Lakeland Industry & Community Association

MARCH 2024

Monthly Ambient Air Quality Monitoring Report

LICA-202403

Operation and Maintenance:

Bureau Veritas Canada

Data Validation and Report:

Lakeland Industry & Community Association

April 10, 2024

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Bonnyville, AB, T9N 2J7
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April 10, 2024

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

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

Enclosed is the March 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
5107 50 Street
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Phone #: 780-226-7068
E-mail: monitoring@lica.ca

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

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LIST OF ACRONYMS

AAAQOs	Alberta Ambient Air Quality Objectives
AEPA	Alberta Environment and Protected Areas
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
PAHs	Polycyclic Aromatic Hydrocarbons
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
VOCs	Volatile Organic Compounds
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 March 2024

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.
- No major operational issues were identified this month.

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.
- No major operational issues were identified this month.

Lac La Biche Station

- All data collected this month were compliant with the requirements outlined in the AMD 2016.

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable.
- All parameters met the 90% operational uptime requirement, except O3 (78.8%). ***DINC0005556***. This non-compliance event was reported in March when the February report was prepared because data collected in February were affected. The DINC # was used for data affected in February and March.
- **O3**: The analyzer failed the as-found points check on March 6. The check result was confirmed using an alternate calibration system. Troubleshooting took place on March 7, revealing a contaminated line in the calibration system and incorrect adjustment of the analyzer during February's calibration. The contaminated tubing was removed from service, and the analyzer was recalibrated on March 7. Consequently, data were invalidated back to the last valid calibration check, which was February 4. One hundred fifty-eight hours of downtime were recorded in March due to this event.
- **AQHI values**: During the monthly data validation, O3 data collected between March 1 and March 6 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, meaning the data did not undergo data validation. As a result, AQHI values presented in this report are provided for *reference use only. AQHI values should be used with caution during this period.*

Integrated Sampling

All the integrated sampling analytical results are included in the March 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.
  - Five samples were collected this month: on March 1, 6, 13, 19 and 25.
- **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).
  - Five samples were collected this month: on March 1, 6, 13, 19 and 25.
- **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.
  - Five samples were collected this month: on March 1, 6, 13, 19 and 25.
- **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 March 2, and were removed between March 1 and March 3.

- A total of 13 duplicate samples were collected: 2 for H_2S, 3 for SO_2, 2 for NO_2, 2 for O_3, 2 for HNO_3 and 2 for NH_3.

- **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 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 March 6 at 07:35 when the NMHC concentration was 0.41ppm at 07:30.

Revisions to Alberta's Ambient Air Quality Data Warehouse

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

Deviations from Authorized Monitoring Methods

No deviations from authorized monitoring methods were recorded this month.

Disclaimer

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

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

Certification

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

Lily Lin, Data & Reporting Specialist, LICA Airshed

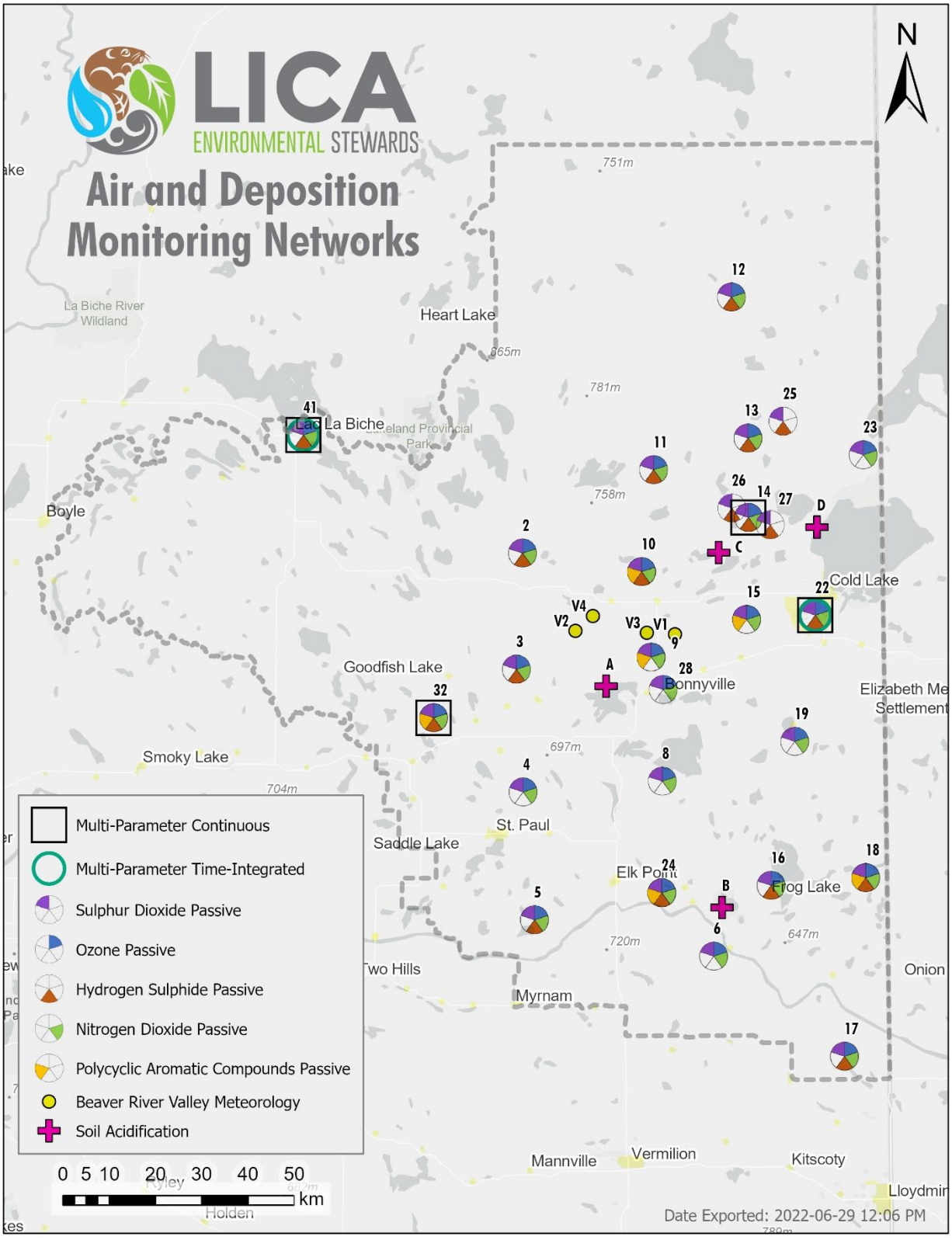
This report was reviewed by Michael Bisaga in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization and reporting requirements. I also certify that at the time of this report's submission, all air data have been electronically uploaded to ETS Data System 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

April 10, 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	March 17, 2024	• No operational issues were identified.
TRS Thermo 450i #812728560 **TRS convertor** CD Nova CDN-101 #501	March 16, 2024	• No operational issues were identified.
NOx/NO/NO2 Thermo 42i #1505664393	March 17, 2024	• A successful shut-down calibration was completed prior to sample pump maintenance/replacement on March 16. The analyzer was allowed time to stabilize overnight. A successful post-repair calibration was conducted on March 17. Twenty hours of downtime were recorded due to this maintenance activity.
O3 Thermo 49iQ #12208316585	March 23, 2024	• The analyzer failed the daily span check on March 11 but passed the repeat zero-span check on March 12. A successful monthly calibration was completed on March 13. Since the analyzer passed the March13's calibration check, data collected between March 11 and March 13 were considered valid. One hour of downtime was recorded due to an additional quality check. • The analyzer spanned low on March 20 and failed the span check on March 23. A repeat zero-span check which was initiated on March 21 also confirmed the drift. A repeat multi-point calibration was completed on March 23 to correct the drift. Five hours of downtime were recorded due to these additional quality checks.

Parameter	Calibration Date	Equipment Operational Summary
THC/CH4/NMHC Thermo 55i #1236656107 **H2 Generator** HG300 #210567071	March 13, 2024	• A new span gas cylinder was connected on March 13. • No operational issues were identified.
PM2.5 Teledyne T640 #575	March 13, 2024	• No operational issues were identified.

Parameter	Verification Date	Equipment Operational Summary
RH Rotronic HC2A-S3 #20257103	March 17, 2024	• No operational issues were identified.
BP Met One 092 #Y23368	March 17, 2024	• No operational issues were identified.
AT Rotronic HC2A-S3 #20257103	March 17, 2024	• No operational issues were identified.
ST COMET #NA	March 17, 2024	• No operational issues were identified.
WS/WD/STDWD RM Young 05305AQ #177354	March 17, 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

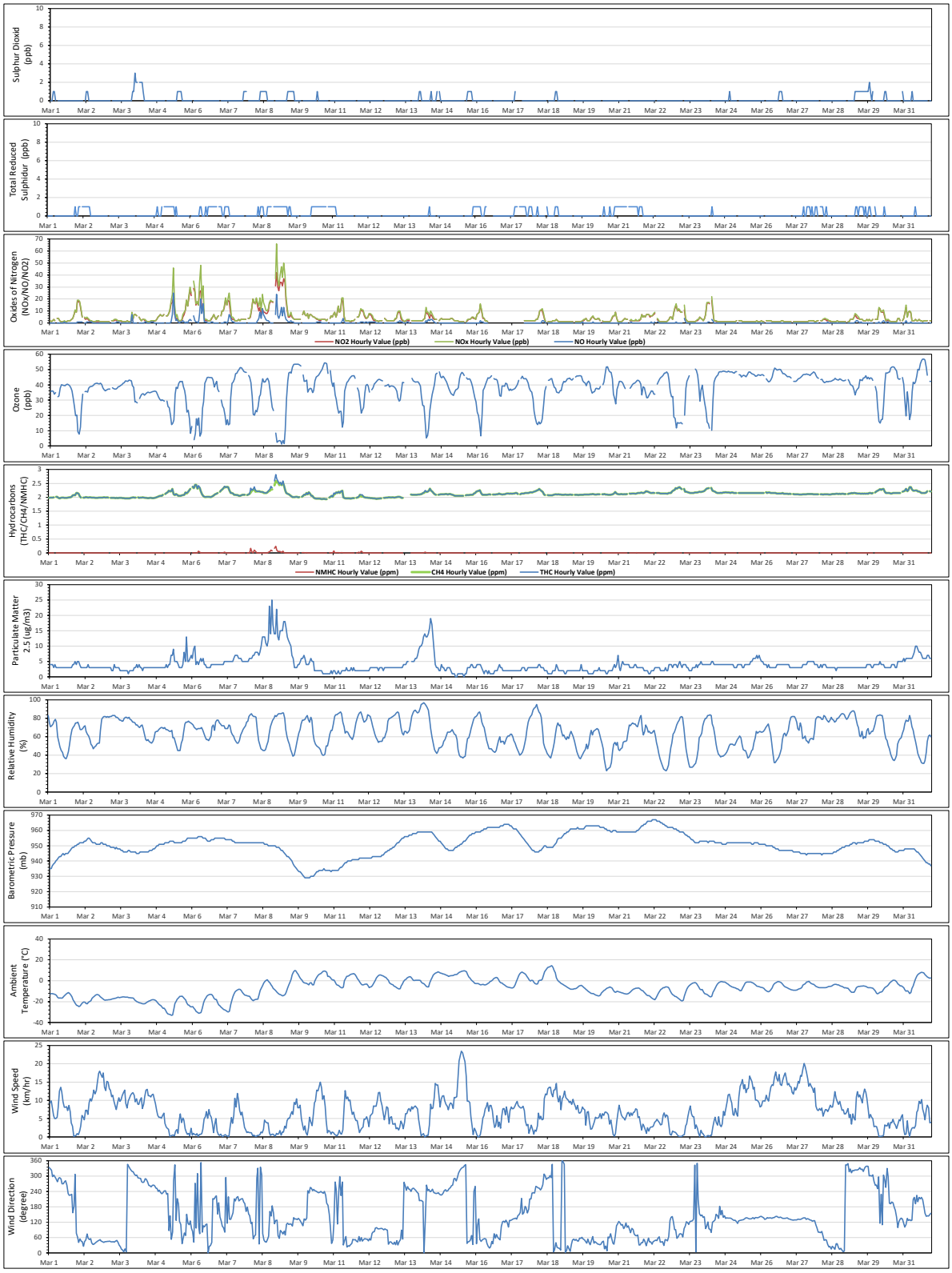
Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.1	0	3	Mar 3 at hr 23	11.4	NW	0.7	Mar 29	100.0	95.0
TRS (ppb)	-	-	-	-	-	-	0.2	0	1	Mar 1 at hr 23	0.9	ENE	0.8	Mar 21	100.0	95.0
NOx (ppb)	-	-	-	-	-	-	5.2	1	66	Mar 8 at hr 23	1	SE	18.4	Mar 8	97.3	91.8
NO (ppb)	-	-	-	-	-	-	0.6	0	25	Mar 5 at hr 8	0.5	E	3.6	Mar 8	97.3	91.8
NO2 (ppb)	159	-	-	0	-	-	4.6	1	42	Mar 8 at hr 23	1	SE	14.6	Mar 8	97.3	91.8
O3 (ppb)	76	-	-	0	-	-	37.9	1.2	56.9	Mar 31 at hr 16	7.6	SSW	46.8	Mar 25	99.2	94.2
THC (ppm)	-	-	-	-	-	-	2.12	1.93	2.82	Mar 8 at hr 23	1	SE	2.27	Mar 8	100.0	95.0
CH4 (ppm)	-	-	-	-	-	-	2.12	1.93	2.59	Mar 8 at hr 23	1	SE	2.23	Mar 8	100.0	95.0
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.24	Mar 8 at hr 23	1	SE	0.04	Mar 8	100.0	95.0
PM2.5 (µg/m3)	80	29	-	0	0	-	4.0	0	25	Mar 8 at hr 19	0.7	SE	11.8	Mar 8	100.0	99.7
RH (%)	-	-	-	-	-	-	63.4	23	97	Mar 14 at hr 4	0	N	80.4	Mar 28	100.0	100.0
BP (millibar)	-	-	-	-	-	-	951	929	967	Mar 22 at hr 4	2.7	NE	964	Mar 22	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	-7.3	-33.0	14.4	Mar 18 at hr 15	11.9	WNW	4.9	Mar 15	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	22.5	20.9	25.2	Mar 13 at hr 13	6.4	WSW	23.6	Mar 10	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	1.4	0.0	23.5	Mar 15 at hr 11	23.5	NNW	14.3	Mar 27	100.0	100.0
WDV (sector)	-	-	-	-	-	-	81 (E)	-	-	-	-	-	-	-	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 Mar 2024 - Cold Lake South Station



Tamarack Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i-TLE #1180930031	March 24, 2024	• No major operational issues were identified. • Eighteen hours of downtime were recorded due to intermittent polling errors this month.
H2S Thermo 450i #CM17360005	March 24, 2024	• The analyzer failed due to a sample pump failure on March 13. The pump was replaced on March 14, and a successful post-repair calibration was completed on March 15. Forty-six hours of downtime were recorded due to this event. • A repeat multi-point calibration was completed on March 24 to confirm the analyzer's functionality and to correct daily span drifts. Five hours of downtime were recorded due to this event. • Eleven hours of downtime were recorded due to intermittent polling errors this month.
NOx/NO/NO2 Thermo 42i #1180930028	March 24, 2024	• The analyzer was put offline on March 22 to obtain GPT points for O3 calibration. One hour of downtime was recorded. • Eighteen hours of downtime were recorded due to intermittent polling errors this month.
O3 Thermo 49i #1002240371	March 26, 2024	• No major operational issues were identified. • Eighteen hours of downtime were recorded due to intermittent polling errors this month.
THC/CH4/NMHC Thermo 55i #1505664392	March 26, 2024	• No major operational issues were identified. • Eighteen hours of downtime were recorded due to intermittent polling errors this month.
PM2.5 Thermo Sharp 5030 #CM2209	March 26, 2024	• No major operational issues were identified. • Five hours of downtime were recorded due to intermittent polling errors/Windows update this month.
RH Rotronic HC2A-S3 #20433166	March 26, 2024	• No major operational issues were identified. • Thirteen 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	March 26, 2024	• No major operational issues were identified. • Thirteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
AT Rotronic HC2A-S3 #20433166	March 26, 2024	• No major operational issues were identified. • Thirteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
ST COMET #NA	March 26, 2024	• No major operational issues were identified. • Five hours of downtime were recorded due to intermittent polling errors/Windows update this month.
Precipitation MetOne 387 #C13580	March 26, 2024	• No major operational issues were identified. • Thirteen hours of downtime were recorded due to intermittent polling errors/Windows update this month.
WS/WD/STDWD RM Young 05305VK #161465	March 26, 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. • Thirteen 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	0.5	0	9	Mar 18 at hr 5	3.9	WNW	2.3	Mar 18	97.6	92.6
H2S (ppb)	10	3	-	0	0	-	0.0	0	1	Mar 8 at hr 8	0.2	NNE	0.0	Mar 2	91.7	86.9
NOx (ppb)	-	-	-	-	-	-	5.6	0	65	Mar 9 at hr 3	1.8	E	15.8	Mar 9	97.6	92.3
NO (ppb)	-	-	-	-	-	-	0.7	0	28	Mar 5 at hr 8	0.7	ESE	3.0	Mar 9	97.6	92.3
NO2 (ppb)	159	-	-	0	-	-	4.9	0	42	Mar 9 at hr 2	2.4	ENE	12.9	Mar 9	97.6	92.3
O3 (ppb)	76	-	-	0	-	-	35.1	3.0	50.4	Mar 9 at hr 14	4.7	SE	41.5	Mar 25	97.6	92.7
THC (ppm)	-	-	-	-	-	-	2.01	1.89	2.57	Mar 8 at hr 8	0.2	NNE	2.14	Mar 8	97.6	92.6
CH4 (ppm)	-	-	-	-	-	-	2.00	1.89	2.40	Mar 6 at hr 5	3.2	E	2.13	Mar 8	97.6	92.6
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.23	Mar 8 at hr 8	0.2	NNE	0.01	Mar 8	97.6	92.6
PM2.5 (µg/m3)	80	29	-	0	0	-	3.8	0	45	Mar 5 at hr 5	5	SSW	9.9	Mar 5	99.3	99.2
RH (%)	-	-	-	-	-	-	66.0	21	100	Mar 14 at hr 1	4.9	SSW	90.2	Mar 28	98.3	98.3
BP (millibar)	-	-	-	-	-	-	936	914	951	Mar 22 at hr 5	3.3	ENE	949	Mar 22	98.3	98.3
Ext. Temp. (°C)	-	-	-	-	-	-	-7.9	-33.1	13.2	Mar 18 at hr 15	8.4	NNW	4.9	Mar 18	98.3	98.3
Stn. Temp. (°C)	-	-	-	-	-	-	20.8	19.0	22.9	Mar 26 at hr 15	13.7	SSE	22.0	Mar 26	99.3	99.3
Precipitation (mm)*	-	-	-	-	-	-	14.1	0.0	1.0	Mar 28 at hr 1	5.5	ENE	5.8	Mar 3	98.3	98.3
WSV (km/hr)	-	-	-	-	-	-	1.2	0.1	16.9	Mar 18 at hr 19	16.9	NNE	11.3	Mar 26	98.3	98.3
WDV (sector)	-	-	-	-	-	-	119 (ESE)	-	-	-	-	-	-	-	98.3	98.3

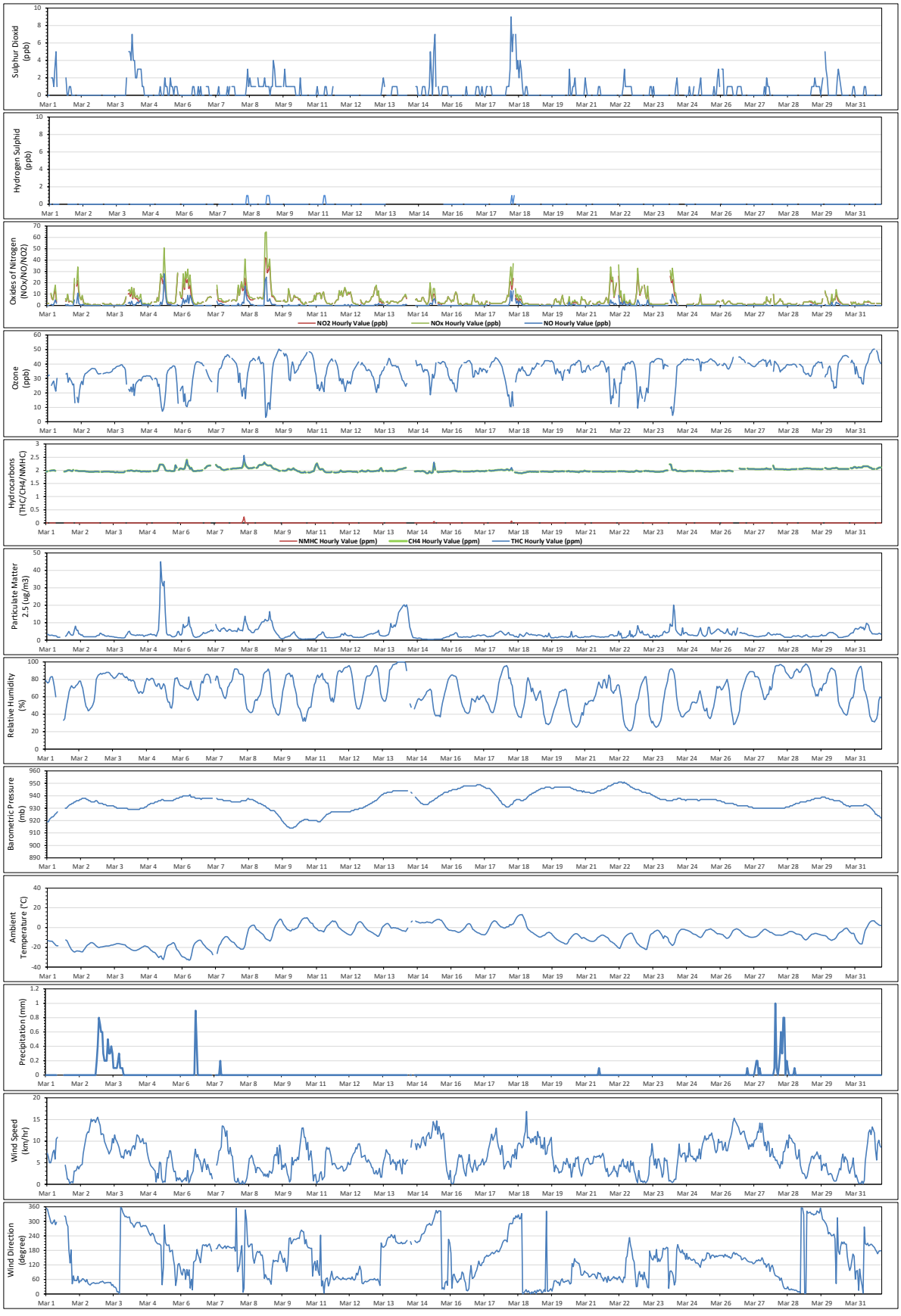
1- Date/ Time given is the first minimum and maximum value that was recorded

* 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 Mar 2024 - Tamarack Site



St. Lina Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i #1226154720	March 12, 2024	• No major operational issues were identified. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
H2S Thermo 450i #CM18010058	March 11, 2024	• Significant daily zero and span drifts were noticed on March 10 and March 11. A repeat zero-span check, initiated on March 10 at hour 6, confirmed the drift. A successful monthly calibration was conducted on March 11 to correct the drift. Since the analyzer passed the March 11's calibration, data collected between March 10 and March 11 were considered valid. The as-found zero check result, which was 2.9ppb, was used for the baseline line correction of data collected on March 10 and March 11, instead of daily zero check results. One hour of downtime was recorded due to the additional quality check. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
NOx/NO/NO2 Thermo 42i #1180930029	March 12, 2024	• The analyzer was put offline on March 21 to obtain GPT points for O3 calibration. Three hours of downtime were recorded. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
O3 Thermo 49iQ #12208316586	March 12, 2024	• The analyzer was put offline after March 21's monthly calibration for calibrator cross-check. Five hours of downtime were recorded as a result. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
THC/CH4/NMHC Thermo 55i # 1180930026	March 11, 2024	• A new span gas cylinder was installed on Match 26. A repeat zero-span check was initiated afterwards to obtain new expected span values. One hour of downtime was recorded due to this event. • No major operational issues were identified. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
PM2.5 Thermo Sharp 5030i #CM17091001	March 12, 2024	• No major operational issues were identified. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.

Parameter	Verification Date	Equipment Operational Summary
RH Rotronic HC2A-S3 #20404750	March 12, 2024	• No major operational issues were identified. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
BP Met One 090D #F4498	March 12, 2024	• No major operational issues were identified. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
AT Rotronic HC2A-S3 #20404750	March 12, 2024	• No major operational issues were identified. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
ST COMET #NA	March 12, 2024	• No major operational issues were identified. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
Precipitation MetOne 387D #A23775	March 12, 2024	• No major operational issues were identified. • Data collected on March 26 between hour 14 and hour 18 were lost due to an operator error.
WS/WD/STDWD RM Young 05305VK #161466	March 12, 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 March 26 between hour 14 and hour 18 were lost due to an operator error.

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	3	Mar 8 at hr 12	10.6	SSW	1.0	Mar 8	99.3	94.5
H2S (ppb)	10	3	-	0	0	-	0.0	0	1	Mar 15 at hr 10	23	NNW	0.0	Mar 1	99.2	94.3
NOx (ppb)	-	-	-	-	-	-	2.5	0	14	Mar 6 at hr 8	6.5	E	9.1	Mar 8	99.3	94.2
NO (ppb)	-	-	-	-	-	-	0.1	0	4	Mar 6 at hr 8	6.5	E	0.8	Mar 8	99.3	94.2
NO2 (ppb)	159	-	-	0	-	-	2.3	0	12	Mar 8 at hr 18	10.2	SSW	8.3	Mar 8	99.3	94.2
O3 (ppb)	76	-	-	0	-	-	37.3	23.1	51.5	Mar 10 at hr 17	7.6	SSW	45.7	Mar 10	99.3	94.5
THC (ppm)	-	-	-	-	-	-	2.09	1.98	2.43	Mar 6 at hr 8	6.5	E	2.23	Mar 6	99.2	94.3
CH4 (ppm)	-	-	-	-	-	-	2.09	1.98	2.43	Mar 6 at hr 8	6.5	E	2.23	Mar 6	99.2	94.3
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.00	Mar 1 at hr 0	15.7	N	0.00	Mar 1	99.2	94.3
PM2.5 (µg/m3)	80	29	-	0	0	-	4.3	0	21	Mar 14 at hr 2	8.5	SW	13.1	Mar 8	99.3	99.2
RH (%)	-	-	-	-	-	-	66.6	27	98	Mar 13 at hr 23	9.7	SW	89.3	Mar 13	99.3	99.3
BP (millibar)	-	-	-	-	-	-	919	899	932	Mar 22 at hr 1	9.8	E	930	Mar 22	99.3	99.3
Ext. Temp. (°C)	-	-	-	-	-	-	-6.5	-28.5	14.4	Mar 18 at hr 14	20.1	NW	7.6	Mar 18	99.3	99.3
Stn. Temp. (°C)	-	-	-	-	-	-	22.0	19.9	26.3	Mar 18 at hr 13	17	NW	23.1	Mar 31	99.3	99.3
Precipitation (mm)*	-	-	-	-	-	-	3.4	0.0	0.9	Mar 27 at hr 22	9.9	E	1.3	Mar 28	99.3	99.2
WSV (km/hr)	-	-	-	-	-	-	3.1	0.0	23.7	Mar 15 at hr 13	23.7	NNW	16.4	Mar 26	99.3	99.3
WDV (sector)	-	-	-	-	-	-	160 (SSE)	-	-	-	-	-	-	-	99.3	99.3

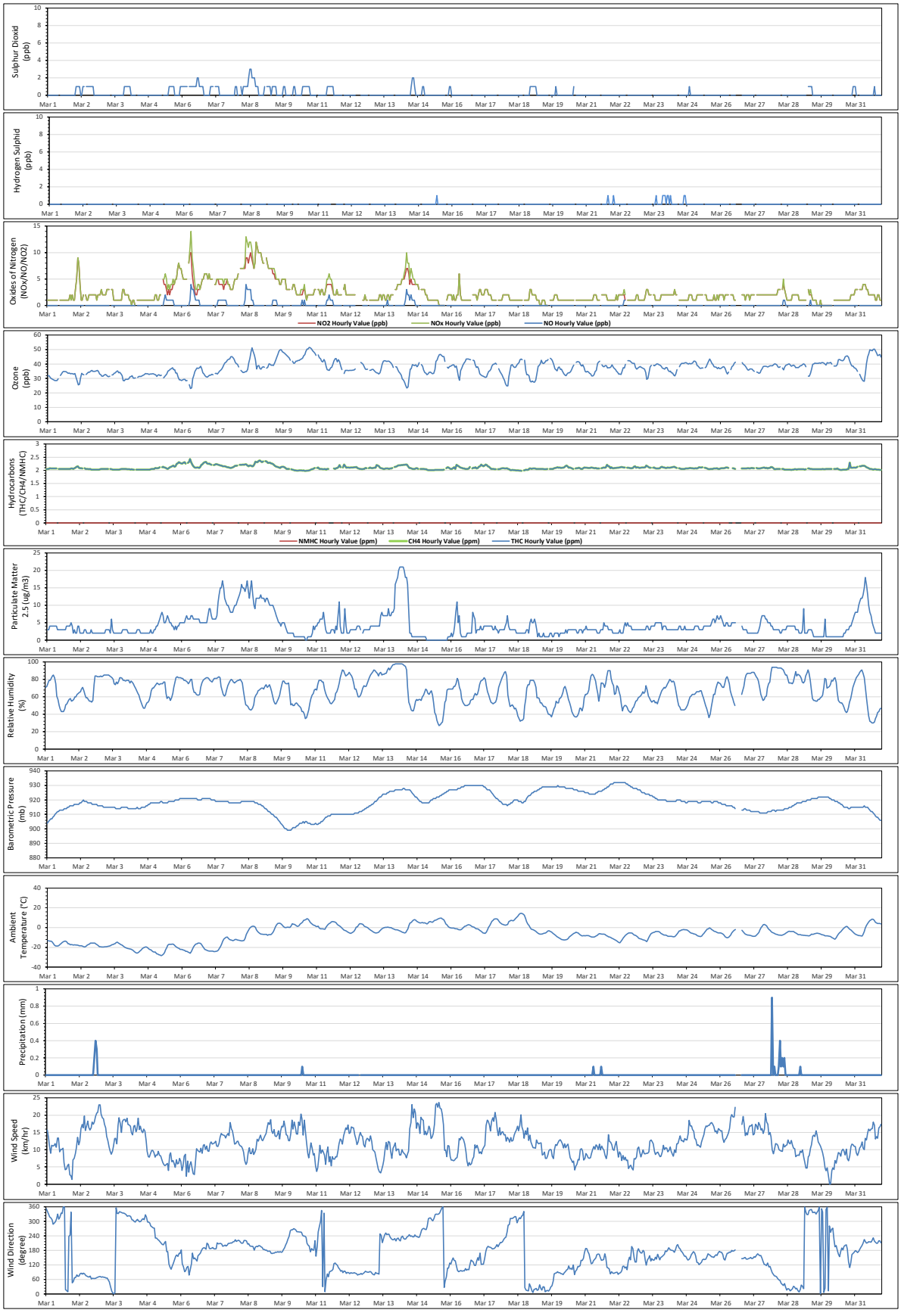
1- Date/ Time given is the first minimum and maximum value that was recorded

* 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 Mar 2024 - St. Lina Site



Lac La Biche Station

Equipment Operation Summary

Parameter	Calibration Date	Equipment Operational Summary
SO2 Thermo 43i-TLE #1180320043	March 5, 2024	• No operational issues were identified this month.
H2S Thermo 450i #CM17360002	March 18, 2024	• Following a successful shut-down calibration on March 5, the SO2 scrubber material was replaced. The analyzer was allowed to stabilize overnight. A successful post-repair calibration was completed on March 6. Twenty-one hours of downtime was recorded due to this event. • Significant span drifts were noticed after the March 6's calibration. A repeat zero-span check, initiated on March 7, confirmed the drift. The analyzer was recalibrated to correct the drift on March 9. The expected span value was updated after the repeat zero-span check on March 10. Seven hours of downtime were recorded due to these additional quality checks. • The analyzer drifted again, starting March 14. A repeat zero-span check, initiated on March 17, confirmed the drift. As a result, the scrubber material was replaced with a different batch following a successful shut-down calibration on March 18. A post-repair calibration was completed afterwards. As the analyzer passed the March 18's shut down calibration, data collected between March 14 and March 18 were considered valid. Seven hours of downtime were recorded due to this event.
NOx/NO/NO2 Thermo 42i #1180930027	March 5, 2024	• The analyzer was put offline on March 6 at hours 16 and 17 to obtain GPT points for the Ozone calibration. Two hours of downtime were recorded. • The analyzer failed both the scheduled and repeat zero- span check on March 25 due to permeation tube depletion. The permeation tube was replaced on March 27. The expected span value was updated after April's monthly calibration. Four hours of downtime were recorded due to this event. • A repeat zero-span check was initiated to assess the analyzer drift on March 31. One hour of downtime was recorded.

Parameter	Calibration Date	Equipment Operational Summary
O3 Thermo 49i #1002240372	March 7, 2024	• The analyzer failed the as-found points check on March 6. The check result was confirmed using an alternate calibration system. Troubleshooting took place on March 7, revealing a contaminated line in the calibration system and incorrect adjustment of the analyzer during February's calibration. The contaminated tubing was removed from service, and the analyzer was recalibrated on March 7. Consequently, data were invalidated back to the last valid calibration check, which was February 4. One hundred fifty-eight hours of downtime were recorded due to this event.
THC/CH4/NMHC Thermo 55i #1180030044	March 6, 2024	• No operational issues were identified this month.
PM2.5 Thermo Sharp 5030i #CM17071016	March 6, 2024	• No operational issues were identified this month.
RH Rotronic HC2A-S3 #0020357518	March 6, 2024	• No operational issues were recorded this month.
BP Met One 092 #Y23360	March 6, 2024	• No operational issues were recorded this month.
AT Rotronic HC2A-S3 #0020357518	March 6, 2024	• No operational issues were recorded this month.
ST COMET #NA	March 6, 2024	• No operational issues were recorded this month.
WS/WD/STDWD RM Young 05305VK #56778	March 6, 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

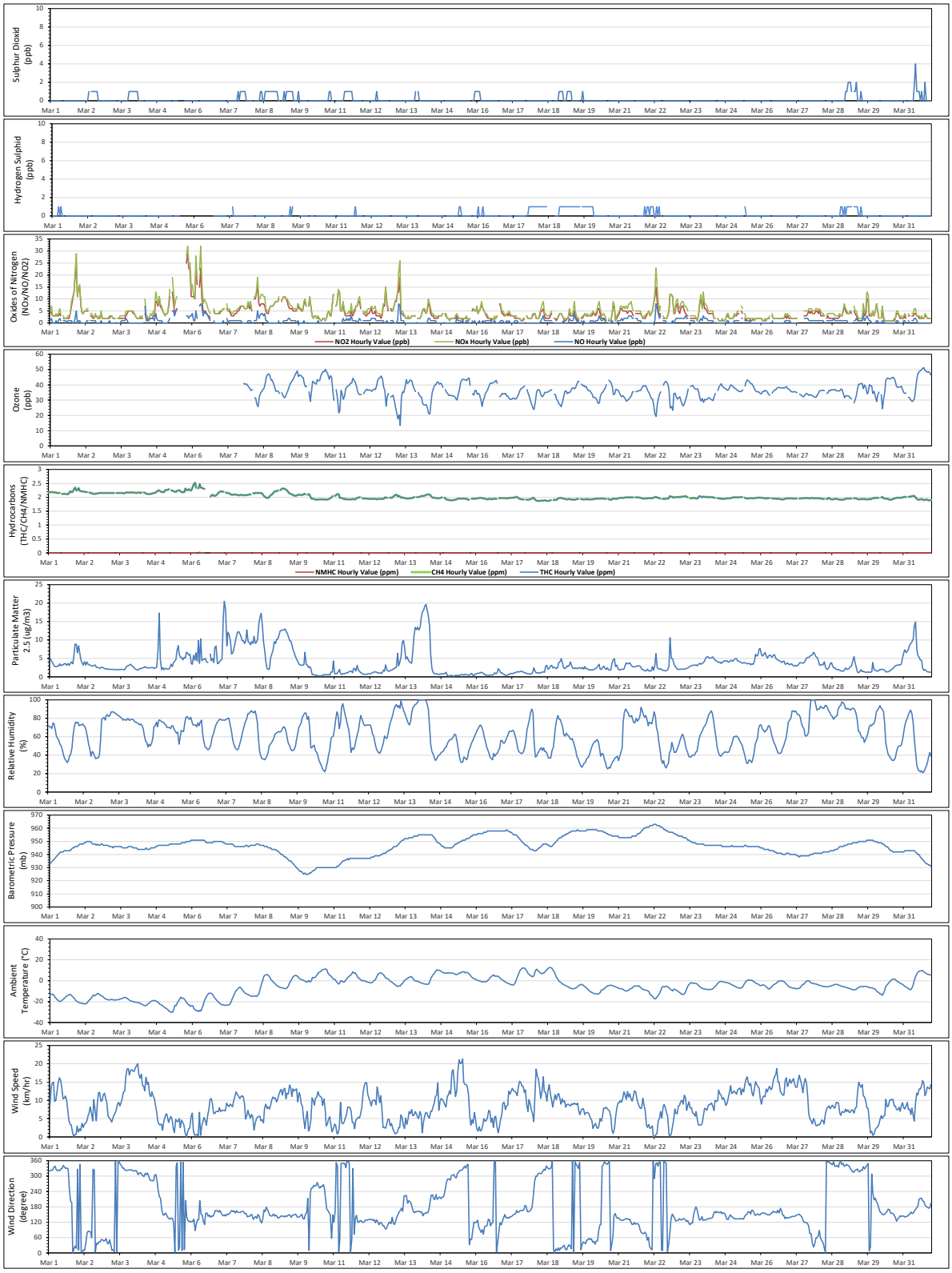
Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.1	0	4	Mar 31 at hr 10	9.3	SSE	0.6	Mar 8	100.0	95.0
H2S (ppb)	10	3	-	0	0	-	0.1	0	1	Mar 1 at hr 5	10	NNW	1.0	Mar 18	95.3	90.3
NOx (ppb)	-	-	-	-	-	-	5.2	1	32	Mar 5 at hr 20	1.2	SE	11.1	Mar 6	99.1	93.8
NO (ppb)	-	-	-	-	-	-	0.8	0	8	Mar 6 at hr 7	0.4	SSW	2.8	Mar 6	99.1	93.8
NO2 (ppb)	159	-	-	0	-	-	4.3	1	29	Mar 5 at hr 20	1.2	SE	8.2	Mar 6	99.1	93.8
O3 (ppb)	76	-	-	0	-	-	36.2	13.4	51.2	Mar 31 at hr 17	14.5	SSW	42.2	Mar 10	78.8	74.7
THC (ppm)	-	-	-	-	-	-	2.02	1.87	2.52	Mar 6 at hr 3	0.5	E	2.25	Mar 6	100.0	95.1
CH4 (ppm)	-	-	-	-	-	-	2.02	1.87	2.52	Mar 6 at hr 3	0.5	E	2.25	Mar 6	100.0	95.1
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.03	Mar 6 at hr 7	0.4	SSW	0.00	Mar 6	100.0	95.1
PM2.5 (µg/m3)	80	29	-	0	0	-	3.8	0	21	Mar 7 at hr 3	7.2	SE	10.6	Mar 7	100.0	99.9
RH (%)	-	-	-	-	-	-	62.2	21	100	Mar 14 at hr 0	6.9	SSE	89.5	Mar 28	100.0	100.0
BP (millibar)	-	-	-	-	-	-	947	925	963	Mar 22 at hr 5	0	N	960	Mar 22	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	-5.7	-30.1	12.7	Mar 18 at hr 13	14.3	NNW	7.4	Mar 18	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	22.9	17.8	25.0	Mar 6 at hr 17	9.2	SE	23.6	Mar 6	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	2.1	0.0	21.4	Mar 15 at hr 12	21.4	NW	13.6	Mar 26	100.0	100.0
WDV (sector)	-	-	-	-	-	-	136 (SE)	-	-	-	-	-	-	-	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 Mar 2024 - Lac La Biche Station



TABLES AND CHARTS

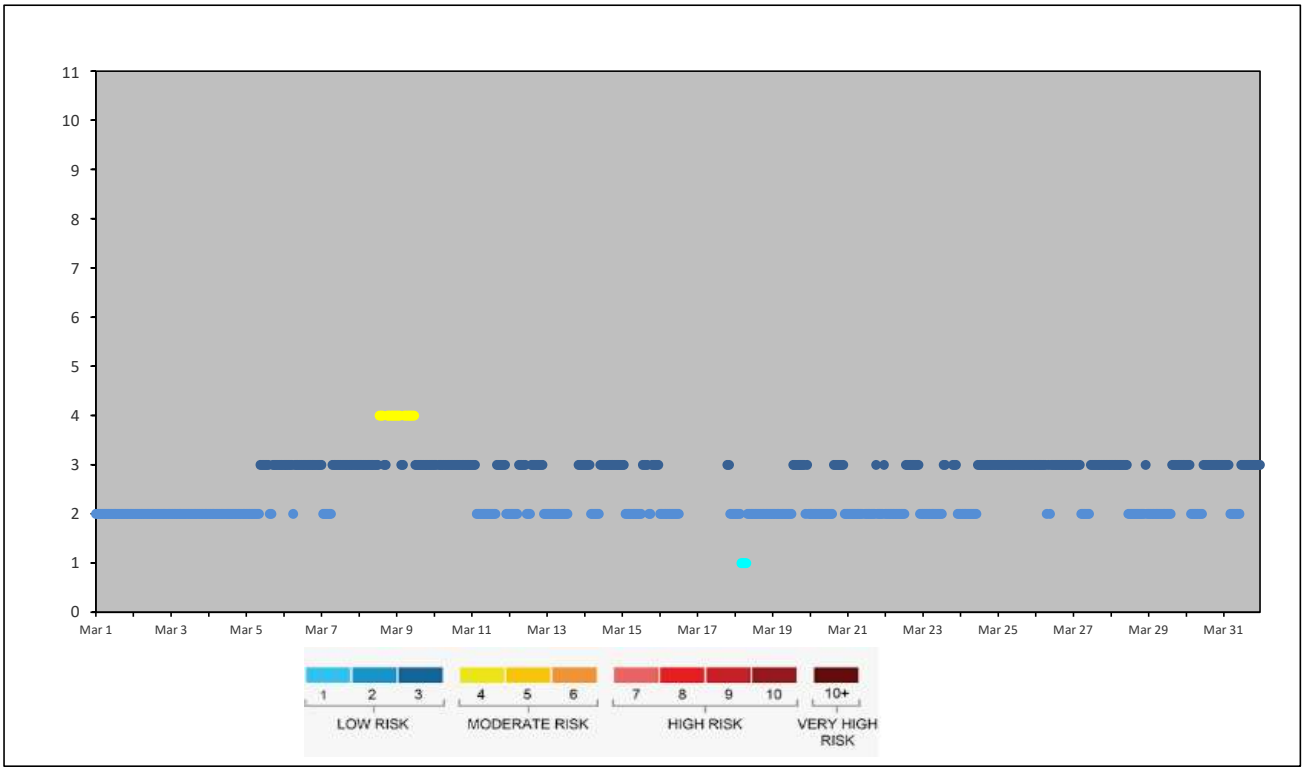
COLD LAKE SOUTH STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Cold Lake South Station - March 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
Mar 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 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
Mar 5	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3
Mar 6	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2
Mar 7	3	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 8	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3	3	4	4	4	4	4	4
Mar 9	4	4	4	3	3	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3
Mar 10	3	3		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 11	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2	2
Mar 12	2	2	2	2	2	2	3	3	3	3	3	2	2	2	3	3	3	3	3	3	3	3	2	2
Mar 13	2	2	2	2	2	2	2	2	2	2	2	2	2	2							3	3	3	3
Mar 14	3	3	3	3	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 15	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2	3	3	3	3	3
Mar 16	2	2	2	2	2	2	2	2	2	2	2	2	2											
Mar 17																				3	3	2	2	2
Mar 18	2	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 19	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	2	3	2
Mar 20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	2	2
Mar 21	2	2	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	3	2	2	2	2	3
Mar 22	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	2	2
Mar 23	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3					3	3	3	2	2
Mar 24	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 25	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 26	3	3	3	3	3	3	3	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 27	3	3	3	3	3	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 28	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	3	2
Mar 29	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3
Mar 30	3	3	3	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 31	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

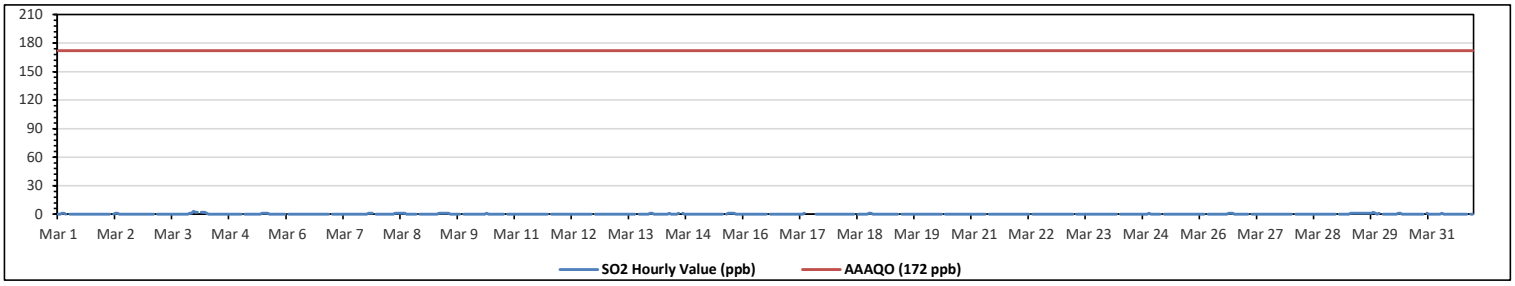
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

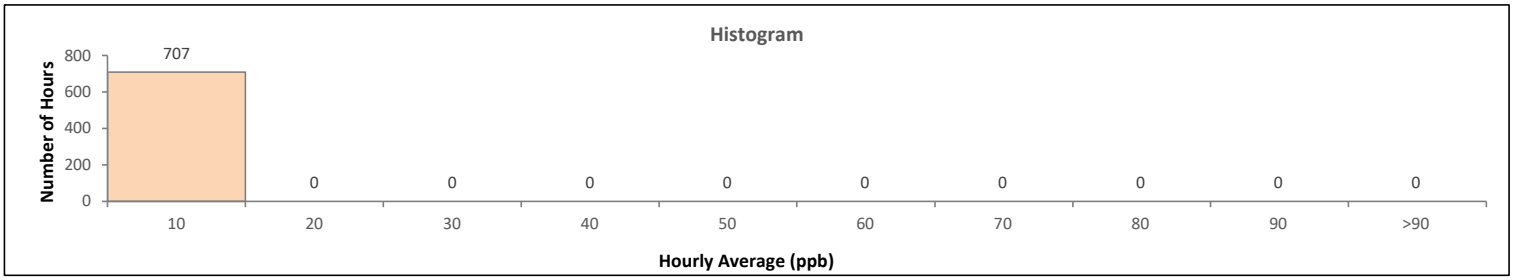
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0	
Maximum Hourly Value:	3	ppb	on Mar 3 at hr 23	Hours in Service:	744	
Maximum Daily Value:	0.7	ppb	on Mar 29	Hours of Data:	707	
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	0	
Minimum Daily Value:	0.0	ppb	on Mar 6	Hours of Calibration:	37	
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			
Mar 1	0	0	1	1	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 2	0	0	0	0	S	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 3	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	0	3	0.2
Mar 4	2	2	S	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.5
Mar 5	0	S	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Mar 6	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0
Mar 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	S	0	0	1	0.1
Mar 8	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	S	0	0	0	1	0.3
Mar 9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	S	0	0	0	0	1	0.3
Mar 10	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.0
Mar 11	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
Mar 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Mar 13	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	1	0.0
Mar 14	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	S	1	0	0	0	0	0	0	0	0	1	0.2
Mar 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	1	1	1	0	0	0	0	0	1	0.2
Mar 16	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 17	0	0	0	0	0	0	0	0	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 18	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0.1
Mar 19	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 20	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 21	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 22	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 23	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 24	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.0
Mar 25	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 26	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0.1
Mar 27	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
Mar 28	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
Mar 29	S	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0	1	S	0	2	0.7
Mar 30	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	S	1	0	1	0.1
Mar 31	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	0.0
Diurnal Maximum	2	2	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	3			
Diurnal Average	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	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.



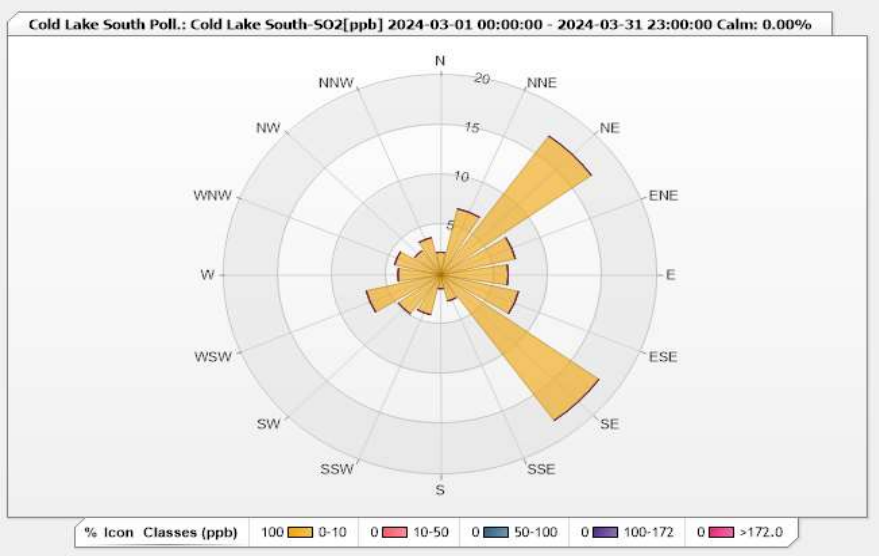


Station: Cold Lake South Poll.: Cold Lake South-SO2[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	2.26	0	0	0	0	2.26
NNE	6.79	0	0	0	0	6.79
NE	17.11	0	0	0	0	17.11
ENE	7.07	0	0	0	0	7.07
E	6.22	0	0	0	0	6.22
ESE	7.36	0	0	0	0	7.36
SE	17.96	0	0	0	0	17.96
SSE	2.69	0	0	0	0	2.69
S	1.41	0	0	0	0	1.41
SSW	4.1	0	0	0	0	4.1
SW	4.81	0	0	0	0	4.81
WSW	7.07	0	0	0	0	7.07
W	3.96	0	0	0	0	3.96
WNW	4.38	0	0	0	0	4.38
NW	2.97	0	0	0	0	2.97
NNW	3.82	0	0	0	0	3.82
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

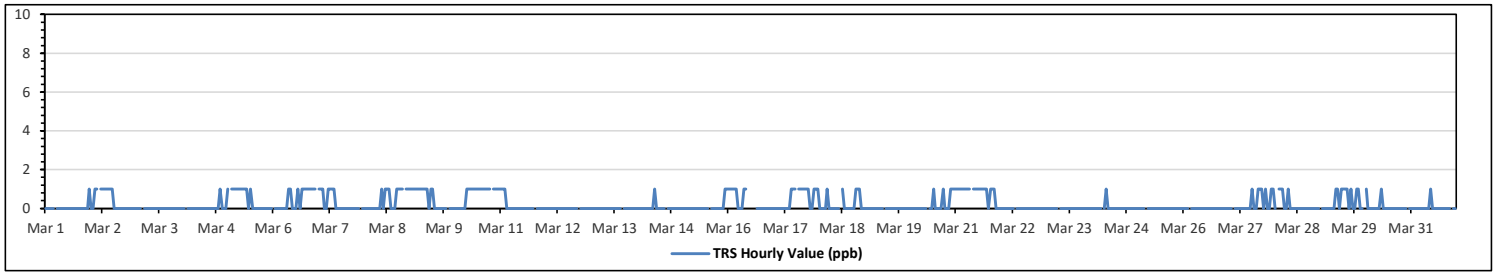
TOTAL REDUCED SULPHUR (TRS) in ppb

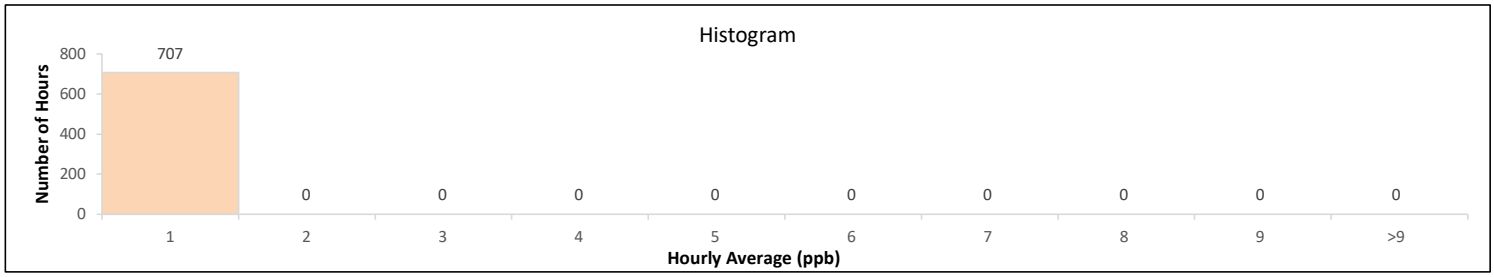
Maximum Hourly Value:	1	ppb	on Mar 1 at hr 23	Hours in Service:	744
Maximum Daily Value:	0.8	ppb	on Mar 21	Hours of Data:	707
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	0
Minimum Daily Value:	0.0	ppb	on Mar 3	Hours of Calibration:	37
Monthly Average:	0.2	ppb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.0
Mar 2	0	0	1	1	S	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4
Mar 3	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 4	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.0
Mar 5	1	S	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5
Mar 6	S	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	S	0	1	0.5
Mar 7	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.3
Mar 8	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	1	1	1	1	S	1	1	0	1	0.4
Mar 9	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	S	0	0	0	0	1	0.5
Mar 10	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	0	1	0.7
Mar 11	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.1
Mar 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Mar 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Mar 14	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.0
Mar 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	1	0	1	0.1
Mar 16	1	1	1	1	1	0	0	0	1	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	1	0.4
Mar 17	0	0	0	0	0	0	0	0	0	1	1	1	S	1	1	1	1	1	1	0	0	1	1	1	0	1	0.5
Mar 18	0	0	0	0	1	0	0	0	0	0	0	S	1	0	0	0	0	0	0	1	1	1	0	0	0	1	0.2
Mar 19	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 20	0	0	0	0	0	0	0	0	0	S	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0	1	0.2
Mar 21	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0	0	1	**0.8**
Mar 22	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 23	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 24	0	0	0	0	0	S	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 25	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 26	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 27	0	0	S	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	1	0	0	1	1	0	1	0.3
Mar 28	0	S	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Mar 29	S	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	1	0	0	1	1	0	0	S	0	1	0.4
Mar 30	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.1
Mar 31	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	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	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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.



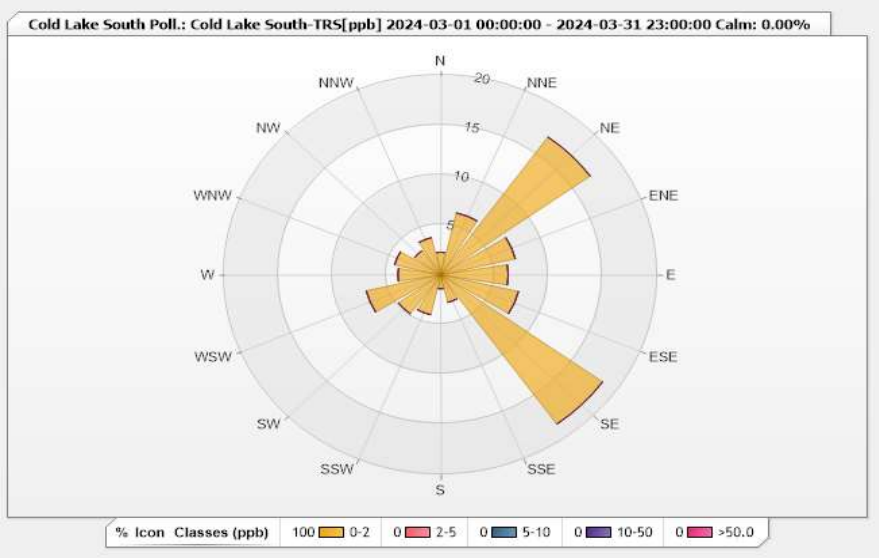


Station: Cold Lake South Poll.: Cold Lake South-TRS[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	2.26	0	0	0	0	2.26
NNE	6.36	0	0	0	0	6.36
NE	16.97	0	0	0	0	16.97
ENE	7.07	0	0	0	0	7.07
E	6.22	0	0	0	0	6.22
ESE	7.36	0	0	0	0	7.36
SE	18.39	0	0	0	0	18.39
SSE	2.83	0	0	0	0	2.83
S	1.41	0	0	0	0	1.41
SSW	4.1	0	0	0	0	4.1
SW	4.81	0	0	0	0	4.81
WSW	7.07	0	0	0	0	7.07
W	3.96	0	0	0	0	3.96
WNW	4.38	0	0	0	0	4.38
NW	2.97	0	0	0	0	2.97
NNW	3.82	0	0	0	0	3.82
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

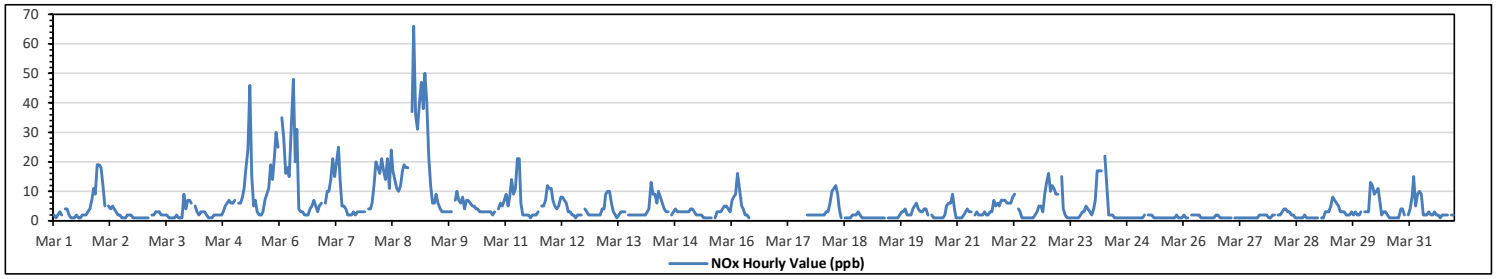
OXIDES OF NITROGEN (NOx) in ppb

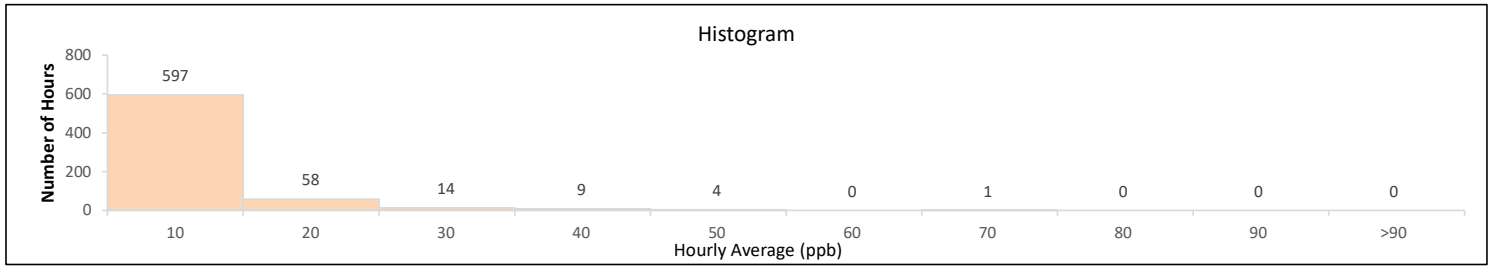
Maximum Hourly Value:	66	ppb	on Mar 8 at hr 23	Hours in Service:	744	
Maximum Daily Value:	18.4	ppb	on Mar 8	Hours of Data:	683	
Minimum Hourly Value:	1	ppb	on Mar 1 at hr 1	Hours of Missing Data:	20	
Minimum Daily Value:	1.2	ppb	on Mar 25	Hours of Calibration:	41	
Monthly Average:	5.2	ppb		Operational 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			
Mar 1	2	1	2	3	2	S	4	4	2	1	1	1	2	1	1	2	2	2	3	4	7	11	9	19	1	19	3.7
Mar 2	19	18	12	5	S	5	4	5	4	3	2	2	1	1	1	2	2	2	1	1	1	1	1	1	1	19	4.1
Mar 3	1	1	1	S	2	2	3	3	3	2	2	2	2	1	1	1	1	2	1	1	1	9	4	7	1	9	2.3
Mar 4	7	6	S	5	3	2	3	3	3	2	1	1	1	2	2	2	2	2	3	5	6	7	6	6	1	7	3.5
Mar 5	7	S	6	6	8	11	18	24	46	15	5	7	3	2	2	3	7	9	11	19	14	22	30	25	2	46	13.0
Mar 6	S	35	28	16	18	15	33	48	20	31	4	3	3	2	2	2	4	5	7	5	3	5	6	S	2	48	13.4
Mar 7	6	10	10	14	21	15	20	25	14	5	5	4	2	2	2	3	2	3	3	3	3	3	S	4	2	25	7.8
Mar 8	4	6	12	20	18	16	21	17	14	21	11	24	17	14	11	10	12	17	19	18	18	S	37	**66**	4	**66**	**18.4**
Mar 9	36	31	40	47	38	50	40	22	12	6	6	9	6	4	3	3	3	3	3	3	S	7	10	7	3	50	16.9
Mar 10	6	8	4	7	7	6	5	5	4	4	3	3	3	3	3	3	3	2	3	S	4	6	5	7	2	8	4.5
Mar 11	9	5	8	14	9	11	21	21	6	2	2	2	2	1	2	2	2	3	S	5	5	7	12	11	1	21	7.0
Mar 12	11	7	5	4	5	8	8	7	6	3	3	2	2	1	2	2	2	S	4	3	2	2	2	2	1	11	4.0
Mar 13	2	2	2	4	4	9	10	10	6	3	2	1	2	3	3	3	S	2	2	2	2	2	2	2	1	10	3.5
Mar 14	2	2	2	3	4	13	9	9	6	10	8	6	4	3	3	S	2	3	4	3	3	3	3	3	2	13	4.7
Mar 15	3	3	4	4	3	2	2	2	2	1	1	1	1	1	S	1	3	3	3	4	5	5	4	3	1	5	2.7
Mar 16	7	8	9	16	11	5	4	2	2	1	C	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	1	16	NA
Mar 17	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	C	2	2	2	2	2	2	2	2	2	2	NA
Mar 18	2	2	3	3	6	10	11	12	9	4	1	S	1	1	1	1	2	2	2	3	2	1	1	1	1	12	3.5
Mar 19	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	2	3	3	4	2	2	2	1	4	1.5
Mar 20	4	5	6	4	3	3	4	4	2	S	2	1	1	1	1	1	1	2	5	6	6	9	4	1	1	9	3.3
Mar 21	1	1	1	2	3	4	3	3	S	2	3	2	2	2	3	2	2	3	3	7	5	6	5	7	1	7	3.1
Mar 22	7	7	6	6	6	8	9	S	4	3	1	1	1	1	1	1	1	2	3	5	5	3	9	13	1	13	4.5
Mar 23	16	10	12	11	9	9	S	15	4	2	1	1	1	1	1	1	1	2	3	3	5	4	3	2	1	16	5.1
Mar 24	4	7	17	17	17	S	22	12	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	5.0
Mar 25	1	1	1	2	S	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	**1.2**
Mar 26	2	1	1	S	2	2	2	2	2	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1.3
Mar 27	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	1	2	1	2	1.3
Mar 28	2	S	2	2	3	4	4	3	3	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	4	1.8
Mar 29	S	1	1	3	3	3	5	8	7	6	5	3	3	3	2	2	2	3	2	3	2	2	3	S	1	8	3.3
Mar 30	3	3	3	13	12	9	10	11	6	2	3	3	2	1	1	1	1	1	1	4	4	2	S	2	1	13	4.3
Mar 31	4	8	15	5	9	10	9	2	2	2	3	2	2	3	2	2	1	2	2	2	2	S	2	2	1	15	4.0
Diurnal Maximum	36	35	40	47	38	50	40	48	46	31	11	24	17	14	11	10	12	17	19	19	18	22	37	66			
Diurnal Average	6.1	6.8	7.6	8.5	8.1	8.4	9.9	9.8	6.7	4.8	2.9	3.1	2.4	2.1	2.0	2.0	2.3	3.0	3.4	4.1	4.1	4.5	6.0	7.2			

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.



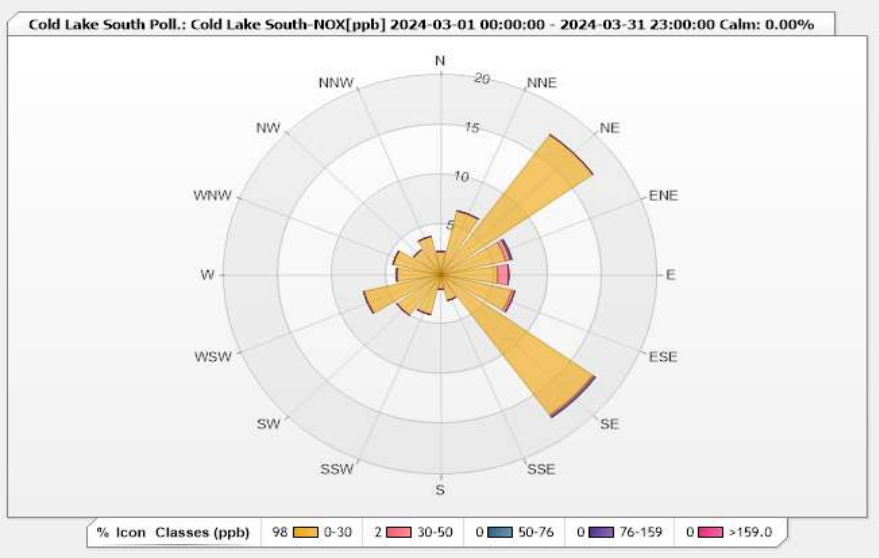


Station: Cold Lake South Poll.: Cold Lake South-NOX[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 91.80% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	2.34	0	0	0	0	2.34
NNE	6.59	0	0	0	0	6.59
NE	17.28	0	0	0	0	17.28
ENE	6.15	0.44	0.15	0	0	6.74
E	5.27	1.02	0	0	0	6.29
ESE	6.73	0.29	0	0	0	7.02
SE	17.28	0.15	0.15	0	0	17.58
SSE	2.64	0	0	0	0	2.64
S	1.46	0	0	0	0	1.46
SSW	4.1	0	0	0	0	4.1
SW	4.98	0	0	0	0	4.98
WSW	7.32	0	0	0	0	7.32
W	4.1	0	0	0	0	4.1
WNW	4.54	0	0	0	0	4.54
NW	3.07	0	0	0	0	3.07
NNW	3.95	0	0	0	0	3.95
Summary	97.8	1.9	0.3	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

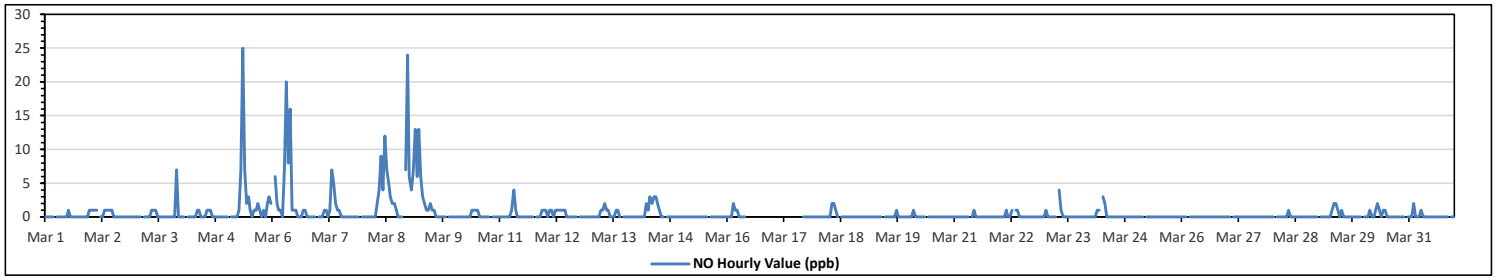
NITRIC OXIDE (NO) in ppb

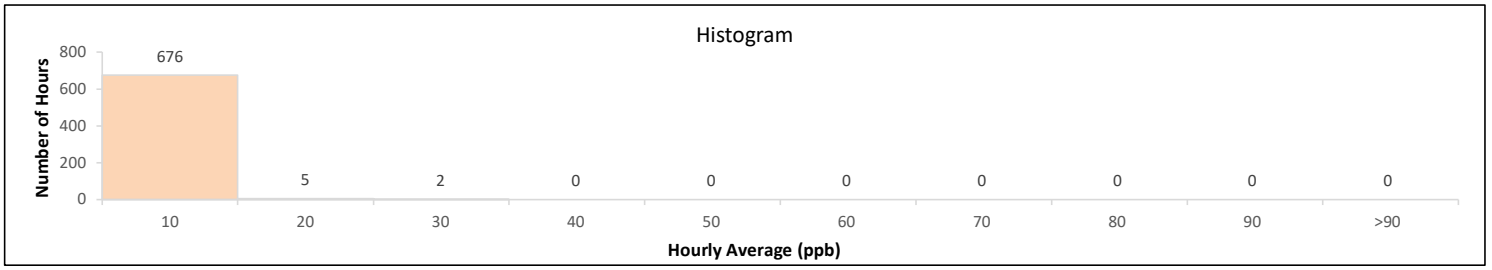
Maximum Hourly Value:	25	ppb	on Mar 5 at hr 8	Hours in Service:	744	
Maximum Daily Value:	3.6	ppb	on Mar 8	Hours of Data:	683	
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	20	
Minimum Daily Value:	0.0	ppb	on Mar 15	Hours of Calibration:	41	
Monthly Average:	0.6	ppb		Operational 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			
Mar 1	0	0	0	0	0	S	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0.1
Mar 2	1	1	1	1	S	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4
Mar 3	0	0	0	S	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0.4
Mar 4	0	0	S	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0.2
Mar 5	0	S	0	0	0	0	1	7	25	7	2	3	1	0	1	1	2	1	0	1	0	2	3	2	0	25	2.6
Mar 6	S	6	2	1	1	0	7	20	8	16	1	1	1	0	0	0	1	1	0	0	0	0	0	S	0	20	3.0
Mar 7	0	0	0	1	1	0	1	7	5	2	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	7	0.8
Mar 8	0	0	0	0	0	0	0	2	4	9	4	12	7	5	3	2	2	1	0	0	0	S	7	24	0	24	3.6
Mar 9	6	4	7	13	6	13	6	3	2	1	1	2	1	1	0	0	0	0	0	0	S	0	0	0	0	13	2.9
Mar 10	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	S	0	0	0	0	0	1	0.2
Mar 11	0	0	0	0	0	0	1	4	1	0	0	0	0	0	0	0	0	0	S	0	0	0	1	1	0	4	0.3
Mar 12	1	0	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0.4
Mar 13	0	0	0	0	0	1	1	2	1	1	0	0	0	1	1	0	S	0	0	0	0	0	0	0	0	2	0.3
Mar 14	0	0	0	0	0	2	1	3	2	3	3	2	1	0	0	S	0	0	0	0	0	0	0	0	0	3	0.7
Mar 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 16	0	0	0	2	1	1	0	0	0	0	C	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	0	2	NA
Mar 17	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	NA
Mar 18	0	0	0	0	0	0	0	2	2	1	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2
Mar 19	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.0
Mar 20	0	0	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 21	0	0	0	0	0	0	0	0	S	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 22	0	0	0	1	0	0	1	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Mar 23	1	0	0	0	0	0	S	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.3
Mar 24	0	0	0	1	1	S	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3
Mar 25	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 26	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 27	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
Mar 28	0	S	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 29	S	0	0	0	0	0	0	1	2	2	1	0	1	0	0	0	0	0	0	0	0	0	0	S	0	2	0.3
Mar 30	0	0	0	1	0	0	1	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	2	0.3
Mar 31	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	2	0.1
Diurnal Maximum	6	6	7	13	6	13	7	20	25	16	4	12	7	5	3	2	2	1	0	1	0	7	7	24			
Diurnal Average	0.3	0.4	0.5	0.8	0.4	0.6	0.9	2.1	2.1	1.7	0.7	0.9	0.5	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.3	0.4	1.0			

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.



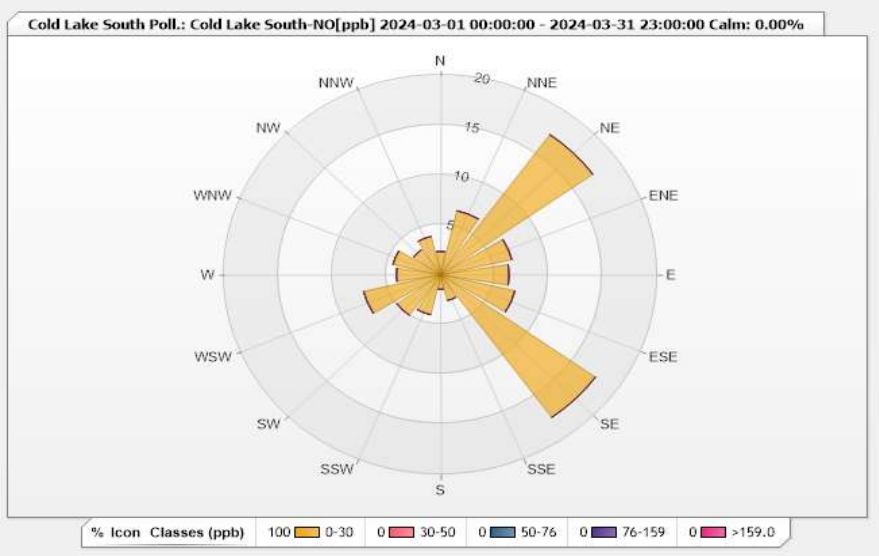


Station: Cold Lake South Poll.: Cold Lake South-NO[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 91.80% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	2.34	0	0	0	0	2.34
NNE	6.59	0	0	0	0	6.59
NE	17.28	0	0	0	0	17.28
ENE	6.73	0	0	0	0	6.73
E	6.3	0	0	0	0	6.3
ESE	7.03	0	0	0	0	7.03
SE	17.57	0	0	0	0	17.57
SSE	2.64	0	0	0	0	2.64
S	1.46	0	0	0	0	1.46
SSW	4.1	0	0	0	0	4.1
SW	4.98	0	0	0	0	4.98
WSW	7.32	0	0	0	0	7.32
W	4.1	0	0	0	0	4.1
WNW	4.54	0	0	0	0	4.54
NW	3.07	0	0	0	0	3.07
NNW	3.95	0	0	0	0	3.95
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 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

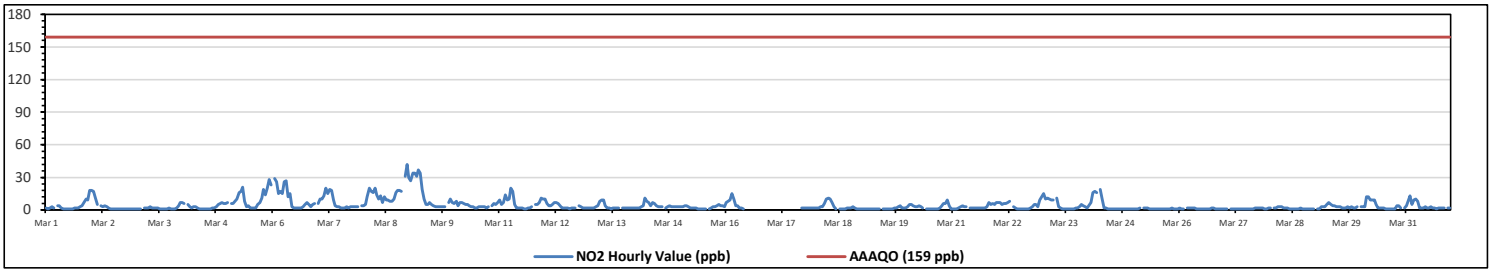
Maximum Hourly Value:	42	ppb	on Mar 8 at hr 23	Hours in Service:	744
Maximum Daily Value:	14.6	ppb	on Mar 8	Hours of Data:	683
Minimum Hourly Value:	1	ppb	on Mar 1 at hr 1	Hours of Missing Data:	20
Minimum Daily Value:	1.2	ppb	on Mar 25	Hours of Calibration:	41
Monthly Average:	4.6	ppb		Operational Uptime:	97.3

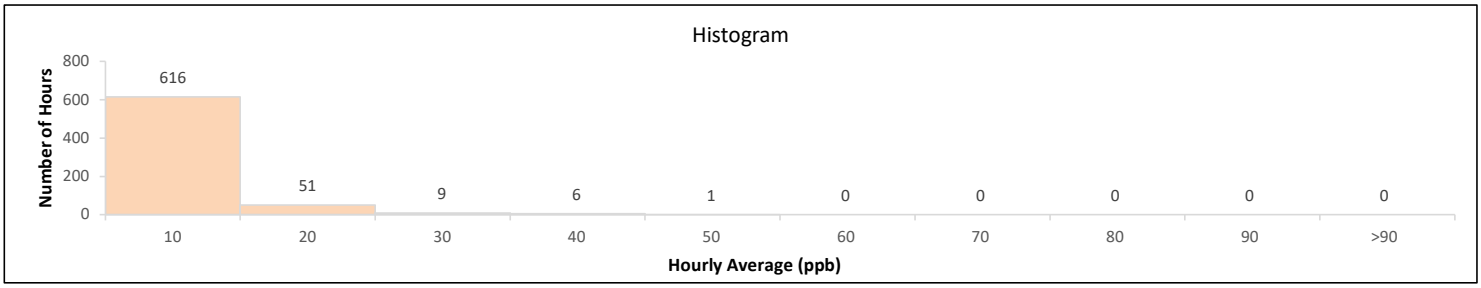
Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	2	1	2	3	2	S	4	4	2	1	1	1	1	1	1	2	2	2	3	4	7	10	9	18	1	18	3.6
Mar 2	18	17	11	5	S	4	3	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	3.5
Mar 3	1	1	1	S	2	2	2	3	2	2	2	2	1	1	1	1	1	2	1	1	1	2	4	7	1	7	1.9
Mar 4	7	6	S	5	3	2	3	3	2	1	1	1	1	1	1	1	2	2	3	5	6	7	6	6	1	7	3.3
Mar 5	7	S	6	6	8	10	16	17	21	8	3	4	2	2	2	2	5	7	11	19	14	20	28	23	2	28	10.5
Mar 6	S	29	26	15	17	15	26	27	12	15	3	2	2	2	2	2	3	5	7	5	3	5	6	S	2	29	10.4
Mar 7	6	10	10	13	20	15	19	18	9	4	3	3	2	2	2	3	2	3	3	3	3	3	S	4	2	20	7.0
Mar 8	4	5	12	20	17	16	20	14	10	13	7	12	9	9	8	8	10	16	18	18	17	S	31	42	4	42	14.6
Mar 9	30	27	34	34	31	37	34	19	10	5	5	7	5	4	3	3	3	3	3	3	S	7	10	7	3	37	14.1
Mar 10	6	8	4	7	7	6	5	5	4	3	3	2	2	3	3	3	3	2	3	S	4	6	5	7	2	8	4.4
Mar 11	9	5	7	14	9	10	20	17	5	2	2	2	2	1	1	2	2	3	S	5	5	7	11	10	1	20	6.6
Mar 12	10	6	4	4	5	7	7	6	4	2	2	2	2	1	2	2	2	S	4	3	2	2	2	2	1	10	3.6
Mar 13	2	2	2	3	4	8	9	9	4	2	2	1	2	2	2	2	S	2	2	2	2	2	2	2	1	9	3.0
Mar 14	2	2	2	3	4	11	8	7	4	7	6	4	3	3	3	S	2	3	4	3	3	3	3	3	2	11	4.0
Mar 15	3	3	4	4	3	2	2	2	2	1	1	1	1	1	S	1	2	3	3	4	5	4	4	3	1	5	2.6
Mar 16	7	8	9	15	10	4	4	2	2	1	C	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	1	15	NA
Mar 17	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	C	2	2	2	2	2	2	2	2	2	2	NA
Mar 18	2	2	3	3	6	10	11	10	7	3	1	S	1	1	1	1	2	2	2	3	2	1	1	1	1	11	3.3
Mar 19	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	2	2	3	4	2	2	2	1	4	1.4
Mar 20	3	5	5	4	3	3	4	3	2	S	1	1	1	1	1	1	1	2	4	6	6	9	4	1	1	9	3.1
Mar 21	1	1	1	2	3	4	3	3	S	2	2	2	2	2	2	2	2	2	3	7	5	6	5	7	1	7	3.0
Mar 22	7	7	5	6	6	7	8	S	3	2	1	1	1	1	1	1	1	2	3	5	5	3	9	12	1	12	4.2
Mar 23	15	10	11	10	9	9	S	11	3	2	1	1	1	1	1	1	1	2	2	3	5	4	3	2	1	15	4.7
Mar 24	4	7	16	17	16	S	19	10	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19	4.7
Mar 25	1	1	1	2	S	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1.2
Mar 26	2	1	1	S	2	2	2	2	2	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1.3
Mar 27	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	1	2	1	2	1.3
Mar 28	2	S	2	2	3	3	3	2	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	3	1.6
Mar 29	S	1	1	3	3	3	5	7	5	4	4	3	3	3	2	2	2	3	2	3	2	2	3	S	1	7	3.0
Mar 30	3	3	3	12	12	9	9	9	5	2	2	2	2	1	1	1	1	1	1	4	4	2	S	2	1	12	4.0
Mar 31	4	8	13	5	9	10	8	2	2	2	3	2	2	3	2	2	1	2	2	2	2	S	2	2	1	13	3.9
Diurnal Maximum	30	29	34	34	31	37	34	27	21	15	7	12	9	9	8	8	10	16	18	19	17	20	31	42			
Diurnal Average	5.7	6.4	7.0	7.8	7.7	7.6	8.9	7.6	4.6	3.2	2.2	2.3	1.9	1.8	1.8	1.8	2.1	2.8	3.3	4.1	4.0	4.1	5.6	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.



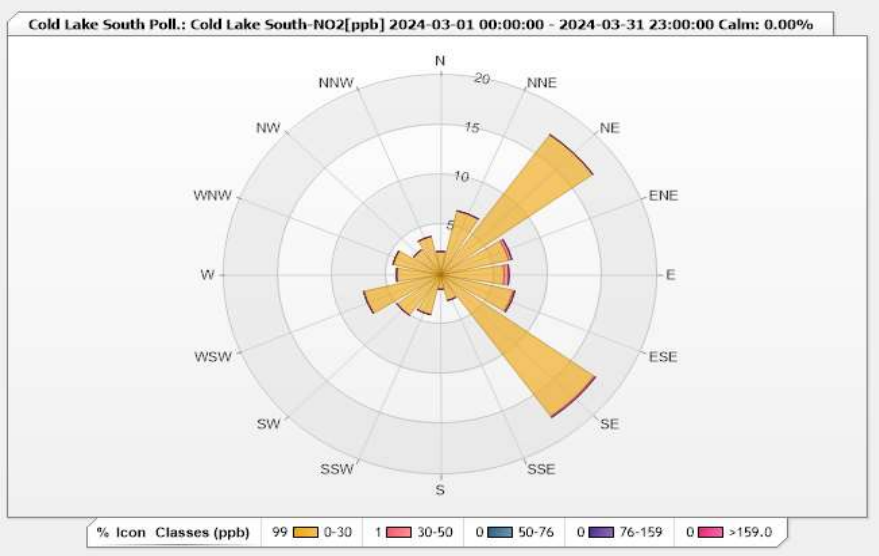


Station: Cold Lake South Poll.: Cold Lake South-NO2[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 91.80% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	2.34	0	0	0	0	2.34
NNE	6.59	0	0	0	0	6.59
NE	17.28	0	0	0	0	17.28
ENE	6.44	0.29	0	0	0	6.73
E	5.86	0.44	0	0	0	6.3
ESE	6.88	0.15	0	0	0	7.03
SE	17.42	0.15	0	0	0	17.57
SSE	2.64	0	0	0	0	2.64
S	1.46	0	0	0	0	1.46
SSW	4.1	0	0	0	0	4.1
SW	4.98	0	0	0	0	4.98
WSW	7.32	0	0	0	0	7.32
W	4.1	0	0	0	0	4.1
WNW	4.54	0	0	0	0	4.54
NW	3.07	0	0	0	0	3.07
NNW	3.95	0	0	0	0	3.95
Summary	98.97	1.03	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

OZONE (O_3) in ppb

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

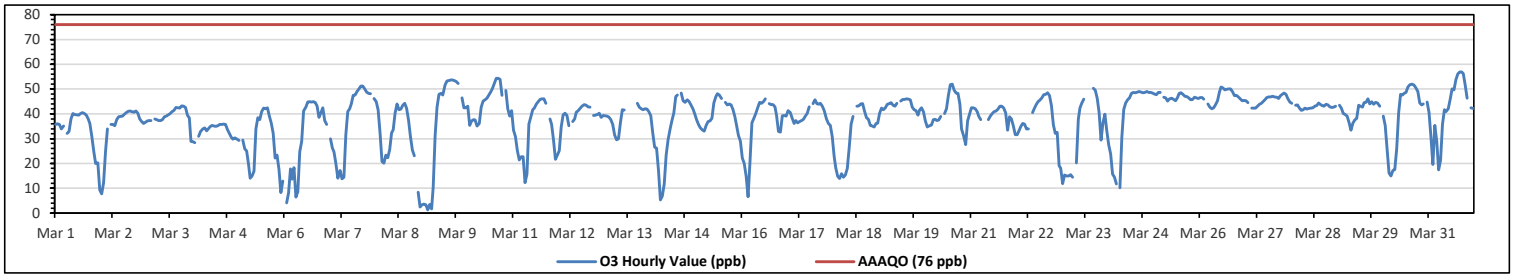
Number of 1-Hour Exceedances: 0

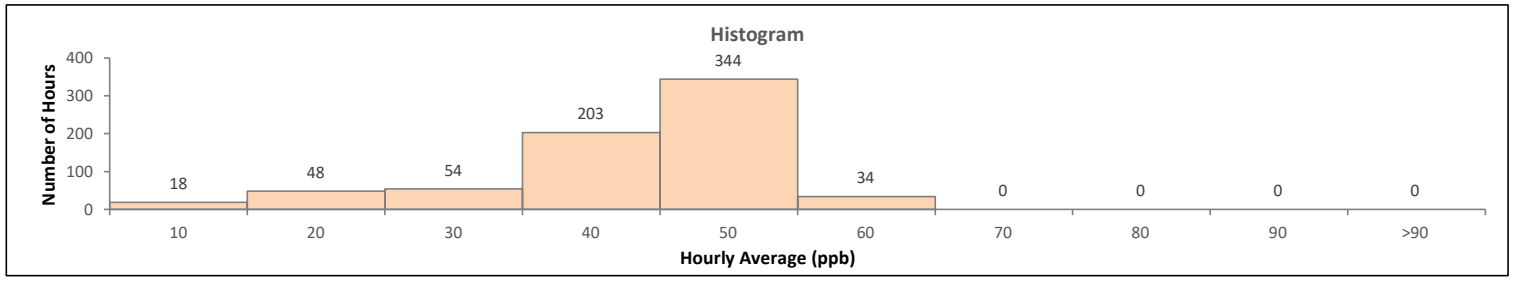
Maximum Hourly Value:	56.9	ppb	on Mar 31 at hr 16	Hours in Service:	744
Maximum Daily Value:	46.8	ppb	on Mar 25	Hours of Data:	701
Minimum Hourly Value:	1.2	ppb	on Mar 9 at hr 3	Hours of Missing Data:	6
Minimum Daily Value:	28.0	ppb	on Mar 5	Hours of Calibration:	37
Monthly Average:	37.9	ppb		Operational Uptime:	99.2

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			
Mar 1	35.7	36	35.8	33.9	35	S	32.2	32.8	37.9	40.2	39.7	39.6	39.4	40.1	40.5	40.2	39.4	37.9	36.1	31.1	25.2	19.9	20.2	9.3	9.3	40.5	33.8
Mar 2	7.7	12.3	24.8	34	S	35.7	35.8	35.2	37.7	38.8	38.9	39.1	39.8	40.6	41	41.1	40.8	40.7	41.1	40.3	37.9	36.9	36.1	36.6	7.7	41.1	35.3
Mar 3	37.1	37.3	37.2	S	38	37.6	37.2	37.2	37.7	38.8	39	39.6	40.1	40.9	41.4	42.6	42.5	42.3	43.2	43	42.6	39.4	38.4	28.9	28.9	43.2	39.2
Mar 4	28.8	28.3	S	31	32.9	33.9	34.3	33.2	34	34.8	35.3	35	34.9	35.2	35.7	35.8	35.9	35.7	33.7	32.1	30.5	29.8	30.3	29.8	28.3	35.9	33.1
Mar 5	29.3	S	29.4	25.9	25	19.6	14	15	16.9	34	38.5	37.6	40.9	42.3	42.1	42.4	39	36.3	32.1	22.2	23.3	17.6	8.3	12.9	8.3	42.4	**28.0**
Mar 6	S	4.1	8.1	17.8	13.6	18.3	6.4	8.7	24.8	28.9	41.1	42.7	44.8	45	44.8	44.9	44.6	43.2	38.6	40.4	42.4	37.3	35.7	S	4.1	45.0	30.7
Mar 7	30	26.2	24.6	19.8	14	17.2	13.8	14.4	31.6	40.9	42	44	47.4	47.6	49	50.1	51.3	51.2	50	48.8	48.3	48.1	S	46.2	13.8	51.3	37.2
Mar 8	45	41.5	32.2	20.7	20.1	23.4	22.3	25.6	32.3	33.6	40.4	44	41.7	41.9	43.5	44.3	42.2	37.4	30.7	25.4	23.1	S	8.4	2.4	2.4	45.0	31.4
Mar 9	3.3	3.6	3.3	1.2	3.5	1.6	10.5	31.1	42.7	47.8	48.3	47.6	51.6	53.3	53.5	53.6	53.6	53.5	53	52.3	S	46.4	42.4	42.5	**1.2**	53.6	34.8
Mar 10	43.1	35.3	37.1	37.7	37.5	35	36.2	42.7	45.1	45.6	46.3	47.6	48.9	50.2	52.2	54.3	54.3	53.9	47.5	S	49.4	42.1	39	41.3	35.0	54.3	44.4
Mar 11	33.4	30.8	25.1	21.4	22.7	22.7	12.2	15.7	35.9	38.7	41.6	42.3	43.8	45	45.8	46.1	46	44.3	S	37.9	35.8	29.4	21.6	23.4	12.2	46.1	33.1
Mar 12	25.1	34.7	39.6	40.3	39.3	35.2	NRM	36.8	38	40.7	41.3	42.2	43.1	43.7	43.4	42.9	42.7	S	39.3	39.5	39.7	40.3	38.6	39.3	25.1	43.7	39.4
Mar 13	39.2	39.1	38.7	37.6	35.8	31.5	29.5	30	36.4	41.6	41.5	C	C	C	C	44.7	S	44.3	42.7	42.1	41.7	42	41.9	40.9	29.5	44.7	39.0
Mar 14	39.2	32.3	26.5	26.2	17.3	5.2	6.8	11.7	23.4	29.6	33.7	37.3	40.4	47	47.6	S	48.4	45.3	44.7	45.6	45	43.5	41.9	40.2	5.2	48.4	33.9
Mar 15	37.6	35.7	34.3	33.5	33	35.4	36.9	37.1	38.2	44.4	46.9	48.1	47.6	46.2	S	44.6	43.6	44	43.6	41.6	38.7	35.3	31.2	29	29.0	48.1	39.4
Mar 16	22.2	19.9	14.9	6.6	20.7	36.4	38.2	40.1	42.5	44.6	44.3	45	46	S	44.1	43.7	43.7	42.9	39.3	32.9	32.6	39.2	39.3	39.1	6.6	46.0	35.6
Mar 17	41.2	40.6	38.2	36.2	37.3	36.4	36.9	37.2	37.8	39.1	40.3	42.9	S	44.1	45.6	44.1	43.9	44.2	43.1	41.2	38	36.1	35.3	30.8	30.8	45.6	39.6
Mar 18	22.8	18.2	14.9	13.9	15.8	14.4	15.3	17.9	26.3	35.9	38.9	S	43	43.2	44	44.1	41	38.5	37.8	35.3	35	34.7	36.2	36.3	13.9	44.1	30.6
Mar 19	40.3	42.3	41.7	42.5	43.9	44.1	44.5	43.4	43.1	44.2	S	45.1	45.8	45.8	46.1	45.9	45.6	42.8	41.7	41.3	39.5	41.5	42.5	40.9	39.5	46.1	43.2
Mar 20	37.1	34.6	35.2	35.5	37.6	37.8	37.3	37.5	38.9	S	40.2	42	47.5	51.7	51.9	49.5	48.4	48.2	43.9	34	30.9	27.6	37.1	39.8	27.6	51.9	40.2
Mar 21	42.4	42.4	42	40.9	38.9	37.6	NRM	38.4	S	37.7	39	40.1	40.9	41.1	41.9	43	43	42.3	40.4	33.4	38.8	38	35.1	31.6	31.6	43.0	39.5
Mar 22	31.6	33.3	34.8	36.1	35.9	33.9	34	S	40.5	42.3	43.9	44.9	45.5	46.4	47.7	47.9	48.5	47.3	43.3	35.6	32.2	32.4	19.1	18	18.0	48.5	38.0
Mar 23	11.8	15.3	15	15	15.4	14.4	S	20.2	37.8	42.3	44.4	45.9	NRM	NRM	NRM	NRM	50.3	49.5	46.3	40.5	29.4	36.4	39.8	33.1	11.8	50.3	31.7
Mar 24	27.5	23.8	15.7	14.5	11.7	S	10.2	30.6	41.8	44.4	45.6	46.4	48.3	48.7	48.5	48.8	49	48.8	48.5	48.6	49	48.6	48.6	48.4	10.2	49.0	39.0
Mar 25	48	47.7	48.7	48.7	S	46.7	46.4	45.1	46	46.3	45.8	45.3	46.6	48.3	48.5	47.8	47.1	47	46.4	45.7	45.8	46.7	46.4	46.2	45.1	48.7	**46.8**
Mar 26	46.6	46.6	45.9	S	44	42.8	42	42.4	43.7	45.2	48.8	50.9	50.5	49.7	49.9	50.1	50	48.9	47.3	47.4	46.8	46.1	45.3	45.4	42.0	50.9	46.8
Mar 27	45.2	44.5	S	42.3	42.3	42.3	43	43.9	44.3	44.9	45.6	46.6	46.9	46.9	47.1	46.8	46.7	46.2	47.2	47.8	48.4	47.9	46	44.8	42.3	48.4	45.5
Mar 28	44.3	S	43.4	43.6	42.3	41.4	41.7	42.3	41.9	42.2	42.3	42.5	43	43.3	44.4	43.7	43.3	43.1	43.9	43.6	42.9	42.6	42.8	43.1	41.4	44.4	42.9
Mar 29	S	43.5	42.3	40.1	39.7	39.1	36.5	33.4	36.3	37.5	38.2	43.5	43.1	42.8	44.5	44.7	46	44	45	43.8	44.6	44.4	43	S	33.4	46.0	41.6
Mar 30	39	35.4	25.7	16.1	15	17.2	17.5	26	40.4	47.8	47.6	48.2	48.6	50.9	51.7	51.9	51.5	50.4	49.1	44.4	43.6	44	S	44.8	15.0	51.9	39.4
Mar 31	40.5	30.5	19.6	35.4	29	17.4	21.3	35.7	41.7	40.8	42	45.8	50.1	49.6	53.8	56.1	**56.9**	**56.9**	56.2	51.6	46.3	S	42.4	42.2	17.4	**56.9**	41.8
Diurnal Maximum	48.0	47.7	48.7	48.7	44.0	46.7	46.4	45.1	46.0	47.8	48.8	50.9	51.6	53.3	53.8	56.1	56.9	56.9	56.2	52.3	49.4	48.6	48.6	48.4			
Diurnal Average	33.6	31.6	30.2	29.3	28.9	29.5	28.3	31.4	37.2	40.5	42.0	43.5	44.7	45.4	46.1	46.1	46.0	45.0	43.2	40.3	38.9	38.4	35.6	34.7			

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.



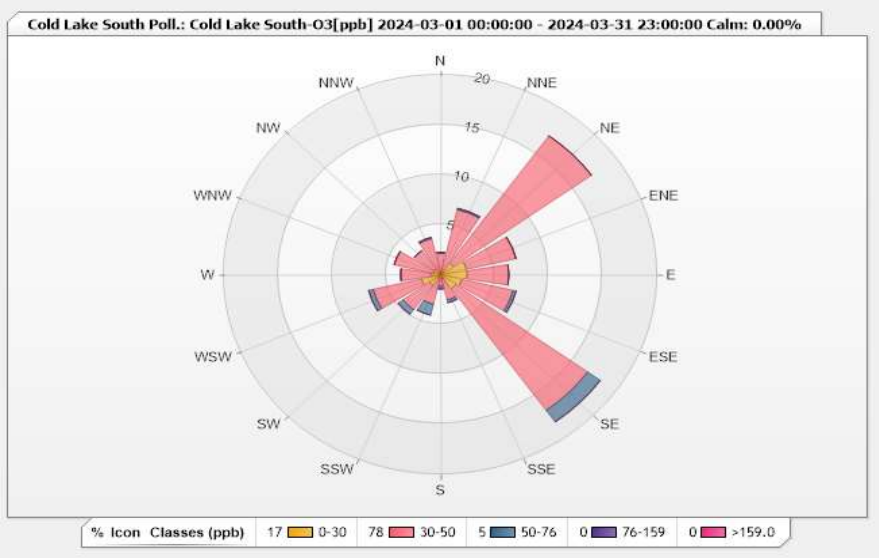


Station: Cold Lake South Poll.: Cold Lake South-O3[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.22% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	0.29	1.85	0.14	0	0	2.28
NNE	0.14	6.56	0.14	0	0	6.84
NE	1.43	15.69	0	0	0	17.12
ENE	2.43	4.71	0	0	0	7.14
E	2.43	3.85	0	0	0	6.28
ESE	2	4.85	0.29	0	0	7.14
SE	1.71	14.98	1.43	0	0	18.12
SSE	0.43	2.14	0.29	0	0	2.86
S	0.29	0.86	0.29	0	0	1.44
SSW	0.29	2.71	1.14	0	0	4.14
SW	1.28	3	0.57	0	0	4.85
WSW	1.85	4.56	0.43	0	0	6.84
W	0.86	2.85	0	0	0	3.71
WNW	0.71	3.71	0	0	0	4.42
NW	0.71	2.28	0	0	0	2.99
NNW	0	3.71	0.14	0	0	3.85
Summary	16.85	78.31	4.86	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

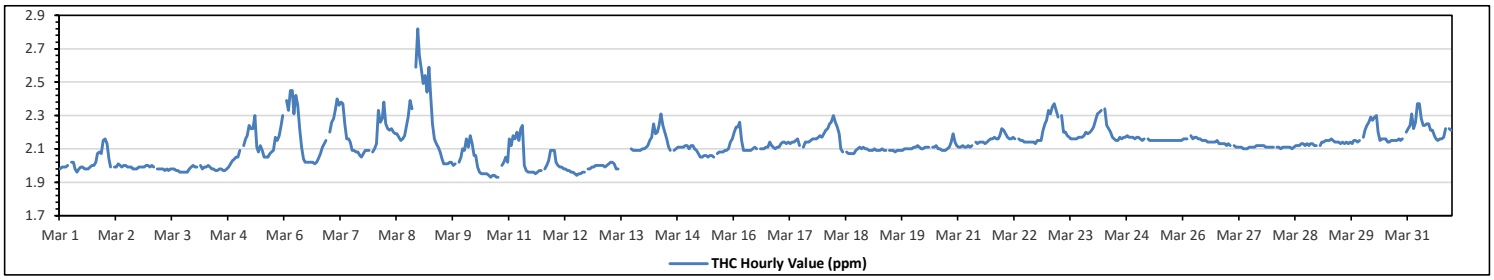
TOTAL HYDROCARBONS (THC) in ppm

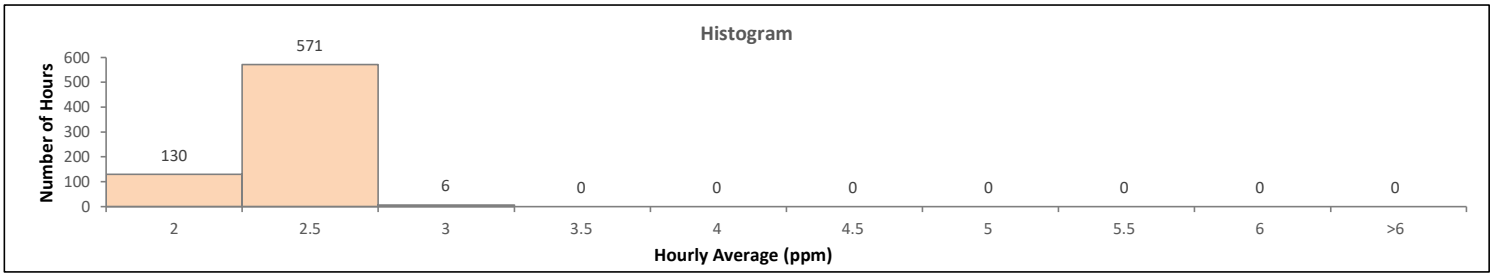
Maximum Hourly Value:	2.82	ppm	on Mar 8 at hr 23	Hours in Service:	744	
Maximum Daily Value:	2.27	ppm	on Mar 8	Hours of Data:	707	
Minimum Hourly Value:	1.93	ppm	on Mar 10 at hr 14	Hours of Missing Data:	0	
Minimum Daily Value:	1.98	ppm	on Mar 3	Hours of Calibration:	37	
Monthly Average:	2.12	ppm		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	1.98	1.99	1.99	1.99	2.00	S	2.02	2.02	1.98	1.96	1.98	1.99	1.99	1.98	1.98	1.98	1.99	2.00	2.00	2.02	2.07	2.08	2.07	2.15	1.96	2.15	2.01
Mar 2	2.16	2.13	2.04	1.99	S	1.99	1.99	2.01	2.00	1.99	2.00	2.00	1.99	1.99	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.99	2.00	2.00	1.98	2.16	2.01
Mar 3	1.99	2.00	1.99	S	1.98	1.98	1.98	1.98	1.97	1.98	1.97	1.98	1.98	1.98	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.98	1.99	2.00	1.96	2.00	1.98
Mar 4	1.99	1.99	S	2.00	1.98	1.99	1.99	2.00	1.99	1.98	1.98	1.97	1.97	1.98	1.98	1.97	1.97	1.98	1.99	2.01	2.03	2.04	2.05	2.05	1.97	2.05	1.99
Mar 5	2.09	S	2.12	2.16	2.18	2.24	2.22	2.22	2.30	2.11	2.08	2.12	2.09	2.05	2.05	2.05	2.07	2.08	2.09	2.17	2.15	2.18	2.24	2.30	2.05	2.30	2.15
Mar 6	S	2.39	2.33	2.45	2.45	2.31	2.42	2.36	2.22	2.11	2.04	2.02	2.02	2.02	2.02	2.02	2.01	2.02	2.04	2.07	2.11	2.13	2.15	S	2.01	2.45	2.17
Mar 7	2.20	2.26	2.28	2.34	2.40	2.36	2.38	2.37	2.25	2.16	2.16	2.14	2.09	2.09	2.08	2.08	2.06	2.05	2.07	2.09	2.09	2.09	S	2.08	2.05	2.40	2.18
Mar 8	2.10	2.13	2.33	2.26	2.28	2.38	2.25	2.22	2.21	2.22	2.20	2.19	2.19	2.17	2.15	2.16	2.18	2.24	2.29	2.39	2.34	S	2.59	**2.82**	2.10	**2.82**	**2.27**
Mar 9	2.66	2.58	2.49	2.54	2.44	2.59	2.43	2.25	2.16	2.13	2.11	2.08	2.04	2.01	2.01	2.01	2.02	2.02	2.00	2.01	S	2.02	2.05	2.10	2.00	2.66	2.21
Mar 10	2.09	2.16	2.11	2.18	2.13	2.06	2.06	1.99	1.96	1.95	1.95	1.95	1.95	1.94	1.93	1.94	1.94	1.93	1.93	S	2.00	2.02	2.05	2.02	1.93	2.18	2.01
Mar 11	2.16	2.12	2.18	2.16	2.20	2.15	2.22	2.24	2.00	1.97	1.96	1.96	1.96	1.96	1.95	1.96	1.97	1.97	S	1.98	2.00	2.03	2.09	2.09	1.95	2.24	2.06
Mar 12	2.09	2.02	2.00	1.99	1.99	1.98	1.98	1.97	1.97	1.96	1.96	1.95	1.94	1.95	1.95	1.96	1.96	S	1.98	1.98	1.99	1.99	2.00	2.00	1.94	2.09	1.98
Mar 13	2.00	2.00	2.00	1.99	2.00	2.01	2.02	2.02	2.01	1.98	1.98	C	C	C	C	2.11	S	2.10	2.09	2.09	2.09	2.09	2.09	2.10	1.98	2.11	2.04
Mar 14	2.10	2.11	2.12	2.15	2.17	2.25	2.19	2.20	2.24	2.31	2.24	2.20	2.16	2.11	2.09	S	2.09	2.10	2.11	2.11	2.11	2.11	2.12	2.12	2.09	2.31	2.15
Mar 15	2.10	2.12	2.12	2.10	2.09	2.07	2.05	2.05	2.06	2.06	2.05	2.06	2.06	2.05	S	2.07	2.08	2.08	2.08	2.09	2.09	2.10	2.14	2.16	2.05	2.16	2.08
Mar 16	2.20	2.23	2.23	2.26	2.15	2.09	2.09	2.09	2.09	2.09	2.10	2.11	2.10	S	2.10	2.10	2.10	2.11	2.11	2.14	2.12	2.11	2.10	2.11	2.09	2.26	2.13
Mar 17	2.11	2.13	2.14	2.14	2.13	2.14	2.13	2.14	2.14	2.15	2.16	2.12	S	2.11	2.14	2.14	2.14	2.15	2.16	2.16	2.16	2.17	2.18	2.17	2.11	2.18	2.14
Mar 18	2.19	2.21	2.22	2.25	2.26	2.30	2.26	2.23	2.19	2.10	2.08	S	2.08	2.07	2.07	2.07	2.07	2.09	2.10	2.11	2.10	2.11	2.10	2.10	2.07	2.30	2.15
Mar 19	2.09	2.09	2.09	2.10	2.09	2.09	2.09	2.10	2.09	2.09	S	2.09	2.09	2.09	2.08	2.09	2.09	2.09	2.09	2.10	2.10	2.10	2.10	2.10	2.08	2.10	2.09
Mar 20	2.11	2.11	2.12	2.11	2.10	2.10	2.11	2.11	2.11	S	2.11	2.11	2.12	2.10	2.10	2.09	2.09	2.09	2.10	2.11	2.14	2.19	2.14	2.12	2.09	2.19	2.11
Mar 21	2.11	2.11	2.12	2.11	2.11	2.12	2.11	2.12	S	2.14	2.13	2.14	2.14	2.14	2.13	2.14	2.15	2.16	2.16	2.17	2.16	2.16	2.18	2.22	2.11	2.22	2.14
Mar 22	2.21	2.19	2.17	2.16	2.16	2.17	2.16	S	2.16	2.15	2.15	2.14	2.14	2.14	2.14	2.14	2.14	2.13	2.15	2.15	2.15	2.21	2.25	2.27	2.13	2.27	2.17
Mar 23	2.33	2.31	2.35	2.37	2.33	2.29	S	2.30	2.20	2.20	2.18	2.17	2.16	2.16	2.16	2.16	2.17	2.17	2.17	2.18	2.20	2.19	2.20	2.21	2.16	2.37	2.22
Mar 24	2.23	2.27	2.31	2.32	2.33	S	2.34	2.24	2.22	2.20	2.17	2.16	2.15	2.15	2.17	2.16	2.17	2.17	2.18	2.17	2.17	2.17	2.16	2.17	2.15	2.34	2.21
Mar 25	2.17	2.16	2.15	2.16	S	2.16	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.17	2.15
Mar 26	2.16	2.16	2.16	S	2.18	2.16	2.17	2.17	2.16	2.16	2.15	2.15	2.15	2.14	2.14	2.14	2.14	2.14	2.15	2.13	2.13	2.13	2.13	2.12	2.12	2.18	2.15
Mar 27	2.13	2.12	S	2.12	2.11	2.11	2.11	2.11	2.10	2.10	2.10	2.11	2.11	2.11	2.11	2.12	2.12	2.12	2.12	2.12	2.11	2.11	2.11	2.11	2.10	2.13	2.11
Mar 28	2.11	S	2.11	2.11	2.10	2.11	2.11	2.11	2.11	2.11	2.10	2.11	2.12	2.12	2.12	2.13	2.13	2.12	2.13	2.12	2.13	2.13	2.12	2.12	2.10	2.13	2.12
Mar 29	S	2.12	2.14	2.14	2.15	2.15	2.15	2.16	2.15	2.14	2.14	2.14	2.13	2.14	2.13	2.14	2.13	2.14	2.13	2.15	2.15	2.14	2.15	S	2.12	2.16	2.14
Mar 30	2.17	2.21	2.24	2.26	2.29	2.27	2.29	2.30	2.20	2.15	2.16	2.16	2.16	2.14	2.14	2.15	2.15	2.15	2.15	2.16	2.15	2.16	S	2.20	2.14	2.30	2.19
Mar 31	2.22	2.24	2.31	2.22	2.26	2.37	2.37	2.28	2.24	2.24	2.25	2.25	2.21	2.21	2.18	2.16	2.15	2.16	2.16	2.17	2.22	S	2.22	2.21	2.15	2.37	2.23
Diurnal Maximum	2.66	2.58	2.49	2.54	2.45	2.59	2.43	2.37	2.30	2.31	2.25	2.25	2.21	2.21	2.18	2.16	2.18	2.24	2.29	2.39	2.34	2.21	2.59	2.82			
Diurnal Average	2.15	2.16	2.17	2.18	2.17	2.17	2.16	2.15	2.12	2.10	2.09	2.09	2.08	2.08	2.08	2.08	2.08	2.09	2.09	2.11	2.11	2.11	2.14	2.15			

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.



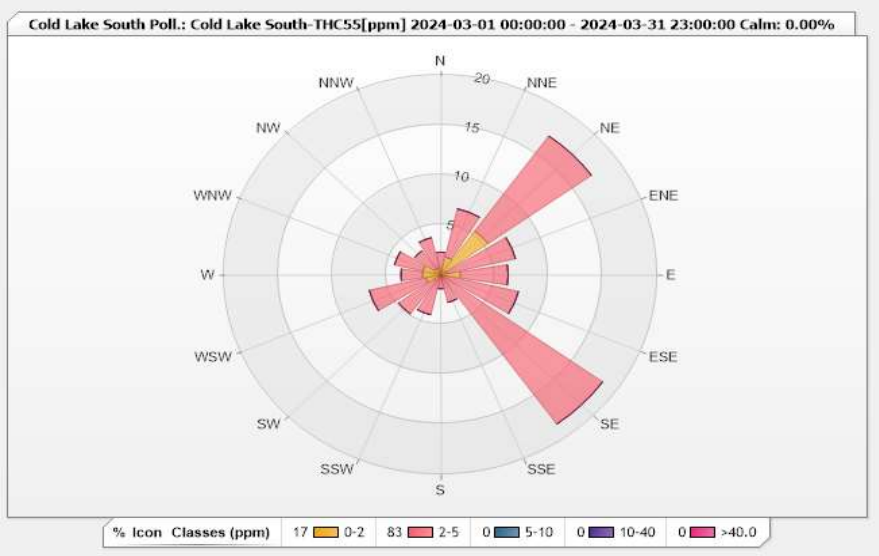


Station: Cold Lake South Poll.: Cold Lake South-THC55[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0.28	1.98	0	0	0	2.26
NNE	1.84	4.95	0	0	0	6.79
NE	5.37	11.74	0	0	0	17.11
ENE	0.57	6.51	0	0	0	7.08
E	1.84	4.38	0	0	0	6.22
ESE	0	7.36	0	0	0	7.36
SE	0.14	18.25	0	0	0	18.39
SSE	0.14	2.69	0	0	0	2.83
S	0	1.41	0	0	0	1.41
SSW	0.14	3.96	0	0	0	4.1
SW	0.71	4.1	0	0	0	4.81
WSW	1.41	5.37	0	0	0	6.78
W	1.7	1.98	0	0	0	3.68
WNW	1.7	2.69	0	0	0	4.39
NW	0.71	2.26	0	0	0	2.97
NNW	0.71	3.11	0	0	0	3.82
Summary	17.26	82.74	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

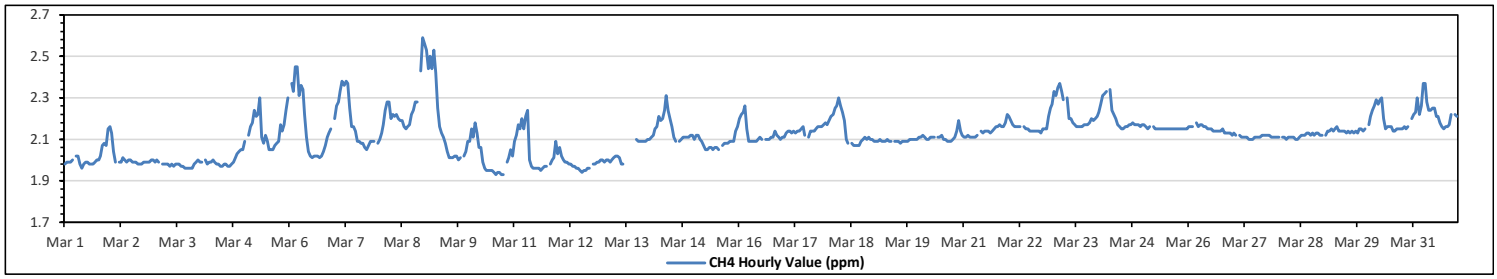
METHANE (CH4) in ppm

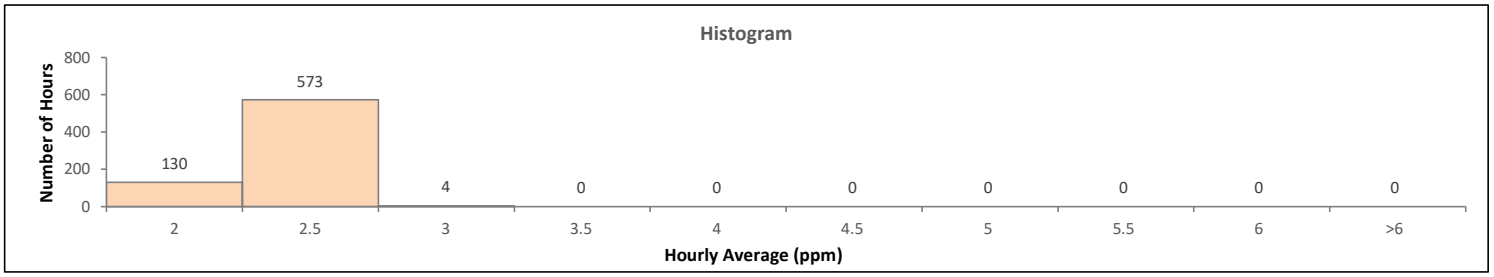
Maximum Hourly Value:	2.59	ppm	on Mar 8 at hr 23	Hours in Service:	744	
Maximum Daily Value:	2.23	ppm	on Mar 8	Hours of Data:	707	
Minimum Hourly Value:	1.93	ppm	on Mar 10 at hr 14	Hours of Missing Data:	0	
Minimum Daily Value:	1.98	ppm	on Mar 3	Hours of Calibration:	37	
Monthly Average:	2.12	ppm		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	1.98	1.99	1.99	1.99	2.00	S	2.02	2.02	1.98	1.96	1.98	1.99	1.99	1.98	1.98	1.98	1.99	2.00	2.00	2.02	2.07	2.08	2.07	2.15	1.96	2.15	2.01
Mar 2	2.16	2.13	2.04	1.99	S	1.99	1.99	2.01	2.00	1.99	2.00	2.00	1.99	1.99	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.99	2.00	2.00	1.98	2.16	2.01
Mar 3	1.99	2.00	1.99	S	1.98	1.98	1.98	1.98	1.97	1.98	1.97	1.98	1.98	1.98	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.98	1.99	2.00	1.96	2.00	1.98
Mar 4	1.99	1.99	S	2.00	1.98	1.99	1.99	2.00	1.99	1.98	1.98	1.97	1.97	1.98	1.98	1.97	1.97	1.98	1.99	2.01	2.03	2.04	2.05	2.05	1.97	2.05	1.99
Mar 5	2.09	S	2.12	2.16	2.18	2.24	2.21	2.22	2.30	2.11	2.08	2.12	2.09	2.05	2.05	2.05	2.07	2.08	2.09	2.17	2.14	2.17	2.24	2.30	2.05	2.30	2.14
Mar 6	S	2.37	2.33	2.45	2.45	2.31	2.36	2.34	2.22	2.11	2.04	2.02	2.01	2.02	2.02	2.02	2.01	2.02	2.04	2.07	2.11	2.13	2.15	S	2.01	2.45	2.16
Mar 7	2.20	2.26	2.28	2.33	2.38	2.36	2.38	2.37	2.25	2.16	2.16	2.14	2.09	2.09	2.08	2.08	2.06	2.05	2.07	2.09	2.09	2.09	S	2.08	2.05	2.38	2.18
Mar 8	2.10	2.13	2.17	2.24	2.28	2.28	2.20	2.22	2.21	2.22	2.20	2.19	2.19	2.16	2.15	2.16	2.17	2.22	2.24	2.28	2.28	S	2.43	**2.59**	2.10	**2.59**	**2.23**
Mar 9	2.56	2.53	2.44	2.50	2.44	2.53	2.42	2.25	2.16	2.13	2.11	2.08	2.04	2.01	2.01	2.01	2.02	2.02	2.00	2.01	S	2.02	2.04	2.09	2.00	2.56	2.19
Mar 10	2.09	2.15	2.11	2.18	2.13	2.06	2.06	1.99	1.96	1.95	1.95	1.95	1.95	1.94	1.93	1.94	1.94	1.93	1.93	S	1.99	2.01	2.05	2.02	1.93	2.18	2.01
Mar 11	2.09	2.12	2.17	2.15	2.20	2.15	2.21	2.24	2.00	1.97	1.96	1.96	1.96	1.96	1.95	1.96	1.97	1.97	S	1.98	2.00	2.01	2.09	2.03	1.95	2.24	2.05
Mar 12	2.06	2.02	2.00	1.99	1.99	1.98	1.98	1.97	1.97	1.96	1.96	1.95	1.94	1.95	1.95	1.96	1.96	S	1.98	1.98	1.99	1.99	2.00	2.00	1.94	2.06	1.98
Mar 13	1.99	2.00	2.00	1.99	2.00	2.01	2.02	2.02	2.01	1.98	1.98	C	C	C	C	2.11	S	2.10	2.09	2.09	2.09	2.09	2.09	2.10	1.98	2.11	2.04
Mar 14	2.10	2.11	2.12	2.15	2.16	2.21	2.19	2.20	2.24	2.31	2.24	2.20	2.16	2.11	2.09	S	2.09	2.10	2.11	2.11	2.11	2.11	2.12	2.12	2.09	2.31	2.15
Mar 15	2.10	2.12	2.12	2.10	2.09	2.07	2.05	2.05	2.06	2.06	2.05	2.06	2.06	2.05	S	2.07	2.08	2.08	2.08	2.09	2.09	2.09	2.14	2.16	2.05	2.16	2.08
Mar 16	2.20	2.22	2.23	2.26	2.15	2.09	2.09	2.09	2.09	2.09	2.10	2.11	2.10	S	2.10	2.10	2.10	2.11	2.11	2.14	2.12	2.11	2.10	2.11	2.09	2.26	2.13
Mar 17	2.11	2.13	2.14	2.14	2.13	2.14	2.13	2.14	2.14	2.15	2.16	2.12	S	2.11	2.14	2.14	2.14	2.15	2.16	2.16	2.16	2.17	2.18	2.17	2.11	2.18	2.14
Mar 18	2.19	2.21	2.22	2.25	2.26	2.30	2.26	2.23	2.19	2.10	2.08	S	2.08	2.07	2.07	2.07	2.07	2.09	2.10	2.11	2.10	2.11	2.10	2.10	2.07	2.30	2.15
Mar 19	2.09	2.09	2.09	2.10	2.09	2.09	2.09	2.10	2.09	2.09	S	2.09	2.09	2.09	2.08	2.09	2.09	2.09	2.09	2.10	2.10	2.10	2.10	2.10	2.08	2.10	2.09
Mar 20	2.11	2.11	2.12	2.11	2.10	2.10	2.11	2.11	2.11	S	2.11	2.11	2.12	2.10	2.10	2.09	2.09	2.09	2.10	2.11	2.14	2.19	2.14	2.12	2.09	2.19	2.11
Mar 21	2.11	2.11	2.12	2.11	2.11	2.11	2.11	2.12	S	2.14	2.13	2.14	2.14	2.14	2.13	2.14	2.15	2.16	2.16	2.17	2.16	2.16	2.18	2.22	2.11	2.22	2.14
Mar 22	2.21	2.19	2.17	2.16	2.16	2.16	2.16	S	2.16	2.15	2.15	2.14	2.14	2.14	2.14	2.14	2.14	2.13	2.15	2.15	2.15	2.21	2.25	2.27	2.13	2.27	2.17
Mar 23	2.33	2.31	2.35	2.37	2.33	2.29	S	2.30	2.20	2.20	2.18	2.17	2.16	2.16	2.16	2.16	2.17	2.17	2.17	2.18	2.20	2.19	2.20	2.21	2.16	2.37	2.22
Mar 24	2.23	2.27	2.31	2.32	2.33	S	2.34	2.24	2.22	2.20	2.17	2.16	2.15	2.15	2.16	2.16	2.17	2.17	2.18	2.17	2.17	2.17	2.16	2.17	2.15	2.34	2.21
Mar 25	2.17	2.16	2.15	2.16	S	2.16	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.17	2.15
Mar 26	2.16	2.16	2.16	S	2.18	2.16	2.17	2.17	2.16	2.16	2.15	2.15	2.15	2.14	2.14	2.14	2.14	2.14	2.15	2.13	2.13	2.13	2.13	2.12	2.12	2.18	2.15
Mar 27	2.13	2.12	S	2.12	2.11	2.11	2.11	2.11	2.10	2.10	2.10	2.11	2.11	2.11	2.11	2.12	2.12	2.12	2.12	2.12	2.11	2.11	2.11	2.11	2.10	2.13	2.11
Mar 28	2.11	S	2.11	2.11	2.10	2.11	2.11	2.11	2.11	2.10	2.10	2.11	2.12	2.12	2.12	2.13	2.13	2.12	2.13	2.12	2.13	2.13	2.12	2.12	2.10	2.13	2.12
Mar 29	S	2.12	2.14	2.14	2.15	2.14	2.15	2.16	2.14	2.14	2.14	2.14	2.13	2.14	2.13	2.14	2.13	2.14	2.13	2.15	2.15	2.14	2.15	S	2.12	2.16	2.14
Mar 30	2.17	2.21	2.24	2.26	2.29	2.27	2.29	2.30	2.20	2.15	2.16	2.16	2.16	2.14	2.14	2.15	2.15	2.15	2.15	2.16	2.15	2.16	S	2.20	2.14	2.30	2.19
Mar 31	2.22	2.23	2.30	2.22	2.26	2.37	2.37	2.28	2.24	2.24	2.25	2.25	2.21	2.21	2.18	2.16	2.15	2.16	2.16	2.17	2.22	S	2.22	2.21	2.15	2.37	2.23
Diurnal Maximum	2.56	2.53	2.44	2.50	2.45	2.53	2.42	2.37	2.30	2.31	2.25	2.25	2.21	2.21	2.18	2.16	2.17	2.22	2.24	2.28	2.28	2.21	2.43	2.59			
Diurnal Average	2.14	2.16	2.16	2.17	2.17	2.16	2.16	2.15	2.12	2.10	2.09	2.09	2.08	2.08	2.08	2.08	2.08	2.09	2.09	2.10	2.11	2.10	2.13	2.14			

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.



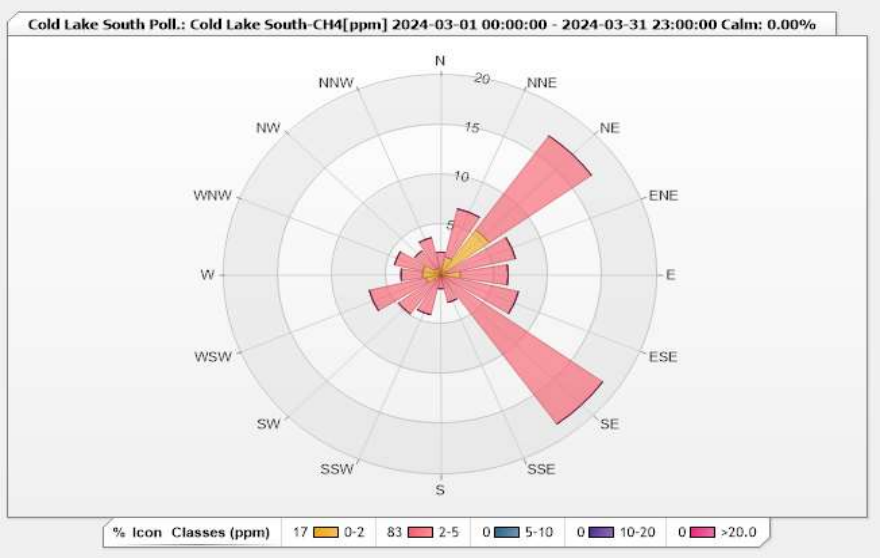


Station: Cold Lake South Poll.: Cold Lake South-CH4[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0.28	1.98	0	0	0	2.26
NNE	1.84	4.95	0	0	0	6.79
NE	5.52	11.6	0	0	0	17.12
ENE	0.57	6.51	0	0	0	7.08
E	1.84	4.38	0	0	0	6.22
ESE	0	7.36	0	0	0	7.36
SE	0.14	18.25	0	0	0	18.39
SSE	0.14	2.69	0	0	0	2.83
S	0	1.41	0	0	0	1.41
SSW	0.14	3.96	0	0	0	4.1
SW	0.71	4.1	0	0	0	4.81
WSW	1.41	5.37	0	0	0	6.78
W	1.7	1.98	0	0	0	3.68
WNW	1.7	2.69	0	0	0	4.39
NW	0.71	2.26	0	0	0	2.97
NNW	0.71	3.11	0	0	0	3.82
Summary	17.41	82.6	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

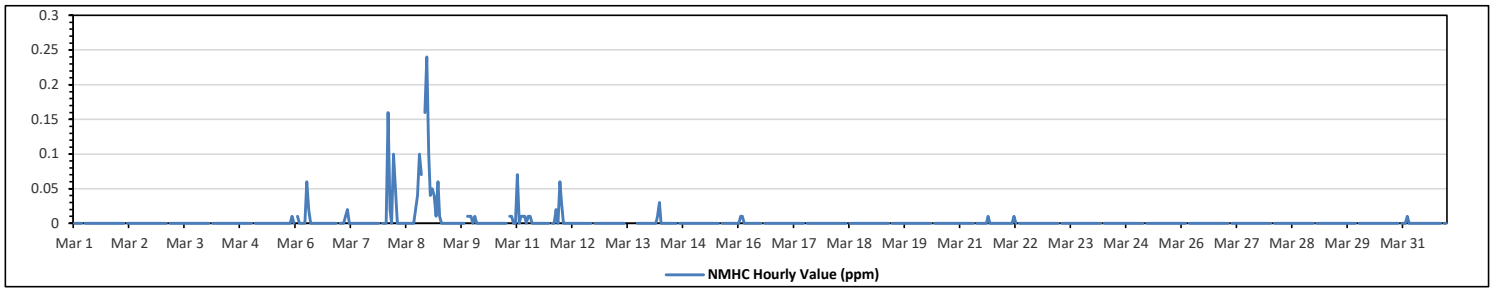
NON-METHANE HYDROCARBONS (NMHC) in ppm

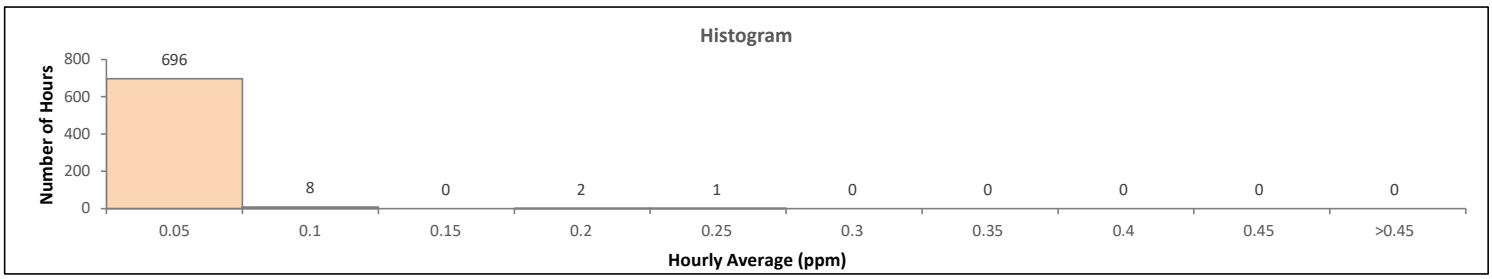
Maximum Hourly Value:	0.24	ppm	on Mar 8 at hr 23	Hours in Service:	744
Maximum Daily Value:	0.04	ppm	on Mar 8	Hours of Data:	707
Minimum Hourly Value:	0.00	ppm	on Mar 1 at hr 0	Hours of Missing Data:	0
Minimum Daily Value:	0.00	ppm	on Mar 1	Hours of Calibration:	37
Monthly Average:	0.00	ppm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Mar 1	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 2	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 3	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 4	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 5	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
Mar 6	S	0.01	0.00	0.00	0.00	0.00	0.06	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	S	0.00	0.06	0.00
Mar 7	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	0.00	S	0.00	0.00	0.02	0.00
Mar 8	0.00	0.00	0.16	0.02	0.00	0.10	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.10	0.07	S	0.16	**0.24**	0.00	**0.24**	**0.04**
Mar 9	0.10	0.04	0.05	0.04	0.01	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.01	0.01	0.01	0.00	0.10	0.01
Mar 10	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.01	0.01	0.00	0.00	0.00	0.01	0.00
Mar 11	0.07	0.00	0.01	0.01	0.01	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	S	0.00	0.00	0.02	0.00	0.06	0.00	0.07	0.01
Mar 12	0.03	0.00	0.00	0.00	0.00	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	0.03	0.00
Mar 13	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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 14	0.00	0.00	0.00	0.00	0.01	0.03	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	0.03	0.00
Mar 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 16	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	S	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
Mar 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Mar 22	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	0.00	0.00	0.01	0.00
Mar 23	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 24	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
Mar 25	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 26	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 27	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 28	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
Mar 29	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
Mar 30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Mar 31	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.01	0.00
Diurnal Maximum	0.10	0.04	0.16	0.04	0.02	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.04	0.10	0.07	0.02	0.16	0.24			
Diurnal Average	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01			

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.



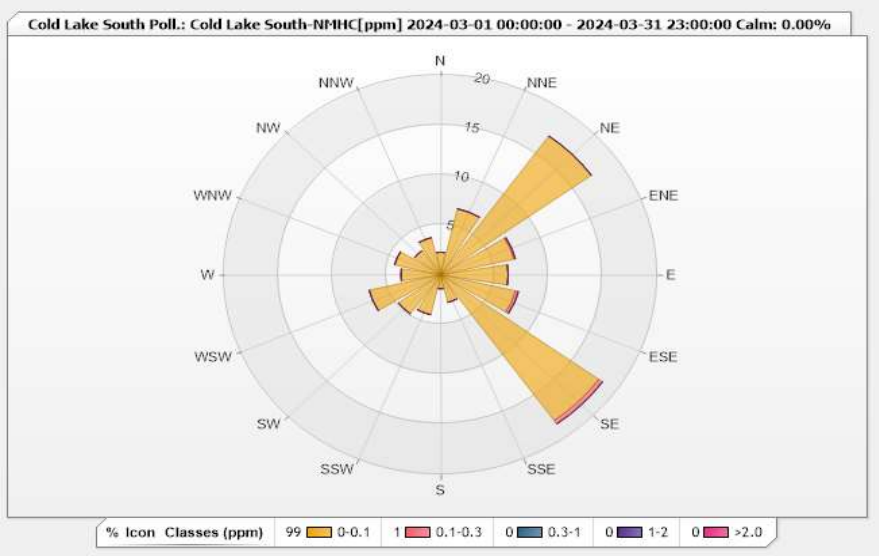


Station: Cold Lake South Poll.: Cold Lake South-NMHC[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	2.26	0	0	0	0	2.26
NNE	6.79	0	0	0	0	6.79
NE	17.11	0	0	0	0	17.11
ENE	6.93	0.14	0	0	0	7.07
E	6.22	0	0	0	0	6.22
ESE	7.07	0.28	0	0	0	7.35
SE	17.96	0.42	0	0	0	18.38
SSE	2.83	0	0	0	0	2.83
S	1.41	0	0	0	0	1.41
SSW	4.1	0	0	0	0	4.1
SW	4.81	0	0	0	0	4.81
WSW	6.79	0	0	0	0	6.79
W	3.68	0	0	0	0	3.68
WNW	4.38	0	0	0	0	4.38
NW	2.97	0	0	0	0	2.97
NNW	3.82	0	0	0	0	3.82
Summary	99.13	0.84	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 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

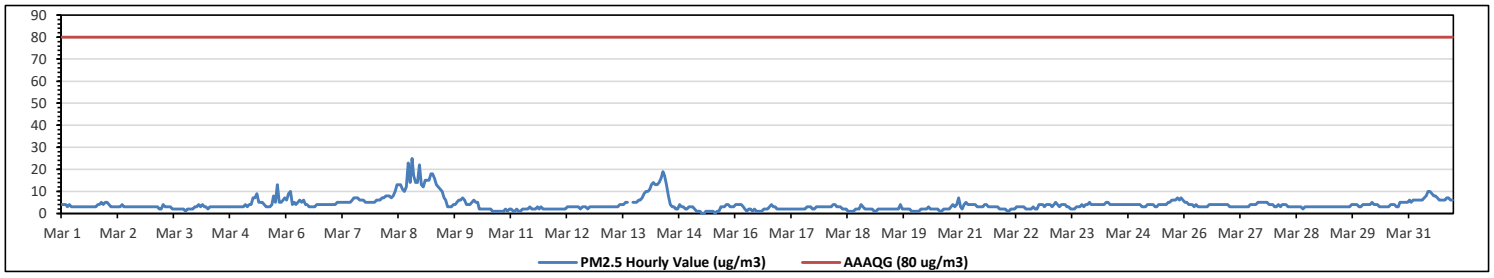
Number of 1-Hour Exceedances: 0 Number of 24-Hour Exceedances: 0

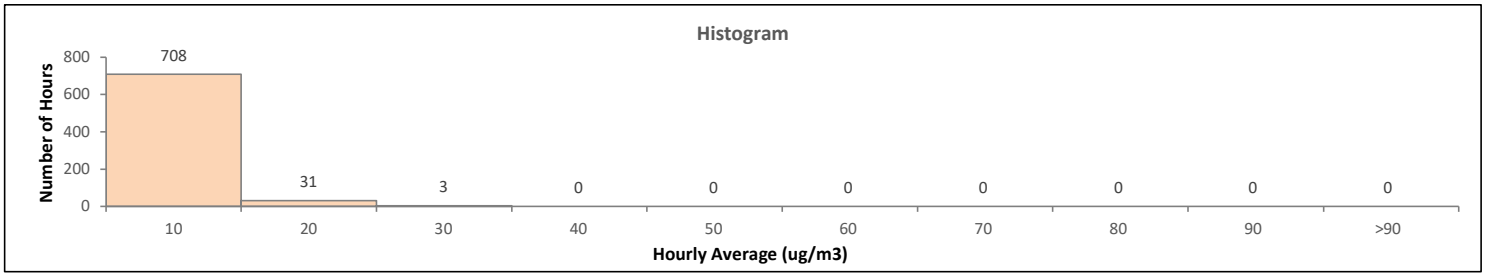
Maximum Hourly Value:	25	µg/m^3 on Mar 8 at hr 19	Hours in Service:	744
Maximum Daily Value:	11.8	µg/m^3 on Mar 8	Hours of Data:	742
Minimum Hourly Value:	0	µg/m^3 on Mar 15 at hr 6	Hours of Missing Data:	0
Minimum Daily Value:	2	µg/m^3 on Mar 15	Hours of Calibration:	2
Monthly Average:	4.0	µg/m^3	Operational 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			
Mar 1	4	4	4	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	5	4	5	3	5	3.5
Mar 2	5	4	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	3.2
Mar 3	3	3	3	3	2	2	4	3	3	3	3	2	2	2	2	2	2	2	1	2	2	2	2	3	1	4	2.4
Mar 4	3	4	3	4	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	4	3.0
Mar 5	3	3	4	3	4	4	7	7	9	5	5	5	4	3	3	3	4	8	5	13	5	5	6	7	3	13	5.2
Mar 6	6	9	10	4	5	4	5	6	5	6	4	4	3	3	3	3	4	4	4	4	4	4	4	4	3	10	4.7
Mar 7	4	4	4	5	5	5	5	5	5	5	5	6	7	7	7	6	6	6	5	5	5	5	5	5	4	7	5.3
Mar 8	6	6	6	7	7	8	8	8	7	8	10	13	13	13	11	10	12	23	14	**25**	17	14	14	22	6	**25**	**11.8**
Mar 9	13	12	15	15	15	18	18	16	13	12	11	10	7	6	3	3	3	4	4	5	6	6	7	6	3	18	9.5
Mar 10	4	4	4	5	6	5	5	2	2	2	2	2	2	2	1	1	1	1	1	1	1	2	1	2	1	6	2.5
Mar 11	2	1	1	2	1	1	2	2	2	2	3	2	2	2	3	2	3	2	2	2	2	2	2	2	1	3	2.0
Mar 12	2	2	2	2	2	2	3	3	3	3	3	3	3	2	3	3	3	2	3	3	3	3	3	3	2	3	2.7
Mar 13	3	3	3	3	3	3	3	3	3	3	4	4	4	5	5	**C**	**C**	5	5	5	6	6	7	9	3	9	4.3
Mar 14	10	10	11	13	14	13	13	14	16	19	17	13	8	4	3	3	2	2	4	3	3	2	2	3	2	19	8.4
Mar 15	3	3	2	1	1	1	0	0	1	1	1	1	1	0	1	1	3	3	3	4	4	3	3	3	**0**	4	**1.8**
Mar 16	4	4	4	4	3	2	1	2	2	1	2	1	1	1	1	2	2	2	3	4	3	3	2	2	1	4	2.3
Mar 17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	3	3	3	3	3	2	3	2.3
Mar 18	3	3	3	3	4	4	3	3	3	2	2	2	1	1	1	1	2	2	2	4	3	2	2	2	1	4	2.4
Mar 19	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	4	2	2	2	2	2	1	1	1	4	1.9
Mar 20	1	1	1	2	2	2	2	3	2	2	2	2	2	1	1	2	2	2	2	3	4	3	4	7	1	7	2.3
Mar 21	3	2	4	5	4	4	4	4	4	3	3	3	3	4	4	3	3	3	3	3	3	2	2	2	2	5	3.3
Mar 22	2	1	1	2	2	2	3	3	3	3	3	2	2	2	2	3	2	2	4	4	4	3	4	4	1	4	2.6
Mar 23	4	3	4	5	4	3	4	4	4	3	3	2	2	2	3	3	3	4	3	4	4	5	4	4	2	5	3.5
Mar 24	4	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4.1
Mar 25	4	3	3	3	4	4	4	4	3	3	4	4	4	4	4	5	5	6	6	6	7	6	7	6	3	7	4.5
Mar 26	5	5	4	4	4	3	4	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	3	5	3.8
Mar 27	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	5	5	5	4	4	4	3	5	3.8
Mar 28	3	3	4	3	4	4	4	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	2	4	3.1
Mar 29	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3	3	4	3	4	3.2
Mar 30	4	4	4	4	5	4	4	4	3	3	3	3	3	3	4	4	4	3	3	5	5	5	5	5	3	5	3.9
Mar 31	6	5	6	6	6	6	6	6	7	8	10	10	9	8	8	7	6	6	6	6	7	7	6	6	5	10	6.8
Diurnal Maximum	13	12	15	15	15	18	18	16	16	19	17	13	13	13	11	10	12	23	14	25	17	14	14	22			
Diurnal Average	4.0	3.9	4.1	4.1	4.2	4.1	4.4	4.3	4.2	4.1	4.2	4.0	3.6	3.4	3.4	3.3	3.6	4.0	3.7	4.7	4.3	4.0	4.0	4.5			

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.



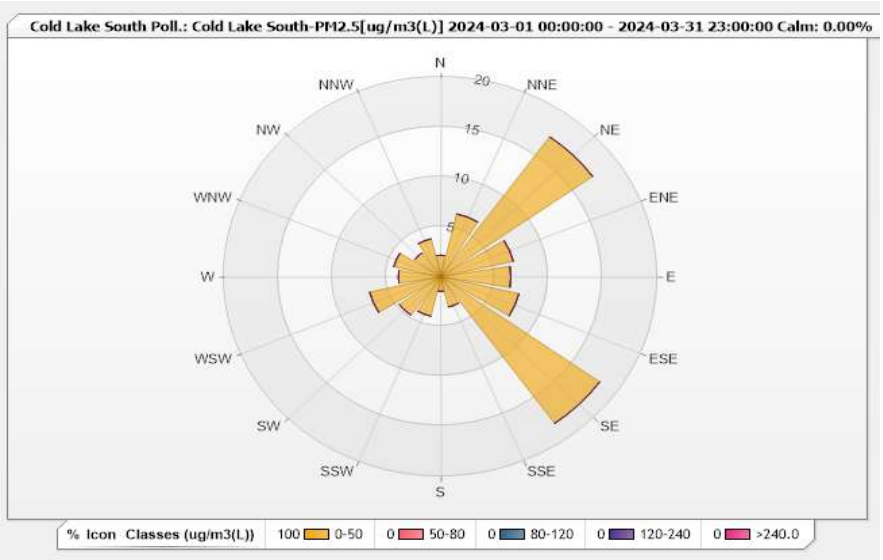


Station: Cold Lake South Poll.: Cold Lake South-PM2.5[ug/m3(L)] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 99.73% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	2.16	0	0	0	0	2.16
NNE	6.47	0	0	0	0	6.47
NE	17.25	0	0	0	0	17.25
ENE	6.87	0	0	0	0	6.87
E	6.47	0	0	0	0	6.47
ESE	7.41	0	0	0	0	7.41
SE	18.06	0	0	0	0	18.06
SSE	3.1	0	0	0	0	3.1
S	1.48	0	0	0	0	1.48
SSW	4.04	0	0	0	0	4.04
SW	4.72	0	0	0	0	4.72
WSW	6.74	0	0	0	0	6.74
W	3.91	0	0	0	0	3.91
WNW	4.45	0	0	0	0	4.45
NW	2.96	0	0	0	0	2.96
NNW	3.91	0	0	0	0	3.91
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

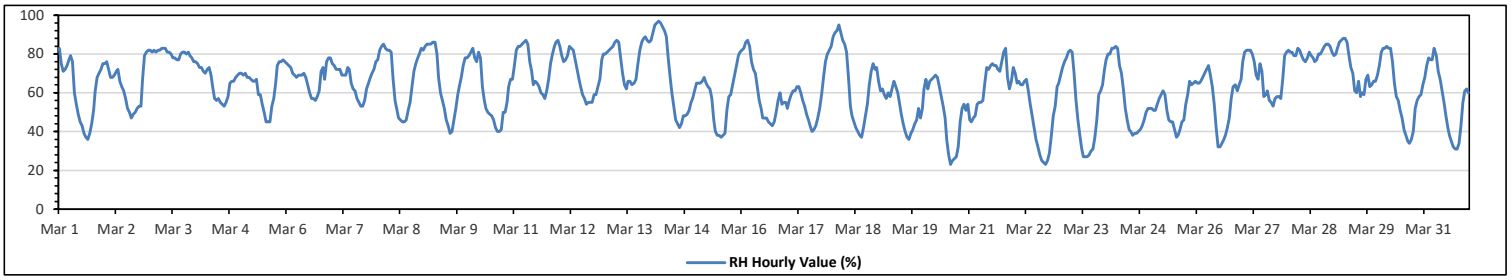
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	97	%	on Mar 14 at hr 4	Hours in Service:	744	
Maximum Daily Value:	80.4	%	on Mar 28	Hours of Data:	744	
Minimum Hourly Value:	23	%	on Mar 20 at hr 14	Hours of Missing Data:	0	
Minimum Daily Value:	48.2	%	on Mar 22	Hours of Calibration:	0	
Monthly Average:	63.4	%		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
Mar 1	83	75	71	72	74	77	79	76	60	54	49	45	43	39	37	36	39	44	51	61	68	70	72	75	36	83	60.4
Mar 2	75	76	72	68	68	69	71	72	66	63	61	57	52	50	47	49	50	52	53	53	67	79	81	82	47	82	63.9
Mar 3	82	81	82	81	82	82	83	83	83	81	81	80	78	78	77	77	80	81	81	80	81	79	78	76	76	83	80.3
Mar 4	76	75	73	73	71	70	72	73	69	63	57	56	57	55	54	53	55	58	65	66	66	68	69	70	53	76	65.2
Mar 5	70	69	70	68	68	67	66	66	67	59	59	54	50	45	45	45	53	57	65	74	76	76	77	76	45	77	63.4
Mar 6	75	74	73	70	69	68	69	69	69	70	68	64	60	57	57	56	58	61	71	73	67	76	78	78	56	78	67.9
Mar 7	75	74	72	72	72	69	69	69	73	72	65	62	61	57	55	53	53	56	62	65	68	70	72	76	53	76	66.3
Mar 8	77	82	84	85	83	82	82	81	67	56	52	47	46	45	45	46	51	55	63	71	75	78	80	83	45	85	67.3
Mar 9	82	84	85	85	85	86	86	80	68	60	56	52	46	43	39	40	46	52	59	64	68	74	78	78	39	86	66.5
Mar 10	79	81	83	78	76	81	78	63	56	52	50	49	48	46	42	40	40	41	50	50	55	63	67	67	40	83	59.8
Mar 11	74	82	84	84	85	86	87	85	76	71	64	66	65	63	60	59	57	61	67	75	80	84	86	87	57	87	74.5
Mar 12	84	79	76	77	79	84	83	82	77	72	67	63	59	57	54	55	55	55	59	59	63	67	77	80	54	84	69.3
Mar 13	80	81	82	83	84	86	87	86	78	70	64	62	66	66	64	65	67	75	82	86	88	89	87	86	62	89	77.7
Mar 14	87	91	95	96	**97**	96	94	92	89	79	69	60	53	46	44	42	44	48	48	49	51	55	57	61	42	**97**	68.5
Mar 15	65	65	65	66	68	65	63	62	57	46	40	38	38	37	38	39	51	58	59	64	69	74	79	81	37	81	57.8
Mar 16	82	83	86	87	84	76	72	70	63	56	52	47	47	47	45	44	43	45	50	56	60	54	55	55	43	87	60.8
Mar 17	52	56	59	61	61	63	63	60	56	53	49	46	43	40	41	43	47	52	59	68	76	80	82	84	40	84	58.1
Mar 18	89	91	92	95	91	87	85	81	68	53	48	45	42	40	38	37	42	48	54	64	71	75	72	73	37	95	65.9
Mar 19	66	61	62	59	57	60	58	62	66	63	60	55	49	44	40	37	36	39	41	44	46	52	47	52	36	66	52.3
Mar 20	62	67	62	66	67	68	69	68	63	58	53	47	36	28	**23**	25	26	27	32	45	52	54	51	54	**23**	69	50.1
Mar 21	46	45	47	48	54	55	55	56	65	73	72	74	75	74	74	72	71	76	81	83	68	62	66	73	45	83	65.2
Mar 22	70	65	66	64	64	66	67	61	54	48	42	36	32	28	25	24	**23**	25	29	38	48	53	63	65	**23**	70	**48.2**
Mar 23	69	73	76	78	81	82	81	70	56	46	38	31	27	27	27	28	30	31	37	46	59	61	64	72	27	82	53.8
Mar 24	77	80	80	83	83	84	83	74	70	62	52	46	41	40	38	39	39	40	41	43	46	50	52	52	38	84	58.1
Mar 25	52	51	51	54	57	59	61	59	51	46	45	45	41	37	38	41	45	46	54	59	66	64	65	66	37	66	52.2
Mar 26	65	65	66	68	70	72	74	69	63	54	42	32	32	34	36	38	42	47	57	63	64	61	64	67	32	74	56.0
Mar 27	76	81	82	82	82	80	76	69	67	75	71	58	59	61	56	55	53	57	58	58	57	67	79	81	53	82	68.3
Mar 28	82	81	81	79	79	83	82	79	77	76	78	81	79	78	76	77	80	80	82	84	85	85	84	81	76	85	**80.4**
Mar 29	79	80	83	86	87	88	88	86	79	73	70	61	60	66	58	60	59	67	69	63	64	66	66	69	58	88	72.0
Mar 30	74	81	83	83	84	83	83	76	65	58	56	51	47	41	38	35	34	36	40	52	56	58	59	64	34	84	59.9
Mar 31	68	74	78	77	77	83	79	71	67	61	55	48	42	38	35	32	31	31	34	43	55	61	62	60	31	83	56.8
Diurnal Maximum	89	91	95	96	97	96	94	92	89	81	81	81	79	78	77	77	80	81	82	86	88	89	87	87			
Diurnal Average	73.3	74.3	74.9	75.1	75.5	76.0	75.6	72.6	67.3	62.0	57.6	53.5	50.8	48.6	46.6	46.5	48.4	51.6	56.5	61.3	65.0	67.9	70.0	71.7			

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 - March 2024

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

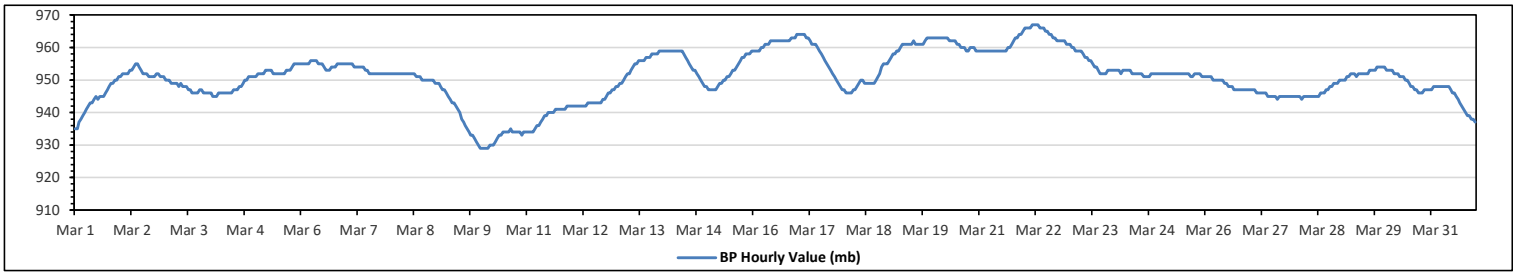
Maximum Hourly Value:	967	mb	on Mar 22 at hr 4	Hours in Service:	744
Maximum Daily Value:	964	mb	on Mar 22	Hours of Data:	744
Minimum Hourly Value:	929	mb	on Mar 9 at hr 23	Hours of Missing Data:	0
Minimum Daily Value:	932	mb	on Mar 10	Hours of Calibration:	0
Monthly Average:	951	mb		Operational Uptime:	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
Mar 1	935	935	937	938	939	940	941	942	943	943	944	945	944	945	945	945	946	947	948	949	949	950	950	951	935	951	944
Mar 2	951	952	952	952	952	953	953	954	955	955	954	953	952	952	952	951	951	951	951	952	952	951	951	951	951	955	952
Mar 3	950	950	950	949	949	949	949	948	949	948	948	948	947	947	946	946	946	946	947	947	946	946	946	946	946	950	948
Mar 4	946	945	945	945	946	946	946	946	946	946	946	946	947	947	947	948	948	949	950	950	951	951	951	951	945	951	947
Mar 5	951	952	952	952	952	953	953	953	953	952	952	952	952	952	952	952	953	953	953	954	955	955	955	955	951	955	953
Mar 6	955	955	955	955	955	956	956	956	956	955	955	955	954	953	953	953	954	954	954	955	955	955	955	955	953	956	955
Mar 7	955	955	955	955	954	954	954	954	954	954	953	953	952	952	952	952	952	952	952	952	952	952	952	952	952	955	953
Mar 8	952	952	952	952	952	952	952	952	952	952	952	952	952	951	951	951	950	950	950	950	950	950	950	949	949	952	951
Mar 9	949	949	948	947	947	946	945	944	943	943	942	941	940	938	937	936	935	934	933	933	932	931	930	**929**	**929**	949	940
Mar 10	**929**	**929**	**929**	**929**	930	930	930	931	932	933	933	934	934	934	934	935	934	934	934	934	934	933	934	934	**929**	935	**932**
Mar 11	934	934	934	934	935	936	936	937	938	939	939	940	940	940	940	941	941	941	941	941	941	942	942	942	934	942	939
Mar 12	942	942	942	942	942	942	942	942	943	943	943	943	943	943	943	943	944	944	945	946	946	947	947	948	942	948	944
Mar 13	948	949	949	950	951	952	952	953	954	955	955	956	956	956	956	957	957	957	958	958	958	958	959	959	948	959	955
Mar 14	959	959	959	959	959	959	959	959	959	959	959	958	957	956	955	954	953	953	952	951	950	949	948	948	948	959	956
Mar 15	947	947	947	947	947	948	949	949	950	950	951	951	952	953	953	954	955	956	957	957	958	958	958	959	947	959	952
Mar 16	959	959	959	959	960	960	961	961	961	962	962	962	962	962	962	962	962	962	962	962	963	963	963	964	959	964	961
Mar 17	964	964	964	964	963	963	962	961	961	961	960	959	958	957	956	955	954	953	952	951	950	949	948	947	947	964	957
Mar 18	947	946	946	946	946	947	947	948	949	950	950	949	949	949	949	949	949	950	951	952	954	955	955	955	946	955	950
Mar 19	956	957	958	958	959	959	960	961	961	961	961	961	961	962	961	961	961	961	961	962	963	963	963	963	956	963	961
Mar 20	963	963	963	963	963	963	963	963	962	962	962	962	961	961	960	960	960	959	959	960	960	960	959	959	959	963	961
Mar 21	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	960	960	961	962	963	963	964	964	965	959	965	960
Mar 22	966	966	966	966	**967**	**967**	**967**	**967**	966	966	966	965	965	964	964	963	963	962	962	962	962	962	961	961	961	**967**	**964**
Mar 23	961	960	960	959	959	959	959	958	957	957	956	956	955	954	954	953	952	952	952	952	953	953	953	953	952	961	956
Mar 24	953	953	953	952	953	953	953	953	953	952	952	952	952	952	952	951	951	951	951	952	952	952	952	952	951	953	952
Mar 25	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	952	951	951	952	952	952	952	951	951	951	952	952
Mar 26	951	951	951	951	950	950	950	950	950	950	949	949	948	948	948	947	947	947	947	947	947	947	947	947	947	951	949
Mar 27	947	947	947	946	946	946	946	946	946	945	945	945	945	945	944	945	945	945	945	945	945	945	945	945	944	947	945
Mar 28	945	945	945	944	945	945	945	945	945	945	945	945	945	946	946	946	947	947	948	948	949	949	949	950	944	950	946
Mar 29	950	950	950	951	951	952	952	952	951	952	952	952	952	952	952	953	953	953	953	954	954	954	954	954	950	954	952
Mar 30	953	953	953	953	952	952	952	951	951	951	950	950	949	948	948	947	947	946	946	946	947	947	947	947	946	953	949
Mar 31	947	948	948	948	948	948	948	948	948	948	947	946	946	945	944	943	942	941	940	939	939	938	938	937	937	948	944
Diurnal Maximum	966	966	966	966	967	967	967	967	966	966	966	965	965	964	964	963	963	962	962	963	963	964	964	965			
Diurnal Average	951	951	951	951	951	951	951	951	952	952	951	951	951	951	951	950	950	950	951	951	951	951	951	951			

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 - March 2024

Summary of Hourly Averages

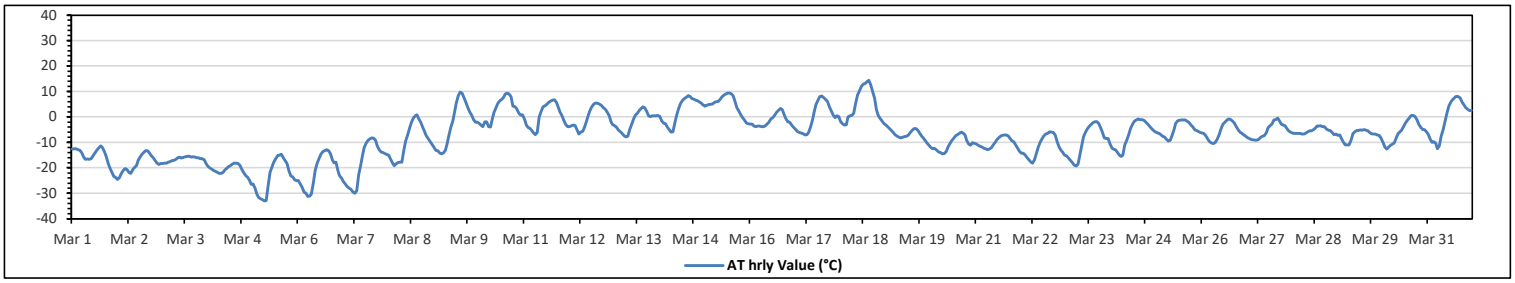
AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	14.4	°C	on Mar 18 at hr 15	Hours in Service:	744	
Maximum Daily Value:	4.9	°C	on Mar 15	Hours of Data:	744	
Minimum Hourly Value:	-33.0	°C	on Mar 5 at hr 6	Hours of Missing Data:	0	
Minimum Daily Value:	-23.4	°C	on Mar 5	Hours of Calibration:	0	
Monthly Average:	-7.3	°C		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	-12.6	-12.4	-12.5	-12.8	-13.2	-14.1	-15.9	-16.6	-16.5	-16.6	-16.4	-15.2	-14.1	-13	-12.1	-11.4	-12	-13.5	-15.5	-18.2	-20.2	-21.7	-23.4	-23.7	-23.7	-11.4	-15.6
Mar 2	-24.6	-24	-22.3	-21.1	-20.3	-20.6	-21.7	-22.1	-20.6	-19.8	-19	-17	-15.8	-14.7	-13.8	-13.3	-13.3	-14.1	-15.2	-16.1	-17.1	-18.2	-18.7	-18.3	-24.6	-13.3	-18.4
Mar 3	-18.3	-18.2	-18.1	-17.8	-17.5	-17.2	-17	-16.6	-16.1	-15.8	-16.2	-15.9	-15.6	-15.5	-15.4	-15.8	-15.7	-15.8	-16.1	-16.1	-16.3	-16.4	-16.8	-18.3	-18.3	-15.4	-16.6
Mar 4	-19.4	-20.1	-20.5	-21	-21.4	-21.8	-22.1	-22.2	-21.8	-20.8	-20.2	-19.5	-19.1	-18.5	-18.1	-18.1	-18.3	-19	-20.6	-21.9	-23	-23.7	-25	-26.5	-26.5	-18.1	-20.9
Mar 5	-26.3	-28	-30.4	-31.6	-32.1	-32.4	**-33**	-32.9	-27	-21.7	-19.7	-17.6	-16.3	-15.1	-14.9	-14.6	-15.9	-17.1	-18.3	-21.2	-23.1	-23.5	-24.7	-25.1	**-33.0**	-14.6	**-23.4**
Mar 6	-24.9	-26.2	-27.6	-29.5	-30	-31.2	-31	-30.4	-26.2	-21.1	-18.3	-16.3	-14.7	-13.6	-13.3	-12.9	-13.3	-14.5	-16.9	-18	-17.8	-21.1	-23	-24	-31.2	-12.9	-21.5
Mar 7	-25.4	-26.3	-27.3	-28	-28.4	-29.5	-29.9	-29	-22.7	-19.1	-15.1	-12.1	-10.3	-9.2	-8.6	-8.2	-8.3	-9.3	-11.3	-12.8	-13.7	-14	-14.4	-14.8	-29.9	-8.2	-17.8
Mar 8	-15	-16.6	-18.2	-19.1	-18.4	-17.9	-17.7	-17.7	-13.2	-9.4	-7	-4.4	-2.1	-0.4	0.4	0.9	-0.8	-2	-3.7	-5.5	-7.3	-8.4	-9.6	-10.8	-19.1	0.9	-9.3
Mar 9	-11.9	-13.1	-13.3	-14.1	-14.5	-14.1	-13.1	-10.8	-7.2	-4.1	-1.7	1.5	5.5	8.2	9.8	9.4	7.6	5.7	3.8	2	0.7	-1	-2	-2.1	-14.5	9.8	-2.9
Mar 10	-2.4	-3.2	-3.9	-1.9	-1.9	-3.8	-4	-0.5	1.9	3.7	5.3	6.4	6.9	7.8	9	9.3	9.1	8	4.2	4.1	3.2	1.6	0.7	0.8	-4.0	9.3	2.5
Mar 11	-0.8	-3.1	-4.2	-4.4	-5.4	-6.3	-6.9	-6.1	-0.1	2.1	4	4.3	5	5.7	6.3	6.6	6.7	5.8	3.8	2	0.6	-1.3	-2.9	-3.9	-6.9	6.7	0.3
Mar 12	-3.9	-3.4	-3.1	-3.3	-4.9	-6.7	-5.9	-5.7	-4	-1.7	0.4	2.6	4.1	5.1	5.5	5.3	5	4.5	3.7	3	1.8	0.4	-2	-3	-6.7	5.5	-0.3
Mar 13	-3.4	-4.1	-5.1	-5.7	-6.5	-7.3	-7.8	-7.6	-5	-2.9	-0.8	0.7	1.5	2.6	3.4	3.9	3.7	2.3	0.5	0.1	0.4	0.4	0.5	0.6	-7.8	3.9	-1.5
Mar 14	0.2	-1.5	-2.4	-2.7	-4.1	-5.1	-6	-5.8	-2.3	0.8	3.3	5.3	6.5	7.3	7.8	8.4	8	7.3	7	6.6	6.4	5.9	5.4	4.8	-6.0	8.4	2.5
Mar 15	4.2	4.6	4.9	5	5.1	5.7	6	6.1	7	8	8.6	9	9.3	9.4	9.2	8.4	6.1	3.7	2.4	0.9	-0.2	-1.3	-2.5	-2.7	-2.7	9.4	**4.9**
Mar 16	-2.8	-2.8	-3.5	-3.8	-3.6	-3.5	-3.9	-3.9	-3.4	-2.7	-2	-0.8	-0.2	0.7	1.9	2.6	3.3	2.8	1.1	-0.7	-1.9	-2.1	-3.1	-4.1	-4.1	3.3	-1.5
Mar 17	-4.8	-5.6	-6.1	-6.4	-6.6	-7	-6.9	-6.1	-4	-1.4	1.7	4.9	6.5	7.9	8.2	7.6	6.9	6.1	4	2.4	0.7	-0.2	0.5	0.2	-7.0	8.2	0.1
Mar 18	-1.8	-2.7	-3.2	-3	-0.1	0.5	0.6	1.5	5.3	8.7	10.3	12	13	13.2	13.8	**14.4**	12.6	10	7.5	2.8	0.5	-0.7	-1.7	-2.7	-3.2	**14.4**	4.6
Mar 19	-3.1	-3.8	-4.6	-5.3	-6.2	-7	-7.5	-8	-8.2	-8	-7.7	-7.6	-7.1	-6.1	-5.2	-4.6	-4.5	-5.3	-6.4	-7.4	-8.3	-9.4	-10.2	-11.1	-11.1	-3.1	-6.8
Mar 20	-12	-12.4	-12.3	-13	-13.7	-14	-14.5	-14.4	-13.6	-11.8	-10.6	-9.4	-8.5	-7.5	-6.9	-6.5	-5.9	-6.4	-7.1	-9.2	-10.7	-11.1	-10.1	-10.3	-14.5	-5.9	-10.5
Mar 21	-10.7	-11.1	-11.5	-11.8	-12.2	-12.5	-12.8	-12.6	-12.1	-11	-10	-8.9	-8.1	-7.5	-7.2	-7.1	-7	-7.4	-8.3	-9.4	-9.7	-10.9	-12.2	-13.5	-13.5	-7.0	-10.2
Mar 22	-14.3	-14.3	-14.9	-16.1	-16.9	-17.7	-18.2	-16.8	-14.2	-11.8	-9.8	-8.4	-7.5	-6.7	-6.5	-5.8	-5.9	-6.1	-7.2	-9.8	-11.9	-13.2	-13.9	-14.9	-18.2	-5.8	-11.8
Mar 23	-15.2	-16.2	-17	-17.9	-18.9	-19.3	-18.6	-14.8	-10.9	-7.9	-6.1	-4.7	-3.7	-2.9	-2.3	-1.9	-1.8	-2.5	-4.1	-6	-8.2	-8.5	-8.4	-10.7	-19.3	-1.8	-9.5
Mar 24	-12.2	-12.7	-12.9	-13.9	-15	-15.5	-14.9	-11	-9.2	-7	-4.5	-2.9	-1.7	-1.2	-0.8	-1	-1.1	-1.4	-1.9	-2.7	-3.5	-4.4	-5.2	-5.8	-15.5	-0.8	-6.8
Mar 25	-6.2	-6.5	-6.9	-7.6	-7.9	-8.7	-9.5	-9.2	-7.2	-5	-2.6	-1.5	-1.3	-1.2	-1.2	-1.2	-1.7	-2.2	-3.1	-4	-5.1	-5.3	-5.6	-6.1	-9.5	-1.2	-4.9
Mar 26	-6.3	-6.5	-7.3	-8.6	-9.7	-10.2	-10.5	-9.9	-8.7	-6.9	-4.5	-2.8	-2	-1.3	-0.8	-0.9	-1.5	-2.3	-3.7	-5	-5.9	-6.4	-6.9	-7.5	-10.5	-0.8	-5.7
Mar 27	-8.1	-8.5	-8.8	-9	-9.1	-9.1	-8.8	-8.1	-7.6	-7.3	-6.3	-4.2	-3.4	-2.8	-1.2	-1	-0.4	-1.7	-2.8	-3.1	-3.4	-4.4	-5.5	-5.9	-9.1	-0.4	-5.4
Mar 28	-6.4	-6.5	-6.5	-6.5	-6.5	-6.8	-6.8	-6.3	-5.8	-5.5	-5.5	-5.1	-4.4	-3.6	-3.5	-3.4	-3.8	-3.9	-4.7	-5.2	-5.4	-6.1	-6.9	-6.8	-6.9	-3.4	-5.5
Mar 29	-7.2	-7.1	-8.5	-9.8	-10.9	-11	-10.9	-9.2	-6.6	-5.8	-5.4	-5.3	-5.1	-5.2	-4.9	-5.2	-5.5	-6.1	-6.6	-6.7	-6.8	-7	-7.2	-8.3	-11.0	-4.9	-7.2
Mar 30	-9.9	-11.9	-12.6	-11.8	-11.1	-10.7	-10.2	-8.3	-6.6	-5.9	-5.2	-3.8	-2.4	-1.3	-0.4	0.6	0.6	0.2	-1	-2.9	-4.1	-5	-4.9	-5.7	-12.6	0.6	-5.6
Mar 31	-6.8	-8.6	-10	-9.7	-10.3	-12.4	-11.4	-7.4	-4.9	-1.7	1.6	4.3	5.9	6.7	7.5	8.1	7.9	7.5	5.9	4.7	3.6	2.9	2.5	2.6	-12.4	8.1	-0.5
Diurnal Maximum	4.2	4.6	4.9	5.0	5.1	5.7	6.0	6.1	7.0	8.7	10.3	12.0	13.0	13.2	13.8	14.4	12.6	10.0	7.5	6.6	6.4	5.9	5.4	4.8			
Diurnal Average	-10.1	-10.7	-11.3	-11.7	-12.0	-12.5	-12.6	-11.7	-9.4	-7.4	-5.8	-4.3	-3.2	-2.3	-1.8	-1.5	-1.9	-2.8	-4.2	-5.6	-6.6	-7.6	-8.3	-9.0			

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

Cold Lake South Station - March 2024

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

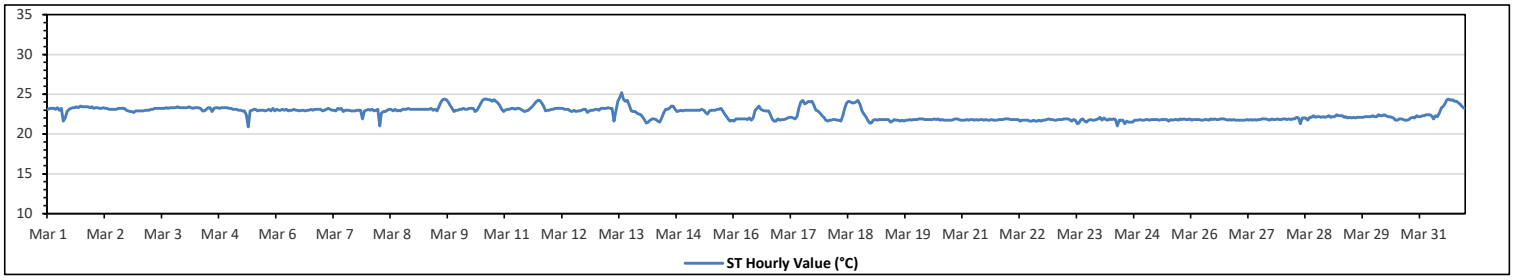
Maximum Hourly Value:	25.2	°C	on Mar 13 at hr 13	Hours in Service:	744	
Maximum Daily Value:	23.6	°C	on Mar 10	Hours of Data:	744	
Minimum Hourly Value:	20.9	°C	on Mar 5 at hr 9	Hours of Missing Data:	0	
Minimum Daily Value:	21.7	°C	on Mar 24	Hours of Calibration:	0	
Monthly Average:	22.5	°C		Operational 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
Mar 1	23.1	23.2	23.2	23.2	23.1	23.3	23.0	23.2	21.6	22.0	22.8	23.1	23.2	23.3	23.3	23.4	23.3	23.5	23.4	23.4	23.4	23.4	23.3	23.4	21.6	23.5	23.1
Mar 2	23.2	23.3	23.3	23.2	23.2	23.3	23.2	23.2	23.1	23.1	23.1	23.1	23.1	23.2	23.2	23.2	23.2	23.0	22.9	22.8	22.8	22.7	22.9	22.9	22.7	23.3	23.1
Mar 3	22.9	22.9	22.9	23.0	23.0	23.0	23.1	23.1	23.2	23.2	23.2	23.2	23.2	23.2	23.3	23.2	23.3	23.3	23.3	23.3	23.4	23.3	23.3	23.3	22.9	23.4	23.2
Mar 4	23.3	23.3	23.4	23.3	23.2	23.3	23.3	23.3	23.2	22.9	22.9	23.1	23.3	23.3	22.8	23.2	23.3	23.3	23.2	23.3	23.3	23.3	23.3	23.2	22.8	23.4	23.2
Mar 5	23.2	23.1	23.1	23.1	23.0	23.0	22.9	22.9	22.4	**20.9**	22.9	23.0	23.1	23.1	22.9	23.0	23.0	23.0	22.9	23.0	23.1	22.9	23.2	22.9	**20.9**	23.2	22.9
Mar 6	23.1	23.0	23.0	23.1	23.0	23.1	22.9	23.0	23.0	23.1	23.0	23.0	22.9	23.0	23.0	22.9	23.0	23.0	23.1	23.0	23.1	23.1	23.1	23.1	22.9	23.1	23.0
Mar 7	22.9	23.0	23.1	23.2	23.1	23.0	23.0	22.9	23.2	23.1	23.2	22.8	23.0	23.0	23.0	22.9	22.9	22.9	23.0	23.0	23.0	21.9	22.9	23.0	21.9	23.2	23.0
Mar 8	23.1	23.0	23.1	22.9	23.0	23.1	21.0	22.6	22.8	22.8	23.0	23.1	23.1	22.9	23.1	22.9	23.0	22.9	23.1	23.1	23.1	23.2	23.1	23.1	21.0	23.2	22.9
Mar 9	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.2	23.0	23.1	22.9	23.4	23.9	24.3	24.4	24.3	24.0	23.6	23.2	22.8	23.0	23.0	22.8	24.4	23.3
Mar 10	23.1	23.1	23.2	23.1	23.1	23.2	23.2	23.2	22.8	23.0	23.4	23.8	24.2	24.4	24.4	24.3	24.3	24.1	24.3	24.1	23.9	23.6	23.1	22.8	22.8	24.4	**23.6**
Mar 11	23.0	23.1	23.1	23.2	23.2	23.1	23.2	23.2	23.1	23.0	22.8	22.9	23.0	23.2	23.4	23.7	24.0	24.2	24.2	23.9	23.5	22.9	23.0	23.0	22.8	24.2	23.3
Mar 12	23.1	23.1	23.2	23.2	23.2	23.2	23.2	23.1	23.1	23.1	22.9	22.8	23.0	22.8	22.9	22.9	23.0	23.1	23.1	22.7	22.9	23.0	23.0	23.1	22.7	23.2	23.0
Mar 13	23.1	23.0	23.2	23.2	23.2	23.3	23.3	23.2	23.2	21.6	22.9	24.1	24.6	**25.2**	24.3	24.1	24.2	23.6	22.9	22.8	22.8	22.6	22.5	22.4	21.6	**25.2**	23.3
Mar 14	22.1	21.7	21.4	21.5	21.7	21.9	21.9	21.8	21.6	21.5	22.0	22.6	23.1	23.1	23.2	23.5	23.5	23.1	22.8	22.9	23.0	22.9	23.0	23.0	21.4	23.5	22.5
Mar 15	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.1	23.0	22.7	22.5	22.9	23.0	23.0	23.0	23.1	23.1	23.2	22.9	22.5	22.2	21.8	21.6	21.7	21.6	23.2	22.8
Mar 16	21.6	21.9	21.9	21.9	21.9	21.9	21.9	21.8	22.0	21.7	22.0	23.0	23.2	23.5	23.1	23.0	22.9	22.9	22.9	22.4	21.9	21.6	21.6	21.9	21.6	23.5	22.3
Mar 17	21.7	21.8	21.8	21.9	22.0	22.1	22.1	22.0	21.9	22.2	23.3	24.0	24.2	23.8	23.9	24.1	24.0	24.1	23.6	23.0	22.9	22.6	22.3	22.1	21.7	24.2	22.8
Mar 18	21.7	21.6	21.7	21.7	21.8	21.8	21.7	21.7	21.6	22.3	23.2	23.9	24.1	24.0	23.9	23.9	24.0	24.2	23.7	22.9	22.5	22.2	21.7	21.4	21.4	24.2	22.6
Mar 19	21.4	21.7	21.8	21.7	21.8	21.8	21.8	21.8	21.8	21.8	21.5	21.6	21.8	21.7	21.7	21.6	21.7	21.6	21.7	21.7	21.8	21.7	21.8	21.8	21.4	21.8	21.7
Mar 20	21.8	21.9	21.9	21.9	21.8	21.8	21.8	21.8	21.8	21.9	21.8	21.9	21.7	21.8	21.7	21.7	21.7	21.7	21.7	21.8	21.9	21.9	21.8	21.7	21.7	21.9	21.8
Mar 21	21.7	21.7	21.8	21.7	21.8	21.8	21.7	21.8	21.7	21.8	21.8	21.7	21.8	21.7	21.7	21.8	21.7	21.7	21.7	21.8	21.8	21.8	21.9	21.9	21.7	21.9	21.8
Mar 22	21.9	21.8	21.8	21.8	21.8	21.8	21.6	21.7	21.7	21.7	21.7	21.6	21.6	21.7	21.6	21.6	21.7	21.6	21.7	21.7	21.8	21.9	21.8	21.8	21.6	21.9	21.7
Mar 23	21.7	21.7	21.8	21.8	21.8	21.9	21.9	21.9	21.8	21.6	21.8	21.7	21.3	21.4	21.8	21.9	21.6	21.5	21.7	21.8	21.7	21.7	21.8	21.9	21.3	21.9	21.7
Mar 24	22.1	21.7	22.0	21.8	21.7	21.9	21.8	21.9	21.8	21.0	21.7	21.7	21.7	21.3	21.6	21.5	21.5	21.5	21.7	21.7	21.7	21.8	21.7	21.7	21.0	22.1	**21.7**
Mar 25	21.8	21.8	21.7	21.8	21.8	21.8	21.8	21.7	21.8	21.8	21.8	21.8	21.6	21.8	21.7	21.8	21.8	21.7	21.9	21.8	21.9	21.8	21.8	21.9	21.6	21.9	21.8
Mar 26	21.7	21.8	21.8	21.8	21.8	21.7	21.7	21.8	21.8	21.7	21.9	21.8	21.9	21.8	21.8	21.9	21.9	21.9	21.8	21.7	21.8	21.7	21.8	21.7	21.7	21.9	21.8
Mar 27	21.7	21.7	21.7	21.7	21.7	21.8	21.7	21.8	21.7	21.8	21.7	21.8	21.8	21.9	21.9	21.9	21.8	21.7	21.9	21.8	21.8	21.9	21.8	21.8	21.7	21.9	21.8
Mar 28	21.9	21.9	21.8	21.9	21.8	21.9	21.9	22.1	22.0	21.3	22.0	22.0	22.0	21.7	22.1	22.1	22.3	22.1	22.2	22.2	22.1	22.2	22.1	22.2	21.3	22.3	22.0
Mar 29	22.3	22.1	22.2	22.2	22.4	22.3	22.3	22.3	22.1	22.2	22.0	22.1	22.0	22.1	22.0	22.1	22.1	22.1	22.1	22.2	22.2	22.2	22.2	22.3	22.0	22.4	22.2
Mar 30	22.2	22.2	22.4	22.3	22.3	22.4	22.3	22.2	22.2	22.1	22.0	21.7	21.7	21.9	21.9	21.8	21.7	21.7	21.8	22.0	22.1	22.0	22.3	22.2	21.7	22.4	22.1
Mar 31	22.2	22.3	22.3	22.4	22.4	22.4	22.3	21.9	22.3	22.2	22.6	23.3	23.5	23.9	24.3	24.4	24.2	24.3	24.1	24.1	23.9	23.7	23.4	23.2	21.9	24.4	23.2
Diurnal Maximum	23.3	23.3	23.4	23.3	23.2	23.3	23.3	23.3	23.2	23.2	23.4	24.1	24.6	25.2	24.4	24.4	24.4	24.3	24.3	24.1	23.9	23.7	23.4	23.4			
Diurnal Average	22.4	22.4	22.4	22.4	22.4	22.5	22.4	22.4	22.3	22.2	22.5	22.7	22.7	22.8	22.8	22.8	22.8	22.8	22.8	22.6	22.6	22.5	22.5	22.4			

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

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

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



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

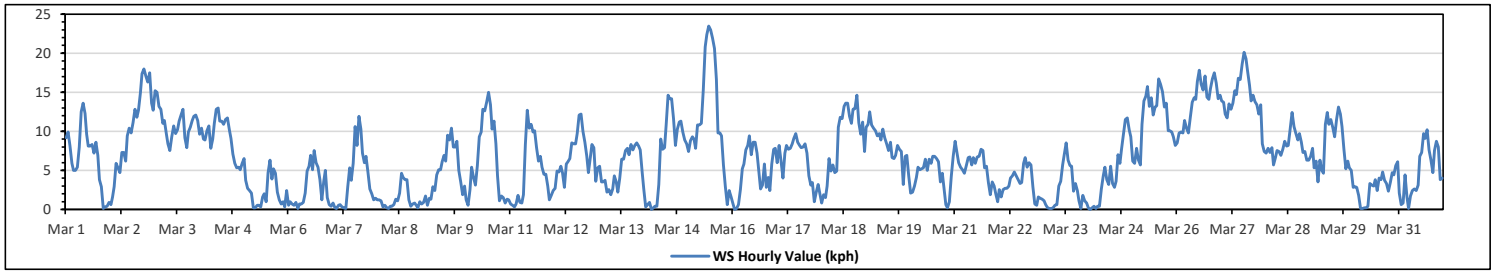
VECTOR WIND SPEED (VWS) in km/hr

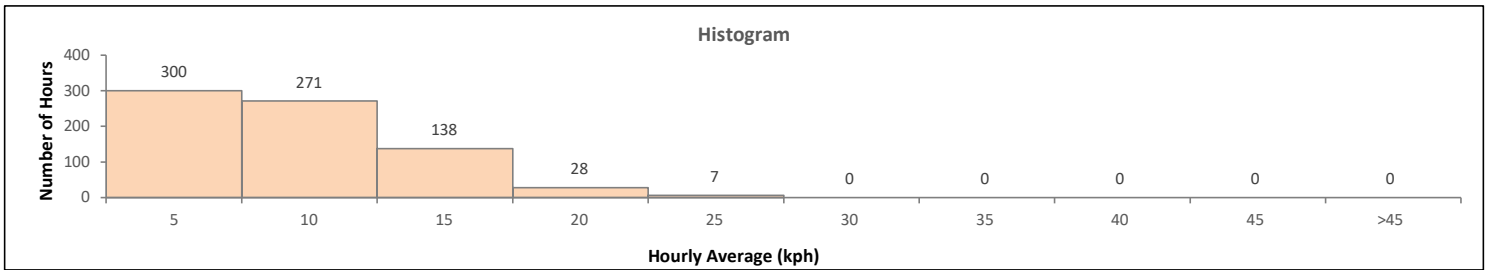
Maximum Hourly Value:	23.5	kph	on Mar 15 at hr 11	Hours in Service:	744	
Maximum Daily Value:	14.3	kph	on Mar 27	Hours of Data:	744	
Minimum Hourly Value:	0.0	kph	on Mar 14 at hr 4	Hours of Missing Data:	0	
Minimum Daily Value:	1.3	kph	on Mar 8	Hours of Calibration:	0	
Monthly Average:	1.4	kph		Operational 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			
Mar 1	9.2	9.9	8.1	5.9	5.0	5.0	5.4	8.0	12.5	13.6	12.3	9.6	8.1	8.1	8.3	7.2	8.6	6.9	3.8	2.9	0.1	0.3	0.4	0.9	0.1	13.6	6.7
Mar 2	0.6	1.6	2.9	5.9	5.3	4.7	7.3	7.3	6.2	9.4	10.4	9.8	11.1	12.8	11.8	12.7	14.9	17.4	18.0	17.1	16.3	17.5	13.6	12.7	0.6	18.0	10.3
Mar 3	15.2	15.0	13.2	12.8	11.0	11.4	9.7	8.4	7.5	9.3	10.7	9.7	10.2	11.3	12.1	12.8	9.2	7.9	9.9	10.5	11.4	11.9	12.1	11.4	7.5	15.2	11.0
Mar 4	9.6	10.4	9.0	8.9	10.1	10.7	7.8	9.0	11.0	12.8	13.0	11.3	11.3	10.9	11.5	11.7	10.2	9.1	7.1	5.9	5.3	5.4	5.1	5.9	5.1	13.0	9.3
Mar 5	6.5	3.7	2.7	2.4	2.1	0.2	0.2	0.5	0.5	0.3	1.6	2.0	1.0	4.7	6.3	3.9	5.2	4.6	2.2	1.2	0.7	1.0	0.3	2.4	0.2	6.5	2.3
Mar 6	0.5	1.0	0.7	0.5	0.9	0.1	0.7	0.7	0.9	2.1	4.9	5.5	6.9	5.1	7.5	6.0	5.4	3.8	1.2	3.6	5.0	1.5	0.6	0.4	0.1	7.5	2.7
Mar 7	0.8	0.2	0.1	0.5	0.6	0.3	0.2	0.1	2.9	5.3	3.7	5.9	10.6	8.2	11.9	10.3	7.2	6.0	6.8	4.8	2.6	2.0	1.2	1.4	0.1	11.9	3.9
Mar 8	1.2	1.2	1.1	0.3	0.5	0.2	0.1	0.4	0.4	0.6	1.3	1.1	2.1	4.6	4.1	3.8	3.8	1.2	0.4	0.7	0.8	0.5	0.2	1.0	0.1	4.6	**1.3**
Mar 9	0.7	0.9	1.7	0.5	1.4	1.3	2.9	2.4	4.4	5.1	5.1	6.1	6.9	6.2	9.5	8.9	10.4	8.0	8.0	8.7	5.0	3.5	1.9	3.0	0.5	10.4	4.7
Mar 10	1.2	0.5	2.5	5.4	4.1	3.1	5.6	9.3	9.9	12.8	12.6	13.7	15.0	13.4	10.3	11.3	8.4	4.3	1.1	1.7	1.5	0.8	1.3	1.2	0.5	15.0	6.3
Mar 11	0.7	0.5	0.3	0.7	1.8	0.9	0.8	1.9	8.3	12.7	10.4	10.9	9.9	10.1	7.9	6.2	6.8	5.4	4.5	4.5	3.0	1.2	1.8	2.4	0.3	12.7	4.7
Mar 12	2.7	4.9	4.8	5.5	4.7	2.8	5.8	6.1	6.5	8.5	8.4	8.4	9.7	12.1	12.2	10.0	8.6	6.8	4.7	6.6	8.3	7.9	3.6	5.3	2.7	12.2	6.9
Mar 13	5.5	3.5	3.5	3.7	2.2	2.5	1.9	2.6	4.3	3.5	2.2	4.0	6.4	6.4	7.5	7.8	7.0	8.3	7.6	8.2	8.5	8.1	7.6	4.8	1.9	8.5	5.3
Mar 14	2.6	0.3	0.6	0.9	**0.0**	0.2	0.4	0.4	3.2	9.0	7.7	7.9	10.8	14.6	14.2	14.2	11.6	8.2	10.3	11.2	11.3	9.9	8.9	8.4	**0.0**	14.6	7.0
Mar 15	7.4	8.8	9.3	9.0	7.8	10.8	10.8	11.0	15.3	20.8	22.4	**23.5**	23.0	21.9	20.6	16.6	9.8	9.8	9.4	5.7	2.9	0.6	2.4	1.6	0.6	**23.5**	11.7
Mar 16	0.7	**0.0**	0.1	0.6	2.5	5.2	5.8	7.6	8.2	9.4	7.0	8.6	8.6	7.2	4.7	2.6	3.1	5.8	2.8	4.1	2.4	5.8	7.7	7.8	**0.0**	9.4	4.9
Mar 17	6.0	8.2	6.2	4.0	7.2	8.2	7.7	7.8	8.4	9.1	9.7	8.6	8.2	7.9	8.0	8.4	7.2	4.3	3.1	3.4	1.0	2.2	3.2	2.1	1.0	9.7	6.3
Mar 18	0.8	1.9	1.5	3.0	6.5	4.9	5.7	4.7	4.9	10.5	11.8	11.6	13.2	13.6	13.6	11.9	11.0	12.8	12.9	14.6	11.1	9.6	11.2	7.4	0.8	14.6	8.8
Mar 19	10.5	10.9	12.5	10.8	10.4	10.1	9.4	9.7	8.9	10.3	9.2	8.4	7.5	8.6	6.6	6.5	6.9	8.2	7.7	7.4	3.2	6.8	6.9	4.3	3.2	12.5	8.4
Mar 20	2.1	2.2	3.0	4.1	5.4	5.1	5.2	5.3	6.4	5.0	6.4	5.9	6.8	6.8	6.5	6.1	3.5	4.6	2.8	0.6	0.2	1.0	4.2	6.8	0.2	6.8	4.4
Mar 21	8.7	7.2	6.0	5.4	5.1	4.6	5.6	6.6	6.7	5.7	6.6	5.9	6.7	6.8	7.7	7.5	5.3	5.5	3.4	1.9	3.5	3.0	2.0	1.0	1.0	8.7	5.4
Mar 22	2.5	1.6	2.5	2.7	2.7	3.0	4.0	4.3	4.8	4.3	3.8	3.3	3.4	5.9	6.6	5.4	6.0	5.7	2.9	0.7	0.5	1.6	1.4	1.3	0.5	6.6	3.4
Mar 23	1.1	0.6	0.2	0.1	0.1	0.2	0.5	0.6	3.0	3.6	5.7	7.0	8.5	6.3	5.6	5.5	2.3	3.3	2.4	1.1	0.1	1.8	1.1	0.8	0.1	8.5	2.6
Mar 24	0.1	**0.0**	0.2	0.4	0.1	0.4	0.4	2.6	4.3	5.4	3.8	3.2	5.5	3.3	2.8	3.6	7.0	5.9	7.7	9.6	11.5	11.7	10.2	9.3	**0.0**	11.7	4.5
Mar 25	6.2	5.9	7.8	6.3	5.7	10.9	13.9	14.5	15.7	13.2	14.3	12.1	13.1	13.3	16.7	16.0	15.1	13.1	13.6	10.1	10.1	9.9	9.3	8.2	5.7	16.7	11.5
Mar 26	8.5	9.8	9.9	9.8	11.4	10.4	9.8	11.8	13.7	14.3	14.1	16.4	17.8	16.0	15.3	17.1	14.4	14.1	15.5	16.7	17.5	16.2	14.2	14.6	8.5	17.8	13.7
Mar 27	13.9	13.7	12.2	11.7	13.5	12.8	13.6	15.2	14.7	16.8	16.6	18.6	20.1	19.3	17.7	15.9	13.9	14.6	13.8	13.4	12.2	13.4	8.4	7.4	7.4	20.1	**14.3**
Mar 28	7.2	7.8	7.3	7.9	5.7	6.6	7.5	7.4	6.9	7.7	8.7	8.1	8.2	10.3	12.4	10.6	9.7	8.9	9.7	8.6	7.3	7.4	6.3	6.3	5.7	12.4	8.1
Mar 29	6.8	7.8	5.3	6.2	3.5	6.3	5.0	4.6	10.9	12.4	10.9	11.5	10.5	9.3	11.5	13.1	12.2	10.6	7.7	5.2	6.2	5.3	5.0	2.8	2.8	13.1	7.9
Mar 30	2.9	2.8	1.8	0.1	0.1	0.2	0.2	0.4	3.3	3.1	3.0	3.8	2.4	4.0	3.8	4.8	3.7	3.3	2.3	3.4	4.7	4.4	5.6	6.1	0.1	6.1	2.9
Mar 31	2.1	0.6	0.8	4.4	1.6	0.1	1.7	2.4	2.6	2.4	3.1	6.8	7.3	9.7	9.1	10.2	7.6	6.3	4.7	7.5	8.7	8.0	3.8	4.0	0.1	10.2	4.8
Diurnal Maximum	15.2	15.0	13.2	12.8	13.5	12.8	13.9	15.2	15.7	20.8	22.4	23.5	23.0	21.9	20.6	17.1	15.1	17.4	18.0	17.1	17.5	17.5	14.2	14.6			
Diurnal Average	4.7	4.6	4.4	4.5	4.5	4.6	5.0	5.6	7.0	8.4	8.4	8.7	9.4	9.6	9.8	9.3	8.3	7.6	6.7	6.5	5.9	5.8	5.2	4.9			

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

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



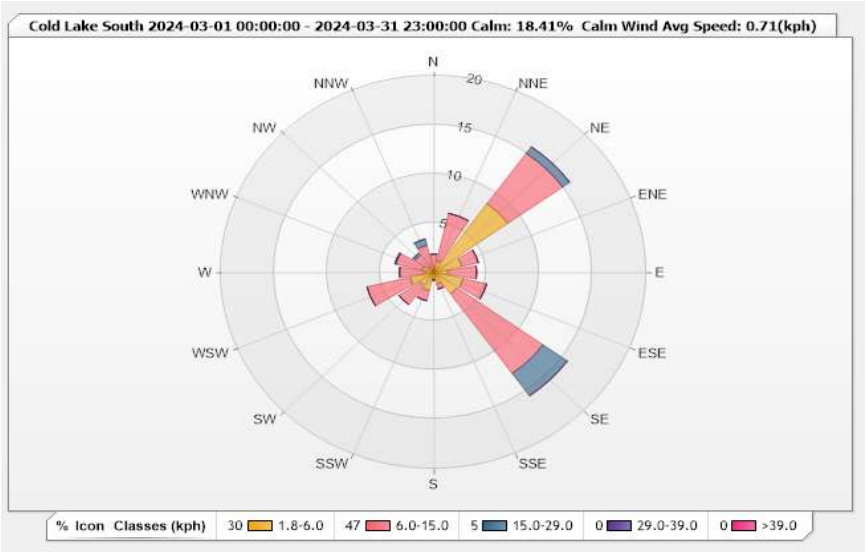


Station: Cold Lake South Monitor: WDS [kph] Monthly: 03-2024

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

Calm (WS<1.8kph): 18.41% 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	0.27	1.61	0	0	0	1.88
NNE	1.21	4.97	0	0	0	6.18
NE	8.6	6.32	0.81	0	0	15.73
ENE	2.69	1.61	0	0	0	4.3
E	1.34	2.69	0	0	0	4.03
ESE	2.82	2.28	0	0	0	5.1
SE	2.69	9.95	2.82	0	0	15.46
SSE	1.21	0.54	0	0	0	1.75
S	0.67	0.13	0	0	0	0.8
SSW	1.88	1.08	0	0	0	2.96
SW	1.61	2.42	0	0	0	4.03
WSW	2.28	4.17	0	0	0	6.45
W	0.81	2.42	0	0	0	3.23
WNW	1.08	2.55	0.13	0	0	3.76
NW	0.67	1.48	0.27	0	0	2.42
NNW	0.27	2.55	0.67	0	0	3.49
Summary	30.1	46.77	4.7	0	0	81.57



Lakeland Industry & Community Association

Cold Lake South Station - March 2024

Summary of Hourly Averages

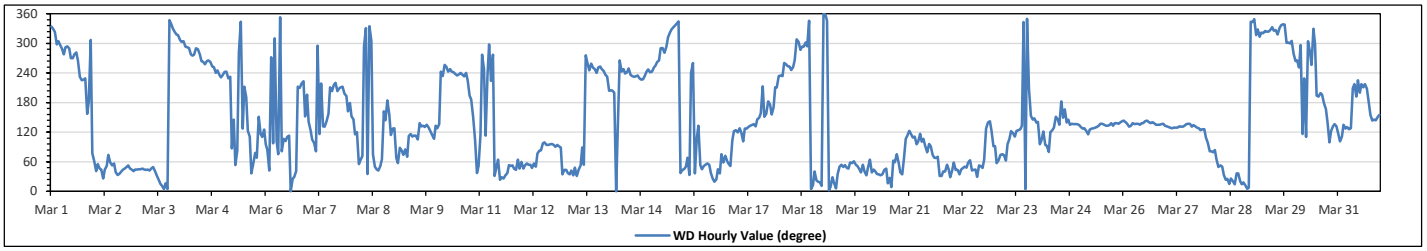
WIND DIRECTION (VWD) in sector

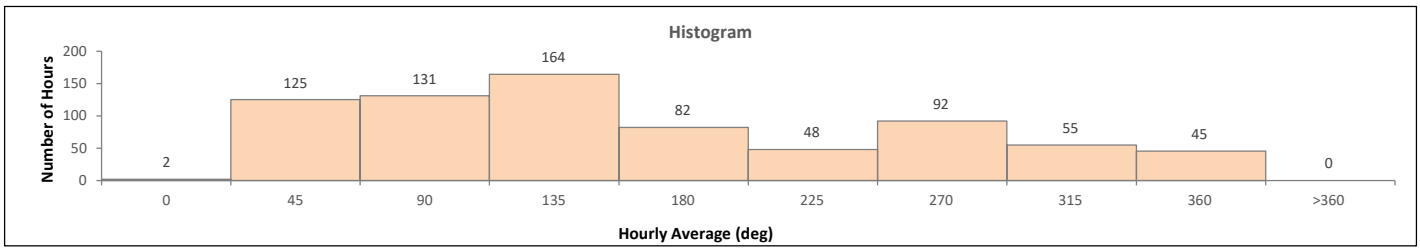
Monthly Average:	81 (E)	degree	
Hours in Service:	744		
Hours of Data:	744		
Hours of Missing Data:	0		
Hours of Calibration:	0		
Operational Uptime:	100.0		

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
Mar 1	NNW	NNW	NW	WNW	WNW	WNW	WNW	W	WNW	WNW	WNW	W	W	W	W	W	SW	SW	SW	SW	SSE	S	NW	ENE	285	WNW
Mar 2	ENE	NE	NE	NE	NE	NNE	NE	NE	ENE	ENE	NE	NE	NE	NNE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	46	NE
Mar 3	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NNE	N	NNE	N	NNW	NNW	NNW	NW	NW	NW	18	NNE
Mar 4	NW	WNW	WNW	WNW	WNW	WNW	W	W	W	WNW	WNW	W	W	W	WSW	W	W	W	WSW	WSW	WSW	WSW	SW	SW	275	W
Mar 5	SW	WSW	WSW	SW	SW	E	SE	NE	E	W	NNW	SE	SSW	S	ESE	ESE	NE	NE	ENE	ENE	SSE	ESE	ESE	SE	148	SE
Mar 6	E	E	NE	W	E	NW	E	ENE	N	E	ESE	E	ESE	ESE	N	NNE	NNE	NE	SSW	SSW	SW	SW	SSE	SSW	79	ENE
Mar 7	SE	ESE	ESE	E	E	WNW	ESE	SW	SE	SE	SE	SSE	SSW	SSW	SW	SW	SSW	SSW	SSW	SSW	SSW	S	SSE	S	196	SSW
Mar 8	SSE	SE	ESE	ESE	NE	ENE	ENE	WNW	NNW	NE	NNW	WNW	ENE	NE	NE	NE	NE	ENE	SSE	SE	S	SSE	ESE	SE	62	ENE
Mar 9	SE	ENE	ENE	E	E	ENE	E	ENE	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	SE	SE	SE	SE	ESE	ESE	ESE	SE	120	ESE
Mar 10	SE	SE	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	WSW	SW	SW	WSW	SW	SSW	S	SSE	ESE	NE	NE	237	SW
Mar 11	ESE	W	WSW	ESE	SW	WNW	SW	W	NNE	NE	ENE	NNE	NNE	NNE	NNE	NE	NE	NE	NE	NE	NE	ENE	NE	ENE	40	NE
Mar 12	NE	NE	NE	NE	NE	NE	NE	NE	ENE	E	E	E	E	E	E	E	E	E	E	E	E	E	NE	NE	80	E
Mar 13	NE	NE	NE	NE	NNE	NE	NNE	NE	NE	E	NE	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	261	W
Mar 14	SSW	SSW	SSW	SSW	N	SE	W	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	235	SW
Mar 15	WSW	WSW	WSW	W	W	WNW	WNW	W	WNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NE	NE	NE	NE	ENE	NNE	WSW	WSW	319	NW
Mar 16	NE	ESE	SE	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NE	NE	ENE	ENE	ENE	ENE	NE	NE	ESE	ESE	ESE	56	NE
Mar 17	ESE	SE	ESE	E	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSW	SSE	SSE	S	S	SSE	S	SSW	SSW	SW	145	SE
Mar 18	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	W	NW	WNW	WNW	WNW	WNW	WNW	WNW	NNW	N	NNE	NE	NNE	NNE	NNE	NNE	323	NW
Mar 19	N	N	NNW	N	N	NNE	NNE	N	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NE	31	NNE
Mar 20	NNE	NE	ENE	NE	NE	NE	NE	NE	NNE	NE	NE	NE	NNE	NNE	N	ENE	ENE	ENE	ENE	NE	NE	ENE	ESE	ESE	46	NE
Mar 21	ESE	ESE	ESE	ESE	E	E	ESE	E	ESE	E	ENE	E	E	ENE	ENE	ENE	ENE	NNE	NNE	NE	NE	NE	NE	NNE	87	E
Mar 22	NE	ENE	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	NE	NE	NE	NNE	NE	NE	NE	ENE	SE	SE	SE	ESE	E	51	NE
Mar 23	E	ENE	ENE	ENE	ENE	ENE	ENE	E	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	NNW	N	N	SSW	SSE	SE	SE	SE	114	ESE
Mar 24	SE	E	ESE	ESE	E	E	E	ESE	ESE	SE	SSE	SE	SE	S	SSE	SSE	SE	SE	SE	SE	SE	SE	SE	SE	138	SE
Mar 25	SE	SE	SE	ESE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	133	SE
Mar 26	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	137	SE
Mar 27	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	SE	ESE	E	130	SE
Mar 28	E	E	ENE	E	ENE	NE	NE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NE	NE	NNE	NNE	NNE	NNE	N	N	NNW	33	NNE
Mar 29	NNW	NNW	NW	NNW	NW	NW	NW	NW	NW	NW	NW	NNW	NW	NW	NW	NNW	NNW	NNW	NNW	WNW	WNW	WNW	WNW	W	326	NW
Mar 30	W	W	WSW	WNW	ESE	SW	ESE	WNW	W	WSW	NNW	WNW	SSW	S	SSW	SSW	S	SSE	SE	E	ESE	SE	SE	SE	182	S
Mar 31	ESE	E	ESE	SE	SE	SE	SE	SE	SSW	SW	S	SW	SSW	SW	SSW	SW	SSW	S	SSE	SE	SE	SE	SSE	SSE	180	S

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 - March 2024

Summary of Hourly Averages

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

WIND SPEED

Maximum Hourly Value:	23.5	kph	on Mar 15 at hr 11	Hours in Service:	744
Maximum Daily Value:	14.3	kph	on Mar 27	Hours of Data:	744
Minimum Hourly Value:	0.0	kph	on Mar 14 at hr 4	Hours of Missing Data:	0
Minimum Daily Value:	1.3	kph	on Mar 8	Hours of Calibration:	0
Monthly Average:	1.4	kph		Operational Uptime:	100.0

WIND DIRECTION

Monthly Average: 81 degree (E)

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			
Mar 1	9.2	9.9	8.1	5.9	5.0	5.0	5.4	8.0	12.5	13.6	12.3	9.6	8.1	8.1	8.3	7.2	8.6	6.9	3.8	2.9	0.1	0.3	0.4	0.9	0.1	13.6	6.7
	NNW	NNW	NW	WNW	WNW	WNW	WNW	W	WNW	WNW	WNW	W	W	W	W	W	SW	SW	SW	SW	SSE	S	NW	ENE			285(WNW)
Mar 2	0.6	1.6	2.9	5.9	5.3	4.7	7.3	7.3	6.2	9.4	10.4	9.8	11.1	12.8	11.8	12.7	14.9	17.4	18.0	17.1	16.3	17.5	13.6	12.7	0.6	18.0	10.3
	ENE	NE	NE	NE	NE	NNE	NE	NE	ENE	ENE	NE	NE	NE	NNE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE			46(NE)
Mar 3	15.2	15.0	13.2	12.8	11.0	11.4	9.7	8.4	7.5	9.3	10.7	9.7	10.2	11.3	12.1	12.8	9.2	7.9	9.9	10.5	11.4	11.9	12.1	11.4	7.5	15.2	11.0
	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NNE	N	NNE	N	NNW	NNW	NNW	NW	NW	NW			18(NNE)
Mar 4	9.6	10.4	9.0	8.9	10.1	10.7	7.8	9.0	11.0	12.8	13.0	11.3	11.3	10.9	11.5	11.7	10.2	9.1	7.1	5.9	5.3	5.4	5.1	5.9	5.1	13.0	9.3
	NW	WNW	WNW	WNW	WNW	WNW	W	W	W	WNW	WNW	W	W	W	WSW	W	W	W	WSW	WSW	WSW	WSW	SW	SW			275(W)
Mar 5	6.5	3.7	2.7	2.4	2.1	0.2	0.2	0.5	0.5	0.3	1.6	2.0	1.0	4.7	6.3	3.9	5.2	4.6	2.2	1.2	0.7	1.0	0.3	2.4	0.2	6.5	2.3
	SW	WSW	WSW	SW	SW	E	SE	NE	E	W	NNW	SE	SSW	S	ESE	ESE	NE	NE	ENE	ENE	SSE	ESE	ESE	SE			148(SE)
Mar 6	0.5	1.0	0.7	0.5	0.9	0.1	0.7	0.7	0.9	2.1	4.9	5.5	6.9	5.1	7.5	6.0	5.4	3.8	1.2	3.6	5.0	1.5	0.6	0.4	0.1	7.5	2.7
	E	E	NE	W	E	NW	E	ENE	N	E	ESE	E	ESE	ESE	N	NNE	NNE	NE	SSW	SSW	SW	SW	SSE	SSW			79(ENE)
Mar 7	0.8	0.2	0.1	0.5	0.6	0.3	0.2	0.1	2.9	5.3	3.7	5.9	10.6	8.2	11.9	10.3	7.2	6.0	6.8	4.8	2.6	2.0	1.2	1.4	0.1	11.9	3.9
	SE	ESE	ESE	E	E	WNW	ESE	SW	SE	SE	SE	SSE	SSW	SSW	SW	SW	SSW	SSW	SSW	SSW	SSW	S	SSE	S			196(SSW)
Mar 8	1.2	1.2	1.1	0.3	0.5	0.2	0.1	0.4	0.4	0.6	1.3	1.1	2.1	4.6	4.1	3.8	3.8	1.2	0.4	0.7	0.8	0.5	0.2	1.0	0.1	4.6	**1.3**
	SSE	SE	ESE	ESE	NE	ENE	ENE	WNW	NNW	NE	NNW	WNW	ENE	NE	NE	NE	NE	ENE	SSE	SE	S	SSE	ESE	SE			62(ENE)
Mar 9	0.7	0.9	1.7	0.5	1.4	1.3	2.9	2.4	4.4	5.1	5.1	6.1	6.9	6.2	9.5	8.9	10.4	8.0	8.0	8.7	5.0	3.5	1.9	3.0	0.5	10.4	4.7
	SE	ENE	ENE	E	E	ENE	E	ENE	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	SE	SE	SE	SE	ESE	ESE	ESE	SE			120(ESE)
Mar 10	1.2	0.5	2.5	5.4	4.1	3.1	5.6	9.3	9.9	12.8	12.6	13.7	15.0	13.4	10.3	11.3	8.4	4.3	1.1	1.7	1.5	0.8	1.3	1.2	0.5	15.0	6.3
	SE	SE	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	WSW	SW	SW	WSW	SW	SSW	S	SSE	ESE	NE	NE			237(SW)
Mar 11	0.7	0.5	0.3	0.7	1.8	0.9	0.8	1.9	8.3	12.7	10.4	10.9	9.9	10.1	7.9	6.2	6.8	5.4	4.5	4.5	3.0	1.2	1.8	2.4	0.3	12.7	4.7
	ESE	W	WSW	ESE	SW	WNW	SW	W	NNE	NE	ENE	NNE	NNE	NNE	NNE	NE	NE	NE	NE	NE	NE	ENE	NE	ENE			40(NE)
Mar 12	2.7	4.9	4.8	5.5	4.7	2.8	5.8	6.1	6.5	8.5	8.4	8.4	9.7	12.1	12.2	10.0	8.6	6.8	4.7	6.6	8.3	7.9	3.6	5.3	2.7	12.2	6.9
	NE	NE	NE	NE	NE	NE	NE	NE	ENE	E	E	E	E	E	E	E	E	E	E	E	E	E	NE	NE			80(E)
Mar 13	5.5	3.5	3.5	3.7	2.2	2.5	1.9	2.6	4.3	3.5	2.2	4.0	6.4	6.4	7.5	7.8	7.0	8.3	7.6	8.2	8.5	8.1	7.6	4.8	1.9	8.5	5.3
	NE	NE	NE	NE	NNE	NE	NNE	NE	NE	E	NE	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW			261(W)
Mar 14	2.6	0.3	0.6	0.9	**0.0**	0.2	0.4	0.4	3.2	9.0	7.7	7.9	10.8	14.6	14.2	14.2	11.6	8.2	10.3	11.2	11.3	9.9	8.9	8.4	**0.0**	14.6	7.0
	SSW	SSW	SSW	SSW	N	SE	W	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW			235(SW)
Mar 15	7.4	8.8	9.3	9.0	7.8	10.8	10.8	11.0	15.3	20.8	22.4	**23.5**	23.0	21.9	20.6	16.6	9.8	9.8	9.4	5.7	2.9	0.6	2.4	1.6	0.6	**23.5**	11.7
	WSW	WSW	WSW	W	W	WNW	WNW	W	WNW	NW	NW	NNW	NNW	NNW	NNW	NNW	NE	NE	NE	NE	ENE	NNE	WSW	WSW			319(NW)
Mar 16	0.7	**0.0**	0.1	0.6	2.5	5.2	5.8	7.6	8.2	9.4	7.0	8.6	8.6	7.2	4.7	2.6	3.1	5.8	2.8	4.1	2.4	5.8	7.7	7.8	**0.0**	9.4	4.9
	NE	ESE	SE	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NE	NE	ENE	ENE	ENE	ENE	NE	NE	ESE	ESE	ESE			56(NE)
Mar 17	6.0	8.2	6.2	4.0	7.2	8.2	7.7	7.8	8.4	9.1	9.7	8.6	8.2	7.9	8.0	8.4	7.2	4.3	3.1	3.4	1.0	2.2	3.2	2.1	1.0	9.7	6.3
	ESE	SE	ESE	E	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSW	SSE	SSE	S	S	SSE	S	SSW	SSW	SW			145(SE)
Mar 18	0.8	1.9	1.5	3.0	6.5	4.9	5.7	4.7	4.9	10.5	11.8	11.6	13.2	13.6	13.6	11.9	11.0	12.8	12.9	14.6	11.1	9.6	11.2	7.4	0.8	14.6	8.8
	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	W	NW	WNW	WNW	WNW	WNW	WNW	WNW	NNW	N	NNE	NE	NNE	NNE	NNE	NNE			323(NW)
Mar 19	10.5	10.9	12.5	10.8	10.4	10.1	9.4	9.7	8.9	10.3	9.2	8.4	7.5	8.6	6.6	6.5	6.9	8.2	7.7	7.4	3.2	6.8	6.9	4.3	3.2	12.5	8.4
	N	N	NNW	N	N	NNE	NNE	N	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NE			31(NNE)
Mar 20	2.1	2.2	3.0	4.1	5.4	5.1	5.2	5.3	6.4	5.0	6.4	5.9	6.8	6.8	6.5	6.1	3.5	4.6	2.8	0.6	0.2	1.0	4.2	6.8	0.2	6.8	4.4
	NNE	NE	ENE	NE	NE	NE	NE	NE	NNE	NE	NE	NE	NNE	NNE	N	ENE	ENE	ENE	ENE	NE	NE	ENE	ESE	ESE			46(NE)
Mar 21	8.7	7.2	6.0	5.4	5.1	4.6	5.6	6.6	6.7	5.7	6.6	5.9	6.7	6.8	7.7	7.5	5.3	5.5	3.4	1.9	3.5	3.0	2.0	1.0	1.0	8.7	5.4
	ESE	ESE	ESE	ESE	E	E	ESE	E	ESE	E	ENE	E	E	ENE	ENE	ENE	ENE	NNE	NNE	NE	NE	NE	NE	NNE			87(E)
Mar 22	2.5	1.6	2.5	2.7	2.7	3.0	4.0	4.3	4.8	4.3	3.8	3.3	3.4	5.9	6.6	5.4	6.0	5.7	2.9	0.7	0.5	1.6	1.4	1.3	0.5	6.6	3.4
	NE	ENE	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	NE	NE	NE	NNE	NE	NE	NE	ENE	SE	SE	SE	ESE	E			51(NE)
Mar 23	1.1	0.6	0.2	0.1	0.1	0.2	0.5	0.6	3.0	3.6	5.7	7.0	8.5	6.3	5.6	5.5	2.3	3.3	2.4	1.1	0.1	1.8	1.1	0.8	0.1	8.5	2.6
	E	ENE	ENE	ENE	ENE	ENE	ENE	E	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	NNW	N	N	SSW	SSE	SE	SE	SE			114(ESE)
Mar 24	0.1	**0.0**	0.2	0.4	0.1	0.4	0.4	2.6	4.3	5.4	3.8	3.2	5.5	3.3	2.8	3.6	7.0	5.9	7.7	9.6	11.5	11.7	10.2	9.3	**0.0**	11.7	4.5
	SE	E	ESE	ESE	E	E	E	ESE	ESE	SE	SSE	SE	SE	S	SSE	SSE	SE	SE	SE	SE	SE	SE	SE	SE			138(SE)
Mar 25	6.2	5.9	7.8	6.3	5.7	10.9	13.9	14.5	15.7	13.2	14.3	12.1	13.1	13.3	16.7	16.0	15.1	13.1	13.6	10.1	10.1	9.9	9.3	8.2	5.7	16.7	11.5
	SE	SE	SE	ESE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE			133(SE)
Mar 26	8.5	9.8	9.9	9.8	11.4	10.4	9.8	11.8	13.7	14.3	14.1	16.4	17.8	16.0	15.3	17.1	14.4	14.1	15.5	16.7	17.5	16.2	14.2	14.6	8.5	17.8	13.7
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE			137(SE)
Mar 27	13.9	13.7	12.2	11.7	13.5	12.8	13.6	15.2	14.7	16.8	16.6	18.6	20.1	19.3	17.7	15.9	13.9	14.6	13.8	13.4	12.2	13.4	8.4	7.4	7.4	20.1	**14.3**
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	SE	ESE	E			130(SE)
Mar 28	7.2	7.8	7.3	7.9	5.7	6.6	7.5	7.4	6.9	7.7	8.7	8.1	8.2	10.3	12.4	10.6	9.7	8.9	9.7	8.6	7.3	7.4	6.3	6.3	5.7	12.4	8.1
	E	E	ENE	E	ENE	NE	NE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NE	NE	NNE	NNE	NNE	NNE	N	N	NNW			33(NNE)
Mar 29	6.8	7.8	5.3	6.2	3.5	6.3	5.0	4.6	10.9	12.4	10.9	11.5	10.5	9.3	11.5	13.1	12.2	10.6	7.7	5.2	6.2	5.3	5.0	2.8	2.8	13.1	7.9
	NNW	NNW	NW	NNW	NW	NW	NW	NW	NW	NW	NW	NNW	NW	NW	NW	NNW	NNW	NNW	NNW	WNW	WNW	WNW	W			326(NW)
Mar 30	2.9	2.8	1.8	0.1	0.1	0.2	0.2	0.4	3.3	3.1	3.0	3.8	2.4	4.0	3.8	4.8	3.7	3.3	2.3	3.4	4.7	4.4	5.6	6.1	0.1	6.1	2.9
	W	W	WSW	WNW	ESE	SW	ESE	WNW	W	WSW	NNW	WNW	SSW	S	SSW	SSW	S	SSE	SE	E	ESE	SE	SE	SE			182(S)
Mar 31	2.1	0.6	0.8	4.4	1.6	0.1	1.7	2.4	2.6	2.4	3.1	6.8	7.3	9.7	9.1	10.2	7.6	6.3	4.7	7.5	8.7	8.0	3.8	4.0	0.1	10.2	4.8
	ESE	E	ESE	SE	SE	SE	SE	SE	SSW	SW	S	SW	SSW	SW	SSW	SW	SSW	S	SSE	SE	SE	SE	SSE	SSE			180(S)

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 - March 2024

Summary of Hour Standard Deviations

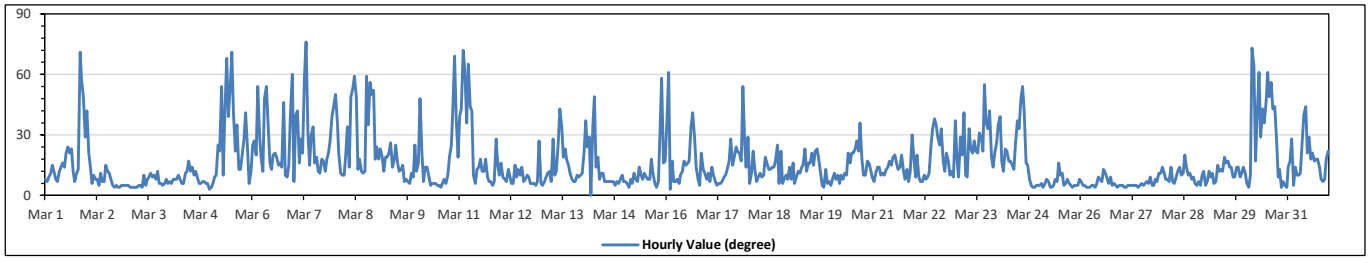
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	76 degree on Mar 7 at hr 7	Hours in Service:	744
		Hours of Data:	744
Minimum Hourly Value:	0 degree on Mar 14 at hr 4	Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
Mar 1	8	7	9	11	15	12	8	7	12	14	16	14	21	24	21	23	12	7	11	13	71	58	49	29	7	71
Mar 2	42	21	14	6	10	8	8	5	11	7	7	15	12	11	8	5	4	5	4	4	5	5	5	5	4	42
Mar 3	5	4	4	4	4	4	5	5	4	10	5	8	9	11	9	10	8	12	6	6	5	6	8	6	4	12
Mar 4	7	6	8	8	8	10	8	6	6	11	12	17	12	14	10	12	9	6	6	7	7	6	6	3	3	17
Mar 5	4	6	9	10	25	22	54	10	40	68	39	54	71	41	22	35	13	13	21	28	41	23	6	12	4	71
Mar 6	25	27	20	54	29	18	12	48	54	33	16	13	20	21	19	15	16	14	46	10	9	15	40	60	9	60
Mar 7	7	40	42	16	28	21	59	**76**	30	15	30	34	16	19	12	11	18	17	12	18	21	27	39	44	7	**76**
Mar 8	50	36	21	11	10	10	20	34	14	49	53	59	49	13	18	12	11	12	59	35	56	50	52	18	10	59
Mar 9	24	18	23	19	12	19	19	21	26	14	18	25	16	12	13	15	7	8	7	6	11	9	25	12	6	26
Mar 10	16	48	21	7	14	14	10	5	6	6	6	5	5	4	6	8	6	10	19	25	40	69	39	19	4	69
Mar 11	39	43	72	62	36	65	44	42	10	6	13	14	18	12	12	18	9	7	7	5	7	28	15	10	5	72
Mar 12	16	9	8	7	13	10	6	6	15	9	13	10	14	7	8	10	9	6	6	6	5	7	27	6	5	27
Mar 13	5	7	9	11	12	7	28	10	12	26	43	34	19	23	18	15	11	8	7	7	10	9	10	11	5	43
Mar 14	22	37	24	29	**0**	34	49	14	19	8	11	11	7	7	7	7	7	7	5	7	6	8	10	7	**0**	49
Mar 15	7	6	4	8	6	11	8	7	14	10	8	11	9	8	8	18	11	6	4	7	31	58	16	17	4	58
Mar 16	38	61	3	17	7	7	8	6	10	12	17	15	16	17	34	41	29	14	8	5	21	13	11	8	3	61
Mar 17	11	7	14	10	7	5	6	6	7	9	10	13	17	28	15	19	24	22	21	17	54	25	14	29	5	54
Mar 18	6	11	22	12	7	9	11	9	10	19	16	13	13	14	14	17	25	6	22	6	8	10	8	14	6	25
Mar 19	8	16	6	9	12	11	14	15	23	12	16	16	21	15	22	23	18	11	5	4	13	6	7	5	4	23
Mar 20	8	11	8	10	6	10	8	11	10	21	16	21	21	23	27	22	36	18	10	10	17	16	13	9	6	36
Mar 21	7	11	14	14	10	11	10	13	14	17	15	19	20	16	13	14	20	12	8	13	7	12	30	19	7	30
Mar 22	9	20	9	7	7	10	8	9	11	25	33	38	35	29	25	33	17	12	21	17	10	12	9	37	7	38
Mar 23	18	9	29	20	41	10	9	33	23	21	27	22	21	31	29	22	55	36	33	42	19	14	21	26	9	55
Mar 24	35	39	17	12	23	22	17	17	15	13	26	37	33	48	54	42	16	15	8	5	4	4	5	5	4	54
Mar 25	5	6	4	6	8	7	4	4	5	8	7	16	10	11	5	6	8	6	5	4	5	5	5	8	4	16
Mar 26	7	5	5	4	4	4	5	5	4	6	9	8	7	13	11	8	6	9	5	6	5	4	5	5	4	13
Mar 27	5	4	4	5	5	5	5	5	5	4	5	6	5	6	7	6	9	5	5	8	7	11	11	14	4	14
Mar 28	11	8	8	7	14	7	6	9	12	14	10	11	20	14	10	11	8	9	6	5	7	5	10	12	5	20
Mar 29	5	7	12	9	11	6	7	15	12	13	12	19	16	17	14	14	9	9	14	14	9	11	14	11	5	19
Mar 30	6	4	10	73	64	17	43	61	29	43	36	46	61	49	56	43	44	30	9	13	4	7	5	4	4	73
Mar 31	14	17	28	5	14	10	10	11	27	40	44	21	29	18	21	17	18	18	14	8	7	8	18	22	5	44
Diurnal Minimum	4	4	3	4	0	4	4	4	4	4	5	5	5	4	5	5	4	5	4	4	4	4	5	3		
Diurnal Maximum	50	61	72	73	64	65	59	76	54	68	53	59	71	49	56	43	55	36	59	42	71	69	52	60		

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.



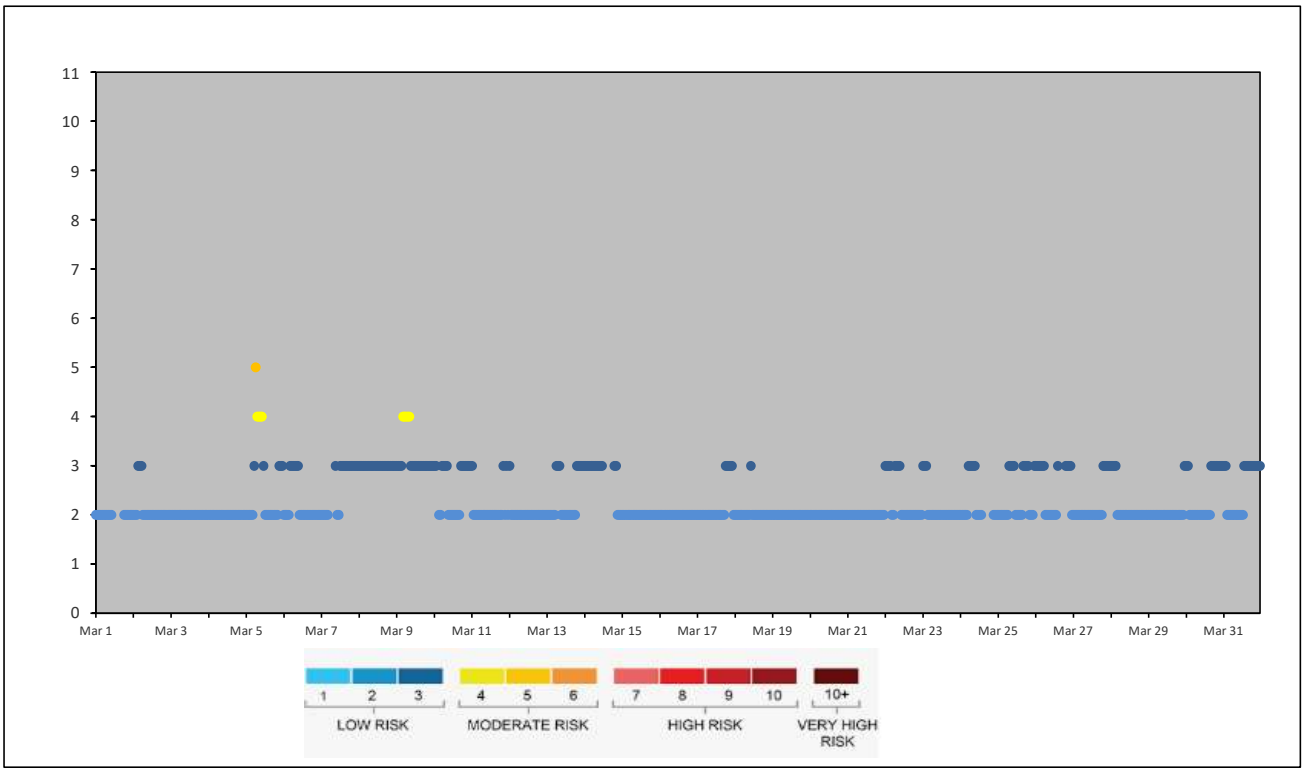
TAMARACK STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - March 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
Mar 1	2	2	2	2	2	2	2	2	2	2	2								2	2	2	2	2	2
Mar 2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 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
Mar 5	2	2	2	2	2	3	5	4	4	4	4	3	2	2	2	2	2	2	2	2	2	3	3	3
Mar 6	2	2	2	2	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	4
Mar 7	2	2	2	2	2					3	2	2	3	3	3	3	3	3	3	3	3	3	3	3
Mar 8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 9	3	3	3	3	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 10	3	3		2	2	3	3	3	3	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3
Mar 11	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	3	2
Mar 12	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 13	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
Mar 14	3	3	3	3	3	3	3	3	3	3	3	3								3	3	2	2	2
Mar 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
Mar 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
Mar 17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2
Mar 18	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 21	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 22	3	3	3	3	2	2	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 23	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 24	2	2	2	2	2	3	3	3	3	3	2	2	2	2								2	2	2
Mar 25	2	2	2	2	2	2	2	3	3	3	3	2	2	2	2	2	3	3	3	3	2	2	2	3
Mar 26	3	3	3	3	3	3	2	2	2	2	2	2	2	2	3					3	3	3	3	2
Mar 27	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
Mar 28	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 29	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
Mar 30	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
Mar 31	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

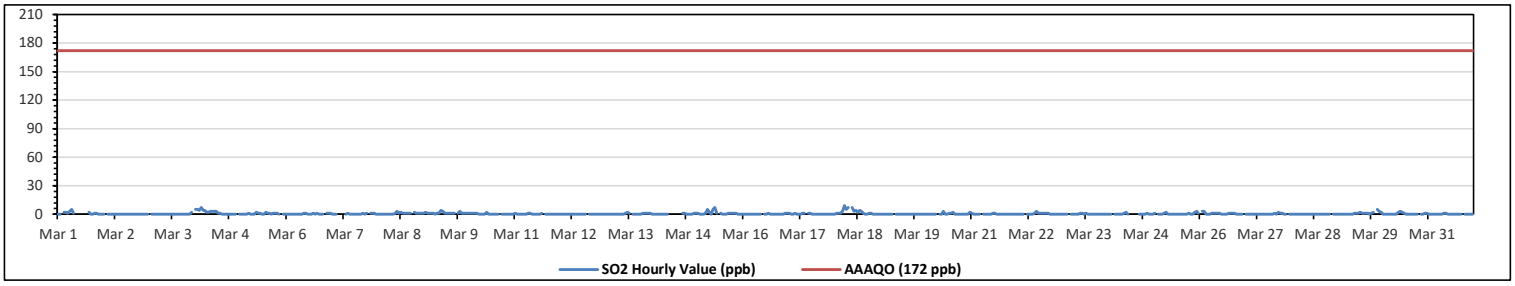
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

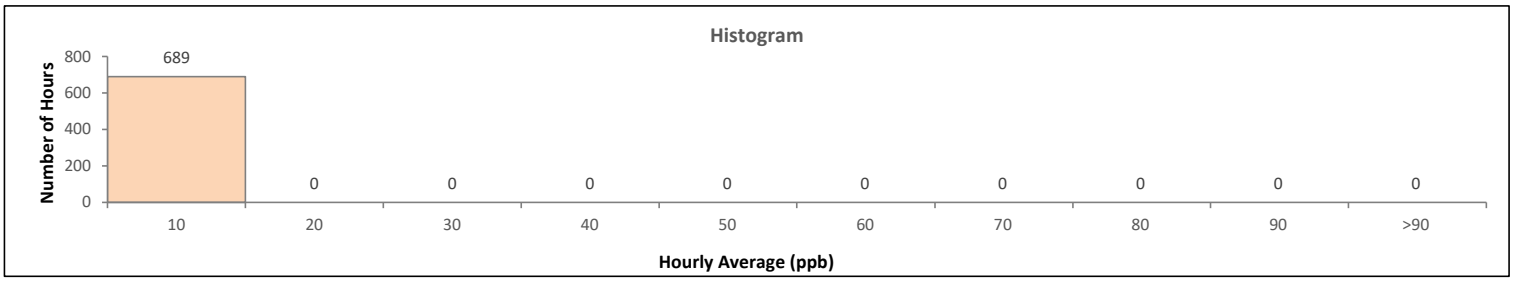
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0	
Maximum Hourly Value:	9	ppb	on Mar 18 at hr 5	Hours in Service:	744	
Maximum Daily Value:	2.3	ppb	on Mar 18	Hours of Data:	689	
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	18	
Minimum Daily Value:	0.0	ppb	on Mar 2	Hours of Calibration:	37	
Monthly Average:	0.5	ppb		Operational Uptime:	97.6	

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			
Mar 1	0	0	S	2	2	1	3	5	1	K	K	K	K	K	K	K	2	0	0	1	1	0	0	0	0	5	NA
Mar 2	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
Mar 3	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	S	0	2	0.1
Mar 4	5	5	4	7	4	4	2	2	3	3	3	3	1	1	0	0	0	0	0	0	0	0	S	0	0	7	2.0
Mar 5	0	0	0	0	1	0	0	0	2	1	1	0	0	2	1	1	0	1	1	1	0	S	0	0	0	2	0.5
Mar 6	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	S	1	1	1	0	1	0.3
Mar 7	0	0	0	K	K	K	K	0	1	0	0	0	0	0	0	0	1	0	1	S	1	1	1	0	0	1	0.3
Mar 8	0	0	0	0	0	0	0	0	0	1	3	1	2	1	1	1	1	1	S	2	1	1	1	1	0	3	0.8
Mar 9	1	2	1	1	1	1	0	1	1	4	3	1	1	1	1	1	1	S	1	3	1	1	1	1	0	4	1.3
Mar 10	1	1	1	1	1	0	0	0	0	2	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	2	0.3
Mar 11	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	S	0	0	0	0	0	0	0	0	0	1	0.2
Mar 12	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
Mar 13	0	0	0	0	0	0	0	0	0	0	1	2	1	S	0	0	0	0	0	1	1	1	1	1	0	2	0.4
Mar 14	0	0	0	0	0	0	0	0	0	K	K	K	K	K	K	K	1	1	0	0	0	0	1	1	0	1	NA
Mar 15	1	0	0	0	1	5	2	0	5	7	1	S	1	0	0	0	1	1	1	1	1	0	0	0	0	7	1.2
Mar 16	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0.1
Mar 17	1	0	0	1	0	0	0	1	1	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3
Mar 18	0	1	1	1	3	9	5	7	S	7	3	4	2	4	3	1	0	0	1	1	0	0	0	0	0	**9**	**2.3**
Mar 19	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
Mar 20	0	0	0	0	0	0	S	0	0	3	0	0	1	1	2	0	0	0	0	0	0	0	0	2	0	3	0.4
Mar 21	1	0	0	0	0	S	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 22	0	0	0	0	S	0	0	0	0	1	3	1	1	1	1	1	1	0	0	0	0	0	0	0	0	3	0.4
Mar 23	0	0	0	S	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 24	0	0	S	0	0	0	0	0	1	2	0	C	C	C	C	C	0	0	0	0	1	0	0	0	0	2	0.2
Mar 25	1	S	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3	1	0	3	0.5
Mar 26	S	3	3	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	S	0	3	0.7
Mar 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	1	0	0	S	0	0	2	0.2
Mar 28	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
Mar 29	0	0	0	0	0	0	0	0	0	1	1	1	2	1	1	1	1	0	1	2	S	5	3	2	0	5	1.0
Mar 30	0	0	0	0	0	0	0	0	2	3	2	1	0	0	0	0	0	0	0	S	0	0	1	1	0	3	0.4
Mar 31	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.1
Diurnal Maximum	5	5	4	7	4	9	5	7	5	7	3	4	2	4	3	1	2	2	1	3	1	5	3	2			
Diurnal Average	0.4	0.4	0.3	0.4	0.4	0.7	0.5	0.6	0.7	1.4	0.9	0.6	0.5	0.5	0.4	0.3	0.4	0.2	0.3	0.4	0.2	0.4	0.6	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.



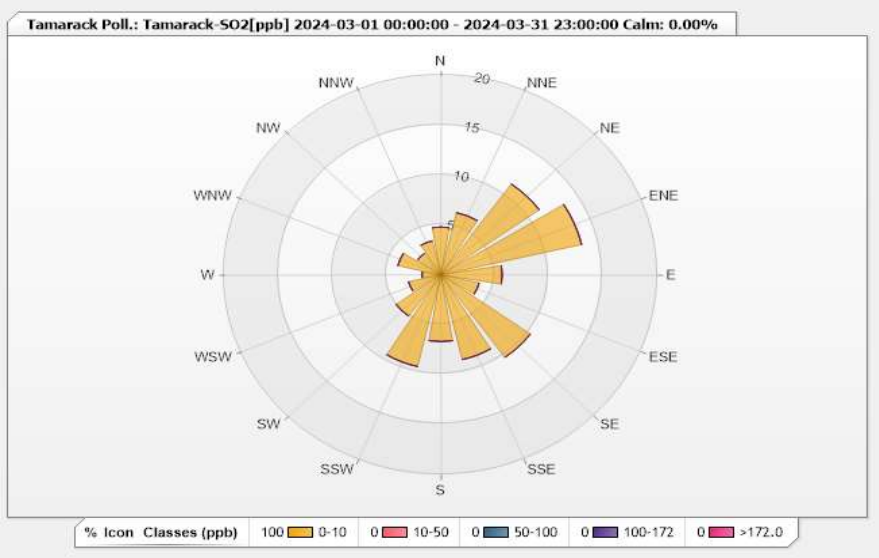


Station: Tamarack Poll.: Tamarack-SO2[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 92.61% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	4.79	0	0	0	0	4.79
NNE	6.39	0	0	0	0	6.39
NE	11.18	0	0	0	0	11.18
ENE	13.35	0	0	0	0	13.35
E	5.66	0	0	0	0	5.66
ESE	3.63	0	0	0	0	3.63
SE	10.16	0	0	0	0	10.16
SSE	8.71	0	0	0	0	8.71
S	6.68	0	0	0	0	6.68
SSW	9.43	0	0	0	0	9.43
SW	5.08	0	0	0	0	5.08
WSW	3.05	0	0	0	0	3.05
W	1.74	0	0	0	0	1.74
WNW	4.06	0	0	0	0	4.06
NW	2.61	0	0	0	0	2.61
NNW	3.48	0	0	0	0	3.48
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 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

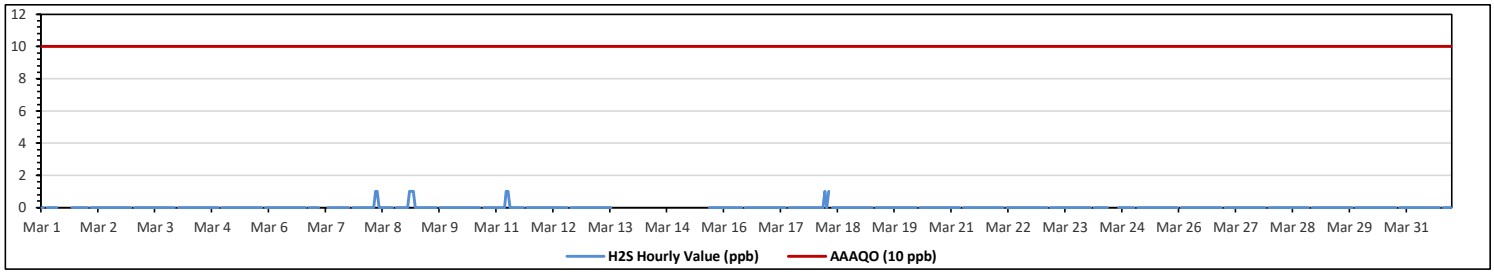
Number of 1-Hour Exceedances:	0		Number of 24-Hour Exceedances:	0	
Maximum Hourly Value:	1	ppb	on Mar 8 at hr 8	Hours in Service:	744
Maximum Daily Value:	0.0	ppb	on Mar 2	Hours of Data:	647
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	62
Minimum Daily Value:	0.0	ppb	on Mar 2	Hours of Calibration:	35
Monthly Average:	0.0	ppb		Operational Uptime:	91.7

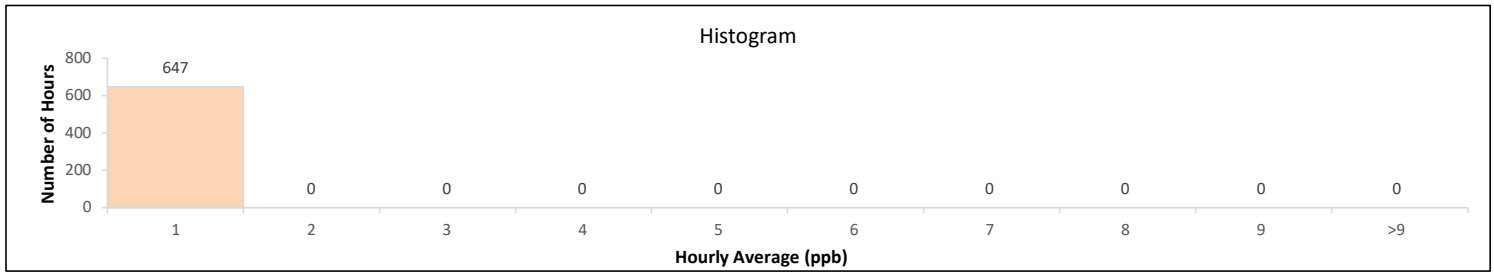
Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	0	0	S	0	0	0	0	0	0	K	K	K	K	K	K	K	0	0	0	0	0	0	0	0	0	0	-
Mar 2	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 3	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0
Mar 4	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
Mar 5	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
Mar 6	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
Mar 7	0	0	0	K	K	K	K	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0
Mar 8	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.0
Mar 9	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0.0
Mar 10	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
Mar 11	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.0
Mar 12	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
Mar 13	0	0	0	0	0	0	0	0	0	0	0	0	0	S	X	X	X	X	X	X	X	X	X	X	0	0	-
Mar 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	-	-	-
Mar 15	X	X	X	X	X	X	X	X	X	X	X	X	C	C	C	C	0	0	0	0	0	0	0	0	0	0	-
Mar 16	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
Mar 17	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
Mar 18	0	0	0	0	0	1	0	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 19	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
Mar 20	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
Mar 21	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
Mar 22	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
Mar 23	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
Mar 24	0	0	S	0	0	0	0	0	0	0	0	NRM	NRM	NRM	NRM	NRM	0	0	0	0	0	0	0	0	0	0	0.0
Mar 25	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
Mar 26	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
Mar 27	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
Mar 28	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
Mar 29	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
Mar 30	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
Mar 31	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
Diurnal Maximum	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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.



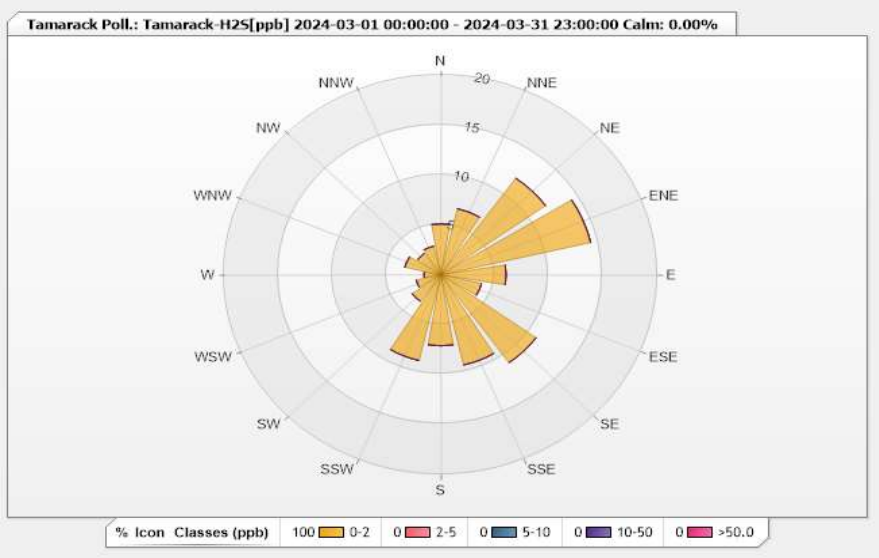


Station: Tamarack Poll.: Tamarack-H2S[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 86.96% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	5.1	0	0	0	0	5.1
NNE	6.8	0	0	0	0	6.8
NE	11.9	0	0	0	0	11.9
ENE	14.22	0	0	0	0	14.22
E	6.03	0	0	0	0	6.03
ESE	3.86	0	0	0	0	3.86
SE	10.82	0	0	0	0	10.82
SSE	9.27	0	0	0	0	9.27
S	7.11	0	0	0	0	7.11
SSW	8.81	0	0	0	0	8.81
SW	3.25	0	0	0	0	3.25
WSW	2.32	0	0	0	0	2.32
W	1.55	0	0	0	0	1.55
WNW	3.4	0	0	0	0	3.4
NW	2.63	0	0	0	0	2.63
NNW	2.94	0	0	0	0	2.94
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

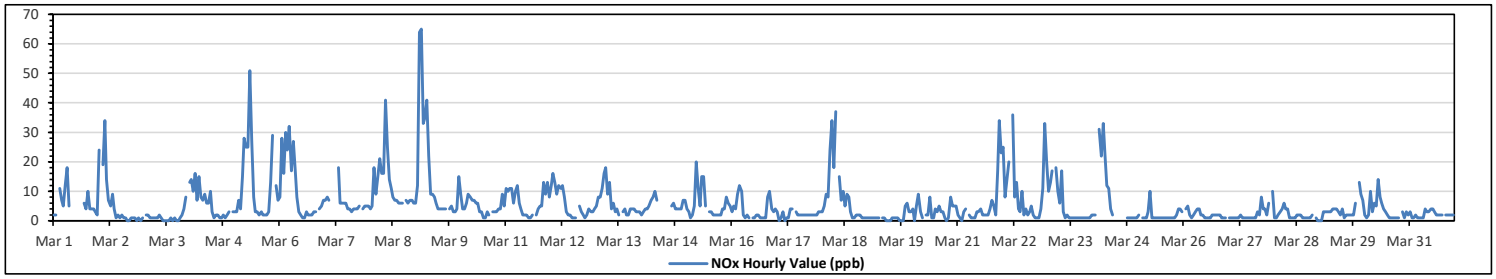
OXIDES OF NITROGEN (NOx) in ppb

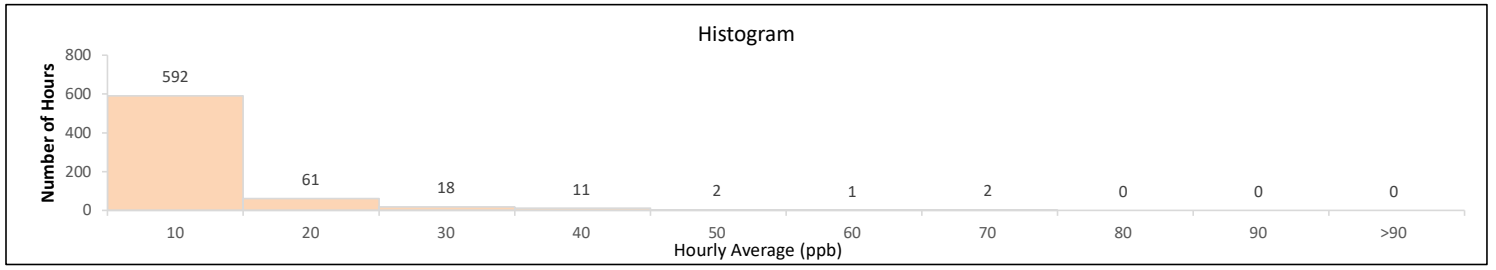
Maximum Hourly Value:	65	ppb	on Mar 9 at hr 3	Hours in Service:	744
Maximum Daily Value:	15.8	ppb	on Mar 9	Hours of Data:	687
Minimum Hourly Value:	0	ppb	on Mar 2 at hr 15	Hours of Missing Data:	18
Minimum Daily Value:	1.3	ppb	on Mar 19	Hours of Calibration:	39
Monthly Average:	5.6	ppb		Operational Uptime:	97.6

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			
Mar 1	2	2	S	11	7	5	12	18	5	K	K	K	K	K	K	K	6	4	10	4	4	4	3	2	2	18	NA
Mar 2	24	S	19	34	14	7	5	9	4	1	2	1	2	1	1	0	0	1	1	1	0	1	0	1	0	34	5.6
Mar 3	S	2	2	1	1	1	1	1	2	1	0	0	0	0	1	0	1	0	0	1	2	4	8	S	0	8	1.3
Mar 4	13	14	10	16	7	15	8	7	9	6	6	10	3	1	2	2	1	1	2	1	2	3	S	3	1	16	6.2
Mar 5	3	3	7	4	15	28	25	25	51	27	8	3	3	2	3	2	2	2	3	13	29	S	12	7	2	51	12.0
Mar 6	8	28	16	30	24	32	17	27	17	8	3	2	1	1	3	2	2	2	3	3	S	4	5	7	1	32	10.7
Mar 7	7	8	7	K	K	K	K	18	6	6	6	6	4	4	3	4	4	4	5	S	4	5	5	5	3	18	5.8
Mar 8	4	5	18	9	15	21	16	16	41	25	14	11	8	7	7	6	6	6	S	7	6	7	7	6	4	41	11.7
Mar 9	6	12	64	65	33	35	41	22	9	9	8	6	4	4	4	4	4	S	4	5	3	3	4	15	3	65	15.8
Mar 10	9	4	4	6	9	8	7	7	6	6	3	3	1	1	3	2	S	3	3	3	4	4	9	5	1	9	4.8
Mar 11	11	10	11	11	6	10	12	6	4	2	2	2	1	1	2	S	2	4	5	5	13	9	13	8	1	13	6.5
Mar 12	12	16	13	9	12	11	12	8	3	2	2	1	1	1	S	5	3	2	1	2	4	3	3	4	1	16	5.7
Mar 13	5	8	8	11	16	18	9	13	4	6	3	4	2	S	3	4	2	2	4	4	4	3	3	3	2	18	6.0
Mar 14	2	3	4	4	5	7	8	10	7	K	K	K	K	K	K	K	5	6	4	4	4	4	7	7	2	10	NA
Mar 15	4	3	1	2	5	20	11	5	15	15	5	S	3	3	2	2	2	2	2	4	4	8	6	5	1	20	5.6
Mar 16	3	5	4	9	12	10	2	1	2	1	S	1	1	2	2	1	1	1	1	8	10	4	3	4	1	12	3.8
Mar 17	3	0	1	3	0	1	1	4	4	S	3	2	2	2	2	2	2	2	2	2	2	2	3	3	0	4	2.1
Mar 18	3	5	9	8	24	34	18	37	S	15	7	10	5	9	8	3	1	1	2	2	2	1	1	1	1	37	9.0
Mar 19	1	1	1	1	1	1	1	S	1	1	0	0	0	1	1	1	1	0	0	0	5	6	3	3	0	6	1.3
Mar 20	4	0	5	9	3	1	S	2	2	8	1	1	4	3	5	3	3	1	0	1	8	5	5	5	0	9	3.4
Mar 21	2	1	0	3	4	S	2	1	1	1	3	3	4	2	2	2	2	4	7	5	2	17	34	23	0	34	5.4
Mar 22	25	8	14	20	S	36	8	13	4	3	10	2	4	2	3	5	2	1	1	1	4	11	33	20	1	36	10.0
Mar 23	10	13	17	S	18	10	6	17	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	18	4.8
Mar 24	2	2	S	31	22	33	23	12	11	4	2	C	C	C	C	C	C	C	1	1	1	1	1	1	1	33	NA
Mar 25	2	S	1	1	1	3	10	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	4	3	1	10	1.9
Mar 26	S	4	5	2	1	2	3	4	4	2	2	1	1	1	1	2	2	2	2	2	1	1	1	S	1	5	2.1
Mar 27	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	3	2	8	4	4	2	6	S	10	1	10	2.4
Mar 28	1	1	2	3	4	6	4	4	1	1	1	1	2	2	2	1	1	1	1	1	2	S	1	0	0	6	1.9
Mar 29	0	0	3	3	3	3	3	4	4	4	3	2	4	1	2	2	2	2	2	6	S	13	9	7	0	13	3.6
Mar 30	2	1	2	10	3	6	5	14	8	6	4	3	2	1	1	1	1	1	1	S	3	1	3	2	1	14	3.5
Mar 31	3	1	1	2	1	1	1	1	4	3	3	4	4	3	2	2	2	2	S	2	2	2	2	2	1	4	2.2
Diurnal Maximum	25	28	64	65	33	36	41	37	51	27	14	11	8	9	8	6	6	8	10	13	29	17	34	23			
Diurnal Average	5.9	5.6	8.6	11.0	9.2	12.6	9.4	10.3	7.8	5.9	3.8	3.0	2.5	2.1	2.5	2.3	2.2	2.3	2.5	3.2	4.5	4.7	6.5	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.
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



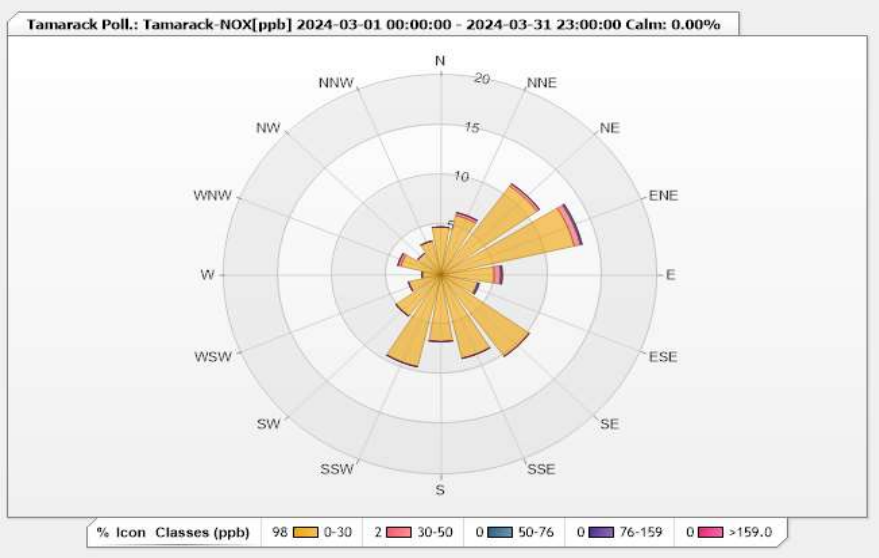


Station: Tamarack Poll.: Tamarack-NOX[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 92.34% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	4.8	0	0	0	0	4.8
NNE	6.11	0.29	0	0	0	6.4
NE	10.92	0.29	0	0	0	11.21
ENE	12.66	0.58	0.15	0	0	13.39
E	4.95	0.58	0.15	0	0	5.68
ESE	3.49	0	0.15	0	0	3.64
SE	10.04	0	0	0	0	10.04
SSE	8.59	0	0	0	0	8.59
S	6.7	0	0	0	0	6.7
SSW	9.46	0	0	0	0	9.46
SW	5.09	0	0	0	0	5.09
WSW	3.06	0	0	0	0	3.06
W	1.75	0	0	0	0	1.75
WNW	3.78	0.29	0	0	0	4.07
NW	2.62	0	0	0	0	2.62
NNW	3.49	0	0	0	0	3.49
Summary	97.51	2.03	0.45	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

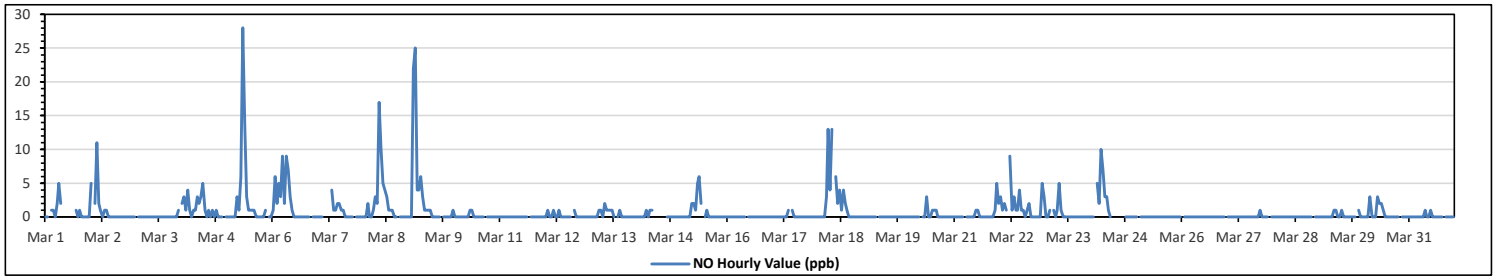
NITRIC OXIDE (NO) in ppb

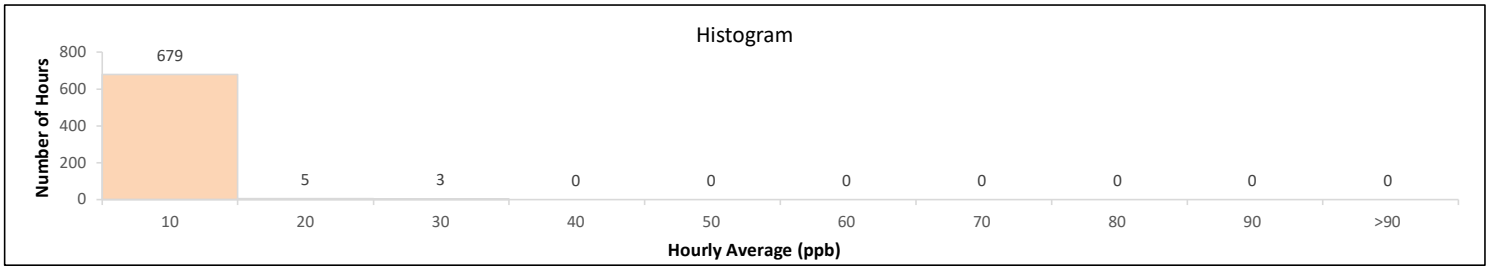
Maximum Hourly Value:	28	ppb	on Mar 5 at hr 8	Hours in Service:	744
Maximum Daily Value:	3.0	ppb	on Mar 9	Hours of Data:	687
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	18
Minimum Daily Value:	0.0	ppb	on Mar 11	Hours of Calibration:	39
Monthly Average:	0.7	ppb		Operational Uptime:	97.6

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			
Mar 1	0	0	S	1	1	0	2	5	2	K	K	K	K	K	K	K	1	0	1	0	0	0	0	0	0	5	NA
Mar 2	5	S	2	11	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	1.0
Mar 3	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S	0	1	0.0
Mar 4	2	3	1	4	1	0	1	1	3	2	3	5	1	0	1	0	1	0	1	0	0	0	S	0	0	5	1.3
Mar 5	0	0	0	0	0	3	1	6	28	14	3	1	1	1	1	0	0	0	0	0	1	S	0	0	0	28	2.6
Mar 6	1	6	2	5	3	9	2	9	7	3	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	9	2.1
Mar 7	0	0	0	K	K	K	K	4	1	1	2	2	1	1	0	0	0	0	0	S	0	0	0	0	0	4	0.6
Mar 8	0	0	2	0	0	1	3	2	17	10	5	4	3	1	1	1	0	0	S	0	0	0	0	0	0	17	2.2
Mar 9	0	0	22	25	4	4	6	3	1	1	1	1	0	0	0	0	0	S	0	0	0	0	0	1	0	25	3.0
Mar 10	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	0.1
Mar 11	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
Mar 12	0	1	0	0	1	0	0	1	0	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	1	0.2
Mar 13	0	0	0	0	1	1	0	2	1	1	1	1	0	S	0	1	0	0	0	0	0	0	0	0	0	2	0.4
Mar 14	0	0	0	0	0	1	0	1	1	K	K	K	K	K	K	K	0	0	0	0	0	0	0	0	0	1	NA
Mar 15	0	0	0	0	0	2	2	1	5	6	2	S	0	1	0	0	0	0	0	0	0	0	0	0	0	6	0.8
Mar 16	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
Mar 17	0	0	0	0	0	0	0	0	1	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 18	0	0	0	0	3	13	4	13	S	6	2	4	1	4	2	1	0	0	0	0	0	0	0	0	0	13	2.3
Mar 19	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
Mar 20	0	0	0	0	0	0	S	0	0	3	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	0.3
Mar 21	0	0	0	0	0	S	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	5	2	0	5	0.4
Mar 22	3	1	2	1	S	9	1	3	1	1	4	1	1	0	1	2	0	0	0	0	0	0	5	3	0	9	1.7
Mar 23	0	0	1	S	1	0	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.4
Mar 24	0	0	S	5	2	10	7	3	3	1	0	C	C	C	C	C	C	C	0	0	0	0	0	0	0	10	NA
Mar 25	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
Mar 26	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
Mar 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	S	0	0	1	0.0
Mar 28	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
Mar 29	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	S	1	0	0	0	1	0.2
Mar 30	0	0	0	3	0	0	0	3	2	2	1	0	0	0	0	0	0	0	0	S	0	0	0	0	0	3	0.5
Mar 31	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.1
Diurnal Maximum	5	6	22	25	4	13	7	13	28	14	5	5	3	4	2	2	1	1	1	0	1	1	5	3			
Diurnal Average	0.4	0.4	1.1	1.9	0.7	1.9	1.0	2.1	2.6	1.9	0.9	0.8	0.4	0.3	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.4	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.



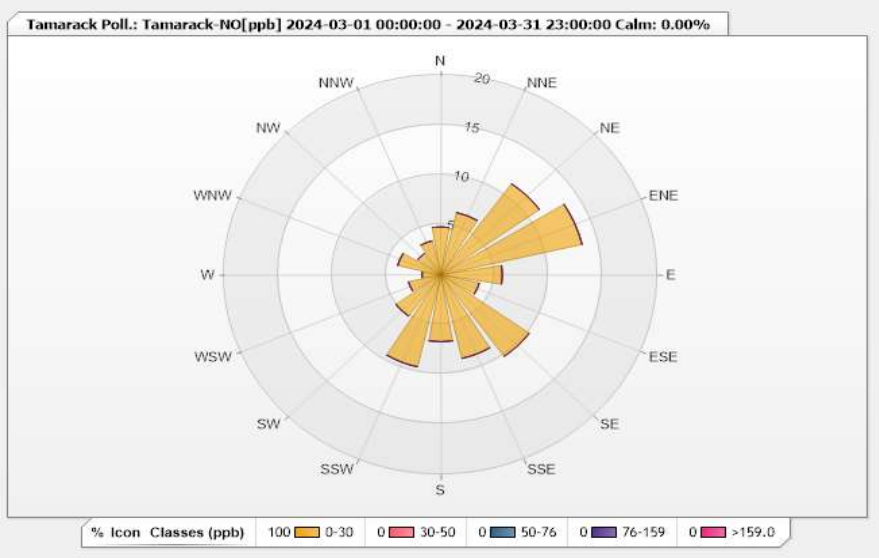


Station: Tamarack Poll.: Tamarack-NO[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 92.34% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	4.8	0	0	0	0	4.8
NNE	6.4	0	0	0	0	6.4
NE	11.21	0	0	0	0	11.21
ENE	13.39	0	0	0	0	13.39
E	5.68	0	0	0	0	5.68
ESE	3.64	0	0	0	0	3.64
SE	10.04	0	0	0	0	10.04
SSE	8.59	0	0	0	0	8.59
S	6.7	0	0	0	0	6.7
SSW	9.46	0	0	0	0	9.46
SW	5.09	0	0	0	0	5.09
WSW	3.06	0	0	0	0	3.06
W	1.75	0	0	0	0	1.75
WNW	4.08	0	0	0	0	4.08
NW	2.62	0	0	0	0	2.62
NNW	3.49	0	0	0	0	3.49
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 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

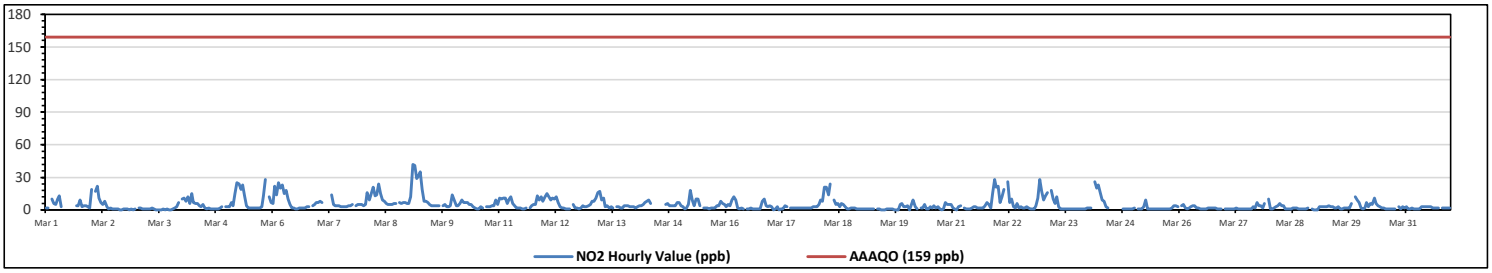
Maximum Hourly Value:	42	ppb	on Mar 9 at hr 2	Hours in Service:	744
Maximum Daily Value:	12.9	ppb	on Mar 9	Hours of Data:	687
Minimum Hourly Value:	0	ppb	on Mar 2 at hr 15	Hours of Missing Data:	18
Minimum Daily Value:	1.2	ppb	on Mar 3	Hours of Calibration:	39
Monthly Average:	4.9	ppb		Operational Uptime:	97.6

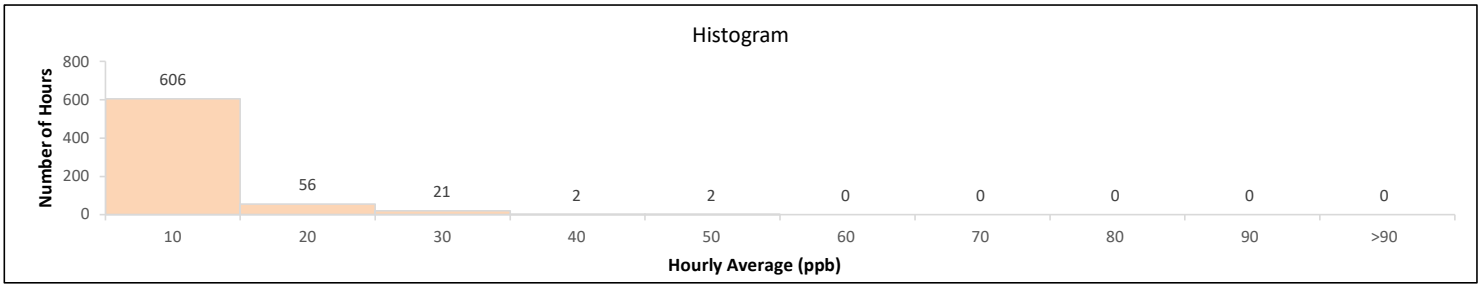
Day	Hourly Period Starting at (MST)																						Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	2	2	S	10	6	5	10	13	3	K	K	K	K	K	K	K	4	4	9	3	4	4	3	2	2	13	NA
Mar 2	19	S	17	22	11	7	5	8	3	1	2	1	1	1	1	0	0	1	1	1	0	1	0	1	0	22	4.5
Mar 3	S	2	2	1	1	1	1	1	2	1	0	0	0	0	1	0	1	0	0	1	2	3	7	S	0	7	**1.2**
Mar 4	10	11	8	12	6	15	7	6	6	4	3	5	2	1	2	1	1	1	1	1	2	3	S	3	1	15	4.8
Mar 5	3	3	7	4	15	25	24	19	23	13	4	2	2	2	2	2	2	2	3	13	28	S	12	7	2	28	9.4
Mar 6	6	22	14	25	20	23	15	18	10	5	2	2	1	1	2	2	2	2	3	3	S	4	5	7	1	25	8.4
Mar 7	7	8	7	K	K	K	K	14	5	4	4	4	3	3	3	3	4	4	5	S	4	5	5	5	3	14	5.1
Mar 8	4	5	16	9	15	21	13	14	24	15	9	8	6	5	5	5	6	6	S	7	6	7	7	6	4	24	9.5
Mar 9	6	12	**42**	41	29	31	35	19	8	8	7	5	4	4	4	4	4	S	4	5	3	3	4	14	3	**42**	**12.9**
Mar 10	9	4	4	6	9	7	7	7	5	5	3	2	1	1	3	2	S	3	3	3	4	4	9	5	1	9	4.6
Mar 11	11	10	11	11	6	10	12	6	4	2	2	2	1	1	2	S	2	4	5	5	13	9	12	8	1	13	6.5
Mar 12	12	15	12	9	11	10	12	7	3	2	2	1	1	1	S	5	2	2	1	2	4	3	3	4	1	15	5.4
Mar 13	5	8	8	11	16	17	9	11	3	4	2	3	2	S	3	3	2	2	4	4	4	3	3	3	2	17	5.7
Mar 14	2	3	4	4	5	7	8	9	6	K	K	K	K	K	K	K	5	6	4	4	4	4	7	7	2	9	NA
Mar 15	4	3	1	2	5	18	9	4	10	10	4	S	2	2	2	1	2	2	2	4	4	8	6	5	1	18	4.8
Mar 16	3	5	4	9	12	9	2	1	2	1	S	1	1	2	1	1	1	1	1	8	10	4	3	4	1	12	3.7
Mar 17	3	0	1	3	0	1	1	4	3	S	2	2	2	2	2	2	2	2	2	2	2	2	3	3	0	4	2.0
Mar 18	3	5	9	8	21	21	14	24	S	9	5	6	3	6	5	3	1	1	2	2	2	1	1	1	1	24	6.7
Mar 19	1	1	1	1	1	1	1	S	1	1	0	0	0	1	1	1	1	0	0	0	5	6	3	3	0	6	1.3
Mar 20	4	0	5	9	3	1	S	2	2	5	1	1	3	2	4	2	3	1	0	1	7	5	5	5	0	9	3.1
Mar 21	2	1	0	3	4	S	2	1	1	1	2	3	3	2	2	2	2	4	7	5	2	16	28	21	0	28	5.0
Mar 22	22	7	12	19	S	26	7	10	3	2	6	2	3	2	2	3	2	1	1	1	4	11	28	17	1	28	8.3
Mar 23	9	13	16	S	18	10	6	12	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	18	4.5
Mar 24	2	2	S	26	20	23	16	9	8	3	2	C	C	C	C	C	C	C	1	1	1	1	1	1	1	26	NA
Mar 25	2	S	1	1	1	3	9	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	4	3	1	9	1.9
Mar 26	S	4	5	2	1	2	3	4	4	2	2	1	1	1	1	2	2	2	2	2	1	1	1	S	1	5	2.1
Mar 27	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	3	2	7	4	4	2	6	S	10	1	10	2.3
Mar 28	1	1	2	3	4	6	4	4	1	1	1	1	2	2	2	1	1	1	1	1	2	S	1	0	0	6	1.9
Mar 29	0	0	3	3	3	3	3	4	3	3	2	2	3	1	1	2	2	2	2	6	S	12	9	7	0	12	3.3
Mar 30	2	1	2	7	3	6	5	11	6	4	3	2	2	1	1	1	1	1	1	S	3	1	3	2	1	11	3.0
Mar 31	3	1	1	2	1	1	1	1	3	3	3	3	3	3	2	2	2	2	S	2	2	2	2	2	1	3	2.0
Diurnal Maximum	22	22	42	41	29	31	35	24	24	15	9	8	6	6	5	5	6	7	9	13	28	16	28	21			
Diurnal Average	5.4	5.2	7.4	9.1	8.6	10.7	8.4	8.2	5.2	4.0	2.7	2.3	2.0	1.9	2.1	2.0	2.1	2.3	2.4	3.2	4.4	4.6	6.1	5.4			

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.



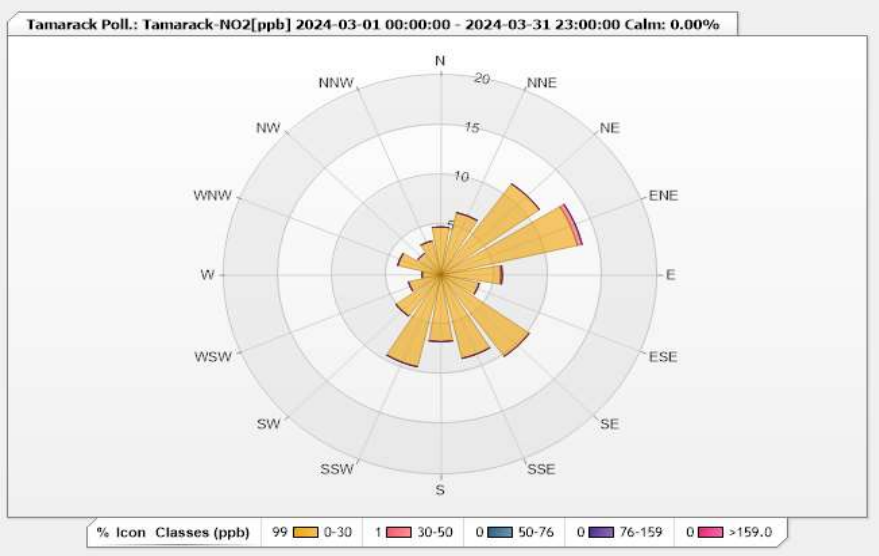


Station: Tamarack Poll.: Tamarack-NO2[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 92.34% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	4.8	0	0	0	0	4.8
NNE	6.4	0	0	0	0	6.4
NE	11.21	0	0	0	0	11.21
ENE	12.95	0.44	0	0	0	13.39
E	5.53	0.15	0	0	0	5.68
ESE	3.64	0	0	0	0	3.64
SE	10.04	0	0	0	0	10.04
SSE	8.59	0	0	0	0	8.59
S	6.7	0	0	0	0	6.7
SSW	9.46	0	0	0	0	9.46
SW	5.09	0	0	0	0	5.09
WSW	3.06	0	0	0	0	3.06
W	1.75	0	0	0	0	1.75
WNW	4.08	0	0	0	0	4.08
NW	2.62	0	0	0	0	2.62
NNW	3.49	0	0	0	0	3.49
Summary	99.41	0.59	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

OZONE (O_3) in ppb

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

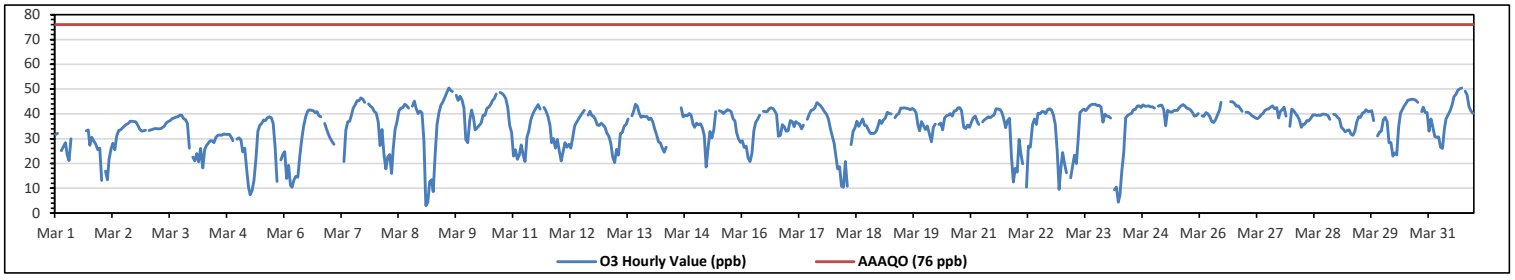
Number of 1-Hour Exceedances: 0

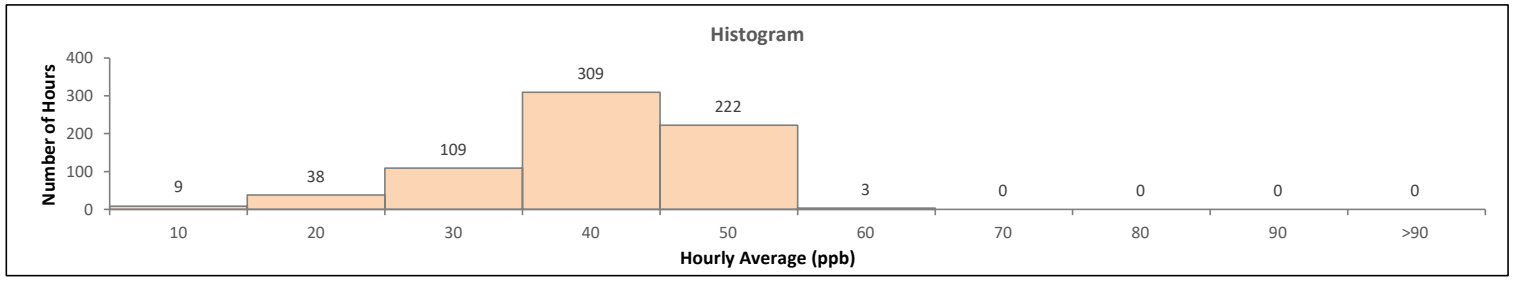
Maximum Hourly Value:	50.4	ppb	on Mar 9 at hr 14	Hours in Service:	744
Maximum Daily Value:	41.5	ppb	on Mar 25	Hours of Data:	690
Minimum Hourly Value:	3.0	ppb	on Mar 9 at hr 2	Hours of Missing Data:	18
Minimum Daily Value:	26.3	ppb	on Mar 5	Hours of Calibration:	36
Monthly Average:	35.1	ppb		Operational Uptime:	97.6

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			
Mar 1	31.7	32.2	S	25.2	27	28.3	23.7	21.2	30	K	K	K	K	K	K	K	33.1	33.6	27.4	30.6	29.1	27.9	25.5	26.2	21.2	33.6	NA
Mar 2	13.1	S	16.9	13.3	21.6	25.7	28.1	25.6	31.1	33.3	33.5	34.3	35.1	35.7	36.2	37	37	36.8	36.7	35.4	33.8	33	33.2	33.4	13.1	37.0	30.4
Mar 3	S	33.3	33.5	33.8	34.1	34.1	34	34.1	34.4	35	36.4	36.8	37.3	38.1	38.4	38.7	38.8	39.4	39.5	38.1	37.6	36.1	26.1	S	26.1	39.5	35.8
Mar 4	22.5	21	24	20.6	26	18.2	25.7	27.3	28	29.1	29.2	28.3	30.6	31.4	31.5	31.4	31.9	31.7	31.7	31.7	30.5	29.1	S	29.8	18.2	31.9	27.9
Mar 5	30.2	29.5	24.6	26.1	17.8	10.3	7.3	9	13.2	21.8	32.8	35.4	36.2	37.5	37.2	38.5	38.8	38.5	36.2	26.6	12.8	S	21.5	23.7	7.3	38.8	**26.3**
Mar 6	24.7	13.9	19.3	11.2	10.5	13.4	14.8	14.5	22.8	29.5	34.9	39.1	41.1	41.6	41.4	41.3	40.6	40.8	39.2	38.8	S	36.1	33.8	31.6	10.5	41.6	29.3
Mar 7	30	28.6	27.8	K	K	K	K	20.7	33.4	36.7	37	39.2	42.3	43.6	45.3	45.2	46.5	45.9	44.7	S	44	43	42.4	41.1	20.7	46.5	38.8
Mar 8	40.3	36.9	27.2	33.7	23.8	17.7	22.6	23.6	16	25.9	33.8	36.9	41.3	42.3	42.5	43.9	43.3	42.3	S	43.1	45.1	42	40.2	41.1	16.0	45.1	35.0
Mar 9	40.4	29.2	3	4.3	12.7	13.3	8.6	23.4	35.7	40.5	43.5	44.8	46.8	48.8	**50.4**	49.4	49.1	S	47.5	45.4	47.1	45.6	42.4	29.5	**3.0**	**50.4**	34.8
Mar 10	28.4	37.3	41.5	38.5	33.6	34.3	35.4	36.4	39.5	39.4	42.3	42.8	43.9	45.3	46.2	48	S	48.6	48.2	47.5	46	42.6	35.3	32.4	28.4	48.6	40.6
Mar 11	23	25.5	21.6	23.4	27.5	23.5	20.8	30.6	33.2	37.5	39.9	41.1	42.5	43.7	41.9	S	42.6	41.2	38.8	35.4	28.4	30.1	26.2	29.7	20.8	43.7	32.5
Mar 12	25	21	24.8	28.4	26.5	27.7	26.2	30.4	35	36.4	37.6	38.9	40.1	41.4	S	39.5	41	39.2	39	37.6	35.5	35.4	36.3	35.5	21.0	41.4	33.8
Mar 13	34.5	32.1	31	28	22.6	20.4	25.7	23.3	32.2	32.5	35.1	35.7	38	S	39.2	41.2	43.9	43.1	40.2	38.6	39	38.8	38.9	37.7	20.4	43.9	34.4
Mar 14	38.4	36.8	33.9	31.6	28.8	28.2	26.2	24.5	26.6	K	K	K	K	K	K	K	42.5	38.8	39.4	39.2	40.1	39.4	35.9	34.5	24.5	42.5	NA
Mar 15	36.3	35.6	36	34.4	31.3	18.6	26.1	32.9	30.2	33.7	40.8	S	41.2	40.8	40.1	40.9	41.7	41.4	40.9	38.1	37.1	32.4	30	28.5	18.6	41.7	35.2
Mar 16	29.2	26.4	26.9	22.3	20.7	23.9	33.2	36.6	37.8	39.5	S	41	40.9	40.9	42	42.4	42.2	41	39.7	30.9	31.3	35.6	34.8	33	20.7	42.4	34.4
Mar 17	33.1	37.3	36.9	34.8	36.8	36.3	35.9	34	35.5	S	37.8	39.8	41.4	41.6	42.5	44.5	44	43.3	42.3	41	39.8	38	34.2	31.1	31.1	44.5	38.3
Mar 18	28.1	23.4	17.8	18.7	10.8	10.4	20.8	10.9	S	27.6	32.9	34.3	37	34.9	36.4	38	35.4	35.2	33.6	32.1	32.2	32.1	32.9	34.5	10.4	38.0	28.3
Mar 19	37.4	36.2	37.5	38.4	40.7	40.2	40	S	38.5	39.6	40.2	42.3	42.3	42.4	42.2	42.1	41.6	42.2	41.6	40.5	35.3	33.1	36.8	35.3	33.1	42.4	39.4
Mar 20	33.7	35	31.7	28.7	34.5	35.9	S	35.7	36.3	33.5	38.3	39.2	39.5	40.1	39.1	41.1	41.2	42.5	42.4	41.3	34.5	34.1	35.5	34.5	28.7	42.5	36.9
Mar 21	36.6	38.5	39.1	36.8	35.8	S	36.7	37.7	38.2	38.8	38.5	39	39.6	42	41.9	41.8	40.7	37.9	34.4	37.3	38.2	22.8	12.5	18	12.5	42.0	35.8
Mar 22	16.5	29.7	24.4	19.8	S	10.4	26.9	26.6	35.7	38	35.8	40.3	40	40.9	40.9	40.1	41.6	42	41.5	39.6	35.7	25.2	9.5	17.6	9.5	42.0	31.2
Mar 23	24.3	19.8	16.3	S	14.2	18.9	23.4	20	30.5	40.6	41.3	41.9	41.2	42.2	43.2	43.7	43.8	43.8	43.3	43.4	42.7	36.6	39.9	39.1	14.2	43.8	34.5
Mar 24	38.9	38.4	S	9.4	10.4	4.4	7.2	17.1	24.5	38.5	39.3	39.8	40.1	41.6	41.8	43.2	43.2	42.6	43.6	43	43	43.2	42.9	42.9	4.4	43.6	33.9
Mar 25	42.3	S	43	43.5	43.5	41.7	35.2	41.4	40.9	40.7	41.2	41.4	41.4	42.4	43.2	43.7	43.2	42.3	42.1	41.5	40.5	39	39.3	40.1	35.2	43.7	**41.5**
Mar 26	S	39.2	38.9	40.5	40	38.8	36.9	36.5	37.7	39.6	41.4	44.6	C	C	C	C	44.9	45	44.2	43.1	43.2	42.2	41	S	36.5	45.0	41.0
Mar 27	40.7	40.7	40.2	39.3	38.8	38.3	38.1	38.7	39.7	40.2	41.4	41.8	42.1	42.8	43.2	42.1	42.6	38.3	40.8	41.6	42.8	39.1	S	34.9	34.9	43.2	40.4
Mar 28	41.9	41.3	40.1	39.1	37.5	34.5	35.9	35.9	37.3	37.1	38.4	39.6	39.6	39.3	39.5	39.3	39.8	39.9	39.7	39.3	37.8	S	39.8	39.6	34.5	41.9	38.8
Mar 29	38.6	37.9	34.5	33.8	32.7	33.3	33.6	31.9	31.4	32.9	36.6	38.8	38.6	40.4	40.6	41.6	40.9	41	41.3	37.2	S	31.1	32.7	33	31.1	41.6	36.3
Mar 30	37.5	38.6	36.8	28.3	28.3	23	24.2	23.5	34.7	40.4	41.8	43	44.3	45.5	45.7	45.9	45.8	45.4	44.7	S	40.9	42.7	40.6	40.5	23.0	45.9	38.4
Mar 31	33	38	34.5	30.8	30.6	30.7	26.6	26	34	37.9	39.7	41.2	43.6	47	47.8	49.5	50.1	**50.4**	S	49.2	47.6	42.9	41.1	40.3	26.0	**50.4**	39.7
Diurnal Maximum	42.3	41.3	43.0	43.5	43.5	41.7	40.0	41.4	40.9	40.7	43.5	44.8	46.8	48.8	50.4	49.5	50.1	50.4	48.2	49.2	47.6	45.6	42.9	42.9			
Diurnal Average	32.1	32.2	29.8	28.2	27.6	25.3	26.9	27.7	32.5	35.6	37.9	39.3	40.3	41.3	41.5	42.0	41.7	41.1	40.2	38.9	37.6	36.2	33.8	33.4			

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.



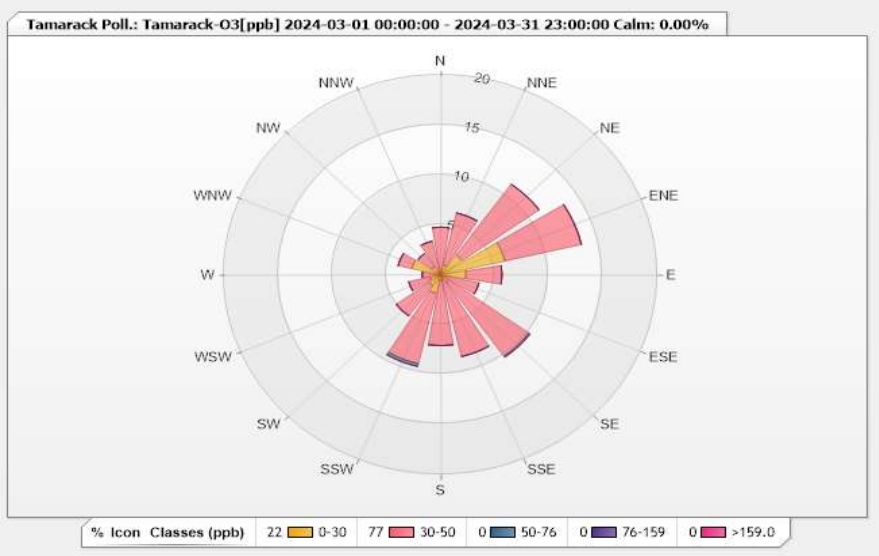


Station: Tamarack Poll.: Tamarack-O3[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 92.74% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	0.29	4.49	0	0	0	4.78
NNE	1.01	5.36	0	0	0	6.37
NE	2.46	8.7	0	0	0	11.16
ENE	6.09	7.25	0	0	0	13.34
E	2.32	3.33	0	0	0	5.65
ESE	0.43	3.19	0	0	0	3.62
SE	0.87	9.13	0.14	0	0	10.14
SSE	0.14	8.26	0	0	0	8.4
S	0.58	6.52	0	0	0	7.1
SSW	1.88	7.25	0.29	0	0	9.42
SW	1.3	3.77	0	0	0	5.07
WSW	1.01	2.03	0	0	0	3.04
W	0.14	1.59	0	0	0	1.73
WNW	2.75	1.3	0	0	0	4.05
NW	1.01	1.59	0	0	0	2.6
NNW	0.14	3.33	0	0	0	3.47
Summary	22.42	77.09	0.43	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

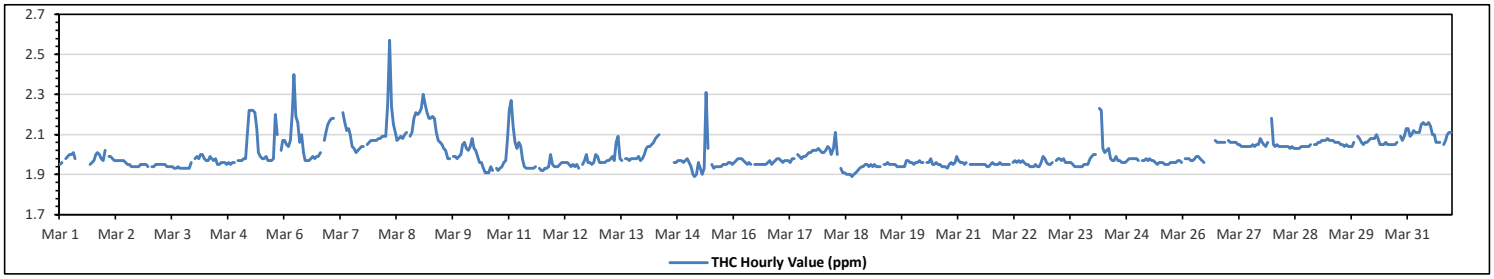
TOTAL HYDROCARBONS (THC) in ppm

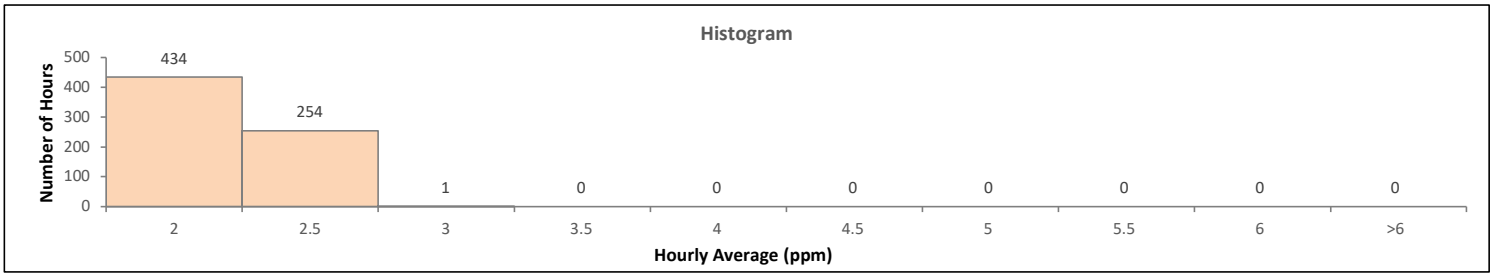
Maximum Hourly Value:	2.57	ppm	on Mar 8 at hr 8	Hours in Service:	744	
Maximum Daily Value:	2.14	ppm	on Mar 8	Hours of Data:	689	
Minimum Hourly Value:	1.89	ppm	on Mar 15 at hr 3	Hours of Missing Data:	18	
Minimum Daily Value:	1.94	ppm	on Mar 3	Hours of Calibration:	37	
Monthly Average:	2.01	ppm		Operational Uptime:	97.6	

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			
Mar 1	1.95	1.96	S	1.98	1.99	2.00	2.00	2.01	1.98	K	K	K	K	K	K	K	1.95	1.96	1.97	2.00	2.01	2.00	1.98	1.97	1.95	2.01	NA
Mar 2	2.02	S	1.99	1.99	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.94	1.94	2.02	1.96
Mar 3	S	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.93	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.96	S	1.93	1.96	1.94
Mar 4	1.98	1.99	1.98	2.00	2.00	1.98	1.97	1.97	1.99	1.98	1.97	1.98	1.95	1.95	1.96	1.96	1.96	1.95	1.96	1.95	1.96	1.96	S	1.97	1.95	2.00	1.97
Mar 5	1.97	1.97	1.98	1.98	2.09	2.22	2.22	2.22	2.21	2.13	2.01	1.99	1.98	1.98	1.99	1.97	1.97	1.97	1.98	2.20	2.10	S	2.02	2.07	1.97	2.22	2.05
Mar 6	2.07	2.05	2.04	2.07	2.21	2.40	2.19	2.16	2.06	2.10	2.01	1.97	1.97	1.97	1.98	1.99	1.98	1.99	1.99	2.01	S	2.07	2.11	2.15	1.97	2.40	2.07
Mar 7	2.17	2.18	2.18	K	K	K	K	2.21	2.16	2.12	2.13	2.10	2.04	2.03	2.01	2.02	2.03	2.04	2.04	S	2.05	2.06	2.07	2.07	2.01	2.21	2.09
Mar 8	2.07	2.07	2.08	2.08	2.09	2.09	2.09	2.25	**2.57**	2.24	2.15	2.11	2.07	2.08	2.09	2.08	2.10	2.11	S	2.09	2.11	2.18	2.21	2.20	2.07	**2.57**	**2.14**
Mar 9	2.21	2.23	2.30	2.25	2.21	2.18	2.18	2.19	2.18	2.11	2.07	2.06	2.05	2.03	2.02	1.98	1.98	S	1.99	1.99	1.98	1.99	2.00	2.05	1.98	2.30	2.10
Mar 10	2.06	2.03	2.02	2.04	2.08	2.03	2.02	1.99	1.96	1.96	1.93	1.91	1.91	1.91	1.94	1.92	S	1.93	1.92	1.93	1.94	1.96	1.97	2.09	1.91	2.09	1.98
Mar 11	2.22	2.27	2.14	2.06	2.03	2.06	2.04	1.98	1.94	1.93	1.93	1.93	1.93	1.93	1.94	S	1.93	1.92	1.92	1.93	1.93	1.94	2.00	1.95	1.92	2.27	1.99
Mar 12	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.95	1.94	1.95	1.94	1.95	1.93	S	1.95	1.97	2.00	1.96	1.96	1.95	1.96	2.00	1.99	1.93	2.00	1.96
Mar 13	1.96	1.96	1.96	1.96	1.97	1.97	1.98	1.99	1.97	2.06	2.09	1.98	1.97	S	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.99	1.97	1.98	1.96	2.09	1.98
Mar 14	2.00	2.03	2.04	2.04	2.05	2.06	2.08	2.09	2.10	K	K	K	K	K	K	K	1.96	1.96	1.97	1.97	1.97	1.96	1.97	1.98	1.96	2.10	NA
Mar 15	1.96	1.94	1.90	1.89	1.90	1.96	1.93	1.90	1.93	2.31	2.03	S	1.95	1.93	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.96	1.96	1.95	1.89	2.31	1.96
Mar 16	1.96	1.97	1.98	1.98	1.98	1.97	1.96	1.95	1.96	1.95	S	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.97	1.95	1.96	1.97	1.98	1.95	1.98	1.96
Mar 17	1.98	1.97	1.96	1.97	1.97	1.97	1.96	1.98	1.98	S	2.00	1.99	1.98	1.99	1.99	2.00	2.01	2.01	2.02	2.02	2.02	2.03	2.02	2.01	1.96	2.03	1.99
Mar 18	2.01	2.02	2.04	2.03	2.00	2.03	2.11	2.00	S	1.93	1.91	1.91	1.90	1.90	1.90	1.89	1.90	1.91	1.92	1.93	1.94	1.94	1.95	1.95	1.89	2.11	1.96
Mar 19	1.94	1.95	1.94	1.95	1.94	1.94	1.94	S	1.95	1.95	1.96	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.97	1.97	1.96	1.96	1.94	1.97	1.95
Mar 20	1.95	1.96	1.96	1.97	1.96	1.96	S	1.96	1.96	1.98	1.95	1.95	1.96	1.95	1.95	1.94	1.94	1.94	1.93	1.95	1.96	1.95	1.96	1.99	1.93	1.99	1.96
Mar 21	1.97	1.96	1.96	1.95	1.96	S	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.95	1.96	1.95	1.95	1.95	1.96	1.95	1.94	1.97	1.95
Mar 22	1.95	1.95	1.95	1.95	S	1.96	1.97	1.96	1.97	1.96	1.97	1.96	1.95	1.95	1.94	1.94	1.94	1.95	1.94	1.94	1.96	1.99	1.98	1.96	1.94	1.99	1.96
Mar 23	1.95	1.95	1.96	S	1.97	1.98	1.98	1.97	1.98	1.96	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.98	1.99	1.94	1.99	1.96
Mar 24	2.00	2.00	S	2.23	2.22	2.03	2.01	2.02	2.03	1.98	1.97	1.97	1.99	1.97	1.97	1.96	1.96	1.96	1.97	1.98	1.98	1.98	1.98	1.98	1.96	2.23	2.01
Mar 25	1.97	S	1.97	1.97	1.98	1.97	1.98	1.97	1.97	1.96	1.95	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.95	1.98	1.96
Mar 26	S	1.98	1.98	1.98	1.97	1.97	1.98	1.99	1.99	1.98	1.97	1.96	C	C	C	C	C	2.07	2.06	2.06	2.06	2.06	2.06	S	1.96	2.07	NA
Mar 27	2.07	2.06	2.06	2.06	2.06	2.05	2.05	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.04	2.05	2.05	2.08	2.06	2.05	2.04	2.06	S	2.18	2.04	2.18	2.06
Mar 28	2.05	2.04	2.05	2.04	2.04	2.04	2.04	2.04	2.04	2.03	2.04	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.04	2.04	2.05	S	2.05	2.05	2.03	2.05	2.04
Mar 29	2.06	2.06	2.07	2.07	2.07	2.08	2.07	2.07	2.07	2.06	2.06	2.06	2.05	2.05	2.04	2.05	2.04	2.04	2.04	2.06	S	2.09	2.08	2.06	2.04	2.09	2.06
Mar 30	2.05	2.06	2.06	2.07	2.08	2.08	2.08	2.10	2.08	2.05	2.05	2.05	2.06	2.05	2.05	2.05	2.05	2.05	2.06	S	2.09	2.07	2.09	2.13	2.05	2.13	2.07
Mar 31	2.13	2.09	2.10	2.12	2.11	2.11	2.11	2.15	2.16	2.15	2.15	2.16	2.14	2.10	2.10	2.06	2.06	2.06	S	2.05	2.07	2.10	2.11	2.11	2.05	2.16	2.11
Diurnal Maximum	2.22	2.27	2.30	2.25	2.22	2.40	2.22	2.25	2.57	2.31	2.15	2.16	2.14	2.10	2.10	2.08	2.10	2.11	2.06	2.20	2.11	2.18	2.21	2.20			
Diurnal Average	2.02	2.02	2.02	2.02	2.03	2.03	2.03	2.03	2.04	2.03	2.00	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	2.00	2.01	2.02			

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.



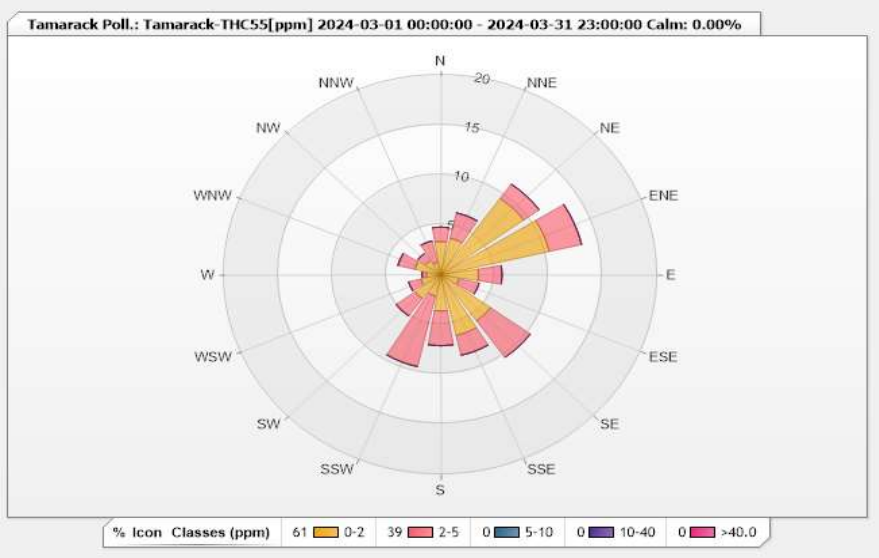


Station: Tamarack Poll.: Tamarack-THC55[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 92.61% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	3.34	1.45	0	0	0	4.79
NNE	3.77	2.61	0	0	0	6.38
NE	9.43	1.74	0	0	0	11.17
ENE	10.3	3.05	0	0	0	13.35
E	3.48	2.18	0	0	0	5.66
ESE	1.74	1.89	0	0	0	3.63
SE	5.66	4.5	0	0	0	10.16
SSE	6.24	2.03	0	0	0	8.27
S	3.63	3.48	0	0	0	7.11
SSW	2.18	7.26	0	0	0	9.44
SW	2.9	2.18	0	0	0	5.08
WSW	1.89	1.16	0	0	0	3.05
W	1.31	0.44	0	0	0	1.75
WNW	2.47	1.6	0	0	0	4.07
NW	1.74	0.87	0	0	0	2.61
NNW	1.31	2.18	0	0	0	3.49
Summary	61.39	38.62	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

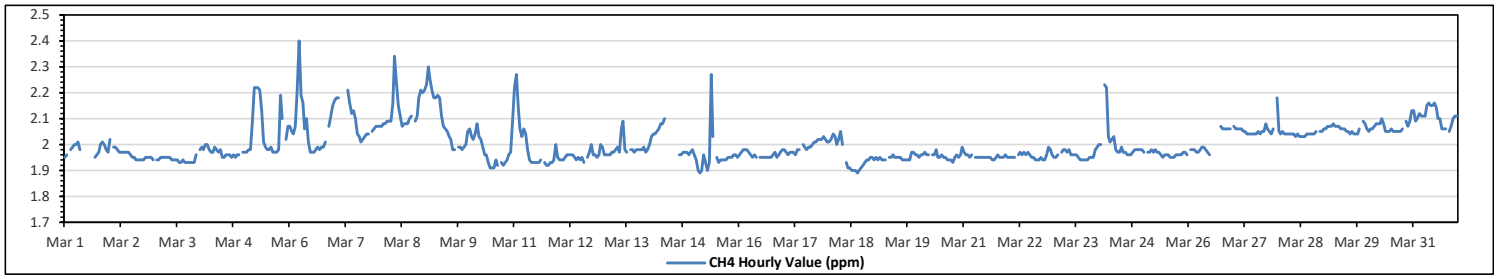
METHANE (CH4) in ppm

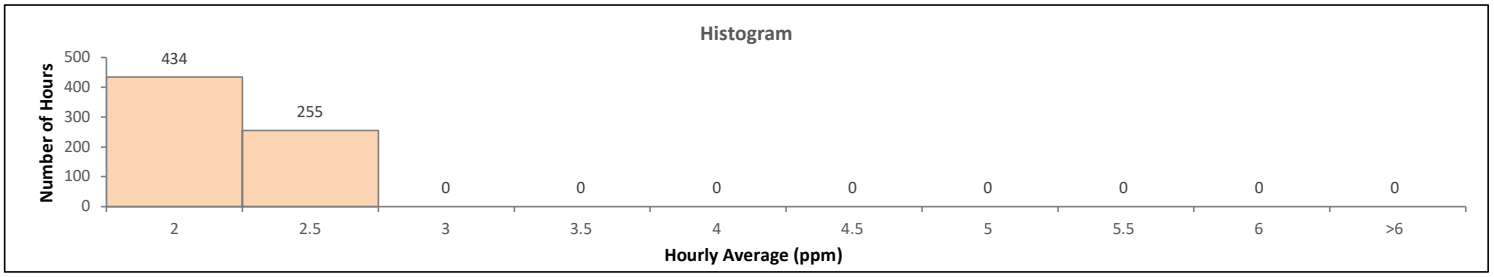
Maximum Hourly Value:	2.40	ppm	on Mar 6 at hr 5	Hours in Service:	744	
Maximum Daily Value:	2.13	ppm	on Mar 8	Hours of Data:	689	
Minimum Hourly Value:	1.89	ppm	on Mar 15 at hr 3	Hours of Missing Data:	18	
Minimum Daily Value:	1.94	ppm	on Mar 3	Hours of Calibration:	37	
Monthly Average:	2.00	ppm		Operational Uptime:	97.6	

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			
Mar 1	1.95	1.96	S	1.98	1.99	2.00	2.00	2.01	1.98	K	K	K	K	K	K	K	1.95	1.96	1.97	2.00	2.01	2.00	1.98	1.97	1.95	2.01	NA
Mar 2	2.02	S	1.99	1.99	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.94	1.94	2.02	1.96
Mar 3	S	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.93	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.96	S	1.93	1.96	1.94
Mar 4	1.98	1.99	1.98	2.00	2.00	1.98	1.97	1.97	1.99	1.98	1.97	1.98	1.95	1.95	1.96	1.96	1.96	1.95	1.96	1.95	1.96	1.96	S	1.97	1.95	2.00	1.97
Mar 5	1.97	1.97	1.98	1.98	2.09	2.22	2.22	2.22	2.21	2.13	2.01	1.99	1.98	1.98	1.99	1.97	1.97	1.97	1.98	2.19	2.10	S	2.02	2.07	1.97	2.22	2.05
Mar 6	2.07	2.05	2.04	2.07	2.21	**2.40**	2.19	2.16	2.06	2.10	2.01	1.97	1.97	1.97	1.98	1.99	1.98	1.99	1.99	2.01	S	2.07	2.11	2.15	1.97	**2.40**	2.07
Mar 7	2.17	2.18	2.18	K	K	K	K	2.21	2.16	2.12	2.13	2.10	2.04	2.03	2.01	2.02	2.03	2.04	2.04	S	2.05	2.06	2.07	2.07	2.01	2.21	2.09
Mar 8	2.07	2.07	2.08	2.08	2.09	2.09	2.09	2.16	2.34	2.24	2.15	2.11	2.07	2.08	2.08	2.08	2.10	2.11	S	2.09	2.11	2.18	2.21	2.20	2.07	2.34	**2.13**
Mar 9	2.21	2.23	2.30	2.25	2.21	2.18	2.18	2.19	2.18	2.11	2.07	2.06	2.05	2.03	2.02	1.98	1.98	S	1.99	1.99	1.98	1.99	2.00	2.05	1.98	2.30	2.10
Mar 10	2.06	2.03	2.02	2.04	2.08	2.03	2.02	1.99	1.96	1.96	1.93	1.91	1.91	1.91	1.94	1.92	S	1.93	1.92	1.93	1.94	1.96	1.97	2.09	1.91	2.09	1.98
Mar 11	2.22	2.27	2.14	2.06	2.03	2.06	2.04	1.98	1.94	1.93	1.93	1.93	1.93	1.93	1.94	S	1.93	1.92	1.92	1.93	1.93	1.94	2.00	1.95	1.92	2.27	1.99
Mar 12	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.95	1.94	1.95	1.94	1.95	1.93	S	1.95	1.97	2.00	1.96	1.96	1.95	1.96	2.00	1.99	1.93	2.00	1.96
Mar 13	1.96	1.96	1.96	1.96	1.97	1.97	1.98	1.99	1.97	2.06	2.09	1.98	1.97	S	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.99	1.97	1.98	1.96	2.09	1.98
Mar 14	2.00	2.03	2.04	2.04	2.05	2.06	2.08	2.08	2.10	K	K	K	K	K	K	K	1.96	1.96	1.97	1.97	1.97	1.96	1.97	1.98	1.96	2.10	NA
Mar 15	1.96	1.94	1.90	1.89	1.90	1.96	1.93	1.90	1.93	2.27	2.03	S	1.95	1.93	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.96	1.96	1.95	1.89	2.27	1.96
Mar 16	1.96	1.97	1.98	1.98	1.98	1.97	1.96	1.95	1.96	1.95	S	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.97	1.95	1.96	1.97	1.98	1.95	1.98	1.96
Mar 17	1.98	1.97	1.96	1.97	1.97	1.97	1.96	1.98	1.98	S	2.00	1.99	1.98	1.99	1.99	2.00	2.01	2.01	2.02	2.02	2.02	2.03	2.02	2.01	1.96	2.03	1.99
Mar 18	2.01	2.02	2.04	2.03	2.00	2.02	2.05	2.00	S	1.93	1.91	1.91	1.90	1.90	1.90	1.89	1.90	1.91	1.92	1.93	1.94	1.94	1.95	1.95	1.89	2.05	1.95
Mar 19	1.94	1.95	1.94	1.95	1.94	1.94	1.94	S	1.95	1.95	1.96	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.97	1.97	1.96	1.96	1.94	1.97	1.95
Mar 20	1.95	1.96	1.96	1.97	1.96	1.96	S	1.96	1.96	1.98	1.95	1.95	1.96	1.95	1.95	1.94	1.94	1.94	1.93	1.95	1.96	1.95	1.96	1.99	1.93	1.99	1.96
Mar 21	1.97	1.96	1.96	1.95	1.96	S	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.95	1.96	1.95	1.95	1.95	1.96	1.95	1.94	1.97	1.95
Mar 22	1.95	1.95	1.95	1.95	S	1.96	1.97	1.96	1.97	1.96	1.97	1.96	1.95	1.95	1.94	1.94	1.94	1.95	1.94	1.94	1.96	1.99	1.98	1.96	1.94	1.99	1.96
Mar 23	1.95	1.95	1.96	S	1.97	1.98	1.98	1.97	1.98	1.96	1.96	1.96	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.98	1.99	1.94	1.99	1.96
Mar 24	2.00	2.00	S	2.23	2.22	2.03	2.01	2.02	2.03	1.98	1.97	1.97	1.99	1.97	1.97	1.96	1.96	1.96	1.97	1.98	1.98	1.98	1.98	1.98	1.96	2.23	2.01
Mar 25	1.97	S	1.97	1.97	1.98	1.97	1.98	1.97	1.97	1.96	1.95	1.96	1.96	1.96	1.95	1.95	1.95	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.95	1.98	1.96
Mar 26	S	1.98	1.98	1.98	1.97	1.97	1.98	1.99	1.99	1.98	1.97	1.96	C	C	C	C	C	2.07	2.06	2.06	2.06	2.06	2.06	S	1.96	2.07	NA
Mar 27	2.07	2.06	2.06	2.06	2.06	2.05	2.05	2.04	2.04	2.04	2.04	2.04	2.04	2.05	2.04	2.05	2.05	2.08	2.06	2.05	2.04	2.06	S	2.18	2.04	2.18	2.06
Mar 28	2.05	2.04	2.05	2.04	2.04	2.04	2.04	2.04	2.04	2.03	2.04	2.03	2.03	2.03	2.03	2.04	2.04	2.04	2.04	2.04	2.05	S	2.05	2.05	2.03	2.05	2.04
Mar 29	2.06	2.06	2.07	2.07	2.07	2.08	2.07	2.07	2.07	2.06	2.06	2.06	2.05	2.05	2.04	2.05	2.04	2.04	2.04	2.06	S	2.09	2.08	2.06	2.04	2.09	2.06
Mar 30	2.05	2.06	2.06	2.07	2.08	2.08	2.08	2.10	2.08	2.05	2.05	2.05	2.06	2.05	2.05	2.05	2.05	2.05	2.06	S	2.09	2.07	2.09	2.13	2.05	2.13	2.07
Mar 31	2.13	2.09	2.10	2.12	2.11	2.11	2.11	2.15	2.16	2.15	2.15	2.16	2.14	2.10	2.10	2.06	2.06	2.06	S	2.05	2.07	2.10	2.11	2.11	2.05	2.16	2.11
Diurnal Maximum	2.22	2.27	2.30	2.25	2.22	2.40	2.22	2.22	2.34	2.27	2.15	2.16	2.14	2.10	2.10	2.08	2.10	2.11	2.06	2.19	2.11	2.18	2.21	2.20			
Diurnal Average	2.02	2.02	2.02	2.02	2.03	2.03	2.02	2.03	2.03	2.02	2.00	1.99	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.99	1.99	2.00	2.01	2.02			

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.



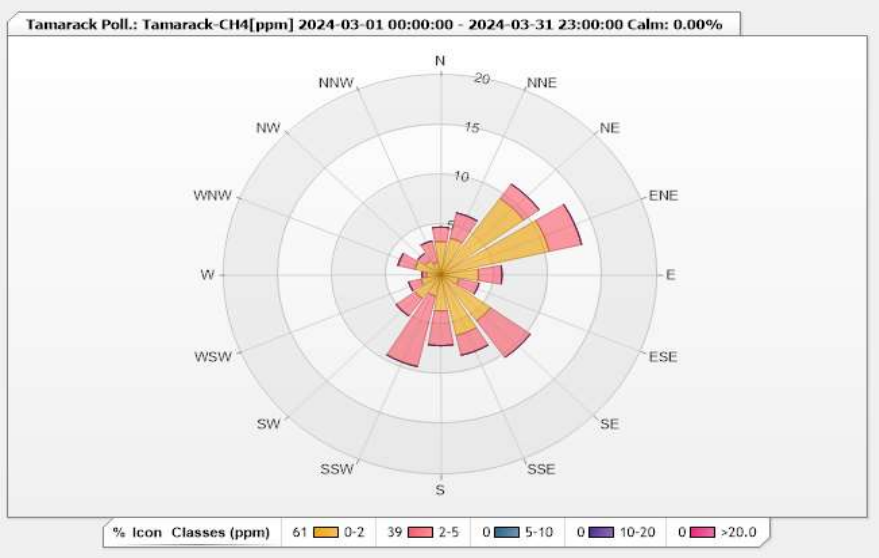


Station: Tamarack Poll.: Tamarack-CH4[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 92.61% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	3.34	1.45	0	0	0	4.79
NNE	3.77	2.61	0	0	0	6.38
NE	9.43	1.74	0	0	0	11.17
ENE	10.3	3.05	0	0	0	13.35
E	3.48	2.18	0	0	0	5.66
ESE	1.74	1.89	0	0	0	3.63
SE	5.66	4.5	0	0	0	10.16
SSE	6.24	2.03	0	0	0	8.27
S	3.63	3.48	0	0	0	7.11
SSW	2.18	7.26	0	0	0	9.44
SW	2.9	2.18	0	0	0	5.08
WSW	1.89	1.16	0	0	0	3.05
W	1.31	0.44	0	0	0	1.75
WNW	2.47	1.6	0	0	0	4.07
NW	1.74	0.87	0	0	0	2.61
NNW	1.31	2.18	0	0	0	3.49
Summary	61.39	38.62	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

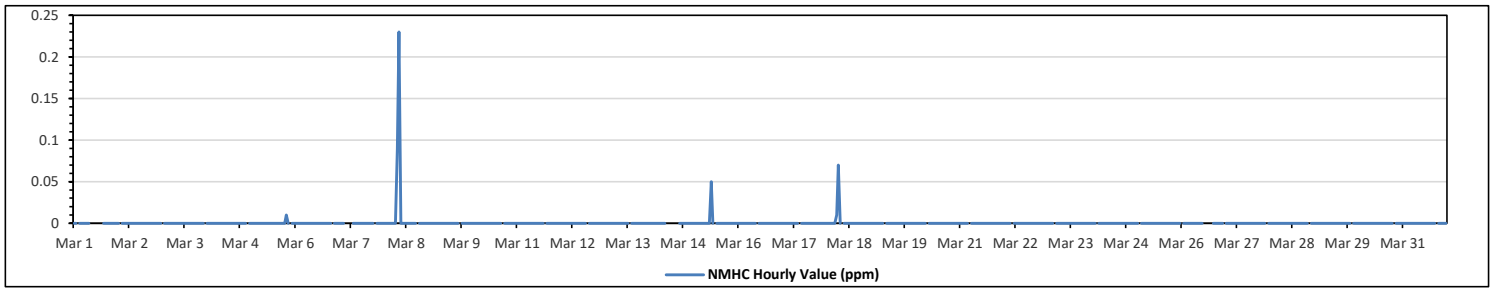
NON-METHANE HYDROCARBONS (NMHC) in ppm

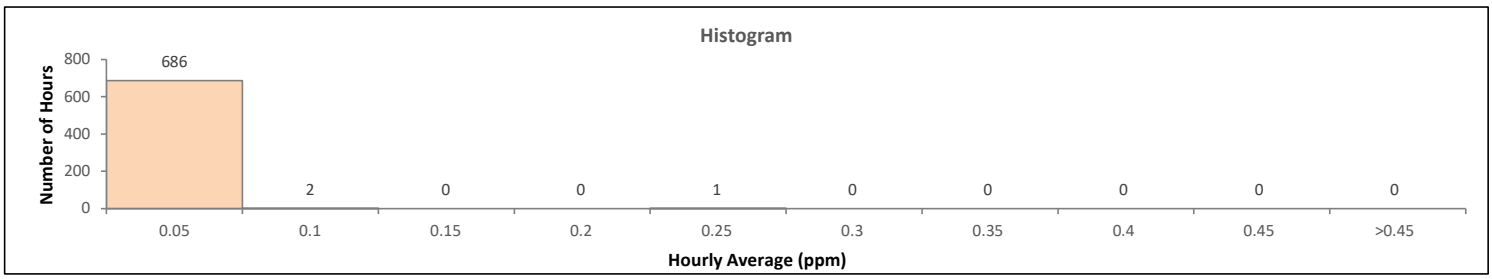
Maximum Hourly Value:	0.23	ppm	on Mar 8 at hr 8	Hours in Service:	744
Maximum Daily Value:	0.01	ppm	on Mar 8	Hours of Data:	689
Minimum Hourly Value:	0.00	ppm	on Mar 1 at hr 0	Hours of Missing Data:	18
Minimum Daily Value:	0.00	ppm	on Mar 2	Hours of Calibration:	37
Monthly Average:	0.00	ppm		Operational Uptime:	97.6

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			
Mar 1	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	K	K	K	K	K	K	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
Mar 2	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
Mar 3	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
Mar 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	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
Mar 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	S	0.00	0.00	0.00	0.01	0.00
Mar 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Mar 7	0.00	0.00	0.00	K	K	K	K	0.00	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
Mar 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	**0.23**	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	**0.23**	**0.01**
Mar 9	0.00	0.00	0.00	0.00	0.00	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
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	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
Mar 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	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
Mar 14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	K	K	K	K	K	K	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
Mar 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	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	0.05	0.00
Mar 16	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
Mar 17	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
Mar 18	0.00	0.00	0.00	0.00	0.00	0.01	0.07	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	0.07	0.00
Mar 19	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
Mar 20	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
Mar 21	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
Mar 22	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
Mar 23	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
Mar 24	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
Mar 25	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
Mar 26	S	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	S	0.00	0.00	NA
Mar 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	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
Mar 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	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
Mar 29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Mar 30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Mar 31	0.00	0.00	0.00	0.00	0.00	0.00	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
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.09	0.23	0.05	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			
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	0.00	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.



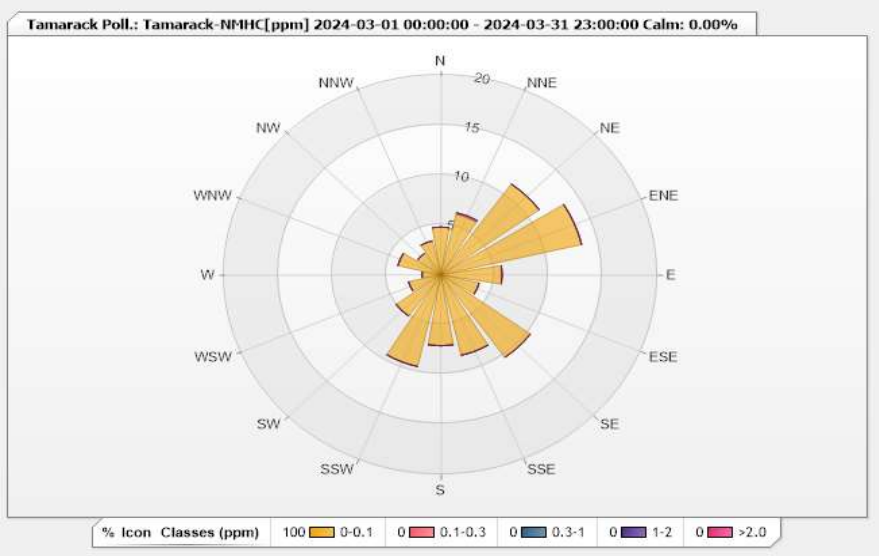


Station: Tamarack Poll.: Tamarack-NMHC[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 92.61% Calm Avg: 0.00 [ppb]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	4.79	0	0	0	0	4.79
NNE	6.24	0.15	0	0	0	6.39
NE	11.18	0	0	0	0	11.18
ENE	13.35	0	0	0	0	13.35
E	5.66	0	0	0	0	5.66
ESE	3.63	0	0	0	0	3.63
SE	10.16	0	0	0	0	10.16
SSE	8.27	0	0	0	0	8.27
S	7.11	0	0	0	0	7.11
SSW	9.43	0	0	0	0	9.43
SW	5.08	0	0	0	0	5.08
WSW	3.05	0	0	0	0	3.05
W	1.74	0	0	0	0	1.74
WNW	4.06	0	0	0	0	4.06
NW	2.61	0	0	0	0	2.61
NNW	3.48	0	0	0	0	3.48
Summary	100	0.15	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

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

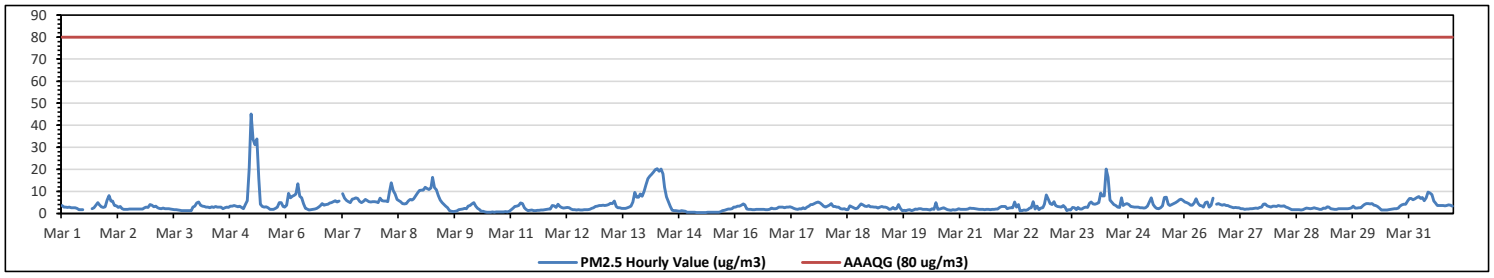
Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m3, Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m3

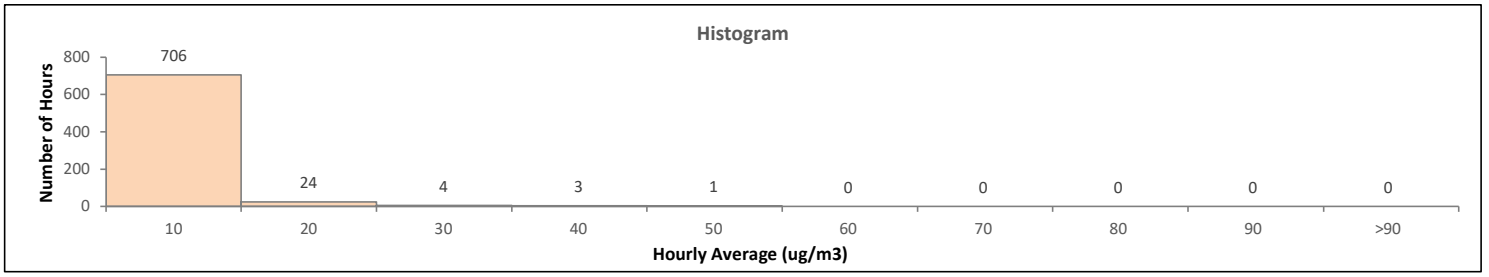
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0
Maximum Hourly Value:	45 µg/m^3 on Mar 5 at hr 5	Hours in Service:	744
Maximum Daily Value:	9.9 µg/m^3 on Mar 5	Hours of Data:	738
Minimum Hourly Value:	0 µg/m^3 on Mar 15 at hr 3	Hours of Missing Data:	5
Minimum Daily Value:	1 µg/m^3 on Mar 15	Hours of Calibration:	1
Monthly Average:	3.8 µg/m^3	Operational Uptime:	99.3

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			
Mar 1	4	3	3	3	3	3	3	3	2	2	2	2	K	K	K	K	2	3	4	5	4	3	3	3	2	5	2.8
Mar 2	6	8	6	6	4	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4	2	8	3.1
Mar 3	4	3	3	3	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	3	3	1	4	2.1
Mar 4	5	5	4	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	4	3	3	3	2	5	3.1
Mar 5	3	2	4	6	20	**45**	34	31	34	16	4	3	3	3	3	2	2	2	2	3	5	5	3	3	2	**45**	**9.9**
Mar 6	4	9	7	8	8	9	13	8	7	4	2	2	2	2	2	2	2	3	3	4	4	4	4	5	2	13	4.9
Mar 7	5	5	6	5	6	K	9	7	6	5	5	6	7	7	7	6	5	6	6	6	5	5	5	5	5	9	5.9
Mar 8	5	5	7	6	6	6	5	10	14	10	9	6	6	5	4	4	4	6	6	6	7	8	9	10	4	14	6.9
Mar 9	11	11	12	11	11	12	16	12	11	8	6	5	4	3	3	1	1	1	1	1	2	2	2	2	1	16	6.1
Mar 10	2	3	4	4	5	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1.5
Mar 11	2	2	3	3	4	5	4	3	2	1	1	2	1	1	1	1	2	2	2	2	2	2	4	3	1	5	2.3
Mar 12	3	4	3	3	2	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4	2	4	2.3
Mar 13	4	4	4	4	4	5	5	6	3	3	3	2	2	2	3	3	3	5	10	7	7	9	8	10	2	10	4.7
Mar 14	13	16	17	18	19	20	20	19	20	18	12	8	5	3	1	1	1	1	1	1	1	1	1	1	1	20	9.1
Mar 15	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	**0**	3	**0.9**
Mar 16	3	3	3	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	4	2.4
Mar 17	3	3	3	3	3	3	3	2	2	2	2	2	3	2	3	3	4	4	5	5	5	5	4	3	2	5	3.2
Mar 18	3	3	4	4	3	3	3	3	2	2	2	2	2	3	3	3	2	2	3	4	4	3	3	4	2	4	3.0
Mar 19	3	3	3	3	2	3	3	3	3	3	2	2	3	2	2	4	2	1	1	1	2	2	1	2	1	4	2.3
Mar 20	2	2	2	2	2	2	2	2	2	2	2	5	2	2	2	3	2	2	2	1	2	2	2	2	1	5	2.0
Mar 21	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	3	2.1
Mar 22	3	2	2	3	3	5	3	4	1	1	2	1	2	2	3	5	2	3	2	2	3	4	8	6	1	8	3.0
Mar 23	4	4	5	4	3	3	3	4	3	1	2	2	3	3	2	3	2	2	3	3	3	5	5	4	1	5	3.0
Mar 24	4	5	5	9	8	8	20	16	6	5	4	4	3	3	7	4	4	5	4	3	3	3	3	3	3	20	5.7
Mar 25	3	3	2	3	3	5	7	4	3	2	2	3	3	7	7	4	4	4	4	5	6	6	6	6	2	7	4.3
Mar 26	5	5	4	4	4	5	7	5	4	3	3	5	5	3	4	7	C	4	4	4	4	4	4	4	3	7	4.3
Mar 27	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	4	4	3	3	3	3	2	4	2.7
Mar 28	3	3	4	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	4	2.4
Mar 29	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	3	3	3	2	3	2.3
Mar 30	4	5	4	4	5	4	4	3	2	2	2	2	2	2	2	2	2	2	2	3	4	4	4	6	2	6	3.1
Mar 31	7	7	6	7	7	8	7	7	6	7	10	9	9	6	5	4	4	4	4	3	4	4	4	3	3	10	5.8
Diurnal Maximum	13	16	17	18	20	45	34	31	34	18	12	9	9	7	7	7	5	6	10	7	7	9	9	10			
Diurnal Average	4.0	4.3	4.4	4.5	5.0	6.0	6.3	5.6	4.9	3.8	3.0	2.9	2.8	2.7	2.7	2.7	2.3	2.6	3.0	3.1	3.2	3.4	3.6	3.8			

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.



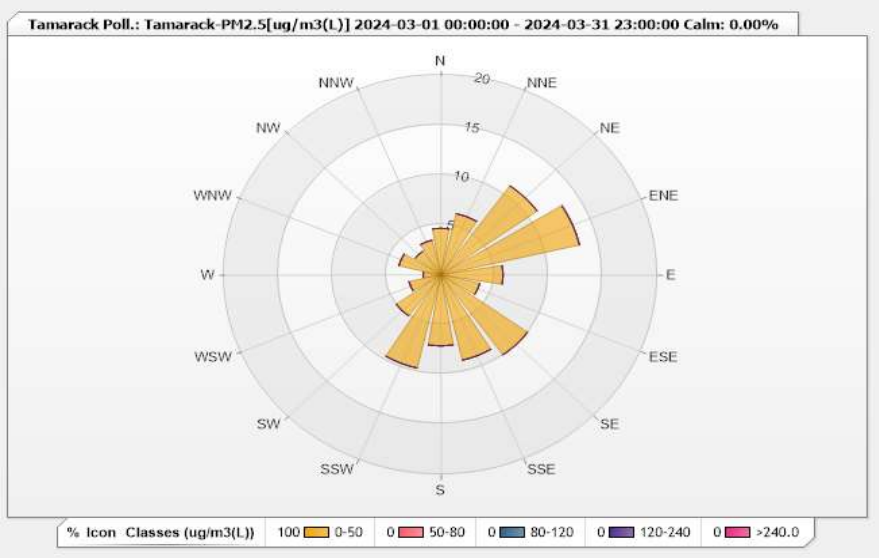


Station: Tamarack Poll.: Tamarack-PM2.5[ug/m3(L)] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 98.12% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	4.66	0	0	0	0	4.66
NNE	6.3	0	0	0	0	6.3
NE	10.96	0	0	0	0	10.96
ENE	13.15	0	0	0	0	13.15
E	5.75	0	0	0	0	5.75
ESE	3.7	0	0	0	0	3.7
SE	9.86	0	0	0	0	9.86
SSE	8.77	0	0	0	0	8.77
S	7.12	0	0	0	0	7.12
SSW	9.59	0	0	0	0	9.59
SW	5.07	0	0	0	0	5.07
WSW	3.01	0	0	0	0	3.01
W	1.64	0	0	0	0	1.64
WNW	3.97	0	0	0	0	3.97
NW	2.88	0	0	0	0	2.88
NNW	3.56	0	0	0	0	3.56
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

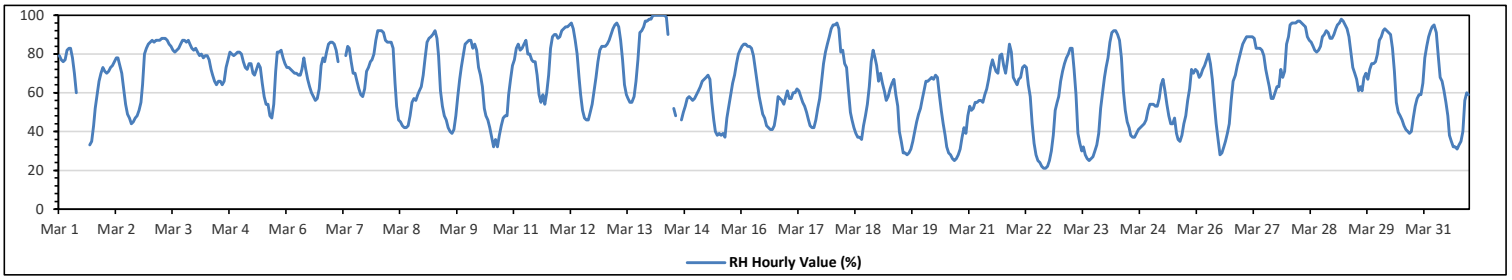
Maximum Hourly Value:	100	%	on Mar 14 at hr 1	Hours in Service:	744
Maximum Daily Value:	90.2	%	on Mar 28	Hours of Data:	731
Minimum Hourly Value:	21	%	on Mar 22 at hr 15	Hours of Missing Data:	13
Minimum Daily Value:	46.0	%	on Mar 22	Hours of Calibration:	0
Monthly Average:	66.0	%		Operational Uptime:	98.3

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
Mar 1	79	77	76	77	82	83	83	78	70	60	K	K	K	K	K	K	33	35	43	52	59	66	70	73	33	83	66.4
Mar 2	71	70	71	73	74	76	78	78	74	70	62	54	49	47	44	45	47	48	51	55	64	80	83	85	44	85	64.5
Mar 3	86	87	86	87	87	87	88	88	88	87	85	84	82	81	82	83	85	87	87	86	87	85	83	82	81	88	85.4
Mar 4	83	81	79	80	78	79	79	77	72	69	66	64	66	66	64	66	73	77	81	80	79	80	81	81	64	83	75.0
Mar 5	80	76	73	72	75	75	70	69	72	75	73	65	58	54	54	48	47	54	71	81	81	82	78	75	47	82	69.1
Mar 6	73	73	72	71	70	70	69	69	72	78	72	67	63	60	58	56	57	62	74	78	76	81	85	86	56	86	70.5
Mar 7	86	85	82	76	K	K	K	79	84	83	76	70	70	66	62	59	58	62	71	73	76	77	80	87	58	87	74.4
Mar 8	92	92	92	91	87	86	86	86	83	65	53	46	45	43	42	42	43	48	55	57	56	59	61	63	42	92	65.5
Mar 9	69	78	86	88	89	90	92	88	79	61	53	48	46	42	40	39	41	48	58	67	73	79	85	86	39	92	67.7
Mar 10	87	87	83	85	82	73	69	63	52	48	46	42	37	32	36	32	38	43	47	48	48	59	67	74	32	87	57.4
Mar 11	77	83	85	82	83	85	87	80	80	77	76	76	69	59	55	59	54	60	69	83	89	90	90	88	54	90	76.5
Mar 12	89	92	93	94	94	95	96	93	87	80	68	59	51	47	46	46	50	54	61	68	76	82	84	84	46	96	74.5
Mar 13	84	85	87	90	93	95	96	94	87	77	64	59	57	55	55	58	66	77	91	92	94	97	97	98	55	98	81.2
Mar 14	98	**100**	**100**	**100**	**100**	**100**	**100**	**100**	99	90	K	K	52	48	K	K	46	50	53	57	58	57	56	57	46	**100**	76.1
Mar 15	59	61	63	66	67	68	69	67	55	46	40	38	39	38	39	37	47	53	59	65	69	75	80	82	37	82	57.6
Mar 16	84	85	85	84	84	83	79	72	65	58	53	49	47	43	42	41	41	43	49	58	57	56	54	58	41	85	61.3
Mar 17	61	57	57	60	60	62	61	58	55	53	50	46	43	42	42	46	52	57	66	75	81	85	89	93	42	93	60.5
Mar 18	95	95	96	93	81	82	75	73	61	50	46	42	39	37	37	36	43	48	54	63	76	82	78	74	36	96	64.8
Mar 19	66	70	65	61	56	58	62	65	67	59	53	40	35	29	29	28	29	31	35	40	45	49	52	57	28	70	49.2
Mar 20	61	66	66	67	68	67	69	68	59	51	44	38	32	29	28	26	25	26	28	31	37	42	39	48	25	69	46.5
Mar 21	53	51	52	55	55	56	56	55	59	62	67	73	77	74	71	70	79	80	74	70	77	85	81	68	51	85	66.7
Mar 22	66	64	67	68	73	74	73	64	58	44	34	28	25	24	22	**21**	**21**	22	25	30	38	51	55	58	**21**	74	**46.0**
Mar 23	66	71	75	78	80	83	83	72	59	39	34	30	32	28	26	25	26	27	30	33	39	52	60	68	25	83	50.7
Mar 24	73	78	86	91	92	92	90	87	78	61	51	45	42	38	37	37	39	41	42	43	44	46	51	54	37	92	59.9
Mar 25	54	54	53	53	57	64	67	61	54	48	44	44	47	39	36	35	38	44	48	56	62	72	70	72	35	72	53.0
Mar 26	71	68	69	72	74	77	80	75	67	55	44	36	28	29	32	35	39	44	56	66	69	74	78	82	28	82	59.2
Mar 27	85	87	89	89	89	89	88	83	83	83	82	79	72	68	63	57	57	60	63	63	72	68	71	85	57	89	76.0
Mar 28	89	95	96	96	96	97	97	96	95	94	89	87	86	84	82	81	82	84	89	90	92	91	88	88	81	97	**90.2**
Mar 29	90	93	95	96	98	97	95	93	89	81	73	70	67	61	63	61	68	70	67	72	75	75	76	80	61	98	79.4
Mar 30	87	89	92	93	92	91	90	83	71	55	50	48	46	43	41	40	39	40	47	53	57	59	59	65	39	93	63.8
Mar 31	78	84	89	92	94	95	91	79	68	66	61	55	48	38	35	32	32	31	33	35	40	56	60	59	31	95	60.5
Diurnal Maximum	98	100	100	100	100	100	100	100	99	94	89	87	86	84	82	83	85	87	91	92	94	97	97	98			
Diurnal Average	77.2	78.5	79.4	80.0	80.3	81.0	80.6	77.2	72.3	65.3	58.9	54.6	51.7	48.1	47.0	46.2	48.2	51.8	57.3	61.9	66.0	70.7	72.3	74.5			

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

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

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



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

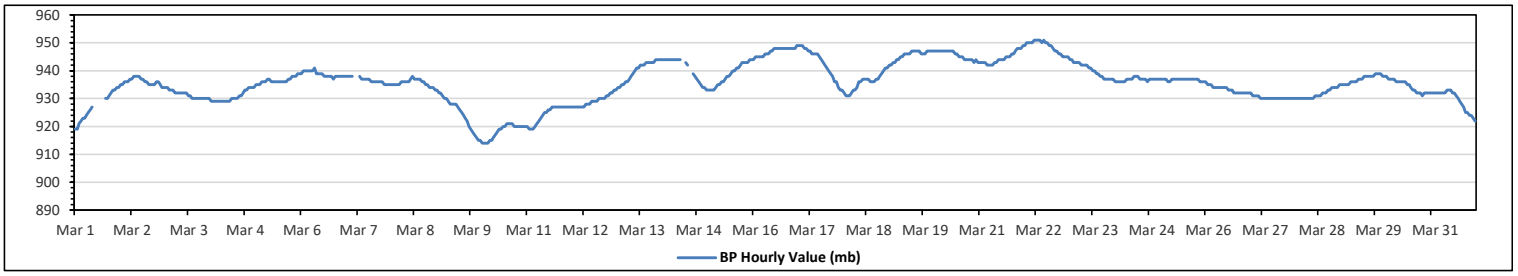
BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	951	mb	on Mar 22 at hr 5	Hours in Service:	744
Maximum Daily Value:	949	mb	on Mar 22	Hours of Data:	731
Minimum Hourly Value:	914	mb	on Mar 10 at hr 0	Hours of Missing Data:	13
Minimum Daily Value:	918	mb	on Mar 10	Hours of Calibration:	0
Monthly Average:	936	mb		Operational Uptime:	98.3

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
Mar 1	919	919	921	922	923	923	924	925	926	927	K	K	K	K	K	K	930	930	931	932	933	933	934	934	919	934	927
Mar 2	935	935	936	936	936	937	937	938	938	938	938	937	937	936	936	935	935	935	935	936	936	935	934	934	934	938	936
Mar 3	934	934	933	933	933	932	932	932	932	932	932	932	931	931	930	930	930	930	930	930	930	930	930	930	930	934	931
Mar 4	929	929	929	929	929	929	929	929	929	929	929	930	930	930	930	931	931	932	933	933	934	934	934	934	929	934	931
Mar 5	935	935	935	936	936	936	937	937	936	936	936	936	936	936	936	936	936	937	937	938	938	938	939	939	935	939	937
Mar 6	939	940	940	940	940	940	940	941	939	939	939	939	938	938	938	938	938	937	938	938	938	938	938	938	937	941	939
Mar 7	938	938	938	938	K	K	K	938	937	937	937	937	937	936	936	936	936	936	936	936	935	935	935	935	935	938	937
Mar 8	935	935	935	935	935	936	936	936	936	936	937	938	937	937	937	937	936	936	935	935	934	934	934	933	933	938	936
Mar 9	933	932	932	931	930	930	929	928	928	928	928	927	926	925	924	923	922	920	919	918	917	916	915	915	915	933	925
Mar 10	**914**	**914**	**914**	**914**	915	915	916	917	918	919	919	920	920	921	921	921	921	920	920	920	920	920	920	920	**914**	921	**918**
Mar 11	920	919	919	919	920	921	922	923	924	925	925	926	926	927	927	927	927	927	927	927	927	927	927	927	919	927	924
Mar 12	927	927	927	927	927	927	927	928	928	928	929	929	929	929	930	930	930	930	931	931	932	932	933	933	927	933	929
Mar 13	934	934	935	935	936	936	937	938	939	940	941	941	942	942	942	943	943	943	943	943	944	944	944	944	934	944	940
Mar 14	944	944	944	944	944	944	944	944	944	944	K	K	943	942	K	K	939	938	937	936	935	934	934	933	933	944	941
Mar 15	933	933	933	933	934	935	935	936	936	937	938	938	939	940	940	941	941	942	943	943	943	943	944	944	933	944	939
Mar 16	944	945	945	945	945	945	946	946	946	947	947	948	948	948	948	948	948	948	948	948	948	948	948	949	944	949	947
Mar 17	949	949	949	948	948	947	947	946	946	946	946	945	944	943	942	941	940	939	938	936	936	934	933	933	933	949	943
Mar 18	932	931	931	931	932	933	933	934	936	936	937	937	937	937	936	936	936	937	937	938	939	940	941	941	931	941	936
Mar 19	942	942	943	943	944	944	945	945	946	946	946	946	947	947	947	947	947	946	946	946	947	947	947	947	942	947	946
Mar 20	947	947	947	947	947	947	947	947	947	947	947	946	946	945	945	945	944	944	944	944	944	943	944	943	943	947	946
Mar 21	943	943	943	943	942	942	942	942	943	943	944	944	944	944	945	945	945	946	946	947	948	948	948	949	942	949	945
Mar 22	949	950	950	950	950	**951**	**951**	**951**	**951**	950	**951**	950	950	949	949	948	947	947	946	946	945	945	945	945	945	**951**	**949**
Mar 23	944	944	943	943	943	943	942	942	942	942	941	941	940	940	939	939	938	938	937	937	937	937	937	937	937	944	940
Mar 24	936	936	936	936	936	936	937	937	937	937	938	938	938	937	937	937	937	936	937	937	937	937	937	937	936	938	937
Mar 25	937	937	937	937	936	936	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937	936	936	936	936	937	937
Mar 26	936	935	935	935	934	934	934	934	934	934	934	934	933	933	933	932	932	932	932	932	932	932	932	932	932	936	933
Mar 27	932	931	931	931	931	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	932	930
Mar 28	930	930	930	930	930	930	930	930	930	930	931	931	931	931	932	932	932	933	933	934	934	934	934	935	930	935	932
Mar 29	935	935	935	935	935	936	936	936	936	937	937	937	938	938	938	938	938	938	939	939	939	939	938	938	935	939	937
Mar 30	938	937	937	937	937	936	936	936	936	936	936	935	935	934	933	933	932	932	932	931	932	932	932	932	931	938	934
Mar 31	932	932	932	932	932	932	932	932	933	933	933	932	932	931	930	929	928	927	925	925	924	924	923	922	922	933	929
Diurnal Maximum	949	950	950	950	950	951	951	951	951	950	951	950	950	949	949	948	948	948	948	948	948	948	948	949			
Diurnal Average	935	935	935	935	935	935	936	936	936	936	937	937	937	936	936	936	936	936	936	936	936	935	935	935			

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 - March 2024

Summary of Hourly Averages

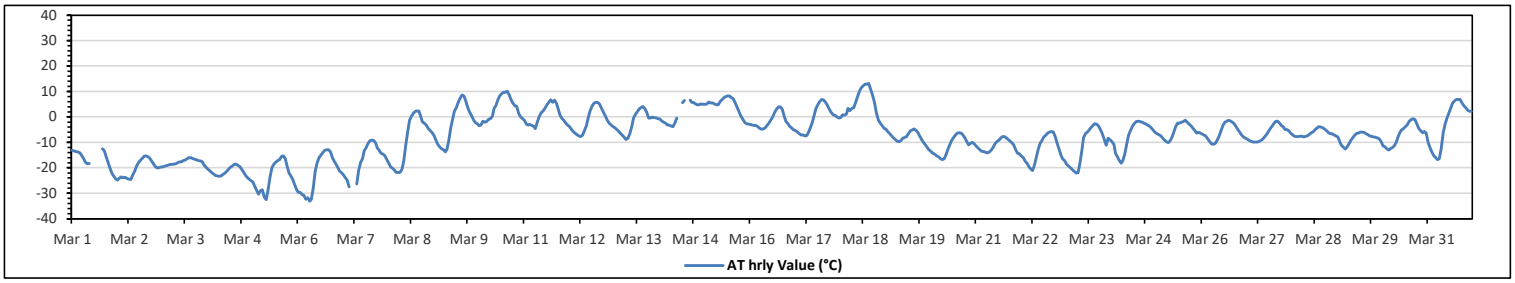
AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	13.2	°C	on Mar 18 at hr 15	Hours in Service:	744	
Maximum Daily Value:	4.9	°C	on Mar 18	Hours of Data:	731	
Minimum Hourly Value:	-33.1	°C	on Mar 6 at hr 6	Hours of Missing Data:	13	
Minimum Daily Value:	-23.6	°C	on Mar 5	Hours of Calibration:	0	
Monthly Average:	-7.9	°C		Operational Uptime:	98.3	

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
Mar 1	-13.2	-13.4	-13.6	-13.7	-14.1	-15.3	-16.5	-17.8	-18.4	-18.3	K	K	K	K	K	K	-12.5	-13.3	-15.7	-17.9	-20.2	-22.1	-23.3	-24.2	-24.2	-12.5	-16.9
Mar 2	-24.8	-24.1	-23.5	-23.9	-23.7	-24.2	-24.4	-24.5	-22.9	-21.3	-19.2	-18.1	-17.1	-16.4	-15.5	-15.3	-15.5	-16.1	-17.2	-18.3	-19.4	-20.1	-20	-19.7	-24.8	-15.3	-20.2
Mar 3	-19.6	-19.3	-19.1	-18.9	-18.7	-18.7	-18.6	-18.4	-17.9	-17.6	-17.6	-17.2	-16.9	-16.3	-16.1	-16.1	-16.3	-16.6	-16.9	-17.2	-17.3	-17.5	-18.9	-19.8	-19.8	-16.1	-17.8
Mar 4	-20.5	-21.2	-21.9	-22.5	-23	-23.2	-23.3	-23.1	-22.6	-22	-21.3	-20.5	-19.8	-19.2	-18.7	-18.6	-19	-19.5	-20.6	-21.8	-23	-23.9	-24.6	-25.1	-25.1	-18.6	-21.6
Mar 5	-25.7	-27.4	-29.1	-30.4	-29	-28.6	-31.4	-32.4	-28.5	-23.5	-20	-18.5	-17.7	-17.2	-16.7	-15.6	-15.3	-16.2	-19.1	-21.9	-23.1	-24.6	-26.6	-28.5	-32.4	-15.3	**-23.6**
Mar 6	-29.6	-29.6	-30.5	-30.9	-32.3	-31.7	**-33.1**	-32.3	-28	-21.5	-18.1	-16	-14.9	-14	-13.2	-12.8	-12.8	-13.7	-16	-17.3	-18.5	-20	-21.2	-21.9	**-33.1**	-12.8	-22.1
Mar 7	-22.7	-23.8	-24.8	-27.4	K	K	K	-26.3	-20.9	-17.9	-16.3	-13.4	-12.1	-10.5	-9.4	-9.1	-9.3	-10.2	-12.1	-13.2	-14.2	-14.7	-15.2	-16.7	-27.4	-9.1	-16.2
Mar 8	-18.2	-19.7	-20.2	-20.8	-21.7	-21.7	-21.8	-20.7	-17.3	-11.1	-6	-1.3	0.3	1.4	2.3	2.4	2.4	0.2	-1.9	-2.5	-3.1	-4.4	-5.4	-6.1	-21.8	2.4	-9.0
Mar 9	-7.2	-9	-10.8	-11.8	-12.4	-12.8	-13.7	-12.6	-9	-4.1	-0.7	2.2	3.7	5.8	7.4	8.7	8.3	6.1	3.7	1.9	0.4	-1.2	-2.3	-2.6	-13.7	8.7	-2.6
Mar 10	-3.4	-3.1	-1.7	-2.1	-1.8	-0.9	-0.6	0.3	3.3	4.5	6.7	8.4	9.2	9.8	9.6	10.1	8.8	6.8	5.3	4.5	4.1	1.3	0.1	-0.7	-3.4	10.1	3.3
Mar 11	-1.3	-2.8	-3.1	-2.9	-3.3	-3.7	-4.5	-2	0	1.6	2.4	3.4	4.7	5.8	6.7	5.7	6.6	5.3	3	0.7	-0.5	-1.3	-2.4	-3.1	-4.5	6.7	0.6
Mar 12	-3.9	-4.9	-5.7	-6.4	-6.9	-7.4	-7.7	-7	-5.2	-3.3	-0.4	2.4	4.2	5.3	5.8	5.7	5	3.4	1.8	0.3	-1.3	-2.5	-3.2	-3.7	-7.7	5.8	-1.5
Mar 13	-4.2	-4.8	-5.5	-6.4	-7.1	-7.9	-8.8	-8.5	-6.7	-4	-0.4	1.1	2.1	3.2	3.8	4.1	3.4	1.8	-0.4	-0.4	-0.1	-0.3	-0.3	-0.7	-8.8	4.1	-2.0
Mar 14	-0.8	-1.5	-2	-2.5	-3.1	-3.1	-3.5	-3.9	-2.5	-0.4	K	K	5.6	6.5	K	K	6.6	5.8	5.6	5.1	4.7	4.9	5.1	5	-3.9	6.6	1.6
Mar 15	5	5.2	5.9	5.4	5.4	5.2	4.7	4.9	6.2	6.9	7.6	8	8.3	8.3	7.7	7.3	5.8	4	2.2	0.5	-0.8	-2	-2.7	-2.8	-2.8	8.3	4.4
Mar 16	-2.9	-3.2	-3.3	-3.3	-3.9	-4.4	-4.8	-4.7	-4.2	-3.1	-2.5	-1.2	0	1.9	3.1	3.9	3.9	2.9	0.6	-1.7	-2.6	-3.7	-4.3	-5.1	-5.1	3.9	-1.8
Mar 17	-5.4	-5.9	-6.6	-7.1	-7.1	-7.4	-7.2	-6	-4.1	-1.9	0.5	3.3	4.9	6.2	6.8	6.6	5.7	4.5	2.9	1.7	0.8	0.6	0	-0.4	-7.4	6.8	-0.6
Mar 18	-0.2	0.8	0.7	1.1	3.3	2.5	3.4	3.6	5.8	7.9	10.1	11.6	12.3	12.9	13	**13.2**	10.7	8.5	5.6	1.5	-1.2	-2.4	-3.4	-4.4	-4.4	**13.2**	**4.9**
Mar 19	-4.8	-5.6	-6.5	-7.3	-8.2	-8.8	-9.5	-9.7	-9.4	-8.3	-8.1	-7.7	-6.6	-5.5	-5.1	-4.7	-5.3	-6.2	-7.5	-8.8	-10	-11	-11.9	-12.8	-12.8	-4.7	-7.9
Mar 20	-13.5	-14.2	-14.7	-15.2	-15.6	-16.3	-16.7	-16.4	-14.7	-12.4	-11	-9.3	-8.1	-7.1	-6.4	-6.2	-6.4	-7.2	-8.3	-9.6	-11	-10.3	-10	-10.7	-16.7	-6.2	-11.3
Mar 21	-11.5	-12.2	-12.8	-13.5	-13.6	-13.9	-14.1	-13.7	-13	-11.9	-10.5	-9.6	-9.1	-8.2	-7.7	-7.7	-8.2	-8.8	-9.5	-10.1	-11	-12.9	-14.2	-14.5	-14.5	-7.7	-11.3
Mar 22	-15.4	-16.1	-17.4	-18.3	-19.7	-20.5	-21.1	-18.8	-15.7	-12.5	-10.2	-9.1	-7.9	-7.2	-6.4	-5.9	-5.7	-6	-7.9	-10.5	-12.7	-15.1	-16.5	-17.2	-21.1	-5.7	-13.1
Mar 23	-18.6	-19.3	-20	-20.6	-21.4	-22	-21.9	-18.1	-13.1	-8.2	-6.6	-5.9	-5.1	-4.1	-3.4	-2.7	-2.8	-3.5	-5	-6.7	-8.8	-11.1	-8.3	-9	-22.0	-2.7	-11.1
Mar 24	-9.7	-10.8	-14.2	-15.7	-17.1	-18.2	-17.2	-14.6	-10.8	-7.1	-5.4	-3.7	-2.6	-1.8	-1.7	-1.8	-2	-2.4	-2.7	-3.1	-3.6	-4.3	-5.2	-6.1	-18.2	-1.7	-7.6
Mar 25	-6.6	-6.9	-7.4	-8.2	-9.1	-9.7	-10.1	-9.4	-7.8	-5.6	-3.8	-2.5	-2.4	-2	-1.8	-1.4	-2	-2.8	-3.4	-4.4	-5.4	-6.3	-6.1	-6.3	-10.1	-1.4	-5.5
Mar 26	-6.7	-7	-7.4	-8.6	-9.6	-10.7	-10.8	-10.4	-9.1	-7.4	-5.4	-3.3	-2.1	-1.7	-1.3	-1.5	-2.1	-2.7	-3.8	-5.1	-6.1	-7.1	-7.9	-8.3	-10.8	-1.3	-6.1
Mar 27	-8.7	-9.2	-9.6	-9.8	-9.8	-9.8	-9.7	-9.4	-8.8	-8	-7.1	-6	-4.7	-3.7	-2.6	-1.7	-1.7	-2.5	-3.3	-3.8	-4.9	-5	-5.3	-6.3	-9.8	-1.7	-6.3
Mar 28	-6.9	-7.6	-7.7	-7.7	-7.6	-7.6	-7.8	-7.6	-7.3	-6.8	-6.2	-5.8	-4.9	-4.3	-3.9	-4	-4.2	-4.7	-5.4	-6.1	-6.6	-6.6	-7	-7.4	-7.8	-3.9	-6.3
Mar 29	-7.9	-9.7	-11.1	-11.9	-12.6	-11.8	-10.5	-9.1	-8.1	-7	-6.5	-6.3	-6	-6	-6.1	-6.6	-6.9	-7.4	-7.6	-7.8	-8	-8.2	-8.6	-9.6	-12.6	-6.0	-8.4
Mar 30	-11.4	-11.7	-12.5	-13	-12.3	-12	-11.4	-10.1	-7.8	-6.3	-5.1	-4.5	-3.9	-3	-1.7	-1	-0.6	-1	-2.8	-4.5	-5.5	-6.2	-5.7	-6.3	-13.0	-0.6	-6.7
Mar 31	-10	-12.1	-13.8	-15.3	-16.1	-16.8	-16.4	-12.3	-6.3	-2.8	-0.4	1.6	3.7	5.3	6.3	6.8	6.8	6.9	5.4	4.4	3.7	2.6	2.2	2.2	-16.8	6.9	-2.7
Diurnal Maximum	5.0	5.2	5.9	5.4	5.4	5.2	4.7	4.9	6.2	7.9	10.1	11.6	12.3	12.9	13.0	13.2	10.7	8.5	5.6	5.1	4.7	4.9	5.1	5.0			
Diurnal Average	-10.7	-11.3	-11.9	-12.6	-12.4	-12.7	-13.0	-12.6	-10.5	-8.2	-6.3	-4.8	-3.4	-2.5	-2.2	-2.0	-2.4	-3.4	-4.9	-6.2	-7.3	-8.2	-8.8	-9.4			

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

Tamarack Site - March 2024

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

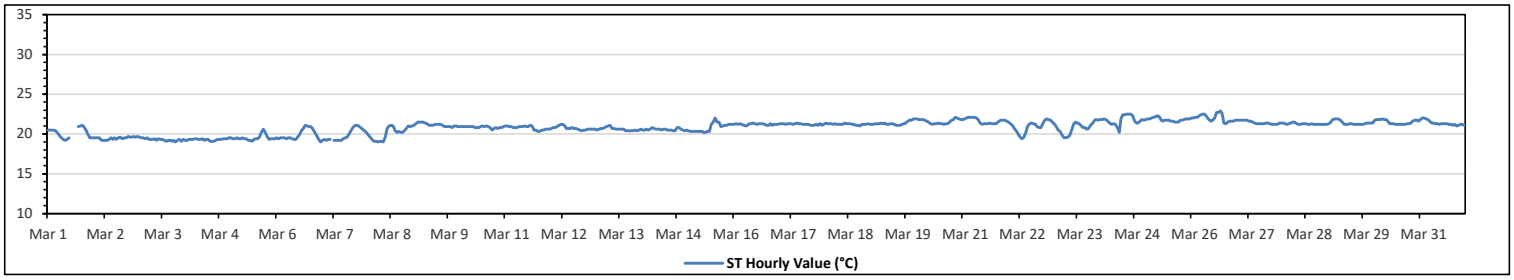
Maximum Hourly Value:	22.9	°C	on Mar 26 at hr 15	Hours in Service:	744	
Maximum Daily Value:	22.0	°C	on Mar 26	Hours of Data:	739	
Minimum Hourly Value:	19.0	°C	on Mar 3 at hr 19	Hours of Missing Data:	5	
Minimum Daily Value:	19.3	°C	on Mar 3	Hours of Calibration:	0	
Monthly Average:	20.8	°C		Operational Uptime:	99.3	

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			
Mar 1	20.5	20.5	20.5	20.5	20.4	20.1	19.8	19.5	19.3	19.2	19.3	19.5	K	K	K	K	20.9	21.0	21.1	20.8	20.4	19.9	19.5	19.5	19.2	21.1	20.1
Mar 2	19.5	19.5	19.5	19.5	19.2	19.2	19.2	19.2	19.3	19.5	19.3	19.5	19.3	19.5	19.6	19.4	19.5	19.5	19.7	19.6	19.6	19.7	19.6	19.7	19.2	19.7	19.5
Mar 3	19.6	19.5	19.5	19.4	19.5	19.3	19.3	19.3	19.4	19.2	19.4	19.3	19.3	19.2	19.1	19.2	19.2	19.1	19.2	**19.0**	19.2	19.3	19.1	19.3	**19.0**	19.6	**19.3**
Mar 4	19.2	19.2	19.3	19.3	19.3	19.4	19.4	19.3	19.3	19.4	19.2	19.3	19.3	19.1	19.1	19.1	19.2	19.3	19.3	19.3	19.4	19.4	19.4	19.5	19.1	19.5	19.3
Mar 5	19.5	19.4	19.4	19.5	19.4	19.4	19.5	19.4	19.4	19.2	19.2	19.1	19.3	19.4	19.4	19.6	20.2	20.6	20.2	19.7	19.3	19.4	19.4	19.4	19.1	20.6	19.5
Mar 6	19.5	19.4	19.5	19.5	19.5	19.4	19.5	19.5	19.4	19.3	19.3	19.6	19.9	20.4	20.7	21.1	21.0	20.9	20.9	20.6	20.2	19.8	19.3	**19.0**	**19.0**	21.1	19.9
Mar 7	19.2	19.3	19.2	19.3	19.3	K	19.2	19.2	19.2	19.2	19.2	19.4	19.5	19.6	20.0	20.4	20.8	21.1	21.1	21.0	20.8	20.6	20.4	20.2	19.2	21.1	19.9
Mar 8	19.9	19.6	19.3	19.1	19.1	**19.0**	19.1	19.1	**19.0**	19.6	20.7	21.0	21.1	21.0	20.4	20.2	20.3	20.2	20.2	20.4	20.7	21.0	20.9	21.0	**19.0**	21.1	20.1
Mar 9	21.1	21.3	21.5	21.5	21.5	21.5	21.4	21.3	21.1	21.1	21.1	21.2	21.2	21.2	21.2	21.1	20.9	20.9	20.9	20.9	20.8	21.0	21.0	20.9	20.8	21.5	21.2
Mar 10	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.8	20.8	20.8	20.9	21.0	20.9	21.0	20.9	20.8	20.5	20.7	20.8	20.7	20.8	20.8	20.9	20.5	21.0	20.8
Mar 11	21.0	21.0	20.9	20.9	20.8	20.8	20.8	20.9	20.9	20.9	21.0	20.9	20.9	21.1	21.0	20.5	20.5	20.3	20.3	20.5	20.5	20.6	20.6	20.6	20.3	21.1	20.8
Mar 12	20.7	20.8	20.8	20.9	21.1	21.2	21.2	21.1	20.7	20.7	20.7	20.8	20.7	20.7	20.6	20.5	20.4	20.5	20.5	20.6	20.6	20.6	20.6	20.6	20.4	21.2	20.7
Mar 13	20.5	20.6	20.7	20.7	20.8	20.9	21.0	21.1	20.7	20.7	20.6	20.6	20.6	20.6	20.6	20.4	20.4	20.4	20.4	20.4	20.5	20.4	20.5	20.6	20.4	21.1	20.6
Mar 14	20.5	20.5	20.6	20.5	20.6	20.8	20.7	20.6	20.6	20.6	20.5	20.6	20.6	20.5	20.5	20.5	20.4	20.4	20.8	20.8	20.6	20.5	20.4	20.5	20.4	20.8	20.6
Mar 15	20.4	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.2	20.2	20.3	20.3	21.2	21.5	22.0	21.5	21.5	20.9	21.0	21.1	21.1	21.2	21.2	21.2	20.2	22.0	20.8
Mar 16	21.2	21.3	21.2	21.3	21.2	21.1	21.0	21.1	21.3	21.3	21.4	21.3	21.2	21.3	21.3	21.3	21.2	21.1	21.1	21.3	21.1	21.2	21.2	21.2	21.0	21.4	21.2
Mar 17	21.3	21.3	21.3	21.2	21.3	21.3	21.3	21.2	21.3	21.4	21.3	21.3	21.2	21.2	21.2	21.2	21.1	21.1	21.1	21.2	21.1	21.3	21.1	21.2	21.1	21.4	21.2
Mar 18	21.4	21.3	21.3	21.3	21.2	21.3	21.2	21.2	21.2	21.2	21.4	21.3	21.3	21.3	21.2	21.2	21.1	21.1	21.0	21.2	21.2	21.2	21.3	21.2	21.0	21.4	21.2
Mar 19	21.2	21.2	21.3	21.3	21.3	21.4	21.3	21.4	21.2	21.2	21.3	21.3	21.2	21.1	21.1	21.1	21.2	21.3	21.4	21.6	21.7	21.7	21.9	21.9	21.1	21.9	21.4
Mar 20	21.9	21.8	21.8	21.8	21.7	21.6	21.5	21.3	21.2	21.3	21.3	21.4	21.3	21.3	21.2	21.3	21.3	21.5	21.7	21.8	22.1	22.0	21.9	21.8	21.2	22.1	21.6
Mar 21	21.8	21.9	22.0	22.1	22.1	22.1	22.1	22.0	21.8	21.4	21.2	21.3	21.3	21.3	21.4	21.3	21.3	21.3	21.4	21.6	21.7	21.7	21.7	21.6	21.2	22.1	21.6
Mar 22	21.5	21.3	21.1	20.7	20.4	20.0	19.6	19.4	19.6	20.2	21.0	21.3	21.4	21.3	21.2	20.9	20.8	20.8	21.3	21.7	21.9	21.8	21.7	21.5	19.4	21.9	20.9
Mar 23	21.2	20.9	20.5	20.3	19.9	19.5	19.5	19.6	19.8	20.5	21.2	21.5	21.4	21.3	21.1	20.8	20.8	20.6	20.7	21.1	21.4	21.7	21.8	21.7	19.5	21.8	20.8
Mar 24	21.8	21.8	21.9	21.8	21.6	21.4	21.2	21.3	21.2	20.8	20.2	21.9	22.4	22.4	22.5	22.5	22.5	22.3	21.6	21.4	21.4	21.6	21.8	21.7	20.2	22.5	21.7
Mar 25	21.8	21.9	21.9	22.0	22.1	22.2	22.3	22.2	21.7	21.6	21.7	21.7	21.7	21.6	21.6	21.5	21.5	21.5	21.7	21.7	21.8	21.9	21.9	21.9	21.5	22.3	21.8
Mar 26	22.0	22.0	22.1	22.1	22.3	22.4	22.5	22.5	22.2	21.8	21.6	21.7	22.0	22.7	22.7	**22.9**	22.6	21.4	21.3	21.5	21.6	21.6	21.6	21.7	21.3	**22.9**	**22.0**
Mar 27	21.7	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.5	21.4	21.3	21.3	21.3	21.3	21.3	21.4	21.4	21.3	21.2	21.2	21.2	21.2	21.4	21.4	21.2	21.7	21.4
Mar 28	21.4	21.3	21.2	21.3	21.4	21.5	21.5	21.3	21.2	21.2	21.3	21.3	21.3	21.2	21.2	21.3	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.5	21.3
Mar 29	21.3	21.5	21.8	21.9	21.9	21.9	21.7	21.5	21.2	21.2	21.2	21.3	21.3	21.2	21.2	21.2	21.2	21.2	21.2	21.3	21.4	21.4	21.4	21.4	21.2	21.9	21.4
Mar 30	21.7	21.8	21.8	21.8	21.9	21.8	21.8	21.6	21.3	21.3	21.3	21.2	21.2	21.2	21.2	21.2	21.2	21.3	21.3	21.4	21.6	21.7	21.7	21.6	21.2	21.9	21.5
Mar 31	21.8	22.0	22.0	21.9	21.8	21.6	21.4	21.4	21.3	21.3	21.2	21.3	21.3	21.3	21.3	21.2	21.2	21.1	21.2	21.0	21.1	21.2	21.2	21.1	21.0	22.0	21.4
Diurnal Maximum	22.0	22.0	22.1	22.1	22.3	22.4	22.5	22.5	22.2	21.8	21.7	21.9	22.4	22.7	22.7	22.9	22.6	22.3	21.7	21.8	22.1	22.0	21.9	21.9			
Diurnal Average	20.9	20.9	20.9	20.8	20.8	20.8	20.7	20.7	20.6	20.6	20.7	20.8	20.9	20.9	20.9	20.9	20.9	20.8	20.9	20.9	20.9	20.9	20.9	20.9			

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

Tamarack Site - March 2024

Summary of Hourly Averages

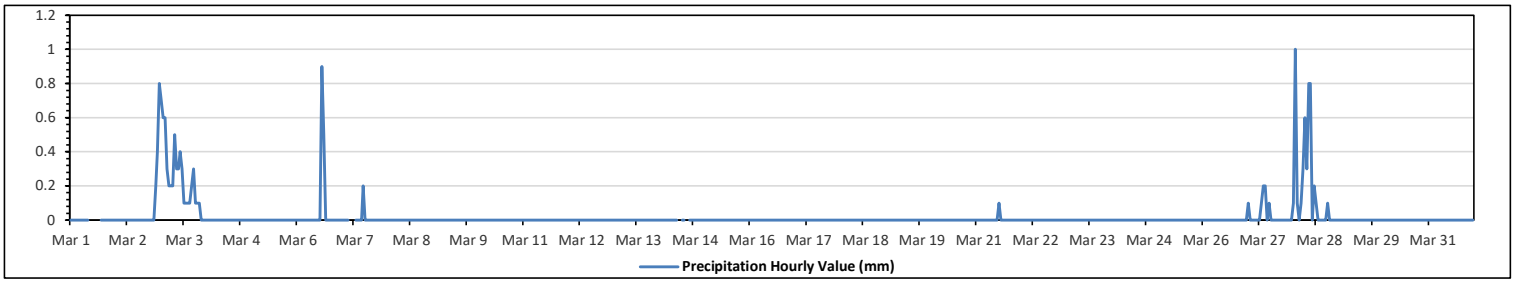
PRECIPITATION in mm

Maximum Hourly Value:	1.0	mm	on Mar 28 at hr 1	Hours in Service:	744	
Maximum Daily Value:	5.8	mm	on Mar 3	Hours of Data:	731	
Minimum Hourly Value:	0.0	mm	on Mar 1 at hr 0	Hours of Missing Data:	13	
Minimum Daily Value:	0.0	mm	on Mar 1	Hours of Calibration:	0	
Monthly Total:	14.1	mm		Operational Uptime:	98.3	

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			
Mar 1	0	0	0	0	0	0	0	0	0	0	K	K	K	K	K	K	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Mar 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.8	0.0	0.8	1.4
Mar 3	0.7	0.6	0.6	0.3	0.2	0.2	0.2	0.5	0.3	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0	0	0	0.0	0.7	**5.8**
Mar 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
Mar 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Mar 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0.5	0	0	0	0	0	0	0	0	0	0.0	0.9	1.4
Mar 7	0	0	0	0	K	K	K	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.2
Mar 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
Mar 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
Mar 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
Mar 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
Mar 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
Mar 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
Mar 14	0	0	0	0	0	0	0	0	0	0	K	K	0	0	K	K	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Mar 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
Mar 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
Mar 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
Mar 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
Mar 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
Mar 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
Mar 21	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	0.1	0.1
Mar 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
Mar 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
Mar 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
Mar 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Mar 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
Mar 27	0.1	0	0	0	0	0	0	0.1	0.2	0.2	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.7
Mar 28	0.1	**1**	0.1	0	0.1	0.3	0.6	0.3	0.8	0.8	0	0.2	0.1	0	0	0	0	0	0.1	0	0	0	0	0	0.0	**1.0**	4.5
Mar 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
Mar 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Mar 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Diurnal Maximum	0.7	1.0	0.6	0.3	0.2	0.3	0.6	0.5	0.8	0.8	0.4	0.3	0.1	0.9	0.5	0.1	0.2	0.3	0.1	0.1	0.1	0.2	0.4	0.8			
Diurnal Average	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

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

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



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

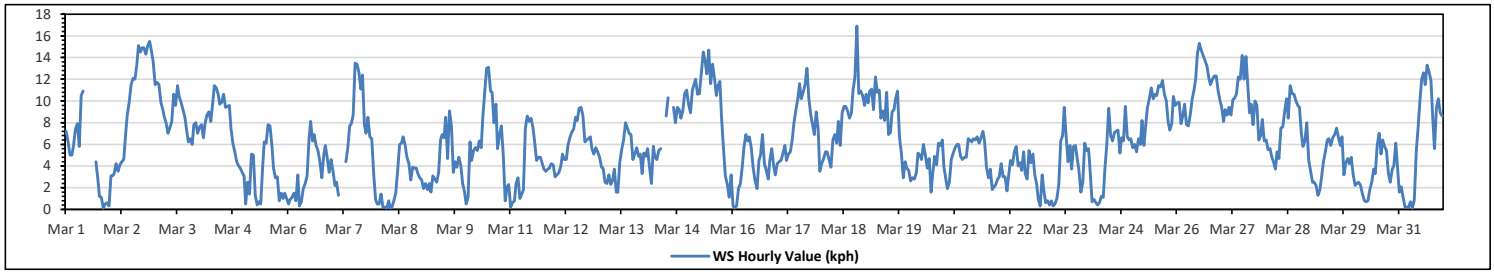
VECTOR WIND SPEED (VWS) in km/hr

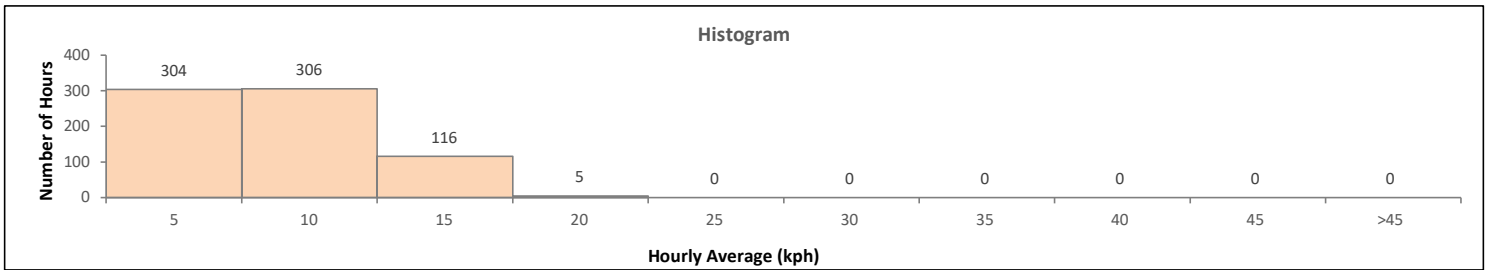
Maximum Hourly Value:	16.9	kph	on Mar 18 at hr 19	Hours in Service:	744
Maximum Daily Value:	11.3	kph	on Mar 26	Hours of Data:	731
Minimum Hourly Value:	0.1	kph	on Mar 1 at hr 20	Hours of Missing Data:	13
Minimum Daily Value:	2.7	kph	on Mar 8	Hours of Calibration:	0
Monthly Average:	1.2	kph		Operational Uptime:	98.3

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			
Mar 1	7.2	6.2	5.0	5.0	5.9	7.4	7.9	5.8	10.5	10.9	K	K	K	K	K	K	4.4	2.8	1.2	1.1	**0.1**	0.5	0.6	0.3	**0.1**	10.9	4.6
Mar 2	3.1	3.1	3.3	4.2	3.5	4.1	4.4	4.6	7.0	8.7	9.9	11.5	12.1	12.0	13.4	15.1	14.5	14.9	14.9	14.3	15.1	15.5	14.5	13.6	3.1	15.5	9.9
Mar 3	11.5	11.7	11.5	9.9	9.2	8.5	7.9	7.0	7.5	8.1	10.6	9.6	11.4	10.4	9.9	9.2	8.5	7.2	6.2	6.5	6.0	7.8	8.0	7.0	6.0	11.7	8.8
Mar 4	7.6	7.8	6.6	7.9	8.7	9.0	8.1	9.8	11.4	11.2	10.6	9.7	9.9	10.6	9.4	9.5	9.6	7.5	6.1	5.3	4.4	4.0	3.8	3.4	3.4	11.4	8.0
Mar 5	3.1	0.5	2.5	1.4	5.1	5.0	1.3	0.4	0.7	0.5	3.9	6.2	6.1	7.8	7.7	5.9	3.8	2.9	3.0	0.8	1.5	1.0	1.5	1.0	0.4	7.8	3.1
Mar 6	0.5	0.9	1.1	1.5	0.8	3.2	0.3	0.7	1.9	2.4	3.1	6.5	8.1	6.3	6.9	5.9	5.4	4.4	2.9	5.0	5.9	4.7	3.4	4.6	0.3	8.1	3.6
Mar 7	3.5	2.2	2.5	1.3	K	K	K	4.4	5.6	7.7	7.9	8.7	13.5	13.4	12.6	11.1	12.4	7.8	7.0	8.5	6.7	6.5	3.3	0.9	0.9	13.5	7.0
Mar 8	0.5	0.5	1.4	0.2	0.2	**0.1**	0.8	**0.1**	0.2	0.8	1.5	3.6	6.0	6.1	6.7	6.0	4.8	4.2	2.7	3.9	3.8	3.8	3.3	2.9	**0.1**	6.7	**2.7**
Mar 9	2.7	1.9	2.4	1.8	2.4	1.6	3.1	2.8	2.5	3.4	6.4	6.9	6.6	8.5	4.7	9.1	7.7	3.4	4.4	3.9	4.8	4.1	2.4	1.6	1.6	9.1	4.1
Mar 10	0.5	1.1	6.2	4.5	5.4	5.7	5.4	6.3	5.7	8.5	10.8	13.0	13.1	10.9	10.8	8.0	9.7	5.6	6.8	7.7	5.0	0.8	2.1	2.3	0.5	13.1	6.5
Mar 11	0.2	0.6	0.8	2.4	2.9	1.0	1.4	1.8	7.5	8.6	8.1	8.4	7.5	6.2	4.5	4.8	4.8	4.3	3.7	3.5	3.7	3.8	4.2	4.1	0.2	8.6	4.1
Mar 12	3.0	3.2	3.4	4.0	5.1	4.6	4.6	5.9	6.6	7.1	7.4	8.5	8.2	9.3	9.4	8.6	6.2	6.4	6.5	6.7	5.6	5.1	5.7	5.3	3.0	9.4	6.1
Mar 13	4.8	3.9	3.8	2.5	2.4	3.2	2.3	2.7	3.7	1.6	1.6	4.3	5.5	6.4	8.0	7.5	7.0	6.9	4.6	5.1	5.7	4.9	5.1	3.3	1.6	8.0	4.5
Mar 14	5.2	4.9	5.6	3.9	2.4	5.8	4.8	4.6	5.4	5.6	K	K	8.6	10.3	K	K	9.4	8.0	9.4	9.2	8.4	9.1	10.7	11.0	2.4	11.0	7.1
Mar 15	9.7	8.9	11.0	11.5	12.0	10.6	10.7	12.6	14.5	13.6	12.5	14.7	11.6	13.4	12.1	10.5	11.4	11.8	8.5	5.7	3.1	2.3	1.1	3.2	1.1	14.7	9.9
Mar 16	0.3	**0.1**	0.3	1.9	2.4	4.0	5.7	6.9	6.3	6.7	5.7	3.8	2.6	1.9	4.5	5.0	6.9	4.2	3.6	2.8	4.5	5.6	4.0	3.2	**0.1**	6.9	3.9
Mar 17	4.2	4.4	4.5	5.2	5.9	4.5	5.1	5.3	6.4	7.9	9.1	10.1	11.6	10.2	10.8	11.5	13.0	10.2	8.7	7.9	6.9	9.0	7.4	3.5	3.5	13.0	7.6
Mar 18	4.2	4.7	5.3	5.3	4.6	3.9	6.4	6.9	6.1	8.1	5.9	8.9	9.5	9.5	9.1	8.4	8.9	11.0	12.2	**16.9**	10.7	10.9	10.5	9.6	3.9	**16.9**	8.2
Mar 19	10.6	9.8	10.9	11.1	9.2	12.2	10.8	11.0	8.4	9.1	8.2	10.8	6.9	7.1	9.0	9.2	10.2	10.9	6.7	5.2	2.9	4.4	3.8	3.6	2.9	12.2	8.4
Mar 20	2.6	2.9	2.8	3.4	5.2	5.0	4.6	6.0	5.0	3.8	4.7	1.6	3.3	4.9	4.1	6.1	5.9	6.4	3.9	2.8	1.9	2.5	4.6	5.2	1.6	6.4	4.1
Mar 21	5.7	6.0	6.0	4.9	4.6	4.8	4.8	6.5	6.4	6.2	6.5	6.4	6.7	6.1	6.6	7.2	6.3	3.9	2.9	3.7	1.8	2.1	2.3	2.8	1.8	7.2	5.1
Mar 22	3.0	4.2	3.0	3.0	1.7	3.3	4.5	4.1	5.3	5.8	4.0	4.3	3.6	5.3	3.3	2.8	5.4	4.3	5.1	3.2	2.3	0.9	0.3	3.2	0.3	5.8	3.6
Mar 23	1.6	0.6	0.8	0.4	0.8	0.3	0.5	1.0	2.3	6.3	6.8	9.4	6.7	4.4	5.9	3.7	5.8	5.9	4.6	3.6	1.6	2.5	6.1	5.4	0.3	9.4	3.6
Mar 24	5.6	3.5	0.7	0.9	0.6	0.4	0.6	1.2	1.1	3.7	6.0	9.3	6.8	6.3	7.1	7.2	7.3	5.2	6.6	6.3	9.5	6.7	6.4	6.5	0.4	9.5	4.8
Mar 25	5.7	6.0	5.3	6.5	6.0	8.2	5.9	7.9	9.4	10.2	11.2	10.2	10.6	10.5	11.4	11.3	11.9	10.6	10.0	8.0	7.3	7.9	10.4	9.6	5.3	11.9	8.8
Mar 26	9.8	9.9	7.9	8.7	9.7	7.8	7.7	8.8	10.2	11.1	12.1	14.3	15.3	14.7	14.2	13.7	13.2	12.1	11.5	12.0	12.3	12.3	10.9	10.0	7.7	15.3	**11.3**
Mar 27	9.4	8.1	9.2	8.7	9.4	8.7	10.1	10.3	10.6	12.2	12.0	14.2	12.0	14.1	11.7	8.9	9.7	7.8	10.0	9.6	6.4	6.8	8.3	6.3	6.3	14.2	9.8
Mar 28	6.4	5.5	5.6	4.8	4.4	3.7	5.3	4.7	7.5	7.6	9.1	10.2	8.4	11.4	10.7	10.6	10.0	9.6	9.4	7.0	5.8	6.3	8.0	4.5	3.7	11.4	7.4
Mar 29	3.5	2.5	2.5	2.2	1.3	1.8	3.2	4.4	5.3	6.4	6.5	5.9	6.6	6.9	7.5	6.6	5.9	6.7	3.2	4.3	4.7	4.2	4.8	3.2	1.3	7.5	4.6
Mar 30	2.2	2.4	2.5	2.2	1.4	0.8	0.7	0.8	1.8	2.5	3.7	3.3	5.9	7.0	5.1	6.4	5.8	5.4	3.3	2.5	3.7	4.0	6.1	3.7	0.7	7.0	3.5
Mar 31	1.6	2.1	1.1	0.2	0.2	0.2	0.7	**0.1**	0.9	5.3	7.6	9.8	12.0	12.6	11.5	13.3	12.7	11.9	8.2	5.6	9.3	10.2	8.9	8.6	**0.1**	13.3	6.4
Diurnal Maximum	11.5	11.7	11.5	11.5	12.0	12.2	10.8	12.6	14.5	13.6	12.5	14.7	15.3	14.7	14.2	15.1	14.5	14.9	14.9	16.9	15.1	15.5	14.5	13.6			
Diurnal Average	4.5	4.2	4.4	4.2	4.4	4.6	4.7	5.0	5.9	6.8	7.4	8.4	8.6	8.8	8.6	8.4	8.3	7.2	6.4	6.1	5.5	5.5	5.6	4.9			

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.



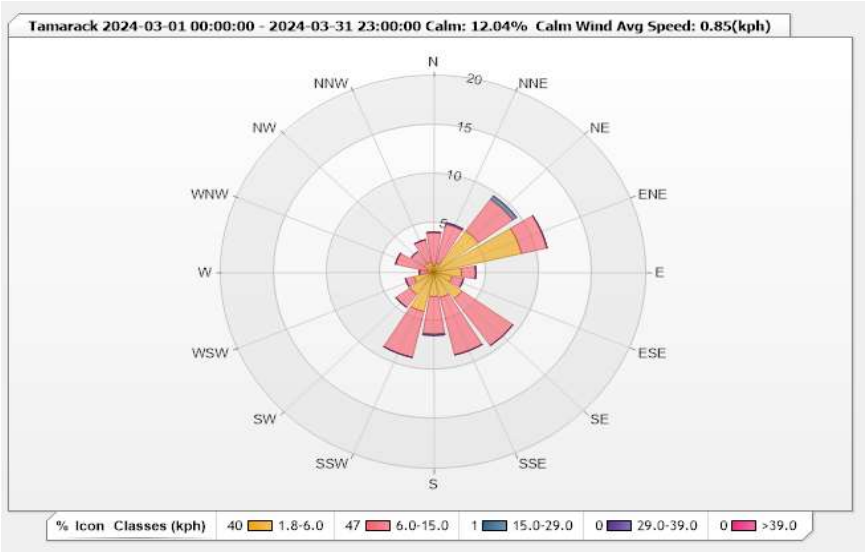


Station: Tamarack Monitor: WDS [kph] Monthly: 03-2024

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

Calm (WS<1.8kph): 12.04% Valid Data: 98.25%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	0.68	3.42	0	0	0	4.1
NNE	0.96	4.1	0.14	0	0	5.2
NE	5.2	3.97	0.41	0	0	9.58
ENE	8.48	2.46	0	0	0	10.94
E	2.6	1.37	0	0	0	3.97
ESE	1.78	1.09	0	0	0	2.87
SE	3.28	5.88	0	0	0	9.16
SSE	2.6	6.02	0	0	0	8.62
S	2.46	3.83	0.14	0	0	6.43
SSW	4.1	4.79	0	0	0	8.89
SW	2.74	1.64	0	0	0	4.38
WSW	1.92	0.82	0	0	0	2.74
W	0.14	1.23	0	0	0	1.37
WNW	0.68	3.01	0	0	0	3.69
NW	1.09	1.5	0	0	0	2.59
NNW	1.09	2.33	0	0	0	3.42
Summary	39.8	47.46	0.69	0	0	87.95



Lakeland Industry & Community Association

Tamarack Site - March 2024

Summary of Hourly Averages

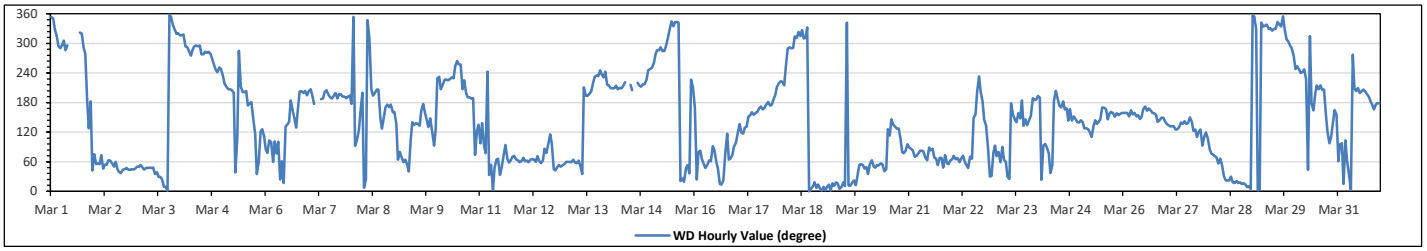
WIND DIRECTION (VWD) in sector

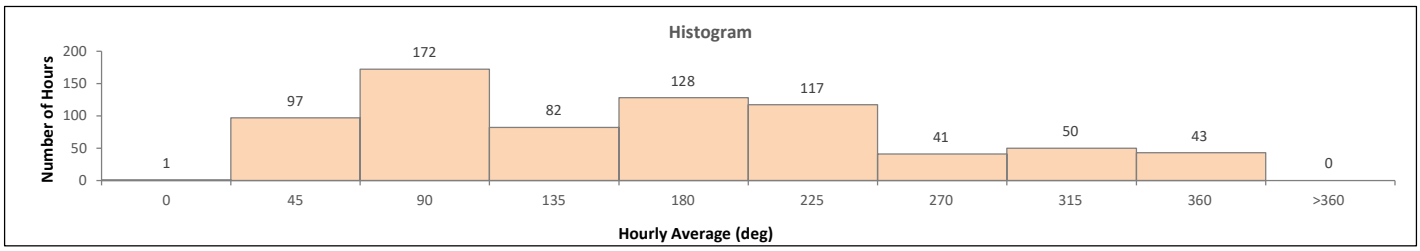
Monthly Average:	119 (ESE)	degree	
Hours in Service:	744		
Hours of Data:	731		
Hours of Missing Data:	13		
Hours of Calibration:	0		
Operational Uptime:	98.3		

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
Mar 1	N	N	NNW	NW	WNW	WNW	WNW	NW	WNW	WNW	K	K	K	K	K	K	NW	NW	WNW	W	S	SE	S	NE	308	NW
Mar 2	ENE	NE	NE	NE	ENE	NE	NE	NE	ENE	ENE	NE	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	48	NE
Mar 3	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	N	N	N	N	N	NNW	NNW	NW	NW	26	NNE
Mar 4	NW	NW	NW	WNW	WNW	WNW	W	WNW	WNW	WNW	WNW	WNW	W	W	W	W	W	W	W	WSW	WSW	WSW	WSW	WSW	285	WNW
Mar 5	SW	SW	SSW	SSW	SSW	SSW	SSW	NE	ESE	WNW	SSW	SSW	SSW	SSW	S	S	S	SE	ESE	NE	ENE	ESE	SE	ESE	188	S
Mar 6	E	ENE	ESE	E	ENE	E	ENE	E	NNE	ENE	NNE	SE	SE	SE	S	SSE	SSE	SE	SSE	SSW	SSW	SSW	SSW	SSW	154	SSE
Mar 7	SSW	SSW	SSW	S	K	K	K	S	S	SSW	SSW	SSW	S	S	SSW	SSW	S	SSW	SSW	S	S	S	S	SSW	194	SSW
Mar 8	S	N	E	ESE	ESE	SSE	SSW	N	NNE	NNW	NW	SSW	SSW	SSW	SSW	SSW	SSE	SE	SSE	SSE	S	S	S	SSE	181	S
Mar 9	SSE	SE	ENE	E	ENE	ENE	ENE	NE	NE	ESE	SE	SE	SE	SE	SE	SSE	S	SSE	SE	SE	SE	ESE	E	SE	131	SE
Mar 10	SW	SW	SSW	SW	SW	SW	SW	SW	SW	SW	WSW	W	WSW	WSW	SSW	SW	SSW	S	S	S	S	ENE	ESE	SE	225	SW
Mar 11	E	SE	E	ENE	WSW	NNE	NE	N	NE	ENE	ENE	NNE	NE	ENE	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	60	ENE
Mar 12	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	E	ENE	E	ESE	E	NE	NE	NE	NE	NE	NE	NE	67	ENE
Mar 13	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	SSW	SSW	S	SSW	SSW	SW	SW	SW	SW	WSW	SW	SW	WSW	SW	209	SSW
Mar 14	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	K	K	SW	SSW	K	K	SW	SSW	SSW	SW	SW	SW	WSW	WSW	219	SW
Mar 15	WSW	WSW	W	WNW	WNW	WNW	WNW	WNW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNE	NNE	NNE	NE	NE	NE	SW	SSW	319	NW
Mar 16	SSE	NNE	ENE	E	ENE	NE	NE	NE	ENE	ENE	E	E	ENE	NE	NNE	NNE	NNE	ENE	ESE	ENE	ENE	ENE	E	E	62	ENE
Mar 17	ESE	SE	ESE	ESE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSE	SSE	S	S	S	S	S	SSW	SSW	SW	166	SSE
Mar 18	SW	SW	SSW	WSW	WNW	WNW	WNW	WNW	NW	NW	NW	NW	NW	NW	NW	NNW	N	N	N	NNE	N	NNE	N	N	334	NNW
Mar 19	N	N	N	NNE	N	NNE	NNE	NNE	NNE	N	N	NNE	N	NNW	NNE	NNE	NNE	NNE	NNE	NNE	NE	NE	NE	NE	14	NNE
Mar 20	NE	NE	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	SE	ESE	SE	SE	SE	SE	SE	ESE	ENE	ENE	E	E	84	E
Mar 21	E	E	E	ENE	ENE	ENE	E	E	E	ENE	ENE	E	E	E	ENE	ENE	NE	ENE	ENE	NE	ENE	NE	NE	ENE	74	ENE
Mar 22	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	ENE	ENE	SSE	SSE	SSW	SW	SSW	S	SE	SE	E	NNE	NNE	ENE	96	E
Mar 23	E	ENE	E	ENE	E	ENE	ENE	NNE	NNE	S	SSE	SE	SE	SSE	SE	S	SE	SE	SE	SE	SSE	S	S	S	151	SSE
Mar 24	S	S	NNE	E	E	E	ENE	NE	NE	S	SSW	S	S	SSE	S	SSE	SSE	SE	SSE	SE	SSE	SE	SE	SE	164	SSE
Mar 25	SE	SE	SE	SE	SE	ESE	ESE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	148	SE
Mar 26	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	S	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	SSE	SSE	SE	156	SSE
Mar 27	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SE	ESE	SE	ESE	ESE	SE	E	ESE	ESE	ESE	130	SE
Mar 28	E	ENE	ENE	ENE	ENE	NE	ENE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	30	NNE
Mar 29	N	N	NNW	N	N	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	NNW	NNW	NNW	NNW	N	NNW	NW	WNW	WNW	WNW	W	330	NNW
Mar 30	WSW	WSW	WSW	WSW	WSW	WSW	SW	NE	NW	S	SSE	SSW	SSW	SSW	SSW	SSW	SSW	SSE	ESE	E	ESE	SE	SSE	SSE	189	S
Mar 31	ENE	E	E	NNE	ESE	ENE	NE	N	W	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	S	S	SSE	S	S	S	191	S

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 - March 2024

Summary of Hourly Averages

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

WIND SPEED

Maximum Hourly Value:	16.9	kph	on Mar 18 at hr 19	Hours in Service:	744
Maximum Daily Value:	11.3	kph	on Mar 26	Hours of Data:	731
Minimum Hourly Value:	0.1	kph	on Mar 1 at hr 20	Hours of Missing Data:	13
Minimum Daily Value:	2.7	kph	on Mar 8	Hours of Calibration:	0
Monthly Average:	1.2	kph		Operational Uptime:	98.3

WIND DIRECTION

Monthly Average: 119 degree (ESE)

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			
Mar 1	7.2	6.2	5.0	5.0	5.9	7.4	7.9	5.8	10.5	10.9	K	K	K	K	K	K	4.4	2.8	1.2	1.1	**0.1**	0.5	0.6	0.3	**0.1**	10.9	4.6
	N	N	NNW	NW	WNW	WNW	WNW	NW	WNW	WNW	K	K	K	K	K	K	NW	NW	WNW	W	S	SE	S	NE			308(NW)
Mar 2	3.1	3.1	3.3	4.2	3.5	4.1	4.4	4.6	7.0	8.7	9.9	11.5	12.1	12.0	13.4	15.1	14.5	14.9	14.9	14.3	15.1	15.5	14.5	13.6	3.1	15.5	9.9
	ENE	NE	NE	NE	ENE	NE	NE	NE	ENE	ENE	NE	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE			48(NE)
Mar 3	11.5	11.7	11.5	9.9	9.2	8.5	7.9	7.0	7.5	8.1	10.6	9.6	11.4	10.4	9.9	9.2	8.5	7.2	6.2	6.5	6.0	7.8	8.0	7.0	6.0	11.7	8.8
	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	N	N	N	N	N	NNW	NNW	NW	NW			26(NNE)
Mar 4	7.6	7.8	6.6	7.9	8.7	9.0	8.1	9.8	11.4	11.2	10.6	9.7	9.9	10.6	9.4	9.5	9.6	7.5	6.1	5.3	4.4	4.0	3.8	3.4	3.4	11.4	8.0
	NW	NW	NW	WNW	WNW	WNW	W	WNW	WNW	WNW	WNW	WNW	W	W	W	W	W	W	W	WSW	WSW	WSW	WSW	WSW			285(WNW)
Mar 5	3.1	0.5	2.5	1.4	5.1	5.0	1.3	0.4	0.7	0.5	3.9	6.2	6.1	7.8	7.7	5.9	3.8	2.9	3.0	0.8	1.5	1.0	1.5	1.0	0.4	7.8	3.1
	SW	SW	SSW	SSW	SSW	SSW	SSW	NE	ESE	WNW	SSW	SSW	SSW	SSW	S	S	S	SE	ESE	NE	ENE	ESE	SE	ESE			188(S)
Mar 6	0.5	0.9	1.1	1.5	0.8	3.2	0.3	0.7	1.9	2.4	3.1	6.5	8.1	6.3	6.9	5.9	5.4	4.4	2.9	5.0	5.9	4.7	3.4	4.6	0.3	8.1	3.6
	E	ENE	ESE	E	ENE	E	ENE	E	NNE	ENE	NNE	SE	SE	SE	S	SSE	SSE	SE	SSE	SSW	SSW	SSW	SSW	SSW			154(SSE)
Mar 7	3.5	2.2	2.5	1.3	K	K	K	4.4	5.6	7.7	7.9	8.7	13.5	13.4	12.6	11.1	12.4	7.8	7.0	8.5	6.7	6.5	3.3	0.9	0.9	13.5	7.0
	SSW	SSW	SSW	S	K	K	K	S	S	SSW	SSW	SSW	S	S	SSW	SSW	S	SSW	SSW	S	S	S	S	SSW			194(SSW)
Mar 8	0.5	0.5	1.4	0.2	0.2	**0.1**	0.8	**0.1**	0.2	0.8	1.5	3.6	6.0	6.1	6.7	6.0	4.8	4.2	2.7	3.9	3.8	3.8	3.3	2.9	**0.1**	6.7	**2.7**
	S	N	E	ESE	ESE	SSE	SSW	N	NNE	NNW	NW	SSW	SSW	SSW	SSW	SSW	SSE	SE	SSE	SSE	S	S	S	SSE			181(S)
Mar 9	2.7	1.9	2.4	1.8	2.4	1.6	3.1	2.8	2.5	3.4	6.4	6.9	6.6	8.5	4.7	9.1	7.7	3.4	4.4	3.9	4.8	4.1	2.4	1.6	1.6	9.1	4.1
	SSE	SE	ENE	E	ENE	ENE	ENE	NE	NE	ESE	SE	SE	SE	SE	SE	SSE	S	SSE	SE	SE	SE	ESE	E	SE			131(SE)
Mar 10	0.5	1.1	6.2	4.5	5.4	5.7	5.4	6.3	5.7	8.5	10.8	13.0	13.1	10.9	10.8	8.0	9.7	5.6	6.8	7.7	5.0	0.8	2.1	2.3	0.5	13.1	6.5
	SW	SW	SSW	SW	SW	SW	SW	SW	SW	SW	WSW	W	WSW	WSW	SSW	SW	SSW	S	S	S	S	ENE	ESE	SE			225(SW)
Mar 11	0.2	0.6	0.8	2.4	2.9	1.0	1.4	1.8	7.5	8.6	8.1	8.4	7.5	6.2	4.5	4.8	4.8	4.3	3.7	3.5	3.7	3.8	4.2	4.1	0.2	8.6	4.1
	E	SE	E	ENE	WSW	NNE	NE	N	NE	ENE	ENE	NNE	NE	ENE	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE			60(ENE)
Mar 12	3.0	3.2	3.4	4.0	5.1	4.6	4.6	5.9	6.6	7.1	7.4	8.5	8.2	9.3	9.4	8.6	6.2	6.4	6.5	6.7	5.6	5.1	5.7	5.3	3.0	9.4	6.1
	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	E	ENE	E	ESE	E	NE	NE	NE	NE	NE	NE	NE			67(ENE)
Mar 13	4.8	3.9	3.8	2.5	2.4	3.2	2.3	2.7	3.7	1.6	1.6	4.3	5.5	6.4	8.0	7.5	7.0	6.9	4.6	5.1	5.7	4.9	5.1	3.3	1.6	8.0	4.5
	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	SSW	SSW	S	SSW	SSW	SW	SW	SW	SW	WSW	SW	SW	WSW	SW			209(SSW)
Mar 14	5.2	4.9	5.6	3.9	2.4	5.8	4.8	4.6	5.4	5.6	K	K	8.6	10.3	K	K	9.4	8.0	9.4	9.2	8.4	9.1	10.7	11.0	2.4	11.0	7.1
	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	K	K	SW	SSW	K	K	SW	SSW	SSW	SW	SW	SW	WSW	WSW			219(SW)
Mar 15	9.7	8.9	11.0	11.5	12.0	10.6	10.7	12.6	14.5	13.6	12.5	14.7	11.6	13.4	12.1	10.5	11.4	11.8	8.5	5.7	3.1	2.3	1.1	3.2	1.1	14.7	9.9
	WSW	WSW	W	WNW	WNW	WNW	WNW	WNW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNE	NNE	NNE	NE	NE	NE	SW	SSW			319(NW)
Mar 16	0.3	**0.1**	0.3	1.9	2.4	4.0	5.7	6.9	6.3	6.7	5.7	3.8	2.6	1.9	4.5	5.0	6.9	4.2	3.6	2.8	4.5	5.6	4.0	3.2	**0.1**	6.9	3.9
	SSE	NNE	ENE	E	ENE	NE	NE	NE	ENE	ENE	E	E	ENE	NE	NNE	NNE	NNE	ENE	ESE	ENE	ENE	ENE	E	E			62(ENE)
Mar 17	4.2	4.4	4.5	5.2	5.9	4.5	5.1	5.3	6.4	7.9	9.1	10.1	11.6	10.2	10.8	11.5	13.0	10.2	8.7	7.9	6.9	9.0	7.4	3.5	3.5	13.0	7.6
	ESE	SE	ESE	ESE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSE	SSE	S	S	S	S	S	SSW	SSW	SW			166(SSE)
Mar 18	4.2	4.7	5.3	5.3	4.6	3.9	6.4	6.9	6.1	8.1	5.9	8.9	9.5	9.5	9.1	8.4	8.9	11.0	12.2	**16.9**	10.7	10.9	10.5	9.6	3.9	**16.9**	8.2
	SW	SW	SSW	WSW	WNW	WNW	WNW	WNW	NW	NW	NW	NW	NW	NW	NW	NNW	N	N	N	NNE	N	NNE	N	N			334(NNW)
Mar 19	10.6	9.8	10.9	11.1	9.2	12.2	10.8	11.0	8.4	9.1	8.2	10.8	6.9	7.1	9.0	9.2	10.2	10.9	6.7	5.2	2.9	4.4	3.8	3.6	2.9	12.2	8.4
	N	N	N	NNE	N	NNE	NNE	NNE	NNE	N	N	NNE	N	NNW	NNE	NNE	NNE	NNE	NNE	NNE	NE	NE	NE	NE			14(NNE)
Mar 20	2.6	2.9	2.8	3.4	5.2	5.0	4.6	6.0	5.0	3.8	4.7	1.6	3.3	4.9	4.1	6.1	5.9	6.4	3.9	2.8	1.9	2.5	4.6	5.2	1.6	6.4	4.1
	NE	NE	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	SE	ESE	SE	SE	SE	SE	SE	ESE	ENE	ENE	E	E			84(E)
Mar 21	5.7	6.0	6.0	4.9	4.6	4.8	4.8	6.5	6.4	6.2	6.5	6.4	6.7	6.1	6.6	7.2	6.3	3.9	2.9	3.7	1.8	2.1	2.3	2.8	1.8	7.2	5.1
	E	E	E	ENE	ENE	ENE	E	E	E	ENE	ENE	E	E	E	ENE	ENE	NE	ENE	ENE	NE	ENE	NE	NE	ENE			74(ENE)
Mar 22	3.0	4.2	3.0	3.0	1.7	3.3	4.5	4.1	5.3	5.8	4.0	4.3	3.6	5.3	3.3	2.8	5.4	4.3	5.1	3.2	2.3	0.9	0.3	3.2	0.3	5.8	3.6
	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	ENE	ENE	SSE	SSE	SSW	SW	SSW	S	SE	SE	E	NNE	NNE	ENE			96(E)
Mar 23	1.6	0.6	0.8	0.4	0.8	0.3	0.5	1.0	2.3	6.3	6.8	9.4	6.7	4.4	5.9	3.7	5.8	5.9	4.6	3.6	1.6	2.5	6.1	5.4	0.3	9.4	3.6
	E	ENE	E	ENE	E	ENE	ENE	NNE	NNE	S	SSE	SE	SE	SSE	SE	S	S	SE	SE	SE	SSE	S	S	S			151(SSE)
Mar 24	5.6	3.5	0.7	0.9	0.6	0.4	0.6	1.2	1.1	3.7	6.0	9.3	6.8	6.3	7.1	7.2	7.3	5.2	6.6	6.3	9.5	6.7	6.4	6.5	0.4	9.5	4.8
	S	S	NNE	E	E	E	ENE	NE	NE	S	SSW	S	S	SSE	S	SSE	SSE	SE	SSE	SE	SSE	SE	SE	SE			164(SSE)
Mar 25	5.7	6.0	5.3	6.5	6.0	8.2	5.9	7.9	9.4	10.2	11.2	10.2	10.6	10.5	11.4	11.3	11.9	10.6	10.0	8.0	7.3	7.9	10.4	9.6	5.3	11.9	8.8
	SE	SE	SE	SE	SE	ESE	ESE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE			148(SE)
Mar 26	9.8	9.9	7.9	8.7	9.7	7.8	7.7	8.8	10.2	11.1	12.1	14.3	15.3	14.7	14.2	13.7	13.2	12.1	11.5	12.0	12.3	12.3	10.9	10.0	7.7	15.3	**11.3**
	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	S	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	SSE	SSE	SE			156(SSE)
Mar 27	9.4	8.1	9.2	8.7	9.4	8.7	10.1	10.3	10.6	12.2	12.0	14.2	12.0	14.1	11.7	8.9	9.7	7.8	10.0	9.6	6.4	6.8	8.3	6.3	6.3	14.2	9.8
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SE	ESE	SE	ESE	ESE	SE	E	ESE	ESE	ESE			130(SE)
Mar 28	6.4	5.5	5.6	4.8	4.4	3.7	5.3	4.7	7.5	7.6	9.1	10.2	8.4	11.4	10.7	10.6	10.0	9.6	9.4	7.0	5.8	6.3	8.0	4.5	3.7	11.4	7.4
	E	ENE	ENE	ENE	ENE	NE	ENE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N			30(NNE)
Mar 29	3.5	2.5	2.5	2.2	1.3	1.8	3.2	4.4	5.3	6.4	6.5	5.9	6.6	6.9	7.5	6.6	5.9	6.7	3.2	4.3	4.7	4.2	4.8	3.2	1.3	7.5	4.6
	N	N	NNW	N	N	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	NNW	NNW	NNW	NNW	N	NNW	NW	WNW	WNW	WNW	W			330(NNW)
Mar 30	2.2	2.4	2.5	2.2	1.4	0.8	0.7	0.8	1.8	2.5	3.7	3.3	5.9	7.0	5.1	6.4	5.8	5.4	3.3	2.5	3.7	4.0	6.1	3.7	0.7	7.0	3.5
	WSW	WSW	WSW	WSW	WSW	WSW	SW	NE	NW	S	SSE	SSW	SSW	SSW	SSW	SSW	SSW	SSE	ESE	E	ESE	SE	SSE	SSE			189(S)
Mar 31	1.6	2.1	1.1	0.2	0.2	0.2	0.7	**0.1**	0.9	5.3	7.6	9.8	12.0	12.6	11.5	13.3	12.7	11.9	8.2	5.6	9.3	10.2	8.9	8.6	**0.1**	13.3	6.4
	ENE	E	E	NNE	ESE	ENE	NE	N	W	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	S	S	SSE	S	S	S			191(S)

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 - March 2024

Summary of Hour Standard Deviations

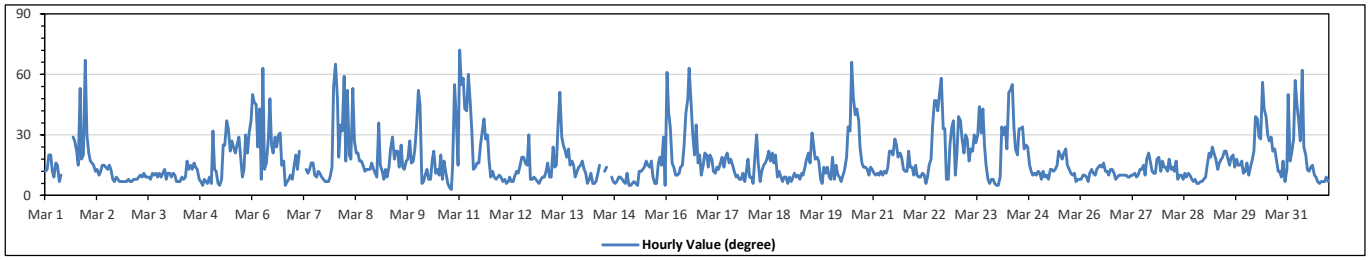
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	72	degree on Mar 11 at hr 0	Hours in Service:	744		
			Hours of Data:	731		
Minimum Hourly Value:	3	degree on Mar 10 at hr 19	Hours of Missing Data:	13		
			Hours of Calibration:	0		
			Operational Uptime:	98.3		

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

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.



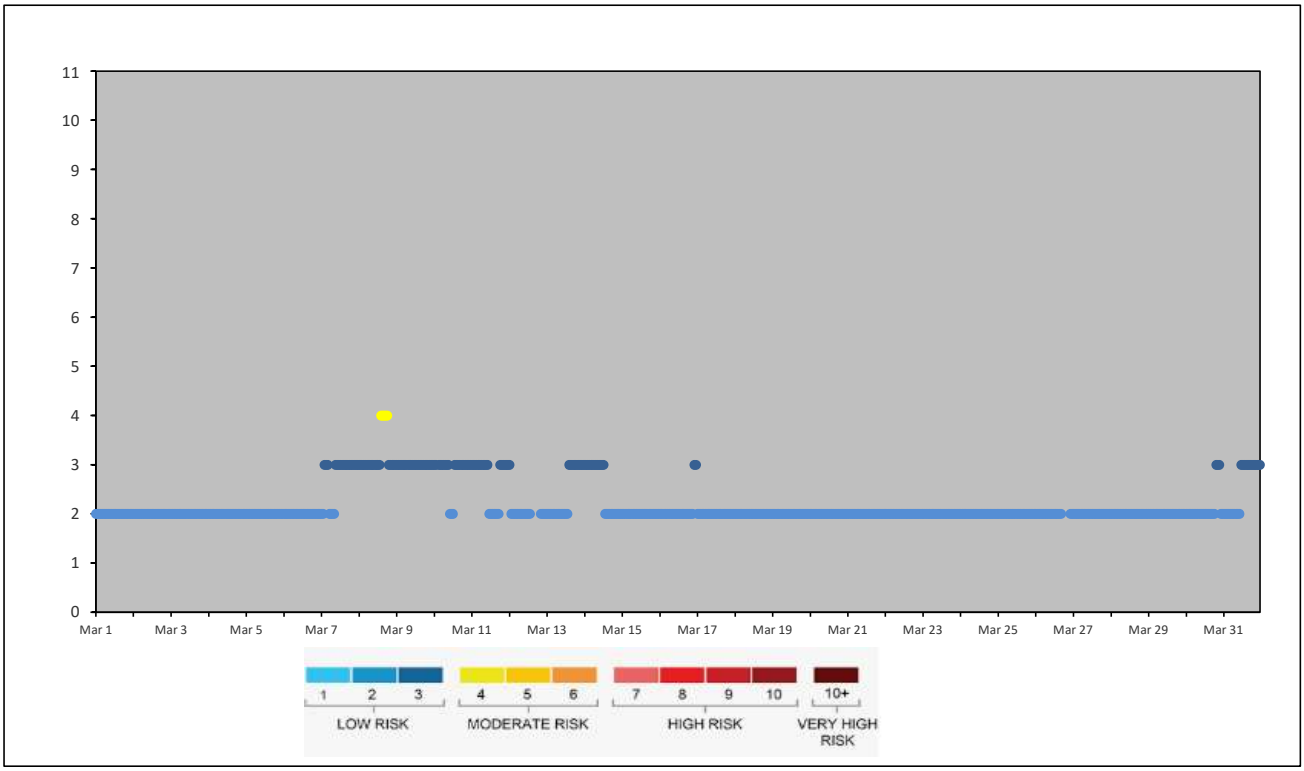
ST. LINA STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - March 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
Mar 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 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
Mar 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
Mar 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
Mar 7	2	2	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	3	3	3	3	3
Mar 9	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 10	3	3		3	3	3	3	3	3	3	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Mar 11	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3	3	3
Mar 12	3	2	2	2	2	2	2	2	2	2	2	2	2	2							2	2	2	2
Mar 13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3
Mar 14	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2
Mar 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
Mar 16	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3
Mar 17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 21	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 22	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 23	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 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
Mar 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
Mar 26	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2						2	2
Mar 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
Mar 28	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 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
Mar 30	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2
Mar 31	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

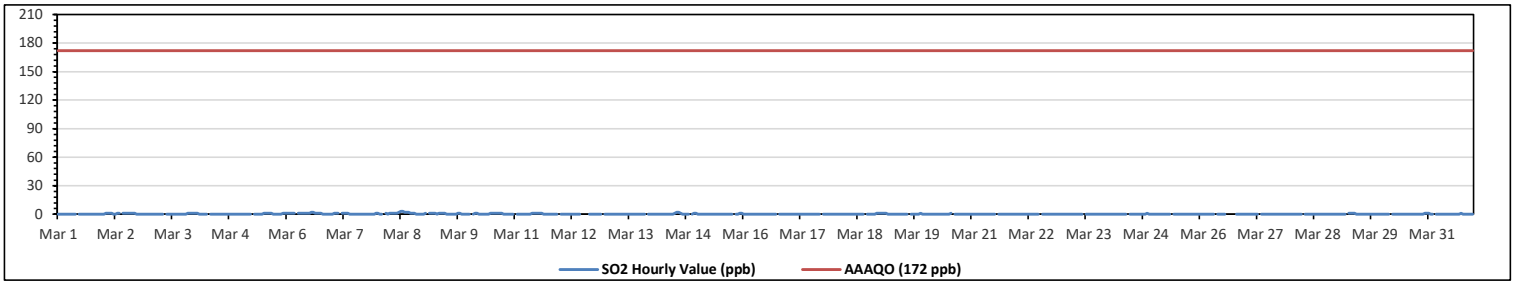
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

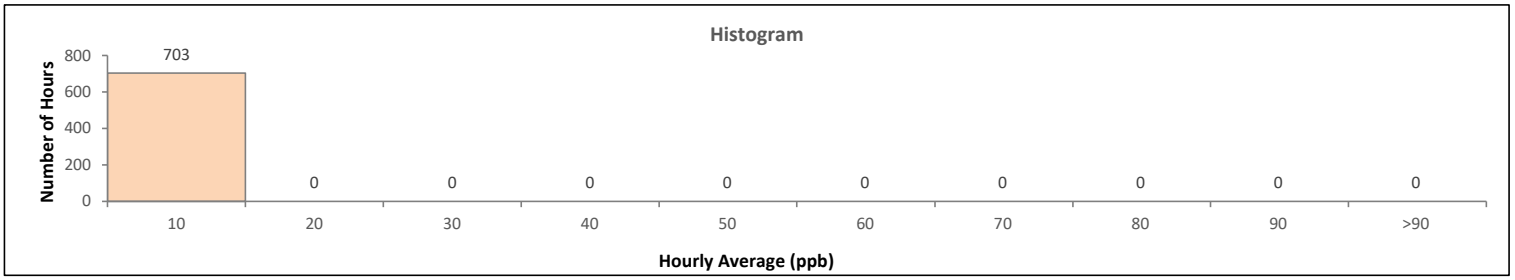
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0	
Maximum Hourly Value:	3	ppb	on Mar 8 at hr 12	Hours in Service:	744	
Maximum Daily Value:	1.0	ppb	on Mar 8	Hours of Data:	703	
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	5	
Minimum Daily Value:	0.0	ppb	on Mar 1	Hours of Calibration:	36	
Monthly Average:	0.2	ppb		Operational Uptime:	99.3	

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			
Mar 1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 2	0	1	1	1	1	0	0	1	1	S	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0.6
Mar 3	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0.2
Mar 4	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 5	0	0	0	0	0	0	S	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	0	1	0.3
Mar 6	1	1	1	1	1	S	1	1	1	1	1	1	1	2	2	1	1	1	1	0	0	0	0	0	0	2	0.9
Mar 7	0	1	1	1	S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.3
Mar 8	1	0	0	S	1	0	1	1	1	1	1	2	3	3	2	2	2	1	1	1	0	0	0	0	0	3	1.0
Mar 9	0	1	S	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0.5
Mar 10	0	S	0	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0.4
Mar 11	S	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	S	0	1	0.3
Mar 12	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	S	0	0	0	0.0
Mar 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Mar 14	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	S	0	1	1	0	2	0.3
Mar 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	1	0	1	0.1
Mar 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0
Mar 17	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
Mar 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	1	0	1	0.1
Mar 19	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0	0	0	1	0.2
Mar 20	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 21	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 22	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
Mar 23	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
Mar 24	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.0
Mar 25	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
Mar 26	0	0	0	0	0	0	0	0	S	0	0	0	0	0	K	K	K	K	K	0	0	0	0	0	0	0	0.0
Mar 27	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
Mar 28	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
Mar 29	0	0	0	0	0	S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Mar 30	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.1
Mar 31	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1
Diurnal Maximum	1	1	1	1	1	1	1	1	1	1	1	2	3	3	2	2	2	1	1	1	1	1	1	1			
Diurnal Average	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	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.



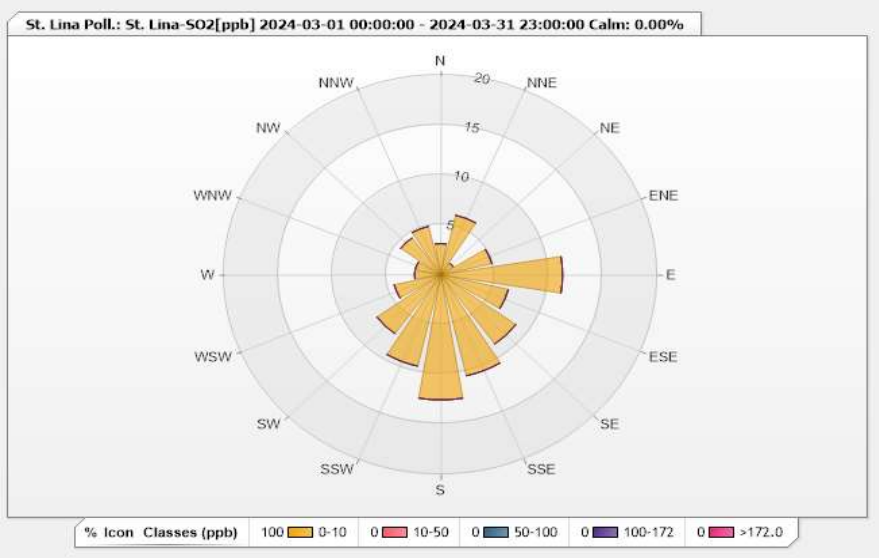


Station: St. Lina Poll.: St. Lina-SO2[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.49% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	3.13	0	0	0	0	3.13
NNE	6.12	0	0	0	0	6.12
NE	1.42	0	0	0	0	1.42
ENE	4.84	0	0	0	0	4.84
E	11.24	0	0	0	0	11.24
ESE	6.4	0	0	0	0	6.4
SE	8.53	0	0	0	0	8.53
SSE	10.38	0	0	0	0	10.38
S	12.52	0	0	0	0	12.52
SSW	9.39	0	0	0	0	9.39
SW	7.25	0	0	0	0	7.25
WSW	4.41	0	0	0	0	4.41
W	2.42	0	0	0	0	2.42
WNW	2.42	0	0	0	0	2.42
NW	4.55	0	0	0	0	4.55
NNW	4.98	0	0	0	0	4.98
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

HYDROGEN SULPHIDE (H_2S) in ppb

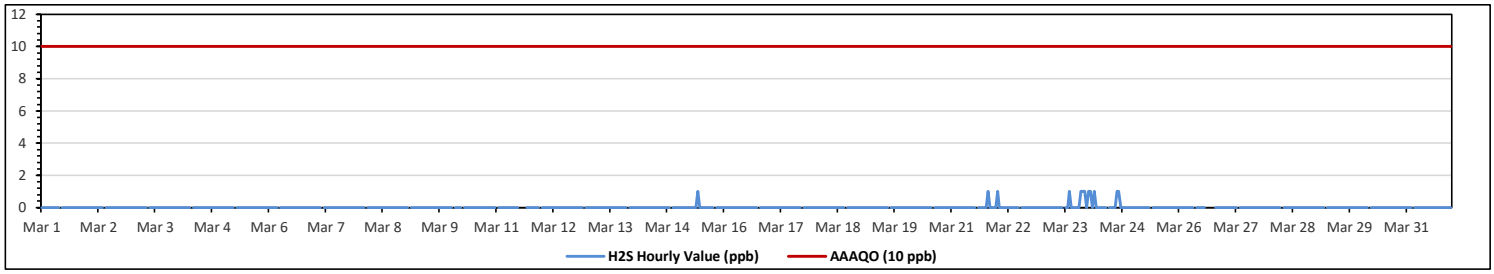
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb

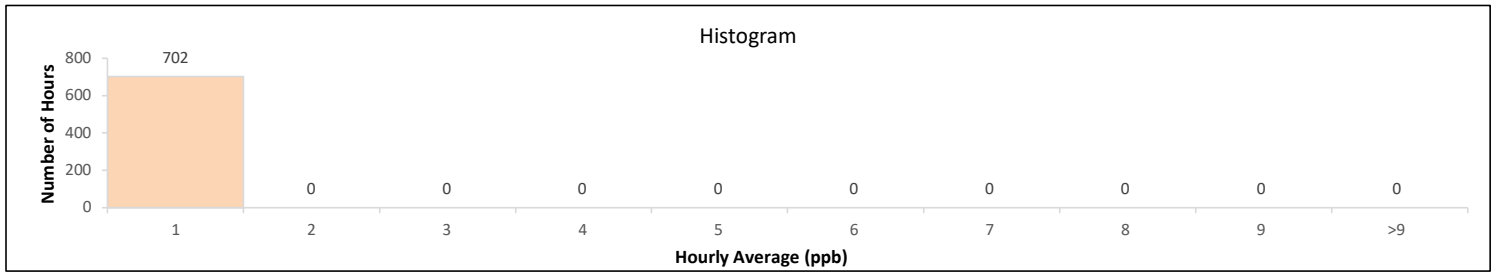
Number of 1-Hour Exceedances:	0		Number of 24-Hour Exceedances:	0	
Maximum Hourly Value:	1	ppb	on Mar 15 at hr 10	Hours in Service:	744
Maximum Daily Value:	0.0	ppb	on Mar 1	Hours of Data:	702
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	6
Minimum Daily Value:	0.0	ppb	on Mar 1	Hours of Calibration:	36
Monthly Average:	0.0	ppb		Operational Uptime:	99.2

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			
Mar 1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 2	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
Mar 3	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 4	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
Mar 5	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
Mar 6	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 7	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 8	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
Mar 9	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 10	0	S	0	0	0	0	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 11	S	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	S	0	0	0.0
Mar 12	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
Mar 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Mar 14	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
Mar 15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.0
Mar 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0
Mar 17	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
Mar 18	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
Mar 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0
Mar 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 21	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0	0	0	0	0	1	0.0
Mar 22	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	1	0.0
Mar 23	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0	0	0	0	0	1	1	1	0	0	1	0.0
Mar 24	1	1	0	1	0	0	0	0	0	0	S	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0.0
Mar 25	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
Mar 26	0	0	0	0	0	0	0	0	S	0	0	0	0	0	K	K	K	K	K	0	0	0	0	0	0	0	0.0
Mar 27	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
Mar 28	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
Mar 29	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
Mar 30	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 31	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Diurnal Maximum	1	1	0	1	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	1	1	1	1	0			
Diurnal Average	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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.



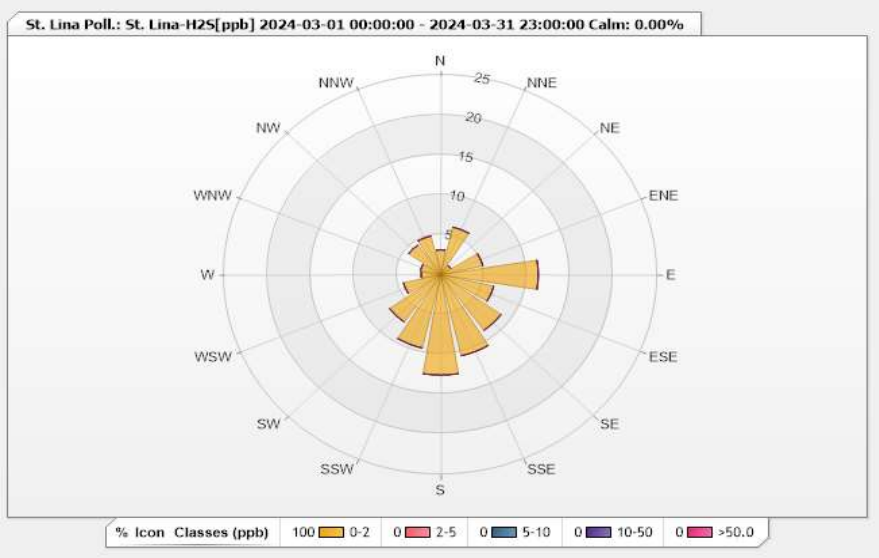


Station: St. Lina Poll.: St. Lina-H2S[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	3.13	0	0	0	0	3.13
NNE	6.13	0	0	0	0	6.13
NE	1.42	0	0	0	0	1.42
ENE	4.99	0	0	0	0	4.99
E	11.25	0	0	0	0	11.25
ESE	6.27	0	0	0	0	6.27
SE	8.55	0	0	0	0	8.55
SSE	10.4	0	0	0	0	10.4
S	12.54	0	0	0	0	12.54
SSW	9.4	0	0	0	0	9.4
SW	7.26	0	0	0	0	7.26
WSW	4.42	0	0	0	0	4.42
W	2.28	0	0	0	0	2.28
WNW	2.42	0	0	0	0	2.42
NW	4.56	0	0	0	0	4.56
NNW	4.99	0	0	0	0	4.99
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

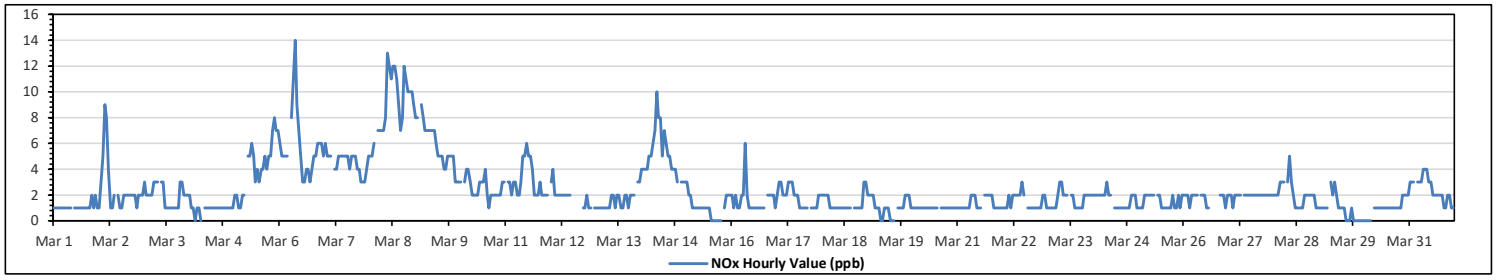
OXIDES OF NITROGEN (NOx) in ppb

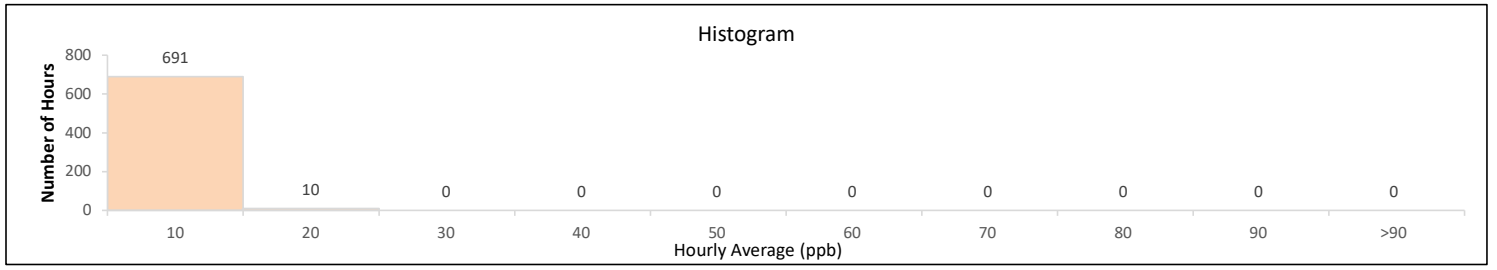
Maximum Hourly Value:	14	ppb	on Mar 6 at hr 8	Hours in Service:	744
Maximum Daily Value:	9.1	ppb	on Mar 8	Hours of Data:	701
Minimum Hourly Value:	0	ppb	on Mar 4 at hr 3	Hours of Missing Data:	5
Minimum Daily Value:	0.9	ppb	on Mar 29	Hours of Calibration:	38
Monthly Average:	2.5	ppb		Operational Uptime:	99.3

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			
Mar 1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	2	1	2	1	1	2	1.1
Mar 2	1	3	5	9	8	4	1	1	2	S	2	1	1	2	2	2	2	2	2	2	1	2	2	2	1	9	2.6
Mar 3	3	2	2	2	2	3	3	3	S	3	3	1	1	1	1	1	1	1	1	3	3	2	2	2	1	3	2.0
Mar 4	2	1	1	0	1	1	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	2	1.0
Mar 5	2	2	1	1	2	2	S	5	5	6	5	3	4	3	4	4	5	4	5	5	7	8	7	7	1	8	4.2
Mar 6	6	5	5	5	5	S	8	11	14	9	7	5	3	3	4	4	3	4	5	5	6	6	6	5	3	14	5.8
Mar 7	6	5	5	5	S	4	4	5	5	5	5	5	5	4	5	5	5	4	4	3	3	3	4	5	3	6	4.5
Mar 8	5	5	6	S	7	7	7	7	8	13	12	11	12	12	11	9	7	8	12	11	10	10	10	9	5	13	9.1
Mar 9	8	8	S	9	8	7	7	7	7	7	7	6	5	5	5	4	4	5	5	5	5	3	3	3	3	9	5.8
Mar 10	3	S	3	4	4	3	2	2	2	2	3	3	3	4	2	1	2	2	2	2	2	2	3	3	1	4	2.6
Mar 11	S	3	3	2	3	3	2	2	3	5	5	6	5	5	4	2	2	2	3	2	2	2	2	S	2	6	3.1
Mar 12	3	4	2	2	2	2	2	2	2	2	2	C	C	C	C	C	C	1	1	2	1	1	S	1	1	4	NA
Mar 13	1	1	1	1	1	1	1	1	2	2	1	2	2	1	1	2	2	1	2	2	2	S	3	3	1	3	1.6
Mar 14	4	4	4	4	5	5	6	7	10	8	8	5	7	6	5	5	4	4	4	3	S	3	3	3	3	10	5.1
Mar 15	3	2	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	S	1	2	2	2	0	3	1.0
Mar 16	2	1	2	1	1	2	2	6	2	1	1	1	1	1	1	1	1	1	S	2	2	2	2	1	1	6	1.6
Mar 17	2	3	3	2	2	2	3	3	3	2	2	2	1	1	1	1	1	S	1	1	1	1	2	2	1	3	1.8
Mar 18	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	3	3	1	3	1.3
Mar 19	2	2	2	2	1	1	1	0	0	1	1	1	0	0	0	S	1	1	1	1	2	2	2	1	0	2	1.1
Mar 20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1.0
Mar 21	1	1	1	1	1	1	1	2	2	2	1	1	1	S	2	2	2	2	2	1	1	1	1	1	1	2	1.3
Mar 22	1	1	1	2	1	2	2	2	2	2	3	2	S	1	1	1	1	1	1	1	1	2	2	1	1	3	1.5
Mar 23	1	1	1	1	1	2	3	3	2	2	2	S	2	2	1	1	1	1	1	2	2	2	2	2	1	3	1.7
Mar 24	2	2	2	2	2	2	2	3	2	2	S	1	1	1	1	1	1	1	1	1	2	2	2	1	1	3	1.6
Mar 25	1	1	1	2	2	2	2	2	2	S	2	2	1	1	1	1	1	1	2	1	1	2	1	2	1	2	1.5
Mar 26	2	2	2	1	2	2	2	2	S	2	2	2	1	1	K	K	K	K	K	2	2	2	1	2	1	2	1.8
Mar 27	2	2	1	2	2	2	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2.0
Mar 28	2	2	2	3	3	3	S	3	5	3	2	1	1	1	1	1	2	2	2	2	2	2	1	1	1	5	2.0
Mar 29	1	1	1	1	1	S	3	2	3	2	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	3	0.9
Mar 30	0	0	0	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	0	2	1.0
Mar 31	3	3	3	S	3	3	3	4	4	4	3	3	2	2	2	2	2	2	1	1	2	2	1	1	1	4	2.4
Diurnal Maximum	8	8	6	9	8	7	8	11	14	13	12	11	12	12	11	9	7	8	12	11	10	10	10	9			
Diurnal Average	2.4	2.4	2.2	2.4	2.6	2.4	2.6	3.1	3.3	3.2	3.0	2.5	2.3	2.2	2.2	2.0	2.0	2.0	2.2	2.2	2.3	2.4	2.5	2.3			

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.



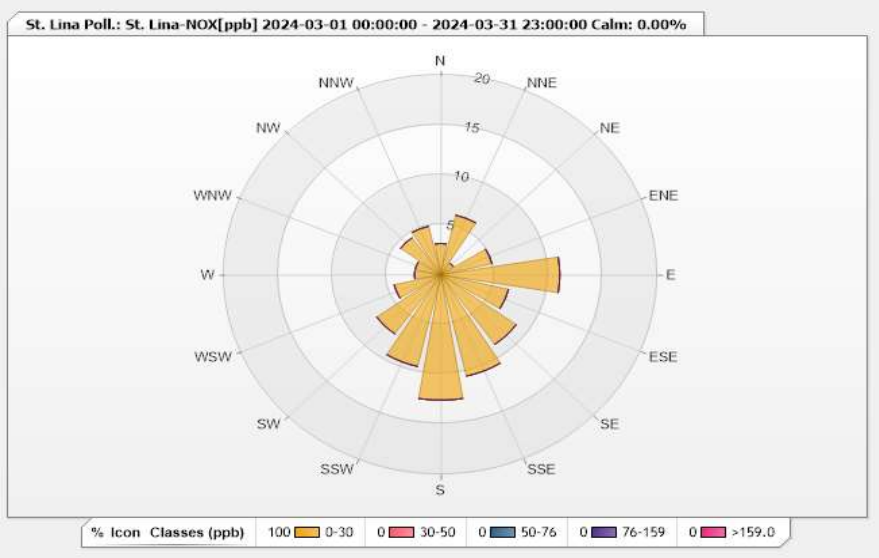


Station: St. Lina Poll.: St. Lina-NOX[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.22% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.14	0	0	0	0	3.14
NNE	6.13	0	0	0	0	6.13
NE	1.43	0	0	0	0	1.43
ENE	4.85	0	0	0	0	4.85
E	10.98	0	0	0	0	10.98
ESE	6.42	0	0	0	0	6.42
SE	8.56	0	0	0	0	8.56
SSE	10.41	0	0	0	0	10.41
S	12.55	0	0	0	0	12.55
SSW	9.42	0	0	0	0	9.42
SW	7.28	0	0	0	0	7.28
WSW	4.42	0	0	0	0	4.42
W	2.43	0	0	0	0	2.43
WNW	2.43	0	0	0	0	2.43
NW	4.56	0	0	0	0	4.56
NNW	4.99	0	0	0	0	4.99
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

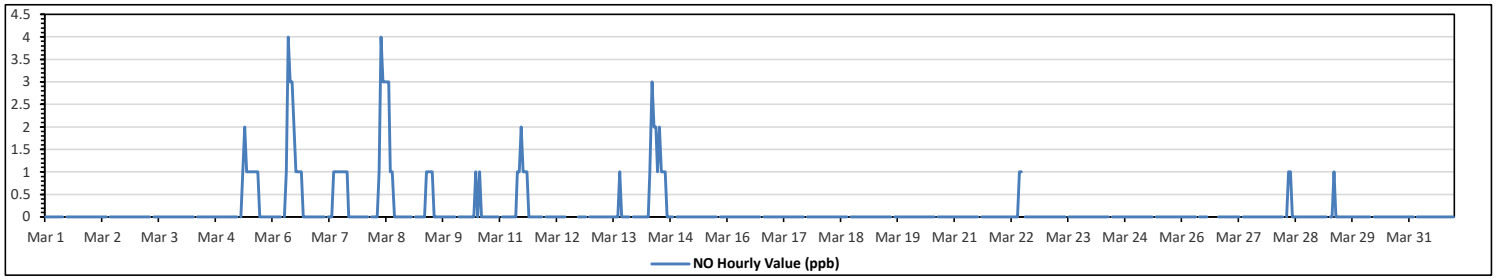
NITRIC OXIDE (NO) in ppb

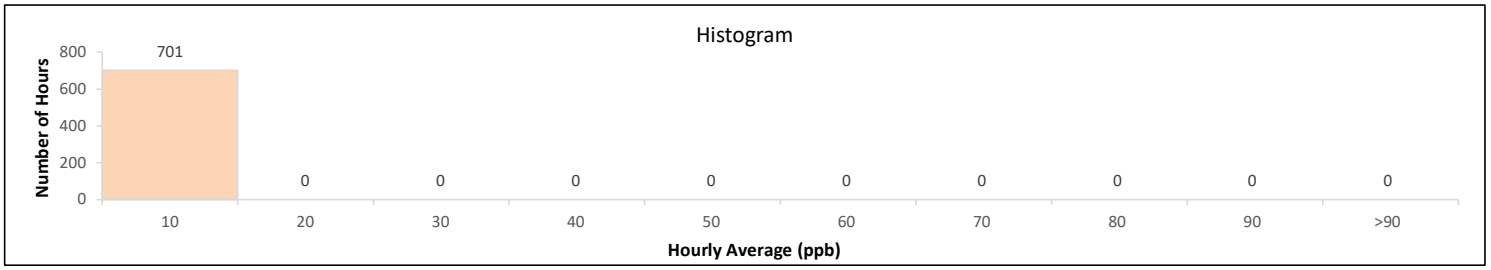
Maximum Hourly Value:	4	ppb	on Mar 6 at hr 8	Hours in Service:	744	
Maximum Daily Value:	0.8	ppb	on Mar 8	Hours of Data:	701	
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	5	
Minimum Daily Value:	0.0	ppb	on Mar 1	Hours of Calibration:	38	
Monthly Average:	0.1	ppb		Operational Uptime:	99.3	

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			
Mar 1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 2	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
Mar 3	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 4	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
Mar 5	0	0	0	0	0	0	S	0	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	2	0.4
Mar 6	0	0	0	0	0	S	0	1	4	3	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	4	0.7
Mar 7	0	0	0	0	S	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.3
Mar 8	0	0	0	S	0	0	0	0	1	4	3	3	3	3	1	1	0	0	0	0	0	0	0	0	0	4	0.8
Mar 9	0	0	S	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
Mar 10	0	S	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 11	S	0	0	0	0	0	0	0	0	1	1	2	1	1	1	0	0	0	0	0	0	0	0	S	0	2	0.3
Mar 12	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	S	0	0	0	NA
Mar 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	S	0	0	0	1	0.0
Mar 14	0	0	0	0	0	0	0	1	3	2	2	1	2	1	1	1	0	0	0	0	S	0	0	0	0	3	0.6
Mar 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0
Mar 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0
Mar 17	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
Mar 18	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
Mar 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0
Mar 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 21	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 22	0	0	0	0	0	0	0	0	0	0	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 23	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
Mar 24	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 25	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
Mar 26	0	0	0	0	0	0	0	0	S	0	0	0	0	0	K	K	K	K	K	0	0	0	0	0	0	0	0.0
Mar 27	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
Mar 28	0	0	0	0	0	0	S	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 29	0	0	0	0	0	S	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 30	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 31	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Diurnal Maximum	0	0	0	0	0	0	0	1	4	4	3	3	3	3	1	1	1	0	0	0	0	0	0	0			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.5	0.4	0.4	0.3	0.3	0.2	0.2	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.



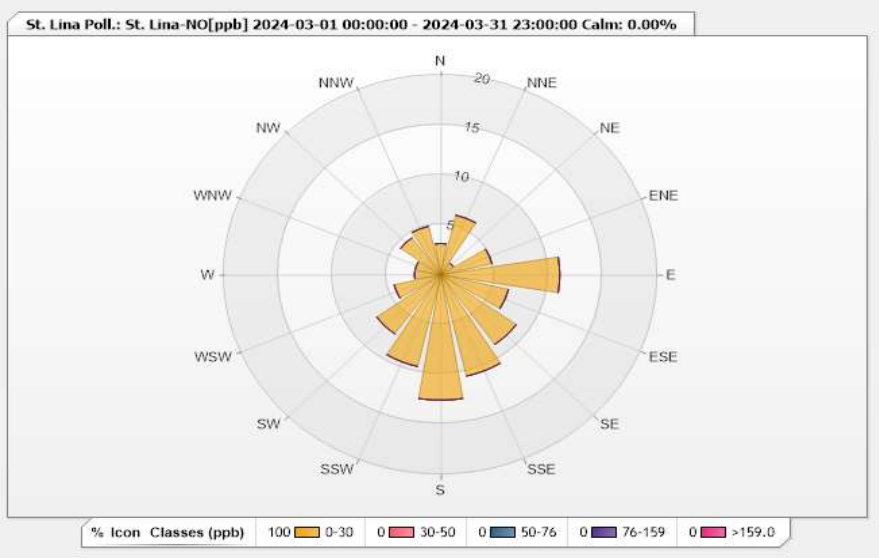


Station: St. Lina Poll.: St. Lina-NO[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.22% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.14	0	0	0	0	3.14
NNE	6.13	0	0	0	0	6.13
NE	1.43	0	0	0	0	1.43
ENE	4.85	0	0	0	0	4.85
E	10.98	0	0	0	0	10.98
ESE	6.42	0	0	0	0	6.42
SE	8.56	0	0	0	0	8.56
SSE	10.41	0	0	0	0	10.41
S	12.55	0	0	0	0	12.55
SSW	9.42	0	0	0	0	9.42
SW	7.28	0	0	0	0	7.28
WSW	4.42	0	0	0	0	4.42
W	2.43	0	0	0	0	2.43
WNW	2.43	0	0	0	0	2.43
NW	4.56	0	0	0	0	4.56
NNW	4.99	0	0	0	0	4.99
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

NITROGEN DIOXIDE (NO_2) in ppb

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

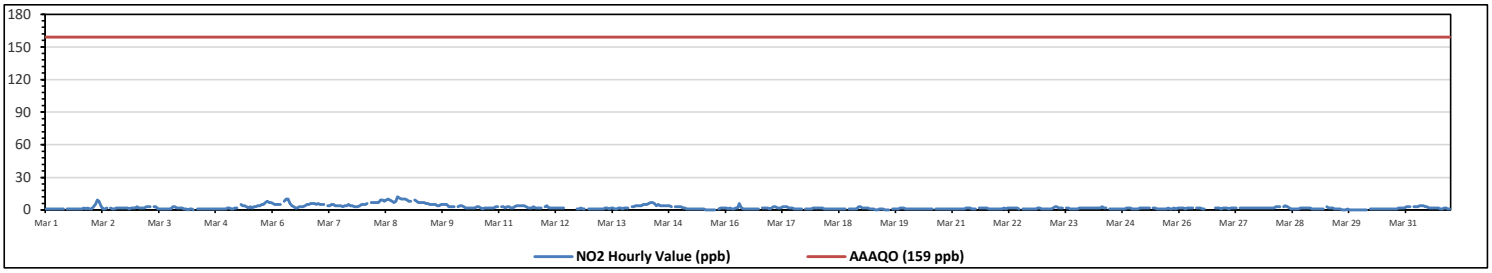
Number of 1-Hour Exceedances: 0

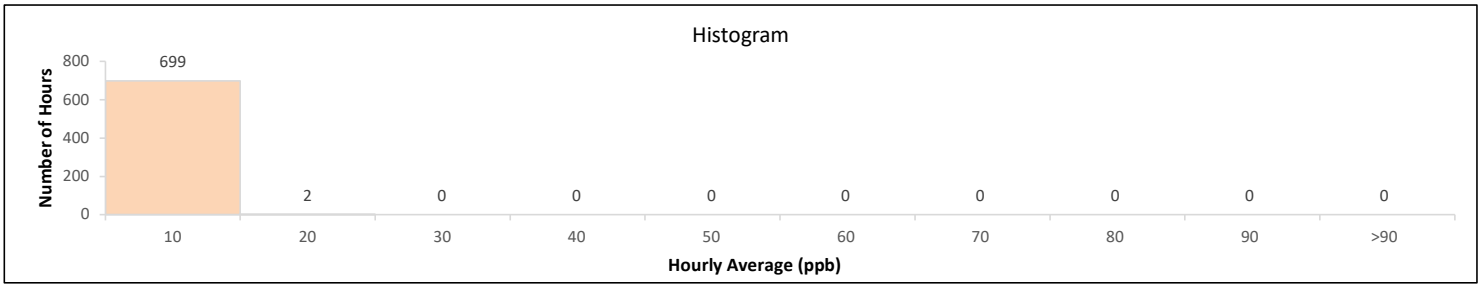
Maximum Hourly Value:	12	ppb	on Mar 8 at hr 18	Hours in Service:	744
Maximum Daily Value:	8.3	ppb	on Mar 8	Hours of Data:	701
Minimum Hourly Value:	0	ppb	on Mar 4 at hr 3	Hours of Missing Data:	5
Minimum Daily Value:	0.8	ppb	on Mar 29	Hours of Calibration:	38
Monthly Average:	2.3	ppb		Operational Uptime:	99.3

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			
Mar 1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	2	1	2	1	1	2	1.1
Mar 2	1	3	5	9	8	4	1	1	2	S	2	1	1	2	2	2	2	2	2	2	1	2	2	2	1	9	2.6
Mar 3	3	2	2	2	2	3	3	3	S	3	3	1	1	1	1	1	1	1	1	3	3	2	2	2	1	3	2.0
Mar 4	2	1	1	0	1	1	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**0**	2	1.0
Mar 5	2	2	1	1	2	2	S	5	4	4	3	2	3	2	3	3	4	4	5	5	7	8	7	7	1	8	3.7
Mar 6	6	5	5	5	5	S	8	10	10	6	4	3	2	2	3	3	3	4	5	5	6	6	6	5	2	10	5.1
Mar 7	6	5	5	5	S	4	4	5	5	4	4	4	4	3	4	4	5	4	4	3	3	3	4	5	3	6	4.2
Mar 8	5	5	6	S	7	7	7	7	7	9	9	8	9	10	9	8	7	8	**12**	11	10	10	10	9	5	**12**	**8.3**
Mar 9	8	8	S	9	8	7	7	7	7	6	6	5	5	5	5	4	4	5	5	5	5	3	3	3	3	9	5.7
Mar 10	3	S	3	4	4	3	2	2	2	2	2	2	3	3	2	1	2	2	2	2	2	2	3	3	1	4	2.4
Mar 11	S	3	3	2	3	3	2	2	3	4	4	4	4	4	3	2	2	2	3	2	2	2	2	S	2	4	2.8
Mar 12	3	4	2	2	2	2	2	2	2	2	2	C	C	C	C	C	C	1	1	2	1	1	S	1	1	4	NA
Mar 13	1	1	1	1	1	1	1	1	2	2	1	2	2	1	1	2	2	1	2	2	2	S	3	3	1	3	1.6
Mar 14	4	4	4	4	5	5	5	6	7	7	6	4	5	4	4	4	4	4	4	3	S	3	3	3	3	7	4.4
Mar 15	3	2	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	S	1	2	2	2	**0**	3	1.0
Mar 16	2	1	2	1	1	2	2	6	2	1	1	1	1	1	1	1	1	1	S	2	2	2	2	1	1	6	1.6
Mar 17	2	3	3	2	2	2	3	3	3	2	2	2	1	1	1	1	1	S	1	1	1	1	2	2	1	3	1.8
Mar 18	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	3	3	1	3	1.3
Mar 19	2	2	2	2	1	1	1	0	0	1	1	1	0	0	0	S	1	1	1	1	2	2	2	1	**0**	2	1.1
Mar 20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1.0
Mar 21	1	1	1	1	1	1	1	2	2	2	1	1	1	S	2	2	2	2	2	1	1	1	1	1	1	2	1.3
Mar 22	1	1	1	2	1	2	2	2	2	2	2	1	S	1	1	1	1	1	1	1	1	2	2	1	1	2	1.4
Mar 23	1	1	1	1	1	2	3	3	2	2	2	S	2	2	1	1	1	1	1	2	2	2	2	2	1	3	1.7
Mar 24	2	2	2	2	2	2	2	3	2	2	S	1	1	1	1	1	1	1	1	1	2	2	2	1	1	3	1.6
Mar 25	1	1	1	2	2	2	2	2	2	S	2	2	1	1	1	1	1	1	2	1	1	2	1	2	1	2	1.5
Mar 26	2	2	2	1	2	2	2	2	S	2	2	2	1	1	K	K	K	K	K	2	2	2	1	2	1	2	1.8
Mar 27	2	2	1	2	2	2	2	S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2.0
Mar 28	2	2	2	3	3	3	S	3	4	3	2	1	1	1	1	1	2	2	2	2	2	2	1	1	1	4	2.0
Mar 29	1	1	1	1	S	3	2	2	2	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	**0**	3	**0.8**
Mar 30	0	0	0	0	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	**0**	2	1.0
Mar 31	3	3	3	S	3	3	3	4	4	4	3	3	2	2	2	2	2	2	1	1	2	2	1	1	1	4	2.4
Diurnal Maximum	8	8	6	9	8	7	8	10	10	9	9	8	9	10	9	8	7	8	12	11	10	10	10	9			
Diurnal Average	2.4	2.4	2.2	2.4	2.6	2.4	2.5	3.0	2.9	2.8	2.5	2.1	2.0	1.9	1.9	1.9	2.0	2.0	2.2	2.2	2.3	2.4	2.5	2.3			

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.



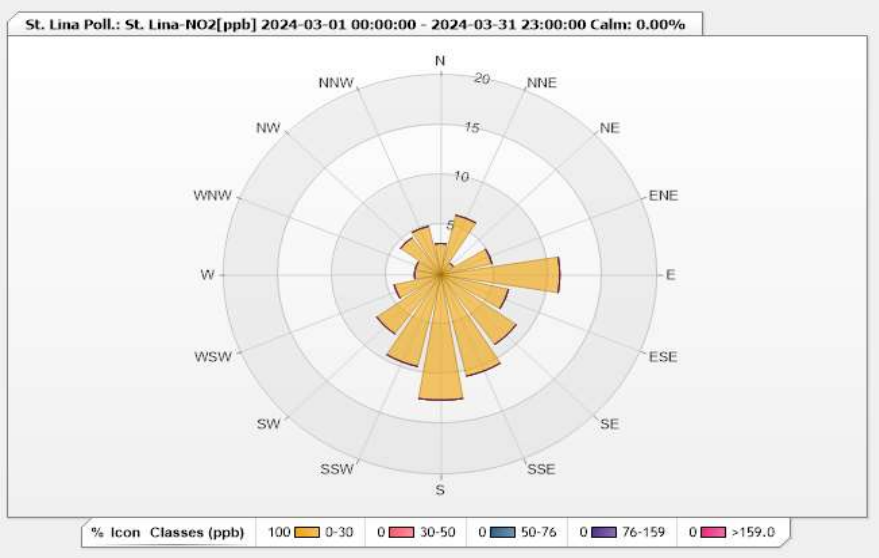


Station: St. Lina Poll.: St. Lina-NO2[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.22% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.14	0	0	0	0	3.14
NNE	6.13	0	0	0	0	6.13
NE	1.43	0	0	0	0	1.43
ENE	4.85	0	0	0	0	4.85
E	10.98	0	0	0	0	10.98
ESE	6.42	0	0	0	0	6.42
SE	8.56	0	0	0	0	8.56
SSE	10.41	0	0	0	0	10.41
S	12.55	0	0	0	0	12.55
SSW	9.42	0	0	0	0	9.42
SW	7.28	0	0	0	0	7.28
WSW	4.42	0	0	0	0	4.42
W	2.43	0	0	0	0	2.43
WNW	2.43	0	0	0	0	2.43
NW	4.56	0	0	0	0	4.56
NNW	4.99	0	0	0	0	4.99
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

OZONE (O_3) in ppb

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

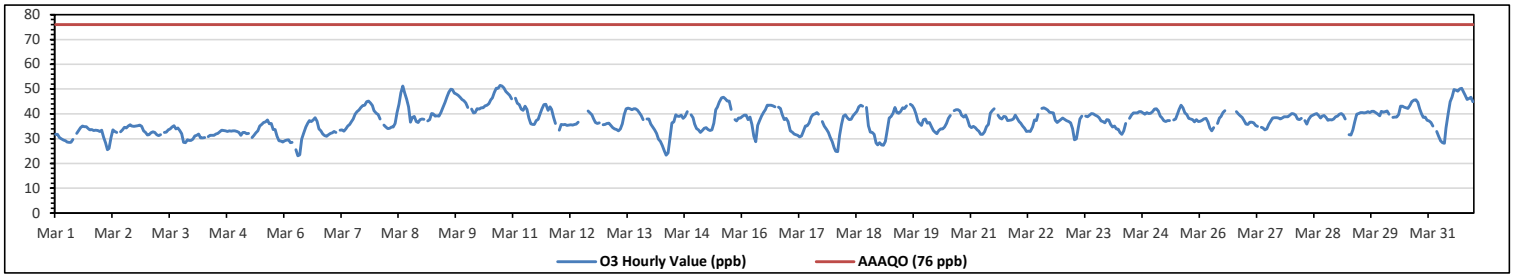
Number of 1-Hour Exceedances: 0

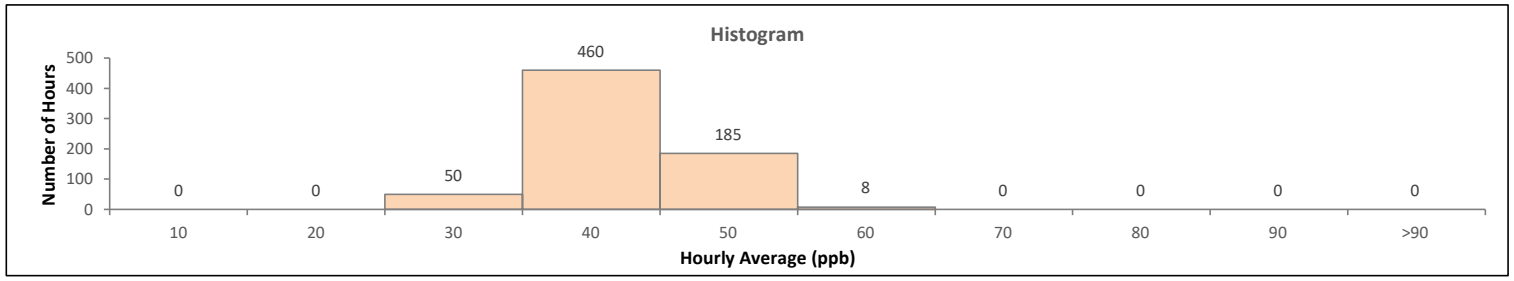
Maximum Hourly Value:	51.5	ppb	on Mar 10 at hr 17	Hours in Service:	744
Maximum Daily Value:	45.7	ppb	on Mar 10	Hours of Data:	703
Minimum Hourly Value:	23.1	ppb	on Mar 6 at hr 7	Hours of Missing Data:	5
Minimum Daily Value:	31.7	ppb	on Mar 6	Hours of Calibration:	36
Monthly Average:	37.3	ppb		Operational Uptime:	99.3

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
Mar 1	31.8	31.7	30.4	29.9	29.4	29.1	28.6	28.5	28.5	29.7	S	32.1	33.3	34.4	35	34.8	34.8	34.1	33.5	33.7	33.3	33.4	33.3	32.9	28.5	35.0	32.0
Mar 2	33.4	30.6	28.4	25.5	26	30.2	33.5	32.8	32.5	S	32.7	33.6	34.5	34.3	35.1	35.6	35	34.9	35	35.2	35.5	34.9	33.1	32.5	25.5	35.6	32.8
Mar 3	31.5	31.6	32.3	32.7	32.4	31.6	31.2	31.6	S	32.4	32.6	33.6	34	34.7	35.2	34	34.3	33.3	32	28.5	28.4	29.5	29.3	29.3	28.4	35.2	32.0
Mar 4	29.8	31.1	31.4	31.9	30.3	30.2	30.4	S	30.8	31.4	31.4	31.4	31.9	32.2	32.7	33.4	33.3	33.2	32.8	33.1	33	33.2	33.2	32.8	29.8	33.4	32.0
Mar 5	32.5	31.4	32.4	32.5	32	32.2	S	30.4	31.3	32.3	33.1	35.1	35.7	36.5	36.7	37.5	36	36.1	33.7	33.7	30.9	29.1	29	28.6	28.6	37.5	33.0
Mar 6	29.1	29.4	29.5	28.4	28.5	S	25.6	23.1	23.5	29.8	32.2	34.7	36.3	37.2	36.9	37.5	38.5	37	34	33.2	31.9	31.2	30.9	31.6	**23.1**	38.5	**31.7**
Mar 7	32.2	32.3	32.9	32.5	S	33.4	33.6	33	34	35.1	35.8	36.7	38	39.9	40.9	41.5	42.6	43.3	43.5	45	45.1	44.4	43.3	41.2	32.2	45.1	38.3
Mar 8	40.3	39.7	37.9	S	35.5	34.7	34.1	34.2	34.7	34.7	36.2	40.5	43.8	48.5	51.2	48.4	45.9	42.9	36.6	38.6	38.9	36.8	36.5	37.7	34.1	51.2	39.5
Mar 9	38	37.8	S	37.1	37.7	40.2	40	39.1	39.2	39	40.6	42.4	44.7	46.9	48.8	49.9	49.8	48.4	48	47.4	46.7	45.8	45.2	44.4	37.1	49.9	43.4
Mar 10	42.6	S	41.9	40.4	40.6	42	41.9	42.5	42.5	43.2	43.5	44.1	45.7	46.5	48.7	50.3	50.3	**51.5**	51.2	50.4	49.1	48.3	47.4	46	40.4	**51.5**	**45.7**
Mar 11	S	46.3	44.3	43.7	41.9	41.4	43.1	41.8	38.3	36	35.8	35.7	37.2	37.8	40	42.1	43.7	43.8	41.4	42.9	41.8	38.7	36.1	S	35.7	46.3	40.6
Mar 12	33.4	35.7	35.6	35.7	35.4	35.5	35.6	35.5	35.8	35.9	36.6	C	C	C	C	41.1	40.4	39.6	38.1	36.5	36.2	36.4	S	35.6	33.4	41.1	36.6
Mar 13	35.8	36.2	36.3	35.3	34.4	33.9	33.7	33.1	34	36	39.7	42	42.3	42.1	41.7	42	42	41.5	40.6	39.3	37.6	S	38	37.9	33.1	42.3	38.1
Mar 14	35.9	34.6	33.6	32.2	29.8	28.9	27.2	25.2	23.4	24.2	30.2	36.4	36.7	39.6	39.1	38.9	39.4	38.2	38.9	40.9	S	39.6	38.5	35.9	23.4	40.9	34.2
Mar 15	34.1	33.6	32.5	33.3	34.2	34.4	33.7	33.3	33.5	36.3	41.7	42.8	44.8	46.4	46.7	46.1	45.1	45.1	41.8	S	37.7	37.1	38.3	38.4	32.5	46.7	38.7
Mar 16	38.9	39.5	39.4	37.7	38.7	35.8	31	28.7	35.4	37.2	39.1	40.6	41.7	43.4	43.4	43.4	43.2	42.9	S	42.7	42.2	39.6	37.6	38.2	28.7	43.4	39.1
Mar 17	36.8	33.2	32.6	31.9	31.6	31.3	30.7	31.1	33	35	35.2	36.4	38.7	39.7	40	40.6	39.8	S	36.8	35	33.8	32.4	30.4	28.7	28.7	40.6	34.6
Mar 18	26.3	24.9	24.8	31.3	35.7	39.1	39.6	38.5	37.6	37.8	39.2	40.1	41	42.9	43.4	43	S	42.6	35.2	32.6	32.5	31.8	28.2	27.5	24.8	43.4	35.5
Mar 19	28.3	27.5	27.3	28.9	33.6	38.4	38.9	40.3	42.6	40.6	40.3	41	42.4	42.2	43.2	S	43.9	43.3	42.1	39.8	36.8	36.1	35.3	37.6	27.3	43.9	37.8
Mar 20	37.9	36.3	36.5	34.8	33.3	32.4	32	33.3	33.9	33.9	34.7	36.1	38.2	39.3	S	41.2	41.6	41.6	41.1	39.5	38.7	39.4	37.7	35	32.0	41.6	36.9
Mar 21	34.4	34.9	34.4	33.5	33	31.7	31.7	32.7	34.8	35.7	40.3	41.3	42	S	39.4	38.3	38	38.9	38.8	37.2	37.4	37.5	37.9	39.5	31.7	42.0	36.7
Mar 22	38.2	36.9	36.3	35.1	34.2	32.9	33	32.8	34.7	37.5	37.3	39.7	S	42.2	42.4	42.1	41.5	40.7	40.5	40.4	37.4	36.5	37.1	37.7	32.8	42.4	37.7
Mar 23	38.3	37.8	37.3	36.9	36.4	34.1	29.5	30	34.4	37.9	39.1	S	39.1	38.8	39.5	40.1	40	39.4	39.1	38.5	37.1	36.9	36.4	37.6	29.5	40.1	37.1
Mar 24	37.5	35.8	34.7	35.1	34	33.8	32.4	31.7	33.1	36.1	S	38.2	39.5	40.4	40.4	40.4	40.8	40.9	40.4	39.9	40.5	40.2	40.3	40.8	31.7	40.9	37.7
Mar 25	41.9	42	41.1	39	38.5	37.2	36.9	37.2	37.3	S	37.5	37.9	40	41.8	43.4	42.4	40.4	39.7	38.2	37.9	37.7	36.7	37.6	36.8	36.7	43.4	39.1
Mar 26	37	37.4	38	38.2	36.7	34.3	33.1	34.4	S	36.1	38.3	38.9	40.5	41.3	K	K	K	K	K	40.9	40	39.2	38.6	37.2	33.1	41.3	37.8
Mar 27	35.9	35.8	36.6	36.6	36.4	35.4	34.9	S	34.5	34.3	33.6	34	35.7	37	38.3	38.5	38.5	38.3	37.9	38.4	38.8	38.8	38.8	39.4	33.6	39.4	36.8
Mar 28	40.1	40	39.4	37.9	37.6	38.2	S	37.2	35.9	37.8	39.1	39.5	39.8	40.2	39.3	38.4	39	39.3	38.6	37.4	37.6	37.5	38	38.8	35.9	40.2	38.5
Mar 29	39	39.8	40.2	39.5	38	S	31.6	31.5	33.5	36.8	39.8	40.2	40.6	40.5	40.4	40.5	40.8	40.5	41	41	40.6	40	39.2	41	31.5	41.0	39.0
Mar 30	40.7	40.8	41.1	39.9	S	38.6	38.7	38.7	39.7	43	43.1	42.7	42.4	42.2	43.3	45	45.5	45.6	44.7	41.9	39.8	38.6	38.7	37.4	37.4	45.6	41.4
Mar 31	37.1	36.5	35	S	32.9	30.9	29.2	28.3	28.1	34.3	40.3	45	46.8	49.8	49.5	49.2	50.1	50.3	49.1	47.5	45.8	46.2	46.7	44.9	28.1	50.3	41.5
Diurnal Maximum	42.6	46.3	44.3	43.7	41.9	42.0	43.1	42.5	42.6	43.2	43.5	45.0	46.8	49.8	51.2	50.3	50.3	51.5	51.2	50.4	49.1	48.3	47.4	46.0			
Diurnal Average	35.6	35.4	35.1	34.7	34.4	34.5	33.6	33.5	34.2	35.5	37.2	38.4	39.6	40.6	41.2	41.2	41.2	40.9	39.5	39.0	38.1	37.5	37.0	36.8			

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.



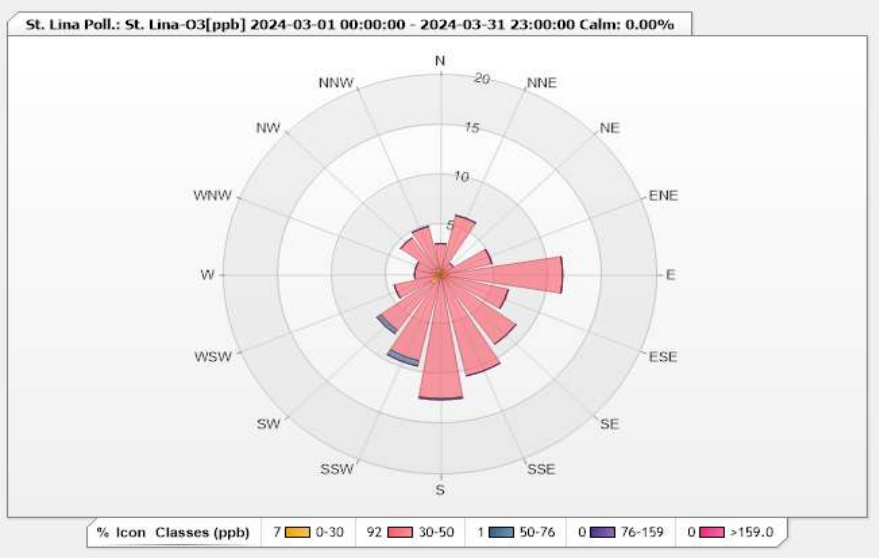


Station: St. Lina Poll.: St. Lina-O3[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.49% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	0.14	2.99	0	0	0	3.13
NNE	0.57	5.55	0	0	0	6.12
NE	0.14	1.28	0	0	0	1.42
ENE	0.43	4.41	0	0	0	4.84
E	0.71	10.53	0	0	0	11.24
ESE	0.43	5.97	0	0	0	6.4
SE	0.43	8.11	0	0	0	8.54
SSE	0.43	9.96	0	0	0	10.39
S	0.14	12.23	0.14	0	0	12.51
SSW	0.28	8.53	0.57	0	0	9.38
SW	1.14	5.69	0.43	0	0	7.26
WSW	0.43	3.98	0	0	0	4.41
W	0	2.42	0	0	0	2.42
WNW	0.43	1.99	0	0	0	2.42
NW	0.71	3.84	0	0	0	4.55
NNW	0.71	4.27	0	0	0	4.98
Summary	7.12	91.75	1.14	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

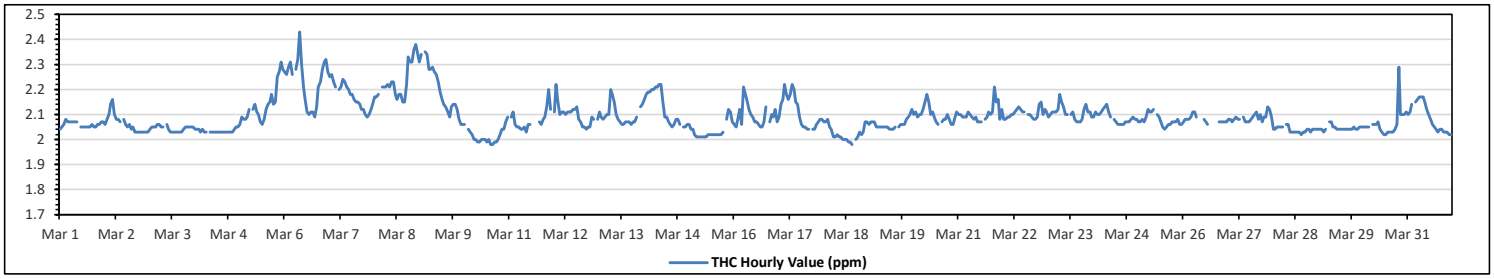
TOTAL HYDROCARBONS (THC) in ppm

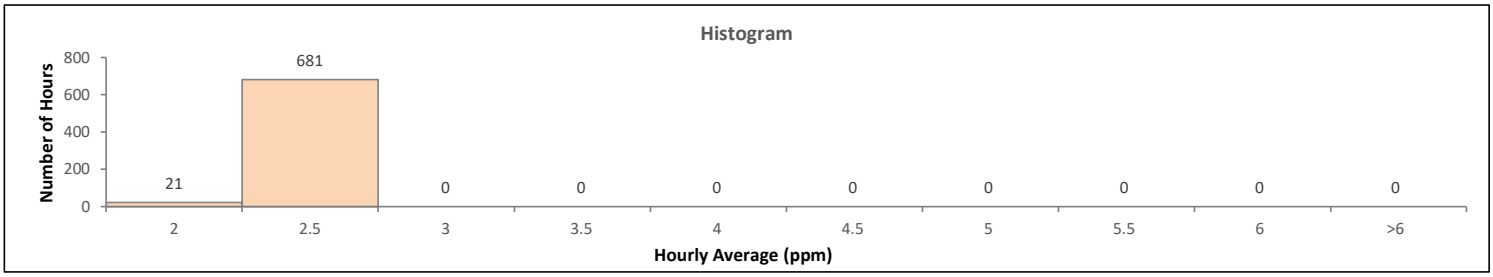
Maximum Hourly Value:	2.43	ppm	on Mar 6 at hr 8	Hours in Service:	744
Maximum Daily Value:	2.23	ppm	on Mar 6	Hours of Data:	702
Minimum Hourly Value:	1.98	ppm	on Mar 10 at hr 14	Hours of Missing Data:	6
Minimum Daily Value:	2.01	ppm	on Mar 10	Hours of Calibration:	36
Monthly Average:	2.09	ppm		Operational Uptime:	99.2

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			
Mar 1	2.04	2.05	2.06	2.08	2.07	2.07	2.07	2.07	2.07	2.07	S	2.05	2.05	2.05	2.05	2.05	2.05	2.06	2.05	2.05	2.06	2.06	2.07	2.07	2.04	2.08	2.06
Mar 2	2.06	2.08	2.10	2.14	2.16	2.10	2.08	2.08	2.07	S	2.08	2.06	2.05	2.06	2.04	2.05	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.16	2.06
Mar 3	2.04	2.05	2.05	2.05	2.06	2.06	2.05	2.05	S	2.06	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.05	2.05	2.05	2.05	2.05	2.03	2.06	2.04
Mar 4	2.04	2.04	2.04	2.03	2.04	2.03	2.03	S	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.05	2.05	2.03	2.05	2.03
Mar 5	2.06	2.09	2.08	2.08	2.09	2.12	S	2.12	2.14	2.11	2.10	2.07	2.06	2.08	2.12	2.14	2.15	2.18	2.14	2.15	2.25	2.27	2.31	2.28	2.06	2.31	2.14
Mar 6	2.27	2.26	2.29	2.31	2.26	S	2.28	2.32	**2.43**	2.30	2.21	2.16	2.11	2.10	2.11	2.11	2.09	2.13	2.21	2.23	2.28	2.31	2.32	2.27	2.09	**2.43**	**2.23**
Mar 7	2.25	2.26	2.23	2.21	S	2.20	2.21	2.24	2.23	2.21	2.20	2.18	2.18	2.16	2.15	2.15	2.14	2.12	2.12	2.10	2.09	2.10	2.12	2.14	2.09	2.26	2.17
Mar 8	2.17	2.17	2.18	S	2.21	2.21	2.21	2.22	2.21	2.23	2.23	2.18	2.16	2.18	2.18	2.15	2.15	2.22	2.33	2.31	2.31	2.36	2.38	2.34	2.15	2.38	2.23
Mar 9	2.31	2.34	S	2.35	2.34	2.28	2.28	2.29	2.27	2.26	2.23	2.19	2.16	2.14	2.13	2.11	2.09	2.13	2.14	2.14	2.12	2.08	2.06	2.06	2.06	2.35	2.20
Mar 10	2.06	S	2.04	2.03	2.02	2.00	2.00	1.99	1.99	2.00	2.00	2.00	1.99	2.00	1.98	1.98	1.99	1.99	2.00	2.02	2.04	2.04	2.07	2.09	1.98	2.09	2.01
Mar 11	S	2.09	2.11	2.06	2.05	2.05	2.04	2.04	2.05	2.03	2.06	2.06	C	C	C	C	2.07	2.06	2.08	2.09	2.13	2.20	2.12	S	2.03	2.20	2.08
Mar 12	2.11	2.22	2.15	2.10	2.11	2.11	2.10	2.11	2.11	2.11	2.12	2.12	2.13	2.08	2.07	2.05	2.05	2.04	2.05	2.05	2.09	2.08	S	2.08	2.04	2.22	2.10
Mar 13	2.11	2.09	2.08	2.09	2.10	2.10	2.20	2.18	2.15	2.10	2.08	2.07	2.06	2.06	2.07	2.07	2.07	2.06	2.07	2.07	2.09	S	2.13	2.14	2.06	2.20	2.10
Mar 14	2.16	2.18	2.19	2.19	2.20	2.20	2.21	2.21	2.22	2.22	2.15	2.09	2.09	2.07	2.06	2.05	2.06	2.08	2.08	2.06	S	2.05	2.05	2.06	2.05	2.22	2.13
Mar 15	2.06	2.04	2.04	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	S	2.08	2.12	2.11	2.07	2.01	2.12	2.03
Mar 16	2.06	2.05	2.08	2.12	2.06	2.21	2.18	2.15	2.12	2.10	2.09	2.07	2.07	2.06	2.05	2.05	2.07	2.13	S	2.07	2.10	2.09	2.12	2.07	2.05	2.21	2.09
Mar 17	2.09	2.14	2.16	2.22	2.18	2.16	2.18	2.22	2.20	2.15	2.14	2.09	2.06	2.05	2.05	2.04	2.04	S	2.04	2.04	2.06	2.07	2.08	2.08	2.04	2.22	2.11
Mar 18	2.07	2.07	2.08	2.05	2.04	2.01	2.01	2.02	2.01	2.01	2.00	2.00	2.00	1.99	1.99	1.98	S	2.00	2.01	2.03	2.02	2.03	2.07	2.07	1.98	2.08	2.02
Mar 19	2.06	2.07	2.07	2.07	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.04	2.04	2.04	2.05	S	2.05	2.06	2.06	2.08	2.09	2.10	2.12	2.04	2.12	2.06
Mar 20	2.10	2.11	2.09	2.10	2.10	2.12	2.15	2.18	2.15	2.10	2.11	2.09	2.07	2.06	S	2.07	2.08	2.08	2.10	2.08	2.06	2.06	2.09	2.11	2.06	2.18	2.10
Mar 21	2.10	2.10	2.09	2.09	2.09	2.11	2.10	2.09	2.08	2.09	2.07	2.07	2.07	S	2.08	2.09	2.11	2.10	2.11	2.21	2.15	2.16	2.08	2.12	2.07	2.21	2.10
Mar 22	2.08	2.08	2.09	2.09	2.10	2.10	2.11	2.12	2.13	2.12	2.11	2.11	S	2.10	2.10	2.09	2.08	2.08	2.09	2.14	2.15	2.10	2.12	2.11	2.08	2.15	2.10
Mar 23	2.09	2.10	2.11	2.11	2.11	2.12	2.18	2.15	2.13	2.10	2.10	S	2.10	2.11	2.08	2.07	2.07	2.07	2.08	2.12	2.14	2.11	2.11	2.09	2.07	2.18	2.11
Mar 24	2.09	2.11	2.10	2.10	2.11	2.12	2.13	2.14	2.11	2.09	S	2.08	2.07	2.06	2.06	2.06	2.06	2.07	2.07	2.07	2.08	2.09	2.08	2.08	2.06	2.14	2.09
Mar 25	2.07	2.07	2.08	2.07	2.09	2.12	2.11	2.11	2.12	S	2.10	2.09	2.07	2.05	2.04	2.05	2.06	2.06	2.07	2.07	2.07	2.08	2.06	2.06	2.04	2.12	2.08
Mar 26	2.07	2.08	2.08	2.08	2.09	2.11	2.11	2.09	S	2.09	NRM	2.08	2.07	2.06	K	K	K	K	K	2.07	2.07	2.07	2.07	2.07	2.06	2.11	NA
Mar 27	2.08	2.08	2.07	2.08	2.09	2.08	2.08	S	2.09	2.07	2.07	2.07	2.08	2.09	2.10	2.11	2.08	2.10	2.07	2.09	2.09	2.13	2.12	2.09	2.07	2.13	2.09
Mar 28	2.04	2.04	2.05	2.05	2.05	2.05	S	2.06	2.06	2.03	2.03	2.03	2.03	2.03	2.03	2.02	2.03	2.03	2.04	2.04	2.03	2.04	2.04	2.04	2.02	2.06	2.04
Mar 29	2.04	2.04	2.04	2.03	2.04	S	2.07	2.07	2.05	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	2.05	2.05	2.03	2.07	2.04
Mar 30	2.05	2.05	2.05	2.05	S	2.06	2.06	2.06	2.07	2.04	2.03	2.02	2.02	2.03	2.03	2.03	2.03	2.04	2.06	2.29	2.10	2.10	2.10	2.11	2.02	2.29	2.06
Mar 31	2.10	2.11	2.14	S	2.15	2.16	2.17	2.17	2.17	2.15	2.12	2.10	2.08	2.06	2.05	2.04	2.03	2.04	2.04	2.03	2.03	2.03	2.02	2.02	2.02	2.17	2.09
Diurnal Maximum	2.31	2.34	2.29	2.35	2.34	2.28	2.28	2.32	2.43	2.30	2.23	2.19	2.18	2.18	2.18	2.15	2.15	2.22	2.33	2.31	2.31	2.36	2.38	2.34			
Diurnal Average	2.10	2.11	2.10	2.11	2.11	2.11	2.12	2.12	2.12	2.10	2.09	2.08	2.07	2.07	2.06	2.06	2.06	2.07	2.08	2.09	2.10	2.10	2.11	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.



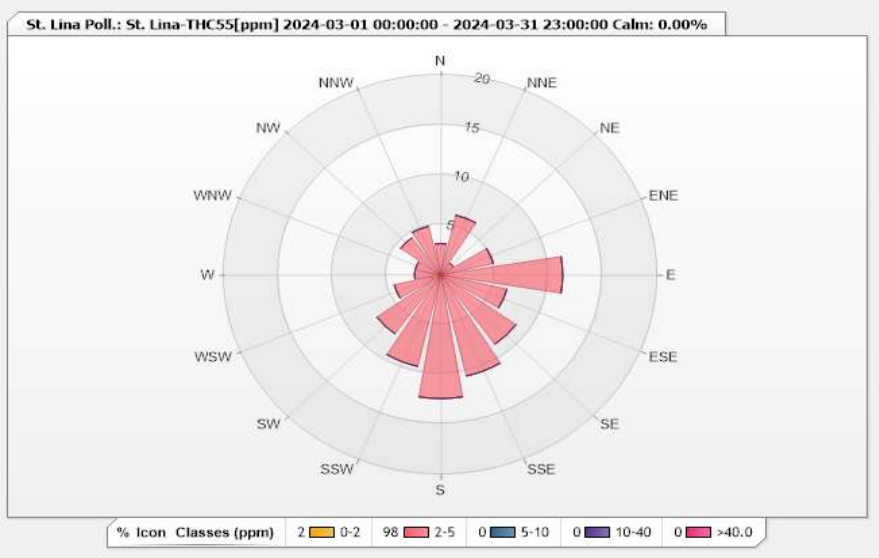


Station: St. Lina Poll.: St. Lina-THC55[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0	3.13	0	0	0	3.13
NNE	0	6.13	0	0	0	6.13
NE	0	1.42	0	0	0	1.42
ENE	0	4.99	0	0	0	4.99
E	0	11.25	0	0	0	11.25
ESE	0	6.27	0	0	0	6.27
SE	0	8.55	0	0	0	8.55
SSE	0	10.4	0	0	0	10.4
S	0	12.39	0	0	0	12.39
SSW	0.43	8.97	0	0	0	9.4
SW	0.14	7.12	0	0	0	7.26
WSW	0.85	3.56	0	0	0	4.41
W	0.14	2.28	0	0	0	2.42
WNW	0	2.42	0	0	0	2.42
NW	0.43	4.13	0	0	0	4.56
NNW	0	4.99	0	0	0	4.99
Summary	1.99	98	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

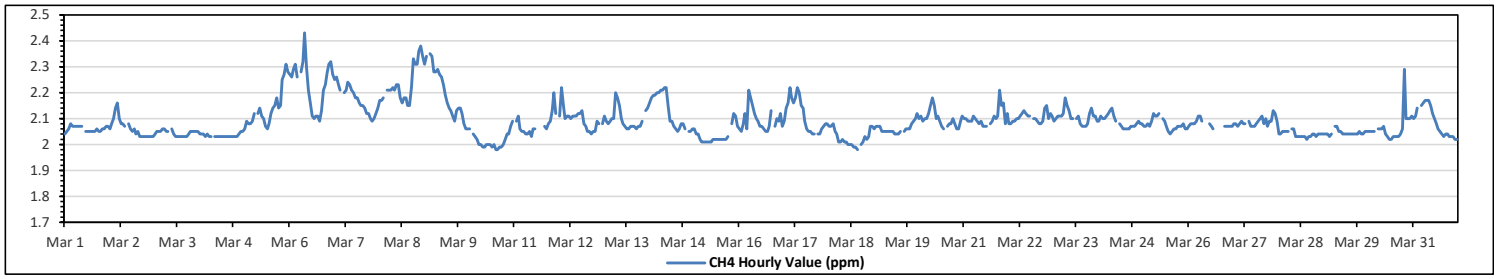
METHANE (CH4) in ppm

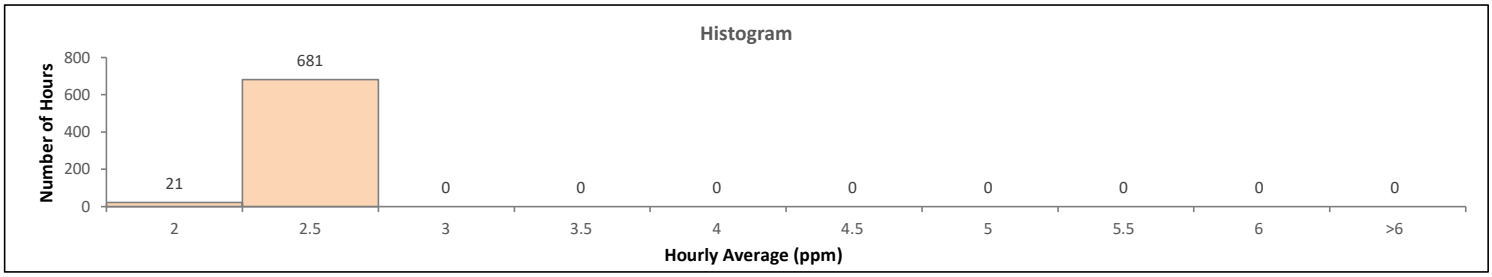
Maximum Hourly Value:	2.43	ppm	on Mar 6 at hr 8	Hours in Service:	744
Maximum Daily Value:	2.23	ppm	on Mar 6	Hours of Data:	702
Minimum Hourly Value:	1.98	ppm	on Mar 10 at hr 14	Hours of Missing Data:	6
Minimum Daily Value:	2.01	ppm	on Mar 10	Hours of Calibration:	36
Monthly Average:	2.09	ppm		Operational Uptime:	99.2

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			
Mar 1	2.04	2.05	2.06	2.08	2.07	2.07	2.07	2.07	2.07	2.07	S	2.05	2.05	2.05	2.05	2.05	2.05	2.06	2.05	2.05	2.06	2.06	2.07	2.07	2.04	2.08	2.06
Mar 2	2.06	2.08	2.10	2.14	2.16	2.10	2.08	2.08	2.07	S	2.08	2.06	2.05	2.06	2.04	2.05	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.16	2.06
Mar 3	2.04	2.05	2.05	2.05	2.06	2.06	2.05	2.05	S	2.06	2.04	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.05	2.05	2.05	2.05	2.05	2.03	2.06	2.04
Mar 4	2.04	2.04	2.04	2.03	2.04	2.03	2.03	S	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.04	2.05	2.05	2.03	2.05	2.03
Mar 5	2.06	2.09	2.08	2.08	2.09	2.12	S	2.12	2.14	2.11	2.10	2.07	2.06	2.08	2.12	2.14	2.15	2.18	2.14	2.15	2.25	2.27	2.31	2.28	2.06	2.31	2.14
Mar 6	2.27	2.26	2.29	2.31	2.26	S	2.28	2.32	**2.43**	2.30	2.21	2.16	2.11	2.10	2.11	2.11	2.09	2.13	2.21	2.23	2.28	2.31	2.32	2.27	2.09	**2.43**	**2.23**
Mar 7	2.25	2.26	2.23	2.21	S	2.20	2.21	2.24	2.23	2.21	2.20	2.18	2.18	2.16	2.15	2.15	2.14	2.12	2.12	2.10	2.09	2.10	2.12	2.14	2.09	2.26	2.17
Mar 8	2.17	2.17	2.18	S	2.21	2.21	2.21	2.22	2.21	2.23	2.23	2.18	2.16	2.18	2.18	2.15	2.15	2.22	2.33	2.31	2.31	2.36	2.38	2.34	2.15	2.38	2.23
Mar 9	2.31	2.34	S	2.35	2.34	2.28	2.28	2.29	2.27	2.26	2.23	2.19	2.16	2.14	2.13	2.11	2.09	2.13	2.14	2.14	2.12	2.08	2.06	2.06	2.06	2.35	2.20
Mar 10	2.06	S	2.04	2.03	2.02	2.00	2.00	1.99	1.99	2.00	2.00	2.00	1.99	2.00	1.98	1.98	1.99	1.99	2.00	2.02	2.04	2.04	2.07	2.09	1.98	2.09	2.01
Mar 11	S	2.09	2.11	2.06	2.05	2.05	2.04	2.04	2.05	2.03	2.06	2.06	C	C	C	C	2.07	2.06	2.08	2.09	2.13	2.20	2.12	S	2.03	2.20	2.08
Mar 12	2.11	2.22	2.15	2.10	2.11	2.11	2.10	2.11	2.11	2.11	2.12	2.12	2.13	2.08	2.07	2.05	2.05	2.04	2.05	2.05	2.09	2.08	S	2.08	2.04	2.22	2.10
Mar 13	2.11	2.09	2.08	2.09	2.10	2.10	2.20	2.18	2.15	2.10	2.08	2.07	2.06	2.06	2.07	2.07	2.07	2.06	2.07	2.07	2.09	S	2.13	2.14	2.06	2.20	2.10
Mar 14	2.16	2.18	2.19	2.19	2.20	2.20	2.21	2.21	2.22	2.22	2.15	2.09	2.09	2.07	2.06	2.05	2.06	2.08	2.08	2.06	S	2.05	2.05	2.06	2.05	2.22	2.13
Mar 15	2.06	2.04	2.04	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	S	2.08	2.12	2.11	2.07	2.01	2.12	2.03
Mar 16	2.06	2.05	2.08	2.12	2.06	2.21	2.18	2.15	2.12	2.10	2.09	2.07	2.07	2.06	2.05	2.05	2.07	2.13	S	2.07	2.10	2.09	2.12	2.07	2.05	2.21	2.09
Mar 17	2.09	2.14	2.16	2.22	2.18	2.16	2.18	2.22	2.20	2.15	2.14	2.09	2.06	2.05	2.05	2.04	2.04	S	2.04	2.04	2.06	2.07	2.08	2.08	2.04	2.22	2.11
Mar 18	2.07	2.07	2.08	2.05	2.04	2.01	2.01	2.02	2.01	2.01	2.00	2.00	2.00	1.99	1.99	1.98	S	2.00	2.01	2.03	2.02	2.03	2.07	2.07	1.98	2.08	2.02
Mar 19	2.06	2.07	2.07	2.07	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.04	2.04	2.04	2.05	S	2.05	2.06	2.06	2.08	2.09	2.10	2.10	2.12	2.04	2.12	2.06
Mar 20	2.10	2.11	2.09	2.10	2.10	2.12	2.15	2.18	2.15	2.10	2.11	2.09	2.07	2.06	S	2.07	2.08	2.08	2.10	2.08	2.06	2.06	2.09	2.11	2.06	2.18	2.10
Mar 21	2.10	2.10	2.09	2.09	2.09	2.11	2.10	2.09	2.08	2.09	2.07	2.07	2.07	S	2.08	2.09	2.11	2.10	2.11	2.21	2.15	2.16	2.08	2.12	2.07	2.21	2.10
Mar 22	2.08	2.08	2.09	2.09	2.10	2.10	2.11	2.12	2.13	2.12	2.11	2.11	S	2.10	2.10	2.09	2.08	2.08	2.09	2.14	2.15	2.10	2.12	2.11	2.08	2.15	2.10
Mar 23	2.09	2.10	2.11	2.11	2.11	2.12	2.18	2.15	2.13	2.10	2.10	S	2.10	2.11	2.08	2.07	2.07	2.07	2.08	2.12	2.14	2.11	2.11	2.09	2.07	2.18	2.11
Mar 24	2.09	2.11	2.10	2.10	2.11	2.12	2.13	2.14	2.11	2.09	S	2.08	2.07	2.06	2.06	2.06	2.06	2.07	2.07	2.07	2.08	2.09	2.08	2.08	2.06	2.14	2.09
Mar 25	2.07	2.07	2.08	2.07	2.09	2.12	2.11	2.11	2.12	S	2.10	2.09	2.07	2.05	2.04	2.05	2.06	2.06	2.07	2.07	2.07	2.08	2.06	2.06	2.04	2.12	2.08
Mar 26	2.07	2.08	2.08	2.08	2.09	2.11	2.11	2.09	S	2.09	NRM	2.08	2.07	2.06	K	K	K	K	K	2.07	2.07	2.07	2.07	2.07	2.06	2.11	NA
Mar 27	2.08	2.08	2.07	2.08	2.09	2.08	2.08	S	2.09	2.07	2.07	2.07	2.08	2.09	2.10	2.11	2.08	2.10	2.07	2.09	2.09	2.13	2.12	2.09	2.07	2.13	2.09
Mar 28	2.04	2.04	2.05	2.05	2.05	2.05	S	2.06	2.06	2.03	2.03	2.03	2.03	2.03	2.03	2.02	2.03	2.03	2.04	2.04	2.03	2.04	2.04	2.04	2.02	2.06	2.04
Mar 29	2.04	2.04	2.04	2.03	2.04	S	2.07	2.07	2.05	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	2.05	2.05	2.03	2.07	2.04
Mar 30	2.05	2.05	2.05	2.05	S	2.06	2.06	2.06	2.07	2.04	2.03	2.02	2.02	2.03	2.03	2.03	2.03	2.04	2.06	2.29	2.10	2.10	2.10	2.11	2.02	2.29	2.06
Mar 31	2.10	2.11	2.14	S	2.15	2.16	2.17	2.17	2.17	2.15	2.12	2.10	2.08	2.06	2.05	2.04	2.03	2.04	2.04	2.03	2.03	2.03	2.02	2.02	2.02	2.17	2.09
Diurnal Maximum	2.31	2.34	2.29	2.35	2.34	2.28	2.28	2.32	2.43	2.30	2.23	2.19	2.18	2.18	2.18	2.15	2.15	2.22	2.33	2.31	2.31	2.36	2.38	2.34			
Diurnal Average	2.10	2.11	2.10	2.11	2.11	2.11	2.12	2.12	2.12	2.10	2.09	2.08	2.07	2.07	2.06	2.06	2.06	2.07	2.08	2.09	2.10	2.10	2.11	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.



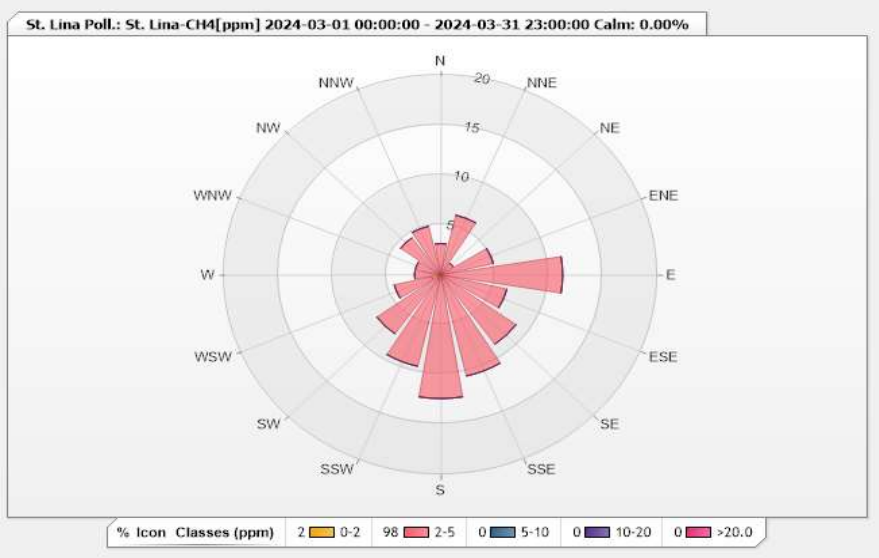


Station: St. Lina Poll.: St. Lina-CH4[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0	3.13	0	0	0	3.13
NNE	0	6.13	0	0	0	6.13
NE	0	1.42	0	0	0	1.42
ENE	0	4.99	0	0	0	4.99
E	0	11.25	0	0	0	11.25
ESE	0	6.27	0	0	0	6.27
SE	0	8.55	0	0	0	8.55
SSE	0	10.4	0	0	0	10.4
S	0	12.39	0	0	0	12.39
SSW	0.43	8.97	0	0	0	9.4
SW	0.14	7.12	0	0	0	7.26
WSW	0.85	3.56	0	0	0	4.41
W	0.14	2.28	0	0	0	2.42
WNW	0	2.42	0	0	0	2.42
NW	0.43	4.13	0	0	0	4.56
NNW	0	4.99	0	0	0	4.99
Summary	1.99	98	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

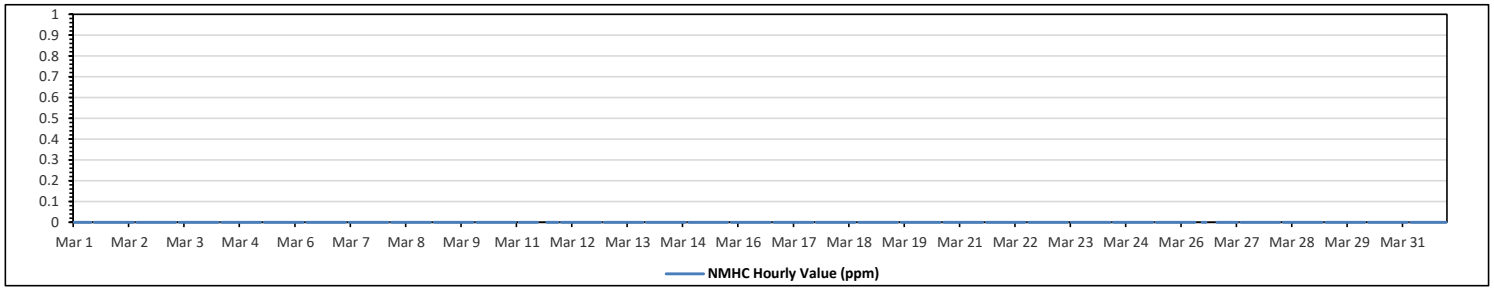
NON-METHANE HYDROCARBONS (NMHC) in ppm

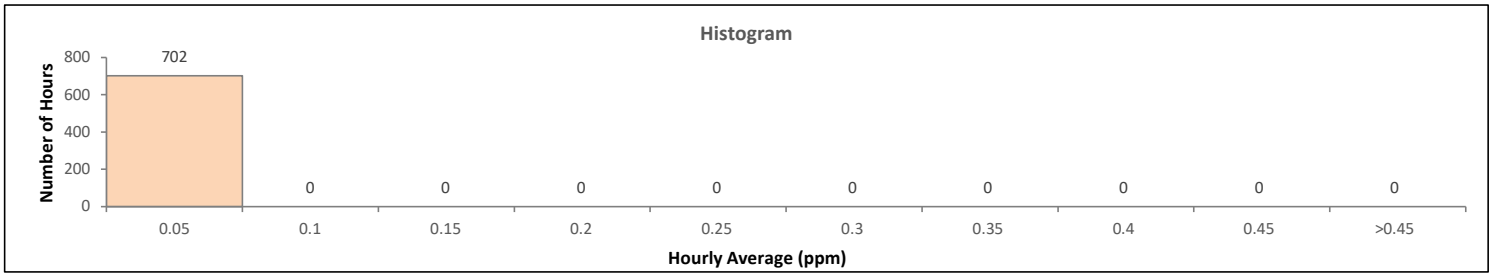
Maximum Hourly Value:	0.00	ppm	on Mar 1 at hr 0	Hours in Service:	744
Maximum Daily Value:	0.00	ppm	on Mar 1	Hours of Data:	702
Minimum Hourly Value:	0.00	ppm	on Mar 1 at hr 0	Hours of Missing Data:	6
Minimum Daily Value:	0.00	ppm	on Mar 1	Hours of Calibration:	36
Monthly Average:	0.00	ppm		Operational Uptime:	99.2

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			
Mar 1	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
Mar 2	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
Mar 3	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
Mar 4	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
Mar 5	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
Mar 6	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
Mar 7	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
Mar 8	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
Mar 9	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
Mar 10	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
Mar 11	S	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
Mar 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	0.00	0.00	S	0.00	0.00	0.00	0.00
Mar 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	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Mar 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	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	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
Mar 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	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
Mar 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	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
Mar 23	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
Mar 24	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
Mar 25	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
Mar 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	NRM	0.00	0.00	0.00	K	K	K	K	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
Mar 27	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
Mar 28	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
Mar 29	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
Mar 30	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
Mar 31	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	0.00	0.00	0.00	0.00	0.00	0.00	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.



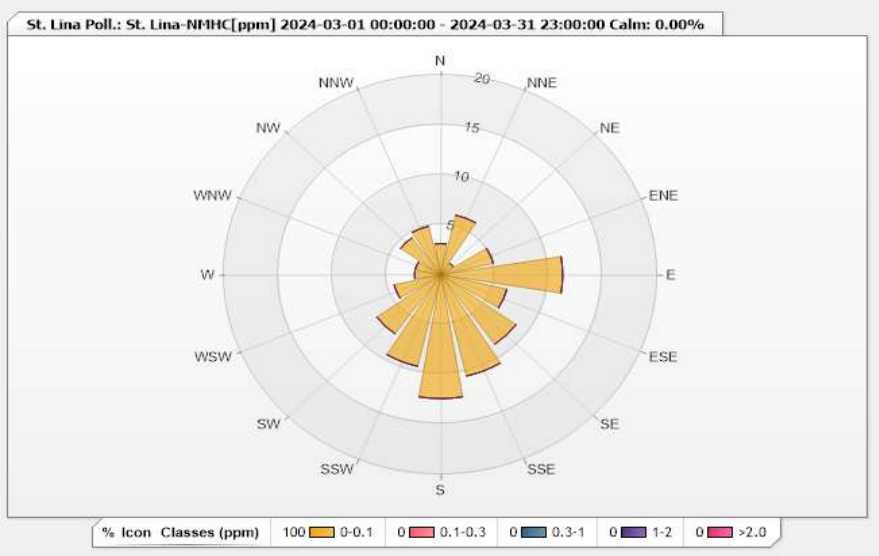


Station: St. Lina Poll.: St. Lina-NMHC[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	3.13	0	0	0	0	3.13
NNE	6.13	0	0	0	0	6.13
NE	1.42	0	0	0	0	1.42
ENE	4.99	0	0	0	0	4.99
E	11.25	0	0	0	0	11.25
ESE	6.27	0	0	0	0	6.27
SE	8.55	0	0	0	0	8.55
SSE	10.4	0	0	0	0	10.4
S	12.39	0	0	0	0	12.39
SSW	9.4	0	0	0	0	9.4
SW	7.26	0	0	0	0	7.26
WSW	4.42	0	0	0	0	4.42
W	2.42	0	0	0	0	2.42
WNW	2.42	0	0	0	0	2.42
NW	4.56	0	0	0	0	4.56
NNW	4.99	0	0	0	0	4.99
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

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

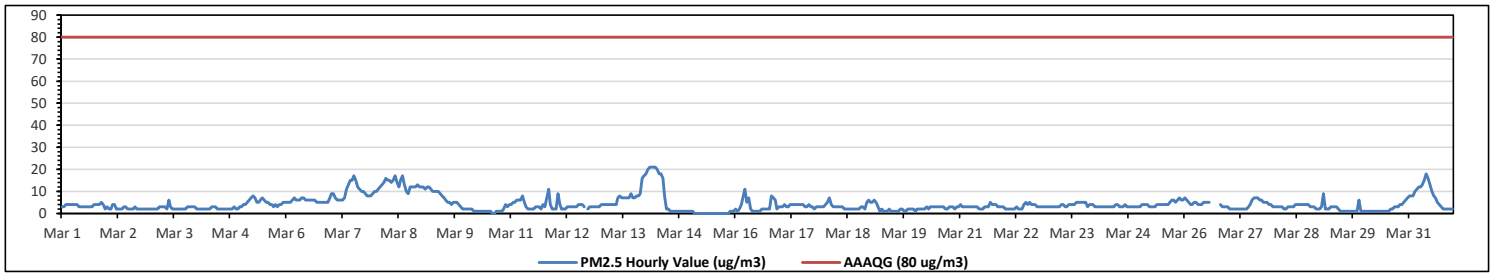
Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m3, Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m3

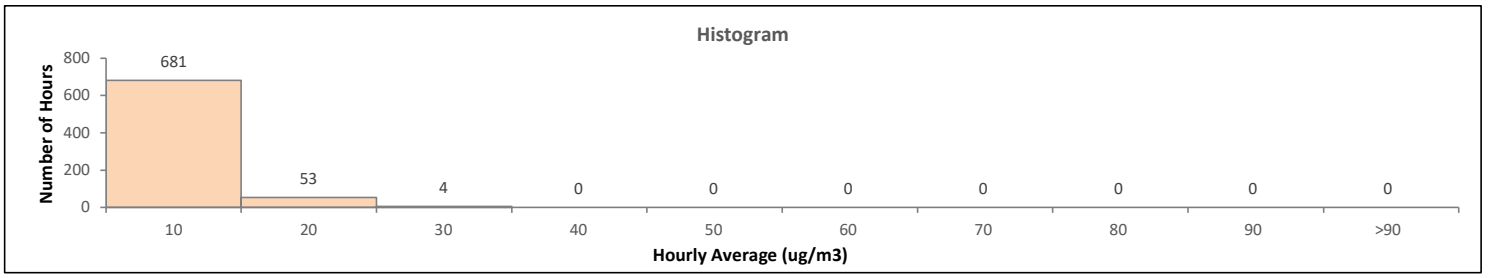
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0
Maximum Hourly Value:	21 µg/m^3 on Mar 14 at hr 2	Hours in Service:	744
Maximum Daily Value:	13.1 µg/m^3 on Mar 8	Hours of Data:	738
Minimum Hourly Value:	0 µg/m^3 on Mar 10 at hr 14	Hours of Missing Data:	5
Minimum Daily Value:	0 µg/m^3 on Mar 15	Hours of Calibration:	1
Monthly Average:	4.3 µg/m^3	Operational Uptime:	99.3

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			
Mar 1	3	3	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	4	4	4	4	5	4	2	2	5	3.5
Mar 2	3	2	2	4	4	2	2	2	2	3	3	2	2	2	2	3	2	2	2	2	2	2	2	2	2	4	2.3
Mar 3	2	2	2	2	3	3	3	3	2	6	3	2	2	2	2	2	2	2	2	3	3	3	3	3	2	6	2.6
Mar 4	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	3	2	2	3	2	3	2.2
Mar 5	3	4	4	5	6	7	8	7	5	5	6	7	6	5	5	4	4	3	4	3	4	4	5	5	3	8	5.0
Mar 6	5	5	5	6	7	6	6	6	7	7	6	6	6	6	6	6	5	5	5	5	5	5	5	7	5	7	5.8
Mar 7	9	9	7	6	6	6	6	7	11	13	15	15	17	15	12	11	10	10	9	8	8	8	9	10	6	17	9.9
Mar 8	10	11	12	13	14	16	15	15	14	15	17	14	12	15	17	13	10	9	12	12	12	12	13	12	9	17	**13.1**
Mar 9	12	12	11	12	12	11	10	10	10	10	9	8	7	6	5	5	4	5	5	5	4	3	2	2	2	12	7.5
Mar 10	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	2	4	3	4	**0**	4	1.5
Mar 11	4	5	5	6	6	6	8	5	3	2	2	2	2	3	3	3	2	4	3	7	11	4	2	2	2	11	4.2
Mar 12	2	9	4	2	2	2	3	3	3	3	3	3	4	4	4	3	**C**	2	3	3	3	3	3	3	2	9	3.2
Mar 13	4	4	4	4	4	4	4	4	4	7	8	7	7	7	7	7	9	7	7	8	8	9	16	17	4	17	7.0
Mar 14	18	20	**21**	**21**	**21**	**21**	20	18	18	16	8	2	2	1	1	1	1	1	1	1	1	1	1	1	1	**21**	9.0
Mar 15	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**0**	1	**0.2**
Mar 16	2	1	2	4	8	11	5	7	2	1	1	1	1	1	2	2	2	2	2	8	7	6	2	3	1	11	3.5
Mar 17	3	3	4	3	3	4	4	4	4	4	4	4	4	3	3	4	3	3	2	3	3	3	3	3	2	4	3.4
Mar 18	4	5	7	4	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	3	3	2	5	6	2	7	3.1
Mar 19	5	5	6	5	3	1	2	1	1	1	2	1	1	1	1	1	2	2	1	1	2	2	2	2	1	6	2.1
Mar 20	1	2	2	2	2	2	3	2	3	3	3	3	3	3	3	3	2	2	3	3	3	2	3	3	1	3	2.5
Mar 21	4	3	3	3	3	3	3	3	3	3	2	2	2	3	3	3	5	4	4	4	3	3	3	3	2	5	3.1
Mar 22	2	2	2	2	2	2	3	2	2	2	4	5	4	5	4	4	4	3	3	3	3	3	3	3	2	5	3.0
Mar 23	3	3	3	3	3	3	4	4	3	3	4	4	4	4	5	5	5	5	5	5	3	4	4	4	3	5	3.9
Mar 24	3	3	3	3	3	3	3	3	3	3	3	4	4	3	3	3	4	3	3	3	3	3	3	3	3	4	3.1
Mar 25	3	4	4	4	4	3	3	3	3	4	4	4	4	4	4	4	5	6	6	5	6	7	6	6	3	7	4.4
Mar 26	7	6	5	4	4	5	5	4	4	4	5	5	5	5	**K**	**K**	**K**	**K**	**K**	4	3	3	3	3	3	7	4.4
Mar 27	2	2	2	2	2	2	2	2	2	2	3	4	6	7	7	7	6	6	5	5	5	4	4	3	2	7	3.8
Mar 28	3	3	3	3	3	2	2	3	3	3	3	4	4	4	4	4	4	4	4	3	3	3	2	2	2	4	3.2
Mar 29	2	3	9	2	2	2	3	3	3	3	2	1	1	1	1	1	1	1	1	1	1	6	1	1	1	9	2.2
Mar 30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3	4	4	5	6	7	1	7	2.2
Mar 31	8	8	8	10	11	12	12	13	15	18	16	13	10	8	7	5	4	3	2	2	2	2	2	2	2	18	8.0
Diurnal Maximum	18	20	21	21	21	21	20	18	18	18	17	15	17	15	17	13	10	10	12	12	12	12	16	17			
Diurnal Average	4.3	4.7	4.8	4.6	4.8	4.8	4.8	4.7	4.6	4.9	4.7	4.3	4.2	4.1	4.0	3.8	3.7	3.5	3.5	3.9	4.0	4.0	4.0	4.1			

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

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



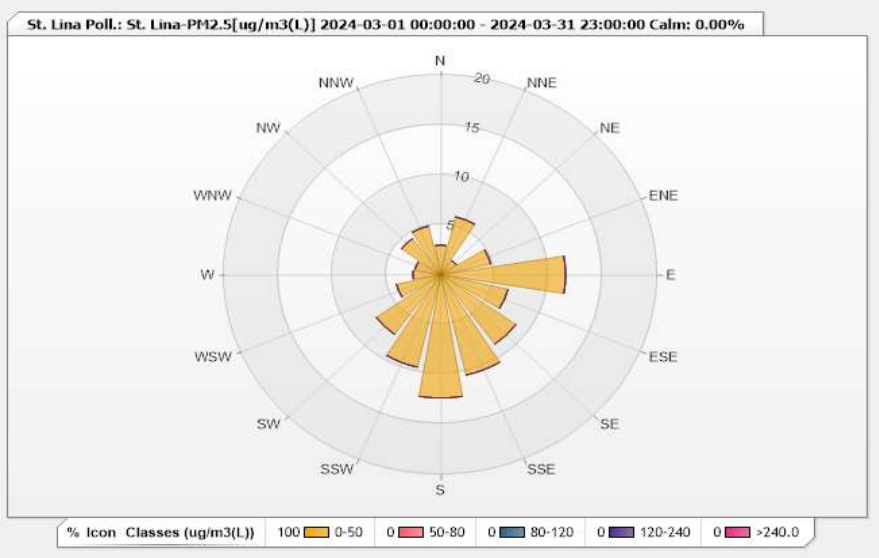


Station: St. Lina Poll.: St. Lina-PM2.5[ug/m3(L)] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 99.19% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	2.98	0	0	0	0	2.98
NNE	5.96	0	0	0	0	5.96
NE	1.76	0	0	0	0	1.76
ENE	4.74	0	0	0	0	4.74
E	11.52	0	0	0	0	11.52
ESE	6.37	0	0	0	0	6.37
SE	8.54	0	0	0	0	8.54
SSE	10.3	0	0	0	0	10.3
S	12.33	0	0	0	0	12.33
SSW	9.49	0	0	0	0	9.49
SW	7.32	0	0	0	0	7.32
WSW	4.2	0	0	0	0	4.2
W	2.57	0	0	0	0	2.57
WNW	2.44	0	0	0	0	2.44
NW	4.47	0	0	0	0	4.47
NNW	5.01	0	0	0	0	5.01
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

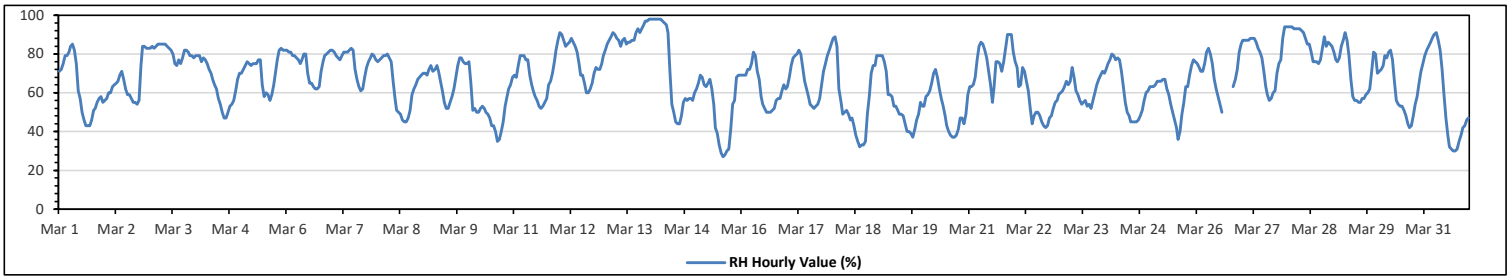
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	98	%	on Mar 13 at hr 23	Hours in Service:	744
Maximum Daily Value:	89.3	%	on Mar 13	Hours of Data:	739
Minimum Hourly Value:	27	%	on Mar 15 at hr 14	Hours of Missing Data:	5
Minimum Daily Value:	51.4	%	on Mar 10	Hours of Calibration:	0
Monthly Average:	66.6	%		Operational Uptime:	99.3

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			
Mar 1	71	72	75	79	79	81	84	85	82	75	61	57	50	46	43	43	43	46	51	52	55	57	58	55	43	85	62.5
Mar 2	56	57	60	60	63	64	65	66	69	71	67	62	59	59	57	55	55	54	56	74	84	84	83	83	54	84	65.1
Mar 3	83	84	83	84	85	85	85	85	85	84	83	82	80	75	74	77	75	78	82	82	81	79	79	78	74	85	81.2
Mar 4	79	79	79	76	78	77	75	72	70	67	64	62	57	54	50	47	47	50	53	54	56	61	67	70	47	79	64.3
Mar 5	70	72	74	76	75	74	75	75	75	77	77	64	58	60	59	56	59	64	71	77	82	83	82	82	56	83	71.5
Mar 6	82	81	81	79	79	78	77	75	77	80	80	70	65	65	63	62	62	63	71	76	79	80	81	82	62	82	74.5
Mar 7	82	81	79	78	77	79	81	81	81	82	83	82	72	67	63	61	62	68	73	76	78	80	79	77	61	83	75.9
Mar 8	76	77	78	79	79	80	78	76	66	57	51	50	49	46	45	45	47	51	59	62	64	67	68	69	45	80	63.3
Mar 9	70	70	69	72	74	71	72	74	71	66	61	55	52	52	55	58	62	68	74	78	78	76	75	75	52	78	67.8
Mar 10	76	65	51	52	50	50	52	53	52	50	49	47	43	43	40	35	36	40	45	53	58	62	64	68	35	76	**51.4**
Mar 11	69	68	74	79	79	79	77	77	69	64	61	58	56	53	52	53	55	57	64	66	70	76	82	87	52	87	67.7
Mar 12	91	90	87	84	85	86	88	86	84	81	75	69	69	65	60	60	62	65	70	73	72	72	75	79	60	91	76.2
Mar 13	82	85	87	89	91	90	88	87	84	87	88	85	86	86	87	87	91	93	91	93	95	97	97	**98**	82	**98**	**89.3**
Mar 14	**98**	**98**	**98**	**98**	**98**	**98**	97	96	95	91	71	54	50	45	44	44	48	55	57	56	57	57	56	60	44	**98**	71.7
Mar 15	62	65	69	68	64	63	65	67	62	54	42	39	33	29	**27**	28	30	31	41	54	56	68	69	69	**27**	69	52.3
Mar 16	69	69	69	72	72	75	81	79	71	67	58	54	52	50	50	50	51	52	56	57	57	61	64	62	50	81	62.4
Mar 17	63	68	74	78	79	80	82	80	73	66	62	58	54	53	52	53	54	57	64	71	75	79	82	85	52	85	68.4
Mar 18	88	89	84	62	56	49	50	51	49	46	47	43	38	35	32	33	33	35	49	58	70	74	74	79	32	89	55.2
Mar 19	79	79	79	76	71	59	59	58	53	53	51	49	49	48	44	40	40	39	37	41	46	49	55	53	37	79	54.5
Mar 20	53	58	59	61	65	70	72	68	62	57	53	48	43	40	38	37	37	38	41	47	47	44	49	59	37	72	51.9
Mar 21	63	63	64	68	77	84	86	85	82	78	71	64	55	63	76	76	75	71	76	83	90	90	90	81	55	90	75.5
Mar 22	76	73	63	64	73	71	66	61	52	44	48	50	50	48	45	43	42	43	47	48	52	55	56	59	42	76	55.4
Mar 23	60	61	63	66	64	66	73	68	61	59	56	54	55	56	53	54	52	56	60	64	67	69	71	70	52	73	61.6
Mar 24	72	75	77	80	79	77	78	77	71	63	55	50	48	45	45	45	45	46	48	51	56	60	61	63	45	80	61.1
Mar 25	63	63	64	66	66	66	67	67	62	59	54	50	46	42	36	40	49	55	63	63	69	74	77	76	36	77	59.9
Mar 26	75	73	71	71	75	81	83	80	75	67	62	58	54	50	**K**	**K**	**K**	**K**	**K**	63	67	72	81	85	50	85	70.7
Mar 27	87	87	87	87	88	88	88	86	83	81	78	71	63	59	56	57	60	61	70	75	77	88	94	94	56	94	77.7
Mar 28	94	94	94	93	93	93	93	92	91	88	85	85	81	76	76	76	75	77	83	89	84	86	85	84	75	94	86.1
Mar 29	81	77	76	78	84	87	91	87	79	67	58	56	56	55	55	57	57	59	60	62	71	81	80	70	55	91	70.2
Mar 30	71	72	74	79	78	81	82	77	66	56	54	53	53	51	48	44	42	43	48	54	58	65	71	75	42	82	62.3
Mar 31	79	82	84	86	88	90	91	87	82	72	59	47	38	32	31	30	30	31	35	38	42	43	46	47	30	91	57.9
Diurnal Maximum	98	98	98	98	98	98	97	96	95	91	88	85	86	86	87	87	91	93	91	93	95	97	97	98			
Diurnal Average	74.8	75.1	75.0	75.5	76.3	76.5	77.5	76.1	72.1	68.0	63.4	58.9	55.3	53.2	51.9	51.5	52.5	54.9	59.8	64.2	67.5	70.6	72.6	73.4			

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

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



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

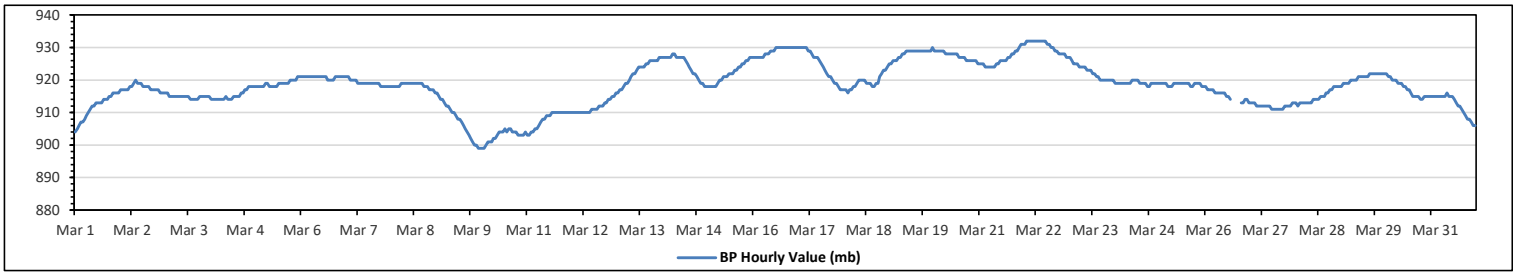
BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	932	mb	on Mar 22 at hr 1	Hours in Service:	744	
Maximum Daily Value:	930	mb	on Mar 22	Hours of Data:	739	
Minimum Hourly Value:	899	mb	on Mar 9 at hr 22	Hours of Missing Data:	5	
Minimum Daily Value:	903	mb	on Mar 10	Hours of Calibration:	0	
Monthly Average:	919	mb		Operational Uptime:	99.3	

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
Mar 1	904	905	906	907	907	908	909	910	911	912	912	913	913	913	913	914	914	914	915	915	916	916	916	916	904	916	912
Mar 2	917	917	917	917	917	918	918	919	920	919	919	919	918	918	918	918	917	917	917	917	917	916	916	916	916	920	918
Mar 3	916	916	915	915	915	915	915	915	915	915	915	915	915	914	914	914	914	914	915	915	915	915	915	915	914	916	915
Mar 4	914	914	914	914	914	914	914	914	915	914	914	914	915	915	915	915	916	916	917	917	918	918	918	918	914	918	915
Mar 5	918	918	918	918	918	919	919	918	918	918	918	918	919	919	919	919	919	919	920	920	920	920	921	921	918	921	919
Mar 6	921	921	921	921	921	921	921	921	921	921	921	921	921	921	920	920	920	920	921	921	921	921	921	921	920	921	921
Mar 7	921	921	920	920	920	920	919	919	919	919	919	919	919	919	919	919	919	919	918	918	918	918	918	918	918	921	919
Mar 8	918	918	918	918	918	919	919	919	919	919	919	919	919	919	919	919	919	918	918	918	917	917	917	916	916	919	918
Mar 9	916	915	914	914	913	912	912	911	910	910	909	908	908	907	906	905	904	903	902	901	900	900	**899**	**899**	**899**	916	907
Mar 10	**899**	**899**	900	901	901	901	902	902	903	904	904	904	905	904	905	905	904	904	904	903	903	903	903	904	**899**	905	**903**
Mar 11	903	903	904	904	905	905	906	907	908	908	909	909	909	910	910	910	910	910	910	910	910	910	910	910	903	910	908
Mar 12	910	910	910	910	910	910	910	910	910	910	911	911	911	911	912	912	912	913	913	914	914	915	915	916	910	916	912
Mar 13	916	917	917	918	919	919	920	921	922	922	923	924	924	924	924	925	925	926	926	926	926	926	927	927	916	927	923
Mar 14	927	927	927	927	927	928	928	927	927	927	927	927	926	925	924	923	922	922	921	920	919	919	918	918	918	928	924
Mar 15	918	918	918	918	918	919	920	920	921	921	921	922	922	922	923	923	924	924	925	925	926	926	927	927	918	927	922
Mar 16	927	927	927	927	927	927	928	928	928	929	929	929	930	930	930	930	930	930	930	930	930	930	930	930	927	930	929
Mar 17	930	930	930	930	930	929	929	928	927	927	927	926	925	924	923	922	921	921	920	919	919	918	917	917	917	930	925
Mar 18	917	917	916	917	917	918	918	919	920	920	920	920	919	919	919	918	918	919	919	921	922	923	923	924	916	924	919
Mar 19	925	925	926	926	926	927	927	928	928	929	929	929	929	929	929	929	929	929	929	929	929	929	929	930	925	930	928
Mar 20	929	929	929	929	929	929	928	928	928	928	928	928	928	927	927	927	927	926	926	926	926	926	926	925	925	929	927
Mar 21	925	925	925	924	924	924	924	924	924	925	925	926	926	926	926	927	927	928	928	929	929	930	931	931	924	931	926
Mar 22	931	**932**	**932**	**932**	**932**	**932**	**932**	**932**	**932**	**932**	**932**	**932**	931	931	930	930	929	929	928	928	928	928	927	927	927	**932**	**930**
Mar 23	927	926	925	925	925	924	924	924	924	923	923	923	922	922	921	921	920	920	920	920	920	920	920	920	920	927	922
Mar 24	919	919	919	919	919	919	919	919	919	920	920	920	920	919	919	919	919	918	918	919	919	919	919	919	918	920	919
Mar 25	919	919	919	919	918	918	918	919	919	919	919	919	919	919	919	919	918	918	919	919	919	919	918	918	918	919	919
Mar 26	918	917	917	917	917	916	916	916	916	916	916	915	915	914	**K**	**K**	**K**	**K**	**K**	913	913	914	914	913	913	918	915
Mar 27	913	913	913	912	912	912	912	912	912	912	912	911	911	911	911	911	911	911	912	912	912	912	913	913	911	913	912
Mar 28	913	912	913	913	913	913	913	913	913	914	914	914	914	915	915	915	916	916	917	917	918	918	918	918	912	918	915
Mar 29	918	919	919	919	919	920	920	920	920	921	921	921	921	921	921	922	922	922	922	922	922	922	922	922	918	922	921
Mar 30	922	921	921	920	920	920	919	919	919	918	918	917	917	916	915	915	915	915	914	914	915	915	915	915	914	922	917
Mar 31	915	915	915	915	915	915	915	915	916	915	915	915	914	913	912	912	911	910	909	908	908	907	906	906	906	916	912
Diurnal Maximum	931	932	932	932	932	932	932	932	932	932	932	932	931	931	930	930	930	930	930	930	930	930	931	931			
Diurnal Average	918	918	918	918	918	918	919	919	919	919	919	919	919	919	919	919	918	918	918	918	918	918	918	918			

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 - March 2024

Summary of Hourly Averages

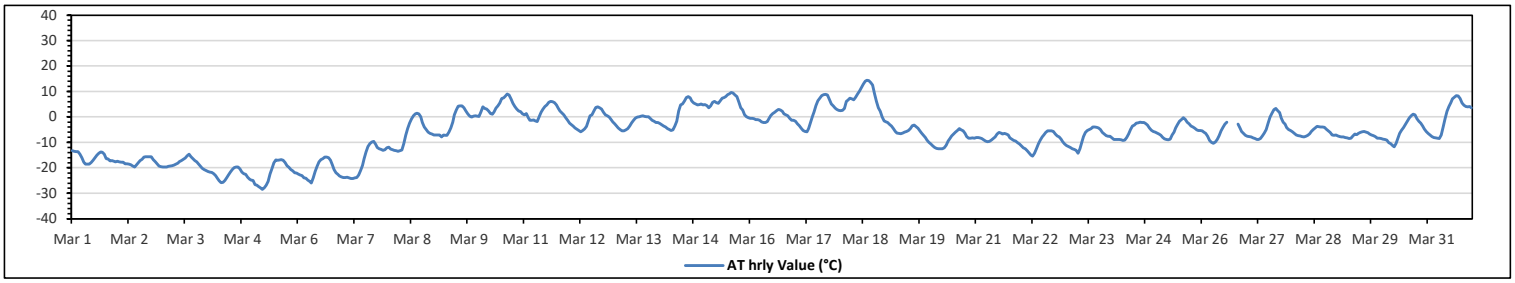
AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	14.4	°C	on Mar 18 at hr 14	Hours in Service:	744	
Maximum Daily Value:	7.6	°C	on Mar 18	Hours of Data:	739	
Minimum Hourly Value:	-28.5	°C	on Mar 5 at hr 5	Hours of Missing Data:	5	
Minimum Daily Value:	-22.7	°C	on Mar 4	Hours of Calibration:	0	
Monthly Average:	-6.5	°C		Operational Uptime:	99.3	

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			
Mar 1	-13.3	-13.5	-13.6	-13.6	-14.6	-16.1	-17.8	-18.6	-18.6	-18.6	-17.9	-17	-16	-15	-14.2	-13.7	-13.8	-14.7	-16.3	-16.5	-17.3	-17.1	-17.4	-17.6	-18.6	-13.3	-16.0
Mar 2	-17.4	-17.6	-17.7	-17.8	-18.4	-18.4	-18.5	-18.8	-19.2	-19.6	-18.8	-18	-17.2	-16.6	-15.8	-15.6	-15.6	-15.6	-15.7	-16.7	-17.5	-18.4	-19.2	-19.5	-19.6	-15.6	-17.7
Mar 3	-19.6	-19.7	-19.6	-19.4	-19.2	-19.1	-18.9	-18.6	-18.1	-17.5	-17.1	-16.6	-16.2	-15.3	-14.7	-15.6	-16.4	-17.1	-17.6	-18.4	-19.2	-20.2	-20.7	-21.1	-21.1	-14.7	-18.2
Mar 4	-21.4	-21.6	-21.8	-22.3	-23	-24.2	-25.1	-25.8	-25.7	-25	-23.8	-22.8	-21.6	-20.6	-20	-19.6	-19.6	-20.4	-21.6	-22.3	-22.6	-23.7	-24.4	-24.8	-25.8	-19.6	**-22.7**
Mar 5	-24.9	-26.6	-26.8	-27.3	-27.8	**-28.5**	-27.9	-26.9	-25.3	-22.5	-20.3	-18	-16.9	-17	-16.9	-16.7	-17	-17.9	-19.1	-19.8	-20.7	-21.2	-21.9	-22	**-28.5**	-16.7	-22.1
Mar 6	-22.4	-22.9	-23	-24	-24.1	-24.8	-25.3	-25.9	-24	-21.4	-19.4	-17.6	-16.8	-16.4	-15.8	-15.8	-16	-17	-18.9	-20.6	-21.9	-22.6	-23.1	-23.5	-25.9	-15.8	-21.0
Mar 7	-23.8	-23.8	-23.7	-23.9	-24.2	-24.2	-24	-23.8	-22.8	-21	-19	-16.3	-13.7	-11.6	-10.5	-9.8	-9.6	-10.8	-12	-12.5	-12.7	-13.2	-12.8	-12.1	-24.2	-9.6	-17.2
Mar 8	-11.9	-12.6	-12.8	-13.1	-13.3	-13.5	-13.3	-13	-10.5	-7.2	-4.6	-2.5	-0.8	0.5	1.2	1.5	1.2	0.1	-2.2	-4	-5	-6	-6.5	-6.7	-13.5	1.5	-6.5
Mar 9	-7	-7	-7	-7	-7.8	-7.1	-7.2	-7.2	-6	-4.3	-2	0.9	2.7	4.2	4.4	4.4	3.7	2.4	1.2	0.3	-0.1	0.3	0.5	0.3	-7.8	4.4	-1.9
Mar 10	0.2	2	3.9	3.4	3.1	2.4	1.3	1.1	2	3.5	4.3	5.4	7.2	7.5	8.1	9	8.6	7.1	5.3	4.1	3.1	2.4	2.1	1.2	0.2	9.0	4.1
Mar 11	0.9	1.3	-0.3	-1.3	-1.3	-1.2	-1.5	-1.8	0.1	1.9	3.1	4.1	4.7	5.8	6.1	6	5.6	4.8	3.3	2.4	1.6	0.9	-0.3	-1.4	-1.8	6.1	1.8
Mar 12	-2.5	-3	-3.5	-4.3	-4.8	-5.4	-5.8	-5.4	-4.7	-3.7	-1.8	0.4	0.8	2.4	3.8	3.9	3.7	3.1	1.8	0.9	0.4	-0.1	-1	-1.9	-5.8	3.9	-1.1
Mar 13	-2.7	-3.5	-4.3	-5	-5.5	-5.5	-5.1	-4.6	-3.5	-2.3	-1.3	-0.4	-0.1	0.1	0.3	0.4	0.2	0	0	-0.7	-1.3	-1.7	-2.2	-2.2	-5.5	0.4	-2.1
Mar 14	-2.6	-3	-3.5	-4	-4.6	-5	-5.4	-5.1	-3.5	-1.6	2.4	4.7	5.2	6.3	7.7	8	7.5	6.3	5.5	5.1	4.7	4.9	5.2	4.7	-5.4	8.0	1.7
Mar 15	4.9	4.5	3.7	4.3	5.8	6.2	5.6	5.3	6.4	7.4	7.7	8	8.8	9.2	9.6	9.4	8.7	8	5.9	3.7	2.7	0.9	0.1	-0.3	-0.3	9.6	5.7
Mar 16	-0.5	-0.5	-0.6	-1	-1.1	-1.4	-1.9	-2.2	-2.2	-1.8	-0.6	0.6	1.3	1.8	2.5	2.9	2.7	2.2	1.2	0.8	0.5	-0.5	-1.4	-1.4	-2.2	2.9	0.0
Mar 17	-1.7	-2.7	-3.4	-4.4	-5.4	-5.7	-5.8	-4.6	-2.2	0.2	2	4.5	6.4	7.4	8.4	8.8	8.9	8.6	6.8	5.1	4.3	3.5	3	2.6	-5.8	8.9	1.9
Mar 18	2.5	2.6	3.3	6.2	6.6	7.4	7.1	6.7	7.8	9.1	10.2	11.5	13	14.1	**14.4**	14.3	13.5	12.5	9.2	6.1	3.6	2.2	-0.1	-1.5	-1.5	**14.4**	**7.6**
Mar 19	-1.9	-2.2	-2.9	-3.6	-4.6	-5.7	-6.3	-6.5	-6.6	-6.3	-5.9	-5.7	-5.4	-4.5	-3.4	-3.2	-3.8	-4.4	-5.4	-6.3	-7.2	-8.1	-9.1	-9.9	-9.9	-1.9	-5.4
Mar 20	-10.6	-11.4	-12	-12.3	-12.5	-12.5	-12.4	-12.1	-11.1	-9.5	-8.6	-7.5	-6.7	-5.9	-5.3	-4.6	-5.1	-5.5	-6.5	-7.7	-8.3	-8.3	-8.2	-8.3	-12.5	-4.6	-8.9
Mar 21	-8.1	-8.1	-8.2	-8.5	-9	-9.5	-9.7	-9.6	-9.1	-8.4	-7.8	-6.8	-6.1	-6.4	-6.7	-6.5	-6.8	-7.1	-8.2	-8.7	-9.2	-9.5	-10.1	-10.7	-10.7	-6.1	-8.3
Mar 22	-11.3	-12.1	-12.5	-13.3	-14.1	-14.9	-15.4	-14.2	-12.5	-10.6	-9.1	-7.8	-7	-6.1	-5.5	-5.5	-5.5	-5.7	-6.8	-7.5	-7.9	-8.7	-9.7	-10.7	-15.4	-5.5	-9.8
Mar 23	-11.2	-11.6	-12	-12.5	-12.7	-13.2	-14.2	-12.5	-9.8	-7.7	-6.1	-5.3	-5	-4.6	-4	-4	-4.1	-4.3	-5	-6.1	-6.7	-7.3	-7.6	-7.6	-14.2	-4.0	-8.1
Mar 24	-8.2	-8.8	-8.8	-8.8	-8.9	-9	-9.3	-9.1	-8.1	-6.8	-4.9	-3.5	-3.1	-2.5	-2.3	-2	-2.2	-2.2	-2.6	-3.1	-4.3	-5.2	-5.6	-6	-9.3	-2.0	-5.6
Mar 25	-6.4	-6.8	-7.2	-8	-8.6	-8.9	-9	-8.7	-7.1	-5.9	-4.3	-2.9	-1.6	-1.1	-0.3	-0.9	-2	-2.7	-3.6	-4	-4.4	-5.1	-5.4	-5.4	-9.0	-0.3	-5.0
Mar 26	-5.5	-5.9	-6.5	-7.6	-9.2	-10	-10.3	-9.8	-8.9	-7.3	-5.5	-4.1	-2.8	-2	**K**	**K**	**K**	**K**	**K**	-2.8	-4.3	-5.6	-6.5	-7.2	-10.3	-2.0	-6.4
Mar 27	-7.6	-7.7	-7.9	-8.2	-8.5	-8.9	-8.9	-8.5	-7.4	-6.3	-5	-2.4	-0.1	1.5	2.8	3.3	2.5	1.7	-0.4	-2	-2.8	-4.2	-4.9	-5.3	-8.9	3.3	-4.0
Mar 28	-5.8	-6.5	-7	-7.3	-7.5	-7.7	-7.9	-7.6	-7.2	-6.6	-5.7	-5	-4.3	-3.7	-3.9	-4	-4	-4.1	-4.8	-5.5	-6.1	-7.1	-7.2	-7.1	-7.9	-3.7	-6.0
Mar 29	-7.5	-7.7	-7.8	-7.9	-8.1	-8.2	-8.4	-8.3	-7.5	-6.8	-6.9	-6.5	-6.1	-5.8	-5.7	-5.9	-6.2	-6.7	-7.1	-7.3	-7.7	-8.3	-8.3	-8.4	-8.4	-5.7	-7.3
Mar 30	-8.7	-8.9	-9.1	-10.1	-10.5	-11.2	-11.8	-10.3	-8.2	-6.5	-5.2	-4.2	-2.9	-1.6	-0.4	0.4	1.1	0.9	-0.6	-1.7	-2.4	-3.5	-4.7	-5.7	-11.8	1.1	-5.2
Mar 31	-6.5	-7.1	-7.7	-8.1	-8.2	-8.3	-8.5	-7	-4	-0.6	2.2	4.1	5.6	7.1	7.8	8.4	8.2	7.2	5.4	4.6	4.1	4	4.1	3.7	-8.5	8.4	0.4
Diurnal Maximum	4.9	4.5	3.9	6.2	6.6	7.4	7.1	6.7	7.8	9.1	10.2	11.5	13.0	14.1	14.4	14.3	13.5	12.5	9.2	6.1	4.7	4.9	5.2	4.7			
Diurnal Average	-8.5	-8.8	-9.0	-9.4	-9.7	-10.1	-10.4	-10.1	-9.0	-7.5	-6.1	-4.7	-3.7	-2.9	-2.3	-2.1	-2.4	-3.0	-4.3	-5.2	-6.0	-6.7	-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.



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

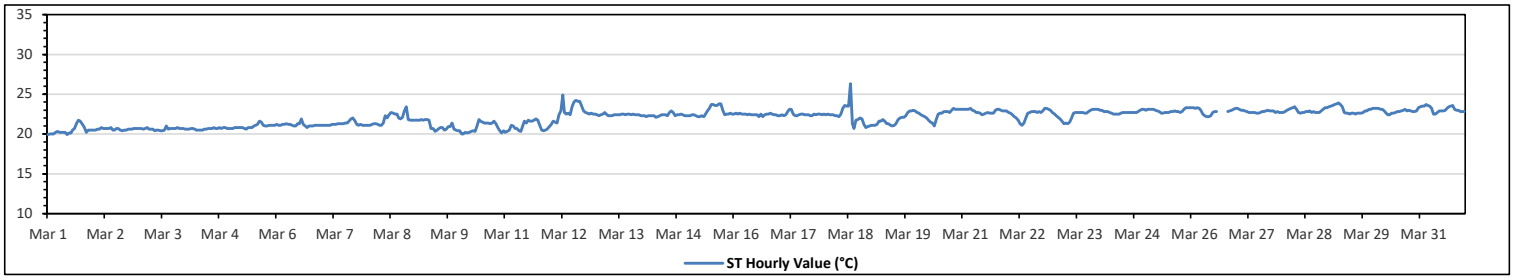
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	26.3	°C	on Mar 18 at hr 13	Hours in Service:	744	
Maximum Daily Value:	23.1	°C	on Mar 31	Hours of Data:	739	
Minimum Hourly Value:	19.9	°C	on Mar 1 at hr 0	Hours of Missing Data:	5	
Minimum Daily Value:	20.5	°C	on Mar 1	Hours of Calibration:	0	
Monthly Average:	22.0	°C		Operational Uptime:	99.3	

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			
Mar 1	**19.9**	20.0	20.0	20.0	20.2	20.3	20.2	20.2	20.2	20.2	**19.9**	20.1	20.1	20.5	20.7	21.3	21.7	21.6	21.2	20.8	20.2	20.5	20.5	20.5	**19.9**	21.7	**20.5**
Mar 2	20.5	20.5	20.6	20.6	20.8	20.7	20.7	20.7	20.7	20.8	20.5	20.5	20.7	20.7	20.5	20.4	20.5	20.5	20.6	20.6	20.6	20.7	20.7	20.7	20.4	20.8	20.6
Mar 3	20.7	20.7	20.6	20.7	20.8	20.6	20.6	20.6	20.4	20.5	20.5	20.4	20.4	20.5	21.0	20.6	20.7	20.7	20.7	20.7	20.8	20.7	20.7	20.7	20.4	21.0	20.6
Mar 4	20.6	20.6	20.6	20.7	20.7	20.6	20.5	20.5	20.5	20.5	20.6	20.6	20.7	20.7	20.7	20.8	20.7	20.7	20.8	20.7	20.8	20.8	20.7	20.7	20.5	20.8	20.7
Mar 5	20.7	20.7	20.8	20.8	20.8	20.8	20.8	20.7	20.6	20.8	20.8	20.8	21.0	21.1	21.2	21.6	21.5	21.1	21.0	21.0	21.1	21.1	21.1	21.1	20.6	21.6	21.0
Mar 6	21.2	21.1	21.1	21.2	21.2	21.3	21.2	21.2	21.1	21.0	21.0	21.3	21.3	21.9	21.2	21.0	20.8	21.0	21.0	21.0	21.1	21.1	21.1	21.1	20.8	21.9	21.1
Mar 7	21.1	21.1	21.1	21.1	21.1	21.2	21.2	21.2	21.3	21.3	21.3	21.3	21.4	21.4	21.6	21.9	22.0	21.6	21.2	21.1	21.2	21.1	21.1	21.1	21.1	22.0	21.3
Mar 8	21.1	21.1	21.2	21.3	21.3	21.2	21.1	21.1	21.4	22.3	22.0	22.4	22.7	22.6	22.5	22.5	22.0	21.9	22.1	22.9	23.4	21.8	21.7	21.7	21.1	23.4	21.9
Mar 9	21.7	21.7	21.7	21.7	21.8	21.7	21.8	21.8	21.7	20.7	20.7	20.3	20.5	20.7	20.8	20.8	20.5	20.6	20.9	20.9	21.4	20.6	20.5	20.4	20.3	21.8	21.1
Mar 10	20.4	20.0	20.0	20.2	20.1	20.2	20.3	20.4	20.3	21.0	21.8	21.6	21.5	21.4	21.4	21.4	21.3	21.4	21.6	21.3	20.8	20.4	20.1	20.4	20.0	21.8	20.8
Mar 11	20.2	20.3	20.5	21.1	21.0	20.7	20.7	20.4	20.3	20.9	21.6	21.4	21.7	21.6	21.6	21.7	21.9	21.7	21.1	20.5	20.4	20.5	20.6	20.9	20.2	21.9	21.0
Mar 12	21.2	21.6	21.5	21.4	22.4	22.9	24.9	22.7	22.5	22.6	22.4	23.4	24.0	24.2	24.1	24.1	23.5	22.9	22.7	22.6	22.5	22.6	22.5	22.5	21.2	24.9	22.8
Mar 13	22.4	22.3	22.4	22.5	22.7	22.5	22.3	22.3	22.3	22.4	22.4	22.4	22.4	22.5	22.5	22.4	22.5	22.5	22.4	22.5	22.4	22.4	22.4	22.3	22.3	22.7	22.4
Mar 14	22.3	22.3	22.2	22.3	22.3	22.3	22.3	22.1	22.2	22.3	22.4	22.4	22.4	22.3	22.7	22.9	22.7	22.3	22.4	22.4	22.5	22.4	22.3	22.3	22.1	22.9	22.4
Mar 15	22.3	22.3	22.4	22.4	22.3	22.2	22.2	22.3	22.2	22.5	22.9	23.2	23.7	23.7	23.6	23.6	23.8	23.8	23.0	22.4	22.5	22.5	22.6	22.5	22.2	23.8	22.8
Mar 16	22.5	22.6	22.5	22.6	22.5	22.5	22.5	22.4	22.5	22.4	22.4	22.4	22.4	22.2	22.5	22.2	22.4	22.5	22.5	22.6	22.5	22.4	22.4	22.3	22.2	22.6	22.4
Mar 17	22.3	22.4	22.3	22.4	22.8	23.1	23.1	22.5	22.3	22.3	22.4	22.5	22.5	22.4	22.4	22.4	22.3	22.3	22.5	22.4	22.5	22.5	22.4	22.5	22.3	23.1	22.5
Mar 18	22.4	22.5	22.4	22.4	22.4	22.3	22.3	22.2	22.5	23.2	23.6	23.5	23.5	**26.3**	21.3	20.7	21.7	21.8	22.0	21.9	21.2	20.8	20.9	21.0	20.7	**26.3**	22.3
Mar 19	21.1	21.1	21.1	21.2	21.6	21.6	21.8	21.6	21.3	21.3	21.1	21.0	21.1	21.3	21.8	22.0	22.1	22.1	22.3	22.7	22.9	22.9	23.0	22.9	21.0	23.0	21.8
Mar 20	22.7	22.6	22.4	22.3	22.2	22.0	21.7	21.5	21.4	21.0	21.8	22.5	22.6	22.6	22.8	22.8	22.8	22.7	23.0	23.2	23.1	23.1	23.1	23.1	21.0	23.2	22.5
Mar 21	23.1	23.1	23.1	23.1	23.2	23.0	22.9	22.7	22.7	22.6	22.4	22.5	22.6	22.7	22.6	22.6	22.6	23.0	23.1	23.1	23.0	22.9	22.9	22.9	22.4	23.2	22.9
Mar 22	22.7	22.6	22.4	22.2	22.0	21.7	21.3	21.1	21.4	22.0	22.6	22.7	22.8	22.8	22.8	22.7	22.8	22.7	22.9	23.2	23.2	23.1	23.0	22.7	21.1	23.2	22.5
Mar 23	22.5	22.3	22.1	21.9	21.6	21.3	21.4	21.3	21.5	22.0	22.6	22.7	22.7	22.7	22.7	22.7	22.6	22.6	22.8	23.0	23.1	23.1	23.1	23.1	21.3	23.1	22.4
Mar 24	23.0	23.0	22.8	22.8	22.8	22.7	22.6	22.5	22.5	22.5	22.5	22.6	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.8	23.0	23.1	23.1	22.5	23.1	22.7
Mar 25	23.0	23.1	23.1	23.1	23.1	23.0	22.9	22.8	22.6	22.6	22.7	22.7	22.7	22.8	22.8	22.9	22.8	22.8	22.7	22.8	23.1	23.3	23.3	23.3	22.6	23.3	22.9
Mar 26	23.3	23.3	23.2	23.3	23.2	22.9	22.5	22.3	22.2	22.2	22.3	22.7	22.8	22.8	K	K	K	K	K	22.8	22.9	23.0	23.1	23.2	22.2	23.3	22.8
Mar 27	23.2	23.1	23.0	23.0	22.9	22.8	22.7	22.7	22.7	22.7	22.6	22.6	22.7	22.8	22.8	22.9	23.0	22.9	22.9	22.9	22.7	22.8	22.7	22.7	22.6	23.2	22.8
Mar 28	22.7	22.8	23.0	23.1	23.2	23.3	23.4	23.1	22.7	22.6	22.7	22.7	22.8	22.8	22.9	22.7	22.8	22.7	22.7	22.7	22.9	23.1	23.3	23.3	22.6	23.4	22.9
Mar 29	23.4	23.5	23.6	23.7	23.8	23.9	23.7	23.4	22.7	22.6	22.6	22.5	22.6	22.6	22.5	22.6	22.6	22.6	22.7	22.9	22.9	23.1	23.1	23.2	22.5	23.9	23.0
Mar 30	23.2	23.2	23.2	23.1	23.1	22.9	22.6	22.4	22.4	22.6	22.6	22.7	22.8	22.8	22.9	23.0	23.1	22.9	23.0	22.9	22.8	22.8	22.9	23.3	22.4	23.3	22.9
Mar 31	23.4	23.5	23.5	23.7	23.6	23.5	23.2	22.5	22.5	22.7	22.9	22.9	22.9	23.0	23.2	23.4	23.5	23.6	23.1	23.0	23.0	22.8	22.8	22.8	22.5	23.7	**23.1**
Diurnal Maximum	23.4	23.5	23.6	23.7	23.8	23.9	24.9	23.4	22.7	23.2	23.6	23.5	24.0	26.3	24.1	24.1	23.8	23.8	23.1	23.2	23.4	23.3	23.3	23.3			
Diurnal Average	22.0	22.0	21.9	22.0	22.0	22.0	22.0	21.8	21.7	21.8	22.0	22.0	22.2	22.3	22.2	22.2	22.2	22.1	22.1	22.1	22.1	22.1	22.1	22.1			

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

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



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

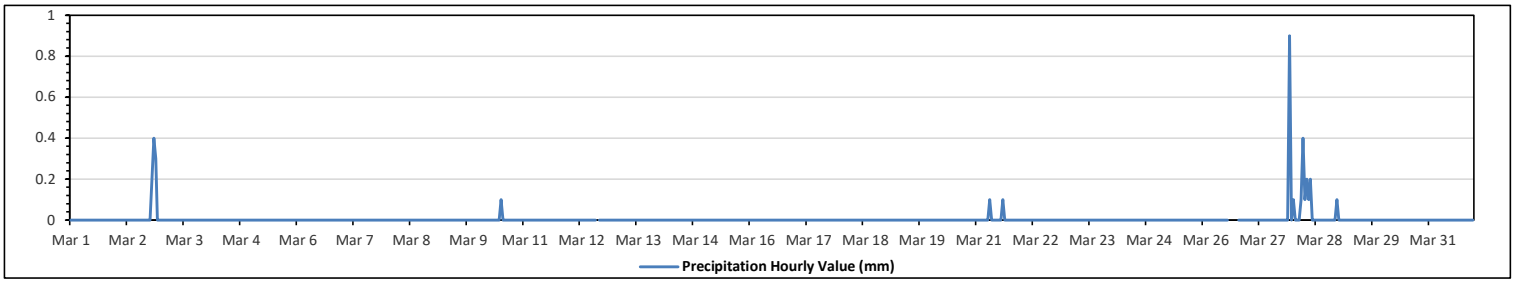
PRECIPITATION in mm

Maximum Hourly Value:	0.9	mm	on Mar 27 at hr 22	Hours in Service:	744	
Maximum Daily Value:	1.3	mm	on Mar 28	Hours of Data:	738	
Minimum Hourly Value:	0.0	mm	on Mar 1 at hr 0	Hours of Missing Data:	5	
Minimum Daily Value:	0.0	mm	on Mar 1	Hours of Calibration:	1	
Monthly Total:	3.4	mm		Operational Uptime:	99.3	

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			
Mar 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
Mar 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.3	0	0	0.0	0.4	0.9
Mar 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
Mar 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
Mar 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Mar 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
Mar 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
Mar 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
Mar 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
Mar 10	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	0.1	0.1
Mar 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
Mar 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Mar 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
Mar 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
Mar 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
Mar 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
Mar 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
Mar 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
Mar 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
Mar 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
Mar 21	0	0	0	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	0.1	0.2
Mar 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
Mar 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
Mar 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
Mar 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Mar 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	K	K	K	K	K	0	0	0	0	0	0.0	0.0	0.0
Mar 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0.9**	0	0.0	**0.9**	0.9
Mar 28	0.1	0	0	0	0.1	0.4	0.1	0.2	0.1	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.0	0.4	**1.3**
Mar 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
Mar 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Mar 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Diurnal Maximum	0.1	0.0	0.0	0.0	0.1	0.4	0.1	0.2	0.1	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.9	0.1			
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 - March 2024

Summary of Hourly Averages

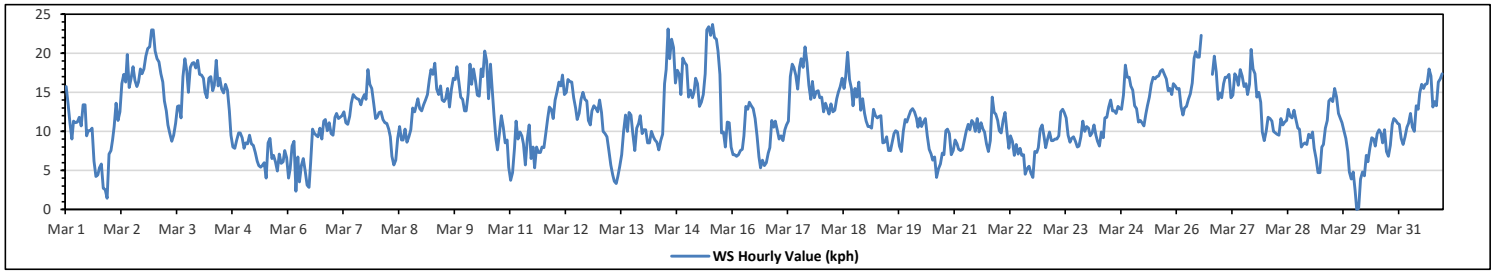
VECTOR WIND SPEED (VWS) in km/hr

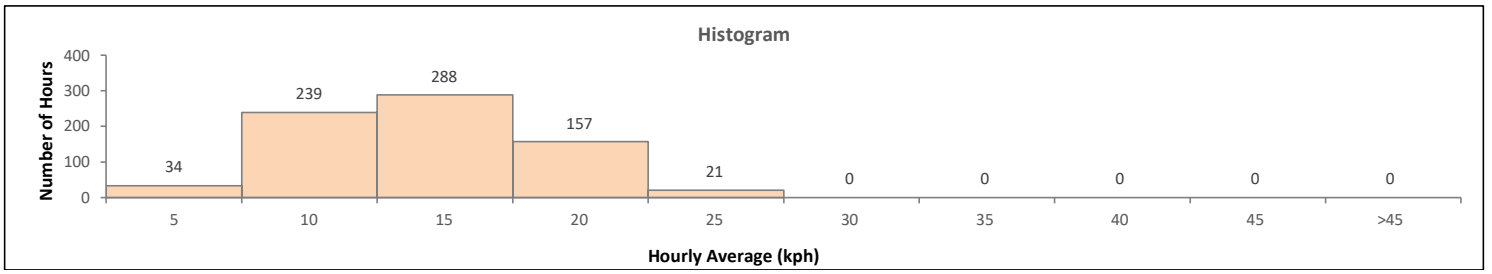
Maximum Hourly Value:	23.7	kph	on Mar 15 at hr 13	Hours in Service:	744	
Maximum Daily Value:	16.4	kph	on Mar 26	Hours of Data:	739	
Minimum Hourly Value:	0.0	kph	on Mar 30 at hr 1	Hours of Missing Data:	5	
Minimum Daily Value:	6.9	kph	on Mar 5	Hours of Calibration:	0	
Monthly Average:	3.1	kph		Operational Uptime:	99.3	

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
Mar 1	15.7	13.5	11.0	9.0	11.3	11.1	11.2	11.8	10.7	13.4	13.4	9.4	10.1	10.1	10.4	6.2	4.2	4.4	5.3	5.8	2.7	2.5	1.4	7.1	1.4	15.7	8.8
Mar 2	7.5	8.9	10.6	13.6	11.4	12.5	16.1	17.3	16.3	19.8	15.6	16.8	18.3	16.5	15.7	16.3	18.0	17.4	18.0	19.6	20.6	20.8	23.0	23.0	7.5	23.0	16.4
Mar 3	20.3	19.3	18.9	17.4	16.3	13.9	12.6	10.8	9.7	8.7	9.5	11.0	13.2	13.3	11.7	17.0	19.3	17.7	15.0	18.2	18.7	18.8	18.1	19.1	8.7	20.3	15.4
Mar 4	17.3	17.2	16.8	15.0	14.3	16.8	17.0	15.2	15.9	19.1	15.8	16.8	15.4	14.9	16.0	15.3	12.6	9.5	8.0	7.8	8.9	9.8	9.8	9.2	7.8	19.1	13.9
Mar 5	7.8	8.5	8.4	9.5	8.4	8.2	7.3	6.2	5.6	5.4	5.7	6.0	4.0	8.5	9.1	6.5	6.9	6.1	4.9	7.1	5.9	6.1	7.5	6.6	4.0	9.5	**6.9**
Mar 6	4.0	5.2	8.1	8.7	2.3	6.7	3.5	5.6	6.5	4.9	3.1	2.8	6.0	10.3	9.8	9.5	9.3	10.4	9.0	11.3	11.5	10.1	11.1	9.7	2.3	11.5	7.5
Mar 7	9.5	11.8	12.3	11.6	11.8	12.0	12.5	11.1	10.9	11.9	13.6	14.7	14.4	14.2	14.1	13.4	14.2	14.7	14.1	17.9	16.0	15.5	13.6	11.6	9.5	17.9	13.2
Mar 8	11.8	12.4	12.5	11.5	11.1	11.0	10.3	9.3	6.8	5.7	6.3	9.1	10.6	8.9	8.9	10.3	8.6	9.3	10.2	13.0	12.5	13.3	14.2	12.9	5.7	14.2	10.4
Mar 9	12.6	13.4	14.0	14.7	16.6	17.9	17.3	18.7	15.4	14.7	15.8	14.0	13.8	14.2	15.5	13.1	15.4	16.8	16.6	18.3	16.4	14.4	14.1	12.6	12.6	18.7	15.3
Mar 10	12.6	14.7	18.6	16.0	18.0	16.5	14.6	14.5	18.0	17.0	20.3	19.0	14.2	18.6	15.6	12.1	9.0	7.6	9.8	12.0	10.5	8.5	8.9	5.4	5.4	20.3	13.8
Mar 11	3.7	4.7	7.8	11.3	9.0	9.9	9.4	8.4	5.7	9.0	10.8	6.5	8.0	5.3	8.0	7.3	7.3	8.0	7.9	9.8	11.7	13.1	12.8	11.6	3.7	13.1	8.6
Mar 12	14.0	15.1	16.3	15.8	17.2	14.7	15.0	16.6	16.4	16.3	14.3	13.0	11.5	12.3	14.1	15.0	14.1	13.9	11.4	10.8	12.6	13.3	13.0	12.5	10.8	17.2	14.1
Mar 13	14.0	12.4	10.0	9.7	9.3	7.5	5.7	4.4	3.6	3.3	4.2	5.5	7.0	10.0	12.1	10.0	12.4	12.1	9.6	7.5	10.4	11.0	12.0	9.7	3.3	14.0	8.9
Mar 14	10.2	10.2	8.5	8.5	10.0	9.3	8.9	8.6	7.6	8.8	9.6	16.1	17.9	23.1	19.3	21.8	20.7	16.2	17.8	17.3	14.7	19.4	18.8	18.5	7.6	23.1	14.2
Mar 15	14.4	15.3	14.3	15.0	16.8	16.1	13.2	13.7	14.7	17.4	23.0	23.4	22.3	**23.7**	22.0	21.8	20.3	17.3	9.8	9.9	8.0	11.2	11.1	8.0	8.0	**23.7**	15.9
Mar 16	7.0	7.0	6.8	7.0	7.5	7.7	9.4	13.2	12.8	13.7	13.3	12.9	11.6	9.4	6.7	5.3	6.3	5.6	6.0	7.2	7.9	11.4	10.5	11.3	5.3	13.7	9.1
Mar 17	10.2	9.0	9.4	8.8	10.2	10.8	11.3	17.0	18.6	18.2	17.2	15.4	18.3	19.3	18.2	20.8	18.8	15.9	14.1	16.4	14.3	15.1	15.2	14.3	8.8	20.8	14.9
Mar 18	14.4	12.5	13.6	13.0	12.2	13.5	12.5	12.7	14.2	15.0	15.7	16.8	15.5	17.0	20.1	16.6	15.5	13.3	15.5	14.4	16.3	12.7	14.2	12.3	12.2	20.1	14.6
Mar 19	11.3	10.6	10.6	10.4	12.8	12.0	11.7	11.9	12.0	8.5	8.6	9.3	7.5	7.5	8.5	9.7	10.1	9.9	8.1	7.4	10.0	11.5	11.2	11.9	7.4	12.8	10.1
Mar 20	12.6	12.9	12.5	11.7	10.5	11.7	10.6	11.2	11.6	9.4	7.7	7.1	6.3	6.7	4.1	5.2	5.8	7.2	7.0	10.1	10.3	9.7	7.0	7.5	4.1	12.9	9.0
Mar 21	8.9	8.4	7.7	7.5	7.7	8.9	10.1	10.9	10.2	11.4	11.1	10.0	11.6	9.9	11.1	10.3	9.9	8.4	7.4	8.8	14.4	12.4	12.2	11.4	7.4	14.4	10.0
Mar 22	10.1	9.8	11.4	12.4	9.9	7.8	9.4	8.7	6.9	8.3	7.1	7.8	6.9	7.0	4.5	5.2	5.5	4.6	4.1	7.4	7.3	7.9	10.3	10.8	4.1	12.4	8.0
Mar 23	9.3	7.9	9.0	9.9	8.8	8.8	9.0	9.0	9.4	12.5	12.8	12.4	11.7	9.5	8.6	9.1	9.3	8.7	8.0	8.1	9.3	11.3	10.0	10.6	7.9	12.8	9.7
Mar 24	10.4	9.4	9.8	10.8	9.5	8.7	8.1	9.9	9.2	11.7	11.8	13.1	14.0	12.6	12.6	12.3	13.2	12.9	12.8	14.6	18.5	16.9	16.9	15.8	8.1	18.5	12.3
Mar 25	15.3	13.3	12.9	11.2	11.4	11.1	10.7	12.2	13.3	14.4	16.0	16.9	16.7	17.0	17.1	17.7	17.9	17.3	16.7	15.2	15.5	14.7	16.1	15.8	10.7	17.9	14.9
Mar 26	15.4	15.5	13.2	12.1	13.0	13.2	14.1	14.8	16.2	19.4	20.2	19.5	19.5	22.3	**K**	**K**	**K**	**K**	**K**	17.3	19.6	17.6	14.1	14.9	12.1	22.3	**16.4**
Mar 27	14.3	16.1	16.9	16.9	17.3	14.3	14.6	17.4	17.0	15.9	17.9	17.1	15.7	16.1	14.7	16.0	20.5	18.0	17.4	14.4	15.0	13.7	9.9	8.8	8.8	20.5	15.7
Mar 28	10.0	11.8	11.6	11.3	10.0	9.8	9.6	9.5	11.6	10.8	11.2	11.4	12.8	11.9	11.7	12.7	11.5	10.4	10.3	8.0	8.3	8.5	8.3	9.6	8.0	12.8	10.5
Mar 29	9.2	9.9	7.8	6.5	4.7	4.7	8.0	8.3	10.4	11.4	13.9	14.2	13.8	15.5	14.4	12.3	11.6	11.1	10.1	9.1	7.4	4.8	3.9	4.8	3.9	15.5	9.5
Mar 30	2.4	**0.0**	0.1	3.9	4.8	4.3	6.9	6.1	7.8	9.2	9.0	8.1	9.7	10.2	9.7	8.5	10.2	7.4	6.8	8.2	10.9	11.6	11.4	11.0	**0.0**	11.6	7.4
Mar 31	10.9	9.1	8.3	9.3	10.5	11.0	12.3	10.5	10.0	13.3	12.8	14.9	16.0	15.5	16.0	16.1	18.0	17.1	13.1	13.8	13.3	16.3	16.7	17.4	8.3	18.0	13.4
Diurnal Maximum	20.3	19.3	18.9	17.4	18.0	17.9	17.3	18.7	18.6	19.8	23.0	23.4	22.3	23.7	22.0	21.8	20.7	18.0	18.0	19.6	20.6	20.8	23.0	23.0			
Diurnal Average	11.2	11.2	11.3	11.3	11.1	11.0	11.1	11.5	11.5	12.2	12.5	12.6	12.7	13.3	12.7	12.4	12.5	11.6	10.8	11.8	12.2	12.4	12.2	11.8			

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.



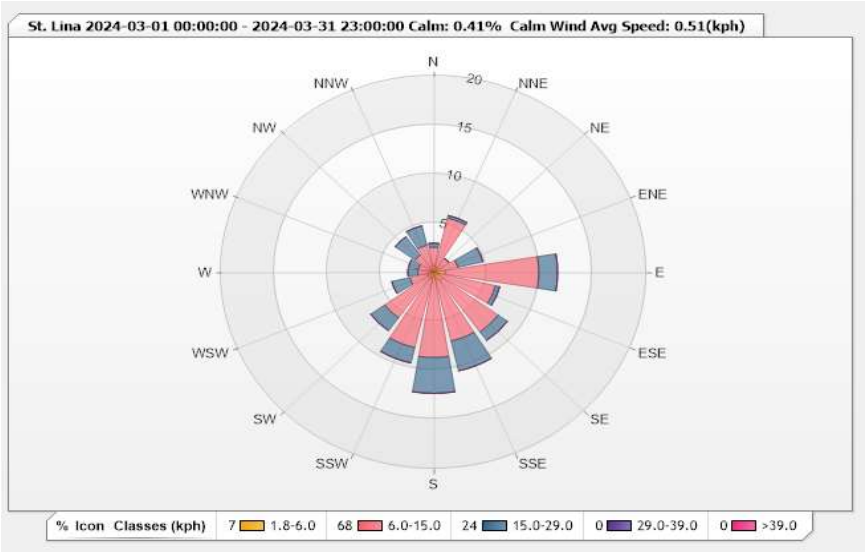


Station: St. Lina Monitor: WDS [kph] Monthly: 03-2024

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

Calm (WS<1.8kph): 0.41% Valid Data: 99.33%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	0.68	1.89	0.41	0	0	2.98
NNE	0.54	5.14	0.27	0	0	5.95
NE	0	1.76	0	0	0	1.76
ENE	0.14	2.17	2.44	0	0	4.75
E	1.08	8.8	1.76	0	0	11.64
ESE	0.41	5.55	0.41	0	0	6.37
SE	0.95	6.5	1.08	0	0	8.53
SSE	0.68	6.5	3.11	0	0	10.29
S	0.41	8.25	3.65	0	0	12.31
SSW	0.68	7.17	1.62	0	0	9.47
SW	0.54	5.14	1.62	0	0	7.3
WSW	0.54	1.76	1.76	0	0	4.06
W	0.27	1.22	0.95	0	0	2.44
WNW	0	1.49	0.95	0	0	2.44
NW	0	2.17	2.3	0	0	4.47
NNW	0.27	2.57	2.03	0	0	4.87
Summary	7.19	68.08	24.36	0	0	100



Lakeland Industry & Community Association

St. Lina Site - March 2024

Summary of Hourly Averages

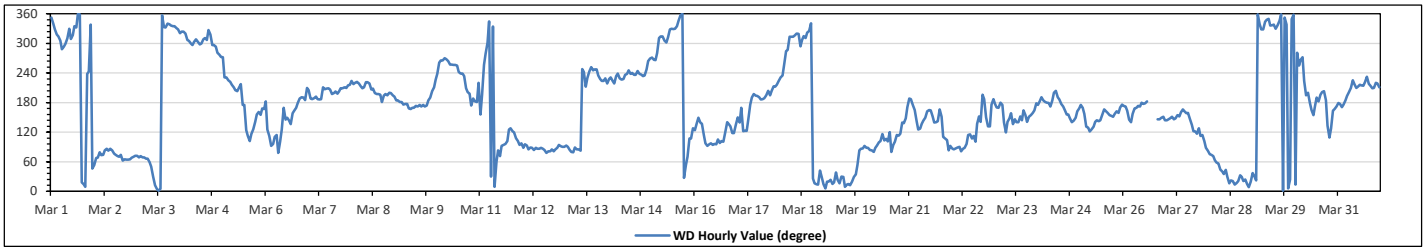
WIND DIRECTION (VWD) in sector

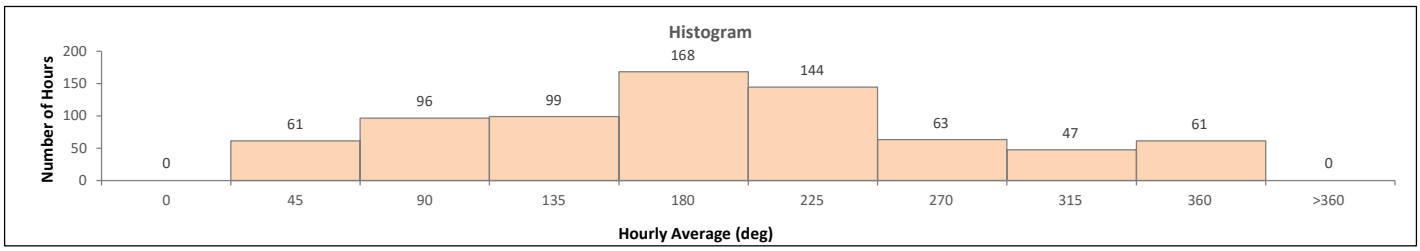
Monthly Average:	160 (SSE)	degree	
Hours in Service:	744		
Hours of Data:	739		
Hours of Missing Data:	5		
Hours of Calibration:	0		
Operational Uptime:	99.3		

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
Mar 1	N	NNW	NNW	NW	NW	NW	WNW	WNW	WNW	NW	NNW	NW	NW	NNW	NNW	N	N	NNE	NNE	N	SW	WSW	NNW	NE	326	NW
Mar 2	NE	ENE	ENE	ENE	ENE	ENE	E	E	E	E	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	72	ENE
Mar 3	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NNE	NNE	N	N	N	N	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	14	NNE
Mar 4	NW	NW	NW	NW	NW	WNW	WNW	WNW	WNW	NW	WNW	WNW	WNW	NW	NW	NW	NW	NW	WNW	WNW	WNW	W	W	W	306	NW
Mar 5	W	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SW	S	S	ESE	ESE	E	ESE	SE	SE	SSE	SSE	SSE	SSE	SSE	183	S
Mar 6	S	SE	ESE	E	E	ESE	ESE	ENE	E	SE	SSE	SE	SSE	SE	SE	SSE	SSE	SSE	S	S	S	S	S	SSW	154	SSE
Mar 7	SSW	S	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	202	SSW
Mar 8	SW	SW	SW	SW	SW	SSW	SSW	SSW	SW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	SSW	SSW	206	SSW
Mar 9	S	S	S	S	S	S	S	S	SSE	SSE	SSE	SSE	S	S	S	S	S	S	S	S	S	SSW	SSW	SW	181	S
Mar 10	SW	W	W	W	W	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SSW	SSW	SSW	S	S	S	S	SW	243	WSW
Mar 11	SSE	SSW	WSW	W	WNW	NNW	NNE	NNW	N	ENE	E	ENE	E	E	E	E	SE	SE	ESE	ESE	ESE	E	E	E	87	E
Mar 12	E	E	E	E	E	E	E	E	E	E	E	E	E	ENE	E	E	E	E	E	E	E	E	E	E	87	E
Mar 13	E	E	E	E	ENE	E	E	E	E	WSW	WSW	SSW	SW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	206	SSW
Mar 14	SW	SW	SW	SW	SW	WSW	SW	SW	SW	SW	SW	WSW	SW	WSW	SW	SW	WSW	SW	SW	SW	SW	WSW	W	W	239	WSW
Mar 15	W	W	W	W	NW	NW	NW	NW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	N	N	NNE	NE	ENE	ESE	ESE	SE	327	NW
Mar 16	ESE	SE	SSE	SE	SE	ESE	E	E	E	E	E	E	E	ESE	E	E	E	ESE	SE	SE	SE	ESE	ESE	SE	112	ESE
Mar 17	SSE	SE	SSE	ESE	ESE	ESE	SE	S	S	SSW	SSW	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	187	S
Mar 18	SW	SW	WSW	WNW	WNW	NW	NW	NW	NW	NW	NW	WNW	NW	NW	NW	NW	NW	NNW	NNE	NNE	NNE	NNE	NE	NNE	322	NW
Mar 19	NNE	N	NNE	NNE	NNE	NNE	NNE	NE	NNE	NNE	NNE	NNE	N	NNE	NNE	NNE	NNE	NNE	NE	NE	E	E	E	E	32	NNE
Mar 20	E	E	E	E	E	E	E	E	E	ESE	ESE	ESE	E	ESE	E	E	E	ESE	ESE	ESE	SE	SE	SE	S	105	ESE
Mar 21	S	S	S	SSE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	ESE	ESE	ESE	E	E	140	SE
Mar 22	E	E	E	E	E	E	E	E	E	ESE	ESE	ESE	ESE	E	SE	SSE	SE	SSW	S	SSE	SE	SE	S	S	115	ESE
Mar 23	S	SSE	SSE	S	S	SE	ESE	SE	SE	SSE	SE	SE	SE	SE	SSE	SE	SSE	SSE	SE	SSE	SSE	SSE	SSE	S	154	SSE
Mar 24	S	S	S	S	S	S	S	S	S	SSW	SSW	S	S	S	S	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	SSE	171	S
Mar 25	S	SSE	SSE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	153	SSE
Mar 26	S	S	SSE	SE	SE	SSE	SSE	SSE	S	S	S	S	S	S	K	K	K	K	K	SE	SE	SSE	SSE	SE	164	SSE
Mar 27	SE	SE	SE	SSE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	ESE	ESE	ESE	SE	ESE	ESE	E	E	E	139	SE
Mar 28	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	NNE	35	NE
Mar 29	NE	NNE	NNE	N	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	NNW	NNW	NNW	NNW	N	N	N	NNW	N	NNE	NNW	N	350	N
Mar 30	NNE	W	WSW	W	W	SW	SSW	SSW	S	SSE	SSE	S	S	S	SSW	SSW	SSW	S	SE	ESE	SE	SSE	SSE	S	177	S
Mar 31	S	S	S	S	S	S	SSW	SSW	SW	SW	SSW	SSW	SW	SSW	SSW	SW	SW	SSW	SSW	SSW	SW	SW	SSW	209	SSW

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 - March 2024

Summary of Hourly Averages

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

WIND SPEED

Maximum Hourly Value:	23.7	kph	on Mar 15 at hr 13	Hours in Service:	744
Maximum Daily Value:	16.4	kph	on Mar 26	Hours of Data:	739
Minimum Hourly Value:	0.0	kph	on Mar 30 at hr 1	Hours of Missing Data:	5
Minimum Daily Value:	6.9	kph	on Mar 5	Hours of Calibration:	0
Monthly Average:	3.1	kph		Operational Uptime:	99.3

WIND DIRECTION

Monthly Average: 160 degree (SSE)

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			
Mar 1	15.7	13.5	11.0	9.0	11.3	11.1	11.2	11.8	10.7	13.4	13.4	9.4	10.1	10.1	10.4	6.2	4.2	4.4	5.3	5.8	2.7	2.5	1.4	7.1	1.4	15.7	8.8
	N	NNW	NNW	NW	NW	NW	WNW	WNW	WNW	NW	NNW	NW	NW	NNW	NNW	N	N	NNE	NNE	N	SW	WSW	NNW	NE			326(NW)
Mar 2	7.5	8.9	10.6	13.6	11.4	12.5	16.1	17.3	16.3	19.8	15.6	16.8	18.3	16.5	15.7	16.3	18.0	17.4	18.0	19.6	20.6	20.8	23.0	23.0	7.5	23.0	16.4
	NE	ENE	ENE	ENE	ENE	ENE	E	E	E	E	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE			72(ENE)
Mar 3	20.3	19.3	18.9	17.4	16.3	13.9	12.6	10.8	9.7	8.7	9.5	11.0	13.2	13.3	11.7	17.0	19.3	17.7	15.0	18.2	18.7	18.8	18.1	19.1	8.7	20.3	15.4
	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NNE	NNE	N	N	N	N	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW			14(NNE)
Mar 4	17.3	17.2	16.8	15.0	14.3	16.8	17.0	15.2	15.9	19.1	15.8	16.8	15.4	14.9	16.0	15.3	12.6	9.5	8.0	7.8	8.9	9.8	9.8	9.2	7.8	19.1	13.9
	NW	NW	NW	NW	NW	WNW	WNW	WNW	WNW	NW	WNW	WNW	WNW	NW	NW	NW	NW	NW	WNW	WNW	WNW	W	W	W			306(NW)
Mar 5	7.8	8.5	8.4	9.5	8.4	8.2	7.3	6.2	5.6	5.4	5.7	6.0	4.0	8.5	9.1	6.5	6.9	6.1	4.9	7.1	5.9	6.1	7.5	6.6	4.0	9.5	**6.9**
	W	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SW	S	S	ESE	ESE	E	ESE	SE	SE	SSE	SSE	SSE	SSE	SSE			183(S)
Mar 6	4.0	5.2	8.1	8.7	2.3	6.7	3.5	5.6	6.5	4.9	3.1	2.8	6.0	10.3	9.8	9.5	9.3	10.4	9.0	11.3	11.5	10.1	11.1	9.7	2.3	11.5	7.5
	S	SE	ESE	E	E	ESE	ESE	ENE	E	SE	SSE	SE	SSE	SE	SE	SSE	SSE	SSE	S	S	S	S	S	SSW			154(SSE)
Mar 7	9.5	11.8	12.3	11.6	11.8	12.0	12.5	11.1	10.9	11.9	13.6	14.7	14.4	14.2	14.1	13.4	14.2	14.7	14.1	17.9	16.0	15.5	13.6	11.6	9.5	17.9	13.2
	SSW	S	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW			202(SSW)
Mar 8	11.8	12.4	12.5	11.5	11.1	11.0	10.3	9.3	6.8	5.7	6.3	9.1	10.6	8.9	8.9	10.3	8.6	9.3	10.2	13.0	12.5	13.3	14.2	12.9	5.7	14.2	10.4
	SW	SW	SW	SW	SW	SSW	SSW	SSW	SW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	SSW	SSW			206(SSW)
Mar 9	12.6	13.4	14.0	14.7	16.6	17.9	17.3	18.7	15.4	14.7	15.8	14.0	13.8	14.2	15.5	13.1	15.4	16.8	16.6	18.3	16.4	14.4	14.1	12.6	12.6	18.7	15.3
	S	S	S	S	S	S	S	S	SSE	SSE	SSE	SSE	S	S	S	S	S	S	S	S	S	SSW	SSW	SW			181(S)
Mar 10	12.6	14.7	18.6	16.0	18.0	16.5	14.6	14.5	18.0	17.0	20.3	19.0	14.2	18.6	15.6	12.1	9.0	7.6	9.8	12.0	10.5	8.5	8.9	5.4	5.4	20.3	13.8
	SW	W	W	W	W	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SSW	SSW	SSW	S	S	S	S	SW			243(WSW)
Mar 11	3.7	4.7	7.8	11.3	9.0	9.9	9.4	8.4	5.7	9.0	10.8	6.5	8.0	5.3	8.0	7.3	7.3	8.0	7.9	9.8	11.7	13.1	12.8	11.6	3.7	13.1	8.6
	SSE	SSW	WSW	W	WNW	NNW	NNE	NNW	N	ENE	E	ENE	E	E	E	E	SE	SE	ESE	ESE	ESE	E	E	E			87(E)
Mar 12	14.0	15.1	16.3	15.8	17.2	14.7	15.0	16.6	16.4	16.3	14.3	13.0	11.5	12.3	14.1	15.0	14.1	13.9	11.4	10.8	12.6	13.3	13.0	12.5	10.8	17.2	14.1
	E	E	E	E	E	E	E	E	E	E	E	E	E	ENE	E	E	E	E	E	E	E	E	E	E			87(E)
Mar 13	14.0	12.4	10.0	9.7	9.3	7.5	5.7	4.4	3.6	3.3	4.2	5.5	7.0	10.0	12.1	10.0	12.4	12.1	9.6	7.5	10.4	11.0	12.0	9.7	3.3	14.0	8.9
	E	E	E	E	ENE	E	E	E	E	WSW	WSW	SSW	SW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW			206(SSW)
Mar 14	10.2	10.2	8.5	8.5	10.0	9.3	8.9	8.6	7.6	8.8	9.6	16.1	17.9	23.1	19.3	21.8	20.7	16.2	17.8	17.3	14.7	19.4	18.8	18.5	7.6	23.1	14.2
	SW	SW	SW	SW	SW	WSW	SW	SW	SW	SW	SW	WSW	SW	WSW	SW	SW	WSW	SW	SW	SW	SW	WSW	W	W			239(WSW)
Mar 15	14.4	15.3	14.3	15.0	16.8	16.1	13.2	13.7	14.7	17.4	23.0	23.4	22.3	**23.7**	22.0	21.8	20.3	17.3	9.8	9.9	8.0	11.2	11.1	8.0	8.0	**23.7**	15.9
	W	W	W	W	NW	NW	NW	NW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	N	N	NNE	NE	ENE	ESE	ESE	SE			327(NW)
Mar 16	7.0	7.0	6.8	7.0	7.5	7.7	9.4	13.2	12.8	13.7	13.3	12.9	11.6	9.4	6.7	5.3	6.3	5.6	6.0	7.2	7.9	11.4	10.5	11.3	5.3	13.7	9.1
	ESE	SE	SSE	SE	SE	ESE	E	E	E	E	E	E	E	ESE	E	E	E	ESE	SE	SE	SE	ESE	ESE	SE			112(ESE)
Mar 17	10.2	9.0	9.4	8.8	10.2	10.8	11.3	17.0	18.6	18.2	17.2	15.4	18.3	19.3	18.2	20.8	18.8	15.9	14.1	16.4	14.3	15.1	15.2	14.3	8.8	20.8	14.9
	SSE	SE	SSE	ESE	ESE	ESE	SE	S	S	SSW	SSW	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW			187(S)
Mar 18	14.4	12.5	13.6	13.0	12.2	13.5	12.5	12.7	14.2	15.0	15.7	16.8	15.5	17.0	20.1	16.6	15.5	13.3	15.5	14.4	16.3	12.7	14.2	12.3	12.2	20.1	14.6
	SW	SW	WSW	WNW	WNW	NW	NW	NW	NW	NW	NW	WNW	NW	NW	NW	NW	NW	NNW	NNE	NNE	NNE	NNE	NE	NNE			322(NW)
Mar 19	11.3	10.6	10.6	10.4	12.8	12.0	11.7	11.9	12.0	8.5	8.6	9.3	7.5	7.5	8.5	9.7	10.1	9.9	8.1	7.4	10.0	11.5	11.2	11.9	7.4	12.8	10.1
	NNE	N	NNE	NNE	NNE	NNE	NNE	NE	NNE	NNE	NNE	NNE	N	NNE	NNE	NNE	NNE	NNE	NE	NE	E	E	E	E			32(NNE)
Mar 20	12.6	12.9	12.5	11.7	10.5	11.7	10.6	11.2	11.6	9.4	7.7	7.1	6.3	6.7	4.1	5.2	5.8	7.2	7.0	10.1	10.3	9.7	7.0	7.5	4.1	12.9	9.0
	E	E	E	E	E	E	E	E	E	ESE	ESE	ESE	E	ESE	E	E	E	ESE	ESE	ESE	SE	SE	SE	S			105(ESE)
Mar 21	8.9	8.4	7.7	7.5	7.7	8.9	10.1	10.9	10.2	11.4	11.1	10.0	11.6	9.9	11.1	10.3	9.9	8.4	7.4	8.8	14.4	12.4	12.2	11.4	7.4	14.4	10.0
	S	S	S	SSE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	ESE	ESE	ESE	E	E			140(SE)
Mar 22	10.1	9.8	11.4	12.4	9.9	7.8	9.4	8.7	6.9	8.3	7.1	7.8	6.9	7.0	4.5	5.2	5.5	4.6	4.1	7.4	7.3	7.9	10.3	10.8	4.1	12.4	8.0
	E	E	E	E	E	E	E	E	E	ESE	ESE	ESE	ESE	E	SE	SSE	SE	SSW	S	SSE	SE	SE	S	S			115(ESE)
Mar 23	9.3	7.9	9.0	9.9	8.8	8.8	9.0	9.0	9.4	12.5	12.8	12.4	11.7	9.5	8.6	9.1	9.3	8.7	8.0	8.1	9.3	11.3	10.0	10.6	7.9	12.8	9.7
	S	SSE	SSE	S	S	SE	ESE	SE	SE	SSE	SE	SE	SE	SE	SSE	SE	SSE	SSE	SE	SSE	SSE	SSE	SSE	S			154(SSE)
Mar 24	10.4	9.4	9.8	10.8	9.5	8.7	8.1	9.9	9.2	11.7	11.8	13.1	14.0	12.6	12.6	12.3	13.2	12.9	12.8	14.6	18.5	16.9	16.9	15.8	8.1	18.5	12.3
	S	S	S	S	S	S	S	S	S	SSW	SSW	S	S	S	S	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	SSE			171(S)
Mar 25	15.3	13.3	12.9	11.2	11.4	11.1	10.7	12.2	13.3	14.4	16.0	16.9	16.7	17.0	17.1	17.7	17.9	17.3	16.7	15.2	15.5	14.7	16.1	15.8	10.7	17.9	14.9
	S	SSE	SSE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S			153(SSE)
Mar 26	15.4	15.5	13.2	12.1	13.0	13.2	14.1	14.8	16.2	19.4	20.2	19.5	19.5	22.3	**K**	**K**	**K**	**K**	**K**	17.3	19.6	17.6	14.1	14.9	12.1	22.3	**16.4**
	S	S	SSE	SE	SE	SSE	SSE	SSE	S	S	S	S	S	S	**K**	**K**	**K**	**K**	**K**	SE	SE	SSE	SSE	SE			164(SSE)
Mar 27	14.3	16.1	16.9	16.9	17.3	14.3	14.6	17.4	17.0	15.9	17.9	17.1	15.7	16.1	14.7	16.0	20.5	18.0	17.4	14.4	15.0	13.7	9.9	8.8	8.8	20.5	15.7
	SE	SE	SE	SSE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	ESE	ESE	ESE	SE	ESE	ESE	E	E	E			139(SE)
Mar 28	10.0	11.8	11.6	11.3	10.0	9.8	9.6	9.5	11.6	10.8	11.2	11.4	12.8	11.9	11.7	12.7	11.5	10.4	10.3	8.0	8.3	8.5	8.3	9.6	8.0	12.8	10.5
	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	NNE			35(NE)
Mar 29	9.2	9.9	7.8	6.5	4.7	4.7	8.0	8.3	10.4	11.4	13.9	14.2	13.8	15.5	14.4	12.3	11.6	11.1	10.1	9.1	7.4	4.8	3.9	4.8	3.9	15.5	9.5
	NE	NNE	NNE	N	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	NNW	NNW	NNW	NNW	N	N	N	NNW	N	NNE	NNW	N			350(N)
Mar 30	2.4	**0.0**	0.1	3.9	4.8	4.3	6.9	6.1	7.8	9.2	9.0	8.1	9.7	10.2	9.7	8.5	10.2	7.4	6.8	8.2	10.9	11.6	11.4	11.0	**0.0**	11.6	7.4
	NNE	W	WSW	W	W	SW	SSW	SSW	S	SSE	SSE	S	S	S	SSW	SSW	SSW	S	SE	ESE	SE	SSE	SSE	S			177(S)
Mar 31	10.9	9.1	8.3	9.3	10.5	11.0	12.3	10.5	10.0	13.3	12.8	14.9	16.0	15.5	16.0	16.1	18.0	17.1	13.1	13.8	13.3	16.3	16.7	17.4	8.3	18.0	13.4
	S	S	S	S	S	S	SSW	SSW	SW	SW	SSW	SSW	SW	SSW	SSW	SW	SW	SW	SSW	SSW	SSW	SW	SW	SSW			209(SSW)

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 - March 2024

Summary of Hour Standard Deviations

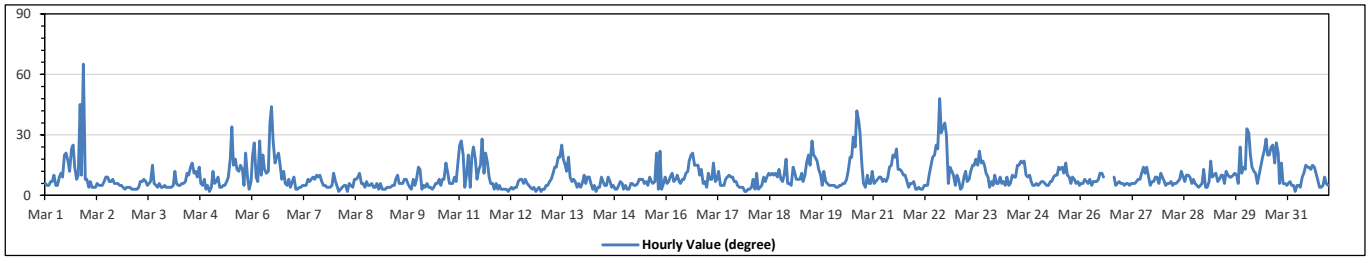
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	65 degree on Mar 1 at hr 22	Hours in Service:	744
		Hours of Data:	739
Minimum Hourly Value:	2 degree on Mar 4 at hr 23	Hours of Missing Data:	5
		Hours of Calibration:	0
		Operational Uptime:	99.3

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		
Mar 1	6	5	5	7	7	10	5	5	9	11	9	20	21	17	12	23	25	14	8	10	45	10	**65**	8	5	**65**
Mar 2	8	4	7	4	4	4	6	5	5	5	7	9	9	7	7	8	6	6	6	5	5	4	3	4	3	9
Mar 3	4	4	3	3	3	3	4	7	7	8	7	5	6	7	15	6	5	4	6	4	4	5	4	4	3	15
Mar 4	4	4	5	12	6	5	5	6	6	7	11	10	14	16	11	12	9	14	6	5	8	3	5	**2**	**2**	16
Mar 5	4	12	6	7	9	4	4	5	5	7	9	18	34	15	18	13	12	15	13	5	21	9	3	7	3	34
Mar 6	20	26	9	7	27	10	20	13	11	12	36	44	27	16	19	21	15	8	12	6	5	8	4	7	4	44
Mar 7	9	3	3	4	4	5	5	5	8	7	8	9	8	10	9	10	7	5	5	4	4	4	5	11	3	11
Mar 8	7	4	**2**	3	4	5	5	**2**	6	5	4	8	8	9	11	6	6	4	7	5	5	6	4	4	**2**	11
Mar 9	6	3	6	3	3	3	4	4	4	5	5	8	10	6	6	6	8	8	6	4	3	8	5	8	3	10
Mar 10	14	13	3	5	4	6	4	4	3	4	6	6	8	5	8	8	16	11	6	6	6	9	7	17	3	17
Mar 11	25	27	20	4	11	20	4	19	24	18	8	13	15	28	11	21	16	9	6	6	3	6	3	5	3	28
Mar 12	3	3	3	3	**2**	3	4	3	4	4	7	8	8	6	8	6	5	4	3	4	**2**	3	4	**2**	**2**	8
Mar 13	3	3	5	5	7	8	11	14	14	19	19	25	18	15	12	19	9	7	8	7	4	6	4	6	3	25
Mar 14	10	6	9	9	6	3	5	**2**	4	4	9	7	5	5	9	7	4	5	3	3	5	7	6	3	**2**	10
Mar 15	5	3	3	6	6	5	5	6	8	8	8	6	7	5	9	7	6	7	21	3	22	3	6	9	3	22
Mar 16	6	7	9	11	7	8	10	7	6	8	8	11	12	17	20	21	15	15	15	10	13	6	7	4	4	21
Mar 17	11	8	8	16	7	8	12	5	5	5	8	9	10	9	9	7	7	5	4	4	4	**2**	**2**	3	**2**	16
Mar 18	3	4	8	3	11	3	4	5	9	7	9	11	10	11	10	11	9	13	8	7	10	18	6	6	3	18
Mar 19	5	14	12	8	8	8	11	7	10	16	20	15	27	20	19	17	13	10	5	12	7	6	5	5	5	27
Mar 20	5	5	4	4	5	5	6	6	8	12	19	19	29	24	42	37	31	15	6	4	10	6	6	12	4	42
Mar 21	6	7	8	9	9	7	8	7	9	14	15	20	19	23	13	13	12	10	10	7	4	6	6	7	4	23
Mar 22	3	3	4	3	3	5	5	5	10	15	19	20	25	23	48	31	34	36	30	6	14	12	10	5	3	48
Mar 23	10	8	3	4	9	12	7	8	12	15	15	18	15	22	16	17	15	11	9	4	7	5	10	6	3	22
Mar 24	6	9	6	7	5	9	5	6	10	9	9	15	15	17	16	17	10	9	10	7	5	5	6	5	5	17
Mar 25	6	7	7	6	5	5	7	7	9	10	10	14	13	14	11	16	10	9	6	9	8	6	7	5	5	16
Mar 26	6	6	8	7	6	8	5	7	7	7	8	11	11	9	**K**	**K**	**K**	**K**	**K**	9	5	6	7	6	5	11
Mar 27	6	5	6	6	5	6	6	6	7	8	8	11	14	11	14	9	5	7	7	9	9	6	11	9	5	14
Mar 28	7	5	6	6	7	5	6	6	7	8	12	9	7	10	10	9	6	8	6	5	4	5	6	13	4	13
Mar 29	4	4	7	17	9	10	11	7	8	10	10	6	12	10	9	9	10	11	10	6	24	11	14	13	4	24
Mar 30	33	31	20	14	12	11	6	10	14	19	22	28	20	20	24	25	16	26	21	6	16	6	6	5	5	33
Mar 31	6	7	5	5	**2**	5	5	4	9	11	15	14	14	13	15	14	11	8	4	4	5	9	6	5	**2**	15
Diurnal Minimum	3	3	2	3	2	3	4	2	3	4	4	5	5	5	6	6	4	4	3	3	2	2	2	2		
Diurnal Maximum	33	31	20	17	27	20	20	19	24	19	36	44	34	28	48	37	34	36	30	12	45	18	65	17		

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.



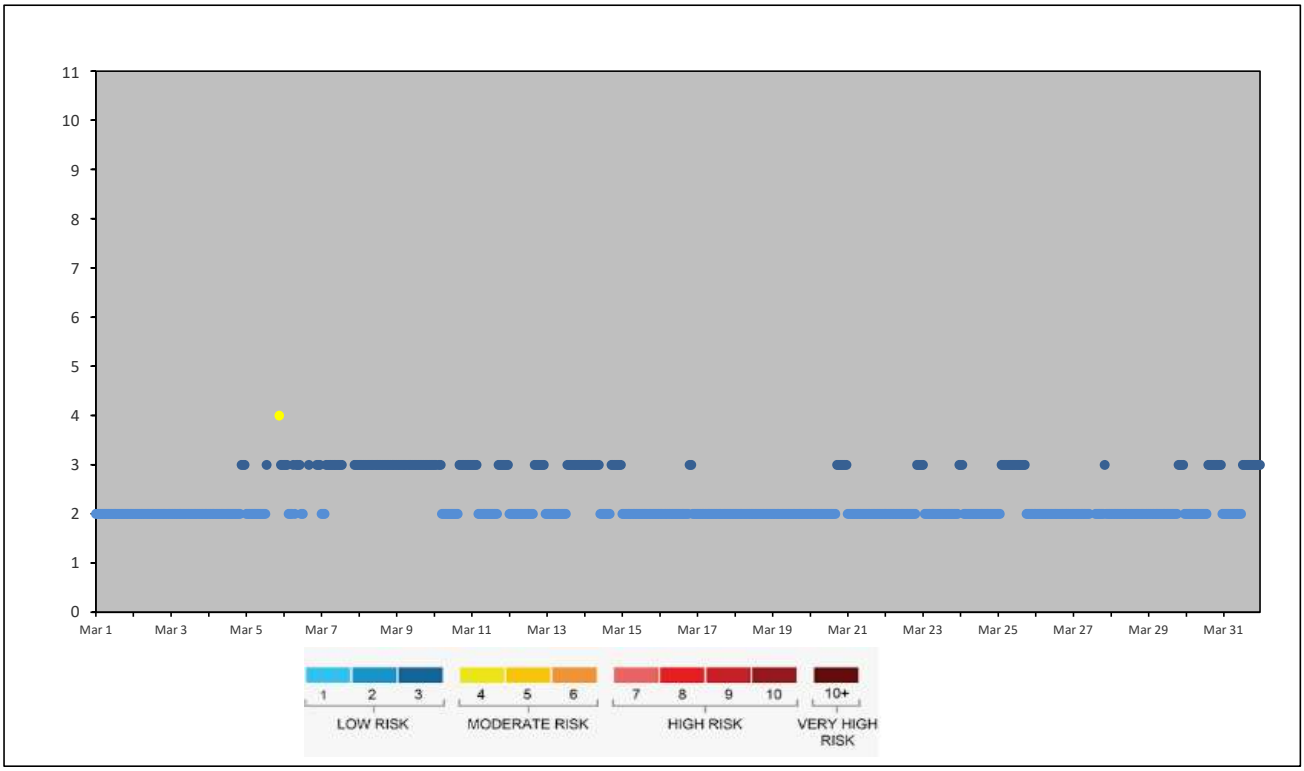
LAC LA BICHE STATION

LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - March 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
Mar 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3
Mar 5	2	2	2	2	2	2	2	2	2	2	2	2	2	3								4	3	3
Mar 6	3	3	3	2	2	2	3	2	3	3	3	2	2				3					3	3	2
Mar 7	2	2	2	3	3	3	3	3	3	3	3	3	3	3								3	3	3
Mar 8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 9	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mar 10	3	3		3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
Mar 11	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3
Mar 12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	2
Mar 13	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Mar 14	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3	3	3	3
Mar 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
Mar 16	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2
Mar 17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3
Mar 21	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 22	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3
Mar 23	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
Mar 24	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 25	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2
Mar 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
Mar 27	2	2	2	2	2	2	2	2	2	2	2				2	2	2	2	2	2	3	2	2	2
Mar 28	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mar 29	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2
Mar 30	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	2
Mar 31	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

SULPHUR DIOXIDE (SO_2) in ppb

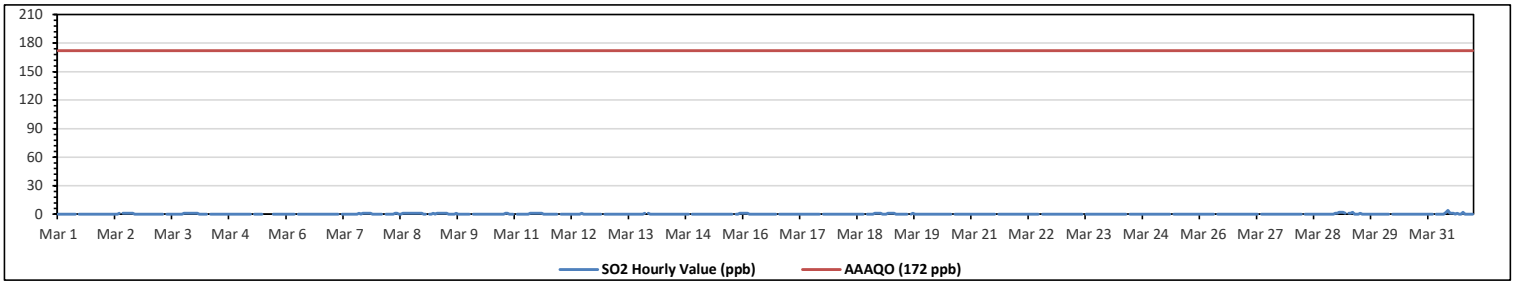
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb

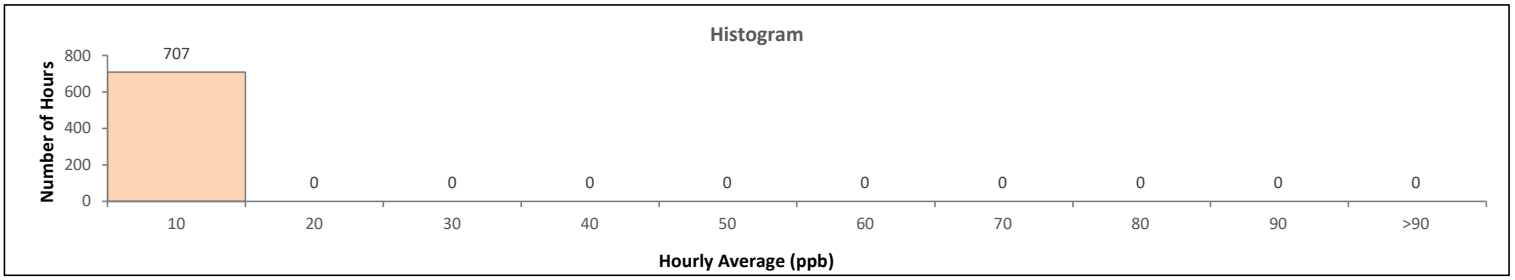
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0	30-Day Exceedence:	0	
Maximum Hourly Value:	4	ppb	on Mar 31 at hr 10	Hours in Service:	744	
Maximum Daily Value:	0.6	ppb	on Mar 8	Hours of Data:	707	
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	0	
Minimum Daily Value:	0.0	ppb	on Mar 1	Hours of Calibration:	37	
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			
Mar 1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 2	0	0	0	0	0	0	0	0	1	S	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.3
Mar 3	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0.3
Mar 4	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Mar 5	0	0	0	0	0	0	S	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0
Mar 6	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 7	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0	0	0	0	1	0.3
Mar 8	0	0	0	S	0	0	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	**0.6**
Mar 9	0	0	S	0	0	1	0	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0.3
Mar 10	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0.1
Mar 11	S	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	S	0	1	0.3
Mar 12	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.0
Mar 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S	1	0	0	1	0.1
Mar 14	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
Mar 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	1	0	1	0.1
Mar 16	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.1
Mar 17	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
Mar 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	1	1	0	1	0.1
Mar 19	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	S	0	1	0	0	0	0	0	0	0	1	0.3
Mar 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 21	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 22	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
Mar 23	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
Mar 24	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 25	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
Mar 26	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 27	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
Mar 28	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.0
Mar 29	1	2	2	2	1	S	1	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	**0.6**
Mar 30	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 31	0	0	0	S	0	0	0	0	0	2	4	1	1	1	0	1	0	0	2	0	0	0	0	0	0	**4**	0.5
Diurnal Maximum	1	2	2	2	1	1	1	1	2	2	4	1	1	1	1	1	1	1	2	1	1	1	1	1			
Diurnal Average	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	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.



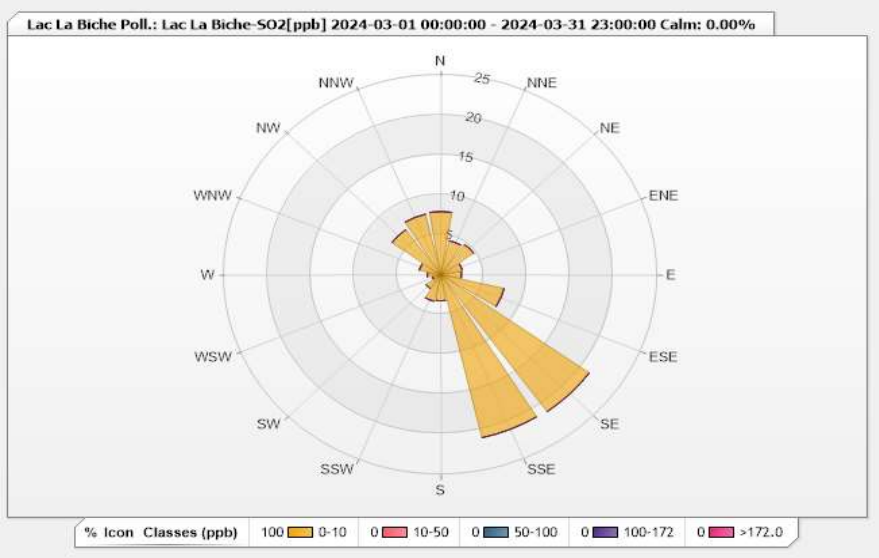


Station: Lac La Biche Poll.: Lac La Biche-SO2[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	7.92	0	0	0	0	7.92
NNE	4.38	0	0	0	0	4.38
NE	4.67	0	0	0	0	4.67
ENE	2.55	0	0	0	0	2.55
E	2.4	0	0	0	0	2.4
ESE	7.5	0	0	0	0	7.5
SE	21.07	0	0	0	0	21.07
SSE	20.93	0	0	0	0	20.93
S	3.25	0	0	0	0	3.25
SSW	3.39	0	0	0	0	3.39
SW	2.12	0	0	0	0	2.12
WSW	0.99	0	0	0	0	0.99
W	1.56	0	0	0	0	1.56
WNW	2.55	0	0	0	0	2.55
NW	6.93	0	0	0	0	6.93
NNW	7.78	0	0	0	0	7.78
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 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

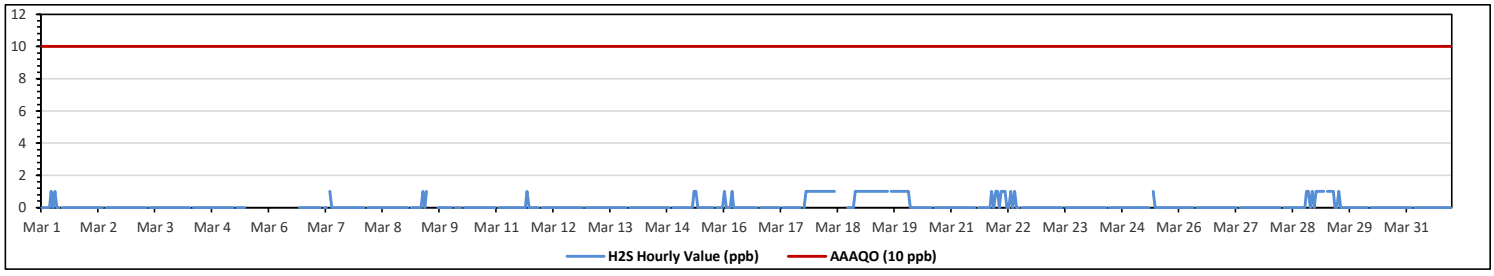
Number of 1-Hour Exceedances:	0		Number of 24-Hour Exceedances:	0	
Maximum Hourly Value:	1	ppb	on Mar 1 at hr 5	Hours in Service:	744
Maximum Daily Value:	1.0	ppb	on Mar 18	Hours of Data:	672
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 0	Hours of Missing Data:	35
Minimum Daily Value:	0.0	ppb	on Mar 1	Hours of Calibration:	37
Monthly Average:	0.1	ppb		Operational Uptime:	95.3

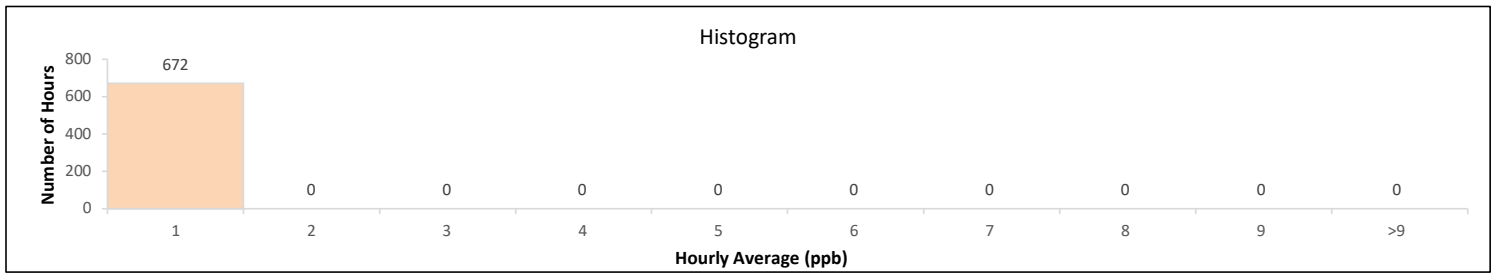
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	0	0	0	0	0	1	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 2	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 3	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 4	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
Mar 5	0	0	0	0	0	0	S	0	0	0	0	0	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	0	0	-
Mar 6	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	0	0	0	0	0	0	0	0	0	0	-
Mar 7	0	0	0	0	S	0	0	NRM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 8	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
Mar 9	0	0	S	0	0	0	0	0	0	1	0	1	NRM	NRM	NRM	NRM	NRM	0	0	0	0	0	0	0	0	1	0.0
Mar 10	0	S	0	0	0	0	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 11	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	S	0	1	0.0
Mar 12	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
Mar 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Mar 14	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
Mar 15	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.0
Mar 16	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.0
Mar 17	0	0	0	0	0	0	NRM	0	0	0	0	0	0	0	0	0	0	S	0	1	1	1	1	1	0	1	0.0
Mar 18	1	1	1	1	1	1	1	1	1	1	1	NRM	NRM	NRM	NRM	NRM	NRM	0	0	0	0	1	1	1	0	1	1.0
Mar 19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1.0
Mar 20	1	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 21	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0	1	0	1	0.0
Mar 22	1	0	1	1	1	0	0	1	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 23	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
Mar 24	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 25	0	0	0	0	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 26	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 27	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
Mar 28	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	1	0.0
Mar 29	1	1	1	1	1	S	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 30	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Mar 31	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Diurnal Maximum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1			
Diurnal Average	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	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.



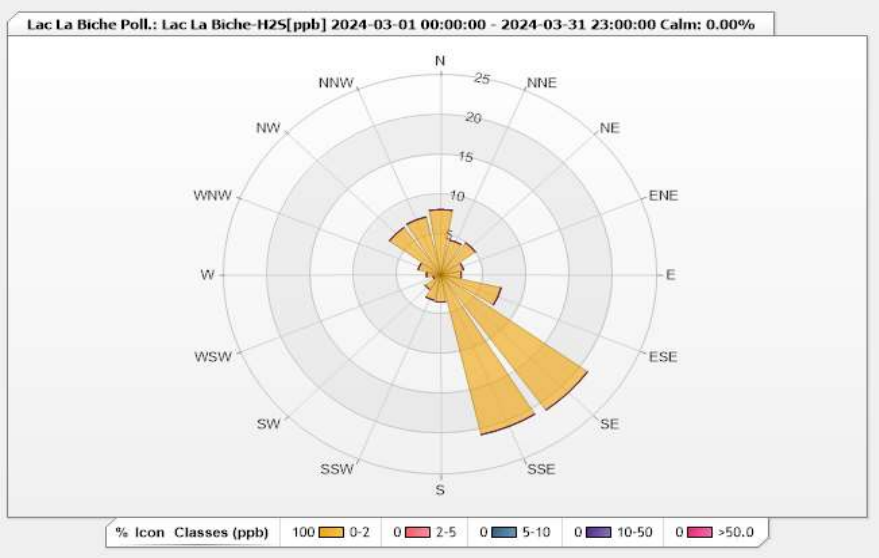


Station: Lac La Biche Poll.: Lac La Biche-H2S[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 90.32% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	8.18	0	0	0	0	8.18
NNE	4.46	0	0	0	0	4.46
NE	4.91	0	0	0	0	4.91
ENE	2.68	0	0	0	0	2.68
E	2.38	0	0	0	0	2.38
ESE	7.14	0	0	0	0	7.14
SE	20.83	0	0	0	0	20.83
SSE	20.54	0	0	0	0	20.54
S	3.42	0	0	0	0	3.42
SSW	3.27	0	0	0	0	3.27
SW	2.23	0	0	0	0	2.23
WSW	0.89	0	0	0	0	0.89
W	1.64	0	0	0	0	1.64
WNW	2.68	0	0	0	0	2.68
NW	7.29	0	0	0	0	7.29
NNW	7.44	0	0	0	0	7.44
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

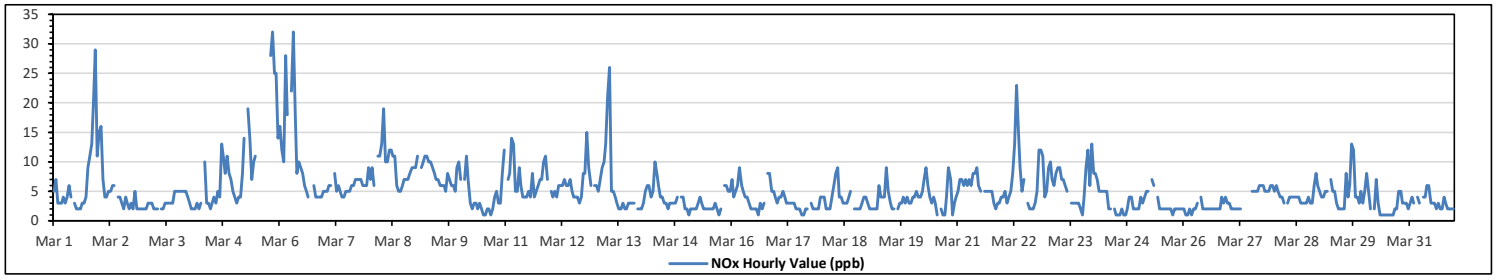
OXIDES OF NITROGEN (NOx) in ppb

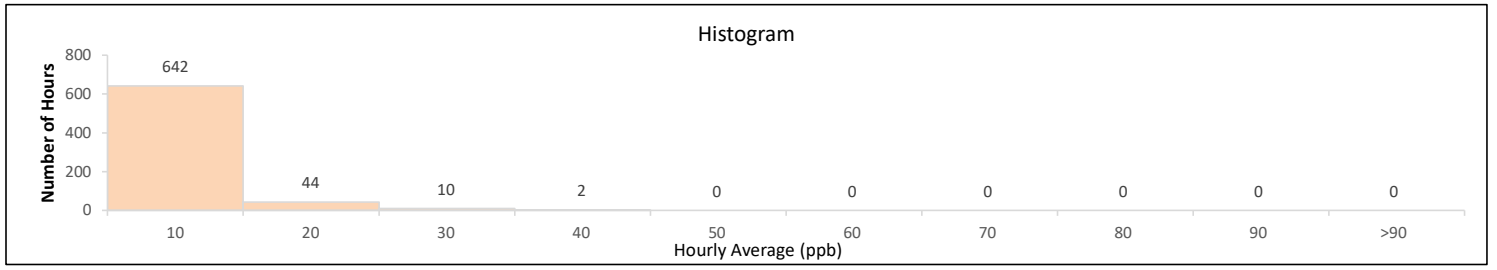
Maximum Hourly Value:	32	ppb	on Mar 5 at hr 20	Hours in Service:	744
Maximum Daily Value:	11.1	ppb	on Mar 6	Hours of Data:	698
Minimum Hourly Value:	1	ppb	on Mar 10 at hr 12	Hours of Missing Data:	7
Minimum Daily Value:	2.3	ppb	on Mar 26	Hours of Calibration:	39
Monthly Average:	5.2	ppb		Operational 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			
Mar 1	5	7	3	3	3	4	3	4	6	4	S	3	2	2	2	3	3	4	9	11	13	21	29	11	2	29	6.7
Mar 2	15	16	7	4	4	5	5	6	6	S	4	4	3	2	4	3	2	3	2	5	2	2	2	2	2	16	4.7
Mar 3	2	2	3	3	3	2	2	2	S	2	2	3	3	3	3	3	5	5	5	5	5	5	5	4	2	5	3.3
Mar 4	3	2	2	2	3	2	3	S	10	3	3	2	3	4	3	5	4	13	11	8	11	8	7	5	2	13	5.1
Mar 5	4	3	4	4	8	14	S	19	14	7	10	11	C	C	C	C	C	C	C	28	**32**	25	25	14	3	**32**	NA
Mar 6	16	12	10	28	18	S	22	**32**	18	8	10	9	8	6	5	4	Y	Y	6	4	4	4	4	5	4	**32**	**11.1**
Mar 7	5	5	6	6	S	8	5	6	5	4	4	5	5	5	6	6	7	7	7	7	6	6	6	9	4	9	5.9
Mar 8	7	9	6	S	11	11	13	19	10	10	12	12	11	11	6	5	5	6	7	7	7	8	9	9	5	19	9.2
Mar 9	9	11	S	9	10	11	11	10	10	9	8	7	7	6	6	6	5	8	7	6	6	5	9	10	5	11	8.1
Mar 10	7	S	7	11	7	3	2	3	3	2	3	2	1	1	2	2	1	2	4	5	3	3	8	12	**1**	12	4.1
Mar 11	S	7	8	14	13	5	5	9	6	4	4	4	5	4	8	4	5	6	7	7	10	11	7	S	4	14	7.0
Mar 12	5	4	5	4	6	6	6	7	6	6	7	5	4	4	4	3	4	8	8	15	9	6	S	6	3	15	6.0
Mar 13	6	5	7	9	10	13	21	26	5	5	4	3	2	2	3	2	2	3	3	3	3	S	2	2	2	26	6.1
Mar 14	2	3	5	6	6	4	5	10	8	6	4	4	3	3	2	3	3	3	3	4	S	4	4	2	2	10	4.2
Mar 15	2	1	2	2	2	2	3	4	3	2	2	2	2	2	2	3	2	1	2	S	6	6	5	5	**1**	6	2.7
Mar 16	7	4	5	6	9	6	5	4	4	3	2	2	2	2	1	3	2	3	S	8	8	5	5	4	**1**	9	4.3
Mar 17	3	4	4	5	4	3	3	3	3	3	2	2	2	1	1	2	2	S	3	2	2	2	2	4	**1**	5	2.7
Mar 18	4	4	2	2	2	4	6	8	9	4	4	3	3	3	4	5	S	2	2	2	2	3	4	4	2	9	3.7
Mar 19	3	2	2	2	2	2	6	4	4	4	9	5	3	2	2	S	2	3	3	4	3	4	3	3	2	9	3.3
Mar 20	4	4	5	4	4	5	7	9	6	4	3	4	3	1	S	2	1	1	4	9	7	1	3	4	**1**	9	4.1
Mar 21	5	7	7	6	7	6	7	6	8	8	9	6	5	S	5	5	5	5	5	3	2	3	3	4	2	9	5.5
Mar 22	4	5	3	4	5	8	13	23	15	9	5	7	S	3	2	2	2	3	5	12	12	11	4	5	2	23	7.0
Mar 23	9	10	7	6	8	9	9	7	7	6	5	S	3	3	3	3	3	2	1	4	9	12	6	13	**1**	13	6.3
Mar 24	8	8	7	5	5	5	5	5	2	2	S	2	1	1	1	2	1	1	2	4	4	2	2	2	**1**	8	3.3
Mar 25	2	4	3	4	5	5	NRM	7	6	S	4	2	2	2	2	2	2	2	1	2	2	2	2	2	**1**	7	3.0
Mar 26	2	1	1	2	1	2	2	3	S	4	2	2	2	2	2	2	2	2	2	2	4	3	4	3	**1**	4	**2.3**
Mar 27	3	2	2	2	2	2	2	S	2	NRM	NRM	NRM	5	5	5	5	6	6	6	5	5	5	6	6	2	6	4.1
Mar 28	5	6	5	4	4	3	S	3	4	4	4	4	4	4	3	3	3	3	4	3	3	6	8	6	3	8	4.2
Mar 29	5	4	4	5	5	S	7	5	5	3	2	2	2	2	8	4	6	13	12	4	4	3	5	3	2	13	4.9
Mar 30	5	8	5	2	S	2	7	3	1	1	1	1	1	1	1	1	2	2	5	5	3	3	3	2	**1**	8	2.8
Mar 31	3	4	3	S	4	3	NRM	4	4	6	6	3	3	3	2	3	2	2	4	3	2	2	2	2	2	6	3.2
Diurnal Maximum	16	16	10	28	18	14	22	32	18	10	12	12	11	11	8	6	7	13	12	28	32	25	29	14			
Diurnal Average	5.3	5.5	4.7	5.7	5.9	5.3	6.9	8.7	6.6	4.8	4.8	4.2	3.4	3.1	3.4	3.3	3.2	4.3	4.8	6.2	6.3	6.0	6.1	5.4			

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.



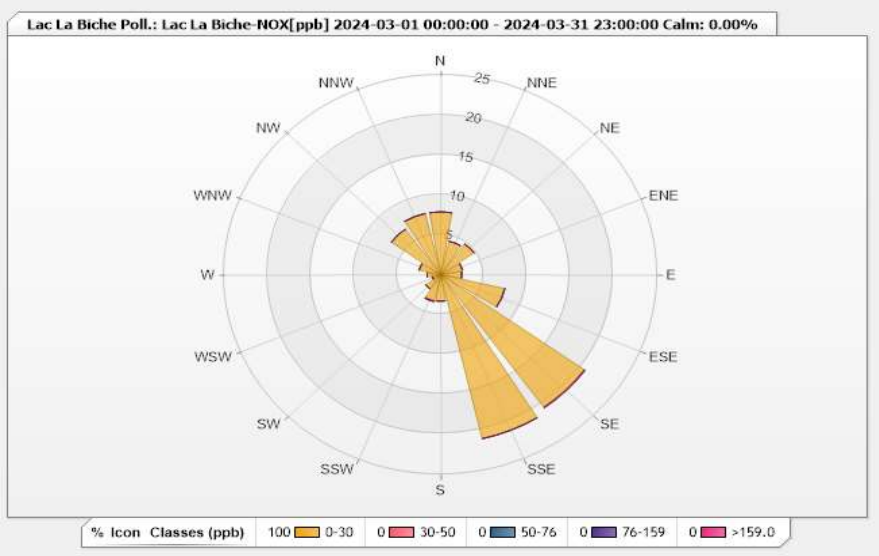


Station: Lac La Biche Poll.: Lac La Biche-NOX[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 93.82% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	7.88	0	0	0	0	7.88
NNE	4.3	0	0	0	0	4.3
NE	4.73	0	0	0	0	4.73
ENE	2.58	0	0	0	0	2.58
E	2.44	0	0	0	0	2.44
ESE	7.59	0	0	0	0	7.59
SE	20.34	0.14	0	0	0	20.48
SSE	21.06	0	0	0	0	21.06
S	3.3	0	0	0	0	3.3
SSW	3.3	0.14	0	0	0	3.44
SW	2.15	0	0	0	0	2.15
WSW	1	0	0	0	0	1
W	1.58	0	0	0	0	1.58
WNW	2.58	0	0	0	0	2.58
NW	7.02	0	0	0	0	7.02
NNW	7.88	0	0	0	0	7.88
Summary	100	0.28	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

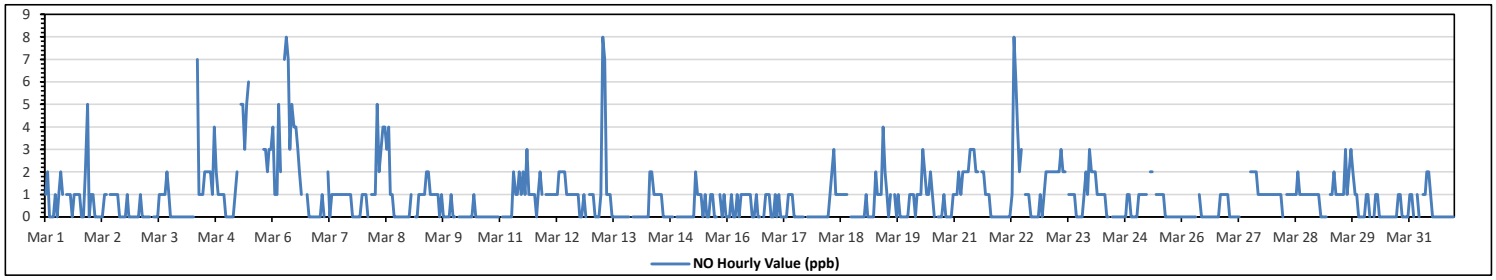
NITRIC OXIDE (NO) in ppb

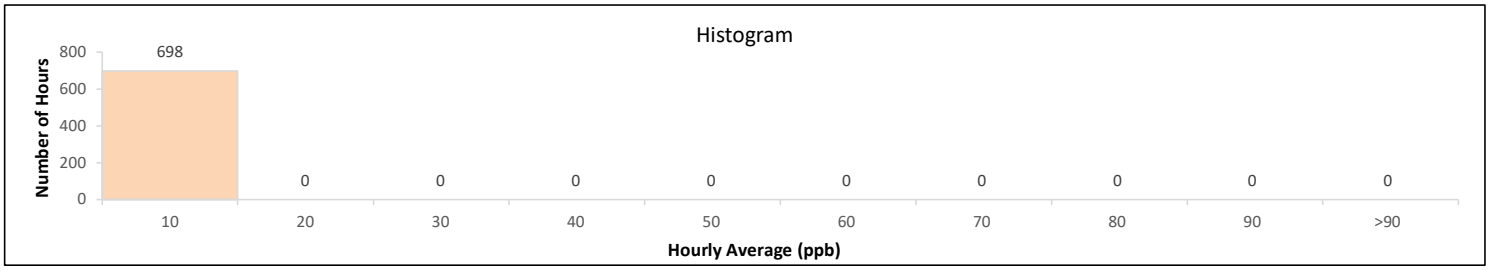
Maximum Hourly Value:	8	ppb	on Mar 6 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.8	ppb	on Mar 6	Hours of Data:	698
Minimum Hourly Value:	0	ppb	on Mar 1 at hr 2	Hours of Missing Data:	7
Minimum Daily Value:	0.0	ppb	on Mar 10	Hours of Calibration:	39
Monthly Average:	0.8	ppb		Operational Uptime:	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			
Mar 1	1	2	0	0	0	1	0	1	2	1	S	1	1	1	0	1	1	1	1	0	0	2	5	0	0	5	1.0
Mar 2	1	1	0	0	0	0	0	1	1	S	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	1	0.4
Mar 3	0	0	1	0	0	0	0	0	S	0	0	0	1	1	1	1	2	1	0	0	0	0	0	0	0	2	0.3
Mar 4	0	0	0	0	0	0	0	S	7	1	1	1	2	2	2	2	1	4	2	1	1	1	1	0	0	7	1.3
Mar 5	0	0	0	0	1	2	S	5	5	3	5	6	C	C	C	C	C	C	C	3	3	2	3	3	0	6	NA
Mar 6	4	1	1	5	2	S	7	8	7	3	5	4	4	3	2	1	Y	Y	1	0	0	0	0	0	0	8	2.8
Mar 7	0	0	1	0	S	2	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	2	0.7
Mar 8	1	1	0	S	1	1	1	5	2	3	4	4	3	4	1	1	0	0	0	0	0	0	0	0	0	5	1.4
Mar 9	0	1	S	0	0	1	1	1	1	2	2	1	1	1	1	1	0	1	0	0	0	0	1	0	0	2	0.7
Mar 10	0	S	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Mar 11	S	0	0	0	0	0	0	2	1	1	2	1	2	1	3	1	1	1	1	0	1	2	1	S	0	3	1.0
Mar 12	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	0	0	1	0	S	1	0	2	1.0
Mar 13	1	1	0	0	0	1	8	7	1	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	8	0.9
Mar 14	0	0	0	0	0	0	0	2	2	1	1	1	1	1	0	0	0	0	0	0	S	0	0	0	0	2	0.4
Mar 15	0	0	0	0	0	0	0	2	1	1	1	0	1	0	0	1	1	0	0	S	1	0	1	0	0	2	0.4
Mar 16	0	0	1	0	0	1	0	1	1	1	1	1	0	0	1	0	0	0	S	0	1	1	1	0	0	1	0.5
Mar 17	0	1	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0.2
Mar 18	0	0	0	0	0	0	1	2	3	1	1	1	1	1	1	1	S	0	0	0	0	0	0	0	0	3	0.6
Mar 19	0	1	0	0	0	0	2	1	1	1	4	2	1	0	1	S	1	0	1	0	0	0	0	0	0	4	0.7
Mar 20	1	1	1	0	1	1	1	3	2	1	1	2	1	0	S	0	0	0	1	0	0	0	0	1	0	3	0.8
Mar 21	1	1	2	1	2	2	2	2	3	3	3	2	2	S	2	2	1	1	1	0	0	0	0	0	0	3	1.4
Mar 22	0	0	0	0	0	0	1	8	6	4	2	3	S	1	1	1	0	0	0	0	0	1	0	1	0	8	1.3
Mar 23	2	2	2	2	2	2	2	2	3	2	2	S	1	1	1	1	0	0	0	0	1	2	1	3	0	3	1.5
Mar 24	2	2	2	1	1	1	1	1	0	0	S	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.6
Mar 25	0	1	1	1	1	1	NRM	2	2	S	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	2	0.6
Mar 26	0	0	0	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0.2
Mar 27	1	0	0	0	0	0	0	S	0	NRM	NRM	NRM	2	2	2	2	1	1	1	1	1	1	1	1	0	2	0.9
Mar 28	1	1	1	1	1	0	S	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0	2	1.0
Mar 29	1	0	0	0	0	S	1	1	2	1	1	1	1	1	3	1	2	3	2	1	1	0	0	0	0	3	1.0
Mar 30	0	1	1	0	S	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0.3
Mar 31	1	1	0	S	1	0	NRM	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.5
Diurnal Maximum	4	2	2	5	2	2	8	8	7	4	5	6	4	4	3	2	2	4	2	3	3	2	5	3			
Diurnal Average	0.6	0.7	0.5	0.4	0.5	0.6	1.1	2.2	2.0	1.4	1.7	1.3	1.1	0.9	0.9	0.7	0.5	0.6	0.4	0.3	0.5	0.5	0.6	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.



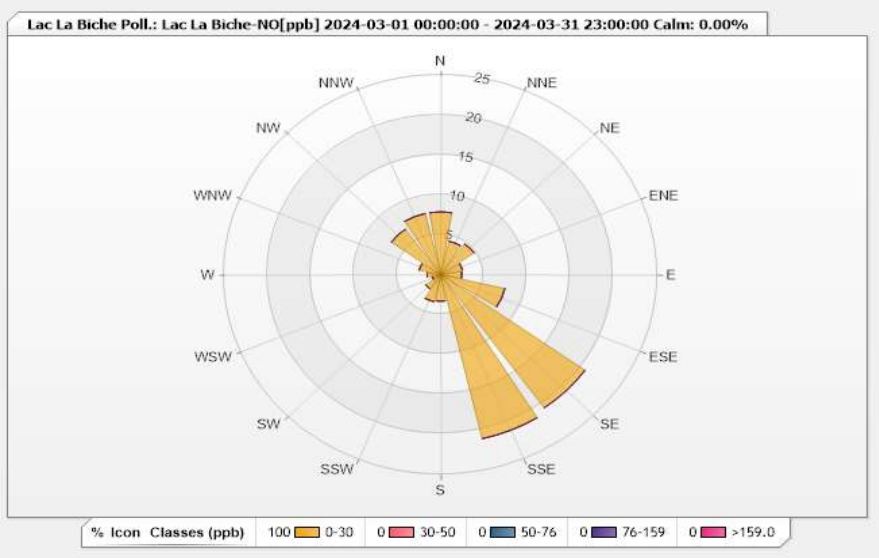


Station: Lac La Biche Poll.: Lac La Biche-NO[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 93.82% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	7.88	0	0	0	0	7.88
NNE	4.3	0	0	0	0	4.3
NE	4.73	0	0	0	0	4.73
ENE	2.58	0	0	0	0	2.58
E	2.44	0	0	0	0	2.44
ESE	7.59	0	0	0	0	7.59
SE	20.49	0	0	0	0	20.49
SSE	21.06	0	0	0	0	21.06
S	3.3	0	0	0	0	3.3
SSW	3.44	0	0	0	0	3.44
SW	2.15	0	0	0	0	2.15
WSW	1	0	0	0	0	1
W	1.58	0	0	0	0	1.58
WNW	2.58	0	0	0	0	2.58
NW	7.02	0	0	0	0	7.02
NNW	7.88	0	0	0	0	7.88
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 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

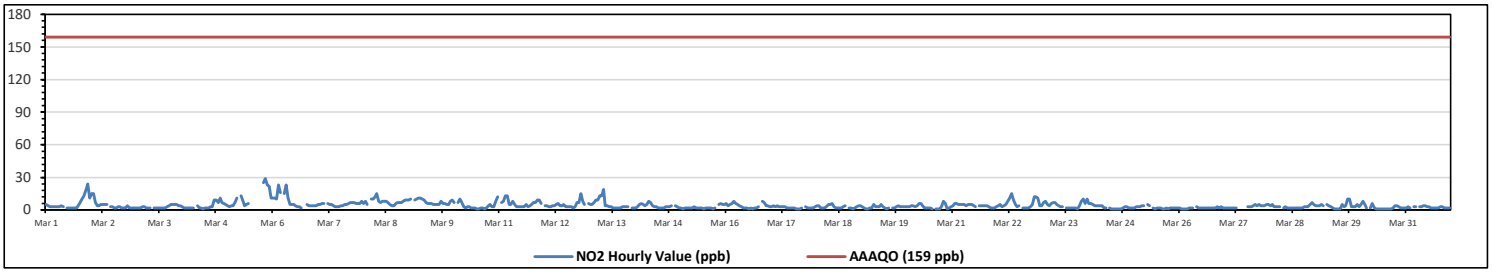
Maximum Hourly Value:	29	ppb	on Mar 5 at hr 20	Hours in Service:	744
Maximum Daily Value:	8.2	ppb	on Mar 6	Hours of Data:	698
Minimum Hourly Value:	1	ppb	on Mar 4 at hr 11	Hours of Missing Data:	7
Minimum Daily Value:	2.0	ppb	on Mar 26	Hours of Calibration:	39
Monthly Average:	4.3	ppb		Operational Uptime:	99.1

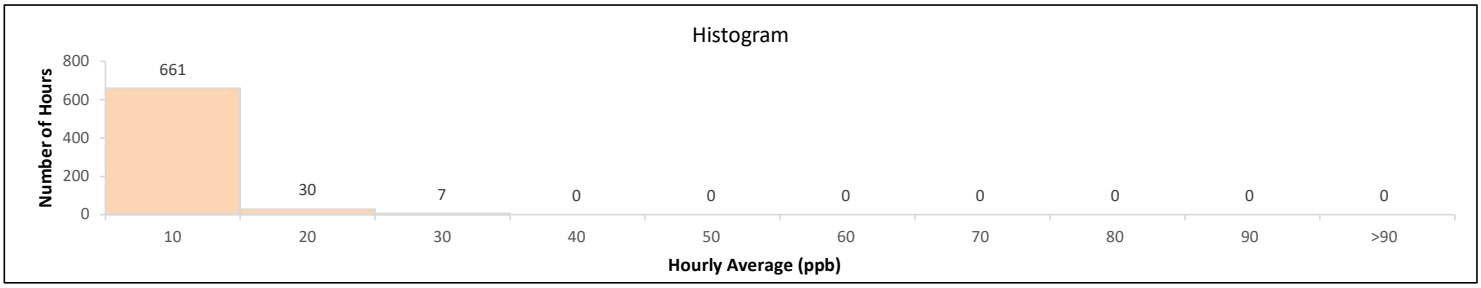
Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	5	4	3	3	3	3	3	3	4	3	S	2	2	2	2	2	2	4	7	10	13	19	24	11	2	24	5.8
Mar 2	15	15	7	4	4	5	5	5	5	S	3	3	2	2	3	3	2	2	2	4	2	2	2	2	2	15	4.3
Mar 3	2	2	2	3	3	2	2	2	S	2	2	2	2	2	2	2	3	4	5	5	5	5	4	4	2	5	2.9
Mar 4	3	2	2	2	2	2	2	S	4	2	2	1	2	2	2	3	3	9	9	7	11	7	6	5	1	11	3.9
Mar 5	4	3	4	4	7	11	S	13	9	4	5	6	C	C	C	C	C	C	C	25	29	23	22	11	3	29	NA
Mar 6	11	11	10	23	16	S	15	23	11	5	5	5	4	3	3	2	Y	Y	5	4	4	4	4	4	2	23	8.2
Mar 7	5	5	6	6	S	6	5	5	4	3	3	3	4	4	5	5	6	7	7	7	6	6	6	8	3	8	5.3
Mar 8	6	8	5	S	10	10	12	15	8	7	8	8	8	7	5	4	4	6	7	7	7	8	9	9	4	15	7.7
Mar 9	9	10	S	9	10	11	11	10	9	7	6	6	6	5	5	5	5	8	6	6	5	5	8	9	5	11	7.4
Mar 10	7	S	7	10	7	3	2	3	3	2	2	2	1	1	2	2	1	2	4	5	3	3	8	12	1	12	4.0
Mar 11	S	7	8	13	13	5	5	8	5	3	3	3	3	3	5	3	4	5	7	7	9	9	6	S	3	13	6.1
Mar 12	4	4	3	3	4	4	5	6	4	4	5	3	3	3	3	2	3	7	7	15	8	5	S	6	2	15	4.8
Mar 13	5	5	7	9	9	13	13	19	4	4	3	3	2	2	2	2	2	3	3	3	3	S	2	2	2	19	5.2
Mar 14	2	3	5	6	5	4	5	8	7	4	3	3	2	2	2	2	3	3	3	4	S	4	3	2	2	8	3.7
Mar 15	2	1	2	2	2	2	2	3	2	2	2	2	1	2	2	2	2	1	2	S	5	6	5	5	1	6	2.5
Mar 16	6	4	5	6	8	6	5	4	3	2	2	2	1	2	1	2	2	3	S	8	7	4	4	3	1	8	3.9
Mar 17	3	4	3	4	3	3	3	3	2	2	2	2	2	1	1	1	2	S	3	2	2	2	2	3	1	4	2.4
Mar 18	4	4	2	2	2	3	5	5	6	3	2	2	2	2	3	4	S	2	2	1	2	3	4	4	1	6	3.0
Mar 19	3	2	1	1	2	2	5	3	3	3	5	3	2	1	2	S	2	2	3	4	3	3	3	3	1	5	2.7
Mar 20	3	3	4	4	3	4	6	6	4	2	2	2	2	2	1	S	1	1	4	8	6	1	2	3	1	8	3.2
Mar 21	4	6	6	5	5	5	5	4	5	5	5	4	3	S	4	4	4	4	4	3	2	2	2	3	2	6	4.1
Mar 22	4	5	3	4	5	8	11	15	9	5	3	4	S	2	2	2	2	3	5	12	12	11	4	4	2	15	5.9
Mar 23	7	8	5	4	6	7	7	5	4	3	3	S	2	2	2	2	2	2	1	4	8	10	6	10	1	10	4.8
Mar 24	6	6	5	4	4	4	4	4	2	2	S	2	1	1	1	1	1	1	2	3	3	2	2	2	1	6	2.7
Mar 25	2	3	3	3	4	4	NRM	5	4	S	2	1	2	2	2	1	1	2	1	2	2	2	2	2	1	5	2.4
Mar 26	2	1	1	1	1	2	2	2	S	3	2	2	2	2	2	2	2	2	2	2	3	2	3	2	1	3	2.0
Mar 27	2	2	2	2	2	2	2	S	2	NRM	NRM	NRM	3	3	3	4	5	4	5	4	4	4	5	5	2	5	3.3
Mar 28	4	5	3	3	3	3	S	2	3	2	2	2	2	2	2	2	2	2	3	3	3	5	7	5	2	7	3.0
Mar 29	4	4	4	5	4	S	5	4	3	2	1	1	1	1	5	3	4	10	10	3	3	3	5	3	1	10	3.8
Mar 30	5	8	5	2	S	2	6	2	1	1	1	1	1	1	1	1	1	2	4	4	3	2	2	2	1	8	2.5
Mar 31	2	3	2	S	3	3	NRM	3	3	4	4	3	3	2	2	2	2	2	3	3	2	2	2	2	2	4	2.6
Diurnal Maximum	15	15	10	23	16	13	15	23	11	7	8	8	8	7	5	5	6	10	10	25	29	23	24	12			
Diurnal Average	4.7	4.9	4.2	5.1	5.2	4.8	5.7	6.6	4.6	3.3	3.1	2.9	2.4	2.2	2.6	2.4	2.6	3.7	4.3	5.8	5.8	5.5	5.5	4.9			

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.



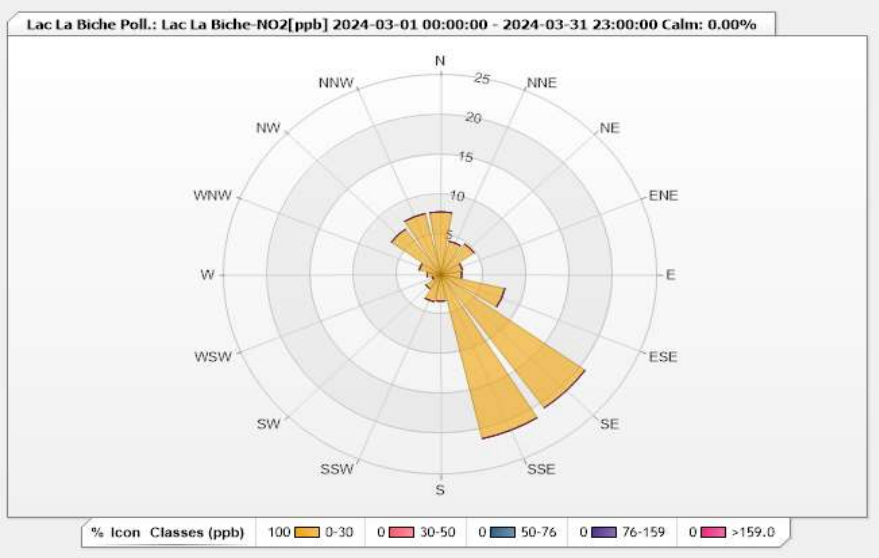


Station: Lac La Biche Poll.: Lac La Biche-NO2[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 93.82% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	7.88	0	0	0	0	7.88
NNE	4.3	0	0	0	0	4.3
NE	4.73	0	0	0	0	4.73
ENE	2.58	0	0	0	0	2.58
E	2.44	0	0	0	0	2.44
ESE	7.59	0	0	0	0	7.59
SE	20.49	0	0	0	0	20.49
SSE	21.06	0	0	0	0	21.06
S	3.3	0	0	0	0	3.3
SSW	3.44	0	0	0	0	3.44
SW	2.15	0	0	0	0	2.15
WSW	1	0	0	0	0	1
W	1.58	0	0	0	0	1.58
WNW	2.58	0	0	0	0	2.58
NW	7.02	0	0	0	0	7.02
NNW	7.88	0	0	0	0	7.88
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

OZONE (O_3) in ppb

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

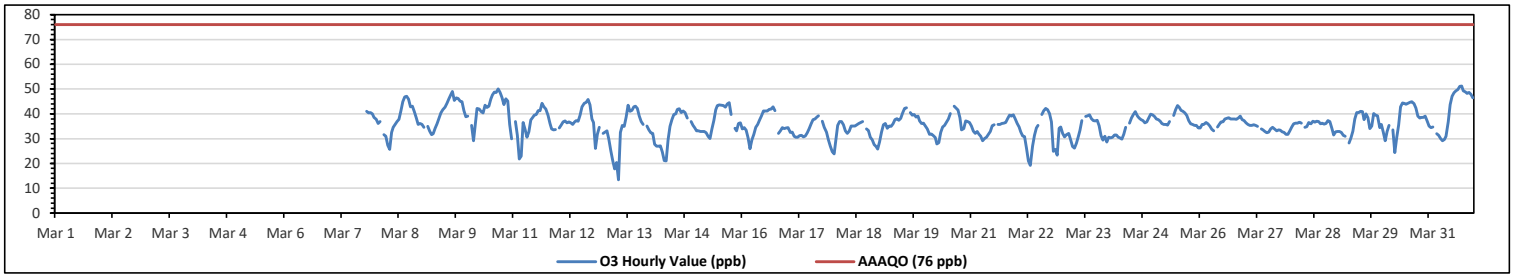
Number of 1-Hour Exceedances: 0

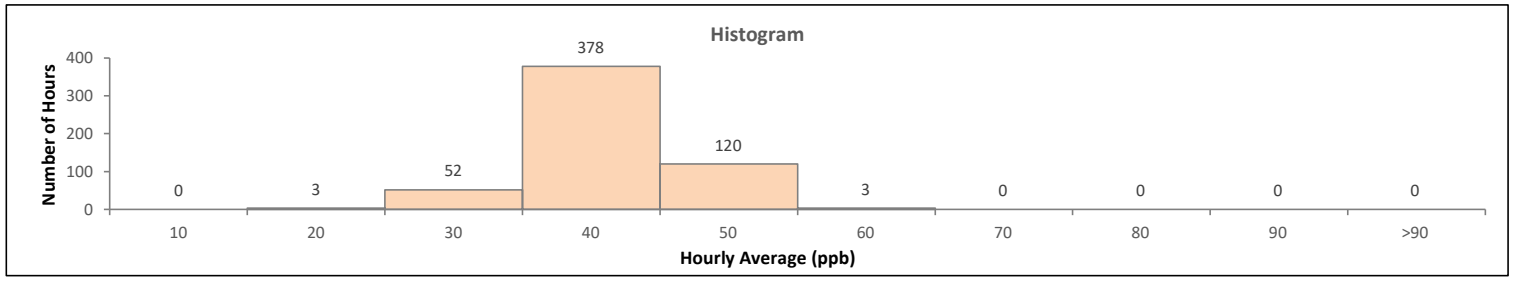
Maximum Hourly Value:	51.2	ppb	on Mar 31 at hr 17	Hours in Service:	744
Maximum Daily Value:	42.2	ppb	on Mar 10	Hours of Data:	556
Minimum Hourly Value:	13.4	ppb	on Mar 13 at hr 7	Hours of Missing Data:	158
Minimum Daily Value:	32.4	ppb	on Mar 22	Hours of Calibration:	30
Monthly Average:	36.2	ppb		Operational Uptime:	78.8

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 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	-	-	
Mar 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	-	-	
Mar 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	-	-	
Mar 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	-	-	
Mar 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	-	-	
Mar 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	-	-	
Mar 7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C	C	C	C	C	41	40.4	40.6	40	38.6	38.6	41.0	NA
Mar 8	37.8	36.2	36.9	S	31.6	31	27.4	25.7	32.4	34.5	35.8	36.8	37.8	41.1	45	46.8	47.1	45.9	42.9	43.1	40.9	38.5	35.8	36.1	25.7	47.1	37.7
Mar 9	35.8	34.5	S	34.9	33	31.6	32	34.2	36	38.2	40.4	41.7	42.8	44.3	46	47.7	49.1	45.4	46.4	46.2	45.1	44.9	41.2	38.8	31.6	49.1	40.4
Mar 10	39.1	S	35.4	29.2	35	42.2	41.9	40.9	40.4	43.4	42.6	43	45.9	47.6	48.8	48.7	50.1	48.6	46.6	43.7	46.1	45.1	35.8	29.9	29.2	50.1	**42.2**
Mar 11	S	36.9	31.3	21.7	22.9	36.5	33.8	30.5	32.7	37.5	38.6	39.4	39.7	41.2	41.3	44.3	42.9	41.9	39.3	36.1	33.9	33.5	33.7	S	21.7	44.3	35.9
Mar 12	34.3	35.5	36.7	37.1	36.4	36.7	36.4	35.8	36.7	37.2	37	39.4	42.9	44.3	44.6	45.8	43.6	38	36.5	26	31.8	34.5	S	32.1	26.0	45.8	37.4
Mar 13	32.6	33.2	29.7	25.1	21.2	17.8	20.3	13.4	32.4	35.4	34.9	38.7	43.5	41	41.4	42.9	43.1	42.2	39	36.9	35.7	S	35.1	33.6	**13.4**	43.5	33.4
Mar 14	32.3	32.1	27.8	26.9	26.9	27.1	24.6	21.2	21.1	29.6	34.9	37.7	39.7	40	41.8	42	40.5	41.1	40.5	38.3	S	36.9	35.3	34.4	21.1	42.0	33.6
Mar 15	33.1	33.2	32.9	32.9	32.8	32.3	30.9	30.1	33.9	37.2	41.6	43.3	43.6	43.4	43.3	42.8	44	44.5	39.7	S	34.2	33.2	36.2	36.4	30.1	44.5	37.2
Mar 16	34	34.4	33.4	30.2	25.9	29.6	31.8	34.5	35.8	37.5	39.2	41.1	41.1	41.1	41.8	41.9	42.9	41.2	S	32.2	33.1	34.4	34.1	34.3	25.9	42.9	35.9
Mar 17	34.4	32.5	32.6	30.9	30.5	30.6	31.2	31.3	30.7	31.1	32.3	34.1	36	37.6	37.9	38.7	39.2	S	37	34.5	32.6	29.6	27	24.7	24.7	39.2	32.9
Mar 18	23.8	29.1	35.4	36.8	36.9	35.6	33.1	32.2	33	35.1	35.1	35.1	35.6	36.1	36.5	36.9	S	33.9	33.3	30.5	29.6	27.6	26.8	25.8	23.8	36.9	32.8
Mar 19	28.7	32.6	35.6	36.1	34.2	35.1	34.9	36	37.7	38.1	37.4	38.2	40.4	42.2	42.4	S	40.5	39.4	39.7	38.7	39	37.1	36.1	36.3	28.7	42.4	37.2
Mar 20	35.1	34	31.7	31.9	31.2	30.4	27.9	28.3	32.5	34.6	35.4	36.6	37.9	40.1	S	43.1	42.3	41.5	38.5	33.5	34.1	37.1	36.8	36.5	27.9	43.1	35.3
Mar 21	35	33	32.2	32.9	31.9	31	29.2	30.1	30.6	31.8	32.8	35.2	35.6	S	35.7	35.7	36.2	36.3	36.5	38.1	39.4	39.1	39.6	37.9	29.2	39.6	34.6
Mar 22	36.2	34.7	32.7	31.1	30.8	26.1	21	19.3	26.9	31.3	34.3	35.4	S	39.7	41.3	42.2	41.7	40.1	36.7	24.9	25.7	23.3	34.2	34.6	19.3	42.2	**32.4**
Mar 23	32.1	30.7	31.6	32.2	29.6	26.8	26.2	28.1	30.8	33.3	37.3	S	38.9	39.2	39.6	38.1	37.3	37.1	37.4	35.2	31.2	29.4	31	28.6	26.2	39.6	33.1
Mar 24	30.6	30.2	30.5	31.5	31.5	30.6	30.2	29.8	31.8	34.5	S	36.3	38.4	39.7	40.8	39.1	38.3	37.7	37.2	36.4	36.7	38.4	39.9	39.6	29.8	40.8	35.2
Mar 25	38.9	37.9	37.6	37	36.2	35.8	35.7	35.5	36.8	S	39.3	41.7	43.3	42.7	41.4	41	40.4	39.3	37.3	36	35.7	35.4	35.3	34.3	34.3	43.3	38.0
Mar 26	34.3	35.8	35.7	36.5	36	35.1	33.8	33.2	S	34.6	35.9	36.7	36.7	37.9	38.2	38.5	37.9	37.9	38	37.8	38.4	39	37.6	37.2	33.2	39.0	36.6
Mar 27	36.4	35.7	35.4	35.4	35.6	35.3	34.9	S	33.9	33.6	32.9	32.3	32.6	33.9	34.5	33.9	33.1	33.5	33.4	32.7	32.4	31.8	31.8	33.2	31.8	36.4	33.8
Mar 28	34.6	36	36.3	36.3	36.6	36.3	S	34.5	34.8	36.5	36	37	36.6	37	36.9	36	36.3	35.9	36.1	37.3	36.9	34.3	31.5	32.7	31.5	37.3	35.8
Mar 29	32.9	32.8	32.4	31.3	30.9	S	28.2	30.2	33	37.9	40.5	40.5	41	40.8	37.6	40	38.5	34.1	35.1	40.1	39.5	39.2	34.4	35.8	28.2	41.0	35.9
Mar 30	32.6	29.1	32.9	35.3	S	33.6	24.4	30.4	35.5	42.9	44.4	44.3	43.8	44.2	44.7	45	44.1	42.3	39	38.3	38.6	38.6	39.1	37.1	24.4	45.0	38.3
Mar 31	35	34.4	34.6	S	32	31.4	30.1	29.1	29.7	31	36.7	43.7	47.1	48.5	49.3	49.8	51.1	**51.2**	49.3	48.9	48.3	48.7	47.8	46.5	29.1	**51.2**	41.5
Diurnal Maximum	39.1	37.9	37.6	37.1	36.9	42.2	41.9	40.9	40.4	43.4	44.4	44.3	47.1	48.5	49.3	49.8	51.1	51.2	49.3	48.9	48.3	48.7	47.8	46.5			
Diurnal Average	33.9	33.7	33.5	32.4	31.7	32.1	30.4	30.2	33.0	35.5	37.2	38.6	40.0	41.0	41.3	41.8	41.7	40.4	38.9	36.9	36.6	36.3	35.7	34.8			

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.



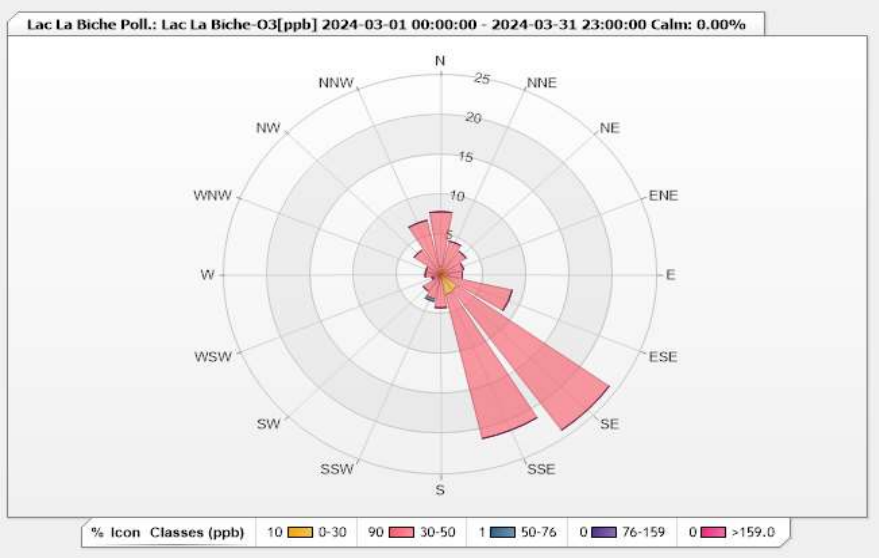


Station: Lac La Biche Poll.: Lac La Biche-O3[ppb] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 74.73% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.08	6.83	0	0	0	7.91
NNE	0.54	3.78	0	0	0	4.32
NE	0.18	3.42	0	0	0	3.6
ENE	0	2.7	0	0	0	2.7
E	0.9	1.62	0	0	0	2.52
ESE	0.54	7.91	0	0	0	8.45
SE	2.34	21.58	0	0	0	23.92
SSE	2.52	18.53	0	0	0	21.05
S	0.36	3.78	0	0	0	4.14
SSW	0.36	2.7	0.36	0	0	3.42
SW	0.18	2.34	0	0	0	2.52
WSW	0	0.9	0.18	0	0	1.08
W	0.18	1.62	0	0	0	1.8
WNW	0.18	1.62	0	0	0	1.8
NW	0.18	3.6	0	0	0	3.78
NNW	0.36	6.65	0	0	0	7.01
Summary	9.9	89.58	0.54	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

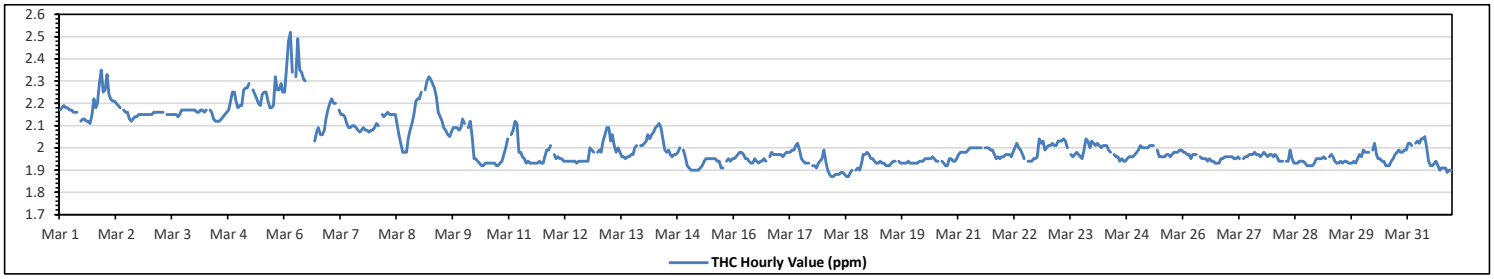
TOTAL HYDROCARBONS (THC) in ppm

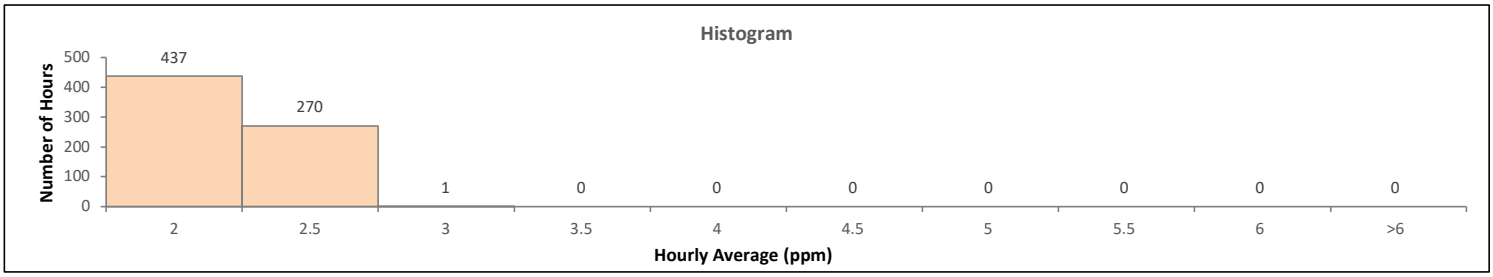
Maximum Hourly Value:	2.52	ppm	on Mar 6 at hr 3	Hours in Service:	744
Maximum Daily Value:	2.25	ppm	on Mar 6	Hours of Data:	708
Minimum Hourly Value:	1.87	ppm	on Mar 18 at hr 4	Hours of Missing Data:	0
Minimum Daily Value:	1.91	ppm	on Mar 18	Hours of Calibration:	36
Monthly Average:	2.02	ppm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	2.17	2.18	2.19	2.18	2.18	2.17	2.17	2.16	2.16	2.16	S	2.12	2.13	2.13	2.12	2.12	2.11	2.15	2.22	2.18	2.20	2.29	2.35	2.25	2.11	2.35	2.18
Mar 2	2.26	2.33	2.24	2.22	2.21	2.21	2.20	2.19	2.18	S	2.17	2.16	2.16	2.13	2.12	2.13	2.14	2.14	2.15	2.15	2.15	2.15	2.15	2.15	2.12	2.33	2.18
Mar 3	2.15	2.15	2.16	2.16	2.16	2.16	2.16	2.16	S	2.15	2.15	2.15	2.15	2.15	2.15	2.14	2.15	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.14	2.17	2.16
Mar 4	2.17	2.16	2.16	2.17	2.17	2.16	2.17	S	2.17	2.16	2.13	2.12	2.12	2.12	2.13	2.14	2.15	2.16	2.17	2.21	2.25	2.25	2.21	2.18	2.12	2.25	2.17
Mar 5	2.19	2.19	2.26	2.27	2.27	2.29	S	2.26	2.24	2.22	2.20	2.19	2.24	2.25	2.25	2.21	2.18	2.18	2.19	2.32	2.26	2.26	2.29	2.25	2.18	2.32	2.24
Mar 6	2.25	2.36	2.48	**2.52**	2.34	S	2.32	2.49	2.35	2.34	2.31	2.30	C	C	C	C	2.03	2.07	2.09	2.06	2.06	2.08	2.13	2.17	2.03	**2.52**	**2.25**
Mar 7	2.20	2.22	2.20	2.20	S	2.17	2.15	2.15	2.14	2.11	2.09	2.09	2.10	2.10	2.09	2.08	2.07	2.08	2.09	2.08	2.08	2.07	2.08	2.08	2.07	2.22	2.12
Mar 8	2.09	2.11	2.10	S	2.15	2.14	2.15	2.16	2.15	2.15	2.15	2.15	2.11	2.06	2.02	1.98	1.98	1.98	2.04	2.08	2.11	2.15	2.21	2.22	1.98	2.22	2.11
Mar 9	2.22	2.25	S	2.26	2.30	2.32	2.31	2.29	2.27	2.23	2.16	2.14	2.12	2.09	2.08	2.06	2.05	2.07	2.09	2.09	2.09	2.08	2.09	2.13	2.05	2.32	2.16
Mar 10	2.11	S	2.09	2.12	2.05	1.95	1.95	1.94	1.93	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	1.93	1.94	1.97	2.00	2.04	1.92	2.12	1.97
Mar 11	S	2.06	2.08	2.12	2.11	1.98	1.98	1.96	1.95	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.93	1.93	1.96	1.99	1.99	2.01	S	1.93	2.12	1.98
Mar 12	1.97	1.95	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.94	1.94	1.94	1.94	1.94	2.00	1.99	1.98	S	1.98	1.93	2.00	1.95
Mar 13	1.99	1.98	2.03	2.06	2.09	2.09	2.03	2.06	2.01	1.98	2.00	1.98	1.96	1.96	1.95	1.96	1.96	1.97	1.97	2.00	2.01	S	2.01	2.01	1.95	2.09	2.00
Mar 14	2.02	2.03	2.06	2.04	2.06	2.07	2.09	2.10	2.11	2.09	2.04	1.99	1.98	1.99	1.97	1.96	1.97	1.97	1.98	2.00	S	1.99	1.96	1.92	1.92	2.11	2.02
Mar 15	1.91	1.90	1.90	1.90	1.90	1.90	1.91	1.92	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.91	1.91	S	1.94	1.95	1.94	1.95	1.90	1.95	1.93
Mar 16	1.95	1.96	1.97	1.98	1.98	1.97	1.95	1.95	1.94	1.93	1.93	1.95	1.94	1.93	1.94	1.94	1.95	1.94	S	1.96	1.98	1.97	1.97	1.97	1.93	1.98	1.95
Mar 17	1.97	1.97	1.96	1.97	1.98	1.98	1.98	1.99	1.99	2.01	2.02	1.99	1.95	1.94	1.93	1.93	1.93	S	1.92	1.92	1.91	1.93	1.94	1.95	1.91	2.02	1.96
Mar 18	1.99	1.94	1.90	1.88	1.87	1.87	1.88	1.88	1.88	1.89	1.89	1.88	1.87	1.87	1.89	1.90	S	1.90	1.91	1.90	1.93	1.97	1.97	1.98	1.87	1.99	1.91
Mar 19	1.97	1.95	1.95	1.94	1.93	1.93	1.94	1.93	1.93	1.92	1.92	1.92	1.93	1.94	1.94	S	1.94	1.93	1.93	1.93	1.94	1.93	1.93	1.93	1.92	1.97	1.93
Mar 20	1.93	1.93	1.93	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.96	1.95	1.94	1.94	S	1.94	1.93	1.92	1.92	1.95	1.95	1.94	1.94	1.95	1.92	1.96	1.94
Mar 21	1.97	1.98	1.98	1.98	1.98	1.99	2.00	2.00	2.00	2.00	2.00	2.00	2.00	S	2.00	2.00	2.00	1.99	1.99	1.97	1.95	1.96	1.95	1.96	1.95	2.00	1.98
Mar 22	1.96	1.97	1.97	1.97	1.96	1.98	2.00	2.02	2.00	1.99	1.97	1.95	S	1.94	1.94	1.94	1.95	1.95	1.96	2.04	2.02	2.03	1.99	2.00	1.94	2.04	1.98
Mar 23	2.01	2.01	2.02	2.01	2.01	2.03	2.03	2.03	2.04	2.03	2.00	S	1.97	1.96	1.97	1.98	1.97	1.96	1.95	1.99	2.04	2.03	2.00	2.03	1.95	2.04	2.00
Mar 24	2.02	2.01	2.02	2.01	2.00	2.01	2.01	2.01	1.99	1.98	S	1.97	1.96	1.96	1.94	1.95	1.94	1.94	1.95	1.96	1.96	1.96	1.97	1.98	1.94	2.02	1.98
Mar 25	1.99	2.01	2.00	2.00	2.00	2.00	2.01	2.01	2.01	S	1.99	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.97	1.98	1.98	1.98	1.99	1.99	1.96	2.01	1.98
Mar 26	1.98	1.98	1.97	1.97	1.95	1.97	1.97	1.97	S	1.96	1.95	1.95	1.95	1.94	1.95	1.94	1.94	1.93	1.93	1.93	1.95	1.95	1.96	1.96	1.93	1.98	1.95
Mar 27	1.96	1.96	1.96	1.95	1.95	1.96	1.95	S	1.95	1.96	1.96	1.97	1.97	1.97	1.98	1.97	1.97	1.96	1.97	1.98	1.97	1.96	1.97	1.97	1.95	1.98	1.96
Mar 28	1.96	1.97	1.96	1.94	1.94	1.94	S	1.94	1.94	1.99	1.95	1.93	1.93	1.93	1.94	1.94	1.94	1.93	1.92	1.92	1.92	1.92	1.93	1.95	1.92	1.99	1.94
Mar 29	1.95	1.95	1.95	1.96	1.95	S	1.96	1.97	1.96	1.94	1.93	1.93	1.94	1.93	1.94	1.94	1.93	1.93	1.93	1.94	1.93	1.95	1.97	1.96	1.93	1.97	1.95
Mar 30	1.99	1.98	1.98	1.98	S	1.99	2.02	1.97	1.95	1.95	1.94	1.94	1.92	1.92	1.92	1.94	1.95	1.97	1.98	1.99	1.98	1.98	1.99	1.99	1.92	2.02	1.97
Mar 31	2.02	2.02	2.01	S	2.02	2.03	2.02	2.04	2.04	2.05	2.00	1.94	1.92	1.92	1.93	1.94	1.92	1.90	1.91	1.91	1.91	1.89	1.90	1.90	1.89	2.05	1.96
Diurnal Maximum	2.26	2.36	2.48	2.52	2.34	2.32	2.32	2.49	2.35	2.34	2.31	2.30	2.24	2.25	2.25	2.21	2.18	2.18	2.22	2.32	2.26	2.29	2.35	2.25			
Diurnal Average	2.04	2.05	2.05	2.06	2.05	2.04	2.04	2.05	2.04	2.03	2.02	2.01	2.00	1.99	1.99	1.99	1.99	1.99	2.00	2.02	2.02	2.02	2.03	2.03			

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.



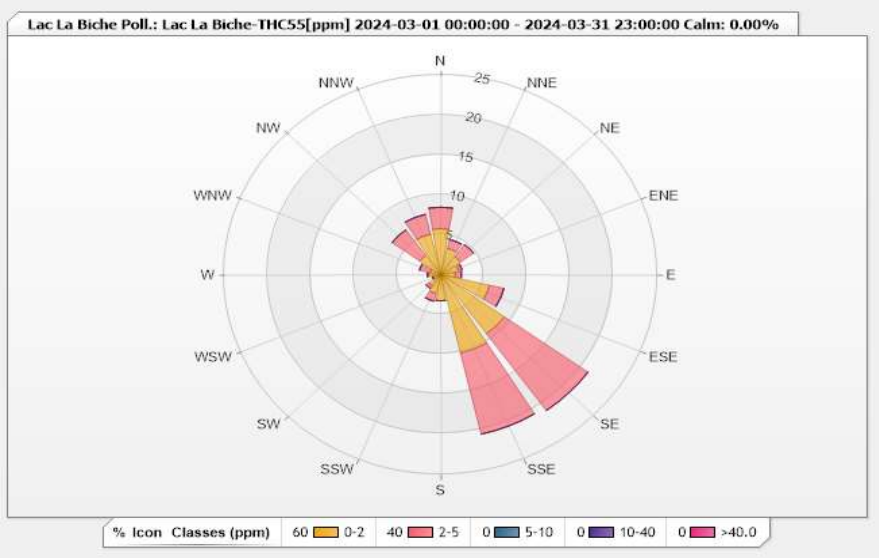


Station: Lac La Biche Poll.: Lac La Biche-THC55[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 95.16% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	5.79	2.68	0	0	0	8.47
NNE	3.39	1.13	0	0	0	4.52
NE	2.82	1.84	0	0	0	4.66
ENE	2.12	0.42	0	0	0	2.54
E	1.69	0.71	0	0	0	2.4
ESE	5.79	1.69	0	0	0	7.48
SE	9.04	11.86	0	0	0	20.9
SSE	10.03	10.45	0	0	0	20.48
S	3.25	0	0	0	0	3.25
SSW	2.4	0.99	0	0	0	3.39
SW	1.69	0.42	0	0	0	2.11
WSW	0.85	0.14	0	0	0	0.99
W	1.41	0.14	0	0	0	1.55
WNW	1.27	1.27	0	0	0	2.54
NW	2.97	3.95	0	0	0	6.92
NNW	5.23	2.54	0	0	0	7.77
Summary	59.74	40.23	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

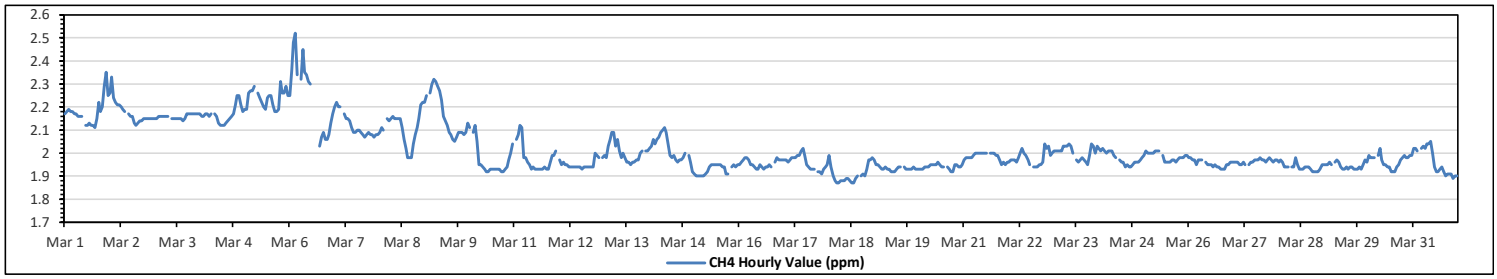
METHANE (CH4) in ppm

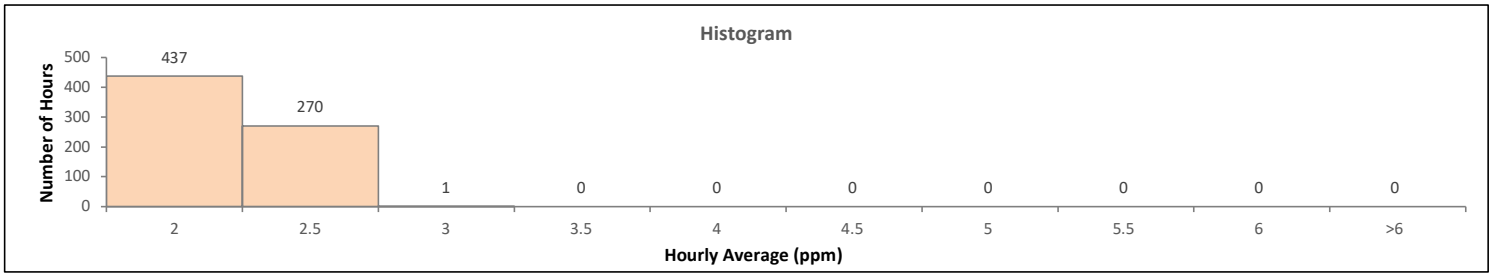
Maximum Hourly Value:	2.52	ppm	on Mar 6 at hr 3	Hours in Service:	744
Maximum Daily Value:	2.25	ppm	on Mar 6	Hours of Data:	708
Minimum Hourly Value:	1.87	ppm	on Mar 18 at hr 4	Hours of Missing Data:	0
Minimum Daily Value:	1.91	ppm	on Mar 18	Hours of Calibration:	36
Monthly Average:	2.02	ppm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	2.17	2.18	2.19	2.18	2.18	2.17	2.17	2.16	2.16	2.16	S	2.12	2.12	2.13	2.12	2.12	2.11	2.15	2.22	2.18	2.20	2.29	2.35	2.25	2.11	2.35	2.18
Mar 2	2.26	2.33	2.24	2.22	2.21	2.21	2.20	2.19	2.18	S	2.17	2.16	2.16	2.13	2.12	2.13	2.14	2.14	2.15	2.15	2.15	2.15	2.15	2.15	2.12	2.33	2.18
Mar 3	2.15	2.15	2.16	2.16	2.16	2.16	2.16	2.16	S	2.15	2.15	2.15	2.15	2.15	2.15	2.14	2.15	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.14	2.17	2.16
Mar 4	2.17	2.16	2.16	2.17	2.17	2.16	2.17	S	2.17	2.16	2.13	2.12	2.12	2.12	2.13	2.14	2.15	2.16	2.17	2.21	2.25	2.25	2.21	2.18	2.12	2.25	2.17
Mar 5	2.19	2.19	2.26	2.27	2.27	2.29	S	2.26	2.24	2.22	2.20	2.19	2.24	2.25	2.25	2.21	2.18	2.18	2.19	2.31	2.26	2.26	2.29	2.25	2.18	2.31	2.24
Mar 6	2.25	2.36	2.48	**2.52**	2.34	S	2.32	2.45	2.35	2.34	2.31	2.30	C	C	C	C	2.03	2.07	2.09	2.06	2.06	2.08	2.13	2.17	2.03	**2.52**	**2.25**
Mar 7	2.20	2.22	2.20	2.20	S	2.17	2.15	2.15	2.14	2.11	2.09	2.09	2.10	2.10	2.09	2.08	2.07	2.08	2.09	2.08	2.08	2.07	2.08	2.08	2.07	2.22	2.12
Mar 8	2.09	2.11	2.10	S	2.15	2.14	2.15	2.16	2.15	2.15	2.15	2.15	2.11	2.06	2.02	1.98	1.98	1.98	2.04	2.08	2.11	2.15	2.21	2.22	1.98	2.22	2.11
Mar 9	2.22	2.25	S	2.26	2.30	2.32	2.31	2.29	2.27	2.23	2.16	2.14	2.12	2.09	2.08	2.06	2.05	2.07	2.09	2.09	2.09	2.08	2.09	2.13	2.05	2.32	2.16
Mar 10	2.11	S	2.09	2.12	2.05	1.95	1.95	1.94	1.93	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	1.93	1.94	1.97	2.00	2.04	1.92	2.12	1.97
Mar 11	S	2.06	2.08	2.12	2.11	1.98	1.98	1.96	1.95	1.93	1.94	1.93	1.93	1.93	1.93	1.93	1.94	1.93	1.93	1.96	1.99	1.99	2.01	S	1.93	2.12	1.98
Mar 12	1.97	1.95	1.96	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.93	1.94	1.94	1.94	1.94	1.94	1.94	2.00	1.99	1.98	S	1.98	1.93	2.00	1.95
Mar 13	1.99	1.98	2.03	2.06	2.09	2.09	2.03	2.06	2.01	1.98	2.00	1.98	1.96	1.96	1.95	1.96	1.96	1.97	1.97	2.00	2.01	S	2.01	2.01	1.95	2.09	2.00
Mar 14	2.02	2.03	2.06	2.04	2.06	2.07	2.09	2.10	2.11	2.09	2.04	1.99	1.98	1.99	1.97	1.96	1.97	1.97	1.98	2.00	S	1.99	1.96	1.92	1.92	2.11	2.02
Mar 15	1.91	1.90	1.90	1.90	1.90	1.90	1.91	1.92	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.91	1.91	S	1.94	1.95	1.94	1.95	1.90	1.95	1.93
Mar 16	1.95	1.96	1.97	1.98	1.98	1.97	1.95	1.95	1.94	1.93	1.93	1.95	1.94	1.93	1.94	1.94	1.95	1.94	S	1.96	1.98	1.97	1.97	1.97	1.93	1.98	1.95
Mar 17	1.97	1.97	1.96	1.97	1.98	1.98	1.98	1.99	1.99	2.01	2.02	1.99	1.95	1.94	1.93	1.93	1.93	S	1.92	1.92	1.91	1.93	1.94	1.95	1.91	2.02	1.96
Mar 18	1.99	1.94	1.90	1.88	1.87	1.87	1.88	1.88	1.88	1.89	1.89	1.88	1.87	1.87	1.89	1.90	S	1.90	1.91	1.90	1.93	1.97	1.97	1.98	1.87	1.99	1.91
Mar 19	1.97	1.95	1.95	1.94	1.93	1.93	1.94	1.93	1.93	1.92	1.92	1.92	1.93	1.94	1.94	S	1.94	1.93	1.93	1.93	1.94	1.93	1.93	1.93	1.92	1.97	1.93
Mar 20	1.93	1.93	1.93	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.96	1.95	1.94	1.94	S	1.94	1.93	1.92	1.92	1.95	1.95	1.94	1.94	1.95	1.92	1.96	1.94
Mar 21	1.97	1.98	1.98	1.98	1.98	1.99	2.00	2.00	2.00	2.00	2.00	2.00	2.00	S	2.00	2.00	2.00	1.99	1.99	1.97	1.95	1.96	1.95	1.96	1.95	2.00	1.98
Mar 22	1.96	1.97	1.97	1.97	1.96	1.98	2.00	2.02	2.00	1.99	1.97	1.95	S	1.94	1.94	1.94	1.95	1.95	1.96	2.04	2.02	2.03	1.99	2.00	1.94	2.04	1.98
Mar 23	2.01	2.01	2.01	2.01	2.01	2.03	2.03	2.03	2.04	2.03	2.00	S	1.97	1.96	1.97	1.98	1.97	1.96	1.95	1.99	2.04	2.03	2.00	2.03	1.95	2.04	2.00
Mar 24	2.02	2.01	2.02	2.01	2.00	2.01	2.01	2.01	1.99	1.98	S	1.97	1.96	1.96	1.94	1.95	1.94	1.94	1.95	1.96	1.96	1.96	1.97	1.98	1.94	2.02	1.98
Mar 25	1.99	2.01	2.00	2.00	2.00	2.00	2.01	2.01	2.01	S	1.99	1.96	1.96	1.96	1.96	1.97	1.97	1.96	1.97	1.98	1.98	1.98	1.99	1.99	1.96	2.01	1.98
Mar 26	1.98	1.98	1.97	1.97	1.95	1.97	1.97	1.97	S	1.96	1.95	1.95	1.95	1.94	1.95	1.94	1.94	1.93	1.93	1.93	1.95	1.95	1.96	1.96	1.93	1.98	1.95
Mar 27	1.96	1.96	1.96	1.95	1.95	1.96	1.95	S	1.95	1.96	1.96	1.97	1.97	1.97	1.98	1.97	1.97	1.96	1.97	1.98	1.97	1.96	1.97	1.97	1.95	1.98	1.96
Mar 28	1.96	1.97	1.96	1.94	1.94	1.94	S	1.94	1.94	1.98	1.95	1.93	1.93	1.93	1.94	1.94	1.94	1.93	1.92	1.92	1.92	1.92	1.93	1.95	1.92	1.98	1.94
Mar 29	1.95	1.95	1.95	1.96	1.95	S	1.96	1.97	1.96	1.94	1.93	1.93	1.94	1.93	1.94	1.94	1.93	1.93	1.93	1.94	1.93	1.95	1.97	1.96	1.93	1.97	1.95
Mar 30	1.99	1.98	1.98	1.98	S	1.99	2.02	1.97	1.95	1.95	1.94	1.94	1.92	1.92	1.92	1.94	1.95	1.97	1.98	1.99	1.98	1.98	1.99	1.99	1.92	2.02	1.97
Mar 31	2.02	2.02	2.01	S	2.02	2.03	2.02	2.04	2.04	2.05	2.00	1.94	1.92	1.92	1.93	1.94	1.92	1.90	1.91	1.91	1.91	1.89	1.90	1.90	1.89	2.05	1.96
Diurnal Maximum	2.26	2.36	2.48	2.52	2.34	2.32	2.32	2.45	2.35	2.34	2.31	2.30	2.24	2.25	2.25	2.21	2.18	2.18	2.22	2.31	2.26	2.29	2.35	2.25			
Diurnal Average	2.04	2.05	2.05	2.06	2.05	2.04	2.04	2.05	2.04	2.03	2.02	2.01	2.00	1.99	1.99	1.99	1.99	1.99	2.00	2.02	2.02	2.02	2.03	2.03			

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.



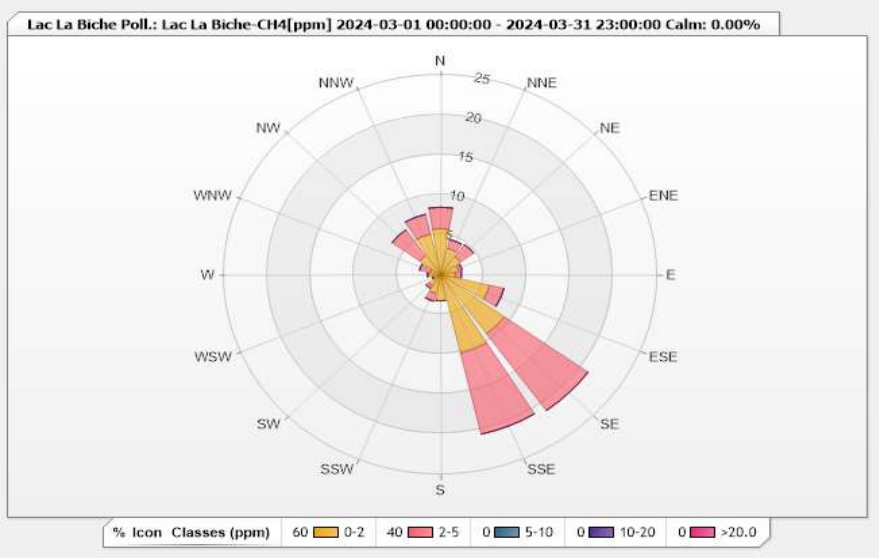


Station: Lac La Biche Poll.: Lac La Biche-CH4[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 95.16% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	5.79	2.68	0	0	0	8.47
NNE	3.39	1.13	0	0	0	4.52
NE	2.82	1.84	0	0	0	4.66
ENE	2.12	0.42	0	0	0	2.54
E	1.69	0.71	0	0	0	2.4
ESE	5.79	1.69	0	0	0	7.48
SE	9.04	11.86	0	0	0	20.9
SSE	10.03	10.45	0	0	0	20.48
S	3.25	0	0	0	0	3.25
SSW	2.4	0.99	0	0	0	3.39
SW	1.69	0.42	0	0	0	2.11
WSW	0.85	0.14	0	0	0	0.99
W	1.41	0.14	0	0	0	1.55
WNW	1.27	1.27	0	0	0	2.54
NW	2.97	3.95	0	0	0	6.92
NNW	5.23	2.54	0	0	0	7.77
Summary	59.74	40.23	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

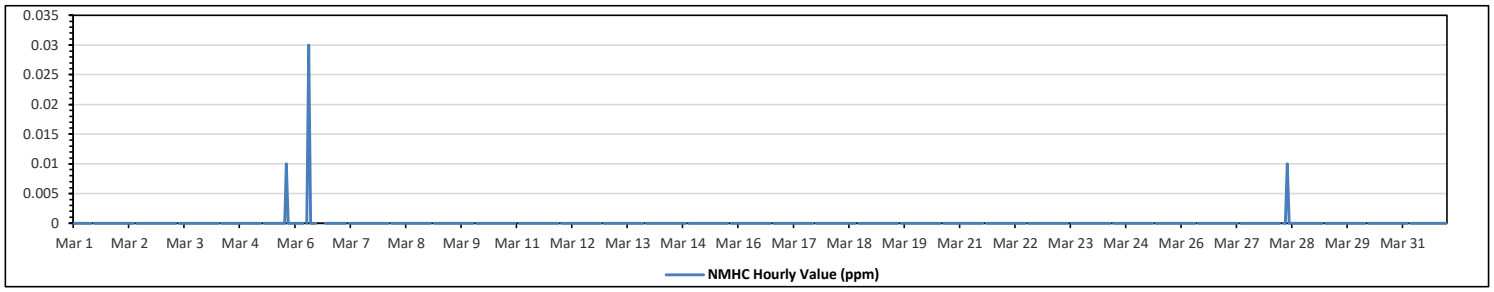
NON-METHANE HYDROCARBONS (NMHC) in ppm

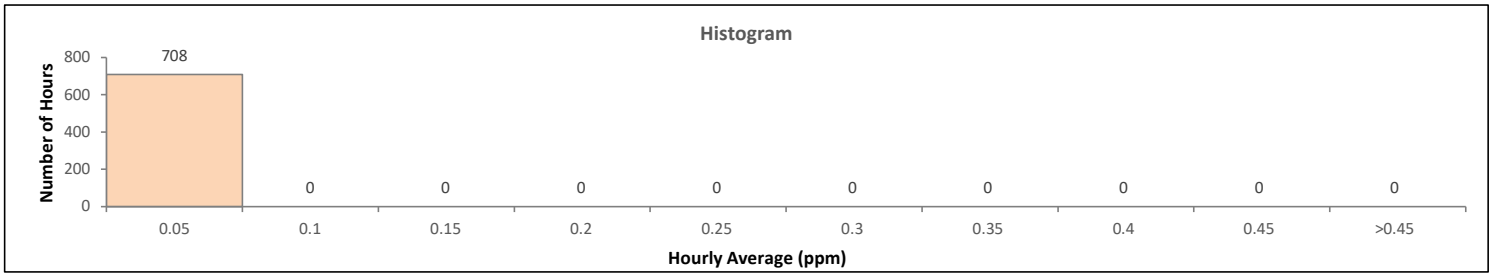
Maximum Hourly Value:	0.03	ppm	on Mar 6 at hr 7	Hours in Service:	744
Maximum Daily Value:	0.00	ppm	on Mar 6	Hours of Data:	708
Minimum Hourly Value:	0.00	ppm	on Mar 1 at hr 0	Hours of Missing Data:	0
Minimum Daily Value:	0.00	ppm	on Mar 1	Hours of Calibration:	36
Monthly Average:	0.00	ppm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Mar 1	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
Mar 2	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
Mar 3	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
Mar 4	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
Mar 5	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	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Mar 6	0.00	0.00	0.00	0.00	0.00	S	0.00	**0.03**	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	**0.03**	**0.00**
Mar 7	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
Mar 8	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
Mar 9	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
Mar 10	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
Mar 11	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
Mar 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	0.00	0.00	S	0.00	0.00	0.00	0.00
Mar 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	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Mar 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	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar 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	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
Mar 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	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
Mar 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	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
Mar 23	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
Mar 24	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
Mar 25	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
Mar 26	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
Mar 27	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
Mar 28	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Mar 29	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
Mar 30	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
Mar 31	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	0.00	0.03	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	0.00	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.



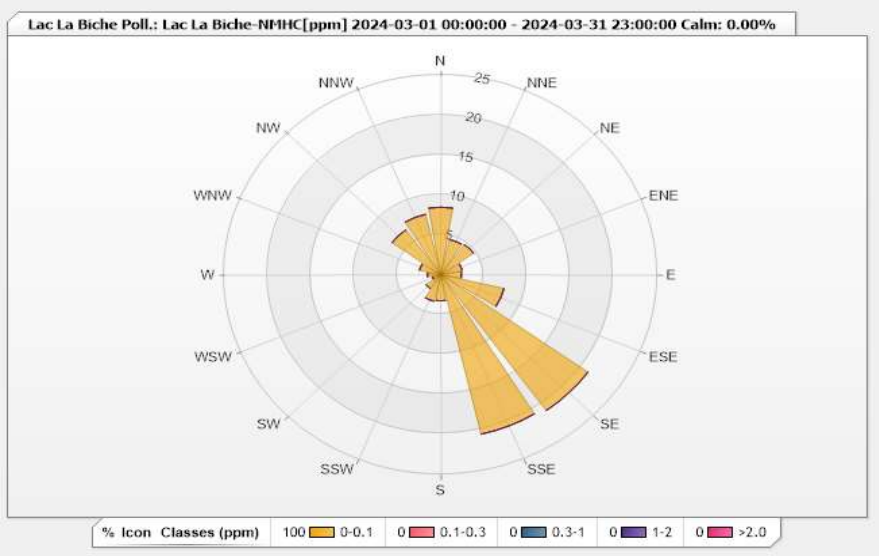


Station: Lac La Biche Poll.: Lac La Biche-NMHC[ppm] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 95.16% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	8.47	0	0	0	0	8.47
NNE	4.52	0	0	0	0	4.52
NE	4.66	0	0	0	0	4.66
ENE	2.54	0	0	0	0	2.54
E	2.4	0	0	0	0	2.4
ESE	7.49	0	0	0	0	7.49
SE	20.9	0	0	0	0	20.9
SSE	20.48	0	0	0	0	20.48
S	3.25	0	0	0	0	3.25
SSW	3.39	0	0	0	0	3.39
SW	2.12	0	0	0	0	2.12
WSW	0.99	0	0	0	0	0.99
W	1.55	0	0	0	0	1.55
WNW	2.54	0	0	0	0	2.54
NW	6.92	0	0	0	0	6.92
NNW	7.77	0	0	0	0	7.77
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

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

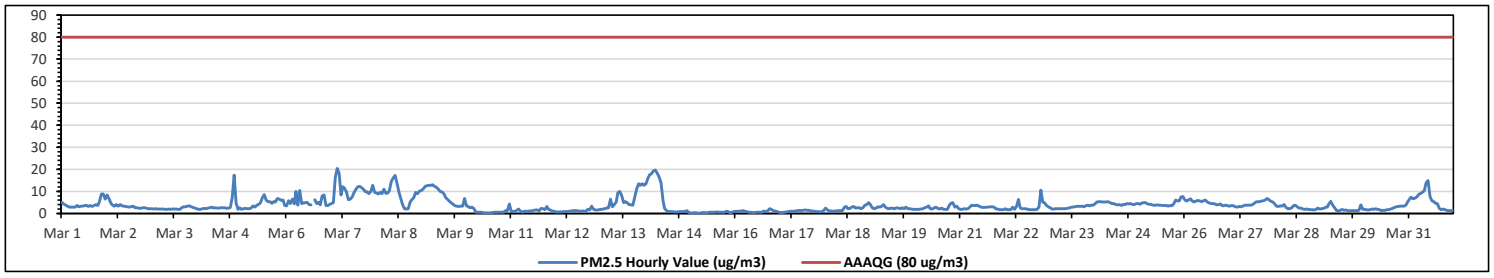
Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m3, Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m3

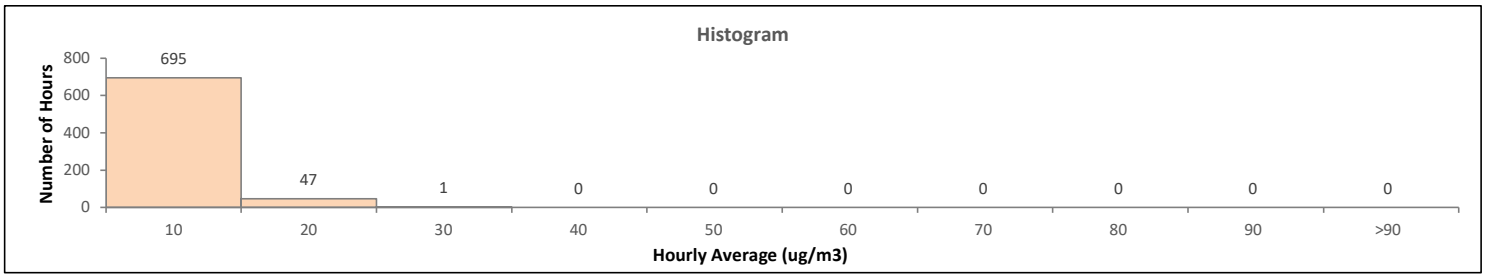
Number of 1-Hour Exceedances:	0	Number of 24-Hour Exceedances:	0
Maximum Hourly Value:	21 µg/m^3 on Mar 7 at hr 3	Hours in Service:	744
Maximum Daily Value:	10.6 µg/m^3 on Mar 7	Hours of Data:	743
Minimum Hourly Value:	0 µg/m^3 on Mar 15 at hr 1	Hours of Missing Data:	0
Minimum Daily Value:	0 µg/m^3 on Mar 15	Hours of Calibration:	1
Monthly Average:	3.8 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			
Mar 1	5	4	4	3	3	3	3	3	4	3	3	3	4	4	3	4	3	4	4	4	5	9	9	7	3	9	4.1
Mar 2	8	7	5	4	3	4	3	4	3	3	3	3	3	3	3	3	3	2	2	3	3	2	2	2	2	8	3.4
Mar 3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	2	2	3	2.3
Mar 4	2	2	2	2	2	2	2	3	3	2	3	2	2	3	3	3	2	2	3	7	17	5	2	3	2	17	3.3
Mar 5	2	2	2	2	2	2	3	3	4	4	5	7	9	6	5	5	5	5	5	7	6	6	6	4	2	9	4.5
Mar 6	3	6	5	7	4	10	4	10	4	5	5	5	4	4	C	6	4	5	4	8	8	4	4	4	3	10	5.3
Mar 7	5	5	16	**21**	18	8	12	11	10	6	7	8	9	11	12	12	12	11	10	10	9	10	13	10	5	**21**	**10.6**
Mar 8	9	9	10	9	11	9	9	10	15	16	17	14	10	7	4	2	2	2	5	6	7	10	9	10	2	17	8.8
Mar 9	10	11	12	13	13	13	13	12	12	11	10	10	9	7	6	6	5	4	3	3	3	3	3	7	3	13	8.3
Mar 10	3	3	3	3	2	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	4	0	4	1.2
Mar 11	1	1	1	1	2	1	1	1	1	1	1	1	1	2	2	1	2	2	2	3	2	2	1	1	1	3	1.3
Mar 12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	2	2	2	1	3	1.2
Mar 13	2	2	2	2	3	6	3	4	5	9	10	8	5	5	5	4	4	4	8	11	13	13	14	13	2	14	6.4
Mar 14	14	16	18	18	19	20	18	17	14	6	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	20	7.2
Mar 15	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	**0**	1	**0.5**
Mar 16	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	2	2	1	1	1	1	0	2	0.9
Mar 17	0	0	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0	2	1.0
Mar 18	2	2	1	1	1	1	1	1	1	1	3	3	2	2	3	3	2	3	3	2	3	4	4	5	1	5	2.3
Mar 19	4	3	2	2	3	3	3	4	3	2	2	2	2	2	3	2	2	3	2	3	2	2	2	2	2	4	2.6
Mar 20	2	2	2	2	2	3	3	3	2	2	2	3	2	2	2	2	2	2	4	5	5	3	3	2	2	5	2.6
Mar 21	2	2	2	2	2	3	4	4	4	4	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	4	2.6
Mar 22	2	2	2	2	3	2	3	6	3	2	2	2	2	2	2	2	2	2	3	11	5	5	4	3	2	11	3.0
Mar 23	3	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	3	4	4	2	4	2.8
Mar 24	4	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	5	4	4	5	4.5
Mar 25	4	5	5	5	4	4	4	4	4	4	4	4	4	4	4	3	4	3	4	6	6	6	8	8	3	8	4.5
Mar 26	6	6	6	7	6	5	6	6	6	5	6	6	5	5	5	4	4	4	4	4	3	4	4	3	3	7	5.0
Mar 27	3	4	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5	6	6	6	7	6	6	5	3	7	4.4
Mar 28	5	3	3	3	3	4	3	2	2	3	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	5	2.6
Mar 29	2	2	2	3	3	4	6	4	3	1	1	1	2	1	2	1	1	1	1	1	1	1	4	2	1	6	2.1
Mar 30	2	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2	3	3	3	3	3	3	4	5	1	5	2.3
Mar 31	7	7	7	7	8	9	9	10	10	14	15	8	6	5	5	4	2	2	2	2	1	1	1	1	1	15	5.9
Diurnal Maximum	14	16	18	21	19	20	18	17	15	16	17	14	10	11	12	12	12	11	10	11	17	13	14	13			
Diurnal Average	3.8	3.7	4.1	4.4	4.3	4.3	4.2	4.5	4.1	4.0	4.0	3.7	3.4	3.2	3.1	3.1	2.8	2.9	3.2	4.1	4.2	3.8	3.9	3.8			

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.



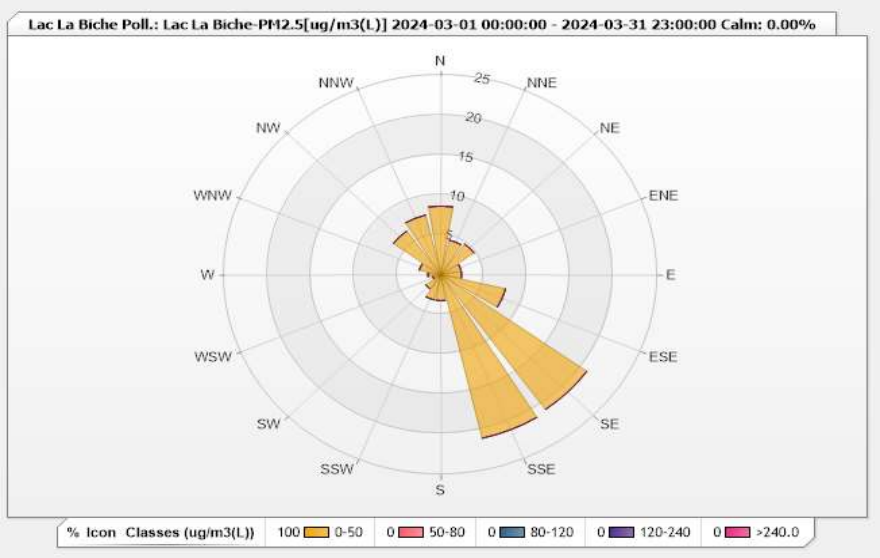


Station: Lac La Biche Poll.: Lac La Biche-PM2.5[ug/m3(L)] Monthly: 03-2024

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

Calm: 0.00% Valid Data: 99.87% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	8.61	0	0	0	0	8.61
NNE	4.44	0	0	0	0	4.44
NE	4.71	0	0	0	0	4.71
ENE	2.42	0	0	0	0	2.42
E	2.42	0	0	0	0	2.42
ESE	7.67	0	0	0	0	7.67
SE	20.73	0	0	0	0	20.73
SSE	21	0	0	0	0	21
S	3.23	0	0	0	0	3.23
SSW	3.23	0	0	0	0	3.23
SW	2.15	0	0	0	0	2.15
WSW	0.94	0	0	0	0	0.94
W	1.48	0	0	0	0	1.48
WNW	2.56	0	0	0	0	2.56
NW	6.73	0	0	0	0	6.73
NNW	7.67	0	0	0	0	7.67
Summary	100	0	0	0	0	100



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

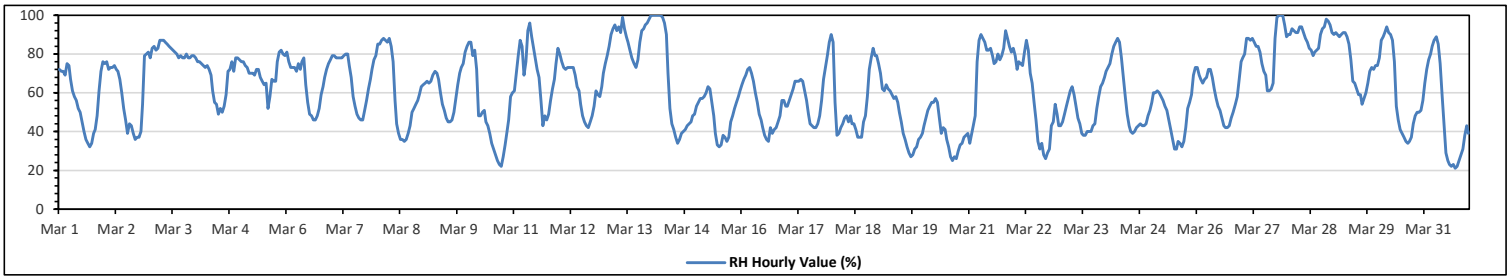
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100	%	on Mar 14 at hr 0	Hours in Service:	744
Maximum Daily Value:	89.5	%	on Mar 28	Hours of Data:	744
Minimum Hourly Value:	21	%	on Mar 31 at hr 16	Hours of Missing Data:	0
Minimum Daily Value:	40.4	%	on Mar 20	Hours of Calibration:	0
Monthly Average:	62.2	%		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
Mar 1	72	71	71	69	75	74	67	61	58	56	52	50	45	40	36	34	32	34	39	41	48	61	71	76	32	76	55.5
Mar 2	75	76	72	73	73	74	72	71	67	60	52	46	39	44	43	39	36	37	37	40	54	79	80	81	36	81	59.2
Mar 3	78	83	84	82	83	87	87	87	86	85	84	83	82	81	80	78	79	78	78	80	78	78	79	79	78	87	81.6
Mar 4	78	76	76	75	74	73	74	72	69	61	55	54	49	52	50	53	59	71	72	76	71	78	78	77	49	78	67.6
Mar 5	76	76	74	73	70	70	70	69	72	72	68	66	64	65	52	58	67	66	66	76	81	82	80	79	52	82	70.5
Mar 6	81	76	73	73	73	71	75	72	76	78	64	55	49	48	46	46	48	52	59	63	68	72	75	77	46	81	65.4
Mar 7	79	79	78	78	78	78	79	80	80	74	68	58	53	49	47	46	46	51	56	62	67	72	77	79	46	80	67.3
Mar 8	85	85	87	88	87	86	88	84	76	56	44	39	36	36	35	36	39	43	50	52	54	56	59	63	35	88	61.0
Mar 9	64	65	66	65	66	69	71	70	67	60	54	51	47	45	45	46	50	57	64	70	73	75	81	84	45	84	62.7
Mar 10	86	86	79	82	72	48	48	50	51	45	43	39	34	31	28	25	23	22	27	33	40	46	58	60	22	86	48.2
Mar 11	61	70	79	87	84	69	76	92	96	89	84	78	72	68	56	43	48	46	49	56	62	67	75	83	43	96	70.4
Mar 12	80	76	73	72	73	73	73	73	69	63	61	54	48	45	43	42	45	48	53	61	59	58	63	70	42	80	61.5
Mar 13	75	79	84	90	93	95	92	94	91	99	93	89	86	82	78	75	73	77	86	92	93	95	96	98	73	99	87.7
Mar 14	**100**	**100**	**100**	**100**	**100**	**100**	99	96	90	70	52	44	41	37	34	36	39	40	41	43	44	45	48	49	34	**100**	64.5
Mar 15	53	55	57	57	58	60	63	62	55	48	39	33	32	33	38	37	35	37	45	48	52	55	58	61	32	63	48.8
Mar 16	64	67	69	72	73	70	66	60	55	49	46	42	38	36	35	42	39	41	42	45	48	56	56	53	35	73	52.7
Mar 17	53	56	59	62	66	66	66	67	66	61	56	49	44	43	42	42	44	48	56	67	73	79	86	90	42	90	60.0
Mar 18	86	55	38	39	42	44	47	48	45	48	44	44	41	37	37	37	45	48	58	72	78	83	79	79	37	86	53.1
Mar 19	75	70	62	61	64	62	61	59	57	58	55	50	45	39	36	32	29	27	28	31	32	36	37	39	27	75	47.7
Mar 20	43	47	51	53	55	55	57	55	47	39	42	41	36	32	27	25	27	26	30	33	34	37	38	39	25	57	**40.4**
Mar 21	34	38	43	48	76	87	90	88	86	82	82	83	79	75	76	80	77	79	83	92	88	84	81	83	34	92	75.6
Mar 22	79	72	76	75	74	81	87	82	70	65	55	46	35	31	34	28	26	29	31	43	45	54	49	43	26	87	54.6
Mar 23	43	45	49	53	57	61	63	59	53	47	44	39	38	38	40	40	40	43	44	52	58	63	65	68	38	68	50.1
Mar 24	71	73	75	80	84	86	88	86	78	68	58	49	43	40	39	40	42	43	44	43	43	44	48	51	39	88	59.0
Mar 25	55	60	60	61	60	58	56	53	51	46	41	36	31	31	35	34	32	35	42	52	55	59	69	73	31	73	49.4
Mar 26	73	69	67	65	67	68	72	72	68	62	57	53	51	47	43	42	42	43	47	50	54	58	67	76	42	76	58.9
Mar 27	78	80	88	88	87	88	86	84	84	81	75	71	69	61	61	62	65	88	99	**100**	**100**	**100**	95	89	61	**100**	82.5
Mar 28	90	90	93	92	91	91	94	94	91	88	86	83	82	79	81	82	83	90	93	94	98	97	95	91	79	98	**89.5**
Mar 29	90	91	90	89	90	91	91	89	85	77	66	65	62	59	59	54	57	60	65	71	73	72	74	74	54	91	74.8
Mar 30	78	87	89	91	94	91	90	87	76	53	46	41	39	37	35	34	35	37	44	48	50	50	51	56	34	94	60.0
Mar 31	65	72	77	80	84	87	89	85	75	59	44	29	25	23	22	23	**21**	22	25	28	31	38	43	39	**21**	89	49.4
Diurnal Maximum	100	100	100	100	100	100	99	96	96	99	93	89	86	82	81	82	83	90	99	100	100	100	96	98			
Diurnal Average	71.6	71.8	72.2	73.3	74.9	74.6	75.4	74.2	70.6	64.5	58.4	53.5	49.5	47.2	45.6	44.9	45.9	49.0	53.3	58.5	61.4	65.5	68.1	69.6			

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 - March 2024

Summary of Hourly Averages

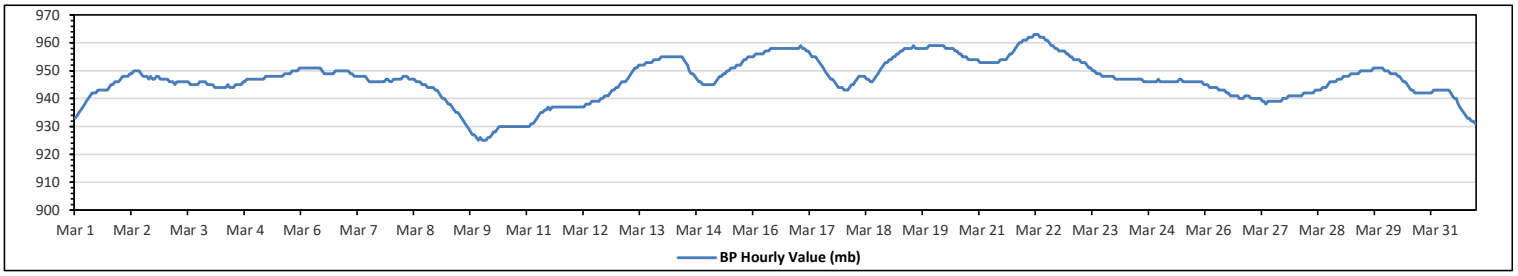
BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	963 mb	on Mar 22 at hr 5	Hours in Service:	744	
Maximum Daily Value:	960 mb	on Mar 22	Hours of Data:	744	
Minimum Hourly Value:	925 mb	on Mar 9 at hr 22	Hours of Missing Data:	0	
Minimum Daily Value:	929 mb	on Mar 10	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
Mar 1	933	934	935	936	937	938	939	940	941	942	942	942	943	943	943	943	943	943	944	945	945	946	946	946	933	946	941
Mar 2	947	948	948	948	948	949	949	950	950	950	950	949	948	948	948	947	948	947	947	948	948	947	947	947	947	950	948
Mar 3	947	947	946	946	946	945	946	946	946	946	946	946	946	945	945	945	945	945	946	946	946	946	945	945	945	947	946
Mar 4	945	945	944	944	944	944	944	944	944	945	944	944	944	945	945	945	945	946	946	947	947	947	947	947	944	947	945
Mar 5	947	947	947	947	947	948	948	948	948	948	948	948	948	948	948	949	949	949	949	950	950	950	950	951	947	951	948
Mar 6	951	951	951	951	951	951	951	951	951	951	951	950	949	949	949	949	949	949	950	950	950	950	950	950	949	951	950
Mar 7	950	950	949	949	948	948	948	948	948	948	948	947	946	946	946	946	946	946	946	946	946	947	947	946	946	950	947
Mar 8	946	947	947	947	947	947	948	948	948	947	947	947	947	946	946	946	945	945	945	944	944	944	944	943	943	948	946
Mar 9	943	942	941	940	940	939	938	938	937	936	935	935	934	933	932	931	930	929	928	927	927	926	**925**	926	**925**	943	934
Mar 10	**925**	**925**	**925**	926	926	927	928	928	929	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	**925**	930	**929**
Mar 11	930	930	931	931	932	933	934	935	935	936	936	937	936	937	937	937	937	937	937	937	937	937	937	937	930	937	935
Mar 12	937	937	937	937	937	937	937	938	938	938	939	939	939	939	939	940	940	941	941	941	942	943	943	944	937	944	939
Mar 13	944	945	946	946	946	947	948	949	950	951	951	952	952	952	952	953	953	953	953	954	954	954	954	955	944	955	951
Mar 14	955	955	955	955	955	955	955	955	955	955	955	954	953	952	950	949	949	948	947	946	946	945	945	945	945	955	951
Mar 15	945	945	945	945	946	947	948	948	949	949	950	950	951	951	951	952	952	952	953	954	954	955	955	955	945	955	950
Mar 16	955	956	956	956	956	956	957	957	957	958	958	958	958	958	958	958	958	958	958	958	958	958	958	958	955	958	957
Mar 17	958	959	958	958	957	957	956	955	955	955	954	953	952	951	950	949	948	947	947	946	945	944	944	944	944	959	952
Mar 18	943	943	943	944	945	945	946	947	948	948	948	948	947	947	946	946	947	948	949	950	951	952	953	953	943	953	947
Mar 19	954	954	955	955	956	956	957	957	958	958	958	958	958	959	958	958	958	958	958	958	958	959	959	959	954	959	957
Mar 20	959	959	959	959	959	959	958	958	958	958	958	957	957	956	956	955	955	955	954	954	954	954	954	954	954	959	957
Mar 21	953	953	953	953	953	953	953	953	953	953	953	954	954	954	954	955	956	956	957	958	959	960	960	961	953	961	955
Mar 22	961	961	962	962	962	**963**	**963**	**963**	962	962	962	961	961	960	959	959	958	958	957	957	957	957	956	956	956	**963**	**960**
Mar 23	955	955	954	954	954	954	953	953	953	952	951	951	950	950	949	949	949	948	948	948	948	948	948	948	948	955	951
Mar 24	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	946	946	946	946	946	946	946	946	947	946	947	947
Mar 25	946	946	946	946	946	946	946	946	946	946	947	947	946	946	946	946	946	946	946	946	946	946	946	945	945	947	946
Mar 26	945	945	944	944	944	944	944	943	943	943	943	942	942	941	941	941	941	941	940	940	940	941	941	941	940	945	942
Mar 27	940	940	940	940	940	940	939	939	938	939	939	939	939	939	939	939	939	940	940	940	941	941	941	941	938	941	940
Mar 28	941	941	941	941	942	942	942	942	942	942	943	943	943	943	944	944	944	945	946	946	946	946	947	947	941	947	943
Mar 29	947	948	948	948	948	949	949	949	949	949	950	950	950	950	950	950	950	951	951	951	951	951	951	950	947	951	950
Mar 30	950	950	949	949	949	949	948	948	947	946	946	945	944	943	943	942	942	942	942	942	942	942	942	942	942	950	945
Mar 31	942	943	943	943	943	943	943	943	943	943	942	941	940	940	938	937	936	935	934	933	933	932	932	931	931	943	939
Diurnal Maximum	961	961	962	962	962	963	963	963	962	962	962	961	961	960	959	959	958	958	958	958	959	960	960	961			
Diurnal Average	946	947	947	947	947	947	947	947	947	947	947	947	947	947	946	946	946	946	946	946	946	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

Lac La Biche Station - March 2024

Summary of Hourly Averages

AMBIENT TEMPERATURE (AT) in Degree Celsius

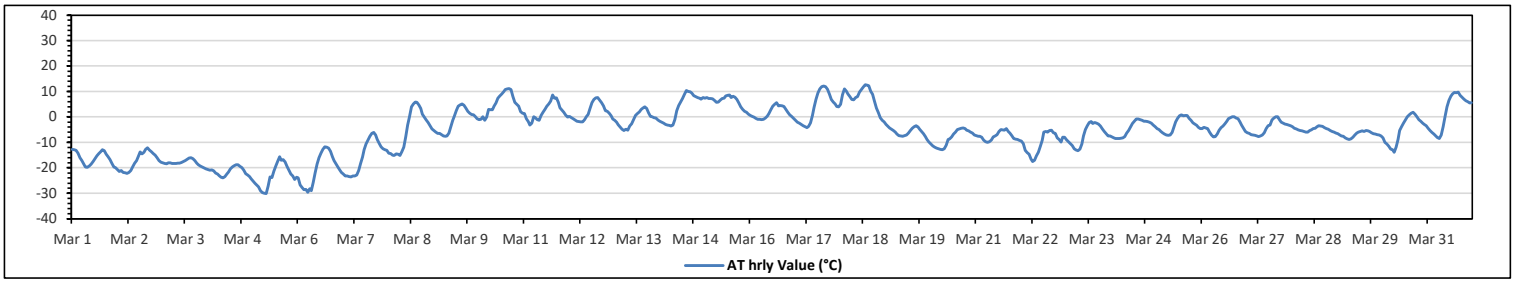
Maximum Hourly Value:	12.7	°C	on Mar 18 at hr 13	Hours in Service:	744	
Maximum Daily Value:	7.4	°C	on Mar 18	Hours of Data:	744	
Minimum Hourly Value:	-30.1	°C	on Mar 5 at hr 7	Hours of Missing Data:	0	
Minimum Daily Value:	-23.2	°C	on Mar 5	Hours of Calibration:	0	
Monthly Average:	-5.7	°C		Operational Uptime:	100.0	

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Mar 1	-12.7	-12.9	-13.1	-14.3	-16.1	-17.2	-18.5	-19.6	-19.8	-19.3	-18.5	-17.5	-16.4	-15.2	-14.4	-13.6	-12.9	-13.3	-14.6	-15.7	-16.8	-18.3	-19.7	-20	-20.0	-12.7	-16.3
Mar 2	-20.6	-21.5	-21	-21.7	-21.9	-22.1	-21.7	-21	-19.5	-18.1	-17.2	-15.6	-13.7	-14.5	-13.8	-12.7	-12.1	-13	-13.6	-14.4	-15	-16.1	-17.1	-17.7	-22.1	-12.1	-17.3
Mar 3	-18	-18.3	-18.4	-18	-18	-18.3	-18.3	-18.3	-18.1	-18.1	-17.9	-17.5	-17.2	-16.6	-16.2	-16	-16.4	-17.2	-18.1	-18.8	-19.3	-19.7	-20.1	-20.4	-20.4	-16.0	-18.1
Mar 4	-20.7	-20.9	-20.8	-21.2	-22	-22.4	-23	-23.7	-23.9	-23.4	-22.4	-21.6	-20.4	-19.7	-19.1	-18.8	-18.8	-19.4	-20	-20.9	-22.3	-22.9	-23.4	-24.3	-24.3	-18.8	-21.5
Mar 5	-25.2	-26	-26.9	-27.4	-29	-29.7	-30	**-30.1**	-27.2	-23.5	-23.8	-21.3	-19.3	-17.4	-15.6	-17	-16.8	-17.6	-19.4	-20.9	-22.5	-23.1	-24.5	-23.7	**-30.1**	-15.6	**-23.2**
Mar 6	-24	-26.7	-27.7	-28.6	-28.4	-29.6	-28.2	-28.9	-25.6	-21.9	-18.6	-16.1	-14.2	-12.7	-11.7	-11.9	-12.2	-13.5	-15.6	-17.2	-18.4	-19.7	-20.7	-21.7	-29.6	-11.7	-20.6
Mar 7	-22.5	-23.1	-23.1	-23.4	-23.6	-23.2	-23.2	-22.8	-21.1	-18.3	-15.8	-12.9	-10.6	-9.1	-7.6	-6.5	-6.1	-7.1	-8.9	-10.4	-11.7	-12.4	-12.9	-13.2	-23.6	-6.1	-15.4
Mar 8	-14.3	-14.4	-14.9	-15.1	-14.5	-14.6	-15.1	-13.6	-11.9	-7.9	-3.2	0.2	4	5.2	5.9	5.7	4.8	3.3	1.1	-0.1	-1.2	-2.2	-3.4	-4.7	-15.1	5.9	-5.0
Mar 9	-5.4	-6	-6.5	-6.5	-6.9	-7.4	-7.6	-7.4	-6.4	-3.9	-1.3	0.3	2.5	4.2	4.8	5.2	4.6	3.5	2.2	1.5	1	0.8	0	-0.6	-7.6	5.2	-1.5
Mar 10	-1.1	-0.9	0.1	-1.4	-0.1	3	2.8	2.8	4.2	5.5	7.4	8.2	9.1	9.9	10.8	11	11.1	10.8	7.9	5.7	5	4.2	2.1	1.5	-1.4	11.1	5.0
Mar 11	1.3	-0.6	-1.8	-3.2	-2.4	0	-0.3	-1.1	-1.3	0.6	1.9	3	4.2	5.2	6.3	8.7	7.4	7.5	5.8	3.7	2.7	1.8	0.7	-0.1	-3.2	8.7	2.1
Mar 12	0.2	-0.2	-0.6	-1.2	-1.6	-1.8	-1.9	-1.9	-1.1	0.2	1	3.3	5.6	6.9	7.5	7.6	6.6	5.6	4.3	2.5	2.2	1.5	0.4	-0.8	-1.9	7.6	1.8
Mar 13	-1.4	-2.1	-3	-4	-4.8	-5.3	-4.8	-5.2	-3.5	-2.7	-1	0.6	1.3	2	2.9	3.5	4	3.4	1.6	0.2	0	-0.2	-0.4	-1.2	-5.3	4.0	-0.8
Mar 14	-1.7	-2.1	-2.5	-2.9	-3.1	-3.3	-3.5	-3.1	-1.1	2.5	4.5	5.9	7.2	8.9	10.5	10	9.9	9.4	8.4	7.9	7.7	7.4	7	7.6	-3.5	10.5	3.8
Mar 15	7.4	7.6	7.3	7.2	7.1	6.5	5.8	5.9	6.6	7.3	7.4	8.2	8.5	8.7	7.6	8.1	7.8	6.9	5.5	4	2.9	2.2	1.8	1.1	1.1	8.7	6.2
Mar 16	0.6	0.2	-0.1	-0.5	-0.9	-0.9	-1	-0.9	-0.4	0.3	1.3	2.8	4.2	5	5.6	4.3	4.5	4.4	4.1	3	1.8	0.9	0.2	-0.5	-1.0	5.6	1.6
Mar 17	-1.3	-2	-2.4	-2.9	-3.4	-3.9	-4.2	-3.7	-2.3	0.6	3.8	6.9	9.3	11	11.9	12.1	11.9	10.9	9.1	6.8	5.9	5.2	4.1	3.9	-4.2	12.1	3.6
Mar 18	5	8.8	11	10.1	9	7.9	6.9	6.7	7.7	7.9	9.8	10.8	11.8	**12.7**	12.5	12.3	10.2	8.9	6.1	3.5	1.7	-0.3	-1.3	-1.9	-1.9	**12.7**	**7.4**
Mar 19	-2.9	-3.6	-4.3	-4.8	-5.4	-6	-6.8	-7.3	-7.5	-7.6	-7.3	-7.1	-6.3	-5.4	-4.4	-3.8	-3.4	-4	-4.8	-5.7	-6.6	-7.7	-8.8	-9.8	-9.8	-2.9	-5.9
Mar 20	-10.7	-11.3	-11.9	-12.2	-12.5	-12.7	-12.8	-12.4	-11.1	-8.8	-8.6	-7.8	-6.7	-5.9	-4.9	-4.7	-4.4	-4.3	-4.6	-5.2	-5.5	-5.9	-6.3	-7	-12.8	-4.3	-8.3
Mar 21	-7.3	-7.6	-7.6	-8	-9.1	-9.7	-9.9	-9.7	-9.1	-7.8	-7.4	-6.9	-5.6	-5	-5.1	-5.2	-4.6	-5.6	-6.4	-7.3	-8.4	-8.7	-8.9	-9.3	-9.9	-4.6	-7.5
Mar 22	-9.5	-10.5	-13.2	-14	-14.6	-16.5	-17.5	-17	-15.3	-13.8	-11.6	-9.3	-5.9	-5.6	-5.9	-5.4	-5.2	-6.2	-6.5	-8.2	-8.8	-9.8	-8	-8	-17.5	-5.2	-10.3
Mar 23	-9	-9.7	-10.5	-11.2	-12.5	-13	-13.3	-12.6	-10.6	-7.4	-4.9	-3.4	-2.2	-1.8	-2.6	-2.2	-2.4	-2.8	-3.5	-4.7	-5.6	-6.6	-7.4	-7.5	-13.3	-1.8	-7.0
Mar 24	-7.9	-8.2	-8.4	-8.4	-8.4	-8.3	-8.2	-7.7	-6.3	-5.3	-4	-2.6	-1.6	-0.8	-0.8	-1	-1.3	-1.6	-1.7	-1.8	-2.1	-2.4	-3.1	-3.8	-8.4	-0.8	-4.4
Mar 25	-4.5	-5	-5.6	-6.2	-6.7	-7	-7.2	-7	-6.1	-3.9	-1.9	-0.5	0.4	0.8	0.4	0.6	0.6	-0.5	-1.3	-2.3	-2.8	-3.3	-4.1	-4.6	-7.2	0.8	-3.2
Mar 26	-4.5	-4.1	-4.3	-4.6	-5.9	-7	-7.8	-7.7	-6.8	-5.2	-4.2	-3.5	-2.7	-1.7	-0.6	-0.2	0	0	-0.4	-0.7	-1.9	-3.2	-4.4	-5.6	-7.8	0.0	-3.6
Mar 27	-6.2	-6.5	-6.9	-7.1	-7.2	-7.5	-7.7	-7.4	-7.1	-6.2	-4.5	-3.4	-3.1	-1.2	-0.4	0	0	-1.2	-2.1	-2.5	-2.8	-2.9	-3.2	-3.4	-7.7	0.0	-4.2
Mar 28	-3.9	-4.4	-4.7	-5.1	-5.4	-5.5	-5.7	-5.9	-5.9	-5.4	-5.1	-4.6	-4.4	-3.9	-3.4	-3.5	-3.7	-4.2	-4.5	-4.8	-5.3	-5.6	-6	-6.4	-6.4	-3.4	-4.9
Mar 29	-6.6	-7	-7.4	-7.6	-8.2	-8.6	-8.8	-8.6	-8	-7.1	-6.3	-6	-5.6	-5.5	-5.6	-5.4	-5.5	-5.7	-6.2	-6.6	-6.8	-6.9	-7.1	-7.5	-8.8	-5.4	-6.9
Mar 30	-8.2	-9.9	-10.7	-11.5	-12.6	-12.8	-13.9	-11.9	-8.8	-5.3	-3.9	-2.4	-1.2	0	0.9	1.5	1.8	1.1	0	-1	-1.6	-2.4	-2.9	-3.4	-13.9	1.8	-5.0
Mar 31	-4.4	-5.4	-6.1	-6.7	-7.5	-8.1	-8.5	-7	-3.8	0.2	3.9	6.5	8.1	9	9.6	9.5	9.7	8.5	7.8	7	6.4	6	5.5	5.6	-8.5	9.7	1.9
Diurnal Maximum	7.4	8.8	11.0	10.1	9.0	7.9	6.9	6.7	7.7	7.9	9.8	10.8	11.8	12.7	12.5	12.3	11.9	10.9	9.1	7.9	7.7	7.4	7.0	7.6			
Diurnal Average	-7.7	-8.2	-8.6	-9.1	-9.6	-9.8	-10.1	-9.9	-8.7	-7.0	-5.4	-4.0	-2.6	-1.7	-1.1	-0.9	-1.0	-1.7	-2.8	-4.0	-4.8	-5.5	-6.2	-6.7			

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

Lac La Biche Station - March 2024

Summary of Hourly Averages

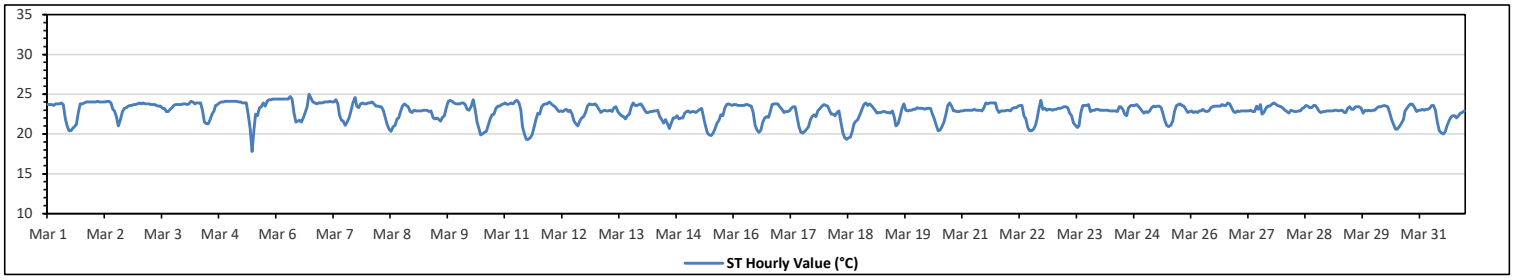
STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	25.0	°C	on Mar 6 at hr 17	Hours in Service:	744	
Maximum Daily Value:	23.6	°C	on Mar 6	Hours of Data:	744	
Minimum Hourly Value:	17.8	°C	on Mar 5 at hr 11	Hours of Missing Data:	0	
Minimum Daily Value:	22.0	°C	on Mar 18	Hours of Calibration:	0	
Monthly Average:	22.9	°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
Mar 1	23.7	23.7	23.7	23.6	23.8	23.8	23.8	23.9	23.7	22.0	21.0	20.4	20.4	20.7	20.9	21.2	22.7	23.8	23.8	23.9	24.0	24.0	24.0	24.0	20.4	24.0	22.9
Mar 2	24.0	24.0	24.1	24.0	24.0	24.0	24.0	24.1	24.1	23.9	23.1	22.9	22.2	21.0	21.7	22.8	23.2	23.3	23.5	23.6	23.6	23.7	23.7	23.8	21.0	24.1	23.4
Mar 3	23.9	23.8	23.9	23.8	23.8	23.8	23.7	23.7	23.7	23.6	23.5	23.5	23.2	23.2	22.8	22.8	23.1	23.3	23.6	23.7	23.7	23.7	23.7	23.8	22.8	23.9	23.6
Mar 4	23.8	23.7	23.8	24.1	24.0	23.8	23.9	23.9	23.9	23.0	21.5	21.3	21.3	21.8	22.5	22.9	23.6	23.7	23.9	24.0	24.0	24.1	24.1	24.1	21.3	24.1	23.4
Mar 5	24.1	24.1	24.1	24.1	24.0	24.0	23.9	23.9	23.9	22.4	20.7	**17.8**	20.6	22.5	22.3	23.3	23.4	23.9	23.5	24.1	24.3	24.3	24.4	24.4	**17.8**	24.4	23.3
Mar 6	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.7	24.4	22.6	21.5	21.6	21.7	21.5	22.0	22.7	23.4	**25.0**	24.5	24.0	23.9	23.8	23.9	23.9	21.5	**25.0**	**23.6**
Mar 7	23.9	24.0	24.0	24.0	24.1	24.0	24.0	24.3	23.8	22.4	21.7	21.6	21.1	21.5	22.0	22.9	23.9	24.6	23.5	23.3	23.8	23.9	23.8	23.8	21.1	24.6	23.3
Mar 8	23.9	23.9	24.0	23.8	23.5	23.5	23.4	23.4	23.0	22.1	21.2	20.6	20.3	20.9	21.1	21.9	22.0	22.8	23.5	23.8	23.6	23.4	22.8	22.7	20.3	24.0	22.7
Mar 9	23.0	22.9	22.9	22.9	22.9	23.0	23.0	23.0	22.8	22.9	22.0	21.9	22.0	21.8	21.6	22.1	22.3	23.3	24.1	24.2	24.1	23.9	23.8	23.8	21.6	24.2	22.9
Mar 10	23.8	23.9	23.9	23.7	23.1	23.0	23.5	24.3	23.1	21.5	20.7	19.9	20.0	20.2	20.3	21.1	21.9	22.4	22.5	23.2	23.5	23.5	23.7	23.8	19.9	24.3	22.5
Mar 11	23.9	23.7	23.8	23.9	23.8	24.1	24.2	23.9	23.0	20.9	20.0	19.3	19.3	19.5	19.9	20.8	21.8	22.6	22.5	23.4	23.7	23.8	23.8	24.0	19.3	24.2	22.5
Mar 12	23.8	23.6	23.4	23.1	22.8	22.9	22.8	23.0	23.1	22.8	23.0	22.5	21.6	21.3	21.0	21.6	22.0	22.2	22.7	23.5	23.8	23.7	23.7	23.8	21.0	23.8	22.8
Mar 13	23.5	23.1	22.7	22.9	23.0	22.9	22.9	23.0	22.8	23.3	23.4	22.8	22.5	22.3	22.2	21.9	22.3	22.5	23.4	23.9	23.6	23.6	23.7	23.8	21.9	23.9	23.0
Mar 14	23.4	23.0	22.7	22.7	22.8	22.8	22.9	22.9	23.0	22.2	21.8	21.4	21.8	21.3	20.7	21.4	22.0	22.0	22.3	21.9	22.0	22.0	22.6	22.8	20.7	23.4	22.3
Mar 15	22.9	22.7	22.8	22.8	22.7	22.9	23.1	23.2	21.9	21.0	20.1	19.9	19.8	20.1	20.7	21.4	21.7	22.4	22.3	23.2	23.7	23.8	23.7	23.6	19.8	23.8	22.2
Mar 16	23.7	23.7	23.6	23.6	23.6	23.6	23.7	23.7	23.6	23.5	22.7	21.1	20.5	20.2	20.5	21.5	22.0	22.2	22.1	22.9	23.7	23.8	23.8	23.8	20.2	23.8	22.8
Mar 17	23.4	23.1	22.7	22.8	22.8	22.9	23.2	23.4	23.4	22.2	20.9	20.2	20.1	20.3	20.6	20.9	21.8	22.2	22.4	22.2	22.9	23.2	23.5	23.7	20.1	23.7	22.3
Mar 18	23.6	23.5	22.9	22.5	22.5	22.3	22.7	22.9	21.5	20.2	19.5	19.3	19.5	19.6	20.4	21.3	21.6	21.8	22.5	23.1	23.7	23.9	23.6	23.8	19.3	23.9	**22.0**
Mar 19	23.6	23.3	23.0	22.6	22.7	22.7	22.8	22.8	22.7	22.7	22.6	22.9	22.1	21.0	21.3	22.2	23.2	23.8	23.0	22.9	23.0	23.0	23.1	23.1	21.0	23.8	22.8
Mar 20	23.3	23.2	23.2	23.2	23.1	23.2	23.2	23.2	22.5	21.9	21.1	20.4	20.5	20.9	21.5	22.4	23.6	23.9	23.5	22.9	22.9	22.8	22.8	22.9	20.4	23.9	22.6
Mar 21	22.9	23.0	23.0	23.0	23.0	23.0	23.1	23.0	23.0	23.0	22.9	23.3	23.9	23.8	23.9	23.9	23.9	23.9	23.1	22.7	22.9	22.9	22.9	23.0	22.7	23.9	23.2
Mar 22	23.0	22.9	23.2	23.3	23.3	23.5	23.6	23.6	22.3	21.9	20.8	20.4	20.4	20.6	21.1	21.9	23.2	24.2	23.1	23.2	23.0	23.1	23.1	23.0	20.4	24.2	22.6
Mar 23	23.1	23.1	23.2	23.2	23.3	23.4	23.4	23.3	22.6	22.3	21.4	21.1	20.8	21.0	22.7	23.6	23.6	23.6	23.7	22.8	23.0	23.0	23.1	23.1	20.8	23.7	22.8
Mar 24	23.0	23.0	23.0	23.0	23.0	22.9	22.9	22.9	22.9	22.8	23.4	23.4	23.1	22.5	22.3	23.3	23.6	23.6	23.6	23.7	23.5	23.2	22.9	22.6	22.3	23.7	23.1
Mar 25	22.8	22.7	22.9	23.3	23.5	23.4	23.5	23.5	23.3	22.6	21.7	21.1	20.9	21.1	21.6	22.9	23.6	23.7	23.8	23.6	23.5	23.1	22.7	22.8	20.9	23.8	22.8
Mar 26	22.9	22.7	22.8	22.7	22.9	22.9	23.1	22.9	22.8	22.9	23.3	23.4	23.5	23.5	23.5	23.5	23.7	23.6	23.6	23.9	23.8	23.3	22.8	22.7	22.7	23.9	23.2
Mar 27	22.9	22.8	22.9	22.9	22.9	22.9	22.9	23.0	22.8	22.8	23.5	23.1	23.7	22.5	22.7	23.2	23.5	23.5	23.7	23.9	23.8	23.6	23.5	23.4	22.5	23.9	23.2
Mar 28	23.2	23.0	22.8	22.6	23.0	22.9	22.8	22.8	22.9	22.9	23.2	23.3	23.6	23.5	23.3	23.3	23.6	23.6	23.2	22.8	22.7	22.8	22.8	22.9	22.6	23.6	23.1
Mar 29	22.9	22.9	22.9	23.0	23.0	22.9	23.0	23.0	22.7	22.7	23.2	23.4	23.1	23.1	23.4	23.4	23.4	23.2	22.6	23.0	22.9	23.0	22.9	23.0	22.6	23.4	23.0
Mar 30	23.0	23.2	23.4	23.4	23.5	23.6	23.5	23.4	22.7	21.8	21.2	20.6	20.6	20.9	21.3	21.8	22.9	23.2	23.6	23.8	23.7	23.3	22.8	23.0	20.6	23.8	22.7
Mar 31	23.0	23.1	23.0	23.1	23.1	23.2	23.6	23.6	23.0	21.5	20.4	20.1	20.0	20.3	21.0	21.6	22.1	22.3	22.3	22.0	22.3	22.6	22.7	22.9	20.0	23.6	22.2
Diurnal Maximum	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.7	24.4	23.9	23.5	23.5	23.9	23.8	23.9	23.9	23.9	25.0	24.5	24.2	24.3	24.3	24.4	24.4			
Diurnal Average	23.4	23.3	23.3	23.3	23.3	23.3	23.4	23.4	23.1	22.4	21.8	21.4	21.4	21.4	21.7	22.3	22.9	23.2	23.2	23.3	23.4	23.4	23.4	23.4			

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 - March 2024

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	21.4	kph	on Mar 15 at hr 12	Hours in Service:	744	
Maximum Daily Value:	13.6	kph	on Mar 26	Hours of Data:	744	
Minimum Hourly Value:	0.0	kph	on Mar 1 at hr 20	Hours of Missing Data:	0	
Minimum Daily Value:	3.7	kph	on Mar 5	Hours of Calibration:	0	
Monthly Average:	2.1	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			
Mar 1	8.6	13.8	14.7	15.0	9.7	10.0	12.7	14.8	16.2	15.4	13.5	10.4	10.6	11.2	10.1	7.6	4.5	3.4	3.3	1.3	**0.0**	0.6	0.7	2.9	**0.0**	16.2	8.8
Mar 2	1.3	2.2	1.7	3.7	2.6	3.4	3.7	4.3	5.6	6.6	8.2	6.5	4.3	10.2	7.3	4.4	9.3	12.2	12.1	9.7	10.0	11.5	12.0	10.4	1.3	12.2	6.8
Mar 3	9.4	5.7	5.2	4.8	4.1	4.9	6.0	6.6	7.4	9.1	9.5	8.5	9.5	10.4	12.3	12.5	16.3	18.6	18.7	17.0	18.2	18.4	18.0	17.9	4.1	18.7	11.2
Mar 4	18.8	19.5	20.0	17.2	16.1	17.2	14.2	13.8	12.6	16.3	14.4	15.0	11.8	11.0	12.3	11.2	10.5	8.6	6.7	4.3	3.4	3.3	3.6	1.8	1.8	20.0	11.8
Mar 5	4.4	5.3	6.4	5.9	4.0	4.9	5.6	4.8	2.2	1.2	4.8	4.2	4.2	5.0	2.5	4.6	3.9	3.3	1.1	**0.0**	1.2	2.2	2.4	5.5	**0.0**	6.4	**3.7**
Mar 6	6.5	1.8	0.5	0.5	0.7	0.2	6.7	0.4	3.0	4.1	5.3	4.4	3.2	5.9	7.6	10.2	10.5	9.2	6.5	6.4	6.9	7.0	6.9	8.0	0.2	10.5	5.1
Mar 7	6.9	7.3	7.3	7.2	7.1	9.2	8.6	8.3	9.0	8.6	8.3	10.0	11.0	12.3	11.6	11.3	10.5	11.0	11.3	11.0	9.1	4.9	5.9	7.3	4.9	12.3	9.0
Mar 8	6.0	5.1	6.2	5.6	1.9	3.5	4.9	5.4	5.6	5.7	4.4	4.7	3.8	7.8	9.0	7.8	8.3	7.6	8.5	10.1	10.9	10.5	10.7	9.6	1.9	10.9	6.8
Mar 9	10.2	11.6	12.4	13.0	11.5	12.9	13.3	10.4	12.0	11.8	14.2	13.5	11.1	13.2	12.6	12.9	13.2	9.6	12.1	11.4	8.9	8.5	4.9	2.3	2.3	14.2	11.1
Mar 10	4.9	7.0	1.6	2.3	4.6	10.7	10.1	8.7	10.6	10.9	12.4	11.4	11.1	10.8	8.6	10.4	7.6	3.0	3.6	4.8	5.5	3.0	1.4	2.3	1.4	12.4	7.0
Mar 11	3.5	3.2	0.9	0.9	2.5	9.5	4.0	3.6	4.1	5.0	6.0	8.1	8.2	8.0	7.1	4.0	3.9	2.2	4.6	5.0	5.4	5.2	6.2	8.0	0.9	9.5	5.0
Mar 12	12.1	13.8	14.9	14.9	11.8	10.6	9.6	8.5	10.0	10.0	10.1	8.8	13.7	11.6	9.4	11.3	7.2	2.6	2.6	2.4	3.4	4.8	4.8	3.1	2.4	14.9	8.8
Mar 13	3.7	2.3	1.6	0.9	0.9	1.3	2.5	2.6	6.0	5.2	3.2	2.3	5.1	3.4	5.1	6.9	6.4	7.5	5.8	6.0	6.9	6.4	5.4	5.0	0.9	7.5	4.3
Mar 14	6.9	6.0	1.1	4.1	5.8	6.7	6.5	5.6	5.1	7.0	6.9	8.1	9.2	10.9	11.4	14.8	7.3	9.8	10.5	10.2	9.6	8.8	8.2	11.1	1.1	14.8	8.0
Mar 15	11.5	12.6	11.8	17.7	18.4	15.1	11.1	12.7	17.7	21.1	20.1	20.2	**21.4**	15.0	14.4	14.3	13.8	11.5	5.6	3.2	4.7	3.7	6.7	4.5	3.2	**21.4**	12.9
Mar 16	2.3	1.6	2.8	1.6	1.9	3.4	5.0	4.3	4.4	5.3	7.3	7.0	4.1	5.2	2.6	5.4	5.7	2.8	1.1	2.6	4.7	6.2	9.2	9.5	1.1	9.5	4.4
Mar 17	7.5	8.4	8.7	12.5	11.7	12.6	13.3	12.6	12.5	12.1	11.3	13.4	15.2	15.0	14.0	13.9	12.2	12.9	9.0	6.9	10.2	9.1	7.4	6.4	6.4	15.2	11.2
Mar 18	4.2	11.0	18.6	16.6	15.9	13.3	10.5	12.4	16.5	12.4	12.2	9.8	12.5	14.3	11.8	10.2	8.2	9.9	11.6	10.2	11.4	11.9	10.5	9.0	4.2	18.6	11.9
Mar 19	10.4	9.6	9.9	8.1	8.8	9.0	8.7	8.5	9.1	8.8	9.2	9.1	8.8	9.2	7.0	6.1	7.3	7.7	7.7	6.1	6.6	6.7	6.6	6.0	6.0	10.4	8.1
Mar 20	5.0	4.4	2.3	3.2	3.7	2.7	2.3	2.9	5.0	4.3	5.6	7.9	7.8	8.1	7.7	7.4	7.0	5.5	1.9	1.0	2.3	5.2	7.8	9.3	1.0	9.3	5.0
Mar 21	9.3	10.0	9.5	10.4	12.3	11.7	10.3	12.4	10.9	11.8	10.6	9.8	11.2	12.6	12.3	10.3	9.3	8.3	7.8	7.9	10.6	8.8	7.3	3.3	3.3	12.6	9.9
Mar 22	2.6	3.4	2.3	2.5	3.0	**0.0**	0.1	0.6	1.0	4.3	5.2	6.9	5.2	8.2	8.9	7.9	6.8	5.6	0.7	0.1	0.9	2.9	4.6	7.6	**0.0**	8.9	3.8
Mar 23	6.5	6.3	8.5	8.6	9.7	10.0	9.0	11.4	10.6	7.3	8.7	9.6	7.9	8.0	6.6	6.4	5.7	6.9	4.7	3.3	3.2	3.3	3.6	5.6	3.2	11.4	7.1
Mar 24	7.8	7.8	7.3	8.5	8.9	8.9	9.3	8.4	7.2	10.0	9.7	9.9	12.8	11.8	11.4	10.3	10.7	10.0	8.6	9.2	10.5	12.2	14.0	11.9	7.2	14.0	9.9
Mar 25	12.1	12.6	12.1	11.7	12.8	13.2	13.4	11.6	13.1	12.3	14.2	15.8	16.5	14.8	14.1	14.6	12.1	11.2	12.9	15.1	14.5	13.8	13.4	10.7	10.7	16.5	13.3
Mar 26	9.0	10.7	11.2	11.0	13.1	12.3	13.3	13.9	12.9	13.4	15.3	16.4	17.1	18.7	15.0	15.0	12.4	12.0	11.4	11.5	15.4	16.2	13.8	14.8	9.0	18.7	**13.6**
Mar 27	15.8	14.7	15.3	16.0	14.5	13.6	13.6	15.6	16.9	15.5	14.4	12.1	14.8	16.0	14.9	10.9	6.3	4.9	4.3	3.6	5.0	4.4	3.1	3.1	3.1	16.9	11.2
Mar 28	3.4	3.3	4.0	4.6	4.5	3.6	6.4	7.6	8.1	8.5	7.7	8.4	8.7	8.0	7.9	9.4	9.5	9.2	6.6	5.9	6.9	6.8	6.7	7.6	3.3	9.5	6.8
Mar 29	6.9	7.4	6.7	6.7	7.4	7.3	6.5	7.8	8.1	11.7	15.0	14.3	13.6	14.4	11.3	10.9	9.7	8.0	7.8	4.7	1.1	1.5	0.4	0.8	0.4	15.0	7.9
Mar 30	2.0	2.5	2.7	3.5	4.7	5.8	5.0	5.6	5.9	10.3	8.3	8.5	9.8	10.3	10.1	10.3	8.5	8.5	7.5	7.4	8.1	7.0	8.6	9.4	2.0	10.3	7.1
Mar 31	8.0	7.6	8.4	9.5	7.5	7.6	6.2	7.9	5.8	4.3	9.3	12.0	11.5	13.1	13.1	14.1	15.4	14.5	11.3	12.2	13.7	13.4	13.1	14.4	4.3	15.4	10.6
Diurnal Maximum	18.8	19.5	20.0	17.7	18.4	17.2	14.2	15.6	17.7	21.1	20.1	20.2	21.4	18.7	15.0	15.0	16.3	18.6	18.7	17.0	18.2	18.4	18.0	17.9			
Diurnal Average	7.3	7.7	7.6	8.0	7.8	8.2	8.1	8.2	8.9	9.4	9.8	9.9	10.2	10.8	10.0	9.9	9.0	8.3	7.4	6.8	7.4	7.4	7.4	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
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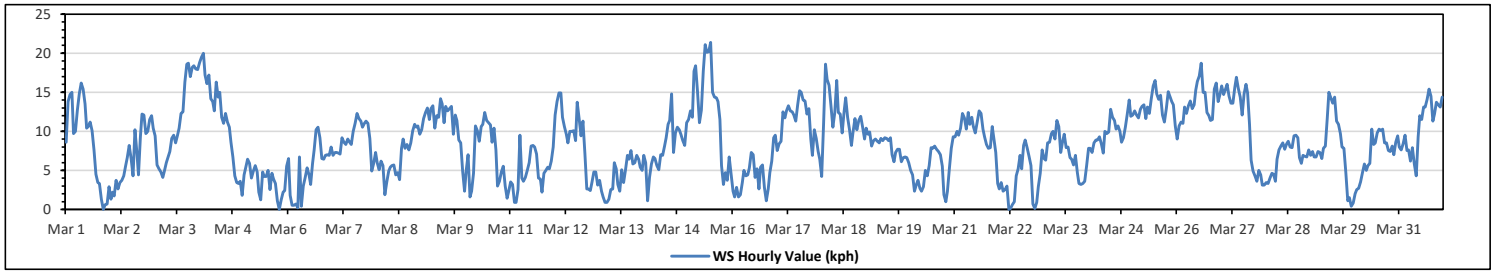
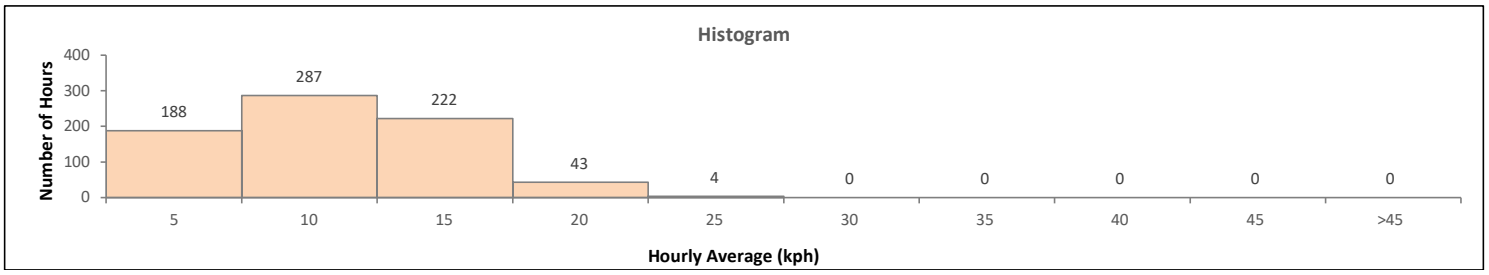
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



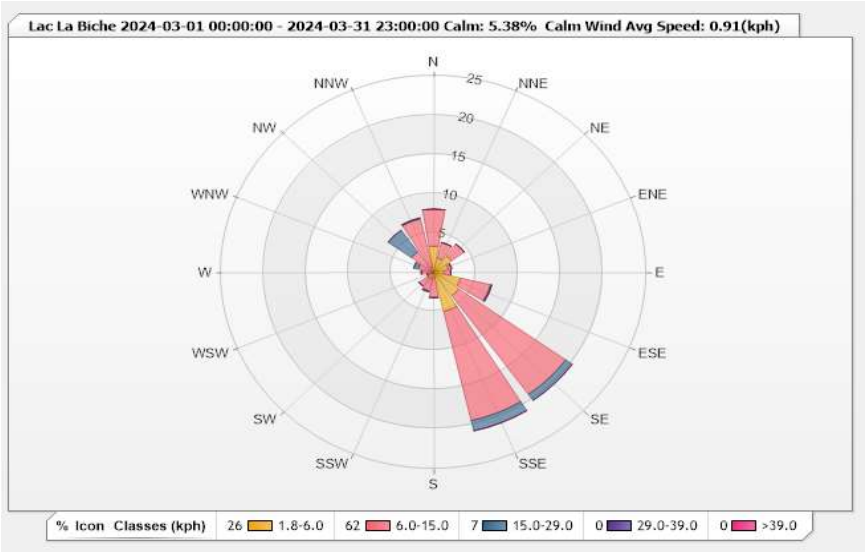


Station: Lac La Biche Monitor: WDS [kph] Monthly: 03-2024

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

Calm (WS<1.8kph): 5.38% 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	3.36	4.7	0	0	0	8.06
NNE	1.88	2.02	0	0	0	3.9
NE	2.55	1.88	0	0	0	4.43
ENE	1.75	0.4	0	0	0	2.15
E	1.21	0.81	0	0	0	2.02
ESE	3.23	3.63	0.13	0	0	6.99
SE	3.63	15.46	0.94	0	0	20.03
SSE	5.11	14.25	1.34	0	0	20.7
S	0.67	2.55	0	0	0	3.22
SSW	0.81	1.61	0.13	0	0	2.55
SW	0.94	1.21	0	0	0	2.15
WSW	0.13	0.67	0	0	0	0.8
W	0.13	1.34	0	0	0	1.47
WNW	0.13	1.75	0.54	0	0	2.42
NW	0	3.23	3.36	0	0	6.59
NNW	0.67	6.32	0.13	0	0	7.12
Summary	26.2	61.83	6.57	0	0	94.6



Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

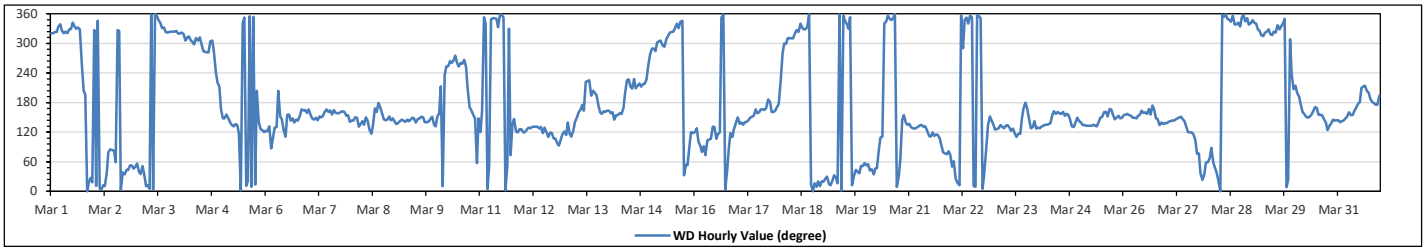
WIND DIRECTION (VWD) in sector

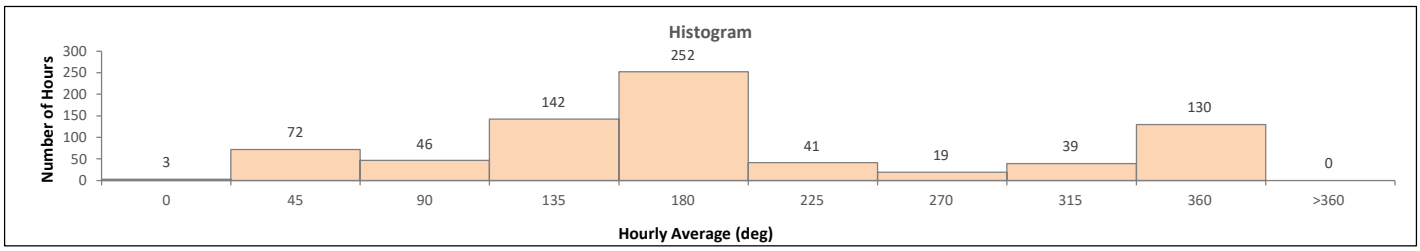
Monthly Average:	136 (SE)	degree	
Hours in Service:	744		
Hours of Data:	744		
Hours of Missing Data:	0		
Hours of Calibration:	0		
Operational Uptime:	100.0		

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
Mar 1	NW	NW	NW	NW	NNW	NNW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	WSW	SSW	SSW	N	NNE	NNE	NNE	326	NW
Mar 2	NW	NNE	NNW	N	N	NNE	N	NE	ENE	E	E	E	ENE	NW	NW	N	NE	NE	NE	NE	NE	NE	NE	NE	38	NE
Mar 3	NE	NE	NE	NE	NE	N	NNE	N	N	N	N	N	NNW	NNW	NNW	NNW	NW	NW	NW	NW	NW	NW	NW	NW	341	NNW
Mar 4	NW	NW	NW	NW	NW	NW	NW	WNW	WNW	NW	NW	NW	WNW	WNW	W	W	W	WNW	NW	W	WSW	SW	SSW	SSE	303	WNW
Mar 5	SE	SE	SSE	SE	SE	SE	SE	SE	SE	ESE	N	NNW	N	NNE	NNE	N	N	N	NNE	SSW	SE	SE	ESE	ESE	103	ESE
Mar 6	ESE	ESE	SE	E	ESE	SE	SE	SSW	SSE	SE	ESE	ESE	SSE	SSE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	145	SE
Mar 7	SSE	SSE	SE	SE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	157	SSE
Mar 8	SE	SE	SSE	SSE	SE	SE	SE	SE	SSE	SE	SE	ESE	SE	SSE	SSE	S	SSE	SSE	SE	SE	SE	SSE	SE	SE	149	SSE
Mar 9	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SE	SE	SE	SE	SSE	SSE	SE	SE	SE	SE	SSE	SE	SE	144	SE
Mar 10	SSE	SSE	SSW	N	SW	WSW	WSW	W	WSW	W	W	WSW	WSW	WSW	WSW	W	WSW	SSW	S	SSE	SSE	SE	ENE	SE	245	WSW
Mar 11	ESE	SSE	N	NNW	N	NE	NNW	N	N	N	NNW	N	N	N	N	NE	NNW	ENE	SE	SE	ESE	ESE	SE	SE	38	NE
Mar 12	ESE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	ESE	ESE	ESE	ESE	ESE	ESE	E	E	ESE	ESE	ESE	123	ESE
Mar 13	ESE	SE	ESE	ESE	ESE	SE	SSE	SSE	SSE	S	SSE	SW	SW	SW	SSW	SSW	SSW	SSW	S	SSE	SSE	SSE	SSE	SSE	175	S
Mar 14	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSW	SW	SW	SSW	SSW	SW	SSW	SSW	SW	SSW	SW	SW	SW	WSW	W	207	SSW
Mar 15	WNW	WNW	WNW	WNW	WNW	NW	WNW	WNW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNE	NE	NE	E	ESE	ESE	319	NW
Mar 16	ESE	SE	E	E	E	E	ENE	ESE	ESE	ESE	SE	SE	ESE	ESE	ESE	N	N	N	NE	E	ESE	ESE	SE	SE	104	ESE
Mar 17	SSE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	SSE	SSE	SSE	SSE	S	158	SSE
Mar 18	SW	W	WNW	WNW	NW	NW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	N	NNE	N	NNE	N	NNE	N	NNE	331	NNW
Mar 19	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	NNW	NNW	NNW	N	NNE	NNE	NE	NE	NE	NE	NE	ENE	17	NNE
Mar 20	NE	NE	NE	NE	NE	NE	NE	E	ESE	ESE	NNW	NNW	N	N	NNW	N	N	N	NNE	ENE	SE	SSE	SE	SE	36	NE
Mar 21	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E	ENE	ENE	ENE	E	ENE	116	ESE
Mar 22	NE	ENE	NNE	NNE	NNE	N	WNW	NNW	N	NNW	N	N	NNE	N	N	N	N	N	NE	E	SE	SSE	SE	SE	15	NNE
Mar 23	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	ESE	ESE	ESE	ESE	SE	SSE	S	SSE	SE	SE	SE	SE	SE	132	SE
Mar 24	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	SE	SE	SSE	SE	146	SE
Mar 25	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	SE	SSE	146	SE
Mar 26	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSE	SE	SE	SE	SE	SE	SE	153	SSE
Mar 27	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SE	SE	SE	ESE	ESE	ESE	ESE	ESE	ENE	ENE	NE	NNE	NE	ENE	ENE	130	SE
Mar 28	ENE	E	ENE	NE	NE	NNE	N	N	N	N	N	NNW	NNW	N	NNW	NNW	NNW	NNW	N	N	NNW	N	NNW	NNW	355	N
Mar 29	NNW	NNW	NNW	NNW	NW	NW	NW	NW	NW	NNW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	N	N	NNE	NW	SW	SSW	329	NNW
Mar 30	SSW	SSW	S	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSE	SSE	SSE	SSE	SE	SE	ESE	SE	SE	SE	SE	SE	153	SSE
Mar 31	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	SSW	SSW	SSW	SSW	SSW	S	S	S	S	S	SSW	179	S

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

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





Lakeland Industry & Community Association

Lac La Biche Station - March 2024

Summary of Hourly Averages

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

WIND SPEED

Maximum Hourly Value:	21.4	kph	on Mar 15 at hr 12	Hours in Service:	744
Maximum Daily Value:	13.6	kph	on Mar 26	Hours of Data:	744
Minimum Hourly Value:	0.0	kph	on Mar 1 at hr 20	Hours of Missing Data:	0
Minimum Daily Value:	3.7	kph	on Mar 5	Hours of Calibration:	0
Monthly Average:	2.1	kph		Operational Uptime:	100.0

WIND DIRECTION

Monthly Average: 136 degree (SE)

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			
Mar 1	8.6	13.8	14.7	15.0	9.7	10.0	12.7	14.8	16.2	15.4	13.5	10.4	10.6	11.2	10.1	7.6	4.5	3.4	3.3	1.3	**0.0**	0.6	0.7	2.9	**0.0**	16.2	8.8
	NW	NW	NW	NW	NNW	NNW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	WSW	SSW	SSW	N	NNE	NNE	NNE			326(NW)
Mar 2	1.3	2.2	1.7	3.7	2.6	3.4	3.7	4.3	5.6	6.6	8.2	6.5	4.3	10.2	7.3	4.4	9.3	12.2	12.1	9.7	10.0	11.5	12.0	10.4	1.3	12.2	6.8
	NW	NNE	NNW	N	N	NNE	N	NE	ENE	E	E	E	ENE	NW	NW	N	NE	NE	NE	NE	NE	NE	NE	NE			38(NE)
Mar 3	9.4	5.7	5.2	4.8	4.1	4.9	6.0	6.6	7.4	9.1	9.5	8.5	9.5	10.4	12.3	12.5	16.3	18.6	18.7	17.0	18.2	18.4	18.0	17.9	4.1	18.7	11.2
	NE	NE	NE	NE	NE	N	NNE	N	N	N	N	N	NNW	NNW	NNW	NNW	NW	NW	NW	NW	NW	NW	NW	NW			341(NNW)
Mar 4	18.8	19.5	20.0	17.2	16.1	17.2	14.2	13.8	12.6	16.3	14.4	15.0	11.8	11.0	12.3	11.2	10.5	8.6	6.7	4.3	3.4	3.3	3.6	1.8	1.8	20.0	11.8
	NW	NW	NW	NW	NW	NW	NW	WNW	WNW	NW	NW	NW	WNW	WNW	W	W	W	WNW	NW	W	WSW	SW	SSW	SSE			303(WNW)
Mar 5	4.4	5.3	6.4	5.9	4.0	4.9	5.6	4.8	2.2	1.2	4.8	4.2	4.2	5.0	2.5	4.6	3.9	3.3	1.1	**0.0**	1.2	2.2	2.4	5.5	**0.0**	6.4	**3.7**
	SE	SE	SSE	SE	SE	SE	SE	SE	SE	ESE	N	NNW	N	NNE	NNE	N	N	N	NNE	SSW	SE	SE	ESE	ESE			103(ESE)
Mar 6	6.5	1.8	0.5	0.5	0.7	0.2	6.7	0.4	3.0	4.1	5.3	4.4	3.2	5.9	7.6	10.2	10.5	9.2	6.5	6.4	6.9	7.0	6.9	8.0	0.2	10.5	5.1
	ESE	ESE	SE	E	ESE	SE	SE	SSW	SSE	SE	ESE	ESE	SSE	SSE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE			145(SE)
Mar 7	6.9	7.3	7.3	7.2	7.1	9.2	8.6	8.3	9.0	8.6	8.3	10.0	11.0	12.3	11.6	11.3	10.5	11.0	11.3	11.0	9.1	4.9	5.9	7.3	4.9	12.3	9.0
	SSE	SSE	SE	SE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE			157(SSE)
Mar 8	6.0	5.1	6.2	5.6	1.9	3.5	4.9	5.4	5.6	5.7	4.4	4.7	3.8	7.8	9.0	7.8	8.3	7.6	8.5	10.1	10.9	10.5	10.7	9.6	1.9	10.9	6.8
	SE	SE	SSE	SSE	SE	SE	SE	SE	SSE	SE	SE	ESE	SE	SSE	SSE	S	SSE	SSE	SE	SE	SE	SSE	SE	SE			149(SSE)
Mar 9	10.2	11.6	12.4	13.0	11.5	12.9	13.3	10.4	12.0	11.8	14.2	13.5	11.1	13.2	12.6	12.9	13.2	9.6	12.1	11.4	8.9	8.5	4.9	2.3	2.3	14.2	11.1
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SE	SE	SE	SE	SSE	SSE	SE	SE	SE	SE	SSE	SE	SE			144(SE)
Mar 10	4.9	7.0	1.6	2.3	4.6	10.7	10.1	8.7	10.6	10.9	12.4	11.4	11.1	10.8	8.6	10.4	7.6	3.0	3.6	4.8	5.5	3.0	1.4	2.3	1.4	12.4	7.0
	SSE	SSE	SSW	N	SW	WSW	WSW	W	WSW	W	W	WSW	WSW	WSW	WSW	W	WSW	SSW	S	SSE	SSE	SE	ENE	SE			245(WSW)
Mar 11	3.5	3.2	0.9	0.9	2.5	9.5	4.0	3.6	4.1	5.0	6.0	8.1	8.2	8.0	7.1	4.0	3.9	2.2	4.6	5.0	5.4	5.2	6.2	8.0	0.9	9.5	5.0
	ESE	SSE	N	NNW	N	NE	NNW	N	N	N	NNW	N	N	N	N	NE	NNW	ENE	SE	SE	ESE	ESE	SE	SE			38(NE)
Mar 12	12.1	13.8	14.9	14.9	11.8	10.6	9.6	8.5	10.0	10.0	10.1	8.8	13.7	11.6	9.4	11.3	7.2	2.6	2.6	2.4	3.4	4.8	4.8	3.1	2.4	14.9	8.8
	ESE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	ESE	ESE	ESE	ESE	ESE	ESE	E	E	ESE	ESE	ESE			123(ESE)
Mar 13	3.7	2.3	1.6	0.9	0.9	1.3	2.5	2.6	6.0	5.2	3.2	2.3	5.1	3.4	5.1	6.9	6.4	7.5	5.8	6.0	6.9	6.4	5.4	5.0	0.9	7.5	4.3
	ESE	SE	ESE	ESE	ESE	SE	SSE	SSE	SSE	S	SSE	SW	SW	SW	SSW	SSW	SSW	SSW	S	SSE	SSE	SSE	SSE	SSE			175(S)
Mar 14	6.9	6.0	1.1	4.1	5.8	6.7	6.5	5.6	5.1	7.0	6.9	8.1	9.2	10.9	11.4	14.8	7.3	9.8	10.5	10.2	9.6	8.8	8.2	11.1	1.1	14.8	8.0
	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSW	SW	SW	SSW	SSW	SW	SSW	SSW	SW	SSW	SW	SW	SW	WSW	W			207(SSW)
Mar 15	11.5	12.6	11.8	17.7	18.4	15.1	11.1	12.7	17.7	21.1	20.1	20.2	**21.4**	15.0	14.4	14.3	13.8	11.5	5.6	3.2	4.7	3.7	6.7	4.5	3.2	**21.4**	12.9
	WNW	WNW	WNW	WNW	WNW	NW	WNW	WNW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNE	NE	NE	E	ESE	ESE			319(NW)
Mar 16	2.3	1.6	2.8	1.6	1.9	3.4	5.0	4.3	4.4	5.3	7.3	7.0	4.1	5.2	2.6	5.4	5.7	2.8	1.1	2.6	4.7	6.2	9.2	9.5	1.1	9.5	4.4
	ESE	SE	E	E	E	E	ENE	ESE	ESE	ESE	SE	SE	ESE	ESE	ESE	N	N	N	NE	E	ESE	ESE	SE	SE			104(ESE)
Mar 17	7.5	8.4	8.7	12.5	11.7	12.6	13.3	12.6	12.5	12.1	11.3	13.4	15.2	15.0	14.0	13.9	12.2	12.9	9.0	6.9	10.2	9.1	7.4	6.4	6.4	15.2	11.2
	SSE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	SSE	SSE	SSE	SSE	S			158(SSE)
Mar 18	4.2	11.0	18.6	16.6	15.9	13.3	10.5	12.4	16.5	12.4	12.2	9.8	12.5	14.3	11.8	10.2	8.2	9.9	11.6	10.2	11.4	11.9	10.5	9.0	4.2	18.6	11.9
	SW	W	WNW	WNW	NW	NW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	N	NNE	N	NNE	N	NNE	N	NNE			331(NNW)
Mar 19	10.4	9.6	9.9	8.1	8.8	9.0	8.7	8.5	9.1	8.8	9.2	9.1	8.8	9.2	7.0	6.1	7.3	7.7	7.7	6.1	6.6	6.7	6.6	6.0	6.0	10.4	8.1
	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	NNW	NNW	NNW	N	NNE	NNE	NE	NE	NE	NE	NE	ENE			17(NNE)
Mar 20	5.0	4.4	2.3	3.2	3.7	2.7	2.3	2.9	5.0	4.3	5.6	7.9	7.8	8.1	7.7	7.4	7.0	5.5	1.9	1.0	2.3	5.2	7.8	9.3	1.0	9.3	5.0
	NE	NE	NE	NE	NE	NE	NE	E	ESE	ESE	NNW	NNW	N	N	NNW	N	N	N	NNE	ENE	SE	SSE	SE	SE			36(NE)
Mar 21	9.3	10.0	9.5	10.4	12.3	11.7	10.3	12.4	10.9	11.8	10.6	9.8	11.2	12.6	12.3	10.3	9.3	8.3	7.8	7.9	10.6	8.8	7.3	3.3	3.3	12.6	9.9
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E	ENE	ENE	ENE	E	ENE			116(ESE)
Mar 22	2.6	3.4	2.3	2.5	3.0	**0.0**	0.1	0.6	1.0	4.3	5.2	6.9	5.2	8.2	8.9	7.9	6.8	5.6	0.7	0.1	0.9	2.9	4.6	7.6	**0.0**	8.9	3.8
	NE	ENE	NNE	NNE	NNE	N	WNW	NNW	N	NNW	N	N	NNE	N	N	N	N	N	NE	E	SE	SSE	SE	SE			15(NNE)
Mar 23	6.5	6.3	8.5	8.6	9.7	10.0	9.0	11.4	10.6	7.3	8.7	9.6	7.9	8.0	6.6	6.4	5.7	6.9	4.7	3.3	3.2	3.3	3.6	5.6	3.2	11.4	7.1
	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	SE	ESE	ESE	ESE	ESE	SE	SSE	S	SSE	SE	SE	SE	SE	SE			132(SE)
Mar 24	7.8	7.8	7.3	8.5	8.9	8.9	9.3	8.4	7.2	10.0	9.7	9.9	12.8	11.8	11.4	10.3	10.7	10.0	8.6	9.2	10.5	12.2	14.0	11.9	7.2	14.0	9.9
	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	SE	SE	SSE	SE			146(SE)
Mar 25	12.1	12.6	12.1	11.7	12.8	13.2	13.4	11.6	13.1	12.3	14.2	15.8	16.5	14.8	14.1	14.6	12.1	11.2	12.9	15.1	14.5	13.8	13.4	10.7	10.7	16.5	13.3
	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	SE	SSE			146(SE)
Mar 26	9.0	10.7	11.2	11.0	13.1	12.3	13.3	13.9	12.9	13.4	15.3	16.4	17.1	18.7	15.0	15.0	12.4	12.0	11.4	11.5	15.4	16.2	13.8	14.8	9.0	18.7	**13.6**
	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSE	SE	SE	SE	SE	SE	SE			153(SSE)
Mar 27	15.8	14.7	15.3	16.0	14.5	13.6	13.6	15.6	16.9	15.5	14.4	12.1	14.8	16.0	14.9	10.9	6.3	4.9	4.3	3.6	5.0	4.4	3.1	3.1	3.1	16.9	11.2
	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SE	SE	SE	ESE	ESE	ESE	ESE	ESE	ENE	ENE	NE	NNE	NE	ENE	ENE			130(SE)
Mar 28	3.4	3.3	4.0	4.6	4.5	3.6	6.4	7.6	8.1	8.5	7.7	8.4	8.7	8.0	7.9	9.4	9.5	9.2	6.6	5.9	6.9	6.8	6.7	7.6	3.3	9.5	6.8
	ENE	E	ENE	NE	NE	NNE	N	N	N	N	N	NNW	NNW	N	NNW	NNW	NNW	NNW	N	N	NNW	N	NNW	NNW			355(N)
Mar 29	6.9	7.4	6.7	6.7	7.4	7.3	6.5	7.8	8.1	11.7	15.0	14.3	13.6	14.4	11.3	10.9	9.7	8.0	7.8	4.7	1.1	1.5	0.4	0.8	0.4	15.0	7.9
	NNW	NNW	NNW	NNW	NW	NW	NW	NW	NW	NNW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	N	N	NNE	NW	SW	SSW			329(NNW)
Mar 30	2.0	2.5	2.7	3.5	4.7	5.8	5.0	5.6	5.9	10.3	8.3	8.5	9.8	10.3	10.1	10.3	8.5	8.5	7.5	7.4	8.1	7.0	8.6	9.4	2.0	10.3	7.1
	SSW	SSW	S	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSE	SSE	SSE	SSE	SE	SE	ESE	SE	SE	SE	SE	SE			153(SSE)
Mar 31	8.0	7.6	8.4	9.5	7.5	7.6	6.2	7.9	5.8	4.3	9.3	12.0	11.5	13.1	13.1	14.1	15.4	14.5	11.3	12.2	13.7	13.4	13.1	14.4	4.3	15.4	10.6
	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	SSW	SSW	SSW	SSW	SSW	S	S	S	S	S	SSW			179(S)

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 - March 2024

Summary of Hour Standard Deviations

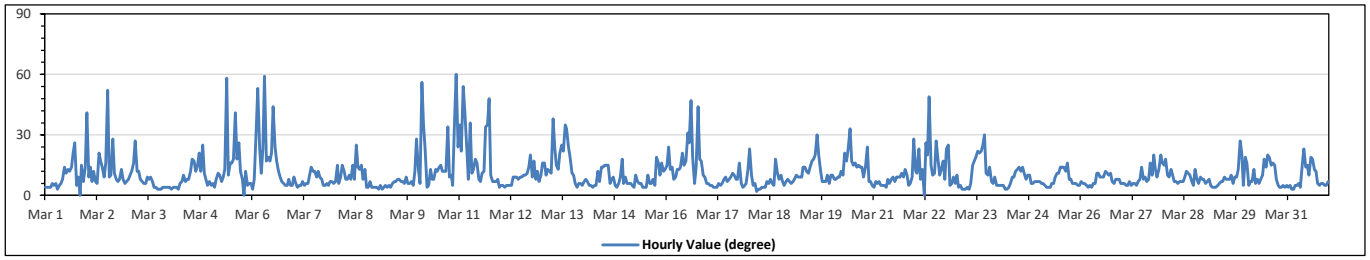
STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:	60 degree on Mar 10 at hr 22	Hours in Service:	744
		Hours of Data:	744
Minimum Hourly Value:	0 degree on Mar 1 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		
Mar 1	4	4	4	4	6	5	6	3	5	6	8	14	11	13	12	14	21	26	5	9	**0**	15	7	14	**0**	26
Mar 2	41	9	14	7	12	7	6	21	17	14	9	16	52	9	10	28	11	8	7	8	13	8	6	7	6	52
Mar 3	8	10	12	16	27	12	12	8	7	6	6	9	8	9	7	4	4	3	3	3	4	4	4	4	3	27
Mar 4	4	3	4	4	4	3	6	7	10	7	8	8	12	18	17	12	14	21	12	25	11	8	5	7	3	25
Mar 5	5	6	4	8	11	10	7	9	13	58	10	16	16	18	41	18	26	12	8	**0**	12	5	6	6	**0**	58
Mar 6	3	8	32	53	23	11	23	59	17	19	17	21	44	24	17	12	9	7	6	5	5	8	5	5	3	59
Mar 7	9	6	4	5	5	7	5	6	6	10	14	12	12	9	12	9	8	5	5	6	5	7	7	6	4	14
Mar 8	7	15	6	9	15	12	8	8	10	8	15	8	25	14	13	15	8	13	4	4	7	4	4	4	4	25
Mar 9	4	3	5	3	4	5	4	5	4	6	7	7	8	8	7	7	6	9	6	6	7	5	12	28	3	28
Mar 10	13	6	56	35	23	4	5	13	8	8	13	12	14	15	12	12	12	34	9	10	5	37	**60**	24	4	**60**
Mar 11	35	22	54	42	24	8	36	11	13	18	16	8	7	11	12	34	35	48	10	7	7	7	8	4	4	54
Mar 12	5	5	4	5	5	5	5	9	9	9	8	9	9	10	10	11	14	20	9	17	8	12	7	10	4	20
Mar 13	16	16	10	13	12	11	38	24	15	13	21	25	22	35	33	24	19	11	10	6	4	6	6	5	4	38
Mar 14	7	8	7	5	5	4	5	5	12	7	14	14	15	15	15	6	8	9	5	4	6	9	18	6	4	18
Mar 15	9	6	6	6	5	4	10	7	6	6	4	4	4	10	6	6	8	5	19	16	10	16	12	13	4	19
Mar 16	15	24	13	14	8	9	13	13	14	21	15	17	31	26	47	19	6	14	44	18	17	10	9	6	6	47
Mar 17	6	5	5	4	4	4	6	5	6	8	9	7	8	9	11	10	8	8	16	6	4	5	6	13	4	16
Mar 18	23	10	5	6	2	3	3	4	4	4	7	6	8	6	5	18	11	8	10	7	5	7	8	7	2	23
Mar 19	6	7	8	10	9	9	9	14	14	12	11	14	17	18	20	30	20	12	7	7	7	10	6	10	6	30
Mar 20	10	8	8	9	9	12	10	21	17	23	33	17	15	16	14	15	14	14	9	14	24	7	7	5	5	33
Mar 21	4	7	6	7	5	5	5	4	8	6	8	9	7	9	9	9	11	9	13	10	5	6	9	28	4	28
Mar 22	12	11	23	8	13	**0**	26	20	49	15	10	11	27	19	10	13	17	8	23	25	5	6	9	6	**0**	49
Mar 23	10	4	5	3	3	3	4	3	6	15	17	19	22	21	22	25	30	11	10	14	7	6	9	5	3	30
Mar 24	5	5	5	5	3	3	4	6	9	9	12	13	14	12	14	11	8	10	10	6	6	7	7	7	3	14
Mar 25	7	6	6	5	4	4	4	6	6	9	11	11	14	14	14	12	16	8	8	6	6	6	5	5	4	16
Mar 26	7	6	6	5	4	5	4	6	6	11	11	9	9	9	12	11	10	11	7	6	8	8	8	6	4	12
Mar 27	6	6	5	5	7	5	6	6	5	7	8	14	8	9	7	8	16	10	20	13	9	13	20	16	5	20
Mar 28	15	18	10	9	13	10	7	7	6	7	7	7	9	12	11	10	7	5	13	8	6	9	8	8	5	18
Mar 29	6	7	8	5	4	4	4	5	6	7	7	9	8	8	8	10	6	9	9	13	27	21	5	19	4	27
Mar 30	16	5	7	7	13	6	8	6	8	10	18	14	20	19	15	16	15	8	5	4	4	5	4	5	4	20
Mar 31	4	5	3	3	5	5	6	4	15	23	14	15	10	19	18	13	12	6	5	6	6	5	5	7	3	23
Diurnal Minimum	3	3	3	3	2	0	3	3	4	4	4	4	4	6	5	4	4	3	3	0	0	4	4	4		
Diurnal Maximum	41	24	56	53	27	12	38	59	49	58	33	25	52	35	47	34	35	48	44	25	27	37	60	28		

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, 156 of 156 ends the March 2024 Monthly Ambient Air Quality Monitoring Report.

Lakeland Industry & Community Association

MARCH 2024

Ambient Air Monitoring Calibration Report

- COLD LAKE SOUTH STATION-

CAL-LICA-202403-01174

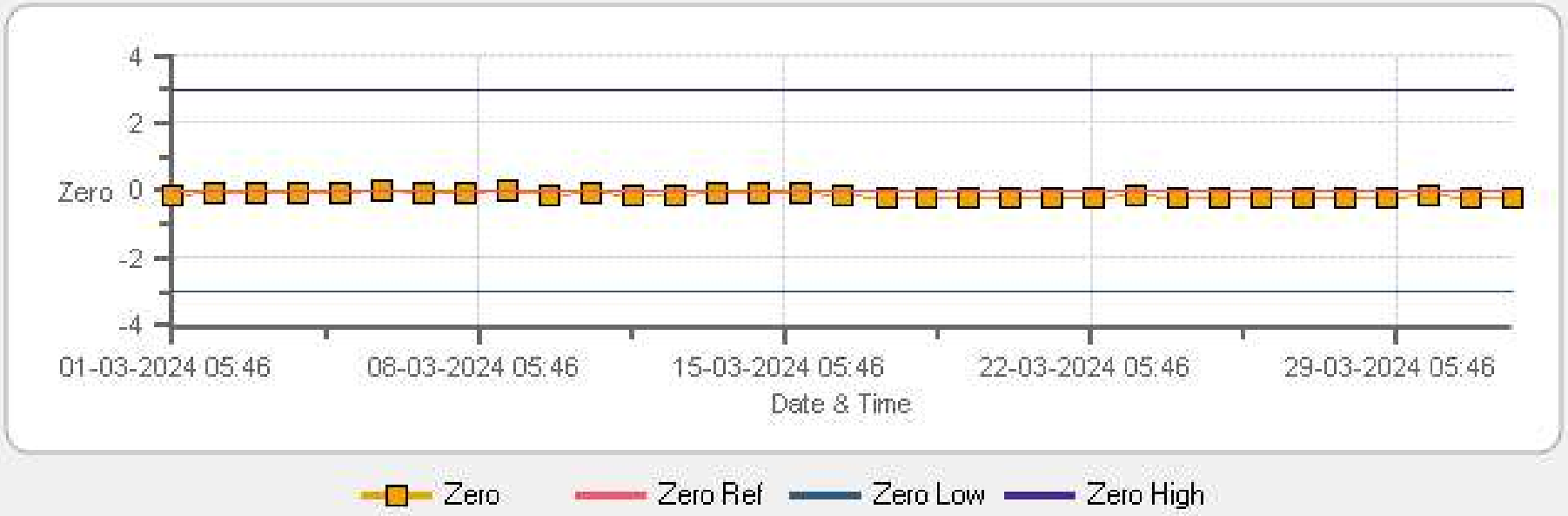
Station Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
LICA / Bureau Veritas Canada

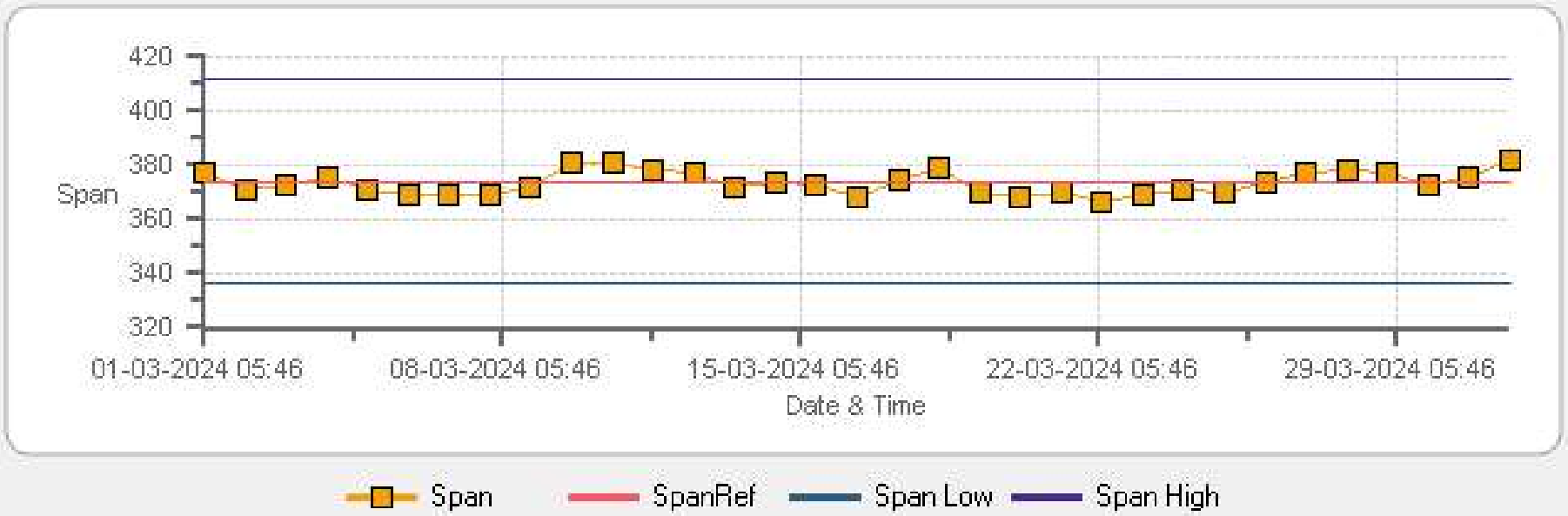
April 9, 2024

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

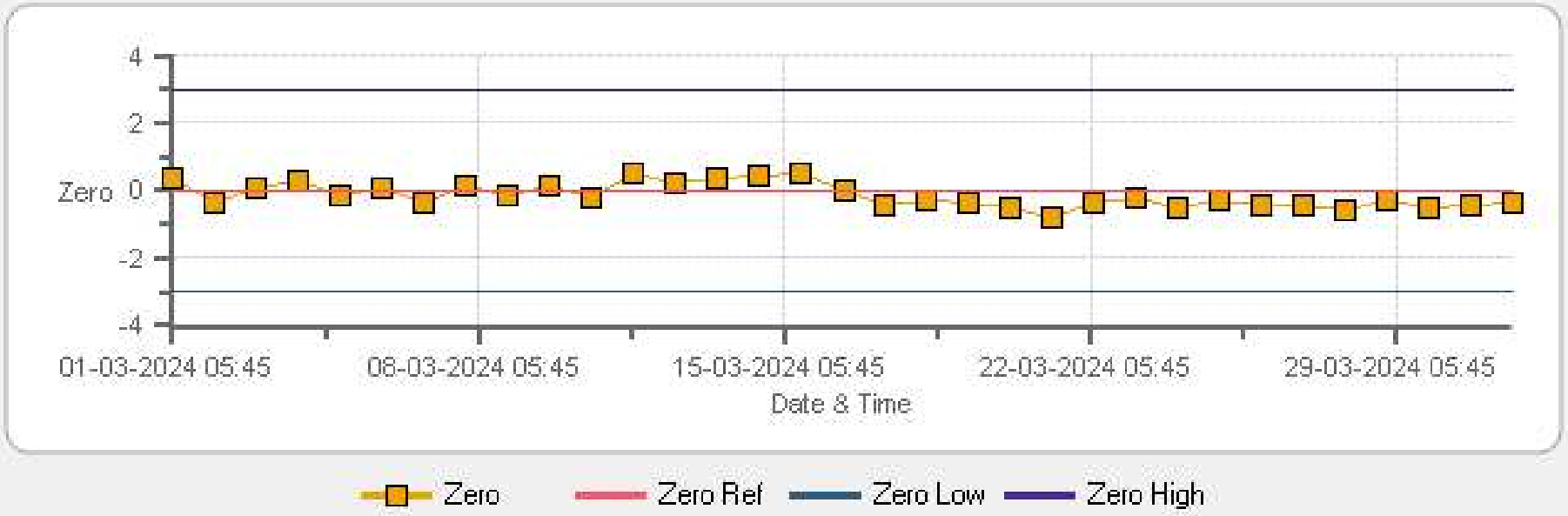
SO2[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Zero



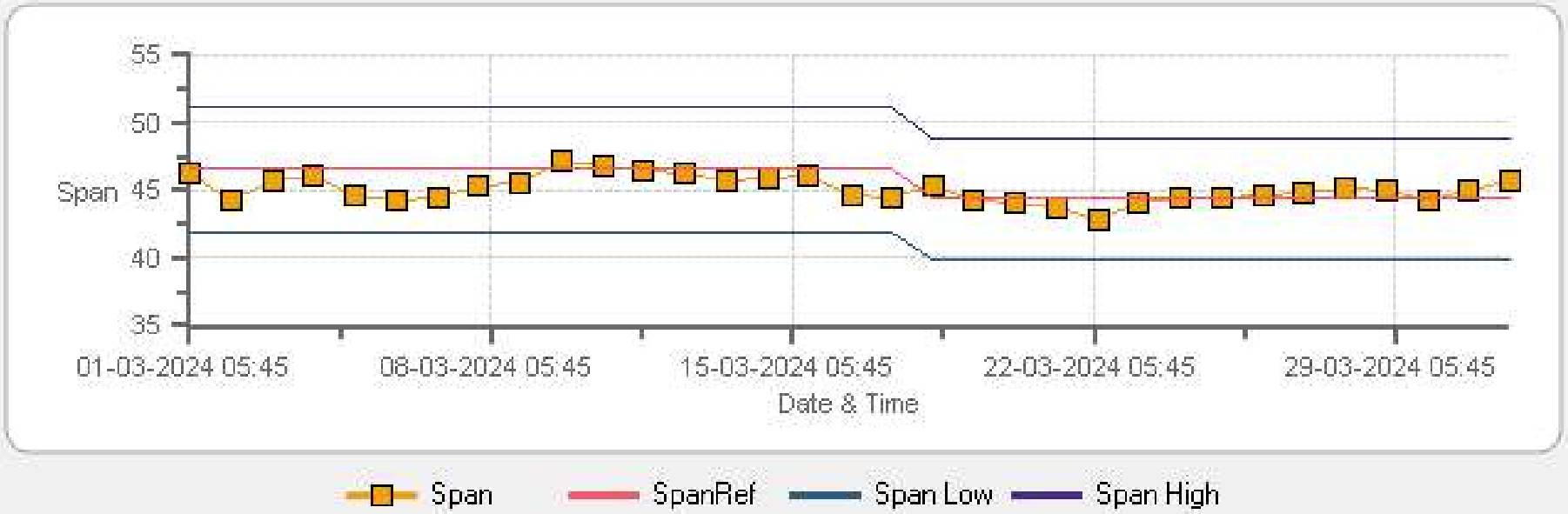
SO2[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Span

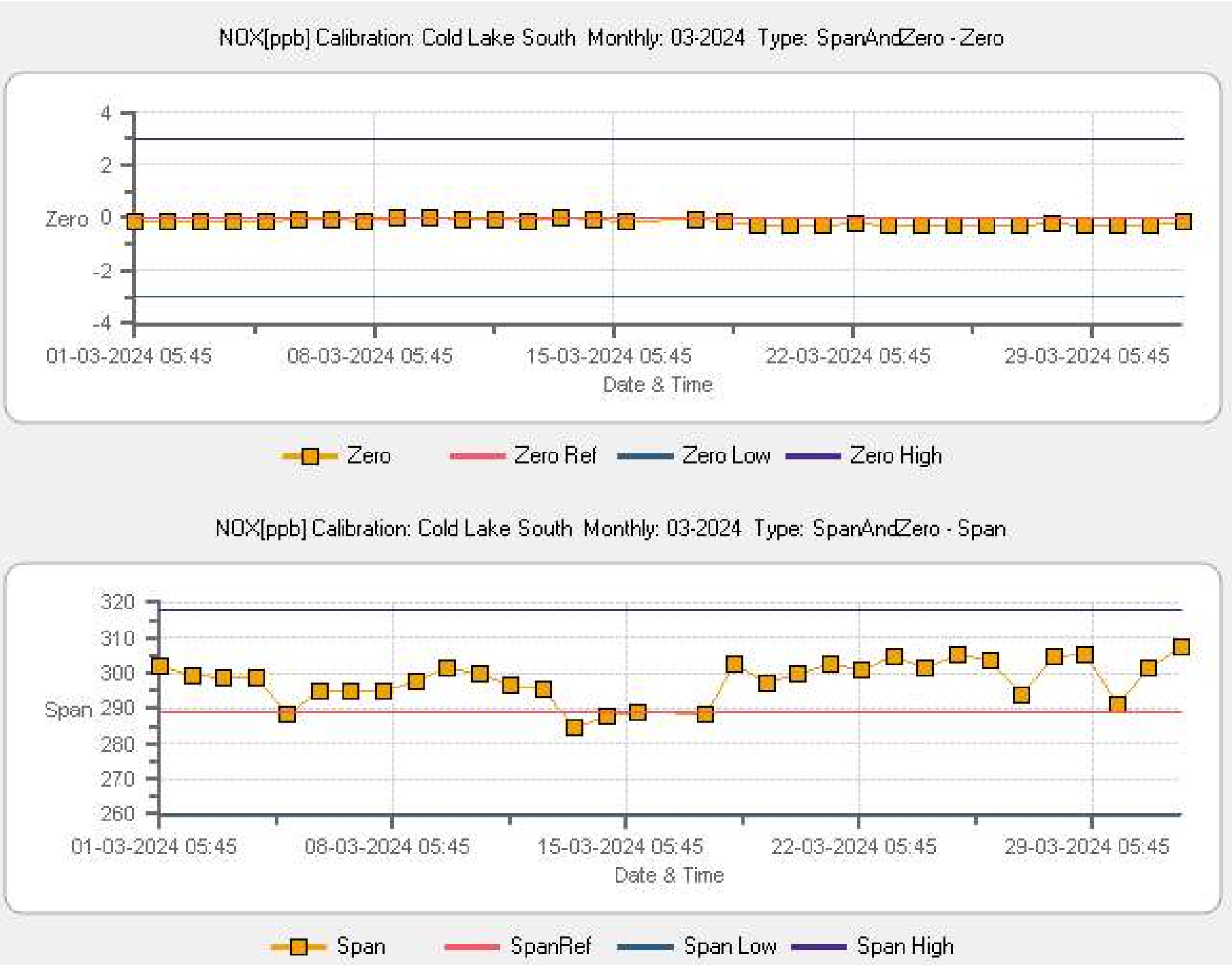


TRS[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Zero

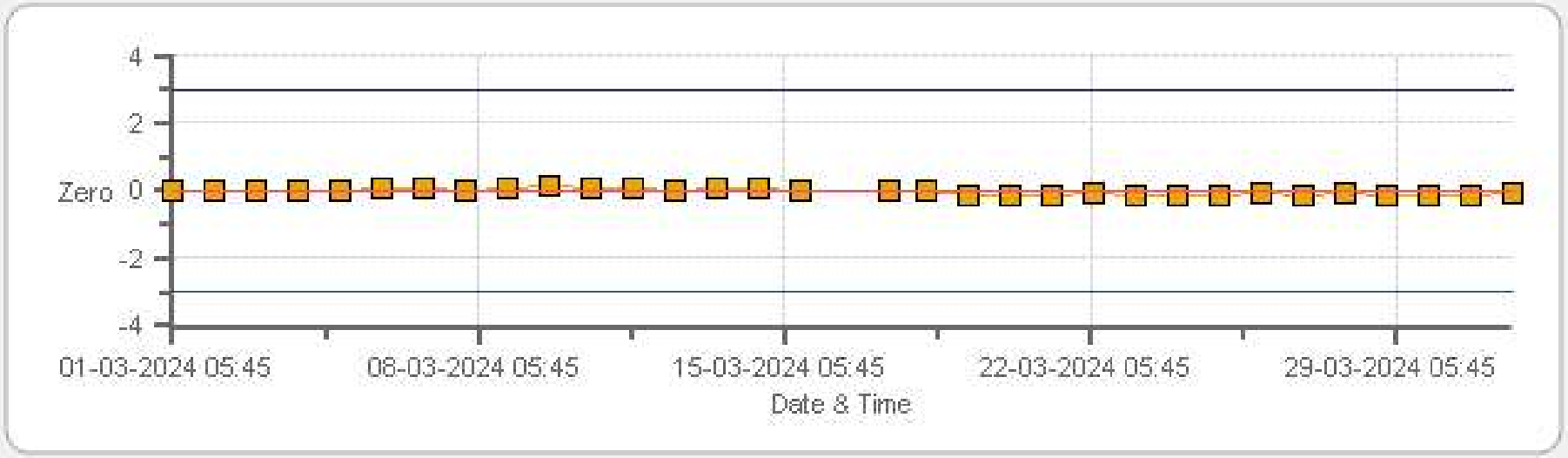


TRS[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Span

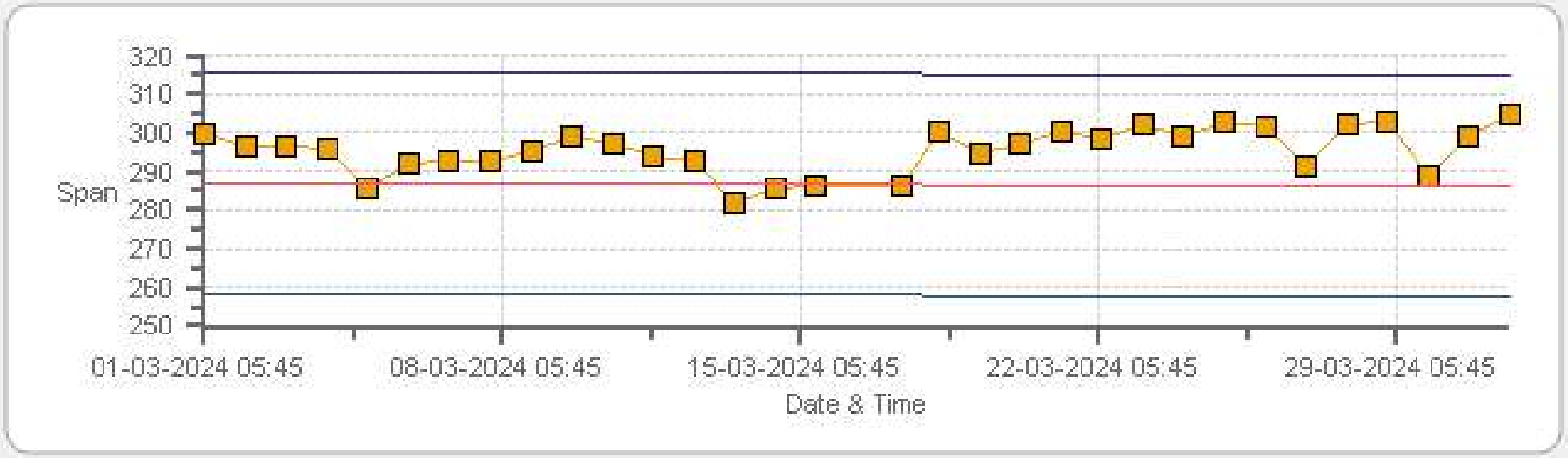


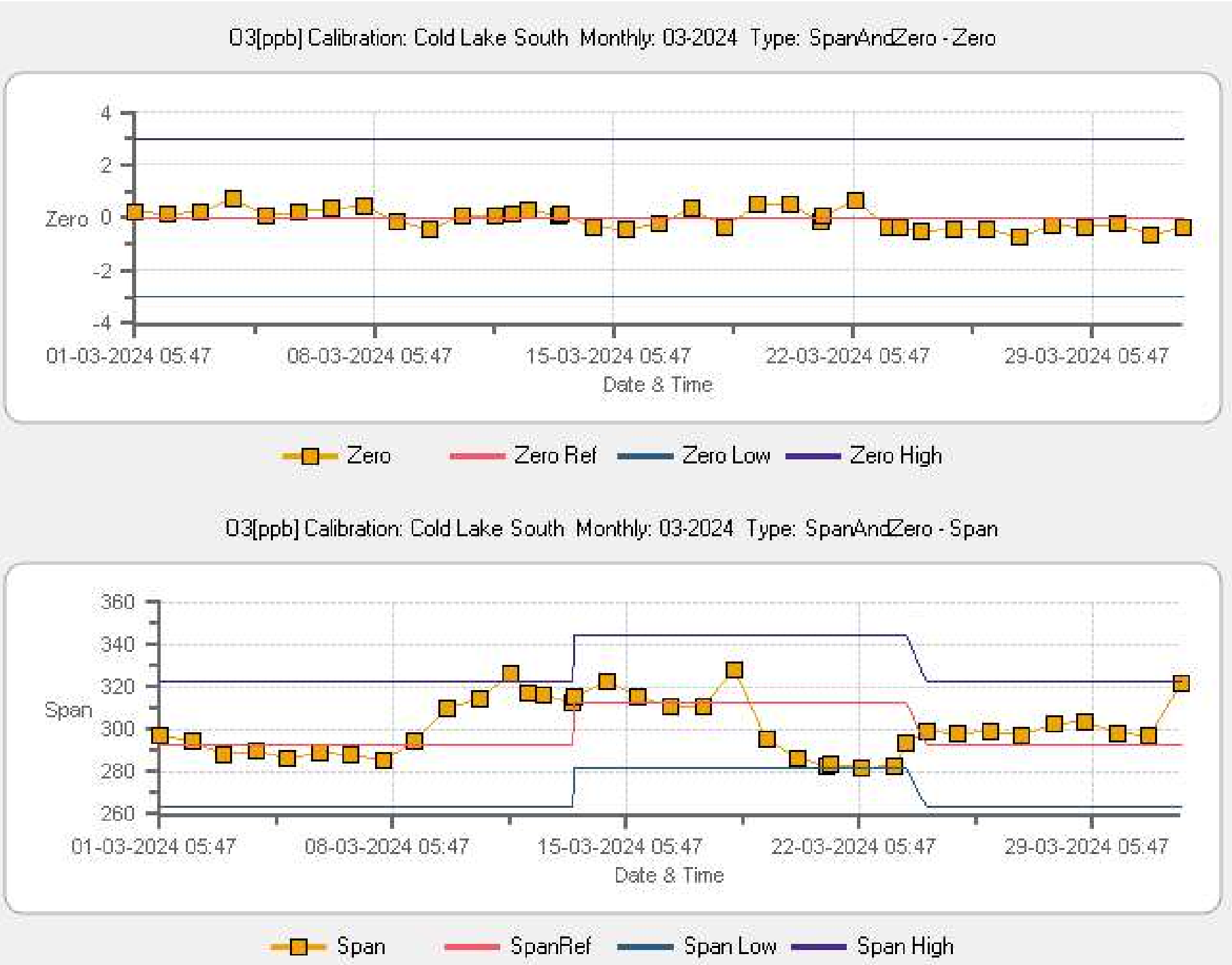

NOX[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 05:45
08-03-2024 05:45
15-03-2024 05:45
22-03-2024 05:45
29-03-2024 05:45
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NOX[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Span
320
310
300
Span 290
280
270
260
01-03-2024 05:45
08-03-2024 05:45
15-03-2024 05:45
22-03-2024 05:45
29-03-2024 05:45
Date & Time
Span
SpanRef
Span Low
Span High

NO2[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Zero

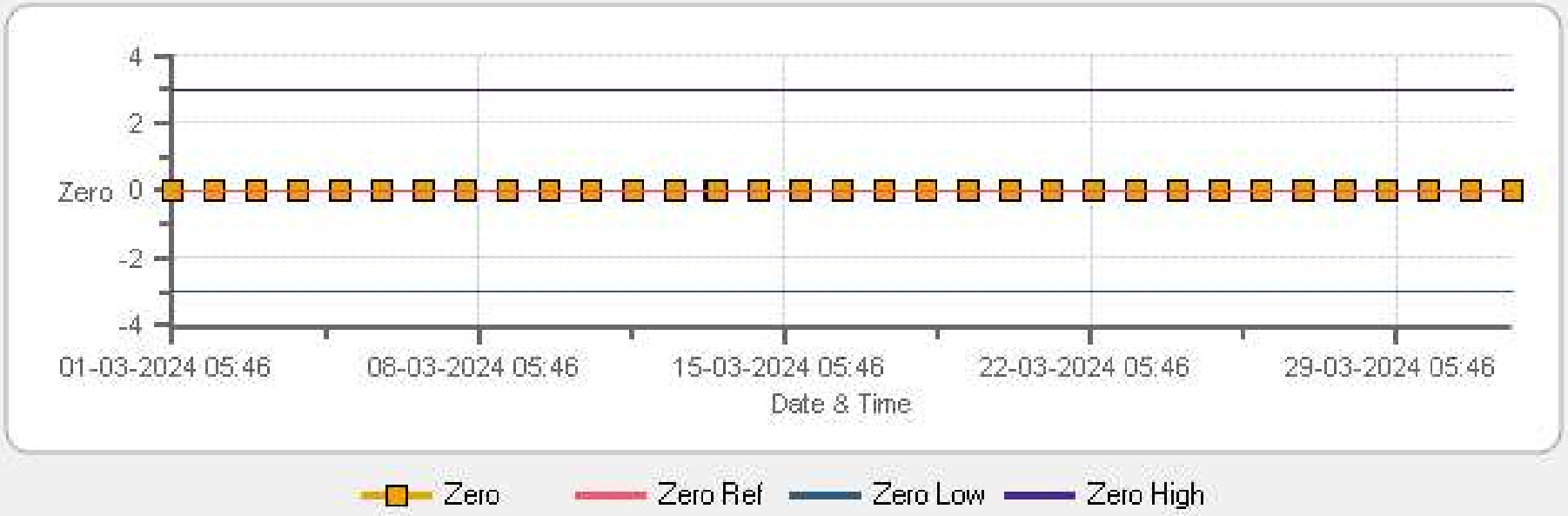


NO2[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Span

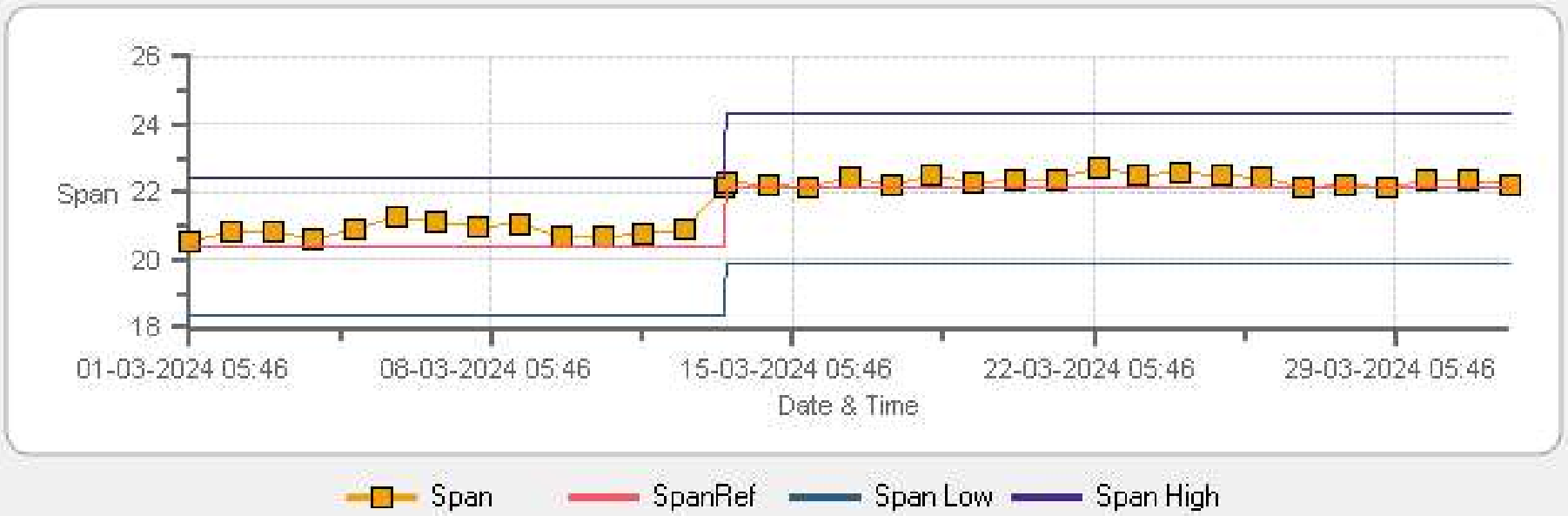


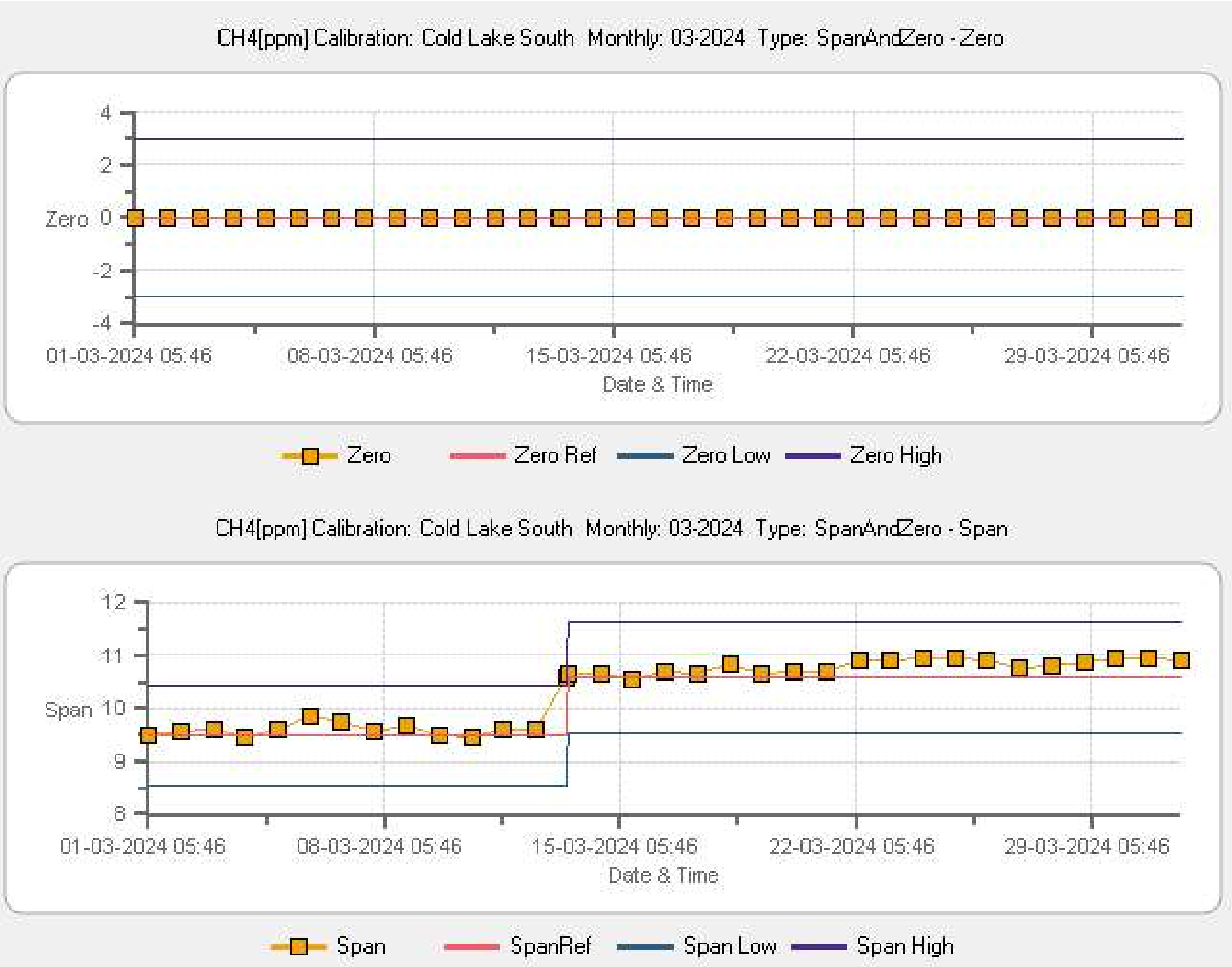

O3[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 05:47
08-03-2024 05:47
15-03-2024 05:47
22-03-2024 05:47
29-03-2024 05:47
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Span
360
340
320
Span
300
280
260
01-03-2024 05:47
08-03-2024 05:47
15-03-2024 05:47
22-03-2024 05:47
29-03-2024 05:47
Date & Time
Span
SpanRef
Span Low
Span High

THC55[ppm] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Zero

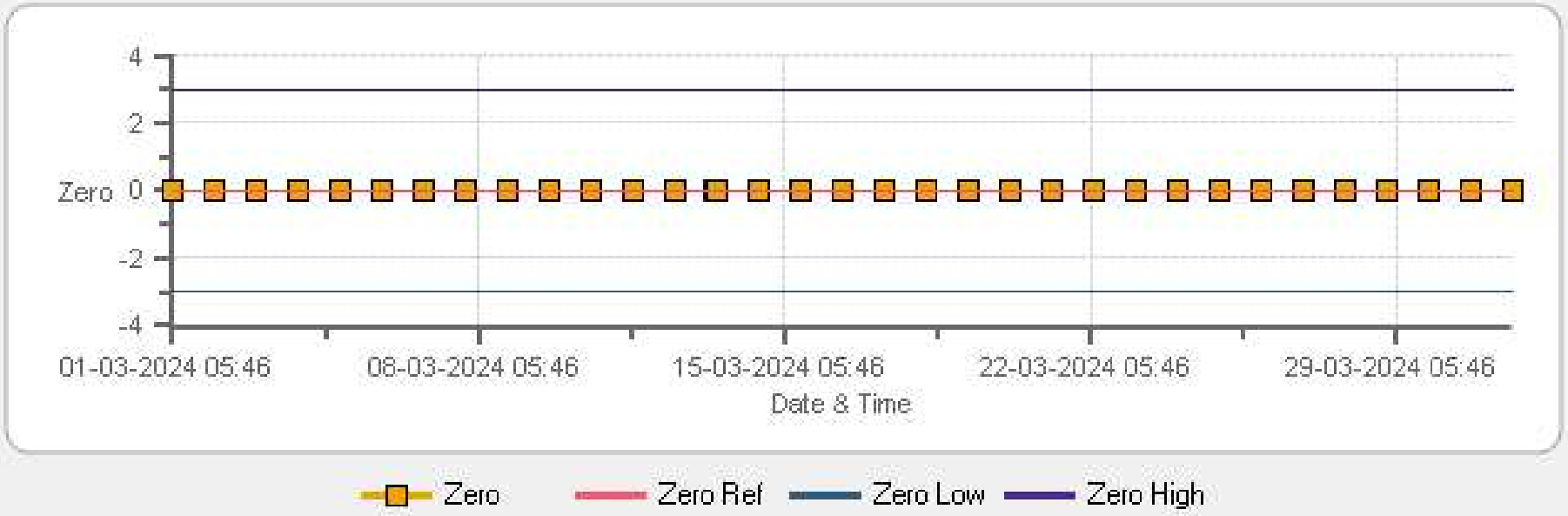


THC55[ppm] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Span

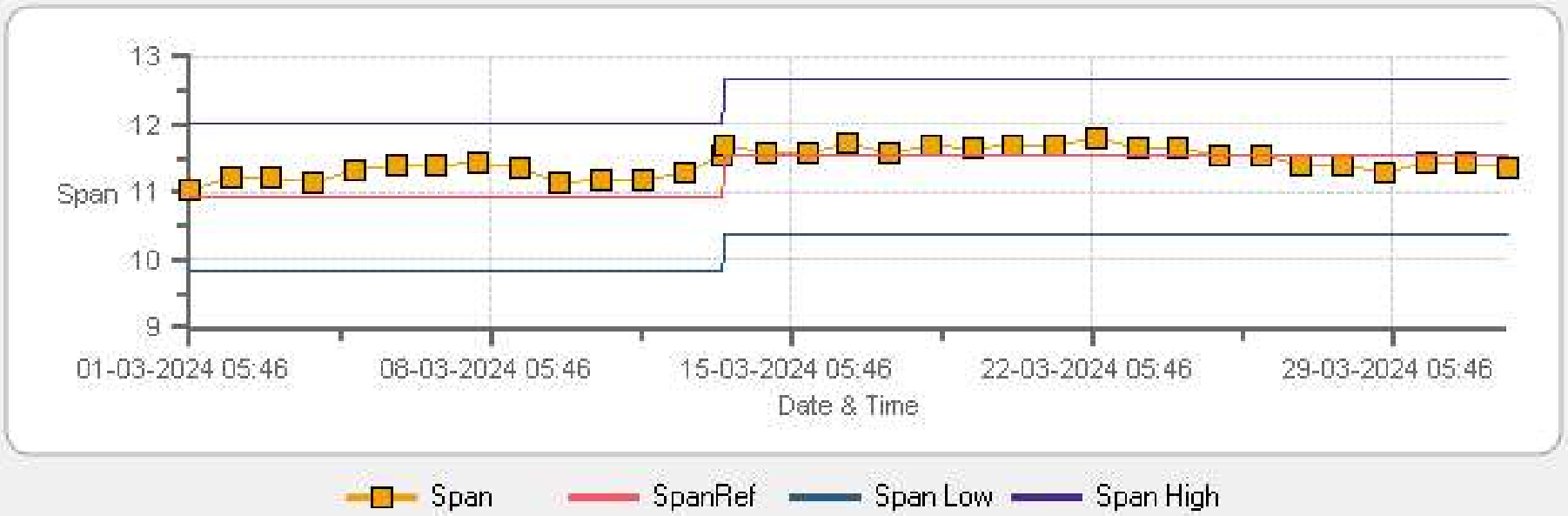



CH4[ppm] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 05:46
08-03-2024 05:46
15-03-2024 05:46
22-03-2024 05:46
29-03-2024 05:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4[ppm] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Span
12
11
Span 10
9
8
01-03-2024 05:46
08-03-2024 05:46
15-03-2024 05:46
22-03-2024 05:46
29-03-2024 05:46
Date & Time
Span
SpanRef
Span Low
Span High

NMHC[ppm] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Zero



NMHC[ppm] Calibration: Cold Lake South Monthly: 03-2024 Type: SpanAndZero - Span



MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	17-Mar-2024	PREVIOUS CALIBRATION DATE:	06-Feb-2024
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.998
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	960
PURPOSE	Routine	START TIME (MST):	09:16
PERFORMED BY:	Alex Yakupov	END TIME (MST):	13:39

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180260018	FLOW (mL/min)	451
INITIAL		FINAL	
BKG/OFFSET	2.39	BKG/OFFSET	2.5
COEF/SLOPE	1.681	COEF/SLOPE	1.695
Expected (reference) Value	374	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):	300	LOW ID	n/a
EXPIRY DATE	27-Oct-2030	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

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

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

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.00	-0.1	0		
4961	37.20	4998	375.13	371.1	374.3	1.011	1.002
4982	17.60	5000	177.41	n/a	176.7	n/a	1.004
4990	8.80	4999	88.72	n/a	88	n/a	1.008

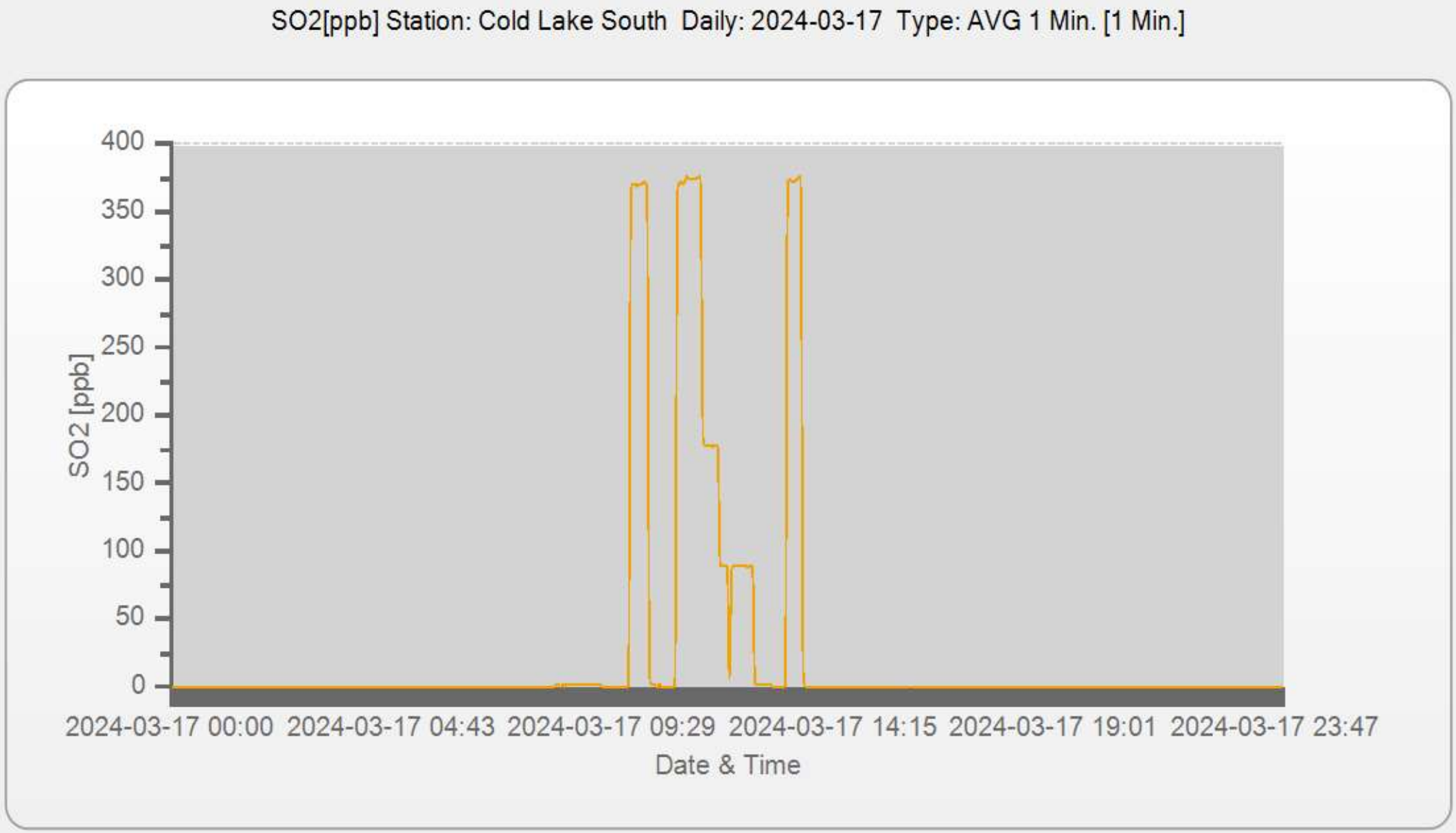
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.998	-0.1%

COMMENTS:

Sample inlet filter was changed.
12:00 = daily ZS. Low point restarted

Report Type: StationReport Avg Type: AVG
Date & Time: 2024-03-17 Time Base: 1 Min. [1 Min.]



TRS Analyzer Calibration by Dilution

DATE:	16-Mar-2024	PREVIOUS CALIBRATION DATE:	06-Feb-2024
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	959
PURPOSE	Routine	START TIME (MST):	10:05
PERFORMED BY:	Alex Yakupov	END TIME (MST):	14:49

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	812728560	FLOW (mL/min)	508
INITIAL		FINAL	
BKG/OFFSET	30.3	BKG/OFFSET	30.2
COEF/SLOPE	1.301	COEF/SLOPE	1.287
Expected (reference) Value	46.6	Expected (reference) Value	44.4

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):	1500	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:	10:09	SO2 Conc (ppb)	380
END TIME:	10:24	Analyzer Response (ppb)	0.0

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	0.7	0		
7442	58.20	7500	77.99	79.9	78.3	0.985	0.996
7472	28.40	7500	38.06	n/a	36.8	n/a	1.034
7486	14.20	7500	19.03	n/a	19.1	n/a	0.996

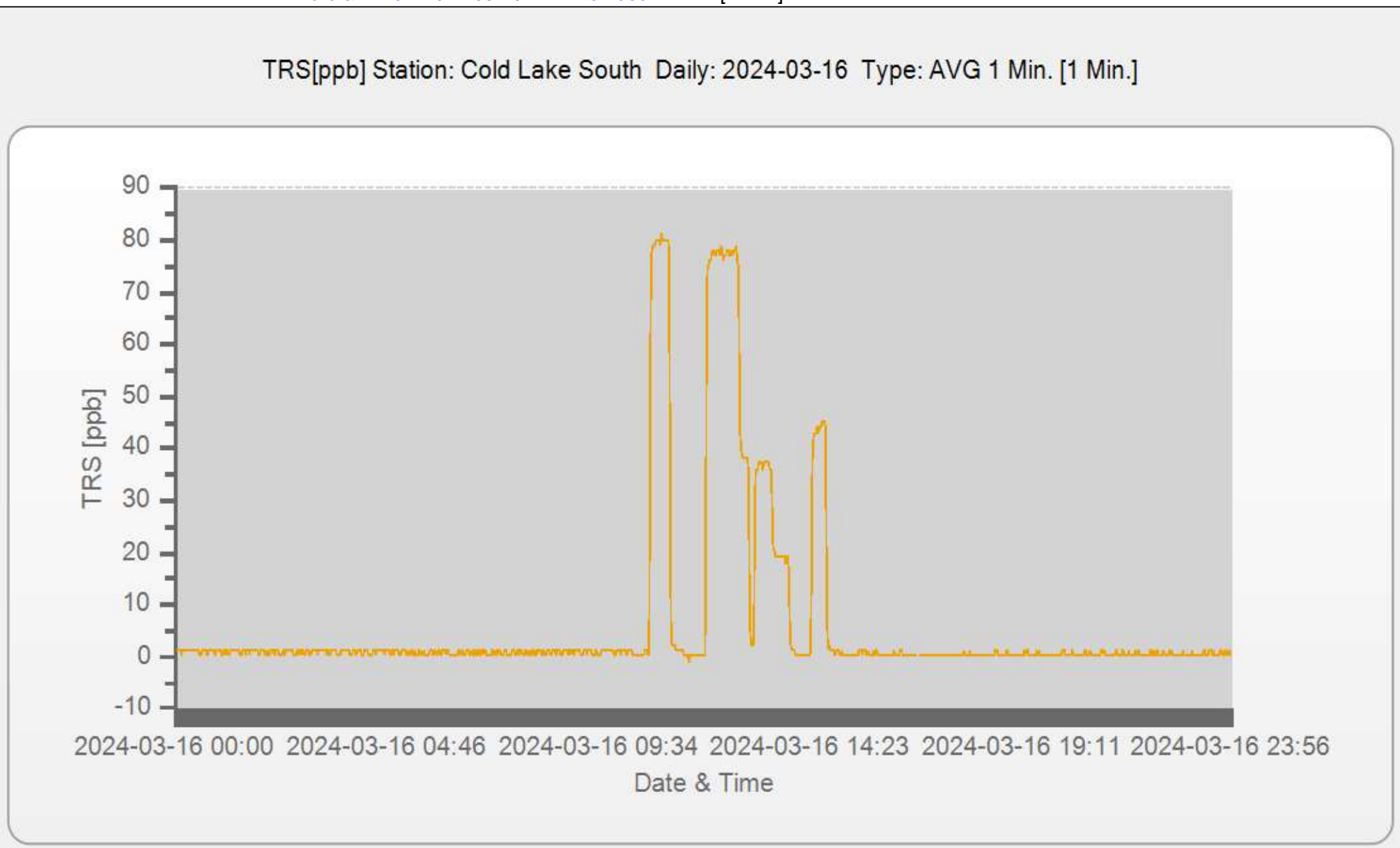
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.3%

COMMENTS:

Sample inlet filter was changed.
13:00 = daily ZS. Mid point restarted

TRS[ppb] Station: Cold Lake South Daily: 2024-03-16 Type: AVG 1 Min. [1 Min.]
Report Type: StationReport Avg Type: AVG
Date & Time: 2024-03-16 Time Base: 1 Min. [1 Min.]



NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

				ANALYZER:			
DATE:	16-Mar-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)	691	NO	1.001
PURPOSE	Removal/Shut-down	START TIME (MST):	10:07	RANGE (ppb)	500	NO2	1.002
PERFORMED BY:	Alex Yakupov	END TIME (MST):	14:05	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):	300		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	380	250	230-265	n/a
MID	180	125	115-150	n/a
LOW	90	45	40-55	n/a
EXTRA 1	n/a	n/a	n/a	n/a

NO/NOx CALIBRATION:

FLOW RATE (mL/min)			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
5000		5000	0.0	0.0	0.0	0.0	0.0	0.0	n/a	n/a	n/a						
4961	37.20	4998	380.3	384.1	3.7	373.5	378.2	4.7	n/a	n/a	n/a	1.018	1.015		n/a	n/a	
4982	17.60	5000	179.9	181.6	1.8	175.5	177.7	2.1	n/a	n/a	n/a	1.025	1.022		n/a	n/a	
4990	8.80	4999	90.0	90.8	0.9	87.4	88.4	1.0	n/a	n/a	n/a	1.029	1.028		n/a	n/a	

GPT CALIBRATION:

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	369.8	373.9	4.0				
AS-FOUND HIGH	37.20	4998	235	116.2	371.6	255.5	253.6	251.5	1.008	99.17%
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	248.9	371.6	122.8	120.9	118.8	1.018	98.26%
LOW	37.20	4998	40	322.3	372.2	49.8	47.5	45.8	1.037	96.42%
NO2 adjustment not required.									AVERAGE:	97.95%

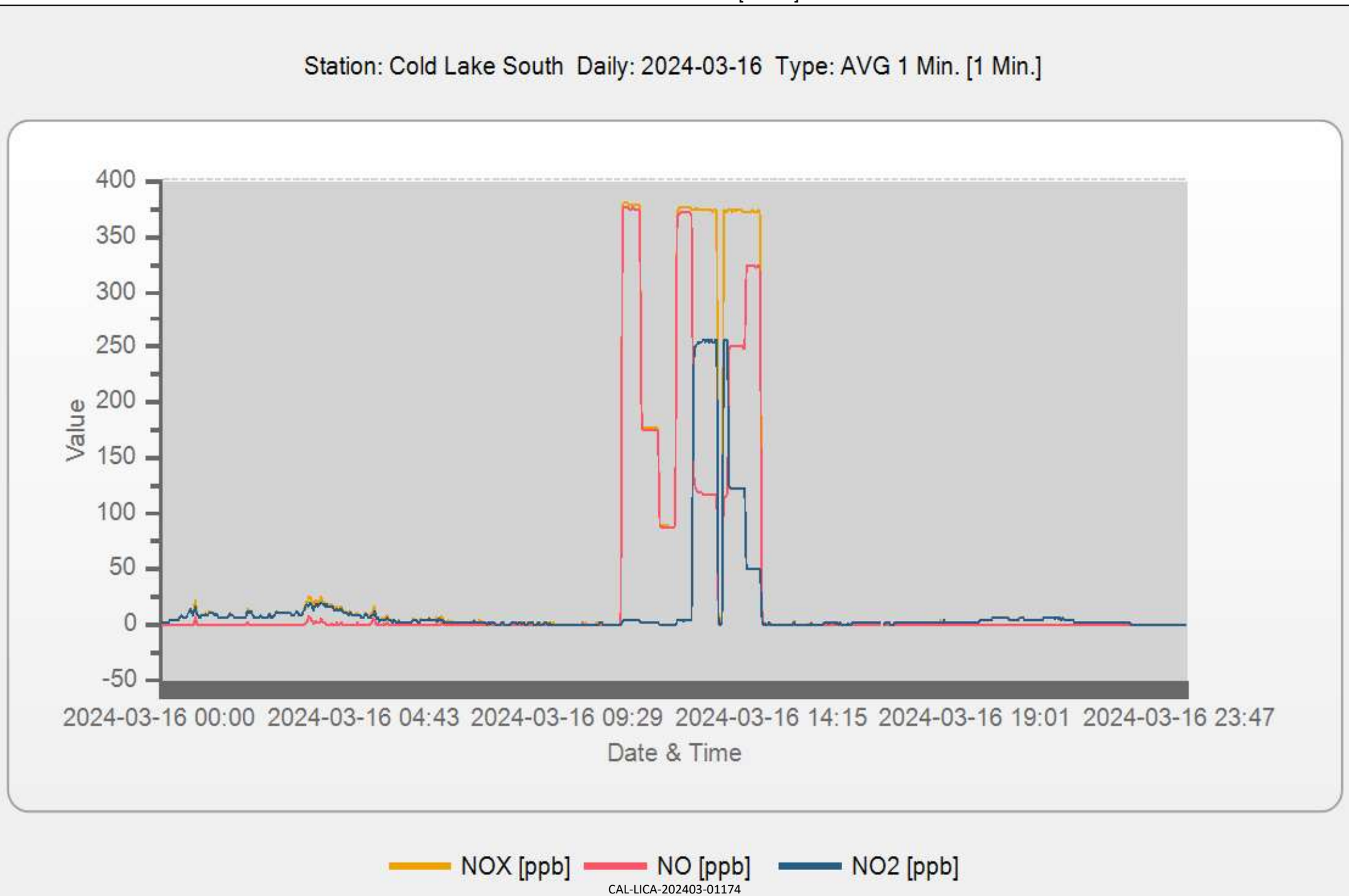
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.983	-0.12%
NOx	1.000	0.985	-0.13%
NO2	1.000	0.998	-0.35%

COMMENTS:

Shutdown prior to sample pump maintenance.
13:00 = daily ZS (End of GPT high).

Report Type: StationReport Avg Type: AVG
Date & Time: 2024-03-16 Time Base: 1 Min. [1 Min.]



NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:				ANALYZER:			
DATE:	17-Mar-2024	PREVIOUS CALIBRATION DATE:	n/a	MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
CLIENT:	LICA	TEMPERATURE (°C):	22.0	SERIAL #:	1505664393	NOx	n/a
LOCATION:	CLS	BAROMETRIC (mBar):	960	FLOW (mL/min)	624	NO	n/a
PURPOSE	Install/Post-Repair	START TIME (MST):	10:18	RANGE (ppb)	500	NO2	n/a
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:14	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):	300		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:	n/a	n/a	n/a	BKG/OFFSET:	5.7	5.4	n/a
SLOPE/COEF/CE:	n/a	n/a	n/a	SLOPE/COEF/CE:	1.008	1.179	0.999

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	n/a	n/a	n/a		289.0	2.6	286.0

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	n/a	n/a	n/a	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	n/a	n/a	n/a	380.2	384.2	4.0	n/a	n/a		1.000	1.000	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.8	181.8	1.9	n/a	n/a		1.000	0.999	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	89.9	90.8	0.9	n/a	n/a		1.001	1.000	

GPT CALIBRATION:

Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.20	4998	0	379.0	382.9	3.9				
AS-FOUND HIGH	37.20	4998	235	120.5	382.4	261.9	258.5	258	1.002	99.81%
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	257.2	383.3	126.1	121.8	122.2	0.997	100.33%
LOW	37.20	4998	40	332.0	382.9	50.9	47	47	1.000	100.00%
NO2 adjustment not required.									AVERAGE:	100.04%

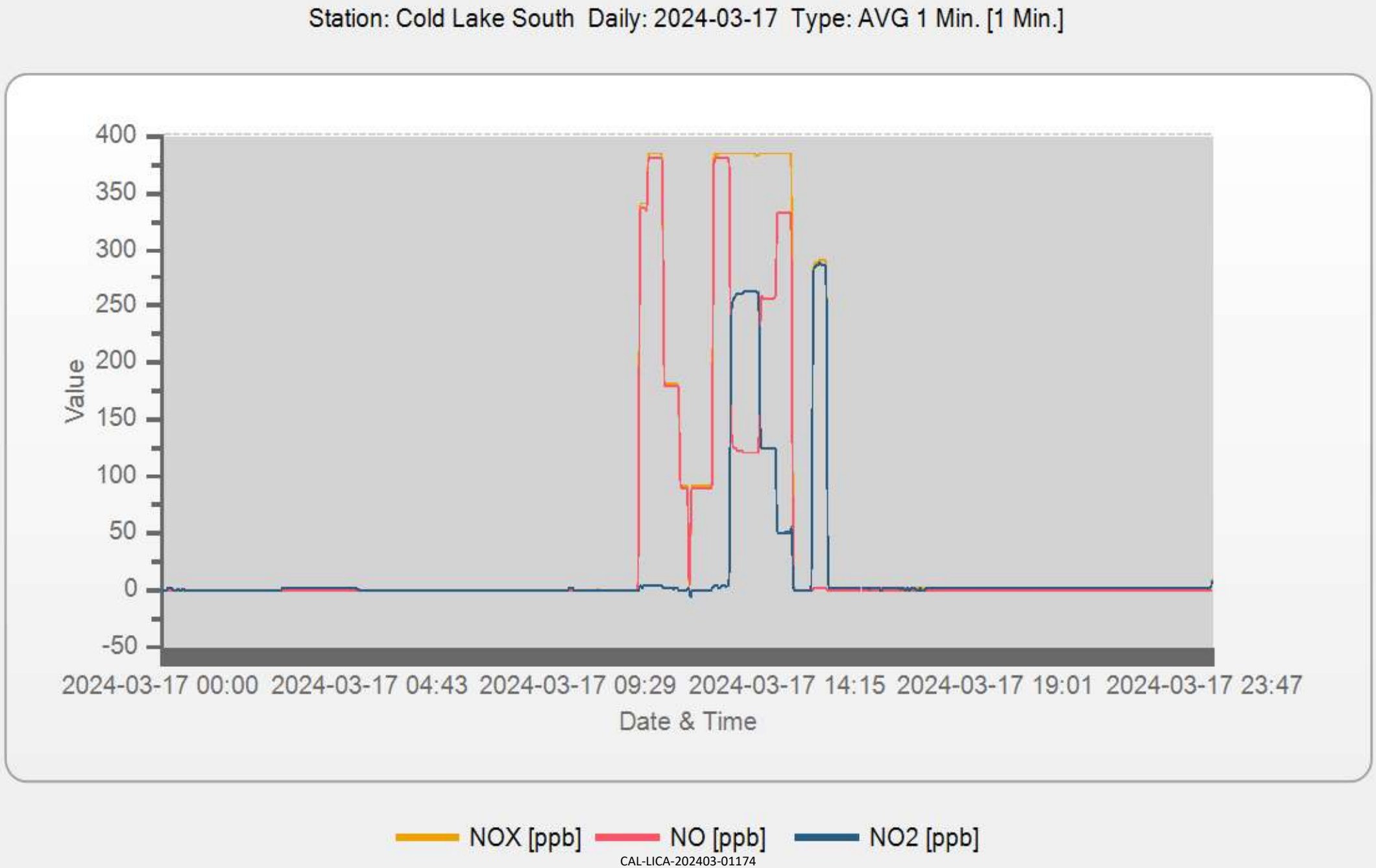
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	1.000	0.00%
NOx	1.000	1.000	0.00%
NO2	1.000	0.997	0.08%

COMMENTS:

Post-repair following sample pump swap
12:00 = daily ZS. Low point restarted

Report Type: StationReport Avg Type: AVG
Date & Time: 2024-03-17 Time Base: 1 Min. [1 Min.]



Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	13-Mar-2024	PREVIOUS CALIBRATION DATE:	16-Feb-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	955
PURPOSE	Routine	START TIME (MST):	10:50
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:05

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	12208316585	FLOW (mL/min)	1320
INITIAL		FINAL	
BKG/OFFSET	0.4	BKG/OFFSET	1.4
COEF/SLOPE	1.354	COEF/SLOPE	1.343
Expected (reference) Value	293	Expected (reference) Value	313

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
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:

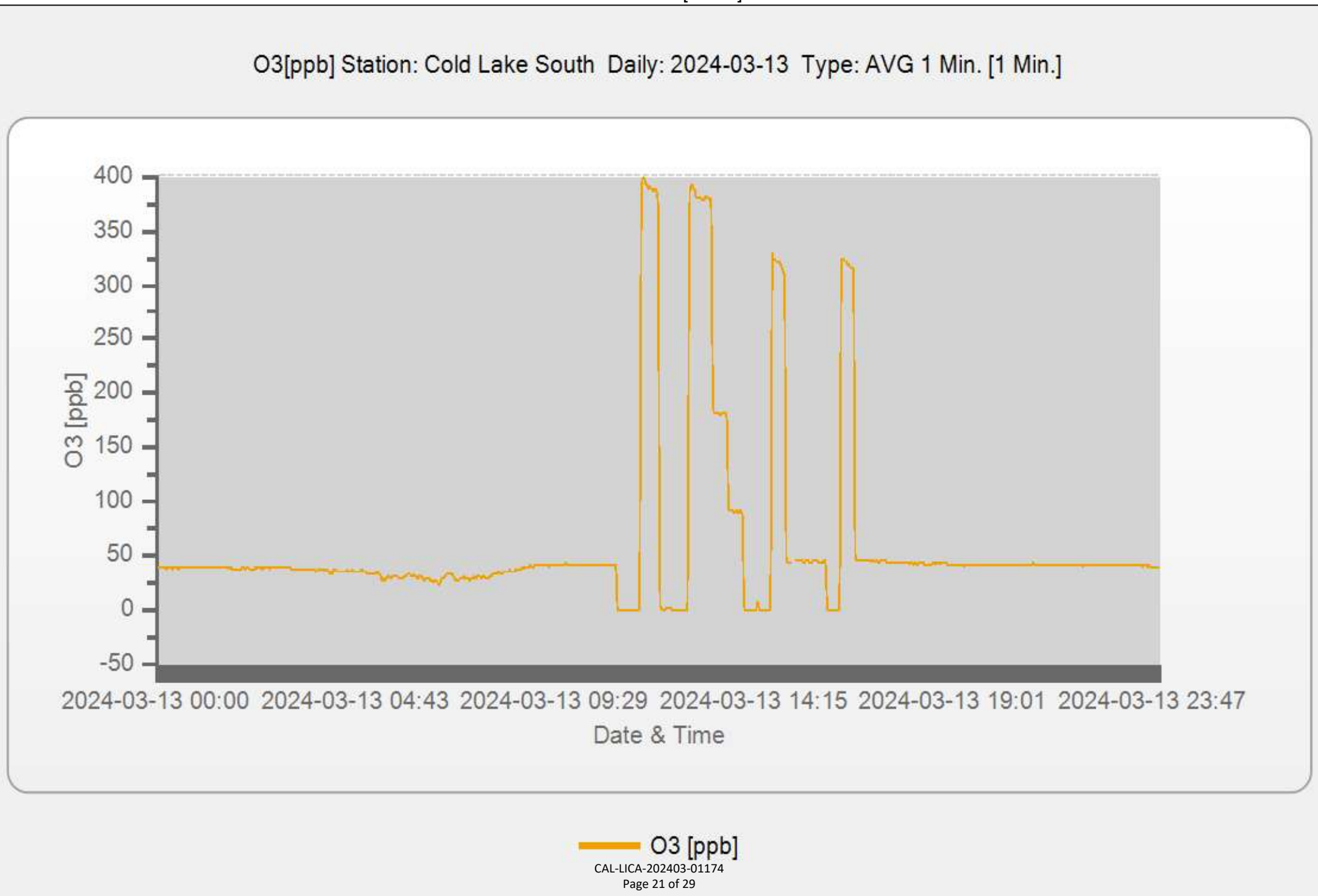
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	0.2	0.0		
5000		5000	380.0	385.7	378.8	0.986	1.003
5000		5000	180.0	n/a	180.5	n/a	0.997
5000		5000	90.0	n/a	90.3	n/a	0.997

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.997	0.1%

COMMENTS:

Monthly calibration. Sample inlet filter was changed.


O3[ppb] Station: Cold Lake South Daily: 2024-03-13 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
2024-03-13 00:00
2024-03-13 04:43
2024-03-13 09:29
2024-03-13 14:15
2024-03-13 19:01
2024-03-13 23:47
Date & Time
O3 [ppb]

Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	23-Mar-2024	PREVIOUS CALIBRATION DATE:	13-Mar-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.003
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	955
PURPOSE	Repeat	START TIME (MST):	12:02
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:31

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	12208316585	FLOW (mL/min)	1320
INITIAL		FINAL	
BKG/OFFSET	1.4	BKG/OFFSET	1.4
COEF/SLOPE	1.343	COEF/SLOPE	1.441
Expected (reference) Value	313	Expected (reference) Value	293

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
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:

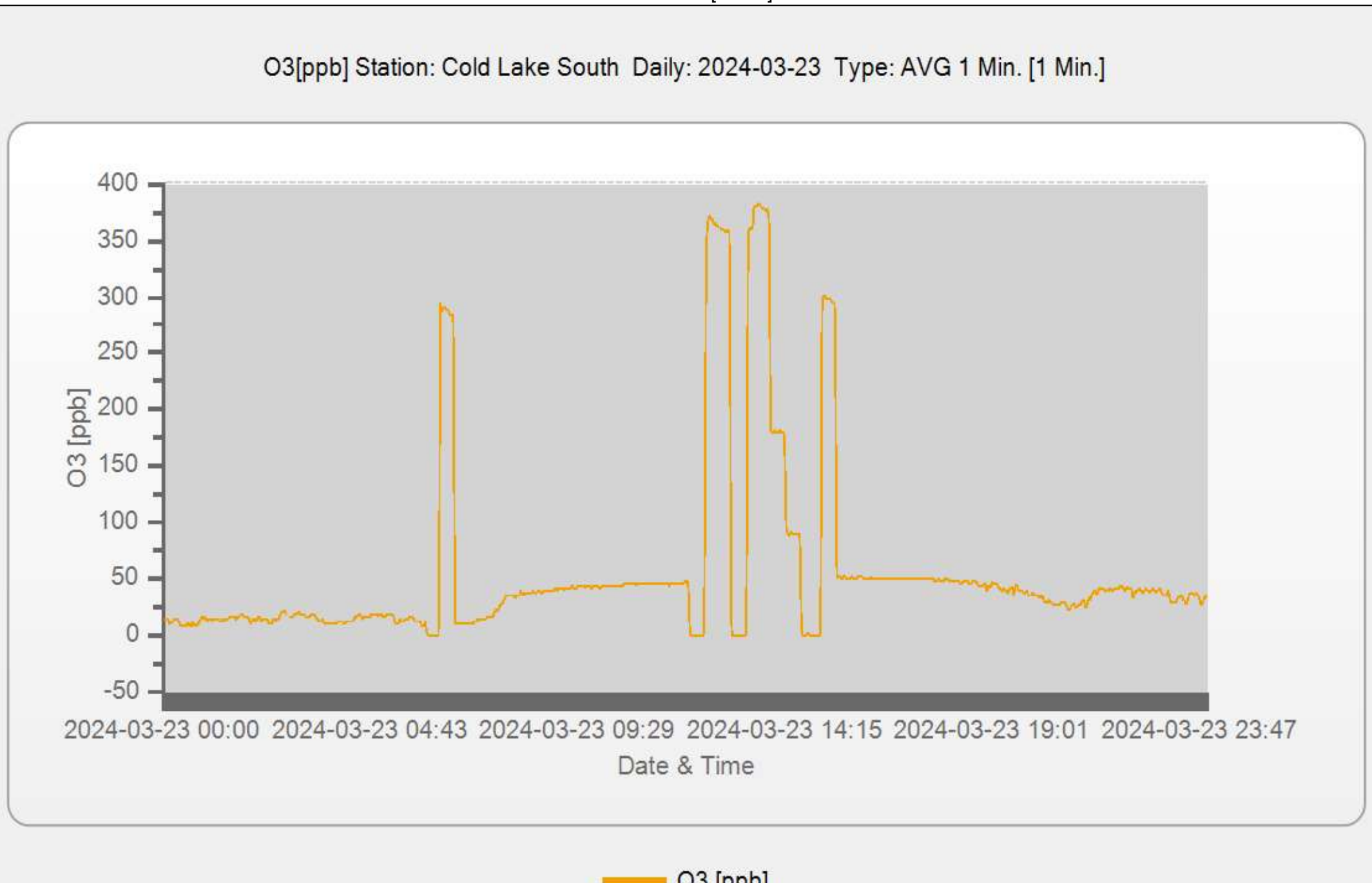
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	0.0	0.0		
5000		5000	380.0	362.4	379.8	1.049	1.001
5000		5000	180.0	n/a	179.7	n/a	1.002
5000		5000	90.0	n/a	89.5	n/a	1.006

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.0%

COMMENTS:

Repeat calibration to correct drift over 10% and the EV


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

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	13-Mar-2024	PREVIOUS CALIBRATION DATE:	23-Feb-2024
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	CLS	BAROMETRIC (mBar):	955
PURPOSE	Routine	START TIME (MST):	10:51
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:05

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1236656107	1002
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	0.999	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):	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
	9.49	10.92	20.42		10.58	11.53	22.11

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	13.72	13.42	27.09	14.50	13.45	27.94	1.058	1.006	1.034	1.001	1.004	1.003
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.25	6.65	13.89	n/a	n/a	n/a	1.001	1.015	1.008
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.63	3.37	7.00	n/a	n/a	n/a	0.997	0.999	0.998

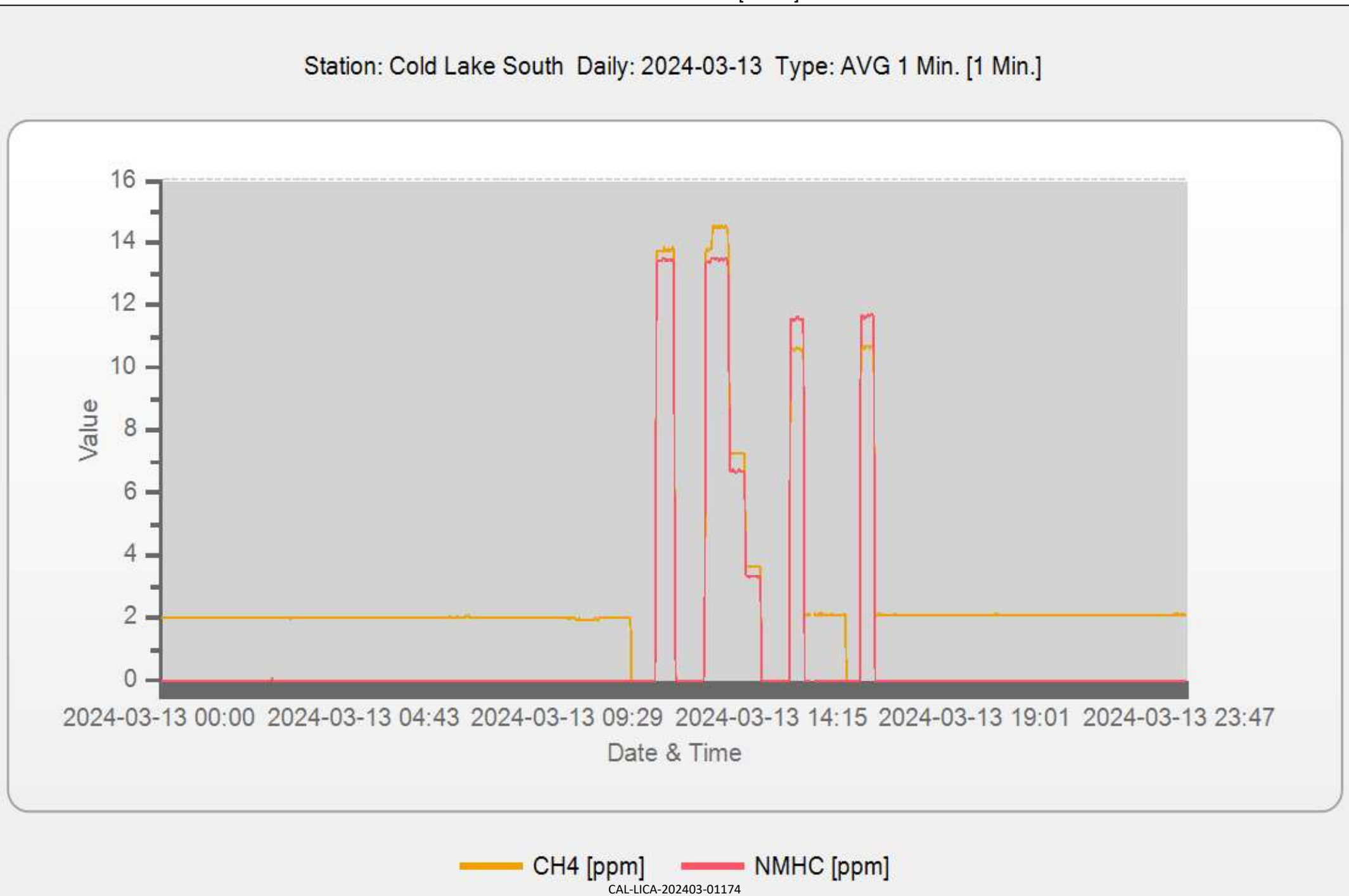
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	0.999	0.0%
NMHC	1.000	0.995	0.0%
THC	1.000	0.997	0.0%

Comments:

Sample inlet filter was changed. A new span gas cylinder was connected.

Use Zero Chrom? **Yes**


Station: Cold Lake South Daily: 2024-03-13 Type: AVG 1 Min. [1 Min.]
16
14
12
10
8
6
4
2
0
Value
2024-03-13 00:00
2024-03-13 04:43
2024-03-13 09:29
2024-03-13 14:15
2024-03-13 19:01
2024-03-13 23:47
Date & Time
CH4 [ppm]
NMHC [ppm]

Teledyne T640 Audit/Calibration

Date/Previous Audit Date:	March 13, 2024	February 7, 2024	**Weather Conditions:**	A few clouds	
Company:	LICA		**Start Time (mst):**	15:20	
Station:	Cold Lake South		**End Time (mst):**	16:29	
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)	716.0	Ambient Temp (°C)	4.6	ASC Heater Duty (%)	0.0
Box Temp (°C)	27.7	Current PMT HV (V)	1429	LED Temp (°C)	39.19
P3 Value	48	PMT Setting (V)	1432	Pump PWM (%)	42
Sample Flow (L/min)	5.01	Sample RH (%RH)	15.2	Number concentration	217.0

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)	717.0	716.0	717	716	+/- 10 mm Hg
Ambient Temperature (°C)	3.80	4.7	n/a		+/- 2°C
Sample Flow (L/min)	5.02	5	5.02	5	+/-5% of T640x (e.g., 4.75 – 5.25 lpm)

Additional Monthly Maintenance :	***Completed***
Inlet cleaned?	Yes
Sample tubing inspected (inner and outer)?	Yes

Comments:

n/a

Meteorological System Checklist

Date:	March 17, 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):	7.6
Station - Ambient Temperature (^{o}C):	7.0
Temperature Difference (^{o}C):	0.6

BAROMETRIC PRESSURE SENSOR CHECK

Reference Barometer ID:	Fisher / FB 61291/ #130168457/ Mar 20, 2024	
Reference Pressure - Units/Reading:	millibar	952
Station Pressure - Units/Reading:	millibar	954
Pressure Tolerance +/- 15% of error:	809 - 1095	-0.21%

RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Reference Hygrometer ID:	Vaisala / HM70 / #T1640130/ Jun 26, 2024	
Reference Hygrometer % RH- Reading:	42.30	
Station Hygrometer % RH- Reading:	46.90	
RH Tolerance +/- 15% of difference:	35.96 - 48.65	-10.9%

ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Wind Speed Observed (kph):	1 -10	Wind Direction Observed:	W
Wind speed on Data Logger (kph):	7.2	Wind Direction on Data Logger:	W
	Annual audit: Dec 27, 2023	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge: 24.0 vs 23.7, Difference = 0.3 degrees. Passed. Wind system: Model 05305AQ. Signal box # 32400

Meteorological Sensor Audit/Calibration

Location Information

Company:	LICA	**Performed By:**	Alex Yakupov
Audit Location:	Cold Lake South	**Reviewed By:**	Chris Wesson
Audit Date:	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

MARCH 2024

Ambient Air Monitoring Calibration Report

- TAMARACK STATION-

CAL-LICA-202403-01248

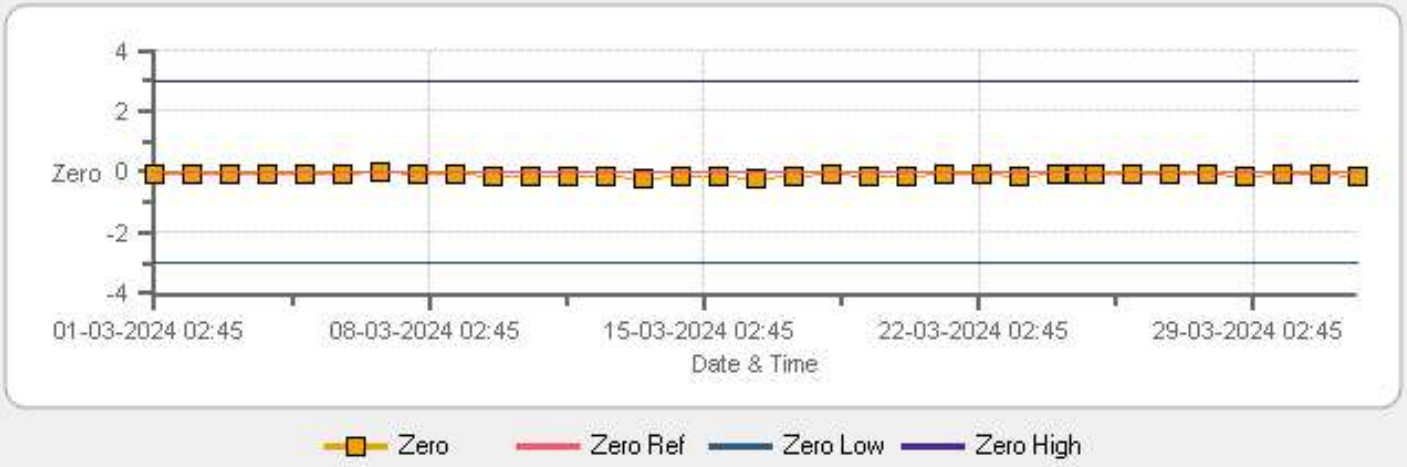
Station Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
LICA / Bureau Veritas Canada

April 9, 2024

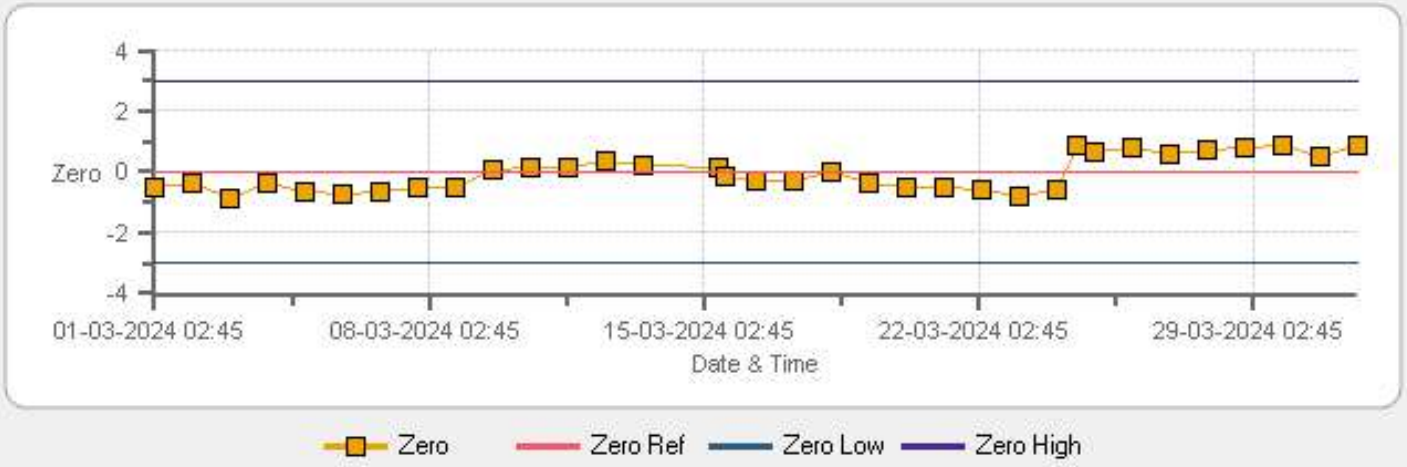
DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Zero



SO2[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Span

H2S[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Zero

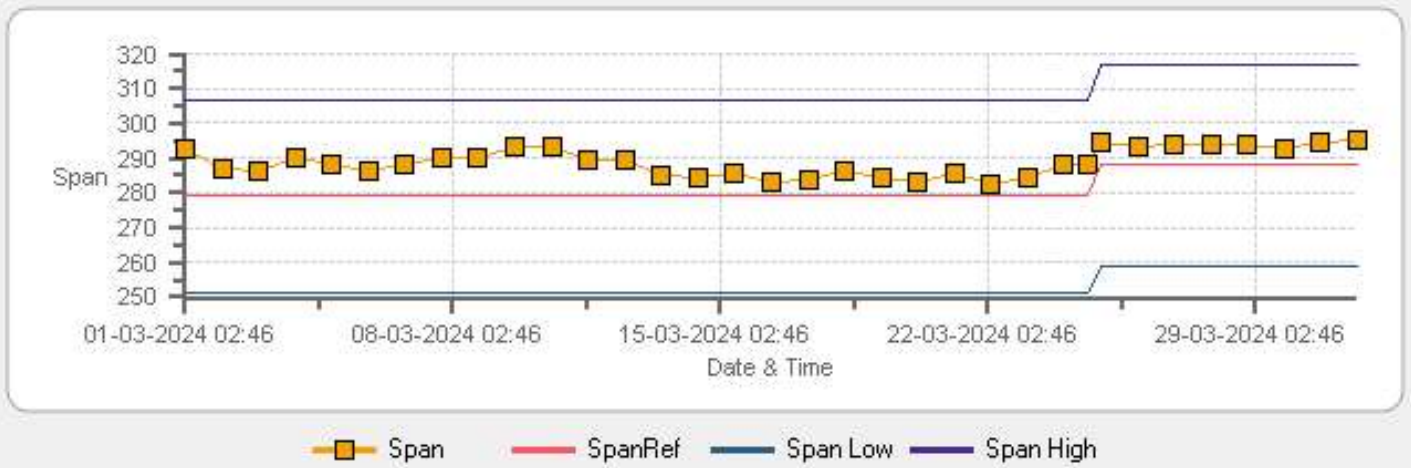


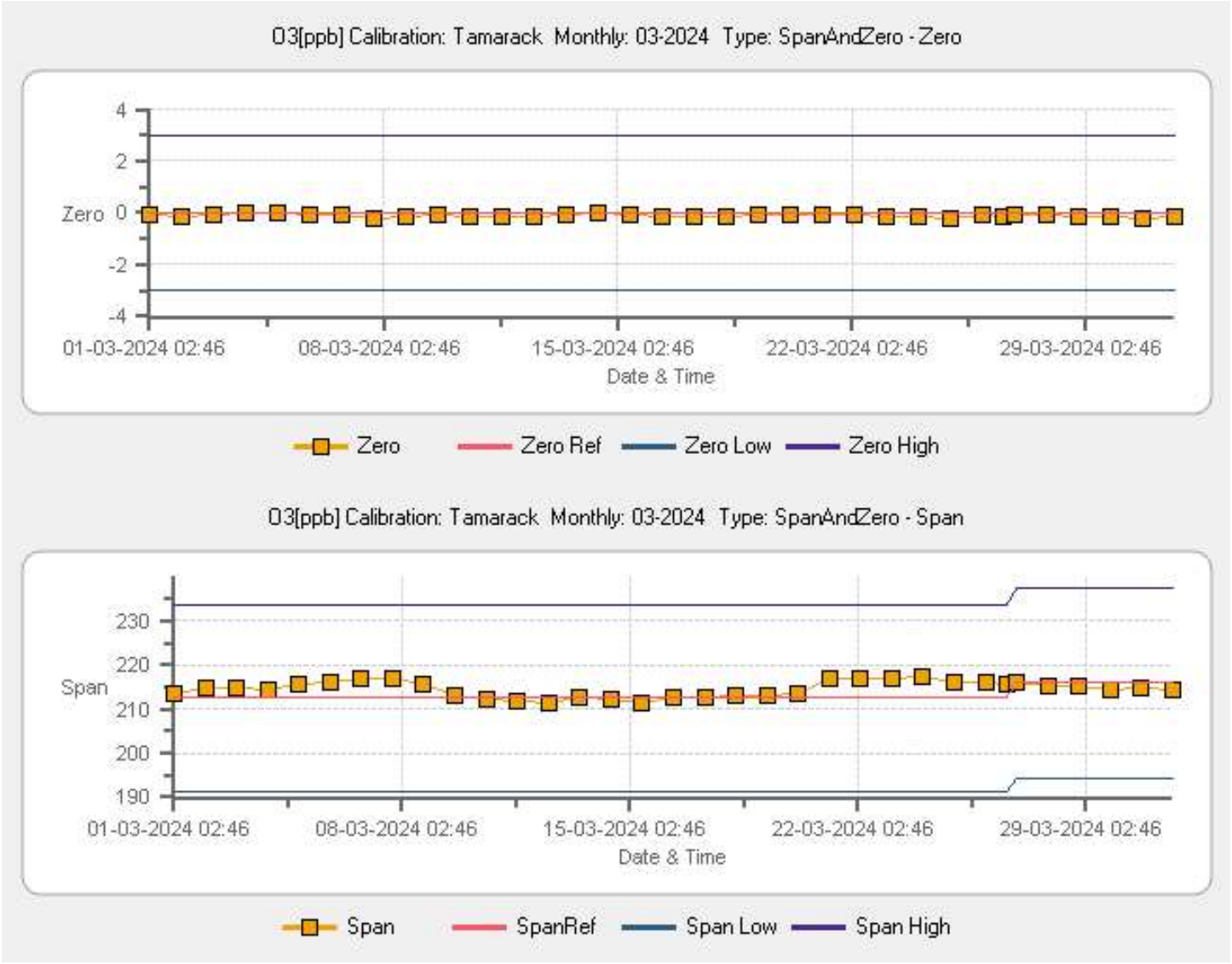
H2S[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Span

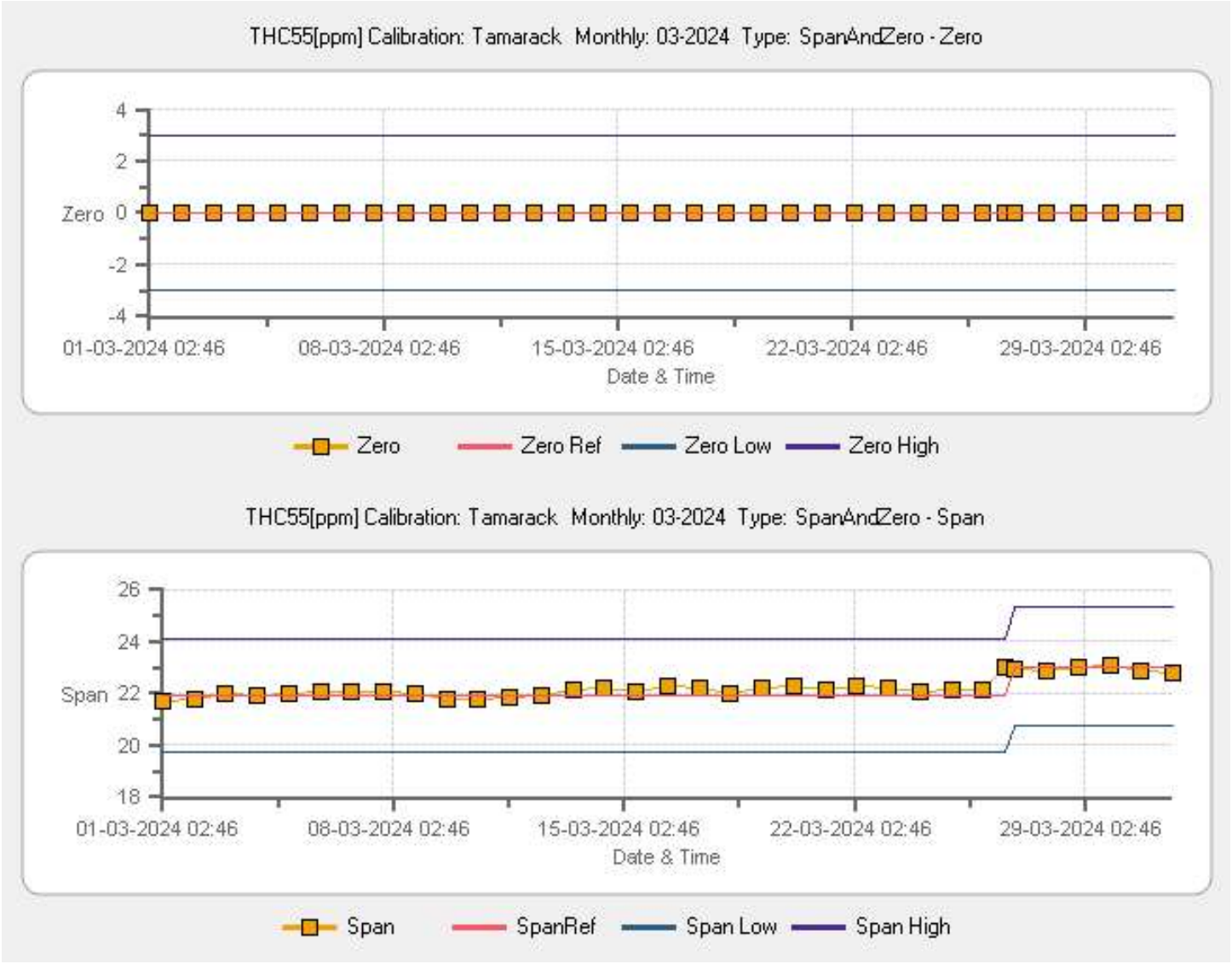

NOX[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 02:45
08-03-2024 02:45
15-03-2024 02:45
22-03-2024 02:45
29-03-2024 02:45
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NOX[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Span
320
310
300
Span 290
280
270
260
250
01-03-2024 02:45
08-03-2024 02:45
15-03-2024 02:45
22-03-2024 02:45
29-03-2024 02:45
Date & Time
Span
SpanRef
Span Low
Span High

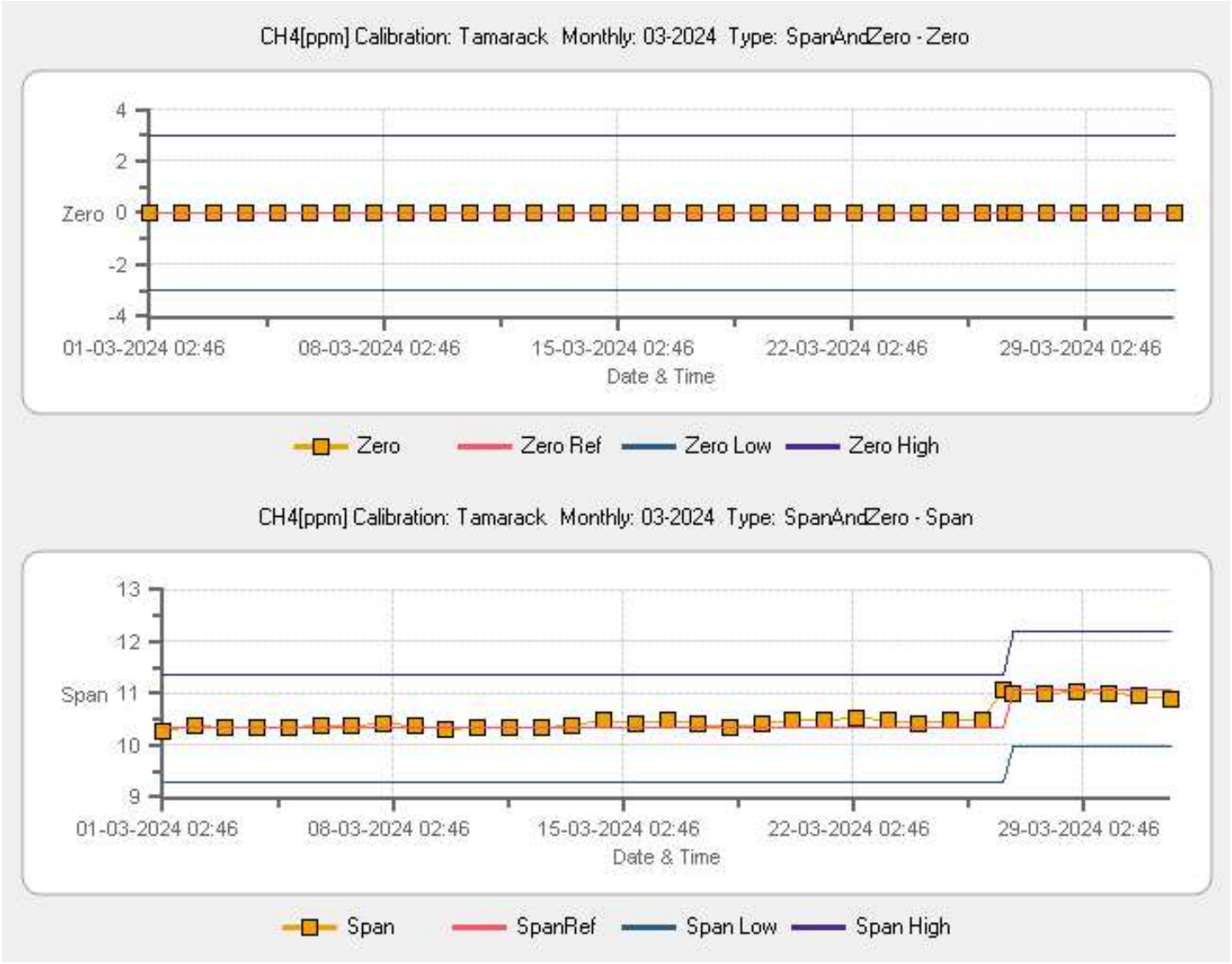
NO2[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Zero

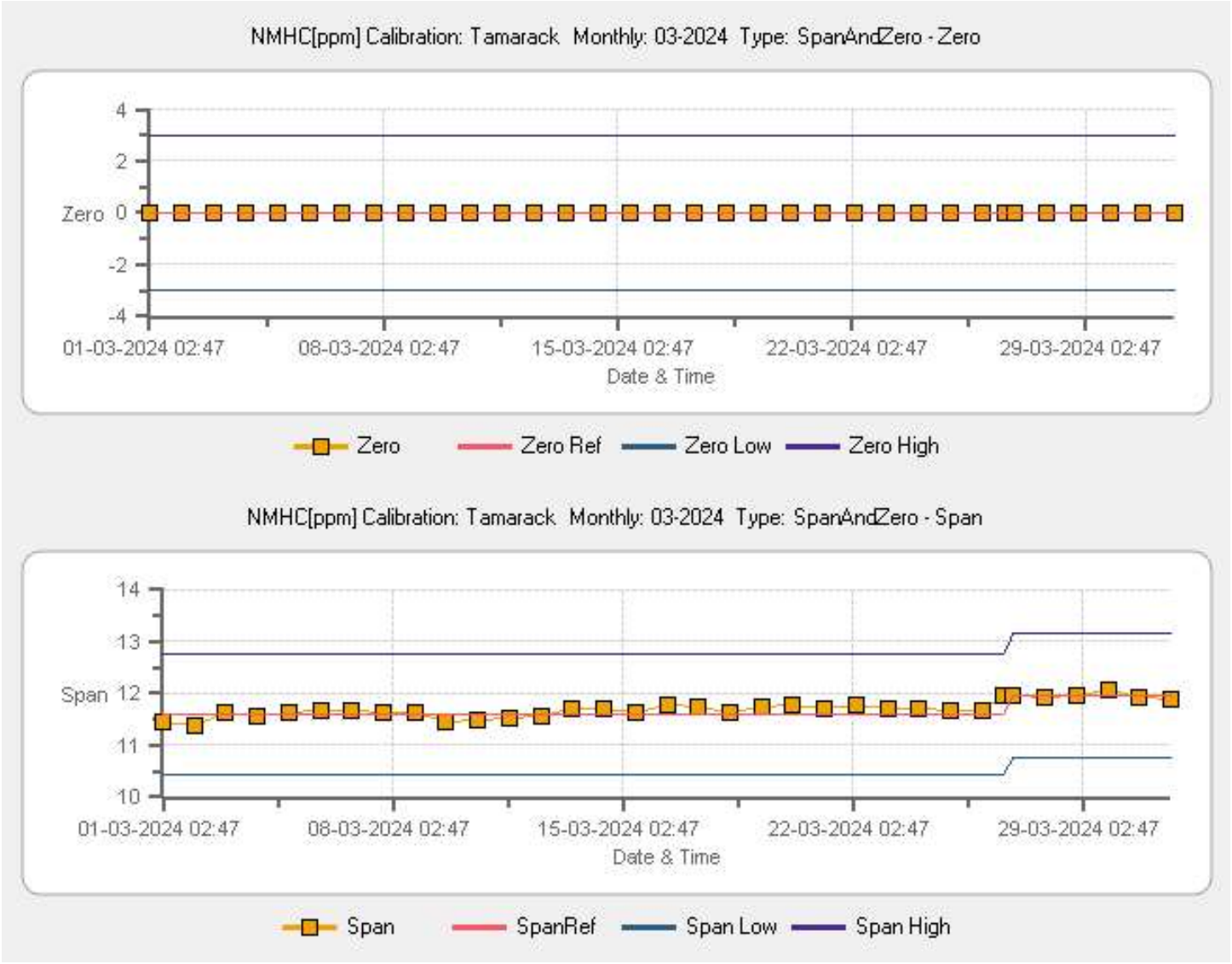
NO2[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Span




O3[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 02:46
08-03-2024 02:46
15-03-2024 02:46
22-03-2024 02:46
29-03-2024 02:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Span
230
220
Span
210
200
190
01-03-2024 02:46
08-03-2024 02:46
15-03-2024 02:46
22-03-2024 02:46
29-03-2024 02:46
Date & Time
Span
SpanRef
Span Low
Span High


THC55[ppm] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 02:46
08-03-2024 02:46
15-03-2024 02:46
22-03-2024 02:46
29-03-2024 02:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Span
26
24
Span 22
20
18
01-03-2024 02:46
08-03-2024 02:46
15-03-2024 02:46
22-03-2024 02:46
29-03-2024 02:46
Date & Time
Span
SpanRef
Span Low
Span High


CH4[ppm] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 02:46
08-03-2024 02:46
15-03-2024 02:46
22-03-2024 02:46
29-03-2024 02:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4[ppm] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Span
13
12
Span 11
10
9
01-03-2024 02:46
08-03-2024 02:46
15-03-2024 02:46
22-03-2024 02:46
29-03-2024 02:46
Date & Time
Span
SpanRef
Span Low
Span High


NMHC[ppm] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 02:47
08-03-2024 02:47
15-03-2024 02:47
22-03-2024 02:47
29-03-2024 02:47
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC[ppm] Calibration: Tamarack Monthly: 03-2024 Type: SpanAndZero - Span
14
13
Span 12
11
10
01-03-2024 02:47
08-03-2024 02:47
15-03-2024 02:47
22-03-2024 02:47
29-03-2024 02:47
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	24-Mar-2024	PREVIOUS CALIBRATION DATE:	13-Feb-2024
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.997
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	937
PURPOSE	Routine	START TIME (MST):	11:01
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:32

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180930031	FLOW (mL/min)	418
INITIAL		FINAL	
BKG/OFFSET	2.99	BKG/OFFSET	3.04
COEF/SLOPE	1.052	COEF/SLOPE	1.081
Expected (reference) Value	193	Expected (reference) Value	196

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):	300	LOW ID	n/a
EXPIRY DATE	27-Oct-2030	EXPIRY DATE	n/a

CALIBRATION PARAMETERS:

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

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

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

CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.00	-0.1	0		
4961	37.20	4998	375.13	363	374.5	1.033	1.002
4982	17.60	5000	177.41	n/a	176.8	n/a	1.003
4990	8.80	4999	88.72	n/a	87.7	n/a	1.012

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.999	-0.1%

COMMENTS:

Sample inlet filter was changed.

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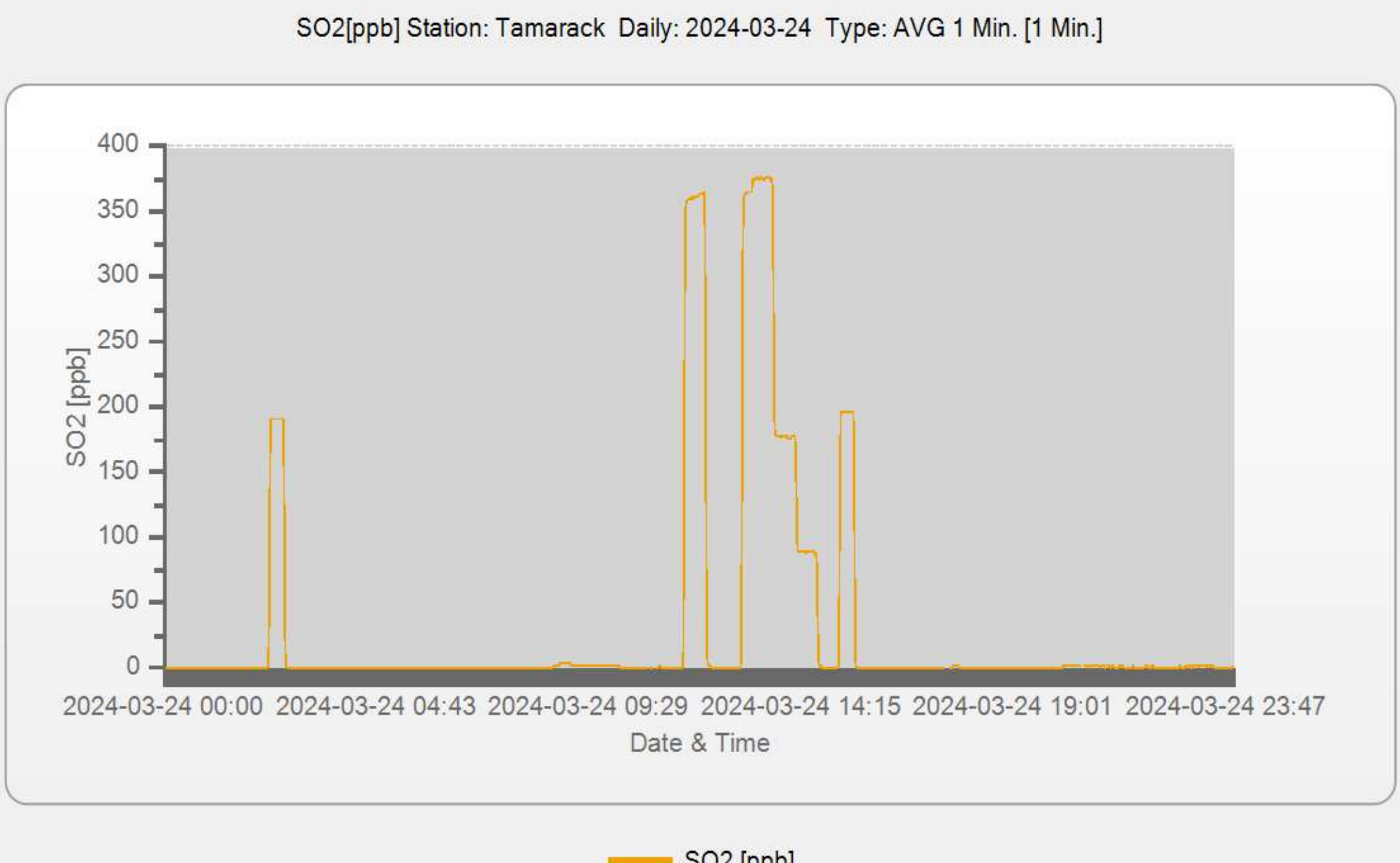
Report Type: StationReport Avg Type: AVG
Date & Time: 2024-03-24 Time Base: 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	15-Mar-2024	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	939
PURPOSE	Install/Post-Repair	START TIME (MST):	12:10
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:42

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM 17360005	FLOW (mL/min)	1008
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	39.9
COEF/SLOPE	n/a	COEF/SLOPE	0.844
Expected (reference) Value	n/a	Expected (reference) Value	39

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):	1500	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:	12:12	SO2 Conc (ppb)	380
END TIME:	12:27	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	28.20	7500	37.79	n/a	38.2	n/a	0.989
7486	14.10	7500	18.89	n/a	19.3	n/a	0.979

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.999	0.2%

COMMENTS:

Post-repair following sample pump replacement

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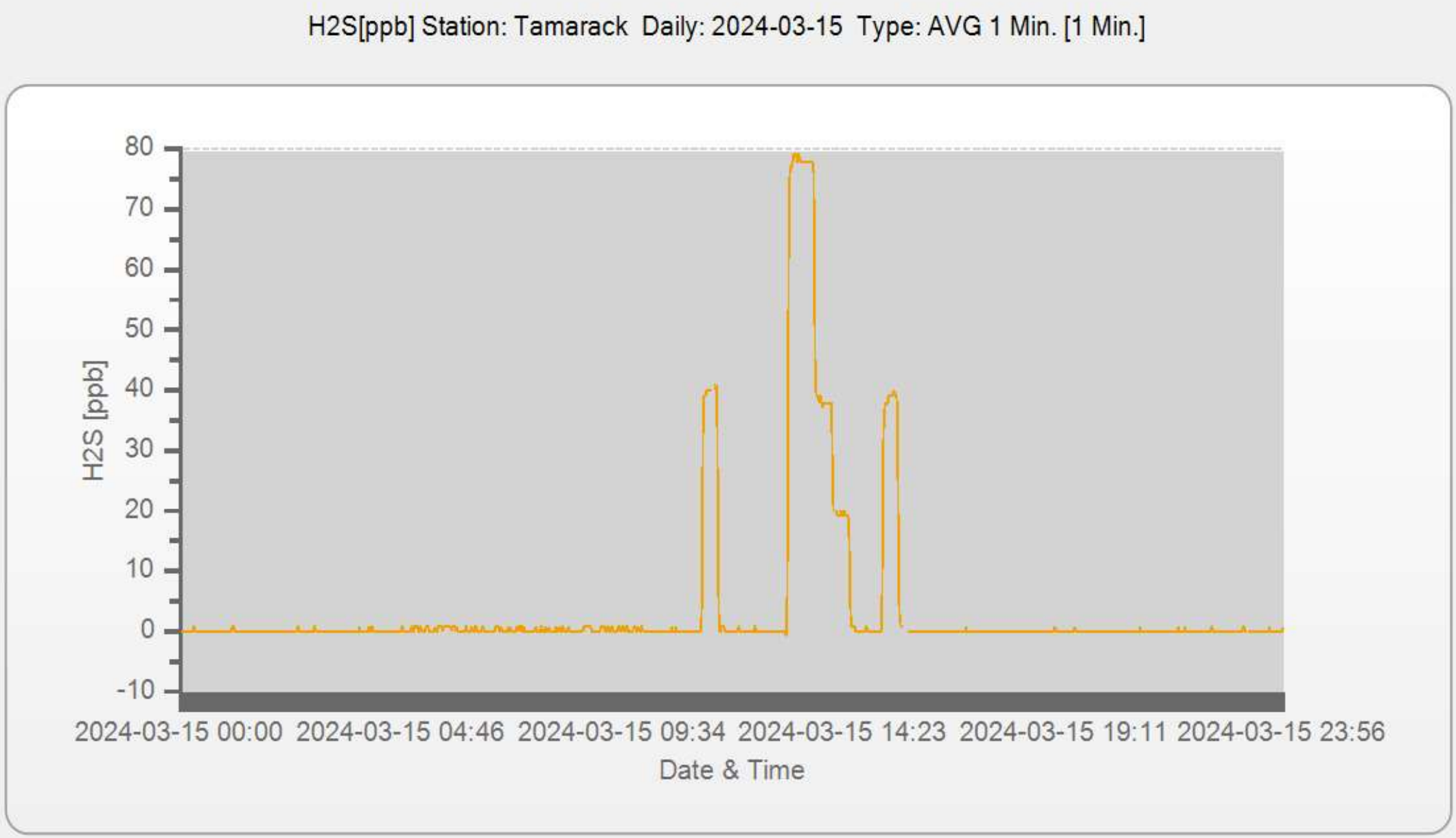
Report Type: StationReport Avg Type: AVG
Date & Time: 2024-03-15 Time Base: 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	24-Mar-2024	PREVIOUS CALIBRATION DATE:	15-Mar-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	937
PURPOSE	Repeat	START TIME (MST):	11:02
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:32

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM 17360005	FLOW (mL/min)	1000
INITIAL		FINAL	
BKG/OFFSET	39.9	BKG/OFFSET	39.1
COEF/SLOPE	0.844	COEF/SLOPE	0.851
Expected (reference) Value	39	Expected (reference) Value	39

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):	1400	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:	11:04	SO2 Conc (ppb)	380
END TIME:	11:19	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	-0.6	0		
7442	58.20	7500	77.99	76.6	77.8	1.010	1.002
7472	28.20	7500	37.79	n/a	38.5	n/a	0.982
7486	14.10	7500	18.89	n/a	19.6	n/a	0.964

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.995	0.5%

COMMENTS:

Repeat calibration to correct the span drift

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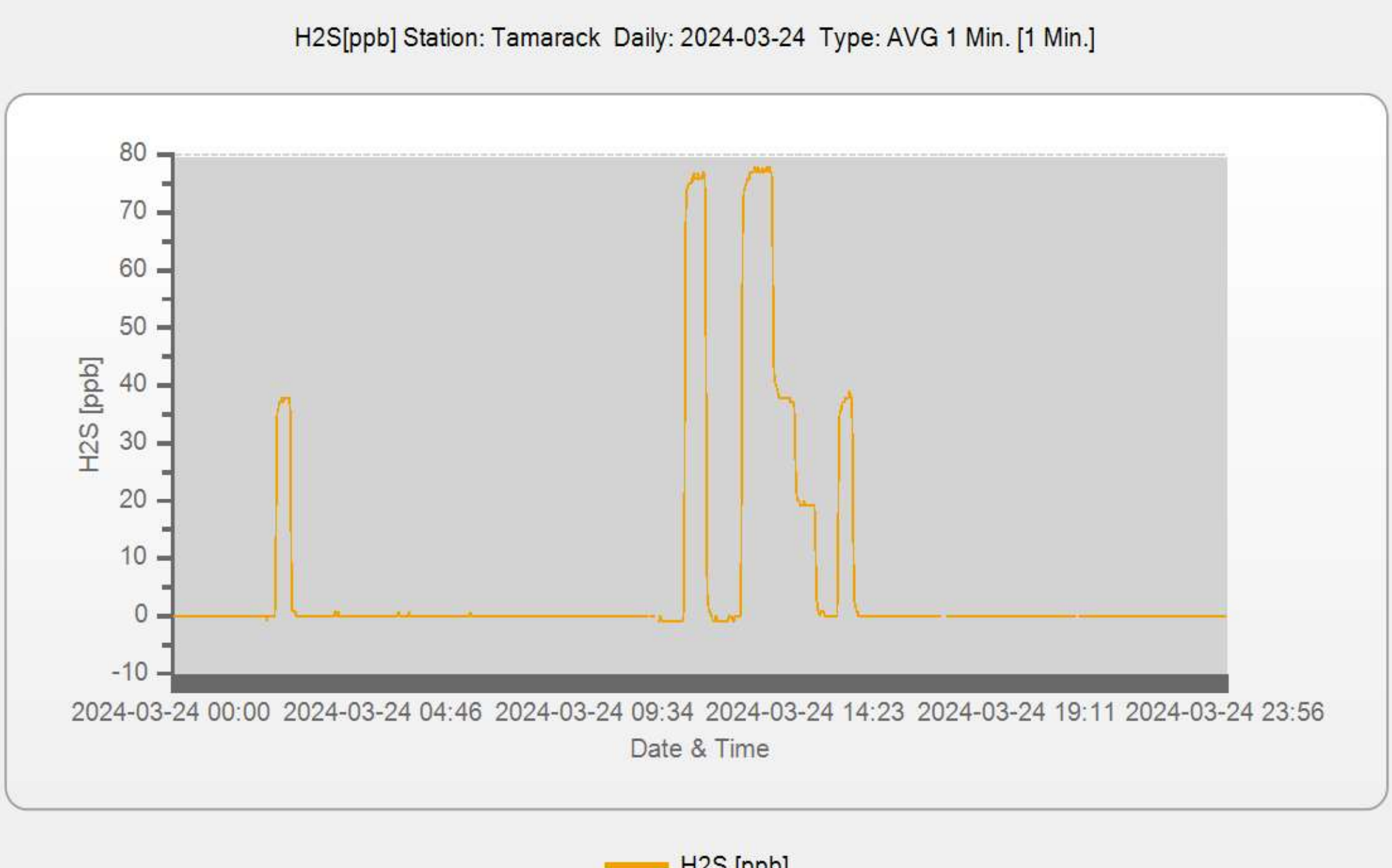
Report Type: StationReport Avg Type: AVG

Date & Time: 2024-03-24 Time Base: 1 Min. [1 Min.]



NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

DATE:	24-Mar-2024	PREVIOUS CALIBRATION DATE:	13-Feb-2024
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	937
PURPOSE	Routine	START TIME (MST):	10:59
PERFORMED BY:	Alex Yakupov	END TIME (MST):	17:25

ANALYZER:

MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
SERIAL #:	1180930028	NOx	0.997
FLOW (mL/min)	712	NO	0.997
RANGE (ppb)	500	NO2	0.998
GPT FOR O3?		No	

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:			FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL 127895		HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	51.1	51.6	HIGH EXPIRY:	n/a
ID:	17100415	ID:	134	CYLINDER (psi):	300		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:	2.3	2.1	n/a	BKG/OFFSET:	2.4	2.2	n/a
SLOPE/COEF/CE:	1.009	1.206	0.998	SLOPE/COEF/CE:	1.01	1.244	0.998

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	281.0	1.6	279.0		290.0	1.6	288.0

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	0.0	0.1	0.0	0.0	0.0						
4961	37.10	4998	379.3	383.0	3.7	369.9	374.0	4.1	379.9	384.1	4.2	1.025	1.024		0.998	0.997	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.9	181.9	1.8	n/a	n/a		1.000	0.999	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	89.6	90.5	1.0	n/a	n/a		1.004	1.004	

GPT CALIBRATION:

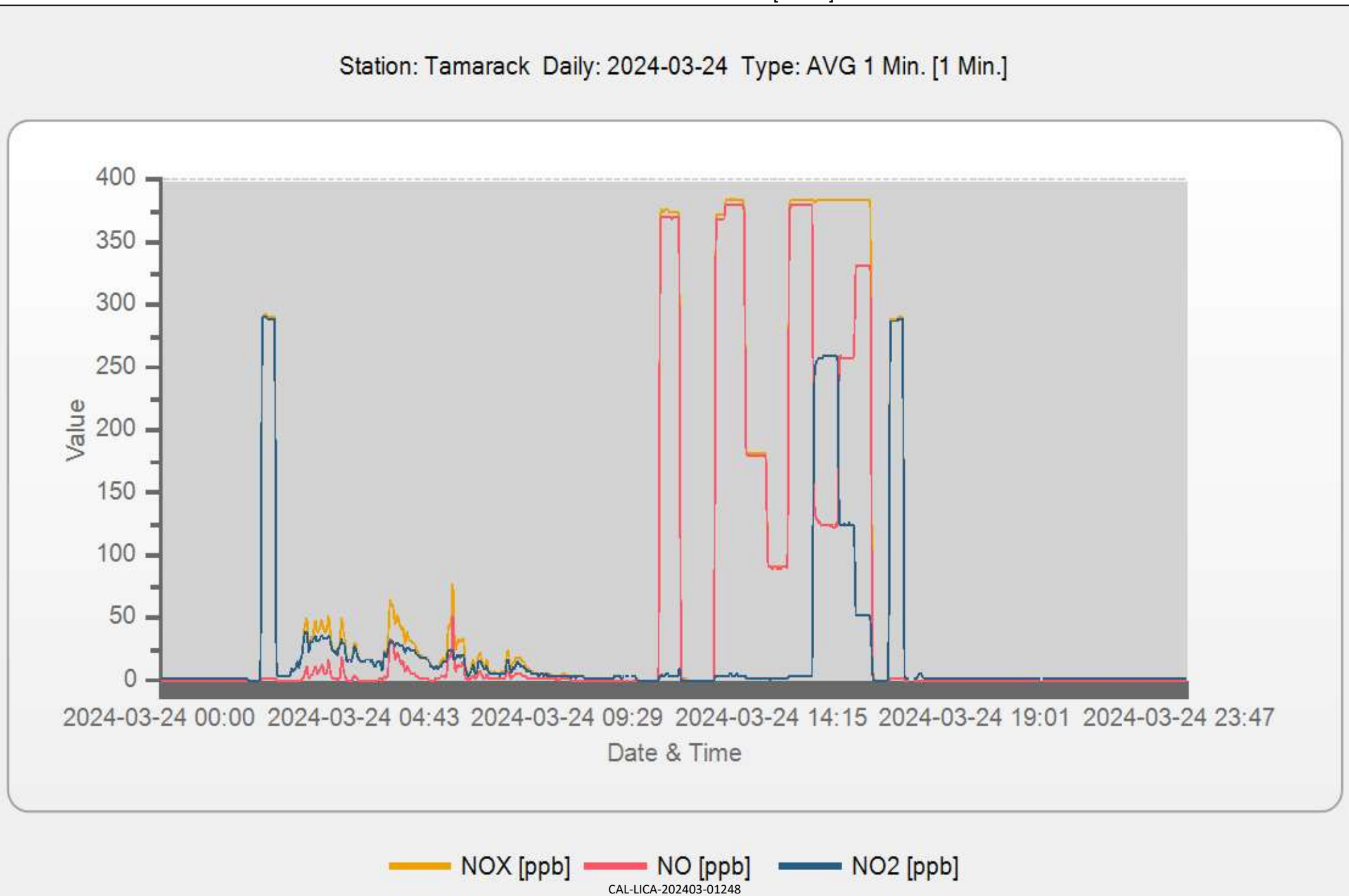
Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2				
REFERENCE	37.10	4997	0	379.4	383.3	3.8				
AS-FOUND HIGH	37.10	4997	235	123.9	383.4	259.4	255.5	255.6	1.000	100.04%
ADJUSTED HIGH	37.10	4997	n/a	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a
MID	37.10	4997	110	257.8	383.0	125.2	121.6	121.4	1.002	99.84%
LOW	37.10	4997	40	331.2	383.0	51.8	48.2	48	1.004	99.59%
NO2 adjustment not required.									AVERAGE:	99.82%

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	1.002	-0.05%
NOx	1.000	1.003	-0.06%
NO2	1.000	1.002	-0.06%

COMMENTS:

Sample inlet filter was changed.


Station: Tamarack Daily: 2024-03-24 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
Value
2024-03-24 00:00
2024-03-24 04:43
2024-03-24 09:29
2024-03-24 14:15
2024-03-24 19:01
2024-03-24 23:47
Date & Time
NOX [ppb]
NO [ppb]
NO2 [ppb]

Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	26-Mar-2024	PREVIOUS CALIBRATION DATE:	22-Feb-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	933
PURPOSE	Routine	START TIME (MST):	12:33
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:10

ANALYZER:

MAKE/MODEL	Thermo 49i	RANGE	500 ppb
SERIAL #	1002240371	FLOW (mL/min)	1483
INITIAL		FINAL	
BKG/OFFSET	0.1	BKG/OFFSET	0.1
COEF/SLOPE	0.987	COEF/SLOPE	0.987
Expected (reference) Value	212.5	Expected (reference) Value	216

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Tel;edyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	134
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:

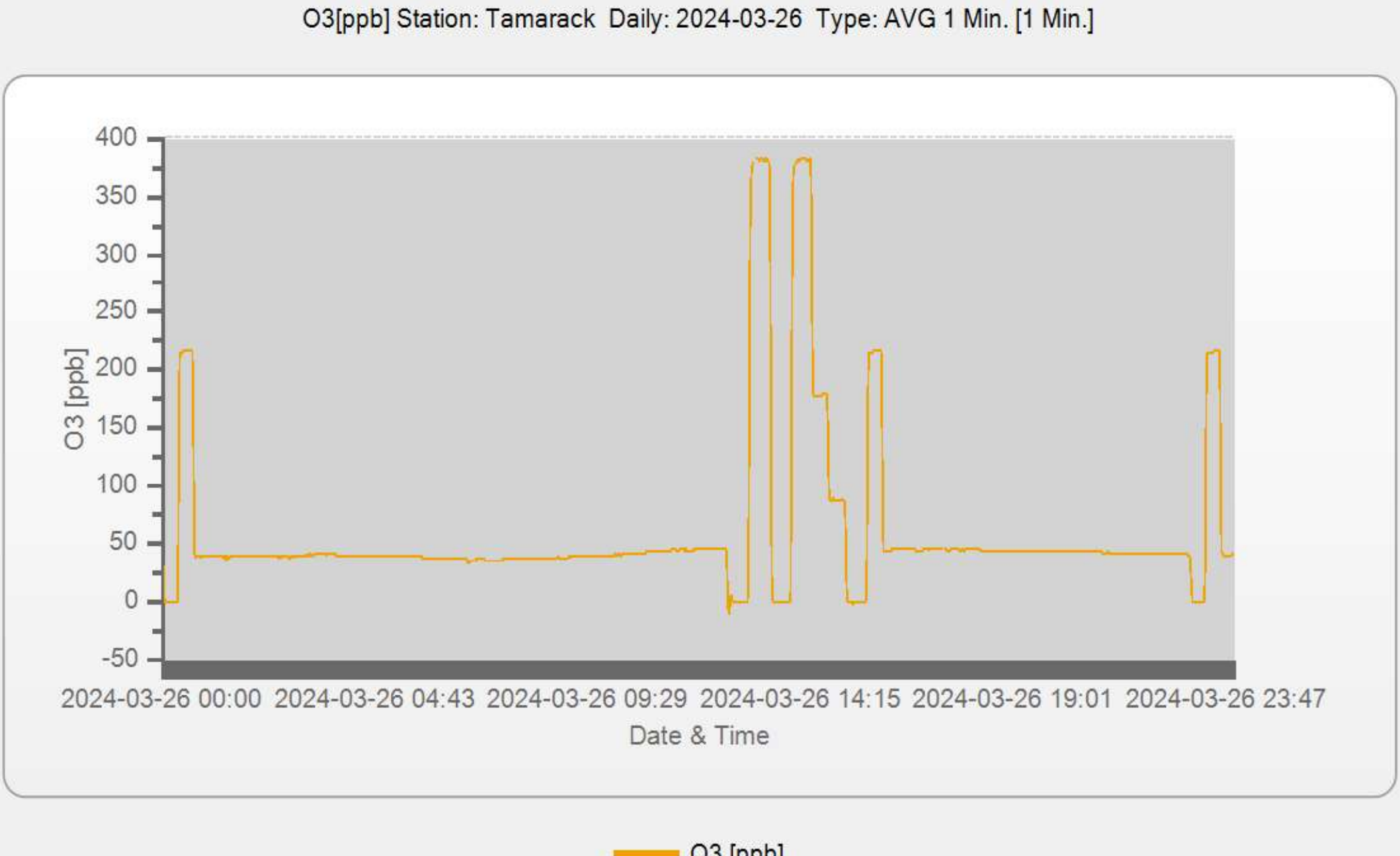
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	0.0	0.0		
5000		5000	380.0	380.9	380.1	0.998	1.000
5000		5000	180.0	n/a	179.0	n/a	1.006
5000		5000	89.0	n/a	86.7	n/a	1.027

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	-0.2%

COMMENTS:

Sample inlet filter was changed


O3[ppb] Station: Tamarack Daily: 2024-03-26 Type: AVG 1 Min. [1 Min.]
400
350
300
250
200
150
100
50
0
-50
O3 [ppb]
2024-03-26 00:00
2024-03-26 04:43
2024-03-26 09:29
2024-03-26 14:15
2024-03-26 19:01
2024-03-26 23:47
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	26-Mar-2024	PREVIOUS CALIBRATION DATE:	22-Feb-2024
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Tamarack	BAROMETRIC (mBar):	933
PURPOSE	Routine	START TIME (MST):	12:36
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:29

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1505664392	1072
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	1.000	0.999	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:	15-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
	10.34	11.59	21.94		11.08	11.96	23.04

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	13.75	13.15	26.89	14.52	13.51	28.04	1.055	1.027	1.042	0.999	0.999	0.999
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.30	6.75	14.05	n/a	n/a	n/a	0.994	1.000	0.997
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.67	3.36	7.03	n/a	n/a	n/a	0.986	1.002	0.993

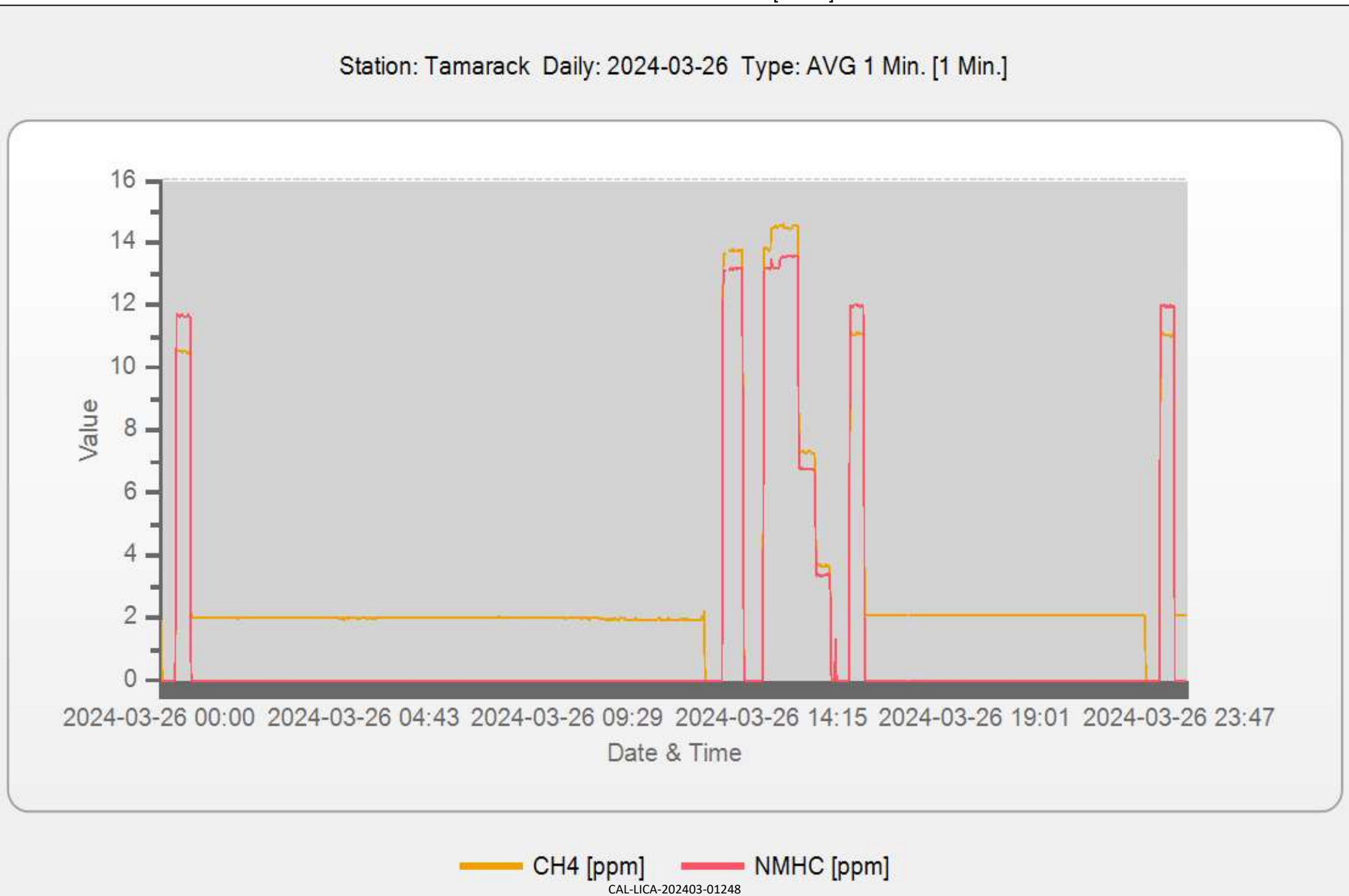
LINEAR REGRESSION ANALYSIS:

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

Comments:

Sample inlet filter was changed

Use Zero Chrom? **Yes**


Station: Tamarack Daily: 2024-03-26 Type: AVG 1 Min. [1 Min.]
16
14
12
10
8
6
4
2
0
Value
2024-03-26 00:00
2024-03-26 04:43
2024-03-26 09:29
2024-03-26 14:15
2024-03-26 19:01
2024-03-26 23:47
Date & Time
CH4 [ppm]
NMHC [ppm]

Thermo 5030 SHARP Monitor Monthly Check

Date:	March 26, 2024	**Performed By/Reviewer:**	Alex Yakupov / Chris Wesson
Company:	LICA	**Start Time (mst):**	15:47
Station Name/Location:	Tamarack	**End Time (mst):**	16:40
Previous Audit Date:	February 22, 2024	**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	Delta Cal	Vaisala
Model:	DC-1	DC-1	DC-1	HM70
Serial Number:	#177246	#177246	#177246	T1640130
Calibration Expiration Date:	November 27, 2024	November 27, 2024	November 27, 2024	June 26, 2024

As found temperature and pressure:

Tolerance +/- 4°C		**Tolerance +/- 13.33 hPa**	
SHARP T1 °C:	-1.0	**SHARP P3 (hPa):**	936.000
Reference °C:	-1.2	**Reference (hPa):**	936.000
Difference °C:	-0.2	**Difference (hPa) :**	0.000

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

Tolerance +/- 4°C		**Tolerance +/- 13.33 hPa**	
SHARP T1 °C:	-1.0	**SHARP P3 (hPa):**	936.000
Reference °C:	-1.2	**Reference (hPa):**	936.000
Difference °C:	-0.2	**Difference :**	0.000

As found flows:

Targets: 1000 l/hr / <90%		**Flow Tolerance 16.67 lpm +/- 0.67 lpm**	
SHARP AirFlow l/hr	1000.00	**SHARP Airflow (l/min)**	16.67
Pump Voltage (%)	53.40	**Reference AirFlow (l/min)**	16.69
		Difference (l/min)	0.02

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

Targets: 1000 l/hr / <90%		**Flow Tolerance 16.67 lpm +/- 0.67 lpm**	
SHARP AirFlow l/hr	1000.00	**SHARP Airflow (l/min)**	16.67
Pump Voltage (%)	50.90	**Reference AirFlow (l/min)**	16.69
		Difference (l/min)	0.02

Inlet Assembly:

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

Comments:

Leak check: 16.65 vs 16.54, 0.11 < 0.80 lpm, passed.

Meteorological System Checklist

Date:	March 26, 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	Water test: 16:42 - 16:46 - response is timely and accurate
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:	Vaisala HMP76B #T1640130, Exp. Date: Jun 26, 2024
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:	Delta Cal / DC-1 / #177246 / November 27, 2024	
Reference Pressure - Units/Reading:	millibar	933
Station Pressure - Units/Reading:	millibar	932
Pressure Tolerance +/- 15% of error:	793 - 1073	0.11%

RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Reference Hygrometer ID:	Vaisala HMP76B #T1640130, Exp. Date: Jun 26, 2024	
Reference Hygrometer % RH- Reading:	39.60	
Station Hygrometer % RH- Reading:	38.40	
RH Tolerance +/- 15% of difference:	33.66 - 45.54	3.0%

ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Wind Speed Observed (kph):	10~20	Wind Direction Observed:	SE
Wind speed on Data Logger (kph):	18.5	Wind Direction on Data Logger:	SE
	Annual audit: Sep 17, 2023	Wind Direction Pass/Fail?:	Pass

Comments

Audits: 16:42 - 17:26

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

MARCH 2024

Ambient Air Monitoring Calibration Report

- ST. LINA STATION-

CAL-LICA-202403-01250

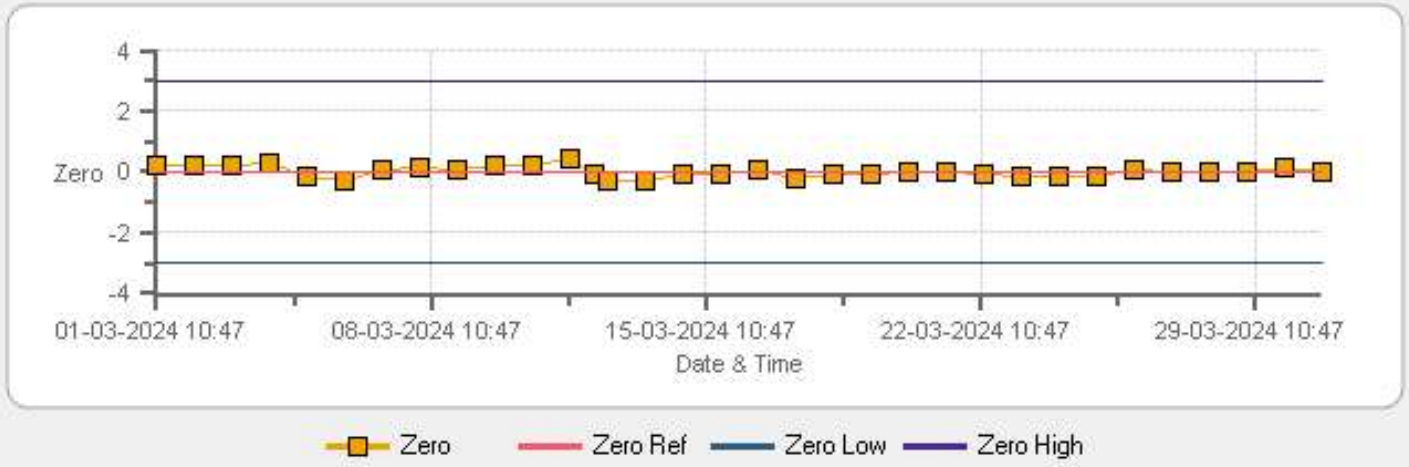
Station Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
LICA / Bureau Veritas Canada

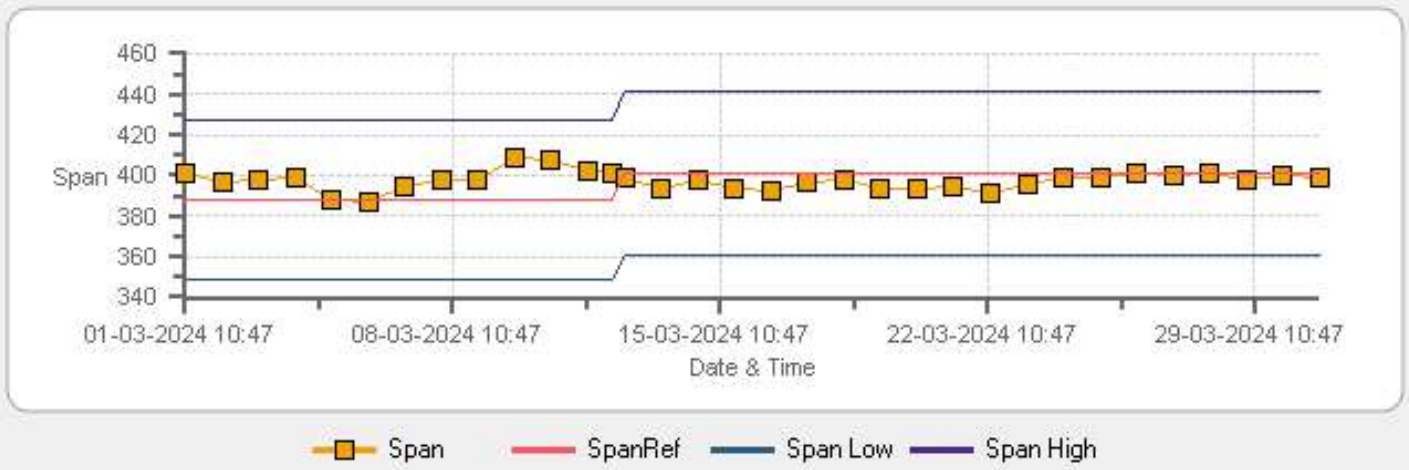
April 9, 2024

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Zero



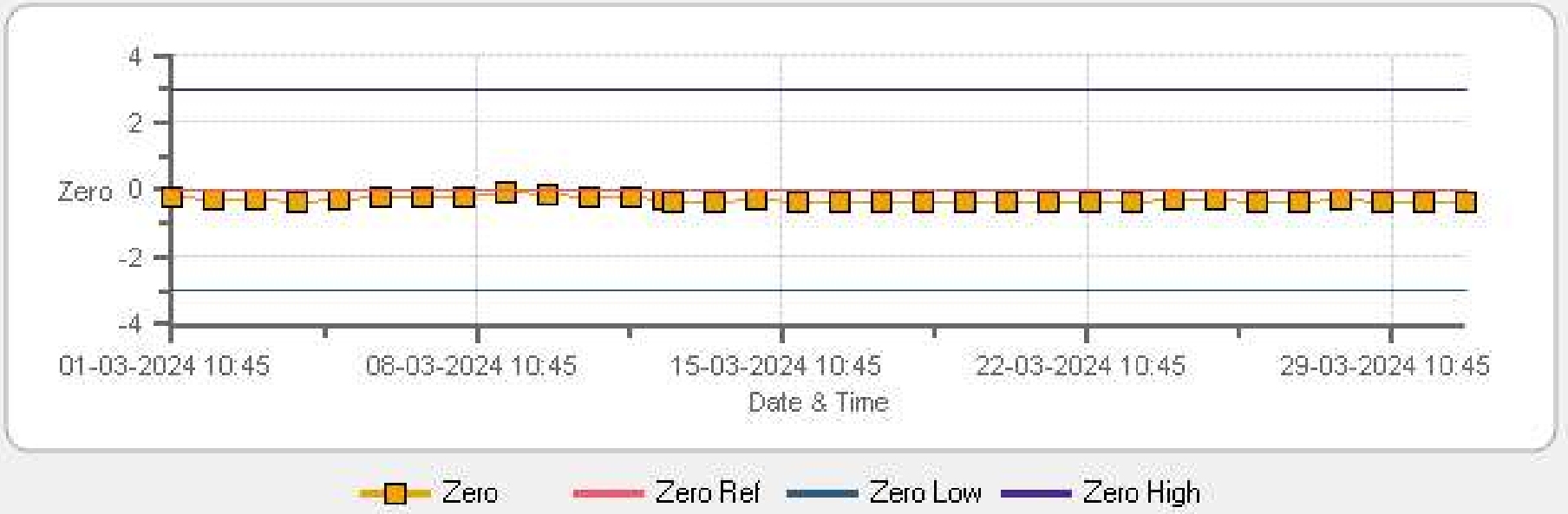
SO2[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Span



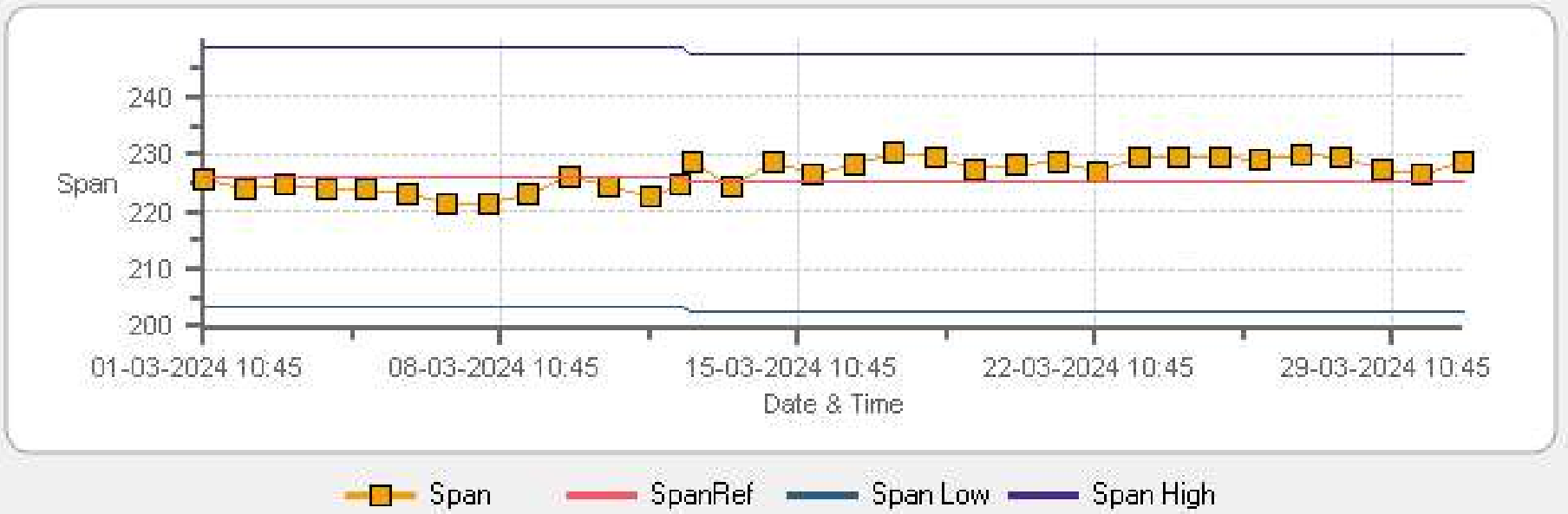
H2S[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Zero

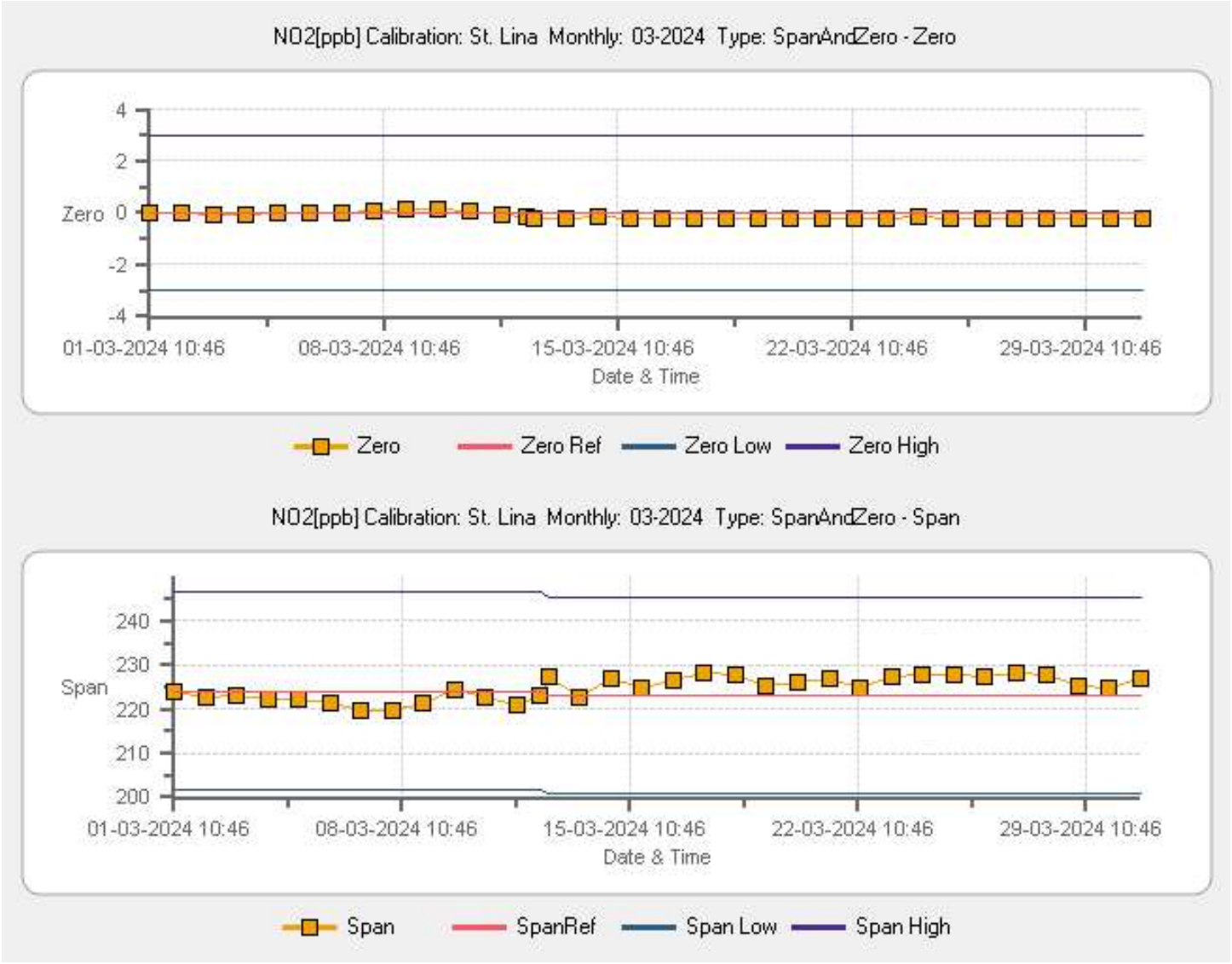
H2S[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Span

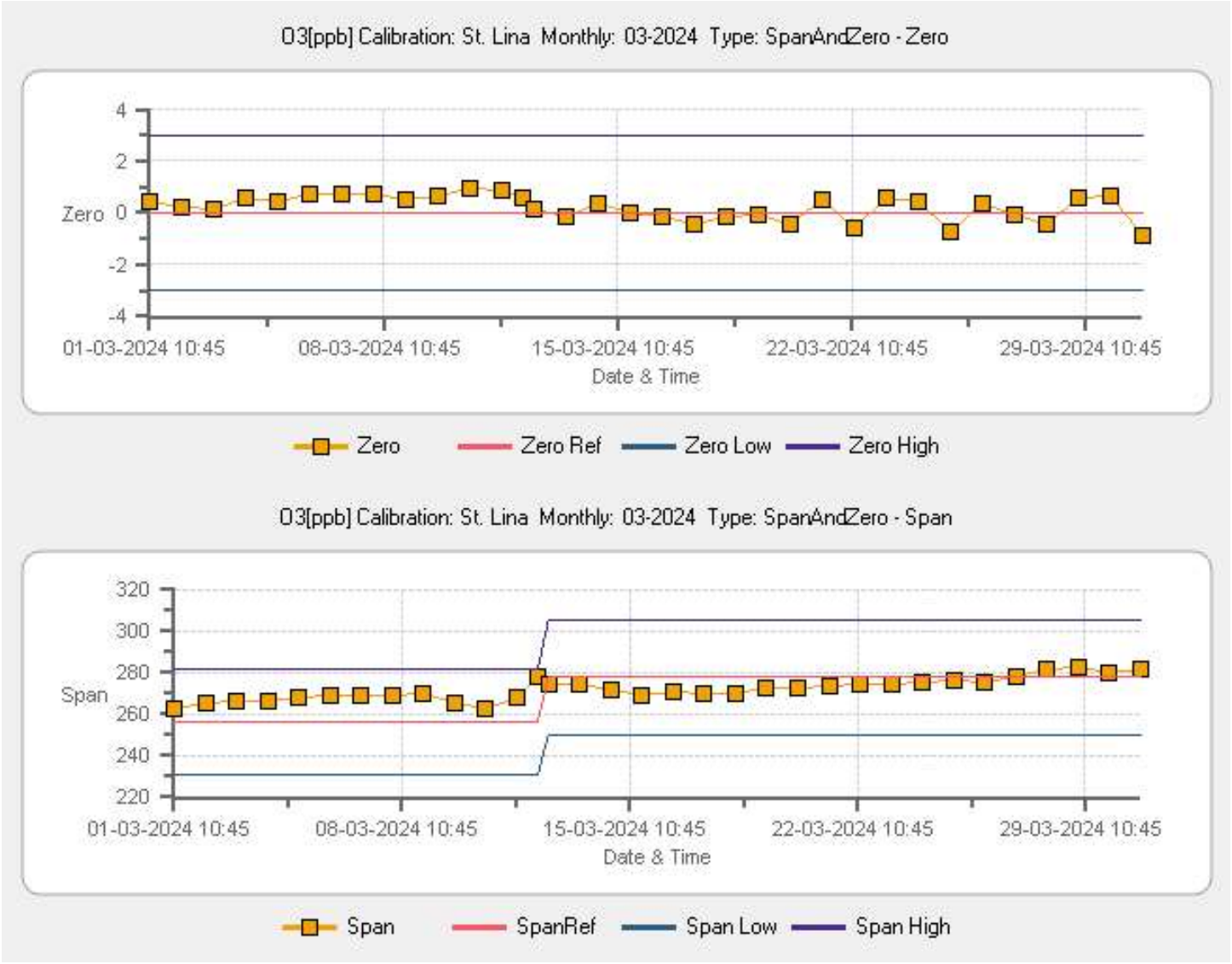
NOX[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Zero

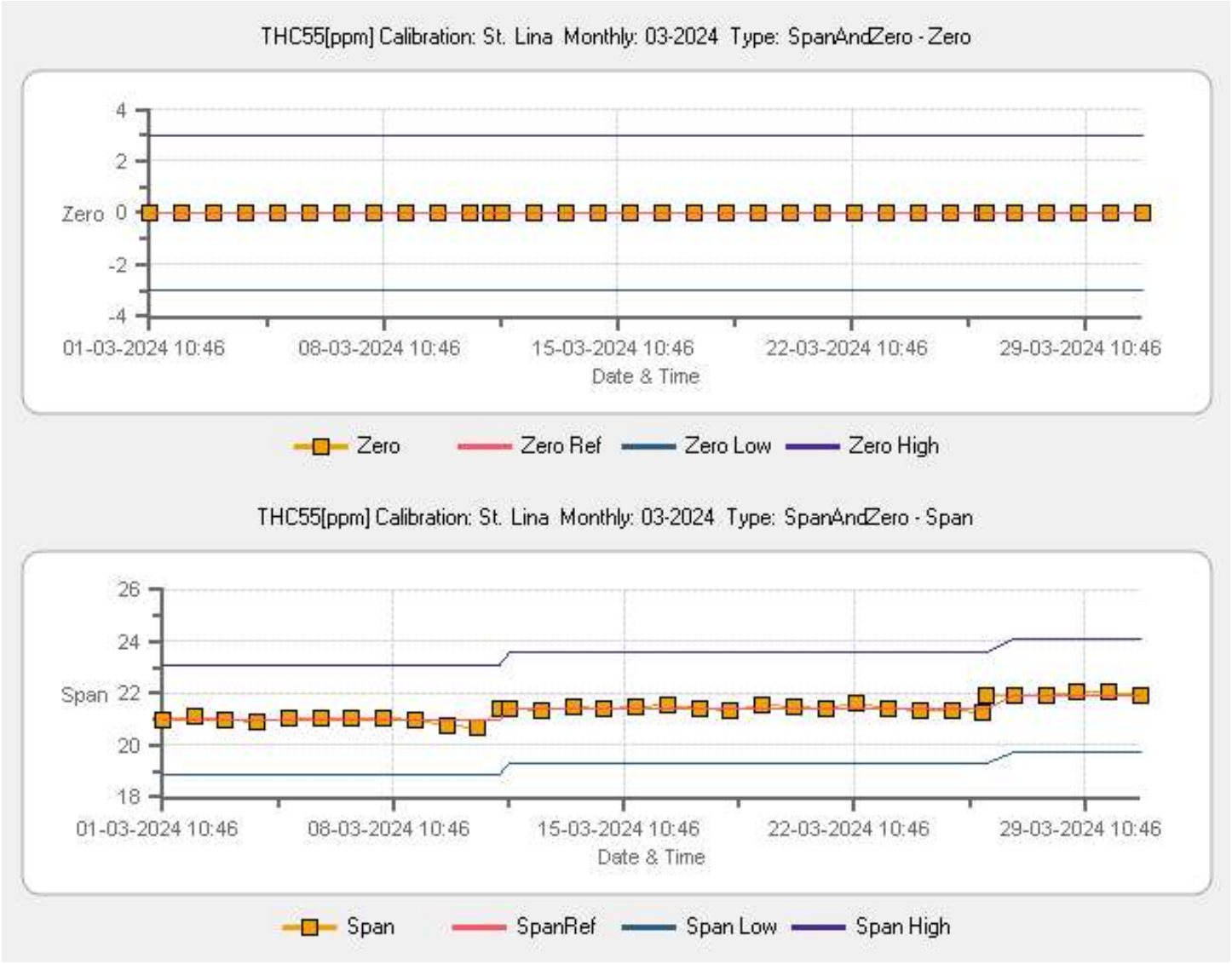


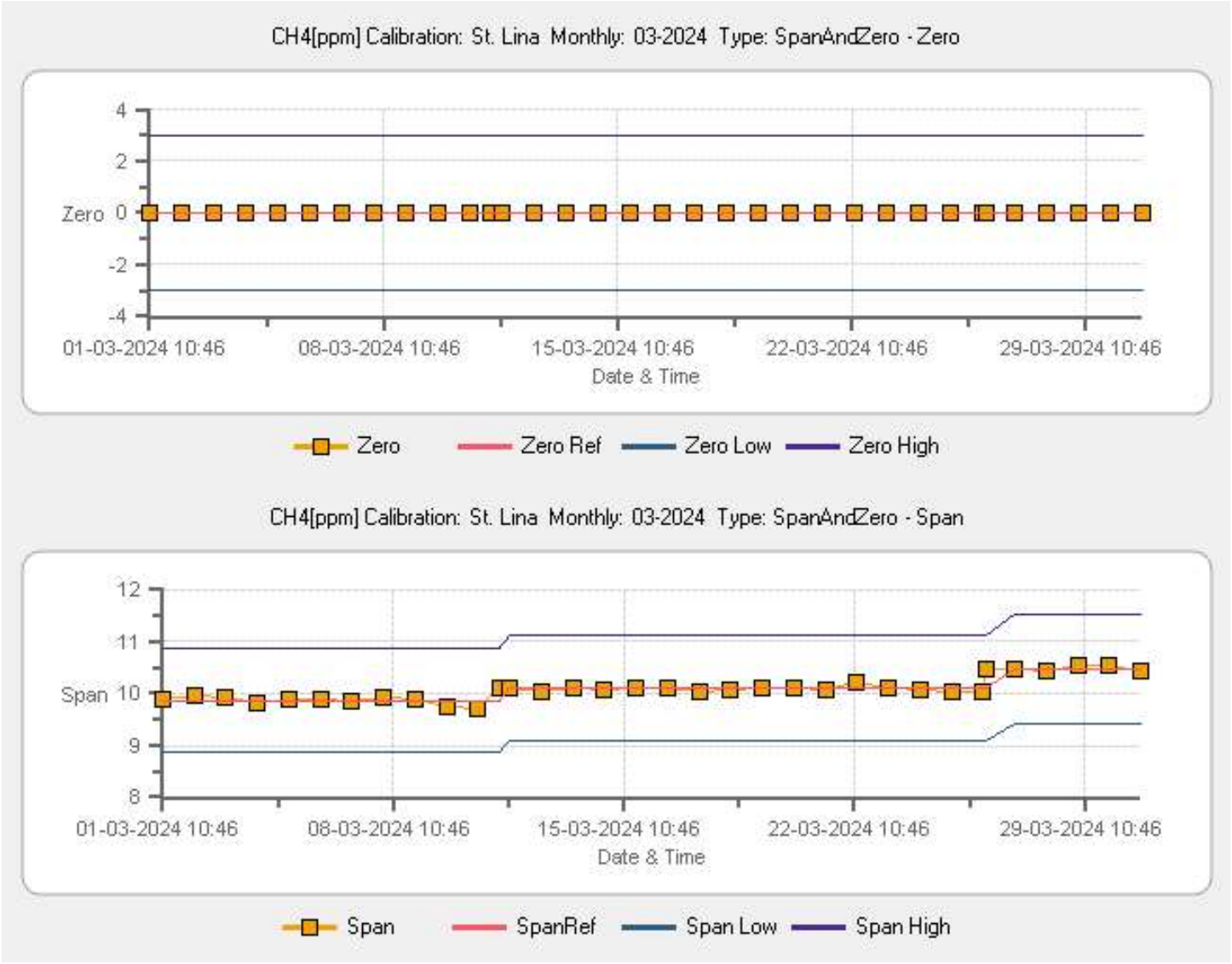
NOX[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Span

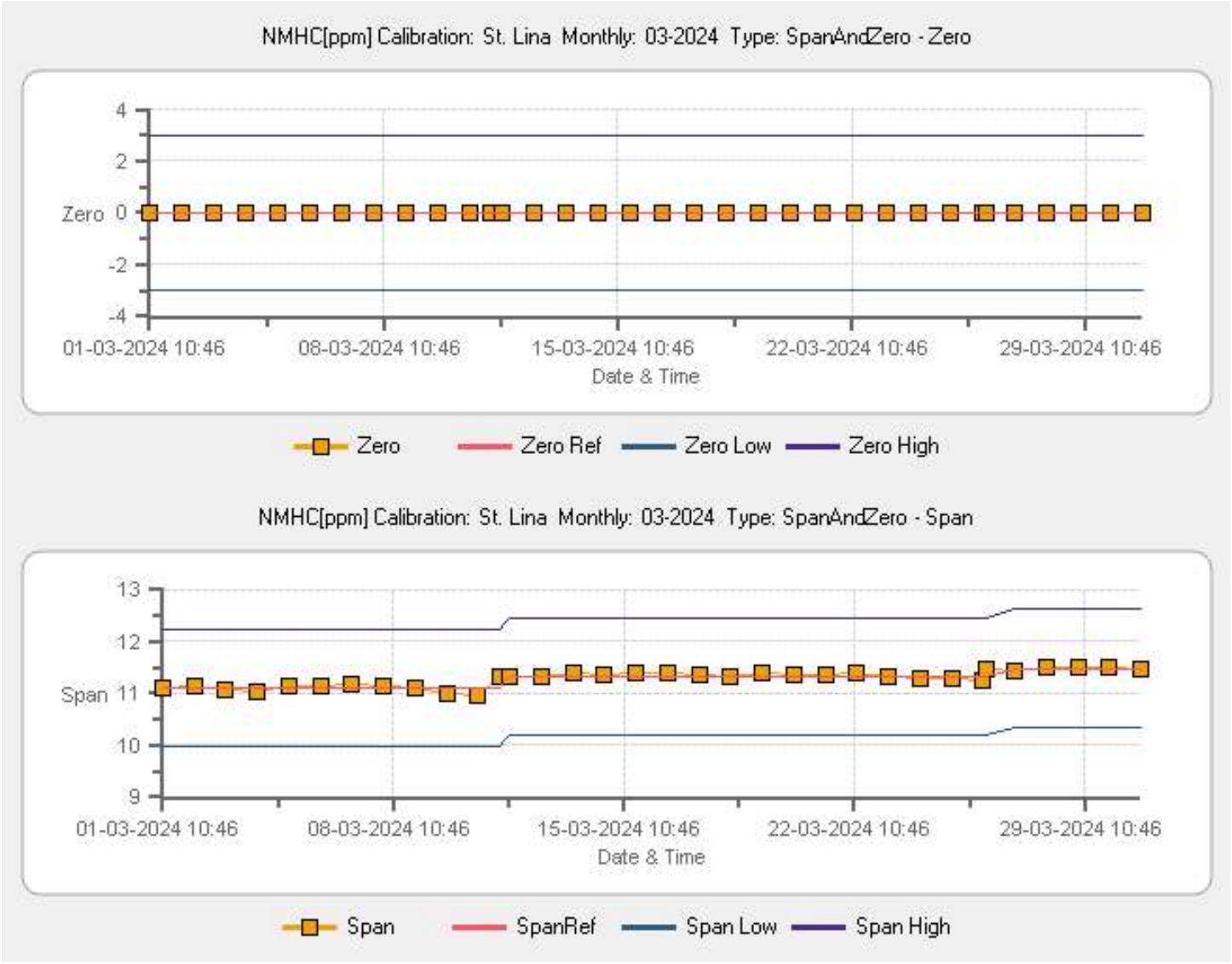



NO2[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NO2[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Span
240
230
Span
220
210
200
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Span
SpanRef
Span Low
Span High


O3[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 10:45
08-03-2024 10:45
15-03-2024 10:45
22-03-2024 10:45
29-03-2024 10:45
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Span
320
300
280
Span
260
240
220
01-03-2024 10:45
08-03-2024 10:45
15-03-2024 10:45
22-03-2024 10:45
29-03-2024 10:45
Date & Time
Span
SpanRef
Span Low
Span High


THC55[ppm] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Span
26
24
Span 22
20
18
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Span
SpanRef
Span Low
Span High


CH4[ppm] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
CH4[ppm] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Span
12
11
Span 10
9
8
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Span
SpanRef
Span Low
Span High


NMHC[ppm] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC[ppm] Calibration: St. Lina Monthly: 03-2024 Type: SpanAndZero - Span
13
12
Span 11
10
9
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	12-Mar-2024	PREVIOUS CALIBRATION DATE:	17-Feb-2024
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	911
PURPOSE	Routine	START TIME (MST):	10:59
PERFORMED BY:	Alex Yakupov	END TIME (MST):	14:58

ANALYZER:

MAKE/MODEL	Thermo 43i	RANGE	500 ppb
SERIAL #	1226154720	FLOW (mL/min)	408
INITIAL		FINAL	
BKG/OFFSET	16.4	BKG/OFFSET	16.8
COEF/SLOPE	1.053	COEF/SLOPE	1.058
Expected (reference) Value	388	Expected (reference) Value	401

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):	300	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	0.4	0		
4961	37.20	4998	375.13	371.6	371	1.011	1.011
4982	17.60	5000	177.41	n/a	177.9	n/a	0.997
4990	8.80	4999	88.72	n/a	88.6	n/a	1.001

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.989	0.2%

COMMENTS:

Sample inlet filter was changed.

Report Type: StationReport Avg Type: AVG
Date & Time: 2024-03-12 Time Base: 1 Min. [1 Min.]

SO2[ppb] Station: St. Lina Daily: 2024-03-12 Type: AVG 1 Min. [1 Min.]

H2S Analyzer Calibration by Dilution

DATE:	11-Mar-2024	PREVIOUS CALIBRATION DATE:	27-Feb-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	0.998
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	909
PURPOSE	Routine	START TIME (MST):	11:49
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:05

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM 18010058	FLOW (mL/min)	809
INITIAL		FINAL	
BKG/OFFSET	65.3	BKG/OFFSET	71.3
COEF/SLOPE	0.983	COEF/SLOPE	1.018
Expected (reference) Value	35	Expected (reference) Value	37.2

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010 D	MODEL:	T701
ID:	11900613	ID:	132
MFC CALIBRATION DATE:	21-Feb-2024	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):	1500	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:	11:53	SO2 Conc (ppb)	380
END TIME:	12:13	Analyzer Response (ppb)	0.0

CALIBRATION:

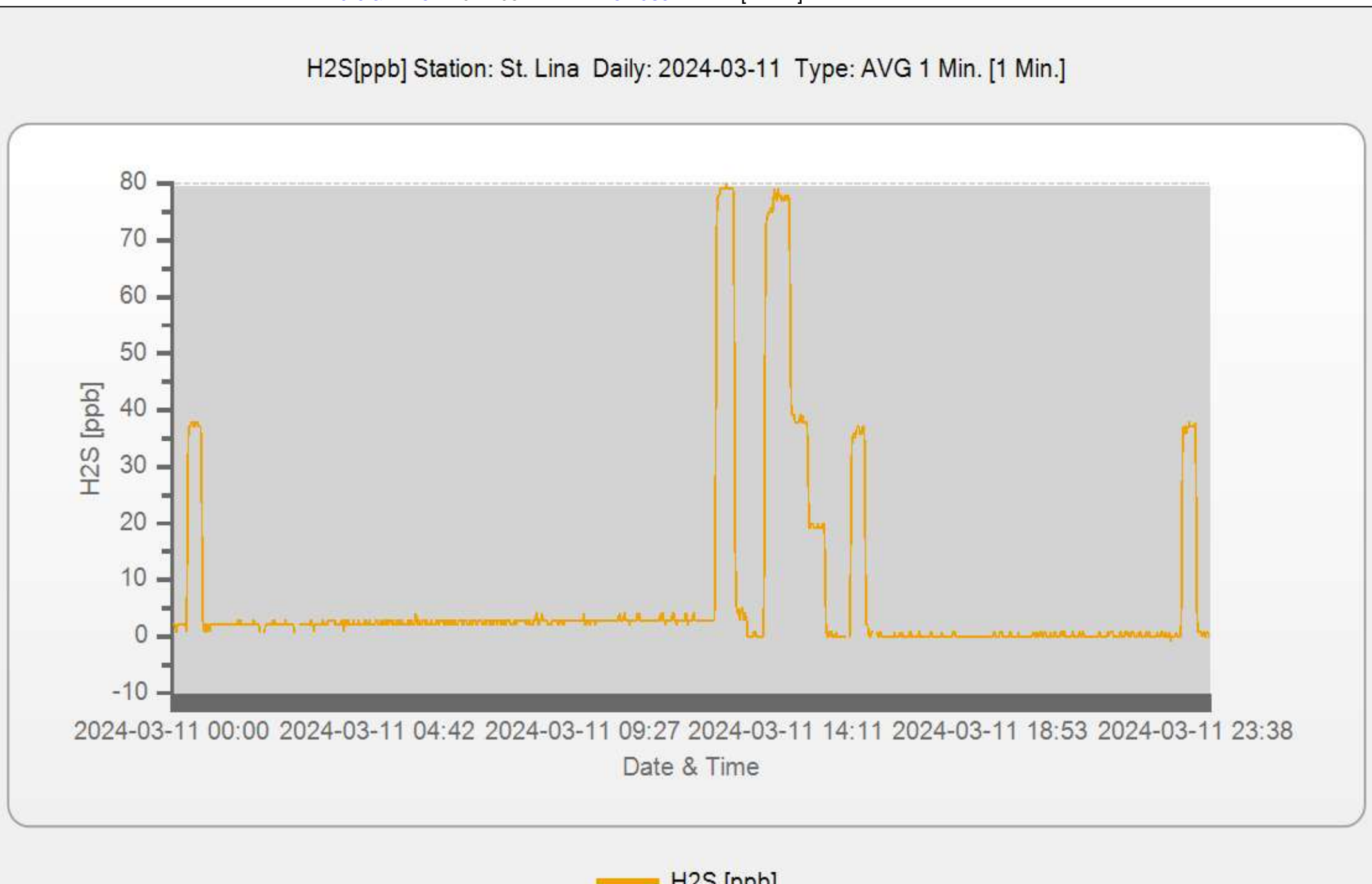
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
7500		7500	0.00	2.9	0		
7442	58.20	7500	77.99	78.8	77.6	1.028	1.005
7472	28.30	7500	37.92	n/a	38.2	n/a	0.993
7486	14.20	7500	19.03	n/a	18.6	n/a	1.023

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.997	0.0%

COMMENTS:

Sample inlet filter was changed.


H2S[ppb] Station: St. Lina Daily: 2024-03-11 Type: AVG 1 Min. [1 Min.]
80
70
60
50
40
30
20
10
0
-10
H2S [ppb]
2024-03-11 00:00
2024-03-11 04:42
2024-03-11 09:27
2024-03-11 14:11
2024-03-11 18:53
2024-03-11 23:38
Date & Time
H2S [ppb]

NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

				ANALYZER:			
DATE:	12-Mar-2024	PREVIOUS CALIBRATION DATE:	17-Feb-2024	MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
CLIENT:	LICA	TEMPERATURE (°C):	22.0	SERIAL #:	1180930029	NOx	1.001
LOCATION:	St. Lina	BAROMETRIC (mBar):	911	FLOW (mL/min)	777	NO	0.999
PURPOSE	Routine	START TIME (MST):	11:00	RANGE (ppb)	500	NO2	0.996
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:59	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):	300		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:	4.6	4.4	n/a	BKG/OFFSET:	4.9	4.5	n/a
SLOPE/COEF/CE:	1.01	0.91	0.997	SLOPE/COEF/CE:	1.01	0.936	0.997

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	226.0	1.7	224.0		225.0	1.6	223.0

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	-0.3	-0.1	0.1	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	370.1	374.2	4.1	379.8	384.2	4.4	1.027	1.026		1.001	1.000	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.9	181.8	1.9	n/a	n/a		1.000	0.999	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	89.8	90.7	0.9	n/a	n/a		1.002	1.001	

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	379.9	383.6	3.8				
AS-FOUND HIGH	37.20	4998	240	126.8	384.9	258.1	253.1	254.3	0.995	100.47%
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	259.0	384.6	125.6	120.9	121.8	0.993	100.74%
LOW	37.20	4998	45	330.7	385.0	54.4	49.2	50.6	0.972	102.85%
NO2 adjustment not required.									AVERAGE:	101.35%

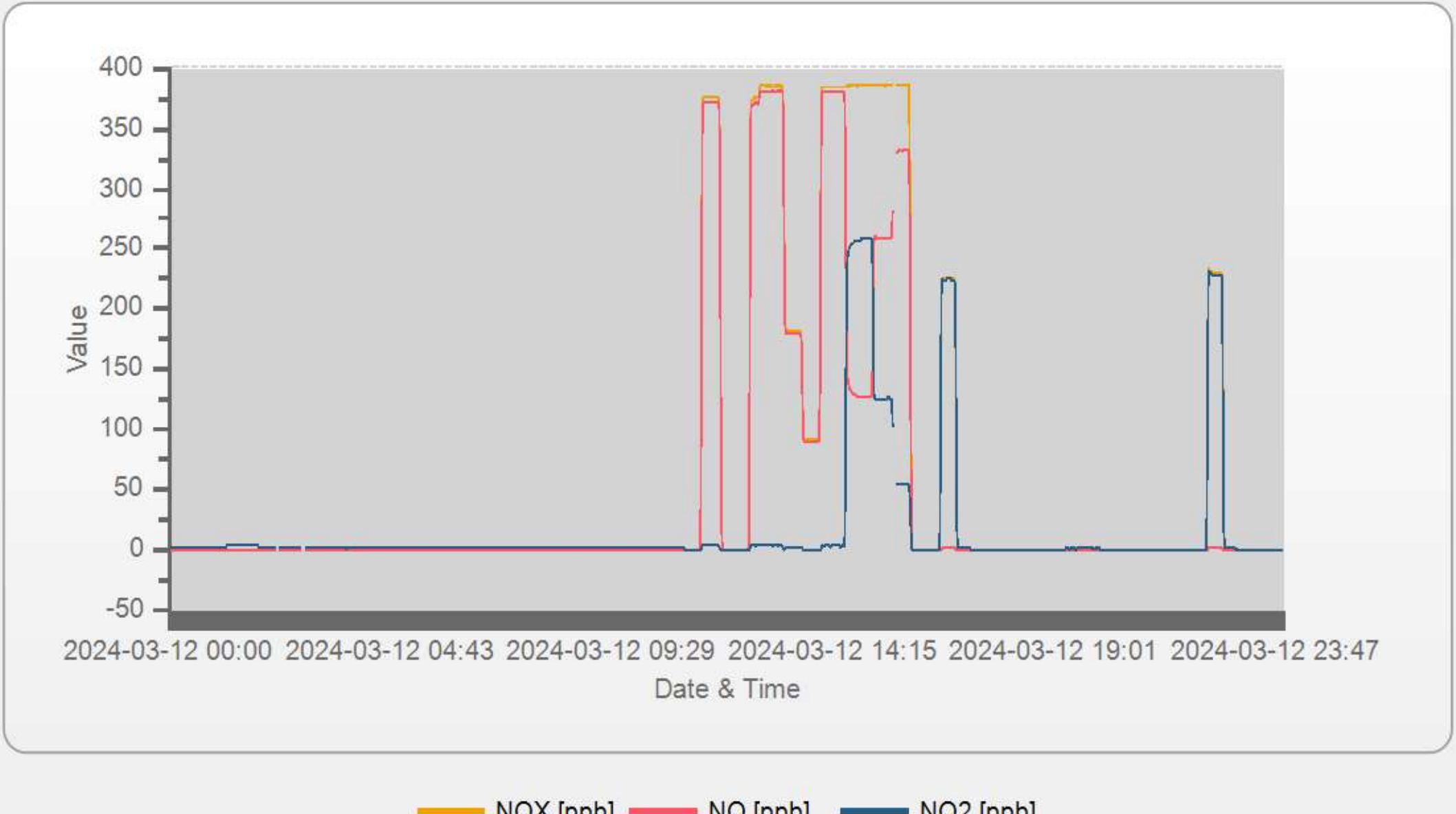
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.999	0.01%
NOx	1.000	1.001	-0.01%
NO2	1.000	0.999	0.25%

COMMENTS:

Sample inlet filter was changed.

Station: St. Lina Daily: 2024-03-12 Type: AVG 1 Min. [1 Min.]



Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	12-Mar-2024	PREVIOUS CALIBRATION DATE:	21-Feb-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	911
PURPOSE	Routine	START TIME (MST):	11:00
PERFORMED BY:	Alex Yakupov	END TIME (MST):	14:58

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	12208316586	FLOW (mL/min)	1320
INITIAL		FINAL	
BKG/OFFSET	0.4	BKG/OFFSET	0.9
COEF/SLOPE	0.989	COEF/SLOPE	1.003
Expected (reference) Value	256.5	Expected (reference) Value	278

CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	THERMO
MODEL:	2010 D	MODEL:	111
ID:	11900613	ID:	111-22449-204
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	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED Initial	INDICATED Final	Initial	Final
5000		5000	0.0	0.4	0.0		
5000		5000	380.0	375.9	381.4	1.012	0.996
5000		5000	180.0	n/a	179.1	n/a	1.005
5000		5000	90.0	n/a	87.7	n/a	1.026

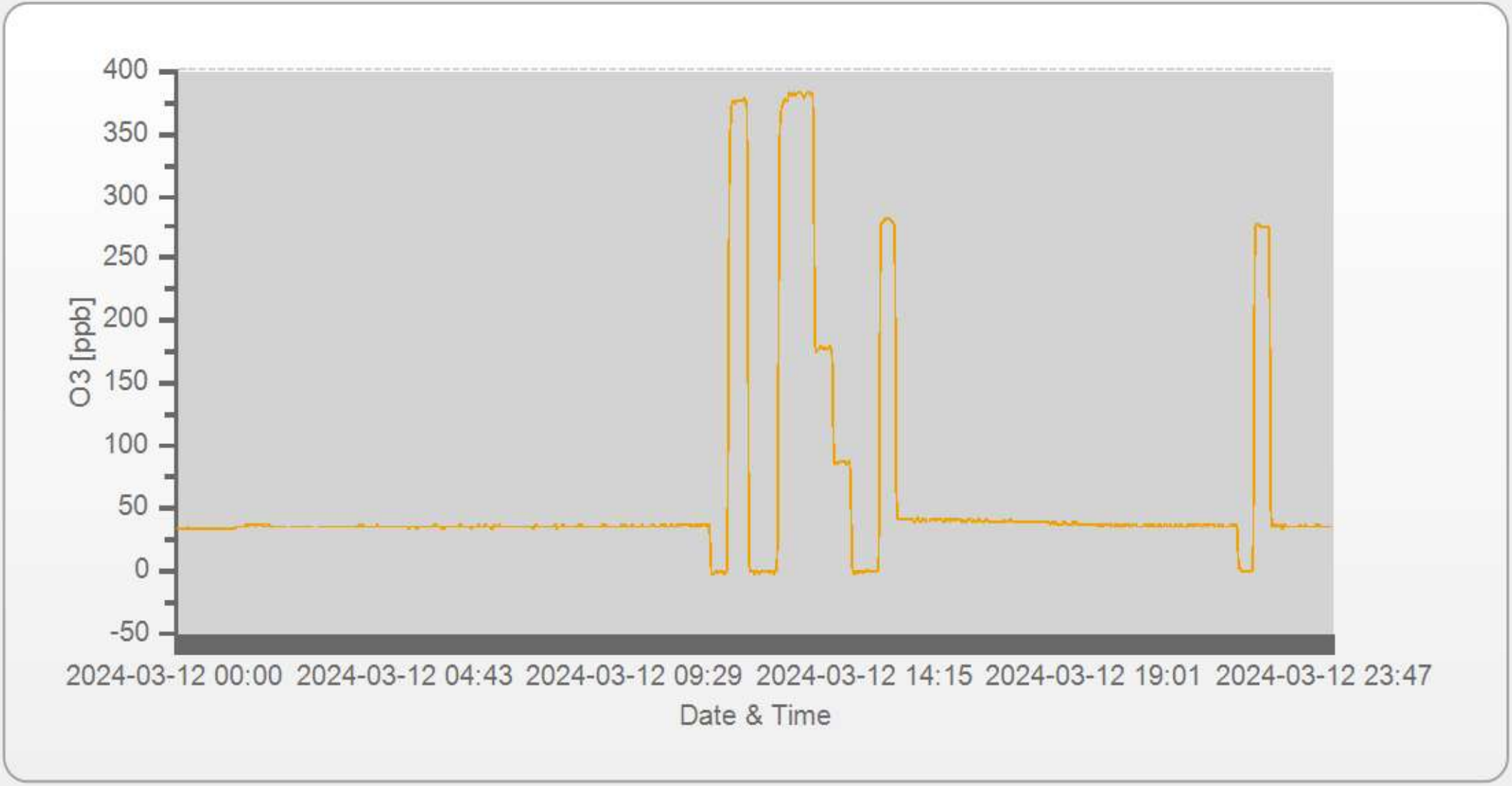
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.006	-0.3%

COMMENTS:

Sample inlet filter was changed

O3[ppb] Station: St. Lina Daily: 2024-03-12 Type: AVG 1 Min. [1 Min.]



Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	11-Mar-2024	PREVIOUS CALIBRATION DATE:	18-Feb-2024
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	St. Lina	BAROMETRIC (mBar):	909
PURPOSE	Routine	START TIME (MST):	11:51
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:05

ANALYZER:

VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
	Thermo 55i	1180930026	1046
PARAMETER:	CH4	NMHC	THC
RANGE (ppm):	20	20	40
PREVIOUS CF:	0.999	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:	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
	9.87	11.11	20.98		10.11	11.33	21.44

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	14.16	13.22	27.38	14.52	13.51	28.02	1.025	1.021	1.023	0.999	0.999	1.000
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.24	6.70	13.94	n/a	n/a	n/a	1.002	1.007	1.005
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.63	3.33	6.96	n/a	n/a	n/a	0.997	1.011	1.003

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	-0.1%

Comments:

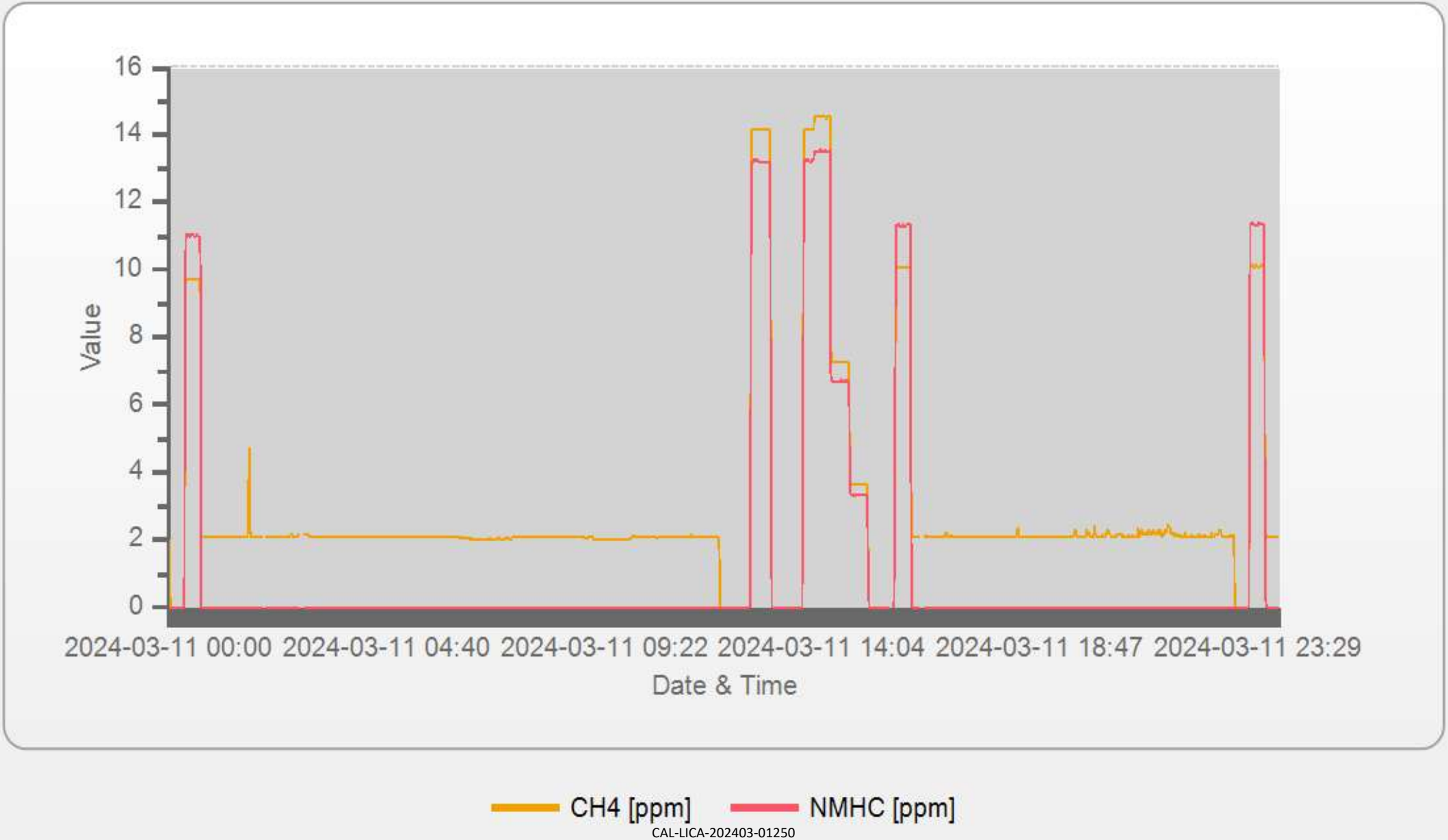
Sample inlet filter was changed.

Use Zero Chrom? **Yes**

Report Type: StationReport Avg Type: AVG

Date & Time: 2024-03-11 Time Base: 1 Min. [1 Min.]

Station: St. Lina Daily: 2024-03-11 Type: AVG 1 Min. [1 Min.]



Thermo 5030i SHARP Monitor Monthly Check

Date:	March 12, 2024	**Performed By/Reviewer:**	Alex Yakupov / Chris Wesson
Company:	LICA	**Start Time (mst):**	16:16
Station Name/Location:	St. Lina	**End Time (mst):**	17:06
Previous Audit Date:	February 18, 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	2.70	1.8	0.9

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

Ambient Relative Humidity (%RH)

As Found:

	Reference	SHARP	Difference
#1	64.60	66.3	-1.7

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	16.66	16.67	% Difference	0.06%
#2	16.66	16.67		
#3	16.66	16.67		
Average	16.66	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	16.66	16.67	-0.01	16.51	16.65	-0.14	*Leak Limit: 0.80 L/min*
					LEAK RATE:	**-0.13**	

Meteorological System Checklist

Date:	March 12, 2024
Technician:	Alex Yakupov
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	Test: 15:07-15:23
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	TRUE

AMBIENT TEMPERATURE SENSOR CHECK

Parameter:	Temperature @ 2 metres
Reference Thermometer ID:	Vaisala / HM70 / #T1640130, Exp. Date: Jun 26, 2024
Reference Temperature (^{o}C):	3.1
Station - Ambient Temperature (^{o}C):	3.9
Temperature Difference (^{o}C):	0.8

BAROMETRIC PRESSURE SENSOR CHECK

Reference Barometer ID:	Fisher / FB 61291/ #130168457/ Mar 20, 2024	
Reference Pressure - Units/Reading:	millibar	922
Station Pressure - Units/Reading:	millibar	912
Pressure Tolerance +/- 15% of error:	784 - 1060	1.08%

RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Reference Hygrometer ID:	Vaisala / HM70 / #T1640130, Exp. Date: Jun 26, 2024
Reference Hygrometer % RH- Reading:	60.80
Station Hygrometer % RH- Reading:	61.40
RH Tolerance +/- 15% of difference:	51.68 - 69.92 -1.0%

ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Wind Speed Observed (kph):	10-20	Wind Direction Observed:	W
Wind speed on Data Logger (kph):	12.1	Wind Direction on Data Logger:	W
	Annual audit: Dec 20, 2023	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge temperature: 24.4 vs 24.2 Difference: 0.2 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

MARCH 2024

Ambient Air Monitoring Calibration Report

- LAC LA BICHE STATION-

CAL-LICA-202403-01690

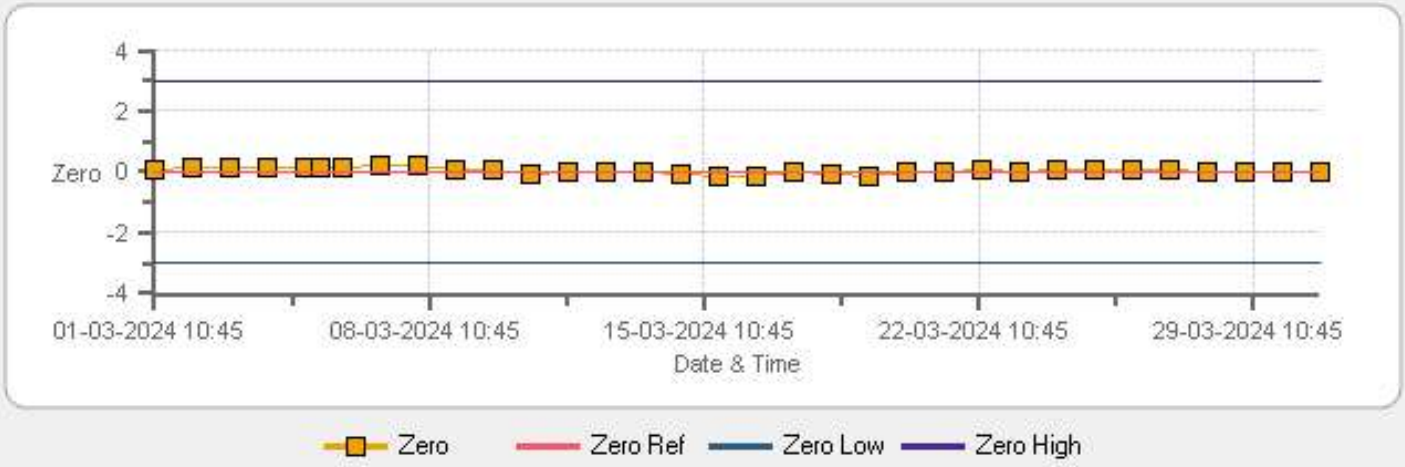
Station Operation and Maintenance:
Bureau Veritas Canada

Data Validation and Report:
LICA / Bureau Veritas Canada

April 9, 2024

DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

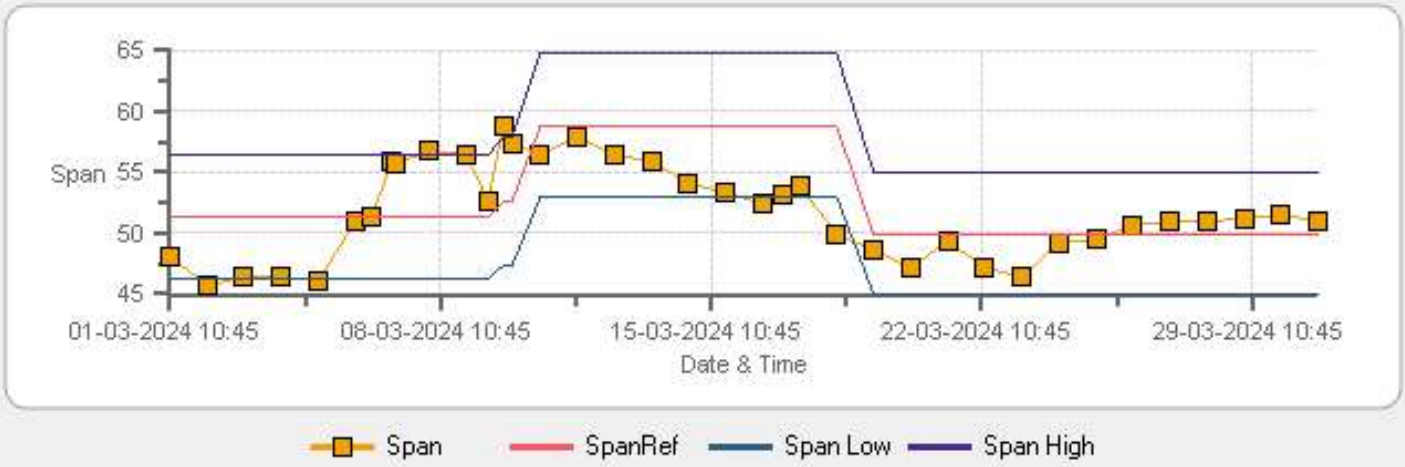
SO2[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Zero

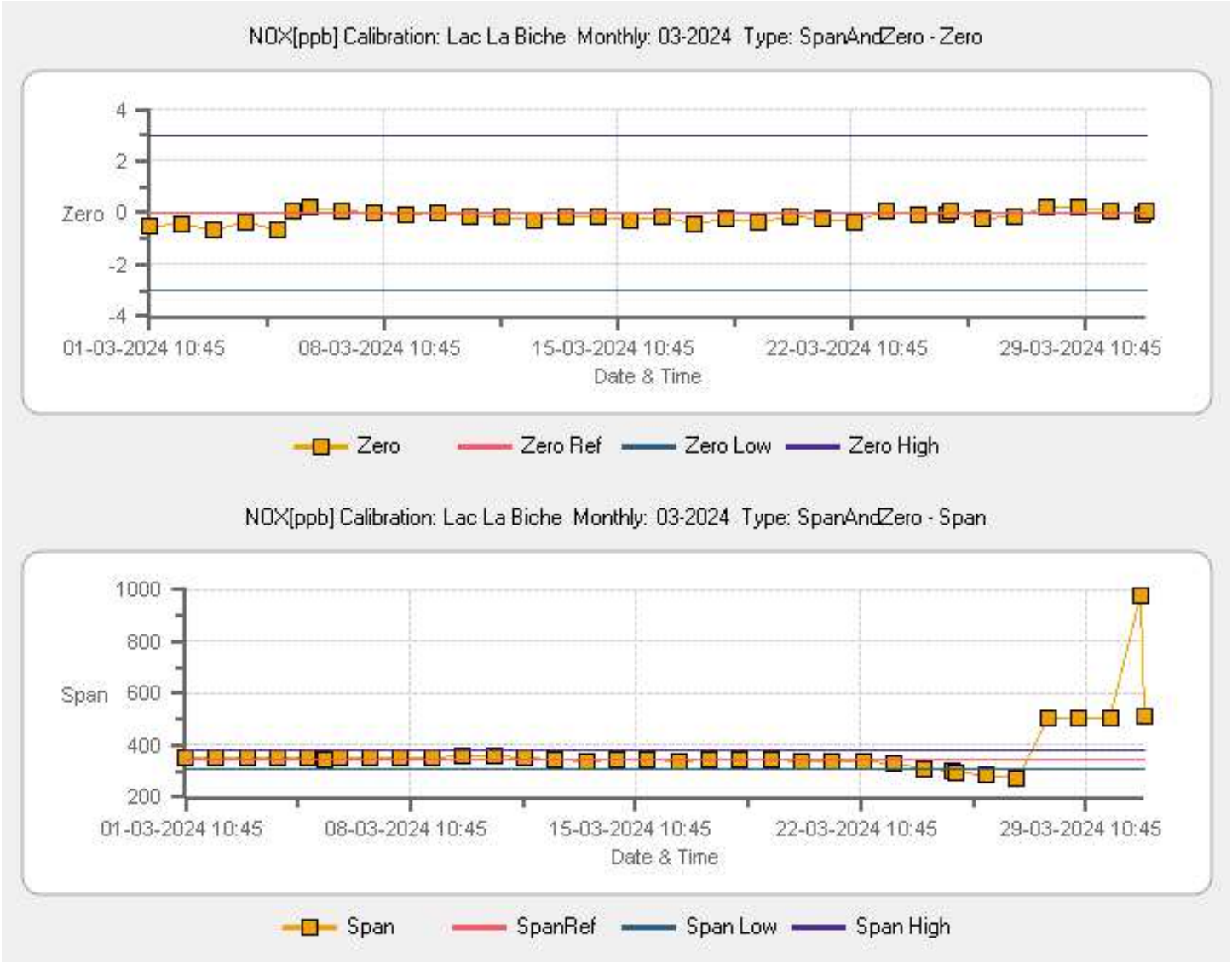


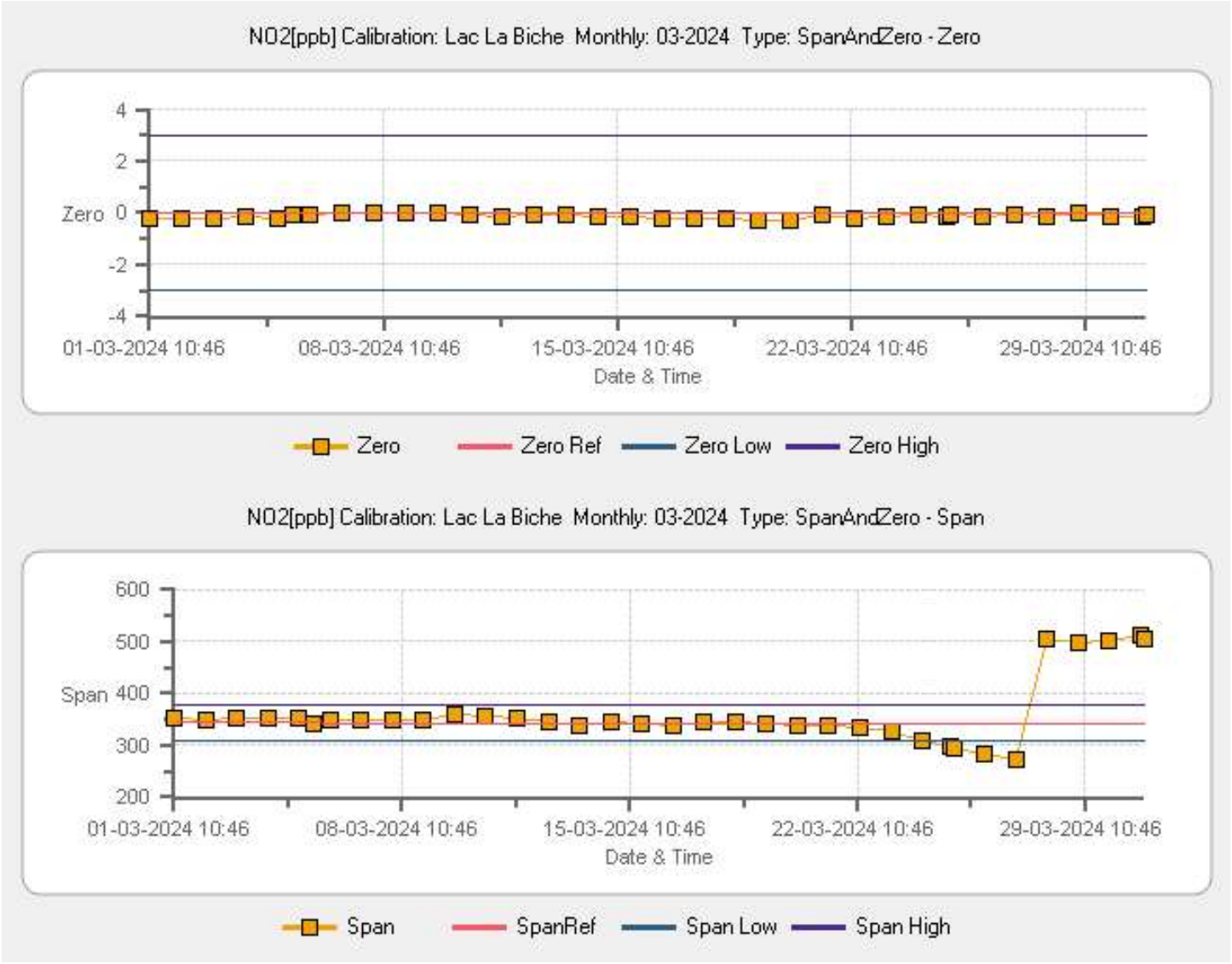
SO2[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Span

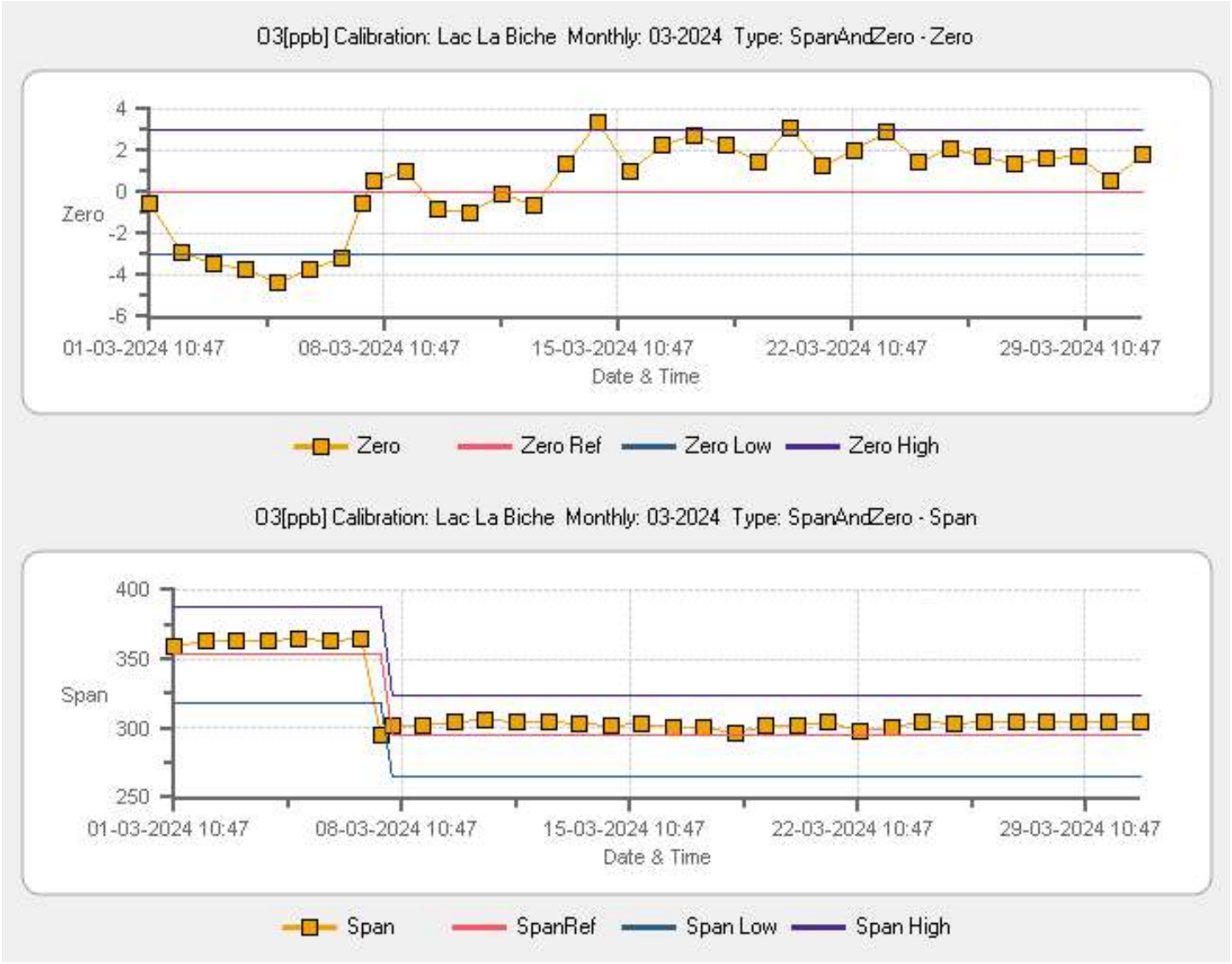
H2S[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Zero

H2S[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Span



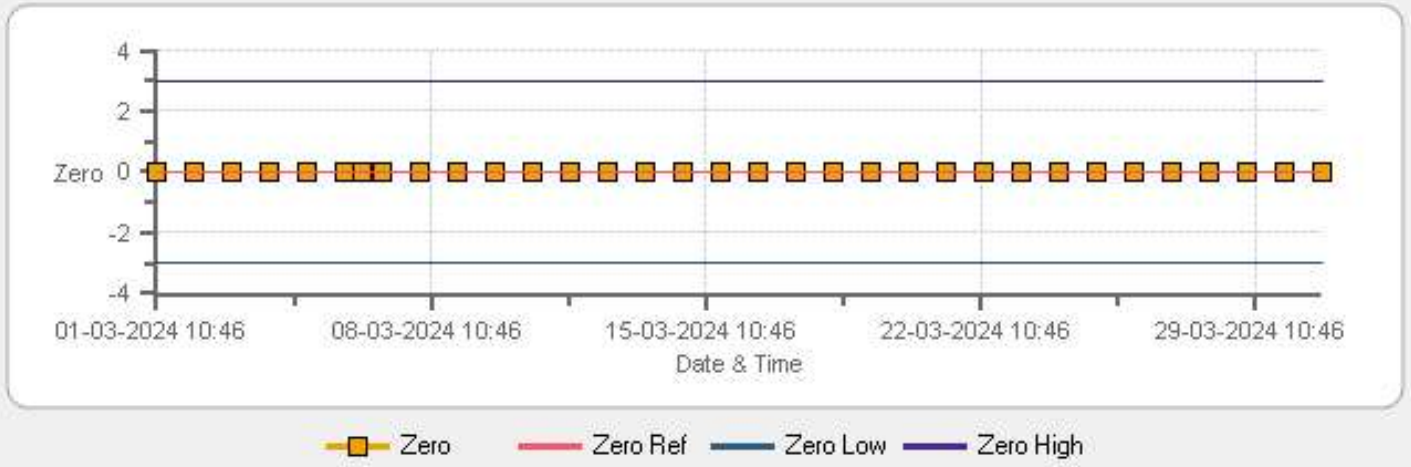

NOX[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 10:45
08-03-2024 10:45
15-03-2024 10:45
22-03-2024 10:45
29-03-2024 10:45
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NOX[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Span
1000
800
Span 600
400
200
01-03-2024 10:45
08-03-2024 10:45
15-03-2024 10:45
22-03-2024 10:45
29-03-2024 10:45
Date & Time
Span
SpanRef
Span Low
Span High


NO2[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NO2[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Span
600
500
Span 400
300
200
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Span
SpanRef
Span Low
Span High

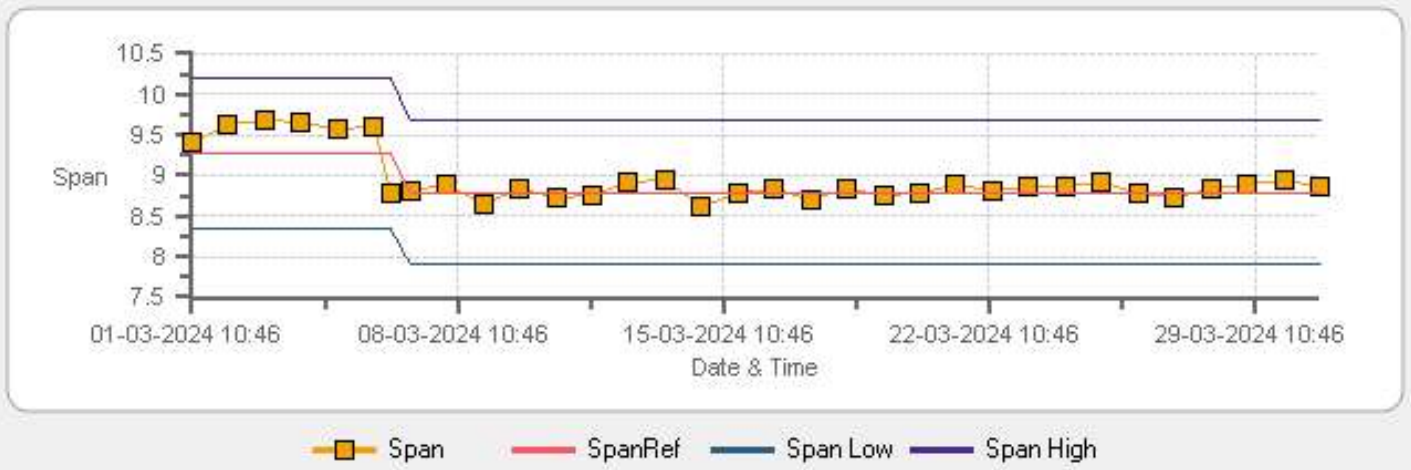

O3[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
0
-2
-4
-6
Zero
01-03-2024 10:47
08-03-2024 10:47
15-03-2024 10:47
22-03-2024 10:47
29-03-2024 10:47
Date & Time
Zero
Zero Ref
Zero Low
Zero High
O3[ppb] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Span
400
350
300
250
Span
01-03-2024 10:47
08-03-2024 10:47
15-03-2024 10:47
22-03-2024 10:47
29-03-2024 10:47
Date & Time
Span
SpanRef
Span Low
Span High

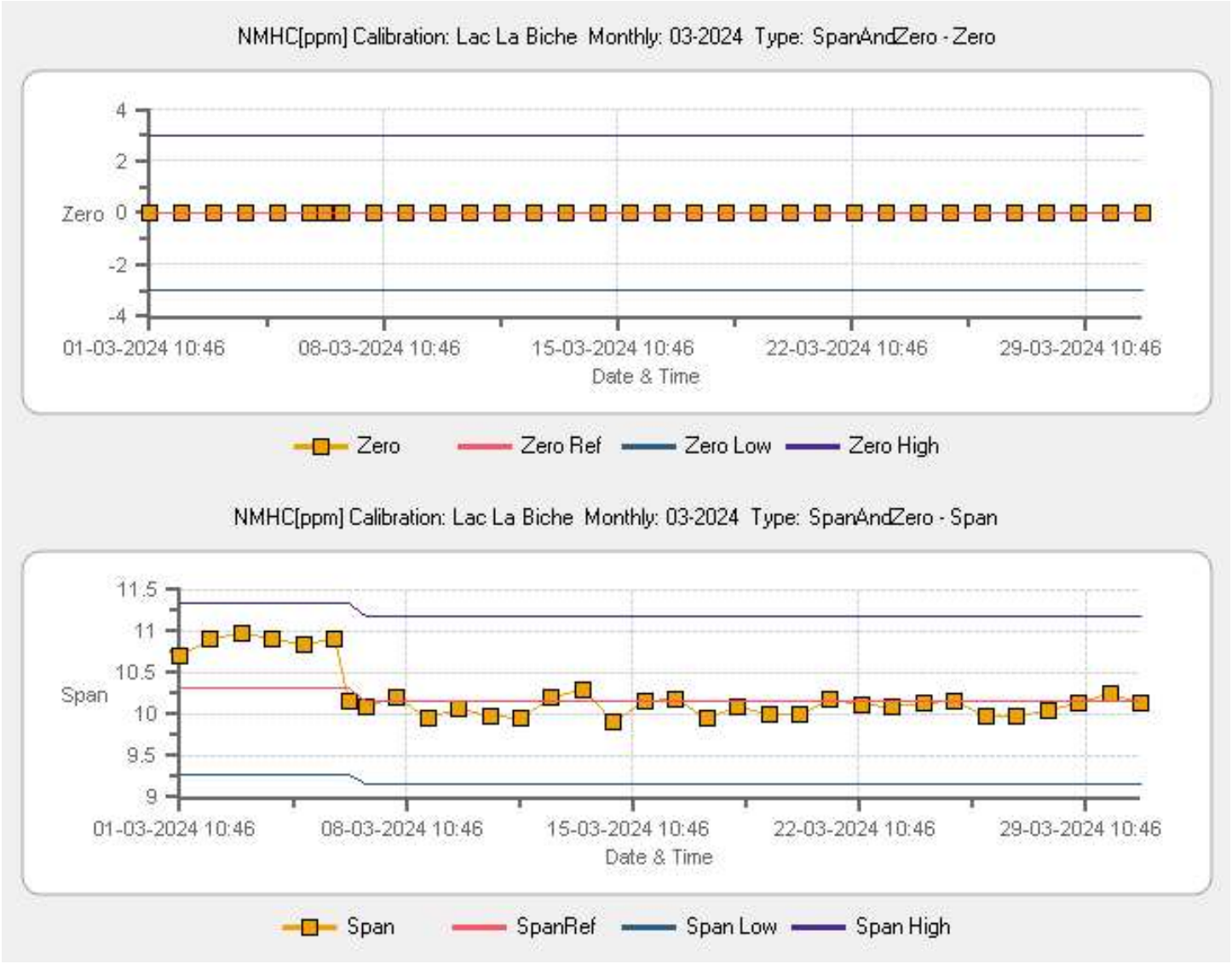

THC55[ppm] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
THC55[ppm] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Span
22
21
20
Span
19
18
17
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Span
SpanRef
Span Low
Span High

CH4[ppm] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Zero



CH4[ppm] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Span




NMHC[ppm] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Zero
4
2
Zero 0
-2
-4
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Zero
Zero Ref
Zero Low
Zero High
NMHC[ppm] Calibration: Lac La Biche Monthly: 03-2024 Type: SpanAndZero - Span
11.5
11
10.5
Span
10
9.5
9
01-03-2024 10:46
08-03-2024 10:46
15-03-2024 10:46
22-03-2024 10:46
29-03-2024 10:46
Date & Time
Span
SpanRef
Span Low
Span High

MULTI-POINT CALIBRATION RECORDS

SO2 Analyzer Calibration by Dilution

DATE:	05-Mar-2024	PREVIOUS CALIBRATION DATE:	03-Feb-2024
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	948
PURPOSE	Routine	START TIME (MST):	12:31
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:18

ANALYZER:

MAKE/MODEL	Thermo 43I-TLE	RANGE	500 ppb
SERIAL #	1180320043	FLOW (mL/min)	456
INITIAL		FINAL	
BKG/OFFSET	7.4	BKG/OFFSET	7.64
COEF/SLOPE	1.424	COEF/SLOPE	1.474
Expected (reference) Value	283	Expected (reference) Value	295

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	0.12	0		
4961	37.20	4998	375.13	361.11	375	1.039	1.000
4982	17.60	5000	177.41	n/a	178.13	n/a	0.996
4990	8.80	4999	88.72	n/a	88.52	n/a	1.002

LINEAR REGRESSION ANALYSIS:

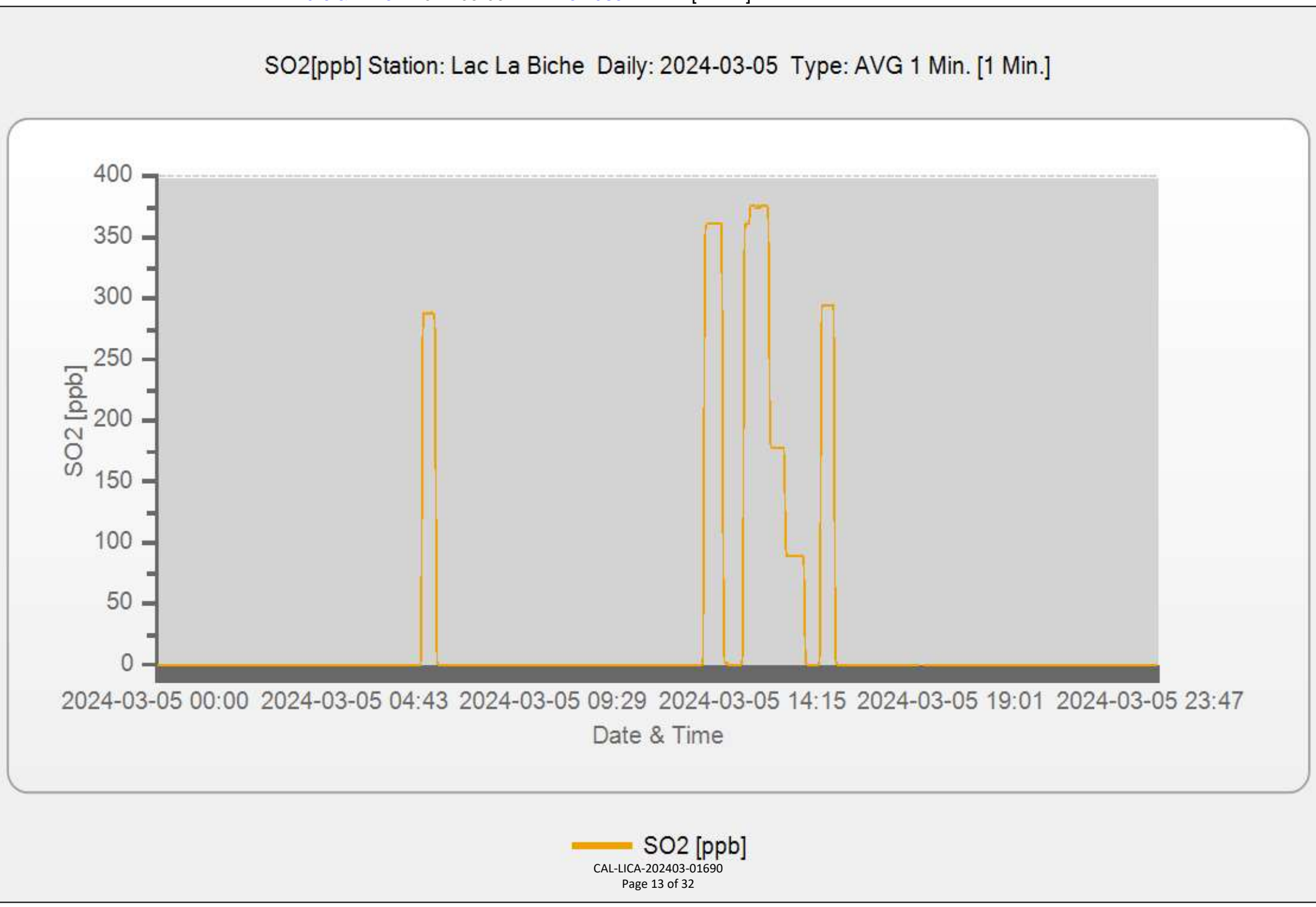
	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.0%

COMMENTS:

Sample inlet filter was changed.

Shaping a World of trust

SO2[ppb] Station: Lac La Biche Daily: 2024-03-05 Type: AVG 1 Min. [1 Min.]
Report Type: StationReport Avg Type: AVG
Date & Time: 2024-03-05 Time Base: 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	05-Mar-2024	PREVIOUS CALIBRATION DATE:	03-Feb-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	948
PURPOSE	Removal/Shut-down	START TIME (MST):	12:27
PERFORMED BY:	Alex Yakupov	END TIME (MST):	14:21

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM17360002	FLOW (mL/min)	930
INITIAL		FINAL	
BKG/OFFSET	80.4	BKG/OFFSET	n/a
COEF/SLOPE	1.004	COEF/SLOPE	n/a
Expected (reference) Value	51.4	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):	1500	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:	12:31	SO2 Conc (ppb)	380
END TIME:	12:46	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	-2.9	n/a		
7442	58.20	7500	77.99	73.5	n/a	1.021	n/a
7472	28.40	7500	38.06	34.8	n/a	1.009	n/a
7486	14.20	7500	19.03	15.4	n/a	1.040	n/a

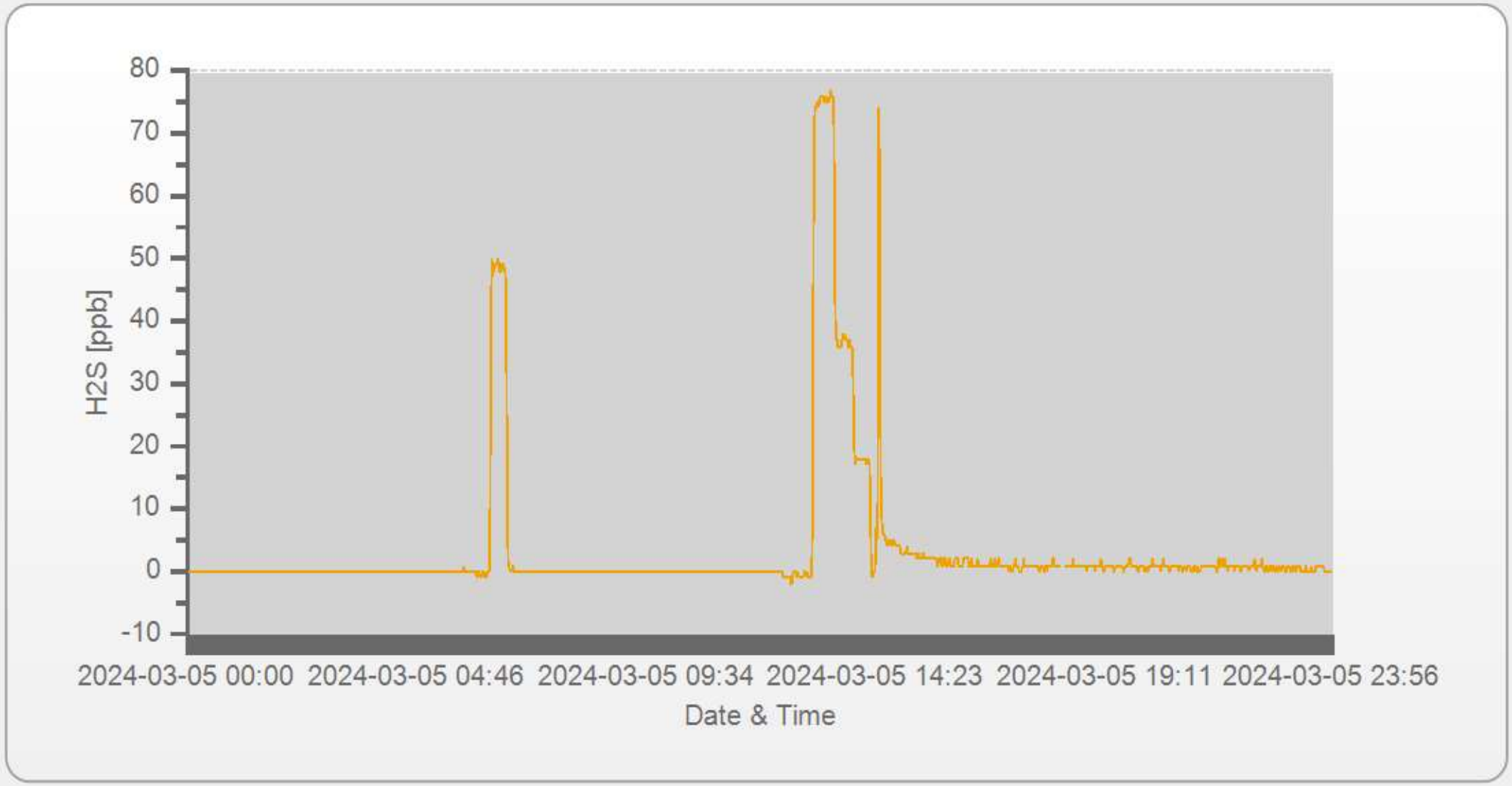
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.982	-2.9%

COMMENTS:

Shutdown prior to SO2 scrubber bead renewal

H2S[ppb] Station: Lac La Biche Daily: 2024-03-05 Type: AVG 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	06-Mar-2024	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	950
PURPOSE	Install/Post-Repair	START TIME (MST):	12:11
PERFORMED BY:	Alex Yakupov	END TIME (MST):	15:39

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM17360002	FLOW (mL/min)	927
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	82.7
COEF/SLOPE	n/a	COEF/SLOPE	1.079
Expected (reference) Value	n/a	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):	1500	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:	12:13	SO2 Conc (ppb)	380
END TIME:	12:28	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	n/a	0		
7442	58.20	7500	77.99	n/a	78	n/a	1.000
7472	28.40	7500	38.06	n/a	38.4	n/a	0.991
7486	14.20	7500	19.03	n/a	18.8	n/a	1.012

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	0.0%

COMMENTS:

Sample inlet filter was changed.
Post-repair after SO2 scrubber beads were renewed.

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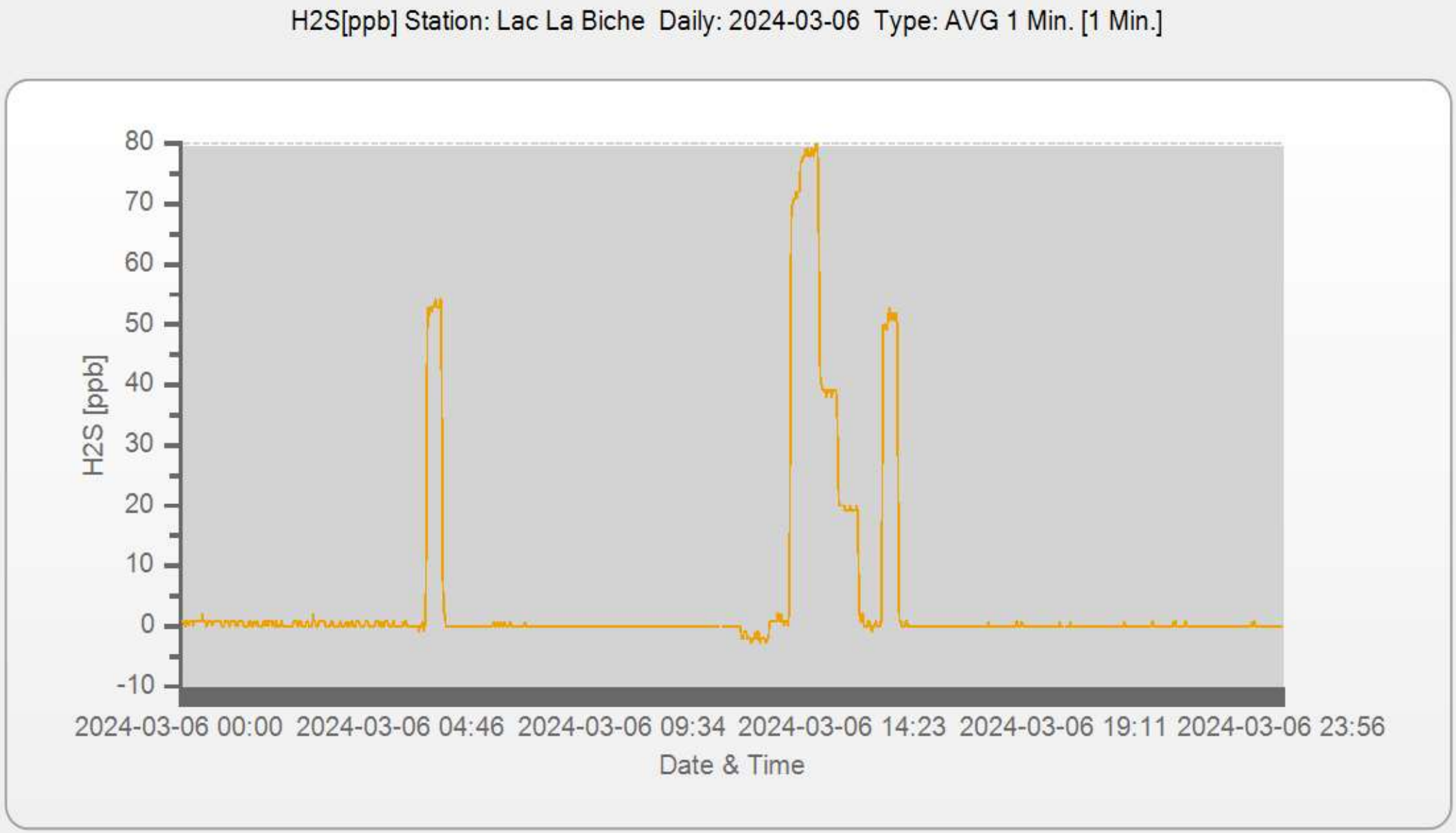
Report Type: StationReport Avg Type: AVG

Date & Time: 2024-03-06 Time Base: 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	09-Mar-2024	PREVIOUS CALIBRATION DATE:	06-Mar-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	935
PURPOSE	Repeat	START TIME (MST):	12:10
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:17

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM17360002	FLOW (mL/min)	920
INITIAL		FINAL	
BKG/OFFSET	82.7	BKG/OFFSET	82.3
COEF/SLOPE	1.079	COEF/SLOPE	1.046
Expected (reference) Value	51.4	Expected (reference) Value	52.7

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):	1500	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:	12:12	SO2 Conc (ppb)	380
END TIME:	12:17	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	0.8	0		
7442	58.20	7500	77.99	81.9	78.2	0.962	0.997
7472	28.40	7500	38.06	n/a	38.4	n/a	0.991
7486	14.20	7500	19.03	n/a	19.2	n/a	0.991

LINEAR REGRESSION ANALYSIS:

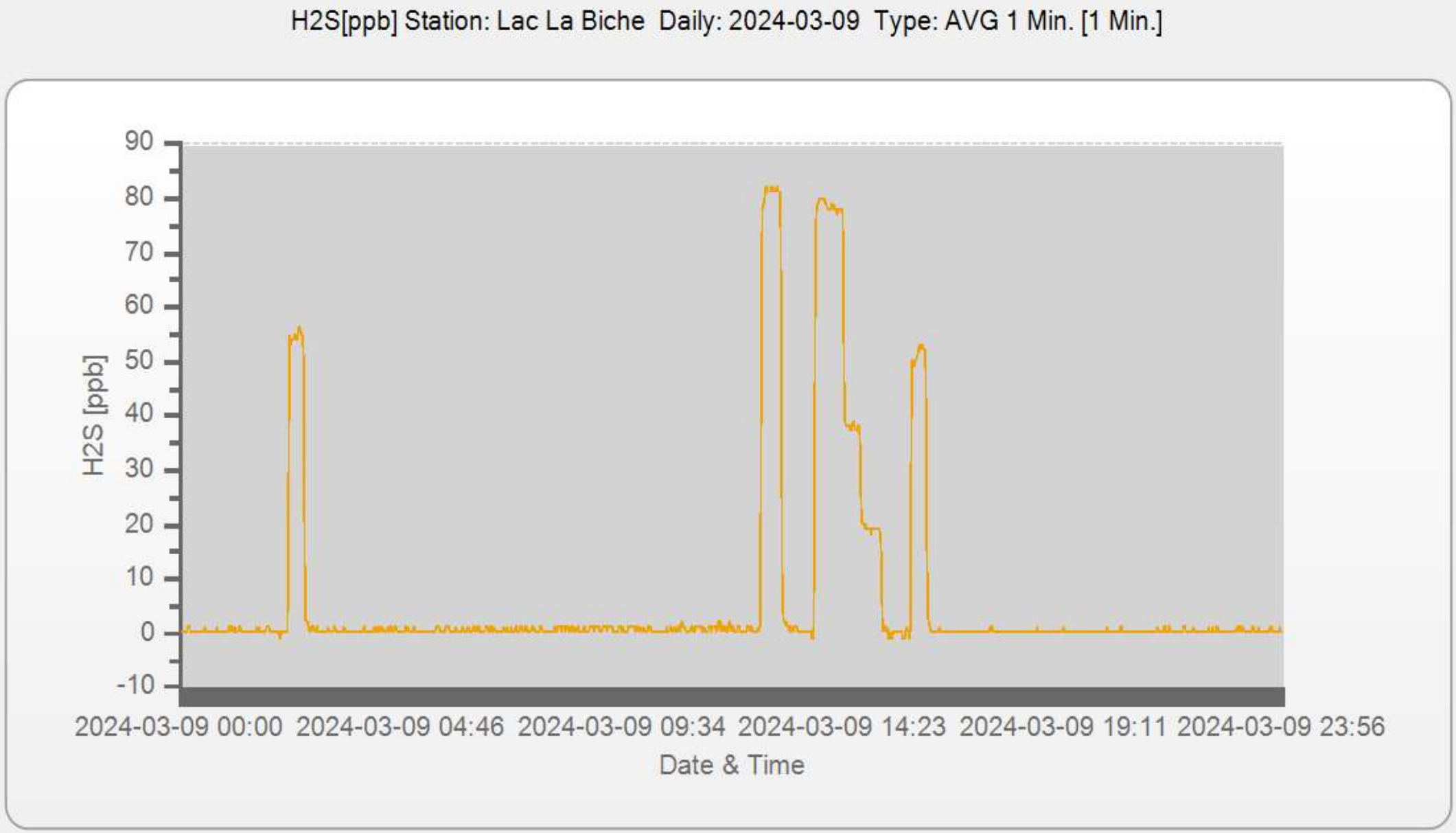
	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.002	0.1%

COMMENTS:

Repeat Calibration was completed to correct the post-repair drift and the EV

Report Type: StationReport Avg Type: AVG

Date & Time: 2024-03-09 Time Base: 1 Min. [1 Min.]



H2S Analyzer Calibration by Dilution

DATE:	18-Mar-2024	PREVIOUS CALIBRATION DATE:	09-Mar-2024
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	0.997
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	947
PURPOSE	Removal/Shut-down	START TIME (MST):	11:28
PERFORMED BY:	Alex Yakupov	END TIME (MST):	13:15

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM17360002	FLOW (mL/min)	930
INITIAL		FINAL	
BKG/OFFSET	82.3	BKG/OFFSET	n/a
COEF/SLOPE	1.046	COEF/SLOPE	n/a
Expected (reference) Value	59	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):	1500	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:	11:32	SO2 Conc (ppb)	380
END TIME:	11:47	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	1.5	n/a		
7442	58.20	7500	77.99	82.1	n/a	0.968	n/a
7472	28.40	7500	38.06	39.9	n/a	0.991	n/a
7486	14.20	7500	19.03	21	n/a	0.976	n/a

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.033	1.2%

COMMENTS:

Shutdown to exchange scrubber beads

Shaping a World of trust

H2S Analyzer Calibration by Dilution

DATE:	18-Mar-2024	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	947
PURPOSE	Install/Post-Repair	START TIME (MST):	13:56
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:44

ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	CM17360002	FLOW (mL/min)	930
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	78.8
COEF/SLOPE	n/a	COEF/SLOPE	0.996
Expected (reference) Value	n/a	Expected (reference) Value	50

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):	1500	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:	13:57	SO2 Conc (ppb)	380
END TIME:	14:12	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	28.40	7500	38.06	n/a	37.8	n/a	1.007
7486	14.20	7500	19.03	n/a	19.1	n/a	0.996

LINEAR REGRESSION ANALYSIS:

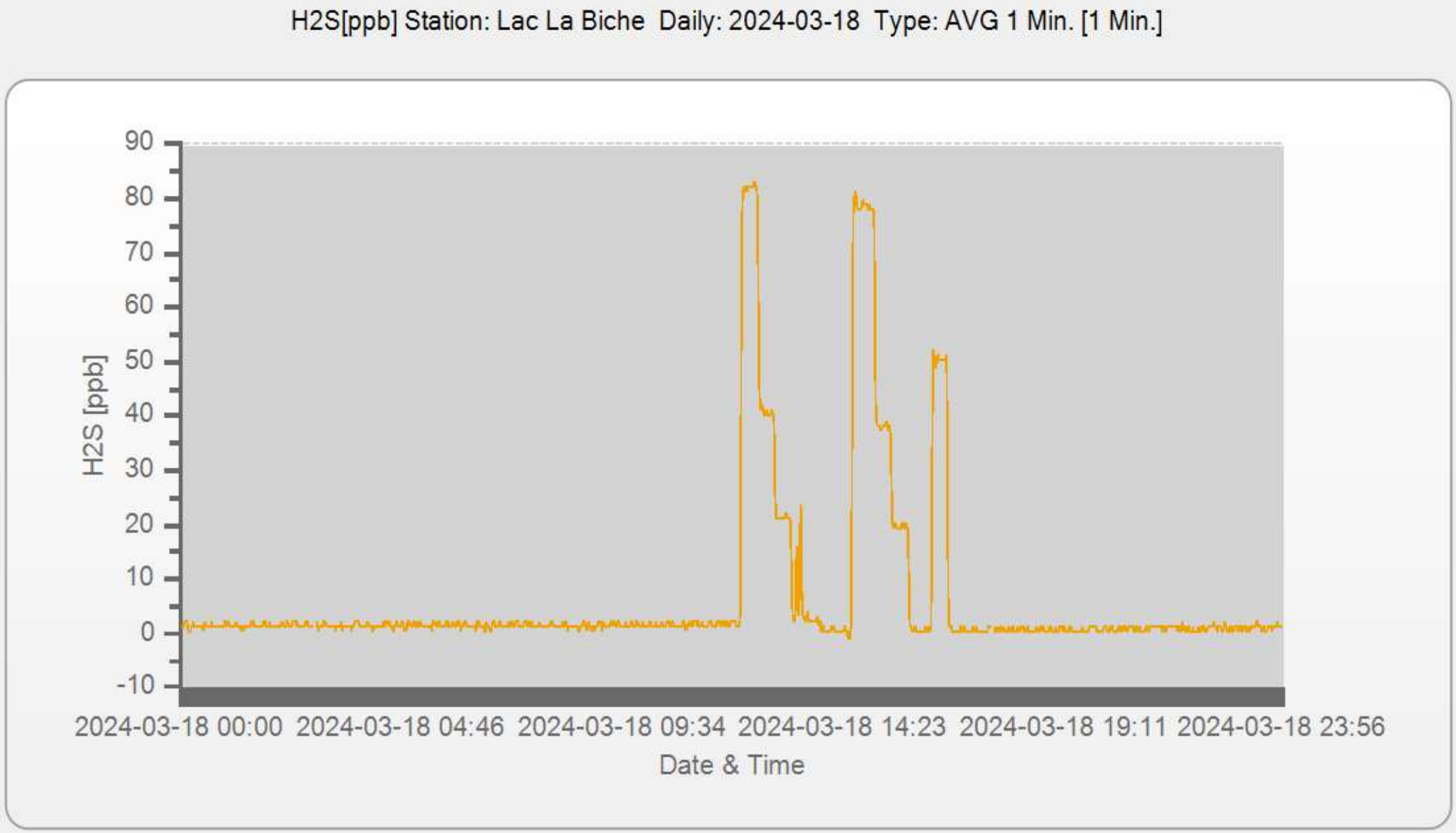
	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.0%

COMMENTS:

Pos-repair following scrubber bead replacement

Report Type: StationReport Avg Type: AVG

Date & Time: 2024-03-18 Time Base: 1 Min. [1 Min.]



NOx Calibration by Dilution/Gas-Phase Titration

CALIBRATION:

DATE:	05-Mar-2024	PREVIOUS CALIBRATION DATE:	03-Feb-2024
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	948
PURPOSE	Routine	START TIME (MST):	12:32
PERFORMED BY:	Alex Yakupov	END TIME (MST):	18:14

ANALYZER:

MAKE/MODEL:	Thermo 42i	PREVIOUS CF.	
SERIAL #:	1180930027	NOx	1.000
FLOW (mL/min)	766	NO	1.001
RANGE (ppb)	500	NO2	1.004
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:	9.1	8.8	n/a	BKG/OFFSET:	8.6	8.3	n/a
SLOPE/COEF/CE:	1.01	0.853	0.998	SLOPE/COEF/CE:	1.008	0.85	0.998

EXPECTED (REFERENCE) VALUE:

INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	347.0	2.3	345.0		345.0	2.5	343.0

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	-0.3	-0.4	-0.2	0.0	0.0	0.0						
4961	37.20	4998	380.3	384.1	3.7	381.4	386.0	4.6	379.8	383.9	4.2	0.996	0.994		1.001	1.000	
4982	17.60	5000	179.9	181.6	1.8	n/a	n/a	n/a	179.4	181.1	1.7	n/a	n/a		1.003	1.003	
4990	8.80	4999	90.0	90.8	0.9	n/a	n/a	n/a	88.9	89.9	1.0	n/a	n/a		1.012	1.010	

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	377.4	380.8	3.4				
AS-FOUND HIGH	37.20	4998	235	124.2	382.3	258.1	253.2	254.7	0.994	100.59%
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	258.3	382.4	124.1	119.1	120.7	0.987	101.34%
LOW	37.20	4998	40	332.2	381.6	49.4	45.2	46	0.983	101.77%
NO2 adjustment not required.									AVERAGE:	101.24%

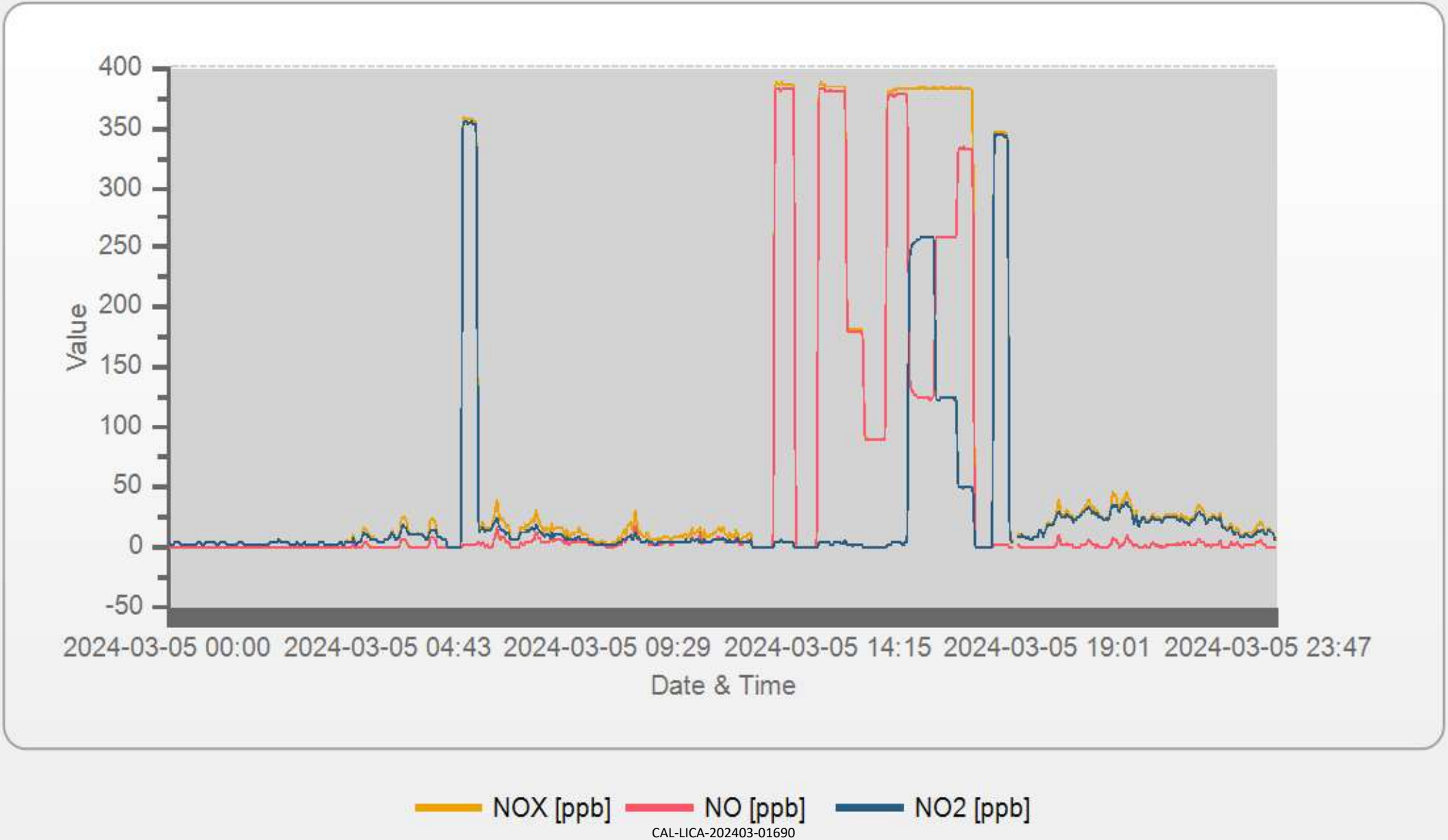
LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
NO	1.000	0.999	-0.08%
NOx	1.000	1.000	-0.09%
NO2	1.000	1.003	0.18%

COMMENTS:

Sample inlet filter was changed.

Station: Lac La Biche Daily: 2024-03-05 Type: AVG 1 Min. [1 Min.]



Ozone Calibration by Photometer (Varying UV Lamp)

DATE:	07-Mar-2024	PREVIOUS CALIBRATION DATE:	04-Feb-2024
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	LICA	TEMPERATURE (°C):	20.9
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	932
PURPOSE	Routine	START TIME (MST):	14:05
PERFORMED BY:	Chris Wesson	END TIME (MST):	19:13

ANALYZER:

MAKE/MODEL	Thermo 49iQ	RANGE	500 ppb
SERIAL #	1202068570	FLOW (mL/min)	1480
INITIAL		FINAL	
BKG/OFFSET	4.8	BKG/OFFSET	1.6
COEF/SLOPE	1.195	COEF/SLOPE	0.991
Expected (reference) Value	353	Expected (reference) Value	294.8

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:

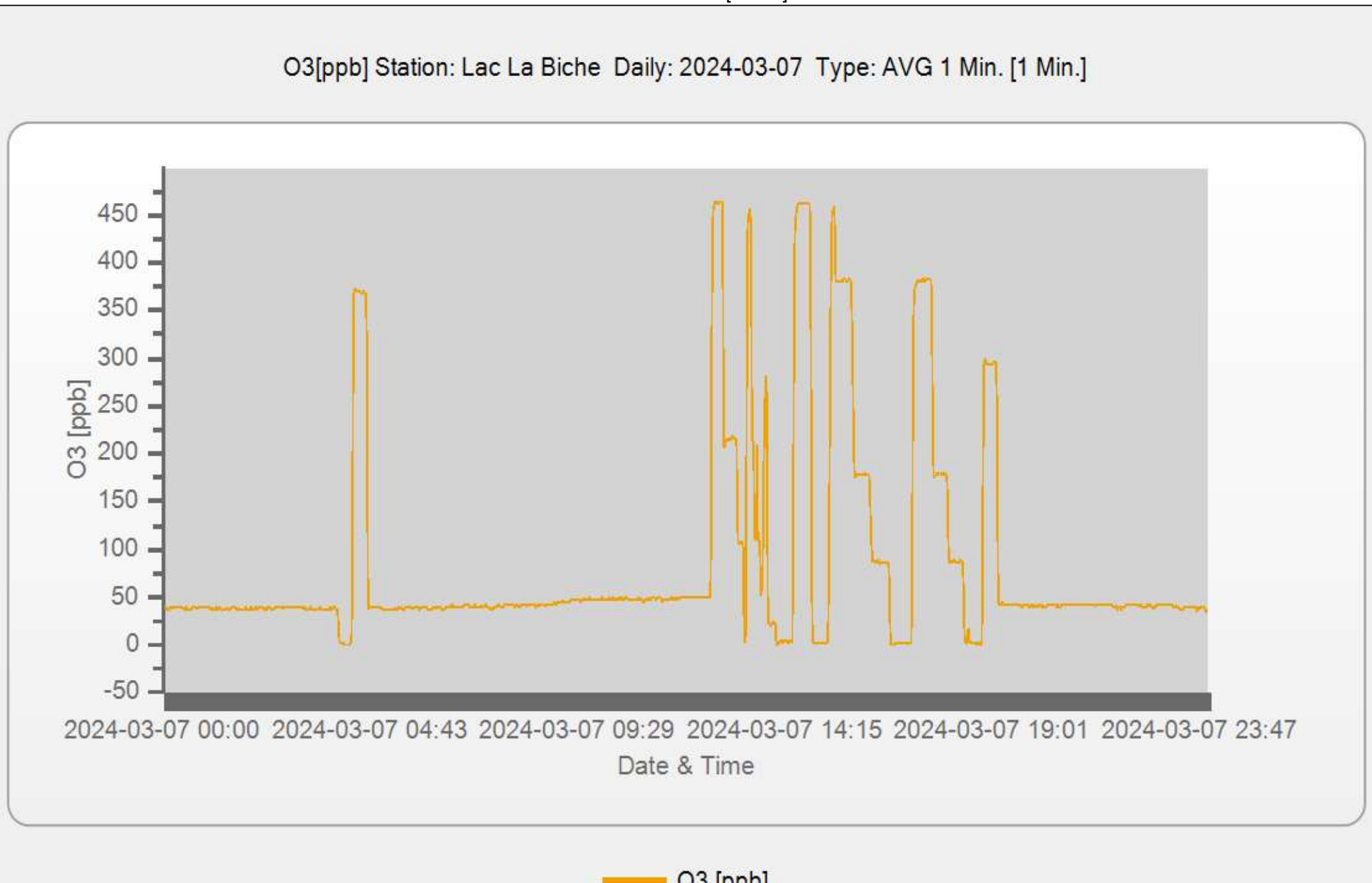
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
5000		5000	0.0	0.6	0.0		
5000		5000	380.0	459.0	378.0	**0.829**	1.005
5000		5000	179.0	n/a	177.2	n/a	1.010
5000		5000	89.0	n/a	85.3	n/a	1.043

LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.998	-0.3%

COMMENTS:

Sample filter changed
Calibration fails at as-found high. Problem traced to previous calibration.
First attempt fails at low. Repeated from adjusted zero.


O3[ppb] Station: Lac La Biche Daily: 2024-03-07 Type: AVG 1 Min. [1 Min.]
O3 [ppb]
450
400
350
300
250
200
150
100
50
0
-50
2024-03-07 00:00
2024-03-07 04:43
2024-03-07 09:29
2024-03-07 14:15
2024-03-07 19:01
2024-03-07 23:47
Date & Time
O3 [ppb]

Methane/Non-Methane Analyzer Calibration by Dilution

CALIBRATION:

DATE:	06-Mar-2024	PREVIOUS CALIBRATION DATE:	02-Feb-2024
CLIENT:	LICA	TEMPERATURE (°C):	22.0
LOCATION:	Lac La Biche	BAROMETRIC (mBar):	950
PURPOSE	Routine	START TIME (MST):	12:09
PERFORMED BY:	Alex Yakupov	END TIME (MST):	16:11

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	0.997	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
	9.28	10.31	19.59		8.79	10.17	18.96

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	15.59	14.50	30.09	14.47	13.60	28.07	0.931	0.931	0.931	1.003	0.993	0.998
3063	37.30	3100	7.26	6.75	14.01	n/a	n/a	n/a	7.17	6.76	13.93	n/a	n/a	n/a	1.012	0.999	1.005
3081	18.60	3100	3.62	3.37	6.98	n/a	n/a	n/a	3.56	3.36	6.91	n/a	n/a	n/a	1.016	1.002	1.011

LINEAR REGRESSION ANALYSIS:

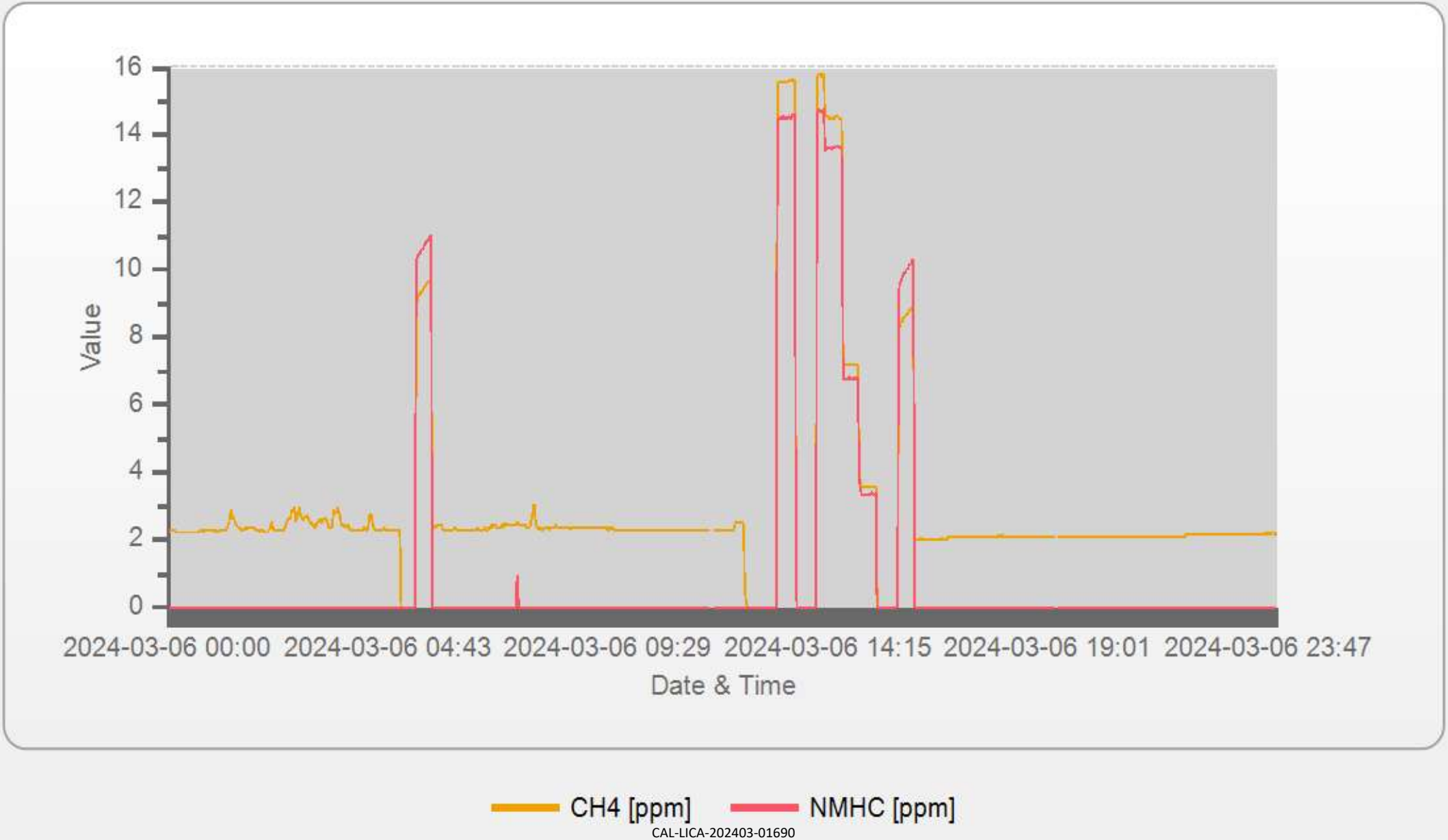
	CORRELATION	SLOPE	INTERCEPT
CH4	1.000	0.998	-0.2%
NMHC	1.000	1.008	-0.1%
THC	1.000	1.003	-0.1%

Comments:

Sample inlet filter was changed.

Use Zero Chrom? **Yes**

Station: Lac La Biche Daily: 2024-03-06 Type: AVG 1 Min. [1 Min.]



Thermo 5030i SHARP Monitor Monthly Check

Date:	March 6, 2024	**Performed By/Reviewer:**	Alex Yakupov / Chris Wesson
Company:	LICA	**Start Time (mst):**	14:03
Station Name/Location:	Lac La Biche	**End Time (mst):**	14:53
Previous Audit Date:	February 4, 2024	**Calibration Purpose:**	routine monthly
Parameter:	PM 2.5	**Weather Conditions:**	Mainly sunny

SHARP 5030i Information and Status:

Serial Number: CM 17071016 **Filter Tape Counter** 105

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	-12.30	-12.5	0.2

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

Ambient Relative Humidity (%RH)

As Found:

	Reference	SHARP	Difference
#1	47.80	47.7	0.1

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

Barometric Pressure (mmHg)

As Found:

	Reference	SHARP	Difference
#1	710.0	710.0	0.0

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

Flow Audit (L/min)

As Found:

	Reference	SHARP
#1	16.72	16.67
#2	16.72	16.67
#3	16.72	16.67
Average	16.72	16.67

% Difference -0.30%

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	16.72	16.67	0.05	16.53	16.65	-0.12
					LEAK RATE:	**-0.17**

Leak Limit: 0.80 L/min

Meteorological System Checklist

Date:	March 6, 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):	-12.1		
Station - Ambient Temperature (^{o}C):	-12.7		
Temperature Difference (^{o}C):	0.6		
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	948	
Pressure Tolerance +/- 15% of error:	804 - 1088	-0.21%	
RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK			
Reference Hygrometer ID:	Vaisala / HM70 / #T1640130/ Jun 26, 2024		
Reference Hygrometer % RH- Reading:	43.60		
Station Hygrometer % RH- Reading:	47.00		
RH Tolerance +/- 15% of difference:	37.06 - 50.14	-7.8%	
ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK			
WIND SPEED		WIND DIRECTION	
Wind Speed Observed (kph):	1~10	Wind Direction Observed:	SE
Wind speed on Data Logger (kph):	7.8	Wind Direction on Data Logger:	SE
	Annual audit: Sep 15, 2023	Wind Direction Pass/Fail?:	Pass

Comments

Station (Trailer) temperature vs Reference gauge: 21.2 vs 21.4 - 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