4	3	3	4	4	4	6	S	6	6	5	4	3	20	8.8
Feb 22	5	5	4	5	6	8	7	6	14	3	4	3	3	3	3	4	5	6	S	3	4	5	4	4	3	14	5.0
Feb 23	3	3	2	2	3	3	4	7	10	7	4	2	1	1	2	3	4	S	4	2	2	3	2	2	1	10	3.3
Feb 24	1	2	2	2	2	2	3	4	4	4	3	3	2	3	3	4	S	3	3	3	4	7	4	4	1	7	3.1
Feb 25	2	3	4	4	5	4	2	7	4	3	2	3	3	3	3	S	2	2	1	1	1	1	1	1	1	7	2.7
Feb 26	1	1	1	1	1	1	2	2	4	3	4	4	4	4	S	5	4	6	7	5	9	5	3	5	1	9	3.6
Feb 27	8	18	19	10	4	5	10	10	9	3	3	2	3	S	2	3	2	4	9	8	4	4	4	6	2	19	6.5
Feb 28	7	6	5	6	7	8	7	8	5	4	3	3	S	3	2	4	4	4	4	3	3	3	3	3	2	8	4.6
Feb 29	4	3	3	4	4	4	4	5	5	5	3	S	3	3	3	3	4	4	3	3	3	4	4	4	3	5	3.7
Diurnal Maximum	19	18	19	18	14	20	19	31	25	26	11	15	10	18	27	16	22	27	35	39	23	23	26	19			
Diurnal Average	5.8	5.8	5.7	5.6	5.8	6.6	7.2	9.4	9.3	7.0	4.5	4.6	4.2	4.2	5.3	5.1	6.0	7.8	8.3	7.8	7.0	6.9	6.4	6.1			

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.



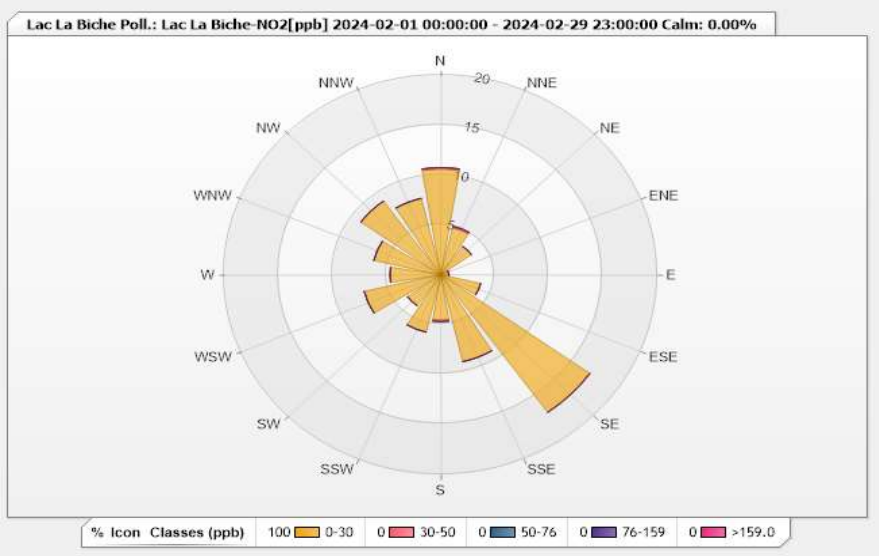


Station: Lac La Biche Poll.: Lac La Biche-NO2[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 94.97% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	10.59	0.15	0	0	0	10.74
NNE	4.84	0.15	0	0	0	4.99
NE	3.48	0	0	0	0	3.48
ENE	0.76	0	0	0	0	0.76
E	0.76	0	0	0	0	0.76
ESE	3.78	0	0	0	0	3.78
SE	16.94	0	0	0	0	16.94
SSE	8.93	0	0	0	0	8.93
S	4.54	0.15	0	0	0	4.69
SSW	5.9	0	0	0	0	5.9
SW	3.78	0	0	0	0	3.78
WSW	7.26	0	0	0	0	7.26
W	4.69	0	0	0	0	4.69
WNW	6.35	0	0	0	0	6.35
NW	9.08	0	0	0	0	9.08
NNW	7.87	0	0	0	0	7.87
Summary	100	0.45	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

OZONE (O_3) in ppb

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

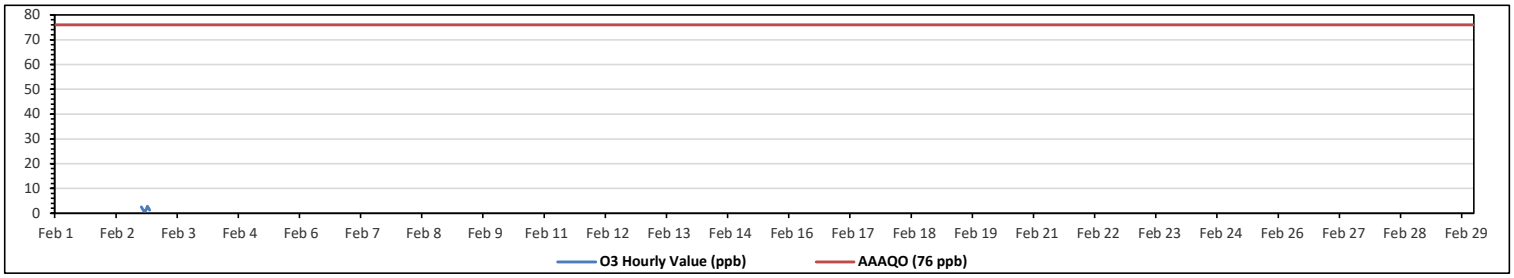
Number of 1-Hour Exceedances: 0

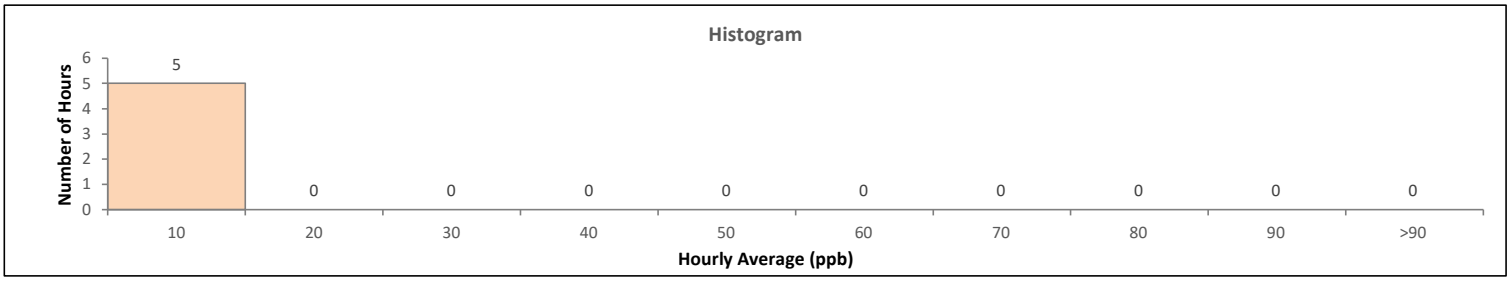
Maximum Hourly Value:	2.8	ppb	on Feb 2 at hr 21	Hours in Service:	696
Maximum Daily Value:	NA	ppb	NA	Hours of Data:	5
Minimum Hourly Value:	0.9	ppb	on Feb 2 at hr 20	Hours of Missing Data:	686
Minimum Daily Value:	0.0	ppb	NA	Hours of Calibration:	5
Monthly Average:	NA	ppb		Operational Uptime:	1.4

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	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 2	X	X	X	X	X	X	X	X	X	X	X	X	X	C	C	C	C	C	2.6	1	0.9	2.8	1.3	X	0.9	2.8	NA
Feb 3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	-	-	
Feb 4	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	X	X	X	X	X	X	X	-	-	
Feb 5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 18	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 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	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Feb 22	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 23	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 24	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 25	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 26	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 27	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 28	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 29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
Diurnal Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	1.0	0.9	2.8	1.3	0.0			
Diurnal Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2.6	1.0	0.9	2.8	1.3	#DIV/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.



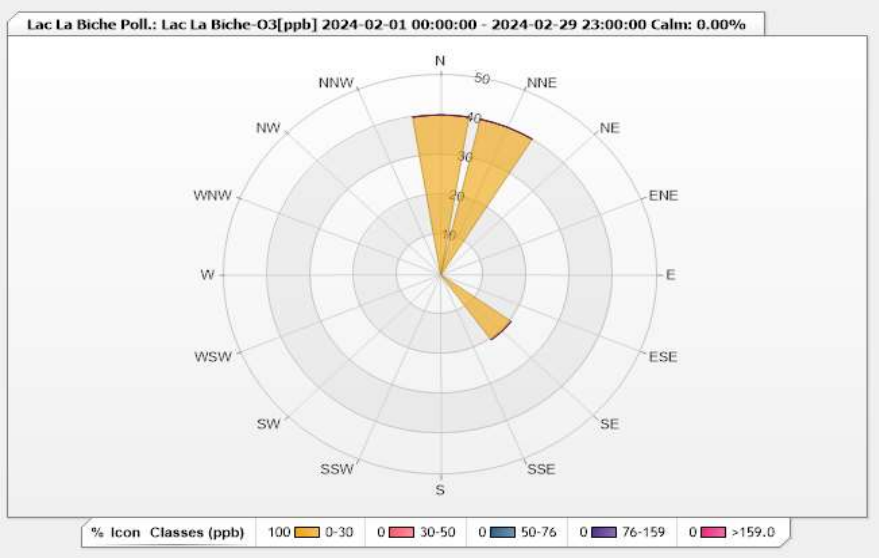


Station: Lac La Biche Poll.: Lac La Biche-O3[ppb] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 0.72% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	40	0	0	0	0	40
NNE	40	0	0	0	0	40
NE	0	0	0	0	0	0
ENE	0	0	0	0	0	0
E	0	0	0	0	0	0
ESE	0	0	0	0	0	0
SE	20	0	0	0	0	20
SSE	0	0	0	0	0	0
S	0	0	0	0	0	0
SSW	0	0	0	0	0	0
SW	0	0	0	0	0	0
WSW	0	0	0	0	0	0
W	0	0	0	0	0	0
WNW	0	0	0	0	0	0
NW	0	0	0	0	0	0
NNW	0	0	0	0	0	0
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

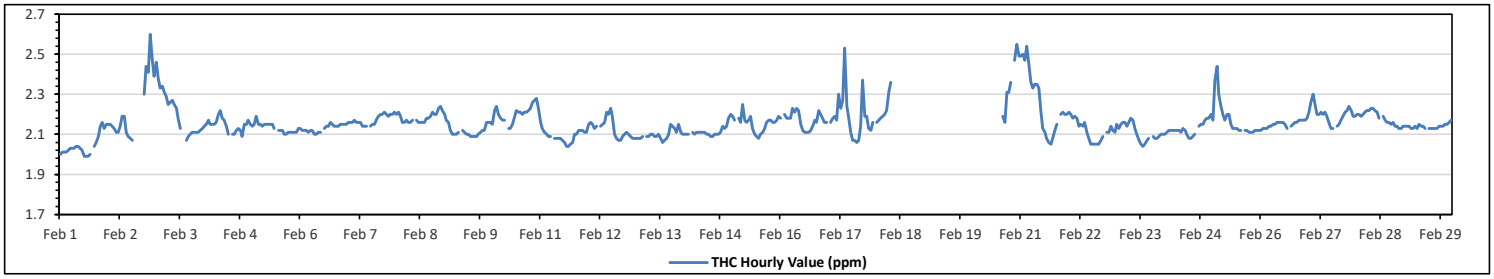
TOTAL HYDROCARBONS (THC) in ppm

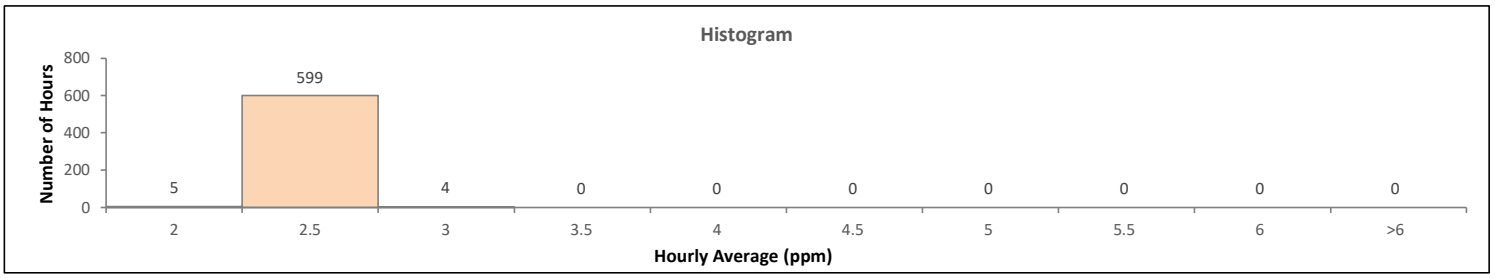
Maximum Hourly Value:	2.60	ppm	on Feb 2 at hr 21	Hours in Service:	696	
Maximum Daily Value:	2.26	ppm	on Feb 21	Hours of Data:	608	
Minimum Hourly Value:	1.99	ppm	on Feb 1 at hr 12	Hours of Missing Data:	56	
Minimum Daily Value:	2.04	ppm	on Feb 1	Hours of Calibration:	32	
Monthly Average:	2.16	ppm		Operational Uptime:	92.0	

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	2.00	2.01	2.01	2.01	2.02	2.03	2.03	2.03	2.04	2.04	2.03	2.02	1.99	1.99	1.99	2.00	S	2.04	2.06	2.09	2.14	2.16	2.13	2.15	1.99	2.16	2.04
Feb 2	2.15	2.15	2.14	2.13	2.11	2.11	2.14	2.19	2.19	2.11	2.09	2.08	2.07	C	C	C	C	C	2.30	2.44	2.41	**2.60**	2.48	2.39	2.07	**2.60**	2.23
Feb 3	2.46	2.38	2.33	2.34	2.31	2.29	2.25	2.26	2.27	2.25	2.23	2.18	2.13	Y	S	2.07	2.09	2.10	2.11	2.11	2.11	2.11	2.12	2.13	2.07	2.46	2.21
Feb 4	2.14	2.15	2.17	2.15	2.15	2.15	2.16	2.20	2.22	2.18	2.17	2.14	2.10	S	2.10	2.10	2.12	2.13	2.12	2.09	2.15	2.15	2.17	2.15	2.09	2.22	2.15
Feb 5	2.14	2.15	2.19	2.15	2.15	2.14	2.15	2.15	2.15	2.15	2.15	2.13	S	2.12	2.12	2.12	2.10	2.10	2.11	2.11	2.11	2.11	2.11	2.13	2.10	2.19	2.13
Feb 6	2.13	2.12	2.12	2.12	2.11	2.12	2.12	2.10	2.10	2.11	2.11	S	2.13	2.14	2.14	2.16	2.15	2.14	2.14	2.14	2.15	2.15	2.15	2.15	2.10	2.16	2.13
Feb 7	2.16	2.16	2.16	2.17	2.16	2.16	2.16	2.14	2.14	2.14	S	2.14	2.15	2.15	2.17	2.19	2.20	2.20	2.21	2.20	2.19	2.20	2.20	2.21	2.14	2.21	2.17
Feb 8	2.20	2.21	2.19	2.16	2.16	2.17	2.16	2.16	2.17	S	2.17	2.16	2.16	2.16	2.16	2.18	2.18	2.19	2.21	2.20	2.20	2.23	2.24	2.22	2.16	2.24	2.18
Feb 9	2.20	2.17	2.16	2.12	2.10	2.10	2.10	2.11	S	2.12	2.11	2.10	2.10	2.09	2.09	2.09	2.09	2.10	2.11	2.12	2.12	2.16	2.16	2.16	2.09	2.20	2.12
Feb 10	2.15	2.22	2.24	2.20	2.18	2.17	2.17	S	2.13	2.13	2.15	2.19	2.22	2.21	2.21	2.20	2.21	2.21	2.22	2.23	2.26	2.27	2.28	2.23	2.13	2.28	2.20
Feb 11	2.16	2.13	2.11	2.10	2.09	2.09	S	2.08	2.08	2.08	2.08	2.07	2.06	2.04	2.04	2.05	2.06	2.10	2.10	2.12	2.12	2.12	2.11	2.11	2.04	2.16	2.09
Feb 12	2.15	2.16	2.15	2.13	2.14	S	2.14	2.15	2.16	2.21	2.20	2.23	2.19	2.10	2.08	2.07	2.07	2.09	2.10	2.11	2.10	2.09	2.08	2.08	2.07	2.23	2.13
Feb 13	2.08	2.08	2.08	2.09	S	2.09	2.09	2.10	2.10	2.09	2.09	2.10	2.08	2.06	2.07	2.08	2.10	2.15	2.14	2.13	2.11	2.15	2.11	2.10	2.06	2.15	2.10
Feb 14	2.10	2.10	2.10	S	2.11	2.10	2.11	2.11	2.11	2.11	2.11	2.10	2.10	2.09	2.09	2.10	2.10	2.10	2.11	2.14	2.13	2.14	2.18	2.20	2.09	2.20	2.11
Feb 15	2.19	2.17	S	2.18	2.16	2.25	2.17	2.16	2.17	2.19	2.13	2.10	2.09	2.08	2.10	2.11	2.13	2.16	2.17	2.17	2.16	2.16	2.17	2.19	2.08	2.25	2.15
Feb 16	2.18	S	2.20	2.18	2.18	2.18	2.23	2.21	2.23	2.22	2.15	2.12	2.11	2.11	2.11	2.12	2.14	2.17	2.16	2.22	2.20	2.18	2.16	2.16	2.11	2.23	2.17
Feb 17	S	2.16	2.18	2.19	2.17	2.30	2.23	2.27	2.53	2.24	2.19	2.11	2.07	2.07	2.06	2.07	2.14	2.37	2.19	2.19	2.13	2.12	2.16	S	2.06	2.53	2.19
Feb 18	2.16	2.17	2.18	2.19	2.20	2.22	2.31	2.36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2.16	2.36	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	NRM	2.19	2.16	2.31	2.31	2.36	S	2.47	2.55	2.49	2.16	2.55	NA
Feb 21	2.49	2.50	2.47	2.54	2.46	2.36	2.33	2.35	2.35	2.33	2.22	2.13	2.11	2.08	2.06	2.05	2.08	2.12	2.15	S	2.20	2.21	2.20	2.20	2.05	2.54	**2.26**
Feb 22	2.21	2.20	2.18	2.19	2.18	2.14	2.15	2.14	2.16	2.11	2.08	2.05	2.05	2.05	2.05	2.05	2.07	2.09	S	2.11	2.11	2.14	2.12	2.11	2.05	2.21	2.12
Feb 23	2.15	2.13	2.15	2.16	2.16	2.14	2.16	2.18	2.17	2.13	2.10	2.07	2.05	2.04	2.05	2.07	2.08	S	2.09	2.08	2.08	2.09	2.10	2.10	2.04	2.18	2.11
Feb 24	2.10	2.11	2.12	2.12	2.12	2.12	2.12	2.12	2.11	2.13	2.12	2.10	2.08	2.08	2.09	2.10	S	2.14	2.15	2.15	2.17	2.18	2.18	2.20	2.08	2.20	2.13
Feb 25	2.17	2.37	2.44	2.30	2.24	2.20	2.17	2.20	2.20	2.15	2.13	2.13	2.13	2.12	2.12	S	2.12	2.12	2.11	2.11	2.11	2.12	2.12	2.12	2.11	2.44	2.17
Feb 26	2.12	2.13	2.13	2.13	2.14	2.14	2.15	2.15	2.16	2.16	2.16	2.16	2.15	2.13	S	2.14	2.15	2.16	2.16	2.17	2.17	2.17	2.17	2.18	2.12	2.18	2.15
Feb 27	2.21	2.26	2.30	2.25	2.20	2.20	2.21	2.20	2.21	2.19	2.16	2.13	2.13	S	2.14	2.15	2.17	2.19	2.21	2.22	2.24	2.22	2.19	2.19	2.13	2.30	2.20
Feb 28	2.20	2.20	2.19	2.20	2.21	2.22	2.22	2.23	2.23	2.22	2.21	2.18	S	2.19	2.17	2.16	2.16	2.15	2.16	2.14	2.14	2.13	2.13	2.14	2.13	2.23	2.18
Feb 29	2.14	2.14	2.14	2.13	2.13	2.14	2.13	2.15	2.14	2.14	2.13	S	2.13	2.13	2.13	2.13	2.13	2.14	2.14	2.14	2.15	2.15	2.16	2.17	2.13	2.17	2.14
Diurnal Maximum	2.49	2.50	2.47	2.54	2.46	2.36	2.33	2.36	2.53	2.33	2.23	2.23	2.22	2.21	2.21	2.20	2.21	2.37	2.31	2.44	2.41	2.60	2.55	2.49			
Diurnal Average	2.17	2.18	2.19	2.18	2.17	2.17	2.17	2.17	2.18	2.16	2.14	2.12	2.11	2.10	2.10	2.11	2.13	2.15	2.16	2.17	2.16	2.18	2.18	2.18			

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.



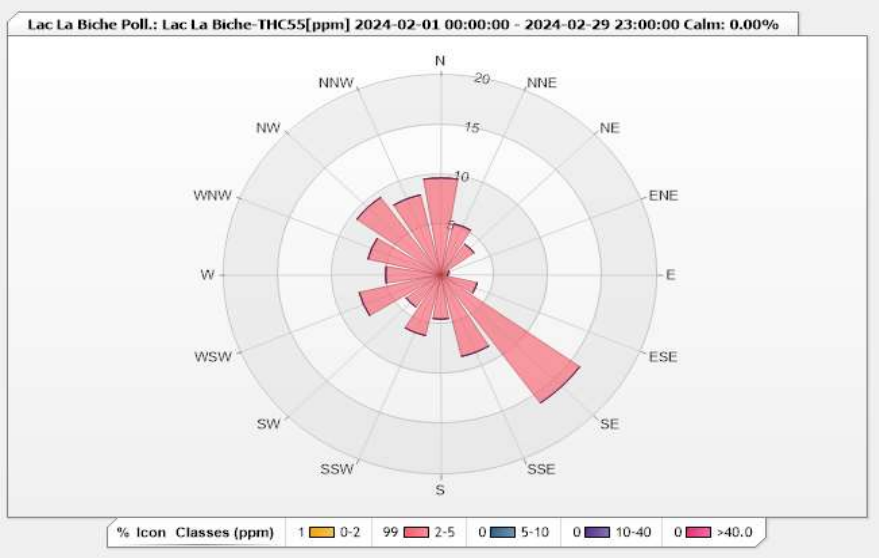


Station: Lac La Biche Poll.: Lac La Biche-THC55[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 87.36% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0	9.7	0	0	0	9.7
NNE	0	5.26	0	0	0	5.26
NE	0	3.78	0	0	0	3.78
ENE	0	0.82	0	0	0	0.82
E	0	0.66	0	0	0	0.66
ESE	0.16	3.29	0	0	0	3.45
SE	0.49	15.3	0	0	0	15.79
SSE	0	8.39	0	0	0	8.39
S	0	4.44	0	0	0	4.44
SSW	0	6.25	0	0	0	6.25
SW	0	3.95	0	0	0	3.95
WSW	0	7.73	0	0	0	7.73
W	0	5.1	0	0	0	5.1
WNW	0	6.91	0	0	0	6.91
NW	0	9.54	0	0	0	9.54
NNW	0	8.22	0	0	0	8.22
Summary	0.65	99.34	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

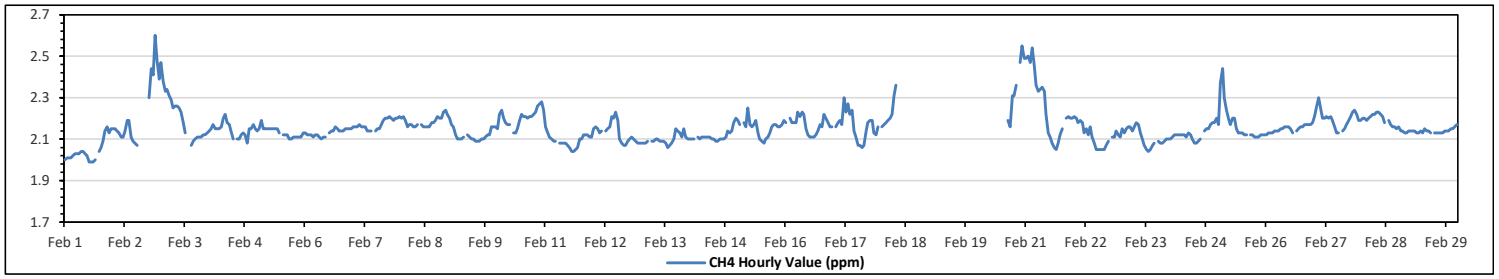
METHANE (CH4) in ppm

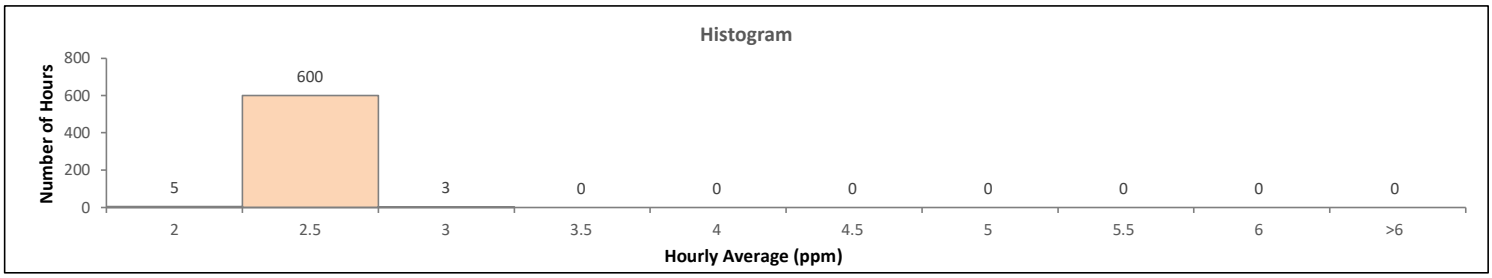
Maximum Hourly Value:	2.60	ppm	on Feb 2 at hr 21	Hours in Service:	696	
Maximum Daily Value:	2.26	ppm	on Feb 21	Hours of Data:	608	
Minimum Hourly Value:	1.99	ppm	on Feb 1 at hr 12	Hours of Missing Data:	56	
Minimum Daily Value:	2.04	ppm	on Feb 1	Hours of Calibration:	32	
Monthly Average:	2.16	ppm		Operational Uptime:	92.0	

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	2.00	2.01	2.01	2.01	2.02	2.03	2.03	2.03	2.04	2.04	2.03	2.02	1.99	1.99	1.99	2.00	S	2.04	2.06	2.09	2.14	2.16	2.13	2.15	1.99	2.16	2.04
Feb 2	2.15	2.15	2.14	2.13	2.11	2.11	2.14	2.19	2.19	2.11	2.09	2.08	2.07	C	C	C	C	C	2.30	2.44	2.41	**2.60**	2.48	2.39	2.07	**2.60**	2.23
Feb 3	2.47	2.38	2.33	2.34	2.31	2.29	2.25	2.26	2.26	2.25	2.23	2.18	2.13	Y	S	2.07	2.09	2.10	2.11	2.11	2.11	2.12	2.12	2.13	2.07	2.47	2.21
Feb 4	2.14	2.15	2.17	2.15	2.15	2.15	2.16	2.20	2.22	2.18	2.17	2.14	2.10	S	2.10	2.10	2.12	2.13	2.12	2.08	2.15	2.15	2.17	2.15	2.08	2.22	2.15
Feb 5	2.14	2.15	2.19	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.13	S	2.12	2.12	2.12	2.10	2.10	2.11	2.11	2.11	2.11	2.11	2.13	2.10	2.19	2.13
Feb 6	2.13	2.12	2.12	2.12	2.11	2.12	2.12	2.11	2.10	2.11	2.11	S	2.13	2.14	2.14	2.16	2.15	2.14	2.14	2.14	2.15	2.15	2.15	2.15	2.10	2.16	2.13
Feb 7	2.16	2.16	2.16	2.17	2.16	2.16	2.16	2.14	2.14	2.14	S	2.14	2.15	2.15	2.17	2.19	2.20	2.20	2.21	2.20	2.19	2.20	2.20	2.21	2.14	2.21	2.17
Feb 8	2.20	2.21	2.19	2.16	2.17	2.17	2.16	2.16	2.17	S	2.17	2.16	2.16	2.16	2.16	2.18	2.18	2.19	2.21	2.20	2.20	2.23	2.24	2.22	2.16	2.24	2.18
Feb 9	2.20	2.17	2.16	2.12	2.10	2.10	2.10	2.11	S	2.12	2.11	2.10	2.10	2.09	2.09	2.09	2.10	2.10	2.11	2.12	2.12	2.16	2.16	2.16	2.09	2.20	2.12
Feb 10	2.15	2.22	2.24	2.20	2.18	2.17	2.17	S	2.13	2.13	2.15	2.19	2.22	2.21	2.21	2.20	2.21	2.21	2.22	2.23	2.26	2.27	2.28	2.24	2.13	2.28	2.20
Feb 11	2.16	2.13	2.11	2.10	2.09	2.09	S	2.08	2.08	2.08	2.08	2.07	2.06	2.04	2.04	2.05	2.06	2.10	2.10	2.12	2.12	2.12	2.11	2.11	2.04	2.16	2.09
Feb 12	2.15	2.16	2.15	2.13	2.14	S	2.14	2.15	2.16	2.21	2.20	2.23	2.19	2.10	2.08	2.07	2.07	2.09	2.10	2.11	2.10	2.09	2.08	2.08	2.07	2.23	2.13
Feb 13	2.08	2.08	2.08	2.09	S	2.09	2.09	2.10	2.10	2.09	2.09	2.09	2.08	2.06	2.07	2.08	2.10	2.15	2.14	2.13	2.11	2.15	2.11	2.10	2.06	2.15	2.10
Feb 14	2.10	2.10	2.10	S	2.11	2.10	2.11	2.11	2.11	2.11	2.11	2.10	2.10	2.09	2.09	2.10	2.10	2.10	2.11	2.14	2.13	2.14	2.18	2.20	2.09	2.20	2.11
Feb 15	2.19	2.17	S	2.18	2.16	2.25	2.17	2.16	2.17	2.19	2.13	2.10	2.09	2.08	2.10	2.11	2.13	2.16	2.17	2.17	2.16	2.16	2.17	2.19	2.08	2.25	2.15
Feb 16	2.18	S	2.20	2.18	2.18	2.18	2.23	2.21	2.23	2.22	2.15	2.12	2.11	2.11	2.11	2.12	2.14	2.17	2.16	2.22	2.20	2.18	2.16	2.16	2.11	2.23	2.17
Feb 17	S	2.16	2.18	2.19	2.17	2.30	2.23	2.27	2.22	2.24	2.14	2.11	2.07	2.07	2.06	2.07	2.14	2.18	2.19	2.19	2.13	2.12	2.16	S	2.06	2.30	2.16
Feb 18	2.16	2.17	2.18	2.19	2.20	2.22	2.31	2.36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2.16	2.36	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	NRM	2.19	2.16	2.31	2.31	2.36	S	2.47	2.55	2.49	2.16	2.55	NA
Feb 21	2.49	2.50	2.47	2.54	2.46	2.36	2.33	2.34	2.35	2.33	2.22	2.13	2.11	2.08	2.06	2.05	2.08	2.12	2.15	S	2.20	2.21	2.20	2.20	2.05	2.54	**2.26**
Feb 22	2.21	2.20	2.18	2.19	2.18	2.13	2.15	2.12	2.16	2.11	2.08	2.05	2.05	2.05	2.05	2.05	2.07	2.09	S	2.11	2.11	2.14	2.12	2.11	2.05	2.21	2.12
Feb 23	2.15	2.13	2.15	2.16	2.16	2.14	2.16	2.18	2.17	2.13	2.10	2.07	2.05	2.04	2.05	2.07	2.08	S	2.09	2.08	2.08	2.09	2.10	2.10	2.04	2.18	2.11
Feb 24	2.10	2.11	2.12	2.12	2.12	2.12	2.12	2.12	2.11	2.13	2.12	2.10	2.08	2.08	2.09	2.10	S	2.14	2.15	2.15	2.17	2.18	2.18	2.20	2.08	2.20	2.13
Feb 25	2.17	2.37	2.44	2.30	2.24	2.20	2.17	2.20	2.20	2.15	2.13	2.13	2.13	2.12	2.12	S	2.12	2.12	2.11	2.11	2.11	2.12	2.12	2.12	2.11	2.44	2.17
Feb 26	2.12	2.13	2.13	2.13	2.14	2.14	2.14	2.15	2.15	2.16	2.16	2.16	2.15	2.13	S	2.14	2.15	2.16	2.16	2.17	2.17	2.17	2.17	2.18	2.12	2.18	2.15
Feb 27	2.21	2.26	2.30	2.25	2.20	2.20	2.21	2.20	2.21	2.19	2.16	2.13	2.13	S	2.14	2.15	2.17	2.19	2.21	2.23	2.24	2.22	2.19	2.19	2.13	2.30	2.20
Feb 28	2.20	2.20	2.19	2.20	2.21	2.22	2.22	2.23	2.23	2.22	2.21	2.18	S	2.19	2.17	2.16	2.16	2.15	2.16	2.14	2.14	2.13	2.13	2.14	2.13	2.23	2.18
Feb 29	2.14	2.14	2.14	2.13	2.13	2.14	2.13	2.15	2.14	2.14	2.13	S	2.13	2.13	2.13	2.13	2.13	2.14	2.14	2.14	2.15	2.15	2.16	2.17	2.13	2.17	2.14
Diurnal Maximum	2.49	2.50	2.47	2.54	2.46	2.36	2.33	2.36	2.35	2.33	2.23	2.23	2.22	2.21	2.21	2.20	2.21	2.31	2.31	2.44	2.41	2.60	2.55	2.49			
Diurnal Average	2.18	2.18	2.19	2.18	2.17	2.17	2.17	2.17	2.17	2.16	2.14	2.12	2.11	2.10	2.10	2.11	2.13	2.14	2.16	2.17	2.16	2.18	2.18	2.18			

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.



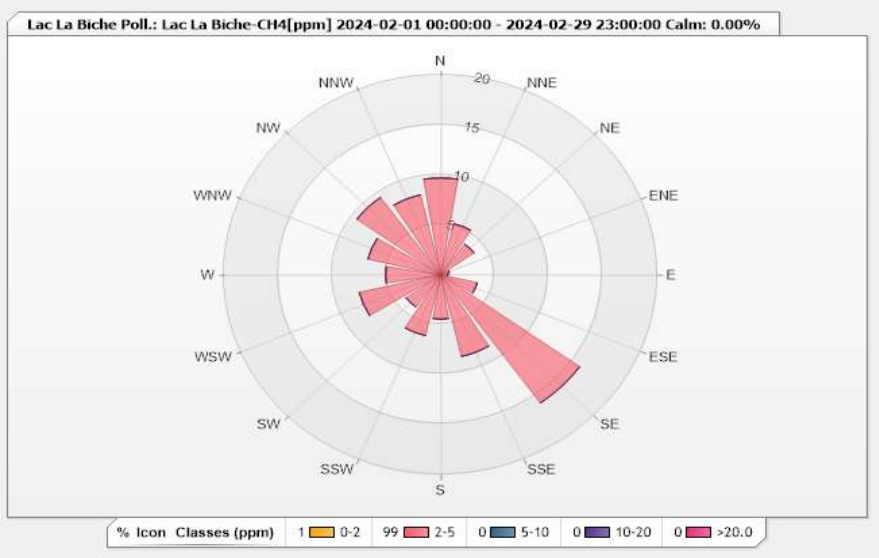


Station: Lac La Biche Poll.: Lac La Biche-CH4[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 87.36% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0	9.7	0	0	0	9.7
NNE	0	5.26	0	0	0	5.26
NE	0	3.78	0	0	0	3.78
ENE	0	0.82	0	0	0	0.82
E	0	0.66	0	0	0	0.66
ESE	0.16	3.29	0	0	0	3.45
SE	0.49	15.3	0	0	0	15.79
SSE	0	8.39	0	0	0	8.39
S	0	4.44	0	0	0	4.44
SSW	0	6.25	0	0	0	6.25
SW	0	3.95	0	0	0	3.95
WSW	0	7.73	0	0	0	7.73
W	0	5.1	0	0	0	5.1
WNW	0	6.91	0	0	0	6.91
NW	0	9.54	0	0	0	9.54
NNW	0	8.22	0	0	0	8.22
Summary	0.65	99.34	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

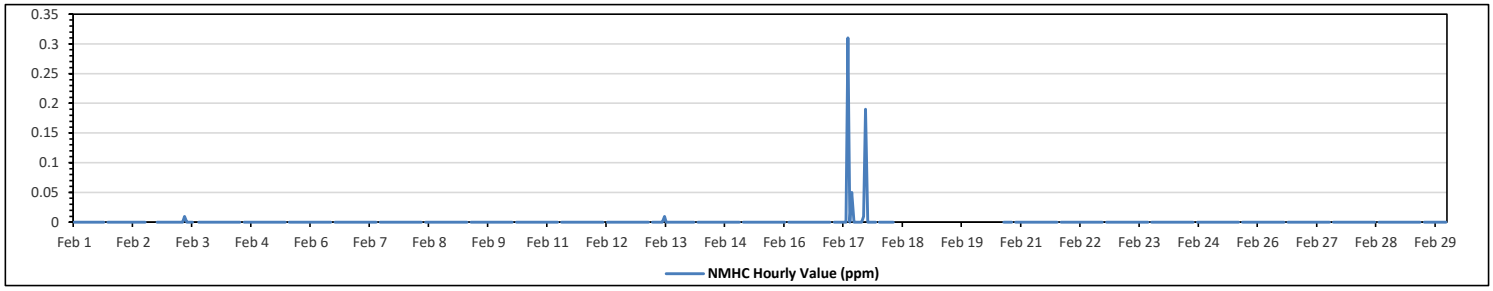
NON-METHANE HYDROCARBONS (NMHC) in ppm

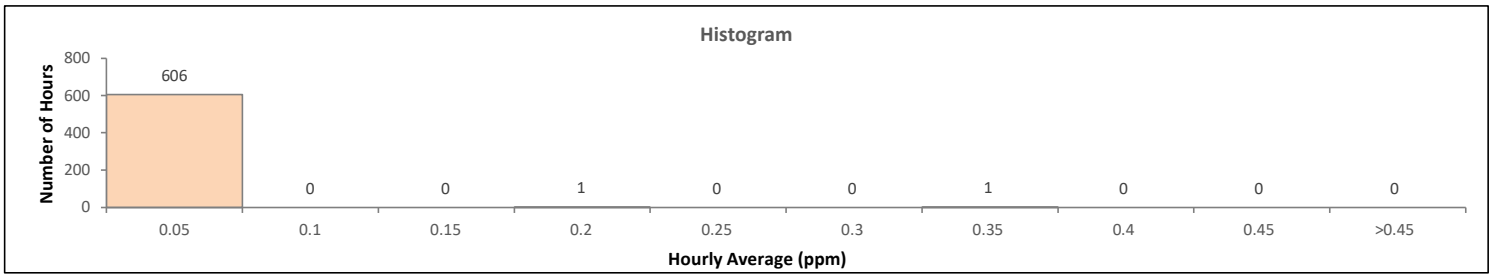
Maximum Hourly Value:	0.31	ppm	on Feb 17 at hr 8	Hours in Service:	696
Maximum Daily Value:	0.03	ppm	on Feb 17	Hours of Data:	608
Minimum Hourly Value:	0.00	ppm	on Feb 1 at hr 0	Hours of Missing Data:	56
Minimum Daily Value:	0.00	ppm	on Feb 1	Hours of Calibration:	32
Monthly Average:	0.00	ppm		Operational Uptime:	92.0

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	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 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	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
Feb 3	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	Y	S	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 4	0.00	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 5	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 6	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 7	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 8	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 9	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 10	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 11	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 12	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 13	0.00	0.00	0.00	0.00	S	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	0.01	0.00
Feb 14	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 15	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 16	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 17	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.31**	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.01	0.19	0.00	0.00	0.00	0.00	0.00	S	0.00	**0.31**	**0.03**
Feb 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0.00	0.00	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	NRM	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	NA
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	0.00	0.00	0.00	S	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	0.00	0.00	0.00	S	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	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 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	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 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	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 26	0.00	0.00	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 27	0.00	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 28	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 29	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
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.01	0.19	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	0.01	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			

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.



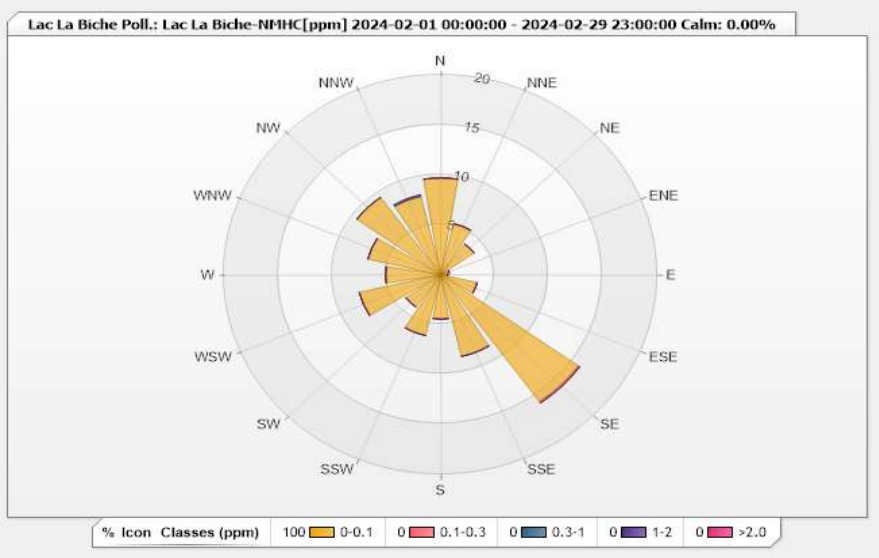


Station: Lac La Biche Poll.: Lac La Biche-NMHC[ppm] Monthly: 02-2024

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

Calm: 0.00% Valid Data: 87.36% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	9.7	0	0	0	0	9.7
NNE	5.26	0	0	0	0	5.26
NE	3.78	0	0	0	0	3.78
ENE	0.82	0	0	0	0	0.82
E	0.66	0	0	0	0	0.66
ESE	3.45	0	0	0	0	3.45
SE	15.63	0.16	0	0	0	15.79
SSE	8.39	0	0	0	0	8.39
S	4.44	0	0	0	0	4.44
SSW	6.25	0	0	0	0	6.25
SW	3.95	0	0	0	0	3.95
WSW	7.73	0	0	0	0	7.73
W	5.1	0	0	0	0	5.1
WNW	6.91	0	0	0	0	6.91
NW	9.54	0	0	0	0	9.54
NNW	8.06	0	0.16	0	0	8.22
Summary	100	0.16	0.16	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

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

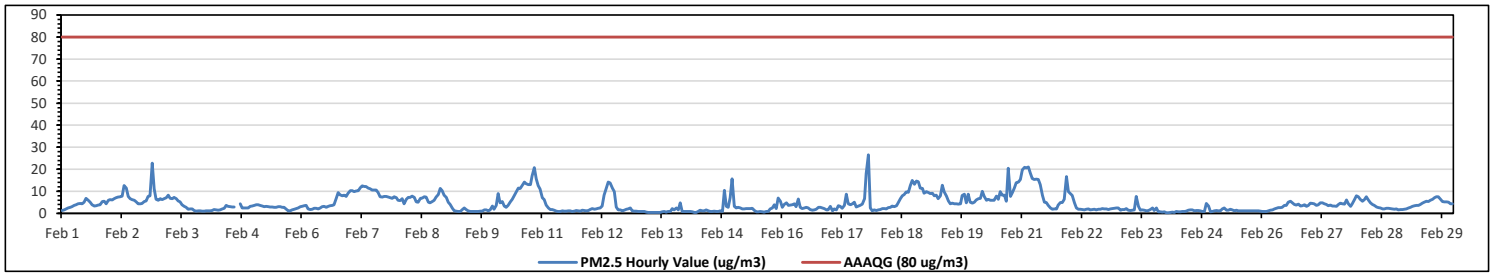
Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0

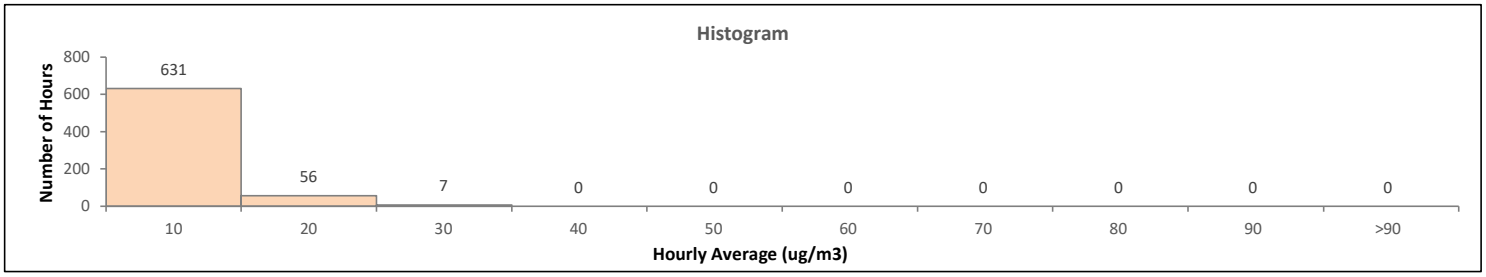
Maximum Hourly Value:	27	µg/m^3 on Feb 17 at hr 19	Hours in Service:	696
Maximum Daily Value:	10.5	µg/m^3 on Feb 21	Hours of Data:	694
Minimum Hourly Value:	0	µg/m^3 on Feb 24 at hr 0	Hours of Missing Data:	0
Minimum Daily Value:	1	µg/m^3 on Feb 13	Hours of Calibration:	2
Monthly Average:	4.4	µg/m^3	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	1	2	2	2	3	3	4	4	4	5	4	5	7	6	5	4	3	3	4	4	5	5	4	6	1	7	4.0
Feb 2	6	6	7	7	7	8	8	13	11	8	7	6	6	5	4	4	5	5	6	8	8	23	11	6	4	23	7.7
Feb 3	6	7	6	7	7	8	7	7	7	7	6	5	4	3	3	2	2	2	1	1	1	1	1	1	1	8	4.2
Feb 4	1	1	1	1	2	2	1	2	2	2	4	3	3	3	3	C	C	4	3	2	2	2	3	3	1	4	2.3
Feb 5	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	2	1	1	2	2	2	3	3	1	4	2.7
Feb 6	3	3	4	2	2	2	2	2	2	3	3	3	3	3	3	4	4	7	9	8	8	8	8	9	2	9	4.4
Feb 7	10	10	10	10	10	12	12	12	12	12	11	11	11	11	9	8	7	8	8	7	7	7	8	7	7	12	9.5
Feb 8	6	6	7	4	6	7	7	8	7	5	5	7	7	8	7	5	5	5	6	7	9	11	10	8	4	11	6.8
Feb 9	7	5	4	2	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	2	2	1	2	3	1	7	1.8
Feb 10	2	4	9	5	5	3	3	4	5	6	8	10	11	11	13	14	14	13	13	17	21	16	13	11	2	21	9.5
Feb 11	7	6	4	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	1.8
Feb 12	2	2	2	2	2	2	3	8	11	14	14	12	10	3	2	2	1	1	2	2	2	1	1	1	1	14	4.3
Feb 13	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	2	2	3	2	5	1	1	0	5	**1.0**
Feb 14	1	1	1	1	0	0	1	1	1	1	2	1	1	1	1	1	1	1	1	10	3	3	7	16	0	16	2.3
Feb 15	3	3	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	2	4	2	7	6	1	7	2.2
Feb 16	3	4	5	4	4	4	4	3	7	3	2	3	3	3	2	1	2	2	3	3	2	2	2	2	1	7	2.9
Feb 17	3	1	2	2	3	3	2	4	9	4	4	4	5	3	3	4	4	7	18	**27**	2	1	2	1	1	**27**	4.9
Feb 18	2	2	2	2	2	3	3	3	3	3	5	7	8	9	10	10	13	15	13	15	14	12	11	9	2	15	7.2
Feb 19	10	9	9	9	8	8	7	8	13	10	8	6	4	5	4	4	4	4	8	9	5	9	5	5	4	13	7.1
Feb 20	5	6	7	7	10	8	6	6	6	6	6	8	6	10	8	8	5	20	8	9	12	14	14	15	5	20	8.8
Feb 21	20	21	21	21	18	16	15	16	15	13	8	5	5	4	3	2	2	2	4	5	5	6	17	10	2	21	**10.5**
Feb 22	9	8	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	9	2.5
Feb 23	2	1	2	2	2	1	1	1	2	8	3	1	2	1	1	1	2	2	1	2	1	1	1	1	1	8	1.8
Feb 24	0	0	0	1	0	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	5	3	1	1	**0**	5	1.1
Feb 25	1	1	1	1	2	2	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.3
Feb 26	1	1	1	1	1	2	2	2	3	3	3	4	4	5	5	5	4	4	4	3	3	4	3	4	1	5	2.9
Feb 27	5	5	4	4	4	5	5	4	4	3	4	3	3	3	4	5	4	4	6	4	3	4	6	8	3	8	4.4
Feb 28	7	6	6	6	8	6	5	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	3.4
Feb 29	2	3	3	3	3	4	4	4	5	5	6	5	6	6	7	7	8	6	5	5	5	5	4	4	2	8	4.8
Diurnal Maximum	20	21	21	21	18	16	15	16	15	14	14	12	11	11	13	14	14	20	18	27	21	23	17	16			
Diurnal Average	4.5	4.4	4.4	4.0	4.2	4.1	3.9	4.4	5.0	4.7	4.3	4.2	4.1	3.9	3.8	3.6	3.6	4.5	4.6	5.6	4.8	5.3	5.1	5.1			

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.





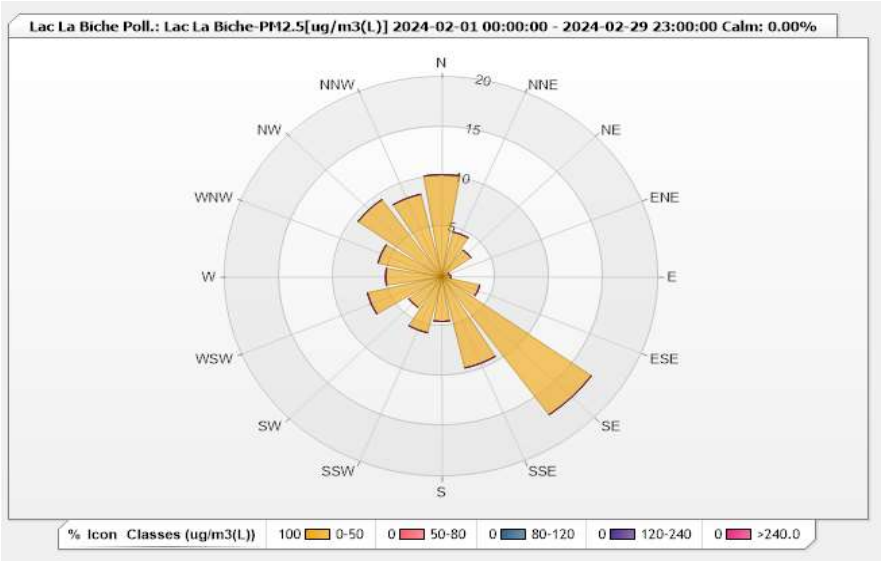
Station: Lac La Biche Poll.: Lac La Biche-PM2.5[ug/m3(L)] Monthly: 02-2024

)]

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

Calm: 0.00% Valid Data: 99.71% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	10.23	0	0	0	0	10.23
NNE	4.61	0	0	0	0	4.61
NE	3.31	0	0	0	0	3.31
ENE	0.72	0	0	0	0	0.72
E	0.86	0	0	0	0	0.86
ESE	3.6	0	0	0	0	3.6
SE	17	0	0	0	0	17
SSE	9.37	0	0	0	0	9.37
S	4.47	0	0	0	0	4.47
SSW	5.76	0	0	0	0	5.76
SW	3.75	0	0	0	0	3.75
WSW	7.06	0	0	0	0	7.06
W	5.19	0	0	0	0	5.19
WNW	6.05	0	0	0	0	6.05
NW	9.51	0	0	0	0	9.51
NNW	8.5	0	0	0	0	8.5
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

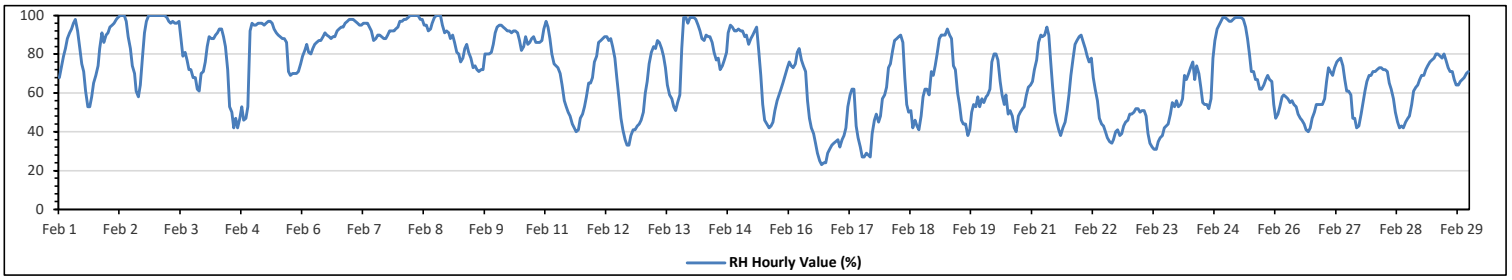
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100	%	on Feb 2 at hr 6	Hours in Service:	696	
Maximum Daily Value:	97.2	%	on Feb 8	Hours of Data:	696	
Minimum Hourly Value:	23	%	on Feb 16 at hr 16	Hours of Missing Data:	0	
Minimum Daily Value:	42.2	%	on Feb 17	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	68	73	79	83	88	91	93	96	98	92	83	75	71	61	53	53	58	65	69	74	83	91	86	90	53	98	78.0
Feb 2	91	94	95	96	98	99	**100**	**100**	**100**	97	89	83	74	70	61	58	64	79	91	97	**100**	**100**	**100**	**100**	58	**100**	89.0
Feb 3	**100**	**100**	**100**	**100**	**100**	99	97	96	97	96	96	97	88	79	81	77	72	72	68	68	62	61	70	71	61	**100**	85.3
Feb 4	76	84	89	88	88	90	91	93	93	89	84	72	53	50	42	47	42	47	53	46	47	53	92	96	42	96	71.0
Feb 5	95	95	96	96	96	95	96	97	97	96	93	91	90	89	88	88	86	71	69	70	70	70	71	75	69	97	86.7
Feb 6	79	82	85	81	80	83	85	86	87	87	89	91	90	89	88	89	89	92	93	94	94	96	97	98	79	98	88.5
Feb 7	98	98	97	96	95	95	96	96	96	94	92	87	88	90	90	89	88	88	90	92	92	92	93	94	87	98	92.8
Feb 8	97	97	98	98	99	**100**	**100**	**100**	**100**	**100**	98	98	95	95	92	93	96	99	**100**	**100**	**100**	95	91	92	91	**100**	**97.2**
Feb 9	91	88	90	86	81	80	76	78	83	85	81	78	73	74	72	71	72	72	80	80	80	81	85	91	71	91	80.3
Feb 10	94	95	95	94	93	92	92	91	92	92	91	87	82	84	89	85	86	88	89	86	86	86	87	93	82	95	89.5
Feb 11	97	94	88	80	75	74	73	70	64	56	53	50	48	44	42	40	41	47	49	53	58	65	65	68	40	97	62.3
Feb 12	76	79	86	87	88	89	89	87	88	84	78	68	57	47	41	36	33	33	38	41	41	43	44	46	33	89	62.5
Feb 13	50	60	66	75	81	84	83	87	86	83	79	73	64	59	57	53	51	55	59	83	99	99	96	99	50	99	74.2
Feb 14	99	99	98	95	92	88	87	90	89	89	86	81	77	78	72	74	77	81	91	95	94	92	92	93	72	99	87.9
Feb 15	92	92	89	90	85	88	90	92	94	81	69	54	46	44	42	43	45	51	56	59	62	65	69	73	42	94	69.6
Feb 16	76	74	73	75	81	83	77	74	71	56	47	42	39	34	29	25	**23**	24	24	29	31	33	34	35	**23**	83	49.5
Feb 17	36	32	36	38	42	53	59	62	62	43	37	32	27	27	29	28	27	39	46	49	45	48	57	59	27	62	**42.2**
Feb 18	63	73	75	82	87	88	89	90	86	68	54	50	51	42	46	43	41	48	58	62	62	59	71	69	41	90	64.9
Feb 19	74	80	88	90	90	90	93	90	88	74	72	60	54	46	44	44	38	41	50	54	53	58	53	57	38	93	65.9
Feb 20	55	58	59	62	76	80	80	77	66	59	54	59	49	51	48	42	40	48	50	52	53	59	63	64	40	80	58.5
Feb 21	66	72	77	86	90	89	90	94	90	76	63	50	45	41	38	42	45	51	59	69	78	85	87	89	38	94	69.7
Feb 22	90	86	83	79	76	78	68	62	56	47	44	43	40	37	35	34	36	40	41	38	39	43	45	46	34	90	53.6
Feb 23	49	49	50	52	52	50	51	51	48	39	34	32	31	31	35	37	38	42	43	44	49	55	53	56	31	56	44.6
Feb 24	53	54	57	69	67	70	73	76	67	74	70	63	55	54	54	52	57	78	87	93	95	97	99	99	52	99	71.4
Feb 25	98	97	97	98	99	99	99	99	98	94	88	80	71	71	67	67	62	62	64	67	69	67	66	54	54	99	80.5
Feb 26	47	49	53	58	59	58	57	55	56	54	53	49	47	46	44	41	40	42	47	50	54	54	54	54	40	59	50.9
Feb 27	57	66	73	71	69	73	76	77	78	74	67	61	61	59	47	47	42	43	49	55	61	66	69	69	42	78	62.9
Feb 28	71	71	72	73	73	72	72	71	65	62	57	50	45	42	43	42	45	47	48	54	61	63	64	67	42	73	59.6
Feb 29	69	69	72	74	76	77	78	80	80	79	78	80	77	73	71	71	67	64	64	66	67	68	70	71	64	80	72.5
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	98	98	95	95	92	93	96	99	100	100	100	100	100	100			
Diurnal Average	76.1	77.9	79.9	81.1	81.9	83.0	83.1	83.3	81.9	76.6	71.7	66.8	61.7	58.9	56.6	55.6	55.2	58.9	62.9	66.2	68.4	70.5	73.2	74.8			

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

Lac La Biche Station - February 2024

Summary of Hourly Averages

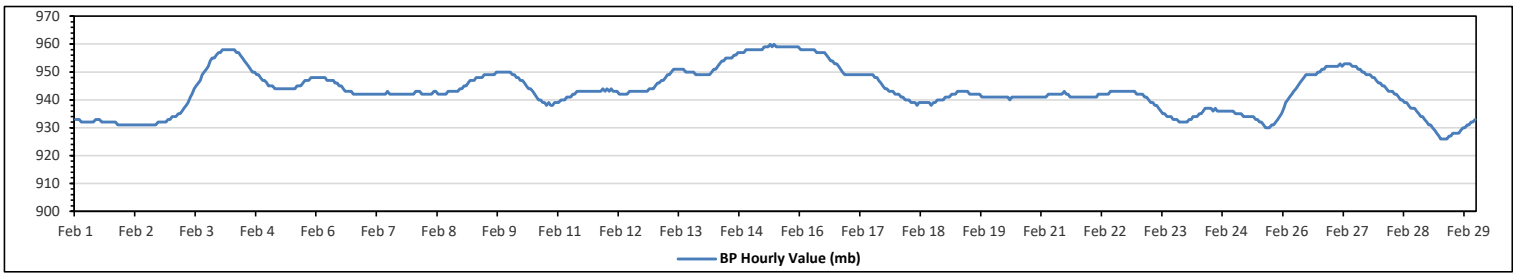
BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	960	mb	on Feb 15 at hr 9	Hours in Service:	696	
Maximum Daily Value:	959	mb	on Feb 15	Hours of Data:	696	
Minimum Hourly Value:	926	mb	on Feb 29 at hr 6	Hours of Missing Data:	0	
Minimum Daily Value:	929	mb	on Feb 29	Hours of Calibration:	0	
Monthly Average:	943	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	933	933	933	932	932	932	932	932	932	932	933	933	933	932	932	932	932	932	932	932	932	931	931	931	931	933	932
Feb 2	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	931	932	932	932	932	932	933	933	931	933	931
Feb 3	934	934	934	935	935	936	937	938	939	941	942	944	945	946	947	949	950	951	952	954	955	955	956	957	934	957	944
Feb 4	957	958	958	958	958	958	958	958	957	957	956	955	954	953	952	951	950	950	949	949	948	947	947	946	946	958	954
Feb 5	945	945	945	944	944	944	944	944	944	944	944	944	944	944	945	945	945	946	947	947	947	948	948	948	944	948	945
Feb 6	948	948	948	948	948	947	947	947	947	946	946	945	945	944	943	943	943	943	942	942	942	942	942	942	942	948	945
Feb 7	942	942	942	942	942	942	942	942	942	942	942	943	942	942	942	942	942	942	942	942	942	942	942	942	942	943	942
Feb 8	942	943	943	943	942	942	942	942	942	942	943	943	942	942	942	942	942	943	943	943	943	943	943	944	942	944	943
Feb 9	944	945	945	946	947	947	947	948	948	948	948	949	949	949	949	949	949	950	950	950	950	950	950	950	944	950	948
Feb 10	950	949	949	948	948	947	947	946	945	944	944	943	942	941	940	940	939	939	938	939	938	938	939	939	938	950	943
Feb 11	939	940	940	940	941	941	941	942	942	943	943	943	943	943	943	943	943	943	943	943	943	943	944	943	939	944	942
Feb 12	944	943	944	943	943	943	942	942	942	942	942	943	943	943	943	943	943	943	943	943	943	944	944	944	942	944	943
Feb 13	945	946	946	947	947	948	949	949	950	951	951	951	951	951	951	950	950	950	950	950	949	949	949	949	945	951	949
Feb 14	949	949	949	949	950	951	951	952	953	954	954	955	955	955	955	956	956	957	957	957	957	958	958	958	949	958	954
Feb 15	958	958	958	958	958	958	959	959	959	**960**	959	**960**	959	959	959	959	959	959	959	959	959	959	959	959	958	**960**	**959**
Feb 16	958	958	958	958	958	958	958	958	957	957	957	957	957	956	955	954	954	953	953	952	951	950	949	949	949	958	955
Feb 17	949	949	949	949	949	949	949	949	949	949	949	949	949	948	948	947	946	945	944	944	943	943	943	942	942	949	947
Feb 18	942	942	941	941	940	940	940	939	939	939	938	939	939	939	939	939	939	938	939	939	940	940	940	940	938	942	940
Feb 19	941	941	941	942	942	942	943	943	943	943	943	943	942	942	942	942	942	942	941	941	941	941	941	941	941	943	942
Feb 20	941	941	941	941	941	941	941	941	940	941	941	941	941	941	941	941	941	941	941	941	941	941	941	941	940	941	941
Feb 21	941	941	941	942	942	942	942	942	942	942	942	943	942	942	941	941	941	941	941	941	941	941	941	941	941	943	942
Feb 22	941	941	941	941	942	942	942	942	942	942	943	943	943	943	943	943	943	943	943	943	943	943	943	942	941	943	942
Feb 23	942	942	942	941	941	940	939	939	938	938	937	936	935	935	934	934	934	933	933	933	932	932	932	932	932	942	936
Feb 24	932	933	933	934	934	934	935	935	936	937	937	937	937	936	937	936	936	936	936	936	936	936	936	936	932	937	935
Feb 25	935	935	935	935	934	934	934	934	934	934	933	933	932	932	931	930	930	930	931	931	932	933	934	935	930	935	933
Feb 26	937	939	940	941	942	943	944	945	946	947	948	949	949	949	949	949	949	950	950	951	951	952	952	952	937	952	947
Feb 27	952	952	952	952	953	952	953	953	953	953	952	952	952	951	951	950	950	949	949	949	948	948	947	946	946	953	951
Feb 28	946	945	945	944	943	943	943	942	942	941	940	940	939	939	938	937	937	937	936	935	934	934	933	932	932	946	939
Feb 29	931	931	930	929	928	927	**926**	**926**	**926**	**926**	927	927	928	928	928	928	929	930	930	931	931	932	932	933	**926**	933	**929**
Diurnal Maximum	958	958	958	958	958	958	959	959	959	960	959	960	959	959	959	959	959	959	959	959	959	959	959	959			
Diurnal Average	943	943	943	943	943	943	943	943	943	944	944	944	944	943	943	943	943	943	943	943	943	943	943	943			

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 2024

Summary of Hourly Averages

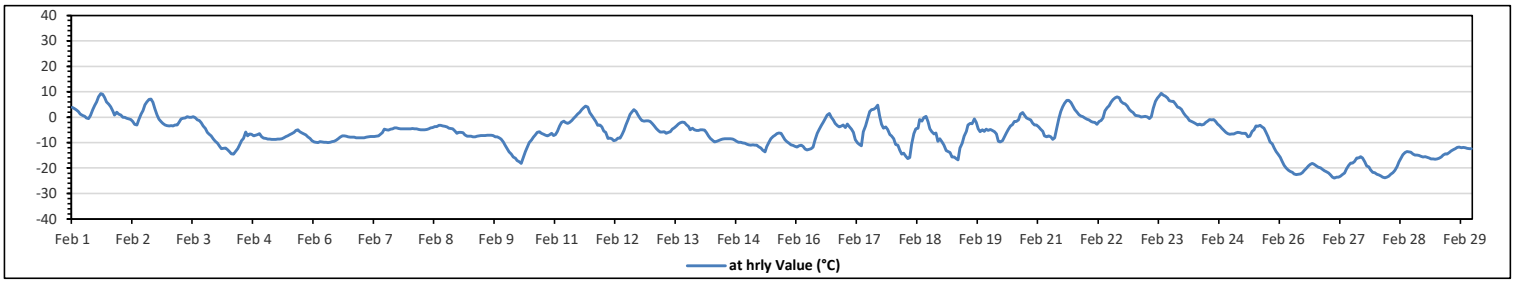
AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	9.4	°C	on Feb 23 at hr 13	Hours in Service:	696	
Maximum Daily Value:	4.0	°C	on Feb 23	Hours of Data:	696	
Minimum Hourly Value:	-23.9	°C	on Feb 27 at hr 3	Hours of Missing Data:	0	
Minimum Daily Value:	-20.2	°C	on Feb 26	Hours of Calibration:	0	
Monthly Average:	-6.4	°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	3.9	3.3	2.8	2.2	1.3	0.7	0.3	-0.2	-0.5	0.7	2.9	4.6	6	8	9.3	9.1	7.8	6	5.1	4.1	2.4	0.8	1.9	1.2	-0.5	9.3	3.5
Feb 2	0.8	0	0	-0.4	-0.7	-1	-1.6	-2.8	-3.1	-1	1.3	2.7	4.9	6	7	7.1	5.9	3.4	0.9	-0.8	-1.8	-2.5	-3.1	-3.3	-3.3	7.1	0.7
Feb 3	-3.4	-3.3	-3.4	-3	-3.1	-1.9	-0.7	-0.4	-0.3	0.2	0	0	0.2	-0.1	-1.1	-1.3	-2.2	-3.5	-4.4	-5.9	-6.7	-7.4	-8.6	-9.4	-9.4	0.2	-2.9
Feb 4	-10.2	-11.3	-12.3	-12.2	-12.1	-12.7	-13.5	-14.4	-14.6	-13.4	-12.4	-11.1	-9.3	-8.3	-5.8	-7.4	-6.6	-6.7	-7.4	-7.1	-6.8	-6.5	-7.8	-8.2	-14.6	-5.8	-9.9
Feb 5	-8.3	-8.6	-8.6	-8.7	-8.7	-8.7	-8.6	-8.6	-8.5	-8.1	-7.6	-7.3	-6.8	-6.5	-5.9	-5.3	-5	-5.7	-6.2	-6.6	-6.9	-7.7	-8.3	-9.2	-9.2	-5.0	-7.5
Feb 6	-9.7	-9.8	-10	-9.5	-9.7	-9.8	-9.8	-10	-9.9	-9.6	-9.4	-9.1	-8.5	-7.9	-7.4	-7.4	-7.5	-7.7	-7.9	-7.9	-7.9	-8	-8	-8	-10.0	-7.4	-8.8
Feb 7	-8.1	-8.1	-7.9	-7.7	-7.6	-7.6	-7.6	-7.5	-7.3	-6.7	-6.1	-4.7	-4.9	-5.1	-4.7	-4.5	-4.2	-4.1	-4.4	-4.6	-4.6	-4.5	-4.6	-4.6	-8.1	-4.1	-5.9
Feb 8	-4.5	-4.4	-4.5	-4.6	-4.8	-4.9	-4.9	-4.9	-4.8	-4.6	-4.2	-4	-3.7	-3.7	-3.2	-3.2	-3.4	-3.6	-3.9	-4.3	-4.4	-4.6	-5.4	-6.3	-6.3	-3.2	-4.4
Feb 9	-5.9	-5.9	-6.1	-6.9	-7.5	-7.5	-7.5	-7.7	-7.8	-7.5	-7.3	-7.2	-7.2	-7.2	-7.1	-7	-7.1	-7.2	-7.7	-7.8	-8.1	-8.6	-9.7	-11.1	-11.1	-5.9	-7.5
Feb 10	-12.4	-13.6	-14.5	-15.7	-16.1	-17.1	-17.5	-18.1	-15.7	-13.5	-11.7	-10	-9	-7.9	-6.9	-6	-5.7	-6.3	-6.7	-7.1	-7.3	-6.9	-6.4	-7.2	-18.1	-5.7	-10.8
Feb 11	-6.8	-5.6	-3.5	-2	-1.5	-2	-2.5	-2.1	-1.3	-0.4	0.3	1.2	2	2.9	3.7	4.3	4	1.8	0.6	-0.6	-1.6	-3.2	-3	-3.9	-6.8	4.3	-0.8
Feb 12	-5.4	-6	-8.3	-8.2	-8.5	-9.3	-9	-8.2	-8.2	-6.8	-5.3	-3	-0.9	1.1	2.1	2.9	2.2	0.9	-0.5	-1.3	-1.5	-1.4	-1.4	-1.6	-9.3	2.9	-3.6
Feb 13	-2.4	-3.3	-4.4	-5.3	-5.8	-5.8	-5.7	-6.4	-5.9	-5.7	-4.7	-4.1	-3.4	-2.7	-2.2	-1.9	-2.1	-2.9	-3.7	-4.9	-4.3	-5	-5.2	-5.3	-6.4	-1.9	-4.3
Feb 14	-5	-4.9	-5.1	-6.1	-7.4	-8.3	-9.1	-9.7	-9.4	-9.2	-8.9	-8.6	-8.5	-8.5	-8.5	-8.4	-8.6	-9	-9.4	-9.8	-9.8	-10.1	-10.3	-10.6	-10.6	-4.9	-8.5
Feb 15	-10.8	-10.9	-10.8	-11	-11	-11.6	-12.1	-13	-13.6	-11.6	-9.9	-8.4	-7.6	-7.1	-6.5	-6.2	-6.4	-7.6	-8.8	-9.6	-10.2	-10.8	-11.1	-11.5	-13.6	-6.2	-9.9
Feb 16	-11.7	-11.2	-10.9	-11.5	-12.5	-12.9	-12.6	-12.3	-11.7	-9	-6.4	-4.8	-3.2	-1.9	-0.5	0.8	1.4	0	-1.1	-2.5	-3.3	-3.8	-3.5	-3.1	-12.9	1.4	-6.2
Feb 17	-4	-2.7	-3.9	-4.7	-6	-8.9	-10.1	-10.7	-11.2	-5.7	-3.4	-0.8	2.3	3	3.1	3.6	4.7	0.4	-2.8	-4.3	-3.9	-4.8	-6.8	-7.3	-11.2	4.7	-3.5
Feb 18	-8.4	-10.7	-10.9	-13	-14.6	-14.1	-15.4	-16.2	-15.9	-10.6	-6.5	-4.6	-4.3	-1	-1.5	-0.1	0.3	-1.7	-4.6	-5.7	-6.6	-6.2	-9.4	-8.5	-16.2	0.3	-7.9
Feb 19	-9.7	-11	-13.1	-13.4	-13.8	-15.6	-15.7	-16.2	-16.8	-12.1	-10.3	-7.5	-5.6	-3.1	-2.5	-2.6	-0.7	-2	-4.5	-5.7	-5	-5.6	-4.7	-5.3	-16.8	-0.7	-8.4
Feb 20	-4.8	-5.3	-5.7	-6.6	-9.4	-9.7	-9.3	-7.8	-6.2	-4.8	-3.4	-2.9	-1.7	-1.7	-1.1	1.2	1.8	0.7	-0.2	-0.7	-1.1	-2.3	-3	-3.1	-9.7	1.8	-3.6
Feb 21	-3.8	-4.7	-5.6	-7.4	-7.7	-7.3	-7.7	-8.7	-8.1	-4.6	-0.6	2.2	4.1	5.4	6.7	6.6	5.7	4.4	3	2.1	1	0.4	0.2	-0.2	-8.7	6.7	-1.0
Feb 22	-0.8	-1.1	-1.7	-1.9	-2.1	-2.8	-1.7	-1.3	-0.2	2.5	3.7	4.5	5.8	6.9	7.7	8	7.7	6.2	5.5	5.3	4.4	3.1	2.4	1.8	-2.8	8.0	2.6
Feb 23	0.7	0.6	0.4	0.1	0.2	0.3	0.1	-0.5	0.2	3.5	6.2	7.5	8.4	**9.4**	8.6	8.2	7.5	6.5	6.2	6.2	5.2	4	3.8	3.1	-0.5	**9.4**	**4.0**
Feb 24	1.6	0.6	-0.1	-1.3	-1.7	-2.1	-2.6	-3.1	-2.7	-3.1	-2.8	-2.1	-1.5	-1	-1.1	-1	-1.7	-2.7	-3.4	-4.3	-5.2	-6	-6.5	-6.7	-6.7	1.6	-2.5
Feb 25	-6.6	-6.6	-6.2	-6	-6.1	-6.3	-6.4	-6.3	-7.7	-7.5	-5.5	-5	-3.4	-3.6	-3.2	-3.8	-4.3	-5.8	-7.7	-9.7	-10.5	-12.1	-13.4	-14.5	-14.5	-3.2	-7.0
Feb 26	-15.8	-17.4	-18.8	-19.9	-20.8	-21.3	-21.7	-22.3	-22.6	-22.5	-22.3	-21.8	-20.9	-20.1	-19.2	-18.5	-18.1	-18.6	-19.1	-19.7	-20	-20.4	-21.1	-21.4	-22.6	-15.8	**-20.2**
Feb 27	-21.9	-22.7	-23.5	**-23.9**	-23.6	-23.5	-23.1	-22.6	-21.9	-20.2	-18.8	-18	-18	-17.4	-16	-16	-15.5	-16	-17.5	-19.2	-19.6	-20.6	-21.6	-21.8	**-23.9**	-15.5	-20.1
Feb 28	-22.4	-22.7	-23	-23.5	-23.8	-23.6	-23.2	-22.5	-21.8	-20.9	-19.4	-17.5	-16.1	-14.7	-13.9	-13.5	-13.6	-13.7	-14.5	-14.9	-14.9	-15	-15.4	-15.7	-23.8	-13.5	-18.3
Feb 29	-15.5	-15.8	-16	-16.3	-16.4	-16.5	-16.4	-16.1	-15.6	-14.8	-14.4	-14.5	-13.9	-13.3	-12.7	-12.4	-11.9	-11.8	-12	-11.9	-12	-12.2	-12.3	-12.4	-16.5	-11.8	-14.0
Diurnal Maximum	3.9	3.3	2.8	2.2	1.3	0.7	0.3	-0.2	0.2	3.5	6.2	7.5	8.4	9.4	9.3	9.1	7.8	6.5	6.2	6.2	5.2	4.0	3.8	3.1			
Diurnal Average	-7.3	-7.7	-8.1	-8.6	-9.0	-9.4	-9.5	-9.7	-9.4	-7.8	-6.4	-5.3	-4.3	-3.5	-2.9	-2.6	-2.6	-3.7	-4.7	-5.5	-5.9	-6.5	-7.0	-7.4			

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

Lac La Biche Station - February 2024

Summary of Hourly Averages

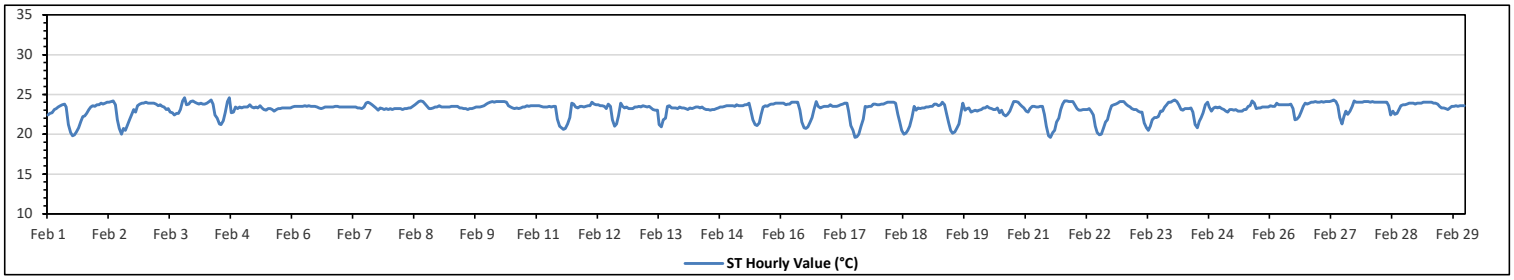
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	24.6	°C	on Feb 3 at hr 19	Hours in Service:	696
Maximum Daily Value:	23.7	°C	on Feb 10	Hours of Data:	696
Minimum Hourly Value:	19.6	°C	on Feb 17 at hr 12	Hours of Missing Data:	0
Minimum Daily Value:	22.4	°C	on Feb 1	Hours of Calibration:	0
Monthly Average:	23.2	°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	22.4	22.6	22.7	23.1	23.2	23.4	23.6	23.7	23.8	23.4	21.2	20.2	19.8	19.9	20.3	20.8	21.6	22.2	22.3	22.6	23.1	23.4	23.6	23.5	19.8	23.8	**22.4**
Feb 2	23.7	23.7	23.9	23.8	23.9	24.0	24.0	24.1	24.2	23.7	21.8	20.7	20.0	20.7	20.5	21.1	21.8	22.5	23.1	22.8	23.6	23.8	23.9	23.9	20.0	24.2	22.9
Feb 3	24.0	23.9	23.9	23.9	23.9	23.8	23.6	23.7	23.5	23.4	23.1	23.2	22.8	22.7	22.4	22.6	22.6	23.1	24.2	**24.6**	23.7	23.8	24.1	24.2	22.4	**24.6**	23.5
Feb 4	24.0	23.9	23.8	23.9	23.8	23.8	23.9	24.1	24.3	23.8	22.4	22.0	21.3	21.2	21.7	22.7	24.1	**24.6**	22.7	22.8	23.4	23.2	23.4	23.3	21.2	**24.6**	23.3
Feb 5	23.4	23.4	23.4	23.7	23.4	23.3	23.4	23.3	23.6	23.3	23.1	23.0	23.2	23.2	23.1	22.9	23.1	23.2	23.2	23.3	23.3	23.3	23.3	23.3	22.9	23.7	23.3
Feb 6	23.4	23.5	23.5	23.5	23.5	23.5	23.6	23.5	23.6	23.5	23.5	23.5	23.4	23.3	23.2	23.3	23.4	23.4	23.4	23.4	23.4	23.5	23.5	23.4	23.2	23.6	23.4
Feb 7	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.3	23.3	23.2	23.4	23.9	24.0	23.9	23.7	23.5	23.3	23.0	23.3	23.2	23.1	23.2	23.1	23.0	24.0	23.4
Feb 8	23.2	23.1	23.2	23.2	23.2	23.2	23.1	23.2	23.2	23.3	23.3	23.5	23.7	23.9	24.1	24.2	24.1	23.8	23.5	23.2	23.2	23.3	23.4	23.4	23.1	24.2	23.4
Feb 9	23.6	23.4	23.4	23.4	23.4	23.4	23.5	23.5	23.5	23.5	23.3	23.3	23.2	23.2	23.1	23.2	23.2	23.3	23.4	23.4	23.4	23.5	23.6	23.8	23.1	23.8	23.4
Feb 10	23.9	24.0	24.1	24.0	24.1	24.1	24.1	24.1	24.1	24.0	23.6	23.4	23.3	23.2	23.3	23.2	23.3	23.4	23.4	23.6	23.5	23.6	23.6	23.6	23.2	24.1	**23.7**
Feb 11	23.6	23.6	23.5	23.4	23.4	23.4	23.5	23.4	23.5	23.5	21.9	21.0	20.8	20.6	20.7	21.3	22.1	23.9	23.8	23.4	23.3	23.5	23.5	23.4	20.6	23.9	22.8
Feb 12	23.5	23.6	23.6	24.0	23.8	23.7	23.7	23.6	23.6	23.5	23.2	23.8	23.5	21.8	21.0	21.3	22.3	23.9	23.5	23.3	23.4	23.2	23.2	23.2	21.0	24.0	23.2
Feb 13	23.4	23.4	23.5	23.4	23.6	23.5	23.4	23.5	23.3	23.1	23.0	23.0	21.2	20.9	21.8	22.0	23.5	23.6	23.3	23.3	23.3	23.2	23.4	23.3	20.9	23.6	23.0
Feb 14	23.3	23.2	23.1	23.3	23.2	23.3	23.4	23.4	23.3	23.4	23.2	23.1	23.1	23.0	23.1	23.1	23.2	23.3	23.4	23.4	23.5	23.6	23.6	23.6	23.0	23.6	23.3
Feb 15	23.6	23.5	23.7	23.6	23.6	23.6	23.7	23.7	23.9	22.9	21.8	21.2	21.1	21.4	22.5	23.4	23.6	23.5	23.7	23.8	23.8	23.9	23.9	23.9	21.1	23.9	23.2
Feb 16	23.9	23.9	23.7	23.8	23.8	24.0	24.0	24.0	24.0	23.0	21.5	20.8	20.7	20.9	21.5	22.1	23.1	24.1	23.5	23.3	23.4	23.5	23.5	23.5	20.7	24.1	23.1
Feb 17	23.7	23.5	23.5	23.5	23.6	23.7	23.8	23.9	23.9	22.9	21.1	20.5	**19.6**	19.7	20.0	21.0	21.9	23.5	23.4	23.5	23.5	23.8	23.8	23.7	**19.6**	23.9	22.7
Feb 18	23.7	23.8	23.8	23.9	24.0	24.0	24.0	24.0	23.9	22.5	21.5	20.5	20.0	20.1	20.5	21.0	22.1	23.5	23.0	23.3	23.2	23.3	23.3	23.4	20.0	24.0	22.8
Feb 19	23.4	23.5	23.5	23.8	23.8	23.6	23.7	24.0	23.7	22.6	21.4	20.5	20.1	20.3	20.7	21.3	22.6	23.9	23.0	23.2	23.3	22.8	22.9	23.0	20.1	24.0	22.7
Feb 20	22.9	23.0	23.1	23.3	23.3	23.5	23.3	23.2	23.1	23.1	23.3	22.7	23.0	22.5	22.3	22.5	22.9	23.5	24.1	24.1	24.0	23.8	23.5	23.3	22.3	24.1	23.2
Feb 21	22.9	22.8	23.2	23.5	23.5	23.4	23.4	23.5	23.5	22.5	21.0	19.8	**19.6**	20.2	20.5	21.5	22.0	23.1	23.8	24.2	24.2	24.1	24.1	24.1	**19.6**	24.2	22.7
Feb 22	23.7	23.2	23.0	23.0	23.1	23.1	23.1	23.2	22.9	22.4	21.0	20.2	19.9	20.0	20.8	21.5	21.8	22.9	23.6	23.7	23.8	23.9	24.1	24.1	19.9	24.1	22.6
Feb 23	24.1	23.8	23.6	23.4	23.2	23.1	23.1	22.9	22.8	22.8	21.4	20.8	20.5	21.0	21.8	22.1	22.1	22.2	22.9	22.9	23.4	23.7	24.0	24.0	20.5	24.1	22.7
Feb 24	24.2	24.3	24.1	23.7	23.1	23.0	23.2	23.2	23.2	23.3	22.8	21.2	20.8	21.6	22.1	22.7	23.7	24.0	23.4	22.9	23.3	23.4	23.3	23.4	20.8	24.3	23.1
Feb 25	23.2	23.1	22.9	22.8	23.1	23.1	23.0	23.1	22.9	22.9	22.9	23.1	23.1	23.5	23.6	24.2	23.9	23.2	23.3	23.3	23.4	23.4	23.4	23.4	22.8	24.2	23.2
Feb 26	23.6	23.5	23.5	23.9	23.7	23.7	23.7	23.7	23.7	23.7	23.8	23.2	21.8	21.9	22.2	22.8	23.5	23.9	23.8	23.9	24.0	24.0	24.1	24.0	21.8	24.1	23.5
Feb 27	24.0	24.1	24.0	24.1	24.1	24.1	24.2	24.3	24.1	23.6	22.1	21.3	22.2	22.9	22.5	22.9	23.5	24.2	24.0	24.0	24.0	24.0	24.1	24.1	21.3	24.3	23.6
Feb 28	24.1	24.0	24.1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.6	22.4	22.9	22.5	22.6	23.1	23.6	23.7	23.7	23.8	23.9	23.9	23.9	23.8	22.4	24.1	23.7
Feb 29	23.9	23.9	23.9	24.0	24.0	24.0	24.0	24.0	23.9	23.9	23.8	23.5	23.3	23.3	23.2	23.1	23.3	23.5	23.5	23.6	23.5	23.6	23.6	23.6	23.1	24.0	23.7
Diurnal Maximum	24.2	24.3	24.1	24.1	24.1	24.1	24.2	24.3	24.3	24.0	23.8	23.8	23.9	24.0	24.1	24.2	24.1	24.6	24.2	24.6	24.2	24.1	24.1	24.2			
Diurnal Average	23.6	23.5	23.5	23.6	23.6	23.6	23.6	23.6	23.6	23.3	22.5	22.0	21.8	21.8	22.0	22.4	22.9	23.5	23.4	23.4	23.5	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 2024

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	21.7	kph	on Feb 3 at hr 13	Hours in Service:	696	
Maximum Daily Value:	12.8	kph	on Feb 28	Hours of Data:	696	
Minimum Hourly Value:	0.0	kph	on Feb 2 at hr 20	Hours of Missing Data:	0	
Minimum Daily Value:	1.6	kph	on Feb 19	Hours of Calibration:	0	
Monthly Average:	0.9	kph		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	12.3	11.2	9.8	9.3	6.3	6.2	9.5	9.3	6.8	8.9	6.0	5.1	6.5	4.2	5.7	6.7	6.9	7.8	5.2	4.3	1.4	2.8	6.8	8.1	1.4	12.3	7.0
Feb 2	7.1	5.6	7.9	7.0	7.4	4.9	1.4	0.1	0.5	5.2	8.8	7.2	3.8	5.5	5.5	5.5	3.8	2.9	1.2	0.2	**0.0**	**0.0**	0.9	0.7	**0.0**	8.8	3.9
Feb 3	0.6	0.9	1.8	2.5	1.3	6.4	12.0	12.8	9.6	12.5	16.7	19.2	19.0	**21.7**	19.7	18.2	17.9	17.1	12.9	7.2	6.0	5.7	5.2	4.7	0.6	**21.7**	10.5
Feb 4	3.8	2.2	3.9	2.9	3.6	3.8	0.5	**0.0**	1.1	3.1	3.3	5.6	4.4	5.5	2.8	5.8	1.5	0.9	0.8	0.2	0.4	4.7	5.8	3.3	**0.0**	5.8	2.9
Feb 5	6.1	2.2	2.2	1.4	**0.0**	1.8	**0.0**	**0.0**	4.2	3.3	4.1	4.7	5.6	6.5	5.1	5.9	8.4	8.6	8.4	6.0	8.1	8.3	7.3	6.5	**0.0**	8.6	4.8
Feb 6	5.6	3.9	2.3	4.8	4.5	3.3	4.8	7.8	7.7	8.3	7.4	8.7	8.4	7.5	7.4	8.5	9.0	8.2	8.7	8.3	6.2	5.4	4.6	6.9	2.3	9.0	6.6
Feb 7	7.4	6.9	6.3	6.5	5.0	5.1	6.3	2.8	2.1	**0.0**	2.8	1.8	3.9	5.0	4.3	4.4	3.9	2.3	2.6	1.9	0.9	0.6	0.3	1.5	**0.0**	7.4	3.5
Feb 8	2.2	0.9	1.3	3.8	2.7	2.6	0.7	0.2	0.5	2.2	0.5	2.5	2.6	2.7	0.8	1.2	0.2	1.2	0.4	**0.0**	0.7	6.6	8.2	9.3	**0.0**	9.3	2.3
Feb 9	12.7	16.6	13.8	14.0	12.8	11.0	10.1	6.9	7.3	10.3	12.8	15.0	14.7	12.8	10.5	9.3	7.4	7.7	2.0	0.4	1.4	2.6	0.1	3.5	0.1	16.6	9.0
Feb 10	5.0	5.7	6.3	6.0	5.9	5.5	5.5	5.9	6.0	5.4	5.8	5.6	6.4	8.0	8.7	7.5	6.7	7.5	7.5	5.7	5.2	5.1	2.5	0.3	0.3	8.7	5.8
Feb 11	3.7	4.8	2.1	7.4	10.8	9.9	11.4	12.1	11.5	12.5	12.8	11.4	11.5	12.5	8.5	8.0	6.7	5.5	7.4	4.7	2.2	2.7	3.4	4.6	2.1	12.8	7.8
Feb 12	5.3	5.6	5.6	6.6	6.0	6.1	6.7	6.7	6.0	0.5	5.0	4.4	5.4	11.4	12.1	8.6	13.2	11.9	8.4	9.6	10.4	11.3	12.2	11.8	0.5	13.2	8.0
Feb 13	15.7	15.1	13.1	12.0	13.3	13.1	14.4	9.9	11.0	8.2	8.9	9.3	9.9	12.9	10.1	9.5	5.0	0.9	0.7	2.0	4.4	4.5	4.5	7.7	0.7	15.7	9.0
Feb 14	7.2	7.8	11.1	10.5	9.6	8.9	10.7	9.7	8.1	8.5	8.9	8.7	8.2	6.9	6.4	4.8	3.9	2.5	2.8	1.5	1.6	2.1	0.9	0.7	0.7	11.1	6.3
Feb 15	1.0	0.9	1.4	0.8	1.6	0.8	0.8	0.7	0.3	2.9	6.0	6.2	7.8	8.8	8.0	7.7	6.8	4.2	4.5	5.5	5.8	6.3	4.7	4.1	0.3	8.8	4.1
Feb 16	4.8	2.2	2.8	3.0	2.5	5.2	4.7	4.3	4.2	3.6	3.7	4.8	6.5	9.8	9.6	7.6	5.9	5.5	7.5	8.7	7.7	6.0	7.6	2.3	2.2	9.8	5.4
Feb 17	4.3	6.0	5.7	4.9	2.2	1.2	0.1	0.5	0.5	2.3	3.7	2.3	2.2	3.9	1.6	0.6	0.2	0.2	0.9	2.5	4.5	5.2	4.8	6.9	0.1	6.9	2.8
Feb 18	4.9	4.4	2.5	3.9	2.7	2.8	**0.0**	**0.0**	1.0	2.2	2.5	0.9	3.4	1.1	2.4	2.0	0.8	0.4	**0.0**	0.3	0.4	3.8	1.4	5.3	**0.0**	5.3	2.0
Feb 19	1.7	1.0	0.3	0.1	**0.0**	0.2	0.1	0.1	**0.0**	0.5	1.2	3.1	1.7	2.0	4.3	4.3	1.4	0.4	0.5	1.3	4.6	3.9	3.4	2.0	**0.0**	4.6	**1.6**
Feb 20	4.9	4.4	3.7	3.4	0.5	0.4	0.6	1.6	5.2	3.4	4.1	2.9	2.4	0.7	3.3	1.1	3.7	2.3	2.0	1.2	2.4	0.2	0.5	0.7	0.2	5.2	2.3
Feb 21	**0.0**	1.8	0.8	0.2	2.8	3.2	4.0	4.7	5.6	3.7	2.7	4.3	5.3	8.2	8.0	10.1	7.7	5.6	6.9	7.2	5.7	5.0	3.8	5.2	**0.0**	10.1	4.7
Feb 22	2.6	2.4	2.6	3.3	2.8	2.6	2.3	2.4	3.2	9.8	10.7	10.0	10.5	10.2	11.5	10.7	9.0	7.6	8.6	11.1	7.4	4.6	3.3	4.2	2.3	11.5	6.4
Feb 23	4.7	5.8	7.1	7.9	5.5	7.0	6.7	6.8	6.5	8.5	13.4	14.8	13.6	13.6	16.9	13.8	9.0	6.6	11.6	14.3	13.4	9.1	11.5	15.2	4.7	16.9	10.1
Feb 24	19.8	14.9	9.0	9.5	12.1	12.4	12.9	8.8	14.6	8.4	9.7	9.2	7.5	14.4	12.2	7.7	3.7	5.0	5.7	4.9	1.8	1.5	2.4	1.2	1.2	19.8	8.7
Feb 25	2.7	0.1	0.3	**0.0**	1.1	2.4	3.6	0.5	6.1	6.6	6.8	7.6	6.5	6.3	8.3	8.2	10.7	13.4	13.8	16.1	15.9	14.7	16.6	15.8	**0.0**	16.6	7.7
Feb 26	14.3	16.0	15.6	14.4	14.1	13.1	12.2	11.9	11.8	11.8	10.5	10.4	9.1	8.3	8.7	7.8	5.3	4.1	4.9	4.1	3.4	3.9	2.6	1.0	1.0	16.0	9.1
Feb 27	0.3	**0.0**	0.3	0.9	**0.0**	1.9	0.9	2.0	3.6	5.0	5.1	4.6	4.5	6.0	6.8	6.7	5.9	3.8	1.0	3.7	5.6	5.0	5.9	7.4	**0.0**	7.4	3.6
Feb 28	7.6	7.6	7.8	9.2	9.5	10.0	9.7	11.1	11.8	14.1	15.8	15.7	16.9	15.9	12.7	16.2	14.5	12.4	16.9	15.4	15.2	12.6	14.8	14.7	7.6	16.9	**12.8**
Feb 29	11.6	13.1	13.0	12.6	11.0	10.4	10.2	6.9	5.9	3.8	1.9	7.6	7.1	6.3	5.7	6.6	6.9	11.7	11.2	9.3	8.9	8.6	8.7	9.3	1.9	13.1	8.7
Diurnal Maximum	19.8	16.6	15.6	14.4	14.1	13.1	14.4	12.8	14.6	14.1	16.7	19.2	19.0	21.7	19.7	18.2	17.9	17.1	16.9	16.1	15.9	14.7	16.6	15.8			
Diurnal Average	6.2	5.9	5.5	5.8	5.4	5.6	5.6	5.1	5.6	6.1	7.0	7.4	7.4	8.2	7.8	7.4	6.4	5.8	5.7	5.4	5.2	5.3	5.3	5.7			

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.
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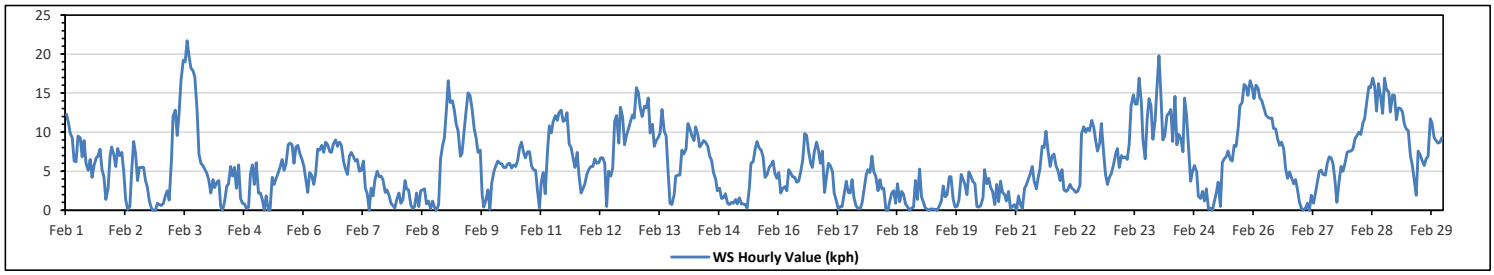
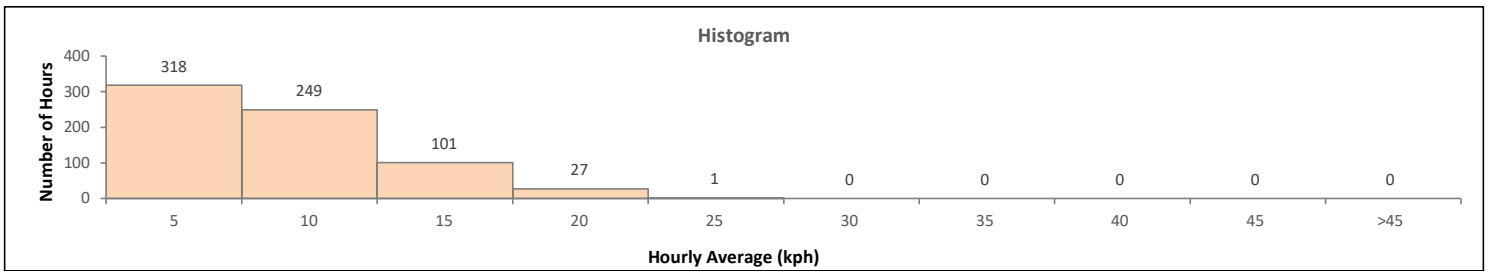


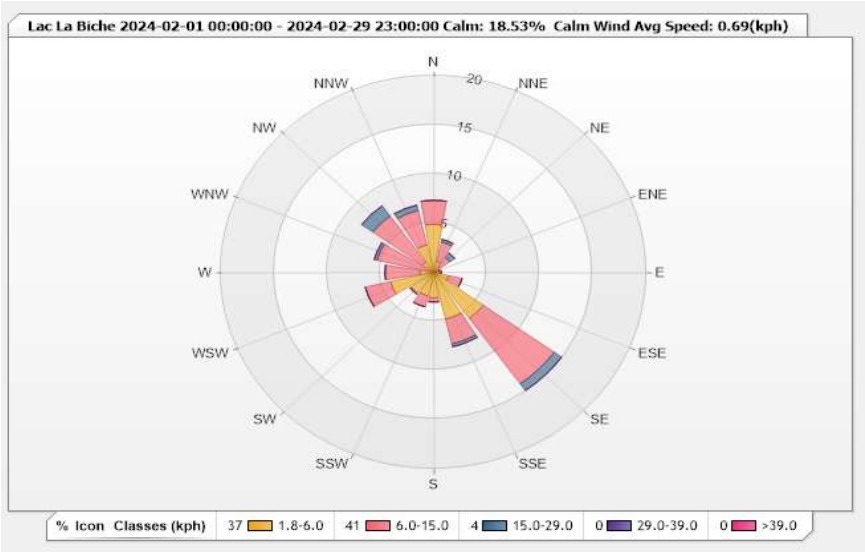


Station: Lac La Biche Monitor: WDS [kph] Monthly: 02-2024

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

Calm (WS<1.8kph): 18.53% 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	4.89	2.44	0	0	0	7.33
NNE	1.15	2.01	0.29	0	0	3.45
NE	0.72	1.15	0.57	0	0	2.44
ENE	0.14	0.43	0	0	0	0.57
E	0.29	0.43	0	0	0	0.72
ESE	1.44	1.29	0	0	0	2.73
SE	5.75	8.19	0.86	0	0	14.8
SSE	4.89	2.59	0.29	0	0	7.77
S	2.59	0.43	0	0	0	3.02
SSW	2.44	1.15	0	0	0	3.59
SW	2.59	0.14	0	0	0	2.73
WSW	4.17	2.44	0	0	0	6.61
W	1.29	3.3	0	0	0	4.59
WNW	0.29	5.17	0.29	0	0	5.75
NW	1.29	5.75	1.29	0	0	8.33
NNW	2.87	3.59	0.57	0	0	7.03
Summary	36.8	40.5	4.16	0	0	81.46



Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

Monthly Average:	298 (WNW) degree	Hours in Service:	696
		Hours of Data:	696
		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	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	ESE	SE	ESE	139	SE
Feb 2	SE	SE	SE	SE	SE	SE	SE	SSE	SE	SE	SE	SE	ESE	ESE	SE	SSE	S	S	NNE	NNE	N	N	SE	SE	137	SE
Feb 3	WNW	N	N	N	N	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NNW	N	N	N	N	N	329	NNW
Feb 4	N	N	N	N	N	N	N	N	NNE	N	N	N	NNW	N	NNW	N	NNE	NNW	N	NE	SSE	SSE	SE	SSE	7	N
Feb 5	SE	SE	ESE	SE	ESE	SE	N	N	NNW	NW	NW	NNW	NNW	NNW	NW	NNW	NNE	NNE	NE	NE	NE	NE	NE	NE	21	NNE
Feb 6	NE	NE	NNE	ENE	E	E	ESE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	126	SE
Feb 7	SE	SE	SE	SE	SE	SE	SE	SE	SE	N	SE	ESE	N	N	NNW	NNW	NNW	NNW	NNW	N	N	N	NNE	NNW	99	E
Feb 8	NNE	NNW	NNE	NE	NE	NNE	NE	NNE	NE	SE	NW	N	N	NNW	NW	SW	SSW	SSW	SSW	SSW	SSW	WNW	WNW	WNW	330	NNW
Feb 9	NW	NW	NW	NW	NW	NW	WNW	WNW	W	WNW	NW	NW	NW	NW	NW	NW	NW	NW	NNW	NNW	S	S	S	S	314	NW
Feb 10	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	S	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSW	SW	SSW	161	SSE
Feb 11	S	SSW	SW	W	WNW	W	W	W	W	WNW	WNW	W	WNW	WNW	WNW	W	W	W	WSW	WSW	SW	SSE	SSE	SSE	273	W
Feb 12	SSE	SSE	SE	SE	SE	SE	SSE	SSE	SSE	WNW	SSE	SSW	WSW	WNW	NW	WNW	NW	WNW	WNW	WNW	WNW	WNW	NW	NW	275	W
Feb 13	NW	NW	NW	NW	NW	NNW	NW	NW	NNW	N	NNW	NNW	NW	NW	NW	NW	NW	SW	W	NNW	W	WSW	WNW	NW	322	NW
Feb 14	NW	NW	NW	NNW	N	N	N	N	N	N	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	SSW	NW	NW	W	WSW	356	N
Feb 15	SW	SW	SW	NW	NNW	W	SSW	S	SSW	SW	WSW	WSW	W	WSW	WSW	W	WSW	SW	SSW	SW	SW	WSW	SW	SW	247	WSW
Feb 16	SSW	WSW	SW	SSW	SSW	SSW	WSW	WSW	SW	SW	W	W	W	WSW	WSW	WSW	WSW	SW	SSW	SSW	SSW	SSW	SSW	WSW	231	SW
Feb 17	W	W	WSW	WSW	WSW	NW	NE	NNE	NNW	NNW	NNW	NW	WSW	W	NW	NW	W	SE	SE	SSE	SSE	SSE	SE	SSE	232	SW
Feb 18	SE	SSE	SE	SE	SE	SE	E	N	SSE	SE	SSE	NW	NNW	NW	N	N	N	E	N	S	SSE	SE	SSE	SSE	136	SE
Feb 19	SSE	SE	SSE	SSW	N	SW	WSW	NNW	N	NNW	NW	N	N	NW	NW	N	NNE	ESE	ESE	SE	SE	SSE	SE	SE	82	E
Feb 20	SE	SE	ESE	ESE	SE	SSE	ESE	ESE	SE	SE	SE	N	SE	N	N	S	SSE	SSW	SSE	SSE	SE	SE	SE	SSE	137	SE
Feb 21	SSE	SSE	S	SSW	S	S	S	SSE	SSE	S	SSW	SSW	SW	WSW	WSW	WSW	WSW	WSW	SSW	SSW	SSW	SSW	WSW	WSW	218	SW
Feb 22	WSW	WSW	WSW	WSW	WSW	SW	WSW	SW	SW	W	WNW	WNW	WNW	WNW	W	W	W	W	W	WNW	W	WSW	S	SSW	272	W
Feb 23	SW	SSW	WSW	WSW	SW	SSW	SSW	S	S	SW	WSW	WSW	WSW	W	WNW	W	W	W	W	W	W	WNW	W	WNW	259	WSW
Feb 24	NW	NW	WNW	W	W	WNW	WNW	WNW	NW	NNW	NNW	NNW	NNW	NW	NNW	NNW	NW	WSW	WSW	WSW	WSW	SW	S	SSE	306	NW
Feb 25	SSE	S	SSW	N	ESE	SE	SE	NE	N	NNE	ENE	ENE	ESE	E	E	E	ENE	NE	NE	NE	NE	NE	NE	NE	57	ENE
Feb 26	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	N	N	N	NNW	N	N	N	NNE	NNE	N	NNE	N	NE	11	NNE
Feb 27	ENE	S	S	S	N	S	S	S	S	SW	W	WNW	N	NW	W	W	WSW	WSW	SSW	SSE	SSW	SSE	SSE	SE	228	SW
Feb 28	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	139	SE
Feb 29	ESE	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	NNW	NNW	NNW	NNW	NNW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NW	35	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.
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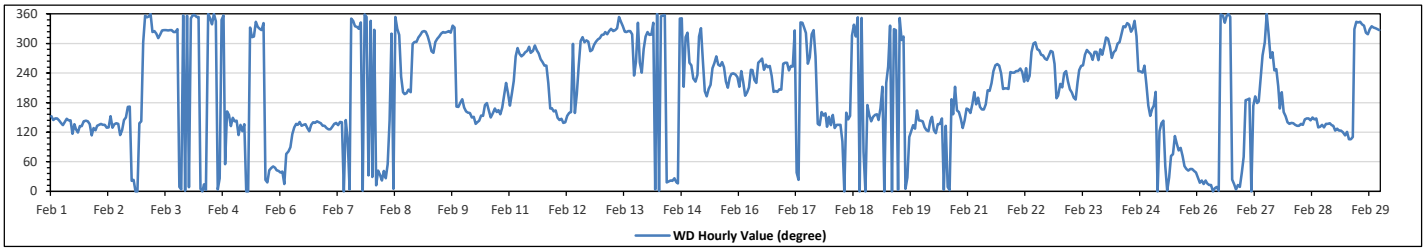
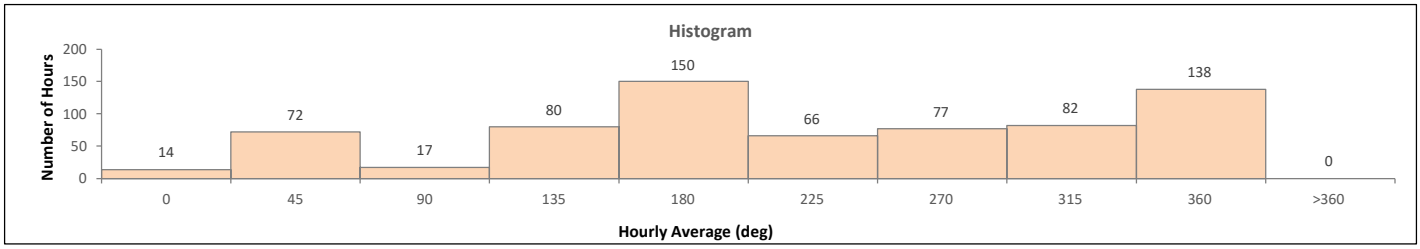




Lakeland Industry & Community Association

Lac La Biche Station - February 2024

Summary of Hourly Averages

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

WIND SPEED

Maximum Hourly Value:	21.7	kph	on Feb 3 at hr 13	Hours in Service:	696
Maximum Daily Value:	12.8	kph	on Feb 28	Hours of Data:	696
Minimum Hourly Value:	0.0	kph	on Feb 2 at hr 20	Hours of Missing Data:	0
Minimum Daily Value:	1.6	kph	on Feb 19	Hours of Calibration:	0
Monthly Average:	0.9	kph		Operational Uptime:	100.0

WIND DIRECTION

Monthly Average: 298 degree (WNW)

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	12.3	11.2	9.8	9.3	6.3	6.2	9.5	9.3	6.8	8.9	6.0	5.1	6.5	4.2	5.7	6.7	6.9	7.8	5.2	4.3	1.4	2.8	6.8	8.1	1.4	12.3	7.0
	SSE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	ESE	SE	ESE			139(SE)
Feb 2	7.1	5.6	7.9	7.0	7.4	4.9	1.4	0.1	0.5	5.2	8.8	7.2	3.8	5.5	5.5	5.5	3.8	2.9	1.2	0.2	**0.0**	**0.0**	0.9	0.7	**0.0**	8.8	3.9
	SE	SE	SE	SE	SE	SE	SE	SSE	SE	SE	SE	SE	ESE	ESE	SE	SSE	S	S	NNE	NNE	N	N	SE	SE			137(SE)
Feb 3	0.6	0.9	1.8	2.5	1.3	6.4	12.0	12.8	9.6	12.5	16.7	19.2	19.0	**21.7**	19.7	18.2	17.9	17.1	12.9	7.2	6.0	5.7	5.2	4.7	0.6	**21.7**	10.5
	WNW	N	N	N	N	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NNW	N	N	N	N	N			329(NNW)
Feb 4	3.8	2.2	3.9	2.9	3.6	3.8	0.5	**0.0**	1.1	3.1	3.3	5.6	4.4	5.5	2.8	5.8	1.5	0.9	0.8	0.2	0.4	4.7	5.8	3.3	**0.0**	5.8	2.9
	N	N	N	N	N	N	N	N	NNE	N	N	N	NNW	N	NNW	N	NNE	NNW	N	NE	SSE	SSE	SE	SSE			7(N)
Feb 5	6.1	2.2	2.2	1.4	**0.0**	1.8	**0.0**	**0.0**	4.2	3.3	4.1	4.7	5.6	6.5	5.1	5.9	8.4	8.6	8.4	6.0	8.1	8.3	7.3	6.5	**0.0**	8.6	4.8
	SE	SE	ESE	SE	ESE	SE	N	N	NNW	NW	NW	NNW	NNW	NNW	NW	NNW	NNE	NNE	NE	NE	NE	NE	NE	NE			21(NNE)
Feb 6	5.6	3.9	2.3	4.8	4.5	3.3	4.8	7.8	7.7	8.3	7.4	8.7	8.4	7.5	7.4	8.5	9.0	8.2	8.7	8.3	6.2	5.4	4.6	6.9	2.3	9.0	6.6
	NE	NE	NNE	ENE	E	E	ESE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	SE	SE			126(SE)
Feb 7	7.4	6.9	6.3	6.5	5.0	5.1	6.3	2.8	2.1	**0.0**	2.8	1.8	3.9	5.0	4.3	4.4	3.9	2.3	2.6	1.9	0.9	0.6	0.3	1.5	**0.0**	7.4	3.5
	SE	SE	SE	SE	SE	SE	SE	SE	SE	N	SE	ESE	N	N	NNW	NNW	NNW	NNW	NNW	N	N	N	NNE	NNW			99(E)
Feb 8	2.2	0.9	1.3	3.8	2.7	2.6	0.7	0.2	0.5	2.2	0.5	2.5	2.6	2.7	0.8	1.2	0.2	1.2	0.4	**0.0**	0.7	6.6	8.2	9.3	**0.0**	9.3	2.3
	NNE	NNW	NNE	NE	NE	NNE	NE	NNE	NE	SE	NW	N	N	NNW	NW	SW	SSW	SSW	SSW	SSW	SSW	WNW	WNW	WNW			330(NNW)
Feb 9	12.7	16.6	13.8	14.0	12.8	11.0	10.1	6.9	7.3	10.3	12.8	15.0	14.7	12.8	10.5	9.3	7.4	7.7	2.0	0.4	1.4	2.6	0.1	3.5	0.1	16.6	9.0
	NW	NW	NW	NW	NW	NW	WNW	WNW	W	WNW	NW	NW	NW	NW	NW	NW	NW	NW	NNW	NNW	S	S	S	S			314(NW)
Feb 10	5.0	5.7	6.3	6.0	5.9	5.5	5.5	5.9	6.0	5.4	5.8	5.6	6.4	8.0	8.7	7.5	6.7	7.5	7.5	5.7	5.2	5.1	2.5	0.3	0.3	8.7	5.8
	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	S	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSW	SW	SSW			161(SSE)
Feb 11	3.7	4.8	2.1	7.4	10.8	9.9	11.4	12.1	11.5	12.5	12.8	11.4	11.5	12.5	8.5	8.0	6.7	5.5	7.4	4.7	2.2	2.7	3.4	4.6	2.1	12.8	7.8
	S	SSW	SW	W	WNW	W	W	W	W	WNW	WNW	W	WNW	WNW	WNW	W	W	W	WSW	WSW	SW	SSE	SSE	SSE			273(W)
Feb 12	5.3	5.6	5.6	6.6	6.0	6.1	6.7	6.7	6.0	0.5	5.0	4.4	5.4	11.4	12.1	8.6	13.2	11.9	8.4	9.6	10.4	11.3	12.2	11.8	0.5	13.2	8.0
	SSE	SSE	SE	SE	SE	SE	SSE	SSE	SSE	WNW	SSE	SSW	WSW	WNW	NW	WNW	NW	WNW	WNW	WNW	WNW	WNW	NW	NW			275(W)
Feb 13	15.7	15.1	13.1	12.0	13.3	13.1	14.4	9.9	11.0	8.2	8.9	9.3	9.9	12.9	10.1	9.5	5.0	0.9	0.7	2.0	4.4	4.5	4.5	7.7	0.7	15.7	9.0
	NW	NW	NW	NW	NW	NNW	NW	NW	NNW	N	NNW	NNW	NW	NW	NW	NW	NW	SW	W	NNW	W	WSW	WNW	NW			322(NW)
Feb 14	7.2	7.8	11.1	10.5	9.6	8.9	10.7	9.7	8.1	8.5	8.9	8.7	8.2	6.9	6.4	4.8	3.9	2.5	2.8	1.5	1.6	2.1	0.9	0.7	0.7	11.1	6.3
	NW	NW	NW	NNW	N	N	N	N	N	N	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	SSW	NW	NW	W	WSW			356(N)
Feb 15	1.0	0.9	1.4	0.8	1.6	0.8	0.8	0.7	0.3	2.9	6.0	6.2	7.8	8.8	8.0	7.7	6.8	4.2	4.5	5.5	5.8	6.3	4.7	4.1	0.3	8.8	4.1
	SW	SW	SW	NW	NNW	W	SSW	S	SSW	SW	WSW	WSW	W	WSW	WSW	W	WSW	SW	SSW	SW	SW	WSW	SW	SW			247(WSW)
Feb 16	4.8	2.2	2.8	3.0	2.5	5.2	4.7	4.3	4.2	3.6	3.7	4.8	6.5	9.8	9.6	7.6	5.9	5.5	7.5	8.7	7.7	6.0	7.6	2.3	2.2	9.8	5.4
	SSW	WSW	SW	SSW	SSW	SSW	WSW	WSW	SW	SW	W	W	W	WSW	WSW	WSW	WSW	SW	SSW	SSW	SSW	SSW	SSW	WSW			231(SW)
Feb 17	4.3	6.0	5.7	4.9	2.2	1.2	0.1	0.5	0.5	2.3	3.7	2.3	2.2	3.9	1.6	0.6	0.2	0.2	0.9	2.5	4.5	5.2	4.8	6.9	0.1	6.9	2.8
	W	W	WSW	WSW	WSW	NW	NE	NNE	NNW	NNW	NNW	NW	WSW	W	NW	NW	W	SE	SE	SSE	SSE	SSE	SE	SSE			232(SW)
Feb 18	4.9	4.4	2.5	3.9	2.7	2.8	**0.0**	**0.0**	1.0	2.2	2.5	0.9	3.4	1.1	2.4	2.0	0.8	0.4	**0.0**	0.3	0.4	3.8	1.4	5.3	**0.0**	5.3	2.0
	SE	SSE	SE	SE	SE	SE	E	N	SSE	SE	SSE	NW	NNW	NW	N	N	N	E	N	S	SSE	SE	SSE	SSE			136(SE)
Feb 19	1.7	1.0	0.3	0.1	**0.0**	0.2	0.1	0.1	**0.0**	0.5	1.2	3.1	1.7	2.0	4.3	4.3	1.4	0.4	0.5	1.3	4.6	3.9	3.4	2.0	**0.0**	4.6	**1.6**
	SSE	SE	SSE	SSW	N	SW	WSW	NNW	N	NNW	NW	N	N	NW	NW	N	NNE	ESE	ESE	SE	SE	SSE	SE	SE			82(E)
Feb 20	4.9	4.4	3.7	3.4	0.5	0.4	0.6	1.6	5.2	3.4	4.1	2.9	2.4	0.7	3.3	1.1	3.7	2.3	2.0	1.2	2.4	0.2	0.5	0.7	0.2	5.2	2.3
	SE	SE	ESE	ESE	SE	SSE	ESE	ESE	SE	SE	SE	N	SE	N	N	S	SSE	SSW	SSE	SSE	SE	SE	SE	SSE			137(SE)
Feb 21	**0.0**	1.8	0.8	0.2	2.8	3.2	4.0	4.7	5.6	3.7	2.7	4.3	5.3	8.2	8.0	10.1	7.7	5.6	6.9	7.2	5.7	5.0	3.8	5.2	**0.0**	10.1	4.7
	SSE	SSE	S	SSW	S	S	S	SSE	SSE	S	SSW	SSW	SW	WSW	WSW	WSW	WSW	WSW	SSW	SSW	SSW	SSW	WSW	WSW			218(SW)
Feb 22	2.6	2.4	2.6	3.3	2.8	2.6	2.3	2.4	3.2	9.8	10.7	10.0	10.5	10.2	11.5	10.7	9.0	7.6	8.6	11.1	7.4	4.6	3.3	4.2	2.3	11.5	6.4
	WSW	WSW	WSW	WSW	WSW	SW	WSW	SW	SW	W	WNW	WNW	WNW	WNW	W	W	W	W	W	WNW	W	WSW	S	SSW			272(W)
Feb 23	4.7	5.8	7.1	7.9	5.5	7.0	6.7	6.8	6.5	8.5	13.4	14.8	13.6	13.6	16.9	13.8	9.0	6.6	11.6	14.3	13.4	9.1	11.5	15.2	4.7	16.9	10.1
	SW	SSW	WSW	WSW	SW	SSW	SSW	S	S	SW	WSW	WSW	WSW	W	WNW	W	W	W	W	W	W	WNW	W	WNW			259(WSW)
Feb 24	19.8	14.9	9.0	9.5	12.1	12.4	12.9	8.8	14.6	8.4	9.7	9.2	7.5	14.4	12.2	7.7	3.7	5.0	5.7	4.9	1.8	1.5	2.4	1.2	1.2	19.8	8.7
	NW	NW	WNW	W	W	WNW	WNW	WNW	NW	NNW	NNW	NNW	NNW	NW	NNW	NNW	NW	WSW	WSW	WSW	WSW	SW	S	SSE			306(NW)
Feb 25	2.7	0.1	0.3	**0.0**	1.1	2.4	3.6	0.5	6.1	6.6	6.8	7.6	6.5	6.3	8.3	8.2	10.7	13.4	13.8	16.1	15.9	14.7	16.6	15.8	**0.0**	16.6	7.7
	SSE	S	SSW	N	ESE	SE	SE	NE	N	NNE	ENE	ENE	ESE	E	E	E	ENE	NE	NE	NE	NE	NE	NE	NE			57(ENE)
Feb 26	14.3	16.0	15.6	14.4	14.1	13.1	12.2	11.9	11.8	11.8	10.5	10.4	9.1	8.3	8.7	7.8	5.3	4.1	4.9	4.1	3.4	3.9	2.6	1.0	1.0	16.0	9.1
	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	N	N	N	NNW	N	N	N	NNE	NNE	N	NNE	N	NE			11(NNE)
Feb 27	0.3	**0.0**	0.3	0.9	**0.0**	1.9	0.9	2.0	3.6	5.0	5.1	4.6	4.5	6.0	6.8	6.7	5.9	3.8	1.0	3.7	5.6	5.0	5.9	7.4	**0.0**	7.4	3.6
	ENE	S	S	S	N	S	S	S	S	SW	W	WNW	N	NW	W	W	WSW	WSW	SSW	SSE	SSW	SSE	SSE	SE			228(SW)
Feb 28	7.6	7.6	7.8	9.2	9.5	10.0	9.7	11.1	11.8	14.1	15.8	15.7	16.9	15.9	12.7	16.2	14.5	12.4	16.9	15.4	15.2	12.6	14.8	14.7	7.6	16.9	**12.8**
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE			139(SE)
Feb 29	11.6	13.1	13.0	12.6	11.0	10.4	10.2	6.9	5.9	3.8	1.9	7.6	7.1	6.3	5.7	6.6	6.9	11.7	11.2	9.3	8.9	8.6	8.7	9.3	1.9	13.1	8.7
	ESE	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	NNW	NNW	NNW	NNW	NNW	NNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NW			35(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 (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 2024

Summary of Hour Standard Deviations

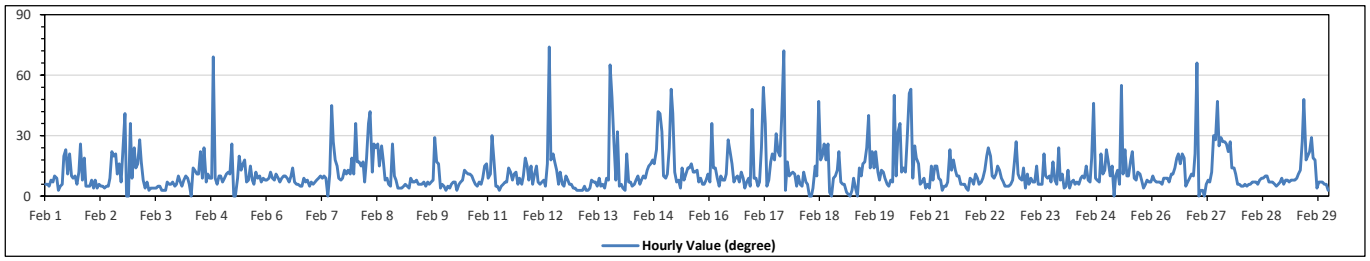
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	74 degree on Feb 12 at hr 9	Hours in Service:	696
		Hours of Data:	696
Minimum Hourly Value:	0 degree on Feb 2 at hr 20	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	6	6	5	8	7	10	9	3	5	6	20	23	11	21	10	9	10	6	12	26	8	19	5	5	3	26
Feb 2	5	8	4	8	4	6	5	5	4	5	5	9	22	20	21	11	16	7	24	41	**0**	**0**	36	9	**0**	41
Feb 3	24	14	16	28	17	8	4	7	3	4	4	4	4	5	5	3	3	3	7	6	6	7	5	6	3	28
Feb 4	10	7	5	8	10	9	6	**0**	14	13	11	11	22	9	24	7	11	9	9	69	9	6	10	10	**0**	69
Feb 5	7	9	11	12	11	26	**0**	**0**	9	20	13	16	18	7	8	15	8	6	12	9	10	7	9	8	**0**	26
Feb 6	8	9	12	9	8	11	9	7	9	10	10	9	7	10	14	7	6	6	5	5	9	7	8	5	5	14
Feb 7	7	6	7	8	9	10	9	10	9	**0**	11	45	27	18	15	9	8	9	13	11	13	11	19	11	**0**	45
Feb 8	36	17	17	15	17	7	19	36	42	12	26	24	26	15	25	18	8	9	6	5	26	10	8	4	4	42
Feb 9	4	4	5	6	5	4	9	7	7	8	6	6	6	7	5	7	6	7	8	29	17	16	4	6	4	29
Feb 10	5	3	5	4	6	7	7	3	6	7	8	13	12	11	11	10	8	6	5	7	6	9	15	16	3	16
Feb 11	9	11	30	18	5	5	3	5	6	7	7	14	12	8	11	12	6	9	6	10	19	15	8	15	3	30
Feb 12	6	11	15	7	6	7	8	5	16	**74**	18	21	17	13	6	12	6	5	10	8	6	6	4	4	4	**74**
Feb 13	3	3	3	3	5	3	3	4	8	7	7	5	9	5	6	4	9	8	65	49	27	8	32	5	3	65
Feb 14	6	4	3	21	7	7	5	6	8	10	6	8	10	9	13	15	16	18	16	23	42	41	32	10	3	42
Feb 15	9	11	24	53	41	12	7	8	4	14	8	11	14	14	16	12	12	13	7	9	6	6	8	11	4	53
Feb 16	7	36	14	14	9	5	10	8	8	11	28	22	16	7	9	10	7	12	9	4	7	9	5	43	4	43
Feb 17	9	9	5	7	24	54	36	5	8	17	21	18	31	22	20	38	72	3	17	10	11	12	11	5	3	72
Feb 18	10	6	5	12	7	6	**0**	**0**	4	15	10	47	18	20	26	18	26	2	**0**	9	10	13	22	7	**0**	47
Feb 19	6	6	2	1	**0**	3	9	4	**0**	14	10	16	17	24	40	14	22	14	22	12	8	13	12	9	**0**	40
Feb 20	6	5	8	7	50	10	32	36	12	14	12	27	51	53	9	25	19	16	6	7	9	4	6	4	4	53
Feb 21	15	8	15	15	9	8	3	5	5	7	23	13	18	13	10	10	6	6	6	4	3	9	8	6	3	23
Feb 22	11	9	6	7	9	13	20	24	20	10	9	11	15	13	9	7	5	5	5	6	8	16	27	11	5	27
Feb 23	9	8	14	4	11	6	9	7	7	15	6	6	6	21	10	9	10	7	17	8	6	24	8	11	4	24
Feb 24	4	5	13	4	7	8	6	7	6	9	10	9	15	8	7	19	46	9	8	7	21	11	13	23	4	46
Feb 25	17	10	15	**0**	10	13	6	55	11	23	10	10	18	22	9	8	12	11	8	4	6	8	7	7	**0**	55
Feb 26	10	8	7	7	7	6	9	9	9	7	11	11	14	19	21	16	21	19	5	7	9	11	10	21	5	21
Feb 27	66	**0**	3	3	**0**	6	8	7	12	30	28	47	25	29	27	27	26	22	27	14	14	11	6	6	**0**	66
Feb 28	5	5	6	5	6	6	7	7	7	6	8	9	9	10	10	7	7	7	6	5	6	7	9	6	5	10
Feb 29	8	8	7	8	8	8	9	11	13	27	48	18	20	22	29	19	18	4	7	7	7	6	6	3	3	48
Diurnal Minimum	3	0	2	0	0	3	0	0	0	0	4	4	4	5	5	3	3	2	0	4	0	0	4	3		
Diurnal Maximum	66	36	30	53	50	54	36	55	42	74	48	47	51	53	40	38	72	22	65	69	42	41	36	43		

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, 158 of 158 ends the February 2024 Monthly Ambient Air Quality Monitoring Report.

Lakeland Industry & Community Association

FEBRUARY 2024

Ambient Air Monitoring Calibration Report

- COLD LAKE SOUTH STATION-

CAL-LICA-202402-01174

Station Operation and Maintenance:
Bureau Veritas Canada

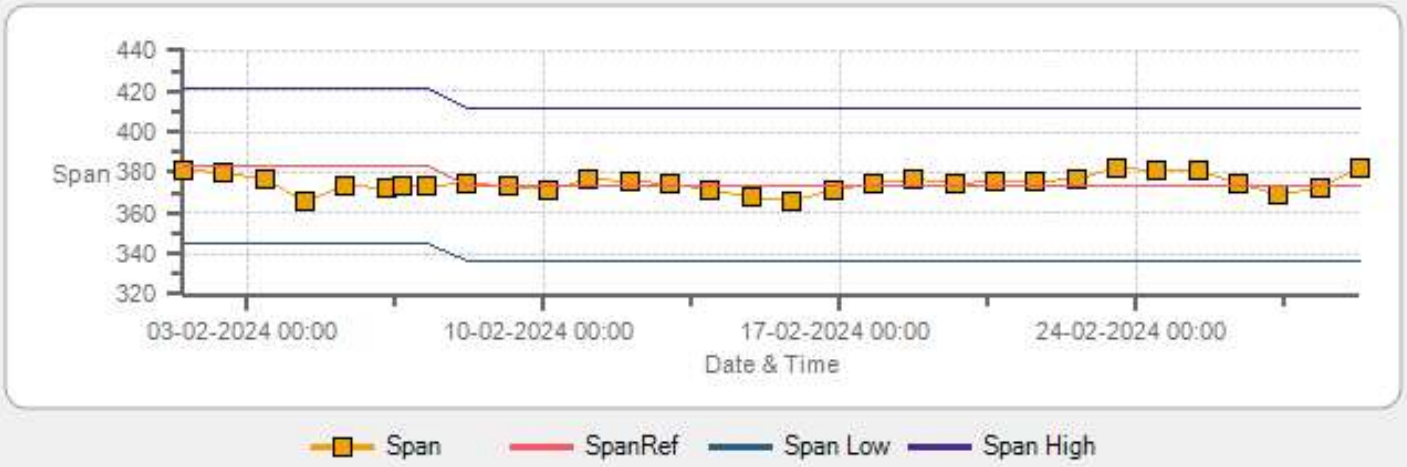
Data Validation and Report:
LICA / Bureau Veritas Canada

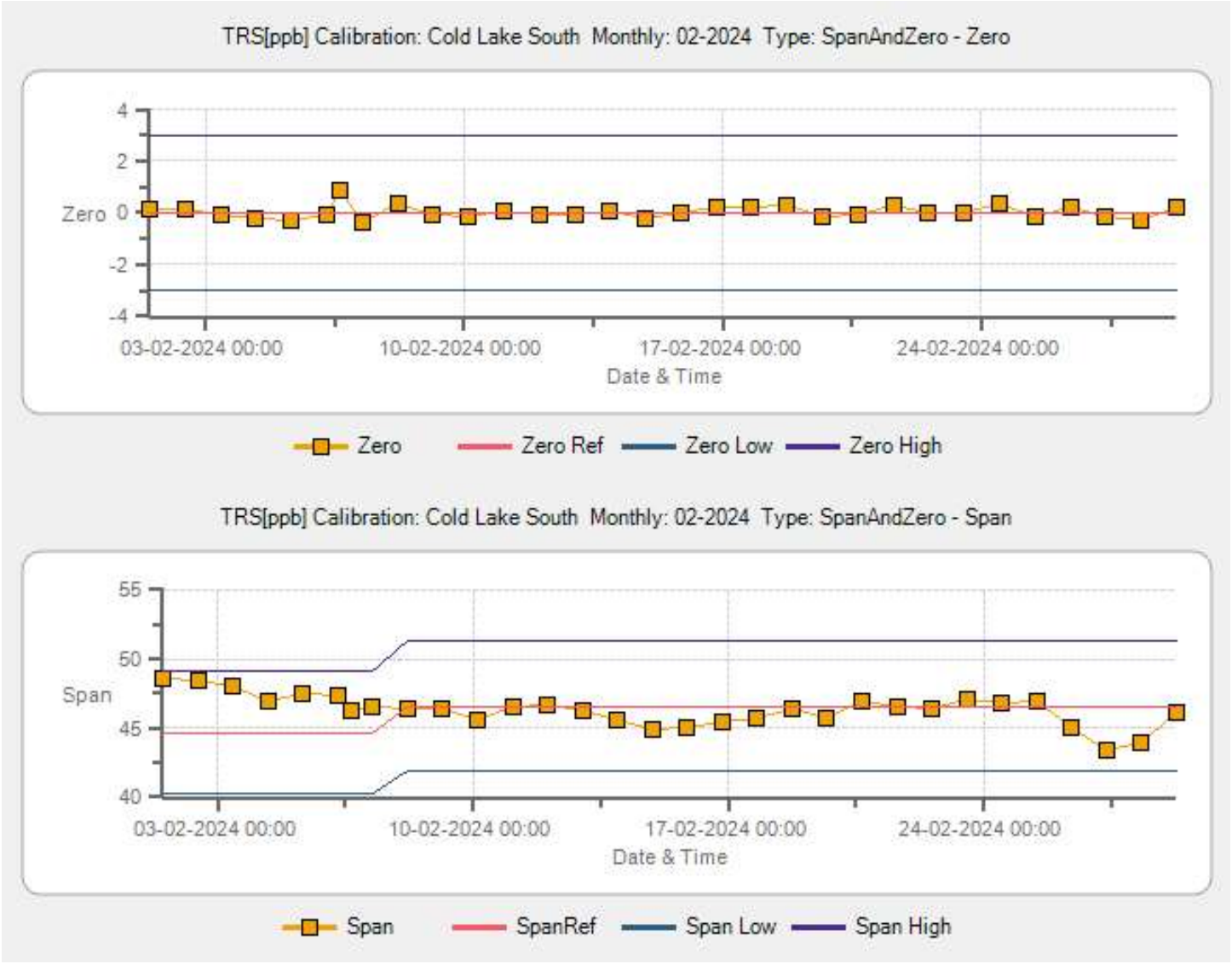
March 13, 2024

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Zero

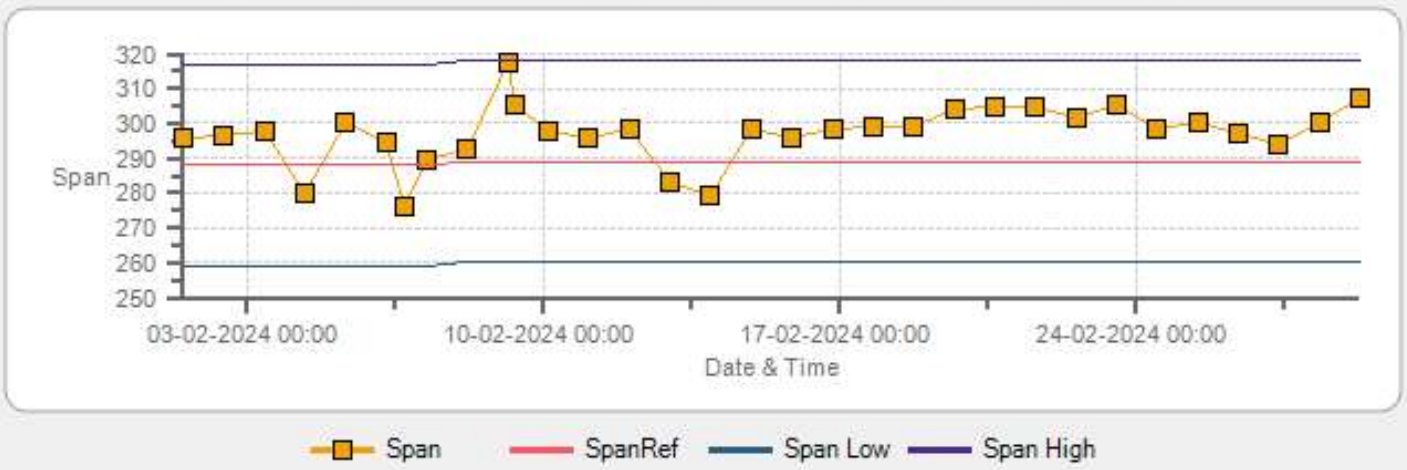
SO2[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Span




TRS[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
TRS[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Span
55
50
Span
45
40
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High

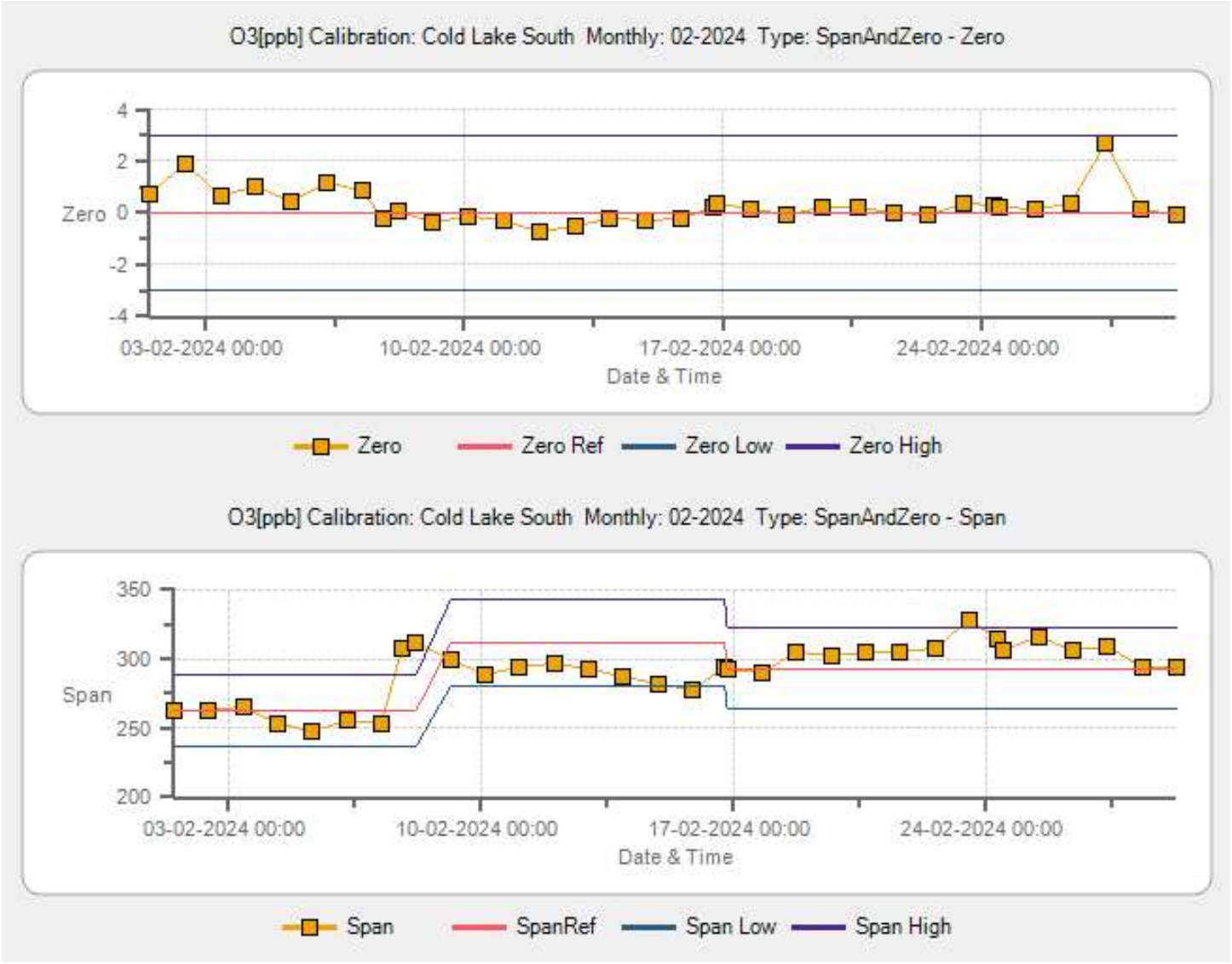
NOX[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Zero

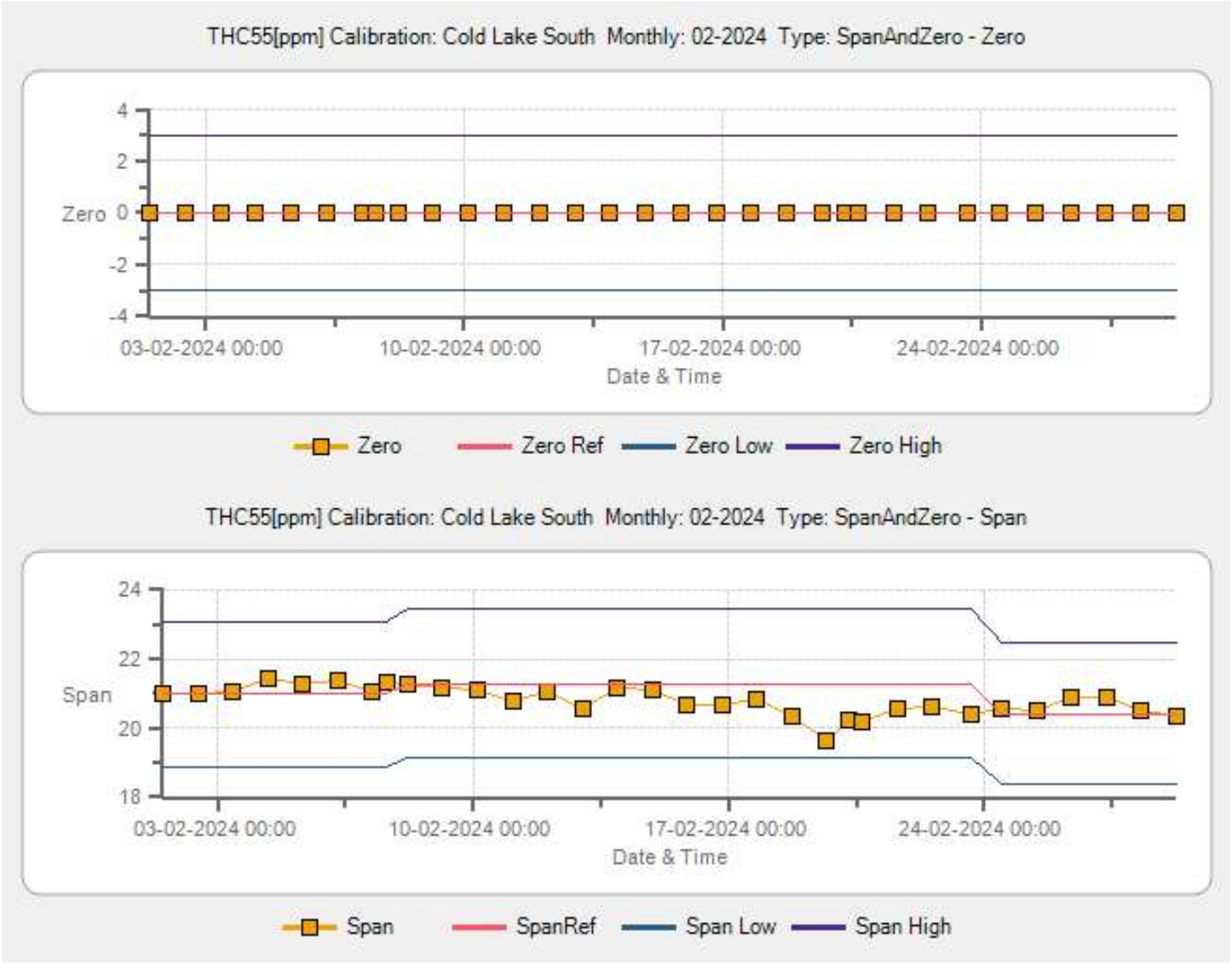
NOX[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Span

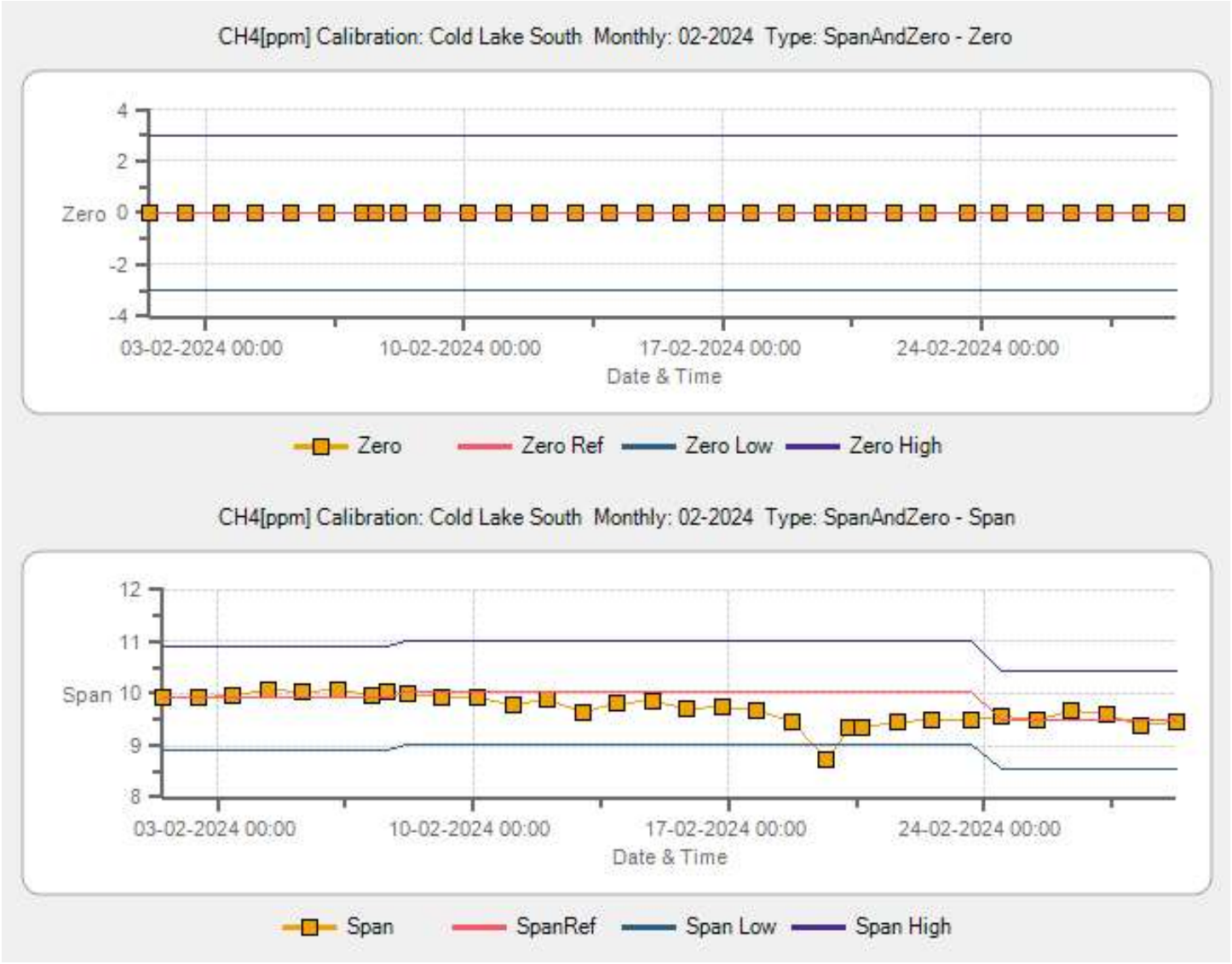


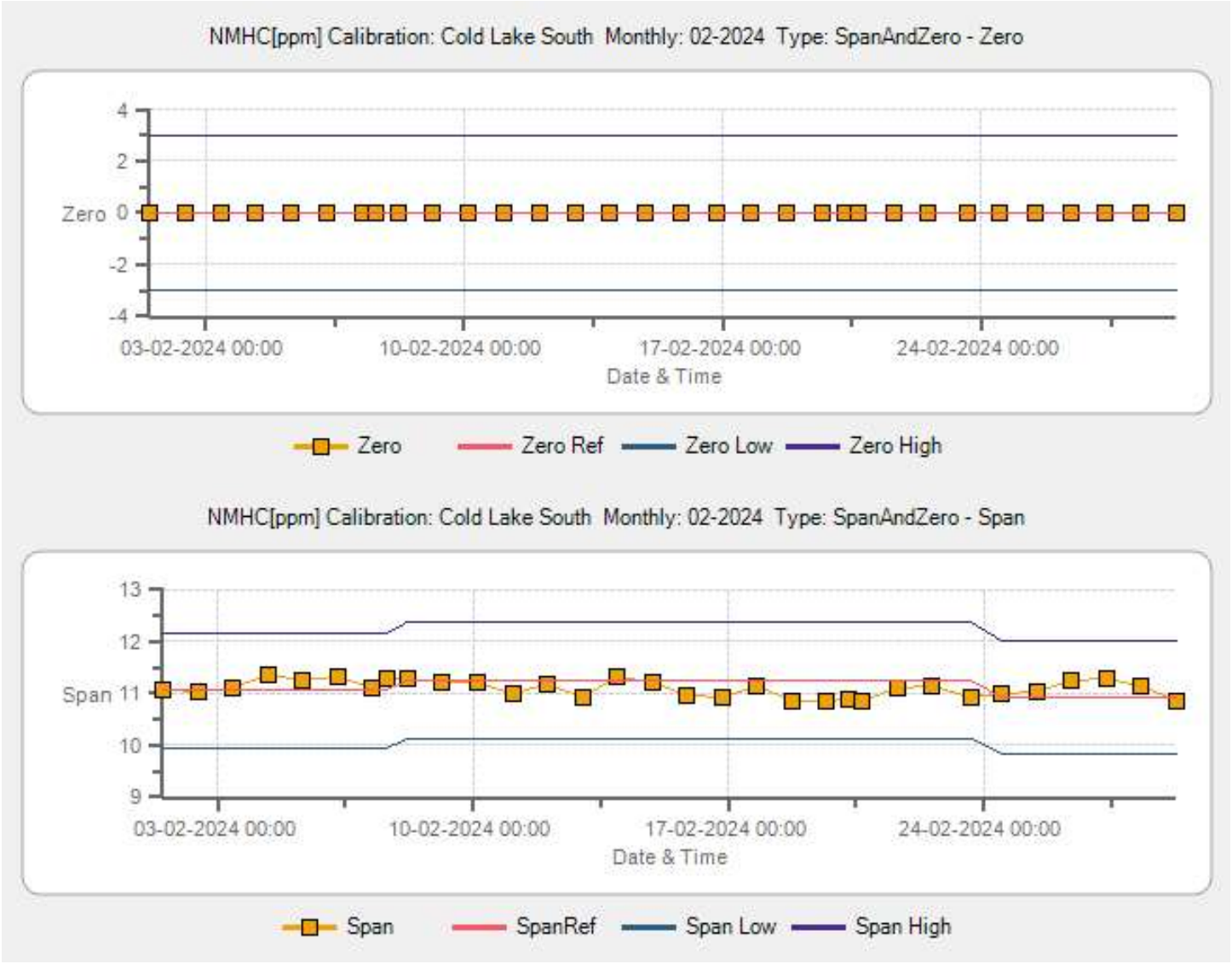
NO2[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Zero

NO2[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Span


O3[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Zero
Zero
4
2
0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Span
Span
350
300
250
200
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


THC55[ppm] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Span
24
22
Span
20
18
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


CH4[ppm] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4[ppm] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Span
12
11
Span 10
9
8
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NMHC[ppm] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC[ppm] Calibration: Cold Lake South Monthly: 02-2024 Type: SpanAndZero - Span
13
12
Span 11
10
9
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	06-Feb-2024	PREVIOUS CALIBRATION DATE:	28-Jan-2024
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.996
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	951
PURPOSE	Routine	START TIME (MST):	10:13
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:25

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180260018	FLOW (mL/min)	444
INITIAL		FINAL	
BKG/OFFSET	2.39	BKG/OFFSET	2.39
COEF/SLOPE	1.681	COEF/SLOPE	1.681
Expected (reference) Value	383	Expected (reference) Value	374

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	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):	500	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:

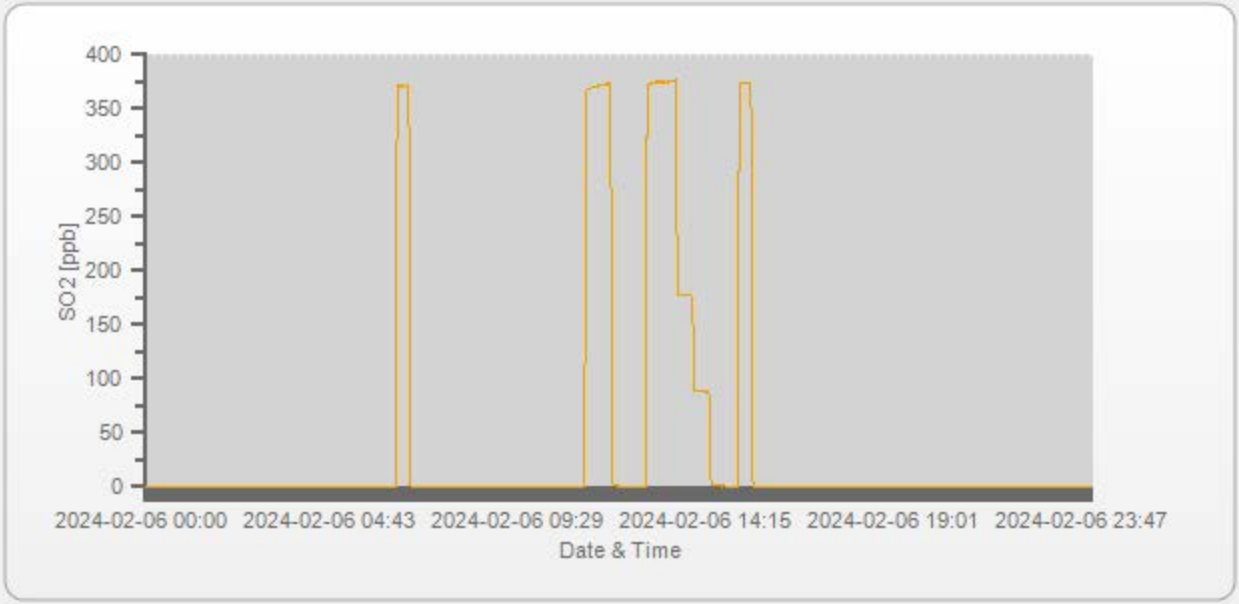
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.00	0	0		
4961	37.20	4998	375.13	372.8	375.7	1.006	0.998
4982	17.60	5000	177.41	n/a	177	n/a	1.002
4990	8.80	4999	88.72	n/a	88.1	n/a	1.007

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.1%

COMMENTS:

Sample inlet filter was changed.


SO2[ppb] Station: Cold Lake South Daily: 2024-02-06 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
SO2 [ppb]
2024-02-06 00:00
2024-02-06 04:43
2024-02-06 09:29
2024-02-06 14:15
2024-02-06 19:01
2024-02-06 23:47
Date & Time
SO2 [ppb]

TRS Analyzer Calibration by Dilution

DATE:	06-Feb-2024	PREVIOUS CALIBRATION DATE:	18-Jan-2024
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.002
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	951
PURPOSE	Routine	START TIME (MST):	10:11
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:25

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	812728560	FLOW (mL/min)	502
INITIAL		FINAL	
BKG/OFFSET	26.8	BKG/OFFSET	30.3
COEF/SLOPE	1.164	COEF/SLOPE	1.301
Expected (reference) Value	45	Expected (reference) Value	47

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL 131360	HIGH ID	n/a
CONC (ppm):	10.05	EXPIRY DATE	n/a
CYLINDER (psi):	1800	LOW ID	n/a
EXPIRY DATE	03-Jan-2026	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:	10:13	SO2 Conc (ppb)	380
END TIME:	10:28	Analyzer Response (ppb)	0.0

CALIBRATION:

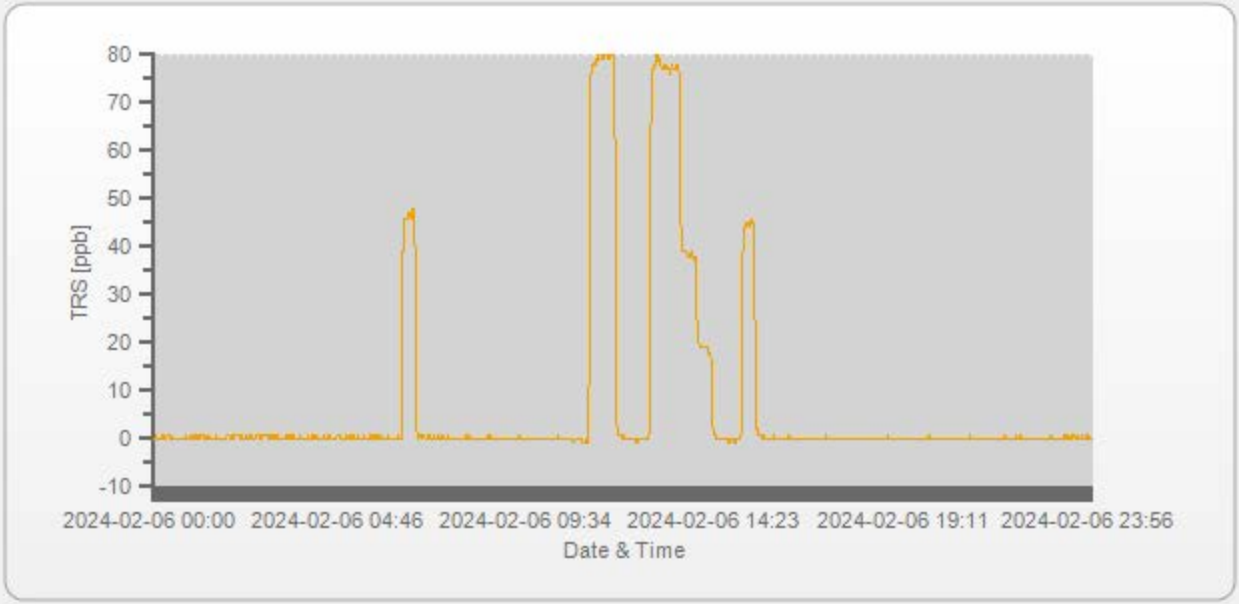
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	-0.3	0		
7442	58.20	7500	77.99	80.2	78.1	0.969	0.999
7472	28.40	7500	38.06	n/a	38.2	n/a	0.996
7486	14.20	7500	19.03	n/a	19.5	n/a	0.976

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.2%

COMMENTS:

Sample inlet filter was changed.


TRS[ppb] Station: Cold Lake South Daily: 2024-02-06 Type: AVG 1 Min. [1 Min.]
80
70
60
50
40
30
20
10
0
-10
TRS [ppb]
2024-02-06 00:00
2024-02-06 04:46
2024-02-06 09:34
2024-02-06 14:23
2024-02-06 19:11
2024-02-06 23:56
Date & Time
TRS [ppb]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

				ANALYZER:			
DATE:	06-Feb-2024	PREVIOUS CALIBRATION DATE:	05-Jan-2024	MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
CLIENT:	LICA	TEMPERATURE (°C):	22.0	SERIAL #:	1505664393	NOx	1.001
LOCATION:	CLS	BAROMETRIC (mBar):	951	FLOW (mL/min)	691	NO	1.001
PURPOSE	Routine	START TIME (MST):	10:14	RANGE (ppb)	500	NO2	1.002
PERFORMED BY:	Alex Yakupov	END TIME (MST):	17:04	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):	500		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2023	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	4.9	n/a	BKG/OFFSET:	5	4.8	n/a
SLOPE/COEF/CE:	1.007	1.031	0.999	SLOPE/COEF/CE:	1.008	1.035	0.999

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	288.0	2.8	285.0		289.0	2.5	287.0

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	-0.2	-0.2	0.0	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	378.6	382.3	3.7	379.8	383.3	3.5	1.004	1.004		1.001	1.002	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.4	181.5	2.1	n/a	n/a		1.003	1.001	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	89.6	90.6	0.9	n/a	n/a		1.004	1.003	

GPT CALIBRATION:

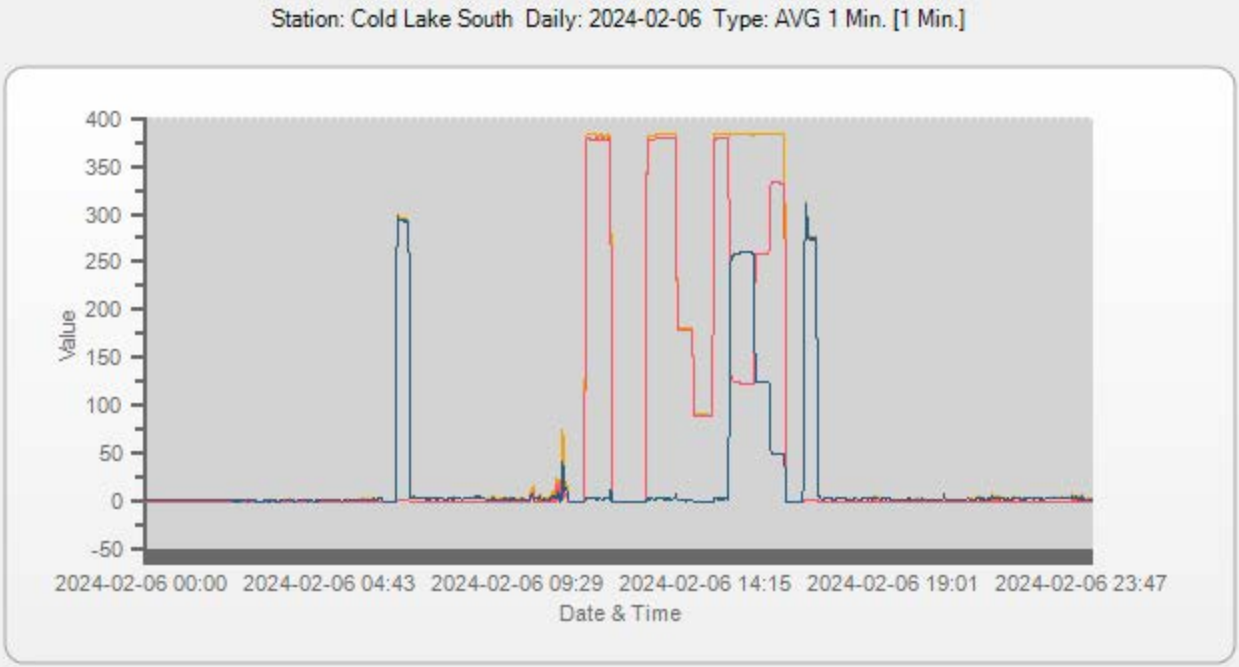
Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	379.6	383.3	3.7				
AS-FOUND HIGH	37.20	4998	235	122.8	382.7	259.9	256.8	256.2	1.002	99.77%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	37.20	4998	110	258.6	383.5	124.9	121	121.2	0.998	100.17%
LOW	37.20	4998	40	332.3	383.0	50.7	47.3	47	1.006	99.37%
NO2 adjustment not required.									AVERAGE:	99.77%

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.999	-0.03%
NOx	1.000	0.998	0.01%
NO2	1.000	0.998	0.01%

COMMENTS:

Sample inlet filter was changed.


Station: Cold Lake South Daily: 2024-02-06 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
Value
2024-02-06 00:00
2024-02-06 04:43
2024-02-06 09:29
2024-02-06 14:15
2024-02-06 19:01
2024-02-06 23:47
Date & Time
NOX [ppb]
NO [ppb]
NO2 [ppb]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

				ANALYZER:			
DATE:	16-Feb-2024	PREVIOUS CALIBRATION DATE:	06-Feb-2024	MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
CLIENT:	LICA	TEMPERATURE (°C):	22.0	SERIAL #:	1505664393	NOx	1.002
LOCATION:	CLS	BAROMETRIC (mBar):	959	FLOW (mL/min)	690	NO	1.001
PURPOSE	As-Found	START TIME (MST):	12:11	RANGE (ppb)	500	NO2	1.002
PERFORMED BY:	Alex Yakupov	END TIME (MST):	13:59	GPT FOR O3?		Yes	

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):	400		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2023	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	1.035	0.999	SLOPE/COEF/CE:	n/a	n/a	n/a

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	289.0	2.5	287.0		n/a	n/a	n/a

CALIBRATION PARAMETERS:

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	395	250	240-275	n/a
MID	180	154	150-157	Mid
LOW	90	54	50-58	Low
EXTRA 1	n/a	340	300-370	High

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
4998		4998	0.0	0.0	0.0	0.0	1.0	0.0	n/a	n/a	n/a						
4954	44.00	4998	**449.9**	**454.3**	4.4	448.0	452.4	4.4	n/a	n/a	n/a	1.004	1.006		n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		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	44.00	4998	0	448.0	452.4	4.4				
AS-FOUND HIGH	44.00	4998	348	100.4	451.3	350.9	347.6	**346.5**	1.003	99.68%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	44.00	4998	175	267.9	450.3	182.5	180.1	178.1	1.011	98.89%
LOW	44.00	4998	85	358.9	449.9	91.0	89.1	**86.6**	1.029	97.19%
NO2 adjustment not required.									AVERAGE:	**n/a**

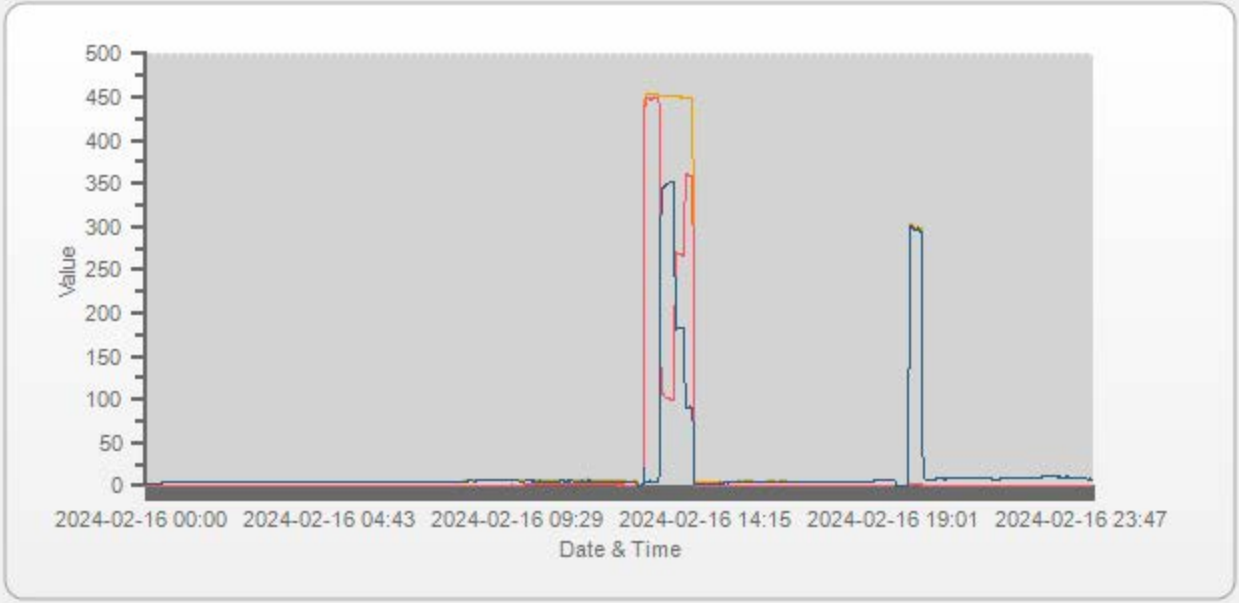
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	n/a	**n/a**	**n/a**
NOx	n/a	**n/a**	**n/a**
NO2	n/a	**n/a**	**n/a**

COMMENTS:

The GPT part was completed for O3 analyzer calibration only. DO NOT REPORT.

Station: Cold Lake South Daily: 2024-02-16 Type: AVG 1 Min. [1 Min.]



Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	07-Feb-2024	PREVIOUS CALIBRATION DATE:	30-Jan-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	946
PURPOSE	Routine	START TIME (MST):	10:44
PERFORMED BY:	Alex Yakupov	END TIME (MST):	19:15

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	12208316585	FLOW (mL/min)	1310
INITIAL		FINAL	
BKG/OFFSET	-0.3	BKG/OFFSET	0.8
COEF/SLOPE	1.044	COEF/SLOPE	1.303
Expected (reference) Value	280.9	Expected (reference) Value	312

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	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:

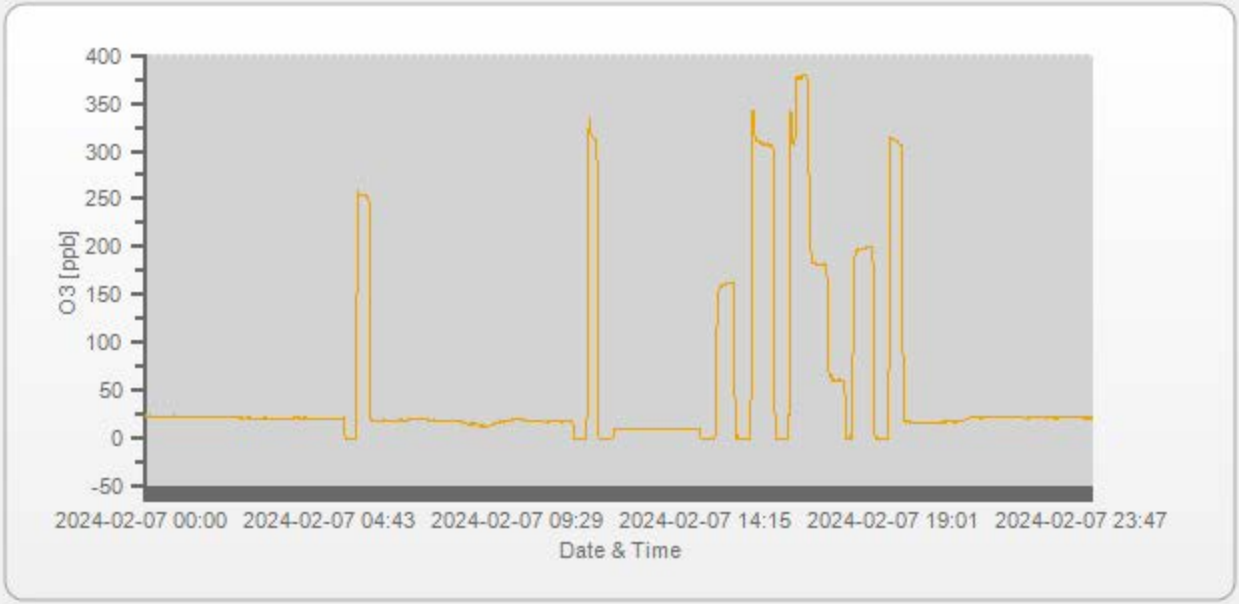
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED Initial	INDICATED Final	Initial	Final
5000		5000	0.0	0.7	0.0		
5000		5000	378.0	306.8	378.8	**1.235**	0.998
5000		5000	180.0	n/a	182.0	n/a	0.989
5000		5000	60.0	n/a	61.2	n/a	0.980

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	0.2%

COMMENTS:

11:25 = Calibration paused due to low reponse. Verification/troubleshooting started.
14:05-14:56 = Low response confirmed with alternate analyzer (Sabio 2010+GPT data)
15:00 onwards. Calibration restarted from As-found zero (Sabio 2010D photometer)
Calibration failed at as-found high. No problems could be found. Analyzer recalibrated.
17:54-18:29 = adjustment cross-checked with alternate calibrator.


O3[ppb] Station: Cold Lake South Daily: 2024-02-07 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
2024-02-07 00:00
2024-02-07 04:43
2024-02-07 09:29
2024-02-07 14:15
2024-02-07 19:01
2024-02-07 23:47
Date & Time
O3 [ppb]

Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	16-Feb-2024	PREVIOUS CALIBRATION DATE:	07-Feb-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	0.998
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	959
PURPOSE	Routine	START TIME (MST):	14:04
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:05

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	12208316585	FLOW (mL/min)	1.32
INITIAL		FINAL	
BKG/OFFSET	0.8	BKG/OFFSET	0.4
COEF/SLOPE	1.303	COEF/SLOPE	1.354
Expected (reference) Value	312	Expected (reference) Value	293

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	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:

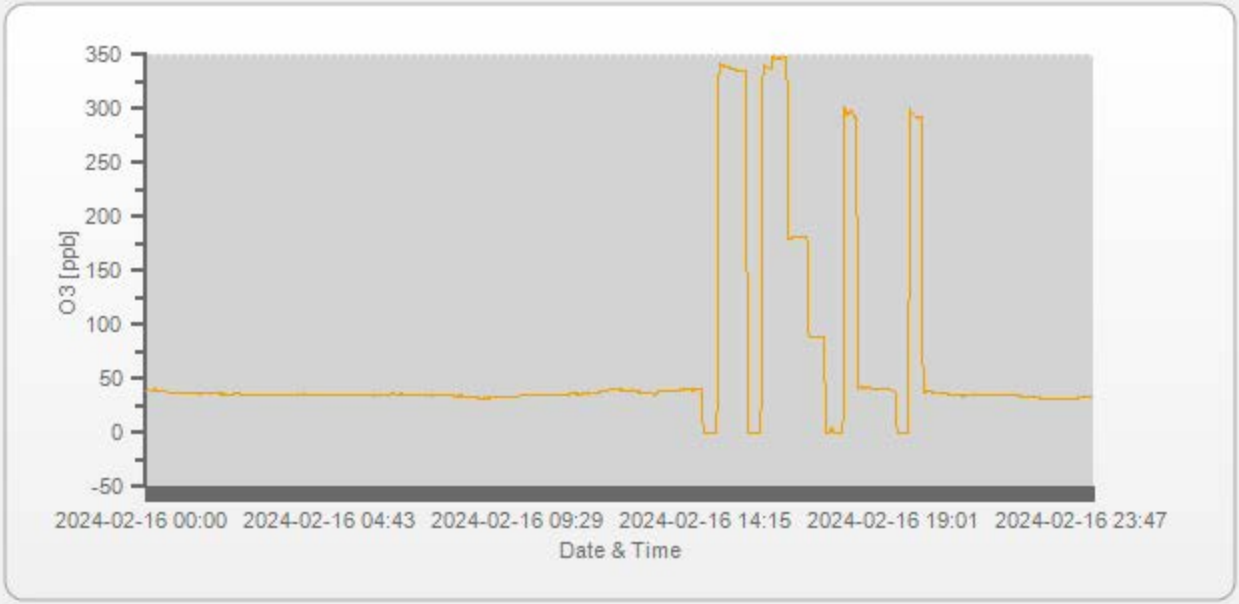
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	-0.1	0.0		
5000		5000	347.6	336.3	348.0	1.033	0.999
5000		5000	180.1	n/a	180.4	n/a	0.998
5000		5000	89.1	n/a	89.2	n/a	0.999

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	0.0%

COMMENTS:

Repeat calibration due to span drift.


O3[ppb] Station: Cold Lake South Daily: 2024-02-16 Type: AVG 1 Min. [1 Min.]
350
300
250
200
150
100
50
0
-50
O3 [ppb]
2024-02-16 00:00
2024-02-16 04:43
2024-02-16 09:29
2024-02-16 14:15
2024-02-16 19:01
2024-02-16 23:47
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	07-Feb-2024	PREVIOUS CALIBRATION DATE:	30-Jan-2024
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	946
PURPOSE	Routine	START TIME (MST):	10:45
PERFORMED BY:	Alex Yakupov	END TIME (MST):	14:42

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1236656107	1002
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.000	1.001	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):	800		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2023	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
	9.91	11.07	20.98		10.02	11.27	21.30

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	14.42	13.37	27.79	14.51	13.55	28.06	1.006	1.010	1.008	1.000	0.996	0.998
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.26	6.74	13.99	n/a	n/a	n/a	0.999	1.001	1.001
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.64	3.32	6.97	n/a	n/a	n/a	0.994	1.014	1.002

LINEAR REGRESSION ANALYSIS:

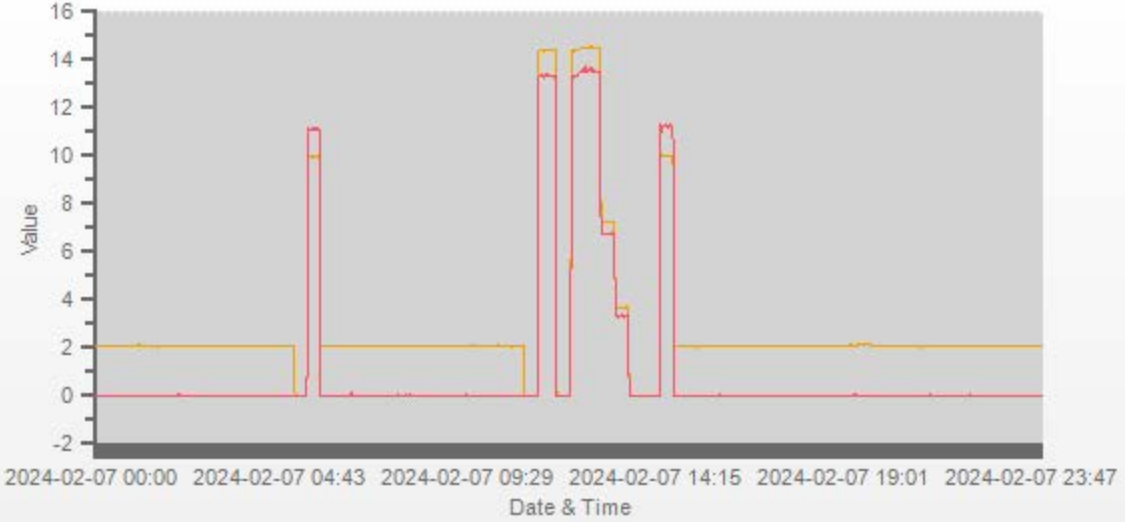
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	0.999	0.0%
NMHC	1.000	1.005	-0.2%
THC	1.000	1.002	0.0%

Comments:

Sample inlet filter was changed.

Use Zero Chrom? **Yes**

Station: Cold Lake South Daily: 2024-02-07 Type: AVG 1 Min. [1 Min.]



Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	23-Feb-2024	PREVIOUS CALIBRATION DATE:	07-Feb-2024
CLIENT:	LICA	TEMPERATURE (°C):	23.1
LOCATION:	CLS	BAROMETRIC (mBar):	942
PURPOSE	Removal/Shut-down	START TIME (MST):	08:52
PERFORMED BY:	Chris Wesson	END TIME (MST):	10:35

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1236656107	1114
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.000	0.996	0.998

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Sabio	CYLINDER ID:	LL119576		HIGH ID:	n/a
MODEL:	2010	MODEL:	2020EXP	CH_4/C_3H_8 (ppm):	870.0	299.0	HIGH EXPIRY:	n/a
ID:	58100720	ID:	18700921	CYLINDER (psi):	1100		LOW ID:	n/a
MFC CALIBRATION DATE:	09-Oct-2023	OXIDIZER ID:	115	EXPIRY DATE	22-Dec-2028		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	822.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1692.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	10.02	11.27	21.30		n/a	n/a	n/a

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
3005		3005	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a	n/a						
2953	49.60	3003	14.37	13.58	27.95	14.50	13.82	28.31	n/a	n/a	n/a	0.991	0.983	0.987	n/a	n/a	n/a
2979	24.80	3004	7.18	6.79	13.97	7.20	6.84	14.04	n/a	n/a	n/a	0.998	0.992	0.995	n/a	n/a	n/a
2992	12.40	3004	3.59	3.39	6.99	3.62	3.43	7.05	n/a	n/a	n/a	0.992	0.990	0.991	n/a	n/a	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.009	-0.1%
NMHC	1.000	1.018	-0.1%
THC	1.000	1.013	-0.1%

Comments:

Shutdown prior to work on support gas

Use Zero Chrom? **Yes**

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	23-Feb-2024	PREVIOUS CALIBRATION DATE:	n/a
CLIENT:	LICA	TEMPERATURE (°C):	24.9
LOCATION:	CLS	BAROMETRIC (mBar):	939
PURPOSE	Install/Post-Repair	START TIME (MST):	13:02
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:25

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1236656107	1114
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	n/a	n/a	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Sabio	CYLINDER ID:	LL119576		HIGH ID:	n/a
MODEL:	2010	MODEL:	2020EXP	CH_4/C_3H_8 (ppm):	870.0	299.0	HIGH EXPIRY:	n/a
ID:	58100720	ID:	18700921	CYLINDER (psi):	1100		LOW ID:	n/a
MFC CALIBRATION DATE:	09-Oct-2023	OXIDIZER ID:	115	EXPIRY DATE	22-Dec-2028		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	822.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1692.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	n/a	n/a	n/a		9.49	10.92	20.42

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
3005		3005	0.00	0.00	0.00	n/a	n/a	n/a	0.00	0.00	0.00						
2953	49.60	3003	14.37	13.58	27.95	n/a	n/a	n/a	14.38	13.60	27.97	n/a	n/a	n/a	0.999	0.999	0.999
2979	24.80	3004	7.18	6.79	13.97	n/a	n/a	n/a	7.17	6.79	13.96	n/a	n/a	n/a	1.002	1.000	1.001
2992	12.40	3004	3.59	3.39	6.99	n/a	n/a	n/a	3.60	3.43	7.03	n/a	n/a	n/a	0.998	0.990	0.994

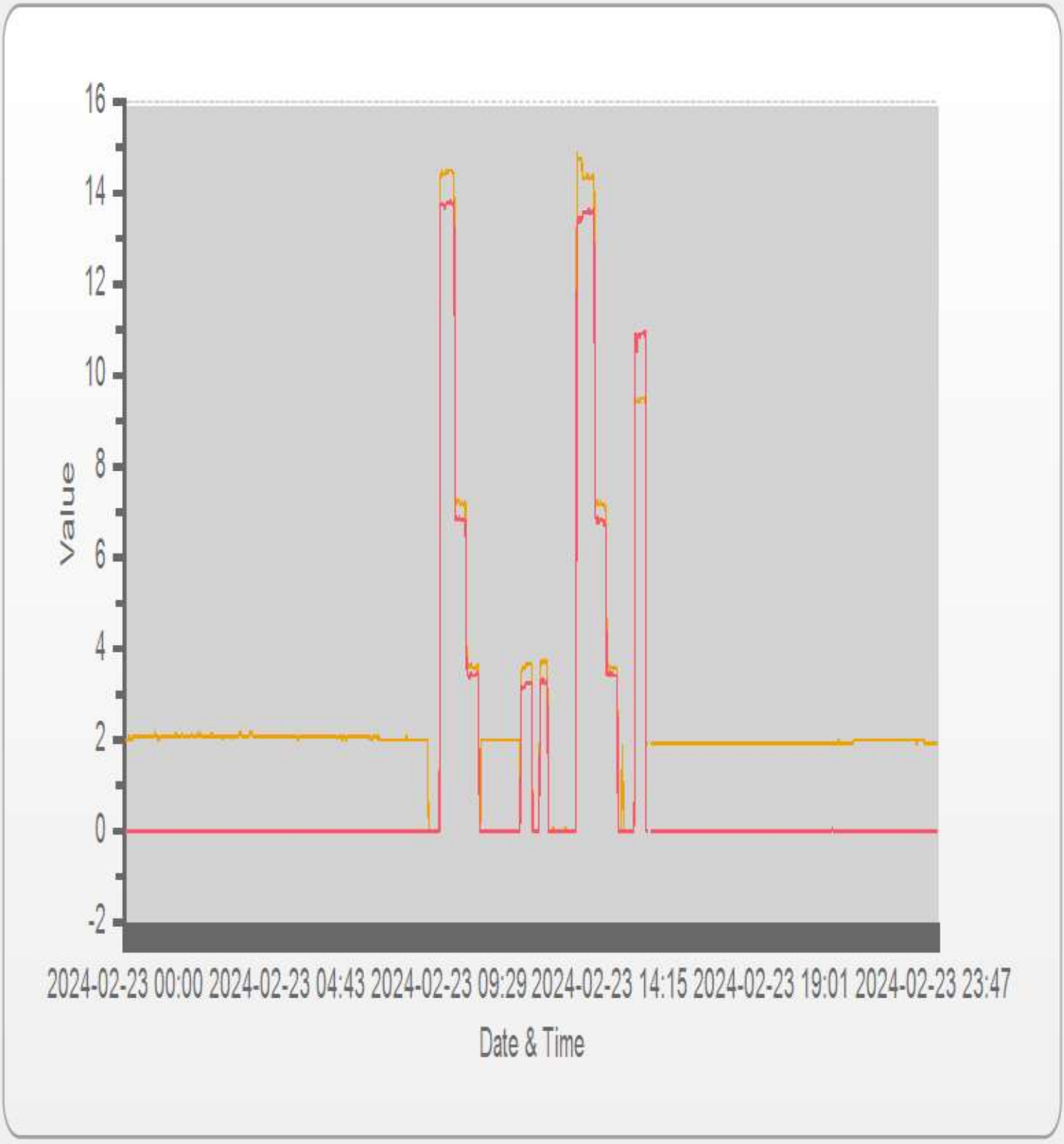
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.000	0.0%
NMHC	1.000	1.001	0.1%
THC	1.000	1.000	0.0%

Comments:

Post-repair following changes to support gas

Use Zero Chrom? **Yes**


Station: Cold Lake South Daily: 2024-02-23 Type: AVG 1 Min. [1 Min.]
16
14
12
10
8
6
4
2
0
-2
Value
2024-02-23 00:00
2024-02-23 04:43
2024-02-23 09:29
2024-02-23 14:15
2024-02-23 19:01
2024-02-23 23:47
Date & Time
CH4 [ppm]
NMHC [ppm]

Teledyne T640 Audit/Calibration

Date/Previous Audit Date:	February 7, 2024	January 4, 2024	**Weather Conditions:**	A few clouds	
Company:	LICA		**Start Time (mst):**	18:30	
Station:	Cold Lake South		**End Time (mst):**	19:37	
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 DC-1/#177246 / Nov 27, 2024
Digital Manometer: DeltaCal DC-1/#177246 / Nov 27, 2024
Temperature: Vaisala / HM70 / #T1640130/ Jun 26, 2024
Pressure: Fisher / FB 61291/ #130168457/ Mar 20, 2024

DIAGNOSTICS:

Ambient Pressure (mmHg)	708.0	Ambient Temp (°C)	-4.9	ASC Heater Duty (%)	0.0
Box Temp (°C)	27.6	Current PMT HV (V)	1429	LED Temp (°C)	36.90
P3 Value	47	PMT Setting (V)	1432	Pump PWM (%)	44
Sample Flow (L/min)	4.99	Sample RH (%RH)	12.2	Number concentration	219.0

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)	707.3	708.0	707.3	708	+/- 10 mm Hg
Ambient Temperature (°C)	-5.10	-4.9	n/a		+/- 2°C
Sample Flow (L/min)	5.01	5.00	5.01	5.00	+/-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:

n/a

Meteorological System Checklist

Date:	February 7, 2024		
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 26, 2024		
Reference Temperature (^{o}C):	-5.2		
Station - Ambient Temperature (^{o}C):	-5.0		
Temperature Difference (^{o}C):	0.1		
BAROMETRIC PRESSURE SENSOR CHECK			
Reference Barometer ID:	Fisher / FB 61291/ #130168457/ Mar 20, 2024		
Reference Pressure - Units/Reading:	millibar	943	
Station Pressure - Units/Reading:	millibar	945	
Pressure Tolerance +/- 15% of error:	802 - 1084	-0.21%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Reference Hygrometer ID:	Vaisala / HM70 / #T1640130/ Jun 26, 2024		
Reference Hygrometer % RH- Reading:	86.10		
Station Hygrometer % RH- Reading:	90.70		
RH Tolerance +/- 15% of difference:	73.19 - 99.02	-5.3%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	January 5, 2024	Previous check date:	January 5, 2024
Wind Speed Observed (kph):	1 -10	Wind Direction Observed:	NE
Wind speed on Data Logger (kph):	3.6	Wind Direction on Data Logger:	NE
	Annual audit: Dec 27, 2023	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge: 23.6 vs 23.4, Difference = 0.2 degrees. Passed. Wind system: Model 05305AQ. Signal box #

Meteorological Sensor Audit/Calibration

Location Information

Company:	LICA	**Performed By:**	Alex Yakupov
Audit Location:	Cold Lake South	**Reviewed By:**	Chris Wesson
Audit Date:	December 27, 2023	**Start/End Time (mst):**	12:09 / 14:17
Calibration Purpose:	routine annual	**Weather Conditions:**	Mainly sunny

Wind Sensor Information

Sensor ID Data:		**Sensor Outputs:**	
Sensor Make:	RM Young	**Velocity Voltage Output Range:**	0-1
Sensor Model:	05305AQ	**Velocity Unit Output Range:**	0-200
Serial #:	177354	**Direction Voltage Output Range:**	0-1
Previous Cal/Audit Date:	July 6, 2022	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 ID# CA4744 expires Oct 18, 2024

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	18.3	18.3	1.007
2000	36.9	36.9	36.7	1.002
3000	55.3	55.1	55.1	1.003
4000	73.7	73.6	73.6	1.002
5000	92.2	92.0	92.0	1.002
6000	110.6	110.5	110.5	1.001
7000	129.0	128.9	128.9	1.001
8000	147.4	147.3	147.3	1.001
9000	165.9	165.8	165.8	1.000
10000	184.3	184.2	184.2	1.001
		The audit meets AMD requirements.	**Average Correction Factor=**	**1.002**

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	353	0.2	2.4	1.3
30	330	26	329	3.7	1.0	2.4
60	300	58	298	2.3	2.0	2.2
90	270	87	268	2.8	2.3	2.6
120	240	119	236	1.5	4.5	3.0
150	210	149	208	1.4	1.7	1.6
180	180	177	177	2.7	2.7	2.7
210	150	206	149	4.0	0.9	2.5
240	120	235	120	4.6	0.5	2.6
270	90	266	89	3.7	1.2	2.5
300	60	297	58	2.7	1.9	2.3
330	30	328	27	1.9	3.1	2.5
355	0	353	0	2.4	0.1	1.2
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**2.2**

Comments:

No issues.

End of Report

Lakeland Industry & Community Association

FEBRUARY 2024

Ambient Air Monitoring Calibration Report

- TAMARACK STATION-

CAL-LICA-202402-01248

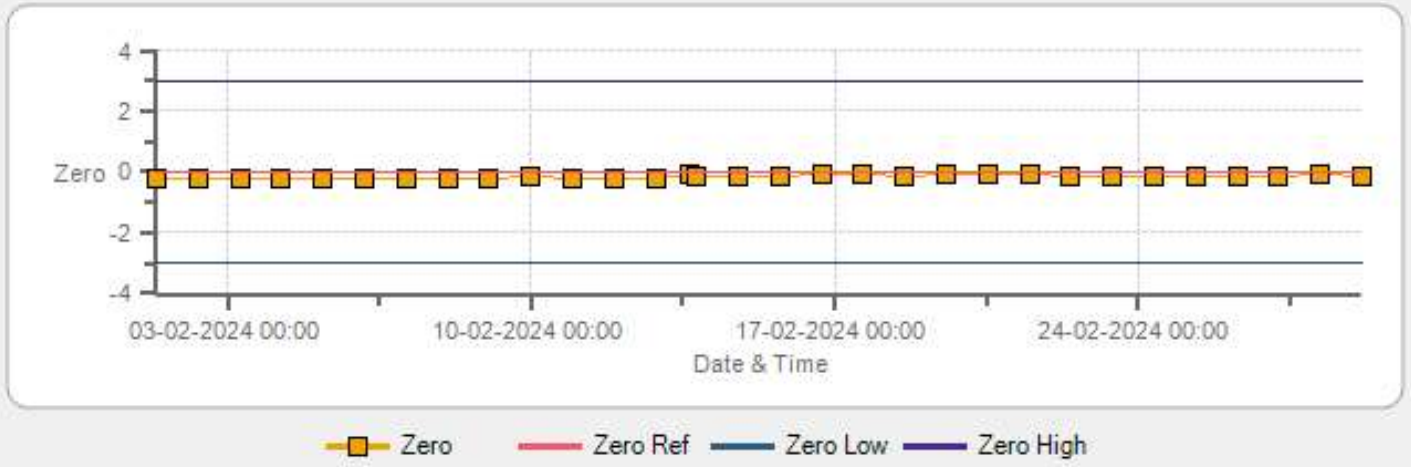
Station Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
LICA / Bureau Veritas Canada

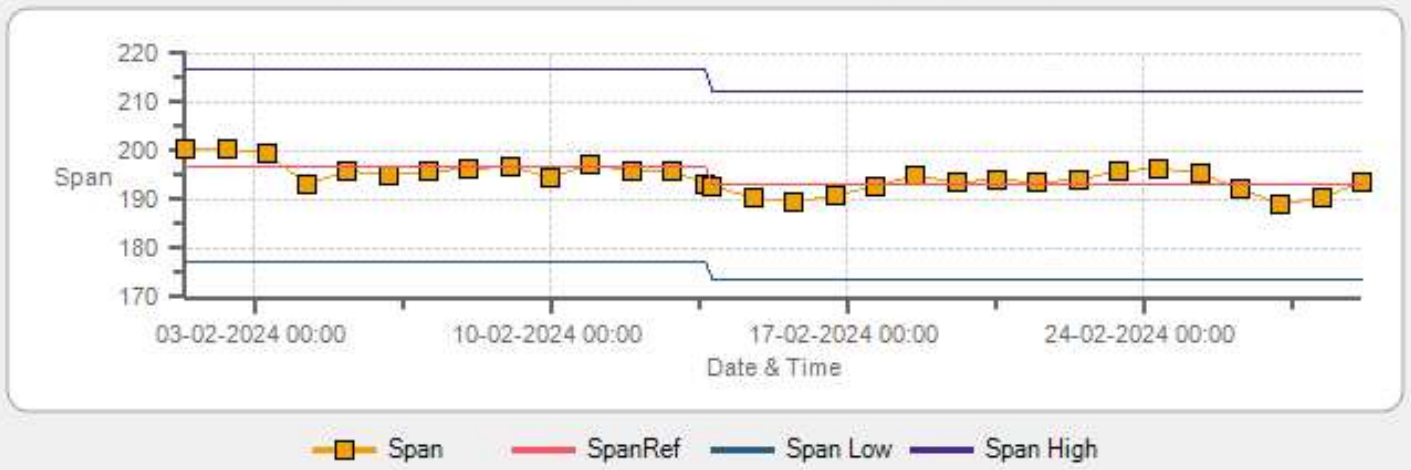
March 13, 2024

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

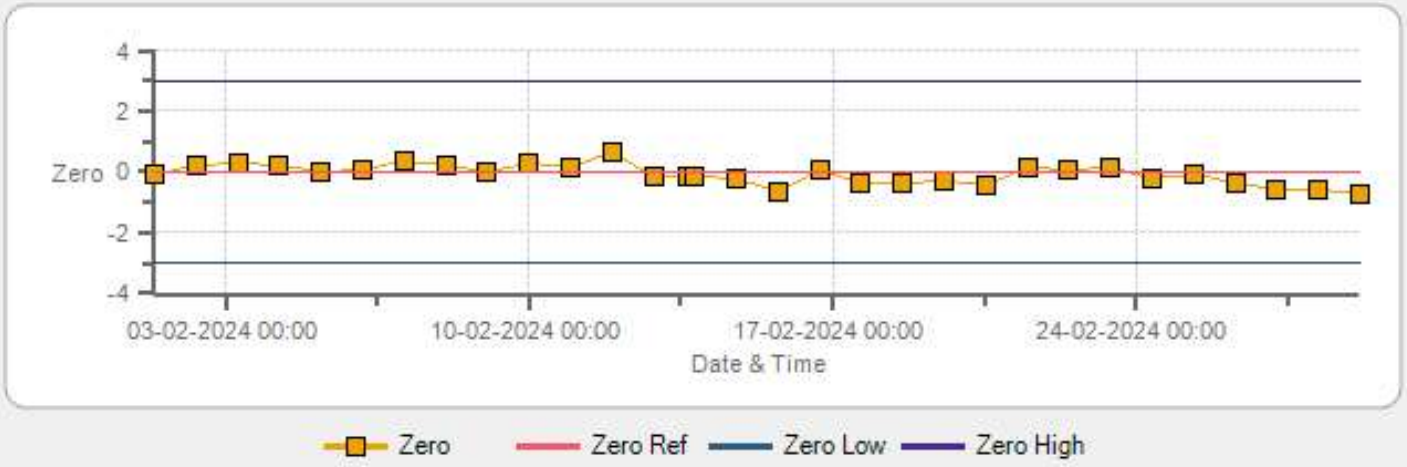
SO2[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Zero



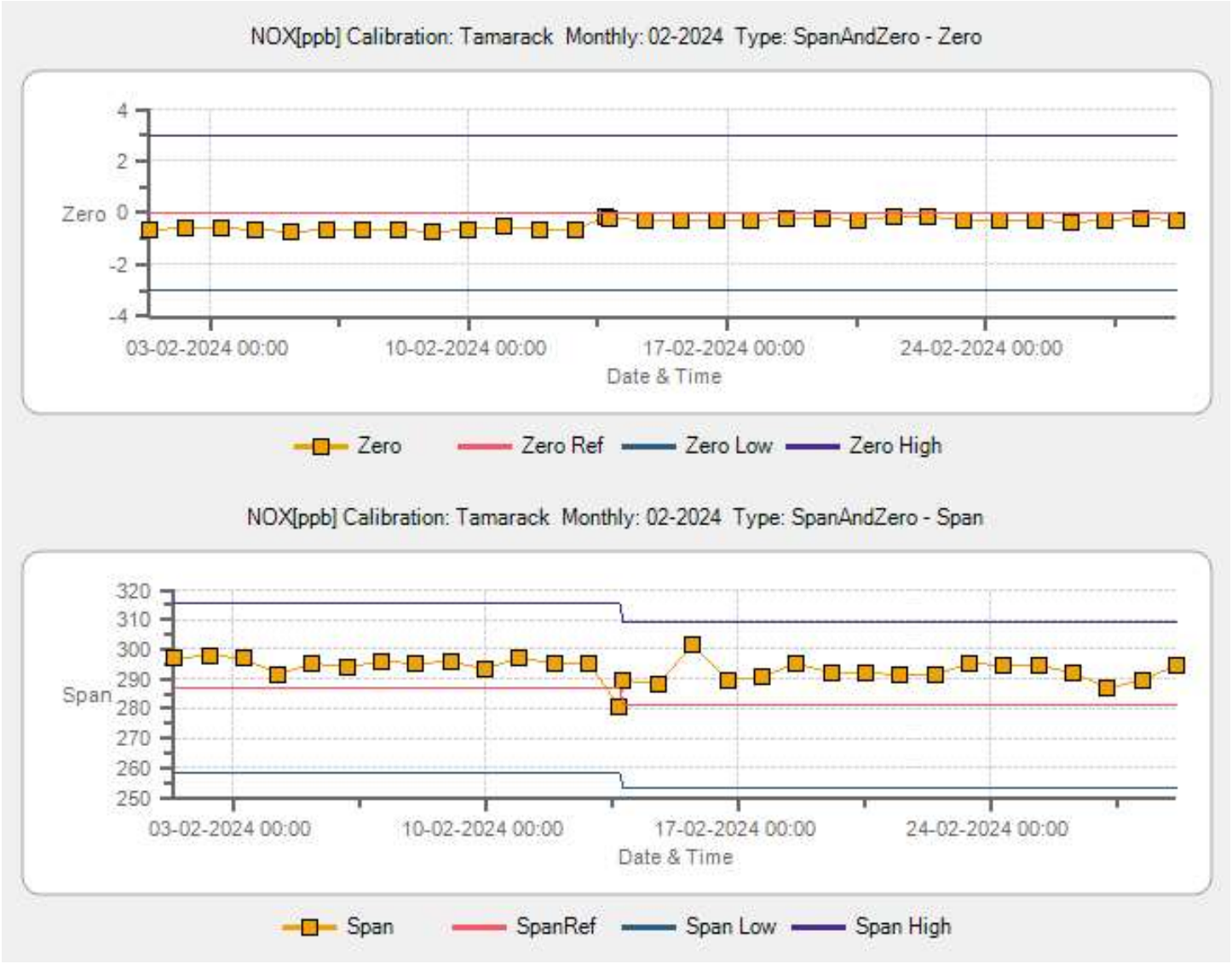
SO2[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Span



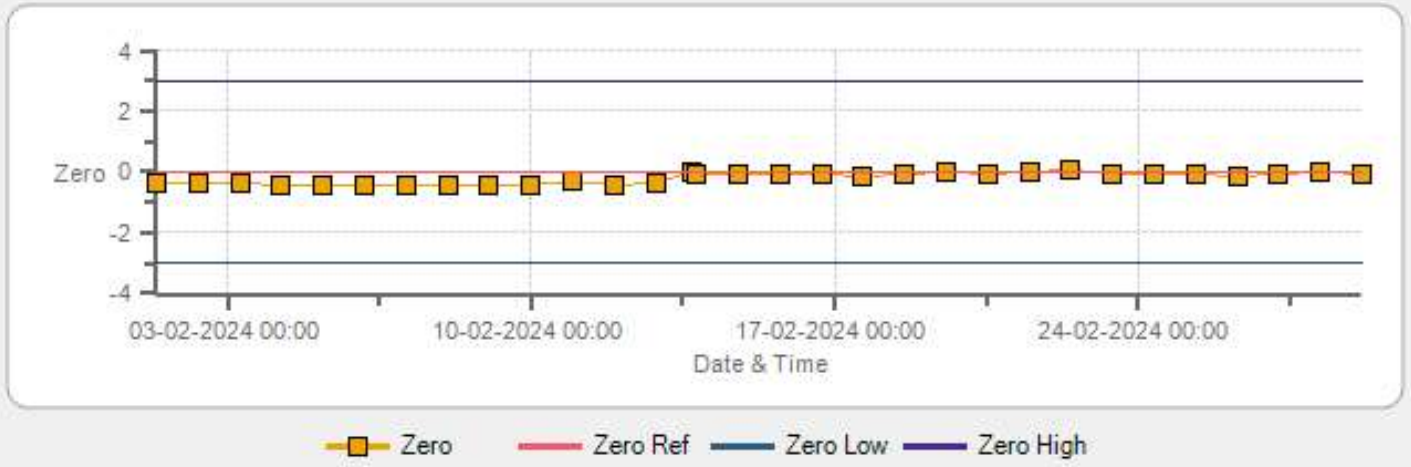
H2S[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Zero



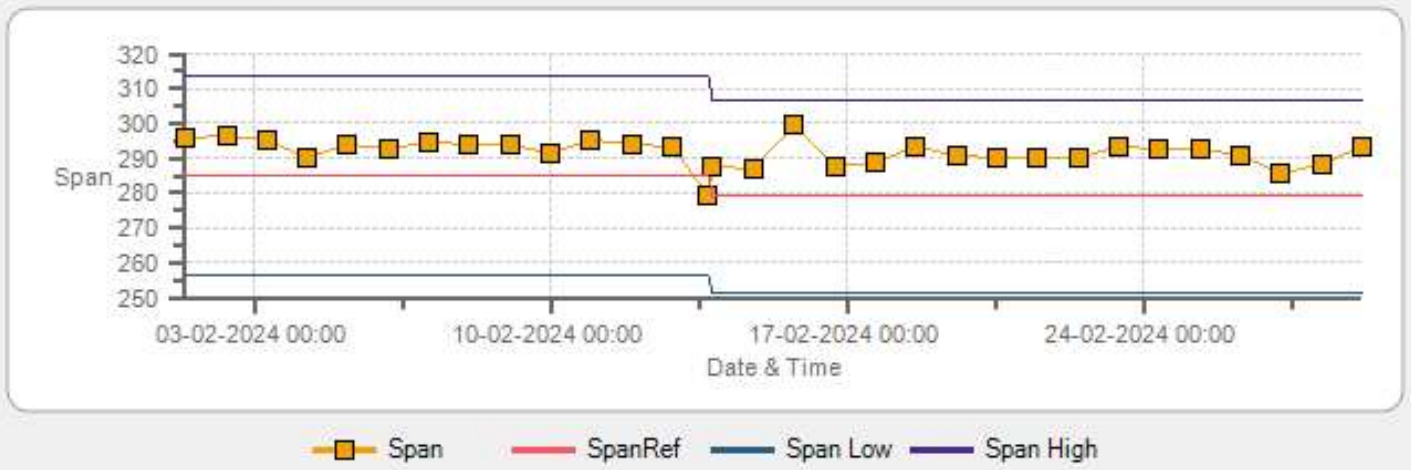
H2S[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Span

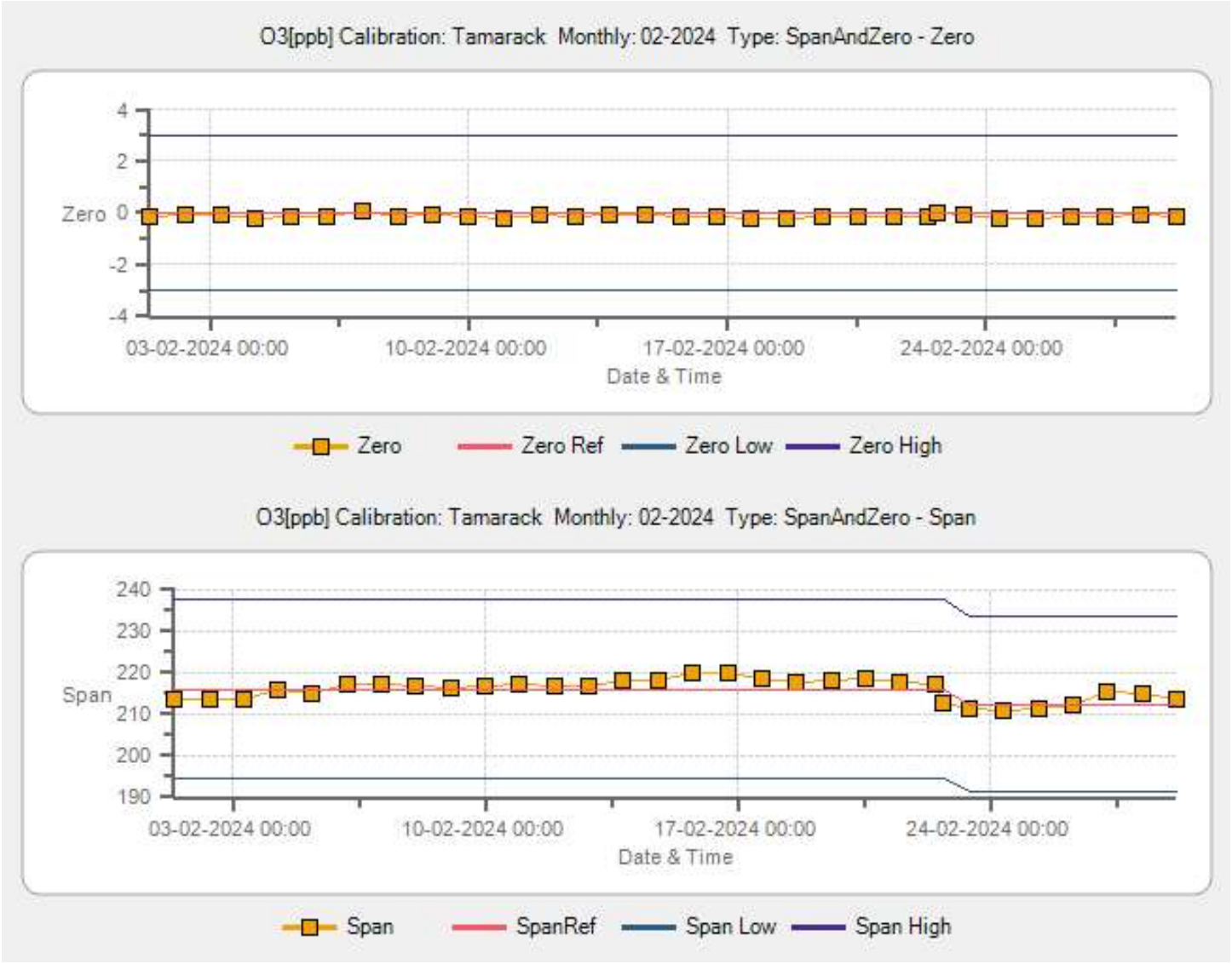

NOX[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NOX[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Span
320
310
300
Span 290
280
270
260
250
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High

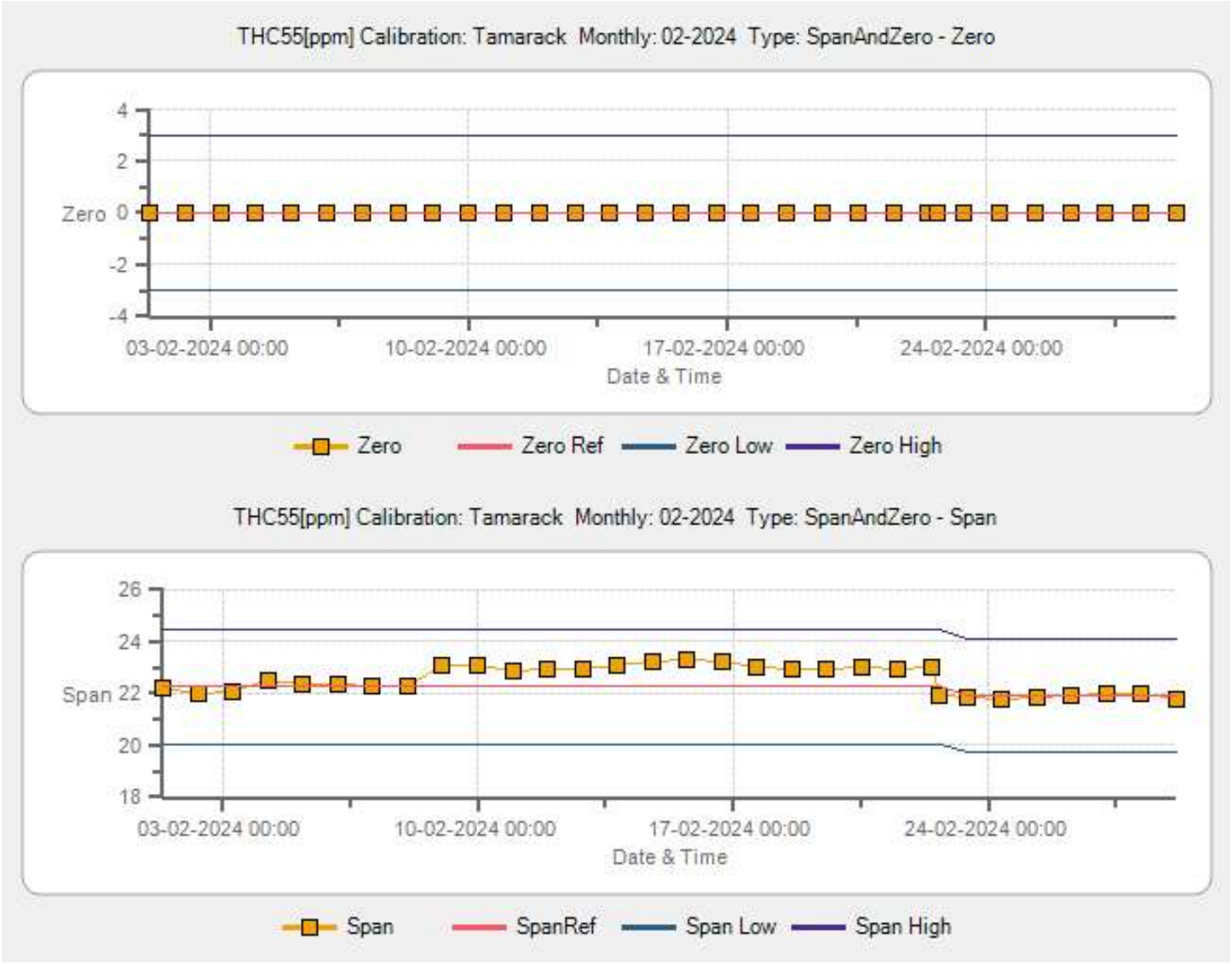
NO2[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Zero

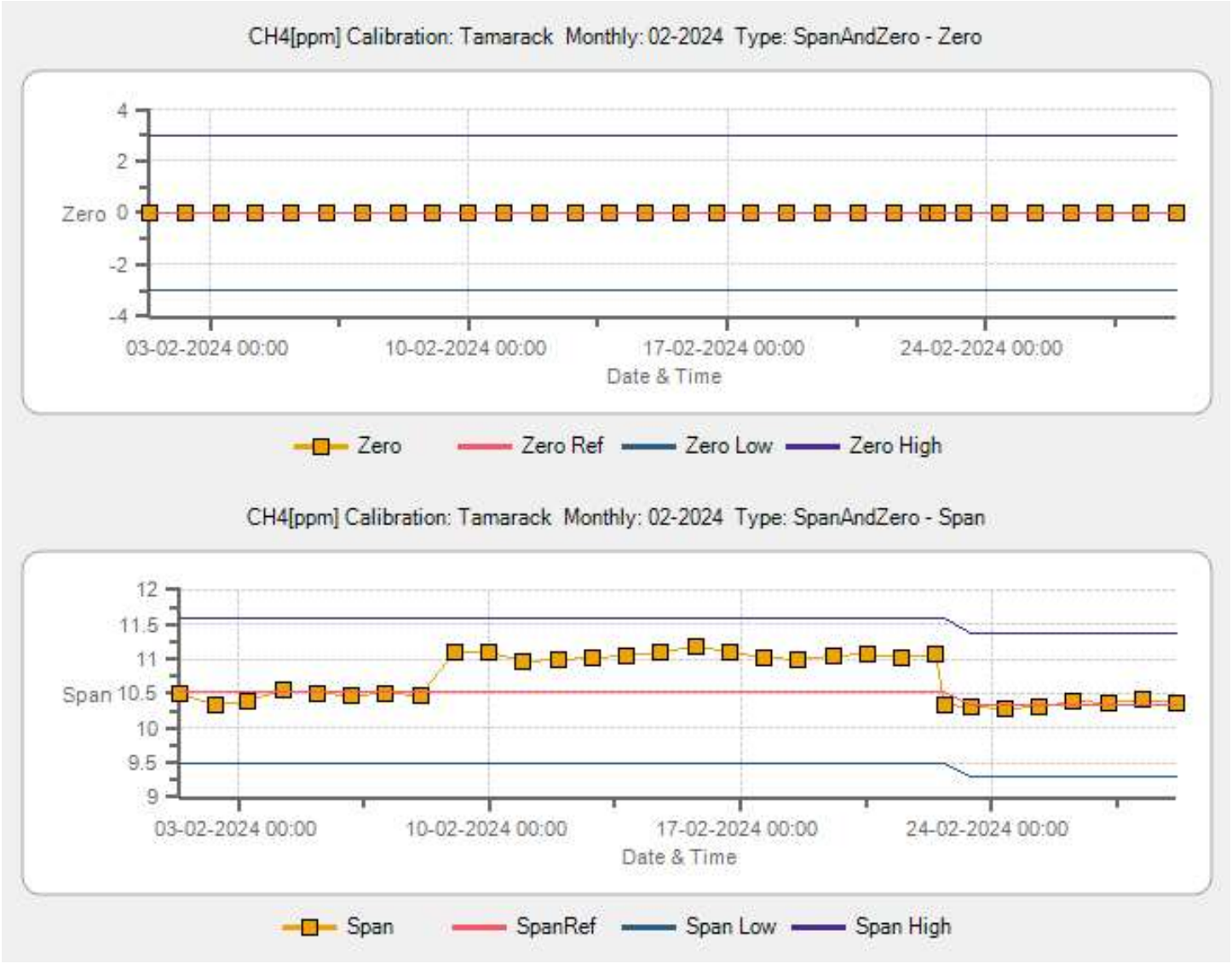


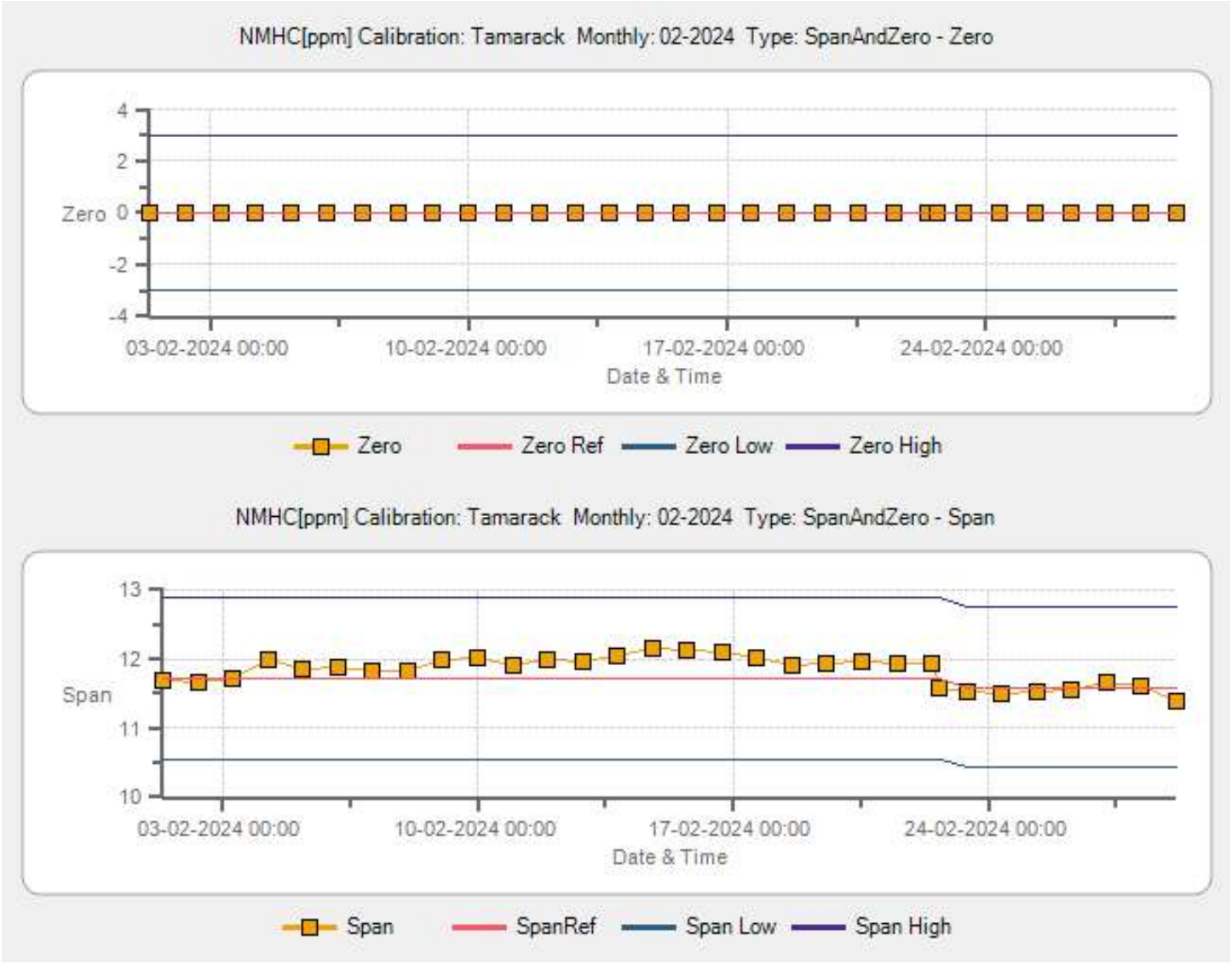
NO2[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Span




O3[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Span
240
230
220
Span
210
200
190
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


THC55[ppm] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Span
26
24
Span 22
20
18
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


CH4[ppm] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4[ppm] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Span
12
11.5
11
Span 10.5
10
9.5
9
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NMHC[ppm] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC[ppm] Calibration: Tamarack Monthly: 02-2024 Type: SpanAndZero - Span
13
12
Span
11
10
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	13-Feb-2024	PREVIOUS CALIBRATION DATE:	24-Jan-2024
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.998
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	938
PURPOSE	Routine	START TIME (MST):	10:53
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:30

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180930031	FLOW (mL/min)	418
INITIAL		FINAL	
BKG/OFFSET	3.11	BKG/OFFSET	2.99
COEF/SLOPE	1.063	COEF/SLOPE	1.052
Expected (reference) Value	197	Expected (reference) Value	193

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	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):	400	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	378.2	376.3	0.991	0.997
4982	17.60	5000	177.41	n/a	177.1	n/a	1.002
4990	8.80	4999	88.72	n/a	88.3	n/a	1.005

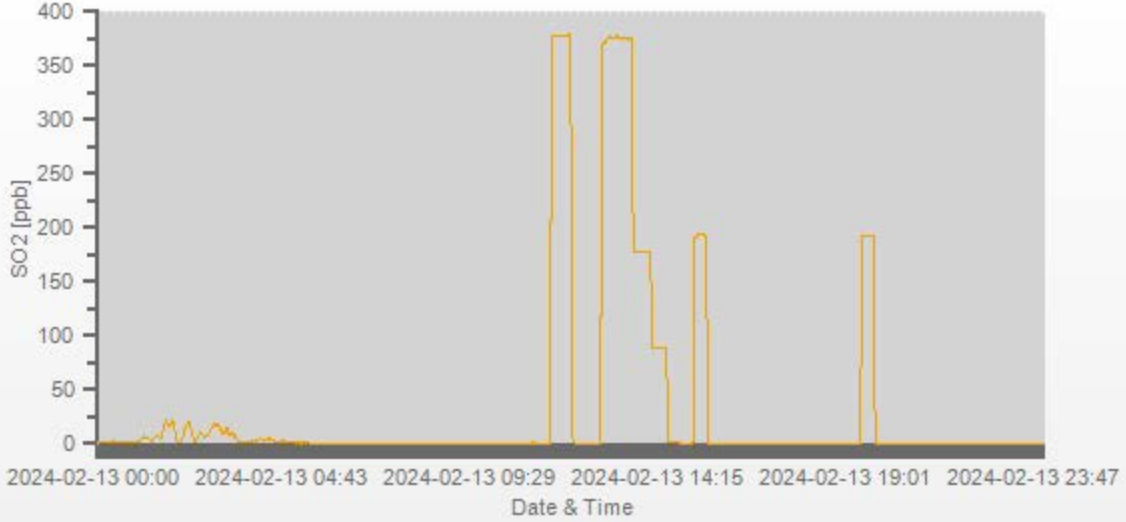
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.004	-0.1%

COMMENTS:

Sample inlet filter was changed.

SO2[ppb] Station: Tamarack Daily: 2024-02-13 Type: AVG 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	13-Feb-2024	PREVIOUS CALIBRATION DATE:	24-Jan-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	0.995
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	938
PURPOSE	Routine	START TIME (MST):	10:51
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:30

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM 17360005	FLOW (mL/min)	901
INITIAL		FINAL	
BKG/OFFSET	39.3	BKG/OFFSET	39.3
COEF/SLOPE	0.86	COEF/SLOPE	0.858
Expected (reference) Value	42.2	Expected (reference) Value	42.2

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	134
MFC CALIBRATION DATE:	13-Oct-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL 131360	HIGH ID	n/a
CONC (ppm):	10.05	EXPIRY DATE	n/a
CYLINDER (psi):	1700	LOW ID	n/a
EXPIRY DATE	03-Jan-2026	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:

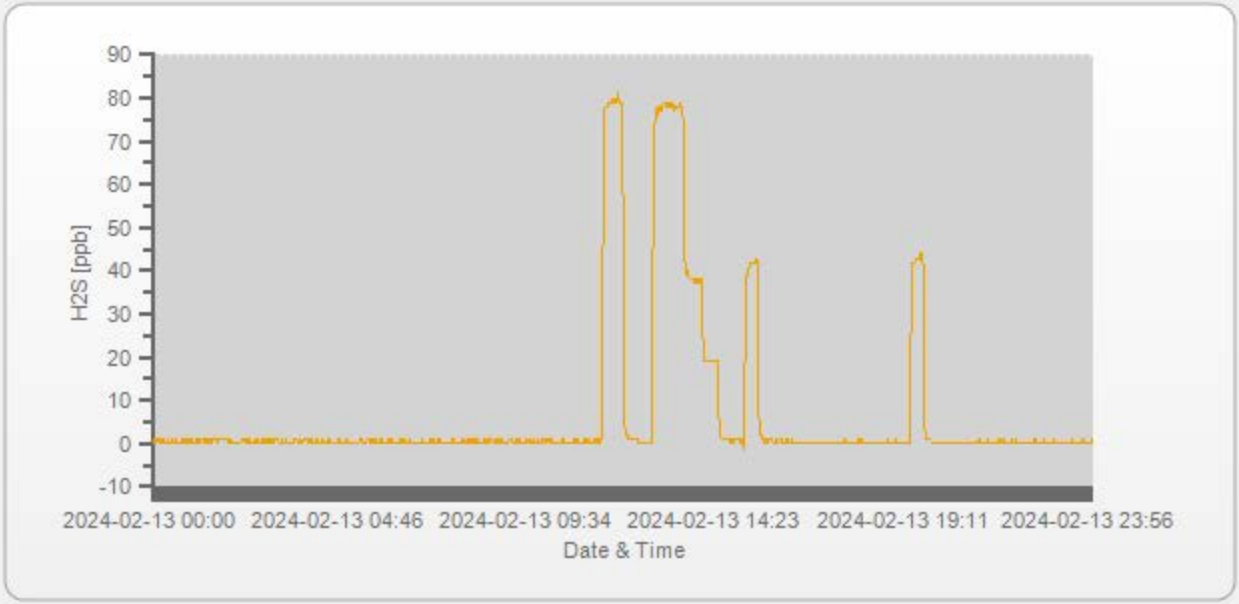
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	0.4	0		
7442	58.20	7500	77.99	79.8	77.9	0.982	1.001
7472	28.20	7500	37.79	n/a	37.6	n/a	1.005
7486	14.10	7500	18.89	n/a	18.9	n/a	1.000

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.999	0.0%

COMMENTS:

Sample inlet filter was changed.


H2S[ppb] Station: Tamarack Daily: 2024-02-13 Type: AVG 1 Min. [1 Min.]
90
80
70
60
50
40
30
20
10
0
-10
H2S [ppb]
2024-02-13 00:00
2024-02-13 04:46
2024-02-13 09:34
2024-02-13 14:23
2024-02-13 19:11
2024-02-13 23:56
Date & Time
H2S [ppb]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:				ANALYZER:			
DATE:	13-Feb-2024	PREVIOUS CALIBRATION DATE:	24-Jan-2024	MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
CLIENT:	LICA	TEMPERATURE (°C):	22.0	SERIAL #:	1180930028	NOx	0.999
LOCATION:	Tamarack	BAROMETRIC (mBar):	938	FLOW (mL/min)	708	NO	1.000
PURPOSE	Routine	START TIME (MST):	10:54	RANGE (ppb)	500	NO2	1.000
PERFORMED BY:	Alex Yakupov	END TIME (MST):	17:03	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):	400		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2023	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:	2.7	2.2	n/a	BKG/OFFSET:	2.3	2.1	n/a
SLOPE/COEF/CE:	1.009	1.209	0.998	SLOPE/COEF/CE:	1.009	1.206	0.998

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	287.0	1.7	285.0		281.0	1.6	279.0

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	-0.2	-0.6	-0.3	0.0	0.0	0.0						
4961	37.10	4998	379.3	383.0	3.7	381.3	385.4	4.1	380.4	384.3	4.0	0.994	0.992		0.997	0.997	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.9	181.6	1.7	n/a	n/a		1.000	1.000	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	90.0	91.1	1.1	n/a	n/a		0.999	0.997	

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	37.10	4997	0	379.5	383.3	3.8				
AS-FOUND HIGH	37.10	4997	235	122.4	383.4	261.5	257.1	257.7	0.998	100.23%
ADJUSTED HIGH	37.10	4997	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	37.10	4997	110	258.2	384.3	126.1	121.3	122.3	0.992	100.82%
LOW	37.10	4997	40	331.8	384.0	52.1	47.7	48.3	0.988	101.26%
NO2 adjustment not required.									AVERAGE:	100.77%

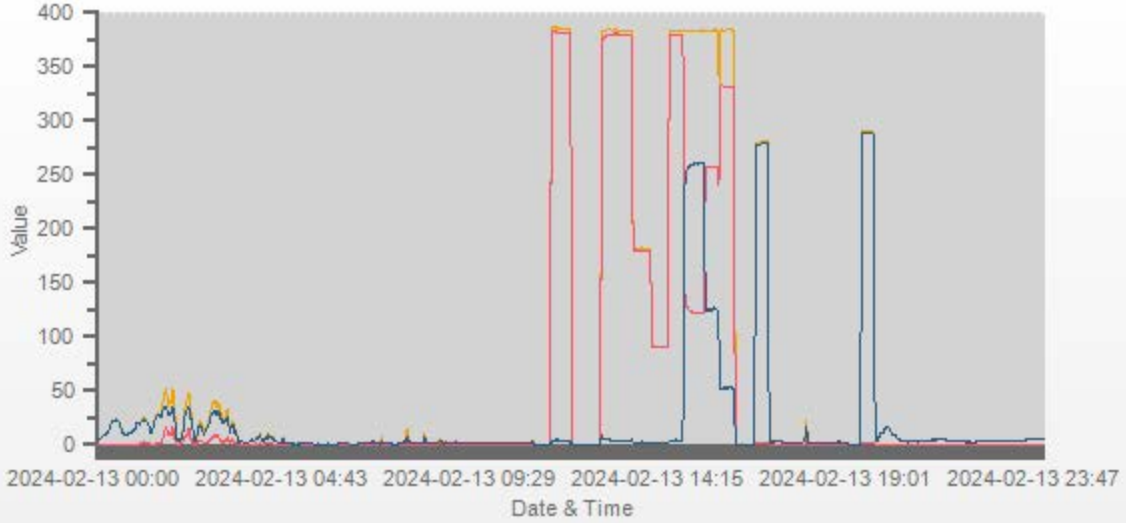
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	1.003	-0.04%
NOx	1.000	1.003	-0.03%
NO2	1.000	1.000	0.16%

COMMENTS:

Sample inlet filter was changed.

Station: Tamarack Daily: 2024-02-13 Type: AVG 1 Min. [1 Min.]



NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:				ANALYZER:			
DATE:	22-Feb-2024	PREVIOUS CALIBRATION DATE:	13-Feb-2024	MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
CLIENT:	LICA	TEMPERATURE (°C):	20.9	SERIAL #:	1180930028	NOx	0.997
LOCATION:	Tamarack	BAROMETRIC (mBar):	932	FLOW (mL/min)	712	NO	0.997
PURPOSE	As-Found	START TIME (MST):	12:35	RANGE (ppb)	500	NO2	0.998
PERFORMED BY:	Chris Wesson	END TIME (MST):	13:56	GPT FOR O3?		Yes	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Sabio	CYLINDER ID:	EY0001013		HIGH ID:	n/a
MODEL:	2010	MODEL:	2020EXP	NO/NOx (PPM):	49.2	49.4	HIGH EXPIRY:	n/a
ID:	26701218	ID:	18700921	CYLINDER (psi):	1000		LOW ID:	n/a
MFC CALIBRATION DATE:	08-Sep-2023	OXIDIZER ID:	n/a	EXPIRY DATE	11-Nov-2029		LOW EXPIRY:	n/a

CALIBRATION SETTINGS:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	n/a	n/a	n/a	BKG/OFFSET:	n/a	n/a	n/a
SLOPE/COEF/CE:	n/a	n/a	n/a	SLOPE/COEF/CE:	n/a	n/a	n/a

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	n/a	n/a	n/a		n/a	n/a	n/a

CALIBRATION PARAMETERS:

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	395	250	240-275	n/a
MID	180	154	150-157	Mid
LOW	90	54	50-58	Low
EXTRA 1	n/a	340	300-370	High

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
4999		4999	0.0	0.0	0.0	-0.2	0.5	0.7	n/a	n/a	n/a						
4958	40.70	4999	**400.6**	**402.2**	1.6	399.4	405.2	5.8	n/a	n/a	n/a	1.002	0.994		n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		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	40.70	4999	0	399.4	405.2	5.8				
AS-FOUND HIGH	40.70	4999	390	26.3	406.3	380.2	373.1	**374.4**	0.997	100.35%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	40.70	4999	190	219.6	405.7	186.1	179.8	**180.3**	0.997	100.28%
LOW	40.70	4999	90	313.7	404.8	91.1	85.7	**85.3**	1.005	99.53%
NO2 adjustment not required.									AVERAGE:	**n/a**

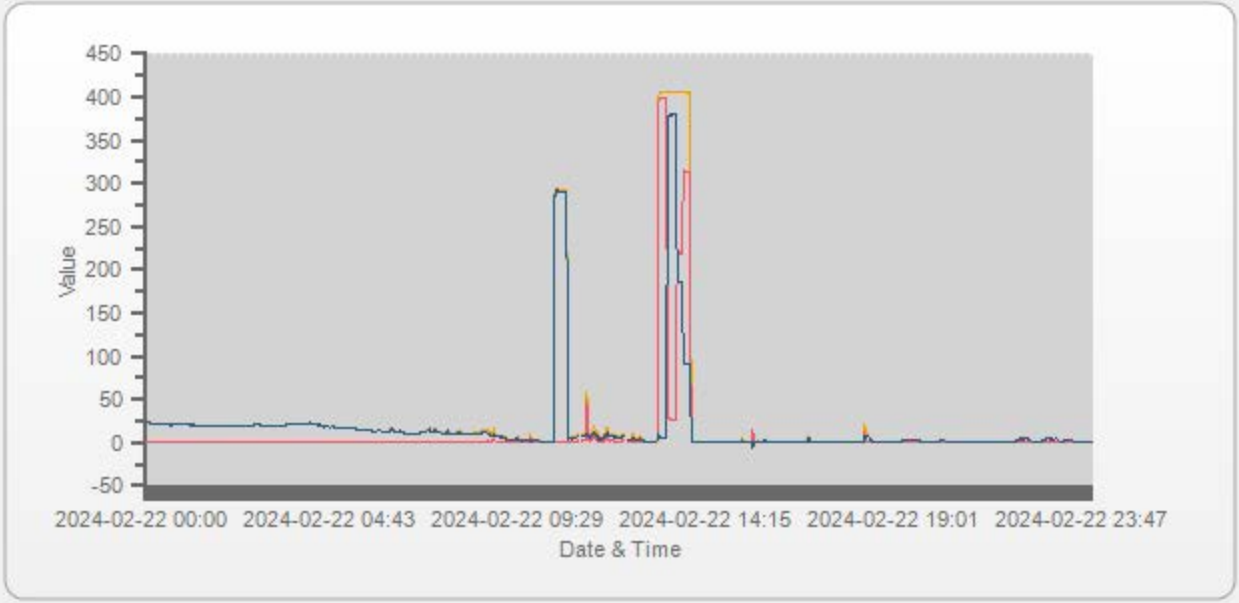
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	n/a	**n/a**	**n/a**
NOx	n/a	**n/a**	**n/a**
NO2	n/a	**n/a**	**n/a**

COMMENTS:

GPT for O3. DO NOT REPORT

Station: Tamarack Daily: 2024-02-22 Type: AVG 1 Min. [1 Min.]



Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	22-Feb-2024	PREVIOUS CALIBRATION DATE:	25-Jan-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.003
CLIENT:	LICA	TEMPERATURE (°C):	20.9
LOCATION:	Tamarack	BAROMETRIC (mBar):	932
PURPOSE	Routine	START TIME (MST):	12:35
PERFORMED BY:	Chris Wesson	END TIME (MST):	15:35

ANALYZER:

MAKE/MODEL	Thermo 49i	RANGE	500 ppb
SERIAL #	1002240371	FLOW (mL/min)	1480
INITIAL		FINAL	
BKG/OFFSET	0.1	BKG/OFFSET	0.1
COEF/SLOPE	1.009	COEF/SLOPE	0.987
Expected (reference) Value	216	Expected (reference) Value	212.5

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Sabio
MODEL:	2010D	MODEL:	2020EXP
ID:	1190613	ID:	18700921
MFC CALIBRATION DATE:	21-Feb-2024	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	382.0	391.5	382.4	0.976	0.999
5000		5000	180.0	n/a	178.2	n/a	1.010
5000		5000	89.0	n/a	86.9	n/a	1.024

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.003	-0.3%

COMMENTS:

Sample filter changed
Calibrator cross-check completed after calibration

Ozone Calibration by Direct GPT

DATE:	22-Feb-2024	PREVIOUS CALIBRATION DATE:	22-Feb-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.1
LOCATION:	Tamarack	BAROMETRIC (mBar):	932
PURPOSE	As-Found	START TIME (MST):	15:35
PERFORMED BY:	Chris Wesson	END TIME (MST):	16:11

ANALYZER:

MAKE/MODEL	Thermo 49i	RANGE	500 ppb
SERIAL #	1002240371	FLOW (mL/min)	1480
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	n/a
COEF/SLOPE	n/a	COEF/SLOPE	n/a
Expected (reference) Value	n/a	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Sabio
MODEL:	2010	MODEL:	2020EXP
ID:	26701218	ID:	18700921
MFC CALIBRATION DATE:	08-Sep-2023	OXIDIZER ID:	n/a
	CALIBRATION METHOD:	Direct GPT	
GPT DATE:	22-Feb-2024	GPT END TIME:	13:56

CALIBRATION PARAMETERS:

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

CALIBRATION:

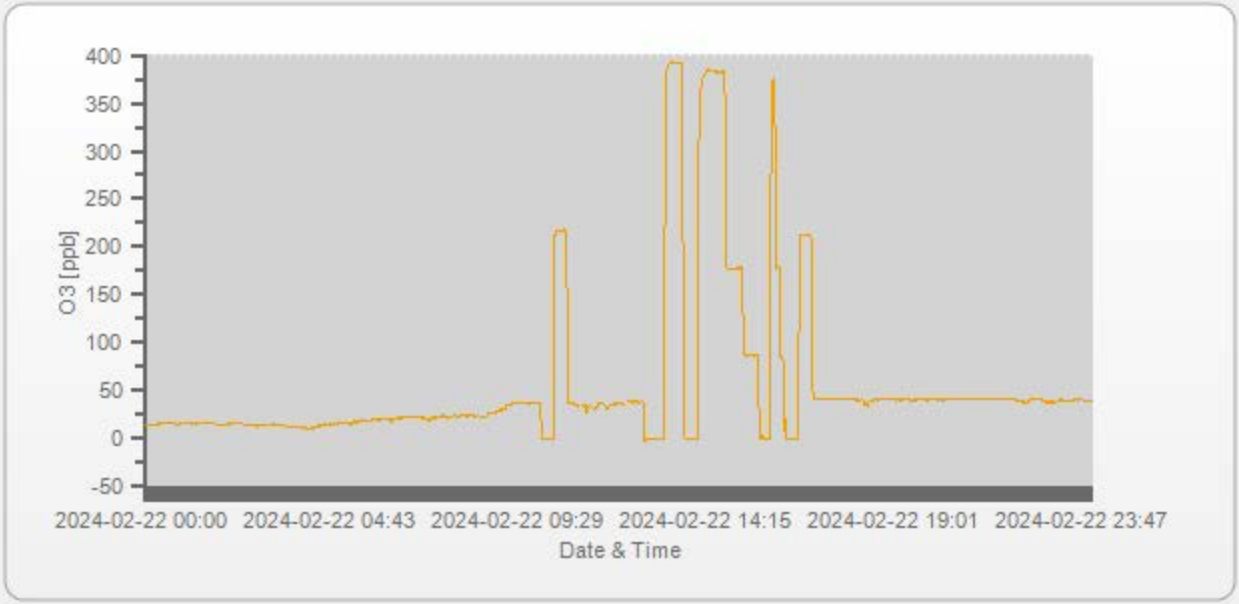
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	-0.1	n/a		
5000		5000	373.1	374.0	n/a	0.997	n/a
5000		5000	179.8	179.0	n/a	1.004	n/a
5000		5000	85.7	84.4	n/a	1.014	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	n/a	**n/a**	**n/a**

COMMENTS:

Calibrator cross-check. DO NOT REPORT


O3[ppb] Station: Tamarack Daily: 2024-02-22 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
2024-02-22 00:00
2024-02-22 04:43
2024-02-22 09:29
2024-02-22 14:15
2024-02-22 19:01
2024-02-22 23:47
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	22-Feb-2024	PREVIOUS CALIBRATION DATE:	25-Jan-2024
CLIENT:	LICA	TEMPERATURE (°C):	20.9
LOCATION:	Tamarack	BAROMETRIC (mBar):	932
PURPOSE	Routine	START TIME (MST):	12:35
PERFORMED BY:	Chris Wesson	END TIME (MST):	16:09

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1505664392	1072
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	0.997	0.999	0.998

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Sabio	CYLINDER ID:	LL119576		HIGH ID:	n/a
MODEL:	2010	MODEL:	2020EXP	CH_4/C_3H_8 (ppm):	870.0	299.0	HIGH EXPIRY:	n/a
ID:	58100720	ID:	18700921	CYLINDER (psi):	1300		LOW ID:	n/a
MFC CALIBRATION DATE:	09-Oct-2023	OXIDIZER ID:	115	EXPIRY DATE	22-Dec-2028		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	822.3
RANGE	12 - 16	6 - 8	2 - 4	THC as CH_4	1692.3

EXPECTED (REFERENCE) VALUE:

INITIAL	CH4	NMHC	THC	FINAL	CH4	NMHC	THC
	10.54	11.72	22.26		10.34	11.59	21.94

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
3005		3005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
2953	49.60	3003	14.37	13.58	27.95	15.23	13.99	29.22	14.37	13.59	27.96	0.944	0.971	0.957	1.000	0.999	1.000
2979	24.80	3004	7.18	6.79	13.97	n/a	n/a	n/a	7.21	6.83	14.04	n/a	n/a	n/a	0.996	0.994	0.995
2992	12.40	3004	3.59	3.39	6.99	n/a	n/a	n/a	3.61	3.44	7.05	n/a	n/a	n/a	0.995	0.987	0.991

LINEAR REGRESSION ANALYSIS:

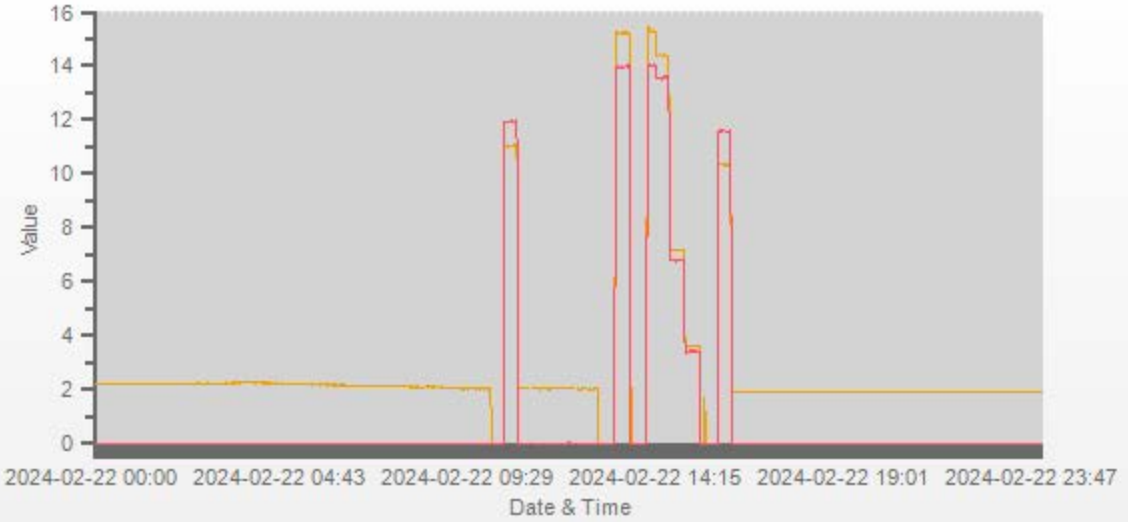
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.000	0.1%
NMHC	1.000	1.000	0.1%
THC	1.000	1.000	0.1%

Comments:

Sample filter changed

Use Zero Chrom? **Yes**

Station: Tamarack Daily: 2024-02-22 Type: AVG 1 Min. [1 Min.]



AIR FCD-00055/1
SHARP_0222_Month

Thermo 5030 SHARP Monitor Monthly Check

Date:	February 22, 2024	**Performed By/Reviewer:**	Chris Wesson | Chris Wesson
Company:	LICA	**Start Time (mst):**	15:06
Station Name/Location:	Tamarack	**End Time (mst):**	15:28
Previous Audit Date:	January 25, 2023	**Calibration Purpose:**	routine monthly
Parameter:	PM 2.5	**Weather Conditions:**	Mainly sunny

SHARP Information and Status:

Serial Number:	CM-2209	**Status:**	0.00
Approx Tape remaining:	4/10	**Error Code:**	0.00

Reference Standards:

Air Flow

	Manometer	Orifice	Pressure:	Temperature:
Make:	Delta Cal	Delta Cal	DeltaCal	DeltaCal
Model:	DC-1	DC-1	DC-1	DC-1
Serial Number:	177246	177246	177246	177246
Calibration Expiration Date:	November 27, 2024	November 27, 2024	November 27, 2024	November 27, 2024

As found temperature and pressure:

Tolerance +/- 4°C		Tolerance +/- 13.33 hPa	
SHARP T1 °C:	7.5	**SHARP P3 (hPa):**	935.000
Reference °C:	7.0	**Reference (hPa):**	935.900
Difference °C:	-0.5	**Difference (hPa) :**	-0.900

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

Tolerance +/- 4°C		Tolerance +/- 13.33 hPa	
SHARP T1 °C:	7.5	**SHARP P3 (hPa):**	935.000
Reference °C:	7.0	**Reference (hPa):**	935.900
Difference °C:	-0.5	**Difference :**	-0.900

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 (%)	50.90	**Reference AirFlow (l/min)**	16.68
		Difference (l/min)	0.01

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 (%)	50.90	**Reference AirFlow (l/min)**	16.68
		Difference (l/min)	0.01

Inlet Assembly:

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

Comments:

Leak check: 16.66 vs 16.56, 0.10 < 0.80 lpm, passed.

Meteorological System Checklist

Date:	February 22, 2024
Technician:	Alex Yakupov
Station:	LICA Tamarack

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	test:14:32-14:39
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 mm)

# 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:	Traceable 20250-21 #230557122 Exp: Aug 17, 2025
Reference Temperature (^{o}C):	8.1
Station - Ambient Temperature (^{o}C):	7.5
Temperature Difference (^{o}C):	0.4

BAROMETRIC PRESSURE SENSOR CHECK

Reference Barometer ID:	Brunton ADC #231010, Exp: Oct 10, 2024	
Reference Pressure - Units/Reading:	millibar	936.9
Station Pressure - Units/Reading:	millibar	931.7
Pressure Tolerance +/- 15% of error:	796 - 1077	0.56%

RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Reference Hygrometer ID:	Traceable 20250-21 #230557122 Exp: Aug 17, 2025
Reference Hygrometer % RH- Reading:	35.30
Station Hygrometer % RH- Reading:	37.90
RH Tolerance +/- 15% of difference:	30.01 - 40.60	-7.4%

ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Previous check date:	January 25, 2024	Previous check date:	January 25, 2024
Wind Speed Observed (kph):	10~20	Wind Direction Observed:	W
Wind speed on Data Logger (kph):	12.4	Wind Direction on Data Logger:	W
	Annual audit: Sep 17, 2023	Wind Direction Pass/Fail?:	Pass

Comments

Meteorological Sensor Audit/Calibration

Location Information

Company:	LICA	**Performed By:**	Alex Yakupov
Audit Location:	Tamarack	**Reviewed By:**	Chris Wesson
Audit Date:	September 17, 2023	**Start/End Time (mst):**	15:01 / 17:09
Calibration Purpose:	routine annual	**Weather Conditions:**	Mainly sunny

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:	July 26, 2022	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: Model 18860-90/18802 SN: CA 4744, expires - Oct 18, 2024

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	37.0	36.9	0.998
3000	55.3	55.4	55.4	0.998
4000	73.7	73.9	73.9	0.998
5000	92.2	92.5	92.5	0.996
6000	110.6	111.0	111.0	0.996
7000	129.0	129.6	129.6	0.995
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=**	**0.996**

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	354	0.3	0.8	0.6
30	330	31	331	-0.8	-0.7	0.7
60	300	61	301	-1.4	-0.8	1.1
90	270	94	271	-3.5	-1.0	2.3
120	240	123	242	-2.8	-1.5	2.2
150	210	152	212	-2.3	-2.4	2.4
180	180	182	183	-1.9	-3.4	2.7
210	150	212	155	-2.2	-4.5	3.3
240	120	241	124	-0.7	-4.1	2.4
270	90	270	95	-0.4	-4.8	2.6
300	60	301	64	-0.5	-3.6	2.1
330	30	329	34	0.7	-3.5	2.1
355	0	354	0	0.8	0.4	0.6
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**1.9**

Comments:

n/a

End of Report

Lakeland Industry & Community Association

FEBRUARY 2024

Ambient Air Monitoring Calibration Report

- ST. LINA STATION-

CAL-LICA-202402-01250

Station Operation and Maintenance:
Bureau Veritas Canada

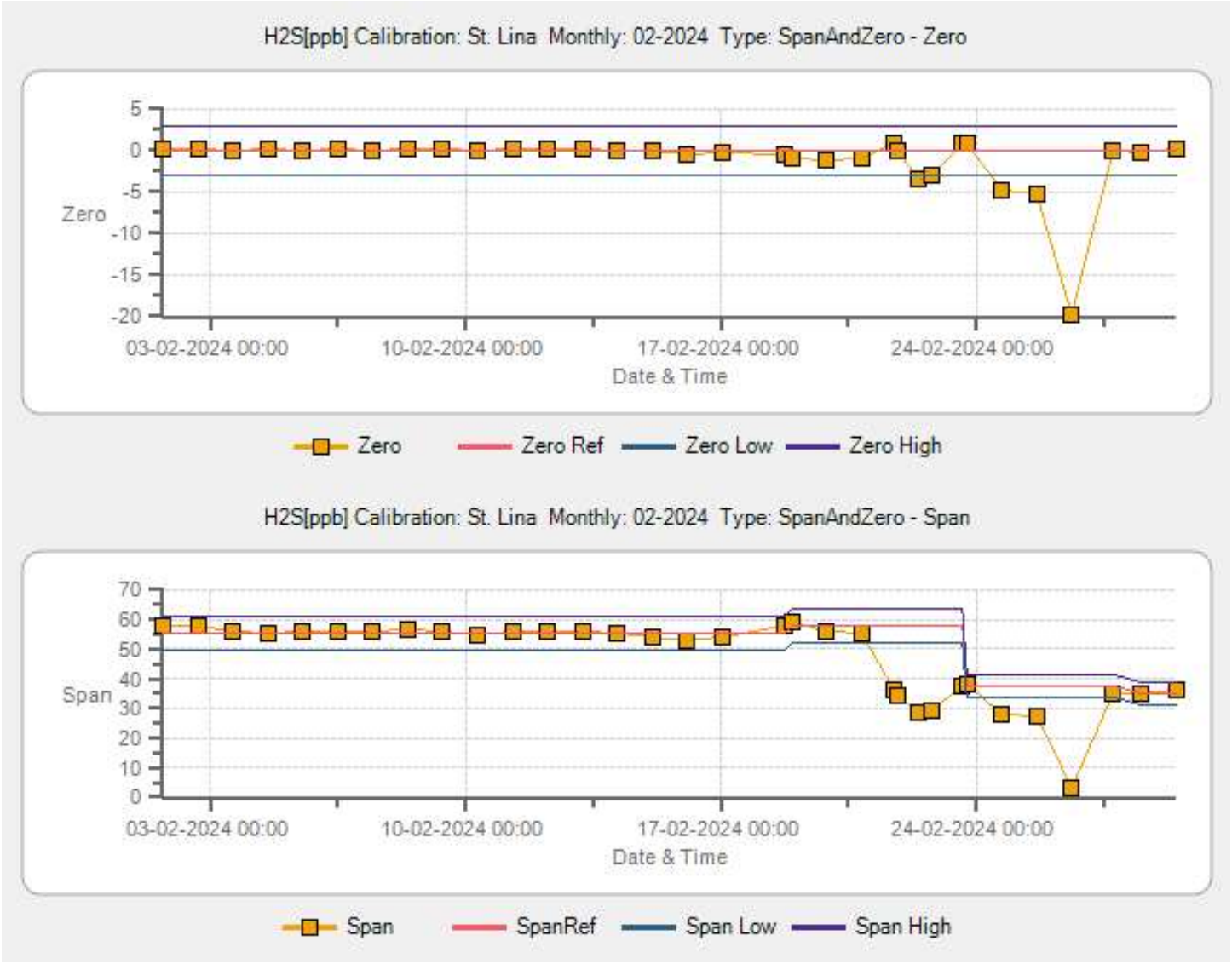
Data Validation and Report:
LICA / Bureau Veritas Canada

March 13, 2024

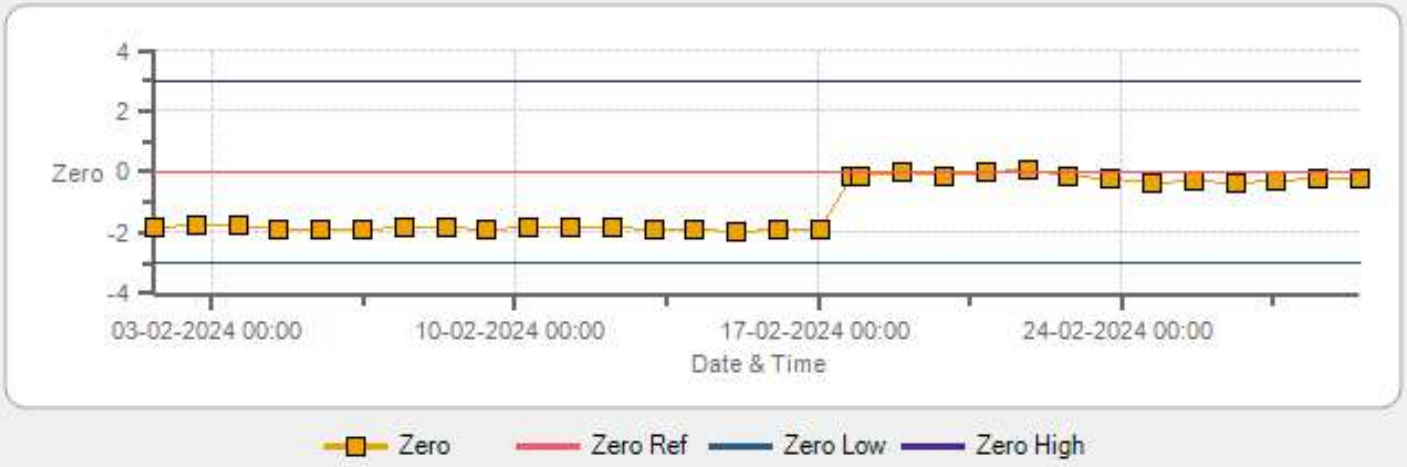
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Zero

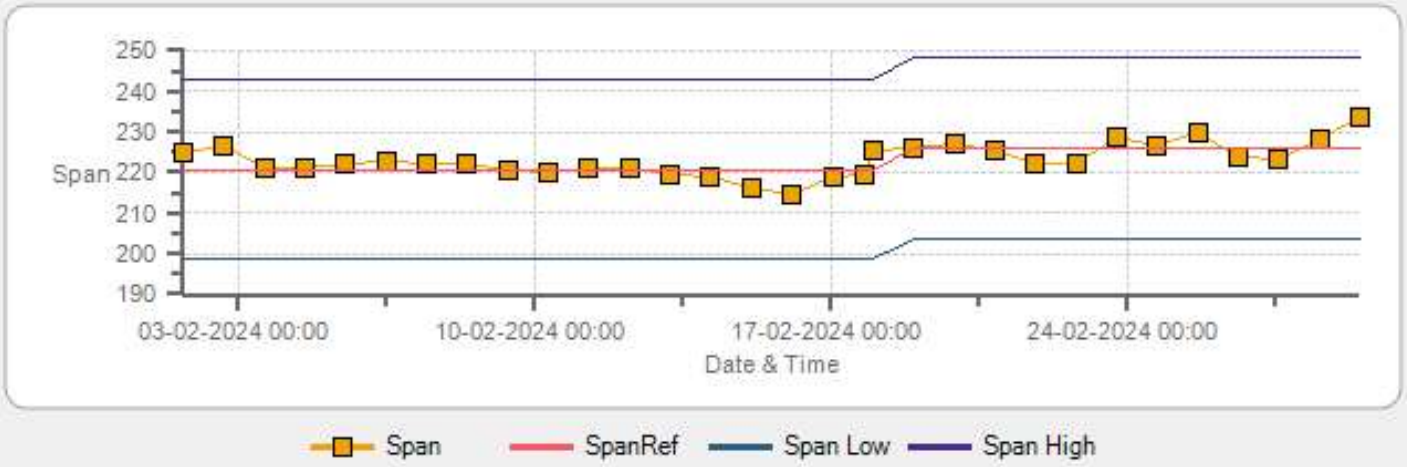
SO2[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Span


H2S[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Zero
Zero
5
0
-5
-10
-15
-20
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
H2S[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Span
Span
70
60
50
40
30
20
10
0
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High

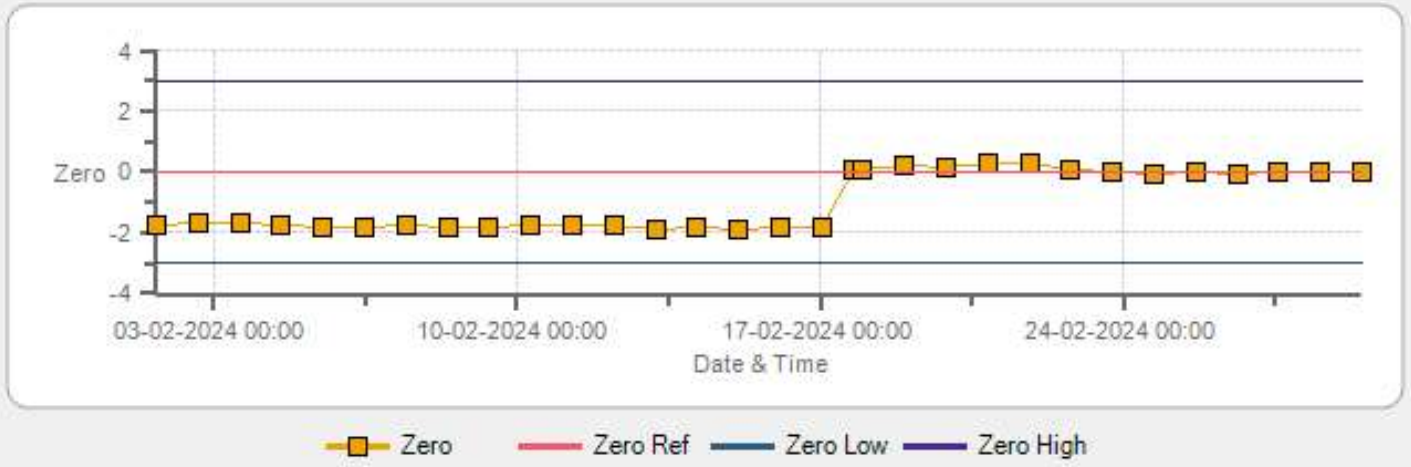
NOX[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Zero



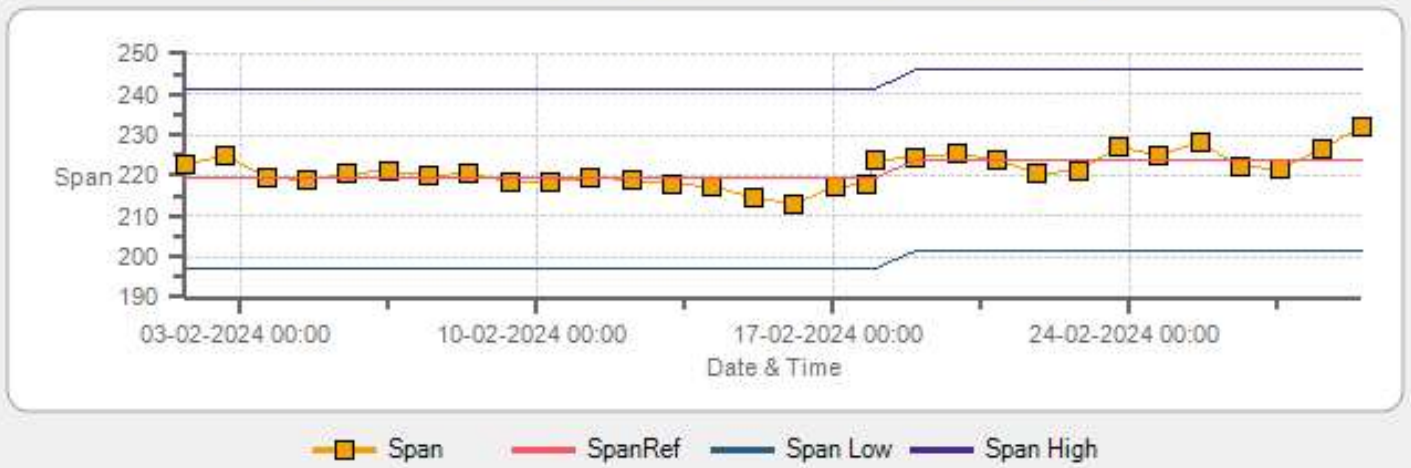
NOX[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Span



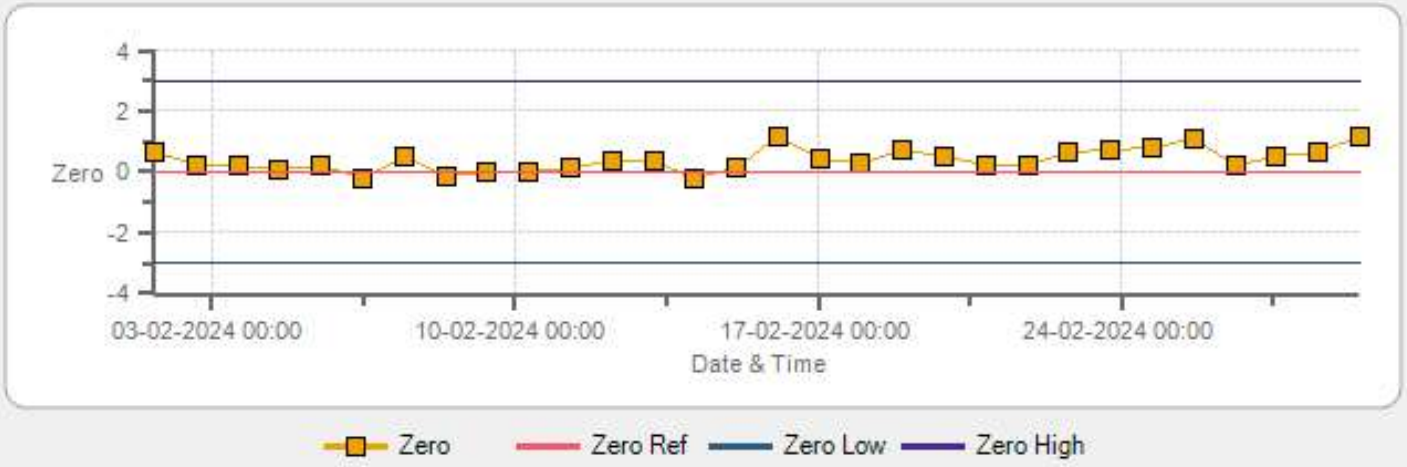
NO2[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Zero



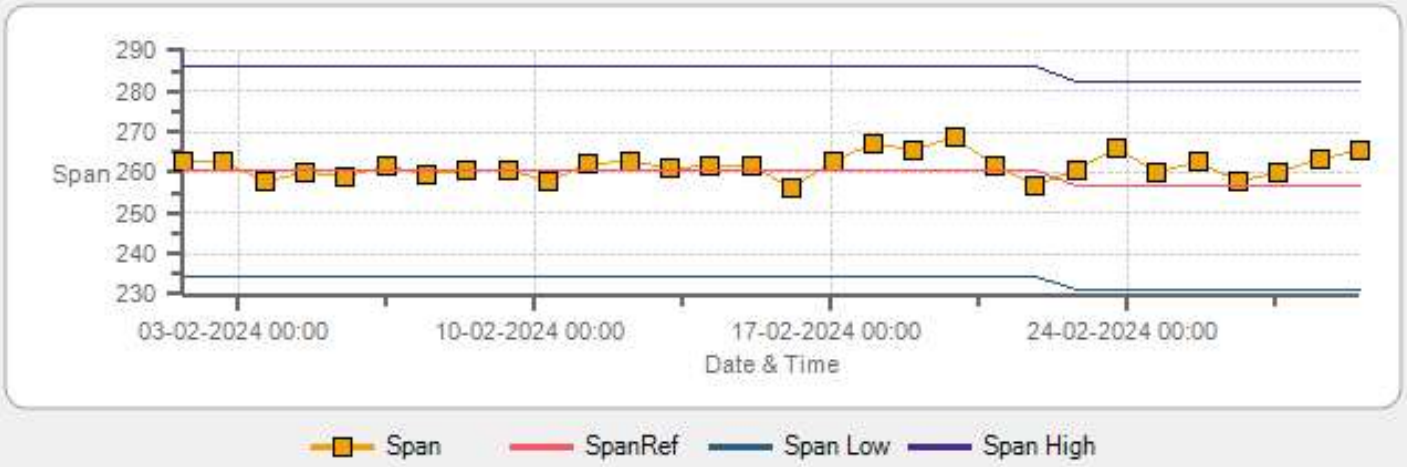
NO2[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Span

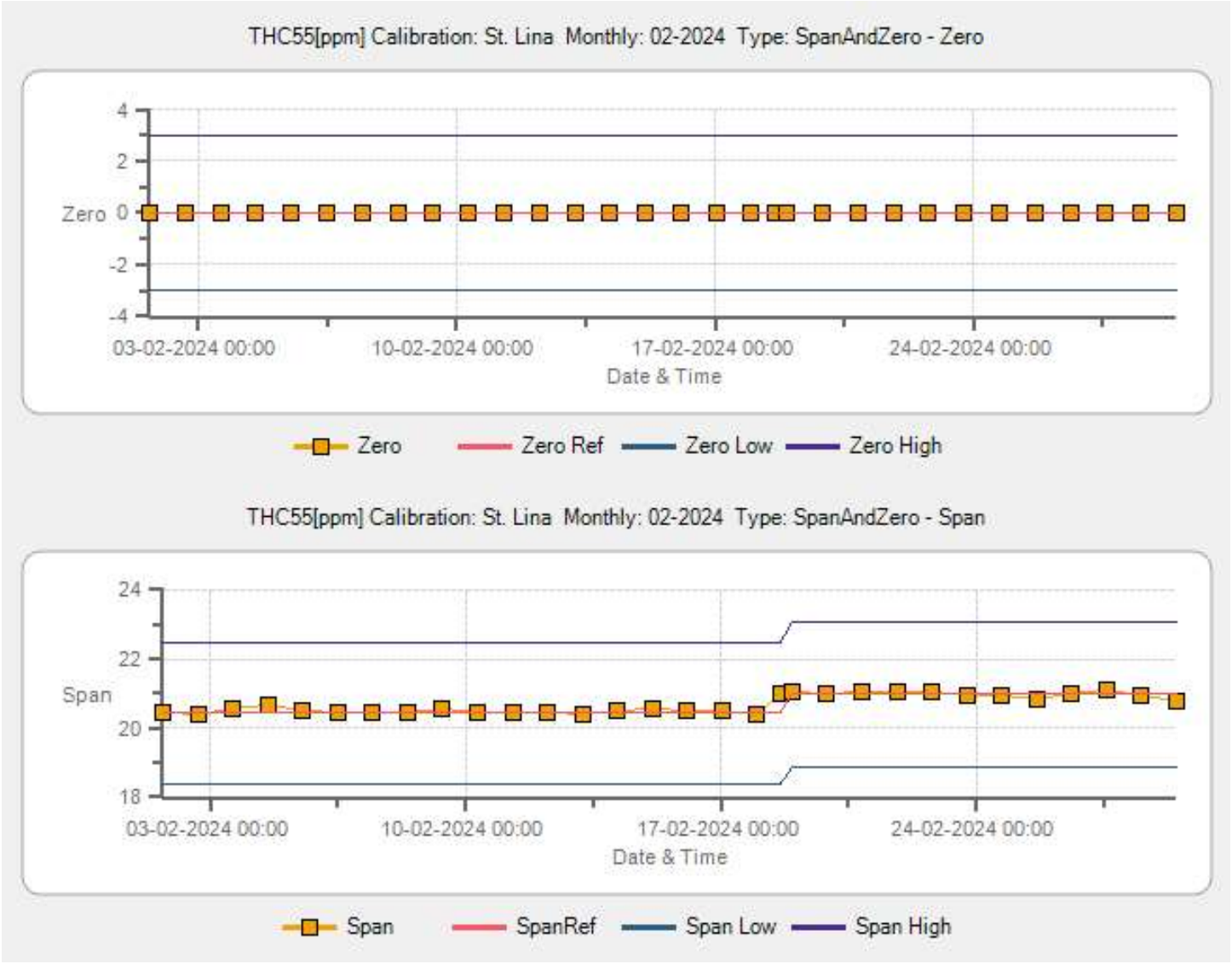


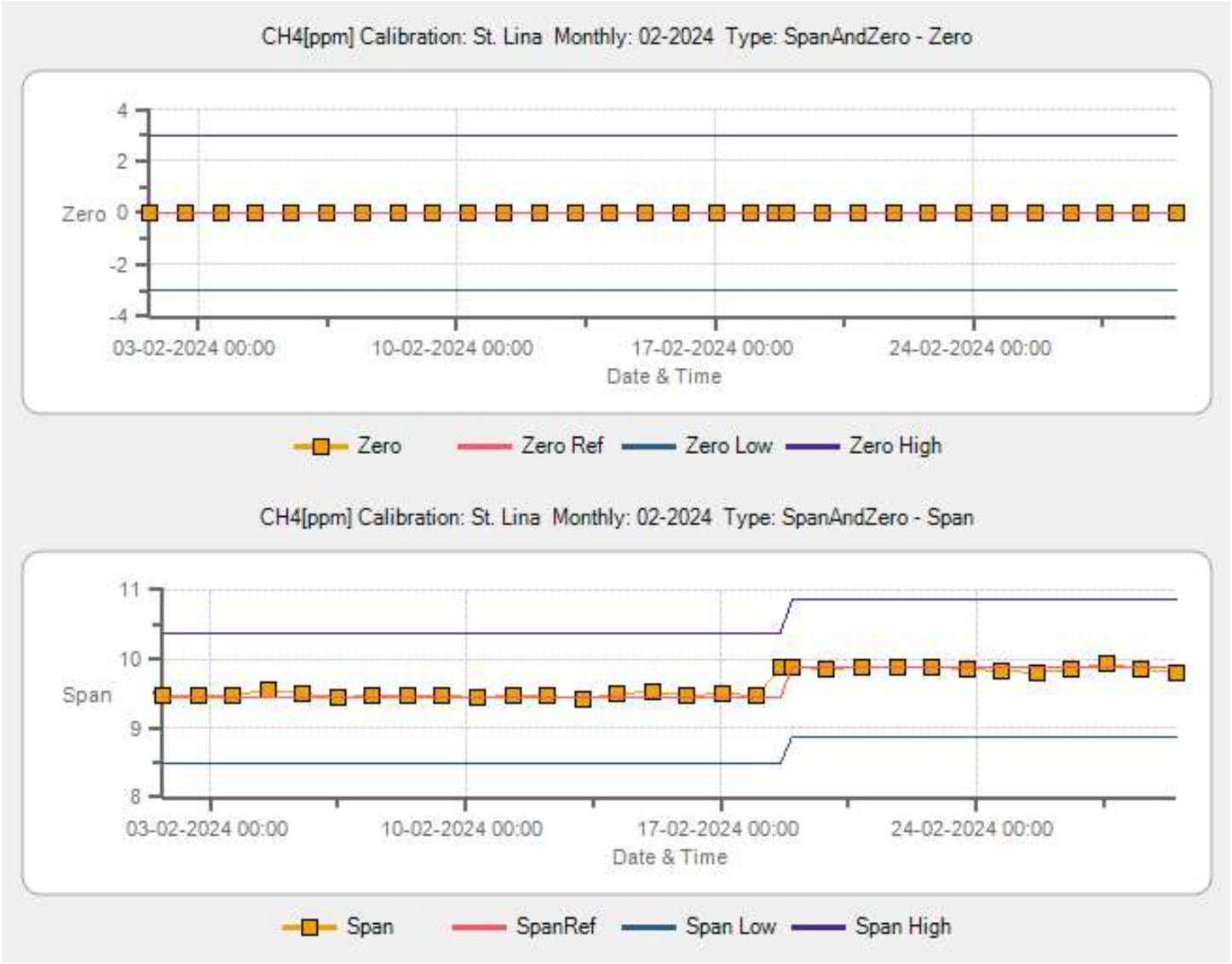
O3[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Zero

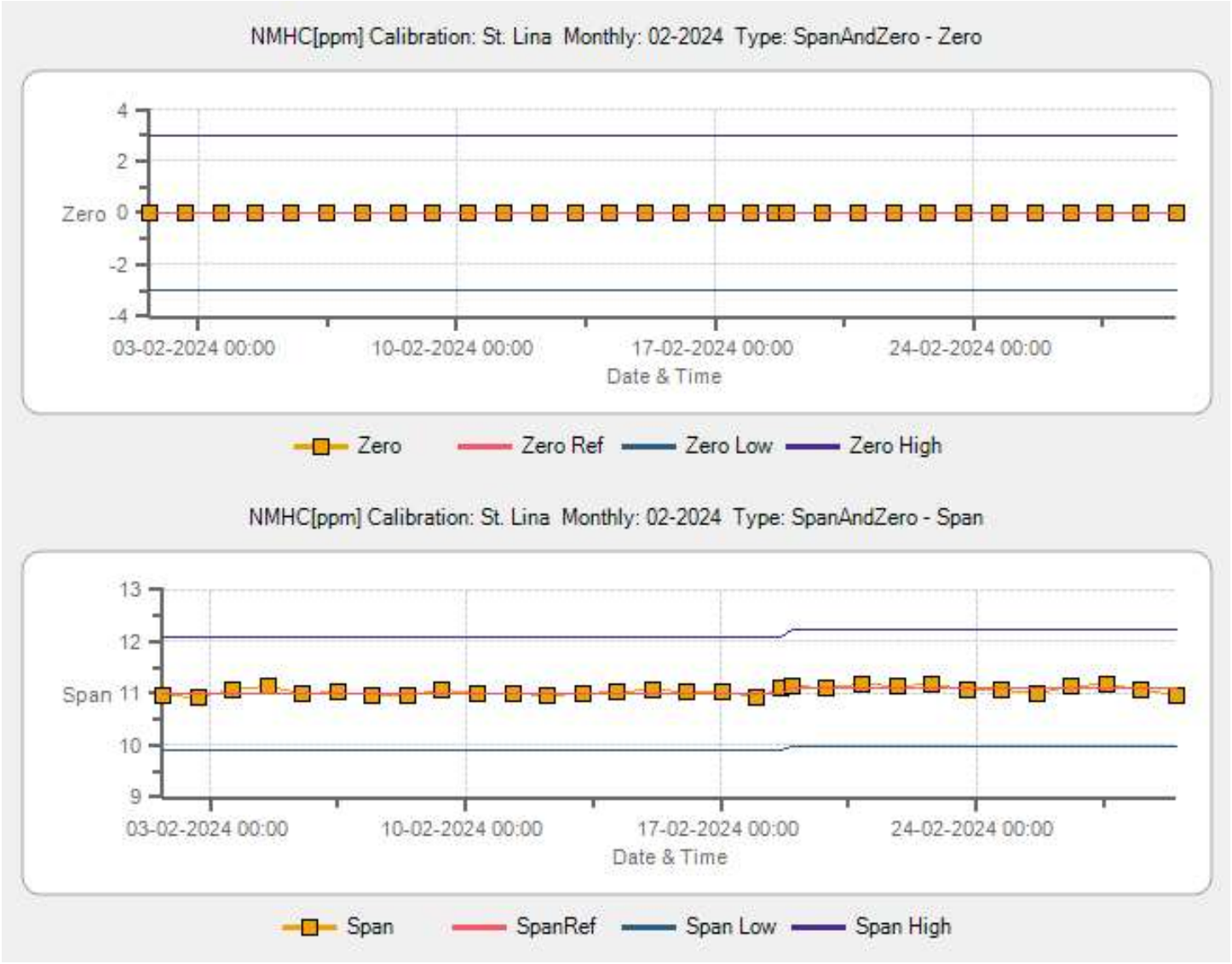


O3[ppb] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Span




THC55[ppm] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Span
24
22
Span
20
18
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


CH4[ppm] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Zero
Zero
4
2
0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4[ppm] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Span
Span
11
10
9
8
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NMHC[ppm] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC[ppm] Calibration: St. Lina Monthly: 02-2024 Type: SpanAndZero - Span
13
12
Span 11
10
9
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	17-Feb-2024	PREVIOUS CALIBRATION DATE:	25-Jan-2024
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	921
PURPOSE	Routine	START TIME (MST):	12:12
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:50

ANALYZER:

MAKE/MODEL	Thermo 43i	RANGE	500 ppb
SERIAL #	1226154720	FLOW (mL/min)	410
INITIAL		FINAL	
BKG/OFFSET	16.2	BKG/OFFSET	16.4
COEF/SLOPE	1.018	COEF/SLOPE	1.053
Expected (reference) Value	386.3	Expected (reference) Value	388

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	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):	400	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	-0.7	0		
4961	37.20	4998	375.13	357.4	375.5	1.048	0.999
4982	17.60	5000	177.41	n/a	177.6	n/a	0.999
4990	8.80	4999	88.72	n/a	88.8	n/a	0.999

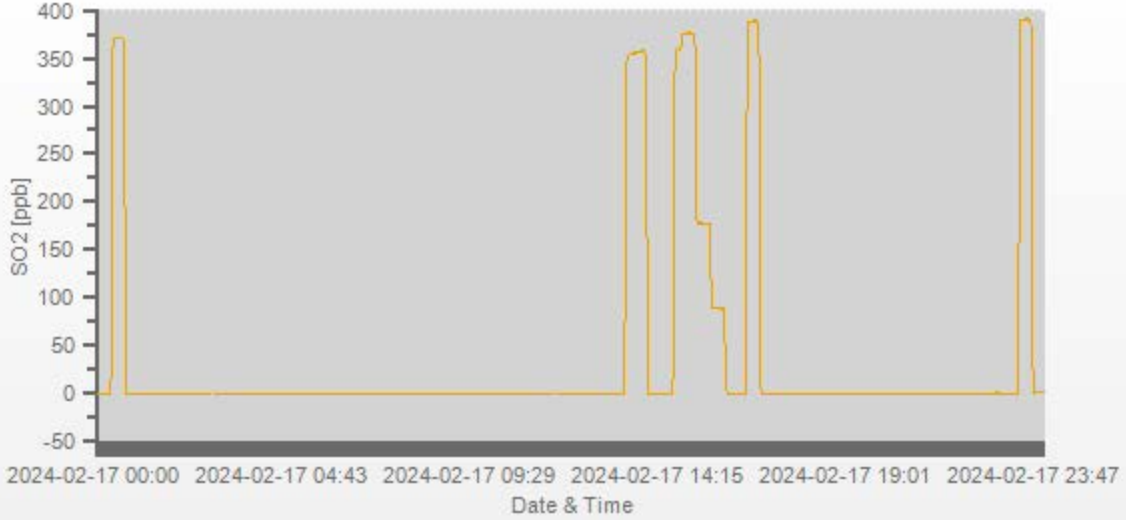
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	0.0%

COMMENTS:

Sample inlet filter was changed.

SO2[ppb] Station: St. Lina Daily: 2024-02-17 Type: AVG 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	17-Feb-2024	PREVIOUS CALIBRATION DATE:	25-Jan-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	921
PURPOSE	Removal/Shut-down	START TIME (MST):	12:20
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:11

ANALYZER:

MAKE/MODEL	Teledyne T100	RANGE	100 ppb
SERIAL #	1014	FLOW (mL/min)	523
INITIAL		FINAL	
BKG/OFFSET	8.202	BKG/OFFSET	n/a
COEF/SLOPE	1.58	COEF/SLOPE	n/a
Expected (reference) Value	55.5	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL 131360	HIGH ID	n/a
CONC (ppm):	10.05	EXPIRY DATE	n/a
CYLINDER (psi):	1700	LOW ID	n/a
EXPIRY DATE	03-Jan-2026	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:	12:44	SO2 Conc (ppb)	380
END TIME:	12:59	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	0.4	n/a		
7442	58.20	7500	77.99	71.8	n/a	1.092	n/a
7472	28.20	7500	37.79	35.6	n/a	1.074	n/a
7486	14.00	7500	18.76	17.5	n/a	1.097	n/a

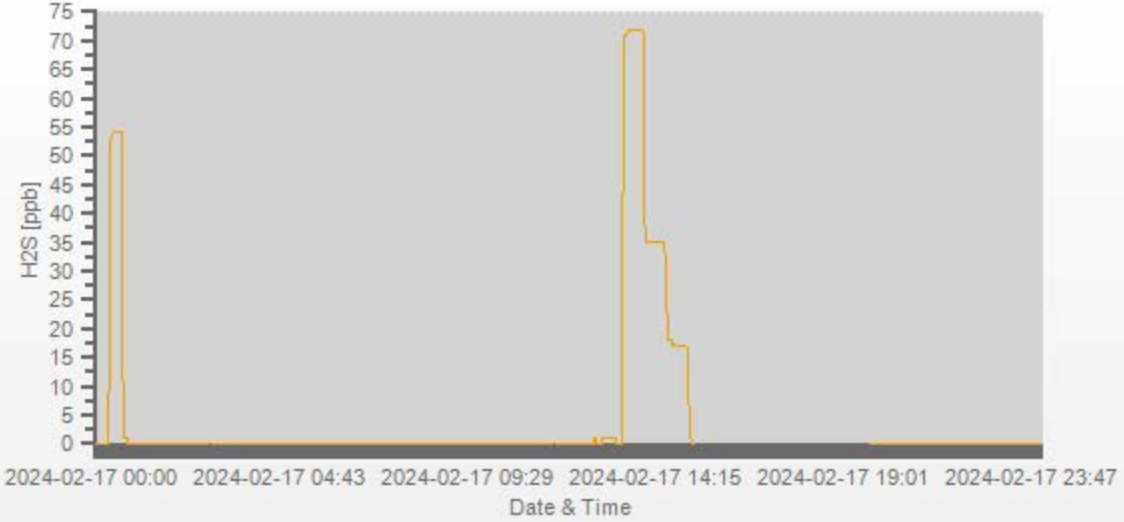
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.917	0.5%

COMMENTS:

Shutdown prior to removal of BV analyzer

H2S[ppb] Station: St. Lina Daily: 2024-02-17 Type: AVG 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	18-Feb-2024	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	910
PURPOSE	Install/Post-Repair	START TIME (MST):	14:25
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:14

ANALYZER:

MAKE/MODEL	Teledyne T100	RANGE	100 ppb
SERIAL #	1014	FLOW (mL/min)	517
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	9.617
COEF/SLOPE	n/a	COEF/SLOPE	1.716
Expected (reference) Value	n/a	Expected (reference) Value	58.1

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL 131360	HIGH ID	n/a
CONC (ppm):	10.05	EXPIRY DATE	n/a
CYLINDER (psi):	1700	LOW ID	n/a
EXPIRY DATE	03-Jan-2026	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:	15:06	SO2 Conc (ppb)	380
END TIME:	15:21	Analyzer Response (ppb)	0.0

CALIBRATION:

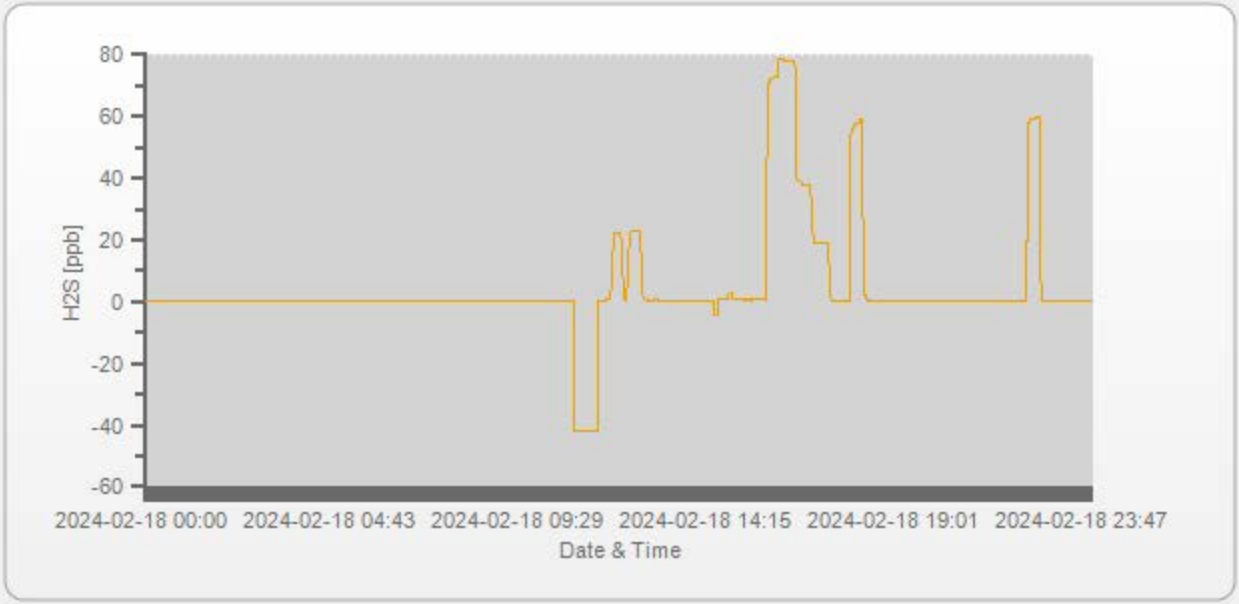
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	n/a	0		
7442	58.20	7500	77.99	n/a	78	n/a	1.000
7472	28.30	7500	37.92	n/a	38	n/a	0.998
7486	14.20	7500	19.03	n/a	18.7	n/a	1.018

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.1%

COMMENTS:

BV analyzer reinstalled due to issues with LICA's


H2S[ppb] Station: St. Lina Daily: 2024-02-18 Type: AVG 1 Min. [1 Min.]
80
60
40
20
0
-20
-40
-60
H2S [ppb]
2024-02-18 00:00
2024-02-18 04:43
2024-02-18 09:29
2024-02-18 14:15
2024-02-18 19:01
2024-02-18 23:47
Date & Time
H2S [ppb]

H2S Analyzer Calibration by Dilution

DATE:	21-Feb-2024	PREVIOUS CALIBRATION DATE:	18-Feb-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	21.6
LOCATION:	St. Lina	BAROMETRIC (mBar):	915
PURPOSE	Removal/Shut-down	START TIME (MST):	11:46
PERFORMED BY:	Chris Wesson	END TIME (MST):	13:30

ANALYZER:

MAKE/MODEL	Teledyne T100	RANGE	100 ppb
SERIAL #	1014	FLOW (mL/min)	519.7
INITIAL		FINAL	
BKG/OFFSET	9.617	BKG/OFFSET	n/a
COEF/SLOPE	1.716	COEF/SLOPE	n/a
Expected (reference) Value	58.1	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Sabio
MODEL:	2010	MODEL:	2020EXP
ID:	58100720	ID:	18700921
MFC CALIBRATION DATE:	09-Oct-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY 0002455	HIGH ID	n/a
CONC (ppm):	9.70	EXPIRY DATE	n/a
CYLINDER (psi):	1900	LOW ID	n/a
EXPIRY DATE	29-Sep-2026	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:	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		
4002		4002	0.00	-1.2	n/a		
3972	32.20	4004	78.01	77.5	n/a	0.991	n/a
3987	15.70	4003	38.04	37.5	n/a	0.983	n/a
3993	7.80	4001	18.91	17.7	n/a	1.001	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.010	-1.2%

COMMENTS:

Removing BV analyzer
BV analyzer T101

H2S Analyzer Calibration by Dilution

DATE:	21-Feb-2024	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	LICA	TEMPERATURE (°C):	21.5
LOCATION:	St. Lina	BAROMETRIC (mBar):	914
PURPOSE	Install/Post-Repair	START TIME (MST):	14:44
PERFORMED BY:	Chris Wesson	END TIME (MST):	17:42

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM18010058	FLOW (mL/min)	817
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	53.7
COEF/SLOPE	n/a	COEF/SLOPE	1.131
Expected (reference) Value	n/a	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Sabio
MODEL:	2010	MODEL:	2020EXP
ID:	58100720	ID:	18700921
MFC CALIBRATION DATE:	09-Oct-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY 0002455	HIGH ID	n/a
CONC (ppm):	9.70	EXPIRY DATE	n/a
CYLINDER (psi):	1900	LOW ID	n/a
EXPIRY DATE	29-Sep-2026	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:	15:01	SO2 Conc (ppb)	380
END TIME:	15:16	Analyzer Response (ppb)	0.0

CALIBRATION:

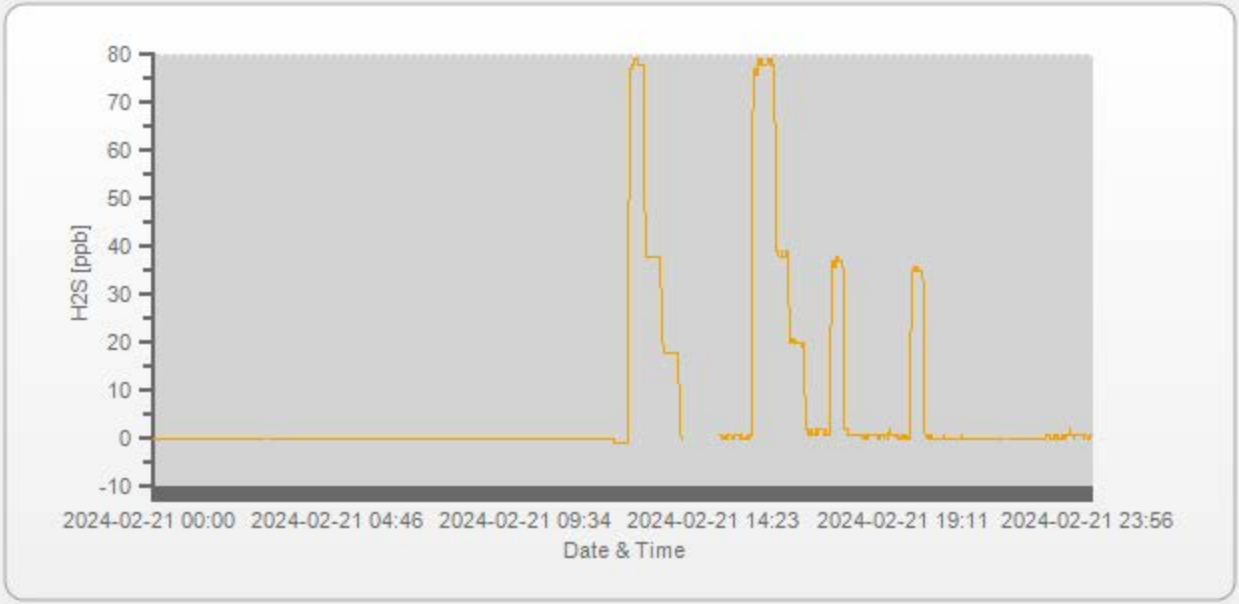
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4002		4002	0.00	n/a	0		
3972	32.20	4004	78.01	n/a	78.1	n/a	0.999
3987	15.70	4003	38.04	n/a	38	n/a	1.001
3993	7.80	4001	18.91	n/a	19.4	n/a	0.975

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.999	0.2%

COMMENTS:

LICA analyzer
New expected value = waiting for stability


H2S[ppb] Station: St. Lina Daily: 2024-02-21 Type: AVG 1 Min. [1 Min.]
80
70
60
50
40
30
20
10
0
-10
H2S [ppb]
2024-02-21 00:00
2024-02-21 04:46
2024-02-21 09:34
2024-02-21 14:23
2024-02-21 19:11
2024-02-21 23:56
Date & Time
H2S [ppb]

H2S Analyzer Calibration by Dilution

DATE:	23-Feb-2024	PREVIOUS CALIBRATION DATE:	21-Feb-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	20.4
LOCATION:	St. Lina	BAROMETRIC (mBar):	912
PURPOSE	Repeat	START TIME (MST):	08:27
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	14:48

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM18010058	FLOW (mL/min)	819
INITIAL		FINAL	
BKG/OFFSET	53.8	BKG/OFFSET	55.9
COEF/SLOPE	1.131	COEF/SLOPE	1.355
Expected (reference) Value	58.1	Expected (reference) Value	37.5

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	M701
ID:	75401122	ID:	5004
MFC CALIBRATION DATE:	08-Sep-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL131374	HIGH ID	n/a
CONC (ppm):	10.09	EXPIRY DATE	n/a
CYLINDER (psi):	1600	LOW ID	n/a
EXPIRY DATE	03-Jan-2026	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:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

CALIBRATION:

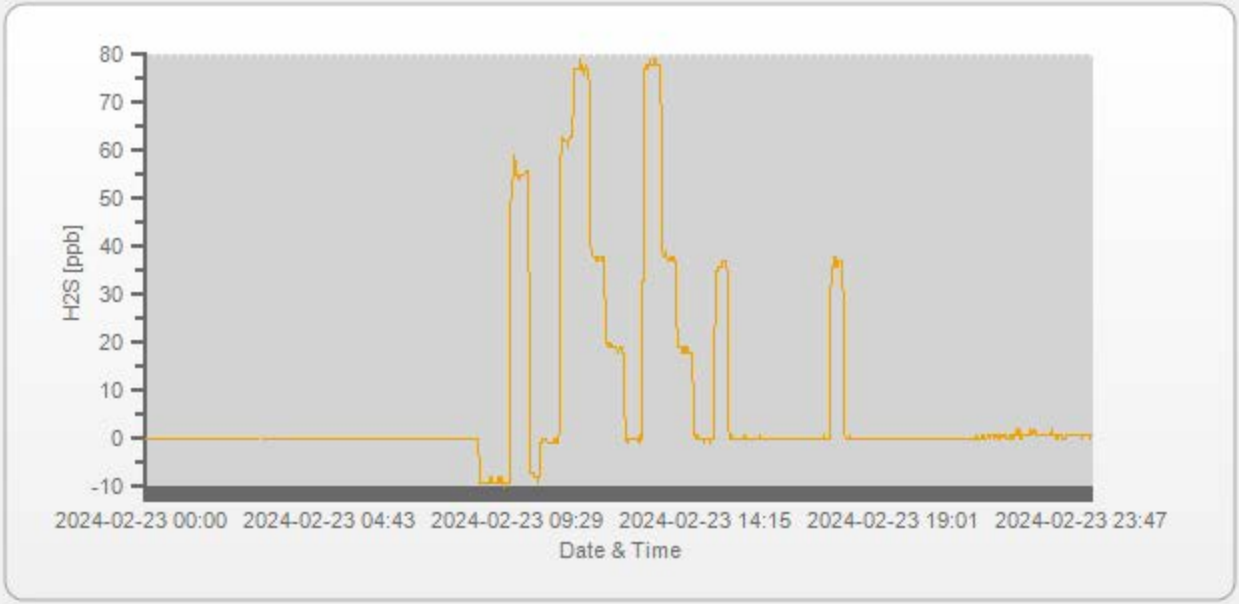
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4000		4000	0.00	**-8.2**	0		
3969	30.90	4000	77.95	56.3	78.8	**1.208**	0.989
3984	15.10	3999	38.10	n/a	38.5	n/a	0.990
3993	7.50	4000	18.92	n/a	19.5	n/a	0.970

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.009	0.1%

COMMENTS:

LICA analyzer
As found Zero and high failed.
Analyser was not stable at Adjusted high. Restarted Adjusted High.


H2S[ppb] Station: St. Lina Daily: 2024-02-23 Type: AVG 1 Min. [1 Min.]
80
70
60
50
40
30
20
10
0
-10
H2S [ppb]
2024-02-23 00:00
2024-02-23 04:43
2024-02-23 09:29
2024-02-23 14:15
2024-02-23 19:01
2024-02-23 23:47
Date & Time
H2S [ppb]

H2S Analyzer Calibration by Dilution

DATE:	27-Feb-2024	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	LICA	TEMPERATURE (°C):	22.4
LOCATION:	St. Lina	BAROMETRIC (mBar):	921
PURPOSE	Install/Post-Repair	START TIME (MST):	15:10
PERFORMED BY:	Chris Wesson	END TIME (MST):	17:57

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100	ppb
SERIAL #	CM18010058	FLOW (mL/min)	821	
INITIAL		FINAL		
BKG/OFFSET	n/a	BKG/OFFSET	65.3	
COEF/SLOPE	n/a	COEF/SLOPE	0.983	
Expected (reference) Value	n/a	Expected (reference) Value	35	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Sabio
MODEL:	2010	MODEL:	2020EXP
ID:	58100720	ID:	18700921
MFC CALIBRATION DATE:	09-Oct-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY 0002455	HIGH ID	n/a
CONC (ppm):	9.70	EXPIRY DATE	n/a
CYLINDER (psi):	1900	LOW ID	n/a
EXPIRY DATE	29-Sep-2026	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:	15:25	SO2 Conc (ppb)	380
END TIME:	15:40	Analyzer Response (ppb)	0.0

CALIBRATION:

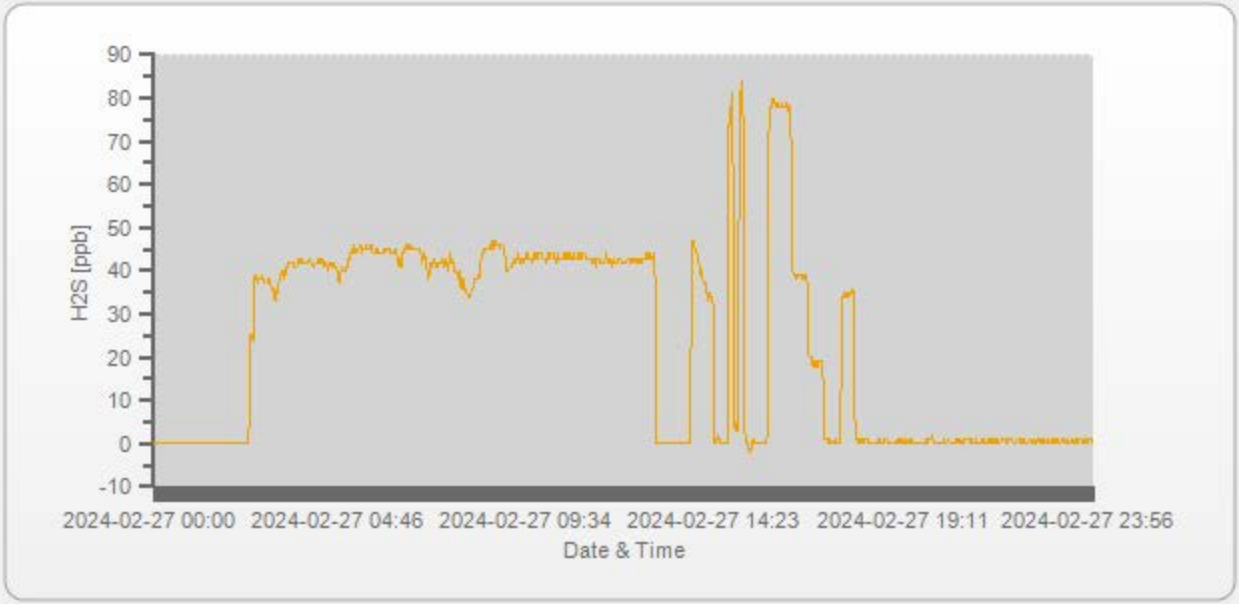
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
4002		4002	0.00	n/a	0		
3971	32.20	4003	78.03	n/a	78.2	n/a	0.998
3986	15.70	4002	38.05	n/a	38.8	n/a	0.981
3993	7.80	4001	18.91	n/a	18.6	n/a	1.017

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.005	0.0%

COMMENTS:

LICA analyzer
PMT replaced


H2S[ppb] Station: St. Lina Daily: 2024-02-27 Type: AVG 1 Min. [1 Min.]
90
80
70
60
50
40
30
20
10
0
-10
H2S [ppb]
2024-02-27 00:00
2024-02-27 04:46
2024-02-27 09:34
2024-02-27 14:23
2024-02-27 19:11
2024-02-27 23:56
Date & Time
H2S [ppb]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

				ANALYZER:			
DATE:	17-Feb-2024	PREVIOUS CALIBRATION DATE:	24-Jan-2024	MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
CLIENT:	LICA	TEMPERATURE (°C):	22.0	SERIAL #:	1180930029	NOx	1.001
LOCATION:	St. Lina	BAROMETRIC (mBar):	921	FLOW (mL/min)	775	NO	0.999
PURPOSE	Routine	START TIME (MST):	12:25	RANGE (ppb)	500	NO2	0.996
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:36	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):	400		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2023	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:	4.7	4.4	n/a	BKG/OFFSET:	4.6	4.4	n/a
SLOPE/COEF/CE:	1.009	0.9	0.997	SLOPE/COEF/CE:	1.01	0.91	0.997

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	221.0	1.5	219.2		226.0	1.7	224.0

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	0.1	-1.5	-1.5	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	380.2	379.0	-1.2	380.7	383.6	2.9	1.001	1.009		0.999	1.001	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.7	181.7	2.0	n/a	n/a		1.001	1.000	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	90.0	91.2	1.0	n/a	n/a		0.999	0.996	

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	379.6	383.0	3.4				
AS-FOUND HIGH	37.20	4998	240	125.0	384.1	259.1	254.6	255.7	0.996	100.43%
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	259.1	384.3	125.2	120.5	121.8	0.989	101.08%
LOW	37.20	4998	45	331.5	383.8	52.3	48.1	48.9	0.984	101.66%
NO2 adjustment not required.									AVERAGE:	101.06%

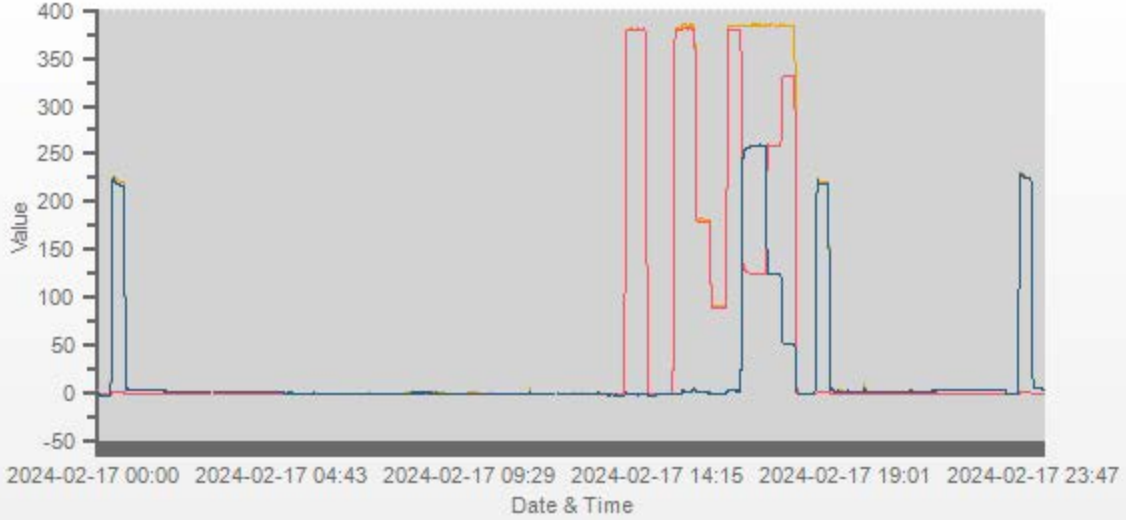
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	1.001	-0.02%
NOx	1.000	0.998	0.05%
NO2	1.000	1.001	0.18%

COMMENTS:

Sample inlet filter was changed.

Station: St. Lina Daily: 2024-02-17 Type: AVG 1 Min. [1 Min.]



NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:				ANALYZER:			
DATE:	21-Feb-2024	PREVIOUS CALIBRATION DATE:	17-Feb-2024	MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
CLIENT:	LICA	TEMPERATURE (°C):	20.4	SERIAL #:	1180930029	NOx	1.001
LOCATION:	St. Lina	BAROMETRIC (mBar):	915	FLOW (mL/min)	776	NO	0.999
PURPOSE	As-Found	START TIME (MST):	09:35	RANGE (ppb)	500	NO2	0.996
PERFORMED BY:	Chris Wesson	END TIME (MST):	11:27	GPT FOR O3?		Yes	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Sabio	CYLINDER ID:	EY0001013		HIGH ID:	n/a
MODEL:	2010	MODEL:	2020EXP	NO/NOx (PPM):	49.2	49.4	HIGH EXPIRY:	n/a
ID:	26701218	ID:	18700921	CYLINDER (psi):	1000		LOW ID:	n/a
MFC CALIBRATION DATE:	08-Sep-2023	OXIDIZER ID:	n/a	EXPIRY DATE	11-Nov-2029		LOW EXPIRY:	n/a

CALIBRATION SETTINGS:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	n/a	n/a	n/a	BKG/OFFSET:	n/a	n/a	n/a
SLOPE/COEF/CE:	n/a	n/a	n/a	SLOPE/COEF/CE:	n/a	n/a	n/a

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	n/a	n/a	n/a		n/a	n/a	n/a

CALIBRATION PARAMETERS:

POINT	NO TARGET (PPB)	NO2 TARGET (PPB)	NO2 RANGE	O3 POINT
HIGH	395	250	240-275	n/a
MID	180	154	150-157	Mid
LOW	90	54	50-58	Low
EXTRA 1	n/a	340	300-370	High

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
4999		4999	0.0	0.0	0.0	-0.3	1.5	1.8	n/a	n/a	n/a						
4957	40.70	4998	**400.6**	**402.3**	1.6	403.5	411.8	8.2	n/a	n/a	n/a	0.992	0.980		n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		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	40.70	4998	0	403.5	411.8	8.2				
AS-FOUND HIGH	40.70	4998	390	22.5	415.2	392.7	381	**384.5**	0.991	100.92%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	40.70	4998	190	221.8	414.4	192.3	181.7	**184.1**	0.987	101.32%
LOW	40.70	4998	90	317.9	411.7	93.8	85.6	**85.6**	1.000	100.00%
NO2 adjustment not required.									AVERAGE:	**n/a**

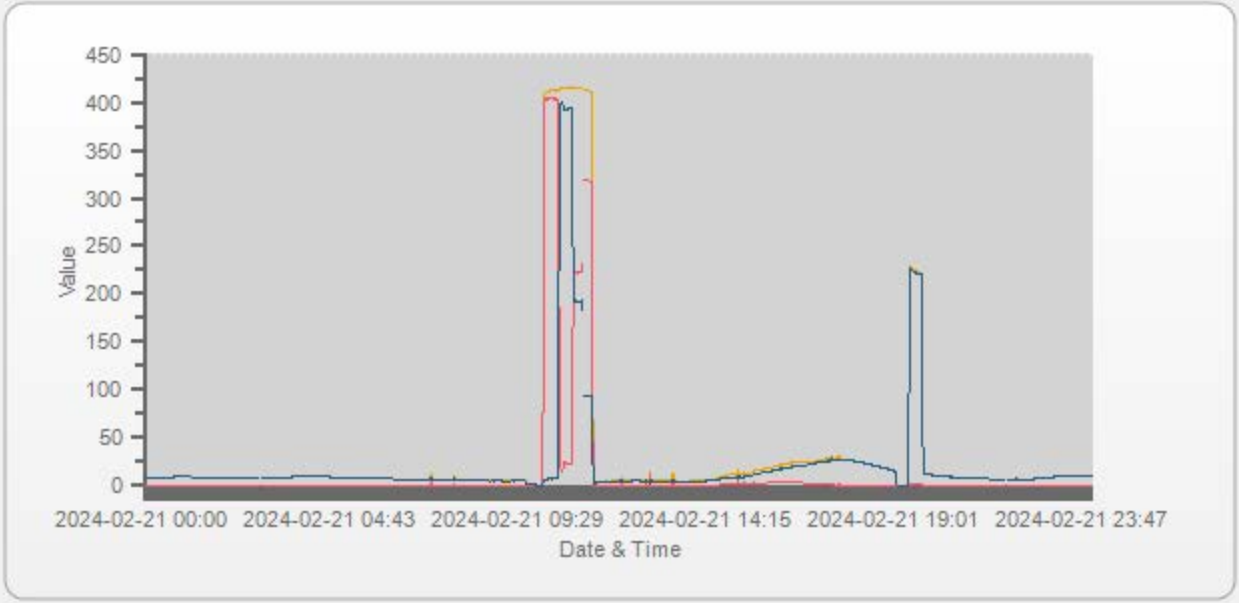
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	n/a	**n/a**	**n/a**
NOx	n/a	**n/a**	**n/a**
NO2	n/a	**n/a**	**n/a**

COMMENTS:

GPT for O3, DO NOT REPORT

Station: St. Lina Daily: 2024-02-21 Type: AVG 1 Min. [1 Min.]



Ozone Calibration by Direct GPT

DATE:	21-Feb-2024	PREVIOUS CALIBRATION DATE:	25-Jan-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	915
PURPOSE	Routine	START TIME (MST):	11:28
PERFORMED BY:	Chris Wesson	END TIME (MST):	14:28

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	12208316586	FLOW (mL/min)	1320
INITIAL		FINAL	
BKG/OFFSET	0.2	BKG/OFFSET	0.4
COEF/SLOPE	0.999	COEF/SLOPE	0.989
Expected (reference) Value	260.4	Expected (reference) Value	256.5

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Sabio
MODEL:	2010	MODEL:	2020EXP
ID:	26701218	ID:	18700921
MFC CALIBRATION DATE:	08-Sep-2023	OXIDIZER ID:	n/a
	CALIBRATION METHOD:	Direct GPT	
GPT DATE:	21-Feb-2024	GPT END TIME:	11:27

CALIBRATION PARAMETERS:

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

CALIBRATION:

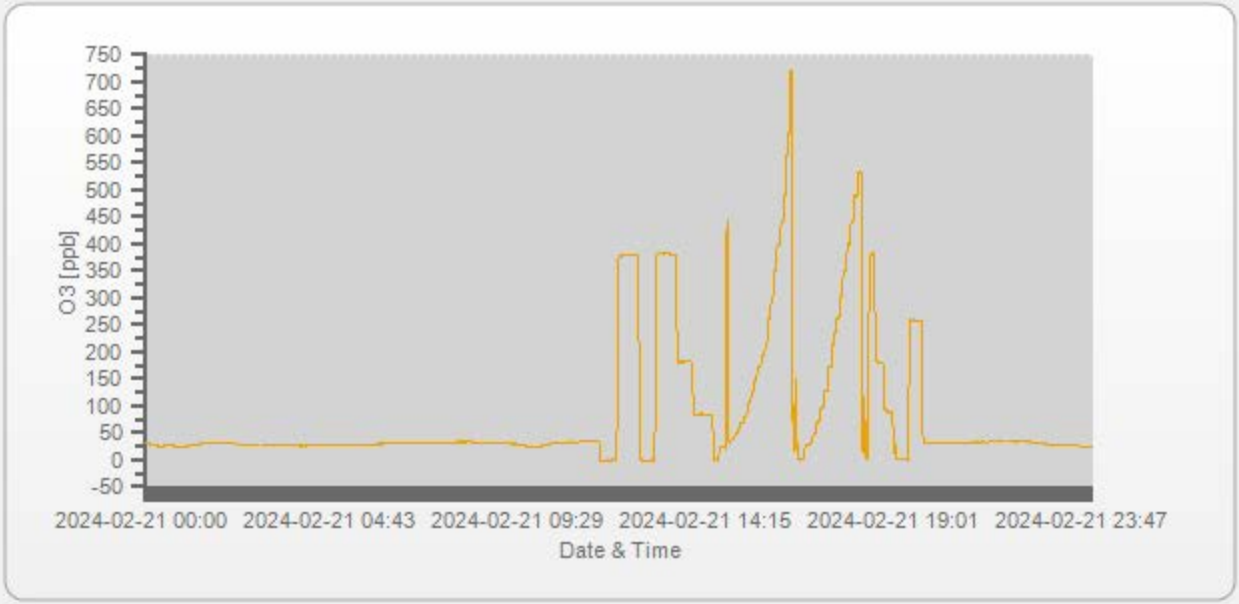
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	0.3	0.0		
5000		5000	381.0	380.7	381.3	1.002	0.999
5000		5000	181.7	n/a	181.9	n/a	0.999
5000		5000	85.6	n/a	84.7	n/a	1.011

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.1%

COMMENTS:

sample filter changed


O3[ppb] Station: St. Lina Daily: 2024-02-21 Type: AVG 1 Min. [1 Min.]
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
2024-02-21 00:00
2024-02-21 04:43
2024-02-21 09:29
2024-02-21 14:15
2024-02-21 19:01
2024-02-21 23:47
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	18-Feb-2024	PREVIOUS CALIBRATION DATE:	24-Jan-2024
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	910
PURPOSE	Routine	START TIME (MST):	10:54
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:06

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1180930026	1046
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	0.997	0.999	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:	132	CYLINDER (psi):	900		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2023	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
	9.44	10.99	20.43		9.87	11.11	20.98

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	13.80	13.27	27.12	14.53	13.52	28.05	1.052	1.017	1.033	0.999	0.999	0.999
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.25	6.71	13.96	n/a	n/a	n/a	1.001	1.006	1.003
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.61	3.32	6.93	n/a	n/a	n/a	1.002	1.014	1.008

LINEAR REGRESSION ANALYSIS:

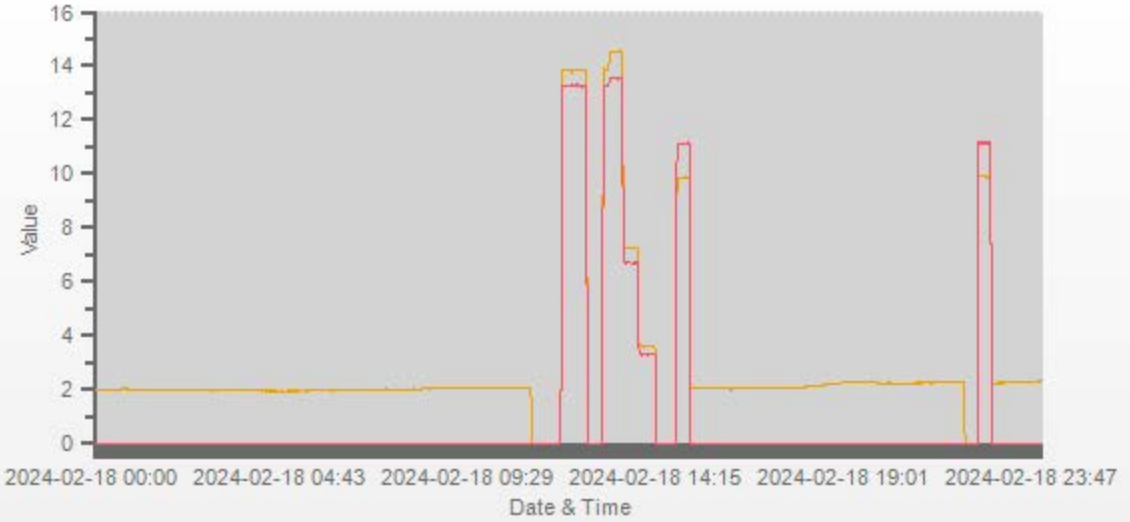
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.001	0.0%
NMHC	1.000	1.002	-0.2%
THC	1.000	1.002	-0.1%

Comments:

Sample inlet filter was changed.

Use Zero Chrom? **Yes**

Station: St. Lina Daily: 2024-02-18 Type: AVG 1 Min. [1 Min.]



Thermo 5030i SHARP Monitor Monthly Check

Date:	February 18, 2024	**Performed By/Reviewer:**	Alex Yakupov / Chris Wesson
Company:	LICA	**Start Time (mst):**	17:31
Station Name/Location:	St. Lina	**End Time (mst):**	18:12
Previous Audit Date:	January 25, 2024	**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** 484

Reference Standards:

	Air Flow			
	Manometer	**Orifice**	**Pressure:**	**Temp / RH:**
Make:	Delta Cal	Delta Cal	Fisher	Vaisala HMP76B
Model:	DC1	DC1	FB61291	HMP 76B
Serial Number:	177246	177246	130168457	T1640130
Calibration Expiration Date:	November 27, 2024	November 27, 2024	March 20, 2024	June 26, 2024

Ambient Temperature (°C)

	Reference	SHARP	Difference
#1	-0.10	-0.5	0.4

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

Ambient Relative Humidity (%RH)

As Found:

	Reference	SHARP	Difference
#1	39.90	39.6	0.3

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

Barometric Pressure (mmHg)

As Found:

	Reference	SHARP	Difference
#1	693.0	693.0	0.0

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

Flow Audit (L/min)

As Found:

	Reference	SHARP		
#1	16.65	16.67	% Difference	0.12%
#2	16.65	16.67		
#3	16.65	16.67		
Average	16.65	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	16.65	16.67	-0.02	16.52	16.66	-0.14	*Leak Limit: 0.80 L/min*
					LEAK RATE:	**-0.12**	

Meteorological System Checklist

Date:	February 18, 2024
Technician:	Alex Yakupov / Audit time: 18:16 - 18:58
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	
Is the screen on the housing? (screen should be on between July and September	no	18:18 - test with water (reading 1.0 mm for 10 tips)
Is the housing clean?	yes	No issues. Response is timely and accurate.
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 mm)

# 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, Exp. Date: Jun 26, 2024
Reference Temperature (^{o}C):	-1.2
Station - Ambient Temperature (^{o}C):	-1.5
Temperature Difference (^{o}C):	0.3

BAROMETRIC PRESSURE SENSOR CHECK

Reference Barometer ID:	Fisher / FB 61291/ #130168457/ Mar 20, 2024	
Reference Pressure - Units/Reading:	millibar	924
Station Pressure - Units/Reading:	millibar	912
Pressure Tolerance +/- 15% of error:	785 - 1063	1.30%

RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Reference Hygrometer ID:	Vaisala / HM70 / #T1640130, Exp. Date: Jun 26, 2024
Reference Hygrometer % RH- Reading:	50.20
Station Hygrometer % RH- Reading:	48.10
RH Tolerance +/- 15% of difference:	42.67 - 57.73	4.2%

ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Wind Speed Observed (kph):	1-10	Wind Direction Observed:	S
Wind speed on Data Logger (kph):	5.7	Wind Direction on Data Logger:	S
	Annual audit: Jul 22, 2022	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge temperature: 21.6 vs 21.9 Difference: 0.3 degrees. Passed

Meteorological Sensor Audit/Calibration

Location Information

Company:	LICA	**Performed By:**	Alex Yakupov
Audit Location:	St. Lina	**Reviewed By:**	Chris Wesson
Audit Date:	December 20, 2023	**Start/End Time (mst):**	11:54 / 15:37
Calibration Purpose:	routine annual	**Weather Conditions:**	Mainly sunny

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:	July 22, 2022	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: Model 18860-90/18802 SN: CA 4744, expires - Oct 18, 2024

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	37.0	37.0	0.996
3000	55.3	55.5	55.5	0.996
4000	73.7	74.1	74.1	0.995
5000	92.2	92.6	92.6	0.995
6000	110.6	111.2	111.2	0.994
7000	129.0	129.8	129.8	0.994
8000	147.4	148.4	148.4	0.994
9000	165.9	167.1	167.1	0.993
10000	184.3	185.7	185.7	0.992
		The audit meets AMD requirements.	**Average Correction Factor=**	**0.995**

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	353	0.9	2.0	1.5
30	330	31	329	-1.0	0.6	0.8
60	300	63	300	-2.7	0.5	1.6
90	270	93	270	-3.4	-0.3	1.9
120	240	124	241	-4.0	-1.3	2.7
150	210	153	212	-3.1	-1.8	2.5
180	180	182	183	-1.8	-2.7	2.3
210	150	211	154	-1.4	-3.6	2.5
240	120	241	125	-0.5	-4.8	2.7
270	90	269	95	1.2	-4.6	2.9
300	60	299	64	1.3	-3.7	2.5
330	30	328	31	1.7	-1.1	1.4
355	0	353	1	2.0	1.1	1.6
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**2.0**

Comments:

n/a

End of Report

Lakeland Industry & Community Association

FEBRUARY 2024

Ambient Air Monitoring Calibration Report

- LAC LA BICHE STATION-

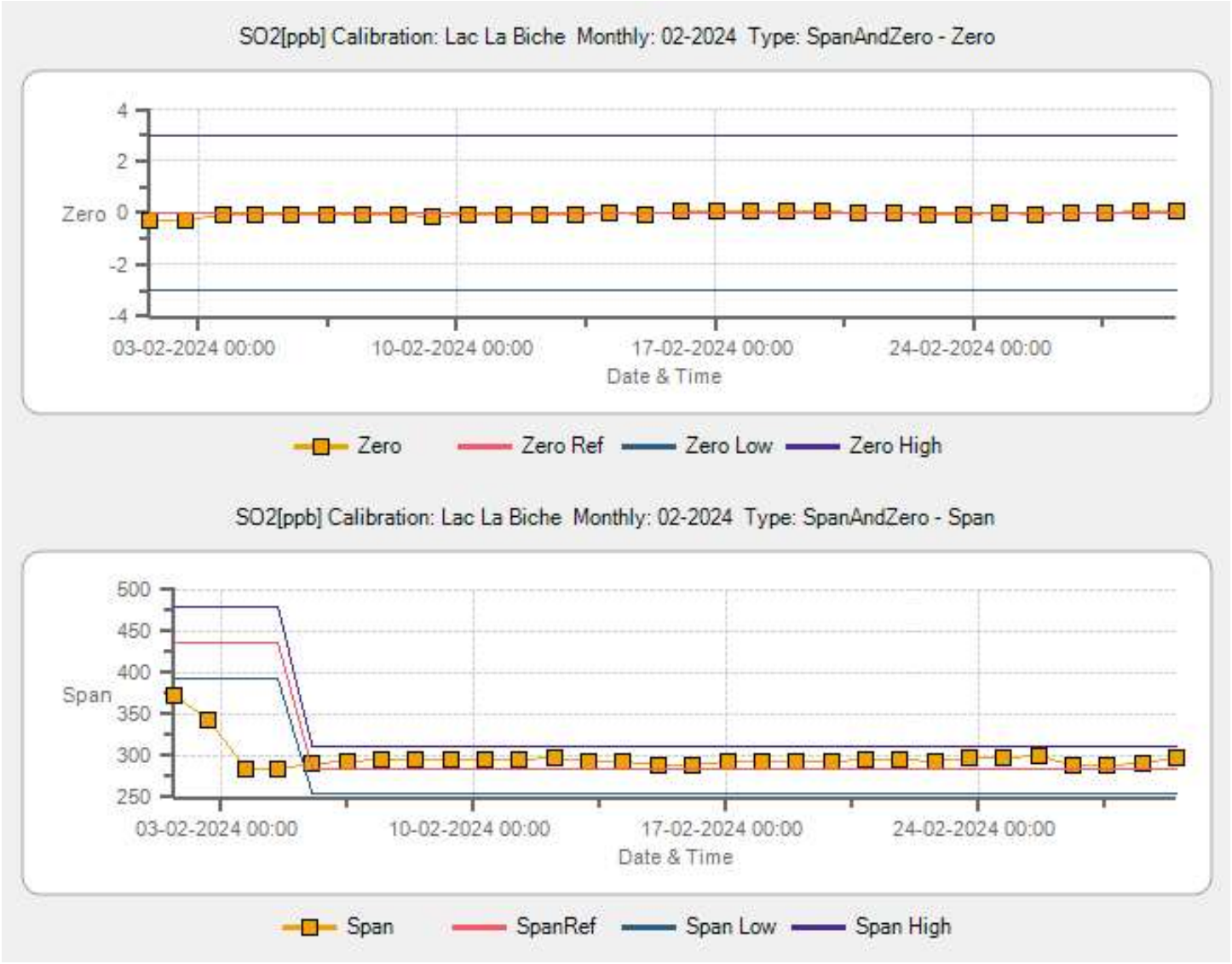
CAL-LICA-202402-01690

Station Operation and Maintenance:
Bureau Veritas Canada

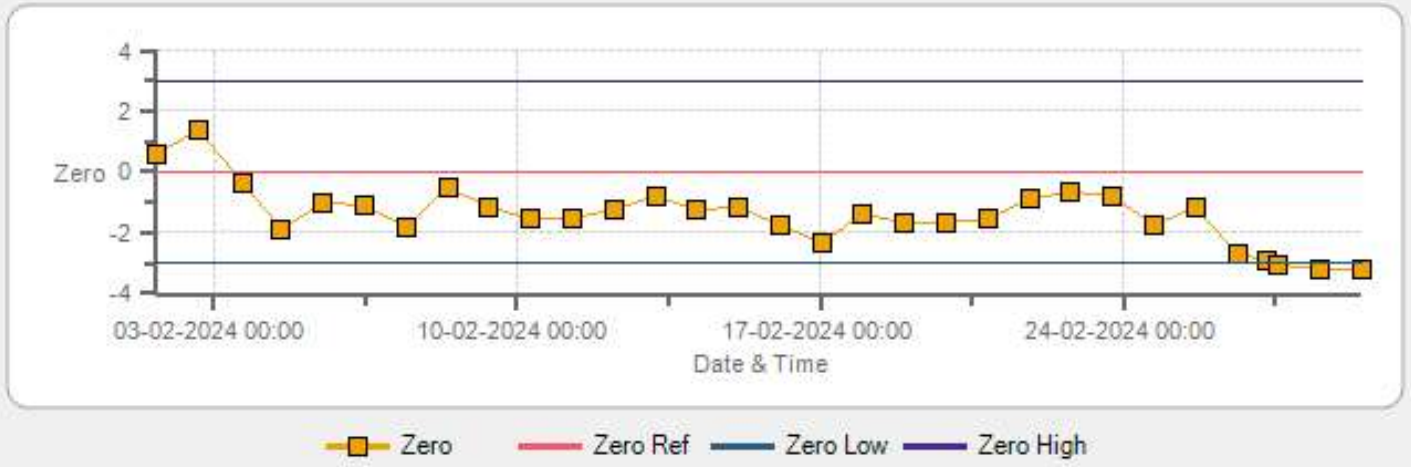
Data Validation and Report:
LICA / Bureau Veritas Canada

March 13, 2024

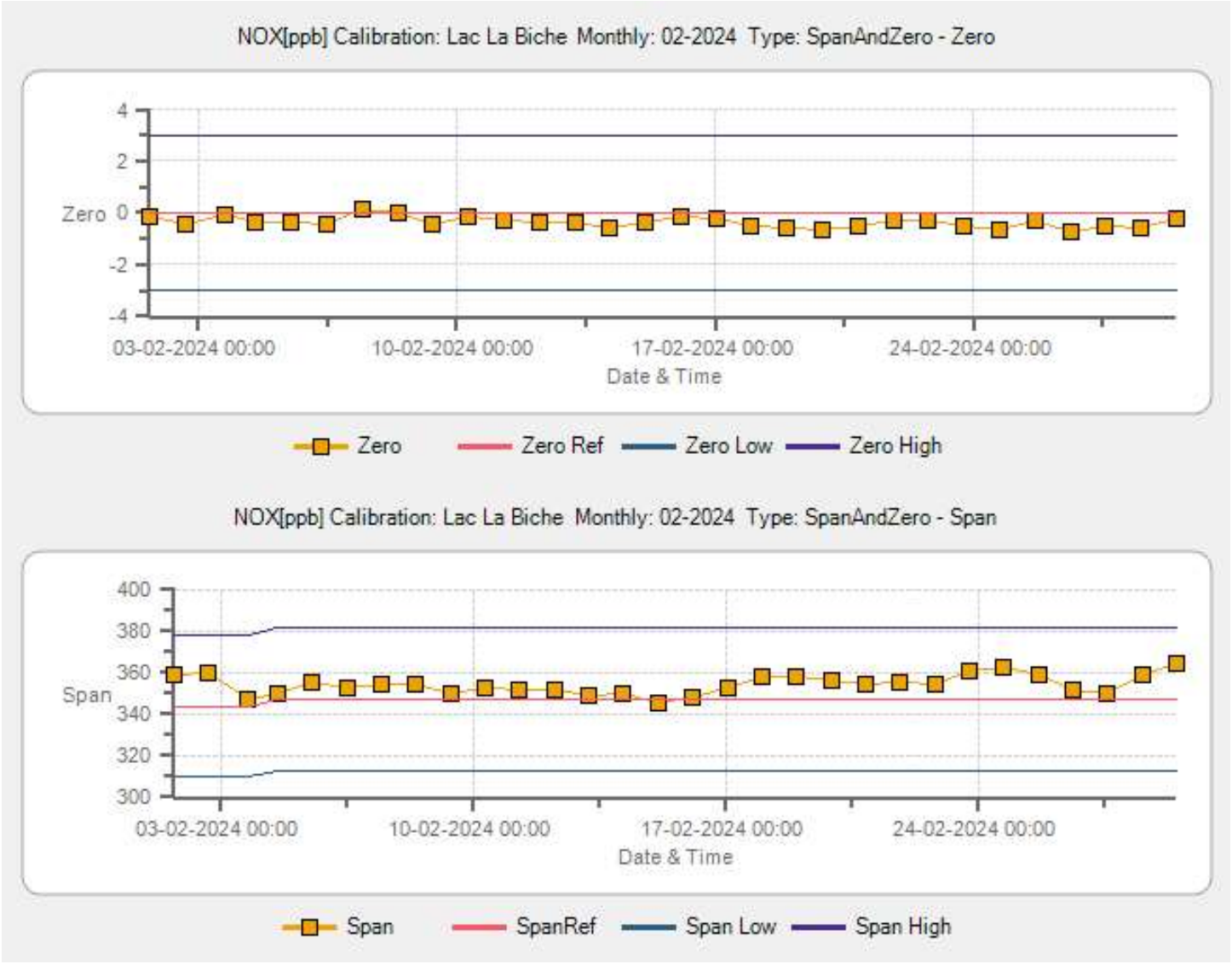
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

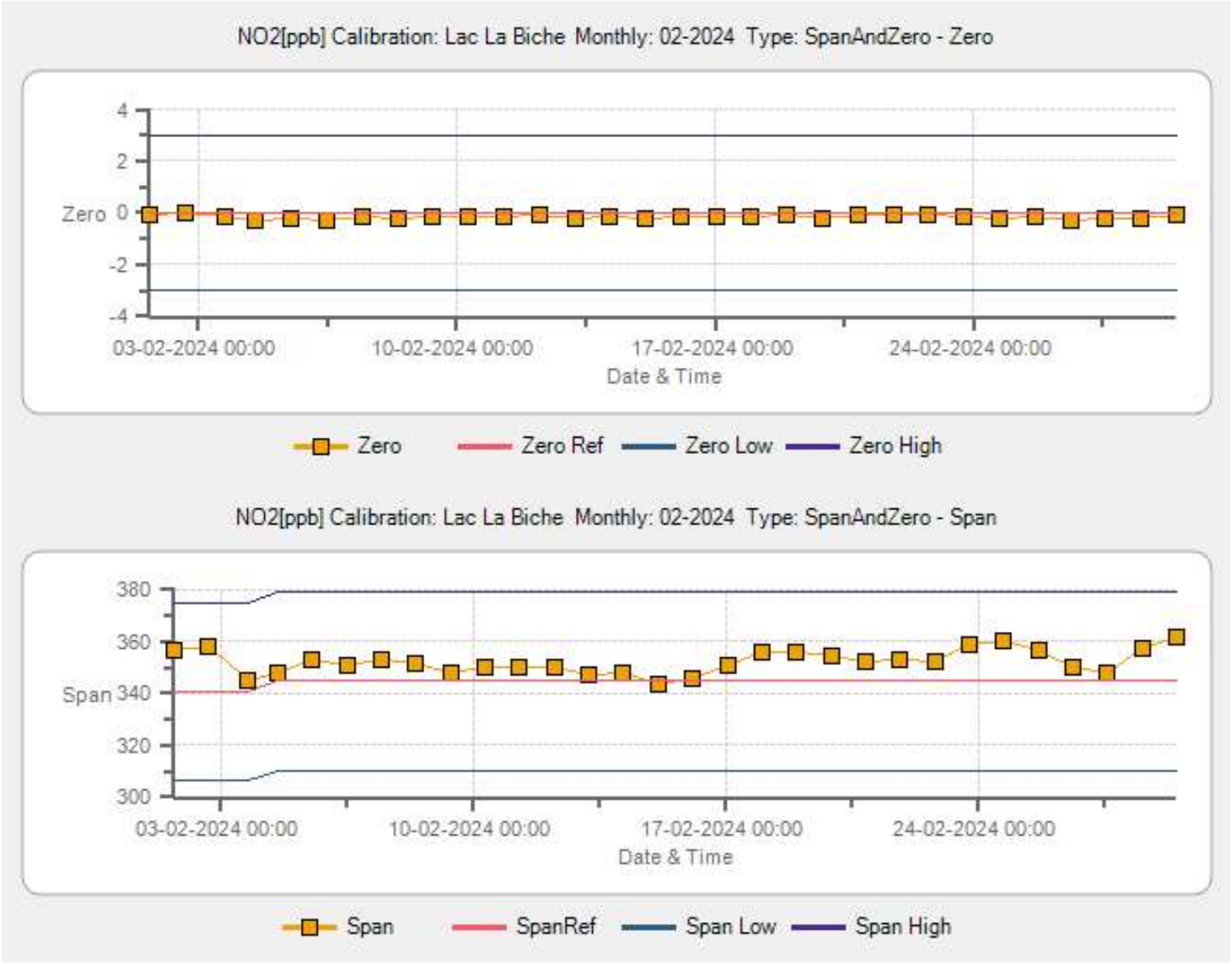

SO2[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
SO2[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Span
500
450
400
Span
350
300
250
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High

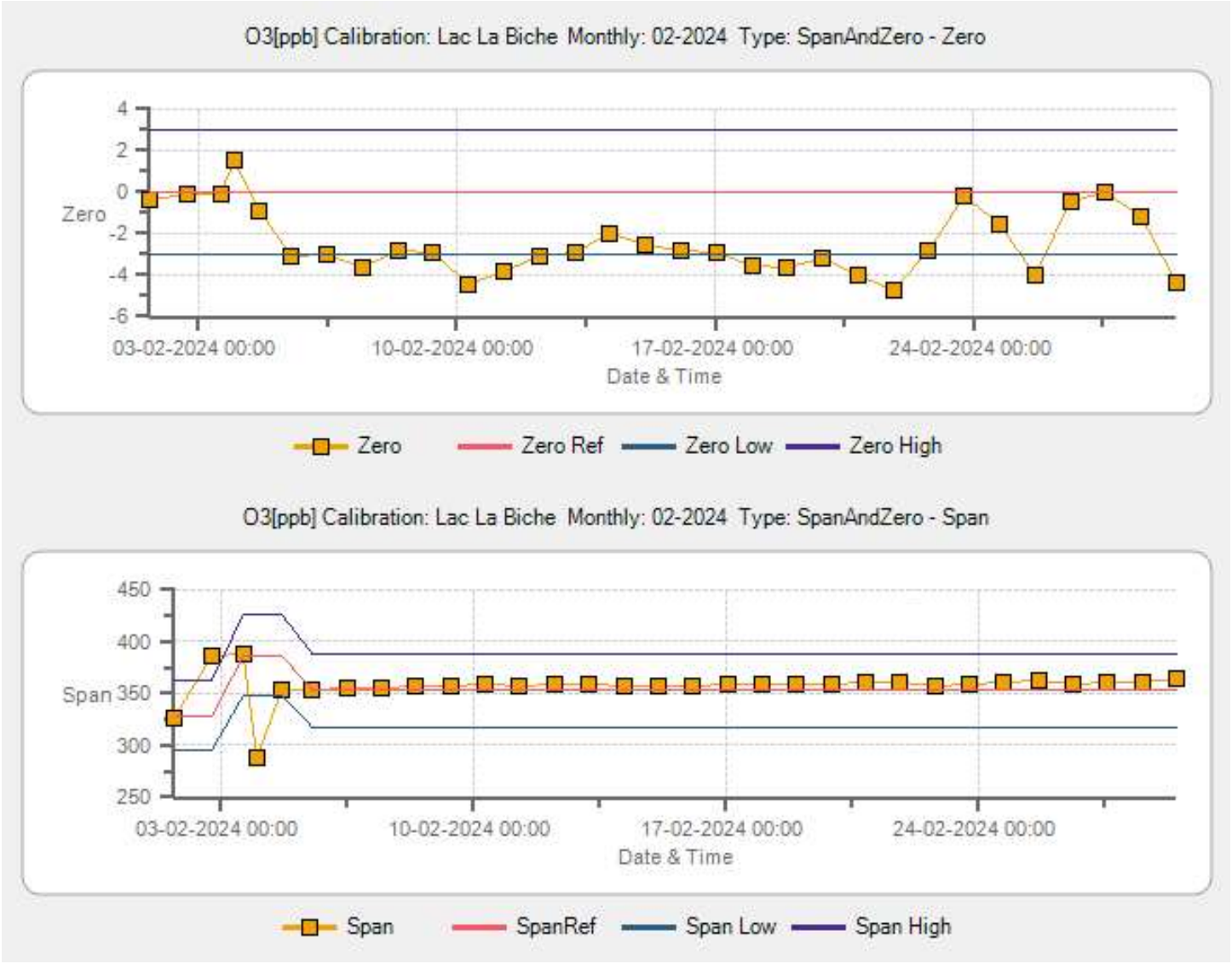
H2S[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Zero

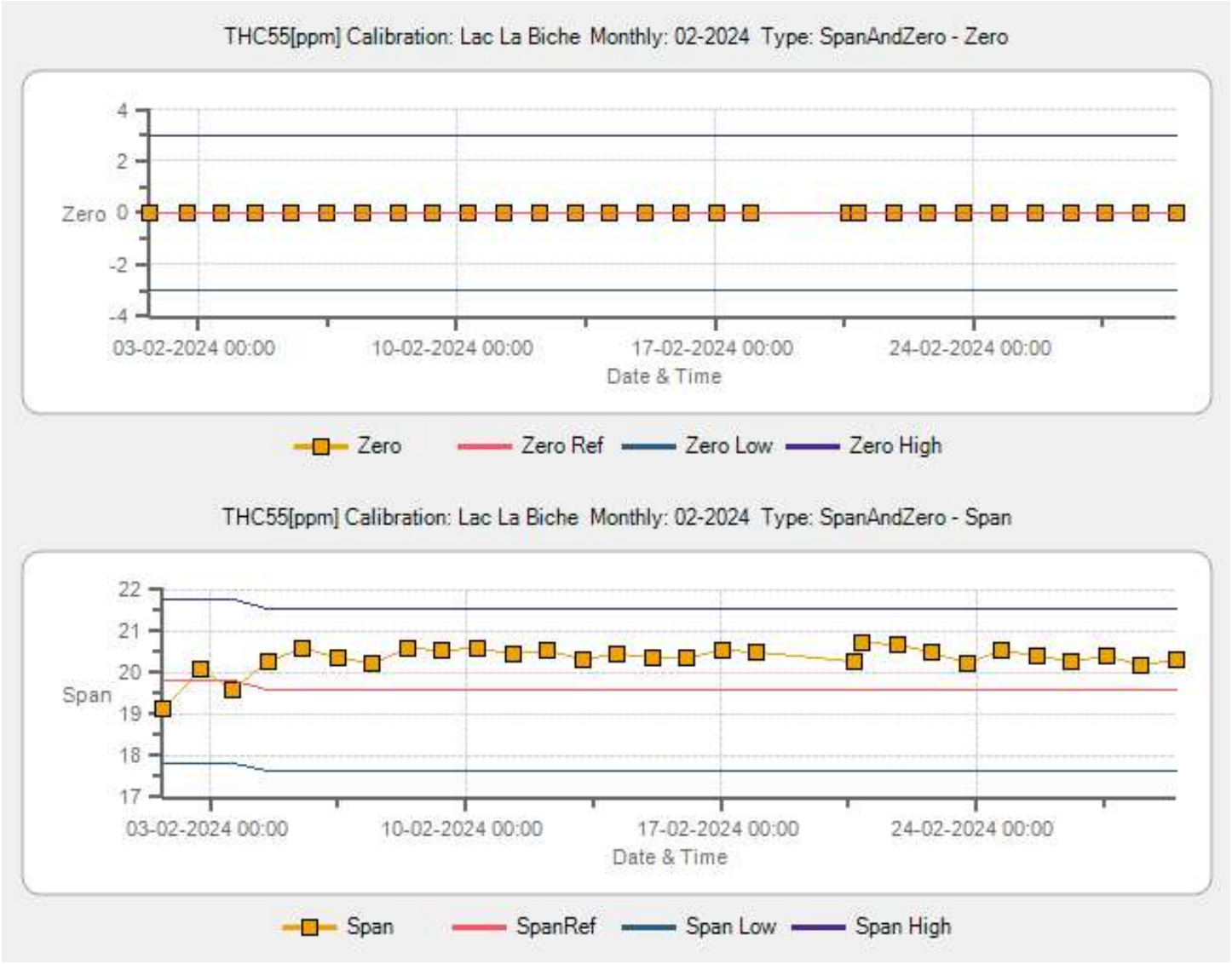


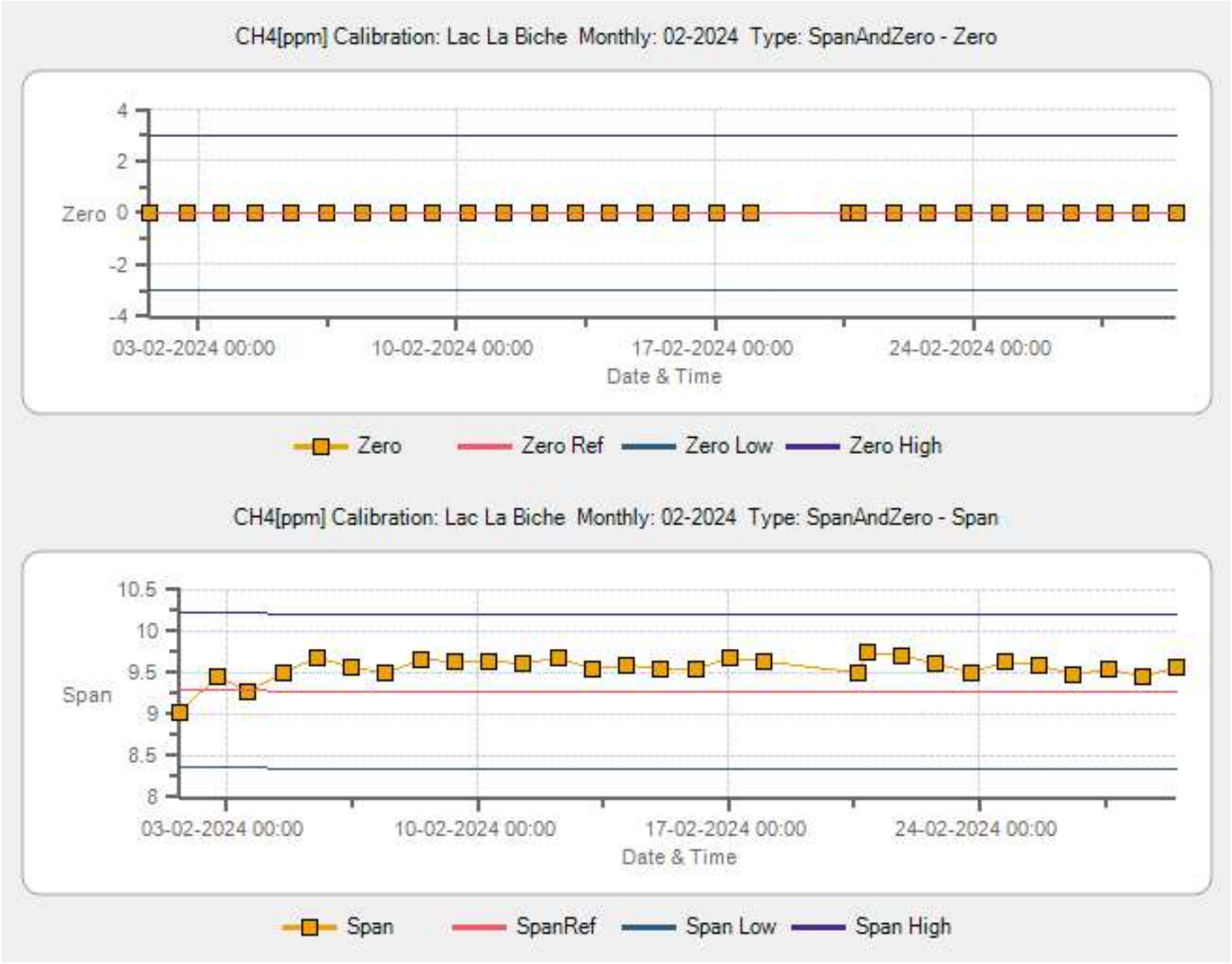
H2S[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Span

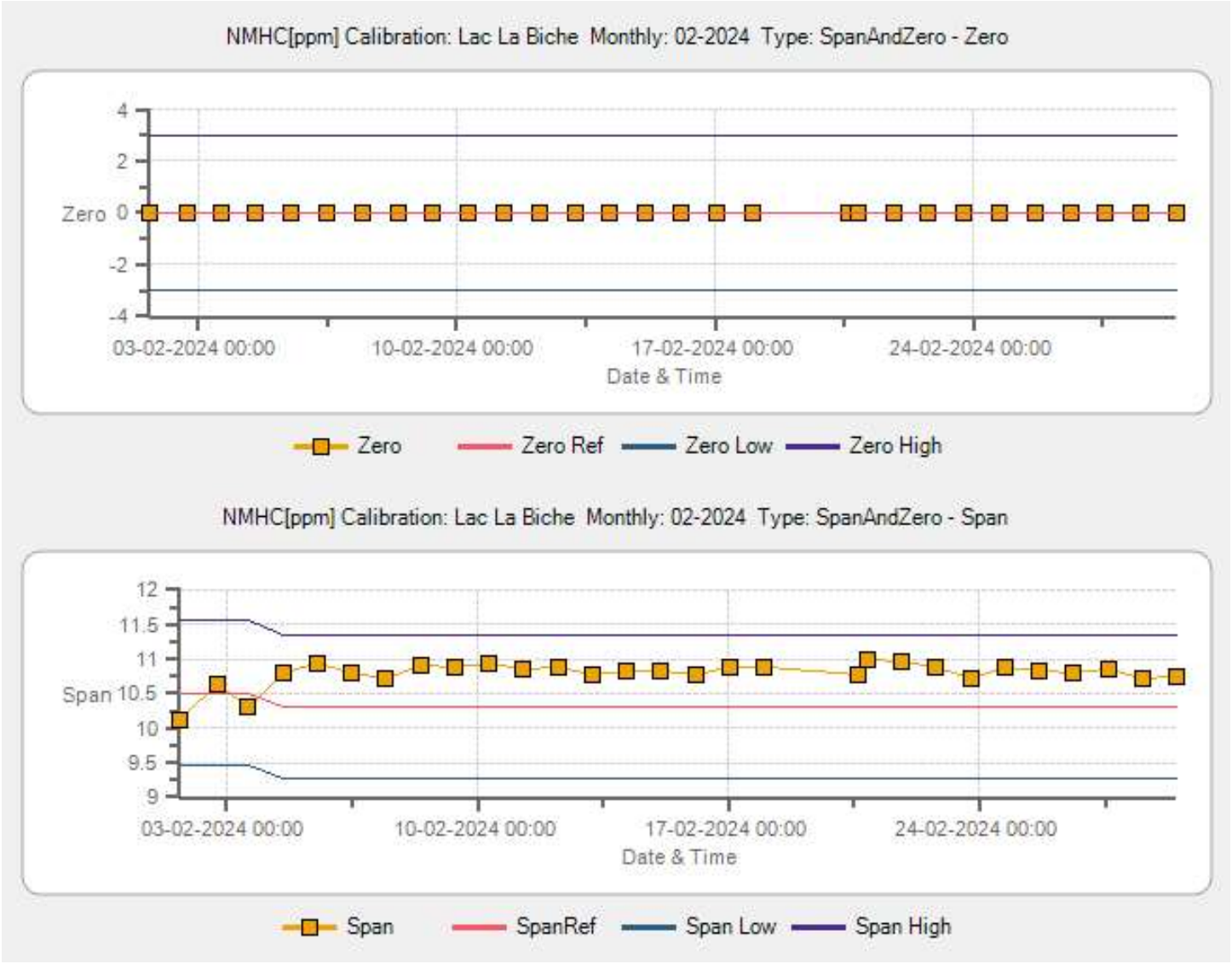

NOX[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NOX[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Span
400
380
360
Span
340
320
300
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NO2[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NO2[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Span
380
360
Span 340
320
300
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


O3[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Zero
Zero
4
2
0
-2
-4
-6
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Span
Span
450
400
350
300
250
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


THC55[ppm] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Span
22
21
20
Span
19
18
17
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


CH4[ppm] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4[ppm] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Span
10.5
10
9.5
Span 9
8.5
8
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High


NMHC[ppm] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC[ppm] Calibration: Lac La Biche Monthly: 02-2024 Type: SpanAndZero - Span
12
11.5
11
Span 10.5
10
9.5
9
03-02-2024 00:00
10-02-2024 00:00
17-02-2024 00:00
24-02-2024 00:00
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	03-Feb-2024	PREVIOUS CALIBRATION DATE:	10-Jan-2024
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.001
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	945
PURPOSE	Routine	START TIME (MST):	12:31
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:43

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180320043	FLOW (mL/min)	455
INITIAL		FINAL	
BKG/OFFSET	7.71	BKG/OFFSET	7.4
COEF/SLOPE	1.459	COEF/SLOPE	1.424
Expected (reference) Value	436	Expected (reference) Value	to be adjusted

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17100415	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	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):	500	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:

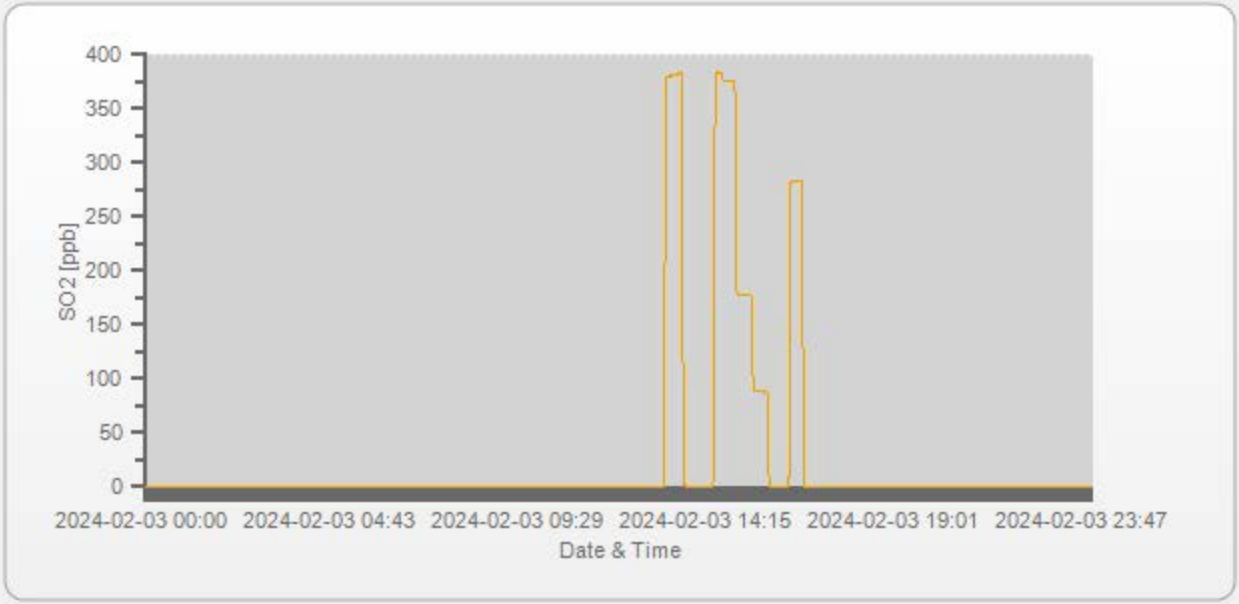
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.00	-0.31	0		
4961	37.20	4998	375.13	381.8	375.61	0.982	0.999
4982	17.60	5000	177.41	n/a	177.45	n/a	1.000
4990	8.80	4999	88.72	n/a	88.35	n/a	1.004

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	0.0%

COMMENTS:

Sample inlet filter was changed.
New perm tube installed. EV will be set once stable.


SO2[ppb] Station: Lac La Biche Daily: 2024-02-03 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
SO2 [ppb]
2024-02-03 00:00
2024-02-03 04:43
2024-02-03 09:29
2024-02-03 14:15
2024-02-03 19:01
2024-02-03 23:47
Date & Time
SO2 [ppb]

H2S Analyzer Calibration by Dilution

DATE:	03-Feb-2024	PREVIOUS CALIBRATION DATE:	10-Jan-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	0.996
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	945
PURPOSE	Routine	START TIME (MST):	12:32
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:43

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM17360002	FLOW (mL/min)	928
INITIAL		FINAL	
BKG/OFFSET	90.4	BKG/OFFSET	80.4
COEF/SLOPE	1.151	COEF/SLOPE	1.004
Expected (reference) Value	49	Expected (reference) Value	51.4

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL 131360	HIGH ID	n/a
CONC (ppm):	10.05	EXPIRY DATE	n/a
CYLINDER (psi):	1900	LOW ID	n/a
EXPIRY DATE	03-Jan-2026	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:	12:34	SO2 Conc (ppb)	380
END TIME:	12:49	Analyzer Response (ppb)	0.0

CALIBRATION:

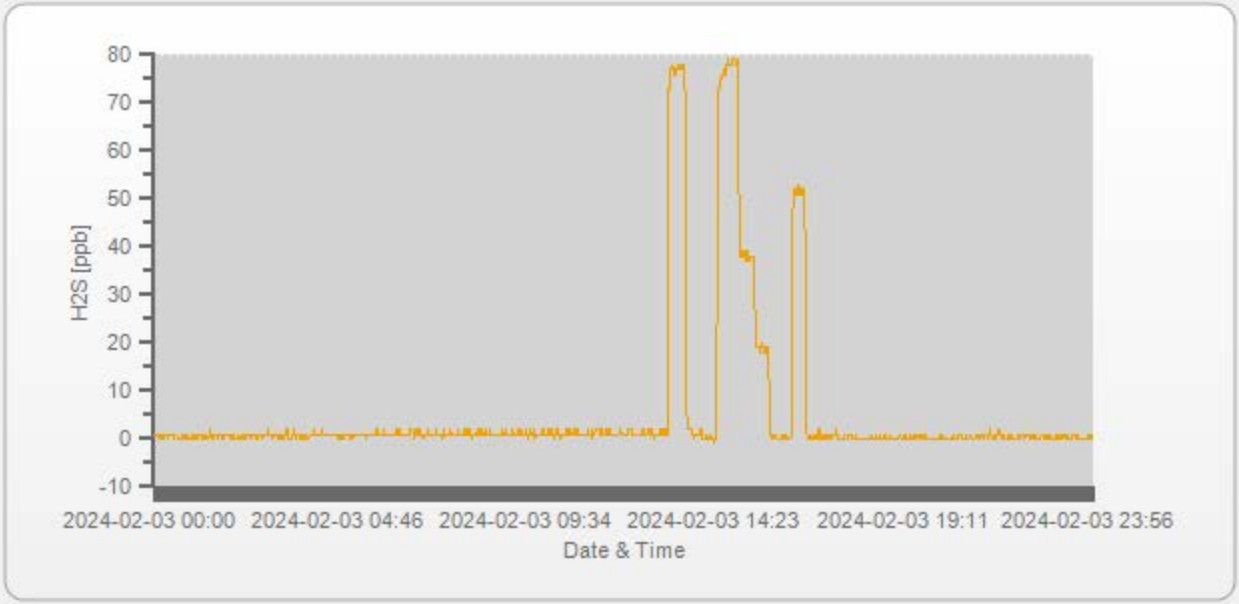
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	1	0		
7442	58.20	7500	77.99	77.2	78	1.023	1.000
7472	28.40	7500	38.06	n/a	38	n/a	1.001
7486	14.20	7500	19.03	n/a	18.7	n/a	1.018

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.1%

COMMENTS:

Sample inlet filter was changed.


H2S[ppb] Station: Lac La Biche Daily: 2024-02-03 Type: AVG 1 Min. [1 Min.]
80
70
60
50
40
30
20
10
0
-10
H2S [ppb]
2024-02-03 00:00
2024-02-03 04:46
2024-02-03 09:34
2024-02-03 14:23
2024-02-03 19:11
2024-02-03 23:56
Date & Time
H2S [ppb]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

				ANALYZER:			
DATE:	03-Feb-2024	PREVIOUS CALIBRATION DATE:	10-Jan-2024	MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
CLIENT:	LICA	TEMPERATURE (°C):	22.0	SERIAL #:	1180930027	NOx	1.000
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	945	FLOW (mL/min)	760	NO	1.001
PURPOSE	Routine	START TIME (MST):	12:30	RANGE (ppb)	500	NO2	1.000
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:10	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):	500		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2023	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:	9	8.8	n/a	BKG/OFFSET:	9.1	8.8	n/a
SLOPE/COEF/CE:	1.008	0.848	0.998	SLOPE/COEF/CE:	1.01	0.853	0.998

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	344.0	2.3	341.0		347.0	2.3	345.0

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	0.1	0.4	0.3	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	377.4	382.1	4.1	379.9	384.0	4.1	1.008	1.006		1.001	1.000	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	180.3	182.1	1.8	n/a	n/a		0.998	0.997	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	89.5	90.5	1.0	n/a	n/a		1.005	1.004	

GPT CALIBRATION:

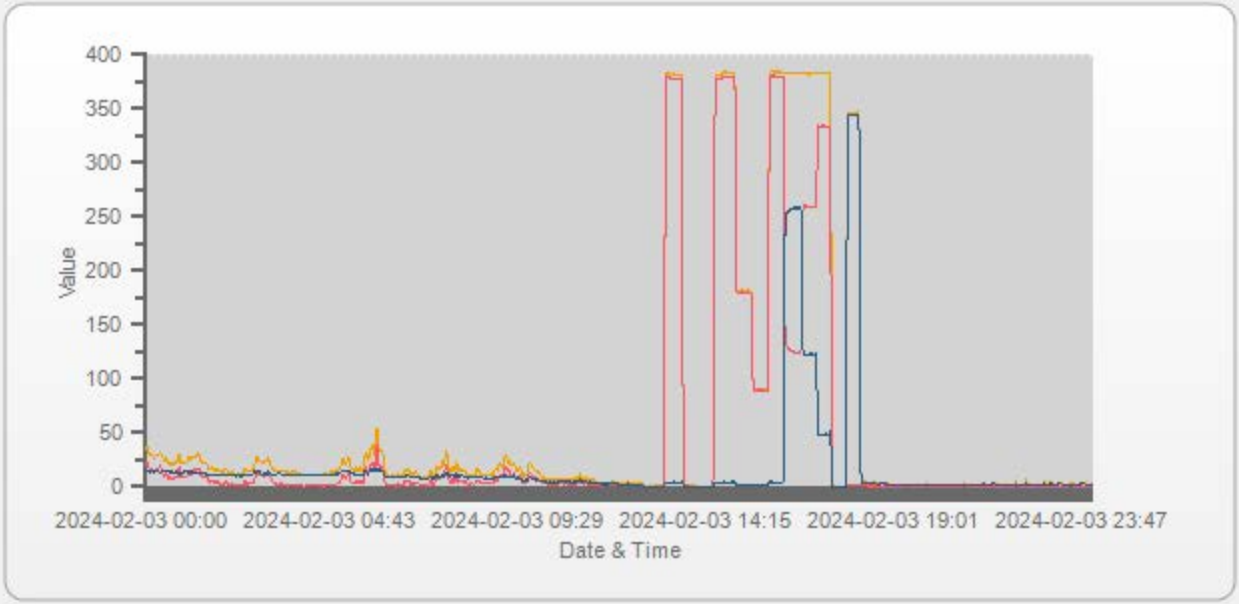
Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	380.3	384.3	4.0				
AS-FOUND HIGH	37.20	4998	235	125.1	383.5	258.3	255.2	254.3	1.004	99.65%
ADJUSTED HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	37.20	4998	110	260.6	383.8	123.2	119.7	119.2	1.004	99.58%
LOW	37.20	4998	40	334.4	383.5	49.2	45.9	45.2	1.015	98.47%
NO2 adjustment not required.									AVERAGE:	99.23%

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.999	0.00%
NOx	1.000	1.000	0.00%
NO2	1.000	0.999	-0.11%

COMMENTS:

Sample inlet filter was changed.


Station: Lac La Biche Daily: 2024-02-03 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
Value
2024-02-03 00:00
2024-02-03 04:43
2024-02-03 09:29
2024-02-03 14:15
2024-02-03 19:01
2024-02-03 23:47
Date & Time
NOX [ppb]
NO [ppb]
NO2 [ppb]

Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	02-Feb-2024	PREVIOUS CALIBRATION DATE:	09-Jan-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	931
PURPOSE	Routine	START TIME (MST):	13:17
PERFORMED BY:	Alex Yakupov	END TIME (MST):	17:49

ANALYZER:

MAKE/MODEL	Thermo 49i	RANGE	500 ppb
SERIAL #	1002240372	FLOW (mL/min)	1381
INITIAL		FINAL	
BKG/OFFSET	0	BKG/OFFSET	0
COEF/SLOPE	1.048	COEF/SLOPE	1.244
Expected (reference) Value	329	Expected (reference) Value	387

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	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:

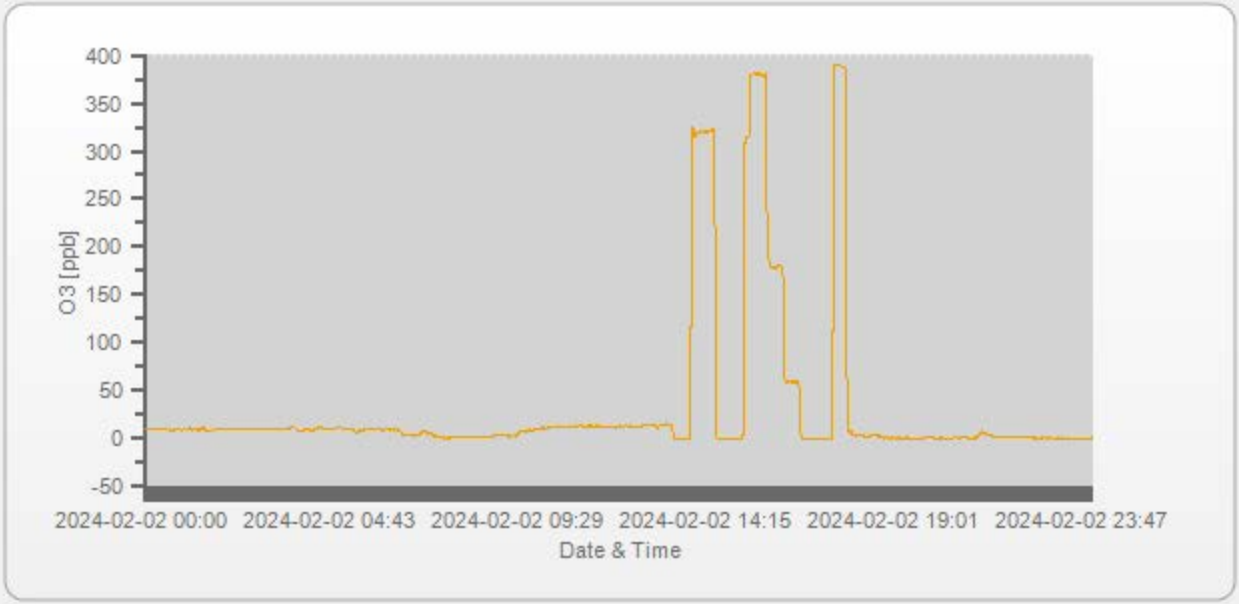
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED Initial	INDICATED Final	Initial	Final
5000		5000	0.0	-0.1	0.0		
5000		5000	378.0	319.2	379.3	**1.184**	0.997
5000		5000	180.0	n/a	179.6	n/a	1.002
5000		5000	60.0	n/a	59.3	n/a	1.012

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.004	-0.1%

COMMENTS:

Calibration failed at as-found high.
Analyzer recalibrated.


O3[ppb] Station: Lac La Biche Daily: 2024-02-02 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
2024-02-02 00:00
2024-02-02 04:43
2024-02-02 09:29
2024-02-02 14:15
2024-02-02 19:01
2024-02-02 23:47
Date & Time
O3 [ppb]

Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	03-Feb-2024	PREVIOUS CALIBRATION DATE:	02-Feb-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	0.997
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	945
PURPOSE	Removal/Shut-down	START TIME (MST):	15:50
PERFORMED BY:	Alex Yakupov	END TIME (MST):	17:44

ANALYZER:

MAKE/MODEL	Thermo 49i	RANGE	500 ppb
SERIAL #	1002240372	FLOW (mL/min)	1379
INITIAL		FINAL	
BKG/OFFSET	0	BKG/OFFSET	n/a
COEF/SLOPE	1.244	COEF/SLOPE	n/a
Expected (reference) Value	387	Expected (reference) Value	n/a

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	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:

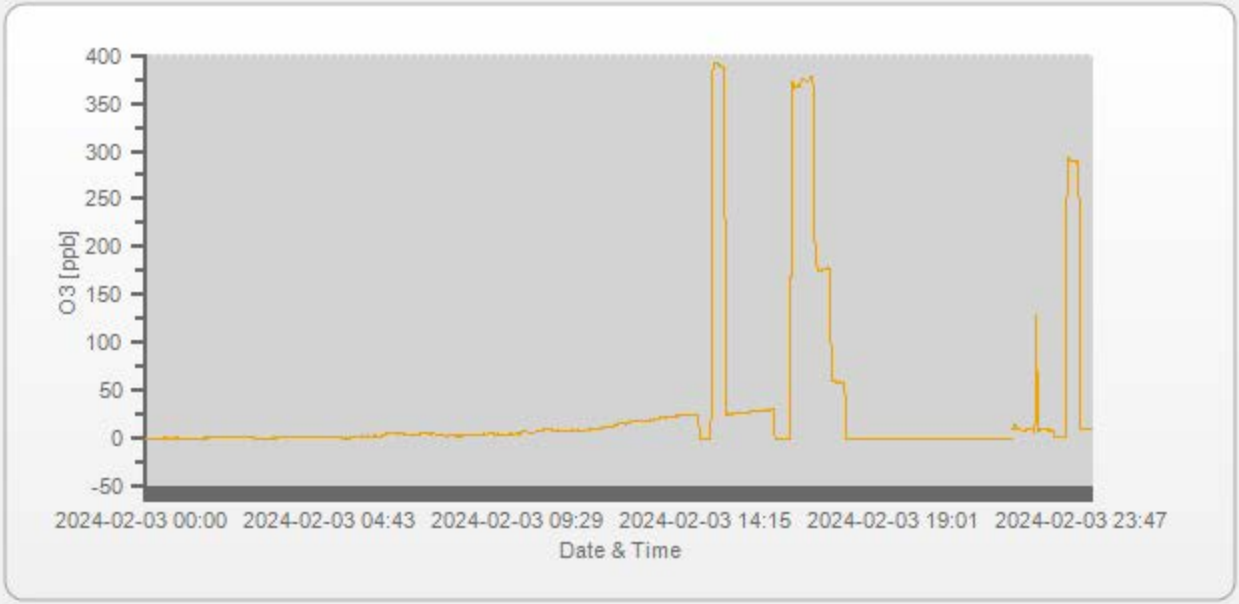
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	0.0	n/a		
5000		5000	378.0	373.6	n/a	1.012	n/a
5000		5000	180.0	177.3	n/a	1.015	n/a
5000		5000	60.0	60.3	n/a	0.995	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.987	0.1%

COMMENTS:

Shutdown calibration due to low intensity (Cell B)


O3[ppb] Station: Lac La Biche Daily: 2024-02-03 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
2024-02-03 00:00
2024-02-03 04:43
2024-02-03 09:29
2024-02-03 14:15
2024-02-03 19:01
2024-02-03 23:47
Date & Time
O3 [ppb]

Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	04-Feb-2024	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	953
PURPOSE	Install/Post-Repair	START TIME (MST):	12:02
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:19

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	1202068510	FLOW (mL/min)	1380
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	4.7
COEF/SLOPE	n/a	COEF/SLOPE	1.195
Expected (reference) Value	n/a	Expected (reference) Value	353

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	13-Oct-2023	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:

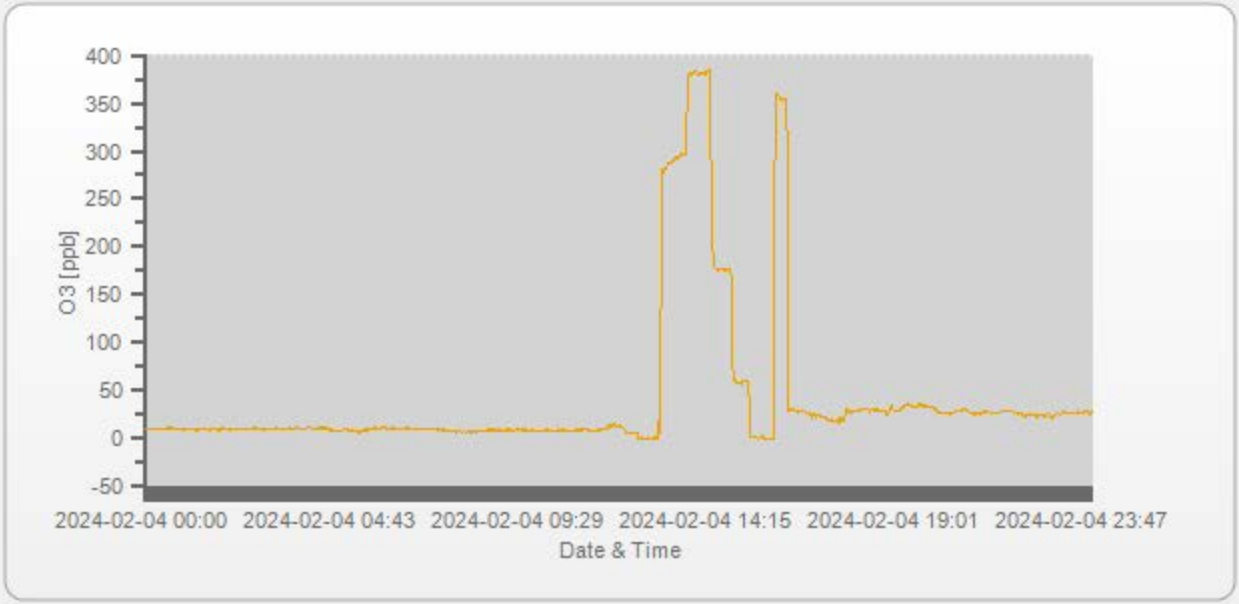
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	n/a	0.0		
5000		5000	378.0	n/a	378.0	n/a	1.000
5000		5000	180.0	n/a	175.3	n/a	1.027
5000		5000	60.0	n/a	59.0	n/a	1.017

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	-0.3%

COMMENTS:

No issues


O3[ppb] Station: Lac La Biche Daily: 2024-02-04 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
2024-02-04 00:00
2024-02-04 04:43
2024-02-04 09:29
2024-02-04 14:15
2024-02-04 19:01
2024-02-04 23:47
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	02-Feb-2024	PREVIOUS CALIBRATION DATE:	11-Jan-2024
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	931
PURPOSE	Routine	START TIME (MST):	13:18
PERFORMED BY:	Alex Yakupov	END TIME (MST):	17:49

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1180320044	903
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.000	0.999	0.999

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):	700		LOW ID:	n/a
MFC CALIBRATION DATE:	13-Oct-2023	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
	9.29	10.51	19.80		9.28	10.31	19.59

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	13.89	13.02	26.91	14.51	13.54	28.05	1.045	1.037	1.041	1.000	0.997	0.999
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.24	6.76	14.00	n/a	n/a	n/a	1.002	0.999	1.000
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.63	3.40	7.02	n/a	n/a	n/a	0.997	0.990	0.995

LINEAR REGRESSION ANALYSIS:

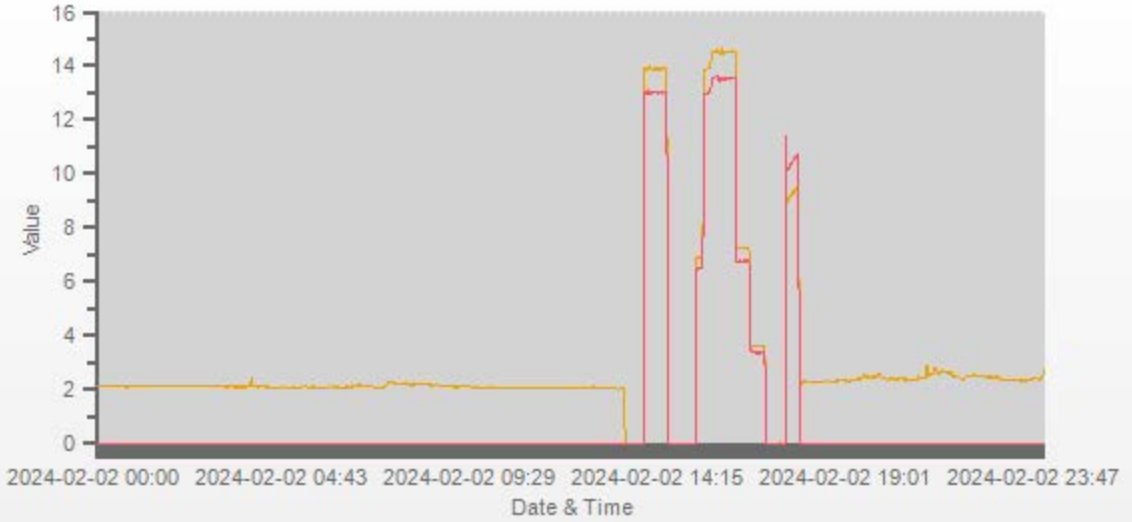
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	1.000	0.0%
NMHC	1.000	1.002	0.0%
THC	1.000	1.001	0.0%

Comments:

Sample inlet filter was changed.

Use Zero Chrom? **Yes**

Station: Lac La Biche Daily: 2024-02-02 Type: AVG 1 Min. [1 Min.]



Thermo 5030i SHARP Monitor Monthly Check

Date:	February 4, 2024	**Performed By/Reviewer:**	Alex Yakupov / Chris Wesson
Company:	LICA	**Start Time (mst):**	15:36
Station Name/Location:	Lac La Biche	**End Time (mst):**	16:56
Previous Audit Date:	January 11, 2024	**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** 74

Reference Standards:

	Air Flow			
	Manometer	**Orifice**	**Pressure:**	**Temp / RH:**
Make:	Delta Cal	Delta Cal	Fisher Scientific	Vaisala HMP76B
Model:	DC1	DC1	FB 61291	HMP 76B
Serial Number:	177246	177246	130168457	T1640130
Calibration Expiration Date:	November 27, 2024	November 27, 2024	March 20, 2024	June 26, 2024

Ambient Temperature (°C)

	Reference	**SHARP**	**Difference**
#1	-6.50	-7.6	1.1

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

Ambient Relative Humidity (%RH)

As Found:

	Reference	**SHARP**	**Difference**
#1	52.40	51.1	1.3

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

Barometric Pressure (mmHg)

As Found:

	Reference	**SHARP**	**Difference**
#1	711.0	711.0	0.0

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

Flow Audit (L/min)

As Found:

	Reference	**SHARP**
#1	16.69	16.67
#2	16.69	16.67
#3	16.69	16.67
Average	16.69	16.67

% Difference -0.12%

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	16.69	16.67	0.02	16.52	16.64	-0.12	*Leak Limit: 0.80 L/min*
					LEAK RATE:	**-0.14**	

Meteorological System Checklist

Date:	February 4, 2024		
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 26, 2024		
Reference Temperature (^{o}C):	-4.8		
Station - Ambient Temperature (^{o}C):	-6.5		
Temperature Difference (^{o}C):	1.7		
BAROMETRIC PRESSURE SENSOR CHECK			
Reference Barometer ID:	Fisher Scientific / FB 61291 / #130168457/ Mar 20, 2024		
Reference Pressure - Units/Reading:	millibar	946	
Station Pressure - Units/Reading:	millibar	950	
Pressure Tolerance +/- 15% of error:	804 - 1088	-0.42%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Reference Hygrometer ID:	Vaisala / HM70 / #T1640130/ Jun 26, 2024		
Reference Hygrometer % RH- Reading:	48.10		
Station Hygrometer % RH- Reading:	42.20		
RH Tolerance +/- 15% of difference:	40.89 - 55.32	12.3%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Previous check date:	January 11, 2024	Previous check date:	January 11, 2024
Wind Speed Observed (kph):	10-Jan	Wind Direction Observed:	NE
Wind speed on Data Logger (kph):	1.6	Wind Direction on Data Logger:	NE
	Annual audit: Sep 15, 2023	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge: 24.3 vs 24.1 - passed.

Meteorological Sensor Audit/Calibration

Location Information

Company:	LICA	**Performed By:**	Alex Yakupov
Audit Location:	Lac La Biche	**Reviewed By:**	Chris Wesson
Audit Date:	September 15, 2023	**Start/End Time (mst):**	16:41 / 18:22
Calibration Purpose:	routine annual	**Weather Conditions:**	Mainly sunny

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:	May 9, 2022	**Direction Unit Output Range:**	0-360

Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA 4744 expires October 18, 2024

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	55.4	55.4	0.998
4000	73.7	73.8	73.8	0.999
5000	92.2	92.2	92.3	0.999
6000	110.6	110.7	110.7	0.999
7000	129.0	129.2	129.2	0.999
8000	147.4	147.7	147.7	0.998
9000	165.9	166.1	166.1	0.999
10000	184.3	184.6	184.6	0.998
		The audit meets AMD requirements.	**Average Correction Factor=**	**0.999**

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	355	1.0	-0.1	0.6
30	330	31	331	-1.4	-0.9	1.1
60	300	63	301	-3.3	-1.1	2.2
90	270	93	272	-3.2	-1.9	2.5
120	240	123	242	-3.4	-2.0	2.7
150	210	154	212	-3.9	-1.6	2.8
180	180	182	183	-2.4	-2.9	2.7
210	150	212	152	-2.3	-2.2	2.3
240	120	242	124	-1.6	-4.1	2.8
270	90	270	94	-0.3	-3.9	2.1
300	60	300	64	0.0	-4.2	2.1
330	30	330	33	0.0	-2.7	1.4
355	0	355	2	-0.1	1.6	0.9
The audit meets AMD requirements.			**Average Absolute Degrees Difference=**			**2.0**

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