



**WOOD BUFFALO
ENVIRONMENTAL ASSOCIATION**

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Wood Buffalo Environmental Association

APRIL 2026

MONTHLY CALIBRATION REPORT

CONTINUOUS MONITORING

May 29, 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS01 BERTHA GANTER - FORT MCKAY APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
Calibration Date: April 17, 2026 Last Cal Date: March 11, 2026
Start time (MST): 10:47 End time (MST): 15:29
Reason: Routine

Calibration Standards

Cal Gas Concentration: 49.21 ppm Cal Gas Exp Date: March 10, 2031
Cal Gas Cylinder #: CC418809
Removed Cal Gas Conc: 49.21 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 3565
Zero Air Gen Model: Teledyne API T701 Serial Number: 146

Analyzer Information

Analyzer make: Thermo 43i Serial Number: JC1501301448
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.005978	1.001280	Backgd or Offset:	21.7	21.3
Calibration intercept:	0.886645	0.706701	Coeff or Slope:	0.888	0.875

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.9	----
As found High point	4918	81.3	800.3	810.6	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	809.7	Previous response	805.9	*% change	0.5%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	1.2	----
High point	4918	81.3	800.3	802.4	0.997
Mid point	4959	40.7	400.6	401.1	0.999
Low point	4979	20.3	199.8	200.6	0.996
As left zero	5000	0.0	0.0	1.3	----
As left span	4918	81.3	800.3	803.0	0.997
Average Correction Factor:					0.997

Notes: Changed the inlet filter after as founds. Adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

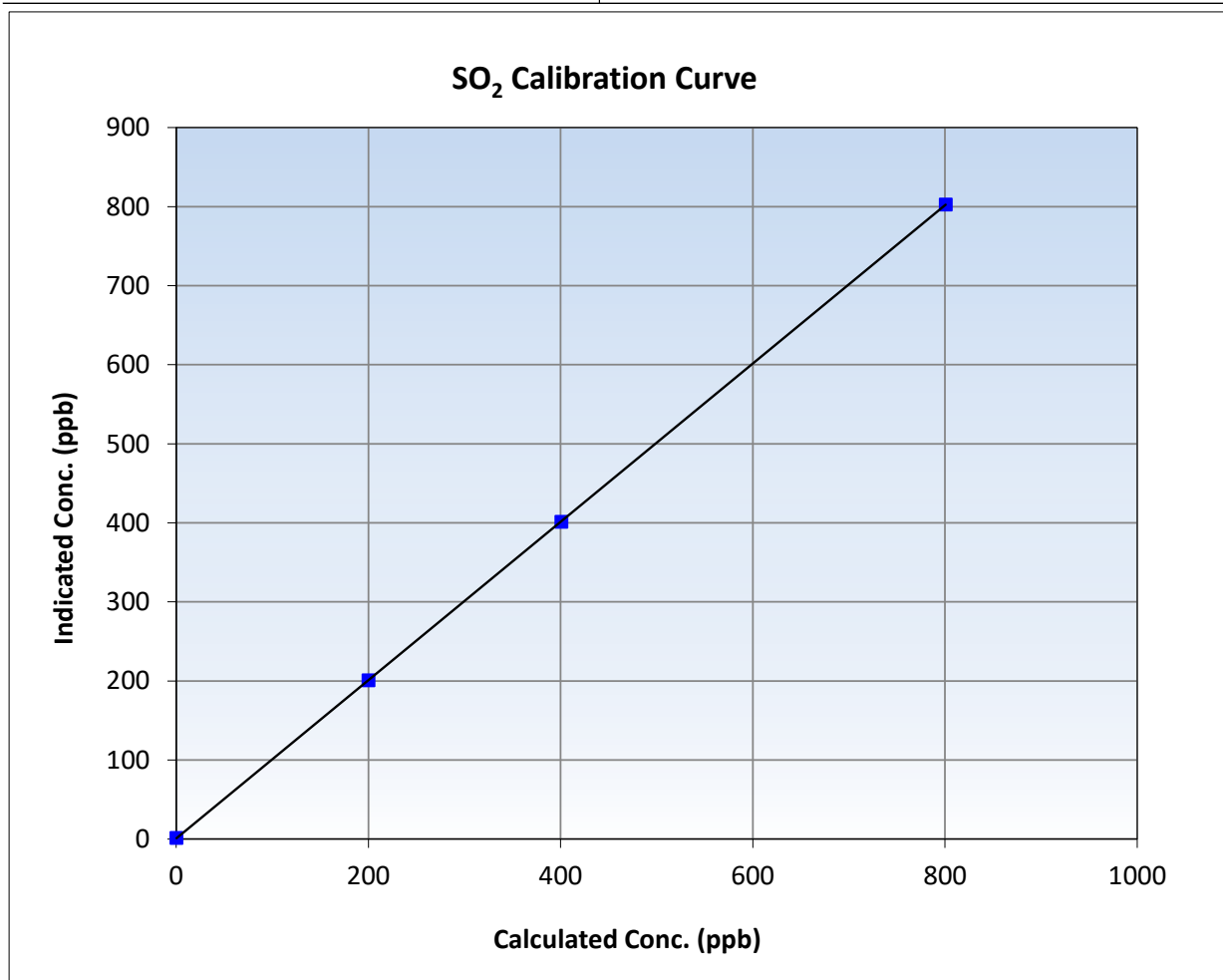
SO₂ Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 11, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:47	End Time (MST):	15:29
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1501301448

Calibration Data

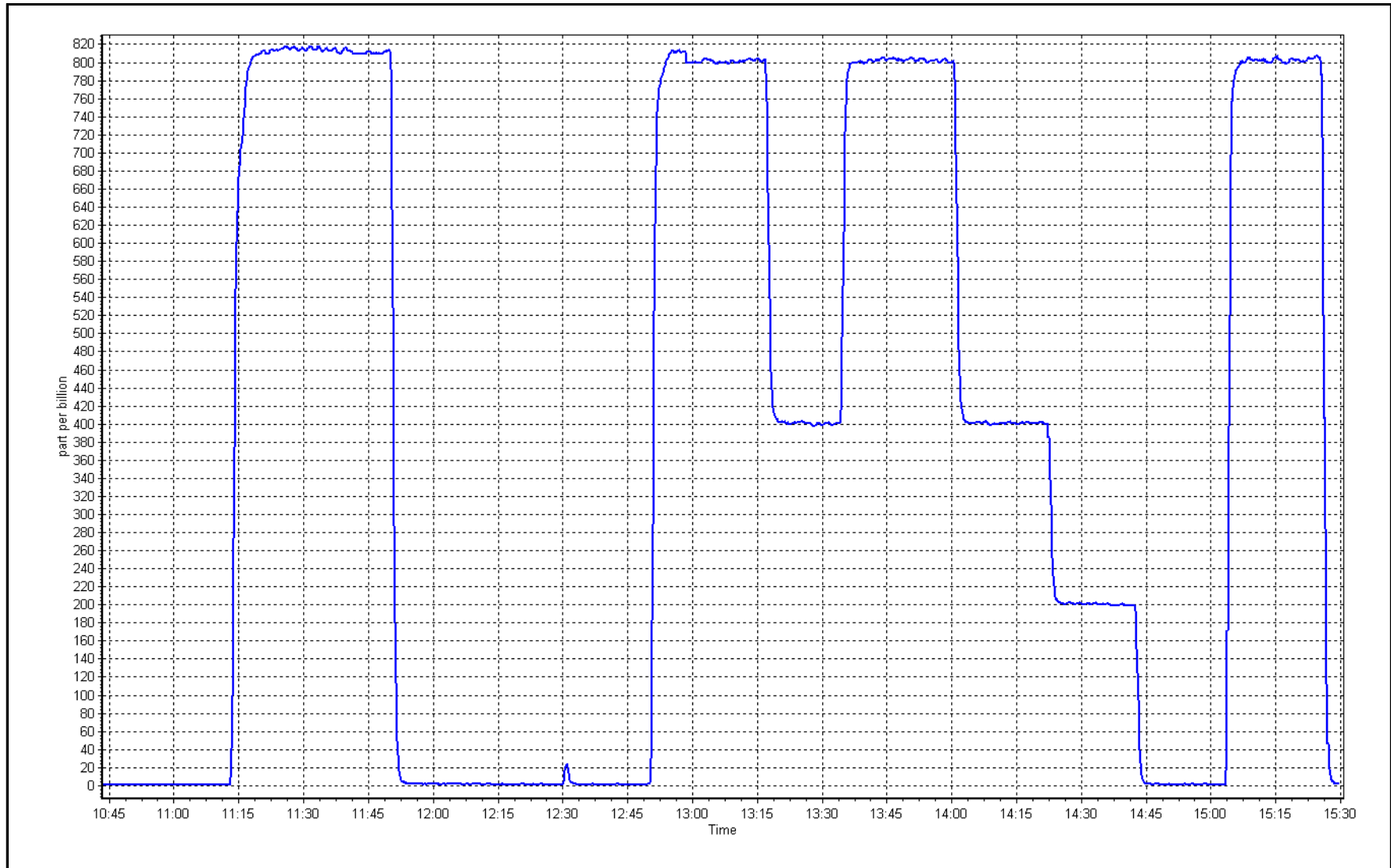
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	1.2	----	Correlation Coefficient	0.999997	≥0.995
800.3	802.4	0.9973	Slope	1.001280	0.90 - 1.10
400.6	401.1	0.9987	Intercept	0.706701	+/-30
199.8	200.6	0.9961			



SO2 Calibration Plot

Date: April 17, 2026

Location: Bertha Ganter-Fort McKay





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
Calibration Date: April 16, 2026 Last Cal Date: March 16, 2026
Start time (MST): 11:13 End time (MST): 15:46
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.84 ppm Cal Gas Exp Date: September 5, 2027
Cal Gas Cylinder #: CC738239
Removed Cal Gas Conc: 4.84 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 3565
ZAG Make/Model: Teledyne API T701 Serial Number: 146

Analyzer Information

Analyzer make: Thermo 43iQ-TL Analyzer serial #: 1200326167
Converter make: CD Nova Converter serial #: 2022-221
Analyzer Range: 0 - 100 ppb Converter Temp: 315 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.974798	0.998386	Backgd or Offset:	2.07	2.13
Calibration intercept:	0.262435	0.061993	Coeff or Slope:	0.999	1.035

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4917	82.6	80.0	77.8	1.026
As found Mid point	4959	41.3	40.0	39.0	1.022
As found Low point	4979	20.7	20.0	19.4	1.028
New cylinder response					
Baseline Corr As found:	77.9	Prev response:	78.21	*% change:	-0.4%
Baseline Corr 2nd AF pt:	39.1	AF Slope:	0.974513	AF Intercept:	-0.077590
Baseline Corr 3rd AF pt:	19.5	AF Correlation:	0.999994	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4917	82.6	80.0	79.8	1.002
Mid point	4959	41.3	40.0	40.2	0.994
Low point	4979	20.7	20.0	20.0	1.002
As left zero	5000	0.0	0.0	0.1	----
As left span	4917	82.6	80.0	80.4	0.995
SO2 Scrubber Check	4919	81.3	813.0	0.1	----
Date of last scrubber change:	January 25, 2024		Ave Corr Factor		0.999
Date of last converter efficiency test:	November 7, 2024		107.9% efficiency		

Notes: Inlet filter change completed after as founds. Adjusted span only. Scrubber check passed.

Calibration Performed By: Mohammed Kashif



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H₂S Calibration Summary

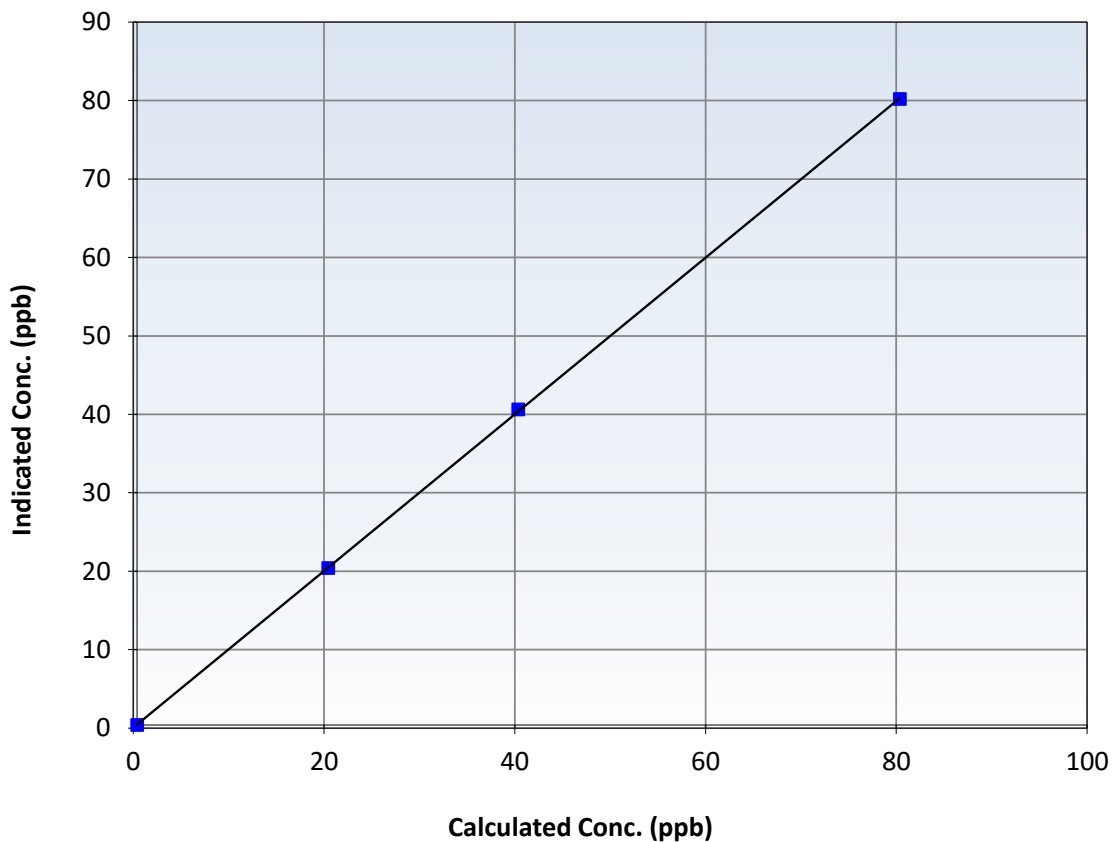
Station Information

Calibration Date:	April 16, 2026	Previous Calibration:	March 16, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:13	End Time (MST):	15:46
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	1200326167

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999980		≥0.995
80.0	79.8	1.0020	Slope	0.998386		0.90 - 1.10
40.0	40.2	0.9944	Intercept	0.061993		+/-3
20.0	20.0	1.0019				

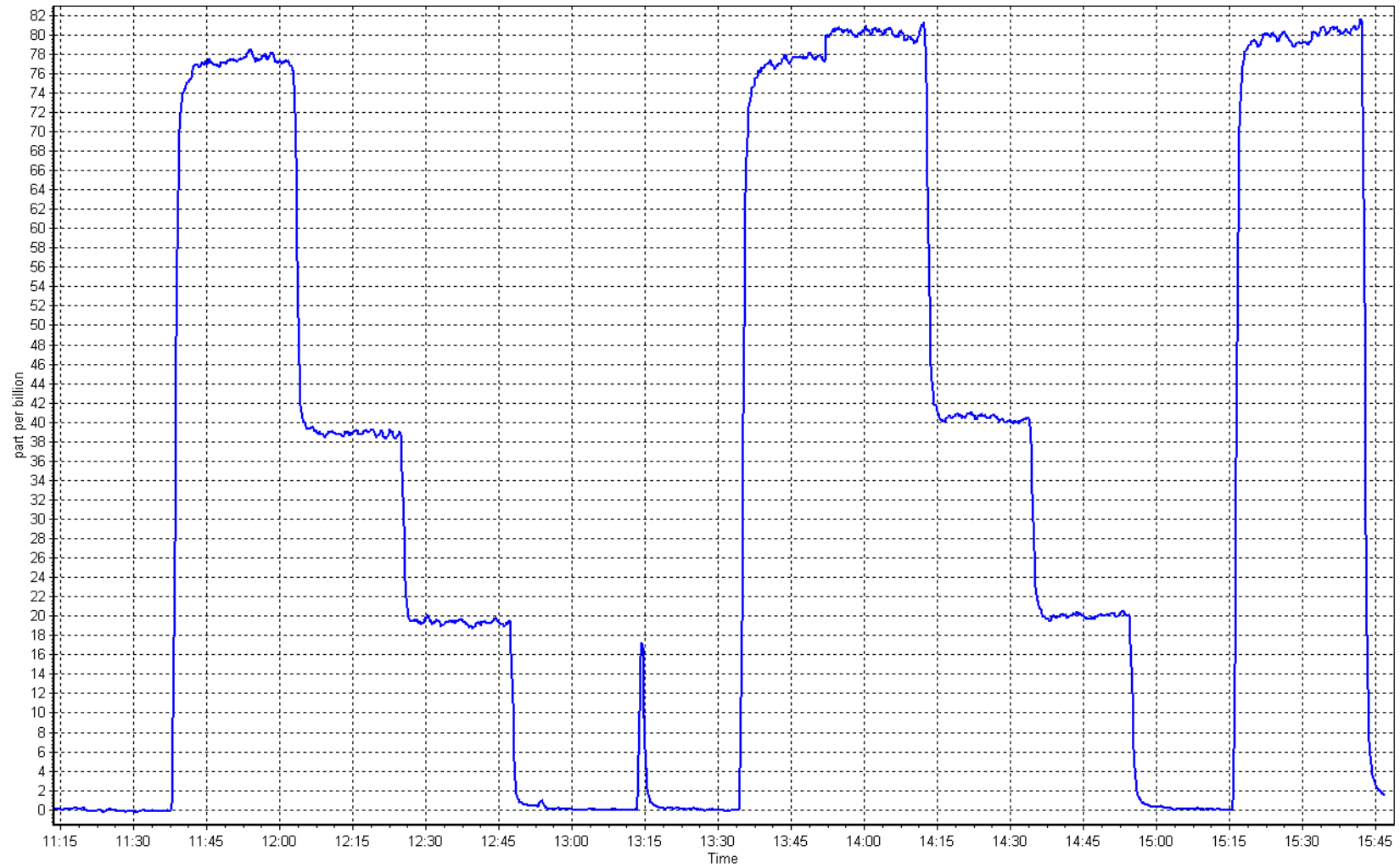
H₂S Calibration Curve



H₂S Calibration Plot

Date: April 16, 2026

Location: Bertha Ganter-Fort McKay





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TRS Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
Calibration Date: April 16, 2026 Last Cal Date: March 16, 2026
Start time (MST): 11:13 End time (MST): 15:46
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.84 ppm Cal Gas Exp Date: September 5, 2027
Cal Gas Cylinder #: CC738239
Removed Cal Gas Conc: 4.84 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 3565
ZAG Make/Model: Teledyne API T701 Serial Number: 146

Analyzer Information

Analyzer make: Thermo 43iQ-TLE Analyzer serial #: 12113311966
Converter make: CD Nova Converter serial #: 580
Analyzer Range: 0 - 100 ppb Converter Temp: 850 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	0.992098	0.999384	Backgd or Offset:	2.11
Calibration intercept:	0.182015	-0.197953	Coeff or Slope:	1.112

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4917	82.6	80.0	79.7	1.002
As found Mid point	4959	41.3	40.0	40.0	0.997
As found Low point	4979	20.7	20.0	19.6	1.017
New cylinder response					
Baseline Corr As found:	79.8	Prev response:	79.51	*% change:	0.4%
Baseline Corr 2nd AF pt:	40.1	AF Slope:	0.999527	AF Intercept:	-0.177940
Baseline Corr 3rd AF pt:	19.7	AF Correlation:	0.999966	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4917	82.6	80.0	79.7	1.003
Mid point	4959	41.3	40.0	39.9	1.002
Low point	4979	20.7	20.0	19.6	1.022
As left zero	5000	0.0	0.0	0.1	----
As left span	4917	82.6	80.0	79.8	1.002
SO2 Scrubber Check	4919	81.3	813.0	0.2	----
Date of last scrubber change:	December 17, 2021			Ave Corr Factor	1.009
Date of last converter efficiency test:					

Notes: Inlet filter change completed after as founds. No adjustments made. Scrubber check passed.

Calibration Performed By: Mohammed Kashif



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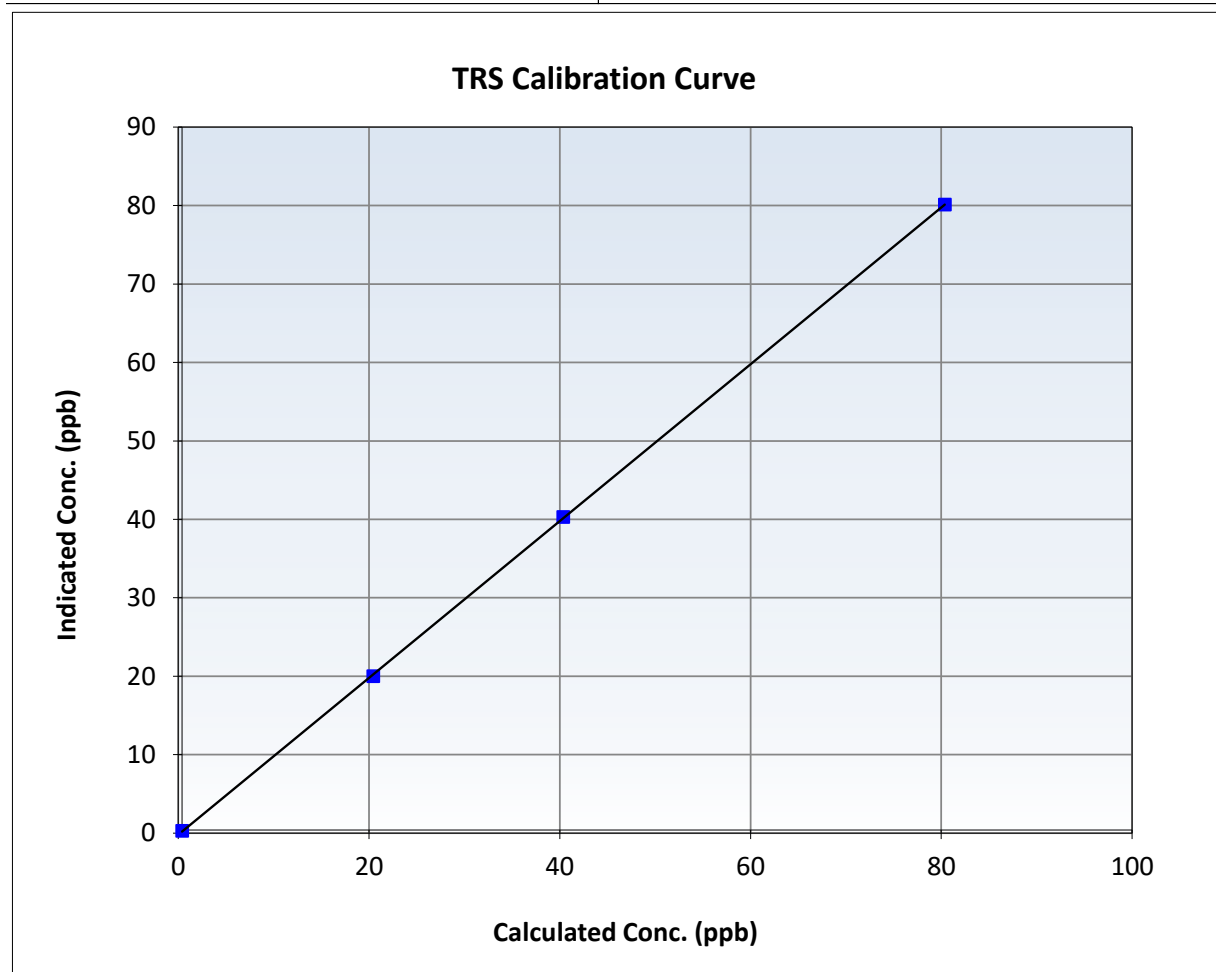
TRS Calibration Summary

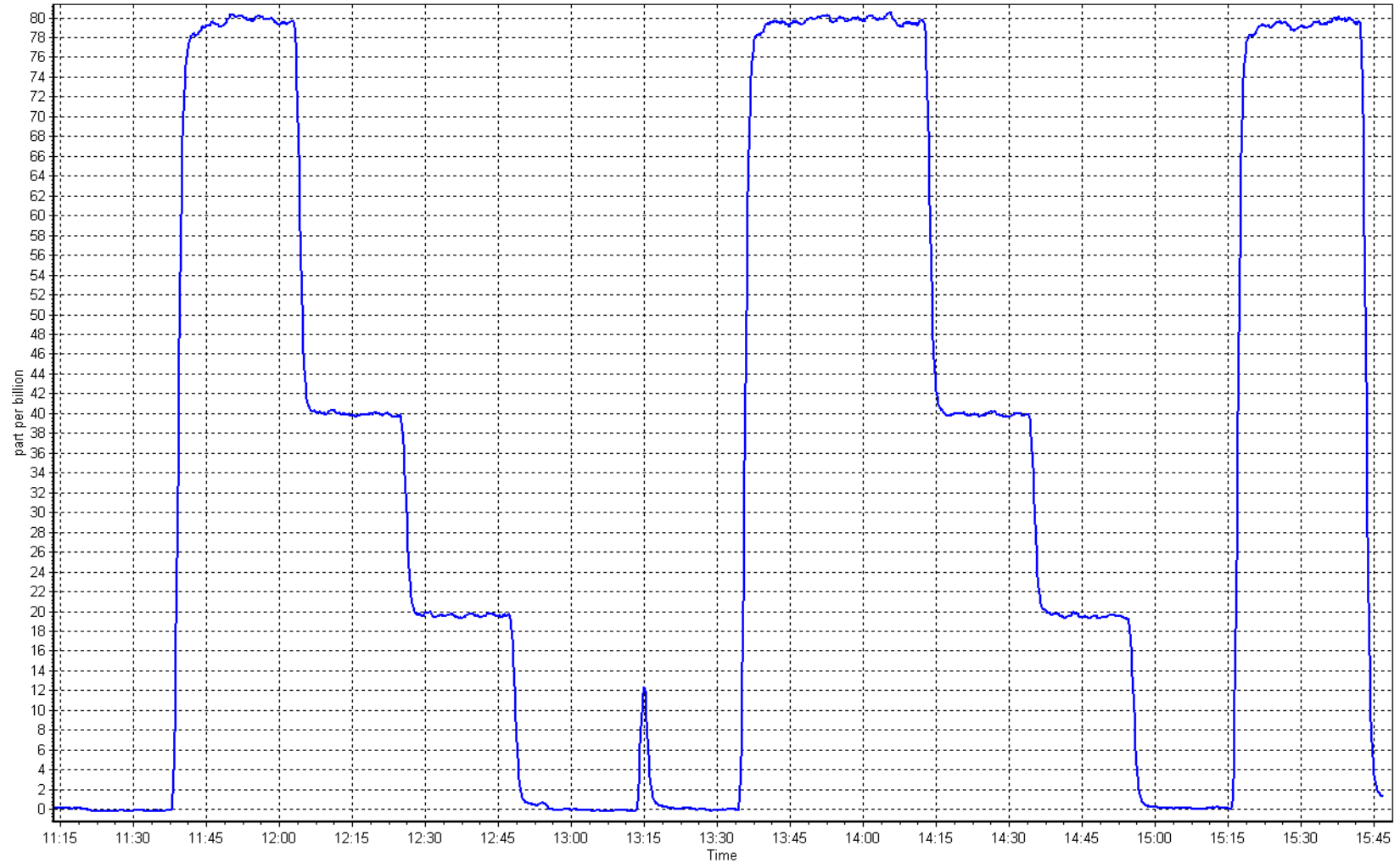
Station Information

Calibration Date:	April 16, 2026	Previous Calibration:	March 16, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:13	End Time (MST):	15:46
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	12113311966

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999976		≥ 0.995
80.0	79.7	1.0033	Slope	0.999384		$0.90 - 1.10$
40.0	39.9	1.0019	Intercept	-0.197953		± 3
20.0	19.6	1.0224				







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
 Calibration Date: April 17, 2026 Last Cal Date: March 11, 2026
 Start time (MST): 10:47 End time (MST): 15:29
 Reason: Routine

Calibration Standards

Gas Cert Reference: CC418809 Cal Gas Expiry Date: March 10, 2031
 CH₄ Cal Gas Conc. 497.2 ppm CH₄ Equiv Conc. 1061.8 ppm
 C₃H₈ Cal Gas Conc. 205.3 ppm
 Removed Gas Cert: NA Removed Gas Expiry: NA
 Removed CH₄ Conc. 497.2 ppm CH₄ Equiv Conc. 1068.8 ppm
 Removed C₃H₈ Conc. 205.3 ppm Diff between cyl (THC):
 Diff between cyl (CH₄): Diff between cyl (NM):
 Calibrator Model: Teledyne API T700 Serial Number: 3565
 Zero Air Gen model: Teledyne API T701 Serial Number: 146

Analyzer Information

Analyzer make: Thermo 55i Analyzer serial #: 1193585648
 THC Range: 0 - 20 ppm NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.48E-04	2.43E-04	NMHC SP Ratio:	4.81E-05	4.74E-05
CH ₄ Retention time:	15.0	15.0	NMHC Peak Area:	191019	193738
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	81.3	17.27	17.29	0.999
Mid point	4959	40.7	8.64	8.63	1.001
Low point	4979	20.3	4.31	4.32	0.998
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	17.27	17.38	0.993
Average Correction Factor					0.999

Notes: No as founds done due to empty carrier gas cylinder. Changed the inlet filter, H₂ and N₂. Adjusted both zero and span.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	81.3	9.18	9.19	0.999
Mid point	4959	40.7	4.60	4.59	1.001
Low point	4979	20.3	2.29	2.30	0.996
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	9.18	9.24	0.994
Average Correction Factor					0.999

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	81.3	8.09	8.10	0.998
Mid point	4959	40.7	4.05	4.04	1.002
Low point	4979	20.3	2.02	2.02	1.000
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	8.09	8.15	0.993
Average Correction Factor					1.000

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.999655	1.000773
THC Cal Offset:	0.002941	-0.001252
CH ₄ Cal Slope:	0.999219	1.001749
CH ₄ Cal Offset:	-0.005731	-0.003929
NMHC Cal Slope:	0.999766	1.000137
NMHC Cal Offset:	0.009270	0.002278

Calibration Performed By: Mohammed Kashif



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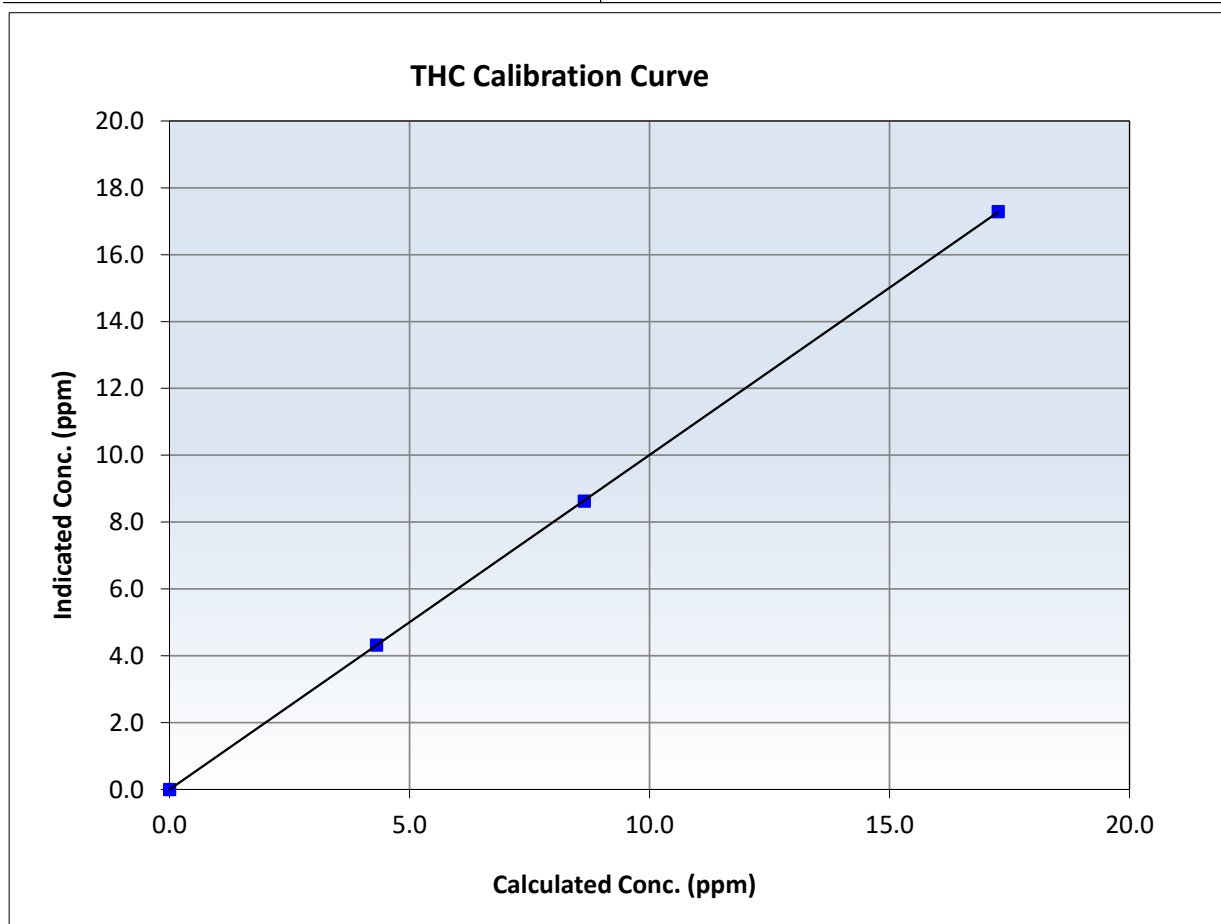
THC Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 11, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:47	End Time (MST):	15:29
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999997	≥ 0.995
17.27	17.29	0.9989	Slope	1.000773	0.90 - 1.10
8.64	8.63	1.0014	Intercept	-0.001252	± 0.5
4.31	4.32	0.9978			





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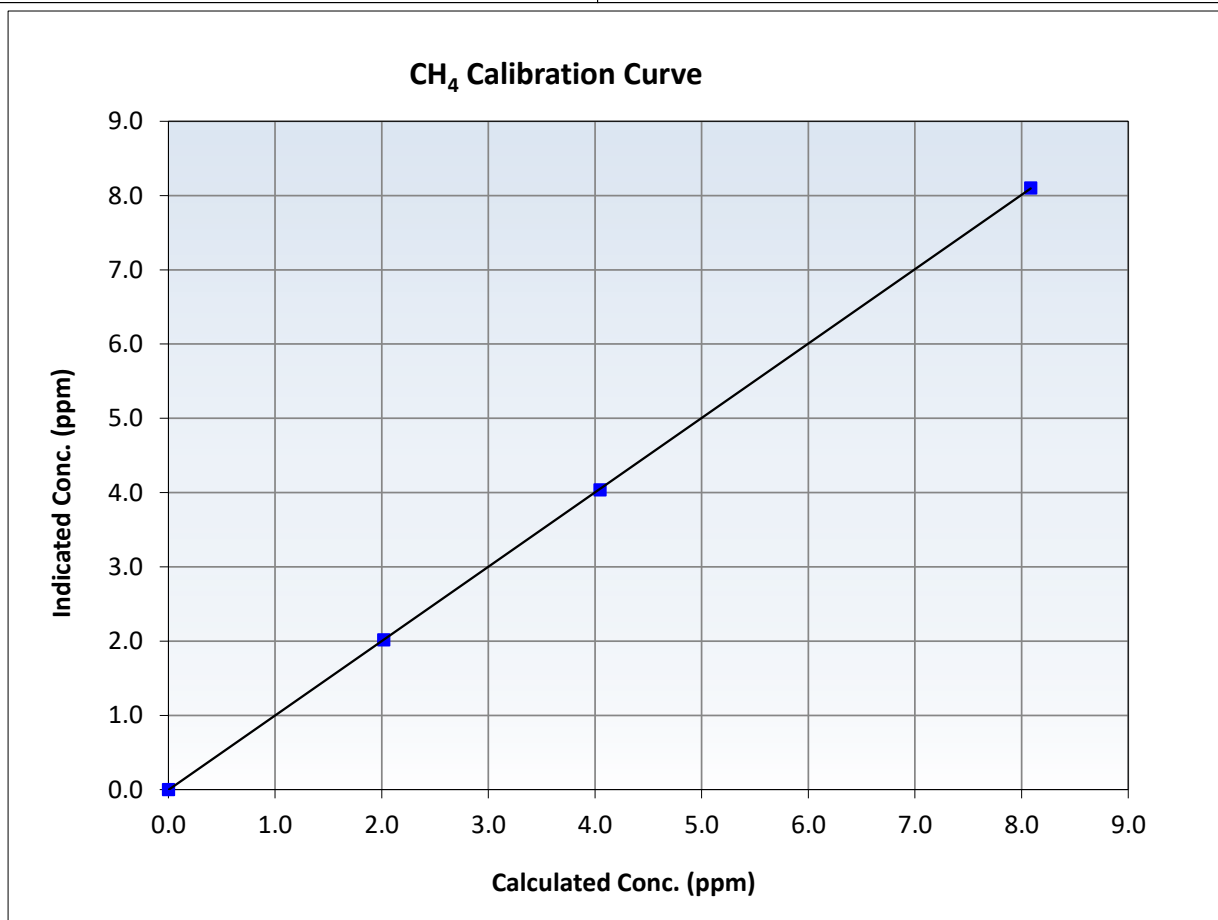
CH₄ Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 11, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:47	End Time (MST):	15:29
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999994		≥ 0.995
8.09	8.10	0.9980	Slope	1.001749		0.90 - 1.10
4.05	4.04	1.0023	Intercept	-0.003929		± 0.5
2.02	2.02	1.0000				





Wood Buffalo Environmental Association

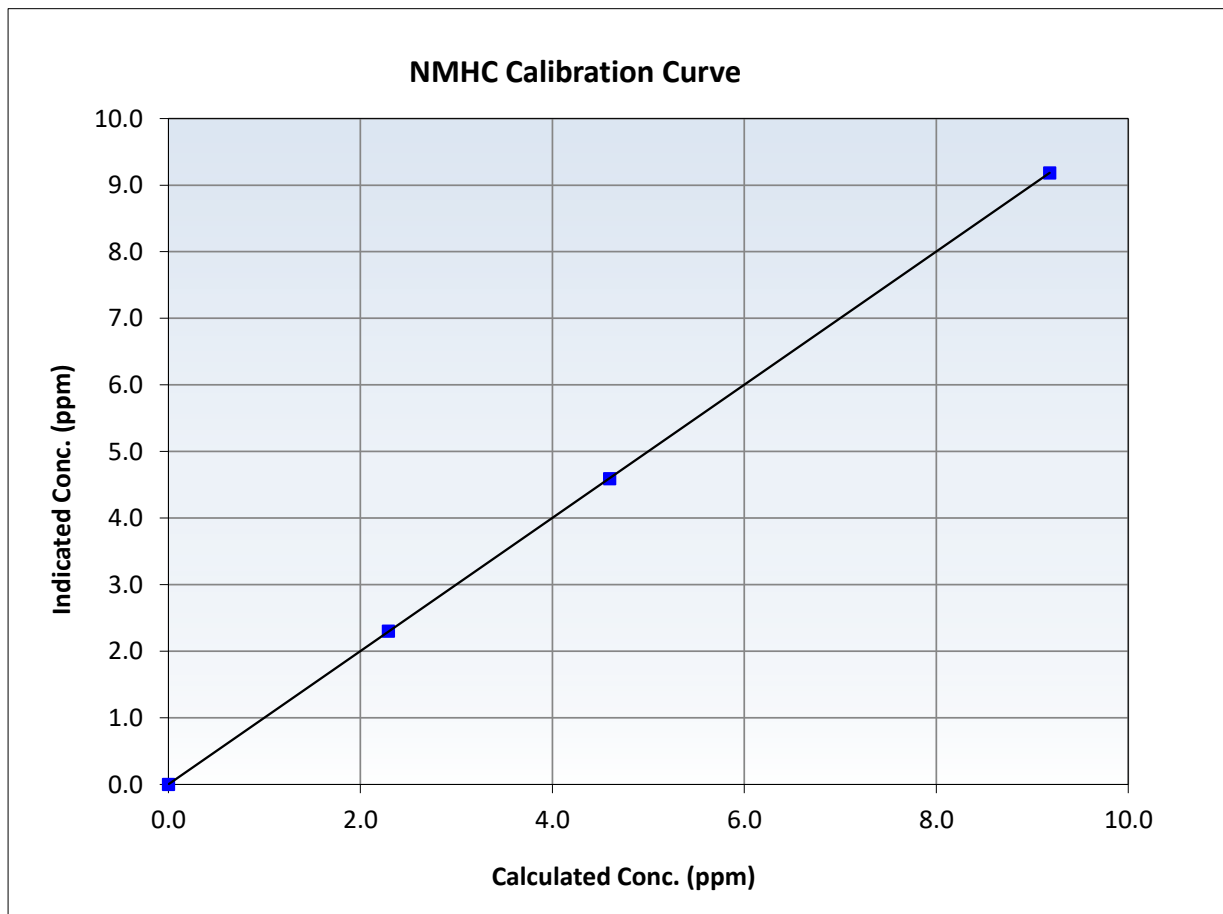
NMHC Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 11, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:47	End Time (MST):	15:29
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

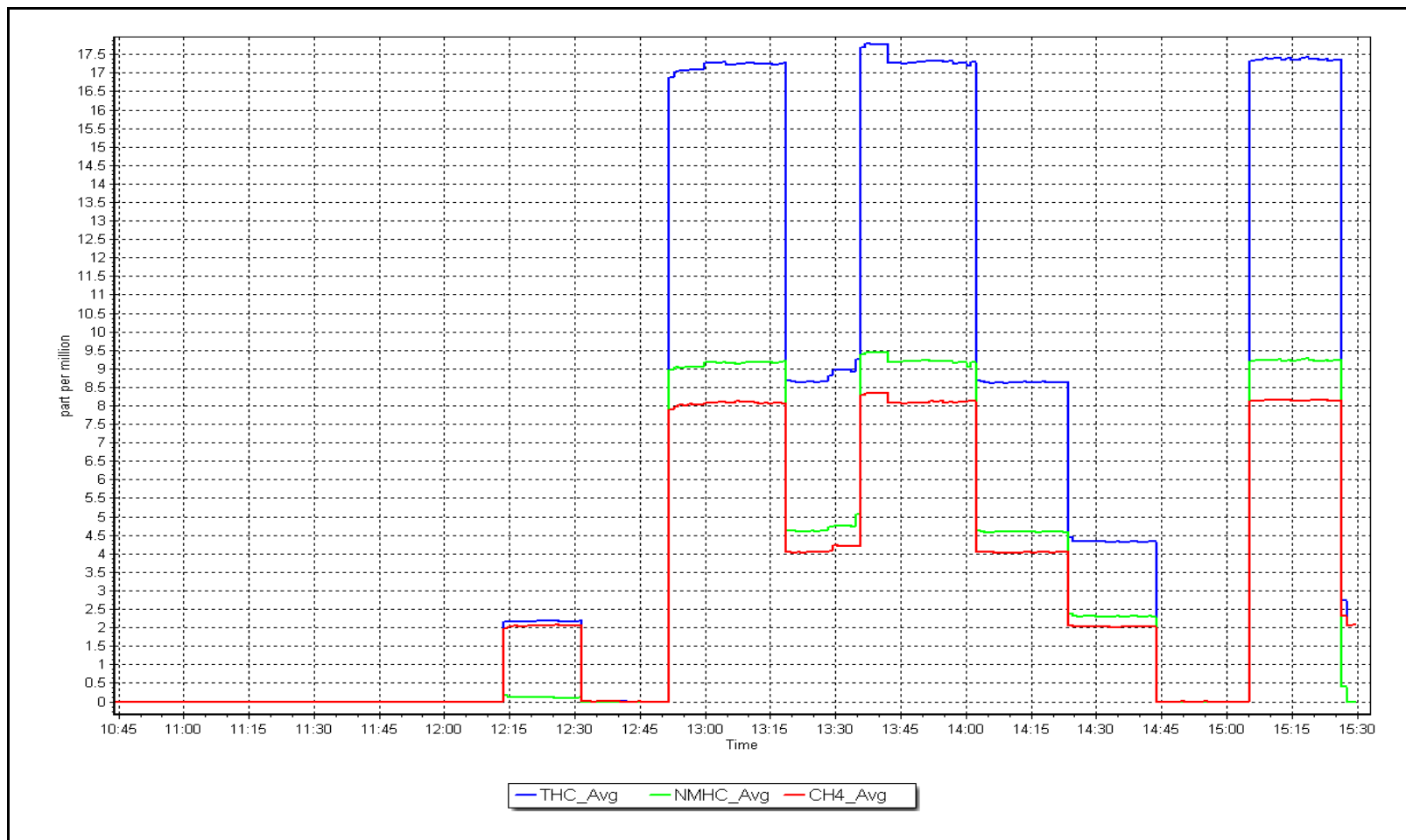
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999998	≥ 0.995
9.18	9.19	0.9995	Slope	1.000137	$0.90 - 1.10$
4.60	4.59	1.0006	Intercept	0.002278	± 0.5
2.29	2.30	0.9959			



NMHC Calibration Plot

Date: April 17, 2026

Location: Bertha Ganter-Fort McKay





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay
Station number: AMS 01
Calibration Date: April 15, 2026
Last Cal Date: March 5, 2026
Start time (MST): 11:27
End time (MST): 16:24
Reason: Routine

Calibration Standards

NO Gas Cylinder #: CC335700
NOX Cal Gas Conc: 59.40 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 59.40 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701
Cal Gas Expiry Date: September 1, 2032
NO Cal Gas Conc: 59.20 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 59.20 ppm
NO gas Diff:
Serial Number: 3565
Serial Number: 146

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.1	-0.1	0.2	----	----
AF High point	4932	67.6	803.1	800.4	2.7	807.2	801.1	6.2	0.9950	0.9990
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 799.5 ppb	NO = 794.5 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = 0.9%
Baseline Corr 1st pt	NO _x = 807.1 ppb	NO = 801.2 ppb	<u>As Found Statistics</u>		*Percent Change	NO = 0.8%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb	As found	NO _x r ² :	Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb	As found	NO r ² :	NO SI:	NO Int:
			As found	NO ₂ r ² :	NO ₂ SI:	NO ₂ Int:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1336160088

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.748	0.748	NO bkgnd or offset:	2.2	2.2
NOX coeff or slope:	1.001	1.001	NOX bkgnd or offset:	2.3	2.3
NO2 coeff or slope:	0.999	0.999	Reaction cell Press:	160.9	161.8

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.995600	0.998517
NO _x Cal Offset:	-0.080000	0.520000
NO Cal Slope:	0.994308	0.998364
NO Cal Offset:	-1.300000	-1.120000
NO ₂ Cal Slope:	0.997680	1.013841
NO ₂ Cal Offset:	1.104050	-0.333851

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.2	0.0	0.2	----	----
High point	4932	67.6	803.1	800.4	2.7	801.8	798.0	4.0	1.0016	1.0030
Mid point	4966	33.8	401.5	400.2	1.4	403.0	399.4	3.6	0.9964	1.0020
Low point	4983	16.9	200.8	200.1	0.7	200.4	196.5	3.9	1.0019	1.0183
As left zero	5000	0.0	0.0	0.0	0.0	0.4	0.0	0.4	----	----
As left span	4932	67.6	803.1	394.8	408.3	799.0	394.8	404.2	1.0051	1.0000
Average Correction Factor									0.9999	1.0078

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.2	----	----
High GPT point	793.2	391.0	404.9	410.1	0.9873	101.3%
Mid GPT point	793.2	600.3	195.6	198.8	0.9839	101.6%
Low GPT point	793.2	693.9	102.0	101.8	1.0020	99.8%
Average Correction Factor					0.9911	100.9%

Notes:

Changed the inlet filter after as founds. No adjustments made.

Calibration Performed By:

Mohammed Kashif



Wood Buffalo Environmental Association

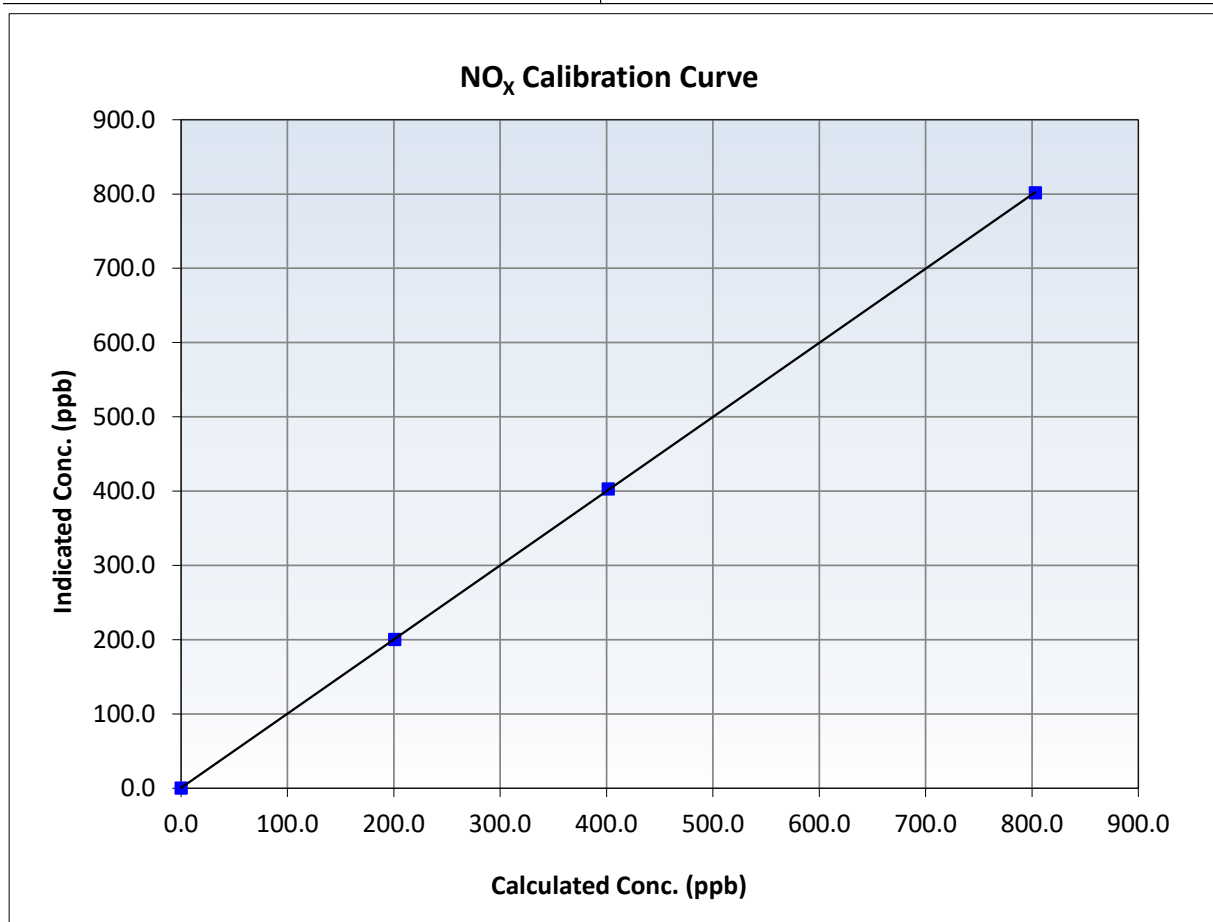
NO_x Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 5, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:27	End Time (MST):	16:24
Analyzer make:	Thermo 42i	Analyzer serial #:	1336160088

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999991	≥0.995
803.1	801.8	1.0016	Slope	0.998517	0.90 - 1.10
401.5	403.0	0.9964	Intercept	0.520000	+/-20
200.8	200.4	1.0019			





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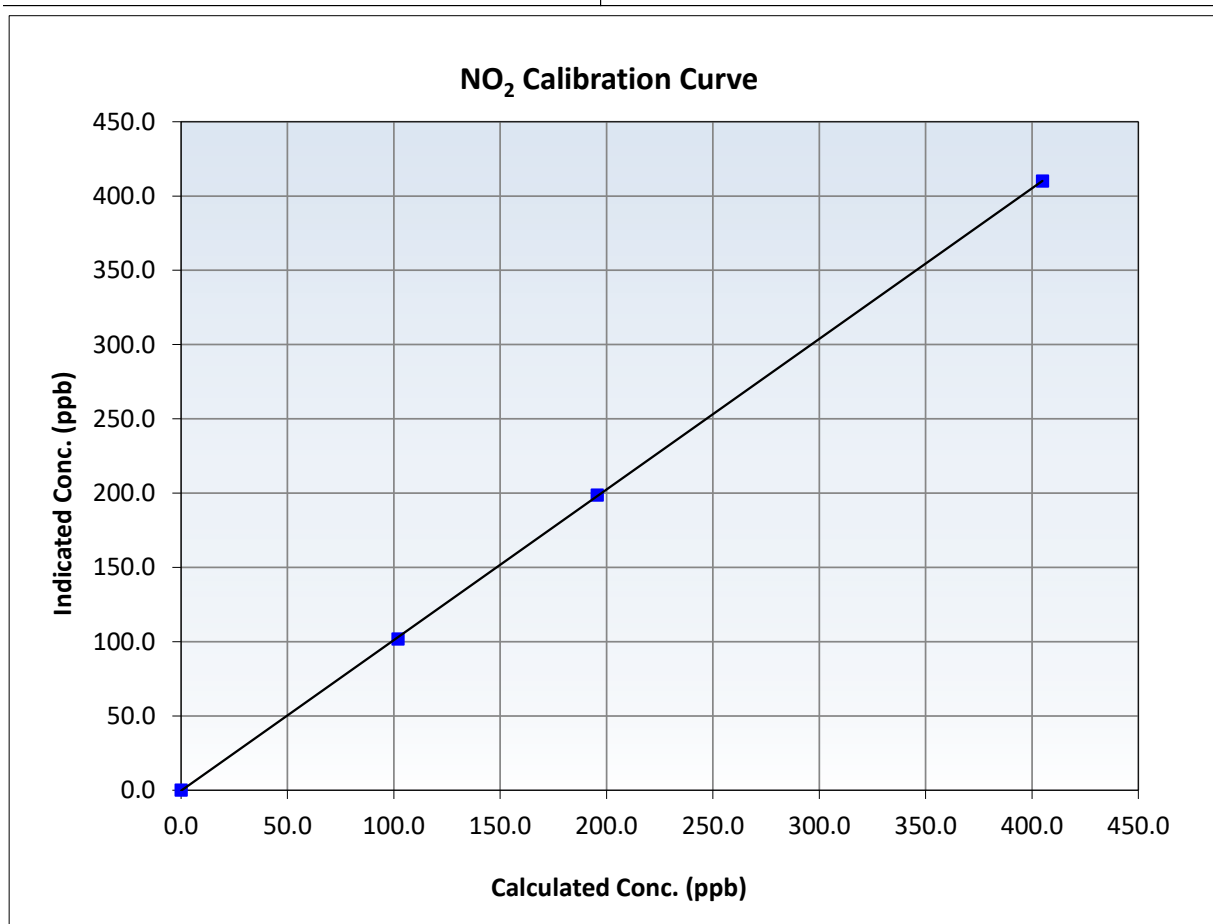
NO₂ Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 5, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:27	End Time (MST):	16:24
Analyzer make:	Thermo 42i	Analyzer serial #:	1336160088

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999972	≥0.995
404.9	410.1	0.9873	Slope	1.013841	0.90 - 1.10
195.6	198.8	0.9839	Intercept	-0.333851	+/-20
102.0	101.8	1.0020			





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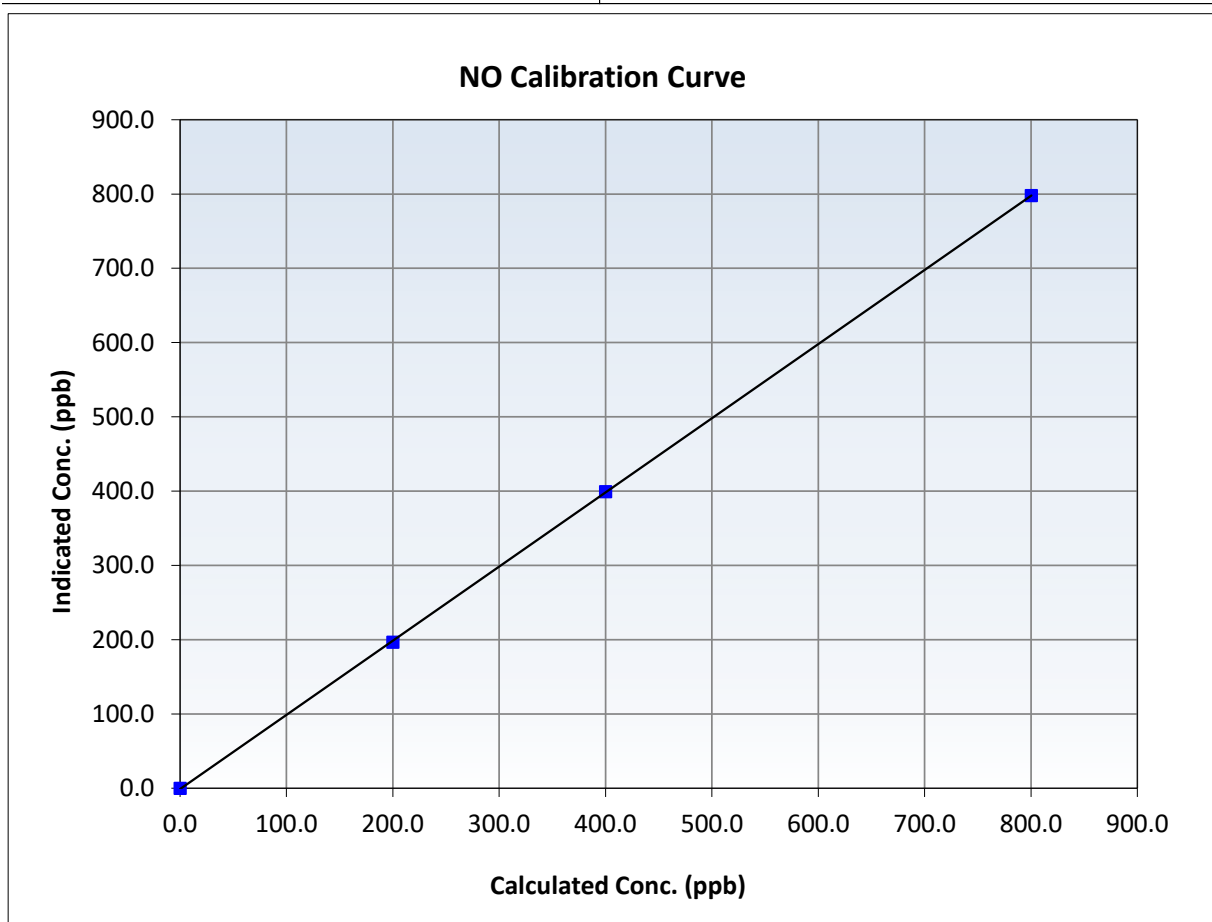
NO Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 5, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:27	End Time (MST):	16:24
Analyzer make:	Thermo 42i	Analyzer serial #:	1336160088

Calibration Data

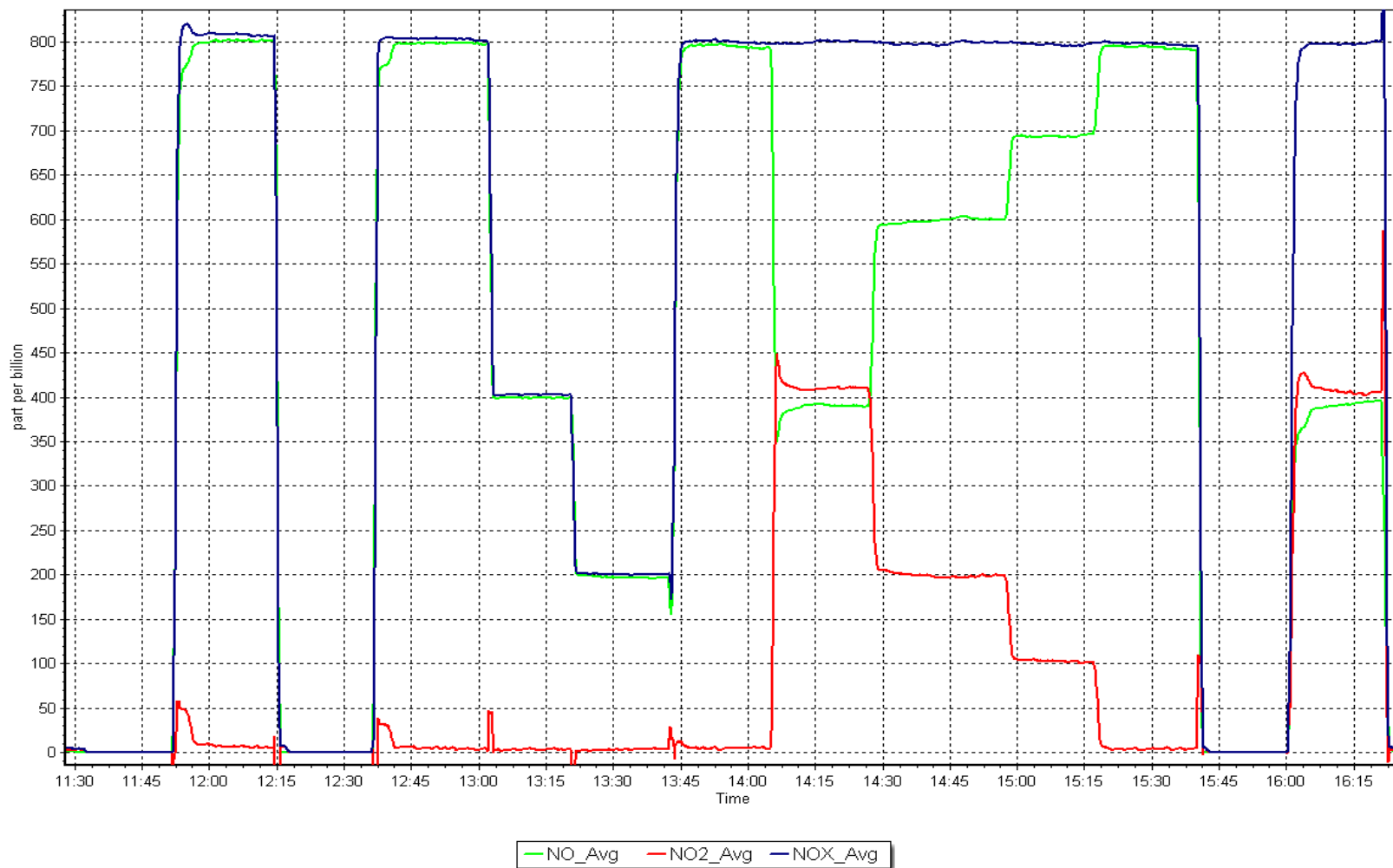
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.0	----	Correlation Coefficient	0.999980	≥ 0.995
800.4	798.0	1.0030	Slope	0.998364	0.90 - 1.10
400.2	399.4	1.0020	Intercept	-1.120000	+/-20
200.1	196.5	1.0183			



NO_x Calibration Plot

Date: April 15, 2026

Location: Bertha Ganter-Fort McKay





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
Calibration Date: April 9, 2026 Last Cal Date: March 3, 2026
Start time (MST): 9:52 End time (MST): 13:26
Reason: Routine

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T700 Serial Number: 3565
ZAG Make/Model: Teledyne API T701 Serial Number: 146

Analyzer Information

Analyzer make: Teledyne API T400 Analyzer serial #: 7045
Analyzer Range: 0 - 500 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.008600	0.997543	Backgd or Offset:	2.8	2.8
Calibration intercept:	1.320000	1.780000	Coeff or Slope:	1.155	1.163

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	5000	874.8	400.0	390.8	1.023
As found Mid point					
As found Low point					
Baseline Corr As found:	391.0	Previous response	404.8	*% change	-3.5%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	5000	874.8	400.0	399.9	1.000
Mid point	5000	744.0	200.0	202.3	0.989
Low point	5000	651.7	100.0	103.1	0.970
As left zero	5000	0.0	0.0	0.4	----
As left span	5000	874.8	400.0	403.6	0.991
Average Correction Factor					0.986

Notes: Changed the inlet filter after as founds. Adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

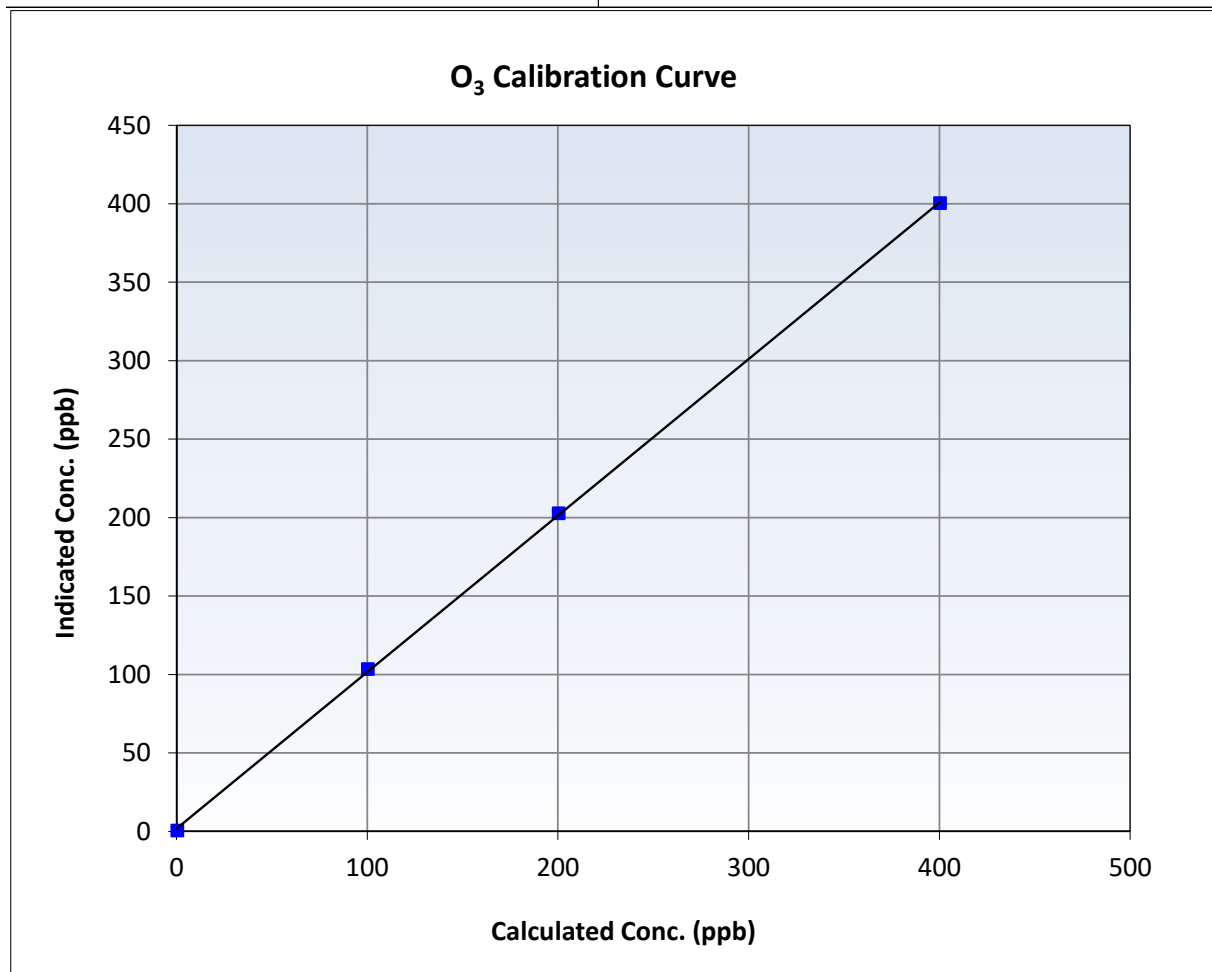
O₃ Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 3, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:52	End Time (MST):	13:26
Analyzer make:	Teledyne API T400	Analyzer serial #:	7045

Calibration Data

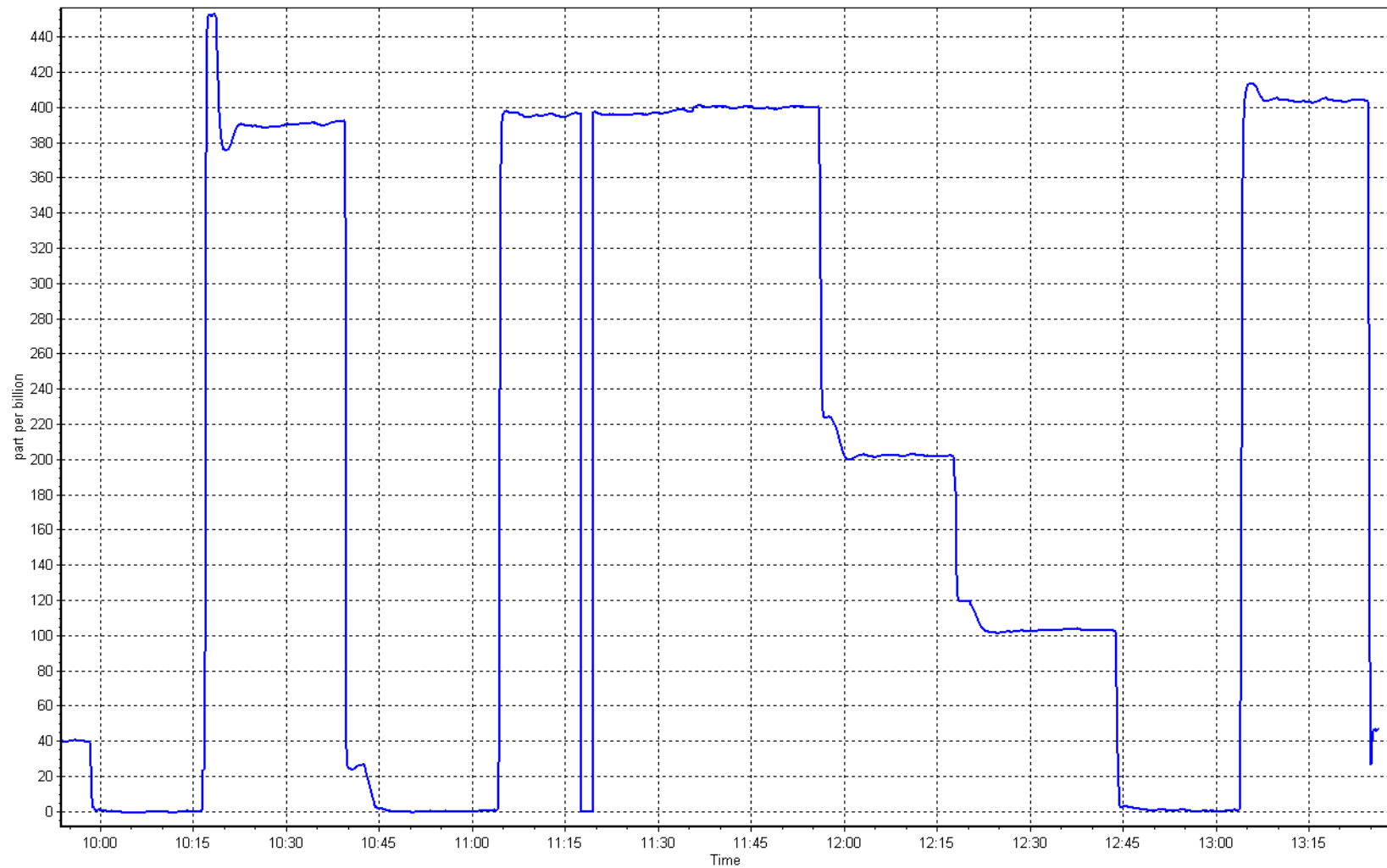
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999918	≥ 0.995
400.0	399.9	1.0003	Slope	0.997543	$0.90 - 1.10$
200.0	202.3	0.9886	Intercept	1.780000	± 5
100.0	103.1	0.9699			



O₃ Calibration Plot

Date: April 9, 2026

Location: Bertha Ganter-Fort McKay





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Fort McKay - Bertha Ganter Station number: AMS 01
Calibration Date: April 16, 2026 Last Cal Date: March 27, 2026
Start time (MST): 15:32 End time (MST): 15:55

Analyzer Make: Teledyne API T640 S/N: 323
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388749
Temp/RH standard: Alicat FP-25BT S/N: 388749

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	2	1.6	2	☐	+/- 2 °C
P (mmHg)	739.00	737.87	739.00	☐	+/- 10 mmHg
Flow (LPM)	5.01	4.935	5.01	☐	+/- 0.25 LPM
PW% (pump)	34		34	☐	>80%
Zero Verification	PM w/o HEPA: 25.9		PM w/ HEPA: 0.0		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: Expiry Date:
Lot No.:

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test				☐	10.9 +/- 0.5

Date Optical Chamber Cleaned: February 24, 2026
Date Disposable Filter Changed: February 24, 2026

Post- maintenance Zero Verification: PM w/ HEPA: <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: February 24, 2026
Date RH/T Sensor Cleaned: February 24, 2026

Notes: Flow, temperature, and pressure were verified. Leak check passed. No adjustments needed.

Calibration by: Mohammed Kashif



Wood Buffalo Environmental Association

Nt - NOX - NH3 Calibration Report

Station Information

Station Name:	Bertha Ganter-Fort McKay	Station number:	AMS 01
NOX Cal Date:	April 20, 2026	Last Cal Date:	March 26, 2026
Start time (MST):	10:14	End time (MST):	15:46
NH3 Cal Date:	April 21, 2026	Last Cal Date:	March 27, 2026
Start time (MST):	9:30	End time (MST):	15:50
Reason:	Routine		

Calibration Standards

NOX Cal Gas Conc:	59.40	ppm	NO Gas Cylinder #:	CC335700
NO Cal Gas Conc:	59.20	ppm	NO Cal Gas Expiry:	September 1, 2032
Removed NOX Conc:	59.40	ppm	Removed Cylinder #:	NA
Removed NO Conc:	59.20	ppm	Removed cyl Expiry:	NA
NOX gas Diff:			NO gas Diff:	
NH3 Cal Gas Conc:	76.58	ppm	NH3 Gas Cylinder #:	CC482625
			NH3 Cal Gas Expiry:	September 10, 2026
Removed NH3 Conc:	76.58	ppm	Removed Cylinder #:	NA
NH3 gas Diff:			Removed cyl Expiry:	NA
Calibrator Model:	API T700		Serial Number:	3565
ZAG make/model:	API T701		Serial Number:	146

Analyzer Information

Analyzer model:	API T201	Analyzer serial #:	152
Converter model:	API T501	Converter serial #:	484
NH3 Range (ppb):	0 - 2000 ppb	Reaction cell Press:	8.60
NOX Range (ppb):	0 - 1000 ppb	Sample Flow:	578

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coefficient:	0.980	0.999	Nt coefficient:	0.991	1.011
NOX coefficient:	0.985	1.010	NO bkgnd:	0.4	0.0
NO2 coefficient:	1.000	1.000	NOX bkgnd:	0.4	0.0
NH3 coefficient:	0.971	0.971	Nt bkgnd:	0.6	0.0

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.004579	0.985766
NO _x Cal Offset:	1.040000	1.000000
NO Cal Slope:	1.010986	0.985327
NO Cal Offset:	-2.040000	-0.380000
NO ₂ Cal Slope:	1.000941	0.995945
NO ₂ Cal Offset:	0.003347	1.808214
NH3 Cal Slope:	1.009031	1.010629
NH3 Cal Offset:	2.148932	-2.970330
Nt Cal Slope:	1.011809	1.012960
Nt Cal Offset:	3.655900	-2.668162



Wood Buffalo Environmental Association

NO_x - NO - NO₂ Calibration Report

NO_x / NO / Nt As Found Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated Nt concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	Baseline corr NO _x Correction factor (Cc/Ic) <i>Limit = 0.9 - 1.0</i>	Baseline corr NO Correction factor (Cc/Ic) <i>Limit = 0.9 - 1.0</i>
As found zero	5000	0.0	0.0	0.0	0.0	3.2	3.0	3.9	----	----
As found span	4932	67.6	803.1	800.4	803.1	785.5	781.6	788.4	1.0224	1.0240
AF GPT span	4932	67.6	803.2	-----	803.2	806.1	-----	807.2	0.9963	-----
new NO cyl rp										

Baseline Corr As Fd Nt = 784.5 ppb NO_x = 782.3 ppb NO = 778.6 ppb

Previous Response Nt = 816.23 ppb NO_x = 807.8 ppb NO = 807.1 ppb

**NO_x Δ (NO to GPT response) = 1.9%

* = > +/-2% difference initiates investigation

*Percent Change Nt(NO) = -4.0%

*Percent Change NO_x = -3.3%

*Percent Change NO = -3.7%

* = > +/-5% change initiates investigation

NO_x / NO / Nt Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated Nt concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibration zero	5000	0.0	0.0	0.0	0.0	0.1	0.3	-0.1	----	----
High point	4932	67.6	803.1	800.4	803.1	791.3	788.7	789.6	1.0149	1.0148
Mid point	4966	33.8	401.5	400.2	401.5	400.0	393.3	400.5	1.0039	1.0175
Low point	4983	16.9	200.8	200.1	200.8	198.0	196.3	198.3	1.0140	1.0193
Average Correction Factor									1.0109	1.0172

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found zero	----	----	0.0	0.1	----	----
Calibration zero	----	----	0.0	-0.2	----	----
High GPT point (400 ppb O3)	797.0	381.8	417.9	416.9	1.0024	99.8%
Mid GPT point (200 ppb O3)	797.0	597.4	202.3	204.7	0.9883	101.2%
Low GPT point (100 ppb O3)	797.0	693.6	106.1	109.2	0.9716	102.9%
Average Correction Factor					0.9875	101.3%



Wood Buffalo Environmental Association NH₃ - N_T Calibration Report

NH₃ As Found Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated Nt concentration (ppb) (Cc)	Calculated NOX concentration (ppb) (Cc)	Calculated NH ₃ concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH ₃ concentration (ppb) (Ic)	Baseline corr Nt Correction factor (Cc/(Ic-zero)) <i>Limit = 0.9 - 1.1</i>	Baseline corr NH ₃ Correction factor (Cc/(Ic-zero)) <i>Limit = 0.9 - 1.1</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.2	0.7	-0.5	----	----
AF High point	2930	70.5	1799.3	0.0	1799.3	1822.6	4.3	1818.4	0.987	0.989
AF Mid point										
AF Low point										
new NH ₃ cyl rp										
Baseline Corr As Fd	Nt = 1822.4 ppb	NH ₃ = 1818.9 ppb							*Percent Change	Nt _(NH₃) = -0.1%
Previous Response	Nt = 1824.2 ppb	NH ₃ = 1817.7 ppb							*Percent Change	NH ₃ = 0.1%

* = > +/-5% change initiates investigation

NH₃ Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated Nt concentration (ppb) (Cc)	Calculated NOX concentration (ppb) (Cc)	Calculated NH ₃ concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH ₃ concentration (ppb) (Ic)	Nt Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NH ₃ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibration zero	5000	0.0	0.0	0.0	0.0	-0.1	0.1	-0.2	----	----
High point	2930	70.5	1799.6	0.0	1799.6	1822.6	4.3	1818.4	0.987	0.990
Mid point	2961	39.2	1000.6	0.0	1000.6	1007.5	3.3	1004.3	0.993	0.996
Low point	2980	19.6	500.3	0.0	500.3	502.7	1.5	501.3	0.995	0.998
Average Correction Factor									0.9920	0.9947
NH ₃ Previous Converter Efficiency =	97.0 %									
NH ₃ Current Converter Efficiency =	97.0 %									

Notes: Changed the inlet filter after as founds. Adjusted the NO_x, NO, NT zero and span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

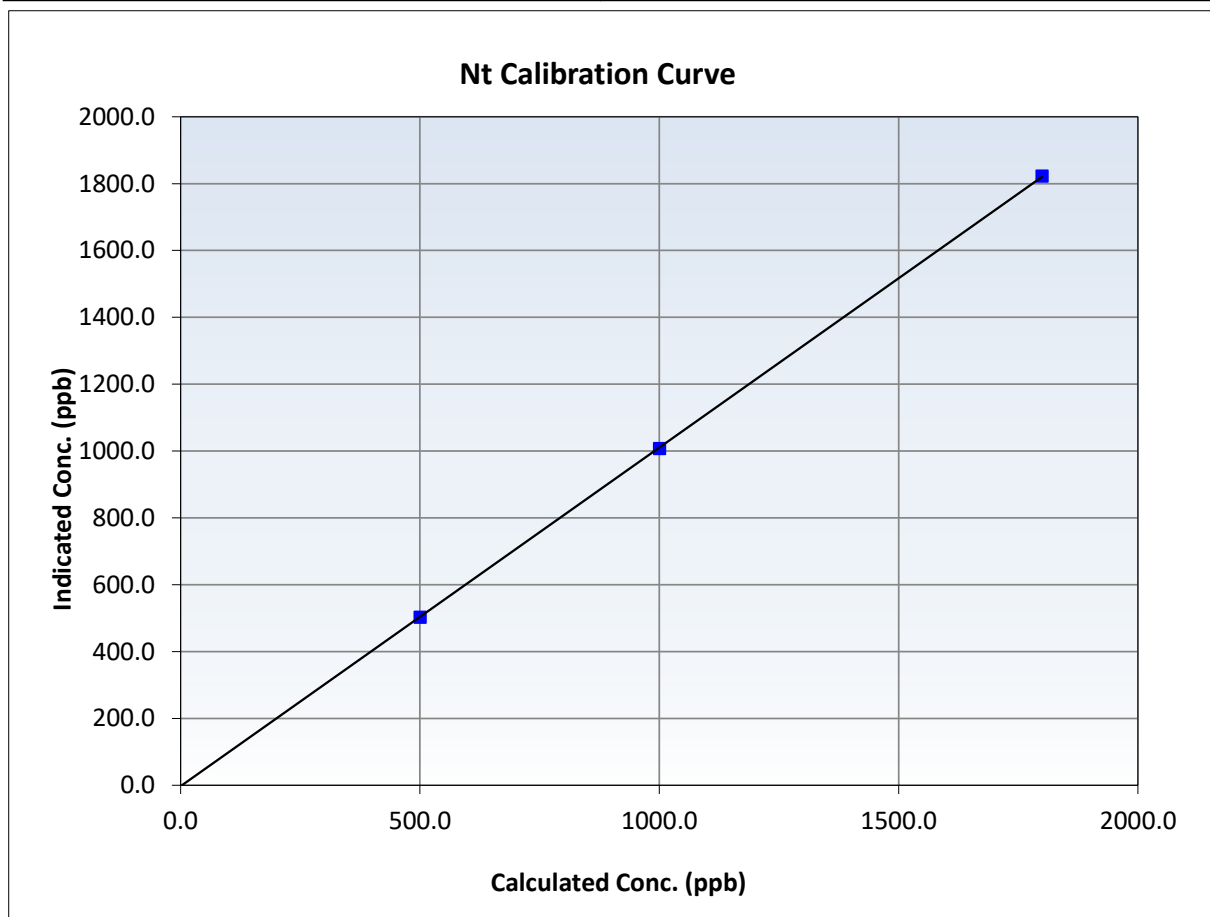
Nt Calibration Summary

Station Information

Calibration Date:	April 21, 2026	Previous Calibration:	March 26, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:14	End Time (MST):	15:46
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999986	≥ 0.995
1799.6	1822.6	0.9874	Slope	1.012960	0.90 - 1.10
1000.6	1007.5	0.9932	Intercept	-2.668162	+/-20
500.3	502.7	0.9953			





Wood Buffalo Environmental Association

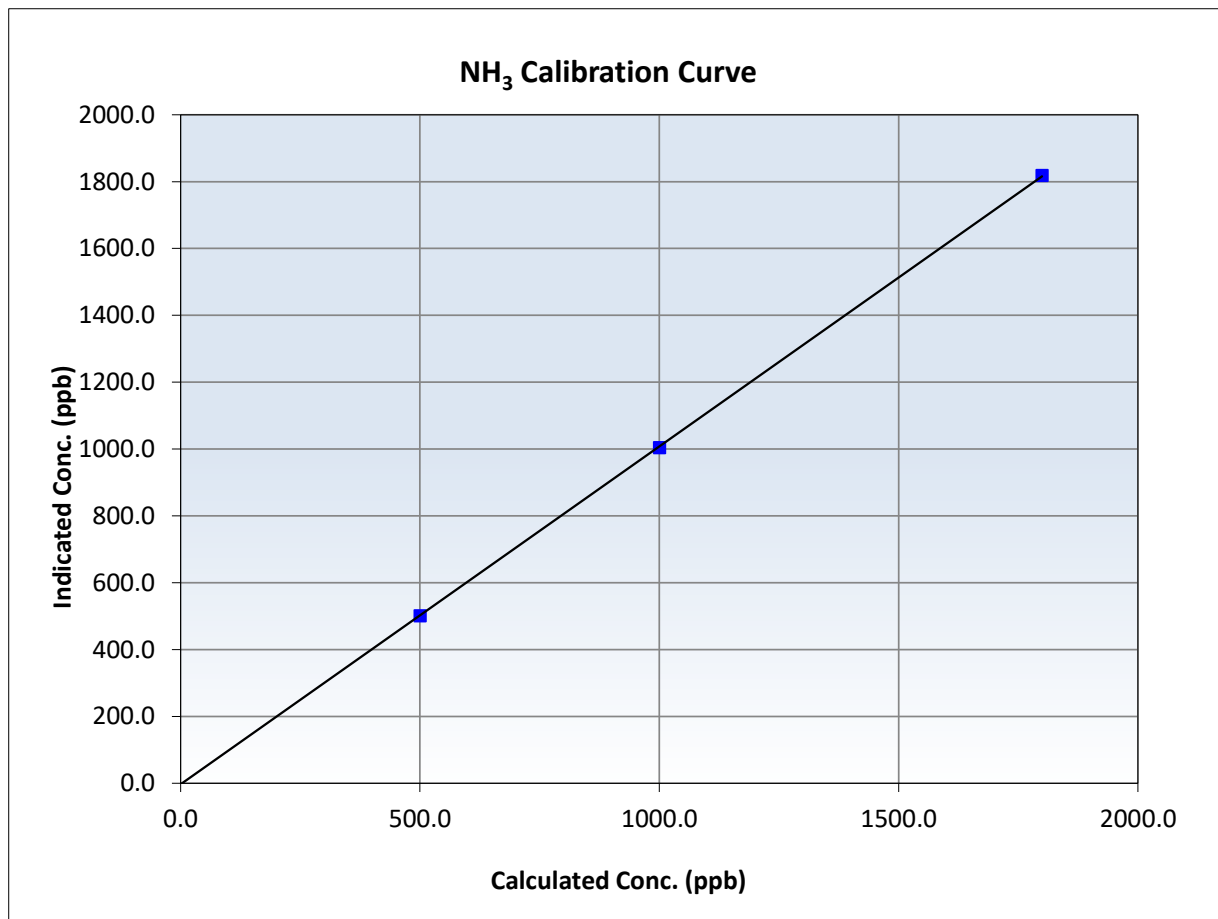
NH₃ Calibration Summary

Station Information

Calibration Date:	April 21, 2026	Previous Calibration:	March 26, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:14	End Time (MST):	15:46
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999982	≥0.995
1799.6	1818.4	0.9897	Slope	1.010629	0.90 - 1.10
1000.6	1004.3	0.9964	Intercept	-2.970330	+/-20
500.3	501.3	0.9981			





Wood Buffalo Environmental Association

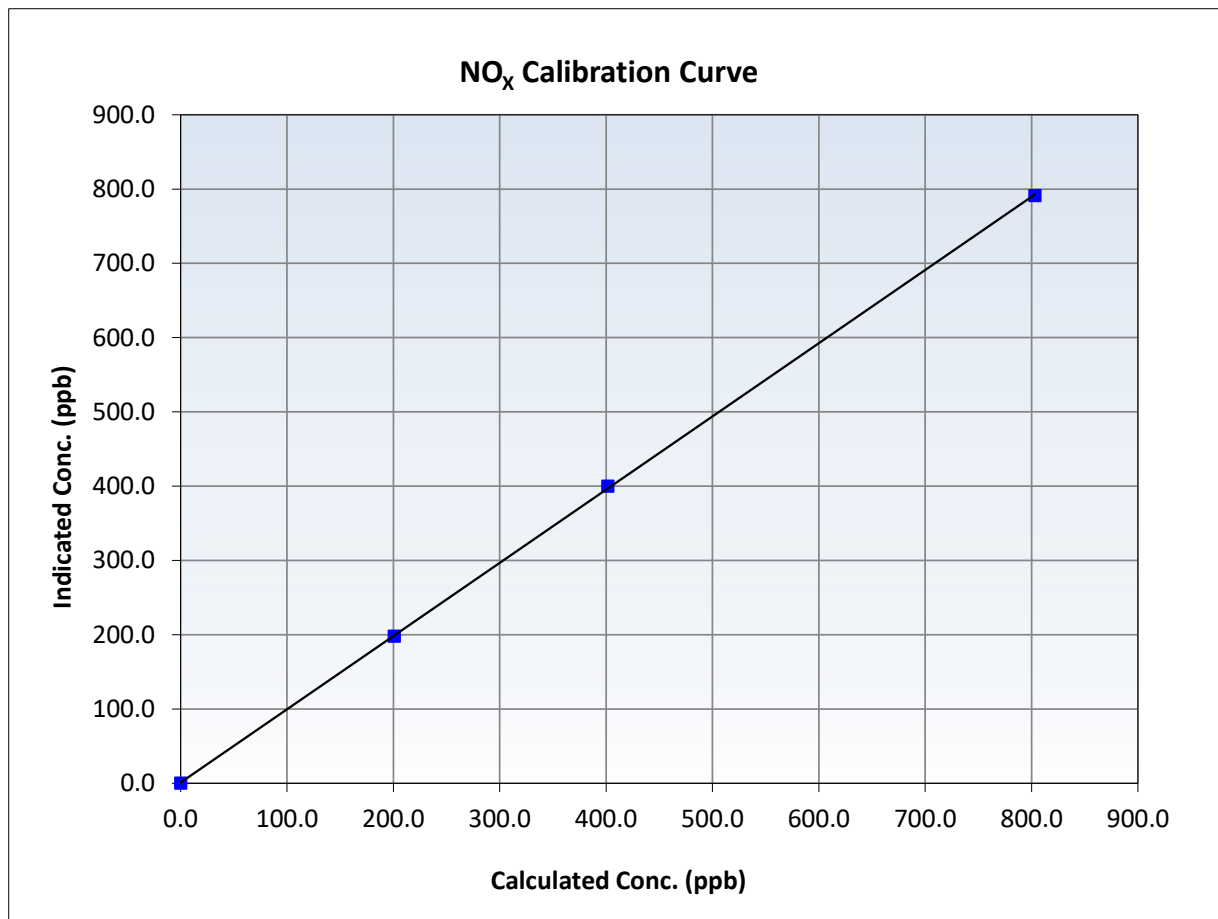
NO_x Calibration Summary

Station Information

Calibration Date:	April 20, 2026	Previous Calibration:	March 26, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:14	End Time (MST):	15:46
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999960	≥0.995
803.1	791.3	1.0149	Slope	0.985766	0.90 - 1.10
401.5	400.0	1.0039	Intercept	1.000000	+/-20
200.8	198.0	1.0140			





Wood Buffalo Environmental Association

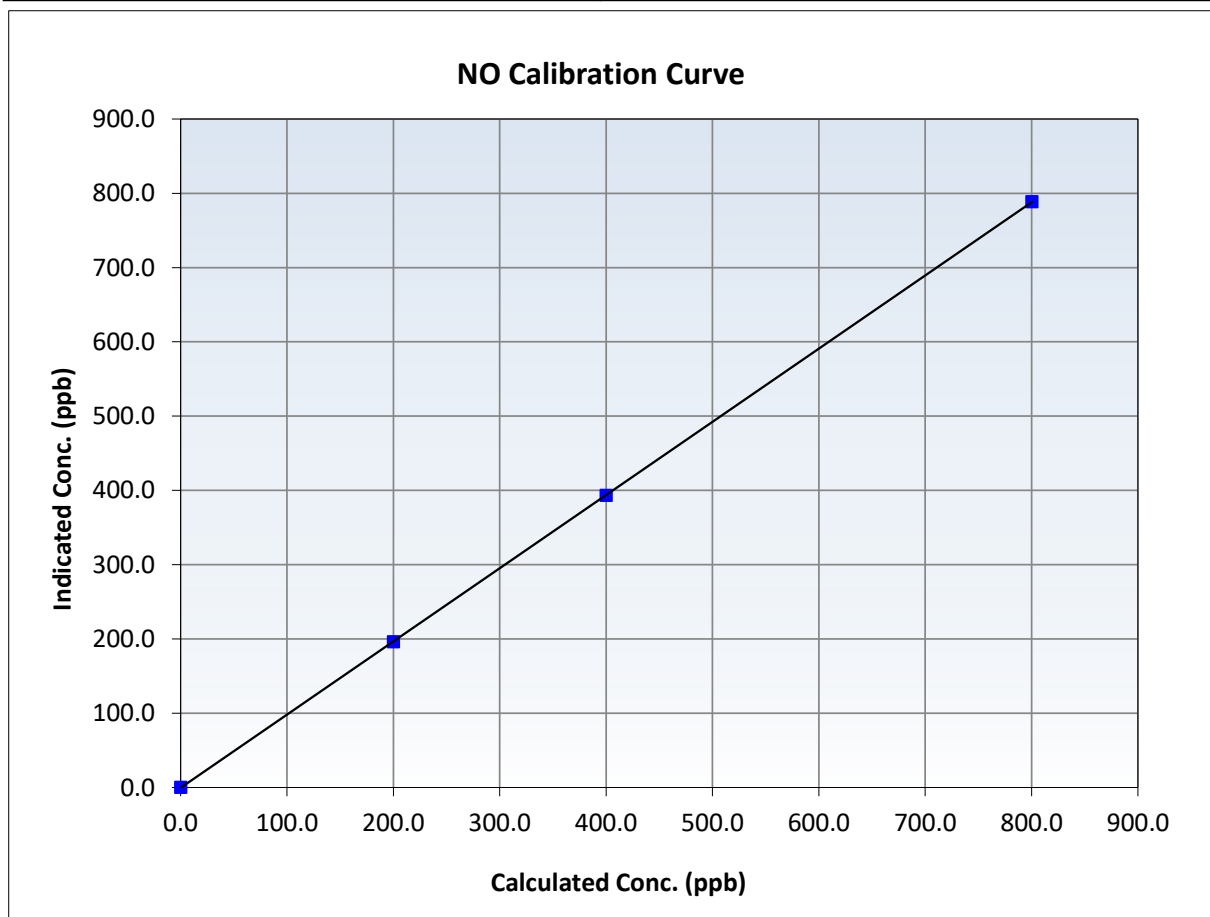
NO Calibration Summary

Station Information

Calibration Date:	April 20, 2026	Previous Calibration:	March 26, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:14	End Time (MST):	15:46
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999996	≥ 0.995
800.4	788.7	1.0148	Slope	0.985327	0.90 - 1.10
400.2	393.3	1.0175	Intercept	-0.380000	+/-20
200.1	196.3	1.0193			





Wood Buffalo Environmental Association

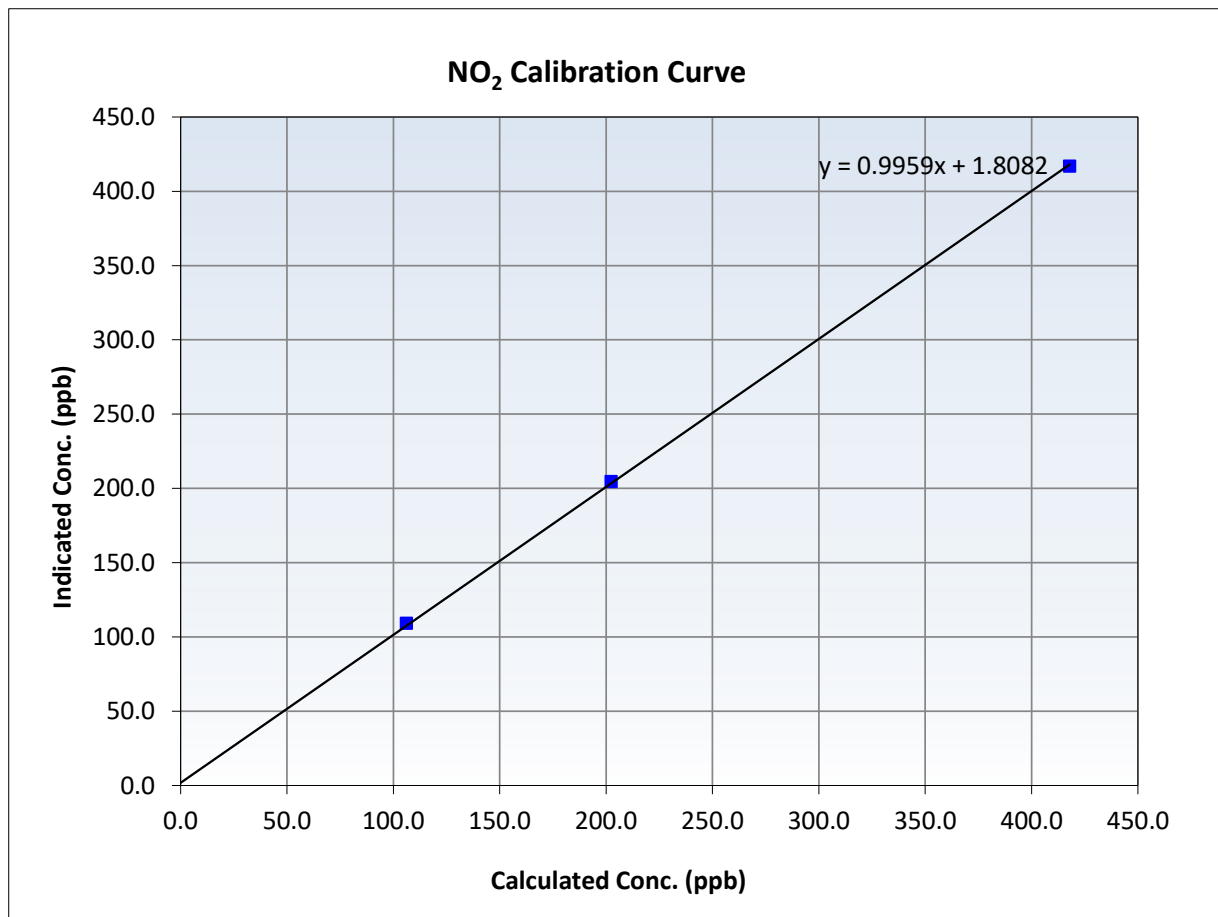
NO₂ Calibration Summary

Station Information

Calibration Date:	April 20, 2026	Previous Calibration:	March 26, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:14	End Time (MST):	15:46
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

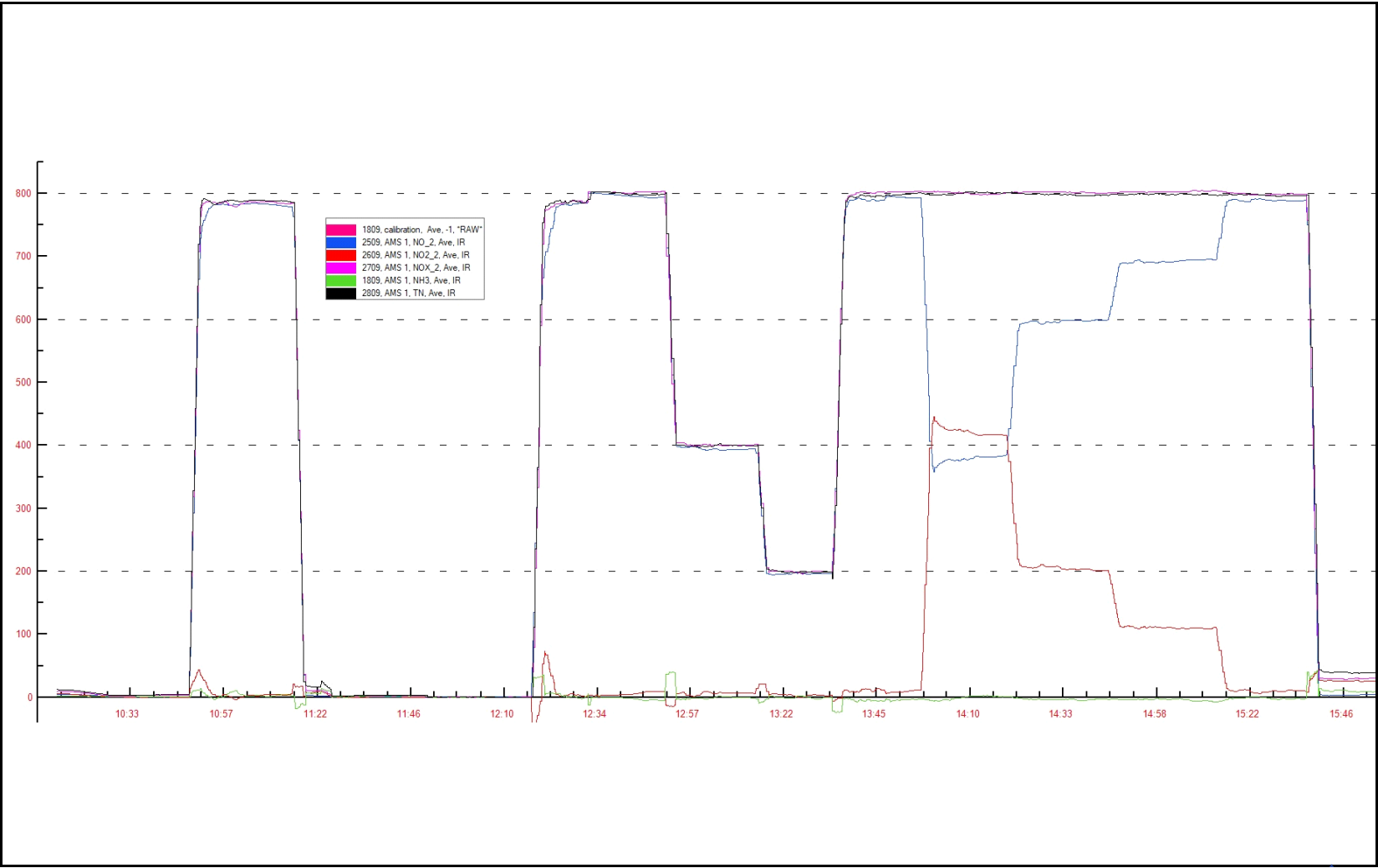
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999892	≥ 0.995
417.9	416.9	1.0024	Slope	0.995945	0.90 - 1.10
202.3	204.7	0.9883	Intercept	1.808214	+/-20
106.1	109.2	0.9716			

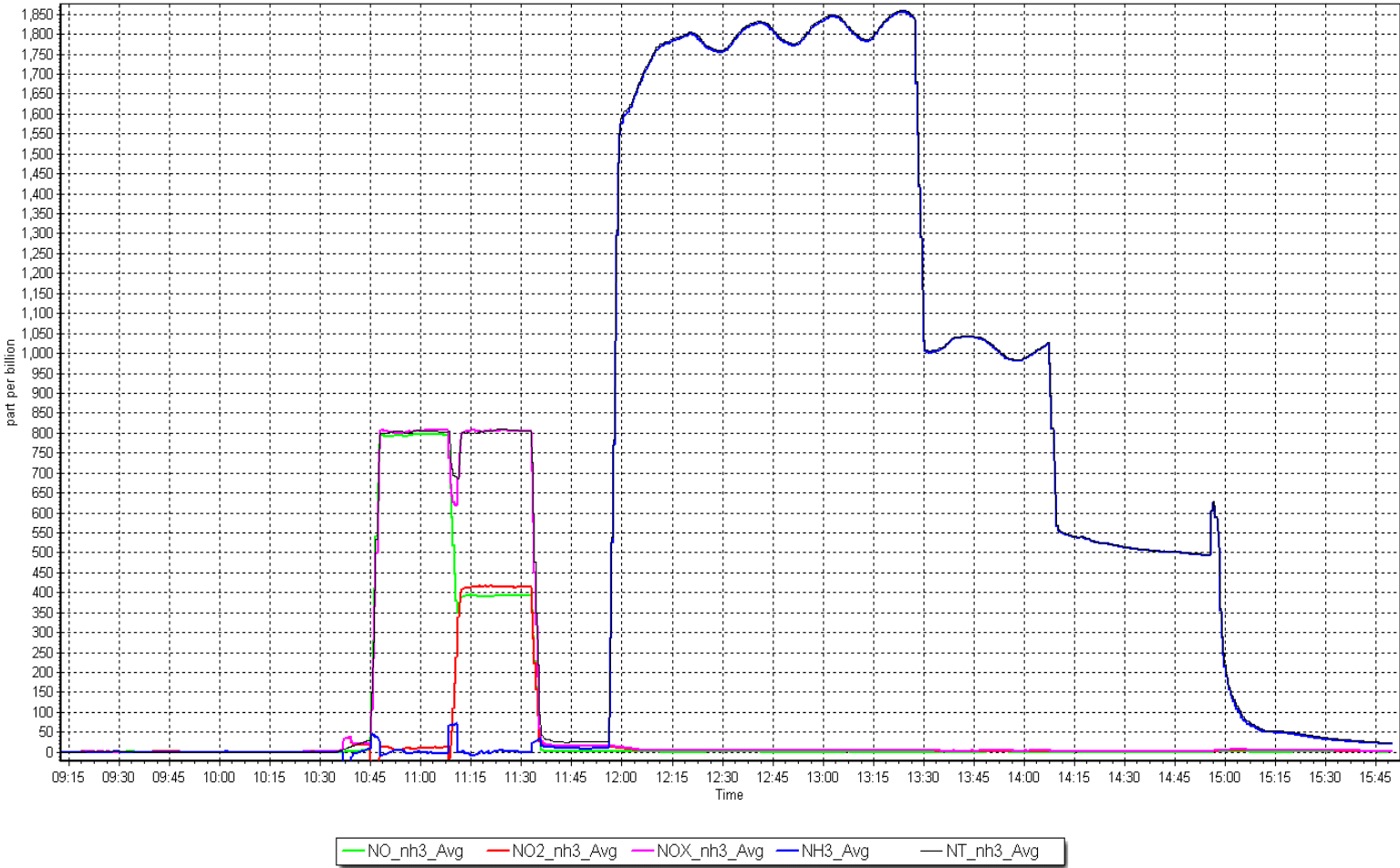


NO_x Calibration Plot

Date: April 20, 2026

Location: Bertha Ganter-Fort McKay







WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS02 MILDRED LAKE APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Mildred Lake
Calibration Date: April 30, 2026
Start time (MST): 8:42
Reason: Removal

Station number: AMS 02
Last Cal Date: March 25, 2026
End time (MST): 10:12

Calibration Standards

Cal Gas Concentration: 50.99 ppm
Cal Gas Cylinder #: EB0112903
Removed Cal Gas Conc: 50.99 ppm
Removed Gas Cyl #:
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 1185
Serial Number: 4891

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0-1000 ppb

Serial Number: JC1404901075

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001558		Backgd or Offset:	24.8	24.8
Calibration intercept:	-1.072443		Coeff or Slope:	0.759	0.759

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	2.8	----
As found High point	4913	78.6	803.0	822.5	0.980
As found Mid point	4961	39.2	399.8	410.7	0.980
As found Low point	4980	19.6	199.9	205.5	0.986
New cylinder response					
Baseline Corr As found:	819.7	Previous response	803.2	*% change	2.0%
Baseline Corr 2nd AF pt:	407.9	AF Slope:	1.021376	AF Intercept:	2.224863
Baseline Corr 3rd AF pt:	202.7	AF Correlation:	0.999997	* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					

Average Correction Factor:

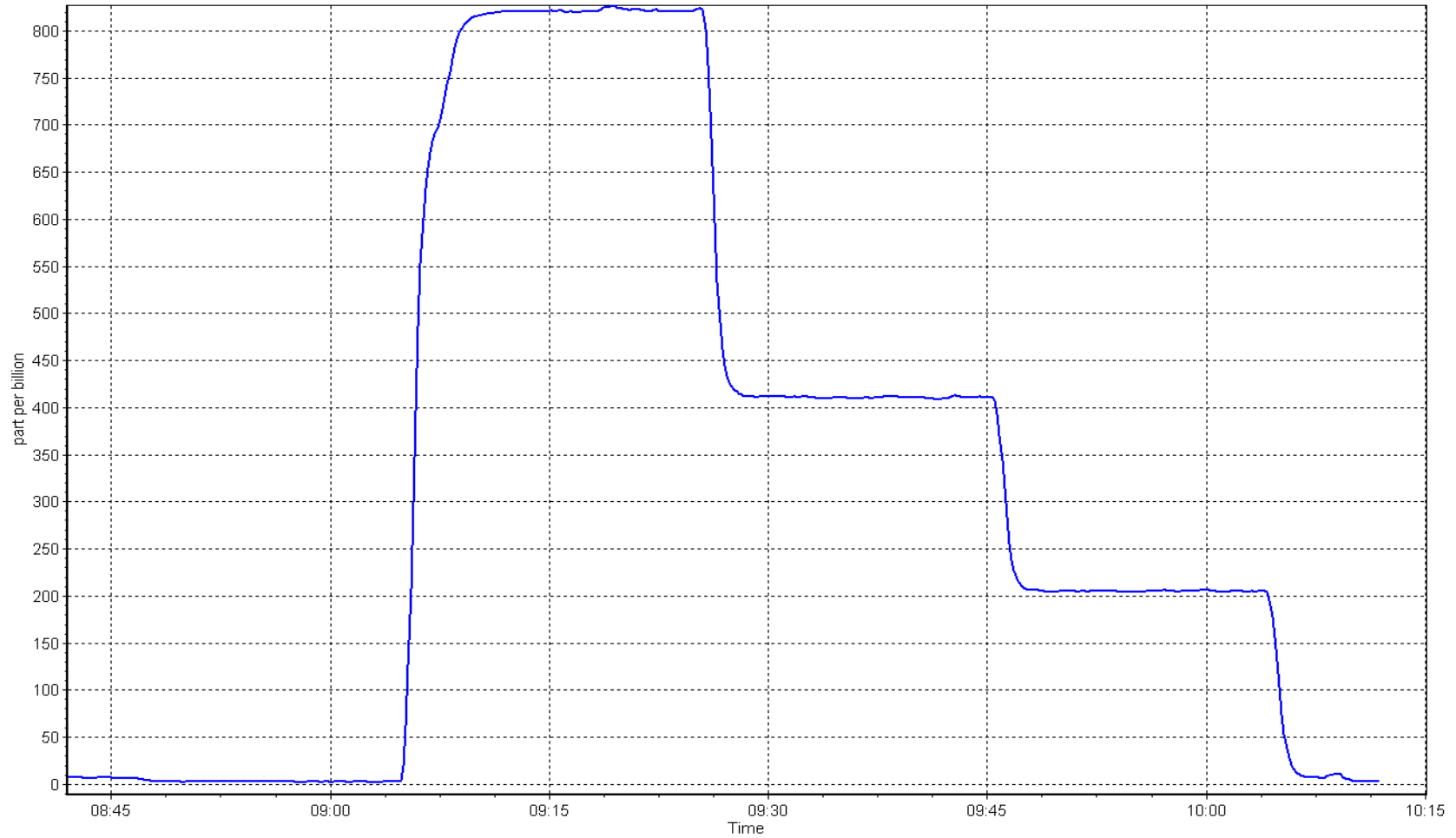
Notes: Instrument removed from service

Calibration Performed By: Jason Brooks

SO2 Calibration Plot

Date: April 30, 2026

Location: Mildred Lake





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Mildred Lake
Calibration Date: April 30, 2026
Start time (MST): 10:12
Reason: Removal

Station number: AMS 02
Last Cal Date: March 27, 2026
End time (MST): 11:47

Calibration Standards

Cal Gas Concentration: 4.75 ppm
Cal Gas Cylinder #: CC700774
Removed Cal Gas Conc: 4.75 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701

Cal Gas Exp Date: August 28, 2027
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 1185
Serial Number: 4891

Analyzer Information

Analyzer make: Thermo 43iQTL
Converter make: Global G150
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 12333331546
Converter serial #: 2023-267
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.020128		Backgd or Offset:	1.58
Calibration intercept:	0.200000		Coeff or Slope:	0.965

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.1	----
As found High point	4916	84.2	80.0	82.7	0.968
As found Mid point	4958	42.1	40.0	41.7	0.961
As found Low point	4979	21.1	20.0	20.7	0.971
New cylinder response					
Baseline Corr As found:	82.6	Prev response:	81.80	*% change:	1.0%
Baseline Corr 2nd AF pt:	41.6	AF Slope:	1.033272	AF Intercept:	0.140000
Baseline Corr 3rd AF pt:	20.6	AF Correlation:	0.999980	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					
SO2 Scrubber Check					
Date of last scrubber change:		July 16, 2024		Ave Corr Factor	
Date of last converter efficiency test:		NA			

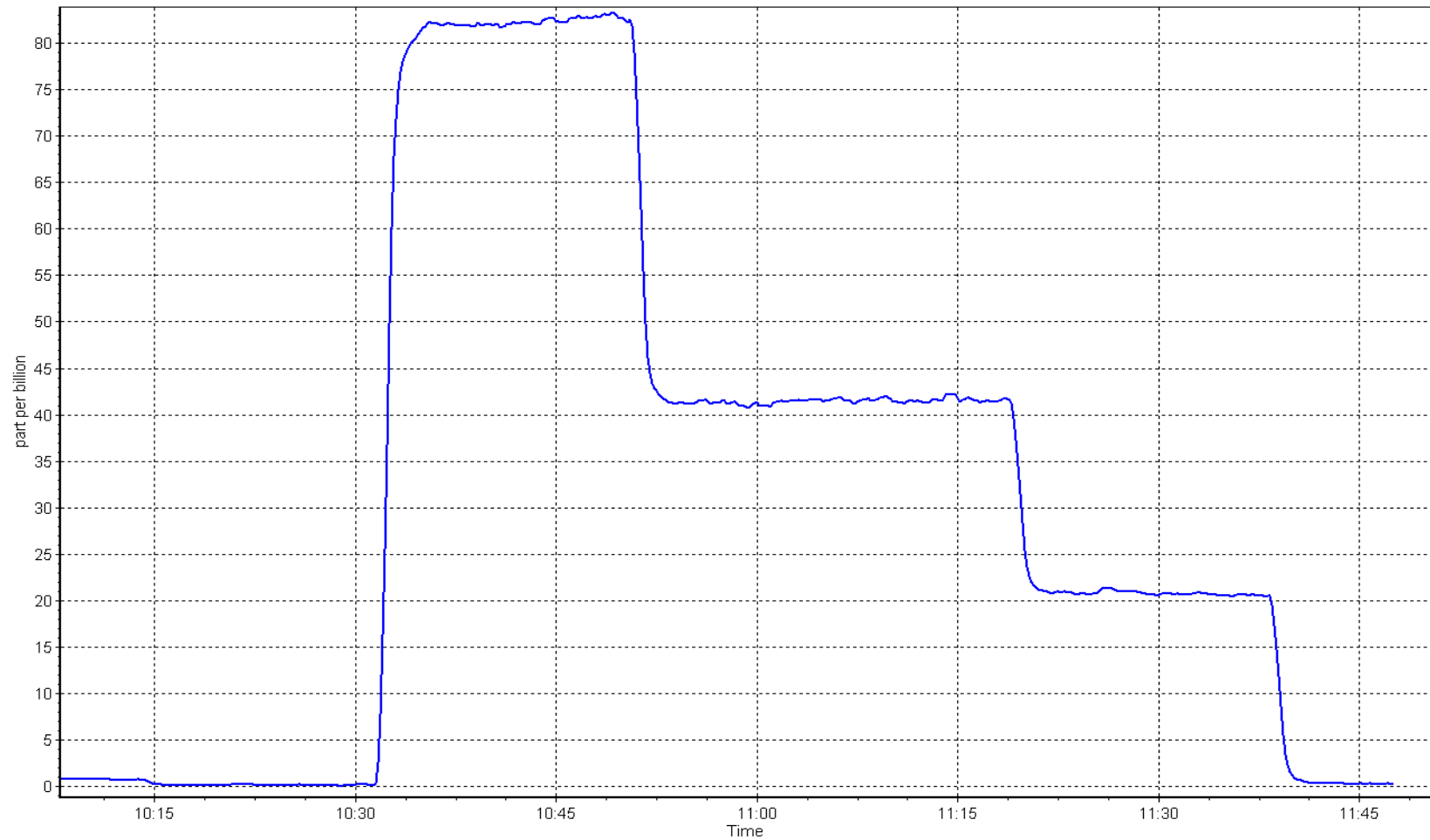
Notes: Instrument removed from service

Calibration Performed By: Jason Brooks

H2S Calibration Plot

Date: April 30, 2026

Location: Mildred Lake





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Mildred Lake
Calibration Date: April 30, 2026
Start time (MST): 8:42
Reason: Removal

Station number: AMS 02
Last Cal Date: March 25, 2026
End time (MST): 10:12

Calibration Standards

Gas Cert Reference:	EB0112903	Cal Gas Expiry Date:	October 9, 2032
CH ₄ Cal Gas Conc.	503.1 ppm	CH ₄ Equiv Conc.	1067.1 ppm
C ₃ H ₈ Cal Gas Conc.	205.1 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH ₄ Conc.	503.1 ppm	CH ₄ Equiv Conc.	1067.1 ppm
Removed C ₃ H ₈ Conc.	205.1 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	1185
Zero Air Gen model:	Teledyne API T701	Serial Number:	4891

Analyzer Information

Analyzer make: Thermo 55i
THC Range: 0 - 20 ppm

Analyzer serial #: 1193585649
NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	3.83E-04	3.83E-04	NMHC SP Ratio:	7.41E-05
CH ₄ Retention time:	17.0	17.0	NMHC Peak Area:	119231
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4922	78.4	16.73	16.16	1.036
As found Mid point	4961	39.2	8.37	8.02	1.043
As found Low point	4980	19.6	4.18	3.97	1.053
New cylinder response					
Baseline Corr AF:	16.16	Prev response	16.64	*% change	-3.0%
Baseline Corr 2nd AF:	8.02	AF Slope:	0.966678	AF Intercept:	-0.037722
Baseline Corr 3rd AF:	3.97	AF Correlation:	0.999975	* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					

Average Correction Factor

Notes:

Instrument removed from service



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4922	78.4	8.84	8.42	1.050
As found Mid point	4961	39.2	4.42	4.21	1.051
As found Low point	4980	19.6	2.21	2.09	1.056
New cylinder response					
Baseline Corr AF:	8.42	Prev response	8.80	*% change	-4.5%
Baseline Corr 2nd AF:	4.21	AF Slope:	0.952801	AF Intercept:	-0.005168
Baseline Corr 3rd AF:	2.09	AF Correlation:	0.999998	* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero					Limit = 0.95-1.05
High point					
Mid point					
Low point					
As left zero					
As left span					

Average Correction Factor

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4922	78.4	7.89	7.74	1.020
As found Mid point	4961	39.2	3.94	3.81	1.034
As found Low point	4980	19.6	1.97	1.88	1.050
New cylinder response					
Baseline Corr AF:	7.74	Prev response	7.83	*% change	-1.2%
Baseline Corr 2nd AF:	3.81	AF Slope:	0.982352	AF Intercept:	-0.032954
Baseline Corr 3rd AF:	1.88	AF Correlation:	0.999911	* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero					Limit = 0.95-1.05
High point					
Mid point					
Low point					
As left zero					
As left span					

Average Correction Factor

Calibration Statistics

	<u>Start</u>	
THC Cal Slope:	0.997483	
THC Cal Offset:	-0.048465	
CH ₄ Cal Slope:	0.996151	
CH ₄ Cal Offset:	-0.025325	
NMHC Cal Slope:	0.997947	
NMHC Cal Offset:	-0.021341	

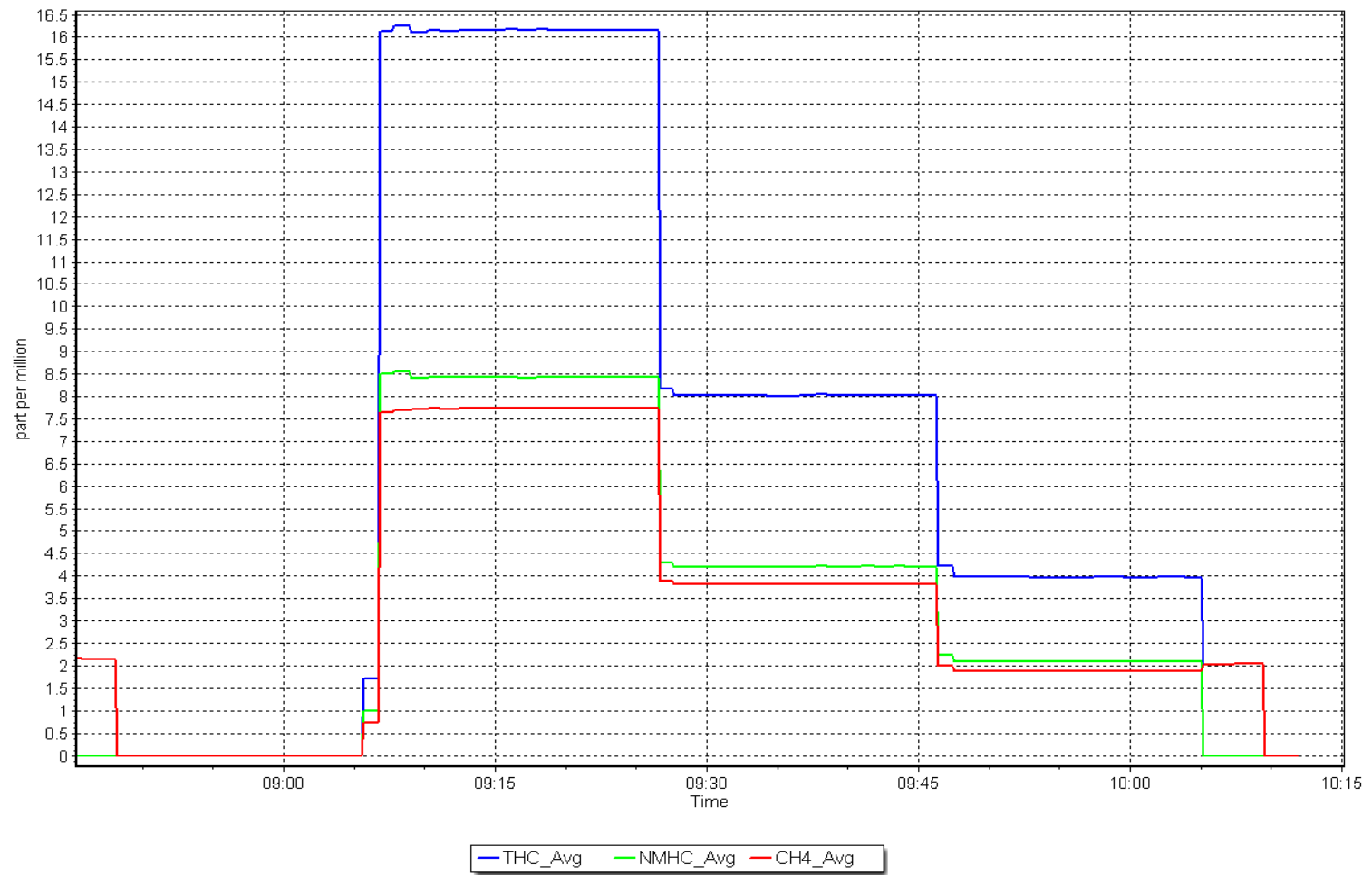
Finish

Calibration Performed By: Jason Brooks

NMHC Calibration Plot

Date: April 30, 2026

Location: Mildred Lake





Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Mildred Lake	Station Number:	AMS 02
Calibration Date:	April 30, 2026	Prev Cal Date:	December 10, 2025
Start Time (MST):	10:00	End Time (MST):	11:19
Tower Height (m):	10.0	Reason:	Removal

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	5230
WS Calibrator:	MetOne 053	Serial Number:	CA 05230

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.3	0.4%
400	39.4	39.4	0.1%
600	58.6	58.5	-0.1%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999999	0.999998	≥ 0.9995
Calculated slope	0.998137	1.000231	$0.98 - 1.02$
Calculated intercept	0.030641	-0.033440	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	B1462
As Found Declination (deg east of True North):	<u>13</u>	As Left Declination (deg east of True North):	<u>13</u>
Solar noon (MST):	NA	Calc Declination*:	13 Degrees
WD Calibrator:	Met One 040	* - calculated declination as per NOAA website	

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	12.5	0.7%
90	89.0	-0.3%
180	179.3	-0.2%
270	272.9	0.8%
350	352.1	0.6%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999954	0.999914	≥ 0.9995
Calculated slope	0.987526	0.996056	$0.97 - 1.03$
Calculated intercept	1.176799	-0.443435	± 5

Notes: Verified sensor readings. Aligned using compass. WS/WD sensors removed

Calibration Performed By: Jason Brooks



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS04 BUFFALO VIEWPOINT APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Buffalo Viewpoint
Calibration Date: April 14, 2026
Start time (MST): 11:30
Reason: Routine

Station number: AMS 04
Last Cal Date: March 6, 2026
End time (MST): 14:47

Calibration Standards

Cal Gas Concentration: 50.87 ppm
Cal Gas Cylinder #: CC446753
Removed Cal Gas Conc: 50.87 ppm
Removed Gas Cyl #:
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701

Cal Gas Exp Date: March 10, 2031
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 3808
Serial Number: 362

Analyzer Information

Analyzer make: Thermo 43i-LTE
Analyzer Range: 0-1000ppb

Serial Number: 1410661331

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999672	1.001871	Backgd or Offset:	1.6	1.6
Calibration intercept:	0.194555	0.275229	Coeff or Slope:	1.016	1.016

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4921	78.6	799.7	798.9	1.001
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	799.0	Previous response	799.7	*% change	-0.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4921	78.6	799.7	801.7	0.998
Mid point	4961	39.3	399.8	400.3	0.999
Low point	4980	19.6	199.4	200.4	0.995
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	78.6	799.7	803.1	0.996
Average Correction Factor:					0.997

Notes: Inlet filter changed after as founds, no adjustment made.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

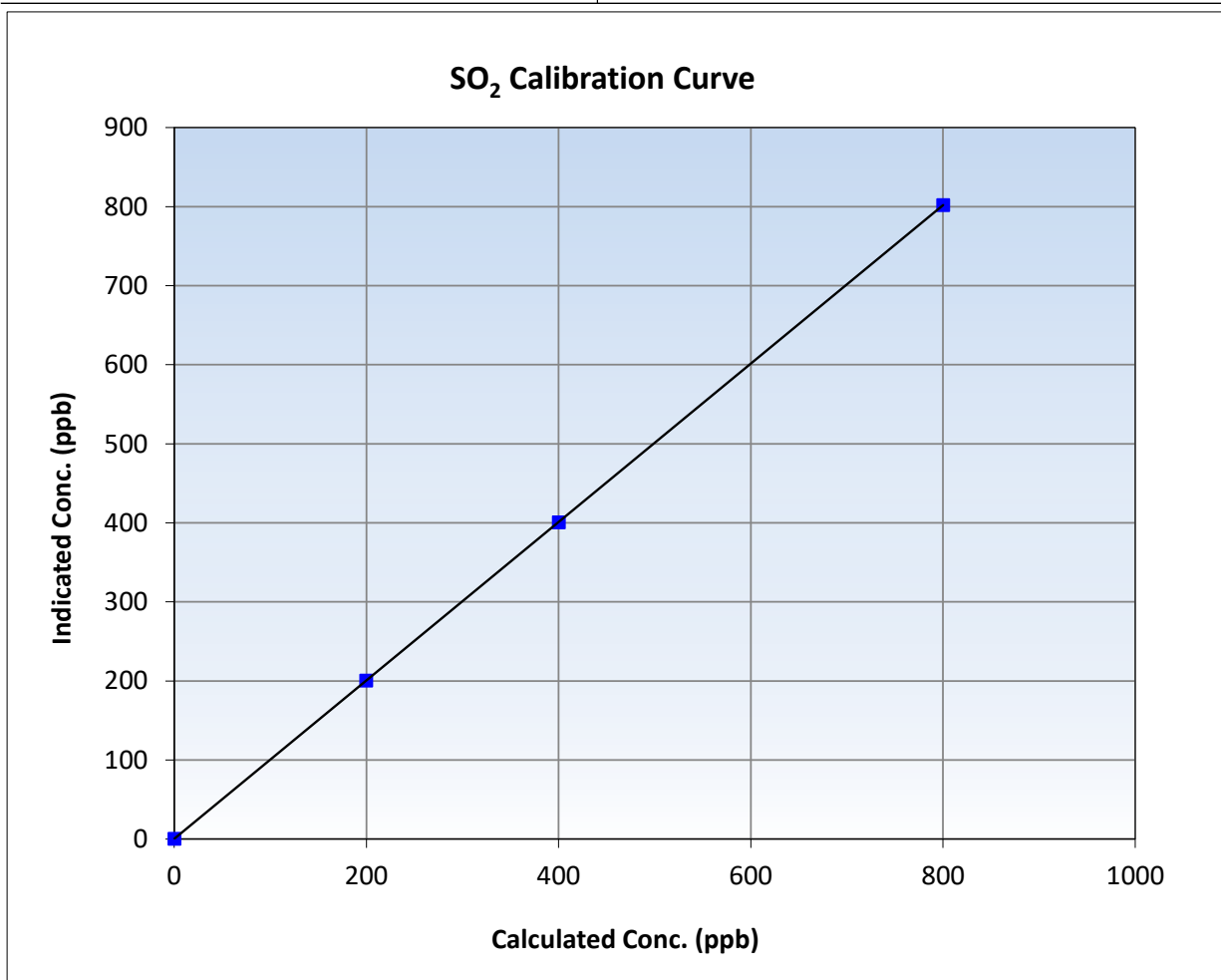
SO₂ Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 6, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	11:30	End Time (MST):	14:47
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1410661331

Calibration Data

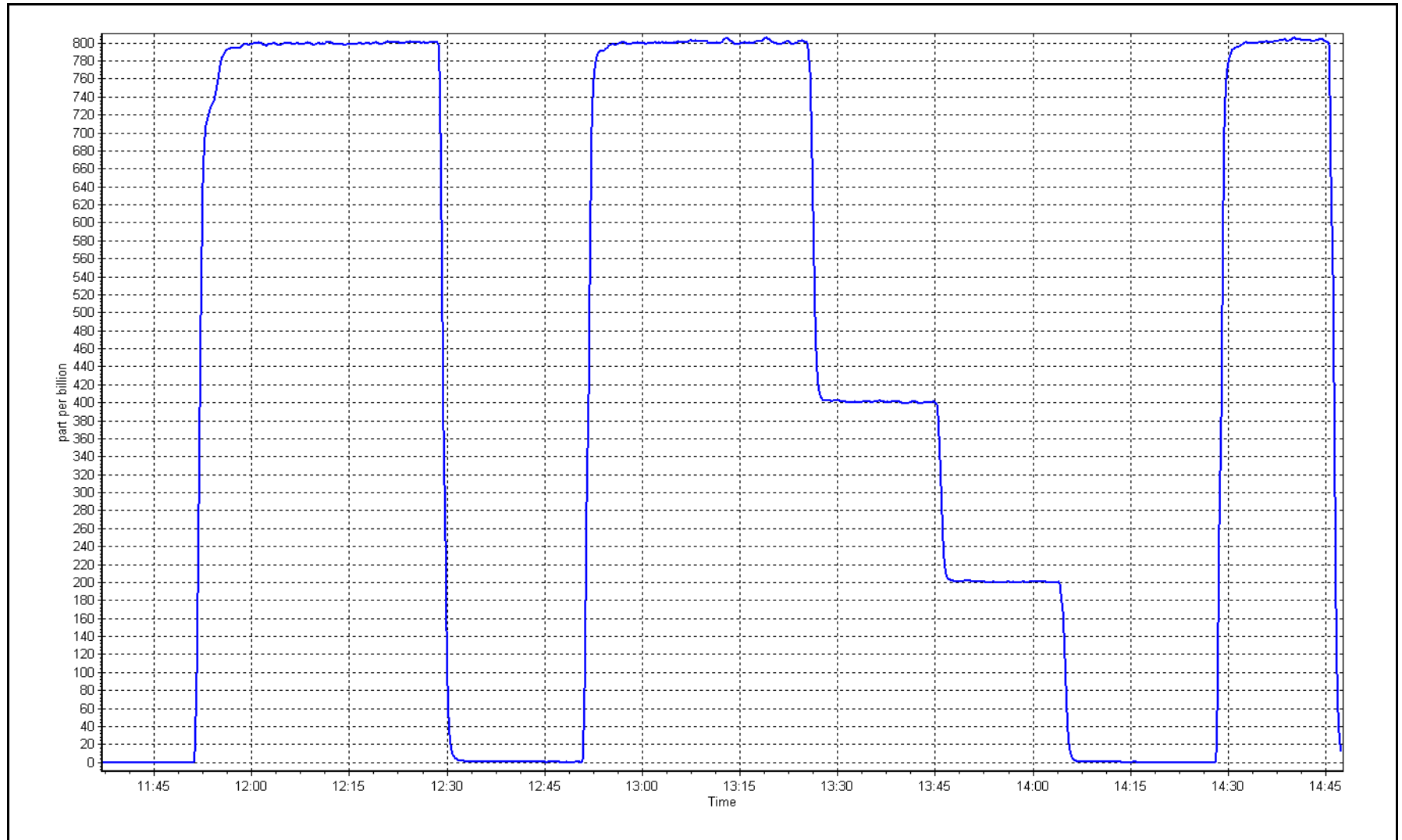
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999999	≥0.995
799.7	801.7	0.9976	Slope	1.001871	0.90 - 1.10
399.8	400.3	0.9988	Intercept	0.275229	+/-30
199.4	200.4	0.9951			



SO2 Calibration Plot

Date: April 14, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Buffalo Viewpoint
Calibration Date: April 20, 2026
Start time (MST): 10:05
Reason: Routine

Station number: AMS 04
Last Cal Date: March 12, 2026
End time (MST): 14:26

Calibration Standards

Cal Gas Concentration: 4.80 ppm
Cal Gas Cylinder #: DT0037528
Removed Cal Gas Conc: 4.80 ppm
Removed Gas Cyl #:
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701H

Cal Gas Exp Date: August 28, 2027
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 3808
Serial Number: 362

Analyzer Information

Analyzer make: Thermo 43i-LTE
Converter make: Global
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1008841400
Converter serial #: 2022-200
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.989993	1.001719	Backgd or Offset:	2.20	2.18
Calibration intercept:	0.158569	-0.101762	Coeff or Slope:	1.152	1.126

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4917	83.3	80.0	82.5	0.968
As found Mid point	4958	41.7	40.0	41.3	0.967
As found Low point	4979	20.8	20.0	20.3	0.979
New cylinder response					
Baseline Corr As found:	82.6	Prev response:	79.32	*% change:	4.0%
Baseline Corr 2nd AF pt:	41.4	AF Slope:	1.034017	AF Intercept:	-0.181901
Baseline Corr 3rd AF pt:	20.4	AF Correlation:	0.999989	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4917	83.3	80.0	80.0	1.000
Mid point	4958	41.7	40.0	40.0	1.001
Low point	4979	20.8	20.0	19.9	1.003
As left zero	5000	0.0	0.0	-0.1	----
As left span	4917	83.3	80.0	81.0	0.987
SO2 Scrubber Check	4920	80.0	800.0	0.1	----
Date of last scrubber change:		12-Mar-26		Ave Corr Factor	1.001
Date of last converter efficiency test:					

Notes:

Span adjusted.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

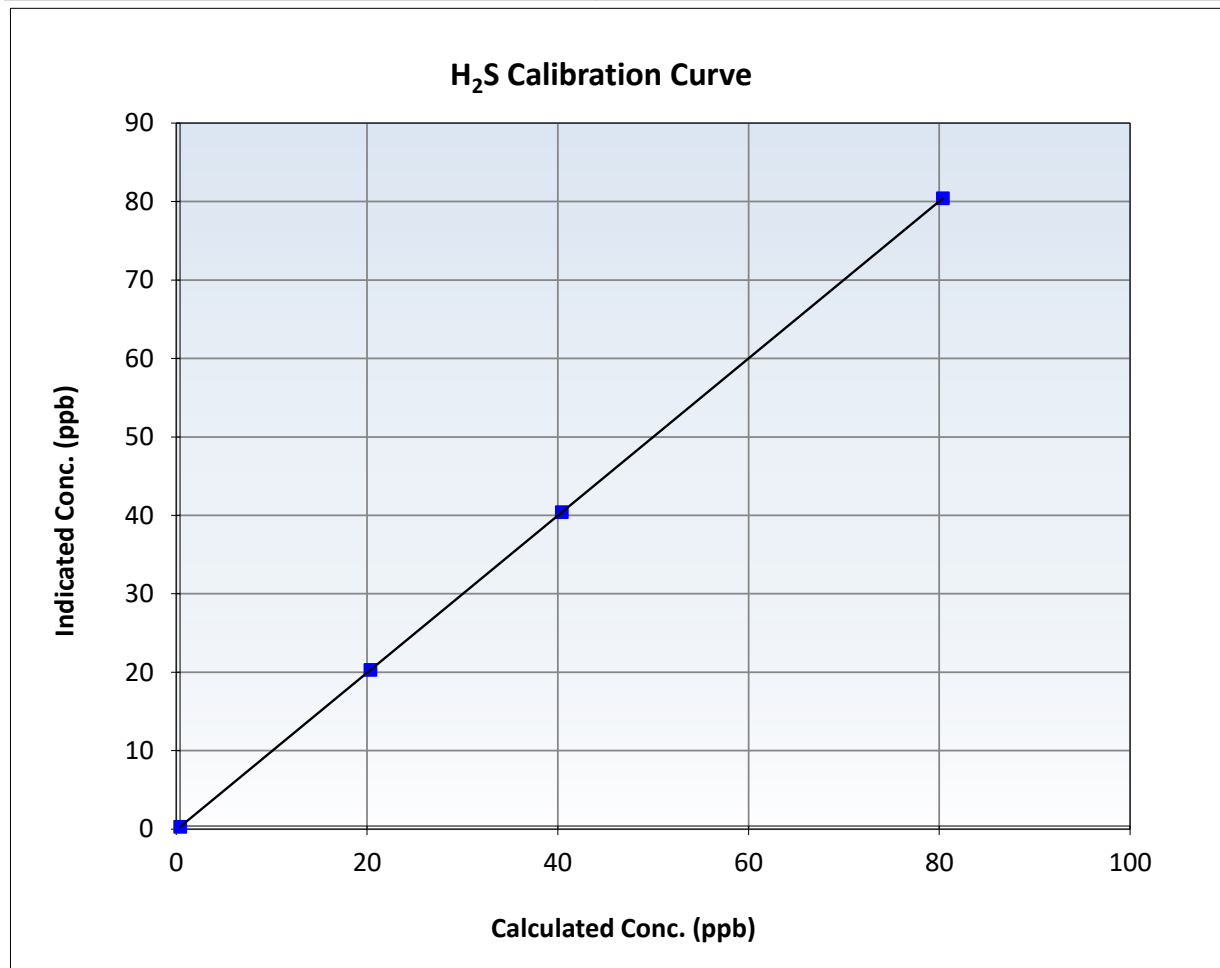
H₂S Calibration Summary

Station Information

Calibration Date:	April 20, 2026	Previous Calibration:	March 12, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	10:05	End Time (MST):	14:26
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1008841400

Calibration Data

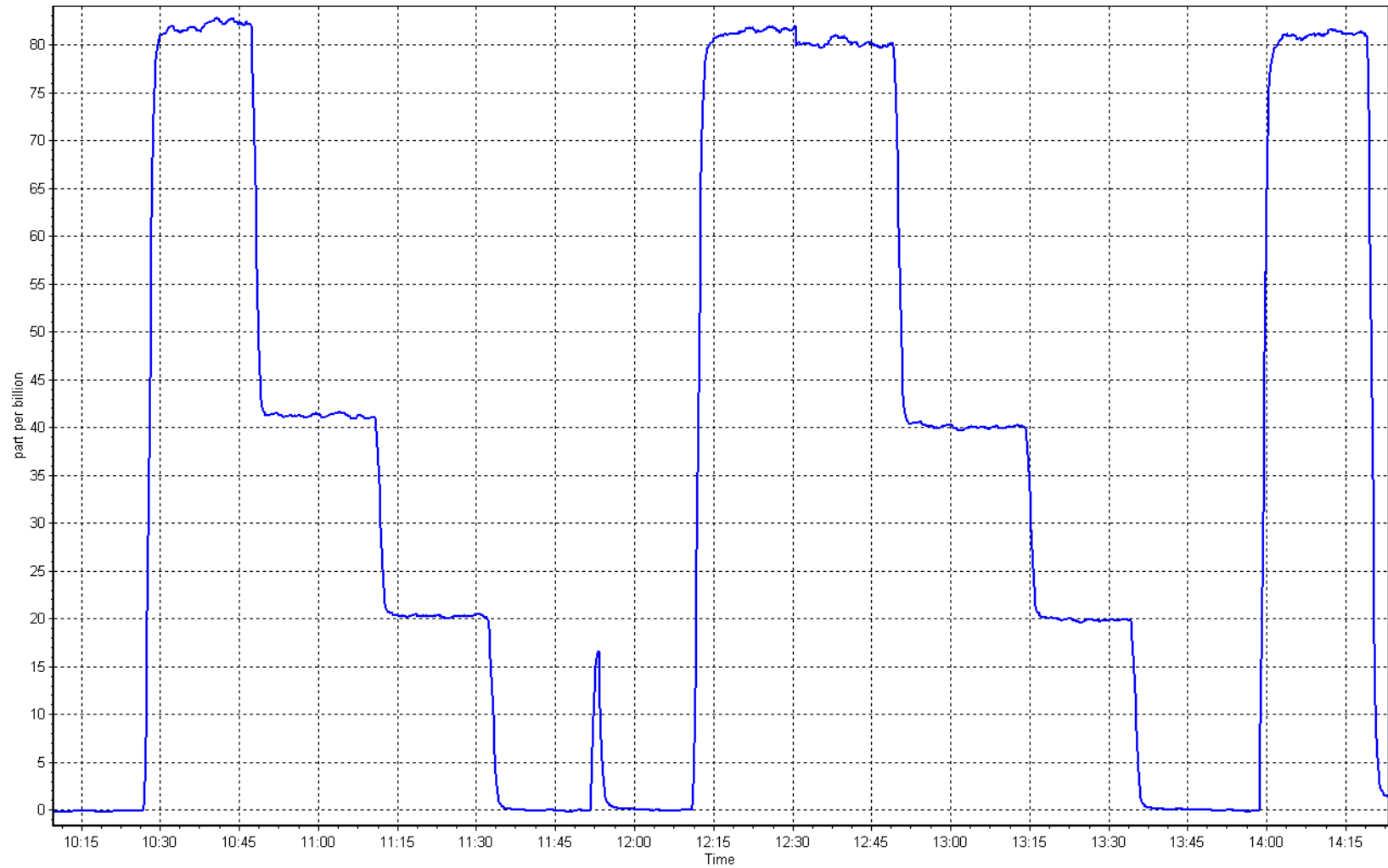
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	1.000000		≥0.995
80.0	80.0	0.9995	Slope	1.001719		0.90 - 1.10
40.0	40.0	1.0009	Intercept	-0.101762		+/-3
20.0	19.9	1.0035				



H₂S Calibration Plot

Date: April 20, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name:	Buffalo Viewpoint	Station number:	AMS 04
Calibration Date:	April 14, 2026	Last Cal Date:	March 6, 2026
Start time (MST):	11:30	End time (MST):	14:47
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC446753	Cal Gas Expiry Date:	March 10, 2031
CH ₄ Cal Gas Conc.	497.2 ppm	CH ₄ Equiv Conc.	1058.2 ppm
C ₃ H ₈ Cal Gas Conc.	204.0 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH ₄ Conc.	497.2 ppm	CH ₄ Equiv Conc.	1058.2 ppm
Removed C ₃ H ₈ Conc.	204.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	3808
Zero Air Gen model:	Teledyne API T701	Serial Number:	362

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038
THC Range:	0 - 20 ppm	NMHC/CH ₄ Range:	0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.27E-04	2.33E-04	NMHC SP Ratio:	4.31E-05
CH ₄ Retention time:	11.2	11.2	NMHC Peak Area:	204629
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.6	16.64	16.29	1.022
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.29	Prev response	16.56	*% change	-1.7%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	78.6	16.64	16.65	0.999
Mid point	4961	39.3	8.32	8.35	0.996
Low point	4980	19.6	4.15	4.12	1.007
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.6	16.64	16.66	0.999
Average Correction Factor					1.001

Notes: N2 cylinder changed out. Span adjusted.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.6	8.82	8.65	1.020
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.65	Prev response	8.77	*% change	-1.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	78.6	8.82	8.82	1.000
Mid point	4961	39.3	4.41	4.42	0.997
Low point	4980	19.6	2.20	2.19	1.004
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.6	8.82	8.84	0.998
Average Correction Factor					1.000

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.6	7.82	7.64	1.023
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.64	Prev response	7.78	*% change	-1.8%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	78.6	7.82	7.83	0.998
Mid point	4961	39.3	3.91	3.93	0.995
Low point	4980	19.6	1.95	1.93	1.011
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.6	7.82	7.81	1.001
Average Correction Factor					1.002

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.995374	1.001646
THC Cal Offset:	-0.002759	-0.008140
CH ₄ Cal Slope:	0.996103	1.002960
CH ₄ Cal Offset:	-0.005314	-0.007505
NMHC Cal Slope:	0.994378	1.000196
NMHC Cal Offset:	0.004155	-0.000036

Calibration Performed By: Aswin Sasi Kumar



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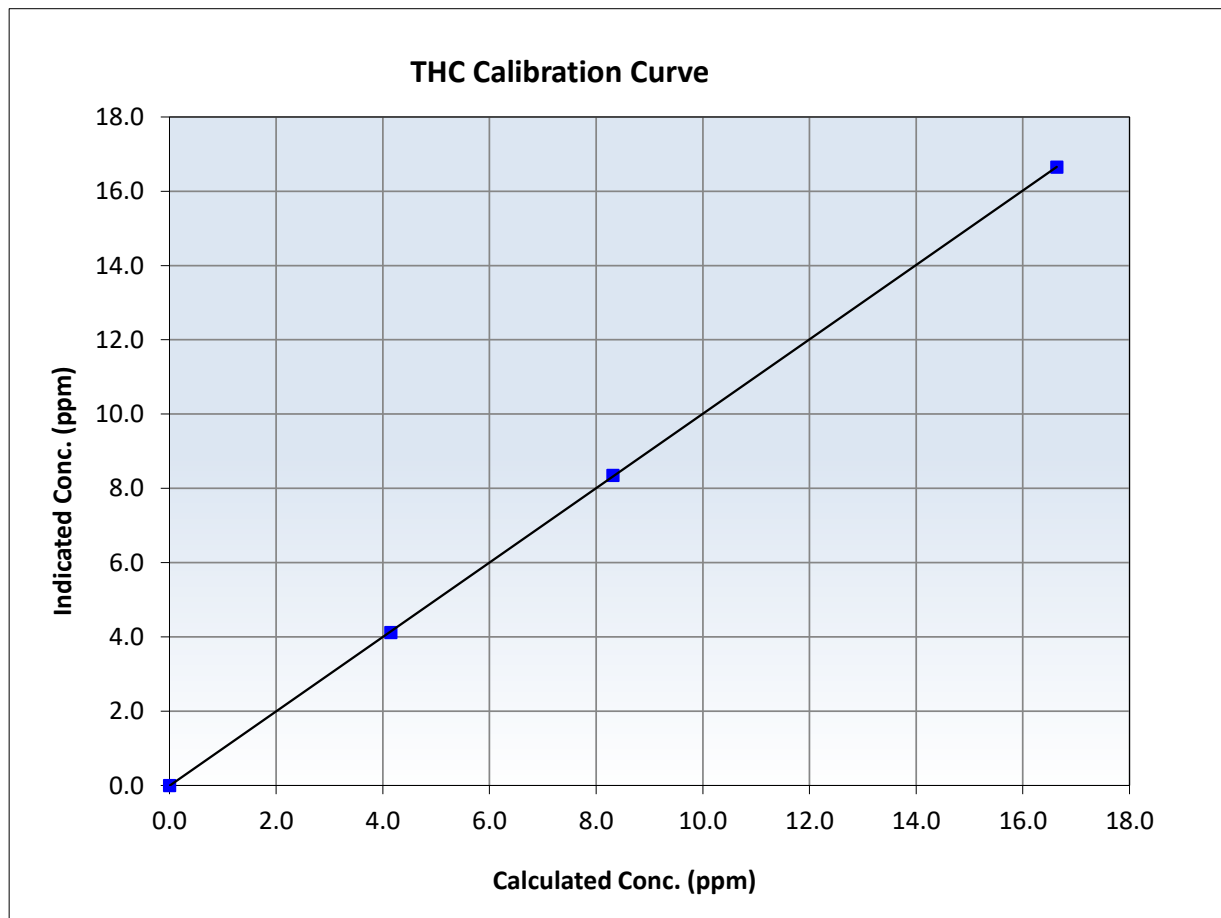
THC Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 6, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	11:30	End Time (MST):	14:47
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999989	≥ 0.995
16.64	16.65	0.9992	Slope	1.001646	$0.90 - 1.10$
8.32	8.35	0.9960	Intercept	-0.008140	± 0.5
4.15	4.12	1.0074			





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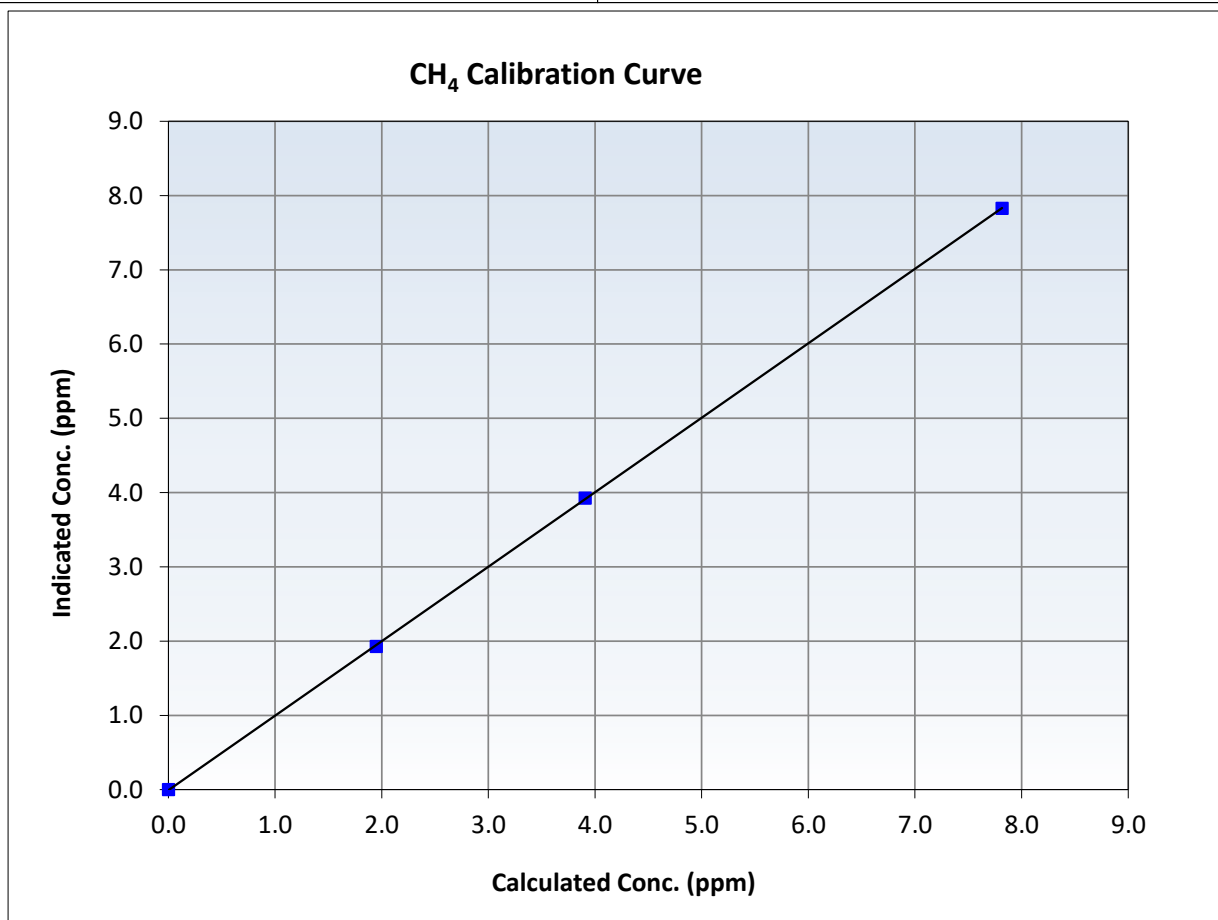
CH₄ Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 6, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	11:30	End Time (MST):	14:47
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999981	≥ 0.995
7.82	7.83	0.9983	Slope	1.002960	$0.90 - 1.10$
3.91	3.93	0.9954	Intercept	-0.007505	± 0.5
1.95	1.93	1.0110			





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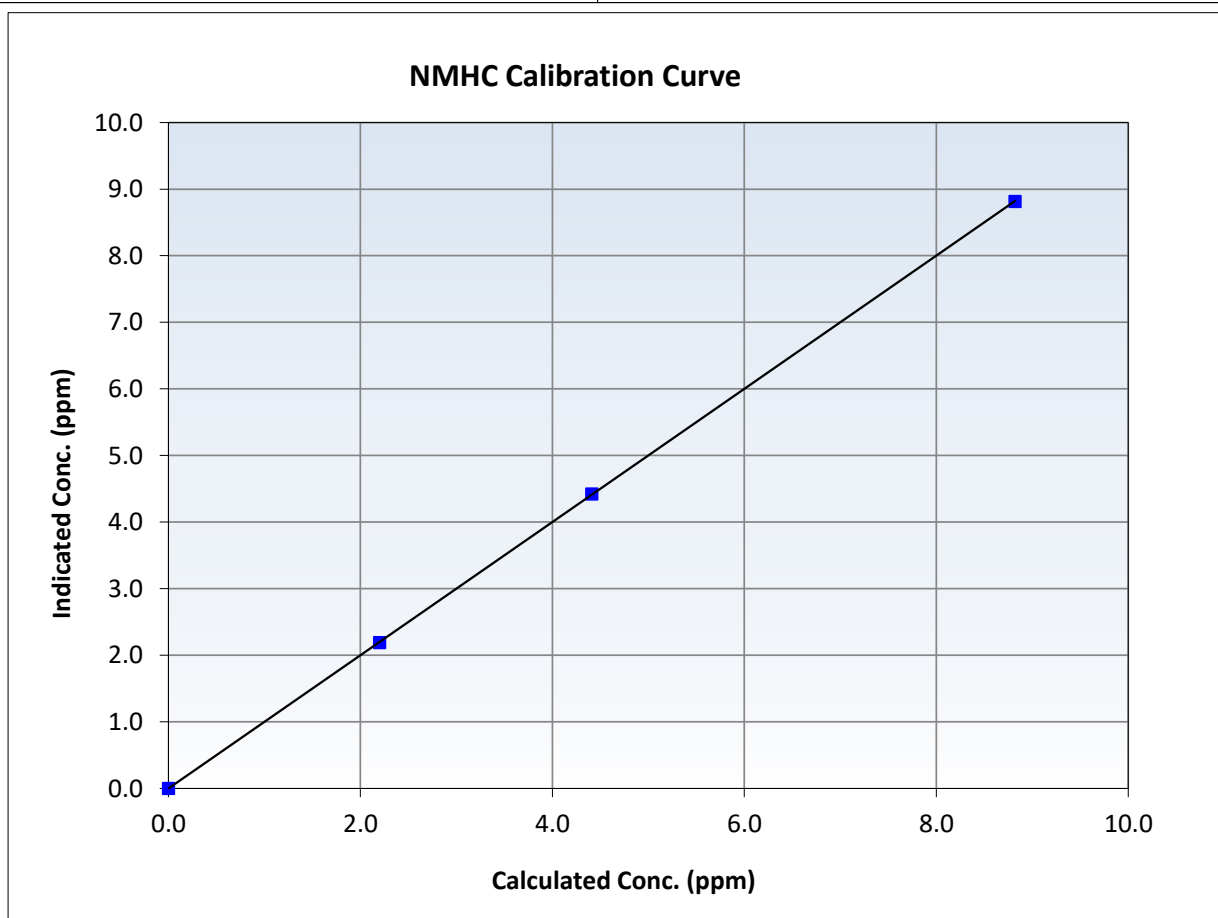
NMHC Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 6, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	11:30	End Time (MST):	14:47
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

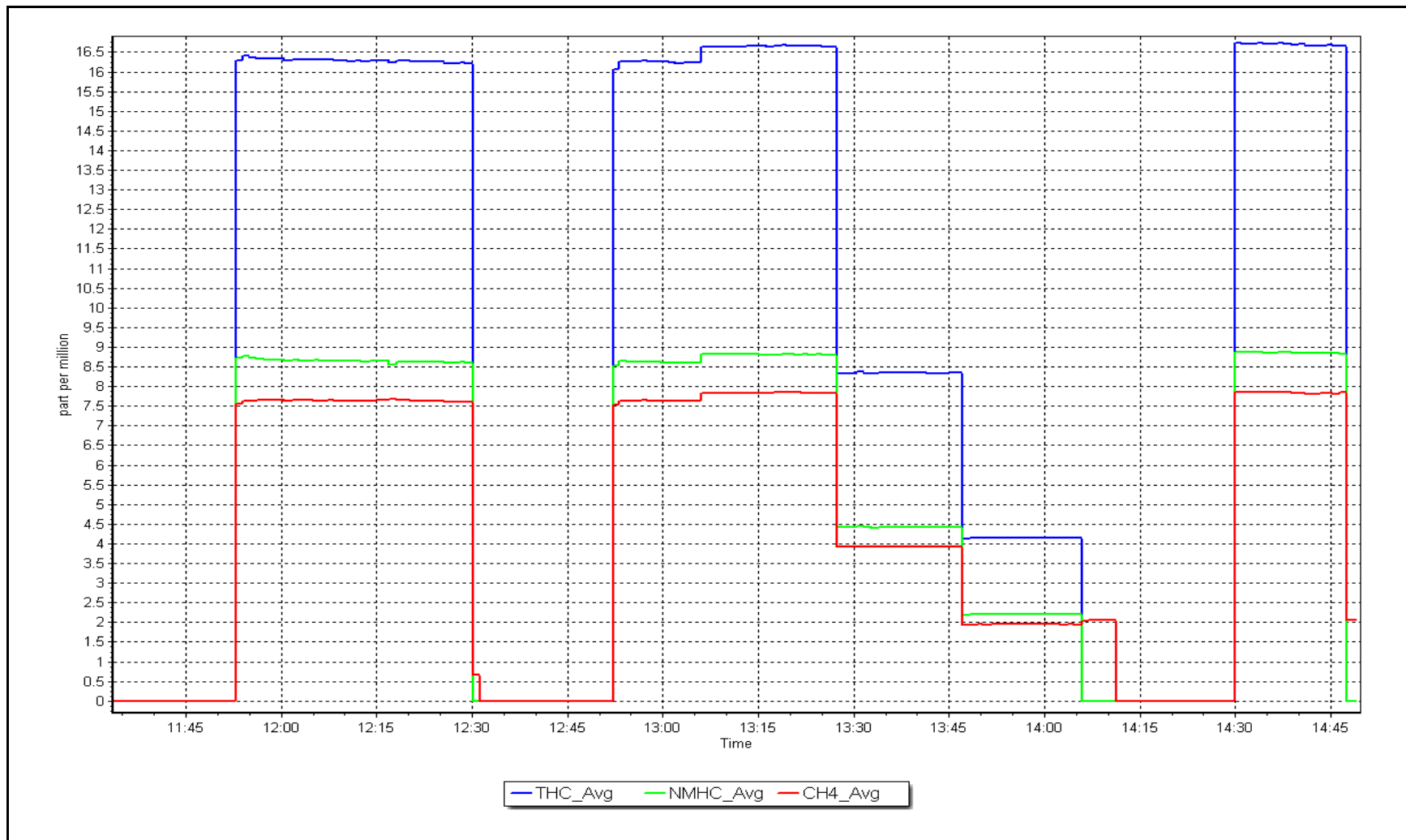
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999994	≥ 0.995
8.82	8.82	1.0003	Slope	1.000196	$0.90 - 1.10$
4.41	4.42	0.9969	Intercept	-0.000036	± 0.5
2.20	2.19	1.0038			



NMHC Calibration Plot

Date: April 14, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Buffalo Viewpoint
Station number: AMS 04
Calibration Date: April 15, 2026
Last Cal Date: March 10, 2026
Start time (MST): 9:47
End time (MST): 14:32
Reason: Routine

Calibration Standards

NO Gas Cylinder #: CC324979
NOX Cal Gas Conc: 48.90 ppm
Removed Cylinder #:
Removed Gas NOX Conc: 48.90 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701
Cal Gas Expiry Date: November 3, 2032
NO Cal Gas Conc: 48.80 ppm
Removed Gas Exp Date:
Removed Gas NO Conc: 48.80 ppm
NO gas Diff:
Serial Number: 3808
Serial Number: 362

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	-0.1	----	----
AF High point	4918	81.8	800.0	798.4	1.6	818.0	811.0	6.9	0.9782	0.9847
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 800.0 ppb	NO = 797.0 ppb	* = > +/-5% change initiates investigation	*Percent Change	NO _x = 2.2%
Baseline Corr 1st pt	NO _x = 817.9 ppb	NO = 810.8 ppb	<u>As Found Statistics</u>	*Percent Change	NO = 1.7%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb	As found NO _x r ² :	Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb	As found NO r ² :	NO SI:	NO Int:
			As found NO ₂ r ² :	NO2 SI:	NO ₂ Int:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1218153357

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.000666	1.000152
NO _x Cal Offset:	-0.593556	-0.113548
NO Cal Slope:	1.000457	1.001574
NO Cal Offset:	-1.754537	-1.594500
NO ₂ Cal Slope:	1.003540	1.003983
NO ₂ Cal Offset:	1.199356	0.151329

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.936	0.920	NO bkgnd or offset:	6.4	6.3
NOX coeff or slope:	0.995	0.993	NOX bkgnd or offset:	6.4	6.3
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	235.1	235.1

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.3	0.3	0.0	----	----
High point	4918	81.8	800.0	798.4	1.6	800.1	798.8	1.4	0.9999	0.9995
Mid point	4959	40.9	400.0	399.2	0.8	400.2	397.9	2.3	0.9995	1.0032
Low point	4980	20.4	199.5	199.1	0.4	198.7	195.5	3.2	1.0040	1.0184
As left zero	5000	0.0	0.0	0.2	-0.2	0.2	0.2	0.0	----	----
As left span	4918	81.8	800.0	400.9	800.0	800.0	400.9	399.4	1.0000	1.0000
Average Correction Factor									1.0012	1.0070

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.0	----	----
High GPT point	794.9	399.5	397.0	398.7	0.9958	100.4%
Mid GPT point	794.9	611.6	184.9	185.9	0.9948	100.5%
Low GPT point	794.9	704.1	92.4	93.1	0.9929	100.7%
Average Correction Factor					0.9945	100.6%

Notes:

Span adjusted.

Calibration Performed By:

Aswin Sasi Kumar



Wood Buffalo Environmental Association

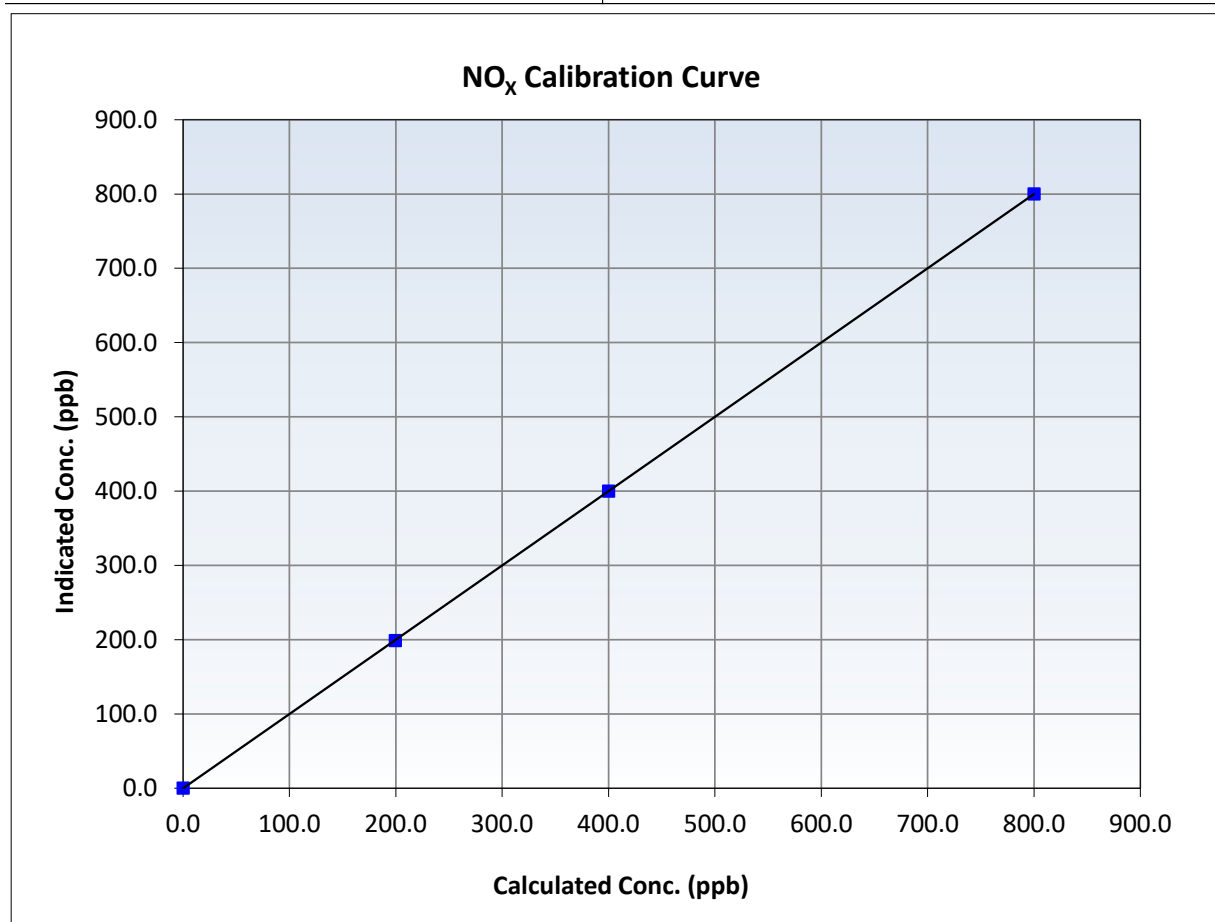
NO_x Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 10, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:47	End Time (MST):	14:32
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153357

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999998	≥0.995
800.0	800.1	0.9999	Slope	1.000152	0.90 - 1.10
400.0	400.2	0.9995	Intercept	-0.113548	+/-20
199.5	198.7	1.0040			





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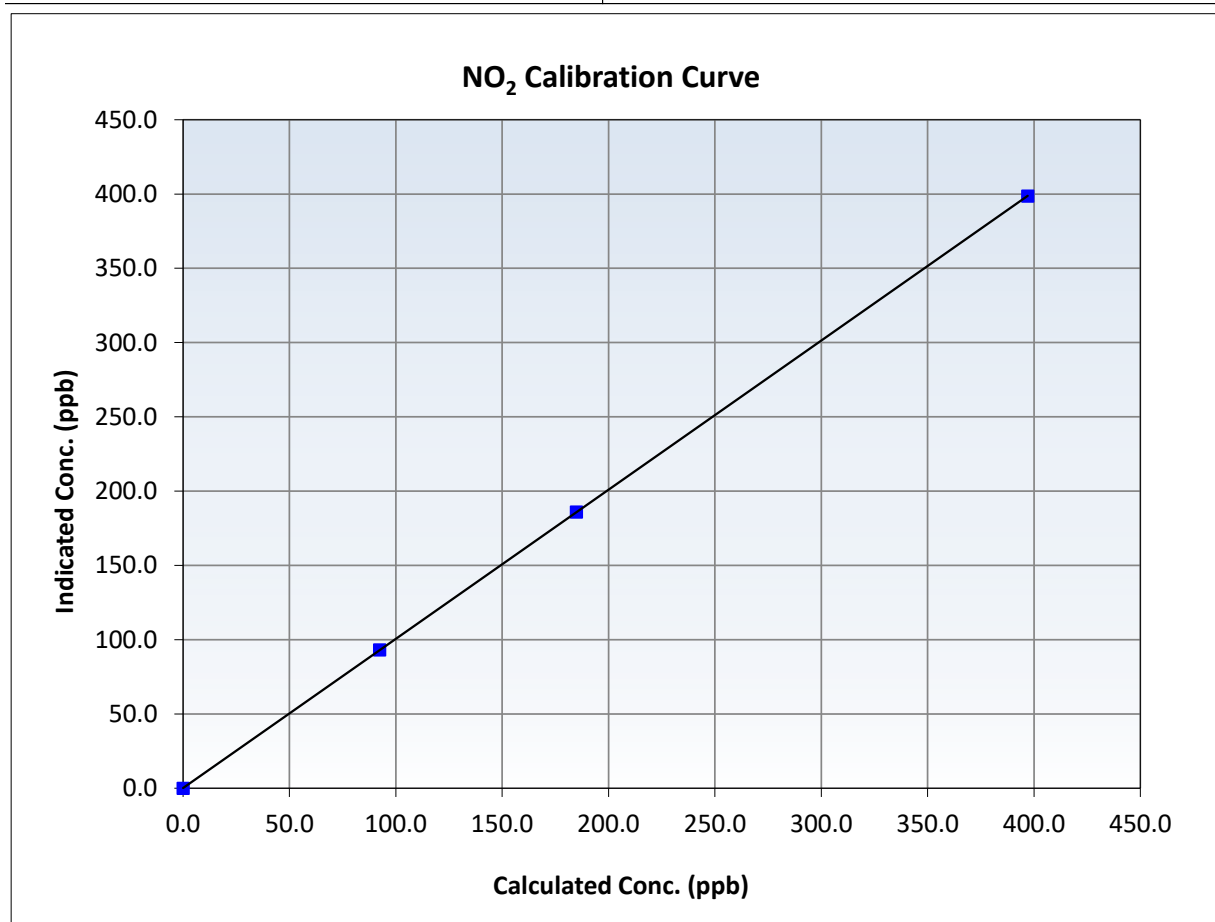
NO₂ Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 10, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:47	End Time (MST):	14:32
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153357

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999999	≥0.995
397.0	398.7	0.9958	Slope	1.003983	0.90 - 1.10
184.9	185.9	0.9948	Intercept	0.151329	+/-20
92.4	93.1	0.9929			





Wood Buffalo Environmental Association

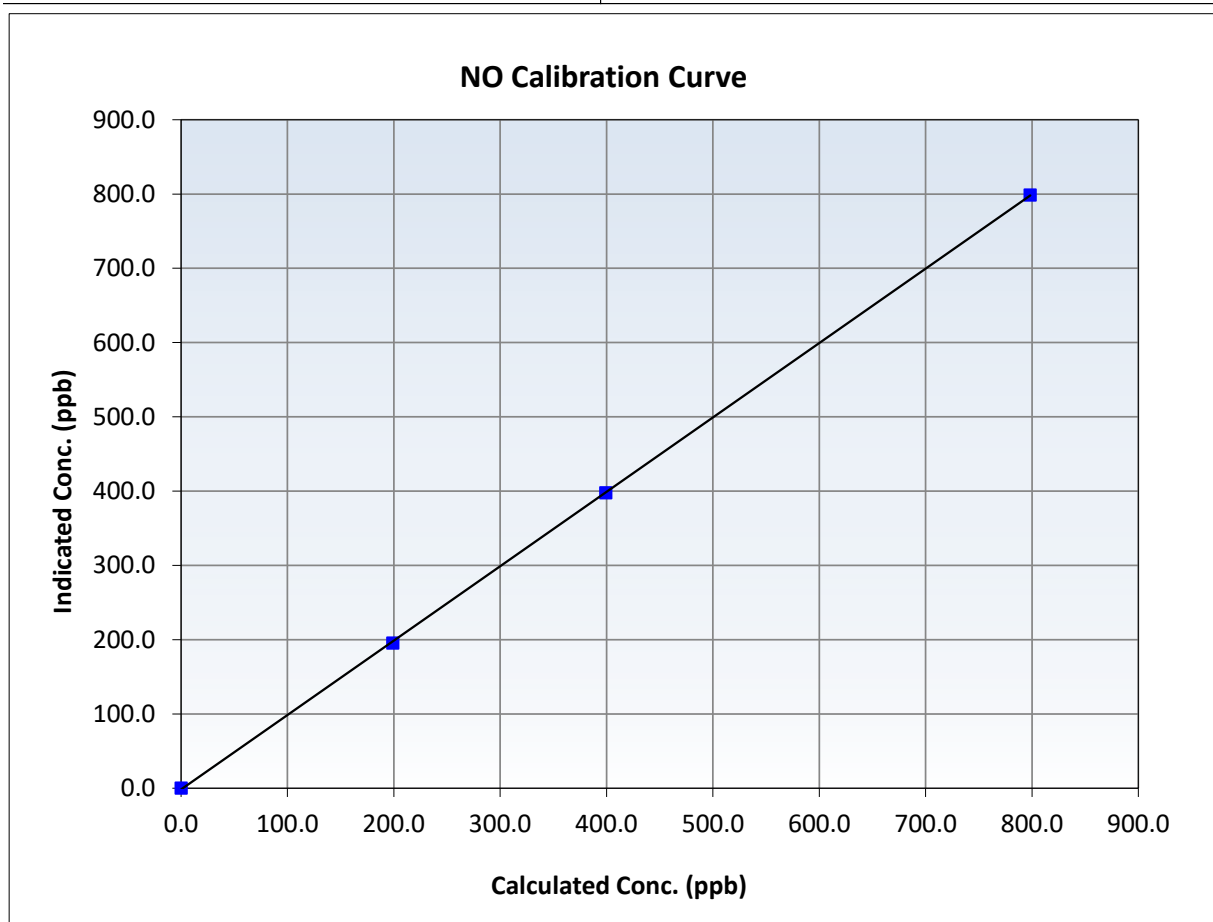
NO Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 10, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:47	End Time (MST):	14:32
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153357

Calibration Data

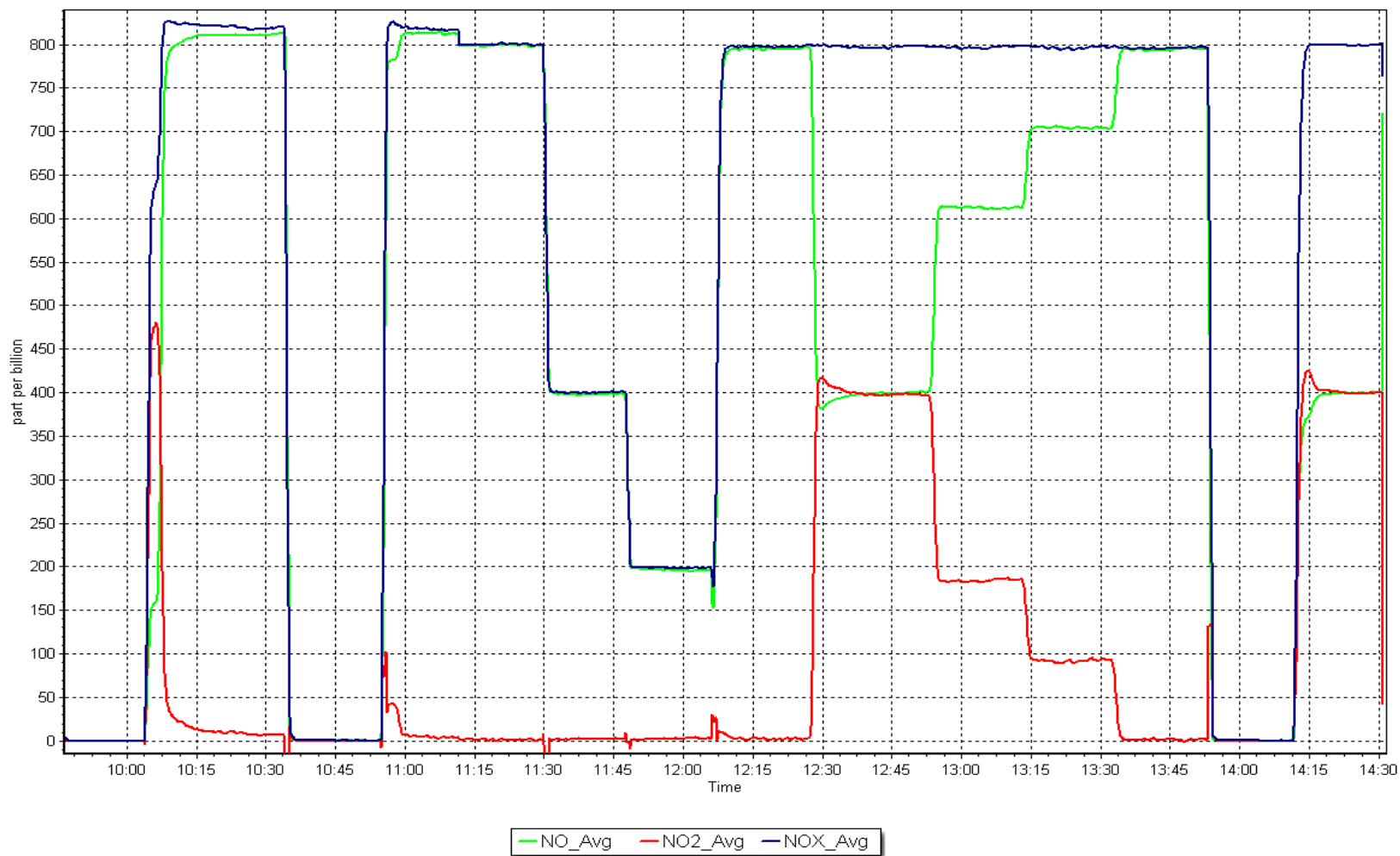
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999973	≥ 0.995
798.4	798.8	0.9995	Slope	1.001574	$0.90 - 1.10$
399.2	397.9	1.0032	Intercept	-1.594500	± 20
199.1	195.5	1.0184			



NO_x Calibration Plot

Date: April 15, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Buffalo Viewpoint
Calibration Date: April 10, 2026
Start time (MST): 9:55
Reason: Routine

Station number: AMS 04
Last Cal Date: March 5, 2026
End time (MST): 13:36

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701H

Serial Number: 3808
Serial Number: 362

Analyzer Information

Analyzer make: Teledyne API T400
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 2961

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002000	0.999086	Backgd or Offset:	-0.2	-0.2
Calibration intercept:	0.300000	0.360000	Coeff or Slope:	1.020	1.020

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	5000	1071.2	400.0	400.5	0.998
As found Mid point					
As found Low point					
Baseline Corr As found:	400.7	Previous response	401.1	*% change	-0.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.2	----
High point	5000	1072.6	400.0	399.8	1.001
Mid point	5000	864.1	200.0	200.6	0.997
Low point	5000	742.1	100.0	100.2	0.998
As left zero	5000	0.0	0.0	-0.1	----
As left span	5000	1072.4	400.0	403.1	0.992
Average Correction Factor					0.999

Notes: No adjustments made.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

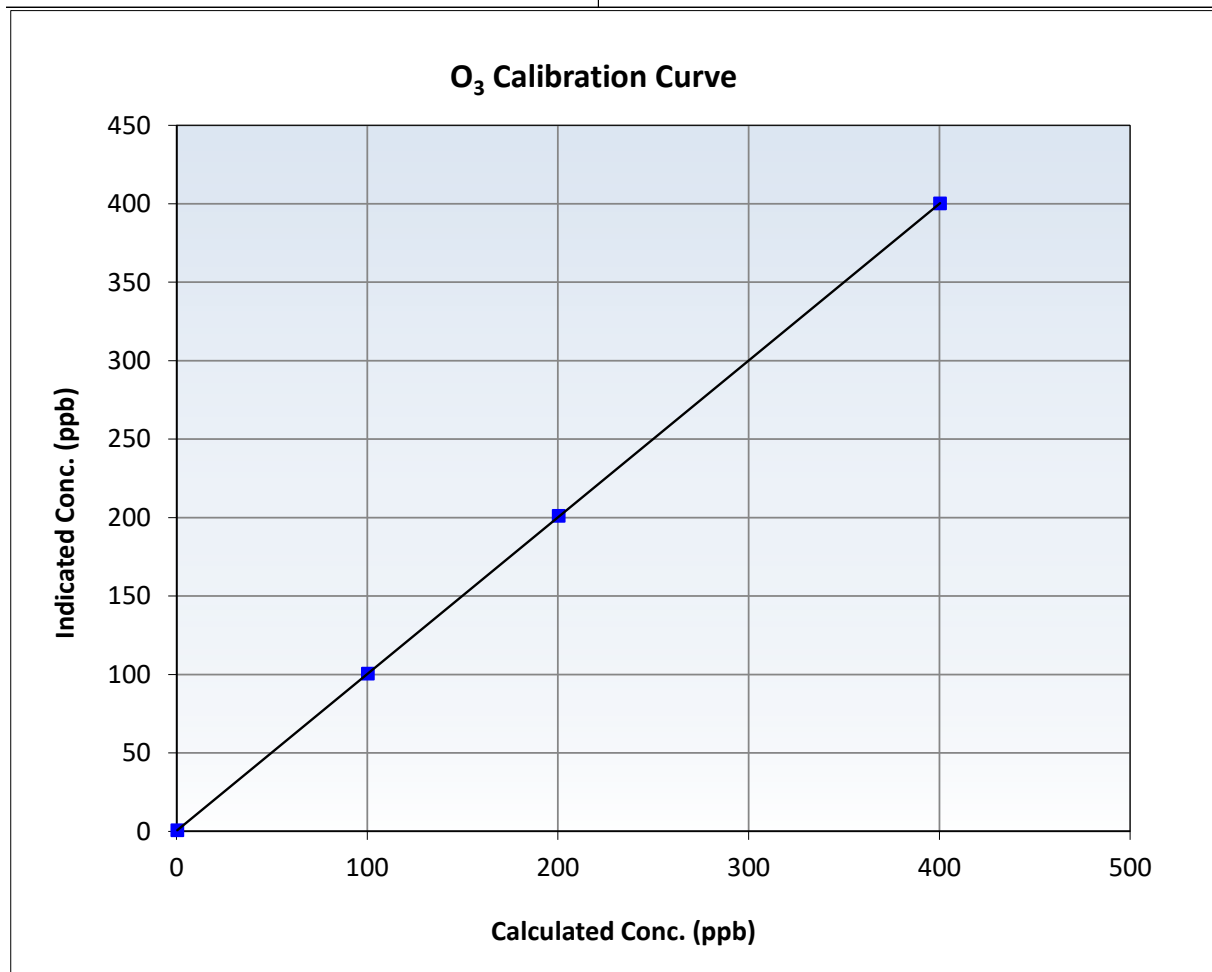
O₃ Calibration Summary

Station Information

Calibration Date:	April 10, 2026	Previous Calibration:	March 5, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:55	End Time (MST):	13:36
Analyzer make:	Teledyne API T400	Analyzer serial #:	2961

Calibration Data

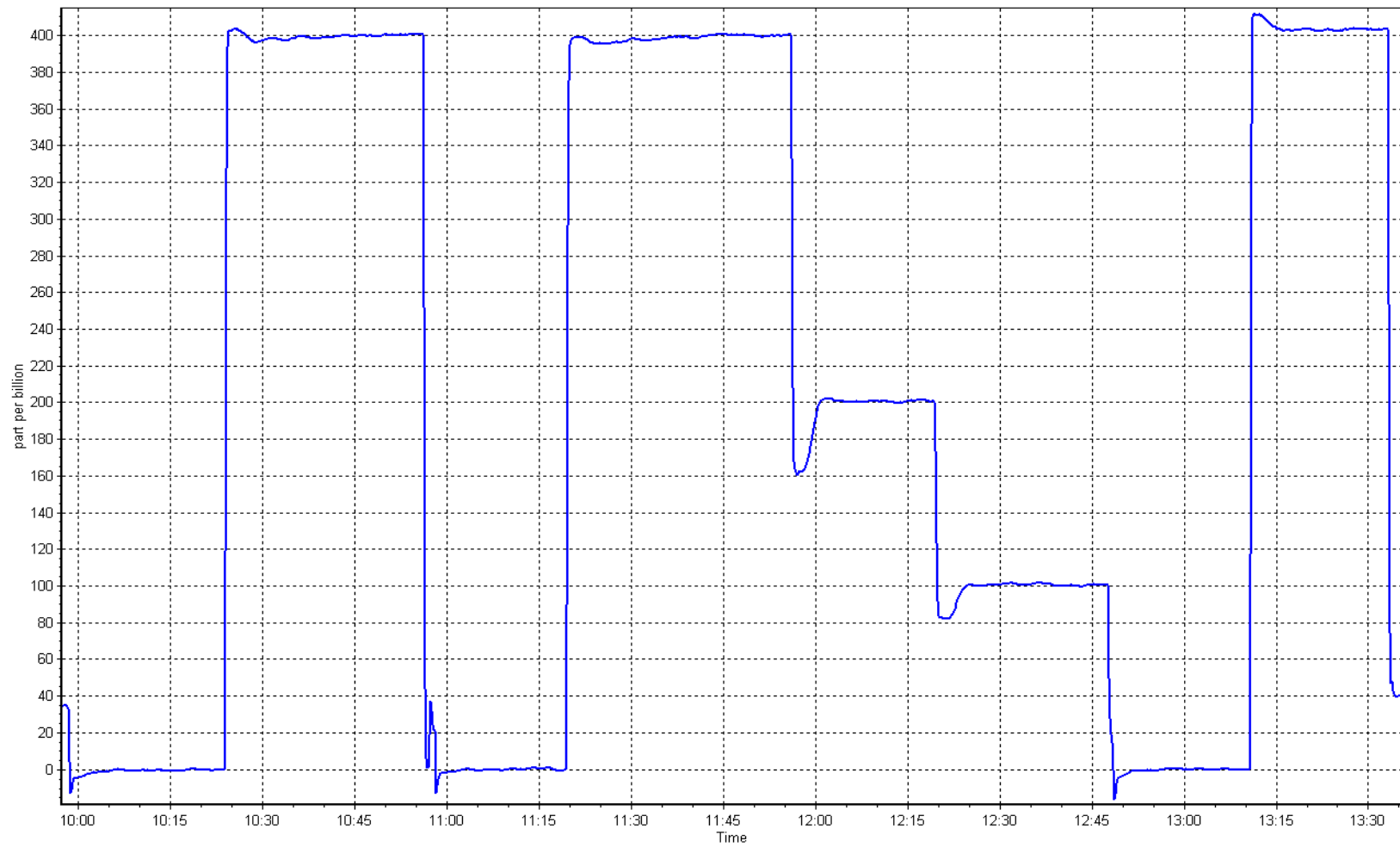
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999997	≥0.995
400.0	399.8	1.0005	Slope	0.999086	0.90 - 1.10
200.0	200.6	0.9970	Intercept	0.360000	+/- 5
100.0	100.2	0.9980			



O₃ Calibration Plot

Date: April 10, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Buffalo Viewpoint Station number: AMS 04
Calibration Date: April 20, 2026 Last Cal Date: March 12, 2026
Start time (MST): 13:39 End time (MST): 14:22

Analyzer Make: Teledyne API T640 S/N: 321
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388748
Temp/RH standard: Alicat FP-25BT S/N: 388748

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	9.9	9.1	9.9	☐	+/- 2 °C
P (mmHg)	721.2	725.3	721.2	☐	+/- 10 mmHg
Flow (LPM)	5.00	4.92	5.00	☐	+/- 0.25 LPM
PW% (pump)	36	----	36	☐	>80%
Zero Verification	PM w/o HEPA: 5.8		PM w/ HEPA: 0.0		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: 30-Jan-27
Lot No.: 100128-050-051

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test				☐	+/- 0.5

Date Optical Chamber Cleaned: March 12, 2026
Date Disposable Filter Changed: March 12, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0.0 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: December 18, 2025
Date RH/T Sensor Cleaned: December 18, 2025

Monthly checks done.

Notes:

Calibration by: Aswin Sasi Kumar



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS05
MANNIX
APRIL 2026**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Mannix
Calibration Date: April 15, 2026
Start time (MST): 9:11
Reason: Routine

Station number: AMS 05
Last Cal Date: March 5, 2026
End time (MST): 14:18

Calibration Standards

Cal Gas Concentration:	50.06	ppm	Cal Gas Exp Date:	October 22, 2032
Cal Gas Cylinder #:	CC308040			
Removed Cal Gas Conc:	50.06	ppm	Rem Gas Exp Date:	October 22, 2032
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Model:	API T700		Serial Number:	5470
Zero Air Gen Model:	API T701		Serial Number:	361

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 1000 ppb
Serial Number: 1008841399

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.003307	1.003192	Backgd or Offset:	10.5	11.3
Calibration intercept:	-1.456869	-2.516303	Coeff or Slope:	0.923	0.923

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.4	----
As found High point	4920	79.9	800.0	806.4	0.993
As found Mid point	4960	40.0	400.5	400.1	1.002
As found Low point	4980	20.0	200.2	198.0	1.013
New cylinder response					
Baseline Corr As found:	806.0	Previous response	801.2	*% change	0.6%
Baseline Corr 2nd AF pt:	399.7	AF Slope:	1.008763	AF Intercept:	-2.017358
Baseline Corr 3rd AF pt:	197.6	AF Correlation:	0.999957	* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4920	79.9	800.0	801.4	0.998
Mid point	4960	40.0	400.5	397.4	1.008
Low point	4980	20.0	200.2	196.5	1.019
As left zero	5000	0.0	0.0	0.0	----
As left span	4920	79.9	800.0	802.7	0.997
Average Correction Factor:					1.008

Notes: Sample inlet filter and pump was changed after the multi point as founds. Adjusted zero.

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

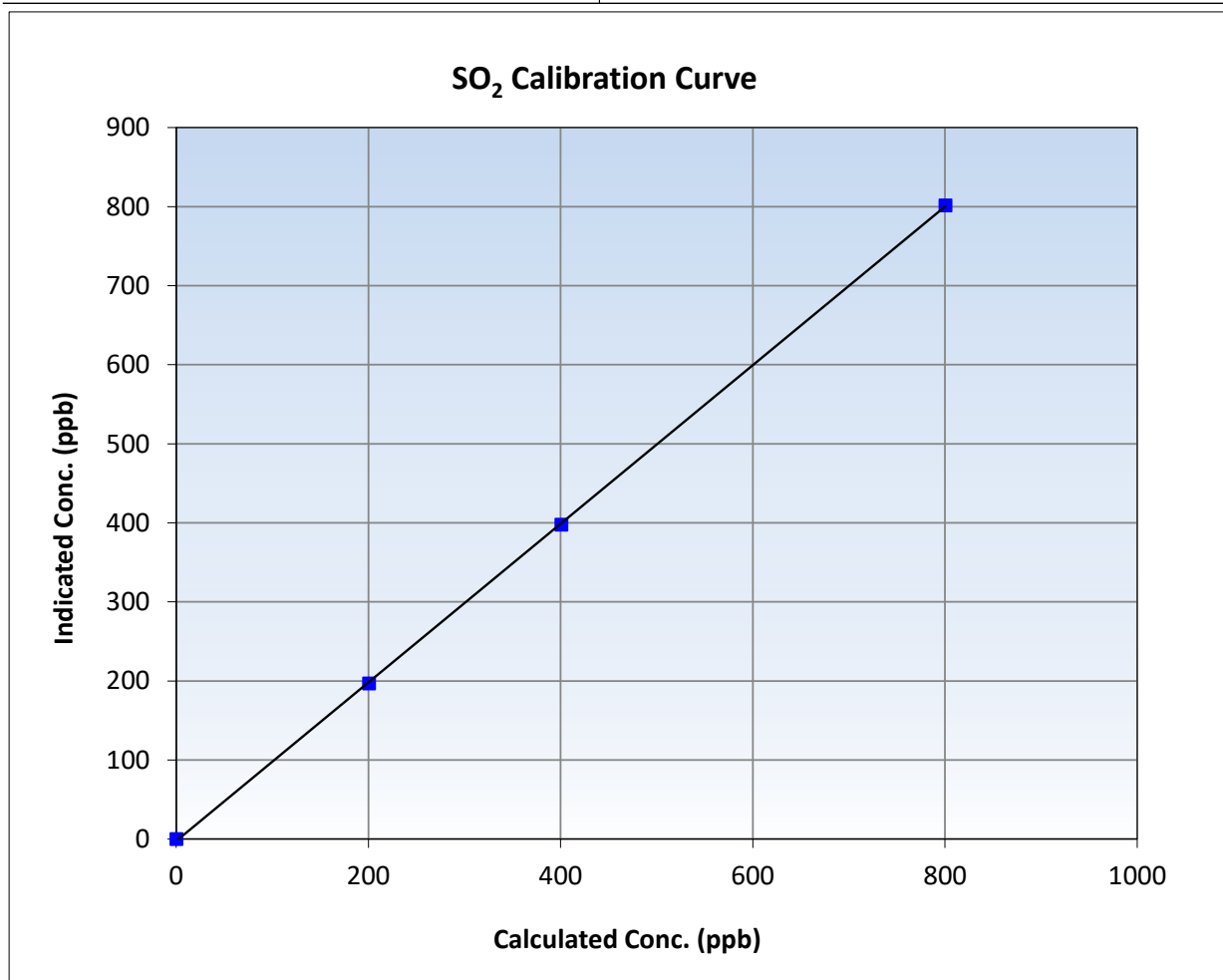
SO₂ Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 5, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:11	End Time (MST):	14:18
Analyzer make:	Thermo 43i	Analyzer serial #:	1008841399

Calibration Data

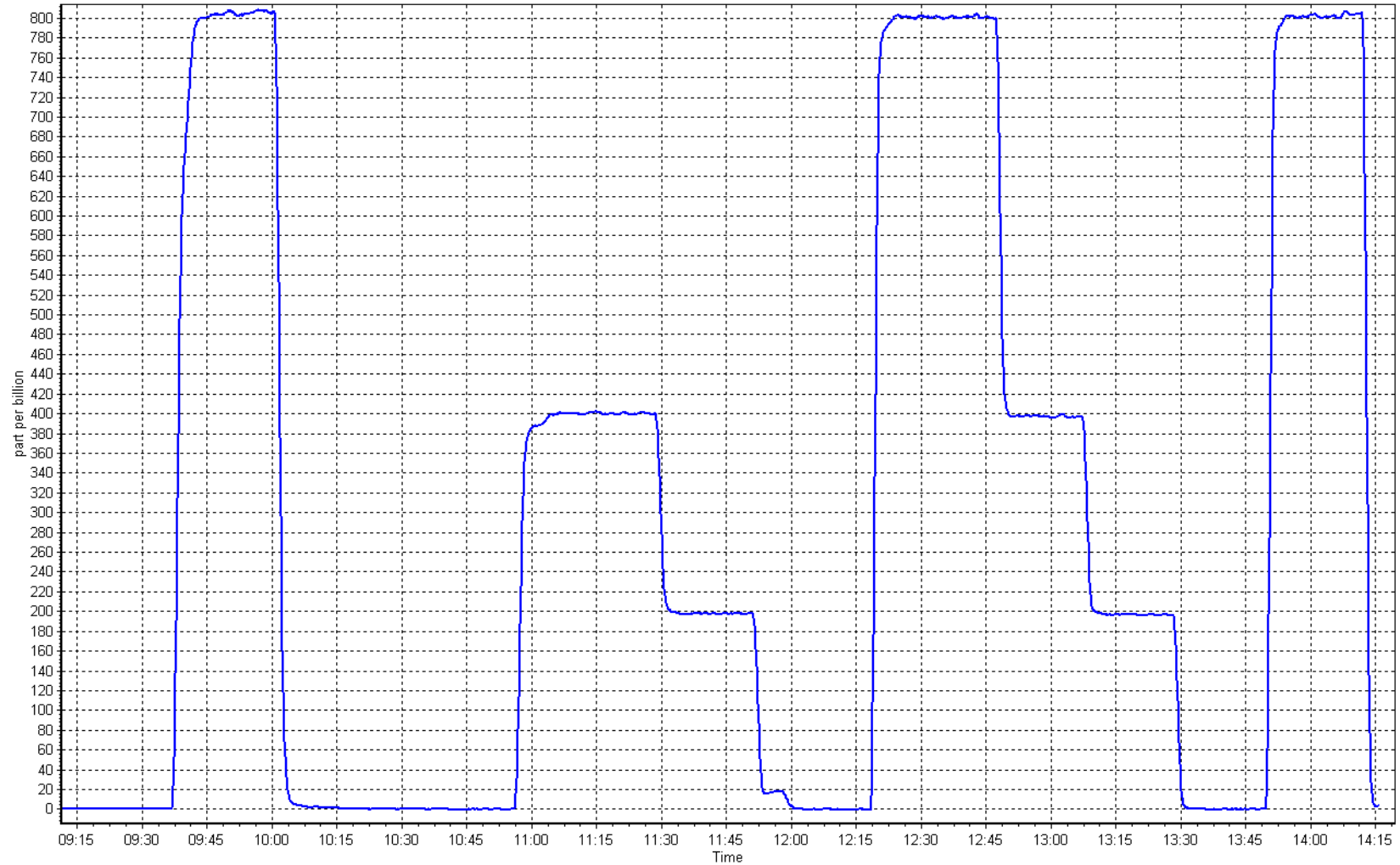
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	-0.2	----	Correlation Coefficient	0.999960	≥0.995
800.0	801.4	0.9982	Slope	1.003192	0.90 - 1.10
400.5	397.4	1.0078	Intercept	-2.516303	+/-30
200.2	196.5	1.0190			



SO2 Calibration Plot

Date: April 15, 2026

Location: Mannix





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Mannix
Calibration Date: April 16, 2026
Start time (MST): 8:37
Reason: Routine

Station number: AMS 05
Last Cal Date: March 11, 2026
End time (MST): 12:56

Calibration Standards

Cal Gas Concentration: 4.96 ppm
Cal Gas Cylinder #: DT0037363
Removed Cal Gas Conc: 4.96 ppm
Removed Gas Cyl #: N/A
Calibrator Make/Model: API T700
ZAG Make/Model: API T701

Cal Gas Exp Date: November 15, 2026
Rem Gas Exp Date: N/A
Diff between cyl:
Serial Number: 5470
Serial Number: 361

Analyzer Information

Analyzer make: Thermo 43iQ
Converter make: Global
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1200326169
Converter serial #: 2022-225
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.994255	0.993254	Backgd or Offset:	1.24	1.24
Calibration intercept:	0.182443	0.142478	Coeff or Slope:	1.020	1.020

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.1	----
As found High point	4919	80.6	80.0	79.9	1.002
As found Mid point	4960	40.3	40.0	40.2	0.997
As found Low point	4980	20.2	20.0	20.0	1.007
New cylinder response					
Baseline Corr As found:	79.8	Prev response:	79.68	*% change:	0.1%
Baseline Corr 2nd AF pt:	40.1	AF Slope:	0.998688	AF Intercept:	0.102326
Baseline Corr 3rd AF pt:	19.9	AF Correlation:	0.999987	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4919	80.6	80.0	79.6	1.005
Mid point	4960	40.3	40.0	39.9	1.002
Low point	4980	20.2	20.0	19.8	1.012
As left zero	5000	0.0	0.0	0.3	----
As left span	4919	80.6	80.0	79.7	1.003
SO2 Scrubber Check	4920	80.3	803.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	1.006
Date of last converter efficiency test:					

Notes: Changed the sample inlet filter after the multi point as founds. Scrubber check done after calibrator zero and it passed. No adjustments made.

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

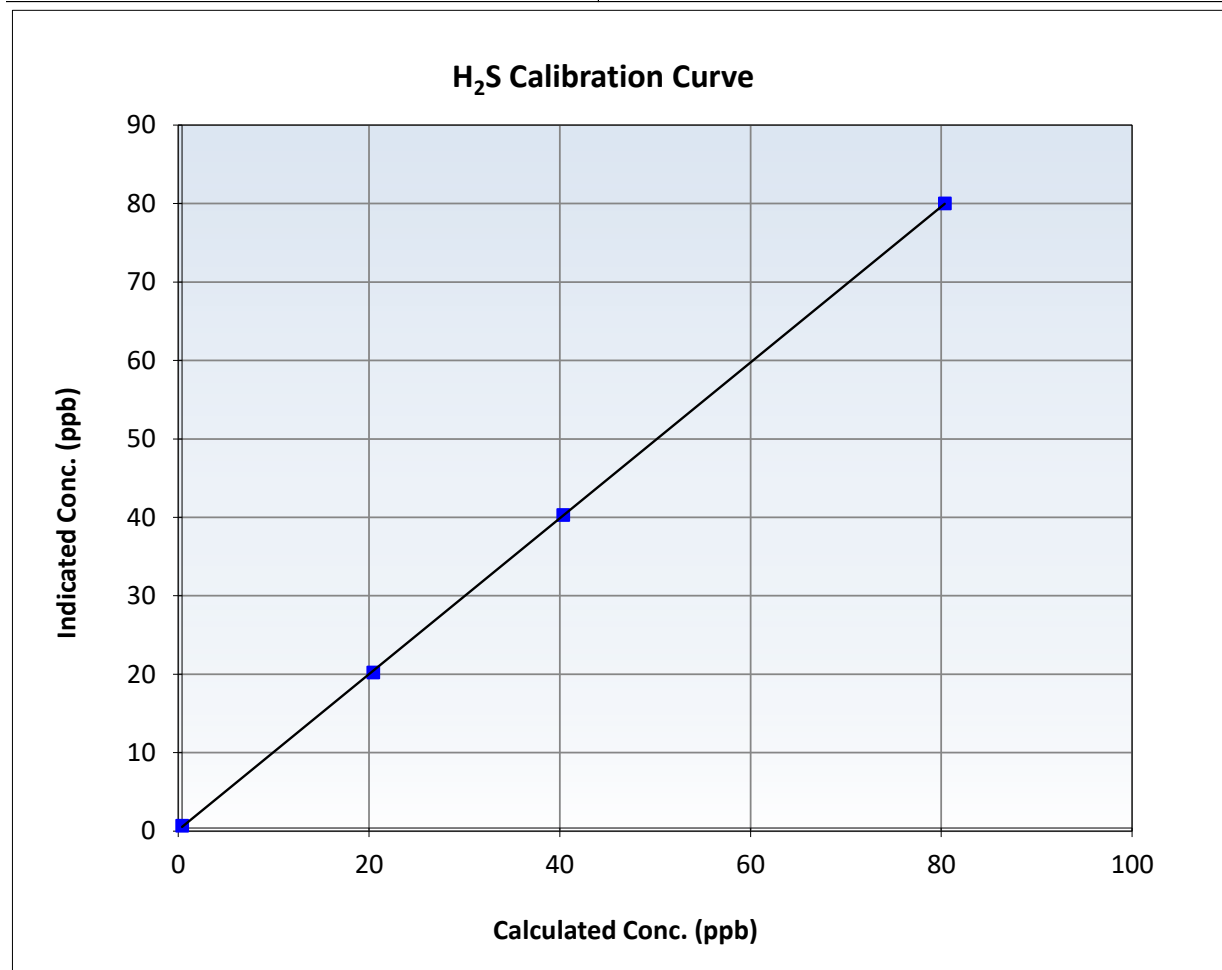
H₂S Calibration Summary

Station Information

Calibration Date:	April 16, 2026	Previous Calibration:	March 11, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	8:37	End Time (MST):	12:56
Analyzer make:	Thermo 43iQ	Analyzer serial #:	1200326169

Calibration Data

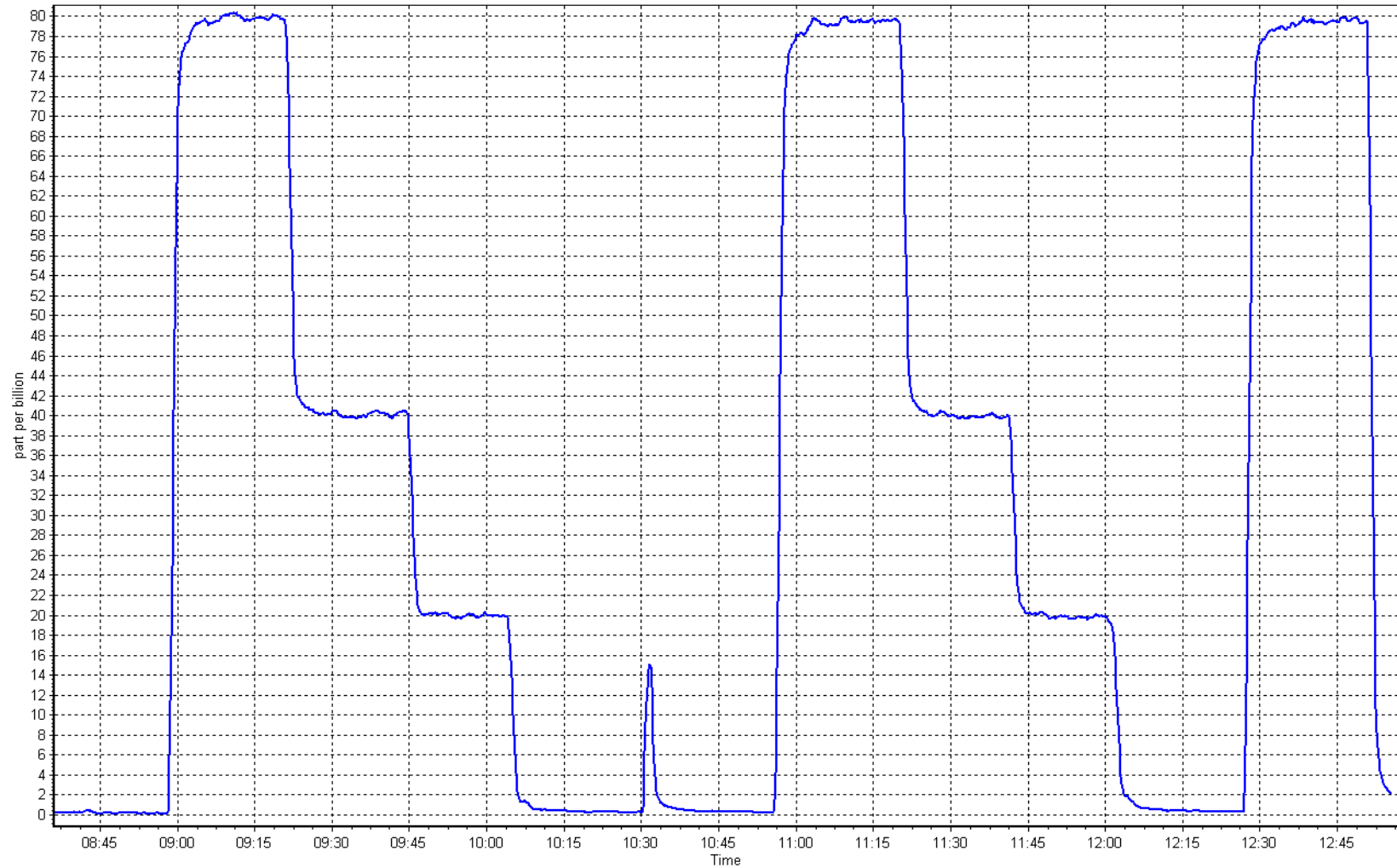
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999974		≥0.995
80.0	79.6	1.0045	Slope	0.993254		0.90 - 1.10
40.0	39.9	1.0019	Intercept	0.142478		+/-3
20.0	19.8	1.0120				



H₂S Calibration Plot

Date: April 16, 2026

Location: Mannix





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Mannix
Calibration Date: April 15, 2026
Start time (MST): 9:11
Reason: Routine

Station number: AMS 05
Last Cal Date: March 5, 2026
End time (MST): 14:18

Calibration Standards

Gas Cert Reference: CC308040
CH₄ Cal Gas Conc. 500.3 ppm
C₃H₈ Cal Gas Conc. 199.0 ppm
Removed Gas Cert:
Removed CH₄ Conc. 500.3 ppm
Removed C₃H₈ Conc. 199.0 ppm
Diff between cyl (CH₄):
Calibrator Model: API T700
Zero Air Gen model: API T701

Cal Gas Expiry Date: October 22, 2032
CH₄ Equiv Conc. 1047.6 ppm
Removed Gas Expiry:
CH₄ Equiv Conc. 1047.6 ppm
Diff between cyl (THC):
Diff between cyl (NM):
Serial Number: 5470
Serial Number: 361

Analyzer Information

Analyzer make: Thermo 55i
THC Range: 0 - 20 ppm

Analyzer serial #: 15005164381
NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.71E-04	2.62E-04	NMHC SP Ratio:	5.15E-05	5.01E-05
CH ₄ Retention time:	13.7	13.9	NMHC Peak Area:	170052	174527
Zero Chromatogram:	OFF	ON	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	16.74	17.39	0.963
As found Mid point	4960	40.0	8.38	8.61	0.974
As found Low point	4980	20.0	4.19	4.30	0.975
New cylinder response					
Baseline Corr AF:	17.39	Prev response	16.75	*% change	3.7%
Baseline Corr 2nd AF:	8.60	AF Slope:	1.039037	AF Intercept:	-0.039250
Baseline Corr 3rd AF:	4.30	AF Correlation:	0.999958	* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	16.74	16.78	0.998
Mid point	4960	40.0	8.38	8.33	1.006
Low point	4980	20.0	4.19	4.14	1.012
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	16.74	16.86	0.993
Average Correction Factor					1.005

Notes:

Sample inlet filter was changed after the as founds. Ran new zero chromatogram. Turned 'Use zero chromatogram' setting to 'ON'. Adjusted zero and span.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	8.75	9.06	0.966
As found Mid point	4960	40.0	4.38	4.46	0.982
As found Low point	4980	20.0	2.19	2.23	0.984
New cylinder response					
Baseline Corr AF:	9.06	Prev response	8.75	*% change	3.3%
Baseline Corr 2nd AF:	4.46	AF Slope:	1.036193	AF Intercept:	-0.031607
Baseline Corr 3rd AF:	2.23	AF Correlation:	0.999913	* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	8.75	8.77	0.997
Mid point	4960	40.0	4.38	4.39	0.998
Low point	4980	20.0	2.19	2.17	1.008
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	8.75	8.81	0.993
Average Correction Factor					1.001

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	7.99	8.33	0.960
As found Mid point	4960	40.0	4.00	4.15	0.966
As found Low point	4980	20.0	2.00	2.08	0.965
New cylinder response					
Baseline Corr AF:	8.33	Prev response	7.99	*% change	4.1%
Baseline Corr 2nd AF:	4.14	AF Slope:	1.042120	AF Intercept:	-0.008043
Baseline Corr 3rd AF:	2.07	AF Correlation:	0.999987	* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	7.99	8.01	0.998
Mid point	4960	40.0	4.00	3.94	1.015
Low point	4980	20.0	2.00	1.97	1.015
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	7.99	8.05	0.993
Average Correction Factor					1.009

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	1.001804	1.003209
THC Cal Offset:	-0.022914	-0.037711
CH ₄ Cal Slope:	1.000593	1.002390
CH ₄ Cal Offset:	-0.006964	-0.026752
NMHC Cal Slope:	1.002702	1.003984
NMHC Cal Offset:	-0.015151	-0.010560

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

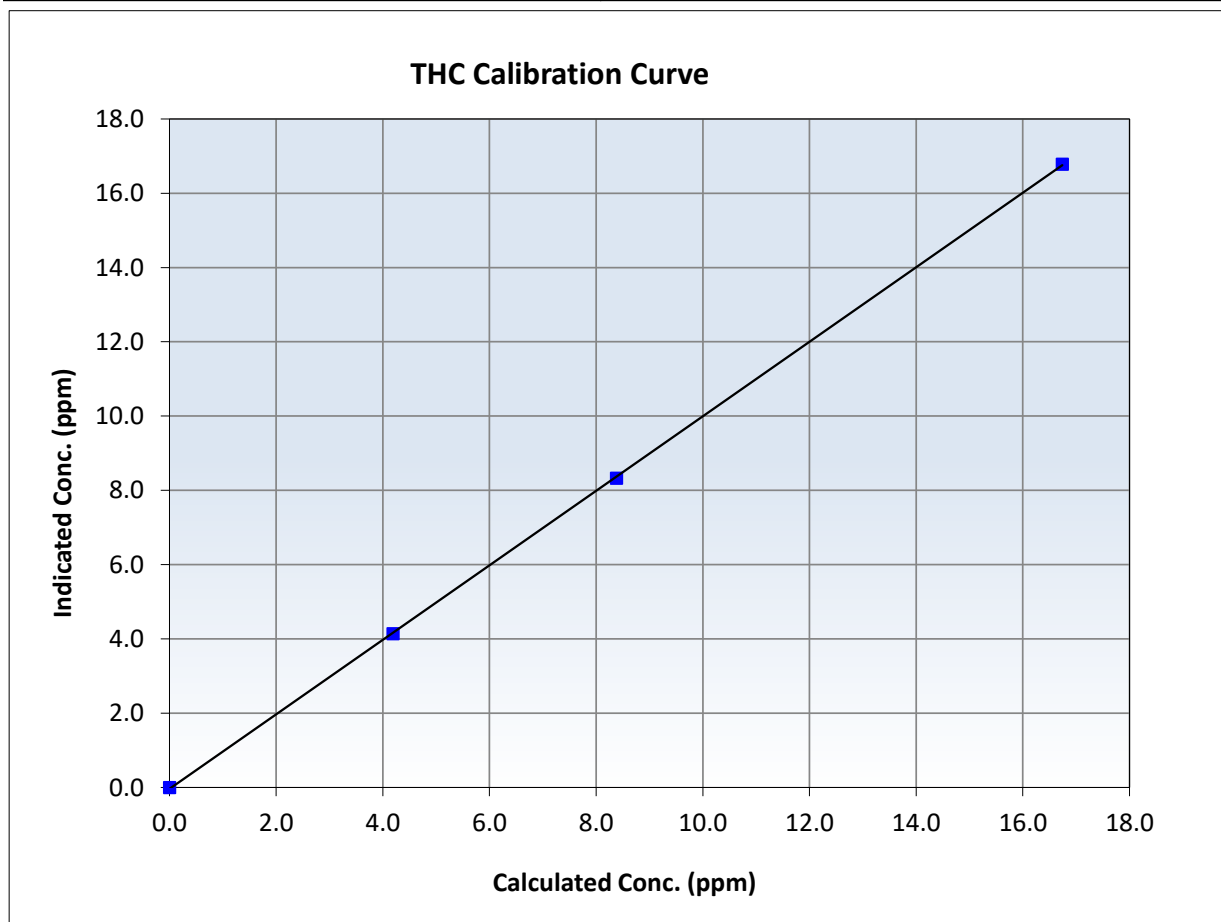
THC Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 5, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:11	End Time (MST):	14:18
Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999973	<i>≥0.995</i>
16.74	16.78	0.9975	Slope	1.003209	<i>0.90 - 1.10</i>
8.38	8.33	1.0061	Intercept	-0.037711	<i>+/-0.5</i>
4.19	4.14	1.0116			





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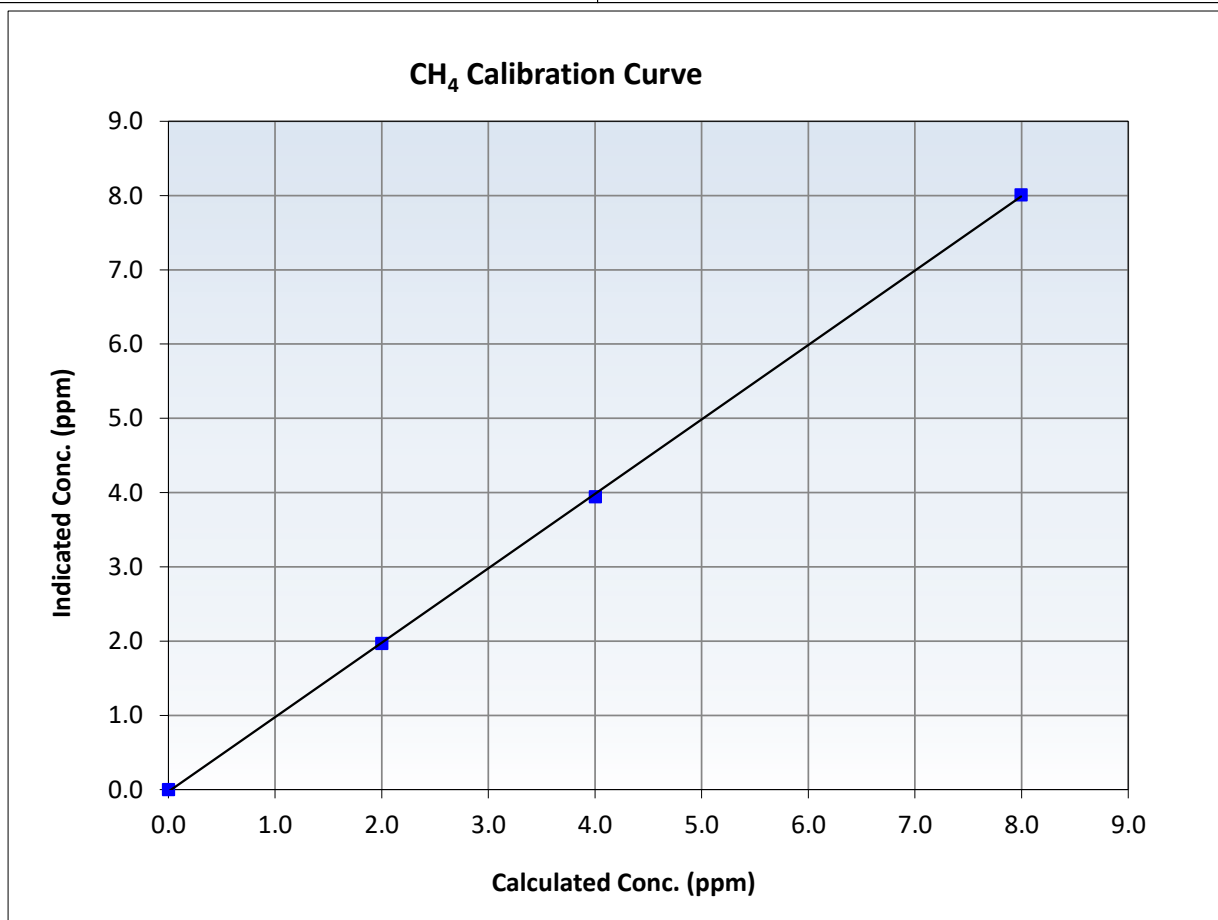
CH₄ Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 5, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:11	End Time (MST):	14:18
Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999915	<i>≥0.995</i>
7.99	8.01	0.9981	Slope	1.002390	<i>0.90 - 1.10</i>
4.00	3.94	1.0148	Intercept	-0.026752	<i>+/-0.5</i>
2.00	1.97	1.0153			





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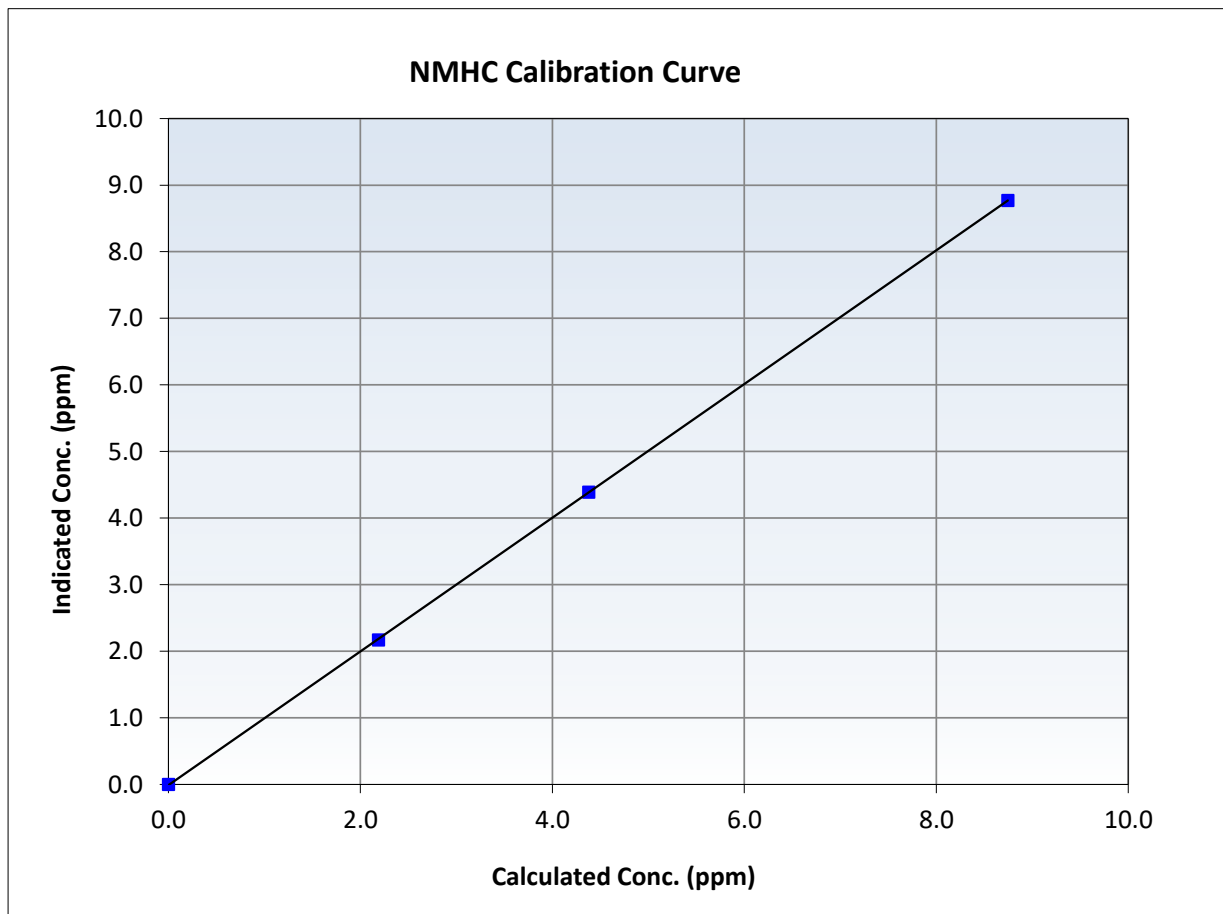
NMHC Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 5, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:11	End Time (MST):	14:18
Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381

Calibration Data

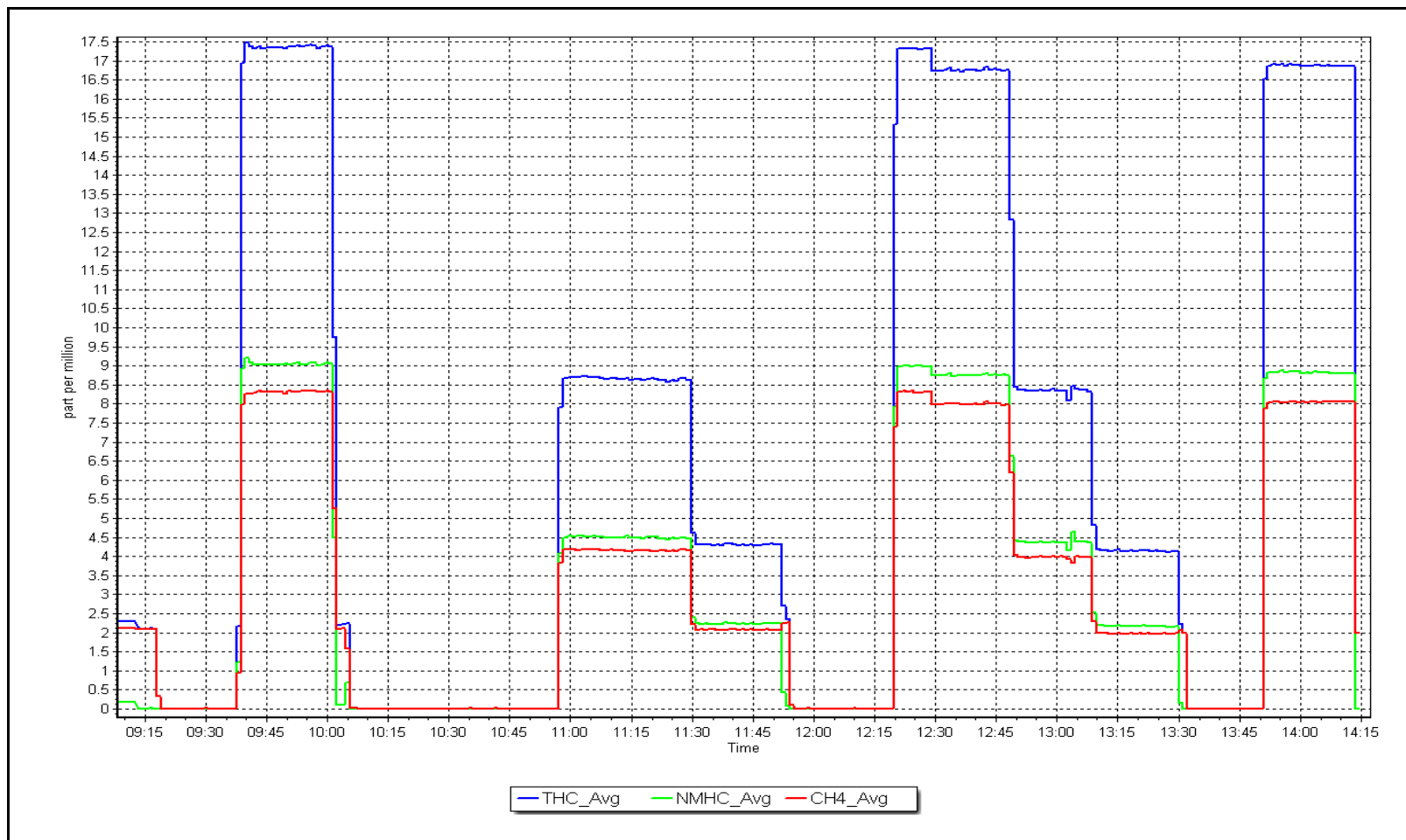
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999991	<i>≥0.995</i>
8.75	8.77	0.9969	Slope	1.003984	<i>0.90 - 1.10</i>
4.38	4.39	0.9977	Intercept	-0.010560	<i>+/-0.5</i>
2.19	2.17	1.0083			



NMHC Calibration Plot

Date: April 15, 2026

Location: Mannix





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS06
PATRICIA MCINNES
APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: April 28, 2026
Start time (MST): 8:30
Reason: Routine

Station number: AMS 06
Last Cal Date: March 3, 2026
End time (MST): 13:37

Calibration Standards

Cal Gas Concentration: 50.08 ppm
Cal Gas Cylinder #: CC255448
Removed Cal Gas Conc: 50.08 ppm
Removed Gas Cyl #:
Calibrator Model: API T700
Zero Air Gen Model: API T701

Cal Gas Exp Date: October 22, 2032
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5240
Serial Number: 4602

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0 - 1000 ppb

Serial Number: 1160290013

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.996076	0.997743	Backgd or Offset:	18.4	28.7
Calibration intercept:	-0.616870	-0.478682	Coeff or Slope:	0.913	1.016

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.3	----
As found High point	4920	79.9	800.3	811.7	0.986
As found Mid point	4960	40.0	400.6	407.0	0.984
As found Low point	4980	20.0	200.3	203.7	0.982
New cylinder response					
Baseline Corr As found:	812.0	Previous response	796.5	*% change	1.9%
Baseline Corr 2nd AF pt:	407.3	AF Slope:	1.014420	AF Intercept:	0.159749
Baseline Corr 3rd AF pt:	204.0	AF Correlation:	0.999998	* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4920	80.2	803.3	801.0	1.003
Mid point	4960	40.2	402.6	401.5	1.003
Low point	4980	20.2	202.3	200.7	1.008
As left zero	5000	0.0	0.0	0.0	----
As left span	4920	80.2	803.3	802.0	1.002

Average Correction Factor: 1.005

Notes: Swapped lamp and trigger pack, reset calibration factors and adjusted PMT voltage. Adjusted zero and span.

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

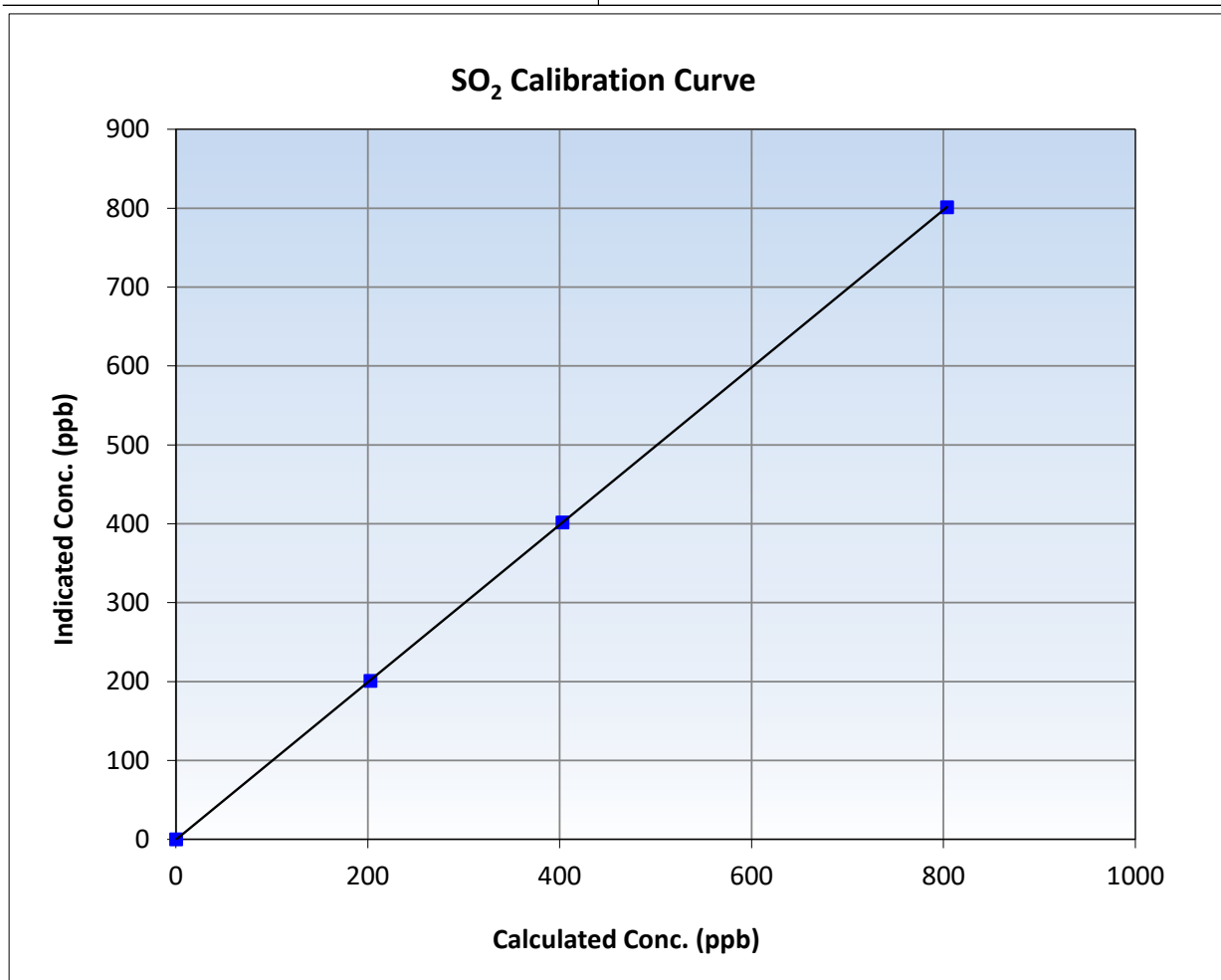
SO₂ Calibration Summary

Station Information

Calibration Date:	April 28, 2026	Previous Calibration:	March 3, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:30	End Time (MST):	13:37
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290013

Calibration Data

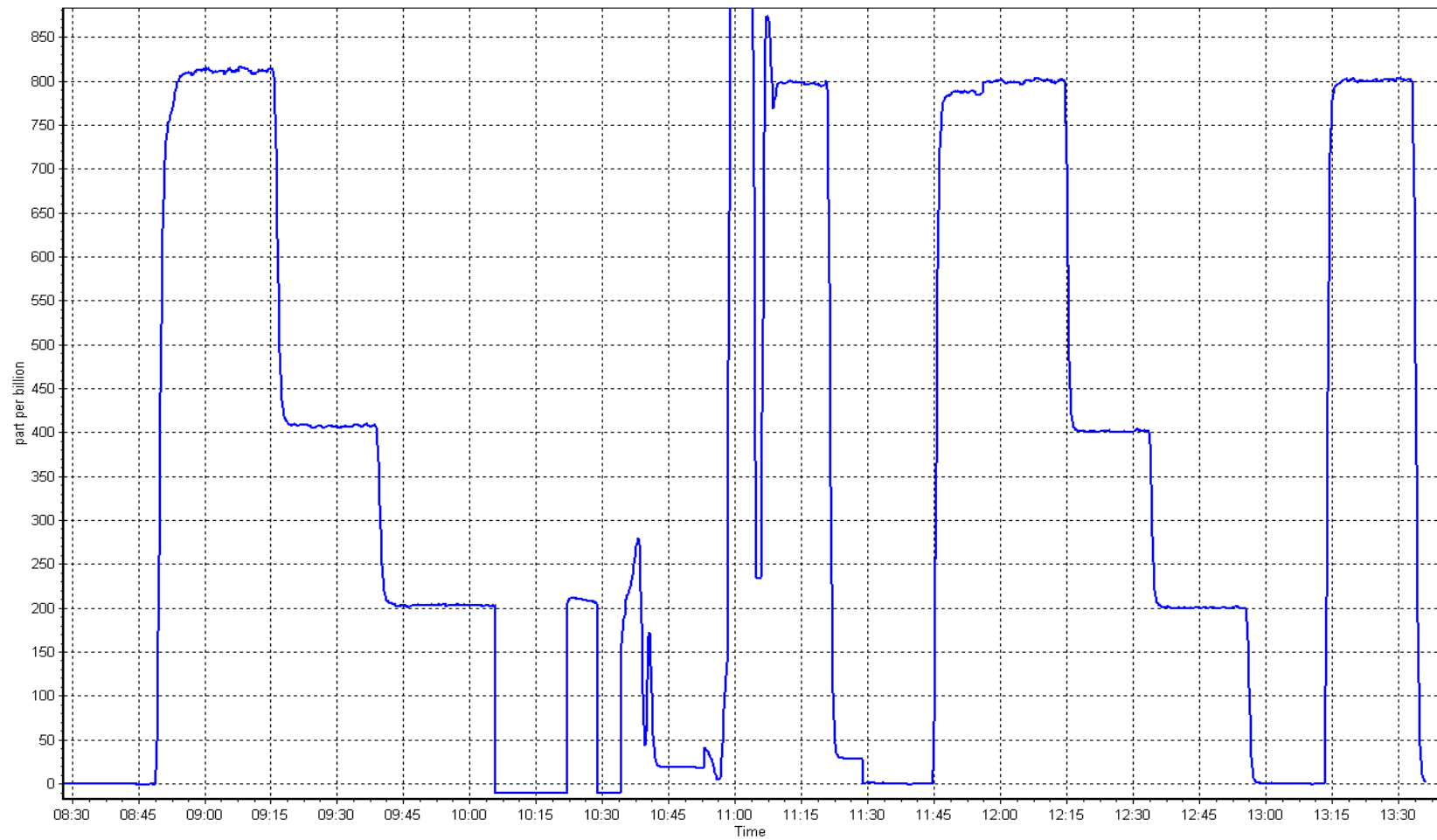
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999998	≥0.995
803.3	801.0	1.0028	Slope	0.997743	0.90 - 1.10
402.6	401.5	1.0028	Intercept	-0.478682	+/-30
202.3	200.7	1.0080			



SO2 Calibration Plot

Date: April 28, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: April 8, 2026
Start time (MST): 8:30
Reason: As Found
Station number: AMS 06
Last Cal Date: March 17, 2026
End time (MST): 15:37

Calibration Standards

Cal Gas Concentration: 4.760 ppm
Cal Gas Cylinder #: DT0014585
Removed Cal Gas Conc: 4.760 ppm
Removed Gas Cyl #:
Calibrator Make/Model: API T700
ZAG Make/Model: API T701
Cal Gas Exp Date: August 28, 2027
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5240
Serial Number: 4602

Analyzer Information

Analyzer make: Thermo 43i TLE
Converter make: CDN-101
Analyzer Range: 0 - 100 ppb
Analyzer serial #: 1236656116
Converter serial #: 621
Converter Temp: 825 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.010690		Backgd or Offset:	2.28	2.28
Calibration intercept:	-0.160000		Coeff or Slope:	1.115	1.115

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.5	----
As found High point	4916	84.0	80.0	76.5	1.039
As found Mid point	4958	42.0	40.0	38.2	1.033
As found Low point	4979	21.0	20.0	18.3	1.063
New cylinder response					
Baseline Corr As found:	77.0	Prev response:	80.66	*% change:	-4.8%
Baseline Corr 2nd AF pt:	38.7	AF Slope:	0.965100	AF Intercept:	-0.640000
Baseline Corr 3rd AF pt:	18.8	AF Correlation:	0.999936	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span	4916	84.0	80.0		
SO2 Scrubber Check					
Date of last scrubber change:		Monday, December 20, 2021		Ave Corr Factor	
Date of last converter efficiency test:					

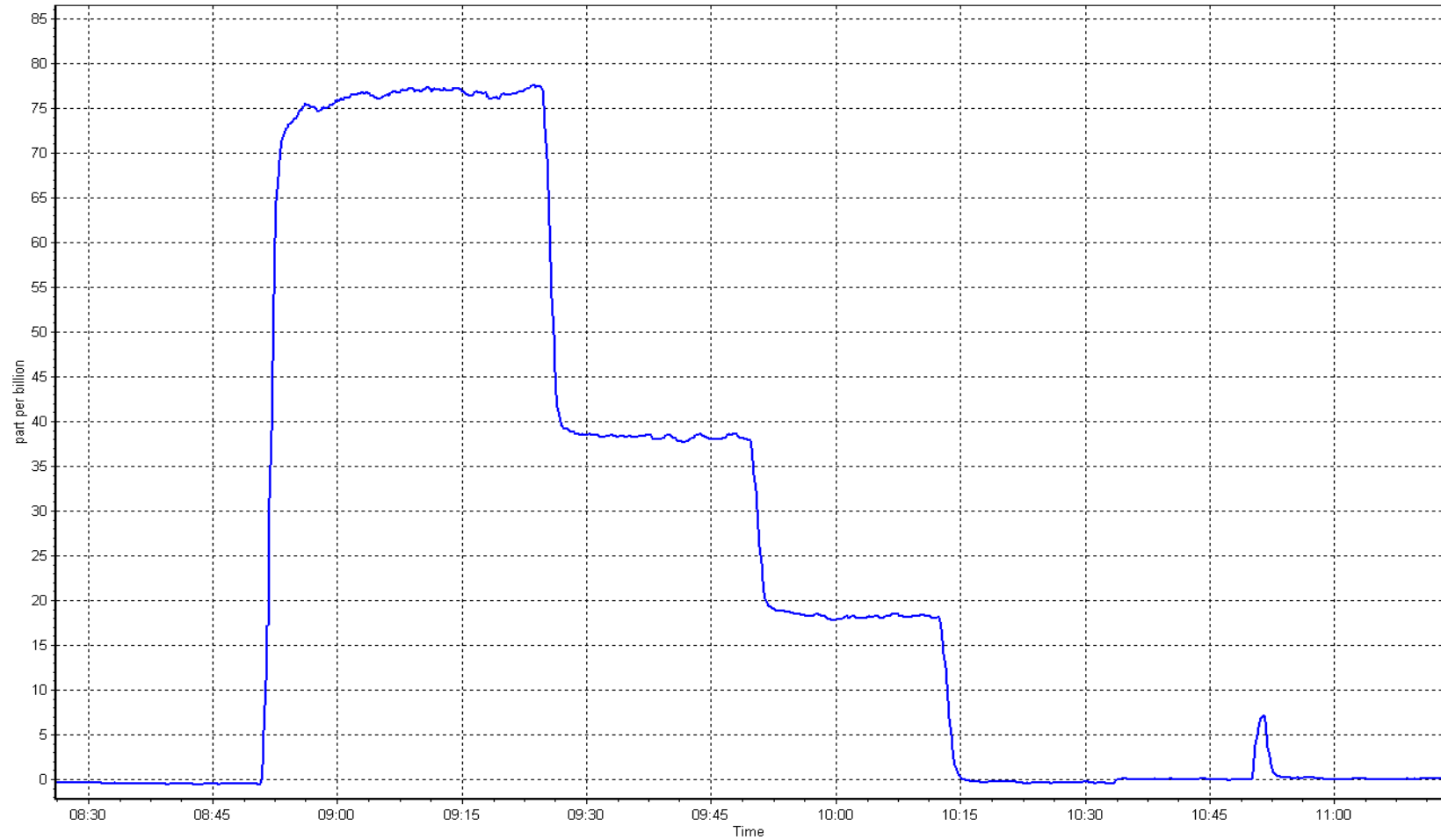
Notes: MPAF's completed. SOx scrubber completed, passed. Instrument currently having linearity issues, will look into April 9.

Calibration Performed By: Braiden Boutillier

TRS Calibration Plot

Date: April 8, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: April 9, 2026
Start time (MST): 8:28
Reason: Routine

Station number: AMS 06
Last Cal Date: April 8, 2026
End time (MST): 12:51

Calibration Standards

Cal Gas Concentration: 4.760 ppm
Cal Gas Cylinder #: DT0014585
Removed Cal Gas Conc: 4.760 ppm
Removed Gas Cyl #:
Calibrator Make/Model: API T700
ZAG Make/Model: API T701

Cal Gas Exp Date: August 28, 2027
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5240
Serial Number: 4602

Analyzer Information

Analyzer make: Thermo 43i TLE
Converter make: CDN-101
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1236656116
Converter serial #: 621
Converter Temp: 850 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.010690	1.000543	Backgd or Offset:	2.28	2.39
Calibration intercept:	-0.160000	0.020000	Coeff or Slope:	1.115	1.193

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	NA	Prev response:	NA	*% change:	NA
Baseline Corr 2nd AF pt:	NA	AF Slope:	NA	AF Intercept:	NA
Baseline Corr 3rd AF pt:	NA	AF Correlation:	NA	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4916	84.0	80.0	80.0	1.000
Mid point	4958	42.0	40.0	40.1	0.997
Low point	4979	21.0	20.0	20.0	1.000
As left zero	5000	0.0	0.0	0.0	----
As left span	4916	84.0	80.0	80.1	0.998
SO2 Scrubber Check					
Date of last scrubber change:		April 8, 2026		Ave Corr Factor	0.999
Date of last converter efficiency test:					

Notes: Calibration following as founds done on April 8, 2026. Changed sample inlet filter, and SOX scrubber. Increased converter temperature from 825 to 850C.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

TRS Calibration Summary

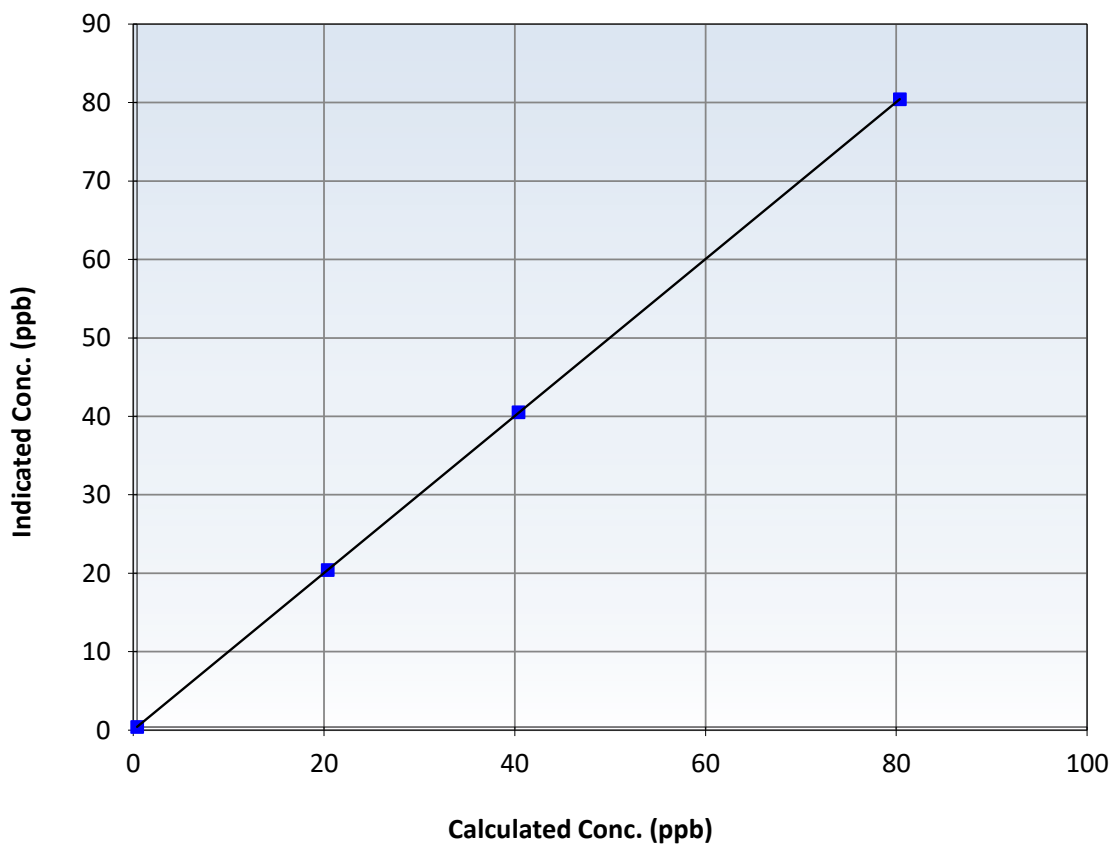
Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	April 8, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:28	End Time (MST):	12:51
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1236656116

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999998		≥ 0.995
80.0	80.0	0.9996	Slope	1.000543		$0.90 - 1.10$
40.0	40.1	0.9971	Intercept	0.020000		± 3
20.0	20.0	0.9996				

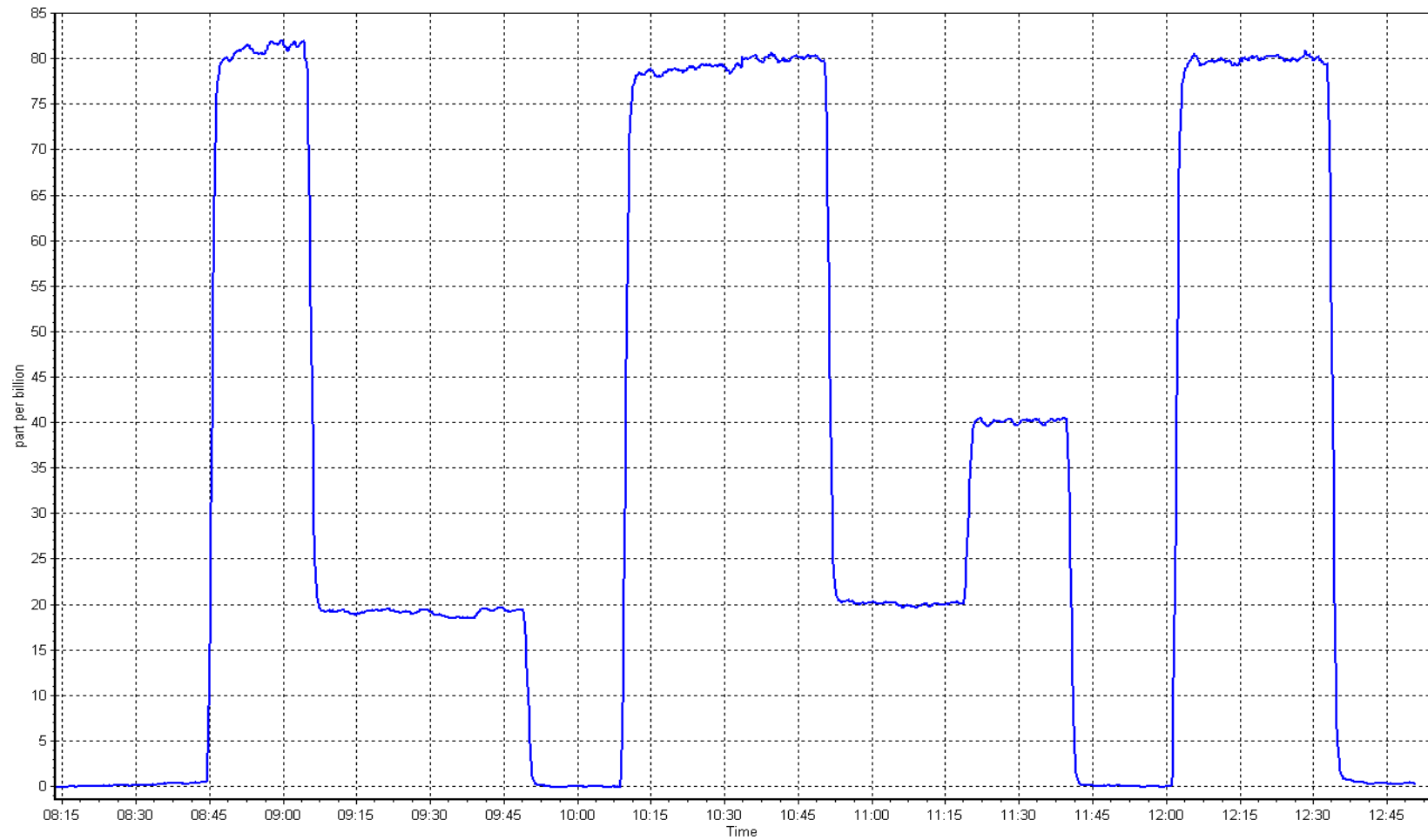
TRS Calibration Curve



TRS Calibration Plot

Date: April 9, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Patricia McInnes
 Calibration Date: April 27, 2026
 Start time (MST): 9:14
 Reason: Routine

Station number: AMS 06
 Last Cal Date: March 3, 2026
 End time (MST): 15:14

Calibration Standards

Gas Cert Reference: CC255448
 CH₄ Cal Gas Conc. 501.4 ppm
 C₃H₈ Cal Gas Conc. 199.3 ppm
 Removed Gas Cert:
 Removed CH₄ Conc. 501.4 ppm
 Removed C₃H₈ Conc. 199.3 ppm
 Diff between cyl (CH₄):
 Calibrator Model: API T700
 Zero Air Gen model: API T701

Cal Gas Expiry Date: October 22, 2032
 CH₄ Equiv Conc. 1049.5 ppm
 Removed Gas Expiry:
 CH₄ Equiv Conc. 1049.5 ppm
 Diff between cyl (THC):
 Diff between cyl (NM):
 Serial Number: 5240
 Serial Number: 4602

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1118148494
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.56E-04	3.12E-04	NMHC SP Ratio:	5.14E-05
CH ₄ Retention time:	14.2	15.4	NMHC Peak Area:	170127
Zero Chromatogram:	ON	ON	Flat Baseline:	OFF
				5.40E-05
				162095
				OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	80.2	16.83	16.37	1.028
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.37	Prev response	16.70	*% change	-2.0%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	80.2	16.83	16.75	1.005
Mid point	4960	40.2	8.44	8.34	1.012
Low point	4980	20.2	4.24	4.15	1.021
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	16.83	16.79	1.003
Average Correction Factor					1.012

Notes: Changed hydrogen and inlet filter after as founds. Ran new zero chromatogram, and span.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	80.2	8.79	8.56	1.027
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.56	Prev response	8.73	*% change	-2.0%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	80.2	8.79	8.75	1.005
Mid point	4960	40.2	4.41	4.37	1.007
Low point	4980	20.2	2.21	2.21	1.004
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.79	8.66	1.015
Average Correction Factor					1.005

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	80.2	8.04	7.81	1.030
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.81	Prev response	7.97	*% change	-2.1%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	80.2	8.04	8.00	1.005
Mid point	4960	40.2	4.03	3.96	1.017
Low point	4980	20.2	2.03	1.95	1.039
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.04	8.12	0.990
Average Correction Factor					1.021

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.993050	0.996006
THC Cal Offset:	-0.017240	-0.037050
CH ₄ Cal Slope:	0.993046	0.996872
CH ₄ Cal Offset:	-0.012940	-0.035925
NMHC Cal Slope:	0.993300	0.995162
NMHC Cal Offset:	-0.004501	-0.001923

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

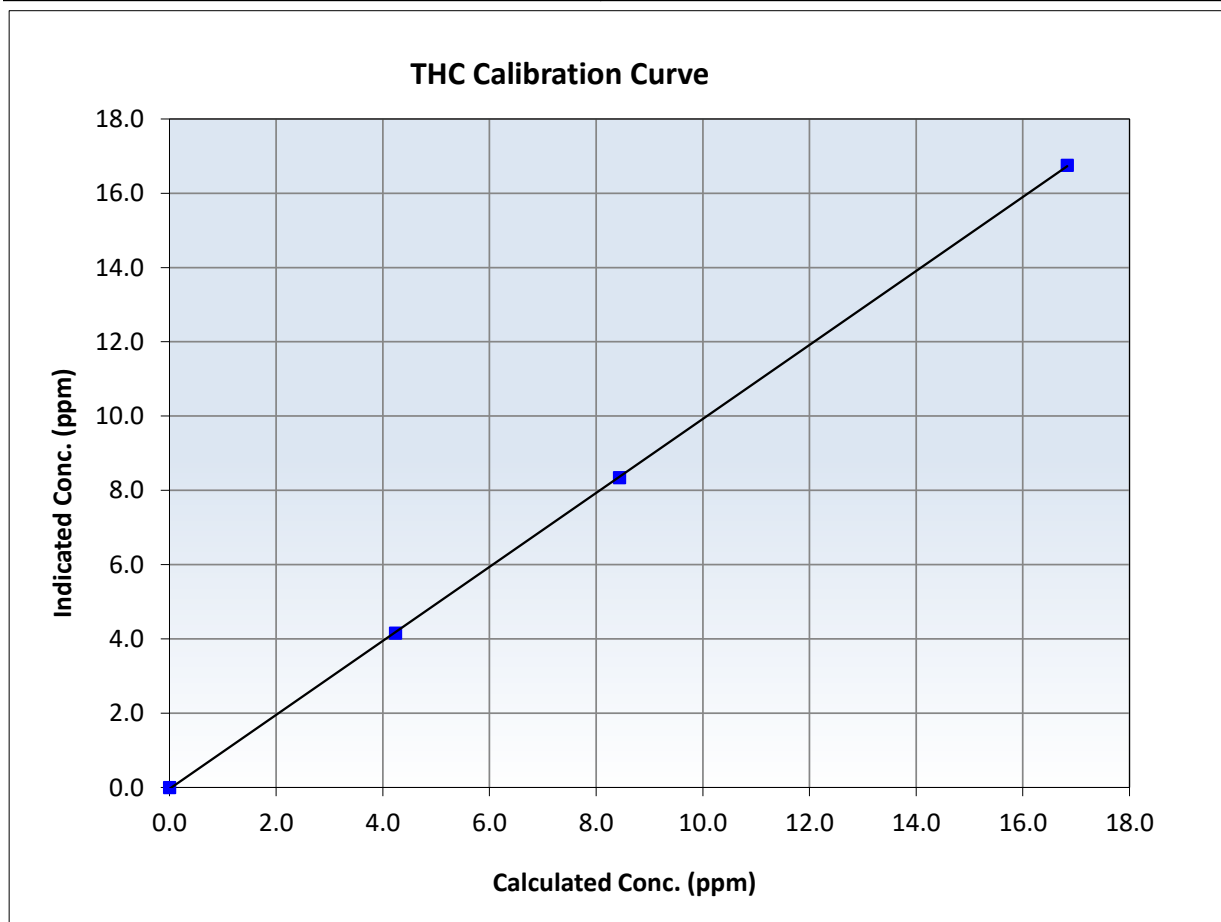
THC Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	March 3, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:14	End Time (MST):	15:14
Analyzer make:	Thermo 55i	Analyzer serial #:	1118148494

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999977		≥ 0.995
16.83	16.75	1.0049	Slope	0.996006		0.90 - 1.10
8.44	8.34	1.0117	Intercept	-0.037050		+/-0.5
4.24	4.15	1.0206				





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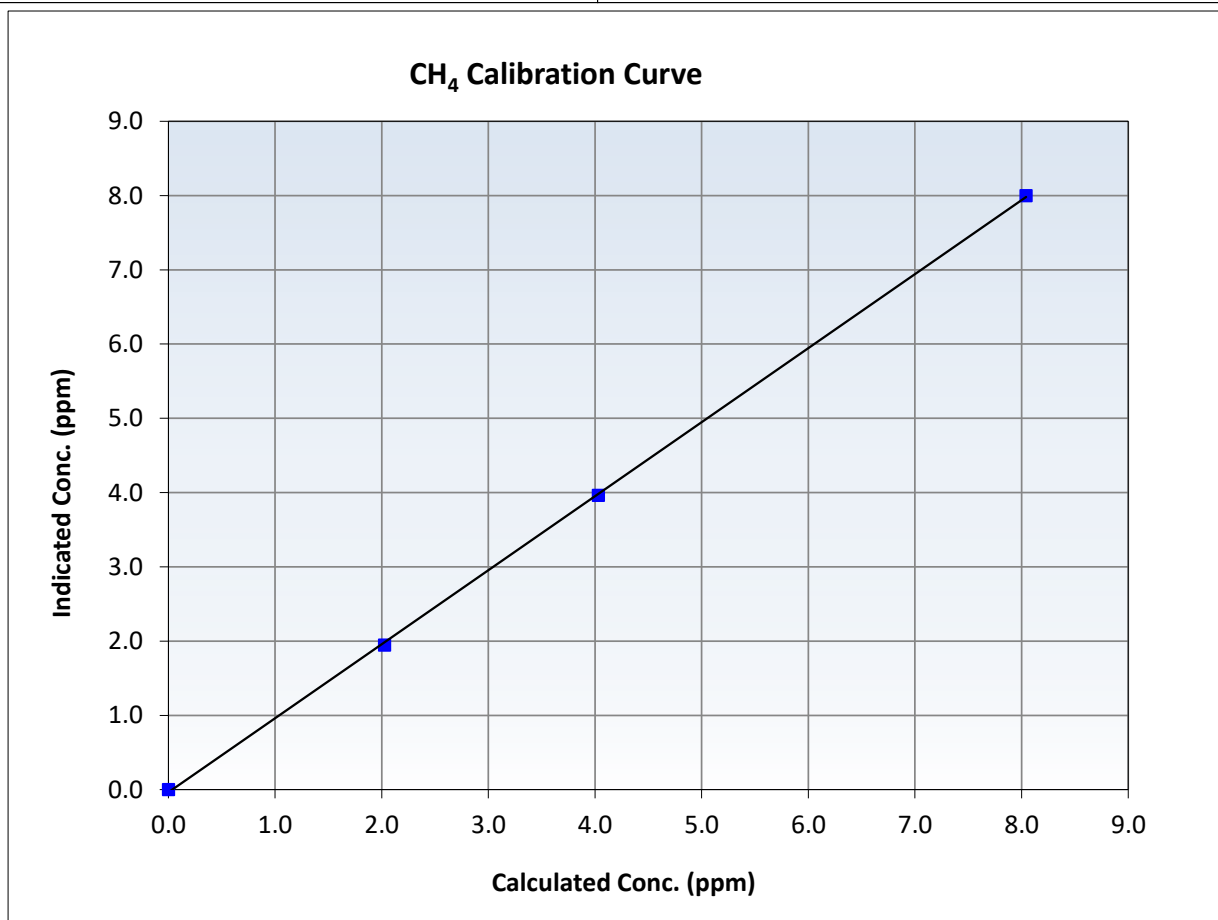
CH₄ Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	March 3, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:14	End Time (MST):	15:14
Analyzer make:	Thermo 55i	Analyzer serial #:	1118148494

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999907	<i>≥0.995</i>
8.04	8.00	1.0053	Slope	0.996872	<i>0.90 - 1.10</i>
4.03	3.96	1.0174	Intercept	-0.035925	<i>+/-0.5</i>
2.03	1.95	1.0393			





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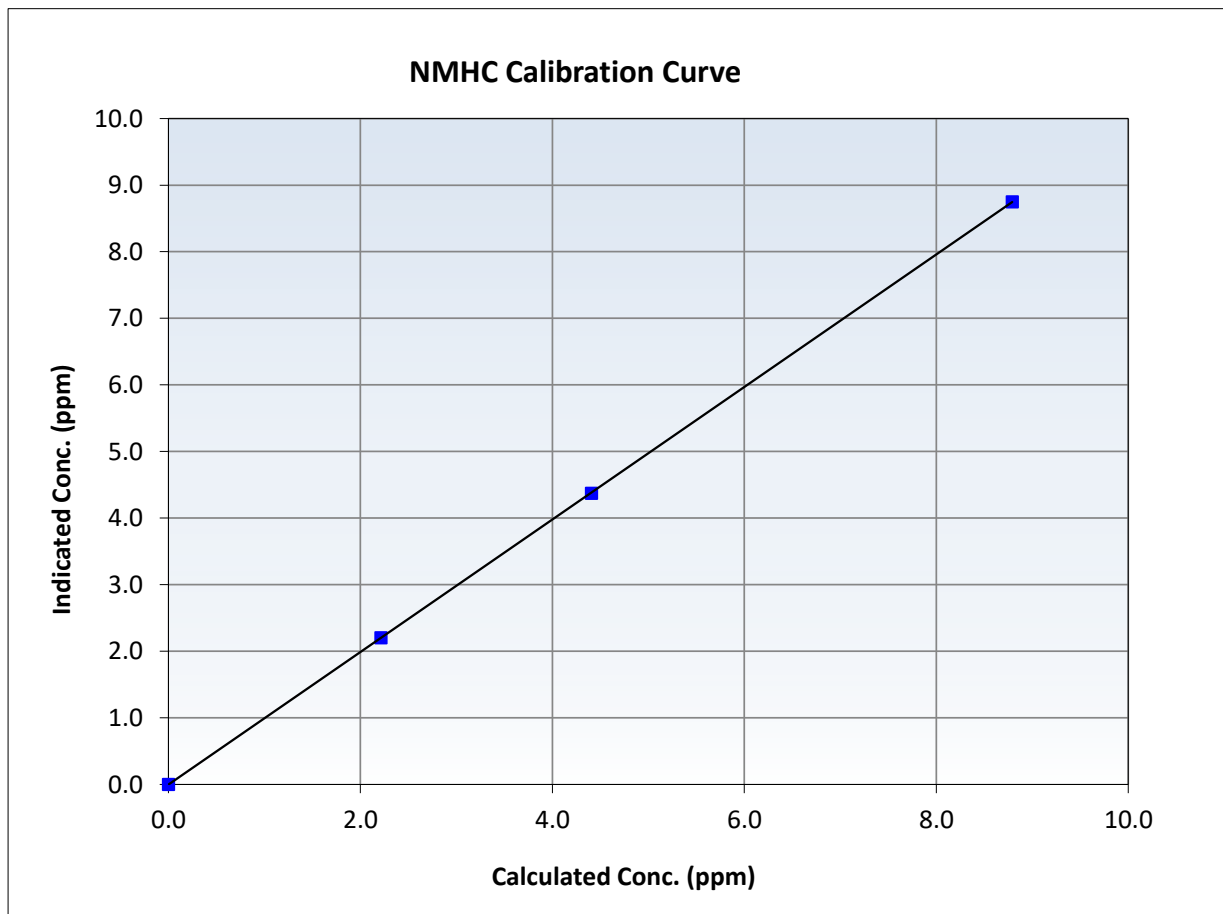
NMHC Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	March 3, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:14	End Time (MST):	15:14
Analyzer make:	Thermo 55i	Analyzer serial #:	1118148494

Calibration Data

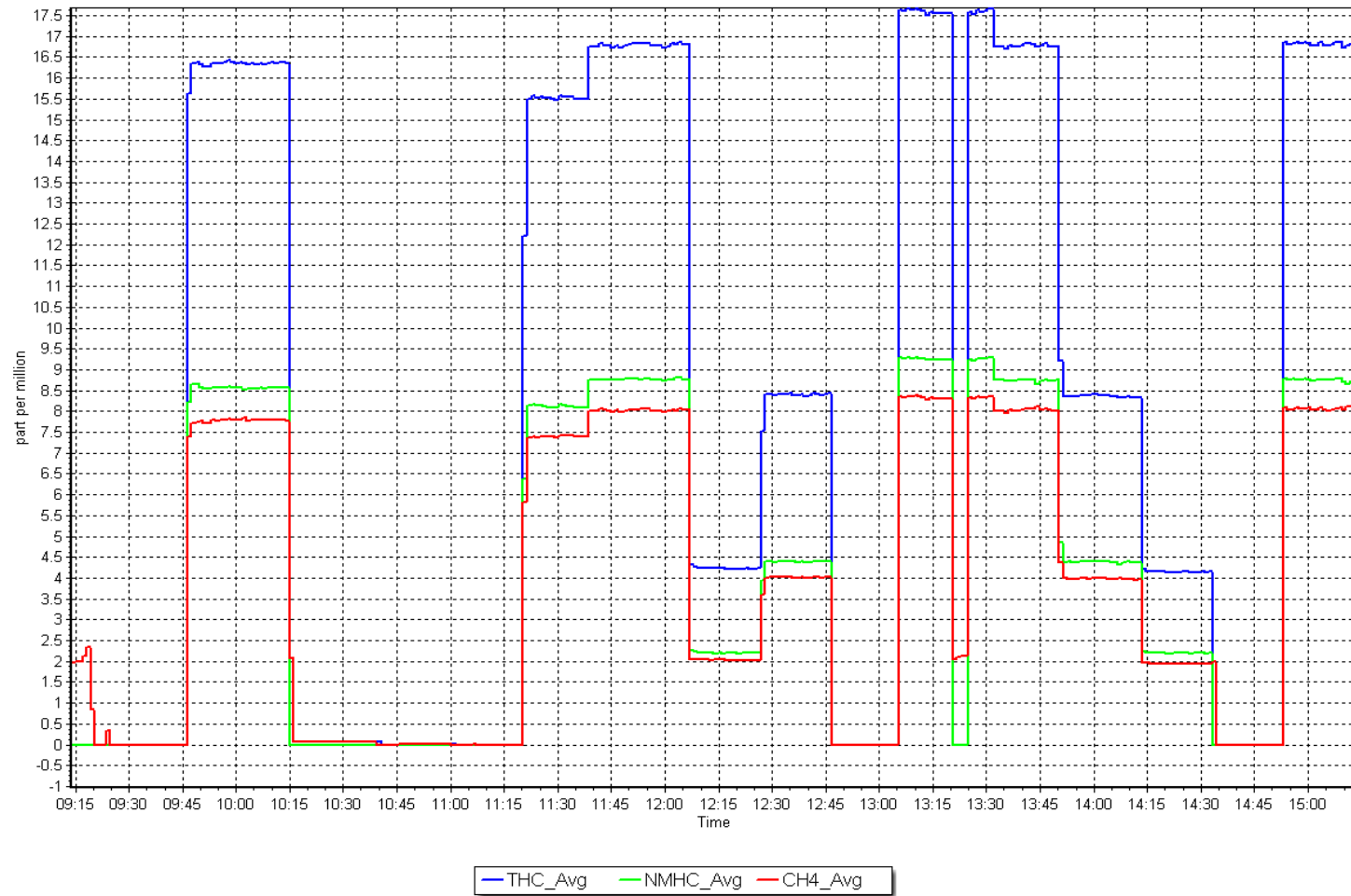
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999997	<i>≥0.995</i>
8.79	8.75	1.0047	Slope	0.995162	<i>0.90 - 1.10</i>
4.41	4.37	1.0074	Intercept	-0.001923	<i>+/-0.5</i>
2.21	2.21	1.0041			



NMHC Calibration Plot

Date: April 27, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Patricia McInnes
Station number: AMS 06
Calibration Date: April 14, 2026
Last Cal Date: March 13, 2026
Start time (MST): 8:30
End time (MST): 14:49
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0036234
NOX Cal Gas Conc: 62.2 ppm
Removed Cylinder #:
Removed Gas NOX Conc: 62.20 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701
Cal Gas Expiry Date: July 22, 2032
NO Cal Gas Conc: 61.90 ppm
Removed Gas Exp Date:
Removed Gas NO Conc: 61.90 ppm
NO gas Diff:
Serial Number: 5240
Serial Number: 4602

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.4	0.0	-0.4	----	----
AF High point	4935	64.6	803.7	799.8	3.9	792.4	786.9	5.5	1.0137	1.0164
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 802.1 ppb	NO = 799.7 ppb				* = > +/-5% change initiates investigation			*Percent Change	NO _x = -1.2%
Baseline Corr 1st pt	NO _x = 792.8 ppb	NO = 786.9 ppb				<u>As Found Statistics</u>			*Percent Change	NO = -1.6%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found NO _x r ² :			Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found NO r ² :			NO SI:	NO Int:
						As found NO ₂ r ² :			NO2 SI:	NO ₂ Int:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1172750022

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999070	0.999668
NO _x Cal Offset:	-0.846872	0.192652
NO Cal Slope:	1.002781	1.004310
NO Cal Offset:	-2.325856	-1.586236
NO ₂ Cal Slope:	0.995616	0.997864
NO ₂ Cal Offset:	-0.666279	0.023749

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.864	0.879	NO bkgnd or offset:	3.8	3.8
NOX coeff or slope:	0.995	0.995	NOX bkgnd or offset:	4.3	4.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	161.2	159.6

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	----	----
High point	4935	64.6	803.7	799.8	3.9	803.0	802.0	1.4	1.0009	0.9973
Mid point	4968	32.3	401.8	399.9	1.9	403.4	400.6	2.8	0.9960	0.9981
Low point	4984	16.2	201.5	200.5	1.0	201.0	197.3	3.8	1.0026	1.0165
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	0.1	-0.2	----	----
As left span	4935	64.6	803.7	388.1	415.6	797.9	388.1	409.8	1.0073	1.0000
Average Correction Factor									0.9998	1.0040

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	794.4	389.7	408.6	407.3	1.0031	99.7%
Mid GPT point	794.4	598.2	200.1	200.9	0.9959	100.4%
Low GPT point	794.4	693.4	104.9	104.0	1.0084	99.2%
Average Correction Factor					1.0025	99.8%

Notes:

Changed the inlet filter after as founds. Adjusted span.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

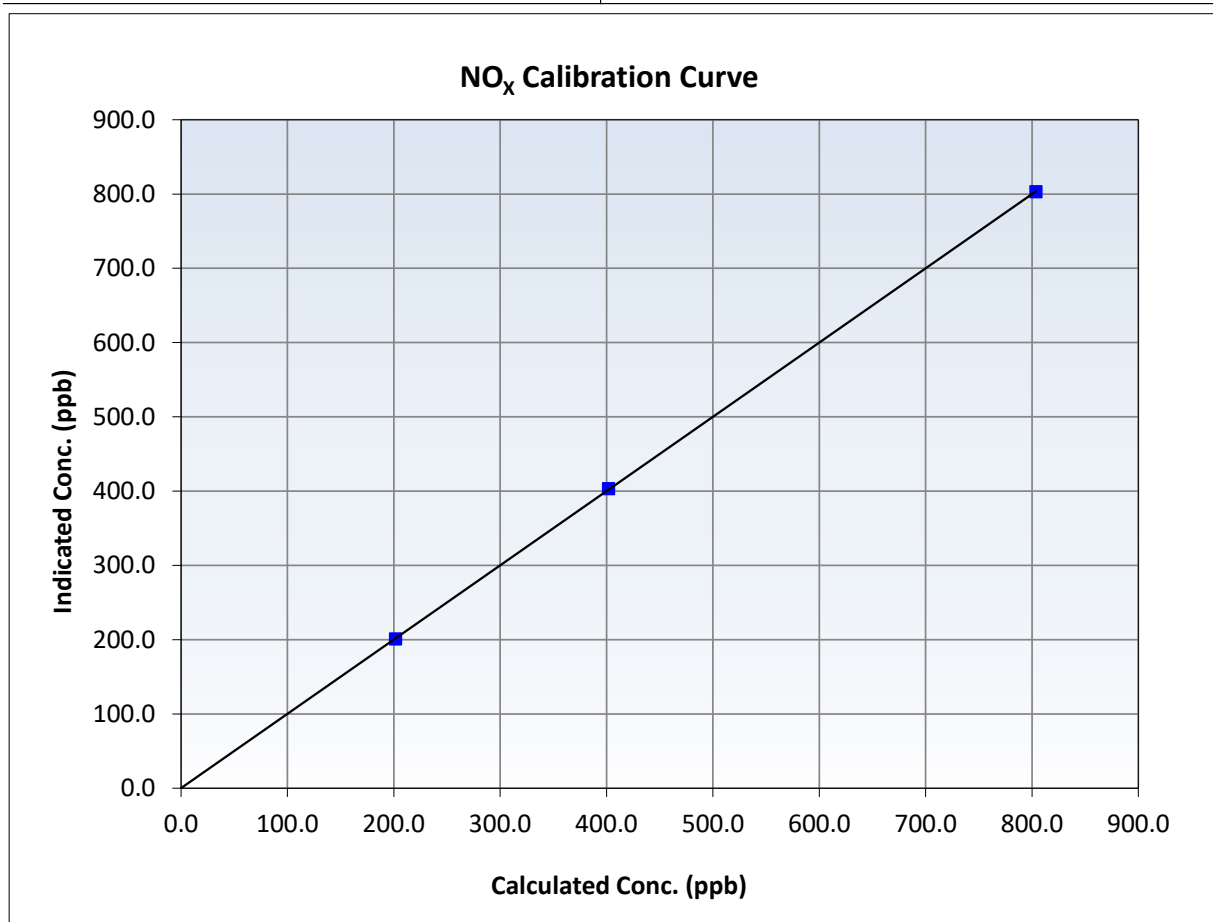
NO_x Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 13, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:30	End Time (MST):	14:49
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999991	≥0.995
803.7	803.0	1.0009	Slope	0.999668	0.90 - 1.10
401.8	403.4	0.9960	Intercept	0.192652	+/-20
201.5	201.0	1.0026			





Wood Buffalo Environmental Association

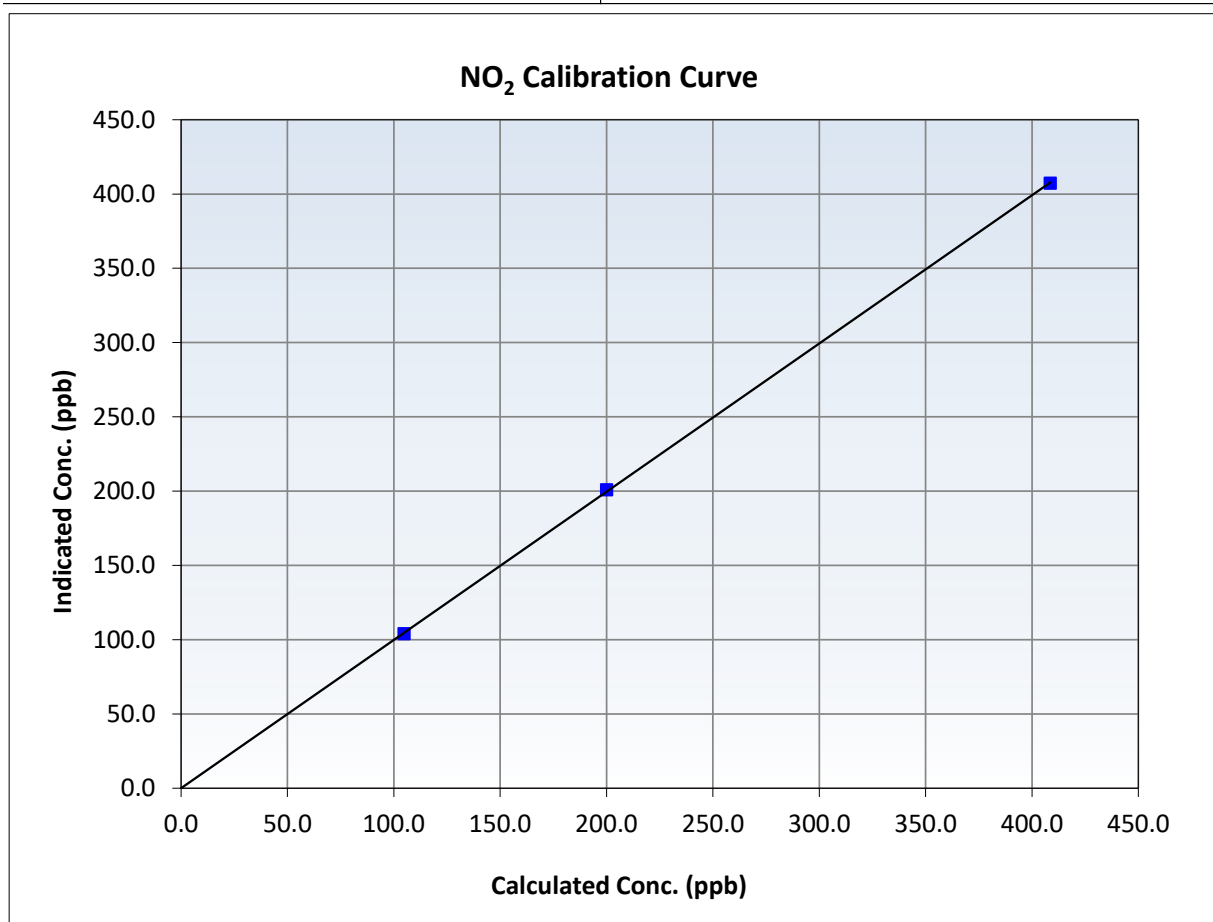
NO₂ Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 13, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:30	End Time (MST):	14:49
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999976	≥0.995
408.6	407.3	1.0031	Slope	0.997864	0.90 - 1.10
200.1	200.9	0.9959	Intercept	0.023749	+/-20
104.9	104.0	1.0084			





Wood Buffalo Environmental Association

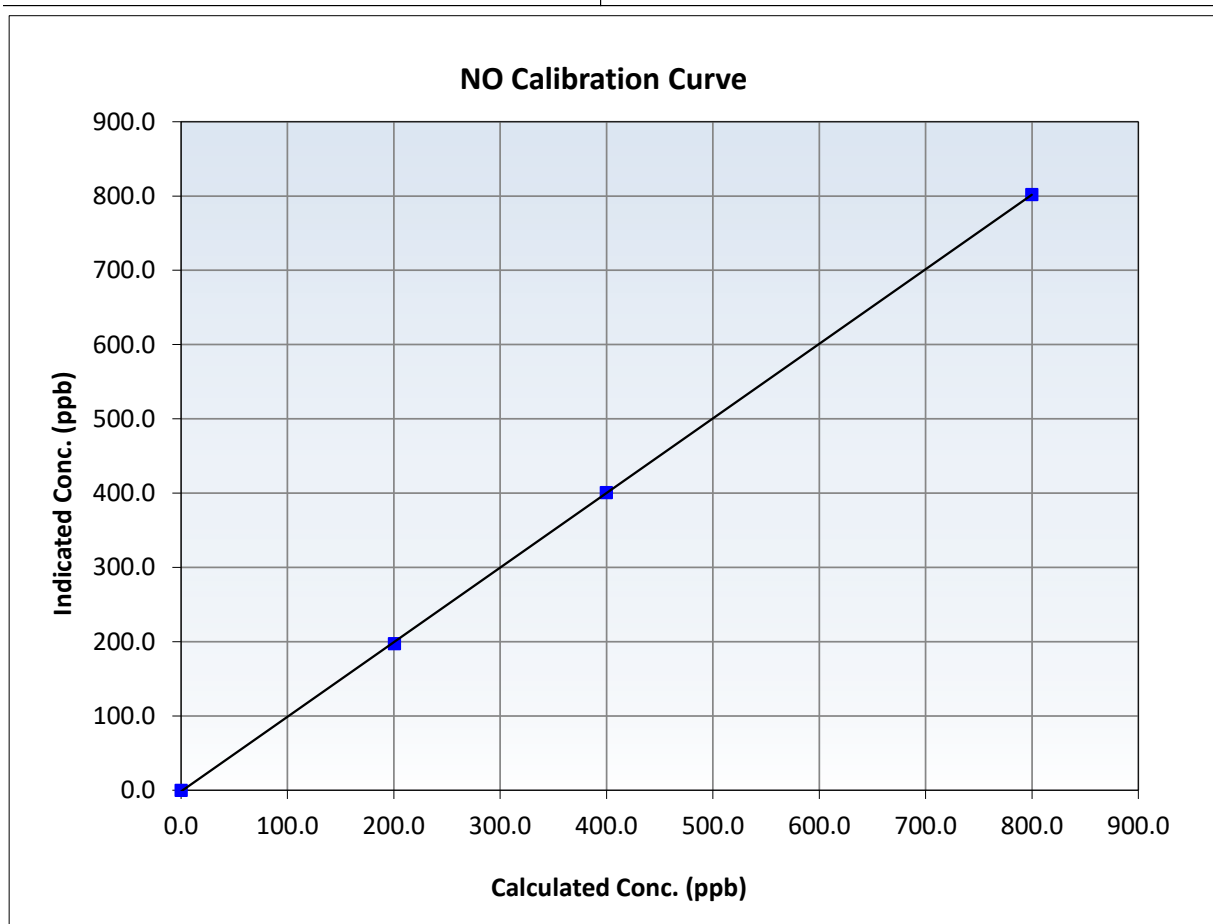
NO Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 13, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:30	End Time (MST):	14:49
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

Calibration Data

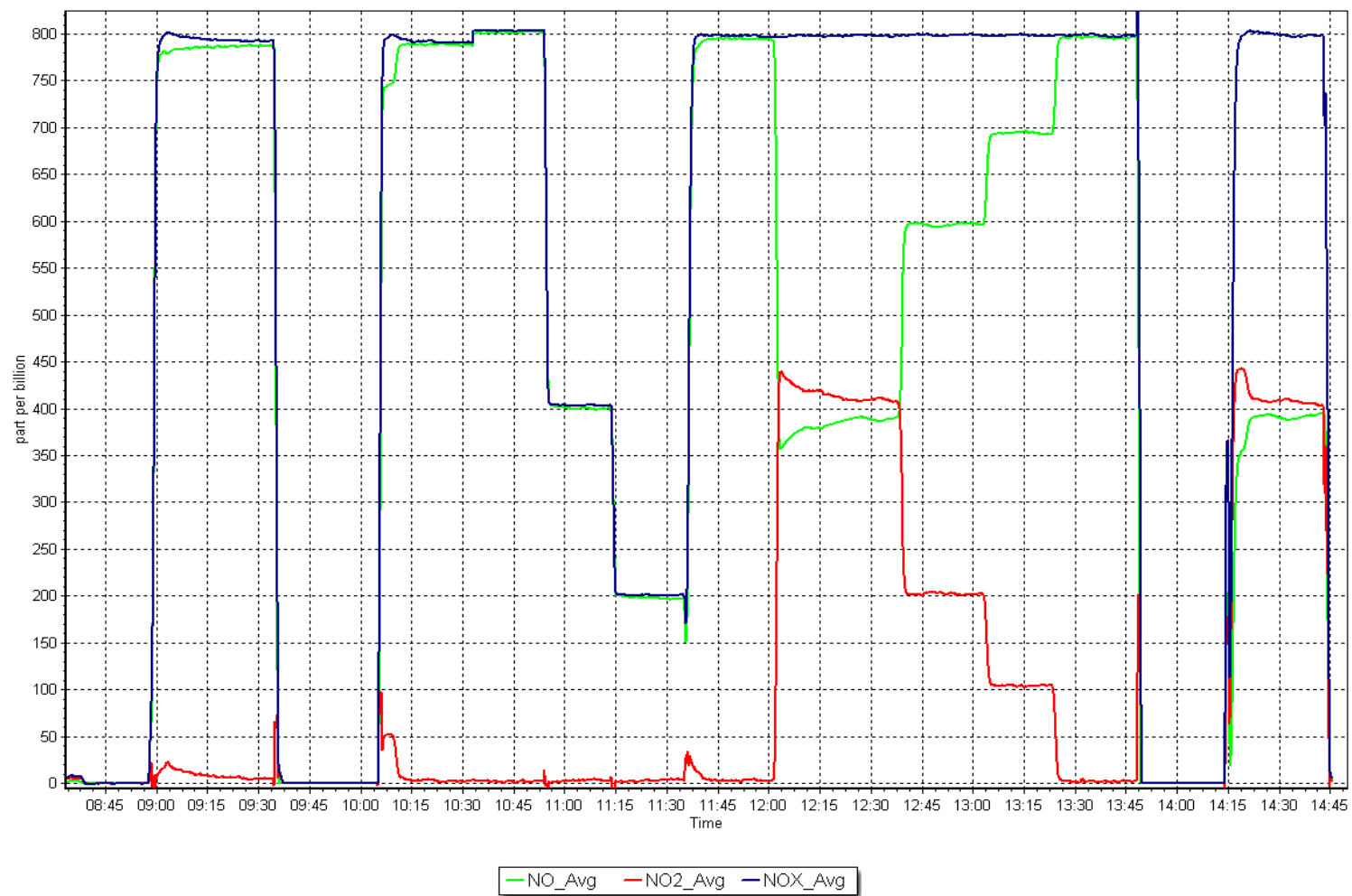
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999973	≥ 0.995
799.8	802.0	0.9973	Slope	1.004310	0.90 - 1.10
399.9	400.6	0.9981	Intercept	-1.586236	+/-20
200.5	197.3	1.0165			



NO_x Calibration Plot

Date: April 14, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: April 21, 2026
Start time (MST): 8:20
Reason: Routine

Station number: AMS 06
Last Cal Date: March 16, 2026
End time (MST): 11:53

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: API T700
ZAG Make/Model: API T701

Serial Number: 5240
Serial Number: 4602

Analyzer Information

Analyzer make: Teledyne API T400
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 7046

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.997829	0.992343	Backgd or Offset:	3.1	3.1
Calibration intercept:	0.780000	0.840000	Coeff or Slope:	1.011	1.011

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	800.0	0.0	0.0	----
As found High point	5000	908.6	400.0	397.0	1.008
As found Mid point					
As found Low point					
Baseline Corr As found:	397.0	Previous response	399.9	*% change	-0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	800.0	0.0	0.1	----
High point	5000	908.1	400.0	397.4	1.007
Mid point	5000	786.8	200.0	199.7	1.002
Low point	5000	688.8	100.0	100.8	0.992
As left zero	5000	800.0	0.0	0.1	----
As left span	5000	907.0	400.0	399.2	1.002
Average Correction Factor					1.000

Notes: Changed sample inlet filter after as founds. No adjustments made.

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

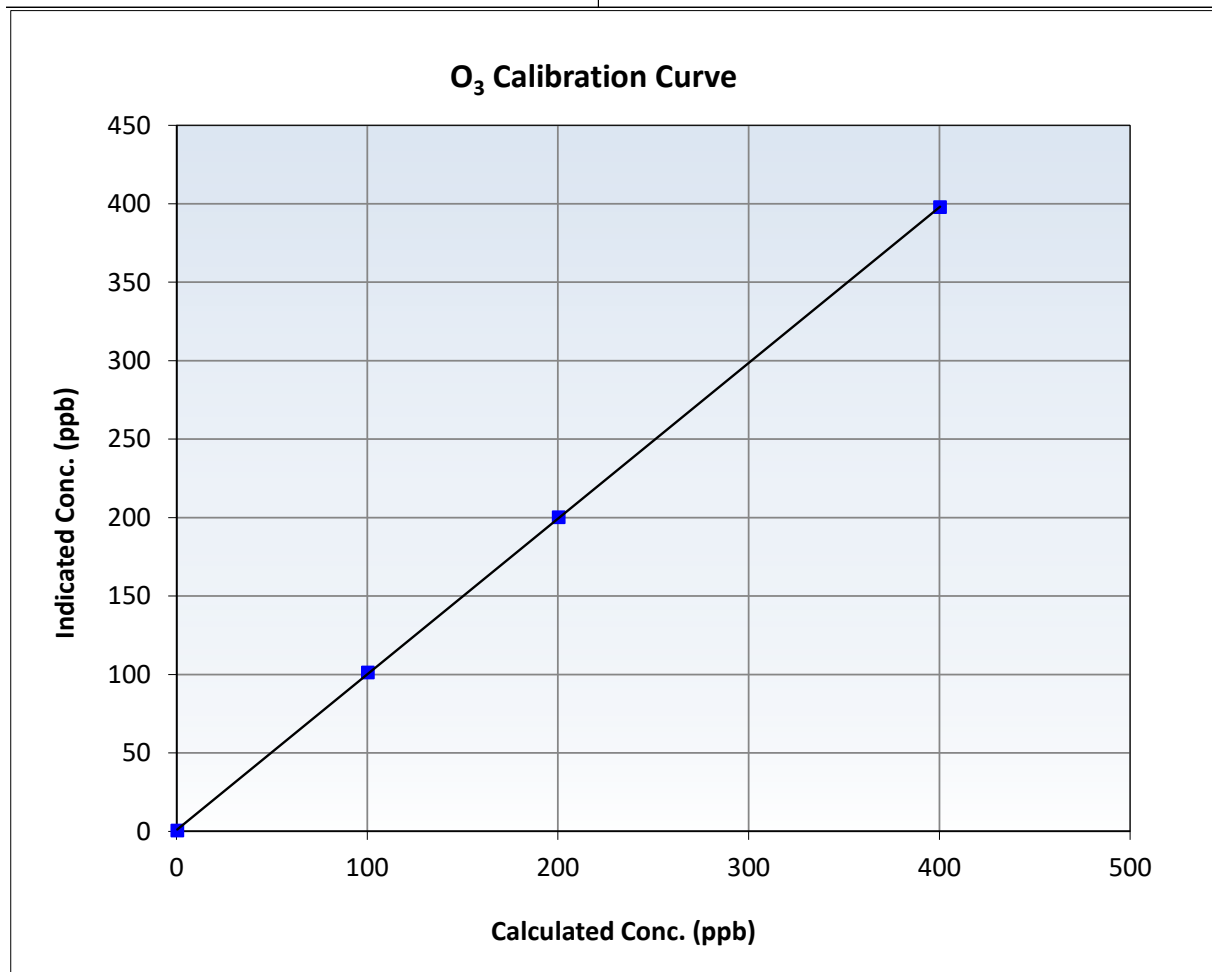
O₃ Calibration Summary

Station Information

Calibration Date:	April 21, 2026	Previous Calibration:	March 16, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:20	End Time (MST):	11:53
Analyzer make:	Teledyne API T400	Analyzer serial #:	7046

Calibration Data

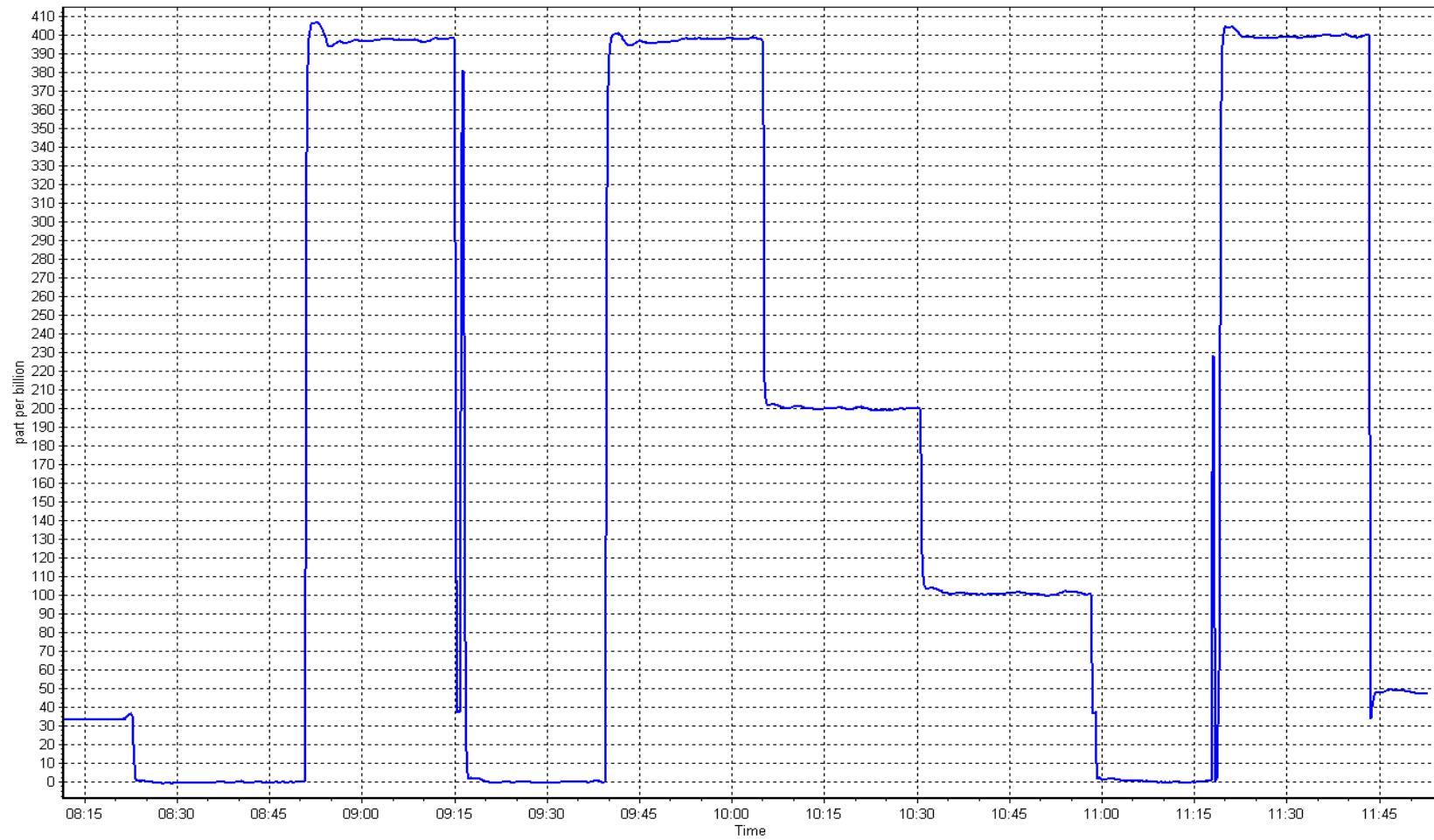
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999984	≥0.995
400.0	397.4	1.0065	Slope	0.992343	0.90 - 1.10
200.0	199.7	1.0015	Intercept	0.840000	+/- 5
100.0	100.8	0.9921			



O₃ Calibration Plot

Date: April 21, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Patricia McInnes
Calibration Date: April 14, 2026
Start time (MST): 11:53
Station number: AMS 06
Last Cal Date: March 27, 2026
End time (MST): 14:06
Analyzer Make: API T640
Particulate Fraction: PM2.5
S/N: 1547
Flow Meter Make/Model: Alicat FP-25BT
Temp/RH standard: Alicat FP-25BT
S/N: 388750
S/N: 388750

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	-4.3	-4.9	-4.3	☐	+/- 2 °C
P (mmHg)	722.3	721.71	722.3	☐	+/- 10 mmHg
Flow (LPM)	5.04	4.903	5.04	☐	+/- 0.25 LPM
PW% (pump)	34	----	34	☐	>80%
Zero Verification	PM w/o HEPA: 3.20		PM w/ HEPA: 0.00		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: 07-16-2026
Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	10.1	11.1	11.1	☐	+/- 0.5

Date Optical Chamber Cleaned: April 14, 2026
Date Disposable Filter Changed: April 14, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0.00 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: April 4, 2025
Date RH/T Sensor Cleaned: April 4, 2025

Verified flow, pressure, temperature and pump power. Completed quarterly maintenance.

Notes:

Calibration by: Braiden Boutilier



Wood Buffalo Environmental Association

Nt - NOX - NH3 Calibration Report

Station Information

Station Name:	Patricia McInnes	Station number:	AMS 06
NOX Cal Date:	April 23, 2026	Last Cal Date:	March 26, 2026
Start time (MST):	8:45	End time (MST):	16:43
NH3 Cal Date:	April 23, 2026	Last Cal Date:	March 27, 2026
Start time (MST):	8:45	End time (MST):	16:43
Reason:	Routine		

Calibration Standards

NOX Cal Gas Conc:	62.20	ppm	NO Gas Cylinder #:	DT0036234
NO Cal Gas Conc:	61.90	ppm	NO Cal Gas Expiry:	July 22, 2032
Removed NOX Conc:	62.20	ppm	Removed Cylinder #:	N/A
Removed NO Conc:	61.90	ppm	Removed cyl Expiry:	N/A
NOX gas Diff:			NO gas Diff:	
NH3 Cal Gas Conc:	77.5	ppm	NH3 Gas Cylinder #:	CC15099
Removed NH3 Conc:	77.5	ppm	NH3 Cal Gas Expiry:	September 10, 2026
NH3 gas Diff:			Removed Cylinder #:	
Calibrator Model:	API T700		Removed cyl Expiry:	
ZAG make/model:	API T701		Serial Number:	5240
			Serial Number:	4602

Analyzer Information

Analyzer model:	API T201	Analyzer serial #:	215
Converter model:	API T501	Converter serial #:	147
NH3 Range (ppb):	0 - 2000 ppb	Reaction cell Press:	5.60
NOX Range (ppb):	0 - 1000 ppb	Sample Flow:	335

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coefficient:	1.019	1.033	Nt coefficient:	1.010	1.036
NOX coefficient:	1.020	1.031	NO bkgrnd:	0.9	0.9
NO2 coefficient:	1.000	1.000	NOX bkgrnd:	0.5	0.5
NH3 coefficient:	0.965	0.950	Nt bkgrnd:	4.4	4.4

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.992868	0.999338
NO _x Cal Offset:	-1.365370	-0.666243
NO Cal Slope:	0.998264	0.999323
NO Cal Offset:	-2.644976	-2.265666
NO ₂ Cal Slope:	1.007089	0.993109
NO ₂ Cal Offset:	0.888551	2.147864
NH3 Cal Slope:	0.996655	1.003014
NH3 Cal Offset:	0.774650	1.126011
Nt Cal Slope:	1.000112	1.006378
Nt Cal Offset:	0.821525	1.399953



Wood Buffalo Environmental Association

NO_x - NO - NO₂ Calibration Report

NO_x / NO / Nt As Found Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated Nt concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	Baseline corr NO _x Correction factor (Cc/Ic) <i>Limit = 0.9 - 1.0</i>	Baseline corr NO Correction factor (Cc/Ic) <i>Limit = 0.9 - 1.0</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.5	-2.0	----	----
As found span	4935	64.6	803.7	799.8	803.7	796.6	790.9	786.4	1.0089	1.0113
AF GPT span										
new NO cyl rp										

Baseline Corr As Fd Nt = 788.4 ppb NO_x = 796.8 ppb NO = 791.4 ppb

Previous Response Nt = 804.6 ppb NO_x = 796.6 ppb NO = 795.8 ppb

****NO_x Δ (NO to GPT response) =**

*** = > +/-2% difference initiates investigation**

***Percent Change Nt(NO) = -2.1%**

***Percent Change NO_x = 0.0%**

***Percent Change NO = -0.6%**

*** = > +/-5% change initiates investigation**

NO_x / NO / Nt Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated Nt concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibration zero	5000	0.0	0.0	0.0	0.0	0.0	-0.4	-0.9	----	----
High point	4935	64.6	803.7	799.8	803.7	802.0	798.0	806.0	1.0021	1.0023
Mid point	4968	32.3	401.8	399.9	401.8	403.0	396.2	404.2	0.9970	1.0092
Low point	4984	16.2	201.5	200.5	201.5	198.4	196.4	199.1	1.0157	1.0211
Average Correction Factor									1.0049	1.0109

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found zero	----	----	0.0	0.3	----	----
Calibration zero	----	----	0.0	0.4	----	----
High GPT point (400 ppb O3)	791.6	385.6	409.9	408.1	1.0044	99.6%
Mid GPT point (200 ppb O3)	791.6	601.4	194.1	196.7	0.9867	101.4%
Low GPT point (100 ppb O3)	791.6	699.9	95.6	98.1	0.9743	102.6%
Average Correction Factor					0.9884	101.2%



Wood Buffalo Environmental Association NH₃ - N_T Calibration Report

NH₃ As Found Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated Nt concentration (ppb) (Cc)	Calculated NOX concentration (ppb) (Cc)	Calculated NH ₃ concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH ₃ concentration (ppb) (Ic)	Baseline corr Nt Correction factor (Cc/(Ic-zero)) <i>Limit = 0.9 - 1.1</i>	Baseline corr NH ₃ Correction factor (Cc/(Ic-zero)) <i>Limit = 0.9 - 1.1</i>
As found zero	5000	0.0	0.0	0.0	0.0	-2.0	-0.2	-1.8	----	----
AF High point	3419	81.3	1800.1	0.0	1800.1	1810.7	6.4	1804.5	0.993	0.997
AF Mid point										
AF Low point										
new NH ₃ cyl rp										
Baseline Corr As Fd	Nt = 1812.7 ppb	NH ₃ = 1806.3 ppb							*Percent Change	Nt _(NH₃) = 0.6%
Previous Response	Nt = 1801.1 ppb	NH ₃ = 1794.8 ppb							*Percent Change	NH ₃ = 0.6%

* = > +/-5% change initiates investigation

NH₃ Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated Nt concentration (ppb) (Cc)	Calculated NOX concentration (ppb) (Cc)	Calculated NH ₃ concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH ₃ concentration (ppb) (Ic)	Nt Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NH ₃ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibration zero	5000	0.0	0.0	0.0	0.0	-0.9	0.0	-0.9	----	----
High point	3419	81.3	1800.1	0.0	1800.1	1810.7	6.4	1804.5	0.994	0.998
Mid point	3455	45.2	1000.8	0.0	1000.8	1012.1	3.7	1008.4	0.989	0.992
Low point	3477	22.6	500.5	0.0	500.5	506.1	2.2	503.8	0.989	0.993
Average Correction Factor									0.9906	0.9945
NH ₃ Previous Converter Efficiency =	96.5 %									
NH ₃ Current Converter Efficiency =	95.0 %									

Notes:

Changed the inlet filter after as founds. Span adjusted for NO_x and TN_x. Adjusted NH₃ span.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

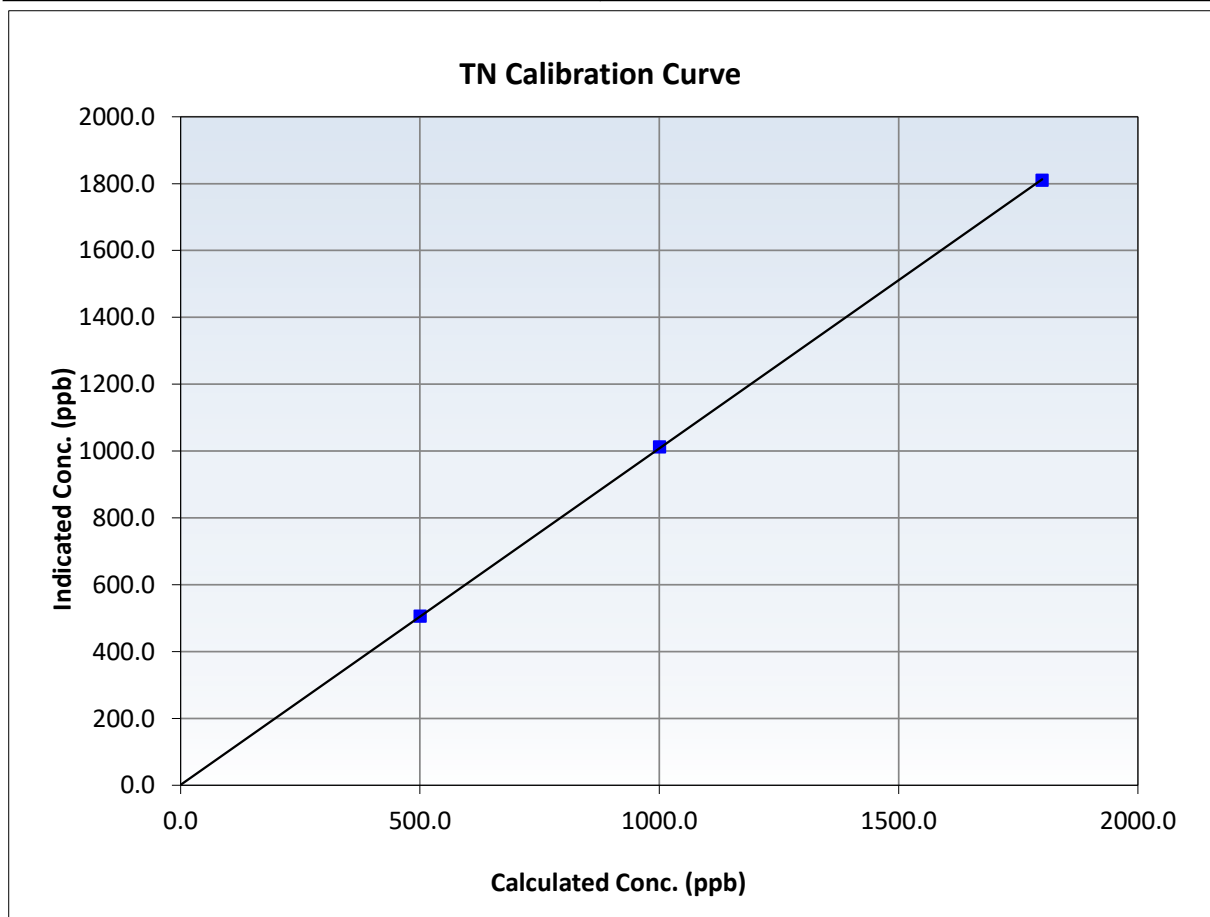
Nt Calibration Summary

Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	March 26, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:45	End Time (MST):	16:43
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.9	----	Correlation Coefficient	0.999987	≥ 0.995
1800.1	1810.7	0.9941	Slope	1.006378	0.90 - 1.10
1000.8	1012.1	0.9888	Intercept	1.399953	+/-20
500.5	506.1	0.9889			





Wood Buffalo Environmental Association

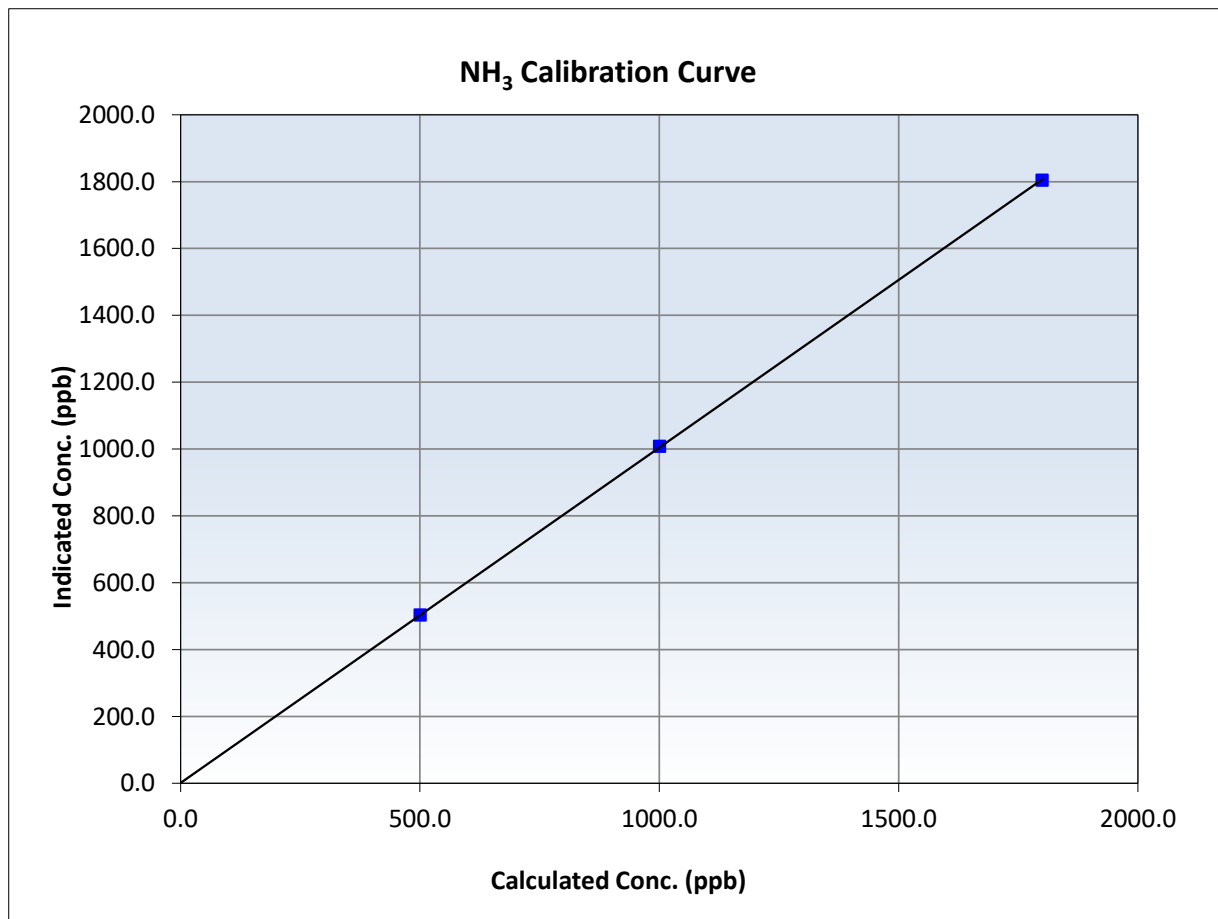
NH₃ Calibration Summary

Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	March 26, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:45	End Time (MST):	16:43
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.9	----	Correlation Coefficient	0.999988	≥0.995
1800.1	1804.5	0.9975	Slope	1.003014	0.90 - 1.10
1000.8	1008.4	0.9925	Intercept	1.126011	+/-20
500.5	503.8	0.9934			





Wood Buffalo Environmental Association

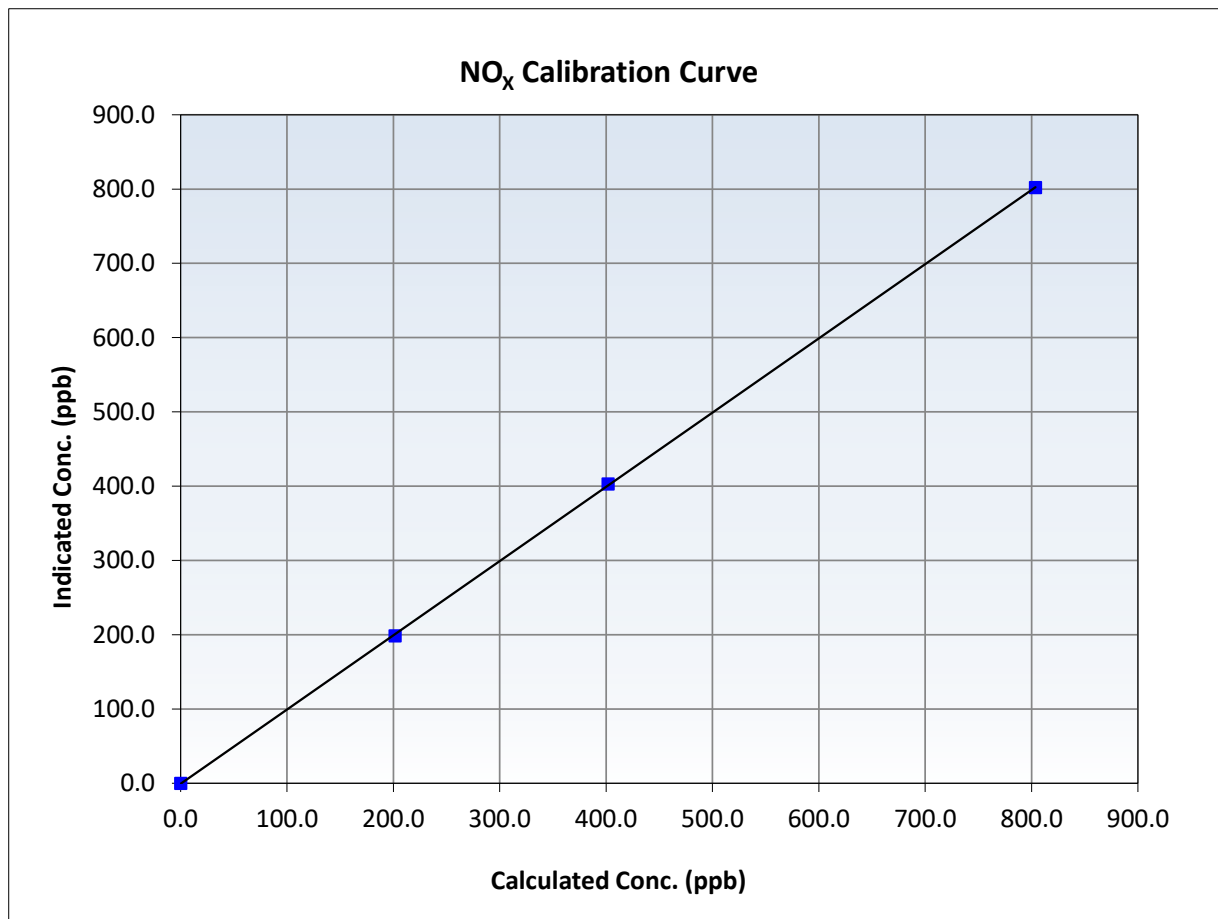
NO_x Calibration Summary

Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	March 26, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:45	End Time (MST):	16:43
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.0	0.0	----	Correlation Coefficient	0.999970	<i>≥0.995</i>
803.7	802.0	1.0021	Slope	0.999338	<i>0.90 - 1.10</i>
401.8	403.0	0.9970	Intercept	-0.666243	<i>+/-20</i>
201.5	198.4	1.0157			





Wood Buffalo Environmental Association

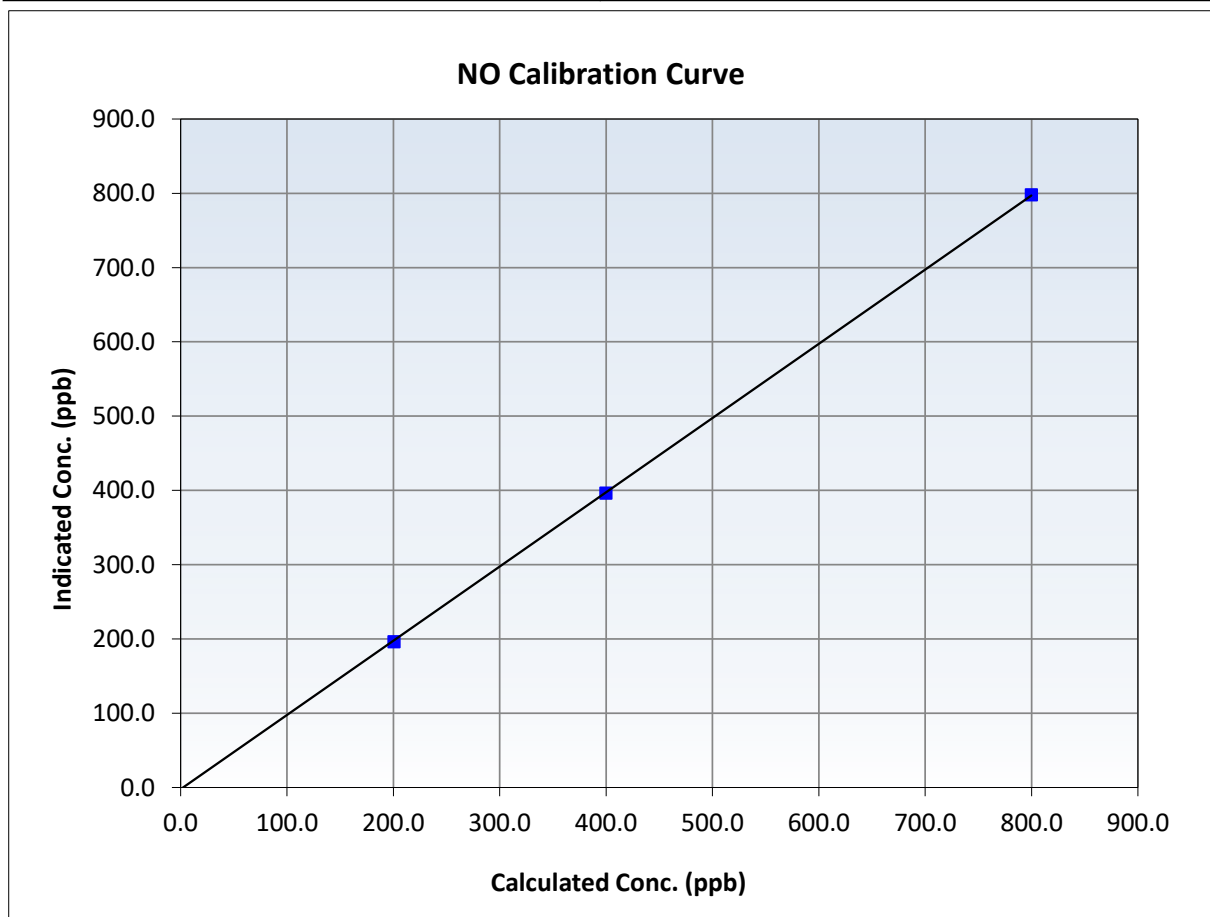
NO Calibration Summary

Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	March 26, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:45	End Time (MST):	16:43
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.0	-0.4	----	Correlation Coefficient	0.999975	<i>≥0.995</i>
799.8	798.0	1.0023	Slope	0.999323	<i>0.90 - 1.10</i>
399.9	396.2	1.0092	Intercept	-2.265666	<i>+/-20</i>
200.5	196.4	1.0211			





Wood Buffalo Environmental Association

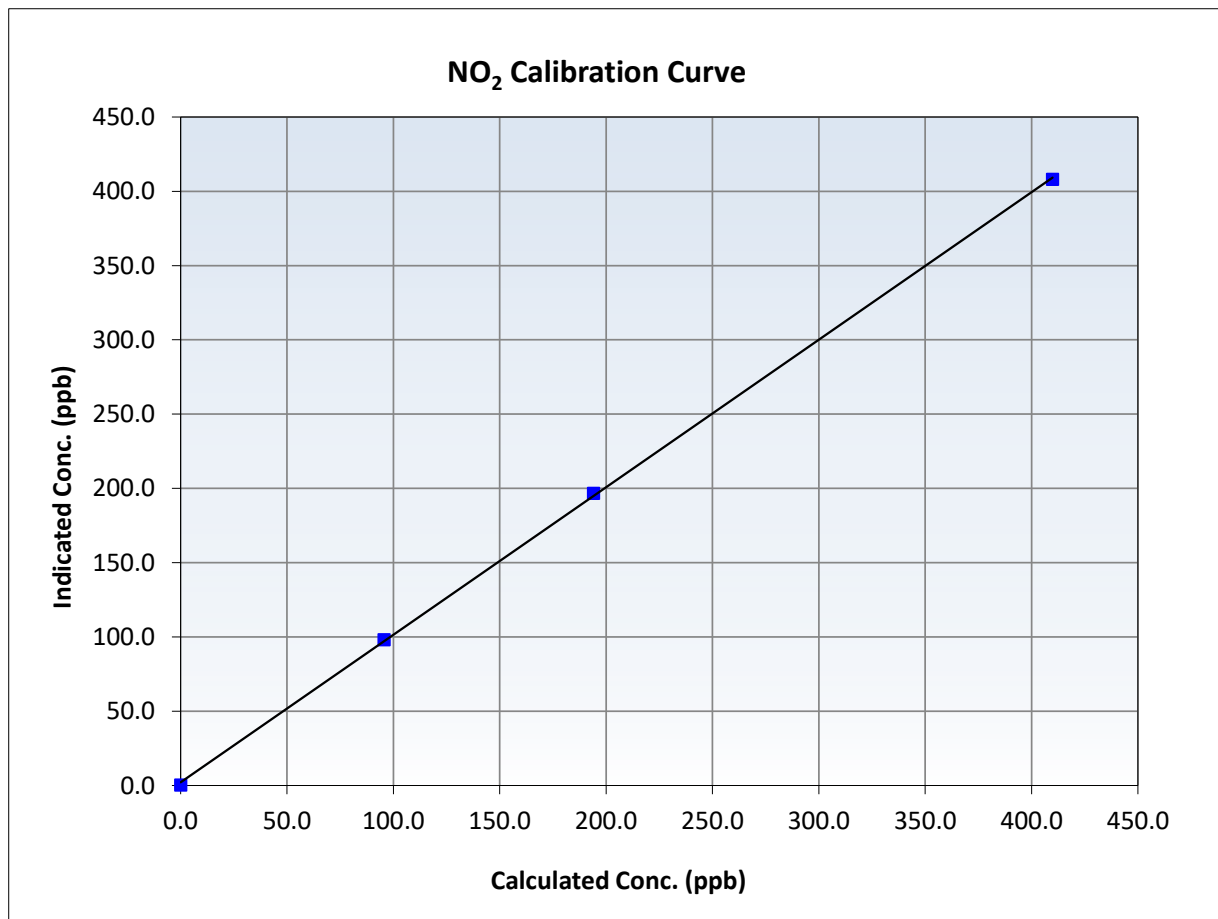
NO₂ Calibration Summary

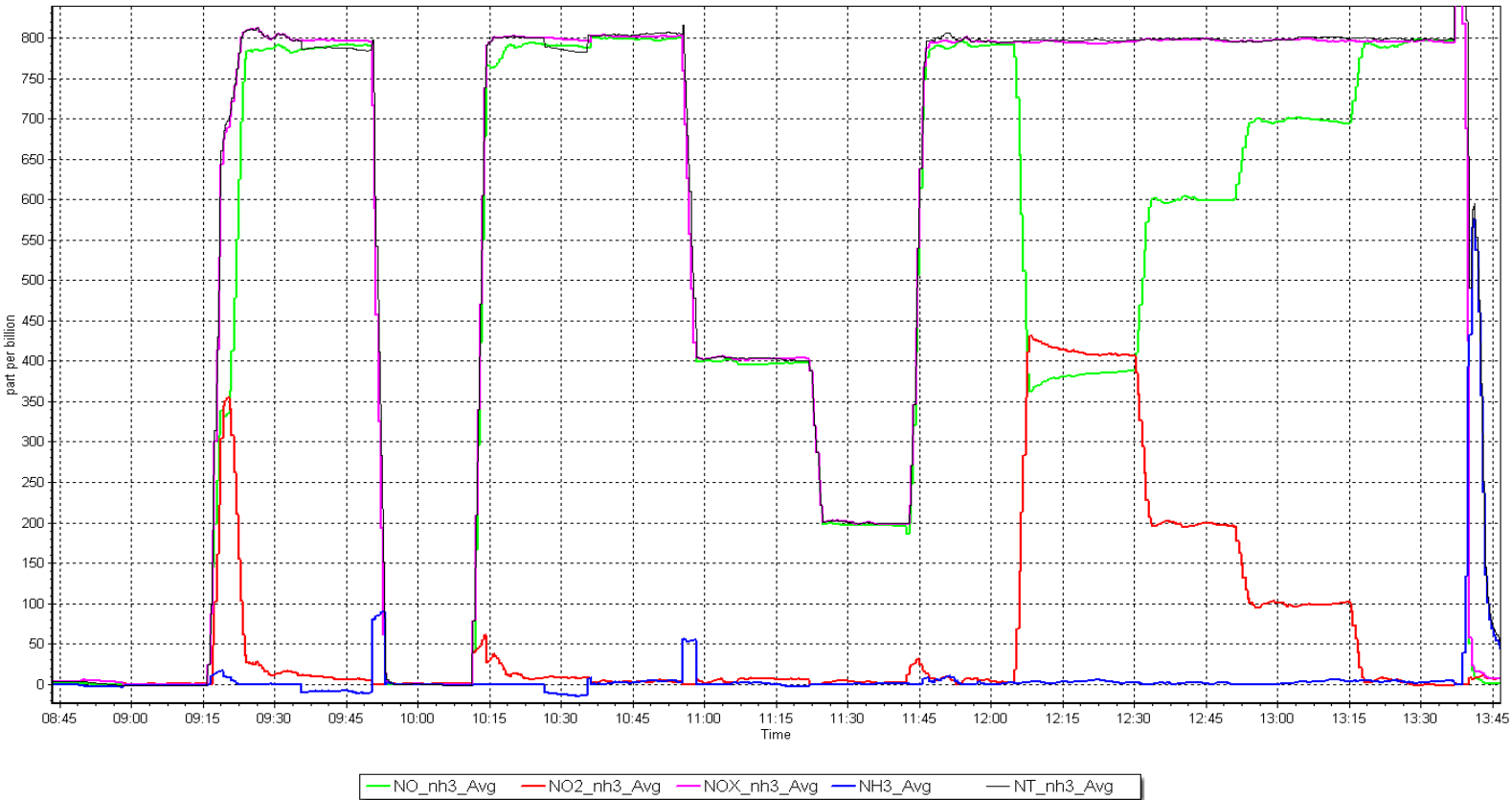
Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	March 26, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:45	End Time (MST):	16:43
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.0	0.4	----	Correlation Coefficient	0.999905	<i>≥0.995</i>
409.9	408.1	1.0044	Slope	0.993109	<i>0.90 - 1.10</i>
194.1	196.7	0.9867	Intercept	2.147864	<i>+/-20</i>
95.6	98.1	0.9743			

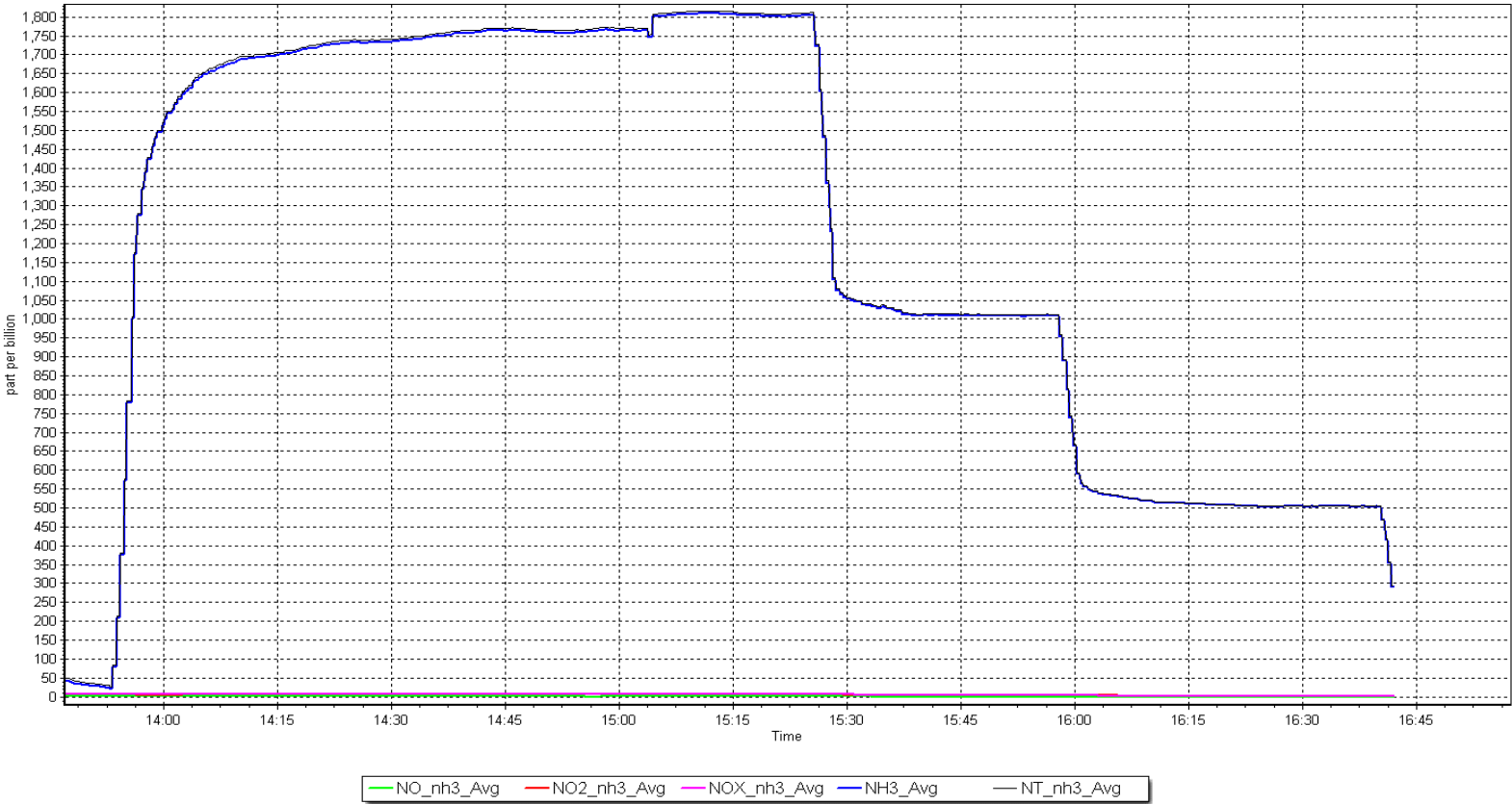




NH₃ Calibration Plot

Date: April 23, 2026

Location: Patricia McInnes





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS07 ATHABASCA VALLEY APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Athabasca Valley Station number: AMS07
Calibration Date: April 8, 2026 Last Cal Date: March 4, 2026
Start time (MST): 12:29 End time (MST): 15:04
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.06 ppm Cal Gas Exp Date: March 10, 2031
Cal Gas Cylinder #: CC320556
Removed Cal Gas Conc: 50.06 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: API T700 Serial Number: 3805
Zero Air Gen Model: API 701H Serial Number: 198

Analyzer Information

Analyzer make: Thermo 43i-LTE Serial Number: 1507864683
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.997532	1.004849	Backgd or Offset:	2.73	2.73
Calibration intercept:	2.863374	2.402830	Coeff or Slope:	0.874	0.874

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.1	----
As found High point	4920	79.9	800.0	800.3	1.000
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	800.2	Previous response	800.9	*% change	-0.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4920	79.9	800.0	804.6	0.994
Mid point	4960	39.9	399.5	406.7	0.982
Low point	4980	20.0	200.2	204.5	0.979
As left zero	5000	0.0	0.0	0.3	----
As left span	4920	79.8	799.0	804.5	0.993
Average Correction Factor:					0.985

Notes: Sample inlet filter was changed after as founds. No adjustments made.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

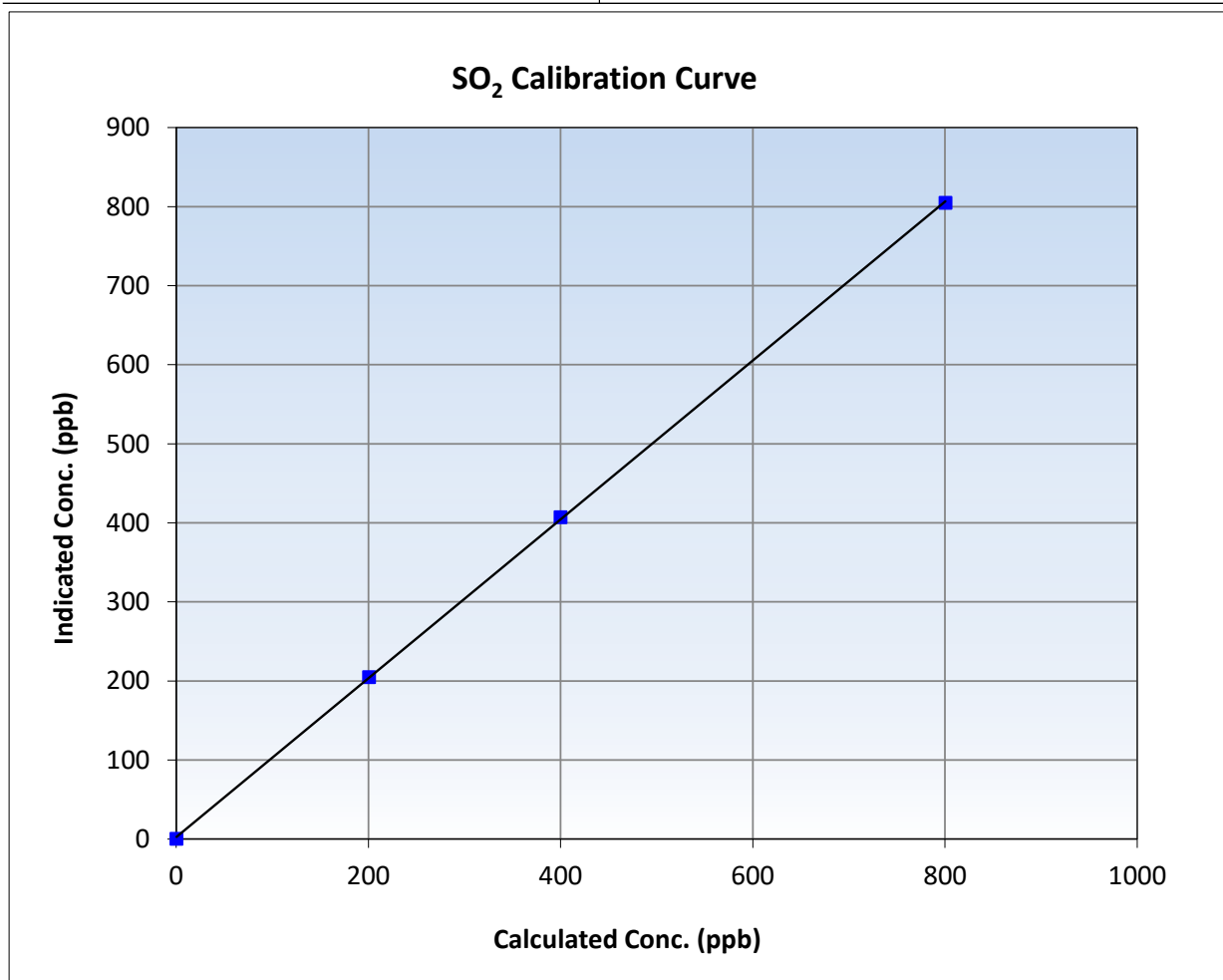
SO₂ Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 4, 2026
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	12:29	End Time (MST):	15:04
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1507864683

Calibration Data

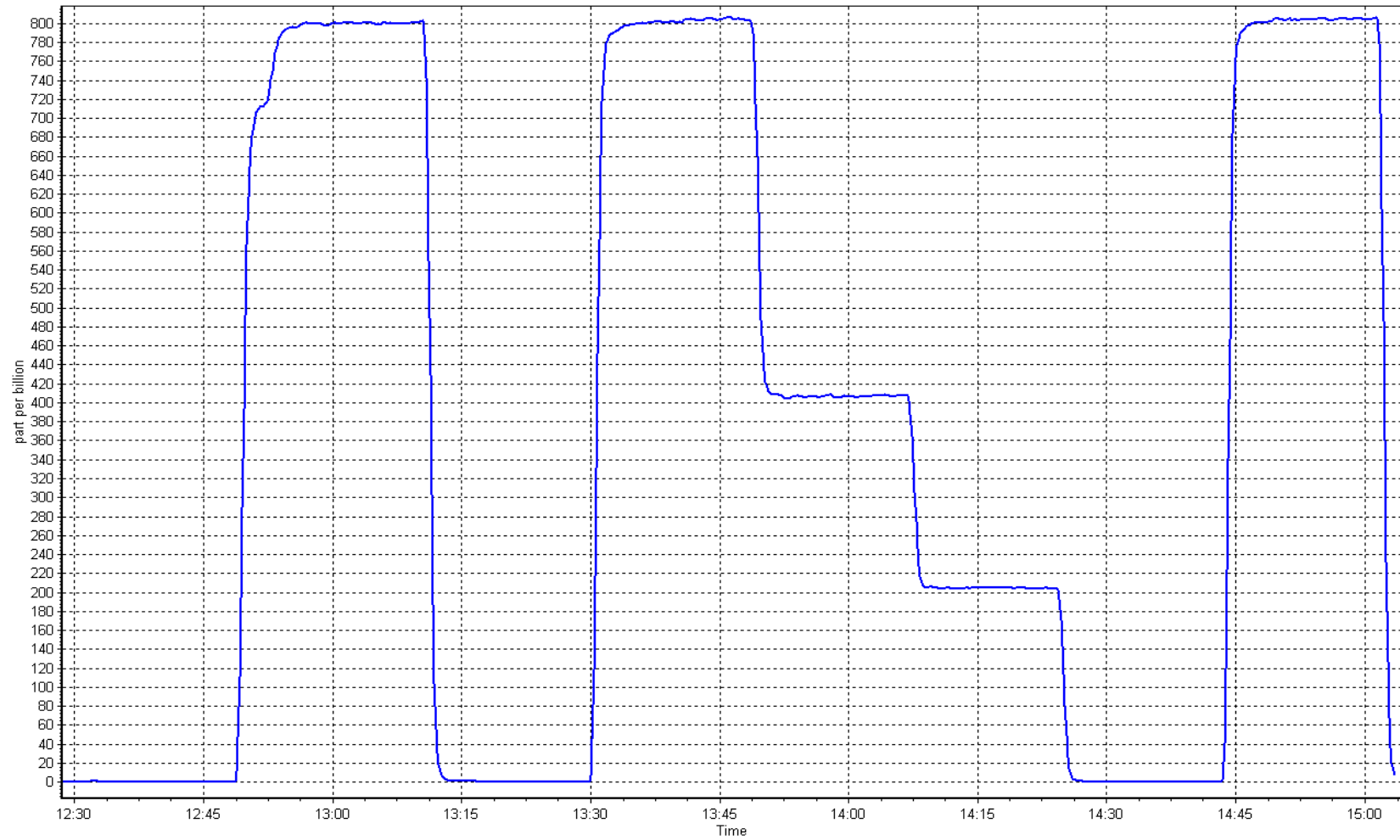
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999954	≥0.995
800.0	804.6	0.9943	Slope	1.004849	0.90 - 1.10
399.5	406.7	0.9823	Intercept	2.402830	+/-30
200.2	204.5	0.9792			



SO2 Calibration Plot

Date: April 8, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: April 9, 2026
Start time (MST): 8:14
Reason: Routine
Station number: AMS07
Last Cal Date: March 5, 2026
End time (MST): 12:06

Calibration Standards

Cal Gas Concentration: 5.25 ppm
Cal Gas Cylinder #: CC504080
Removed Cal Gas Conc: 5.25 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: API T700
ZAG Make/Model: API T701H
Cal Gas Exp Date: January 3, 2026
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3805
Serial Number: 198

Analyzer Information

Analyzer make: Thermo 43i LTE
Converter make: CDN-101
Analyzer Range: 0 - 100 ppb
Analyzer serial #: 1180540018
Converter serial #: 551
Converter Temp: 840 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004248	1.002662	Backgd or Offset:	2.7	2.7
Calibration intercept:	0.057828	0.037856	Coeff or Slope:	0.887	0.887

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4925	75.5	79.3	79.3	0.998
As found Mid point	4962	37.7	39.6	39.8	0.992
As found Low point	4981	18.9	19.8	19.8	0.997
New cylinder response					
Baseline Corr As found:	79.4	Prev response:	79.66	*% change:	-0.3%
Baseline Corr 2nd AF pt:	39.9	AF Slope:	1.001937	AF Intercept:	-0.042128
Baseline Corr 3rd AF pt:	19.9	AF Correlation:	0.999988	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4925	75.5	79.3	79.5	0.998
Mid point	4962	37.7	39.6	39.9	0.993
Low point	4981	18.9	19.9	19.9	0.998
As left zero	5000	0.0	0.0	0.0	----
As left span	4925	75.5	79.3	79.9	0.993
SO2 Scrubber Check	4920	79.2	792.1	0.0	----
Date of last scrubber change:	8-Aug-25		Ave Corr Factor		0.996
Date of last converter efficiency test:	Friday, April 22, 2022				

Notes: Sample inlet filter was changed after multi point as founds. Scrubber check done and passed. No adjustments made.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

TRS Calibration Summary

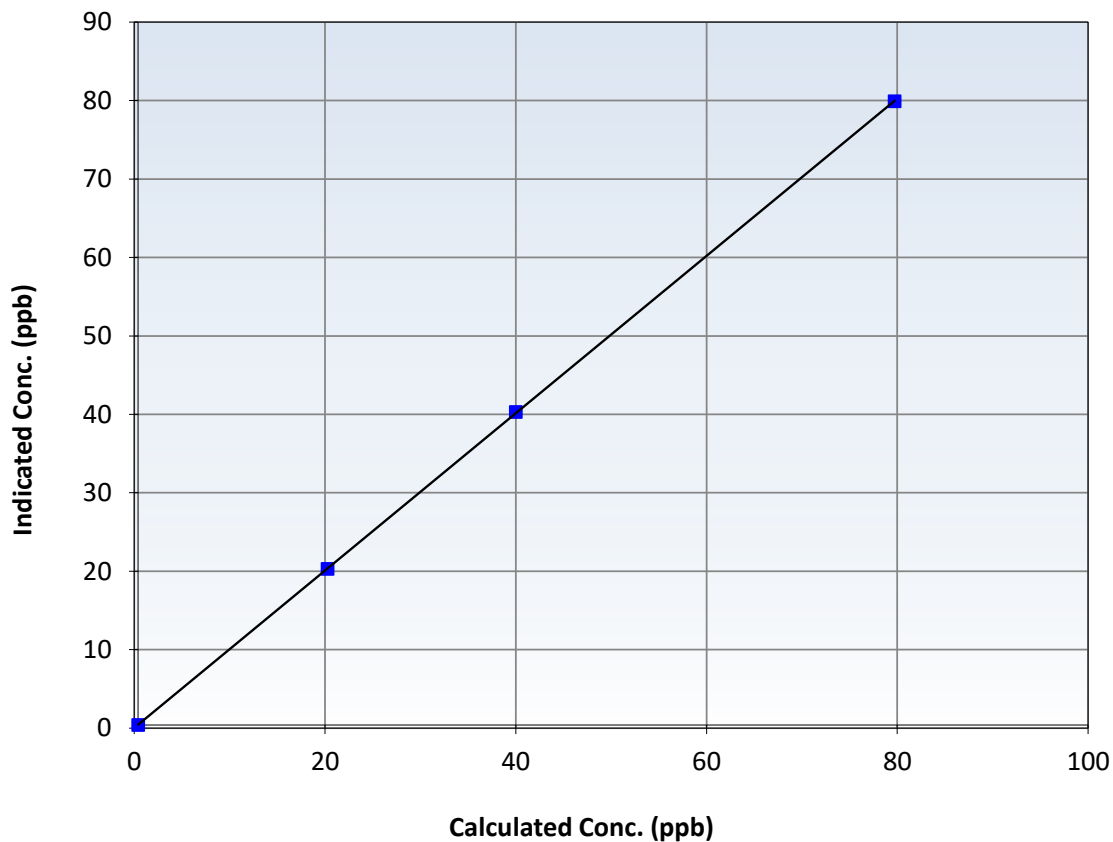
Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 5, 2026
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	8:14	End Time (MST):	12:06
Analyzer make:	Thermo 43i LTE	Analyzer serial #:	1180540018

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999992		≥ 0.995
79.3	79.5	0.9976	Slope	1.002662		$0.90 - 1.10$
39.6	39.9	0.9927	Intercept	0.037856		± 3
19.9	19.9	0.9978				

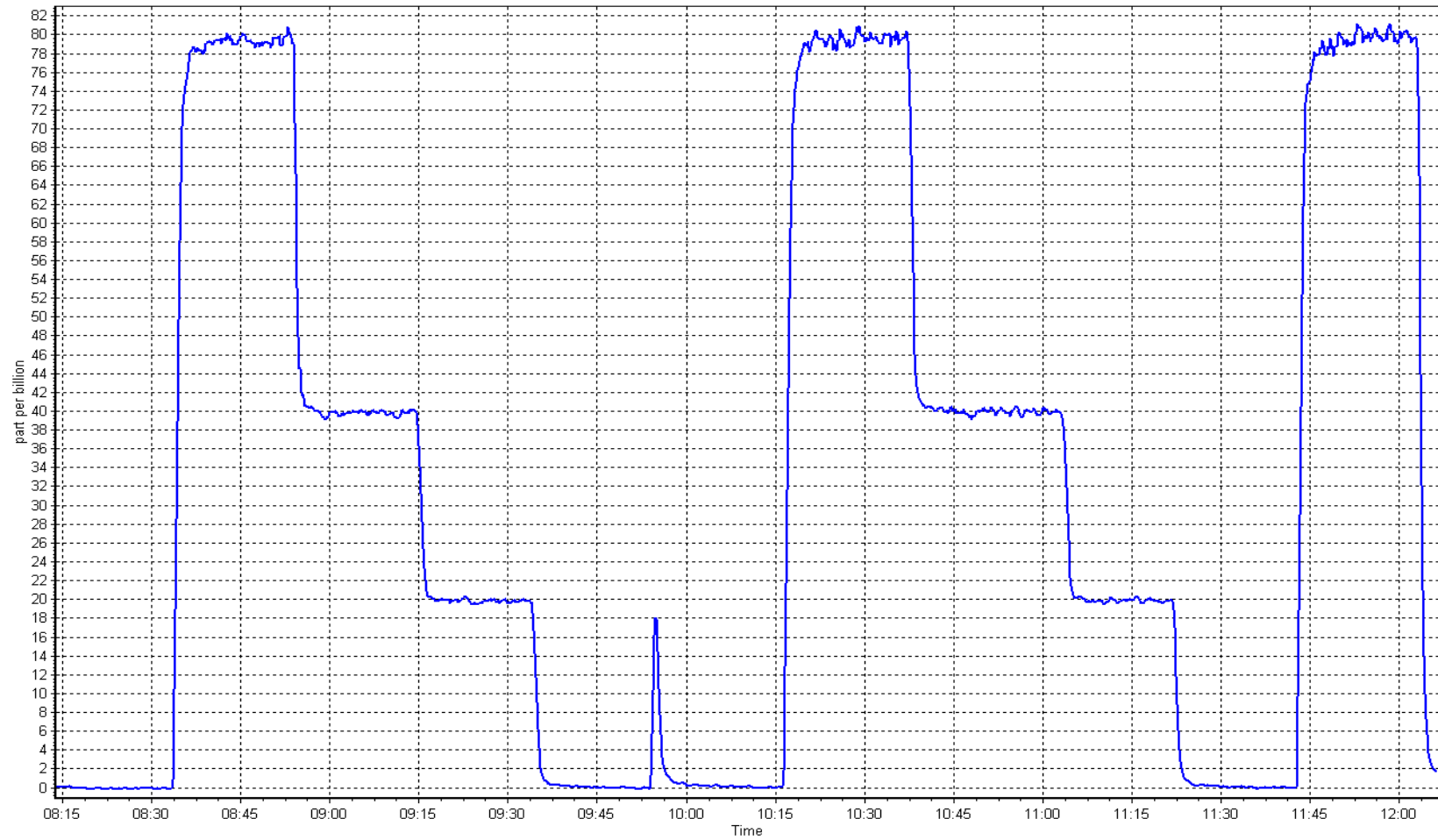
TRS Calibration Curve



TRS Calibration Plot

Date: April 9, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Athabasca Valley
 Calibration Date: April 3, 2026
 Start time (MST): 11:05
 Reason: Routine

Station number: AMS 07
 Last Cal Date: March 4, 2026
 End time (MST): 14:03

Calibration Standards

Gas Cert Reference:	CC320556	Cal Gas Expiry Date:	March 10, 2031
CH ₄ Cal Gas Conc.	496.0 ppm	CH ₄ Equiv Conc.	1059.8 ppm
C ₃ H ₈ Cal Gas Conc.	205.0 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH ₄ Conc.	496.0 ppm	CH ₄ Equiv Conc.	1059.8 ppm
Removed C ₃ H ₈ Conc.	205.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	3805
Zero Air Gen model:	Teledyne API T701H	Serial Number:	198

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1331259520
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.78E-04	2.85E-04	NMHC SP Ratio:	5.49E-05
CH ₄ Retention time:	14.4	14.4	NMHC Peak Area:	164069
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	16.91	16.56	1.022
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.56	Prev response	17.07	*% change	-3.1%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	16.94	16.90	1.002
Mid point	4960	39.9	8.46	8.47	0.999
Low point	4980	20.0	4.24	4.27	0.992
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	16.91	15.66	1.080
Average Correction Factor					0.998

Notes:

Sample inlet filter was changed after as founds. Adjusted span only.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	9.00	8.86	1.016
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.86	Prev response	9.09	*% change	-2.6%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	9.01	8.99	1.002
Mid point	4960	39.9	4.50	4.51	0.997
Low point	4980	20.0	2.26	2.28	0.989
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	9.00	8.16	1.103
Average Correction Factor					0.996

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	7.92	7.70	1.028
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.70	Prev response	7.98	*% change	-3.7%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	7.93	7.91	1.003
Mid point	4960	39.9	3.96	3.95	1.001
Low point	4980	20.0	1.98	1.99	0.995
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	7.92	7.50	1.055
Average Correction Factor					1.000

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	1.008717	0.997474
THC Cal Offset:	0.011643	0.021432
CH ₄ Cal Slope:	1.007292	0.996924
CH ₄ Cal Offset:	0.008619	0.006814
NMHC Cal Slope:	1.009629	0.997285
NMHC Cal Offset:	0.003625	0.016019

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

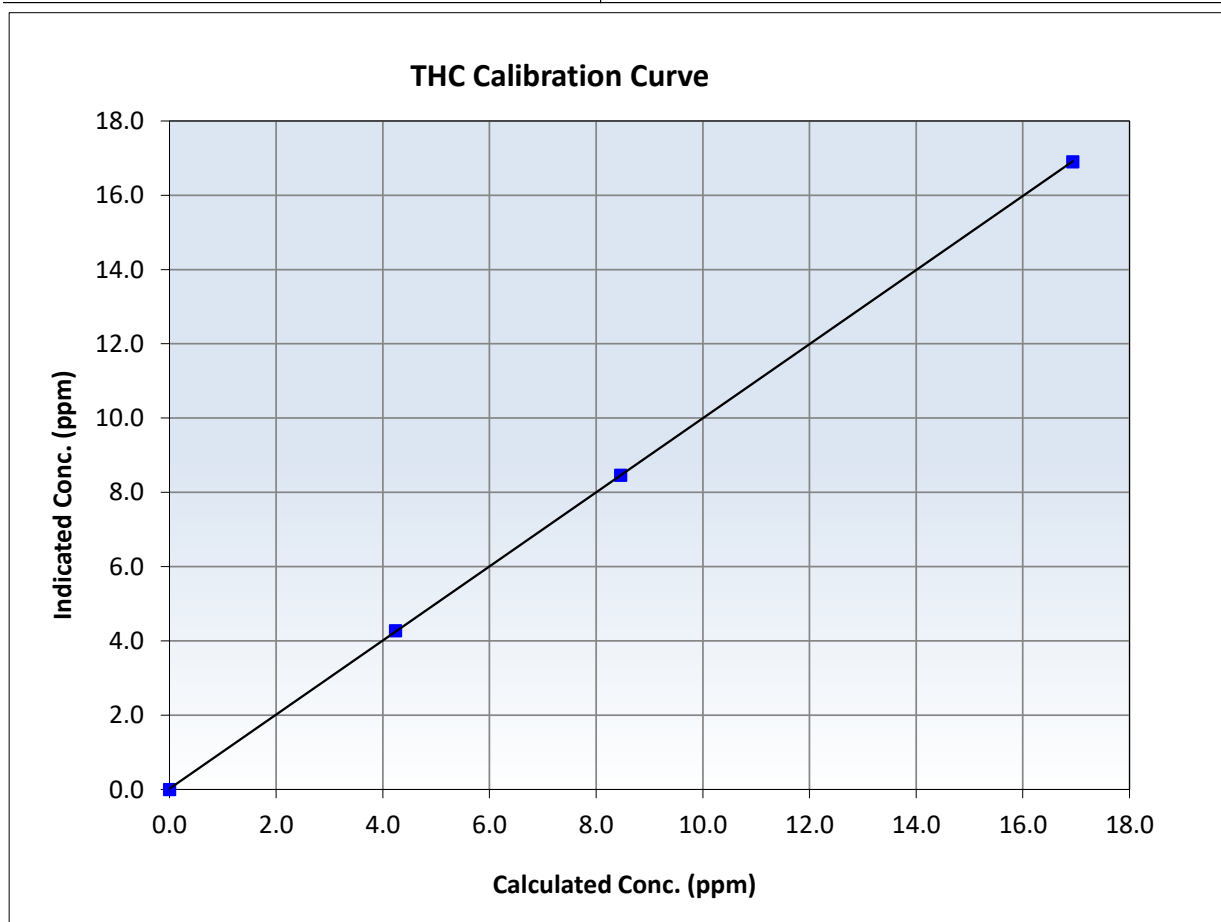
THC Calibration Summary

Station Information

Calibration Date:	April 3, 2026	Previous Calibration:	March 4, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	11:05	End Time (MST):	14:03
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999993	≥ 0.995
16.94	16.90	1.0018	Slope	0.997474	$0.90 - 1.10$
8.46	8.47	0.9991	Intercept	0.021432	± 0.5
4.24	4.27	0.9920			





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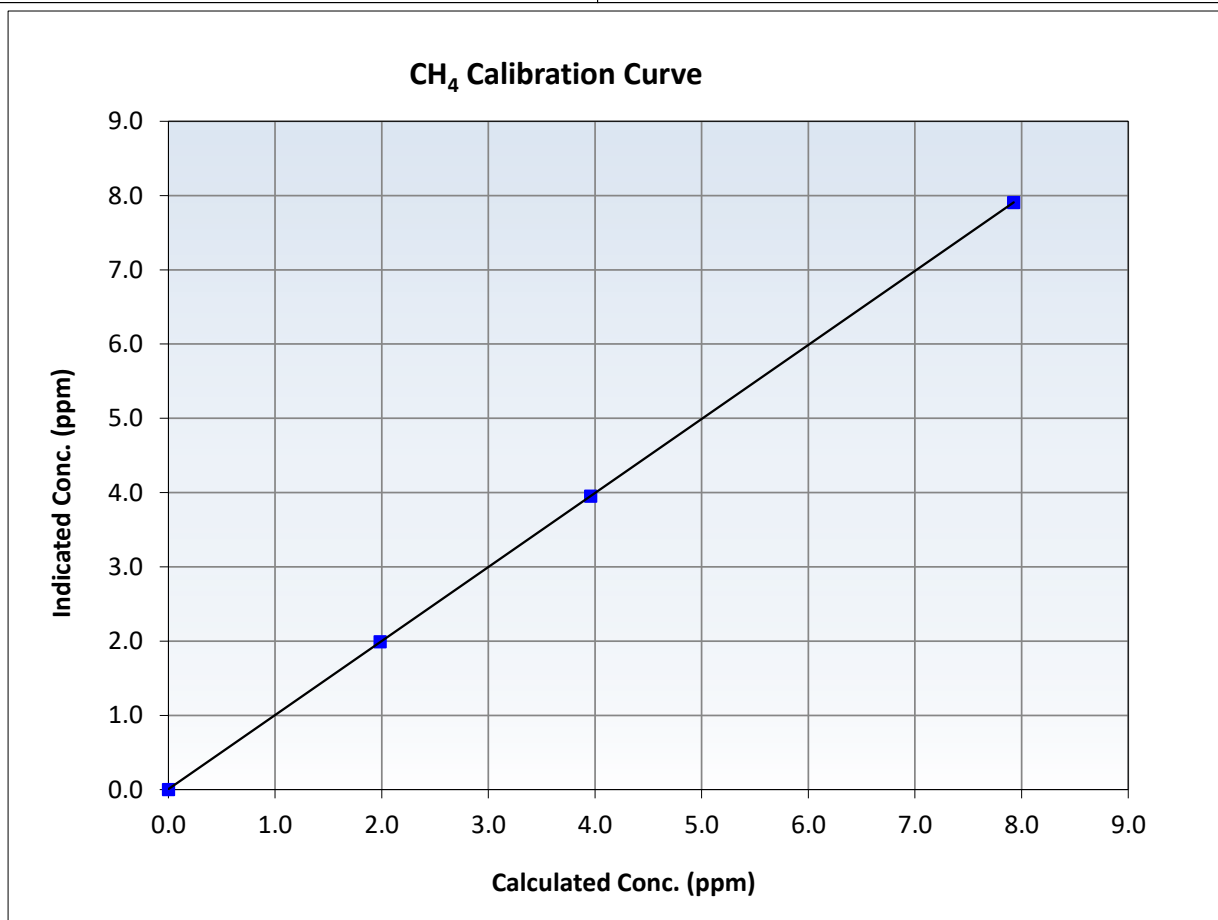
CH₄ Calibration Summary

Station Information

Calibration Date:	April 3, 2026	Previous Calibration:	March 4, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	11:05	End Time (MST):	14:03
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999996	≥ 0.995
7.93	7.91	1.0026	Slope	0.996924	$0.90 - 1.10$
3.96	3.95	1.0011	Intercept	0.006814	± 0.5
1.98	1.99	0.9955			





Wood Buffalo Environmental Association

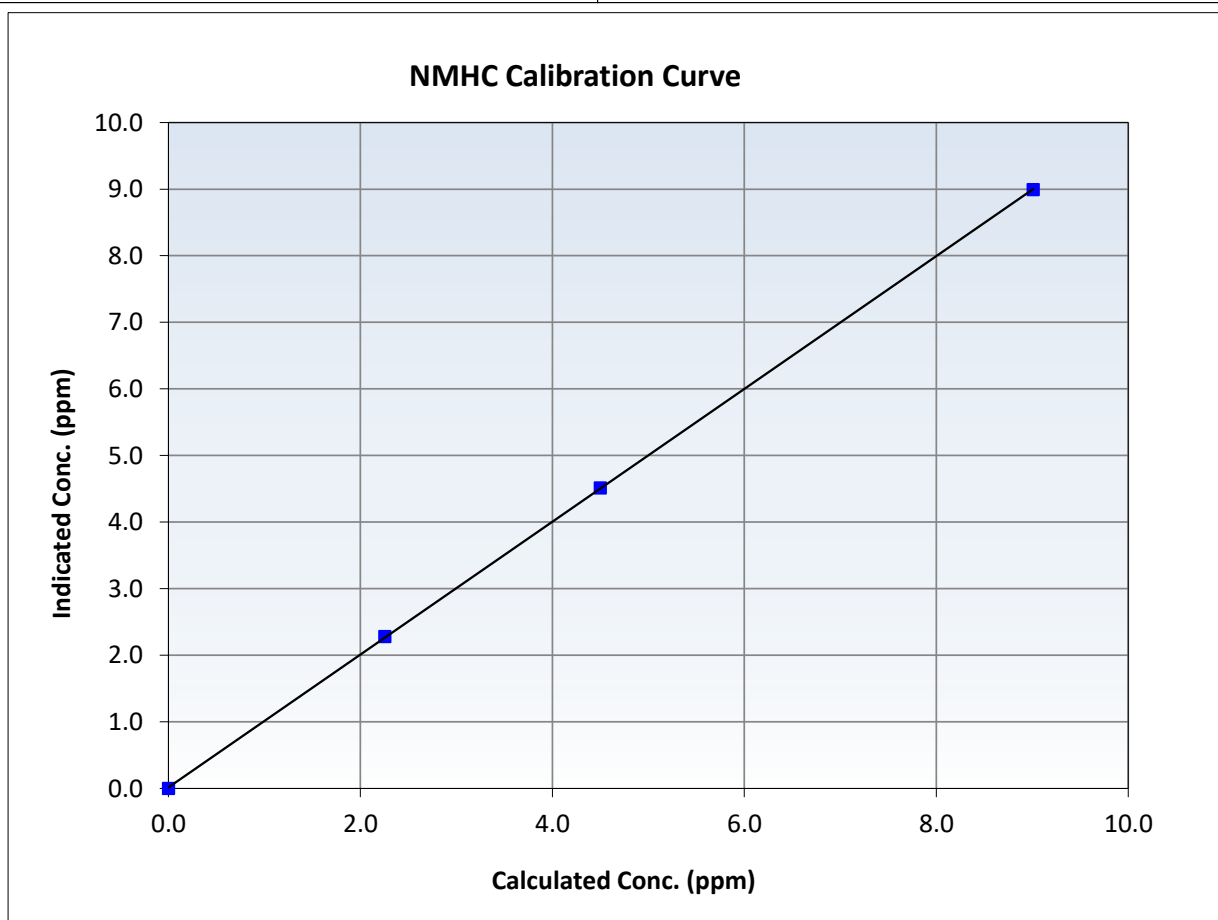
NMHC Calibration Summary

Station Information

Calibration Date:	April 3, 2026	Previous Calibration:	March 4, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	11:05	End Time (MST):	14:03
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

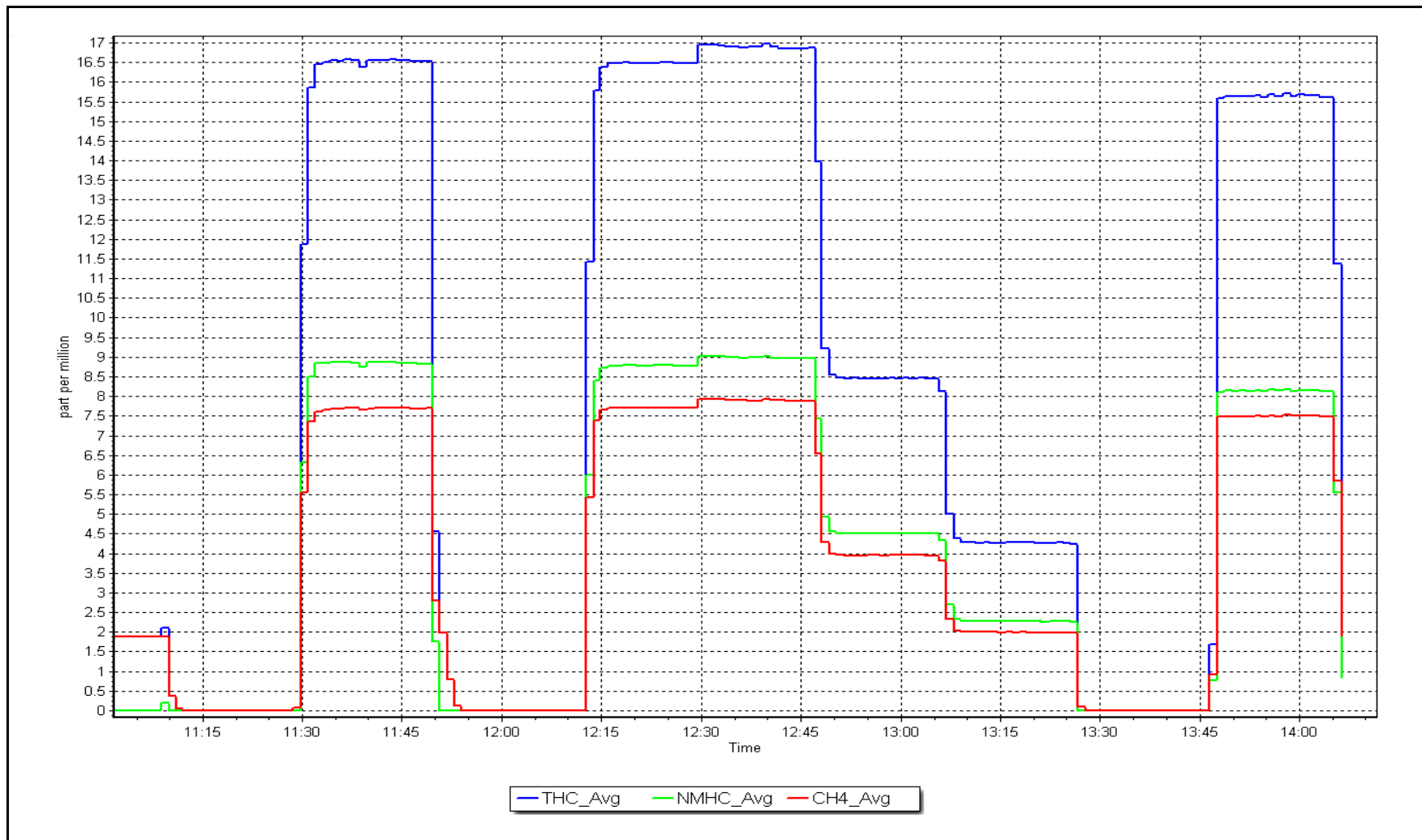
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999985	≥ 0.995
9.01	8.99	1.0019	Slope	0.997285	$0.90 - 1.10$
4.50	4.51	0.9971	Intercept	0.016019	± 0.5
2.26	2.28	0.9890			



NMHC Calibration Plot

Date: April 3, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Athabasca Valley
 Calibration Date: April 7, 2026
 Start time (MST): 9:31
 Reason: Maintenance

Station number: AMS 07
 Last Cal Date: April 3, 2026
 End time (MST): 15:12

Calibration Standards

Gas Cert Reference:	CC320556	Cal Gas Expiry Date:	March 10, 2031
CH ₄ Cal Gas Conc.	496.0 ppm	CH ₄ Equiv Conc.	1059.8 ppm
C ₃ H ₈ Cal Gas Conc.	205.0 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH ₄ Conc.	496.0 ppm	CH ₄ Equiv Conc.	1059.8 ppm
Removed C ₃ H ₈ Conc.	205.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	3805
Zero Air Gen model:	Teledyne API T701H	Serial Number:	198

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1331259520
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.85E-04	2.77E-04	NMHC SP Ratio:	5.61E-05
CH ₄ Retention time:	14.4	14.4	NMHC Peak Area:	160496
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	16.91	16.37	1.033
As found Mid point	4960	39.9	8.46	8.21	1.030
As found Low point	4980	20.0	4.24	4.15	1.022
New cylinder response					
Baseline Corr AF:	16.37	Prev response	16.89	*% change	-3.2%
Baseline Corr 2nd AF:	8.21	AF Slope:	0.967207	AF Intercept:	0.023186
Baseline Corr 3rd AF:	4.15	AF Correlation:	0.999991	* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	16.94	16.96	0.998
Mid point	4960	39.9	8.46	8.56	0.988
Low point	4980	20.0	4.24	4.34	0.977
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	16.91	17.19	0.984
Average Correction Factor					0.988

Notes: Sample inlet filter was changed after as founds. Internal pump replaced as well. Adjusted span only.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	79.8	9.00	8.62	1.044
As found Mid point	4960	39.9	4.50	4.34	1.036
As found Low point	4980	20.0	2.26	2.20	1.027
New cylinder response					
Baseline Corr AF:	8.62	Prev response	8.99	*% change	-4.3%
Baseline Corr 2nd AF:	4.34	AF Slope:	0.957200	AF Intercept:	0.020885
Baseline Corr 3rd AF:	2.20	AF Correlation:	0.999972	* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	79.9	9.01	9.03	0.997
Mid point	4960	39.9	4.50	4.58	0.983
Low point	4980	20.0	2.26	2.33	0.968
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	9.00	9.19	0.979
Average Correction Factor					0.983

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	79.8	7.92	7.75	1.021
As found Mid point	4960	39.9	3.96	3.87	1.023
As found Low point	4980	20.0	1.98	1.95	1.016
New cylinder response					
Baseline Corr AF:	7.75	Prev response	7.90	*% change	-1.9%
Baseline Corr 2nd AF:	3.87	AF Slope:	0.978465	AF Intercept:	0.002701
Baseline Corr 3rd AF:	1.95	AF Correlation:	0.999996	* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	79.9	7.93	7.93	1.000
Mid point	4960	39.9	3.96	3.98	0.994
Low point	4980	20.0	1.98	2.01	0.988
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	7.92	8.00	0.990
Average Correction Factor					0.994

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.997474	1.000347
THC Cal Offset:	0.021432	0.054647
CH ₄ Cal Slope:	0.996924	0.999432
CH ₄ Cal Offset:	0.006814	0.014620
NMHC Cal Slope:	0.997285	1.001026
NMHC Cal Offset:	0.016019	0.040027

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

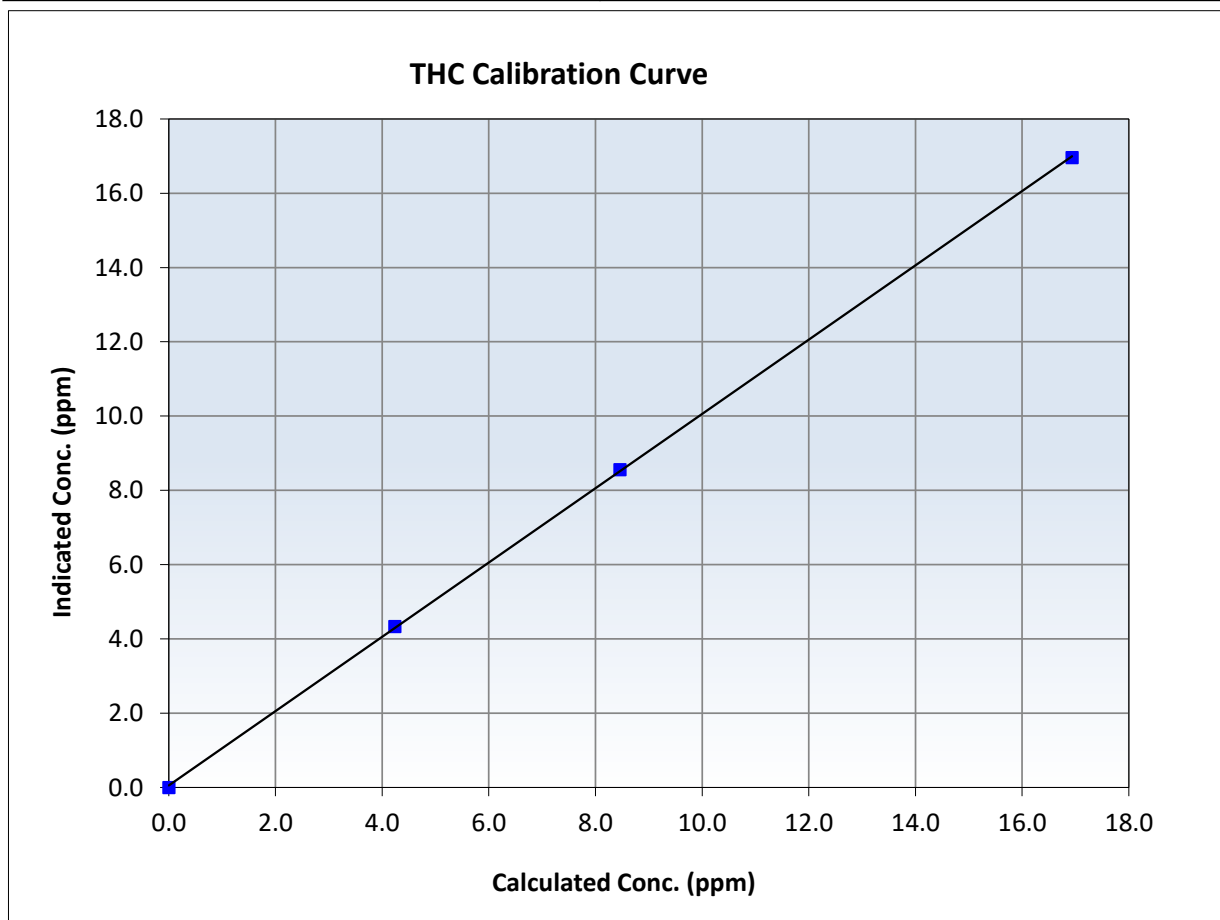
THC Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	April 3, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	9:31	End Time (MST):	15:12
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999949	≥ 0.995
16.94	16.96	0.9984	Slope	1.000347	$0.90 - 1.10$
8.46	8.56	0.9878	Intercept	0.054647	± 0.5
4.24	4.34	0.9774			





Wood Buffalo Environmental Association

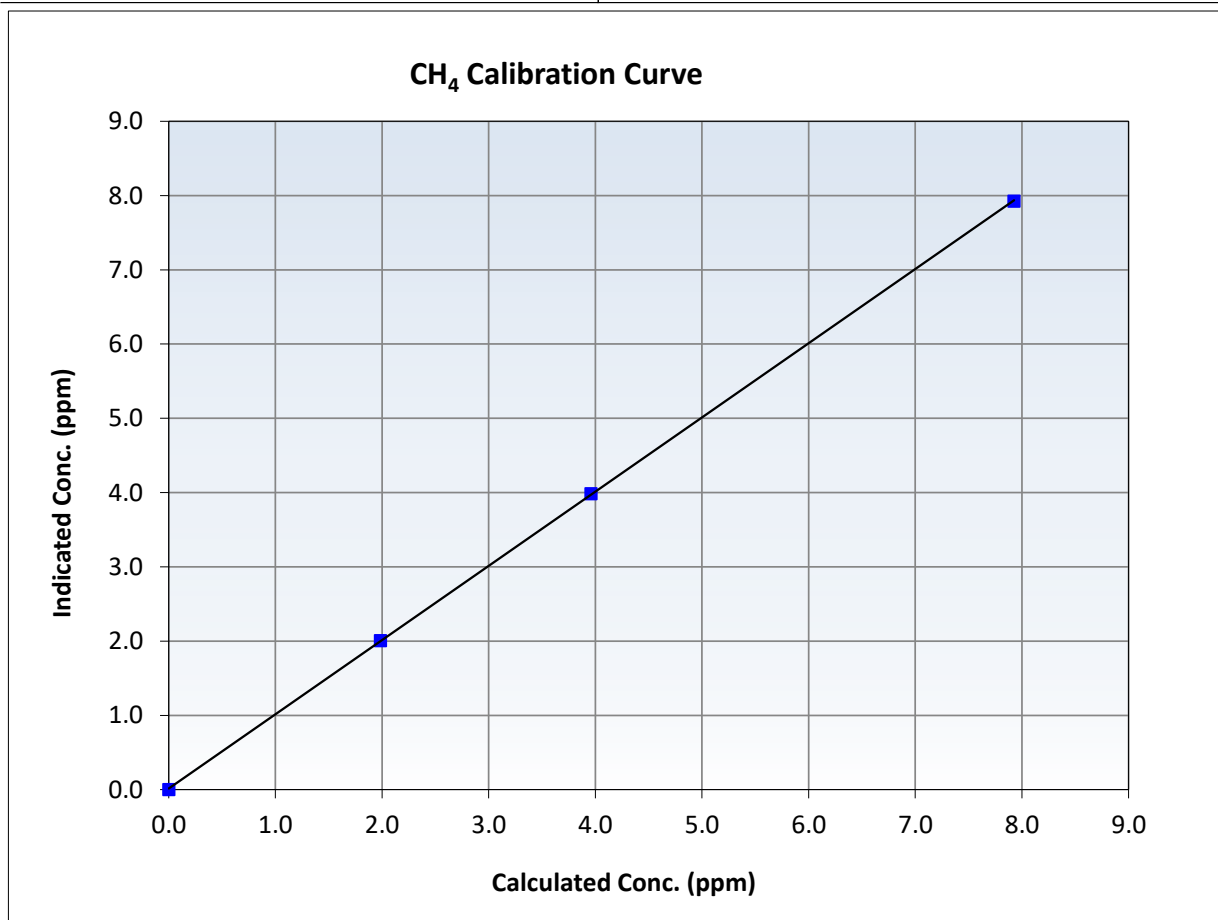
CH₄ Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	April 3, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	9:31	End Time (MST):	15:12
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999983	≥ 0.995
7.93	7.93	0.9999	Slope	0.999432	$0.90 - 1.10$
3.96	3.98	0.9935	Intercept	0.014620	± 0.5
1.98	2.01	0.9880			





Wood Buffalo Environmental Association

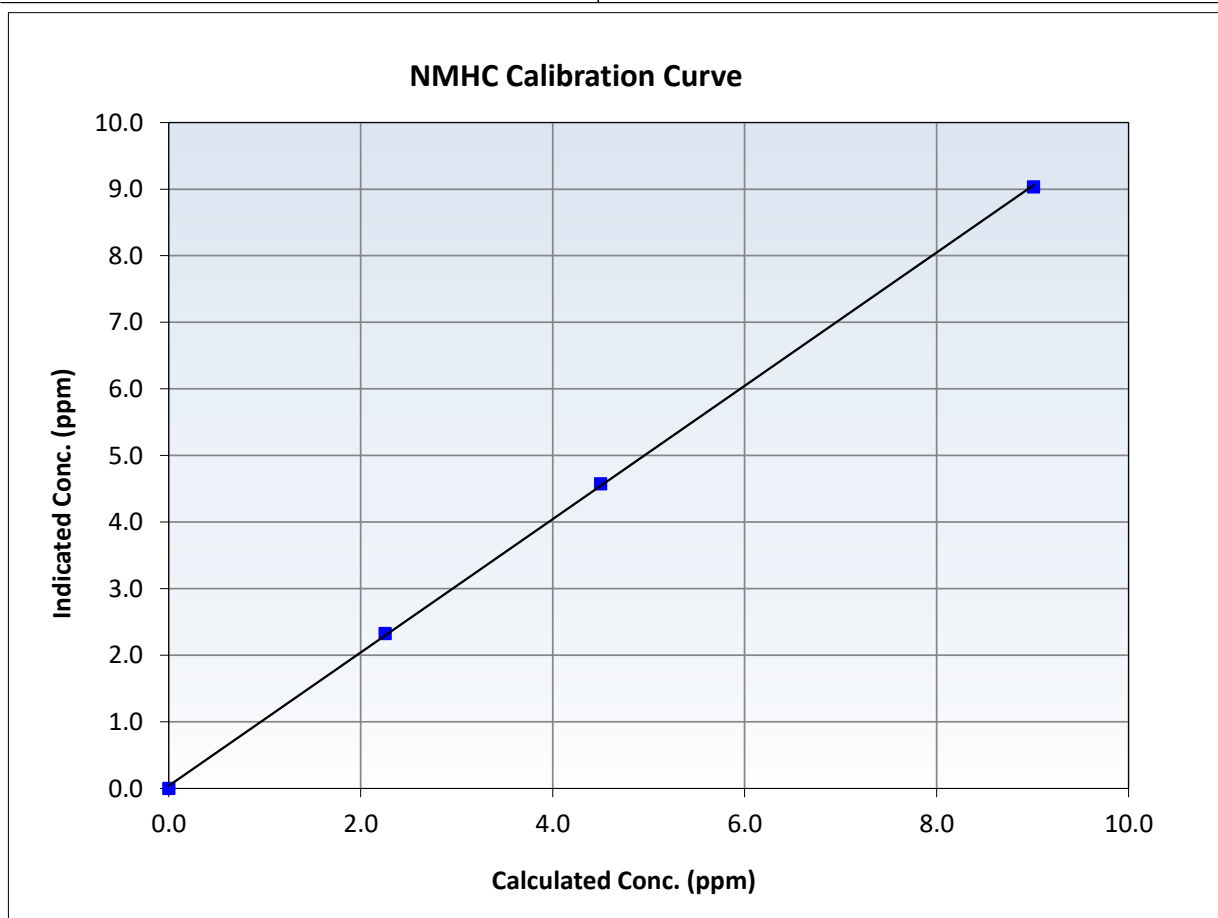
NMHC Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	April 3, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	9:31	End Time (MST):	15:12
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

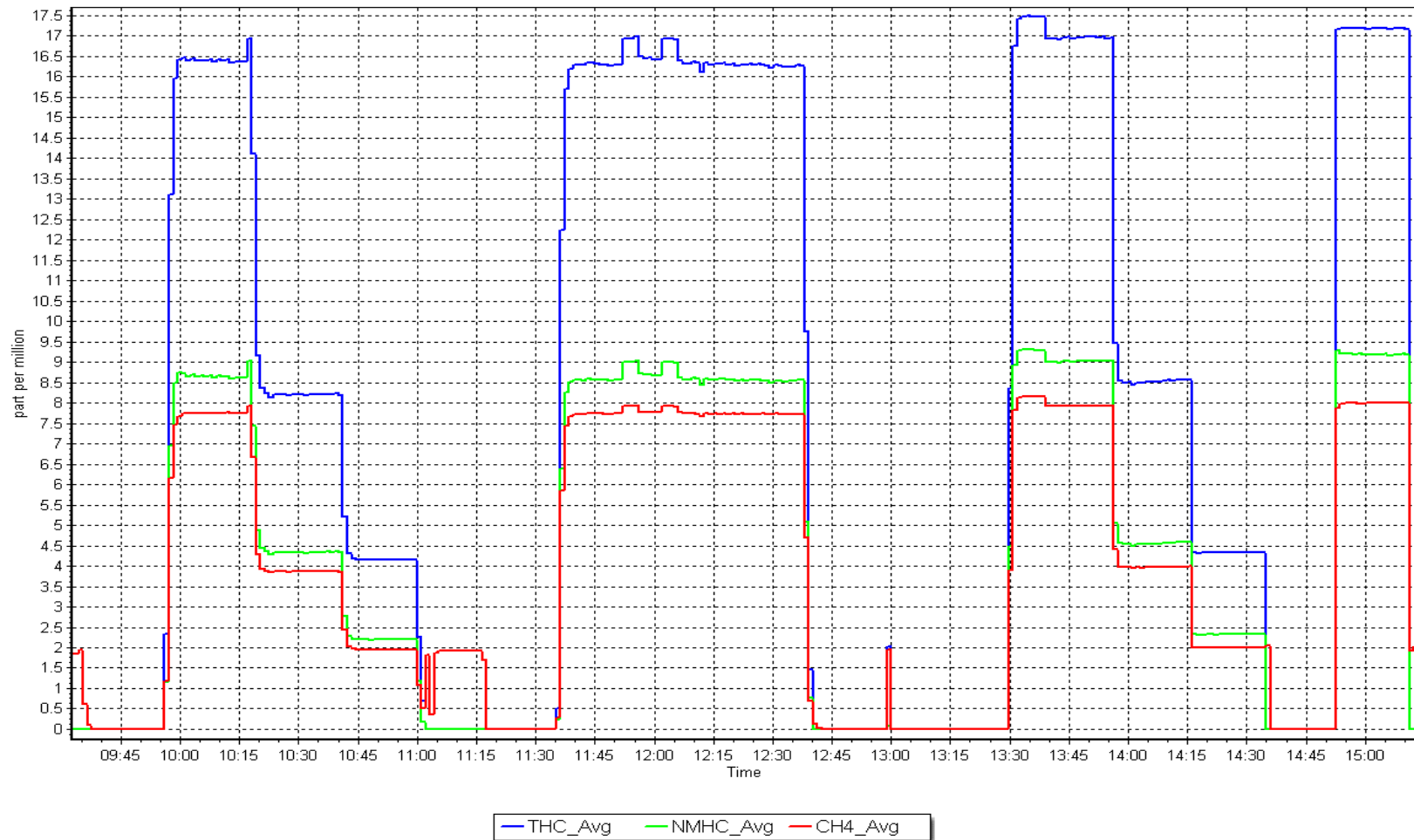
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999904	≥ 0.995
9.01	9.03	0.9972	Slope	1.001026	$0.90 - 1.10$
4.50	4.58	0.9831	Intercept	0.040027	± 0.5
2.26	2.33	0.9682			



NMHC Calibration Plot

Date: April 7, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Athabasca Valley
Station number: AMS 07
Calibration Date: April 8, 2026
Last Cal Date: March 6, 2026
Start time (MST): 8:22
End time (MST): 12:32
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0033919
NOX Cal Gas Conc: 60.10 ppm
Removed Cylinder #: N/A
Removed Gas NOX Conc: 60.10 ppm
NOX gas Diff:
Calibrator Model: API T750
ZAG make/model: API T751H
Cal Gas Expiry Date: January 9, 2032
NO Cal Gas Conc: 59.90 ppm
Removed Gas Exp Date: N/A
Removed Gas NO Conc: 59.90 ppm
NO gas Diff:
Serial Number: 276
Serial Number: 321

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.5	-0.2	-0.3	----	----
AF High point	4933	66.8	803.0	800.3	2.7	805.7	800.5	5.2	0.9960	0.9995
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 806.0 ppb	NO = 801.3 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = 0.0%	
Baseline Corr 1st pt	NO _x = 806.2 ppb	NO = 800.7 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -0.1%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	NO2 SI:	NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1160120024

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.001268	1.002450
NO _x Cal Offset:	1.971883	1.731869
NO Cal Slope:	0.998756	1.000613
NO Cal Offset:	1.971926	1.771923
NO ₂ Cal Slope:	1.005424	1.003636
NO ₂ Cal Offset:	0.765266	0.204668

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.911	0.911	NO bkgnd or offset:	6.5	6.5
NOX coeff or slope:	1.005	1.005	NOX bkgnd or offset:	7.0	7.0
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	185.7	184.2

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.3	0.0	-0.2	----	----
High point	4933	66.8	803.0	800.3	2.7	805.2	801.3	4.0	0.9972	0.9987
Mid point	4966	33.4	401.5	400.2	1.3	406.6	404.2	2.4	0.9875	0.9901
Low point	4983	16.7	200.7	200.1	0.7	204.1	203.0	1.1	0.9836	0.9856
As left zero	5000	0.0	0.0	0.0	0.0	-0.3	-0.1	-0.2	----	----
As left span	4933	66.8	803.0	400.8	402.2	802.9	400.8	402.1	1.0001	1.0000
Average Correction Factor									0.9894	0.9915

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.2	----	----
High GPT point	798.1	399.7	401.1	402.5	0.9965	100.4%
Mid GPT point	798.1	598.9	201.9	203.1	0.9940	100.6%
Low GPT point	798.1	698.3	102.5	103.4	0.9910	100.9%
Average Correction Factor					0.9938	100.6%

Notes:

No adjustment.

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

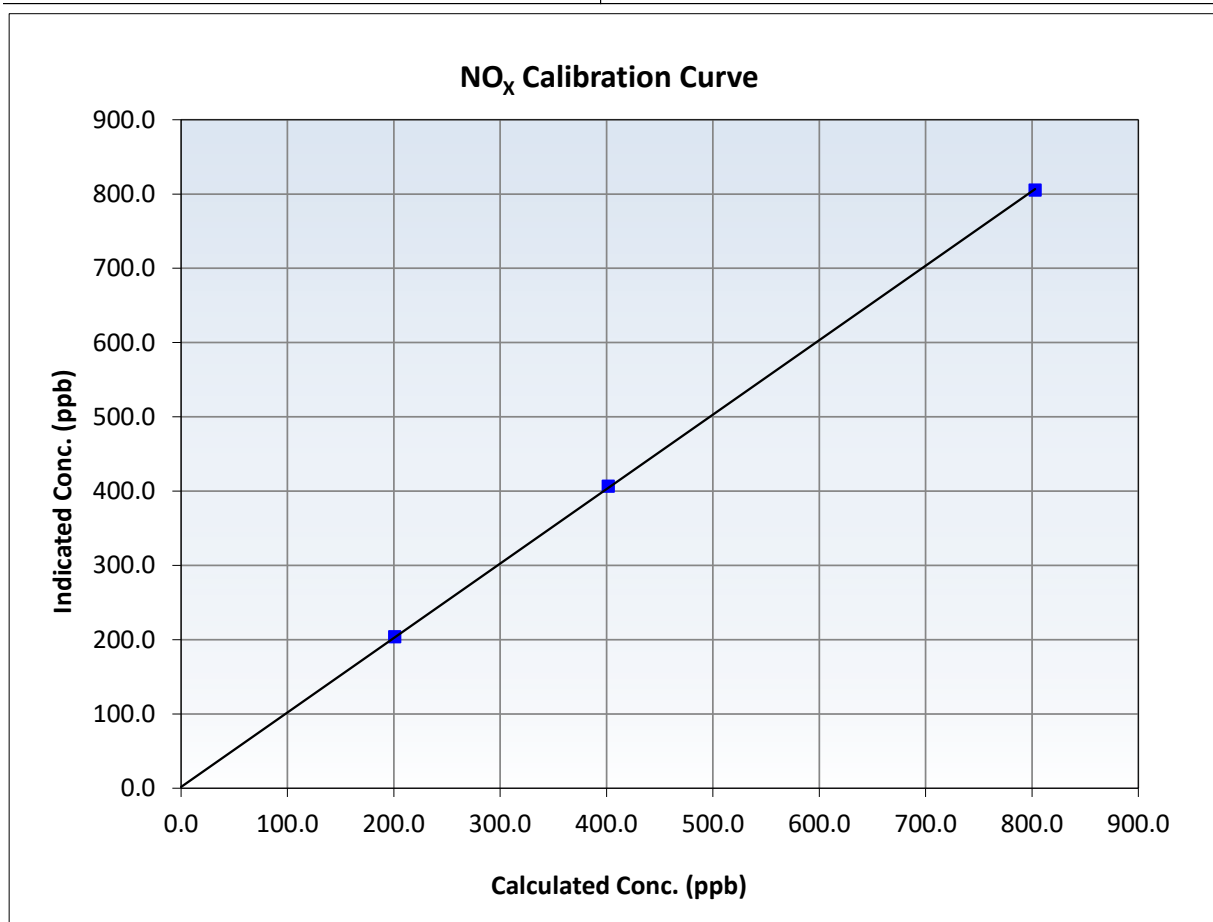
NO_x Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 6, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:22	End Time (MST):	12:32
Analyzer make:	Thermo 42i	Analyzer serial #:	1160120024

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999963	≥0.995
803.0	805.2	0.9972	Slope	1.002450	0.90 - 1.10
401.5	406.6	0.9875	Intercept	1.731869	+/-20
200.7	204.1	0.9836			





Wood Buffalo Environmental Association

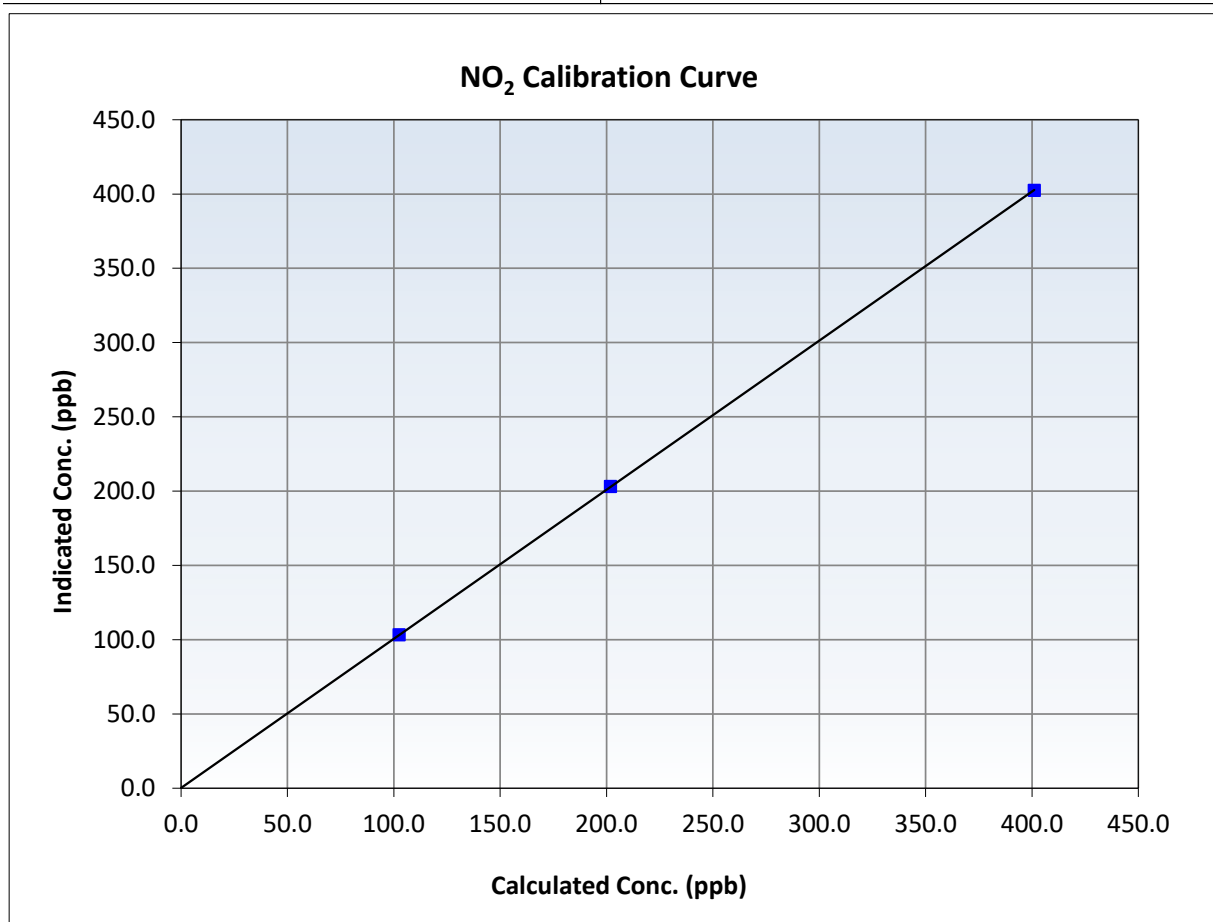
NO₂ Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 6, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:22	End Time (MST):	12:32
Analyzer make:	Thermo 42i	Analyzer serial #:	1160120024

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999995	≥0.995
401.1	402.5	0.9965	Slope	1.003636	0.90 - 1.10
201.9	203.1	0.9940	Intercept	0.204668	+/-20
102.5	103.4	0.9910			





Wood Buffalo Environmental Association

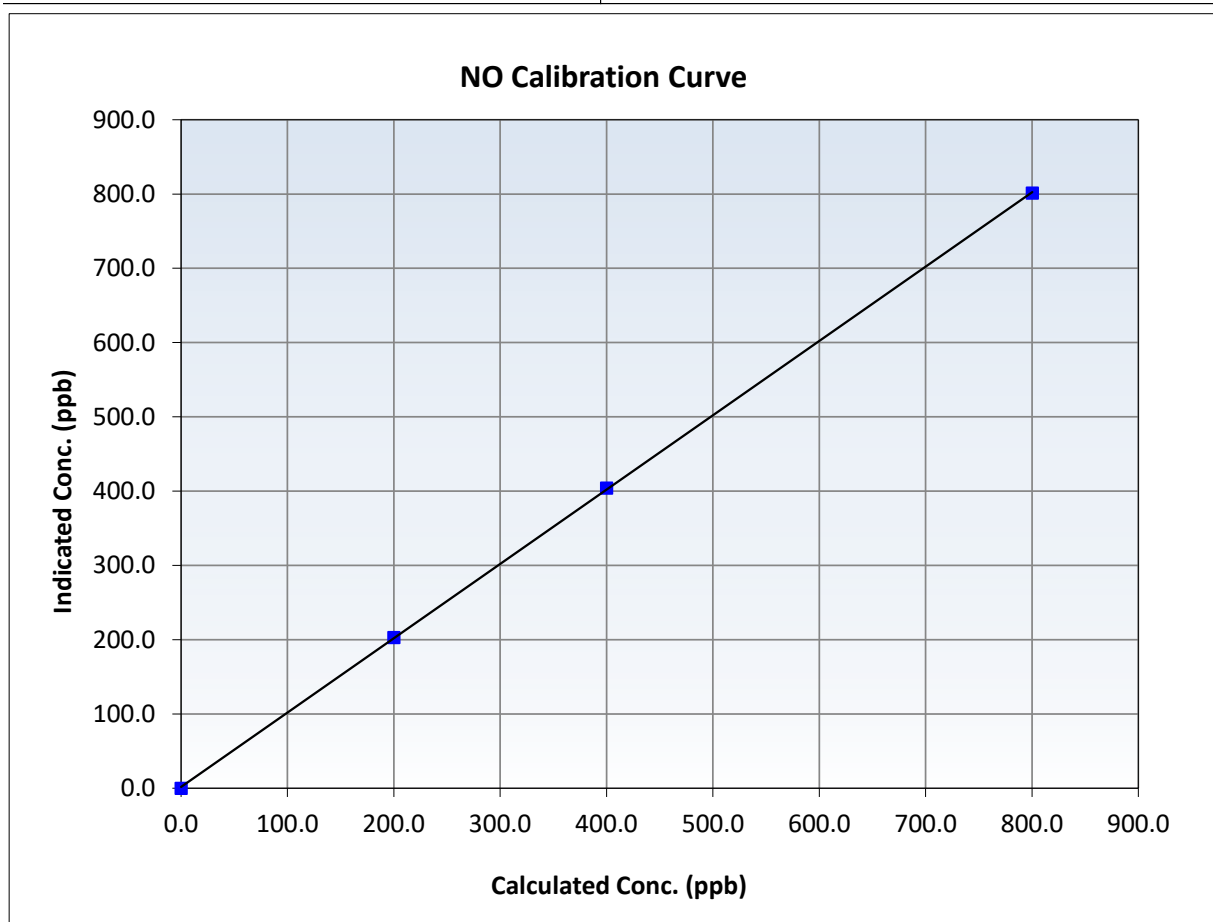
NO Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 6, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:22	End Time (MST):	12:32
Analyzer make:	Thermo 42i	Analyzer serial #:	1160120024

Calibration Data

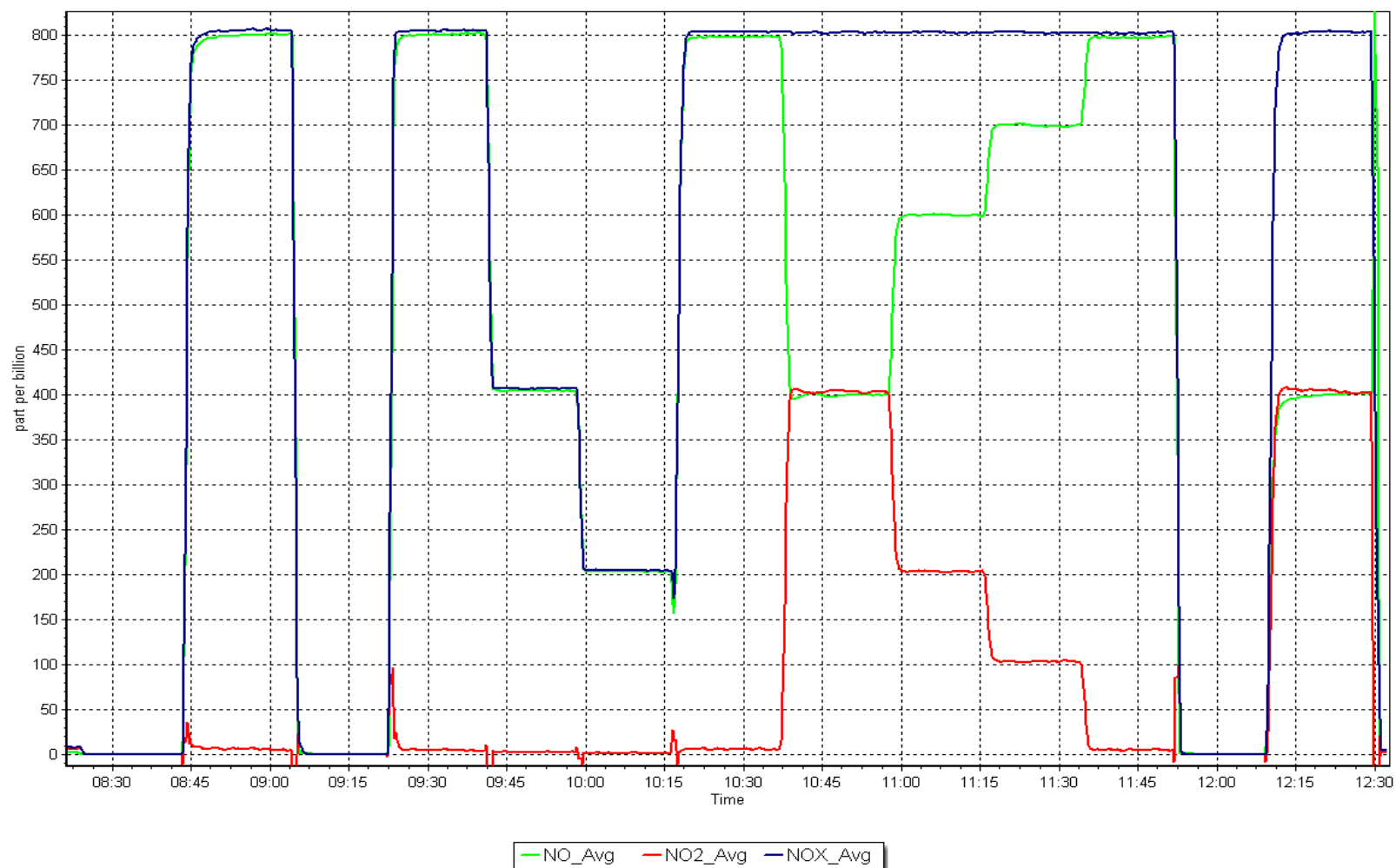
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999972	≥ 0.995
800.3	801.3	0.9987	Slope	1.000613	0.90 - 1.10
400.2	404.2	0.9901	Intercept	1.771923	+/-20
200.1	203.0	0.9856			



NO_x Calibration Plot

Date: April 8, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: April 2, 2026
Start time (MST): 9:28
Reason: Routine

Station number: AMS07
Last Cal Date: March 9, 2026
End time (MST): 12:08

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701H

Serial Number: 3805
Serial Number: 198

Analyzer Information

Analyzer make: Thermo 49i
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 1507964700

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001600	1.001314	Backgd or Offset:	-0.3	-0.2
Calibration intercept:	0.520000	1.020000	Coeff or Slope:	1.012	1.038

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	NA	0.0	-0.2	----
As found High point	5000	1840.0	400.0	390.1	1.025
As found Mid point					
As found Low point					
Baseline Corr As found:	390.3	Previous response	401.2	*% change	-2.8%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	NA	0.0	0.1	----
High point	5000	1840.0	400.0	400.9	0.998
Mid point	5000	1240.1	200.0	202.3	0.989
Low point	5000	953.2	100.0	101.7	0.983
As left zero	5000	NA	0.0	0.0	----
As left span	5000	1840.0	400.0	403.3	0.992
Average Correction Factor					0.990

Notes: Sample inlet filter changed after as founds. Adjusted span only.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

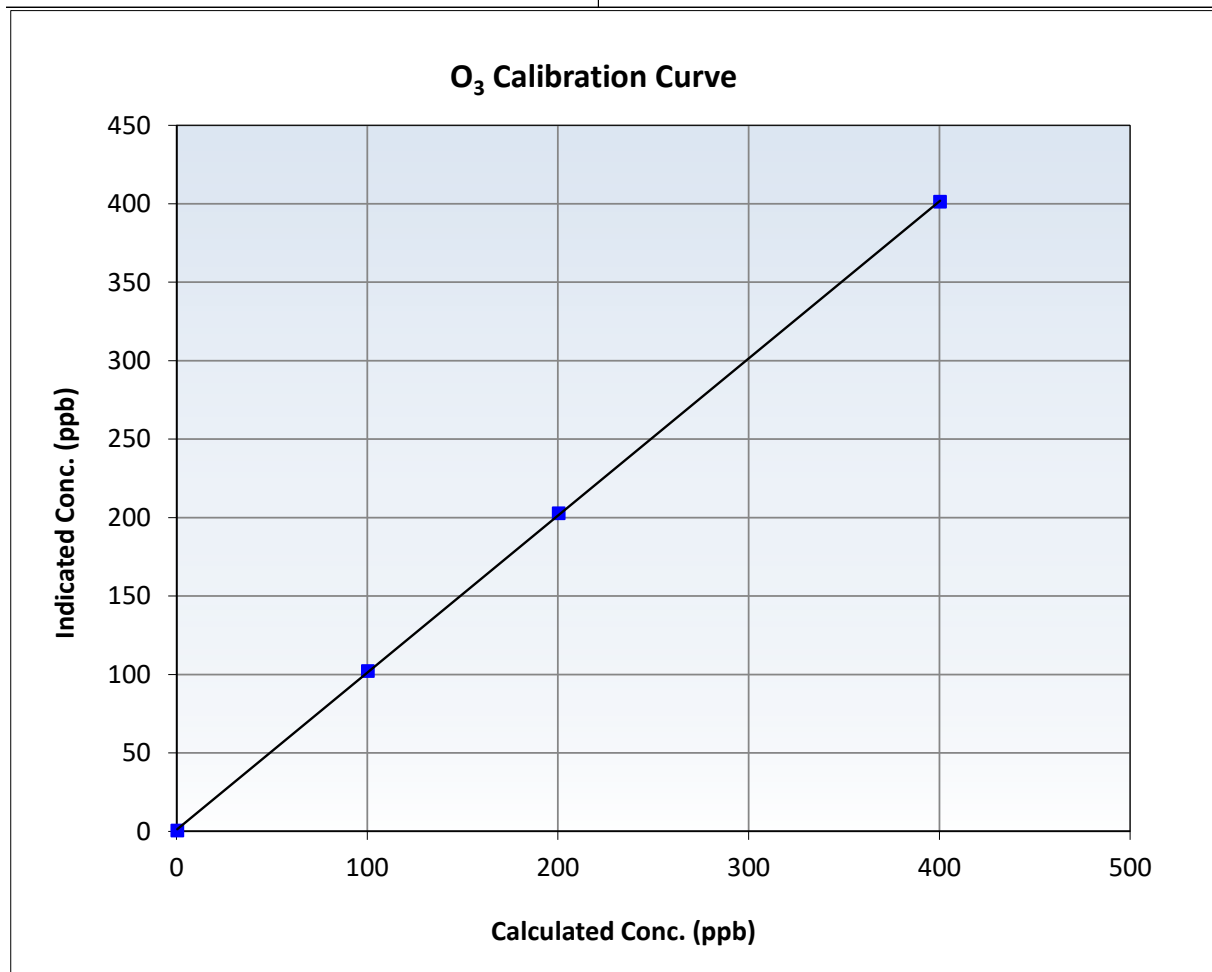
O₃ Calibration Summary

Station Information

Calibration Date:	April 2, 2026	Previous Calibration:	March 9, 2026
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	9:28	End Time (MST):	12:08
Analyzer make:	Thermo 49i	Analyzer serial #:	1507964700

Calibration Data

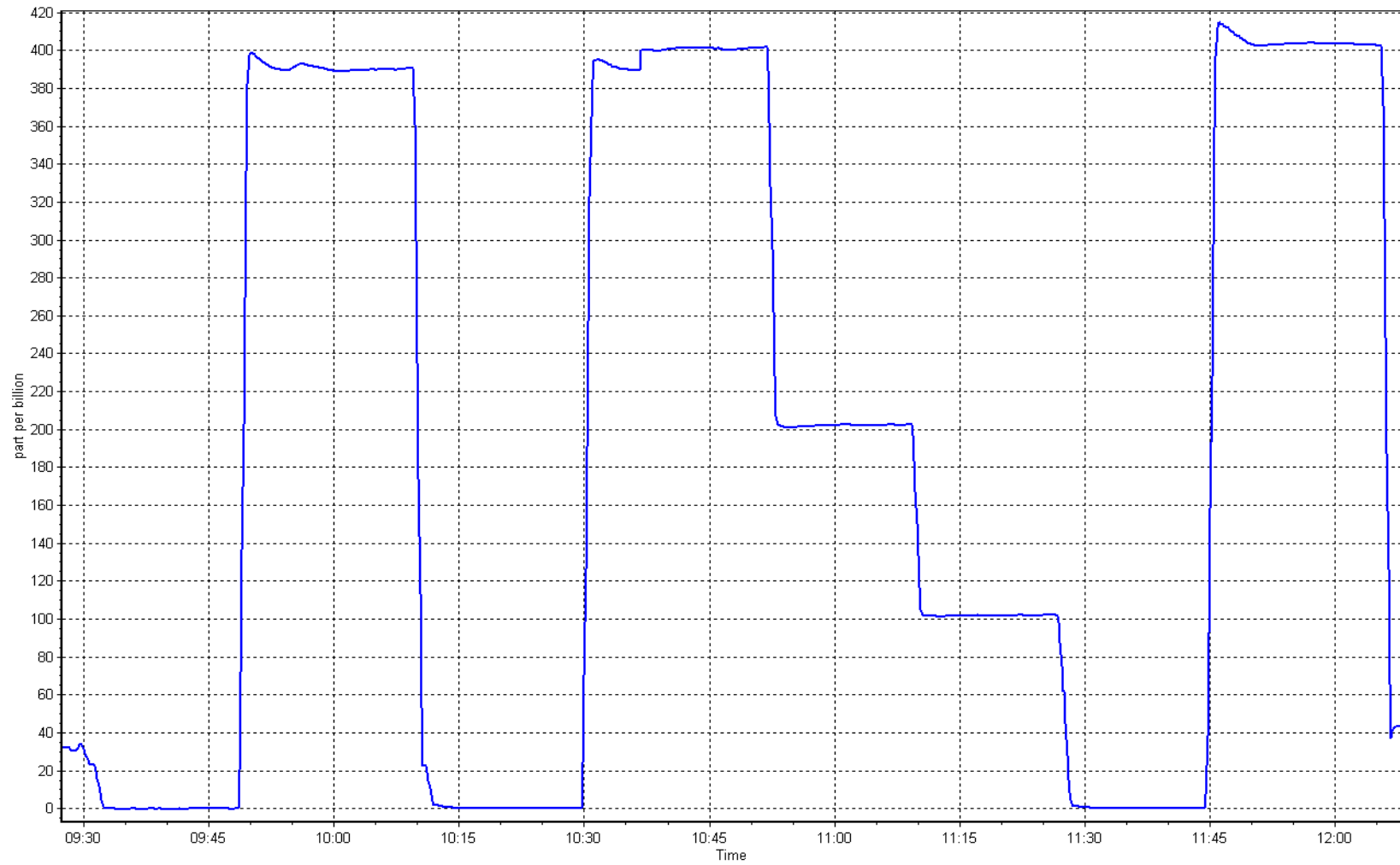
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999970	≥0.995
400.0	400.9	0.9978	Slope	1.001314	0.90 - 1.10
200.0	202.3	0.9886	Intercept	1.020000	+/- 5
100.0	101.7	0.9833			



O₃ Calibration Plot

Date: April 2, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Athabasca Valley Station number: AMS 07
Calibration Date: April 9, 2026 Last Cal Date: March 5, 2026
Start time (MST): 10:34 End time (MST): 11:37

Analyzer Make: API T640 S/N: 2235
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388746
Temp/RH standard: Alicat FP-25BT S/N: 388746

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	5.10	3.70	5.10	☐	+/- 2 °C
P (mmHg)	741.50	740.7	741.50	☐	+/- 10 mmHg
Flow (LPM)	4.99	4.89	4.99	☐	+/- 0.25 LPM
PW% (pump)	31	----	31	☐	>80%
Zero Verification	PM w/o HEPA: _____	4.70	PM w/ HEPA: _____	0.00	<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: July 16, 2026
Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	11.10	12.20	10.90	☒	+/- 0.5

Date Optical Chamber Cleaned: April 9, 2026
Date Disposable Filter Changed: April 9, 2026

Post- maintenance Zero Verification: PM w/ HEPA: _____ <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: October 9, 2025
Date RH/T Sensor Cleaned: October 9, 2025

Notes: Temperature, pressure and flow checked. Leak check passed.

Calibration by: Sean Bala



Wood Buffalo Environmental Association

CO Calibration Report

Station Information

Station Name: Athabasca Valley Station number: AMS 07
Calibration Date: April 10, 2026 Last Cal Date: March 10, 2026
Start time (MST): 9:03 End time (MST): 11:53
Reason: Routine

Calibration Standards

Cal Gas Concentration: 2,953 ppm Cal Gas Exp Date: September 30, 2029
Cal Gas Cylinder #: T1TWKRN
Removed Cal Gas Conc: 2,953 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 3805
ZAG Make/Model: Teledyne API 701H Serial Number: 198

Analyzer Information

Analyzer make: Thermo 48i-TLE Analyzer serial #: 1408761381
Analyzer Range: 0 - 50 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.997010	1.003373	Backgd or Offset:	5.968	5.968
Calibration intercept:	0.258016	0.354086	Coeff or Slope:	1.079	1.079

CO As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.2	----
As found High point	4932	67.8	40.0	40.3	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	40.16	Prev response:	40.18	*% change:	-0.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CO Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4932	67.8	40.0	40.4	0.991
Mid point	4966	33.9	20.0	20.6	0.971
Low point	4983	16.9	10.0	10.5	0.952
As left zero	5000	0.0	0.0	0.2	----
As left span	4932	67.8	40.0	40.5	0.989
Average Correction Factor					0.971

Notes: Sample inlet filter was changed after as founds. No adjustments made.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

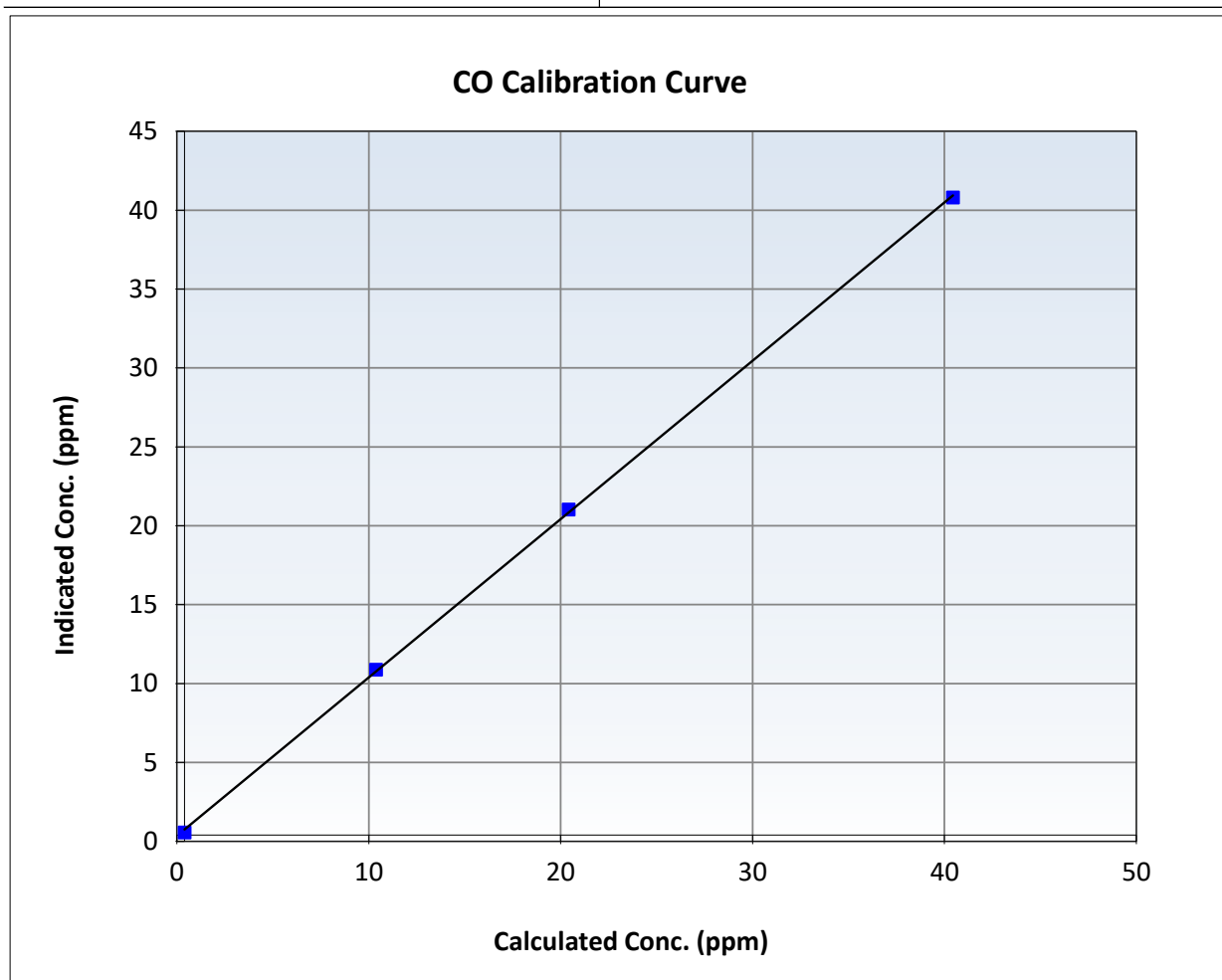
CO Calibration Summary

Station Information

Calibration Date:	April 10, 2026	Previous Calibration:	March 10, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	9:03	End Time (MST):	11:53
Analyzer make:	Thermo 48i-TLE	Analyzer serial #:	1408761381

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999888	≥0.995
40.0	40.4	0.9909	Slope	1.003373	0.90 - 1.10
20.0	20.6	0.9705	Intercept	0.354086	+/-1.5
10.0	10.5	0.9515			



CO Calibration Plot

Date: April 10, 2026

Location: Athabasca Valley





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS08 FORT CHIPEWYAN APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Fort Chipewyan Station number: AMS 08
Calibration Date: April 8, 2026 Last Cal Date: March 17, 2026
Start time (MST): 8:28 End time (MST): 11:31
Reason: Routine

Calibration Standards

Cal Gas Concentration: 49.84 ppm Cal Gas Exp Date: January 6, 2030
Cal Gas Cylinder #: CC196697
Removed Cal Gas Conc: 49.84 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 3810
Zero Air Gen Model: Teledyne API T701 Serial Number: 135

Analyzer Information

Analyzer make: Thermo 43i-TLE Serial Number: 1170050147
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.994151	0.999333	Backgd or Offset:	4.02	3.65
Calibration intercept:	0.516111	0.675446	Coeff or Slope:	1.058	1.052

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.9	----
As found High point	4920	80.3	800.4	802.2	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	803.1	Previous response	796.2	*% change	0.9%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.3	----
High point	4920	80.3	800.4	800.0	1.000
Mid point	4960	40.2	400.7	401.7	0.998
Low point	4980	20.1	200.4	201.8	0.993
As left zero	5000	0.0	0.0	-0.2	----
As left span	4920	80.3	800.4	797.0	1.004
Average Correction Factor:					0.997

Notes: Changed inlet filter after as founds. Adjustments made to zero and span high point.

Calibration Performed By: Matthew Courtoreille



Wood Buffalo Environmental Association

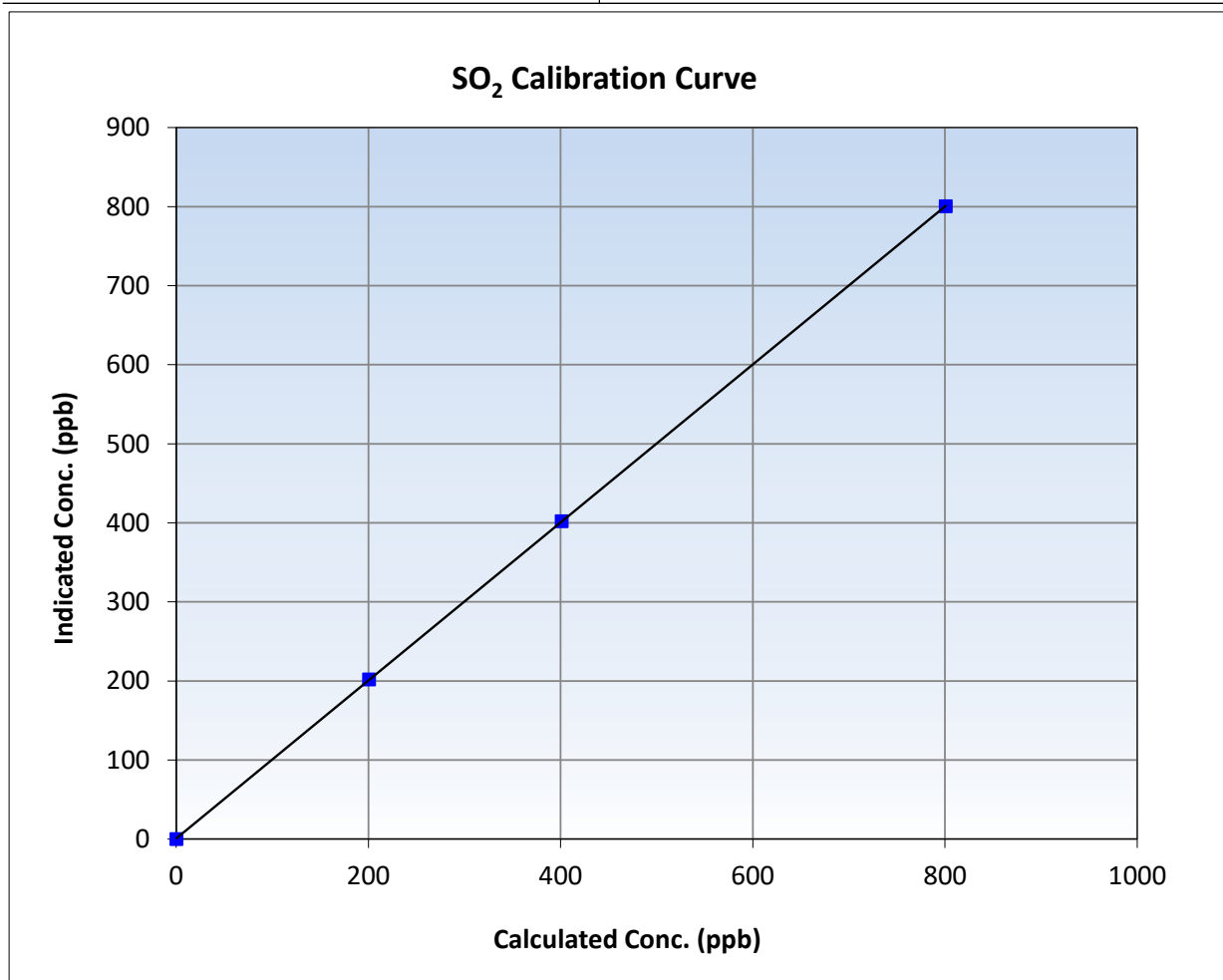
SO₂ Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 17, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	8:28	End Time (MST):	11:31
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1170050147

Calibration Data

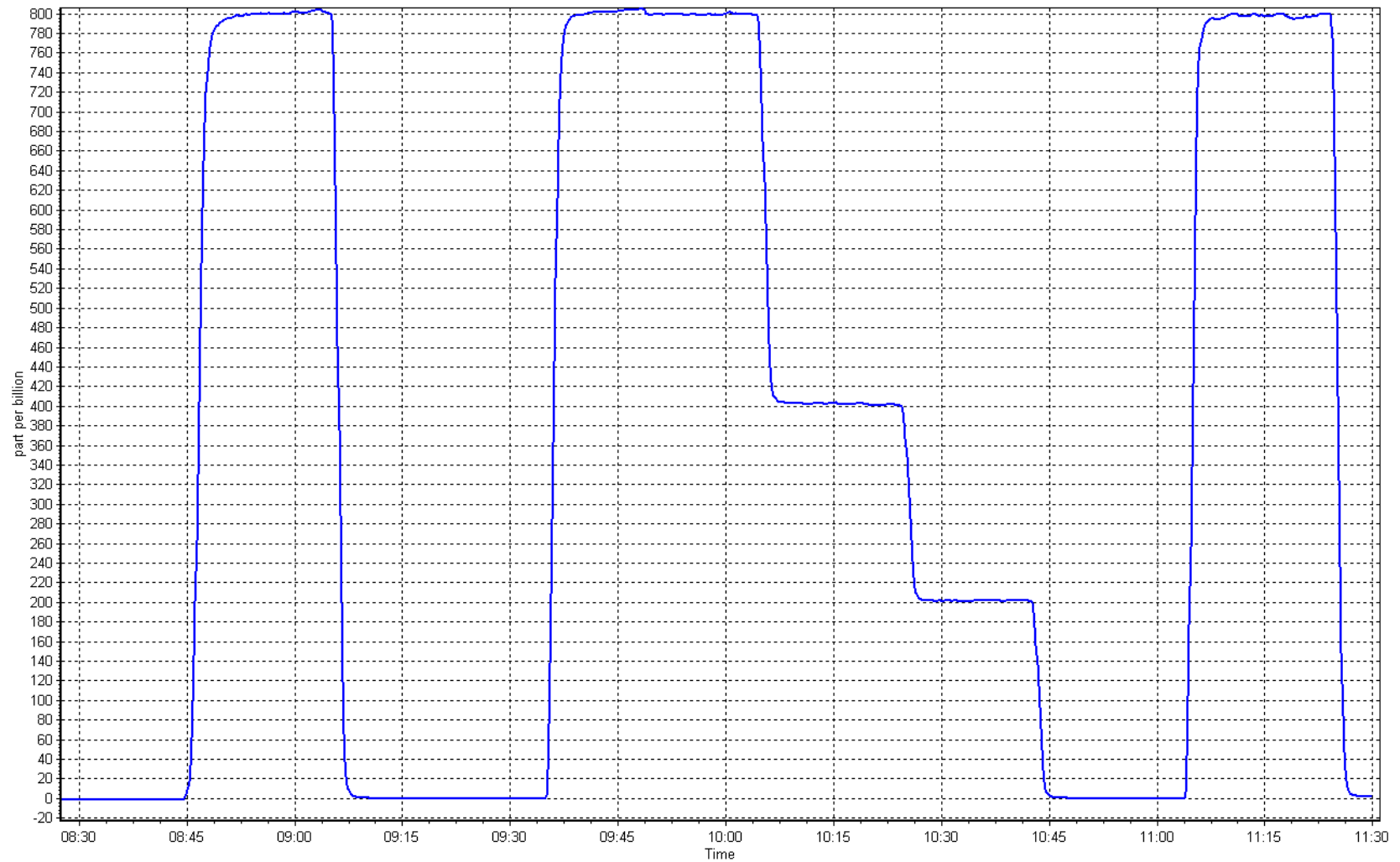
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999993	≥0.995
800.4	800.0	1.0005	Slope	0.999333	0.90 - 1.10
400.7	401.7	0.9975	Intercept	0.675446	+/-30
200.4	201.8	0.9928			



SO2 Calibration Plot

Date: April 8, 2026

Location: Fort Chipewyan





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Fort Chipewyan Station number: AMS 08
Calibration Date: April 9, 2026 Last Cal Date: March 19, 2026
Start time (MST): 9:24 End time (MST): 13:16
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.84 ppm Cal Gas Exp Date: August 28, 2027
Cal Gas Cylinder #: SA7549
Removed Cal Gas Conc: 4.84 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 3810
ZAG Make/Model: Teledyne API T701 Serial Number: 135

Analyzer Information

Analyzer make: Thermo 43i-TLE Analyzer serial #: 1218153461
Converter make: CDN-101 Converter serial #: 630
Analyzer Range: 0 - 100 ppb Converter Temp: 800 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	0.994949	1.018251	Backgd or Offset:	3.0
Calibration intercept:	-0.317733	-0.458200	Coeff or Slope:	1.157

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4917	82.6	80.0	79.6	1.003
As found Mid point	4959	41.3	40.0	40.0	0.997
As found Low point	4979	20.7	20.0	19.4	1.028
New cylinder response					
Baseline Corr As found:	79.7	Prev response:	79.24	*% change:	0.6%
Baseline Corr 2nd AF pt:	40.1	AF Slope:	0.999096	AF Intercept:	-0.237865
Baseline Corr 3rd AF pt:	19.5	AF Correlation:	0.999926	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4917	82.6	80.0	81.1	0.986
Mid point	4959	41.3	40.0	40.2	0.994
Low point	4979	20.7	20.0	19.5	1.028
As left zero	5000	0.0	0.0	0.0	----
As left span	4917	82.6	80.0	80.6	0.992
SO2 Scrubber Check	4920	80.3	803.0	0.1	----
Date of last scrubber change:	May 15, 2025		Ave Corr Factor		1.003
Date of last converter efficiency test:					

Notes: changed inlet filter after as found. Adjustment made to high point span for a better linear equation.

Calibration Performed By: Matthew Courtoreille



Wood Buffalo Environmental Association

TRS Calibration Summary

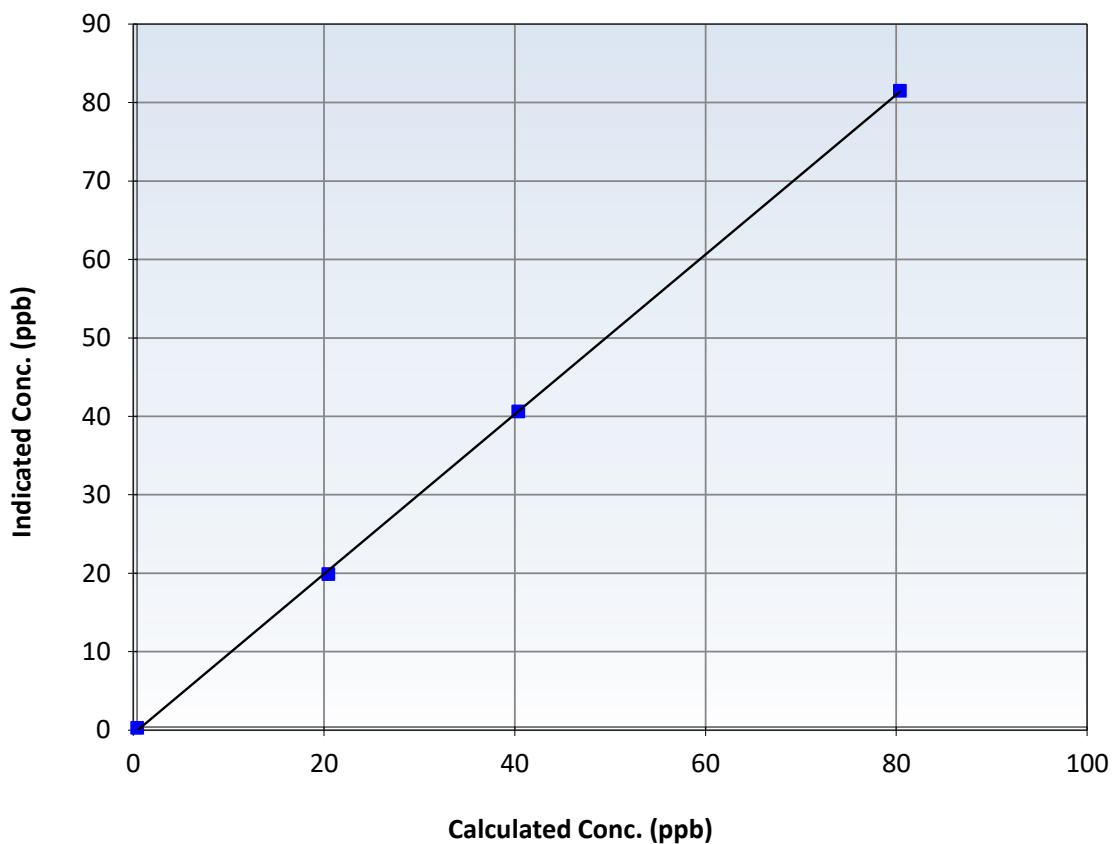
Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 19, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:24	End Time (MST):	13:16
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1218153461

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999904		≥ 0.995
80.0	81.1	0.9860	Slope	1.018251		$0.90 - 1.10$
40.0	40.2	0.9944	Intercept	-0.458200		± 3
20.0	19.5	1.0276				

TRS Calibration Curve



TRS Calibration Plot

Date: April 9, 2026

Location: Fort Chipewyan





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1426262592

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.995382	0.996609
NO _x Cal Offset:	1.754790	0.874791
NO Cal Slope:	0.998370	0.998141
NO Cal Offset:	0.814744	-0.105106
NO ₂ Cal Slope:	0.991864	0.999667
NO ₂ Cal Offset:	-0.449987	-1.590408

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.066	1.037	NO bkgnd or offset:	4.8	6.0
NOX coeff or slope:	0.997	0.996	NOX bkgnd or offset:	5.2	6.1
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	175.5	173.7

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	----	----
High point	4933	66.7	801.8	800.4	1.3	799.3	798.7	0.6	1.0031	1.0022
Mid point	4967	33.3	400.2	399.6	0.7	400.7	399.3	1.4	0.9989	1.0007
Low point	4983	16.7	200.7	200.4	0.3	201.6	199.4	2.2	0.9957	1.0050
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	----	----
As left span	4933	66.7	801.8	393.4	408.4	799.3	393.4	405.9	1.0031	1.0000
Average Correction Factor									0.9992	1.0026

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	796.6	395.6	402.3	401.5	1.0021	99.8%
Mid GPT point	796.6	587.7	210.2	207.6	1.0127	98.7%
Low GPT point	796.6	688.8	109.1	106.1	1.0286	97.2%
Average Correction Factor					1.0145	98.6%

Notes: Changed inlet filter after as founds. Made adjustment to zero and span high point.

Calibration Performed By: Matthew Courtoreille



Wood Buffalo Environmental Association

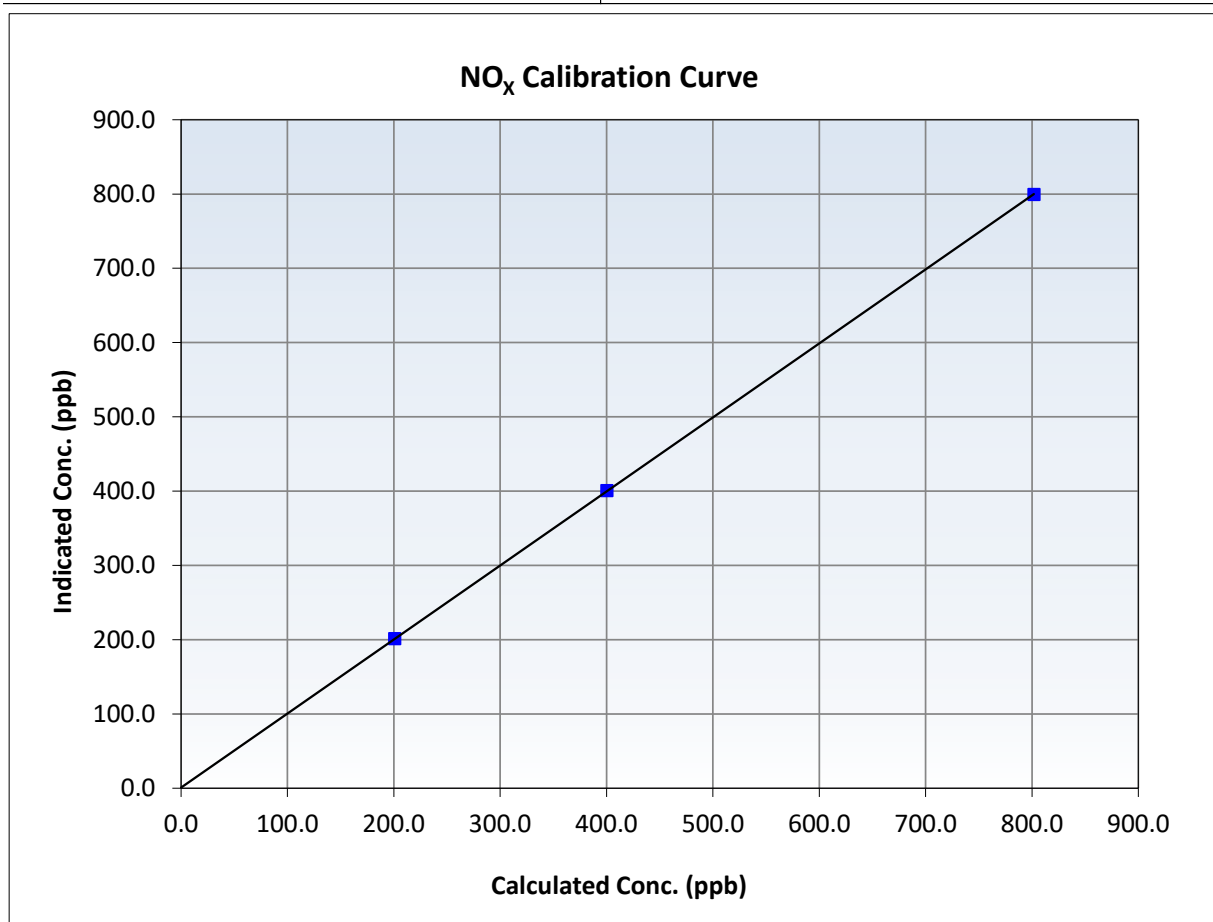
NO_x Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 24, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	11:35	End Time (MST):	16:07
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262592

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999992	≥0.995
801.8	799.3	1.0031	Slope	0.996609	0.90 - 1.10
400.2	400.7	0.9989	Intercept	0.874791	+/-20
200.7	201.6	0.9957			





Wood Buffalo Environmental Association

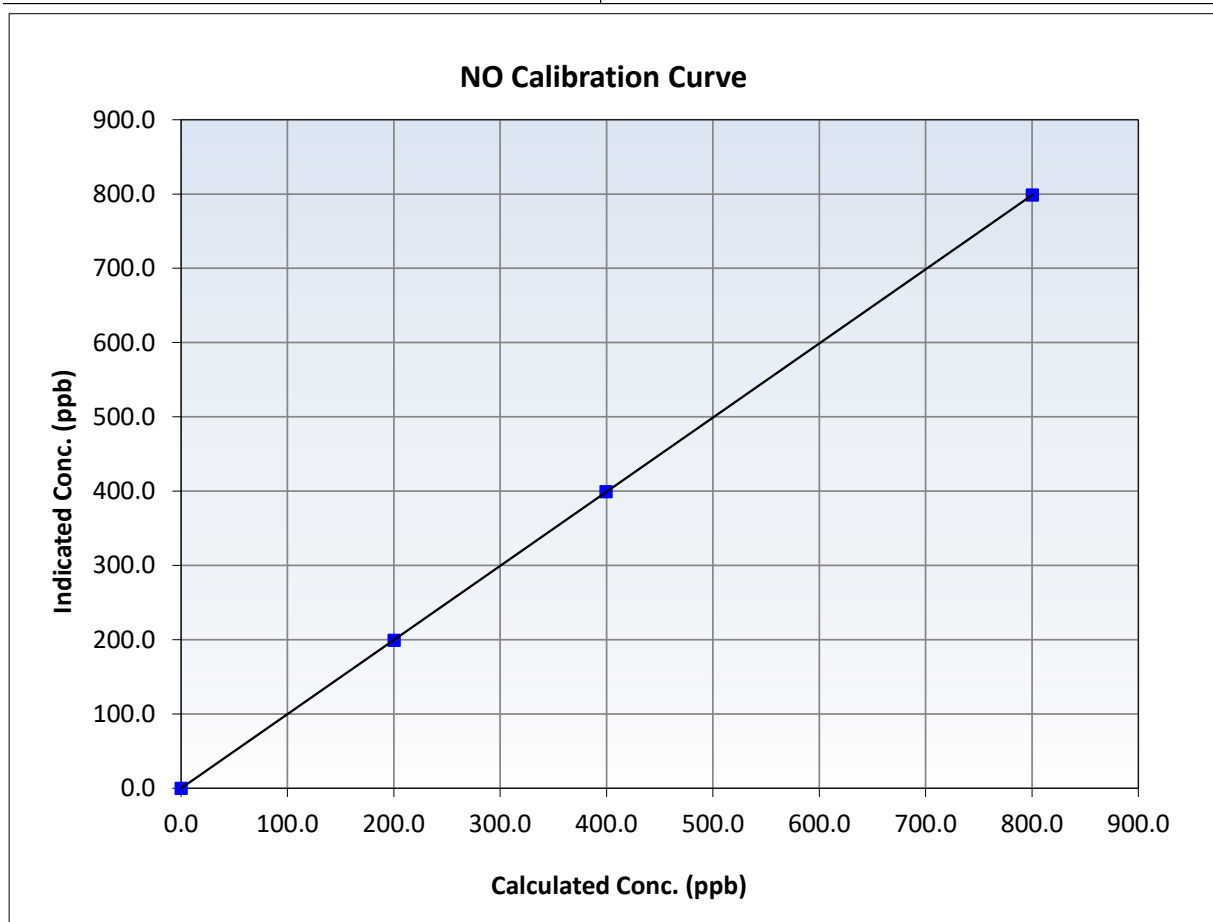
NO Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 24, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	11:35	End Time (MST):	16:07
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262592

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999998	≥ 0.995
800.4	798.7	1.0022	Slope	0.998141	$0.90 - 1.10$
399.6	399.3	1.0007	Intercept	-0.105106	± 20
200.4	199.4	1.0050			





Wood Buffalo Environmental Association

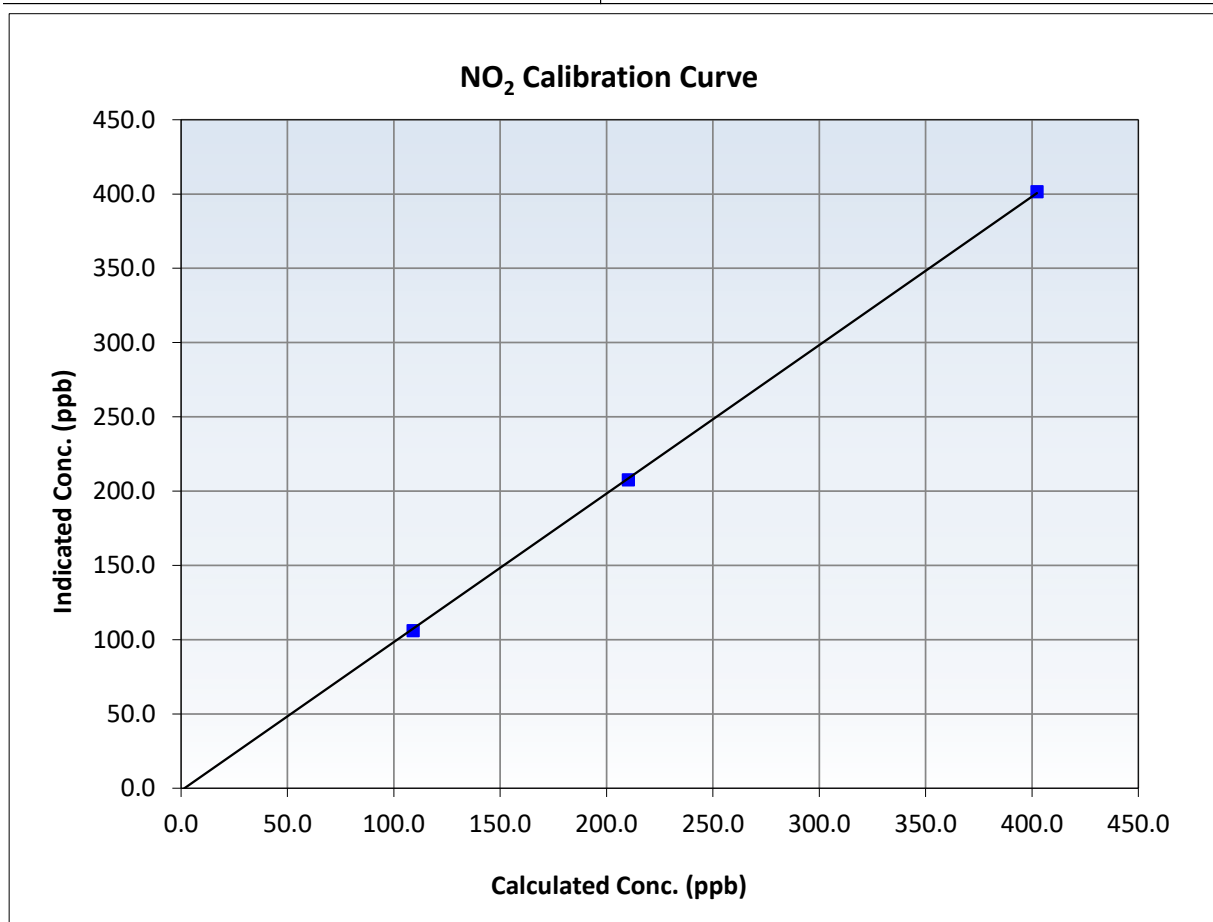
NO₂ Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 24, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	11:35	End Time (MST):	16:07
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262592

Calibration Data

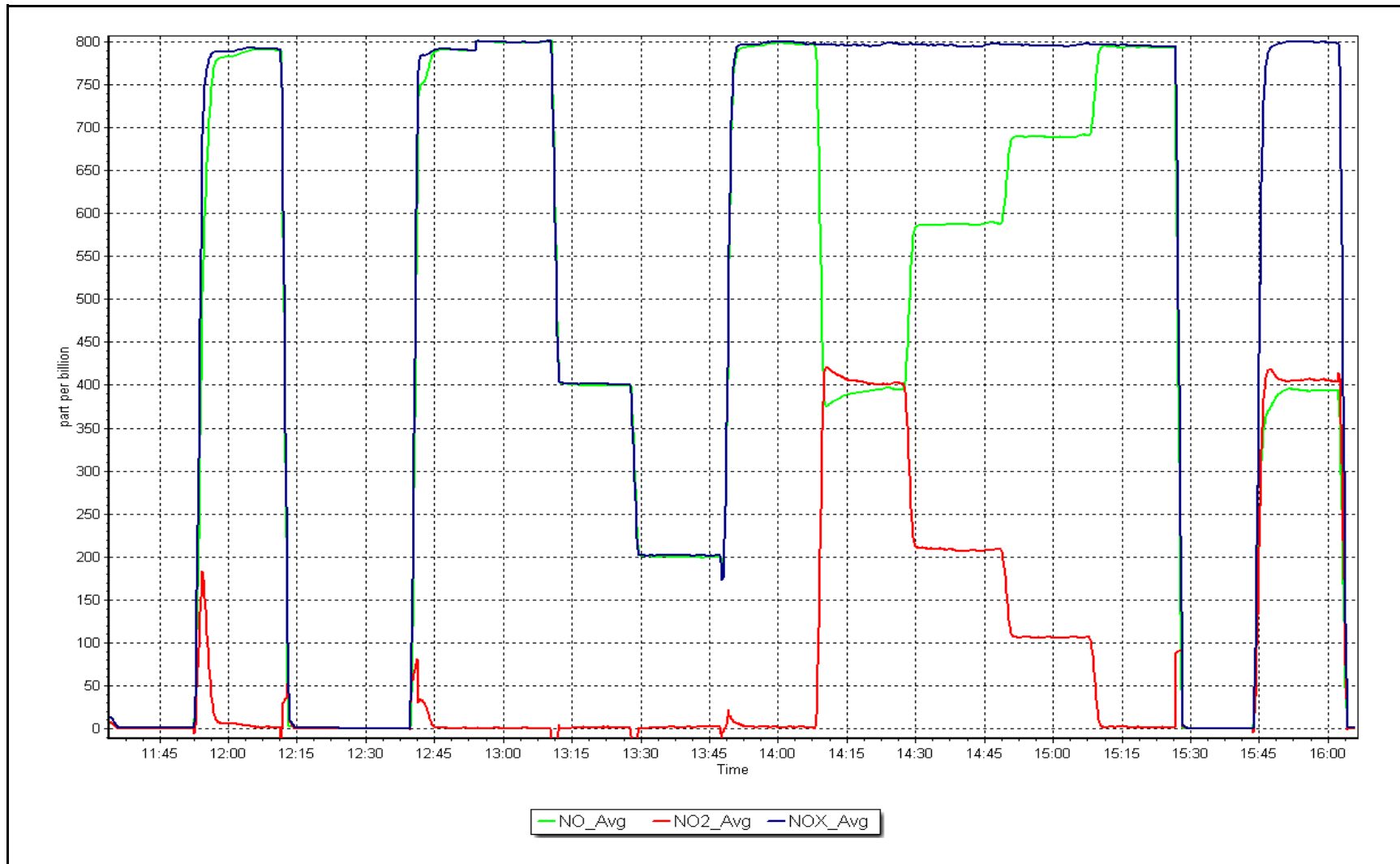
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999932	≥0.995
402.3	401.5	1.0021	Slope	0.999667	0.90 - 1.10
210.2	207.6	1.0127	Intercept	-1.590408	+/-20
109.1	106.1	1.0286			



NO_x Calibration Plot

Date: April 8, 2026

Location: Fort Chipewyan





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Fort Chipewyan
Calibration Date: April 7, 2026
Start time (MST): 9:30
Reason: Routine

Station number: AMS 08
Last Cal Date: March 12, 2026
End time (MST): 12:01

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701

Serial Number: 3810
Serial Number: 135

Analyzer Information

Analyzer make: Thermo 49i
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 1152220026

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.993829	0.996429	Backgd or Offset:	-2.7	-2.6
Calibration intercept:	1.780000	1.400000	Coeff or Slope:	1.002	1.002

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted
					Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.6	----
As found High point	5000	968.7	400.0	401.0	0.999
As found Mid point					
As found Low point					
Baseline Corr As found:	400.4	Previous response	399.3	*% change	0.3%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.8	----
High point	5000	968.7	400.0	399.6	1.001
Mid point	5000	820.5	200.0	201.2	0.994
Low point	5000	720.0	100.0	101.5	0.985
As left zero	5000	0.0	0.0	0.9	----
As left span	5000	968.7	400.0	402.0	0.995
Average Correction Factor					0.993

Notes: Changed inlet filters after as founds.

Calibration Performed By: Matthew Courtoreille



Wood Buffalo Environmental Association

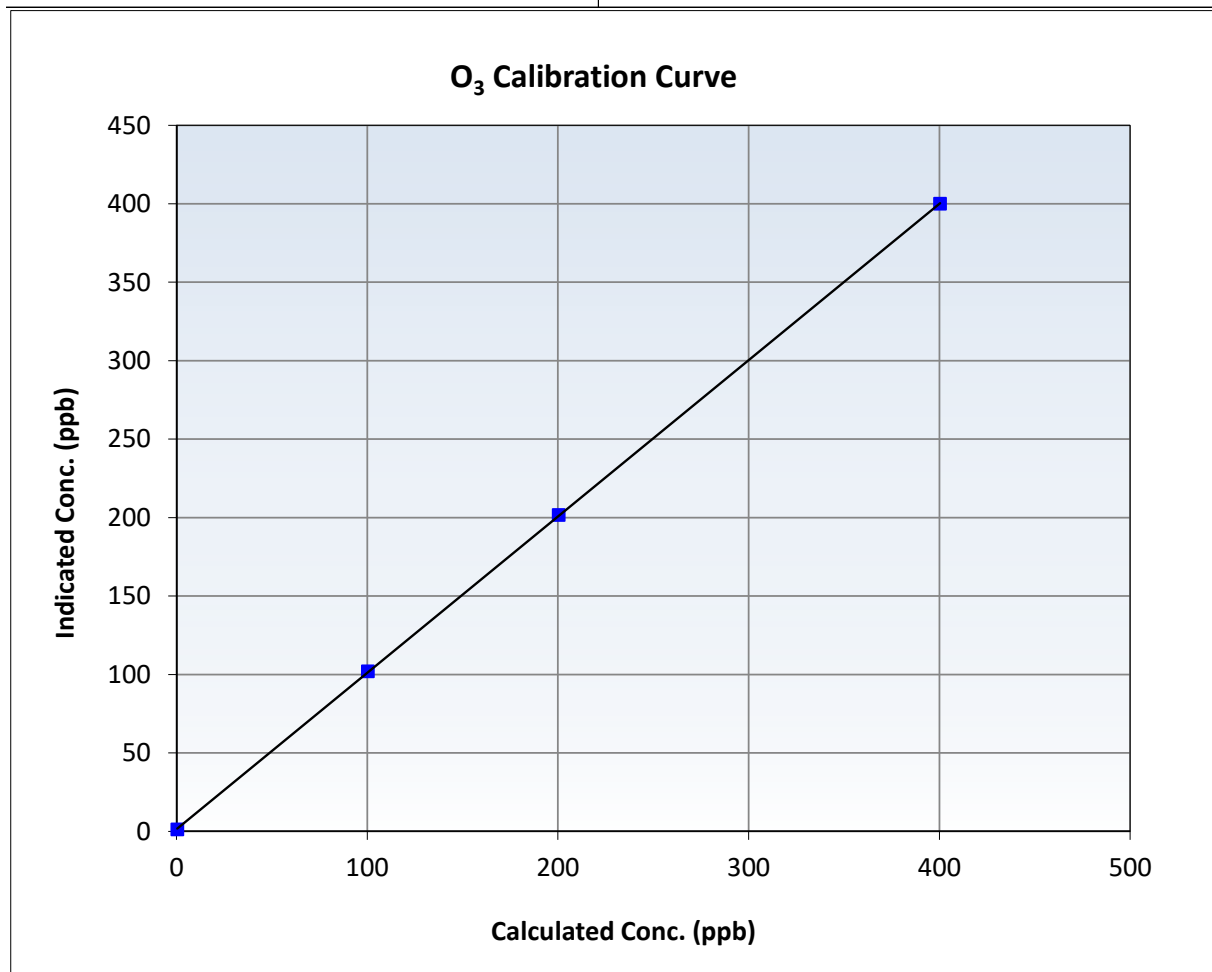
O₃ Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	March 12, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:30	End Time (MST):	12:01
Analyzer make:	Thermo 49i	Analyzer serial #:	1152220026

Calibration Data

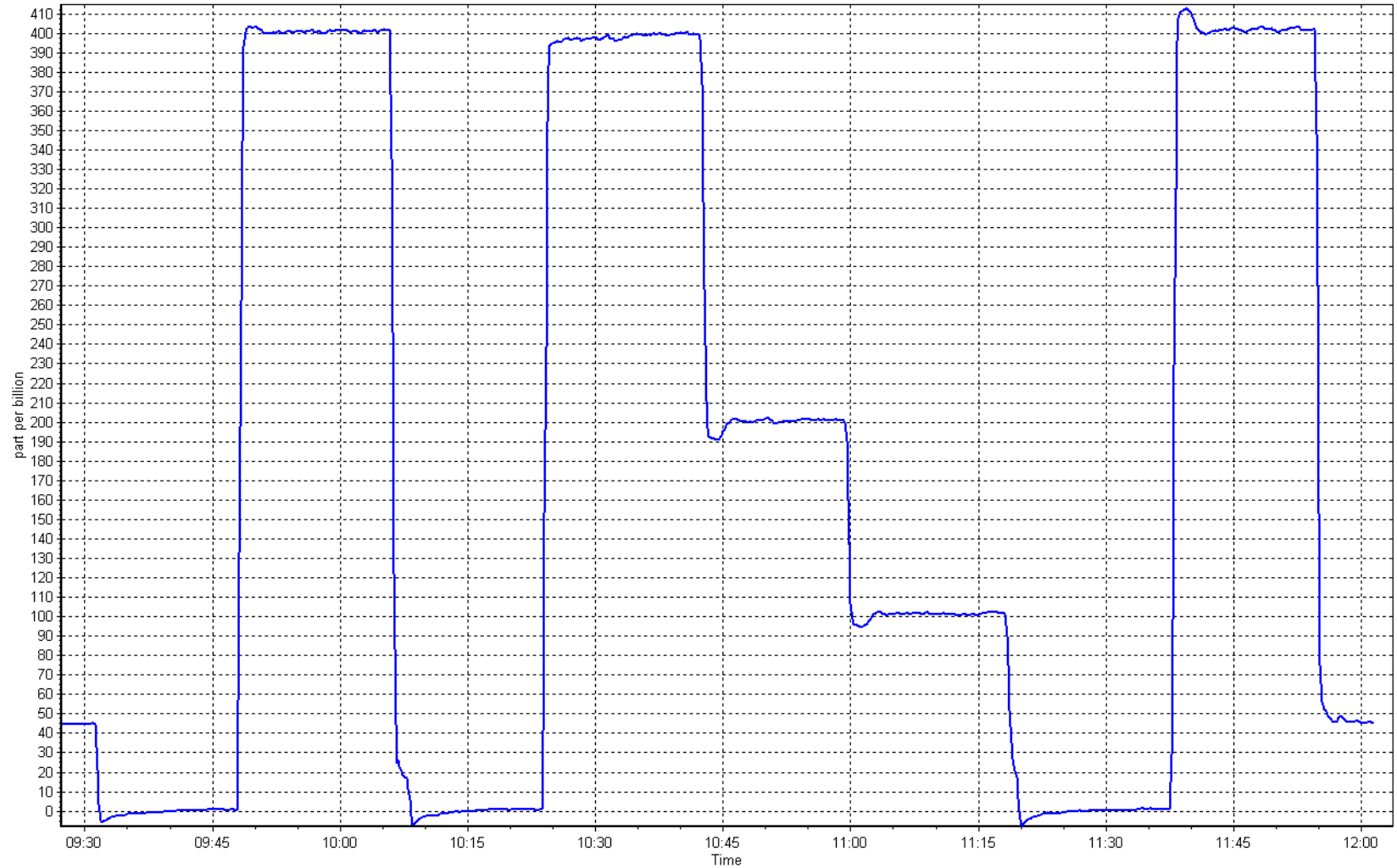
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.8	----	Correlation Coefficient	0.999989	≥0.995
400.0	399.6	1.0010	Slope	0.996429	0.90 - 1.10
200.0	201.2	0.9940	Intercept	1.400000	+/- 5
100.0	101.5	0.9852			



O₃ Calibration Plot

Date: April 7, 2026

Location: Fort Chipewyan





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Fort Chipewyan Station number: AMS 08
Calibration Date: April 10, 2026 Last Cal Date: March 23, 2026
Start time (MST): 9:36 End time (MST): 10:43

Analyzer Make: Teledyne API T640 S/N: 319
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388749
Temp/RH standard: Alicat FP-25BT S/N: 388749

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	-5.2	-5.88	-5.2	☐	+/- 2 °C
P (mmHg)	742.1	742.08	742.1	☐	+/- 10 mmHg
Flow (LPM)	4.96	4.80	4.96	☒	+/- 0.25 LPM
PW% (pump)	32%	NA	32%	☐	>80%
Zero Verification	PM w/o HEPA: 2.80		PM w/ HEPA: 0.00		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.90 Expiry Date: 30-Jan-27
Lot No.: 100128-050-051

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	10.9	10.8	10.8	☐	+/- 0.5

Date Optical Chamber Cleaned: March 23, 2026

Date Disposable Filter Changed: March 23, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0.00 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: December 3, 2025

Date RH/T Sensor Cleaned: December 3, 2025

Notes: Calibrated flow it was showing 0.0 and reconfigured or calibrated the flow. Pump was 100% working to hard or clogged.

Calibration by: Matthew Courtoreille



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS09 BARGE LANDING APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Barge Landing
Calibration Date: April 7, 2026
Start time (MST): 9:29
Reason: Routine

Station number: AMS 09
Last Cal Date: March 25, 2026
End time (MST): 12:49

Calibration Standards

Cal Gas Concentration: 50.56 ppm
Cal Gas Cylinder #: CC705748
Removed Cal Gas Conc: 50.56 ppm
Removed Gas Cyl #: NA
Calibrator Model: API T700P
Zero Air Gen Model: APIT701

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 2464
Serial Number: 5613

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0 - 1000 ppb

Serial Number: 1118148498

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.007959	0.999785	Backgd or Offset:	12.5	12.7
Calibration intercept:	-1.397633	-1.338093	Coeff or Slope:	1.036	1.036

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4921	79.1	799.8	799.1	1.001
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	799.3	Previous response	804.8	*% change	-0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4921	79.1	799.8	798.8	1.001
Mid point	4961	39.5	399.4	397.8	1.004
Low point	4980	19.8	200.2	197.3	1.015
As left zero	5000	0.0	0.0	-0.2	----
As left span	4921	79.1	799.8	799.0	1.001
Average Correction Factor:					1.007

Notes: Changed sample inlet filter after as founds. No adjustments made.

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

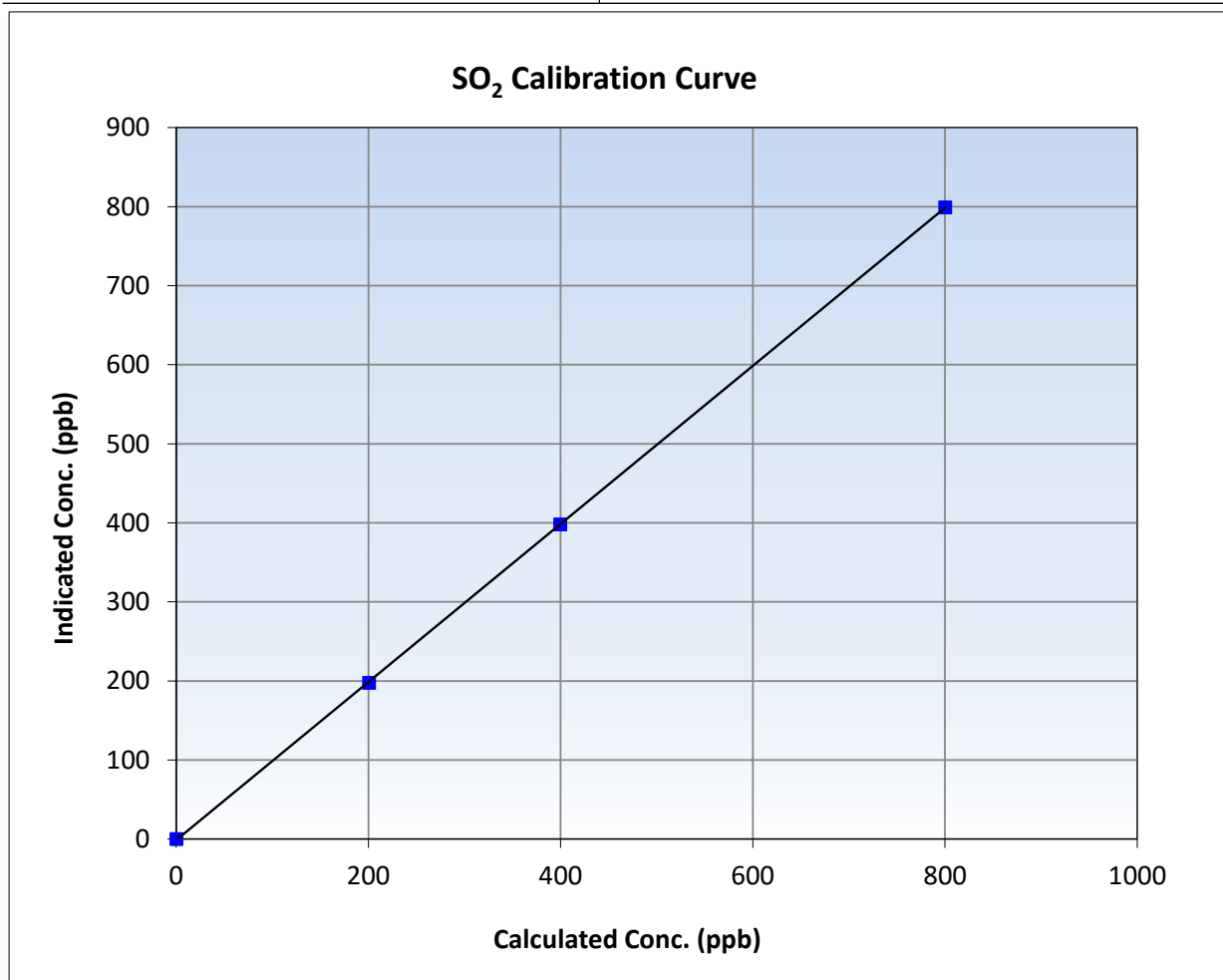
SO₂ Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	March 25, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:29	End Time (MST):	12:49
Analyzer make:	Thermo 43i	Analyzer serial #:	1118148498

Calibration Data

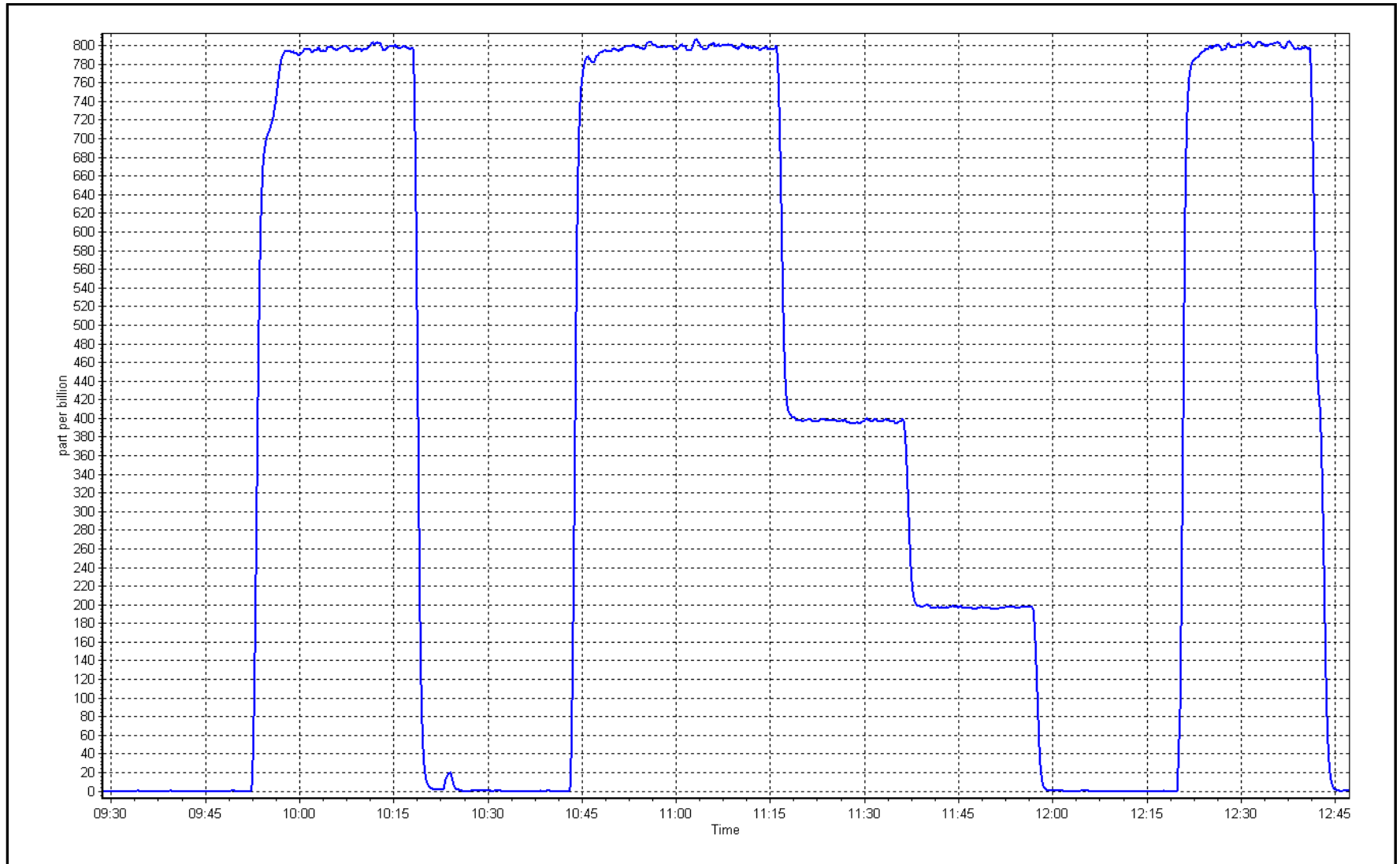
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999988	≥0.995
799.8	798.8	1.0013	Slope	0.999785	0.90 - 1.10
399.4	397.8	1.0040	Intercept	-1.338093	+/-30
200.2	197.3	1.0148			



SO2 Calibration Plot

Date: April 7, 2026

Location: Barge Landing





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Barge Landing
Calibration Date: April 8, 2026
Start time (MST): 9:46
Reason: Routine

Station number: AMS 09
Last Cal Date: March 10, 2026
End time (MST): 14:12

Calibration Standards

Cal Gas Concentration: 5.17 ppm
Cal Gas Cylinder #: CC511415
Removed Cal Gas Conc: 5.17 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: API T700
ZAG Make/Model: API T701

Cal Gas Exp Date: August 22, 2026
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 2464
Serial Number: 5613

Analyzer Information

Analyzer make: Thermo 43iQ-TLE
Converter make: CDN-101
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1203169744
Converter serial #: 519
Converter Temp: 830 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004260	0.996980	Backgd or Offset:	1.910	1.910
Calibration intercept:	0.019504	-0.000655	Coeff or Slope:	0.740	0.740

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4923	77.4	80.0	79.7	1.004
As found Mid point	4961	38.7	40.0	39.7	1.008
As found Low point	4981	19.3	20.0	19.7	1.013
New cylinder response					
Baseline Corr As found:	79.7	Prev response:	80.40	*% change:	-0.9%
Baseline Corr 2nd AF pt:	39.7	AF Slope:	0.996268	AF Intercept:	-0.100709
Baseline Corr 3rd AF pt:	19.7	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4923	77.4	80.0	79.8	1.003
Mid point	4961	38.7	40.0	39.9	1.003
Low point	4981	19.3	20.0	19.9	1.003
As left zero	5000	0.0	0.0	0.1	----
As left span	4923	77.4	80.0	80.1	0.999
SO2 Scrubber Check	4920	80.2	802.0	0.0	----
Date of last scrubber change:	8-Jul-25		Ave Corr Factor		1.003
Date of last converter efficiency test:					

Notes: Changed the sample inlet filter after as founds. No adjustments made. SOx scrubber check done after calibrator zero, and it passed.

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

TRS Calibration Summary

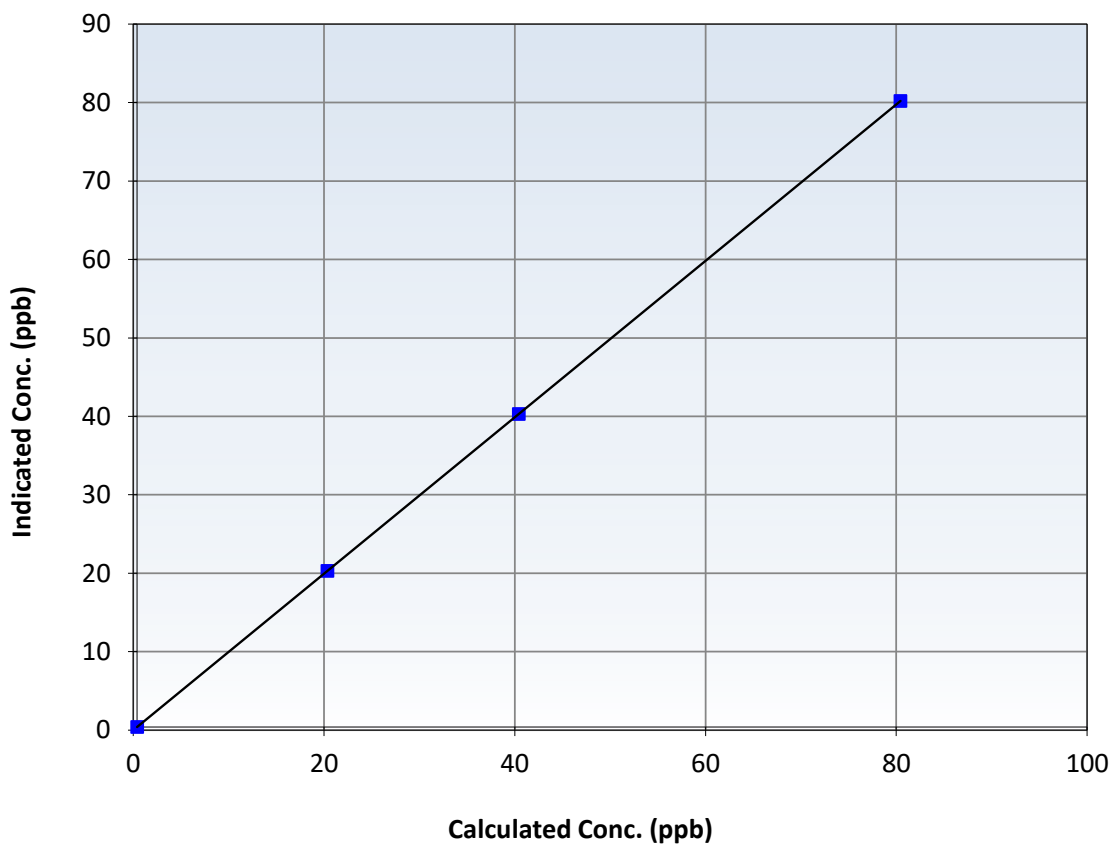
Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 10, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:46	End Time (MST):	14:12
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	1203169744

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	1.000000		≥ 0.995
80.0	79.8	1.0030	Slope	0.996980		$0.90 - 1.10$
40.0	39.9	1.0032	Intercept	-0.000655		± 3
20.0	19.9	1.0030				

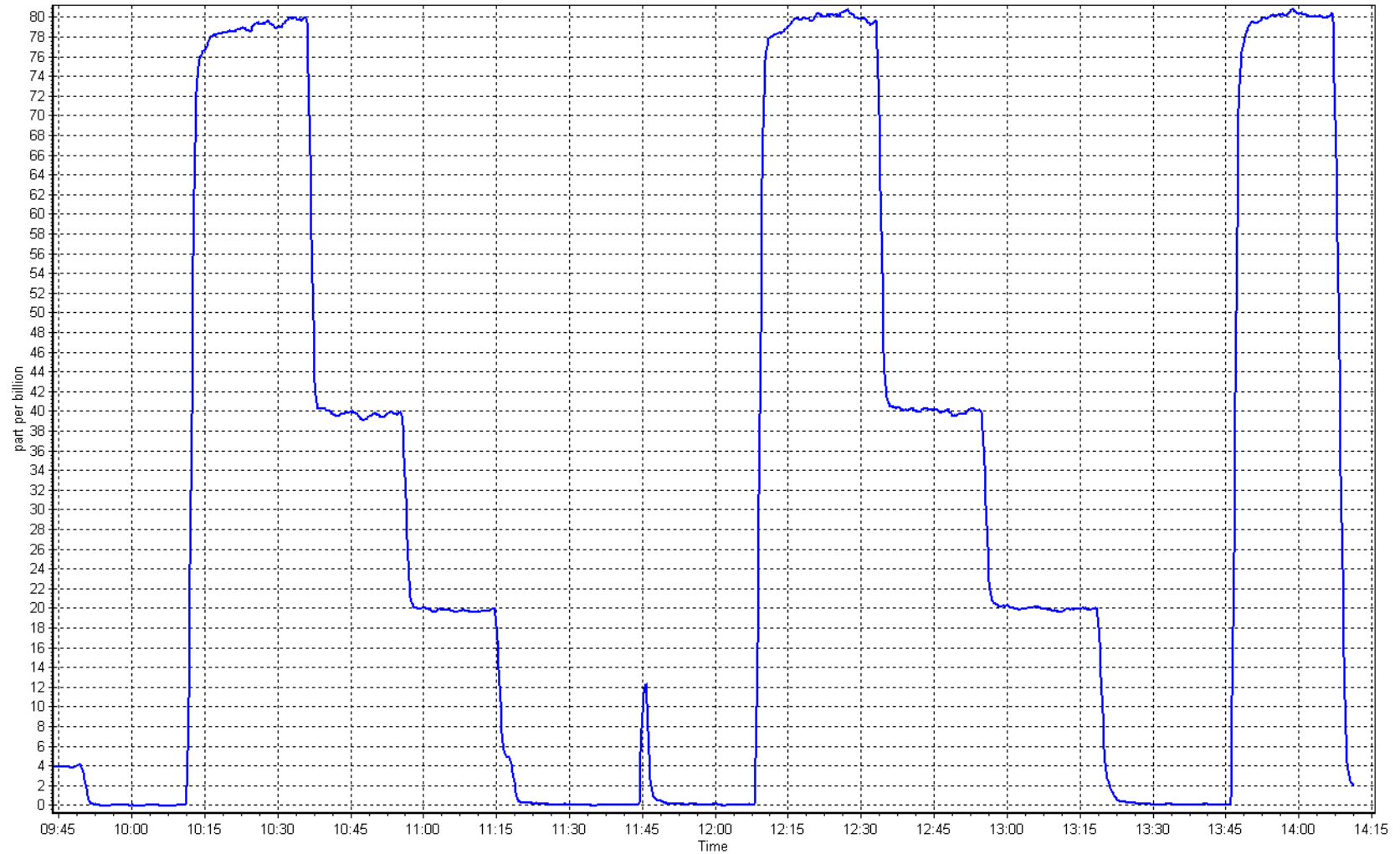
TRS Calibration Curve



TRS Calibration Plot

Date: April 8, 2026

Location: Barge Landing





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Barge Landing
 Calibration Date: April 7, 2026
 Start time (MST): 9:29
 Reason: Routine

Station number: AMS 09
 Last Cal Date: March 25, 2026
 End time (MST): 12:49

Calibration Standards

Gas Cert Reference: CC705748
 CH₄ Cal Gas Conc. 505.6 ppm
 C₃H₈ Cal Gas Conc. 204.8 ppm
 Removed Gas Cert: CC151285
 Removed CH₄ Conc. 505.6 ppm
 Removed C₃H₈ Conc. 204.8 ppm
 Diff between cyl (CH₄):
 Calibrator Model: API T700P
 Zero Air Gen model: APIT701

Cal Gas Expiry Date: October 9, 2032
 CH₄ Equiv Conc. 1068.8 ppm
 Removed Gas Expiry: January 5, 2025
 CH₄ Equiv Conc. 1068.8 ppm
 Diff between cyl (THC):
 Diff between cyl (NM):
 Serial Number: 2464
 Serial Number: 5613

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1193585650
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.31E-04	2.34E-04	NMHC SP Ratio:	5.47E-05
CH ₄ Retention time:	14.4	14.4	NMHC Peak Area:	162930
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF
				5.63E-05
				158132
				OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	16.91	16.56	1.021
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.56	Prev response	16.84	*% change	-1.7%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	16.91	16.97	0.997
Mid point	4961	39.5	8.44	8.39	1.006
Low point	4980	19.8	4.23	4.15	1.020
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	16.91	16.95	0.998
Average Correction Factor					1.008

Notes:

Changed sample inlet filter after as founds. Adjusted span only.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.1	8.91	8.66	1.029
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.66	Prev response	8.86	*% change	-2.4%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4921	79.1	8.91	8.96	0.994
Mid point	4961	39.5	4.45	4.43	1.003
Low point	4980	19.8	2.23	2.19	1.019
As left zero	5000	0.0	0.00	0.00	
As left span	4921	79.1	8.91	8.94	0.996
Average Correction Factor					1.006

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.1	8.00	7.91	1.012
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.91	Prev response	7.98	*% change	-0.9%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4921	79.1	8.00	8.01	0.999
Mid point	4961	39.5	3.99	3.96	1.009
Low point	4980	19.8	2.00	1.96	1.022
As left zero	5000	0.0	0.00	0.00	
As left span	4921	79.1	8.00	8.01	0.999
Average Correction Factor					1.010

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.998977	1.004818
THC Cal Offset:	-0.048774	-0.054973
CH ₄ Cal Slope:	1.001004	1.002803
CH ₄ Cal Offset:	-0.027393	-0.026189
NMHC Cal Slope:	0.996798	1.007332
NMHC Cal Offset:	-0.021982	-0.029784

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

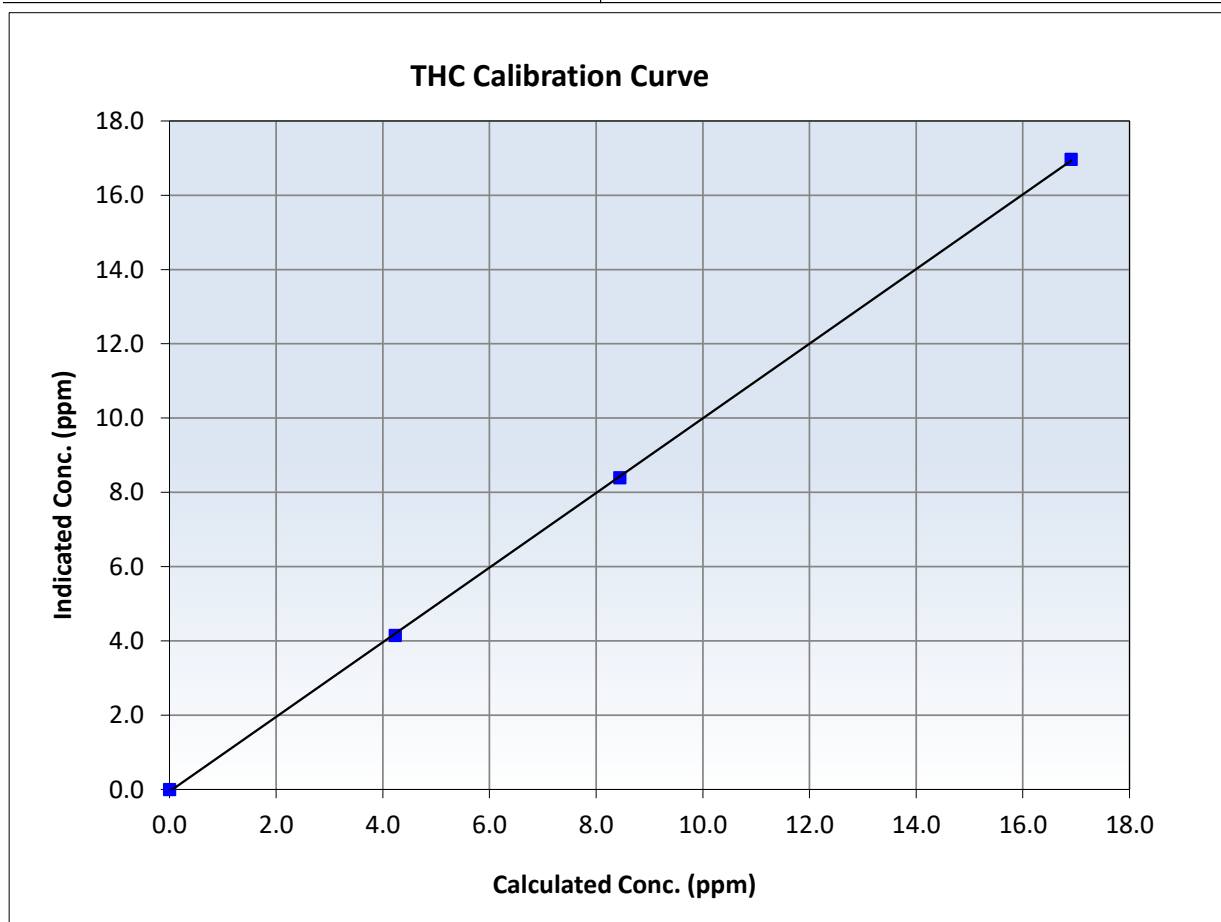
THC Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	March 25, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:29	End Time (MST):	12:49
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585650

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999951	≥ 0.995
16.91	16.97	0.9966	Slope	1.004818	$0.90 - 1.10$
8.44	8.39	1.0060	Intercept	-0.054973	± 0.5
4.23	4.15	1.0202			





Wood Buffalo Environmental Association

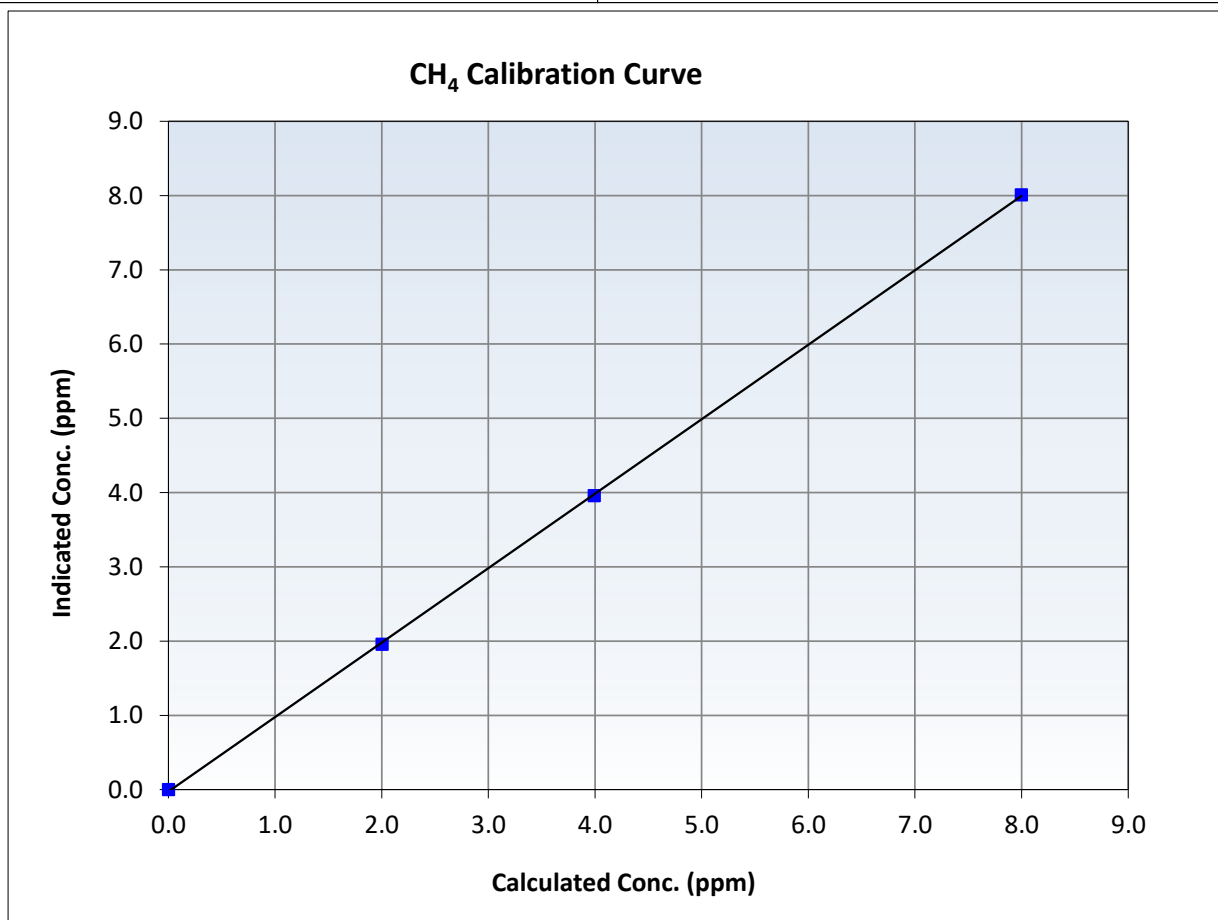
CH₄ Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	March 25, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:29	End Time (MST):	12:49
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585650

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999949		≥ 0.995
8.00	8.01	0.9986	Slope	1.002803		0.90 - 1.10
3.99	3.96	1.0088	Intercept	-0.026189		± 0.5
2.00	1.96	1.0216				





Wood Buffalo Environmental Association

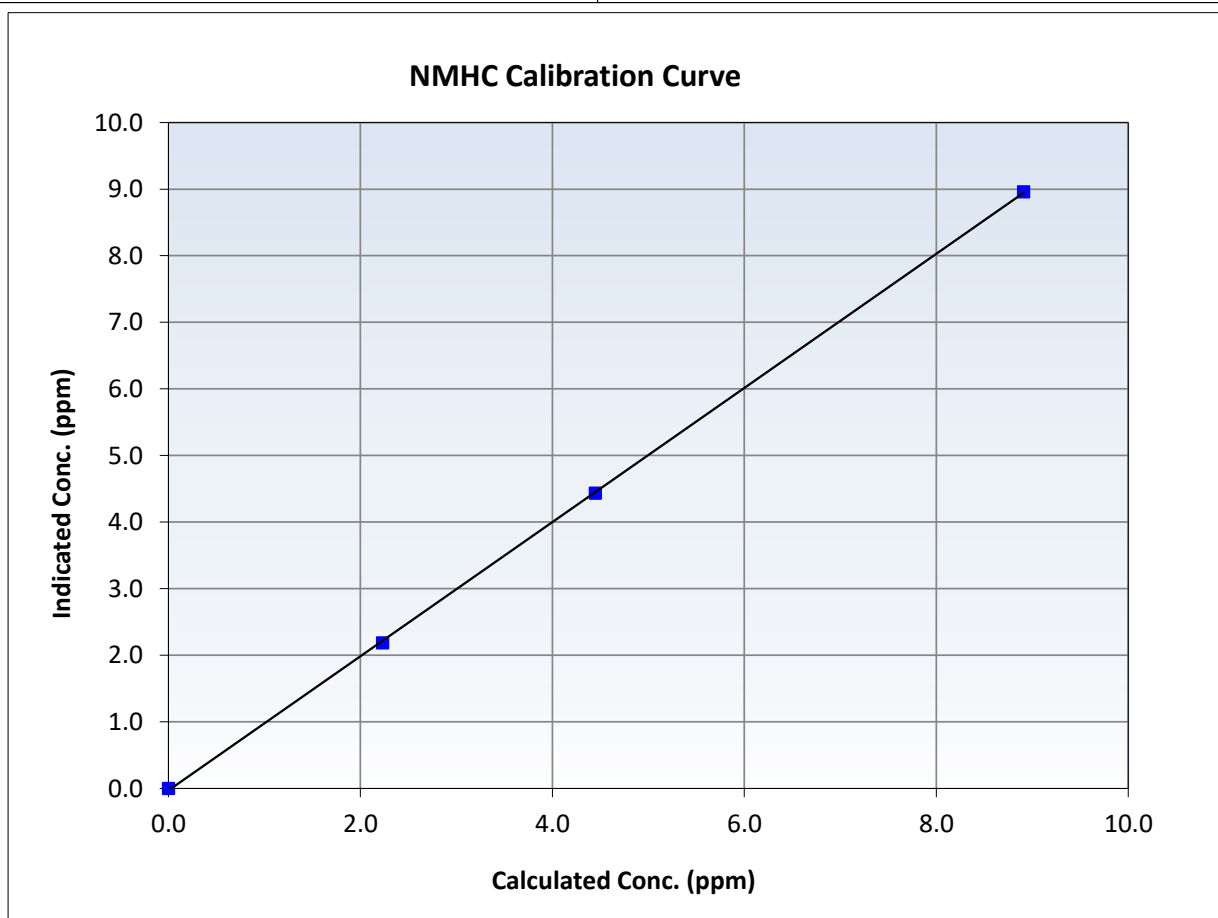
NMHC Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	March 25, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:29	End Time (MST):	12:49
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585650

Calibration Data

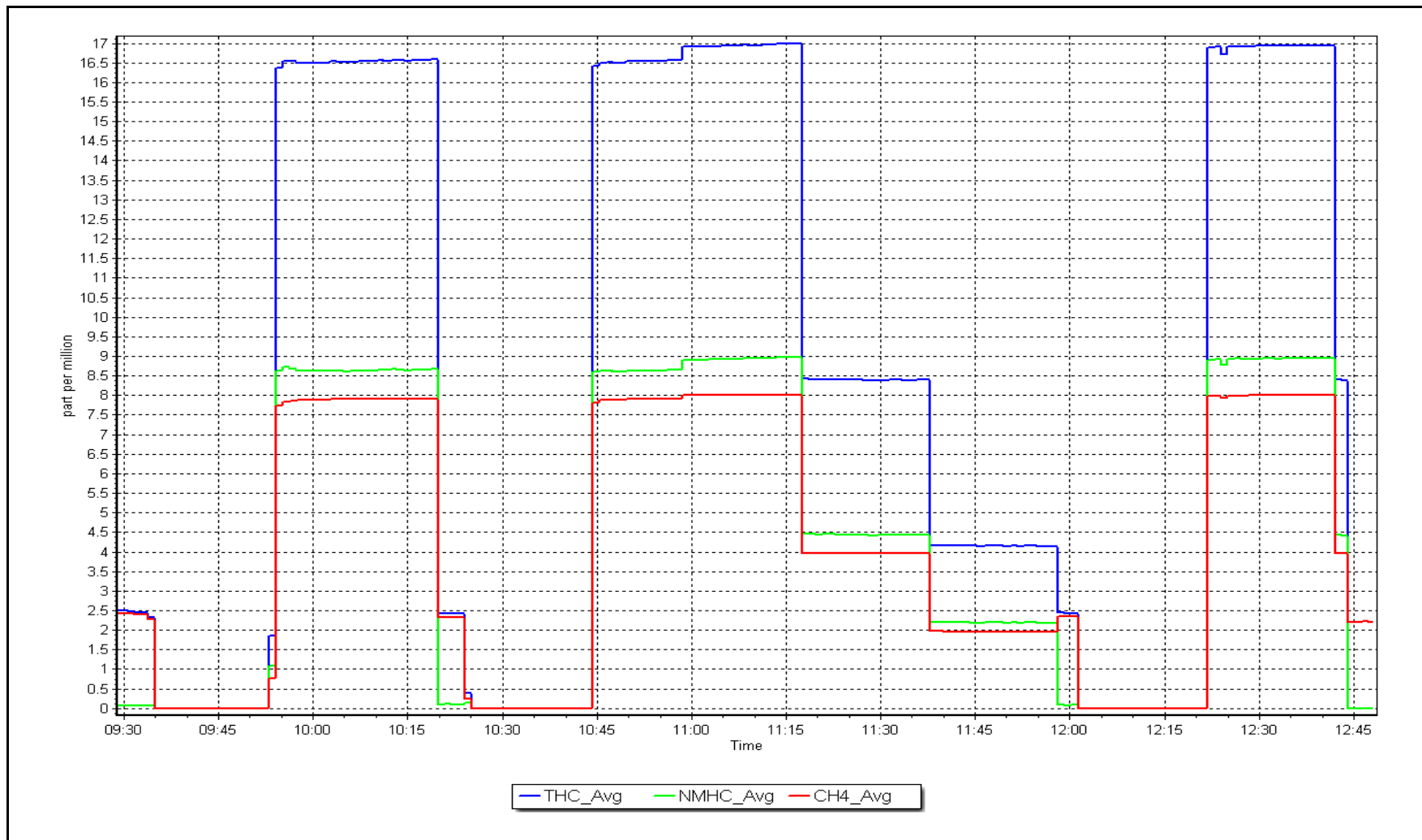
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999949	<i>≥0.995</i>
8.91	8.96	0.9943	Slope	1.007332	<i>0.90 - 1.10</i>
4.45	4.43	1.0033	Intercept	-0.029784	<i>+/-0.5</i>
2.23	2.19	1.0189			



NMHC Calibration Plot

Date: April 7, 2026

Location: Barge Landing





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Barge Landing
Station number: AMS 09
Calibration Date: April 10, 2026
Last Cal Date: March 4, 2026
Start time (MST): 8:54
End time (MST): 13:48
Reason: Routine

Calibration Standards

NO Gas Cylinder #: T2Y1KDH
NO_x Cal Gas Conc: 47.38 ppm
Removed Cylinder #: NA
Removed Gas NO_x Conc: 47.38 ppm
NO_x gas Diff:
Calibrator Model: Teledyne API 700
ZAG make/model: Teledyne API T701
Cal Gas Expiry Date: November 17, 2026
NO Cal Gas Conc: 46.94 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 46.94 ppm
NO gas Diff:
Serial Number: 2464
Serial Number: 5613

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.3	-0.1	-0.2	----	----
AF High point	4915	85.3	808.3	800.8	7.5	800.9	790.3	10.6	1.0089	1.0132
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 805.8 ppb	NO = 800.1 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.6%	
Baseline Corr 1st pt	NO _x = 801.2 ppb	NO = 790.4 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -1.2%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	NO ₂ SI:	NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1426262593

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.126	1.141	NO bkgnd or offset:	10.3	10.5
NOX coeff or slope:	0.999	0.999	NOX bkgnd or offset:	10.6	10.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	175.2	175.6

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.997519	0.998734
NO _x Cal Offset:	-0.532790	-0.212198
NO Cal Slope:	1.000877	1.000619
NO Cal Offset:	-1.434541	-1.494307
NO ₂ Cal Slope:	0.995164	0.999411
NO ₂ Cal Offset:	-0.746203	-0.550331

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.2	0.1	-0.3	----	----
High point	4915	85.3	808.3	800.8	7.5	806.9	800.4	6.6	1.0017	1.0005
Mid point	4957	42.6	403.7	400.0	3.7	403.5	398.5	5.0	1.0005	1.0037
Low point	4979	21.3	201.8	200.0	1.9	201.0	196.6	4.4	1.0041	1.0171
As left zero	5000	0.0	0.0	0.0	0.0	-0.2	0.0	-0.2	----	----
As left span	4915	85.3	808.3	412.6	395.7	806.8	412.6	394.2	1.0019	1.0000
Average Correction Factor									1.0021	1.0071

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.3	----	----
High GPT point	797.5	411.1	393.9	393.3	1.0015	99.8%
Mid GPT point	797.5	597.6	207.4	206.5	1.0044	99.6%
Low GPT point	797.5	696.9	108.1	107.3	1.0075	99.3%
Average Correction Factor					1.0045	99.6%

Notes:

Changed the sample inlet filter after as founds. Adjusted span.

Calibration Performed By:

Param Kaur



Wood Buffalo Environmental Association

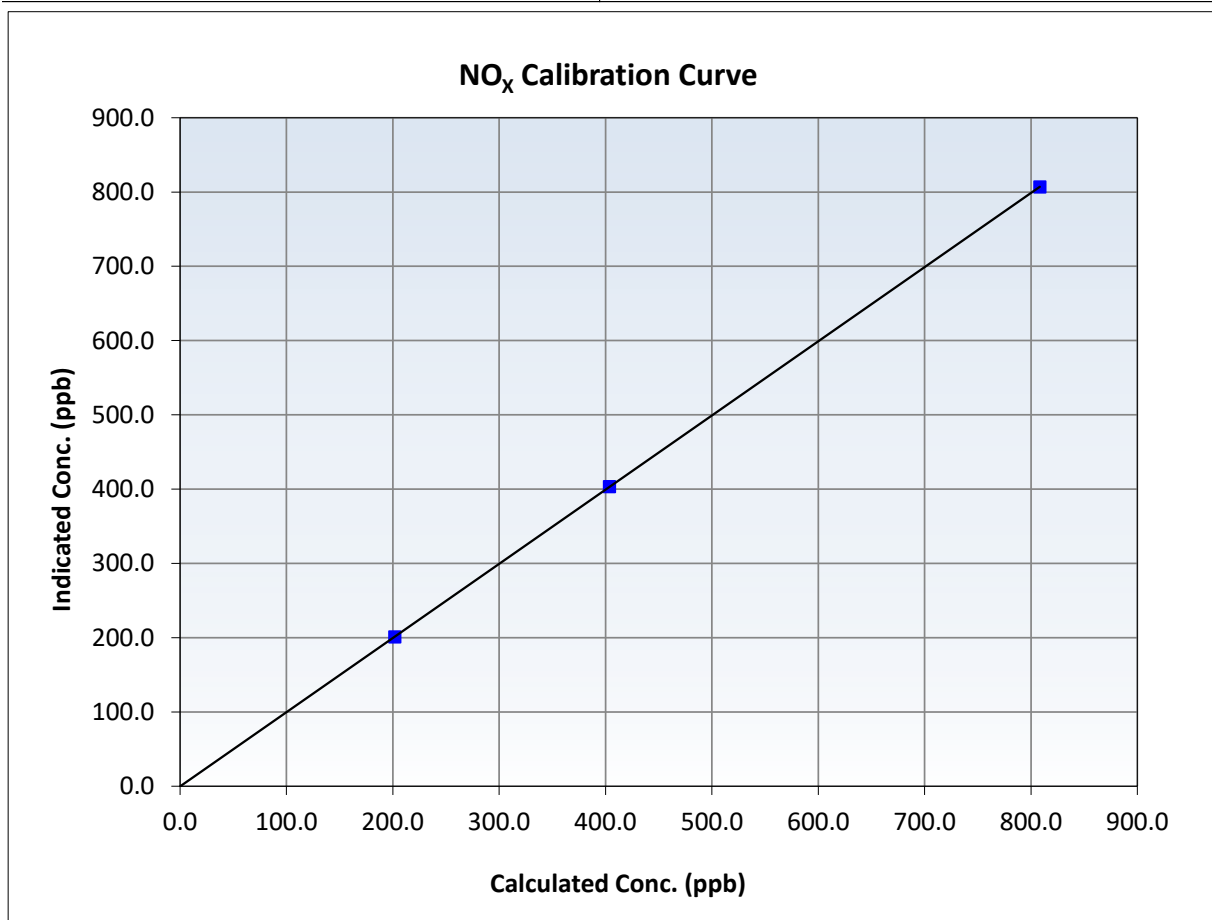
NO_x Calibration Summary

Station Information

Calibration Date:	April 10, 2026	Previous Calibration:	March 4, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	8:54	End Time (MST):	13:48
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262593

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999999	≥0.995
808.3	806.9	1.0017	Slope	0.998734	0.90 - 1.10
403.7	403.5	1.0005	Intercept	-0.212198	+/-20
201.8	201.0	1.0041			





Wood Buffalo Environmental Association

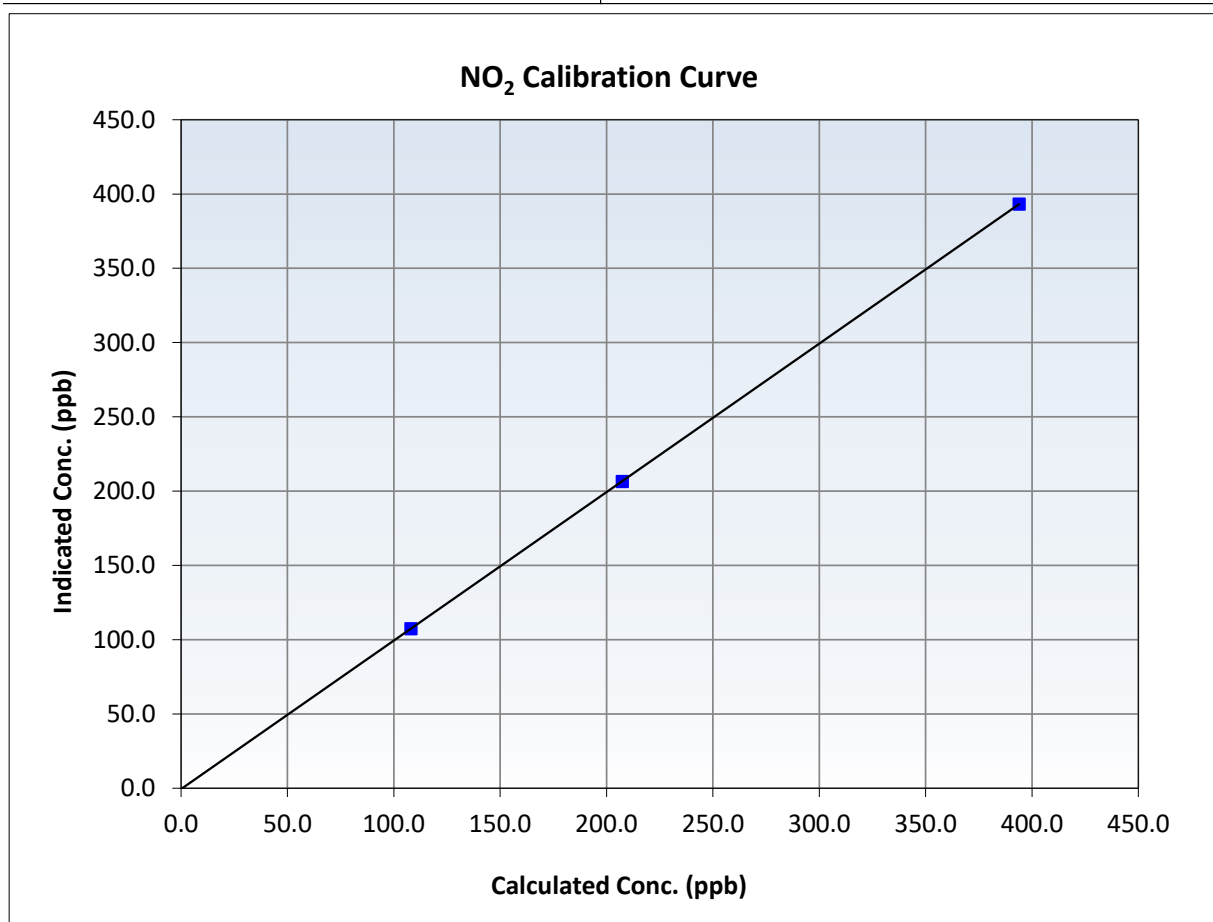
NO₂ Calibration Summary

Station Information

Calibration Date:	April 10, 2026	Previous Calibration:	March 4, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	8:54	End Time (MST):	13:48
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262593

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999998	≥ 0.995
393.9	393.3	1.0015	Slope	0.999411	$0.90 - 1.10$
207.4	206.5	1.0044	Intercept	-0.550331	± 20
108.1	107.3	1.0075			





Wood Buffalo Environmental Association

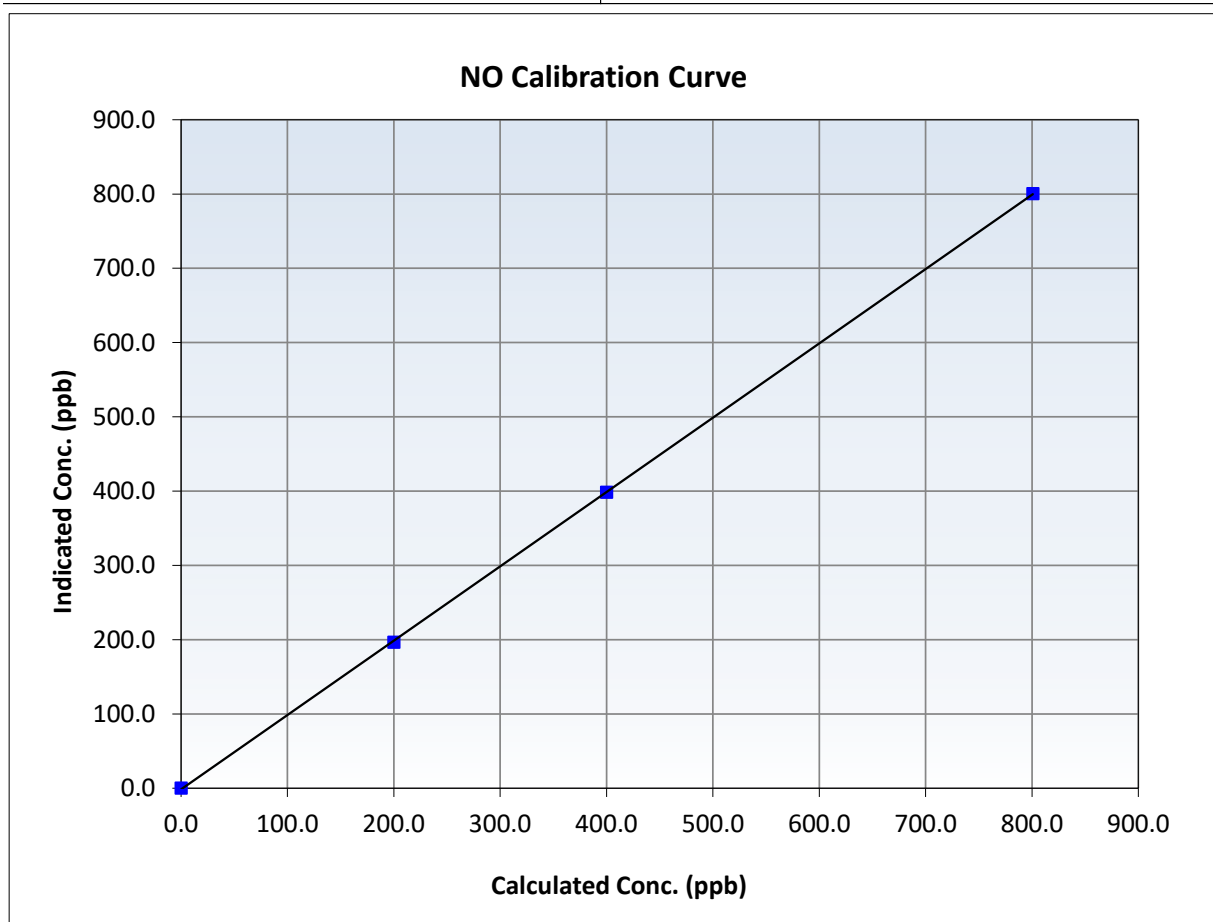
NO Calibration Summary

Station Information

Calibration Date:	April 10, 2026	Previous Calibration:	March 4, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	8:54	End Time (MST):	13:48
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262593

Calibration Data

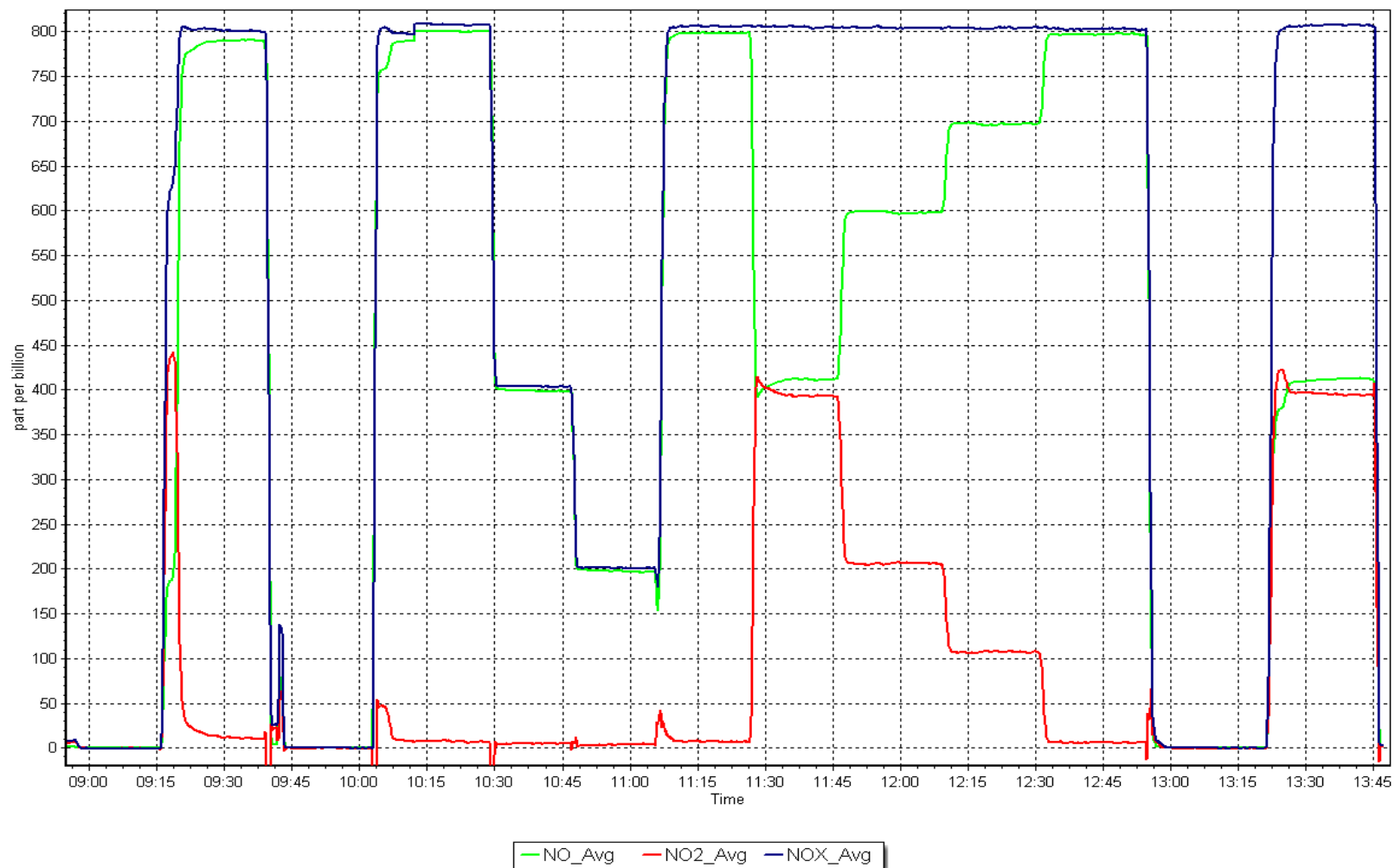
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999980	≥ 0.995
800.8	800.4	1.0005	Slope	1.000619	$0.90 - 1.10$
400.0	398.5	1.0037	Intercept	-1.494307	± 20
200.0	196.6	1.0171			



NO_x Calibration Plot

Date: April 10, 2026

Location: Barge Landing





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Barge Landing Station number: AMS 09
Calibration Date: April 20, 2026 Last Cal Date: March 10, 2026
Start time (MST): 10:12 End time (MST): 10:35

Analyzer Make: API T640 S/N: 2237
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25 S/N: 388755
Temp/RH standard: Alicat FP-25 S/N: 388755

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	6.7	6.0	6.7	☐	+/- 2 °C
P (mmHg)	728.8	727.9	728.8	☐	+/- 10 mmHg
Flow (LPM)	4.99	4.98	4.99	☐	+/- 0.25 LPM
PW% (pump)	33	----	33	☐	>80%
Zero Verification	PM w/o HEPA: _____	4.2	PM w/ HEPA: _____	0.0	<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: January 30, 2027
Lot No.: 100128-050-042

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test				☐	+/- 0.5

Date Optical Chamber Cleaned: _____ March 10, 2026
Date Disposable Filter Changed: _____ January 26, 2026

Post- maintenance Zero Verification: PM w/ HEPA: _____ <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: _____ March 5, 2026
Date RH/T Sensor Cleaned: _____ July 22, 2025

Notes: Verified flow, pressure, temperature and pump power. No adjustments made. Leak check passed.

Calibration by: Param Kaur



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS11 LOWER CAMP APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Lower Camp Station number: AMS 11
Calibration Date: April 27, 2026 Last Cal Date: March 20, 2026
Start time (MST): 10:11 End time (MST): 13:21
Reason: Routine

Calibration Standards

Cal Gas Concentration: 48.75 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC741503
Removed Cal Gas Conc: 48.75 ppm Rem Gas Exp Date:
Removed Gas Cyl #: CC741503 Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 3811
Zero Air Gen Model: Teledyne API T701 Serial Number: 4428

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 100841398
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.998016	0.996419	Backgd or Offset:	19.5	19.2
Calibration intercept:	-0.512767	0.646542	Coeff or Slope:	1.047	1.040

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.2	----
As found High point	4918	82.1	800.5	803.2	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	803.0	Previous response	798.4	*% change	0.6%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4918	82.1	800.5	798.2	1.003
Mid point	4959	41.1	400.7	399.8	1.002
Low point	4980	20.5	199.9	200.2	0.998
As left zero	5000	0.0	0.0	0.3	----
As left span	4918	82.1	800.5	802.3	0.998
Average Correction Factor:					1.001

Notes: Inlet filter changed after as founds, Adjusted span only.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

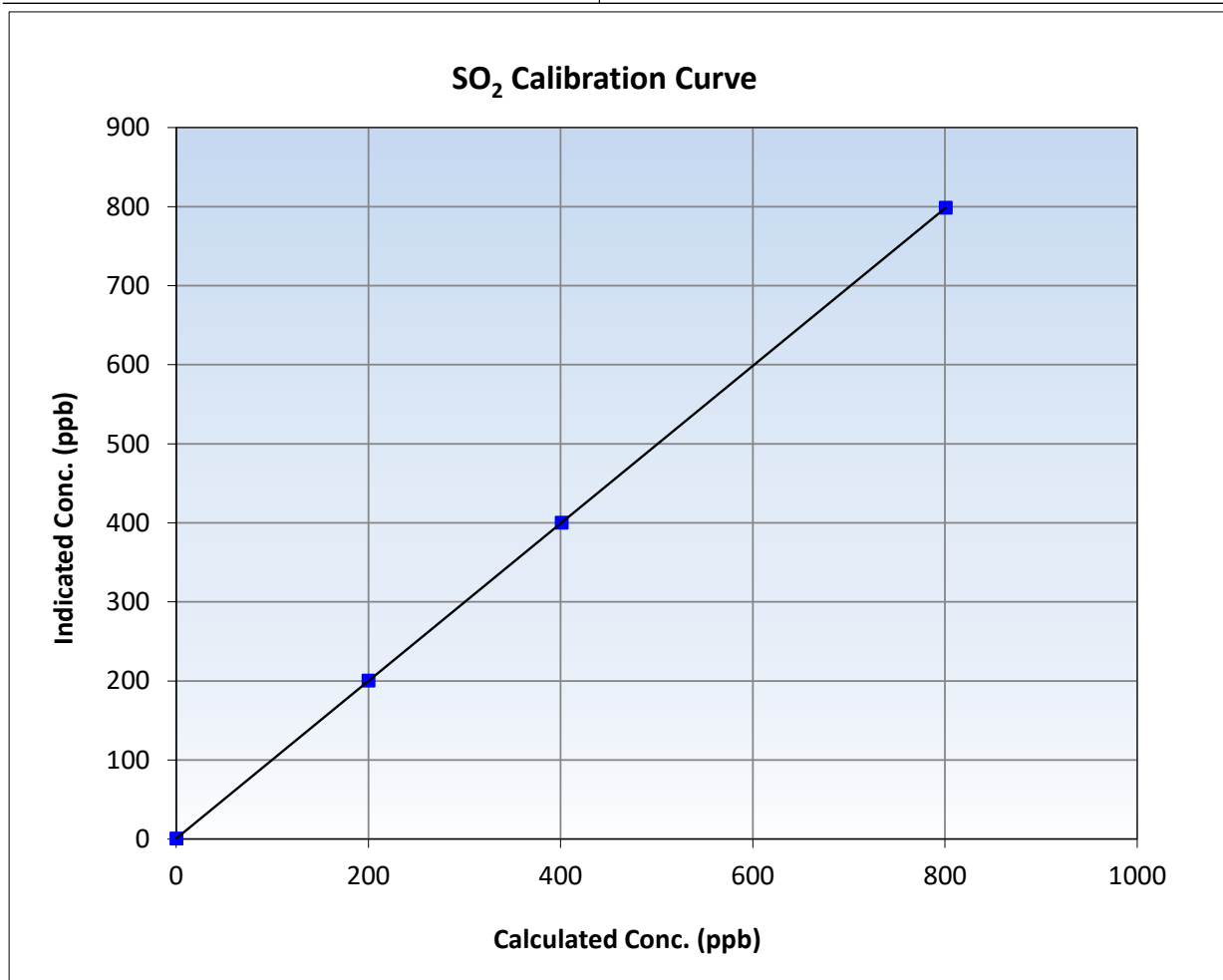
SO₂ Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	March 20, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	10:11	End Time (MST):	13:21
Analyzer make:	Thermo 43i	Analyzer serial #:	100841398

Calibration Data

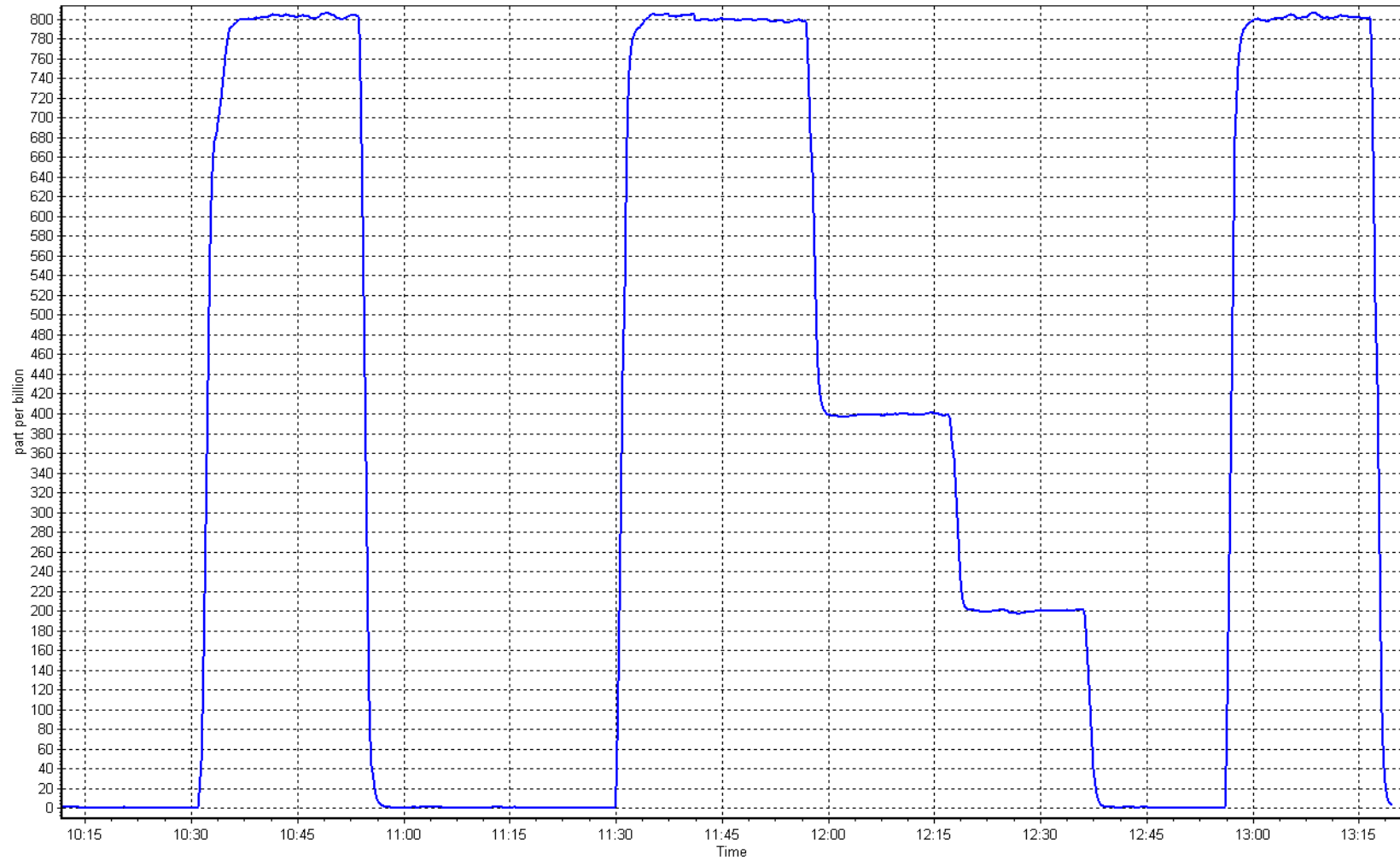
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999999	≥0.995
800.5	798.2	1.0028	Slope	0.996419	0.90 - 1.10
400.7	399.8	1.0023	Intercept	0.646542	+/-30
199.9	200.2	0.9983			



SO2 Calibration Plot

Date: April 27, 2026

Location: Lower Camp





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Lower Camp Station number: AMS 11
Calibration Date: April 23, 2026 Last Cal Date: March 19, 2026
Start time (MST): 9:23 End time (MST): 13:03
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.83 ppm Cal Gas Exp Date: August 28, 2027
Cal Gas Cylinder #: CC737863
Removed Cal Gas Conc: 4.83 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: API T700 Serial Number: 3811
ZAG Make/Model: API T701H Serial Number: 4428

Analyzer Information

Analyzer make: Thermo 43iQ-TL Analyzer serial #: 1203169745
Converter make: Global G150 Converter serial #: 2022-223
Analyzer Range: 0 - 100 ppb Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999705	1.009303	Backgd or Offset: 2.5	2.5
Calibration intercept:	0.228675	0.280814	Coeff or Slope: 0.816	0.816

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4917	82.8	80.0	81.5	0.981
As found Mid point	4959	41.4	40.0	40.6	0.985
As found Low point	4979	20.7	20.0	20.6	0.971
New cylinder response					
Baseline Corr As found:	81.5	Prev response:	80.19	*% change:	1.6%
Baseline Corr 2nd AF pt:	40.6	AF Slope:	1.017733	AF Intercept:	0.060806
Baseline Corr 3rd AF pt:	20.6	AF Correlation:	0.999982	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4917	82.8	80.0	80.9	0.989
Mid point	4959	41.4	40.0	40.8	0.980
Low point	4979	20.7	20.0	20.6	0.971
As left zero	5000	0.0	0.0	0.1	----
As left span	4923	82.8	79.9	81.1	0.985
SO2 Scrubber Check	4932	82.2	819.7	0.0	----
Date of last scrubber change:				Ave Corr Factor	0.980
Date of last converter efficiency test:					

Notes: Inlet filter changed after as founds, scrubber check passed, no adjustments made.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

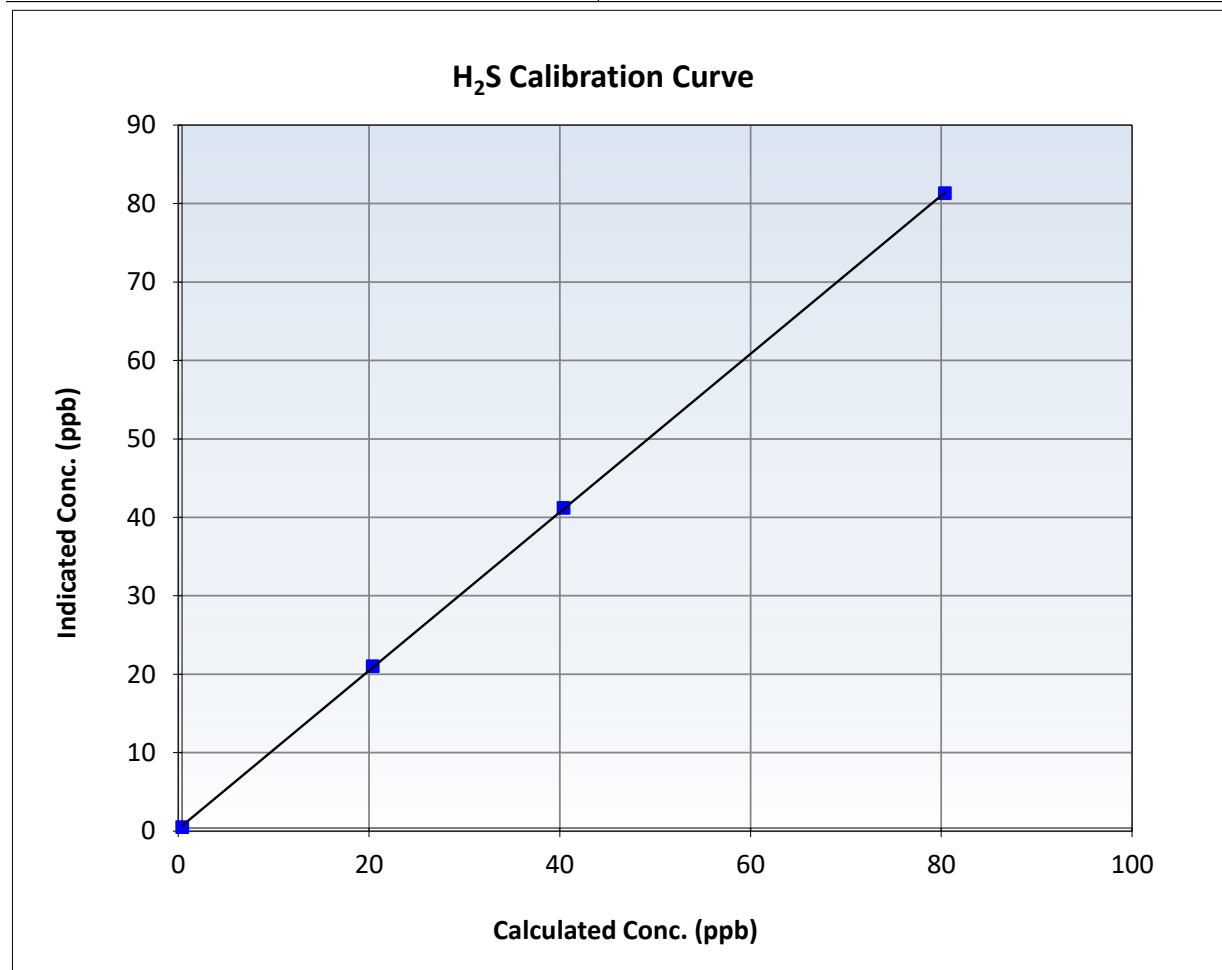
H₂S Calibration Summary

Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	March 19, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:23	End Time (MST):	13:03
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	1203169745

Calibration Data

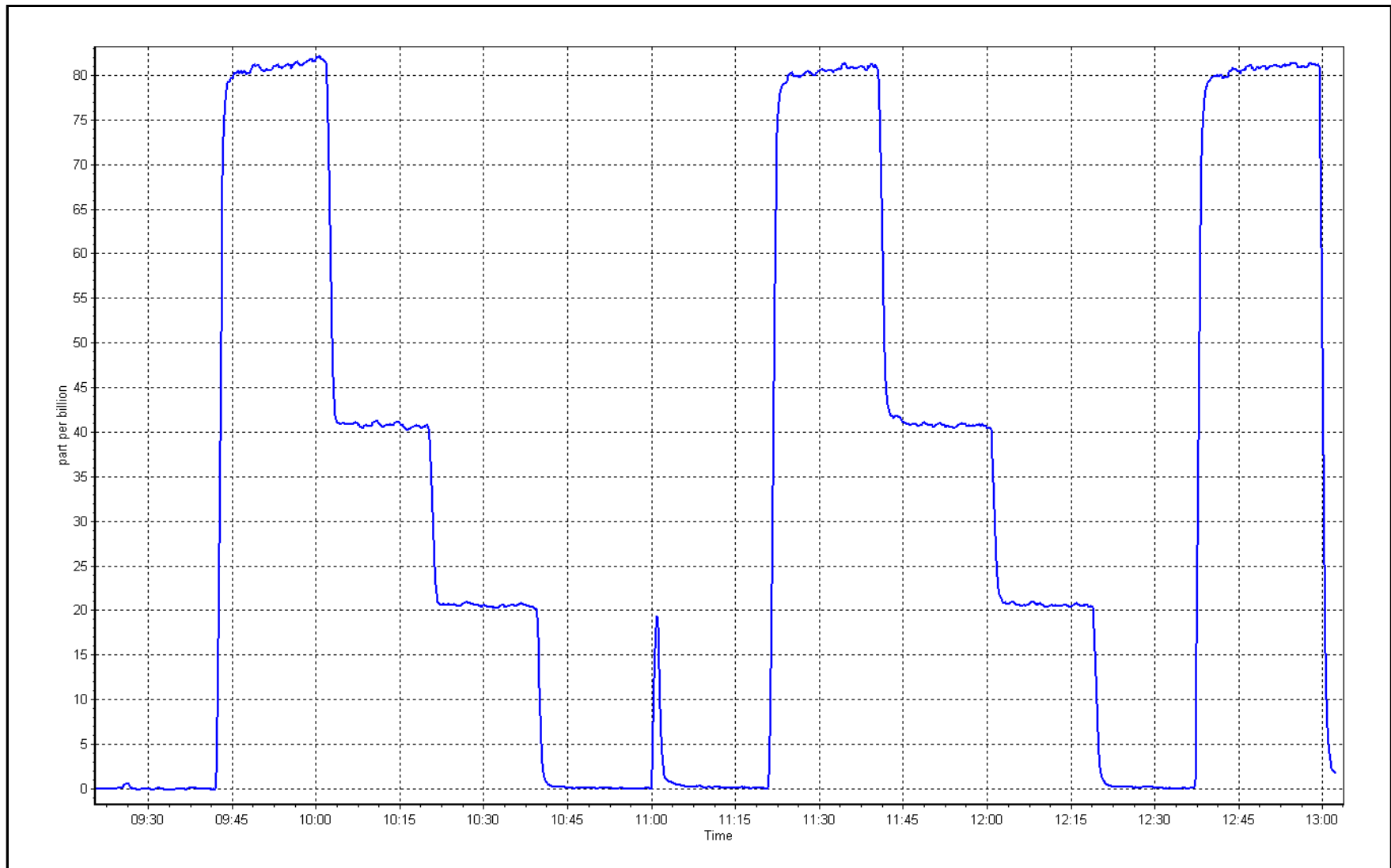
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999975		≥0.995
80.0	80.9	0.9887	Slope	1.009303		0.90 - 1.10
40.0	40.8	0.9801	Intercept	0.280814		+/-3
20.0	20.6	0.9707				



H₂S Calibration Plot

Date: April 23, 2026

Location: Lower Camp





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Lower Camp
Calibration Date: April 27, 2026
Start time (MST): 10:11
Reason: Routine

Station number: AMS 11
Last Cal Date: March 20, 2026
End time (MST): 13:21

Calibration Standards

Gas Cert Reference:	CC741503	Cal Gas Expiry Date:	October 9, 2032
CH ₄ Cal Gas Conc.	504.8 ppm	CH ₄ Equiv Conc.	1071.9 ppm
C ₃ H ₈ Cal Gas Conc.	206.2 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH ₄ Conc.	504.8 ppm	CH ₄ Equiv Conc.	1071.9 ppm
Removed C ₃ H ₈ Conc.	206.2 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	3811
Zero Air Gen model:	Teledyne API T701	Serial Number:	4428

Analyzer Information

Analyzer make: Thermo 55i
THC Range: 0 - 20 ppm

Analyzer serial #: 1152430012
NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.28E-04	2.31E-04	NMHC SP Ratio:	5.18E-05	5.35E-05
CH ₄ Retention time:	13.0	13.2	NMHC Peak Area:	179862	174083
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4918	82.1	17.60	17.29	1.018
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.29	Prev response	17.21	*% change	0.4%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	17.60	17.61	0.999
Mid point	4959	41.1	8.81	8.81	1.000
Low point	4980	20.5	4.39	4.41	0.996
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	17.60	17.52	1.005
Average Correction Factor					0.998

Notes:

Inlet filter changed after as founds, Adjusted span only.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4918	82.1	9.31	9.12	1.021
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.12	Prev response	9.14	*% change	-0.2%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4918	82.1	9.31	9.34	0.997
Mid point	4959	41.1	4.66	4.70	0.991
Low point	4980	20.5	2.32	2.35	0.988
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	9.31	9.30	1.001
Average Correction Factor					0.992

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4918	82.1	8.29	8.17	1.015
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.17	Prev response	8.08	*% change	1.1%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4918	82.1	8.29	8.27	1.002
Mid point	4959	41.1	4.15	4.11	1.011
Low point	4980	20.5	2.07	2.06	1.004
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	8.29	8.22	1.009
Average Correction Factor					1.006

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.978296	1.000435
THC Cal Offset:	-0.005786	0.004148
CH ₄ Cal Slope:	0.975257	0.997187
CH ₄ Cal Offset:	-0.006087	-0.007921
NMHC Cal Slope:	0.981332	1.003057
NMHC Cal Offset:	-0.000299	0.012670

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

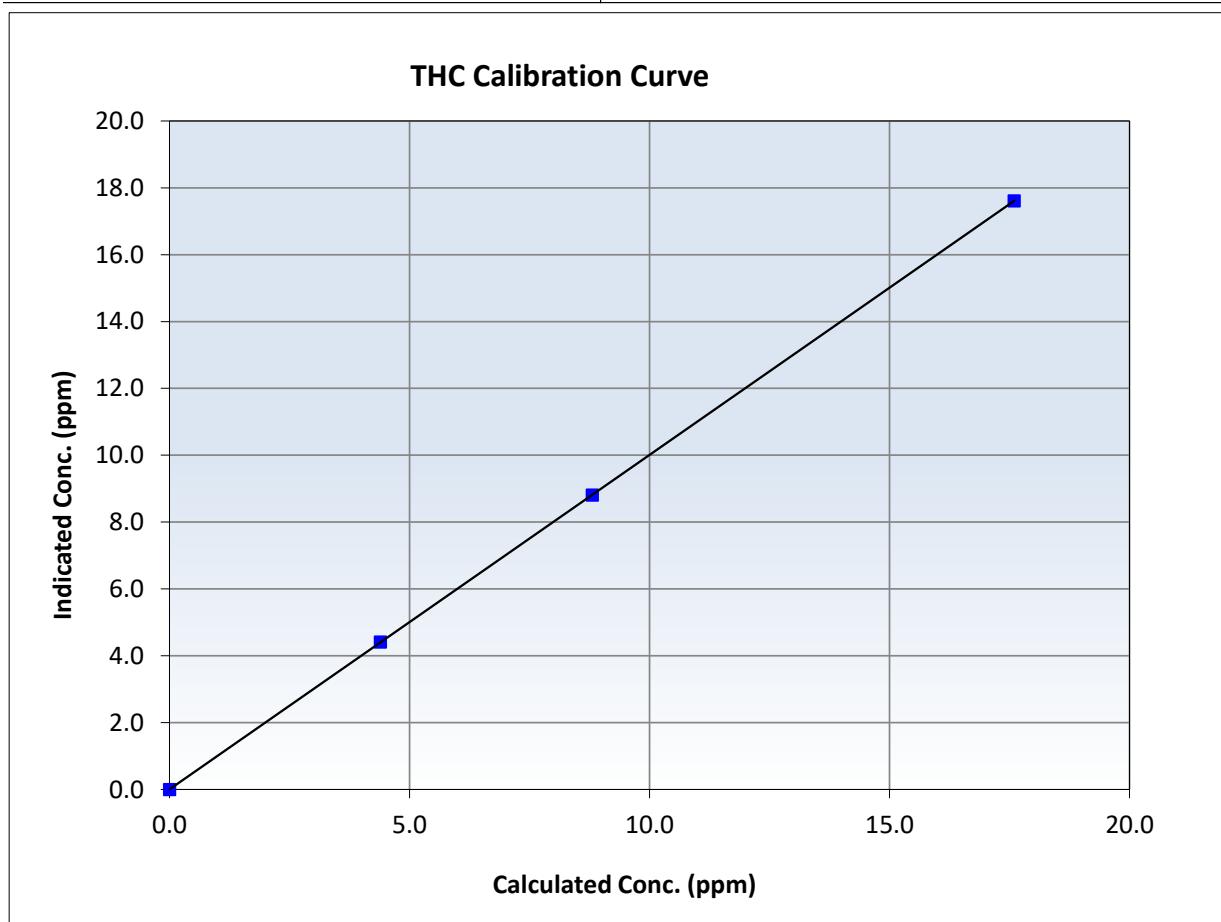
THC Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	March 20, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	10:11	End Time (MST):	13:21
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999999	≥ 0.995
17.60	17.61	0.9992	Slope	1.000435	$0.90 - 1.10$
8.81	8.81	1.0002	Intercept	0.004148	± 0.5
4.39	4.41	0.9960			





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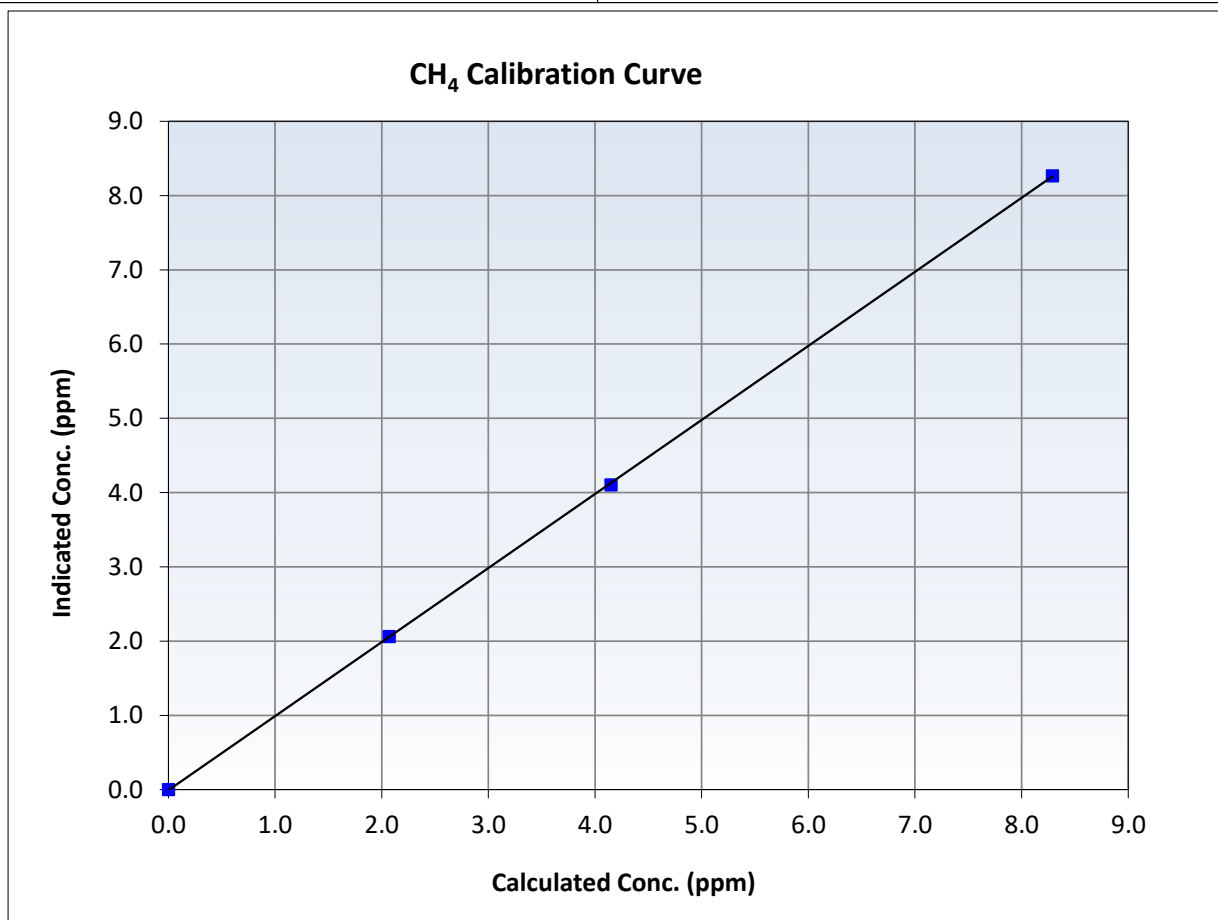
CH₄ Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	March 20, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	10:11	End Time (MST):	13:21
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999979	<i>≥0.995</i>
8.29	8.27	1.0025	Slope	0.997187	<i>0.90 - 1.10</i>
4.15	4.11	1.0106	Intercept	-0.007921	<i>+/-0.5</i>
2.07	2.06	1.0041			





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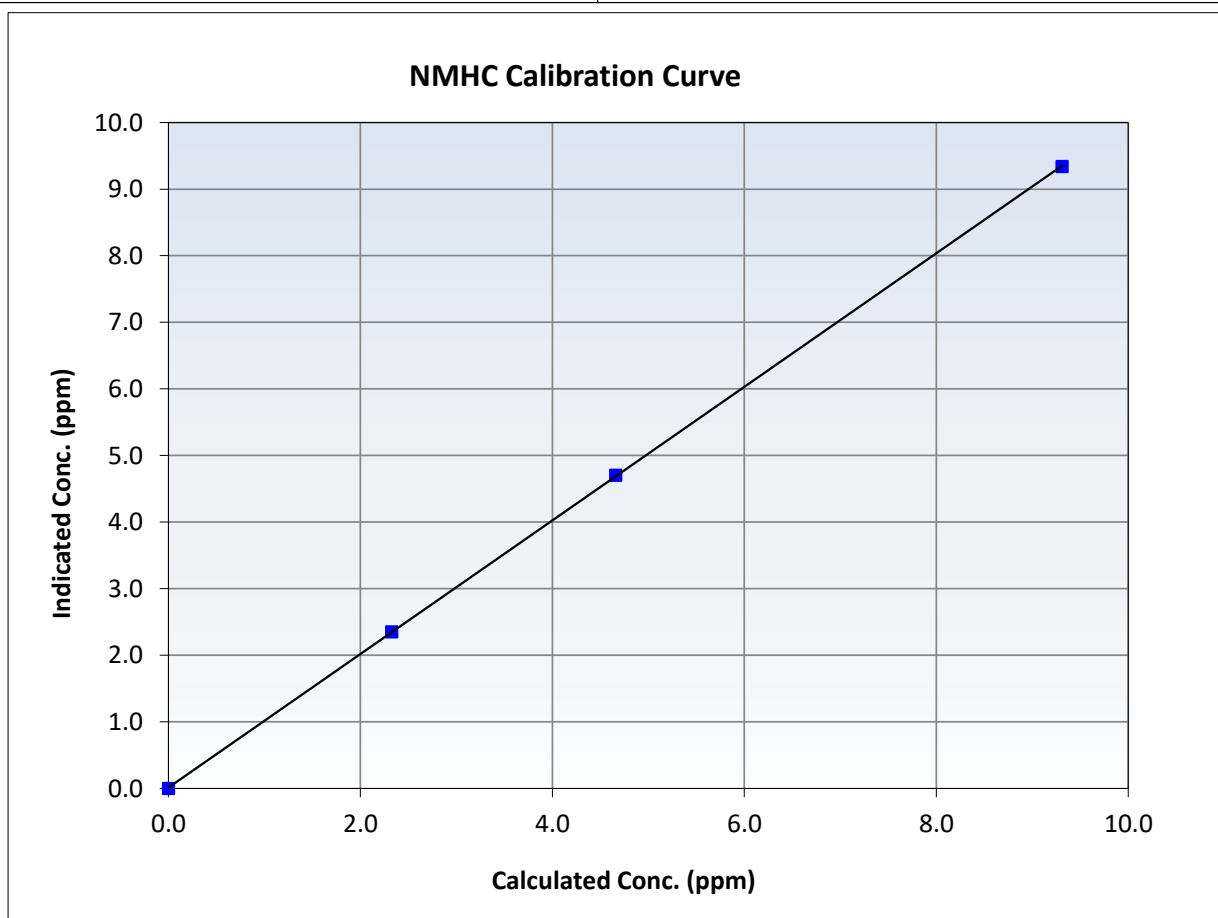
NMHC Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	March 20, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	10:11	End Time (MST):	13:21
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012

Calibration Data

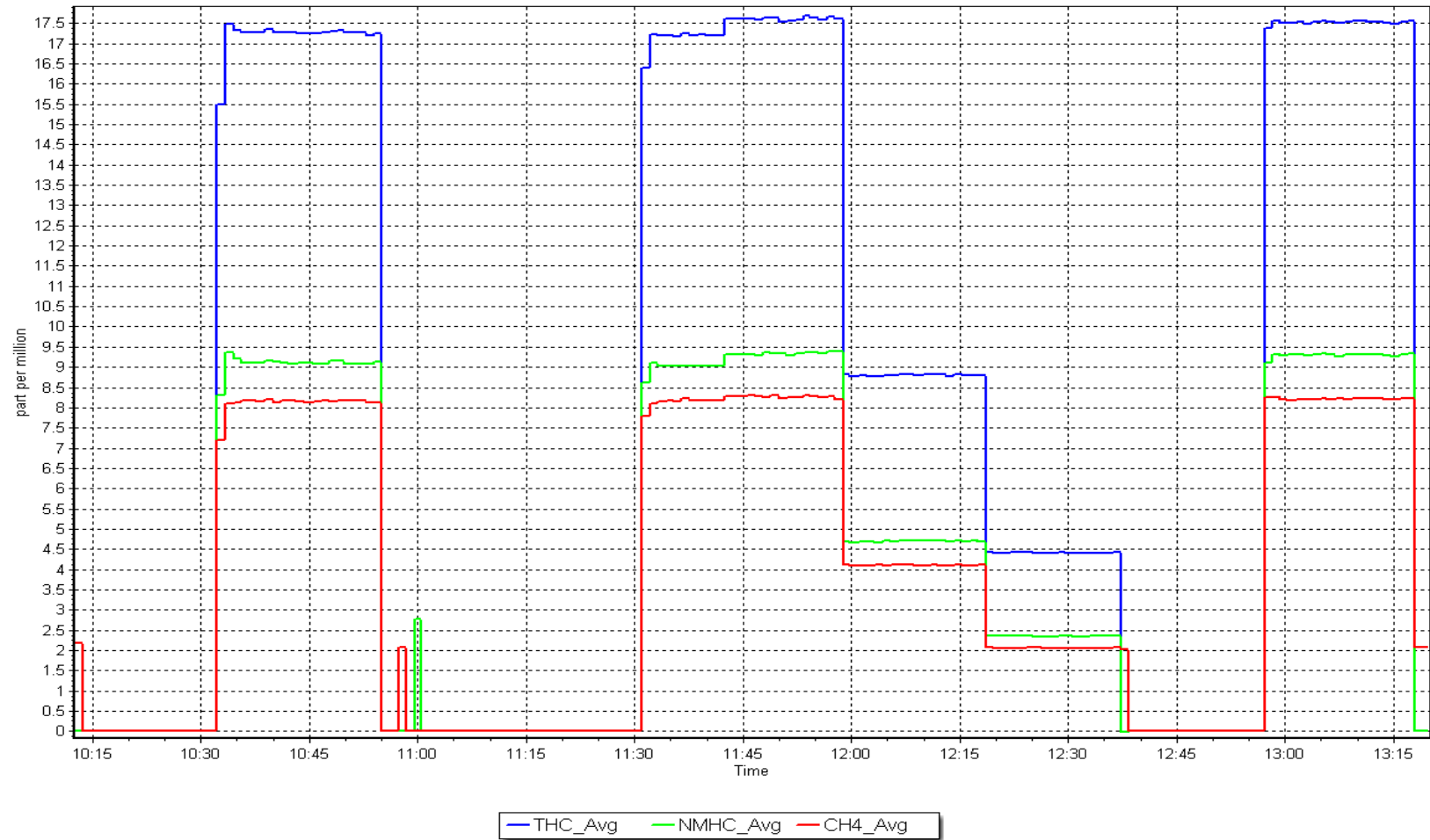
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999990	≥ 0.995
9.31	9.34	0.9966	Slope	1.003057	$0.90 - 1.10$
4.66	4.70	0.9913	Intercept	0.012670	± 0.5
2.32	2.35	0.9884			



NMHC Calibration Plot

Date: April 27, 2026

Location: Lower Camp





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS13 FORT MCKAY SOUTH APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: April 2, 2026
Start time (MST): 10:09
Reason: Routine

Station number: AMS 13
Last Cal Date: March 5, 2026
End time (MST): 12:47

Calibration Standards

Cal Gas Concentration: 50.55 ppm
Cal Gas Cylinder #: CC260812
Removed Cal Gas Conc: 50.55 ppm
Removed Gas Cyl #: NA
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701

Cal Gas Exp Date: December 29, 2028
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 2657
Serial Number: 1118

Analyzer Information

Analyzer make: Thermo 43i-TLE
Analyzer Range: 0 - 1000 ppb

Serial Number: 1331259320

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002285	0.996023	Backgd or Offset:	3.06	3.06
Calibration intercept:	0.181703	0.322151	Coeff or Slope:	0.982	0.982

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.3	----
As found High point	4921	79.1	799.7	794.9	1.006
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	795.2	Previous response	801.7	*% change	-0.8%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4921	79.1	799.7	796.4	1.004
Mid point	4961	39.5	399.3	399.0	1.001
Low point	4980	19.8	200.2	199.5	1.003
As left zero	5000	0.0	0.0	0.0	----
As left span	4921	79.1	799.7	797.7	1.002

Average Correction Factor: 1.003

Notes: Changed inlet filter after as founds. No adjustment made.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

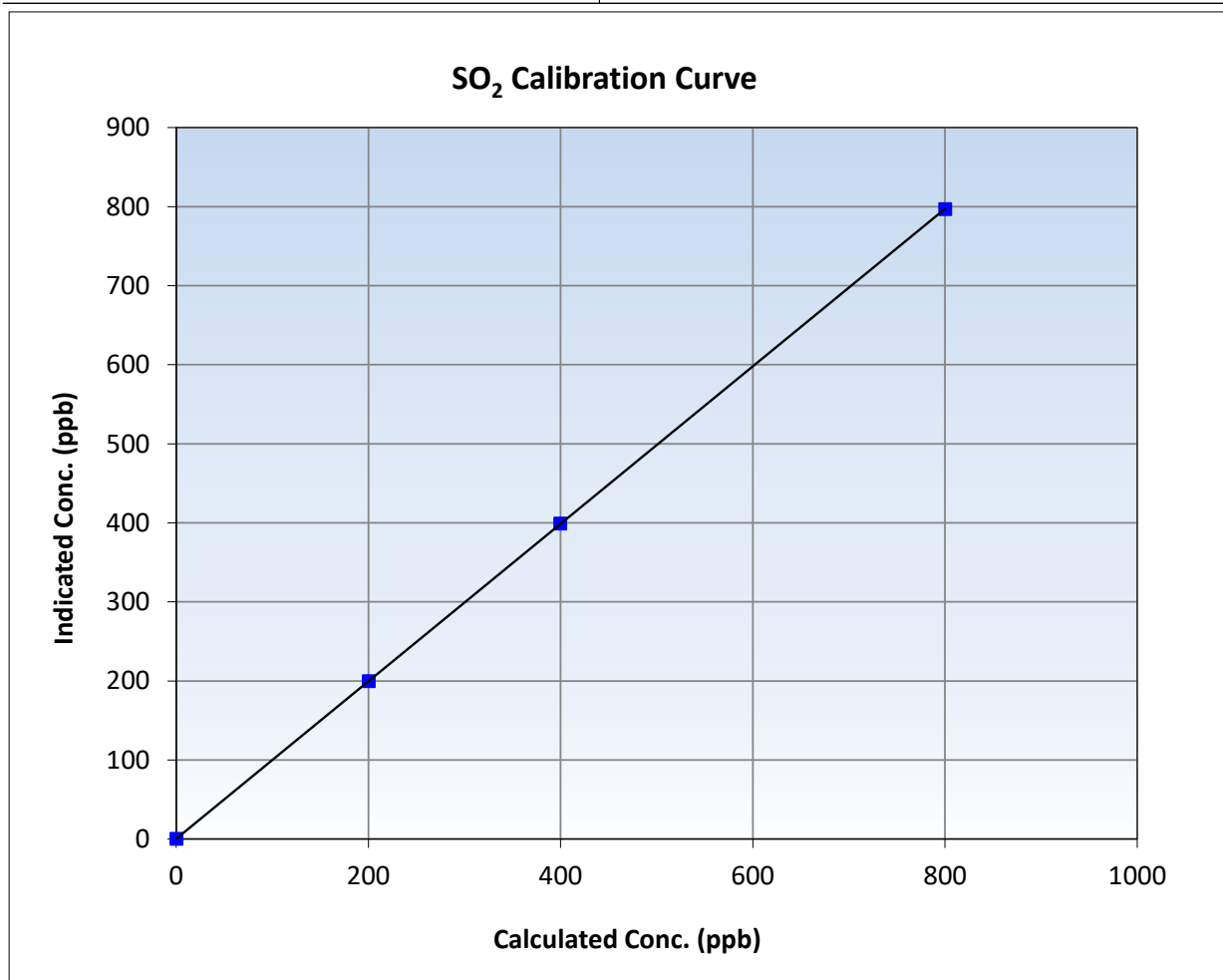
SO₂ Calibration Summary

Station Information

Calibration Date:	April 2, 2026	Previous Calibration:	March 5, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:09	End Time (MST):	13:39
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1331259320

Calibration Data

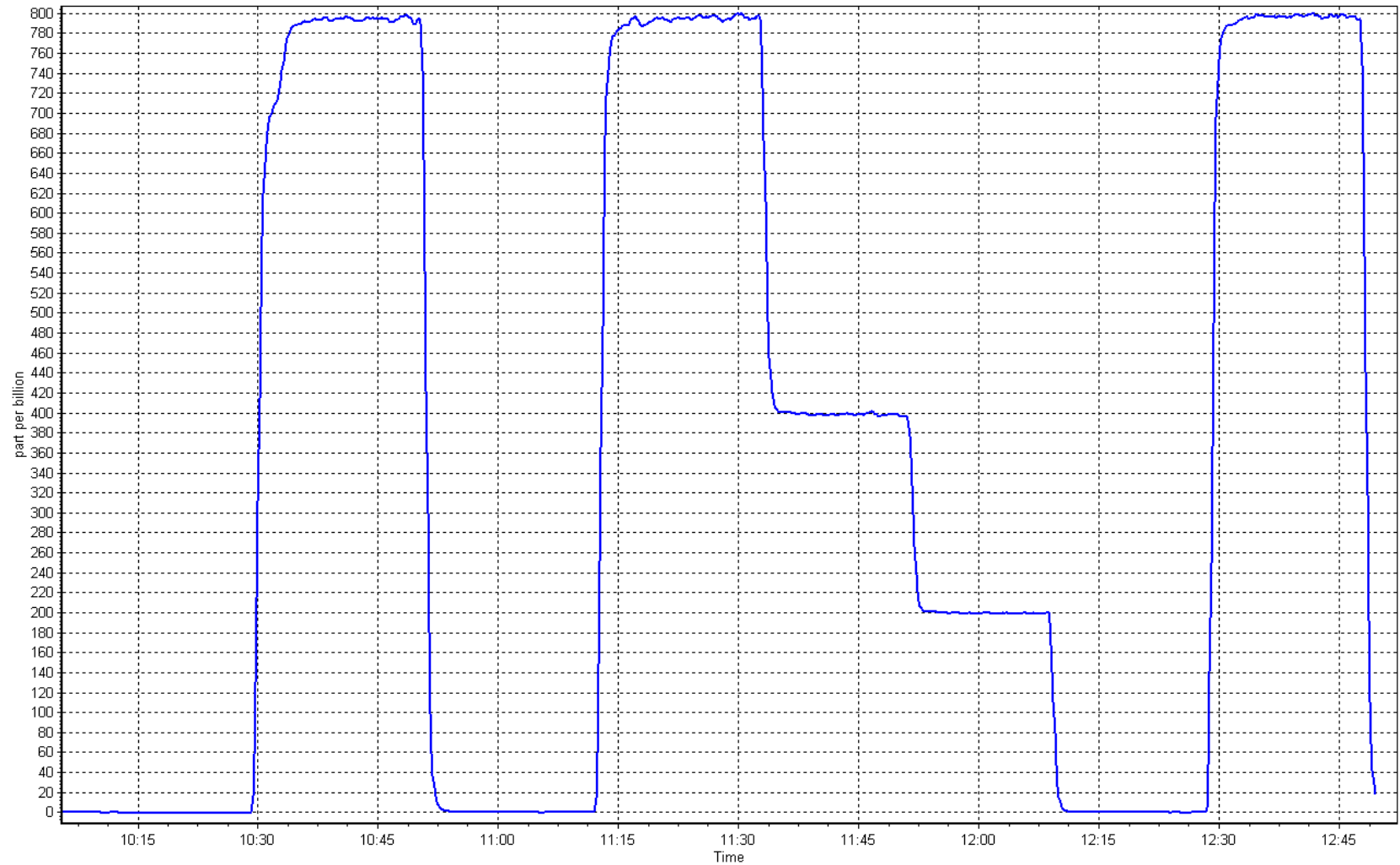
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999996	≥0.995
799.7	796.4	1.0041	Slope	0.996023	0.90 - 1.10
399.3	399.0	1.0008	Intercept	0.322151	+/-30
200.2	199.5	1.0034			



SO2 Calibration Plot

Date: April 2, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: April 15, 2026
Start time (MST): 9:31
Reason: Routine

Station number: AMS 13
Last Cal Date: March 16, 2026
End time (MST): 13:13

Calibration Standards

Cal Gas Concentration: 4.88 ppm
Cal Gas Cylinder #: CC500241
Removed Cal Gas Conc: 4.88 ppm
Removed Gas Cyl #: CC500241
Calibrator Make/Model: Teledyne API T700P
ZAG Make/Model: Teledyne API T701

Cal Gas Exp Date: September 5, 2027
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 2657
Serial Number: 1118

Analyzer Information

Analyzer make: Thermo 43i TLE
Converter make: CDN-101
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1180540017
Converter serial #: 521
Converter Temp: 800 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.003691	1.002830	Backgd or Offset:	3.74	3.74
Calibration intercept:	0.001595	-0.118408	Coeff or Slope:	1.12	1.118

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4918	81.6	79.6	79.0	1.008
As found Mid point	4959	40.8	39.8	39.4	1.011
As found Low point	4980	20.4	19.9	19.4	1.026
New cylinder response					
Baseline Corr As found:	79.0	Prev response:	79.94	*% change:	-1.2%
Baseline Corr 2nd AF pt:	39.4	AF Slope:	0.993217	AF Intercept:	-0.158425
Baseline Corr 3rd AF pt:	19.4	AF Correlation:	0.999978	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4918	81.6	79.6	79.8	0.998
Mid point	4959	40.8	39.8	39.8	1.001
Low point	4980	20.4	19.9	19.7	1.011
As left zero	5000	0.0	0.0	0.0	----
As left span	4918	81.6	79.6	80.0	0.996
SO2 Scrubber Check	4921	79.1	791.0	0.1	----
Date of last scrubber change:	7-Aug-25		Ave Corr Factor		1.003
Date of last converter efficiency test:					

Notes: Changed inlet filter after multipoint as founds. SO2 scrubber check after calibrator zero and passed.
No adjustment made.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

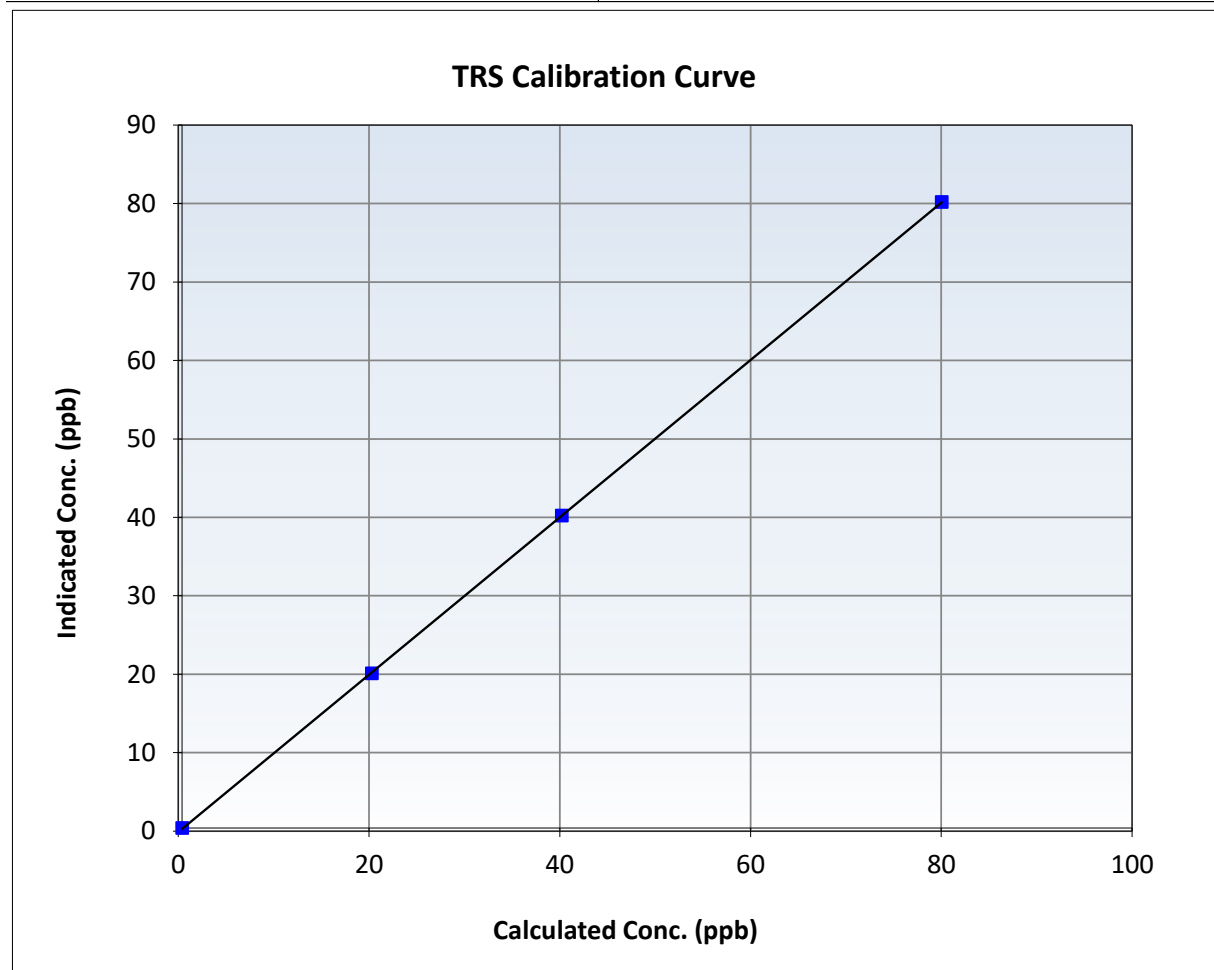
TRS Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 16, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:31	End Time (MST):	13:13
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1180540017

Calibration Data

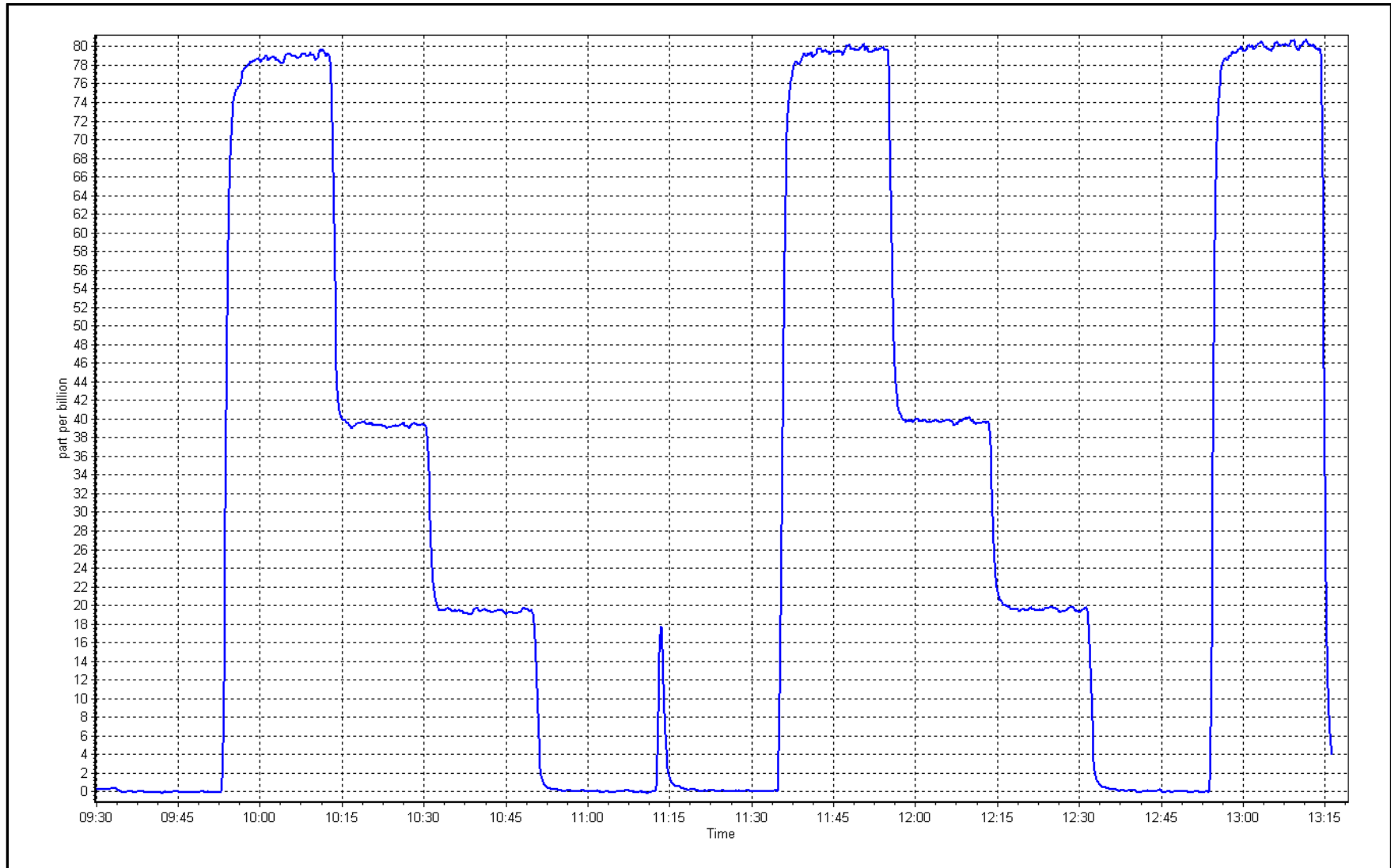
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999989		≥ 0.995
79.6	79.8	0.9981	Slope	1.002830		$0.90 - 1.10$
39.8	39.8	1.0006	Intercept	-0.118408		± 3
19.9	19.7	1.0106				



TRS Calibration Plot

Date: April 15, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: April 1, 2026
Start time (MST): 9:35
Reason: Routine

Station number: AMS 13
Last Cal Date: March 5, 2026
End time (MST): 13:34

Calibration Standards

Gas Cert Reference:	CC260812	Cal Gas Expiry Date:	Friday, December 29, 2028
CH ₄ Cal Gas Conc.	503.6 ppm	CH ₄ Equiv Conc.	1077.5 ppm
C ₃ H ₈ Cal Gas Conc.	208.7 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	
Removed CH ₄ Conc.	503.6 ppm	CH ₄ Equiv Conc.	1077.5 ppm
Removed C ₃ H ₈ Conc.	208.7 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	2657
Zero Air Gen model:	Teledyne API T701	Serial Number:	1118

Analyzer Information

Analyzer make: Thermo 55i
THC Range: 0 - 20 ppm

Analyzer serial #: 1181490018
NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	3.28E-04	3.21E-04	NMHC SP Ratio:	4.65E-05
CH ₄ Retention time:	16.80	16.60	NMHC Peak Area:	195067
Zero Chromatogram:	OFF	ON	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	17.05	16.42	1.038
As found Mid point	4961	39.5	8.51	8.10	1.052
As found Low point	4980	19.8	4.27	3.95	1.081
New cylinder response					
Baseline Corr AF:	16.42	Prev response	17.04	*% change	-3.8%
Baseline Corr 2nd AF:	8.09	AF Slope:	0.965954	AF Intercept:	-0.084366
Baseline Corr 3rd AF:	3.95	AF Correlation:	0.999874	* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	17.05	17.23	0.989
Mid point	4961	39.5	8.51	8.56	0.994
Low point	4980	19.8	4.27	4.20	1.016
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	17.05	17.09	0.998
Average Correction Factor					1.000

Notes: Baseline dips present. Changed inlet filter after MPAFs. Adjusted span only.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	9.08	8.92	1.018
As found Mid point	4961	39.5	4.53	4.41	1.028
As found Low point	4980	19.8	2.27	2.17	1.049
New cylinder response					
Baseline Corr AF:	8.92	Prev response	9.05	*% change	-1.4%
Baseline Corr 2nd AF:	4.41	AF Slope:	0.984566	AF Intercept:	-0.035381
Baseline Corr 3rd AF:	2.17	AF Correlation:	0.999928	* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	9.08	9.09	0.999
Mid point	4961	39.5	4.53	4.50	1.009
Low point	4980	19.8	2.27	2.21	1.027
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	9.08	9.05	1.003
Average Correction Factor					1.011

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	16	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	196813
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	7.97	7.50	1.062
As found Mid point	4961	39.5	3.98	3.68	1.081
As found Low point	4980	19.8	1.99	1.78	1.119
New cylinder response					
Baseline Corr AF:	7.50	Prev response	7.99	*% change	-6.5%
Baseline Corr 2nd AF:	3.68	AF Slope:	0.944729	AF Intercept:	-0.049186
Baseline Corr 3rd AF:	1.78	AF Correlation:	0.999789	* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	7.97	8.14	0.979
Mid point	4961	39.5	3.98	4.07	0.979
Low point	4980	19.8	1.99	1.99	1.005
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	7.97	8.04	0.992
Average Correction Factor					0.987

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	1.001883	1.012792
THC Cal Offset:	-0.038758	-0.054351
CH ₄ Cal Slope:	1.004185	1.024011
CH ₄ Cal Offset:	-0.009377	-0.020968
NMHC Cal Slope:	0.999939	1.002948
NMHC Cal Offset:	-0.030183	-0.033383

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

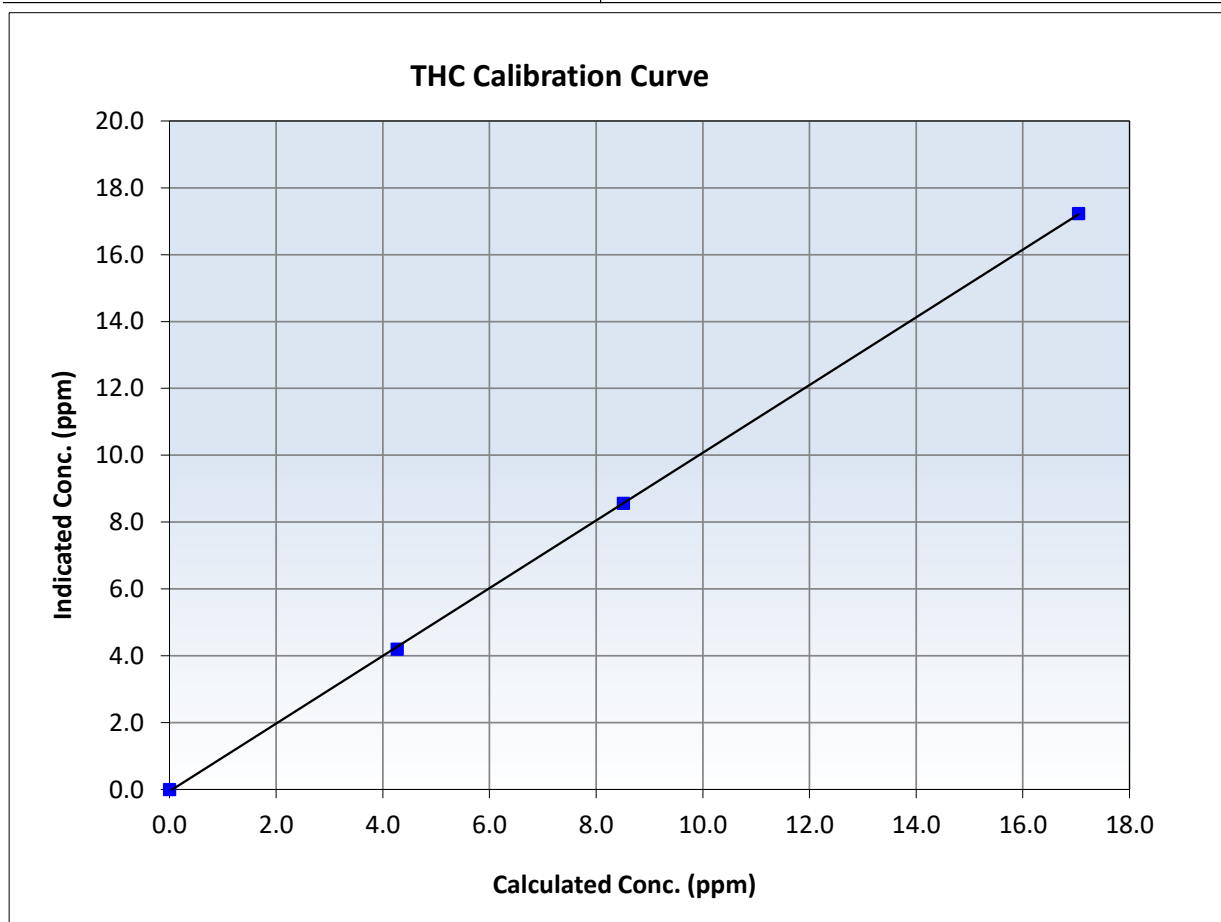
THC Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	March 5, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:35	End Time (MST):	13:34
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999950	≥ 0.995
17.05	17.23	0.9893	Slope	1.012792	$0.90 - 1.10$
8.51	8.56	0.9943	Intercept	-0.054351	± 0.5
4.27	4.20	1.0162			





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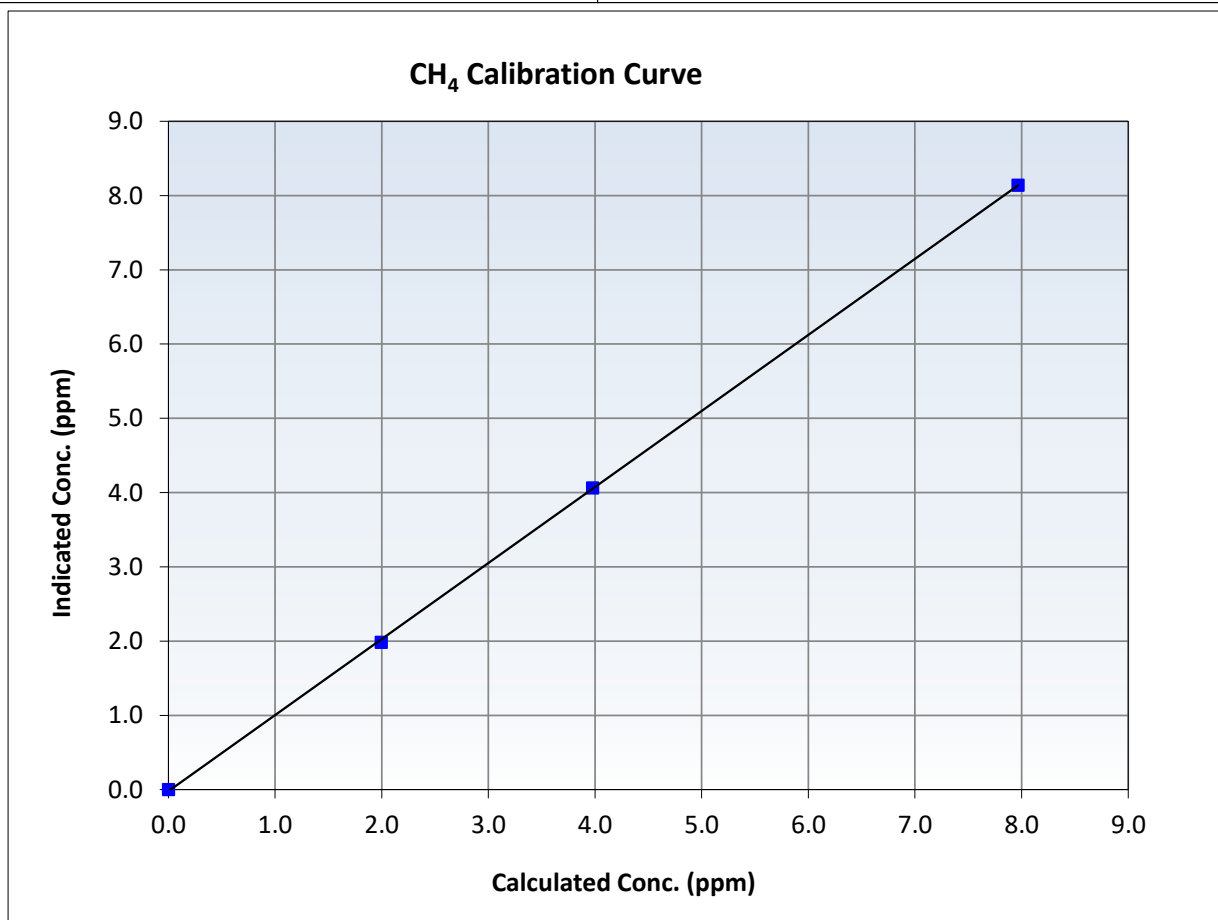
CH₄ Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	March 5, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:35	End Time (MST):	13:34
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999947		<i>≥0.995</i>
7.97	8.14	0.9787	Slope	1.024011		<i>0.90 - 1.10</i>
3.98	4.07	0.9786	Intercept	-0.020968		<i>+/-0.5</i>
1.99	1.99	1.0047				





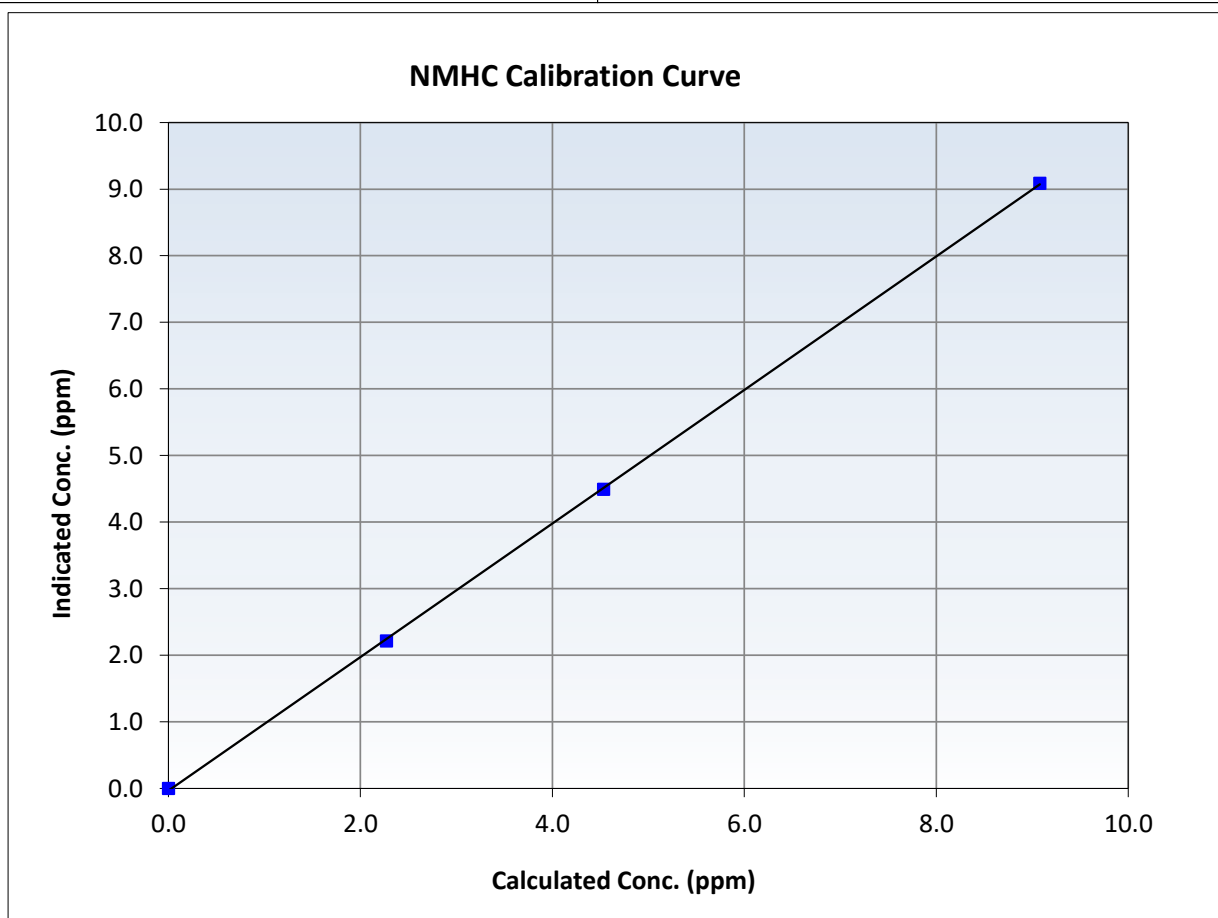
Wood Buffalo Environmental Association NMHC Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	March 5, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:35	End Time (MST):	13:34
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

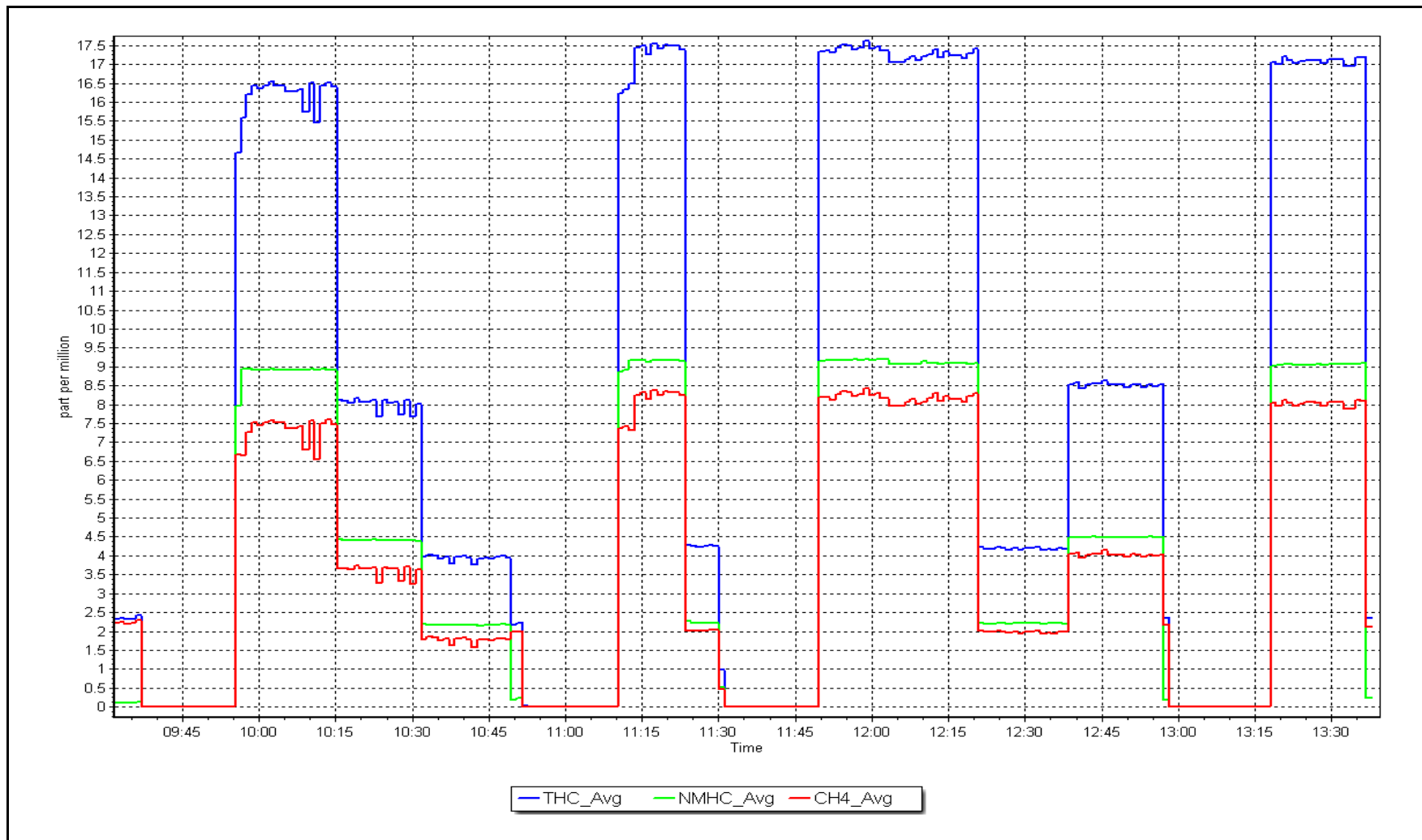
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999938	≥ 0.995
9.08	9.09	0.9988	Slope	1.002948	$0.90 - 1.10$
4.53	4.50	1.0086	Intercept	-0.033383	± 0.5
2.27	2.21	1.0266			



NMHC Calibration Plot

Date: April 1, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Fort McKay South
 Calibration Date: April 17, 2026
 Start time (MST): 9:49
 Reason: Maintenance

Station number: AMS 13
 Last Cal Date: April 1, 2026
 End time (MST): 14:27

Calibration Standards

Gas Cert Reference:	CC260812	Cal Gas Expiry Date:	Friday, December 29, 2028
CH ₄ Cal Gas Conc.	503.6 ppm	CH ₄ Equiv Conc.	1077.5 ppm
C ₃ H ₈ Cal Gas Conc.	208.7 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	
Removed CH ₄ Conc.	503.6 ppm	CH ₄ Equiv Conc.	1077.5 ppm
Removed C ₃ H ₈ Conc.	208.7 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	2657
Zero Air Gen model:	Teledyne API T701	Serial Number:	1118

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1181490018
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	3.21E-04	2.81E-04	NMHC SP Ratio:	4.60E-05
CH ₄ Retention time:	16.60	16.20	NMHC Peak Area:	197215
Zero Chromatogram:	OFF	ON	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	17.05	16.33	1.044
As found Mid point	4961	39.5	8.51	8.26	1.031
As found Low point	4980	19.8	4.27	4.10	1.040
New cylinder response					
Baseline Corr AF:	16.33	Prev response	17.21	*% change	-5.4%
Baseline Corr 2nd AF:	8.26	AF Slope:	0.958089	AF Intercept:	0.027276
Baseline Corr 3rd AF:	4.10	AF Correlation:	0.999947	* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	17.05	17.02	1.002
Mid point	4961	39.5	8.51	8.43	1.010
Low point	4980	19.8	4.27	4.16	1.026
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	17.05	17.03	1.001
Average Correction Factor					1.012

Notes: Baseline dips present. Changed inlet filter and actuator after MPAFs. Adjusted span only.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	9.08	9.02	1.007
As found Mid point	4961	39.5	4.53	4.46	1.017
As found Low point	4980	19.8	2.27	2.20	1.035
New cylinder response					
Baseline Corr AF:	9.02	Prev response	9.07	*% change	-0.6%
Baseline Corr 2nd AF:	4.46	AF Slope:	0.995155	AF Intercept:	-0.034184
Baseline Corr 3rd AF:	2.20	AF Correlation:	0.999934	* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	9.08	9.08	1.000
Mid point	4961	39.5	4.53	4.50	1.007
Low point	4980	19.8	2.27	2.21	1.030
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	9.08	9.12	0.996
Average Correction Factor					1.012

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	16	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	196813
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	7.97	7.31	1.090
As found Mid point	4961	39.5	3.98	3.80	1.047
As found Low point	4980	19.8	1.99	1.91	1.046
New cylinder response					
Baseline Corr AF:	7.31	Prev response	8.14	*% change	-11.4%
Baseline Corr 2nd AF:	3.80	AF Slope:	0.915862	AF Intercept:	0.061661
Baseline Corr 3rd AF:	1.91	AF Correlation:	0.999454	* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	7.97	7.93	1.005
Mid point	4961	39.5	3.98	3.93	1.012
Low point	4980	19.8	1.99	1.95	1.022
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	7.97	7.91	1.007
Average Correction Factor					1.013

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	1.012792	1.000074
THC Cal Offset:	-0.054351	-0.054766
CH ₄ Cal Slope:	1.024011	0.996541
CH ₄ Cal Offset:	-0.020968	-0.019988
NMHC Cal Slope:	1.002948	1.002166
NMHC Cal Offset:	-0.033383	-0.032777

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

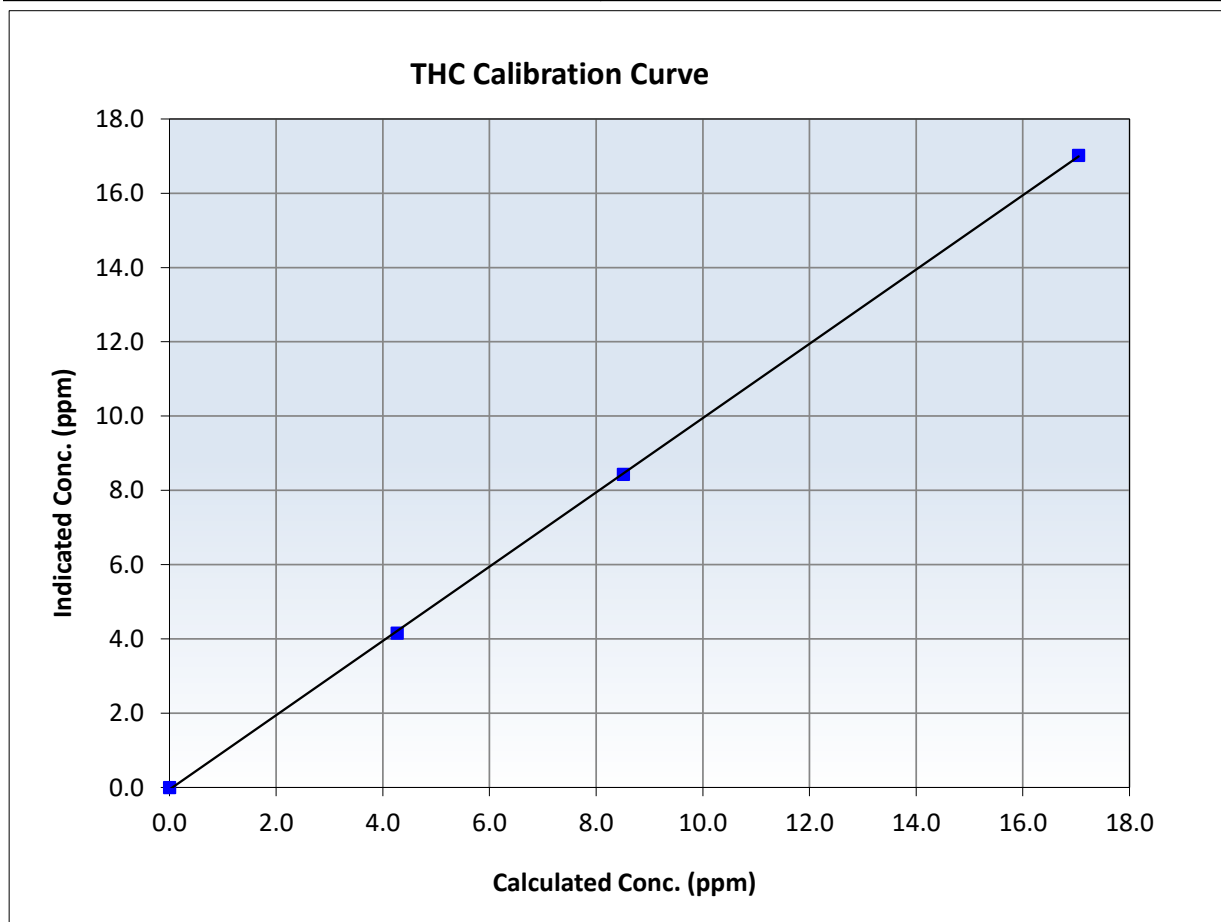
THC Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	April 1, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:49	End Time (MST):	14:27
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999953	<i>≥0.995</i>
17.05	17.02	1.0015	Slope	1.000074	<i>0.90 - 1.10</i>
8.51	8.43	1.0097	Intercept	-0.054766	<i>+/-0.5</i>
4.27	4.16	1.0263			





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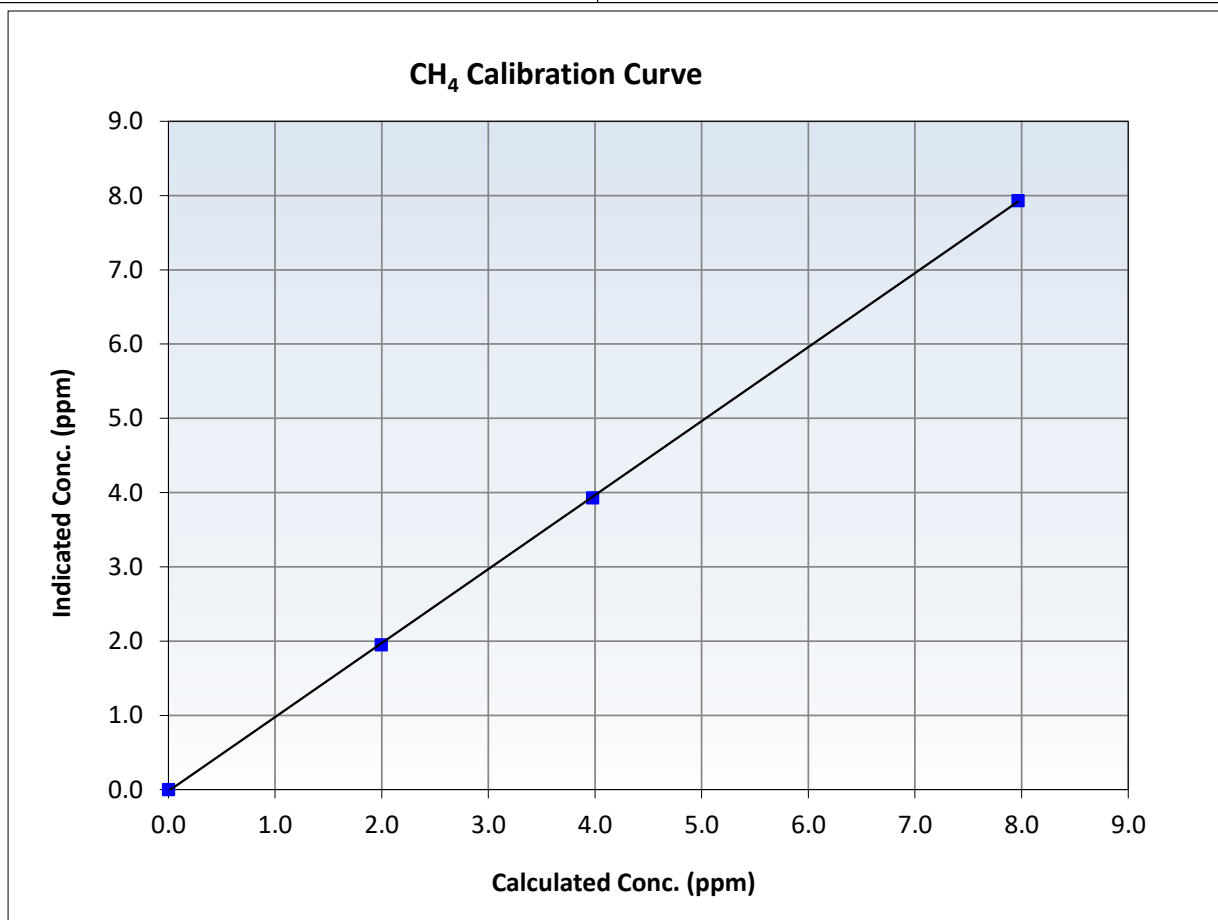
CH₄ Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	April 1, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:49	End Time (MST):	14:27
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999970	<i>≥0.995</i>
7.97	7.93	1.0045	Slope	0.996541	<i>0.90 - 1.10</i>
3.98	3.93	1.0125	Intercept	-0.019988	<i>+/-0.5</i>
1.99	1.95	1.0222			





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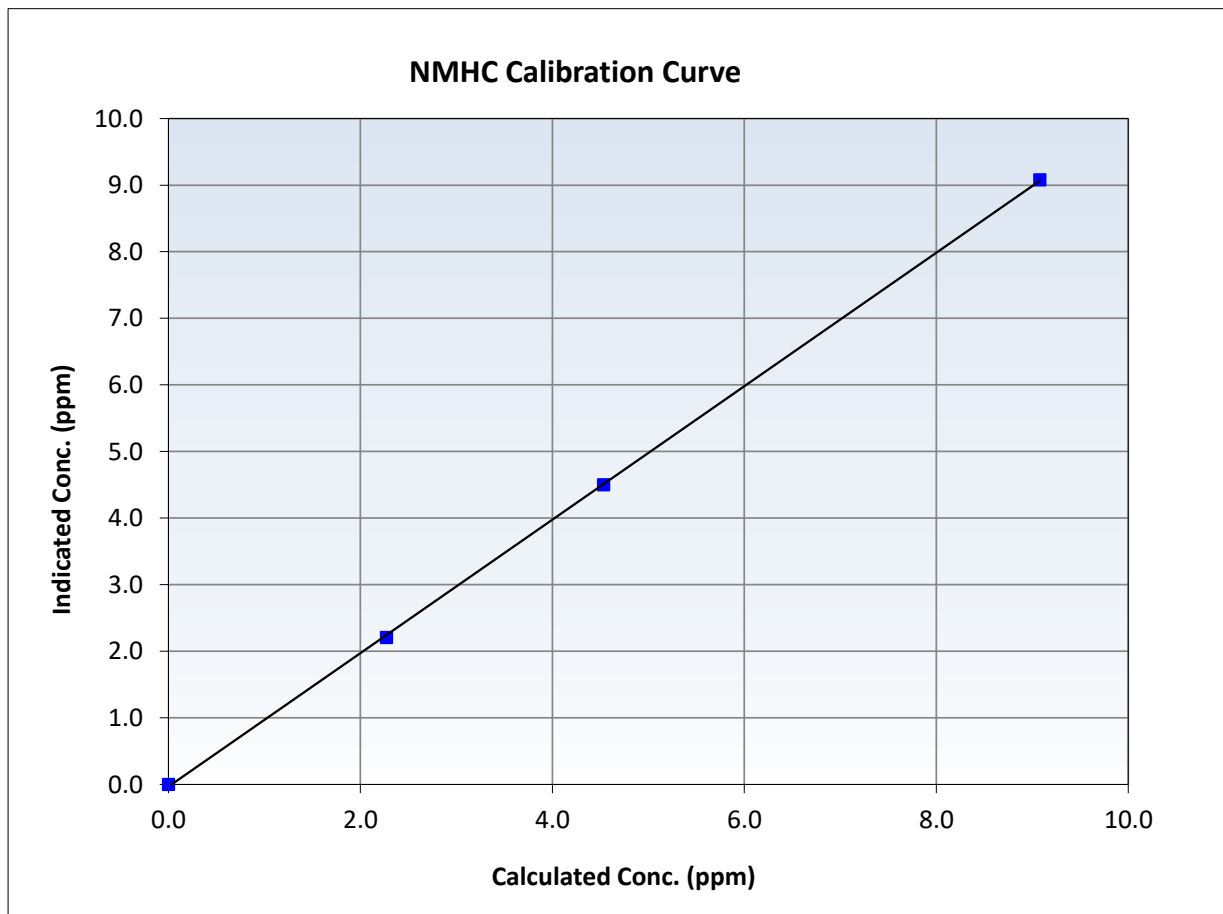
NMHC Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	April 1, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:49	End Time (MST):	14:27
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

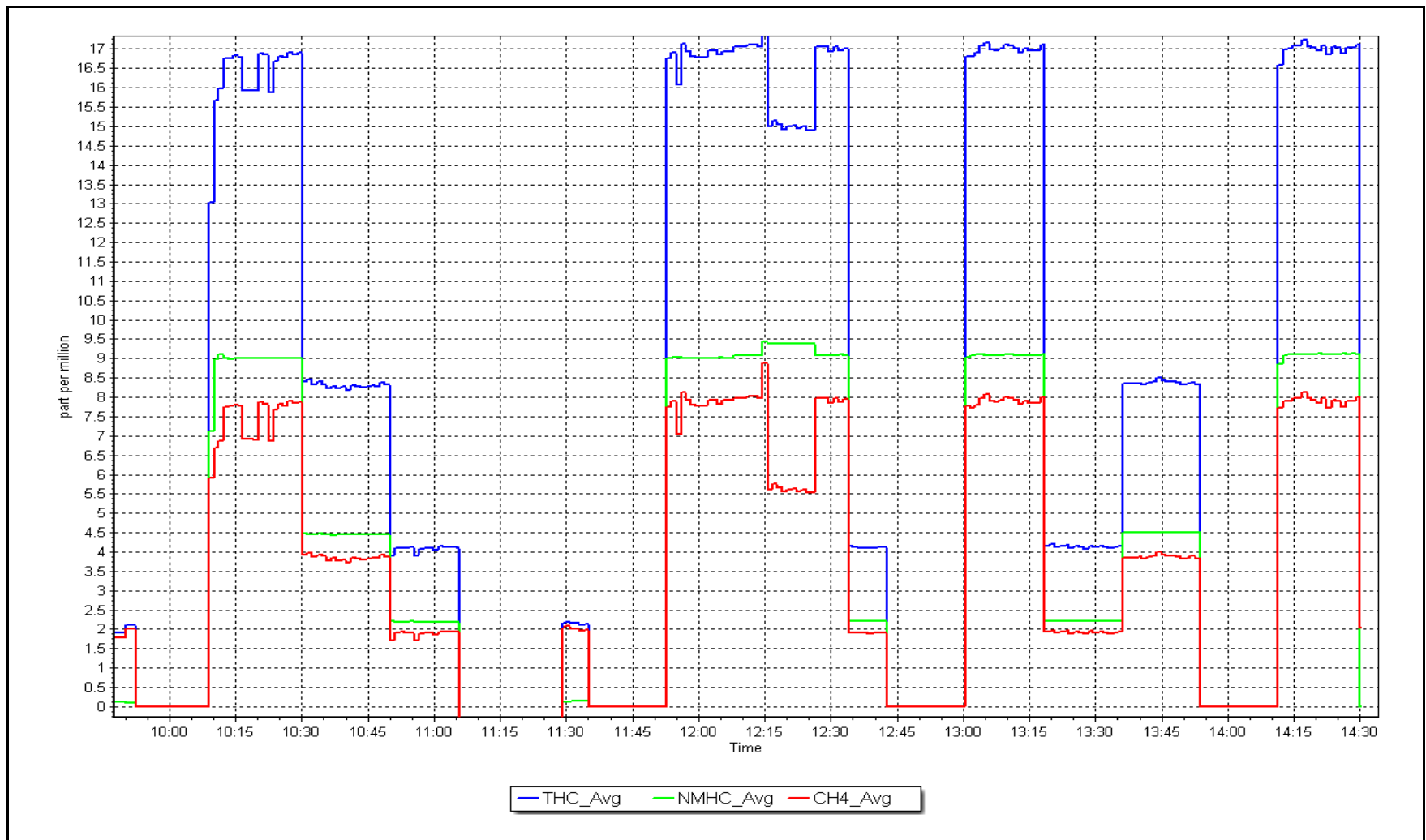
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999939	<i>≥0.995</i>
9.08	9.08	0.9999	Slope	1.002166	<i>0.90 - 1.10</i>
4.53	4.50	1.0070	Intercept	-0.032777	<i>+/-0.5</i>
2.27	2.21	1.0298			



NMHC Calibration Plot

Date: April 17, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Fort McKay South
Station number: AMS 13
Calibration Date: April 7, 2026
Last Cal Date: March 12, 2026
Start time (MST): 10:46
End time (MST): 13:53
Reason: Removal

Calibration Standards

NO Gas Cylinder #: T2UP1RP
NO_x Cal Gas Conc: 48.25 ppm
Removed Cylinder #: NA
Removed Gas NO_x Conc: 48.25 ppm
NO_x gas Diff:
Calibrator Model: Teledyne API T750
ZAG make/model: Teledyne API 751H
Cal Gas Expiry Date: November 17, 2026
NO Cal Gas Conc: 47.88 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 47.88 ppm
NO gas Diff:
Serial Number: 281
Serial Number: 321

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.1	0.2	-0.3	----	----
AF High point	4916	83.5	805.9	799.7	6.2	805.2	800.2	4.9	1.0007	0.9996
AF Mid point	4958	41.8	403.4	400.3	3.1	404.3	400.7	3.6	0.9975	0.9995
AF Low point	4979	20.9	201.7	200.1	1.5	204.1	201.1	3.0	0.9877	0.9962

New cyl resp

Previous Response	NO _x = 802.6 ppb	NO = 798.5 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = 0.3%
Baseline Corr 1st pt	NO _x = 805.3 ppb	NO = 800.0 ppb	<u>As Found Statistics</u>		*Percent Change	NO = 0.2%
Baseline Corr 2nd pt	NO _x = 404.4 ppb	NO = 400.5 ppb	As found	NO _x r ² : 0.999987	Nx SI: 0.998368	Nx Int: 1.218
Baseline Corr 3rd pt	NO _x = 204.2 ppb	NO = 200.9 ppb	As found	NO r ² : 0.999999	NO SI: 1.000122	NO Int: 0.480
			As found	NO ₂ r ² : 0.999868	NO ₂ SI: 0.986656	NO ₂ Int: 1.508

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero	----	----	0.0	-0.3	----	----
As found high GPT point	793.0	389.8	409.4	404.0	1.0133	98.7%
As found mid GPT point	793.0	592.6	206.6	207.7	0.9946	100.5%
As found low GPT point	793.0	690.4	108.8	109.7	0.9916	100.8%



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42iQ
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 12300522720

Instrument Settings

	<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.131	
NOX coeff or slope:	0.991	
NO2 coeff or slope:	1.000	

	<u>Start</u>	<u>Finish</u>
NO bkgnd or offset:	3.0	
NOX bkgnd or offset:	3.4	
Reaction cell Press:	163.2	

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999035	
NO _x Cal Offset:	-2.452223	
NO Cal Slope:	1.002480	
NO Cal Offset:	-3.130787	
NO ₂ Cal Slope:	0.969059	
NO ₂ Cal Offset:	-0.021927	

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>

Cal zero
High point
Mid point
Low point
As left zero
As left span

Average Correction Factor

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>

Cal zero
High GPT point
Mid GPT point
Low GPT point

Average Correction Factor

Notes:

Removal calibrations done to do further troubleshooting at the shop.

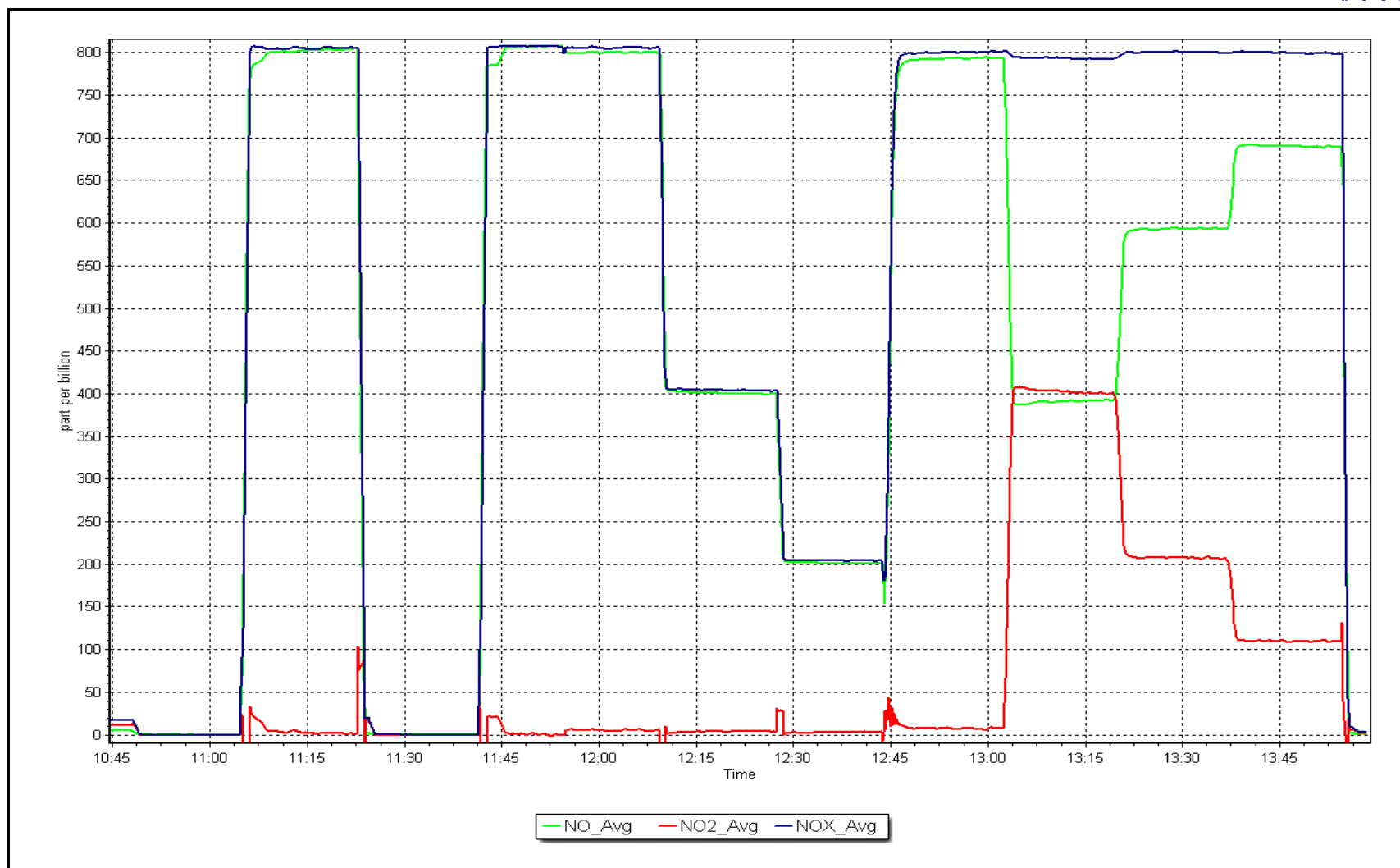
Calibration Performed By:

Jan Castro

NO_x Calibration Plot

Date: April 7, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Fort McKay South
Station number: AMS 13
Calibration Date: April 8, 2026
Last Cal Date:
Start time (MST): 10:24
End time (MST): 14:18
Reason: Install

Calibration Standards

NO Gas Cylinder #: T2UP1RP
NOX Cal Gas Conc: 48.25 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 48.25 ppm
NO gas Diff:
Calibrator Model: Teledyne API T700P
ZAG make/model: Teledyne API T701
Cal Gas Expiry Date: November 17, 2026
NO Cal Gas Conc: 47.88 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 47.88 ppm
NO gas Diff:
Serial Number: 2657
Serial Number: 1118

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero										
AF High point										
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = NA	ppb	NO = NA	ppb	* = > +/-5% change initiates investigation		*Percent Change		NO _x =	NA
Baseline Corr 1st pt	NO _x = NA	ppb	NO = NA	ppb	<u>As Found Statistics</u>		*Percent Change		NO =	NA
Baseline Corr 2nd pt	NO _x = NA	ppb	NO = NA	ppb	As found	NO _x r ² :	Nx SI:		Nx Int:	
Baseline Corr 3rd pt	NO _x = NA	ppb	NO = NA	ppb	As found	NO r ² :	NO SI:		NO Int:	
					As found	NO ₂ r ² :	NO2 SI:		NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42iQ
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 12124313137

Calibration Statistics

Start

Finish

NO_x Cal Slope: 1.002299
NO_x Cal Offset: -2.153379
NO Cal Slope: 1.005068
NO Cal Offset: -3.211646
NO₂ Cal Slope: 0.997405
NO₂ Cal Offset: 1.187951

Instrument Settings

Start

Finish

Start

Finish

NO coeff or slope: 0.992
NOX coeff or slope: 0.997
NO2 coeff or slope: 1.000
NO bkgnd or offset: 0.8
NOX bkgnd or offset: 1.2
Reaction cell Press: 190.8

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	----	----
High point	4917	83.5	805.7	799.5	6.2	806.4	802.0	4.6	0.9991	0.9969
Mid point	4958	41.8	403.4	400.3	3.1	401.2	397.4	3.8	1.0054	1.0073
Low point	4979	20.9	201.7	200.1	1.5	197.9	194.8	3.1	1.0191	1.0274
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	0.2	-0.3	----	----
As left span	4917	83.5	805.7	403.5	402.2	815.0	403.5	411.5	0.9886	1.0000
Average Correction Factor									1.0079	1.0105

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	805.5	396.8	414.9	414.2	1.0016	99.8%
Mid GPT point	805.5	604.7	207.0	208.7	0.9918	100.8%
Low GPT point	805.5	706.4	105.3	107.2	0.9821	101.8%
Average Correction Factor					0.9918	100.8%

Notes: Install calibrations. Sample inlet filter was changed before calibrator zero. Adjusted zero and span.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

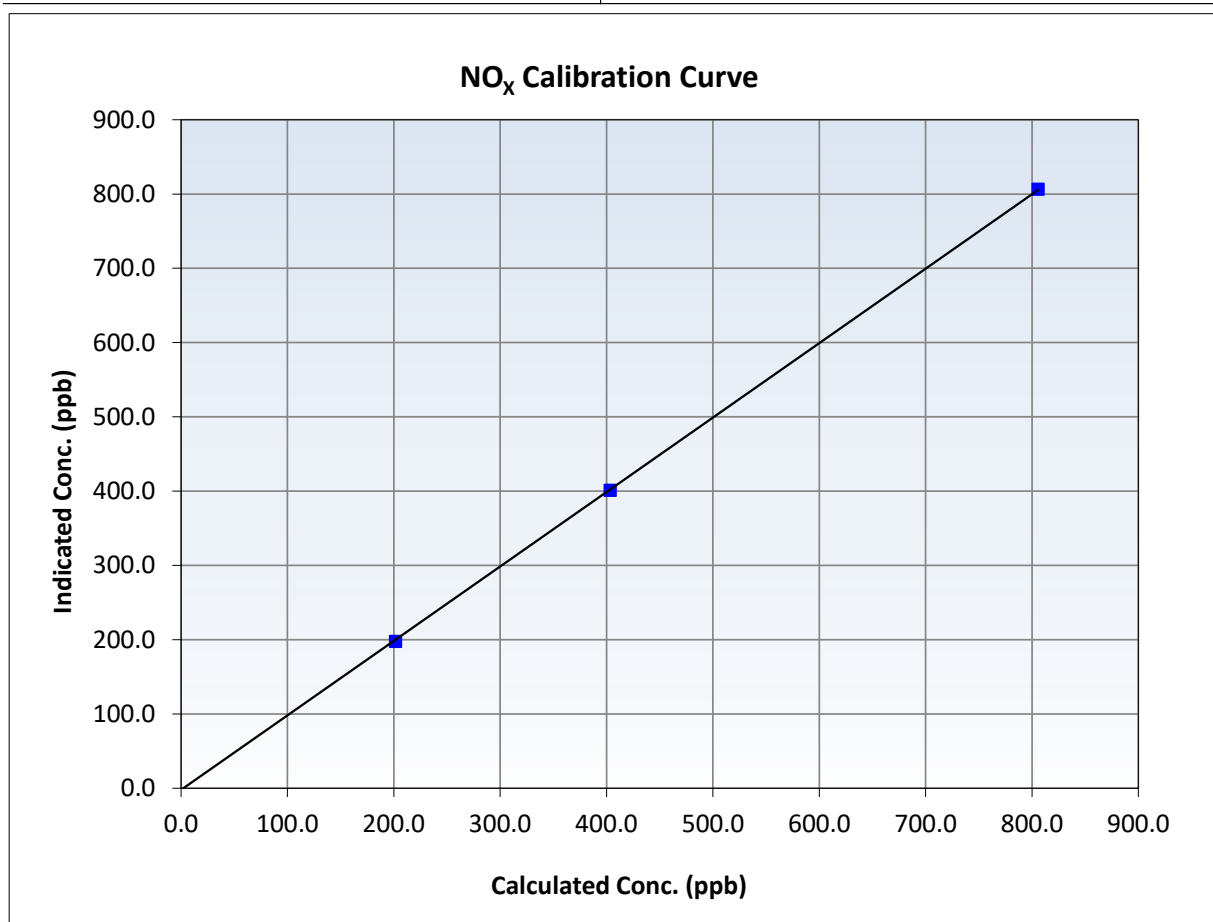
NO_x Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:24	End Time (MST):	14:18
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12124313137
			14:18

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999970	≥0.995
805.7	806.4	0.9991	Slope	1.002299	0.90 - 1.10
403.4	401.2	1.0054	Intercept	-2.153379	+/-20
201.7	197.9	1.0191			





Wood Buffalo Environmental Association

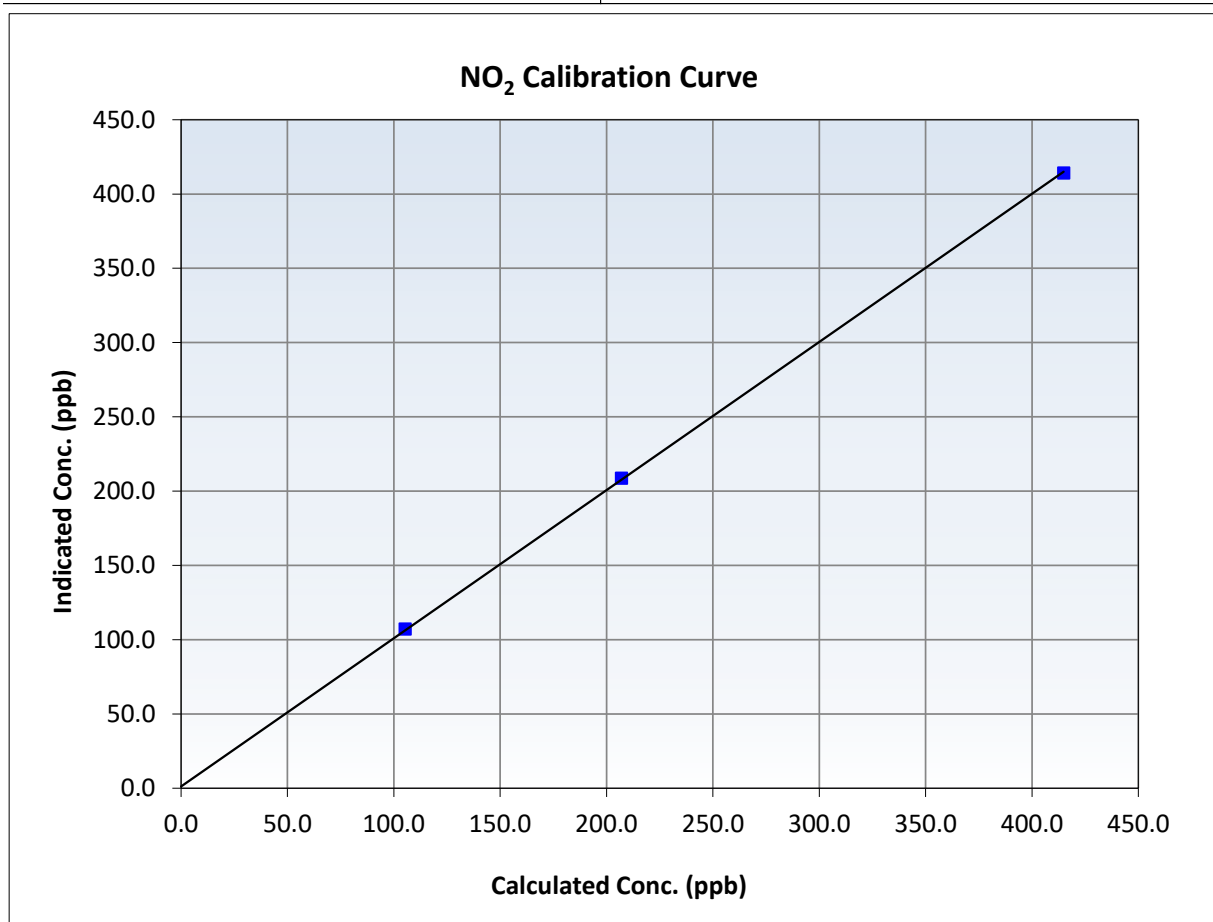
NO₂ Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:24	End Time (MST):	14:18
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12124313137
			14:18

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999952	≥0.995
414.9	414.2	1.0016	Slope	0.997405	0.90 - 1.10
207.0	208.7	0.9918	Intercept	1.187951	+/-20
105.3	107.2	0.9821			





Wood Buffalo Environmental Association

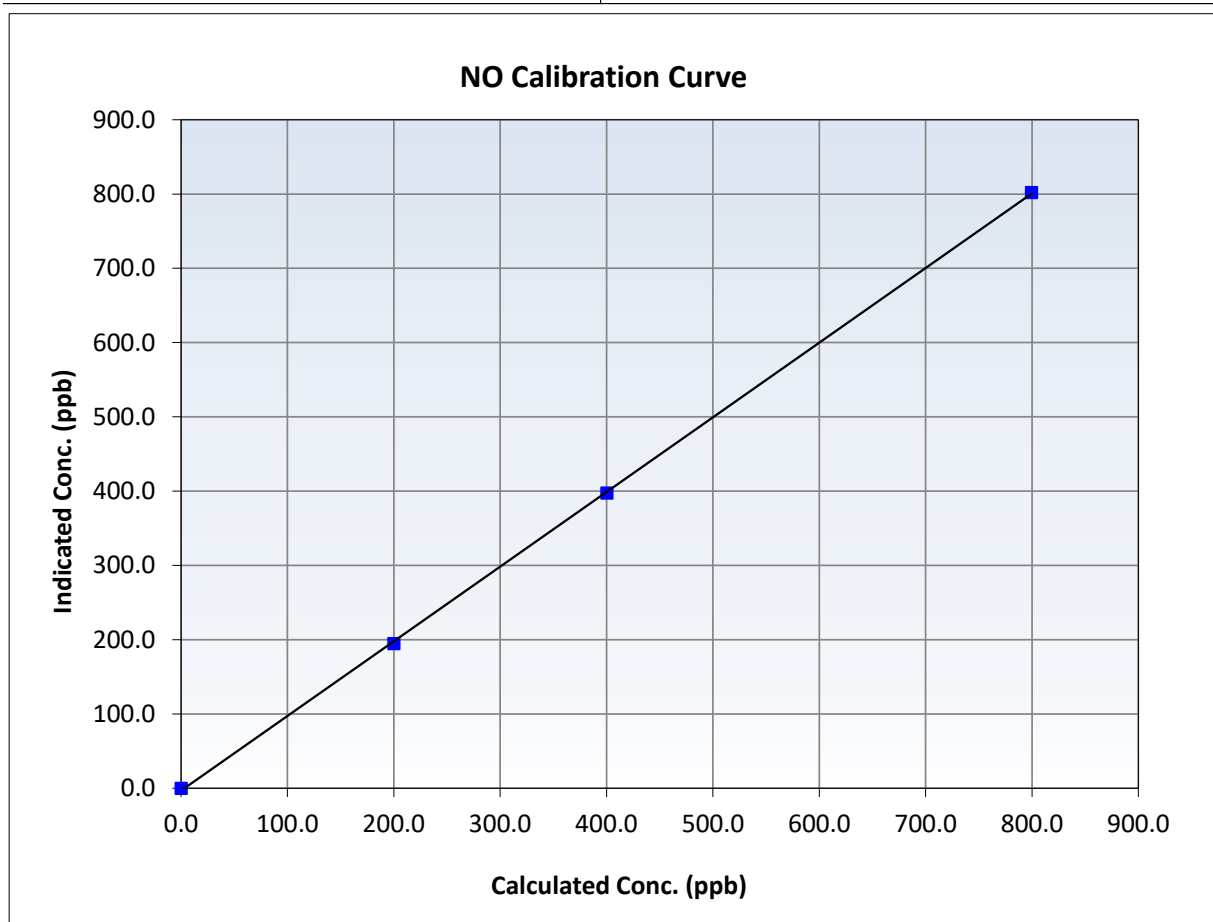
NO Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:24	End Time (MST):	14:18
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12124313137
			14:18

Calibration Data

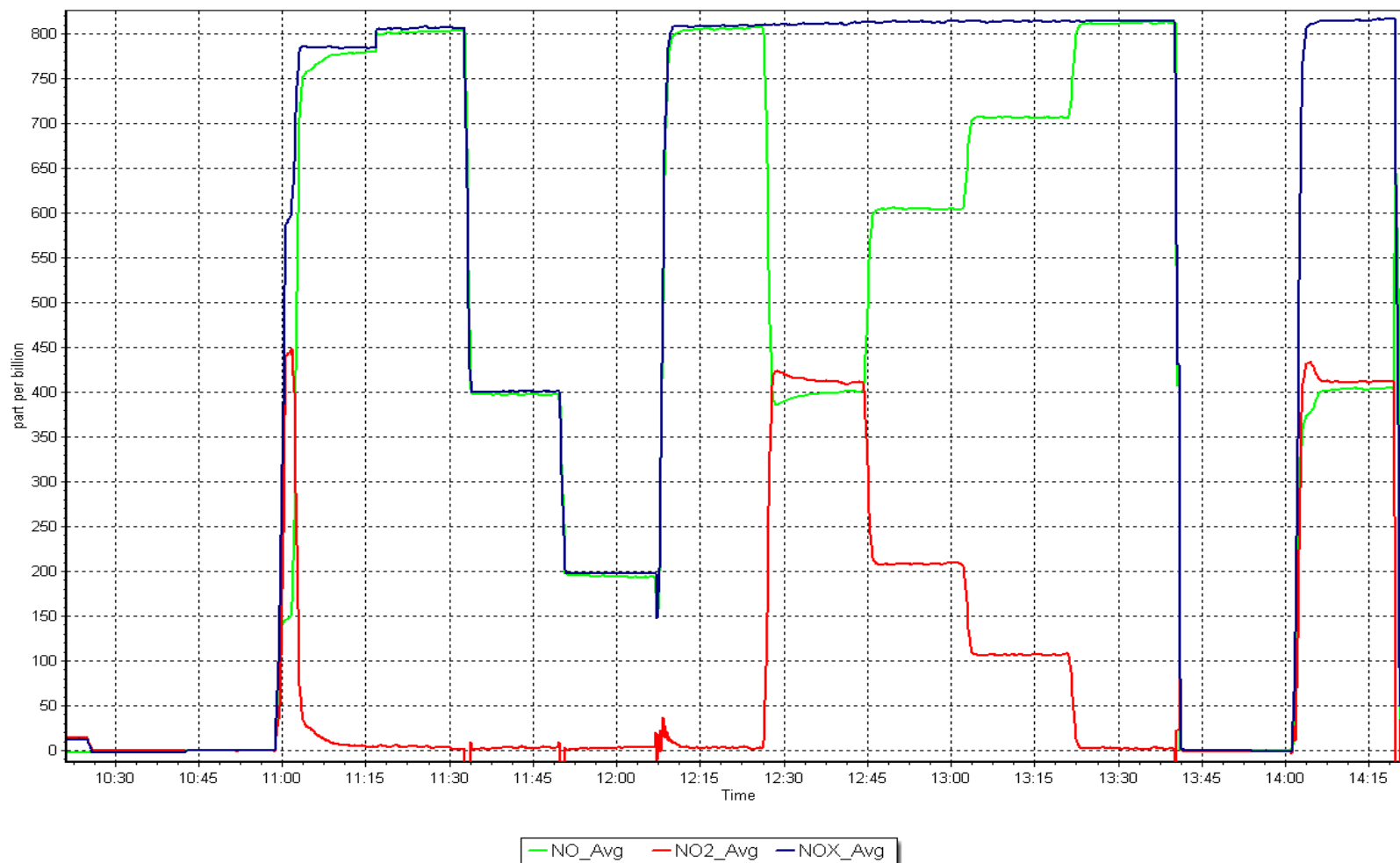
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.0	----	Correlation Coefficient	0.999927	≥ 0.995
799.5	802.0	0.9969	Slope	1.005068	$0.90 - 1.10$
400.3	397.4	1.0073	Intercept	-3.211646	± 20
200.1	194.8	1.0274			



NO_x Calibration Plot

Date: April 8, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: April 10, 2026
Start time (MST): 9:47
Reason: Removal

Station number: AMS 13
Last Cal Date: March 6, 2026
End time (MST): 11:22

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API 701

Serial Number: 2657
Serial Number: 1118

Analyzer Information

Analyzer make: Teledyne API T400
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 7413

Start
Calibration slope: 1.001229
Calibration intercept: 0.760000

Finish

Start
Backgd or Offset: -1.8
Coeff or Slope: 1.016

Finish

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted
					Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	800.0	0.0	-0.2	----
As found High point	5000	981.4	400.0	400.4	0.999
As found Mid point	5000	799.5	200.0	201.5	0.992
As found Low point	5000	682.5	100.0	102.0	0.978
Baseline Corr As found:	400.6	Previous response	401.3	*% change	-0.2%
Baseline Corr 2nd AF pt:	201.7	AF Slope:	1.000143	AF Intercept:	0.900000
Baseline Corr 3rd AF pt:	102.2	AF Correlation:	0.999965	* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					

Average Correction Factor

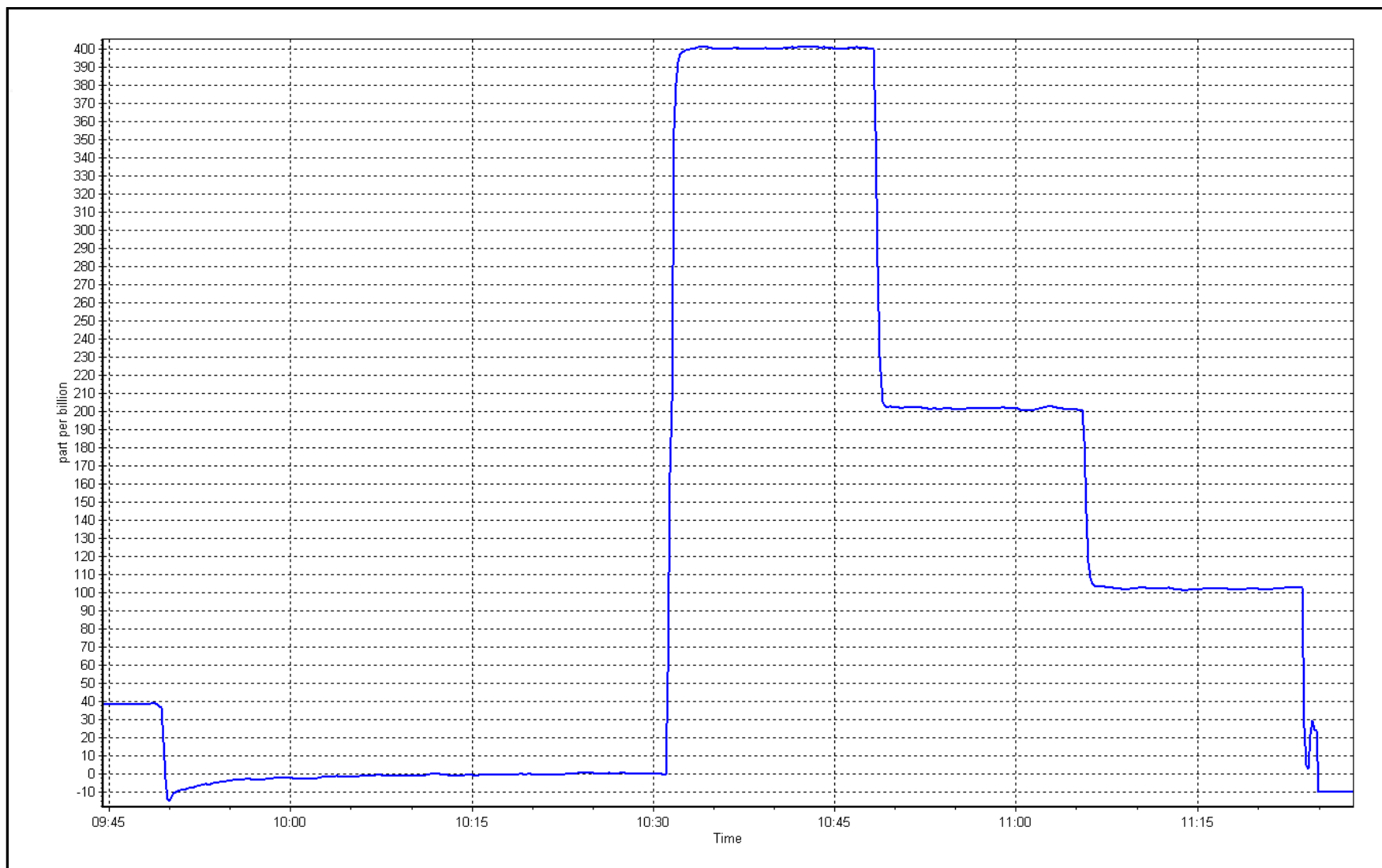
Notes: Removal calibration done to do further troubleshooting at the shop.

Calibration Performed By: Jan Castro

O₃ Calibration Plot

Date: April 10, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: April 10, 2026
Start time (MST): 11:55
Reason: Install
Station number: AMS 13
Last Cal Date:
End time (MST): 14:12

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API 701
Serial Number: 2657
Serial Number: 1118

Analyzer Information

Analyzer make: Thermo 49i
Analyzer Range: 0 - 500 ppb
Analyzer serial #: 1426262595

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:		0.998943	Backgd or Offset:		0.2
Calibration intercept:		0.660000	Coeff or Slope:		1.656

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
Baseline Corr As found:	NA	Previous response	NA	*% change	NA
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	800.0	0.0	0.1	----
High point	5000	990.2	400.0	400.1	1.000
Mid point	5000	806.8	200.0	200.3	0.999
Low point	5000	691.4	100.0	101.4	0.986
As left zero	5000	800.0	0.0	0.1	----
As left span	5000	898.3	400.0	401.4	0.997
Average Correction Factor					0.995

Notes: Sample inlet filter was changed before calibrator zero. Adjusted zero and span.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

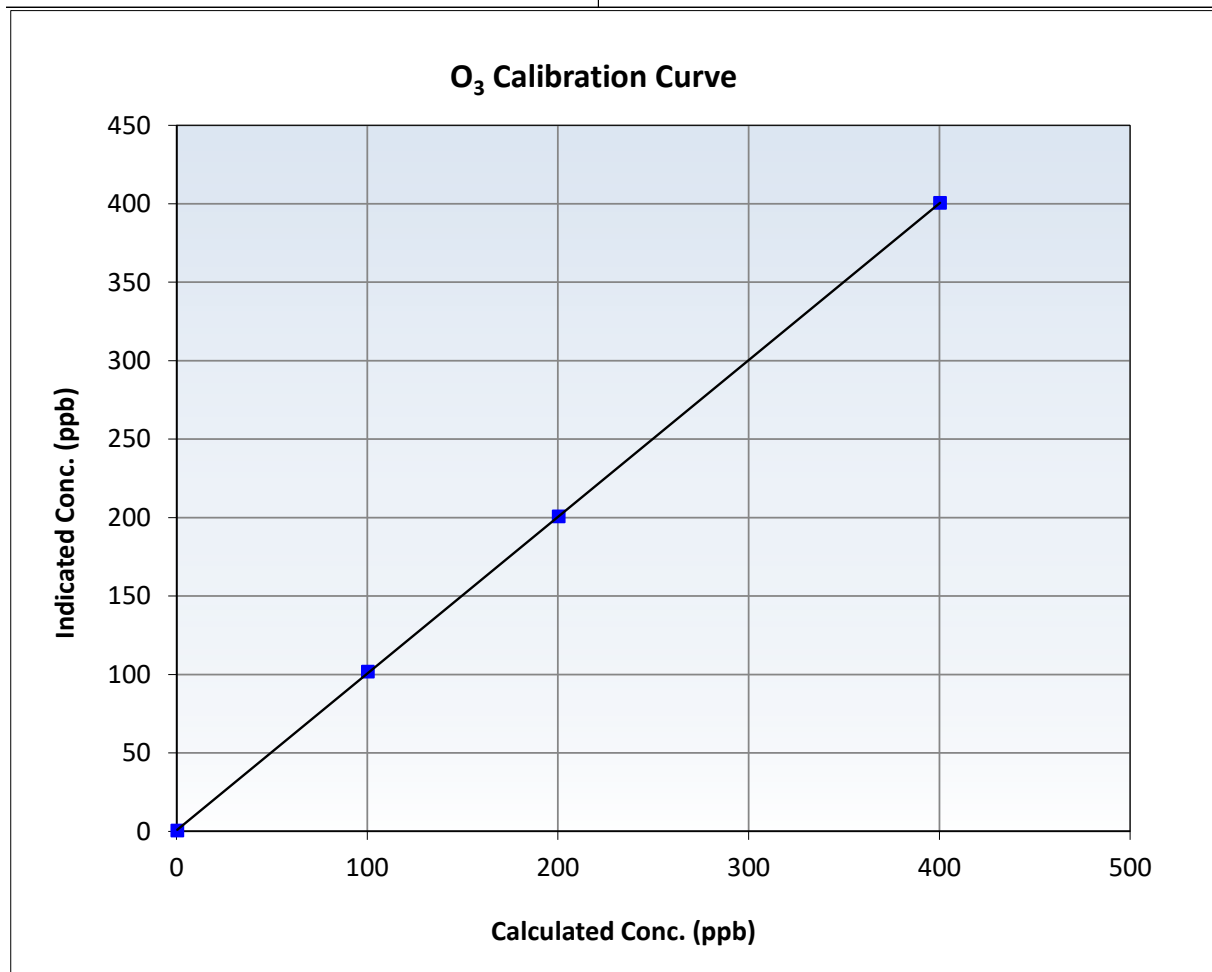
O₃ Calibration Summary

Station Information

Calibration Date:	April 10, 2026	Previous Calibration:	
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	11:55	End Time (MST):	14:12
Analyzer make:	Thermo 49i	Analyzer serial #:	1426262595

Calibration Data

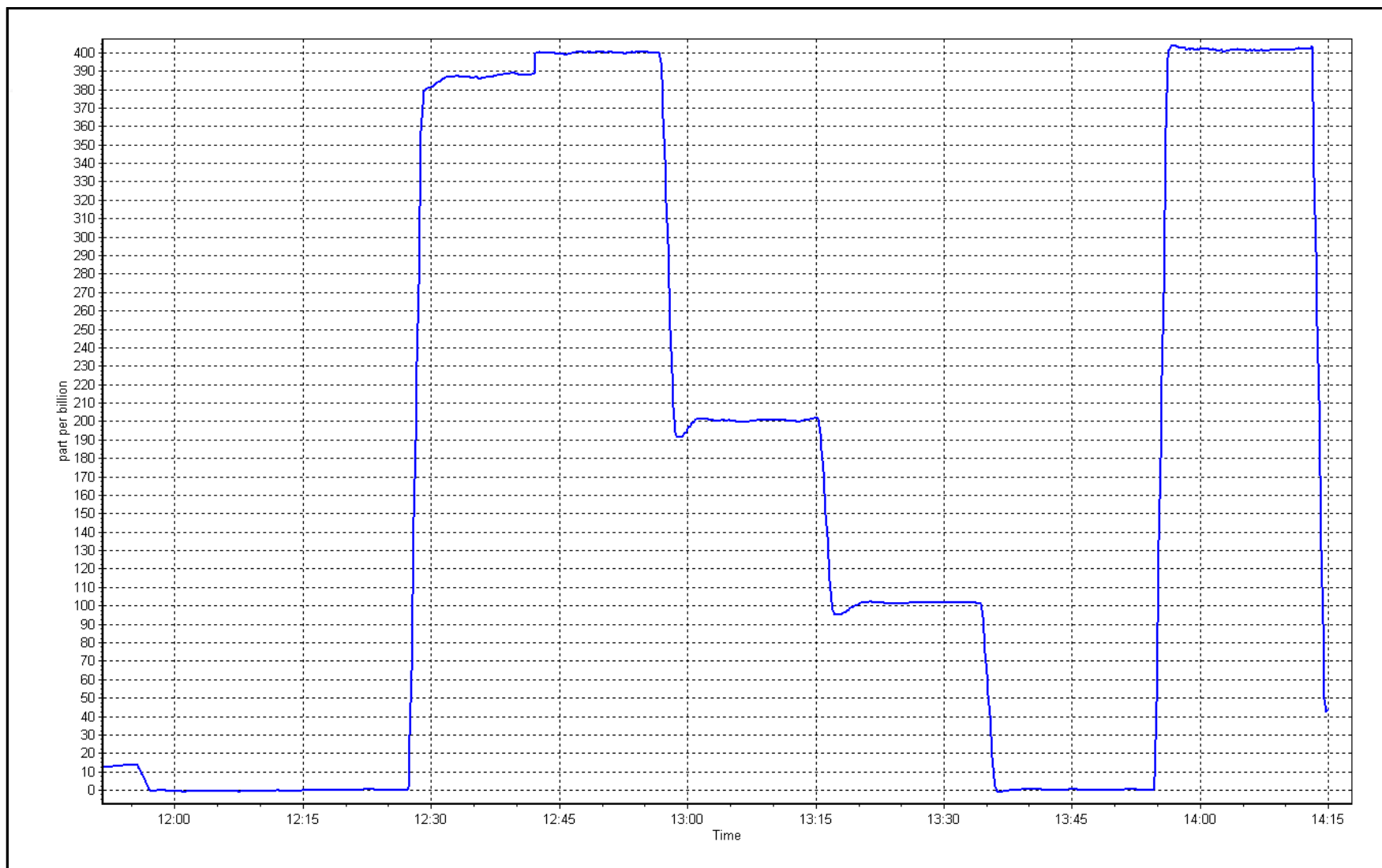
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999988	≥0.995
400.0	400.1	0.9998	Slope	0.998943	0.90 - 1.10
200.0	200.3	0.9985	Intercept	0.660000	+/- 5
100.0	101.4	0.9862			



O₃ Calibration Plot

Date: April 10, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Fort McKay South Station number: AMS 13
Calibration Date: April 1, 2026 Last Cal Date: March 5, 2026
Start time (MST): 11:50 End time (MST): 12:58

Analyzer Make: Teledyne API T640 S/N: 1335
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25 S/N: 388754
Temp/RH standard: Alicat FP-25 S/N: 388754

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	-0.80	-0.80	-0.80	☐	+/- 2 °C
P (mmHg)	735.30	738.20	735.30	☐	+/- 10 mmHg
Flow (LPM vol)	5.02	4.95	5.02	☐	+/- 0.25 LPM
PW% (pump)	44	----	44	☐	>80%
Zero Verification	PM w/o HEPA: 17.40		PM w/ HEPA: 4.60		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: June 10, 2024
Lot No.: 100128-050-042

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	6.20	11.10	11.10	☐	+/- 0.5

Date Optical Chamber Cleaned: April 1, 2026
Date Disposable Filter Changed: April 1, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0.00 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: June 2, 2025
Date RH/T Sensor Cleaned: June 2, 2025

Notes: Verified flow, pressure, temperature and pump power. No adjustment made. Leak check passed.

Calibration by: Jan Castro



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS14
ANZAC
APRIL 2026**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Anzac Station number: AMS 14
Calibration Date: April 14, 2026 Last Cal Date: March 5, 2026
Start time (MST): 6:33 End time (MST): 9:26
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.32 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC462030
Removed Cal Gas Conc: 50.32 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: API T700 Serial Number: 3812
Zero Air Gen Model: API T701H Serial Number: 357

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 0710321322
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.003090	1.005307	Backgd or Offset:	26.3	27.6
Calibration intercept:	-2.309365	-0.211002	Coeff or Slope:	1.112	1.141

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4920	79.5	800.2	780.2	1.025
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	780.4	Previous response	800.3	*% change	-2.6%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4920	79.5	800.2	804.3	0.995
Mid point	4960	39.8	400.6	402.6	0.995
Low point	4980	19.9	200.3	200.5	0.999
As left zero	5000	0.0	0.0	-0.1	----
As left span	4920	79.5	800.2	809.1	0.989
Average Correction Factor:					0.996

Notes: No Maintenance done. Span adjusted.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

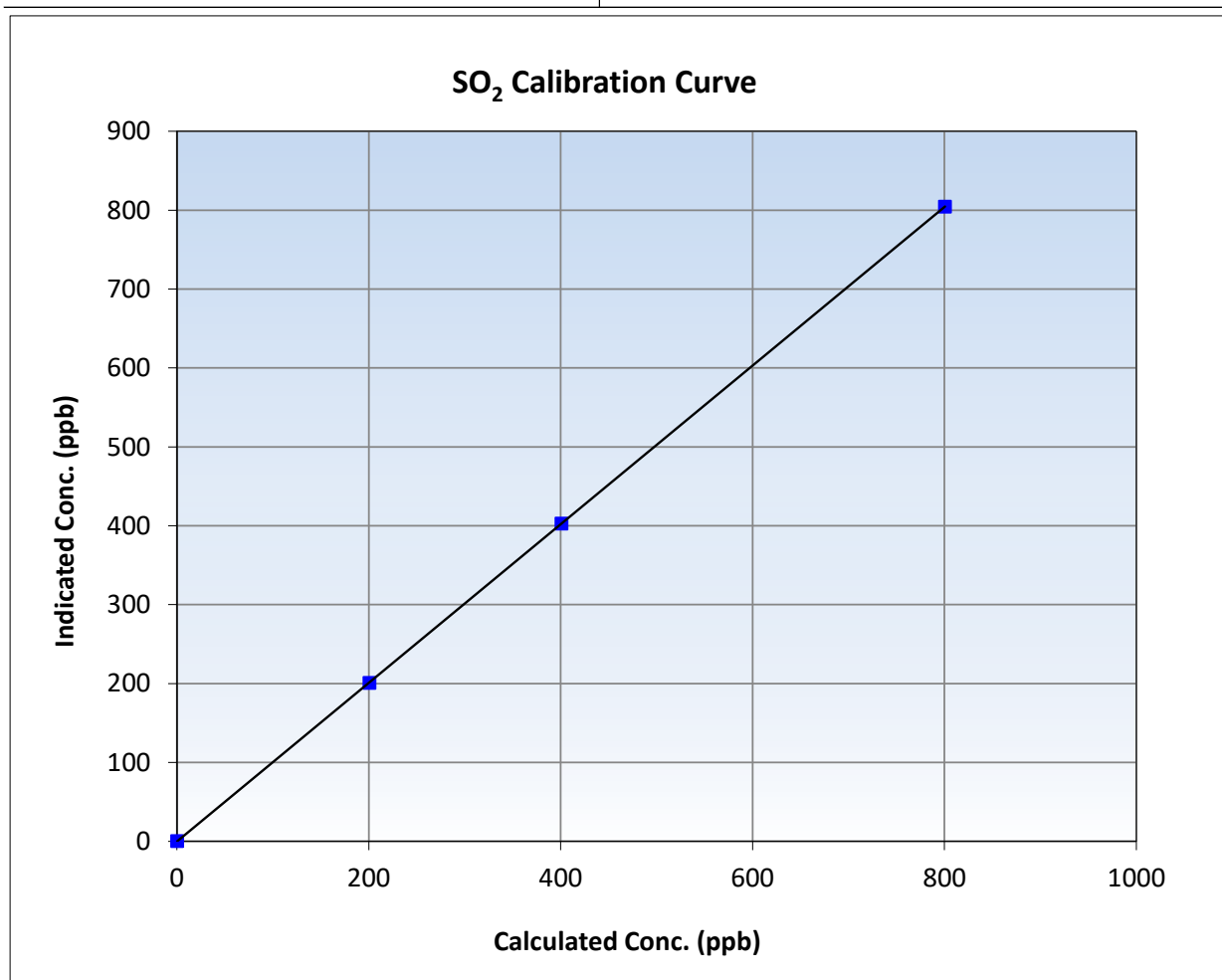
SO₂ Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 5, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:33	End Time (MST):	9:26
Analyzer make:	Thermo 43i	Analyzer serial #:	0710321322

Calibration Data

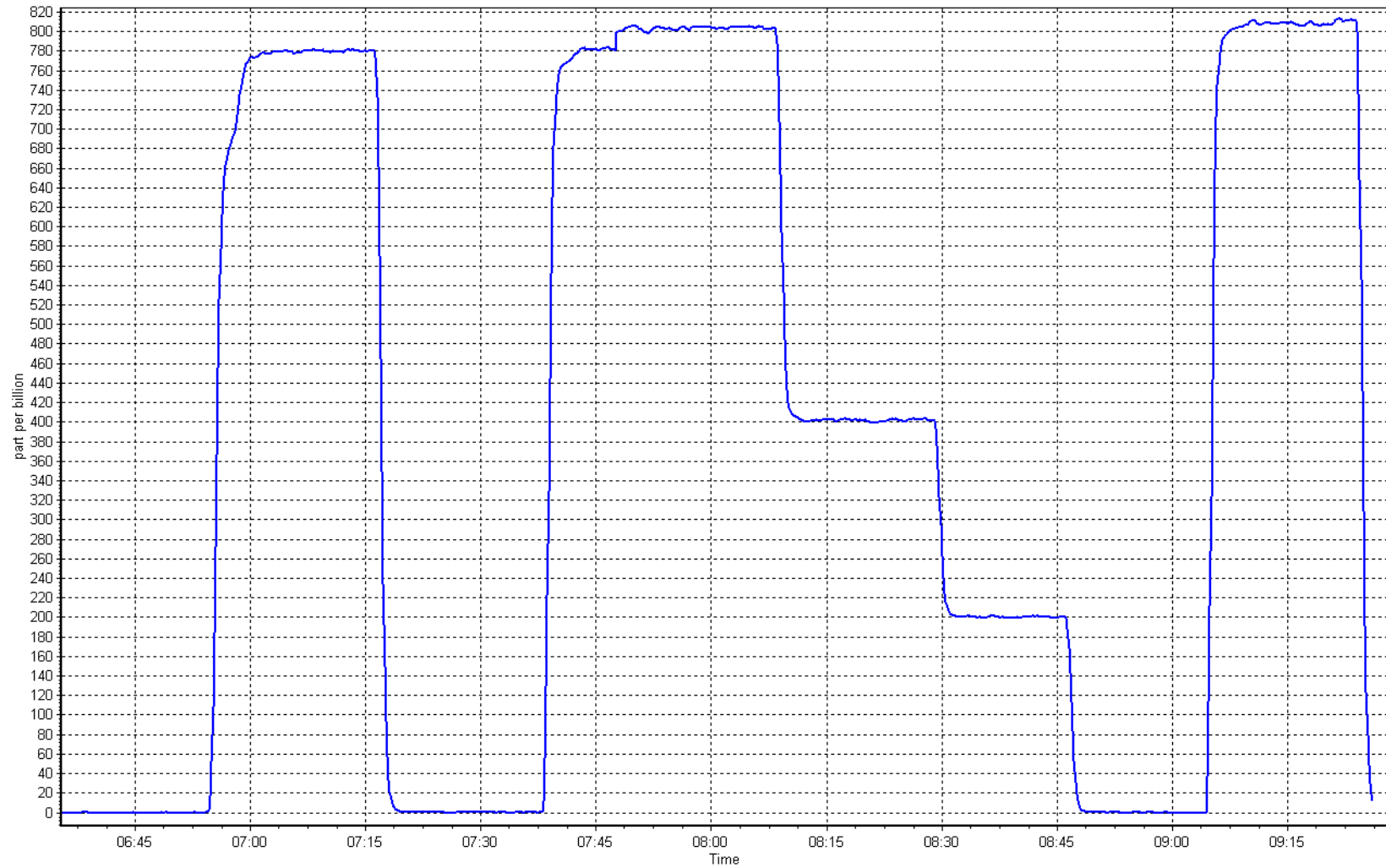
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999998	≥0.995
800.2	804.3	0.9949	Slope	1.005307	0.90 - 1.10
400.6	402.6	0.9949	Intercept	-0.211002	+/-30
200.3	200.5	0.9989			



SO2 Calibration Plot

Date: April 14, 2026

Location: Anzac





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Anzac
Calibration Date: April 21, 2026
Start time (MST): 11:15
Reason: Cylinder Change

Station number: AMS 14
Last Cal Date: March 12, 2026
End time (MST): 11:40

Calibration Standards

Cal Gas Concentration: 5.05 ppm
Cal Gas Cylinder #: DT0021903
Removed Cal Gas Conc: 5.01 ppm
Removed Gas Cyl #: VSL5604426
Calibrator Make/Model: API T700
ZAG Make/Model: API 701H

Cal Gas Exp Date: September 22, 2028
Rem Gas Exp Date: April 15, 2022
Diff between cyl: -0.4%
Serial Number: 3812
Serial Number: 357

Analyzer Information

Analyzer make: Thermo 43i-TLE
Converter make: CD Nova CDN-101
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1218153582
Converter serial #: 461
Converter Temp: 800 degC

Start
Calibration slope: 1.010802
Calibration intercept: -0.000254

Finish
Backgd or Offset: 2.25
Coeff or Slope: 0.965

Start
2.25
0.965

Finish
2.25
0.965

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4920	79.8	80.0	81.7	0.978
As found Mid point					
As found Low point					
New cylinder response	4921	79.2	80.0	81.4	0.983
Baseline Corr As found:	81.8	Prev response:	80.83	*% change:	1.2%
Baseline Corr 2nd AF pt:	NA	AF Slope:	NA	AF Intercept:	NA
Baseline Corr 3rd AF pt:	NA	AF Correlation:	NA	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					
SO2 Scrubber Check					
Date of last scrubber change:	28-May-25			Ave Corr Factor	
Date of last converter efficiency test:	September 16, 2025			103.4% efficiency	

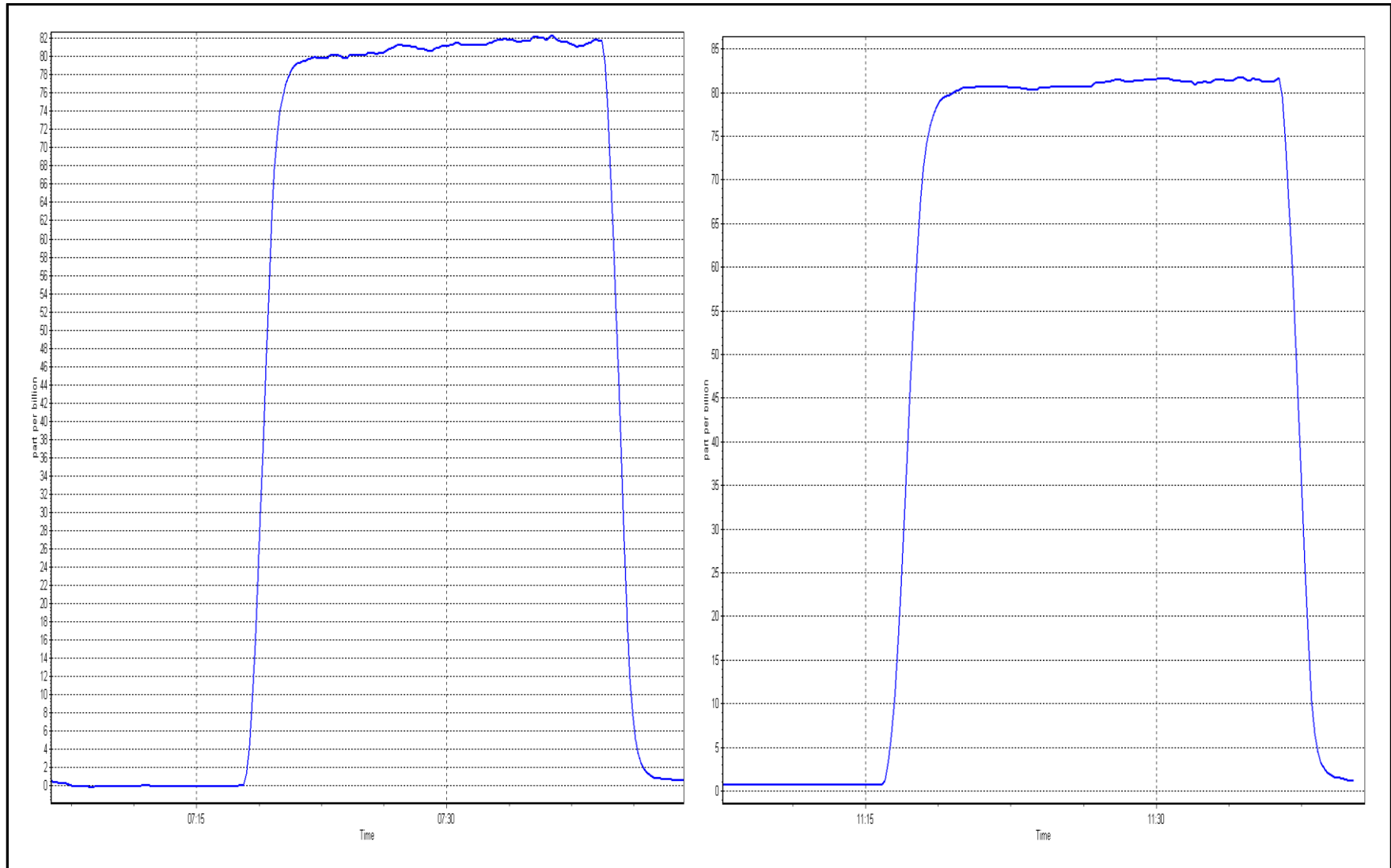
Notes: As found zero and span done on April 20,2026 between 7:07-7:45MST. New Cylinder was installed and span checked on April 21,2026

Calibration Performed By: Melissa Lemay

TRS Calibration Plot

Date: April 21, 2026

Location: Anzac





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Anzac
Calibration Date: April 22, 2026
Start time (MST): 6:20
Reason: Routine

Station number: AMS 14
Last Cal Date: March 12, 2026
End time (MST): 10:45

Calibration Standards

Cal Gas Concentration: 5.05 ppm
Cal Gas Cylinder #: DT0021903
Removed Cal Gas Conc: 5.05 ppm
Removed Gas Cyl #:
Calibrator Make/Model: API T700
ZAG Make/Model: API 701H
Cal Gas Exp Date: September 22, 2028
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 3812
Serial Number: 357

Analyzer Information

Analyzer make: Thermo 43i-TLE
Converter make: CD Nova CDN-101
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1218153582
Converter serial #: 461
Converter Temp: 800 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.010802	1.005283	Backgd or Offset:	2.25	2.20
Calibration intercept:	-0.000254	-0.081602	Coeff or Slope:	0.965	0.948

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4921	79.2	80.0	81.9	0.975
As found Mid point	4960	39.6	40.0	40.9	0.976
As found Low point	4980	19.8	20.0	20.2	0.985
New cylinder response					
Baseline Corr As found:	82.0	Prev response:	80.85	*% change:	1.4%
Baseline Corr 2nd AF pt:	41.0	AF Slope:	1.026001	AF Intercept:	-0.181641
Baseline Corr 3rd AF pt:	20.3	AF Correlation:	0.999993	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4921	79.2	80.0	80.4	0.995
Mid point	4960	39.6	40.0	40.0	1.000
Low point	4980	19.8	20.0	20.0	1.000
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.2	80.0	79.3	1.009
SO2 Scrubber Check	4921	79.5	794.9	0.0	----
Date of last scrubber change:	28-May-25		Ave Corr Factor		0.998
Date of last converter efficiency test:	September 16, 2025		103.4% efficiency		

Notes: Sox scrubber checked after the calibrator zero. Span adjusted.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

TRS Calibration Summary

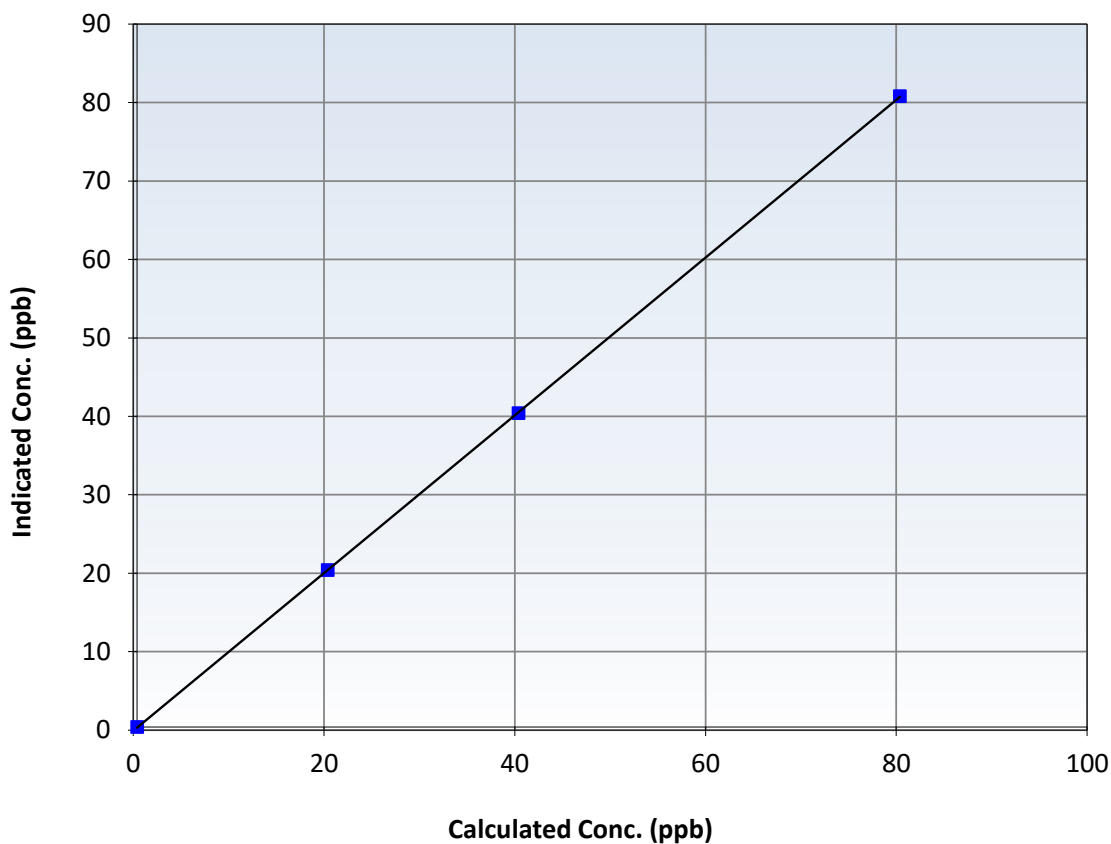
Station Information

Calibration Date:	April 22, 2026	Previous Calibration:	March 12, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:20	End Time (MST):	10:45
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1218153582

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999992		≥ 0.995
80.0	80.4	0.9949	Slope	1.005283		$0.90 - 1.10$
40.0	40.0	1.0000	Intercept	-0.081602		± 3
20.0	20.0	0.9999				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Anzac
 Calibration Date: April 14, 2026
 Start time (MST): 6:33
 Reason: Routine

Station number: AMS 14
 Last Cal Date: March 4, 2026
 End time (MST): 9:25

Calibration Standards

Gas Cert Reference:	CC462030	Cal Gas Expiry Date:	October 9, 2032
CH ₄ Cal Gas Conc.	505.3 ppm	CH ₄ Equiv Conc.	1068.8 ppm
C ₃ H ₈ Cal Gas Conc.	204.9 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH ₄ Conc.	505.3 ppm	CH ₄ Equiv Conc.	1068.8 ppm
Removed C ₃ H ₈ Conc.	204.9 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	API T700	Serial Number:	3812
Zero Air Gen model:	API 701H	Serial Number:	357

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1331259521
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	3.68E-04	3.77E-04	NMHC SP Ratio:	5.91E-05
CH ₄ Retention time:	16.6	16.6	NMHC Peak Area:	151680
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.5	17.00	16.53	1.028
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.53	Prev response	16.91	*% change	-2.3%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.5	17.00	16.95	1.003
Mid point	4960	39.8	8.51	8.40	1.013
Low point	4980	19.9	4.25	4.17	1.019
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	17.00	16.97	1.002
Average Correction Factor					1.012

Notes:

No Maintenance done. Span adjusted.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	79.5	8.96	8.67	1.033
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.67	Prev response	8.92	*% change	-2.8%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	79.5	8.96	8.93	1.003
Mid point	4960	39.8	4.49	4.44	1.010
Low point	4980	19.9	2.24	2.21	1.014
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	8.96	8.94	1.002
Average Correction Factor					1.009

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	79.5	8.04	7.86	1.023
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.86	Prev response	7.99	*% change	-1.7%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	79.5	8.04	8.02	1.002
Mid point	4960	39.8	4.02	3.95	1.018
Low point	4980	19.9	2.01	1.96	1.026
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	8.04	8.03	1.001
Average Correction Factor					1.015

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.999231	0.997889
THC Cal Offset:	-0.074982	-0.044999
CH ₄ Cal Slope:	0.999911	0.998705
CH ₄ Cal Offset:	-0.045077	-0.030086
NMHC Cal Slope:	0.998620	0.997399
NMHC Cal Offset:	-0.029904	-0.015113

Calibration Performed By: Melissa Lemay



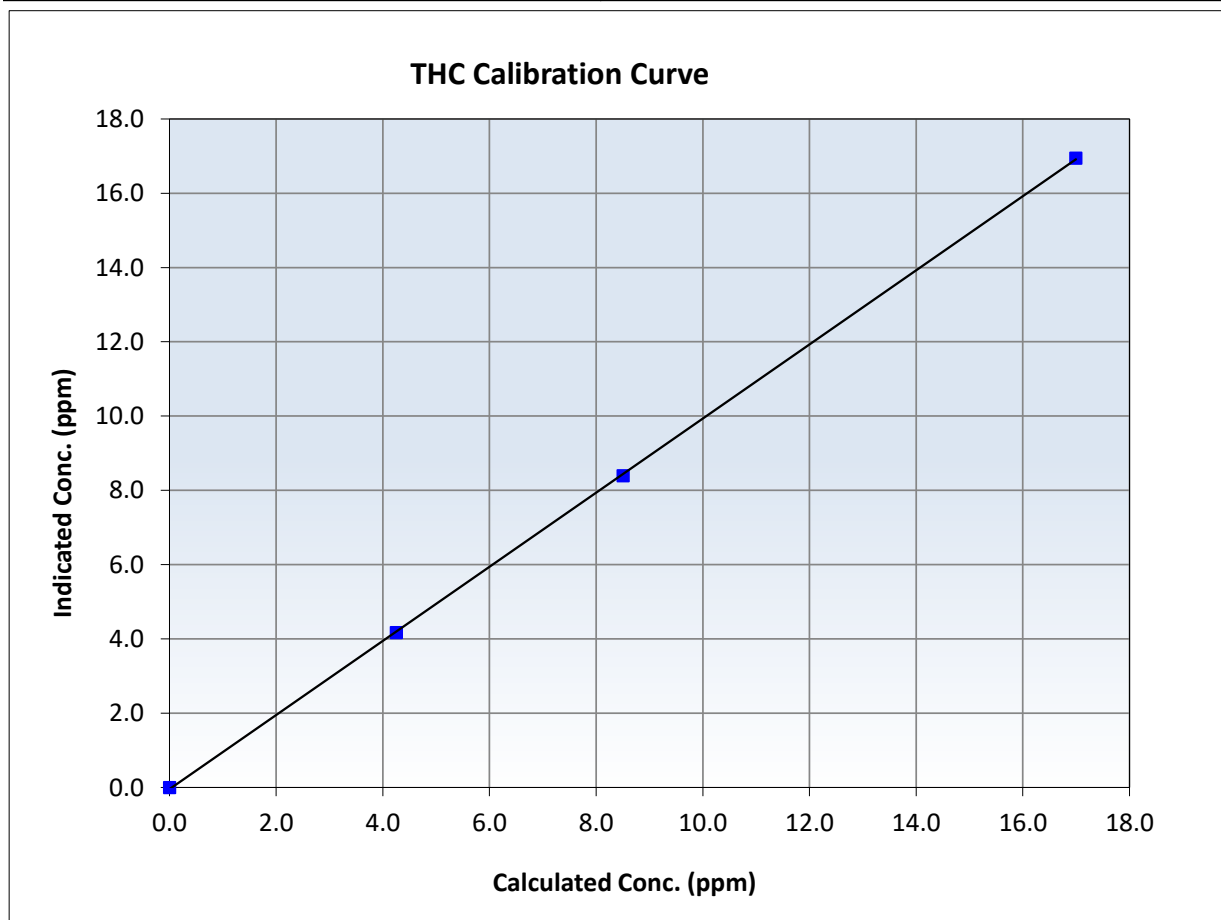
Wood Buffalo Environmental Association THC Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 4, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:33	End Time (MST):	9:25
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999960	<i>≥0.995</i>
17.00	16.95	1.0029	Slope	0.997889	<i>0.90 - 1.10</i>
8.51	8.40	1.0134	Intercept	-0.044999	<i>+/-0.5</i>
4.25	4.17	1.0194			





Wood Buffalo Environmental Association

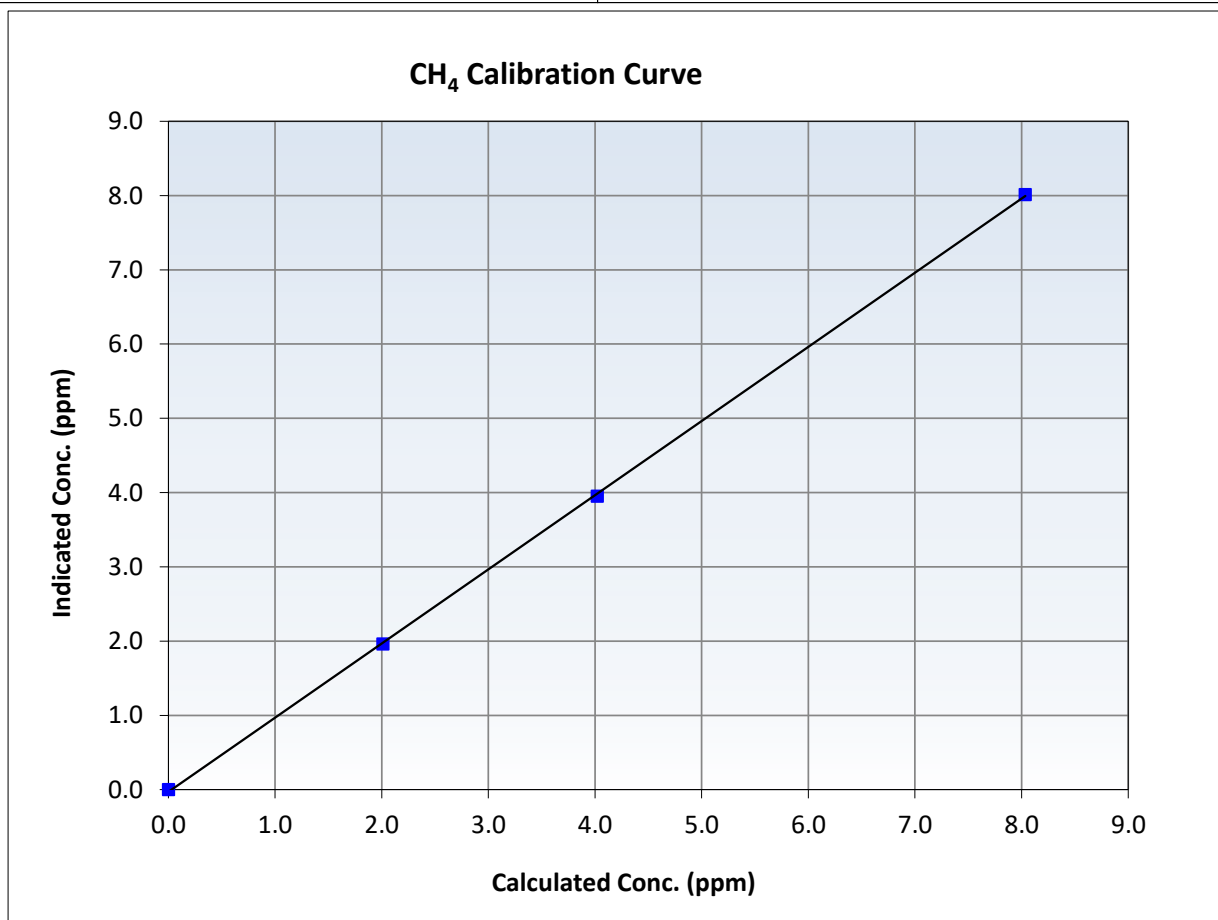
CH₄ Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 4, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:33	End Time (MST):	9:25
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999920	<i>≥0.995</i>
8.04	8.02	1.0024	Slope	0.998705	<i>0.90 - 1.10</i>
4.02	3.95	1.0175	Intercept	-0.030086	<i>+/-0.5</i>
2.01	1.96	1.0256			





Wood Buffalo Environmental Association

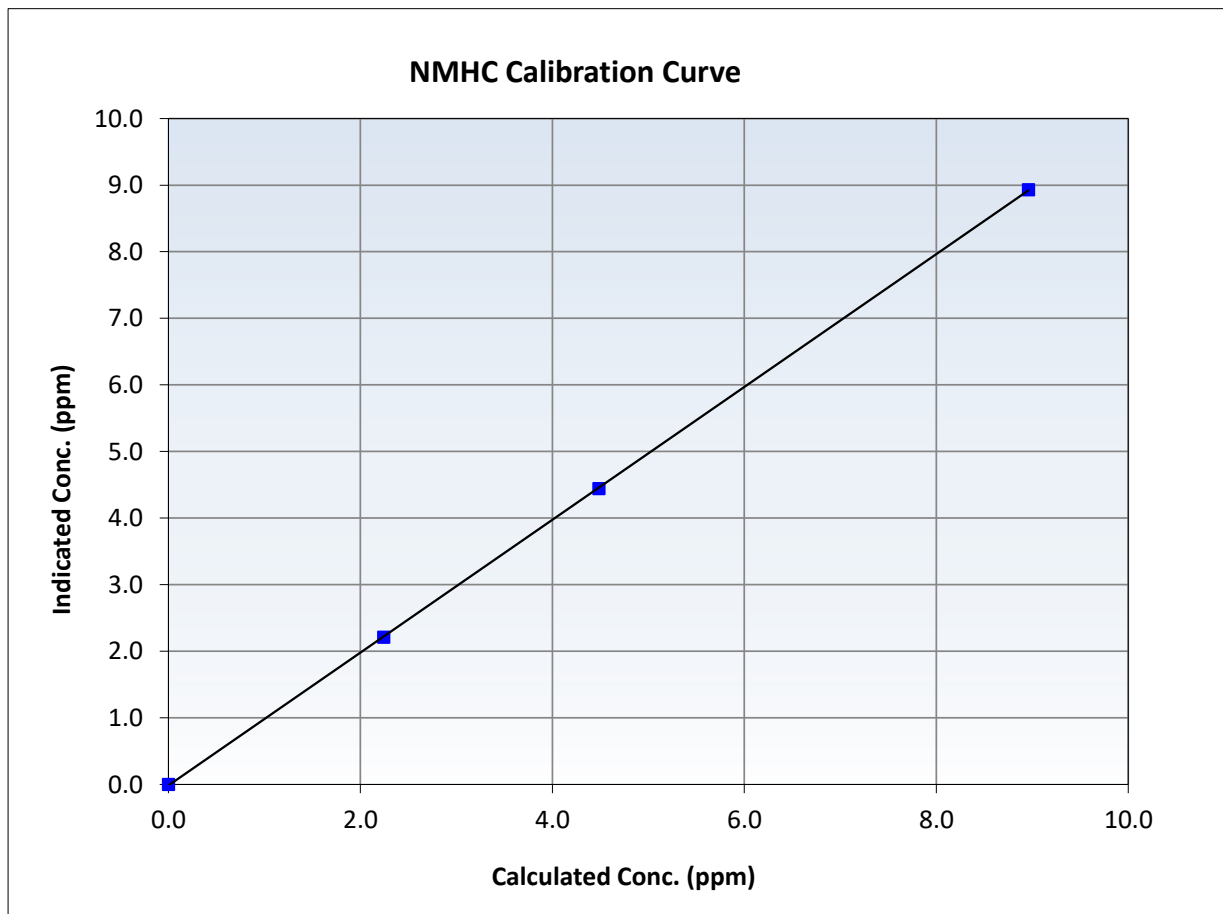
NMHC Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 4, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:33	End Time (MST):	9:25
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

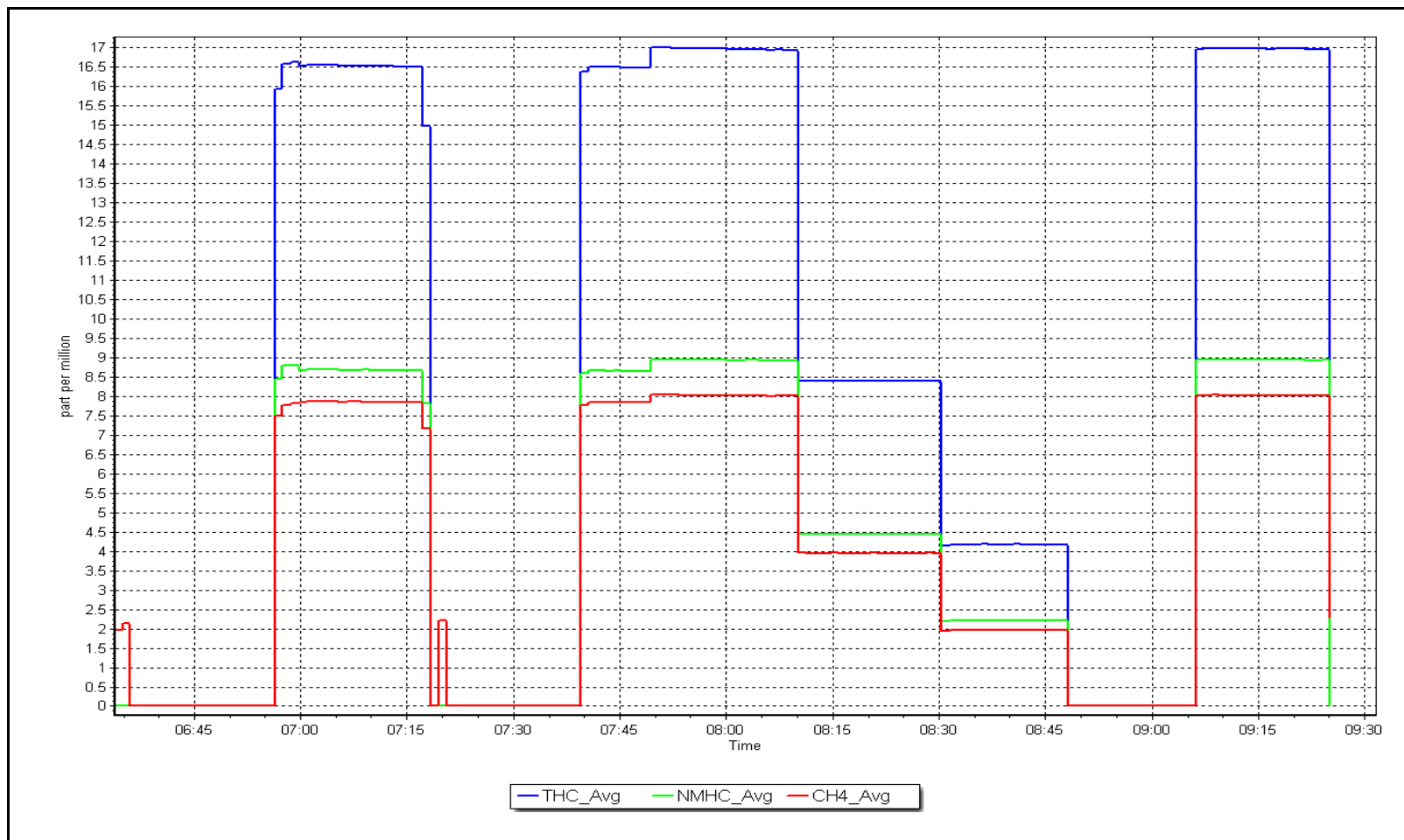
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999985	<i>≥0.995</i>
8.96	8.93	1.0032	Slope	0.997399	<i>0.90 - 1.10</i>
4.49	4.44	1.0096	Intercept	-0.015113	<i>+/-0.5</i>
2.24	2.21	1.0139			



NMHC Calibration Plot

Date: April 14, 2026

Location: Anzac





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1152430008

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.375	1.375	NO bkgnd or offset:	3.7	3.7
NOX coeff or slope:	0.996	0.996	NOX bkgnd or offset:	3.7	3.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	149.7	149.7

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.997948	0.991077
NO _x Cal Offset:	0.246433	-0.011720
NO Cal Slope:	1.001858	0.994968
NO Cal Offset:	-1.112462	-1.350605
NO ₂ Cal Slope:	0.997102	0.995905
NO ₂ Cal Offset:	-0.791226	-0.917017

Dilution Calibration Data

Set Point	Dilution flow rate (scm)	Source gas flow rate (scm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.2	0.1	0.1	----	----
High point	4934	66.2	803.6	799.7	4.0	796.6	795.0	1.6	1.0088	1.0059
Mid point	4967	33.1	401.8	399.8	2.0	398.0	395.8	2.2	1.0096	1.0102
Low point	4983	16.6	201.5	200.5	1.0	199.6	196.7	2.9	1.0097	1.0195
As left zero	5000	0.0	0.0	0.0	0.0	0.3	0.1	0.1	----	----
As left span	4934	66.2	803.6	387.0	416.6	795.2	387.0	408.2	1.0106	1.0000
Average Correction Factor									1.0094	1.0119

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.1	----	----
High GPT point	791.0	381.4	413.6	411.5	1.0050	99.5%
Mid GPT point	791.0	591.9	203.1	200.7	1.0118	98.8%
Low GPT point	791.0	691.8	103.2	100.9	1.0225	97.8%
Average Correction Factor					1.0131	98.7%

Notes:

No adjustments or maintenance done.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

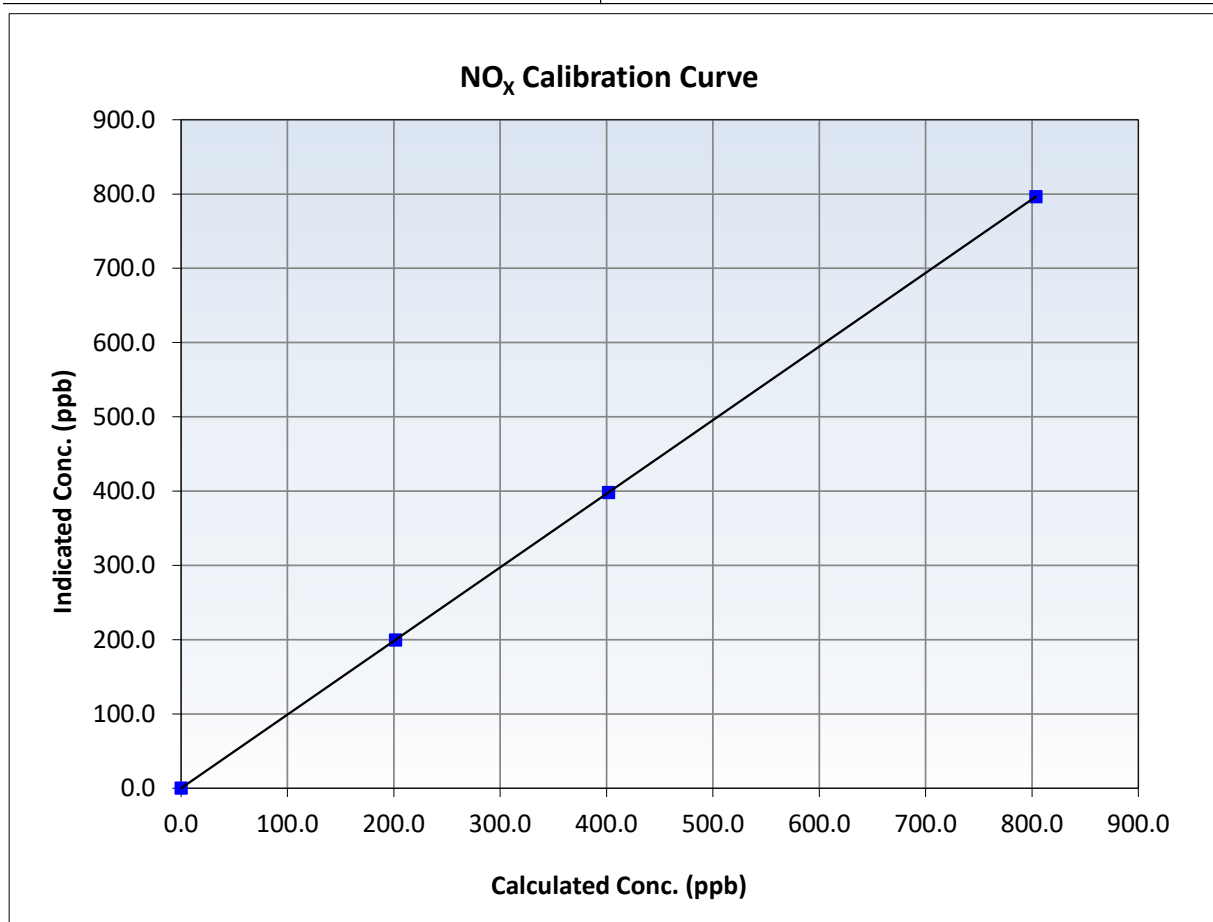
NO_x Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	March 23, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:40	End Time (MST):	10:57
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	1.000000	≥0.995
803.6	796.6	1.0088	Slope	0.991077	0.90 - 1.10
401.8	398.0	1.0096	Intercept	-0.011720	+/-20
201.5	199.6	1.0097			





Wood Buffalo Environmental Association

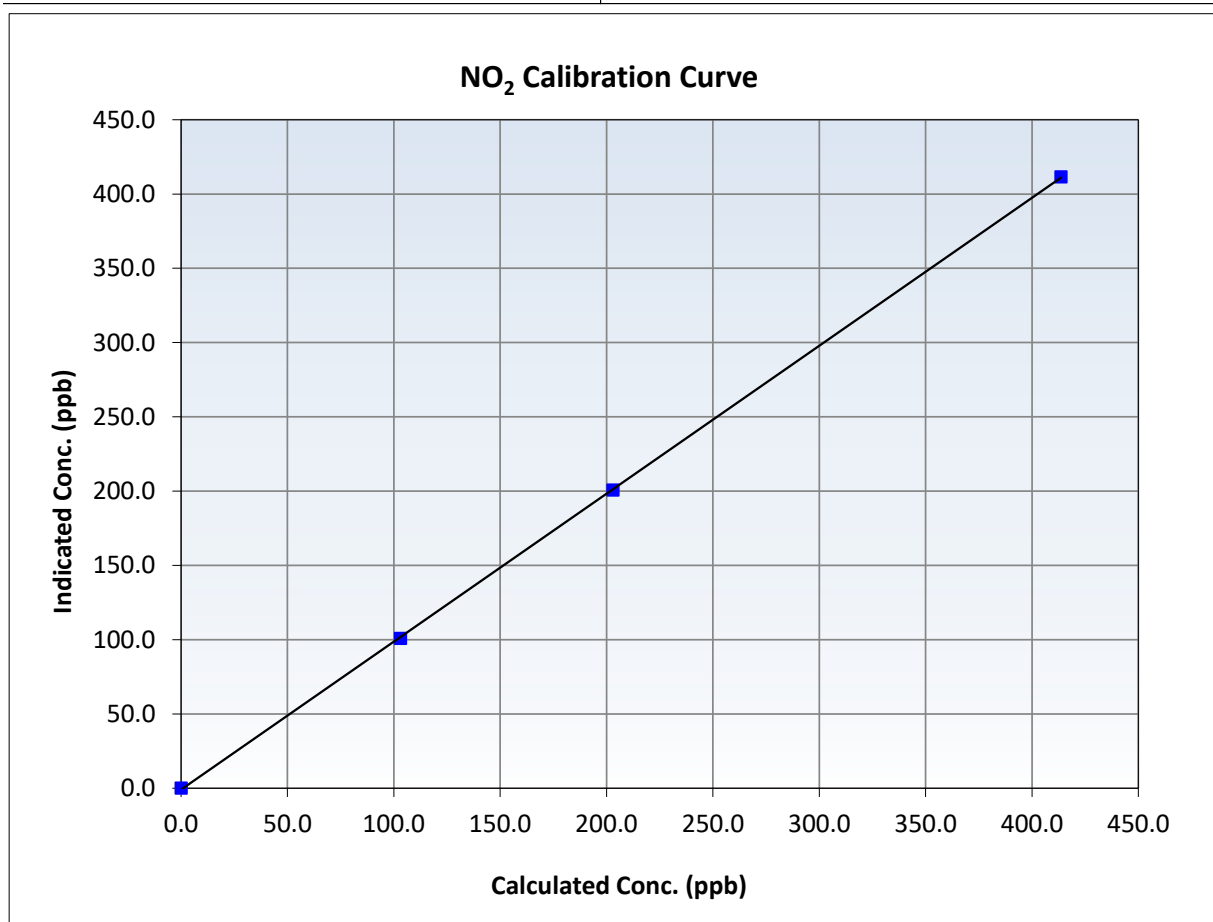
NO₂ Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	March 23, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:40	End Time (MST):	10:57
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999972	≥0.995
413.6	411.5	1.0050	Slope	0.995905	0.90 - 1.10
203.1	200.7	1.0118	Intercept	-0.917017	+/-20
103.2	100.9	1.0225			





Wood Buffalo Environmental Association

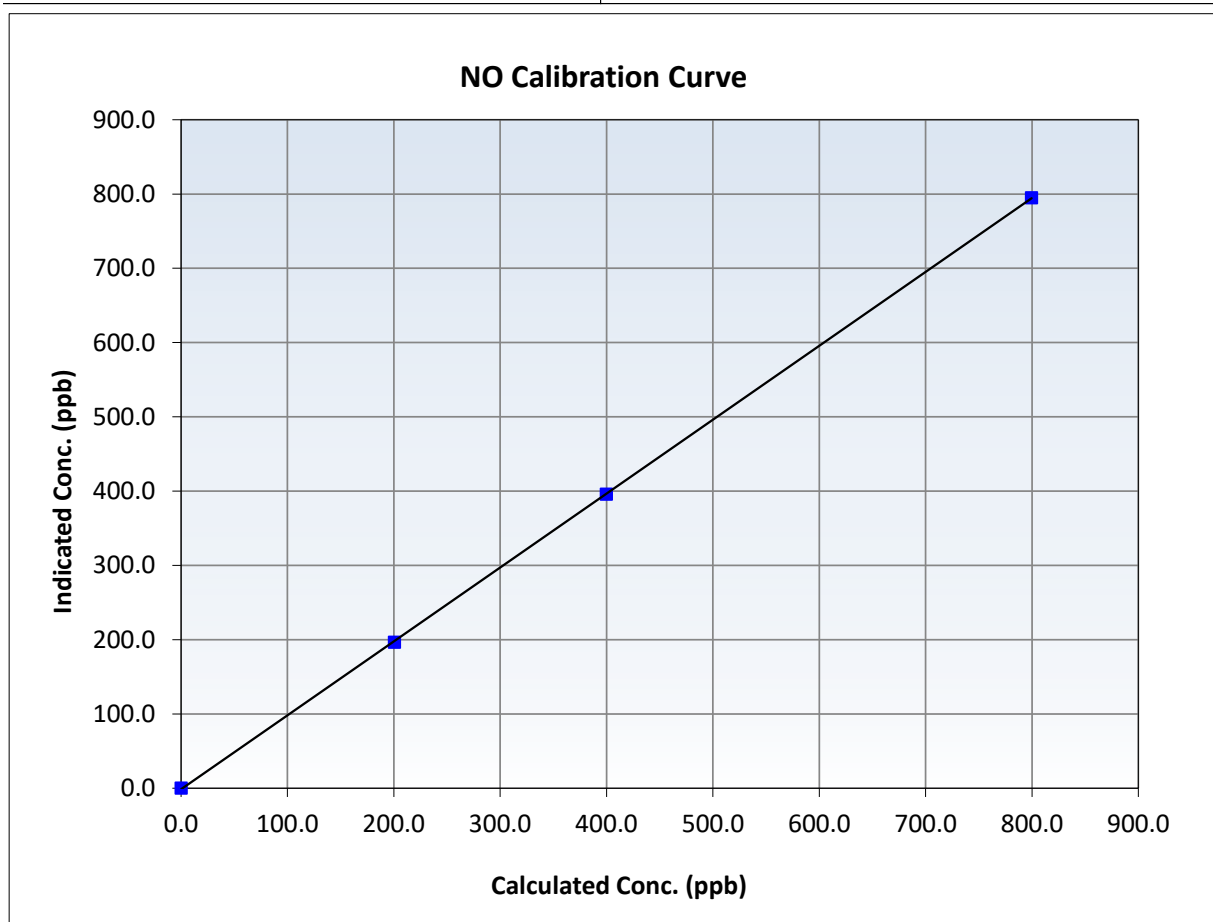
NO Calibration Summary

Station Information

Calibration Date:	April 7, 2026	Previous Calibration:	March 23, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:40	End Time (MST):	10:57
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430008

Calibration Data

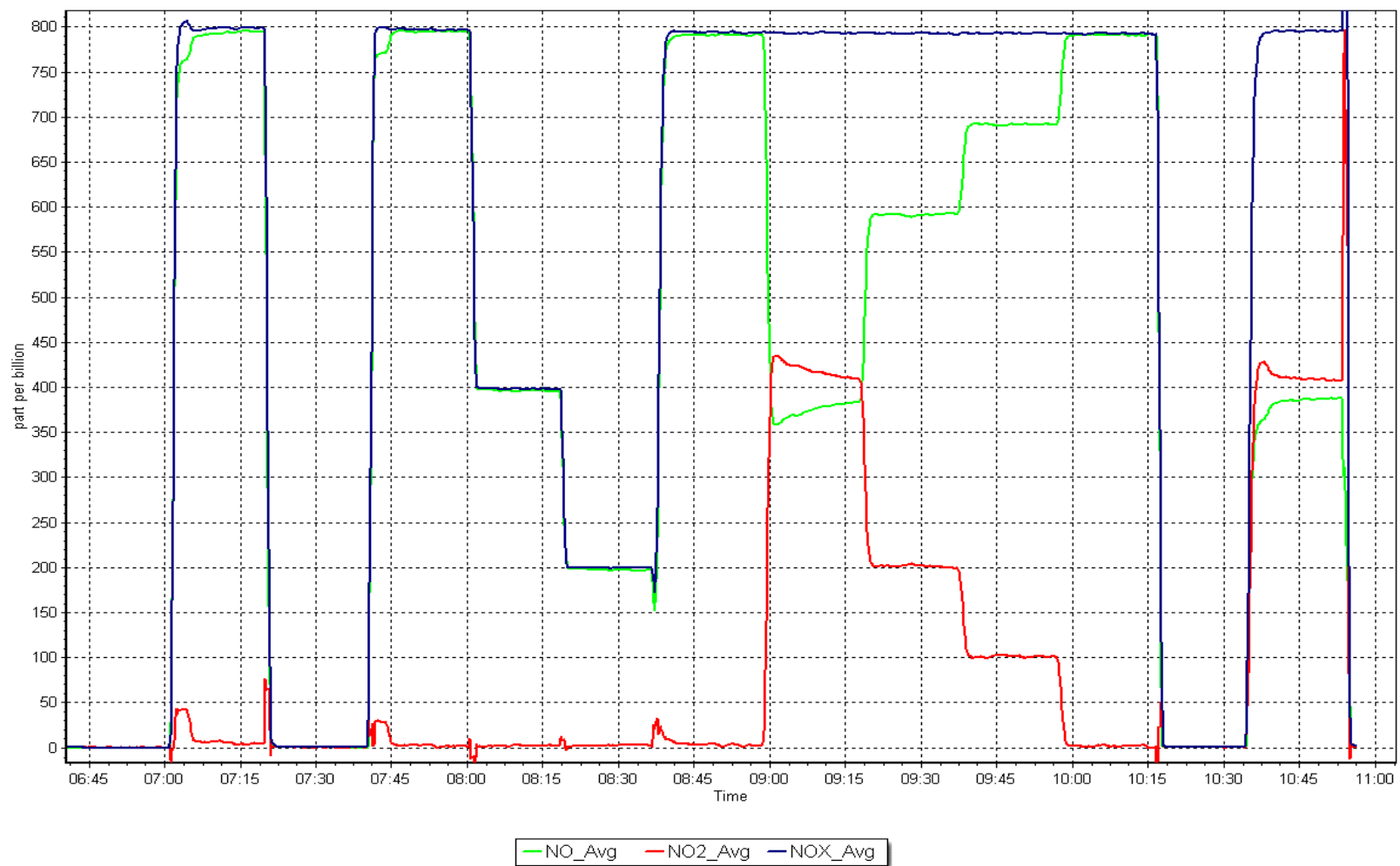
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999985	≥ 0.995
799.7	795.0	1.0059	Slope	0.994968	$0.90 - 1.10$
399.8	395.8	1.0102	Intercept	-1.350605	± 20
200.5	196.7	1.0195			



NO_x Calibration Plot

Date: April 7, 2026

Location: Anzac





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Anzac
Calibration Date: April 2, 2026
Start time (MST): 6:27
Reason: Routine

Station number: AMS 14
Last Cal Date: March 6, 2026
End time (MST): 9:07

Calibration Standards

O3 generation mode: Photometer
Calibrator Make/Model: API T700
ZAG Make/Model: API T701H

Serial Number: 3812
Serial Number: 357

Analyzer Information

Analyzer make: Thermo 49i
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 1152220023

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.996914	0.999800	Backgd or Offset:	-1.7	-0.8
Calibration intercept:	1.640000	0.660000	Coeff or Slope:	1.523	1.532

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.7	----
As found High point	5000	939.1	400.0	397.7	1.008
As found Mid point					
As found Low point					
Baseline Corr As found:	397.0	Previous response	400.4	*% change	-0.9%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.6	----
High point	5000	942.4	400.0	400.4	0.999
Mid point	5000	812.0	200.0	201.1	0.995
Low point	5000	716.2	100.0	100.4	0.996
As left zero	5000	0.0	0.0	0.1	----
As left span	5000	941.2	400.0	401.0	0.998
Average Correction Factor					0.997

Notes: No Maintenance done. Zero and Span adjusted.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

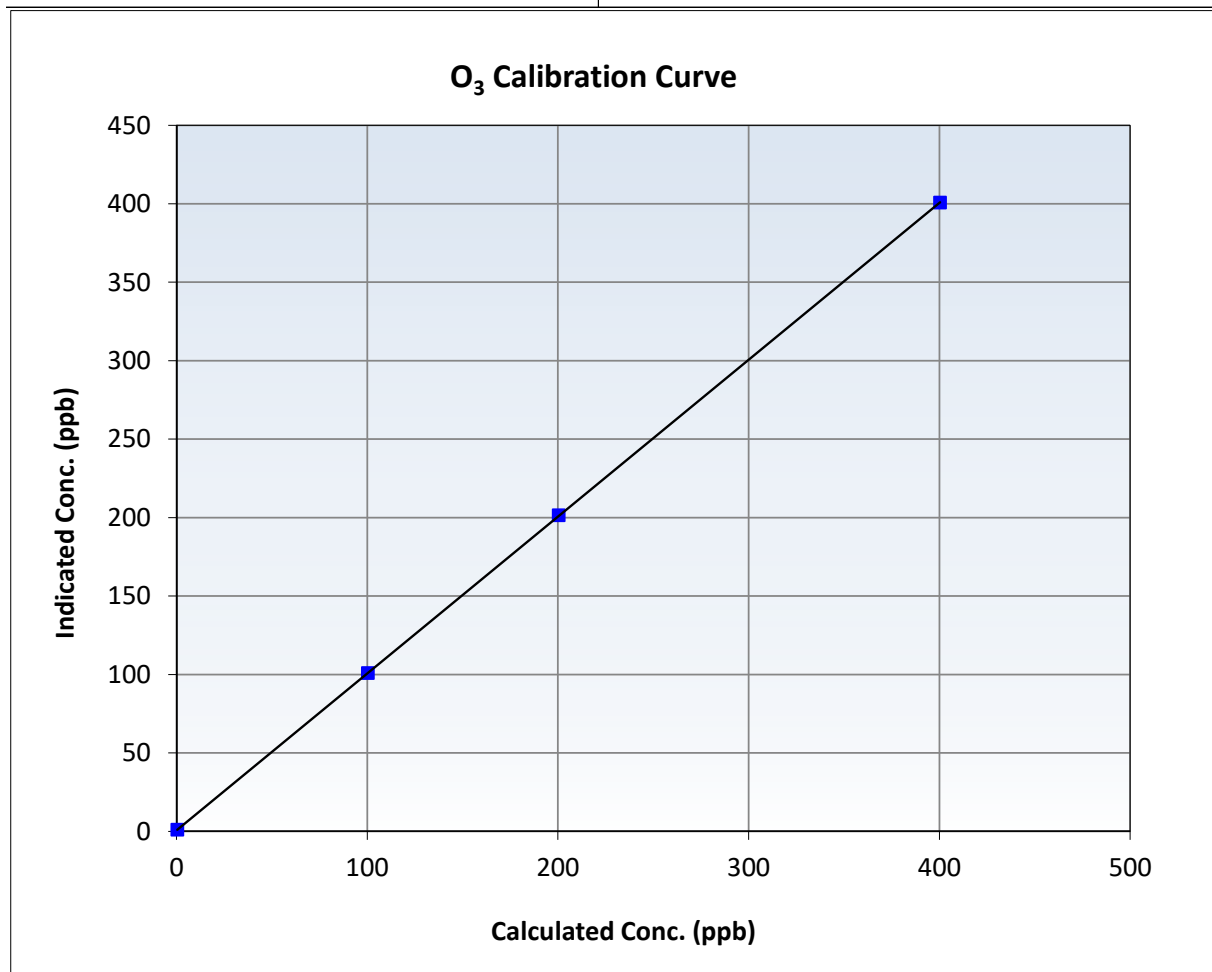
O₃ Calibration Summary

Station Information

Calibration Date:	April 2, 2026	Previous Calibration:	March 6, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:27	End Time (MST):	9:07
Analyzer make:	Thermo 49i	Analyzer serial #:	1152220023

Calibration Data

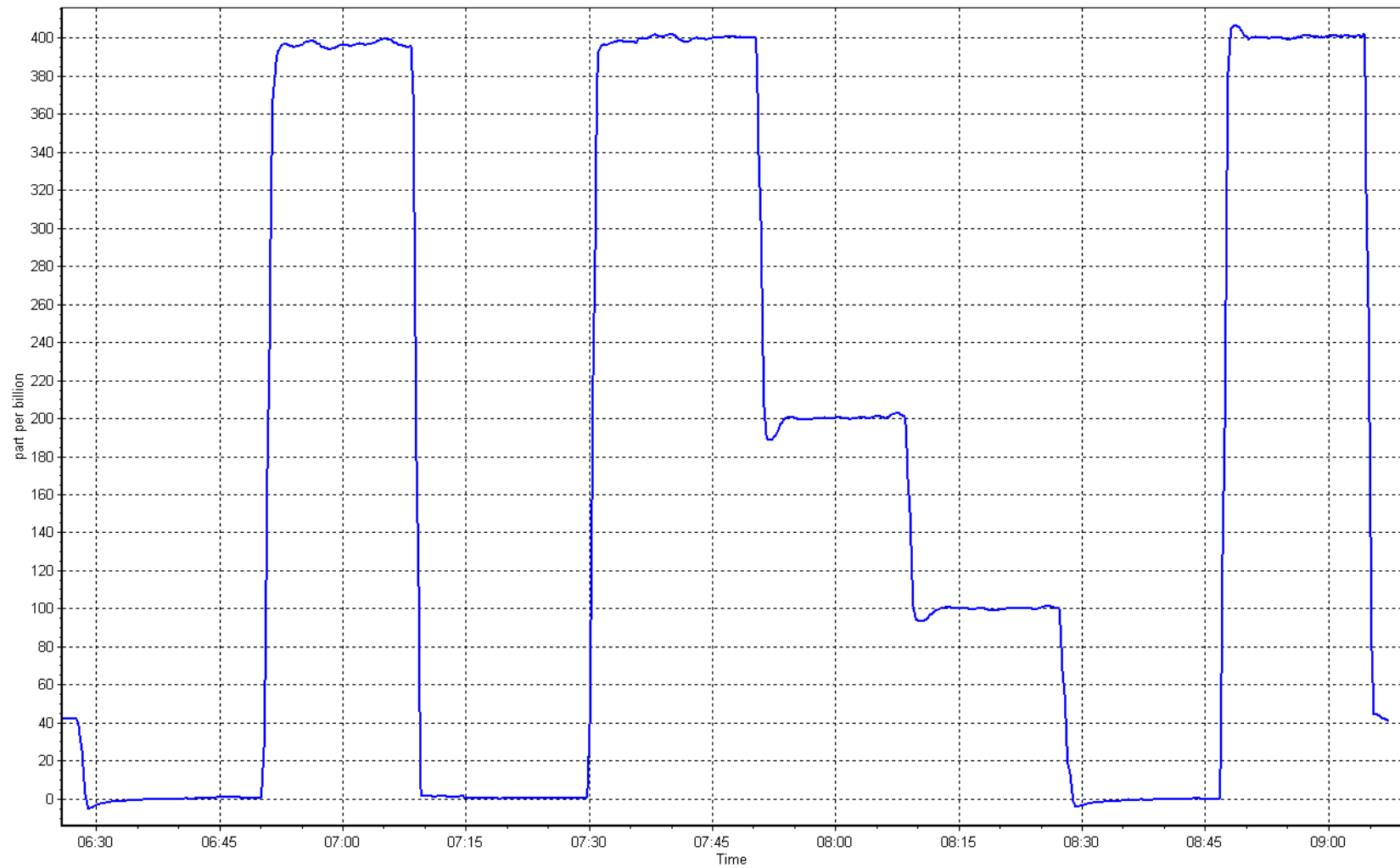
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.6	----	Correlation Coefficient	0.999996	≥0.995
400.0	400.4	0.9990	Slope	0.999800	0.90 - 1.10
200.0	201.1	0.9945	Intercept	0.660000	+/- 5
100.0	100.4	0.9960			



O₃ Calibration Plot

Date: April 2, 2026

Location: Anzac





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Anzac Station number: AMS 14
Calibration Date: April 14, 2026 Last Cal Date: March 26, 2026
Start time (MST): 6:08 End time (MST): 6:32

Analyzer Make: AP T640 S/N: 825
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388744
Temp/RH standard: Alicat FP-25BT S/N: 388744

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	0.50	0.90	0.50	☐	+/- 2 °C
P (mmHg)	705.20	706.3	705.20	☐	+/- 10 mmHg
Flow (LPM)	4.97	4.98	4.97	☐	+/- 0.25 LPM
PW% (pump)	37	----	37	☐	>80%
Zero Verification	PM w/o HEPA: 2.40		PM w/ HEPA: 0.00		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: July 16, 2026
Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test				☐	+/- 0.5

Date Optical Chamber Cleaned: March 26, 2026
Date Disposable Filter Changed: March 26, 2026

Post- maintenance Zero Verification: PM w/ HEPA: <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: March 26, 2026
Date RH/T Sensor Cleaned: March 26, 2026

Notes: No adjustments done.

Calibration by: Melissa Lemay



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Anzac	Station Number:	AMS 14
Calibration Date:	April 28, 2026	Prev Cal Date:	January 27, 2025
Start Time (MST):	7:40	End Time (MST):	8:49
Tower Height (m):	20.0	Reason:	Removal

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	U11126
WS Calibrator:	MetOne 053	Serial Number:	R10866

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.4	0.1%
600	58.6	58.5	-0.1%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999999	0.999999	≥ 0.9995
Calculated slope	0.998960	0.999473	$0.98 - 1.02$
Calculated intercept	0.026359	0.026227	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	C21020
As Found Declination (deg east of True North):	14	As Left Declination (deg east of True North):	14
Solar noon (MST):	12:21	Calc Declination*:	14.28 Degrees
WD Calibrator:	Met One 040		* - calculated declination as per NOAA website

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	12.1	0.6%
90	92.2	0.6%
180	182.3	0.6%
270	272.9	0.8%
350	354.4	1.2%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999991	0.999994	≥ 0.9995
Calculated slope	0.991924	0.993891	$0.97 - 1.03$
Calculated intercept	0.378436	-1.663317	± 5

Notes: Bearings needed to be replaced. WD 350 degree point out 1.2%. Both WS and WD removed.

Calibration Performed By: Param Kaur and Melissa Lemay



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name: Anzac Station Number: AMS 14
Calibration Date: April 28, 2026 Prev Cal Date:
Start Time (MST): 7:40 End Time (MST): 8:49
Tower Height (m): 20.0 Reason: Install

Wind Speed Calibration

Sensor make/model: Met One 010C-1 Serial Number: Y18363
WS Calibrator: MetOne 053 Serial Number: R10866

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.2	0.2%
400	39.4	39.4	0.1%
600	58.6	58.6	0.1%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		1.000000	≥ 0.9995
Calculated slope		0.999465	$0.98 - 1.02$
Calculated intercept		-0.013446	± 2

Wind Direction Calibration

Sensor make/model: Met One 020C-1 Serial Number: D14061
As Found Declination (deg east of True North): 14 As Left Declination (deg east of True North): 14
Solar noon (MST): 12:21 Calc Declination*: 14.28 Degrees
WD Calibrator: Met One 040
* - calculated declination as per NOAA website

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	11.2	0.3%
90	90.5	0.1%
180	181.5	0.4%
270	272.9	0.8%
350	348.0	-0.6%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999921	≥ 0.9995
Calculated slope		1.004294	$0.97 - 1.03$
Calculated intercept		-1.596483	± 5

Notes: New WD install due to 350deg not passing on removed WD. WS removed due to torque test not passing.

Calibration Performed By: Param Kaur and Melissa Lemay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS17
WAPASU
APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Wapasu Station number: AMS17
Calibration Date: April 29, 2026 Last Cal Date: March 9, 2026
Start time (MST): 9:41 End time (MST): 12:34
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.12 ppm Cal Gas Exp Date: April 9, 2033
Cal Gas Cylinder #: CC422255
Removed Cal Gas Conc: 50.12 ppm Rem Gas Exp Date:
Removed Gas Cyl #: N/A Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 2448
Zero Air Gen Model: Teledyne API 701H Serial Number: 1238

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1218153459
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002819	1.004350	Backgd or Offset:	15.4	15.5
Calibration intercept:	-2.635156	-1.196218	Coeff or Slope:	1.113	1.105

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.4	----
As found High point	4920	79.8	799.9	806.7	0.991
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	807.1	Previous response	799.6	*% change	0.9%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4920	79.8	799.9	803.0	0.996
Mid point	4960	39.9	400.0	399.3	1.002
Low point	4980	20.0	200.5	199.5	1.005
As left zero	5000	0.0	0.0	-0.3	----
As left span	4920	79.8	799.9	800.6	0.999
Average Correction Factor:					1.001

Notes: Inlet filter changed after as founds. Adjusted span only.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

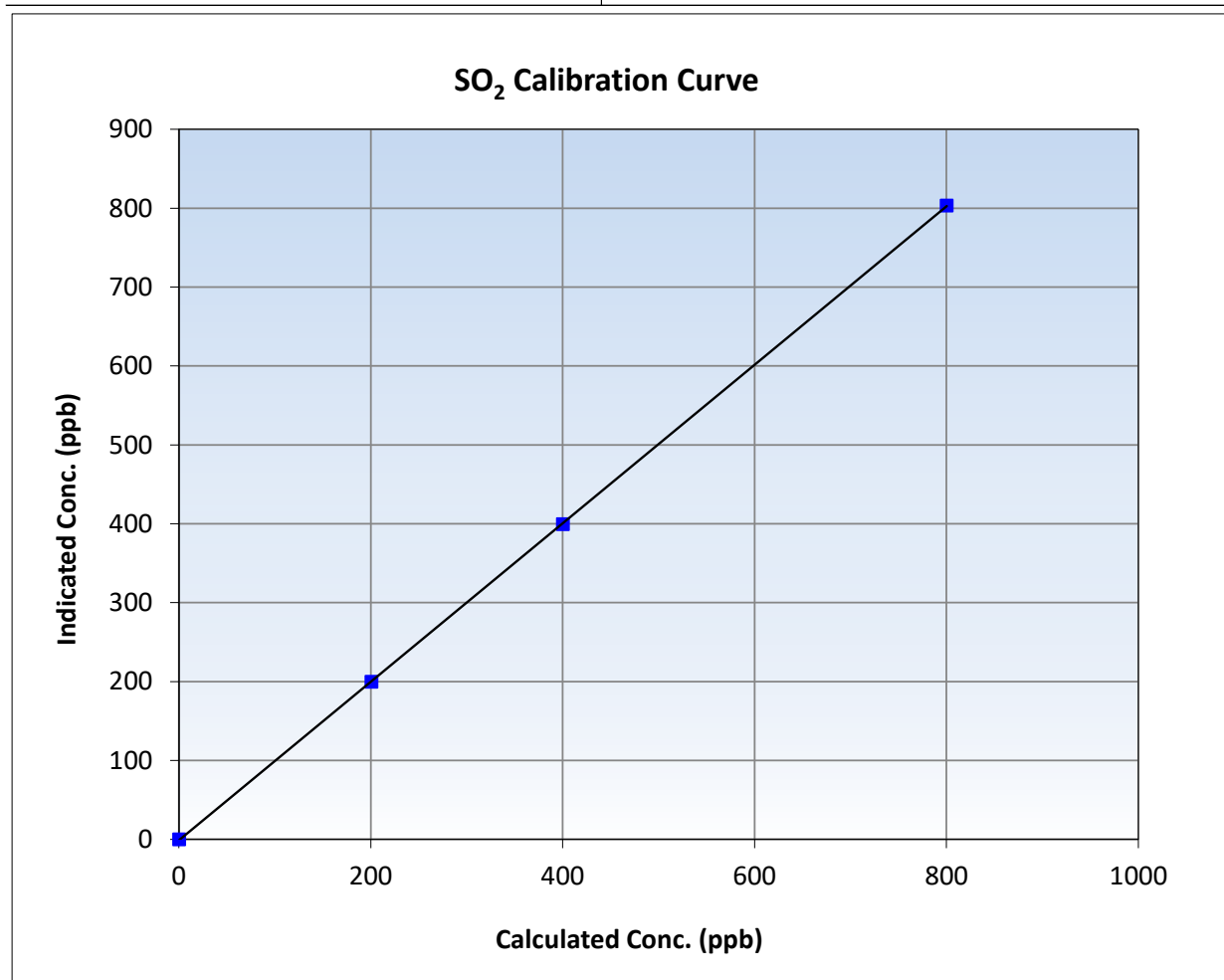
SO₂ Calibration Summary

Station Information

Calibration Date:	April 29, 2026	Previous Calibration:	March 9, 2026
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	9:41	End Time (MST):	12:34
Analyzer make:	Thermo 43i	Analyzer serial #:	1218153459

Calibration Data

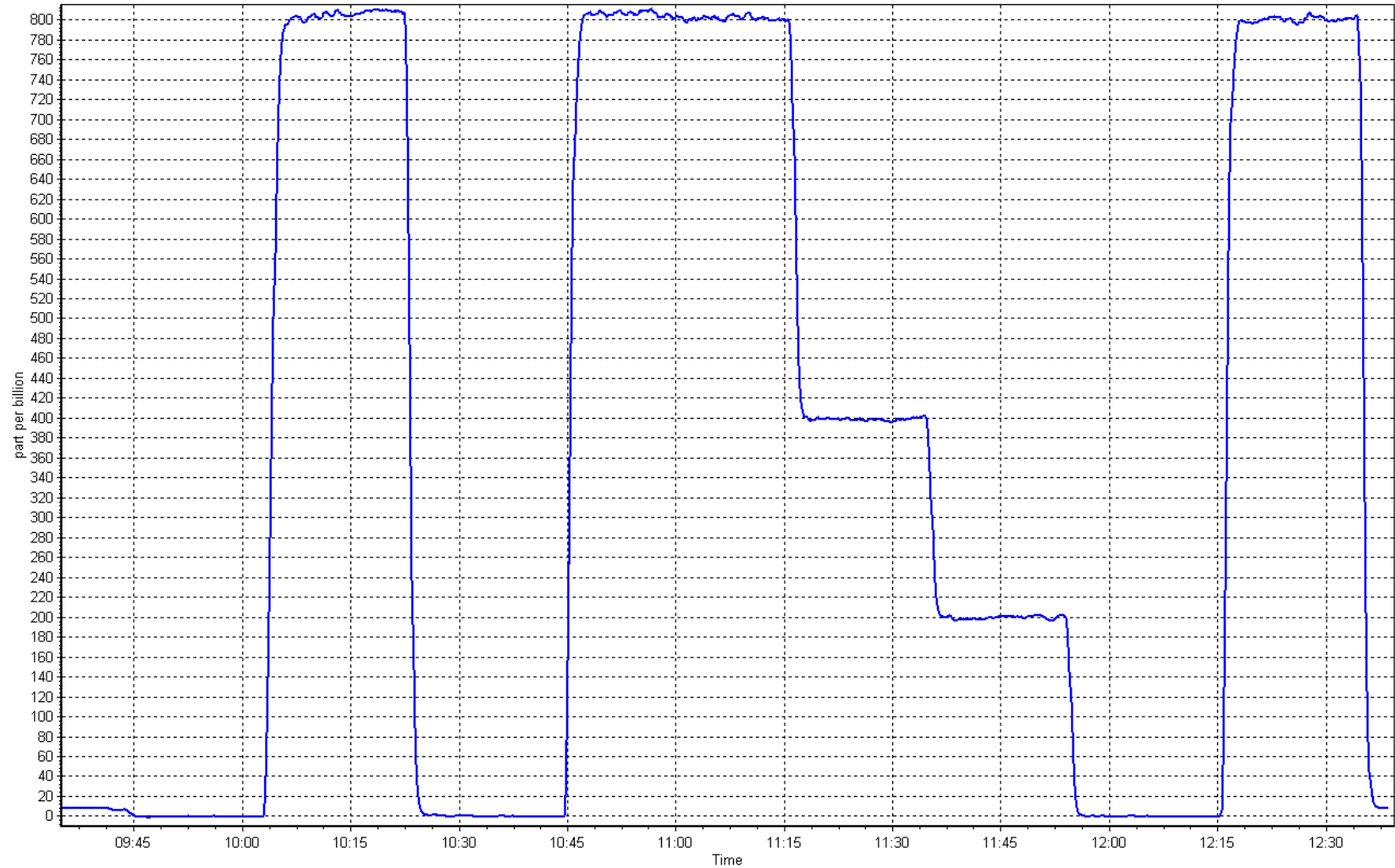
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999990	≥0.995
799.9	803.0	0.9962	Slope	1.004350	0.90 - 1.10
400.0	399.3	1.0017	Intercept	-1.196218	+/-30
200.5	199.5	1.0049			



SO2 Calibration Plot

Date: April 29, 2026

Location: Wapasu





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Wapasu
Calibration Date: April 14, 2026
Start time (MST): 9:51
Reason: Routine

Station number: AMS 17
Last Cal Date: March 25, 2026
End time (MST): 13:57

Calibration Standards

Cal Gas Concentration: 4.77 ppm
Cal Gas Cylinder #: DT20029267
Removed Cal Gas Conc: 4.77 ppm
Removed Gas Cyl #:
Calibrator Make/Model: API T700
ZAG Make/Model: API T701H

Cal Gas Exp Date: August 28, 2027
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 2449
Serial Number: 359

Analyzer Information

Analyzer make: Thermo 43iQ-TL
Converter make: Global G150
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 12228021057
Converter serial #: 2022-219
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.998641	0.998785	Backgd or Offset:	3.1	3.12
Calibration intercept:	0.060186	-0.219869	Coeff or Slope:	1.037	1.037

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4916	83.9	80.0	79.8	1.001
As found Mid point	4958	41.9	40.0	39.7	1.002
As found Low point	4979	21.0	20.0	19.6	1.012
New cylinder response					
Baseline Corr As found:	80.0	Prev response:	79.99	*% change:	0.0%
Baseline Corr 2nd AF pt:	39.9	AF Slope:	1.000354	AF Intercept:	-0.299801
Baseline Corr 3rd AF pt:	19.8	AF Correlation:	0.999991	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4916	83.9	80.0	79.8	1.003
Mid point	4958	41.9	40.0	39.6	1.009
Low point	4979	21.0	20.0	19.7	1.017
As left zero	5000	0.0	0.0	0.0	----
As left span	4916	83.9	80.0	79.8	1.003
SO2 Scrubber Check	4920	79.8	798.0	0.0	----
Date of last scrubber change:	N/A			Ave Corr Factor	1.010
Date of last converter efficiency test:	N/A				

Notes: Sample inlet filter was changed after multipoint as founds. Internal pump was replaced with external pump. SO2 scrubber check done and passed. No adjustment made.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

H₂S Calibration Summary

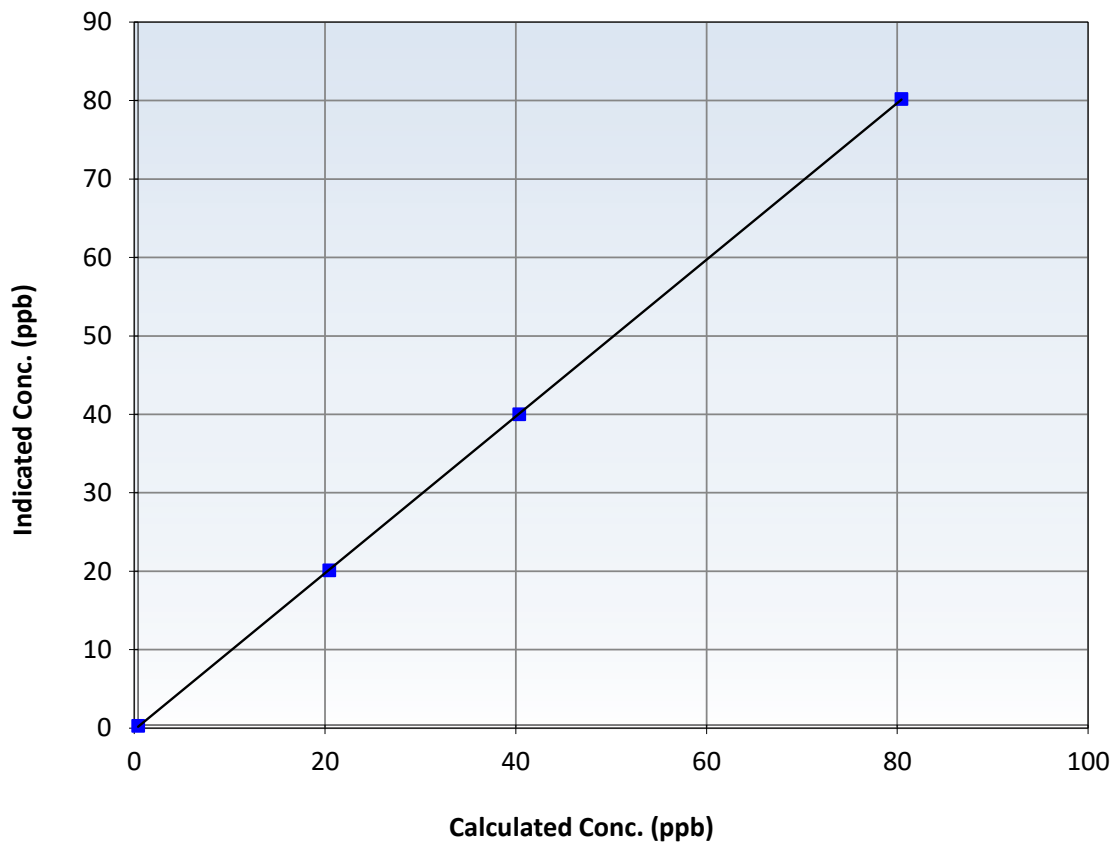
Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 25, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	9:51	End Time (MST):	13:57
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	12228021057

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999989	≥ 0.995
80.0	79.8	1.0030	Slope	0.998785	$0.90 - 1.10$
40.0	39.6	1.0094	Intercept	-0.219869	± 3
20.0	19.7	1.0170			

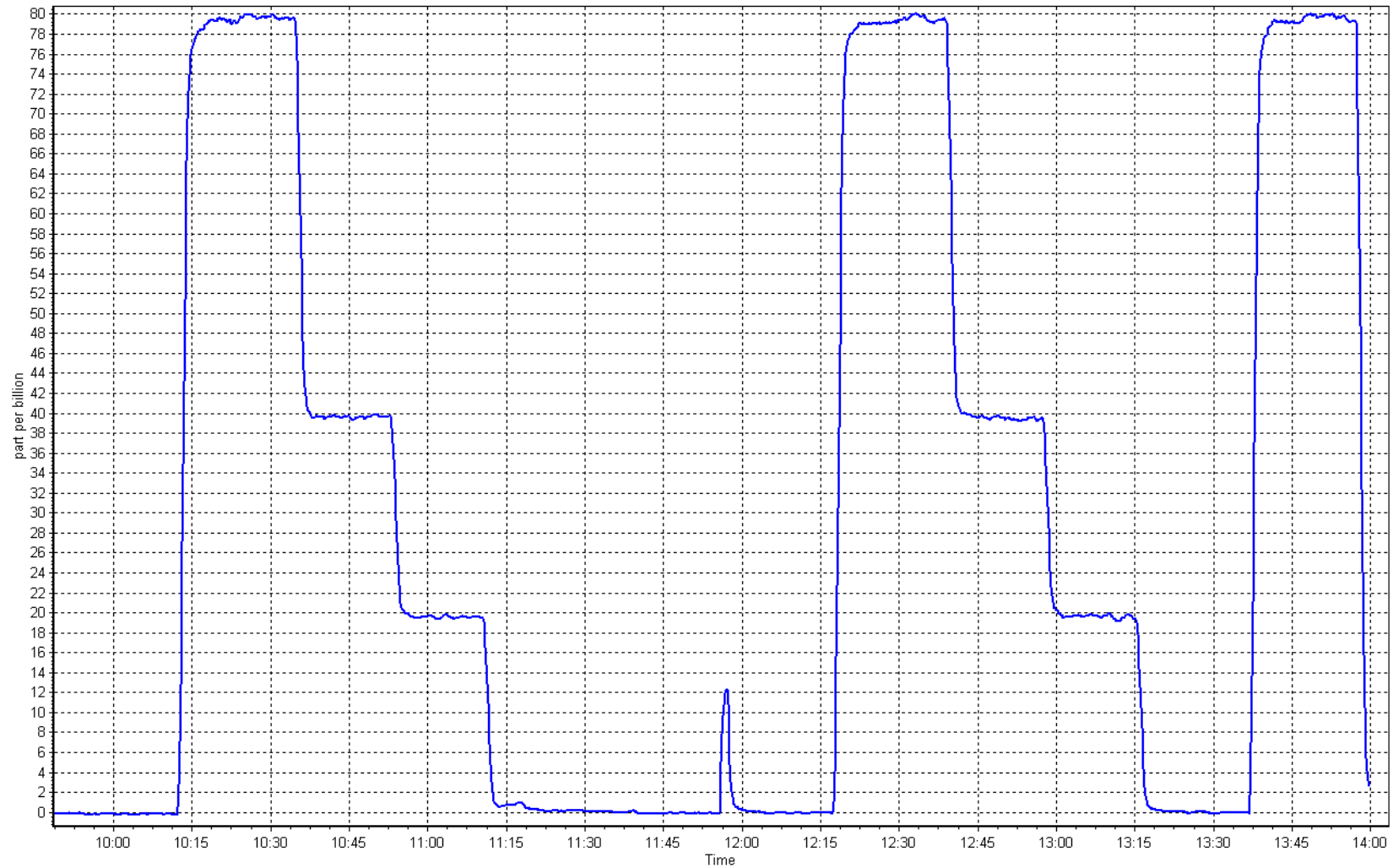
H₂S Calibration Curve



H₂S Calibration Plot

Date: April 14, 2026

Location: Wapasu





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Wapasu Station number: AMS17
Calibration Date: April 29, 2026 Last Cal Date: March 9, 2026
Start time (MST): 9:41 End time (MST): 12:34
Reason: Routine

Calibration Standards

Gas Cert Reference: CC422255 Cal Gas Expiry Date: April 9, 2033
CH4 Cal Gas Conc. 499.6 ppm CH4 Equiv Conc. 1059.0 ppm
C3H8 Cal Gas Conc. 203.4 ppm
Removed Gas Cert: n/a Removed Gas Expiry:
Removed CH4 Conc. 499.6 ppm CH4 Equiv Conc. 1059.0 ppm
Removed C3H8 Conc. 203.4 ppm Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 2448
ZAG Make/Model: Teledyne API 701H Serial Number: 1238

Analyzer Information

Analyzer make: Thermo 51i-LT Analyzer serial #: 1218153352
Analyzer Range: 0 - 20 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999911	0.999620	Background:	3.100
Calibration intercept:	-0.071318	-0.011917	Coefficient:	4.402
				3.050
				4.331

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
					Limit = 0.90-1.10
As found zero	5000	0.0	0.00	0.03	----
As found High point	4920	79.8	16.90	17.18	0.986
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	17.15	Previous response	16.83	*% change	1.9%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
					Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.04	----
High point	4920	79.8	16.90	16.92	0.999
Mid point	4960	39.9	8.45	8.38	1.008
Low point	4980	20.0	4.24	4.19	1.011
As left zero	5000	0.0	0.00	0.09	----
As left span	4920	79.8	16.90	16.99	0.995
Average Correction Factor					1.006

Notes: Sample inlet filter was changed after as founds. Adjusted span only.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

THC Calibration Summary

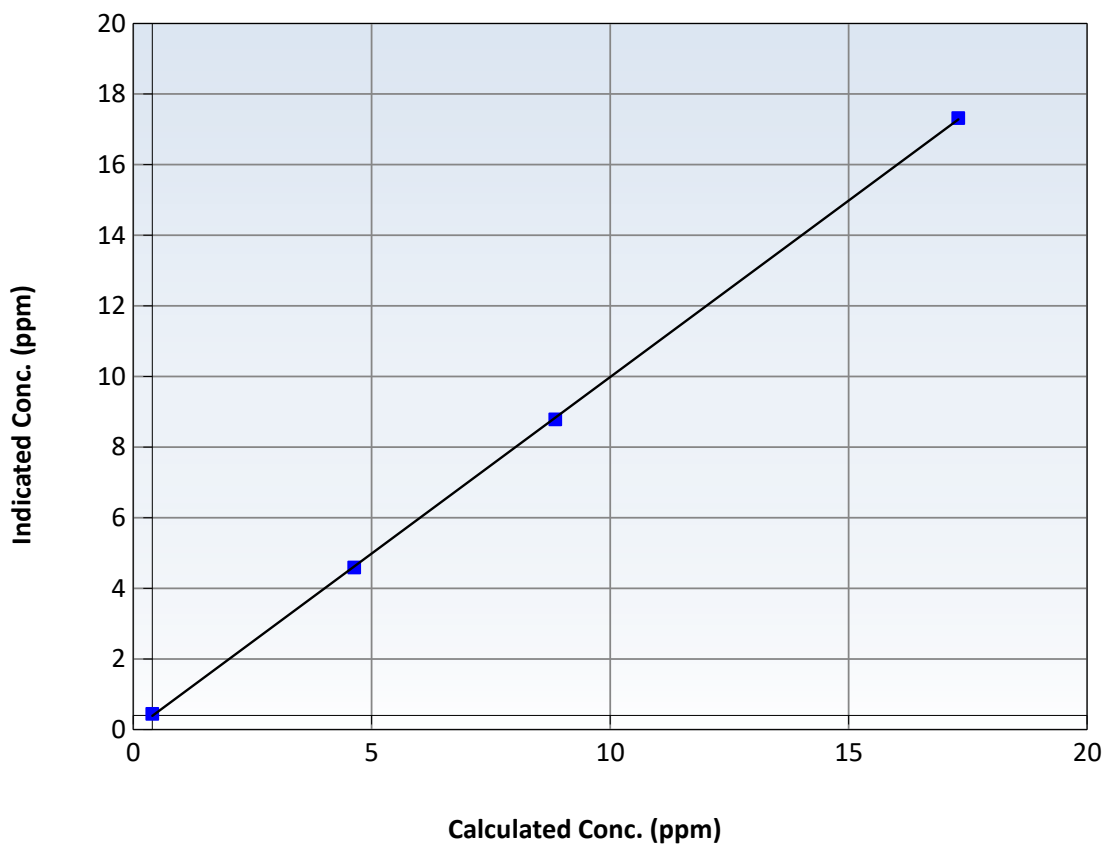
Station Information

Calibration Date:	April 29, 2026	Previous Calibration:	March 9, 2026
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	9:41	End Time (MST):	12:34
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1218153352

Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.04	----	Correlation Coefficient	0.999948	≥ 0.995
16.90	16.92	0.9990	Slope	0.999620	$0.90 - 1.10$
8.45	8.38	1.0084	Intercept	-0.011917	± 1.5
4.24	4.19	1.0109			

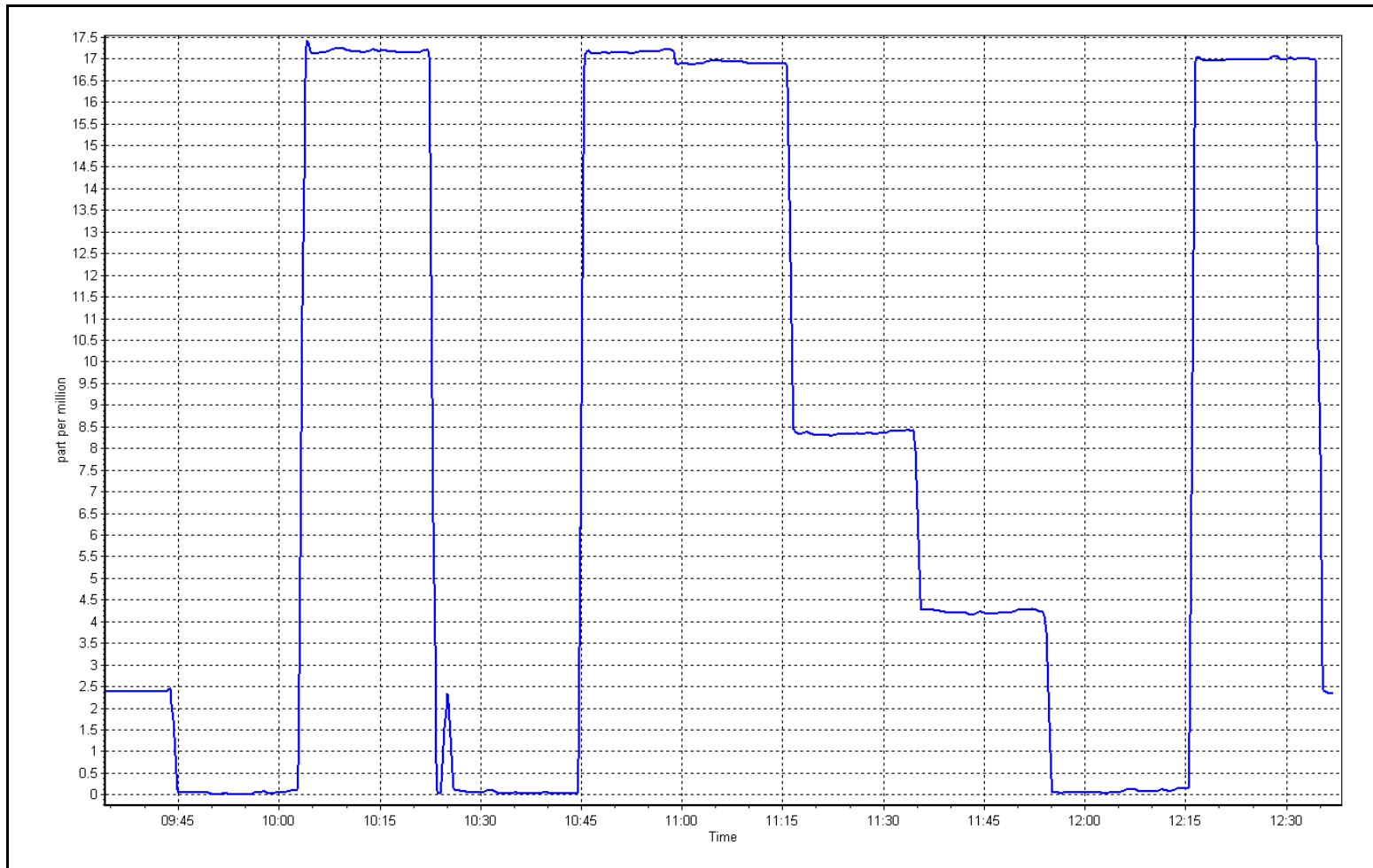
THC Calibration Curve



THC Calibration Plot

Date: April 29, 2026

Location: Wapasu





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Wapasu
 Station number: AMS 17
 Calibration Date: April 20, 2026
 Last Cal Date: March 26, 2026
 Start time (MST): 10:17
 End time (MST): 14:17
 Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0045177
 NOX Cal Gas Conc: 61.30 ppm
 Removed Cylinder #: NA
 Removed Gas NOX Conc: 61.30 ppm
 NOX gas Diff:
 Calibrator Model: API T700
 ZAG make/model: API T701H
 Cal Gas Expiry Date: July 19, 2032
 NO Cal Gas Conc: 61.00 ppm
 Removed Gas Exp Date:
 Removed Gas NO Conc: 61.00 ppm
 NO gas Diff:
 Serial Number: 2448
 Serial Number: 359

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.4	0.0	-0.3	----	----
AF High point	4934	65.6	804.3	800.4	3.9	806.4	799.9	6.5	0.9969	1.0006
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 809.7 ppb	NO = 804.7 ppb				* = > +/-5% change initiates investigation			*Percent Change	NO _x = -0.4%
Baseline Corr 1st pt	NO _x = 806.8 ppb	NO = 799.9 ppb				<u>As Found Statistics</u>			*Percent Change	NO = -0.6%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found NO _x r ² :			Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found NO r ² :			NO SI:	NO Int:
						As found NO ₂ r ² :			NO2 SI:	NO ₂ Int:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo Scientific 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1218153460

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.018	1.018	NO bkgnd or offset:	3.5	3.5
NOX coeff or slope:	0.997	0.997	NOX bkgnd or offset:	3.9	3.9
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	226.4	226.6

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.008201	0.995242
NO _x Cal Offset:	-1.263826	1.196062
NO Cal Slope:	1.008262	0.994811
NO Cal Offset:	-2.323961	0.335929
NO ₂ Cal Slope:	1.001055	1.001017
NO ₂ Cal Offset:	-0.294148	-0.279353

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	0.2	-0.3	----	----
High point	4934	65.6	804.3	800.4	3.9	801.1	796.5	4.6	1.0040	1.0049
Mid point	4967	32.8	402.1	400.2	2.0	401.9	398.5	3.4	1.0006	1.0042
Low point	4984	16.4	201.0	200.1	1.0	202.7	199.5	3.2	0.9918	1.0028
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.3	-0.3	----	----
As left span	4934	65.6	804.3	392.7	411.6	799.4	392.7	406.7	1.0062	1.0000
Average Correction Factor									0.9988	1.0040

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.3	----	----
High GPT point	790.1	409.3	384.7	384.9	0.9996	100.0%
Mid GPT point	790.1	588.4	205.6	205.4	1.0012	99.9%
Low GPT point	790.1	688.1	105.9	105.9	1.0003	100.0%
Average Correction Factor					1.0004	100.0%

Notes:

Sample inlet filter was changed after as founds. No adjustment made.

Calibration Performed By:

Jan Castro



Wood Buffalo Environmental Association

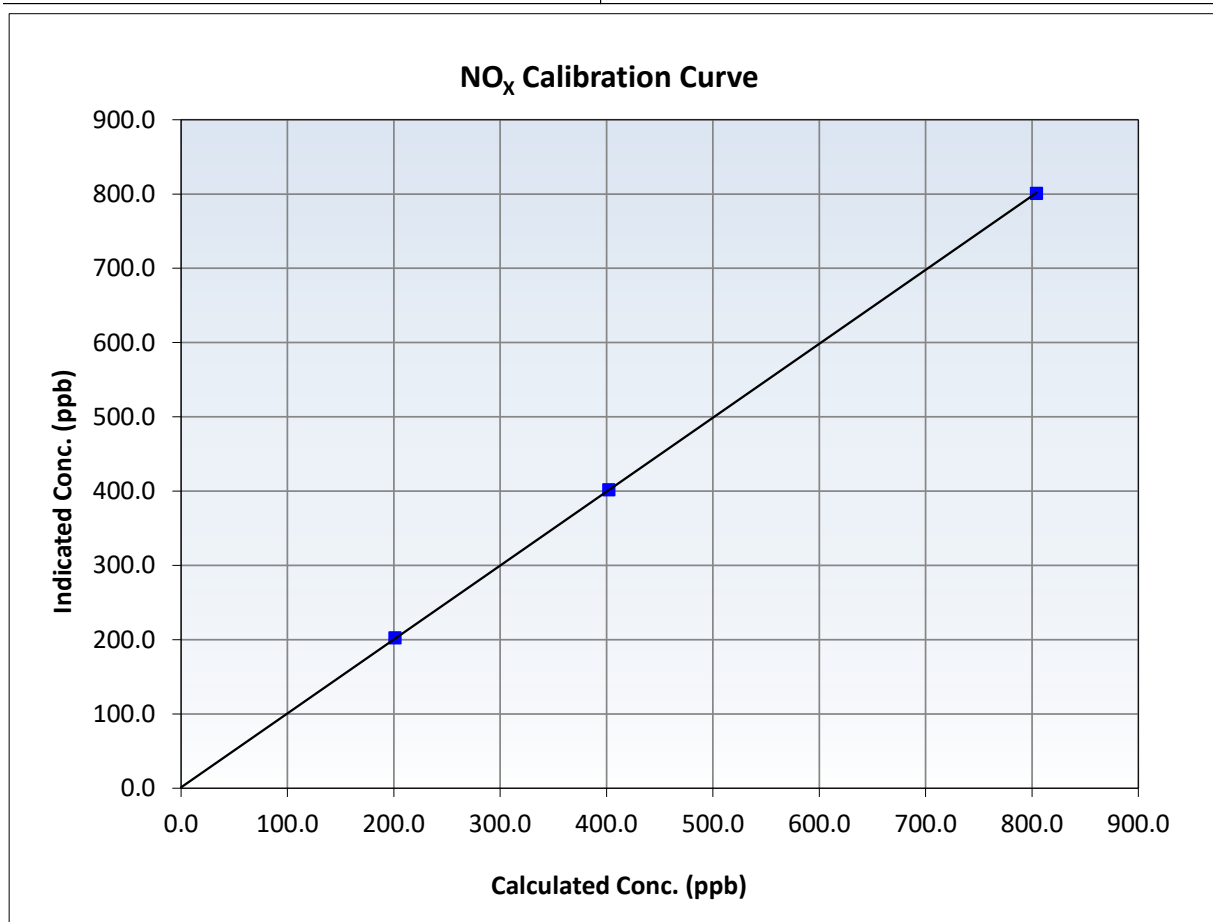
NO_x Calibration Summary

Station Information

Calibration Date:	April 20, 2026	Previous Calibration:	March 26, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	10:17	End Time (MST):	14:17
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1218153460

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999988	≥0.995
804.3	801.1	1.0040	Slope	0.995242	0.90 - 1.10
402.1	401.9	1.0006	Intercept	1.196062	+/-20
201.0	202.7	0.9918			





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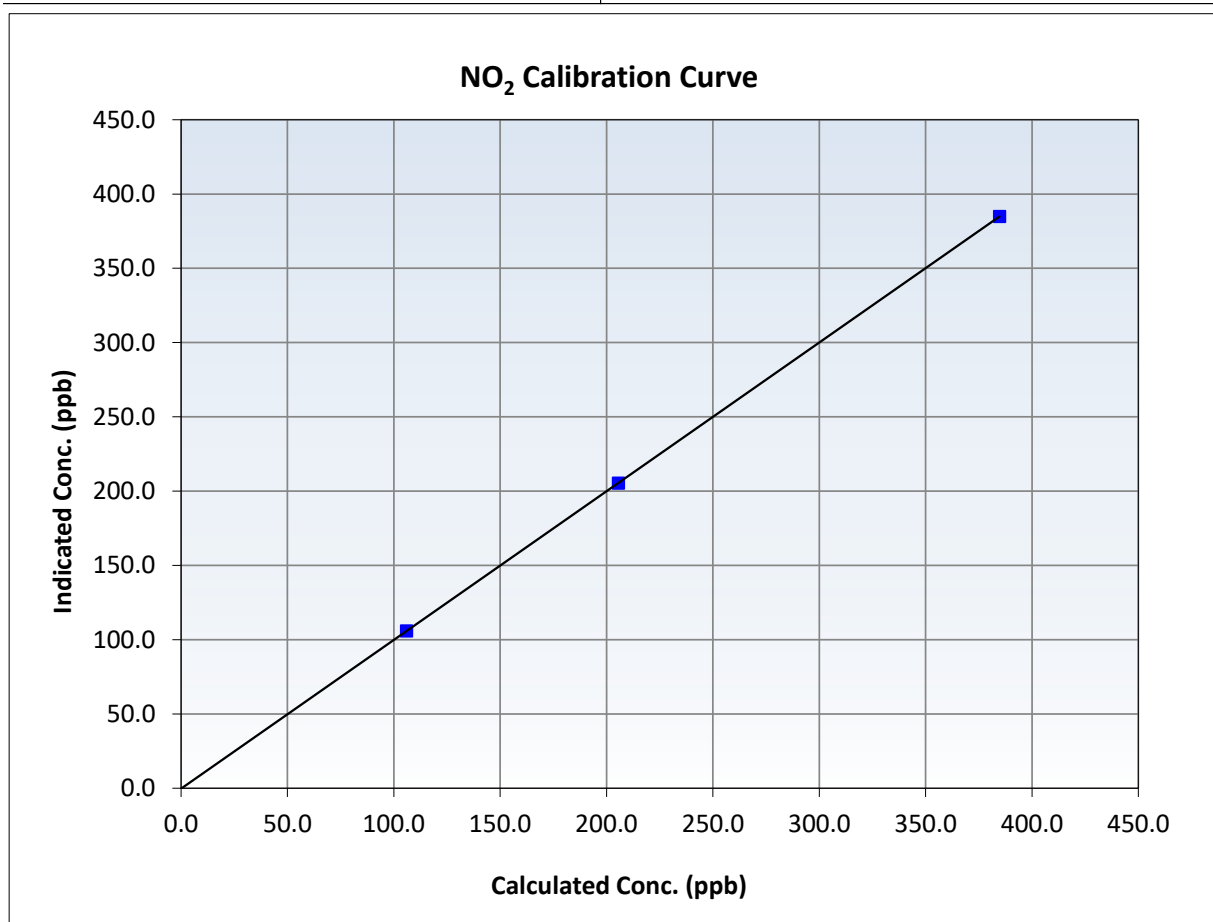
NO₂ Calibration Summary

Station Information

Calibration Date:	April 20, 2026	Previous Calibration:	March 26, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	10:17	End Time (MST):	14:17
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1218153460

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999999	≥ 0.995
384.7	384.9	0.9996	Slope	1.001017	$0.90 - 1.10$
205.6	205.4	1.0012	Intercept	-0.279353	± 20
105.9	105.9	1.0003			





Wood Buffalo Environmental Association

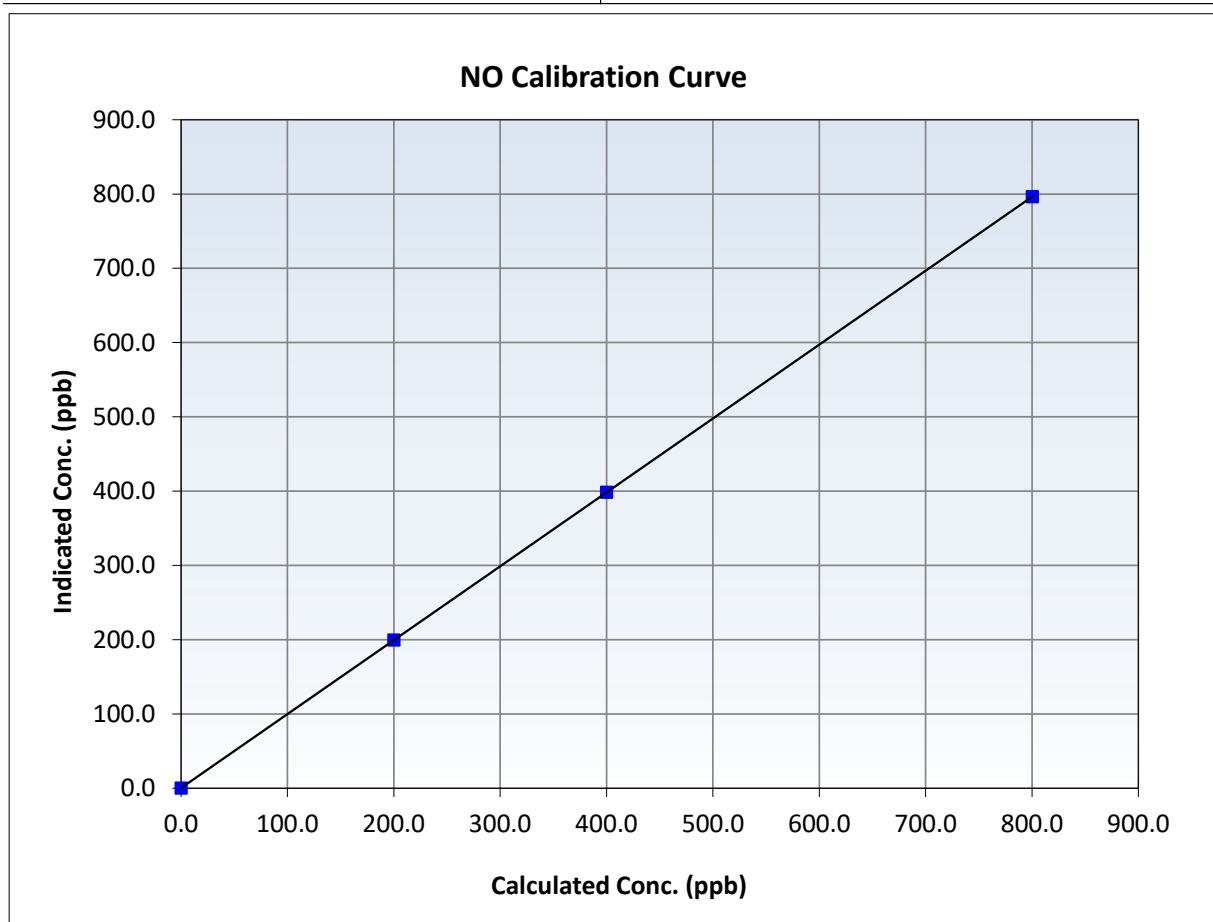
NO Calibration Summary

Station Information

Calibration Date:	April 20, 2026	Previous Calibration:	March 26, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	10:17	End Time (MST):	14:17
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1218153460

Calibration Data

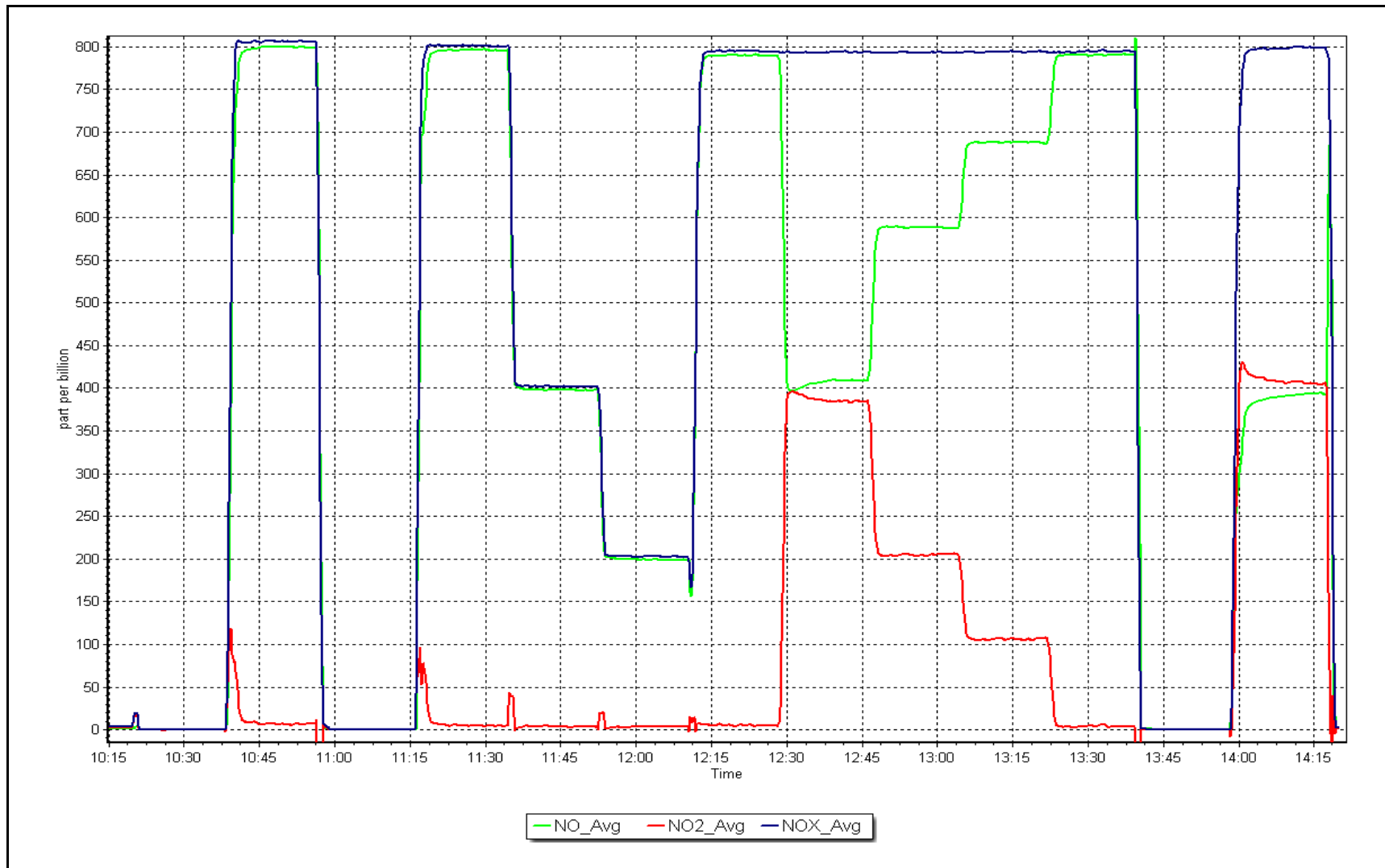
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	1.000000	≥ 0.995
800.4	796.5	1.0049	Slope	0.994811	$0.90 - 1.10$
400.2	398.5	1.0042	Intercept	0.335929	± 20
200.1	199.5	1.0028			



NO_x Calibration Plot

Date: April 20, 2026

Location: Wapasu





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Wapasu
Calibration Date: April 13, 2026
Start time (MST): 9:59
Reason: Routine

Station number: AMS17
Last Cal Date: March 23, 2026
End time (MST): 12:38

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: API T700
ZAG Make/Model: API T701H

Serial Number: 2449
Serial Number: 359

Analyzer Information

Analyzer make: Thermo Scientific 49i
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 1501663734

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.005143	0.999971	Backgd or Offset:	-0.4	-0.4
Calibration intercept:	-0.800000	-0.220000	Coeff or Slope:	1.033	1.033

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	800.0	0.0	0.1	----
As found High point	5000	1122.8	400.0	402.0	0.995
As found Mid point					
As found Low point					
Baseline Corr As found:	401.9	Previous response	401.3	*% change	0.2%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	800.0	0.0	0.2	----
High point	5000	1123.4	400.0	400.0	1.000
Mid point	5000	923.2	200.0	199.5	1.003
Low point	5000	801.2	100.0	99.4	1.006
As left zero	5000	800.0	0.0	0.2	----
As left span	5000	1122.6	400.0	404.9	0.988
Average Correction Factor					1.003

Notes: Sample inlet filter was changed after as founds. No adjustments made.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

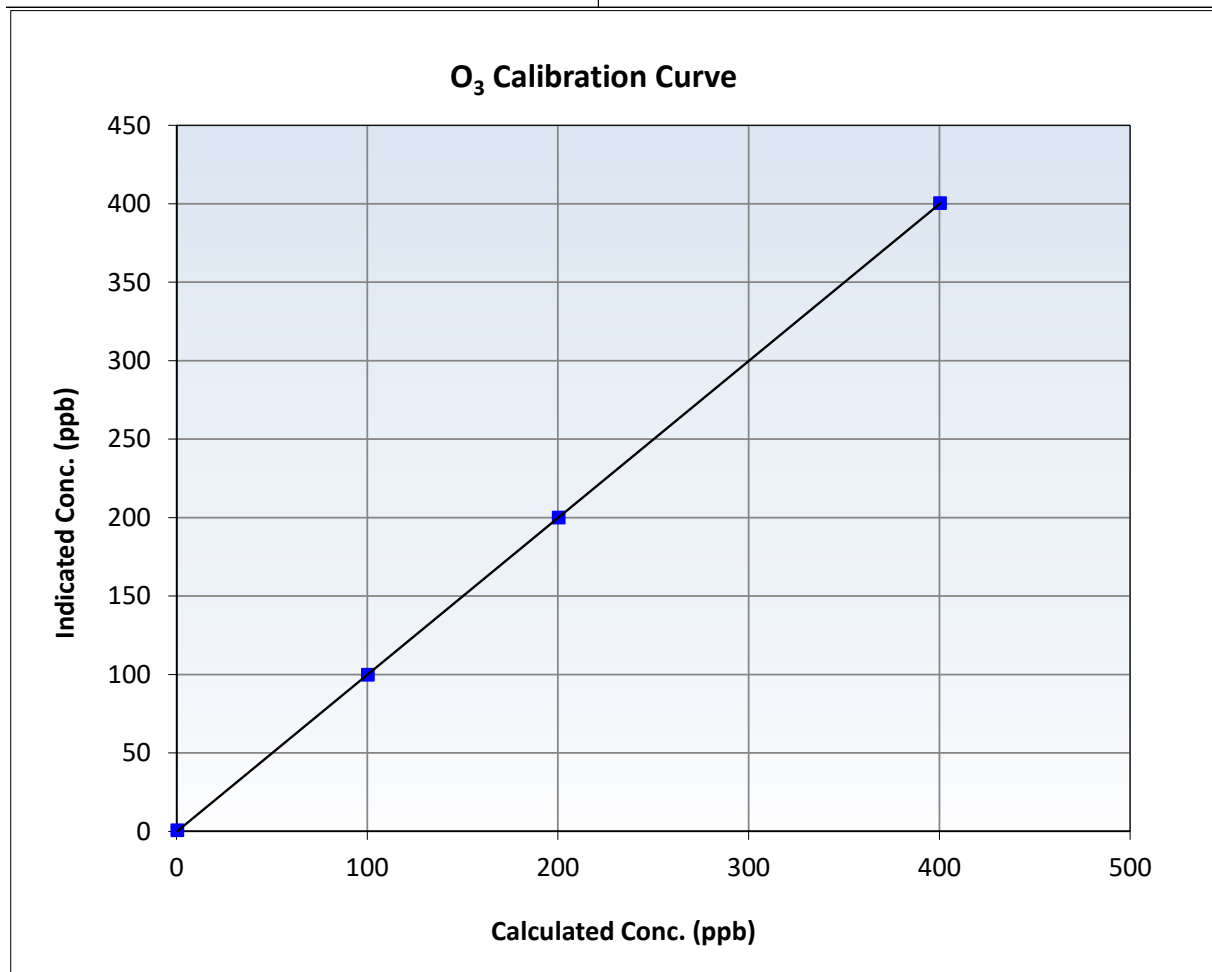
O₃ Calibration Summary

Station Information

Calibration Date:	April 13, 2026	Previous Calibration:	March 23, 2026
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	9:59	End Time (MST):	12:38
Analyzer make:	Thermo Scientific 49i	Analyzer serial #:	1501663734

Calibration Data

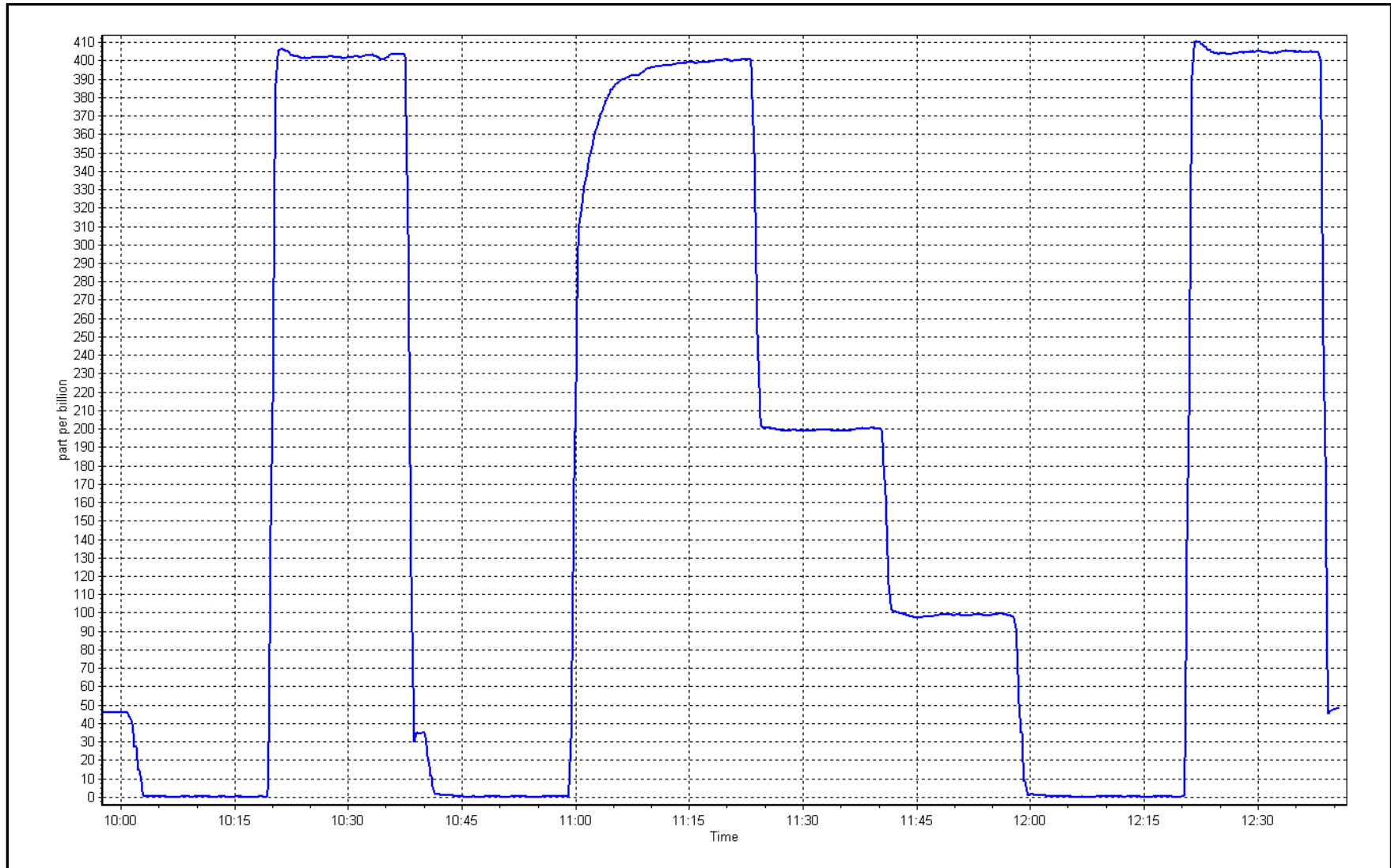
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999995	≥0.995
400.0	400.0	1.0000	Slope	0.999971	0.90 - 1.10
200.0	199.5	1.0025	Intercept	-0.220000	+/- 5
100.0	99.4	1.0060			



O₃ Calibration Plot

Date: April 13, 2026

Location: Wapasu





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Wapasu Station number: AMS 17
Calibration Date: April 14, 2026 Last Cal Date: March 26, 2026
Start time (MST): 12:17 End time (MST): 12:33

Analyzer Make: Teledyne API T640 S/N: 1183
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388754
Temp/RH standard: Alicat FP-25BT S/N: 388754

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	-7.90	-8.11	-7.90	☐	+/- 2 °C
P (mmHg)	707.40	708.02	707.40	☐	+/- 10 mmHg
Flow (LPM)	5.01	4.94	5.01	☐	+/- 0.25 LPM
PW% (pump)	38	----	38	☒	>80%
Zero Verification	PM w/o HEPA: 3.90		PM w/ HEPA: 0.00		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: January 30, 2027
Lot No.: 100128-050-042

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test				☐	+/- 0.5

Date Optical Chamber Cleaned: March 26, 2026
Date Disposable Filter Changed: March 26, 2026

Post- maintenance Zero Verification: PM w/ HEPA: <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: July 21, 2025
Date RH/T Sensor Cleaned: July 21, 2025

Notes:

Verified flow, pressure, temperature and pump power. No adjustment made. Leak check passed.

Calibration by: Jan Castro



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS18 STONY MOUNTAIN APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Stony Mountain Station number: AMS 18
Calibration Date: April 30, 2026 Last Cal Date: March 9, 2026
Start time (MST): 10:39 End time (MST): 16:04
Reason: Routine

Calibration Standards

Cal Gas Concentration: 51.22 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC417455
Removed Cal Gas Conc: 51.22 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: CC417455 Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 2658
Zero Air Gen Model: Teledyne API 701 Serial Number: 4890

Analyzer Information

Analyzer make: Thermo 43i Serial Number: JC1501301453
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.009410	1.012380	Backgd or Offset:	26.7	27.1
Calibration intercept:	-1.757555	0.002385	Coeff or Slope:	0.824	0.824

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.7	----
As found High point	4921	78.1	800.2	808.5	0.991
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	807.8	Previous response	806.0	*% change	0.2%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.6	----
High point	4921	78.1	800.2	810.3	0.988
Mid point	4960	39.1	400.6	405.6	0.988
Low point	4981	19.5	199.7	201.4	0.992
As left zero	5000	0.0	0.0	0.3	----
As left span	4921	78.1	800.2	813.9	0.983
Average Correction Factor:					0.989

Notes: Changed the inlet filter after as founds. Adjusted zero only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

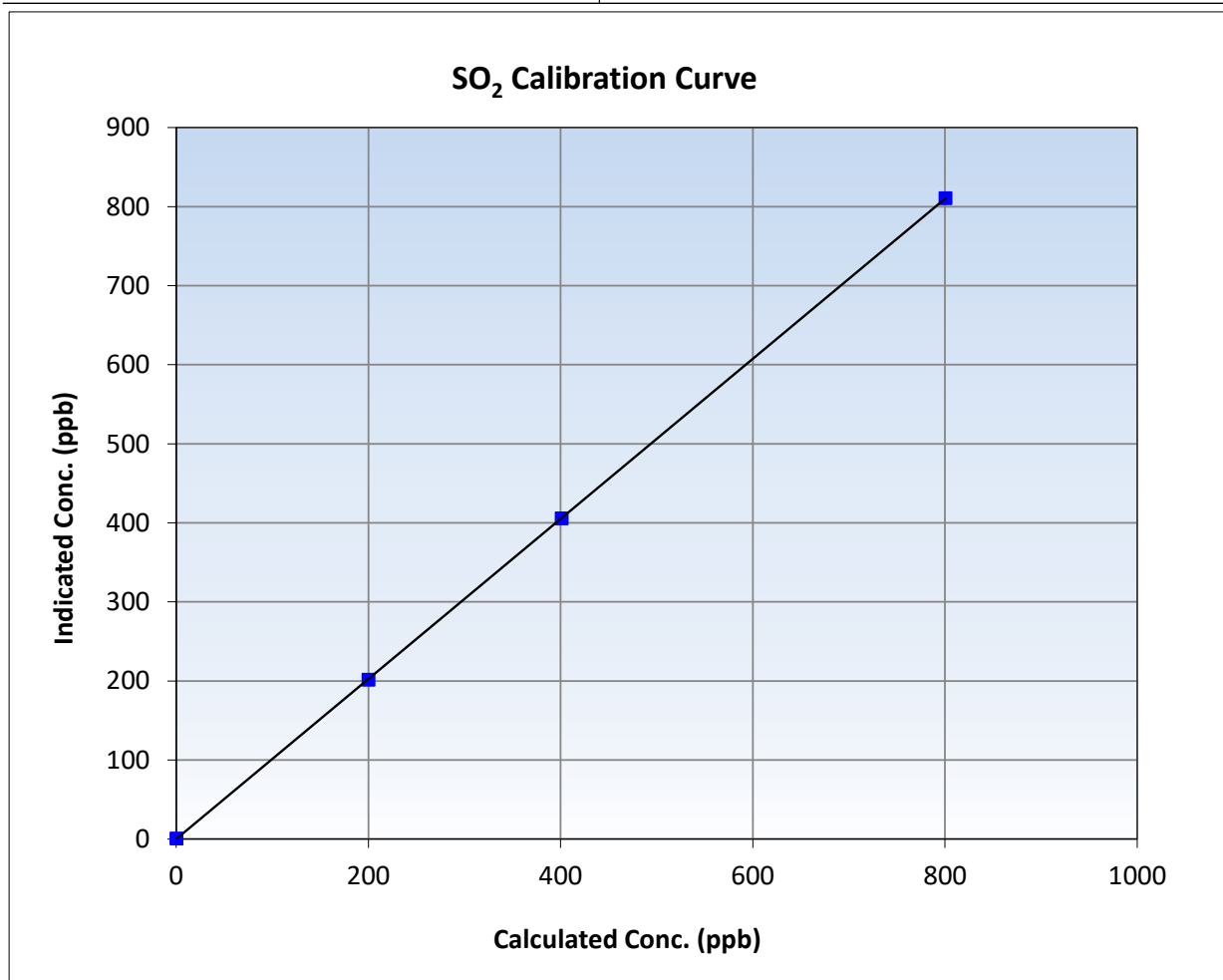
SO₂ Calibration Summary

Station Information

Calibration Date:	April 30, 2026	Previous Calibration:	March 9, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	10:39	End Time (MST):	16:04
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1501301453

Calibration Data

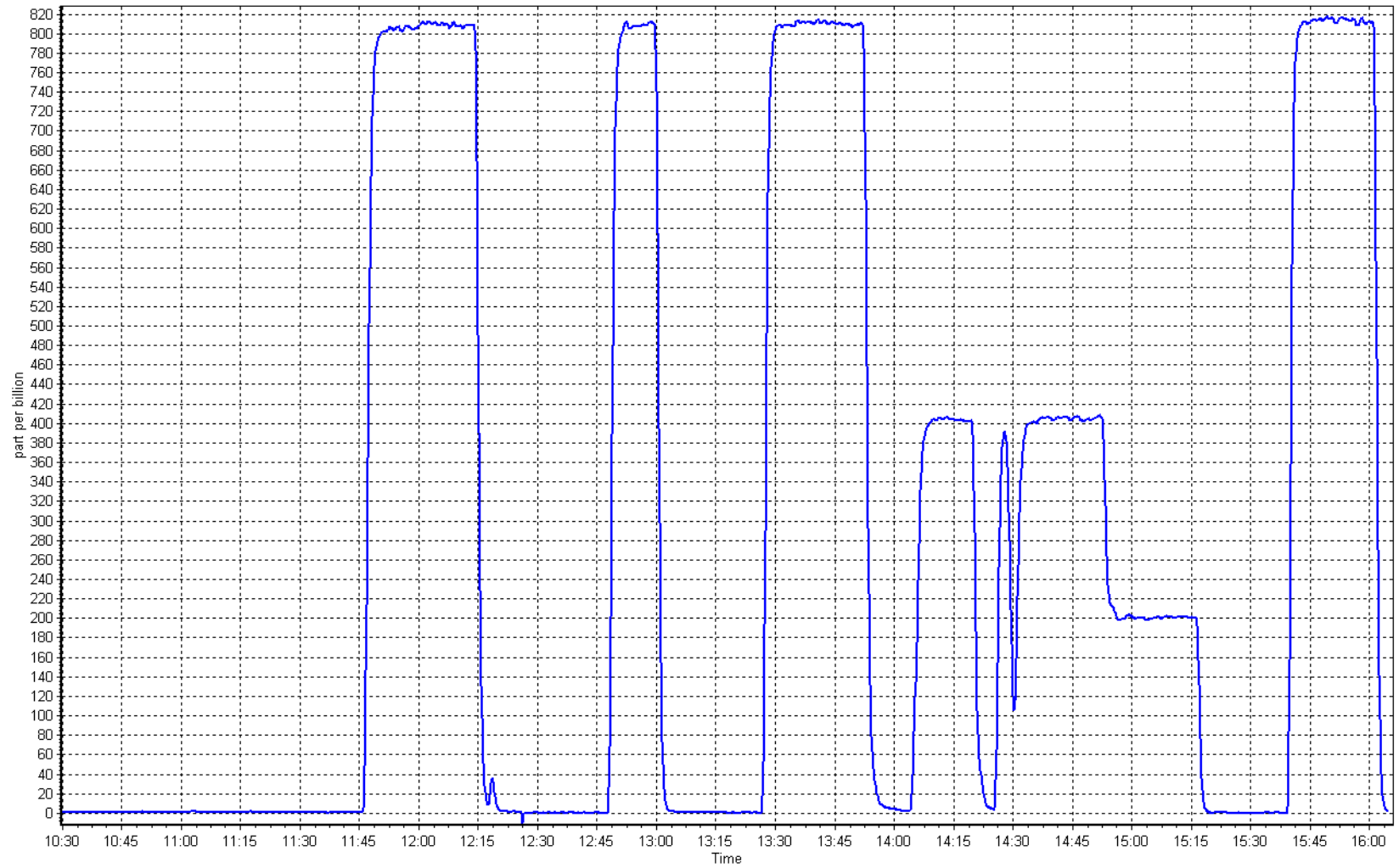
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.6	----	Correlation Coefficient	0.999997	≥0.995
800.2	810.3	0.9875	Slope	1.012380	0.90 - 1.10
400.6	405.6	0.9877	Intercept	0.002385	+/-30
199.7	201.4	0.9917			



SO2 Calibration Plot

Date: April 30, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Stony Mountain Station number: AMS18
Calibration Date: April 13, 2026 Last Cal Date: March 19, 2026
Start time (MST): 11:18 End time (MST): 16:02
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.86 ppm Cal Gas Exp Date: May 9, 2027
Cal Gas Cylinder #: CC523103
Removed Cal Gas Conc: 4.86 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 2658
ZAG Make/Model: Teledyne API T701 Serial Number: 4890

Analyzer Information

Analyzer make: Thermo 43i-TLE Analyzer serial #: 1218153359
Converter make: CD Nova CDN-101 Converter serial #: 555
Analyzer Range: 0 - 100 ppb Converter Temp: 800 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002942	1.002801	Backgd or Offset:	2.90	2.91
Calibration intercept:	0.000873	0.080808	Coeff or Slope:	1.159	1.159

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.1	----
As found High point	4917	82.3	80.0	80.9	0.990
As found Mid point	4958	41.2	40.1	40.5	0.991
As found Low point	4979	20.6	20.0	20.3	0.991
New cylinder response					
Baseline Corr As found:	80.8	Prev response:	80.24	*% change:	0.7%
Baseline Corr 2nd AF pt:	40.4	AF Slope:	1.009942	AF Intercept:	0.080704
Baseline Corr 3rd AF pt:	20.2	AF Correlation:	1.000000	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4917	82.3	80.0	80.3	0.996
Mid point	4958	41.2	40.1	40.4	0.991
Low point	4979	20.6	20.0	19.9	1.006
As left zero	5000	0.0	0.0	0.3	----
As left span	4917	82.3	80.0	80.3	0.996
SO2 Scrubber Check	4923	77.1	771.0	0.1	----
Date of last scrubber change:	17-Dec-21		Ave Corr Factor		0.998
Date of last converter efficiency test:					

Notes: Changed the inlet filter after as founds. No adjustments made.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

TRS Calibration Summary

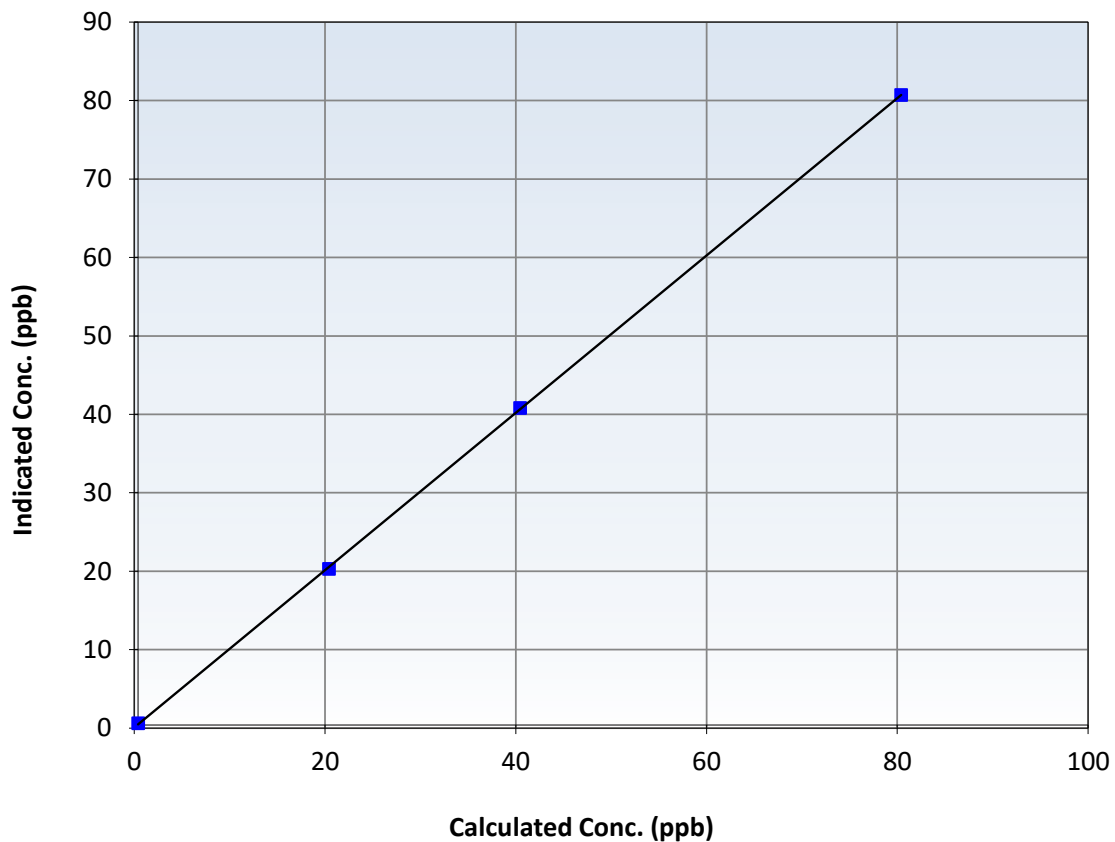
Station Information

Calibration Date:	April 13, 2026	Previous Calibration:	March 19, 2026
Station Name:	Stony Mountain	Station Number:	AMS18
Start Time (MST):	11:18	End Time (MST):	16:02
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1218153359

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999970		≥ 0.995
80.0	80.3	0.9963	Slope	1.002801		$0.90 - 1.10$
40.1	40.4	0.9914	Intercept	0.080808		± 3
20.0	19.9	1.0063				

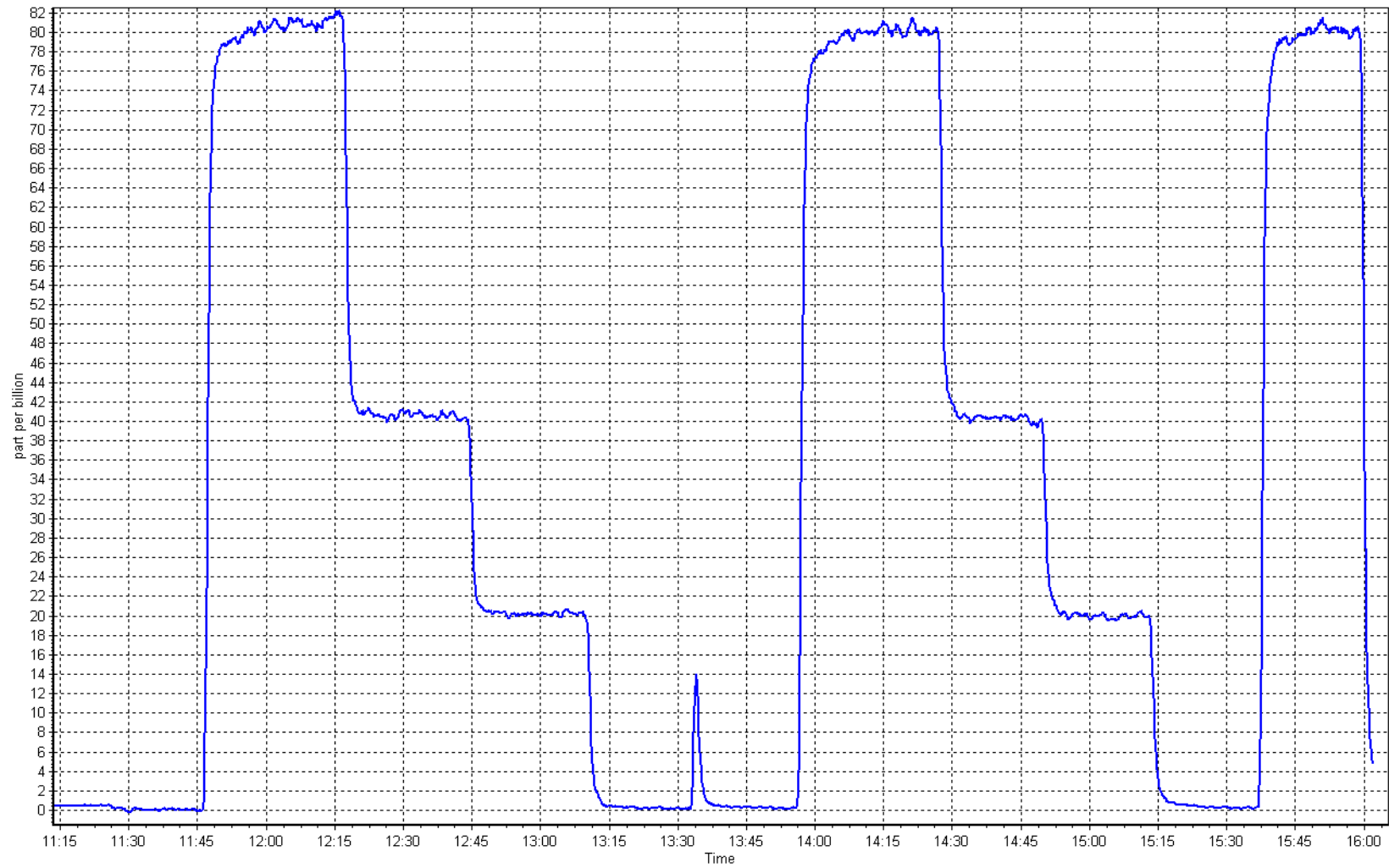
TRS Calibration Curve



TRS Calibration Plot

Date: April 13, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name:	Stony Mountain	Station number:	AMS 18
Calibration Date:	April 30, 2026	Last Cal Date:	March 9, 2026
Start time (MST):	10:39	End time (MST):	16:04
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	XC026809B	Cal Gas Expiry Date:	January 12, 2029
CH ₄ Cal Gas Conc.	504.9 ppm	CH ₄ Equiv Conc.	1076.6 ppm
C ₃ H ₈ Cal Gas Conc.	207.9 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH ₄ Conc.	504.9 ppm	CH ₄ Equiv Conc.	1076.6 ppm
Removed C ₃ H ₈ Conc.	207.9 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	2658
Zero Air Gen model:	Teledyne API T701	Serial Number:	4890

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130
THC Range:	0 - 20 ppm	NMHC/CH ₄ Range:	0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.85E-04	2.89E-04	NMHC SP Ratio:	5.31E-05
CH ₄ Retention time:	15.0	15.0	NMHC Peak Area:	168304
Zero Chromatogram:	OFF	OFF	Flat Baseline:	ON

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.02	----
As found High point	4921	78.1	16.82	16.38	1.028
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.36	Prev response	16.90	*% change	-3.3%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.02	----
High point	4921	78.1	16.82	16.82	1.000
Mid point	4960	39.1	8.42	8.43	0.999
Low point	4981	19.5	4.20	4.18	1.004
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	16.82	16.99	0.990
Average Correction Factor					1.001

Notes: The H₂ and N₂ cylinders were replaced immediately upon arrival, as they were empty. Inlet filter was changed after as founds. The NM window timing start was adjusted from 34 to 32.8 according to the as-found chromatogram. Adjusted both zero and span.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	78.1	8.93	8.64	1.033
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.64	Prev response	8.95	*% change	-3.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4921	78.1	8.93	8.94	0.999
Mid point	4960	39.1	4.47	4.48	0.998
Low point	4981	19.5	2.23	2.22	1.003
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	8.93	9.05	0.987
Average Correction Factor					1.000

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.02	Limit = 0.90-1.10
As found High point	4921	78.1	7.89	7.73	1.022
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.72	Prev response	7.96	*% change	-3.2%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.02	Limit = 0.95-1.05
High point	4921	78.1	7.89	7.89	1.000
Mid point	4960	39.1	3.95	3.94	1.002
Low point	4981	19.5	1.97	1.96	1.006
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	7.89	7.94	0.993
Average Correction Factor					1.002

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.001706	0.999868
THC Cal Offset:	0.055678	0.003462
CH ₄ Cal Slope:	1.004824	0.998770
CH ₄ Cal Offset:	0.033625	0.004019
NMHC Cal Slope:	0.999209	1.001194
NMHC Cal Offset:	0.022053	-0.001956

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

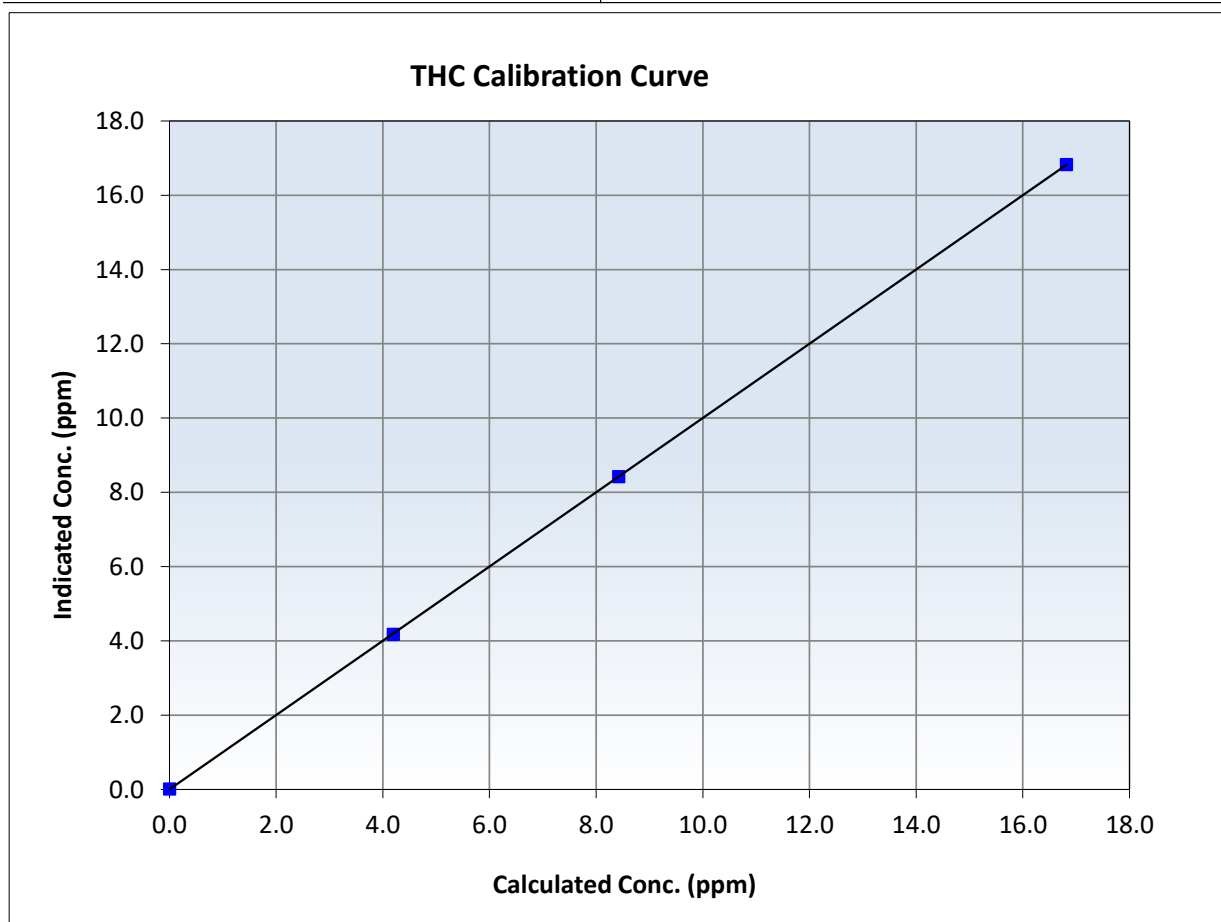
THC Calibration Summary

Station Information

Calibration Date:	April 30, 2026	Previous Calibration:	March 9, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	10:39	End Time (MST):	16:04
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.02	----	Correlation Coefficient	0.999996	≥ 0.995
16.82	16.82	0.9998	Slope	0.999868	0.90 - 1.10
8.42	8.43	0.9993	Intercept	0.003462	± 0.5
4.20	4.18	1.0039			





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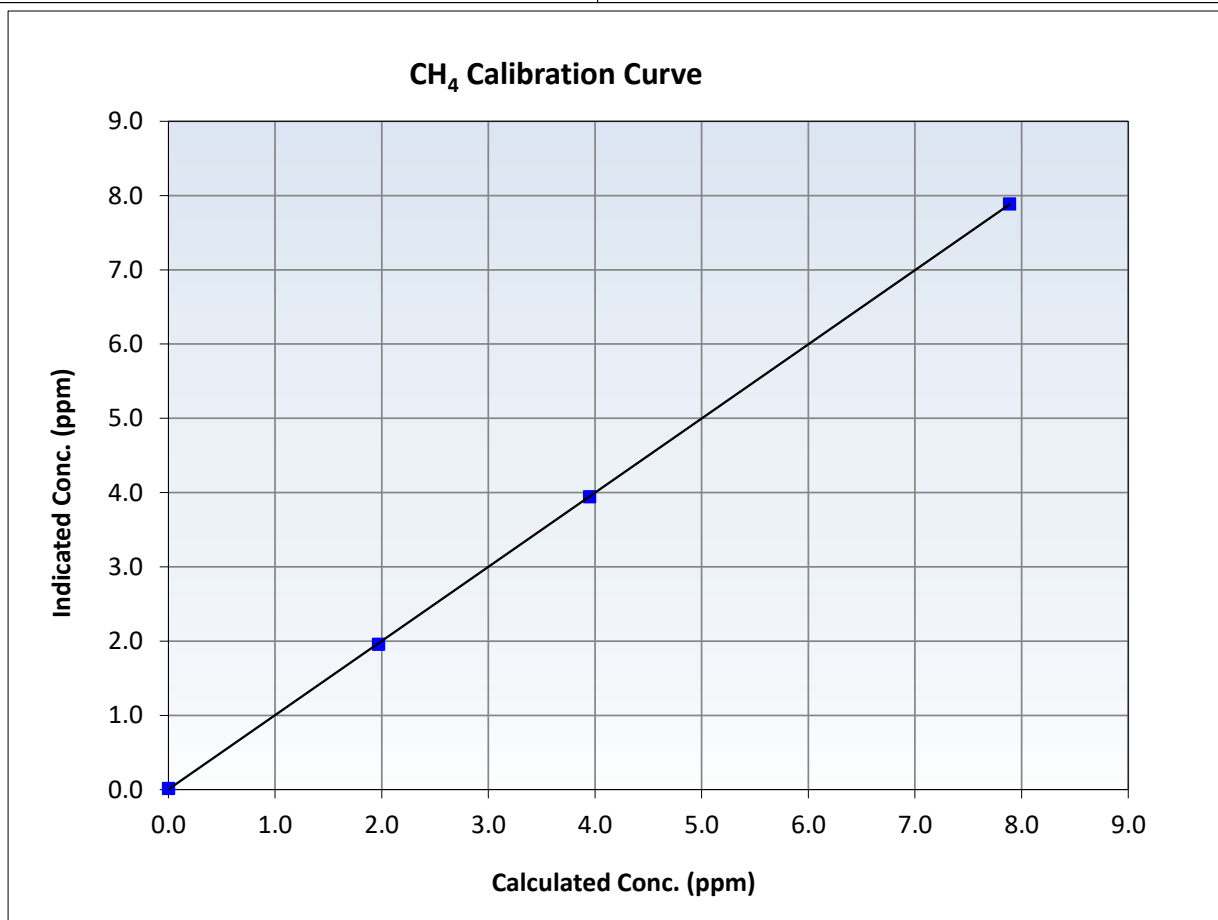
CH₄ Calibration Summary

Station Information

Calibration Date:	April 30, 2026	Previous Calibration:	March 9, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	10:39	End Time (MST):	16:04
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.02	----	Correlation Coefficient	0.999989	≥ 0.995
7.89	7.89	1.0000	Slope	0.998770	$0.90 - 1.10$
3.95	3.94	1.0015	Intercept	0.004019	± 0.5
1.97	1.96	1.0056			





Wood Buffalo Environmental Association

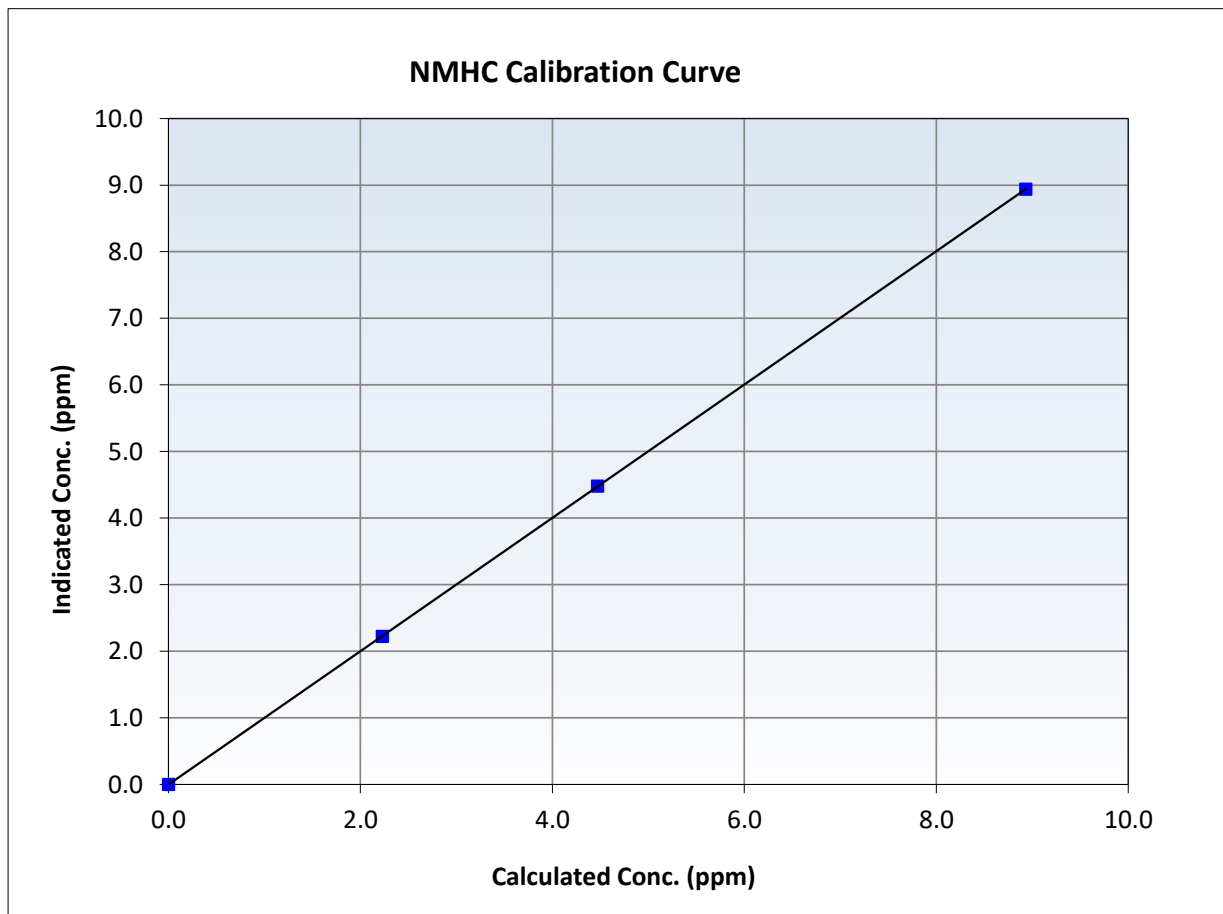
NMHC Calibration Summary

Station Information

Calibration Date:	April 30, 2026	Previous Calibration:	March 9, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	10:39	End Time (MST):	16:04
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

Calibration Data

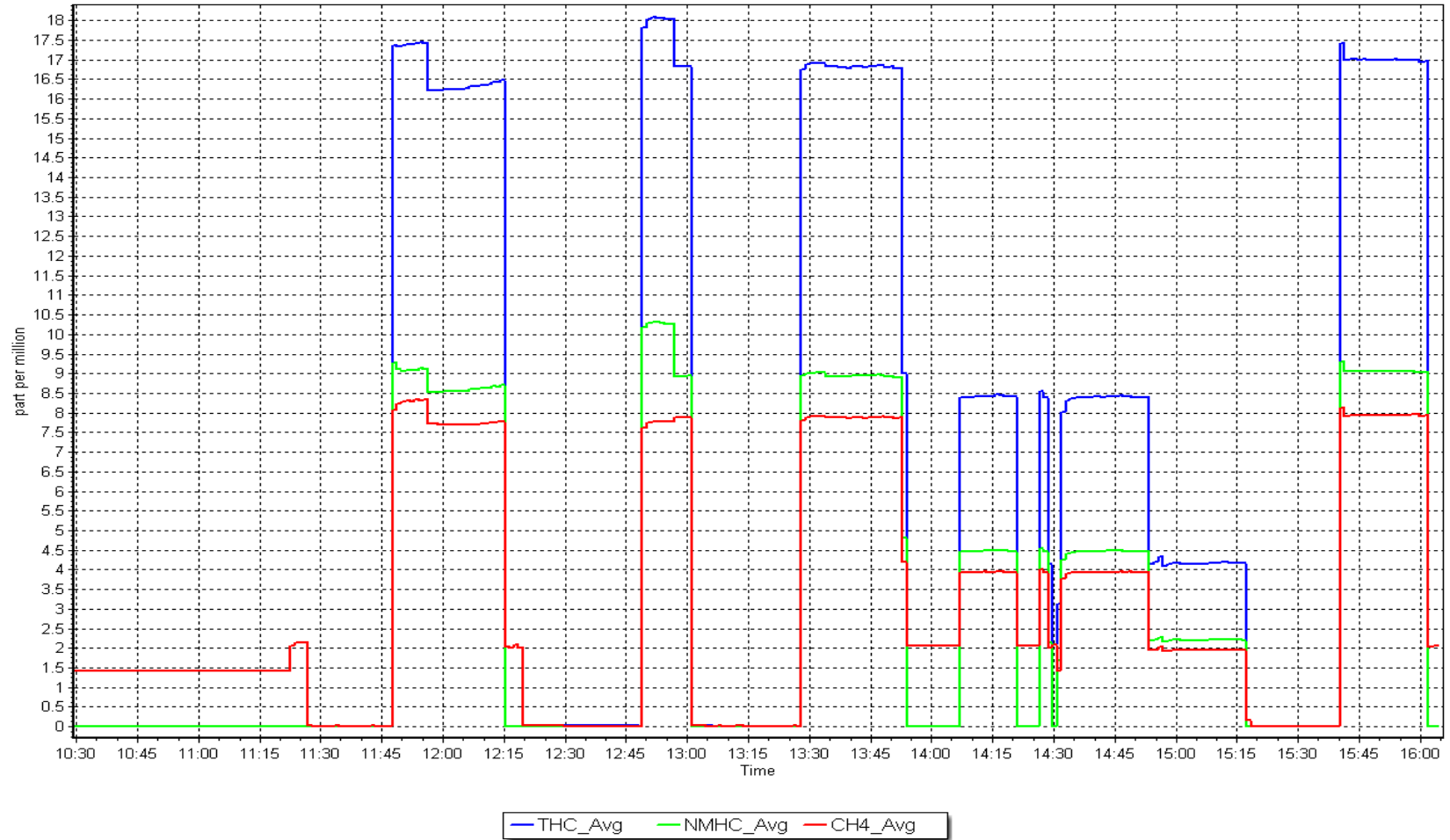
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999998	<i>≥0.995</i>
8.93	8.94	0.9992	Slope	1.001194	<i>0.90 - 1.10</i>
4.47	4.48	0.9977	Intercept	-0.001956	<i>+/-0.5</i>
2.23	2.22	1.0029			



NMHC Calibration Plot

Date: April 30, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Stony Mountain
Station number: AMS 18
Calibration Date: April 8, 2026
Last Cal Date: March 12, 2026
Start time (MST): 11:05
End time (MST): 16:16
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0045516
NO_x Cal Gas Conc: 60.30 ppm
Removed Cylinder #: N/A
Removed Gas NO_x Conc: 60.30 ppm
NO_x gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API 701
Cal Gas Expiry Date: November 17, 2026
NO Cal Gas Conc: 60.10 ppm
Removed Gas Exp Date: N/A
Removed Gas NO Conc: 60.10 ppm
NO gas Diff:
Serial Number: 2658
Serial Number: 4890

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.1	0.1	0.0	----	----
AF High point	4933	66.6	803.3	800.6	2.7	742.3	735.9	6.4	1.0823	1.0881
AF Mid point										
AF Low point										
New cyl resp										

Previous Respo 4933 NO_x = 801.8 ppb NO = 798.7 ppb * = > +/-5% change initiates investigation *Percent Change NO_x = -8.0%
Baseline Corr 1st pt NO_x = 742.2 ppb NO = 735.8 ppb *Percent Change NO = -8.6%
Baseline Corr 2nd pt NO_x = NA ppb NO = NA ppb
Baseline Corr 3rd pt NO_x = NA ppb NO = NA ppb

As Found Statistics

As found NO_x r²: Nx SI: Nx Int:
As found NO r²: NO SI: NO Int:
As found NO₂ r²: NO₂ SI: NO₂ Int:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo Scientific 42i Serial Number: 1501663731
NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.041	1.127	NO bkgnd or offset:	10.4	11.2
NOX coeff or slope:	1.000	1.000	NOX bkgnd or offset:	10.5	11.3
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	218.9	218.3

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999977	0.998198
NO _x Cal Offset:	-1.428521	-1.128679
NO Cal Slope:	1.001095	0.999781
NO Cal Offset:	-2.729839	-2.269756
NO ₂ Cal Slope:	1.003177	0.998008
NO ₂ Cal Offset:	0.519107	0.514691

Dilution Calibration Data

Set Point	Dilution flow rate (scm)	Source gas flow rate (scm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.3	0.2	0.1	----	----
High point	4933	66.6	803.3	800.6	2.7	801.6	799.6	1.9	1.0021	1.0012
Mid point	4967	33.3	401.6	400.2	1.3	398.4	396.0	2.5	1.0080	1.0107
Low point	4983	16.6	200.2	199.5	0.7	197.7	195.2	2.4	1.0127	1.0223
As left zero	5000	0.0	0.0	0.0	0.0	0.3	0.2	0.1	----	----
As left span	4933	66.6	803.3	385.2	418.1	801.8	385.2	416.7	1.0018	1.0000
Average Correction Factor									1.0076	1.0114

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.1	----	----
High GPT point	799.6	383.5	418.8	418.2	1.0013	99.9%
Mid GPT point	799.6	595.5	206.8	207.2	0.9979	100.2%
Low GPT point	799.6	699.0	103.3	103.9	0.9939	100.6%
Average Correction Factor					0.9977	100.2%

Notes:

An investigation was conducted, diagnostics were consistent with previous calibration results. No issues were identified with the setup, and the flow remained within acceptable limits. Changed sample inlet filter after as founds, span adjusted.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

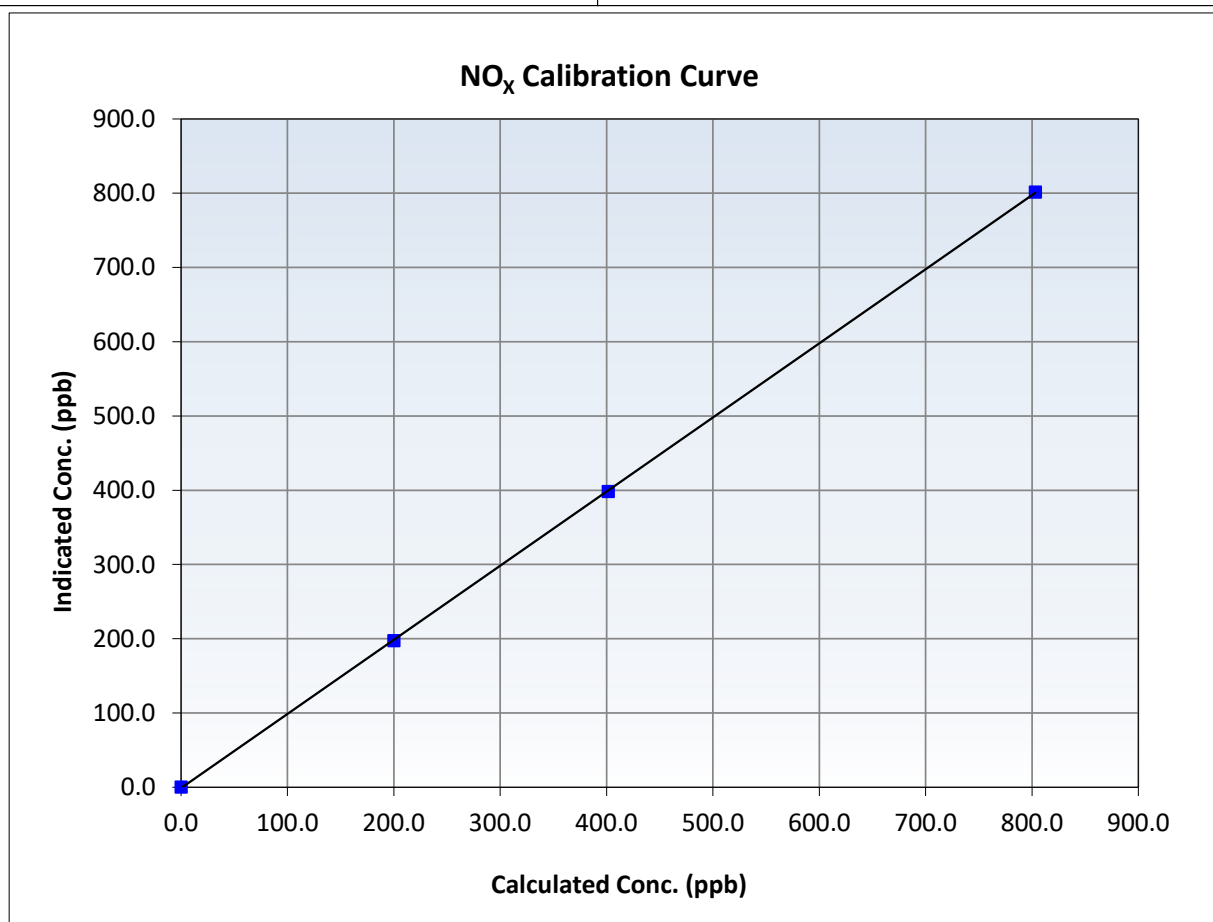
NO_x Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 12, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:05	End Time (MST):	16:16
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1501663731

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999984	≥0.995
803.3	801.6	1.0021	Slope	0.998198	0.90 - 1.10
401.6	398.4	1.0080	Intercept	-1.128679	+/-20
200.2	197.7	1.0127			





Wood Buffalo Environmental Association

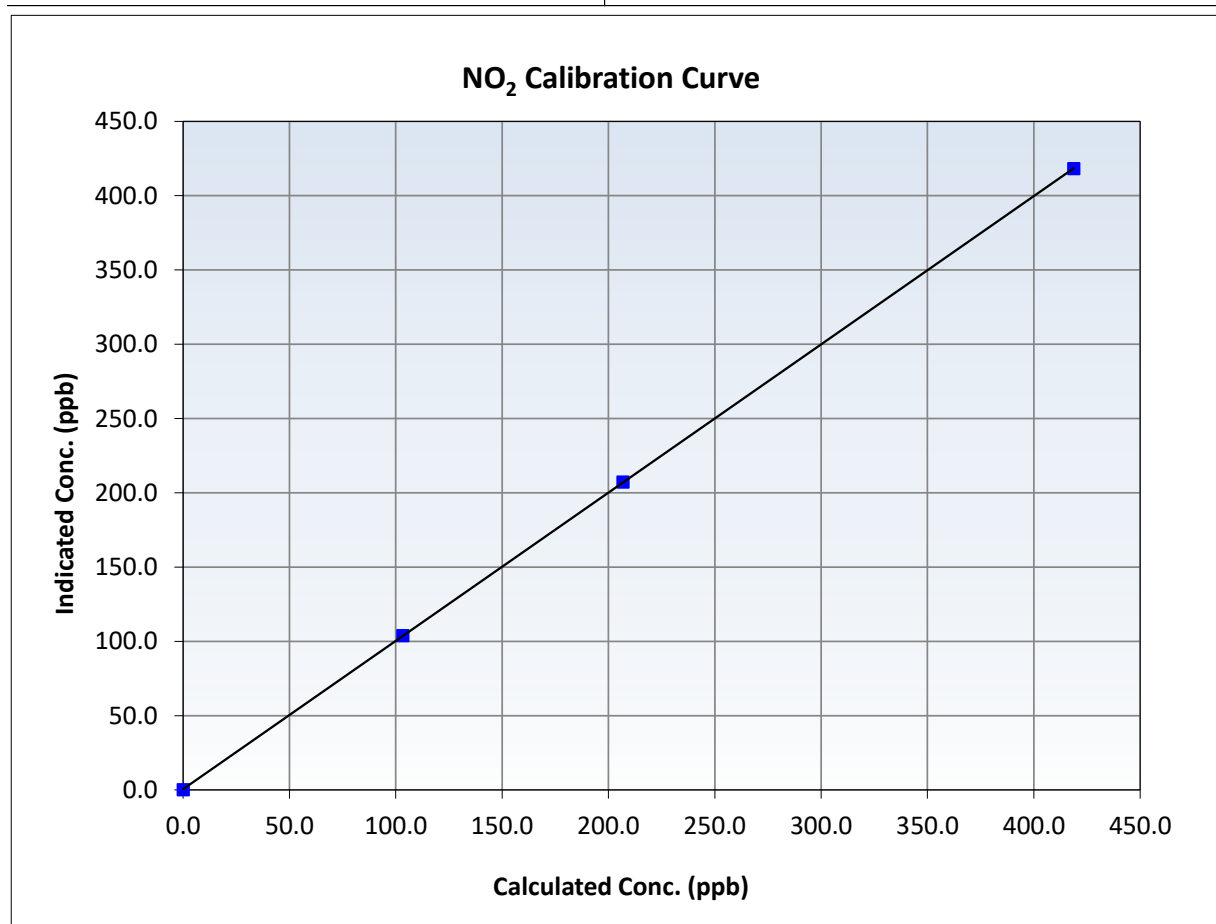
NO₂ Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 12, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:05	End Time (MST):	16:16
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1501663731

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999995	≥0.995
418.8	418.2	1.0013	Slope	0.998008	0.90 - 1.10
206.8	207.2	0.9979	Intercept	0.514691	+/-20
103.3	103.9	0.9939			





Wood Buffalo Environmental Association

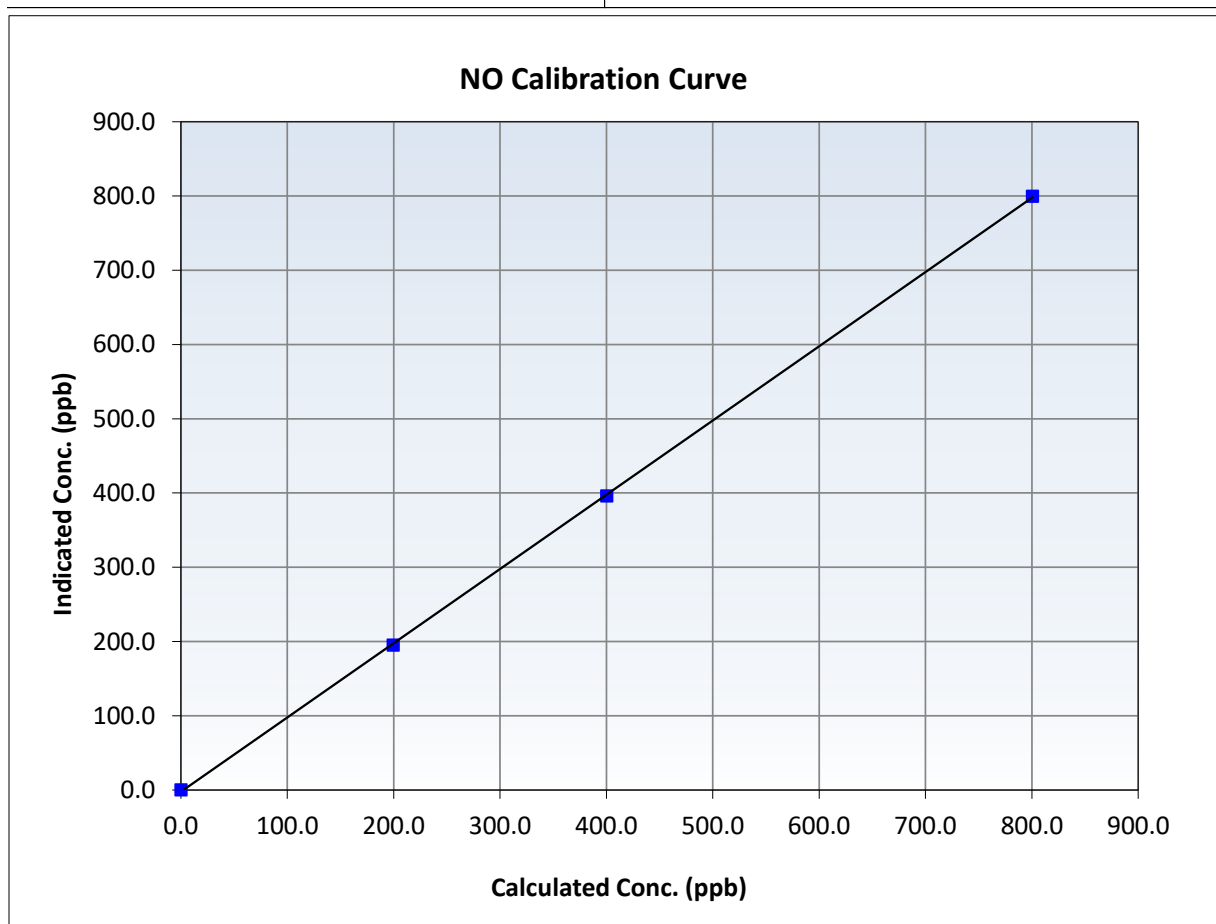
NO Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 12, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:05	End Time (MST):	16:16
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1501663731

Calibration Data

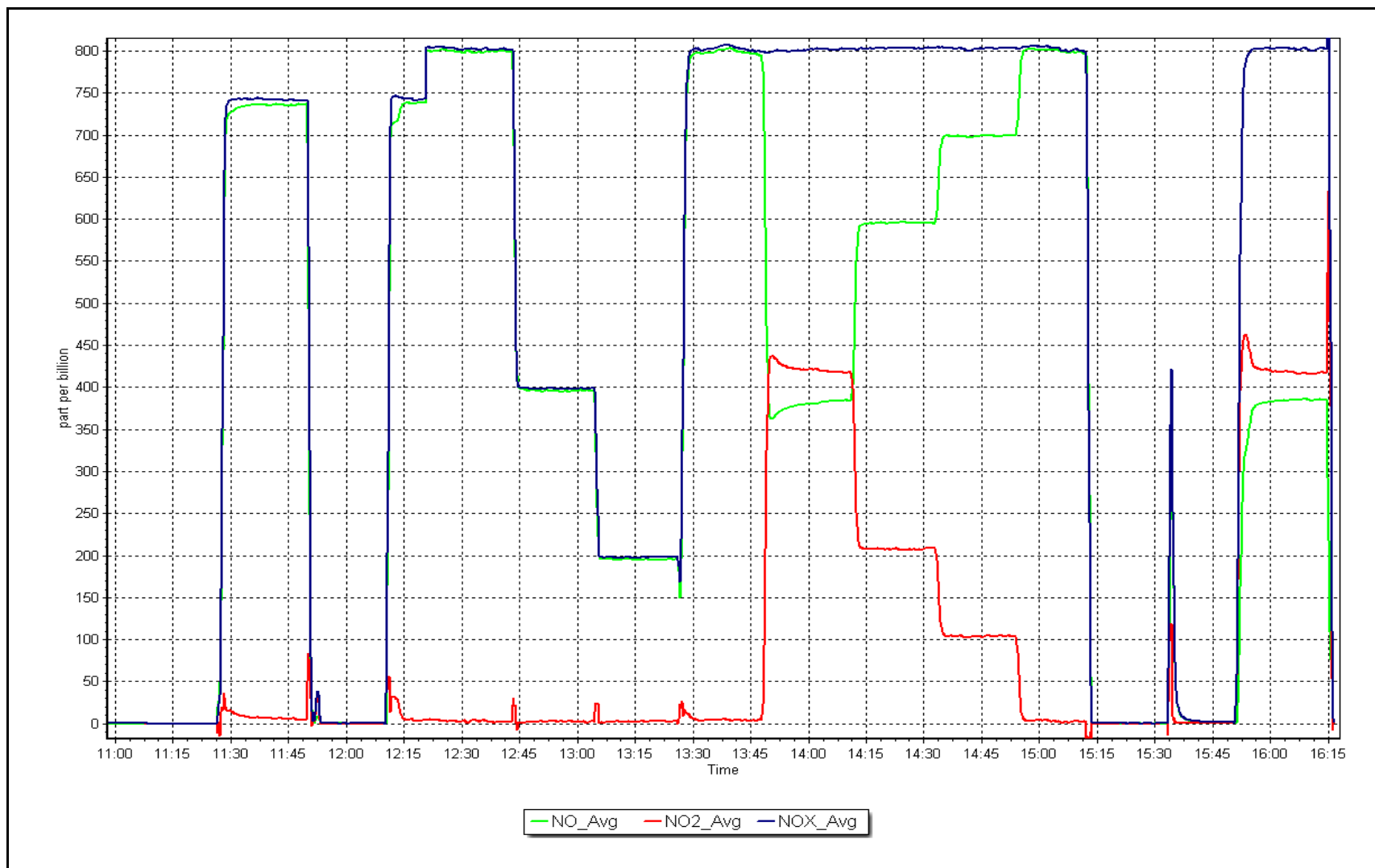
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999955	≥ 0.995
800.6	799.6	1.0012	Slope	0.999781	$0.90 - 1.10$
400.2	396.0	1.0107	Intercept	-2.269756	± 20
199.5	195.2	1.0223			



NO_x Calibration Plot

Date: April 8, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Stony Mountain
Calibration Date: April 1, 2026
Start time (MST): 11:04
Reason: Routine

Station number: AMS 18
Last Cal Date: March 17, 2026
End time (MST): 14:52

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API 701H

Serial Number: 2658
Serial Number: 4890

Analyzer Information

Analyzer make: API T400
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 825

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999086	0.997971	Backgd or Offset:	2.7	2.7
Calibration intercept:	0.260000	0.680000	Coeff or Slope:	0.985	0.967

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted
					Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	NA	0.0	0.1	----
As found High point	4888	1138.4	400.0	404.3	0.990
As found Mid point					
As found Low point					
Baseline Corr As found:	404.2	Previous response	399.9	*% change	1.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	NA	0.0	0.8	----
High point	4888	1138.4	400.0	399.9	1.000
Mid point	4888	890.7	200.0	200.3	0.999
Low point	4888	758.3	100.0	100.3	0.997
As left zero	5000	NA	0.0	0.5	----
As left span	4812	1138.4	400.0	400.4	0.999
Average Correction Factor					0.999

Notes: Sample inlet filter changed and adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

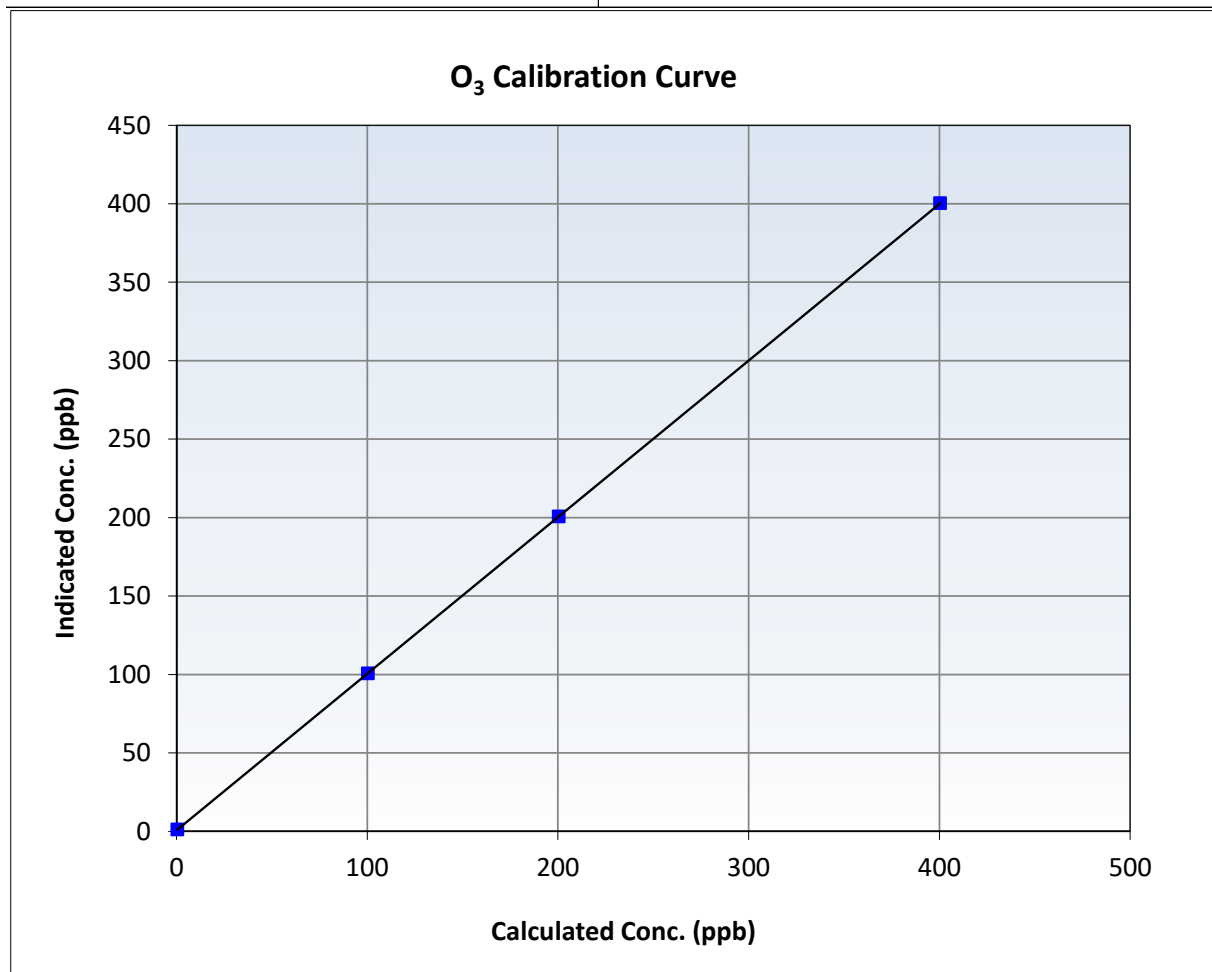
O₃ Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	March 17, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:04	End Time (MST):	14:52
Analyzer make:	API T400	Analyzer serial #:	825

Calibration Data

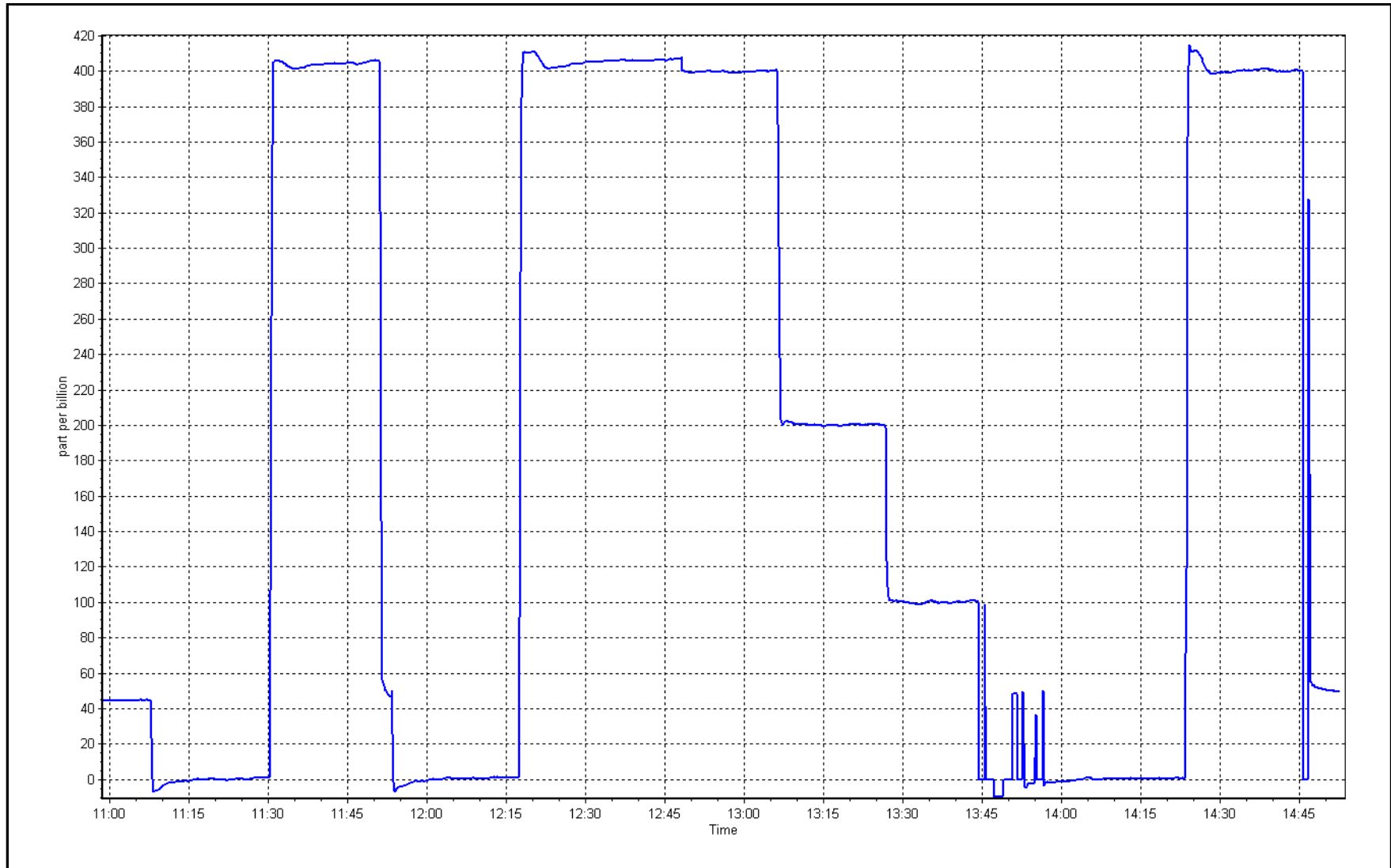
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.8	----	Correlation Coefficient	0.999999	≥ 0.995
400.0	399.9	1.0003	Slope	0.997971	$0.90 - 1.10$
200.0	200.3	0.9985	Intercept	0.680000	± 5
100.0	100.3	0.9970			



O₃ Calibration Plot

Date: April 1, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Stony Mountain Station number: AMS 18
Calibration Date: April 30, 2026 Last Cal Date: March 19, 2026
Start time (MST): 15:33 End time (MST): 15:56

Analyzer Make: API T640 S/N: 324
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25 S/N: 388749
Temp/RH standard: Alicat FP-25 S/N: 388749

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	20	19.08	20	☐	+/- 2 °C
P (mmHg)	701.2	701.32	701.2	☐	+/- 10 mmHg
Flow (LPM)	4.99	4.946	4.99	☐	+/- 0.25 LPM
PW% (pump)	49	-----	49	☐	>80%
Zero Verification	PM w/o HEPA:	14.1	PM w/ HEPA:	0.0	<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: Expiry Date:
Lot No.:

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test				☐	+/- 0.5

Date Optical Chamber Cleaned: January 26, 2026
Date Disposable Filter Changed: February 25, 2026

Post- maintenance Zero Verification: PM w/ HEPA: <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: September 23, 2025
Date RH/T Sensor Cleaned: September 23, 2025

Notes: Flow pressure and temp checked, leak check passed, no adjustments made.

Calibration by: Mohammed Kashif



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS19
FIREBAG
APRIL 2026**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Firebag
Calibration Date: April 9, 2026
Start time (MST): 9:19
Reason: Routine

Station number: AMS 19
Last Cal Date: March 11, 2026
End time (MST): 12:27

Calibration Standards

Cal Gas Concentration: 50.97 ppm
Cal Gas Cylinder #: CC705799
Removed Cal Gas Conc: 50.97 ppm
Removed Gas Cyl #:
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701H

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5258
Serial Number: 201

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0 - 1000 ppb

Serial Number: 1410661308

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999841	1.001570	Backgd or Offset:	11.8	13.6
Calibration intercept:	-1.299467	-1.979418	Coeff or Slope:	1.014	0.997

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	1.7	----
As found High point	4922	78.5	800.2	815.2	0.984
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	813.5	Previous response	798.8	*% change	1.8%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.3	----
High point	4922	78.5	800.2	799.9	1.000
Mid point	4961	39.2	399.6	398.7	1.002
Low point	4980	19.6	199.8	195.6	1.021
As left zero	4999	0.0	0.0	-0.2	----
As left span	4922	78.4	799.2	802.5	0.996
Average Correction Factor:					1.008

Notes: Inlet filter changed after as founds, zero adjusted, span adjusted.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

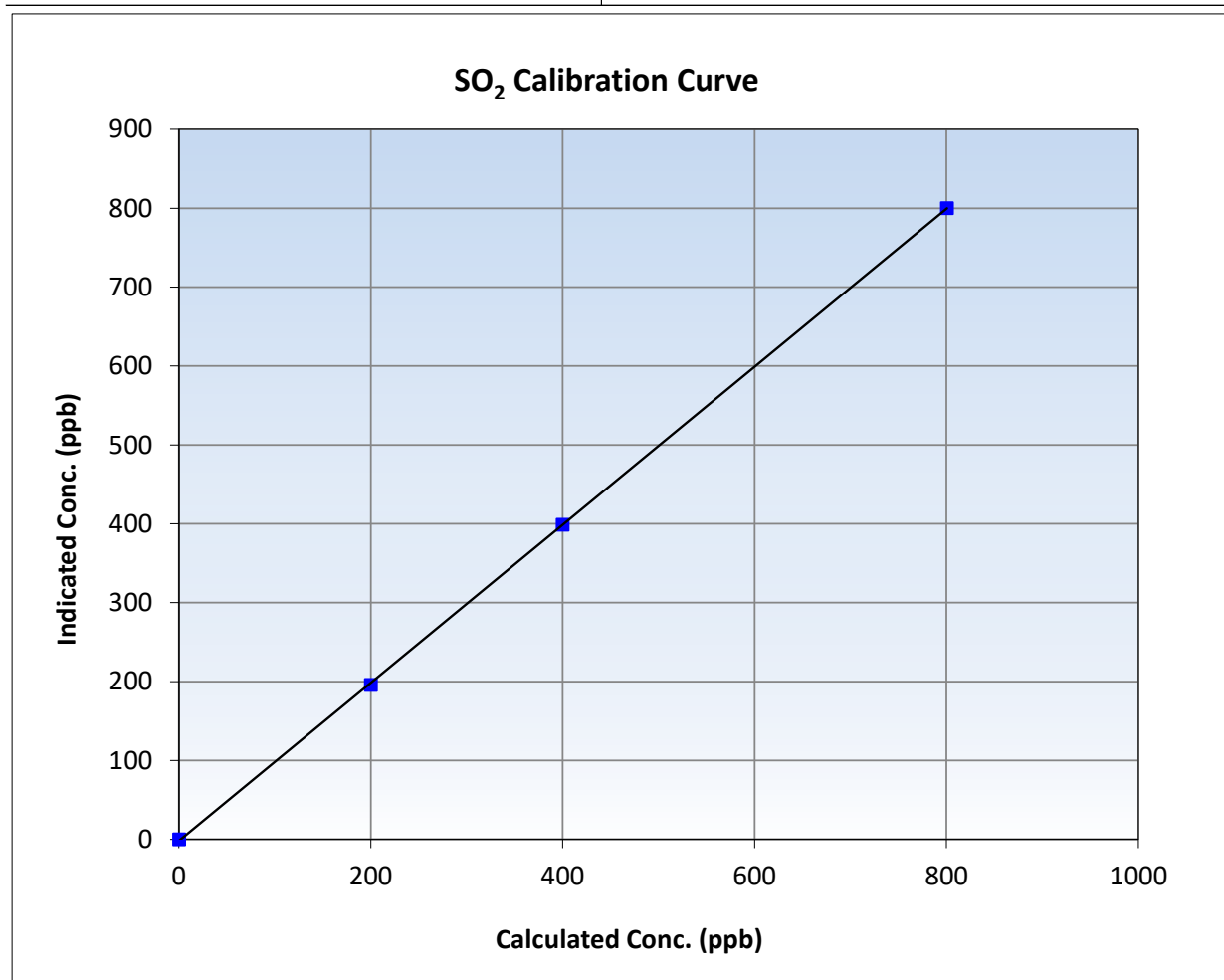
SO₂ Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 11, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:19	End Time (MST):	12:27
Analyzer make:	Thermo 43i	Analyzer serial #:	1410661308

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999973	≥0.995
800.2	799.9	1.0004	Slope	1.001570	0.90 - 1.10
399.6	398.7	1.0023	Intercept	-1.979418	+/-30
199.8	195.6	1.0215			



SO2 Calibration Plot

Date: April 9, 2026

Location: Firebag





Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Firebag Station number: AMS 19
Calibration Date: April 20, 2026 Last Cal Date: April 9, 2026
Start time (MST): 10:17 End time (MST): 11:40
Reason: Removal

Calibration Standards

Cal Gas Concentration: 50.97 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC705799
Removed Cal Gas Conc: 50.97 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 5258
Zero Air Gen Model: Teledyne API T701H Serial Number: 201

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1410661308
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001570		Backgd or Offset:	13.6	
Calibration intercept:	-1.979418		Coeff or Slope:	0.997	

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-2.4	----
As found High point	4922	78.5	800.2	785.9	1.015
As found Mid point	4961	39.2	399.6	389.5	1.020
As found Low point	4980	19.6	199.8	190.5	1.036
New cylinder response					
Baseline Corr As found:	788.3	Previous response	799.5	*% change	-1.4%
Baseline Corr 2nd AF pt:	391.9	AF Slope:	0.986556	AF Intercept:	-4.325917
Baseline Corr 3rd AF pt:	192.9	AF Correlation:	0.999971	* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					

Average Correction Factor:

Notes:

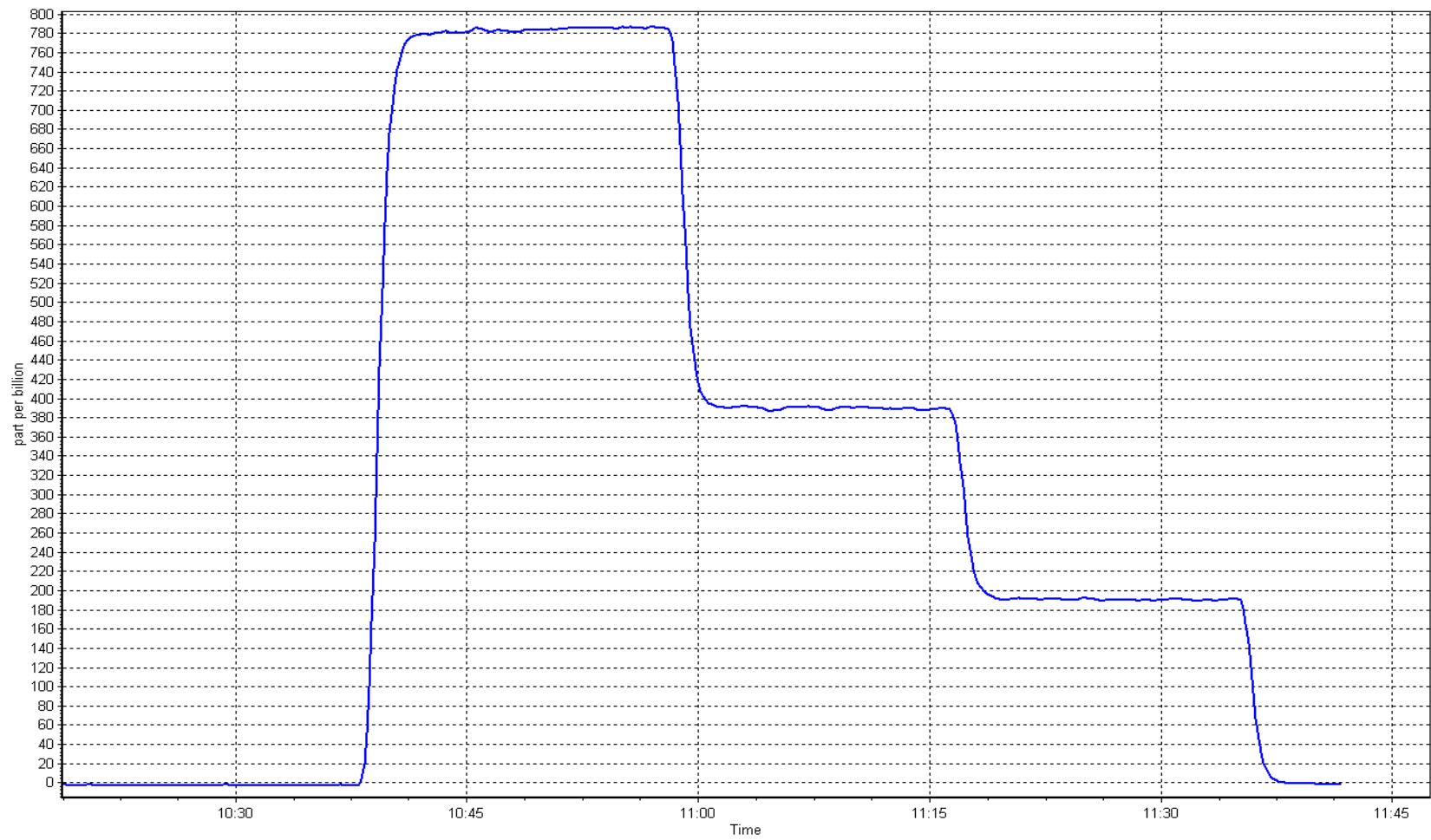
Instrument removed

Calibration Performed By: Jason Brooks

SO2 Calibration Plot

Date: April 20, 2026

Location: Firebag





Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Firebag
Calibration Date: April 20, 2026
Start time (MST): 12:15
Reason: Install

Station number: AMS 19
Last Cal Date: N/A
End time (MST): 15:15

Calibration Standards

Cal Gas Concentration: 50.97 ppm
Cal Gas Cylinder #: CC705799
Removed Cal Gas Conc: 50.97 ppm
Removed Gas Cyl #:
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701H

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5258
Serial Number: 201

Analyzer Information

Analyzer make: Thermo 43iQTL
Analyzer Range: 0 - 1000 ppb

Serial Number: 1253044366

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	N/A	0.998737	Backgd or Offset:	N/A	1.68
Calibration intercept:	N/A	-0.962985	Coeff or Slope:	N/A	1.057

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	NA	Previous response	NA	*% change	NA
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4922	78.5	800.2	798.5	1.002
Mid point	4961	39.2	399.6	398.7	1.002
Low point	4980	19.6	199.8	196.4	1.017
As left zero	5000	0.0	0.0	0.5	----
As left span	4922	78.5	800.2	800.5	1.000
Average Correction Factor:					1.007

Notes:

Instrument installed

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

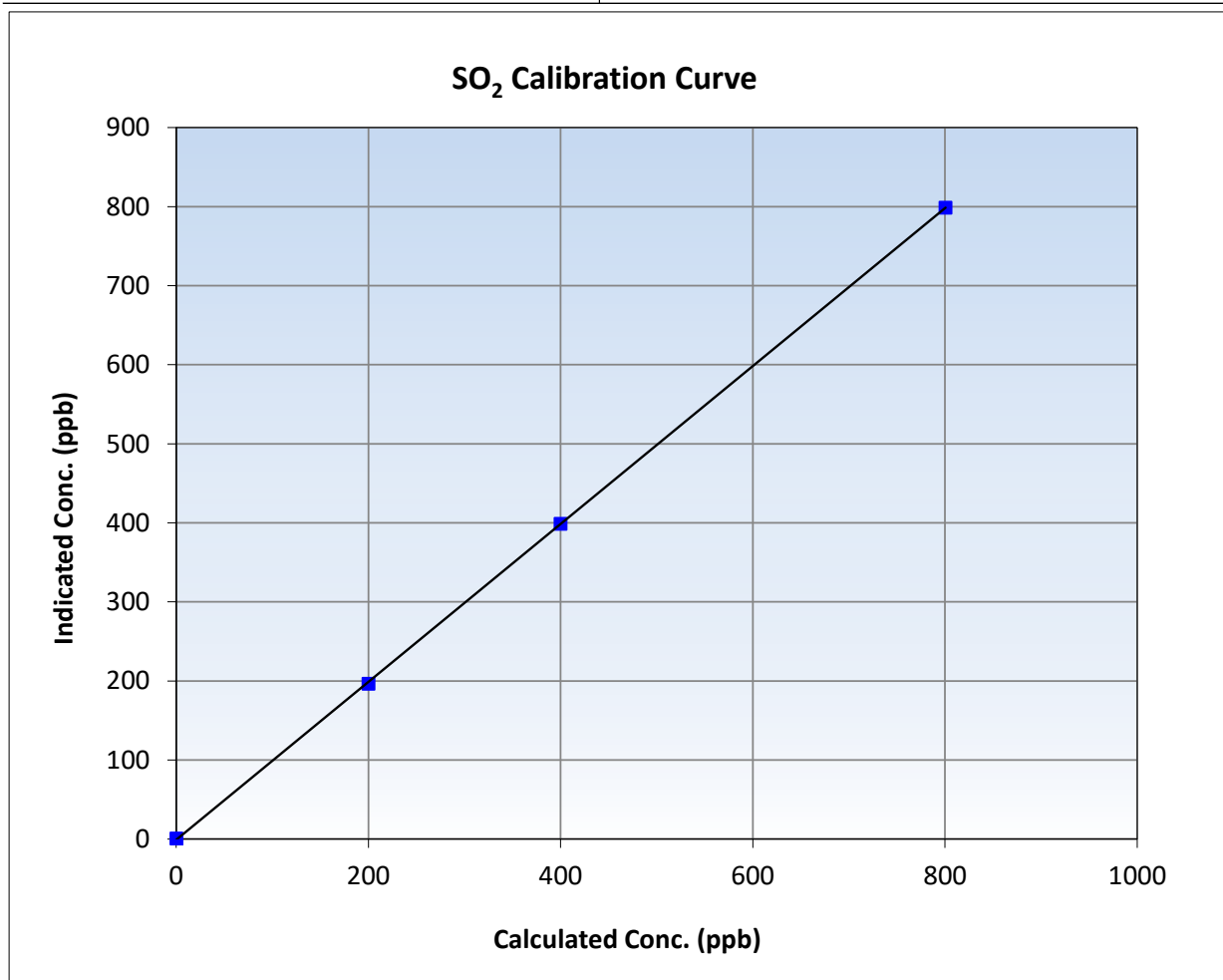
SO₂ Calibration Summary

Station Information

Calibration Date:	April 20, 2026	Previous Calibration:	N/A
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	12:15	End Time (MST):	15:15
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	1253044366

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999980	≥0.995
800.2	798.5	1.0021	Slope	0.998737	0.90 - 1.10
399.6	398.7	1.0022	Intercept	-0.962985	+/-30
199.8	196.4	1.0174			



SO2 Calibration Plot

Date: April 20, 2026

Location: Firebag





Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Firebag Station number: AMS 19
Calibration Date: April 23, 2026 Last Cal Date: April 20, 2026
Start time (MST): 10:18 End time (MST): 14:00
Reason: Maintenance

Calibration Standards

Cal Gas Concentration: 50.97 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC705799
Removed Cal Gas Conc: 50.97 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 5258
Zero Air Gen Model: Teledyne API T701H Serial Number: 201

Analyzer Information

Analyzer make: Thermo 43iQTL Serial Number: 1253044366
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.998737	0.999925	Backgd or Offset:	1.68	1.73
Calibration intercept:	-0.962985	-1.803798	Coeff or Slope:	1.057	1.090

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4922	78.5	800.2	781.3	1.024
As found Mid point	4961	39.2	399.6	391.0	1.022
As found Low point	4980	19.6	199.8	192.0	1.040
New cylinder response					
Baseline Corr As found:	781.4	Previous response	798.2	*% change	-2.2%
Baseline Corr 2nd AF pt:	391.1	AF Slope:	0.977913	AF Intercept:	-1.126709
Baseline Corr 3rd AF pt:	192.1	AF Correlation:	0.999976	* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4922	78.5	800.2	799.6	1.001
Mid point	4961	39.2	399.6	395.9	1.009
Low point	4980	19.6	199.8	196.7	1.016
As left zero	5000	0.0	0.0	0.3	----
As left span	4922	78.5	800.2	803.9	0.995
Average Correction Factor:					1.009

Notes: replaced exhaust pump, span adjusted

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

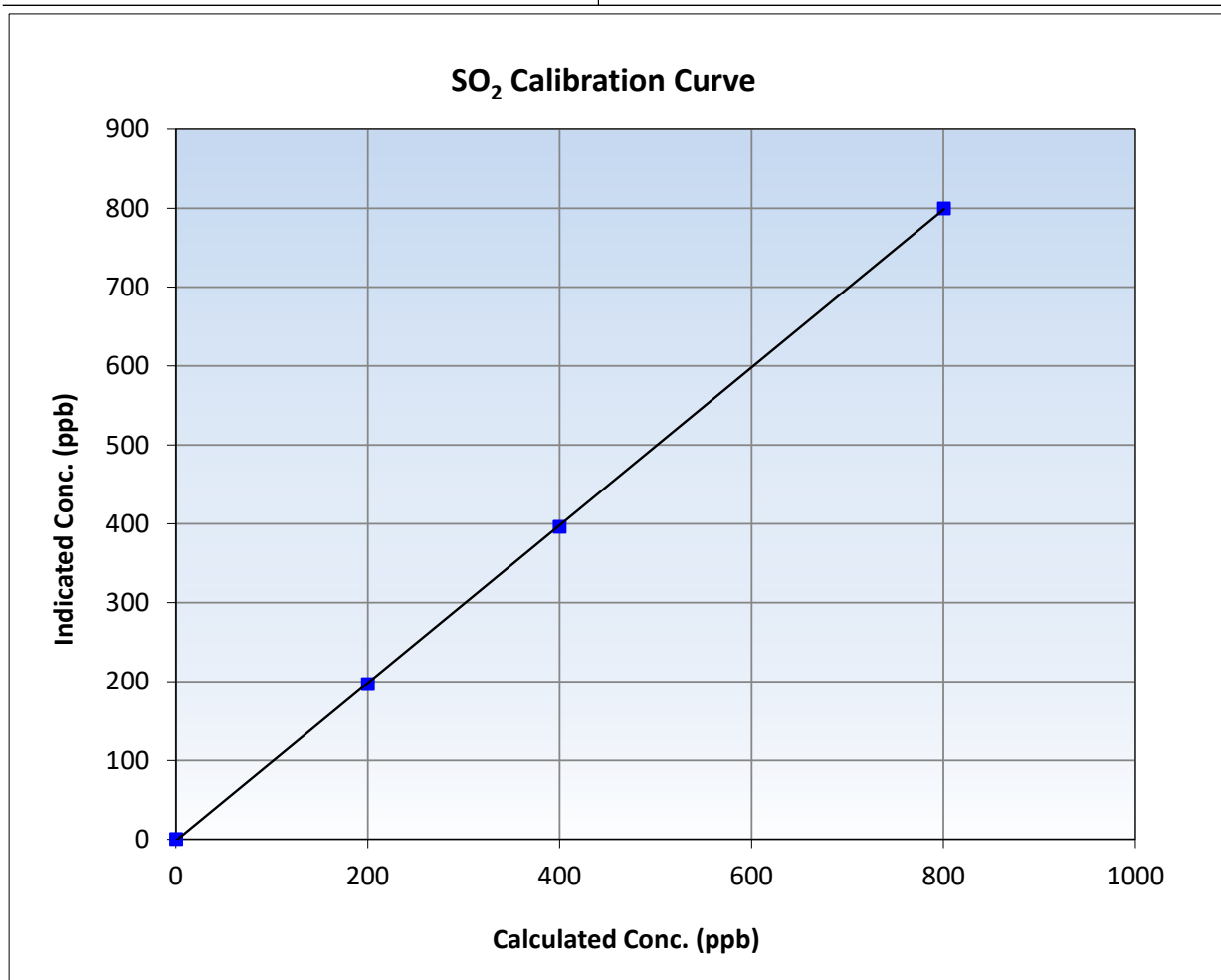
SO₂ Calibration Summary

Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	April 20, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	10:18	End Time (MST):	14:00
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	1253044366

Calibration Data

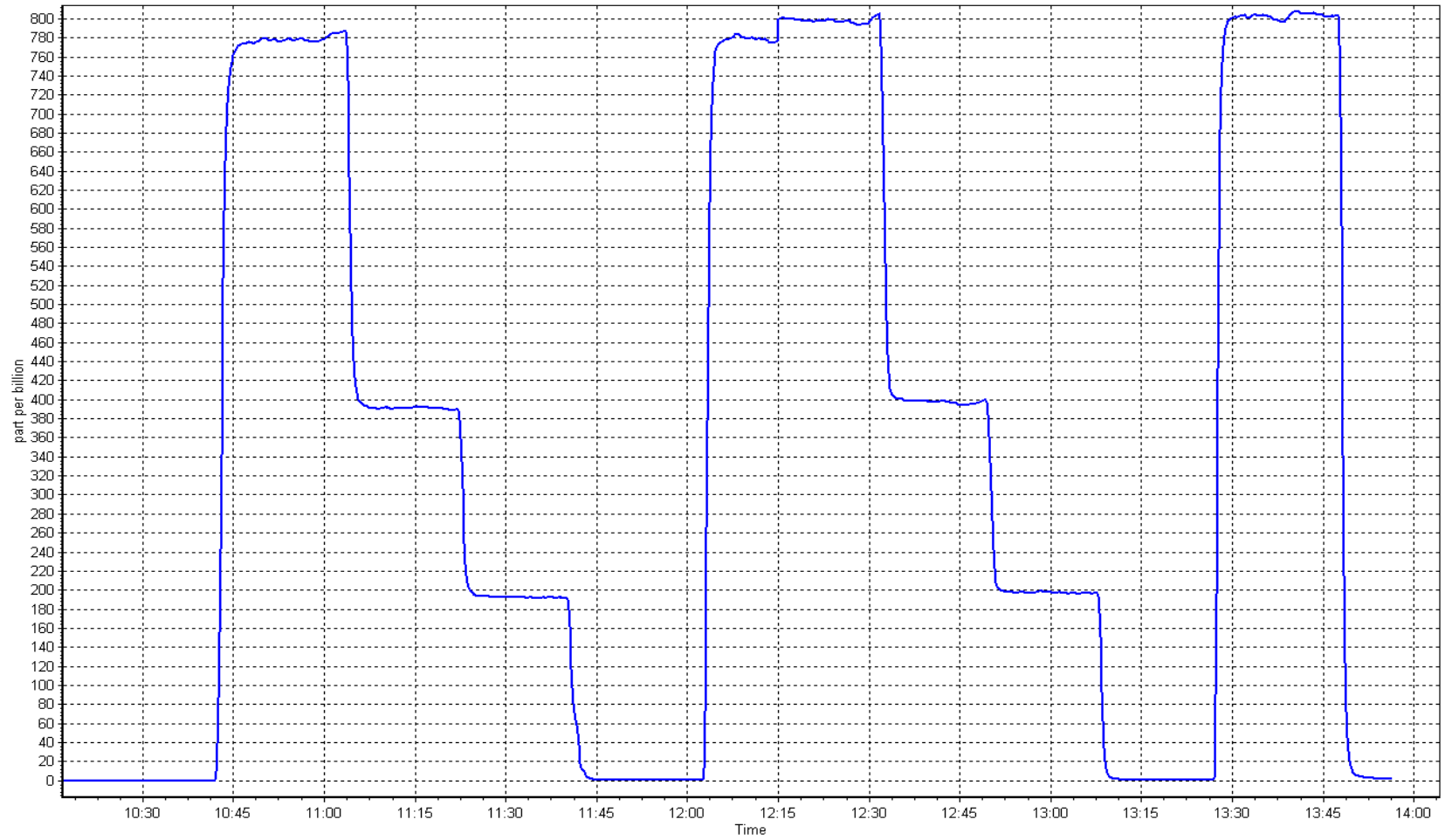
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999971	≥0.995
800.2	799.6	1.0008	Slope	0.999925	0.90 - 1.10
399.6	395.9	1.0093	Intercept	-1.803798	+/-30
199.8	196.7	1.0159			



SO2 Calibration Plot

Date: April 23, 2026

Location: Firebag





Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Firebag Station number: AMS 19
Calibration Date: April 30, 2026 Last Cal Date: April 23, 2026
Start time (MST): 9:56 End time (MST): 13:49
Reason: Install

Calibration Standards

Cal Gas Concentration: 50.97 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC705799
Removed Cal Gas Conc: 50.97 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 5258
Zero Air Gen Model: Teledyne API T701H Serial Number: 201

Analyzer Information

Analyzer make: Thermo 43iQTL Serial Number: 12530443167
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:		1.000109	Backgd or Offset:		2.10
Calibration intercept:		-1.543130	Coeff or Slope:		1.121

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	NA	Previous response	NA	*% change	NA
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4922	78.5	800.2	799.4	1.001
Mid point	4961	39.2	399.6	397.5	1.005
Low point	4980	19.6	199.8	196.9	1.015
As left zero	5000	0.0	0.0	-0.2	----
As left span	4922	78.5	800.2	798.1	1.003
Average Correction Factor:					1.007

Notes: Replaced 43iQ (SN: 1253044366), could not complete removal on previous 43iQ due to lamp issues. Installed new 43iQTLE.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

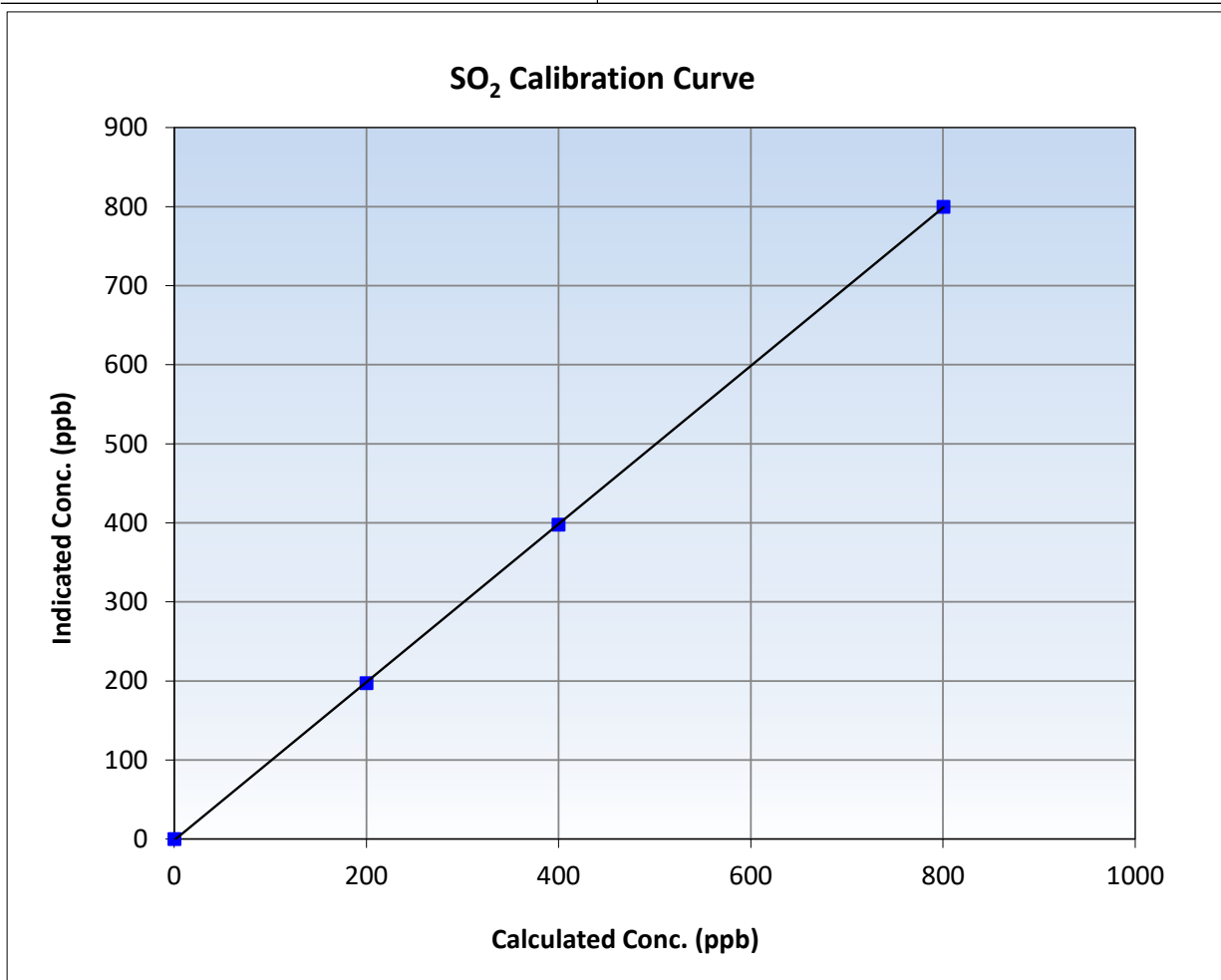
SO₂ Calibration Summary

Station Information

Calibration Date:	April 30, 2026	Previous Calibration:	April 23, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:56	End Time (MST):	13:49
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12530443167

Calibration Data

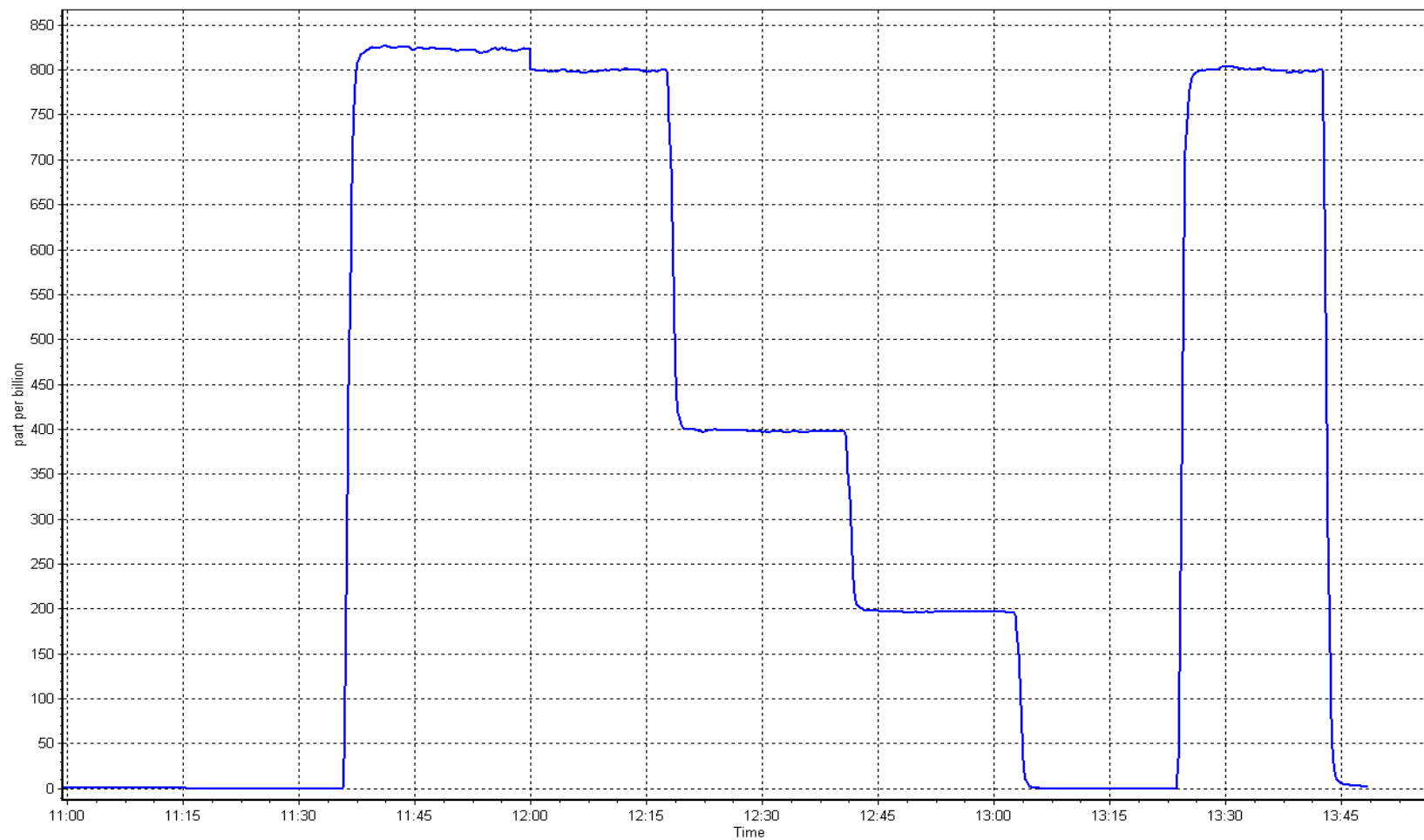
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999987	≥0.995
800.2	799.4	1.0010	Slope	1.000109	0.90 - 1.10
399.6	397.5	1.0053	Intercept	-1.543130	+/-30
199.8	196.9	1.0148			



SO2 Calibration Plot

Date: April 30, 2026

Location: Firebag





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Firebag Station number: AMS 19
Calibration Date: April 22, 2026 Last Cal Date: March 17, 2026
Start time (MST): 9:45 End time (MST): 13:30
Reason: Routine

Calibration Standards

Cal Gas Concentration: 5.29 ppm Cal Gas Exp Date: March 19, 2027
Cal Gas Cylinder #: DT0010492
Removed Cal Gas Conc: 5.29 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 5258
ZAG Make/Model: Teledyne API T701 Serial Number: 201

Analyzer Information

Analyzer make: Thermo 43i-TLE Analyzer serial #: 1151680032
Converter make: Global Converter serial #: 2022-222
Analyzer Range: 0 - 100 ppb Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002905	1.016907	Backgd or Offset:	3.25
Calibration intercept:	-0.120000	-0.160000	Coeff or Slope:	1.258

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4924	75.6	80.0	82.7	0.966
As found Mid point	4962	37.8	40.0	40.8	0.978
As found Low point	4981	18.9	20.0	19.9	1.000
New cylinder response					
Baseline Corr As found:	82.8	Prev response:	80.10	*% change:	3.3%
Baseline Corr 2nd AF pt:	40.9	AF Slope:	1.037483	AF Intercept:	-0.480000
Baseline Corr 3rd AF pt:	20.0	AF Correlation:	0.999904	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4924	75.6	80.0	81.2	0.985
Mid point	4962	37.8	40.0	40.6	0.985
Low point	4981	18.9	20.0	19.9	1.005
As left zero	5000	0.0	0.0	0.0	----
As left span	4924	75.6	80.0	81.3	0.984
SO2 Scrubber Check	4922	78.5	785.0	0.0	----
Date of last scrubber change:		18-Jan-23		Ave Corr Factor	0.992
Date of last converter efficiency test:		November 26, 2024		106.2% efficiency	

Notes: Inlet filter changed after as founds, scrubber check passed. No adjustments made.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

H2S Calibration Summary

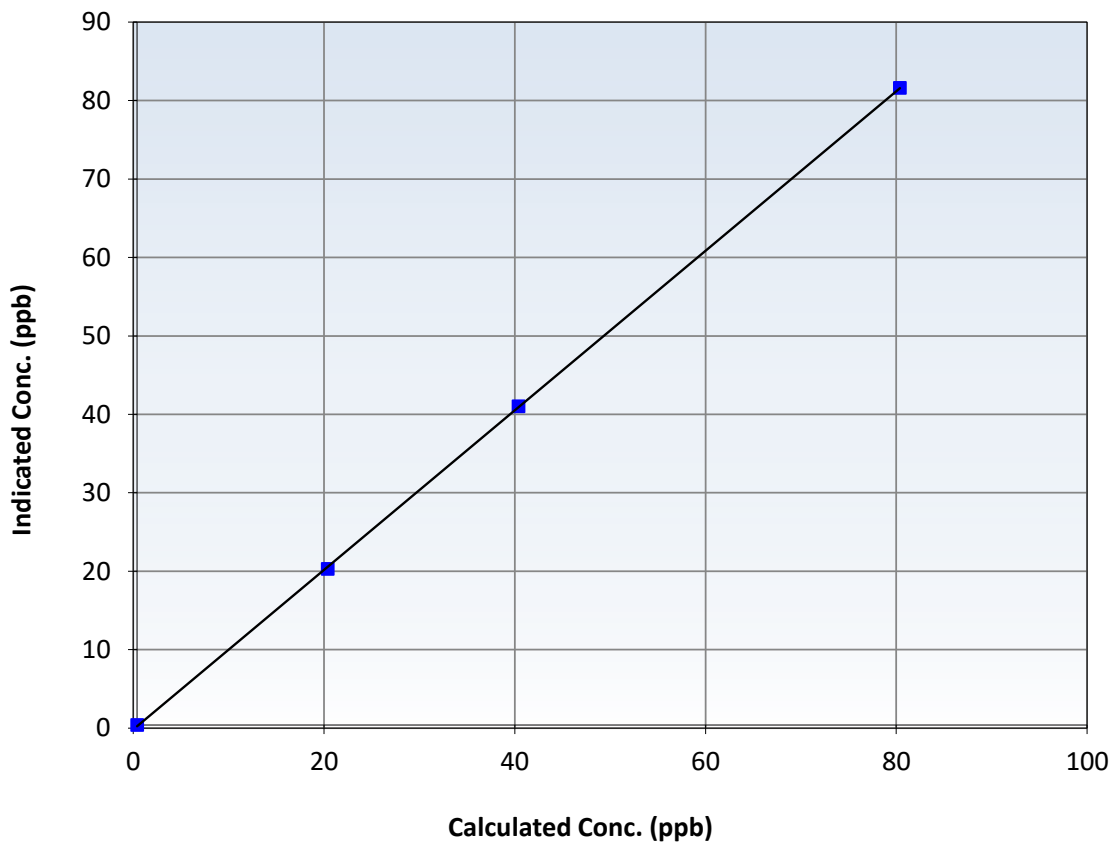
Station Information

Calibration Date:	April 22, 2026	Previous Calibration:	March 17, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:45	End Time (MST):	13:30
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1151680032

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999970		≥ 0.995
80.0	81.2	0.9850	Slope	1.016907		$0.90 - 1.10$
40.0	40.6	0.9850	Intercept	-0.160000		± 3
20.0	19.9	1.0048				

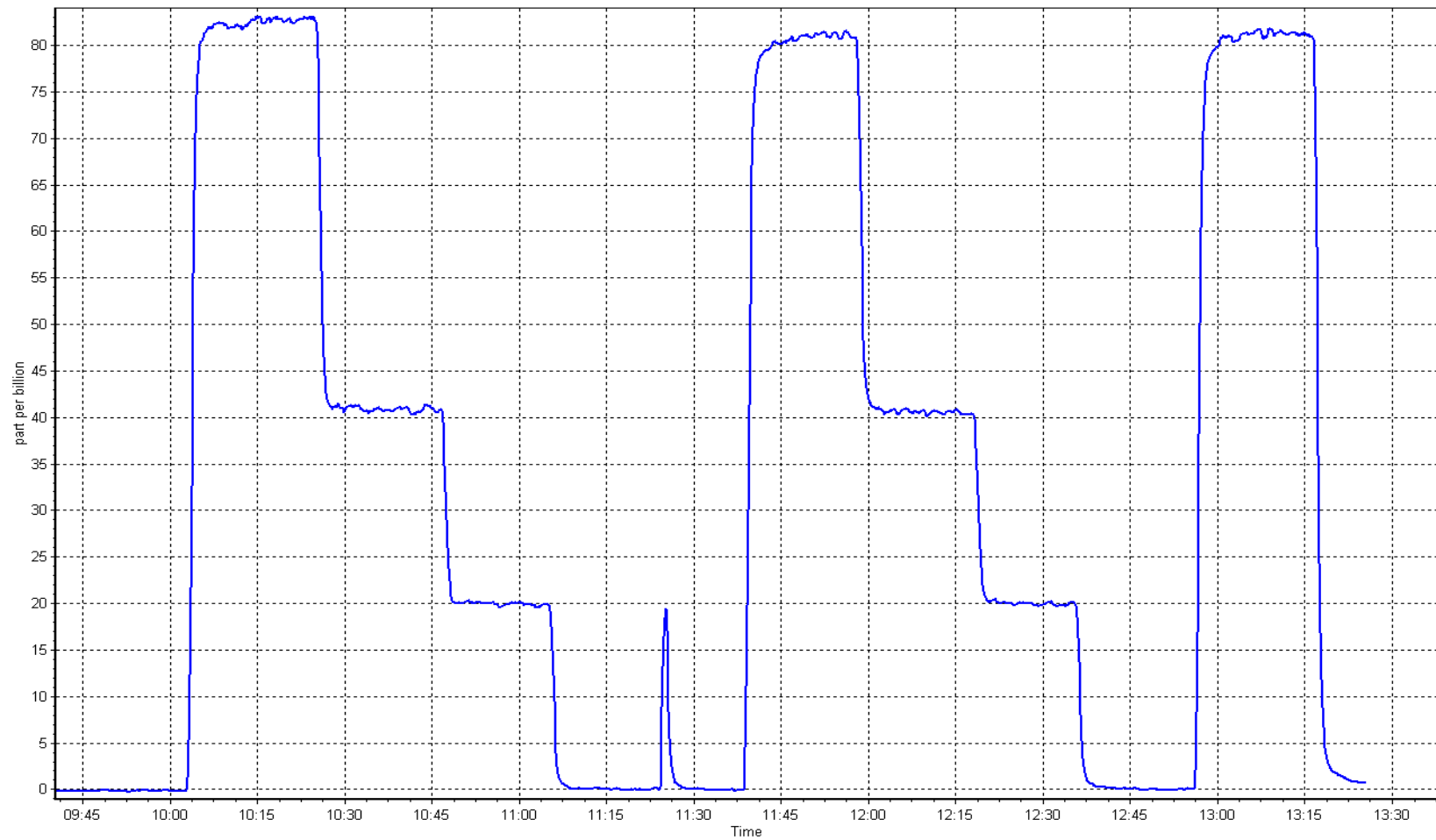
H₂S Calibration Curve



H2S Calibration Plot

Date: April 22, 2026

Location: Firebag





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Firebag Station number: AMS 19
Calibration Date: April 9, 2026 Last Cal Date: March 11, 2026
Start time (MST): 9:19 End time (MST): 12:27
Reason: Routine

Calibration Standards

Gas Cert Reference: CC705799 Cal Gas Expiry Date: October 9, 2032
CH4 Cal Gas Conc. 505.1 ppm CH4 Equiv Conc. 1066.9 ppm
C3H8 Cal Gas Conc. 204.3 ppm
Removed Gas Cert: Removed Gas Expiry:
Removed CH4 Conc. 505.1 ppm CH4 Equiv Conc. 1066.9 ppm
Removed C3H8 Conc. 204.3 ppm Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 5258
ZAG Make/Model: Teledyne API T701H Serial Number: 201

Analyzer Information

Analyzer make: Thermo 51i-LT Analyzer serial #: 1336160089
Analyzer Range: 0 - 20 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	0.992597	0.988536	Background: 2.11	2.11
Calibration intercept:	0.002781	0.113780	Coefficient: 3.773	3.773

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.14	----
As found High point	4922	78.5	16.75	16.61	1.017
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.47	Previous response	16.63	*% change	-1.0%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.21	----
High point	4922	78.5	16.75	16.71	1.002
Mid point	4961	39.2	8.36	8.35	1.002
Low point	4980	19.6	4.18	4.15	1.009
As left zero	4999	0.0	0.00	0.21	----
As left span	4922	78.4	16.73	16.73	1.000
Average Correction Factor					1.004

Notes: Inlet filter changed after as founds, no changes made.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

THC Calibration Summary

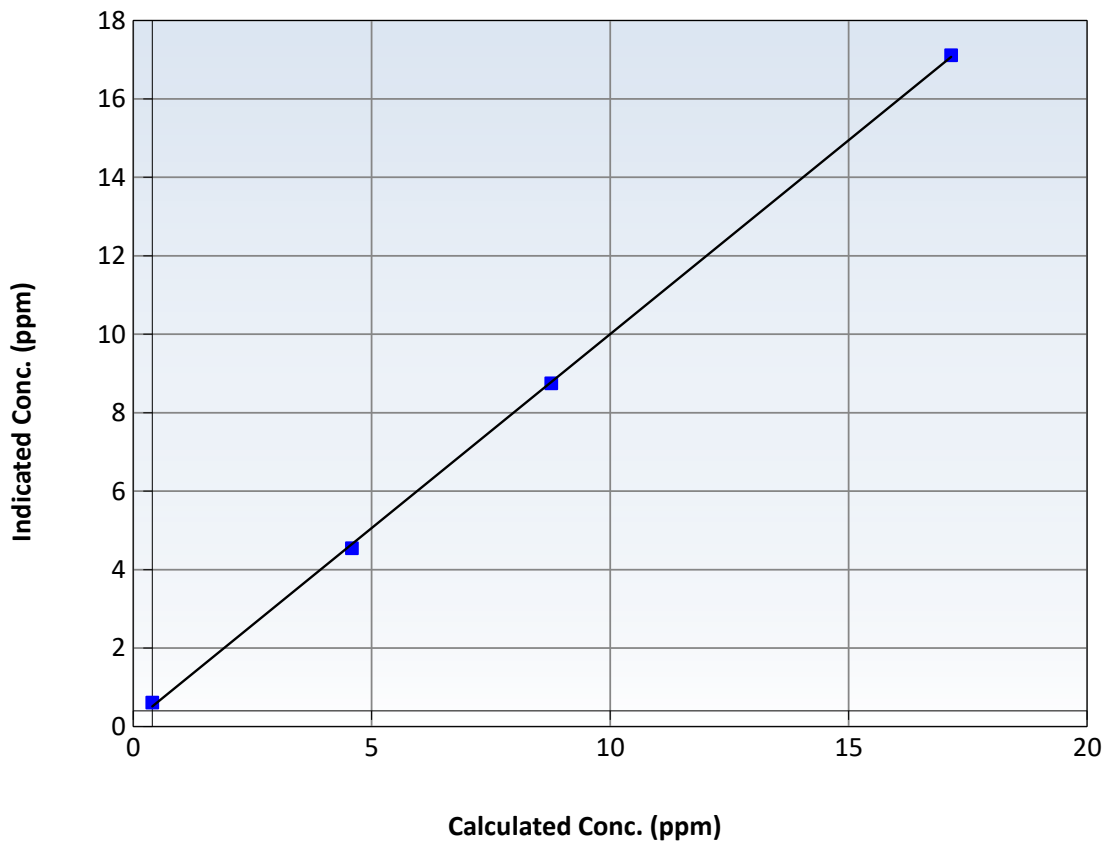
Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 11, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:19	End Time (MST):	12:27
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1336160089

Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.21	----	Correlation Coefficient	0.999853	≥ 0.995
16.75	16.71	1.0022	Slope	0.988536	$0.90 - 1.10$
8.36	8.35	1.0018	Intercept	0.113780	± 1.5
4.18	4.15	1.0088			

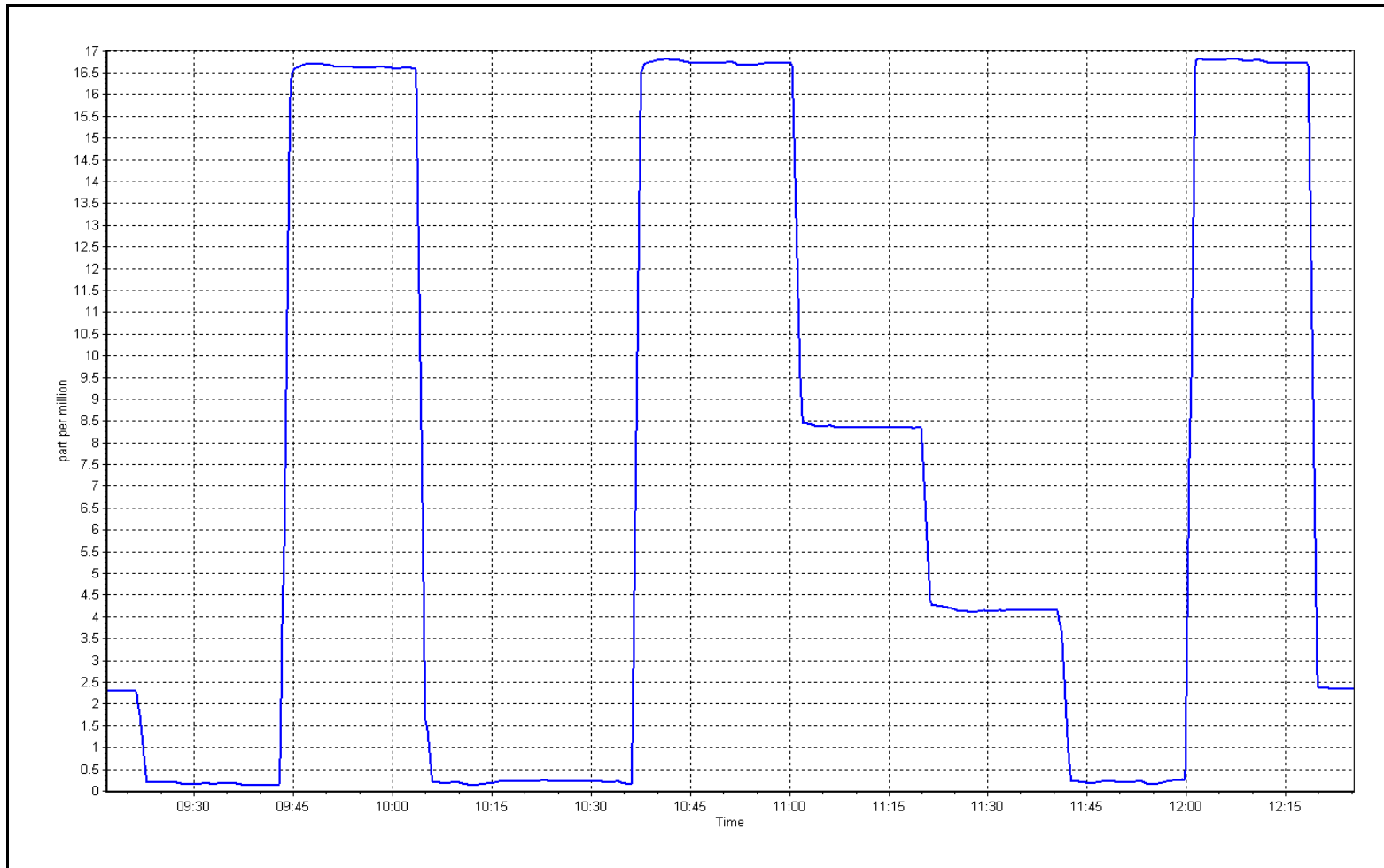
THC Calibration Curve



THC Calibration Plot

Date: April 9, 2026

Location: Firebag





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Firebag
Station number: AMS 19
Calibration Date: April 1, 2026
Last Cal Date: March 10, 2026
Start time (MST): 9:55
End time (MST): 14:45
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0045593
NOX Cal Gas Conc: 62.10 ppm
Removed Cylinder #:
Removed Gas NOX Conc: 62.10 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701H
Cal Gas Expiry Date: July 22, 2032
NO Cal Gas Conc: 61.90 ppm
Removed Gas Exp Date:
Removed Gas NO Conc: 61.90 ppm
NO gas Diff:
Serial Number: 5258
Serial Number: 201

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	----	----
AF High point	4936	64.4	799.8	797.2	2.6	809.4	798.4	10.9	0.9880	0.9984
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 800.0 ppb	NO = 801.5 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = 1.2%	
Baseline Corr 1st pt	NO _x = 809.5 ppb	NO = 798.5 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -0.4%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	NO ₂ SI:	NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1410661309

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.934	0.934	NO bkgnd or offset:	4.7	4.7
NOX coeff or slope:	0.994	0.994	NOX bkgnd or offset:	4.7	4.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	164.8	164.8

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.002231	1.006403
NO _x Cal Offset:	-1.567993	-1.528026
NO Cal Slope:	1.008078	1.008551
NO Cal Offset:	-2.128005	-2.567997
NO ₂ Cal Slope:	0.999791	0.996887
NO ₂ Cal Offset:	-0.844959	-1.165962

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
High point	4936	64.4	799.8	797.2	2.6	803.8	802.4	1.3	0.9950	0.9935
Mid point	4968	32.2	399.9	398.6	1.3	401.3	399.2	2.1	0.9965	0.9985
Low point	4984	16.1	200.0	199.3	0.6	197.3	195.2	2.1	1.0135	1.0211
As left zero	5000	0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
As left span	4936	64.4	799.8	395.7	404.1	799.0	395.7	403.3	1.0010	1.0000
Average Correction Factor									1.0017	1.0044

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.1	----	----
High GPT point	796.2	391.0	407.8	405.8	1.0049	99.5%
Mid GPT point	796.2	598.2	200.6	199.0	1.0079	99.2%
Low GPT point	796.2	680.0	118.8	115.3	1.0301	97.1%
Average Correction Factor					1.0143	98.6%

Notes:

Inlet filter changed after as founds, no adjustments made. Gpt portion looks good.

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

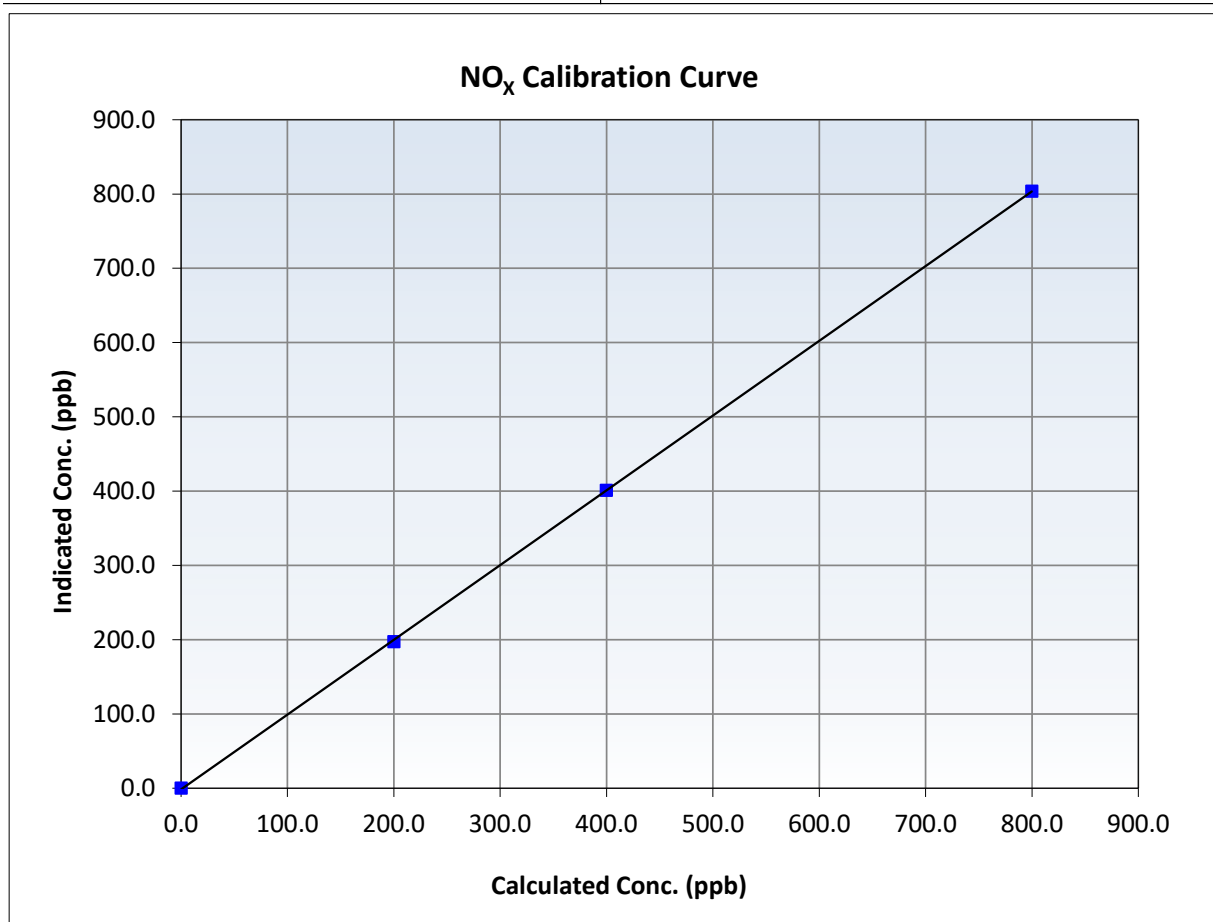
NO_x Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	March 10, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:55	End Time (MST):	14:45
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661309

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999975	≥0.995
799.8	803.8	0.9950	Slope	1.006403	0.90 - 1.10
399.9	401.3	0.9965	Intercept	-1.528026	+/-20
200.0	197.3	1.0135			





Wood Buffalo Environmental Association

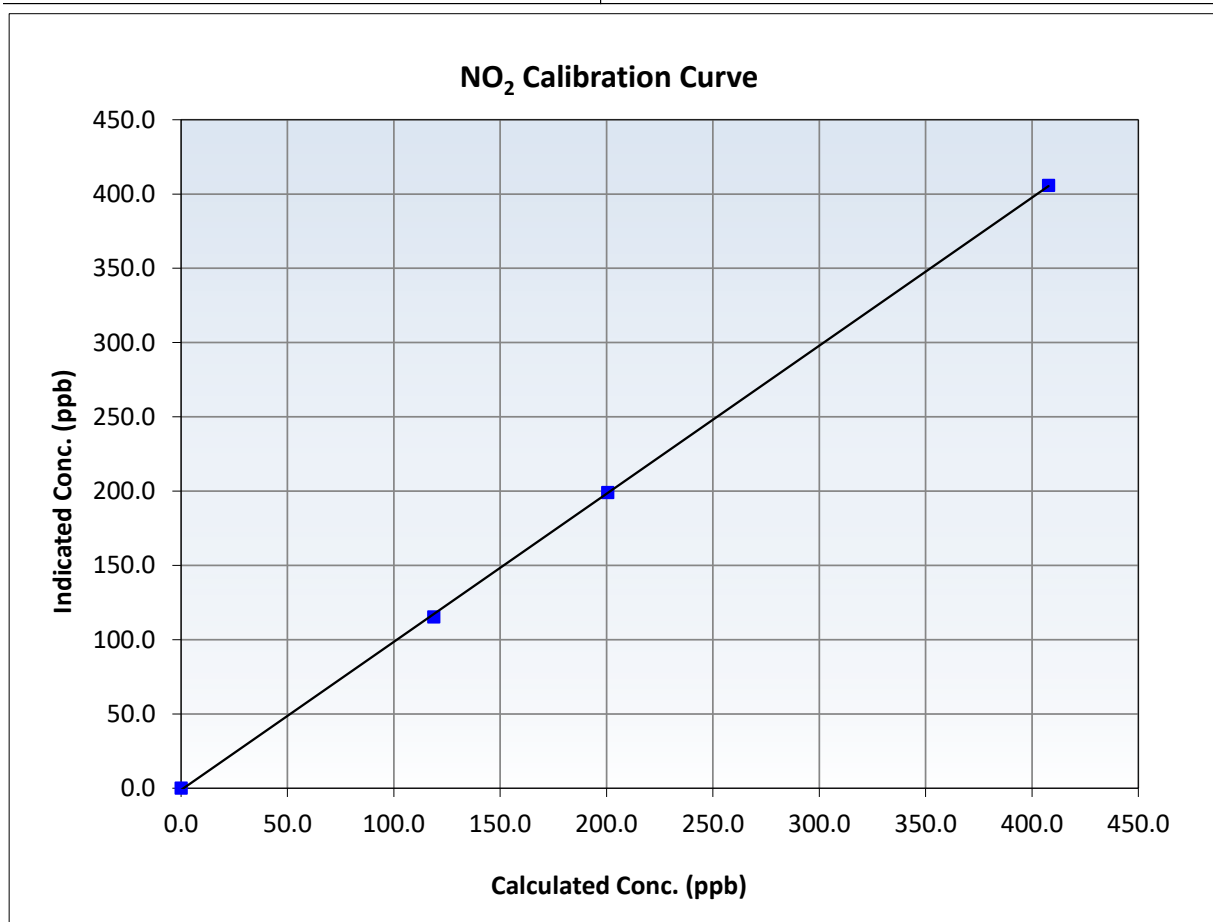
NO₂ Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	March 10, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:55	End Time (MST):	14:45
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661309

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999936	≥0.995
407.8	405.8	1.0049	Slope	0.996887	0.90 - 1.10
200.6	199.0	1.0079	Intercept	-1.165962	+/-20
118.8	115.3	1.0301			





Wood Buffalo Environmental Association

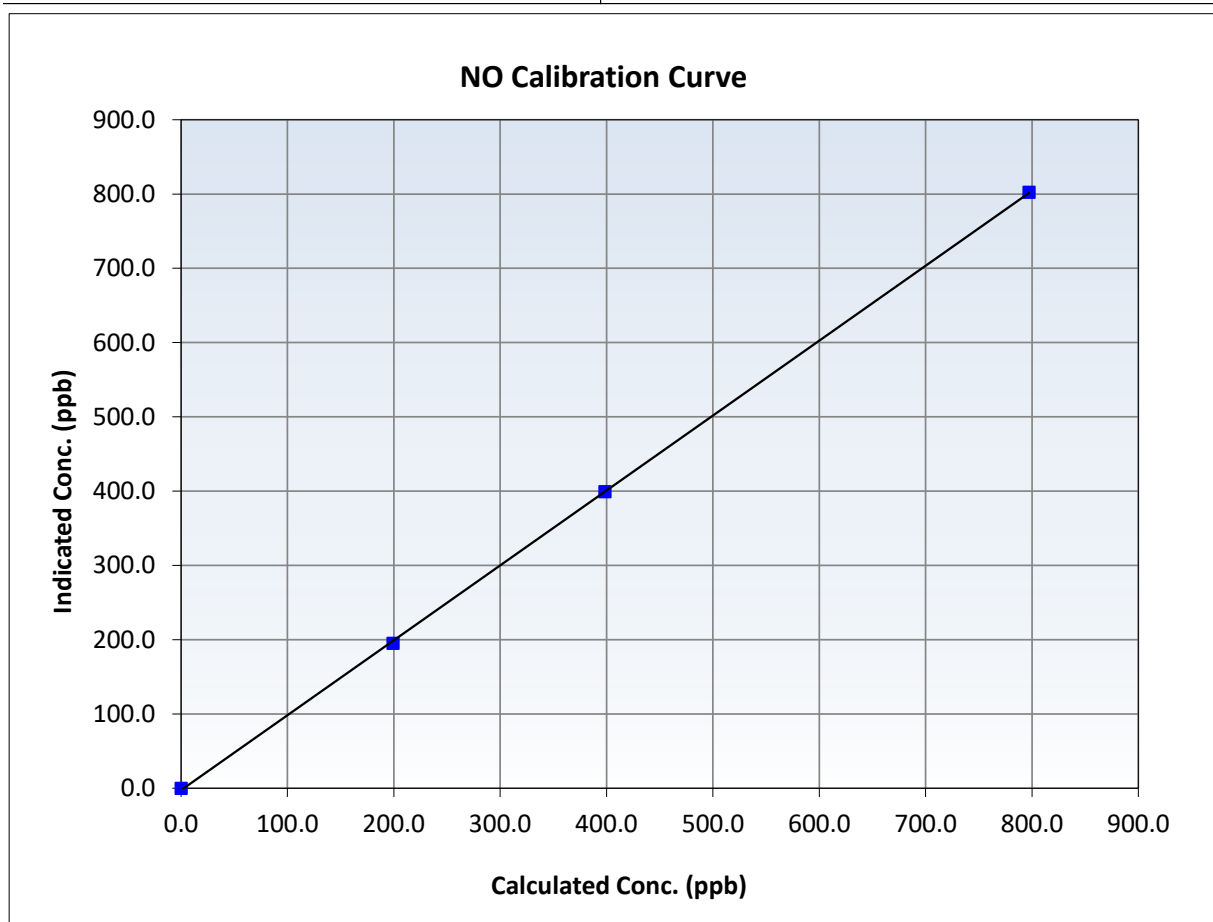
NO Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	March 10, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:55	End Time (MST):	14:45
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661309

Calibration Data

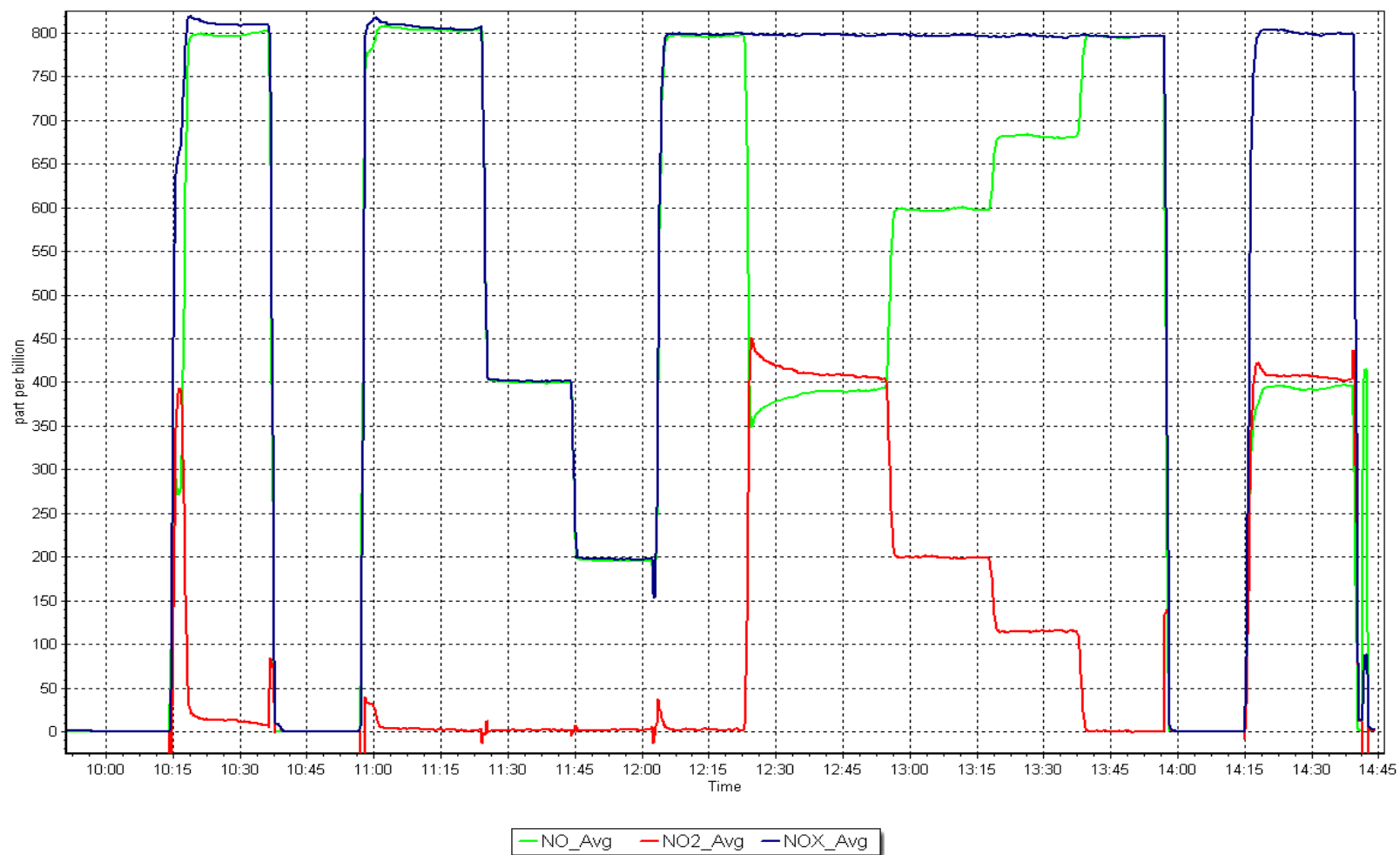
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999949	≥ 0.995
797.2	802.4	0.9935	Slope	1.008551	$0.90 - 1.10$
398.6	399.2	0.9985	Intercept	-2.567997	± 20
199.3	195.2	1.0211			



NO_x Calibration Plot

Date: April 1, 2026

Location: Firebag





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS20 MACKAY RIVER APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: MacKay River
Calibration Date: April 17, 2026
Start time (MST): 7:55
Reason: Routine

Station number: AMS 20
Last Cal Date: March 19, 2026
End time (MST): 10:38

Calibration Standards

Cal Gas Concentration: 49.15 ppm
Cal Gas Cylinder #: CC409669
Removed Cal Gas Conc: 49.15 ppm
Removed Gas Cyl #:
Calibrator Model: API T700
Zero Air Gen Model: API 701

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5706
Serial Number: 4888

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0-1000ppb

Serial Number: 1501301450

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000802	0.999803	Backgd or Offset:	21.0	21.4
Calibration intercept:	0.484324	-0.215930	Coeff or Slope:	0.938	0.930

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.9	----
As found High point	4919	81.4	800.1	807.5	0.992
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	806.6	Previous response	801.2	*% change	0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4919	81.4	800.1	800.2	1.000
Mid point	4959	40.7	400.1	398.6	1.004
Low point	4980	20.3	199.5	199.8	0.999
As left zero	5000	0.0	0.0	0.3	----
As left span	4919	81.4	800.1	800.2	1.000
Average Correction Factor:					1.001

Notes: No maintenance done. Zero and Span adjusted.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

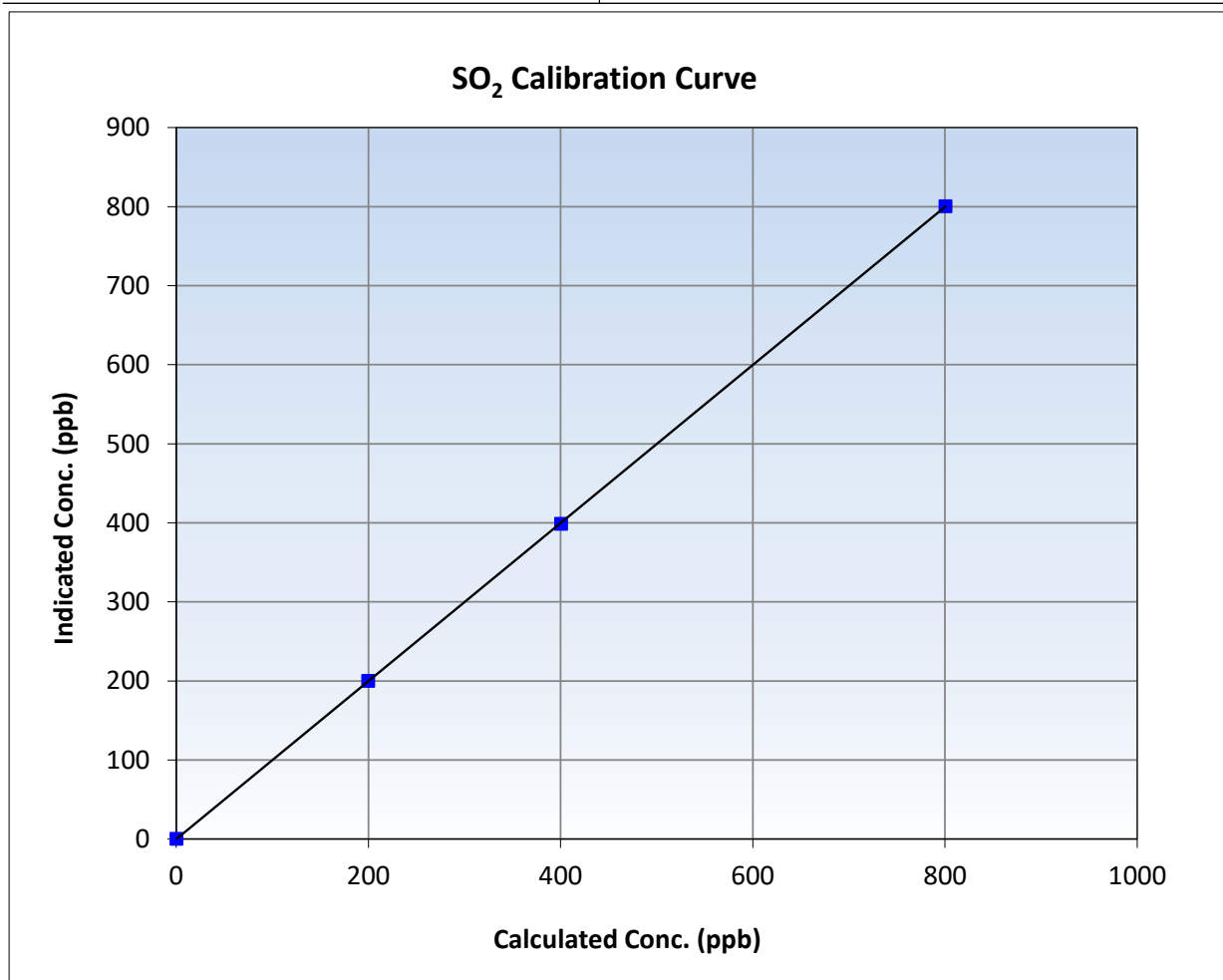
SO₂ Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 19, 2026
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	7:55	End Time (MST):	10:38
Analyzer make:	Thermo 43i	Analyzer serial #:	1501301450

Calibration Data

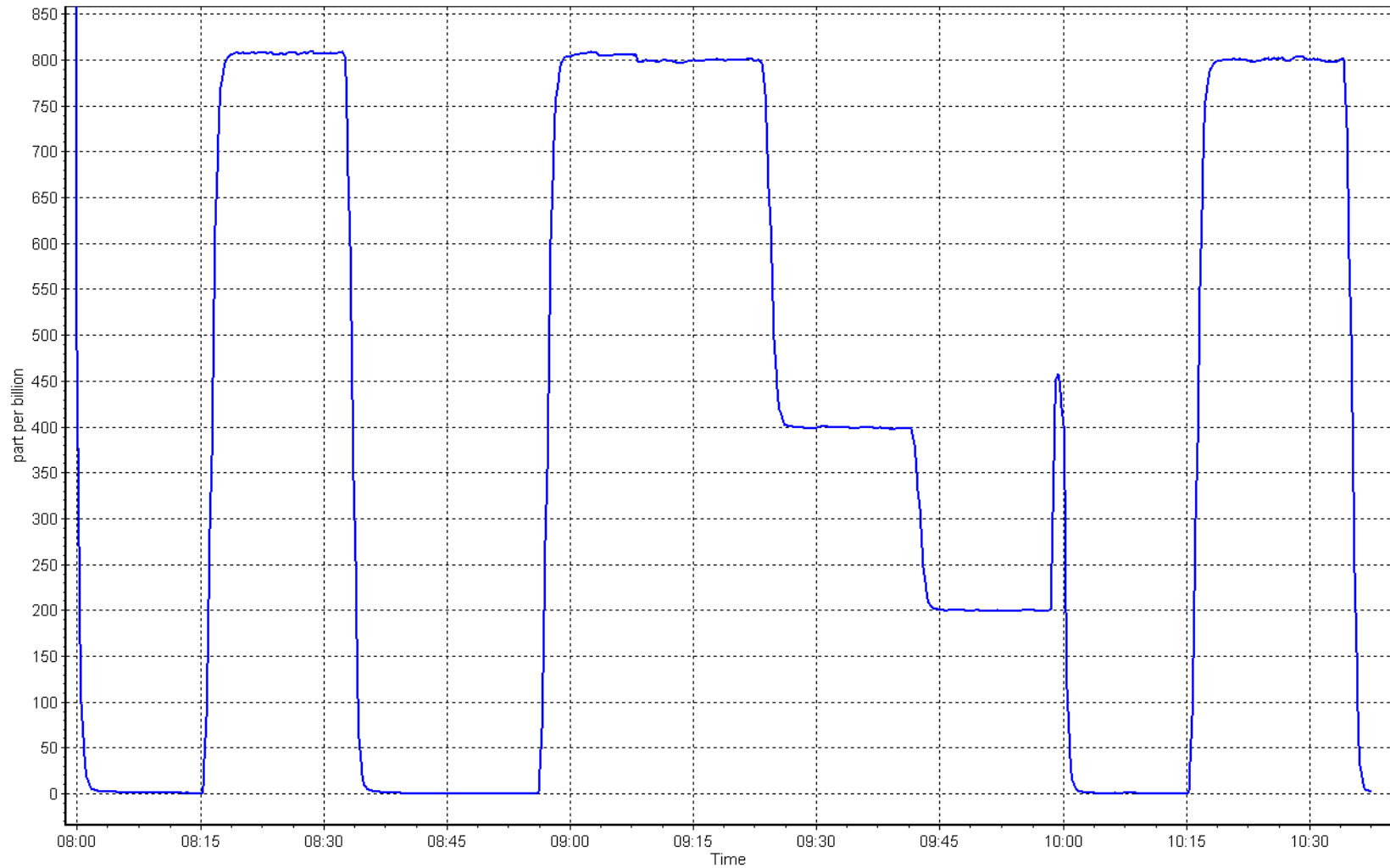
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999994	≥0.995
800.1	800.2	0.9999	Slope	0.999803	0.90 - 1.10
400.1	398.6	1.0038	Intercept	-0.215930	+/-30
199.5	199.8	0.9987			



SO2 Calibration Plot

Date: April 17, 2026

Location: MacKay River





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: MacKay River
Calibration Date: April 8, 2026
Start time (MST): 6:24
Reason: Routine

Station number: AMS 20
Last Cal Date: March 2, 2026
End time (MST): 10:45

Calibration Standards

Cal Gas Concentration: 4.96 ppm
Cal Gas Cylinder #: CC737854
Removed Cal Gas Conc: 4.96 ppm
Removed Gas Cyl #:
Calibrator Make/Model: API T700
ZAG Make/Model: API 701

Cal Gas Exp Date: September 22, 2028
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5706
Serial Number: 4888

Analyzer Information

Analyzer make: Thermo 43i TLE
Converter make: Global
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1236656117
Converter serial #: 2022-226
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.992644	1.001508	Backgd or Offset:	3.77	3.90
Calibration intercept:	0.256477	0.096250	Coeff or Slope:	1.071	1.071

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.2	----
As found High point	4919	80.6	80.0	81.6	0.982
As found Mid point	4960	40.3	40.0	40.9	0.983
As found Low point	4980	20.2	20.0	20.4	0.992
New cylinder response					
Baseline Corr As found:	81.4	Prev response:	79.63	*% change:	2.2%
Baseline Corr 2nd AF pt:	40.7	AF Slope:	1.018802	AF Intercept:	0.115946
Baseline Corr 3rd AF pt:	20.2	AF Correlation:	0.999993	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4919	80.6	80.0	80.1	0.998
Mid point	4960	40.3	40.0	40.3	0.993
Low point	4980	20.2	20.0	20.2	0.992
As left zero	5000	0.0	0.0	0.0	----
As left span	4919	80.6	80.0	80.6	0.992
SO2 Scrubber Check	4982	81.3	802.8	0.0	----
Date of last scrubber change:	25-May-23			Ave Corr Factor	0.994
Date of last converter efficiency test:					

Notes: Sox scrubber checked after the calibrator zero. Zero adjusted. During High Point Calibrator screen froze, restarted calibrator before Mid Point.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

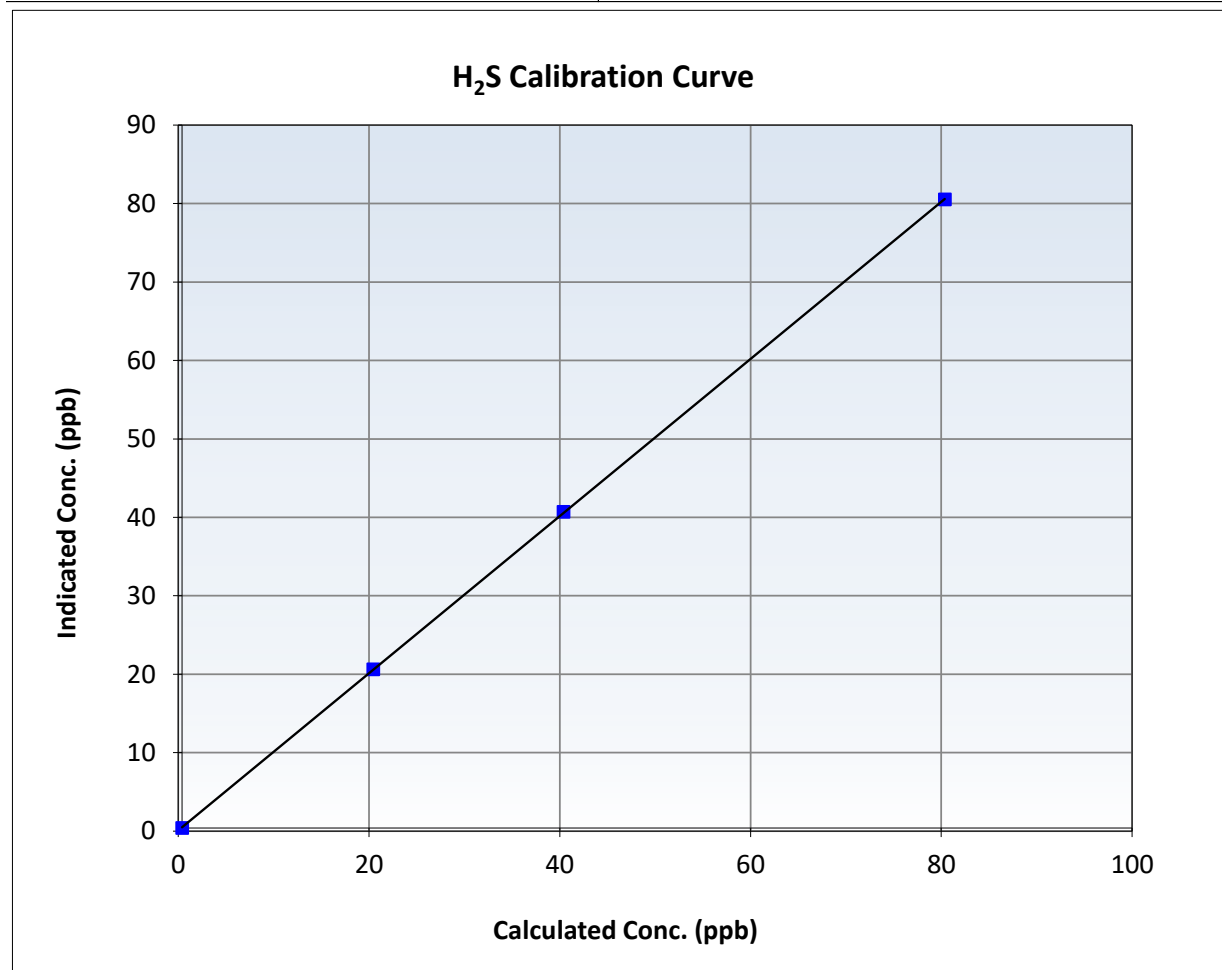
H₂S Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 2, 2026
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	6:24	End Time (MST):	10:45
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1236656117

Calibration Data

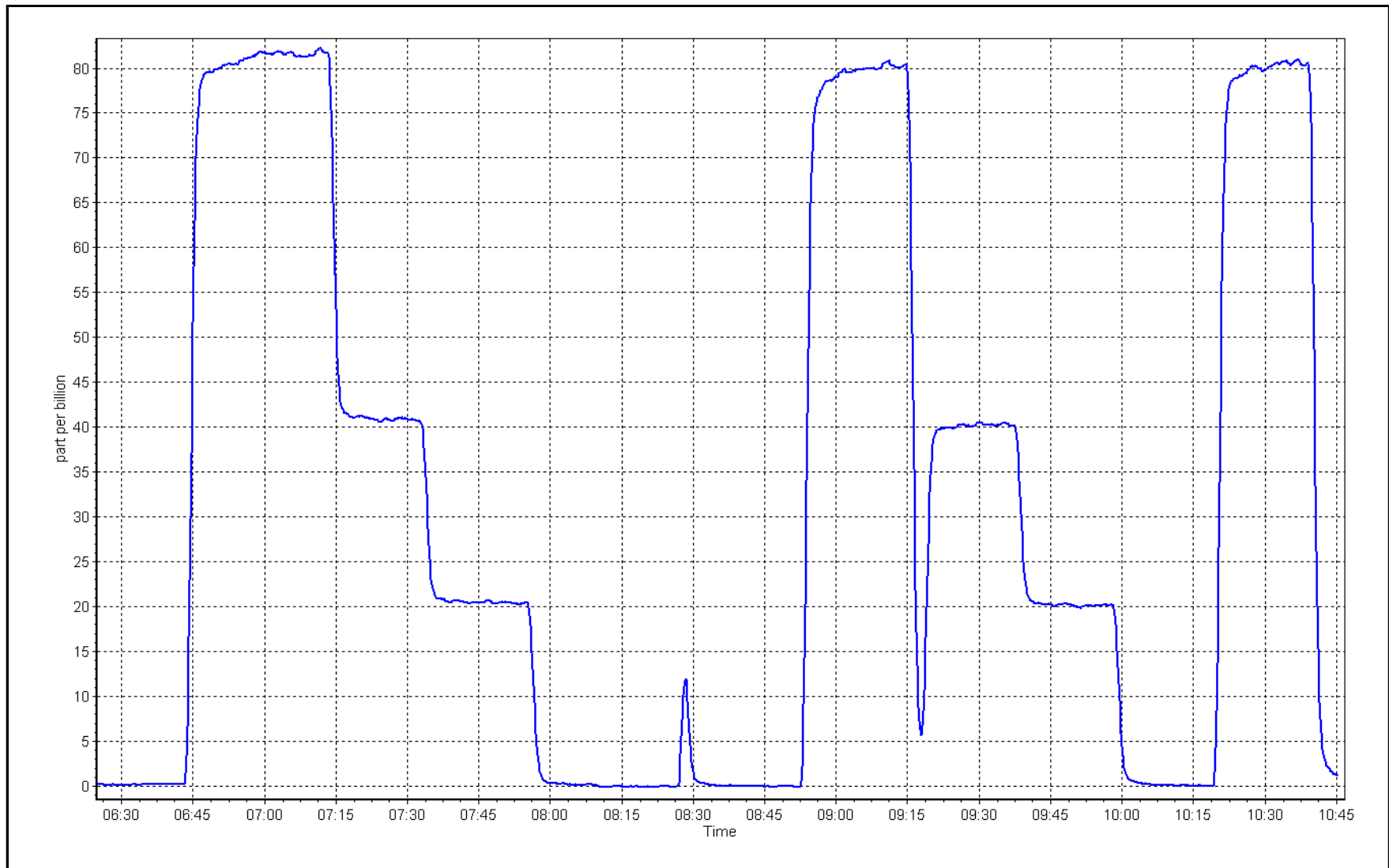
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999990	≥ 0.995
80.0	80.1	0.9983	Slope	1.001508	$0.90 - 1.10$
40.0	40.3	0.9927	Intercept	0.096250	± 3
20.0	20.2	0.9920			



H₂S Calibration Plot

Date: April 8, 2026

Location: MacKay River





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: MacKay River
Calibration Date: April 17, 2026
Start time (MST): 7:55
Reason: Routine

Station number: AMS 20
Last Cal Date: March 19, 2026
End time (MST): 10:37

Calibration Standards

Gas Cert Reference: CC409669
CH4 Cal Gas Conc. 505.1 ppm
C3H8 Cal Gas Conc. 206.4 ppm
Removed Gas Cert:
Removed CH4 Conc. 505.1 ppm
Removed C3H8 Conc. 206.4 ppm
Calibrator Make/Model: API T700
ZAG Make/Model: API 701

Cal Gas Expiry Date: October 9, 2032
CH4 Equiv Conc. 1072.7 ppm
Removed Gas Expiry:
CH4 Equiv Conc. 1072.7 ppm
Diff between cyl:
Serial Number: 5706
Serial Number: 4888

Analyzer Information

Analyzer make: Thermo 51i-LT
Analyzer Range: 0 - 20 ppm

Analyzer serial #: 1501663727

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002348	0.990820	Background:	2.880	2.880
Calibration intercept:	-0.029776	0.076772	Coefficient:	4.818	4.818

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted
					Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.06	----
As found High point	4919	81.4	17.46	17.41	1.007
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	17.35	Previous response	17.47	*% change	-0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
					<i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.10	----
High point	4919	81.4	17.46	17.40	1.004
Mid point	4959	40.7	8.73	8.70	1.004
Low point	4980	20.3	4.35	4.38	0.993
As left zero	5000	0.0	0.00	0.00	----
As left span	4919	81.4	17.46	17.51	0.997
Average Correction Factor					1.000

Notes:

Span adjusted. No Maintenance done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

THC Calibration Summary

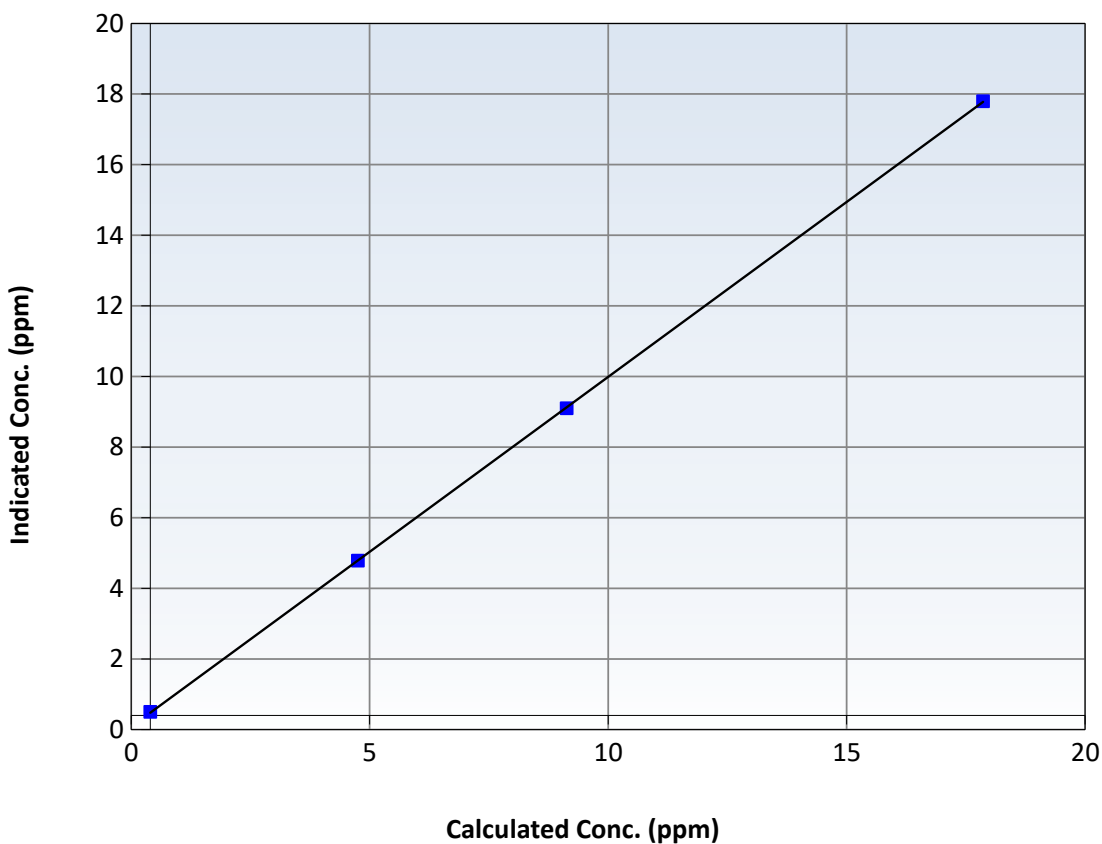
Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 19, 2026
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	7:55	End Time (MST):	10:37
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1501663727

Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.10	----	Correlation Coefficient	0.999990	≥ 0.995
17.46	17.40	1.0039	Slope	0.990820	$0.90 - 1.10$
8.73	8.70	1.0037	Intercept	0.076772	± 1.5
4.35	4.38	0.9934			

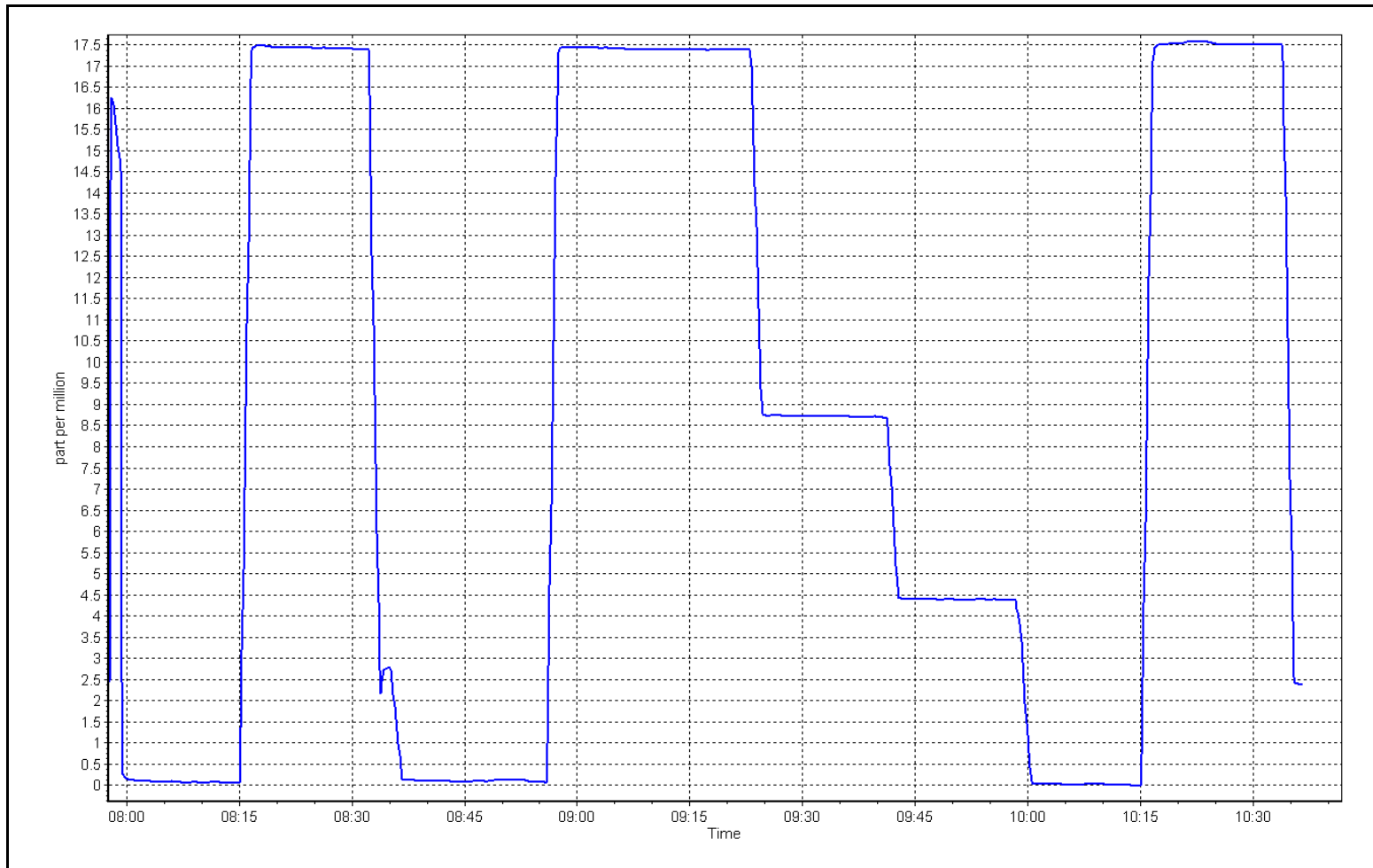
THC Calibration Curve



THC Calibration Plot

Date: April 17, 2026

Location: MacKay River





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: MacKay River
Station number: AMS 20
Calibration Date: April 9, 2026
Last Cal Date: March 11, 2026
Start time (MST): 6:32
End time (MST): 10:50
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0037393
NOX Cal Gas Conc: 62.00 ppm
Removed Cylinder #:
Removed Gas NOX Conc: 62.00 ppm
NOX gas Diff:
Calibrator Model: API T700
ZAG make/model: API T701
Cal Gas Expiry Date: July 22, 2032
NO Cal Gas Conc: 61.90 ppm
Removed Gas Exp Date:
Removed Gas NO Conc: 61.90 ppm
NO gas Diff:
Serial Number: 5706
Serial Number: 4888

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.2	0.0	-0.2	----	----
AF High point	4935	64.6	801.1	799.8	1.3	798.3	792.6	5.7	1.0033	1.0091
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 801.5 ppb	NO = 797.6 ppb				* = > +/-5% change initiates investigation			*Percent Change	NO _x = -0.4%
Baseline Corr 1st pt	NO _x = 798.5 ppb	NO = 792.6 ppb				<u>As Found Statistics</u>			*Percent Change	NO = -0.6%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found NO _x r ² :			Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found NO r ² :			NO SI:	NO Int:
						As found NO ₂ r ² :			NO2 SI:	NO ₂ Int:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1505164379

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.043	1.043	NO bkgnd or offset:	2.9	2.9
NOX coeff or slope:	1.000	1.000	NOX bkgnd or offset:	3.2	3.2
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	148.6	148.6

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999627	0.992621
NO _x Cal Offset:	0.712726	0.794309
NO Cal Slope:	0.997981	0.990677
NO Cal Offset:	-0.645620	-0.763897
NO ₂ Cal Slope:	1.005228	1.007243
NO ₂ Cal Offset:	0.363067	0.364496

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	-0.2	----	----
High point	4935	64.6	801.1	799.8	1.3	795.5	791.9	3.5	1.0070	1.0100
Mid point	4968	32.3	400.5	399.9	0.6	399.1	395.4	3.7	1.0035	1.0113
Low point	4984	16.2	200.9	200.5	0.3	200.6	196.6	4.0	1.0014	1.0201
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	-0.2	----	----
As left span	4935	64.6	801.1	426.3	374.8	793.5	426.3	367.2	1.0096	1.0000
Average Correction Factor									1.0040	1.0138

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.2	----	----
High GPT point	787.7	424.2	364.8	367.5	0.9926	100.7%
Mid GPT point	787.7	604.0	185.0	187.0	0.9893	101.1%
Low GPT point	787.7	694.6	94.4	96.0	0.9833	101.7%
Average Correction Factor					0.9884	101.2%

Notes: No Maintenance or adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

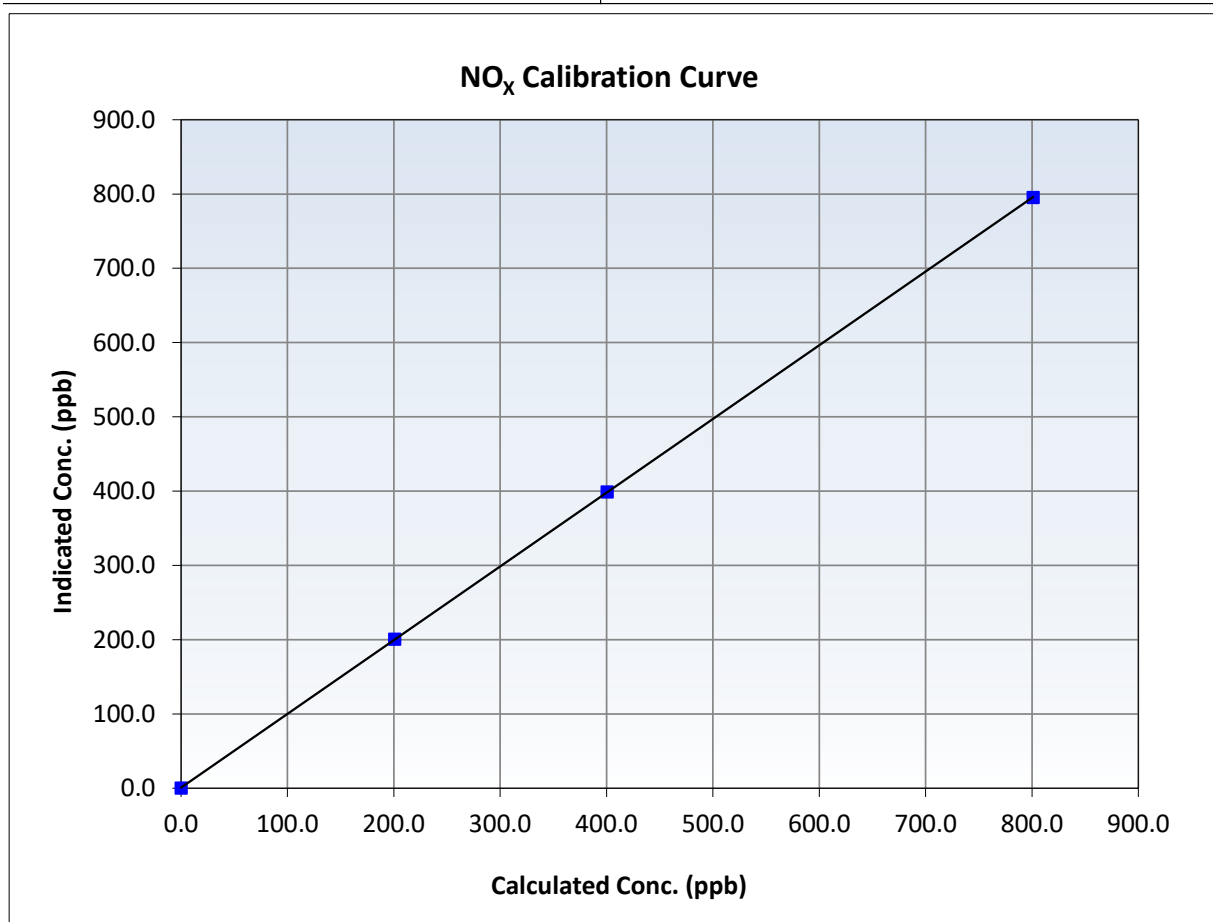
NO_x Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 11, 2026
Station Name:	Mackay River	Station Number:	AMS 20
Start Time (MST):	6:32	End Time (MST):	10:50
Analyzer make:	Thermo 42i	6:50:00 AM	1505164379

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999996	≥0.995
801.1	795.5	1.0070	Slope	0.992621	0.90 - 1.10
400.5	399.1	1.0035	Intercept	0.794309	+/-20
200.9	200.6	1.0014			





Wood Buffalo Environmental Association

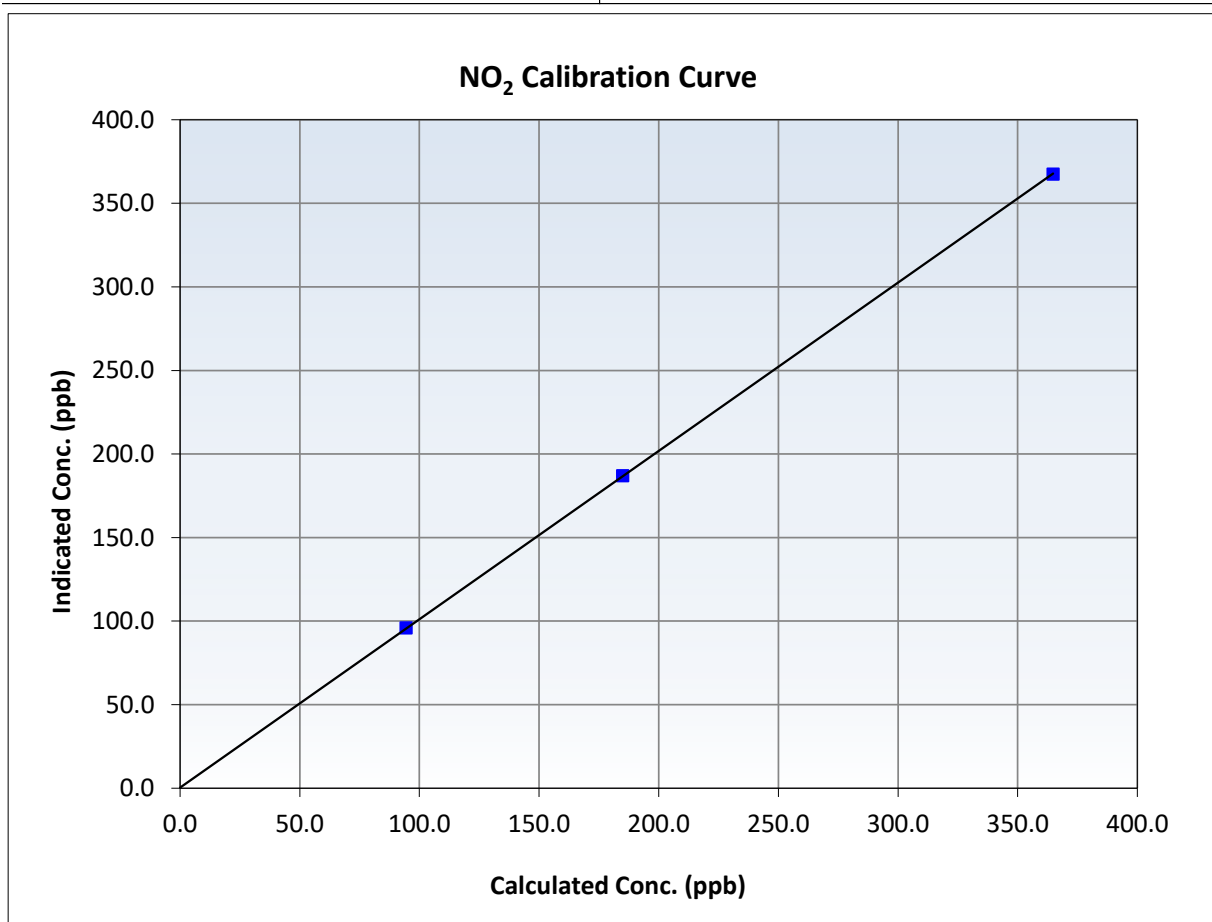
NO₂ Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 11, 2026
Station Name:	Mackay River	Station Number:	AMS 20
Start Time (MST):	6:32	End Time (MST):	10:50
Analyzer make:	Thermo 42i	6:50:00 AM	1505164379

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999989	≥0.995
364.8	367.5	0.9926	Slope	1.007243	0.90 - 1.10
185.0	187.0	0.9893	Intercept	0.364496	+/-20
94.4	96.0	0.9833			





Wood Buffalo Environmental Association

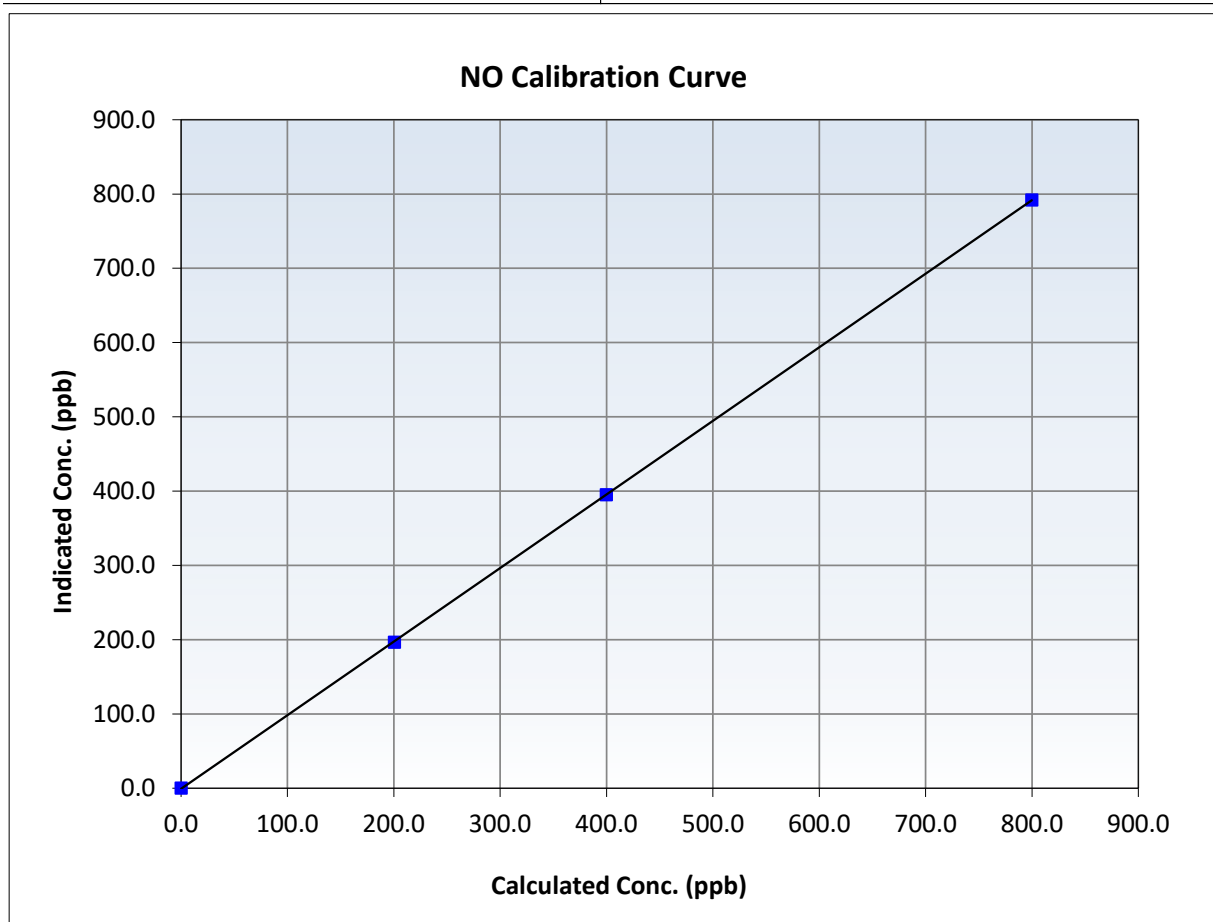
NO Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 11, 2026
Station Name:	Mackay River	Station Number:	AMS 20
Start Time (MST):	6:32	End Time (MST):	10:50
Analyzer make:	Thermo 42i	6:50:00 AM	1505164379

Calibration Data

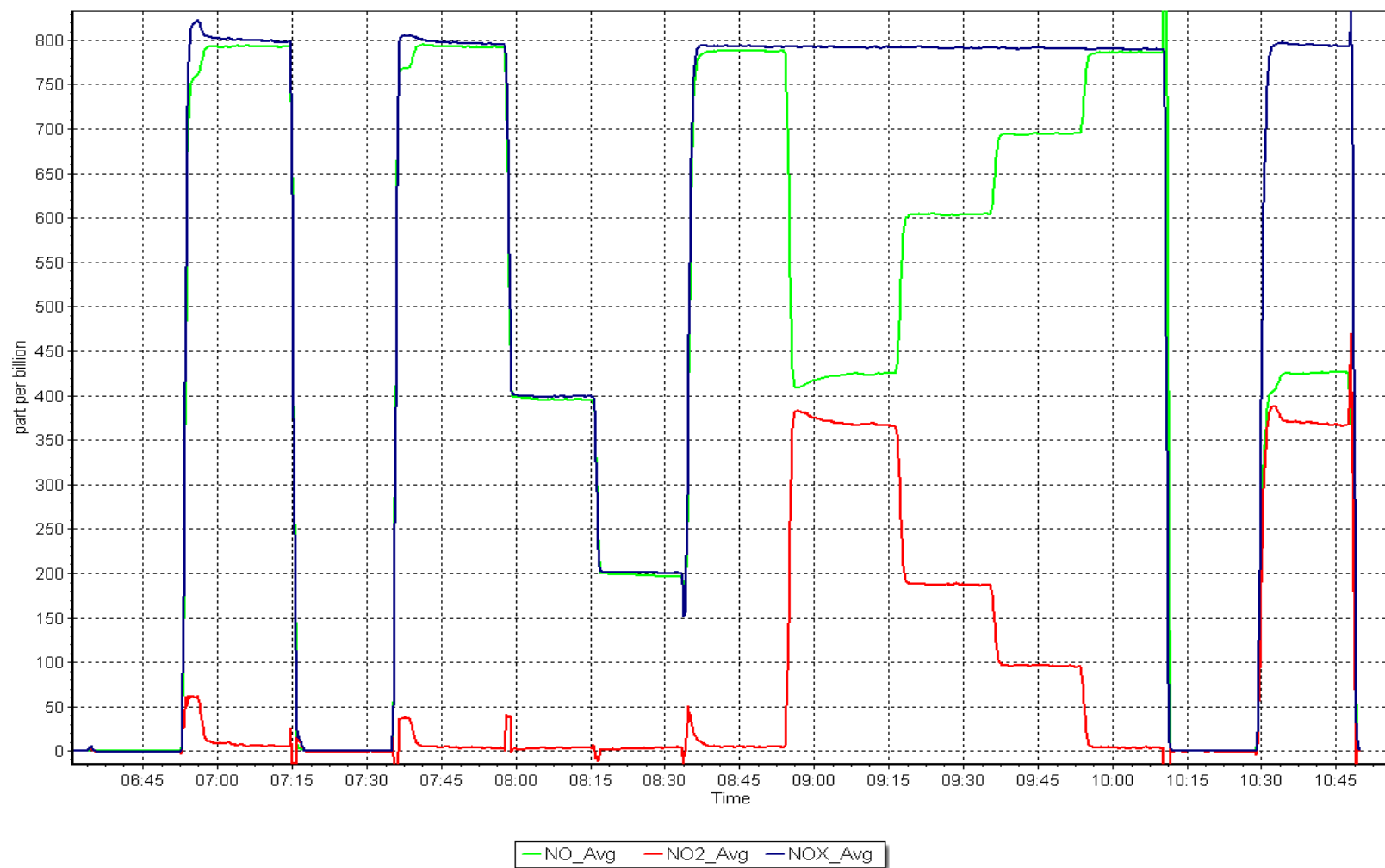
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999992	≥ 0.995
799.8	791.9	1.0100	Slope	0.990677	0.90 - 1.10
399.9	395.4	1.0113	Intercept	-0.763897	+/-20
200.5	196.6	1.0201			



NO_x Calibration Plot

Date: April 9, 2026

Location: MacKay River





Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Mackay River	Station Number:	AMS 20
Calibration Date:	April 29, 2026	Prev Cal Date:	May 28, 2025
Start Time (MST):	7:33	End Time (MST):	8:24
Tower Height (m):	10m	Reason:	Removal

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	P15103
WS Calibrator:	MetOne 053	Serial Number:	R10866

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.5	0.4%
600	58.6	58.5	-0.1%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999999	0.999996	≥ 0.9995
Calculated slope	0.999473	0.999464	$0.98 - 1.02$
Calculated intercept	0.026227	0.006619	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	N9937
As Found Declination (deg east of True North):	<u>14</u>	As Left Declination (deg east of True North):	<u>14</u>
Solar noon (MST):	12:26:58	Calc Declination*:	13.89 Degrees
WD Calibrator:	Met One 040	* - calculated declination as per NOAA website	

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	6.9	-0.9%
90	86.5	-1.0%
180	178.8	-0.3%
270	268.3	-0.5%
350	345.6	-1.2%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999983	0.999953	≥ 0.9995
Calculated slope	1.011119	1.000659	$0.97 - 1.03$
Calculated intercept	-3.008427	2.667259	± 5

Notes: WS Torque test Failed. WD 350degree point failed. WS and WD replaced.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Mackay River	Station Number:	AMS 20
Calibration Date:	April 29, 2026	Prev Cal Date:	
Start Time (MST):	7:33	End Time (MST):	8:24
Tower Height (m):	10m	Reason:	Install

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	D16124
WS Calibrator:	MetOne 053	Serial Number:	R10866

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.4	0.1%
600	58.6	58.7	0.2%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999998	≥ 0.9995
Calculated slope		0.998443	$0.98 - 1.02$
Calculated intercept		0.026636	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	N9937
As Found Declination (deg east of True North):	<u>14</u>	As Left Declination (deg east of True North):	<u>14</u>
Solar noon (MST):	12:26:58	Calc Declination*:	13.89 Degrees
WD Calibrator:	Met One 040	<i>* - calculated declination as per NOAA website</i>	

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	11.3	0.4%
90	90.8	0.2%
180	178.8	-0.3%
270	269.9	0.0%
350	349.3	-0.2%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999987	≥ 0.9995
Calculated slope		1.005696	$0.97 - 1.03$
Calculated intercept		-1.045393	± 5

Notes: WD and WS installed due to old WS and WD failed.

Calibration Performed By: Melissa Lemay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS21
CONKLIN
APRIL 2026**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Conklin
Calibration Date: April 9, 2026
Start time (MST): 10:40
Reason: Routine

Station number: AMS 21
Last Cal Date: March 9, 2026
End time (MST): 14:07

Calibration Standards

Cal Gas Concentration: 50.34 ppm
Cal Gas Cylinder #: CC340840
Removed Cal Gas Conc: 50.34 ppm
Removed Gas Cyl #: NA
Calibrator Model: Teledyne API T700P
Zero Air Gen Model: Teledyne API T701H

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 2656
Serial Number: 355

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0 - 1000 ppb

Serial Number: 1428701363

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999933	1.001547	Backgd or Offset:	32.0	32.0
Calibration intercept:	2.297220	2.256578	Coeff or Slope:	0.913	0.913

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4921	79.5	800.3	802.8	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	802.9	Previous response	802.6	*% change	0.0%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4921	79.5	800.3	803.0	0.997
Mid point	4960	39.8	400.7	403.6	0.993
Low point	4980	19.9	200.4	206.2	0.972
As left zero	5000	0.0	0.0	-0.2	----
As left span	4921	79.5	800.3	804.2	0.995
Average Correction Factor:					0.987

Notes: Sample inlet filter was changed after as founds. No adjustments made.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

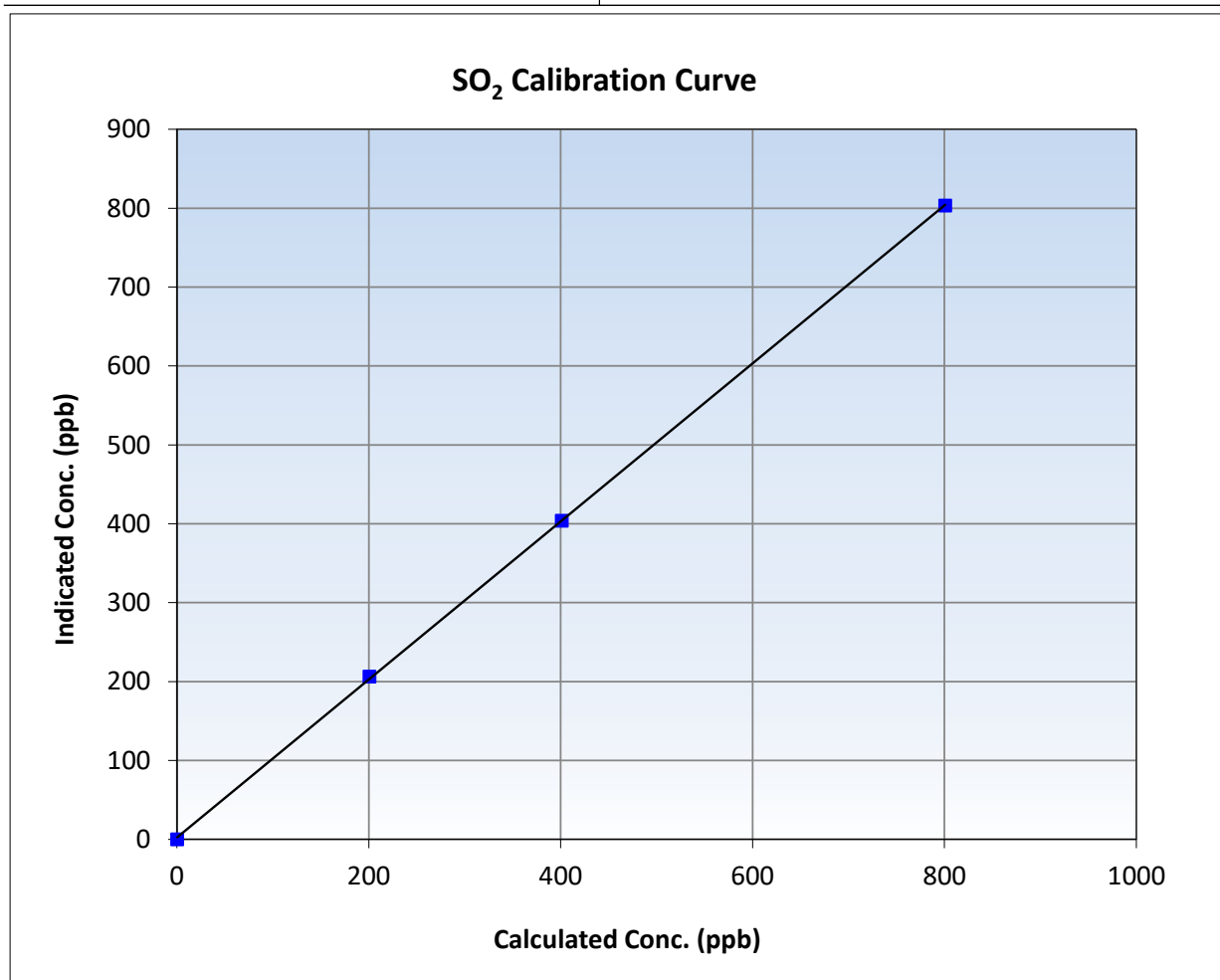
SO₂ Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 9, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:40	End Time (MST):	14:07
Analyzer make:	Thermo 43i	Analyzer serial #:	1428701363

Calibration Data

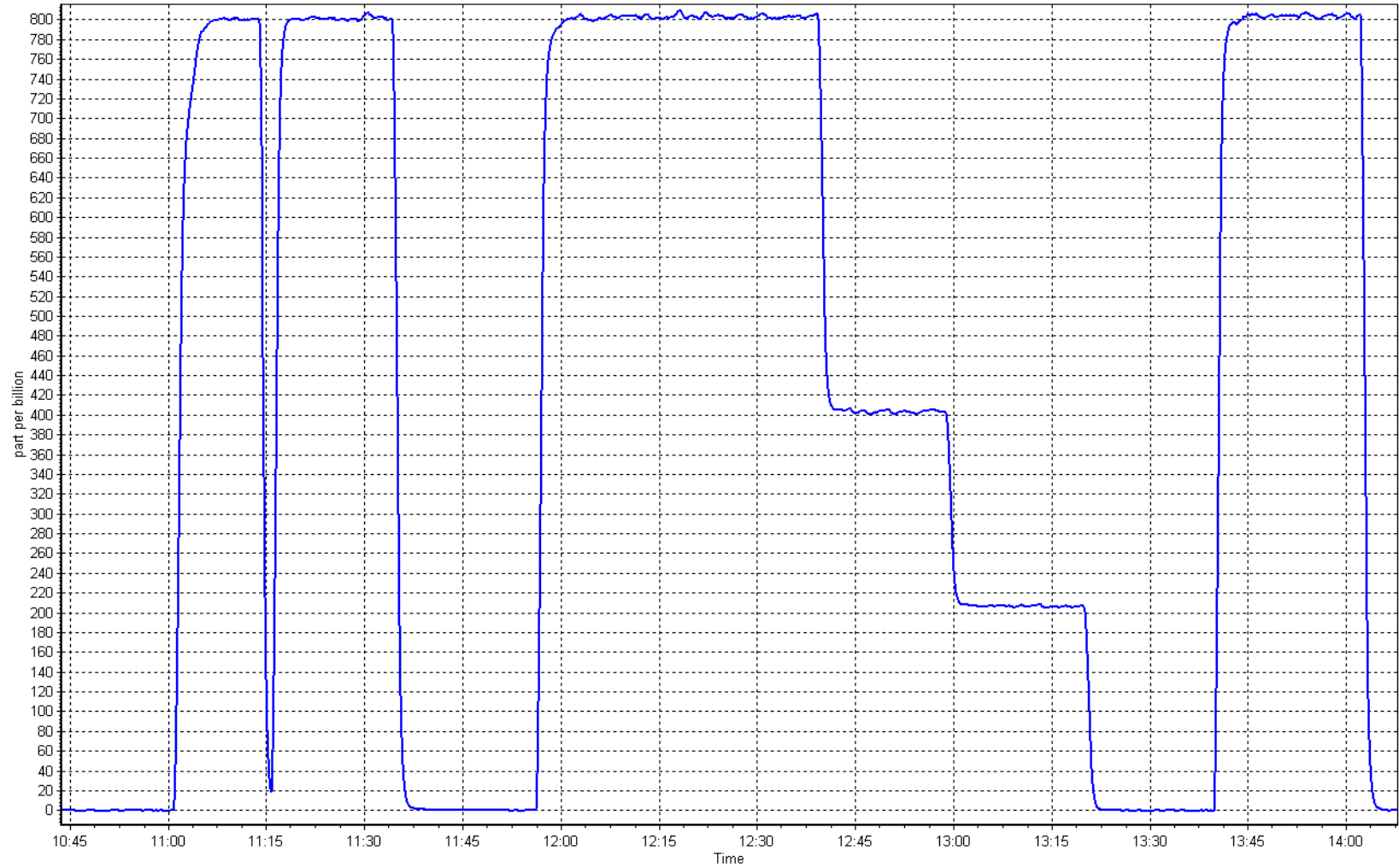
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999950	≥0.995
800.3	803.0	0.9967	Slope	1.001547	0.90 - 1.10
400.7	403.6	0.9929	Intercept	2.256578	+/-30
200.4	206.2	0.9717			



SO2 Calibration Plot

Date: April 9, 2026

Location: Conklin





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Conklin
Calibration Date: April 29, 2026
Start time (MST): 10:54
Reason: Routine

Station number: AMS 21
Last Cal Date: March 11, 2026
End time (MST): 15:22

Calibration Standards

Cal Gas Concentration: 5.06 ppm
Cal Gas Cylinder #: SA15198
Removed Cal Gas Conc: 5.06 ppm
Removed Gas Cyl #:
Calibrator Make/Model: Teledyne T700P
ZAG Make/Model: Teledyne T701H

Cal Gas Exp Date: September 22, 2028
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 2656
Serial Number: 355

Analyzer Information

Analyzer make: Thermo 43i-QTL
Converter make: CD-Nova 101
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 12228021058
Converter serial #: 565
Converter Temp: 825 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004872	1.004304	Backgd or Offset:	3.17	3.17
Calibration intercept:	0.040726	-0.039388	Coeff or Slope:	1.450	1.419

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4921	79.1	80.0	81.8	0.979
As found Mid point	4961	39.5	40.0	41.2	0.970
As found Low point	4980	19.7	19.9	20.8	0.959
New cylinder response					
Baseline Corr As found:	81.8	Prev response:	80.48	*% change:	1.6%
Baseline Corr 2nd AF pt:	41.2	AF Slope:	1.020568	AF Intercept:	0.241559
Baseline Corr 3rd AF pt:	20.8	AF Correlation:	0.999959	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4921	79.1	80.0	80.4	0.996
Mid point	4961	39.5	40.0	40.0	0.999
Low point	4980	19.7	19.9	20.0	0.997
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.1	80.0	80.1	0.999
SO2 Scrubber Check	4921	79.5	794.9	0.2	----
Date of last scrubber change:	August 6, 2025		Ave Corr Factor		0.997
Date of last converter efficiency test:	October 7, 2025				

Notes: Sox scrubber checked after calibrator zero. Span adjusted.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

TRS Calibration Summary

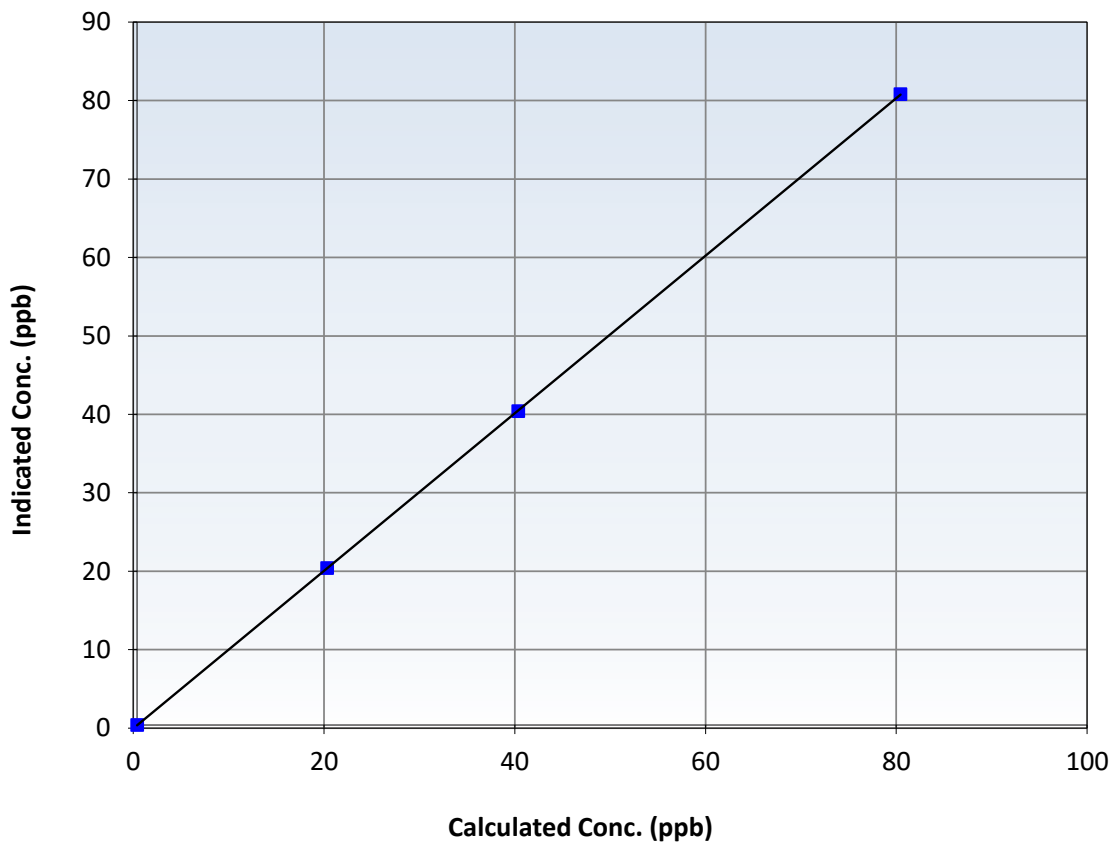
Station Information

Calibration Date:	April 29, 2026	Previous Calibration:	March 11, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:54	End Time (MST):	15:22
Analyzer make:	Thermo 43i-QTL	Analyzer serial #:	12228021058

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999996		≥ 0.995
80.0	80.4	0.9956	Slope	1.004304		$0.90 - 1.10$
40.0	40.0	0.9993	Intercept	-0.039388		± 3
19.9	20.0	0.9969				

TRS Calibration Curve



TRS Calibration Plot

Date: April 29, 2026

Location: Conklin





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Conklin
 Calibration Date: April 9, 2026
 Start time (MST): 10:40
 Reason: Routine

Station number: AMS 21
 Last Cal Date: March 26, 2026
 End time (MST): 14:07

Calibration Standards

Gas Cert Reference:	CC340840	Cal Gas Expiry Date:	October 9, 2032
CH ₄ Cal Gas Conc.	503.8 ppm	CH ₄ Equiv Conc.	1067.6 ppm
C ₃ H ₈ Cal Gas Conc.	205.0 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH ₄ Conc.	503.8 ppm	CH ₄ Equiv Conc.	1067.6 ppm
Removed C ₃ H ₈ Conc.	205.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700P	Serial Number:	2656
Zero Air Gen model:	Teledyne API T701H	Serial Number:	355

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1180320039
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.27E-04	2.32E-04	NMHC SP Ratio:	4.67E-05
CH ₄ Retention time:	15.0	15.4	NMHC Peak Area:	191901
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	16.97	16.90	1.005
Mid point	4960	39.8	8.50	8.51	0.999
Low point	4980	19.9	4.25	4.32	0.984
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	16.97	16.92	1.003
Average Correction Factor					0.996

Notes: No as founds done due to empty carrier gas cylinder. N2 cylinder swapped out. Span adjusted.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	8.96	8.87	1.011
Mid point	4960	39.8	4.49	4.50	0.997
Low point	4980	19.9	2.24	2.28	0.985
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.96	8.89	1.008
Average Correction Factor					0.998

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	8.01	8.03	0.998
Mid point	4960	39.8	4.01	4.01	1.001
Low point	4980	19.9	2.01	2.04	0.982
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.01	8.03	0.998
Average Correction Factor					0.994

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.997611	0.993926
THC Cal Offset:	0.063669	0.045295
CH ₄ Cal Slope:	0.997553	1.000734
CH ₄ Cal Offset:	0.011783	0.010377
NMHC Cal Slope:	0.997790	0.987970
NMHC Cal Offset:	0.050888	0.034918

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

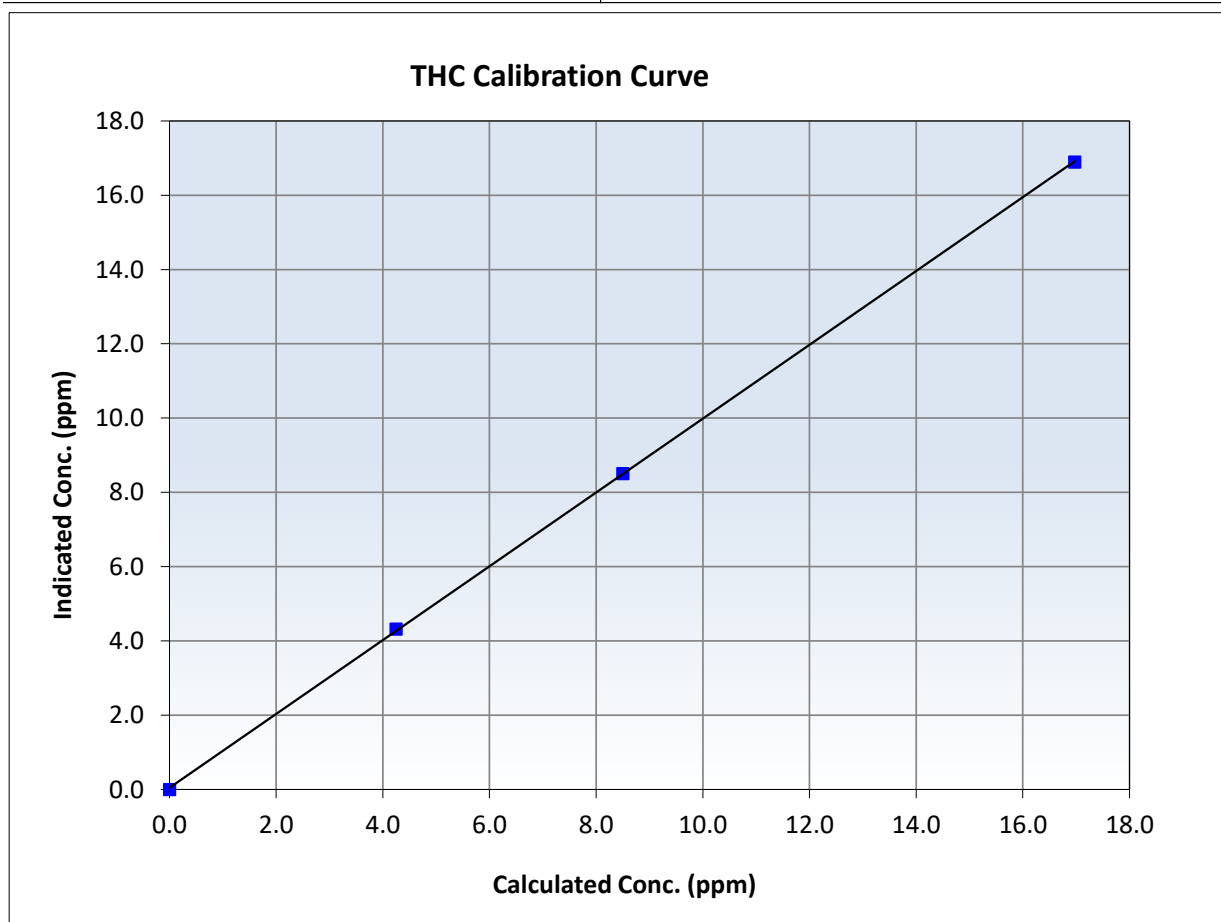
THC Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 26, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:40	End Time (MST):	14:07
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999966	≥ 0.995
16.97	16.90	1.0046	Slope	0.993926	$0.90 - 1.10$
8.50	8.51	0.9992	Intercept	0.045295	± 0.5
4.25	4.32	0.9835			





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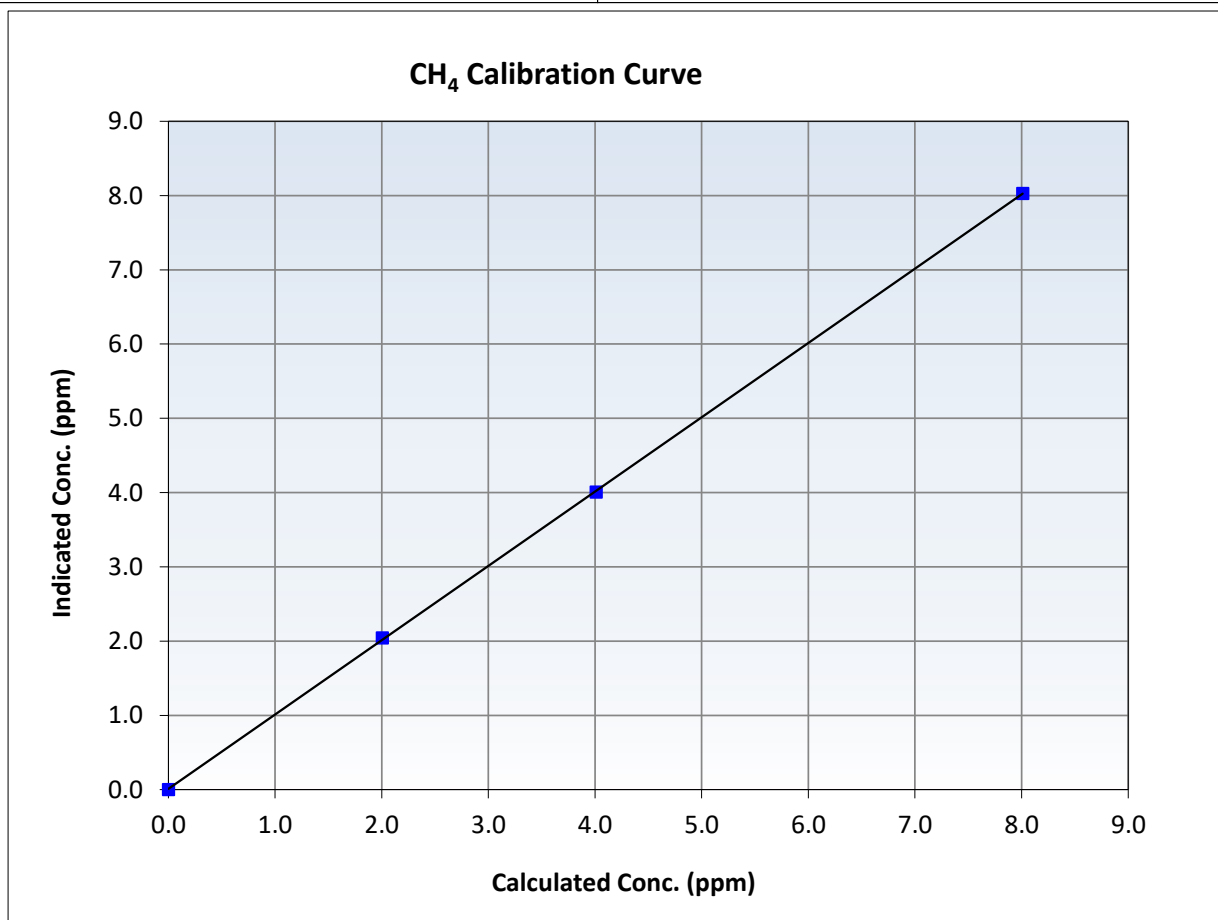
CH₄ Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 26, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:40	End Time (MST):	14:07
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999971	<i>≥0.995</i>
8.01	8.03	0.9977	Slope	1.000734	<i>0.90 - 1.10</i>
4.01	4.01	1.0009	Intercept	0.010377	<i>+/-0.5</i>
2.01	2.04	0.9820			





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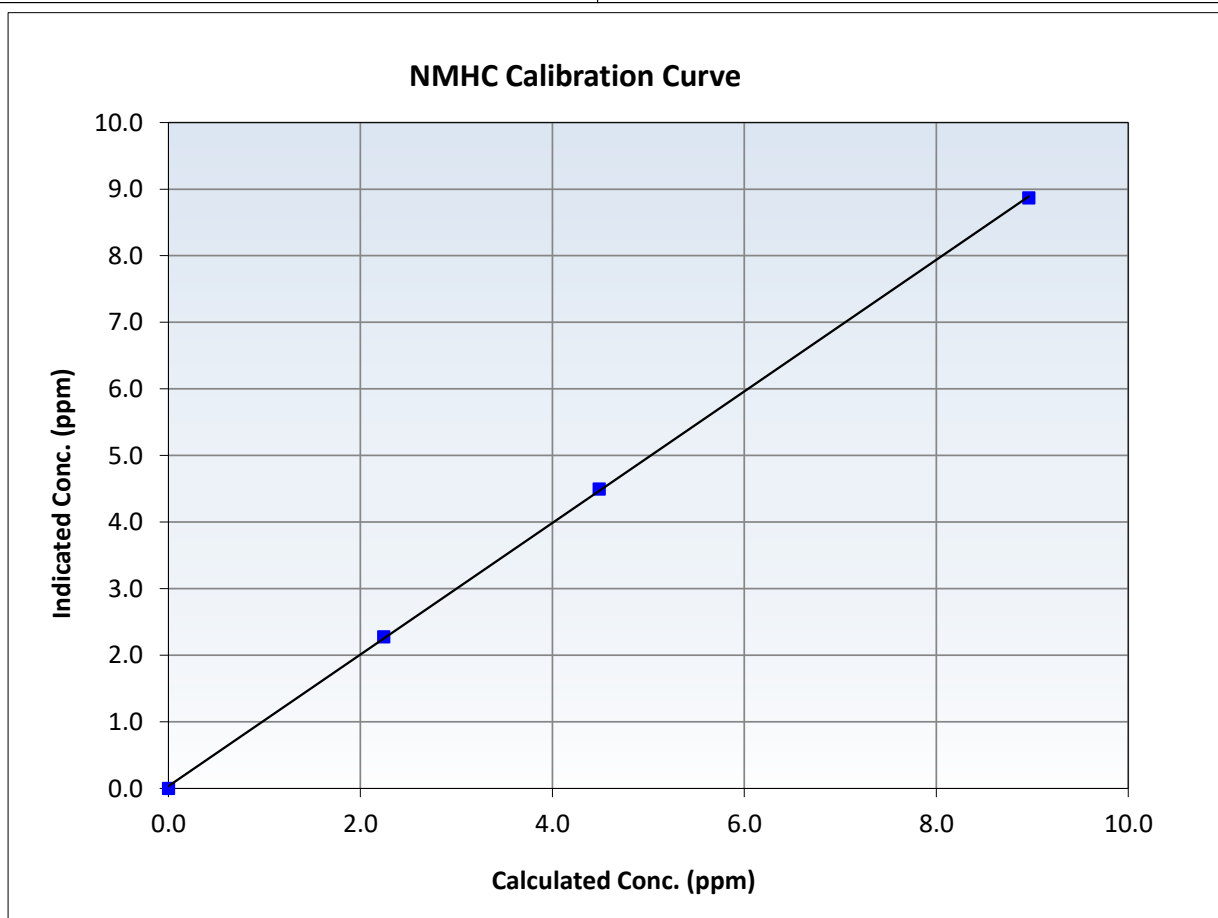
NMHC Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 26, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:40	End Time (MST):	14:07
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039

Calibration Data

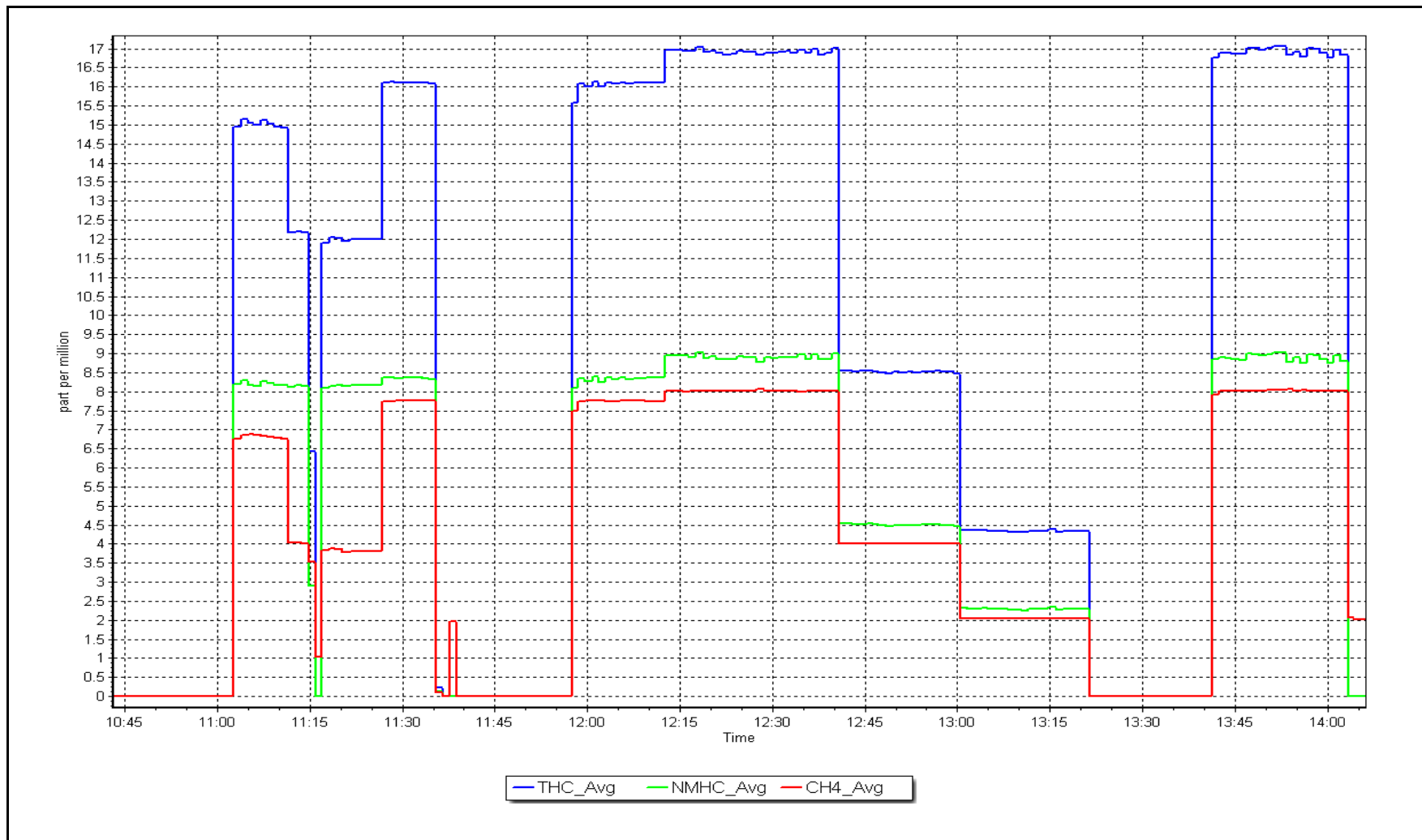
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999923	<i>≥0.995</i>
8.96	8.87	1.0107	Slope	0.987970	<i>0.90 - 1.10</i>
4.49	4.50	0.9975	Intercept	0.034918	<i>+/-0.5</i>
2.24	2.28	0.9850			



NMHC Calibration Plot

Date: April 9, 2026

Location: Conklin





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name:	Conklin	Station number:	AMS 21
Calibration Date:	April 27, 2026	Last Cal Date:	April 9, 2026
Start time (MST):	10:38	End time (MST):	13:43
Reason:	Maintenance		

Calibration Standards

Gas Cert Reference:	CC340840	Cal Gas Expiry Date:	October 9, 2032
CH ₄ Cal Gas Conc.	503.8 ppm	CH ₄ Equiv Conc.	1067.6 ppm
C ₃ H ₈ Cal Gas Conc.	205.0 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH ₄ Conc.	503.8 ppm	CH ₄ Equiv Conc.	1067.6 ppm
Removed C ₃ H ₈ Conc.	205.0 ppm		
Diff between cyl (CH ₄):		Diff between cyl (THC):	
		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700P	Serial Number:	2656
Zero Air Gen model:	Teledyne API T701H	Serial Number:	355

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039
THC Range:	0 - 20 ppm	NMHC/CH ₄ Range:	0 - 10 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.32E-04	2.56E-04	NMHC SP Ratio:	5.33E-05	5.00E-05
CH ₄ Retention time:	15.4	15.8	NMHC Peak Area:	168251	179057
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.5	16.97	16.66	1.019
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.66	Prev response	16.91	*% change	-1.6%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	16.97	16.75	1.013
Mid point	4960	39.8	8.50	8.42	1.009
Low point	4980	19.9	4.25	4.29	0.991
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	16.97	16.85	1.007
Average Correction Factor					1.004

Notes: H2 swapped out after as founds. Span adjusted.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.5	8.96	9.32	0.962
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.32	Prev response	8.89	*% change	4.6%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	8.96	8.71	1.029
Mid point	4960	39.8	4.49	4.42	1.015
Low point	4980	19.9	2.24	2.25	0.999
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.96	8.87	1.011
Average Correction Factor					1.014

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.5	8.01	7.33	1.092
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.33	Prev response	8.03	*% change	-9.4%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	8.01	8.04	0.996
Mid point	4960	39.8	4.01	4.00	1.002
Low point	4980	19.9	2.01	2.04	0.981
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.01	7.99	1.003
Average Correction Factor					0.993

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.993926	0.985273
THC Cal Offset:	0.045295	0.045339
CH ₄ Cal Slope:	1.000734	1.002003
CH ₄ Cal Offset:	0.010377	0.008178
NMHC Cal Slope:	0.987970	0.970551
NMHC Cal Offset:	0.034918	0.036761

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

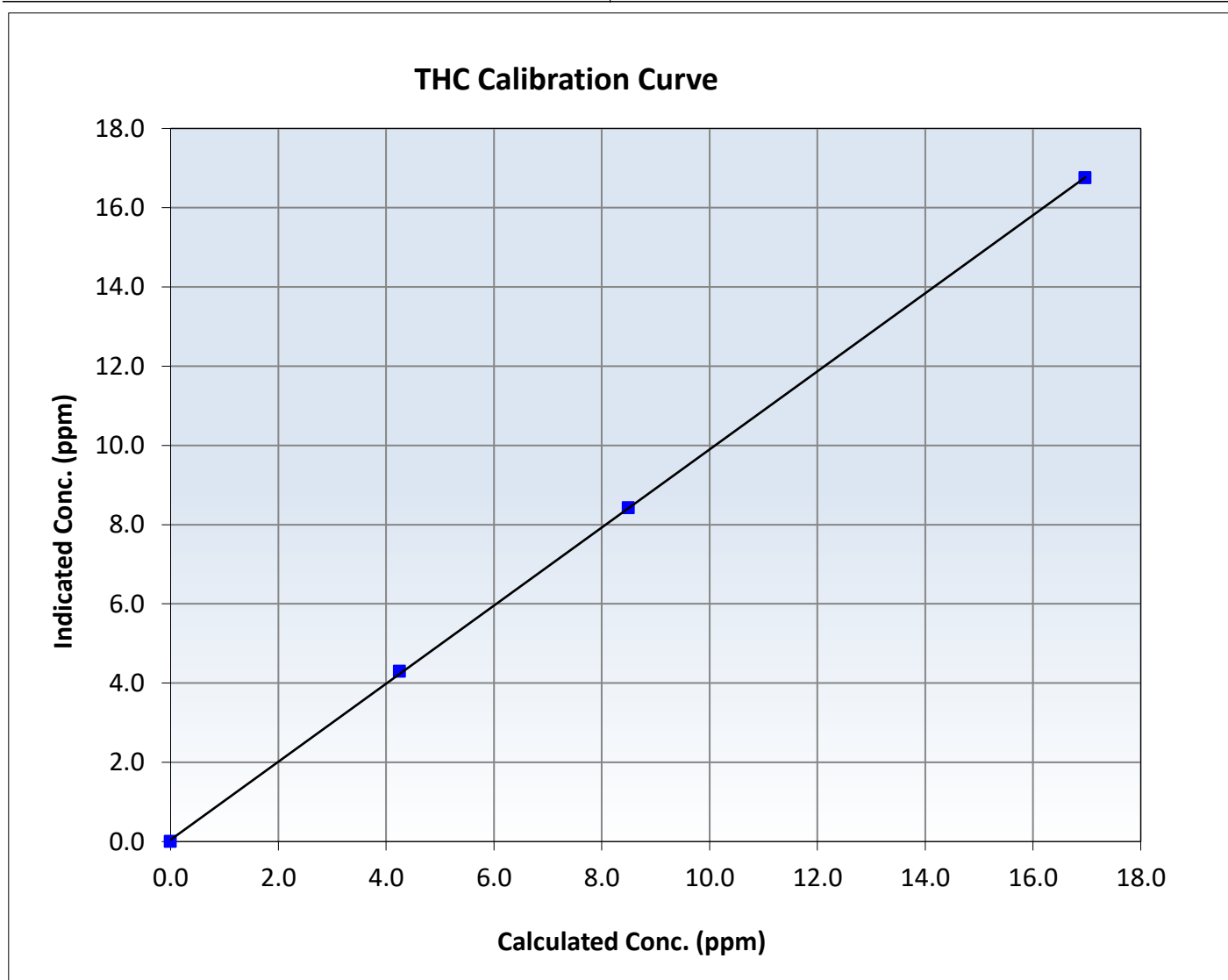
THC Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	April 9, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:38	End Time (MST):	13:43
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999963	≥ 0.995
16.97	16.75	1.0132	Slope	0.985273	$0.90 - 1.10$
8.50	8.42	1.0089	Intercept	0.045339	± 0.5
4.25	4.29	0.9907			





Wood Buffalo Environmental Association

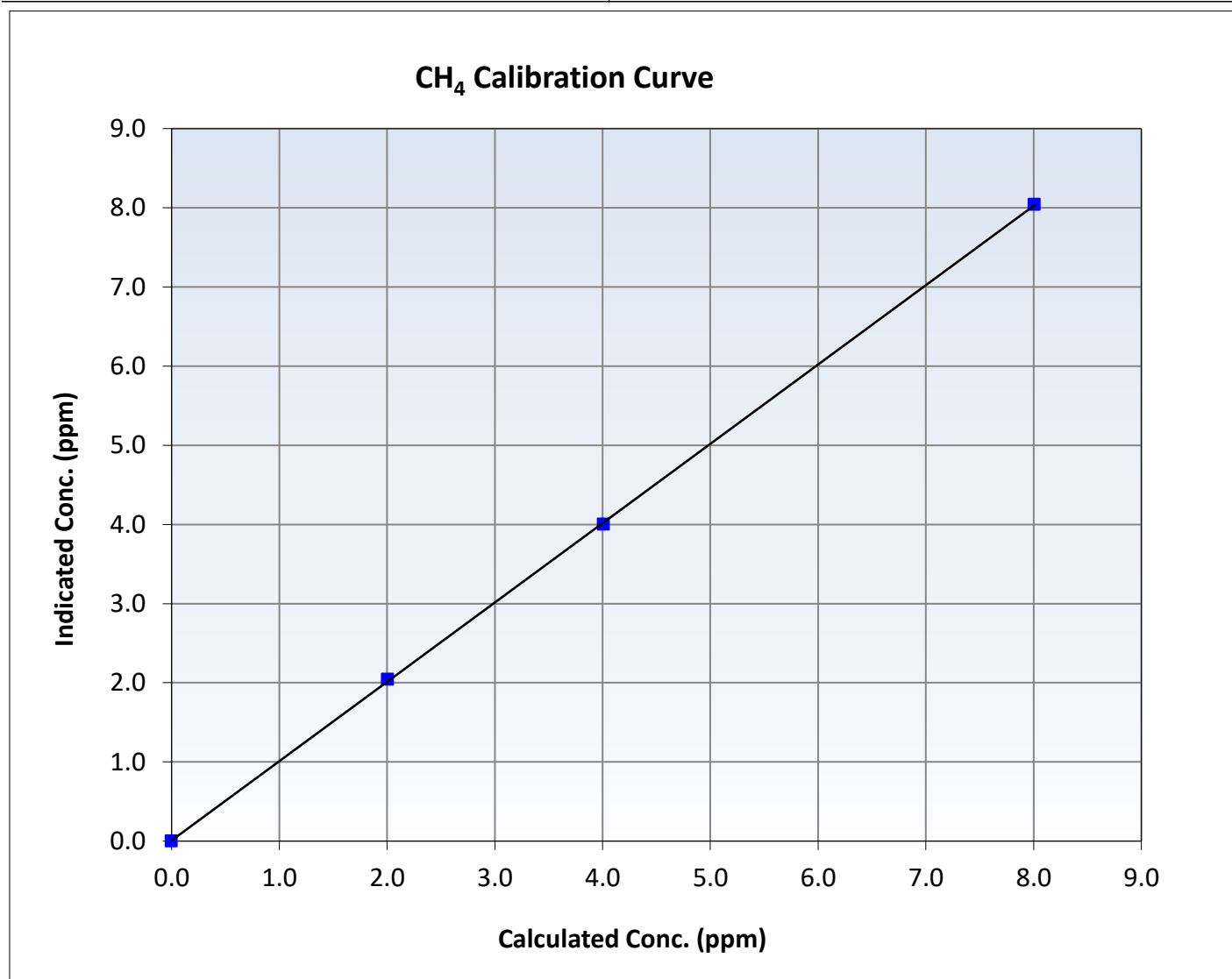
CH₄ Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	April 9, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:38	End Time (MST):	13:43
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999961	≥ 0.995
8.01	8.04	0.9963	Slope	1.002003	$0.90 - 1.10$
4.01	4.00	1.0019	Intercept	0.008178	± 0.5
2.01	2.04	0.9810			





Wood Buffalo Environmental Association

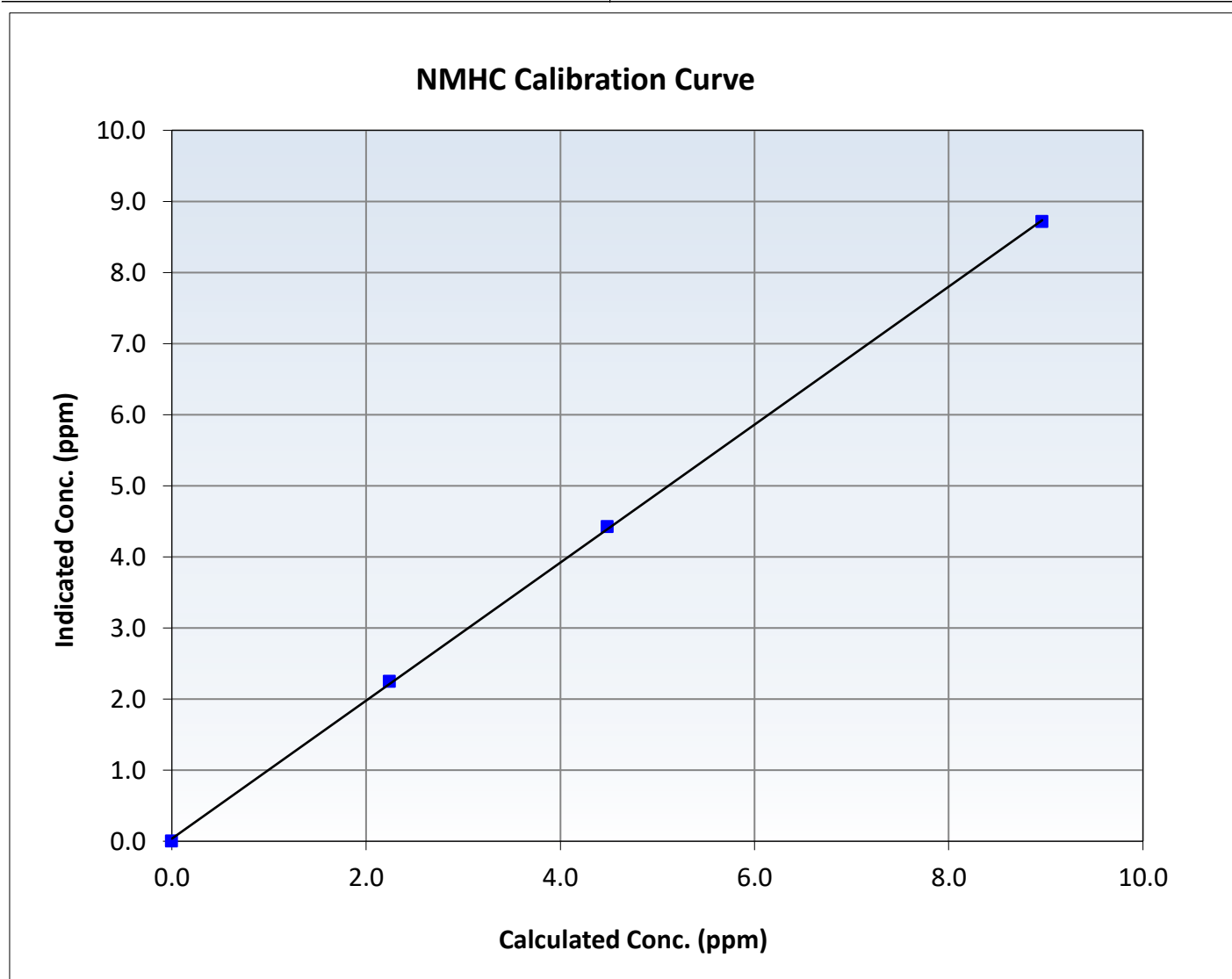
NMHC Calibration Summary

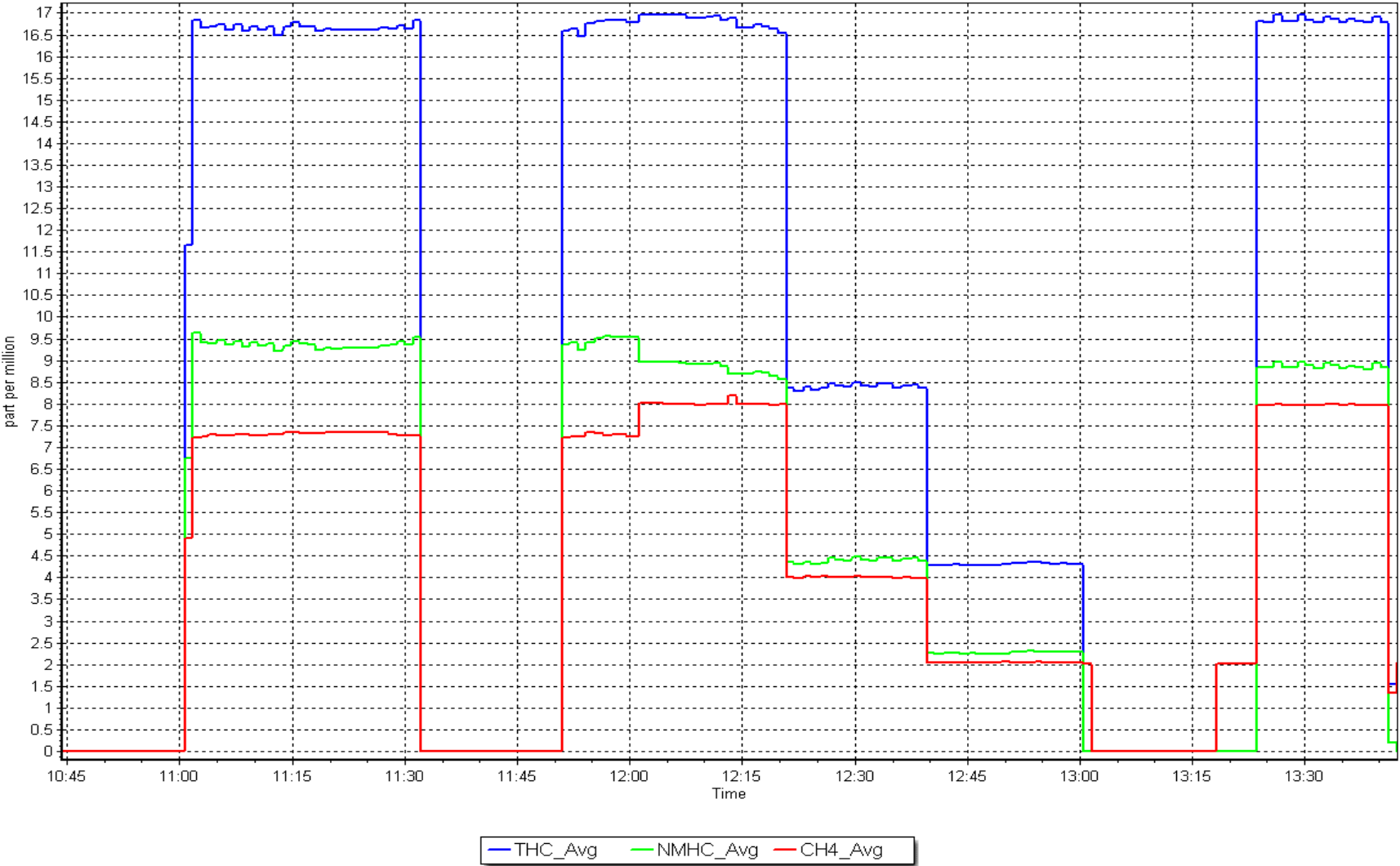
Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	April 9, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:38	End Time (MST):	13:43
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999915	≥ 0.995
8.96	8.71	1.0285	Slope	0.970551	$0.90 - 1.10$
4.49	4.42	1.0153	Intercept	0.036761	± 0.5
2.24	2.25	0.9995			







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Conklin
Calibration Date: April 30, 2026
Start time (MST): 10:30
Reason: Removal

Station number: AMS 21
Last Cal Date: April 27, 2026
End time (MST): 11:45

Calibration Standards

Gas Cert Reference:	CC340840	Cal Gas Expiry Date:	October 9, 2032
CH ₄ Cal Gas Conc.	503.8 ppm	CH ₄ Equiv Conc.	1067.6 ppm
C ₃ H ₈ Cal Gas Conc.	205.0 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH ₄ Conc.	503.8 ppm	CH ₄ Equiv Conc.	1067.6 ppm
Removed C ₃ H ₈ Conc.	205.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700P	Serial Number:	2656
Zero Air Gen model:	Teledyne API T701H	Serial Number:	355

Analyzer Information

Analyzer make: Thermo 55i
THC Range: 0 - 20 ppm

Analyzer serial #: 1180320039
NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.56E-04		NMHC SP Ratio:	5.00E-05
CH ₄ Retention time:	15.8		NMHC Peak Area:	179057
Zero Chromatogram:	OFF		Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.5	16.97	16.22	1.046
As found Mid point	4960	39.8	8.50	8.16	1.042
As found Low point	4980	19.9	4.25	4.11	1.034
New cylinder response					
Baseline Corr AF:	16.22	Prev response	16.75	*% change	-3.2%
Baseline Corr 2nd AF:	8.16	AF Slope:	0.955111	AF Intercept:	0.026684
Baseline Corr 3rd AF:	4.11	AF Correlation:	0.999988	* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					

Average Correction Factor

Notes:

Removal calibration



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.5	8.96	8.83	1.015
As found Mid point	4960	39.8	4.49	4.52	0.994
As found Low point	4980	19.9	2.24	2.30	0.975
New cylinder response					
Baseline Corr AF:	8.83	Prev response	8.72	*% change	1.3%
Baseline Corr 2nd AF:	4.52	AF Slope:	0.983281	AF Intercept:	0.054315
Baseline Corr 3rd AF:	2.30	AF Correlation:	0.999810	* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) Limit = 0.95-1.05
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					

Average Correction Factor

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.5	8.01	7.39	1.084
As found Mid point	4960	39.8	4.01	3.64	1.101
As found Low point	4980	19.9	2.01	1.81	1.108
New cylinder response					
Baseline Corr AF:	7.39	Prev response	8.03	*% change	-8.7%
Baseline Corr 2nd AF:	3.64	AF Slope:	0.923304	AF Intercept:	-0.027630
Baseline Corr 3rd AF:	1.81	AF Correlation:	0.999917	* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) Limit = 0.95-1.05
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					

Average Correction Factor

Calibration Statistics

	<u>Start</u>	
THC Cal Slope:	0.979921	
THC Cal Offset:	0.113474	
CH ₄ Cal Slope:	0.999958	
CH ₄ Cal Offset:	0.020467	
NMHC Cal Slope:	0.962333	
NMHC Cal Offset:	0.092005	

Finish

Calibration Performed By: Aswin Sasi Kumar

NMHC Calibration Plot

Date: April 30, 2026

Location: Conklin





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Conklin
 Calibration Date: April 30, 2026
 Start time (MST): 12:45
 Reason: Install

Station number: AMS 21
 Last Cal Date:
 End time (MST): 15:05

Calibration Standards

Gas Cert Reference:	CC340840	Cal Gas Expiry Date:	October 9, 2032
CH ₄ Cal Gas Conc.	503.8 ppm	CH ₄ Equiv Conc.	1067.6 ppm
C ₃ H ₈ Cal Gas Conc.	205.0 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH ₄ Conc.	503.8 ppm	CH ₄ Equiv Conc.	1067.6 ppm
Removed C ₃ H ₈ Conc.	205.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700P	Serial Number:	2656
Zero Air Gen model:	Teledyne API T701H	Serial Number:	355

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1152430011
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:		2.56E-04	NMHC SP Ratio:	5.00E-05
CH ₄ Retention time:		15.8	NMHC Peak Area:	179057
Zero Chromatogram:		OFF	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	16.97	17.07	0.994
Mid point	4960	39.8	8.50	8.63	0.985
Low point	4980	19.9	4.25	4.44	0.957
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	16.97	17.12	0.991
Average Correction Factor					0.979

Notes:

Install calibration. Span adjusted.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	8.96	9.02	0.994
Mid point	4960	39.8	4.49	4.56	0.985
Low point	4980	19.9	2.24	2.36	0.952
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.96	9.03	0.993
Average Correction Factor					0.977

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	8.01	8.05	0.994
Mid point	4960	39.8	4.01	4.08	0.983
Low point	4980	19.9	2.01	2.08	0.964
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.01	8.10	0.989
Average Correction Factor					0.980

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:		1.003114
THC Cal Offset:		0.082035
CH ₄ Cal Slope:		1.003423
CH ₄ Cal Offset:		0.034949
NMHC Cal Slope:		1.003207
NMHC Cal Offset:		0.047884

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

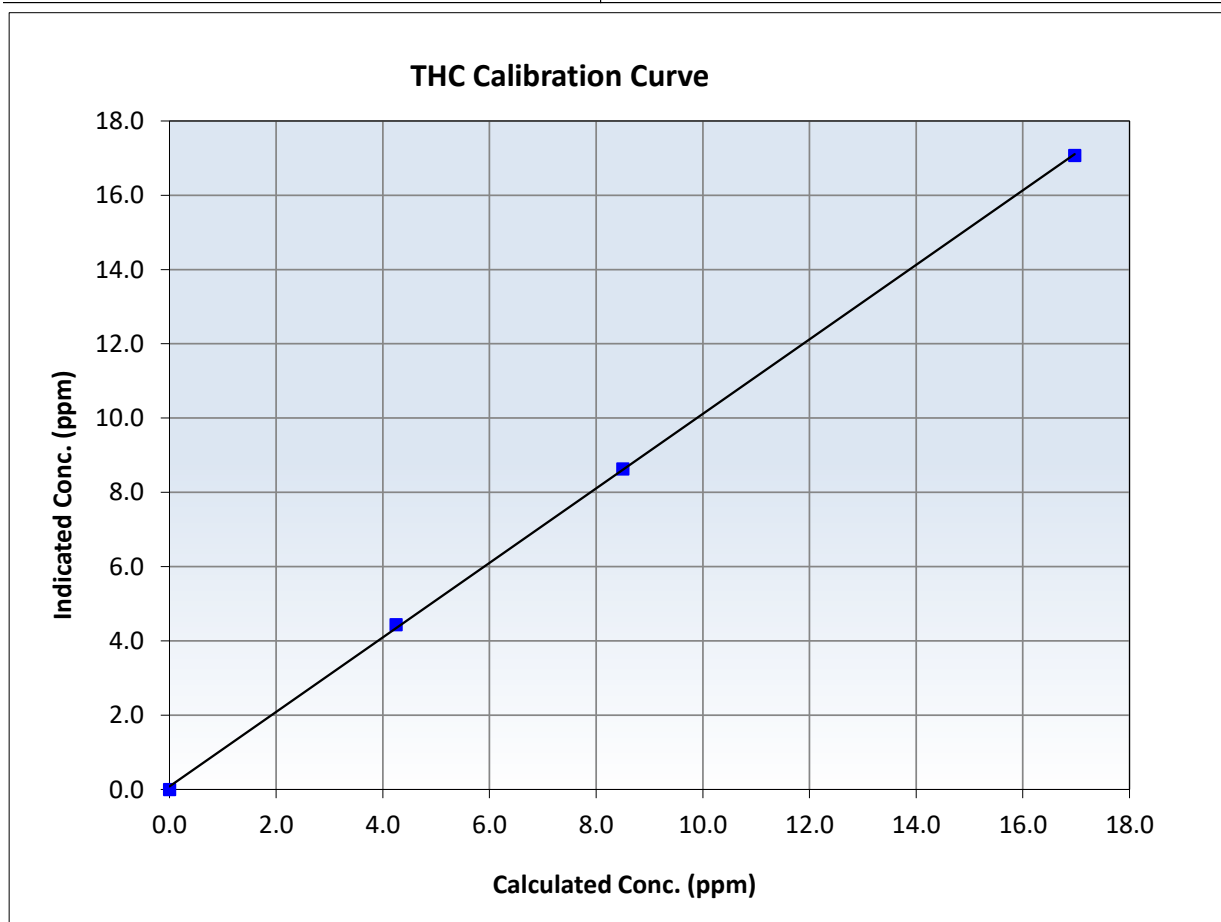
THC Calibration Summary

Station Information

Calibration Date:	April 30, 2026	Previous Calibration:	
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	12:45	End Time (MST):	15:05
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430011

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999891	<i>≥0.995</i>
16.97	17.07	0.9942	Slope	1.003114	<i>0.90 - 1.10</i>
8.50	8.63	0.9847	Intercept	0.082035	<i>+/-0.5</i>
4.25	4.44	0.9574			





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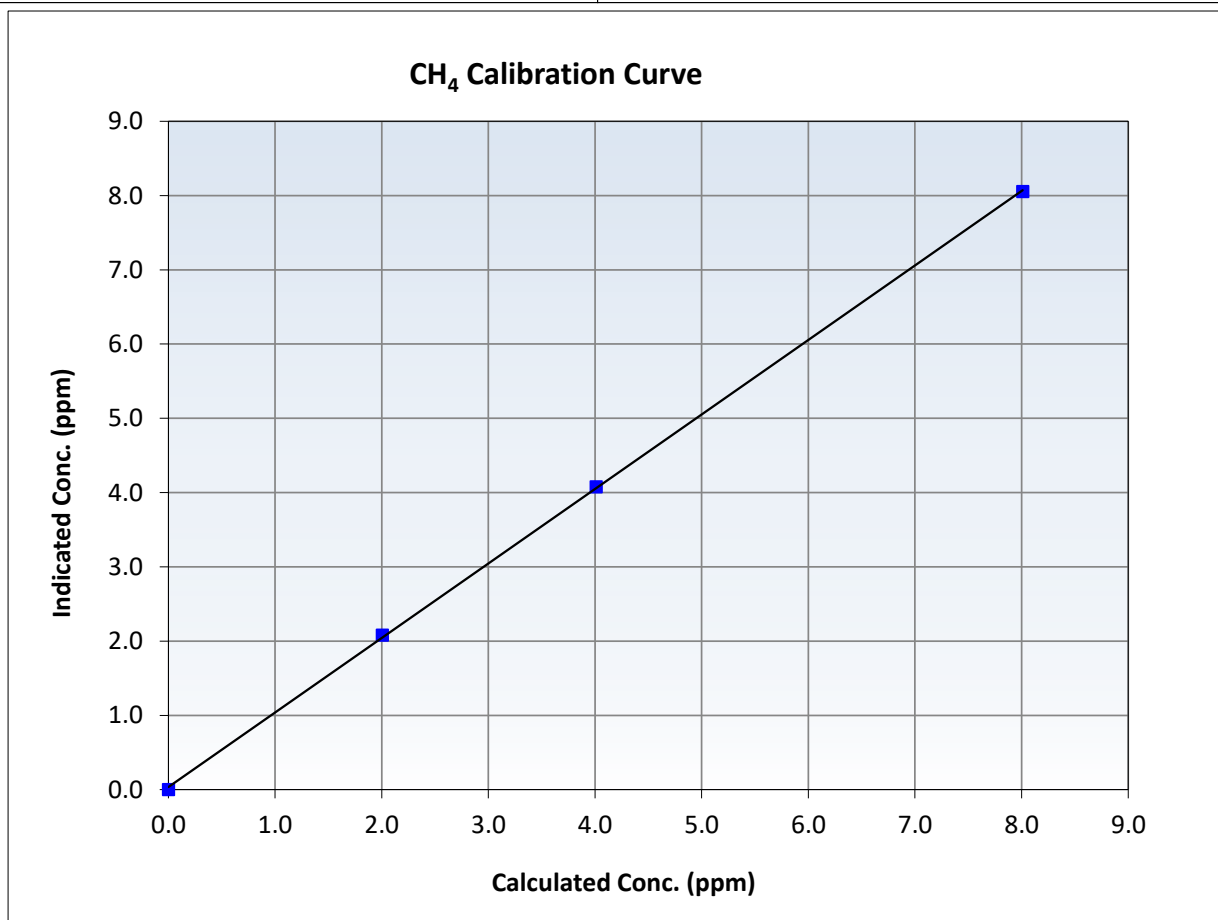
CH₄ Calibration Summary

Station Information

Calibration Date:	April 30, 2026	Previous Calibration:	
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	12:45	End Time (MST):	15:05
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430011

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999913	<i>≥0.995</i>
8.01	8.05	0.9945	Slope	1.003423	<i>0.90 - 1.10</i>
4.01	4.08	0.9834	Intercept	0.034949	<i>+/-0.5</i>
2.01	2.08	0.9636			





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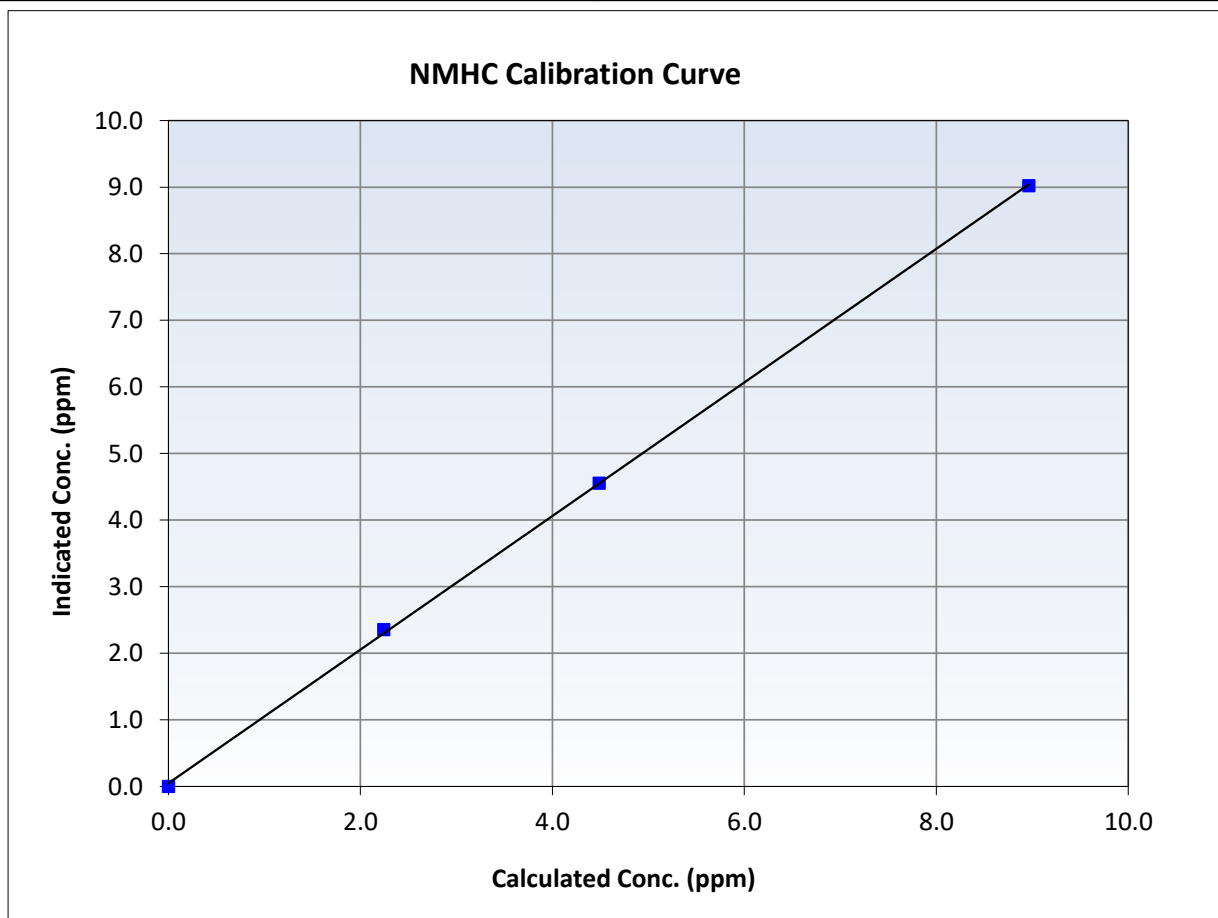
NMHC Calibration Summary

Station Information

Calibration Date:	April 30, 2026	Previous Calibration:	
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	12:45	End Time (MST):	15:05
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430011

Calibration Data

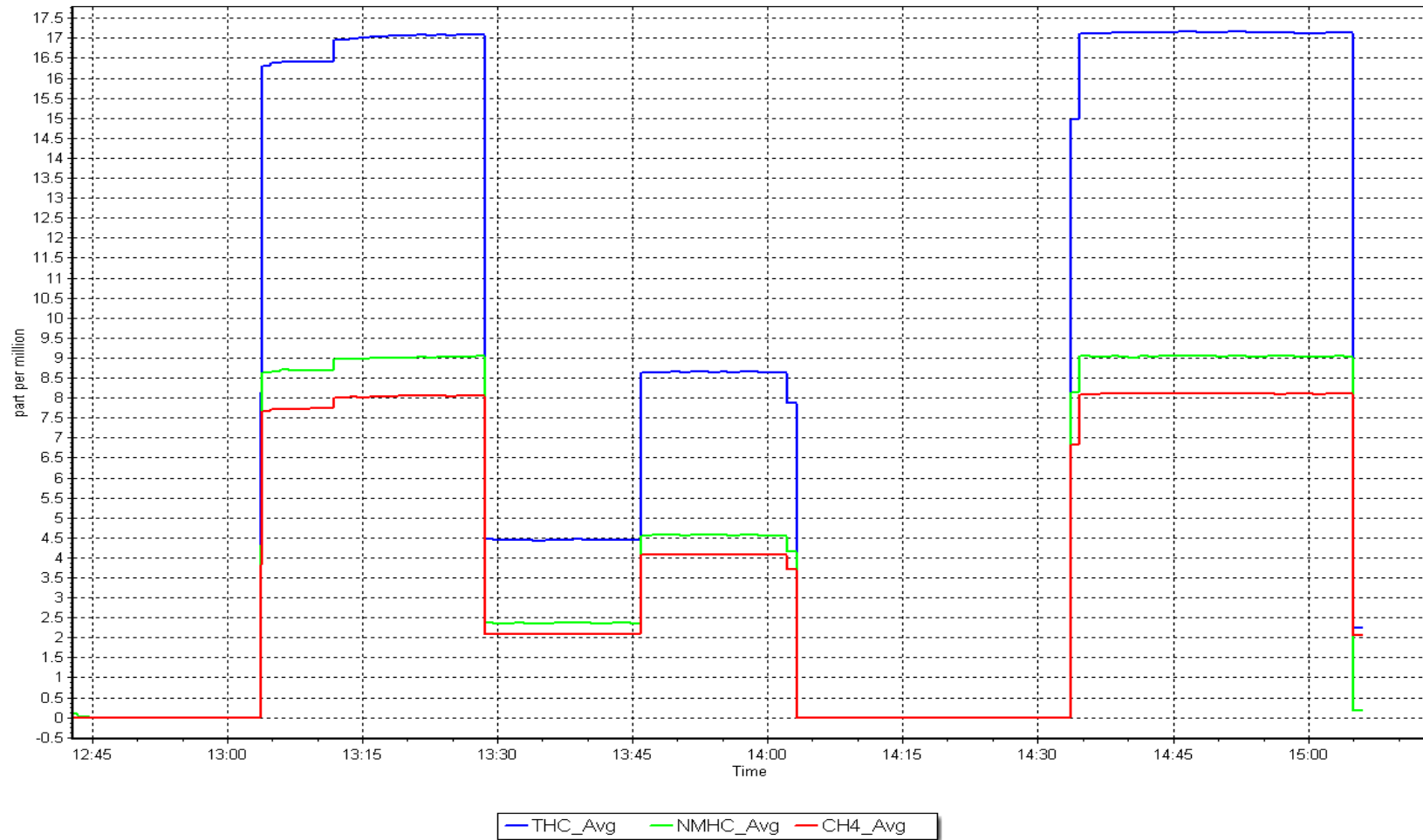
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999860	≥ 0.995
8.96	9.02	0.9935	Slope	1.003207	$0.90 - 1.10$
4.49	4.56	0.9848	Intercept	0.047884	± 0.5
2.24	2.36	0.9516			



NMHC Calibration Plot

Date: April 30, 2026

Location: Conklin





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Conklin
 Station number: AMS 21
 Calibration Date: April 28, 2026
 Last Cal Date: March 16, 2026
 Start time (MST): 10:45
 End time (MST): 15:42
 Reason: Routine

Calibration Standards

NO Gas Cylinder #: SA18828
 NOX Cal Gas Conc: 48.90 ppm
 Removed Cylinder #: NA
 Removed Gas NOX Conc: 48.90 ppm
 NOX gas Diff:
 Calibrator Model: Teledyne API T700
 ZAG make/model: Teledyne API T701
 Cal Gas Expiry Date: November 3, 2031
 NO Cal Gas Conc: 48.80 ppm
 Removed Gas Exp Date: NA
 Removed Gas NO Conc: 48.80 ppm
 NO gas Diff:
 Serial Number: 2656
 Serial Number: 355

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	0.0	----	----
AF High point	4918	82.0	802.0	800.3	1.6	806.0	801.0	5.6	0.9951	0.9994
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 803.4 ppb	NO = 801.2 ppb	* = > +/-5% change initiates investigation			*Percent Change	NO _x = 0.3%			
Baseline Corr 1st pt	NO _x = 805.9 ppb	NO = 800.8 ppb	<u>As Found Statistics</u>			*Percent Change	NO = -0.1%			
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb	As found NO _x r ² :			Nx SI:	Nx Int:			
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb	As found NO r ² :			NO SI:	NO Int:			
			As found NO ₂ r ² :			NO ₂ SI:	NO ₂ Int:			

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1218153356

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.617	0.614	NO bkgnd or offset:	2.9	2.9
NOX coeff or slope:	0.996	0.997	NOX bkgnd or offset:	3.0	3.0
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	161.5	165.3

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.997676	0.998388
NO _x Cal Offset:	3.288068	3.088075
NO Cal Slope:	0.998606	0.997792
NO Cal Offset:	2.028039	1.688035
NO ₂ Cal Slope:	1.003884	1.002634
NO ₂ Cal Offset:	-0.376785	0.896211

Dilution Calibration Data

Set Point	Dilution flow rate (scm)	Source gas flow rate (scm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.2	0.3	-0.1	----	----
High point	4918	82.0	802.0	800.3	1.6	802.6	800.1	2.4	0.9992	1.0003
Mid point	4959	41.0	401.0	400.2	0.8	404.0	400.0	4.0	0.9925	1.0004
Low point	4980	20.5	200.5	200.1	0.4	206.7	203.8	2.9	0.9699	0.9816
As left zero	5000	0.0	0.0	0.0	0.0	0.3	0.4	0.0	----	----
As left span	4918	82.0	802.0	387.5	414.5	800.7	387.5	413.2	1.0016	1.0000
Average Correction Factor									0.9872	0.9941

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	797.4	389.7	409.3	410.6	0.9969	100.3%
Mid GPT point	797.4	592.4	206.6	209.2	0.9878	101.2%
Low GPT point	797.4	695.6	103.4	105.2	0.9833	101.7%
Average Correction Factor					0.9893	101.1%

Notes:

Span adjusted.

Calibration Performed By:

Aswin Sasi Kumar



Wood Buffalo Environmental Association

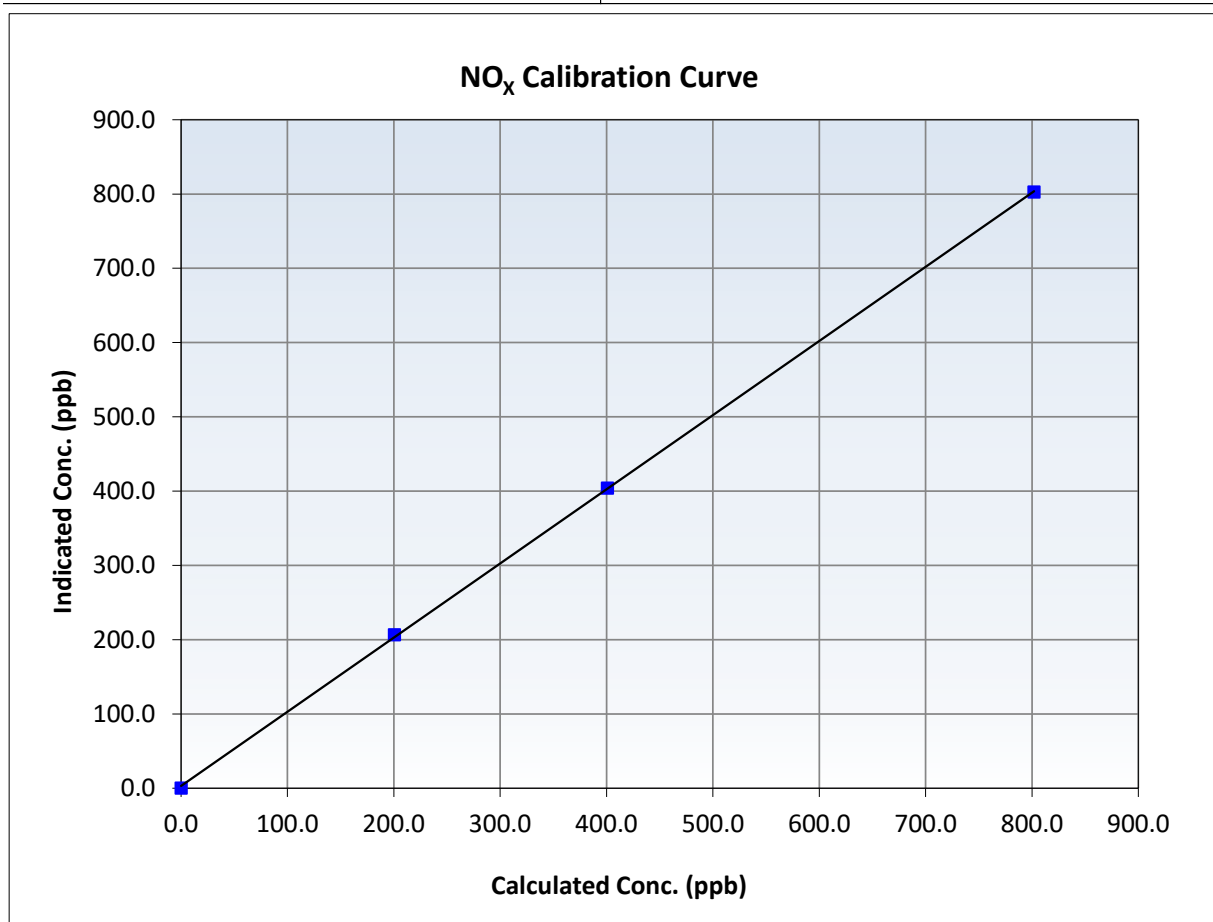
NO_x Calibration Summary

Station Information

Calibration Date:	April 28, 2026	Previous Calibration:	March 16, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:45	End Time (MST):	15:42
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153356

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999937	≥0.995
802.0	802.6	0.9992	Slope	0.998388	0.90 - 1.10
401.0	404.0	0.9925	Intercept	3.088075	+/-20
200.5	206.7	0.9699			





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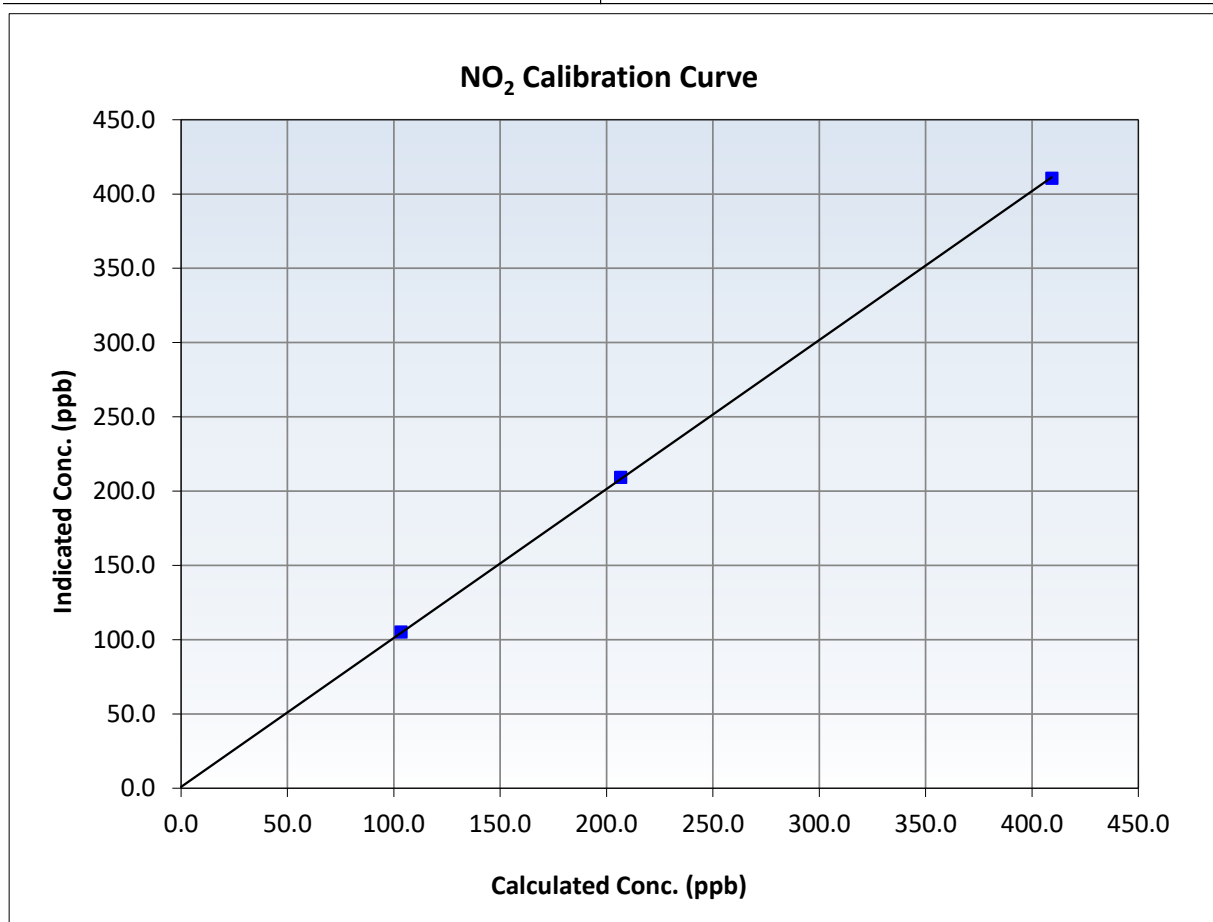
NO₂ Calibration Summary

Station Information

Calibration Date:	April 28, 2026	Previous Calibration:	March 16, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:45	End Time (MST):	15:42
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153356

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999966	≥0.995
409.3	410.6	0.9969	Slope	1.002634	0.90 - 1.10
206.6	209.2	0.9878	Intercept	0.896211	+/-20
103.4	105.2	0.9833			





Wood Buffalo Environmental Association

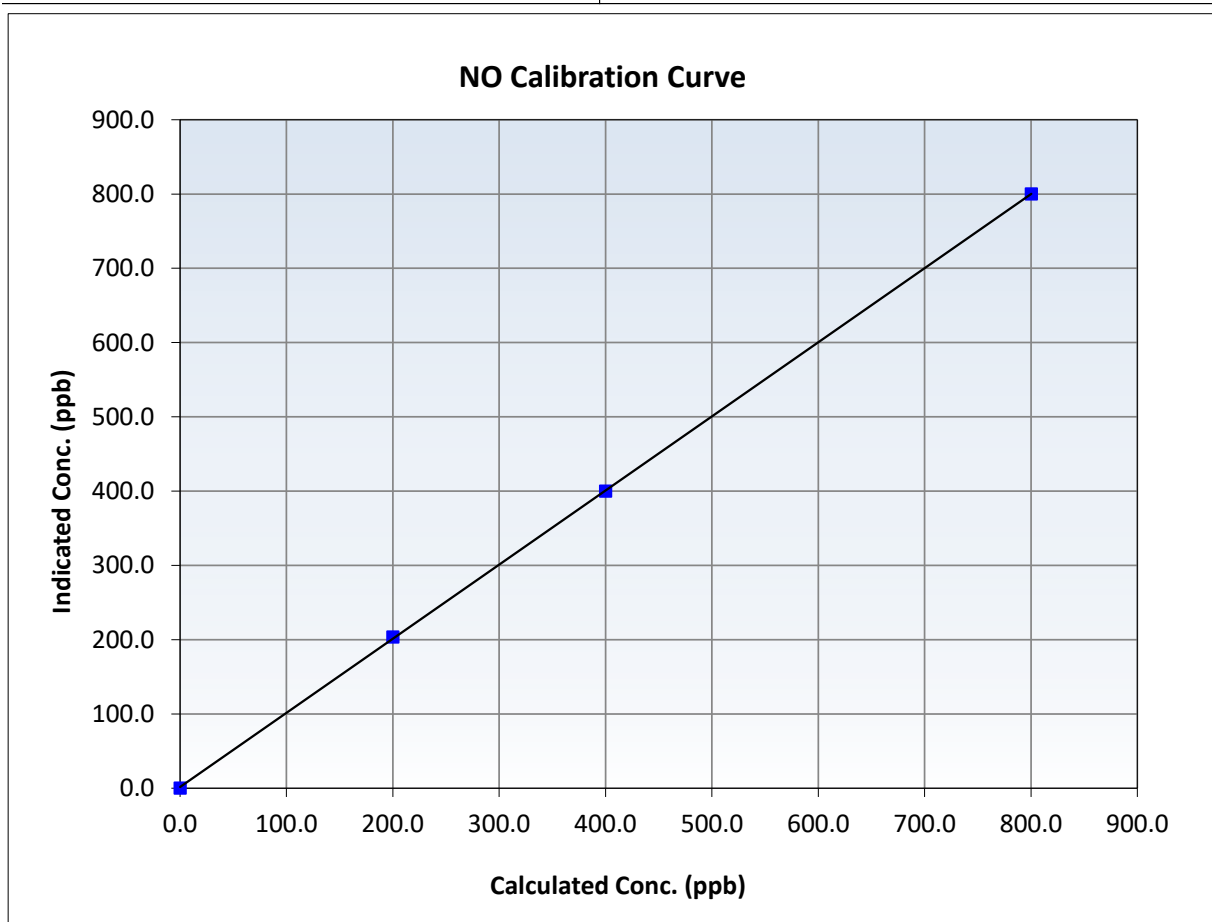
NO Calibration Summary

Station Information

Calibration Date:	April 28, 2026	Previous Calibration:	March 16, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:45	End Time (MST):	15:42
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153356

Calibration Data

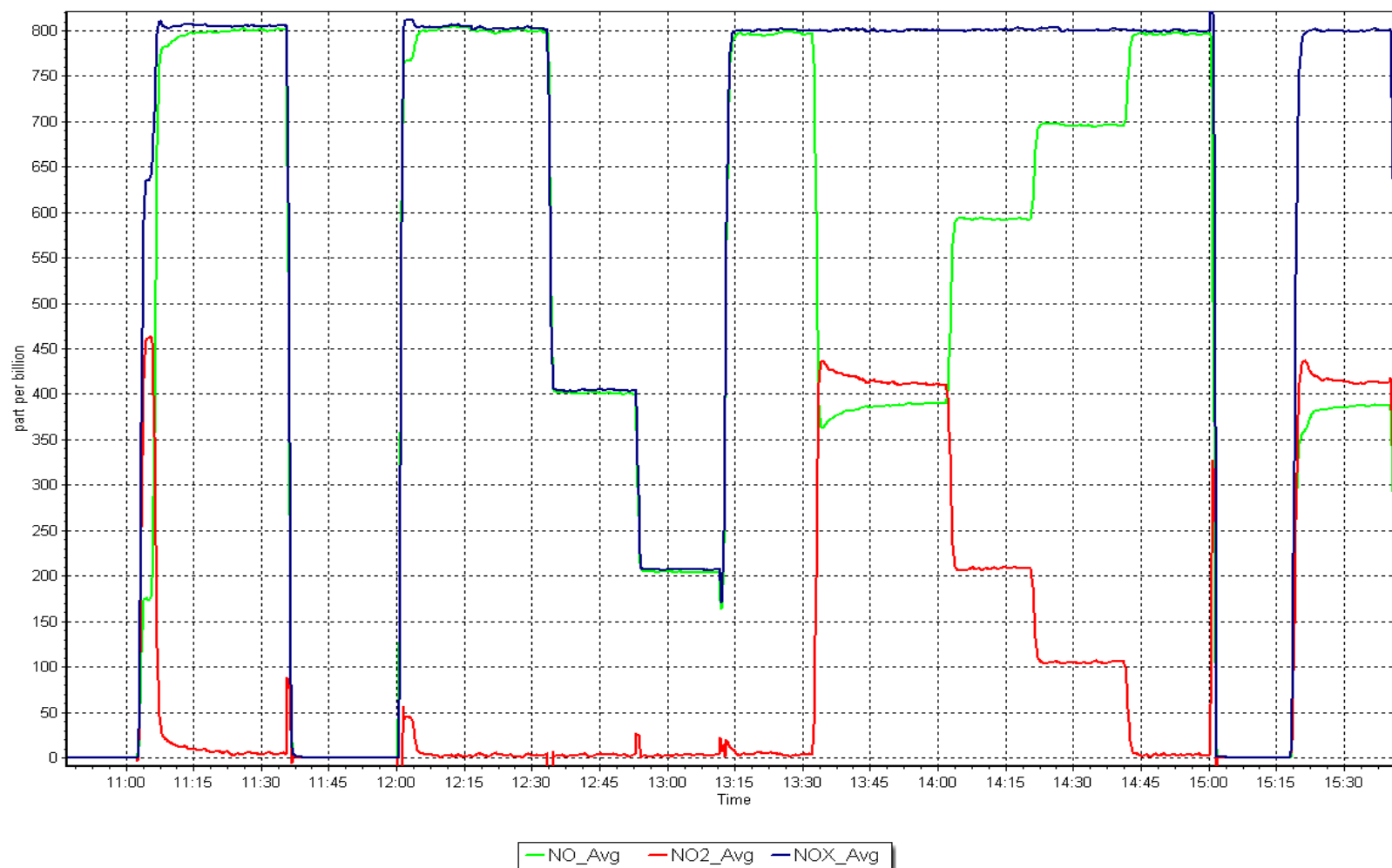
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999974	≥ 0.995
800.3	800.1	1.0003	Slope	0.997792	$0.90 - 1.10$
400.2	400.0	1.0004	Intercept	1.688035	± 20
200.1	203.8	0.9816			



NO_x Calibration Plot

Date: April 28, 2026

Location: Conklin





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Conklin
Calibration Date: April 8, 2026
Start time (MST): 10:07
Reason: Routine

Station number: AMS 21
Last Cal Date: March 3, 2026
End time (MST): 13:02

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T700P
ZAG Make/Model: Teledyne API T701H

Serial Number: 2656
Serial Number: 355

Analyzer Information

Analyzer make: Thermo 49i
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 1300156233

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999914	0.997371	Backgd or Offset:	0.2	0.2
Calibration intercept:	0.640000	0.660000	Coeff or Slope:	1.218	1.218

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted
					Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	800.0	0.0	-0.3	----
As found High point	5000	1036.7	400.0	397.7	1.005
As found Mid point					
As found Low point					
Baseline Corr As found:	398.0	Previous response	400.6	*% change	-0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	800.0	0.0	0.1	----
High point	5000	1037.8	400.0	399.4	1.002
Mid point	5000	865.1	200.0	200.2	0.999
Low point	5000	748.0	100.0	101.1	0.989
As left zero	5000	800.0	0.0	0.1	----
As left span	5000	1033.9	400.0	403.6	0.991
Average Correction Factor					0.997

Notes:

Sample inlet filter was changed after as founds.

Calibration Performed By:

Aswin Sasi Kumar



Wood Buffalo Environmental Association

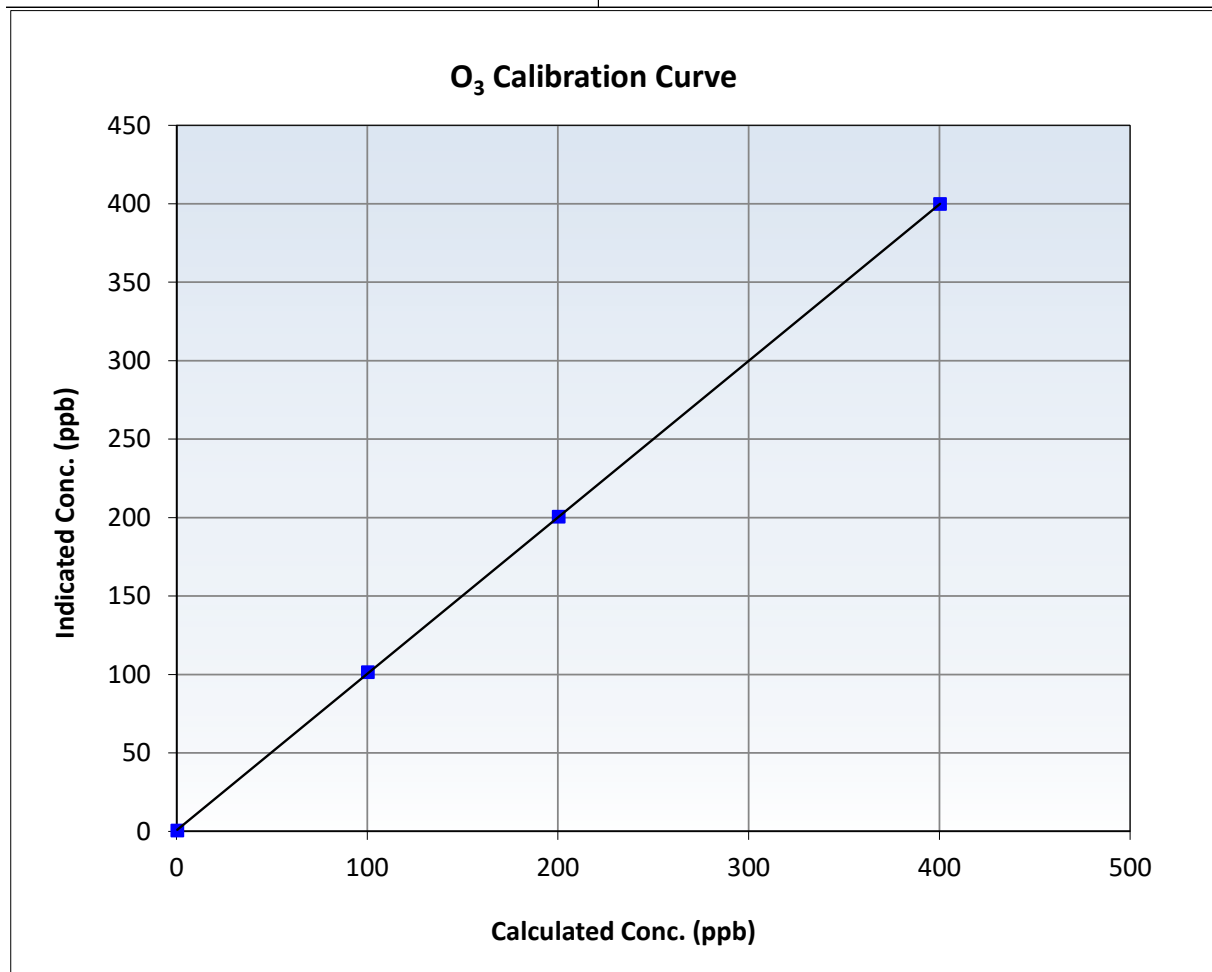
O₃ Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 3, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:07	End Time (MST):	13:02
Analyzer make:	Thermo 49i	Analyzer serial #:	1300156233

Calibration Data

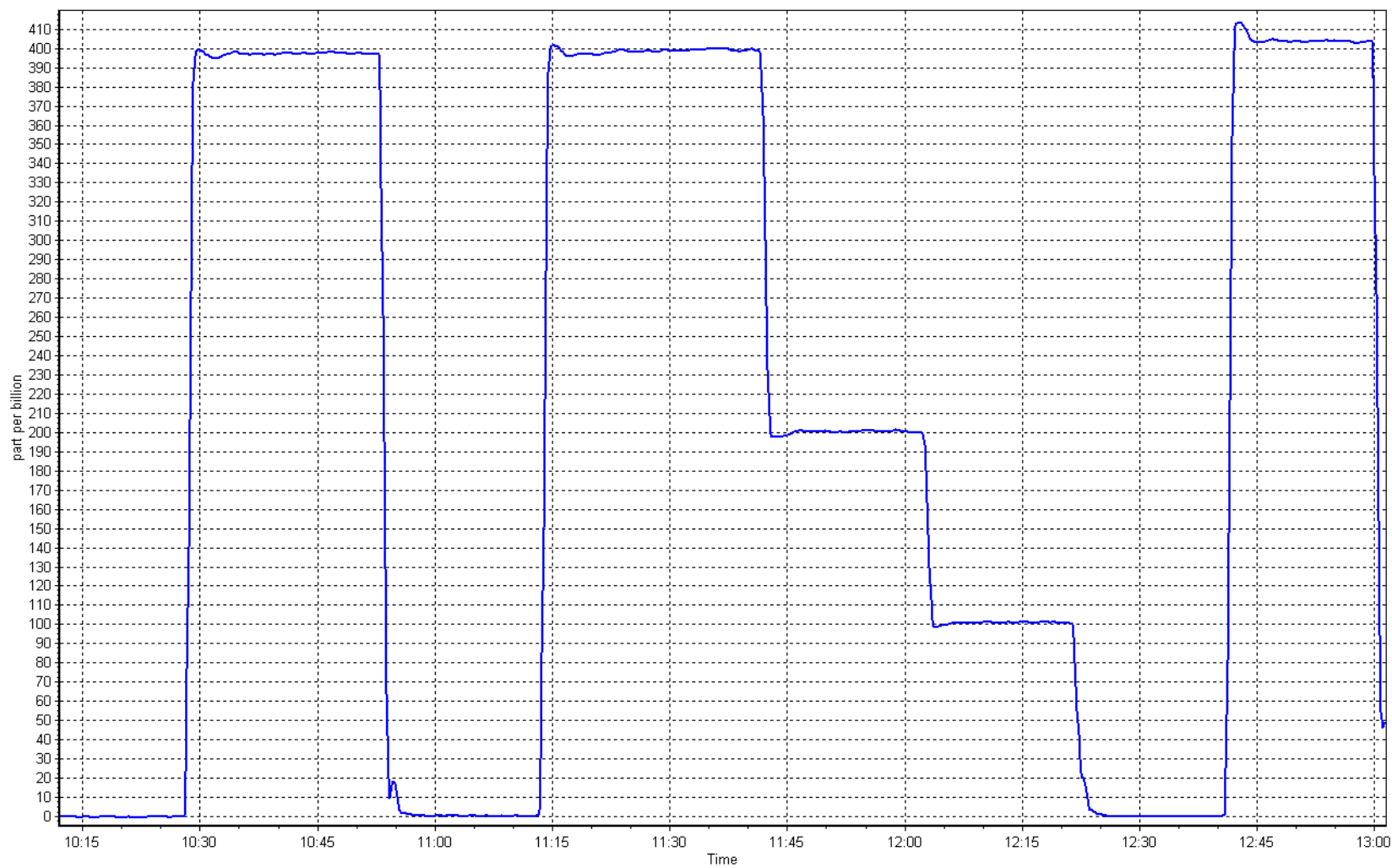
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999990	≥0.995
400.0	399.4	1.0015	Slope	0.997371	0.90 - 1.10
200.0	200.2	0.9990	Intercept	0.660000	+/- 5
100.0	101.1	0.9891			



O₃ Calibration Plot

Date: April 8, 2026

Location: Conklin





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Conklin
Calibration Date: April 29, 2026
Start time (MST): 14:29
Station number: AMS 21
Last Cal Date: March 16, 2026
End time (MST): 15:04
Analyzer Make: API T640
Particulate Fraction: PM2.5
S/N: 1266
Flow Meter Make/Model: Alicat FP-25BT
Temp/RH standard: Alicat FP-25BT
S/N: 388748
S/N: 388748

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	15.40	14.80	15.40	☐	+/- 2 °C
P (mmHg)	712.40	702.60	712.40	☐	+/- 10 mmHg
Flow (LPM)	5.03	4.95	5.03	☐	+/- 0.25 LPM
PW% (pump)	46	----	46	☐	>80%
Zero Verification	PM w/o HEPA: 3.00		PM w/ HEPA: 0.00		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.90 Expiry Date: July 16, 2026
Lot No.: 100128-050-040

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	N/A	N/A	N/A	☐	+/- 0.5

Date Optical Chamber Cleaned: February 26, 2026

Date Disposable Filter Changed: February 26, 2026

Post- maintenance Zero Verification: PM w/ HEPA: <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: February 26, 2026

Date RH/T Sensor Cleaned: February 26, 2026

Notes:

Temp, flow and pressure checked. Leak check passed.

Calibration by: Aswin Sasi Kumar



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS22
JANVIER
APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Janvier
Calibration Date: April 13, 2026
Start time (MST): 9:55
Reason: Routine

Station number: AMS 22
Last Cal Date: March 11, 2026
End time (MST): 12:58

Calibration Standards

Cal Gas Concentration: 49.82 ppm
Cal Gas Cylinder #: CC494522
Removed Cal Gas Conc: 49.82 ppm
Removed Gas Cyl #: NA
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701H

Cal Gas Exp Date: April 9, 2033
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3806
Serial Number: 363

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0 - 1000 ppb

Serial Number: 1152430006

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.997493	0.996905	Backgd or Offset:	29.2	28.7
Calibration intercept:	1.035533	0.916351	Coeff or Slope:	1.047	1.025

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.4	----
As found High point	4920	80.3	800.1	814.4	0.983
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	814.0	Previous response	799.1	*% change	1.8%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4920	80.3	800.1	798.3	1.002
Mid point	4960	40.2	400.5	400.3	1.001
Low point	4980	20.1	200.3	201.2	0.995
As left zero	5000	0.0	0.0	0.5	----
As left span	4920	80.3	800.1	799.8	1.000
Average Correction Factor:					0.999

Notes: Changed the inlet filter after as founds. Adjusted the span.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

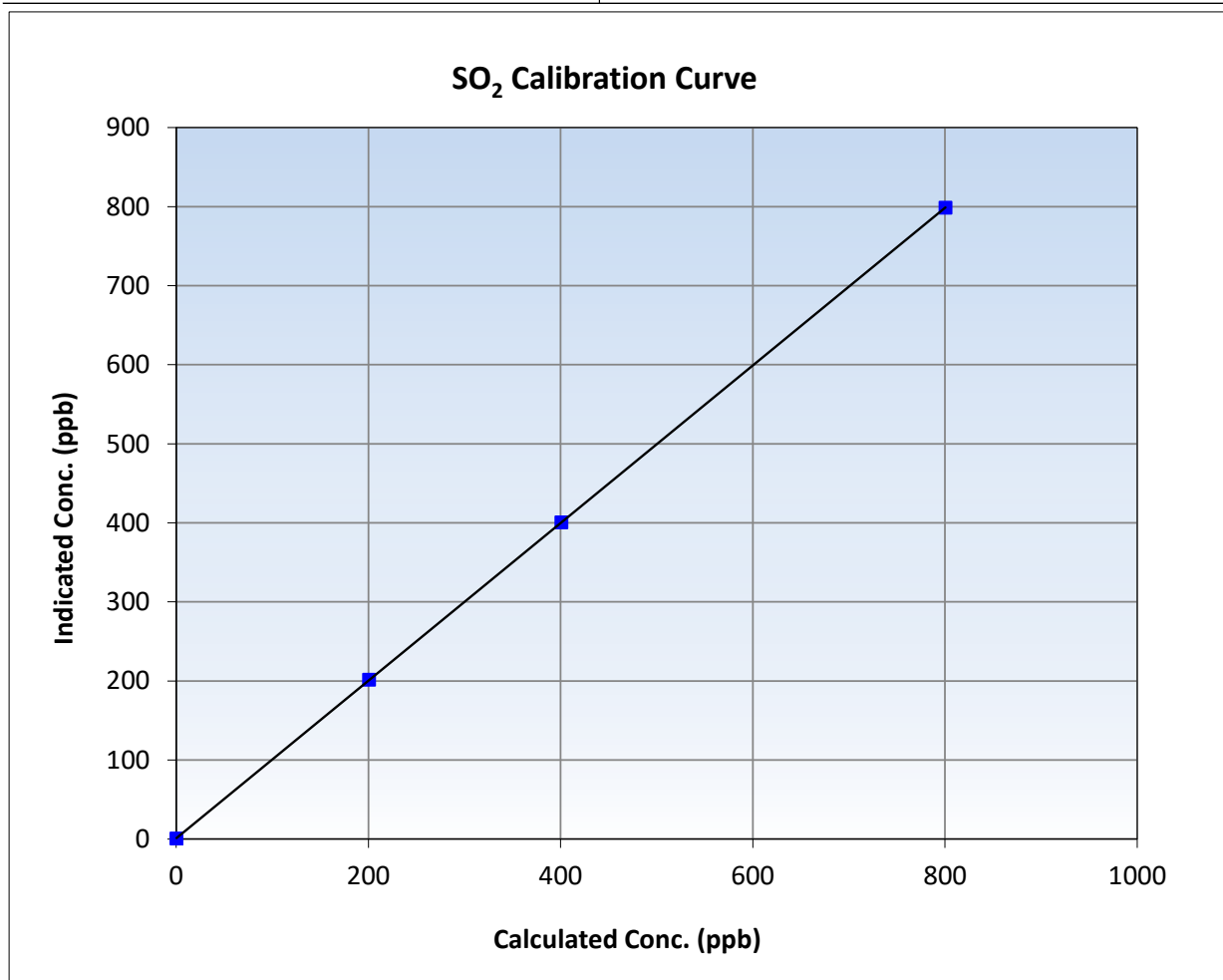
SO₂ Calibration Summary

Station Information

Calibration Date:	April 13, 2026	Previous Calibration:	March 11, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:55	End Time (MST):	12:58
Analyzer make:	Thermo 43i	Analyzer serial #:	1152430006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999998	≥0.995
800.1	798.3	1.0022	Slope	0.996905	0.90 - 1.10
400.5	400.3	1.0006	Intercept	0.916351	+/-30
200.3	201.2	0.9954			



SO2 Calibration Plot

Date: April 13, 2026

Location: Janvier





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Janvier Station number: AMS 22
Calibration Date: April 15, 2026 Last Cal Date: March 18, 2026
Start time (MST): 9:31 End time (MST): 13:46
Reason: Routine

Calibration Standards

Cal Gas Concentration: 5.02 ppm Cal Gas Exp Date: November 15, 2026
Cal Gas Cylinder #: CC424047
Removed Cal Gas Conc: 5.02 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 3806
ZAG Make/Model: Teledyne API T701 Serial Number: 691

Analyzer Information

Analyzer make: Thermo 43i-TLE Analyzer serial #: 1151680031
Converter make: CDN-101 Converter serial #: 620
Analyzer Range: 0 - 100 ppb Converter Temp: 850 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.022370	0.991097	Backgd or Offset:	4.65	4.65
Calibration intercept:	-0.098862	-0.279591	Coeff or Slope:	1.307	1.307

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.5	----
As found High point	4920	79.7	80.0	80.4	0.989
As found Mid point	4960	39.8	40.0	40.1	0.984
As found Low point	4980	19.9	20.0	19.7	0.989
New cylinder response					
Baseline Corr As found:	80.9	Prev response:	81.71	*% change:	-1.0%
Baseline Corr 2nd AF pt:	40.6	AF Slope:	1.011233	AF Intercept:	-0.459144
Baseline Corr 3rd AF pt:	20.2	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4920	79.7	80.0	79.0	1.013
Mid point	4960	39.8	40.0	39.5	1.012
Low point	4980	19.9	20.0	19.3	1.035
As left zero	5000	0.0	0.0	0.0	----
As left span	4920	79.7	80.0	79.3	1.009
SO2 Scrubber Check	4920	79.8	798.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	1.020
Date of last converter efficiency test:					

Notes: Changed the inlet filter after as founds. Scrubber test performed, no issues. No adjustment.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

TRS Calibration Summary

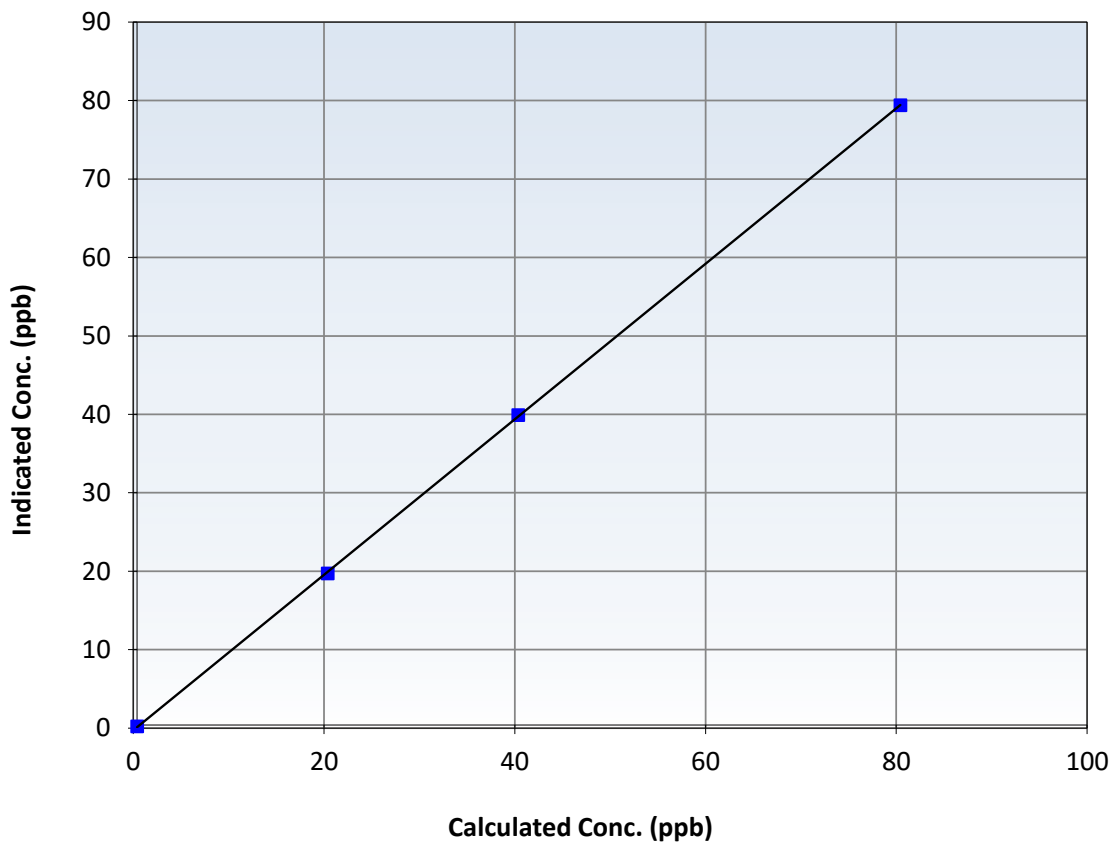
Station Information

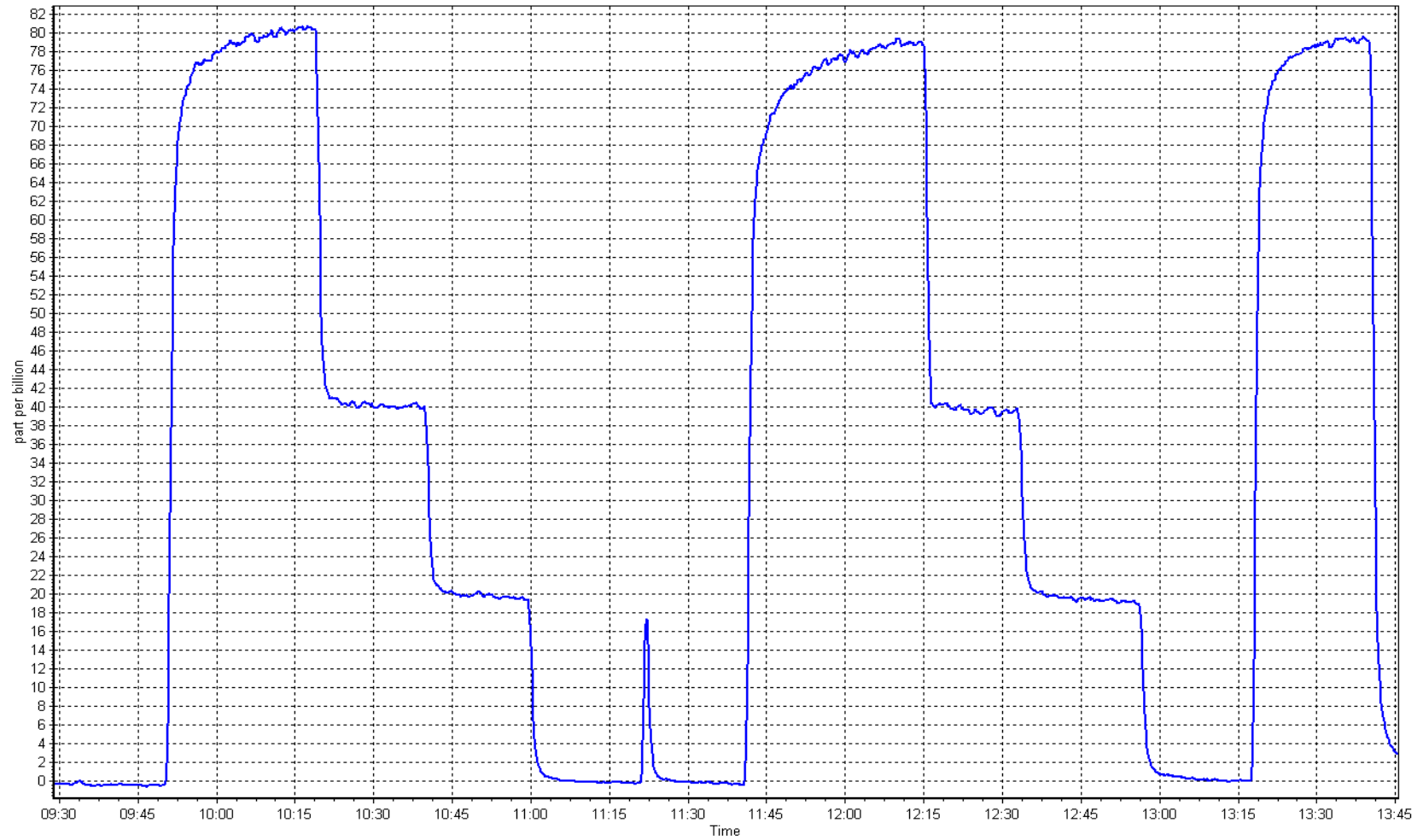
Calibration Date:	April 15, 2026	Previous Calibration:	March 18, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:31	End Time (MST):	13:46
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1151680031

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999975		≥ 0.995
80.0	79.0	1.0130	Slope	0.991097		$0.90 - 1.10$
40.0	39.5	1.0117	Intercept	-0.279591		± 3
20.0	19.3	1.0352				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Janvier
 Calibration Date: April 13, 2026
 Start time (MST): 9:55
 Reason: Routine

Station number: AMS 22
 Last Cal Date: March 11, 2026
 End time (MST): 12:58

Calibration Standards

Gas Cert Reference: CC494522
 CH₄ Cal Gas Conc. 499.5 ppm
 C₃H₈ Cal Gas Conc. 202.9 ppm
 Removed Gas Cert: NA
 Removed CH₄ Conc. 499.5 ppm
 Removed C₃H₈ Conc. 202.9 ppm
 Diff between cyl (CH₄):
 Calibrator Model: Teledyne API 700
 Zero Air Gen model: Teledyne API 701H

Cal Gas Expiry Date: April 9, 2033
 CH₄ Equiv Conc. 1057.5 ppm
 Removed Gas Expiry: NA
 CH₄ Equiv Conc. 1057.5 ppm
 Diff between cyl (THC):
 Diff between cyl (NM):
 Serial Number: 3806
 Serial Number: 363

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1317958219
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.60E-04	2.61E-04	NMHC SP Ratio:	5.52E-05	5.48E-05
CH ₄ Retention time:	11.6	11.8	NMHC Peak Area:	162383	163502
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	80.3	16.98	17.08	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.08	Prev response	16.94	*% change	0.8%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	80.3	16.98	16.92	1.003
Mid point	4960	40.2	8.50	8.41	1.011
Low point	4980	20.1	4.25	4.20	1.011
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	16.98	16.92	1.004
Average Correction Factor					1.009

Notes:

Changed sample inlet filter after as founds. Adjusted the span.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	80.3	8.96	8.98	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.98	Prev response	8.95	*% change	0.4%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	80.3	8.96	8.91	1.005
Mid point	4960	40.2	4.49	4.45	1.009
Low point	4980	20.1	2.24	2.23	1.007
As left zero	5000	0.0	0.00	0.00	
As left span	4920	80.3	8.96	8.87	1.010
Average Correction Factor					1.007

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	80.3	8.02	8.09	0.992
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.09	Prev response	8.00	*% change	1.1%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	80.3	8.02	8.01	1.001
Mid point	4960	40.2	4.02	3.96	1.013
Low point	4980	20.1	2.01	1.98	1.016
As left zero	5000	0.0	0.00	0.00	
As left span	4920	80.3	8.02	8.04	0.997
Average Correction Factor					1.010

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.999578	0.996833
THC Cal Offset:	-0.034300	-0.025896
CH ₄ Cal Slope:	1.000401	0.999406
CH ₄ Cal Offset:	-0.029222	-0.021228
NMHC Cal Slope:	0.998867	0.994594
NMHC Cal Offset:	-0.003680	-0.004668

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

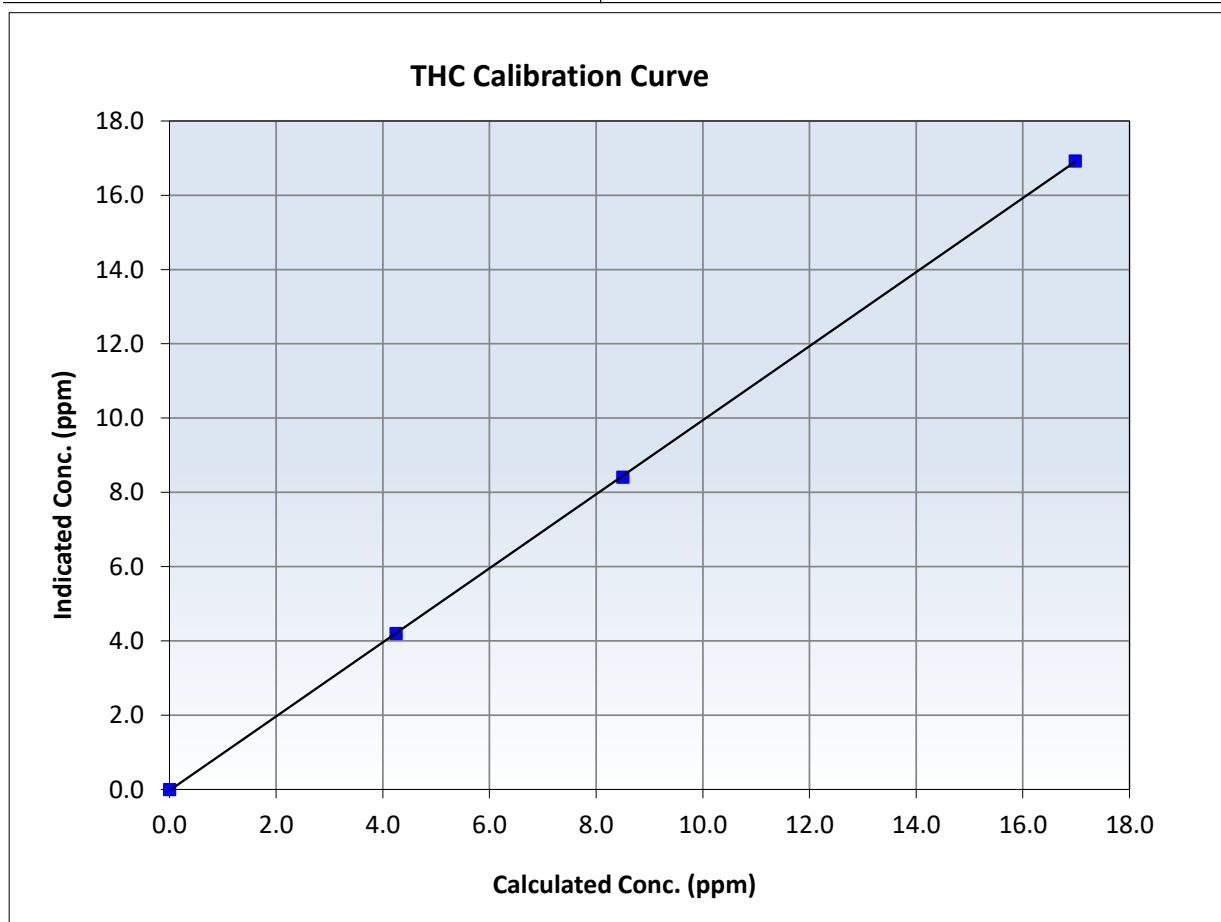
THC Calibration Summary

Station Information

Calibration Date:	April 13, 2026	Previous Calibration:	March 11, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:55	End Time (MST):	12:58
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999983	≥ 0.995
16.98	16.92	1.0034	Slope	0.996833	$0.90 - 1.10$
8.50	8.41	1.0109	Intercept	-0.025896	± 0.5
4.25	4.20	1.0114			





Wood Buffalo Environmental Association

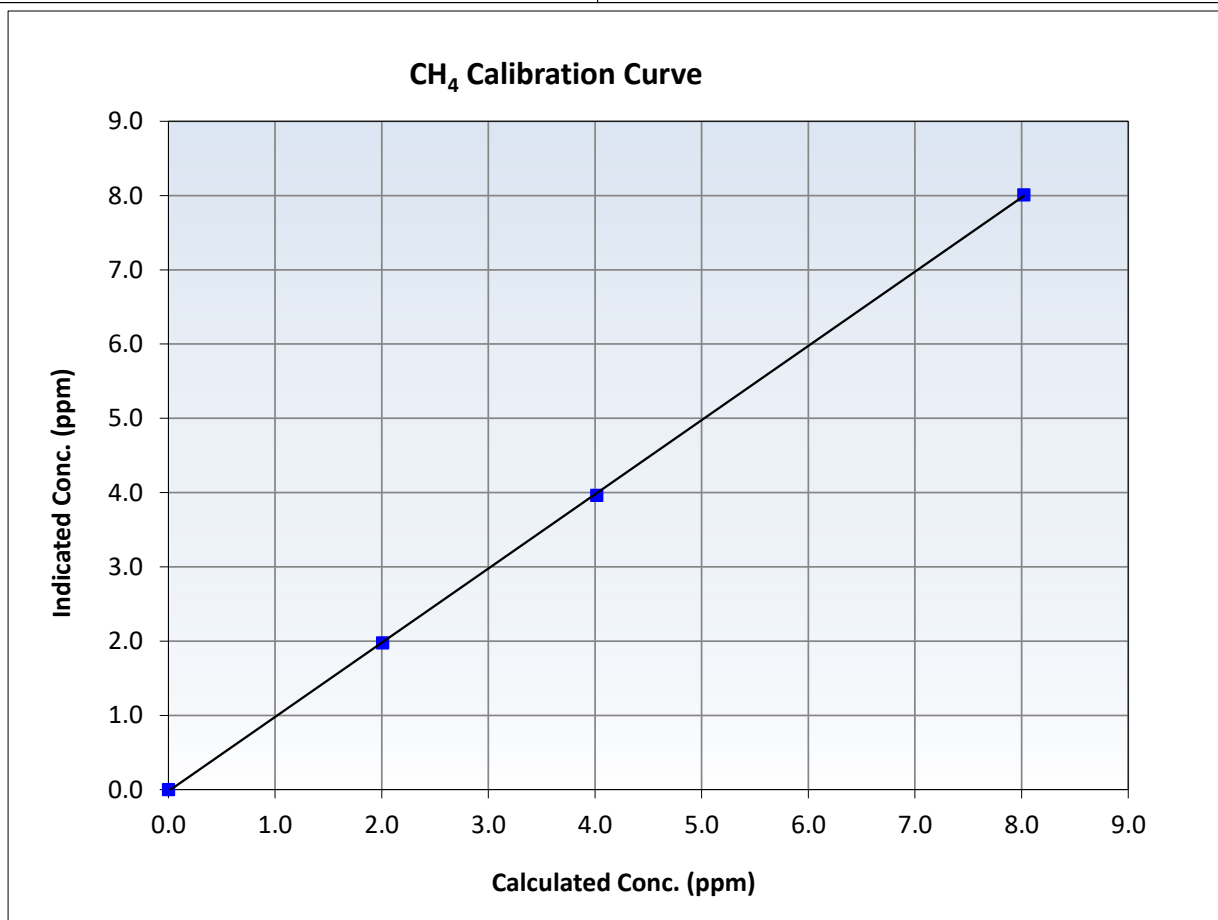
CH₄ Calibration Summary

Station Information

Calibration Date:	April 13, 2026	Previous Calibration:	March 11, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:55	End Time (MST):	12:58
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999954	≥ 0.995
8.02	8.01	1.0012	Slope	0.999406	$0.90 - 1.10$
4.02	3.96	1.0131	Intercept	-0.021228	± 0.5
2.01	1.98	1.0162			





Wood Buffalo Environmental Association

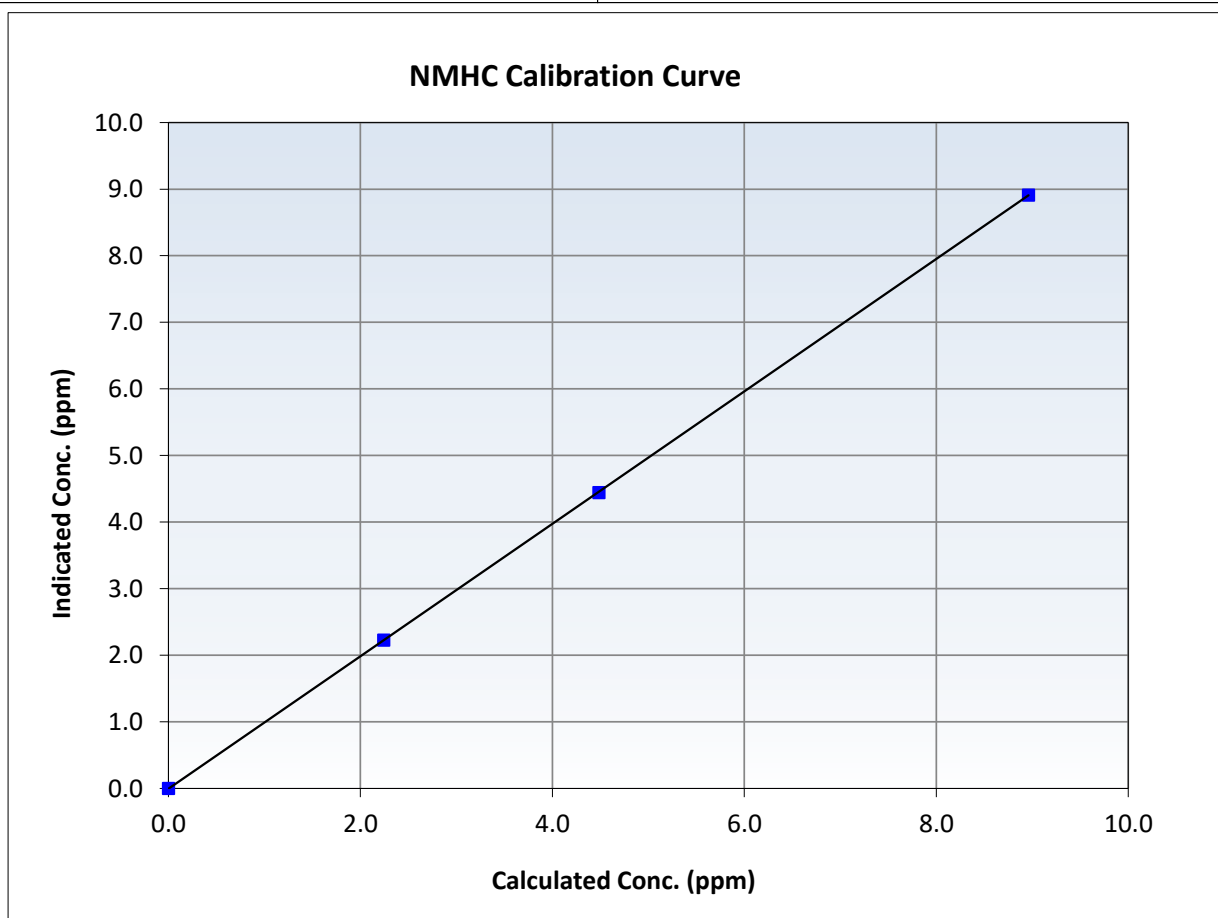
NMHC Calibration Summary

Station Information

Calibration Date:	April 13, 2026	Previous Calibration:	March 11, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:55	End Time (MST):	12:58
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

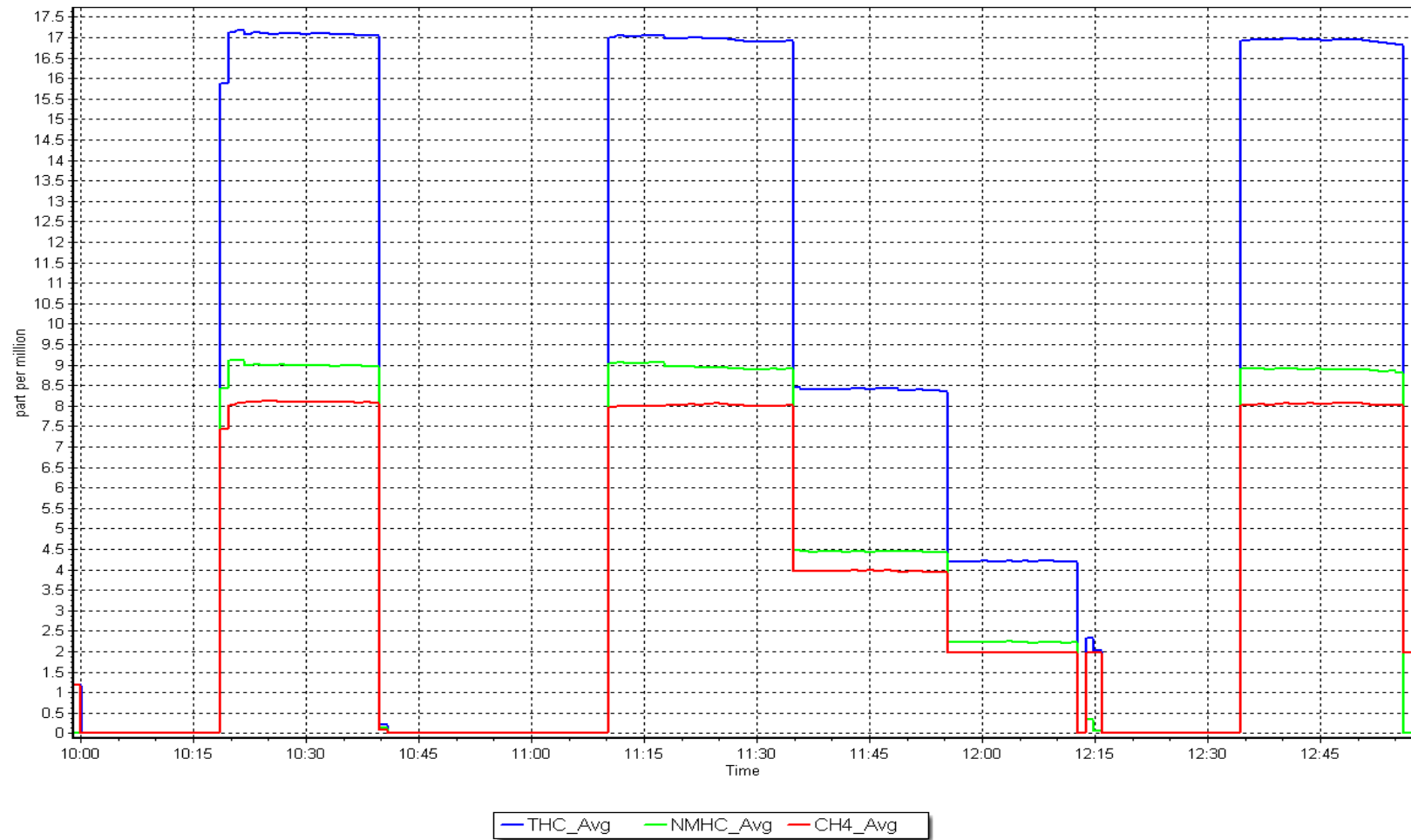
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999995	<i>≥0.995</i>
8.96	8.91	1.0053	Slope	0.994594	<i>0.90 - 1.10</i>
4.49	4.45	1.0092	Intercept	-0.004668	<i>+/-0.5</i>
2.24	2.23	1.0067			



NMHC Calibration Plot

Date: April 13, 2026

Location: Janvier





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Janvier
Station number: AMS 22
Calibration Date: April 29, 2026
Last Cal Date: March 19, 2026
Start time (MST): 9:22
End time (MST): 14:44
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0047765
NOX Cal Gas Conc: 48.90 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 48.90 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701
Cal Gas Expiry Date: March 11, 2031
NO Cal Gas Conc: 48.80 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 48.80 ppm
NO gas Diff:
Serial Number: 3806
Serial Number: 691

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.3	-0.2	-0.1	----	----
AF High point	4918	82.0	802.0	800.3	1.6	788.0	781.6	6.4	1.0173	1.0237
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 794.5 ppb	NO = 791.0 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.8%
Baseline Corr 1st pt	NO _x = 788.3 ppb	NO = 781.8 ppb	<u>As Found Statistics</u>		*Percent Change	NO = -1.2%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb	As found	NO _x r ² :	Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb	As found	NO r ² :	NO SI:	NO Int:
			As found	NO ₂ r ² :	NO2 SI:	NO ₂ Int:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1229254994

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.990904	1.003003
NO _x Cal Offset:	-0.116174	-0.735905
NO Cal Slope:	0.990107	1.002716
NO Cal Offset:	-1.376336	-2.116053
NO ₂ Cal Slope:	1.001895	1.003673
NO ₂ Cal Offset:	0.241634	0.185553

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.012	1.034	NO bkgnd or offset:	2.8	2.8
NOX coeff or slope:	0.997	0.997	NOX bkgnd or offset:	2.9	2.9
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	172.3	175.3

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	----	----
High point	4918	82.0	802.0	800.3	1.6	803.9	801.4	2.6	0.9976	0.9987
Mid point	4960	41.0	400.9	400.1	0.8	401.1	398.0	3.1	0.9995	1.0052
Low point	4980	20.5	200.5	200.1	0.4	199.8	196.5	3.3	1.0034	1.0181
As left zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	----	----
As left span	4918	82.0	802.0	397.3	404.7	803.3	397.3	406.1	0.9983	1.0000
Average Correction Factor									1.0001	1.0073

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	797.9	395.2	404.3	405.7	0.9966	100.3%
Mid GPT point	797.9	591.1	208.4	210.0	0.9926	100.7%
Low GPT point	797.9	694.1	105.4	106.0	0.9947	100.5%
Average Correction Factor					0.9946	100.5%

Notes:

Sample inlet filter was changed after as founds. Span adjusted.

Calibration Performed By:

Param Kaur



Wood Buffalo Environmental Association

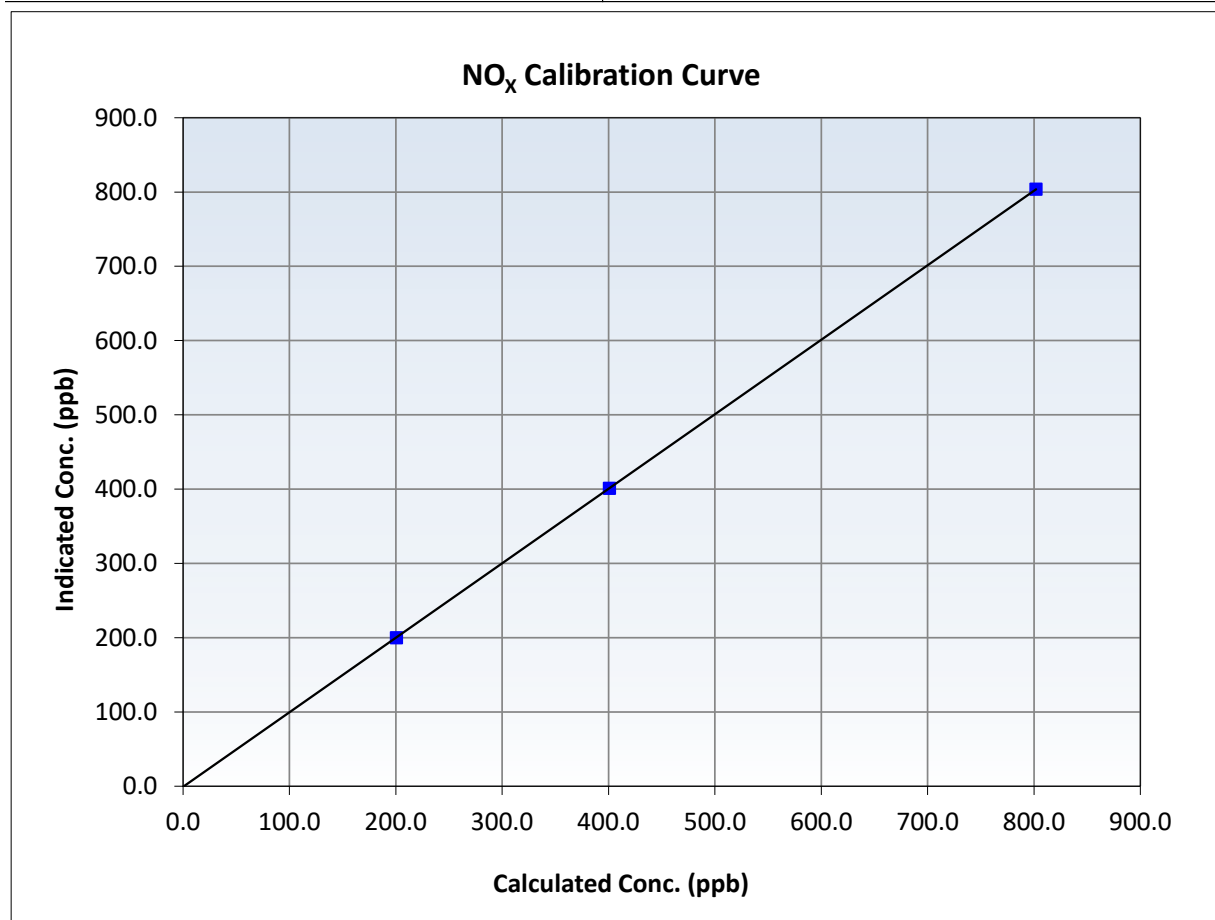
NO_x Calibration Summary

Station Information

Calibration Date:	April 29, 2026	Previous Calibration:	March 19, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:22	End Time (MST):	14:44
Analyzer make:	Thermo 42i	Analyzer serial #:	1229254994

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999998	≥0.995
802.0	803.9	0.9976	Slope	1.003003	0.90 - 1.10
400.9	401.1	0.9995	Intercept	-0.735905	+/-20
200.5	199.8	1.0034			





Wood Buffalo Environmental Association

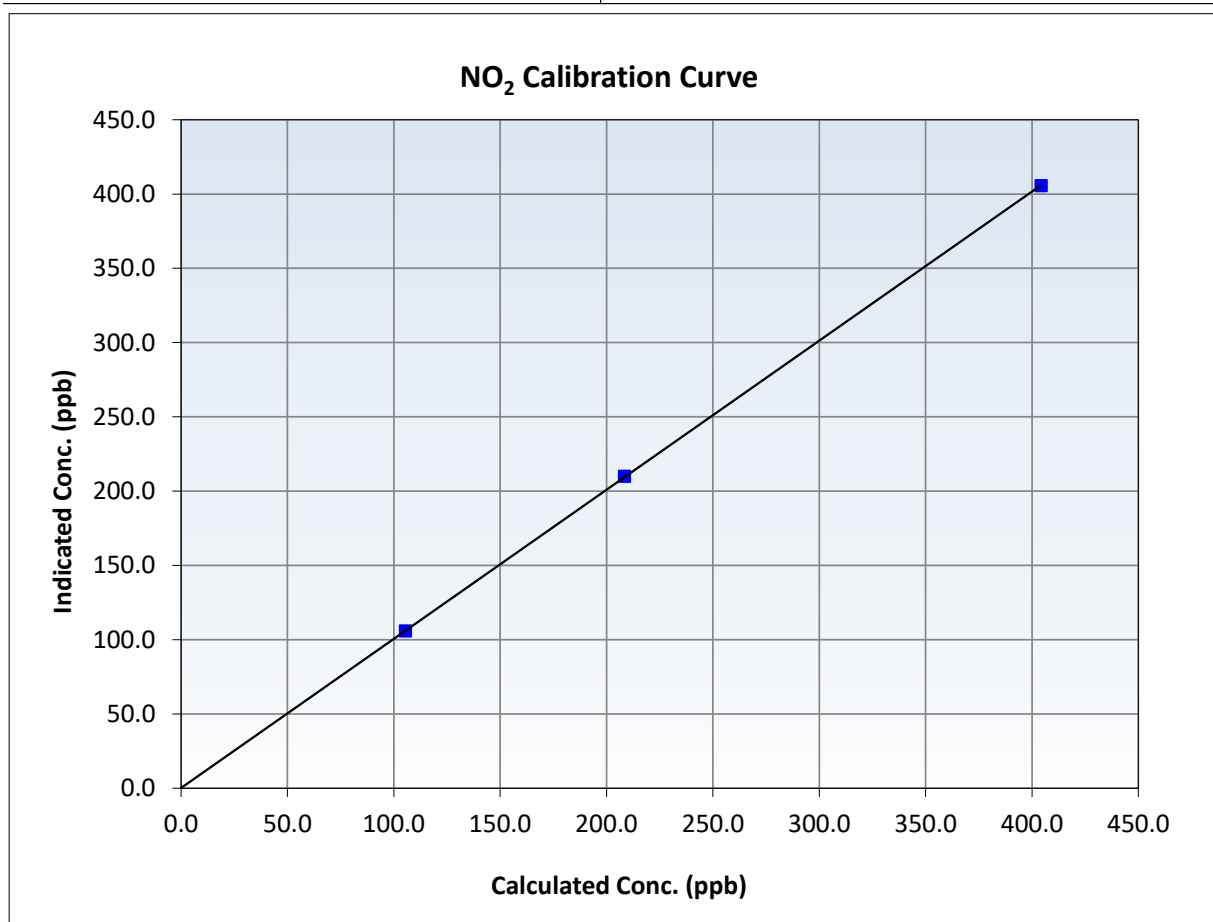
NO₂ Calibration Summary

Station Information

Calibration Date:	April 29, 2026	Previous Calibration:	March 19, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:22	End Time (MST):	14:44
Analyzer make:	Thermo 42i	Analyzer serial #:	1229254994

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999994	≥0.995
404.3	405.7	0.9966	Slope	1.003673	0.90 - 1.10
208.4	210.0	0.9926	Intercept	0.185553	+/-20
105.4	106.0	0.9947			





Wood Buffalo Environmental Association

NO Calibration Summary

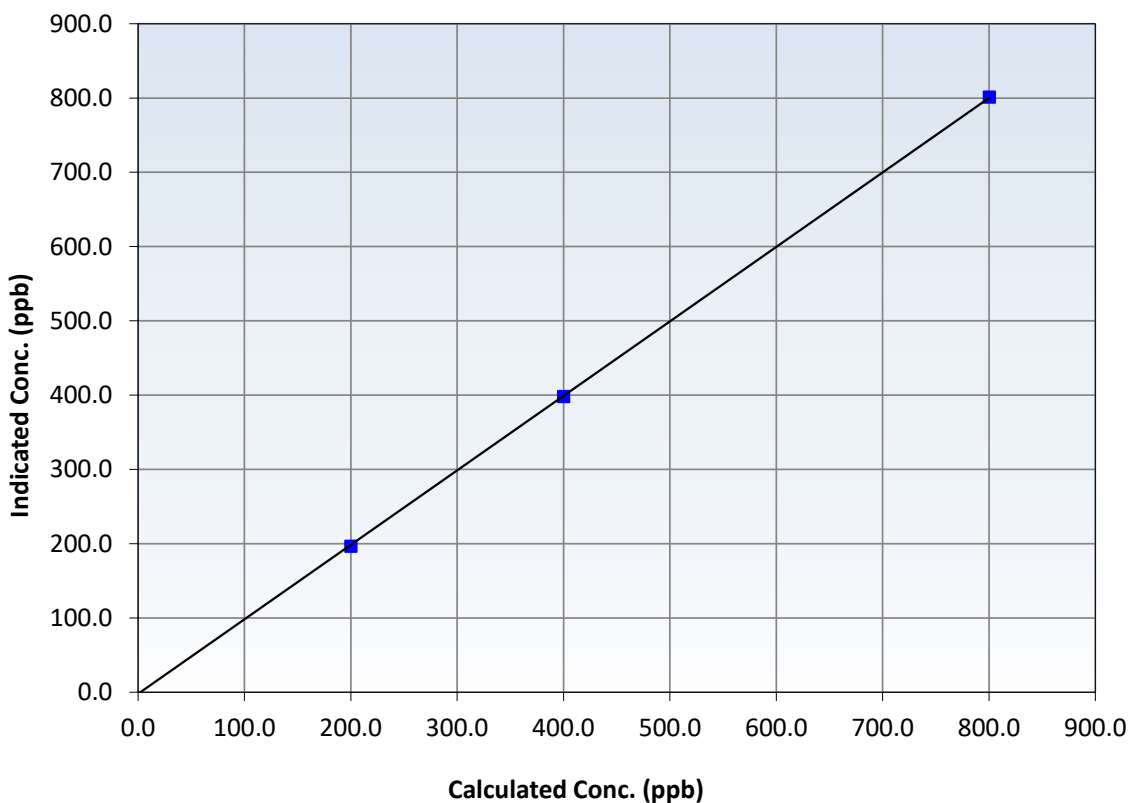
Station Information

Calibration Date:	April 29, 2026	Previous Calibration:	March 19, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:22	End Time (MST):	14:44
Analyzer make:	Thermo 42i	Analyzer serial #:	1229254994

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999971	≥ 0.995
800.3	801.4	0.9987	Slope	1.002716	$0.90 - 1.10$
400.1	398.0	1.0052	Intercept	-2.116053	± 20
200.1	196.5	1.0181			

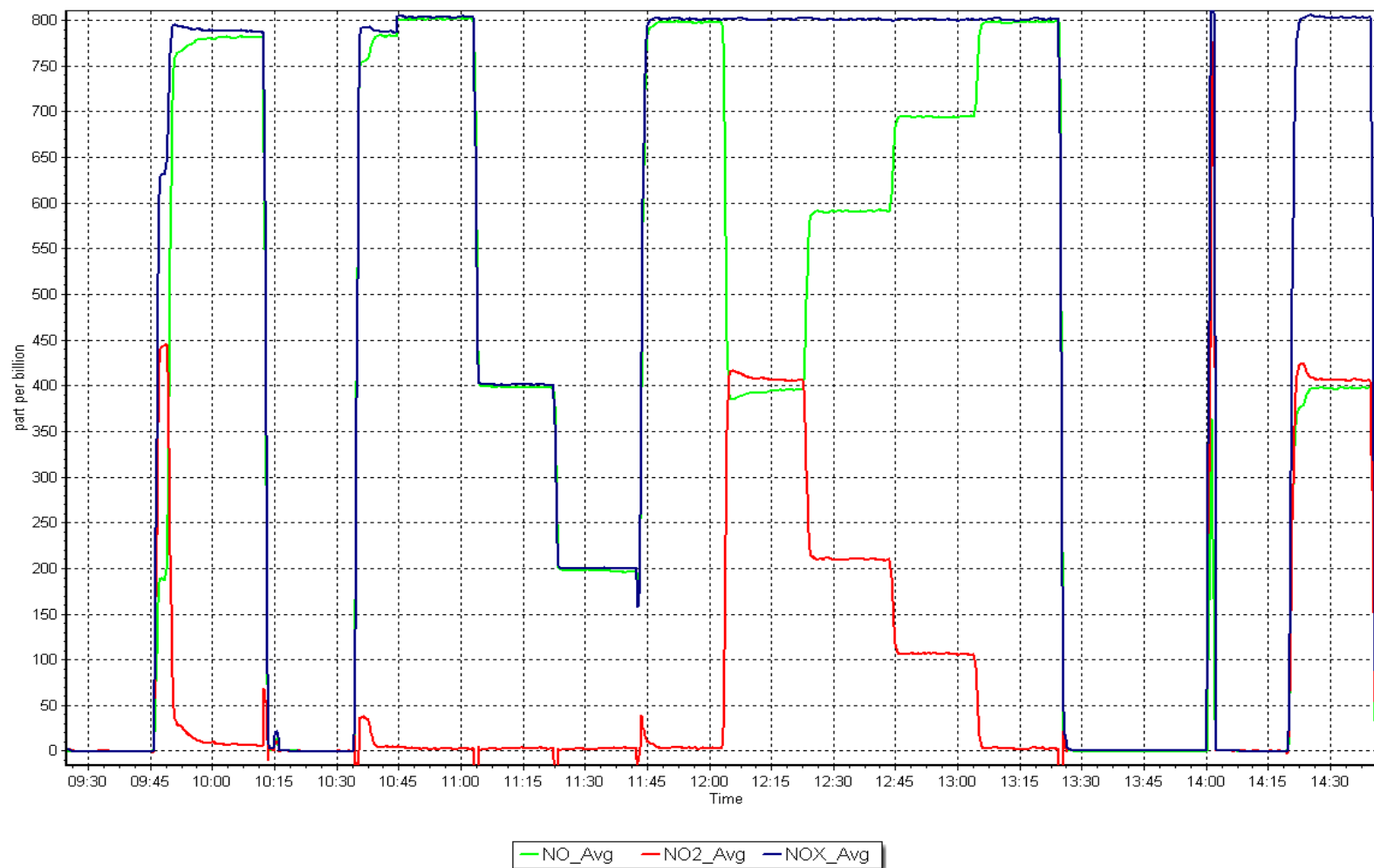
NO Calibration Curve



NO_x Calibration Plot

Date: April 29, 2026

Location: Janvier





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Janvier
Calibration Date: April 1, 2026
Start time (MST): 10:04
Reason: Routine

Station number: AMS 22
Last Cal Date: March 16, 2026
End time (MST): 13:23

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T750
ZAG Make/Model: Teledyne API T751H

Serial Number: 281
Serial Number: 530

Analyzer Information

Analyzer make: Thermo 49i
Analyzer Range: 0 - 500 ppb

Analyzer serial #: 1227254861

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.991114	1.001371	Backgd or Offset:	-0.2	-0.2
Calibration intercept:	0.280000	0.960000	Coeff or Slope:	1.506	1.506

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted
					Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.3	----
As found High point	5000	1063.6	400.0	464.5	0.862
As found Mid point	5000	814.2	200.0	232.8	0.860
As found Low point	5000	688.9	100.0	117.6	0.853
Baseline Corr As found:	464.2	Previous response	396.7	*% change	14.5%
Baseline Corr 2nd AF pt:	232.5	AF Slope:	1.159543	AF Intercept:	0.880000
Baseline Corr 3rd AF pt:	117.3	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
					<i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.4	----
High point	5000	1063.6	400.0	401.3	0.997
Mid point	5000	814.2	200.0	201.3	0.994
Low point	5000	688.9	100.0	101.8	0.982
As left zero	5000	0.0	0.0	0.3	----
As left span	5000	924.3	400.0	402.6	0.994
Average Correction Factor					0.991

Notes: Portable calibrator and zero air generator was used. Sample inlet filter was changed after as founds. Adjusted span only.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

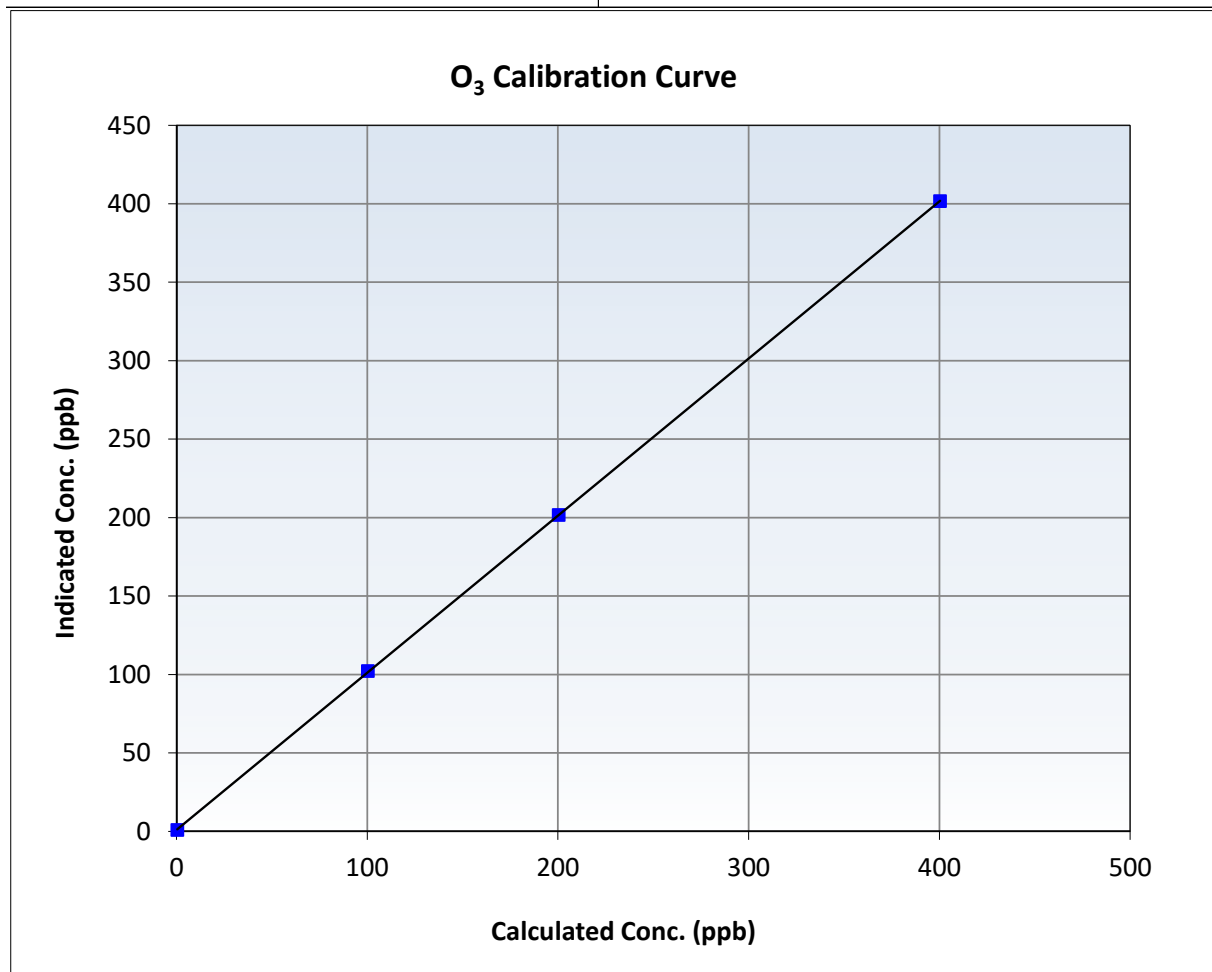
O₃ Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	March 16, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	10:04	End Time (MST):	13:23
Analyzer make:	Thermo 49i	Analyzer serial #:	1227254861

Calibration Data

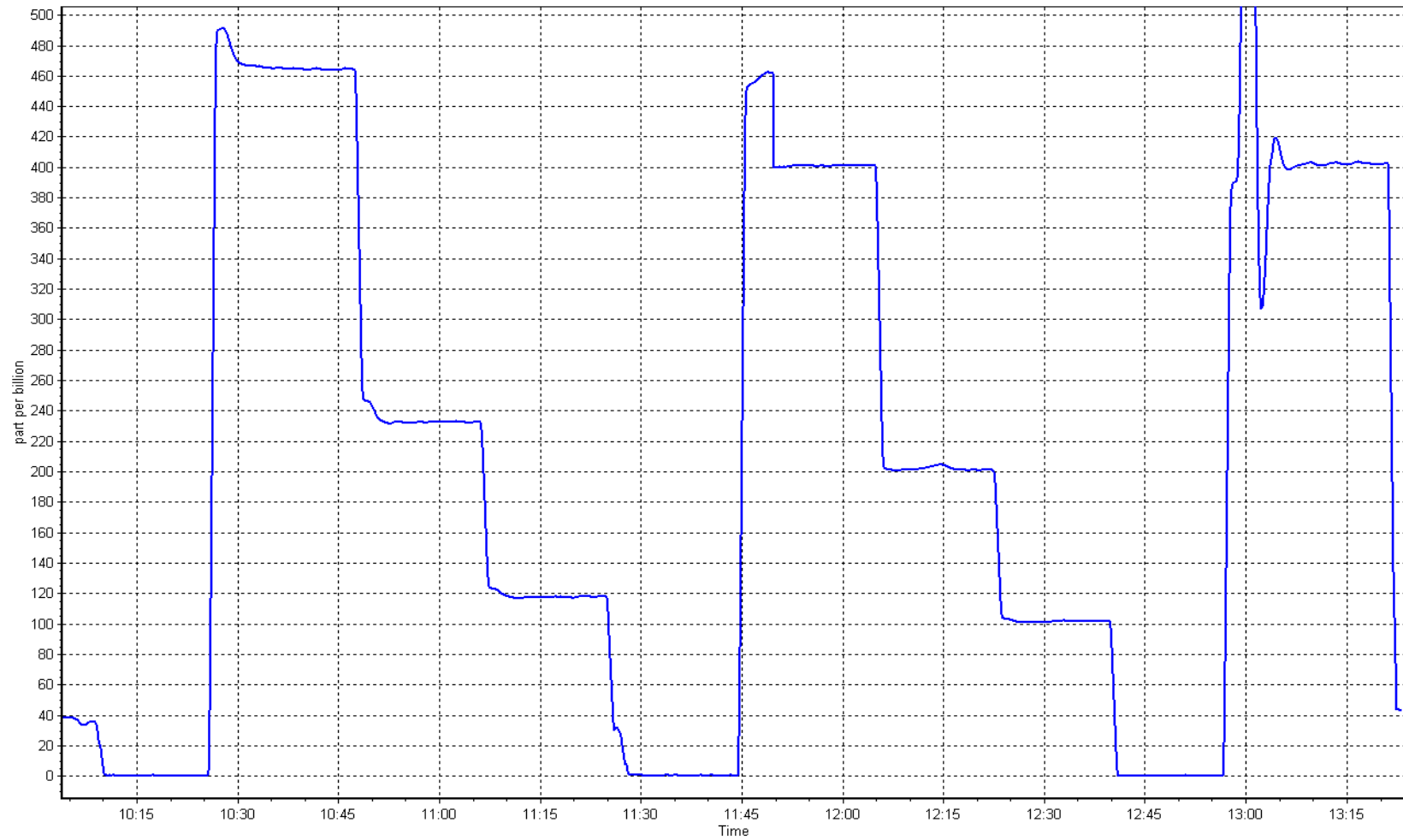
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999990	≥ 0.995
400.0	401.3	0.9968	Slope	1.001371	$0.90 - 1.10$
200.0	201.3	0.9935	Intercept	0.960000	± 5
100.0	101.8	0.9823			



O₃ Calibration Plot

Date: April 1, 2026

Location: Janvier





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Janvier Station number: AMS 22
Calibration Date: April 29, 2026 Last Cal Date: March 18, 2026
Start time (MST): 11:18 End time (MST): 11:31

Analyzer Make: Teledyne API T640 S/N: 325
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388745
Temp/RH standard: Alicat FP-25BT S/N: 388745

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	12.0	11.6	12.0	☐	+/- 2 °C
P (mmHg)	721.5	722.6	721.5	☐	+/- 10 mmHg
Flow (LPM)	4.99	5.00	4.99	☐	+/- 0.25 LPM
PW% (pump)	35	----	35	☐	>80%
Zero Verification	PM w/o HEPA: 3.1		PM w/ HEPA: 0.0		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: October 6, 2024
Lot No.: 100128-050-042

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test				☐	10.9 +/- 0.5

Date Optical Chamber Cleaned: February 24, 2026
Date Disposable Filter Changed: February 24, 2026

Post- maintenance Zero Verification: PM w/ HEPA: <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: February 24, 2026
Date RH/T Sensor Cleaned: February 24, 2026

Notes:

Verified the flow, temperature, and pressure. Leak check passed. No adjustments done.

Calibration by: Param Kaur



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS23
FORT HILLS
APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Fort Hills Station number: AMS 23
Calibration Date: April 22, 2026 Last Cal Date: March 24, 2026
Start time (MST): 10:20 End time (MST): 14:01
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.35 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC484463
Removed Cal Gas Conc: 50.35 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Model: API T700 Serial Number: 5762
Zero Air Gen Model: API T701 Serial Number: 1117

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1160290012
Analyzer Range: 0-1000ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999018	1.008007	Backgd or Offset:	19.1	19.4
Calibration intercept:	-0.279266	-0.797739	Coeff or Slope:	1.070	1.070

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4921	79.4	799.5	803.3	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	803.3	Previous response	798.4	*% change	0.6%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4921	79.4	799.5	805.9	0.992
Mid point	4960	39.7	399.8	400.5	0.998
Low point	4980	19.8	199.4	200.4	0.995
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.4	799.5	805.7	0.992
Average Correction Factor:					0.995

Notes: Inlet filter changed after as founds. No adjustments done.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

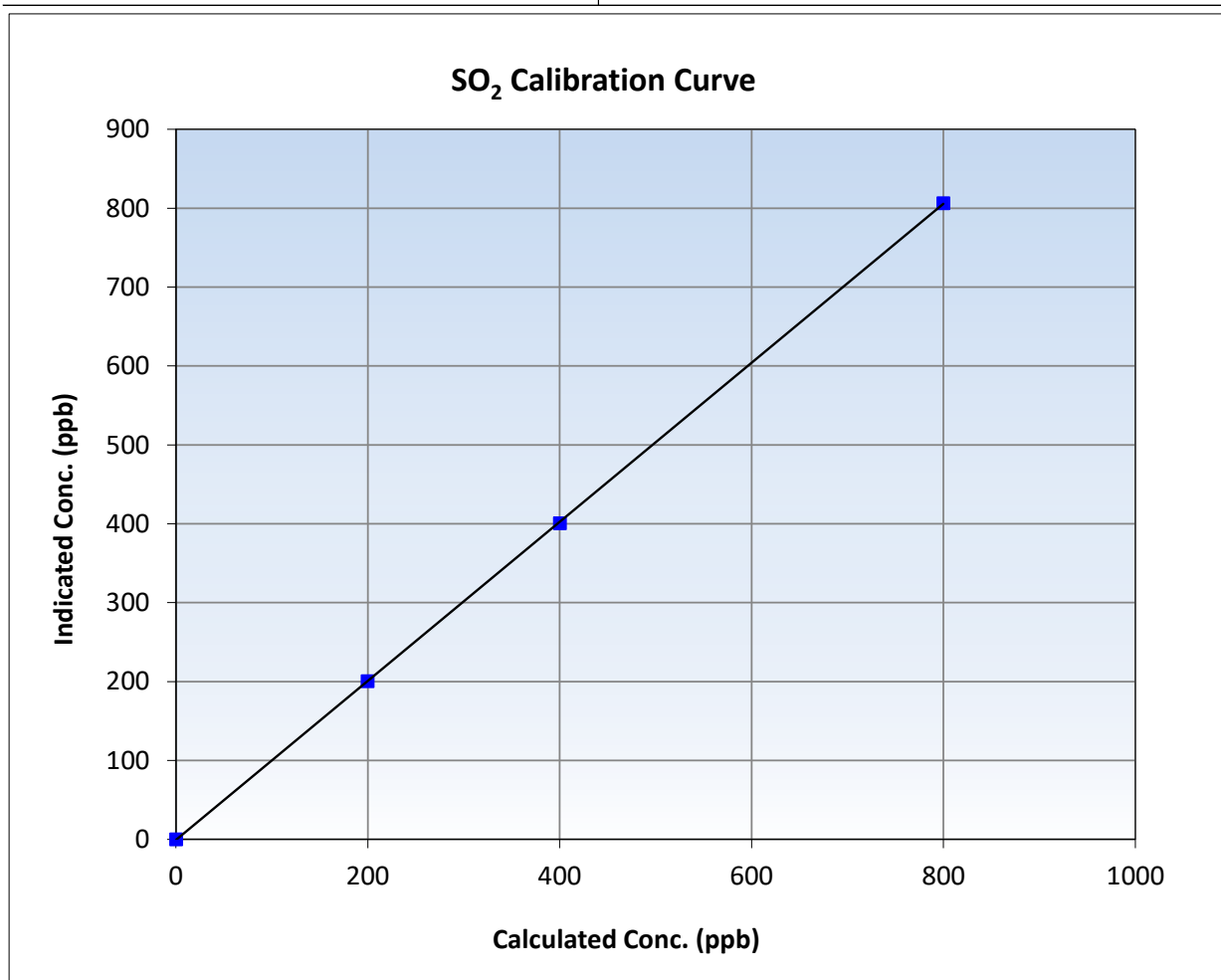
SO₂ Calibration Summary

Station Information

Calibration Date:	April 22, 2026	Previous Calibration:	March 24, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:20	End Time (MST):	14:01
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290012

Calibration Data

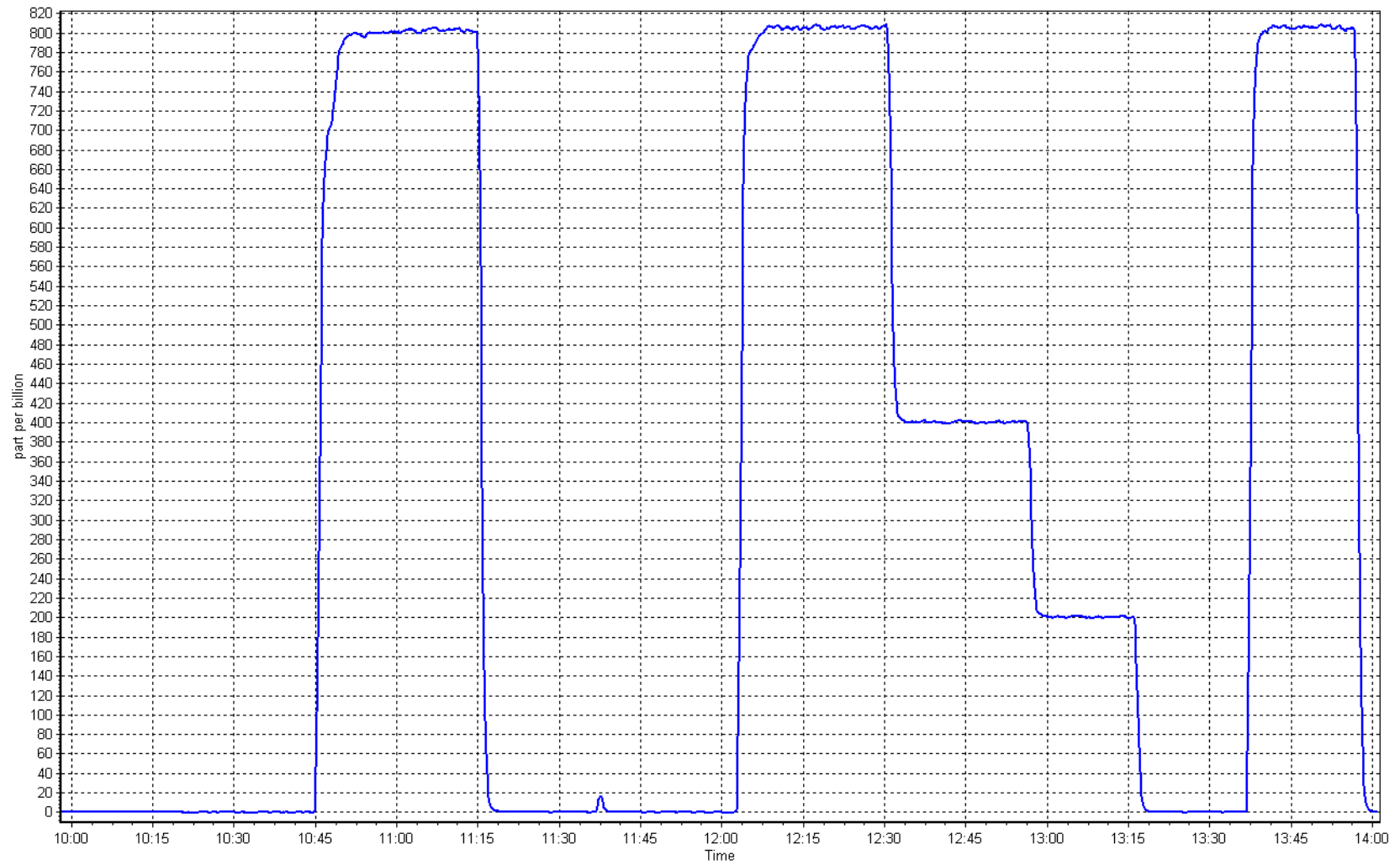
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999989	≥0.995
799.5	805.9	0.9921	Slope	1.008007	0.90 - 1.10
399.8	400.5	0.9983	Intercept	-0.797739	+/-30
199.4	200.4	0.9950			



SO2 Calibration Plot

Date: April 22, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Fort Hills
Calibration Date: April 28, 2026
Start time (MST): 11:59
Reason: Install

Station number: AMS 23
Last Cal Date: N/A
End time (MST): 14:53

Calibration Standards

Cal Gas Concentration: 4.84 ppm
Cal Gas Cylinder #: DT0021910
Removed Cal Gas Conc: 4.84 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: API T700
ZAG Make/Model: API T701

Cal Gas Exp Date: August 28, 2027
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 5762
Serial Number: 1117

Analyzer Information

Analyzer make: Thermo 43iQ Trace level
Converter make: Global
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1200326168
Converter serial #: 2022-227
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	NA	1.000674	Backgd or Offset:	NA	0.98
Calibration intercept:	NA	-0.018088	Coeff or Slope:	NA	1.045

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	NA	Prev response:	NA	*% change:	NA
Baseline Corr 2nd AF pt:	NA	AF Slope:	NA	AF Intercept:	NA
Baseline Corr 3rd AF pt:	NA	AF Correlation:	NA	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4917	82.6	80.0	80.1	0.998
Mid point	4959	41.3	40.0	39.8	1.004
Low point	4979	20.7	20.0	20.0	1.002
As left zero	5000	0.0	0.0	0.1	----
As left span	4917	82.6	80.0	80.1	0.998
SO ₂ Scrubber Check	4920	80.3	803.0	0.1	----
Date of last scrubber change:	April 28, 2026		Ave Corr Factor		1.002
Date of last converter efficiency test:					

Notes: Install calibration. SO_x scrubber checked after the calibrator zero. Adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

H₂S Calibration Summary

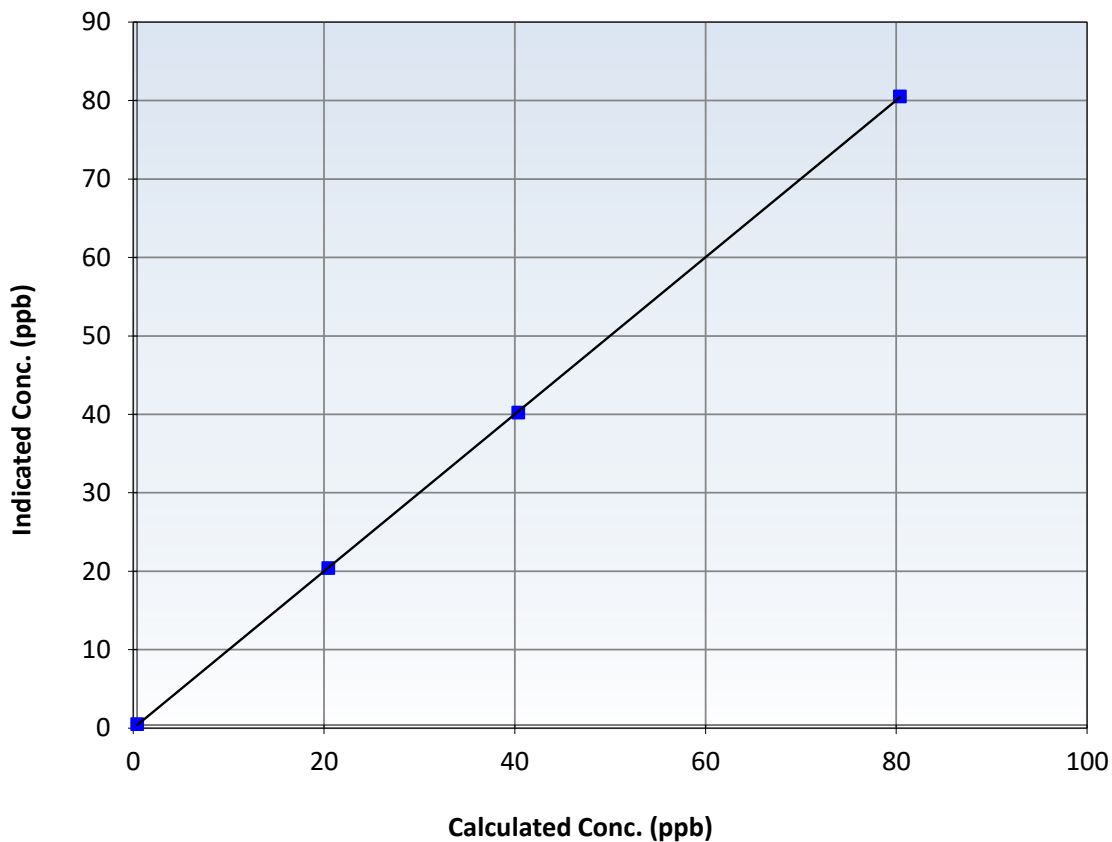
Station Information

Calibration Date:	April 28, 2026	Previous Calibration:	N/A
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	11:59	End Time (MST):	14:53
Analyzer make:	Thermo 43iQ Trace level	Analyzer serial #:	1200326168

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999983		≥0.995
80.0	80.1	0.9983	Slope	1.000674		0.90 - 1.10
40.0	39.8	1.0044	Intercept	-0.018088		+/-3
20.0	20.0	1.0019				

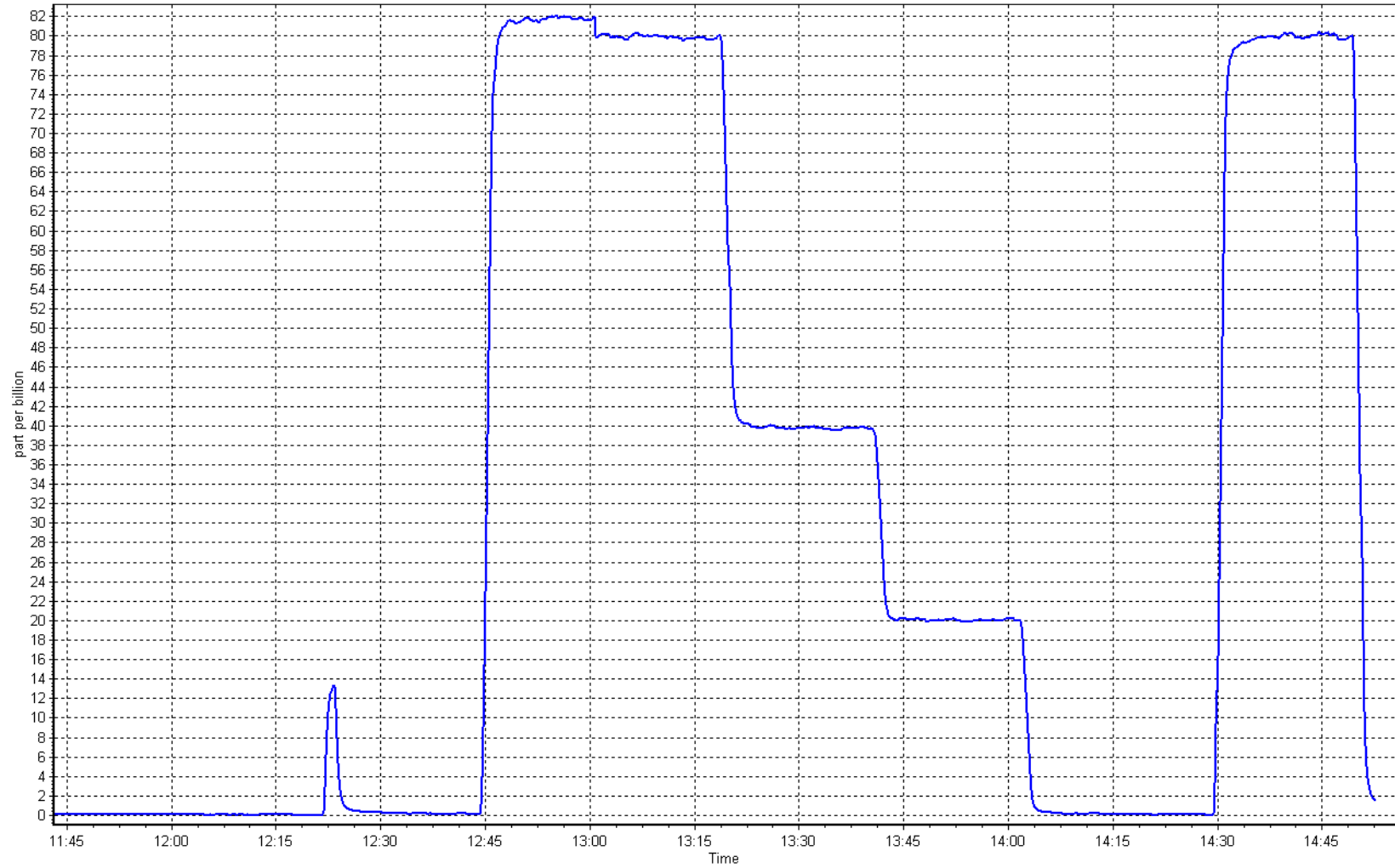
H₂S Calibration Curve



H₂S Calibration Plot

Date: April 28, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Fort Hills
Calibration Date: April 28, 2026
Start time (MST): 10:17
Reason: Routine

Station number: AMS 23
Last Cal Date: March 28, 2026
End time (MST): 14:53

Calibration Standards

Cal Gas Concentration: 4.84 ppm
Cal Gas Cylinder #: DT0021910
Removed Cal Gas Conc: 4.84 ppm
Removed Gas Cyl #:
Calibrator Make/Model: API T700
ZAG Make/Model: API T701

Cal Gas Exp Date: August 28, 2027
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5762
Serial Number: 1117

Analyzer Information

Analyzer make: Thermo 43i TLE
Converter make: CDN-101
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1300156232
Converter serial #: 594
Converter Temp: 800 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.003822	1.003675	Backgd or Offset:	1.95	1.90
Calibration intercept:	0.421737	-0.098095	Coeff or Slope:	0.986	0.965

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4917	82.6	80.0	81.5	0.981
As found Mid point	4959	41.3	40.0	40.5	0.987
As found Low point	4979	20.7	20.0	20.2	0.992
New cylinder response					
Baseline Corr As found:	81.5	Prev response:	80.69	*% change:	1.0%
Baseline Corr 2nd AF pt:	40.5	AF Slope:	1.019829	AF Intercept:	-0.138401
Baseline Corr 3rd AF pt:	20.2	AF Correlation:	0.999985	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4917	82.6	80.0	80.2	0.997
Mid point	4959	41.3	40.0	40.0	0.999
Low point	4979	20.7	20.0	19.9	1.007
As left zero	5000	0.0	0.0	0.1	----
As left span	4917	82.6	80.0	80.7	0.991
SO2 Scrubber Check	4920	80.3	803.0	0.1	----
Date of last scrubber change:				Ave Corr Factor	1.001
Date of last converter efficiency test:	March 13, 2024			110.3%	efficiency

Notes: Changed sample inlet filter after as founds. SOx scrubber checked after the calibrator zero.
Adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

TRS Calibration Summary

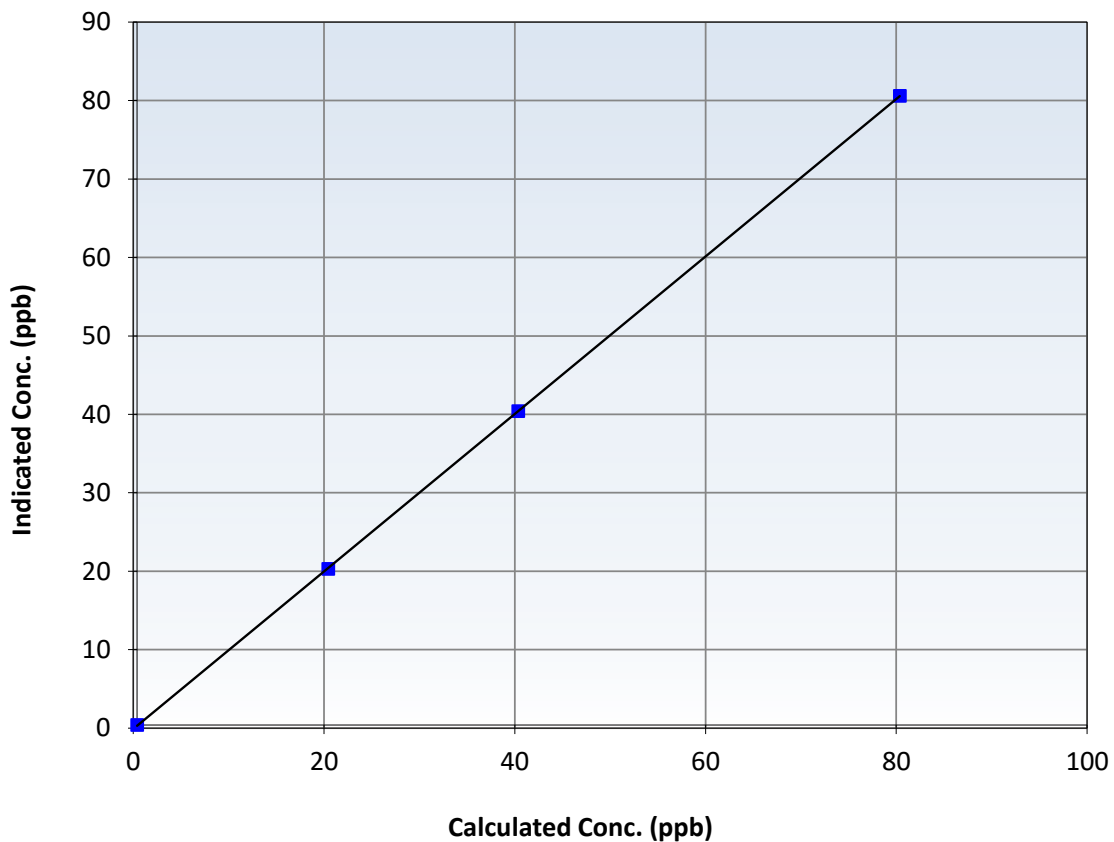
Station Information

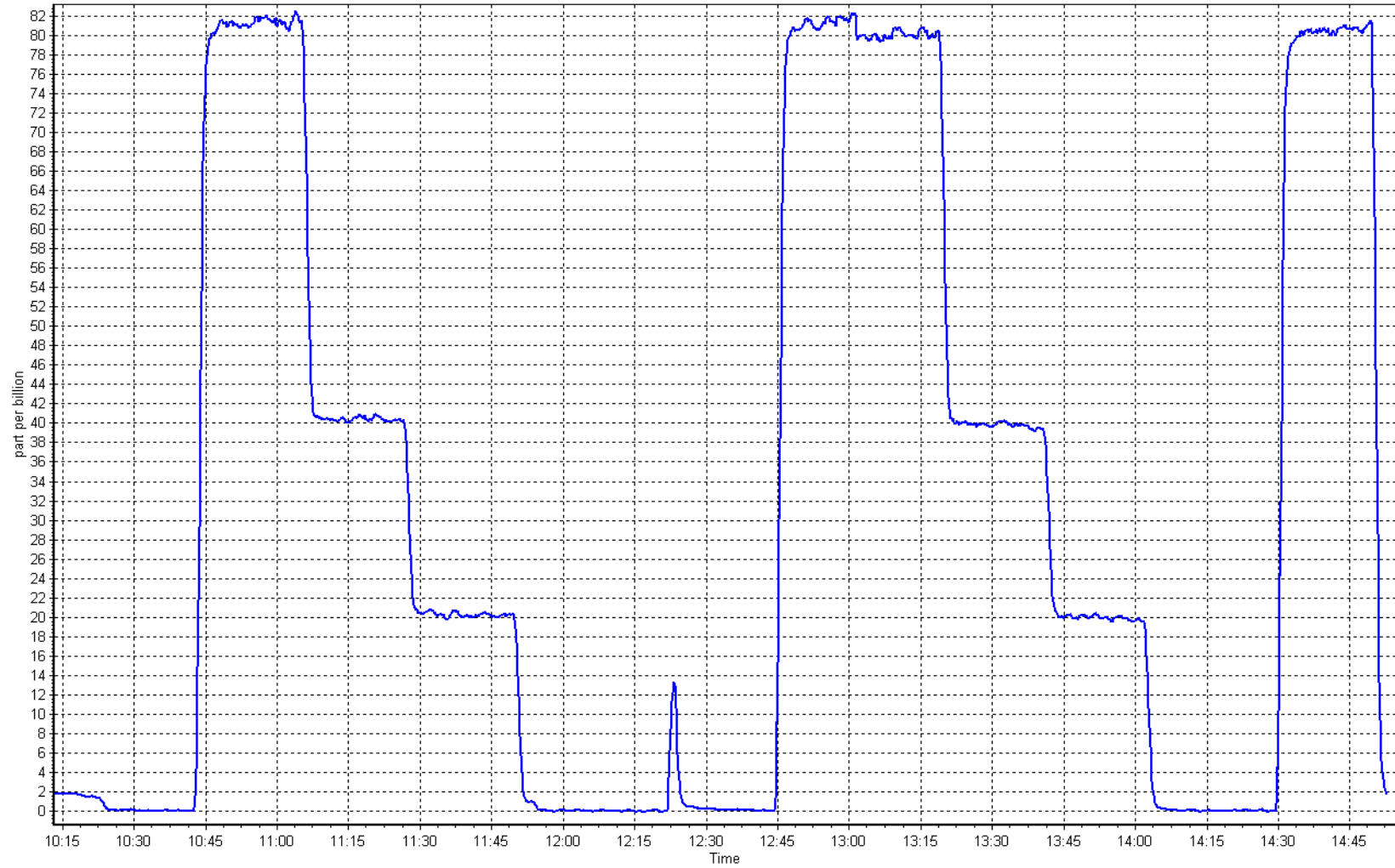
Calibration Date:	April 28, 2026	Previous Calibration:	March 28, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:17	End Time (MST):	14:53
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1300156232

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999993		≥ 0.995
80.0	80.2	0.9970	Slope	1.003675		$0.90 - 1.10$
40.0	40.0	0.9994	Intercept	-0.098095		± 3
20.0	19.9	1.0070				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Fort Hills
 Calibration Date: April 22, 2026
 Start time (MST): 10:20
 Reason: Routine

Station number: AMS 23
 Last Cal Date: March 26, 2026
 End time (MST): 14:01

Calibration Standards

Gas Cert Reference:	CC484463	Cal Gas Expiry Date:	October 9, 2032
CH ₄ Cal Gas Conc.	504.3 ppm	CH ₄ Equiv Conc.	1065.6 ppm
C ₃ H ₈ Cal Gas Conc.	204.1 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH ₄ Conc.	504.3 ppm	CH ₄ Equiv Conc.	1065.6 ppm
Removed C ₃ H ₈ Conc.	204.1 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	API T700	Serial Number:	5762
Zero Air Gen model:	API T701	Serial Number:	1117

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 12227620777
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	3.77E-04	3.76E-04	NMHC SP Ratio:	6.00E-05
CH ₄ Retention time:	15.0	15.4	NMHC Peak Area:	148580
Zero Chromatogram:	ON	ON	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.4	16.92	17.14	0.987
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.14	Prev response	16.89	*% change	1.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.4	16.92	16.87	1.003
Mid point	4960	39.7	8.46	8.23	1.028
Low point	4980	19.8	4.22	4.11	1.027
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	16.92	16.87	1.003
Average Correction Factor					1.019

Notes: Inlet filter and N₂ were changed after as founds. Adjusted zero and span.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.4	8.91	9.11	0.978
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.11	Prev response	8.89	*% change	2.4%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.4	8.91	8.87	1.005
Mid point	4960	39.7	4.46	4.36	1.023
Low point	4980	19.8	2.22	2.19	1.017
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	8.91	8.87	1.005
Average Correction Factor					1.015

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.4	8.01	8.03	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.03	Prev response	8.00	*% change	0.4%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.4	8.01	7.99	1.002
Mid point	4960	39.7	4.00	3.87	1.034
Low point	4980	19.8	2.00	1.92	1.038
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	8.01	7.99	1.002
Average Correction Factor					1.025

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.001456	0.997391
THC Cal Offset:	-0.051771	-0.079190
CH ₄ Cal Slope:	1.004427	0.999361
CH ₄ Cal Offset:	-0.042787	-0.052797
NMHC Cal Slope:	0.998555	0.995261
NMHC Cal Offset:	-0.008585	-0.025993

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

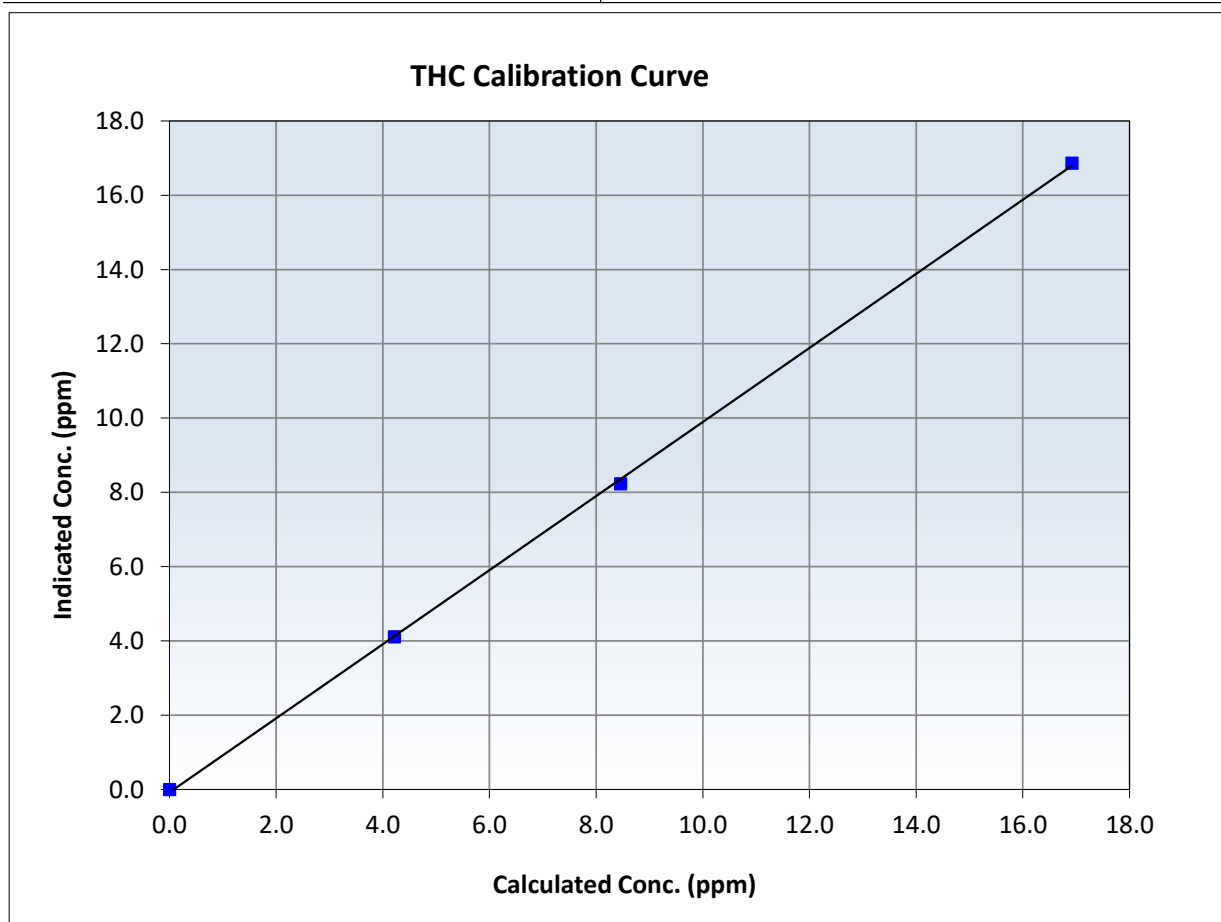
THC Calibration Summary

Station Information

Calibration Date:	April 22, 2026	Previous Calibration:	March 26, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:20	End Time (MST):	14:01
Analyzer make:	Thermo 55i	Analyzer serial #:	12227620777

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999820	≥ 0.995
16.92	16.87	1.0032	Slope	0.997391	$0.90 - 1.10$
8.46	8.23	1.0280	Intercept	-0.079190	± 0.5
4.22	4.11	1.0267			





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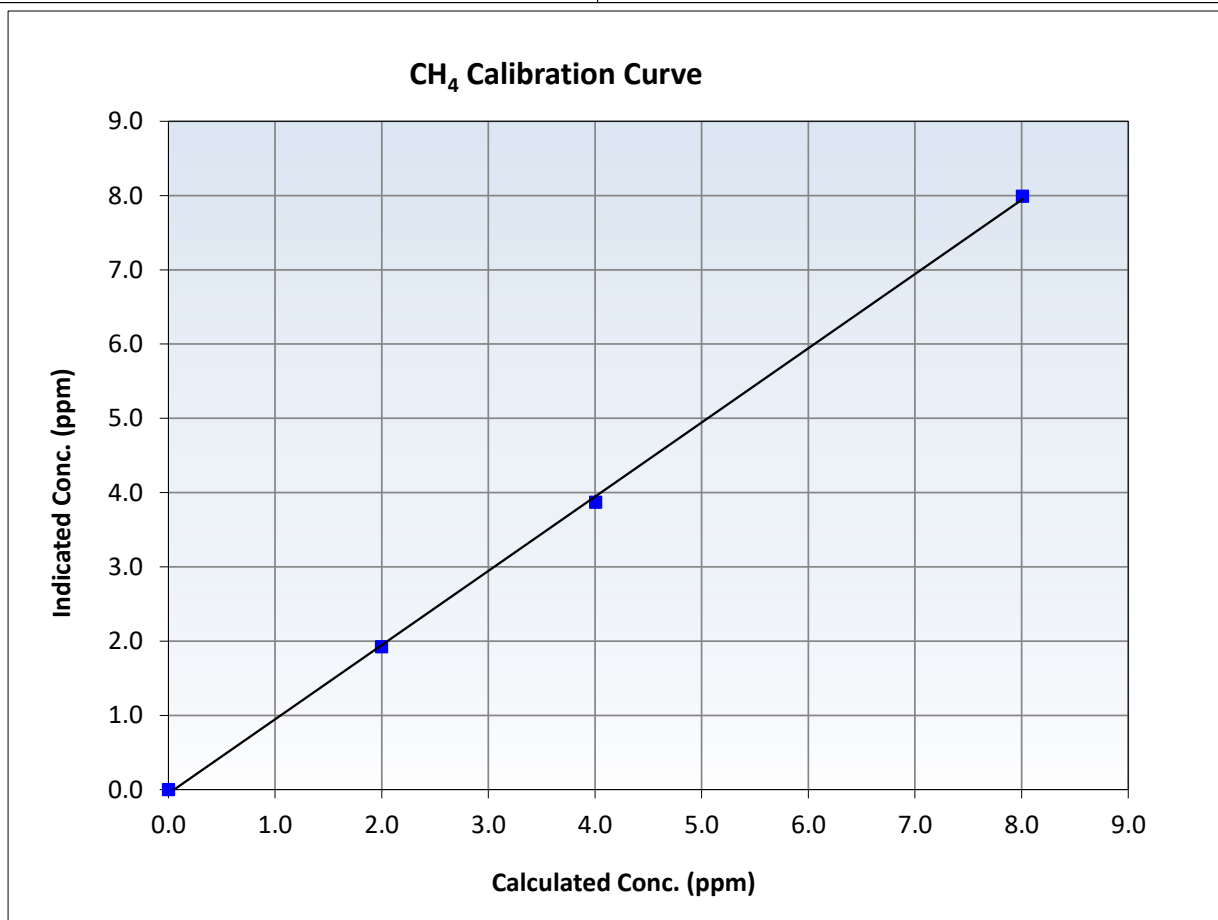
CH₄ Calibration Summary

Station Information

Calibration Date:	April 22, 2026	Previous Calibration:	March 26, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:20	End Time (MST):	14:01
Analyzer make:	Thermo 55i	Analyzer serial #:	12227620777

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999687	<i>≥0.995</i>
8.01	7.99	1.0018	Slope	0.999361	<i>0.90 - 1.10</i>
4.00	3.87	1.0342	Intercept	-0.052797	<i>+/-0.5</i>
2.00	1.92	1.0380			





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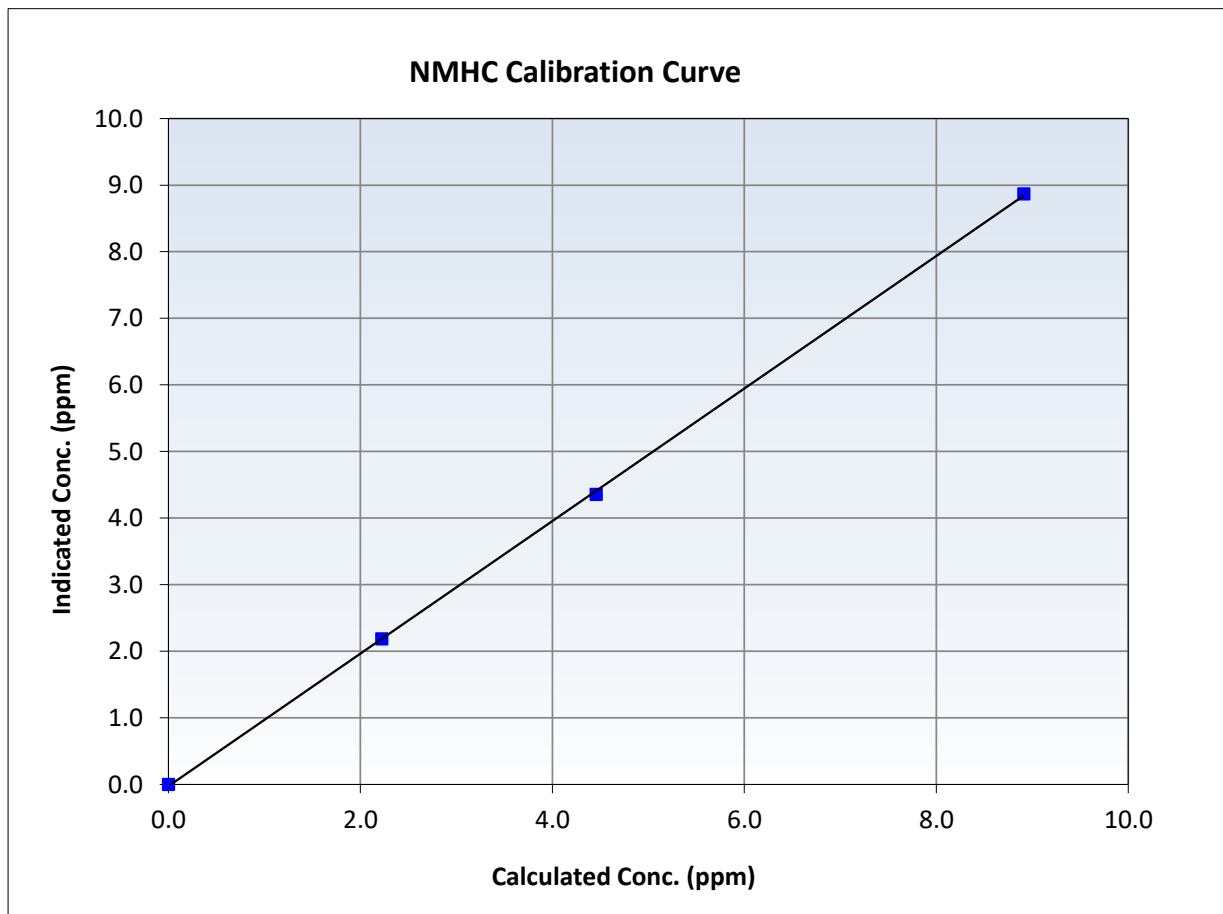
NMHC Calibration Summary

Station Information

Calibration Date:	April 22, 2026	Previous Calibration:	March 26, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:20	End Time (MST):	14:01
Analyzer make:	Thermo 55i	Analyzer serial #:	12227620777

Calibration Data

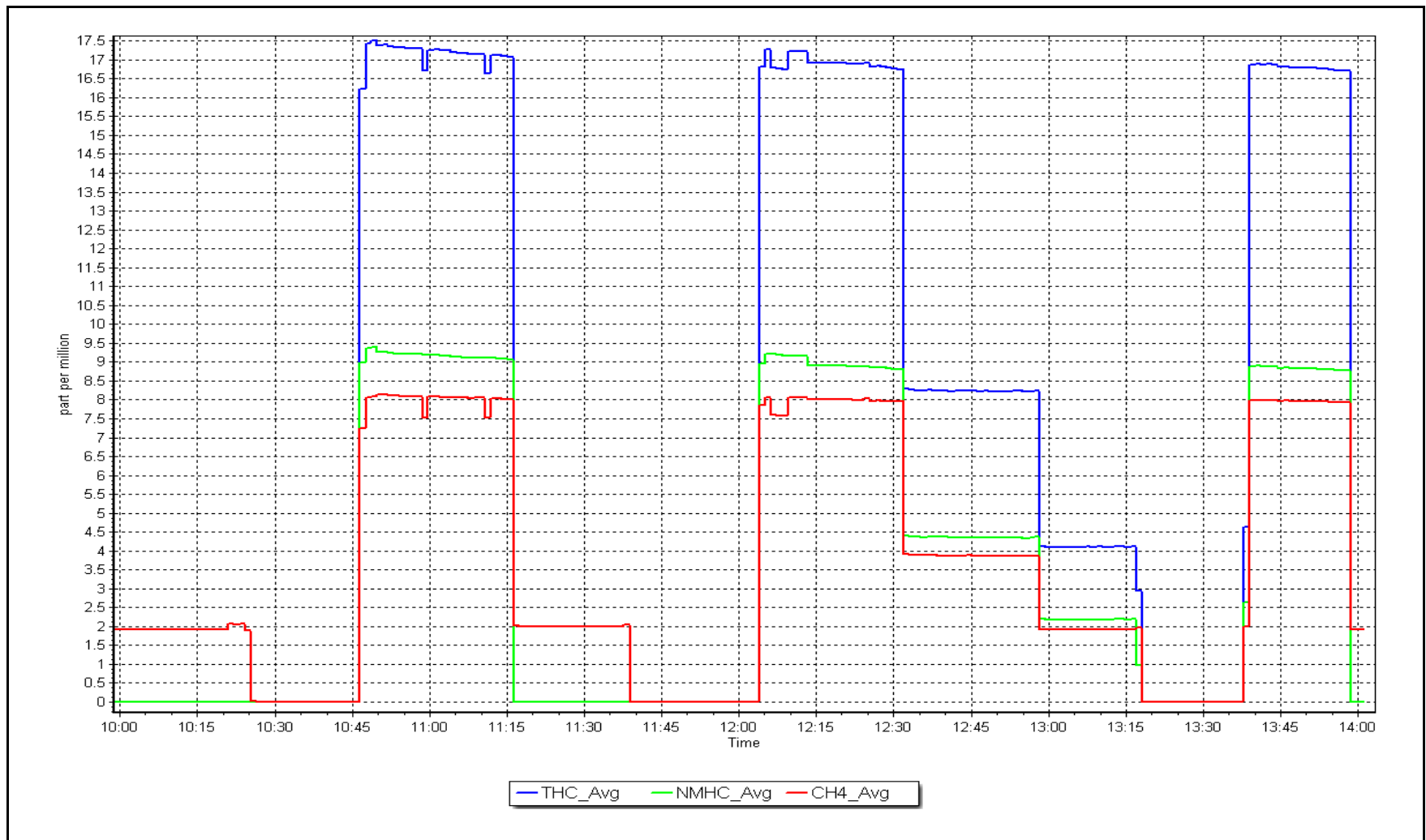
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999907	≥ 0.995
8.91	8.87	1.0048	Slope	0.995261	$0.90 - 1.10$
4.46	4.36	1.0227	Intercept	-0.025993	± 0.5
2.22	2.19	1.0168			



NMHC Calibration Plot

Date: April 22, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Fort Hills
Station number: AMS 23
Calibration Date: April 23, 2026
Last Cal Date: March 25, 2026
Start time (MST): 11:14
End time (MST): 16:21
Reason: Routine

Calibration Standards

NO Gas Cylinder #: CC358149
NOX Cal Gas Conc: 60.30 ppm
Removed Cylinder #:
Removed Gas NOX Conc: 60.30 ppm
NOX gas Diff:
Calibrator Model: API T700
ZAG make/model: API T701
Cal Gas Expiry Date: January 5, 2032
NO Cal Gas Conc: 60.10 ppm
Removed Gas Exp Date:
Removed Gas NO Conc: 60.10 ppm
NO gas Diff:
Serial Number: 5762
Serial Number: 1117

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	----	----
AF High point	4934	66.3	799.5	796.9	2.7	791.0	784.2	6.8	1.0108	1.0162
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 799.0 ppb	NO = 795.9 ppb							*Percent Change	NO _x = -1.0%
Baseline Corr 1st pt	NO _x = 791.0 ppb	NO = 784.2 ppb							*Percent Change	NO = -1.5%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb							Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb							NO SI:	NO Int:
									NO2 SI:	NO2 Int:

* = > +/-5% change initiates investigation

As Found Statistics

As found NO_x r²:

As found NO r²:

As found NO₂ r²:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1152430007

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.924	0.940	NO bkgnd or offset:	2.7	2.7
NOX coeff or slope:	0.992	0.992	NOX bkgnd or offset:	2.8	2.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	149.0	149.6

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999611	1.002741
NO _x Cal Offset:	-0.193446	-0.013989
NO Cal Slope:	1.000440	1.004139
NO Cal Offset:	-1.371973	-1.612554
NO ₂ Cal Slope:	1.006146	0.994459
NO ₂ Cal Offset:	-0.558448	1.562698

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.2	0.1	0.0	----	----
High point	4934	66.3	799.5	796.9	2.7	802.3	799.9	2.2	0.9965	0.9962
Mid point	4967	33.2	400.4	399.0	1.3	399.9	396.8	3.1	1.0012	1.0057
Low point	4983	16.6	200.2	199.5	0.7	201.5	198.0	3.5	0.9936	1.0078
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
As left span	4934	66.3	799.5	399.7	399.8	802.3	399.7	402.6	0.9965	1.0000
Average Correction Factor									0.9971	1.0032

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.0	----	----
High GPT point	796.3	397.0	402.0	400.8	1.0029	99.7%
Mid GPT point	796.3	596.0	203.0	203.3	0.9983	100.2%
Low GPT point	796.3	698.9	100.1	103.2	0.9695	103.1%
Average Correction Factor					0.9902	101.0%

Notes:

Changed sample inlet filter after as founds. Adjusted span only.

Calibration Performed By:

Mohammed Kashif



Wood Buffalo Environmental Association

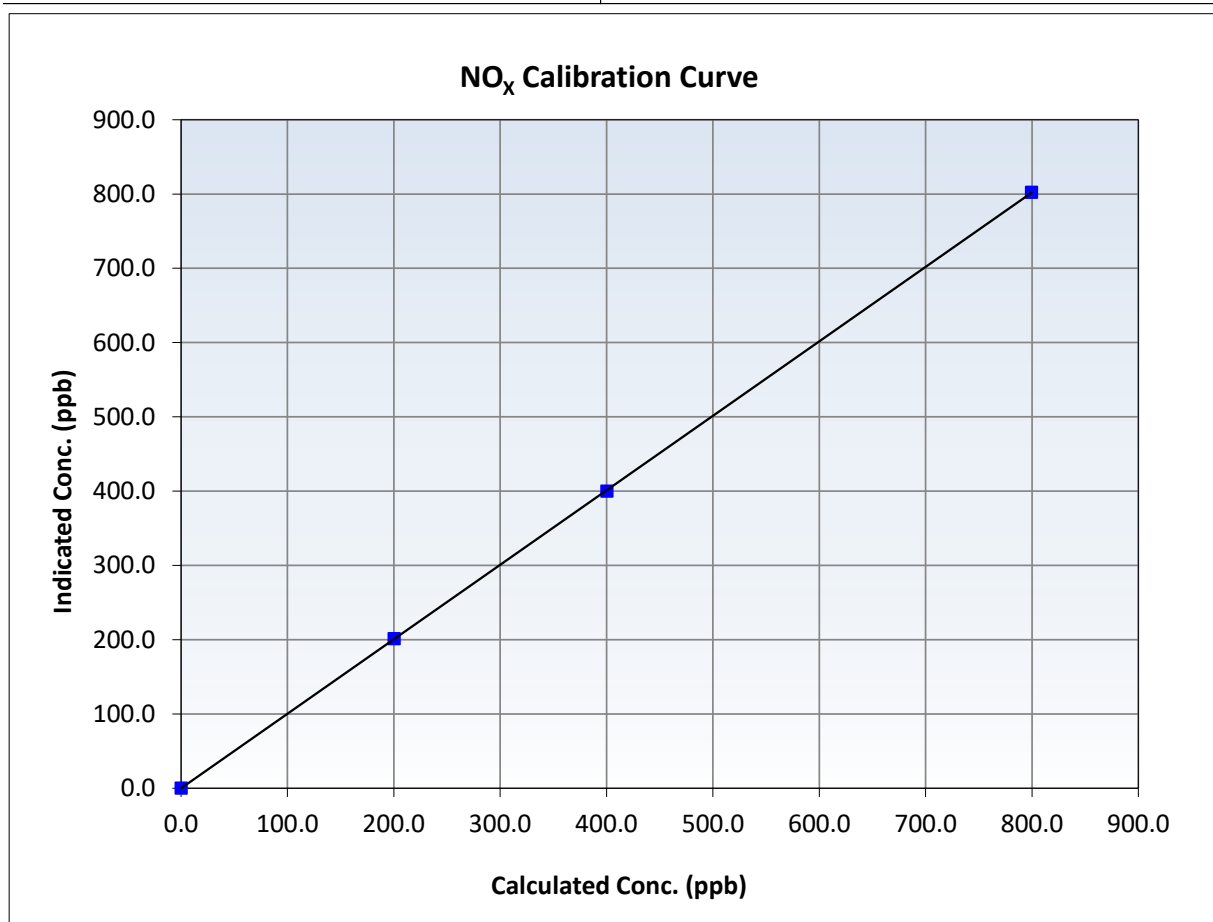
NO_x Calibration Summary

Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	March 25, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	11:14	End Time (MST):	16:21
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999990	≥0.995
799.5	802.3	0.9965	Slope	1.002741	0.90 - 1.10
400.4	399.9	1.0012	Intercept	-0.013989	+/-20
200.2	201.5	0.9936			





Wood Buffalo Environmental Association

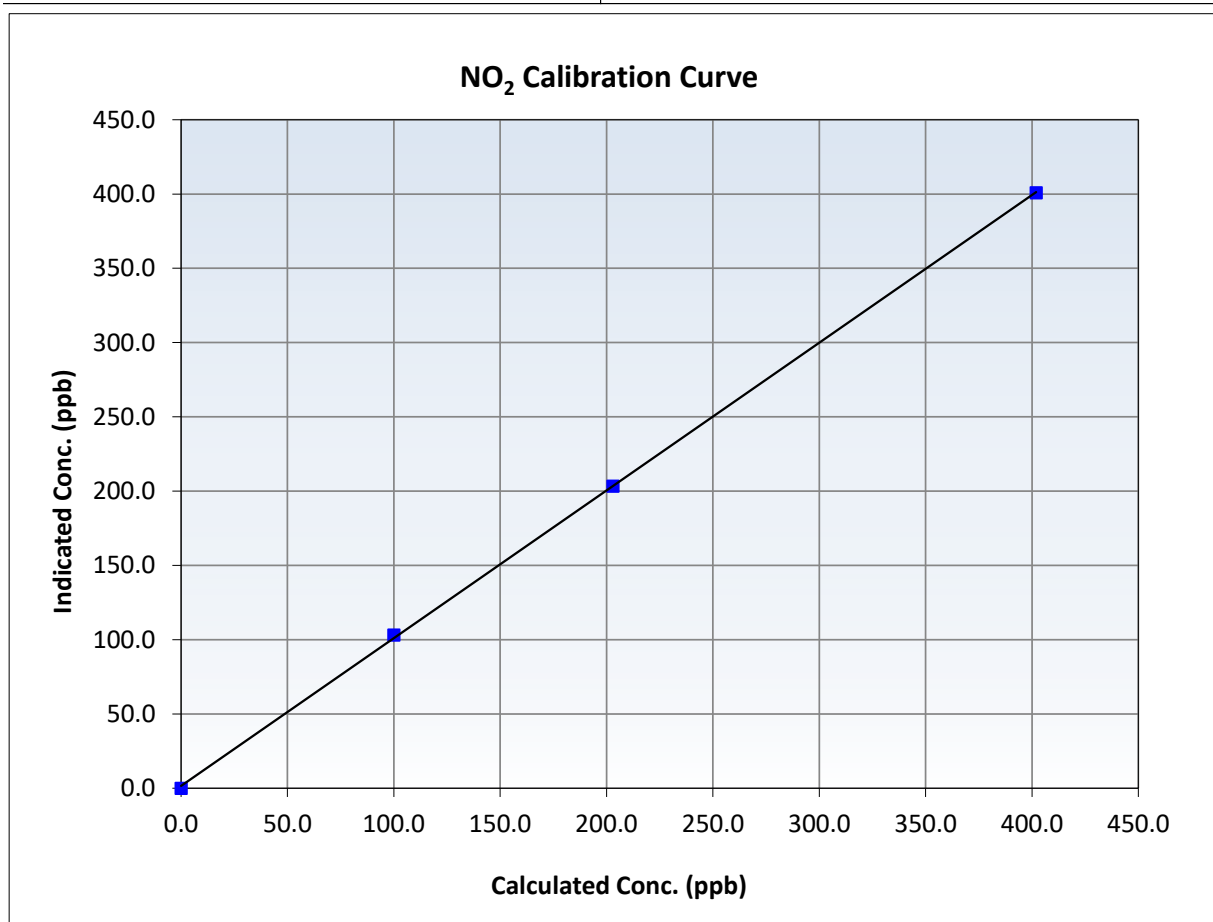
NO₂ Calibration Summary

Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	March 25, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	11:14	End Time (MST):	16:21
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999917	≥0.995
402.0	400.8	1.0029	Slope	0.994459	0.90 - 1.10
203.0	203.3	0.9983	Intercept	1.562698	+/-20
100.1	103.2	0.9695			





Wood Buffalo Environmental Association

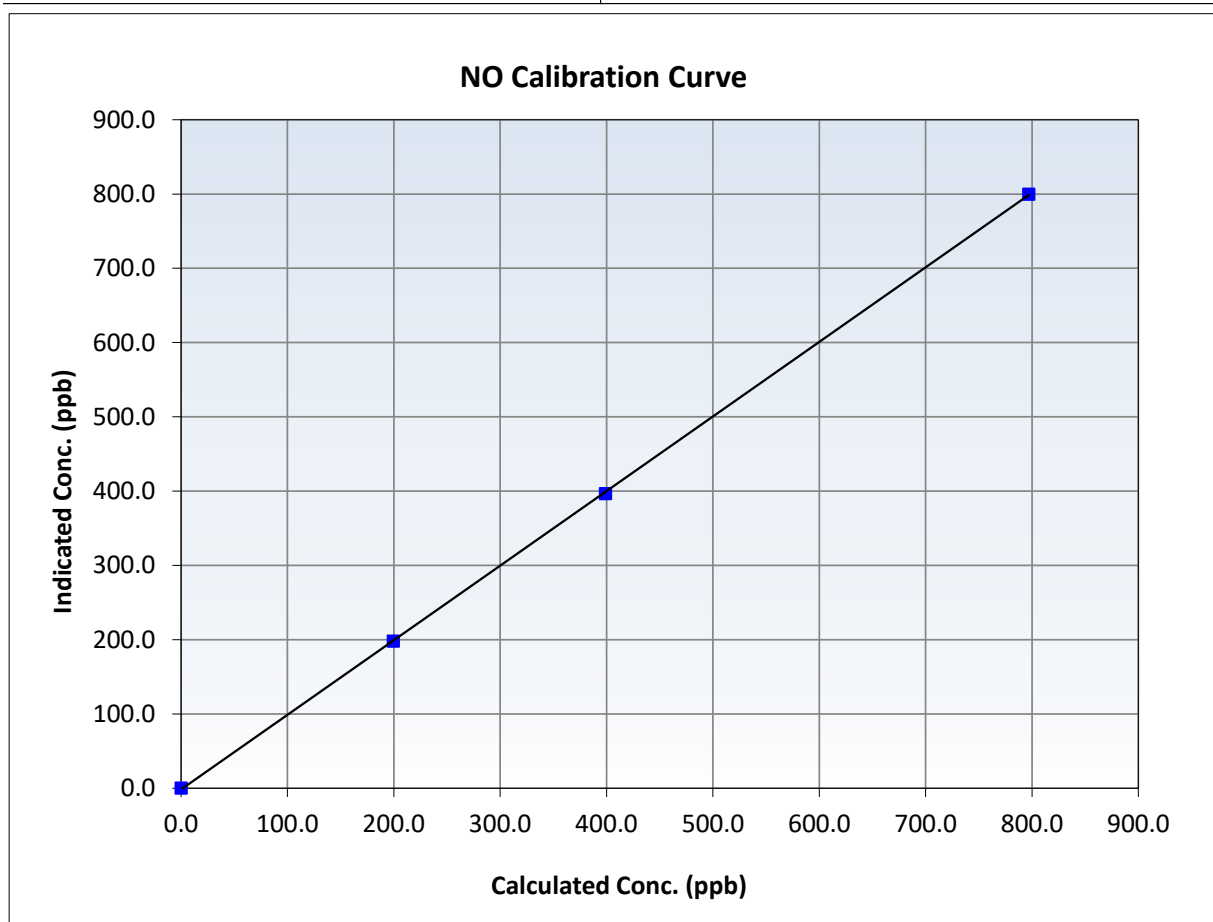
NO Calibration Summary

Station Information

Calibration Date:	April 23, 2026	Previous Calibration:	March 25, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	11:14	End Time (MST):	16:21
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

Calibration Data

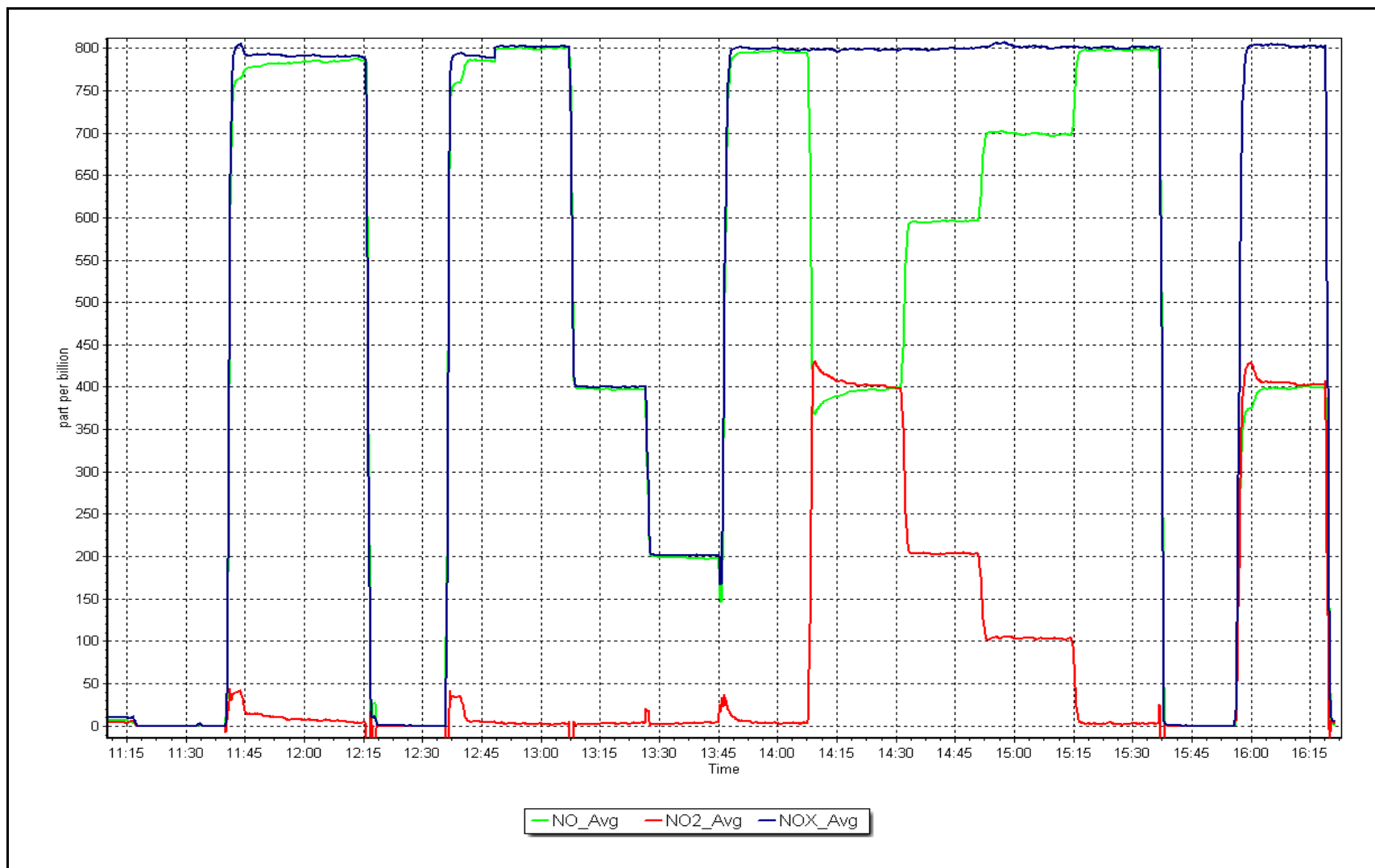
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999970	≥ 0.995
796.9	799.9	0.9962	Slope	1.004139	0.90 - 1.10
399.0	396.8	1.0057	Intercept	-1.612554	+/-20
199.5	198.0	1.0078			



NO_x Calibration Plot

Date: April 23, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Fort Hills Station number: AMS 23
Calibration Date: April 28, 2026 Last Cal Date: March 25, 2026
Start time (MST): 11:32 End time (MST): 13:06

Analyzer Make: API T640 S/N: 320
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388749
Temp/RH standard: Alicat FP-25BT S/N: 388749

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	6.8	6.79	6.8	☐	+/- 2 °C
P (mmHg)	737	736.2	737	☐	+/- 10 mmHg
Flow (LPM)	4.98	5.002	4.98	☐	+/- 0.25 LPM
PW% (pump)	33	----	33	☐	>80%
Zero Verification	PM w/o HEPA: 20.0		PM w/ HEPA: 0.0		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: 16-Jul-26
Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	9.8	10.8	10.8	☐	+/- 0.5

Date Optical Chamber Cleaned: April 28, 2026
Date Disposable Filter Changed: April 28, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: April 28, 2026
Date RH/T Sensor Cleaned: April 28, 2026

Notes: Leak Check, Flow and PMT checked before and after cleaning. No adjustments made after cleaning of optical chamber and filter change out.

Calibration by: Mohammed Kashif



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS25 WASKŌW OHCI PIMÂTISIWIN APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Waskow ohci Pimatisiwin Station number: AMS 25
Calibration Date: April 2, 2026 Last Cal Date: March 10, 2026
Start time (MST): 11:12 End time (MST): 14:03
Reason: Routine

Calibration Standards

Cal Gas Concentration: 49.70 ppm Cal Gas Exp Date: March 10, 2031
Cal Gas Cylinder #: CC342445
Removed Cal Gas Conc: 49.70 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Model: API T700 Serial Number: 621
Zero Air Gen Model: API T701 Serial Number: 4765

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1118148497
Analyzer Range: 0-1000ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001471	1.001185	Backgd or Offset:	12.7	12.7
Calibration intercept:	-1.152490	-0.652482	Coeff or Slope:	1.100	1.090

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.4	----
As found High point	4920	80.5	800.1	804.4	0.994
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	804.8	Previous response	800.1	*% change	0.6%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4920	80.5	800.1	800.7	0.999
Mid point	4960	40.2	399.6	398.9	1.002
Low point	4980	20.1	199.8	199.1	1.003
As left zero	5000	0.0	0.0	-0.2	----
As left span	4920	80.5	800.1	799.1	1.001
Average Correction Factor:					1.001

Notes: Changed the inlet filter after as founds. Adjusted the span.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

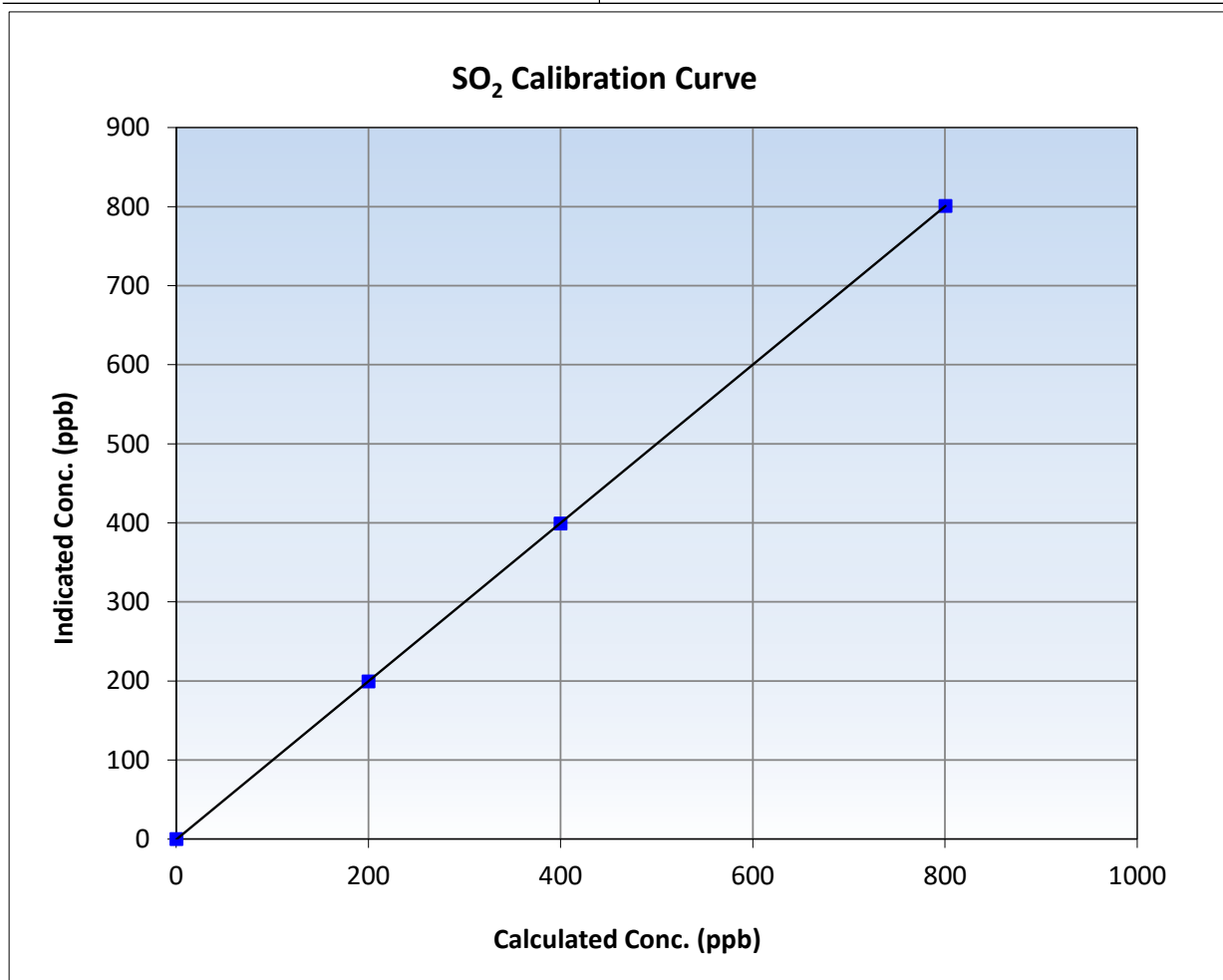
SO₂ Calibration Summary

Station Information

Calibration Date:	April 2, 2026	Previous Calibration:	March 10, 2026
Station Name:	Waskow ohci Pimatisiwin	Station Number:	AMS 25
Start Time (MST):	11:12	End Time (MST):	14:03
Analyzer make:	Thermo 43i	Analyzer serial #:	1118148497

Calibration Data

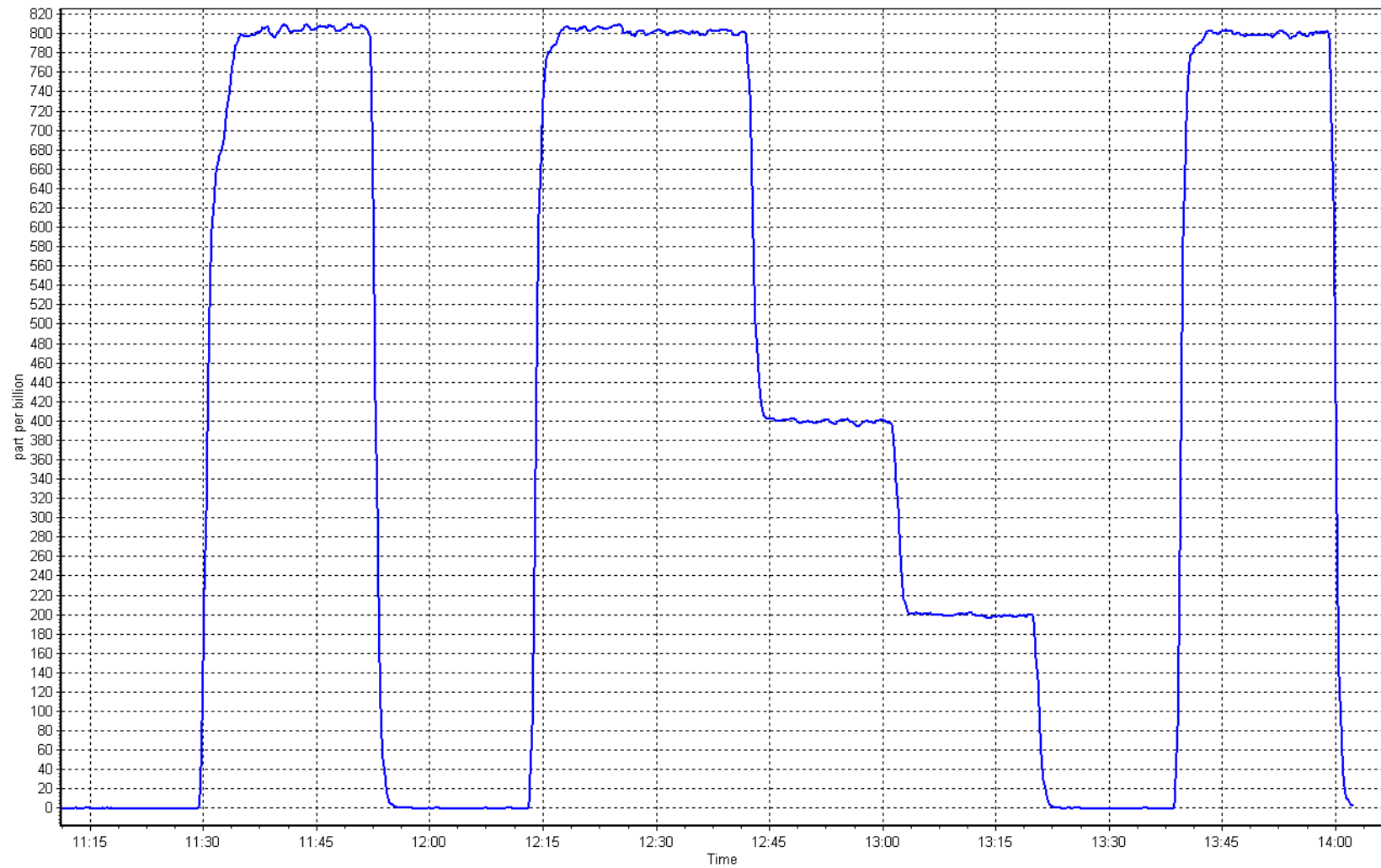
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999998	≥0.995
800.1	800.7	0.9992	Slope	1.001185	0.90 - 1.10
399.6	398.9	1.0017	Intercept	-0.652482	+/-30
199.8	199.1	1.0035			



SO2 Calibration Plot

Date: April 2, 2026

Location: Waskow ohci Pimatisiwin





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Waskow ohci Pimatisiwin Station number: AMS 25
Calibration Date: April 1, 2026 Last Cal Date: March 13, 2026
Start time (MST): 10:39 End time (MST): 14:37
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.97 ppm Cal Gas Exp Date: January 3, 2026
Cal Gas Cylinder #: CC517099
Removed Cal Gas Conc: 4.97 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Make/Model: API T700 Serial Number: 747
ZAG Make/Model: API T701 Serial Number: 261

Analyzer Information

Analyzer make: Thermo 43i-LTE Analyzer serial #: 1170050146
Converter make: Global G-150 Converter serial #: 2024-287
Analyzer Range: 0 - 100 ppb Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000796	1.002080	Backgd or Offset:	3.89
Calibration intercept:	0.182193	-0.037792	Coeff or Slope:	1.161

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4919	80.5	80.0	80.7	0.989
As found Mid point	4960	40.3	40.1	40.4	0.987
As found Low point	4980	20.1	20.0	19.8	0.999
New cylinder response					
Baseline Corr As found:	80.9	Prev response:	80.27	*% change:	0.8%
Baseline Corr 2nd AF pt:	40.6	AF Slope:	1.011934	AF Intercept:	-0.257829
Baseline Corr 3rd AF pt:	20.0	AF Correlation:	0.999988	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4919	80.5	80.0	80.1	0.999
Mid point	4960	40.3	40.1	40.2	0.996
Low point	4980	20.1	20.0	20.0	0.999
As left zero	5000	0.0	0.0	0.0	----
As left span	4920	80.0	800.0	822.9	0.972
SO2 Scrubber Check	4920	80.0	800.0	0.1	----
Date of last scrubber change:				Ave Corr Factor	0.998
Date of last converter efficiency test:		February 12, 2025		111.0%	efficiency

Notes: Changed the inlet filter and performed an SO2 scrubber check after the as founds. No adjustments made.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

H₂S Calibration Summary

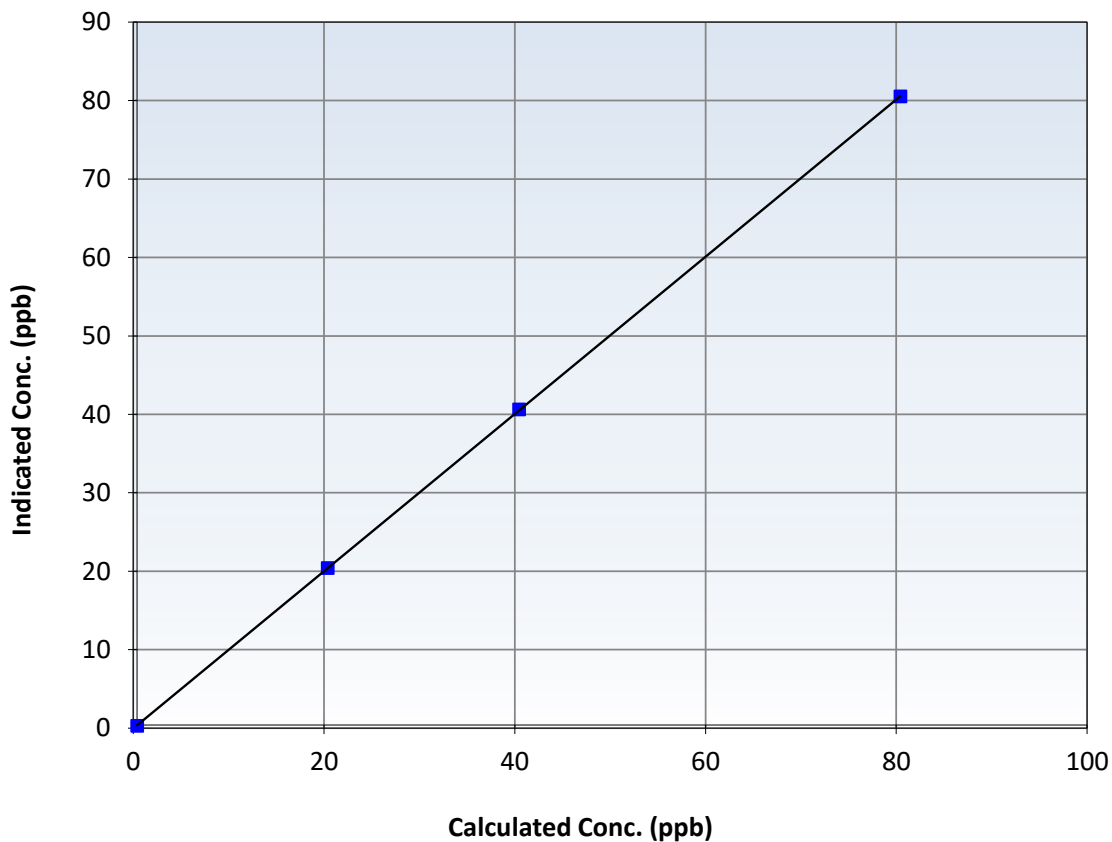
Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	March 13, 2026
Station Name:	Waskow ohci Pimatisiwin	Station Number:	AMS 25
Start Time (MST):	10:39	End Time (MST):	14:37
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1170050146

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999995	≥ 0.995
80.0	80.1	0.9991	Slope	1.002080	$0.90 - 1.10$
40.1	40.2	0.9964	Intercept	-0.037792	± 3
20.0	20.0	0.9990			

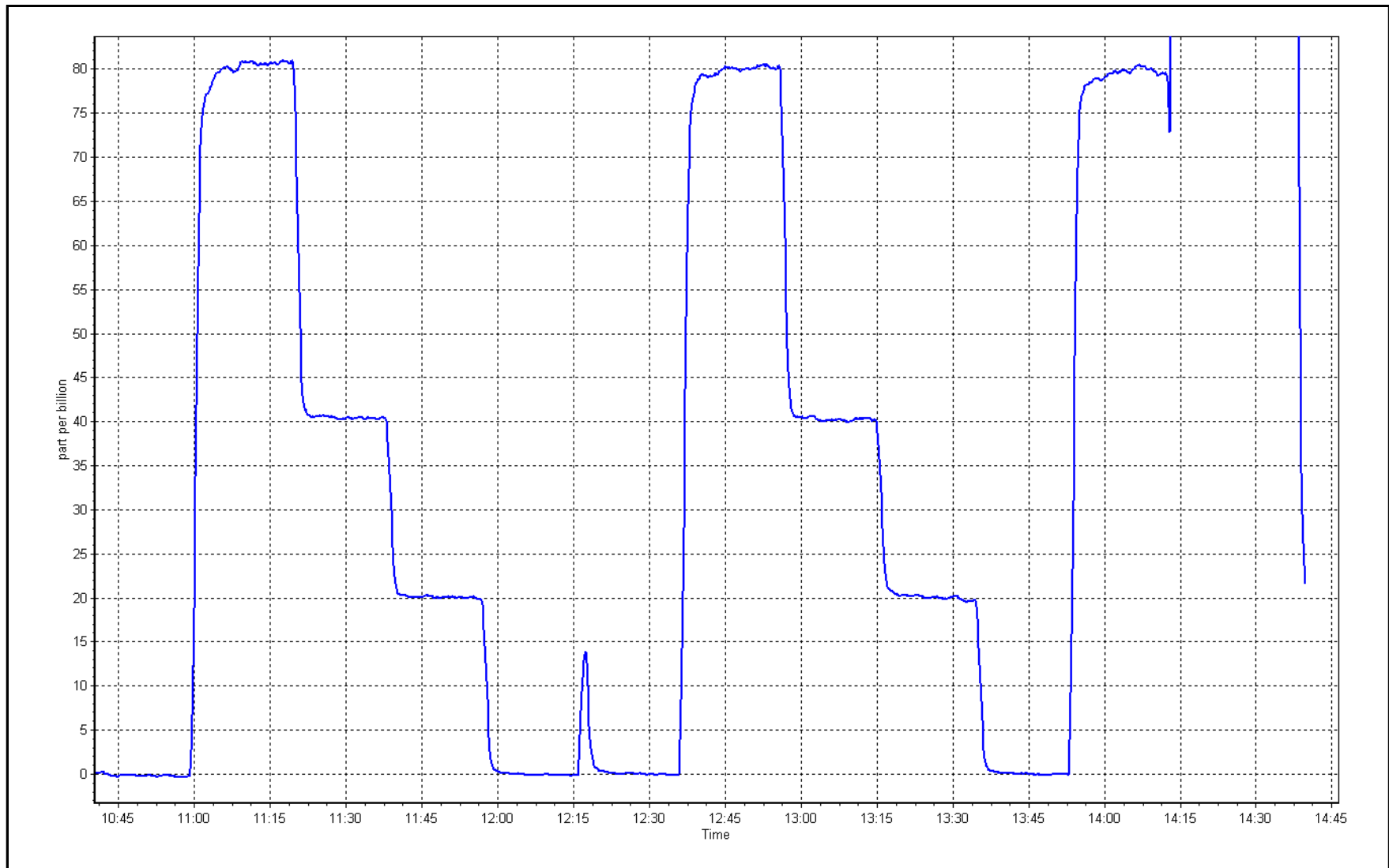
H₂S Calibration Curve



H₂S Calibration Plot

Date: April 1, 2026

Location: Waskow ohci Pimatisiwin





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS27
JACKFISH 2/3
APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Jackfish 2/3 Station number: AMS 27
Calibration Date: April 16, 2026 Last Cal Date: March 23, 2026
Start time (MST): 9:56 End time (MST): 12:42
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.58 ppm Cal Gas Exp Date: December 29, 2028
Cal Gas Cylinder #: SG9133974BAL
Removed Cal Gas Conc: 50.58 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: API T700 Serial Number: 5252
Zero Air Gen Model: API 701 Serial Number: 268

Analyzer Information

Analyzer make: Thermo 43iQ-TL Serial Number: 12124313138
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004207	0.997979	Backgd or Offset:	11.0	11.0
Calibration intercept:	0.105879	0.385868	Coeff or Slope:	0.929	0.921

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4921	79.1	800.2	806.5	0.992
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	806.7	Previous response	803.6	*% change	0.4%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4921	79.1	800.2	798.5	1.002
Mid point	4960	39.5	399.6	399.9	0.999
Low point	4980	19.8	200.3	200.6	0.999
As left zero	5000	0.0	0.0	-0.1	----
As left span	4921	79.1	800.2	800.9	0.999
Average Correction Factor:					1.000

Notes: Changed the sample inlet filter after as founds. Span adjusted.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

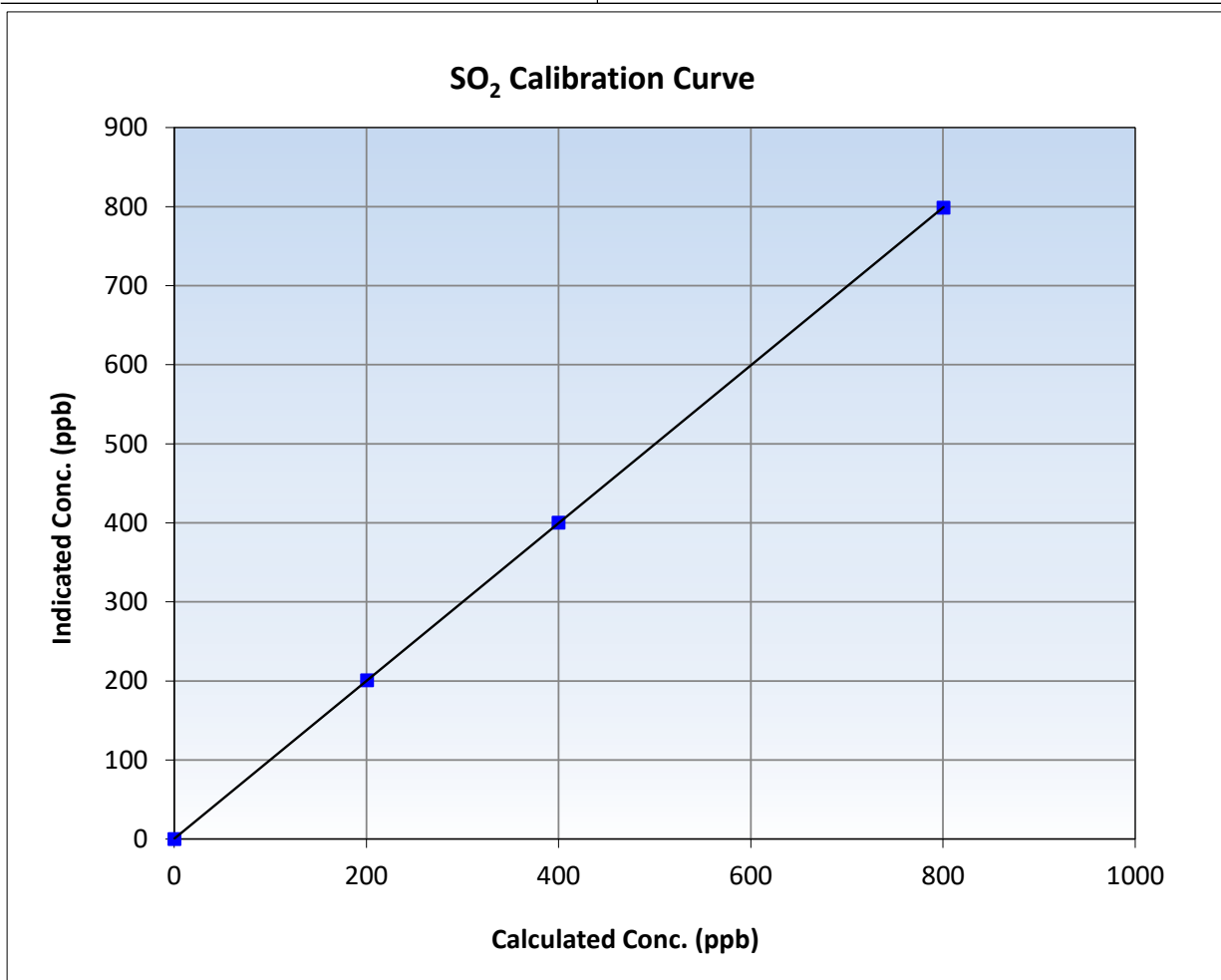
SO₂ Calibration Summary

Station Information

Calibration Date:	April 16, 2026	Previous Calibration:	March 23, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:56	End Time (MST):	12:42
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	12124313138

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999997	≥0.995
800.2	798.5	1.0021	Slope	0.997979	0.90 - 1.10
399.6	399.9	0.9993	Intercept	0.385868	+/-30
200.3	200.6	0.9985			



SO2 Calibration Plot

Date: April 16, 2026

Location: Jackfish 2/3





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Jackfish 2/3
Calibration Date: April 22, 2026
Start time (MST): 8:23
Reason: Routine

Station number: AMS 27
Last Cal Date: March 4, 2026
End time (MST): 12:14

Calibration Standards

Cal Gas Concentration: 4.87 ppm
Cal Gas Cylinder #: CC523090
Removed Cal Gas Conc: 4.87 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701H

Cal Gas Exp Date: September 5, 2027
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 5252
Serial Number: 268

Analyzer Information

Analyzer make: Thermo 43iQ
Converter make: Global G150
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 12228021055
Converter serial #: 2022-195
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001574	1.001286	Backgd or Offset:	3.4	3.3
Calibration intercept:	-0.020920	-0.260837	Coeff or Slope:	1.071	1.049

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4918	82.1	80.0	81.5	0.979
As found Mid point	4959	41.1	40.0	40.4	0.986
As found Low point	4979	20.5	20.0	20.1	0.984
New cylinder response					
Baseline Corr As found:	81.7	Prev response:	80.07	*% change:	2.0%
Baseline Corr 2nd AF pt:	40.6	AF Slope:	1.021721	AF Intercept:	-0.300883
Baseline Corr 3rd AF pt:	20.3	AF Correlation:	0.999984	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4918	82.1	80.0	79.9	1.001
Mid point	4959	41.1	40.0	39.6	1.011
Low point	4979	20.5	20.0	19.8	1.009
As left zero	5000	0.0	0.0	-0.1	----
As left span	4918	82.1	80.0	80.4	0.995
SO2 Scrubber Check	4921	79.1	791.0	0.0	----
Date of last scrubber change:	18-Nov-25		Ave Corr Factor		1.007
Date of last converter efficiency test:	April 23, 2025				

Notes: Sample inlet filter was changed after multipoint as founds. SO2 scrubber check done and passed.
Adjusted span only.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

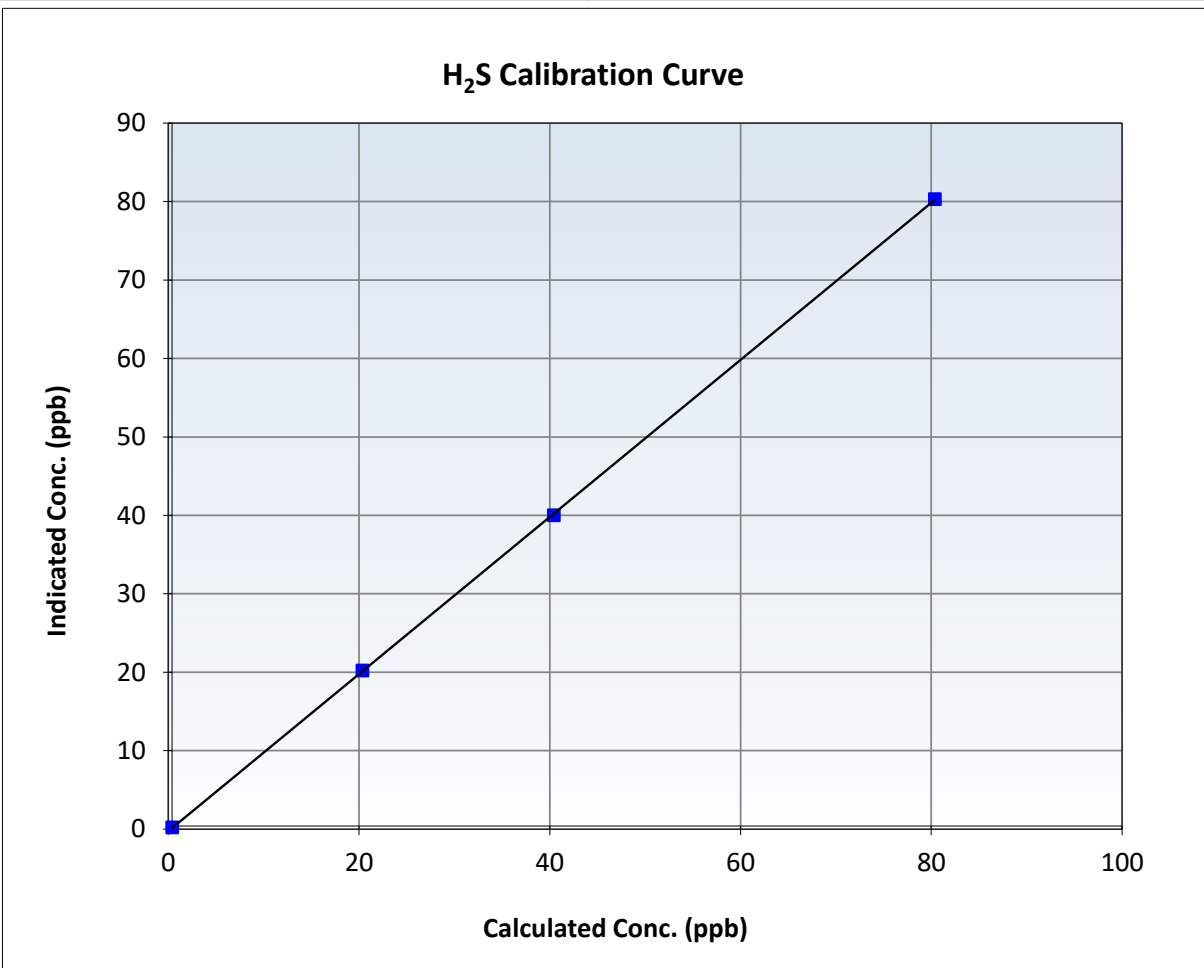
H₂S Calibration Summary

Station Information

Calibration Date:	April 22, 2026	Previous Calibration:	March 4, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	8:23	End Time (MST):	12:14
Analyzer make:	Thermo 43iQ	Analyzer serial #:	12228021055

Calibration Data

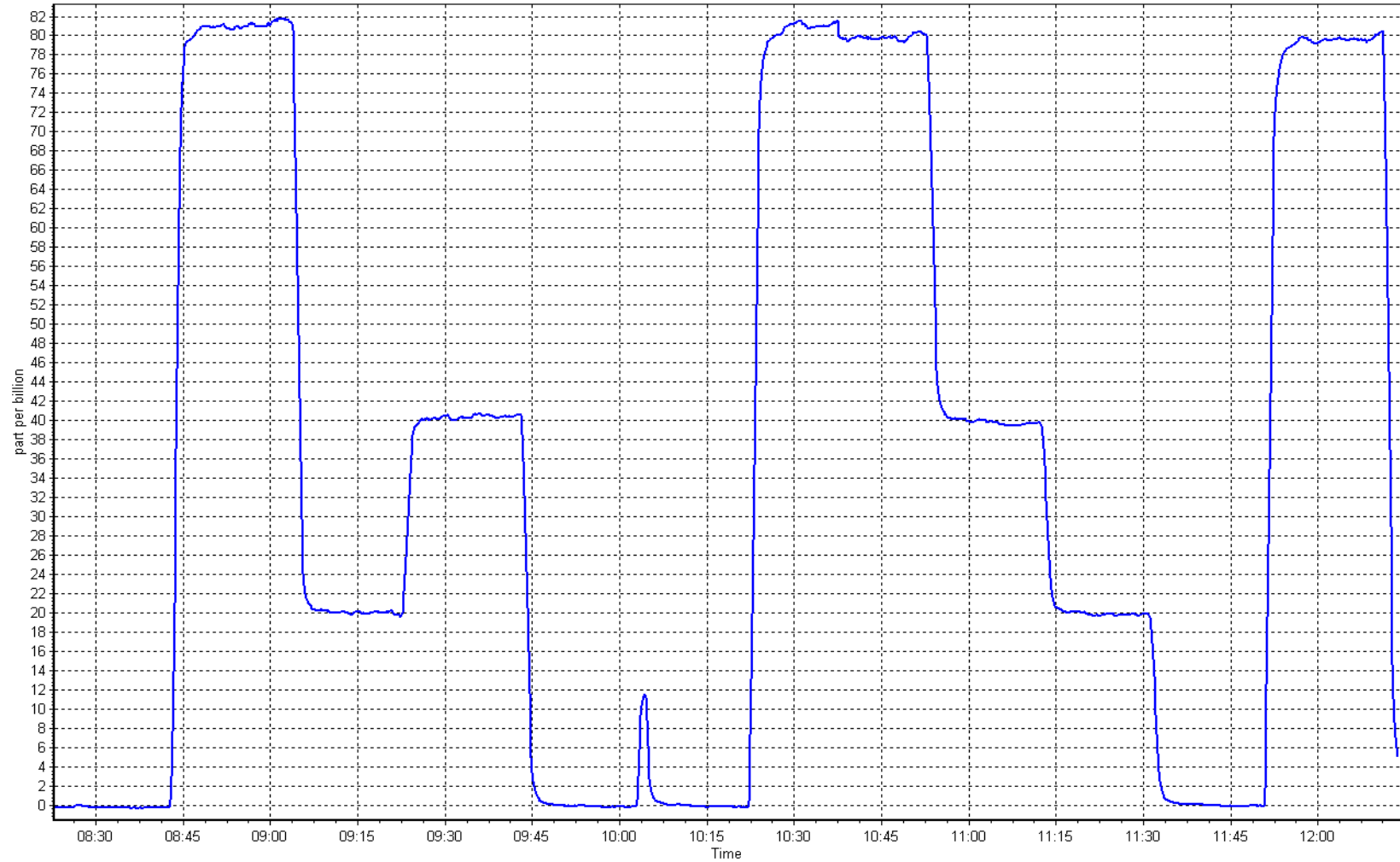
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999981		≥ 0.995
80.0	79.9	1.0008	Slope	1.001286		$0.90 - 1.10$
40.0	39.6	1.0109	Intercept	-0.260837		± 3
20.0	19.8	1.0085				



H₂S Calibration Plot

Date: April 22, 2026

Location: Jackfish 2/3





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Jackfish 2/3
Station number: AMS 27
Calibration Date: April 21, 2026
Last Cal Date: March 31, 2026
Start time (MST): 9:19
End time (MST): 13:32
Reason: Routine

Calibration Standards

NO Gas Cylinder #: CC757838
NOX Cal Gas Conc: 60.30 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 60.30 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T750
ZAG make/model: Teledyne API T751H
Cal Gas Expiry Date: January 9, 2032
NO Cal Gas Conc: 60.20 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 60.20 ppm
NO gas Diff:
Serial Number: 282
Serial Number: 321

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.5	-0.4	-0.1	----	----
AF High point	4934	66.4	800.7	799.4	1.3	791.4	786.2	5.1	1.0111	1.0163
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 801.4 ppb	NO = 800.6 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -1.2%	
Baseline Corr 1st pt	NO _x = 791.9 ppb	NO = 786.6 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -1.8%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	NO ₂ SI:	NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: API T200
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1035

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.863	0.871	NO bkgnd or offset:	-4.9	-4.8
NOX coeff or slope:	0.857	0.863	NOX bkgnd or offset:	-3.7	-4.1
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	4.9	4.5

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.000825	0.998456
NO _x Cal Offset:	-0.016028	-0.236001
NO Cal Slope:	1.003131	0.998685
NO Cal Offset:	-1.315990	-1.435923
NO ₂ Cal Slope:	0.996092	0.993495
NO ₂ Cal Offset:	-0.588359	-0.112802

Dilution Calibration Data

Set Point	Dilution flow rate (scm)	Source gas flow rate (scm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.5	-0.5	0.0	----	----
High point	4934	66.4	800.7	799.4	1.3	799.1	796.9	2.2	1.0020	1.0031
Mid point	4967	33.2	400.4	399.7	0.7	399.7	398.7	1.0	1.0017	1.0025
Low point	4983	16.6	200.2	199.9	0.3	199.9	196.3	3.6	1.0016	1.0182
As left zero	5000	0.0	0.0	0.0	0.0	0.2	0.2	0.0	----	----
As left span	4934	66.4	800.7	384.2	416.5	797.1	384.2	412.9	1.0045	1.0000
Average Correction Factor									1.0018	1.0080

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.0	----	----
High GPT point	797.5	379.0	419.8	417.2	1.0063	99.4%
Mid GPT point	797.5	586.5	212.3	210.3	1.0096	99.0%
Low GPT point	797.5	688.1	110.7	110.1	1.0057	99.4%
Average Correction Factor					1.0072	99.3%

Notes:

Changed sample inlet filter after as founds. Adjusted span only.

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

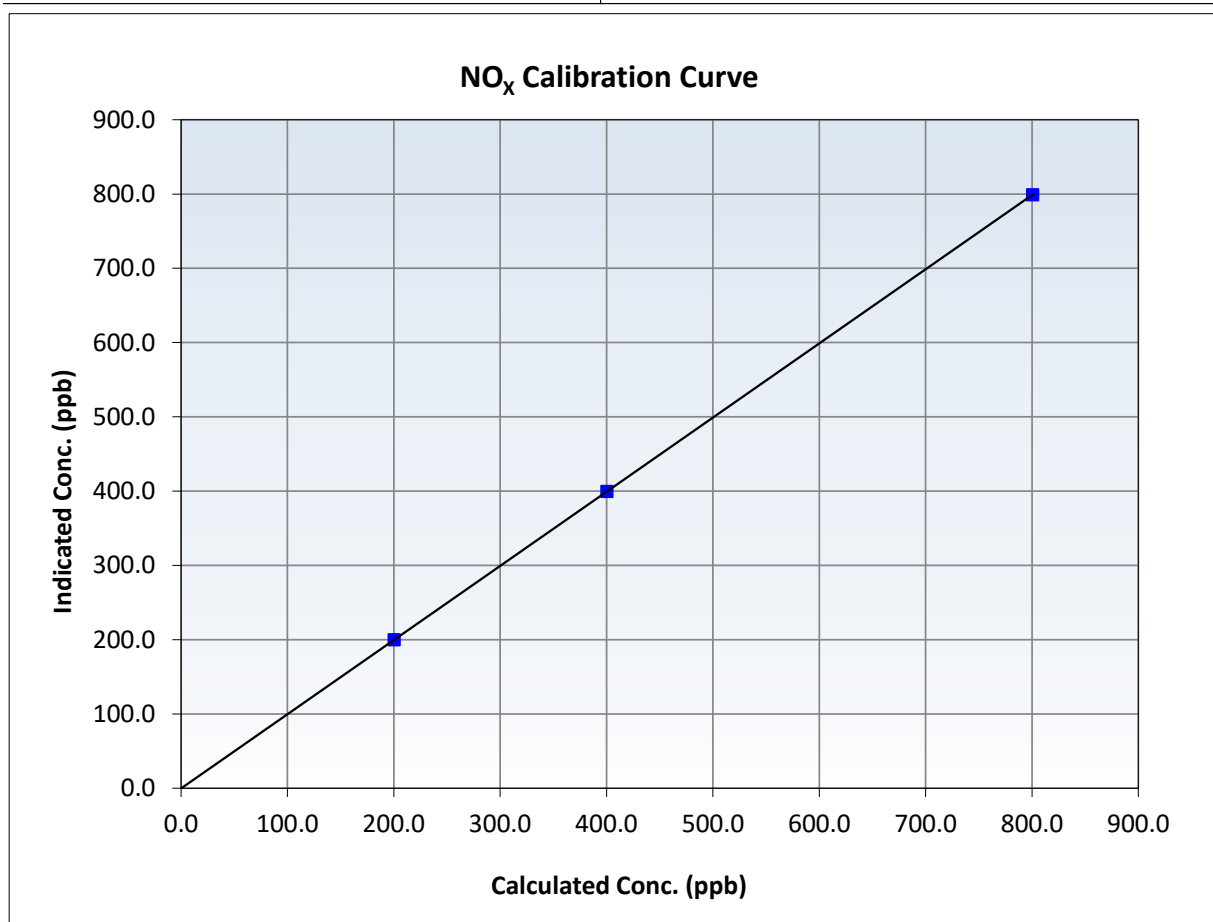
NO_x Calibration Summary

Station Information

Calibration Date:	April 21, 2026	Previous Calibration:	March 31, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:19	End Time (MST):	13:32
Analyzer make:	API T200	Analyzer serial #:	1035

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.5	----	Correlation Coefficient	0.999999	≥0.995
800.7	799.1	1.0020	Slope	0.998456	0.90 - 1.10
400.4	399.7	1.0017	Intercept	-0.236001	+/-20
200.2	199.9	1.0016			





Wood Buffalo Environmental Association

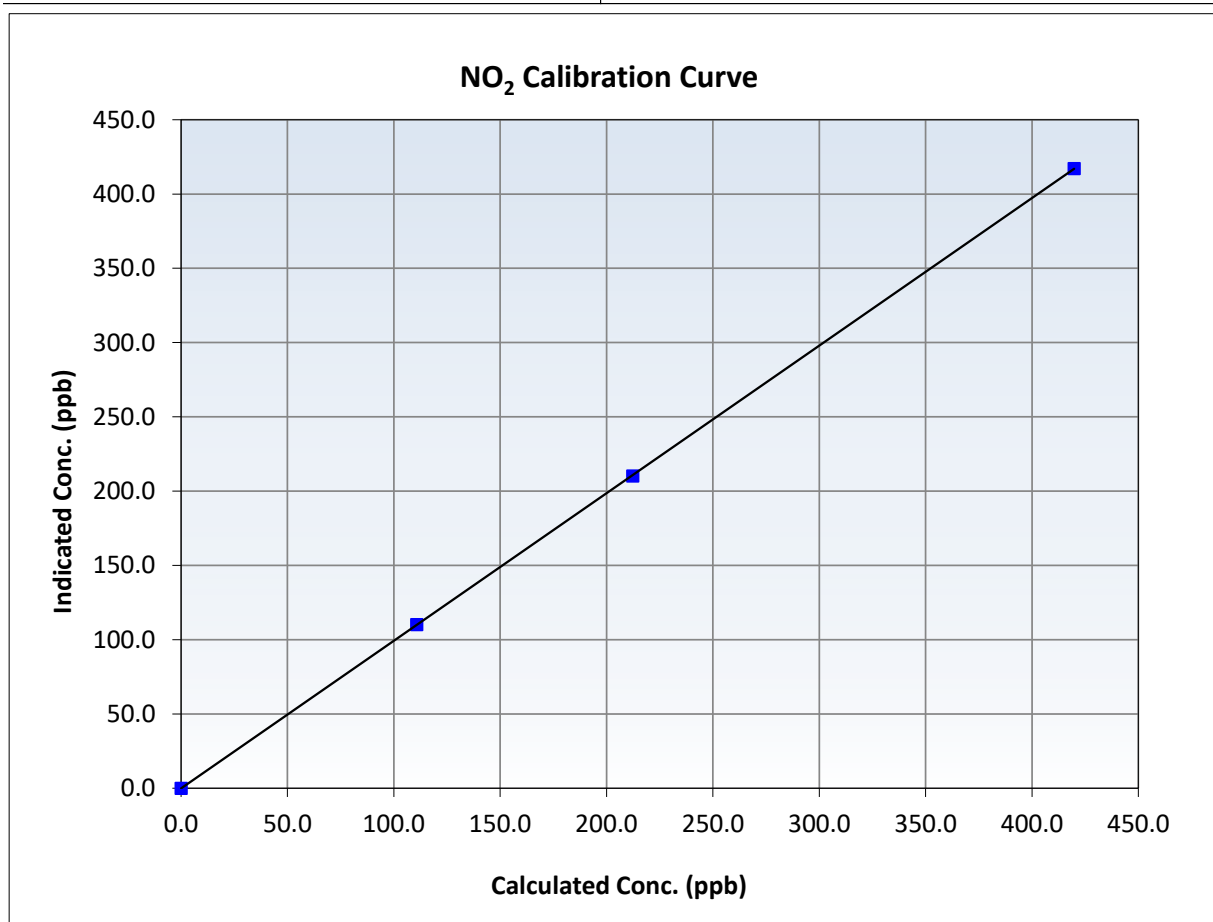
NO₂ Calibration Summary

Station Information

Calibration Date:	April 21, 2026	Previous Calibration:	March 31, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:19	End Time (MST):	13:32
Analyzer make:	API T200	Analyzer serial #:	1035

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999996	≥0.995
419.8	417.2	1.0063	Slope	0.993495	0.90 - 1.10
212.3	210.3	1.0096	Intercept	-0.112802	+/-20
110.7	110.1	1.0057			





Wood Buffalo Environmental Association

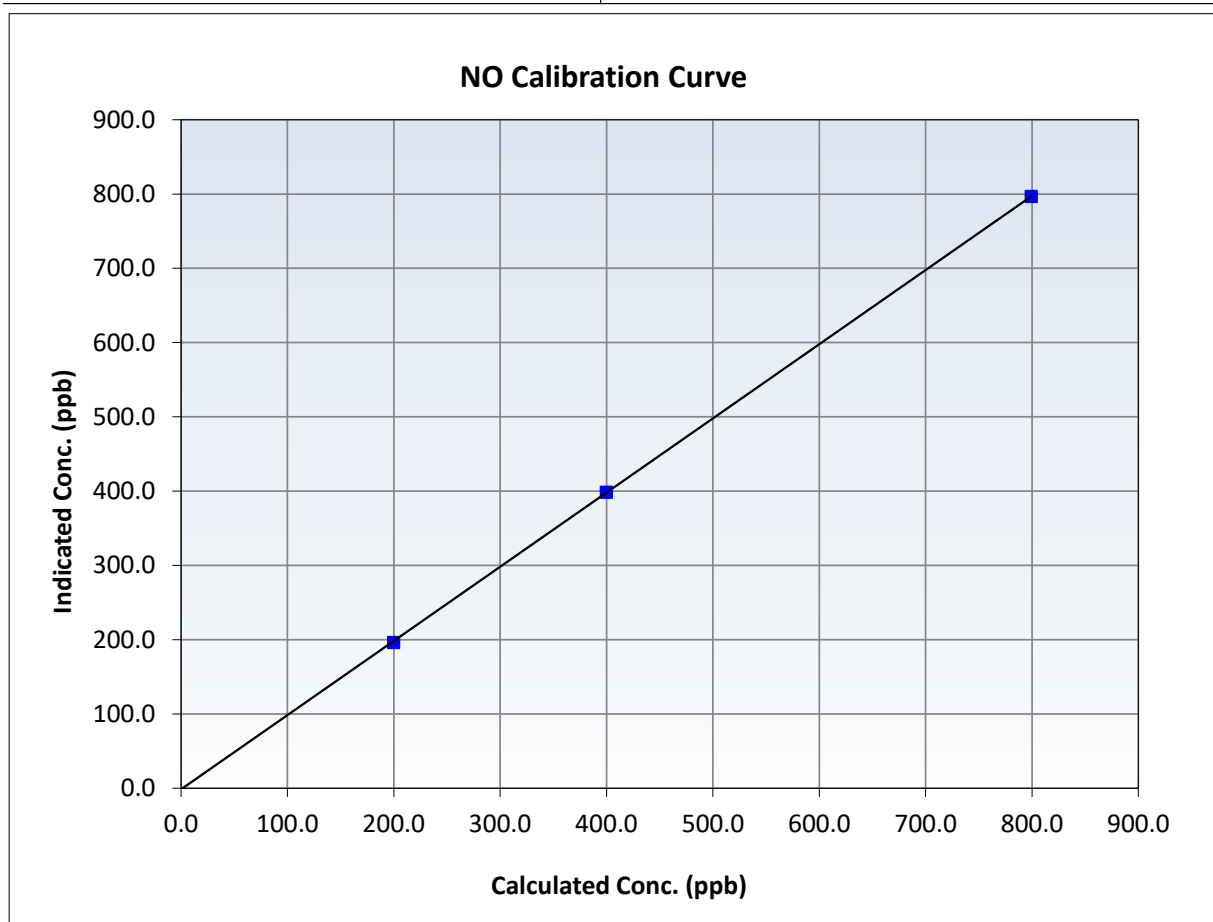
NO Calibration Summary

Station Information

Calibration Date:	April 21, 2026	Previous Calibration:	March 31, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:19	End Time (MST):	13:32
Analyzer make:	API T200	Analyzer serial #:	1035

Calibration Data

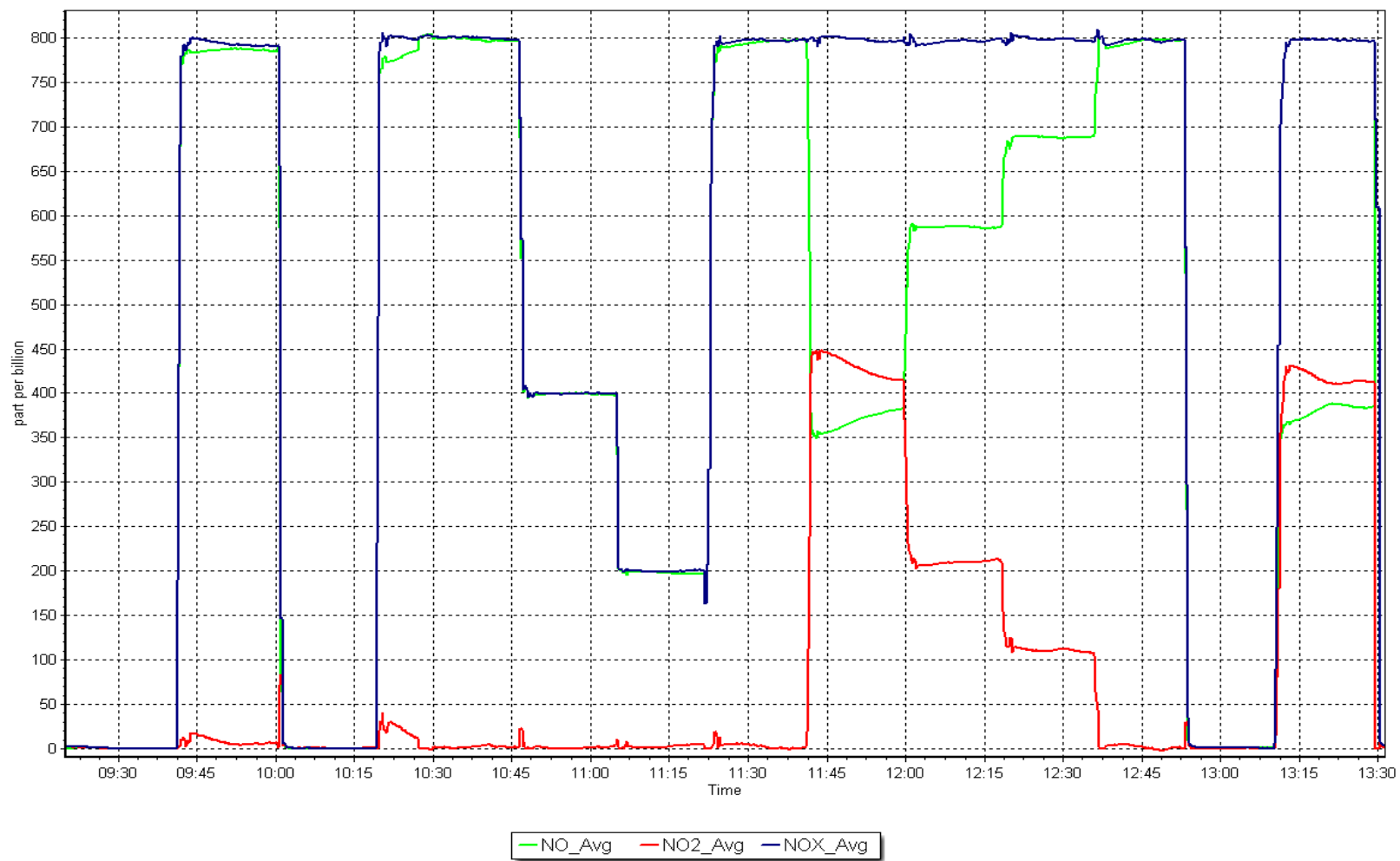
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.5	----	Correlation Coefficient	0.999985	≥ 0.995
799.4	796.9	1.0031	Slope	0.998685	0.90 - 1.10
399.7	398.7	1.0025	Intercept	-1.435923	+/-20
199.9	196.3	1.0182			



NO_x Calibration Plot

Date: April 21, 2026

Location: Jackfish 2/3





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS29
SURMONT 2
APRIL 2026**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Surmont 2 Station number: AMS 29
Calibration Date: April 13, 2026 Last Cal Date: March 13, 2026
Start time (MST): 7:58 End time (MST): 10:44
Reason: Routine

Calibration Standards

Cal Gas Concentration: 49.95 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC356229
Removed Cal Gas Conc: 49.95 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 5472
Zero Air Gen Model: Teledyne API T701 Serial Number: 1402

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1170050150
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001431	1.004302	Backgd or Offset:	14.6
Calibration intercept:	-1.300570	-1.879979	Coeff or Slope:	0.950

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.9	----
As found High point	4920	80.1	800.2	804.0	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	803.1	Previous response	800.0	*% change	0.4%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4920	80.1	800.2	802.4	0.997
Mid point	4960	40.0	399.6	399.3	1.001
Low point	4980	20.0	199.8	196.5	1.017
As left zero	5000	0.0	0.0		----
As left span	4920	80.1	800.2	807.0	0.992
Average Correction Factor:					1.005

Notes: No Maintenance done. Adjusted zero.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

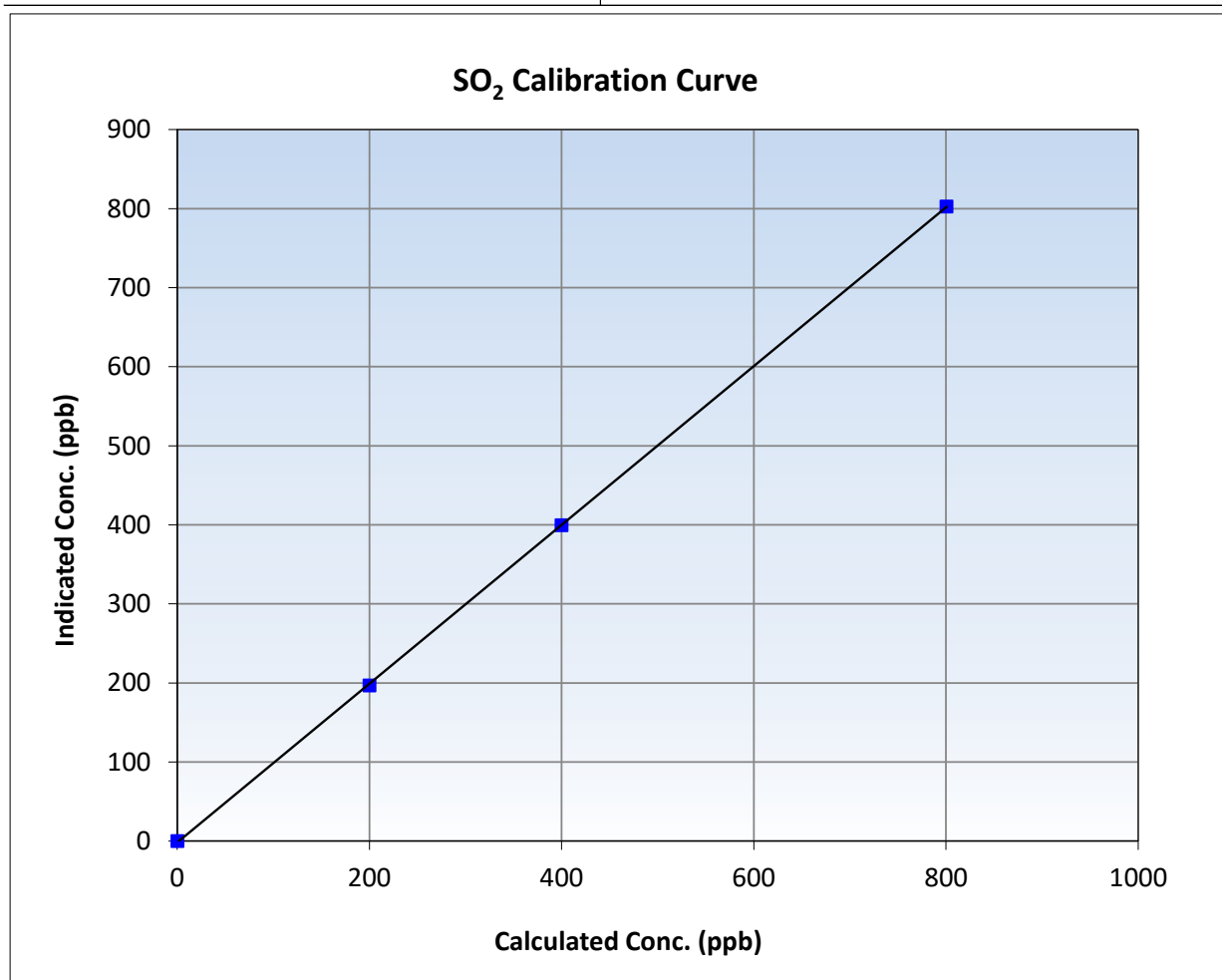
SO₂ Calibration Summary

Station Information

Calibration Date:	April 13, 2026	Previous Calibration:	March 13, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	7:58	End Time (MST):	10:44
Analyzer make:	Thermo 43i	Analyzer serial #:	1170050150

Calibration Data

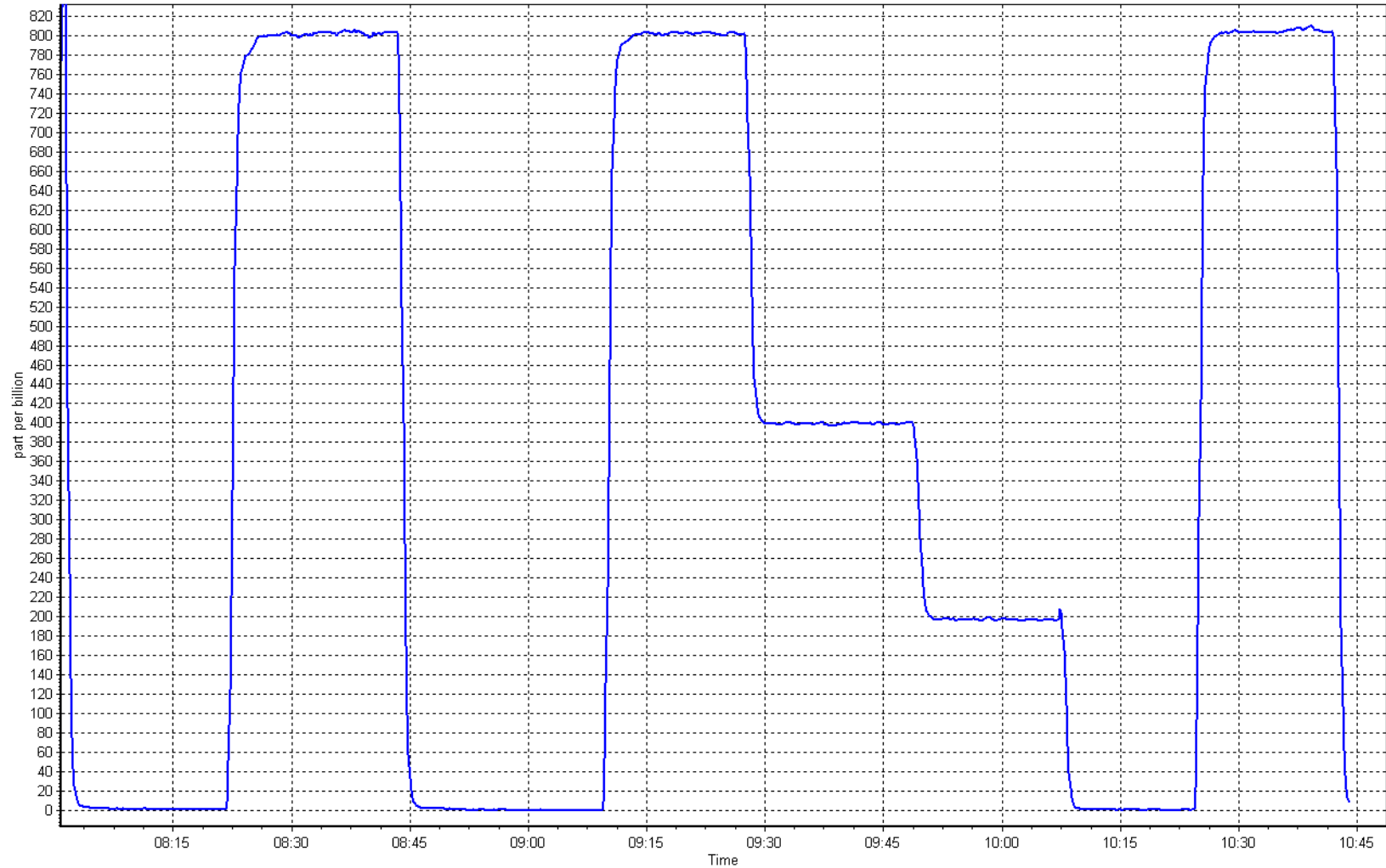
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999975	≥0.995
800.2	802.4	0.9973	Slope	1.004302	0.90 - 1.10
399.6	399.3	1.0008	Intercept	-1.879979	+/-30
199.8	196.5	1.0168			



SO2 Calibration Plot

Date: April 13, 2026

Location: Surmont 2





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Surmont 2 Station number: AMS 29
Calibration Date: April 16, 2026 Last Cal Date: March 25, 2026
Start time (MST): 7:08 End time (MST): 11:22
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.750 ppm Cal Gas Exp Date: August 28, 2027
Cal Gas Cylinder #: CC737848
Removed Cal Gas Conc: 4.750 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 5472
ZAG Make/Model: Teledyne API T701 Serial Number: 1402

Analyzer Information

Analyzer make: Thermo 43iQ-TLE Analyzer serial #: 1200326170
Converter make: Global Converter serial #: 2022-220
Analyzer Range: 0 - 100 ppb Converter Temp: 325.0 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	0.994309	0.993309	Backgd or Offset:	1.02
Calibration intercept:	0.079523	0.039524	Coeff or Slope:	1.070

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4916	84.2	80.0	80.1	0.997
As found Mid point	4958	42.1	40.0	40.1	0.995
As found Low point	4979	21.1	20.0	19.9	1.000
New cylinder response					
Baseline Corr As found:	80.2	Prev response:	79.61	*% change:	0.7%
Baseline Corr 2nd AF pt:	40.2	AF Slope:	1.003025	AF Intercept:	-0.100482
Baseline Corr 3rd AF pt:	20.0	AF Correlation:	0.999997	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4916	84.2	80.0	79.5	1.006
Mid point	4958	42.1	40.0	39.8	1.005
Low point	4979	21.1	20.0	19.8	1.010
As left zero	5000	0.0	0.0	0.2	----
As left span	4916	84.2	80.0	79.7	1.004
SO2 Scrubber Check	4919	81.3	813.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	1.007
Date of last converter efficiency test:		December 5, 2024		108.1% efficiency	

Notes: Sox scrubber checked after the calibrator zero. No adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

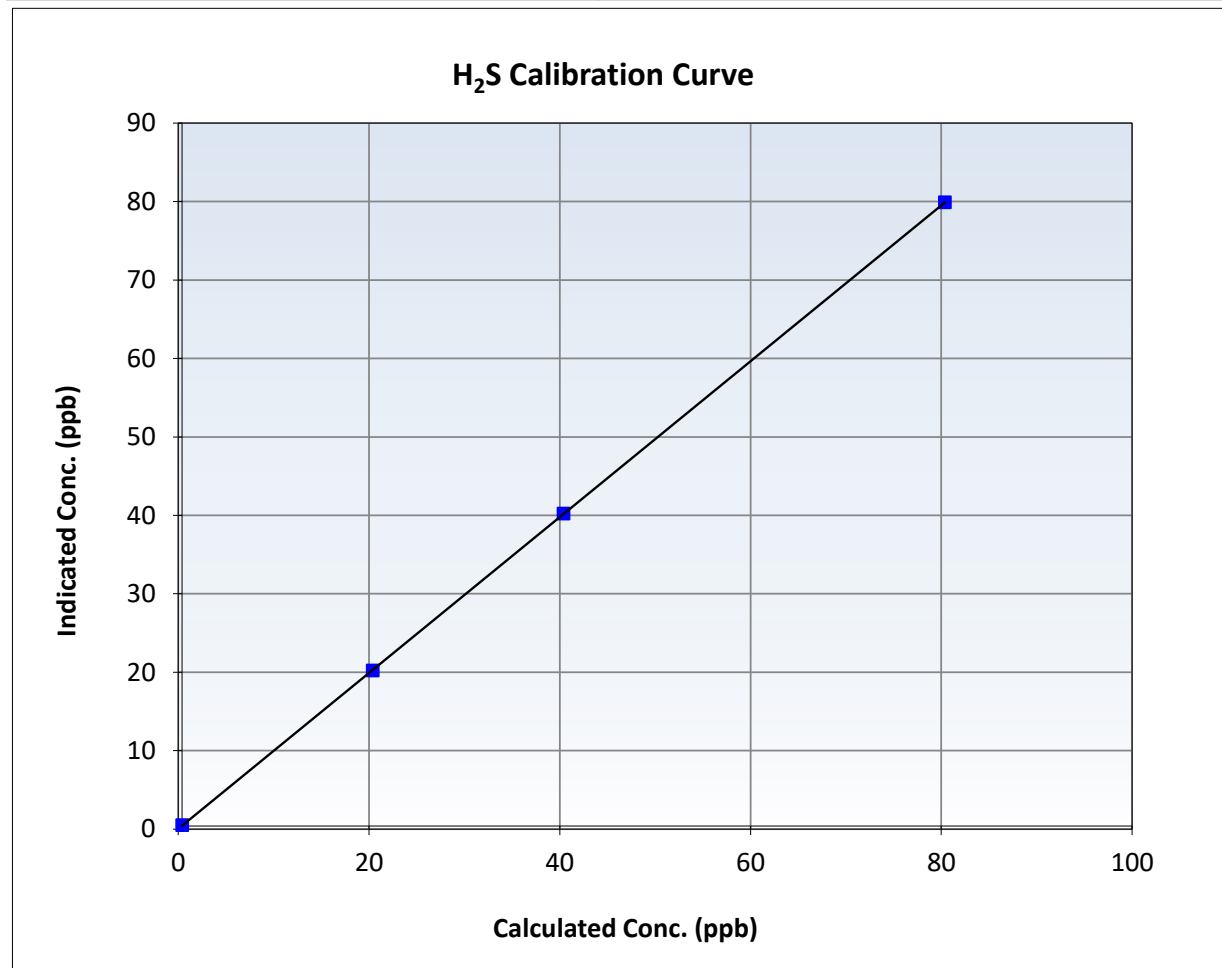
H₂S Calibration Summary

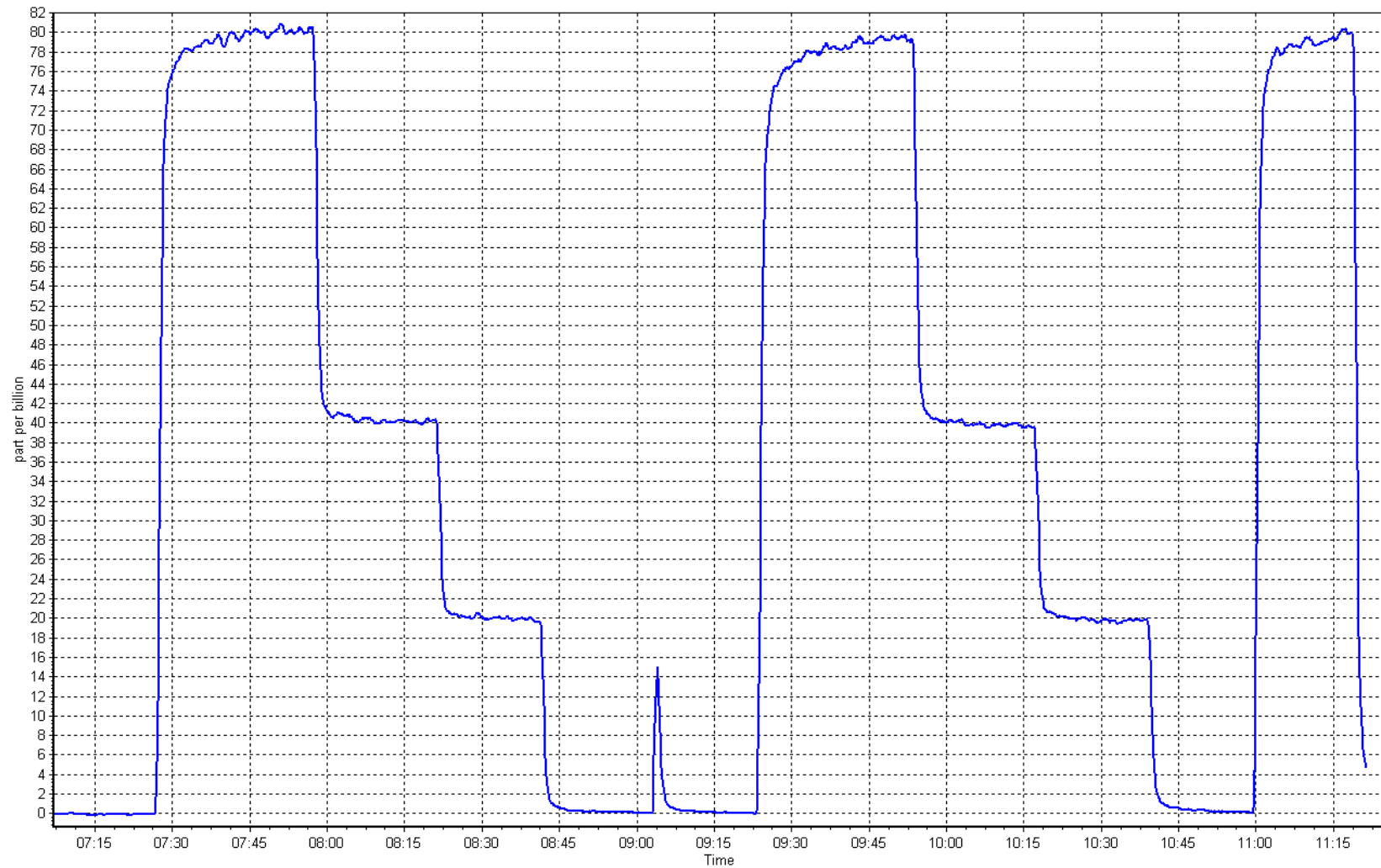
Station Information

Calibration Date:	April 16, 2026	Previous Calibration:	March 25, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	7:08	End Time (MST):	11:22
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	1200326170

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999995		≥ 0.995
80.0	79.5	1.0061	Slope	0.993309		$0.90 - 1.10$
40.0	39.8	1.0049	Intercept	0.039524		± 3
20.0	19.8	1.0100				







Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Surmont 2 Station number: AMS 29
Calibration Date: April 13, 2026 Last Cal Date: March 13, 2026
Start time (MST): 7:58 End time (MST): 10:44
Reason: Routine

Calibration Standards

Gas Cert Reference: CC356229 Cal Gas Expiry Date: October 9, 2032
CH4 Cal Gas Conc. 503.7 ppm CH4 Equiv Conc. 1066.9 ppm
C3H8 Cal Gas Conc. 204.8 ppm
Removed Gas Cert: NA Removed Gas Expiry: NA
Removed CH4 Conc. 503.7 ppm CH4 Equiv Conc. 1066.9 ppm
Removed C3H8 Conc. 204.8 ppm Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 5472
ZAG Make/Model: Teledyne API T701 Serial Number: 1402

Analyzer Information

Analyzer make: Thermo 51i-LT Analyzer serial #: 1180540021
Analyzer Range: 0 - 20 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000189	1.000564	Background:	1.93	2.05
Calibration intercept:	0.008454	-0.073350	Coefficient:	3.944	3.944

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.04	----
As found High point	4920	80.1	17.09	17.16	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	17.12	Previous response	17.10	*% change	0.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	-0.03	----
High point	4920	80.1	17.09	17.05	1.003
Mid point	4960	40.0	8.54	8.46	1.009
Low point	4980	20.0	4.27	4.14	1.031
As left zero	5000	0.0	0.00	-0.09	----
As left span	4920	80.1	17.09	17.17	0.996
Average Correction Factor					1.014

Notes: No maintenance done. Adjusted zero.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

THC Calibration Summary

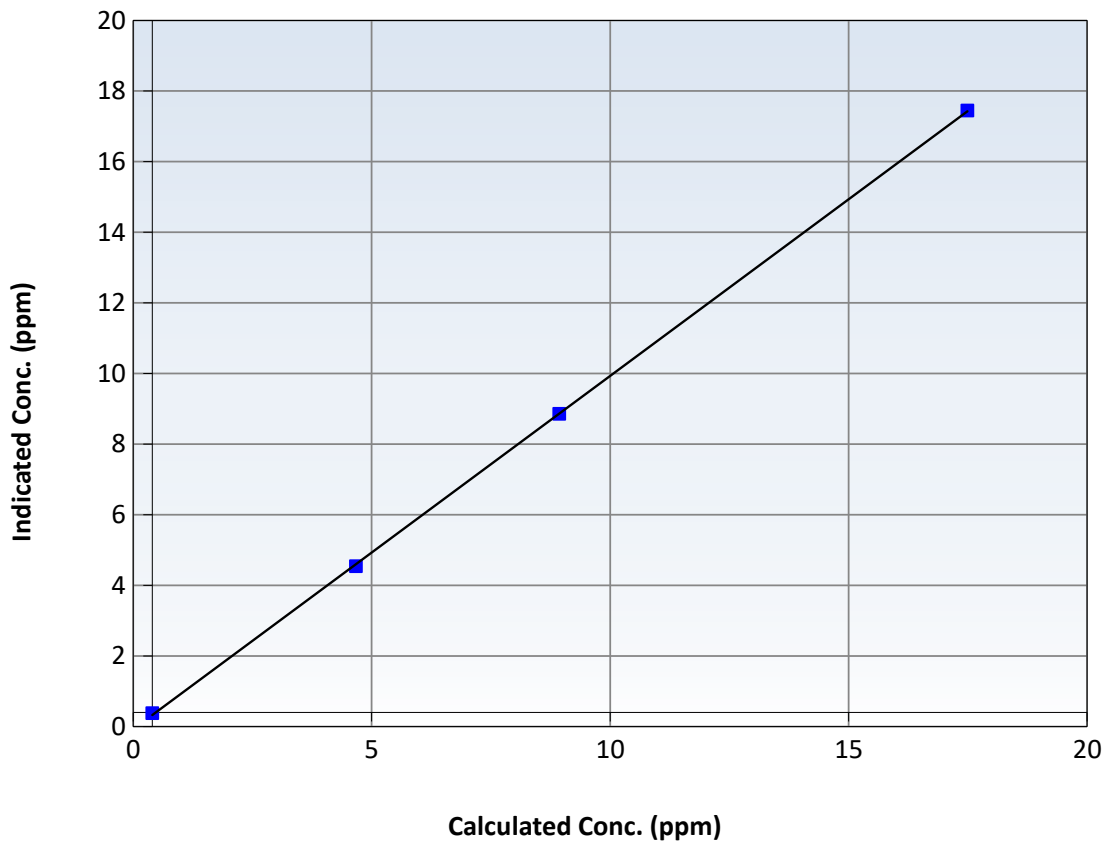
Station Information

Calibration Date:	April 13, 2026	Previous Calibration:	March 13, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	7:58	End Time (MST):	10:44
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1180540021

Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	-0.03	----	Correlation Coefficient	0.999962	≥ 0.995
17.09	17.05	1.0026	Slope	1.000564	$0.90 - 1.10$
8.54	8.46	1.0095	Intercept	-0.073350	± 1.5
4.27	4.14	1.0308			

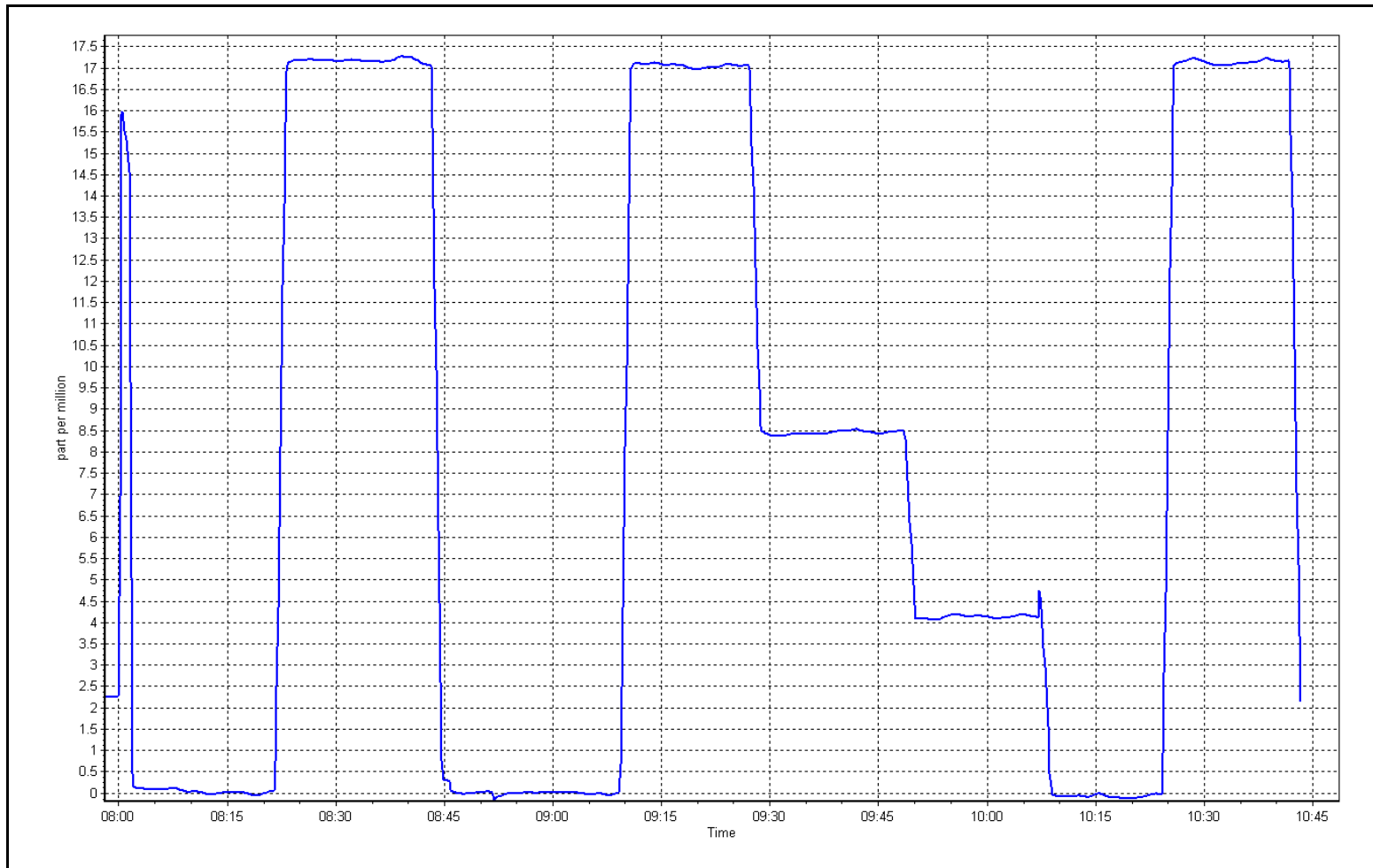
THC Calibration Curve



THC Calibration Plot

Date: April 13, 2026

Location: Surmont 2





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Surmont 2
Station number: AMS 29
Calibration Date: April 15, 2026
Last Cal Date: March 20, 2026
Start time (MST): 6:44
End time (MST): 11:15
Reason: Routine

Calibration Standards

NO Gas Cylinder #: CC218007
NOX Cal Gas Conc: 60.20 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 60.20 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701
Cal Gas Expiry Date: January 9, 2032
NO Cal Gas Conc: 60.00 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 60.00 ppm
NO gas Diff:
Serial Number: 5472
Serial Number: 1402

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0	0.0	0.0	0.0	-0.1	0.0	-0.1	----	----
AF High point	4933	66.7	803.1	800.4	2.7	802.5	799.1	3.4	1.0006	1.0017
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 802.4 ppb		NO = 799.6 ppb			* = > +/-5% change initiates investigation		*Percent Change	NO _x = 0.0%	
Baseline Corr 1st pt	NO _x = 802.6 ppb		NO = 799.1 ppb			<u>As Found Statistics</u>		*Percent Change	NO = -0.1%	
Baseline Corr 2nd pt	NO _x = NA ppb		NO = NA ppb			As found NO _x r ² :		Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb		NO = NA ppb			As found NO r ² :		NO SI:	NO Int:	
						As found NO ₂ r ² :		NO ₂ SI:	NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1410661329

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.000393	1.000593
NO _x Cal Offset:	-0.989025	-1.109281
NO Cal Slope:	1.002043	1.002657
NO Cal Offset:	-2.449152	-2.589349
NO ₂ Cal Slope:	0.985307	1.001572
NO ₂ Cal Offset:	1.857864	-0.577035

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.939	0.939	NO bkgnd or offset:	8.6	8.6
NOX coeff or slope:	0.996	0.996	NOX bkgnd or offset:	8.7	8.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	153.1	153.1

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0	0.0	0.0	0.0	0.0	0.1	0.0	----	----
High point	4933	66.7	803.1	800.4	2.7	802.6	800.9	1.8	1.0006	0.9994
Mid point	4967	33.3	400.9	399.6	1.3	400.8	398.0	2.8	1.0003	1.0040
Low point	4983	16.7	201.1	200.4	0.7	198.1	194.8	3.3	1.0150	1.0288
As left zero	5000	0	0.0	0.0	0.0	0.0	0.1	0.0	----	----
As left span	4933	66.7	803.1	426.6	376.5	799.4	426.6	372.8	1.0046	1.0000
Average Correction Factor									1.0053	1.0107

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.0	----	----
High GPT point	793.0	425.5	370.2	370.6	0.9988	100.1%
Mid GPT point	793.0	618.0	177.7	176.6	1.0060	99.4%
Low GPT point	793.0	705.1	90.6	89.9	1.0074	99.3%
Average Correction Factor					1.0041	99.6%

Notes:

No Adjustments or maintenance done.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

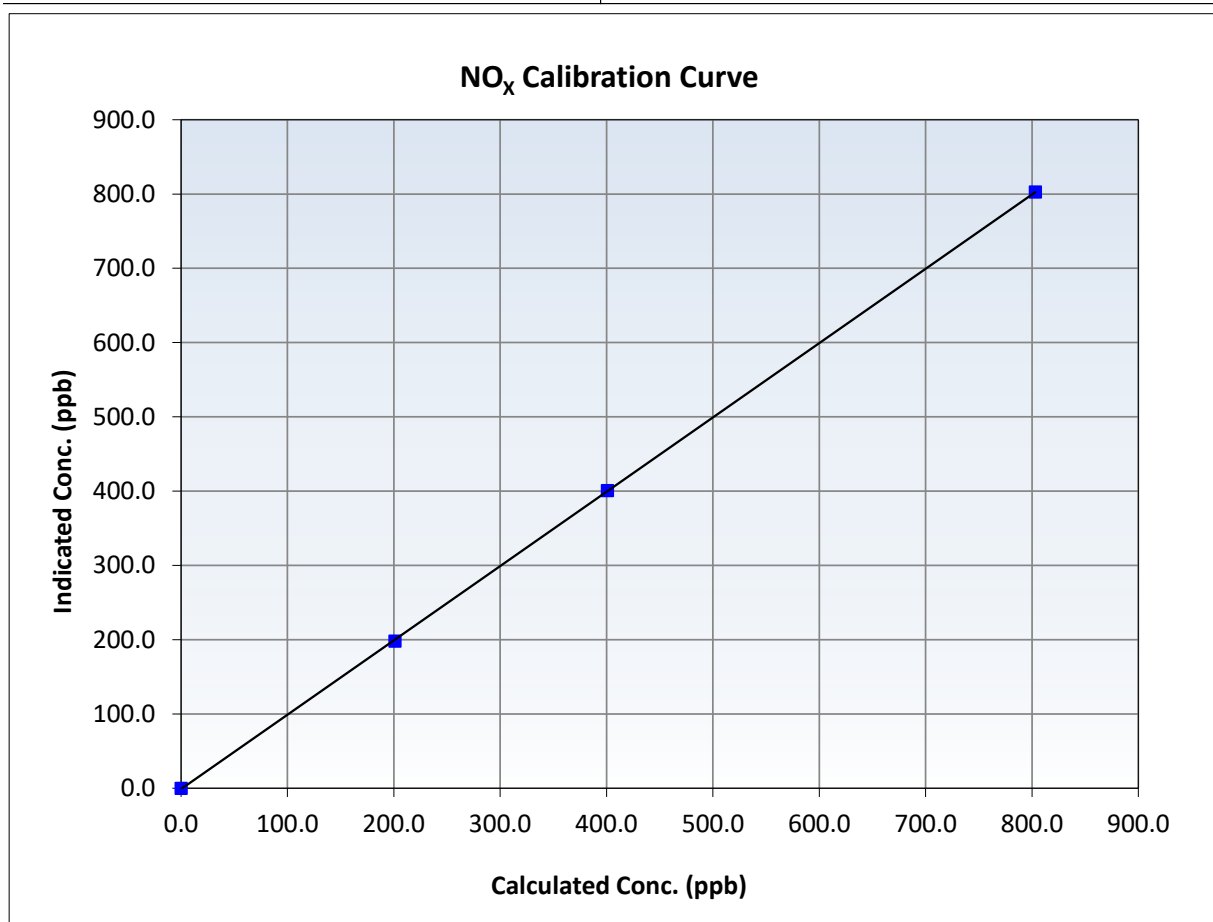
NO_x Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 20, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	6:44	End Time (MST):	11:15
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661329

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999984	≥0.995
803.1	802.6	1.0006	Slope	1.000593	0.90 - 1.10
400.9	400.8	1.0003	Intercept	-1.109281	+/-20
201.1	198.1	1.0150			





Wood Buffalo Environmental Association

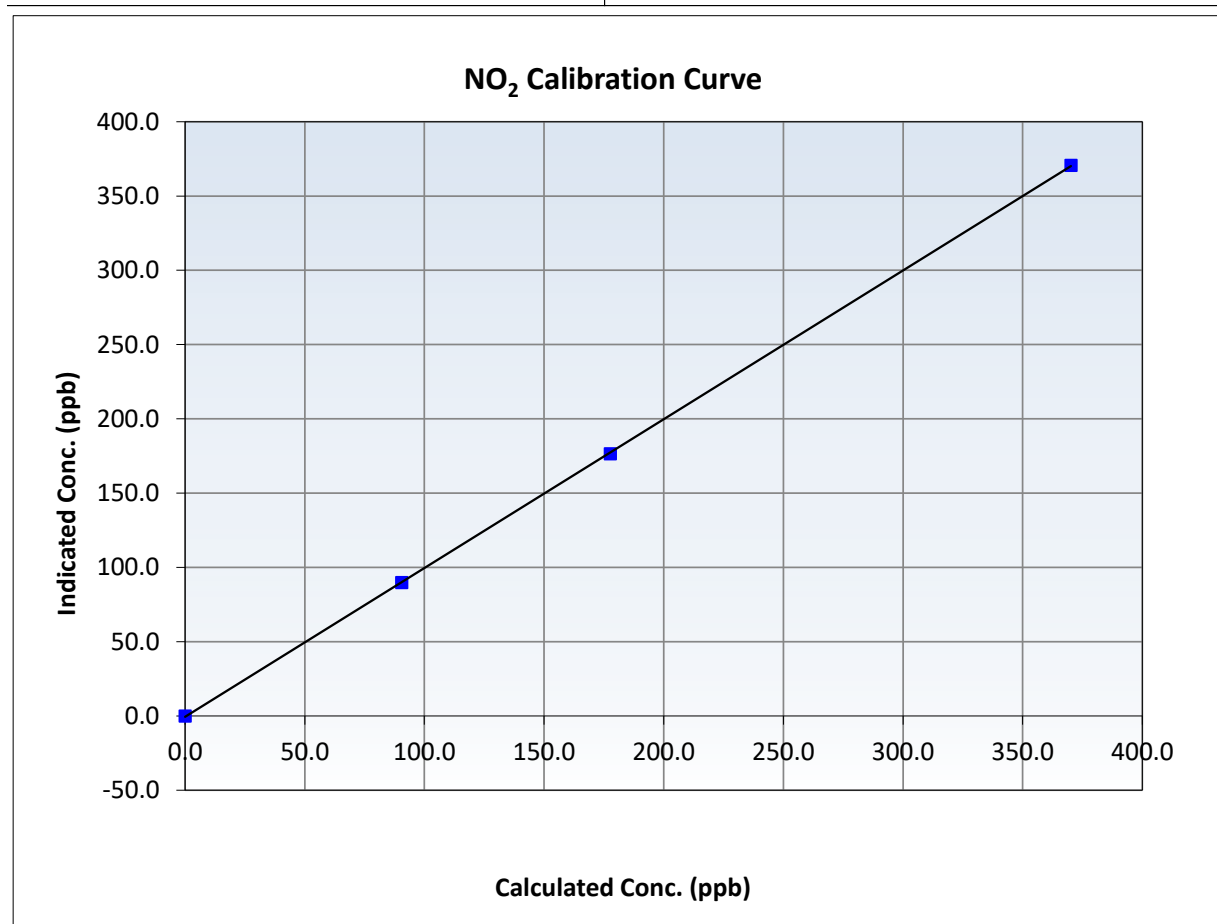
NO₂ Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 20, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	6:44	End Time (MST):	11:15
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661329

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999985	≥0.995
370.2	370.6	0.9988	Slope	1.001572	0.90 - 1.10
177.7	176.6	1.0060	Intercept	-0.577035	+/-20
90.6	89.9	1.0074			





Wood Buffalo Environmental Association

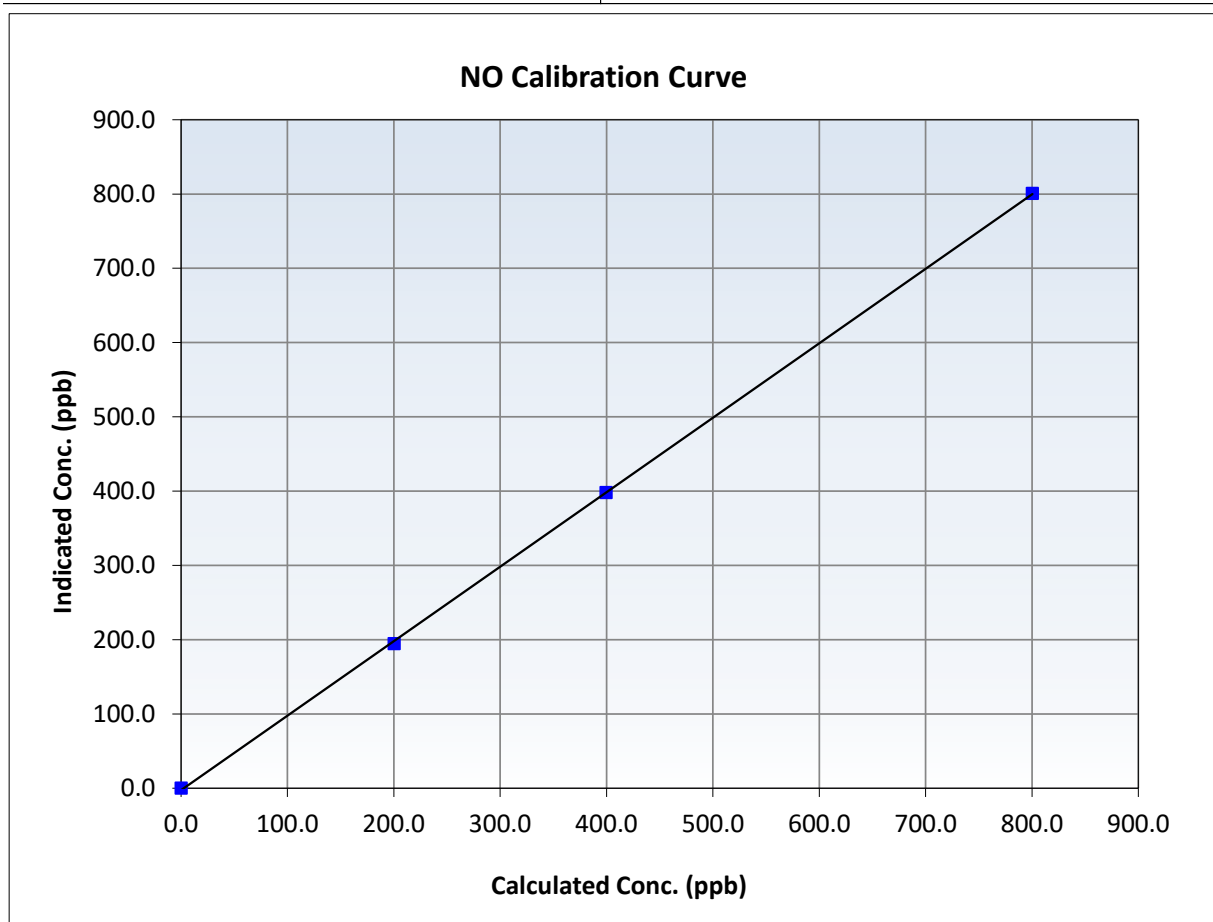
NO Calibration Summary

Station Information

Calibration Date:	April 15, 2026	Previous Calibration:	March 20, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	6:44	End Time (MST):	11:15
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661329

Calibration Data

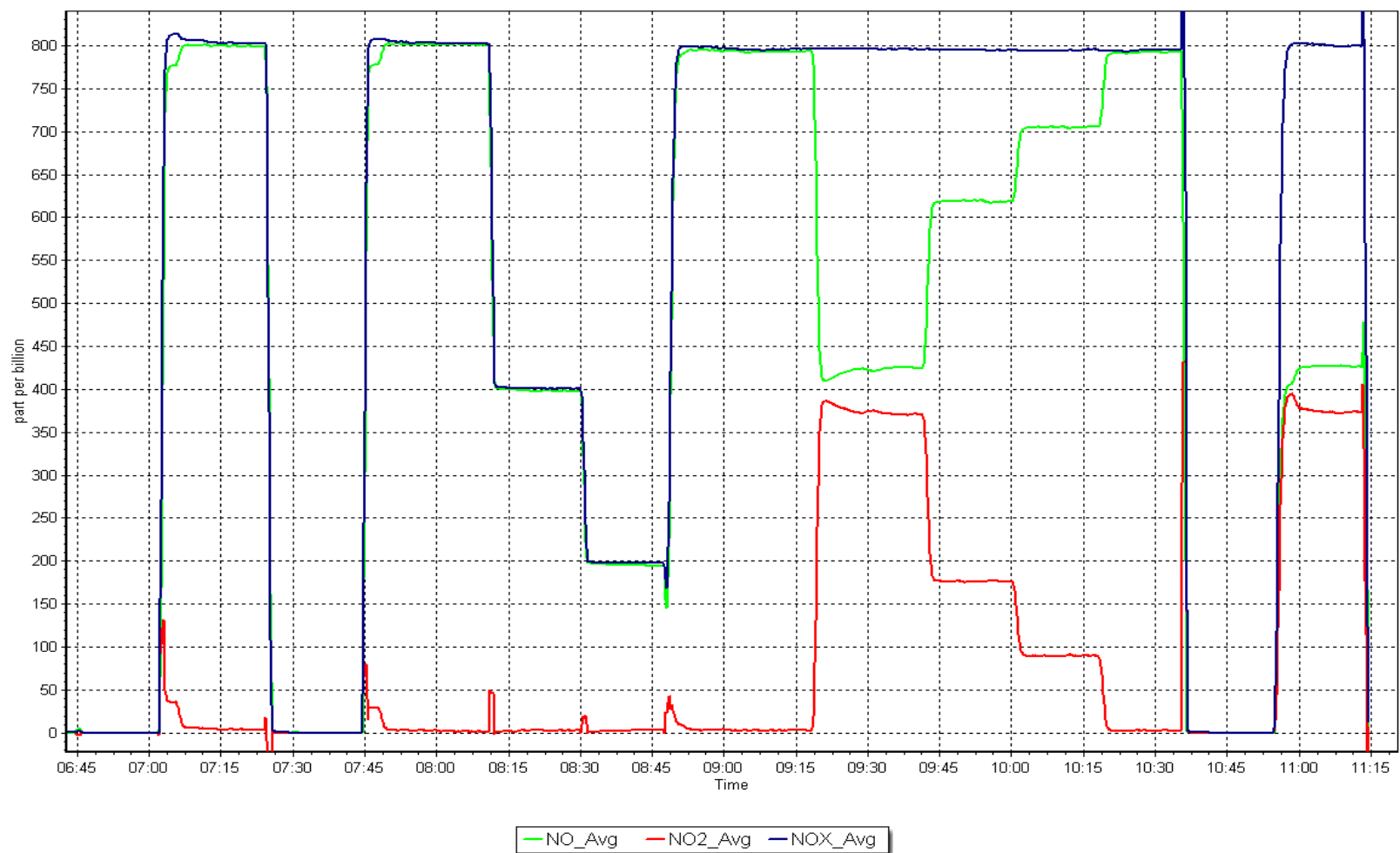
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999941	≥ 0.995
800.4	800.9	0.9994	Slope	1.002657	0.90 - 1.10
399.6	398.0	1.0040	Intercept	-2.589349	+/-20
200.4	194.8	1.0288			



NO_x Calibration Plot

Date: April 15, 2026

Location: Surmont 2





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Surmont 2 Station number: AMS 29
Calibration Date: April 13, 2026 Last Cal Date: March 26, 2026
Start time (MST): 6:40 End time (MST): 7:13

Analyzer Make: API T640 S/N: 2236
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388753
Temp/RH standard: Alicat FP-25BT S/N: 388753

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	-0.4	-0.1	-0.4	☐	+/- 2 °C
P (mmHg)	707.1	705.90	707.1	☐	+/- 10 mmHg
Flow (LPM)	4.96	5.040	4.96	☐	+/- 0.25 LPM
PW% (pump)	43	----	43	☐	>80%
Zero Verification	PM w/o HEPA: _____	3.0	PM w/ HEPA: _____	0.0	<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: July 16, 2026
Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test				☐	+/- 0.5

Date Optical Chamber Cleaned: February 27, 2026
Date Disposable Filter Changed: February 27, 2026

Post- maintenance Zero Verification: PM w/ HEPA: _____ <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: April 14, 2025
Date RH/T Sensor Cleaned: July 15, 2025

Notes: No adjustments done.

Calibration by: Melissa Lemay



Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Surmont 2 Station number: AMS 29
Calibration Date: April 16, 2026 Last Cal Date: April 13, 2026
Start time (MST): 7:18 End time (MST): 7:32

Analyzer Make: API T640 S/N: 2236
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388753
Temp/RH standard: Alicat FP-25BT S/N: 388753

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	-9	-9.1	-9	☐	+/- 2 °C
P (mmHg)	716.3	715.10	716.3	☐	+/- 10 mmHg
Flow (LPM)	4.95	4.930	4.95	☐	+/- 0.25 LPM
PW% (pump)	41	----	41	☐	>80%
Zero Verification	PM w/o HEPA: _____	5.3	PM w/ HEPA: _____	0.0	<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: July 16, 2026
Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test				☐	+/- 0.5

Date Optical Chamber Cleaned: February 27, 2026
Date Disposable Filter Changed: February 27, 2026

Post- maintenance Zero Verification: PM w/ HEPA: _____ <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: April 14, 2025
Date RH/T Sensor Cleaned: July 15, 2025

Notes: Rechecked due to higher readings than usual.

Calibration by: Melissa Lemay



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Surmont	Station Number:	AMS 29
Calibration Date:	April 30, 2026	Prev Cal Date:	November 17, 2025
Start Time (MST):	9:53	End Time (MST):	10:39
Tower Height (m):	10.0	Reason:	Removal

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	B4129
WS Calibrator:	MetOne 053	Serial Number:	R110866

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.4	0.1%
600	58.6	58.5	0.0%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999999	0.999999	≥ 0.9995
Calculated slope	1.001155	0.999267	$0.98 - 1.02$
Calculated intercept	-0.057643	0.024293	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	U11347
As Found Declination (deg east of True North):	<u>13</u>	As Left Declination (deg east of True North):	<u>13</u>
Solar noon (MST):	12:20	Calc Declination*:	13 Degrees
WD Calibrator:	Met One 040	* - calculated declination as per NOAA website	

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	11.3	0.4%
90	90.0	0.0%
180	179.1	-0.3%
270	268.4	-0.4%
350	348.3	-0.5%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999988	0.999997	≥ 0.9995
Calculated slope	1.013452	1.008910	$0.97 - 1.03$
Calculated intercept	-3.880716	-1.018609	± 5

Notes: WS torque test failed. Sensor removed. WD passed.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Surmont	Station Number:	AMS 29
Calibration Date:	April 30, 2026	Prev Cal Date:	November 17, 2025
Start Time (MST):	9:53	End Time (MST):	10:40
Tower Height (m):	10.0	Reason:	Install

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	Y3176
WS Calibrator:	MetOne 053	Serial Number:	R110866

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.4	0.1%
600	58.6	58.6	0.1%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999999	≥ 0.9995
Calculated slope		0.998959	$0.98 - 1.02$
Calculated intercept		0.024387	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	U11347
As Found Declination (deg east of True North):	<u>13</u>	As Left Declination (deg east of True North):	<u>13</u>
Solar noon (MST):	12:20	Calc Declination*:	13 Degrees
WD Calibrator:	Met One 040	* - calculated declination as per NOAA website	

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10		
90		
180		
270		
350		

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)			≥ 0.9995
Calculated slope			$0.97 - 1.03$
Calculated intercept			± 5

Notes: New WS sensor, old WS sensor removed due to torque test failed.

Calibration Performed By: Melissa Lemay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS30
ELLS RIVER
APRIL 2026**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Ells River Station number: AMS 30
Calibration Date: April 9, 2026 Last Cal Date: March 4, 2026
Start time (MST): 9:13 End time (MST): 13:40
Reason: Routine

Calibration Standards

Cal Gas Concentration: 48.75 ppm Cal Gas Exp Date: March 10, 2031
Cal Gas Cylinder #: CC350110
Removed Cal Gas Conc: 48.75 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: API T700 Serial Number: 5707
Zero Air Gen Model: API T701H Serial Number: 358

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1008841397
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001686	1.001515	Backgd or Offset:	10.8	10.8
Calibration intercept:	-1.116258	-0.856273	Coeff or Slope:	1.013	1.013

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.3	----
As found High point	4918	82.1	800.5	798.3	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	798.6	Previous response	800.7	*% change	-0.3%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4918	82.1	800.5	801.2	0.999
Mid point	4959	41.0	399.8	399.1	1.002
Low point	4979	20.5	199.9	198.6	1.007
As left zero	5000	0.0	0.0	-0.2	----
As left span	4918	82.1	800.5	803.6	0.996
Average Correction Factor:					1.002

Notes: Sample inlet filter was changed after as founds. No adjustments made.

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

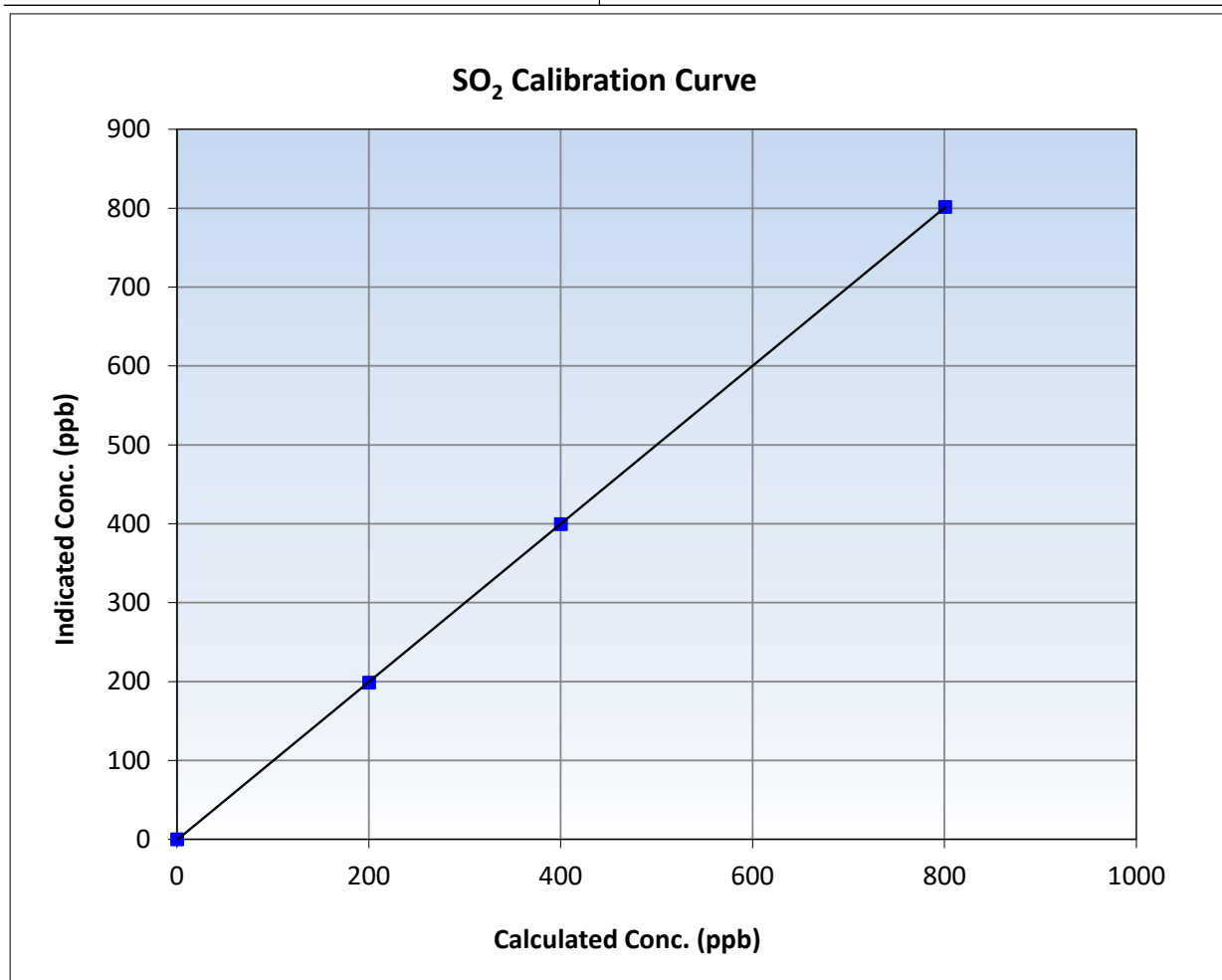
SO₂ Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 4, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:13	End Time (MST):	13:40
Analyzer make:	Thermo 43i	Analyzer serial #:	1008841397

Calibration Data

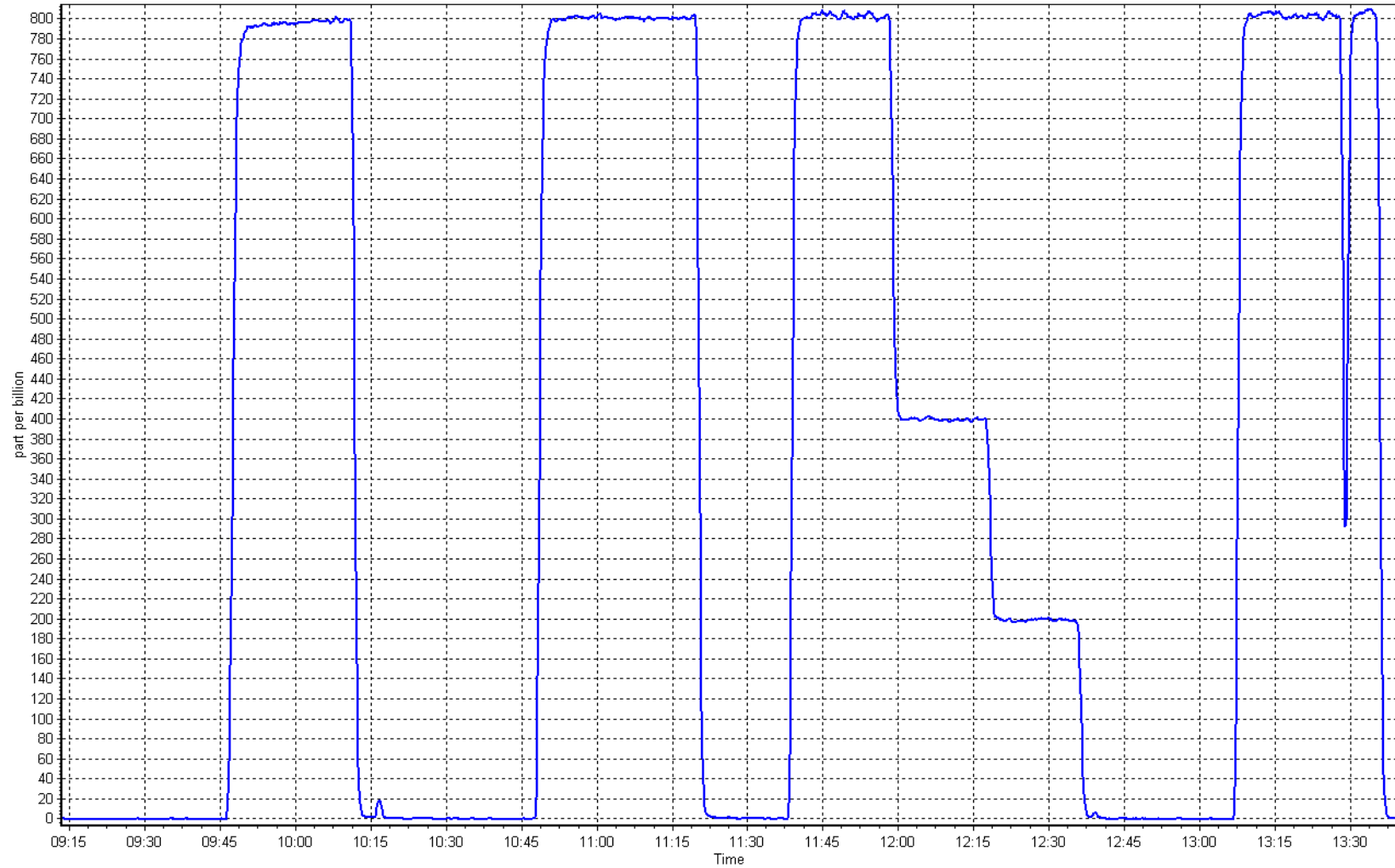
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999996	≥0.995
800.5	801.2	0.9991	Slope	1.001515	0.90 - 1.10
399.8	399.1	1.0016	Intercept	-0.856273	+/-30
199.9	198.6	1.0065			



SO2 Calibration Plot

Date: April 9, 2026

Location: Ells River





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Ells River Station number: AMS 30
Calibration Date: April 13, 2026 Last Cal Date: March 5, 2026
Start time (MST): 8:51 End time (MST): 12:55
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.99 ppm Cal Gas Exp Date: November 15, 2026
Cal Gas Cylinder #: CC505806
Removed Cal Gas Conc: 4.99 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: API T700 Serial Number: 5707
ZAG Make/Model: API 701H Serial Number: 358

Analyzer Information

Analyzer make: Thermo 43i-LTE Analyzer serial #: 1170050152
Converter make: CDN- 101 Converter serial #: 632
Analyzer Range: 0 - 100 ppb Converter Temp: 800 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	0.993341	1.008328	Backgd or Offset:	4.01
Calibration intercept:	-0.120752	-0.020362	Coeff or Slope:	1.286

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4920	80.2	80.0	80.4	0.994
As found Mid point	4960	40.1	40.0	40.2	0.993
As found Low point	4980	20.0	20.0	19.8	1.003
New cylinder response					
Baseline Corr As found:	80.5	Prev response:	79.38	*% change:	1.4%
Baseline Corr 2nd AF pt:	40.3	AF Slope:	1.006617	AF Intercept:	-0.160457
Baseline Corr 3rd AF pt:	19.9	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4920	80.2	80.0	80.6	0.993
Mid point	4960	40.1	40.0	40.5	0.988
Low point	4980	20.0	20.0	20.1	0.993
As left zero	5000	0.0	0.0	-0.1	----
As left span	4920	80.2	80.0	80.9	0.989
SO2 Scrubber Check	4918	82.0	820.0	0.1	----
Date of last scrubber change:	16-Dec-25		Ave Corr Factor		0.991
Date of last converter efficiency test:					

Notes: Sample inlet filter was changed after multipoint as founds. SO2 scrubber check passed. No adjustments made.

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

TRS Calibration Summary

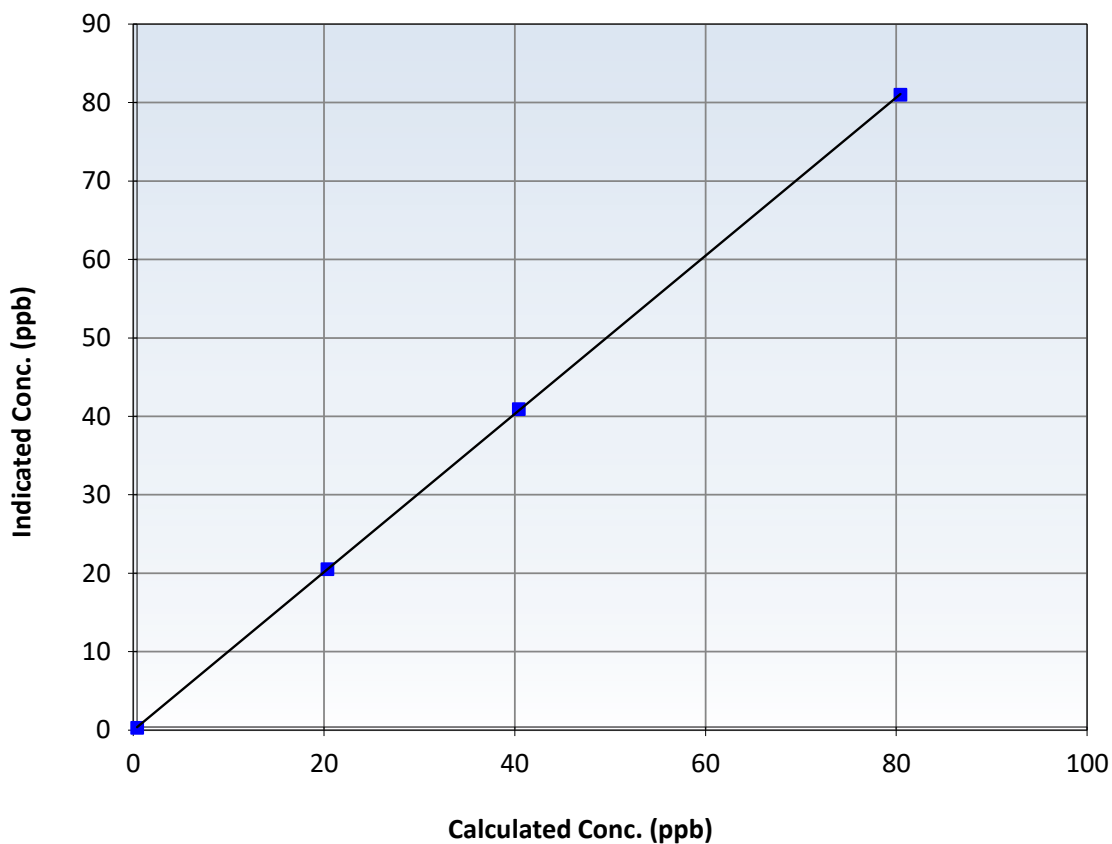
Station Information

Calibration Date:	April 13, 2026	Previous Calibration:	March 5, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	8:51	End Time (MST):	12:55
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1170050152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999988		≥ 0.995
80.0	80.6	0.9930	Slope	1.008328		$0.90 - 1.10$
40.0	40.5	0.9881	Intercept	-0.020362		± 3
20.0	20.1	0.9930				

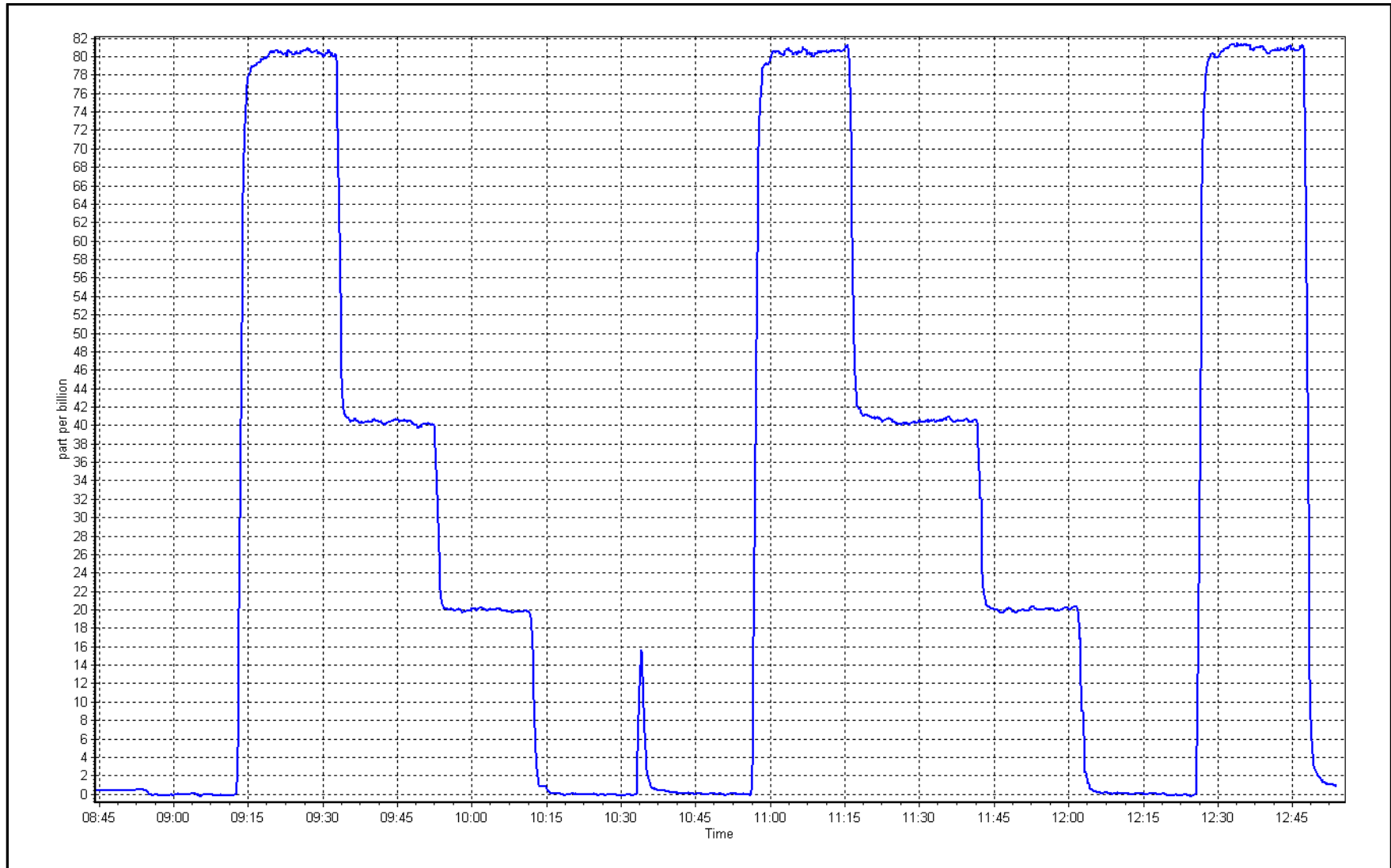
TRS Calibration Curve



TRS Calibration Plot

Date: April 13, 2026

Location: Ells River





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Ells River
 Calibration Date: April 9, 2026
 Start time (MST): 9:13
 Reason: Routine

Station number: AMS 30
 Last Cal Date: March 31, 2026
 End time (MST): 13:40

Calibration Standards

Gas Cert Reference:	CC350110	Cal Gas Expiry Date:	Monday, March 10, 2031
CH ₄ Cal Gas Conc.	496.6 ppm	CH ₄ Equiv Conc.	1066.4 ppm
C ₃ H ₈ Cal Gas Conc.	207.2 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH ₄ Conc.	496.6 ppm	CH ₄ Equiv Conc.	1066.4 ppm
Removed C ₃ H ₈ Conc.	207.2 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	API T700	Serial Number:	5707
Zero Air Gen model:	API T701H	Serial Number:	358

Analyzer Information

Analyzer make: Thermo 55i
 THC Range: 0 - 20 ppm

Analyzer serial #: 1180320037
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	4.35E-04	4.34E-04	NMHC SP Ratio:	6.68E-05
CH ₄ Retention time:	16.4	16.4	NMHC Peak Area:	140091
Zero Chromatogram:	ON	ON	Flat Baseline:	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.01	----
As found High point	4918	82.1	17.51	17.54	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.53	Prev response	17.47	*% change	0.3%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	17.51	17.40	1.006
Mid point	4959	41.0	8.74	8.66	1.009
Low point	4979	20.5	4.37	4.30	1.018
As left zero	5000	0.0	0.00	0.00	----
As left span	4919	82.1	17.51	17.43	1.004
Average Correction Factor					1.011

Notes:

Sample inlet filter was changed after as founds. Adjustment made to span and window timings (specifically to CH₄ start time).



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.01	Limit = 0.90-1.10
As found High point	4918	82.1	9.36	9.46	0.990
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.45	Prev response	9.41	*% change	0.3%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4918	82.1	9.36	9.30	1.006
Mid point	4959	41.0	4.67	4.66	1.002
Low point	4979	20.5	2.34	2.33	1.003
As left zero	5000	0.0	0.00	0.00	----
As left span	4919	82.1	9.35	9.33	1.003
Average Correction Factor					1.004

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4918	82.1	8.15	8.07	1.010
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.07	Prev response	8.05	*% change	0.2%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4918	82.1	8.15	8.09	1.007
Mid point	4959	41.0	4.07	4.00	1.017
Low point	4979	20.5	2.04	1.97	1.035
As left zero	5000	0.0	0.00	0.00	----
As left span	4919	82.1	8.15	8.11	1.006
Average Correction Factor					1.020

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.996750	0.994461
THC Cal Offset:	0.012608	-0.024611
CH ₄ Cal Slope:	0.992616	0.994336
CH ₄ Cal Offset:	-0.042770	-0.029152
NMHC Cal Slope:	1.000390	0.994423
NMHC Cal Offset:	0.054978	0.005141

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

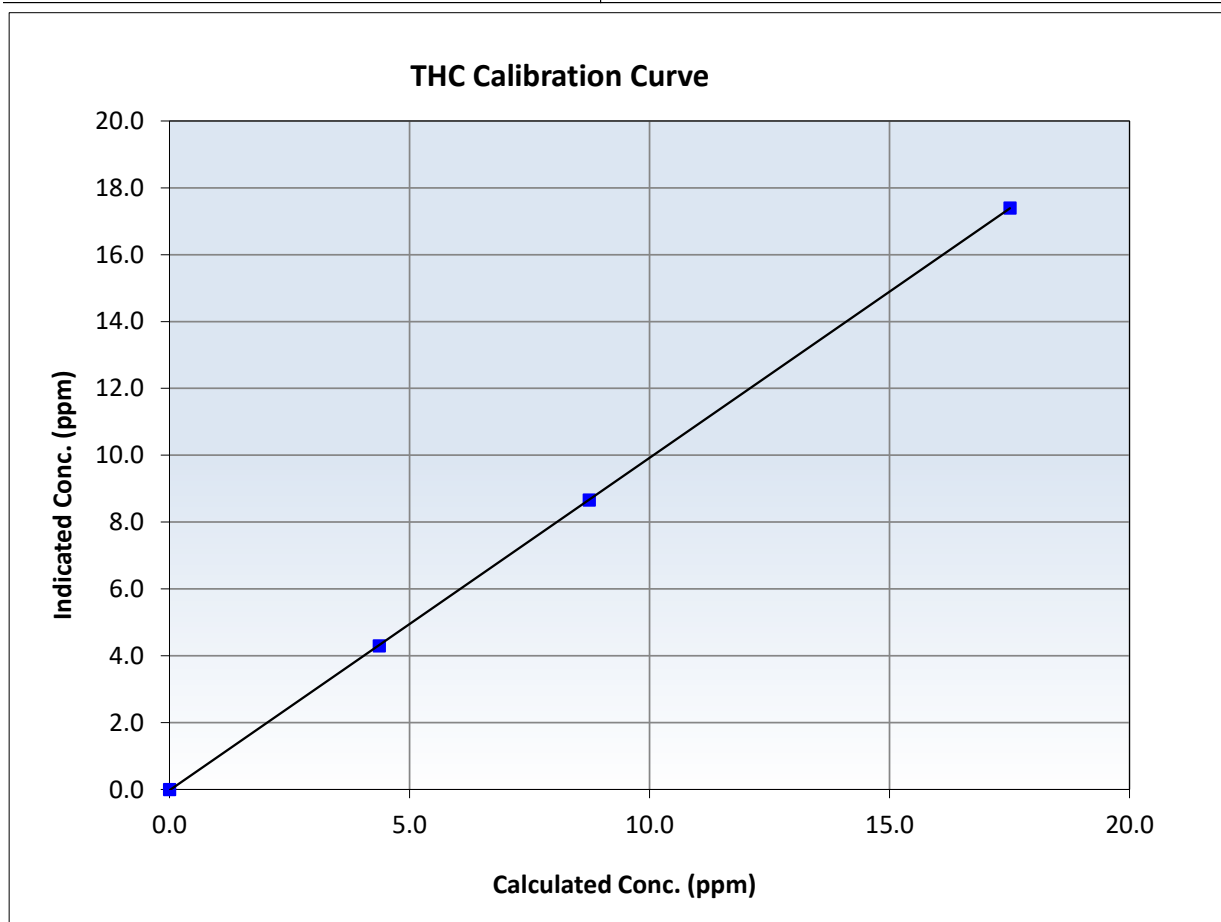
THC Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 31, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:13	End Time (MST):	13:40
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320037

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999991	<i>≥0.995</i>
17.51	17.40	1.0064	Slope	0.994461	<i>0.90 - 1.10</i>
8.74	8.66	1.0093	Intercept	-0.024611	<i>+/-0.5</i>
4.37	4.30	1.0178			





Wood Buffalo Environmental Association

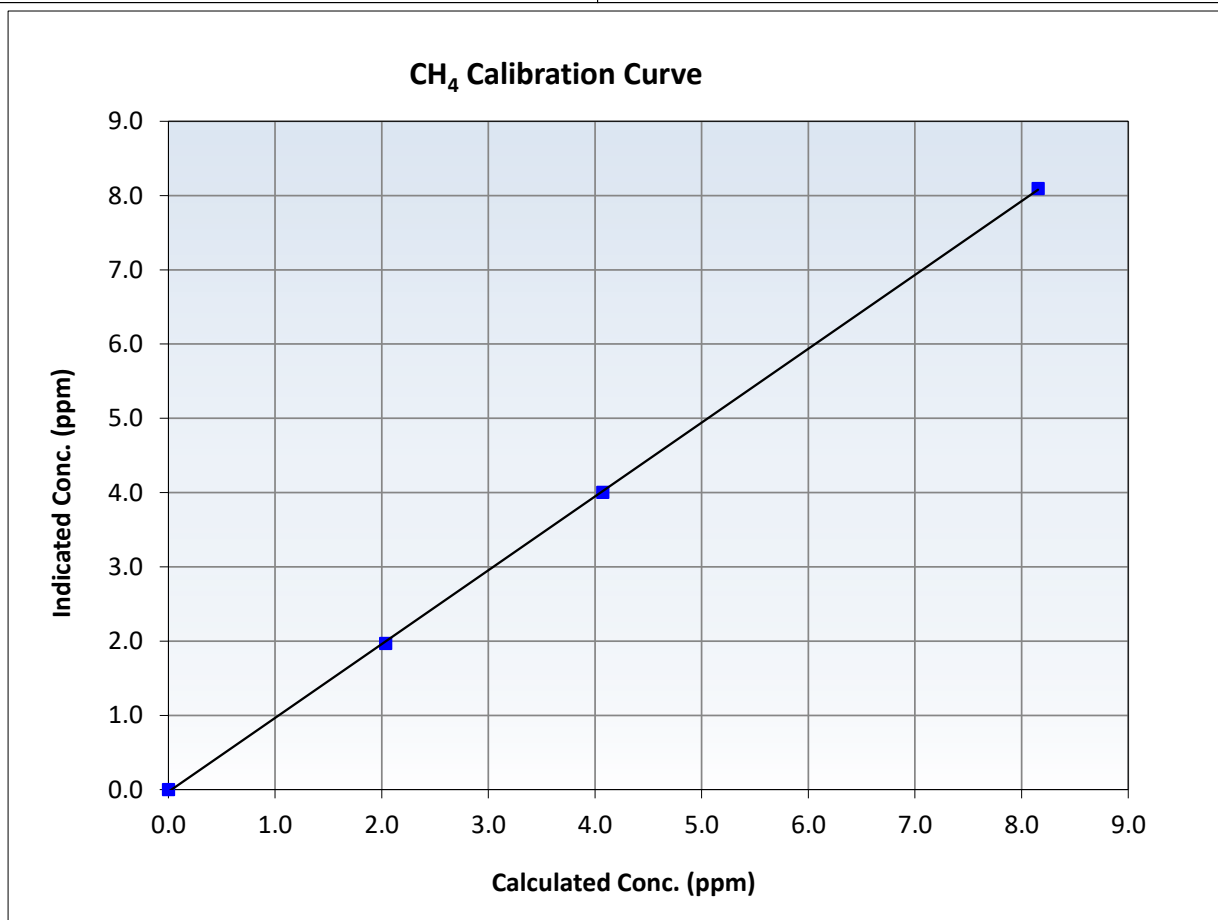
CH₄ Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 31, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:13	End Time (MST):	13:40
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320037

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999941	≥ 0.995
8.15	8.09	1.0074	Slope	0.994336	0.90 - 1.10
4.07	4.00	1.0173	Intercept	-0.029152	± 0.5
2.04	1.97	1.0347			





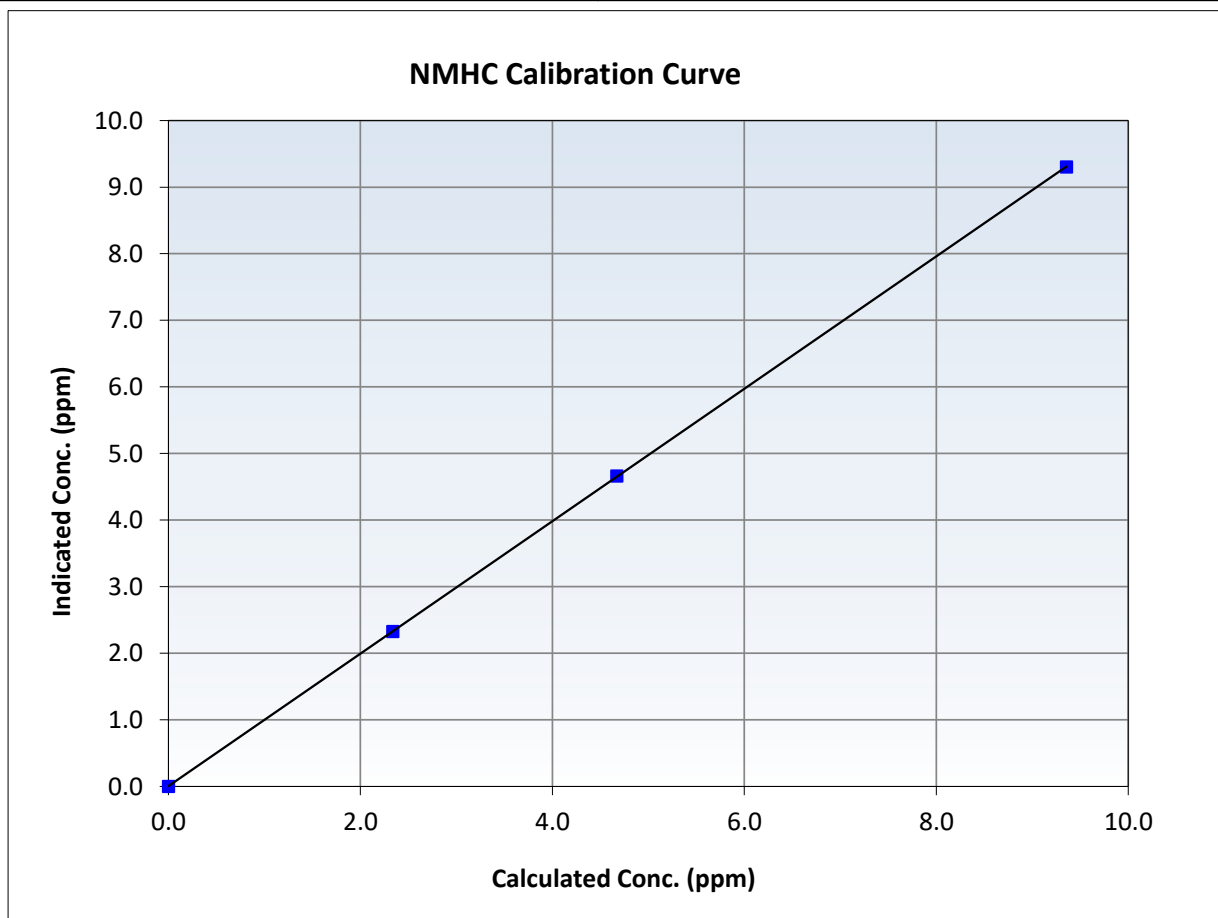
Wood Buffalo Environmental Association NMHC Calibration Summary

Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 31, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:13	End Time (MST):	13:40
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320037

Calibration Data

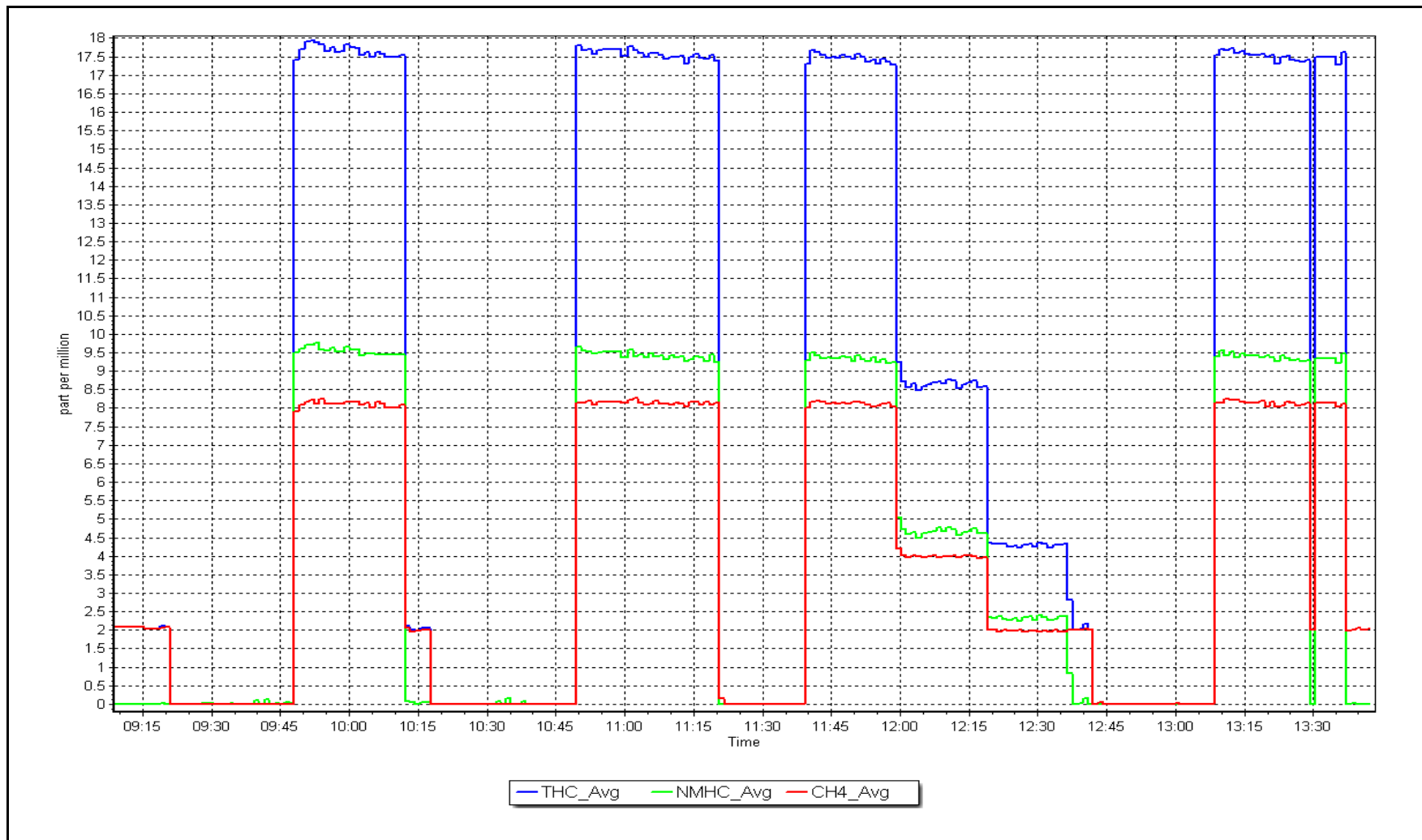
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999997	≥ 0.995
9.36	9.30	1.0056	Slope	0.994423	$0.90 - 1.10$
4.67	4.66	1.0024	Intercept	0.005141	± 0.5
2.34	2.33	1.0032			



NMHC Calibration Plot

Date: April 9, 2026

Location: Ells River





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Ells River
Station number: AMS 30
Calibration Date: April 14, 2026
Last Cal Date: March 3, 2026
Start time (MST): 9:21
End time (MST): 14:02
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0027487
NOX Cal Gas Conc: 59.30 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 59.30 ppm
NOX gas Diff:
Calibrator Model: API T700
ZAG make/model: API T701H
Cal Gas Expiry Date: January 9, 2032
NO Cal Gas Conc: 59.10 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 59.10 ppm
NO gas Diff:
Serial Number: 5707
Serial Number: 358

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.2	0.1	-0.3	----	----
AF High point	4932	67.7	803.0	800.3	2.7	775.6	767.9	7.7	1.0350	1.0423
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 798.5 ppb	NO = 793.5 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -2.9%	
Baseline Corr 1st pt	NO _x = 775.8 ppb	NO = 767.8 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -3.3%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	NO ₂ SI:	NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 0710321429

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.582	1.645	NO bkgnd or offset:	17.9	18.7
NOX coeff or slope:	0.996	0.996	NOX bkgnd or offset:	18.2	19.0
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	218.5	217.9

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.994335	1.000810
NO _x Cal Offset:	0.040727	-0.157585
NO Cal Slope:	0.993176	0.999302
NO Cal Offset:	-1.301285	-1.319706
NO ₂ Cal Slope:	0.991111	1.000874
NO ₂ Cal Offset:	1.242464	0.010019

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.0	0.2	-0.2	----	----
High point	4932	67.7	803.0	800.3	2.7	803.3	799.0	4.3	0.9996	1.0016
Mid point	4966	33.8	400.9	399.5	1.4	401.7	397.6	4.1	0.9980	1.0049
Low point	4983	16.9	200.4	199.8	0.7	199.8	196.5	3.4	1.0032	1.0166
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.3	-0.2	----	----
As left span	4932	67.7	803.0	390.6	412.4	800.9	390.6	410.3	1.0026	1.0000
Average Correction Factor									1.0003	1.0077

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.2	----	----
High GPT point	793.9	384.9	411.7	412.1	0.9990	100.1%
Mid GPT point	793.9	589.8	206.8	206.7	1.0005	99.9%
Low GPT point	793.9	688.2	108.4	109.0	0.9946	100.5%
Average Correction Factor					0.9980	100.2%

Notes: Sample inlet filter changed after as founds, span adjusted.

Calibration Performed By: Param Kaur



Wood Buffalo Environmental Association

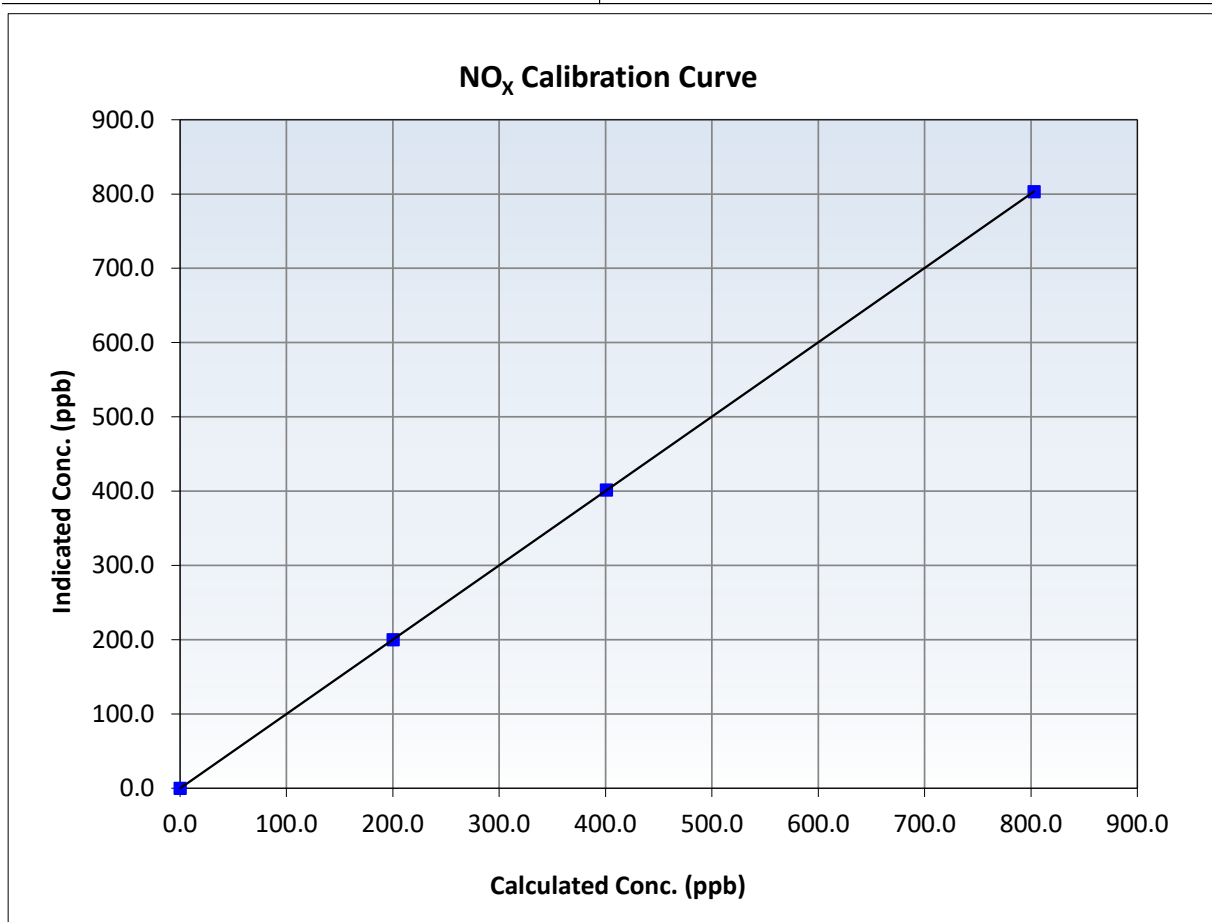
NO_x Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:21	End Time (MST):	14:02
Analyzer make:	Thermo 42i	Analyzer serial #:	0710321429

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999997	≥0.995
803.0	803.3	0.9996	Slope	1.000810	0.90 - 1.10
400.9	401.7	0.9980	Intercept	-0.157585	+/-20
200.4	199.8	1.0032			





Wood Buffalo Environmental Association

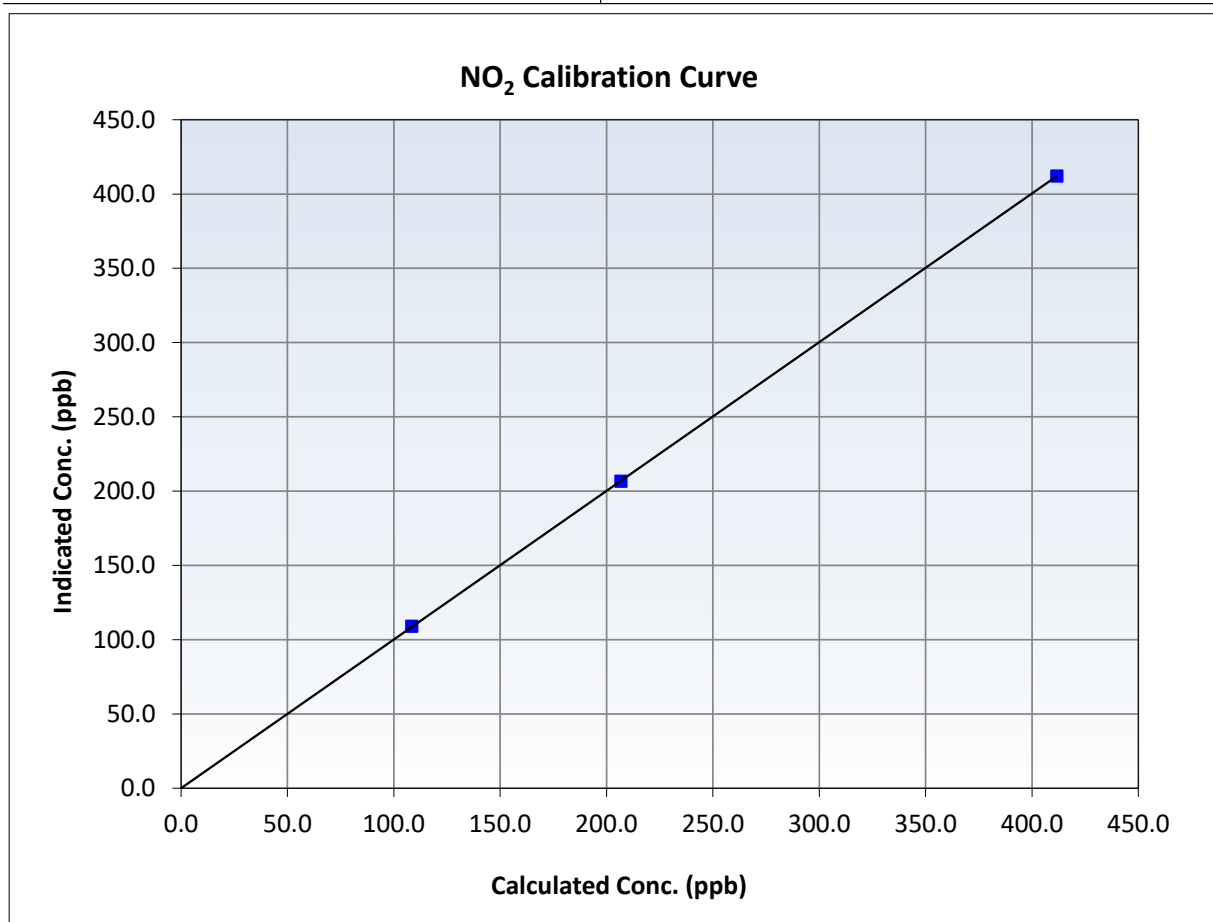
NO₂ Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:21	End Time (MST):	14:02
Analyzer make:	Thermo 42i	Analyzer serial #:	0710321429

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999996	≥0.995
411.7	412.1	0.9990	Slope	1.000874	0.90 - 1.10
206.8	206.7	1.0005	Intercept	0.010019	+/-20
108.4	109.0	0.9946			





Wood Buffalo Environmental Association

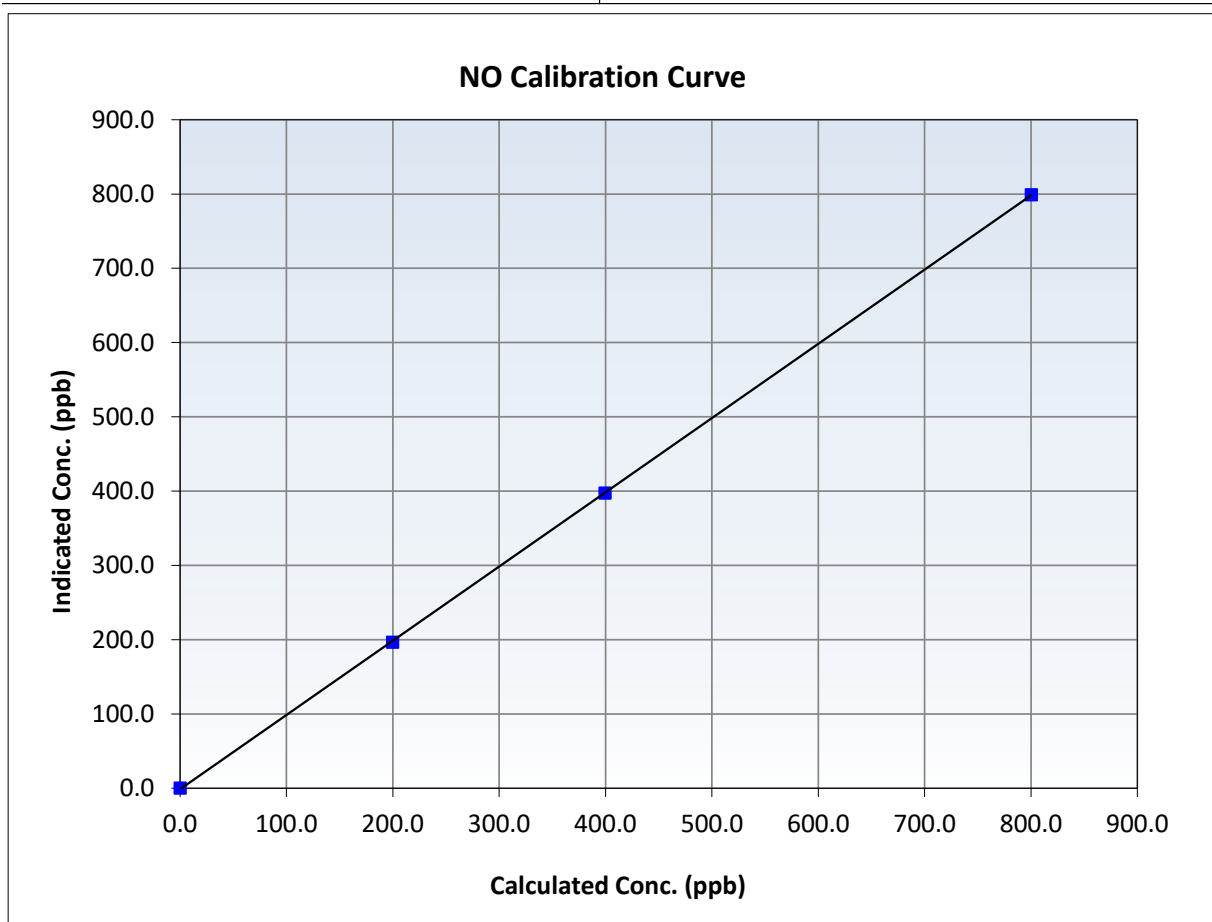
NO Calibration Summary

Station Information

Calibration Date:	April 14, 2026	Previous Calibration:	March 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:21	End Time (MST):	14:02
Analyzer make:	Thermo 42i	Analyzer serial #:	0710321429

Calibration Data

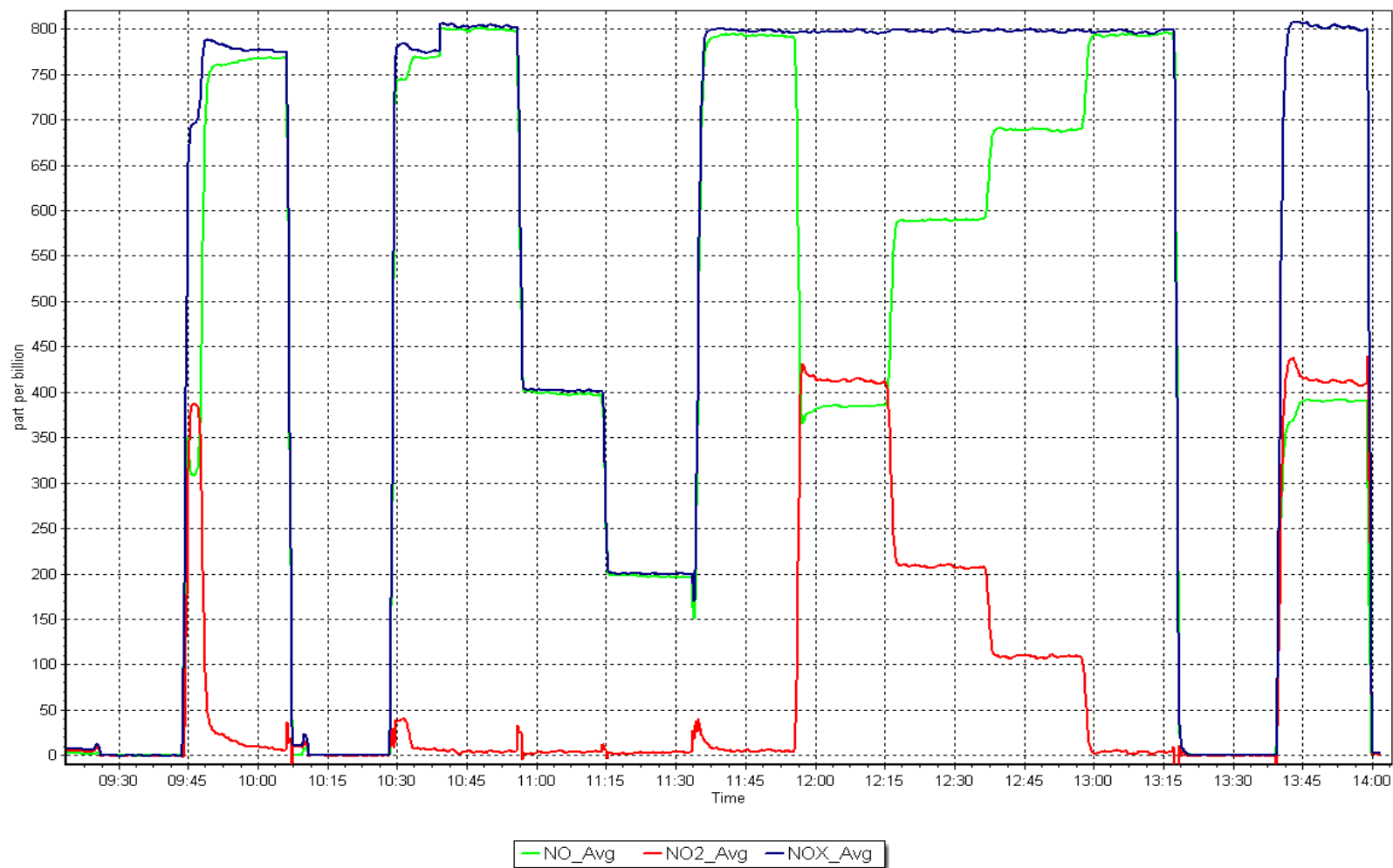
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999983	≥ 0.995
800.3	799.0	1.0016	Slope	0.999302	0.90 - 1.10
399.5	397.6	1.0049	Intercept	-1.319706	+/-20
199.8	196.5	1.0166			



NO_x Calibration Plot

Date: April 14, 2026

Location: Ells River





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Ells River Station number: AMS 30
Calibration Date: April 5, 2026 Last Cal Date: March 11, 2026
Start time (MST): 11:50 End time (MST): 12:49

Analyzer Make: API T640 S/N: 875
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388754
Temp/RH standard: Alicat FP-25BT S/N: 388754

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	2.50	1.95	2.50	☐	+/- 2 °C
P (mmHg)	747.40	750.24	747.40	☐	+/- 10 mmHg
Flow (LPM)	4.99	4.94	4.99	☐	+/- 0.25 LPM
PW% (pump)	33	----	33	☐	>80%
Zero Verification	PM w/o HEPA: 19.30		PM w/ HEPA: 8.30		<0.2 ug/m3

Note: this leak check will be completed before the quarterly work and will serve as the pre maintenance leak check

PM Inlet observation : Inlet Head Clean ☒ Alignment Factor On : ☒

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.90 Expiry Date: January 30, 2027
Lot No.: 100128-050-051

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	8.00	12.70	10.90	☒	+/- 0.5

Date Optical Chamber Cleaned: April 5, 2026
Date Disposable Filter Changed: April 5, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0.00 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: June 18, 2025
Date RH/T Sensor Cleaned: June 18, 2025

Notes: Verified flow, pressure, temperature and pump power. PMT adjusted. Leak check passed.

Calibration by: Jan Castro



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS31
BLACKROD
APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Blackrod
Calibration Date: April 28, 2026
Start time (MST): 9:49
Reason: Routine

Station number: AMS 31
Last Cal Date: March 24, 2026
End time (MST): 12:38

Calibration Standards

Cal Gas Concentration: 50.25 ppm
Cal Gas Cylinder #: CC327023
Removed Cal Gas Conc: 50.25 ppm
Removed Gas Cyl #: N/A
Calibrator Model: Teledyne T700
Zero Air Gen Model: Teledyne N701H

Cal Gas Exp Date: March 10, 2031
Rem Gas Exp Date: N/A
Diff between cyl:
Serial Number: 1220
Serial Number: 72

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0 - 1000 ppb

Serial Number: 1160290014

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999805	1.006142	Backgd or Offset:	42.7	42.7
Calibration intercept:	-0.181800	-0.323118	Coeff or Slope:	1.036	1.036

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.6	----
As found High point	4921	79.5	798.9	803.5	0.994
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	804.1	Previous response	798.6	*% change	0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4921	79.5	798.9	803.5	0.994
Mid point	4960	39.8	400.0	402.3	0.994
Low point	4980	19.9	200.0	200.5	0.998
As left zero	5000	0.0	0.0	-0.3	----
As left span	4921	79.5	798.9	804.5	0.993
Average Correction Factor:					0.995

Notes: Sample inlet filter was changed after as founds. No adjustment made.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

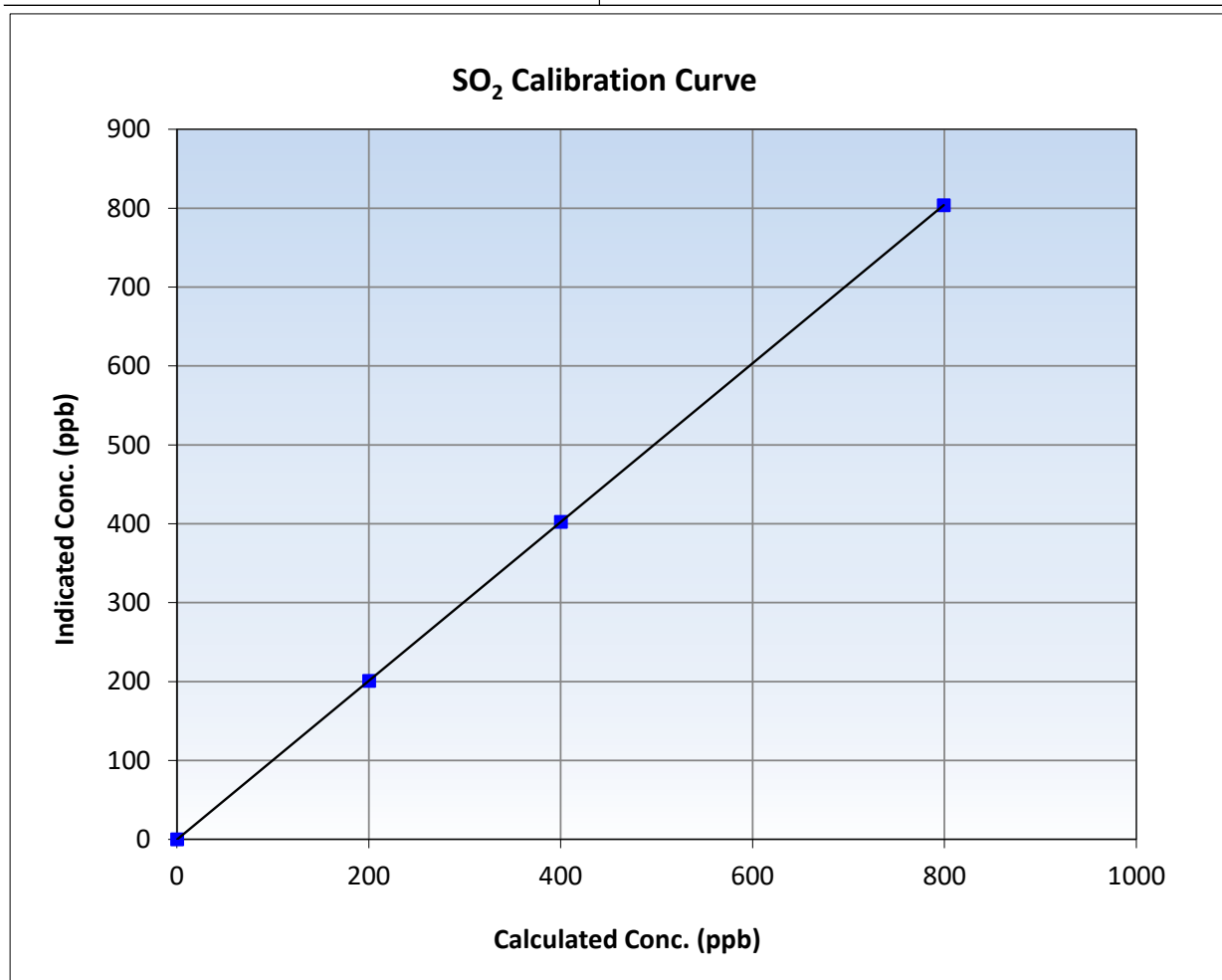
SO₂ Calibration Summary

Station Information

Calibration Date:	April 28, 2026	Previous Calibration:	March 24, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:49	End Time (MST):	12:38
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290014

Calibration Data

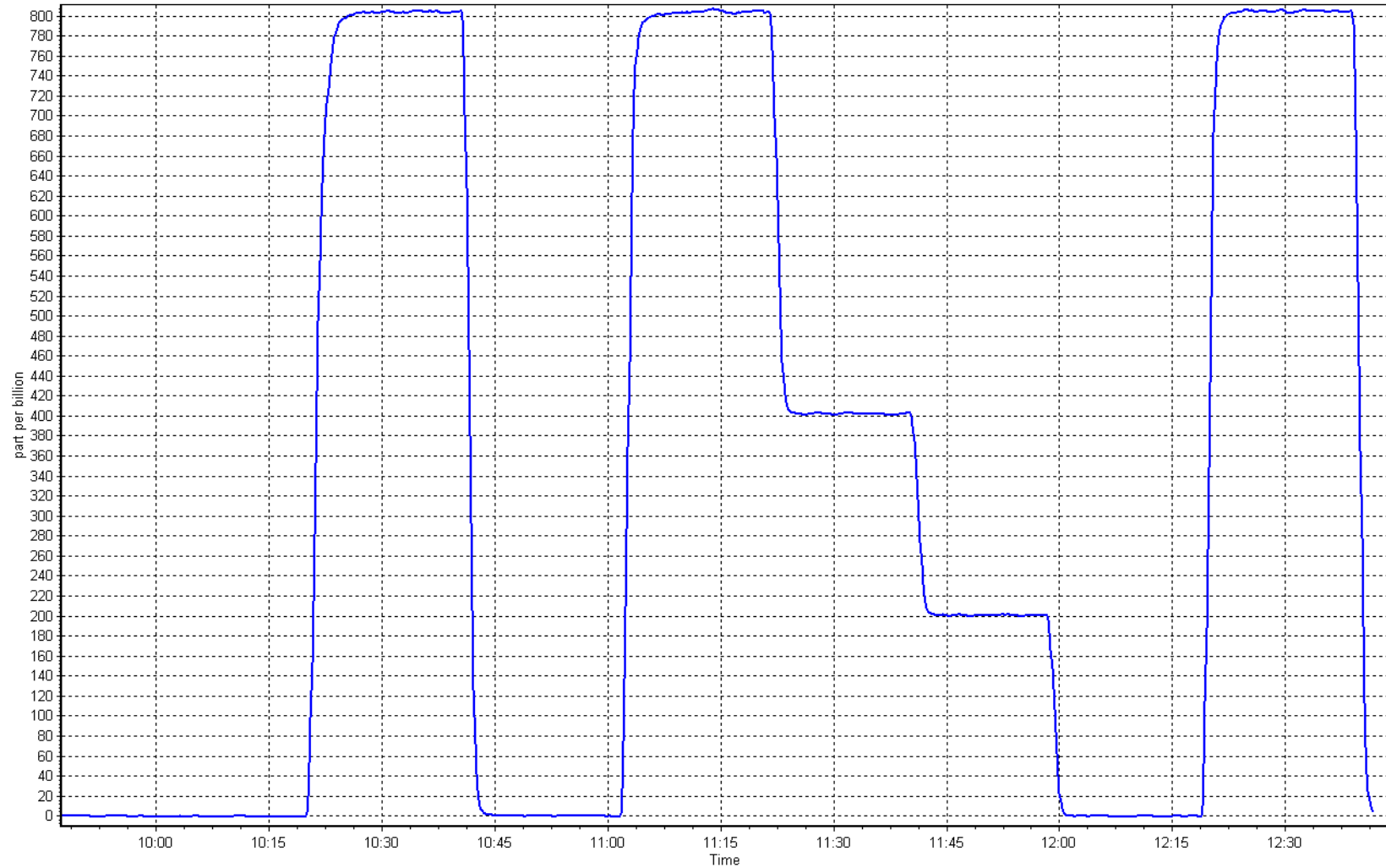
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999999	≥0.995
798.9	803.5	0.9943	Slope	1.006142	0.90 - 1.10
400.0	402.3	0.9943	Intercept	-0.323118	+/-30
200.0	200.5	0.9975			



SO2 Calibration Plot

Date: April 28, 2026

Location: Blackrod





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Blackrod
Calibration Date: April 22, 2026
Start time (MST): 9:48
Reason: Routine

Station number: AMS 31
Last Cal Date: March 11, 2026
End time (MST): 13:46

Calibration Standards

Cal Gas Concentration: 5.42 ppm
Cal Gas Cylinder #: DT0016926
Removed Cal Gas Conc: 5.42 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API N701H

Cal Gas Exp Date: March 19, 2027
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 1220
Serial Number: 72

Analyzer Information

Analyzer make: Thermo 43iQTL
Converter make: Global
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 12228021056
Converter serial #: 2023-266
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	0.991332	1.004761	Backgd or Offset:	3.04
Calibration intercept:	0.139789	0.119593	Coeff or Slope:	1.006

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4926	73.8	80.0	80.0	1.000
As found Mid point	4963	36.9	40.0	40.2	0.995
As found Low point	4982	18.5	20.1	19.9	1.008
New cylinder response					
Baseline Corr As found:	80.0	Prev response:	79.45	*% change:	0.7%
Baseline Corr 2nd AF pt:	40.2	AF Slope:	1.000904	AF Intercept:	-0.020338
Baseline Corr 3rd AF pt:	19.9	AF Correlation:	0.999983	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4926	73.8	80.0	80.4	0.995
Mid point	4963	36.9	40.0	40.6	0.985
Low point	4982	18.5	20.1	20.1	0.998
As left zero	5000	0.0	0.0	0.1	----
As left span	4926	73.8	80.0	80.5	0.994
SO2 Scrubber Check	4921	79.5	794.9	-0.1	----
Date of last scrubber change:		27-Aug-25		Ave Corr Factor	0.993
Date of last converter efficiency test:		October 9, 2025			

Notes: Sample inlet filter was changed after multipoint as founds. SO2 scrubber done and passed. No adjustment made.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

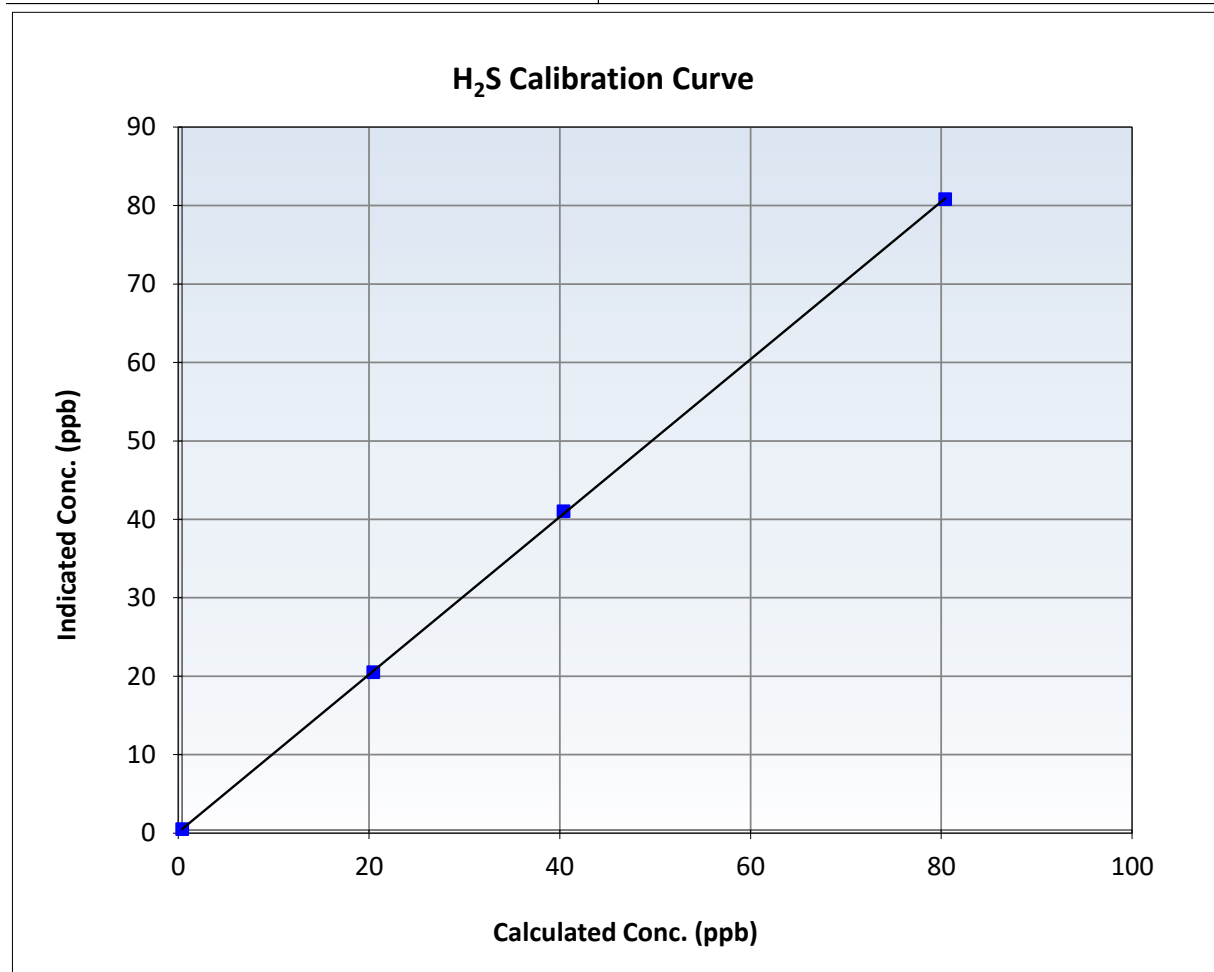
H₂S Calibration Summary

Station Information

Calibration Date:	April 22, 2026	Previous Calibration:	March 11, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:48	End Time (MST):	13:46
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12228021056

Calibration Data

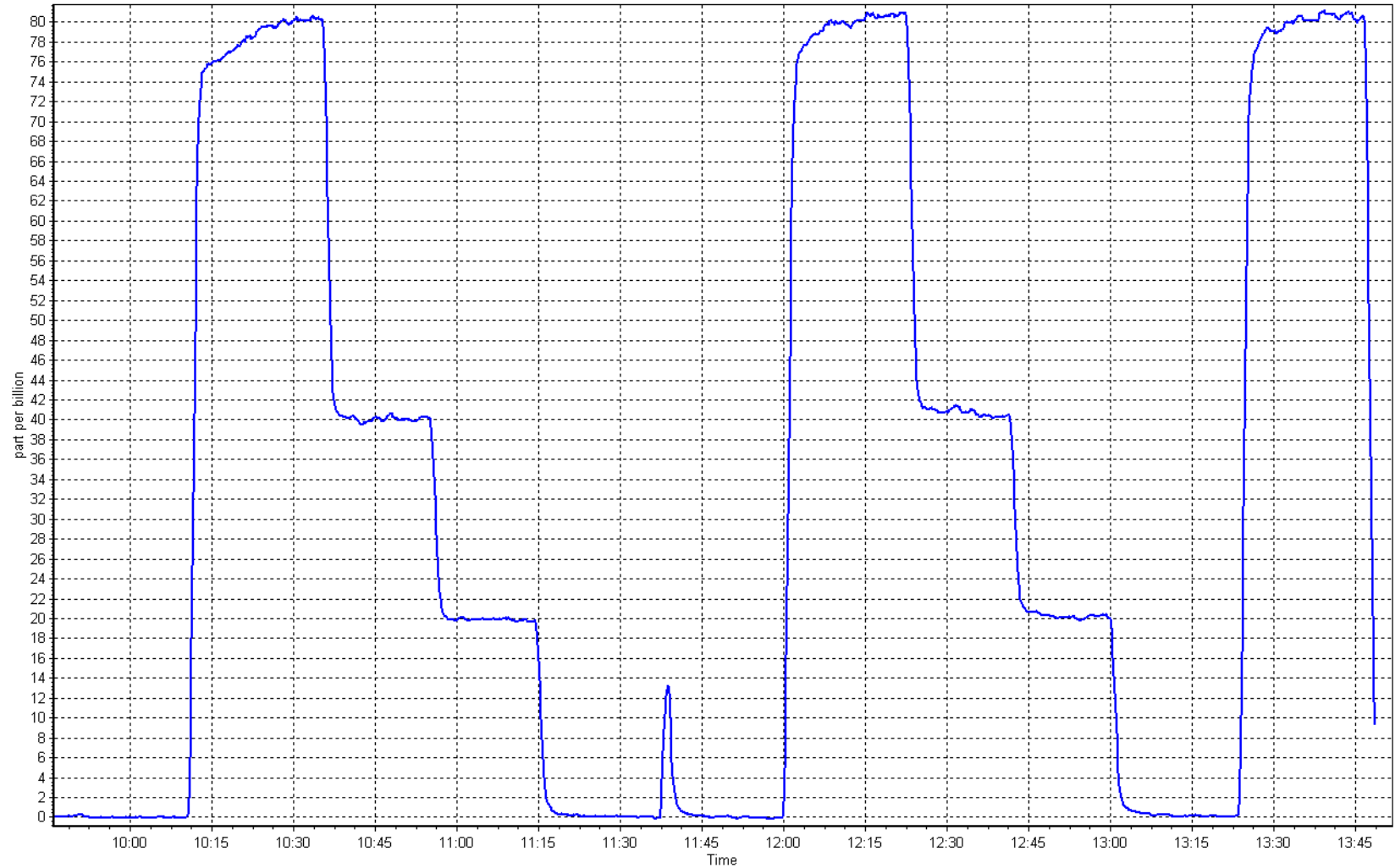
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999965		≥0.995
80.0	80.4	0.9951	Slope	1.004761		0.90 - 1.10
40.0	40.6	0.9852	Intercept	0.119593		+/-3
20.1	20.1	0.9976				



H₂S Calibration Plot

Date: April 22, 2026

Location: Blackrod





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Blackrod Station number: AMS 31
Calibration Date: April 28, 2026 Last Cal Date: March 24, 2026
Start time (MST): 9:49 End time (MST): 12:38
Reason: Routine

Calibration Standards

Gas Cert Reference: CC327023 Cal Gas Expiry Date: March 10, 2031
CH4 Cal Gas Conc. 499.9 ppm CH4 Equiv Conc. 1058.2 ppm
C3H8 Cal Gas Conc. 203.0 ppm
Removed Gas Cert: NA Removed Gas Expiry: NA
Removed CH4 Conc. 499.9 ppm CH4 Equiv Conc. 1058.2 ppm
Removed C3H8 Conc. 203.0 ppm Diff between cyl:
Calibrator Make/Model: Teledyne T700 Serial Number: 1220
ZAG Make/Model: Teledyne API N701H Serial Number: 72

Analyzer Information

Analyzer make: Thermo 51i- LT Analyzer serial #: 1505164380
Analyzer Range: 0 - 20 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000395	1.000678	Background:	1.990	1.990
Calibration intercept:	-0.018069	0.029346	Coefficient:	3.143	3.143

THC As Found Data

Set Point	Dilution air flow rate (scm)	Source gas flow rate (scm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.02	----
As found High point	4921	79.5	16.82	16.90	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.88	Previous response	16.81	*% change	0.4%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (scm)	Source gas flow rate (scm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.06	----
High point	4921	79.5	16.82	16.88	0.997
Mid point	4960	39.8	8.42	8.44	0.998
Low point	4980	19.9	4.21	4.22	0.999
As left zero	5000	0.0	0.00	0.02	----
As left span	4921	79.5	16.82	16.94	0.993
Average Correction Factor					0.998

Notes: Sample inlet filter was changed after as founds. No adjustment made.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

THC Calibration Summary

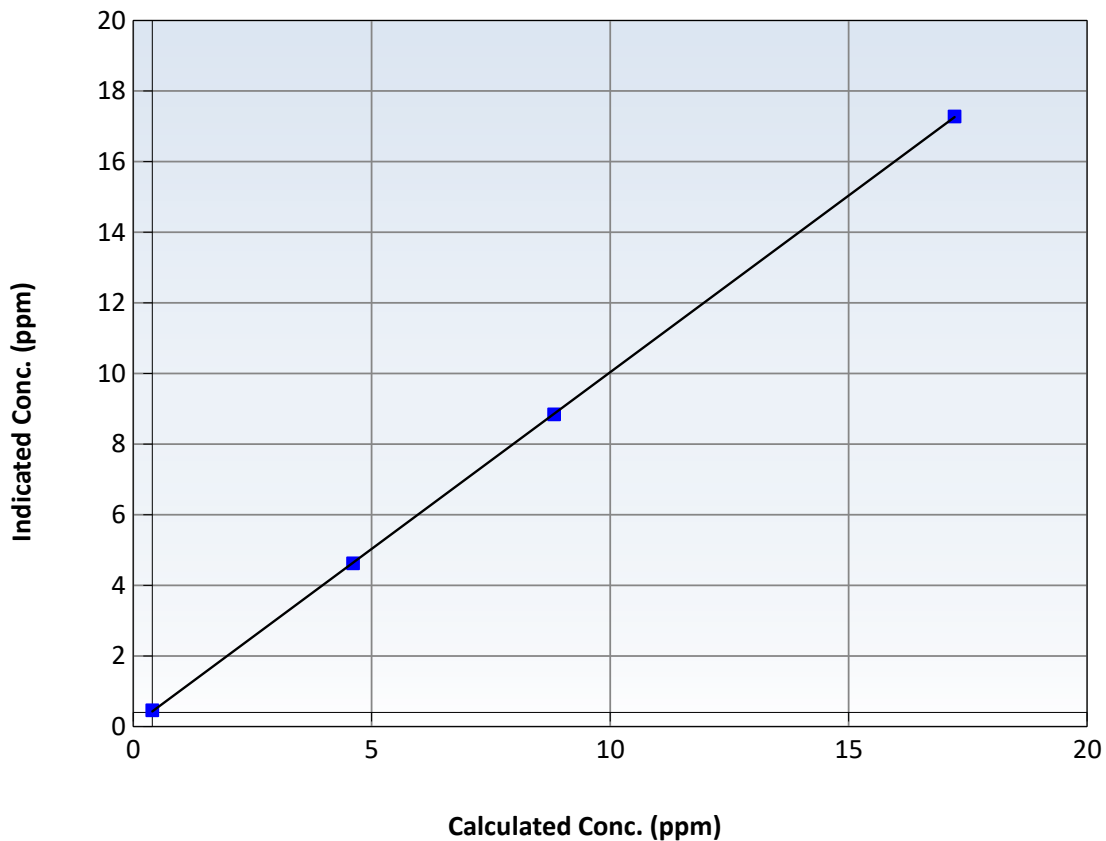
Station Information

Calibration Date:	April 28, 2026	Previous Calibration:	March 24, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:49	End Time (MST):	12:38
Analyzer make:	Thermo 51i- LT	Analyzer serial #:	1505164380

Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.06	----	Correlation Coefficient	0.999984	≥ 0.995
16.82	16.88	0.9966	Slope	1.000678	$0.90 - 1.10$
8.42	8.44	0.9984	Intercept	0.029346	± 1.5
4.21	4.22	0.9987			

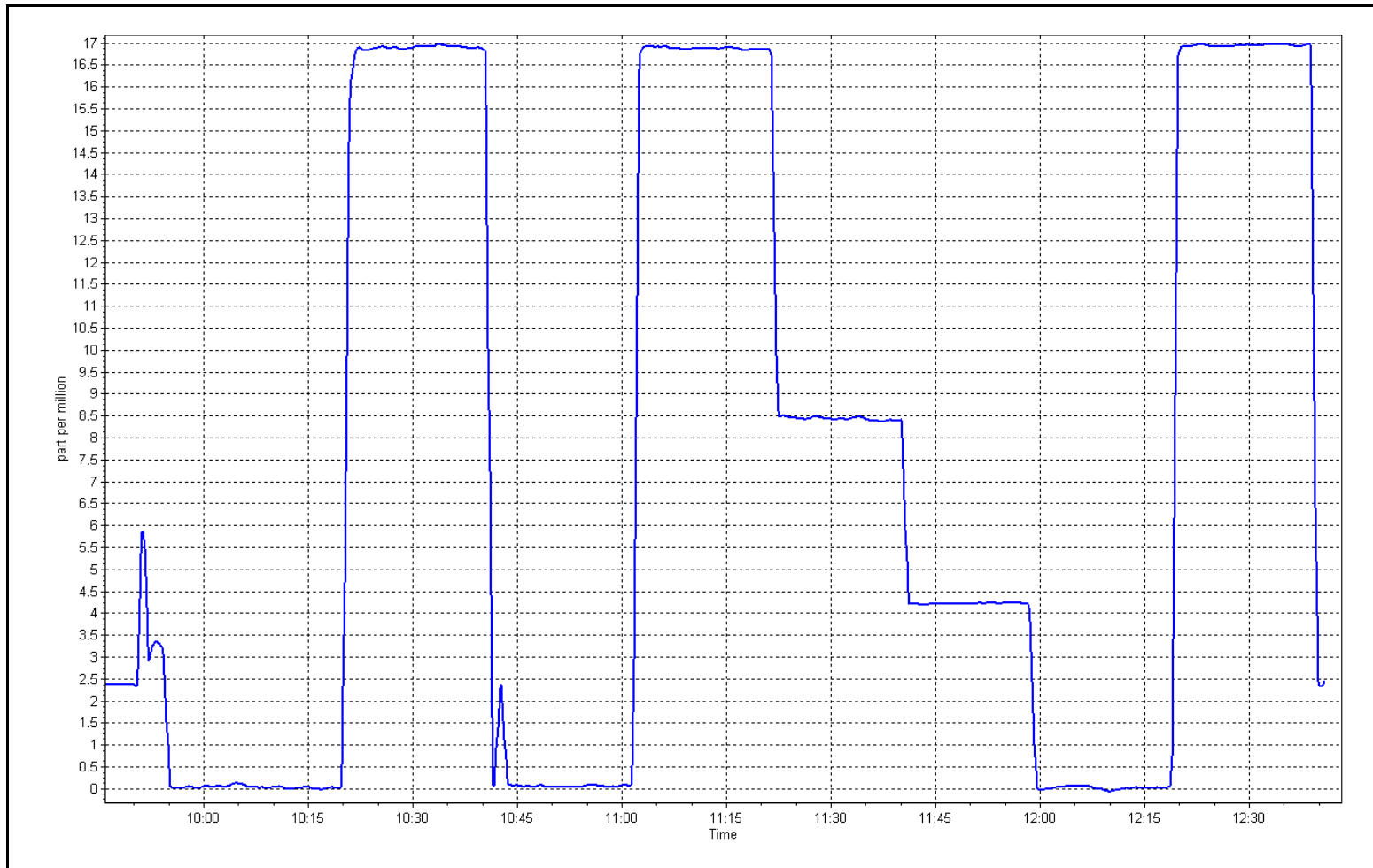
THC Calibration Curve



THC Calibration Plot

Date: April 28, 2026

Location: Blackrod





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Blackrod
Station number: AMS 31
Calibration Date: April 21, 2026
Last Cal Date: March 10, 2026
Start time (MST): 9:44
End time (MST): 13:56
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0035071
NOX Cal Gas Conc: 59.30 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 59.30 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API N701H
Cal Gas Expiry Date: January 9, 2032
NO Cal Gas Conc: 59.10 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 59.10 ppm
NO gas Diff:
Serial Number: 1220
Serial Number: 72

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
AF High point	4932	67.7	803.0	800.3	2.7	796.5	791.1	5.4	1.0082	1.0116
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 808.6 ppb	NO = 804.8 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = -1.5%
Baseline Corr 1st pt	NO _x = 796.4 ppb	NO = 791.1 ppb	<u>As Found Statistics</u>		*Percent Change	NO = -1.7%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb	As found	NO _x r ² :	Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb	As found	NO r ² :	NO SI:	NO Int:
			As found	NO ₂ r ² :	NO2 SI:	NO ₂ Int:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1173480006

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.007045	0.998262
NO _x Cal Offset:	0.003765	0.562008
NO Cal Slope:	1.006799	0.999329
NO Cal Offset:	-0.917772	-0.479260
NO ₂ Cal Slope:	1.003970	0.997753
NO ₂ Cal Offset:	-1.014432	-0.091364

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.958	0.968	NO bkgnd or offset:	2.3	2.3
NOX coeff or slope:	0.996	0.995	NOX bkgnd or offset:	2.3	2.3
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	146.8	145.6

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.3	0.1	0.2	----	----
High point	4932	67.7	803.0	800.3	2.7	801.8	799.5	2.3	1.0015	1.0010
Mid point	4966	33.8	400.9	399.5	1.4	401.5	398.6	2.9	0.9985	1.0023
Low point	4983	16.9	200.4	199.8	0.7	200.5	198.5	2.0	0.9997	1.0064
As left zero	5000	0.0	0.0	0.0	0.0	0.2	0.1	0.1	----	----
As left span	4932	67.7	803.0	383.4	419.6	801.5	383.4	418.1	1.0018	1.0000
Average Correction Factor									0.9999	1.0032

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.2	----	----
High GPT point	797.8	384.7	415.8	414.9	1.0022	99.8%
Mid GPT point	797.8	587.9	212.6	212.0	1.0029	99.7%
Low GPT point	797.8	690.7	109.8	109.1	1.0065	99.4%
Average Correction Factor					1.0038	99.6%

Notes: Sample inlet filter was changed after as founds. Adjusted span only.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

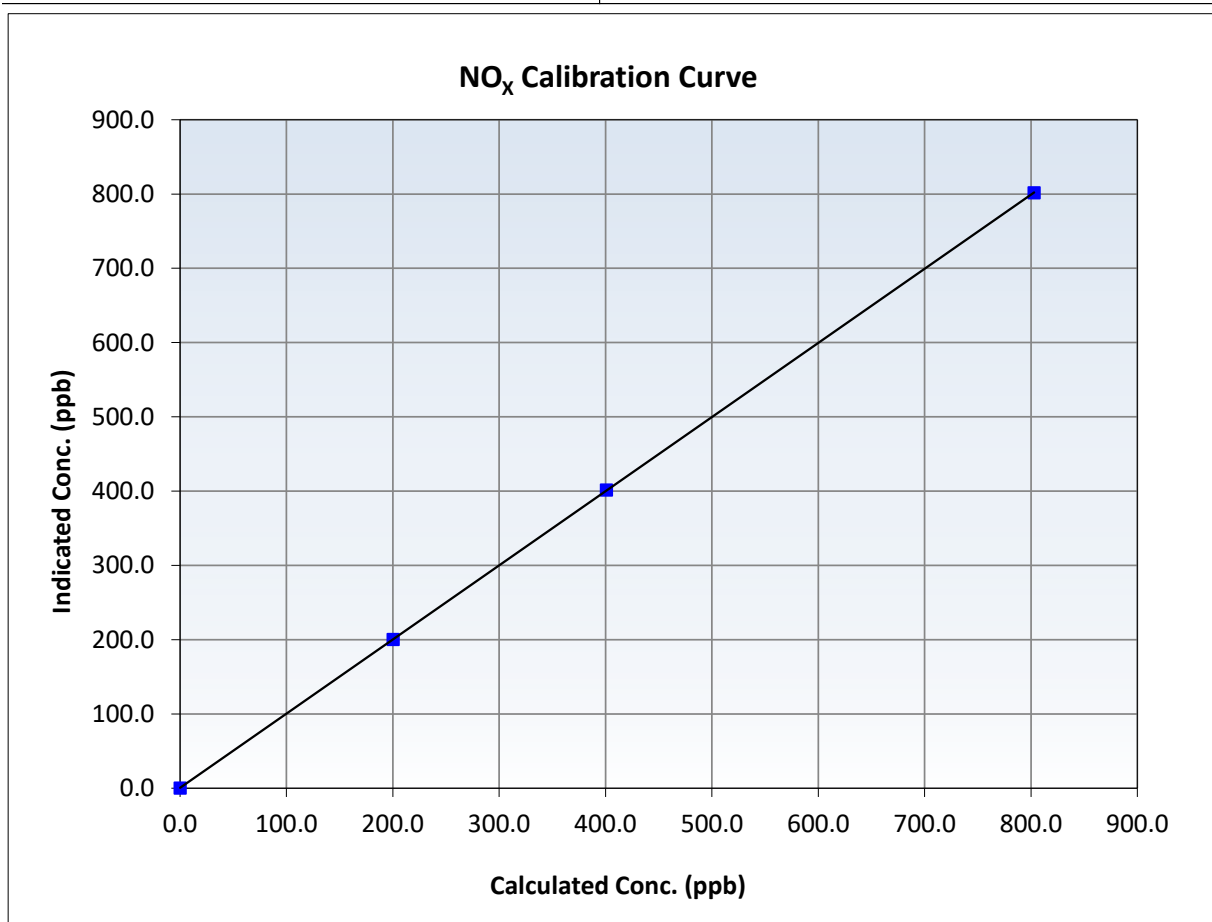
NO_x Calibration Summary

Station Information

Calibration Date:	April 21, 2026	Previous Calibration:	March 10, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:44	End Time (MST):	13:56
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999998	≥0.995
803.0	801.8	1.0015	Slope	0.998262	0.90 - 1.10
400.9	401.5	0.9985	Intercept	0.562008	+/-20
200.4	200.5	0.9997			





Wood Buffalo Environmental Association

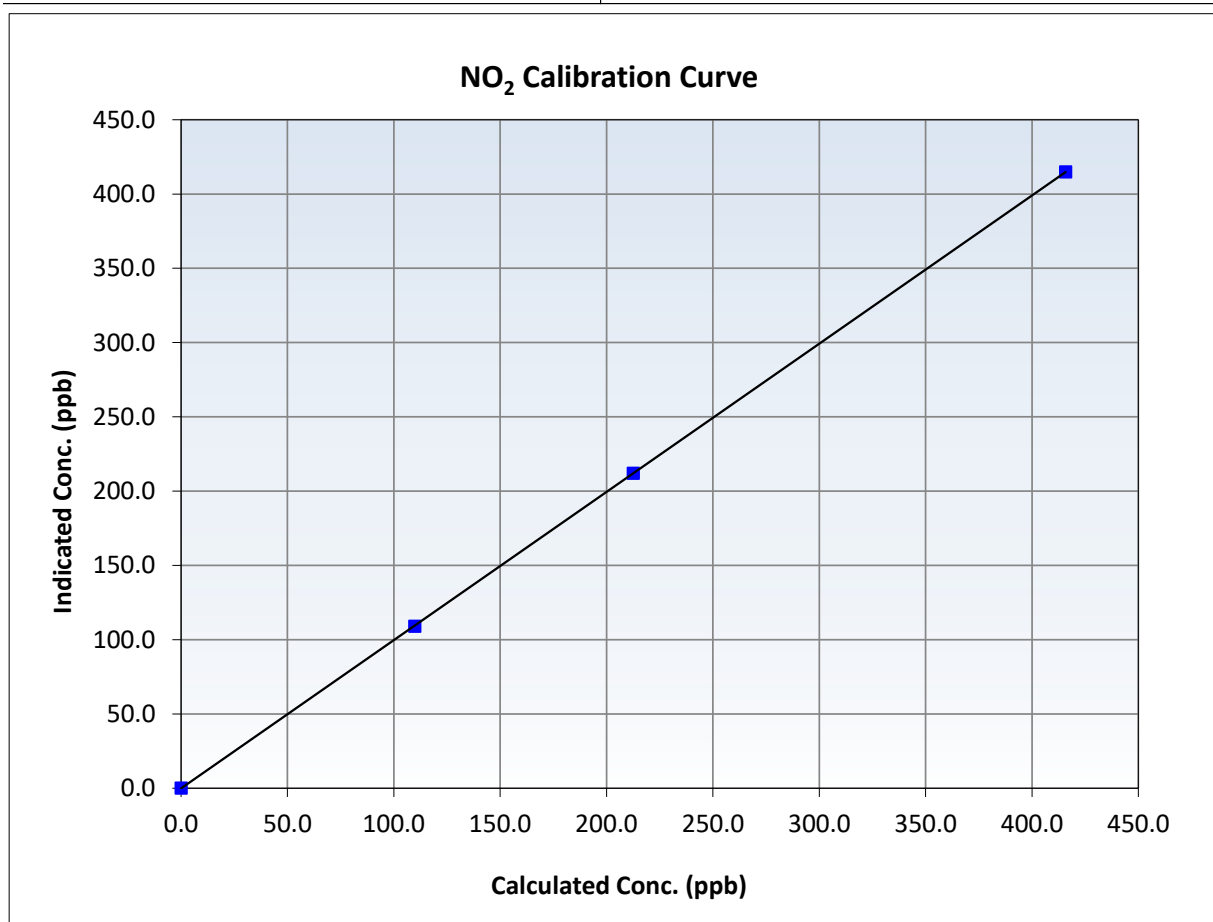
NO₂ Calibration Summary

Station Information

Calibration Date:	April 21, 2026	Previous Calibration:	March 10, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:44	End Time (MST):	13:56
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999997	≥0.995
415.8	414.9	1.0022	Slope	0.997753	0.90 - 1.10
212.6	212.0	1.0029	Intercept	-0.091364	+/-20
109.8	109.1	1.0065			





Wood Buffalo Environmental Association

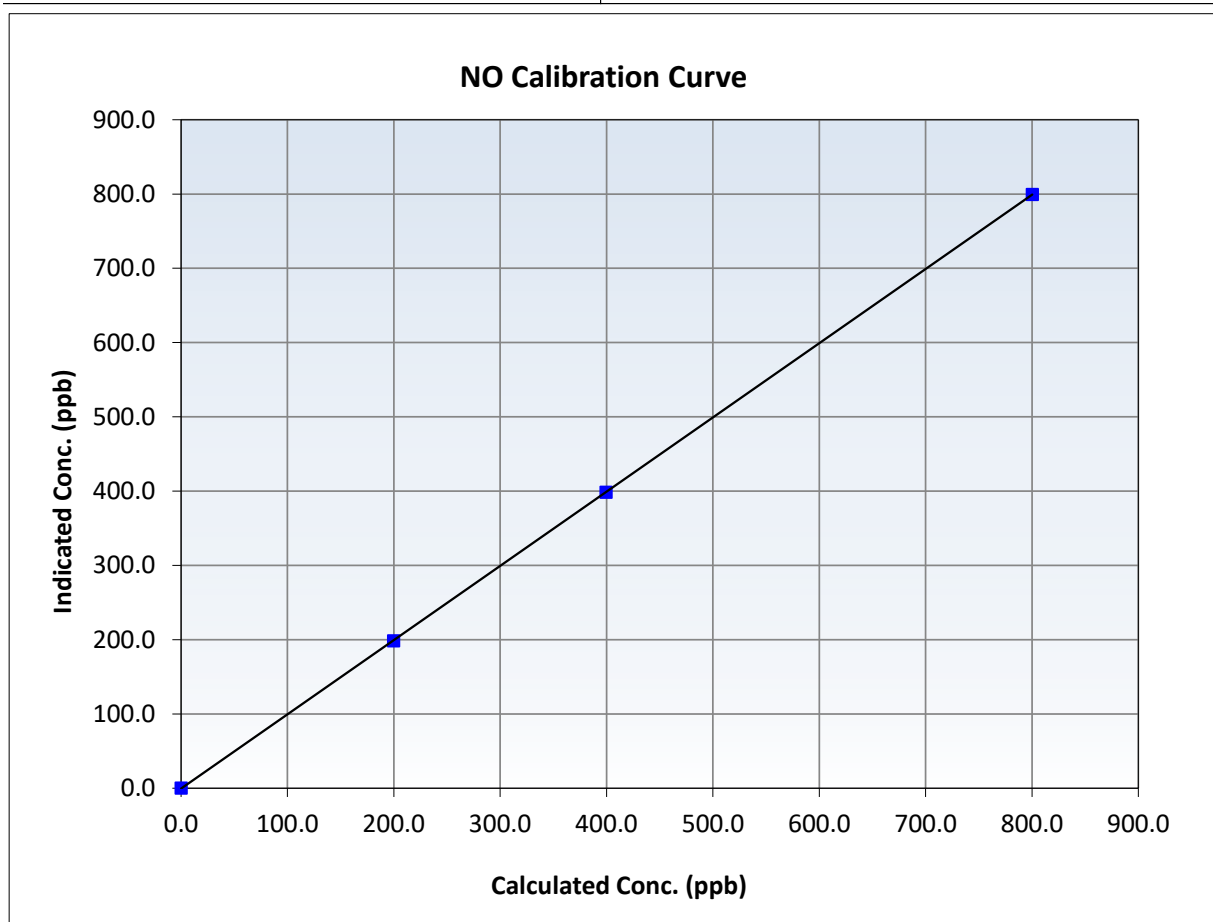
NO Calibration Summary

Station Information

Calibration Date:	April 21, 2026	Previous Calibration:	March 10, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:44	End Time (MST):	13:56
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

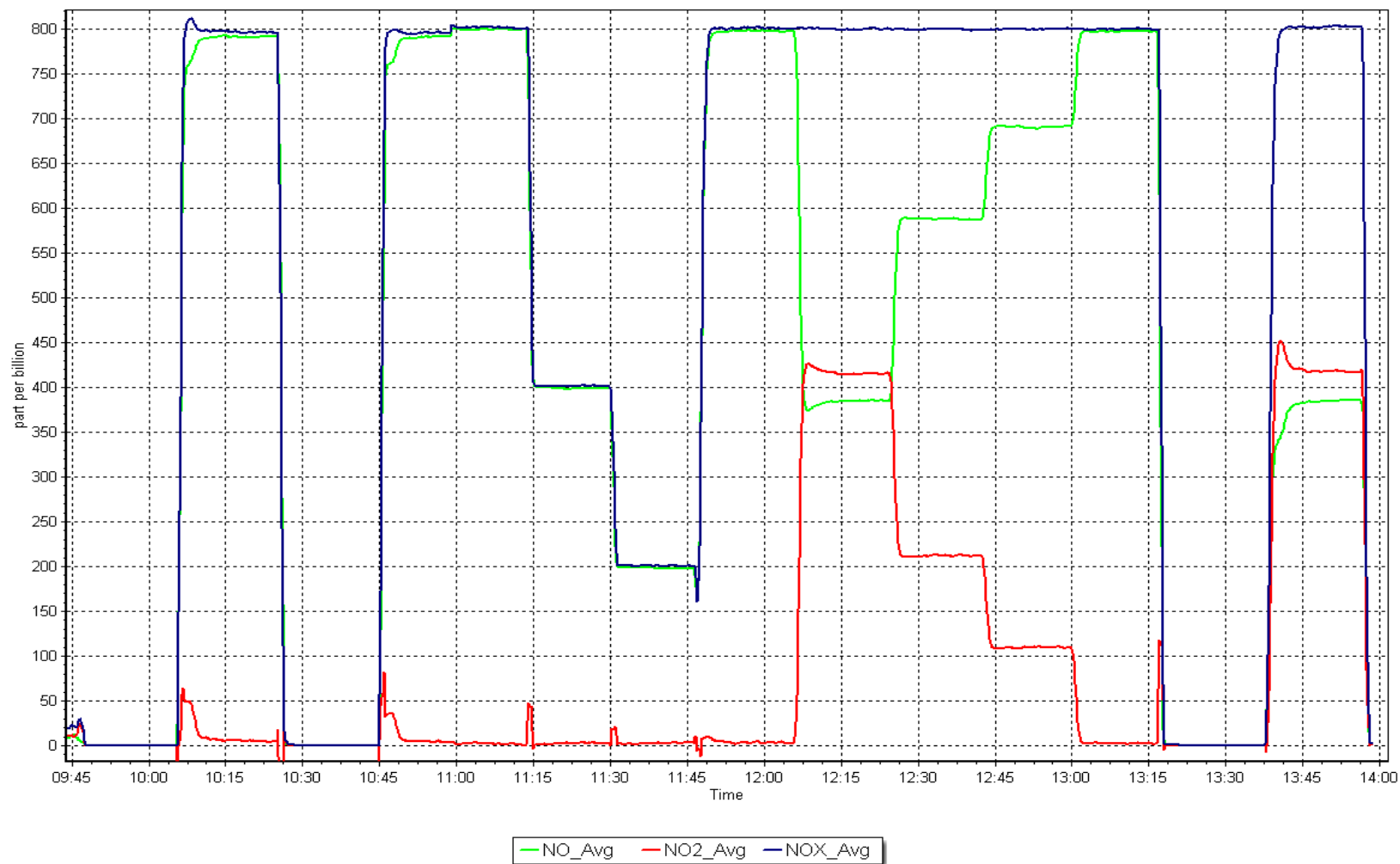
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999998	≥ 0.995
800.3	799.5	1.0010	Slope	0.999329	0.90 - 1.10
399.5	398.6	1.0023	Intercept	-0.479260	+/-20
199.8	198.5	1.0064			



NO_x Calibration Plot

Date: April 21, 2026

Location: Blackrod





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS33 MONDAY CREEK APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Monday Creek
Calibration Date: April 9, 2026
Start time (MST): 11:42
Reason: Routine

Station number: AMS 33
Last Cal Date: March 17, 2026
End time (MST): 14:35

Calibration Standards

Cal Gas Concentration: 50.62 ppm
Cal Gas Cylinder #: EB0008522
Removed Cal Gas Conc: 50.62 ppm
Removed Gas Cyl #: NA
Calibrator Model: Teledyne T700
Zero Air Gen Model: Teledyne T701H

Cal Gas Exp Date: March 10, 2031
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3253
Serial Number: 832

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0- 1000 ppb

Serial Number: 1152430005

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002496	0.997187	Backgd or Offset:	32.5	32.5
Calibration intercept:	0.222240	0.381758	Coeff or Slope:	1.016	1.000

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.4	----
As found High point	4921	79.1	800.8	808.9	0.990
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	808.5	Previous response	803.0	*% change	0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4921	79.1	800.8	798.7	1.003
Mid point	4961	39.5	399.9	399.5	1.001
Low point	4980	19.8	200.5	200.4	1.000
As left zero	5000	0.0	0.0	0.4	----
As left span	4921	79.1	800.8	798.5	1.003
Average Correction Factor:					1.001

Notes: Sample inlet filter was changed after as founds. Adjusted the zero and span.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

SO₂ Calibration Summary

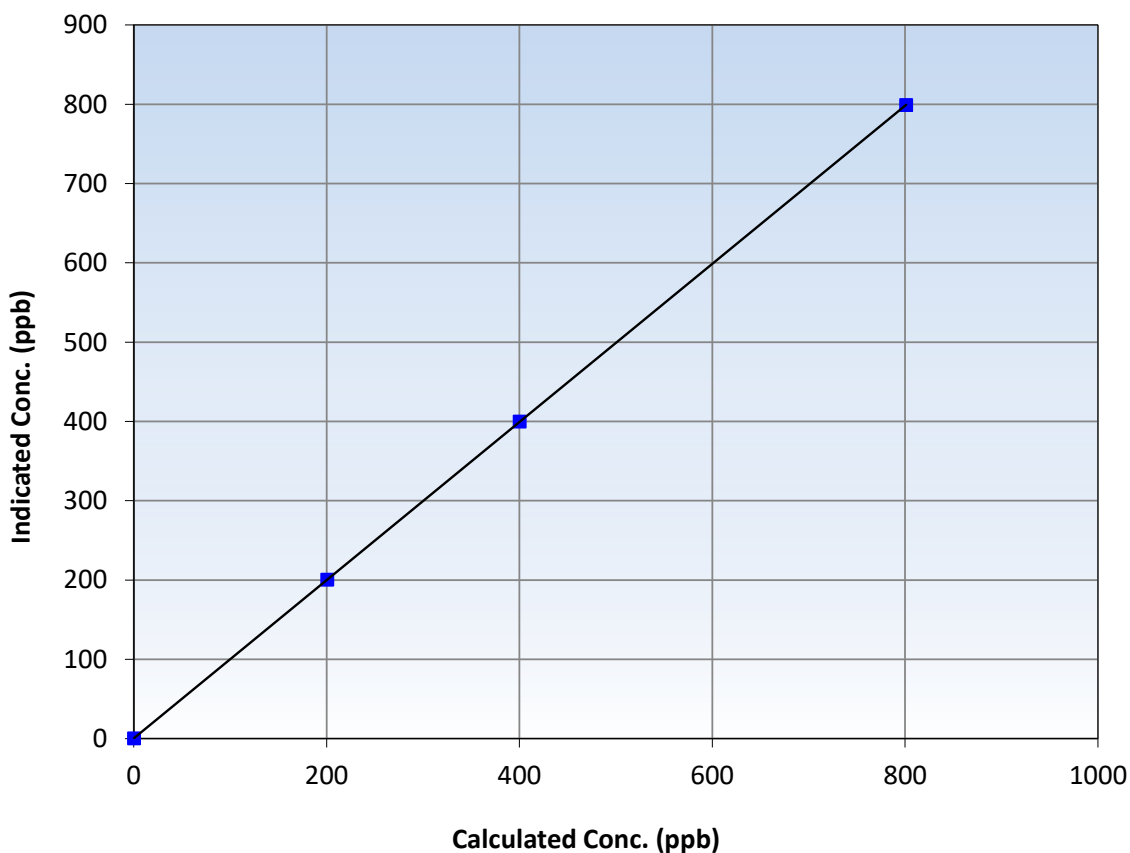
Station Information

Calibration Date:	April 9, 2026	Previous Calibration:	March 17, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:42	End Time (MST):	14:35
Analyzer make:	Thermo 43i	Analyzer serial #:	1152430005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999999	≥0.995
800.8	798.7	1.0026	Slope	0.997187	0.90 - 1.10
399.9	399.5	1.0009	Intercept	0.381758	+/-30
200.5	200.4	1.0003			

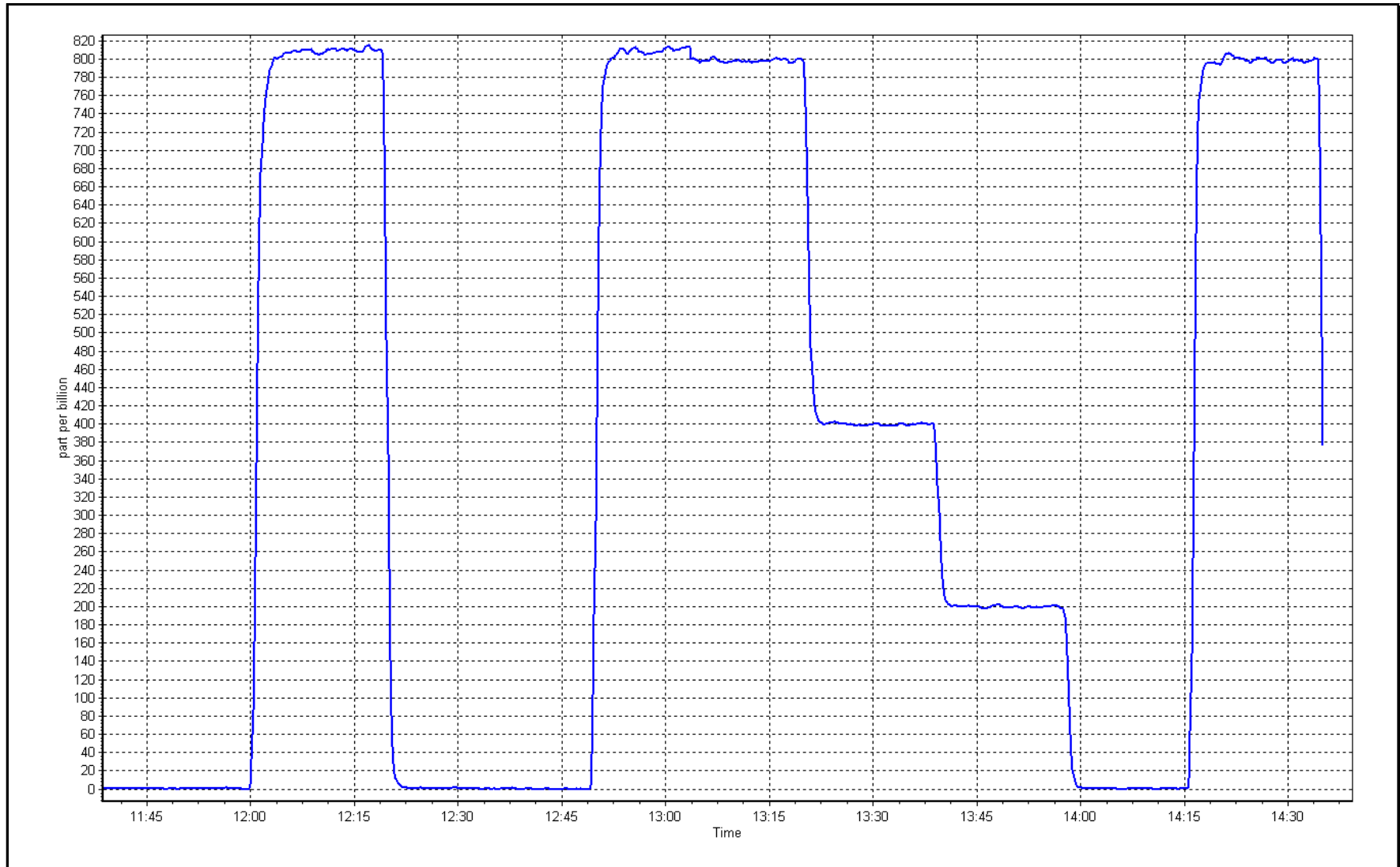
SO₂ Calibration Curve



SO2 Calibration Plot

Date: April 9, 2026

Location: Monday Creek





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Monday Creek
Calibration Date: April 27, 2026
Start time (MST): 11:07
Reason: Routine

Station number: AMS 33
Last Cal Date: March 18, 2026
End time (MST): 15:04

Calibration Standards

Cal Gas Concentration: 5.05 ppm
Cal Gas Cylinder #: DT0014831
Removed Cal Gas Conc: 5.05 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne T701H

Cal Gas Exp Date: November 15, 2026
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3253
Serial Number: 832

Analyzer Information

Analyzer make: Thermo 43iQTL
Converter make: Global 150
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 12333331547
Converter serial #: 2022-196
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001997	1.003855	Backgd or Offset:	1.76	1.76
Calibration intercept:	-0.041603	-0.181607	Coeff or Slope:	1.081	1.081

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4921	79.2	80.0	82.1	0.972
As found Mid point	4960	39.6	40.0	40.8	0.976
As found Low point	4980	19.8	20.0	20.3	0.976
New cylinder response					
Baseline Corr As found:	82.3	Prev response:	80.11	*% change:	2.7%
Baseline Corr 2nd AF pt:	41.0	AF Slope:	1.029001	AF Intercept:	-0.261641
Baseline Corr 3rd AF pt:	20.5	AF Correlation:	0.999996	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4921	79.2	80.0	80.1	0.999
Mid point	4960	39.6	40.0	40.0	1.000
Low point	4980	19.8	20.0	19.9	1.005
As left zero	5000	0.0	0.0	0.2	----
As left span	4921	79.2	80.0	80.4	0.995
SO2 Scrubber Check	4921	79.1	791.0	0.1	----
Date of last scrubber change:	11-Apr-24			Ave Corr Factor	1.001
Date of last converter efficiency test:	October 22, 2025				

Notes: Sample inlet filter was changed after the multi-point as founds. SO2 scrubber check passed. No adjustments made.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

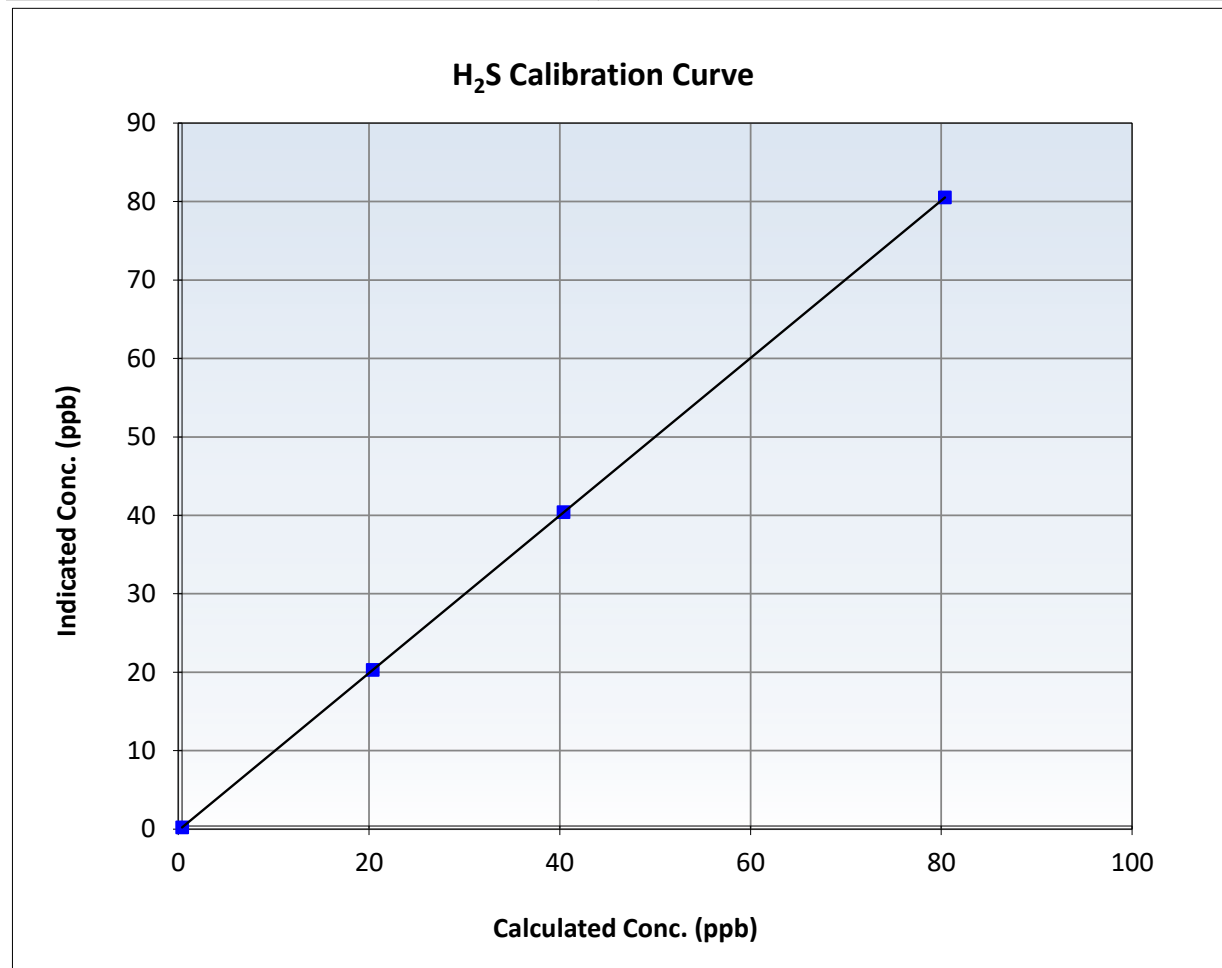
H₂S Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	March 18, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:07	End Time (MST):	15:04
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12333331547

Calibration Data

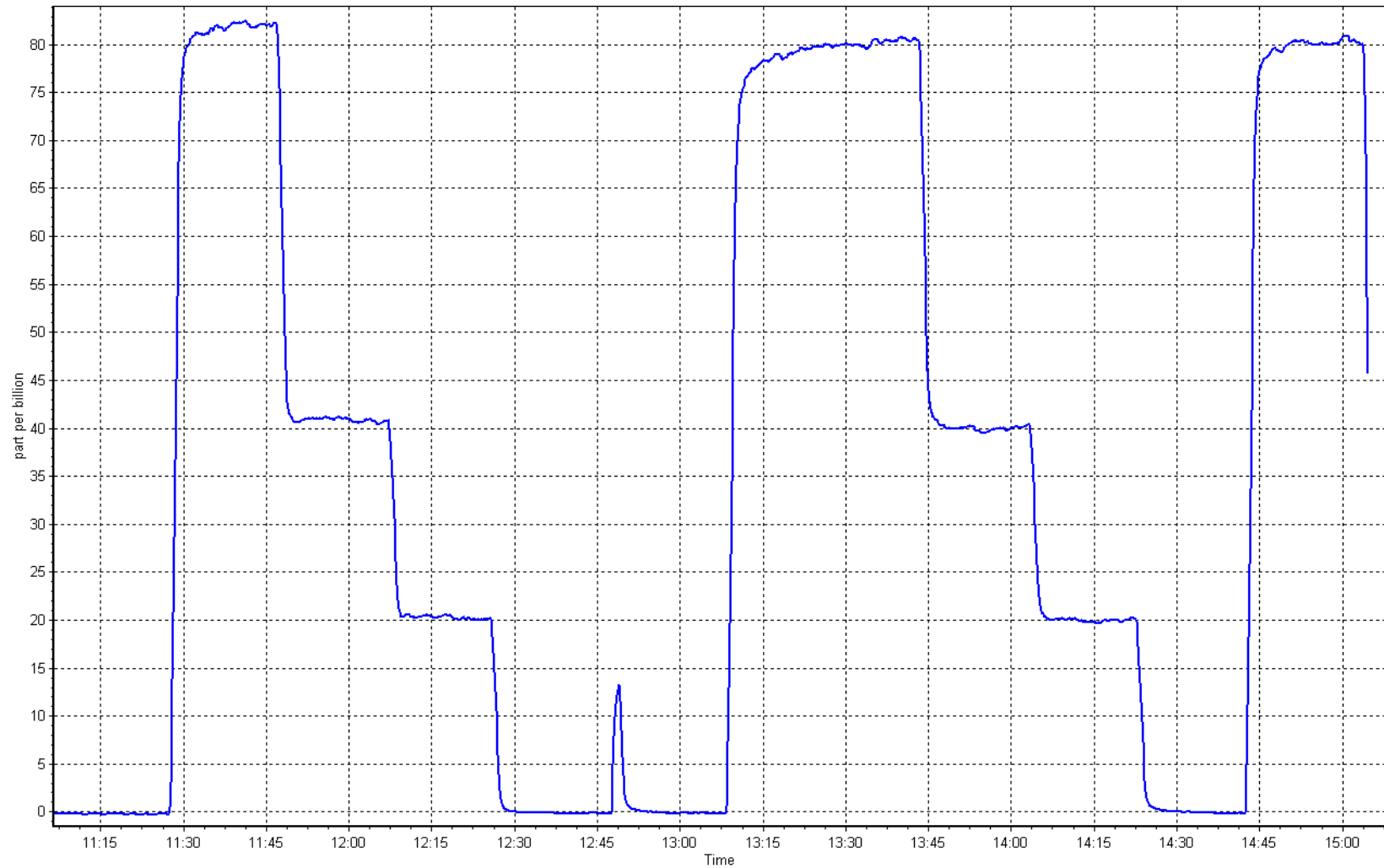
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	1.000000		≥0.995
80.0	80.1	0.9986	Slope	1.003855		0.90 - 1.10
40.0	40.0	1.0000	Intercept	-0.181607		+/-3
20.0	19.9	1.0050				



H2S Calibration Plot

Date: April 27, 2026

Location: Monday Creek





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Monday Creek
Station number: AMS 33
Calibration Date: April 10, 2026
Last Cal Date: March 24, 2026
Start time (MST): 11:33
End time (MST): 15:53
Reason: Routine

Calibration Standards

NO Gas Cylinder #: CC755290
NOX Cal Gas Conc: 48.90 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 48.90 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701H
Cal Gas Expiry Date: March 11, 2031
NO Cal Gas Conc: 48.70 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 48.70 ppm
NO gas Diff:
Serial Number: 3253
Serial Number: 832

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	----	----
AF High point	4918	82.1	802.9	799.6	3.3	805.8	801.5	4.3	0.9963	0.9976
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 808.1 ppb	NO = 807.0 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.3%	
Baseline Corr 1st pt	NO _x = 805.9 ppb	NO = 801.6 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -0.7%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	NO ₂ SI:	NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1170050148

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.005474	1.001318
NO _x Cal Offset:	0.766163	0.926647
NO Cal Slope:	1.009217	1.005401
NO Cal Offset:	0.026305	-0.113382
NO ₂ Cal Slope:	0.995581	0.995968
NO ₂ Cal Offset:	-1.197715	-0.772513

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.675	0.675	NO bkgnd or offset:	1.3	1.3
NOX coeff or slope:	0.985	0.985	NOX bkgnd or offset:	1.4	1.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	160.2	158.7

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
High point	4918	82.1	802.9	799.6	3.3	804.6	804.0	0.5	0.9979	0.9946
Mid point	4959	41.1	401.9	400.3	1.6	403.5	402.0	1.5	0.9962	0.9958
Low point	4980	20.5	200.5	199.7	0.8	202.7	200.7	2.0	0.9890	0.9948
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	----	----
As left span	4918	82.1	802.9	403.0	399.9	804.0	403.0	401.0	0.9987	1.0000
Average Correction Factor									0.9944	0.9950

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.1	----	----
High GPT point	802.1	399.7	405.7	403.7	1.0049	99.5%
Mid GPT point	802.1	603.5	201.9	199.9	1.0099	99.0%
Low GPT point	802.1	703.2	102.2	100.1	1.0208	98.0%
Average Correction Factor					1.0119	98.8%

Notes: The sample inlet filter was changed after the as founds. No adjustments made. Used the 2nd GPT reference point because of drift.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

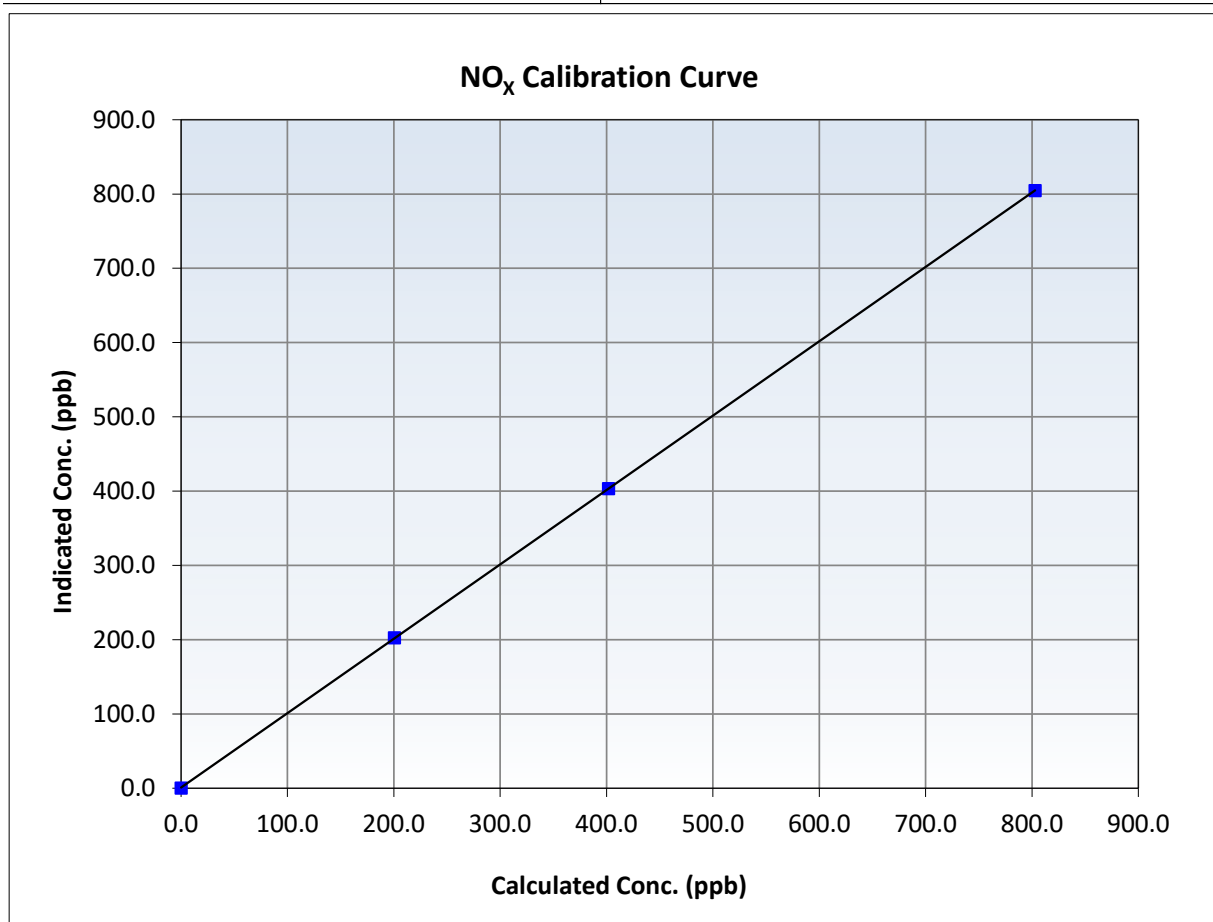
NO_x Calibration Summary

Station Information

Calibration Date:	April 10, 2026	Previous Calibration:	March 24, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:33	End Time (MST):	15:53
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999995	≥0.995
802.9	804.6	0.9979	Slope	1.001318	0.90 - 1.10
401.9	403.5	0.9962	Intercept	0.926647	+/-20
200.5	202.7	0.9890			





Wood Buffalo Environmental Association

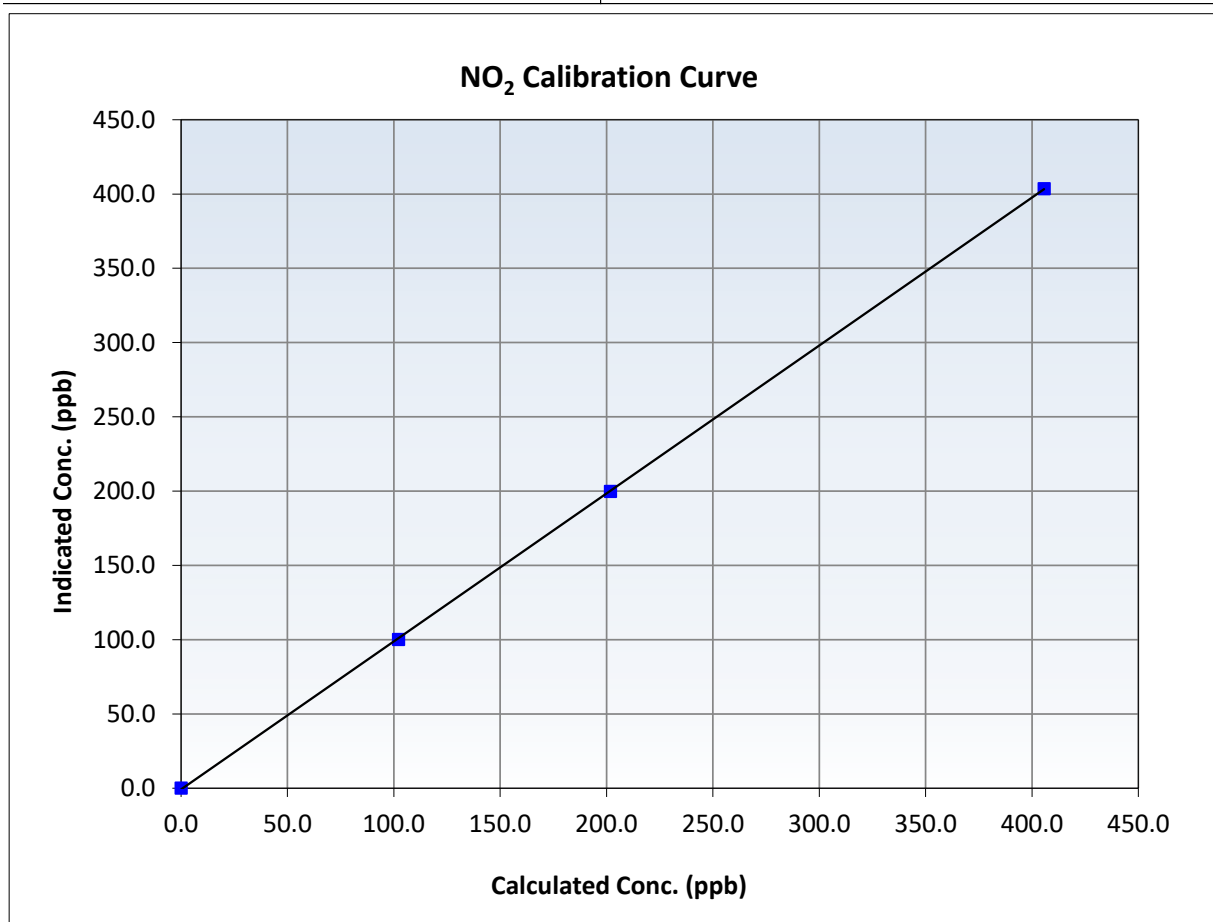
NO₂ Calibration Summary

Station Information

Calibration Date:	April 10, 2026	Previous Calibration:	March 24, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:33	End Time (MST):	15:53
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999979	≥0.995
405.7	403.7	1.0049	Slope	0.995968	0.90 - 1.10
201.9	199.9	1.0099	Intercept	-0.772513	+/-20
102.2	100.1	1.0208			





Wood Buffalo Environmental Association

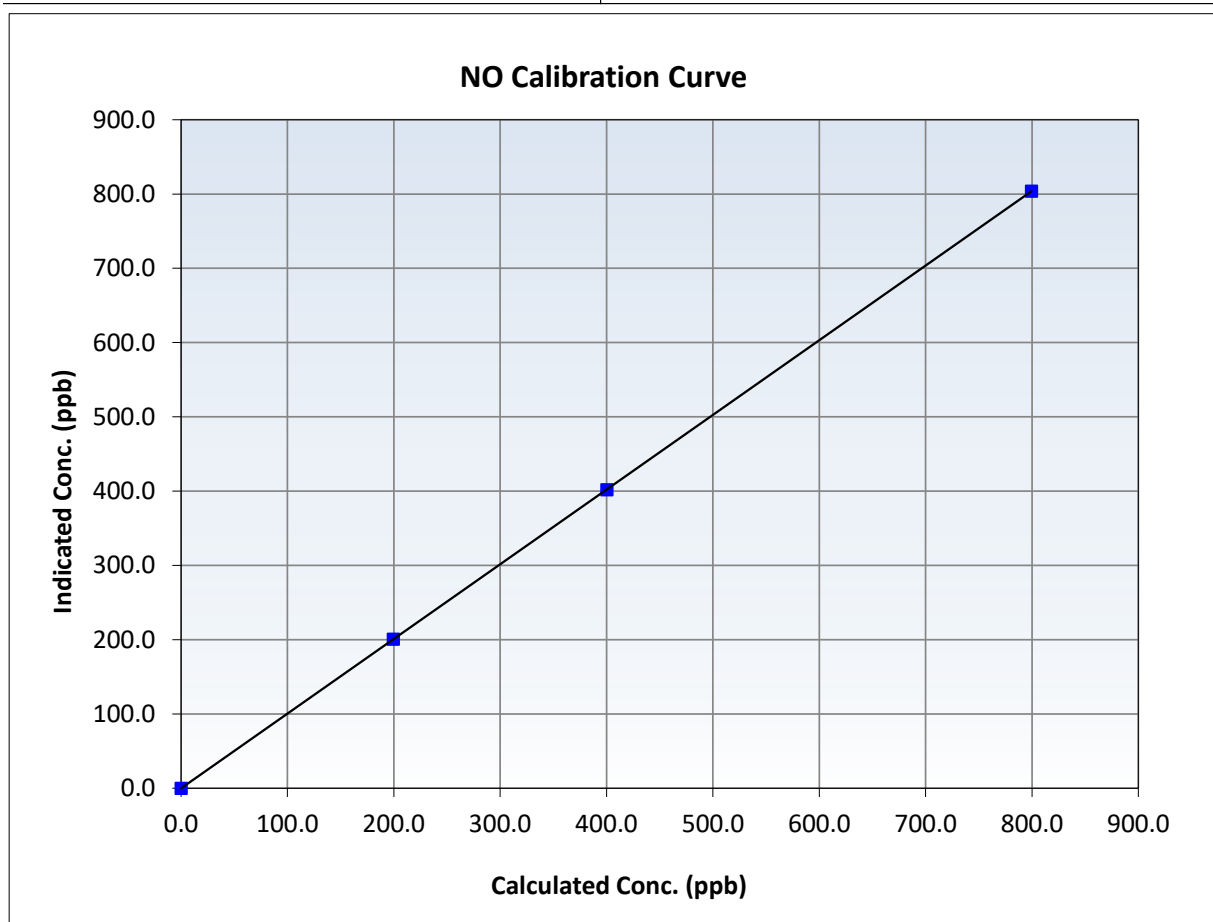
NO Calibration Summary

Station Information

Calibration Date:	April 10, 2026	Previous Calibration:	March 24, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:33	End Time (MST):	15:53
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

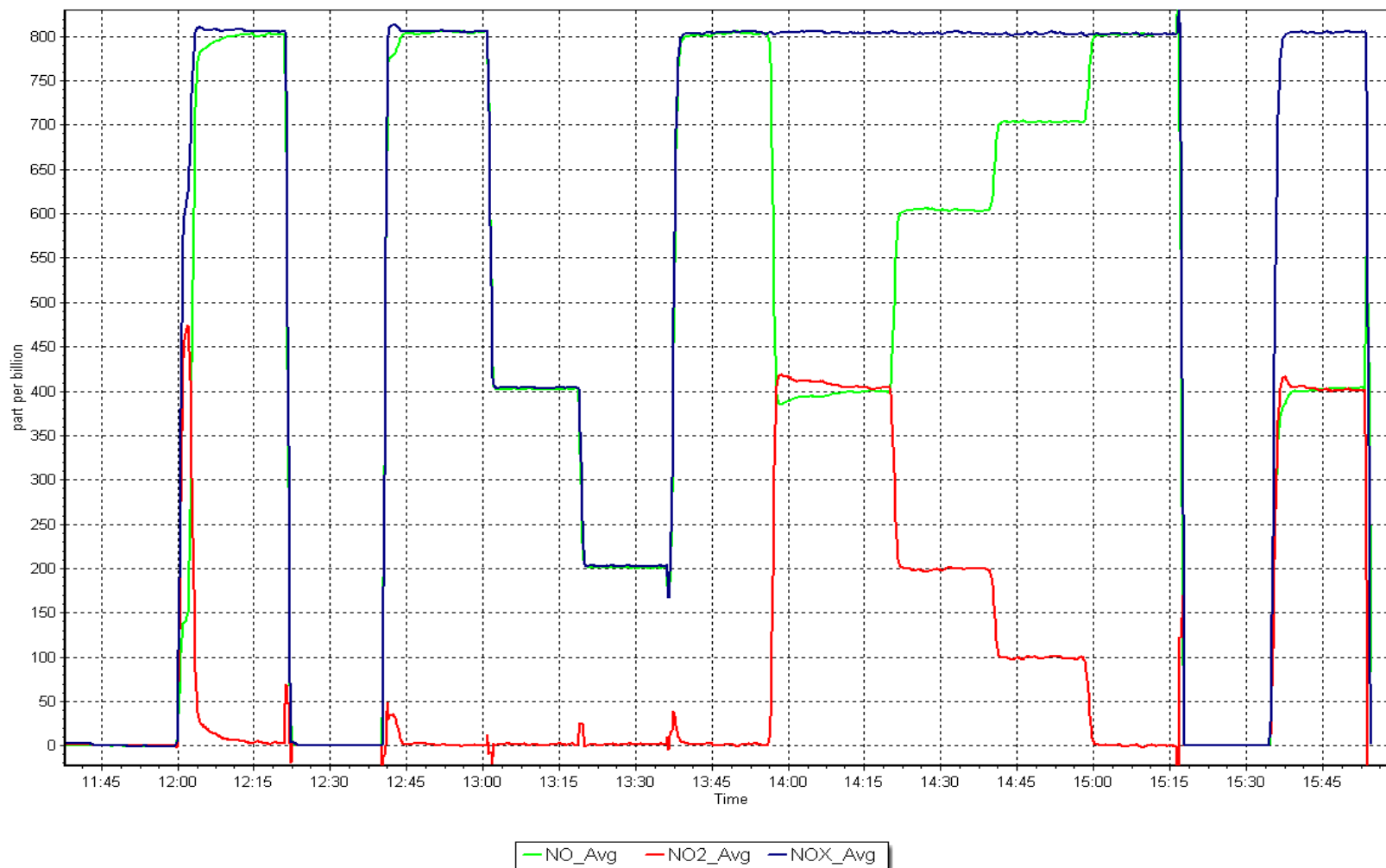
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	1.000000	≥ 0.995
799.6	804.0	0.9946	Slope	1.005401	$0.90 - 1.10$
400.3	402.0	0.9958	Intercept	-0.113382	± 20
199.7	200.7	0.9948			



NO_x Calibration Plot

Date: April 10, 2026

Location: Monday Creek





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS34 HANGINGSTONE EXPANSION APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2025



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Hangingstone Expansion Station number: AMS 34
Calibration Date: April 1, 2026 Last Cal Date:
Start time (MST): 9:08 End time (MST): 12:10
Reason: Install

Calibration Standards

Cal Gas Concentration: 49.37 ppm Cal Gas Exp Date: January 5, 2029
Cal Gas Cylinder #: CC303094
Removed Cal Gas Conc: 49.37 ppm Rem Gas Exp Date:
Removed Gas Cyl #: N/A Diff between cyl:
Calibrator Model: Teledyne API T750 Serial Number: 282
Zero Air Gen Model: Teledyne API 751H Serial Number: 321

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1173410001
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:		1.004543	Backgd or Offset:	15.5	15.5
Calibration intercept:		-1.180492	Coeff or Slope:	1.189	1.189

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	NA	Previous response	NA	*% change	NA
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.5	----
High point	4919	81.0	799.8	802.8	0.996
Mid point	4959	40.5	399.9	400.6	0.998
Low point	4980	20.3	200.4	197.9	1.013
As left zero	5000	0.0	0.0	0.3	----
As left span	4919	81.0	799.8	809.4	0.988
Average Correction Factor:					1.002

Notes: Install Station at new site. As lefts done with station calibrator.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

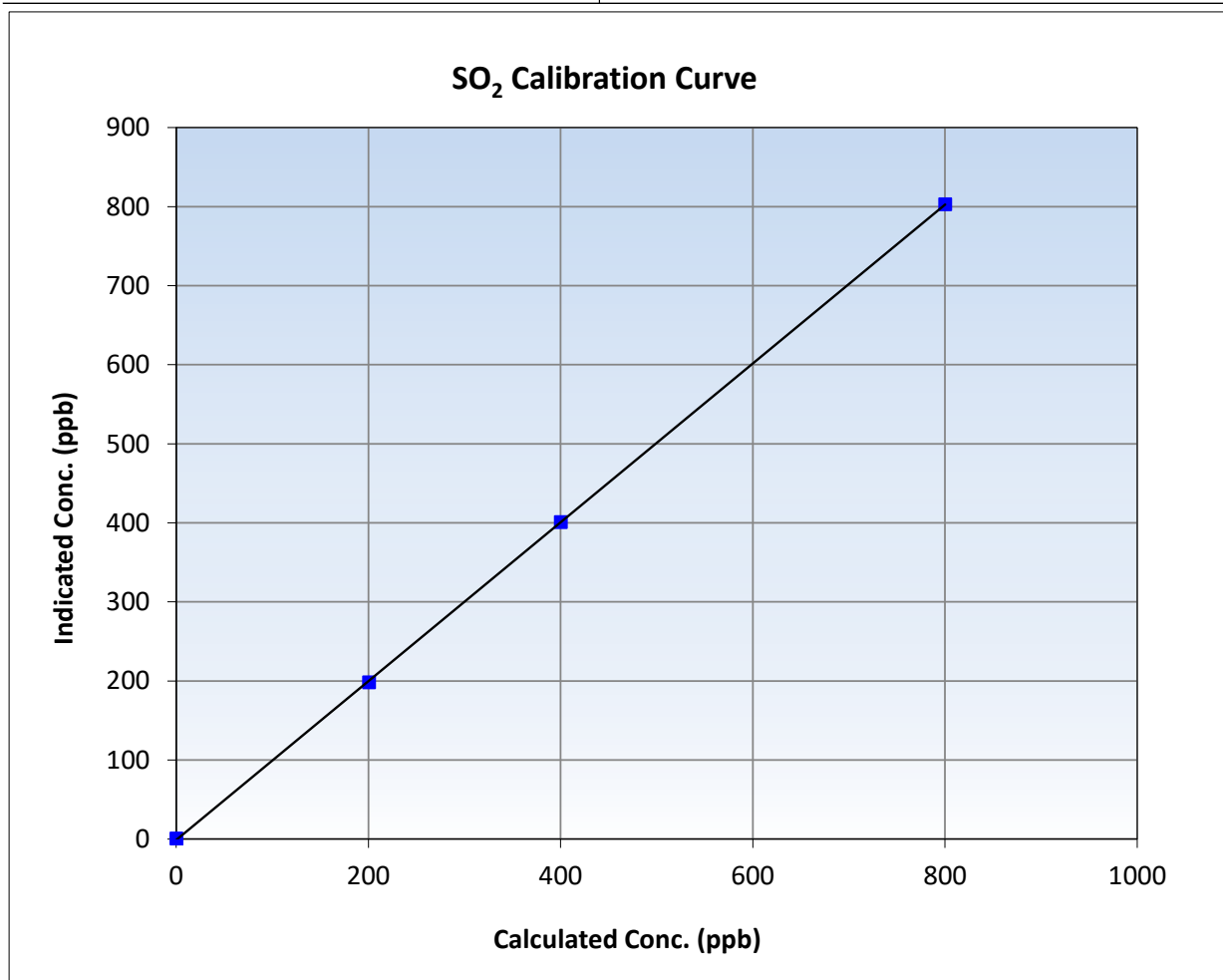
SO₂ Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	9:08	End Time (MST):	12:10
Analyzer make:	Thermo 43i	Analyzer serial #:	1173410001

Calibration Data

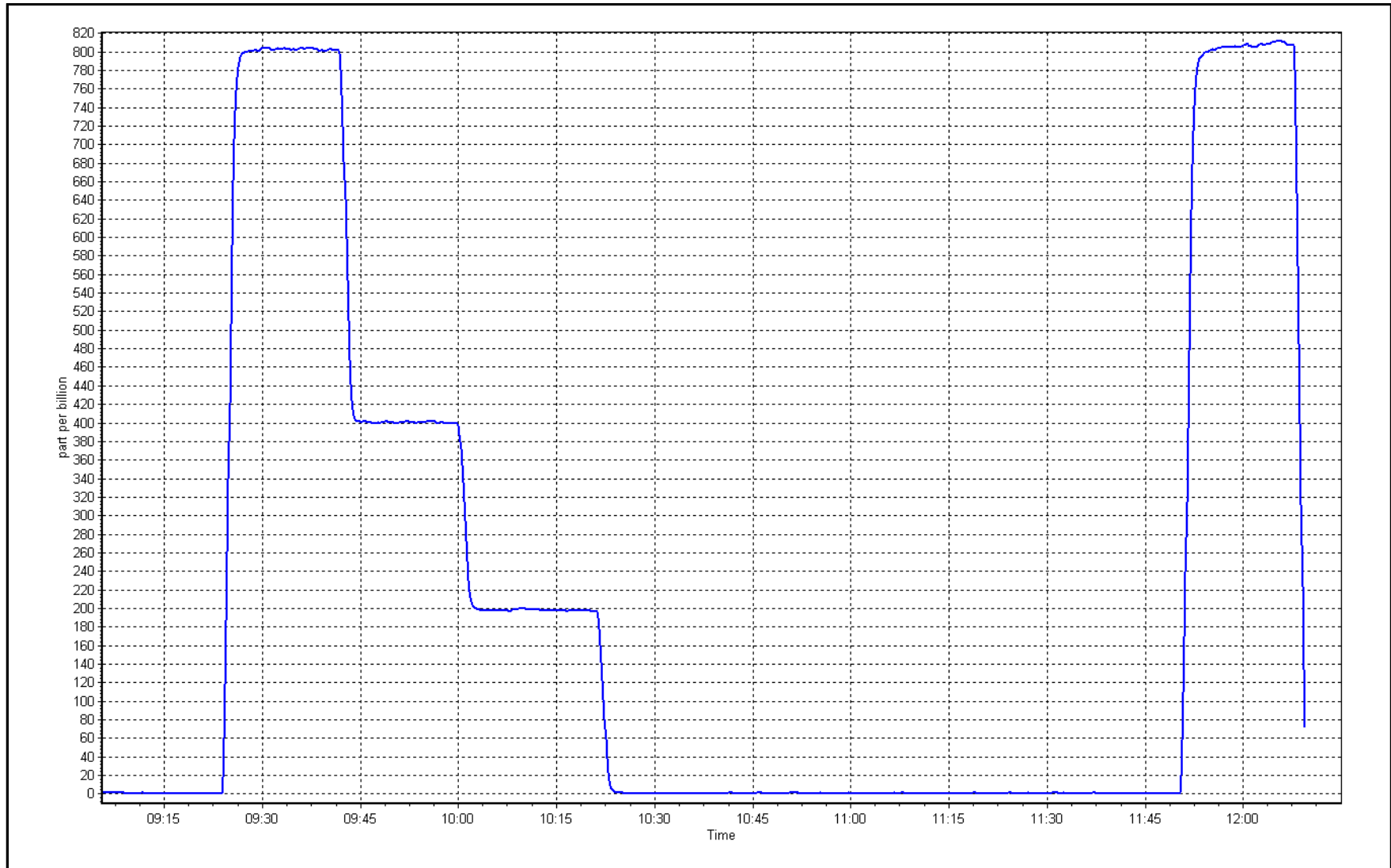
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.5	----	Correlation Coefficient	0.999977	≥0.995
799.8	802.8	0.9963	Slope	1.004543	0.90 - 1.10
399.9	400.6	0.9983	Intercept	-1.180492	+/-30
200.4	197.9	1.0128			



SO2 Calibration Plot

Date: April 1, 2026

Location: Hangingstone Expansion





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Hangingstone Expansion Station number: AMS 34
Calibration Date: April 1, 2026 Last Cal Date:
Start time (MST): 7:19 End time (MST): 11:40
Reason: Install

Calibration Standards

Cal Gas Concentration: 5.139 ppm Cal Gas Exp Date: January 3, 2026
Cal Gas Cylinder #: CC511397
Removed Cal Gas Conc: 5.139 ppm Rem Gas Exp Date: N/A
Removed Gas Cyl #: N/A Diff between cyl:
Calibrator Make/Model: API T750 Serial Number: 282
ZAG Make/Model: API T751H Serial Number: 321

Analyzer Information

Analyzer make: Thermo 43i-TLE Analyzer serial #: 1336160090
Converter make: Global G150 Converter serial #: 2025-299
Analyzer Range: 0 - 100 ppb Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:		1.006350	Backgd or Offset:	4.56
Calibration intercept:		-0.019325	Coeff or Slope:	1.465

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	NA	Prev response:	NA	*% change:	NA
Baseline Corr 2nd AF pt:	NA	AF Slope:	NA	AF Intercept:	NA
Baseline Corr 3rd AF pt:	NA	AF Correlation:	NA	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4922	77.8	80.0	80.5	0.993
Mid point	4961	38.9	40.0	40.2	0.995
Low point	4981	19.5	20.0	20.0	1.002
As left zero	5000	0.0	0.0	0.0	----
As left span	4922	77.8	80.0	80.6	0.992
SO2 Scrubber Check	4919	81.0	810.0	0.1	----
Date of last scrubber change:				Ave Corr Factor	0.997
Date of last converter efficiency test:					

Notes: Install Station at new site. Span adjusted. Sox scrubber checked after third point. As left done with Station Calibrator.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

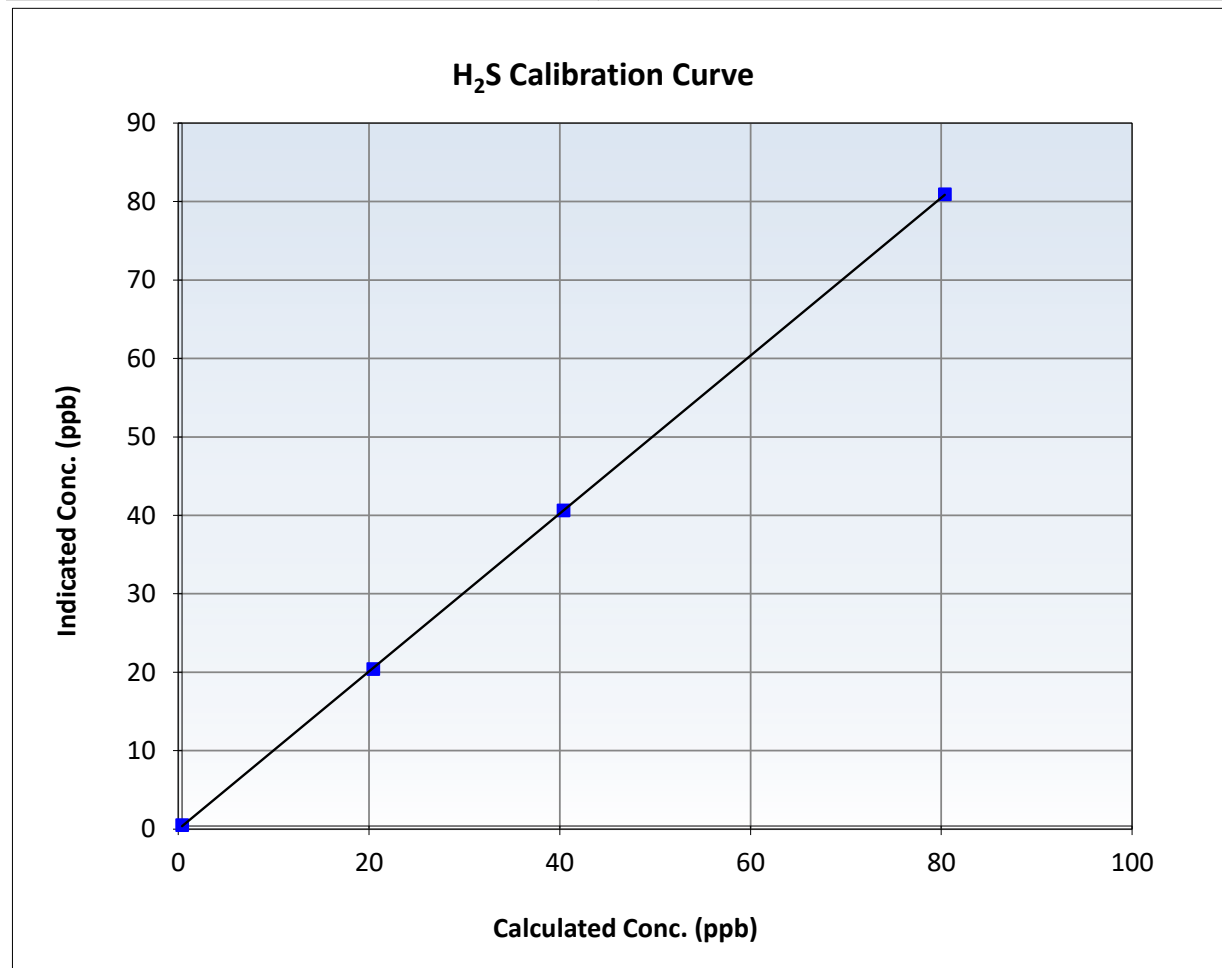
H₂S Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:19	End Time (MST):	11:40
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1336160090

Calibration Data

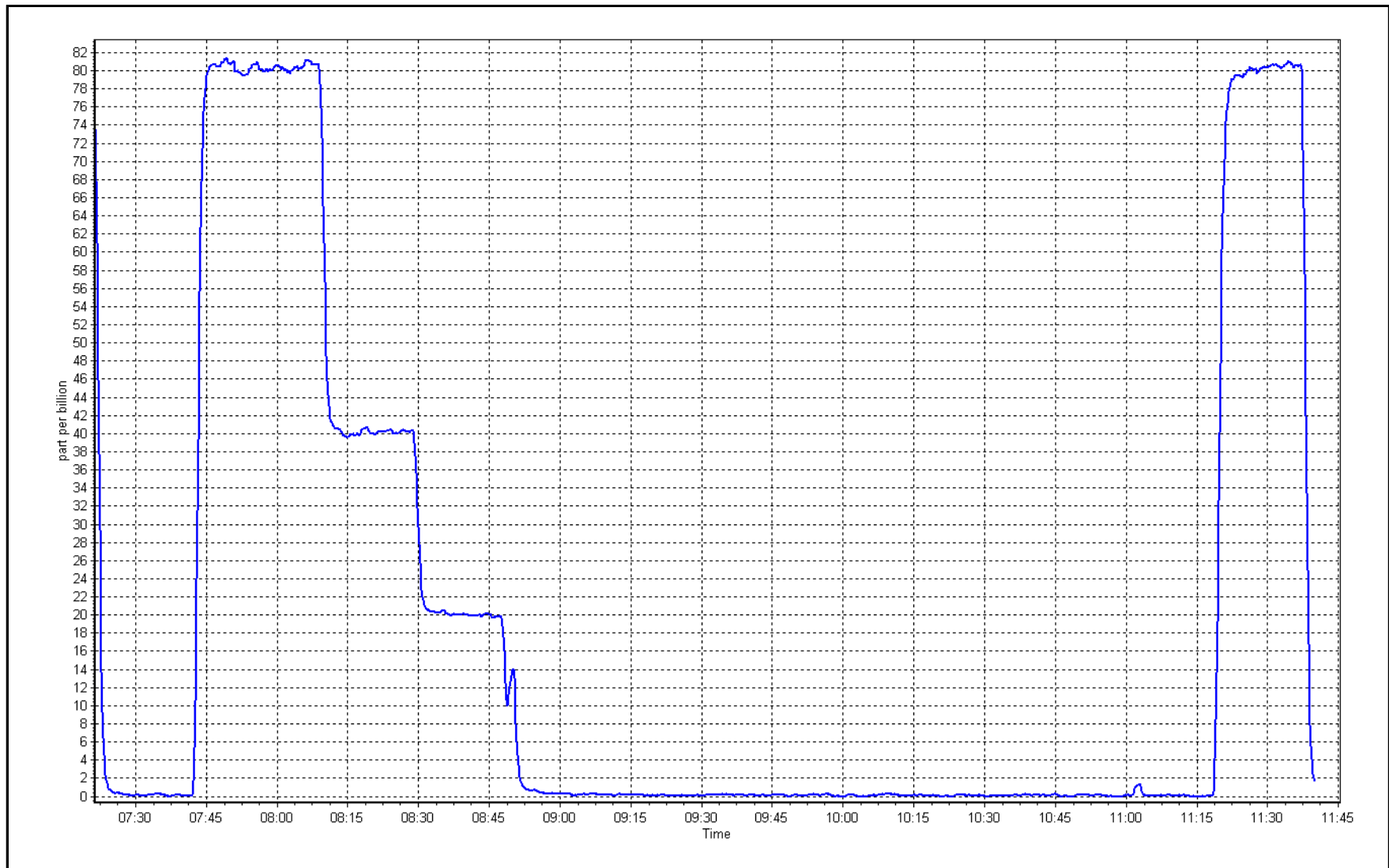
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999989	≥ 0.995
80.0	80.5	0.9934	Slope	1.006350	$0.90 - 1.10$
40.0	40.2	0.9946	Intercept	-0.019325	± 3
20.0	20.0	1.0020			



H₂S Calibration Plot

Date: April 1, 2026

Location: Hangingstone Expansion





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Hangingstone Expansion
Station number: AMS 34
Calibration Date: April 1, 2026
Last Cal Date:
Start time (MST): 7:19
End time (MST): 11:02
Reason: Install

Calibration Standards

NO Gas Cylinder #: T0F8P52
NOX Cal Gas Conc: 47.43 ppm
Removed Cylinder #: N/A
Removed Gas NOX Conc: 47.43 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API 701
Cal Gas Expiry Date: August 16, 2026
NO Cal Gas Conc: 47.43 ppm
Removed Gas Exp Date: N/A
Removed Gas NO Conc: 47.43 ppm
NO gas Diff:
Serial Number: 953
Serial Number: 2659

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>

As found zero
AF High point
AF Mid point
AF Low point
New cyl resp

Previous Response	NO _x = NA	ppb	NO = NA	ppb	* = > +/-5% change initiates investigation	*Percent Change	NO _x = NA
Baseline Corr 1st pt	NO _x = NA	ppb	NO = NA	ppb	<u>As Found Statistics</u>	*Percent Change	NO = NA
Baseline Corr 2nd pt	NO _x = NA	ppb	NO = NA	ppb	As found NO _x r ² :	Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA	ppb	NO = NA	ppb	As found NO r ² :	NO SI:	NO Int:
					As found NO ₂ r ² :	NO2 SI:	NO ₂ Int:

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>

As Found GPT zero
As found high GPT point
As found mid GPT point
As found low GPT point



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Teledyne API T200
NOX Range (ppb): 0-1000

Serial Number: 7029

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.129	1.204	NO bkgnd or offset:	0.2	0.2
NOX coeff or slope:	1.126	1.199	NOX bkgnd or offset:	0.4	0.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	9.3	9.3

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:		1.001294
NO _x Cal Offset:		-1.547988
NO Cal Slope:		0.999567
NO Cal Offset:		-1.867969
NO ₂ Cal Slope:		0.989746
NO ₂ Cal Offset:		-1.201670

Dilution Calibration Data

Set Point	Dilution flow rate (scm)	Source gas flow rate (scm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	----	----
High point	4915	84.4	800.7	800.7	0.0	801.0	799.4	1.6	0.9996	1.0016
Mid point	4957	42.2	400.4	400.4	0.0	398.4	397.4	0.9	1.0050	1.0075
Low point	4978	21.1	200.2	200.2	0.0	197.6	196.5	1.1	1.0131	1.0188
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
As left span	4915	84.4	800.7	375.6	425.1	787.5	375.6	411.9	1.0168	1.0000
Average Correction Factor									1.0059	1.0093

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	796.5	382.5	414.0	409.3	1.0115	98.9%
Mid GPT point	796.5	581.8	214.7	210.3	1.0209	98.0%
Low GPT point	796.5	684.7	111.8	108.6	1.0295	97.1%
Average Correction Factor					1.0206	98.0%

Notes:

Install New Station Location. Span adjusted.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

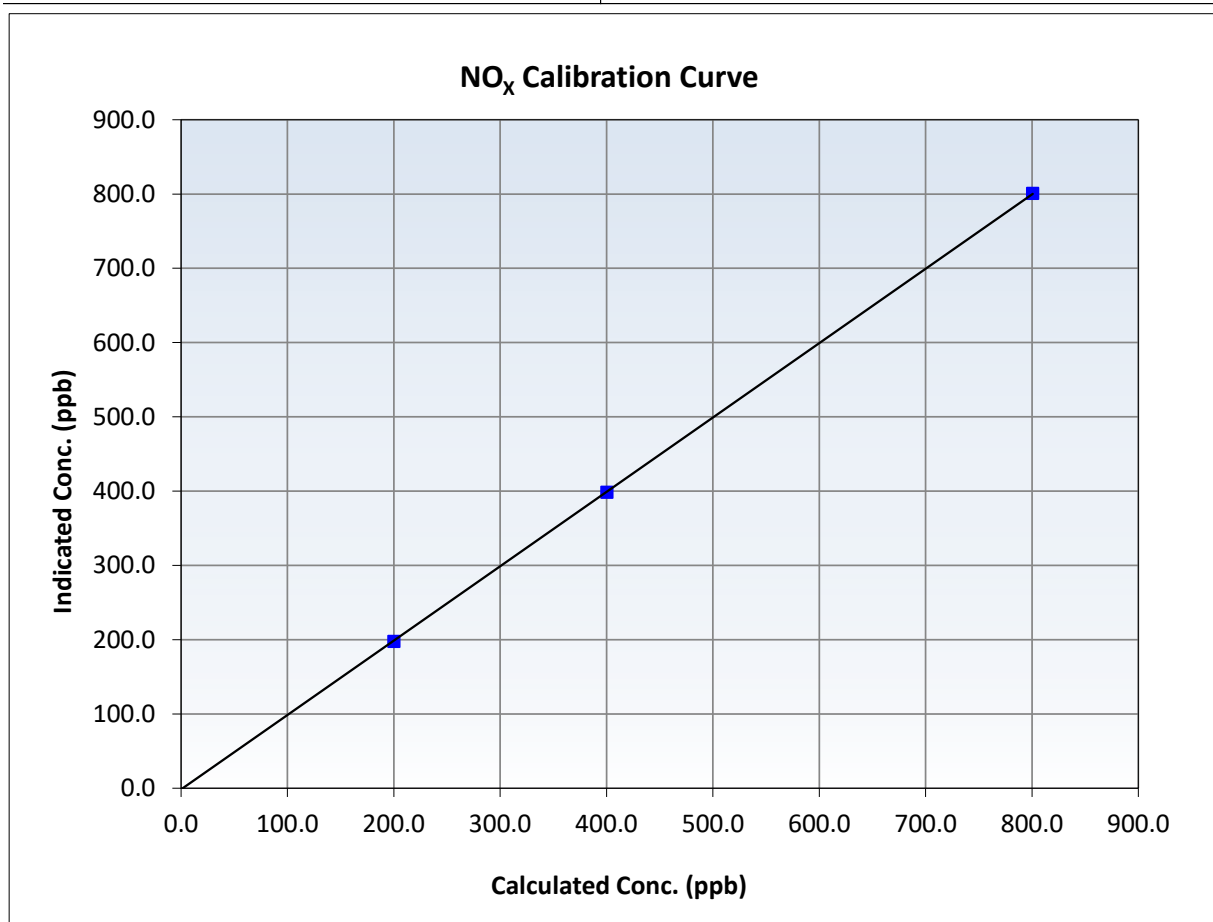
NO_x Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:19	End Time (MST):	11:02
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999985	≥ 0.995
800.7	801.0	0.9996	Slope	1.001294	0.90 - 1.10
400.4	398.4	1.0050	Intercept	-1.547988	+/-20
200.2	197.6	1.0131			





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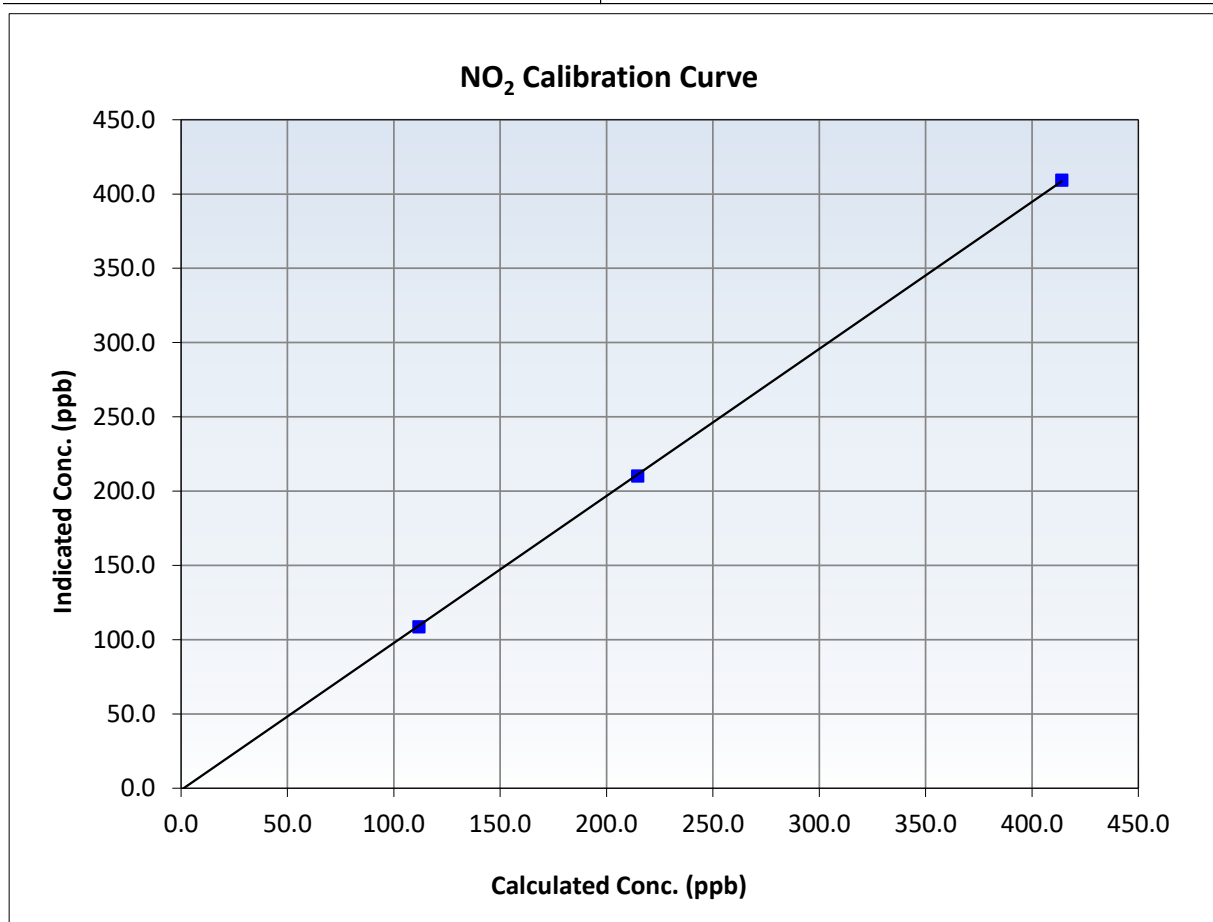
NO₂ Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:19	End Time (MST):	11:02
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999962	≥0.995
414.0	409.3	1.0115	Slope	0.989746	0.90 - 1.10
214.7	210.3	1.0209	Intercept	-1.201670	+/-20
111.8	108.6	1.0295			





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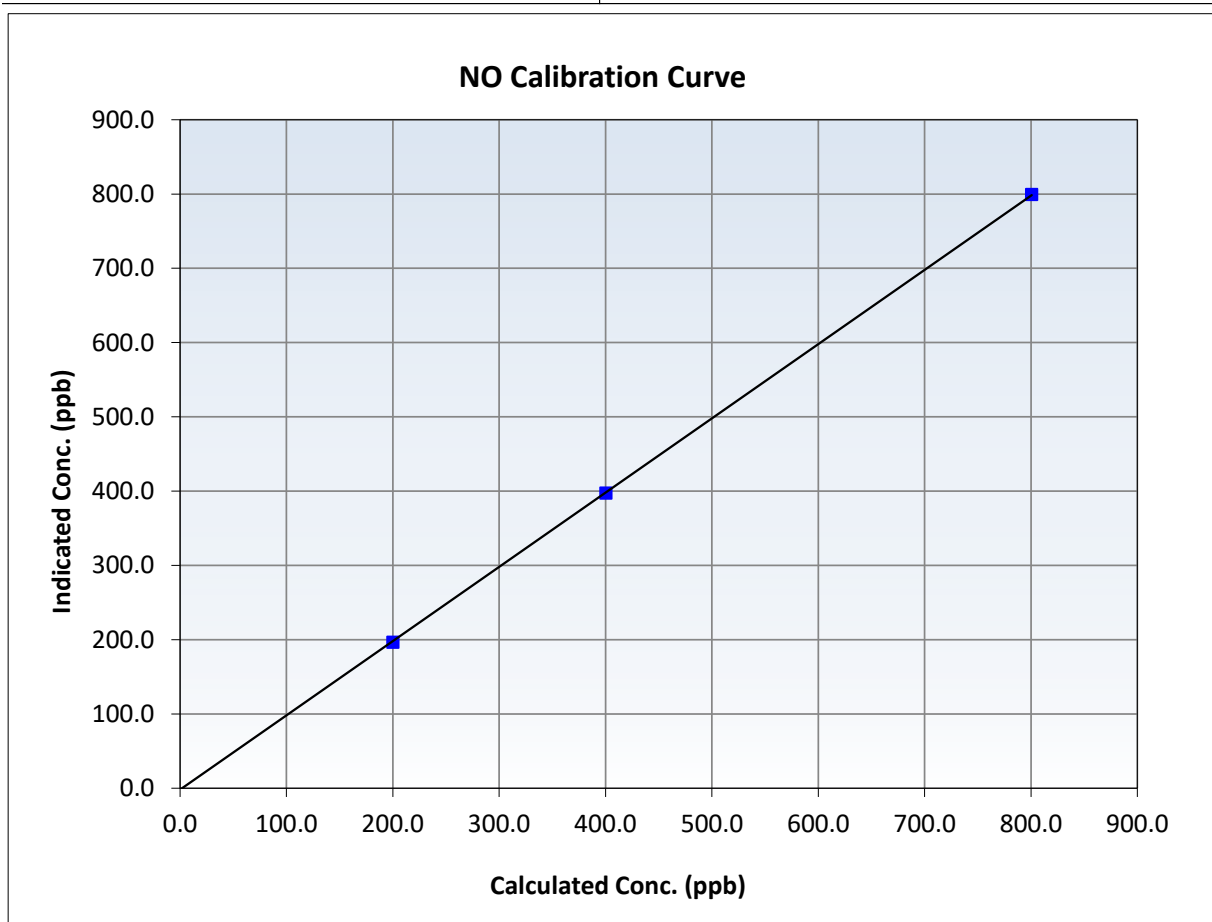
NO Calibration Summary

Station Information

Calibration Date:	April 1, 2026	Previous Calibration:	
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:19	End Time (MST):	11:02
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

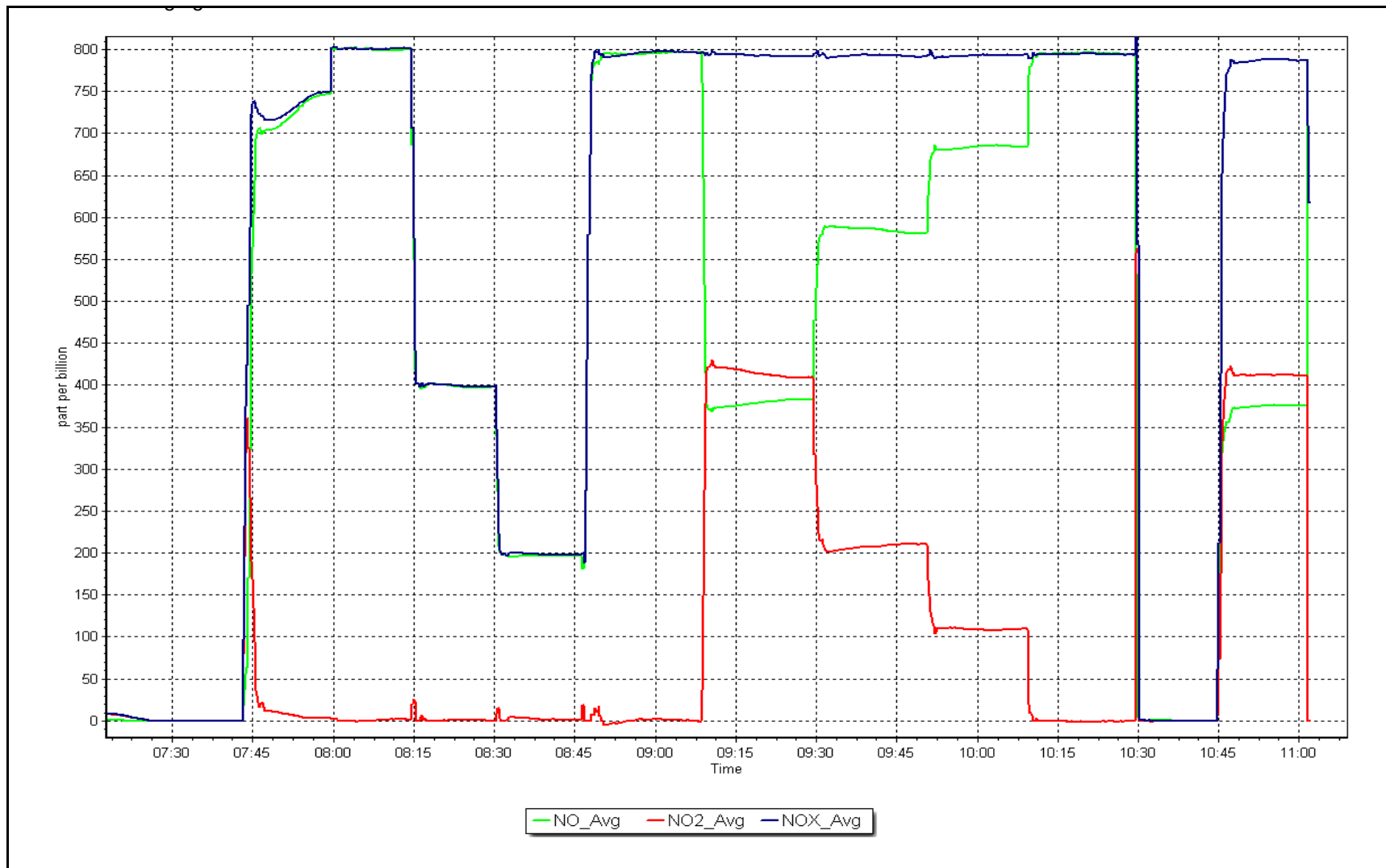
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	-0.1	----	Correlation Coefficient	0.999978	≥ 0.995
800.7	799.4	1.0016	Slope	0.999567	0.90 - 1.10
400.4	397.4	1.0075	Intercept	-1.867969	+/-20
200.2	196.5	1.0188			



NO_x Calibration Plot

Date: April 1, 2026

Location: Hangingstone Expansion





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Hangingstone Expansion
Station number: AMS 34
Calibration Date: April 27, 2026
Last Cal Date: April 1, 2026
Start time (MST): 9:35
End time (MST): 13:50
Reason: Maintenance

Calibration Standards

NO Gas Cylinder #: T0F8P52
NOX Cal Gas Conc: 47.43 ppm
Removed Cylinder #: N/A
Removed Gas NOX Conc: 47.43 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API 701
Cal Gas Expiry Date: August 16, 2026
NO Cal Gas Conc: 47.43 ppm
Removed Gas Exp Date: N/A
Removed Gas NO Conc: 47.43 ppm
NO gas Diff:
Serial Number: 953
Serial Number: 2659

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.4	-0.3	-0.1	----	----
AF High point	4920	80.0	758.9	758.9	0.0	282.3	283.8	-1.4	2.6844	2.6712
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 758.3 ppb	NO = 756.7 ppb	* = > +/-5% change initiates investigation			*Percent Change	NO _x = -62.7%			
Baseline Corr 1st pt	NO _x = 282.7 ppb	NO = 284.1 ppb	<u>As Found Statistics</u>			*Percent Change	NO = -62.5%			
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb	As found NO _x r ² :			Nx SI:	Nx Int:			
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb	As found NO r ² :			NO SI:	NO Int:			
			As found NO ₂ r ² :			NO ₂ SI:	NO ₂ Int:			

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Teledyne API T200
NOX Range (ppb): 0-1000

Serial Number: 7029

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.204	1.077	NO bkgnd or offset:	0.2	0.2
NOX coeff or slope:	1.199	1.073	NOX bkgnd or offset:	0.4	0.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	12.9	4.6

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.001294	1.006076
NO _x Cal Offset:	-1.547988	-1.248040
NO Cal Slope:	0.999567	1.004306
NO Cal Offset:	-1.867969	-1.428019
NO ₂ Cal Slope:	0.989746	0.999839
NO ₂ Cal Offset:	-1.201670	0.154829

Dilution Calibration Data

Set Point	Dilution flow rate (scm)	Source gas flow rate (scm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	----	----
High point	4915	84.4	800.7	800.7	0.0	804.7	803.3	1.6	0.9950	0.9968
Mid point	4957	42.2	400.4	400.4	0.0	401.5	400.3	1.2	0.9972	1.0002
Low point	4978	21.1	200.2	200.2	0.0	198.8	198.1	0.7	1.0070	1.0106
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	----	----
As left span	4915	84.4	800.7	382.1	418.6	796.5	382.1	414.5	1.0053	1.0000
Average Correction Factor									0.9997	1.0025

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	802.2	385.7	416.5	416.4	1.0002	100.0%
Mid GPT point	802.2	587.1	215.1	215.5	0.9981	100.2%
Low GPT point	802.2	691.2	111.0	111.3	0.9973	100.3%
Average Correction Factor					0.9986	100.1%

Notes:

Daily span was reported low, analyzer flow was the same but sample pressure dropped from 9.3 to 12.9 "Hg. Performed as found using portable calibrator SN 422 to validate output from site calibration system. Replaced pump.

Calibration Performed By:

Kelly Baragar



Wood Buffalo Environmental Association

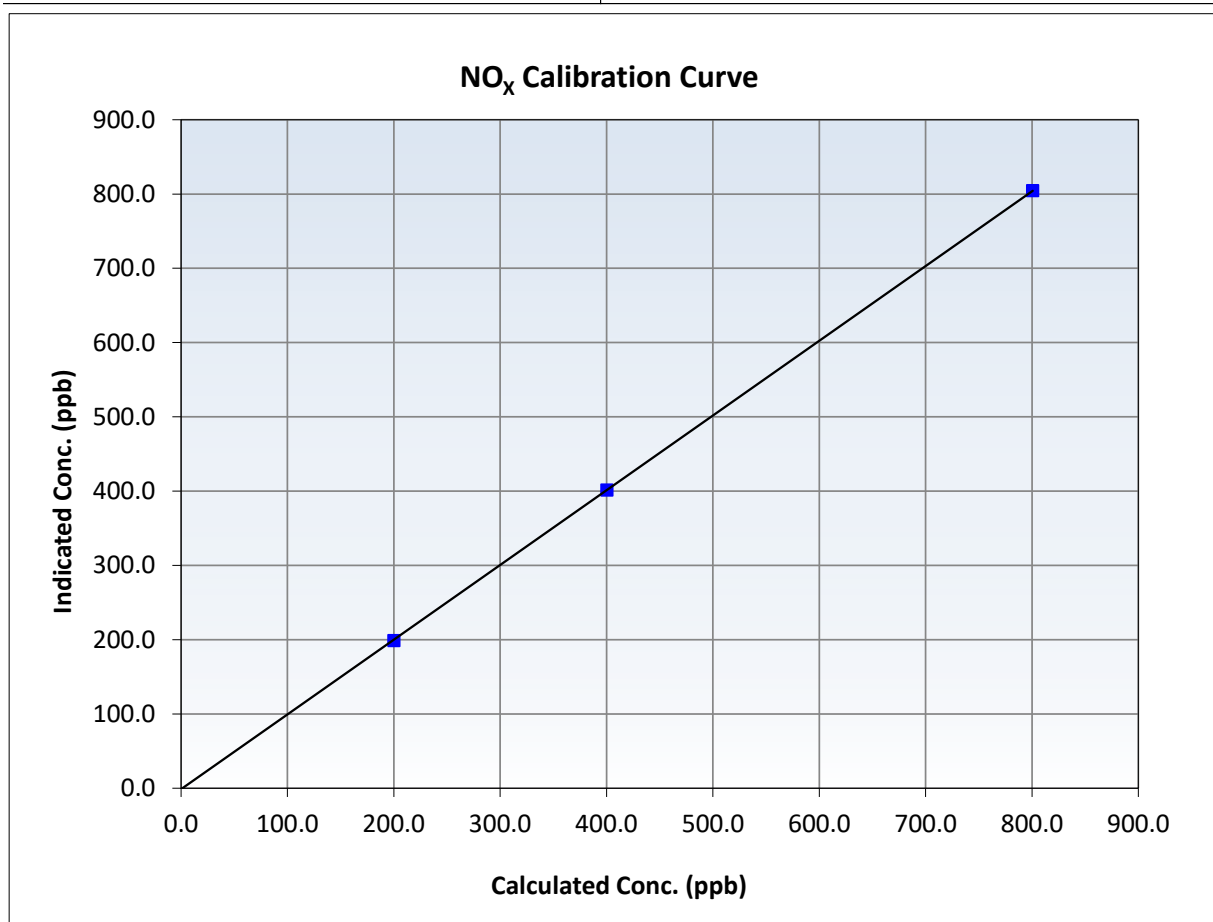
NO_x Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	April 1, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	9:35	End Time (MST):	13:50
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999991	≥0.995
800.7	804.7	0.9950	Slope	1.006076	0.90 - 1.10
400.4	401.5	0.9972	Intercept	-1.248040	+/-20
200.2	198.8	1.0070			





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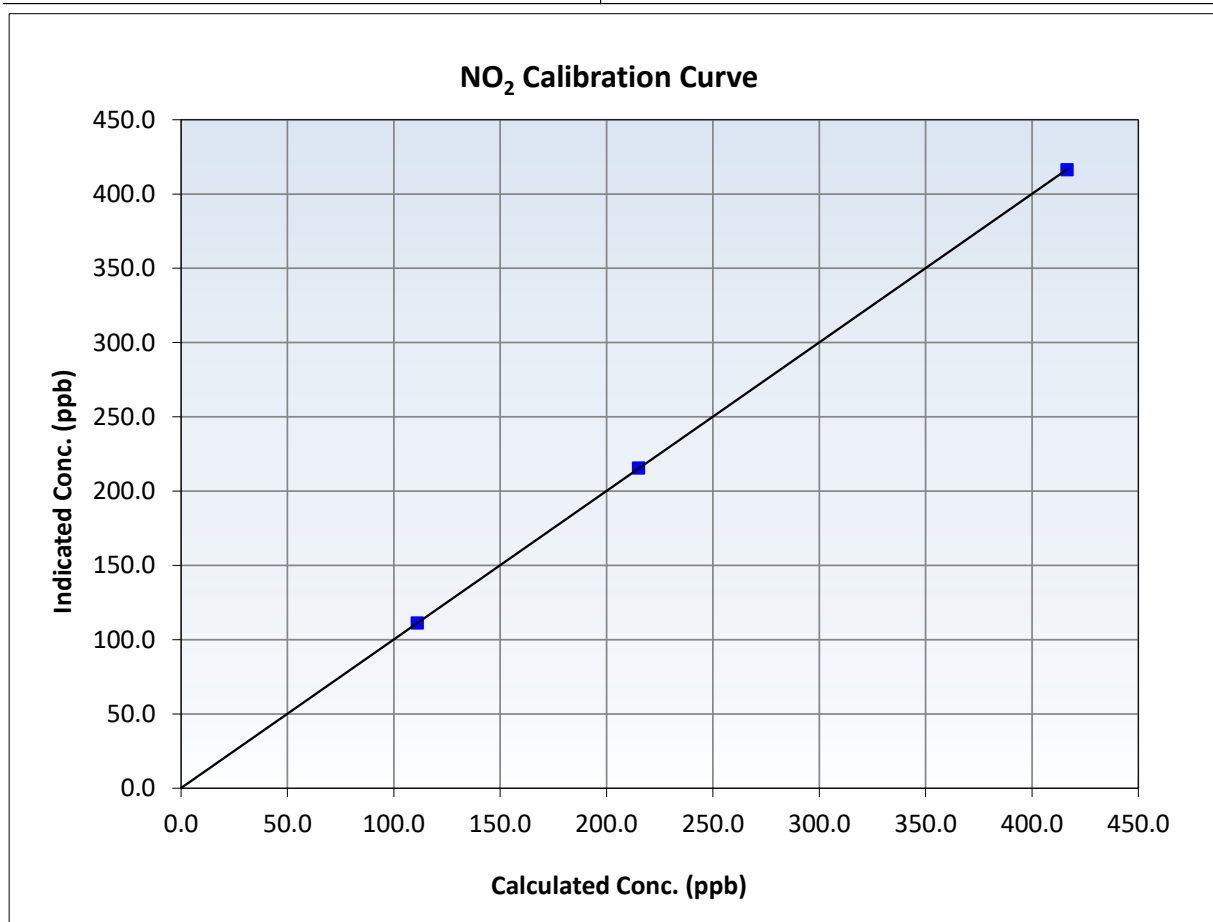
NO₂ Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	April 1, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	9:35	End Time (MST):	13:50
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999998	≥ 0.995
416.5	416.4	1.0002	Slope	0.999839	$0.90 - 1.10$
215.1	215.5	0.9981	Intercept	0.154829	± 20
111.0	111.3	0.9973			





Wood Buffalo Environmental Association

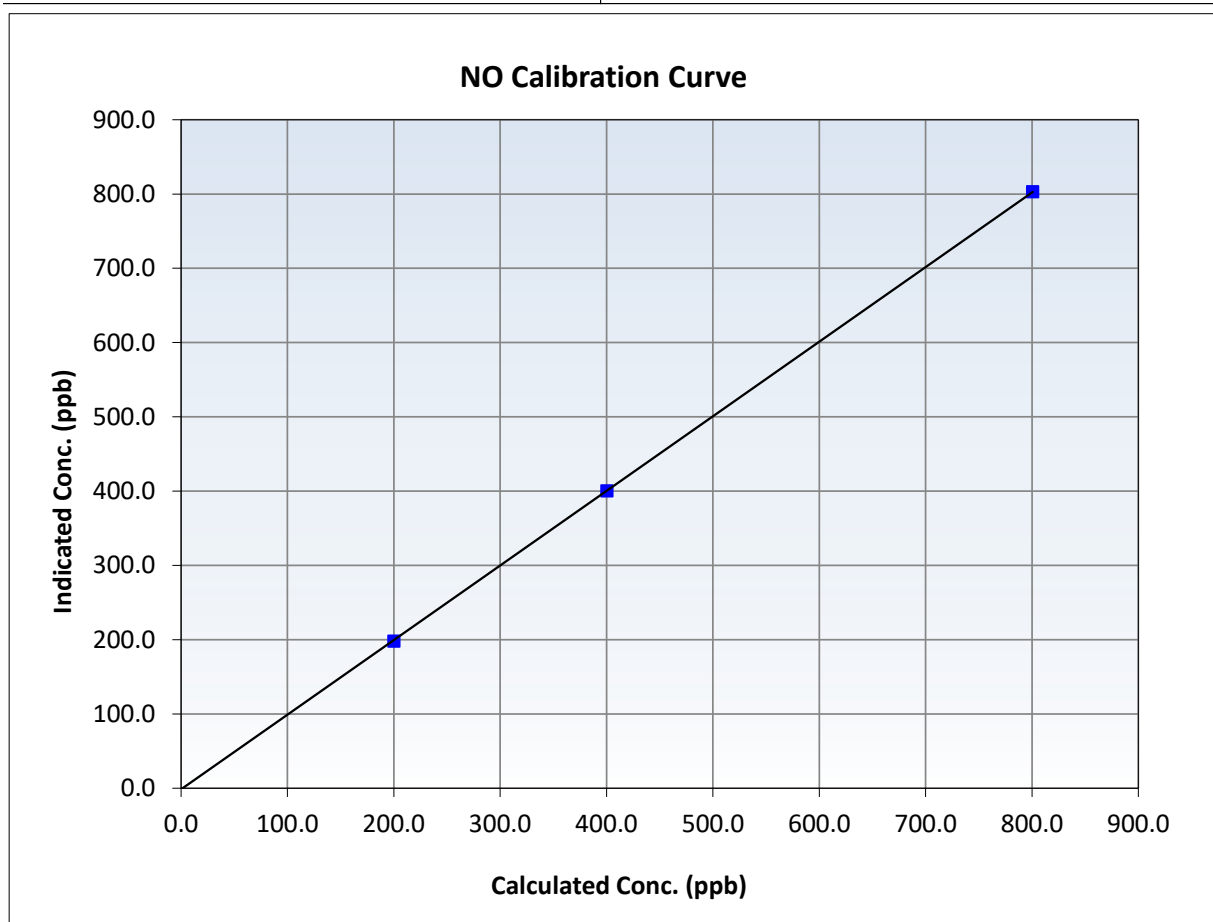
NO Calibration Summary

Station Information

Calibration Date:	April 27, 2026	Previous Calibration:	April 1, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	9:35	End Time (MST):	13:50
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

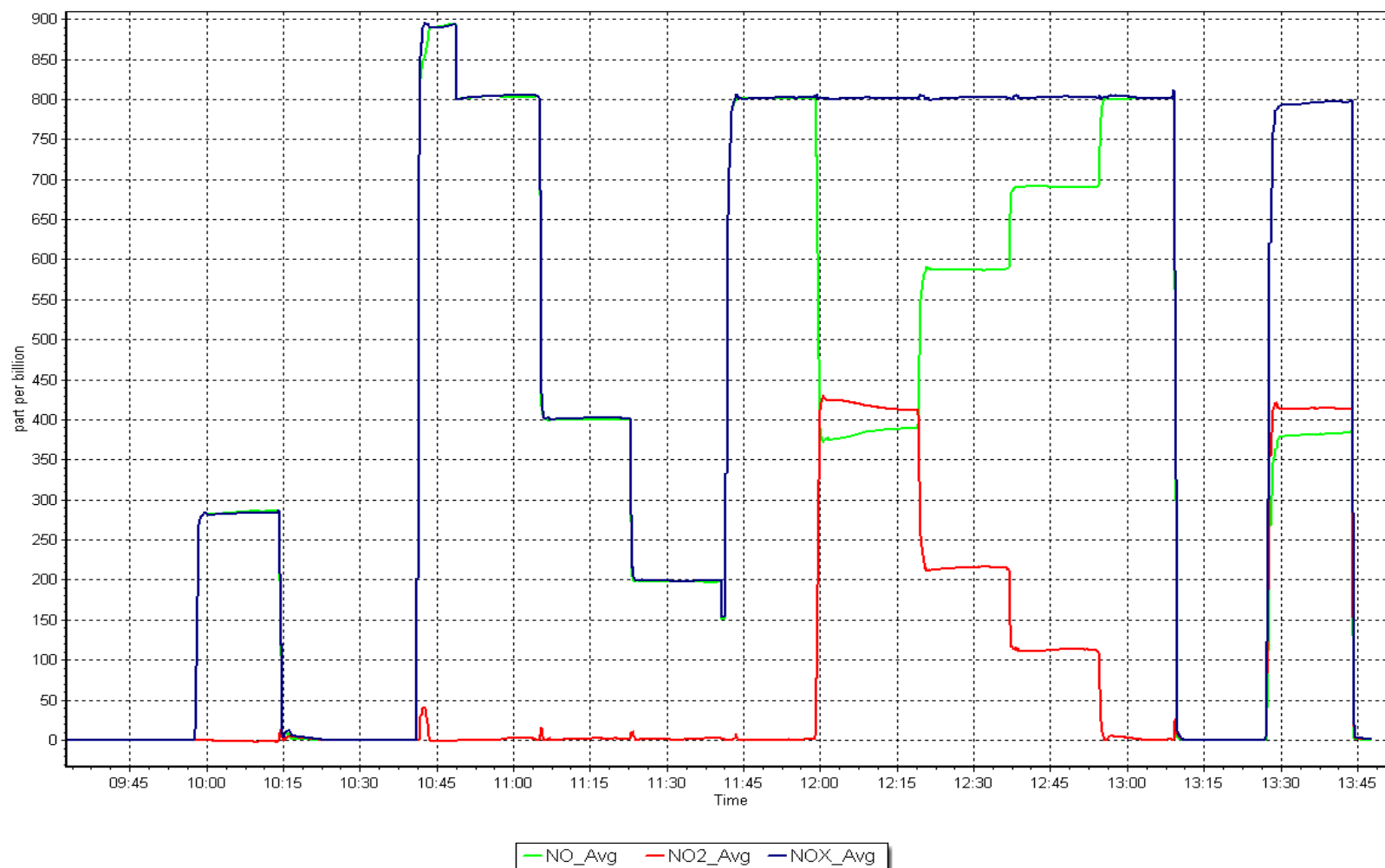
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999987	≥ 0.995
800.7	803.3	0.9968	Slope	1.004306	$0.90 - 1.10$
400.4	400.3	1.0002	Intercept	-1.428019	± 20
200.2	198.1	1.0106			



NO_x Calibration Plot

Date: April 27, 2026

Location: Hangingstone Expansion





Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Calibration Date:	April 1, 2026	Prev Cal Date:	September 26, 2025
Start Time (MST):	9:26	End Time (MST):	10:00
Tower Height (m):	10.0	Reason:	Install

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	B10017
WS Calibrator:	MetOne 053	Serial Number:	R10866

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.4	0.1%
600	58.6	58.7	0.2%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999999	0.999998	≥ 0.9995
Calculated slope	0.998949	0.998443	$0.98 - 1.02$
Calculated intercept	-0.013169	0.026636	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	D13603
As Found Declination (deg east of True North):	<u>N/A</u>	As Left Declination (deg east of True North):	<u>14</u>
Solar noon (MST):		Calc Declination*:	Degrees
WD Calibrator:	Met One 040		* - calculated declination as per NOAA website

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	10.3	0.1%
90	89.8	-0.1%
180	179.7	-0.1%
270	271.3	0.4%
350	349.4	-0.2%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999968	0.999985	≥ 0.9995
Calculated slope	0.990632	1.000213	$0.97 - 1.03$
Calculated intercept	0.873846	-0.138423	± 5

Notes: Install Station at new site.

Calibration Performed By: Melissa Lemay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS505 SAWBONES BAY APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Sawbones Bay Station number: AMS 505
Calibration Date: April 17, 2026 Last Cal Date: March 20, 2026
Start time (MST): 10:18 End time (MST): 14:31
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.05 ppm Cal Gas Exp Date: April 9, 2033
Cal Gas Cylinder #: EB0063977
Removed Cal Gas Conc: 50.05 ppm Rem Gas Exp Date:
Removed Gas Cyl #: EB0063977 Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 3807
Zero Air Gen Model: Teledyne API T701H Serial Number: 690

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 0710321323
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.997685	1.001249	Backgd or Offset:	22.4	22.7
Calibration intercept:	-0.274881	0.404080	Coeff or Slope:	1.101	1.111

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4920	79.8	798.8	795.0	1.005
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	795.1	Previous response	796.7	*% change	-0.2%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4920	79.8	798.8	800.1	0.998
Mid point	4960	39.9	399.4	400.3	0.998
Low point	4980	20.0	200.2	201.4	0.994
As left zero	5000	0.0	0.0	0.0	----
As left span	4920	79.8	798.8	803.0	0.995
Average Correction Factor:					0.997

Notes: Changed inlet filter after as founds. Adjusted zero and span.

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

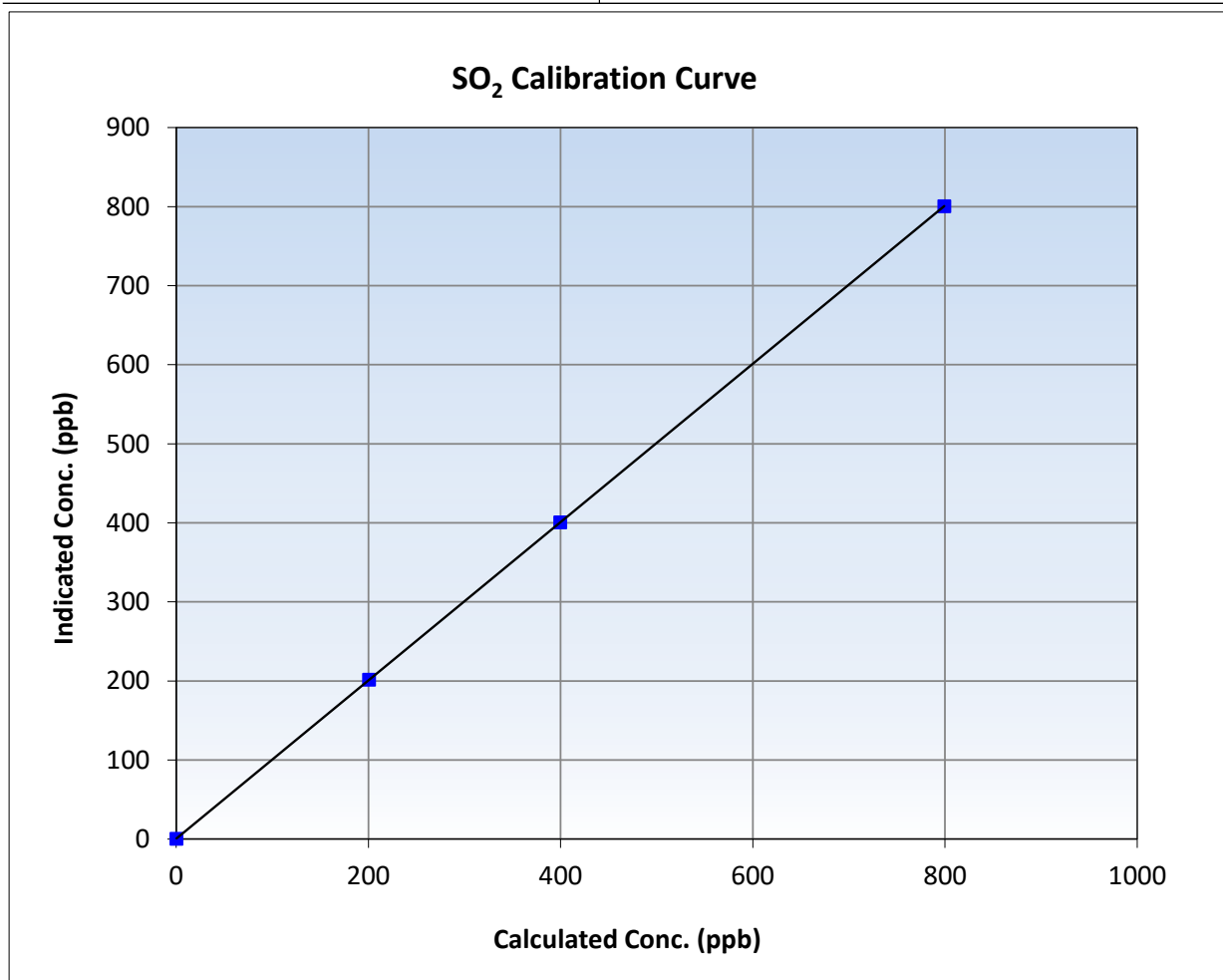
SO₂ Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 20, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:18	End Time (MST):	14:31
Analyzer make:	Thermo 43i	Analyzer serial #:	0710321323

Calibration Data

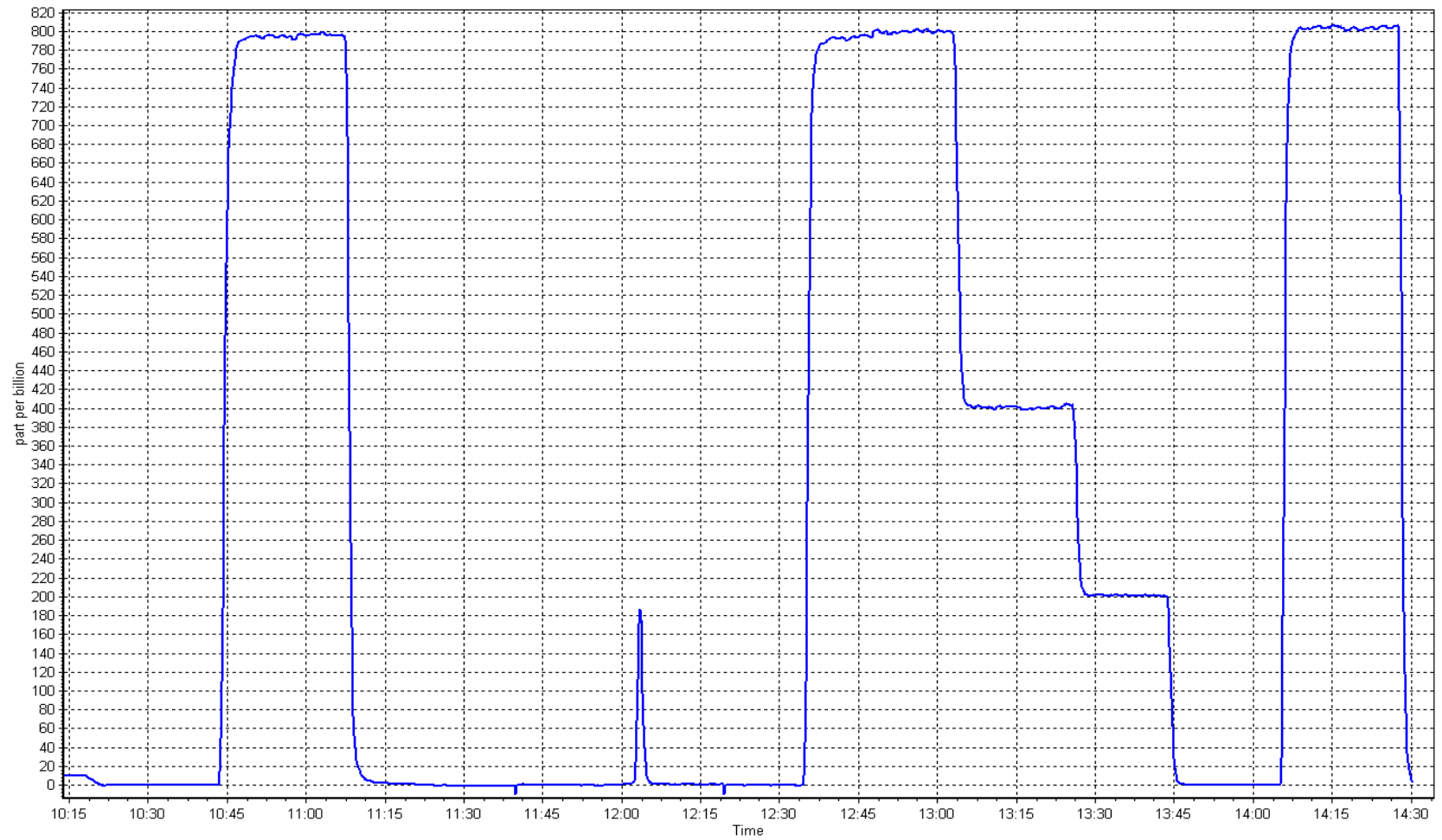
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999999	≥0.995
798.8	800.1	0.9984	Slope	1.001249	0.90 - 1.10
399.4	400.3	0.9978	Intercept	0.404080	+/-30
200.2	201.4	0.9940			



SO2 Calibration Plot

Date: April 17, 2026

Location: Sawbones Bay





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Sawbones Bay Station number: AMS 505
Calibration Date: April 16, 2026 Last Cal Date: March 24, 2026
Start time (MST): 10:48 End time (MST): 16:55
Reason: Routine

Calibration Standards

Cal Gas Concentration: 5.26 ppm Cal Gas Exp Date: March 19, 2027
Cal Gas Cylinder #: DT0034141
Removed Cal Gas Conc: 5.26 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T750 Serial Number: 281
ZAG Make/Model: Teledyne API T751H Serial Number: 321

Analyzer Information

Analyzer make: Thermo 43iQTL Analyzer serial #: 12113311965
Converter make: Global 150 Converter serial #: 2022-224
Analyzer Range: 0 - 100 ppb Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.003952	0.988307	Backgd or Offset:	1.190	1.19
Calibration intercept:	0.036776	0.380000	Coeff or Slope:	1.087	1.087

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4925	76.0	79.9	81.2	0.983
As found Mid point	4962	38.0	40.0	40.4	0.987
As found Low point	4981	19.0	20.0	20.3	0.980
New cylinder response					
Baseline Corr As found:	81.3	Prev response:	80.29	*% change:	1.2%
Baseline Corr 2nd AF pt:	40.5	AF Slope:	1.016533	AF Intercept:	-0.103243
Baseline Corr 3rd AF pt:	20.4	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4924	76.0	80.0	79.2	1.009
Mid point	4962	38.0	40.0	40.1	0.997
Low point	4981	19.0	20.0	20.5	0.975
As left zero	5000	0.0	0.0	-0.1	----
As left span	4925	76.0	79.9	79.1	1.011
SO2 Scrubber Check	4920	79.8	798.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	0.994
Date of last converter efficiency test:					

Notes: Changed inlet filter after as founds. SO2 scrubber check done and passed. No adjustments made.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

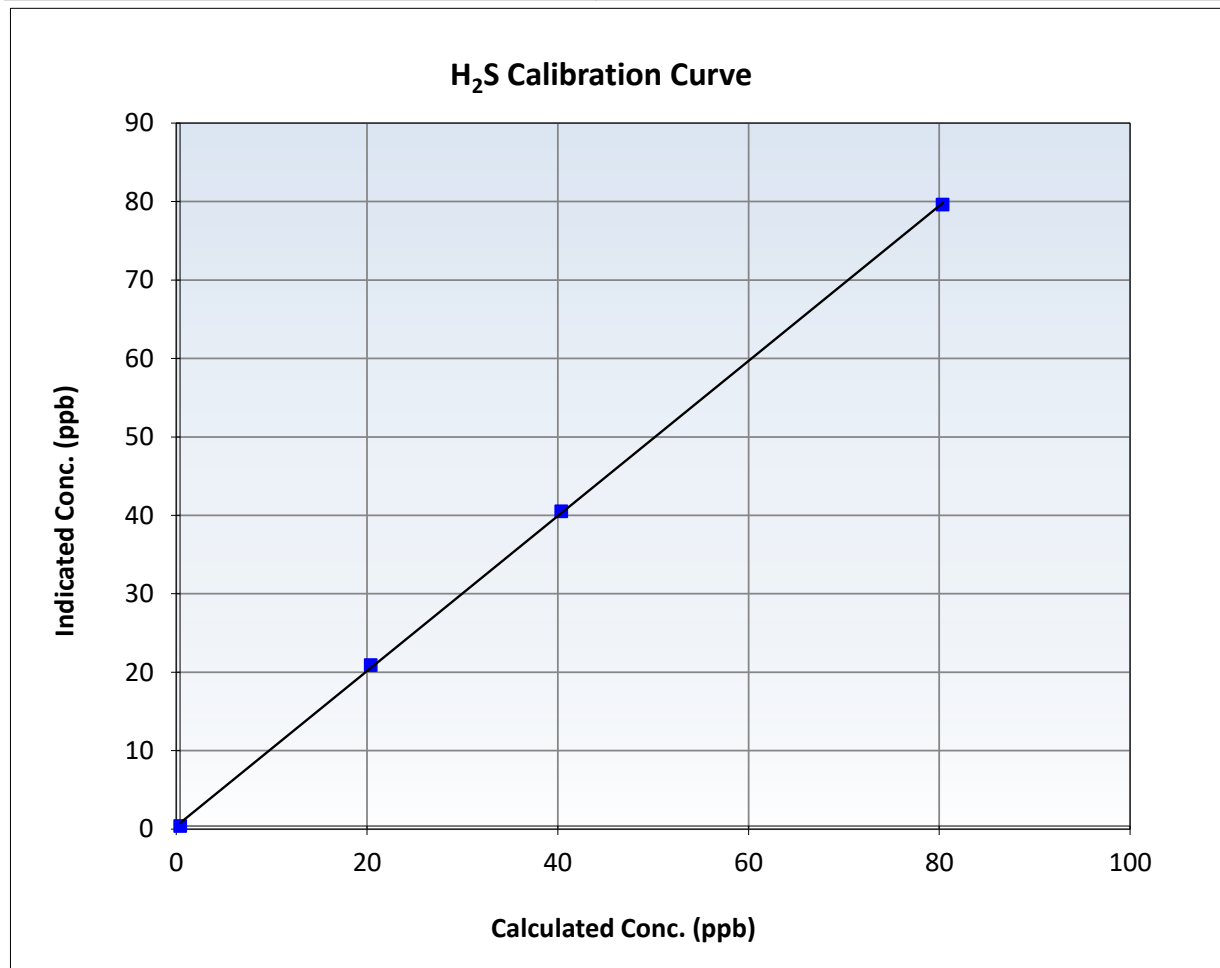
H₂S Calibration Summary

Station Information

Calibration Date:	April 16, 2026	Previous Calibration:	March 24, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:48	End Time (MST):	16:55
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12113311965

Calibration Data

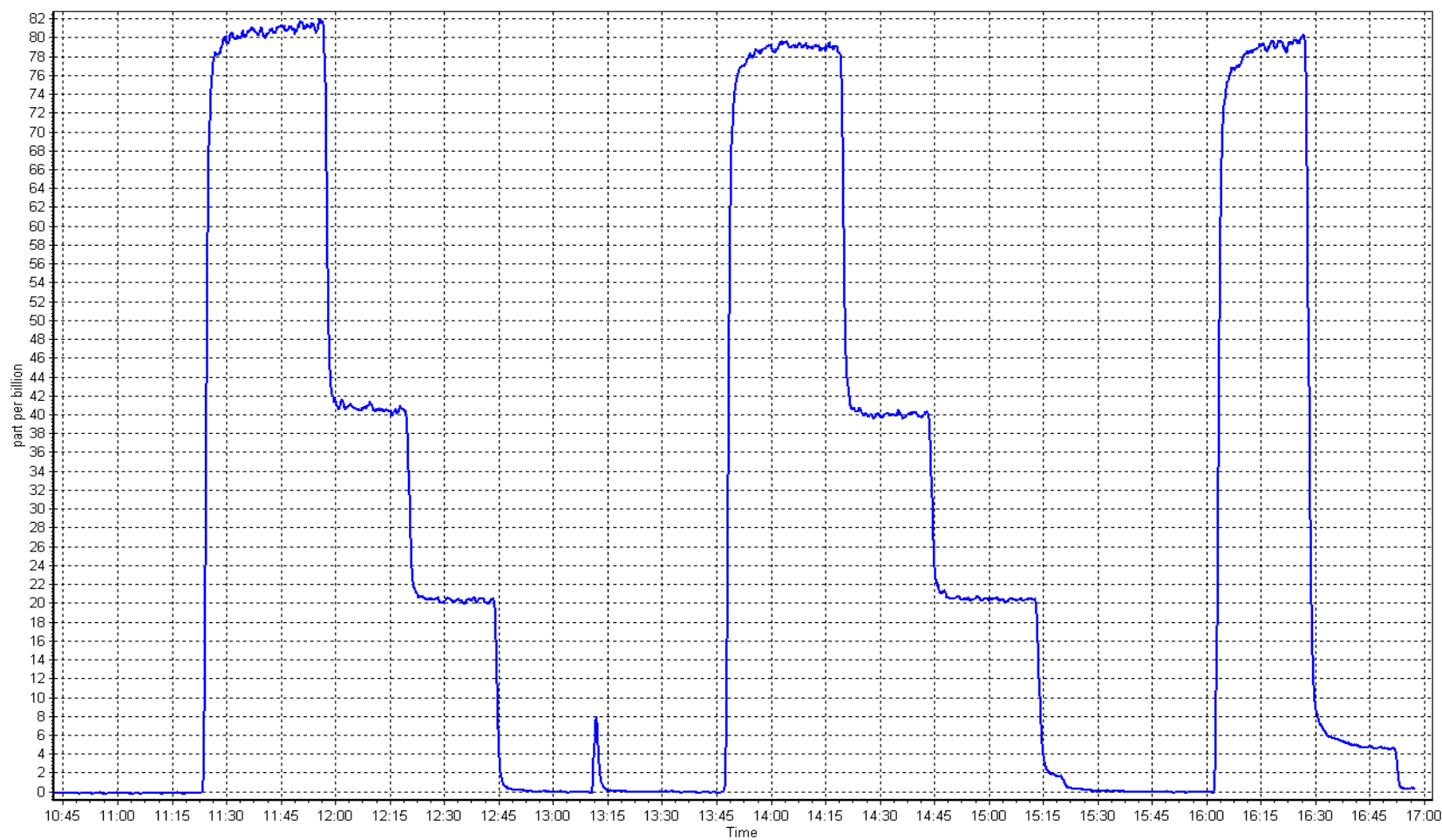
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999894		≥0.995
80.0	79.2	1.0095	Slope	0.988307		0.90 - 1.10
40.0	40.1	0.9969	Intercept	0.380000		+/-3
20.0	20.5	0.9750				



H2S Calibration Plot

Date: April 16, 2026

Location: Sawbones Bay





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Sawbones Bay
Station number: AMS 505
Calibration Date: April 16, 2026
Last Cal Date: March 19, 2026
Start time (MST): 10:48
End time (MST): 16:55
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0009786
NOX Cal Gas Conc: 60.10 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 60.10 ppm
NOX gas Diff:
Calibrator Model: API T700
ZAG make/model: API T701H
Cal Gas Expiry Date: January 5, 2032
NO Cal Gas Conc: 60.00 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 60.00 ppm
NO gas Diff:
Serial Number: 3807
Serial Number: 690

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	----	----
AF High point	4933	66.7	801.8	800.4	1.3	819.0	818.0	0.9	0.9787	0.9784
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 803.1 ppb	NO = 802.5 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = 2.0%	
Baseline Corr 1st pt	NO _x = 819.2 ppb	NO = 818.1 ppb				<u>As Found Statistics</u>		*Percent Change	NO = 1.9%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	NO ₂ SI:	NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NO2 Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



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NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: API T200
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 4259

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.964	0.936	NO bkgnd or offset:	0.3	0.3
NOX coeff or slope:	0.961	0.935	NOX bkgnd or offset:	0.6	0.6
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	3.7	3.8

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.002429	1.004154
NO _x Cal Offset:	-0.669377	0.650656
NO Cal Slope:	1.004714	1.005540
NO Cal Offset:	-1.709469	-0.248551
NO ₂ Cal Slope:	0.991389	1.035654
NO ₂ Cal Offset:	-0.432109	-1.265205

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	----	----
High point	4933	66.7	801.8	800.4	1.3	805.0	804.0	1.3	0.9960	0.9956
Mid point	4967	33.3	400.2	399.6	0.7	404.1	403.6	0.5	0.9905	0.9900
Low point	4983	16.7	200.7	200.4	0.3	202.2	199.7	2.5	0.9928	1.0036
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	----	----
As left span	4933	66.7	801.8	791.3	10.5	790.4	791.3	-1.0	1.0144	1.0000
Average Correction Factor									0.9931	0.9964

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.0	----	----
High GPT point	788.1	429.7	359.7	372.9	0.9647	103.7%
Mid GPT point	788.1	608.7	180.7	182.4	0.9909	100.9%
Low GPT point	788.1	700.0	89.4	92.0	0.9721	102.9%
Average Correction Factor					0.9759	102.5%

Notes: Changed inlet filter after as founds. Adjusted zero and span. Second high NO reference point used in GPT calculations.

Calibration Performed By: Braiden Boutilier



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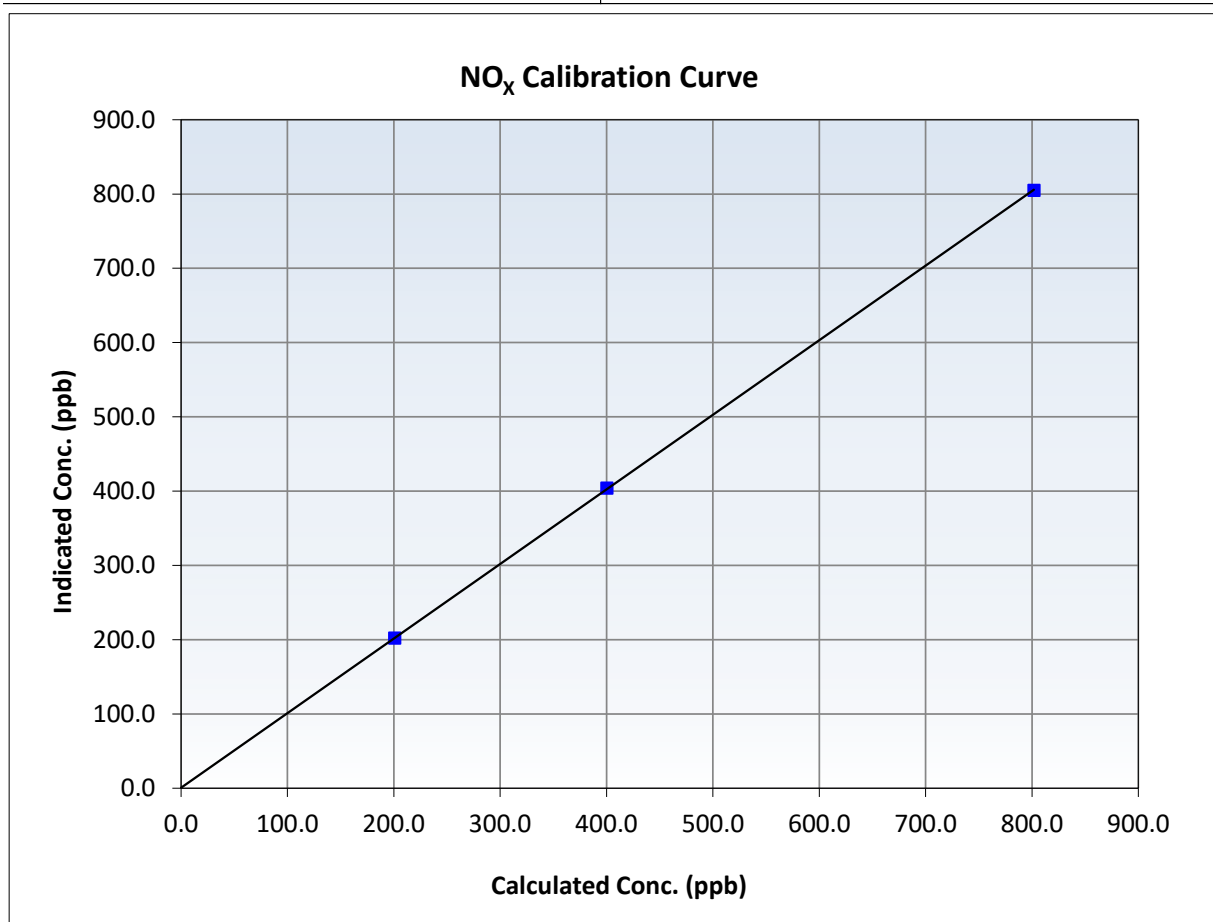
NO_x Calibration Summary

Station Information

Calibration Date:	April 16, 2026	Previous Calibration:	March 19, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:48	End Time (MST):	16:55
Analyzer make:	API T200	Analyzer serial #:	4259

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999990	≥0.995
801.8	805.0	0.9960	Slope	1.004154	0.90 - 1.10
400.2	404.1	0.9905	Intercept	0.650656	+/-20
200.7	202.2	0.9928			





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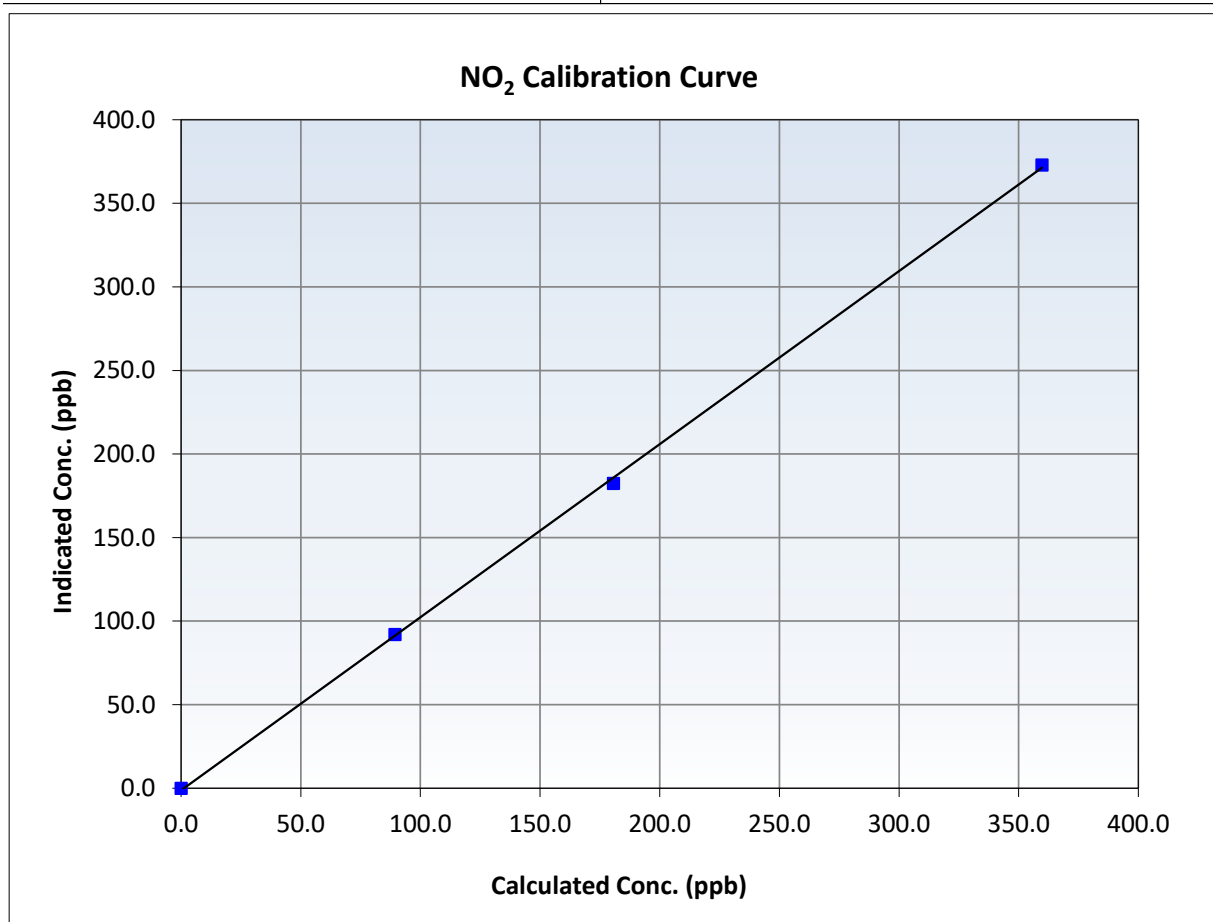
NO₂ Calibration Summary

Station Information

Calibration Date:	April 16, 2026	Previous Calibration:	March 19, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:48	End Time (MST):	16:55
Analyzer make:	API T200	Analyzer serial #:	4259

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999777	≥0.995
359.7	372.9	0.9647	Slope	1.035654	0.90 - 1.10
180.7	182.4	0.9909	Intercept	-1.265205	+/-20
89.4	92.0	0.9721			





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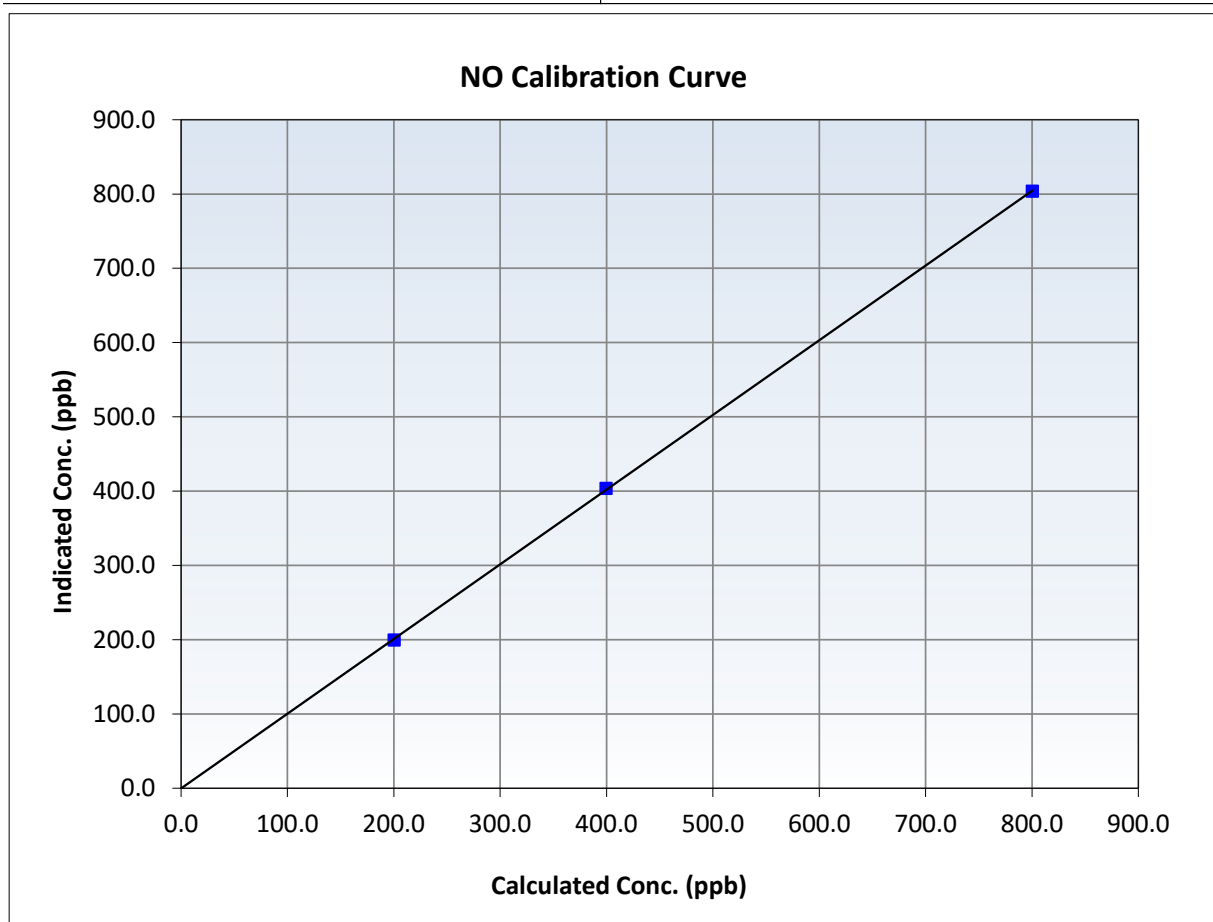
NO Calibration Summary

Station Information

Calibration Date:	April 16, 2026	Previous Calibration:	March 19, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:48	End Time (MST):	16:55
Analyzer make:	API T200	Analyzer serial #:	4259

Calibration Data

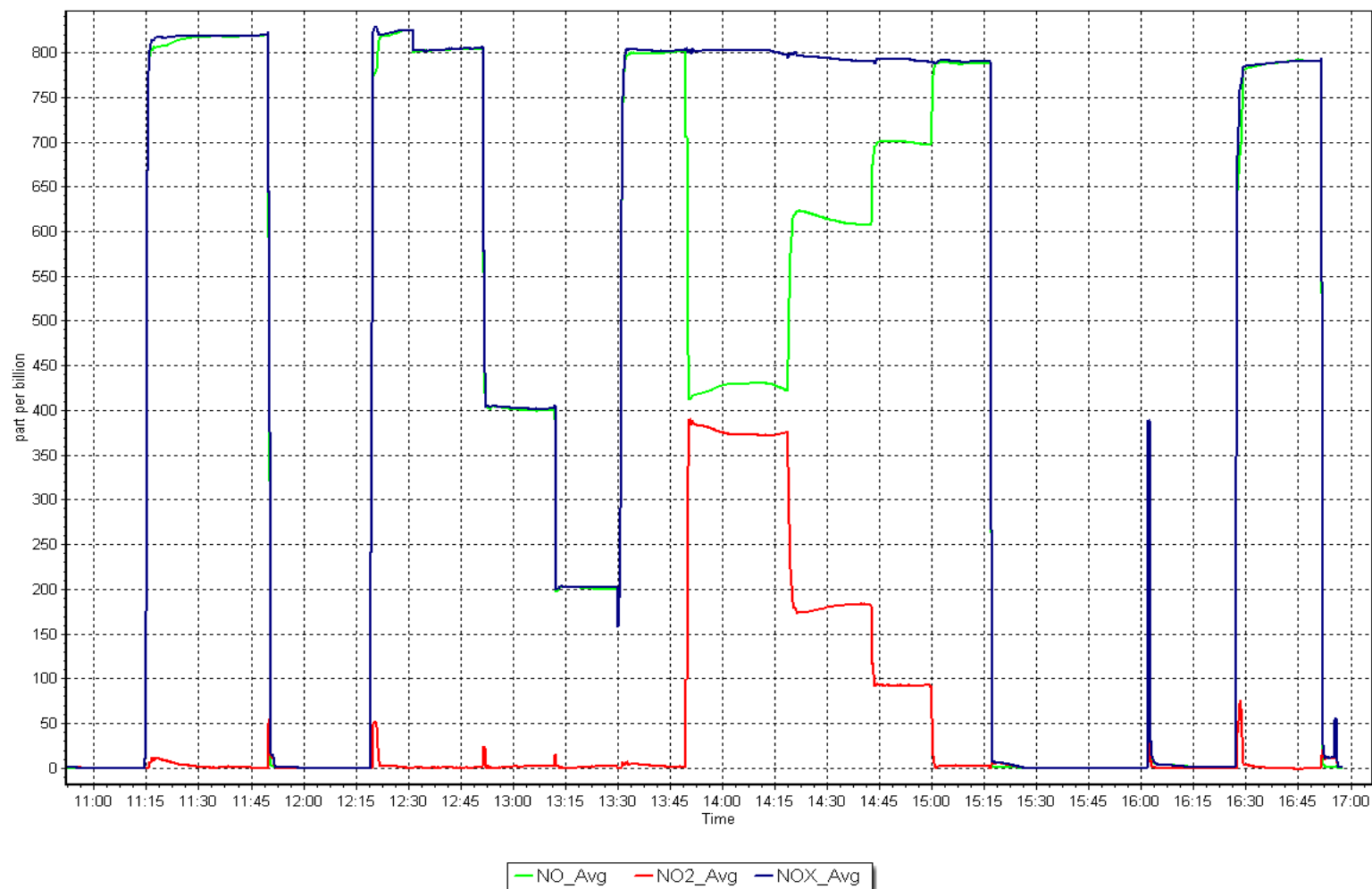
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999980	≥ 0.995
800.4	804.0	0.9956	Slope	1.005540	$0.90 - 1.10$
399.6	403.6	0.9900	Intercept	-0.248551	± 20
200.4	199.7	1.0036			



NO_x Calibration Plot

Date: April 16, 2026

Location: Sawbones Bay





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS507
KIRBY SOUTH
APRIL 2026

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

May 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Kirby South
Calibration Date: April 8, 2026
Start time (MST): 10:43
Reason: Routine

Station number: AMS 507
Last Cal Date: March 12, 2026
End time (MST): 14:04

Calibration Standards

Cal Gas Concentration: 50.74 ppm
Cal Gas Cylinder #: CC255918
Removed Cal Gas Conc: 50.74 ppm
Removed Gas Cyl #:
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701H

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 2445
Serial Number: 880

Analyzer Information

Analyzer make: Thermo 43iQ-TLE
Analyzer Range: 0 - 1000 ppb

Serial Number: 1182340007

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.008294	1.010523	Backgd or Offset:	31.1	31.9
Calibration intercept:	0.168004	-0.611969	Coeff or Slope:	1.134	1.134

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.5	----
As found High point	4921	78.8	799.7	807.9	0.990
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	807.4	Previous response	806.5	*% change	0.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.4	----
High point	4921	78.8	799.7	807.9	0.990
Mid point	4961	39.4	399.8	402.4	0.994
Low point	4980	19.7	199.9	201.8	0.991
As left zero	5000	0.0	0.0	-0.1	----
As left span	4921	78.8	799.7	809.7	0.988
Average Correction Factor:					0.991

Notes: Inlet filter changed after as founds, zero adjusted.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

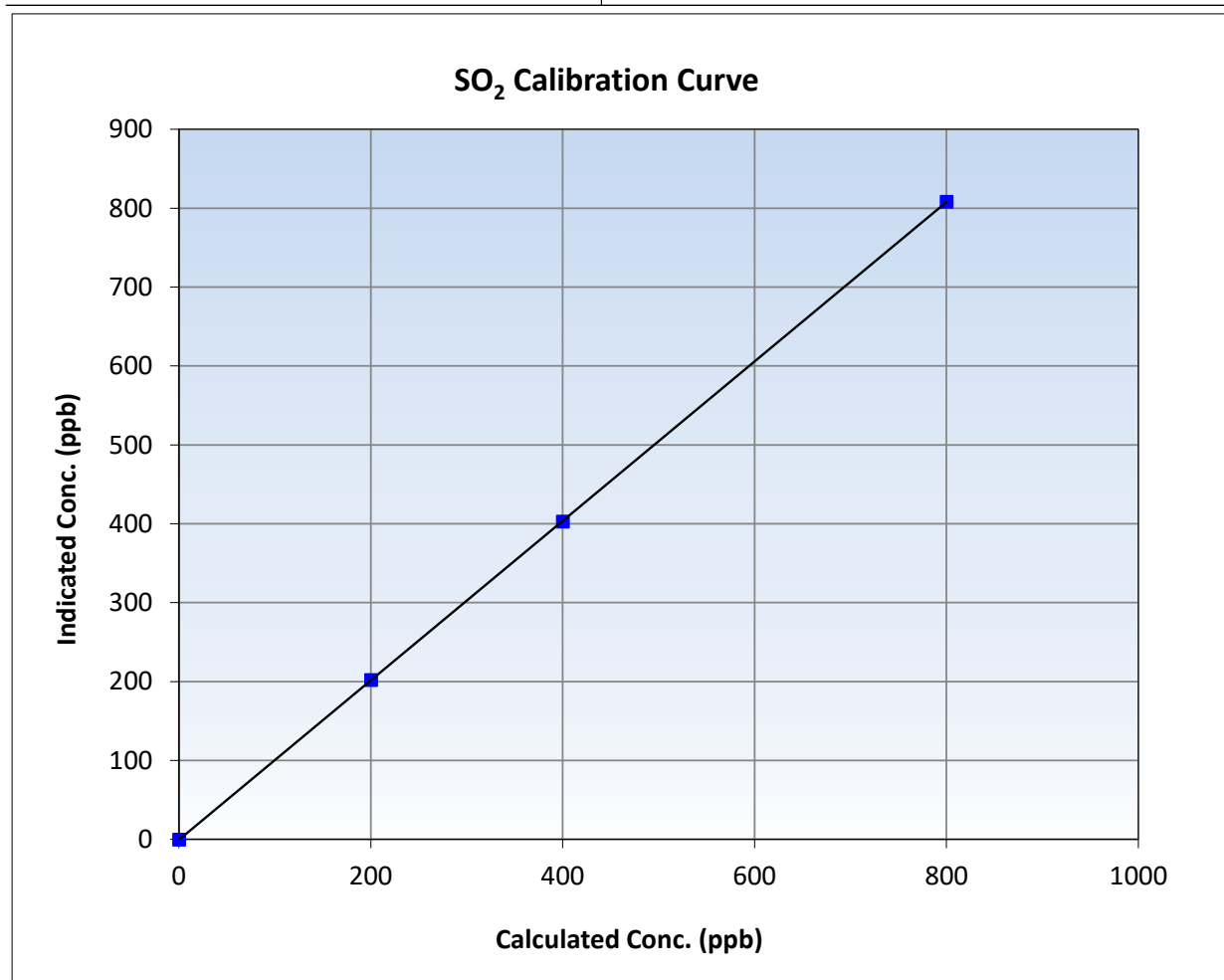
SO₂ Calibration Summary

Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 12, 2026
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	10:43	End Time (MST):	14:04
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	1182340007

Calibration Data

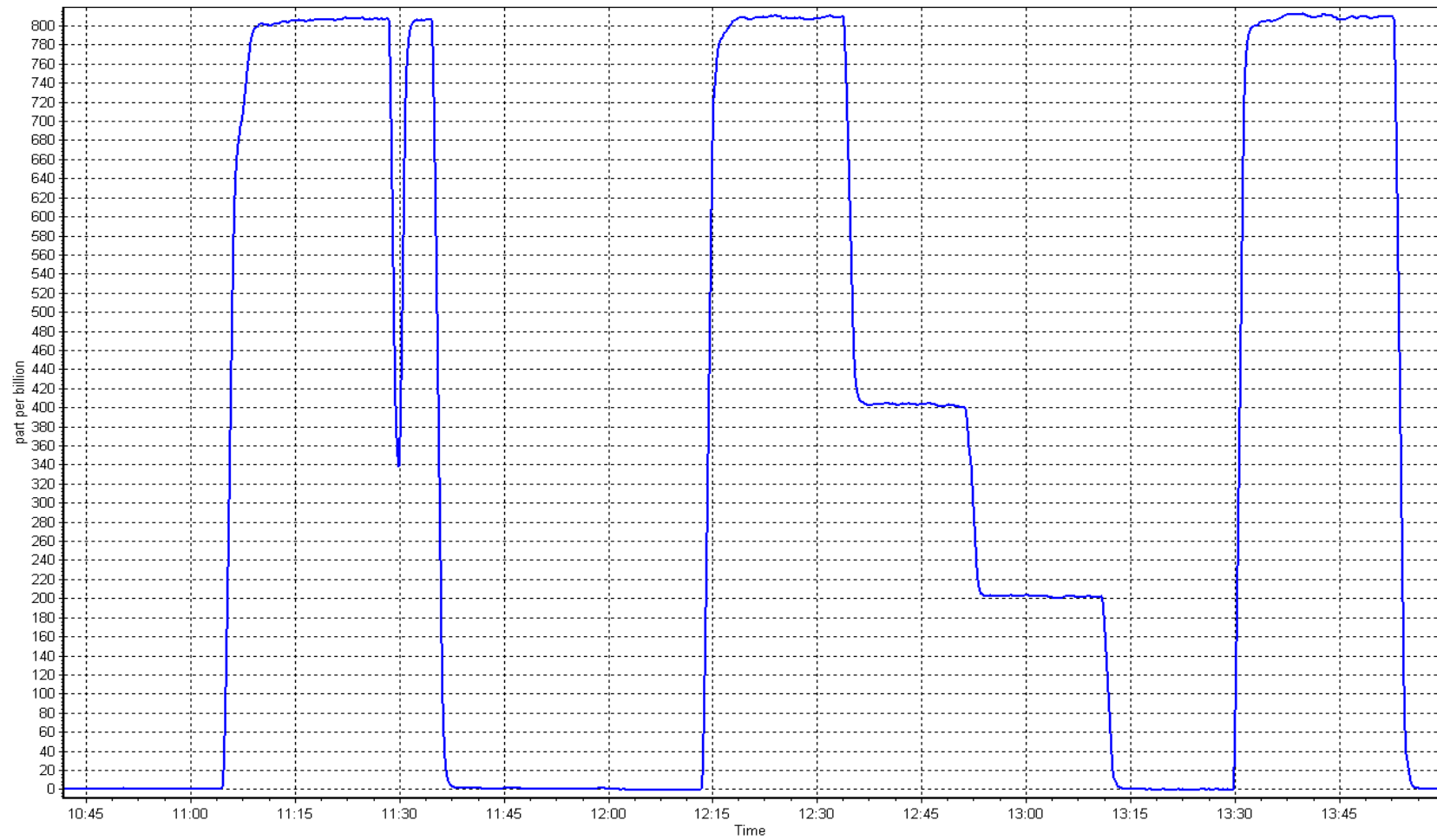
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.4	----	Correlation Coefficient	0.999996	≥0.995
799.7	807.9	0.9898	Slope	1.010523	0.90 - 1.10
399.8	402.4	0.9935	Intercept	-0.611969	+/-30
199.9	201.8	0.9907			



SO2 Calibration Plot

Date: April 8, 2026

Location: Kirby South





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Kirby South
Calibration Date: April 17, 2026
Start time (MST): 10:48
Reason: Routine

Station number: AMS 507
Last Cal Date: March 18, 2026
End time (MST): 15:42

Calibration Standards

Cal Gas Concentration: 5.05 ppm
Cal Gas Cylinder #: DT0019762
Removed Cal Gas Conc: 5.05 ppm
Removed Gas Cyl #: n/a
Calibrator Make/Model: Teledyne API T750
ZAG Make/Model: Teledyne API T751H

Cal Gas Exp Date: November 15, 2026
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 282
Serial Number: 321

Analyzer Information

Analyzer make: Thermo 43i-TLE
Converter make: Global
Analyzer Range: 0 - 100 ppb

Analyzer serial #: 1150840012
Converter serial #: 2022-197
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.006815	0.980669	Backgd or Offset:	1.72	1.70
Calibration intercept:	0.040000	0.080000	Coeff or Slope:	1.072	1.072

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4921	79.2	80.0	80.2	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	80.2	Prev response:	80.58	*% change:	-0.5%
Baseline Corr 2nd AF pt:	NA	AF Slope:	NA	AF Intercept:	NA
Baseline Corr 3rd AF pt:	NA	AF Correlation:	NA	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4921	79.2	80.0	78.5	1.019
Mid point	4960	39.6	40.0	39.4	1.015
Low point	4980	19.8	20.0	19.6	1.020
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.2	80.0	78.9	1.014
SO2 Scrubber Check	4919	80.0	800.2	0.1	----
Date of last scrubber change:		July 25, 2023		Ave Corr Factor	1.018
Date of last converter efficiency test:		September 18, 2025		102.4% efficiency	

Notes:

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

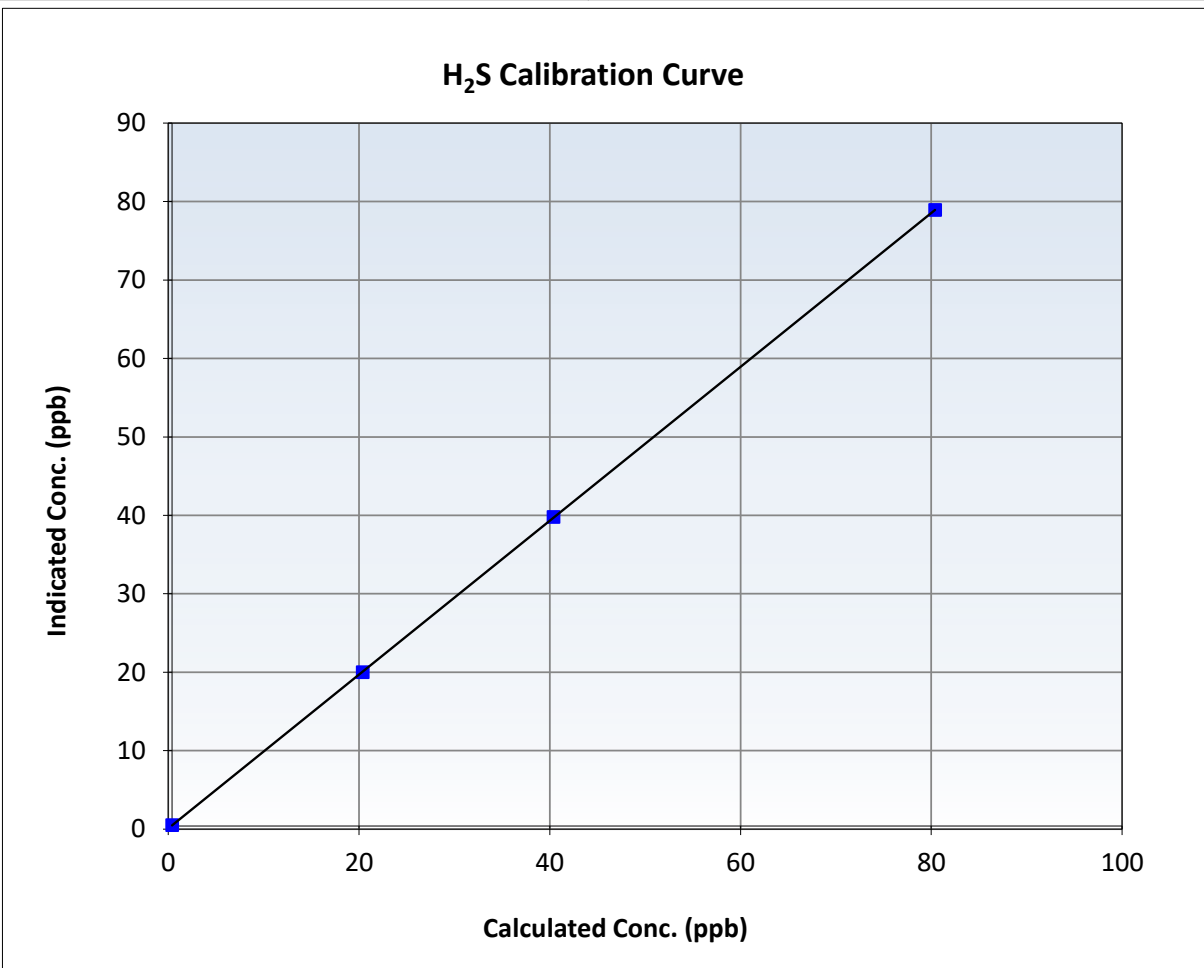
H₂S Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 18, 2026
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	10:48	End Time (MST):	15:42
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1150840012

Calibration Data

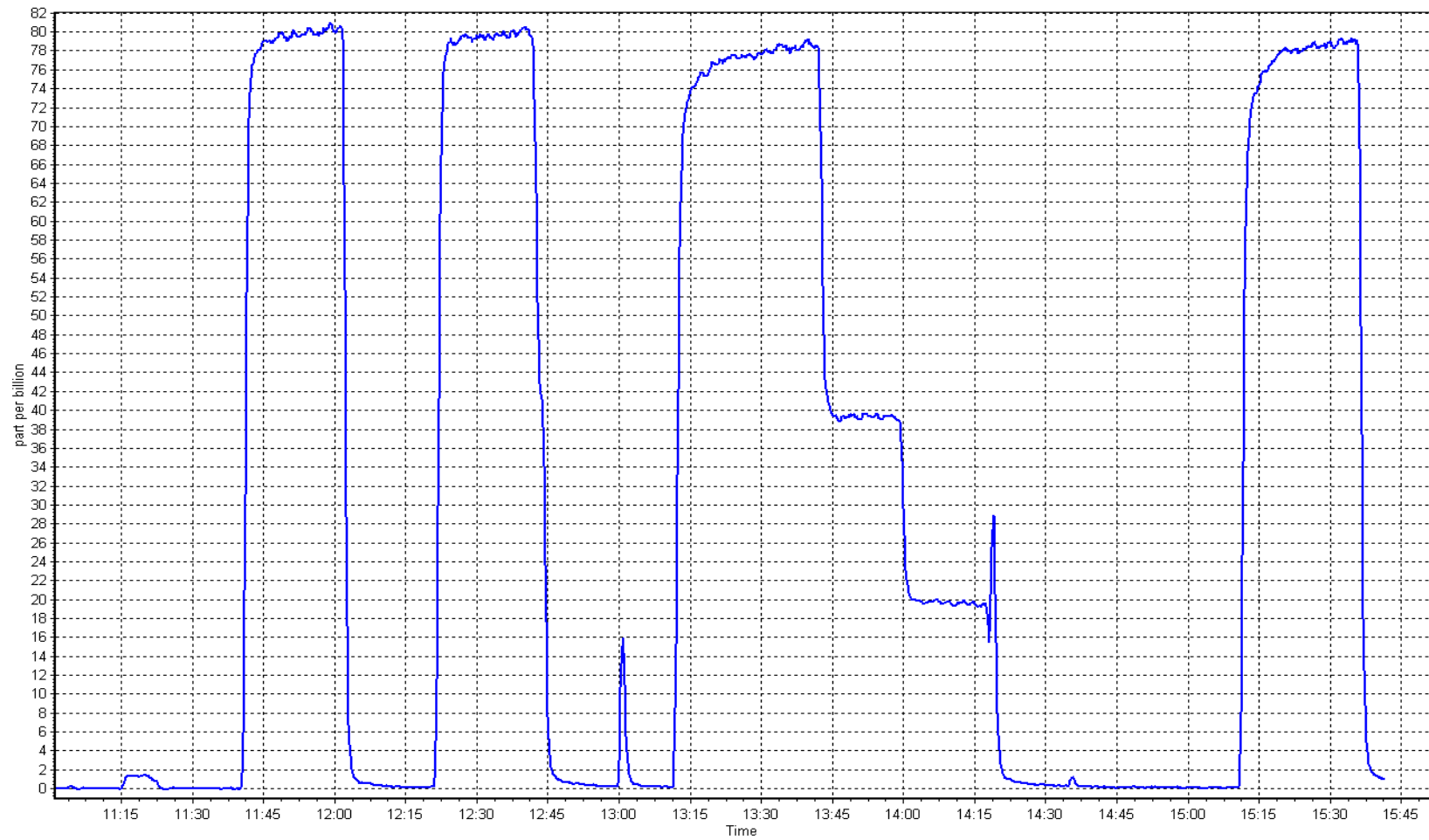
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999994		≥0.995
80.0	78.5	1.0190	Slope	0.980669		0.90 - 1.10
40.0	39.4	1.0151	Intercept	0.080000		+/-3
20.0	19.6	1.0203				



H2S Calibration Plot

Date: April 17, 2026

Location: Kirby South





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Kirby South Station number: AMS 507
Calibration Date: April 8, 2026 Last Cal Date: March 12, 2026
Start time (MST): 10:43 End time (MST): 14:04
Reason: Routine

Calibration Standards

Gas Cert Reference: CC255918 Cal Gas Expiry Date: October 9, 2032
CH4 Cal Gas Conc. 506.4 ppm CH4 Equiv Conc. 1070.2 ppm
C3H8 Cal Gas Conc. 205.0 ppm
Removed Gas Cert: Removed Gas Expiry:
Removed CH4 Conc. 506.4 ppm CH4 Equiv Conc. 1070.2 ppm
Removed C3H8 Conc. 205.0 ppm Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 2445
ZAG Make/Model: Teledyne API T701H Serial Number: 880

Analyzer Information

Analyzer make: Thermo 51i-LT Analyzer serial #: 1182340005
Analyzer Range: 0 - 20 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004538	1.014980	Background:	1.98	1.98
Calibration intercept:	-0.008231	-0.004030	Coefficient:	3.313	3.313

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/Ic-AFzero) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	-0.05	----
As found High point	4921	78.8	16.87	17.07	0.985
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	17.12	Previous response	16.93	*% change	1.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	
High point	4921	78.8	16.87	17.12	0.985
Mid point	4961	39.4	8.43	8.54	0.988
Low point	4980	19.7	4.22	4.28	0.985
As left zero	5000	0.0	0.00	0.06	----
As left span	4921	78.8	16.87	17.17	0.983
Average Correction Factor					0.986

Notes: Inlet filter changed after as founds, no adjustment made.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

THC Calibration Summary

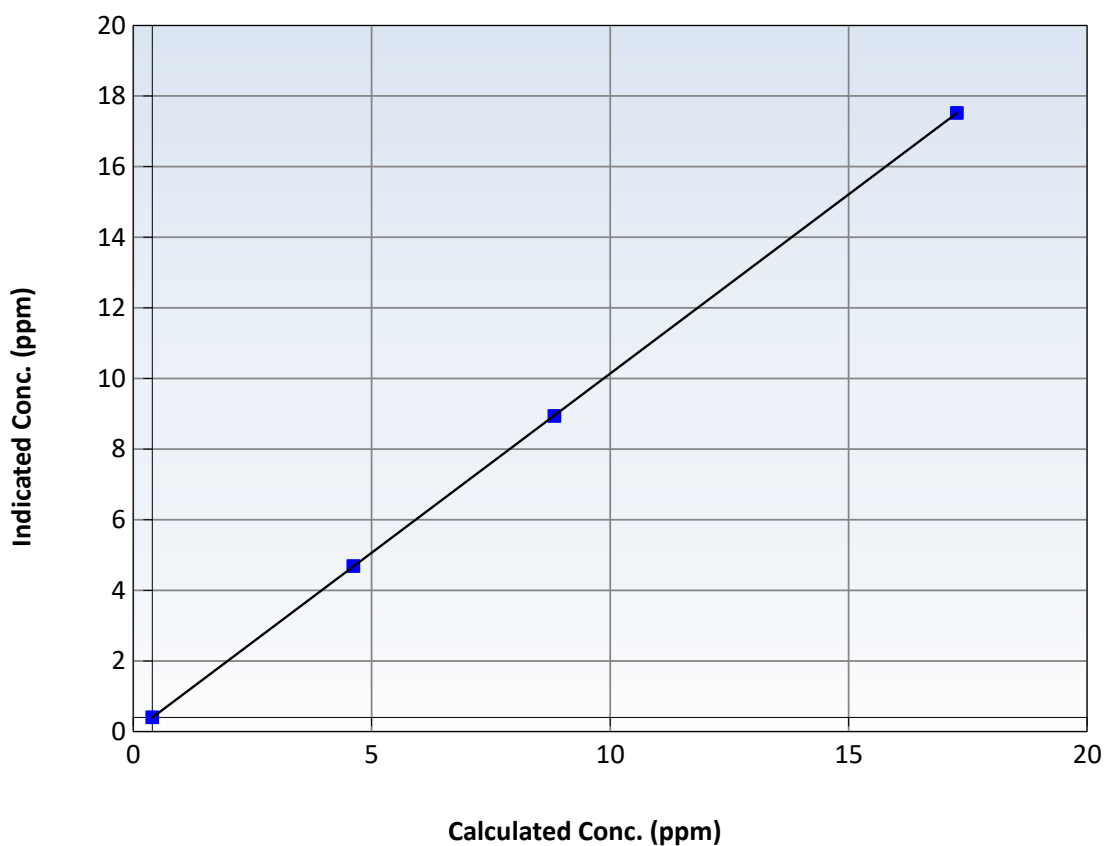
Station Information

Calibration Date:	April 8, 2026	Previous Calibration:	March 12, 2026
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	10:43	End Time (MST):	14:04
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1182340005

Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999997	≥ 0.995
16.87	17.12	0.9851	Slope	1.014980	$0.90 - 1.10$
8.43	8.54	0.9877	Intercept	-0.004030	± 1.5
4.22	4.28	0.9847			

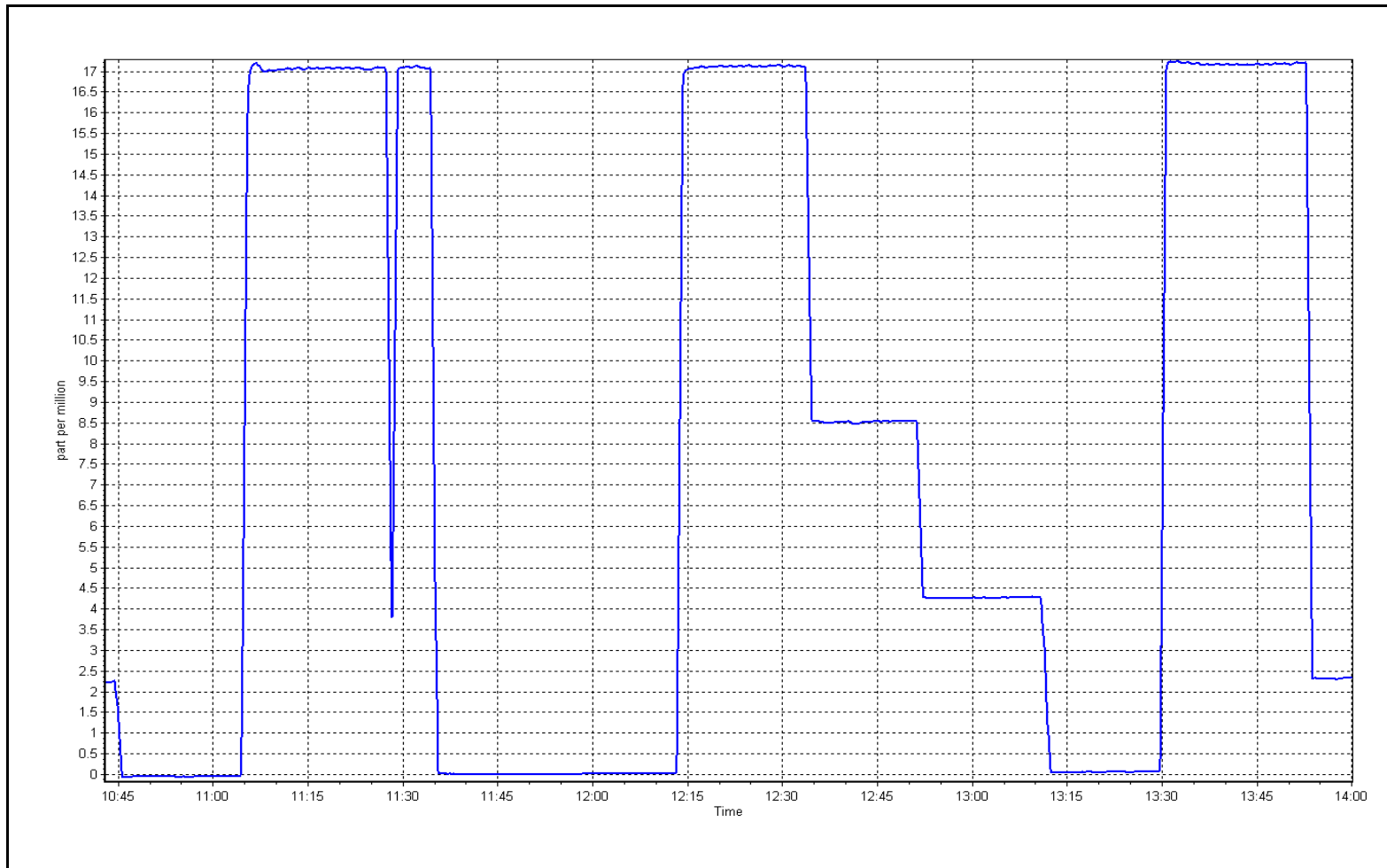
THC Calibration Curve



THC Calibration Plot

Date: April 8, 2026

Location: Kirby South





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Kirby South
Station number: AMS 507
Calibration Date: April 17, 2026
Last Cal Date: March 18, 2026
Start time (MST): 11:03
End time (MST): 15:16
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0019572
NOX Cal Gas Conc: 60.00 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 60.00 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701H
Cal Gas Expiry Date: January 5, 2032
NO Cal Gas Conc: 59.90 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 59.90 ppm
NO gas Diff:
Serial Number: 2445
Serial Number: 880

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.7	-0.1	-0.6	----	----
AF High point	4933	66.8	801.6	800.3	1.3	803.8	796.6	7.3	0.9964	1.0045
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 796.7 ppb	NO = 790.4 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = 1.0%	
Baseline Corr 1st pt	NO _x = 804.5 ppb	NO = 796.7 ppb				<u>As Found Statistics</u>		*Percent Change	NO = 0.8%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	NO ₂ SI:	NO ₂ Int:	

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO ₂ Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Converter Efficiency <i>Limit = 96-104%</i>
As Found GPT zero						
As found high GPT point						
As found mid GPT point						
As found low GPT point						



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NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1173480006

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.995440	0.996951
NO _x Cal Offset:	-1.233631	-0.913617
NO Cal Slope:	0.990147	0.992346
NO Cal Offset:	-1.973695	-1.693676
NO ₂ Cal Slope:	0.990384	0.985703
NO ₂ Cal Offset:	1.844260	1.562237

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.715	0.715	NO bkgnd or offset:	8.0	8.1
NOX coeff or slope:	0.999	0.999	NOX bkgnd or offset:	8.5	8.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	142.0	143.2

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.4	0.1	-0.5	----	----
High point	4933	66.8	801.6	800.3	1.3	798.6	793.4	5.2	1.0038	1.0087
Mid point	4967	33.4	400.8	400.1	0.7	398.2	394.4	3.8	1.0065	1.0145
Low point	4983	16.7	200.4	200.1	0.3	198.5	195.1	3.4	1.0096	1.0255
As left zero	5000	0.0	0.0	0.0	0.0	-0.4	0.1	-0.5	----	----
As left span	4933	66.8	801.6	405.0	396.6	785.3	405.0	380.3	1.0208	1.0000
Average Correction Factor									1.0066	1.0162

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.5	----	----
High GPT point	790.2	406.6	384.9	380.0	1.0130	98.7%
Mid GPT point	790.2	626.2	165.3	166.1	0.9954	100.5%
Low GPT point	790.2	708.3	83.2	85.1	0.9781	102.2%
Average Correction Factor					0.9955	100.5%

Notes:

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

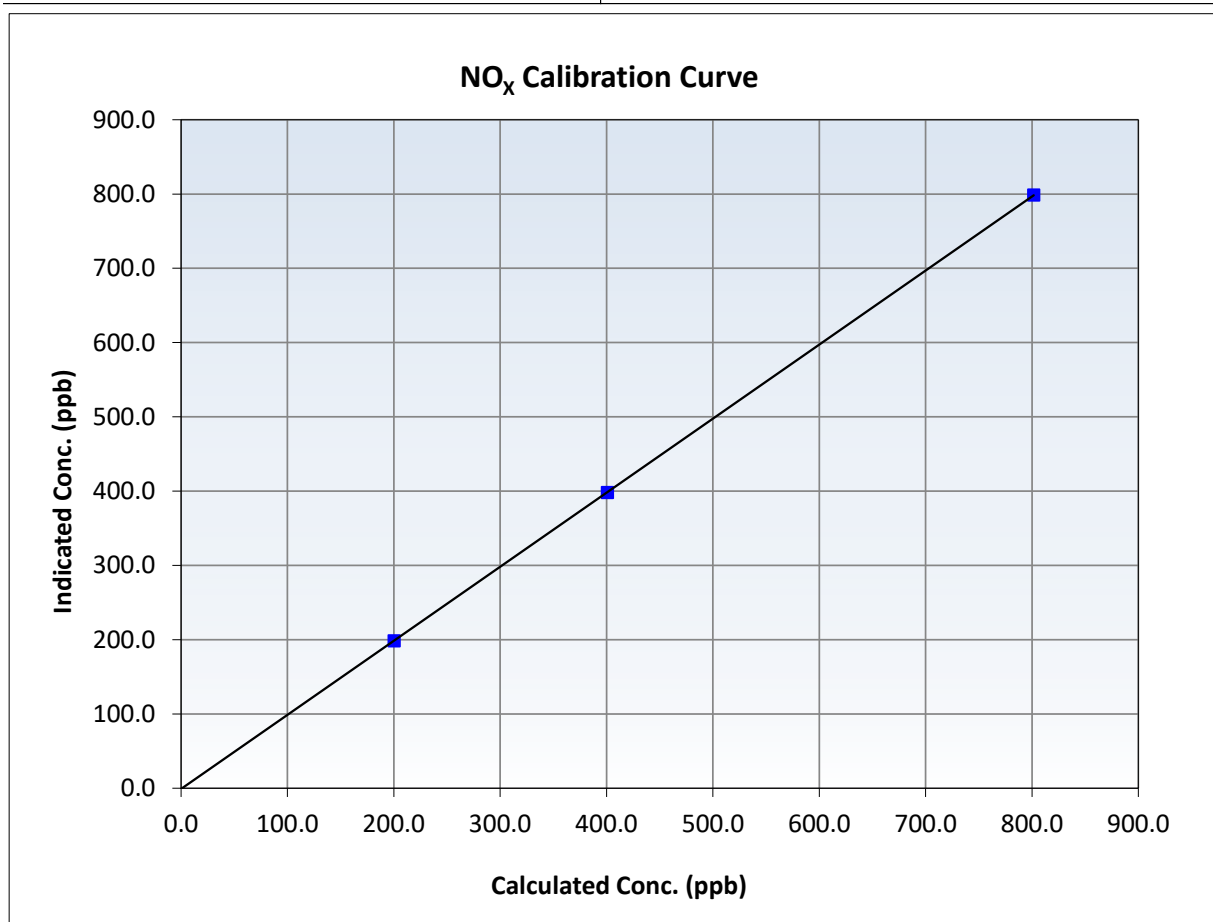
NO_x Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 18, 2026
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	11:03	End Time (MST):	15:16
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.4	----	Correlation Coefficient	0.999998	≥0.995
801.6	798.6	1.0038	Slope	0.996951	0.90 - 1.10
400.8	398.2	1.0065	Intercept	-0.913617	+/-20
200.4	198.5	1.0096			





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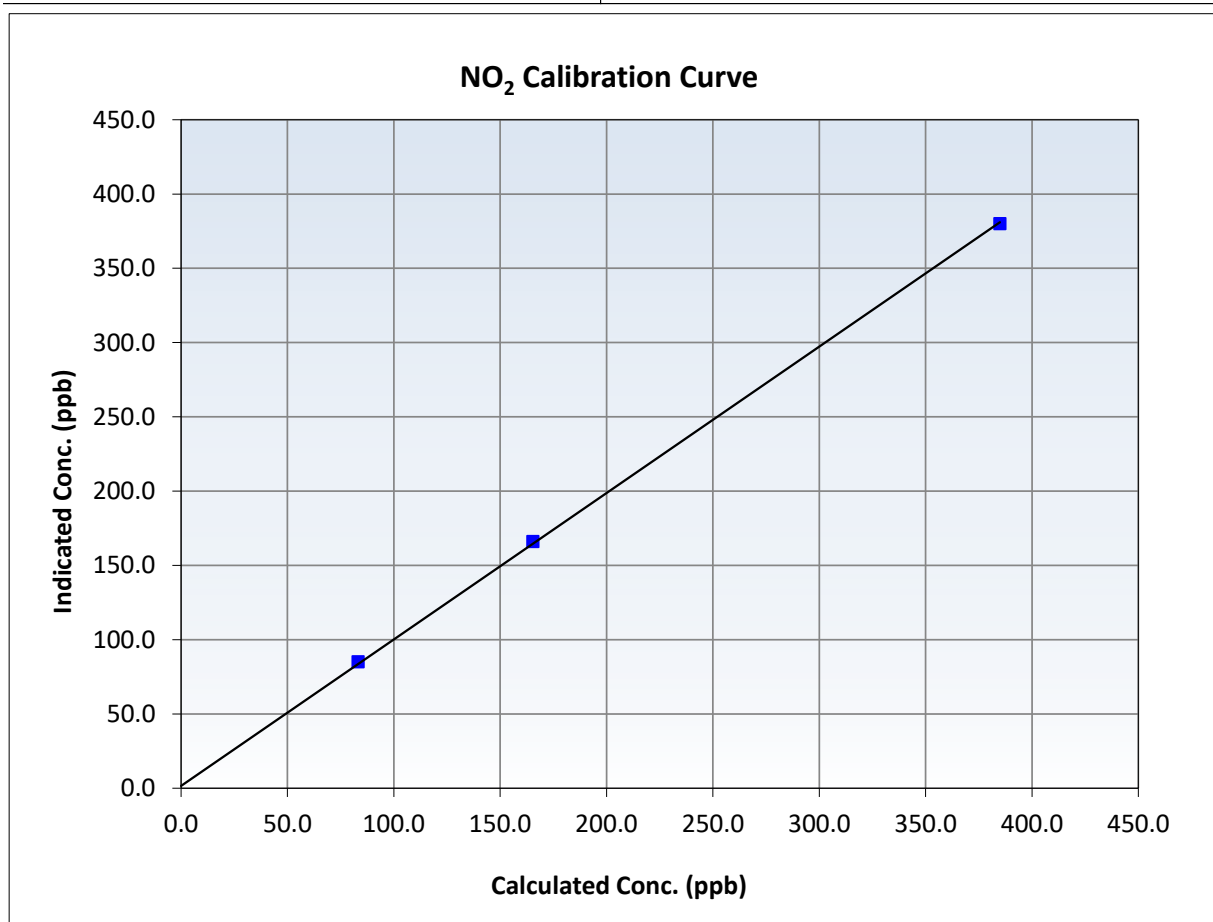
NO₂ Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 18, 2026
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	11:03	End Time (MST):	15:16
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.5	----	Correlation Coefficient	0.999876	≥0.995
384.9	380.0	1.0130	Slope	0.985703	0.90 - 1.10
165.3	166.1	0.9954	Intercept	1.562237	+/-20
83.2	85.1	0.9781			





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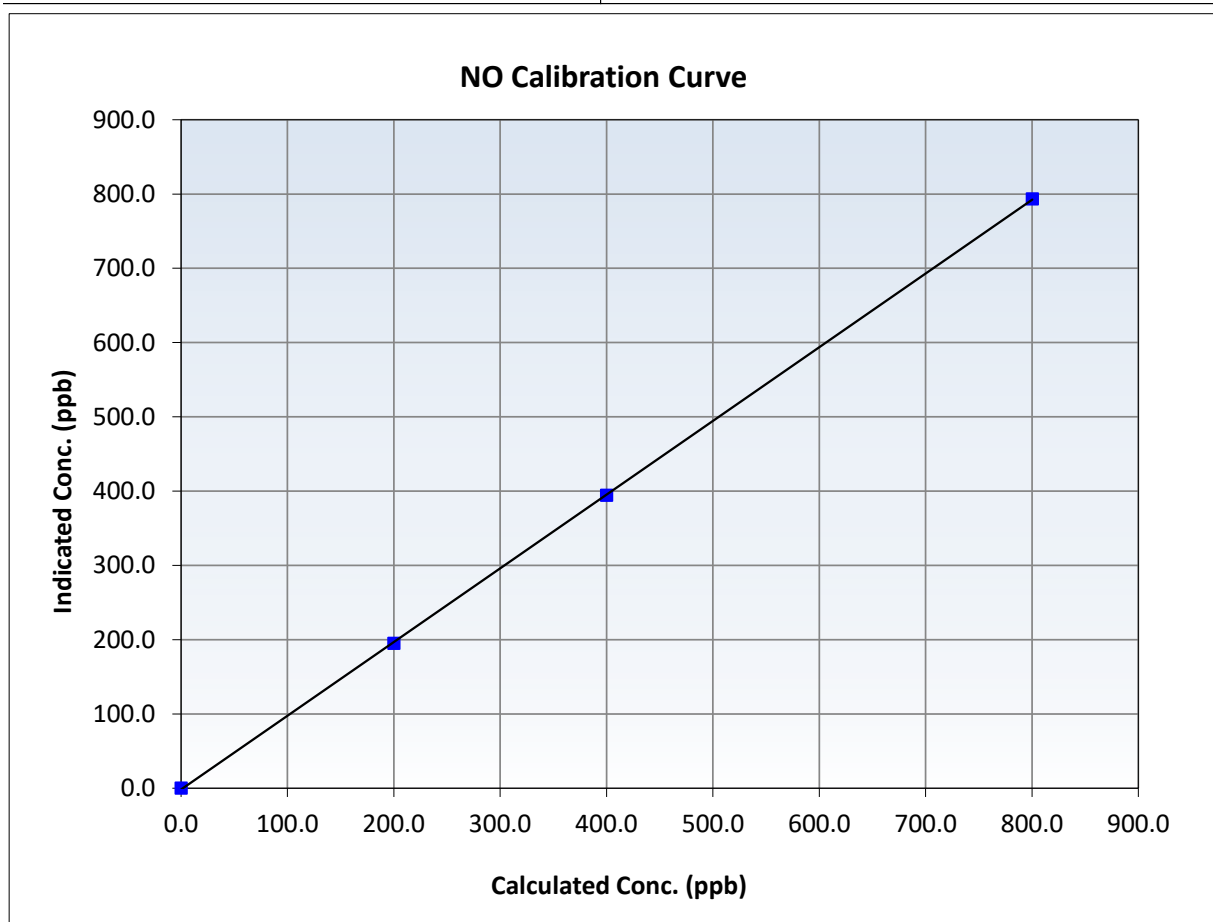
NO Calibration Summary

Station Information

Calibration Date:	April 17, 2026	Previous Calibration:	March 18, 2026
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	11:03	End Time (MST):	15:16
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

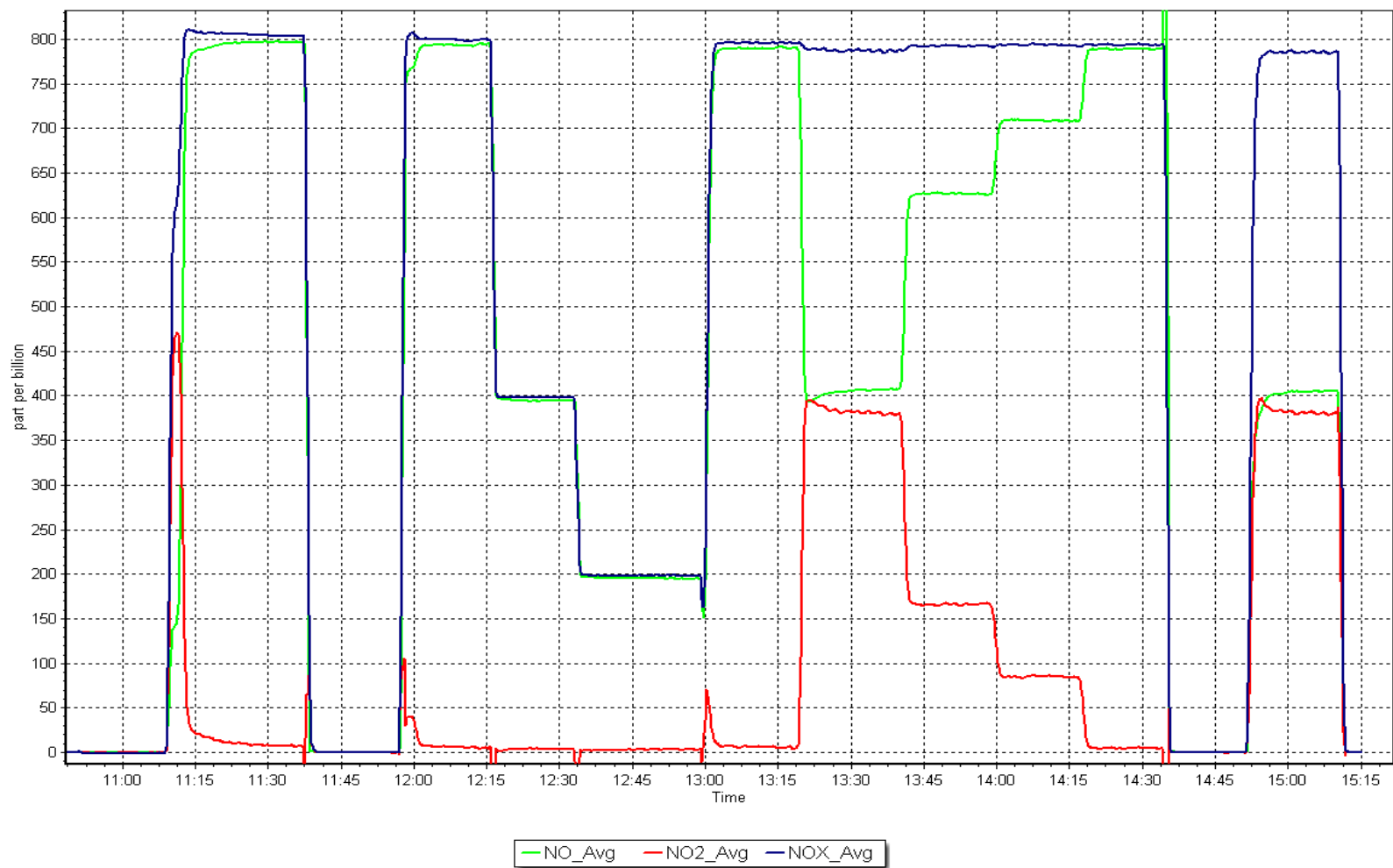
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999977	≥ 0.995
800.3	793.4	1.0087	Slope	0.992346	0.90 - 1.10
400.1	394.4	1.0145	Intercept	-1.693676	+/-20
200.1	195.1	1.0255			



NO_x Calibration Plot

Date: April 17, 2026

Location: Kirby South





End of Report