



**WOOD BUFFALO
ENVIRONMENTAL ASSOCIATION**

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Wood Buffalo Environmental Association

JULY 2026

MONTHLY CALIBRATION REPORT

CONTINUOUS MONITORING

August 31, 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 JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
Calibration Date: July 14, 2026 Last Cal Date: June 26, 2026
Start time (MST): 10:04 End time (MST): 13:10
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:	1.005420	0.995354	Backgd or Offset:	22.6	22.1
Calibration intercept:	-0.793019	-0.793445	Coeff or Slope:	0.865	0.865

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	4918	81.3	800.3	797.9	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	798.5	Previous response	803.8	*% 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	-0.3	----
High point	4918	81.3	800.3	796.1	1.005
Mid point	4959	40.7	400.6	397.4	1.008
Low point	4979	20.3	199.8	197.8	1.010
As left zero	5000	0.0	0.0	-0.3	----
As left span	4918	81.3	800.3	793.8	1.008
Average Correction Factor:					1.008

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

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

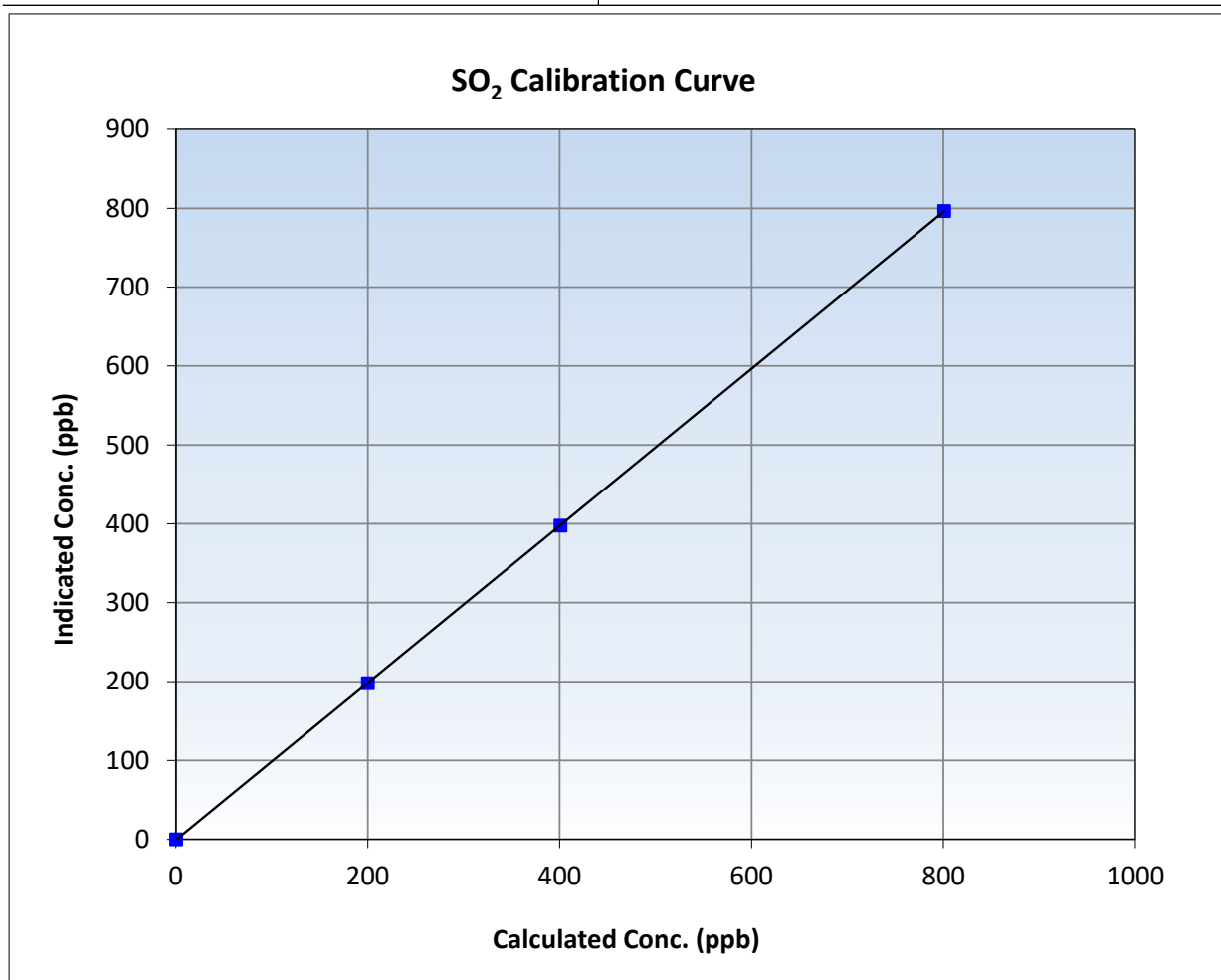
SO₂ Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 26, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:04	End Time (MST):	13:10
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1501301448

Calibration Data

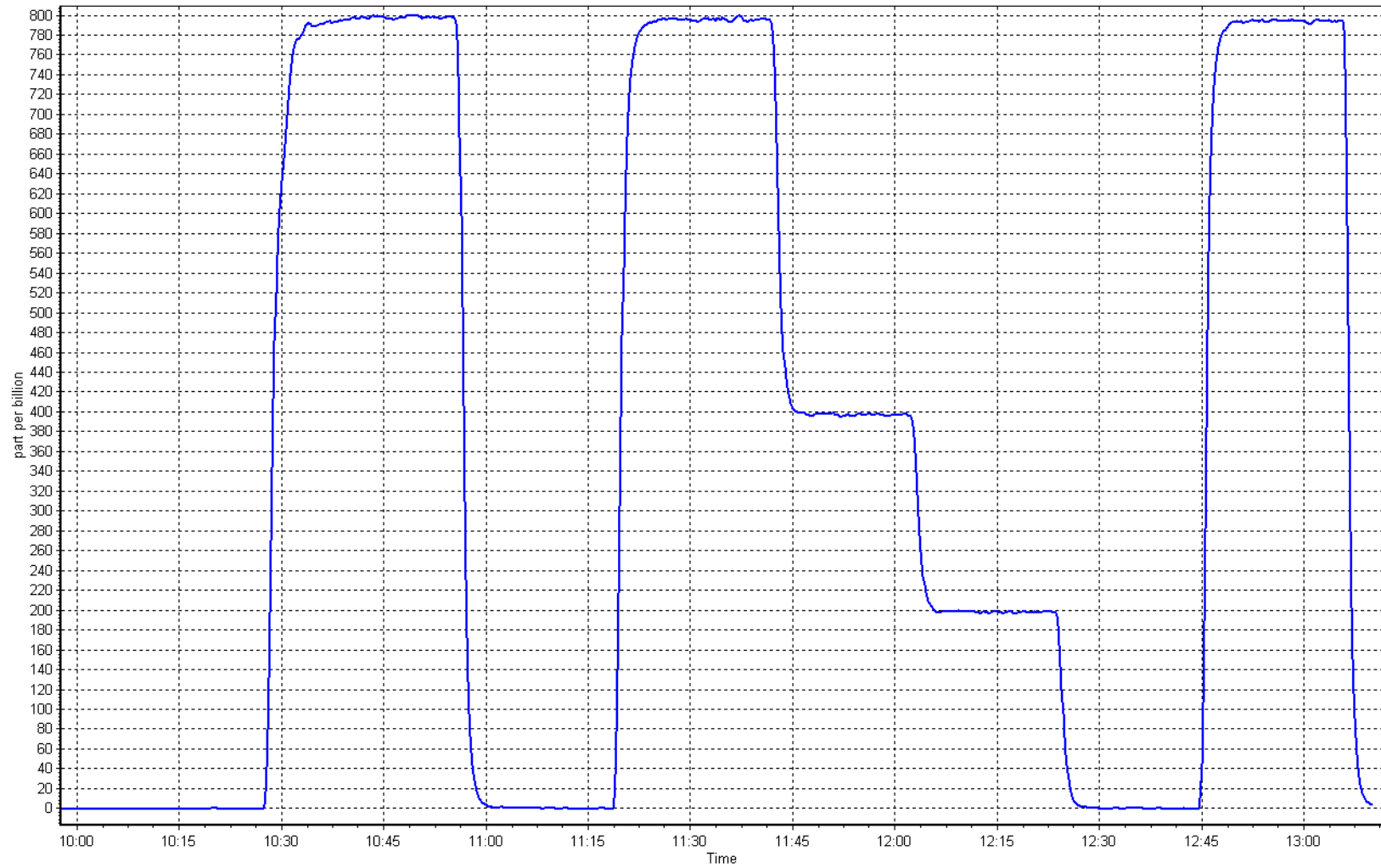
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999998	≥0.995
800.3	796.1	1.0052	Slope	0.995354	0.90 - 1.10
400.6	397.4	1.0080	Intercept	-0.793445	+/-30
199.8	197.8	1.0102			



SO2 Calibration Plot

Date: July 14, 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: July 30, 2026 Last Cal Date: June 16, 2026
Start time (MST): 9:15 End time (MST): 13:48
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: 261

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:	1.005249	1.005249	Backgd or Offset:	1.90	1.82
Calibration intercept:	-0.078182	-0.078194	Coeff or Slope:	1.035	1.012

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	4917	82.6	80.0	82.3	0.969
As found Mid point	4959	41.3	40.0	41.2	0.966
As found Low point	4979	20.7	20.0	20.6	0.963
New cylinder response					
Baseline Corr As found:	82.5	Prev response:	80.30	*% change:	2.7%
Baseline Corr 2nd AF pt:	41.4	AF Slope:	1.031410	AF Intercept:	-0.118669
Baseline Corr 3rd AF pt:	20.8	AF Correlation:	0.999995	* = > +/-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	80.3	0.996
Mid point	4959	41.3	40.0	40.1	0.997
Low point	4979	20.7	20.0	20.1	0.997
As left zero	5000	0.0	0.0	-0.1	----
As left span	4917	82.6	80.0	79.7	1.003
SO2 Scrubber Check	4919	81.3	813.0	0.0	----
Date of last scrubber change:		January 25, 2024		Ave Corr Factor	0.997
Date of last converter efficiency test:		November 7, 2024		107.9% efficiency	

Notes: Changed inlet filter after as founds. Scrubber check completed and passed. Adjusted span only.

Calibration Performed By: Mohammed Kashif



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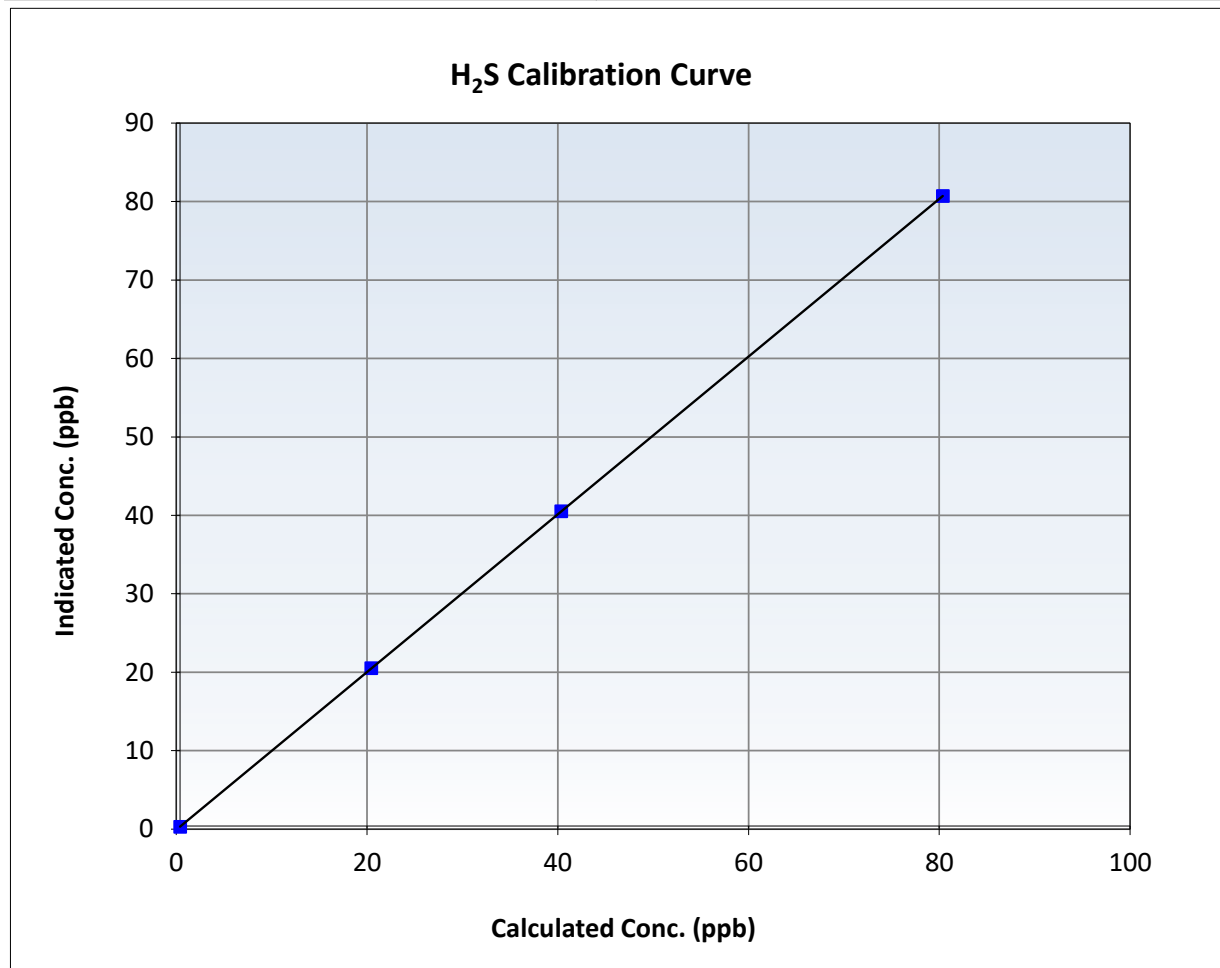
H₂S Calibration Summary

Station Information

Calibration Date:	July 30, 2026	Previous Calibration:	June 16, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:15	End Time (MST):	13:48
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	1200326167

Calibration Data

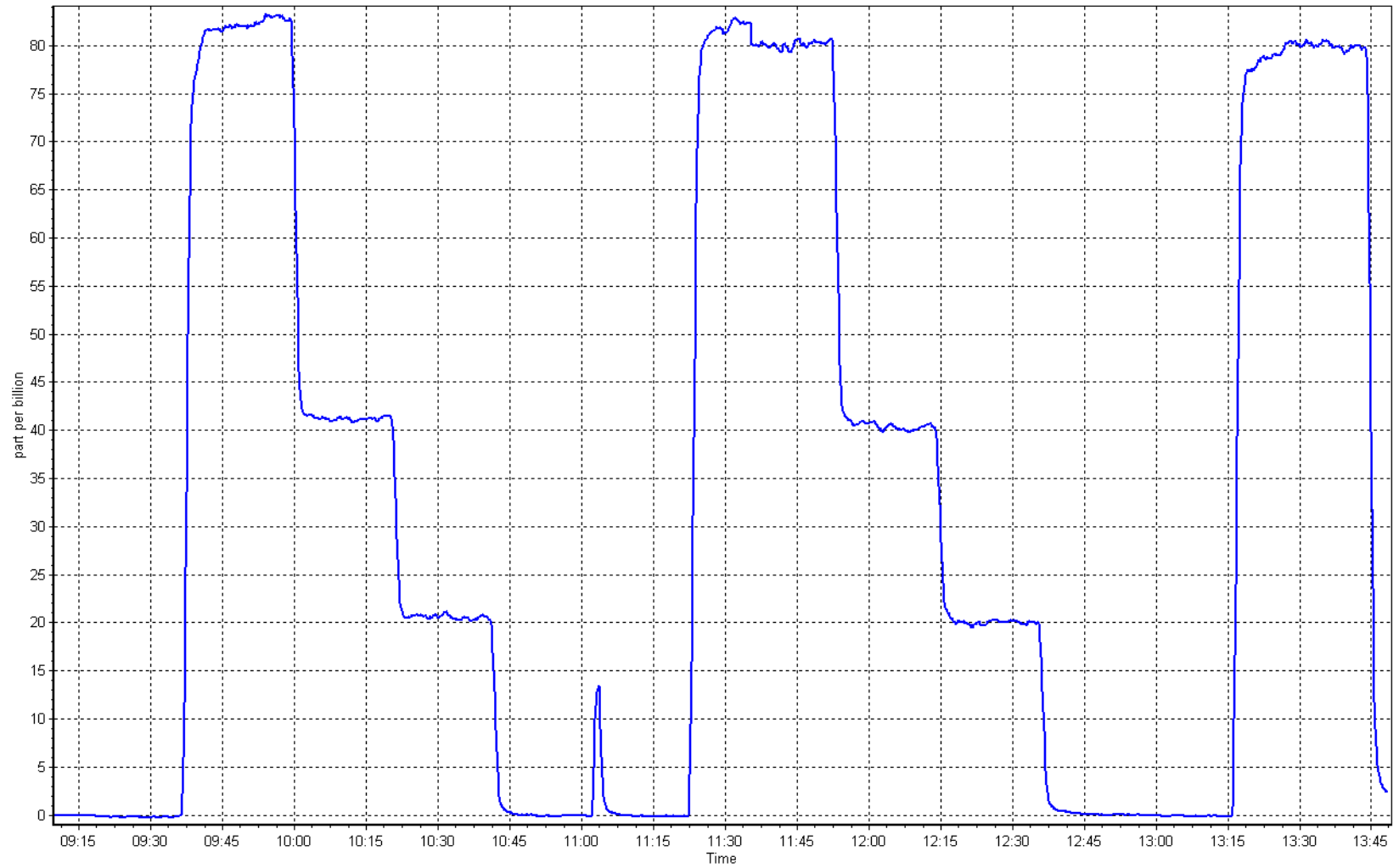
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	1.000000		≥0.995
80.0	80.3	0.9958	Slope	1.005249		0.90 - 1.10
40.0	40.1	0.9969	Intercept	-0.078194		+/-3
20.0	20.1	0.9970				



H₂S Calibration Plot

Date: July 30, 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: July 30, 2026 Last Cal Date: June 16, 2026
Start time (MST): 9:15 End time (MST): 13:48
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: 261

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:	0.996669	1.007962	Backgd or Offset:	2.11
Calibration intercept:	-0.277921	-0.198124	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	-0.2	----
As found High point	4917	82.6	80.0	79.3	1.006
As found Mid point	4959	41.3	40.0	39.8	0.999
As found Low point	4979	20.7	20.0	19.9	0.997
New cylinder response					
Baseline Corr As found:	79.5	Prev response:	79.42	*% change:	0.1%
Baseline Corr 2nd AF pt:	40.0	AF Slope:	0.993813	AF Intercept:	-0.077992
Baseline Corr 3rd AF pt:	20.1	AF Correlation:	0.999986	* = > +/-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	80.4	0.995
Mid point	4959	41.3	40.0	40.2	0.994
Low point	4979	20.7	20.0	19.8	1.012
As left zero	5000	0.0	0.0	-0.1	----
As left span	4917	82.6	80.0	79.3	1.008
SO2 Scrubber Check	4919	81.3	813.0	0.0	----
Date of last scrubber change:	December 17, 2021			Ave Corr Factor	1.000
Date of last converter efficiency test:					

Notes: Changed inlet filter after as founds. No adjustments made. Scrubber check passed.

Calibration Performed By: Mohammed Kashif



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TRS Calibration Summary

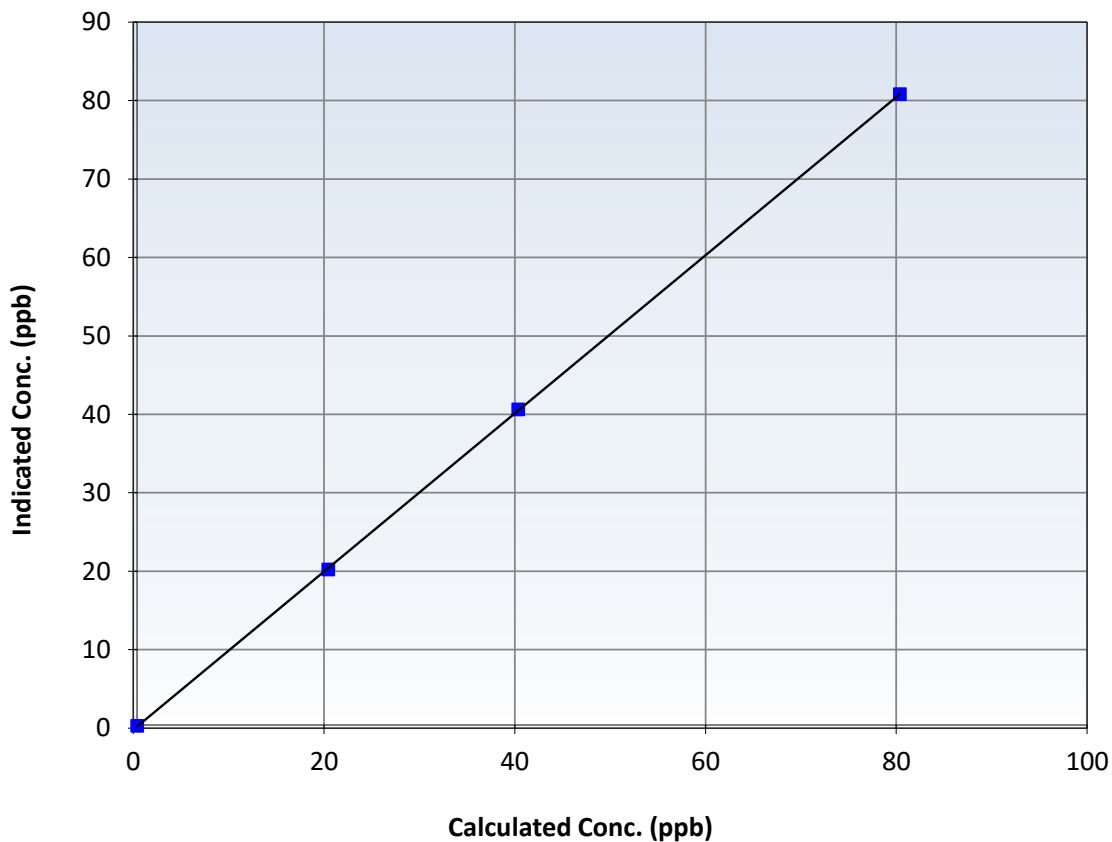
Station Information

Calibration Date:	July 30, 2026	Previous Calibration:	June 16, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:15	End Time (MST):	13:48
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	0.999983		≥ 0.995
80.0	80.4	0.9946	Slope	1.007962		$0.90 - 1.10$
40.0	40.2	0.9944	Intercept	-0.198124		± 3
20.0	19.8	1.0121				

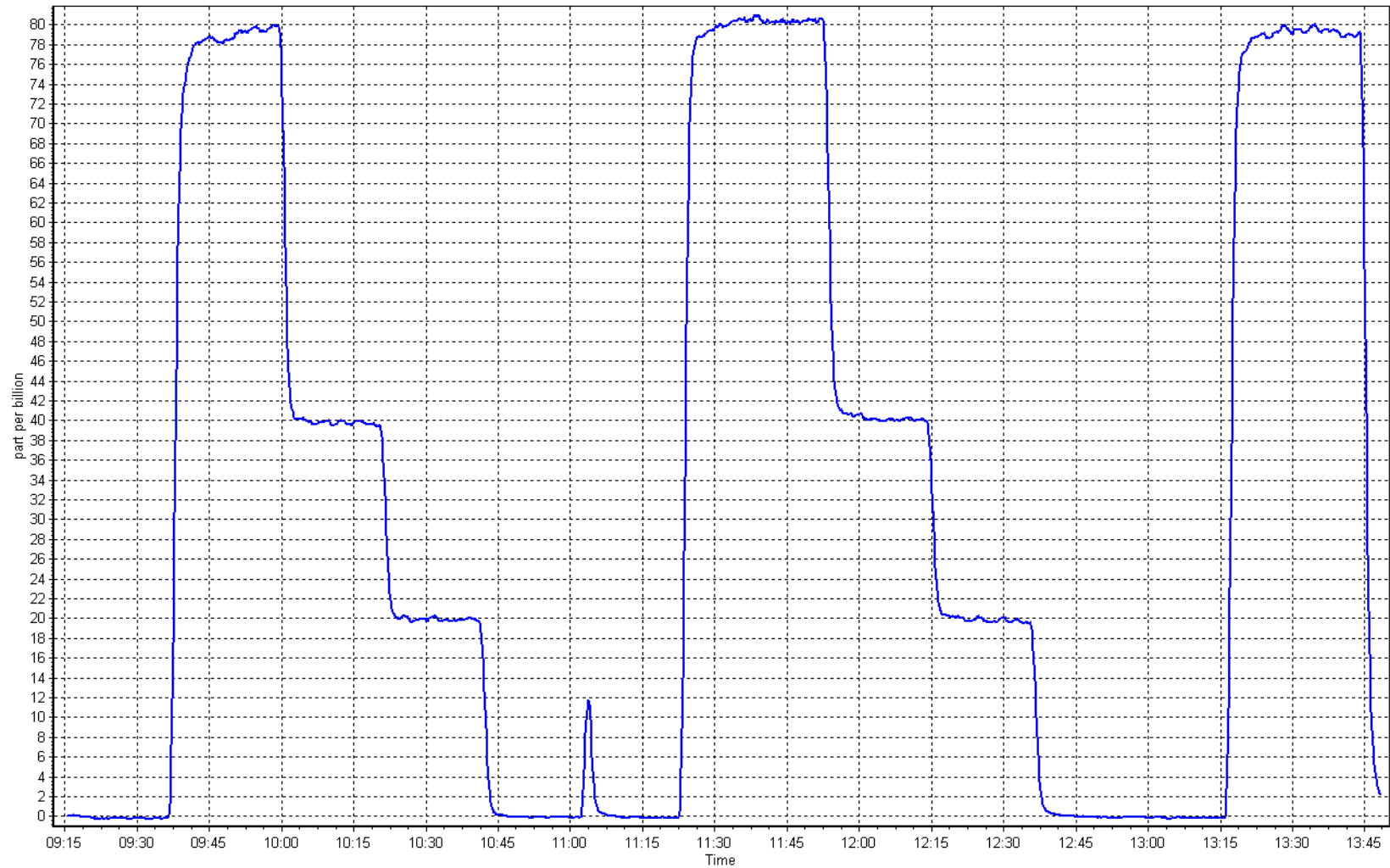
TRS Calibration Curve



TRS Calibration Plot

Date: July 30, 2026

Location: Bertha Ganter-Fort McKay





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
 Calibration Date: July 14, 2026 Last Cal Date: June 26, 2026
 Start time (MST): 10:04 End time (MST): 13:10
 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. 1061.8 ppm
 Removed C₃H₈ Conc. 205.3 ppm Diff between cyl (THC):
 Diff between cyl (NMHC):
 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:	2.41E-04	2.41E-04	NMHC SP Ratio:	4.72E-05
CH ₄ Retention time:	15.0	15.0	NMHC Peak Area:	194614
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	4918	81.3	17.27	17.57	0.983
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.57	Prev response	17.25	*% change	1.8%
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	4918	81.3	17.27	17.64	0.979
Mid point	4959	40.7	8.64	8.82	0.981
Low point	4979	20.3	4.31	4.45	0.968
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	17.27	17.73	0.974
				Average Correction Factor	0.976

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



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	81.3	9.18	9.38	0.979
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.38	Prev response	9.16	*% change	2.3%
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	81.3	9.18	9.44	0.973
Mid point	4959	40.7	4.60	4.74	0.970
Low point	4979	20.3	2.29	2.41	0.951
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	9.18	9.53	0.964
Average Correction Factor					0.964

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	81.3	8.09	8.19	0.987
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.19	Prev response	8.09	*% change	1.3%
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	81.3	8.09	8.20	0.986
Mid point	4959	40.7	4.05	4.08	0.992
Low point	4979	20.3	2.02	2.04	0.989
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	8.09	8.20	0.986
Average Correction Factor					0.989

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.997696	1.020505
THC Cal Offset:	0.022747	0.016160
CH ₄ Cal Slope:	1.000336	1.013930
CH ₄ Cal Offset:	-0.001930	-0.007526
NMHC Cal Slope:	0.995396	1.026321
NMHC Cal Offset:	0.025076	0.024085

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

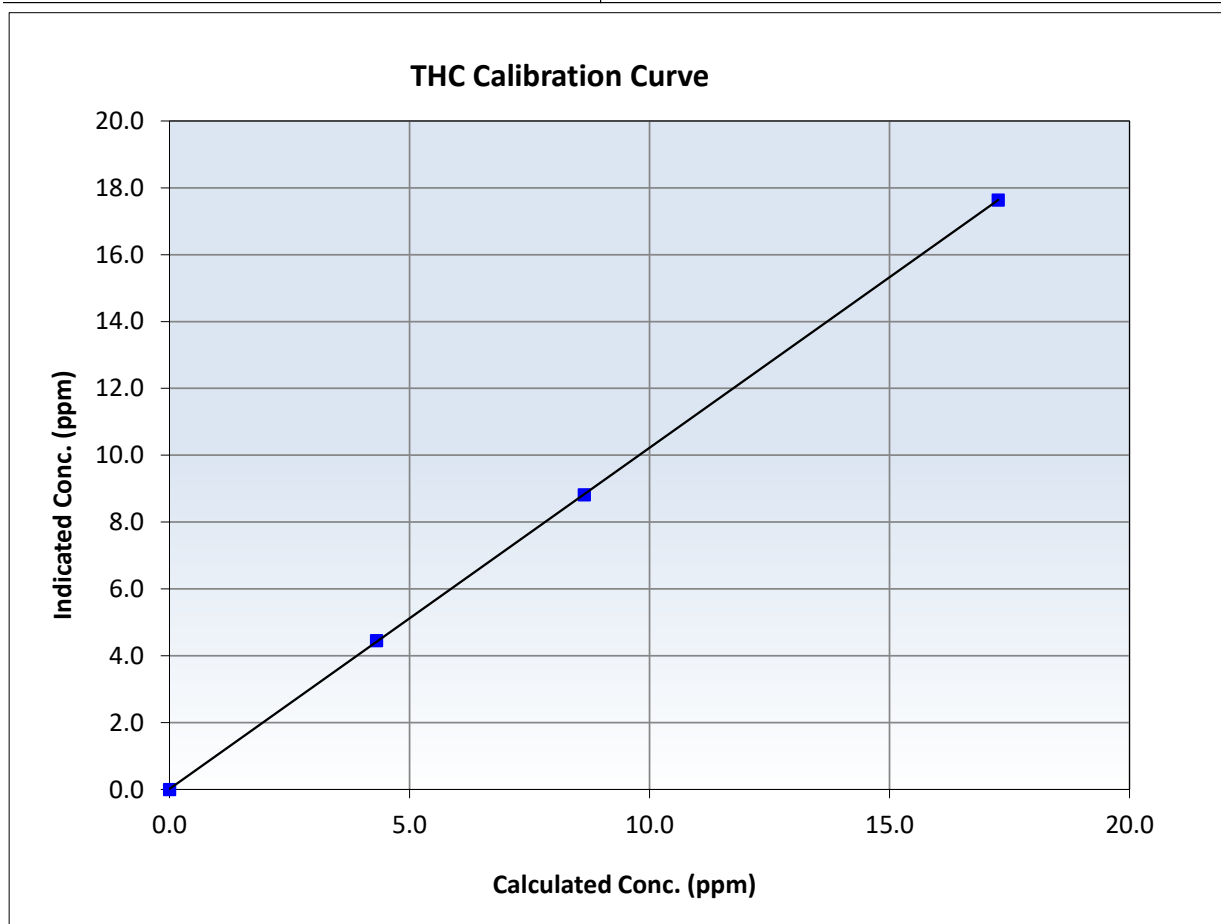
THC Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 26, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:04	End Time (MST):	13:10
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	0.999988	≥ 0.995
17.27	17.64	0.9789	Slope	1.020505	$0.90 - 1.10$
8.64	8.82	0.9805	Intercept	0.016160	± 0.5
4.31	4.45	0.9684			





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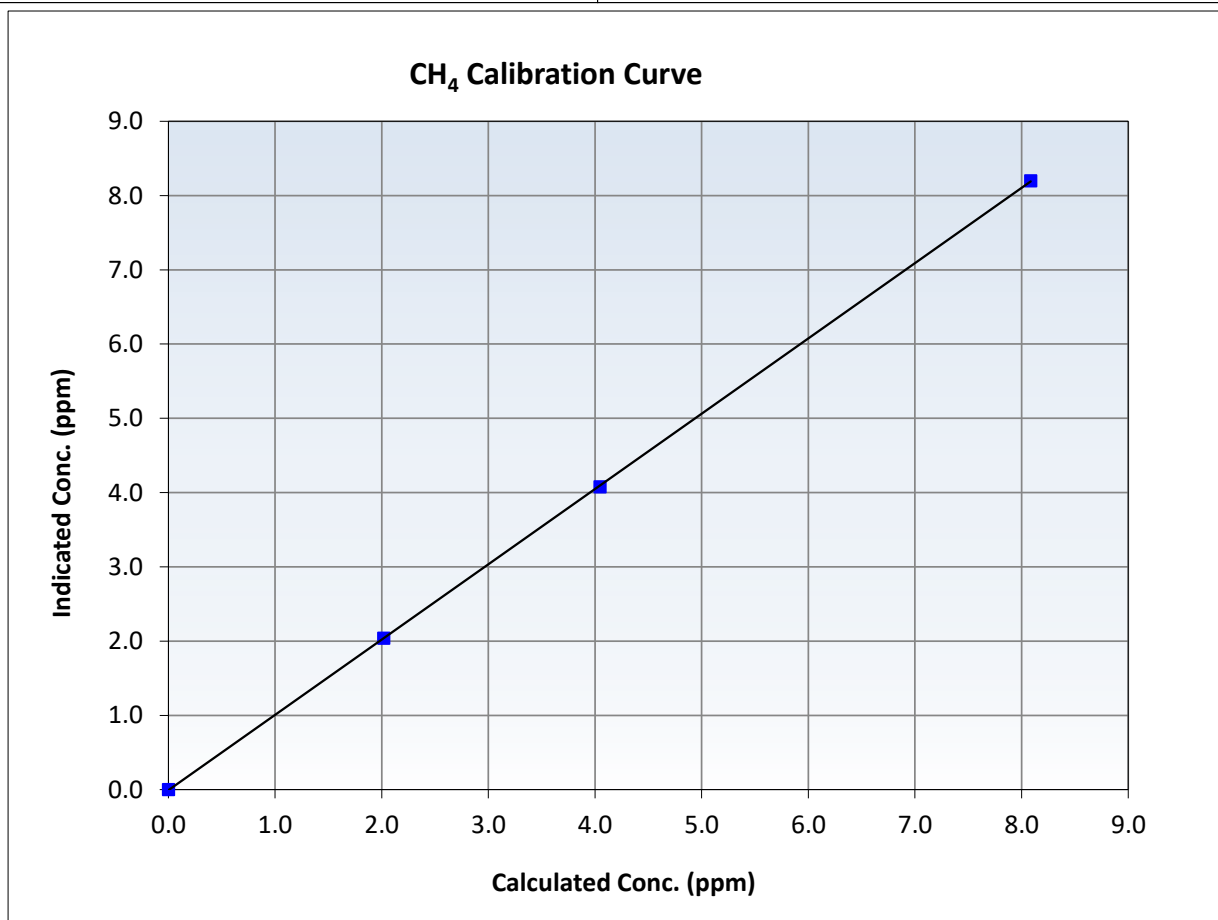
CH₄ Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 26, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:04	End Time (MST):	13:10
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

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	0.999988	<i>≥0.995</i>
8.09	8.20	0.9862	Slope	1.013930	<i>0.90 - 1.10</i>
4.05	4.08	0.9923	Intercept	-0.007526	<i>+/-0.5</i>
2.02	2.04	0.9892			





Wood Buffalo Environmental Association

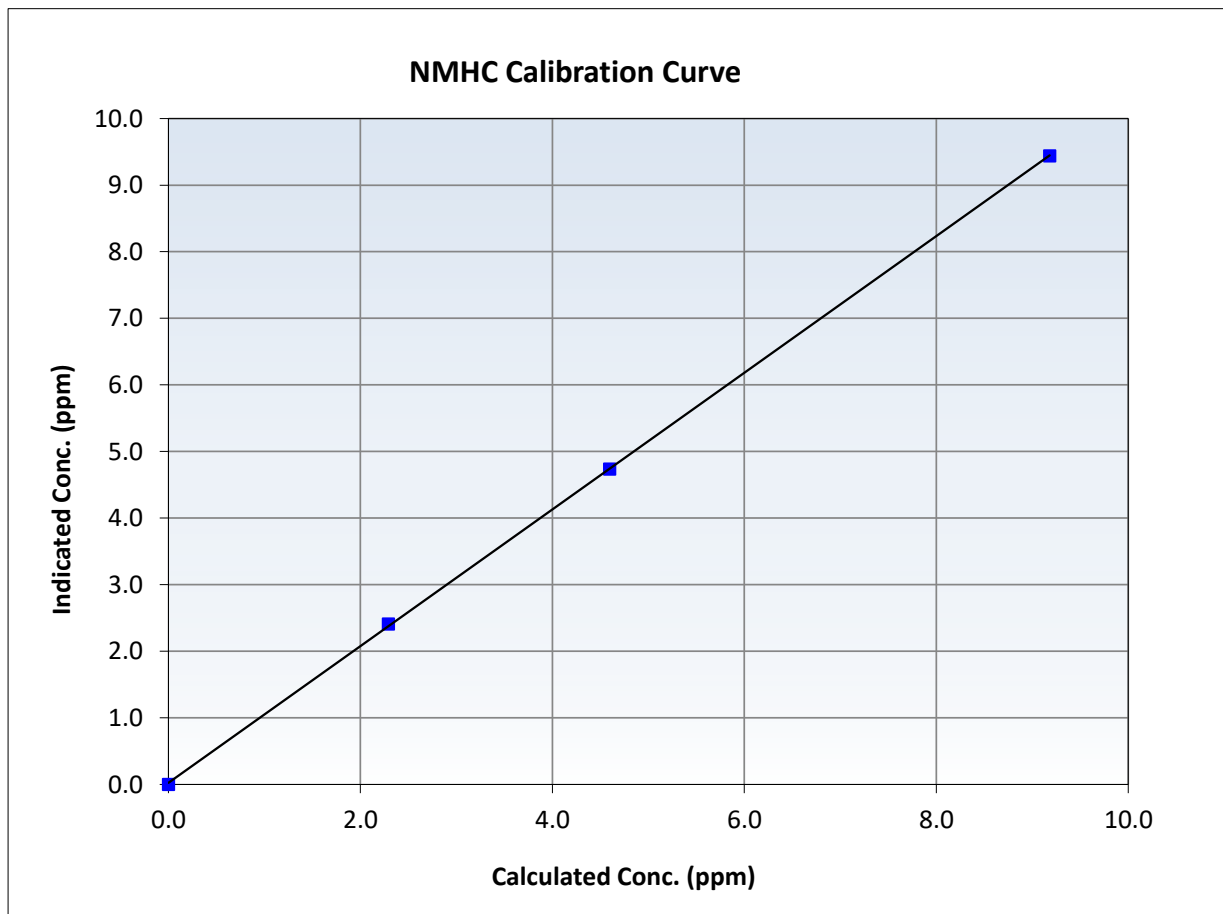
NMHC Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 26, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:04	End Time (MST):	13:10
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

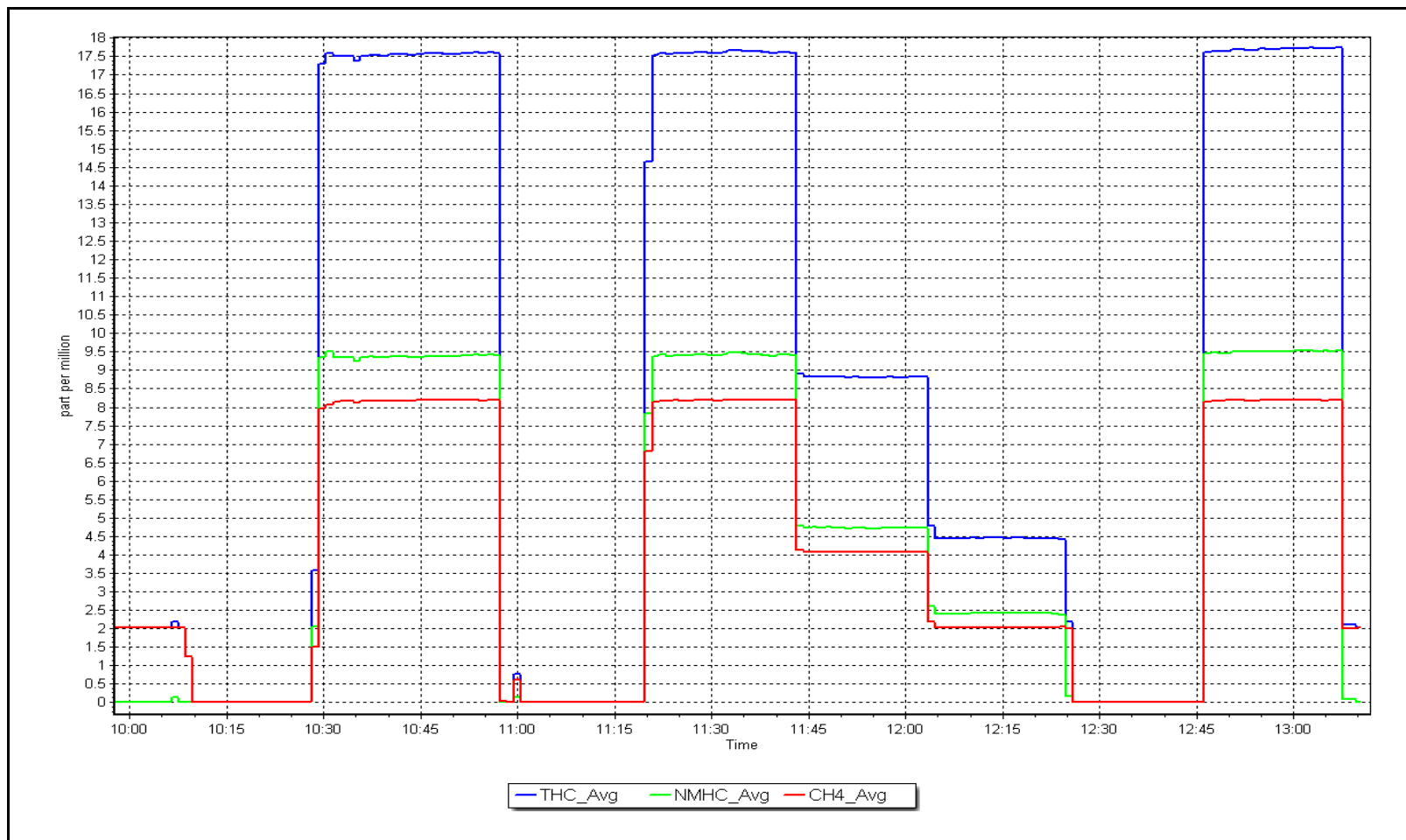
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999963	<i>≥0.995</i>
9.18	9.44	0.9726	Slope	1.026321	<i>0.90 - 1.10</i>
4.60	4.74	0.9700	Intercept	0.024085	<i>+/-0.5</i>
2.29	2.41	0.9508			



NMHC Calibration Plot

Date: July 14, 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: July 9, 2026
Last Cal Date: June 24, 2026
Start time (MST): 9:49
End time (MST): 14:40
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 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	67.6	803.1	800.4	2.7	796.3	785.7	10.6	1.0087	1.0187
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 805.1 ppb	NO = 799.2 ppb				* = > +/-5% change initiates investigation			*Percent Change	NO _x = -1.1%
Baseline Corr 1st pt	NO _x = 796.2 ppb	NO = 785.7 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						



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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:	0.753	0.769	NO bkgnd or offset:	2.2	2.2
NOX coeff or slope:	1.001	0.996	NOX bkgnd or offset:	2.3	2.3
NO2 coeff or slope:	0.999	0.999	Reaction cell Press:	161.2	160.3

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.002502	1.000766
NO _x Cal Offset:	0.020000	0.280000
NO Cal Slope:	1.000534	1.001562
NO Cal Offset:	-1.580000	-1.340000
NO ₂ Cal Slope:	1.003841	1.002653
NO ₂ Cal Offset:	0.778452	-0.586458

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	0.4	0.1	0.3	----	----
High point	4932	67.6	803.1	800.4	2.7	803.9	800.9	3.1	0.9990	0.9994
Mid point	4966	33.8	401.5	400.2	1.4	402.5	399.1	3.3	0.9976	1.0027
Low point	4983	16.9	200.8	200.1	0.7	200.8	197.4	3.4	0.9999	1.0137
As left zero	5000	0.0	0.0	0.0	0.0	0.8	0.0	0.7	----	----
As left span	4932	67.6	803.1	404.9	398.2	800.4	404.9	395.4	1.0034	1.0000
Average Correction Factor									0.9988	1.0052

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	798.6	400.0	401.3	402.1	0.9980	100.2%
Mid GPT point	798.6	605.9	195.4	195.2	1.0010	99.9%
Low GPT point	798.6	706.8	94.5	93.1	1.0151	98.5%
Average Correction Factor					1.0047	99.5%

Notes:

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

Calibration Performed By:

Mohammed Kashif



Wood Buffalo Environmental Association

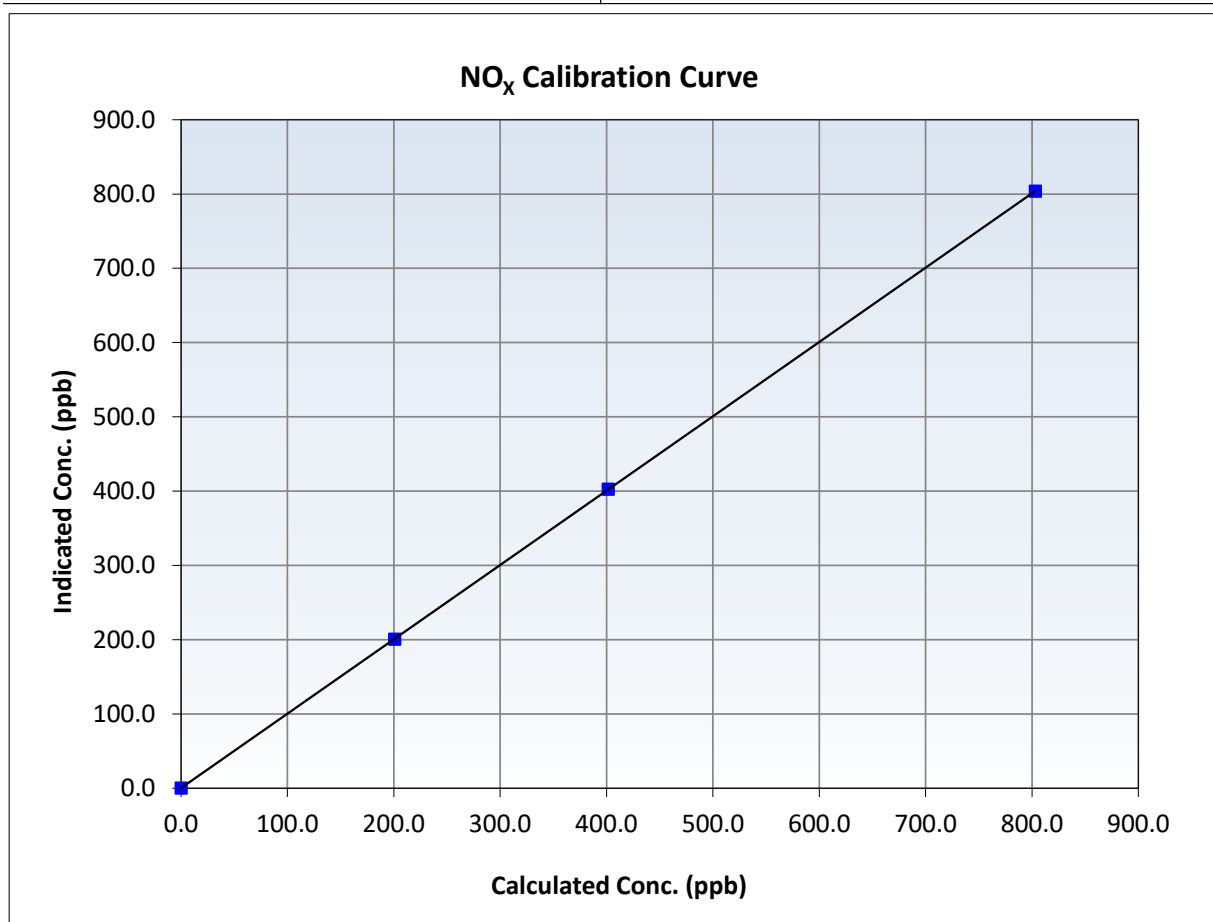
NO_x Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 24, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:49	End Time (MST):	14:40
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	0.4	----	Correlation Coefficient	0.999999	≥0.995
803.1	803.9	0.9990	Slope	1.000766	0.90 - 1.10
401.5	402.5	0.9976	Intercept	0.280000	+/-20
200.8	200.8	0.9999			





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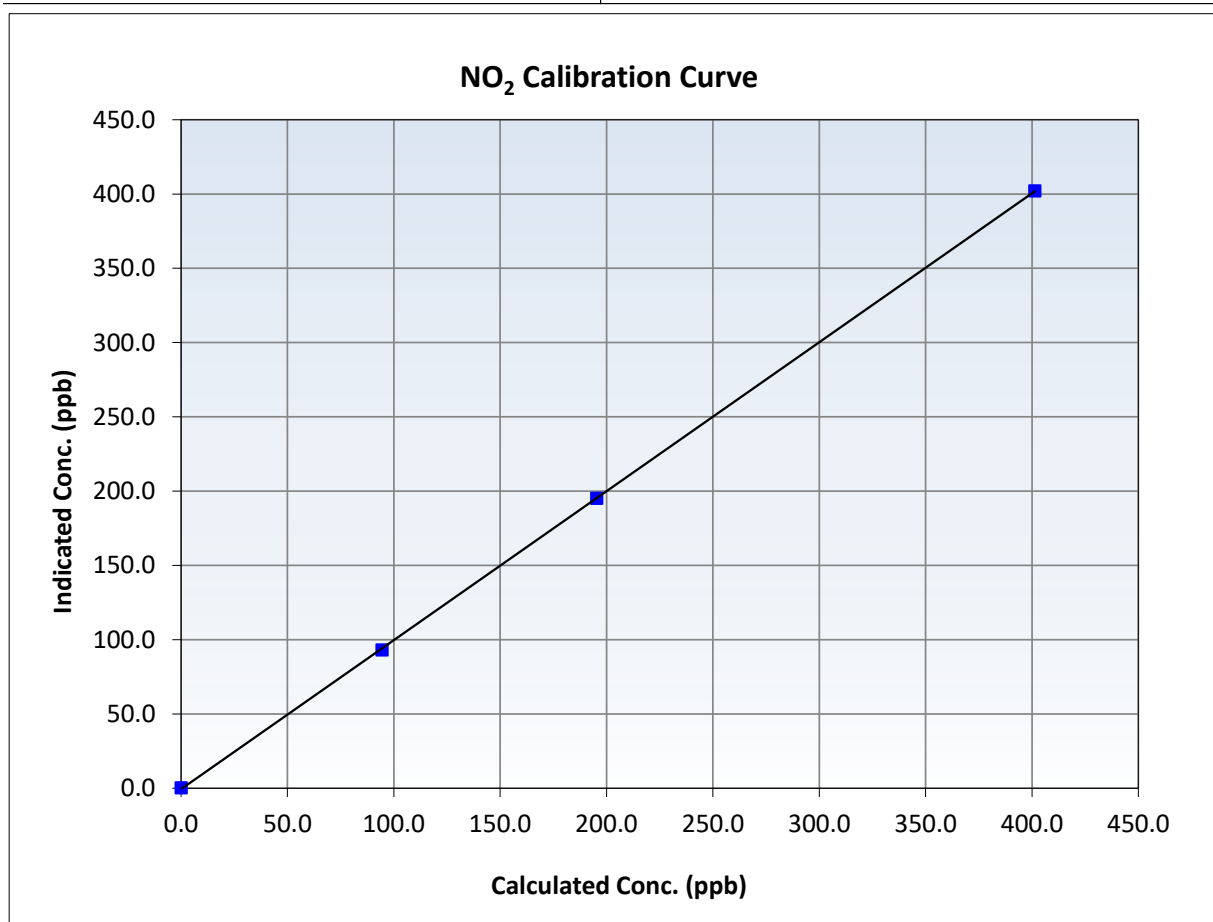
NO₂ Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 24, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:49	End Time (MST):	14:40
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	0.3	----	Correlation Coefficient	0.999977	≥ 0.995
401.3	402.1	0.9980	Slope	1.002653	$0.90 - 1.10$
195.4	195.2	1.0010	Intercept	-0.586458	± 20
94.5	93.1	1.0151			





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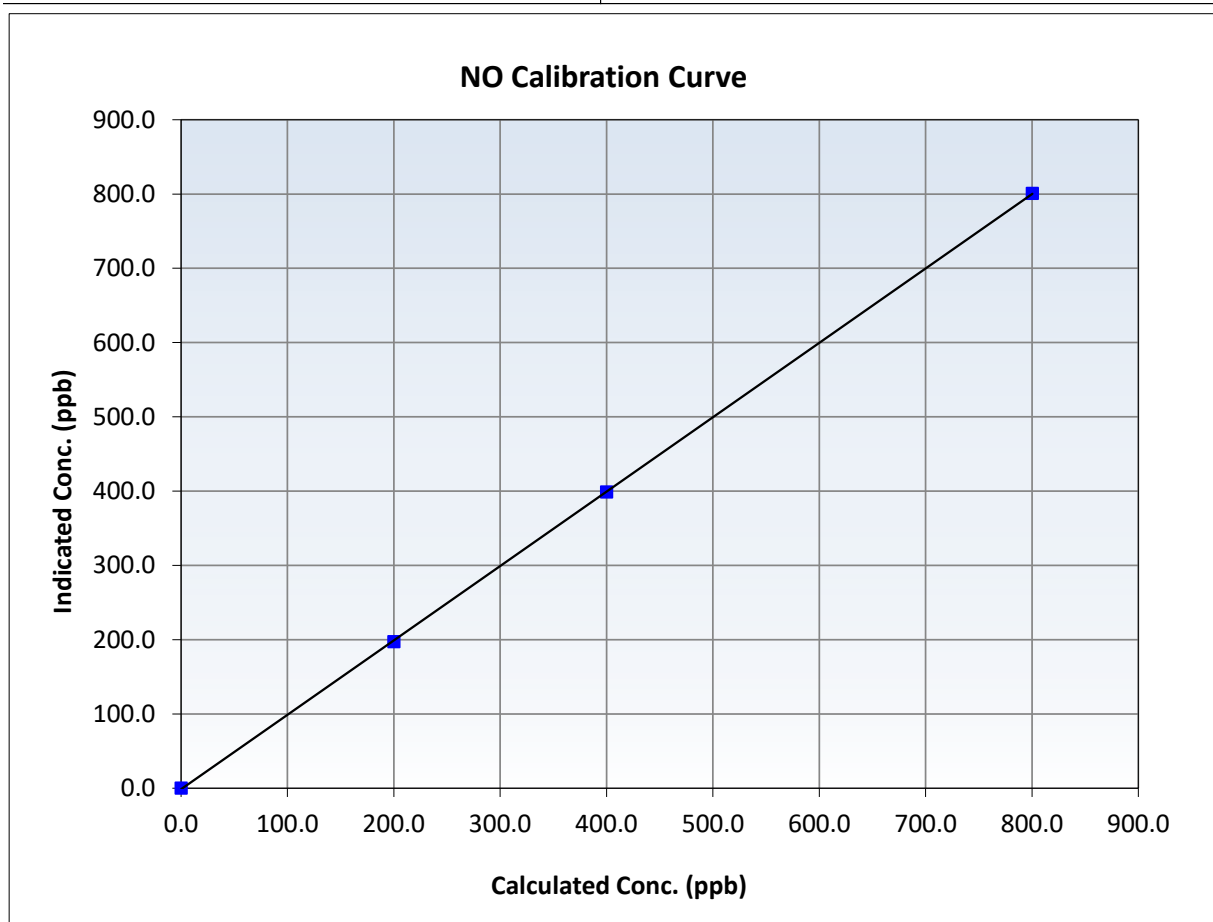
NO Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 24, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:49	End Time (MST):	14:40
Analyzer make:	Thermo 42i	Analyzer serial #:	1336160088

Calibration Data

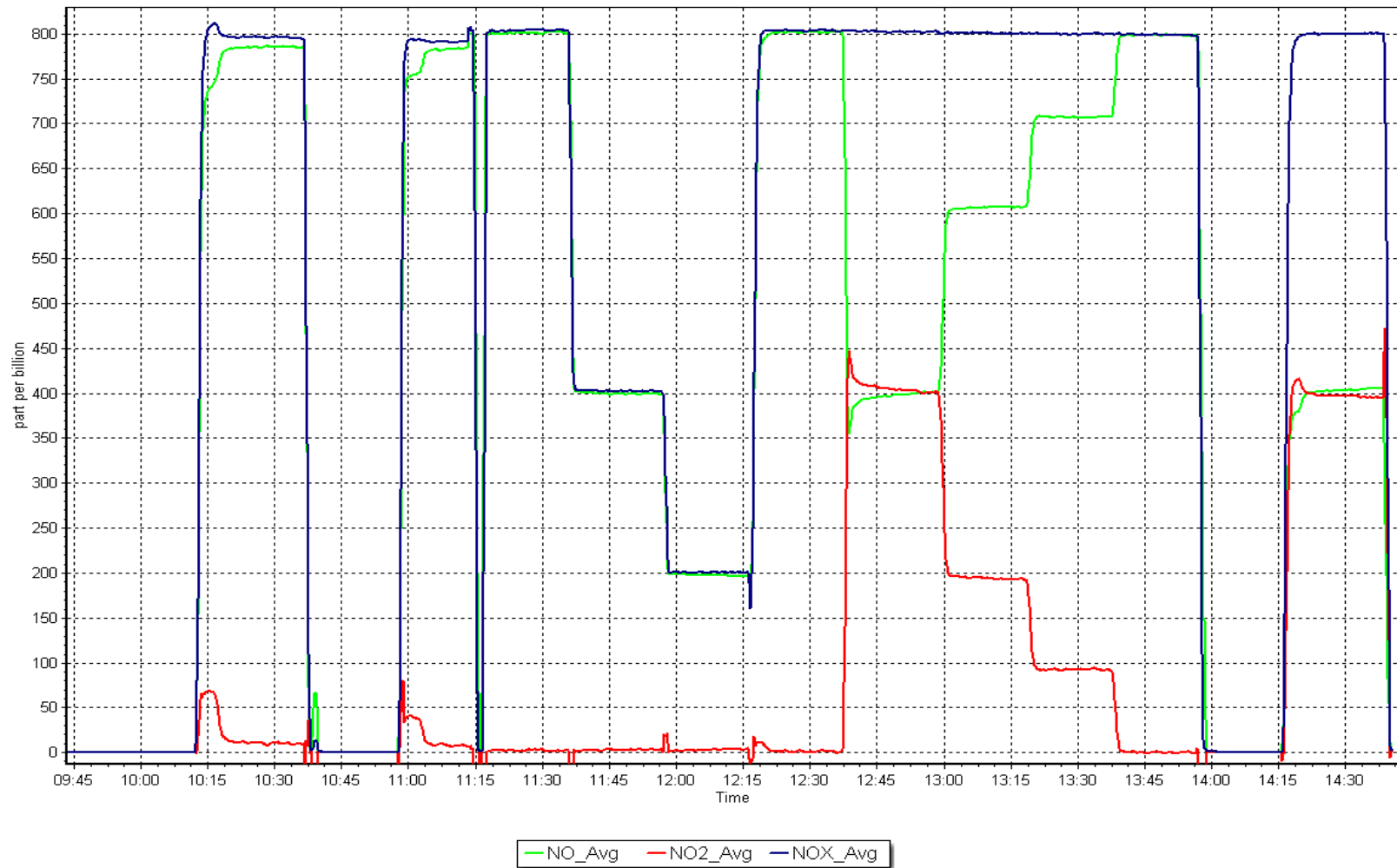
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.1	----	Correlation Coefficient	0.999985	≥ 0.995
800.4	800.9	0.9994	Slope	1.001562	0.90 - 1.10
400.2	399.1	1.0027	Intercept	-1.340000	+/-20
200.1	197.4	1.0137			



NO_x Calibration Plot

Date: July 9, 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: July 15, 2026 Last Cal Date: June 9, 2026
Start time (MST): 11:21 End time (MST): 14:40
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:	1.007743	1.002686	Backgd or Offset:	2.6	2.6
Calibration intercept:	-0.380000	-0.220000	Coeff or Slope:	1.010	1.010

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	-1.3	----
As found High point	5000	880.4	400.0	401.2	0.994
As found Mid point					
As found Low point					
Baseline Corr As found:	402.5	Previous response	402.7	*% 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	

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	880.4	400.0	400.6	0.999
Mid point	5000	755.0	200.0	200.9	0.996
Low point	5000	661.2	100.0	99.9	1.001
As left zero	5000	0.0	0.0	-0.2	----
As left span	5000	880.4	400.0	404.9	0.988
Average Correction Factor					0.998

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

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

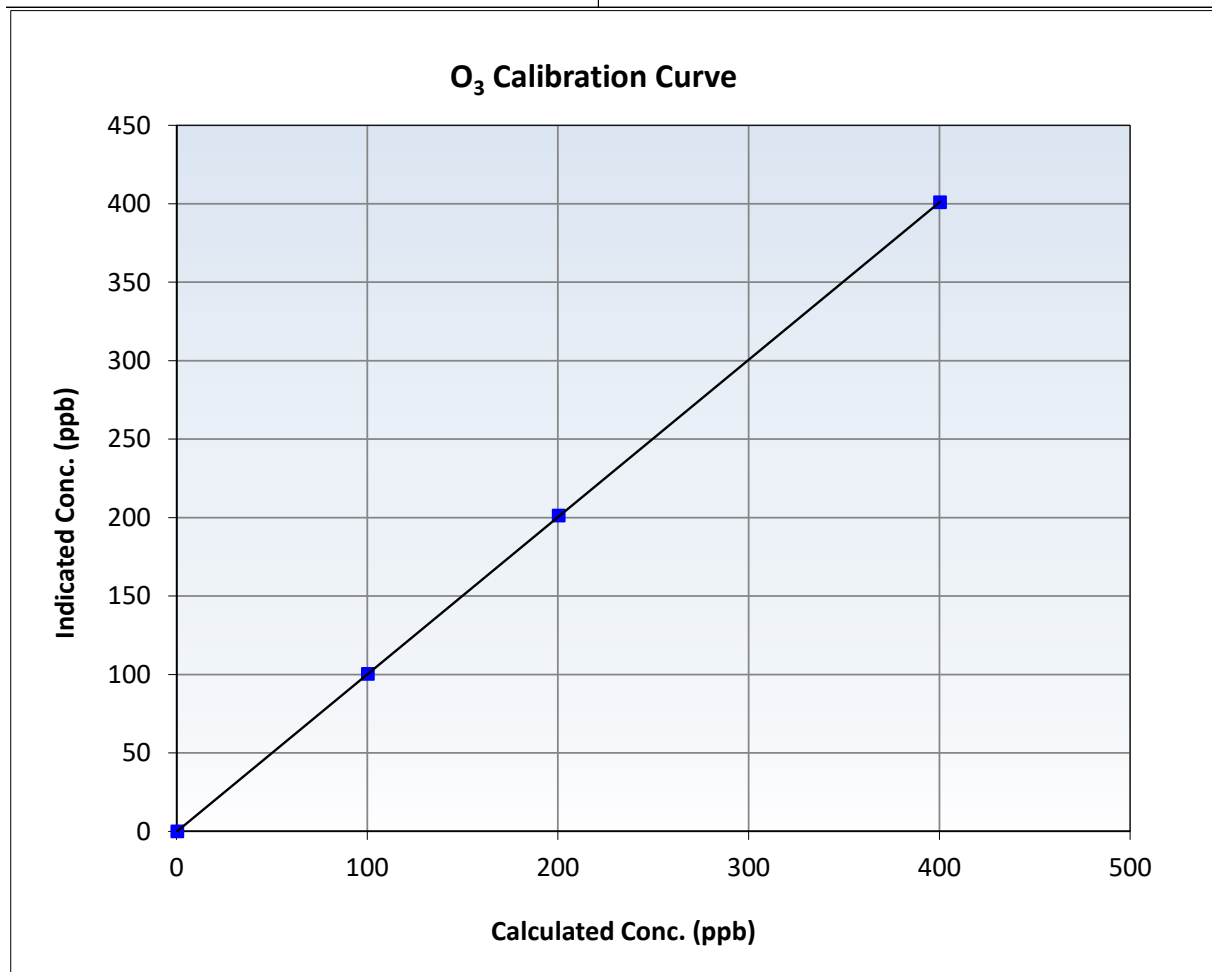
O₃ Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 9, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:21	End Time (MST):	14:40
Analyzer make:	Teledyne API T400	Analyzer serial #:	7045

Calibration Data

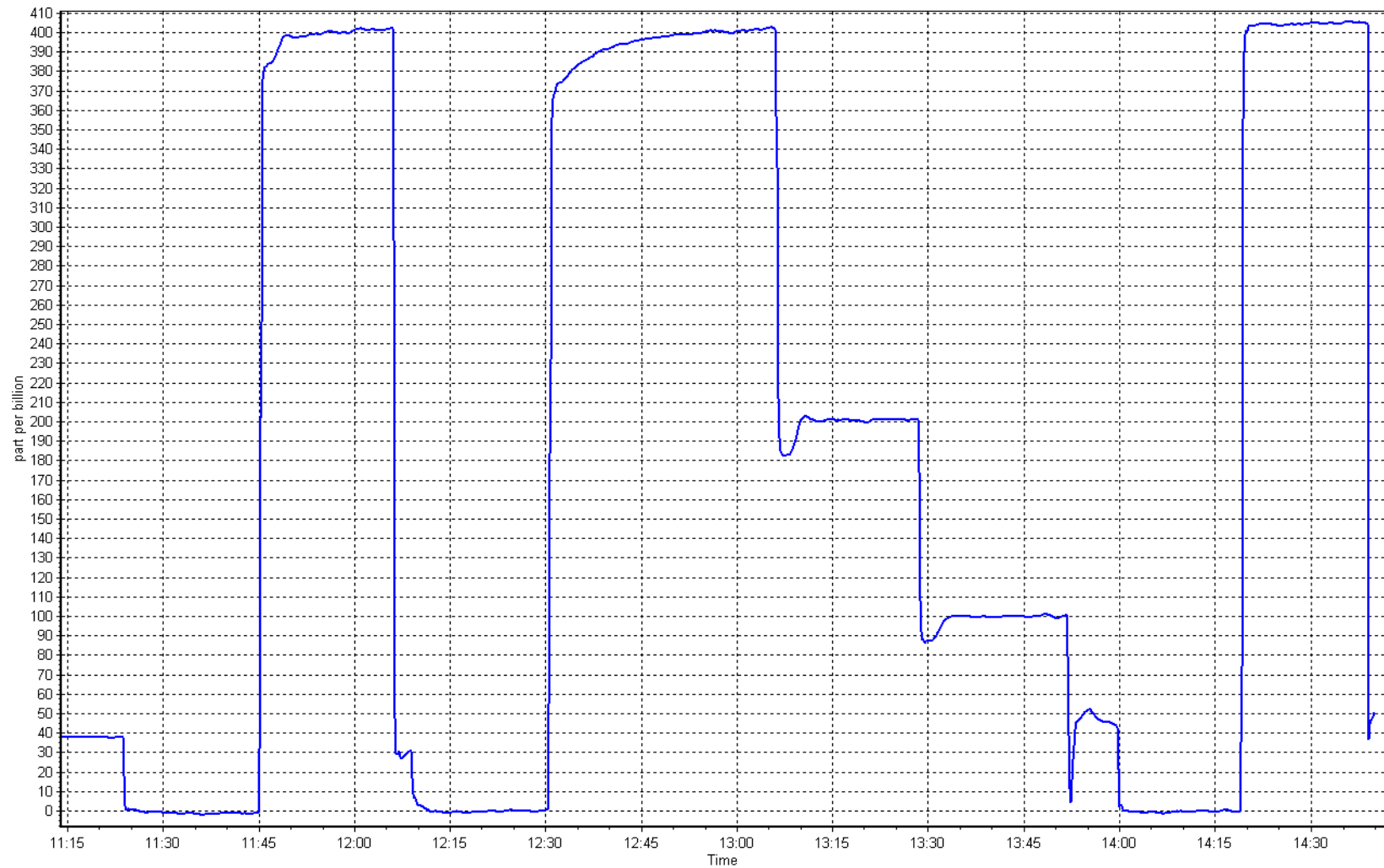
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.4	----	Correlation Coefficient	0.999995	≥0.995
400.0	400.6	0.9985	Slope	1.002686	0.90 - 1.10
200.0	200.9	0.9955	Intercept	-0.220000	+/- 5
100.0	99.9	1.0010			



O₃ Calibration Plot

Date: July 15, 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: July 9, 2026 Last Cal Date: June 16, 2026
Start time (MST): 13:48 End time (MST): 14:07

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)	22.50	22.2	22.50	☐	+/- 2 °C
P (mmHg)	731.10	730.37	731.10	☐	+/- 10 mmHg
Flow (LPM)	5	5.007	5.00	☐	+/- 0.25 LPM
PW% (pump)	30		30	☐	>80%
Zero Verification	PM w/o HEPA:	1.40	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: May 26, 2026
Date Disposable Filter Changed: May 26, 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. No adjustments made. Leak check passed. Inlet head cleaned.

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:	July 27, 2026	Last Cal Date:	June 29, 2026
Start time (MST):	11:17	End time (MST):	15:30
NH3 Cal Date:	July 27, 2026	Last Cal Date:	June 30, 2026
Start time (MST):	15:45	End time (MST):	18:15
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:	261

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:	8.2
NOX Range (ppb):	0 - 1000 ppb	Sample Flow:	562

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coefficient:	0.999	0.999	Nt coefficient:	1.011	1.011
NOX coefficient:	1.010	1.010	NO bkgrnd:	0.0	0.0
NO2 coefficient:	1.000	1.000	NOX bkgrnd:	0.0	0.0
NH3 coefficient:	0.971	0.971	Nt bkgrnd:	0.0	0.0

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.001064	1.001392
NO _x Cal Offset:	-1.300000	0.160000
NO Cal Slope:	0.997678	1.001134
NO Cal Offset:	-3.580000	-2.540000
NO ₂ Cal Slope:	1.017447	1.012041
NO ₂ Cal Offset:	-0.603697	1.470889
NH3 Cal Slope:	0.998088	0.990686
NH3 Cal Offset:	7.302791	5.911145
Nt Cal Slope:	1.001150	0.994135
Nt Cal Offset:	7.176808	6.115003



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	0.4	-0.1	1.1	----	----
As found span	4932	67.6	803.1	800.4	803.1	803.4	793.1	796.2	0.9996	1.0092
AF GPT span										
new NO cyl rp										

Baseline Corr As Fd Nt = 795.1 ppb NO_x = 803.0 ppb NO = 793.2 ppb *Percent Change Nt_(NO) = -2.0%

Previous Response Nt = 811.19 ppb NO_x = 802.6 ppb NO = 794.9 ppb *Percent Change NO_x = 0.0%

**NO_x Δ (NO to GPT response) = *Percent Change NO = -0.2%

* = > +/-2% difference initiates investigation * = > +/-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	0.2	0.2	----	----
High point	4932	67.6	803.1	800.4	803.1	804.7	800.2	798.9	0.9980	1.0002
Mid point	4966	33.8	401.5	400.2	401.5	401.1	396.5	396.8	1.0011	1.0093
Low point	4983	16.9	200.8	200.1	200.8	202.2	195.2	197.9	0.9929	1.0251
Average Correction Factor									0.9973	1.0115

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	0.5	----	----
Calibration zero	----	----	0.0	-0.2	----	----
High GPT point (400 ppb O3)	795.0	409.7	388.0	392.8	0.9878	101.2%
Mid GPT point (200 ppb O3)	795.0	566.3	231.4	237.1	0.9760	102.5%
Low GPT point (100 ppb O3)	795.0	677.6	120.1	124.6	0.9639	103.7%
Average Correction Factor					0.9759	102.5%



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	1.1	0.4	0.7	----	----
AF High point										
AF Mid point										
AF Low point										
new NH ₃ cyl rp										
Baseline Corr As Fd	Nt =	NA	ppb	NH ₃ =	NA	ppb			*Percent Change	Nt _(NH₃) = NA
Previous Response	Nt =	NA	ppb	NH ₃ =	NA	ppb	* = > +/-5% change initiates investigation		*Percent Change	NH ₃ = NA

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	0.2	0.0	0.2	----	----
High point	2930	70.5	1799.6	0.0	1799.6	1791.6	6.3	1785.4	1.004	1.008
Mid point	2961	39.2	1000.6	0.0	1000.6	1004.3	4.0	1000.3	0.996	1.000
Low point	2980	19.6	500.3	0.0	500.3	509.6	2.0	507.6	0.982	0.986
Average Correction Factor									0.9942	0.9980
NH ₃ Previous Converter Efficiency =			97.1 %							
NH ₃ Current Converter Efficiency =			97.1 %							

Notes:

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

Calibration Performed By:

Mohammed Kashif



Wood Buffalo Environmental Association

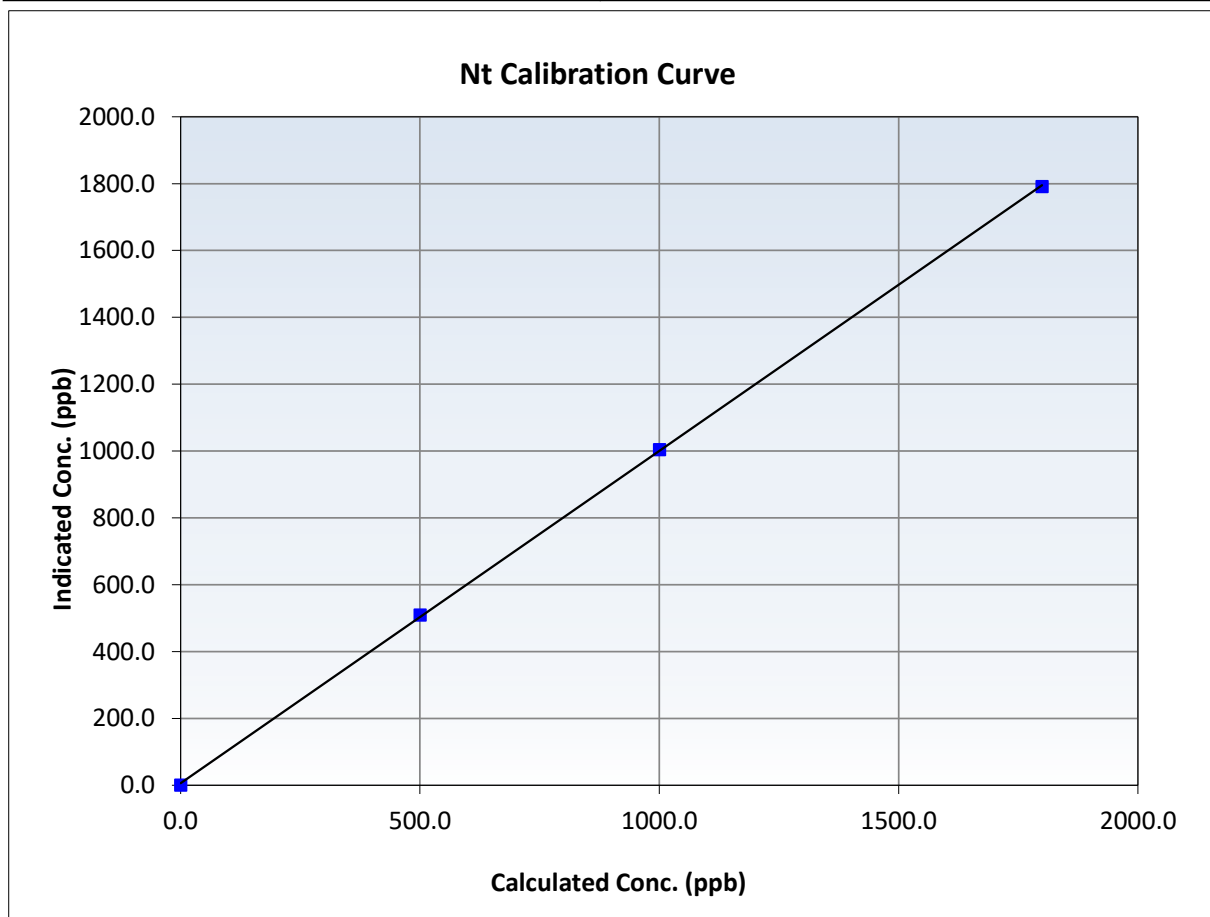
Nt Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 29, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	15:45	End Time (MST):	18:15
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	0.999945	≥ 0.995
1799.6	1791.6	1.0045	Slope	0.994135	0.90 - 1.10
1000.6	1004.3	0.9964	Intercept	6.115003	+/-20
500.3	509.6	0.9818			





Wood Buffalo Environmental Association

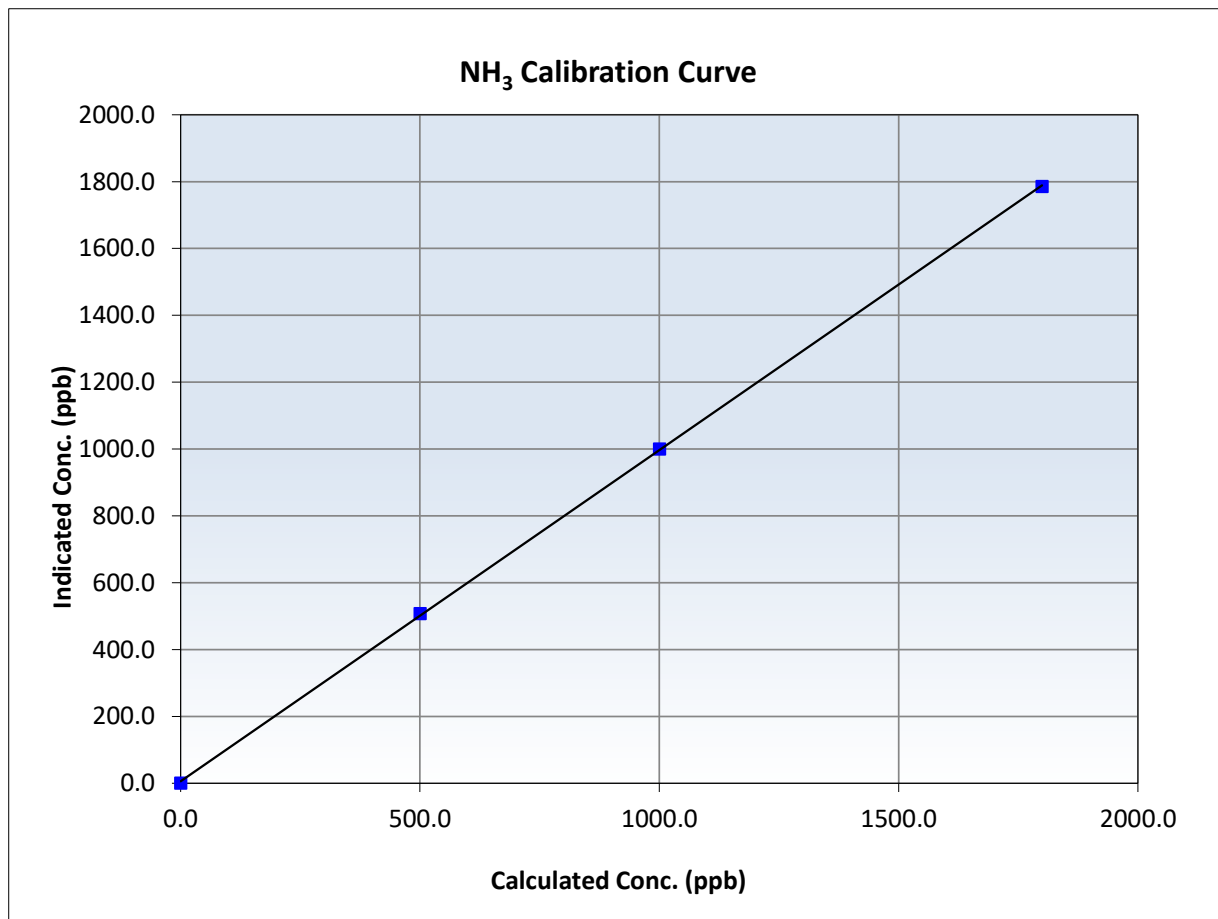
NH₃ Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 29, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	15:45	End Time (MST):	18:15
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	0.999948	≥ 0.995
1799.6	1785.4	1.0080	Slope	0.990686	0.90 - 1.10
1000.6	1000.3	1.0003	Intercept	5.911145	+/-20
500.3	507.6	0.9857			





Wood Buffalo Environmental Association

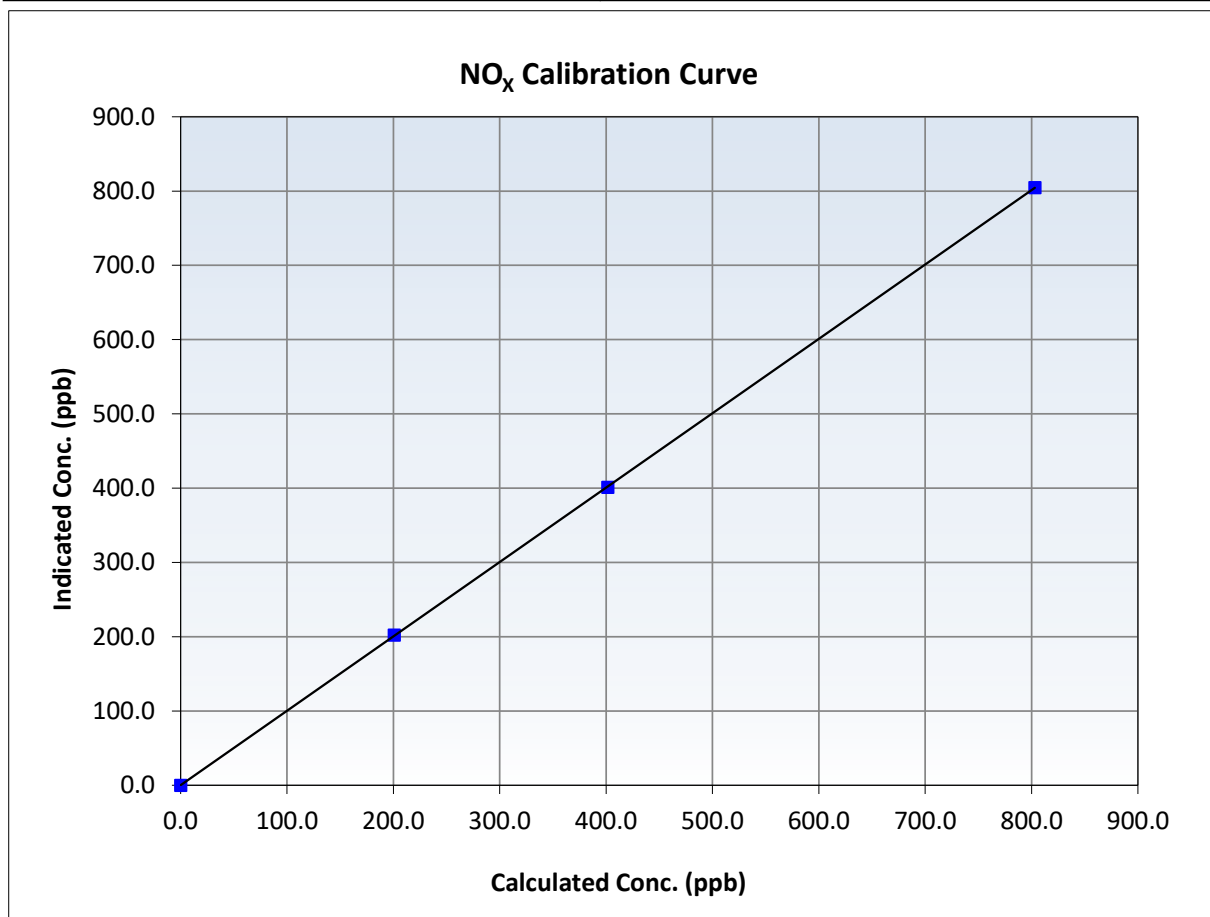
NO_x Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 29, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:17	End Time (MST):	15:30
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	0.0	----	Correlation Coefficient	0.999993	≥0.995
803.1	804.7	0.9980	Slope	1.001392	0.90 - 1.10
401.5	401.1	1.0011	Intercept	0.160000	+/-20
200.8	202.2	0.9929			





Wood Buffalo Environmental Association

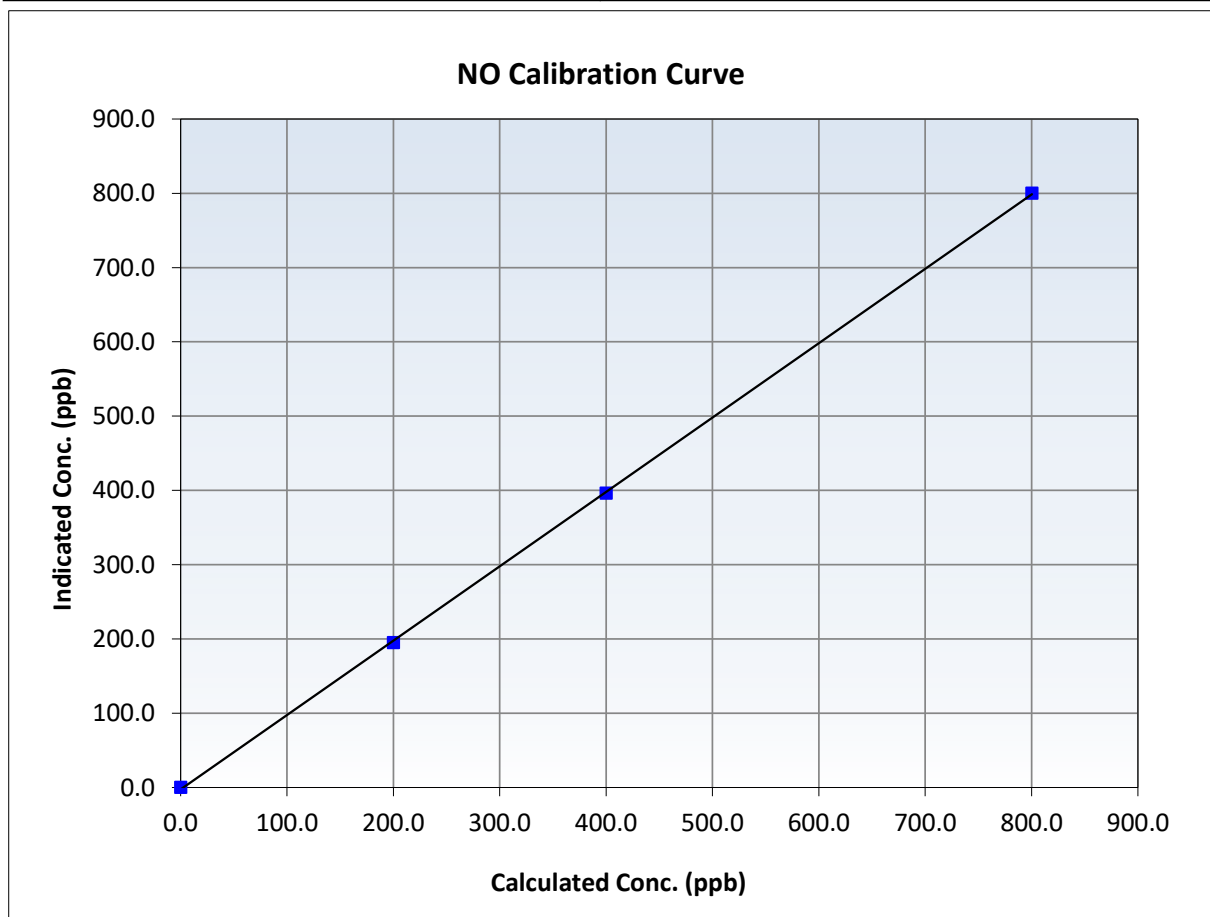
NO Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 29, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:17	End Time (MST):	15:30
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	0.999946	≥ 0.995
800.4	800.2	1.0002	Slope	1.001134	0.90 - 1.10
400.2	396.5	1.0093	Intercept	-2.540000	+/-20
200.1	195.2	1.0251			





Wood Buffalo Environmental Association

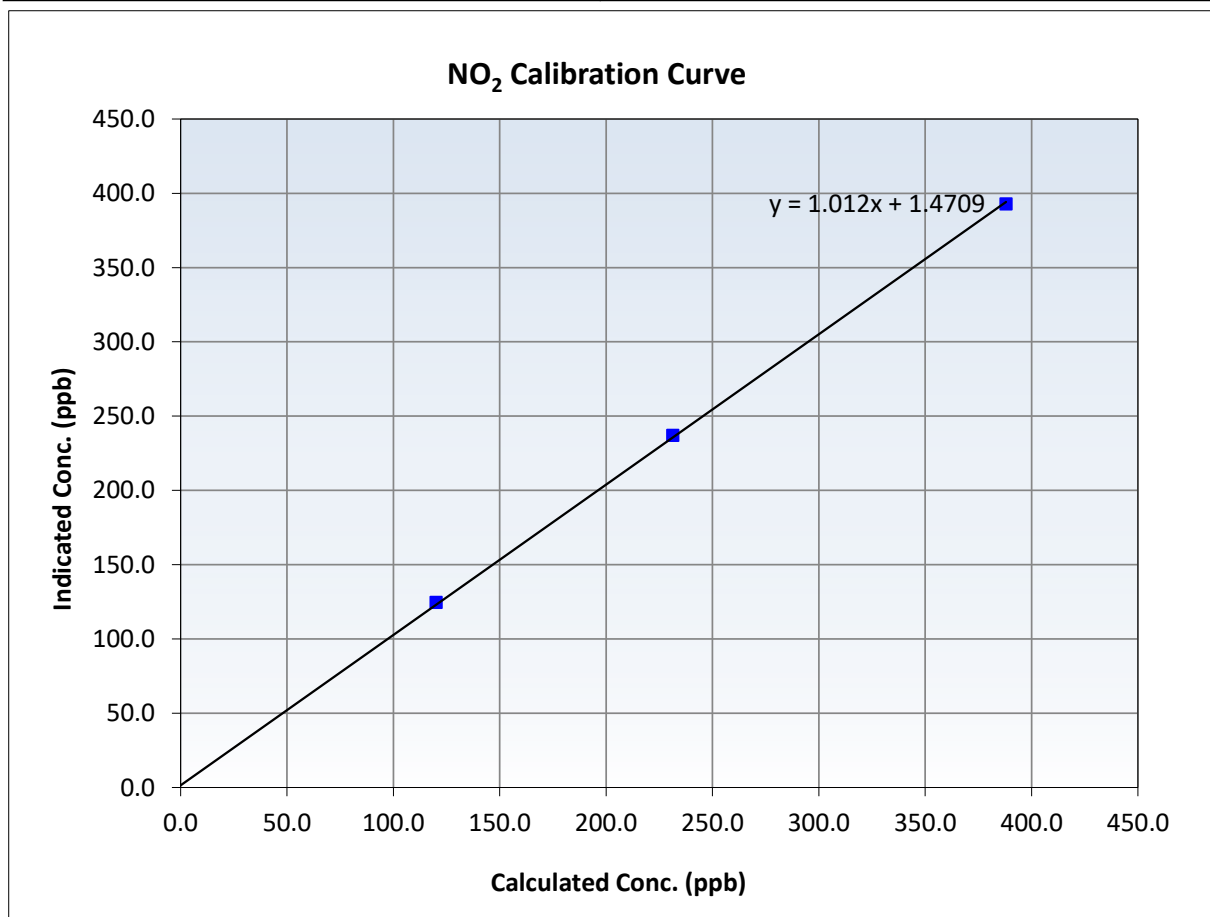
NO₂ Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 29, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:17	End Time (MST):	15:30
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

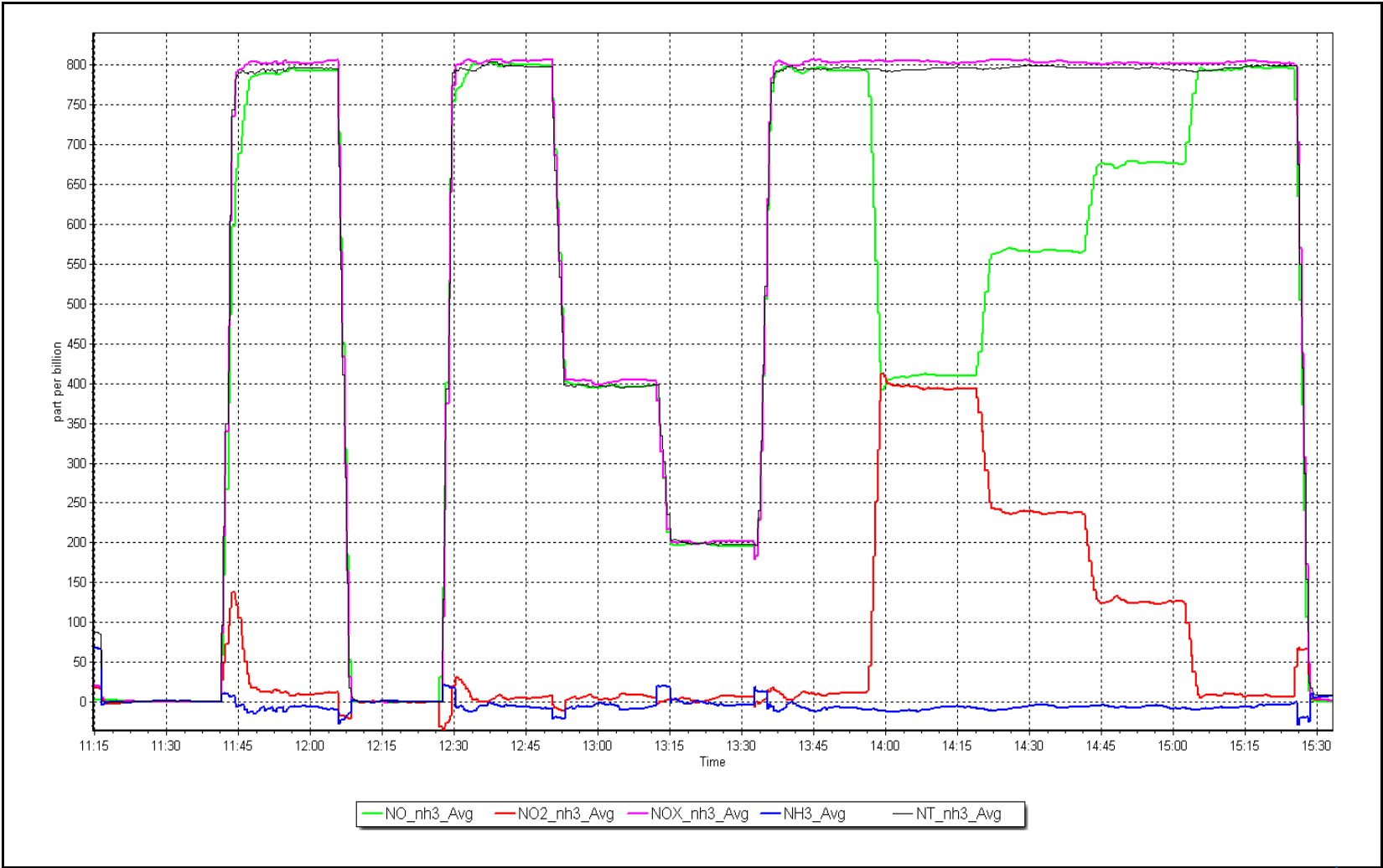
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999891	≥ 0.995
388.0	392.8	0.9878	Slope	1.012041	0.90 - 1.10
231.4	237.1	0.9760	Intercept	1.470889	+/-20
120.1	124.6	0.9639			



NO_x Calibration Plot

Date: July 27, 2026

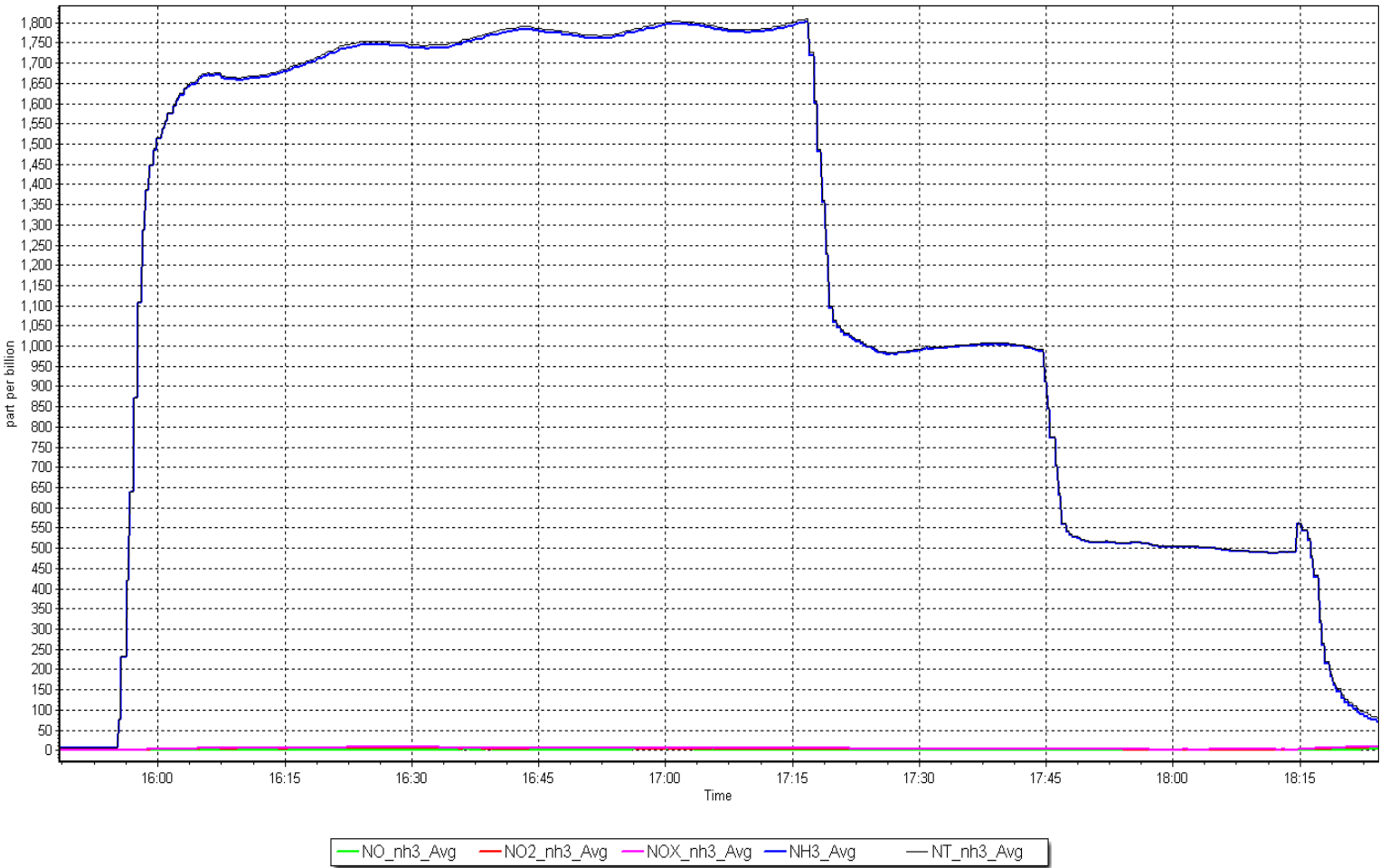
Location: Bertha Ganter-Fort McKay



NH₃ Calibration Plot

Date: July 27, 2026

Location: Bertha Ganter-Fort McKay





Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Fort McKay - Bertha Ganter	Station Number:	AMS 01
Calibration Date:	July 24, 2026	Prev Cal Date:	September 10, 2025
Start Time (MST):	12:41	End Time (MST):	14:32
Tower Height (m):	10.0	Reason:	Routine

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	P10041
WS Calibrator:	MetOne 053	Serial Number:	18811

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	0.5%
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	≥ 0.9995
Calculated slope		0.998854	$0.98 - 1.02$
Calculated intercept		-0.028010	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	R14655
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):	12:33	Calc Declination*:	13.19 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	91.3	0.4%
180	180.3	0.1%
270	270.3	0.1%
350	350.2	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999997	≥ 0.9995
Calculated slope		1.005686	$0.97 - 1.03$
Calculated intercept		-1.889517	± 5

Notes: Performing the annual WS/WD calibration. No issues to note. Bearings good. Solar noon was verified before and after calibration.

Calibration Performed By: Mohammed Kashif



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS04 BUFFALO VIEWPOINT JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Buffalo Viewpoint Station number: AMS 04
Calibration Date: July 28, 2026 Last Cal Date: June 2, 2026
Start time (MST): 11:33 End time (MST): 15:16
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.06 ppm Cal Gas Exp Date: January 5, 2029
Cal Gas Cylinder #: CC147416
Removed Cal Gas Conc: 50.06 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 3808
Zero Air Gen Model: Teledyne API T701 Serial Number: 362

Analyzer Information

Analyzer make: Thermo 43i-LTE Serial Number: 1410661331
Analyzer Range: 0-1000ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004295	1.000200	Backgd or Offset:	1.6	1.6
Calibration intercept:	1.100000	1.460000	Coeff or Slope:	1.014	1.002

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	80.0	801.0	810.3	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	810.4	Previous response	805.5	*% 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	0.3	----
High point	4920	80.0	801.0	802.0	0.999
Mid point	4960	40.0	400.5	402.6	0.995
Low point	4980	20.0	200.2	202.9	0.987
As left zero	5000	0.0	0.0	0.1	----
As left span	4920	80.0	801.0	803.3	0.997
Average Correction Factor:					0.993

Notes:

Span adjusted.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

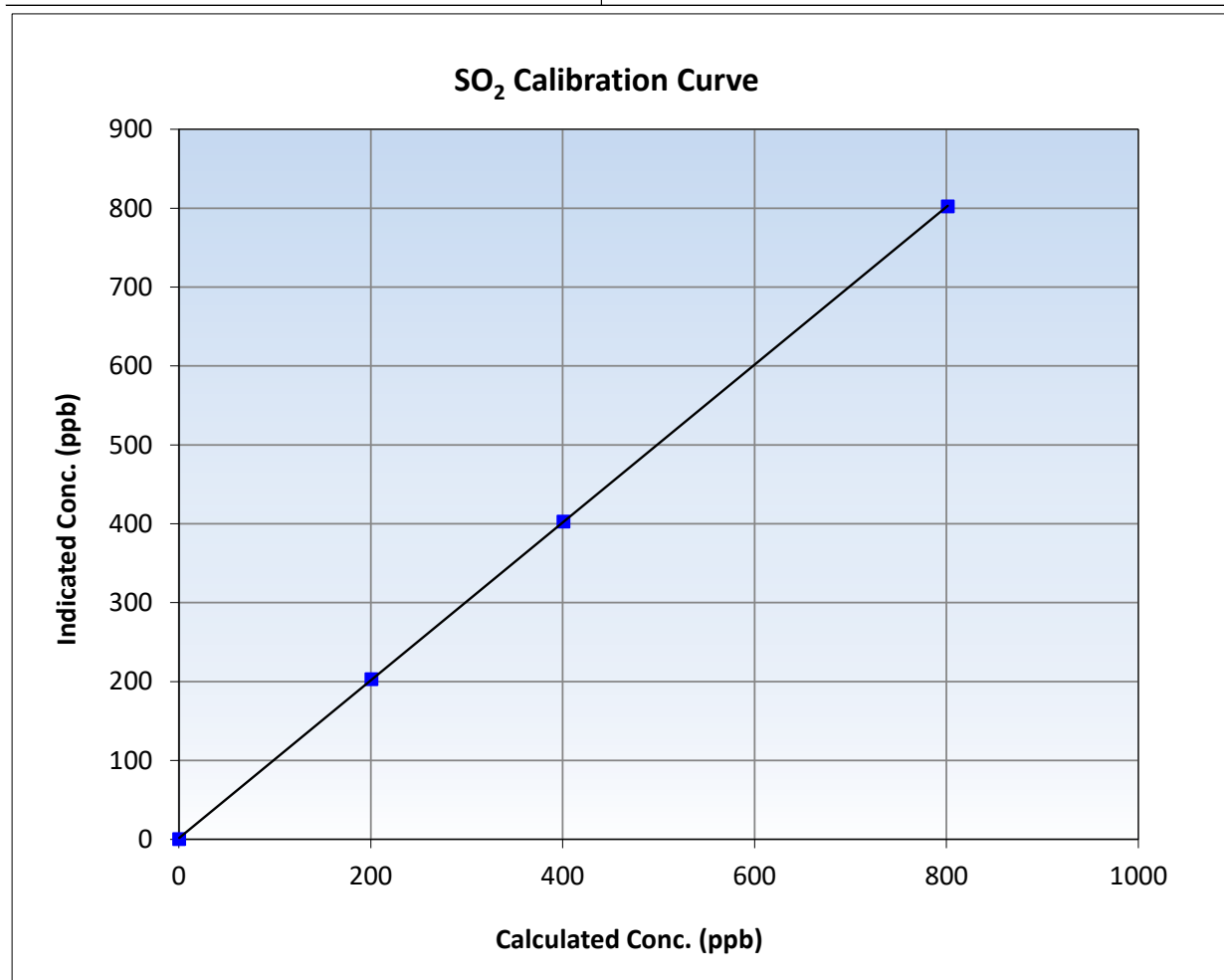
SO₂ Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 2, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	11:33	End Time (MST):	15:16
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	0.999990	≥0.995
801.0	802.0	0.9987	Slope	1.000200	0.90 - 1.10
400.5	402.6	0.9947	Intercept	1.460000	+/-30
200.2	202.9	0.9869			



SO2 Calibration Plot

Date: July 28, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Buffalo Viewpoint
Calibration Date: July 6, 2026
Start time (MST): 10:01
Reason: Routine

Station number: AMS 04
Last Cal Date: June 22, 2026
End time (MST): 14:22

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:	1.006577	1.002149	Backgd or Offset:	2.12
Calibration intercept:	-0.121726	-0.141790	Coeff or Slope:	1.107

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	4917	83.3	80.0	80.5	0.991
As found Mid point	4958	41.7	40.0	40.2	0.991
As found Low point	4979	20.8	20.0	19.7	1.003
New cylinder response					
Baseline Corr As found:	80.7	Prev response:	80.37	*% change:	0.4%
Baseline Corr 2nd AF pt:	40.4	AF Slope:	1.010295	AF Intercept:	-0.301845
Baseline Corr 3rd AF pt:	19.9	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	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	19.8	1.009
As left zero	5000	0.0	0.0	-0.1	----
As left span	4917	83.3	80.0	80.3	0.996
SO2 Scrubber Check	4920	80.0	800.0	0.0	----
Date of last scrubber change:	12-Mar-26		Ave Corr Factor		1.003
Date of last converter efficiency test:					

Notes: No adjustment needed.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

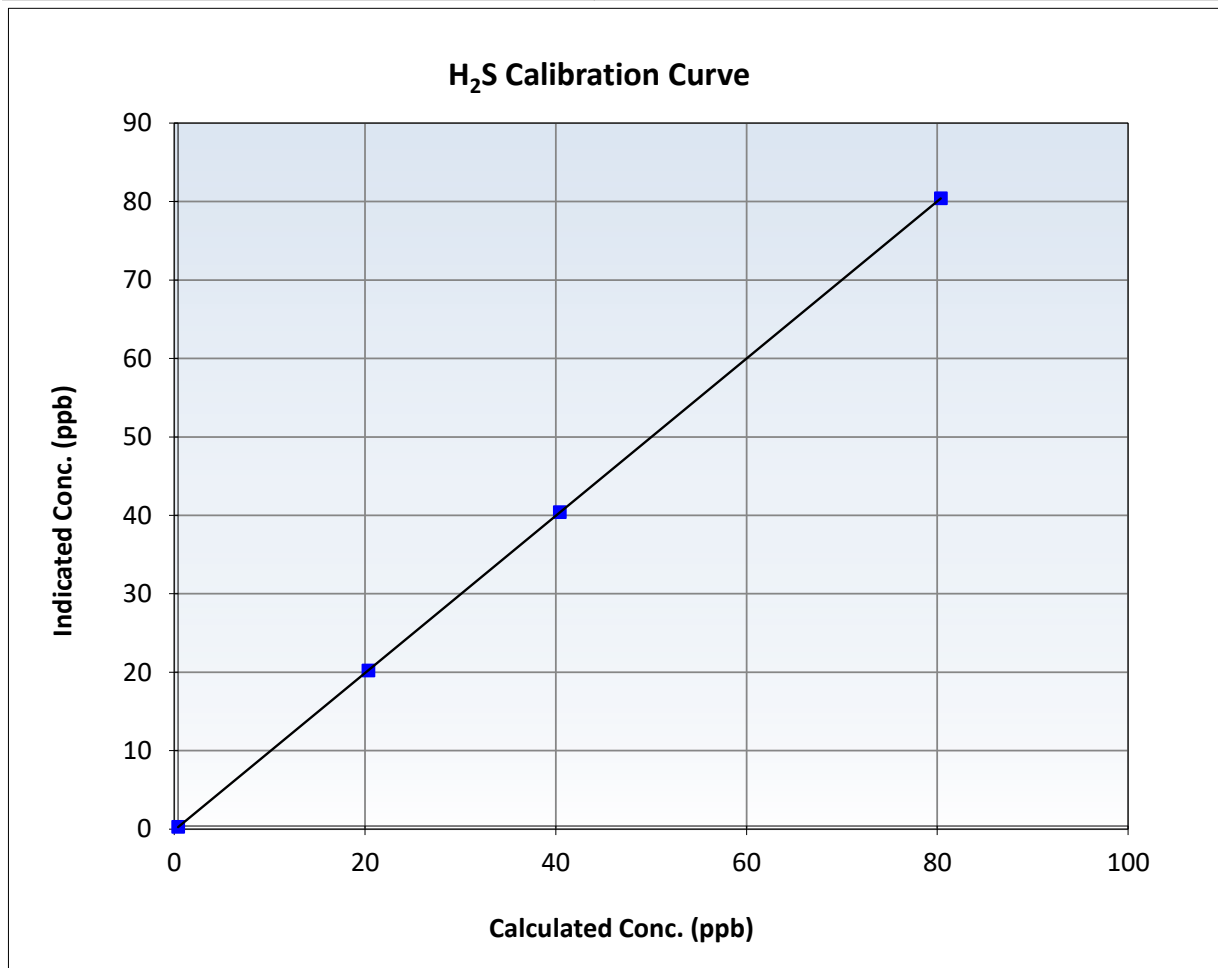
H₂S Calibration Summary

Station Information

Calibration Date:	July 6, 2026	Previous Calibration:	June 22, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	10:01	End Time (MST):	14:22
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1008841400

Calibration Data

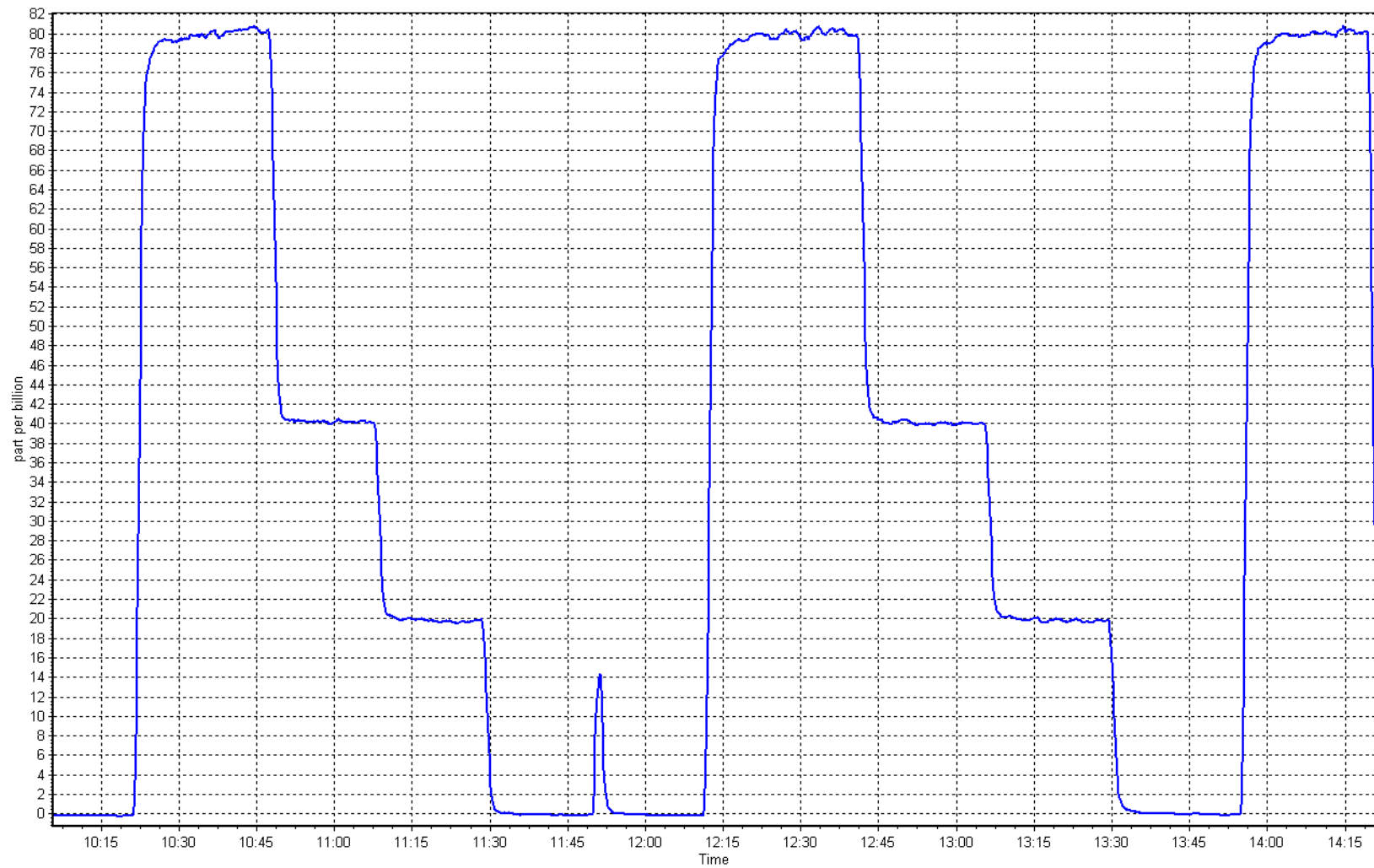
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999998		≥0.995
80.0	80.0	0.9995	Slope	1.002149		0.90 - 1.10
40.0	40.0	1.0009	Intercept	-0.141790		+/-3
20.0	19.8	1.0085				



H₂S Calibration Plot

Date: July 6, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Buffalo Viewpoint
 Calibration Date: July 28, 2026
 Start time (MST): 11:33
 Reason: Routine

Station number: AMS 04
 Last Cal Date: June 2, 2026
 End time (MST): 15:16

Calibration Standards

Gas Cert Reference:	CC147416	Cal Gas Expiry Date:	January 5, 2029
CH4 Cal Gas Conc.	498.9 ppm	CH4 Equiv Conc.	1070.9 ppm
C3H8 Cal Gas Conc.	208.0 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	498.9 ppm	CH4 Equiv Conc.	1070.9 ppm
Removed C3H8 Conc.	208.0 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
 THC Range: 0 - 20 ppm

Analyzer serial #: 1180320038
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH4 SP Ratio:	2.35E-04	2.44E-04	NMHC SP Ratio:	4.57E-05
CH4 Retention time:	11.4	11.4	NMHC Peak Area:	200086
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	80.0	17.13	16.61	1.032
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.61	Prev response	17.10	*% change	-3.0%
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	80.0	17.13	17.14	1.000
Mid point	4960	40.0	8.57	8.60	0.996
Low point	4980	20.0	4.28	4.29	0.999
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.0	17.13	17.08	1.003
Average Correction Factor					0.998

Notes:

H2 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))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	80.0	9.15	8.88	1.031
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.88	Prev response	9.13	*% change	-2.9%
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	80.0	9.15	9.11	1.004
Mid point	4960	40.0	4.58	4.59	0.997
Low point	4980	20.0	2.29	2.29	1.001
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.0	9.15	9.11	1.005
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))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	80.0	7.98	7.73	1.033
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.73	Prev response	7.97	*% change	-3.1%
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	80.0	7.98	8.02	0.995
Mid point	4960	40.0	3.99	4.01	0.995
Low point	4980	20.0	2.00	2.00	0.997
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.0	7.98	7.97	1.001
Average Correction Factor					0.996

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.997819	1.000620
THC Cal Offset:	0.007800	0.006800
CH ₄ Cal Slope:	0.999084	1.005441
CH ₄ Cal Offset:	-0.002600	-0.001800
NMHC Cal Slope:	0.996941	0.995842
NMHC Cal Offset:	0.010000	0.009400

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

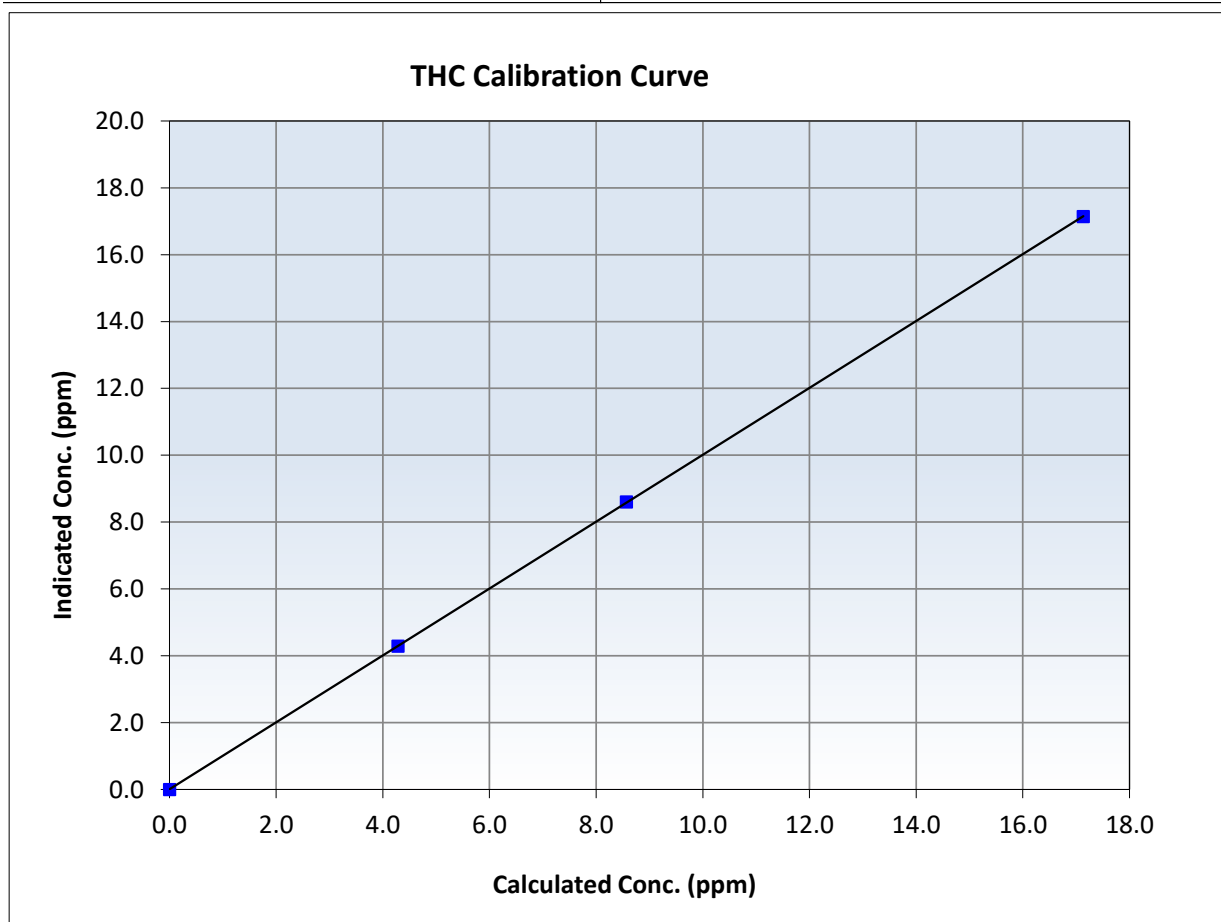
THC Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 2, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	11:33	End Time (MST):	15:16
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

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	0.999996	<i>≥0.995</i>
17.13	17.14	0.9996	Slope	1.000620	<i>0.90 - 1.10</i>
8.57	8.60	0.9960	Intercept	0.006800	<i>+/-0.5</i>
4.28	4.29	0.9992			





Wood Buffalo Environmental Association

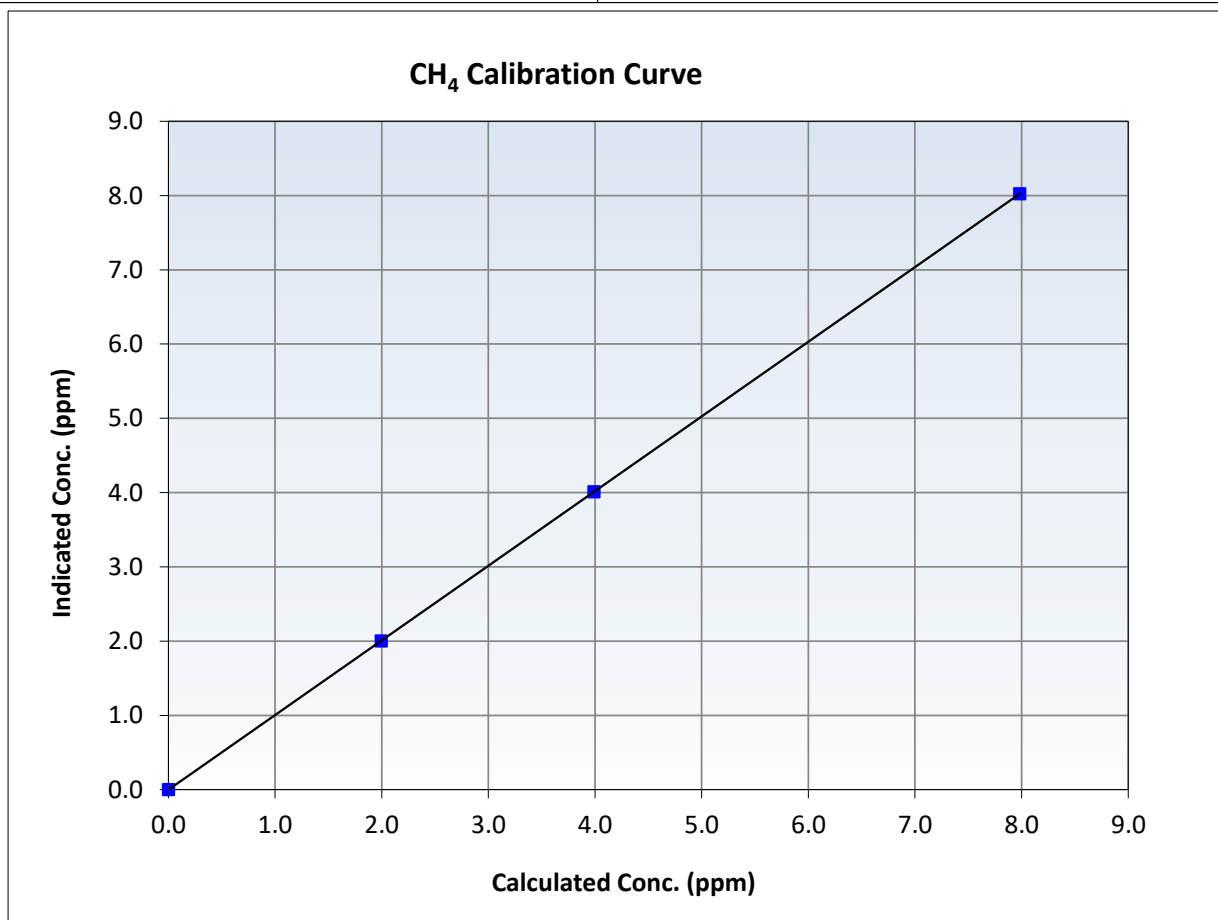
CH₄ Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 2, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	11:33	End Time (MST):	15:16
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

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	0.999999	<i>≥0.995</i>
7.98	8.02	0.9948	Slope	1.005441	<i>0.90 - 1.10</i>
3.99	4.01	0.9946	Intercept	-0.001800	<i>+/-0.5</i>
2.00	2.00	0.9973			





Wood Buffalo Environmental Association

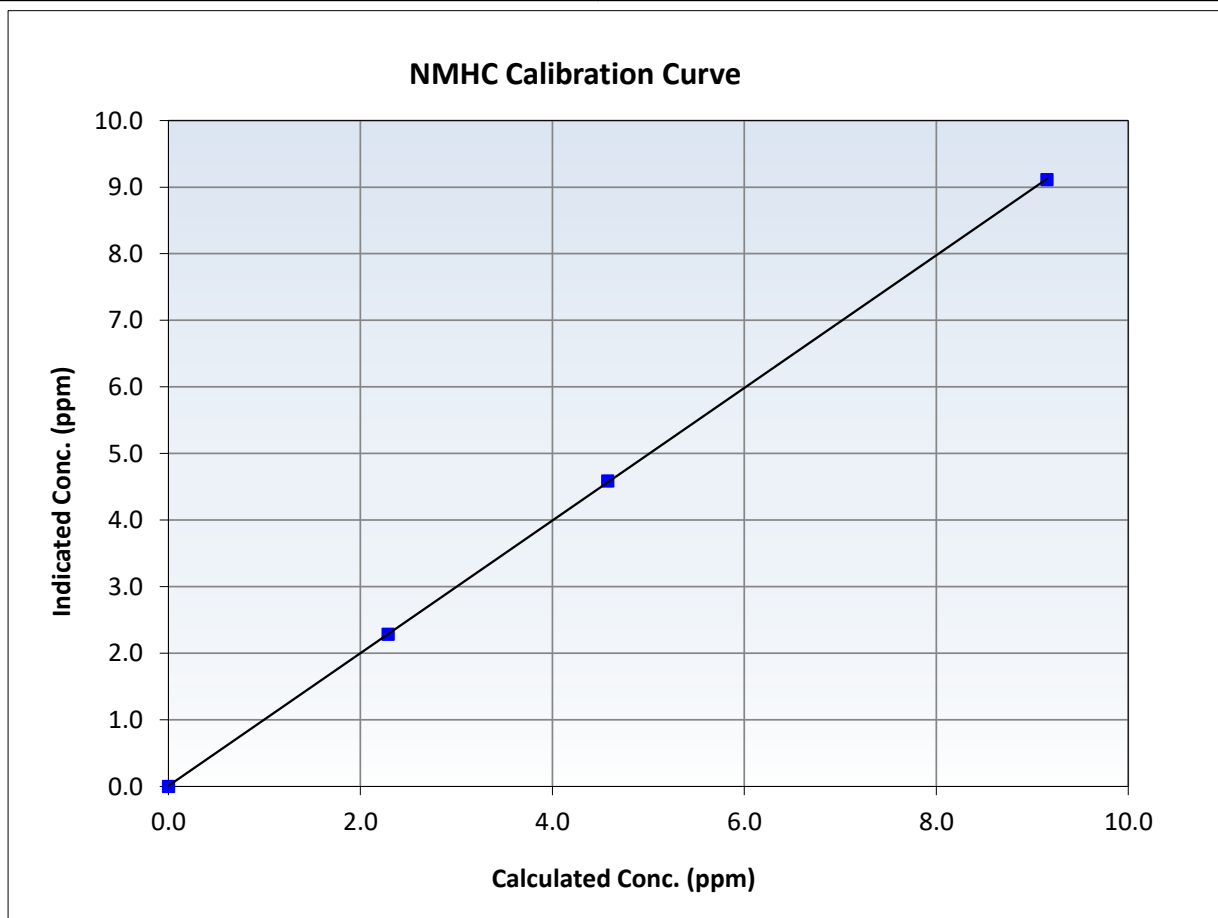
NMHC Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 2, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	11:33	End Time (MST):	15:16
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

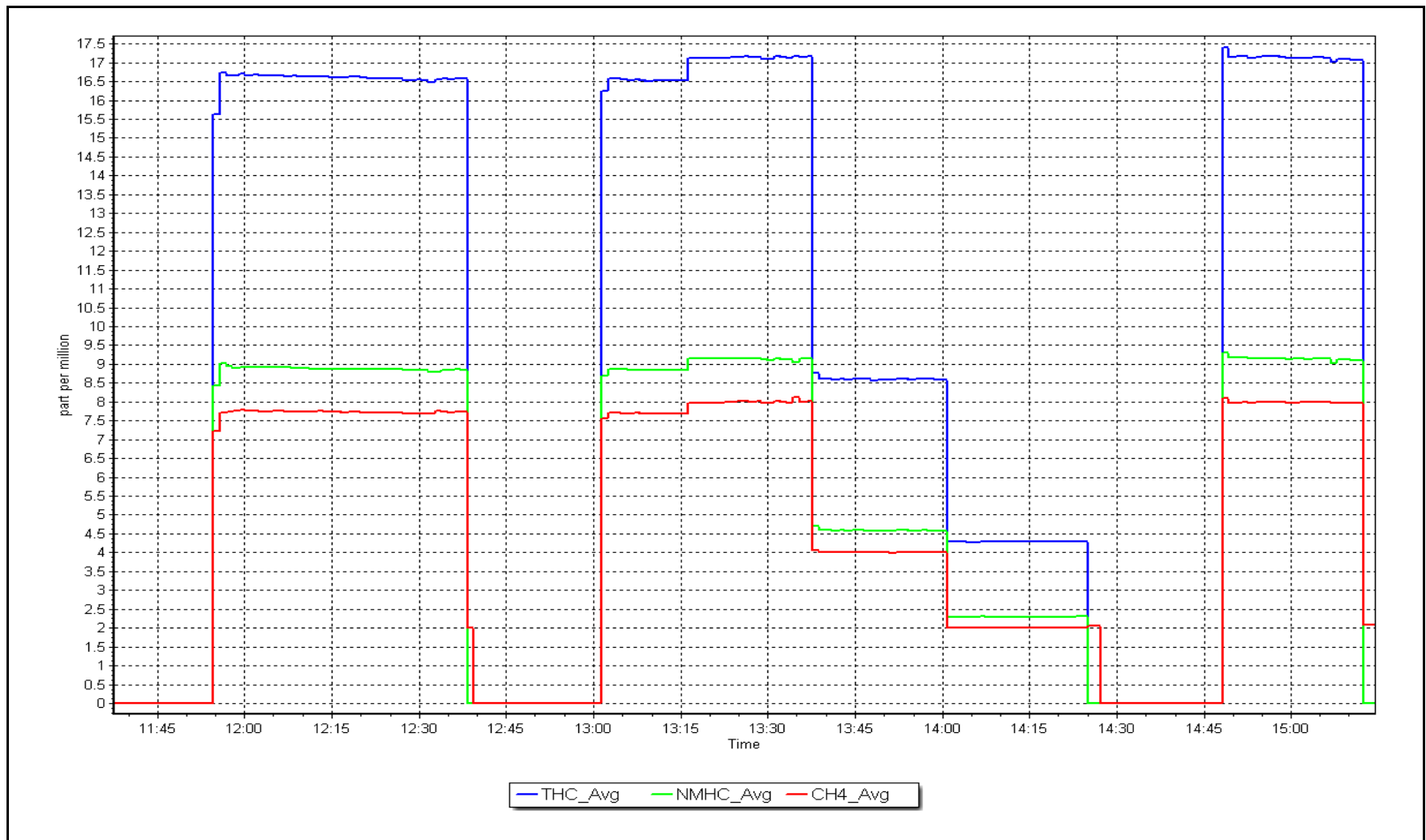
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999985	≥ 0.995
9.15	9.11	1.0043	Slope	0.995842	$0.90 - 1.10$
4.58	4.59	0.9974	Intercept	0.009400	± 0.5
2.29	2.29	1.0009			



NMHC Calibration Plot

Date: July 28, 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: July 17, 2026
Last Cal Date: June 17, 2026
Start time (MST): 9:00
End time (MST): 12:00
Reason: Removal

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	11.7	7.9	3.8	----	----
AF High point	4918	81.8	800.0	798.4	1.6	693.1	685.5	7.6	1.1741	1.1783
AF Mid point	4959	40.9	400.0	399.2	0.8	324.9	327.7	-2.8	1.2772	1.2483
AF Low point	4980	20.4	199.5	199.1	0.4	156.2	161.8	-5.7	1.3806	1.2936

New cyl resp

Previous Response	NO _x = 800.1 ppb	NO = 801.8 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = -17.4%
Baseline Corr 1st pt	NO _x = 681.4 ppb	NO = 677.6 ppb	<u>As Found Statistics</u>		*Percent Change	NO = -18.3%
Baseline Corr 2nd pt	NO _x = 313.2 ppb	NO = 319.8 ppb	As found	NO _x r ² : 0.997355	Nx SI: 0.858690	Nx Int: -3.968
Baseline Corr 3rd pt	NO _x = 144.5 ppb	NO = 153.9 ppb	As found	NO r ² : 0.998846	NO SI: 0.852457	NO Int: -1.927
			As found	NO ₂ r ² : 0.997368	NO2 SI: 1.011212	NO ₂ Int: 10.361

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	----	----	0.0	3.8	----	----
As found high GPT point	663.8	328.8	336.6	351.2	0.9585	104.3%
As found mid GPT point	663.8	501.2	164.2	171.9	0.9554	104.7%
As found low GPT point	663.8	609.1	56.3	78.0	0.7223	138.5%



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

Instrument Settings

	<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.940	0.961
NOX coeff or slope:	0.993	0.989
NO2 coeff or slope:	1.000	1.000

	<u>Start</u>	<u>Finish</u>
NO bkgnd or offset:	6.4	6.5
NOX bkgnd or offset:	6.5	6.6
Reaction cell Press:	233.3	233.9

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.998708	
NO _x Cal Offset:	1.066622	
NO Cal Slope:	1.004621	
NO Cal Offset:	-0.333389	
NO ₂ Cal Slope:	1.004681	
NO ₂ Cal Offset:	-0.158890	

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 calibration

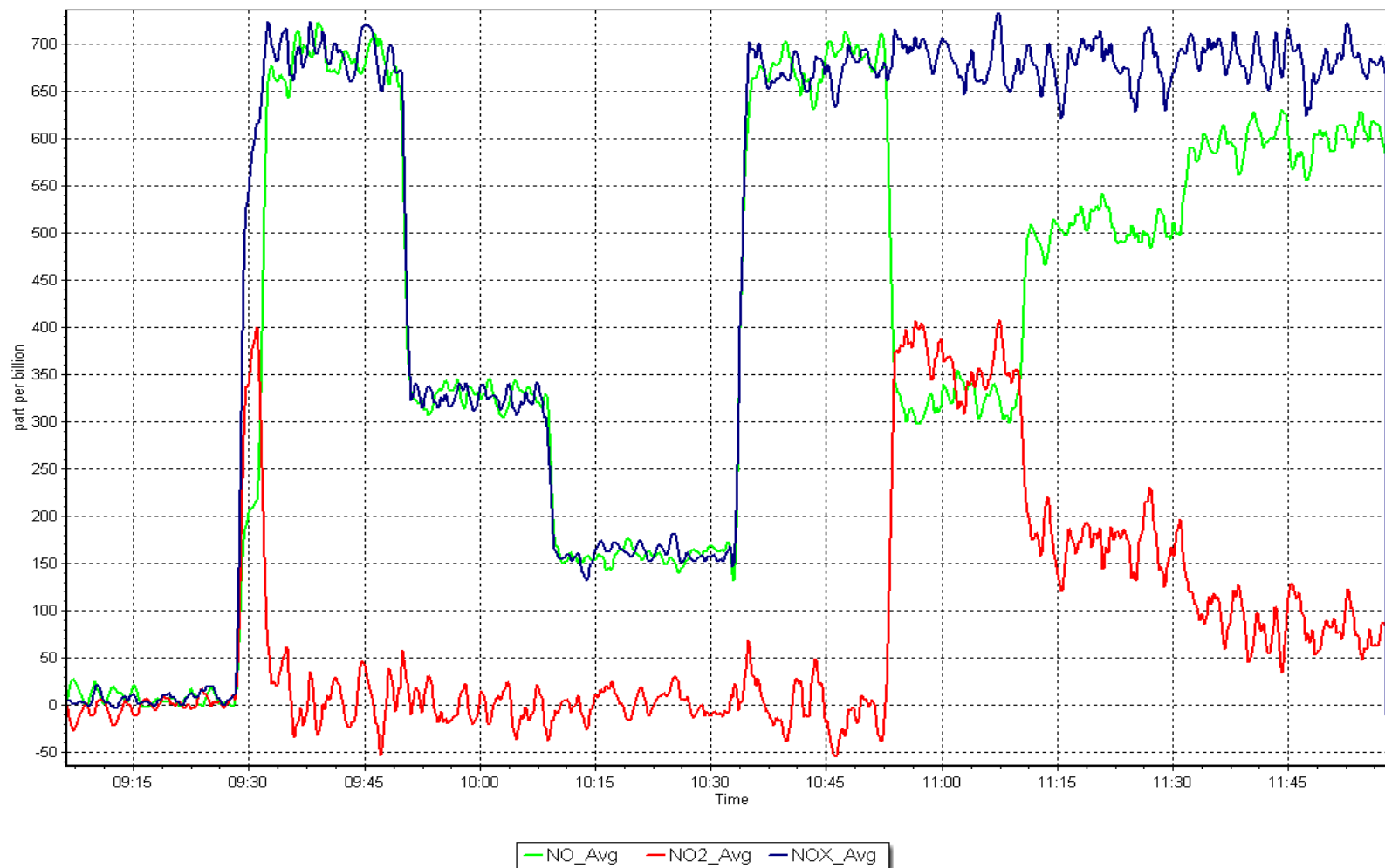
Calibration Performed By:

Aswin Sasi Kumar

NO_x Calibration Plot

Date: July 17, 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: July 17, 2026
Last Cal Date: N/A
Start time (MST): 12:15
End time (MST): 16:31
Reason: Install

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										
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 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1152430007

Instrument Settings

	<u>Start</u>	<u>Finish</u>
NO coeff or slope:	N/A	1.093
NOX coeff or slope:	N/A	0.994
NO2 coeff or slope:	N/A	1.000

	<u>Start</u>	<u>Finish</u>
NO bkgnd or offset:	N/A	4.7
NOX bkgnd or offset:	N/A	6.1
Reaction cell Press:	N/A	181.4

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	N/A	0.999651
NO _x Cal Offset:	N/A	-0.113340
NO Cal Slope:	N/A	1.001643
NO Cal Offset:	N/A	-0.393814
NO ₂ Cal Slope:	N/A	0.997126
NO ₂ Cal Offset:	N/A	0.162619

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	-0.2	-0.2	----	----
High point	4918	81.8	800.0	798.4	1.6	799.3	799.0	0.3	1.0009	0.9992
Mid point	4959	40.9	400.0	399.2	0.8	400.5	400.6	-0.1	0.9988	0.9965
Low point	4980	20.4	199.5	199.1	0.4	199.2	198.0	1.1	1.0015	1.0055
As left zero	5000	0.0	0.0	-1.0	1.0	-2.1	-1.0	-1.0	----	----
As left span	4918	81.8	800.0	405.4	800.0	800.9	405.4	395.5	0.9989	1.0000
Average Correction Factor									1.0004	1.0004

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	797.0	405.0	393.6	392.6	1.0026	99.7%
Mid GPT point	797.0	605.3	193.3	192.8	1.0028	99.7%
Low GPT point	797.0	704.0	94.6	95.1	0.9951	100.5%
Average Correction Factor					1.0002	100.0%

Notes:

Install calibration. Zero and span adjusted.

Calibration Performed By:

Aswin Sasi Kumar



Wood Buffalo Environmental Association

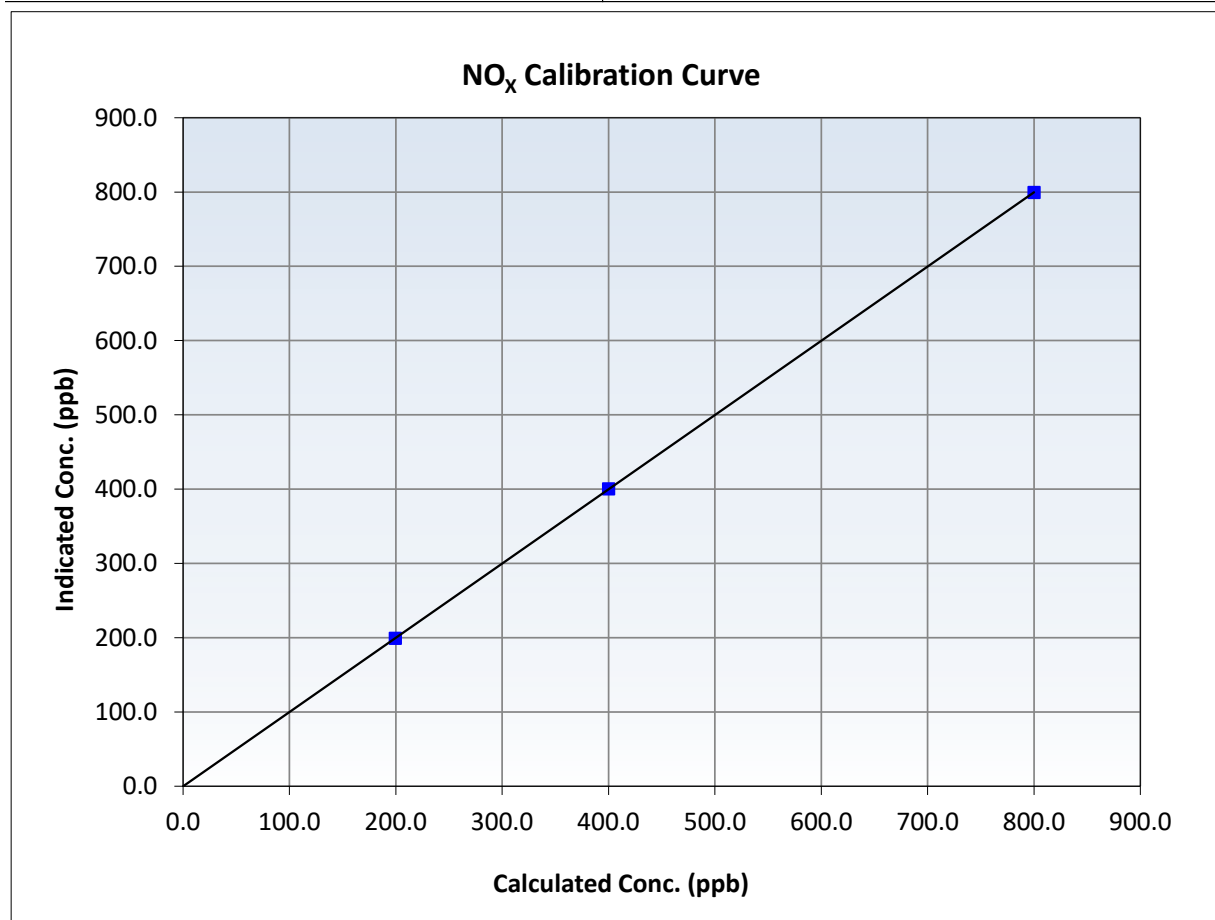
NO_x Calibration Summary

Station Information

Calibration Date:	July 17, 2026	Previous Calibration:	N/A
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	12:15	End Time (MST):	16:31
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	-0.4	----	Correlation Coefficient	0.999998	≥0.995
800.0	799.3	1.0009	Slope	0.999651	0.90 - 1.10
400.0	400.5	0.9988	Intercept	-0.113340	+/-20
199.5	199.2	1.0015			





Wood Buffalo Environmental Association

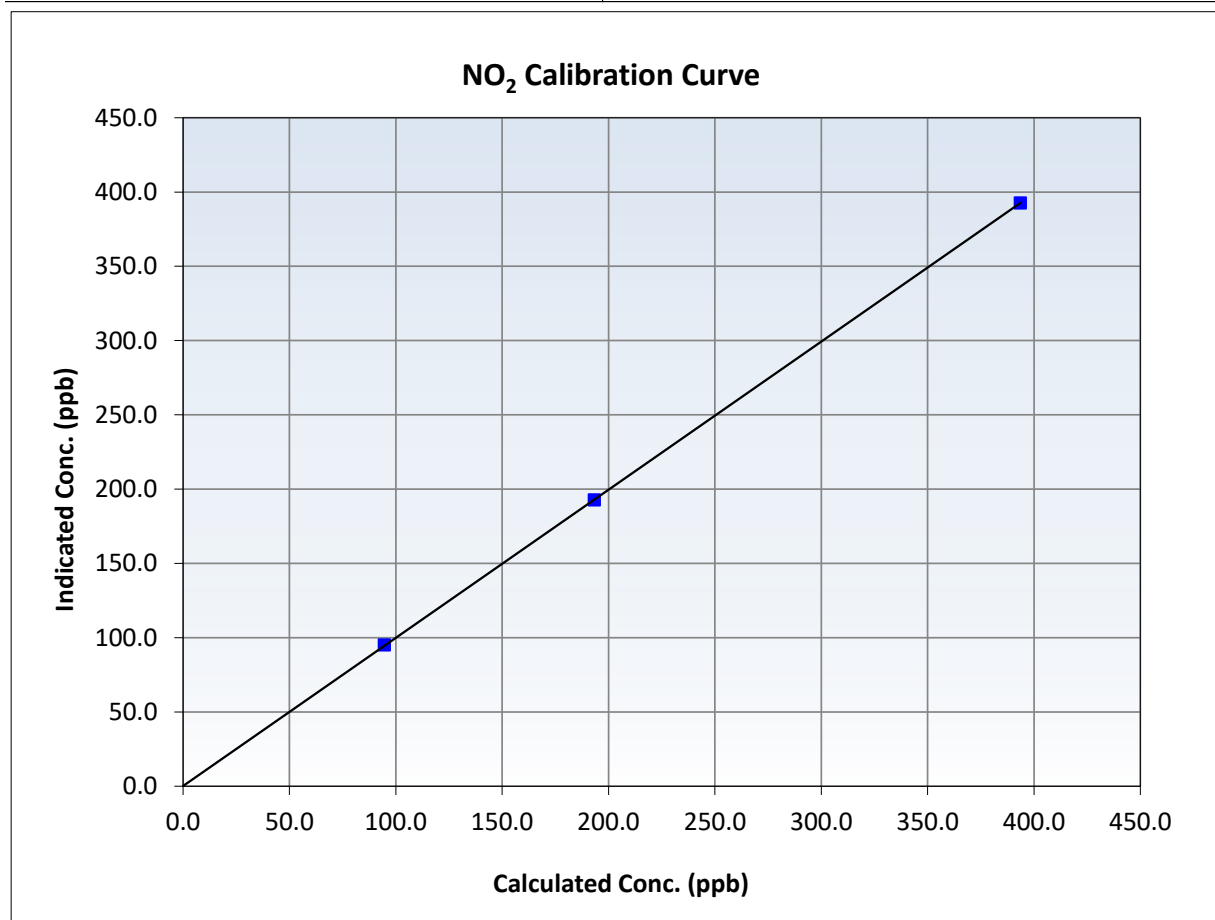
NO₂ Calibration Summary

Station Information

Calibration Date:	July 17, 2026	Previous Calibration:	N/A
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	12:15	End Time (MST):	16:31
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	0.999994	≥0.995
393.6	392.6	1.0026	Slope	0.997126	0.90 - 1.10
193.3	192.8	1.0028	Intercept	0.162619	+/-20
94.6	95.1	0.9951			





Wood Buffalo Environmental Association

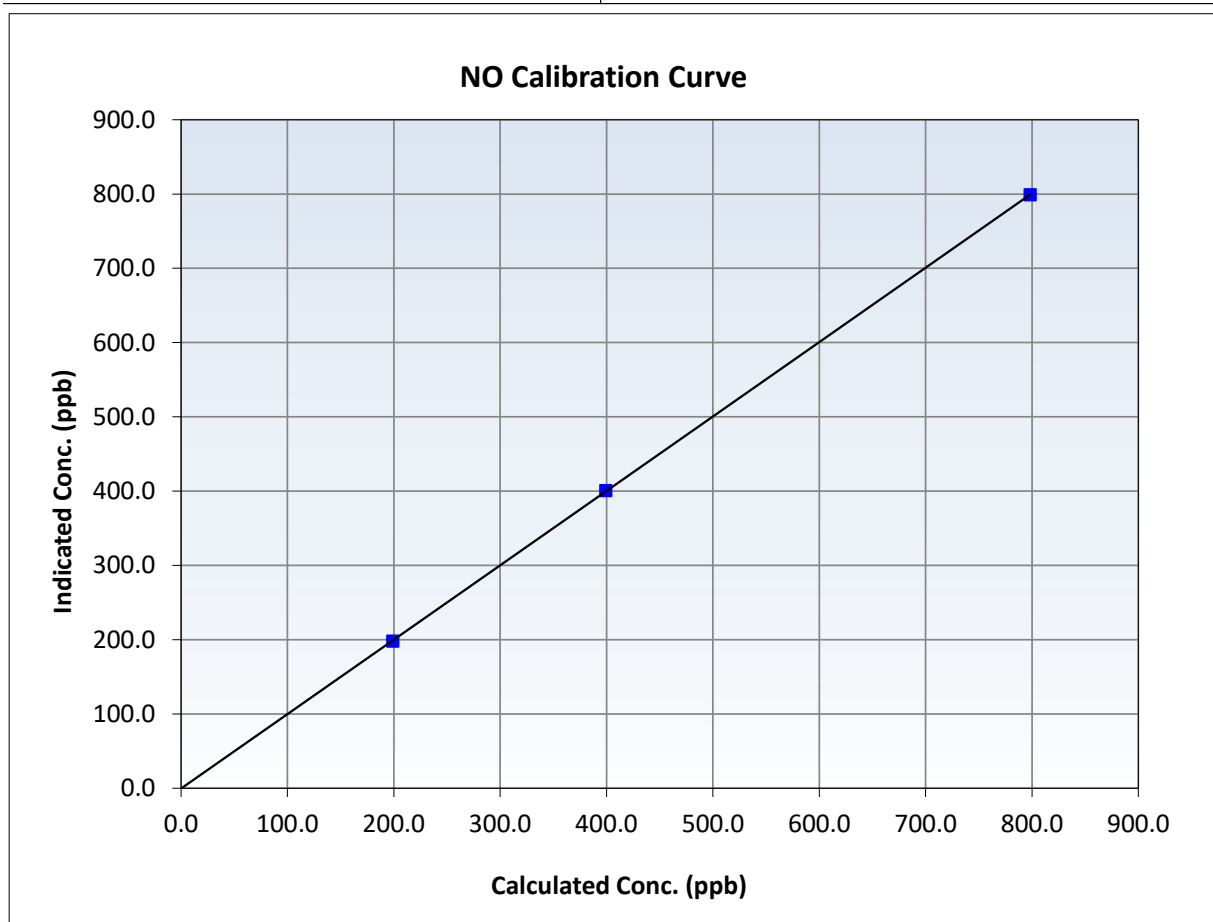
NO Calibration Summary

Station Information

Calibration Date:	July 17, 2026	Previous Calibration:	N/A
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	12:15	End Time (MST):	16:31
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

Calibration Data

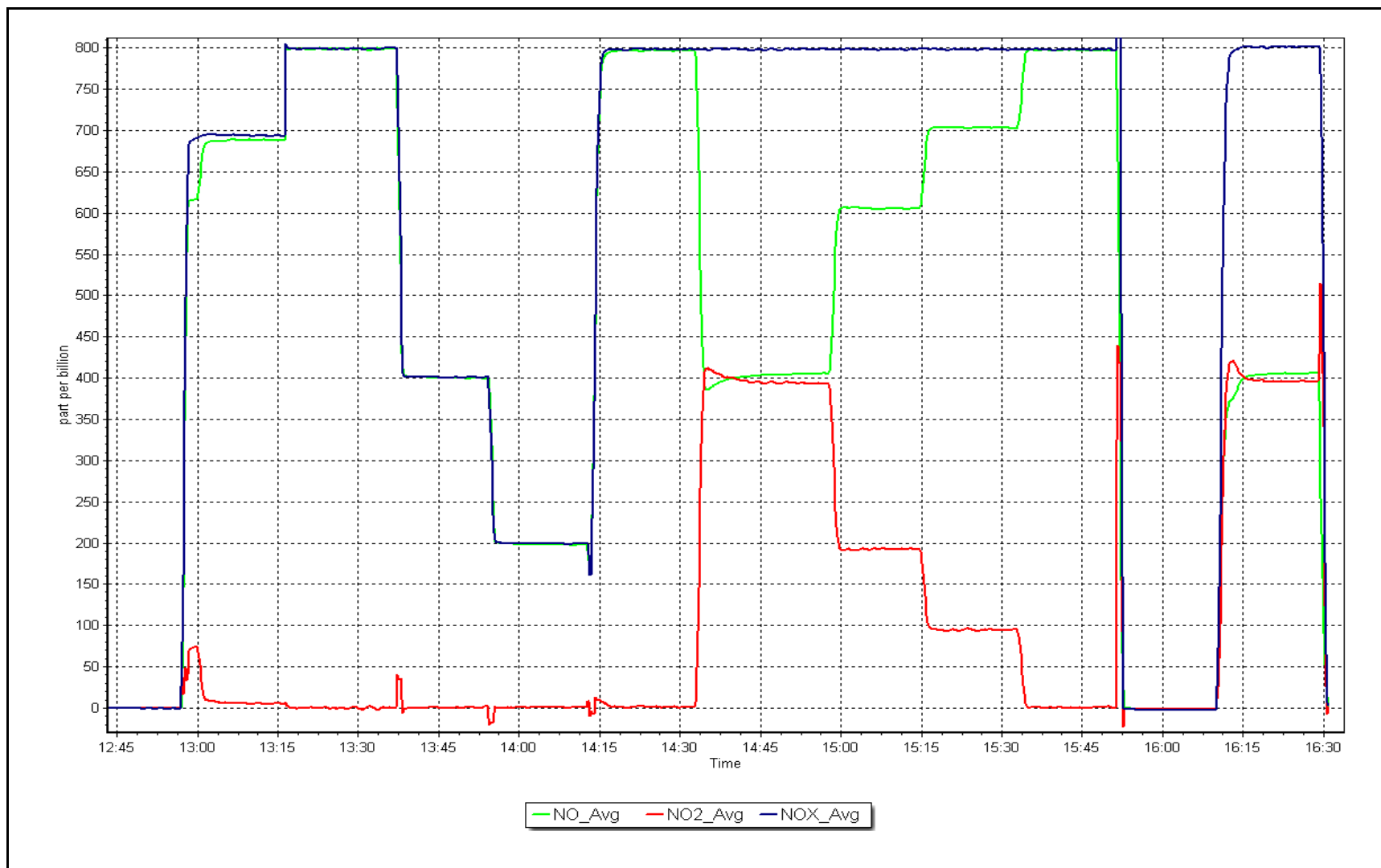
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999993	≥ 0.995
798.4	799.0	0.9992	Slope	1.001643	$0.90 - 1.10$
399.2	400.6	0.9965	Intercept	-0.393814	± 20
199.1	198.0	1.0055			



NO_x Calibration Plot

Date: July 17, 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: July 31, 2026 Last Cal Date: June 26, 2026
Start time (MST): 11:15 End time (MST): 13:21

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)	18.4	18.8	18.4	☐	+/- 2 °C
P (mmHg)	730.9	728.3	730.9	☐	+/- 10 mmHg
Flow (LPM)	5.05	4.94	5.05	☐	+/- 0.25 LPM
PW% (pump)	36	----	36	☐	>80%
Zero Verification	PM w/o HEPA: 3.9		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: 10.9 Expiry Date: 30-Jan-27
Lot No.: 100128-050-051

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	N/A	10.7	10.7	☐	+/- 0.5

Date Optical Chamber Cleaned: July 31, 2026
Date Disposable Filter Changed: July 31, 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 and quarterly checks done.

Notes:

Calibration by: Aswin Sasi Kumar



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS05
MANNIX
JULY 2026**

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Mannix Station number: AMS 05
Calibration Date: July 10, 2026 Last Cal Date: June 3, 2026
Start time (MST): 9:08 End time (MST): 12:43
Reason: Routine

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 Serial Number: 1008841399
Analyzer Range: 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002821	1.000980	Backgd or Offset:	11.4	11.4
Calibration intercept:	-1.436607	-0.916881	Coeff or Slope:	0.927	0.927

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	4920	79.9	800.0	798.7	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	798.7	Previous response	800.8	*% 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	4920	79.9	800.0	800.2	1.000
Mid point	4960	40.0	400.5	399.9	1.001
Low point	4980	20.0	200.2	198.2	1.010
As left zero	5000	0.0	0.0	0.2	----
As left span	4920	79.9	800.0	804.7	0.994
Average Correction Factor:					1.004

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

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

SO₂ Calibration Summary

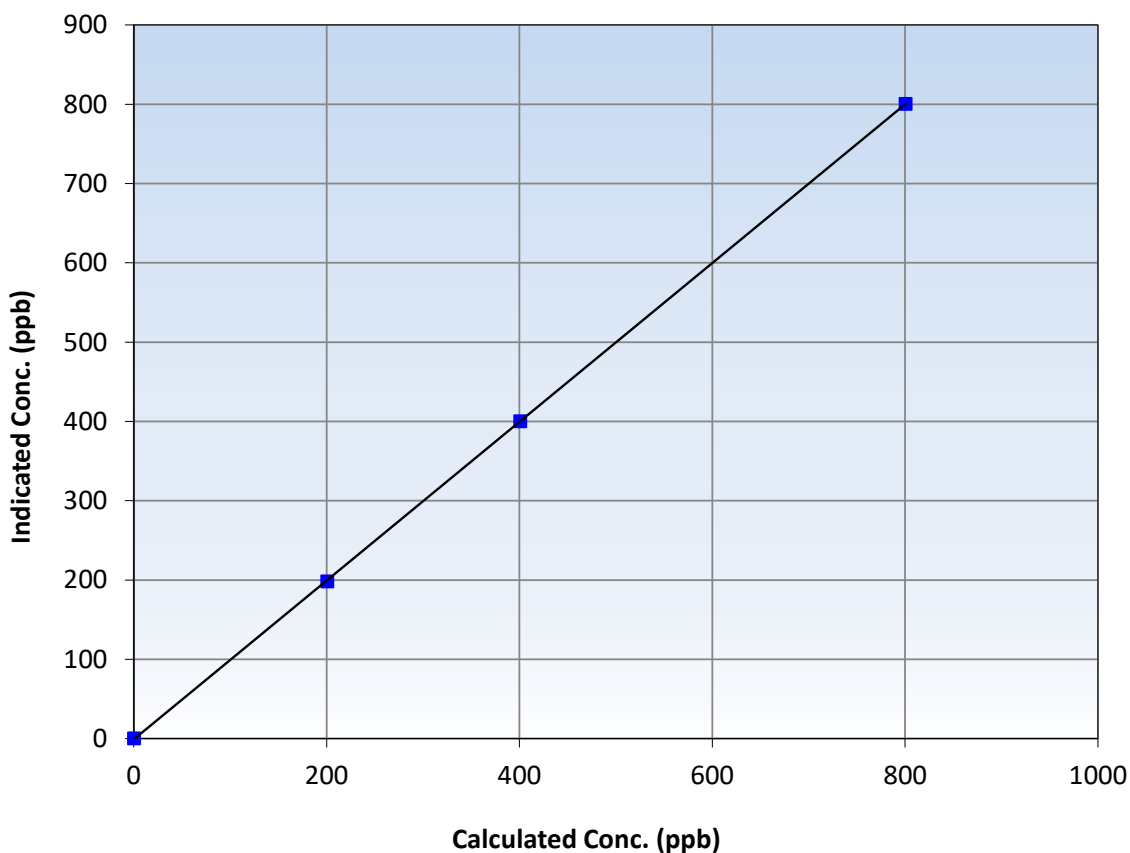
Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 3, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:08	End Time (MST):	12:43
Analyzer make:	Thermo 43i	Analyzer serial #:	1008841399

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
800.0	800.2	0.9997	Slope	1.000980	0.90 - 1.10
400.5	399.9	1.0015	Intercept	-0.916881	+/-30
200.2	198.2	1.0103			

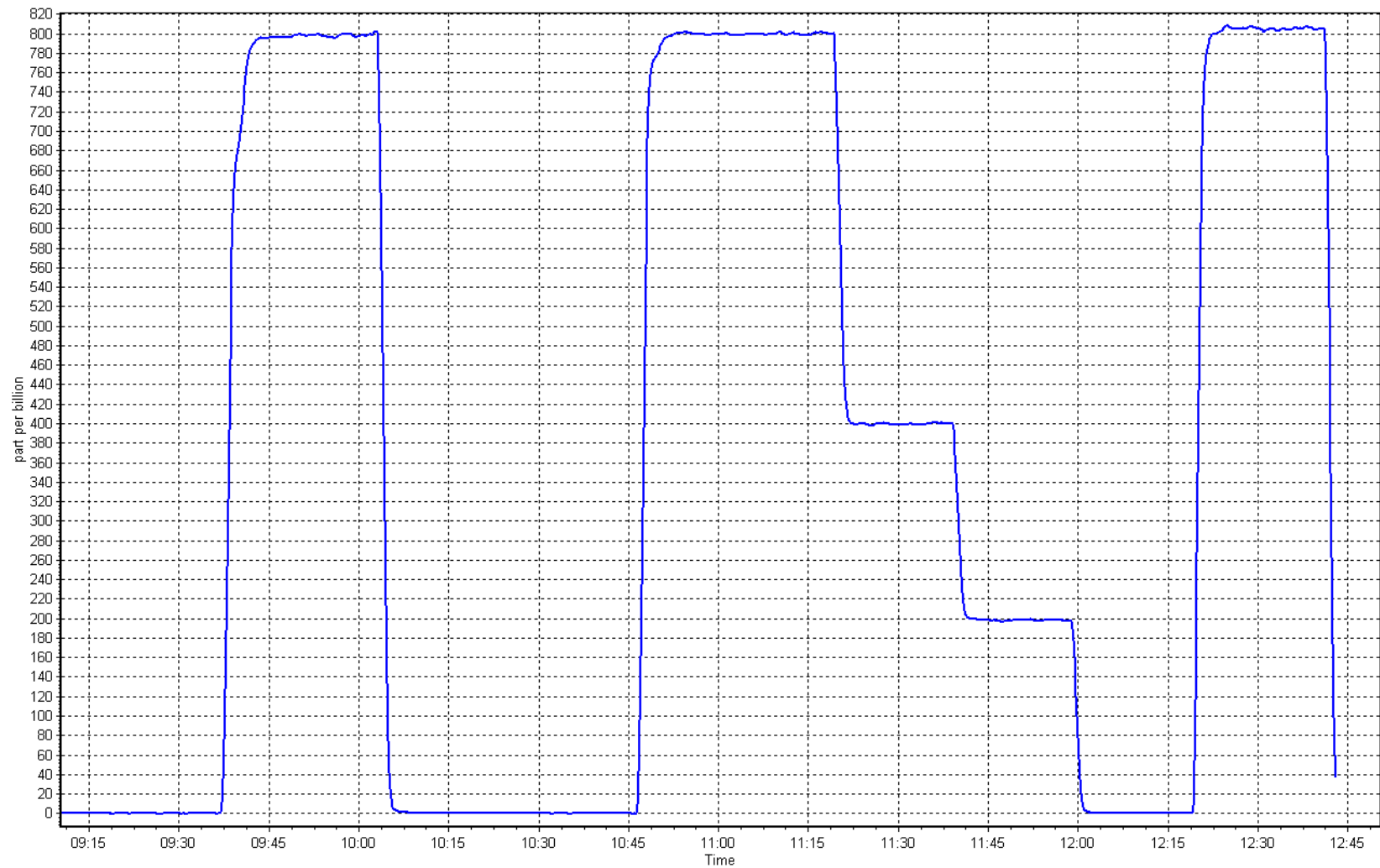
SO₂ Calibration Curve



SO2 Calibration Plot

Date: July 10, 2026

Location: Mannix





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Mannix
Calibration Date: July 9, 2026
Start time (MST): 9:54
Reason: Routine

Station number: AMS 05
Last Cal Date: June 5, 2026
End time (MST): 14:32

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:	0.991539	0.996400	Backgd or Offset:	1.24	1.24
Calibration intercept:	0.002474	0.182384	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	0.0	----
As found High point	4919	80.6	80.0	80.5	0.993
As found Mid point	4960	40.3	40.0	40.3	0.992
As found Low point	4980	20.2	20.0	19.9	1.007
New cylinder response					
Baseline Corr As found:	80.5	Prev response:	79.29	*% change:	1.5%
Baseline Corr 2nd AF pt:	40.3	AF Slope:	1.007979	AF Intercept:	-0.097802
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	0.2	----
High point	4919	80.6	80.0	79.8	1.002
Mid point	4960	40.3	40.0	40.2	0.994
Low point	4980	20.2	20.0	20.0	1.002
As left zero	5000	0.0	0.0	0.2	----
As left span	4919	80.6	80.0	78.8	1.015
SO2 Scrubber Check	4920	80.3	803.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	0.999
Date of last converter efficiency test:					

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

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

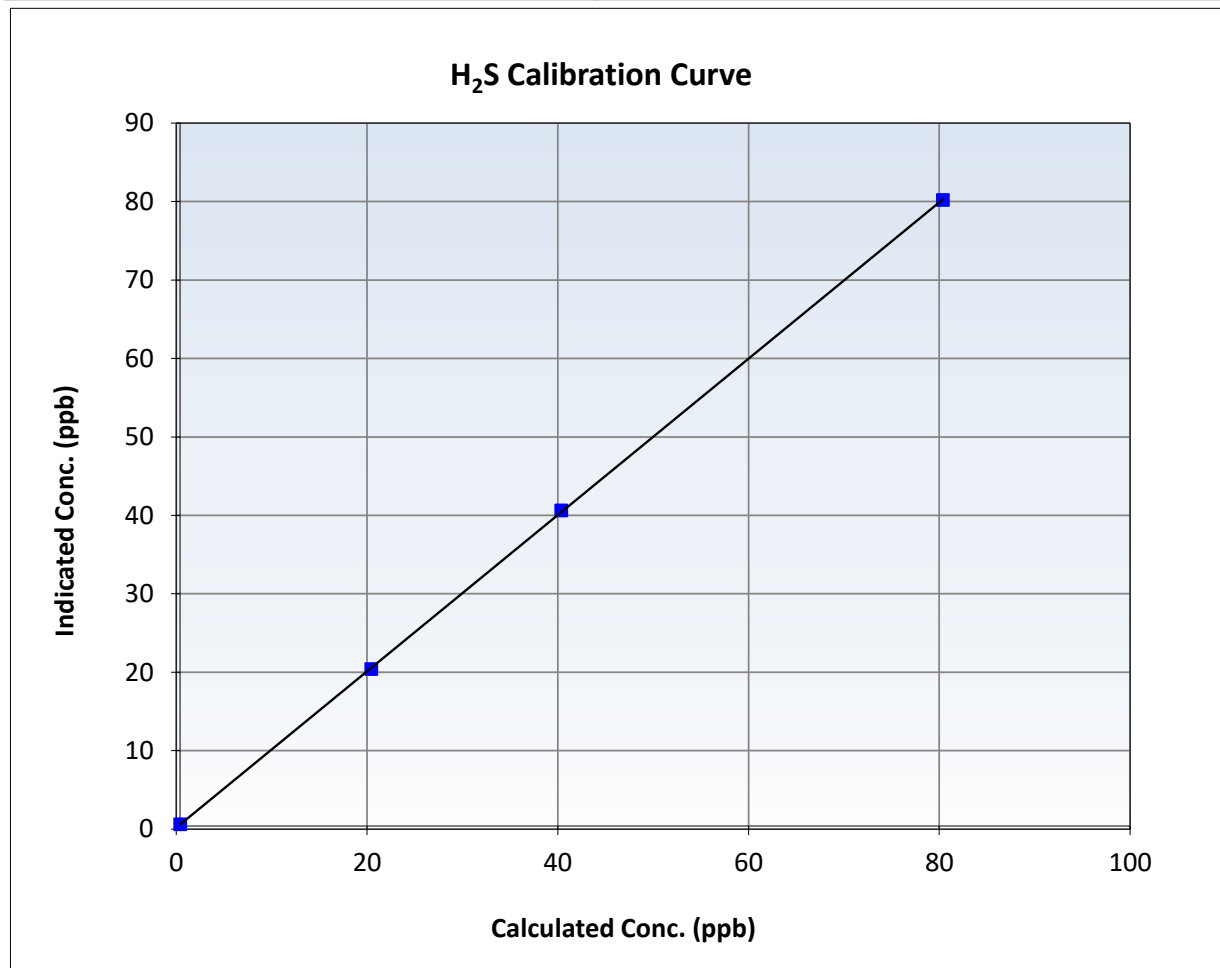
H₂S Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 5, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:54	End Time (MST):	14:32
Analyzer make:	Thermo 43iQ	Analyzer serial #:	1200326169

Calibration Data

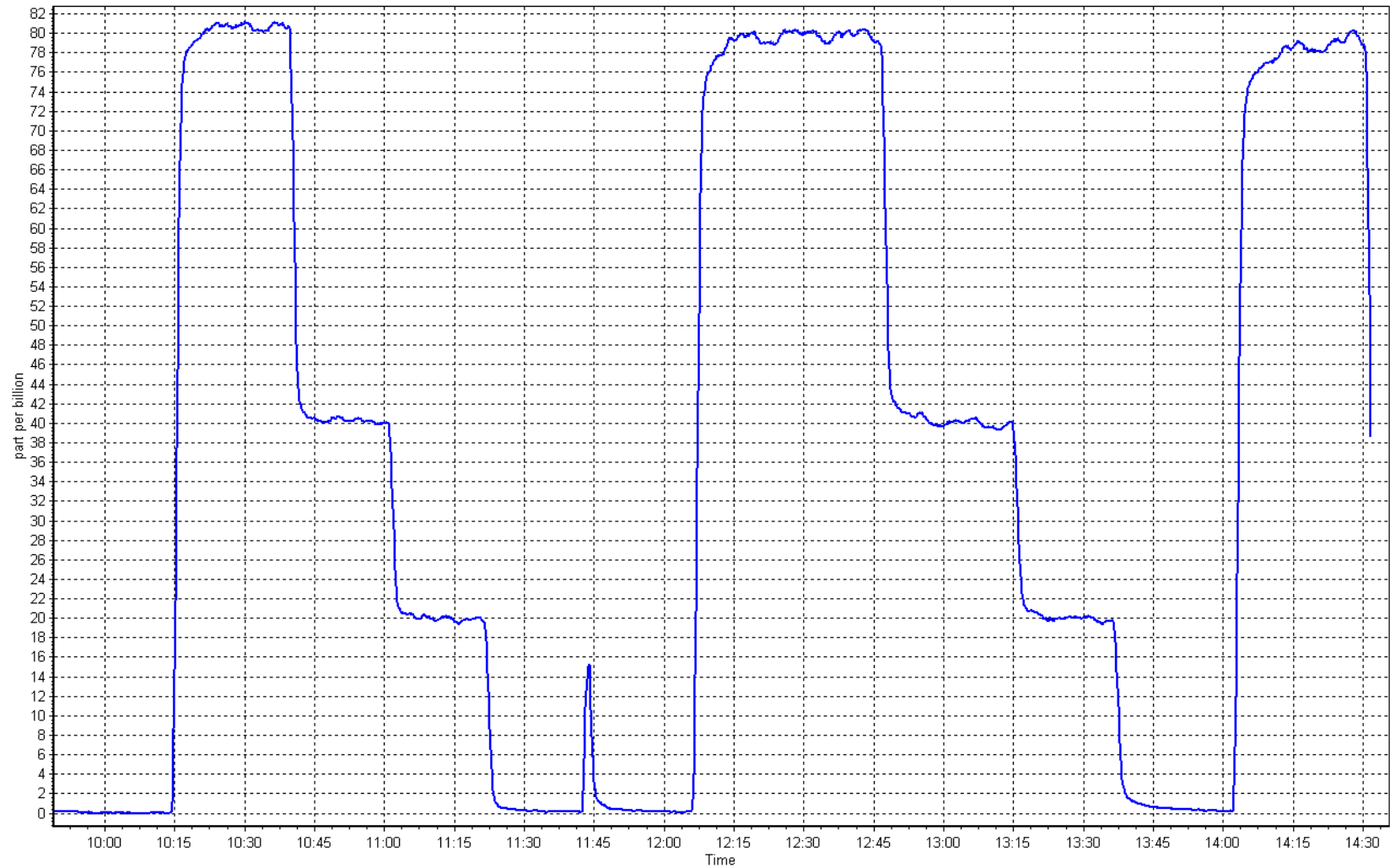
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999983	≥ 0.995
80.0	79.8	1.0020	Slope	0.996400	$0.90 - 1.10$
40.0	40.2	0.9944	Intercept	0.182384	± 3
20.0	20.0	1.0019			



H₂S Calibration Plot

Date: July 9, 2026

Location: Mannix





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Mannix
 Calibration Date: July 10, 2026
 Start time (MST): 9:08
 Reason: Routine

Station number: AMS 05
 Last Cal Date: June 3, 2026
 End time (MST): 12:43

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:	2.65E-04	2.66E-04	NMHC SP Ratio:	5.12E-05	5.13E-05
CH ₄ Retention time:	13.9	13.9	NMHC Peak Area:	171016	170601
Zero Chromatogram:	ON	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	16.59	1.009
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.59	Prev response	16.72	*% 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	79.9	16.74	16.71	1.002
Mid point	4960	40.0	8.38	8.28	1.012
Low point	4980	20.0	4.19	4.10	1.022
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	16.74	16.47	1.016
Average Correction Factor					1.012

Notes: Sample inlet filter and N₂/H₂ cylinders were changed after the 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	----
As found High point	4920	79.9	8.75	8.72	1.003
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.72	Prev response	8.76	*% 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	----
High point	4920	79.9	8.75	8.77	0.998
Mid point	4960	40.0	4.38	4.36	1.003
Low point	4980	20.0	2.19	2.17	1.011
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	8.75	8.79	0.995
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	----
As found High point	4920	79.9	7.99	7.87	1.016
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.87	Prev response	7.96	*% change	-1.2%
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	----
High point	4920	79.9	7.99	7.94	1.008
Mid point	4960	40.0	4.00	3.91	1.023
Low point	4980	20.0	2.00	1.93	1.035
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	7.99	7.68	1.041
Average Correction Factor					1.022

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.999593	0.999003
THC Cal Offset:	-0.015714	-0.049888
CH ₄ Cal Slope:	0.996605	0.993913
CH ₄ Cal Offset:	-0.009759	-0.033336
NMHC Cal Slope:	1.002599	1.003316
NMHC Cal Offset:	-0.006756	-0.016752

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

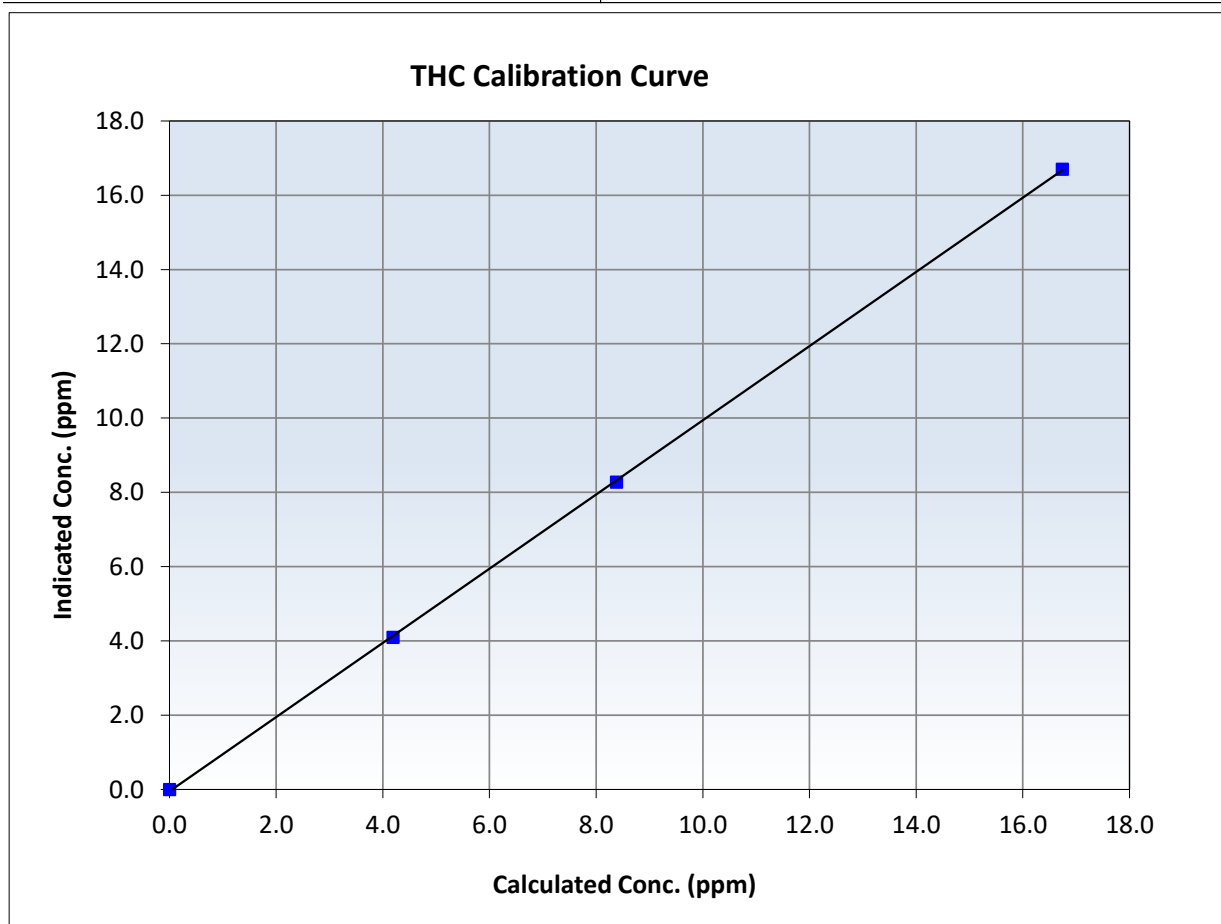
THC Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 3, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:08	End Time (MST):	12:43
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	0.999956	<i>≥0.995</i>
16.74	16.71	1.0021	Slope	0.999003	<i>0.90 - 1.10</i>
8.38	8.28	1.0124	Intercept	-0.049888	<i>+/-0.5</i>
4.19	4.10	1.0222			





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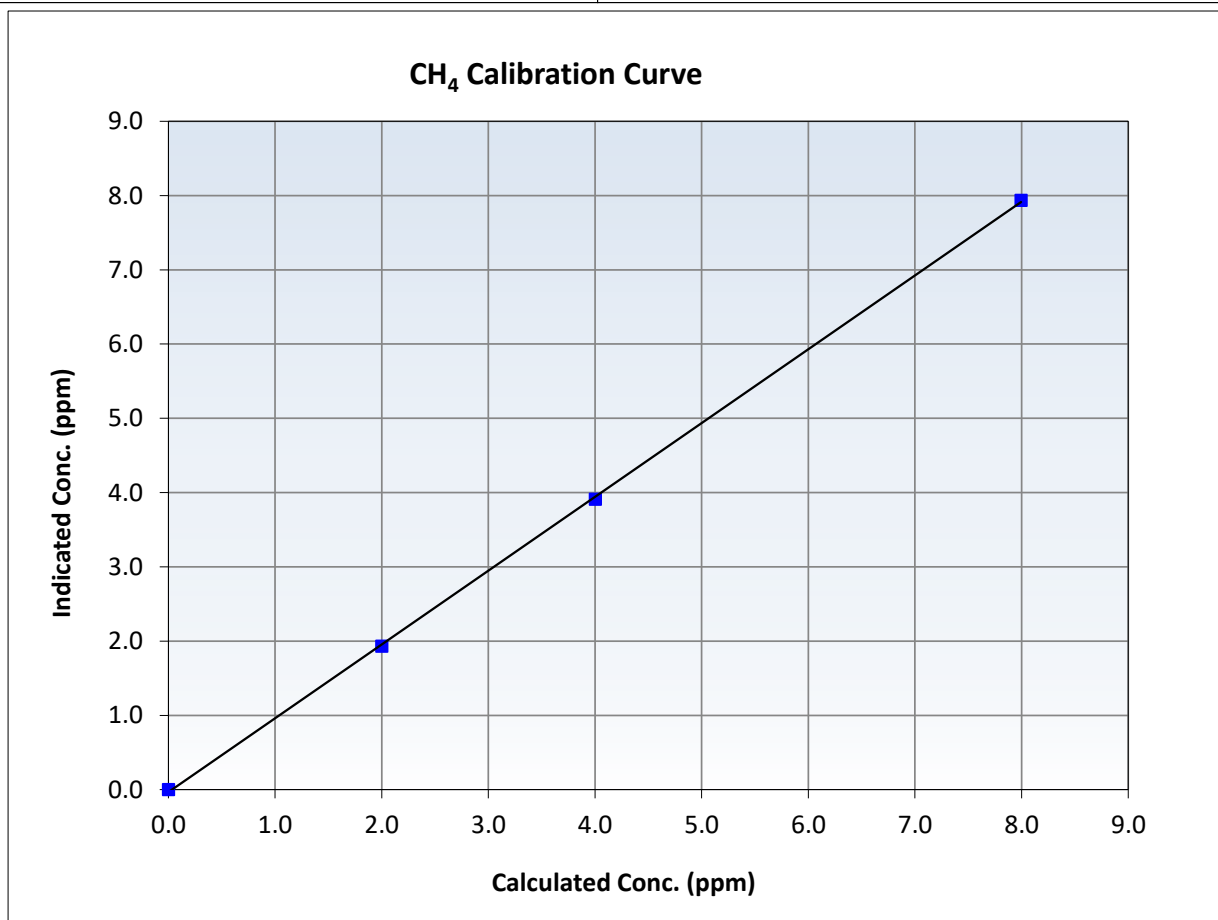
CH₄ Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 3, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:08	End Time (MST):	12:43
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	0.999908	<i>≥0.995</i>
7.99	7.94	1.0076	Slope	0.993913	<i>0.90 - 1.10</i>
4.00	3.91	1.0231	Intercept	-0.033336	<i>+/-0.5</i>
2.00	1.93	1.0353			





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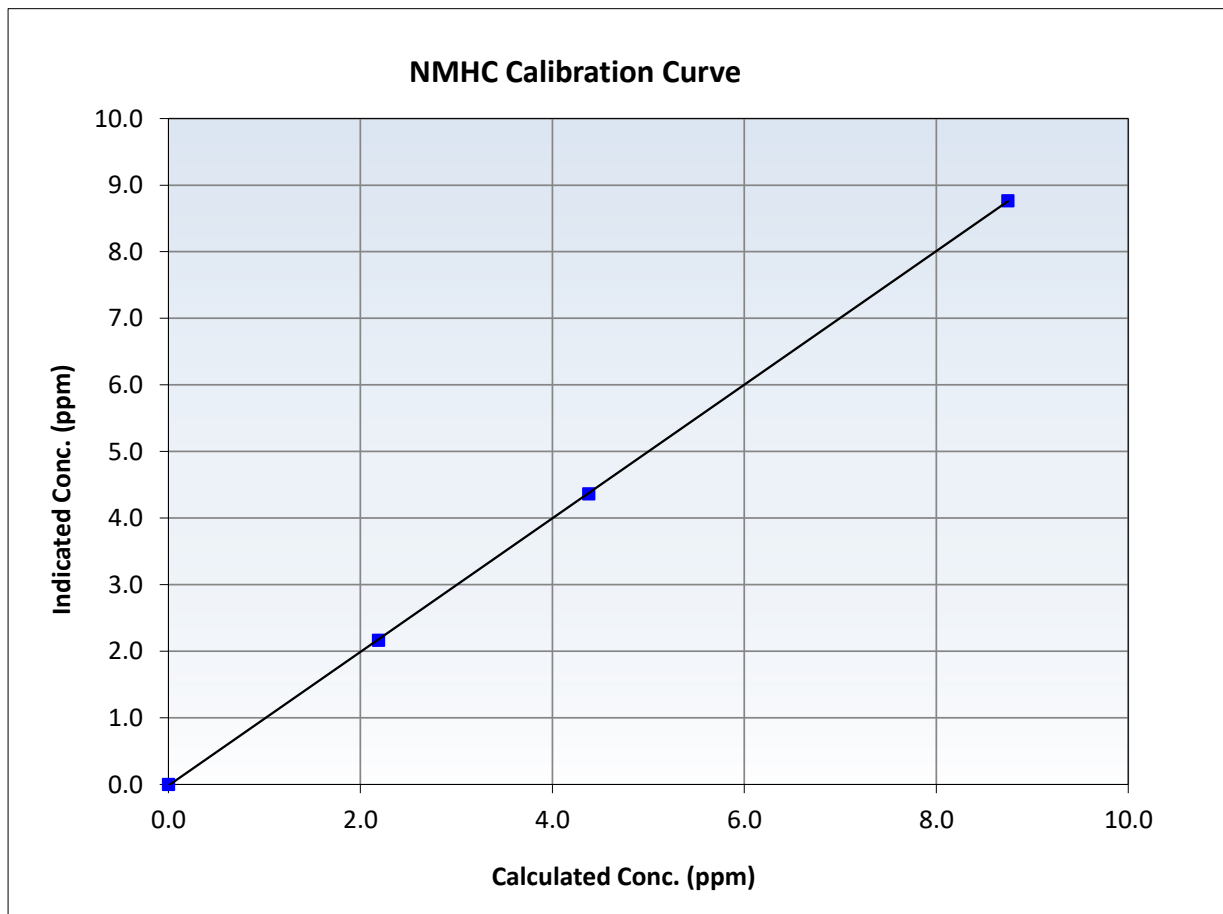
NMHC Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 3, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:08	End Time (MST):	12:43
Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381

Calibration Data

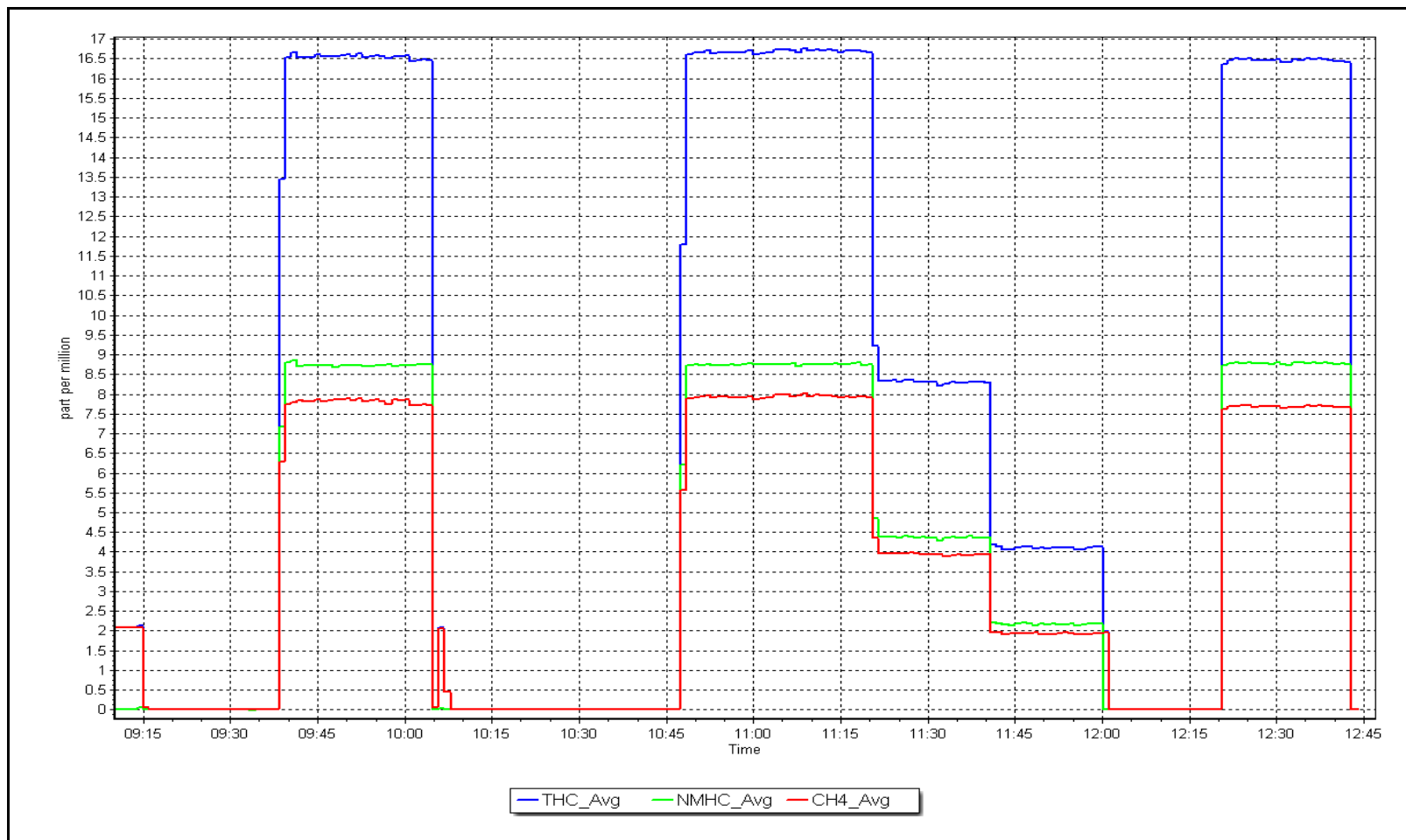
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999983	<i>≥0.995</i>
8.75	8.77	0.9975	Slope	1.003316	<i>0.90 - 1.10</i>
4.38	4.36	1.0032	Intercept	-0.016752	<i>+/-0.5</i>
2.19	2.17	1.0111			



NMHC Calibration Plot

Date: July 10, 2026

Location: Mannix





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS06
PATRICIA MCINNES
JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: July 9, 2026
Start time (MST): 9:20
Reason: Routine

Station number: AMS 06
Last Cal Date: June 22, 2026
End time (MST): 16:41

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:	1.007236	1.003693	Backgd or Offset:	28.2	28.2
Calibration intercept:	0.101688	0.241953	Coeff or Slope:	1.016	1.012

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	4920	79.9	800.3	802.0	0.997
As found Mid point	4960	39.9	399.6	402.7	0.991
As found Low point	4980	20.0	200.3	201.0	0.994
New cylinder response					
Baseline Corr As found:	802.6	Previous response	806.2	*% change	-0.4%
Baseline Corr 2nd AF pt:	403.3	AF Slope:	1.002935	AF Intercept:	0.182480
Baseline Corr 3rd AF pt:	201.6	AF Correlation:	0.999988	* = > +/-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	79.9	800.3	803.0	0.997
Mid point	4960	39.9	399.6	402.2	0.994
Low point	4980	20.0	200.3	201.6	0.994
As left zero	5000	0.0	0.0	-0.5	----
As left span	4920	79.9	800.3		

Average Correction Factor: 0.995

Notes: Swapped sample inlet filter as founds. Adjusted span.

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

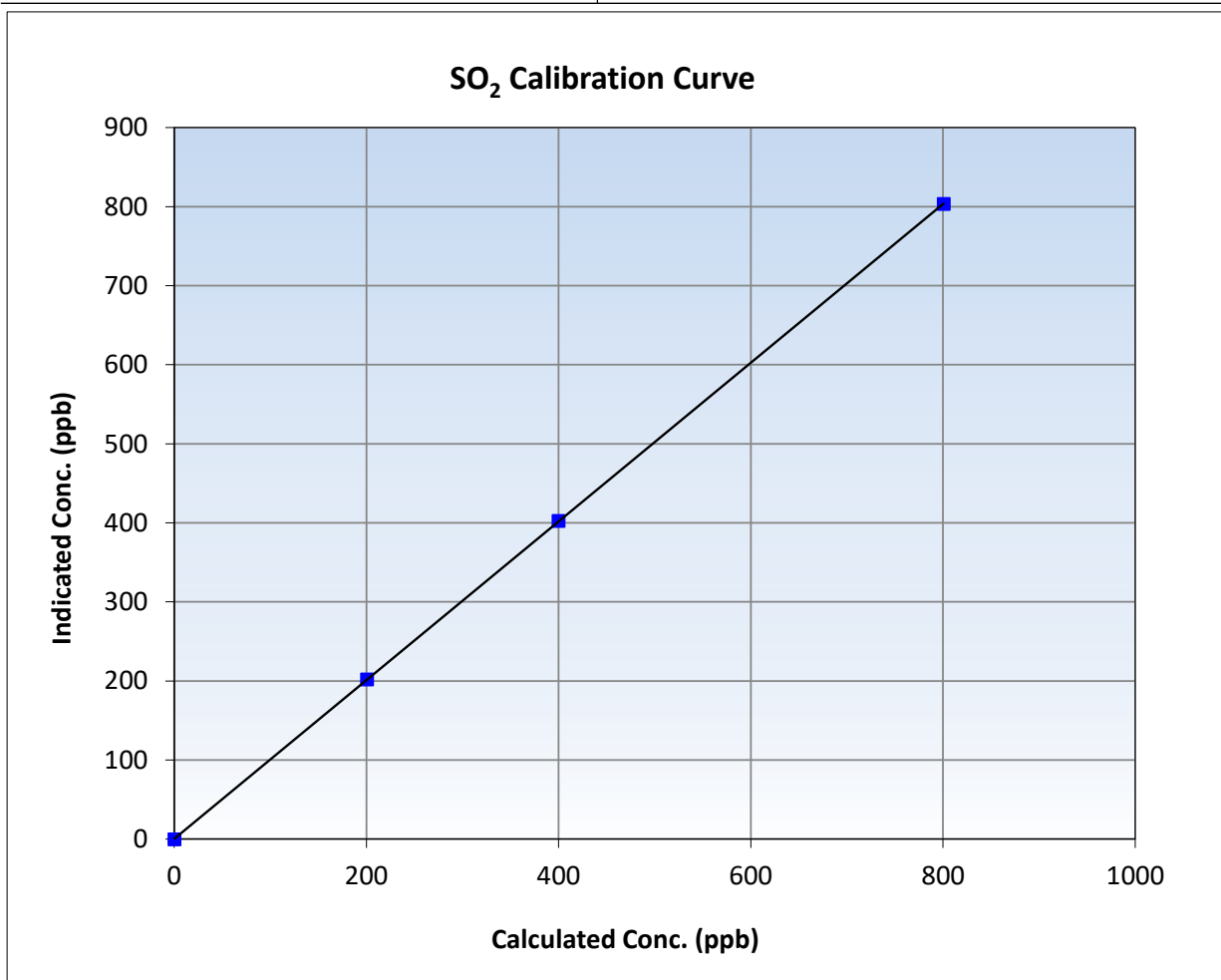
SO₂ Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 22, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:20	End Time (MST):	16:41
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290013

Calibration Data

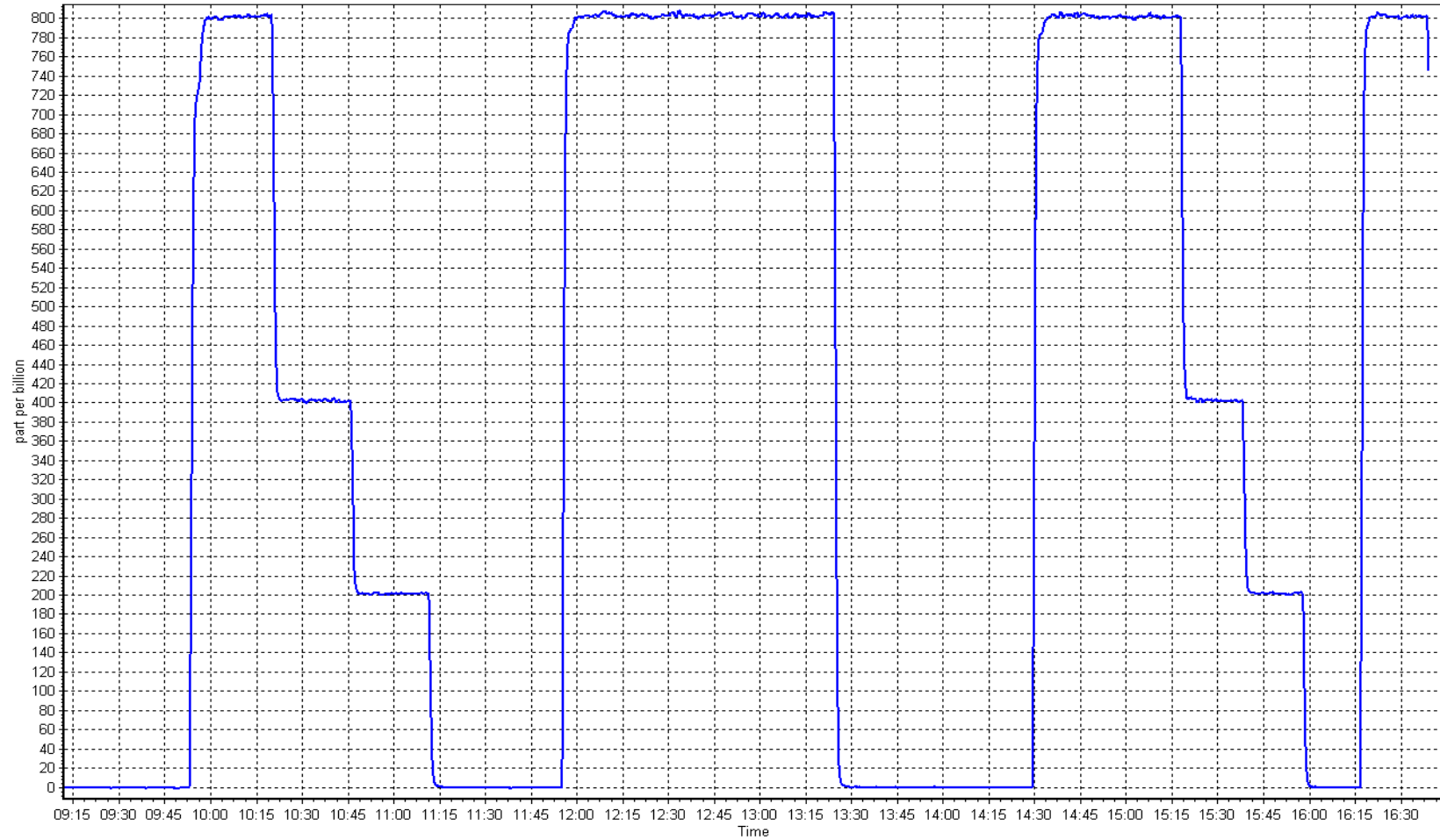
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.4	----	Correlation Coefficient	0.999996	≥0.995
800.3	803.0	0.9966	Slope	1.003693	0.90 - 1.10
399.6	402.2	0.9937	Intercept	0.241953	+/-30
200.3	201.6	0.9937			



SO2 Calibration Plot

Date: July 9, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: July 20, 2026
Start time (MST): 9:15
Reason: Removal

Station number: AMS 06
Last Cal Date: June 4, 2026
End time (MST): 11:32

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:	1.007689		Backgd or Offset:	2.55	2.55
Calibration intercept:	0.020000		Coeff or Slope:	1.276	1.276

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	4916	84.0	80.0	81.6	0.980
As found Mid point	4958	42.0	40.0	41.3	0.968
As found Low point	4979	21.0	20.0	20.7	0.966
New cylinder response					
Baseline Corr As found:	81.6	Prev response:	80.60	*% change:	1.2%
Baseline Corr 2nd AF pt:	41.3	AF Slope:	1.019837	AF Intercept:	0.220000
Baseline Corr 3rd AF pt:	20.7	AF Correlation:	0.999951	* = > +/-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	4920	79.9	799.0		----
Date of last scrubber change:		Wednesday, April 8, 2026		Ave Corr Factor	
Date of last converter efficiency test:					

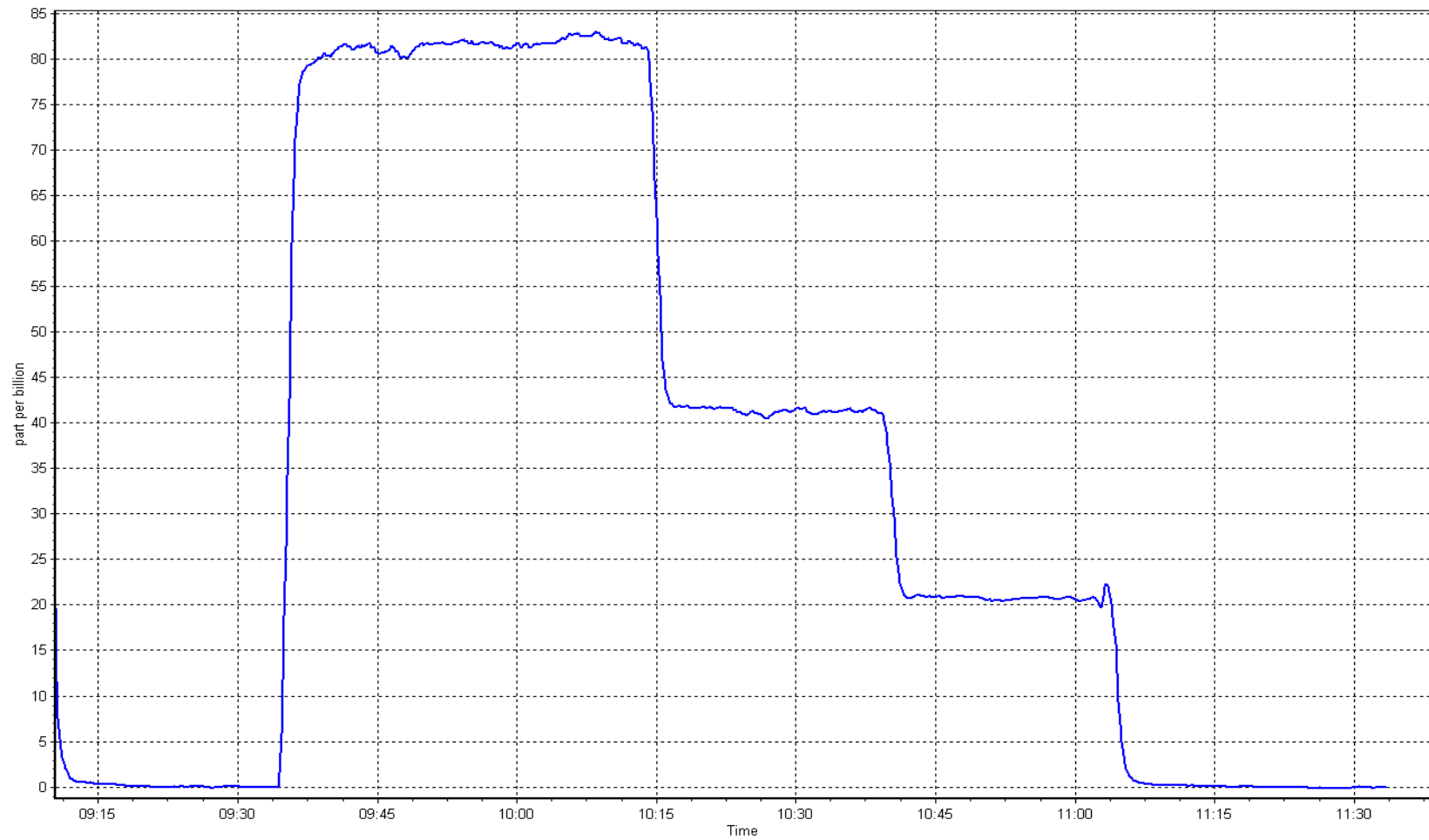
Notes: Removed analyzer due to low nightly span response. Replacing to troubleshoot the issue.

Calibration Performed By: Braiden Boutilier

TRS Calibration Plot

Date: July 20, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: July 20, 2026
Start time (MST): 13:00
Reason: Install

Station number: AMS 06
Last Cal Date: June 4, 2026
End time (MST): 15:38

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

Analyzer serial #: 12333331546
Converter serial #: 621
Converter Temp: 850 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:		1.012405	Backgd or Offset:		1.61
Calibration intercept:		-0.020000	Coeff or Slope:		1.026

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	81.0	0.987
Mid point	4958	42.0	40.0	40.3	0.992
Low point	4979	21.0	20.0	20.3	0.985
As left zero	5000	0.0	0.0	0.0	----
As left span	4916	84.0	80.0	81.8	0.978
SO2 Scrubber Check					
Date of last scrubber change:		April 8, 2026		Ave Corr Factor	0.988
Date of last converter efficiency test:					

Notes: Installed new analyzer to troubleshoot low nightly span response.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

TRS Calibration Summary

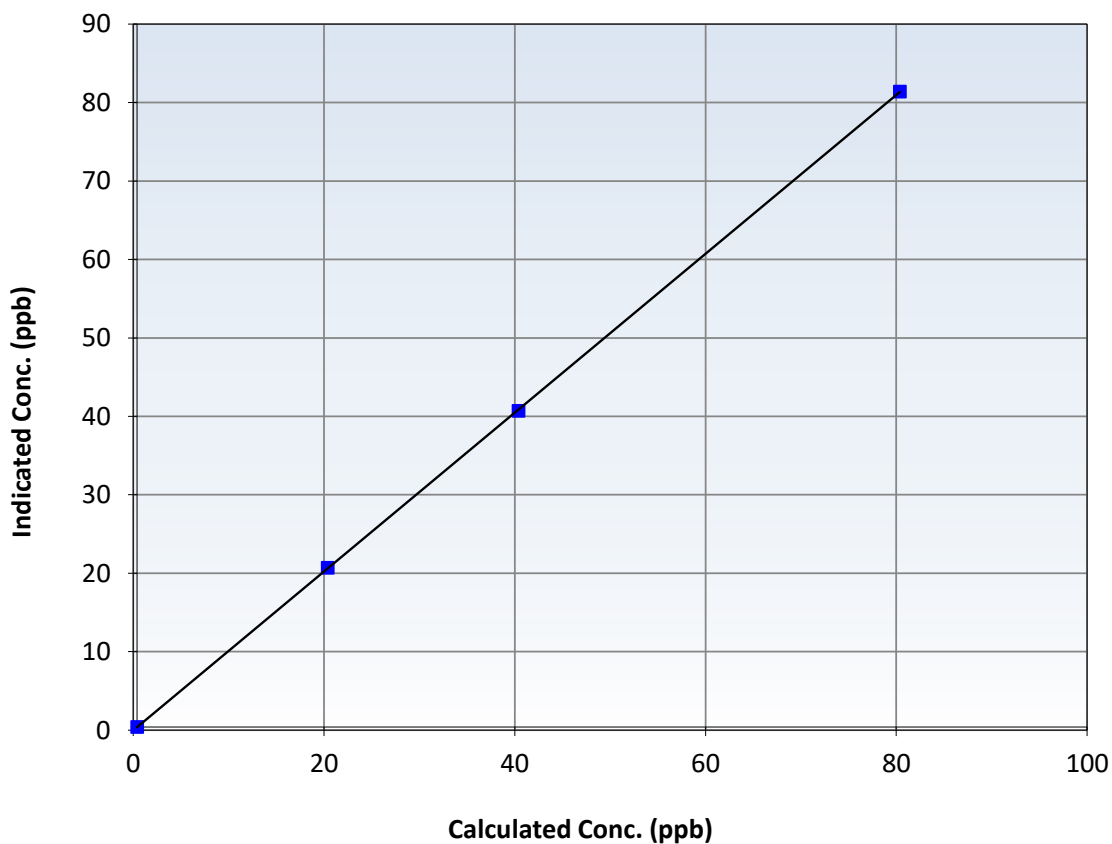
Station Information

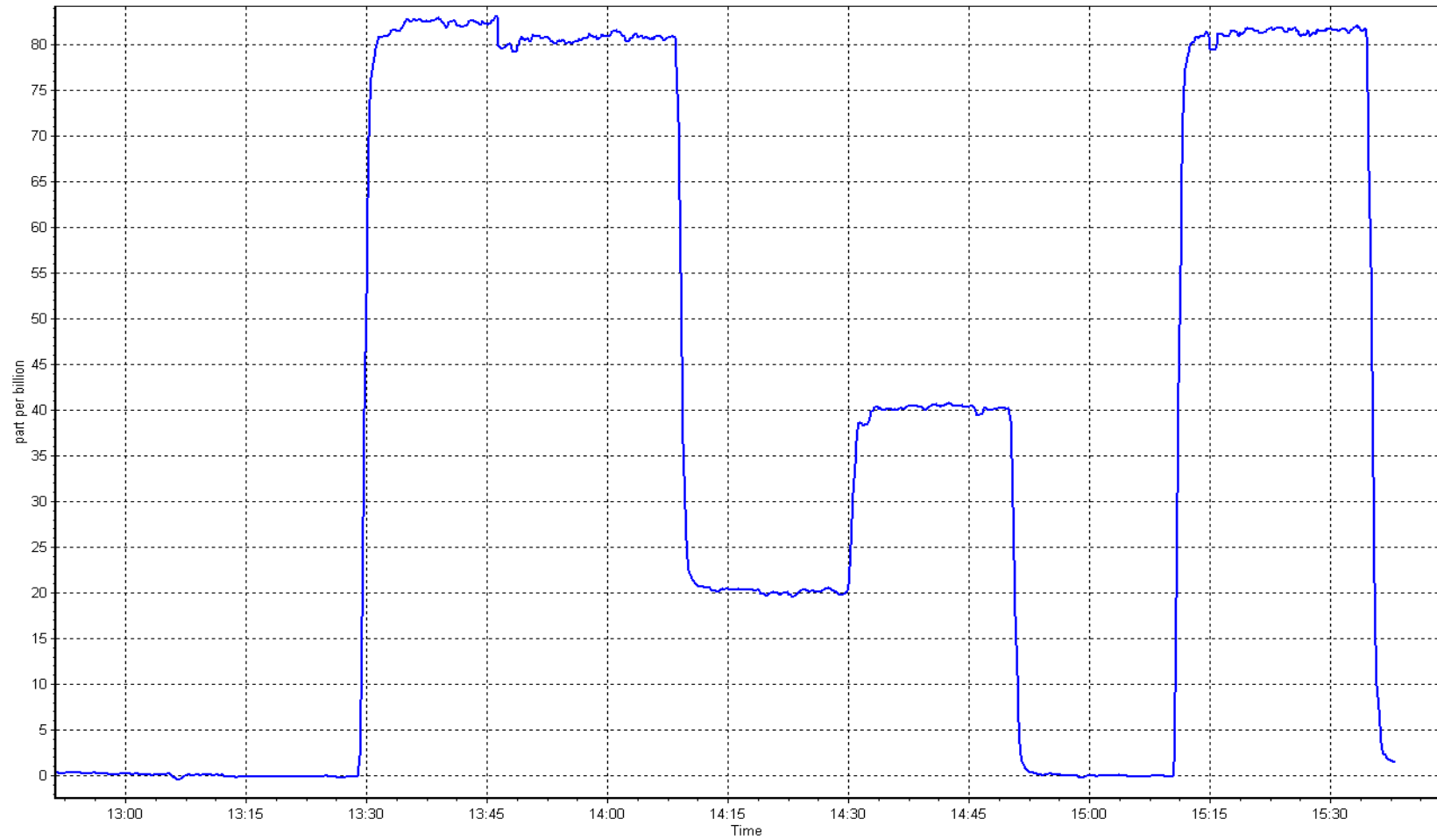
Calibration Date:	July 20, 2026	Previous Calibration:	June 4, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	13:00	End Time (MST):	15:38
Analyzer make:	Thermo 43iQ TLE	Analyzer serial #:	12333331546

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	81.0	0.9873	Slope	1.012405		0.90 - 1.10
40.0	40.3	0.9922	Intercept	-0.020000		+/-3
20.0	20.3	0.9848				

TRS Calibration Curve







Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: July 23, 2026
Start time (MST): 9:23
Reason: Maintenance

Station number: AMS 06
Last Cal Date: July 20, 2026
End time (MST): 18:11

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

Analyzer serial #: 12333331546
Converter serial #: 621
Converter Temp: 850 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.012905	1.002544	Backgd or Offset:	1.61	1.60
Calibration intercept:	-0.050000	0.100000	Coeff or Slope:	1.026	1.035

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	4916	84.0	80.0	78.4	1.020
As found Mid point	4958	42.0	40.0	39.3	1.017
As found Low point	4979	21.0	20.0	19.6	1.020
New cylinder response					
Baseline Corr As found:	78.4	Prev response:	80.95	*% change:	-3.3%
Baseline Corr 2nd AF pt:	39.3	AF Slope:	0.980535	AF Intercept:	0.020000
Baseline Corr 3rd AF pt:	19.6	AF Correlation:	0.999998	* = > +/-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	80.2	0.997
Mid point	4958	42.0	40.0	40.3	0.992
Low point	4979	21.0	20.0	20.2	0.990
As left zero	5000	0.0	0.0	0.0	----
As left span	4916	84.0	80.0	80.3	0.996
SO2 Scrubber Check					
Date of last scrubber change:		July 23, 2026		Ave Corr Factor	0.993
Date of last converter efficiency test:					

Notes: Calibrating to troubleshoot low nightly spans. Swapped scrubber, external pump and external valve after MPAF's. Adjusted zero and span.

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

TRS Calibration Summary

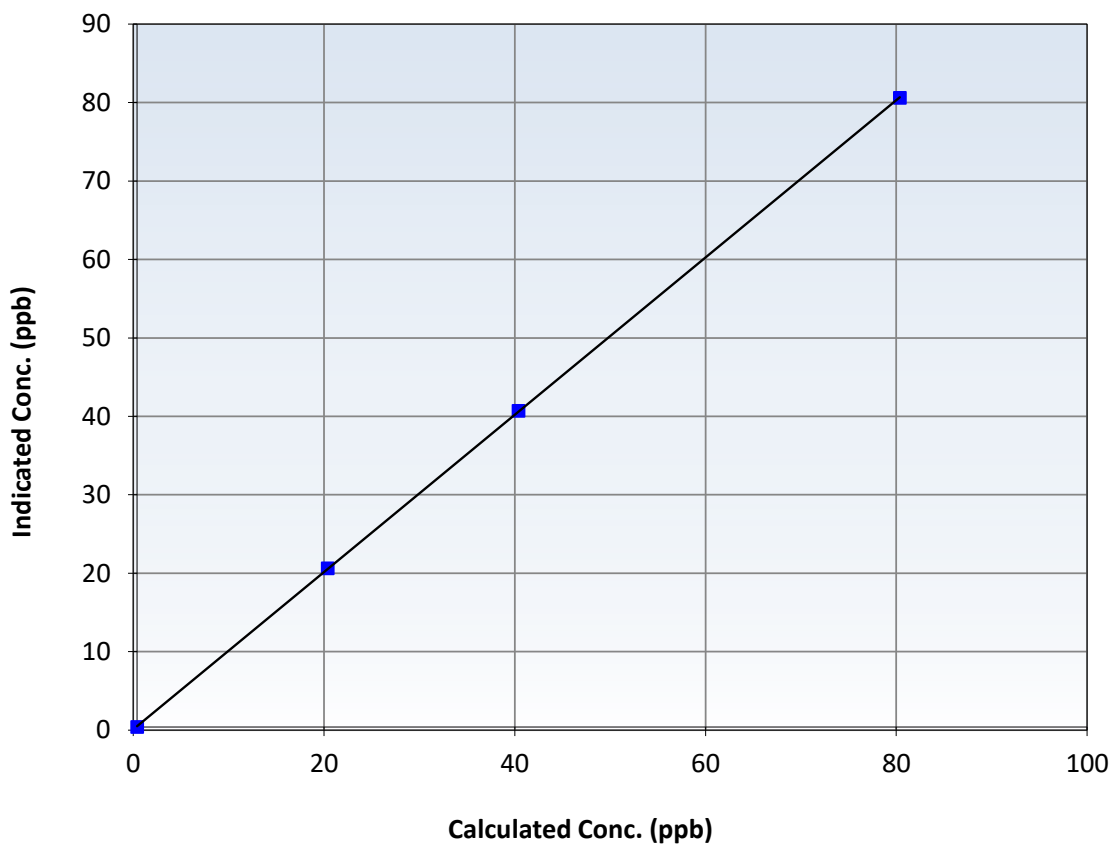
Station Information

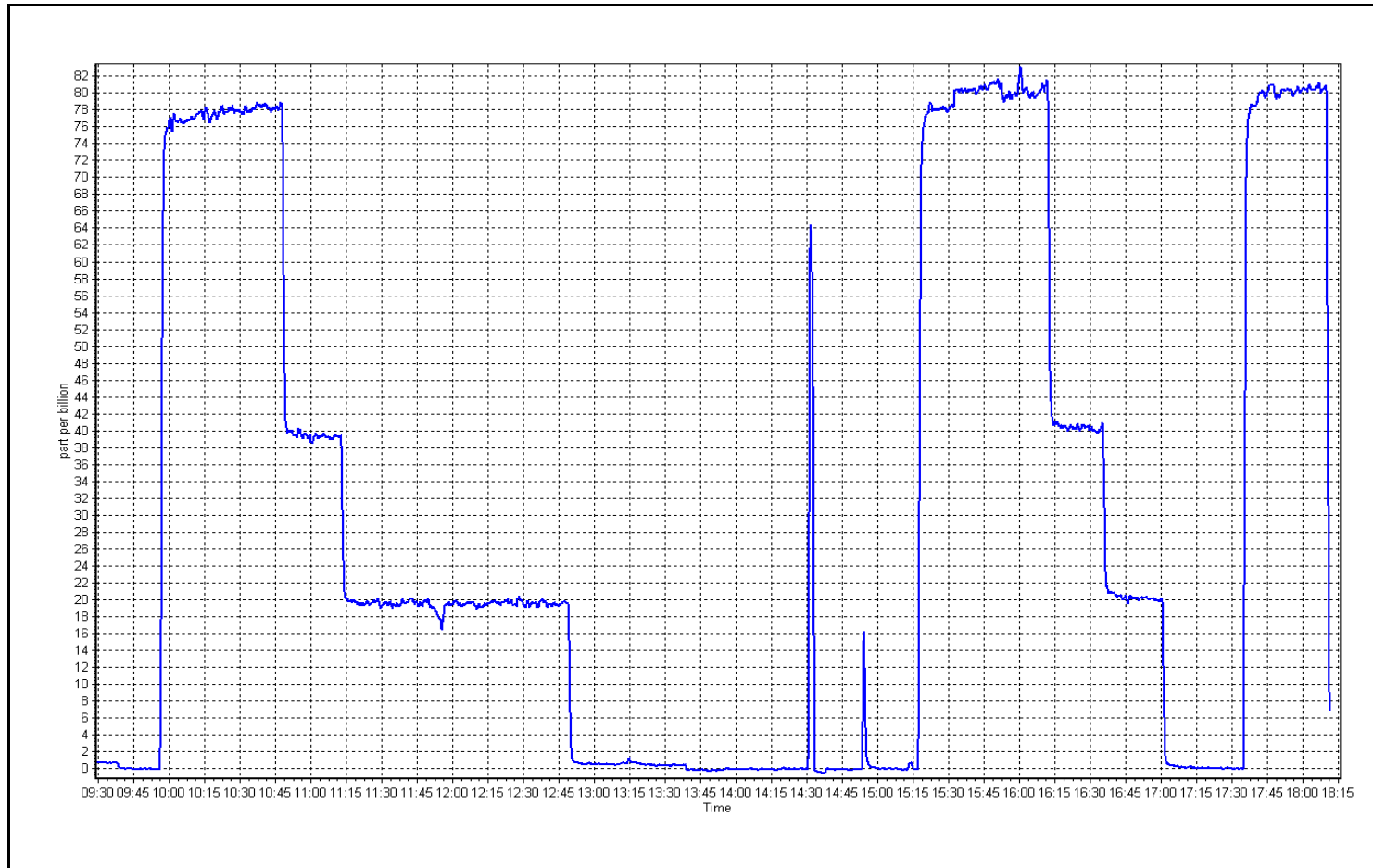
Calibration Date:	July 23, 2026	Previous Calibration:	July 20, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:23	End Time (MST):	18:11
Analyzer make:	Thermo 43iQ TLE	Analyzer serial #:	12333331546

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	0.999991		≥ 0.995
80.0	80.2	0.9971	Slope	1.002544		$0.90 - 1.10$
40.0	40.3	0.9922	Intercept	0.100000		± 3
20.0	20.2	0.9897				

TRS Calibration Curve





Calibrating to troubleshoot low nightly spans. Swapped scrubber, external pump and external valve after MPAF's.



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: July 27, 2026
Start time (MST): 8:55
Reason: Maintenance

Station number: AMS 06
Last Cal Date: July 23, 2026
End time (MST): 20:30

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

Analyzer serial #: 12333331546
Converter serial #: NA
Converter Temp: 850 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002544	1.002973	Backgd or Offset:	1.60	1.54
Calibration intercept:	0.100000	0.060000	Coeff or Slope:	1.035	0.997

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	4916	84.0	80.0	77.2	1.037
As found Mid point	4958	42.0	40.0	39.4	1.017
As found Low point	4979	21.0	20.0	19.7	1.020
New cylinder response					
Baseline Corr As found:	77.1	Prev response:	80.27	*% change:	-4.1%
Baseline Corr 2nd AF pt:	39.3	AF Slope:	0.963814	AF Intercept:	0.380000
Baseline Corr 3rd AF pt:	19.6	AF Correlation:	0.999883	* = > +/-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	4916	84.0	80.0	80.4	0.995
Mid point	4958	42.0	40.0	39.8	1.005
Low point	4979	21.0	20.0	20.3	0.985
As left zero	5000	0.0	0.0	0.0	----
As left span	4916	84.0	80.0	79.7	1.003
SO2 Scrubber Check					
Date of last scrubber change:		July 23, 2026		Ave Corr Factor	0.995
Date of last converter efficiency test:					

Notes: Completing maintenance to troubleshoot cause of low nightly spans. Swapped converter, external sample teflon lines. Adjusted span.

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

TRS Calibration Summary

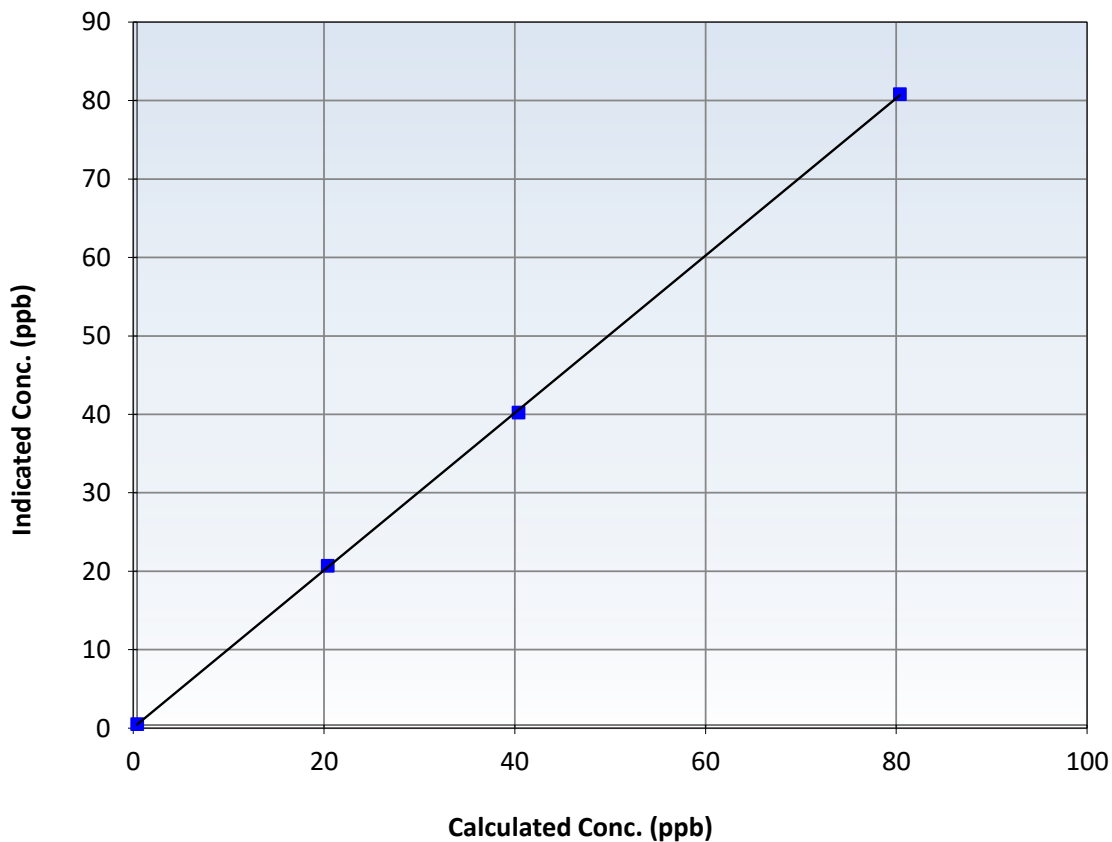
Station Information

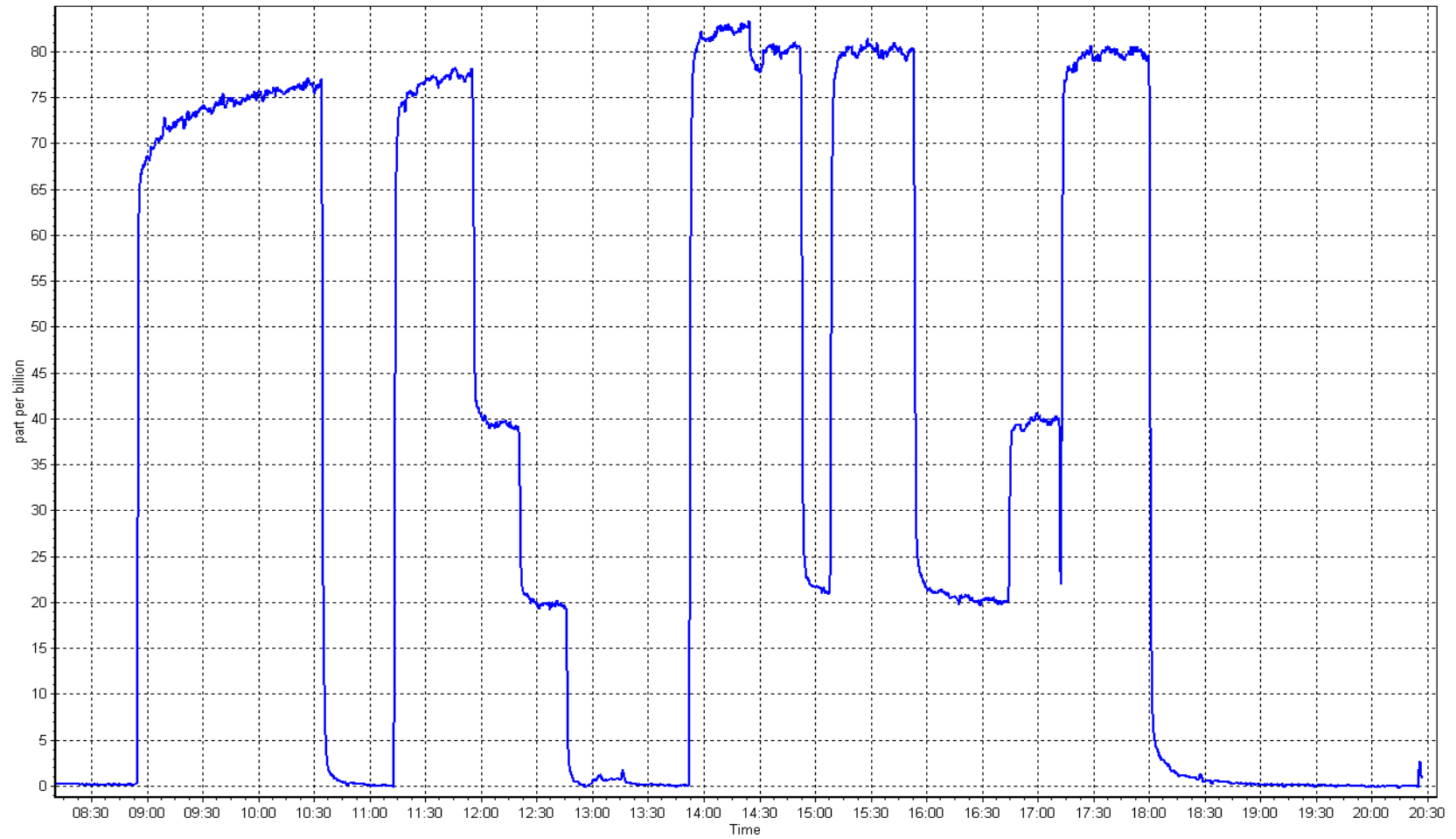
Calibration Date:	July 27, 2026	Previous Calibration:	July 23, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:55	End Time (MST):	20:30
Analyzer make:	Thermo 43iQ TLE	Analyzer serial #:	12333331546

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	0.999947		≥ 0.995
80.0	80.4	0.9946	Slope	1.002973		$0.90 - 1.10$
40.0	39.8	1.0046	Intercept	0.060000		± 3
20.0	20.3	0.9848				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Patricia McInnes
 Calibration Date: July 9, 2026
 Start time (MST): 9:20
 Reason: Routine

Station number: AMS 06
 Last Cal Date: June 23, 2026
 End time (MST): 16:41

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>
CH4 SP Ratio:	3.03E-04	2.92E-04	NMHC SP Ratio:	4.50E-05	4.53E-05
CH4 Retention time:	15.9	15.7	NMHC Peak Area:	194272	193233
Zero Chromatogram:	ON	ON	Flat Baseline:	OFF	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	0.00	----
As found High point	4920	80.2	16.83	15.65	1.076
As found Mid point	4960	40.2	8.44	7.74	1.091
As found Low point	4980	20.2	4.24	3.94	1.076
New cylinder response					
Baseline Corr AF:	15.65	Prev response	16.65	*% change	-6.4%
Baseline Corr 2nd AF:	7.74	AF Slope:	0.929030	AF Intercept:	-0.022279
Baseline Corr 3rd AF:	3.94	AF Correlation:	0.999933	* = > +/-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	16.87	0.998
Mid point	4960	40.2	8.44	8.36	1.009
Low point	4980	20.2	4.24	4.20	1.009
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	16.83	16.62	1.013
Average Correction Factor					1.005

Notes: Internal pump dead, swapped first and cal completed after. Adjusted zero and span. Turned on "use flat baseline" for zero correction.



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	7.94	1.107
As found Mid point	4960	40.2	4.41	3.95	1.117
As found Low point	4980	20.2	2.21	2.01	1.103
New cylinder response					
Baseline Corr AF:	7.94	Prev response	8.73	*% change	-10.0%
Baseline Corr 2nd AF:	3.95	AF Slope:	0.902262	AF Intercept:	-0.003169
Baseline Corr 3rd AF:	2.01	AF Correlation:	0.999971	* = > +/-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	8.93	0.984
Mid point	4960	40.2	4.41	4.33	1.017
Low point	4980	20.2	2.21	2.21	1.001
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.79	8.71	1.009
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	80.2	8.04	7.71	1.043
As found Mid point	4960	40.2	4.03	3.79	1.064
As found Low point	4980	20.2	2.03	1.93	1.048
New cylinder response					
Baseline Corr AF:	7.71	Prev response	7.92	*% change	-2.7%
Baseline Corr 2nd AF:	3.79	AF Slope:	0.958404	AF Intercept:	-0.019510
Baseline Corr 3rd AF:	1.93	AF Correlation:	0.999869	* = > +/-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	7.94	1.013
Mid point	4960	40.2	4.03	4.03	1.000
Low point	4980	20.2	2.03	1.99	1.019
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.04	7.91	1.016
Average Correction Factor					1.011

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.989136	1.002520
THC Cal Offset:	0.003385	-0.038357
CH ₄ Cal Slope:	0.985572	0.988407
CH ₄ Cal Offset:	-0.004098	0.005660
NMHC Cal Slope:	0.992201	1.015379
NMHC Cal Offset:	0.007485	-0.043816

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

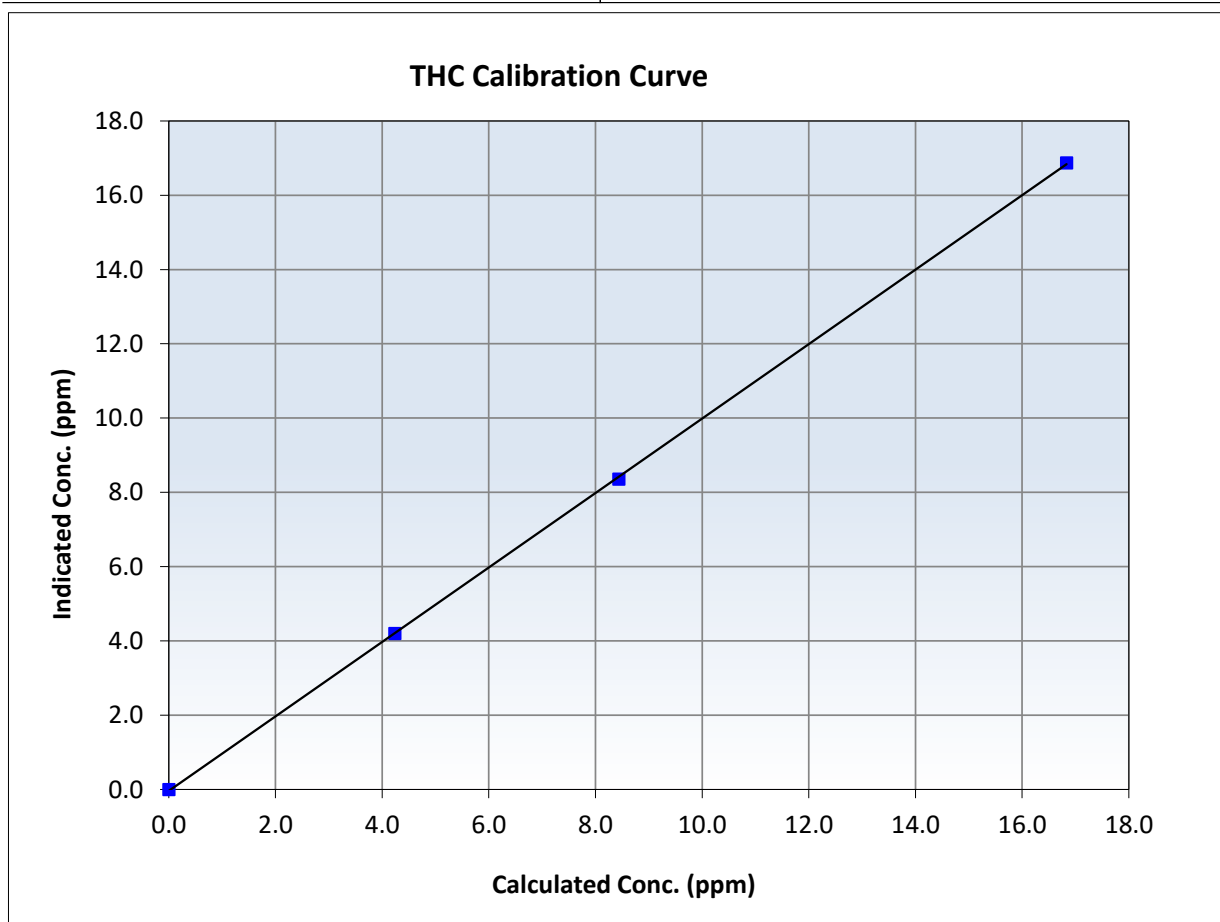
THC Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 23, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:20	End Time (MST):	16:41
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	0.999959	≥ 0.995
16.83	16.87	0.9978	Slope	1.002520	$0.90 - 1.10$
8.44	8.36	1.0093	Intercept	-0.038357	± 0.5
4.24	4.20	1.0092			





Wood Buffalo Environmental Association

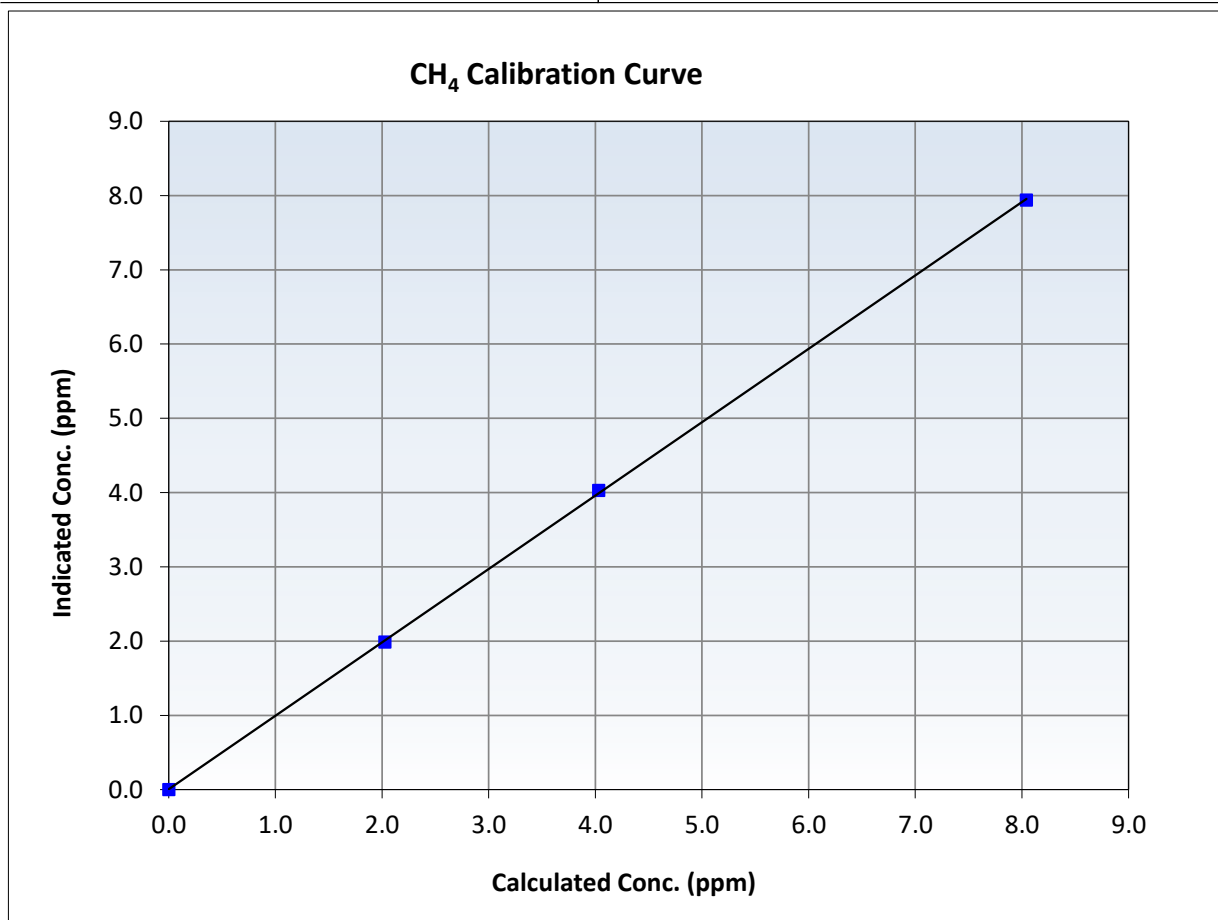
CH₄ Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 23, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:20	End Time (MST):	16:41
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	0.999932	≥ 0.995
8.04	7.94	1.0130	Slope	0.988407	$0.90 - 1.10$
4.03	4.03	1.0000	Intercept	0.005660	± 0.5
2.03	1.99	1.0189			





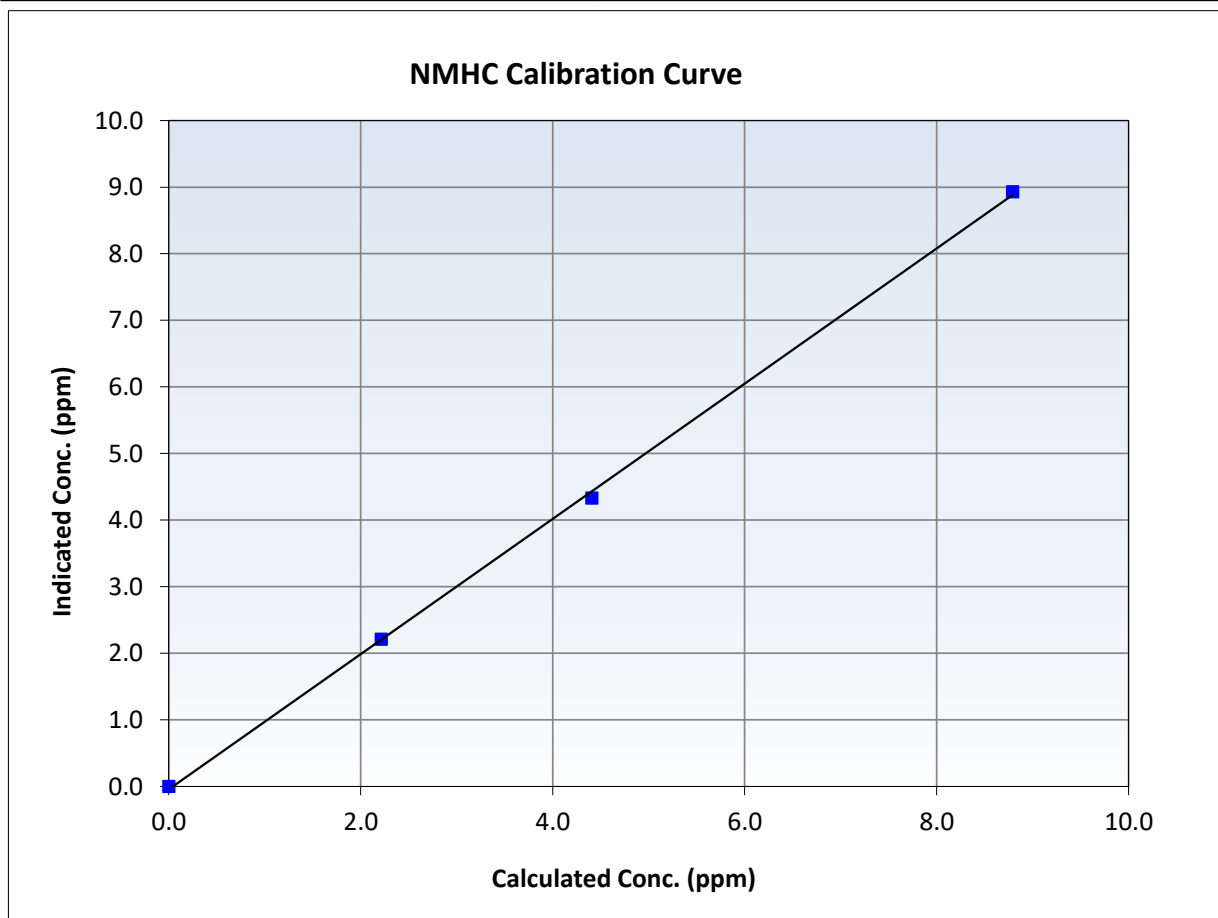
Wood Buffalo Environmental Association NMHC Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 23, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:20	End Time (MST):	16:41
Analyzer make:	Thermo 55i	Analyzer serial #:	1118148494

Calibration Data

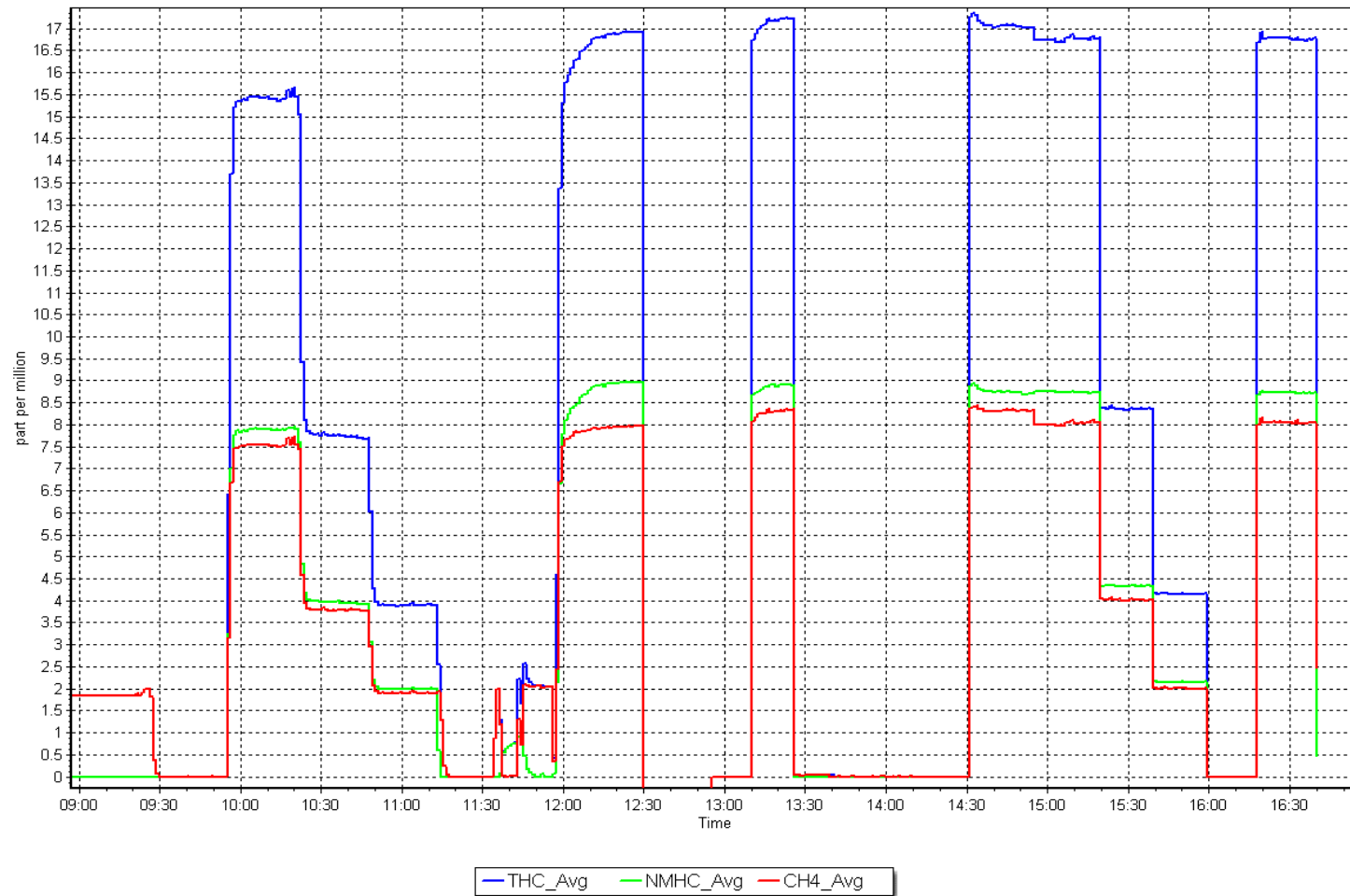
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999676	<i>≥0.995</i>
8.79	8.93	0.9844	Slope	1.015379	<i>0.90 - 1.10</i>
4.41	4.33	1.0174	Intercept	-0.043816	<i>+/-0.5</i>
2.21	2.21	1.0010			



NMHC Calibration Plot

Date: July 9, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Patricia McInnes
 Calibration Date: July 10, 2026
 Start time (MST): 8:45
 Reason: Maintenance

Station number: AMS 06
 Last Cal Date: July 9, 2026
 End time (MST): 11:35

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:	2.92E-04	2.92E-04	NMHC SP Ratio:	4.53E-05	4.55E-05
CH ₄ Retention time:	15.7	15.5	NMHC Peak Area:	193233	192455
Zero Chromatogram:	ON	ON	Flat Baseline:	OFF	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))
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	16.77	16.75	1.001
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.75	Prev response	16.77	*% change	-0.2%
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))
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	16.77	16.79	0.999
Mid point	4960	39.9	8.37	8.37	1.001
Low point	4980	20.0	4.20	4.15	1.013
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	16.83	16.82	1.001
Average Correction Factor					1.004

Notes:

Span adjusted to correct for shifted CH₄ retention 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)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	8.76	8.72	1.005
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.72	Prev response	8.85	*% 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	4920	79.9	8.76	8.75	1.001
Mid point	4960	39.9	4.37	4.36	1.004
Low point	4980	20.0	2.19	2.15	1.019
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.79	8.76	1.004
Average Correction Factor					1.008

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	8.01	8.03	0.998
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.03	Prev response	7.92	*% change	1.3%
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	8.01	8.03	0.997
Mid point	4960	39.9	4.00	4.01	0.998
Low point	4980	20.0	2.01	1.99	1.006
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.04	8.05	0.999
Average Correction Factor					1.000

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	1.002520	1.001881
THC Cal Offset:	-0.038357	-0.024756
CH ₄ Cal Slope:	0.988407	1.003433
CH ₄ Cal Offset:	0.005660	-0.007379
NMHC Cal Slope:	1.015379	1.000017
NMHC Cal Offset:	-0.043816	-0.017177

Calibration Performed By: Devin Russell



Wood Buffalo Environmental Association

THC Calibration Summary

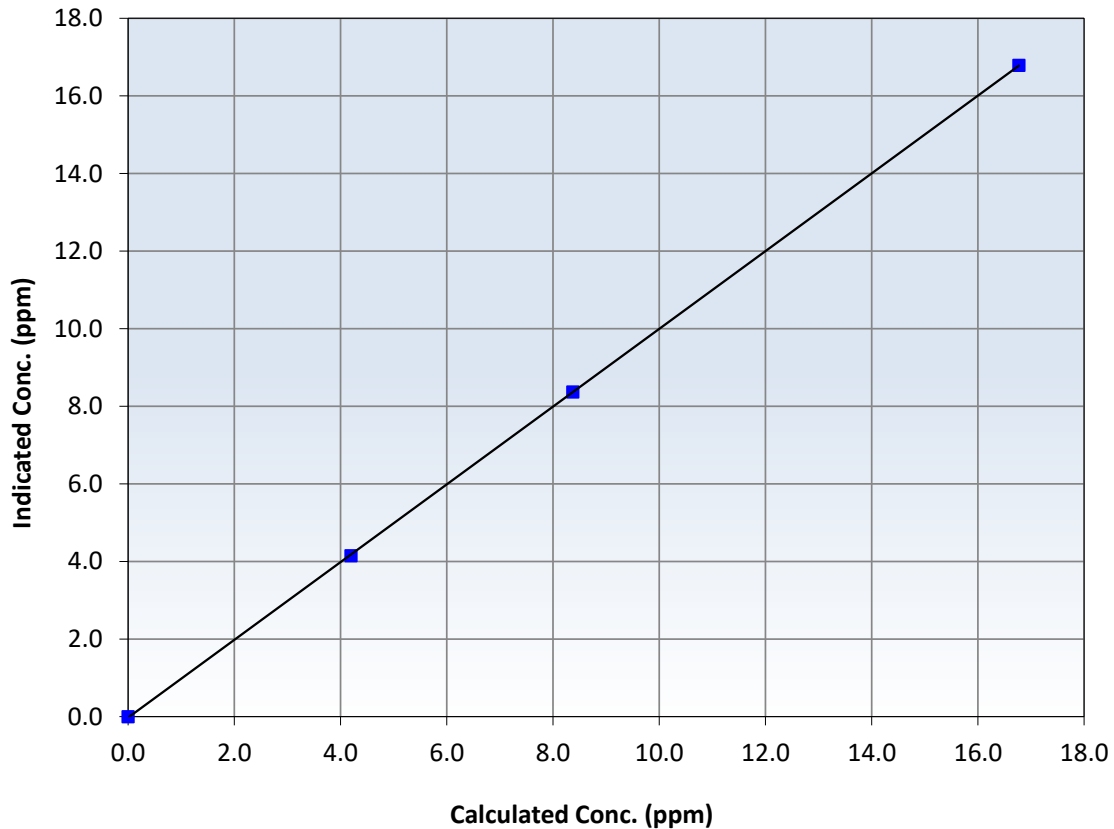
Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	July 9, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:45	End Time (MST):	11:35
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	0.999988	≥ 0.995
16.77	16.79	0.9992	Slope	1.001881	$0.90 - 1.10$
8.37	8.37	1.0007	Intercept	-0.024756	± 0.5
4.20	4.15	1.0125			

THC Calibration Curve





Wood Buffalo Environmental Association

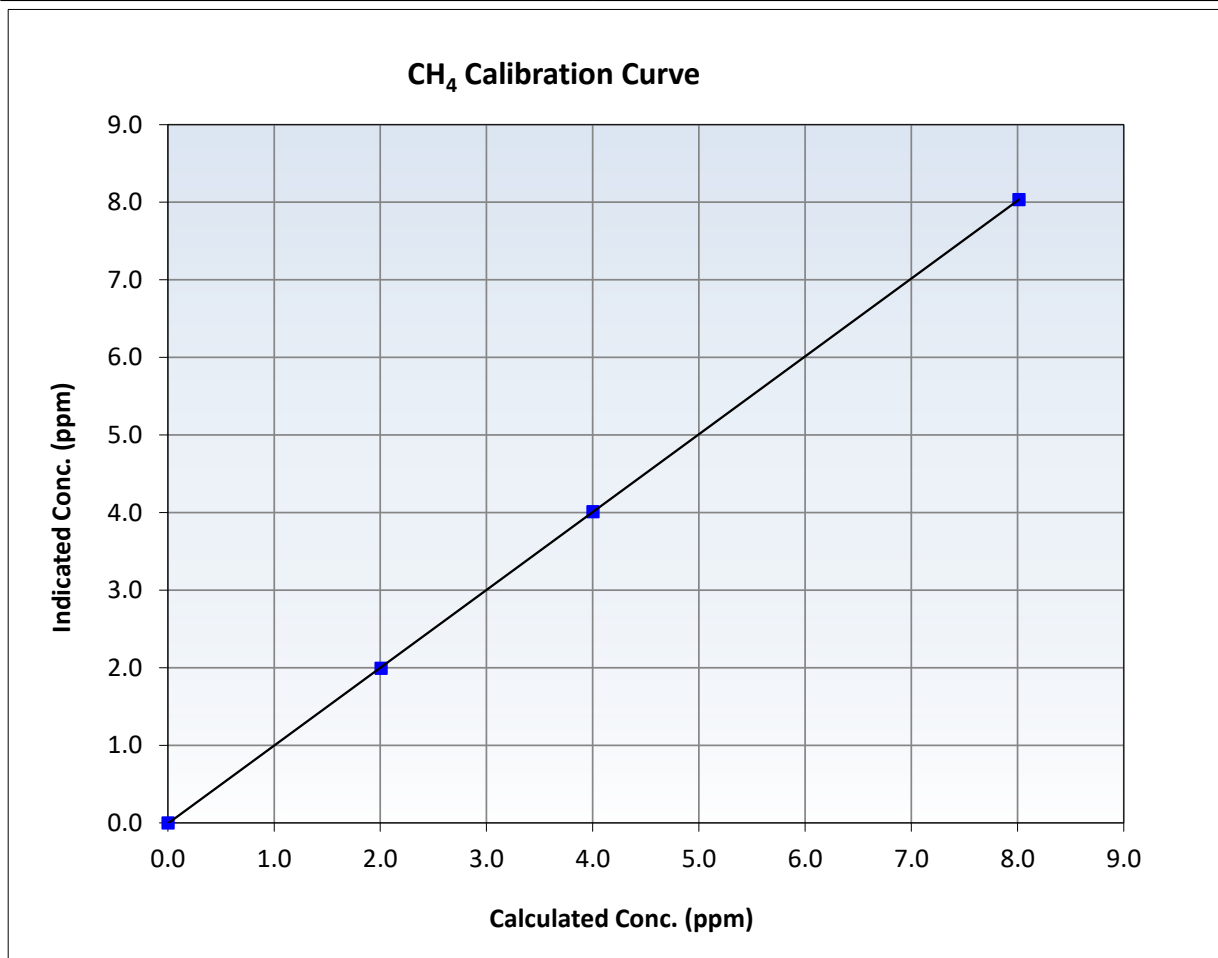
CH₄ Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	July 9, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:45	End Time (MST):	11:35
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	0.999994	≥ 0.995
8.01	8.03	0.9973	Slope	1.003433	$0.90 - 1.10$
4.00	4.01	0.9976	Intercept	-0.007379	± 0.5
2.01	1.99	1.0063			





Wood Buffalo Environmental Association

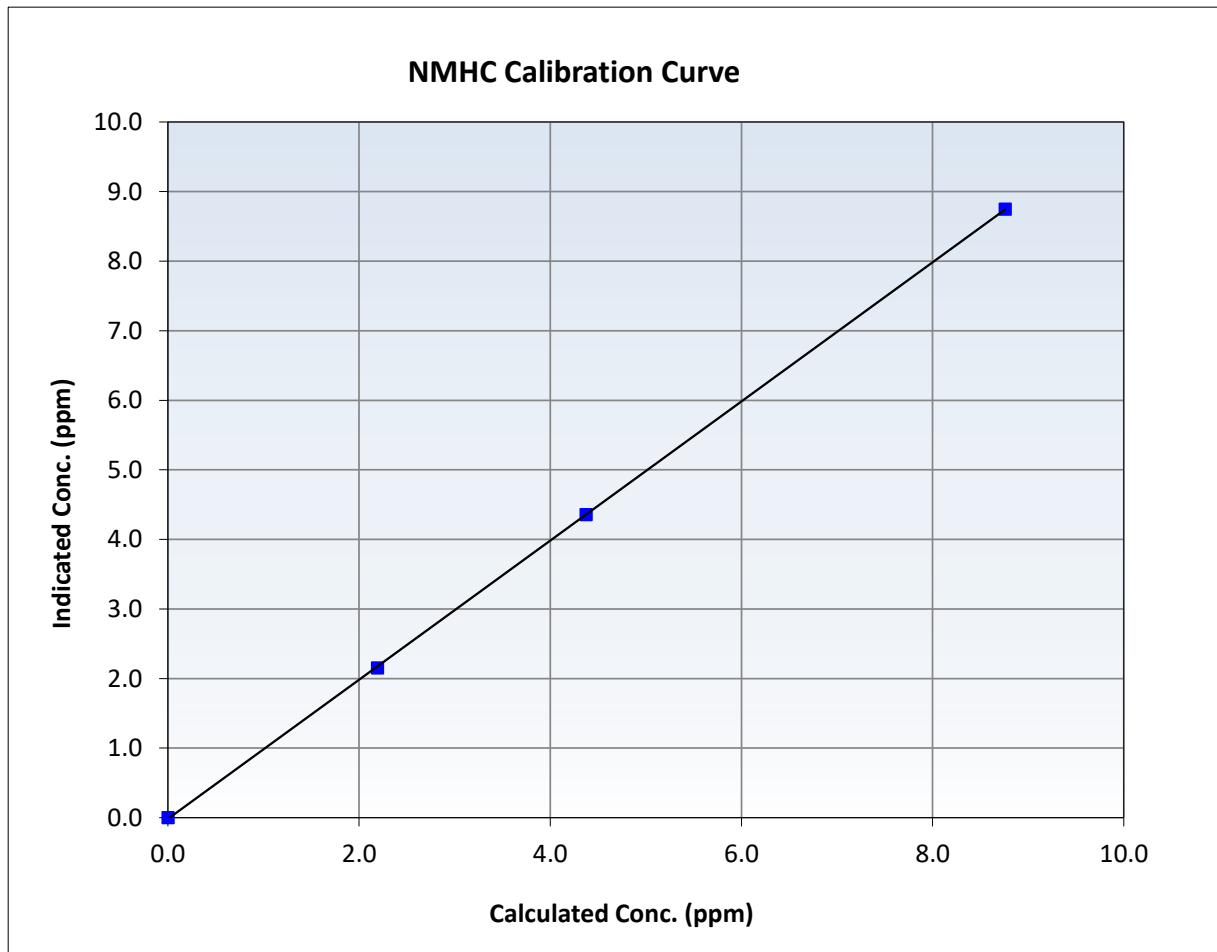
NMHC Calibration Summary

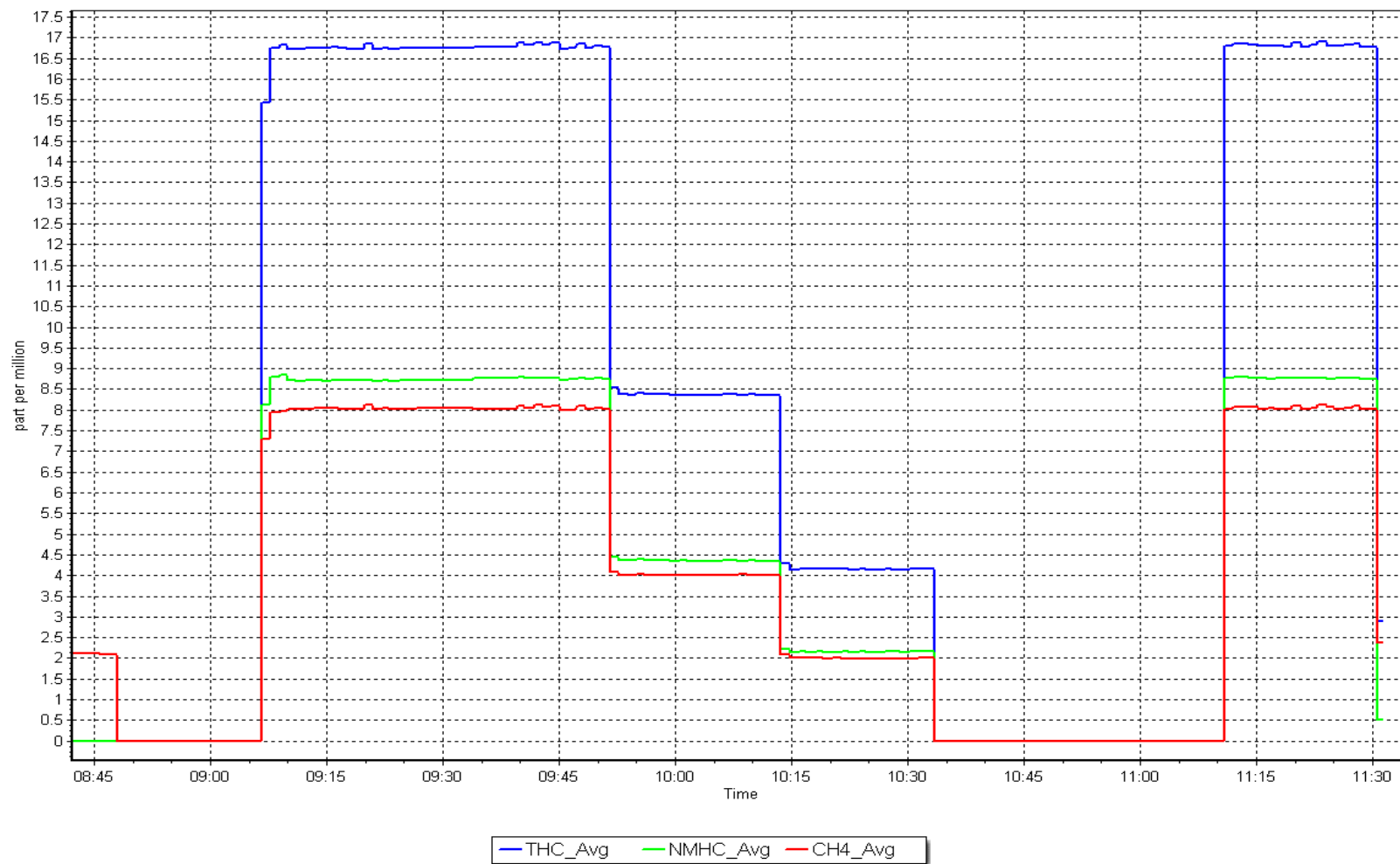
Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	July 9, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:45	End Time (MST):	11:35
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	0.999979	≥ 0.995
8.76	8.75	1.0013	Slope	1.000017	$0.90 - 1.10$
4.37	4.36	1.0038	Intercept	-0.017177	± 0.5
2.19	2.15	1.0187			







Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Patricia McInnes
Station number: AMS 06
Calibration Date: July 28, 2026
Last Cal Date: June 3, 2026
Start time (MST): 9:45
End time (MST): 14:53
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0036234
NOX Cal Gas Conc: 62.20 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	-0.5	-0.4	-0.1	----	----
AF High point	4935	64.6	803.7	799.8	3.9	794.6	785.6	8.9	1.0108	1.0176
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 804.2 ppb	NO = 800.7 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -1.1%	
Baseline Corr 1st pt	NO _x = 795.1 ppb	NO = 786.0 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 :		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:	0.998901	0.997806
NO _x Cal Offset:	1.412385	1.272646
NO Cal Slope:	1.001910	1.002824
NO Cal Offset:	-0.646169	-1.466131
NO ₂ Cal Slope:	1.000938	0.997530
NO ₂ Cal Offset:	0.171260	0.387888

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.887	0.889	NO bkgnd or offset:	3.9	3.9
NOX coeff or slope:	0.995	0.994	NOX bkgnd or offset:	4.4	4.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	162.4	156.6

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	0.0	-0.1	0.0	----	----
High point	4935	64.6	803.7	799.8	3.9	802.0	800.9	2.1	1.0021	0.9986
Mid point	4968	32.3	401.8	399.9	1.9	404.5	400.0	4.4	0.9933	0.9996
Low point	4984	16.2	201.5	200.5	1.0	202.5	197.5	5.0	0.9952	1.0154
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	382.8	420.9	797.9	382.8	415.1	1.0073	1.0000
Average Correction Factor									0.9969	1.0046

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	794.2	382.6	415.5	414.8	1.0016	99.8%
Mid GPT point	794.2	593.1	205.0	204.6	1.0018	99.8%
Low GPT point	794.2	697.7	100.4	101.2	0.9919	100.8%
Average Correction Factor					0.9984	100.2%

Notes:

Inlet filter changed after as founds. Adjusted span.

Calibration Performed By: Devin Russell, Braiden Boutilier



Wood Buffalo Environmental Association

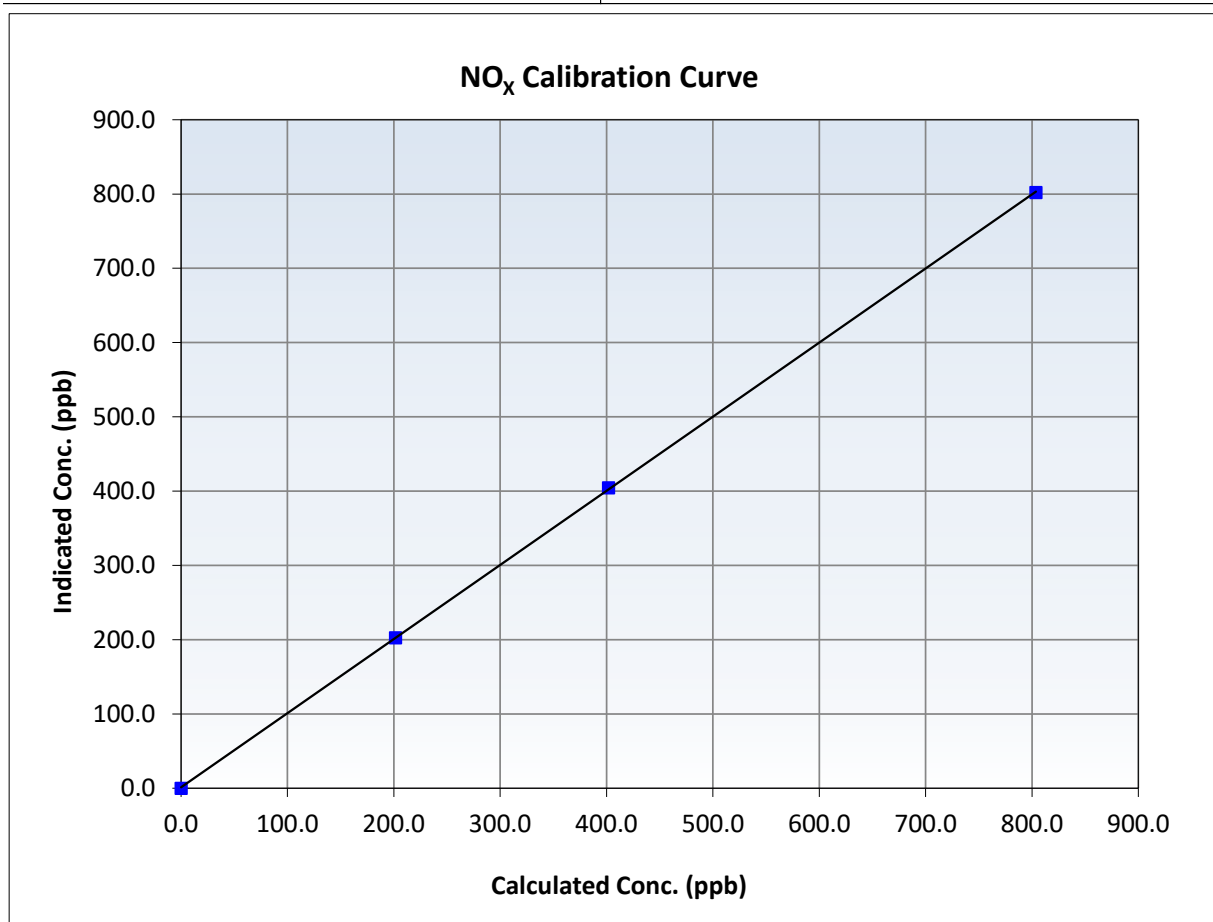
NO_x Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 3, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:45	End Time (MST):	14:53
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	0.999976	≥0.995
803.7	802.0	1.0021	Slope	0.997806	0.90 - 1.10
401.8	404.5	0.9933	Intercept	1.272646	+/-20
201.5	202.5	0.9952			





Wood Buffalo Environmental Association

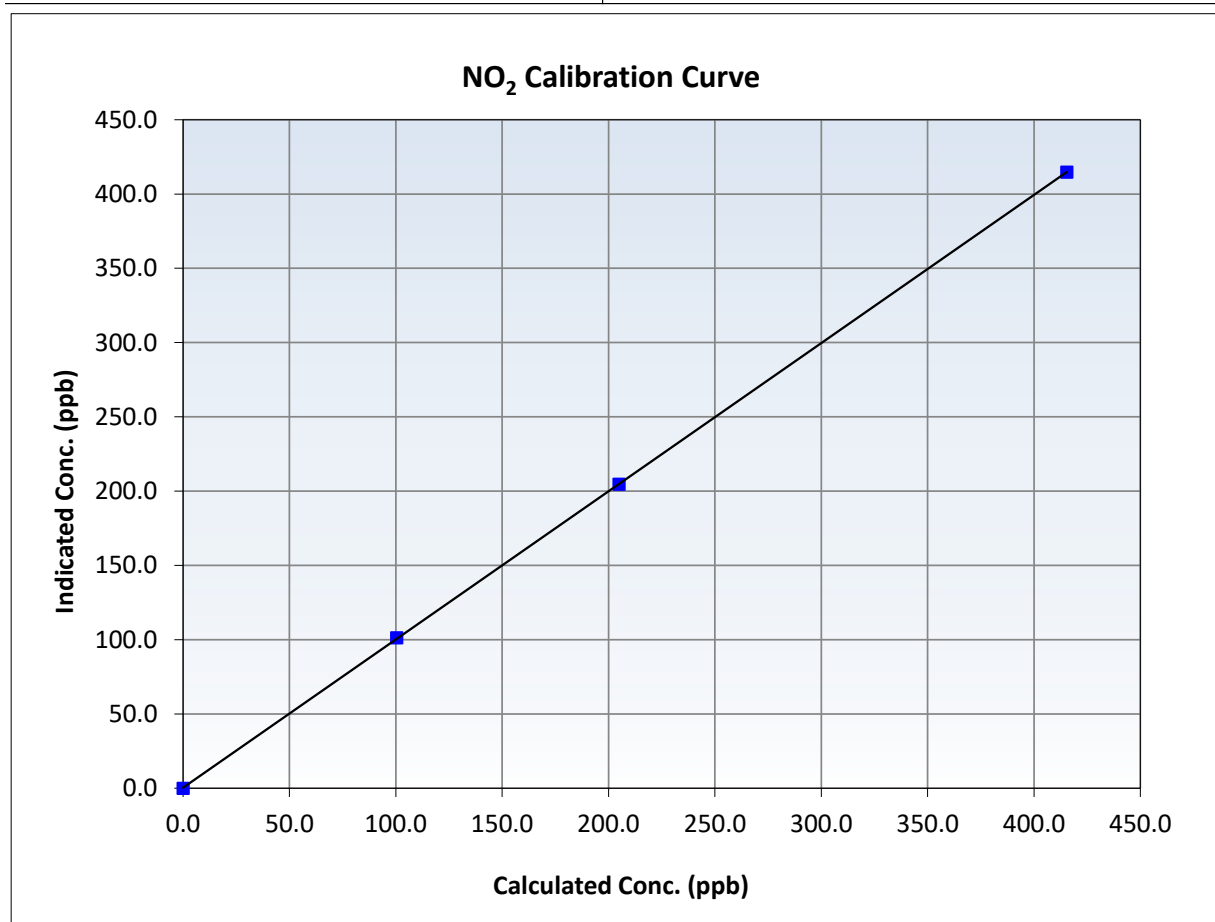
NO₂ Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 3, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:45	End Time (MST):	14:53
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	0.999993	≥0.995
415.5	414.8	1.0016	Slope	0.997530	0.90 - 1.10
205.0	204.6	1.0018	Intercept	0.387888	+/-20
100.4	101.2	0.9919			





Wood Buffalo Environmental Association

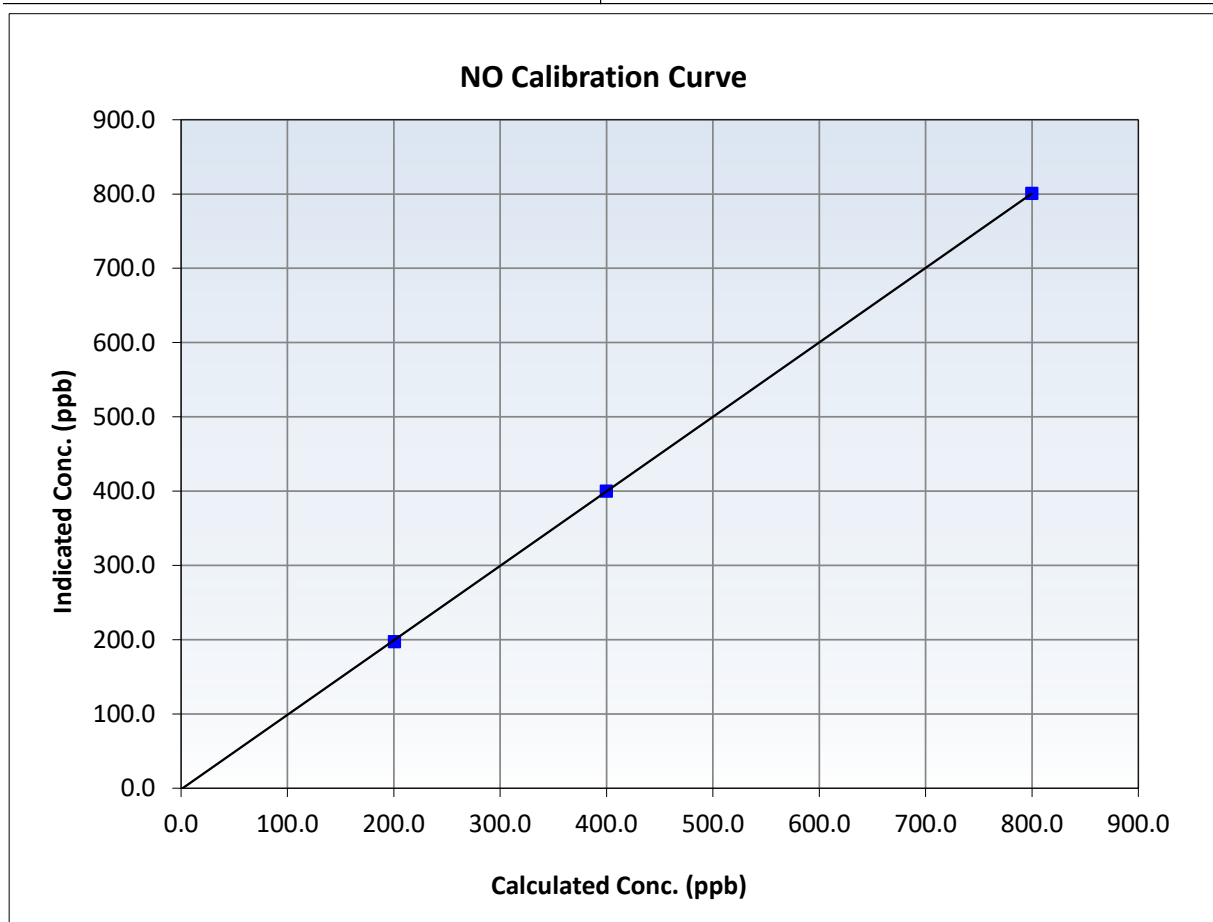
NO Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 3, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:45	End Time (MST):	14:53
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

Calibration Data

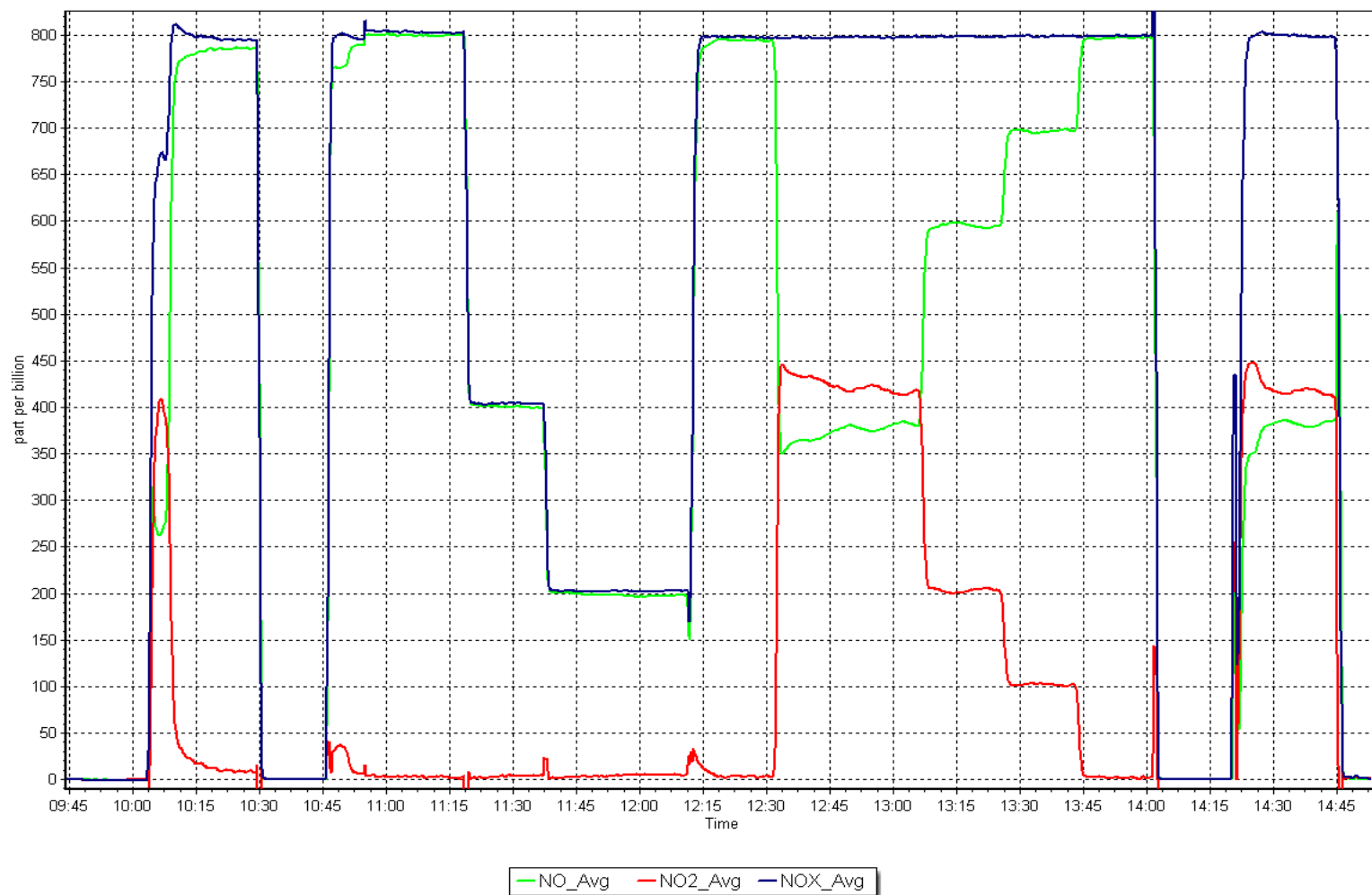
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999981	≥ 0.995
799.8	800.9	0.9986	Slope	1.002824	$0.90 - 1.10$
399.9	400.0	0.9996	Intercept	-1.466131	± 20
200.5	197.5	1.0154			



NO_x Calibration Plot

Date: July 28, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: July 22, 2026
Start time (MST): 9:54
Reason: Routine

Station number: AMS 06
Last Cal Date: June 5, 2026
End time (MST): 13:41

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:	1.001686	1.002914	Backgd or Offset:	3.5	3.5
Calibration intercept:	0.280000	0.540000	Coeff or Slope:	1.026	1.026

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	912.4	400.0	400.7	0.999
As found Mid point					
As found Low point					
Baseline Corr As found:	400.6	Previous response	401.0	*% 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	800.0	0.0	-0.1	----
High point	5000	910.8	400.0	401.3	0.997
Mid point	5000	792.4	200.0	201.7	0.992
Low point	5000	688.2	100.0	101.3	0.987
As left zero	5000	800.0	0.0	0.1	----
As left span	5000	910.8	400.0	401.4	0.997
Average Correction Factor					0.992

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

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

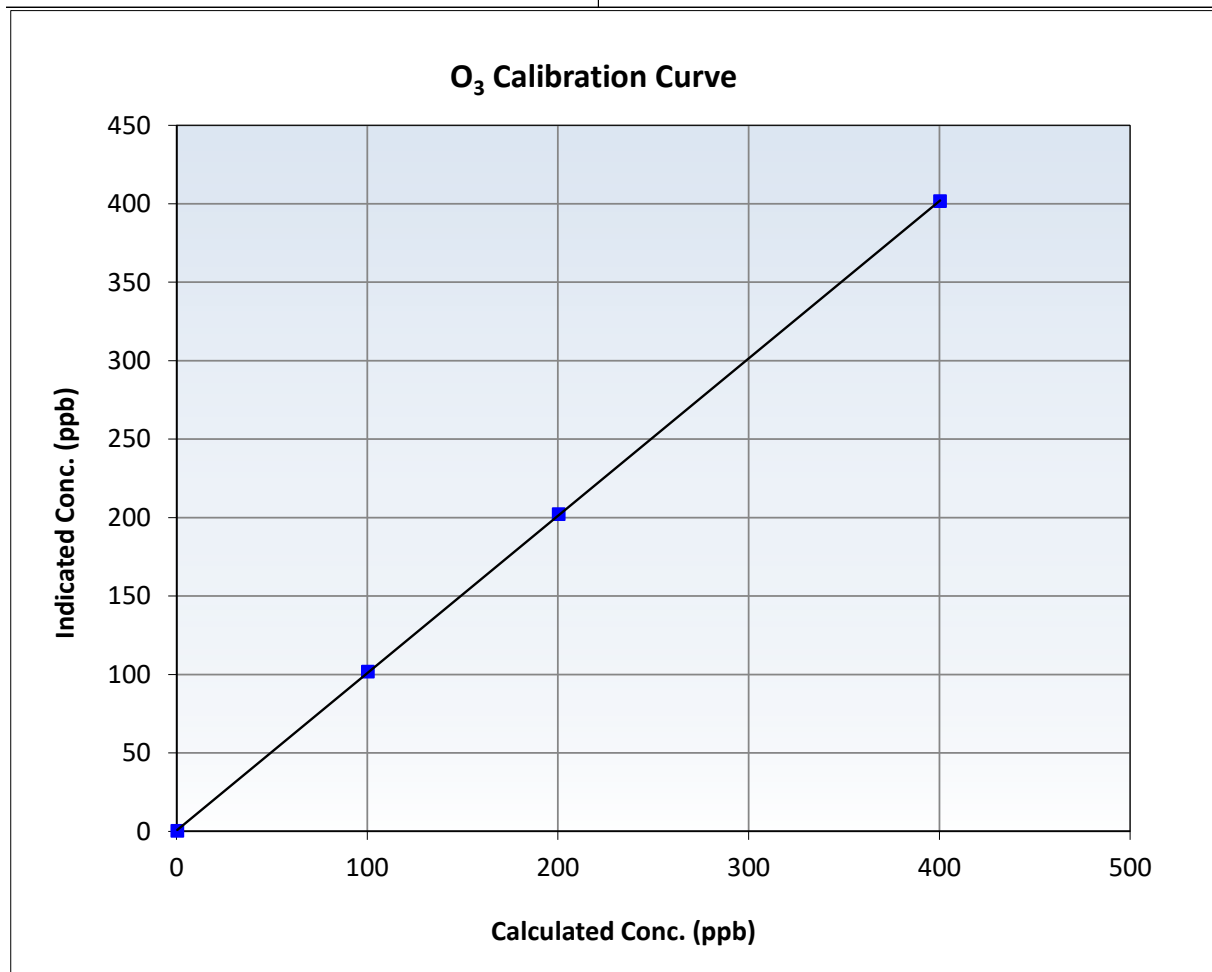
O₃ Calibration Summary

Station Information

Calibration Date:	July 22, 2026	Previous Calibration:	June 5, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:54	End Time (MST):	13:41
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	0.999987	≥ 0.995
400.0	401.3	0.9968	Slope	1.002914	$0.90 - 1.10$
200.0	201.7	0.9916	Intercept	0.540000	± 5
100.0	101.3	0.9872			



O₃ Calibration Plot

Date: July 22, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Patricia McInnes Station number: AMS 06
Calibration Date: July 28, 2026 Last Cal Date: June 9, 2026
Start time (MST): 13:12 End time (MST): 14:19

Analyzer Make: API T640 S/N: 1547
Particulate Fraction: PM2.5

Flow Meter Make/Model: Alicat FP-25BT S/N: 388750
Temp/RH standard: Alicat FP-25BT S/N: 388750

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	25.1	25.35	25.1	☐	+/- 2 °C
P (mmHg)	725.3	724.67	725.3	☐	+/- 10 mmHg
Flow (LPM)	5.01	4.915	5.01	☐	+/- 0.25 LPM
PW% (pump)	29	----	29	☐	>80%
Zero Verification	PM w/o HEPA: _____	3.7	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	10.8	10.9	10.9	☐	+/- 0.5

Date Optical Chamber Cleaned: July 28, 2026
Date Disposable Filter Changed: July 28, 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

Notes: Verified teampérature, pressure, flow and pump%. Leak check passed. Completed quarterly cleaning.

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:	July 21, 2026	Last Cal Date:	June 9, 2026
Start time (MST):	7:49	End time (MST):	12:13
NH3 Cal Date:	July 21, 2026	Last Cal Date:	June 9, 2026
Start time (MST):	12:29	End time (MST):	16:12
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		Serial Number:	5240
ZAG make/model:	API T701		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:	5.50
NOX Range (ppb):	0 - 1000 ppb	Sample Flow:	558

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coefficient:	1.032	1.032	Nt coefficient:	1.034	1.034
NOX coefficient:	1.031	1.031	NO bkgrnd:	-0.2	-0.2
NO2 coefficient:	1.000	1.000	NOX bkgrnd:	0.5	0.5
NH3 coefficient:	0.947	0.947	Nt bkgrnd:	1.0	1.0

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999971	1.007264
NO _x Cal Offset:	-0.188866	0.170913
NO Cal Slope:	1.003581	1.007742
NO Cal Offset:	-1.805903	-1.187601
NO ₂ Cal Slope:	0.994247	0.995112
NO ₂ Cal Offset:	1.414677	0.274280
NH3 Cal Slope:	1.000182	1.002911
NH3 Cal Offset:	4.013449	3.435908
Nt Cal Slope:	1.003869	1.006228
Nt Cal Offset:	3.895072	3.573396



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	-0.3	-0.3	0.1	----	----
As found span	4935	64.6	803.7	799.8	803.7	808.8	800.9	810.3	0.9937	0.9986
AF GPT span										
new NO cyl rp										

Baseline Corr As Fd Nt = 810.2 ppb NO_x = 809.1 ppb NO = 801.2 ppb
 Previous Response Nt = 810.69 ppb NO_x = 803.5 ppb NO = 800.9 ppb

*Percent Change Nt_(NO) = -0.1%
 *Percent Change NO_x = 0.7%
 *Percent Change NO = 0.0%

**NO_x Δ (NO to GPT response) =

* = > +/-2% difference initiates investigation

* = > +/-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	0.1	0.5	----	----
High point	4935	64.6	803.7	799.8	803.7	809.2	805.3	812.0	0.9932	0.9932
Mid point	4968	32.3	401.8	399.9	401.8	406.2	401.6	409.8	0.9891	0.9956
Low point	4984	16.2	201.5	200.5	201.5	202.5	199.3	203.5	0.9952	1.0063
Average Correction Factor									0.9925	0.9984

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	0.0	----	----
Calibration zero	----	----	0.0	-0.1	----	----
High GPT point (400 ppb O3)	797.3	376.4	424.8	422.1	1.0063	99.4%
Mid GPT point (200 ppb O3)	797.3	592.9	208.3	209.9	0.9923	100.8%
Low GPT point (100 ppb O3)	797.3	692.4	108.8	107.4	1.0128	98.7%
Average Correction Factor					1.0038	99.6%



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	0.1	-0.3	0.3	----	----
AF High point	3419	81.3	1800.1	0.0	1800.1	1827.7	6.2	1821.5	0.985	0.988
AF Mid point										
AF Low point										
new NH ₃ cyl rp										
Baseline Corr As Fd	Nt = 1827.6 ppb	NH ₃ = 1821.2 ppb						*Percent Change	Nt _(NH₃) = 0.9%	
Previous Response	Nt = 1810.9 ppb	NH ₃ = 1804.4 ppb		* = > +/-5% change initiates investigation				*Percent Change	NH ₃ = 0.9%	

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	0.5	0.0	0.5	----	----
High point	3419	81.3	1800.1	0.0	1800.1	1812.2	6.2	1806.2	0.993	0.997
Mid point	3455	45.2	1000.8	0.0	1000.8	1014.4	3.6	1010.8	0.987	0.990
Low point	3477	22.6	500.5	0.0	500.5	509.1	1.9	507.2	0.983	0.987
Average Correction Factor									0.9877	0.9912
NH ₃ Previous Converter Efficiency =			94.7 %							
NH ₃ Current Converter Efficiency =			96.0 %							

Notes:

Changed the inlet filter after as founds. Adjusted NH₃ converter gain.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

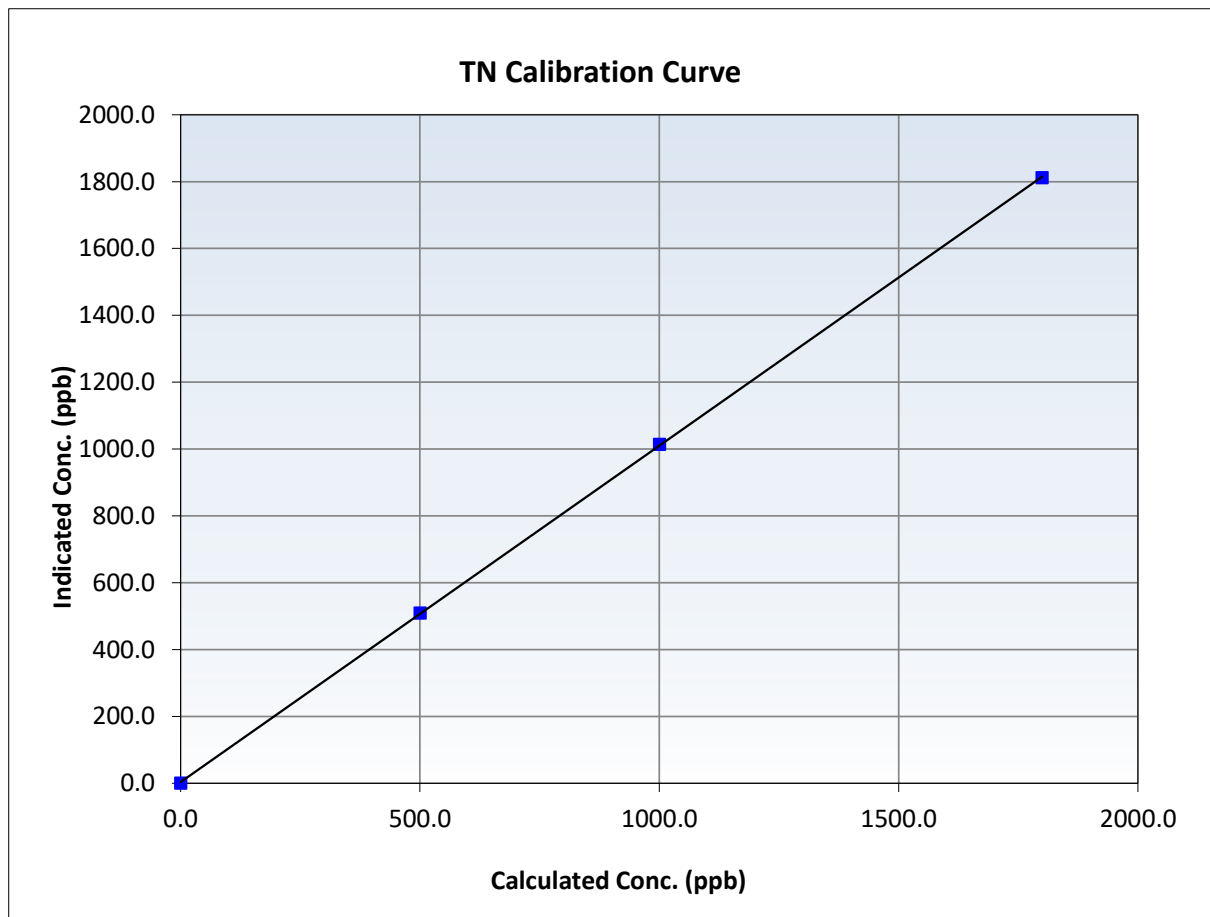
Nt Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 9, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	12:29	End Time (MST):	16:12
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	0.5	----	Correlation Coefficient	0.999981	≥ 0.995
1800.1	1812.2	0.9933	Slope	1.006228	0.90 - 1.10
1000.8	1014.4	0.9866	Intercept	3.573396	+/-20
500.5	509.1	0.9831			





Wood Buffalo Environmental Association

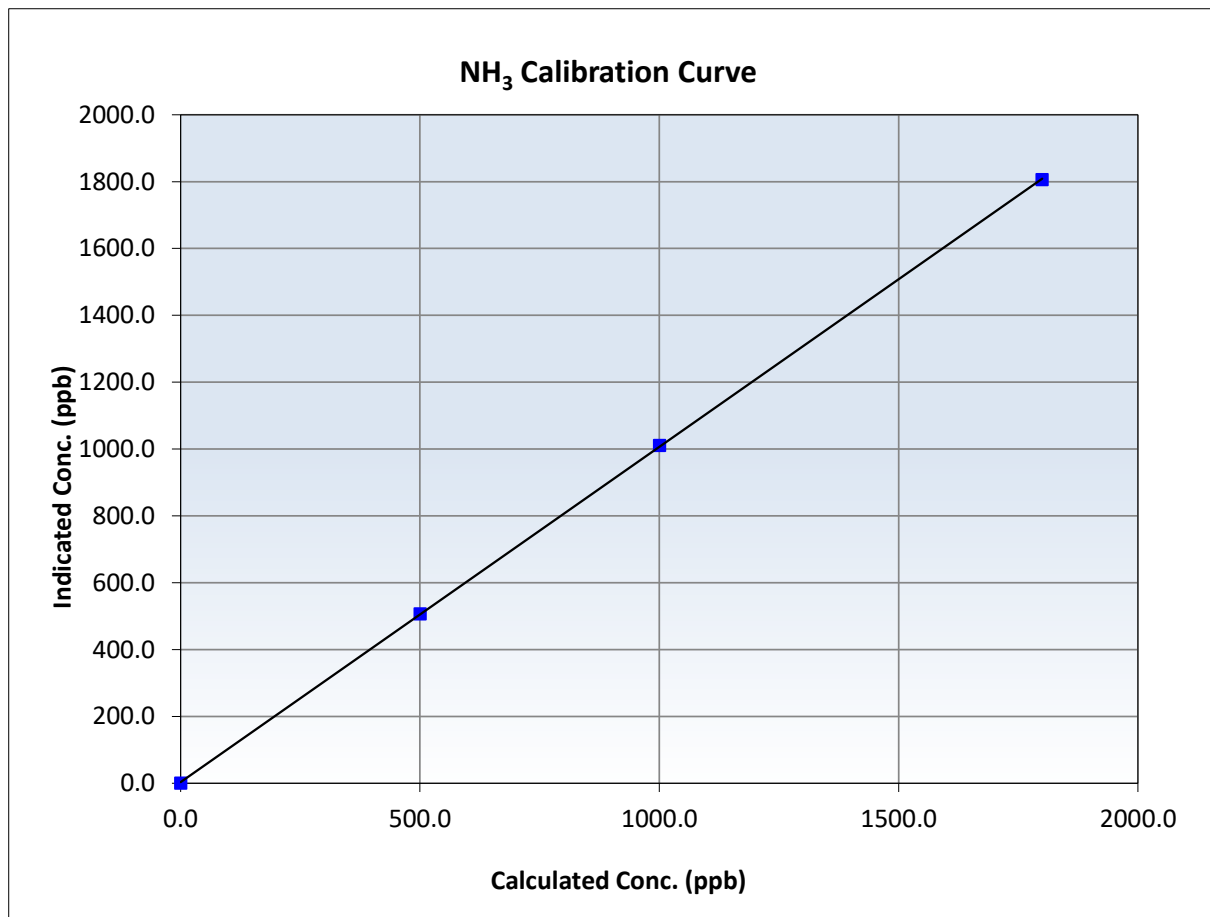
NH₃ Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 9, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	12:29	End Time (MST):	16:12
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	0.5	----	Correlation Coefficient	0.999982	<i>≥0.995</i>
1800.1	1806.2	0.9966	Slope	1.002911	<i>0.90 - 1.10</i>
1000.8	1010.8	0.9901	Intercept	3.435908	<i>+/-20</i>
500.5	507.2	0.9868			





Wood Buffalo Environmental Association

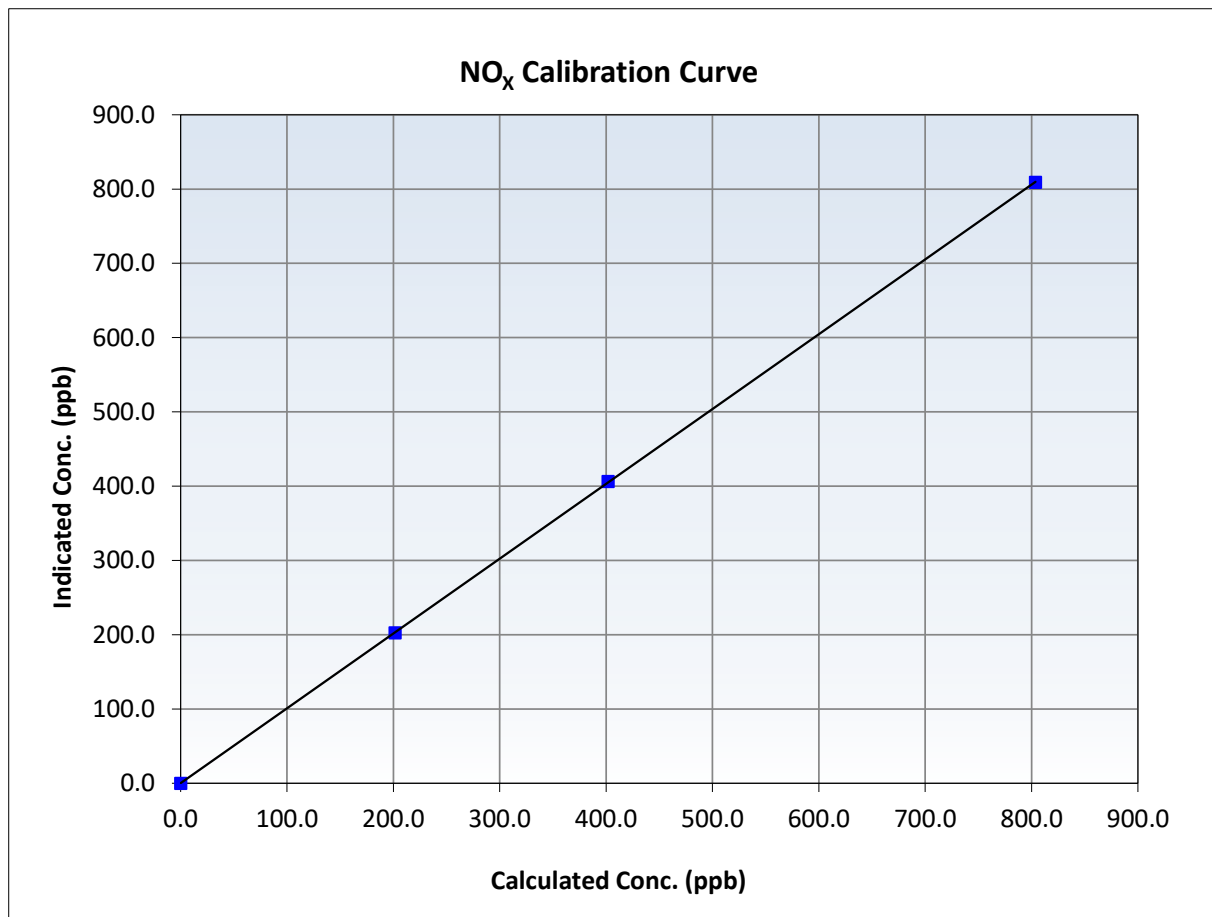
NO_x Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 9, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	7:49	End Time (MST):	12:13
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	0.0	----	Correlation Coefficient	0.999993	≥0.995
803.7	809.2	0.9932	Slope	1.007264	0.90 - 1.10
401.8	406.2	0.9891	Intercept	0.170913	+/-20
201.5	202.5	0.9952			





Wood Buffalo Environmental Association

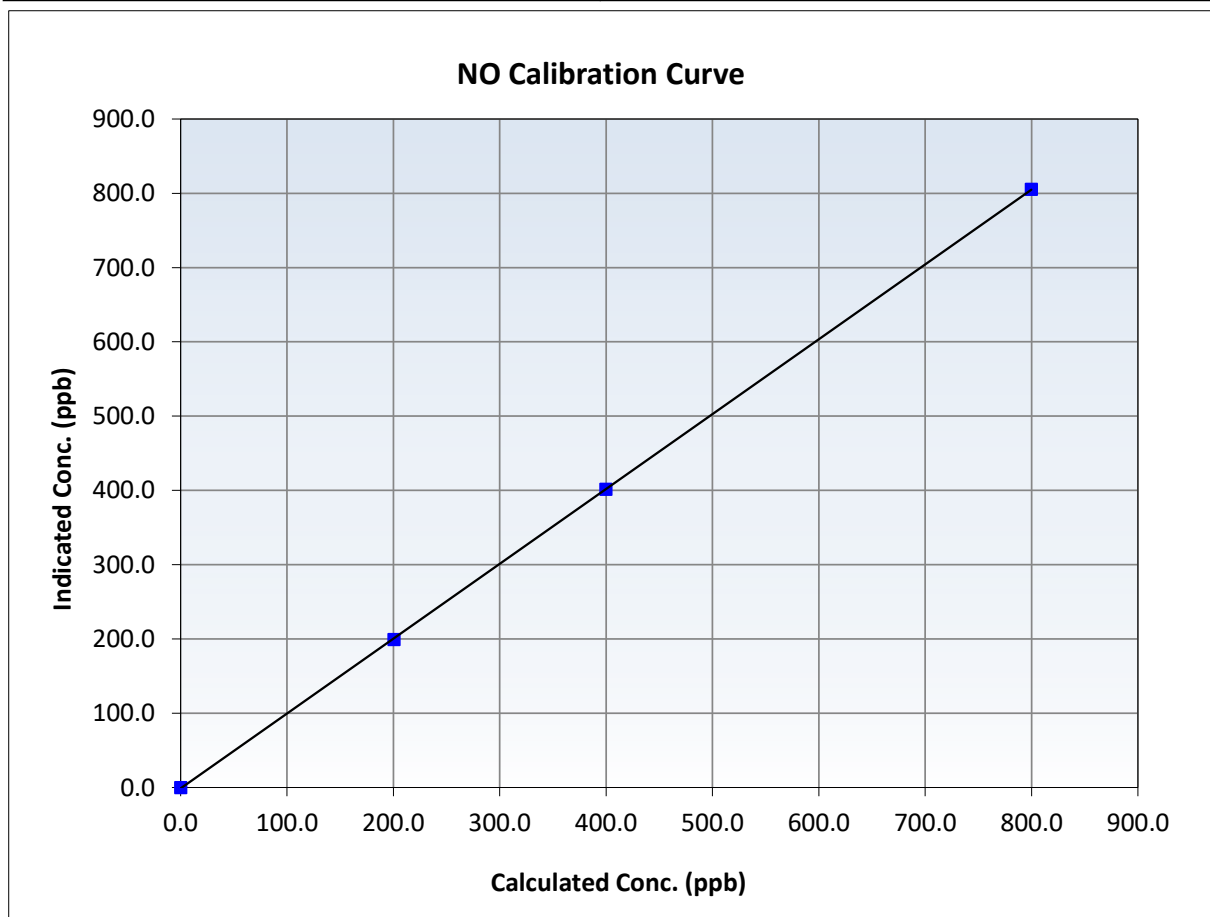
NO Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 9, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	7:49	End Time (MST):	12:13
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	0.1	----	Correlation Coefficient	0.999987	≥ 0.995
799.8	805.3	0.9932	Slope	1.007742	0.90 - 1.10
399.9	401.6	0.9956	Intercept	-1.187601	+/-20
200.5	199.3	1.0063			





Wood Buffalo Environmental Association

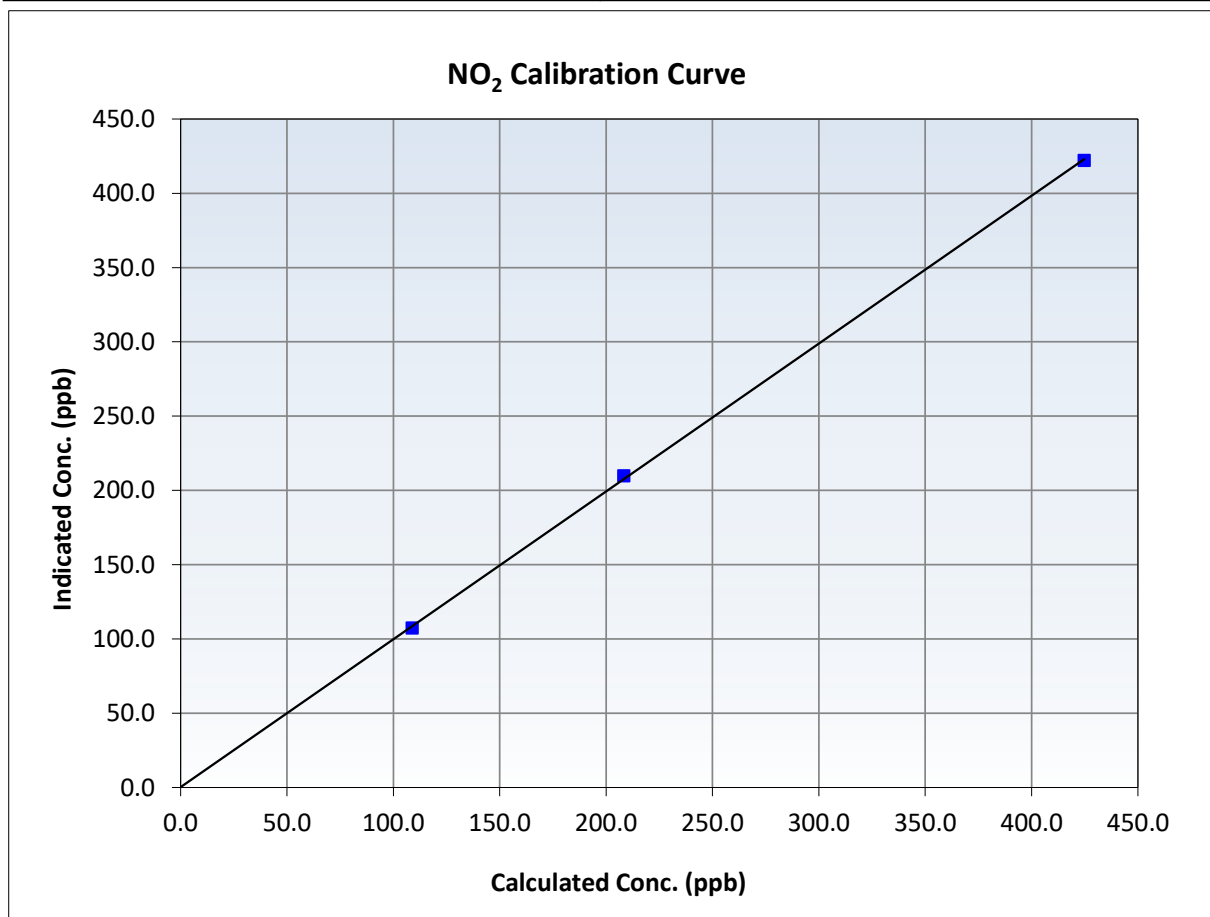
NO₂ Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 9, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	7:49	End Time (MST):	12:13
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

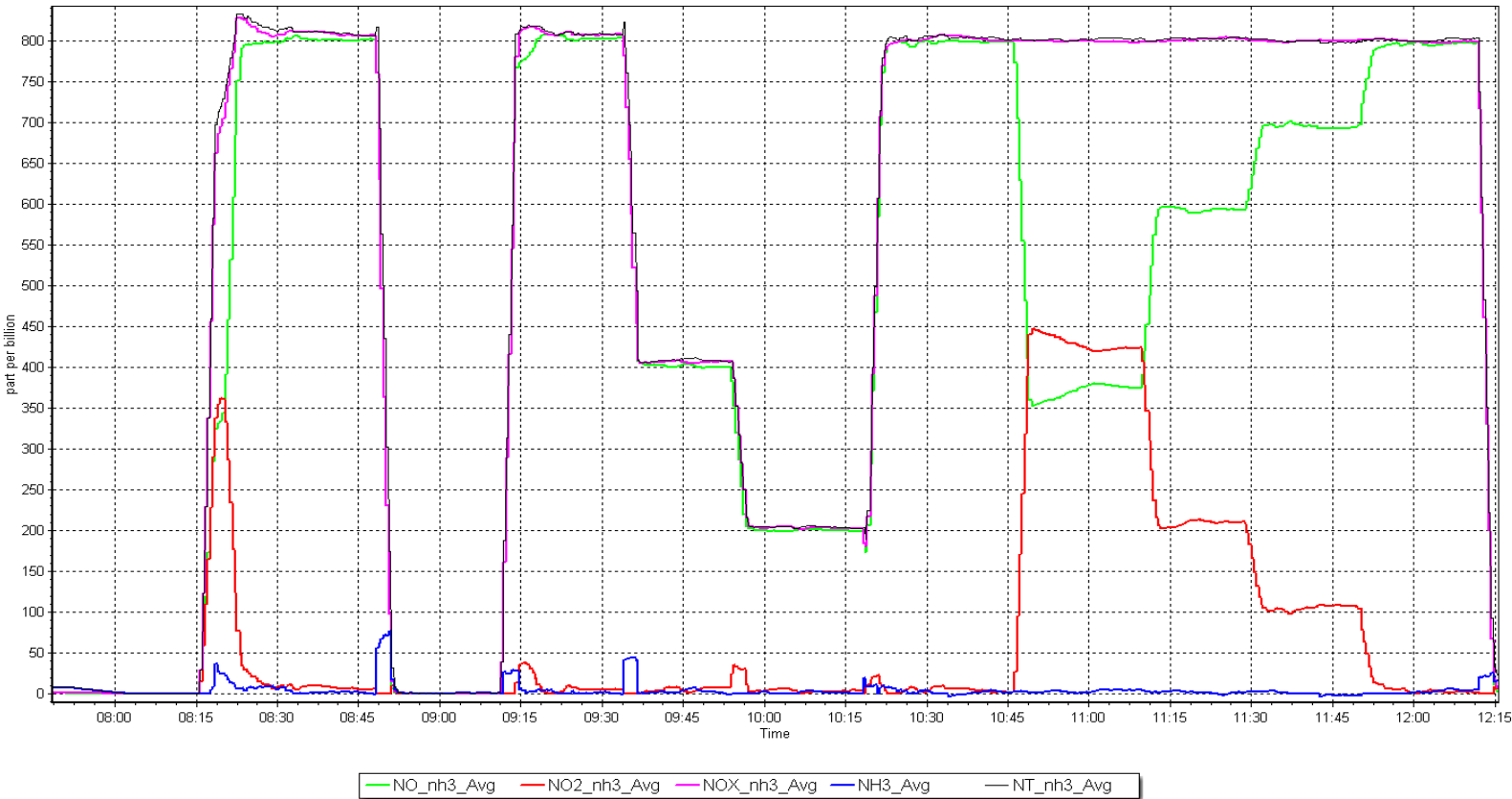
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999920	≥0.995
424.8	422.1	1.0063	Slope	0.995112	0.90 - 1.10
208.3	209.9	0.9923	Intercept	0.274280	+/-20
108.8	107.4	1.0128			

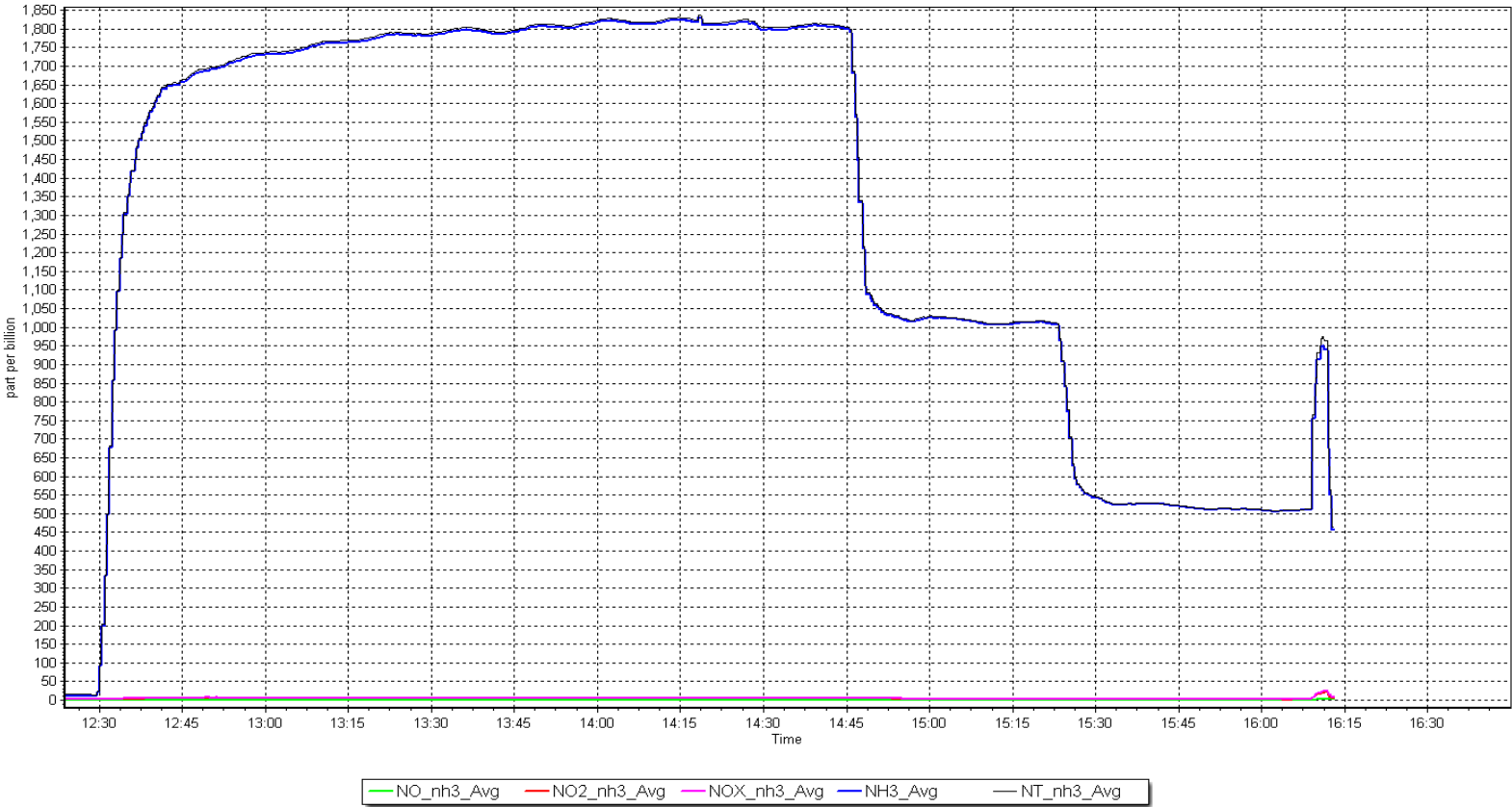


NO_x Calibration Plot

Date: July 21, 2026

Location: Patricia McInnes







WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS07 ATHABASCA VALLEY JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Athabasca Valley Station number: AMS07
Calibration Date: July 23, 2026 Last Cal Date: June 4, 2026
Start time (MST): 8:18 End time (MST): 11:16
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:	1.002595	0.999547	Backgd or Offset:	2.70	2.73
Calibration intercept:	2.363536	2.604403	Coeff or Slope:	0.861	0.856

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	799.0	805.1	0.993
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	805.0	Previous response	803.4	*% 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	0.3	----
High point	4920	79.8	799.0	799.2	1.000
Mid point	4960	39.9	399.5	405.7	0.985
Low point	4980	20.0	200.2	203.3	0.985
As left zero	5000	0.0	0.0	0.3	----
As left span	4920	79.8	799.0	802.2	0.996
Average Correction Factor:					0.990

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

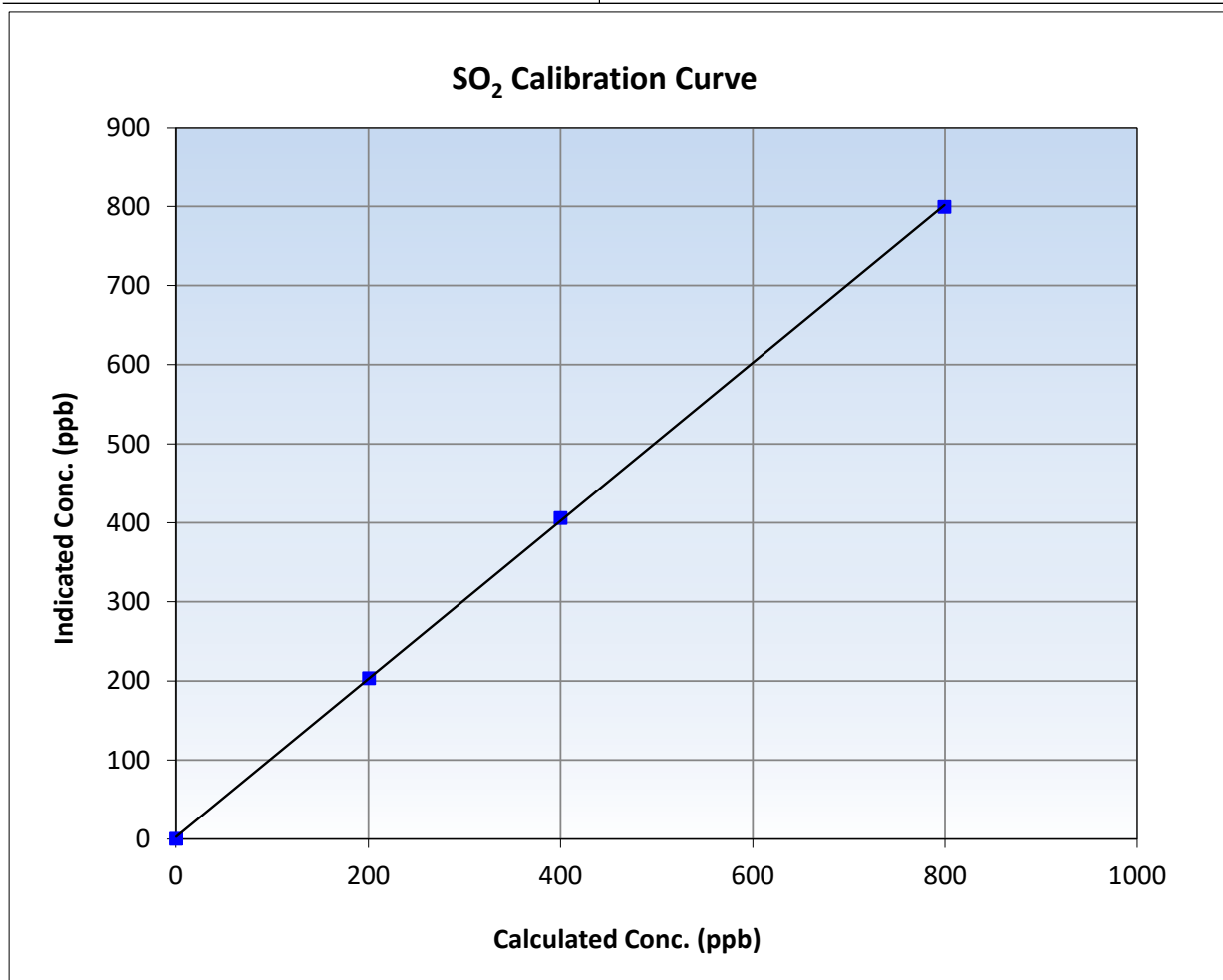
SO₂ Calibration Summary

Station Information

Calibration Date:	July 23, 2026	Previous Calibration:	June 4, 2026
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	8:18	End Time (MST):	11:16
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1507864683

Calibration Data

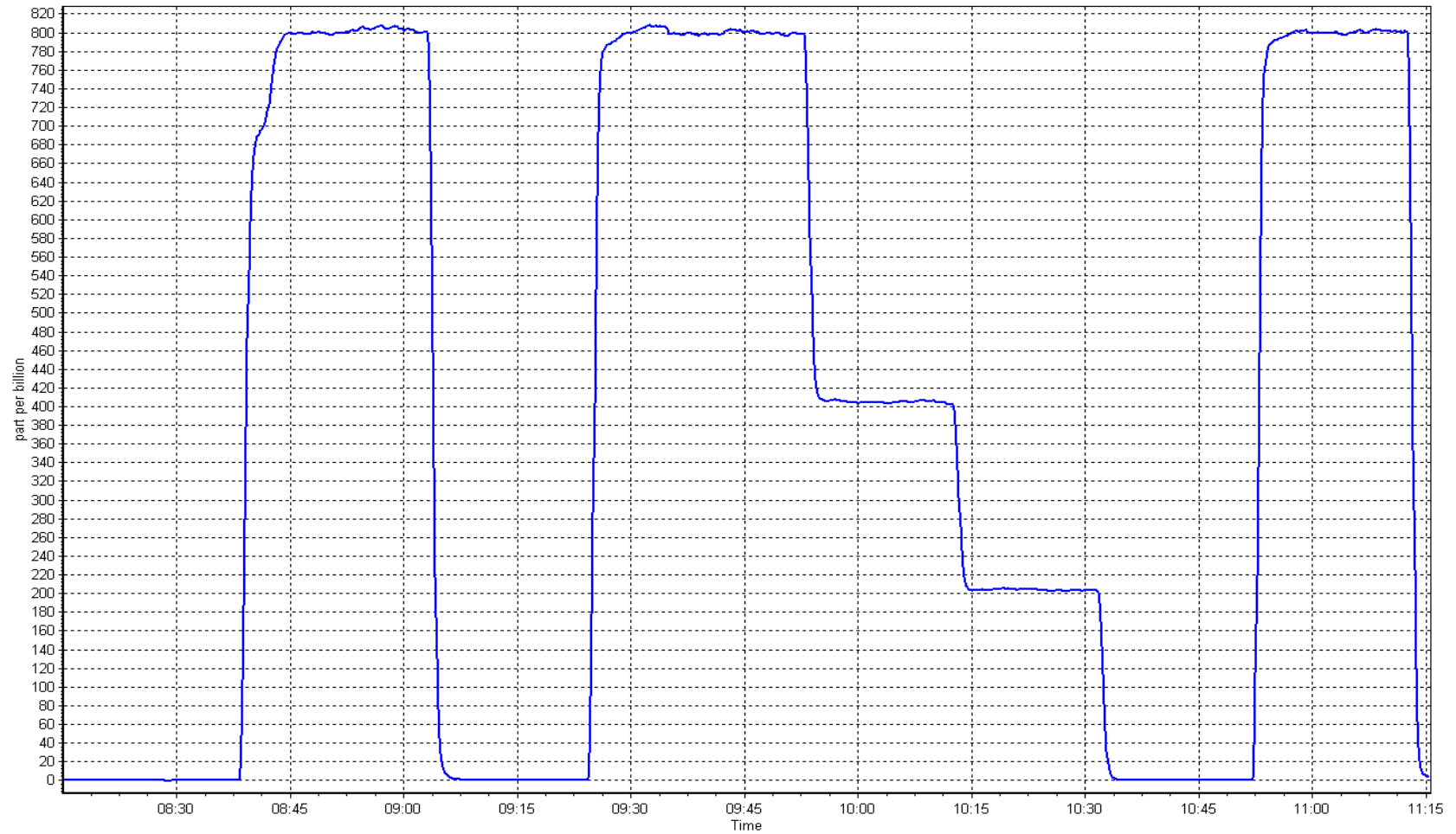
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999931	≥0.995
799.0	799.2	0.9997	Slope	0.999547	0.90 - 1.10
399.5	405.7	0.9847	Intercept	2.604403	+/-30
200.2	203.3	0.9849			



SO2 Calibration Plot

Date: July 23, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: July 6, 2026
Start time (MST): 9:09
Reason: Routine

Station number: AMS07
Last Cal Date: June 8, 2026
End time (MST): 13:53

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:	1.006986	1.005551	Backgd or Offset:	2.8	3.1
Calibration intercept:	-0.162162	-0.162363	Coeff or Slope:	0.913	1.440

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	-0.2	----
As found High point	4925	75.5	79.3	67.9	1.164
As found Mid point	4962	37.7	39.6	34.1	1.154
As found Low point	4981	18.9	19.8	16.9	1.161
New cylinder response					
Baseline Corr As found:	68.1	Prev response:	79.66	*% change:	-17.0%
Baseline Corr 2nd AF pt:	34.3	AF Slope:	0.859318	AF Intercept:	-0.121803
Baseline Corr 3rd AF pt:	17.1	AF Correlation:	0.999977	* = > +/-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	0.3	----
High point	4925	75.5	79.3	79.9	0.993
Mid point	4962	37.7	39.6	39.2	1.010
Low point	4981	18.9	19.9	19.5	1.018
As left zero	5000	0.0	0.0	0.3	----
As left span	4925	75.5	79.3	83.0	0.956
SO2 Scrubber Check	4920	79.2	792.1	-0.2	----
Date of last scrubber change:		6-Jul-26		Ave Corr Factor	1.007
Date of last converter efficiency test:		Friday, April 22, 2022			

Notes: Here to address low spans. Sample inlet filter was changed after multi point as founds. Scrubber beads replaced and passed. Adjusted span only.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

TRS Calibration Summary

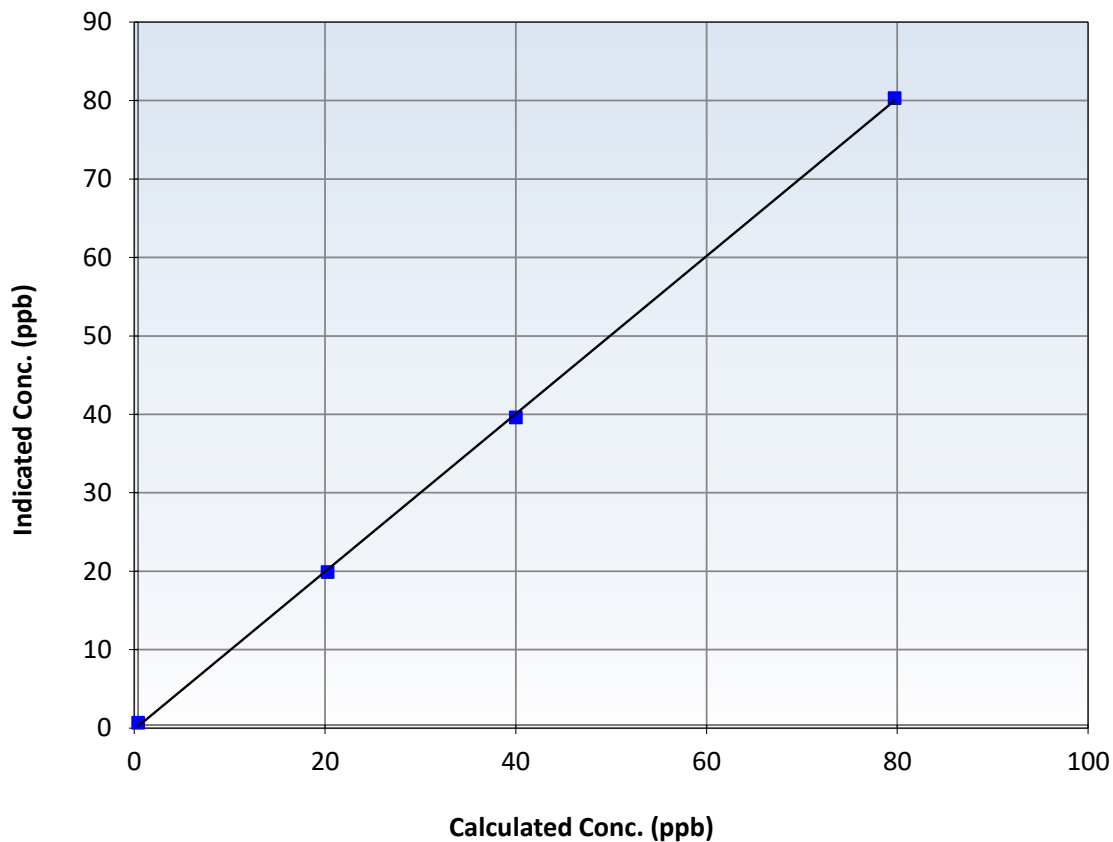
Station Information

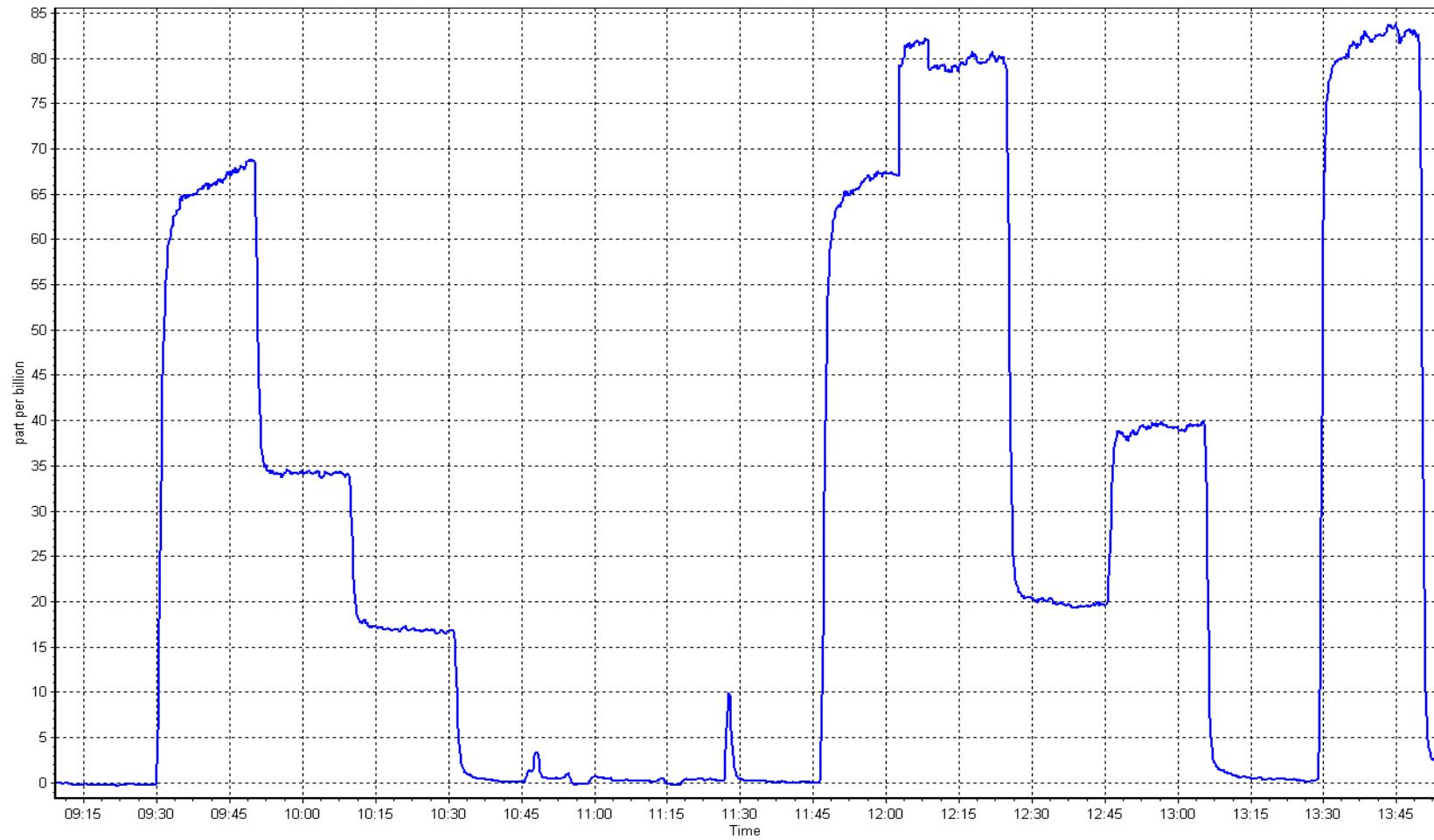
Calibration Date:	July 6, 2026	Previous Calibration:	June 8, 2026
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	9:09	End Time (MST):	13:53
Analyzer make:	Thermo 43i LTE	Analyzer serial #:	1180540018

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999821		≥ 0.995
79.3	79.9	0.9926	Slope	1.005551		$0.90 - 1.10$
39.6	39.2	1.0105	Intercept	-0.162363		± 3
19.9	19.5	1.0183				

TRS Calibration Curve







Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: July 9, 2026
Start time (MST): 8:50
Reason: Removal

Station number: AMS07
Last Cal Date: July 6, 2026
End time (MST): 13:45

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

Start Finish
Calibration slope: 1.005551
Calibration intercept: -0.162363

Start Finish
Backgd or Offset: 3.1
Coeff or Slope: 1.440

TRS As Found Data

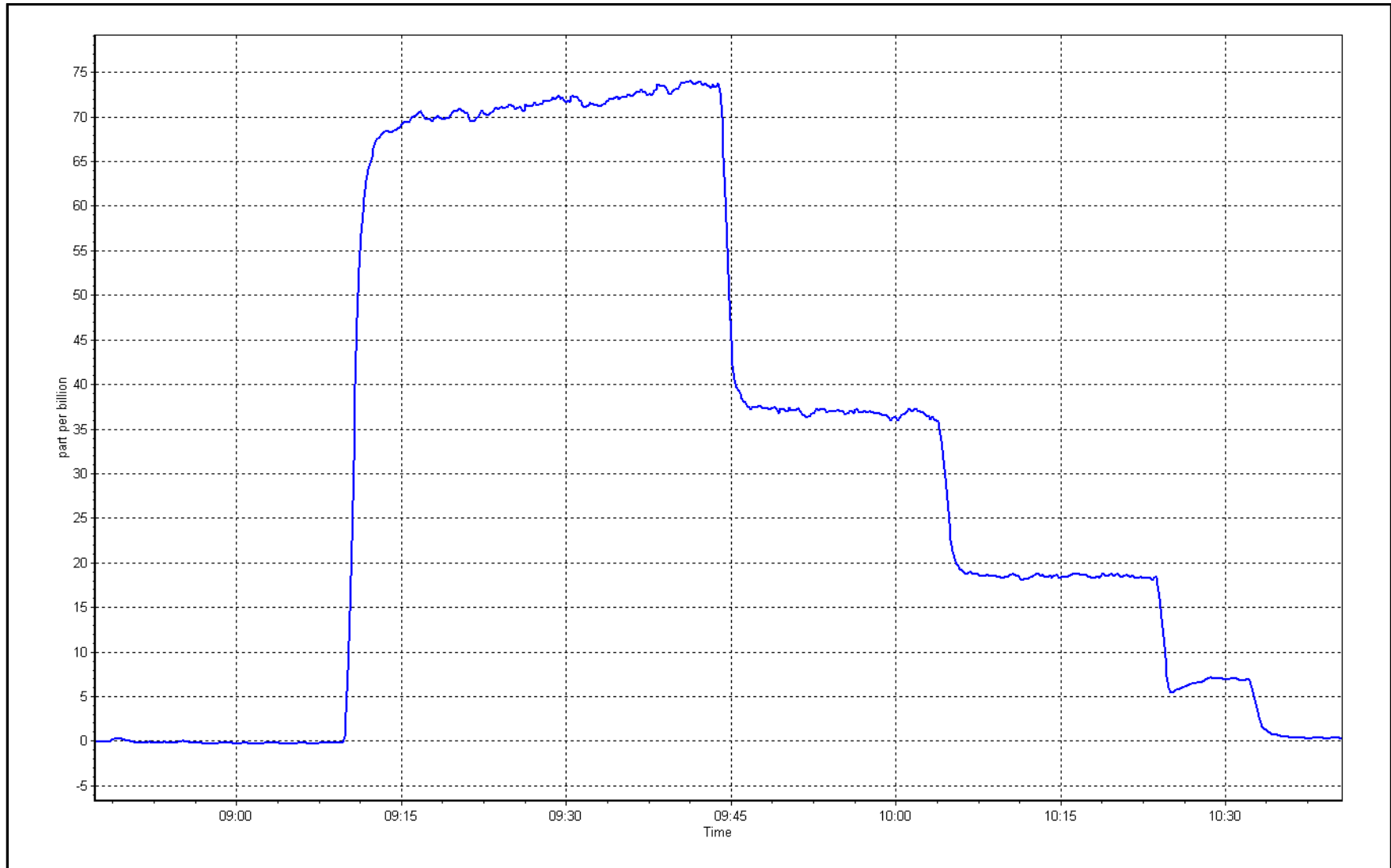
Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4925	75.5	79.3	73.8	1.071
As found Mid point	4962	37.7	39.6	36.7	1.073
As found Low point	4981	18.9	19.8	18.6	1.056
New cylinder response					
Baseline Corr As found:	74.0	Prev response:	79.54	*% change:	-7.5%
Baseline Corr 2nd AF pt:	36.9	AF Slope:	0.932292	AF Intercept:	-0.102176
Baseline Corr 3rd AF pt:	18.8	AF Correlation:	0.999980	* = > +/-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:		9-Jul-26		Ave Corr Factor	
Date of last converter efficiency test:		Friday, April 22, 2022			

Notes: Instrument being removed for repair back at WBEAC.

Calibration Performed By: Aswin Sasi Kumar





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: July 10, 2026
Start time (MST): 10:00
Reason: Install

Station number: AMS07
Last Cal Date: N/A
End time (MST): 13:53

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

Analyzer serial #: 12333331546
Converter serial #: 551
Converter Temp: 840 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	N/A	1.014914	Backgd or Offset:	N/A	1.4
Calibration intercept:	N/A	0.037772	Coeff or Slope:	N/A	1.056

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	4925	75.5	79.3	80.5	0.985
Mid point	4962	37.7	39.6	40.3	0.983
Low point	4981	18.9	19.9	20.2	0.983
As left zero	5000	0.0	0.0	0.1	----
As left span	4925	75.5	79.3	82.1	0.966
SO2 Scrubber Check	4920	79.8	798.0	0.1	----
Date of last scrubber change:	9-Jul-26		Ave Corr Factor		0.984
Date of last converter efficiency test:	Friday, April 22, 2022				

Notes: Install calibration. Zero and span adjusted.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

TRS Calibration Summary

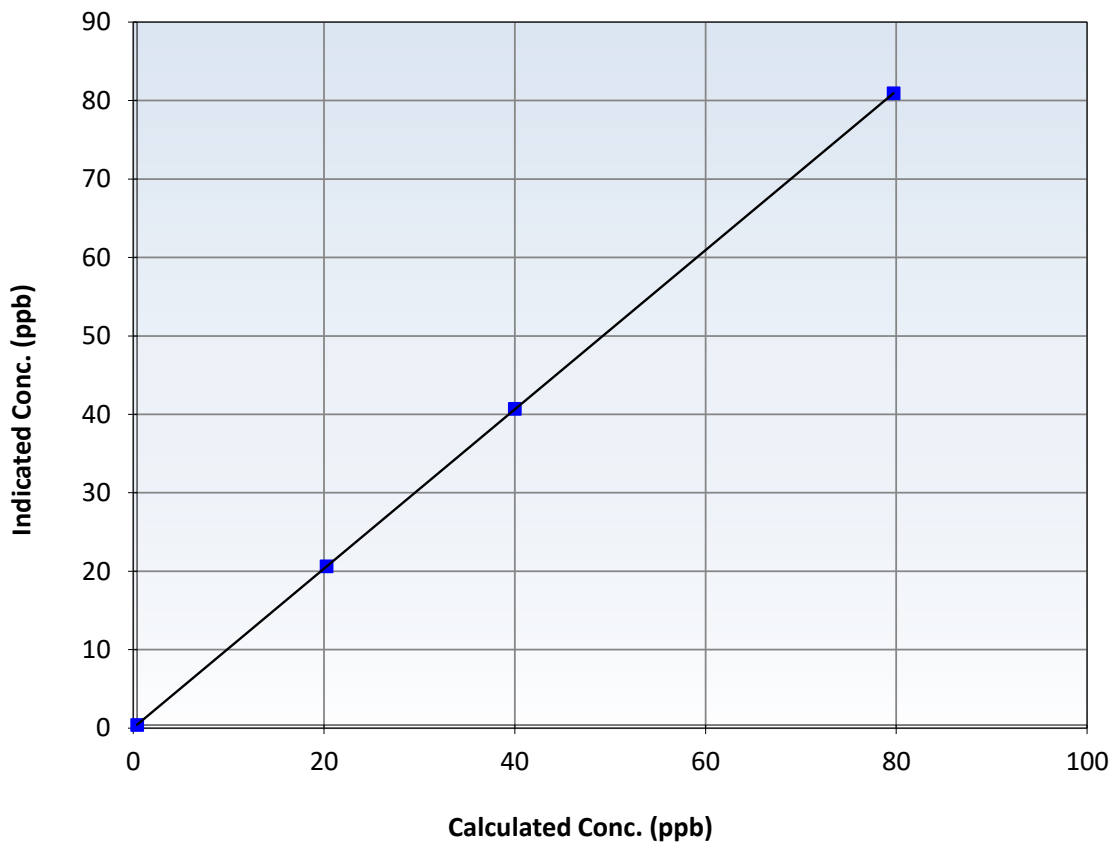
Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	N/A
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	10:00	End Time (MST):	13:53
Analyzer make:	Thermo 43iQ TL	Analyzer serial #:	12333331546

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
79.3	80.5	0.9852	Slope	1.014914		0.90 - 1.10
39.6	40.3	0.9829	Intercept	0.037772		+/-3
19.9	20.2	0.9830				

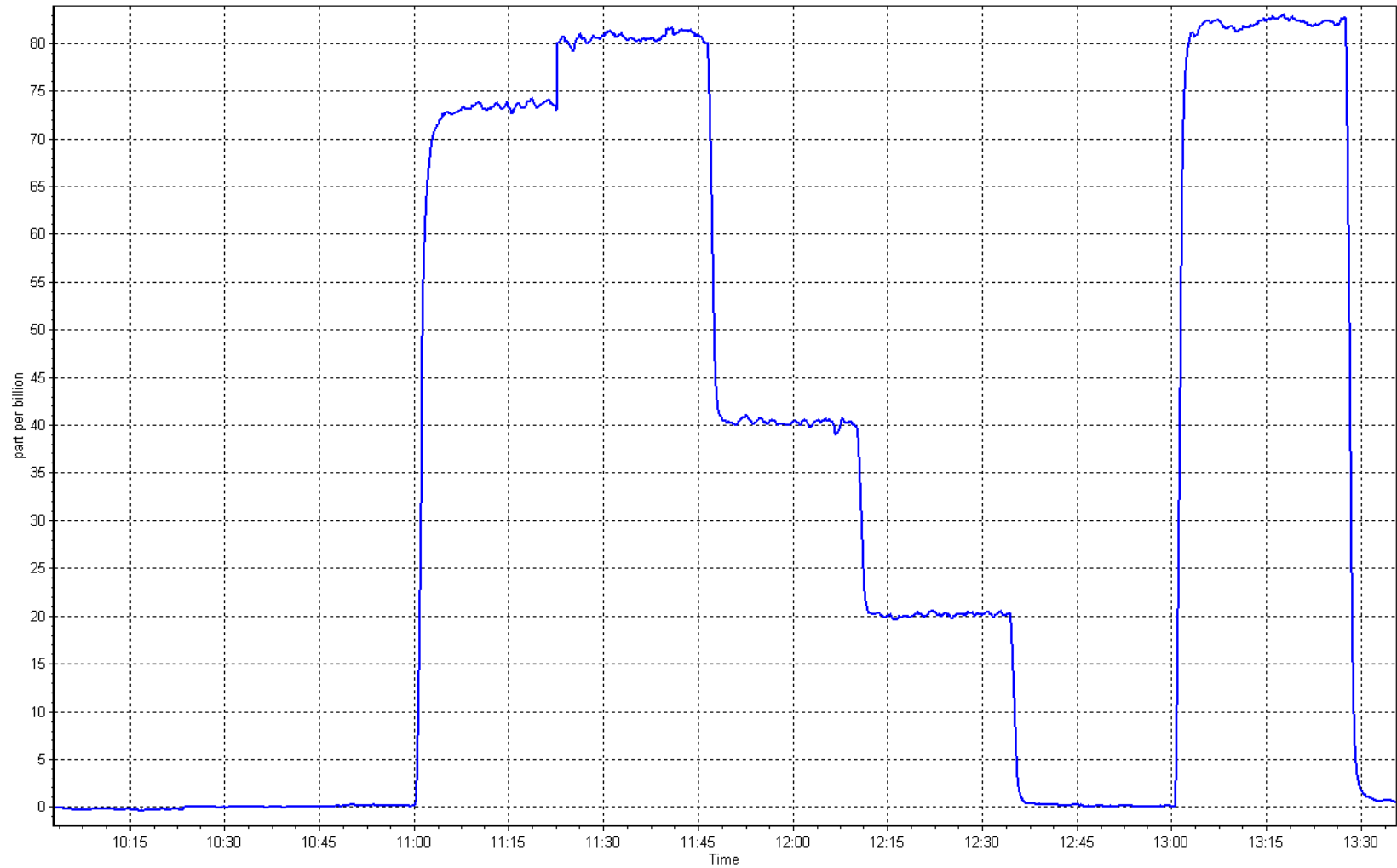
TRS Calibration Curve



TRS Calibration Plot

Date: July 10, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: July 20, 2026
Start time (MST): 8:52
Reason: Removal
Station number: AMS07
Last Cal Date: July 10, 2026
End time (MST): 10:26

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 43iQ TL
Converter make: CDN-101
Analyzer Range: 0 - 100 ppb
Analyzer serial #: 12333331546
Converter serial #: 551
Converter Temp: 840 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.014914		Backgd or Offset:	1.4
Calibration intercept:	0.037772		Coeff or Slope:	1.056

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	0.3	----
As found High point	4925	75.5	79.3	80.9	0.983
As found Mid point	4962	37.7	39.6	40.5	0.985
As found Low point	4981	18.9	19.8	20.2	0.997
New cylinder response					
Baseline Corr As found:	80.6	Prev response:	80.49	*% change:	0.1%
Baseline Corr 2nd AF pt:	40.2	AF Slope:	1.017945	AF Intercept:	0.177804
Baseline Corr 3rd AF pt:	19.9	AF Correlation:	0.999986	* = > +/-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:		9-Jul-26		Ave Corr Factor	
Date of last converter efficiency test:		Friday, April 22, 2022			

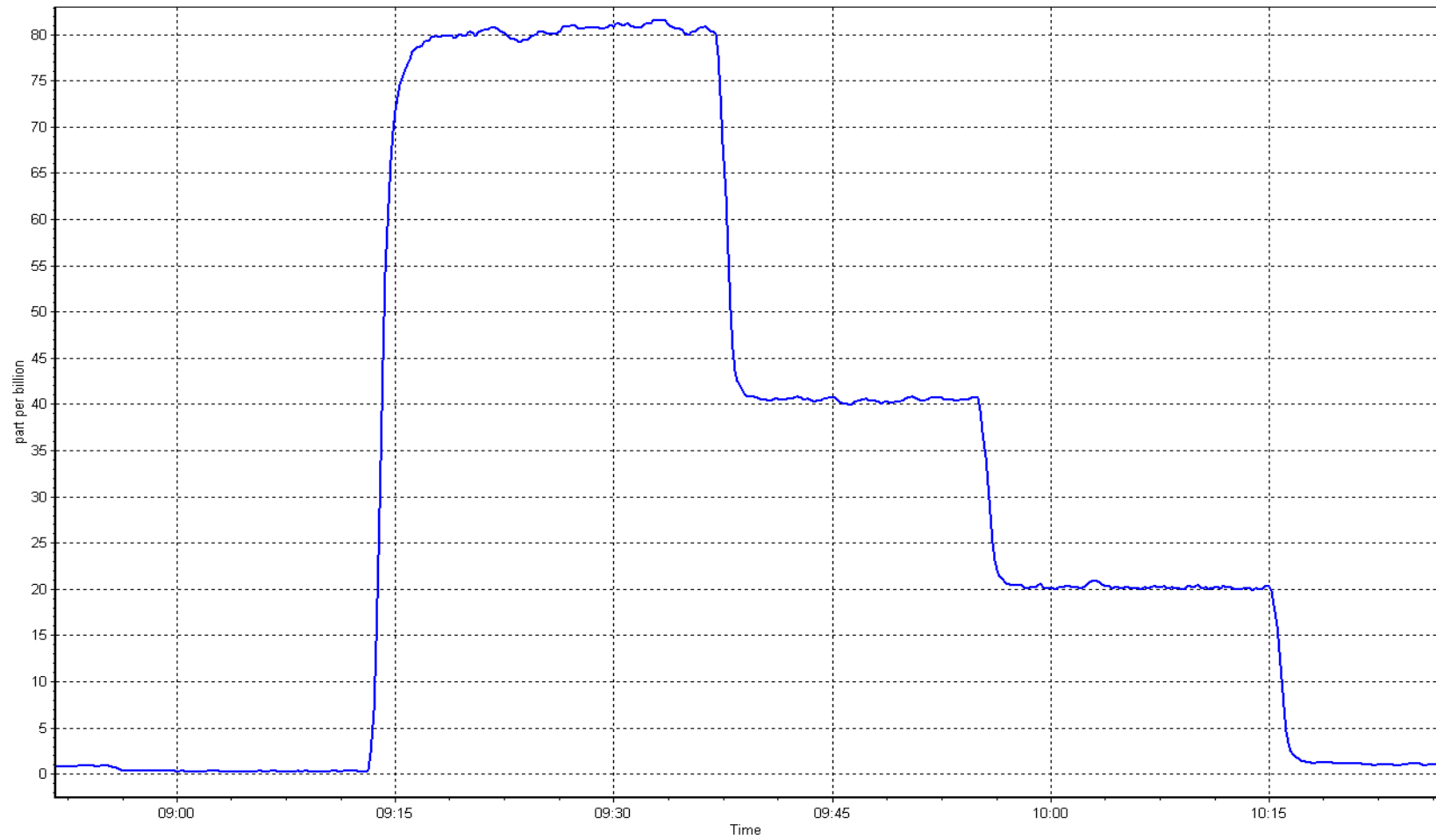
Notes: Instrument removed.

Calibration Performed By: Jason Brooks

TRS Calibration Plot

Date: July 20, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: July 20, 2026
Start time (MST): 10:30
Reason: Install

Station number: AMS07
Last Cal Date: N/A
End time (MST): 13:50

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

Analyzer serial #: 12522542352
Converter serial #: 551
Converter Temp: 840 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	N/A	1.008001	Backgd or Offset:	N/A	1.9
Calibration intercept:	N/A	-0.122353	Coeff or Slope:	N/A	1.097

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	0.1	----
High point	4925	75.5	79.3	80.0	0.991
Mid point	4962	37.7	39.6	39.5	1.003
Low point	4981	18.9	19.9	19.8	1.003
As left zero	5000	0.0	0.0	-0.2	----
As left span	4925	75.5	79.3	81.3	0.976
SO2 Scrubber Check	4920	79.8	798.0	0.0	----
Date of last scrubber change:	9-Jul-26		Ave Corr Factor		0.999
Date of last converter efficiency test:	Friday, April 22, 2022				

Notes: Instrument installed, span adjusted. Scrubber check passed.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

TRS Calibration Summary

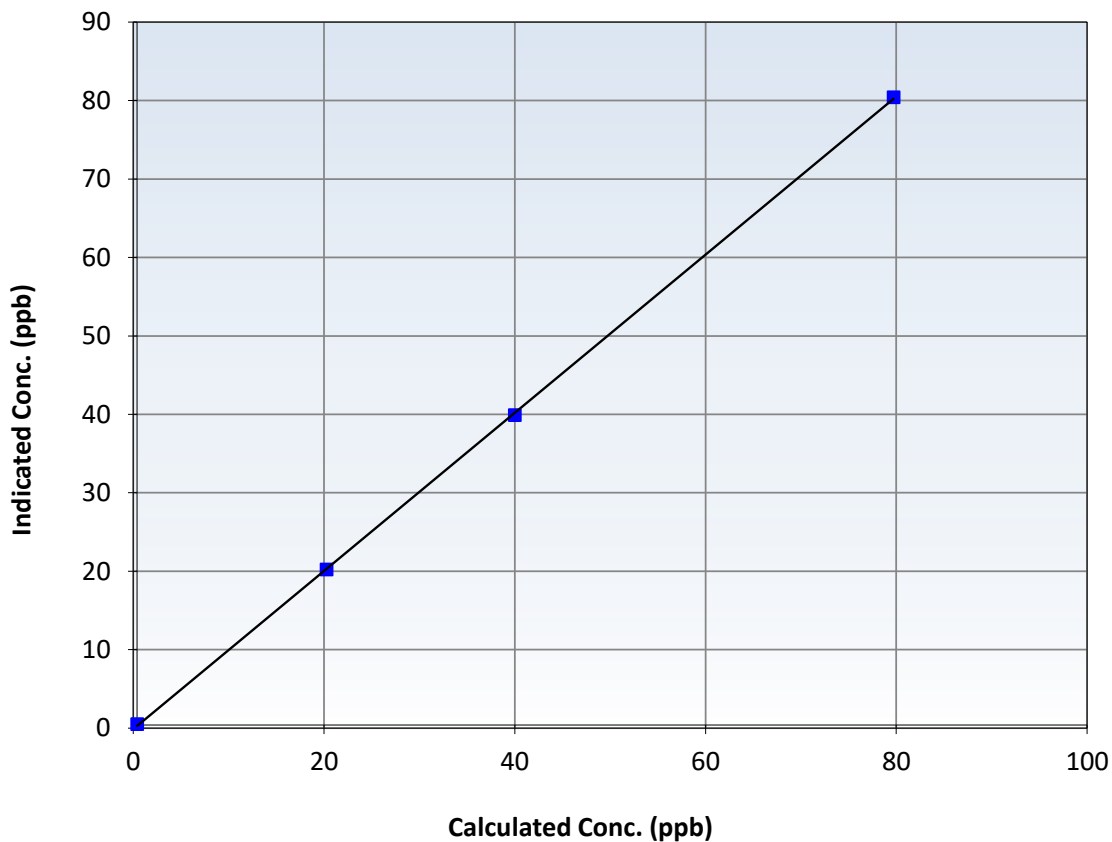
Station Information

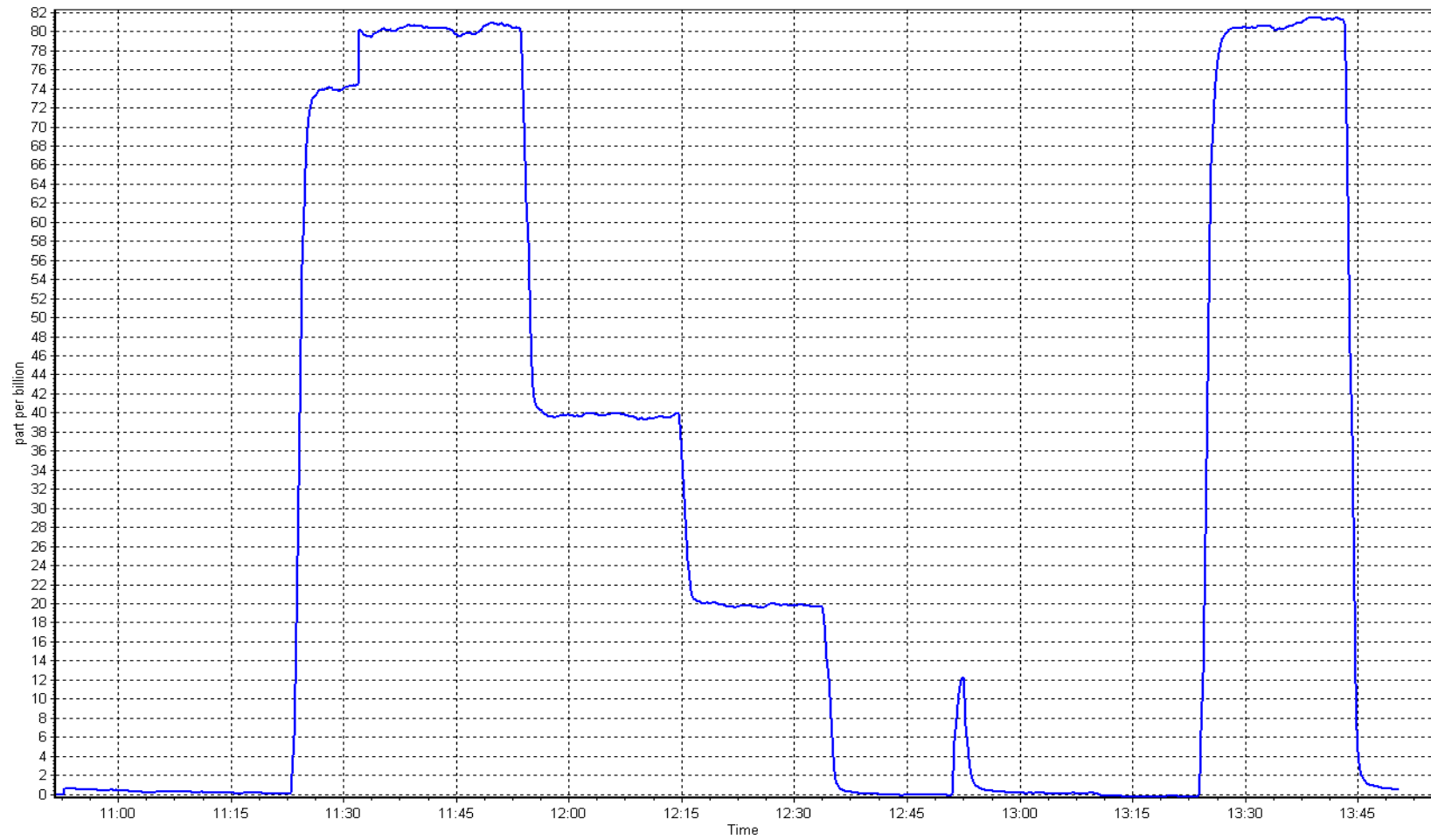
Calibration Date:	July 20, 2026	Previous Calibration:	N/A
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	10:30	End Time (MST):	13:50
Analyzer make:	Thermo 43iQ TL	Analyzer serial #:	12522542352

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	0.999948		≥ 0.995
79.3	80.0	0.9914	Slope	1.008001		0.90 - 1.10
39.6	39.5	1.0028	Intercept	-0.122353		+/-3
19.9	19.8	1.0029				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Athabasca Valley
 Calibration Date: July 23, 2026
 Start time (MST): 8:18
 Reason: Routine

Station number: AMS 07
 Last Cal Date: June 4, 2026
 End time (MST): 11:16

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:	3.12E-04	3.10E-04	NMHC SP Ratio:	6.19E-05
CH ₄ Retention time:	14.4	14.4	NMHC Peak Area:	145370
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	17.01	0.994
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.01	Prev response	16.86	*% change	0.9%
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	79.8	16.91	16.92	1.000
Mid point	4960	39.9	8.46	8.51	0.994
Low point	4980	20.0	4.24	4.32	0.981
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	16.91	16.95	0.998
Average Correction Factor					0.992

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))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	79.8	9.00	9.03	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.03	Prev response	8.98	*% change	0.6%
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)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	79.8	9.00	9.01	0.999
Mid point	4960	39.9	4.50	4.54	0.991
Low point	4980	20.0	2.26	2.31	0.976
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	9.00	9.03	0.997
Average Correction Factor					0.989

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	7.98	0.992
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.98	Prev response	7.89	*% change	1.2%
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	4920	79.8	7.92	7.91	1.001
Mid point	4960	39.9	3.96	3.97	0.998
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	7.92	1.000
Average Correction Factor					0.995

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.996228	0.999066
THC Cal Offset:	0.013856	0.040845
CH ₄ Cal Slope:	0.995607	0.998321
CH ₄ Cal Offset:	0.004061	0.012659
NMHC Cal Slope:	0.997118	0.999837
NMHC Cal Offset:	0.009194	0.027986

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

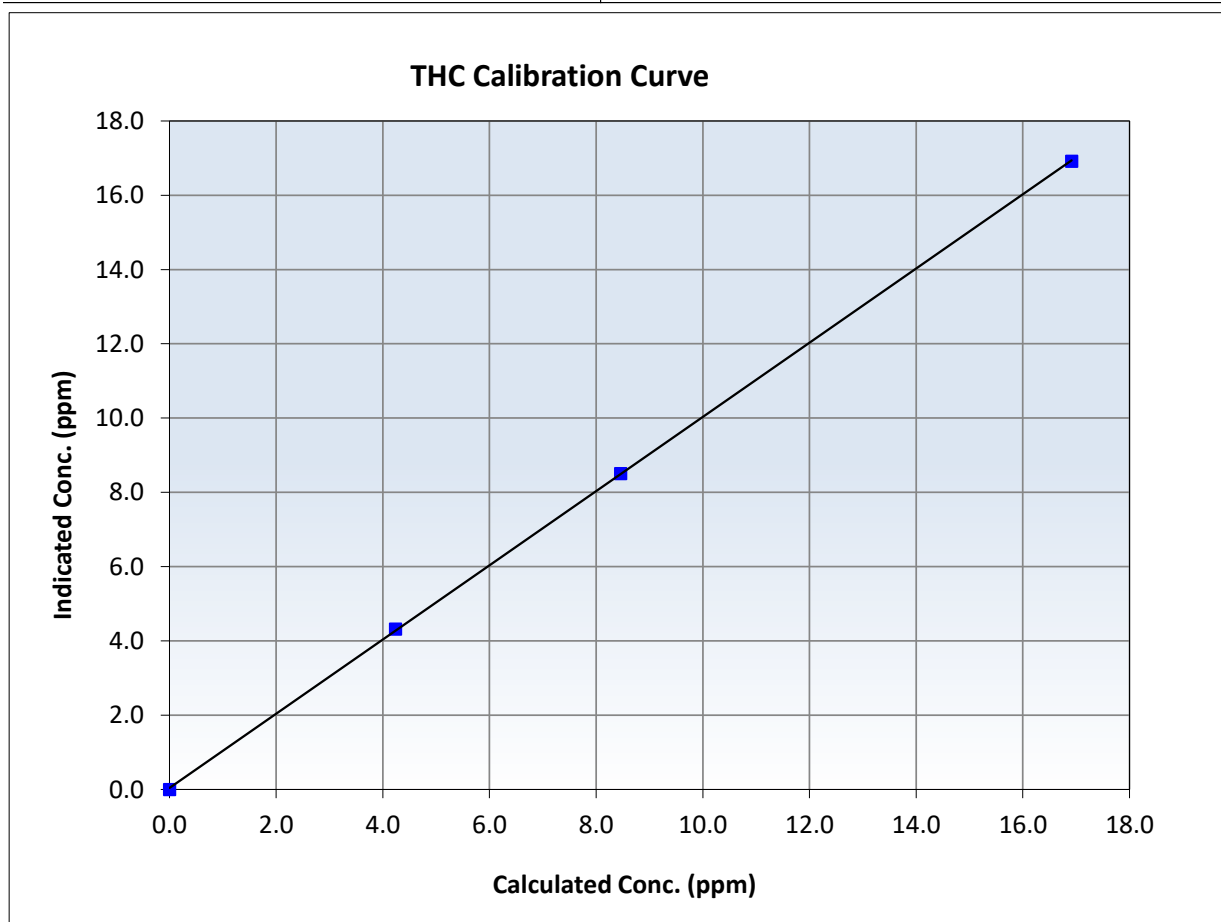
THC Calibration Summary

Station Information

Calibration Date:	July 23, 2026	Previous Calibration:	June 4, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:18	End Time (MST):	11:16
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	0.999973	≥ 0.995
16.91	16.92	0.9997	Slope	0.999066	$0.90 - 1.10$
8.46	8.51	0.9941	Intercept	0.040845	± 0.5
4.24	4.32	0.9815			





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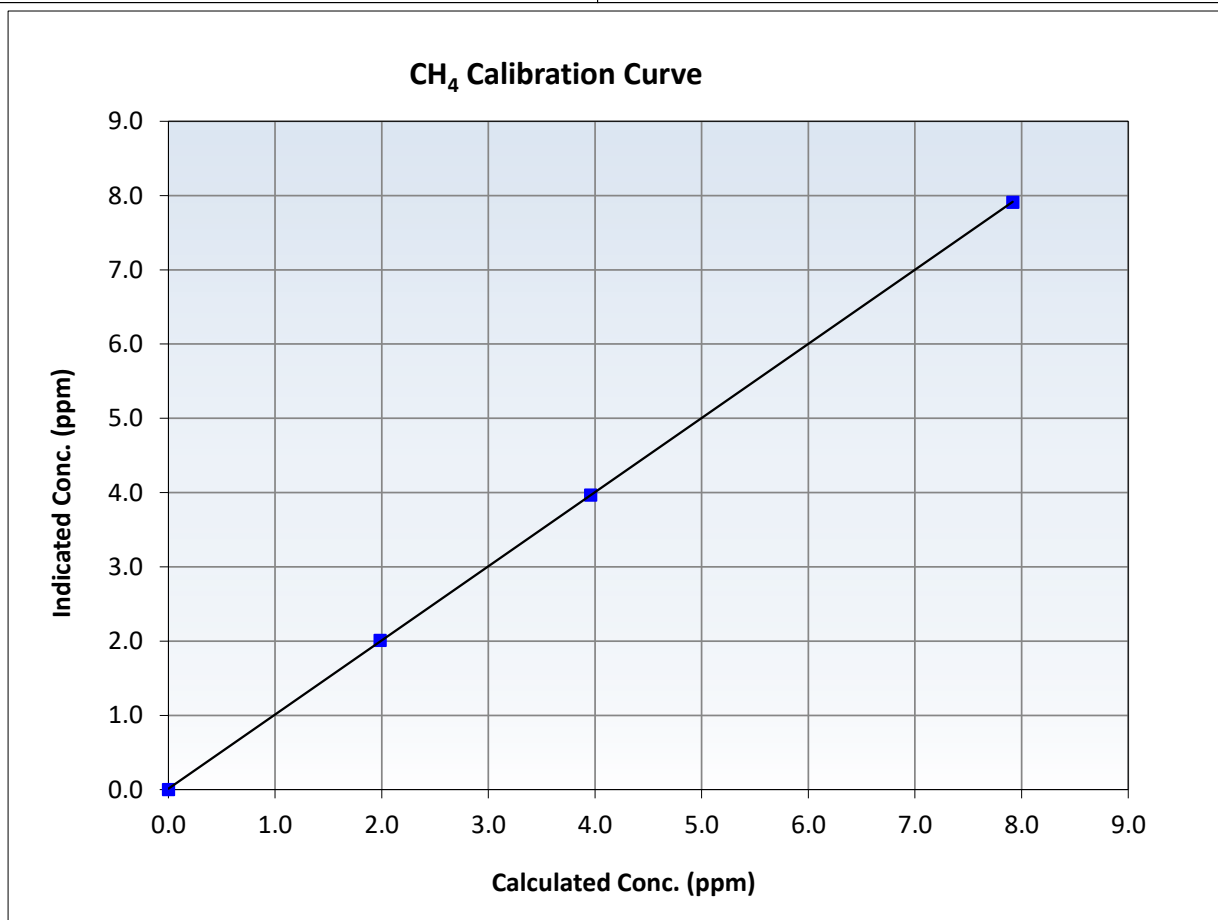
CH₄ Calibration Summary

Station Information

Calibration Date:	July 23, 2026	Previous Calibration:	June 4, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:18	End Time (MST):	11:16
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	0.999987	≥ 0.995
7.92	7.91	1.0007	Slope	0.998321	$0.90 - 1.10$
3.96	3.97	0.9980	Intercept	0.012659	± 0.5
1.98	2.01	0.9876			





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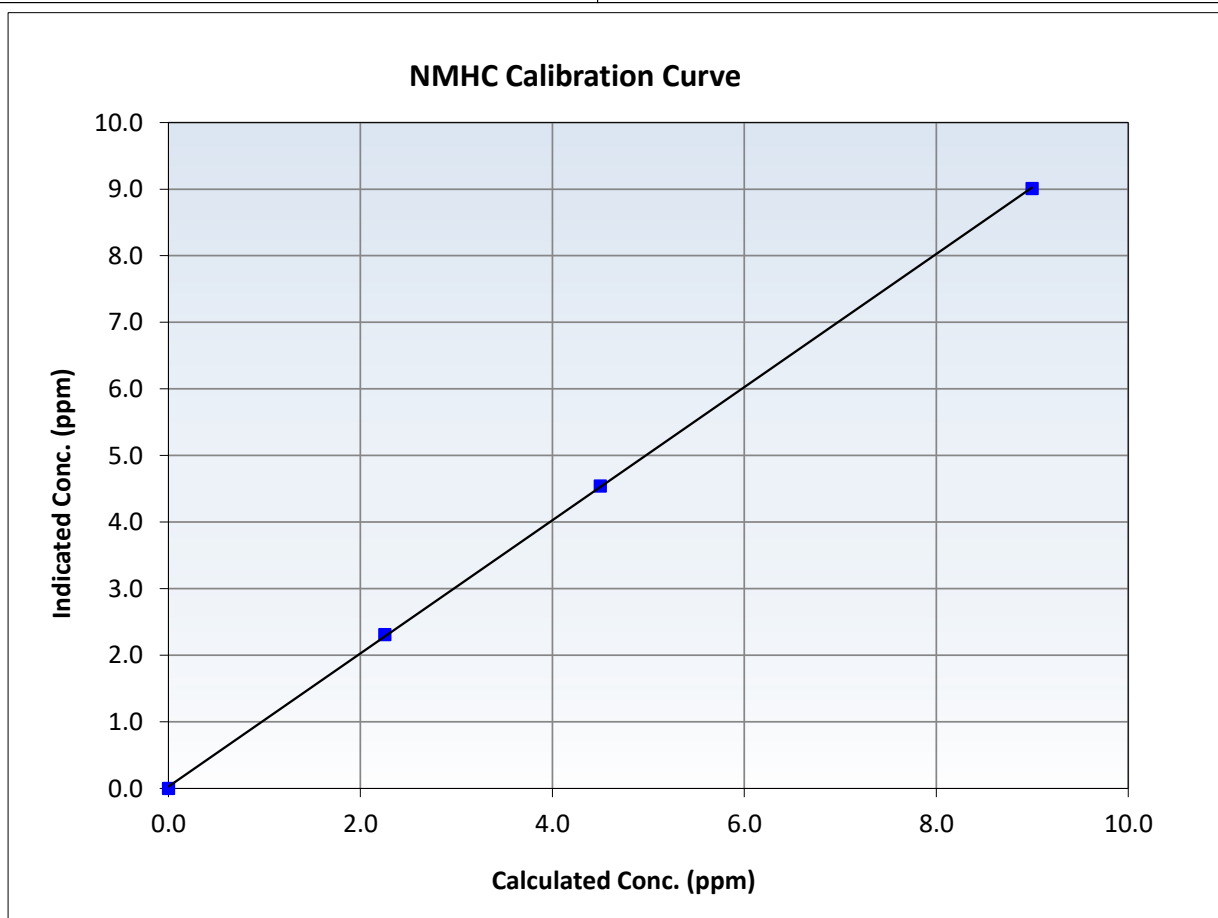
NMHC Calibration Summary

Station Information

Calibration Date:	July 23, 2026	Previous Calibration:	June 4, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:18	End Time (MST):	11:16
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

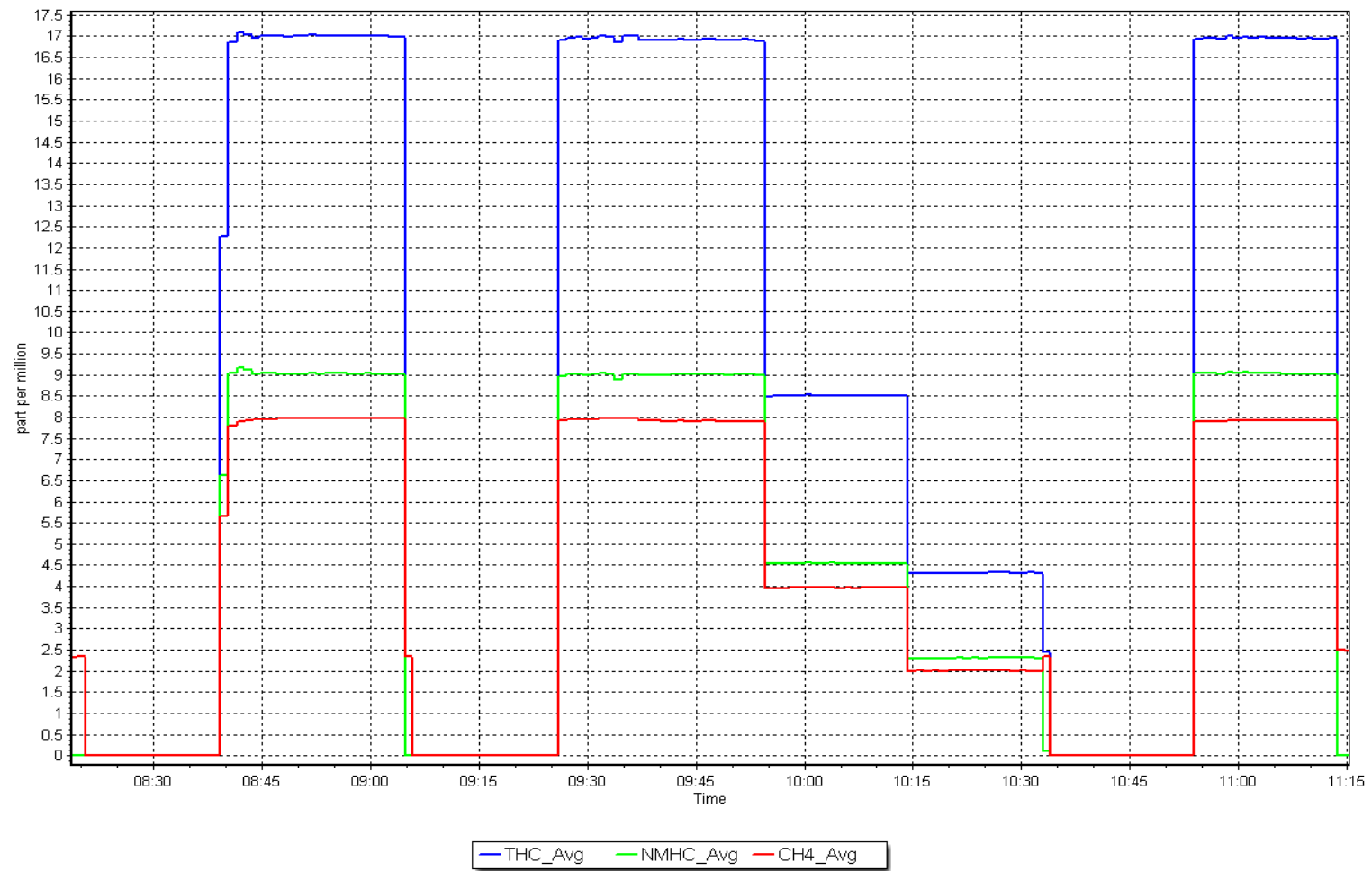
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999956	≥ 0.995
9.00	9.01	0.9986	Slope	0.999837	0.90 - 1.10
4.50	4.54	0.9907	Intercept	0.027986	± 0.5
2.26	2.31	0.9762			



NMHC Calibration Plot

Date: July 23, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Athabasca Valley
 Calibration Date: July 31, 2026
 Start time (MST): 7:57
 Reason: Cylinder Change

Station number: AMS 07
 Last Cal Date: July 23, 2026
 End time (MST): 9:20

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:	3.10E-04	3.10E-04	NMHC SP Ratio:	6.19E-05
CH ₄ Retention time:	14.4	14.4	NMHC Peak Area:	145296
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	16.90	1.001
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.90	Prev response	16.86	*% change	0.2%
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					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	16.91	16.88	1.002
Average Correction Factor					

Notes:

H2 cylinder changed.



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	----
As found High point	4920	79.8	9.00	9.04	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.04	Prev response	8.98	*% change	0.7%
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					----
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	9.00	9.01	0.999
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	----
As found High point	4920	79.8	7.92	7.86	1.007
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.86	Prev response	7.89	*% change	-0.3%
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					----
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	7.92	7.87	1.006
Average Correction Factor					

Calibration Statistics

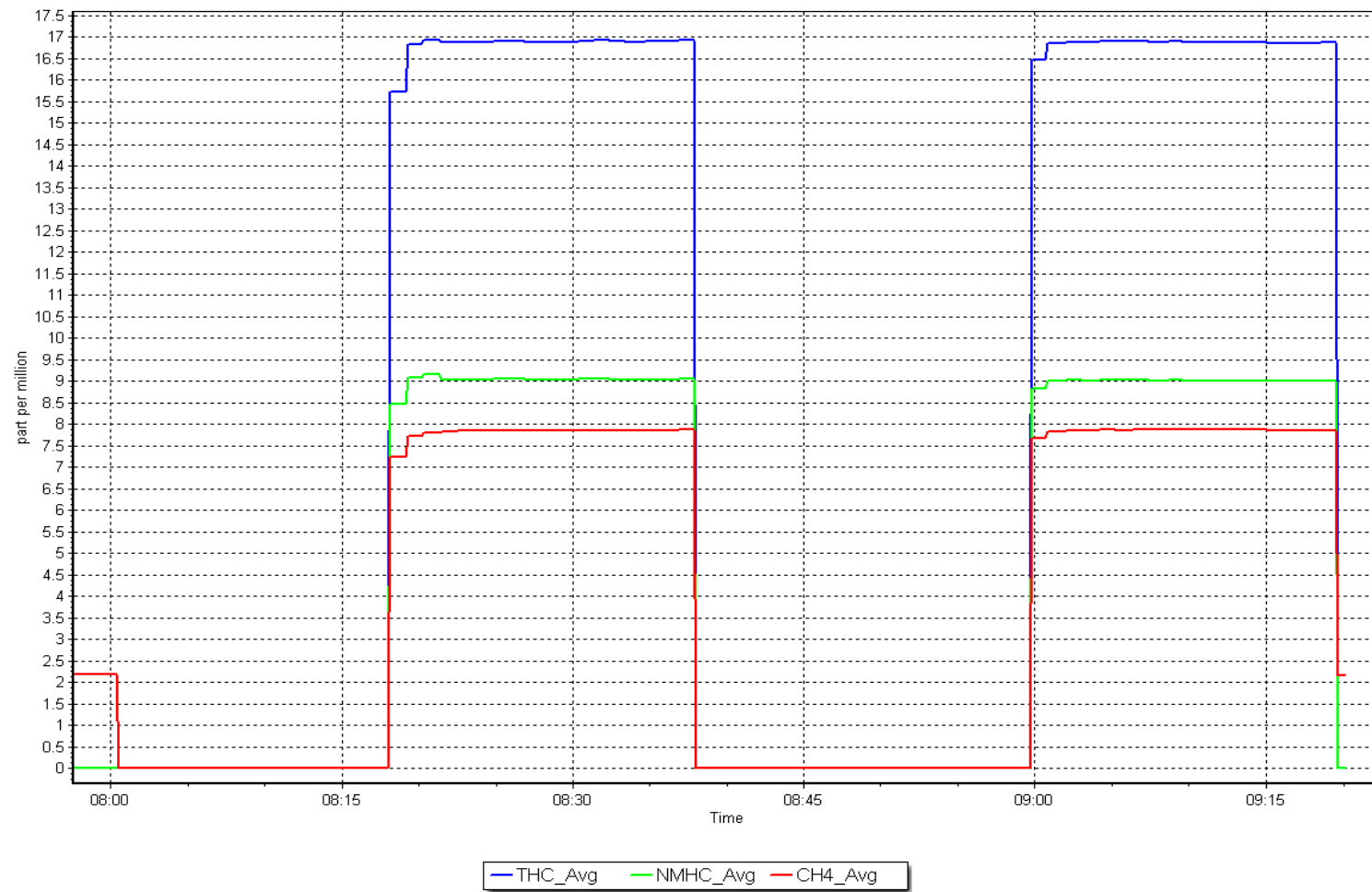
	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.996228	
THC Cal Offset:	0.013856	
CH ₄ Cal Slope:	0.995607	
CH ₄ Cal Offset:	0.004061	
NMHC Cal Slope:	0.997118	
NMHC Cal Offset:	0.009194	

Calibration Performed By: Sean Bala

NMHC Calibration Plot

Date: July 31, 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: July 15, 2026
Last Cal Date: June 11, 2026
Start time (MST): 8:16
End time (MST): 12:36
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 T700
ZAG make/model: API T701H
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: 3805
Serial Number: 198

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	-0.6	-0.3	-0.3	----	----
AF High point	4933	66.8	803.0	800.3	2.7	803.7	795.3	8.5	0.9983	1.0059
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 804.8 ppb	NO = 800.5 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.1%
Baseline Corr 1st pt	NO _x = 804.3 ppb	NO = 795.6 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: 1160120024

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999973	0.999119
NO _x Cal Offset:	1.851898	1.851908
NO Cal Slope:	0.997585	0.996486
NO Cal Offset:	2.131935	1.691961
NO ₂ Cal Slope:	1.007941	1.006652
NO ₂ Cal Offset:	0.547833	1.092849

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.920	0.920	NO bkgnd or offset:	6.6	6.5
NOX coeff or slope:	1.005	1.005	NOX bkgnd or offset:	7.1	6.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	185.7	187.5

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	66.8	803.0	800.3	2.7	802.8	798.0	5.0	1.0002	1.0029
Mid point	4966	33.4	401.5	400.2	1.3	405.0	402.3	2.6	0.9914	0.9947
Low point	4983	16.7	200.7	200.1	0.7	203.7	202.1	1.6	0.9855	0.9900
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	----	----
As left span	4933	66.8	803.0	398.6	404.4	803.6	398.6	405.0	0.9992	1.0000
Average Correction Factor									0.9924	0.9959

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	794.0	396.7	400.0	403.1	0.9922	100.8%
Mid GPT point	794.0	601.8	194.9	198.0	0.9842	101.6%
Low GPT point	794.0	698.2	98.5	101.3	0.9721	102.9%
Average Correction Factor					0.9828	101.8%

Notes:

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

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

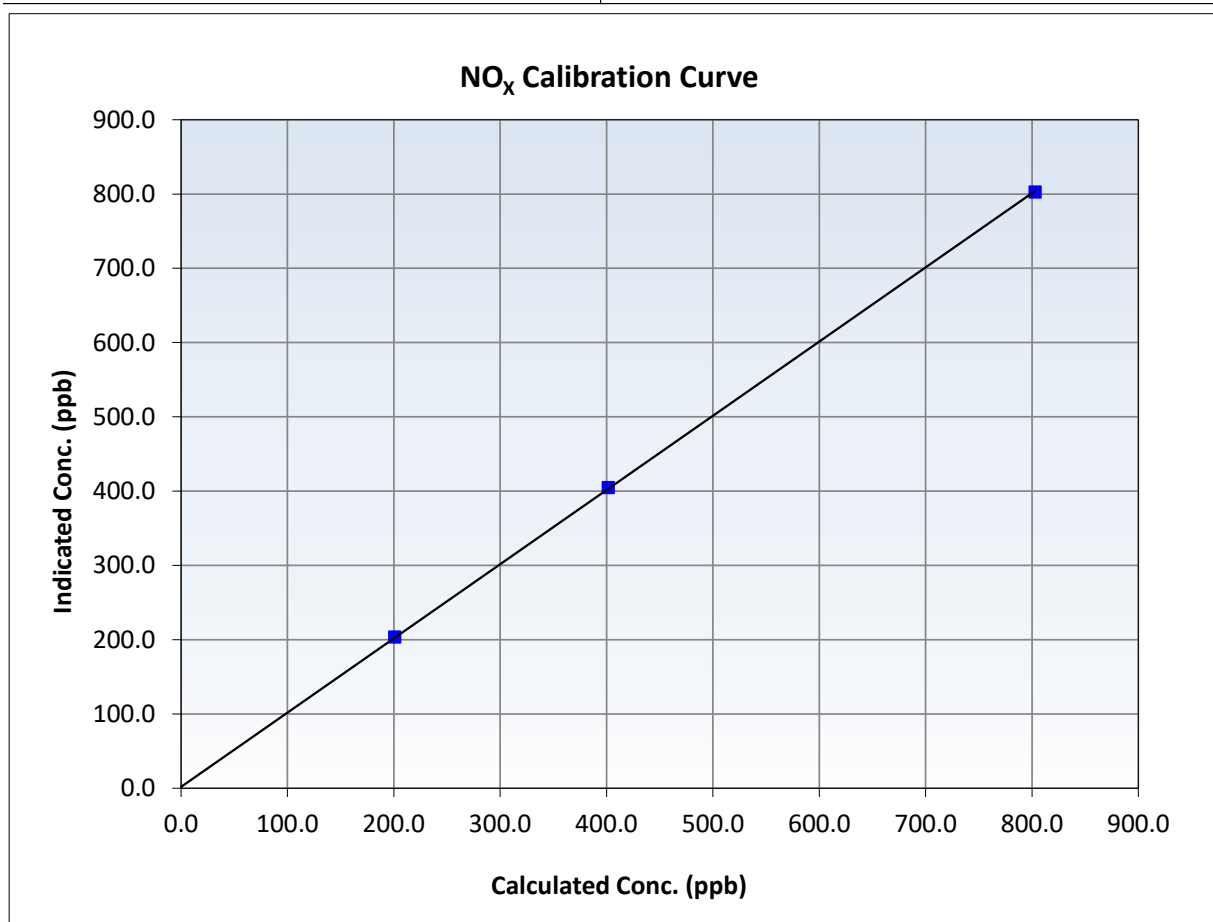
NO_x Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 11, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:16	End Time (MST):	12:36
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	-0.1	----	Correlation Coefficient	0.999968	≥0.995
803.0	802.8	1.0002	Slope	0.999119	0.90 - 1.10
401.5	405.0	0.9914	Intercept	1.851908	+/-20
200.7	203.7	0.9855			





Wood Buffalo Environmental Association

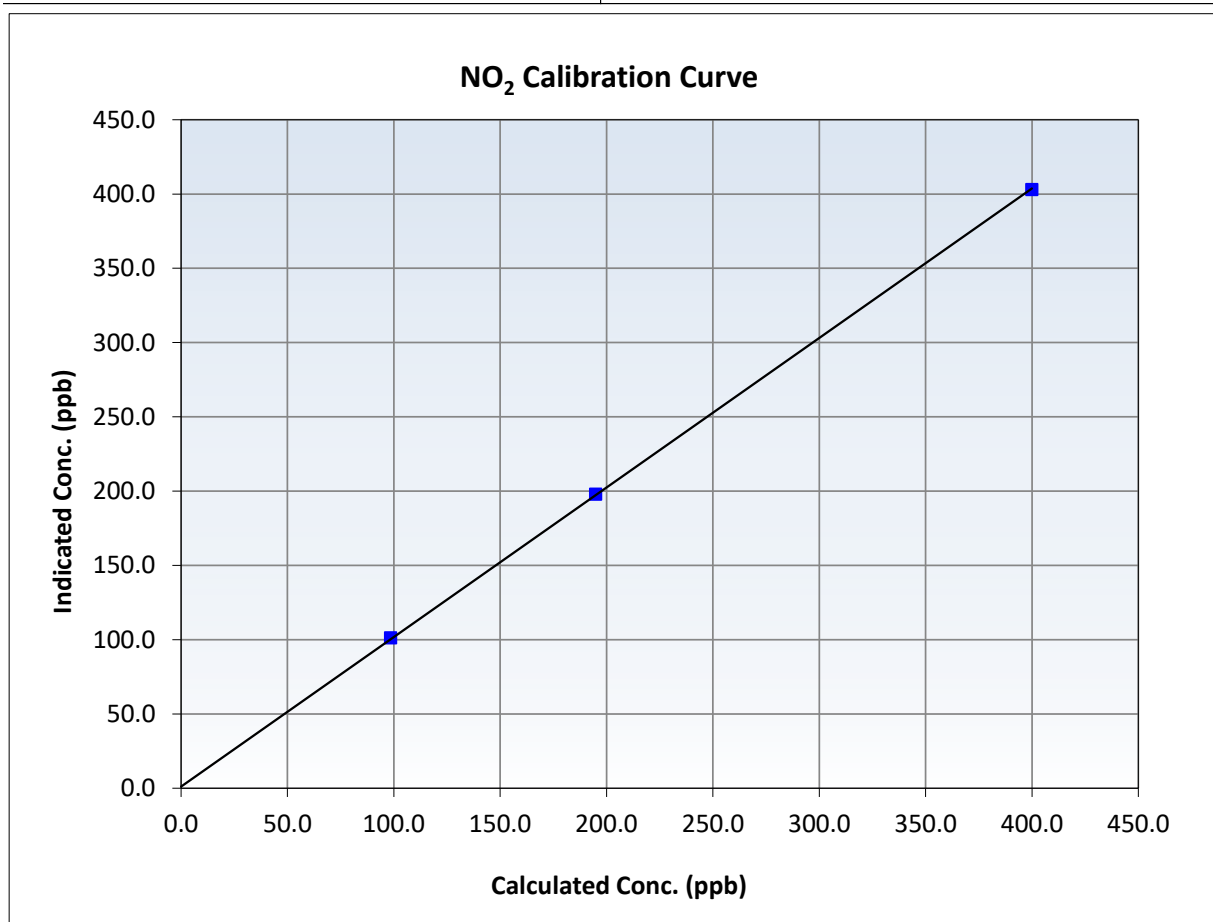
NO₂ Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 11, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:16	End Time (MST):	12:36
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	-0.1	----	Correlation Coefficient	0.999960	≥0.995
400.0	403.1	0.9922	Slope	1.006652	0.90 - 1.10
194.9	198.0	0.9842	Intercept	1.092849	+/-20
98.5	101.3	0.9721			





Wood Buffalo Environmental Association

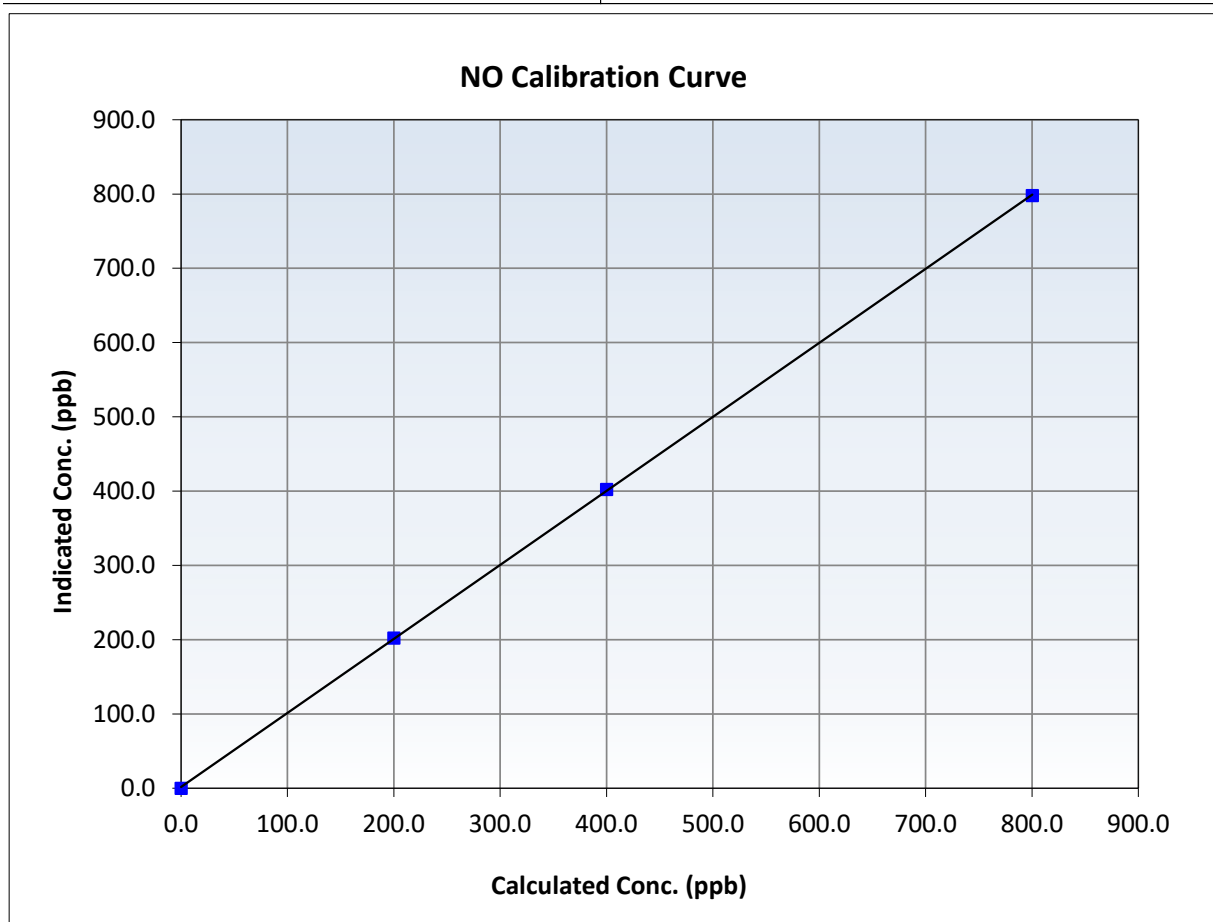
NO Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 11, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:16	End Time (MST):	12:36
Analyzer make:	Thermo 42i	Analyzer serial #:	1160120024

Calibration Data

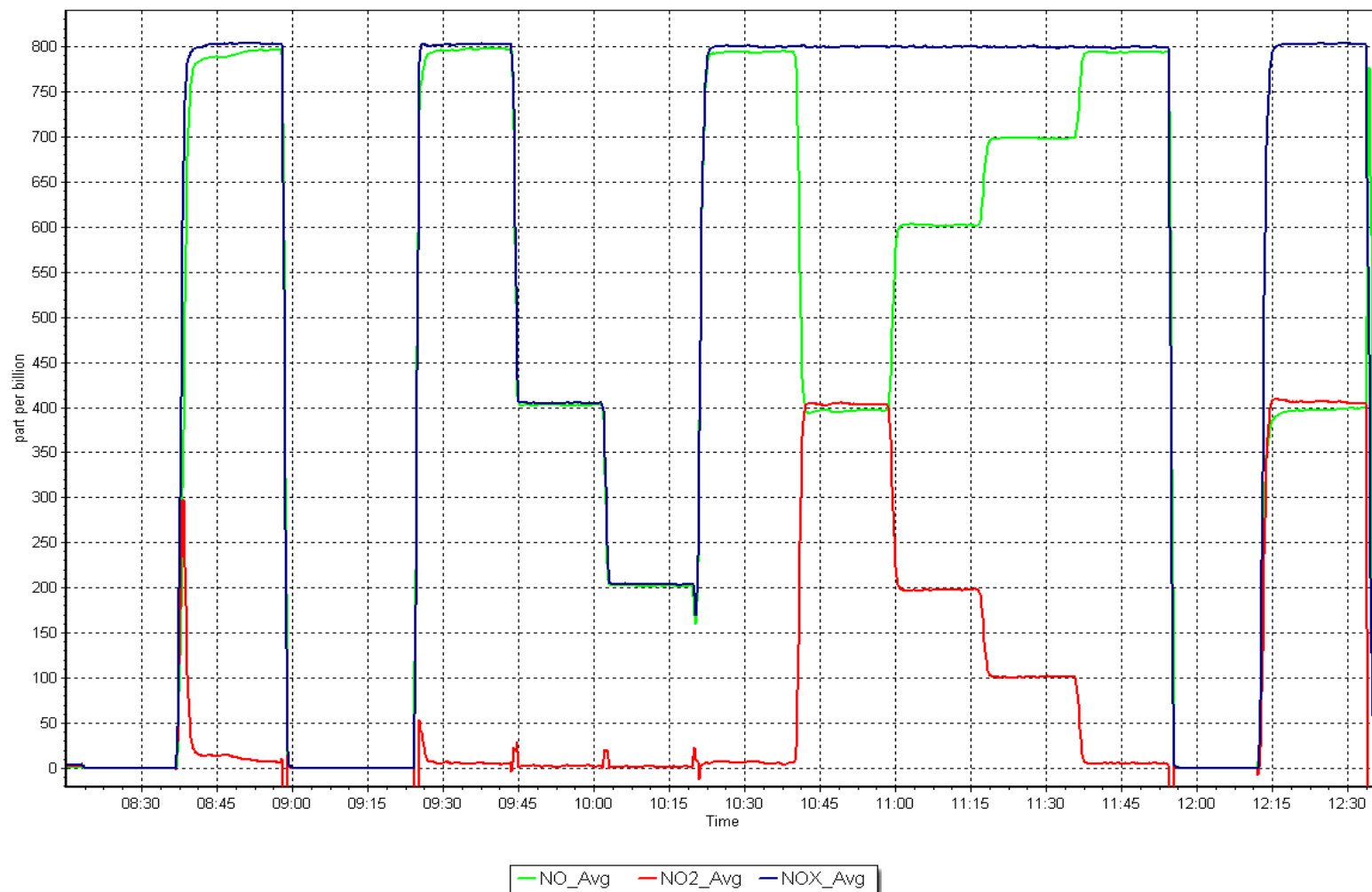
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999975	≥ 0.995
800.3	798.0	1.0029	Slope	0.996486	$0.90 - 1.10$
400.2	402.3	0.9947	Intercept	1.691961	± 20
200.1	202.1	0.9900			



NO_x Calibration Plot

Date: July 15, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Athabasca Valley Station number: AMS07
Calibration Date: July 2, 2026 Last Cal Date: June 3, 2026
Start time (MST): 8:55 End time (MST): 11:35
Reason: Routine

Calibration Standards

O₃ generation mode: Photometer
Calibrator Make/Model: Teledyne API T700 Serial Number: 3805
ZAG Make/Model: Teledyne API T701H Serial Number: 198

Analyzer Information

Analyzer make: Thermo 49i Analyzer serial #: 1507964700
Analyzer Range: 0 - 500 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999657	0.996343	Backgd or Offset:	-0.2	-0.2
Calibration intercept:	-0.040000	-0.160000	Coeff or Slope:	1.003	1.003

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	-1.2	----
As found High point	5000	1876.6	400.0	393.4	1.014
As found Mid point					
As found Low point					
Baseline Corr As found:	394.6	Previous response	399.8	*% change	-1.3%
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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	NA	0.0	-0.3	----
High point	5000	1876.6	400.0	398.2	1.005
Mid point	5000	1253.9	200.0	199.5	1.003
Low point	5000	957.2	100.0	99.4	1.006
As left zero	5000	NA	0.0	-0.1	----
As left span	5000	1876.6	400.0	401.6	0.996
Average Correction Factor					1.004

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

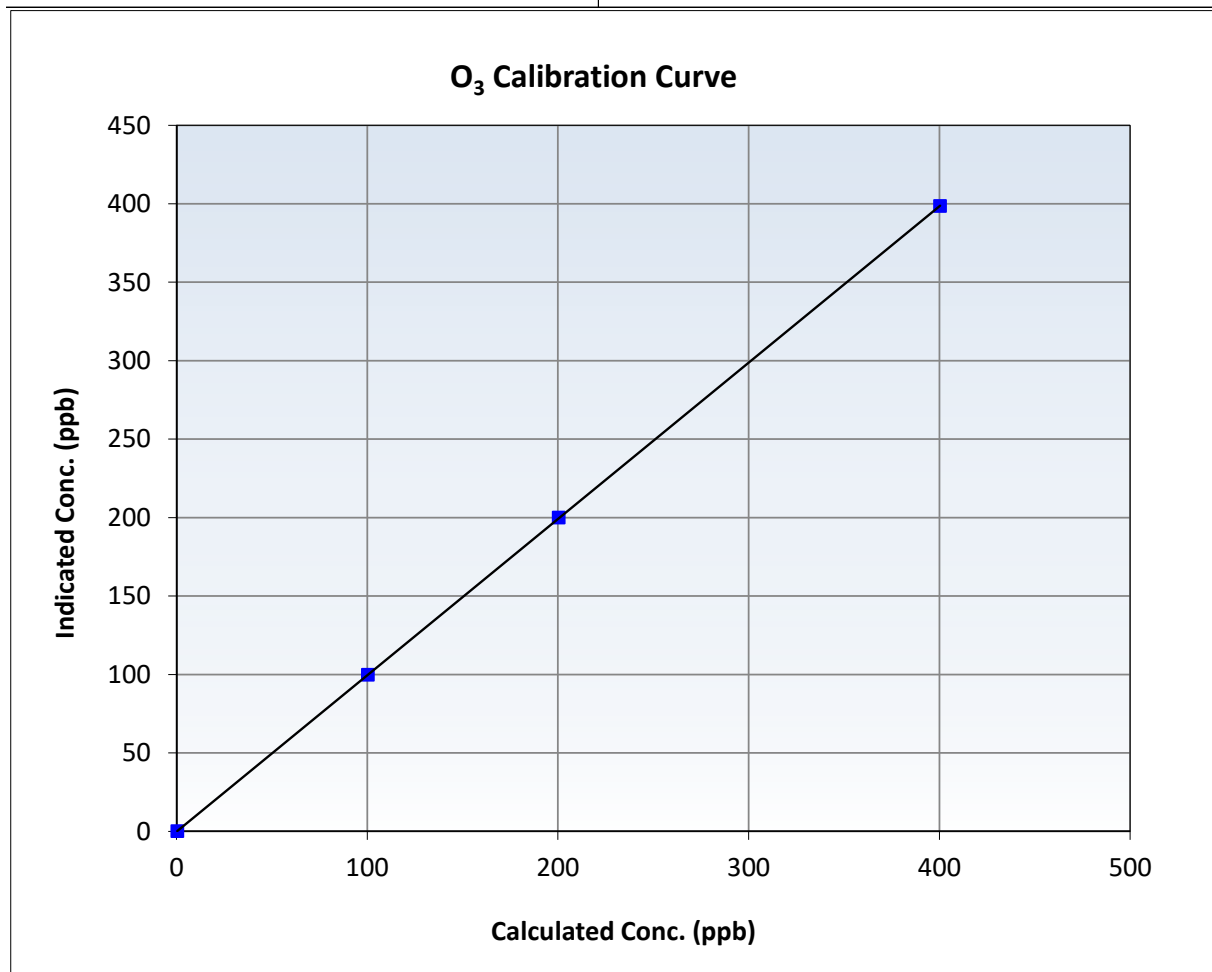
O₃ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 3, 2026
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	8:55	End Time (MST):	11:35
Analyzer make:	Thermo 49i	Analyzer serial #:	1507964700

Calibration Data

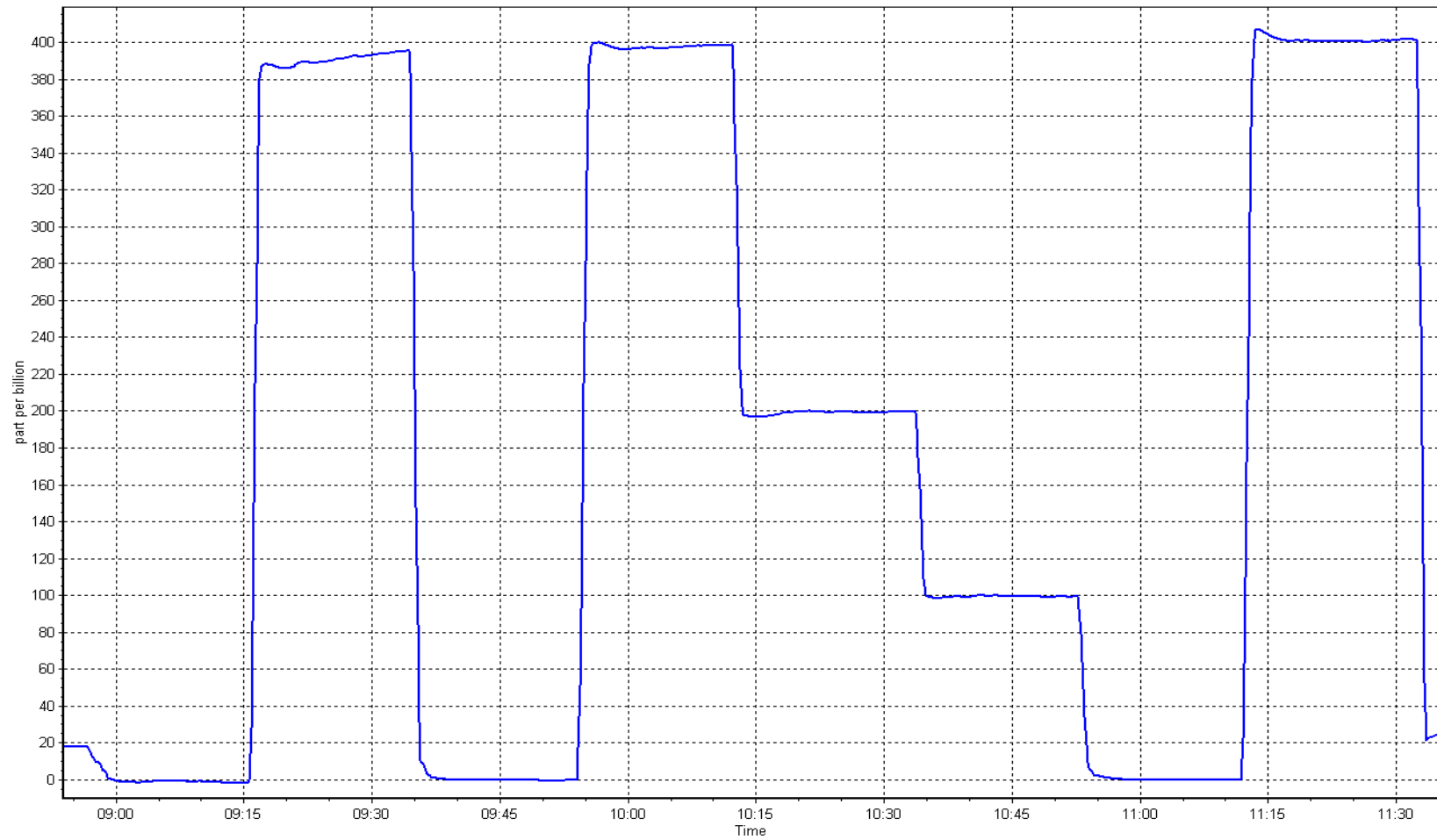
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999998	≥0.995
400.0	398.2	1.0045	Slope	0.996343	0.90 - 1.10
200.0	199.5	1.0025	Intercept	-0.160000	+/- 5
100.0	99.4	1.0060			



O₃ Calibration Plot

Date: July 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: July 24, 2026 Last Cal Date: June 11, 2026
Start time (MST): 9:26 End time (MST): 10:14

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)	22.20	20.41	22.20	☐	+/- 2 °C
P (mmHg)	729.00	728.86	729.00	☐	+/- 10 mmHg
Flow (LPM)	5.01	4.92	5.01	☐	+/- 0.25 LPM
PW% (pump)	29	----	29	☐	>80%
Zero Verification	PM w/o HEPA: 18.20		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: January 31, 2027
Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	11.00	11.20	11.00	☒	+/- 0.5

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

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

Annual Maintenance

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

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

Calibration by: Sean Bala



Wood Buffalo Environmental Association

CO Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: July 13, 2026
Start time (MST): 9:08
Reason: Routine

Station number: AMS 07
Last Cal Date: June 15, 2026
End time (MST): 12:36

Calibration Standards

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

Analyzer Information

Analyzer make: Thermo 48iQ
Analyzer Range: 0 - 50 ppm

Analyzer serial #: 12522542354

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.998324	0.995297	Backgd or Offset:	-2.810	-3.110
Calibration intercept:	0.180017	0.398018	Coeff or Slope:	1.021	0.978

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	-0.1	----
As found High point	4932	67.8	40.0	40.6	0.986
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	40.61	Prev response:	40.16	*% 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	

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	40.1	0.999
Mid point	4966	33.9	20.0	20.6	0.973
Low point	4983	16.9	10.0	10.5	0.951
As left zero	5000	0.0	0.0	0.2	----
As left span	4932	67.8	40.0	40.3	0.993
Average Correction Factor					0.974

Notes: Changed inlet filter after as founds. Adjusted zero and span.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

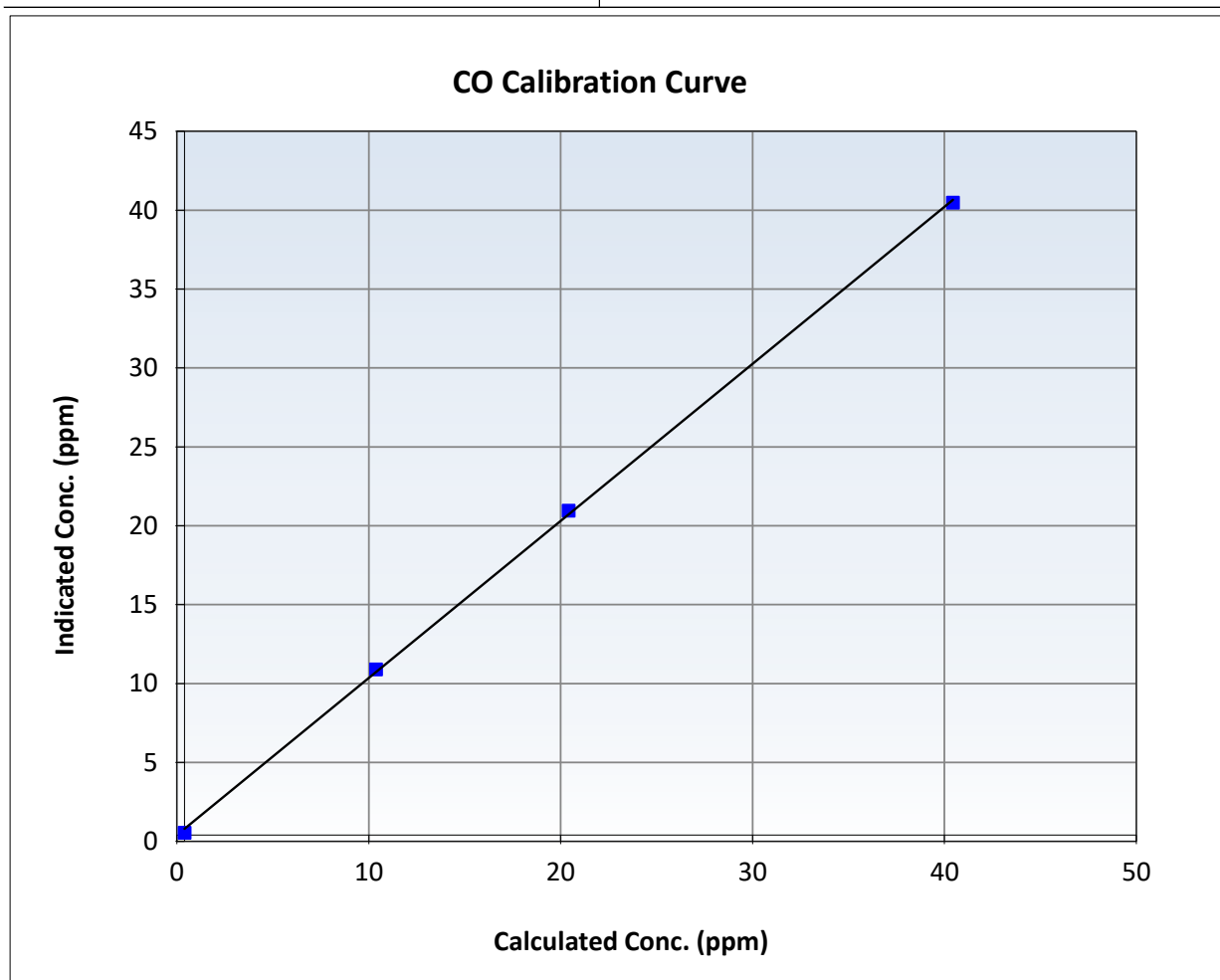
CO Calibration Summary

Station Information

Calibration Date:	July 13, 2026	Previous Calibration:	June 15, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	9:08	End Time (MST):	12:36
Analyzer make:	Thermo 48iQ	Analyzer serial #:	12522542354

Calibration Data

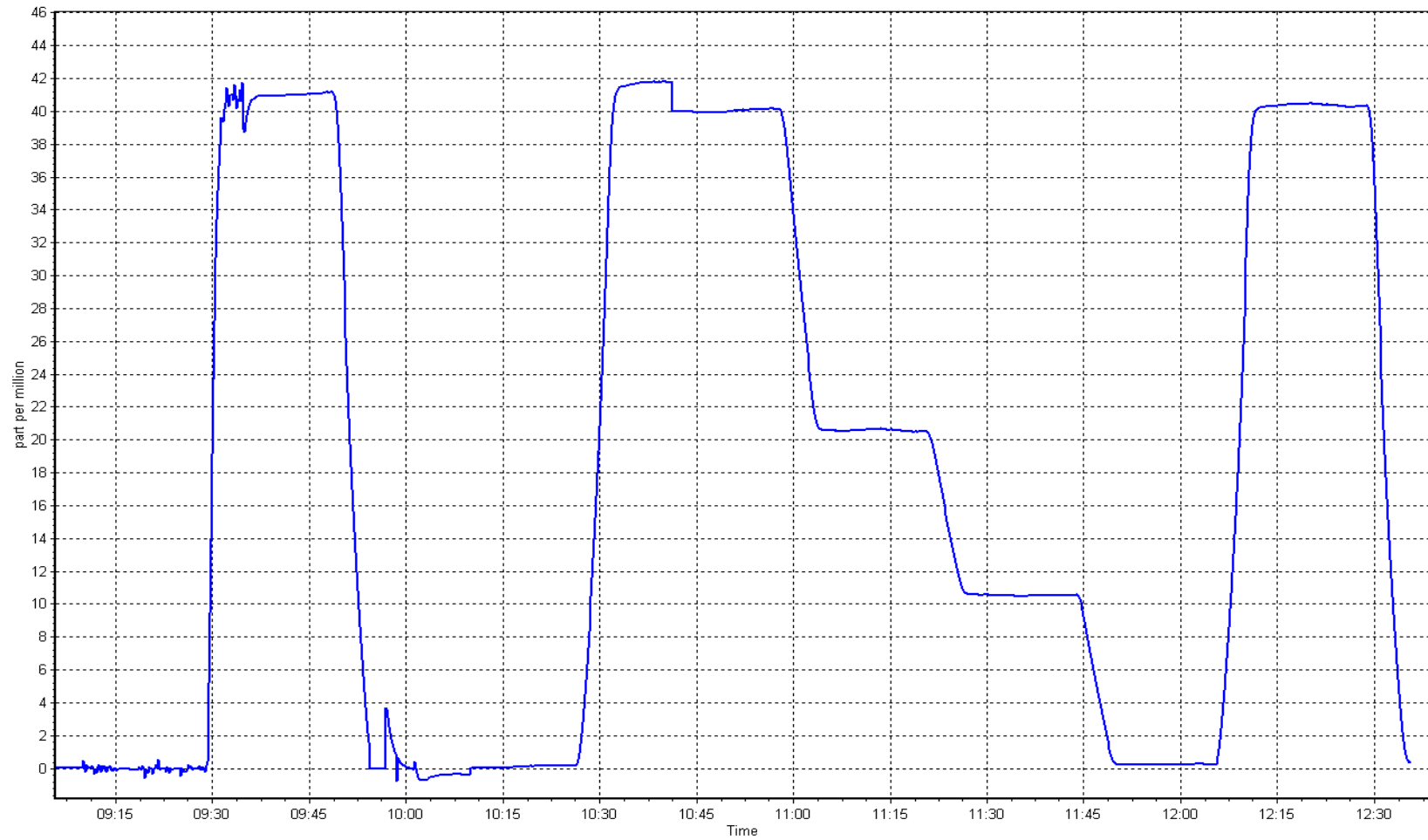
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999797	≥0.995
40.0	40.1	0.9989	Slope	0.995297	0.90 - 1.10
20.0	20.6	0.9733	Intercept	0.398018	+/-1.5
10.0	10.5	0.9506			



CO Calibration Plot

Date: July 13, 2026

Location: Athabasca Valley





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS08 FORT CHIPEWYAN JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Fort Chipewyan Station number: AMS 08
Calibration Date: July 20, 2026 Last Cal Date: June 4, 2026
Start time (MST): 12:31 End time (MST): 15:12
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:	1.000060	1.010371	Backgd or Offset:	3.49	3.49
Calibration intercept:	-0.004298	0.333103	Coeff or Slope:	1.004	1.004

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	4920	80.3	800.4	800.5	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	801.1	Previous response	800.4	*% 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	80.3	800.4	808.4	0.990
Mid point	4960	40.2	400.7	406.4	0.986
Low point	4980	20.1	200.4	202.8	0.988
As left zero	5000	0.0	0.0	-0.3	----
As left span	4920	80.3	800.4	817.6	0.979

Average Correction Factor: 0.988

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

Calibration Performed By: Morgan Voyageur



Wood Buffalo Environmental Association

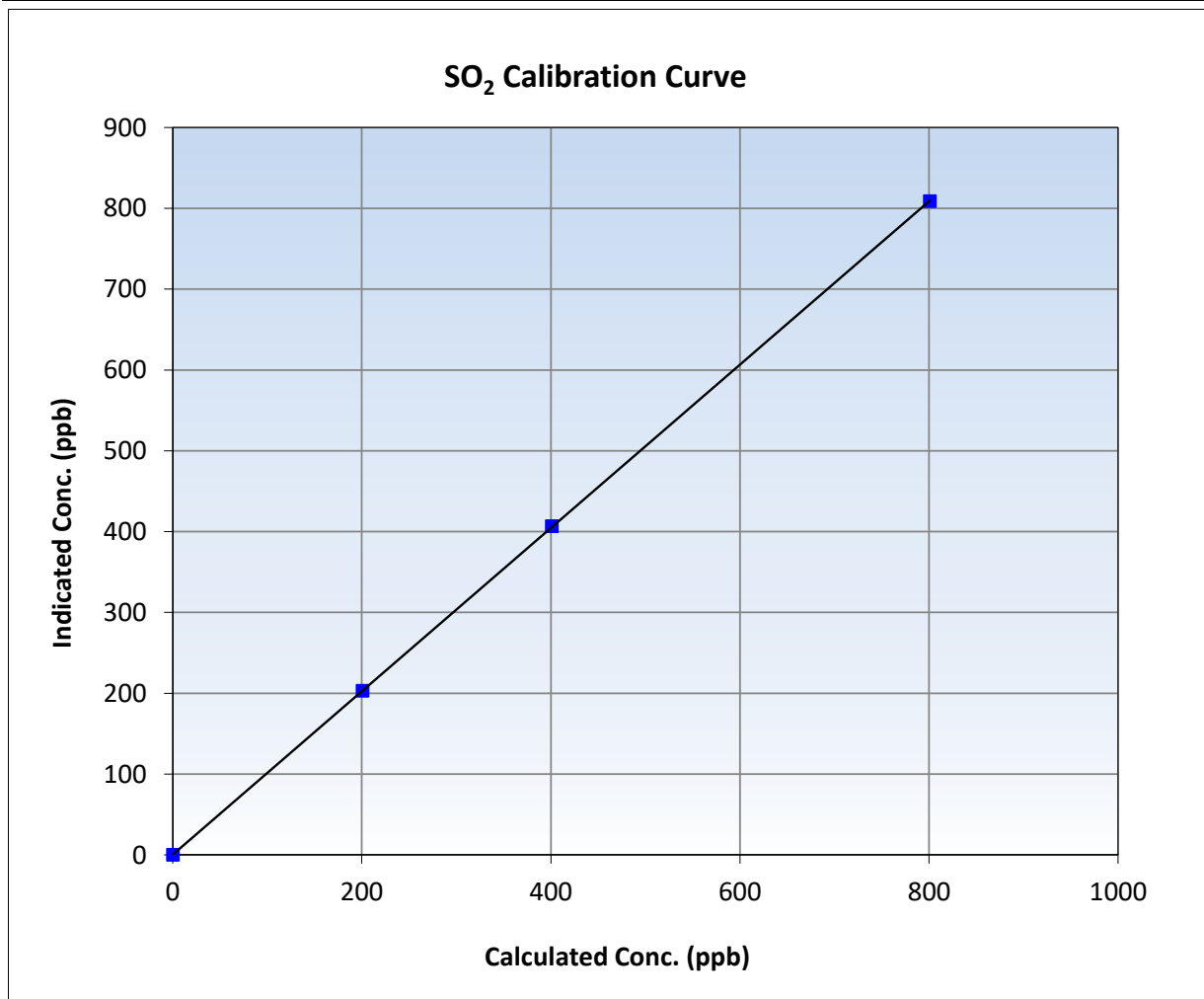
SO₂ Calibration Summary

Station Information

Calibration Date:	July 20, 2026	Previous Calibration:	June 4, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	12:31	End Time (MST):	15:12
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1170050147

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			Limits
0.0	-0.3	----	Correlation Coefficient	0.999994		≥0.995
800.4	808.4	0.9901	Slope	1.010371		0.90 - 1.10
400.7	406.4	0.9860	Intercept	0.333103		+/-30
200.4	202.8	0.9879				

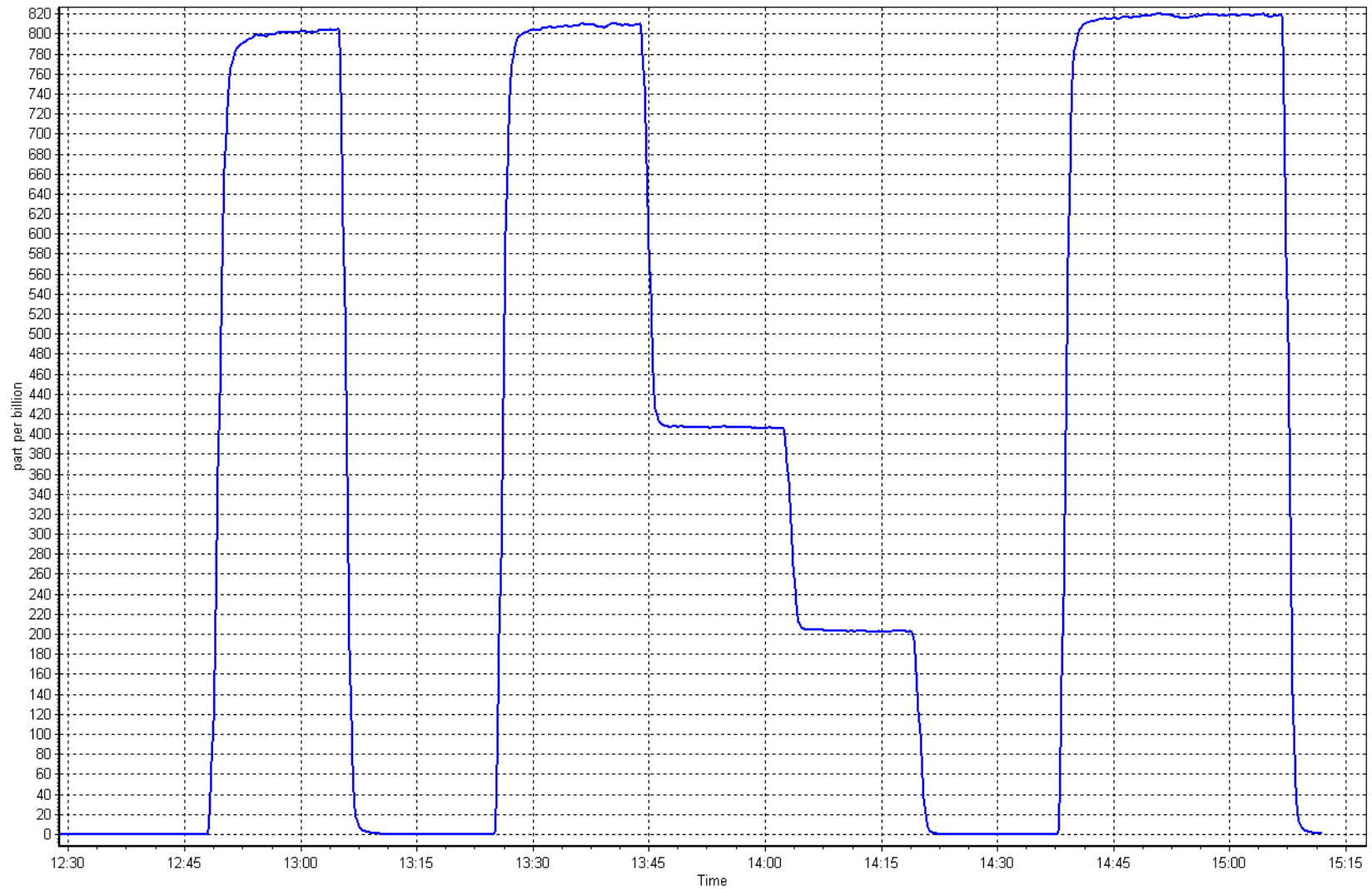


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SO2 Calibration Plot

Date: July 20, 2026

Location: Fort Chipewyan





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Fort Chipewyan Station number: AMS 08
Calibration Date: July 24, 2026 Last Cal Date: June 12, 2026
Start time (MST): 10:33 End time (MST): 15:02
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:	1.010529	1.009959	Backgd or Offset:	3.1
Calibration intercept:	-0.437965	-0.318015	Coeff or Slope:	1.181

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	-0.2	----
As found High point	4917	82.6	80.0	48.3	1.649
As found Mid point	4959	41.3	40.0	27.0	1.470
As found Low point	4979	20.7	20.0	13.8	1.431
New cylinder response					
Baseline Corr As found:	48.5	Prev response:	80.37	*% change:	-65.7%
Baseline Corr 2nd AF pt:	27.2	AF Slope:	0.602840	AF Intercept:	1.128915
Baseline Corr 3rd AF pt:	14.0	AF Correlation:	0.995046	* = > +/-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	80.6	0.992
Mid point	4959	41.3	40.0	40.0	0.999
Low point	4979	20.7	20.0	19.4	1.033
As left zero	5000	0.0	0.0	0.4	----
As left span	4917	82.6	80.0	83.0	0.963
SO2 Scrubber Check	4920	80.3	803.0	-0.1	----
Date of last scrubber change:	July 24, 2026		Ave Corr Factor		1.008
Date of last converter efficiency test:					

Notes: Changed inlet filter and scrubber after as found. Power outage at 10:24 off for one minute. Zero stabilized by 10:28. adjusted span.

Calibration Performed By: Morgan Voyageur



Wood Buffalo Environmental Association

TRS Calibration Summary

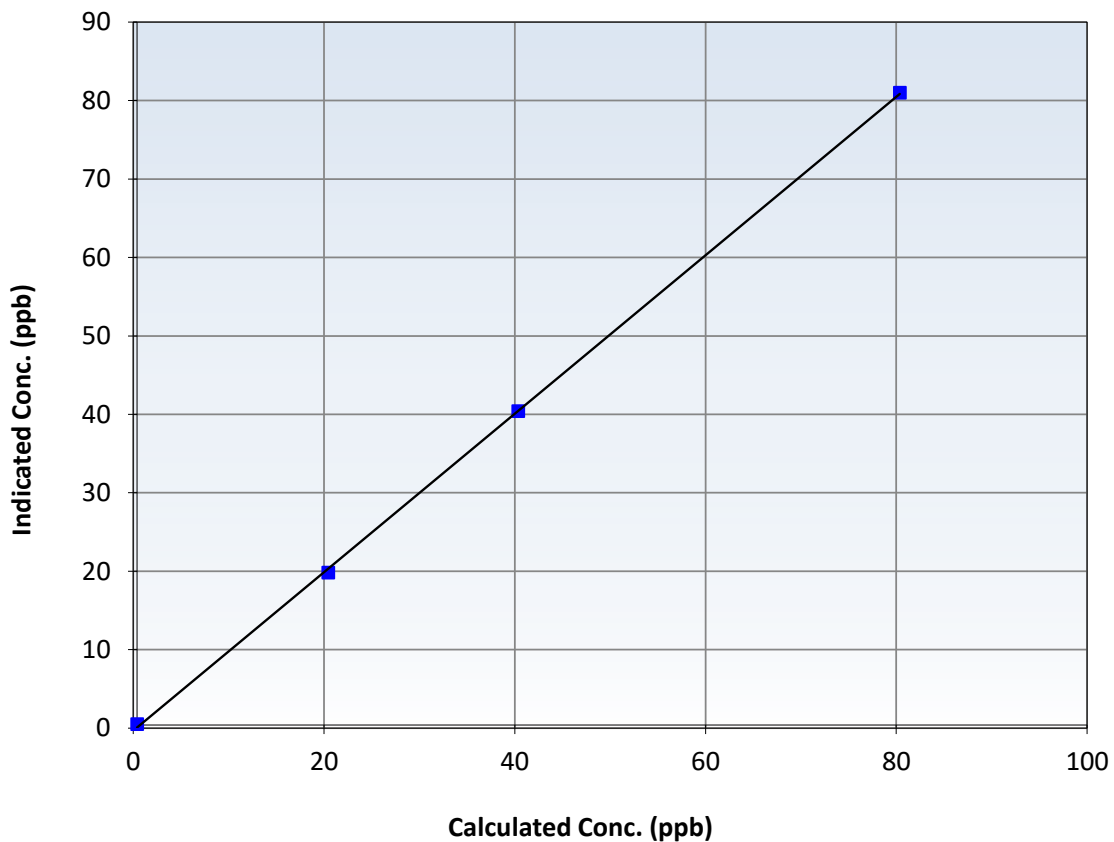
Station Information

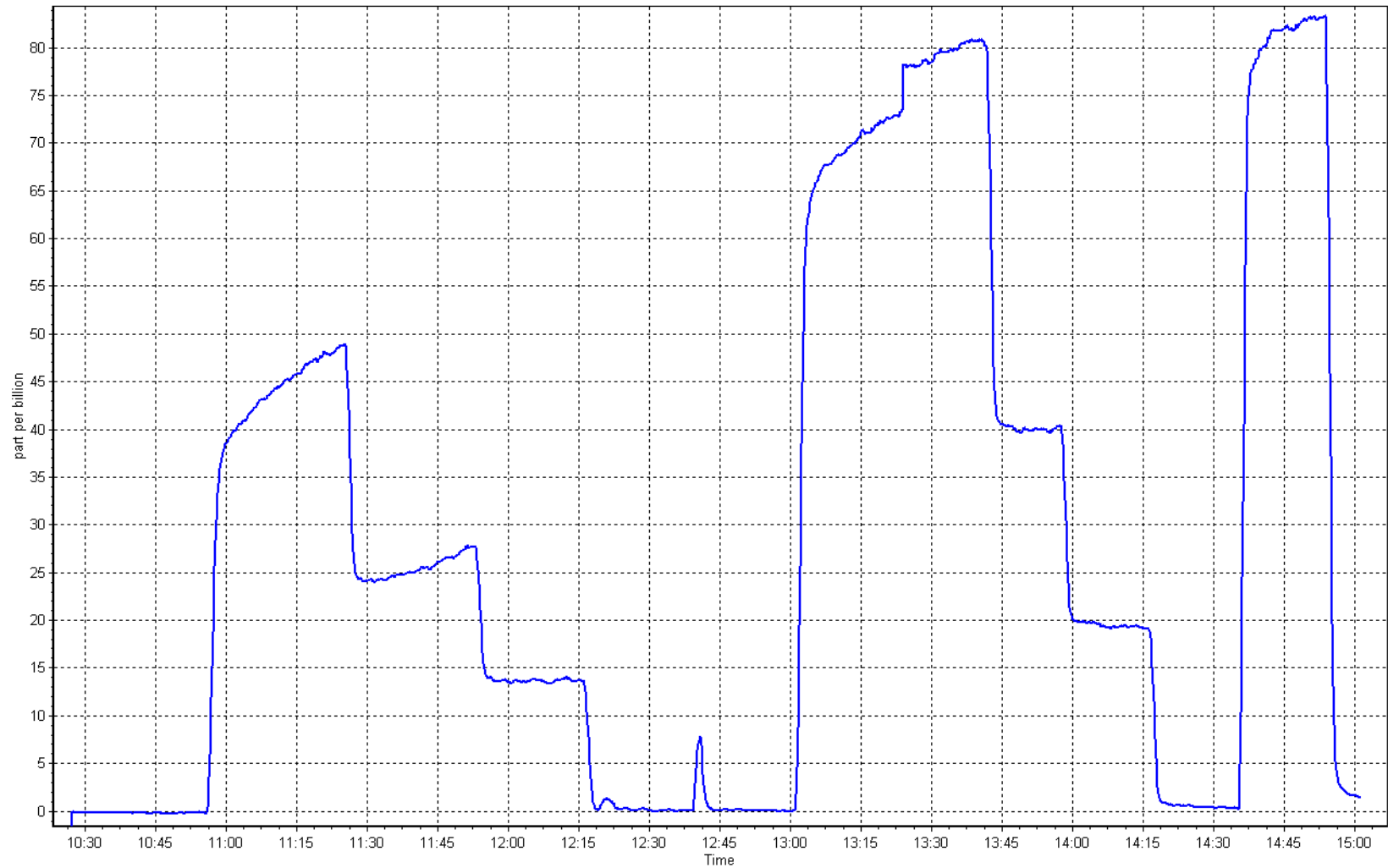
Calibration Date:	July 24, 2026	Previous Calibration:	June 12, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	10:33	End Time (MST):	15:02
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1218153461

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	0.999867		≥ 0.995
80.0	80.6	0.9921	Slope	1.009959		$0.90 - 1.10$
40.0	40.0	0.9994	Intercept	-0.318015		± 3
20.0	19.4	1.0329				

TRS Calibration Curve







Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Fort Chipewyan
Station number: AMS 08
Calibration Date: July 22, 2026
Last Cal Date: June 19, 2026
Start time (MST): 9:26
End time (MST): 13:20
Reason: Routine

Calibration Standards

NO Gas Cylinder #: CC358100
NOX Cal Gas Conc: 60.10 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 60.10 ppm
NOX ga 4.8
Calibra 5.2
ZAG make/model: Teledyne API T700
Teledyne 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: 3810
Serial Number: 197

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	0.0	0.0	0.0	----	----
AF High point	4933	66.7	801.8	800.4	1.3	813.5	810.7	2.7	0.9856	0.9874
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 801.0 ppb	NO = 800.5 ppb							*Percent Change	NO _x = 1.5%
Baseline Corr 1st pt	NO _x = 813.5 ppb	NO = 810.7 ppb							*Percent Change	NO = 1.3%
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 r ² :							Nx SI:	Nx Int:
	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: 1426262592

Instrument Settings

	<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.023	1.006
NOX coeff or slope:	0.995	0.995
NO2 coeff or slope:	1.000	1.000

	<u>Start</u>	<u>Finish</u>
NO bkgnd or offset:	6.4	6.3
NOX bkgnd or offset:	6.4	6.3
Reaction cell Press:	175.8	177.0

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999019	0.998192
NO _x Cal Offset:	-0.045530	1.194509
NO Cal Slope:	1.001769	0.999441
NO Cal Offset:	-1.325488	0.014536
NO ₂ Cal Slope:	1.000082	0.998938
NO ₂ Cal Offset:	0.184838	0.318169

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	4933	66.7	801.8	800.4	1.3	801.0	800.0	0.9	1.0010	1.0006
Mid point	4967	33.3	400.2	399.6	0.7	401.3	399.5	1.8	0.9974	1.0002
Low point	4983	16.7	200.7	200.4	0.3	202.5	200.1	2.3	0.9913	1.0015
As left zero	5000	0.0	0.0	0.0	0.0	0.7	0.1	0.6	----	----
As left span	4933	66.7	801.8	399.2	402.6	804.5	399.2	405.3	0.9966	1.0000
Average Correction Factor									0.9965	1.0007

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	798.3	394.7	404.9	404.9	1.0001	100.0%
Mid GPT point	798.3	582.0	217.6	217.3	1.0015	99.8%
Low GPT point	798.3	692.5	107.1	107.9	0.9929	100.7%
Average Correction Factor					0.9982	100.2%

Notes: Changed inlet filter after as founds. Adjusted Zero and High point span.

Calibration Performed By: Jermey cardinal



Wood Buffalo Environmental Association

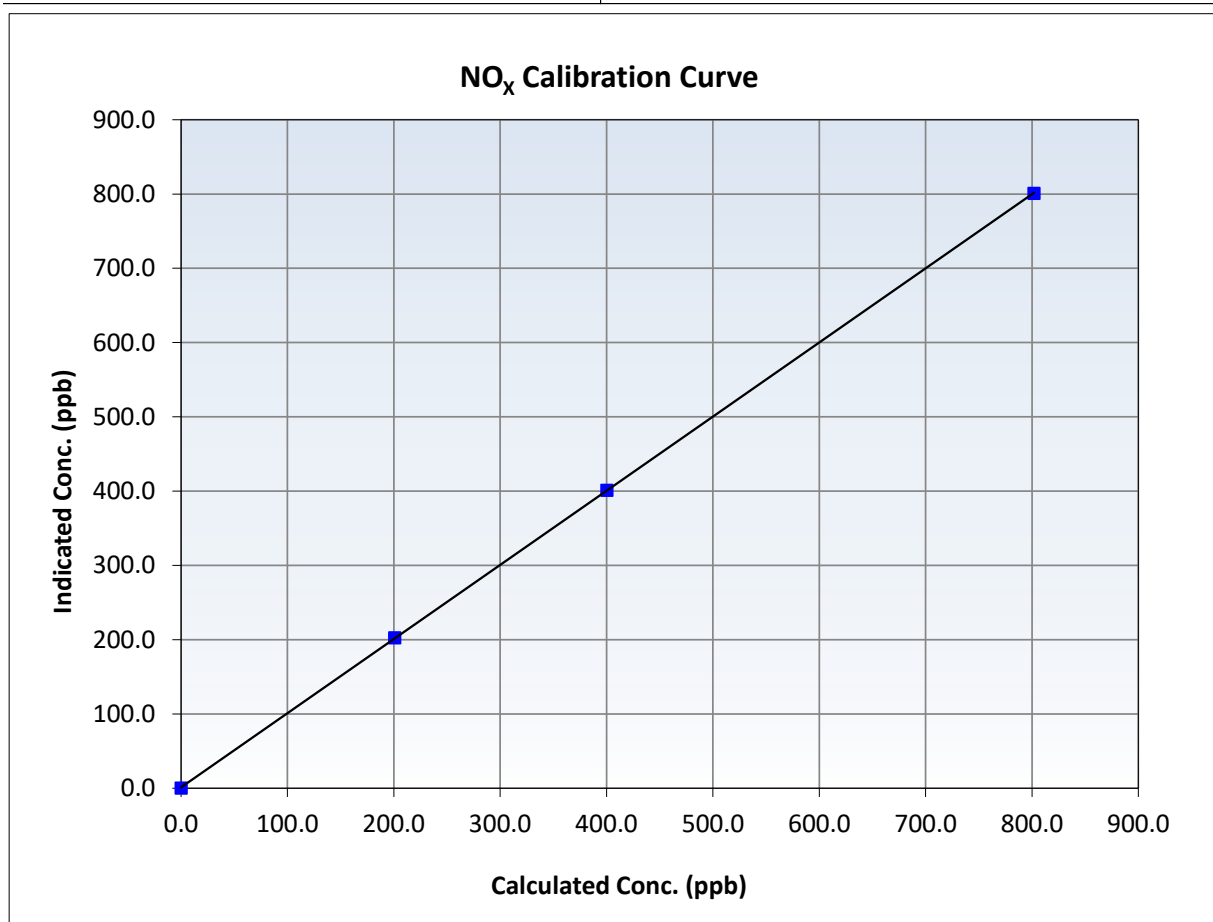
NO_x Calibration Summary

Station Information

Calibration Date:	July 22, 2026	Previous Calibration:	June 19, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:26	End Time (MST):	13:20
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	0.2	----	Correlation Coefficient	0.999993	≥0.995
801.8	801.0	1.0010	Slope	0.998192	0.90 - 1.10
400.2	401.3	0.9974	Intercept	1.194509	+/-20
200.7	202.5	0.9913			





Wood Buffalo Environmental Association

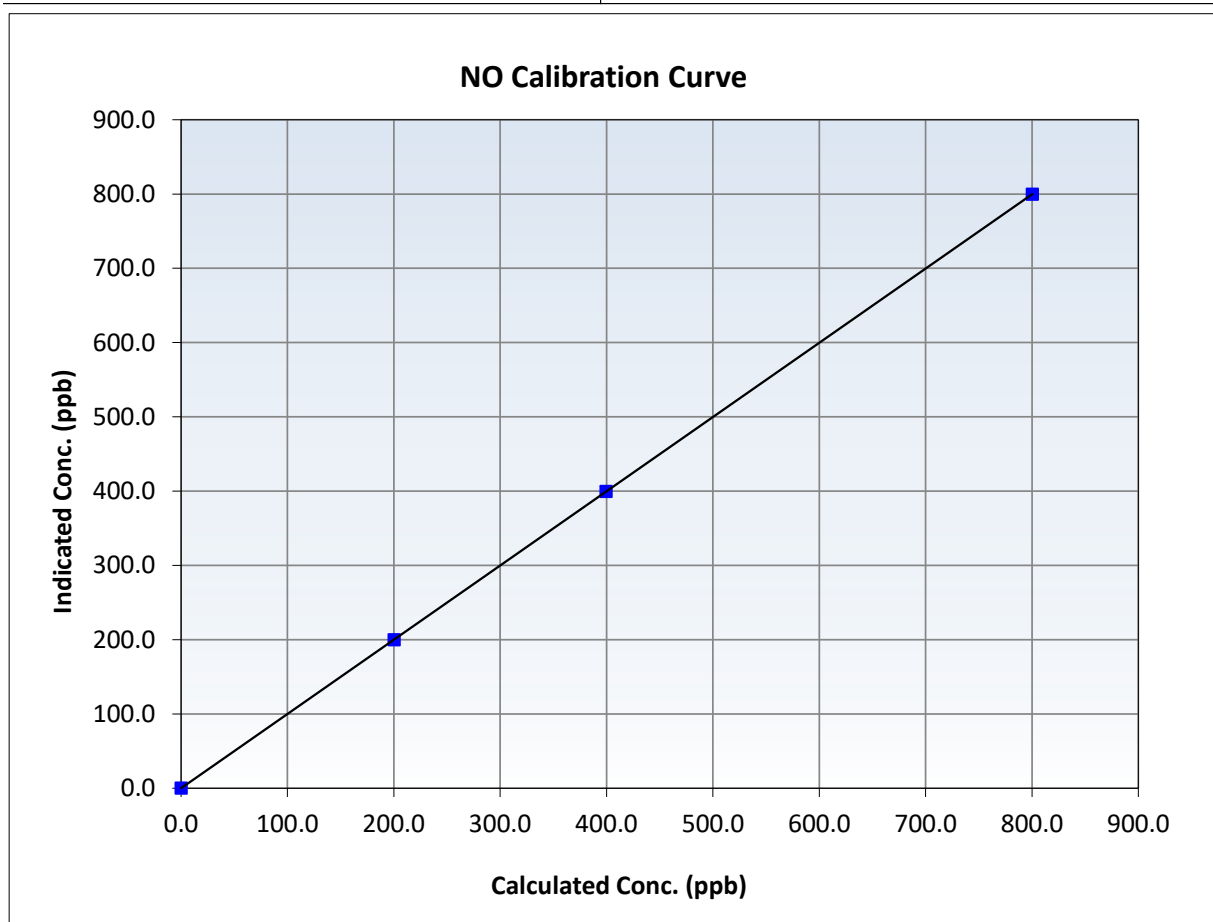
NO Calibration Summary

Station Information

Calibration Date:	July 22, 2026	Previous Calibration:	June 19, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:26	End Time (MST):	13:20
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262592

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.1	----	Correlation Coefficient	1.000000	≥ 0.995
800.4	800.0	1.0006	Slope	0.999441	0.90 - 1.10
399.6	399.5	1.0002	Intercept	0.014536	+/-20
200.4	200.1	1.0015			





Wood Buffalo Environmental Association

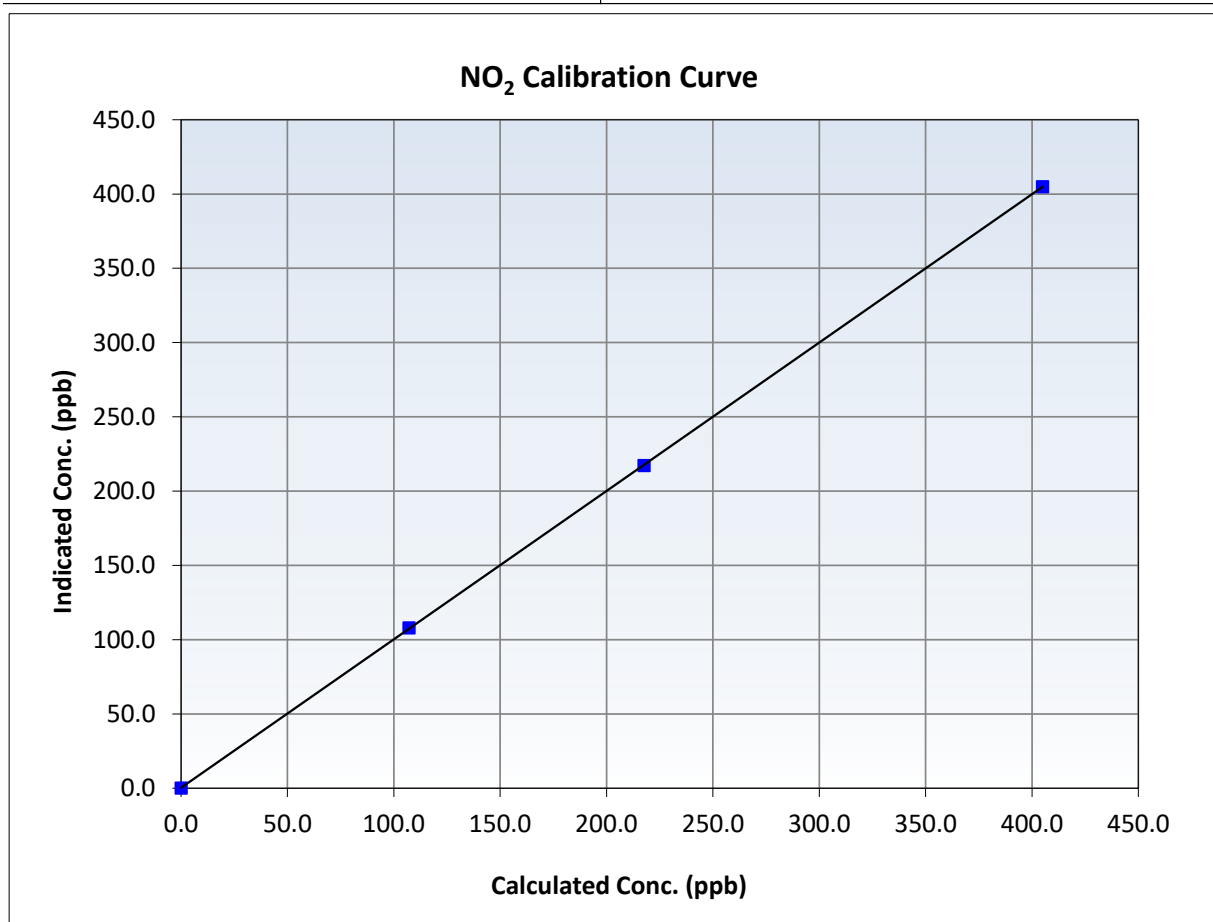
NO₂ Calibration Summary

Station Information

Calibration Date:	July 22, 2026	Previous Calibration:	June 19, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:26	End Time (MST):	13:20
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262592

Calibration Data

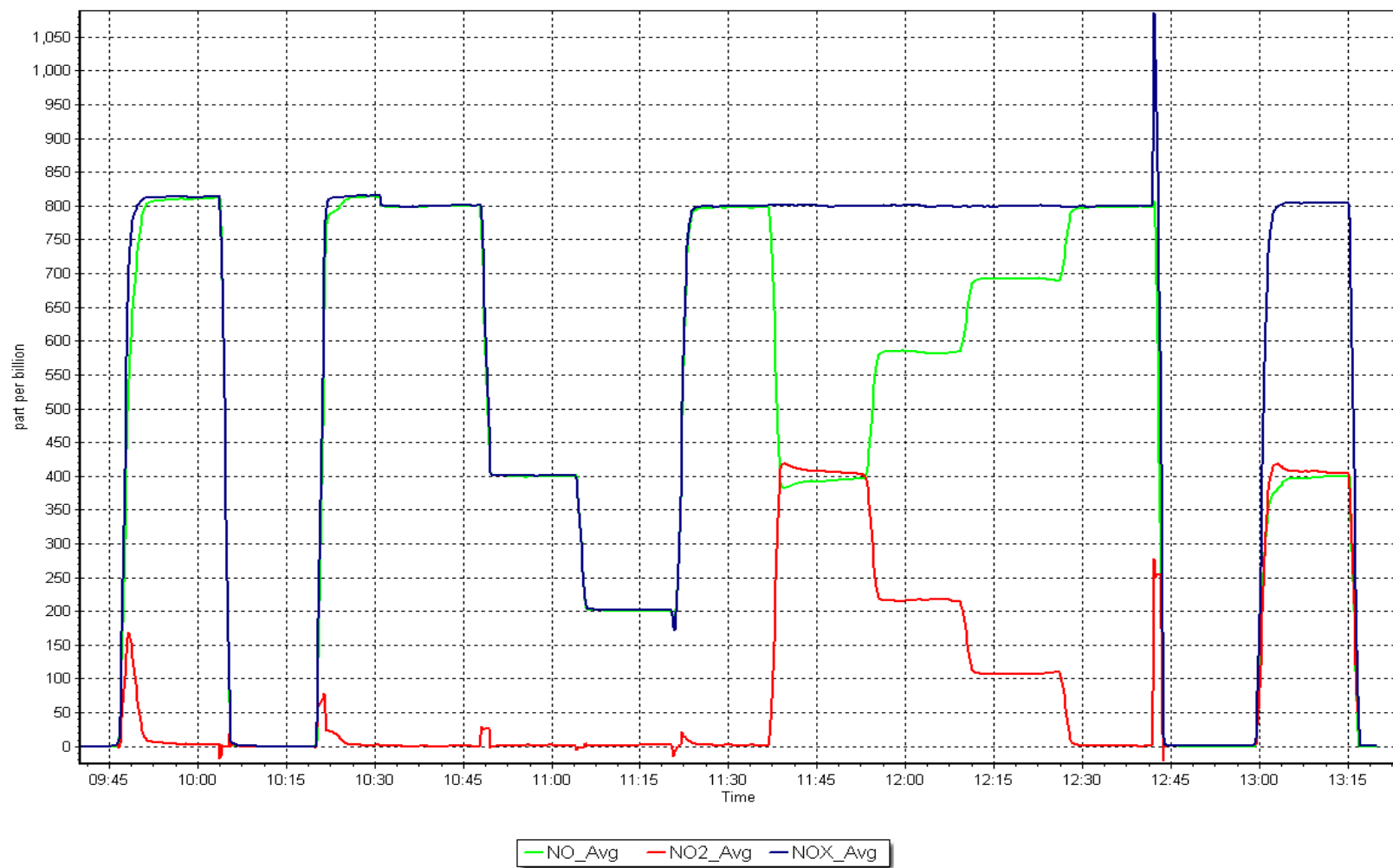
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999994	≥0.995
404.9	404.9	1.0001	Slope	0.998938	0.90 - 1.10
217.6	217.3	1.0015	Intercept	0.318169	+/-20
107.1	107.9	0.9929			



NO_x Calibration Plot

Date: July 22, 2026

Location: Fort Chipewyan





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Fort Chipewyan
Calibration Date: July 16, 2026
Start time (MST): 8:31
Reason: Routine

Station number: AMS 08
Last Cal Date: June 5, 2026
End time (MST): 11:24

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:	1.006514	1.009400	Backgd or Offset:	-2.7	-2.7
Calibration intercept:	0.660000	-0.420000	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	-1.2	----
As found High point	5000	968.7	400.0	402.6	0.991
As found Mid point					
As found Low point					
Baseline Corr As found:	403.8	Previous response	403.3	*% 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- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-1.5	----
High point	5000	968.7	400.0	402.9	0.993
Mid point	5000	820.5	200.0	201.7	0.992
Low point	5000	720.0	100.0	101.8	0.982
As left zero	5000	0.0	0.0	-1.8	----
As left span	5000	968.7	400.0	403.6	0.991
Average Correction Factor					0.989

Notes: Changed inlet filters after as founds. No adjustments made.

Calibration Performed By: Morgan Voyageur



Wood Buffalo Environmental Association

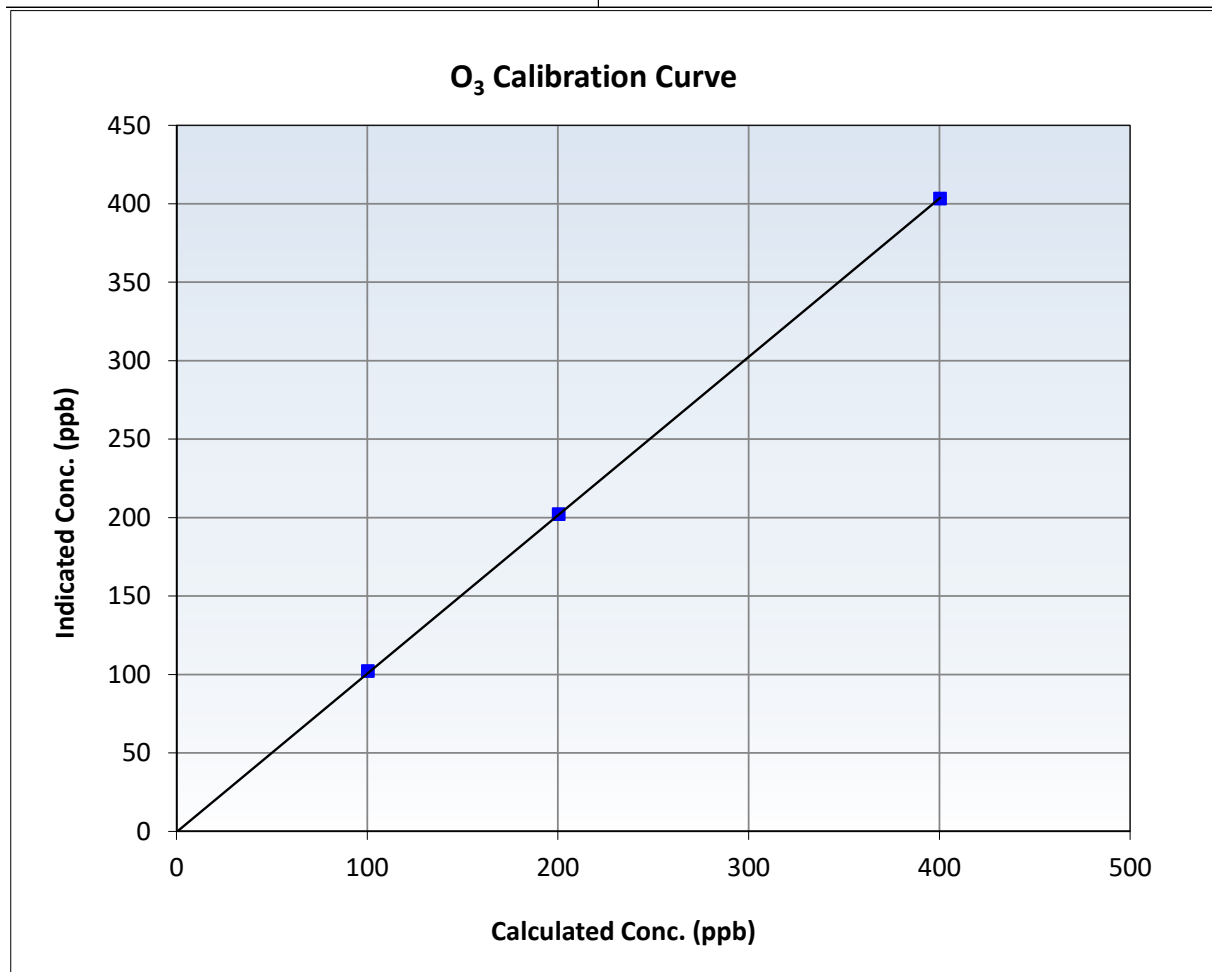
O₃ Calibration Summary

Station Information

Calibration Date:	July 16, 2026	Previous Calibration:	June 5, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	8:31	End Time (MST):	11:24
Analyzer make:	Thermo 49i	Analyzer serial #:	1152220026

Calibration Data

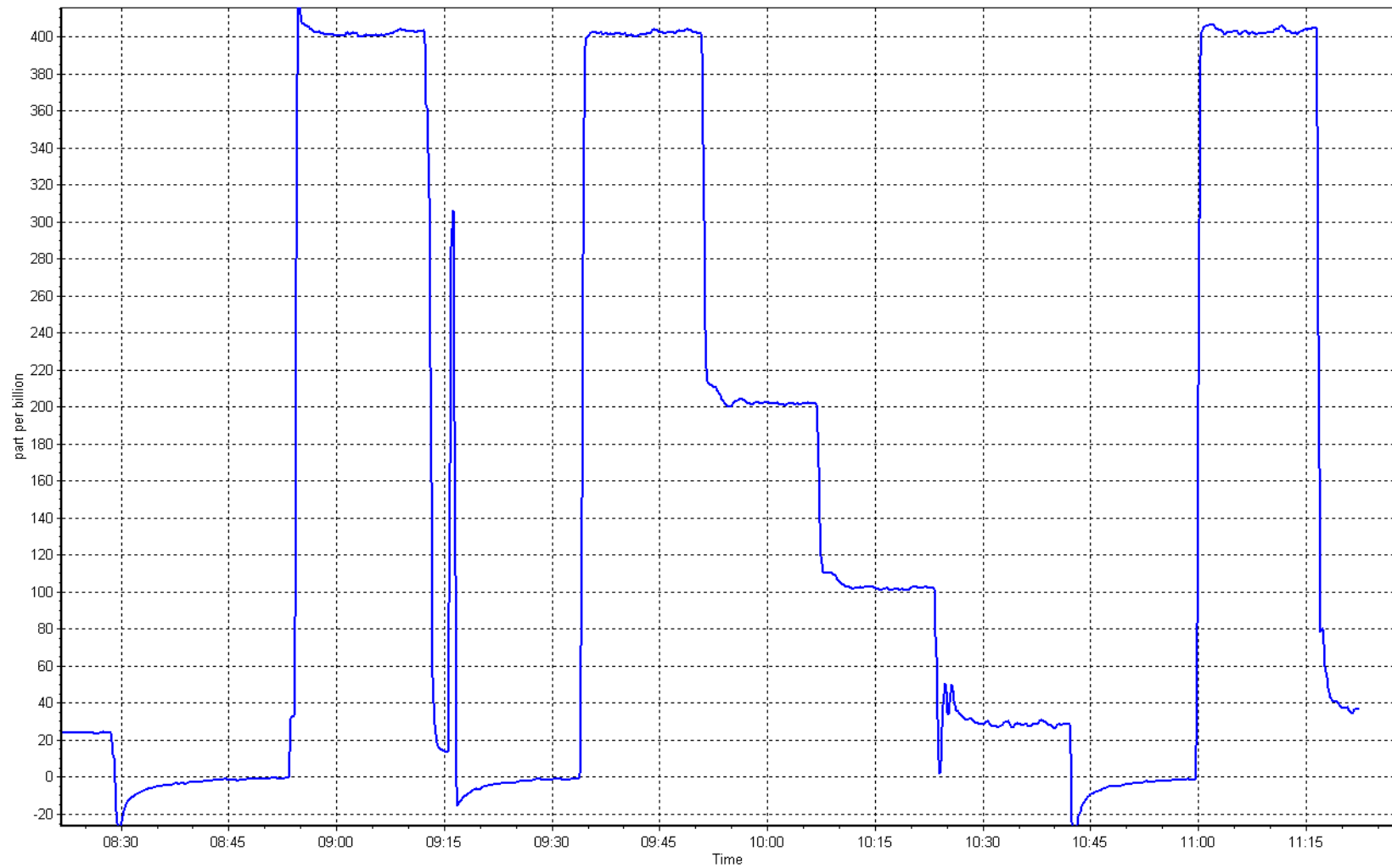
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-1.5	----	Correlation Coefficient	0.999966	≥0.995
400.0	402.9	0.9928	Slope	1.009400	0.90 - 1.10
200.0	201.7	0.9916	Intercept	-0.420000	+/- 5
100.0	101.8	0.9823			



O₃ Calibration Plot

Date: July 16, 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: July 23, 2026 Last Cal Date: June 23, 2026
Start time (MST): 8:40 End time (MST): 9:47

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)	20.2	19.70	20.2	☐	+/- 2 °C
P (mmHg)	730.6	732.10	730.6	☐	+/- 10 mmHg
Flow (LPM)	4.98	5.01	4.98	☐	+/- 0.25 LPM
PW% (pump)	40%	NA	40%	☐	>80%
Zero Verification	PM w/o HEPA: 3.52		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	10.9	☐	+/- 0.5

Date Optical Chamber Cleaned: July 23, 2026
Date Disposable Filter Changed: July 23, 2026

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

Annual Maintenance

Date Sample Tube Cleaned: July 23, 2026
Date RH/T Sensor Cleaned: July 23, 2026

Notes: No adjustments needed. Did all annual maintenance

Calibration by: Jermey Cardinal, Morgan Voyageru



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS09 BARGE LANDING JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Barge Landing
Calibration Date: July 28, 2026
Start time (MST): 9:45
Reason: Routine

Station number: AMS 09
Last Cal Date: June 12, 2026
End time (MST): 12:42

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:	1.005545	1.000045	Backgd or Offset:	12.3	12.2
Calibration intercept:	-0.778326	-0.578871	Coeff or Slope:	1.029	1.029

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	79.1	799.8	801.6	0.998
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	801.5	Previous response	803.5	*% 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	0.2	----
High point	4921	79.1	799.8	799.9	1.000
Mid point	4961	39.5	399.4	397.8	1.004
Low point	4980	19.8	200.2	199.3	1.005
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.1	799.8	792.3	1.010
Average Correction Factor:					1.003

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

Calibration Performed By: Ryan Power



Wood Buffalo Environmental Association

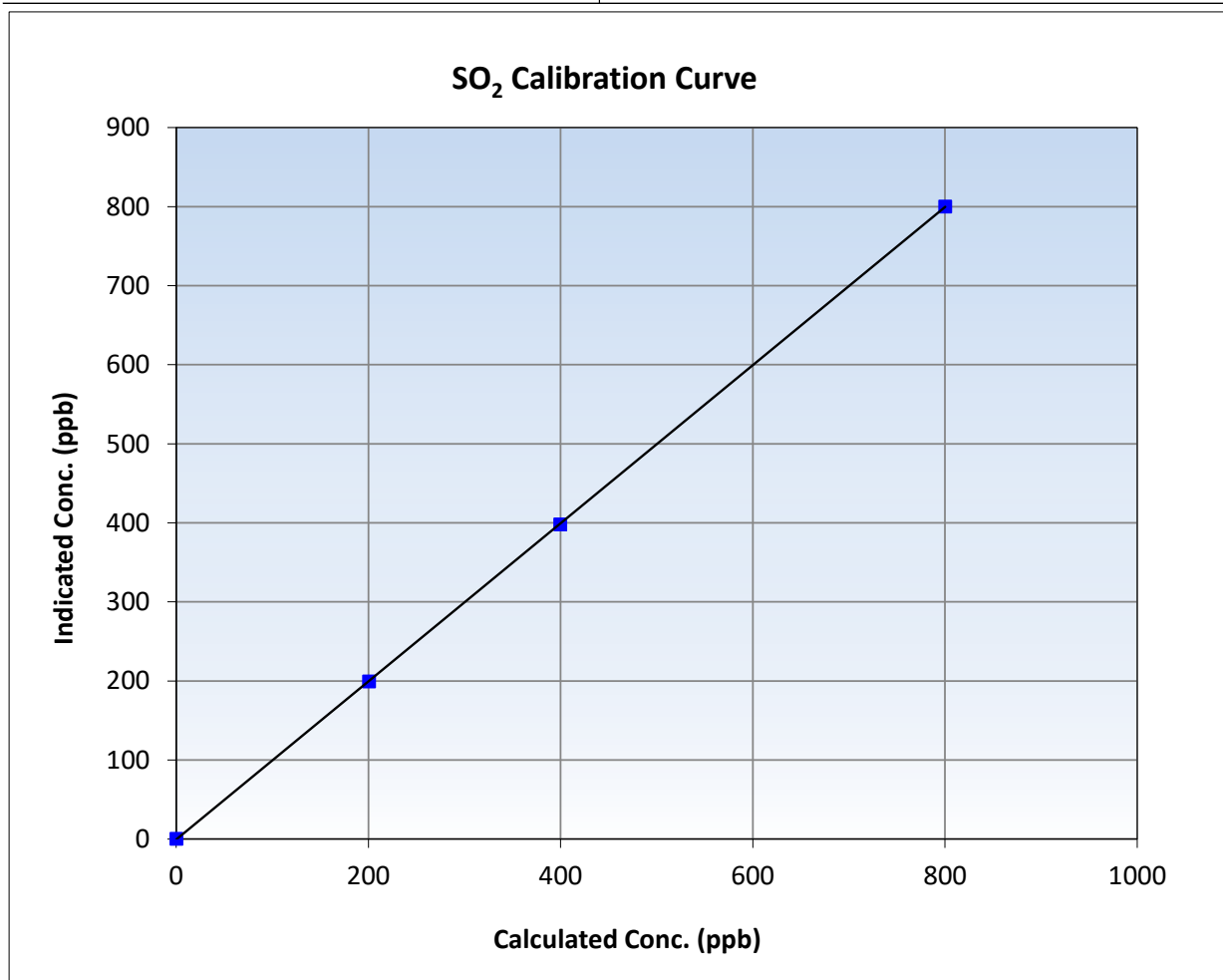
SO₂ Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 12, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:45	End Time (MST):	12:42
Analyzer make:	Thermo 43i	Analyzer serial #:	1118148498

Calibration Data

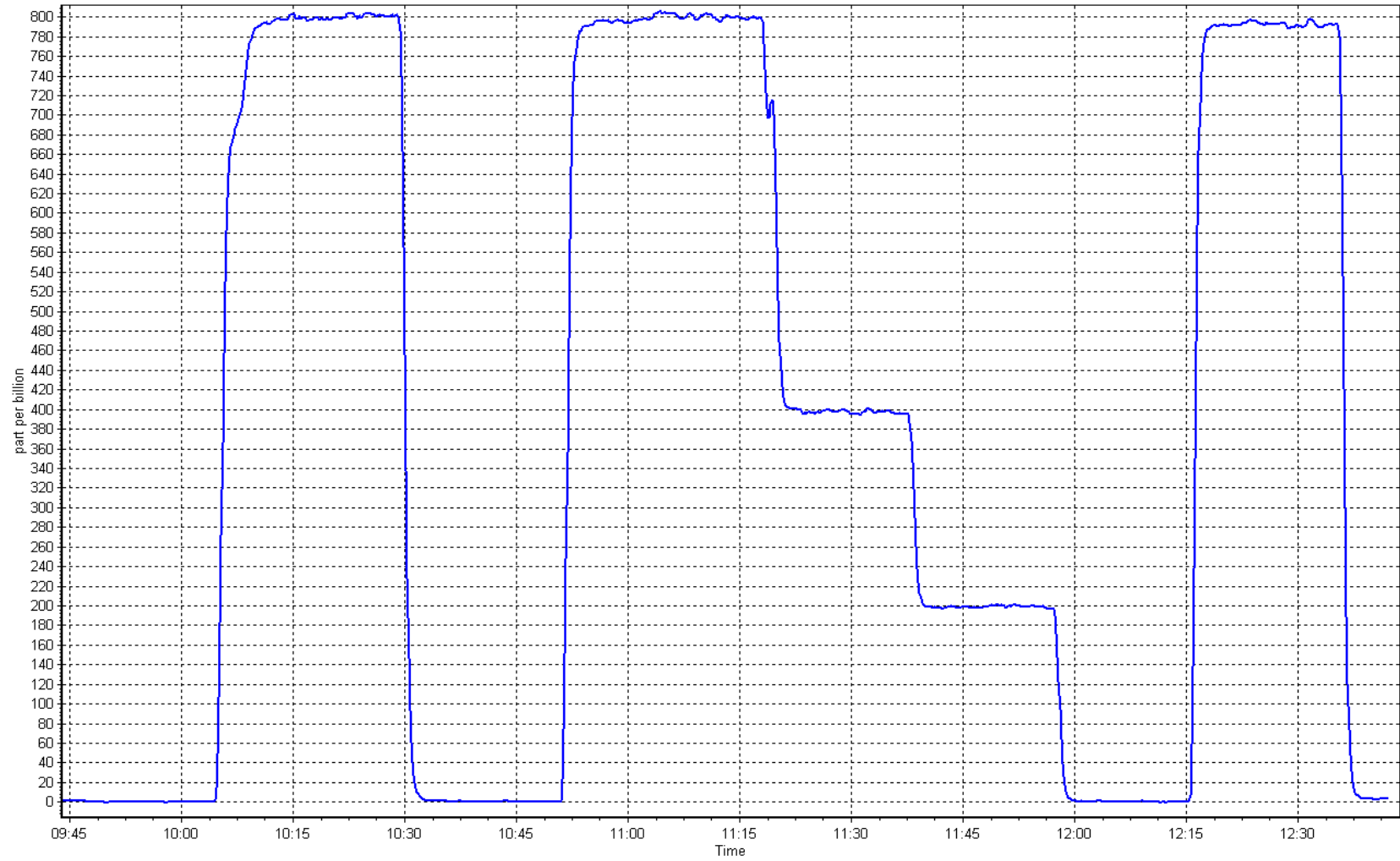
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999994	≥0.995
799.8	799.9	0.9999	Slope	1.000045	0.90 - 1.10
399.4	397.8	1.0040	Intercept	-0.578871	+/-30
200.2	199.3	1.0046			



SO2 Calibration Plot

Date: July 28, 2026

Location: Barge Landing





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Barge Landing
Calibration Date: July 7, 2026
Start time (MST): 9:14
Reason: Routine

Station number: AMS 09
Last Cal Date: June 8, 2026
End time (MST): 14:28

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:	1.000548	1.010827	Backgd or Offset:	1.860	1.830
Calibration intercept:	-0.000569	-0.060390	Coeff or Slope:	0.710	0.710

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	80.0	1.001
As found Mid point	4961	38.7	40.0	40.0	1.001
As found Low point	4981	19.3	20.0	20.0	0.998
New cylinder response					
Baseline Corr As found:	80.0	Prev response:	80.08	*% change:	-0.1%
Baseline Corr 2nd AF pt:	40.0	AF Slope:	0.999264	AF Intercept:	0.019407
Baseline Corr 3rd AF pt:	20.0	AF Correlation:	0.999999	* = > +/-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	80.9	0.989
Mid point	4961	38.7	40.0	40.3	0.993
Low point	4981	19.3	20.0	20.1	0.993
As left zero	5000	0.0	0.0	0.0	----
As left span	4923	77.4	80.0	81.2	0.986
SO2 Scrubber Check	4920	80.2	802.0	0.0	----
Date of last scrubber change:	8-Jul-25		Ave Corr Factor		0.992
Date of last converter efficiency test:					

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

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

TRS Calibration Summary

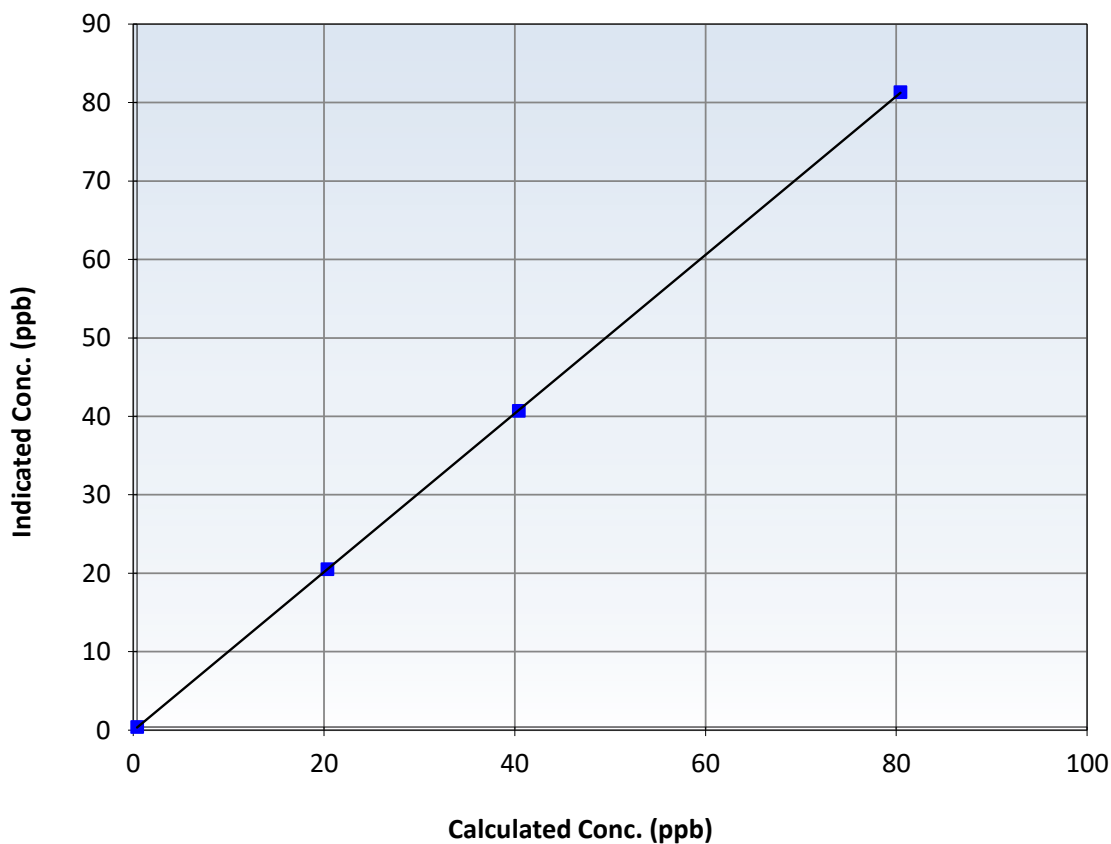
Station Information

Calibration Date:	July 7, 2026	Previous Calibration:	June 8, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:14	End Time (MST):	14:28
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	0.999995	≥ 0.995
80.0	80.9	0.9894	Slope	1.010827	$0.90 - 1.10$
40.0	40.3	0.9932	Intercept	-0.060390	± 3
20.0	20.1	0.9930			

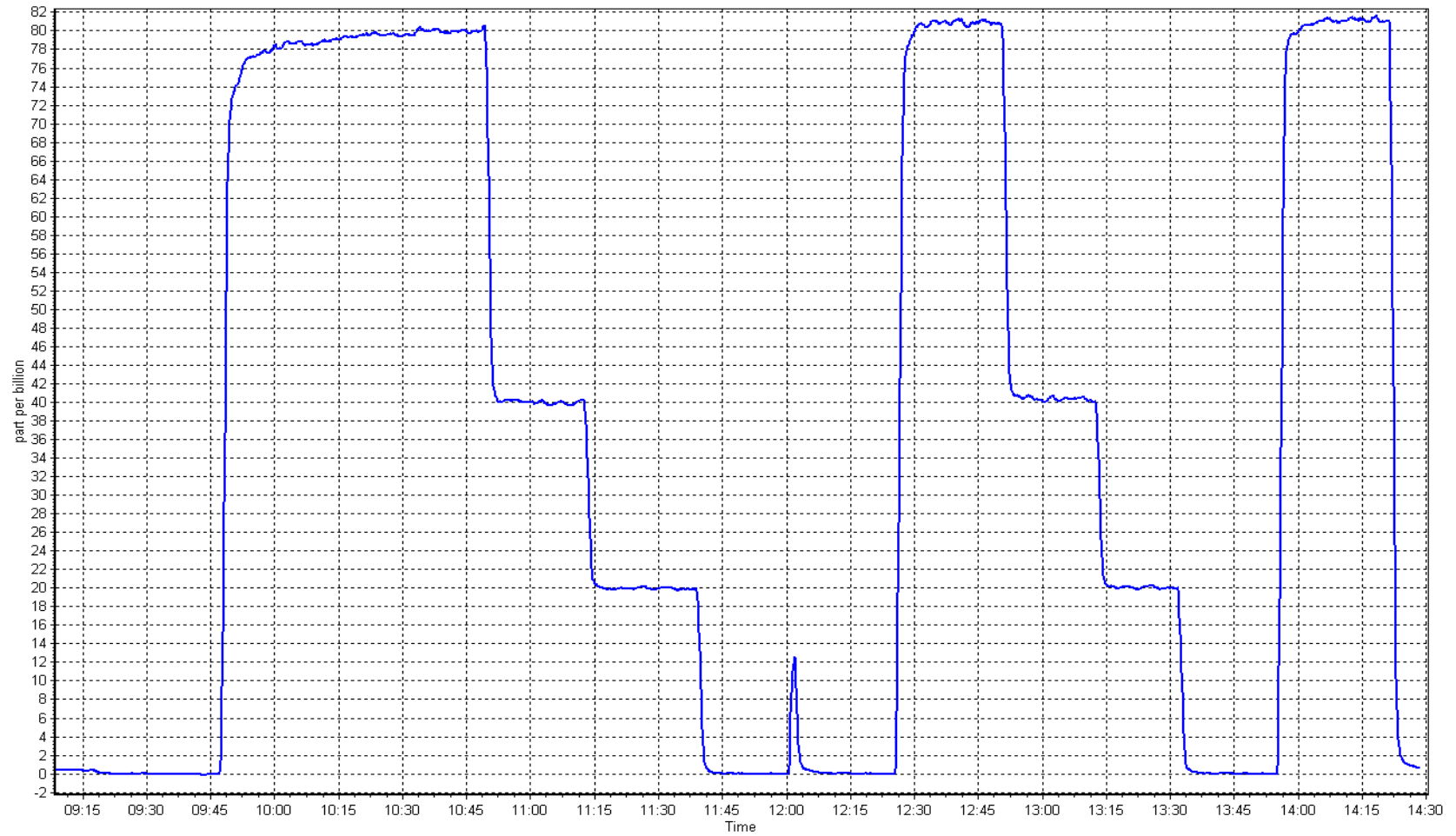
TRS Calibration Curve



TRS Calibration Plot

Date: July 7, 2026

Location: Barge Landing





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Barge Landing
 Calibration Date: July 28, 2026
 Start time (MST): 9:45
 Reason: Routine

Station number: AMS 09
 Last Cal Date: June 12, 2026
 End time (MST): 12:37

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:	2.34E-04	2.35E-04	NMHC SP Ratio:	5.63E-05
CH ₄ Retention time:	14.4	14.6	NMHC Peak Area:	158132
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF
				161025
				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	16.96	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.96	Prev response	16.89	*% 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	4921	79.1	16.91	16.91	1.000
Mid point	4961	39.5	8.44	8.35	1.011
Low point	4980	19.8	4.23	4.14	1.023
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	16.91	16.83	1.005
Average Correction Factor					1.011

Notes:

Inline filter changed after As Found. No adjustments needed.



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	9.02	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.02	Prev response	8.94	*% change	0.9%
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	8.91	1.000
Mid point	4961	39.5	4.45	4.39	1.013
Low point	4980	19.8	2.23	2.17	1.028
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	8.91	8.89	1.002
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))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.1	8.00	7.94	1.007
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.94	Prev response	7.94	*% change	0.0%
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	8.00	1.000
Mid point	4961	39.5	3.99	3.96	1.010
Low point	4980	19.8	2.00	1.97	1.018
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	8.00	7.94	1.007
Average Correction Factor					1.009

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.001167	1.001601
THC Cal Offset:	-0.041973	-0.058182
CH ₄ Cal Slope:	0.996000	1.001174
CH ₄ Cal Offset:	-0.022386	-0.021991
NMHC Cal Slope:	1.005293	1.001688
NMHC Cal Offset:	-0.019589	-0.035789

Calibration Performed By: Ryan Power



Wood Buffalo Environmental Association

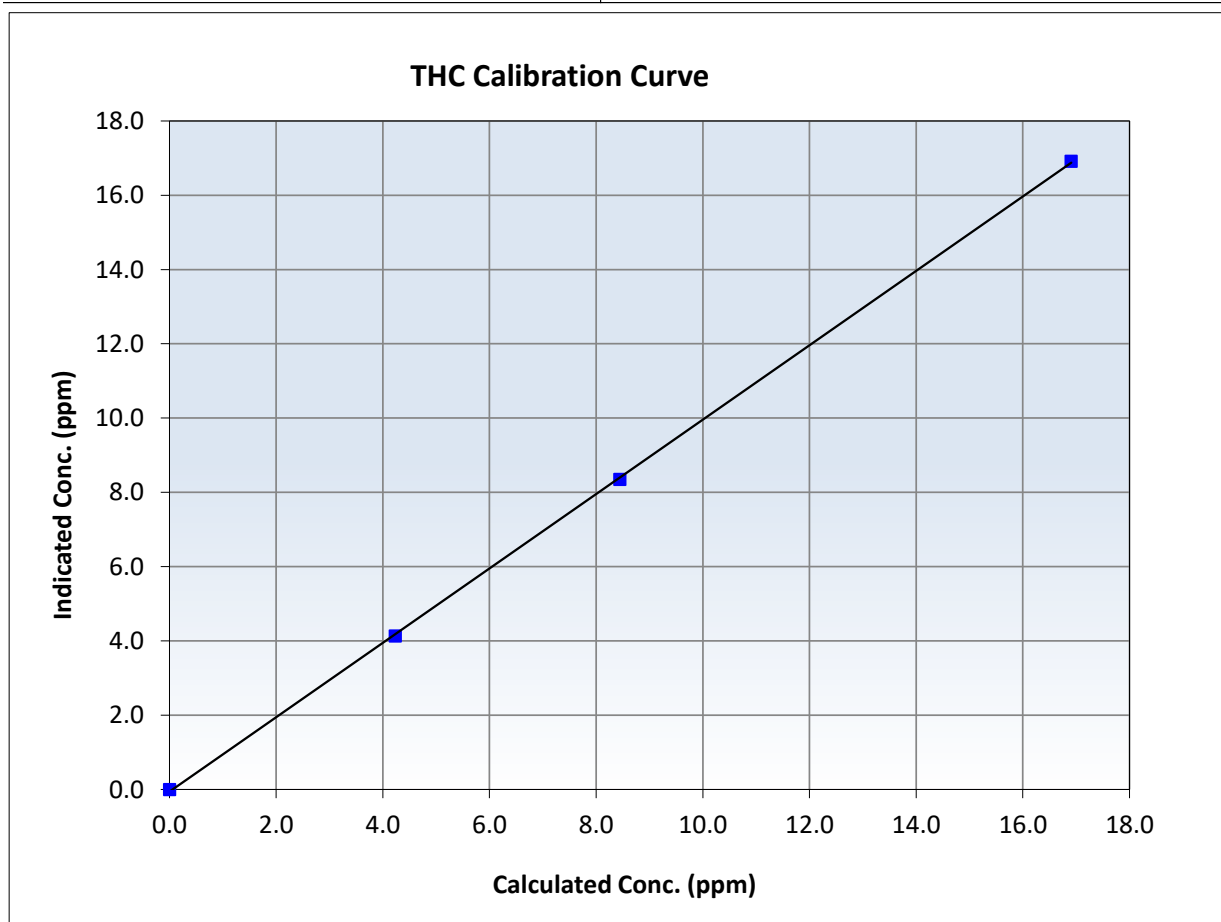
THC Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 12, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:45	End Time (MST):	12:37
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	0.999942	≥ 0.995
16.91	16.91	0.9997	Slope	1.001601	$0.90 - 1.10$
8.44	8.35	1.0113	Intercept	-0.058182	± 0.5
4.23	4.14	1.0231			





Wood Buffalo Environmental Association

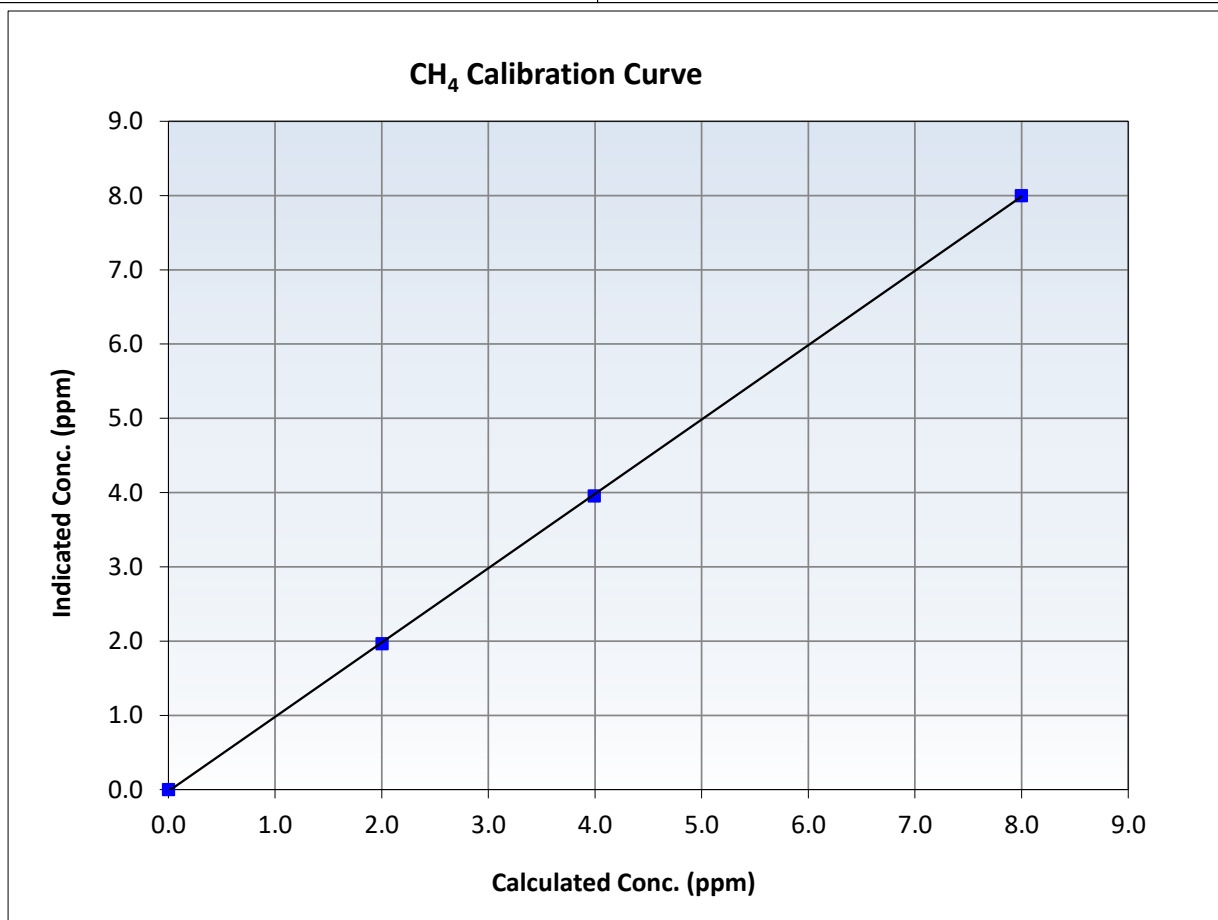
CH₄ Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 12, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:45	End Time (MST):	12:37
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	0.999961	<i>≥0.995</i>
8.00	8.00	0.9998	Slope	1.001174	<i>0.90 - 1.10</i>
3.99	3.96	1.0096	Intercept	-0.021991	<i>+/-0.5</i>
2.00	1.97	1.0179			





Wood Buffalo Environmental Association

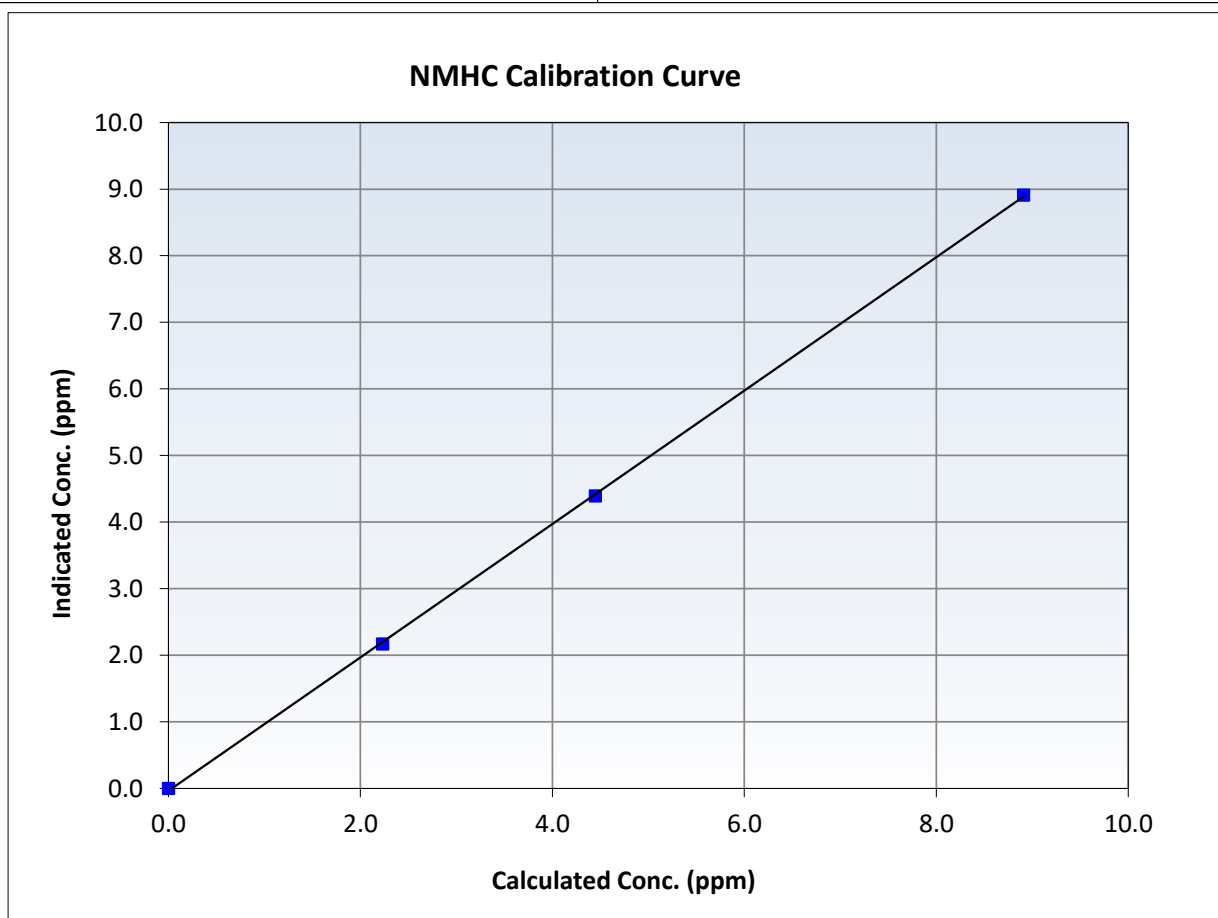
NMHC Calibration Summary

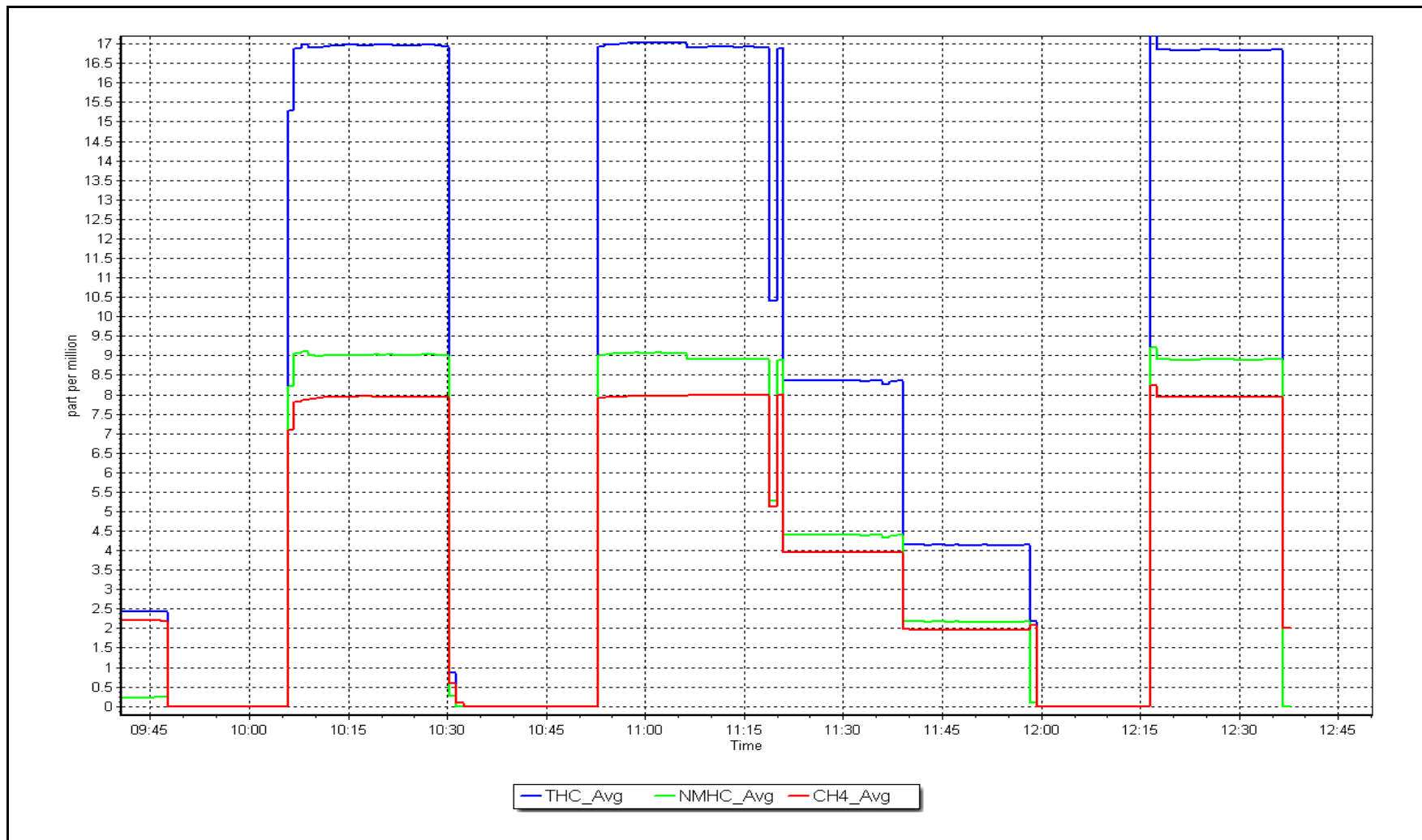
Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 12, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:45	End Time (MST):	12:37
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	0.999923	<i>≥0.995</i>
8.91	8.91	1.0000	Slope	1.001688	<i>0.90 - 1.10</i>
4.45	4.39	1.0127	Intercept	-0.035789	<i>+/-0.5</i>
2.23	2.17	1.0283			







Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Barge Landing
Station number: AMS 09
Calibration Date: July 10, 2026
Last Cal Date: June 1, 2026
Start time (MST): 9:45
End time (MST): 15:34
Reason: Install

Calibration Standards

NO Gas Cylinder #: T2Y1KDH
NOX Cal Gas Conc: 47.38 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 47.38 ppm
NOX 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 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 ppb

Serial Number: 1035

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.916		NO bkgnd or offset:	-25.1	
NOX coeff or slope:	0.912		NOX bkgnd or offset:	-24.0	
NO2 coeff or slope:	1.000		Reaction cell Press:	3.9	

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:		0.994718
NO _x Cal Offset:		2.507230
NO Cal Slope:		0.997620
NO Cal Offset:		1.405856
NO ₂ Cal Slope:		0.993724
NO ₂ Cal Offset:		-0.712559

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	1.8	1.8	0.0	----	----
High point	4915	85.3	808.3	800.8	7.5	806.2	800.1	6.0	1.0026	1.0009
Mid point	4957	42.6	403.7	400.0	3.7	404.4	401.4	3.0	0.9983	0.9964
Low point	4979	21.3	201.8	200.0	1.9	204.0	199.7	4.3	0.9893	1.0013
As left zero	5000	0.0	0.0	0.0	0.0	6.3	6.8	-0.5	----	----
As left span	4915	85.3	808.3	408.9	399.4	800.1	408.9	391.2	1.0103	1.0000
Average Correction Factor									0.9967	0.9995

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	794.8	403.3	399.0	396.6	1.0061	99.4%
Mid GPT point	794.8	590.0	212.3	209.5	1.0134	98.7%
Low GPT point	794.8	590.0	212.3	209.5	1.0134	98.7%
Average Correction Factor					1.0110	98.9%

Notes:

Swapped analyzer due to low NO2 readings. Adjusted zero and span.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

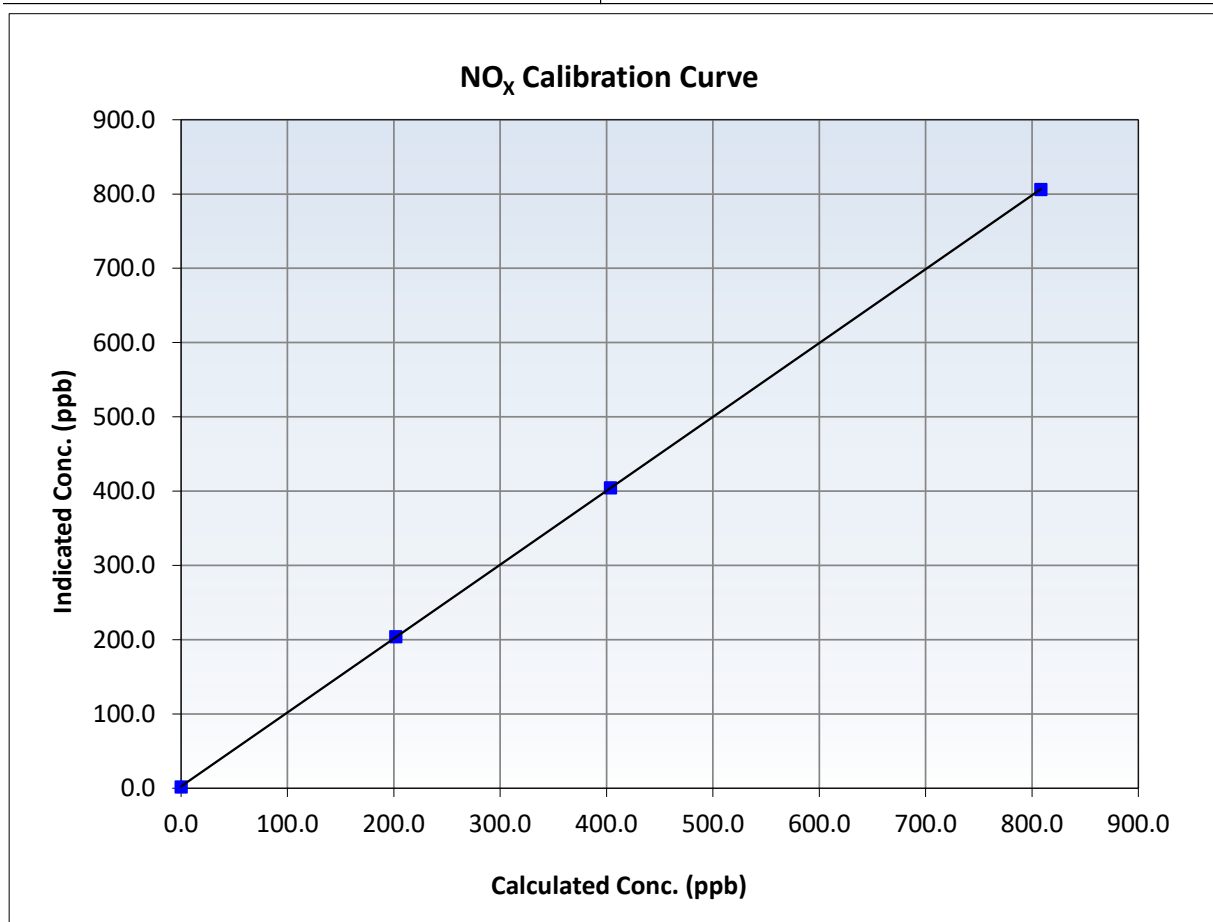
NO_x Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 1, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:45	End Time (MST):	15:34
Analyzer make:	Teledyne 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	1.8	----	Correlation Coefficient	0.999996	≥0.995
808.3	806.2	1.0026	Slope	0.994718	0.90 - 1.10
403.7	404.4	0.9983	Intercept	2.507230	+/-20
201.8	204.0	0.9893			





Wood Buffalo Environmental Association

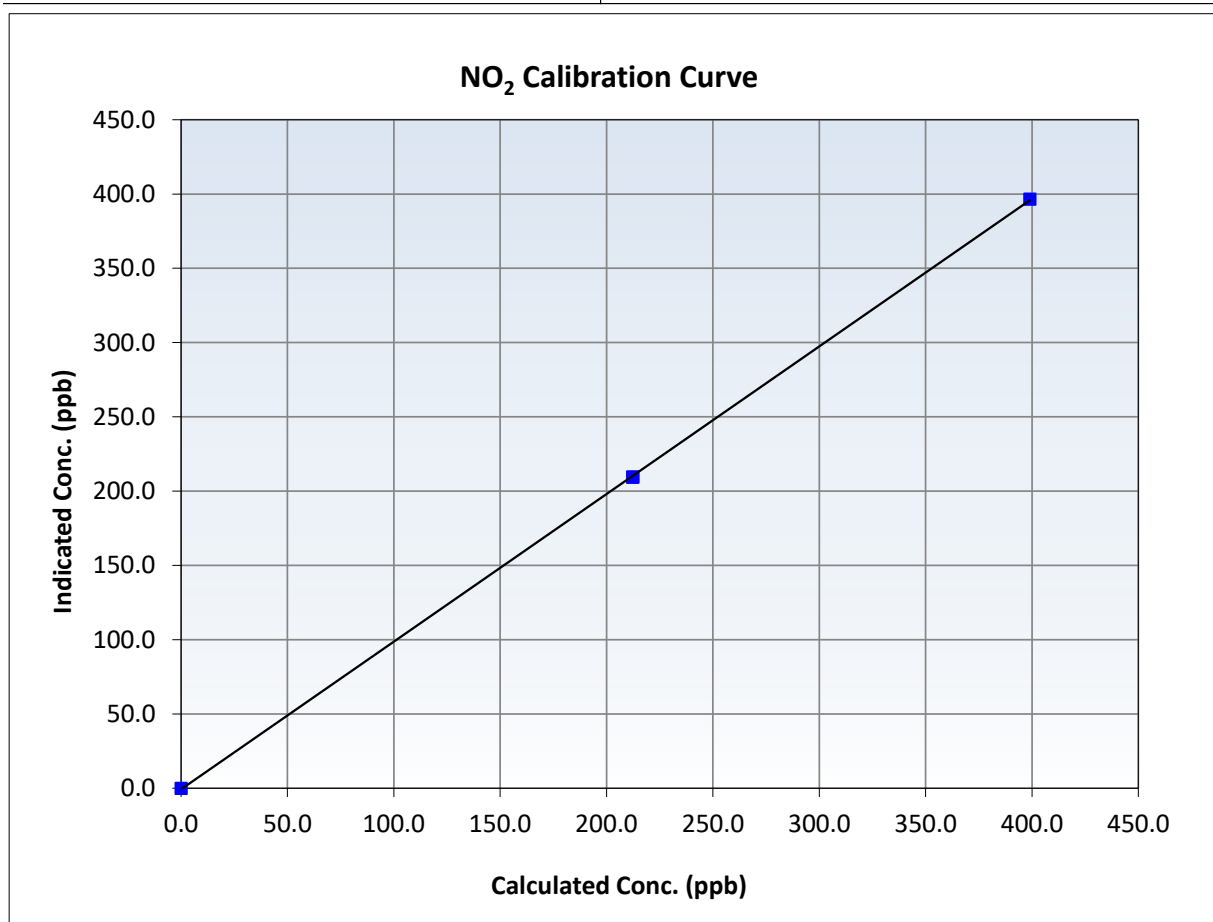
NO₂ Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 1, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:45	End Time (MST):	15:34
Analyzer make:	Teledyne 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	0.999970	≥ 0.995
399.0	396.6	1.0061	Slope	0.993724	$0.90 - 1.10$
212.3	209.5	1.0134	Intercept	-0.712559	± 20
212.3	209.5	1.0134			





Wood Buffalo Environmental Association

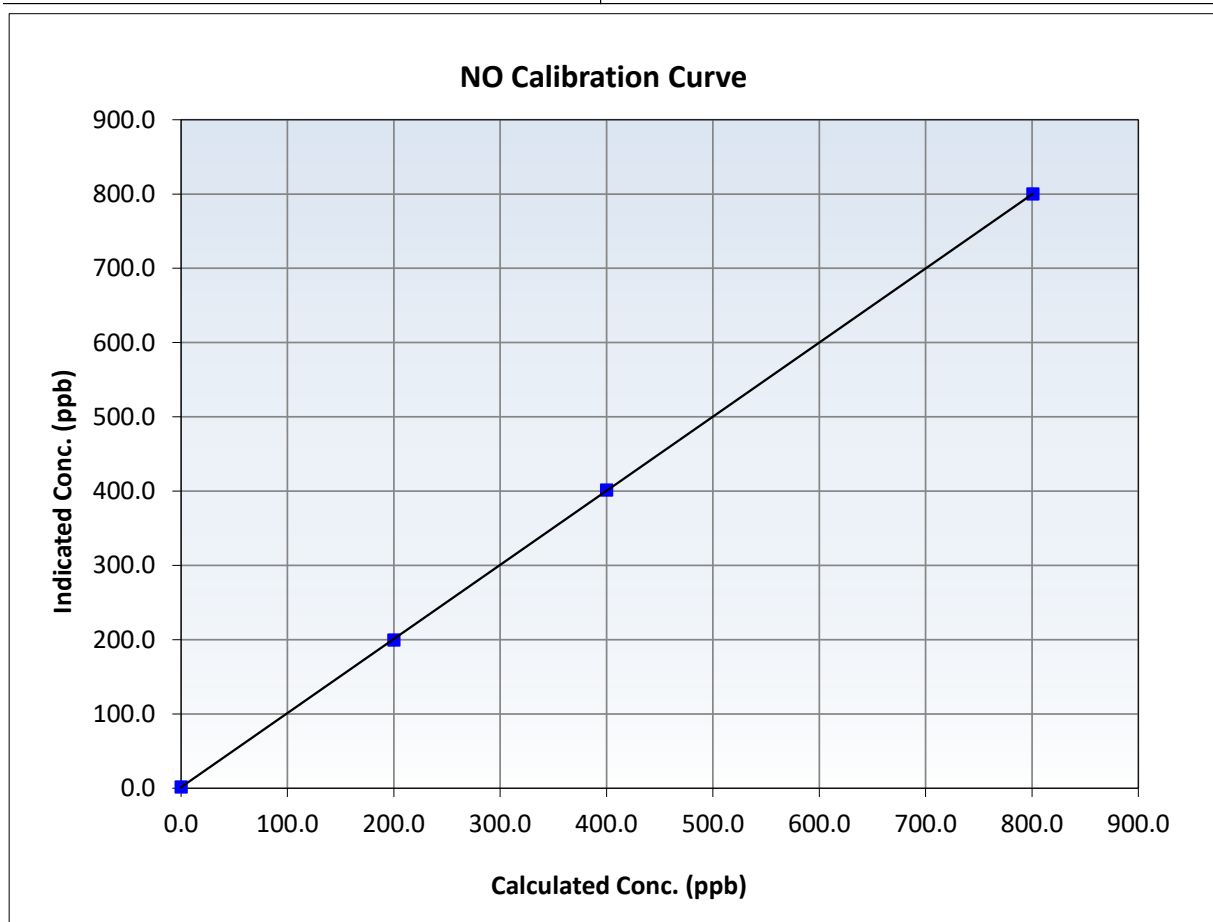
NO Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 1, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:45	End Time (MST):	15:34
Analyzer make:	Teledyne API T200	Analyzer serial #:	1035

Calibration Data

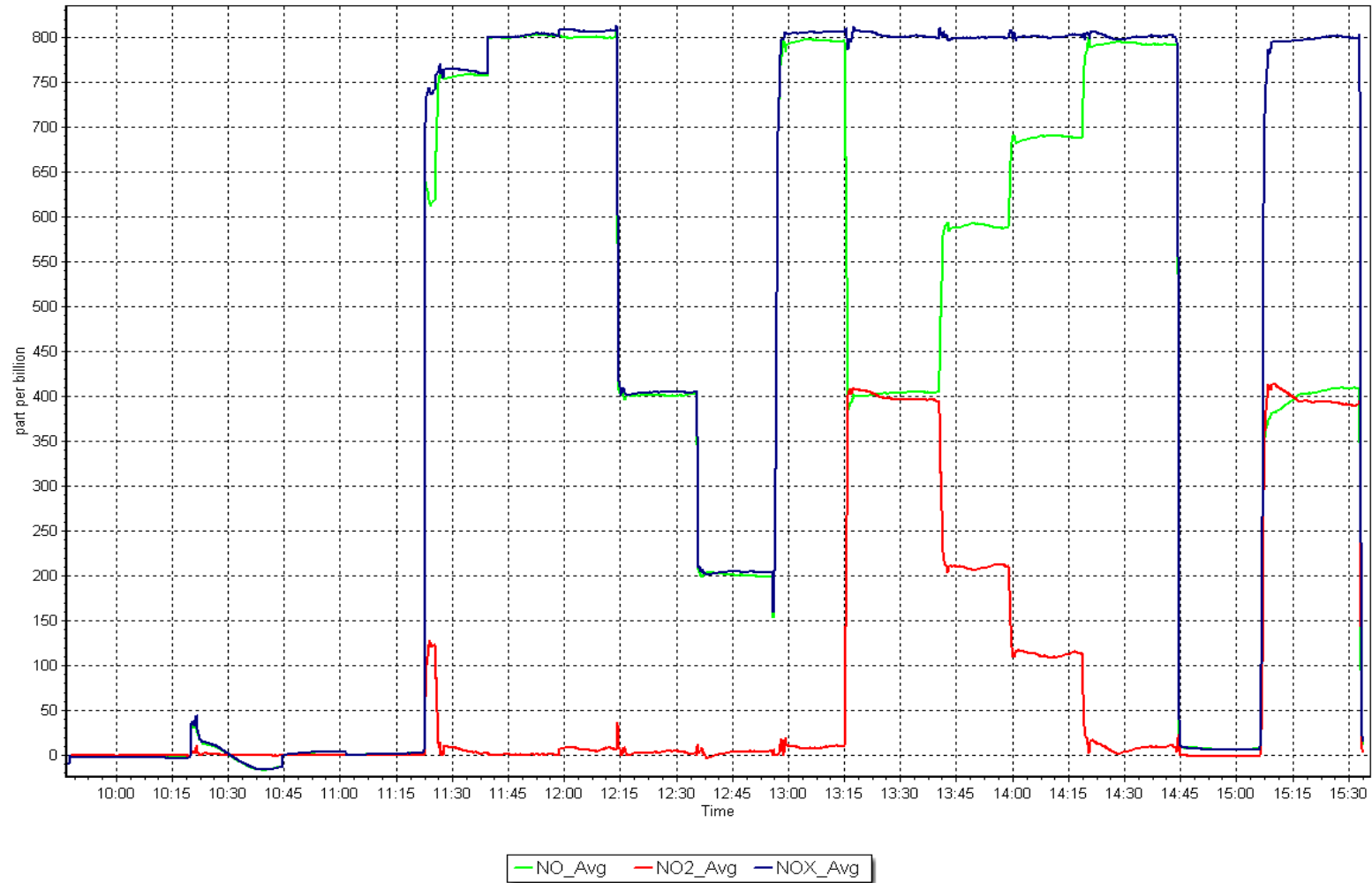
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	1.8	----	Correlation Coefficient	0.999993	≥ 0.995
800.8	800.1	1.0009	Slope	0.997620	$0.90 - 1.10$
400.0	401.4	0.9964	Intercept	1.405856	± 20
200.0	199.7	1.0013			



NO_x Calibration Plot

Date: July 10, 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: July 14, 2026
Last Cal Date: July 10, 2026
Start time (MST): 10:25
End time (MST): 16:00
Reason: Maintenance

Calibration Standards

NO Gas Cylinder #: T2Y1KDH
NOX Cal Gas Conc: 47.38 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 47.38 ppm
NOX 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 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	8.0	8.3	-0.3	----	----
AF High point	4915	85.3	808.3	800.8	7.5	783.6	779.3	4.3	1.0422	1.0386
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 806.5 ppb	NO = 800.3 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -4.0%	
Baseline Corr 1st pt	NO _x = 775.6 ppb	NO = 771.0 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -3.8%	
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 :	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 ppb

Serial Number: 1035

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.916	0.952	NO bkgnd or offset:	-25.1	-4.9
NOX coeff or slope:	0.912	0.952	NOX bkgnd or offset:	-24.0	-4.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	3.9	3.9

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.994718	1.001252
NO _x Cal Offset:	2.507230	-0.852331
NO Cal Slope:	0.997620	1.002932
NO Cal Offset:	1.405856	-2.054149
NO ₂ Cal Slope:	0.993724	1.000855
NO ₂ Cal Offset:	-0.712559	-0.809619

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	-0.3	-0.1	-0.2	----	----
High point	4915	85.3	808.3	800.8	7.5	809.0	802.0	7.0	0.9991	0.9985
Mid point	4957	42.6	403.7	400.0	3.7	402.3	398.3	4.0	1.0035	1.0042
Low point	4979	21.3	201.8	200.0	1.9	201.2	196.4	4.8	1.0031	1.0181
As left zero	5000	0.0	0.0	0.0	0.0	0.6	0.9	-0.2	----	----
As left span	4915	85.3	808.3	412.9	395.4	807.3	412.9	394.4	1.0012	1.0000
Average Correction Factor									1.0019	1.0069

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	799.6	408.2	398.9	399.2	0.9993	100.1%
Mid GPT point	799.6	593.5	213.6	211.5	1.0100	99.0%
Low GPT point	799.6	695.5	111.6	111.0	1.0055	99.5%
Average Correction Factor					1.0049	99.5%

Notes: Maintenance calibration to adjust baseline drift observed since install. Swapped inlet filter after as founds. Adjusted zero and span.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

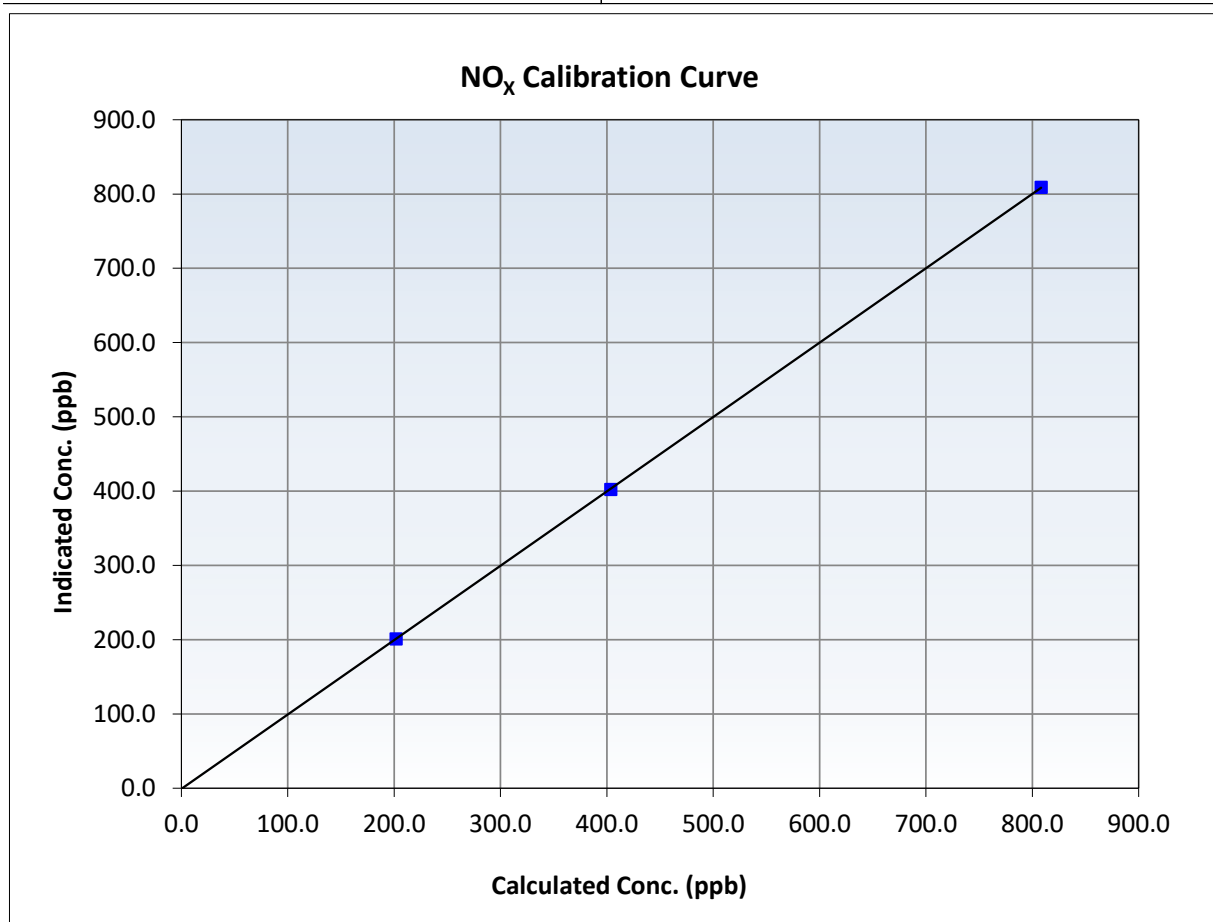
NO_x Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	July 10, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:25	End Time (MST):	16:00
Analyzer make:	Teledyne API T200	Analyzer serial #:	1035

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.0	-0.3	----	Correlation Coefficient	0.999995	<i>≥0.995</i>
808.3	809.0	0.9991	Slope	1.001252	<i>0.90 - 1.10</i>
403.7	402.3	1.0035	Intercept	-0.852331	<i>+/-20</i>
201.8	201.2	1.0031			





Wood Buffalo Environmental Association

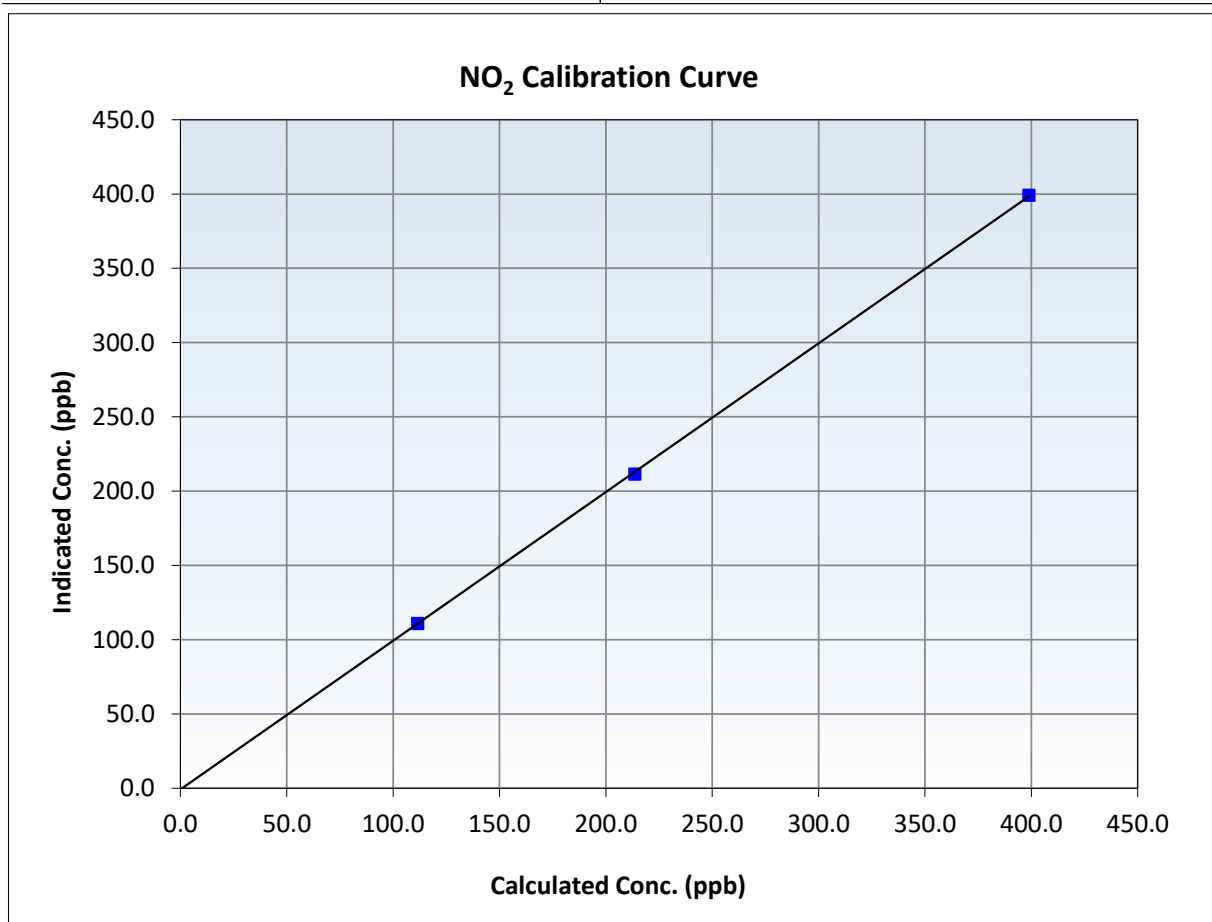
NO₂ Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	July 10, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:25	End Time (MST):	16:00
Analyzer make:	Teledyne 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	-0.2	----	Correlation Coefficient	0.999963	≥ 0.995
398.9	399.2	0.9993	Slope	1.000855	0.90 - 1.10
213.6	211.5	1.0100	Intercept	-0.809619	+/-20
111.6	111.0	1.0055			





Wood Buffalo Environmental Association

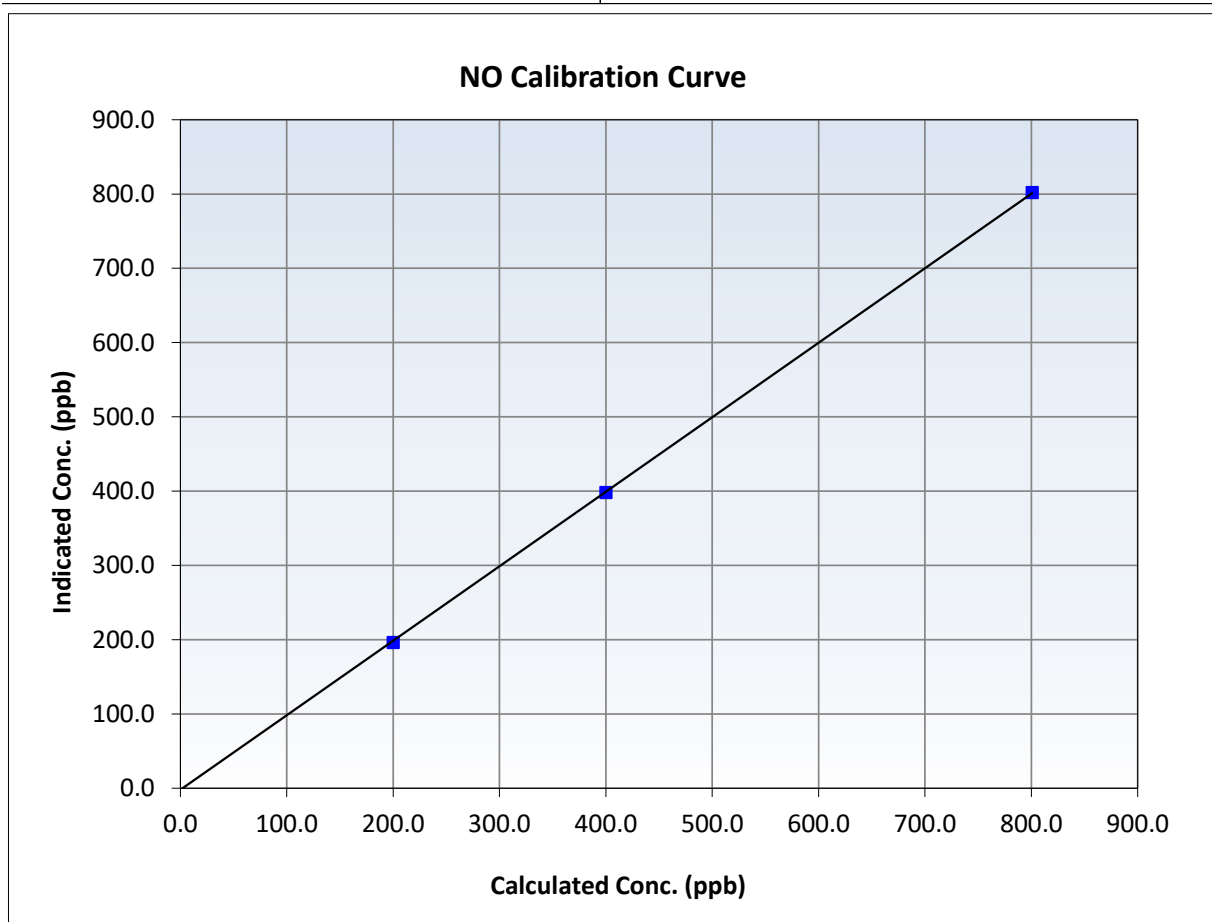
NO Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	July 10, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:25	End Time (MST):	16:00
Analyzer make:	Teledyne API T200	Analyzer serial #:	1035

Calibration Data

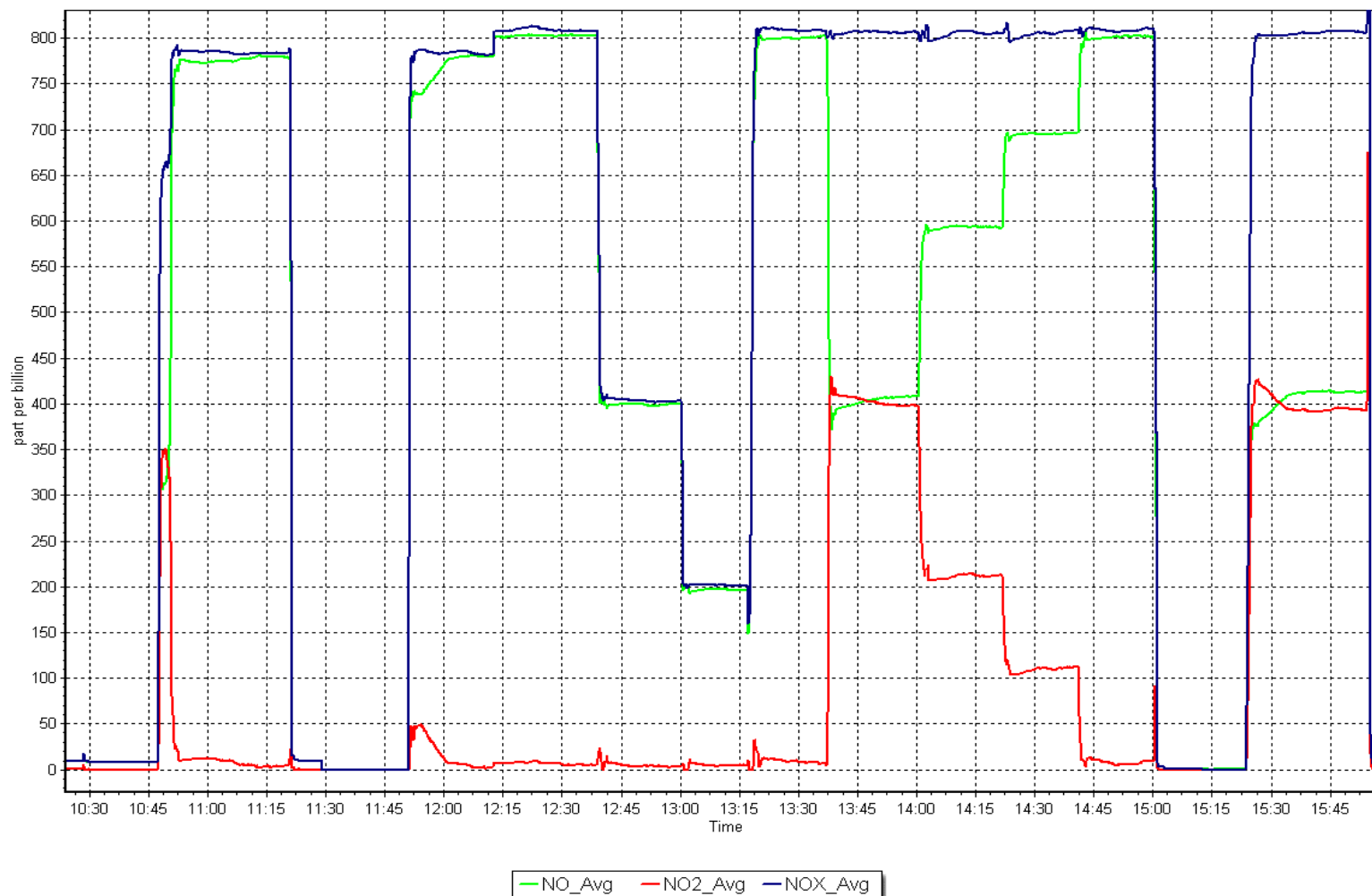
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999973	≥ 0.995
800.8	802.0	0.9985	Slope	1.002932	$0.90 - 1.10$
400.0	398.3	1.0042	Intercept	-2.054149	± 20
200.0	196.4	1.0181			



NO_x Calibration Plot

Date: July 14, 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: July 14, 2026 Last Cal Date: June 1, 2026
Start time (MST): 10:36 End time (MST): 12:54

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

Flow Meter Make/Model: Alicat FP-25 S/N: 388750
Temp/RH standard: Alicat FP-25 S/N: 388750

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	22.5	22.60	22.5	☐	+/- 2 °C
P (mmHg)	740.1	739.55	740.1	☐	+/- 10 mmHg
Flow (LPM)	5.02	5.093	5.025	☒	+/- 0.25 LPM
PW% (pump)	33	----	28	☐	>80%
Zero Verification	PM w/o HEPA: 19.0		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: January 30, 2027
Lot No.: 100128-050-042

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	9.0	10.7	10.7	☐	+/- 0.5

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

Post- maintenance Zero Verification: PM w/ HEPA: 0.0 <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. Quarterly cleaning completed. Adjusted flow post cleaning.

Calibration by: Braiden Boutilier



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS11 LOWER CAMP JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Lower Camp Station number: AMS 11
Calibration Date: July 27, 2026 Last Cal Date: June 12, 2026
Start time (MST): 9:41 End time (MST): 12:34
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:	0.999730	1.000700	Backgd or Offset:	19.7	19.7
Calibration intercept:	0.886823	1.747027	Coeff or Slope:	1.027	1.022

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	803.7	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	803.5	Previous response	801.1	*% 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	0.4	----
High point	4918	82.1	800.5	802.4	0.998
Mid point	4959	41.1	400.7	402.5	0.996
Low point	4980	20.5	199.9	203.7	0.981
As left zero	5000	0.0	0.0	0.3	----
As left span	4918	82.1	800.5	803.1	0.997
Average Correction Factor:					0.991

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

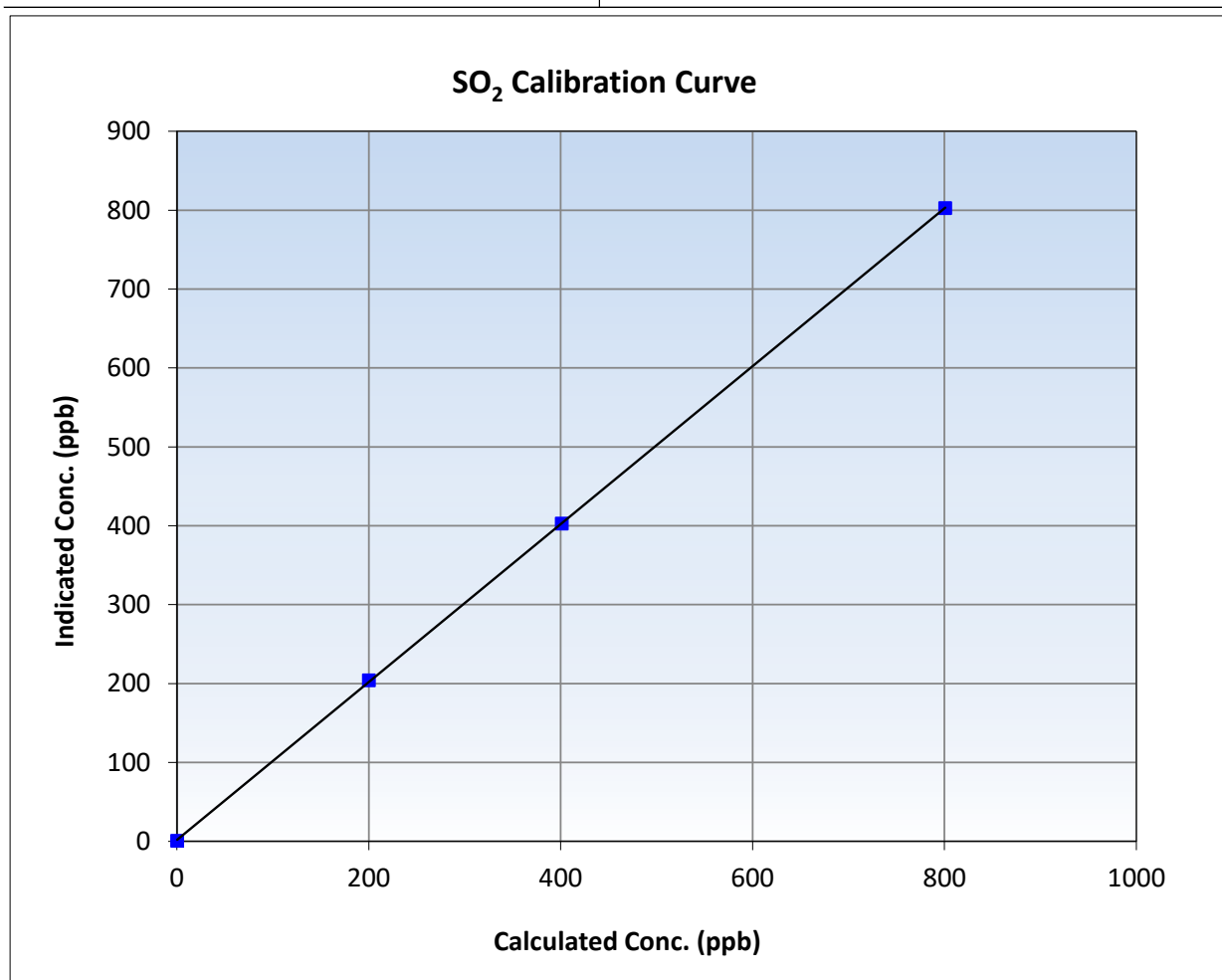
SO₂ Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 12, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:41	End Time (MST):	12:34
Analyzer make:	Thermo 43i	Analyzer serial #:	100841398

Calibration Data

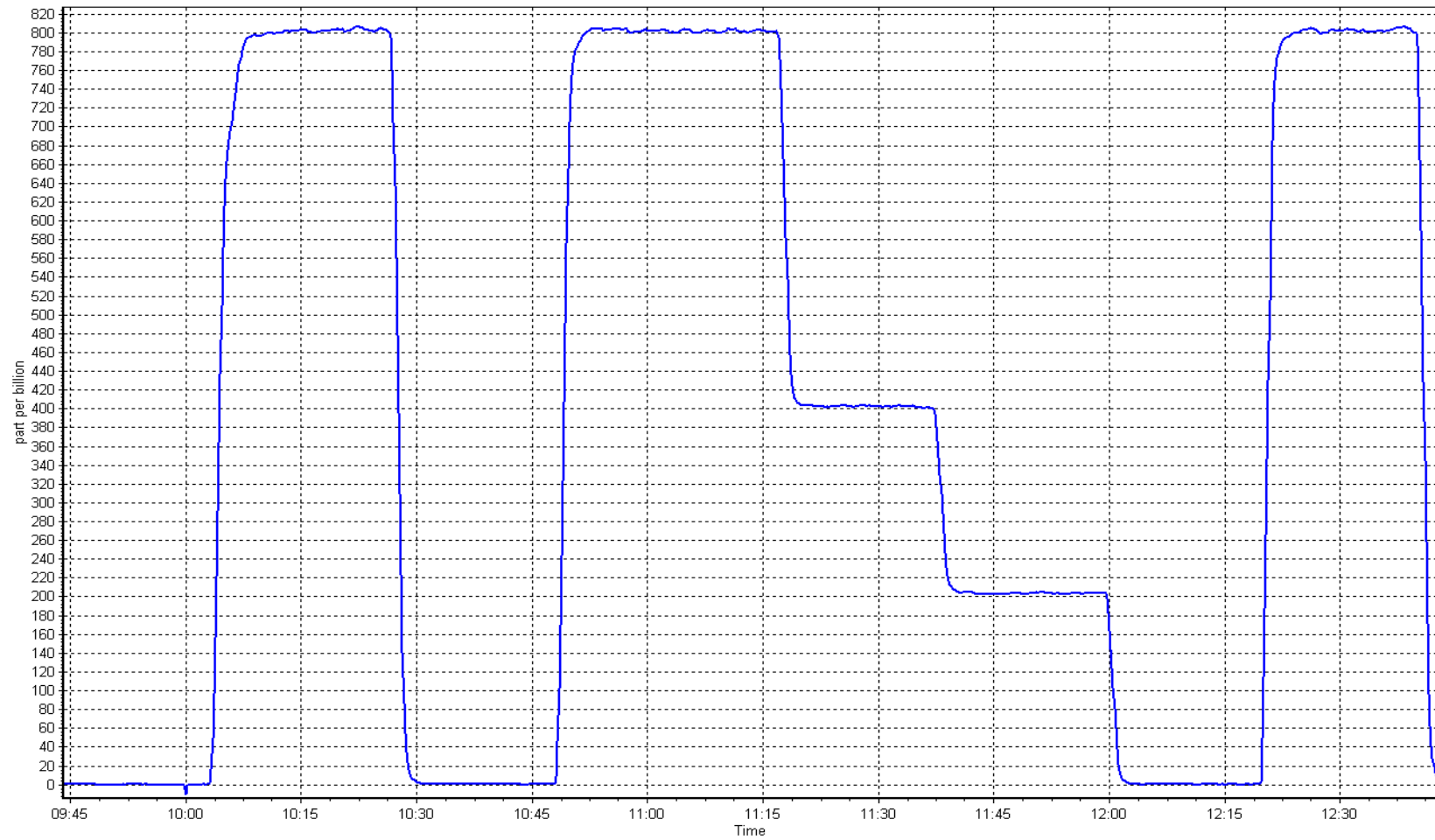
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999983	≥0.995
800.5	802.4	0.9976	Slope	1.000700	0.90 - 1.10
400.7	402.5	0.9956	Intercept	1.747027	+/-30
199.9	203.7	0.9811			



SO2 Calibration Plot

Date: June 12, 2026

Location: Lower Camp





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Lower Camp Station number: AMS 11
Calibration Date: July 22, 2026 Last Cal Date: June 10, 2026
Start time (MST): 9:48 End time (MST): 13:43
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:	1.003445	1.000444	Backgd or Offset:	2.5
Calibration intercept:	0.260807	0.340806	Coeff or Slope:	0.802

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	82.8	80.0	82.4	0.972
As found Mid point	4959	41.4	40.0	41.7	0.961
As found Low point	4979	20.7	20.0	21.2	0.948
New cylinder response					
Baseline Corr As found:	82.3	Prev response:	80.52	*% change:	2.2%
Baseline Corr 2nd AF pt:	41.6	AF Slope:	1.027305	AF Intercept:	0.400831
Baseline Corr 3rd AF pt:	21.1	AF Correlation:	0.999937	* = > +/-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	82.8	80.0	80.2	0.997
Mid point	4959	41.4	40.0	40.5	0.987
Low point	4979	20.7	20.0	20.7	0.966
As left zero	5000	0.0	0.0	0.1	----
As left span	4923	82.8	79.9	79.7	1.002
SO ₂ Scrubber Check	4932	82.2	819.7	0.0	----
Date of last scrubber change:				Ave Corr Factor	0.984
Date of last converter efficiency test:					

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

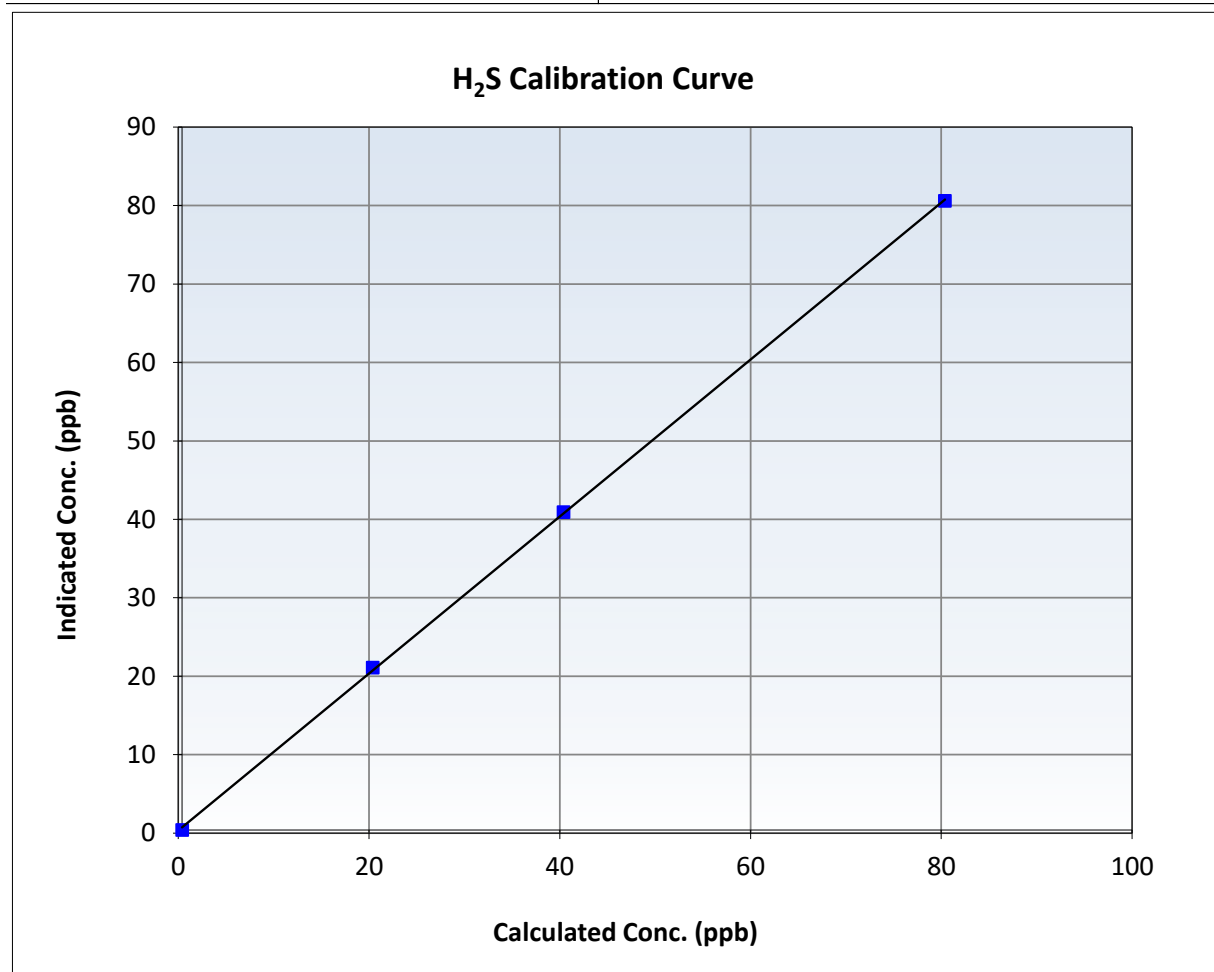
H₂S Calibration Summary

Station Information

Calibration Date:	July 22, 2026	Previous Calibration:	June 10, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:48	End Time (MST):	13:43
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	1203169745

Calibration Data

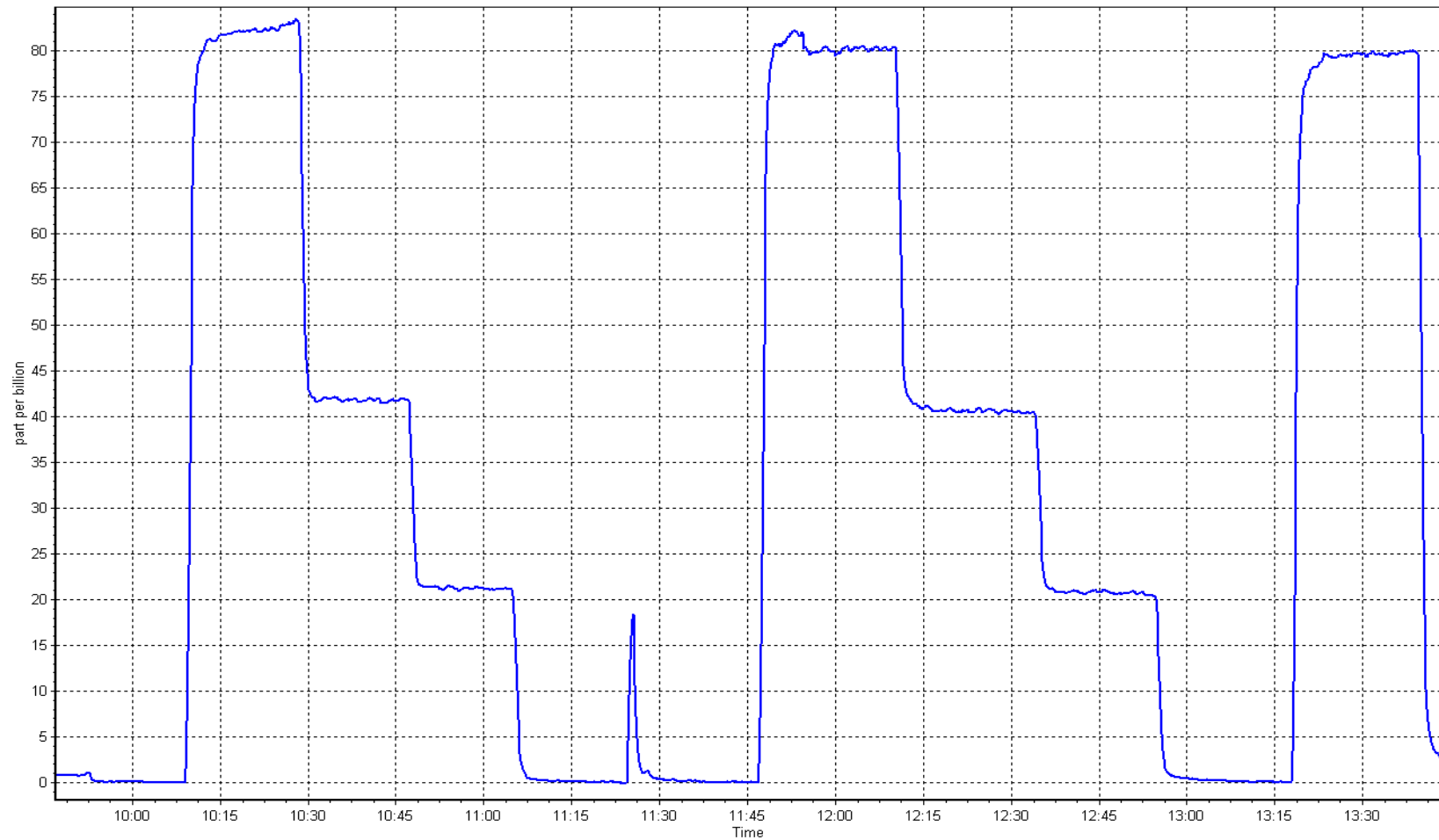
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999917		≥0.995
80.0	80.2	0.9974	Slope	1.000444		0.90 - 1.10
40.0	40.5	0.9874	Intercept	0.340806		+/-3
20.0	20.7	0.9661				



H₂S Calibration Plot

Date: July 22, 2026

Location: Lower Camp





Wood Buffalo Environmental Association

THC / CH4 / NMHC Calibration Report

Station Information

Station Name: Lower Camp
 Calibration Date: July 27, 2026
 Start time (MST): 9:41
 Reason: Routine

Station number: AMS 11
 Last Cal Date: June 12, 2026
 End time (MST): 12:34

Calibration Standards

Gas Cert Reference:	CC741503	Cal Gas Expiry Date:	October 9, 2032
CH4 Cal Gas Conc.	504.8 ppm	CH4 Equiv Conc.	1071.9 ppm
C3H8 Cal Gas Conc.	206.2 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	504.8 ppm	CH4 Equiv Conc.	1071.9 ppm
Removed C3H8 Conc.	206.2 ppm	Diff between cyl (THC):	
Diff between cyl (CH4):		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>
CH4 SP Ratio:	2.30E-04	2.24E-04	NMHC SP Ratio:	5.31E-05
CH4 Retention time:	13.2	13.2	NMHC Peak Area:	175323
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	4918	82.1	17.60	17.94	0.981
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.94	Prev response	17.60	*% change	1.9%
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	17.55	1.003
Mid point	4959	41.1	8.81	8.83	0.998
Low point	4980	20.5	4.39	4.48	0.981
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	17.60	17.60	1.000
Average Correction Factor					0.994

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	9.44	0.986
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.44	Prev response	9.34	*% change	1.1%
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	9.28	1.004
Mid point	4959	41.1	4.66	4.67	0.997
Low point	4980	20.5	2.32	2.38	0.978
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					0.993

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	8.50	0.975
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.50	Prev response	8.27	*% change	2.7%
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	4918	82.1	8.29	8.28	1.001
Mid point	4959	41.1	4.15	4.15	0.999
Low point	4980	20.5	2.07	2.10	0.985
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	8.29	8.30	0.999
Average Correction Factor					0.995

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.998967	0.995630
THC Cal Offset:	0.022951	0.047150
CH ₄ Cal Slope:	0.996624	0.997437
CH ₄ Cal Offset:	0.005869	0.015672
NMHC Cal Slope:	1.001053	0.994341
NMHC Cal Offset:	0.017082	0.030680

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

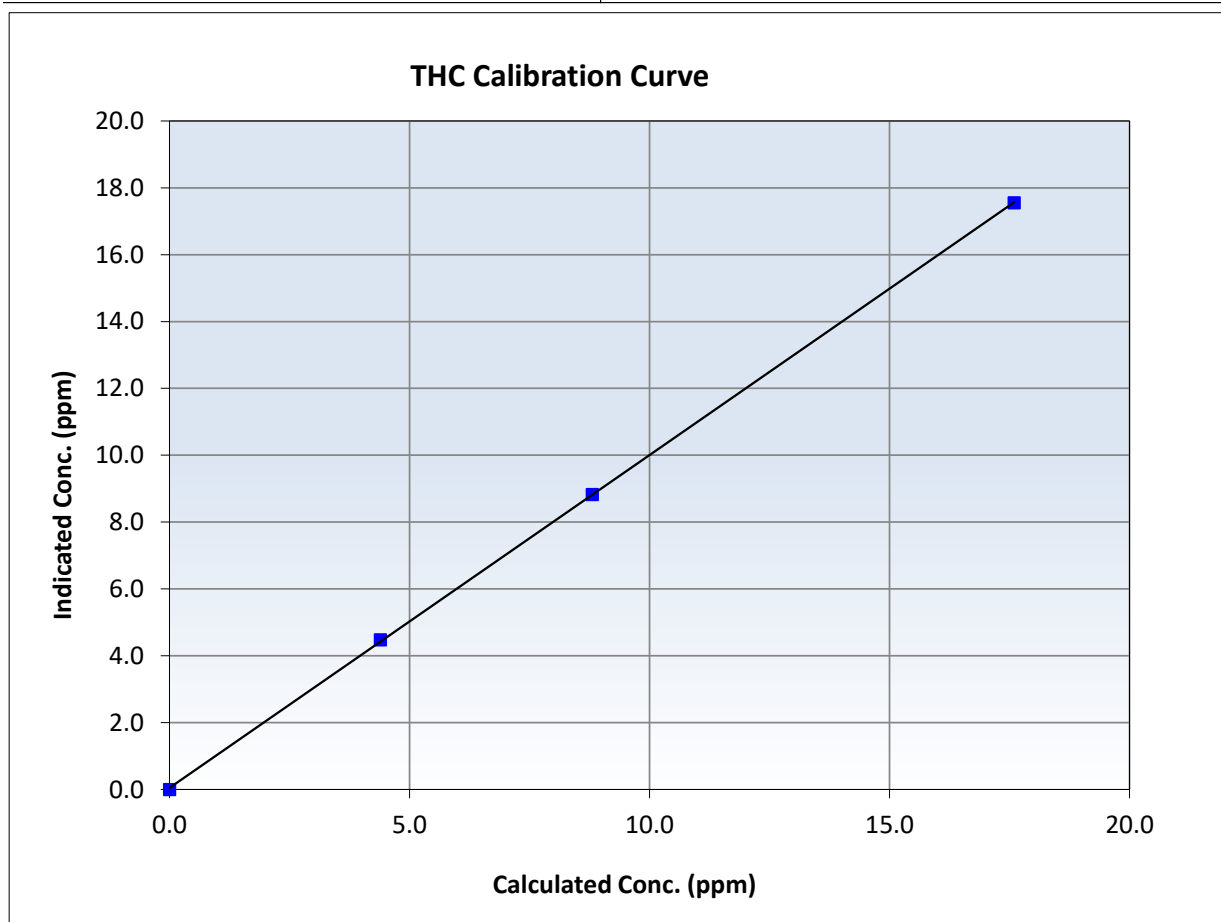
THC Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 12, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:41	End Time (MST):	12:34
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	0.999965	<i>≥0.995</i>
17.60	17.55	1.0028	Slope	0.995630	<i>0.90 - 1.10</i>
8.81	8.83	0.9980	Intercept	0.047150	<i>+/-0.5</i>
4.39	4.48	0.9811			





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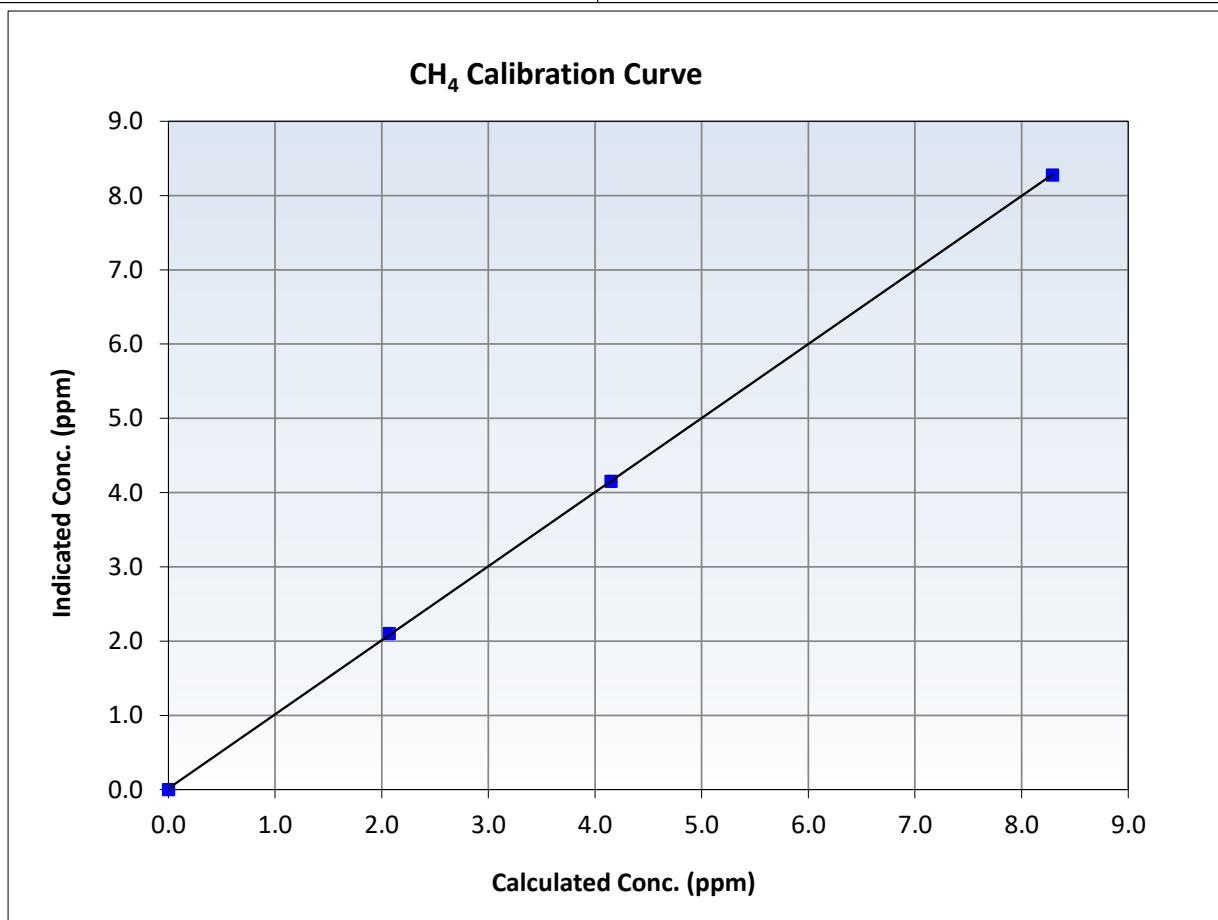
CH₄ Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 12, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:41	End Time (MST):	12:34
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	0.999981	<i>≥0.995</i>
8.29	8.28	1.0013	Slope	0.997437	<i>0.90 - 1.10</i>
4.15	4.15	0.9989	Intercept	0.015672	<i>+/-0.5</i>
2.07	2.10	0.9850			





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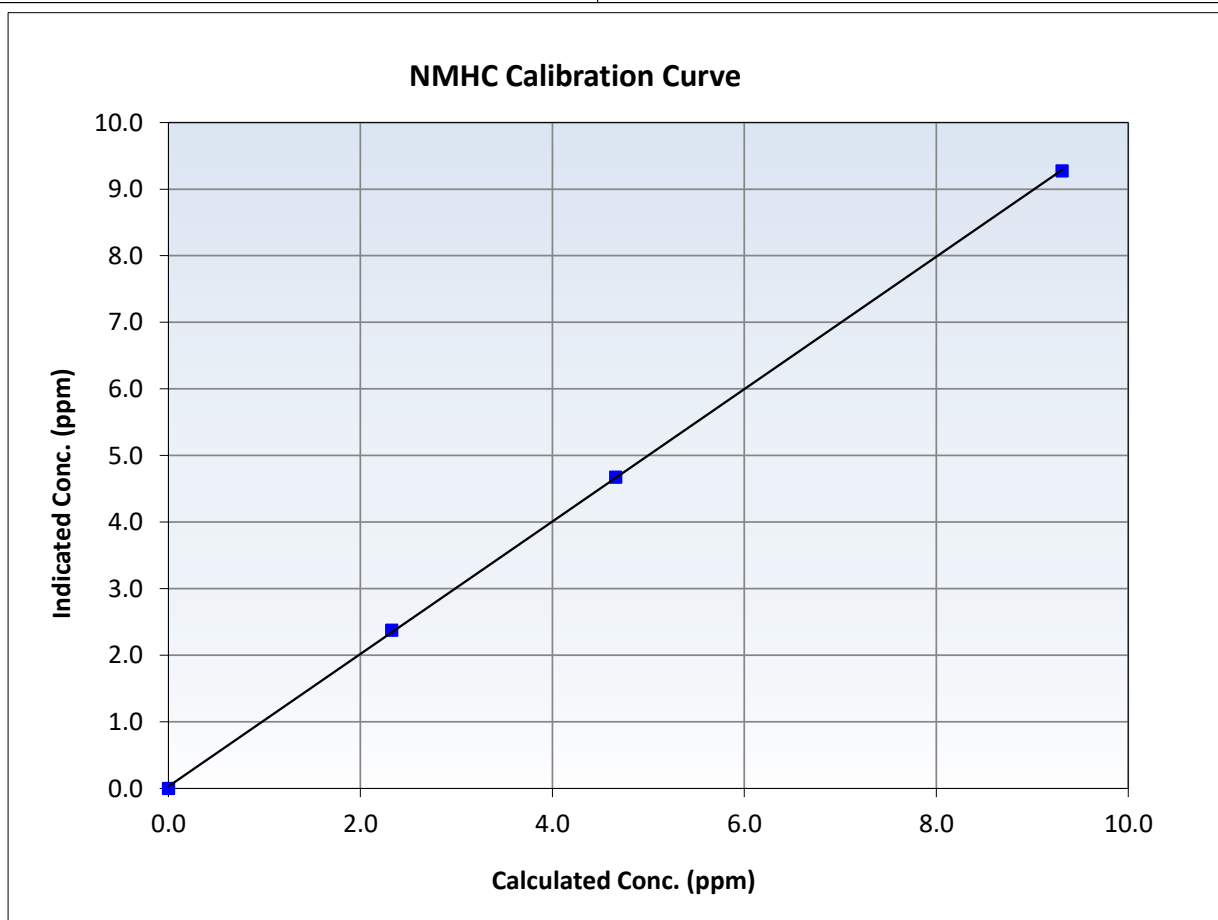
NMHC Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 12, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:41	End Time (MST):	12:34
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012

Calibration Data

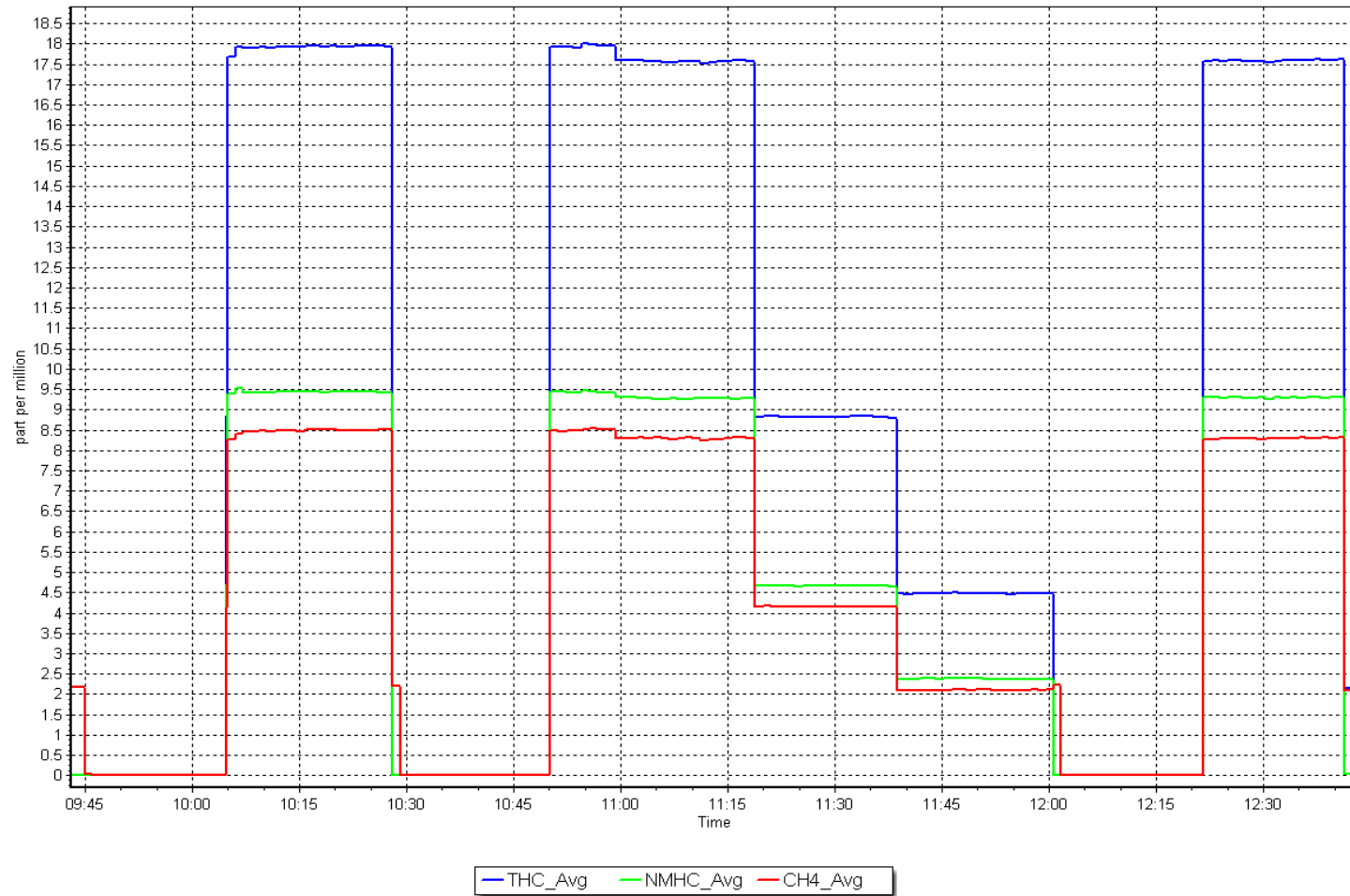
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999948	≥ 0.995
9.31	9.28	1.0037	Slope	0.994341	0.90 - 1.10
4.66	4.67	0.9974	Intercept	0.030680	± 0.5
2.32	2.38	0.9776			



NMHC Calibration Plot

Date: July 27, 2026

Location: Lower Camp





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS13 FORT MCKAY SOUTH JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: July 2, 2026
Start time (MST): 9:57
Reason: Routine

Station number: AMS 13
Last Cal Date: June 3, 2026
End time (MST): 13:59

Calibration Standards

Cal Gas Concentration: 50.59 ppm
Cal Gas Cylinder #: CC504296
Removed Cal Gas Conc: 50.55 ppm
Removed Gas Cyl #: CC260812
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701

Cal Gas Exp Date: April 16, 2034
Rem Gas Exp Date: December 29, 2028
Diff between cyl: -1.4%
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:	0.999040	1.000292	Backgd or Offset:	2.99	3.03
Calibration intercept:	0.041881	0.001915	Coeff or Slope:	0.956	0.962

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	799.7	800.4	0.999
As found Mid point					
As found Low point					
New cylinder response	4921	79.1	800.3	789.8	1.013
Baseline Corr As found:	800.8	Previous response	799.0	*% 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	-0.2	----
High point	4921	79.1	800.3	800.3	1.000
Mid point	4961	39.5	399.6	400.3	0.998
Low point	4980	19.8	200.3	200.3	1.000
As left zero	5000	0.0	0.0	-0.2	----
As left span	4921	79.1	800.3	798.0	1.003
Average Correction Factor:					1.000

Notes: Changed inlet filter and SO₂ cyl after as founds. Adjusted span only.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

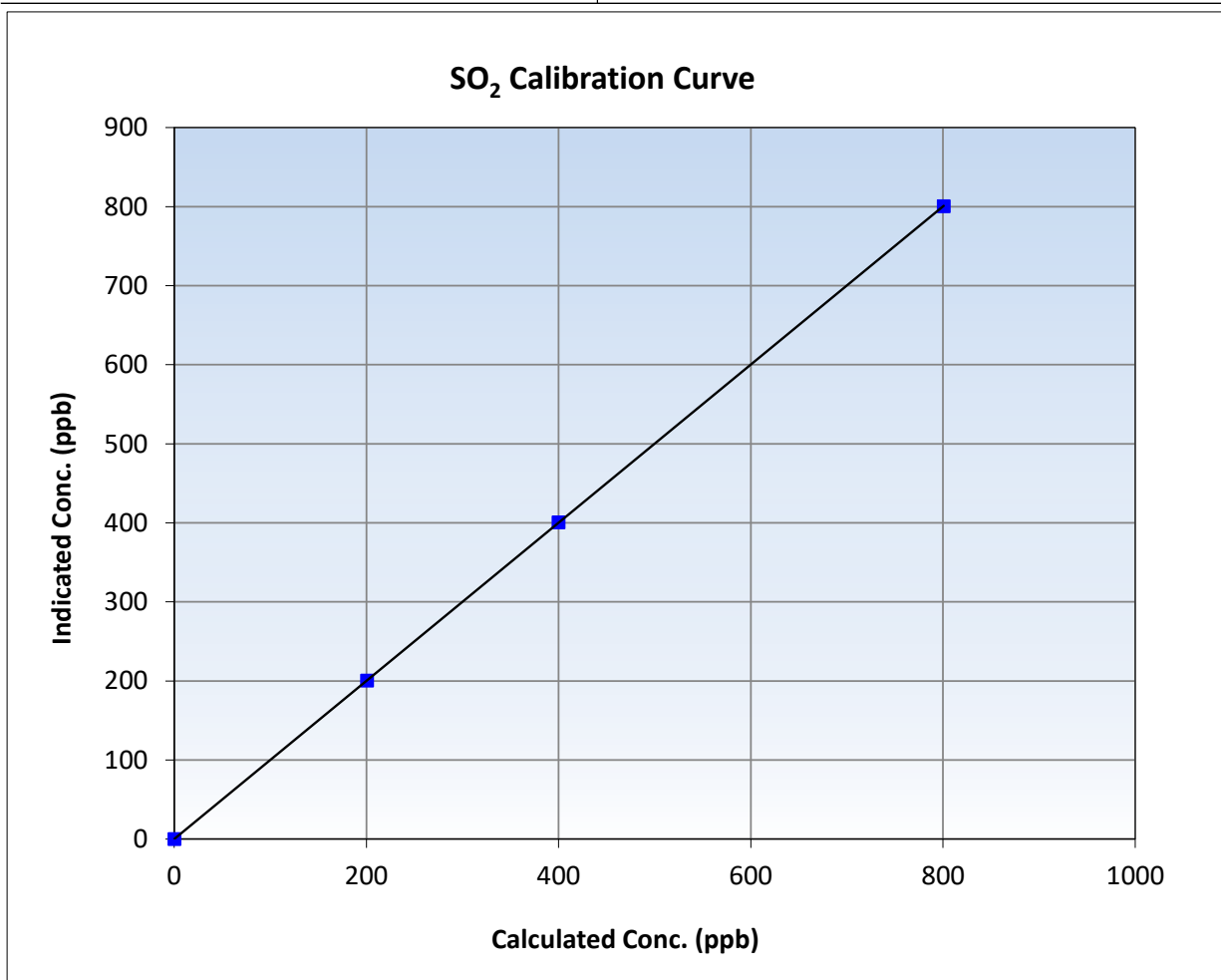
SO₂ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 3, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:57	End Time (MST):	13:39
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1331259320

Calibration Data

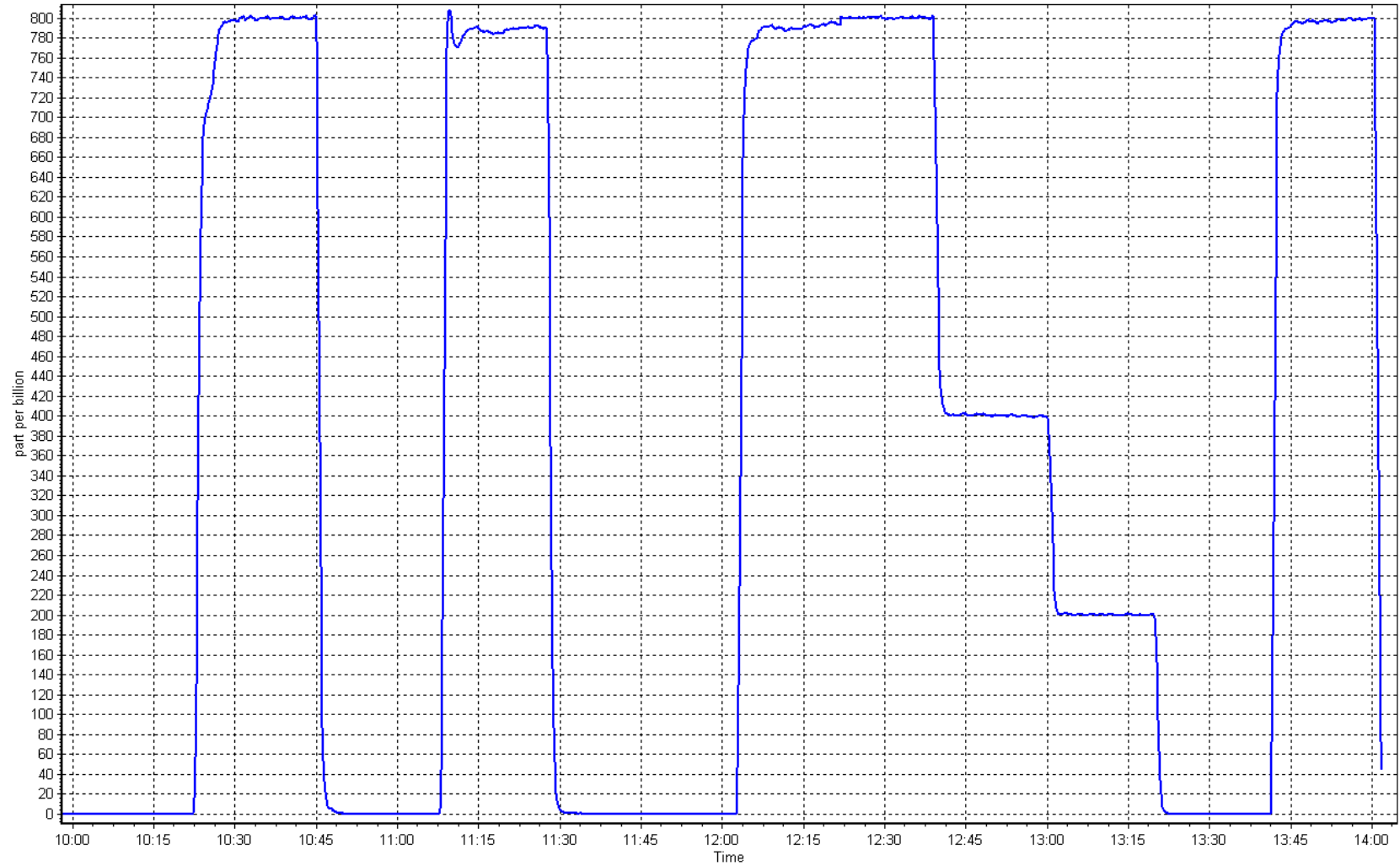
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999999	≥0.995
800.3	800.3	1.0000	Slope	1.000292	0.90 - 1.10
399.6	400.3	0.9983	Intercept	0.001915	+/-30
200.3	200.3	1.0002			



SO2 Calibration Plot

Date: July 2, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: July 20, 2026
Start time (MST): 10:08
Reason: Routine

Station number: AMS 13
Last Cal Date: June 24, 2026
End time (MST): 14:22

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:	1.009717	1.006561	Backgd or Offset:	3.79	3.62
Calibration intercept:	-0.158394	-0.098401	Coeff or Slope:	1.14	1.080

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	4918	81.6	79.6	70.0	1.136
As found Mid point	4959	40.8	39.8	33.6	1.182
As found Low point	4980	20.4	19.9	15.7	1.260
New cylinder response					
Baseline Corr As found:	70.1	Prev response:	80.26	*% change:	-14.5%
Baseline Corr 2nd AF pt:	33.7	AF Slope:	0.885602	AF Intercept:	-1.058627
Baseline Corr 3rd AF pt:	15.8	AF Correlation:	0.999147	* = > +/-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	80.1	0.994
Mid point	4959	40.8	39.8	40.0	0.996
Low point	4980	20.4	19.9	19.8	1.005
As left zero	5000	0.0	0.0	0.1	----
As left span	4918	81.6	79.6	80.0	0.996
SO2 Scrubber Check	4921	79.1	791.0	0.0	----
Date of last scrubber change:	July 20, 2026		Ave Corr Factor		0.998
Date of last converter efficiency test:					

Notes: Low span response for few days now. Changed inlet filter, pump and scrubber beads after multipoint as founds. SO2 scrubber check after calibrator zero and passed. Adjusted span only.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

TRS Calibration Summary

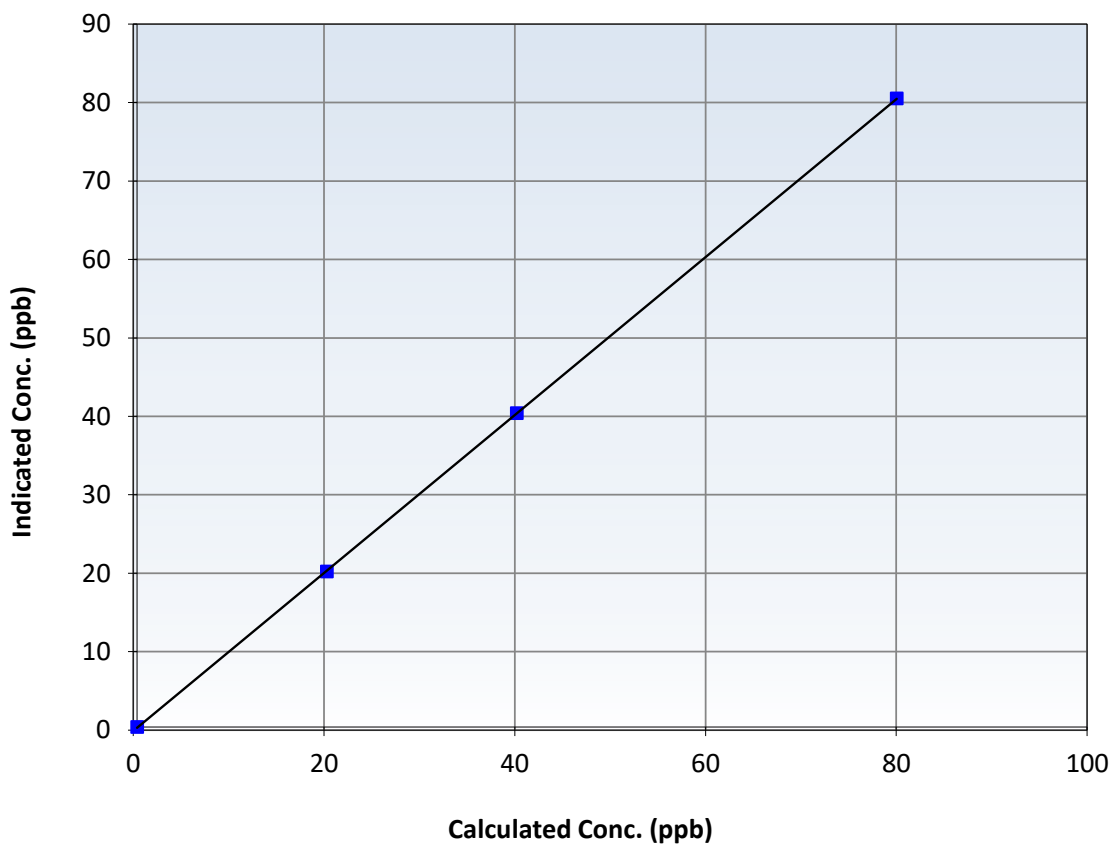
Station Information

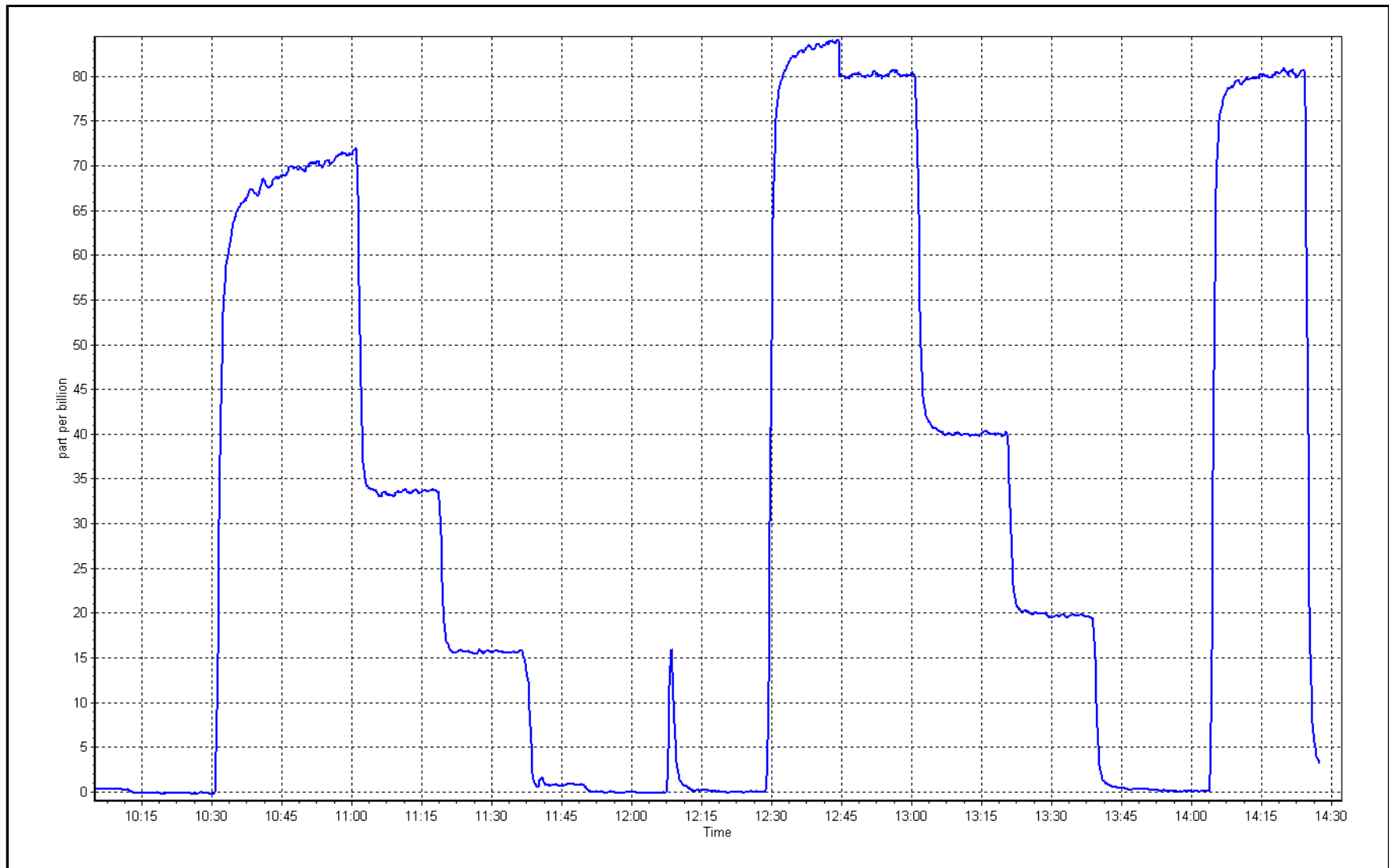
Calibration Date:	July 20, 2026	Previous Calibration:	June 24, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:08	End Time (MST):	14:22
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1180540017

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	0.999991		≥ 0.995
79.6	80.1	0.9944	Slope	1.006561		$0.90 - 1.10$
39.8	40.0	0.9956	Intercept	-0.098401		± 3
19.9	19.8	1.0055				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: July 2, 2026
Start time (MST): 9:57
Reason: Routine

Station number: AMS 13
Last Cal Date: June 3, 2026
End time (MST): 13:59

Calibration Standards

Gas Cert Reference:	CC504296	Cal Gas Expiry Date:	April 16, 2034
CH ₄ Cal Gas Conc.	499.0 ppm	CH ₄ Equiv Conc.	1053.7 ppm
C ₃ H ₈ Cal Gas Conc.	201.7 ppm		
Removed Gas Cert:	CC260812	Removed Gas Expiry:	December 29, 2028
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):	1.7%
Diff between cyl (CH ₄):	-0.8%	Diff between cyl (NM):	3.8%
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:	2.95E-04	2.94E-04	NMHC SP Ratio:	4.41E-05
CH ₄ Retention time:	16.60	16.80	NMHC Peak Area:	206100
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	79.1	17.05	16.90	1.009
As found Mid point					
As found Low point					
New cylinder response	4921	79.1	16.67	16.80	0.992
Baseline Corr AF:	16.90	Prev response	16.93	*% change	-0.2%
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	16.67	16.60	1.004
Mid point	4961	39.5	8.32	8.23	1.011
Low point	4980	19.8	4.17	4.06	1.027
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	16.67	16.66	1.001
Average Correction Factor					1.014

Notes: Sample inlet filter and SO₂ cyl was 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)) <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	9.01	1.008
As found Mid point					
As found Low point					
New cylinder response	4921	79.1	8.77	9.05	0.970
Baseline Corr AF:	9.01	Prev response	9.05	*% 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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	8.77	8.77	1.000
Mid point	4961	39.5	4.38	4.34	1.009
Low point	4980	19.8	2.20	2.14	1.025
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	8.77	8.77	1.000
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	7.89	1.010
As found Mid point					
As found Low point					
New cylinder response	4921	79.1	7.89	7.76	1.017
Baseline Corr AF:	7.89	Prev response	7.88	*% change	0.1%
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	4921	79.1	7.89	7.83	1.008
Mid point	4961	39.5	3.94	3.89	1.013
Low point	4980	19.8	1.98	1.92	1.030
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	7.89	7.89	1.001
Average Correction Factor					1.017

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.996560	0.997399
THC Cal Offset:	-0.054570	-0.048965
CH ₄ Cal Slope:	0.993170	0.993258
CH ₄ Cal Offset:	-0.027990	-0.020181
NMHC Cal Slope:	0.999447	1.001137
NMHC Cal Offset:	-0.025979	-0.028584

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

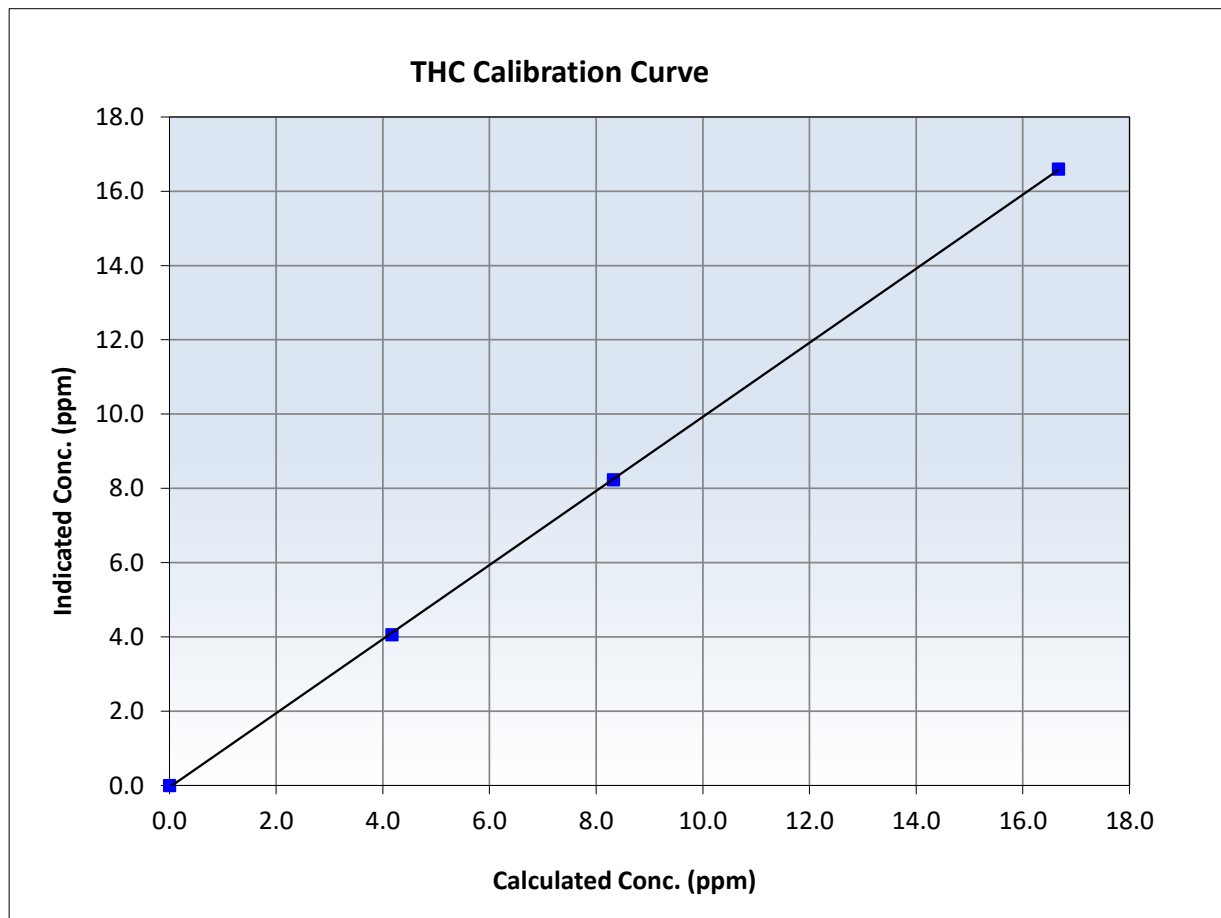
THC Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 3, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:57	End Time (MST):	13:59
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	0.999960	<i>≥0.995</i>
16.67	16.60	1.0041	Slope	0.997399	<i>0.90 - 1.10</i>
8.32	8.23	1.0112	Intercept	-0.048965	<i>+/-0.5</i>
4.17	4.06	1.0273			





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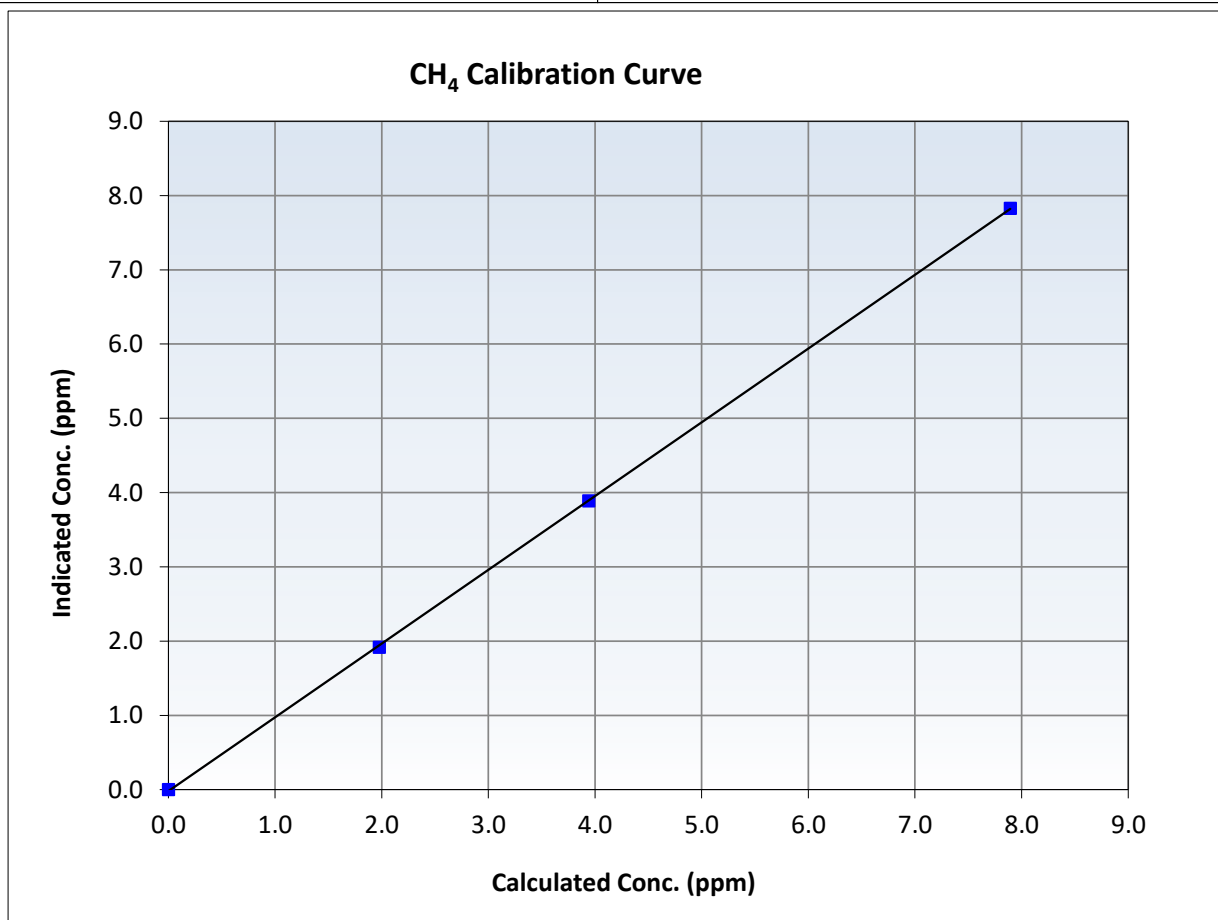
CH₄ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 3, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:57	End Time (MST):	13:59
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	0.999968	<i>≥0.995</i>
7.89	7.83	1.0083	Slope	0.993258	<i>0.90 - 1.10</i>
3.94	3.89	1.0133	Intercept	-0.020181	<i>+/-0.5</i>
1.98	1.92	1.0298			





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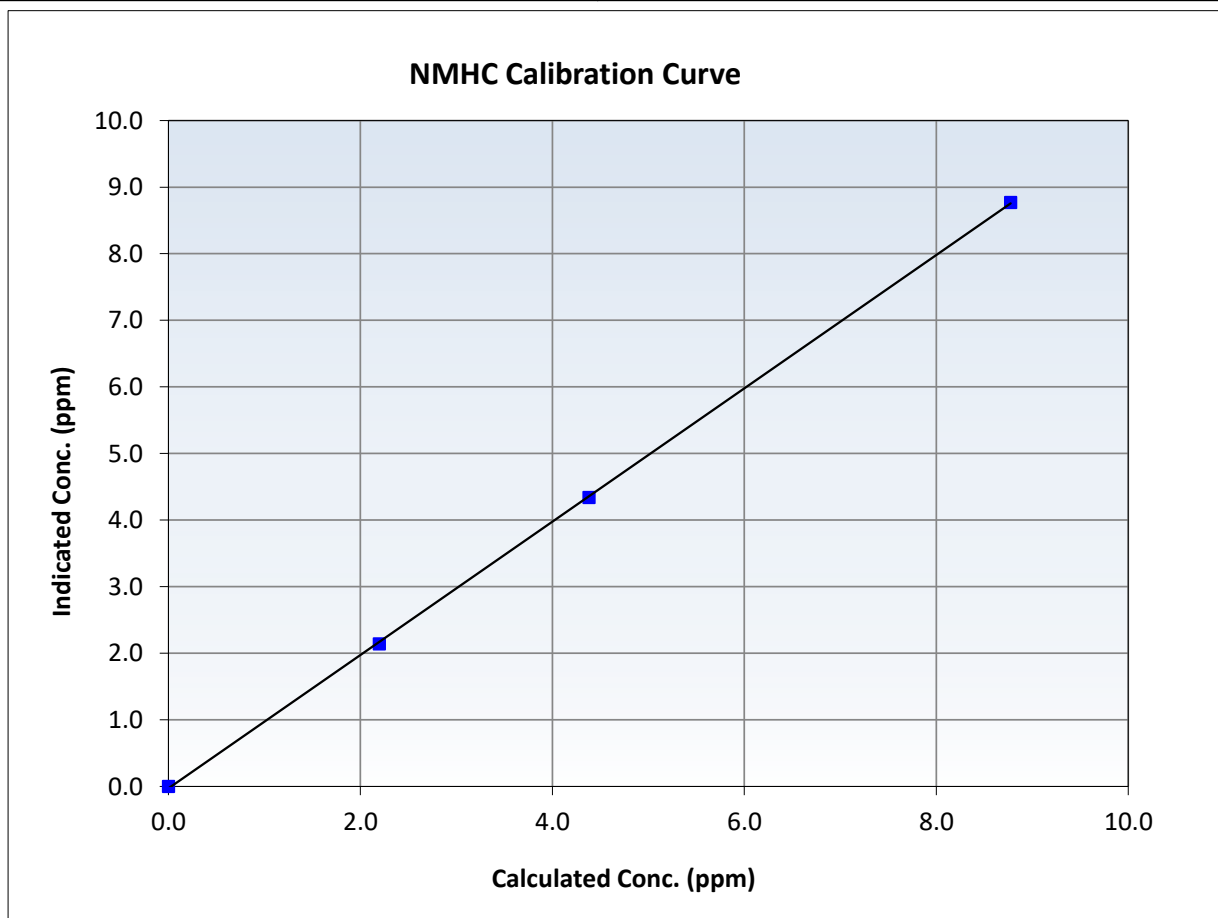
NMHC Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 3, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:57	End Time (MST):	13:59
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

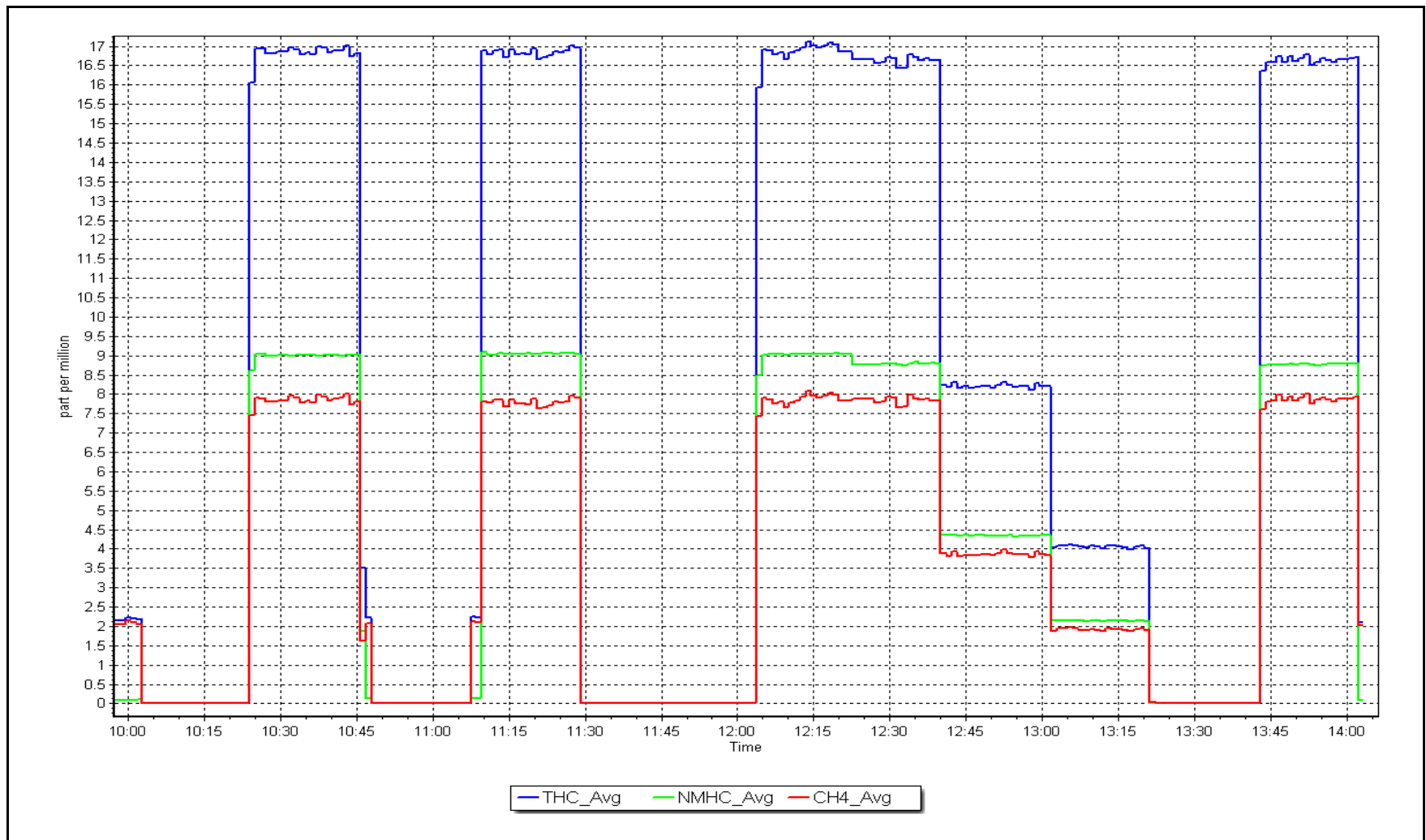
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999951	≥ 0.995
8.77	8.77	1.0004	Slope	1.001137	$0.90 - 1.10$
4.38	4.34	1.0091	Intercept	-0.028584	± 0.5
2.20	2.14	1.0250			



NMHC Calibration Plot

Date: July 2, 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: July 27, 2026
Last Cal Date: June 17, 2026
Start time (MST): 10:06
End time (MST): 14:24
Reason: Routine

Calibration Standards

NO Gas Cylinder #: T2UP1RP
NOX Cal Gas Conc: 48.25 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 48.25 ppm
NOX 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 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	4917	83.5	805.7	799.5	6.2	790.0	775.5	14.5	1.0194	1.0306
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 803.8 ppb	NO = 798.0 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -1.7%	
Baseline Corr 1st pt	NO _x = 790.4 ppb	NO = 775.8 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -2.9%	
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 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 42iQ
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 12300522720

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.001120	1.001630
NO _x Cal Offset:	-2.812583	-3.692300
NO Cal Slope:	1.003137	1.002578
NO Cal Offset:	-4.010764	-4.690084
NO ₂ Cal Slope:	0.997299	1.005049
NO ₂ Cal Offset:	-0.578065	0.166098

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.111	1.135	NO bkgnd or offset:	3.9	4.0
NOX coeff or slope:	1.007	1.000	NOX bkgnd or offset:	4.1	4.2
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	163.1	165.3

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	-0.4	-0.2	-0.2	----	----
High point	4917	83.5	805.7	799.5	6.2	805.2	799.5	5.6	1.0006	1.0000
Mid point	4958	41.8	403.4	400.3	3.1	398.0	393.3	4.7	1.0135	1.0178
Low point	4979	20.9	201.7	200.1	1.5	195.5	192.2	3.3	1.0317	1.0413
As left zero	5000	0.0	0.0	0.0	0.0	-0.4	-0.2	-0.2	----	----
As left span	4917	83.5	805.7	396.3	409.4	796.8	396.3	400.6	1.0112	1.0000
Average Correction Factor									1.0153	1.0197

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	792.9	397.0	402.1	404.1	0.9950	100.5%
Mid GPT point	792.9	595.4	203.7	205.0	0.9936	100.6%
Low GPT point	792.9	691.8	107.3	108.4	0.9897	101.0%
Average Correction Factor					0.9927	100.7%

Notes:

Sample inlet filter was changed after as founds. Adjusted span only. Used 2nd NO point because of drift.

Calibration Performed By:

Jan Castro



Wood Buffalo Environmental Association

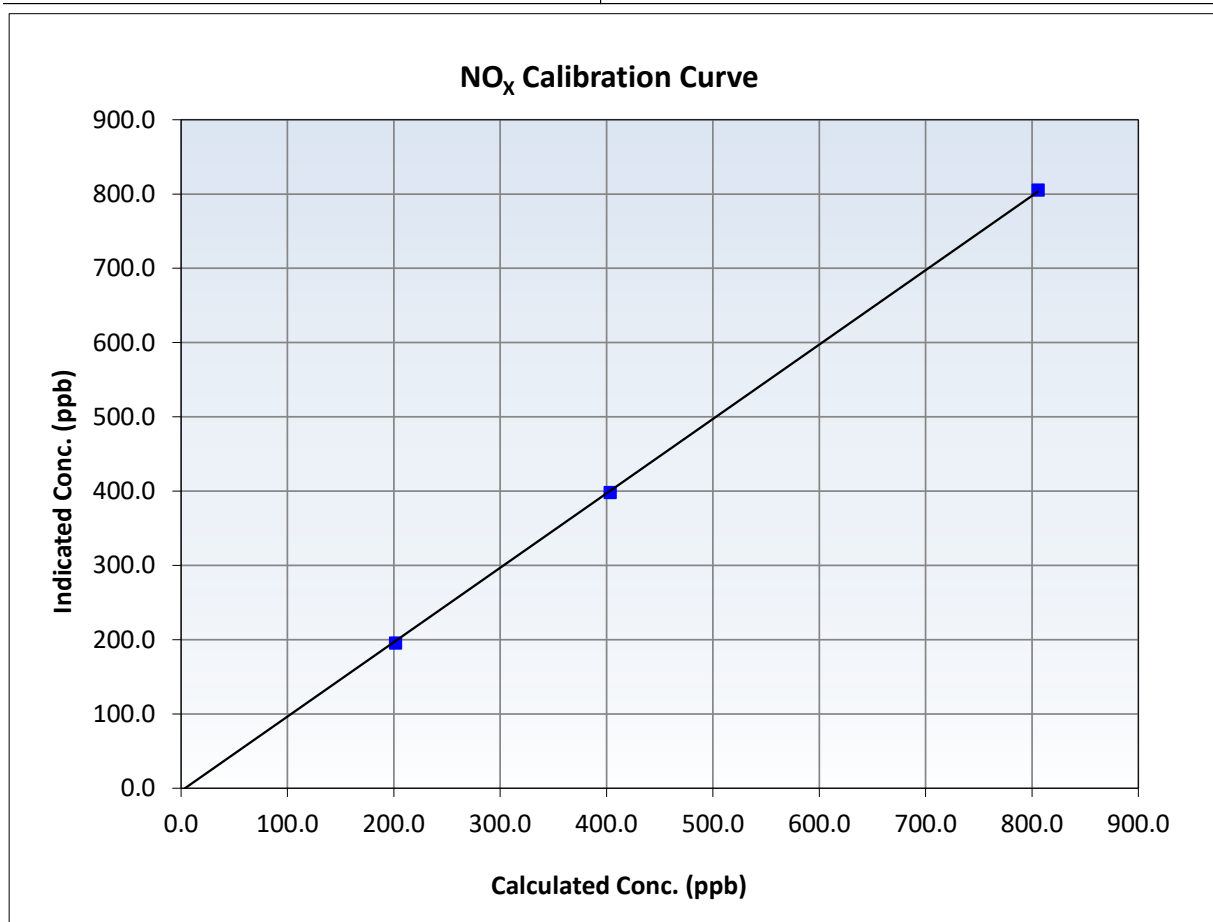
NO_x Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 17, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:06	End Time (MST):	14:24
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12300522720
			14:18

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	0.999922	≥0.995
805.7	805.2	1.0006	Slope	1.001630	0.90 - 1.10
403.4	398.0	1.0135	Intercept	-3.692300	+/-20
201.7	195.5	1.0317			





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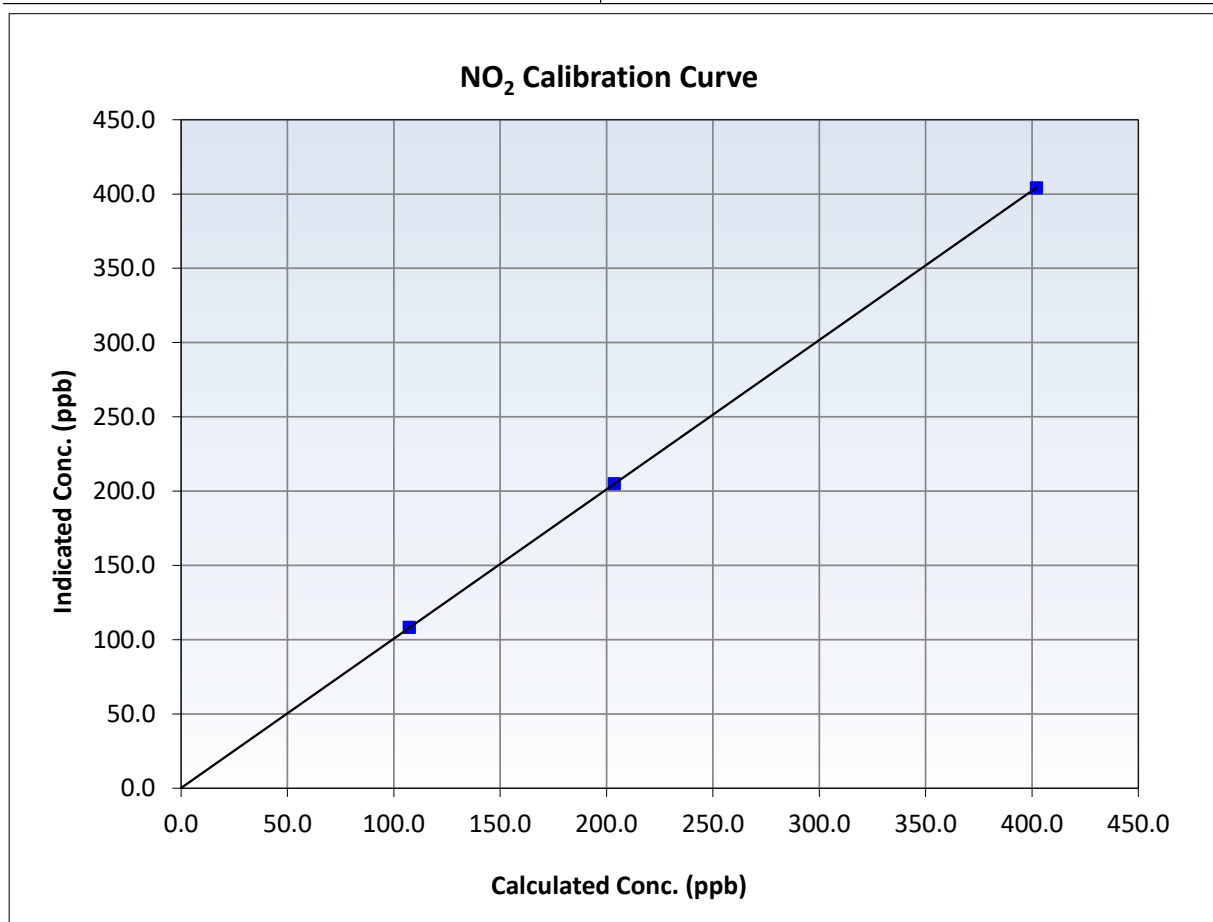
NO₂ Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 17, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:06	End Time (MST):	14:24
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12300522720
			14:18

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
402.1	404.1	0.9950	Slope	1.005049	0.90 - 1.10
203.7	205.0	0.9936	Intercept	0.166098	+/-20
107.3	108.4	0.9897			





Wood Buffalo Environmental Association

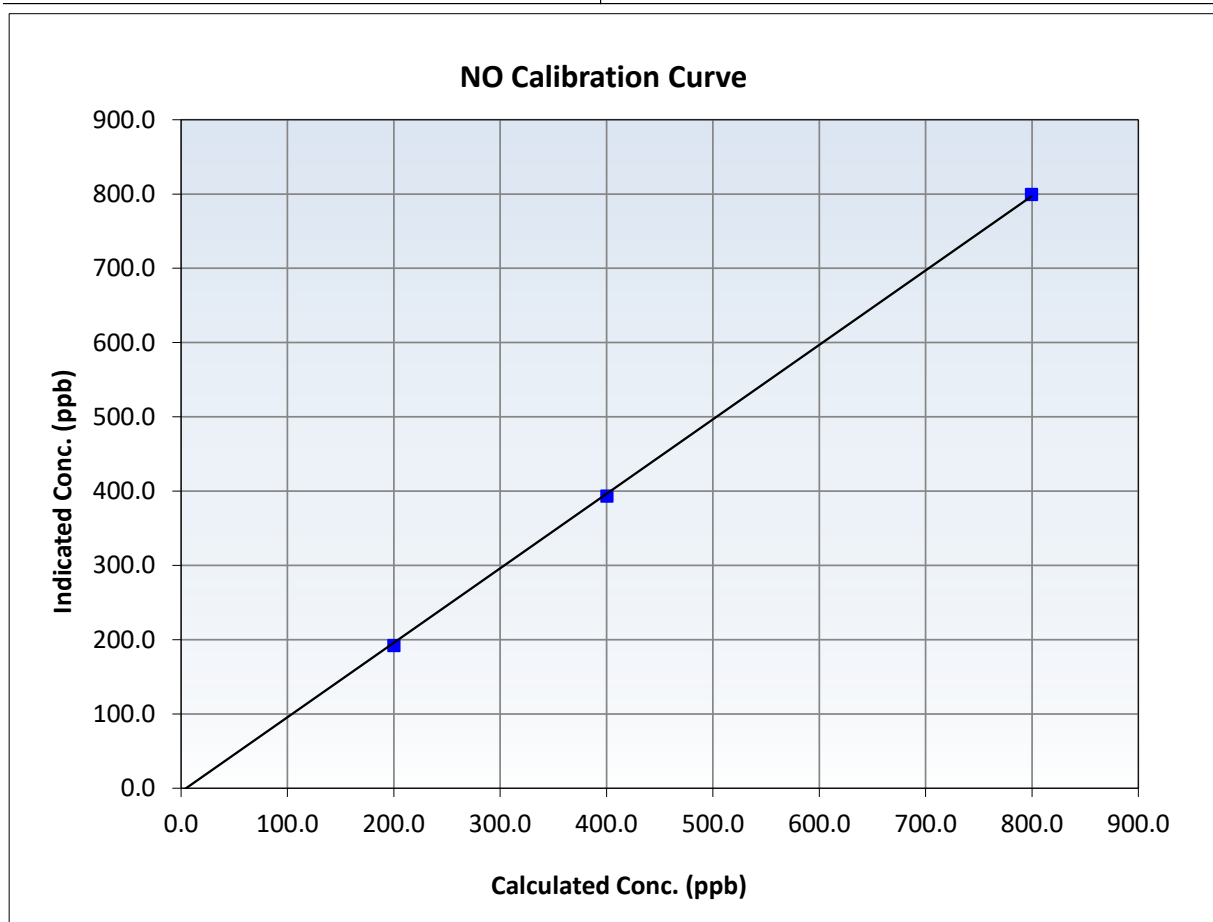
NO Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 17, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:06	End Time (MST):	14:24
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12300522720
			14:18

Calibration Data

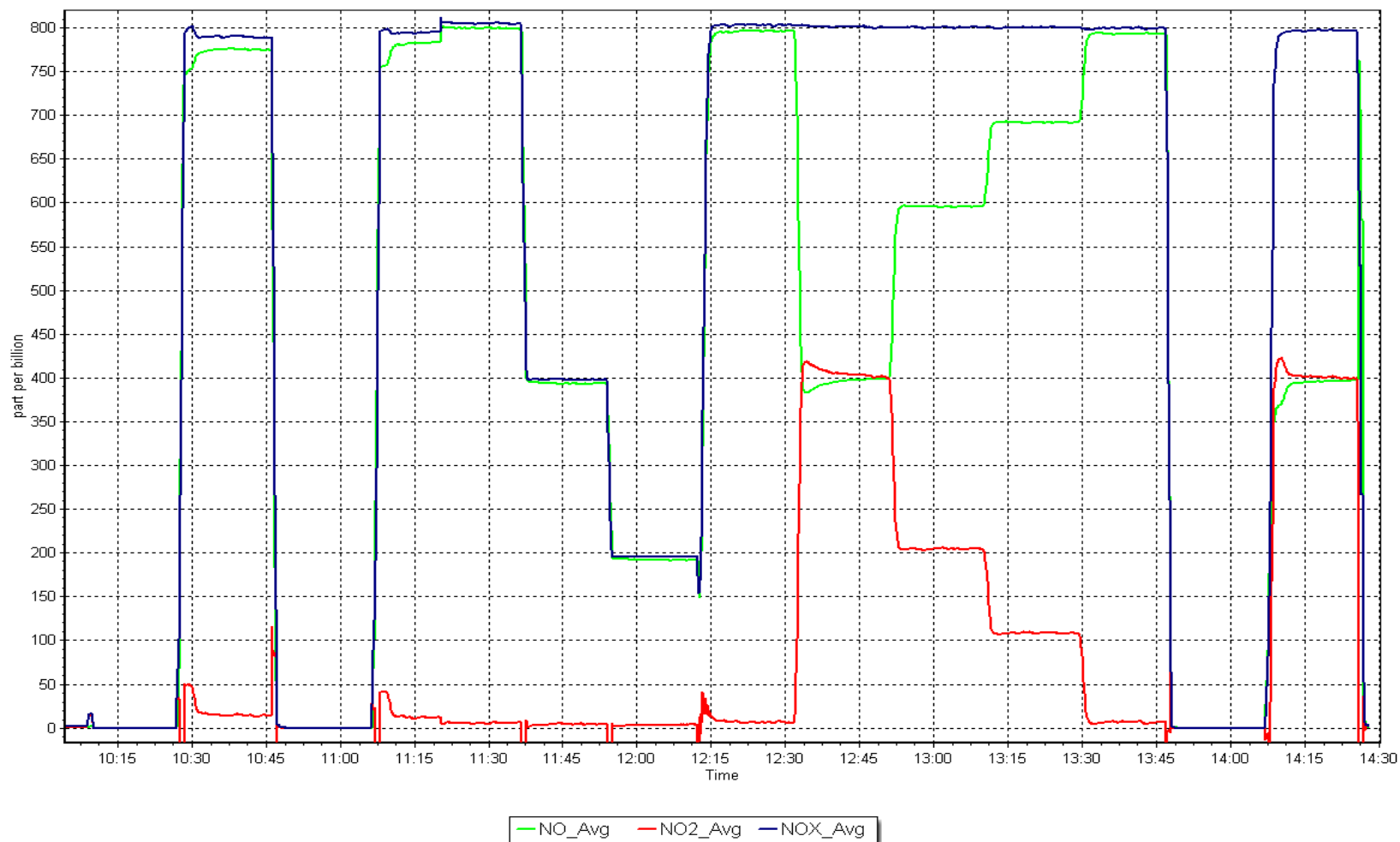
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999851	≥ 0.995
799.5	799.5	1.0000	Slope	1.002578	$0.90 - 1.10$
400.3	393.3	1.0178	Intercept	-4.690084	± 20
200.1	192.2	1.0413			



NO_x Calibration Plot

Date: July 27, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: July 10, 2026
Start time (MST): 9:19
Reason: Routine

Station number: AMS 13
Last Cal Date: June 5, 2026
End time (MST): 11:55

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:	1.002143	0.997714	Backgd or Offset:	0.2	0.2
Calibration intercept:	1.100000	1.000000	Coeff or Slope:	1.656	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	5000	800.0	0.0	-0.3	----
As found High point	5000	994.9	400.0	399.9	1.000
As found Mid point					
As found Low point					
Baseline Corr As found:	400.2	Previous response	402.0	*% 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	

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	0.4	----
High point	5000	997.0	400.0	399.7	1.001
Mid point	5000	812.0	200.0	201.1	0.995
Low point	5000	690.2	100.0	101.2	0.988
As left zero	5000	800.0	0.0	0.2	----
As left span	5000	997.8	400.0	400.0	1.000
Average Correction Factor					0.994

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

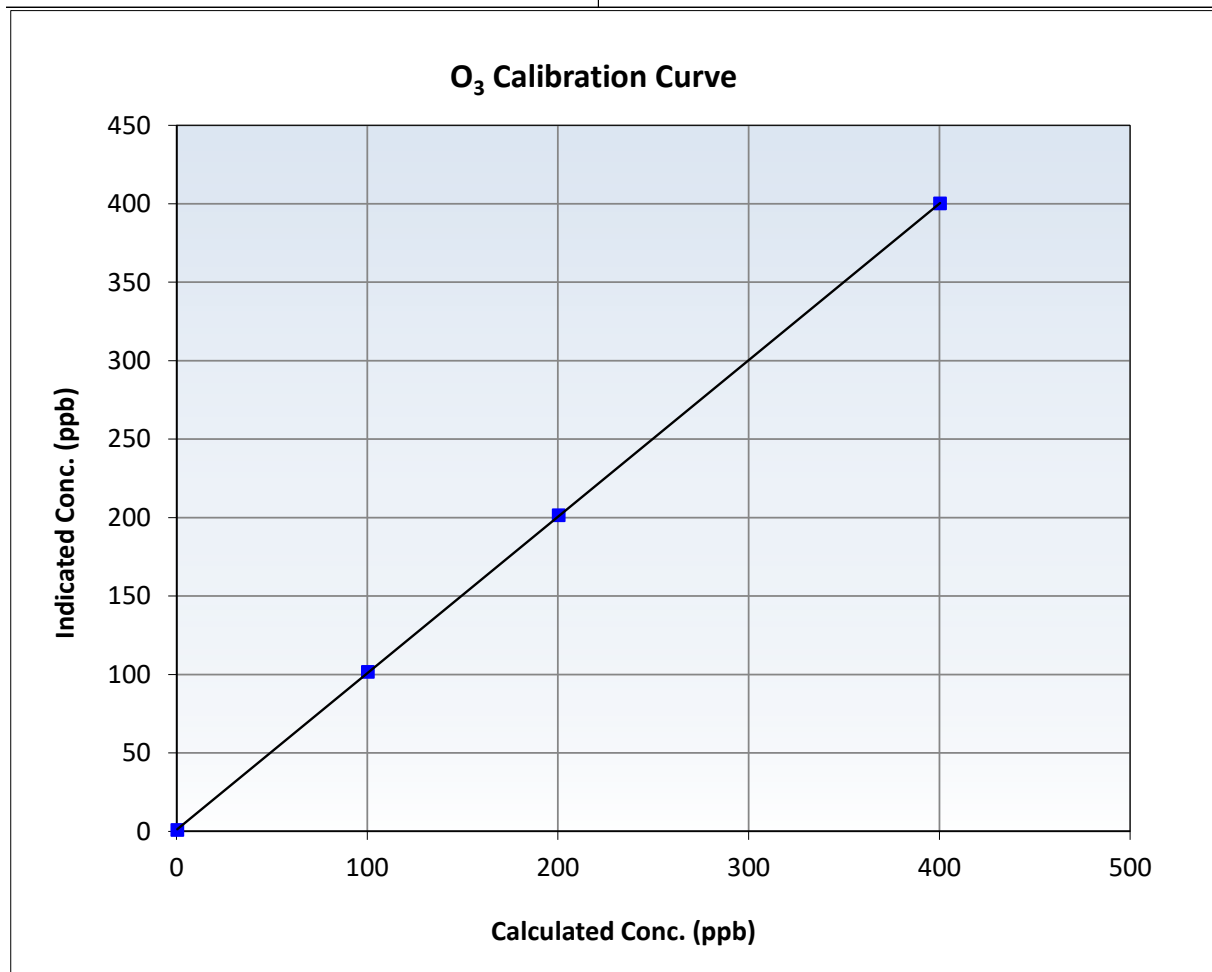
O₃ Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 5, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:19	End Time (MST):	11:55
Analyzer make:	Thermo 49i	Analyzer serial #:	1426262595

Calibration Data

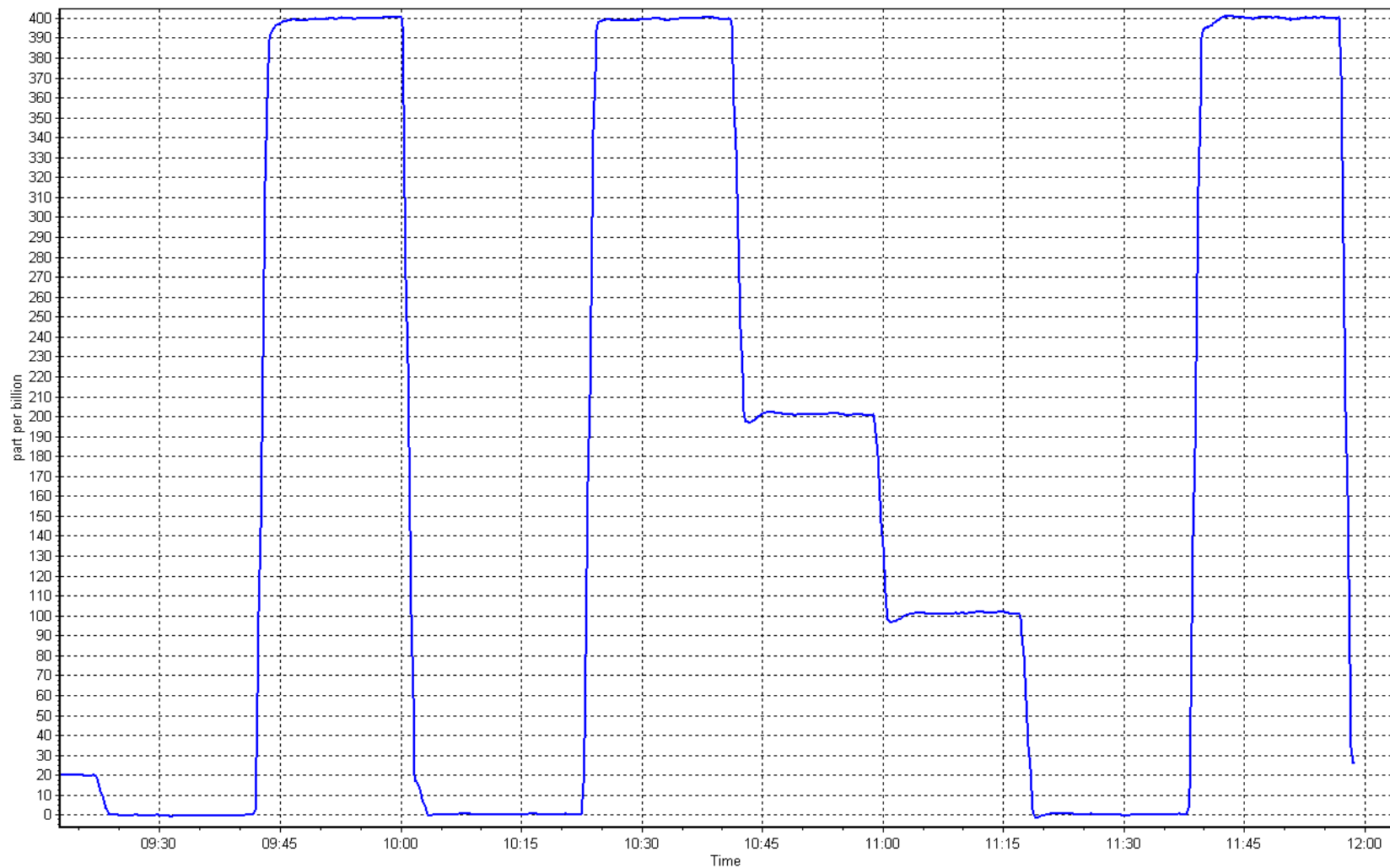
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999988	≥0.995
400.0	399.7	1.0008	Slope	0.997714	0.90 - 1.10
200.0	201.1	0.9945	Intercept	1.000000	+/- 5
100.0	101.2	0.9881			



O₃ Calibration Plot

Date: July 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: July 7, 2026 Last Cal Date: June 24, 2026
Start time (MST): 10:23 End time (MST): 11:03

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)	23.90	23.50	23.90	☐	+/- 2 °C
P (mmHg)	736.00	736.77	736.00	☐	+/- 10 mmHg
Flow (LPM vol)	5.01	5.02	5.01	☐	+/- 0.25 LPM
PW% (pump)	46	----	46	☐	>80%
Zero Verification	PM w/o HEPA: 20.10		PM w/ HEPA: 44.10		<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	12.00	11.00	11.00	☐	+/- 0.5

Date Optical Chamber Cleaned: July 7, 2026
Date Disposable Filter Changed: July 7, 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. As found leak check failed due to dirty chamber. No adjustment made for PMT. After cleaning leak check passed.

Calibration by: Jan Castro



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS14
ANZAC
JULY 2026**

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Anzac Station number: AMS 14
Calibration Date: July 15, 2026 Last Cal Date: June 1, 2026
Start time (MST): 6:52 End time (MST): 9:16
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:	0.999636	1.003079	Backgd or Offset:	28.4	28.4
Calibration intercept:	-0.349851	0.569426	Coeff or Slope:	1.117	1.117

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	4920	79.5	800.2	804.1	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	803.5	Previous response	799.5	*% 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	0.7	----
High point	4920	79.5	800.2	803.3	0.996
Mid point	4960	39.8	400.6	402.2	0.996
Low point	4980	19.9	200.3	201.4	0.994
As left zero	5000	0.0	0.0	0.6	----
As left span	4920	79.5	800.2	803.6	0.996
Average Correction Factor:					0.995

Notes: No Maintenance or adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

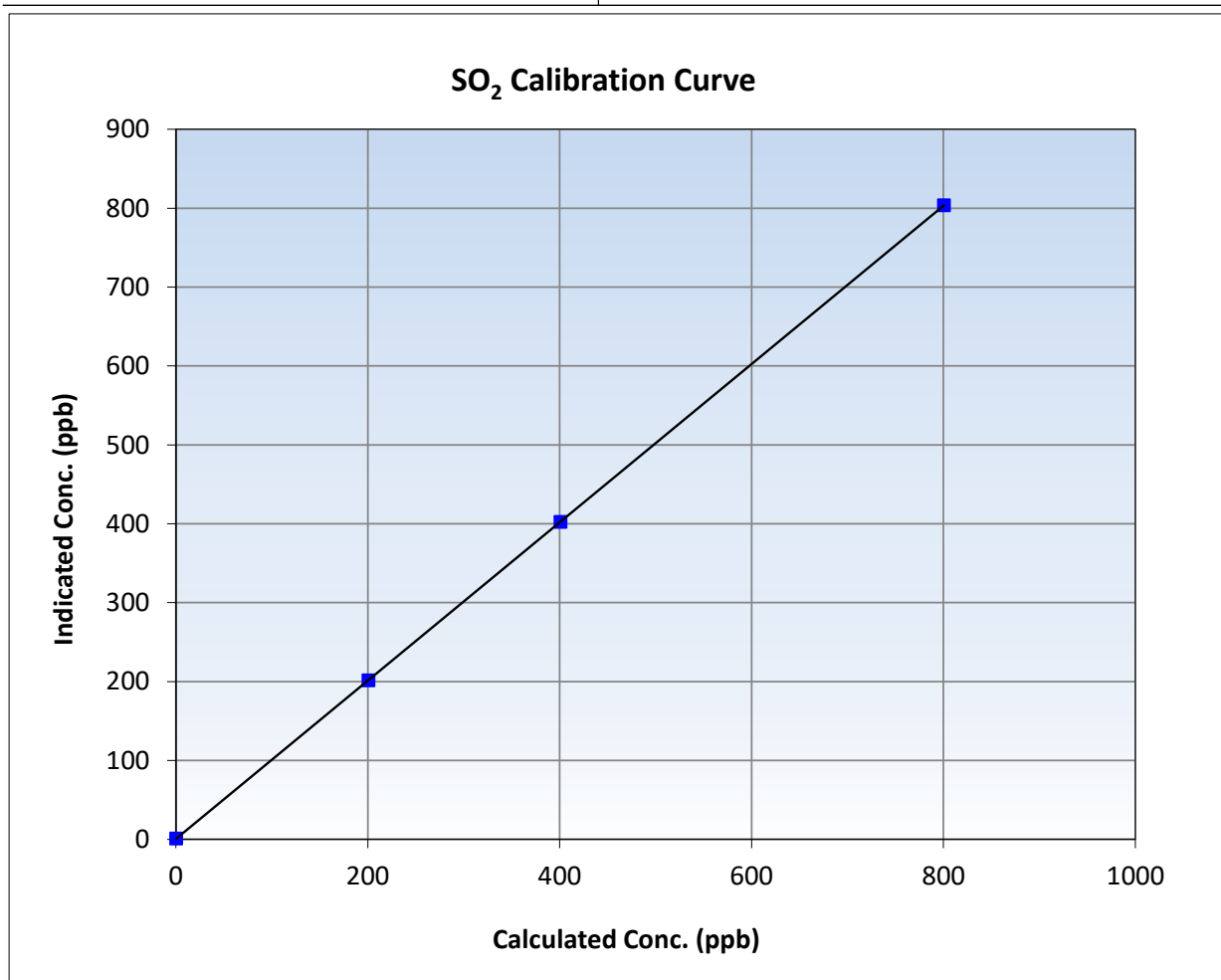
SO₂ Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 1, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:52	End Time (MST):	9:16
Analyzer make:	Thermo 43i	Analyzer serial #:	0710321322

Calibration Data

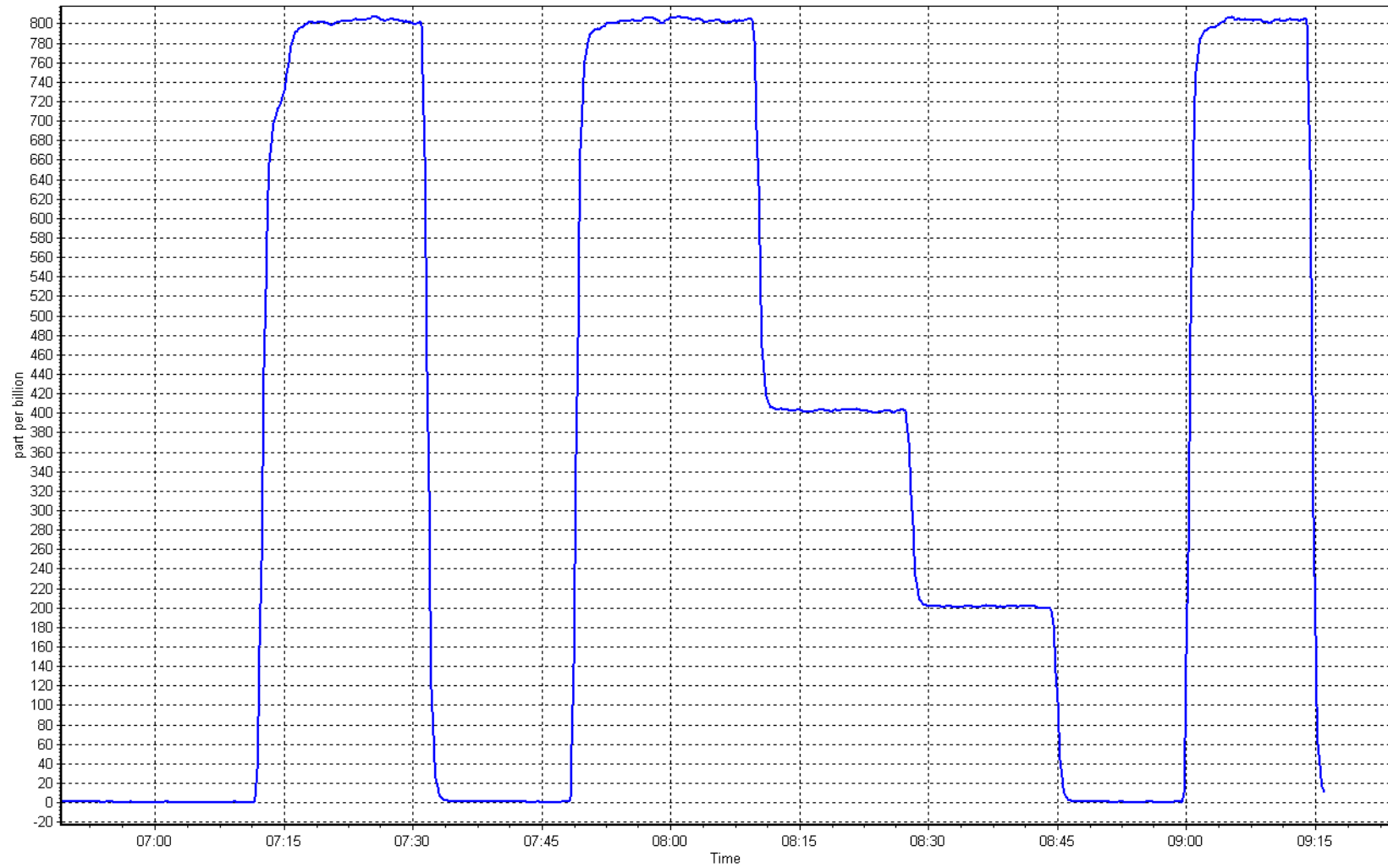
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.7	----	Correlation Coefficient	1.000000	≥0.995
800.2	803.3	0.9961	Slope	1.003079	0.90 - 1.10
400.6	402.2	0.9959	Intercept	0.569426	+/-30
200.3	201.4	0.9944			



SO2 Calibration Plot

Date: July 15, 2026

Location: Anzac





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Anzac
Calibration Date: July 7, 2026
Start time (MST): 9:21
Reason: Routine

Station number: AMS 14
Last Cal Date: June 9, 2026
End time (MST): 13:14

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:	0.995425	0.987424	Backgd or Offset:	2.20	2.20
Calibration intercept:	-0.061589	-0.181572	Coeff or Slope:	0.948	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	78.5	1.018
As found Mid point	4960	39.6	40.0	39.2	1.018
As found Low point	4980	19.8	20.0	19.3	1.031
New cylinder response					
Baseline Corr As found:	78.6	Prev response:	79.56	*% change:	-1.2%
Baseline Corr 2nd AF pt:	39.3	AF Slope:	0.983709	AF Intercept:	-0.201574
Baseline Corr 3rd AF pt:	19.4	AF Correlation:	0.999987	* = > +/-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	78.9	1.014
Mid point	4960	39.6	40.0	39.2	1.020
Low point	4980	19.8	20.0	19.4	1.031
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.2	80.0	76.9	1.040
SO2 Scrubber Check	4921	79.5	794.9	0.0	----
Date of last scrubber change:	28-May-25		Ave Corr Factor		1.022
Date of last converter efficiency test:	September 16, 2025		103.4% efficiency		

Notes: Changed the sample inlet filter after the as founds. SOx scrubber check was completed after the calibrator zero. No adjustments made.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

TRS Calibration Summary

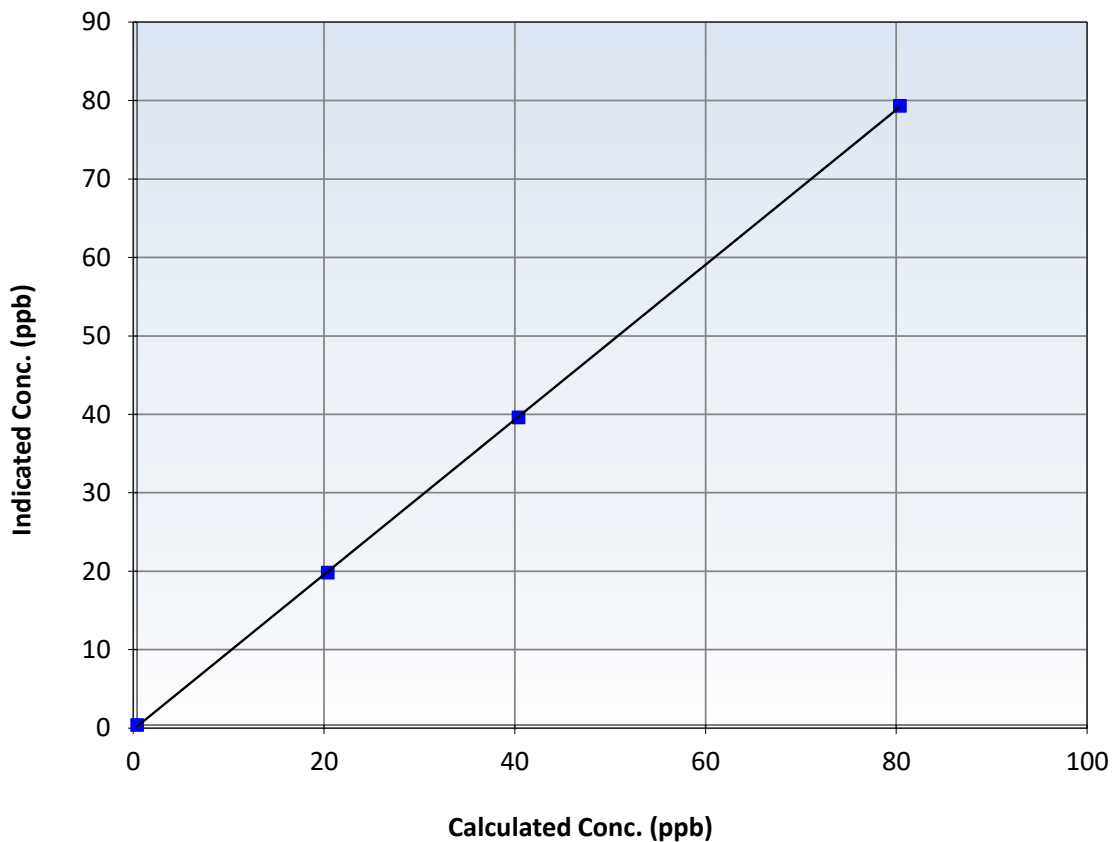
Station Information

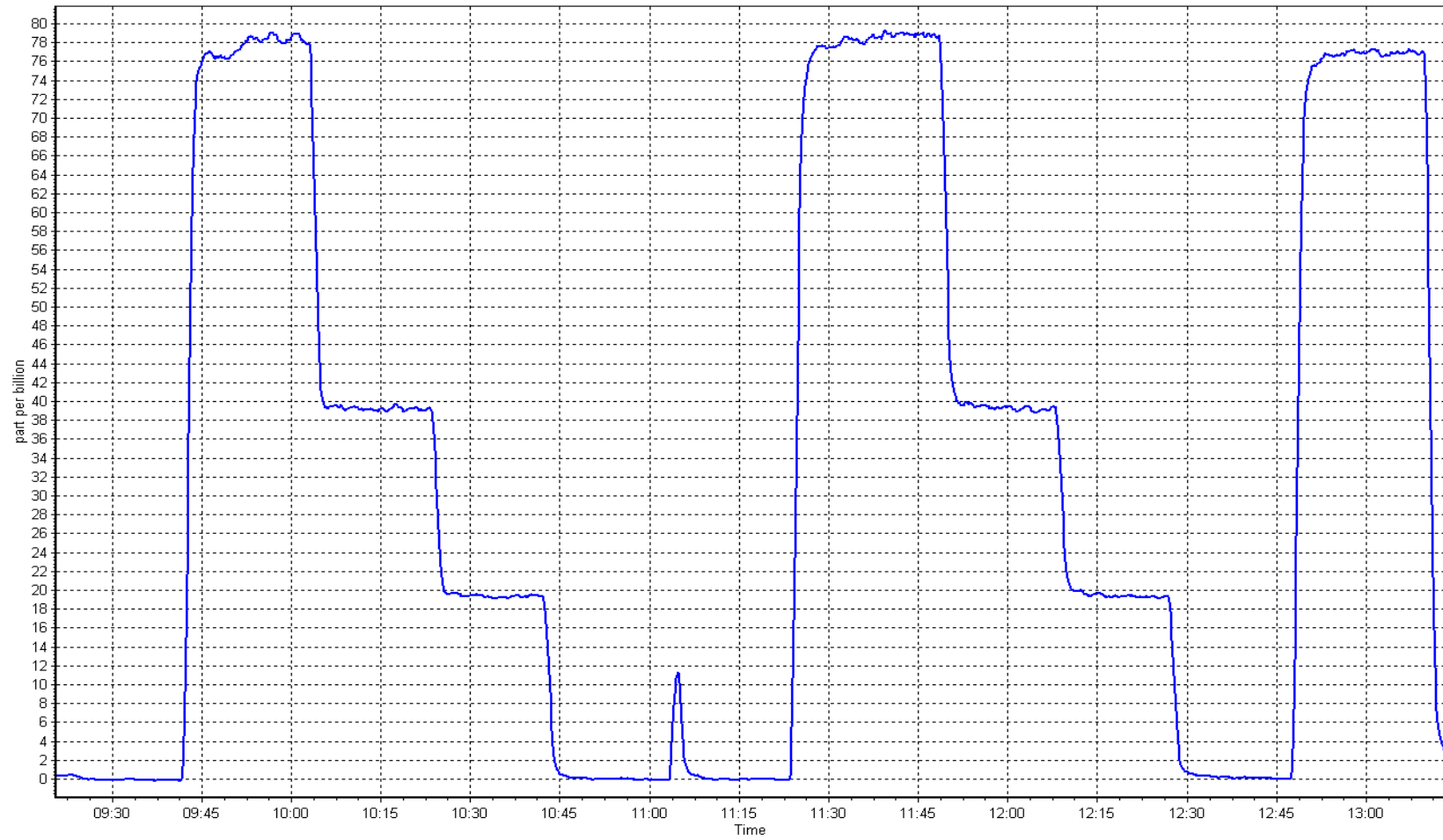
Calibration Date:	July 7, 2026	Previous Calibration:	June 9, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	9:21	End Time (MST):	13:14
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1218153582

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	0.999976	≥ 0.995
80.0	78.9	1.0138	Slope	0.987424	$0.90 - 1.10$
40.0	39.2	1.0204	Intercept	-0.181572	± 3
20.0	19.4	1.0309			

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Anzac
 Calibration Date: July 15, 2026
 Start time (MST): 6:52
 Reason: Routine

Station number: AMS 14
 Last Cal Date: June 1, 2026
 End time (MST): 9:16

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:	3.93E-04	4.16E-04	NMHC SP Ratio:	6.23E-05
CH ₄ Retention time:	16.8	17.0	NMHC Peak Area:	143854
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	16.03	1.060
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.03	Prev response	16.95	*% change	-5.8%
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	79.5	17.00	16.97	1.002
Mid point	4960	39.8	8.51	8.41	1.011
Low point	4980	19.9	4.25	4.20	1.014
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	17.00	16.93	1.004
Average Correction Factor					1.009

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)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.5	8.96	8.42	1.064
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.42	Prev response	8.94	*% change	-6.1%
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	79.5	8.96	8.94	1.002
Mid point	4960	39.8	4.49	4.45	1.008
Low point	4980	19.9	2.24	2.23	1.008
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	8.96	8.91	1.006
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)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.5	8.04	7.61	1.057
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.61	Prev response	8.01	*% change	-5.3%
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	79.5	8.04	8.03	1.000
Mid point	4960	39.8	4.02	3.96	1.016
Low point	4980	19.9	2.01	1.97	1.021
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					1.012

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.999866	0.998844
THC Cal Offset:	-0.043207	-0.036606
CH ₄ Cal Slope:	1.001023	1.000469
CH ₄ Cal Offset:	-0.031489	-0.028289
NMHC Cal Slope:	0.998904	0.997705
NMHC Cal Offset:	-0.011518	-0.009316

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

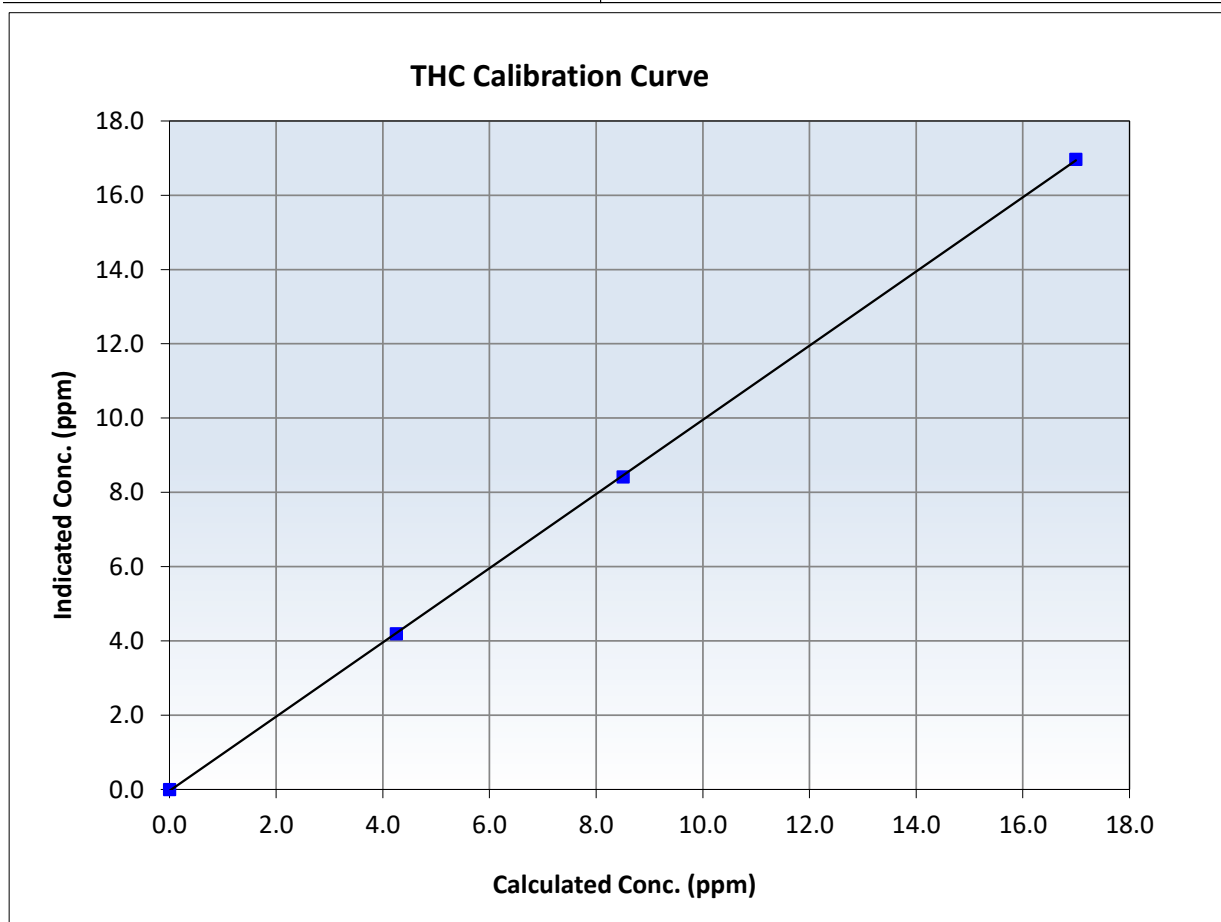
THC Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 1, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:52	End Time (MST):	9:16
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

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	0.999970	≥ 0.995
17.00	16.97	1.0017	Slope	0.998844	$0.90 - 1.10$
8.51	8.41	1.0111	Intercept	-0.036606	± 0.5
4.25	4.20	1.0140			





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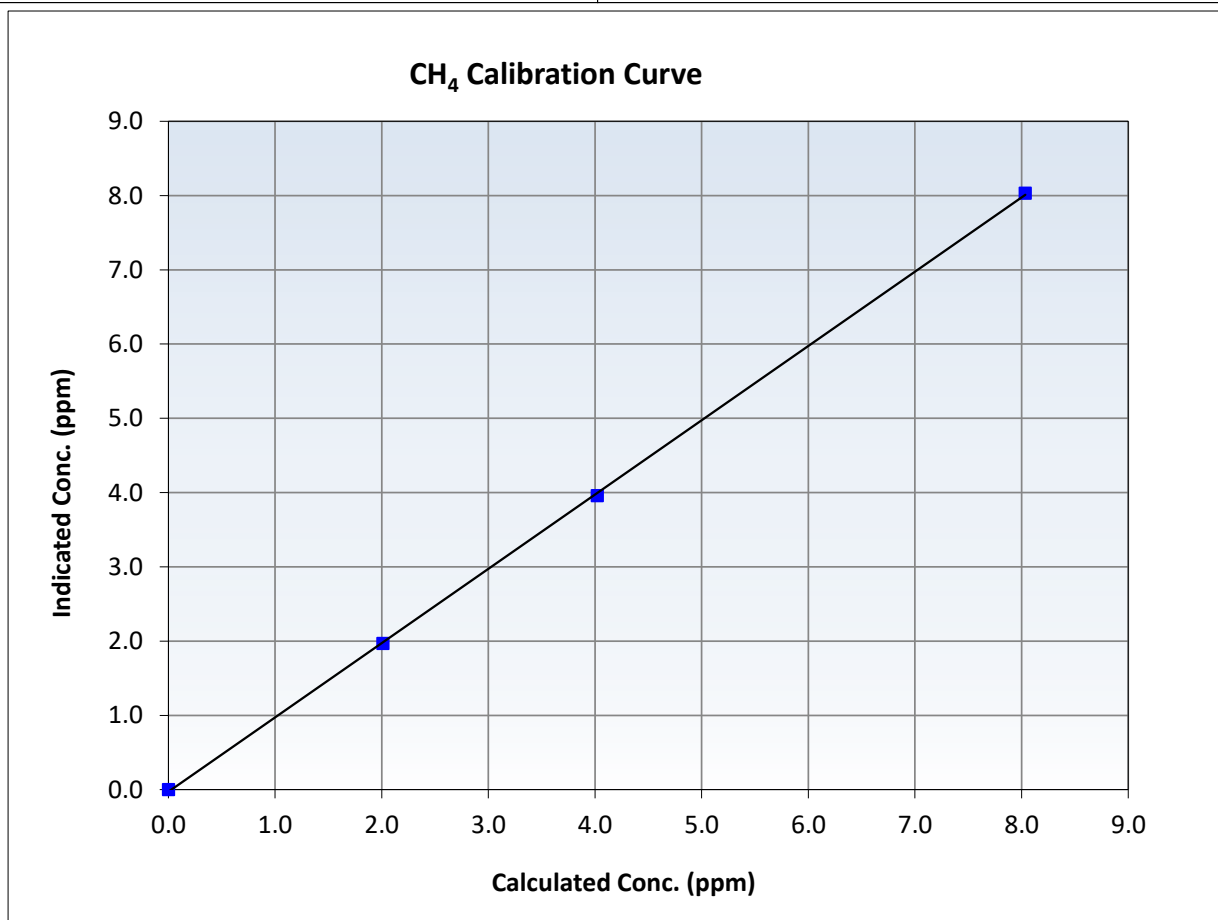
CH₄ Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 1, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:52	End Time (MST):	9:16
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	0.999922	<i>≥0.995</i>
8.04	8.03	1.0004	Slope	1.000469	<i>0.90 - 1.10</i>
4.02	3.96	1.0157	Intercept	-0.028289	<i>+/-0.5</i>
2.01	1.97	1.0209			





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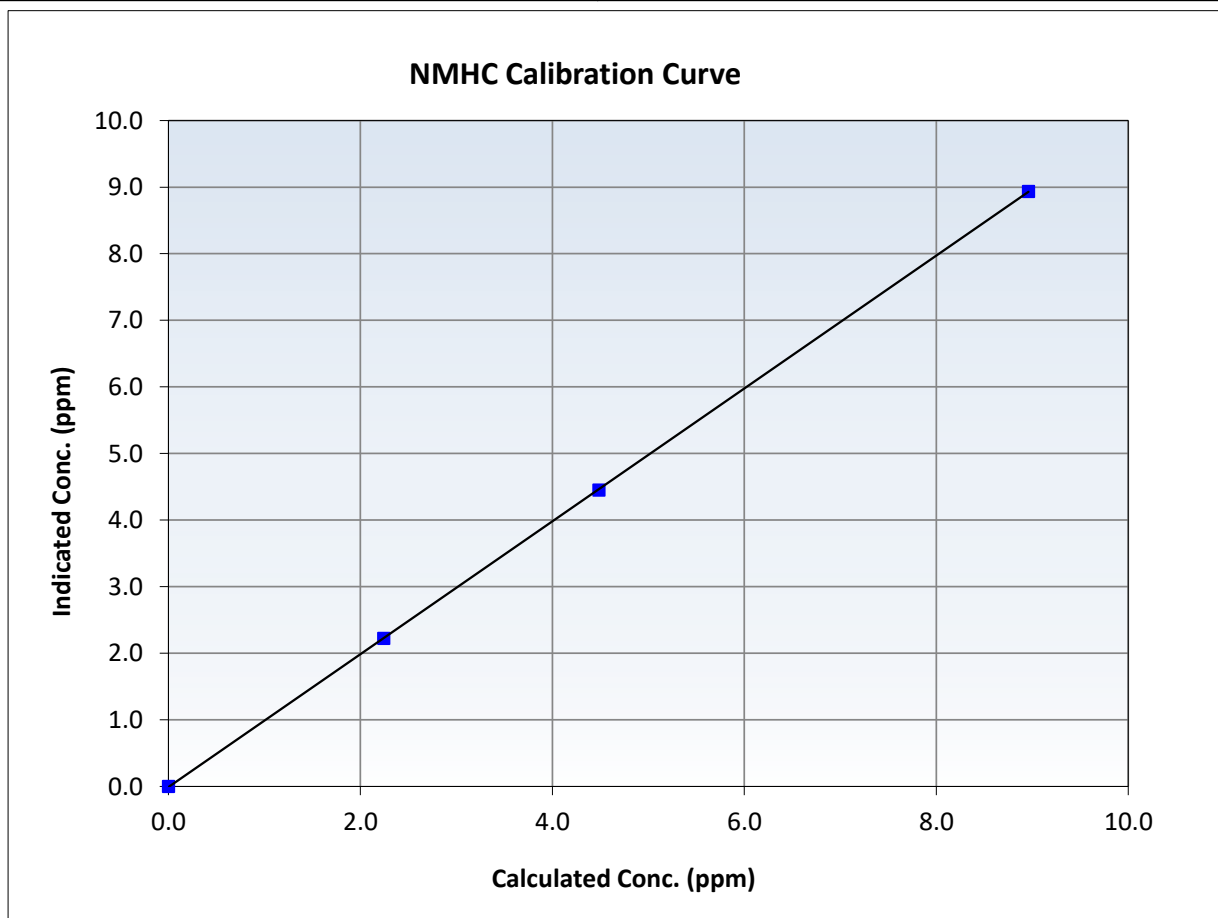
NMHC Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 1, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:52	End Time (MST):	9:16
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

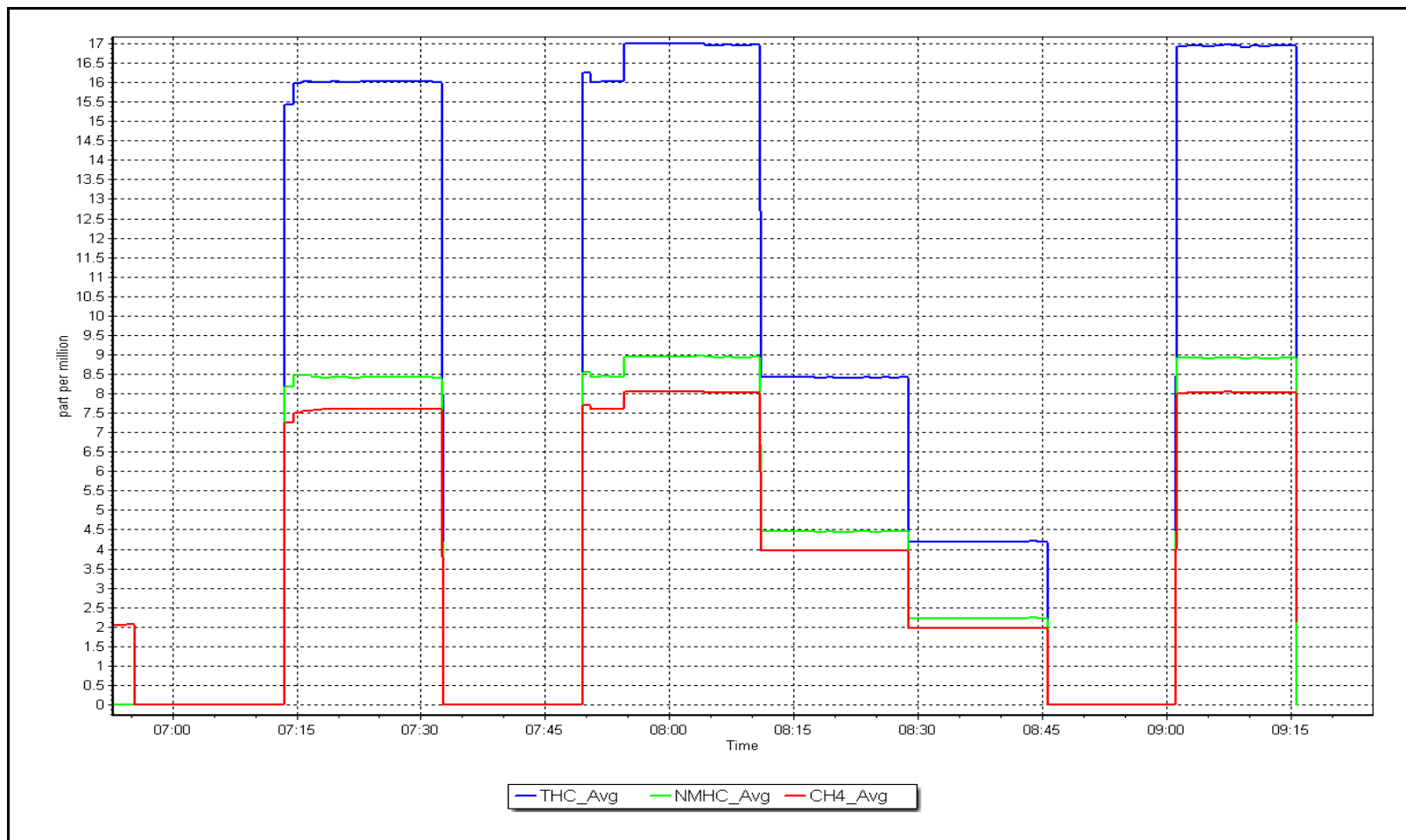
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999992	<i>≥0.995</i>
8.96	8.94	1.0025	Slope	0.997705	<i>0.90 - 1.10</i>
4.49	4.45	1.0075	Intercept	-0.009316	<i>+/-0.5</i>
2.24	2.23	1.0079			



NMHC Calibration Plot

Date: July 15, 2026

Location: Anzac





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Anzac
 Calibration Date: July 29, 2026
 Start time (MST): 9:45
 Reason: Maintenance

Station number: AMS 14
 Last Cal Date: July 15, 2026
 End time (MST): 13:37

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:	4.16E-04	4.23E-04	NMHC SP Ratio:	6.63E-05
CH ₄ Retention time:	17.0	17.0	NMHC Peak Area:	135236
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	15.19	1.119
As found Mid point	4960	39.8	8.51	7.53	1.130
As found Low point	4980	19.9	4.25	3.76	1.133
New cylinder response					
Baseline Corr AF:	15.19	Prev response	16.94	*% change	-11.5%
Baseline Corr 2nd AF:	7.53	AF Slope:	0.893985	AF Intercept:	-0.032785
Baseline Corr 3rd AF:	3.76	AF Correlation:	0.999970	* = > +/-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	17.01	0.999
Mid point	4960	39.8	8.51	8.45	1.007
Low point	4980	19.9	4.25	4.22	1.008
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	17.00	16.99	1.000
Average Correction Factor					1.005

Notes:

Internal pump swapped. 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	8.04	1.114
As found Mid point	4960	39.8	4.49	4.00	1.120
As found Low point	4980	19.9	2.24	2.00	1.121
New cylinder response					
Baseline Corr AF:	8.04	Prev response	8.93	*% change	-11.1%
Baseline Corr 2nd AF:	4.00	AF Slope:	0.897474	AF Intercept:	-0.008703
Baseline Corr 3rd AF:	2.00	AF Correlation:	0.999991	* = > +/-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	8.97	0.999
Mid point	4960	39.8	4.49	4.47	1.004
Low point	4980	19.9	2.24	2.24	1.003
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					1.002

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	7.14	1.125
As found Mid point	4960	39.8	4.02	3.53	1.141
As found Low point	4980	19.9	2.01	1.75	1.147
New cylinder response					
Baseline Corr AF:	7.14	Prev response	8.01	*% change	-12.1%
Baseline Corr 2nd AF:	3.53	AF Slope:	0.889837	AF Intercept:	-0.023682
Baseline Corr 3rd AF:	1.75	AF Correlation:	0.999932	* = > +/-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	8.05	0.999
Mid point	4960	39.8	4.02	3.98	1.011
Low point	4980	19.9	2.01	1.98	1.014
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	8.04	8.05	0.998
Average Correction Factor					1.008

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.998844	1.000956
THC Cal Offset:	-0.036606	-0.027819
CH ₄ Cal Slope:	1.000469	1.001821
CH ₄ Cal Offset:	-0.028289	-0.022295
NMHC Cal Slope:	0.997705	1.000792
NMHC Cal Offset:	-0.009316	-0.006924

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

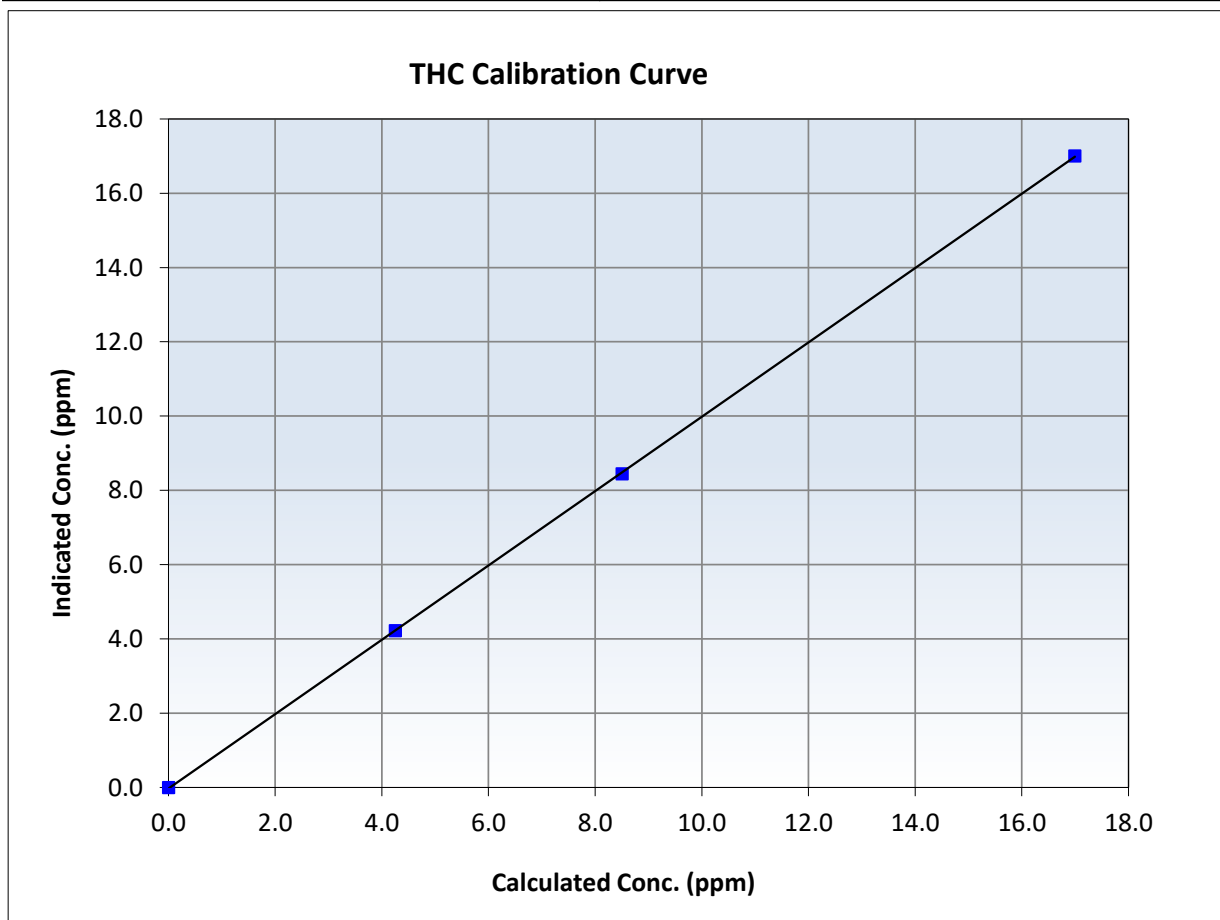
THC Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	July 15, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	9:45	End Time (MST):	13:37
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	0.999980	<i>≥0.995</i>
17.00	17.01	0.9993	Slope	1.000956	<i>0.90 - 1.10</i>
8.51	8.45	1.0073	Intercept	-0.027819	<i>+/-0.5</i>
4.25	4.22	1.0078			





Wood Buffalo Environmental Association

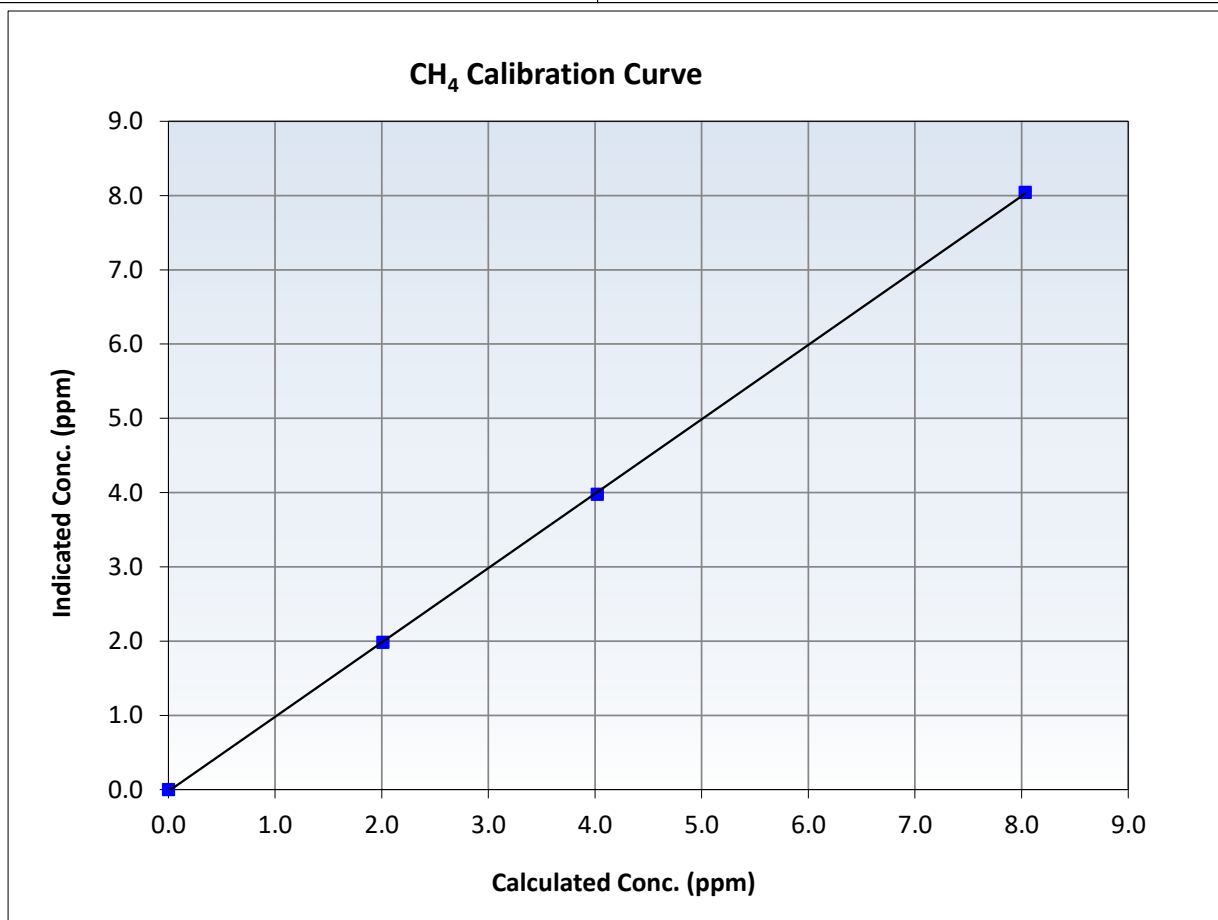
CH₄ Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	July 15, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	9:45	End Time (MST):	13:37
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	0.999949	<i>≥0.995</i>
8.04	8.05	0.9988	Slope	1.001821	<i>0.90 - 1.10</i>
4.02	3.98	1.0114	Intercept	-0.022295	<i>+/-0.5</i>
2.01	1.98	1.0142			





Wood Buffalo Environmental Association

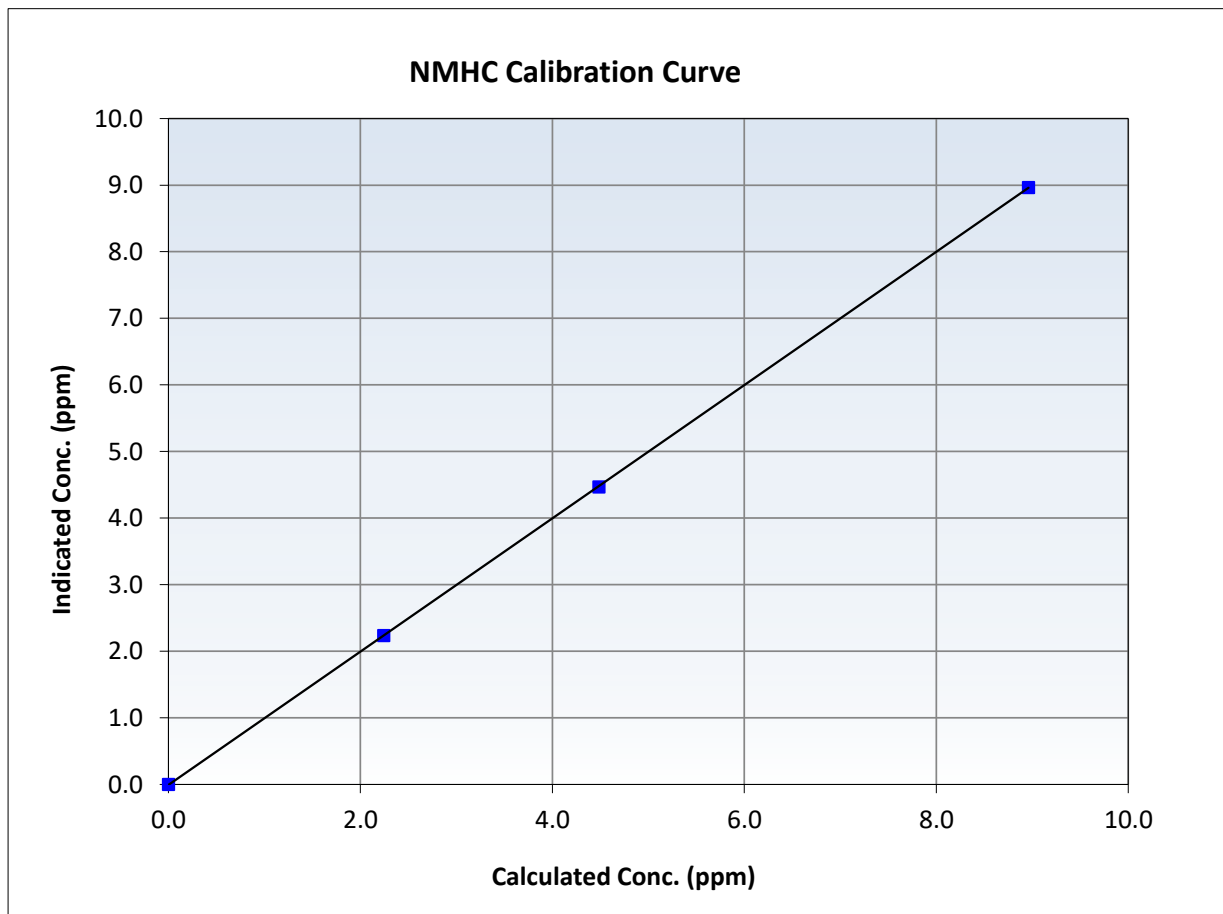
NMHC Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	July 15, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	9:45	End Time (MST):	13:37
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

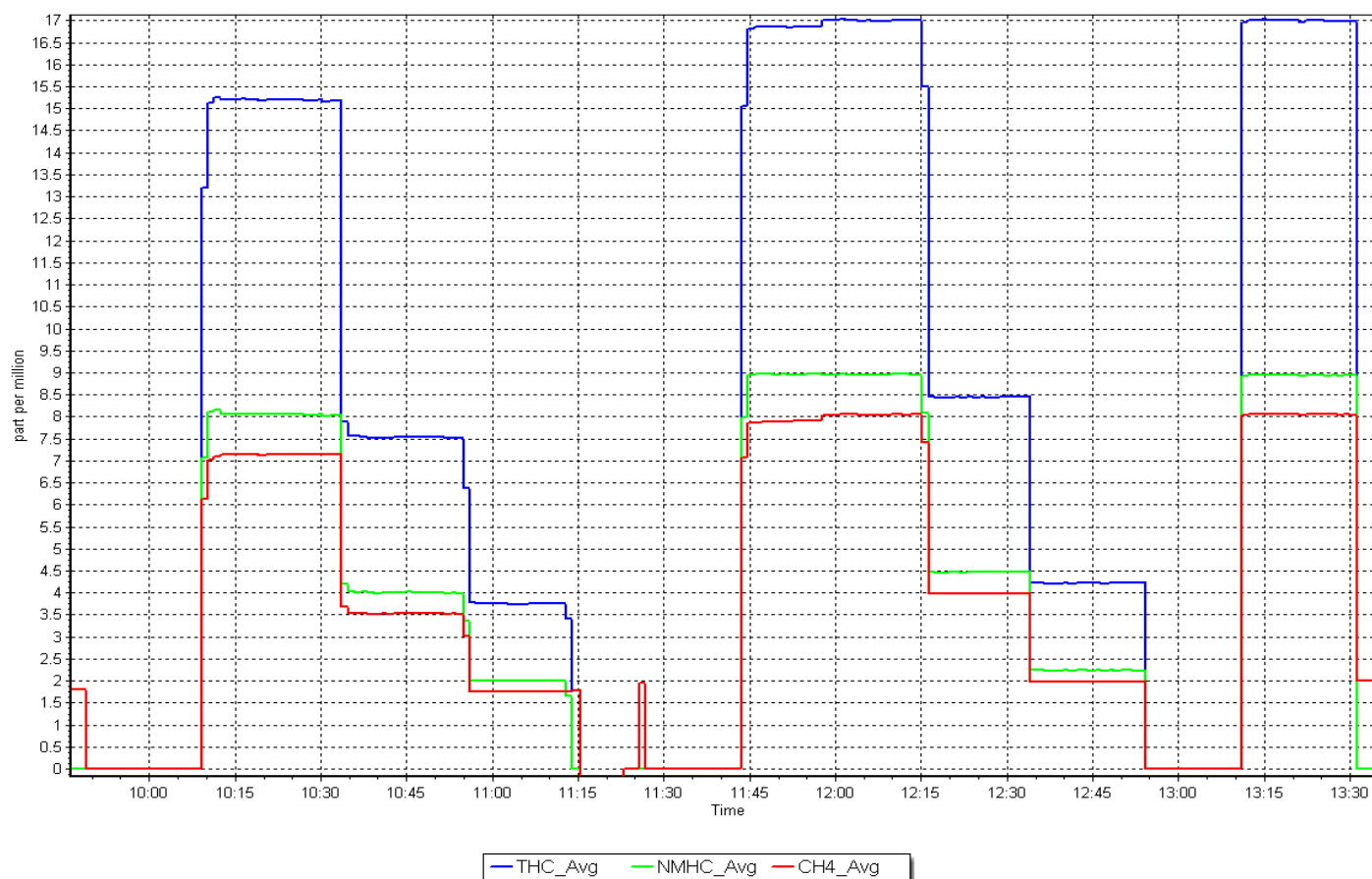
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999994	<i>≥0.995</i>
8.96	8.97	0.9992	Slope	1.000792	<i>0.90 - 1.10</i>
4.49	4.47	1.0037	Intercept	-0.006924	<i>+/-0.5</i>
2.24	2.24	1.0025			



NMHC Calibration Plot

Date: July 29, 2026

Location: Anzac





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Anzac
Station number: AMS 14
Calibration Date: July 27, 2026
Last Cal Date: June 2, 2026
Start time (MST): 7:22
End time (MST): 11:39
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0037092
NOX Cal Gas Conc: 60.7 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 60.70 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701H
Cal Gas Expiry Date: May 16, 2031
NO Cal Gas Conc: 60.40 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 60.40 ppm
NO gas Diff:
Serial Number: 3812
Serial Number: 357

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	4934	66.2	803.6	799.7	4.0	797.4	791.9	5.5	1.0081	1.0098
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 801.0 ppb	NO = 798.6 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.5%
Baseline Corr 1st pt	NO _x = 797.2 ppb	NO = 791.9 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 :	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: 1152430008

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.386	1.386	NO bkgnd or offset:	3.8	3.8
NOX coeff or slope:	0.996	0.996	NOX bkgnd or offset:	3.8	3.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	151.2	151.2

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.995359	0.989357
NO _x Cal Offset:	1.106859	0.768357
NO Cal Slope:	0.999500	0.991852
NO Cal Offset:	-0.712100	-0.810186
NO ₂ Cal Slope:	0.996482	0.996262
NO ₂ Cal Offset:	-0.393098	-0.876749

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	0.3	0.1	0.2	----	----
High point	4934	66.2	803.6	799.7	4.0	795.6	792.8	2.8	1.0101	1.0087
Mid point	4967	33.1	401.8	399.8	2.0	398.6	395.3	3.3	1.0081	1.0115
Low point	4983	16.6	201.5	200.5	1.0	200.6	197.2	3.4	1.0047	1.0170
As left zero	5000	0.0	0.0	0.0	0.0	0.3	0.1	0.2	----	----
As left span	4934	66.2	803.6	380.3	423.3	791.9	380.3	411.6	1.0148	1.0000
Average Correction Factor									1.0076	1.0124

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	790.1	378.2	415.9	414.1	1.0043	99.6%
Mid GPT point	790.1	589.3	204.8	202.2	1.0127	98.7%
Low GPT point	790.1	690.1	104.0	101.9	1.0203	98.0%
Average Correction Factor					1.0124	98.8%

Notes:

No Maintenance or adjustments done.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

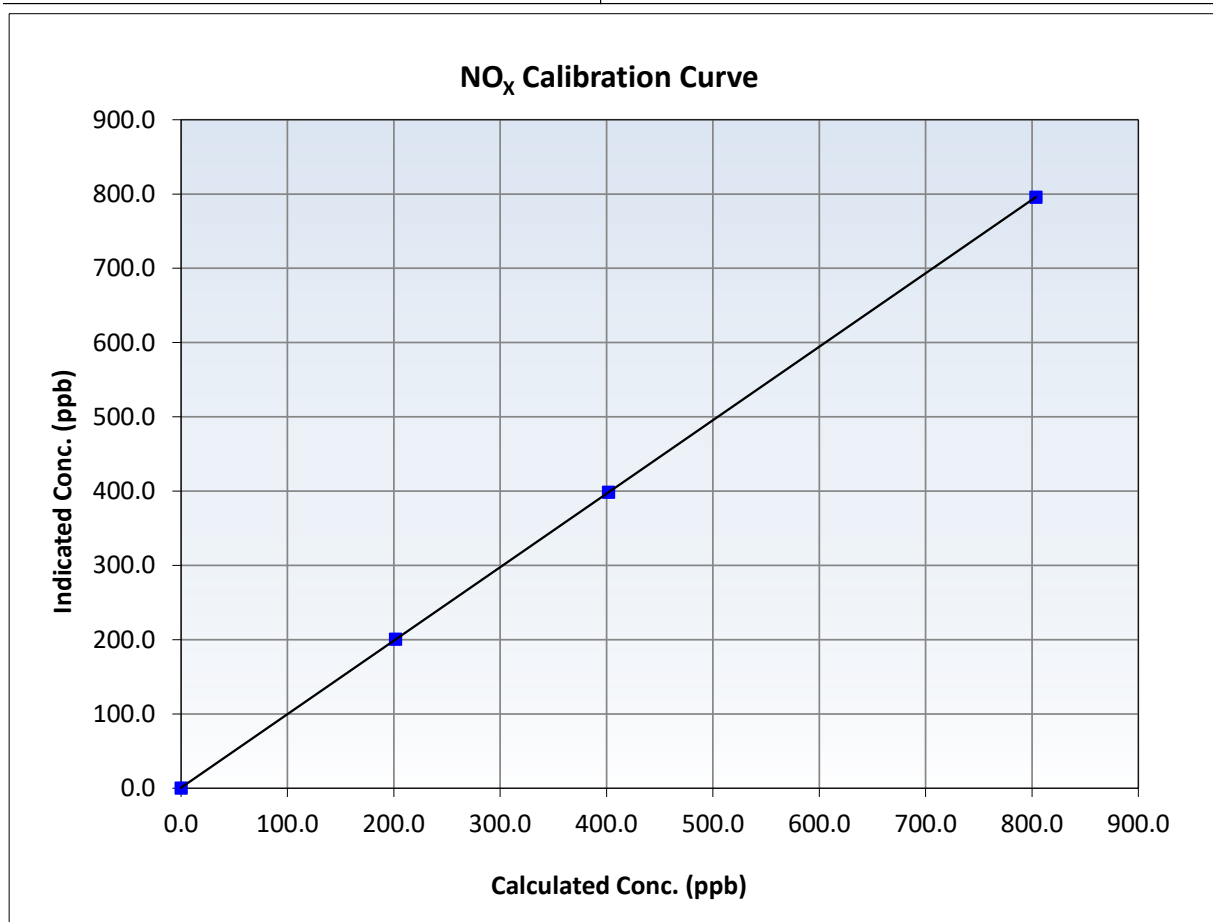
NO_x Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 2, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	7:22	End Time (MST):	11:39
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	0.3	----	Correlation Coefficient	0.999998	≥0.995
803.6	795.6	1.0101	Slope	0.989357	0.90 - 1.10
401.8	398.6	1.0081	Intercept	0.768357	+/-20
201.5	200.6	1.0047			





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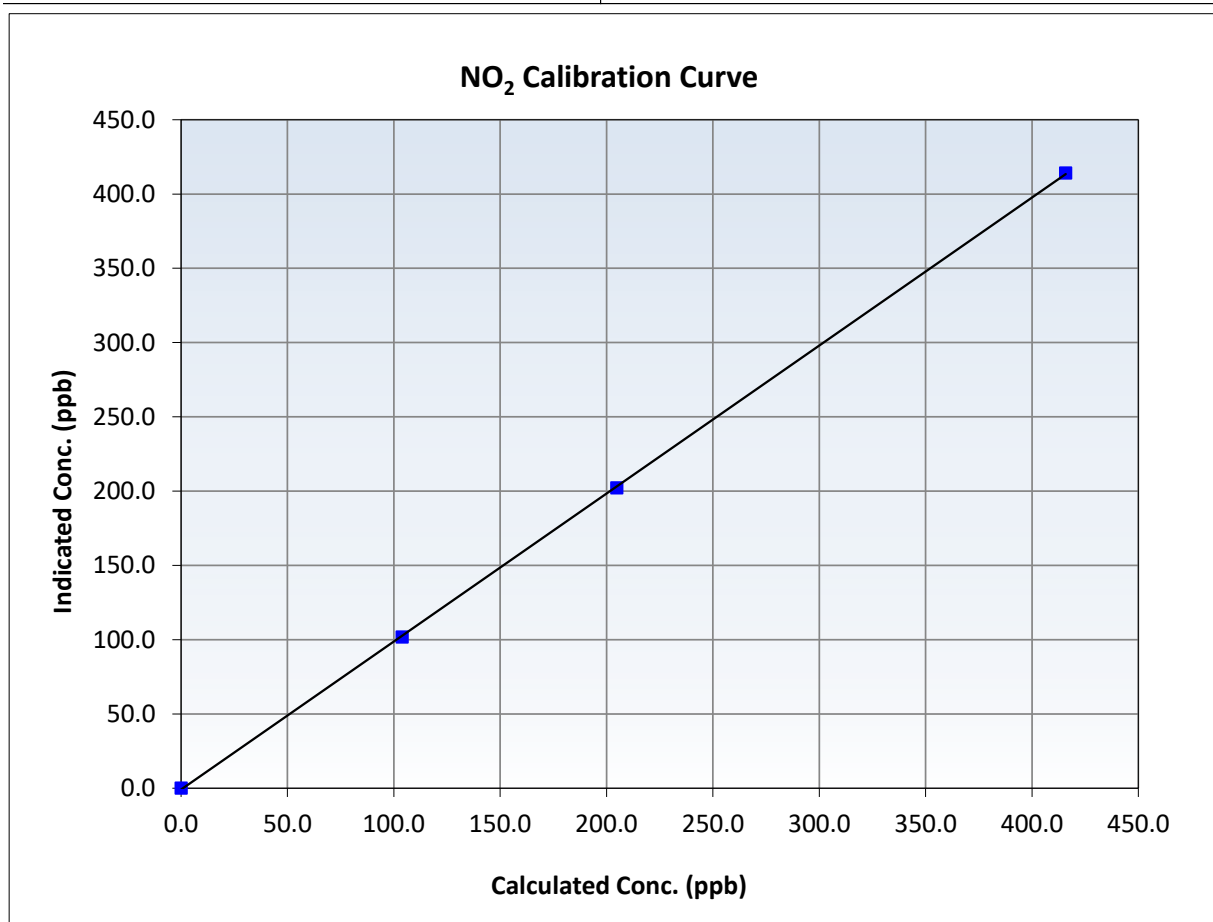
NO₂ Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 2, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	7:22	End Time (MST):	11:39
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	0.999967	≥0.995
415.9	414.1	1.0043	Slope	0.996262	0.90 - 1.10
204.8	202.2	1.0127	Intercept	-0.876749	+/-20
104.0	101.9	1.0203			





Wood Buffalo Environmental Association

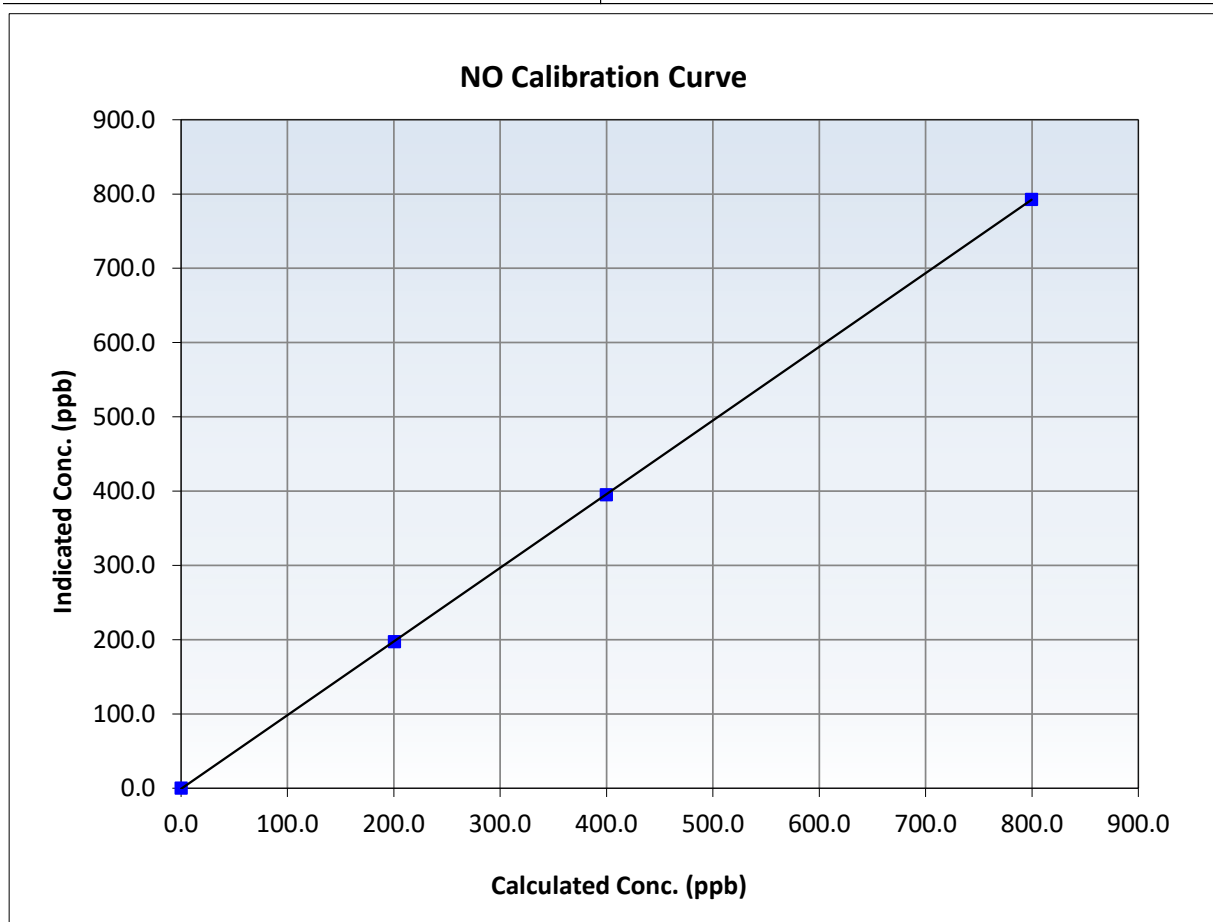
NO Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 2, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	7:22	End Time (MST):	11:39
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430008

Calibration Data

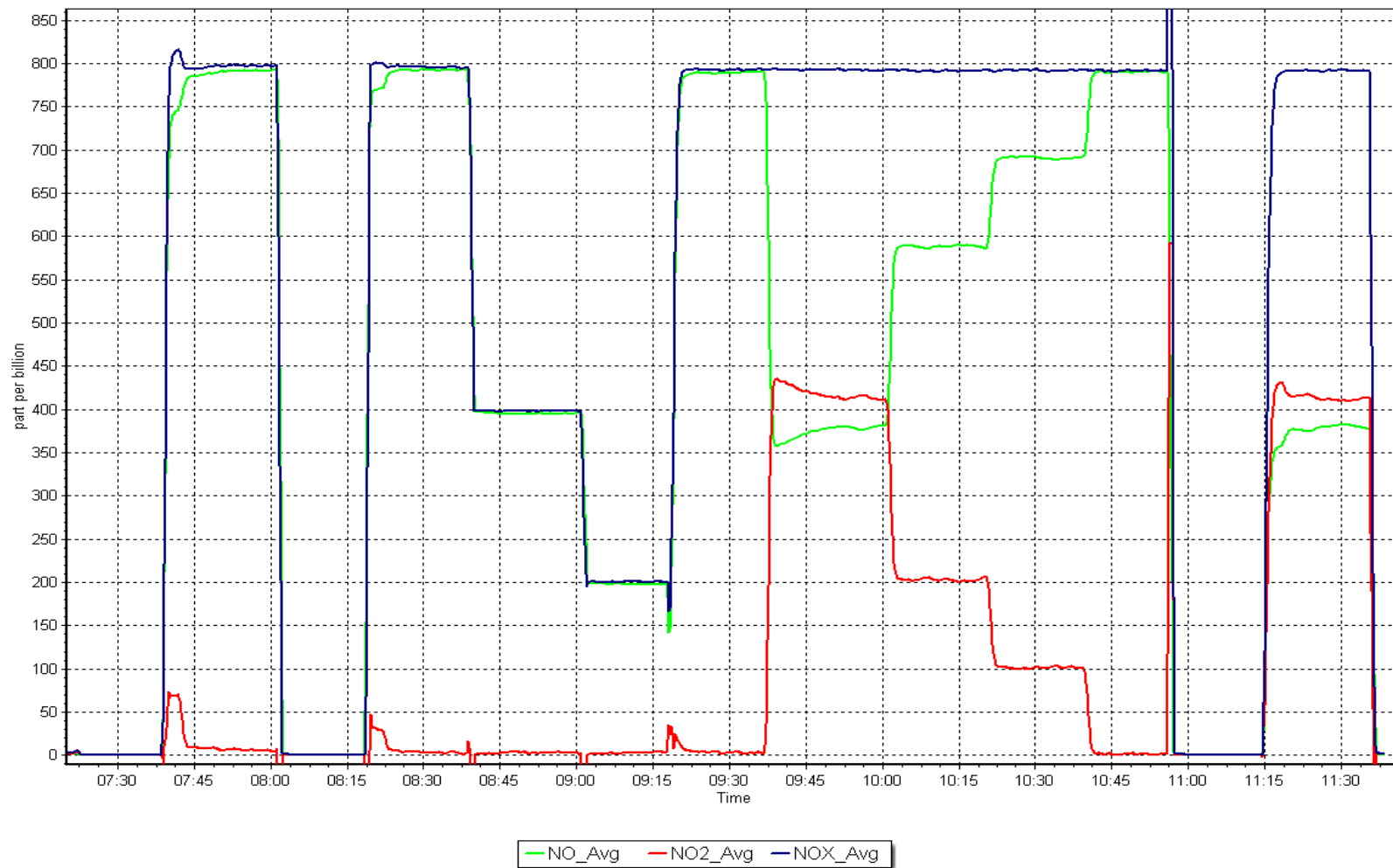
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999994	≥ 0.995
799.7	792.8	1.0087	Slope	0.991852	$0.90 - 1.10$
399.8	395.3	1.0115	Intercept	-0.810186	± 20
200.5	197.2	1.0170			



NO_x Calibration Plot

Date: July 27, 2026

Location: Anzac





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Anzac
Calibration Date: July 3, 2026
Start time (MST): 6:54
Reason: Routine

Station number: AMS 14
Last Cal Date: June 8, 2026
End time (MST): 9:28

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:	1.002771	1.007143	Backgd or Offset:	-0.8	-0.8
Calibration intercept:	0.340000	0.300000	Coeff or Slope:	1.532	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	-0.6	----
As found High point	5000	938.9	400.0	404.2	0.988
As found Mid point					
As found Low point					
Baseline Corr As found:	404.8	Previous response	401.4	*% 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	

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	0.3	----
High point	5000	937.3	400.0	403.2	0.992
Mid point	5000	811.4	200.0	201.6	0.992
Low point	5000	714.6	100.0	101.1	0.989
As left zero	5000	0.0	0.0	0.6	----
As left span	5000	933.9	400.0	403.8	0.991
Average Correction Factor					0.991

Notes: No adjustments or maintenance done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

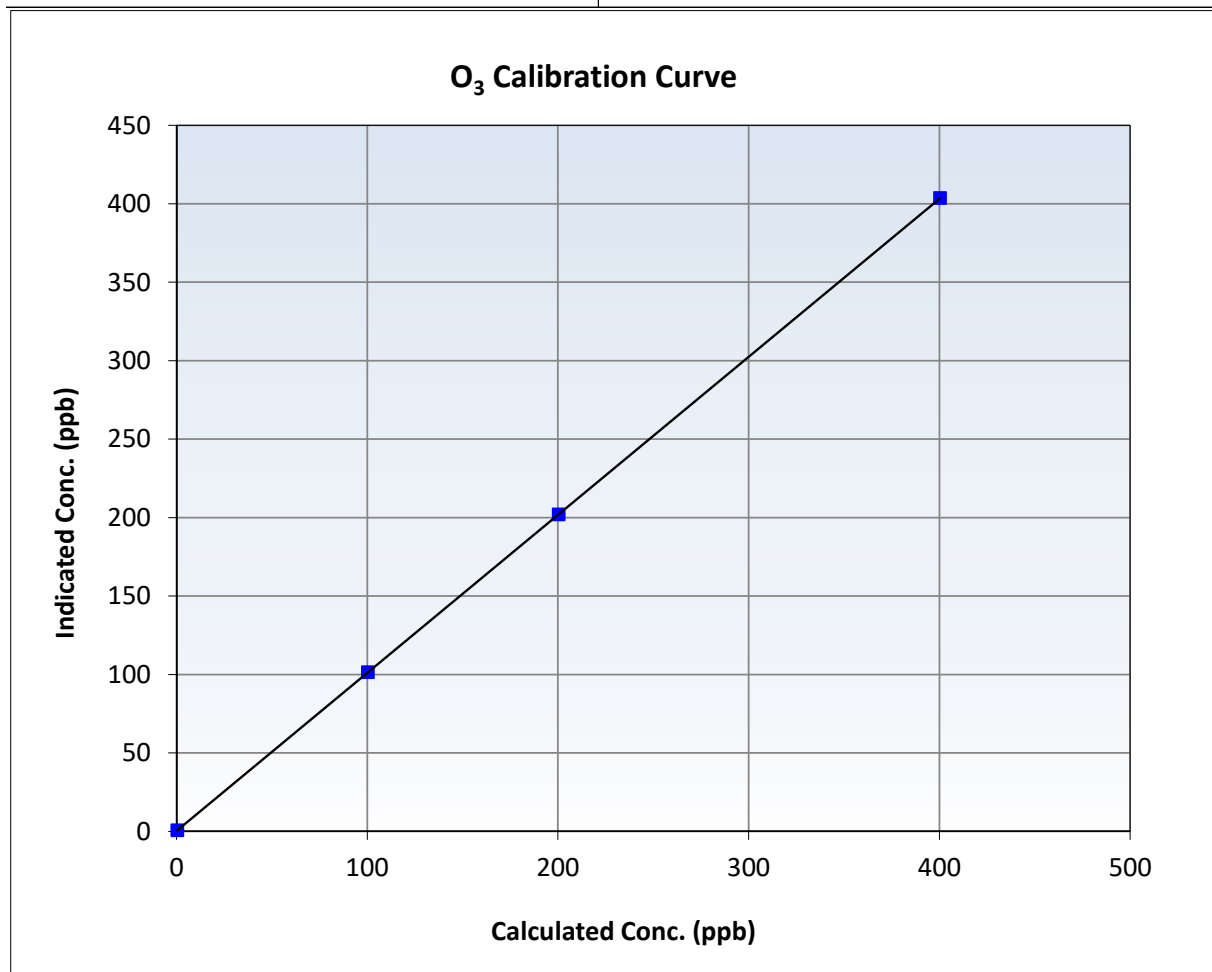
O₃ Calibration Summary

Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 8, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	6:54	End Time (MST):	9:28
Analyzer make:	Thermo 49i	Analyzer serial #:	1152220023

Calibration Data

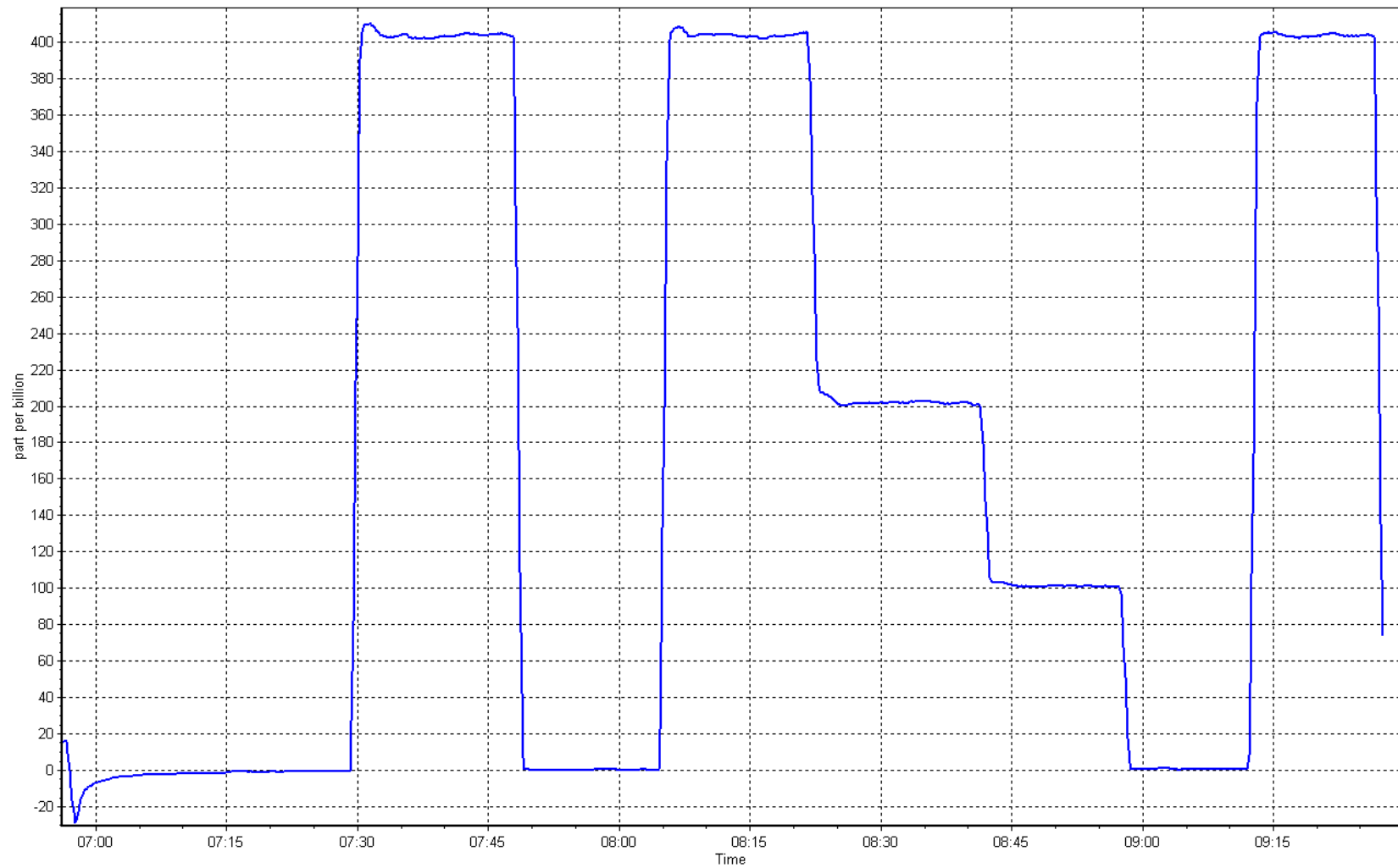
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	1.000000	≥0.995
400.0	403.2	0.9921	Slope	1.007143	0.90 - 1.10
200.0	201.6	0.9921	Intercept	0.300000	+/- 5
100.0	101.1	0.9891			



O₃ Calibration Plot

Date: July 3, 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: July 27, 2026 Last Cal Date: June 12, 2026
Start time (MST): 6:57 End time (MST): 7:25

Analyzer Make: AP T640 S/N: 825
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)	13.60	12.60	13.60	☐	+/- 2 °C
P (mmHg)	713.30	714.8	713.30	☐	+/- 10 mmHg
Flow (LPM)	5.04	4.93	5.04	☐	+/- 0.25 LPM
PW% (pump)	36	----	36	☐	>80%
Zero Verification	PM w/o HEPA:	7.50	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: May 22, 2026
Date Disposable Filter Changed: May 22, 2026

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

Annual Maintenance

Date Sample Tube Cleaned: May 22, 2026
Date RH/T Sensor Cleaned: May 22, 2026

Notes: Leak check passed. No adjustments made.

Calibration by: Melissa Lemay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS17
WAPASU
JULY 2026**

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Wapasu
Calibration Date: July 3, 2026
Start time (MST): 9:37
Reason: Routine

Station number: AMS17
Last Cal Date: June 11, 2026
End time (MST): 12:58

Calibration Standards

Cal Gas Concentration: 50.12 ppm
Cal Gas Cylinder #: CC422255
Removed Cal Gas Conc: 50.12 ppm
Removed Gas Cyl #: N/A
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API 701H

Cal Gas Exp Date: April 9, 2033
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 2448
Serial Number: 1238

Analyzer Information

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

Serial Number: 1218153459

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.996720	1.002778	Backgd or Offset:	15.2	14.7
Calibration intercept:	-1.374730	-0.795861	Coeff or Slope:	1.081	1.088

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	-0.8	----
As found High point	4920	79.8	799.9	790.6	1.011
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	791.4	Previous response	795.9	*% 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	4920	79.8	799.9	801.7	0.998
Mid point	4960	39.9	400.0	400.0	1.000
Low point	4980	20.0	200.5	199.5	1.005
As left zero	5000	0.0	0.0	0.1	----
As left span	4920	79.8	799.9	801.6	0.998
Average Correction Factor:					1.001

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

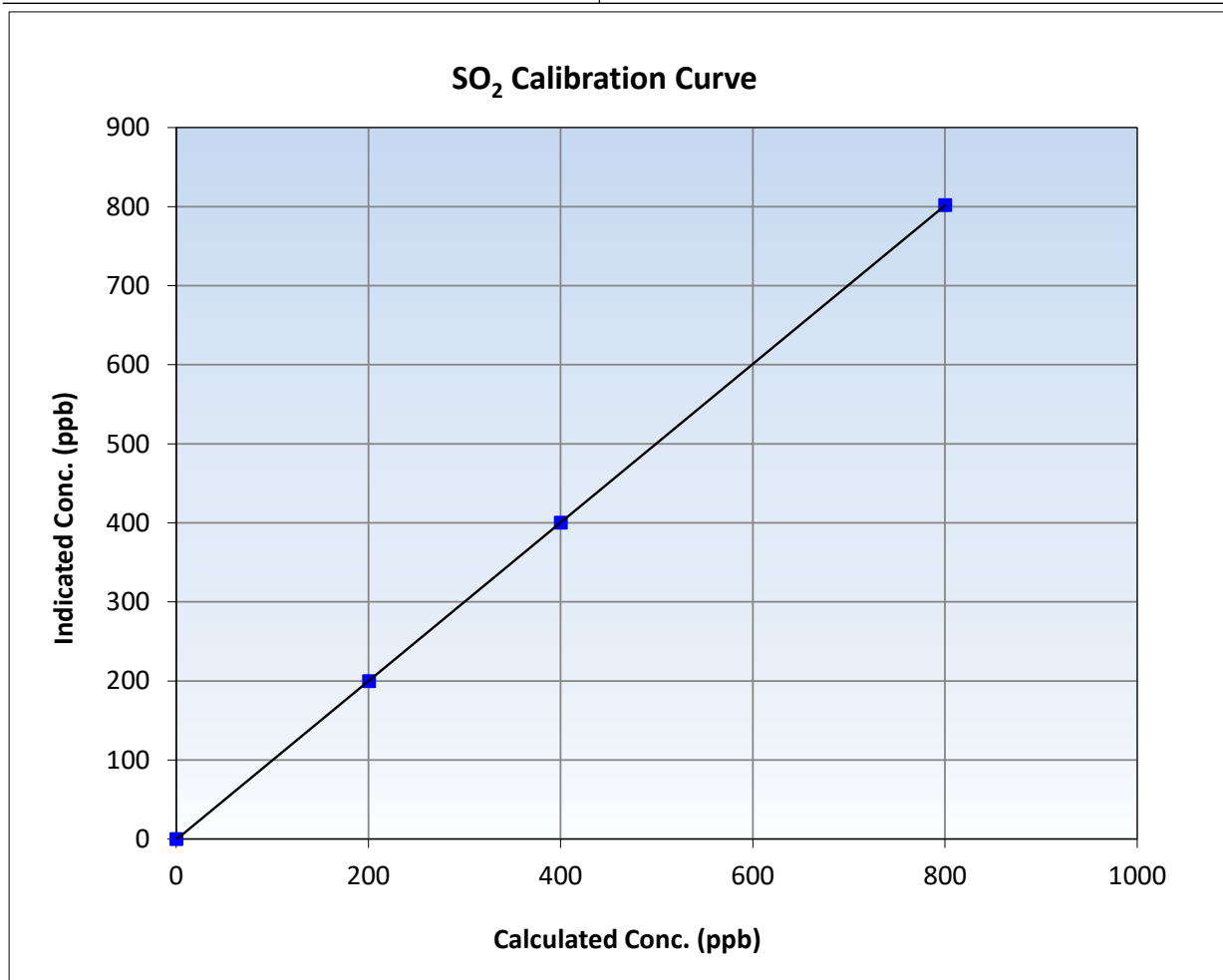
SO₂ Calibration Summary

Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 11, 2026
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	9:37	End Time (MST):	12:58
Analyzer make:	Thermo 43i	Analyzer serial #:	1218153459

Calibration Data

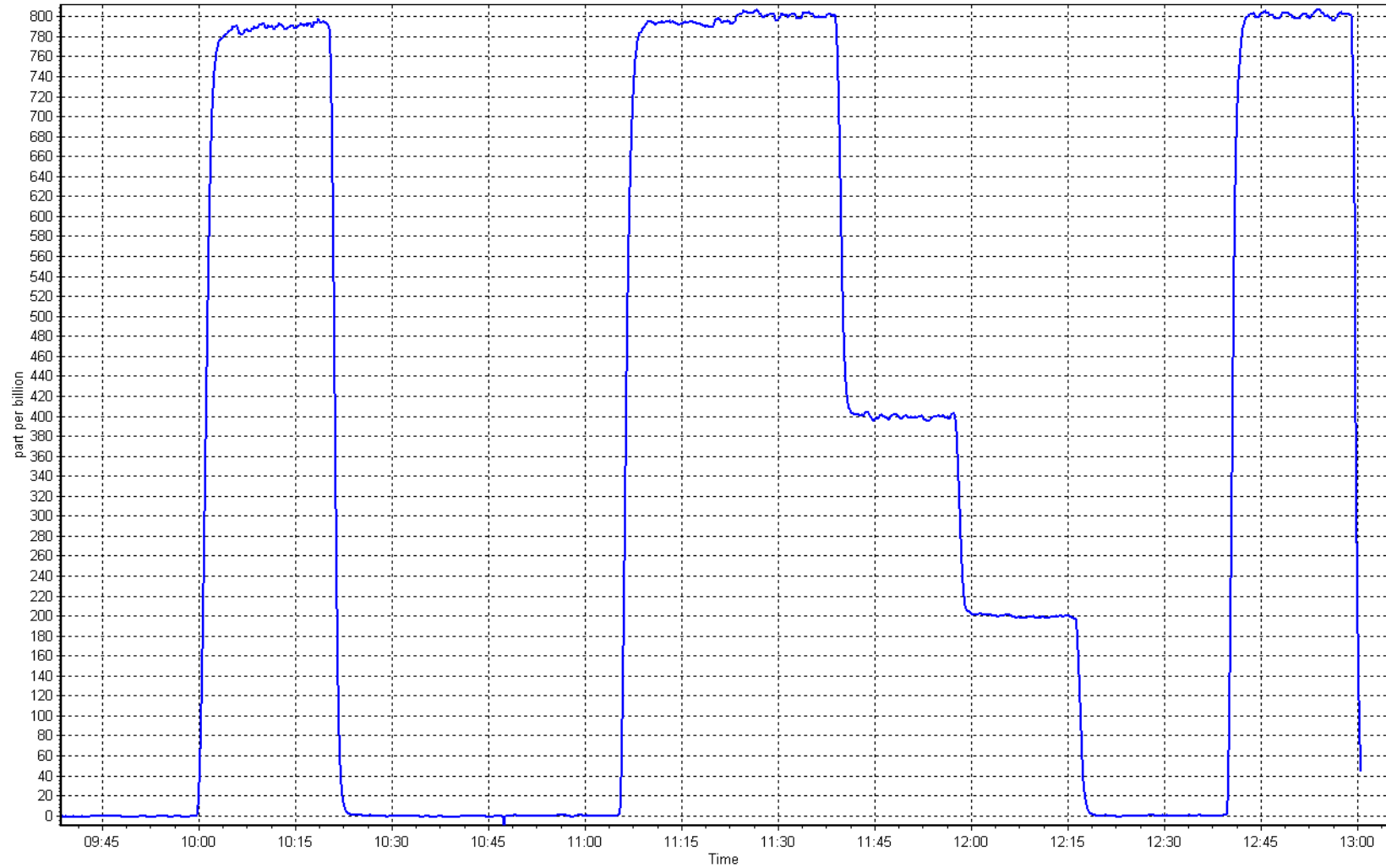
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999997	≥0.995
799.9	801.7	0.9978	Slope	1.002778	0.90 - 1.10
400.0	400.0	0.9999	Intercept	-0.795861	+/-30
200.5	199.5	1.0049			



SO2 Calibration Plot

Date: July 3, 2026

Location: Wapasu





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Wapasu
Calibration Date: July 30, 2026
Start time (MST): 9:14
Reason: Routine

Station number: AMS 17
Last Cal Date: June 8, 2026
End time (MST): 13:05

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: 2448
Serial Number: 1238

Analyzer Information

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

Analyzer serial #: 12228021057
Converter serial #: 2026-101
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004353	0.996639	Backgd or Offset:	2.75	2.55
Calibration intercept:	-0.039799	0.180281	Coeff or Slope:	1.014	0.943

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	4916	83.9	80.0	85.5	0.936
As found Mid point	4958	41.9	40.0	43.2	0.925
As found Low point	4979	21.0	20.0	21.6	0.928
New cylinder response					
Baseline Corr As found:	85.5	Prev response:	80.35	*% change:	6.0%
Baseline Corr 2nd AF pt:	43.2	AF Slope:	1.068041	AF Intercept:	0.180322
Baseline Corr 3rd AF pt:	21.6	AF Correlation:	0.999958	* = > +/-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	4916	83.9	80.0	79.8	1.003
Mid point	4958	41.9	40.0	40.3	0.992
Low point	4979	21.0	20.0	20.2	0.992
As left zero	5000	0.0	0.0	0.1	----
As left span	4916	83.9	80.0	80.5	0.994
SO2 Scrubber Check	4920	79.8	798.0	0.0	----
Date of last scrubber change:		N/A		Ave Corr Factor	0.996
Date of last converter efficiency test:		N/A			

Notes: Sample inelt 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

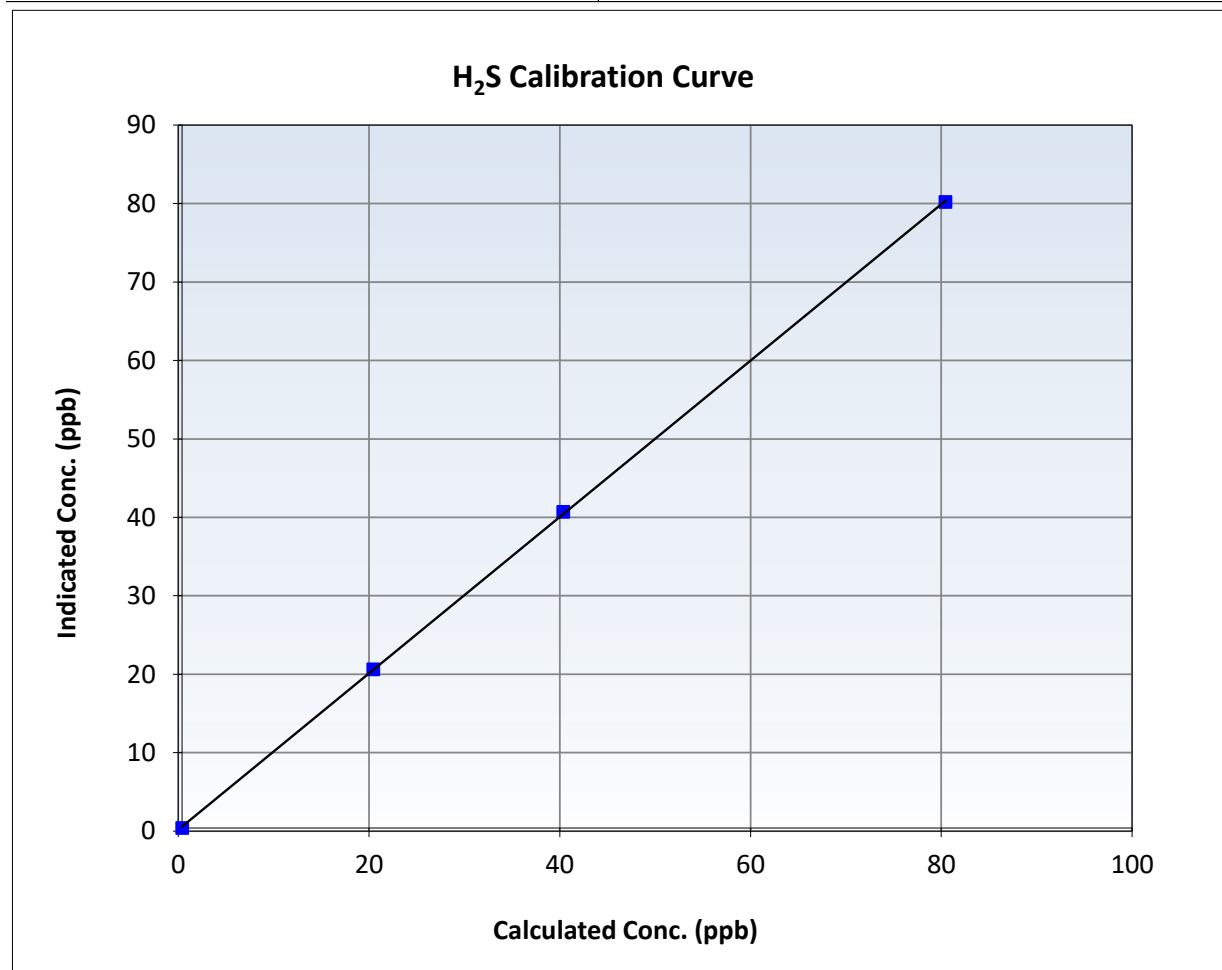
H₂S Calibration Summary

Station Information

Calibration Date:	July 30, 2026	Previous Calibration:	June 8, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	9:14	End Time (MST):	13:05
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	12228021057

Calibration Data

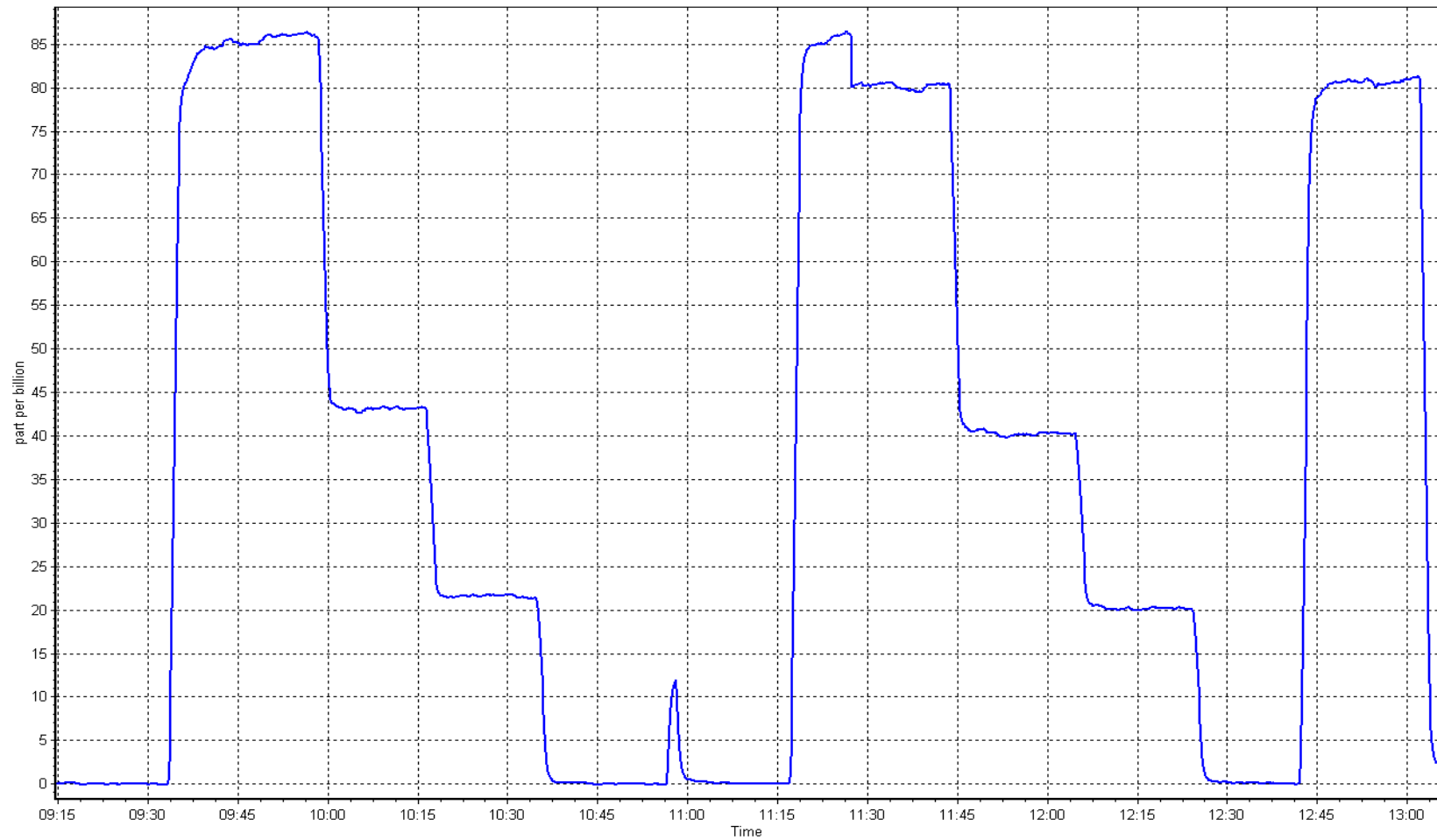
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999960	≥ 0.995
80.0	79.8	1.0030	Slope	0.996639	$0.90 - 1.10$
40.0	40.3	0.9919	Intercept	0.180281	± 3
20.0	20.2	0.9918			



H₂S Calibration Plot

Date: July 30, 2026

Location: Wapasu





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Wapasu Station number: AMS17
Calibration Date: July 3, 2026 Last Cal Date: June 11, 2026
Start time (MST): 9:37 End time (MST): 12:58
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:	1.013495	0.997641	Background:	3.200	2.770
Calibration intercept:	-0.245798	0.044472	Coefficient:	4.416	4.323

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))
As found zero	5000	0.0	0.00	-0.27	----
As found High point	4920	79.8	16.90	16.96	0.981
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	17.23	Previous response	16.88	*% change	2.0%
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)
Calibrator zero	5000	0.0	0.00	0.05	----
High point	4920	79.8	16.90	16.92	0.999
Mid point	4960	39.9	8.45	8.45	1.000
Low point	4980	20.0	4.24	4.28	0.990
As left zero	5000	0.0	0.00	0.11	----
As left span	4920	79.8	16.90	16.95	0.997
Average Correction Factor					0.997

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

THC Calibration Summary

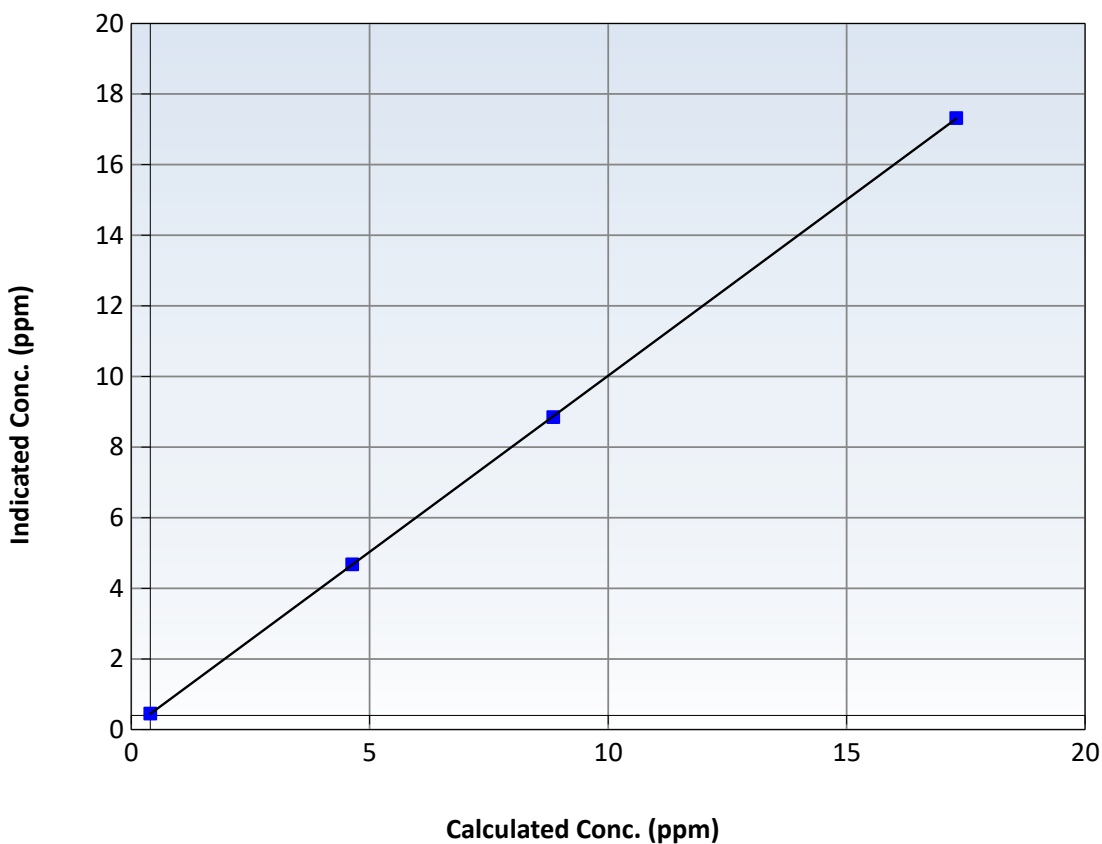
Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 11, 2026
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	9:37	End Time (MST):	12:58
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	0.05	----	Correlation Coefficient	0.999995	≥ 0.995
16.90	16.92	0.9991	Slope	0.997641	$0.90 - 1.10$
8.45	8.45	1.0001	Intercept	0.044472	± 1.5
4.24	4.28	0.9904			

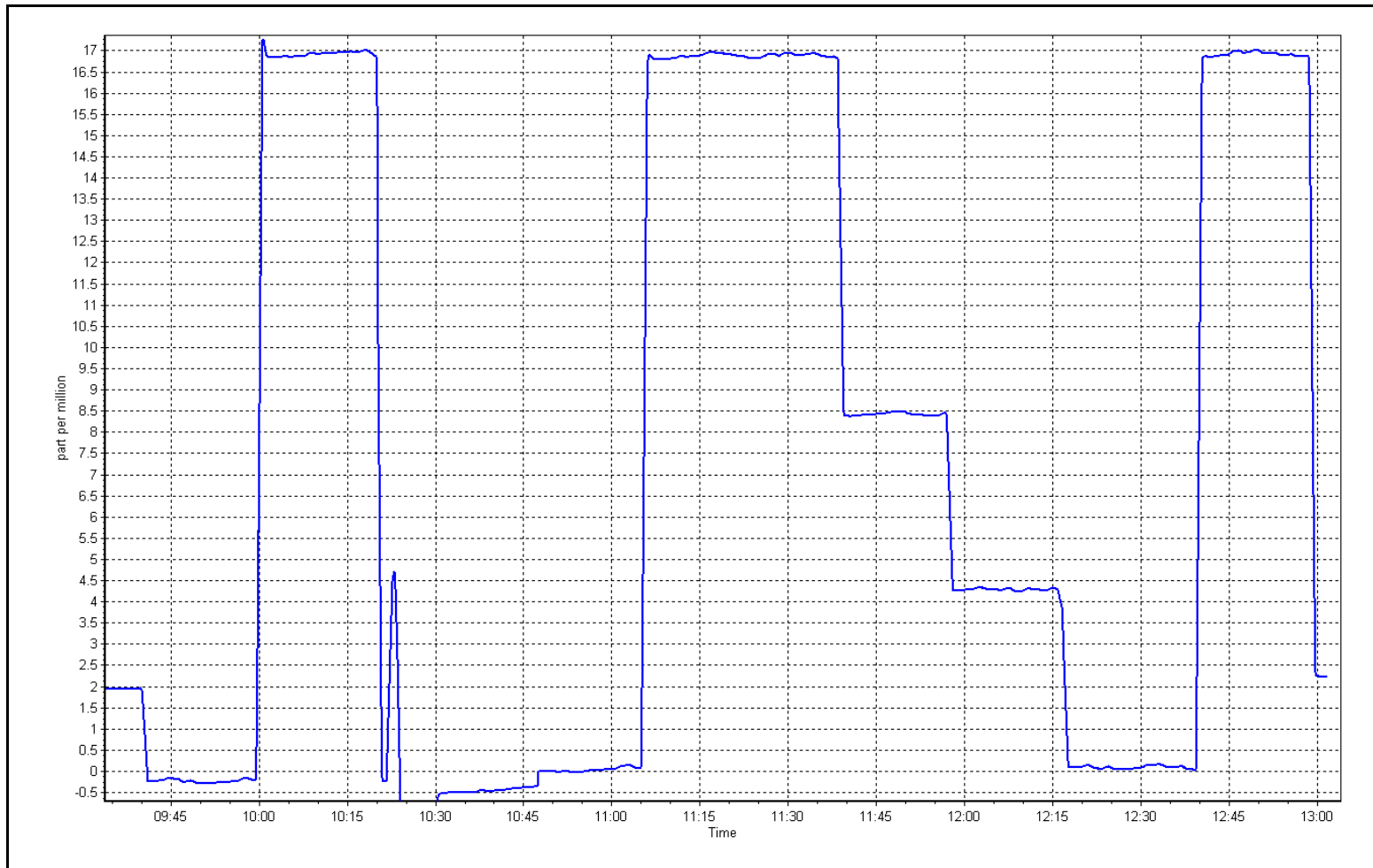
THC Calibration Curve



THC Calibration Plot

Date: July 3, 2026

Location: Wapasu





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Wapasu
Station number: AMS 17
Calibration Date: July 17, 2026
Last Cal Date: June 15, 2026
Start time (MST): 8:59
End time (MST): 13:28
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	0.0	0.3	-0.3	----	----
AF High point	4934	65.6	804.3	800.4	3.9	789.7	783.7	6.0	1.0185	1.0217
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 805.1 ppb	NO = 799.8 ppb				* = > +/-5% change initiates investigation			*Percent Change	NO _x = -2.0%
Baseline Corr 1st pt	NO _x = 789.7 ppb	NO = 783.4 ppb				<u>As Found Statistics</u>			*Percent Change	NO = -2.1%
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 Scientific 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1218153460

Instrument Settings

	<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.029	1.048
NOX coeff or slope:	0.997	0.997
NO2 coeff or slope:	1.000	1.000

	<u>Start</u>	<u>Finish</u>
NO bkgnd or offset:	3.6	3.6
NOX bkgnd or offset:	3.9	4.0
Reaction cell Press:	221.7	222.0

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.998865	0.998723
NO _x Cal Offset:	1.696134	1.996143
NO Cal Slope:	0.998524	0.998995
NO Cal Offset:	0.635997	0.796008
NO ₂ Cal Slope:	1.002168	1.002689
NO ₂ Cal Offset:	0.834390	-0.061367

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	0.4	-0.3	----	----
High point	4934	65.6	804.3	800.4	3.9	804.5	800.3	4.0	0.9998	1.0001
Mid point	4967	32.8	402.1	400.2	2.0	404.1	400.4	3.7	0.9952	0.9994
Low point	4984	16.4	201.0	200.1	1.0	205.0	201.3	3.7	0.9807	0.9939
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.4	-0.3	----	----
As left span	4934	65.6	804.3	394.7	409.6	806.5	394.7	411.8	0.9973	1.0000
Average Correction Factor									0.9919	0.9978

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	-0.3	----	----
High GPT point	798.5	394.2	408.2	409.1	0.9979	100.2%
Mid GPT point	798.5	595.3	207.1	207.9	0.9963	100.4%
Low GPT point	798.5	697.7	104.7	105.1	0.9965	100.3%
Average Correction Factor					0.9969	100.3%

Notes:

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

Calibration Performed By:

Jan Castro



Wood Buffalo Environmental Association

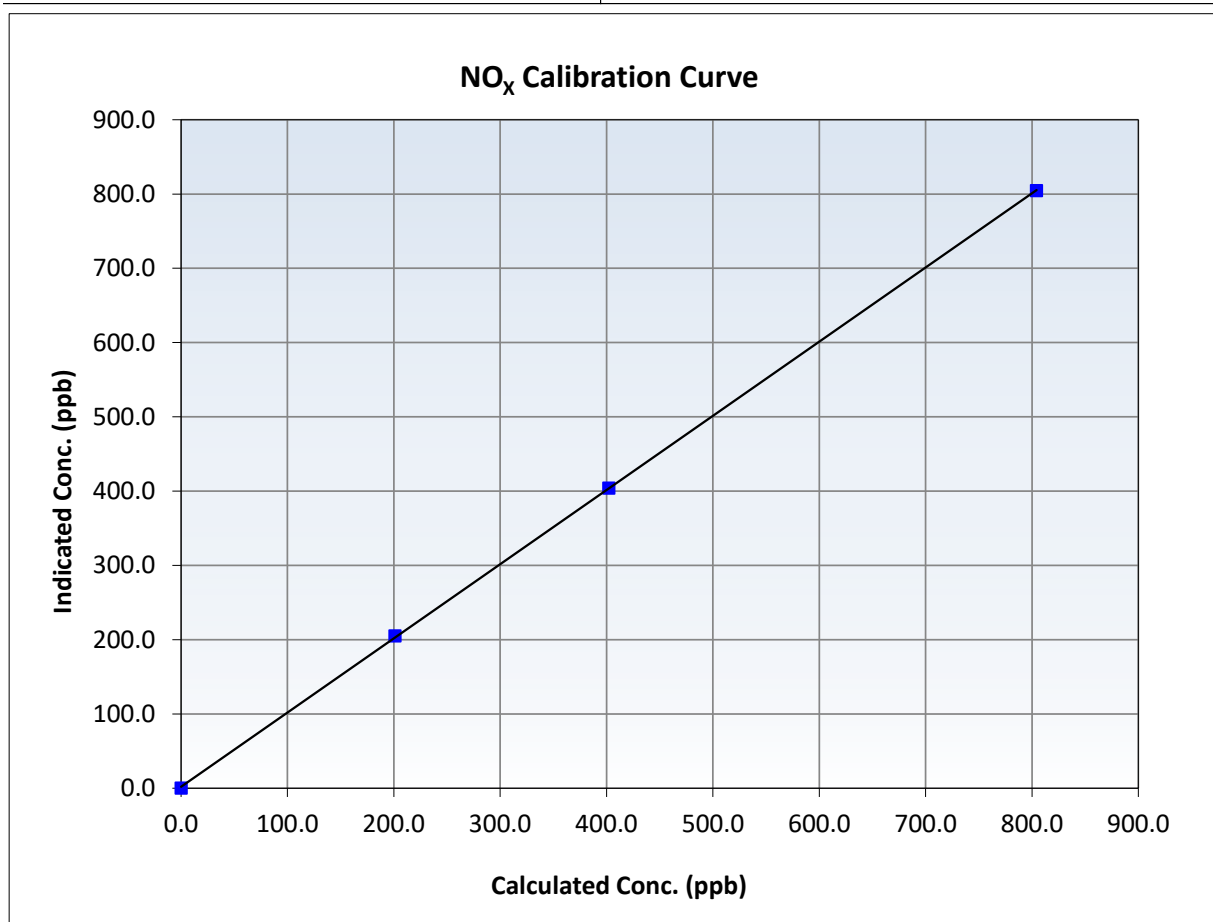
NO_x Calibration Summary

Station Information

Calibration Date:	July 17, 2026	Previous Calibration:	June 15, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	8:59	End Time (MST):	13:28
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	0.999974	≥0.995
804.3	804.5	0.9998	Slope	0.998723	0.90 - 1.10
402.1	404.1	0.9952	Intercept	1.996143	+/-20
201.0	205.0	0.9807			





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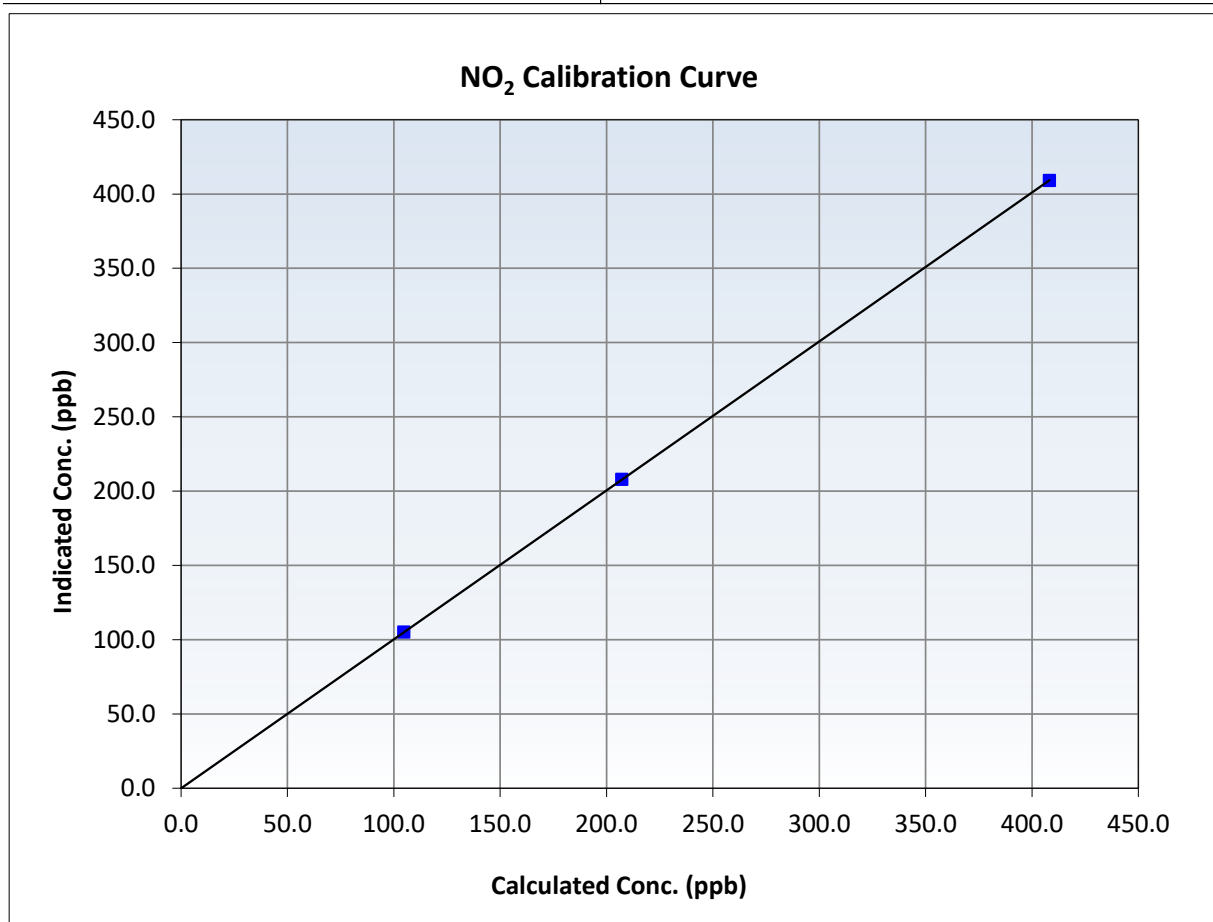
NO₂ Calibration Summary

Station Information

Calibration Date:	July 17, 2026	Previous Calibration:	June 15, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	8:59	End Time (MST):	13:28
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	0.999998	≥ 0.995
408.2	409.1	0.9979	Slope	1.002689	$0.90 - 1.10$
207.1	207.9	0.9963	Intercept	-0.061367	± 20
104.7	105.1	0.9965			





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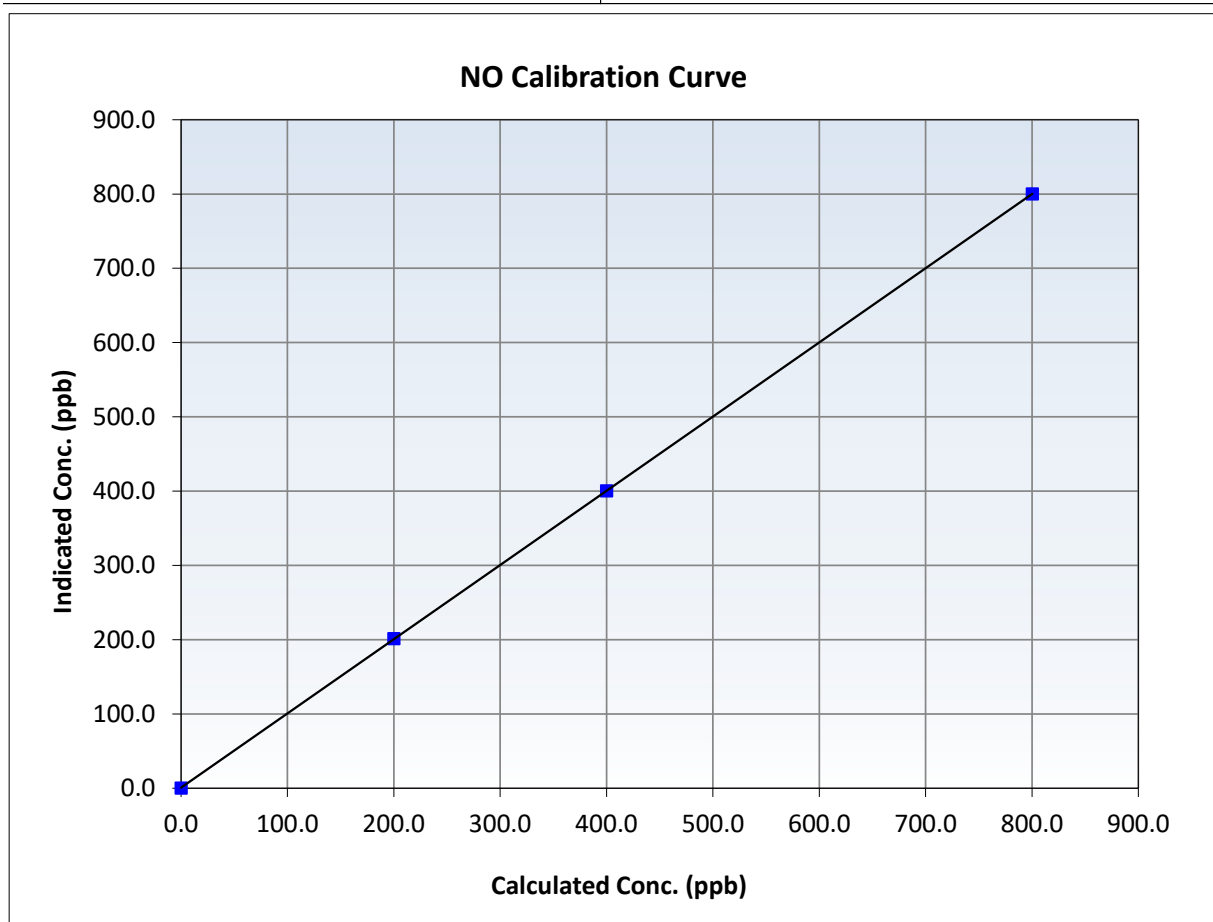
NO Calibration Summary

Station Information

Calibration Date:	July 17, 2026	Previous Calibration:	June 15, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	8:59	End Time (MST):	13:28
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1218153460

Calibration Data

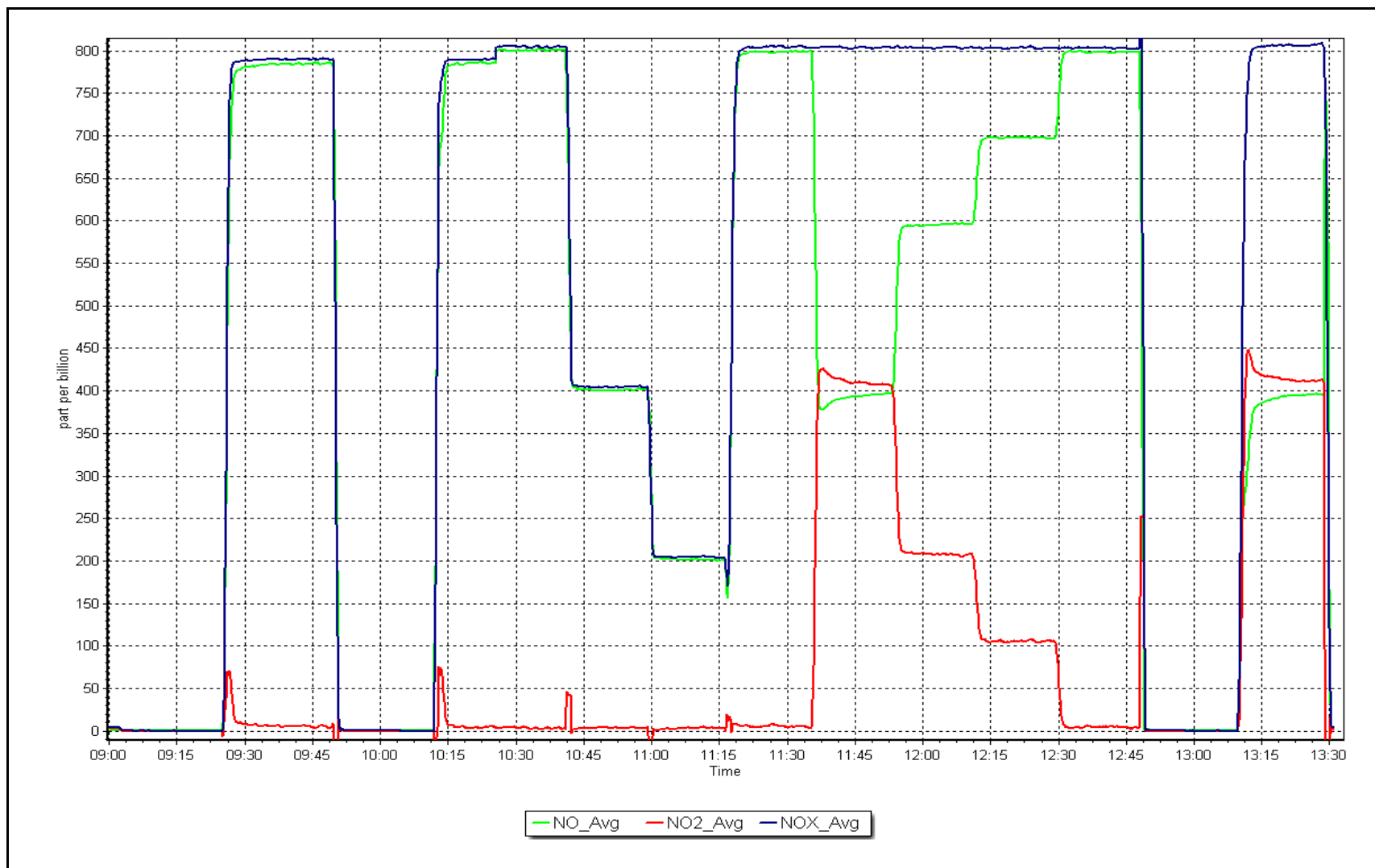
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.4	----	Correlation Coefficient	0.999998	≥ 0.995
800.4	800.3	1.0001	Slope	0.998995	0.90 - 1.10
400.2	400.4	0.9994	Intercept	0.796008	+/-20
200.1	201.3	0.9939			



NO_x Calibration Plot

Date: July 17, 2026

Location: Wapasu





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Wapasu
Calibration Date: July 6, 2026
Start time (MST): 10:55
Reason: Routine

Station number: AMS17
Last Cal Date: June 4, 2026
End time (MST): 13:44

Calibration Standards

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

Serial Number: 2448
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:	0.994314	1.005829	Backgd or Offset:	-0.4	-0.4
Calibration intercept:	0.420000	-0.020000	Coeff or Slope:	1.005	1.013

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	1003.5	400.0	396.6	1.009
As found Mid point					
As found Low point					
Baseline Corr As found:	396.5	Previous response	398.1	*% 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	

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	1008.9	400.0	402.4	0.994
Mid point	5000	851.3	200.0	201.0	0.995
Low point	5000	742.8	100.0	100.5	0.995
As left zero	5000	800.0	0.0	0.2	----
As left span	5000	1005.0	400.0	405.5	0.986
Average Correction Factor					0.995

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

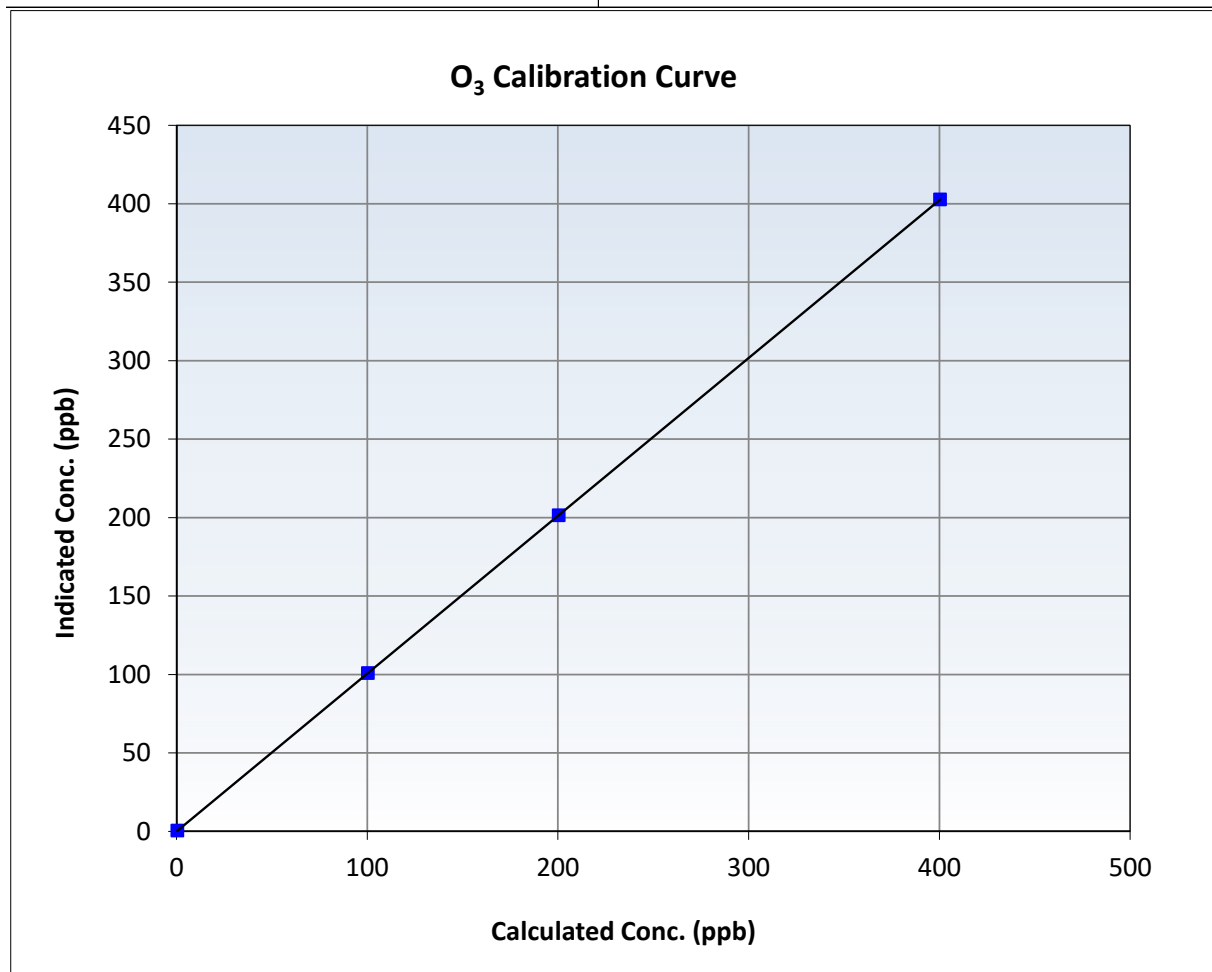
O₃ Calibration Summary

Station Information

Calibration Date:	July 6, 2026	Previous Calibration:	June 4, 2026
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	10:55	End Time (MST):	13:44
Analyzer make:	Thermo Scientific 49i	Analyzer serial #:	1501663734

Calibration Data

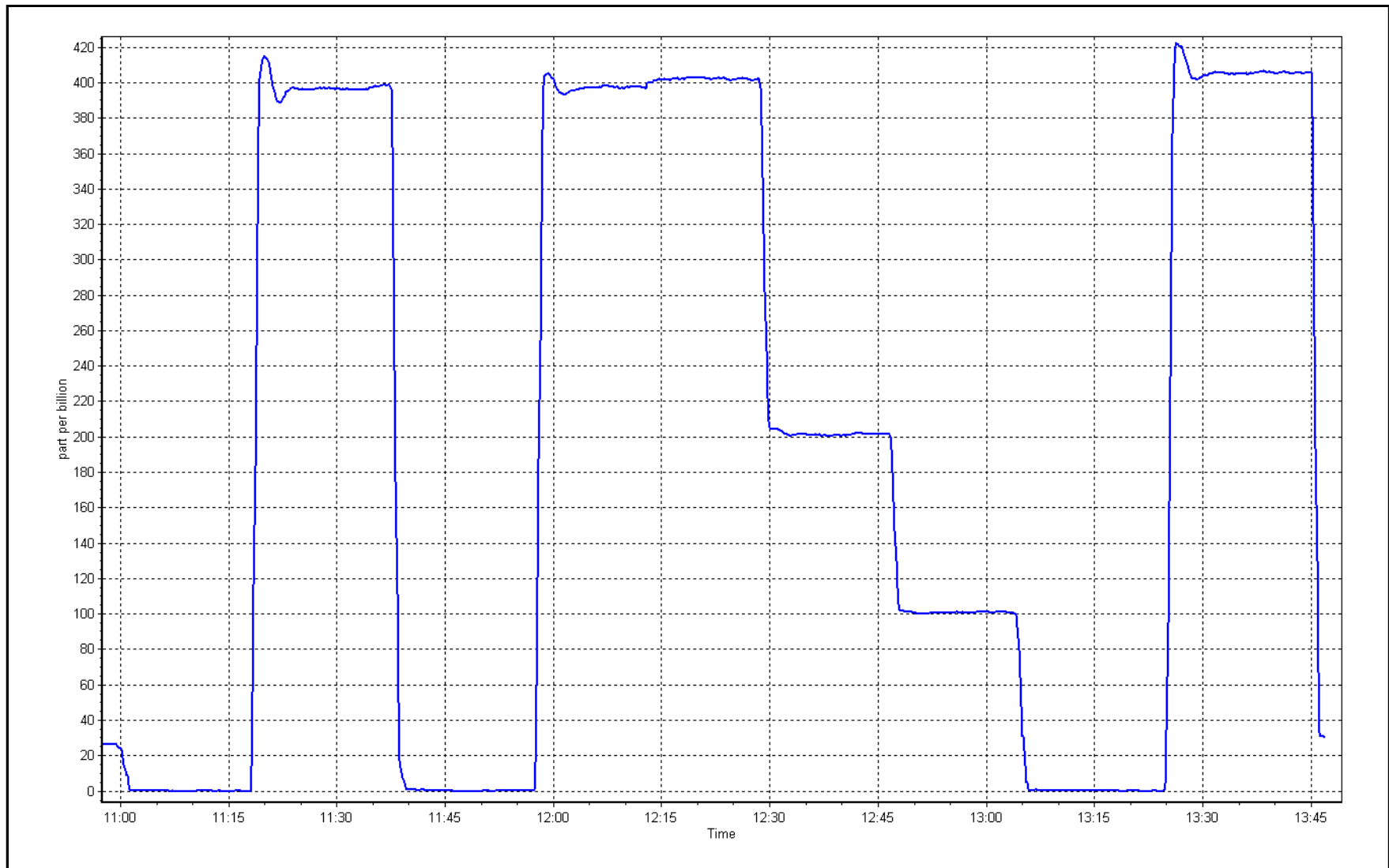
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999999	≥0.995
400.0	402.4	0.9940	Slope	1.005829	0.90 - 1.10
200.0	201.0	0.9950	Intercept	-0.020000	+/- 5
100.0	100.5	0.9950			



O₃ Calibration Plot

Date: July 6, 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: July 30, 2026 Last Cal Date: June 15, 2026
Start time (MST): 11:43 End time (MST): 12:04

Analyzer Make: Teledyne API T640 S/N: 1183
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

<u>Parameter</u>	<u>As found</u>	<u>Measured</u>	<u>As left</u>	<u>Adjusted</u>	<u>(Limits)</u>
T (°C)	19.10	19.05	19.10	☐	+/- 2 °C
P (mmHg)	714.60	717.78	714.60	☐	+/- 10 mmHg
Flow (LPM)	4.99	4.92	4.99	☐	+/- 0.25 LPM
PW% (pump)	54	----	54	☐	>80%
Zero Verification	PM w/o HEPA: 6.60		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

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

Date Optical Chamber Cleaned: June 15, 2026
Date Disposable Filter Changed: June 15, 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 adjustments made. Leak check passed.

Calibration by: Sean Bala



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS18 STONY MOUNTAIN JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Stony Mountain Station number: AMS 18
Calibration Date: July 7, 2026 Last Cal Date: June 10, 2026
Start time (MST): 12:10 End time (MST): 15:53
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:	1.001626	1.010696	Backgd or Offset:	27.0	27.1
Calibration intercept:	-1.257182	-0.357919	Coeff or Slope:	0.812	0.812

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	78.1	800.2	807.2	0.992
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	806.8	Previous response	800.2	*% 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	0.3	----
High point	4921	78.1	800.2	808.5	0.990
Mid point	4960	39.1	400.6	404.9	0.989
Low point	4981	19.5	199.7	200.4	0.997
As left zero	5000	0.0	0.0	0.3	----
As left span	4921	78.1	800.2	808.4	0.990
Average Correction Factor:					0.992

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

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

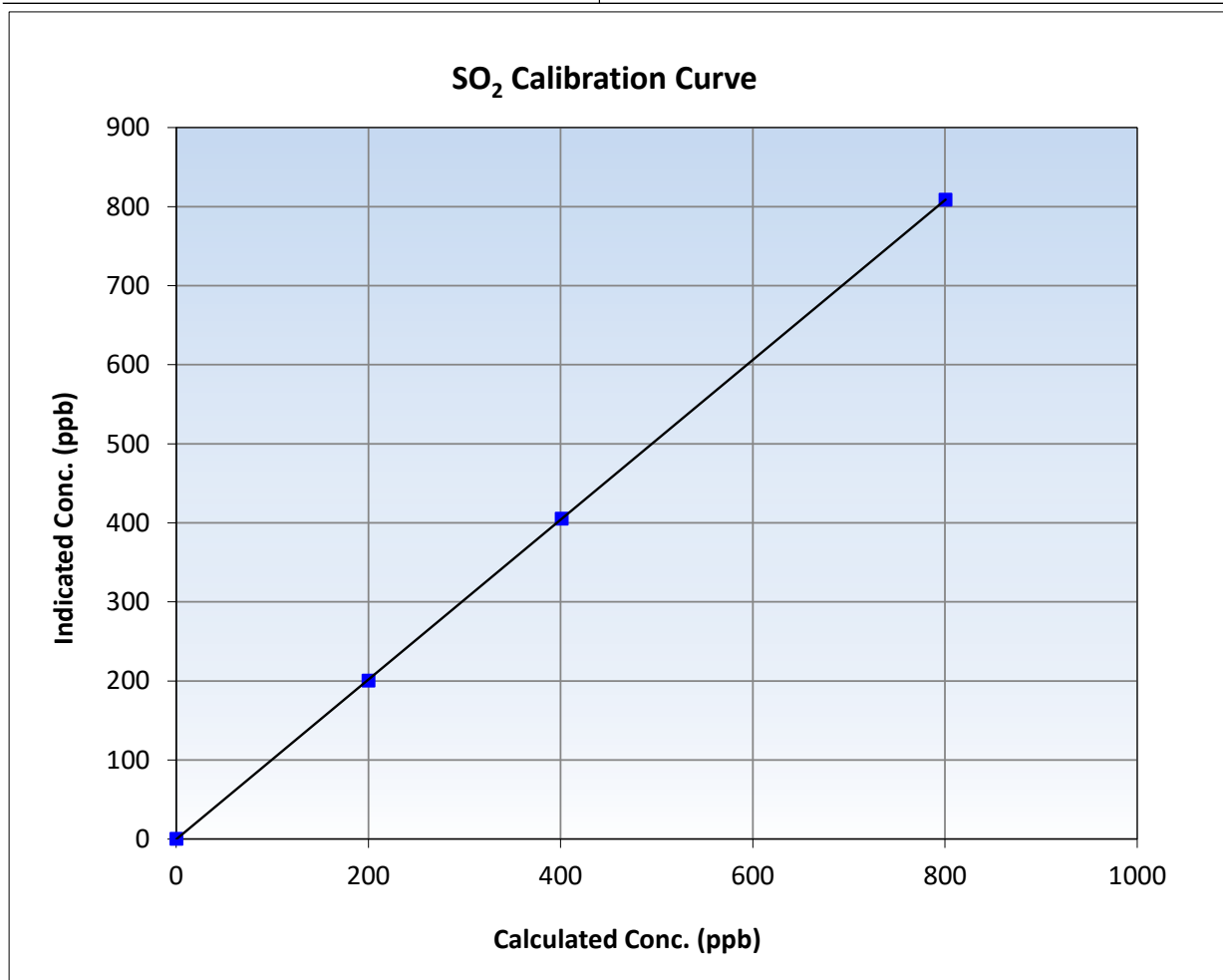
SO₂ Calibration Summary

Station Information

Calibration Date:	July 7, 2026	Previous Calibration:	June 10, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	12:10	End Time (MST):	15:53
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1501301453

Calibration Data

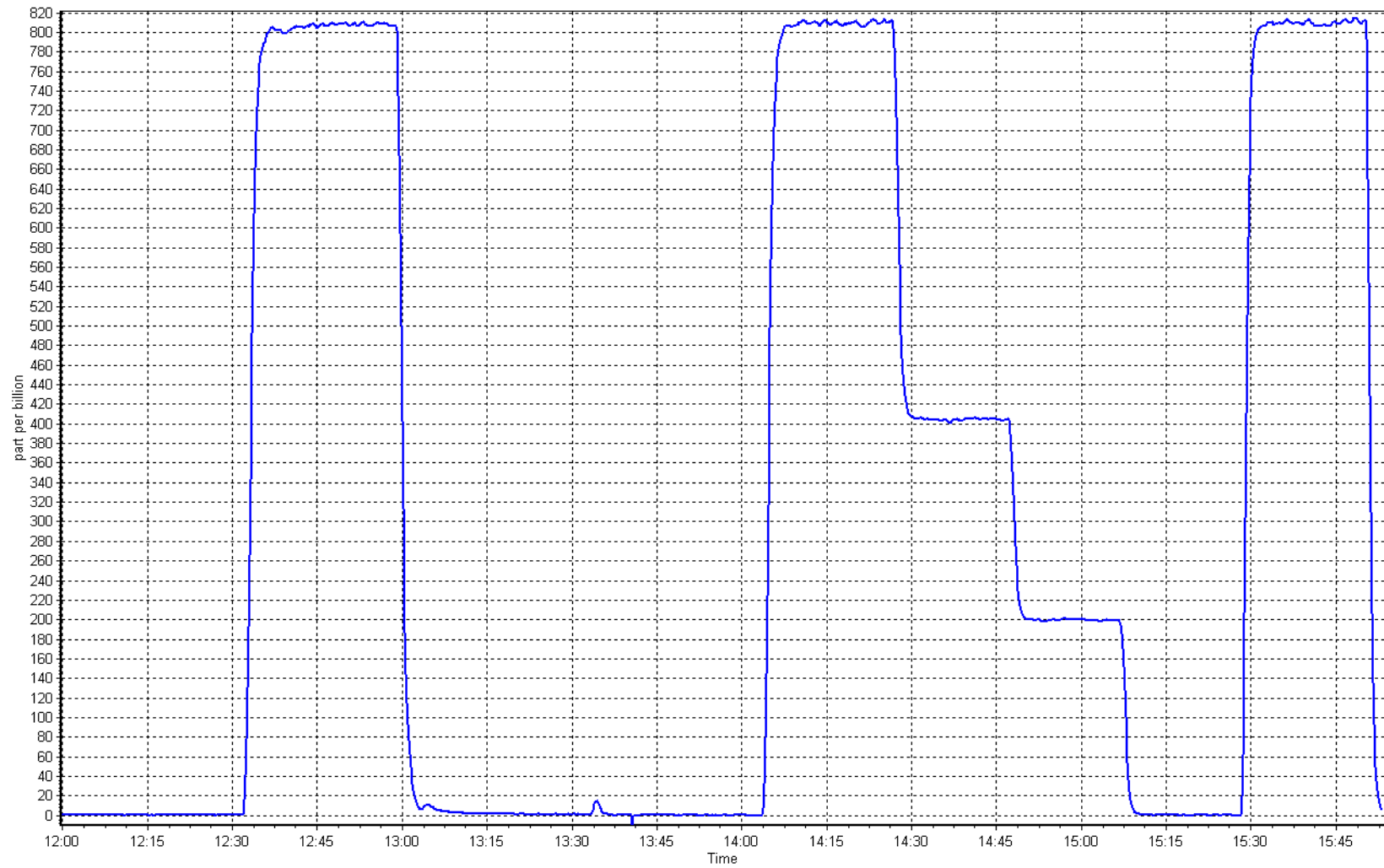
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999995	≥0.995
800.2	808.5	0.9897	Slope	1.010696	0.90 - 1.10
400.6	404.9	0.9894	Intercept	-0.357919	+/-30
199.7	200.4	0.9967			



SO2 Calibration Plot

Date: July 7, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Stony Mountain Station number: AMS18
Calibration Date: July 6, 2026 Last Cal Date: June 22, 2026
Start time (MST): 10:55 End time (MST): 15:18
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:	0.988661	0.986663	Backgd or Offset:	2.94
Calibration intercept:	0.200992	0.420976	Coeff or Slope:	1.178

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	79.8	1.004
As found Mid point	4958	41.2	40.1	40.2	0.999
As found Low point	4979	20.6	20.0	19.8	1.016
New cylinder response					
Baseline Corr As found:	79.7	Prev response:	79.30	*% change:	0.5%
Baseline Corr 2nd AF pt:	40.1	AF Slope:	0.997516	AF Intercept:	0.040873
Baseline Corr 3rd AF pt:	19.7	AF Correlation:	0.999973	* = > +/-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	79.2	1.010
Mid point	4958	41.2	40.1	40.2	0.996
Low point	4979	20.6	20.0	20.3	0.986
As left zero	5000	0.0	0.0	0.3	----
As left span	4917	82.3	80.0	78.8	1.015
SO2 Scrubber Check	4923	77.1	771.0	0.0	----
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. Scrubber check completed. No adjustments made.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

TRS Calibration Summary

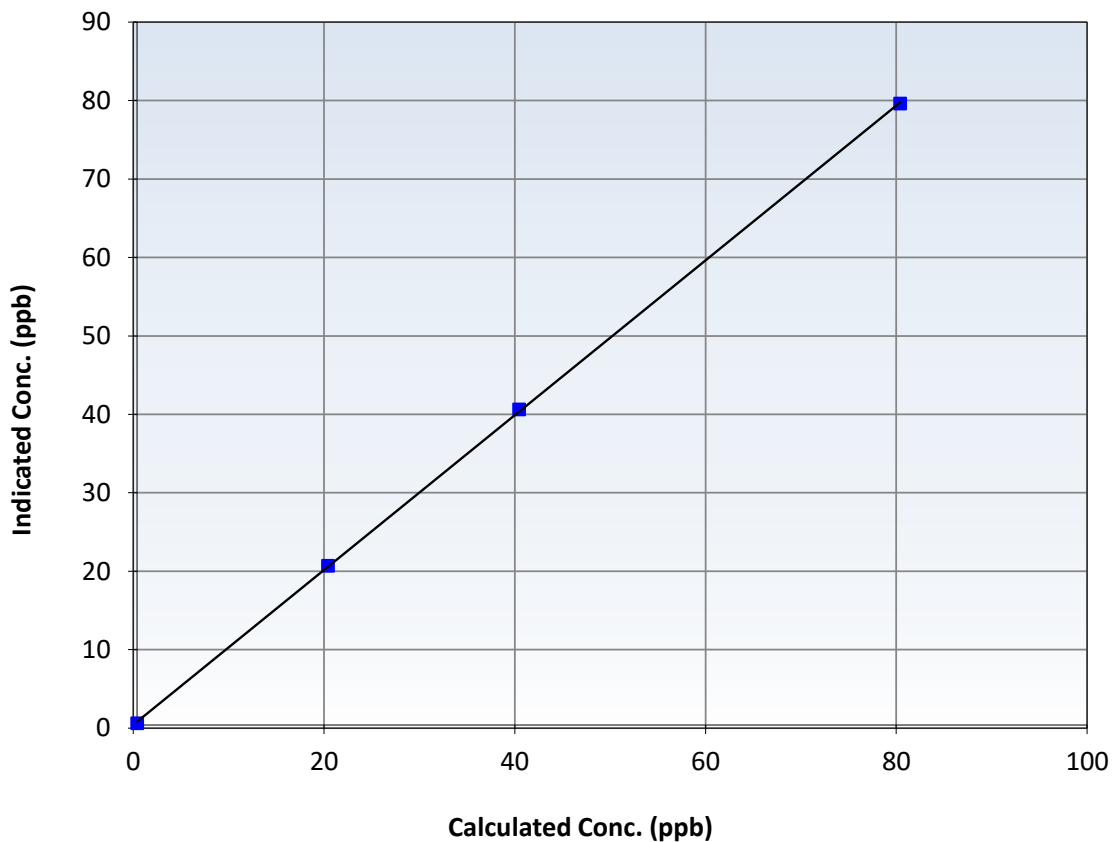
Station Information

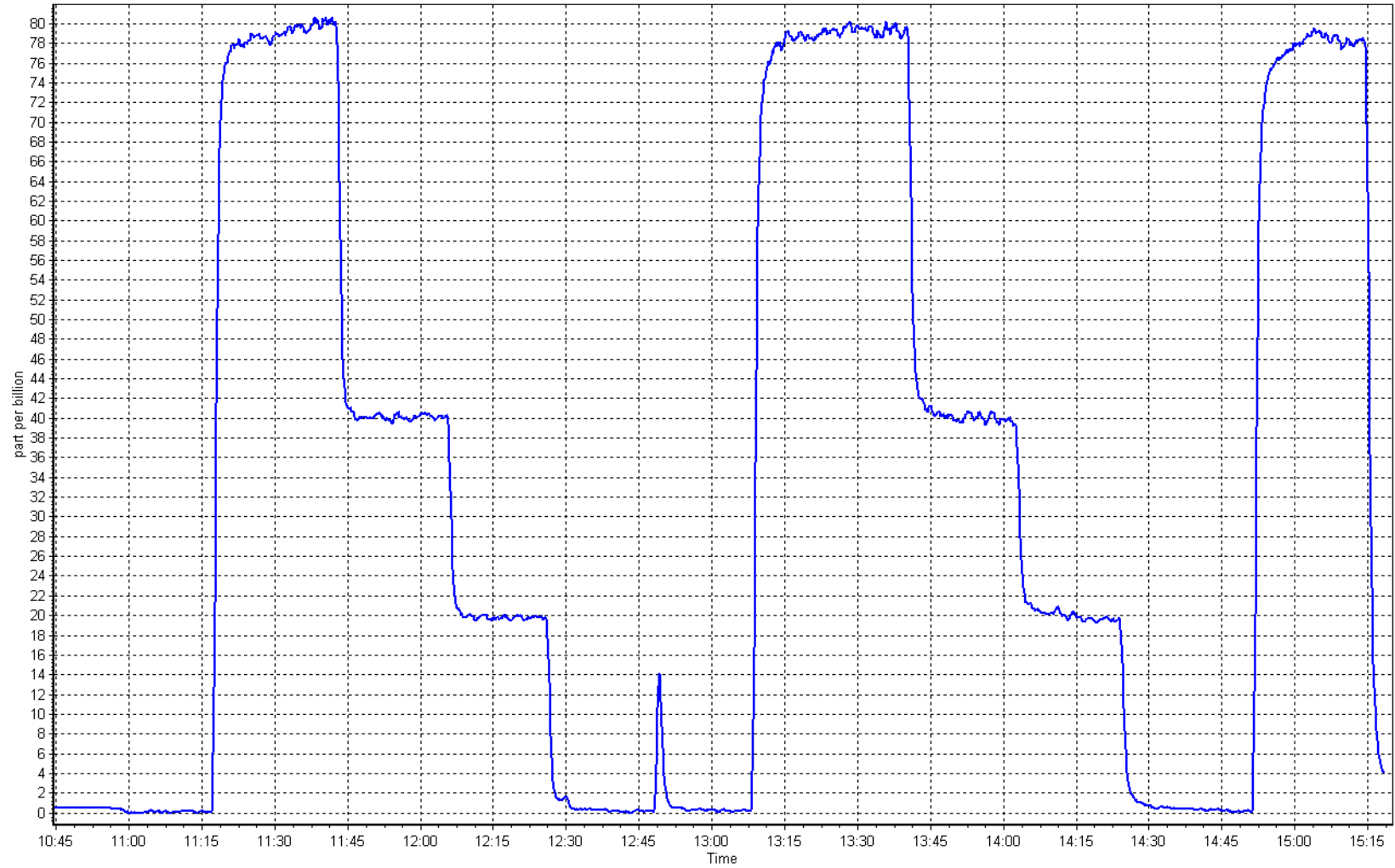
Calibration Date:	July 6, 2026	Previous Calibration:	June 22, 2026
Station Name:	Stony Mountain	Station Number:	AMS18
Start Time (MST):	10:55	End Time (MST):	15:18
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1218153359

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	0.999954	≥ 0.995
80.0	79.2	1.0102	Slope	0.986663	$0.90 - 1.10$
40.1	40.2	0.9963	Intercept	0.420976	± 3
20.0	20.3	0.9864			

TRS Calibration Curve







Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Stony Mountain Station number: AMS18
Calibration Date: July 28, 2026 Last Cal Date: July 6, 2026
Start time (MST): 10:58 End time (MST): 12:45
Reason: Removal

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:	0.986663		Backgd or Offset:	2.94	NA
Calibration intercept:	0.420976		Coeff or Slope:	1.178	NA

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	78.7	1.018
As found Mid point	4958	41.2	40.1	39.9	1.006
As found Low point	4979	20.6	20.0	20.4	0.986
New cylinder response					
Baseline Corr As found:	78.6	Prev response:	79.36	*% change:	-1.0%
Baseline Corr 2nd AF pt:	39.8	AF Slope:	0.980378	AF Intercept:	0.441083
Baseline Corr 3rd AF pt:	20.3	AF Correlation:	0.999913	* = > +/-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:	17-Dec-21			Ave Corr Factor	
Date of last converter efficiency test:					

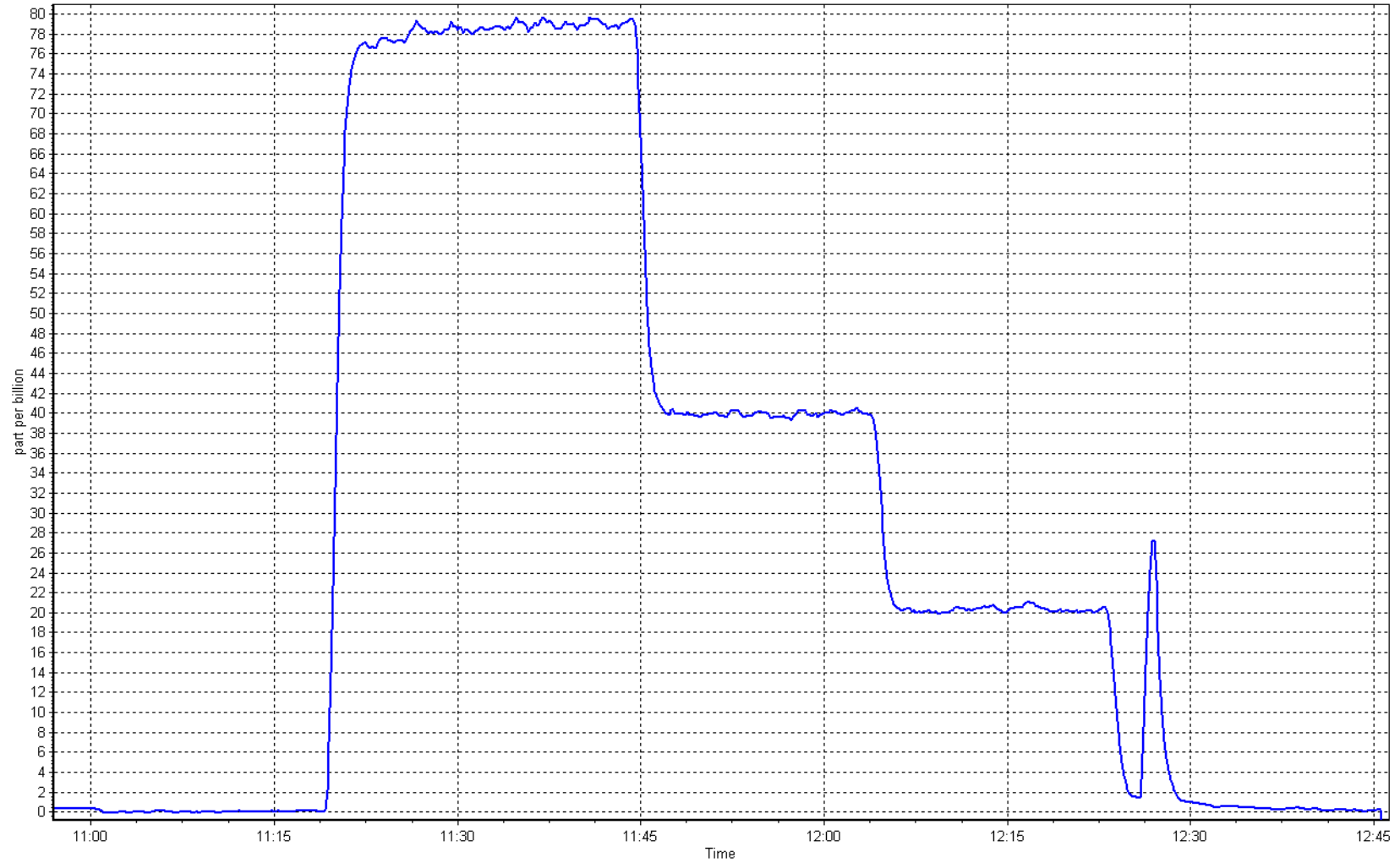
Notes: Removal calibration was performed. A scrubber check was also completed and resulted in approximately 0.3 ppb.

Calibration Performed By: Mohammed Kashif

TRS Calibration Plot

Date: July 28, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Stony Mountain Station number: AMS18
Calibration Date: July 28, 2026 Last Cal Date: NA
Start time (MST): 14:45 End time (MST): 17:36
Reason: Install

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 43IQ-TLE Analyzer serial #: 12530443166
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:	NA	0.999656	Backgd or Offset:	NA	0.50
Calibration intercept:	NA	-0.259043	Coeff or Slope:	NA	1.173

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	4917	82.3	80.0	79.8	1.003
Mid point	4958	41.2	40.1	39.8	1.006
Low point	4979	20.6	20.0	19.4	1.032
As left zero	5000	0.0	0.0	0.1	----
As left span	4917	82.3	80.0	79.7	1.004
SO2 Scrubber Check	4923	77.1	771.0	0.1	----
Date of last scrubber change:	17-Dec-21		Ave Corr Factor		1.014
Date of last converter efficiency test:					

Notes: Installation calibration.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

TRS Calibration Summary

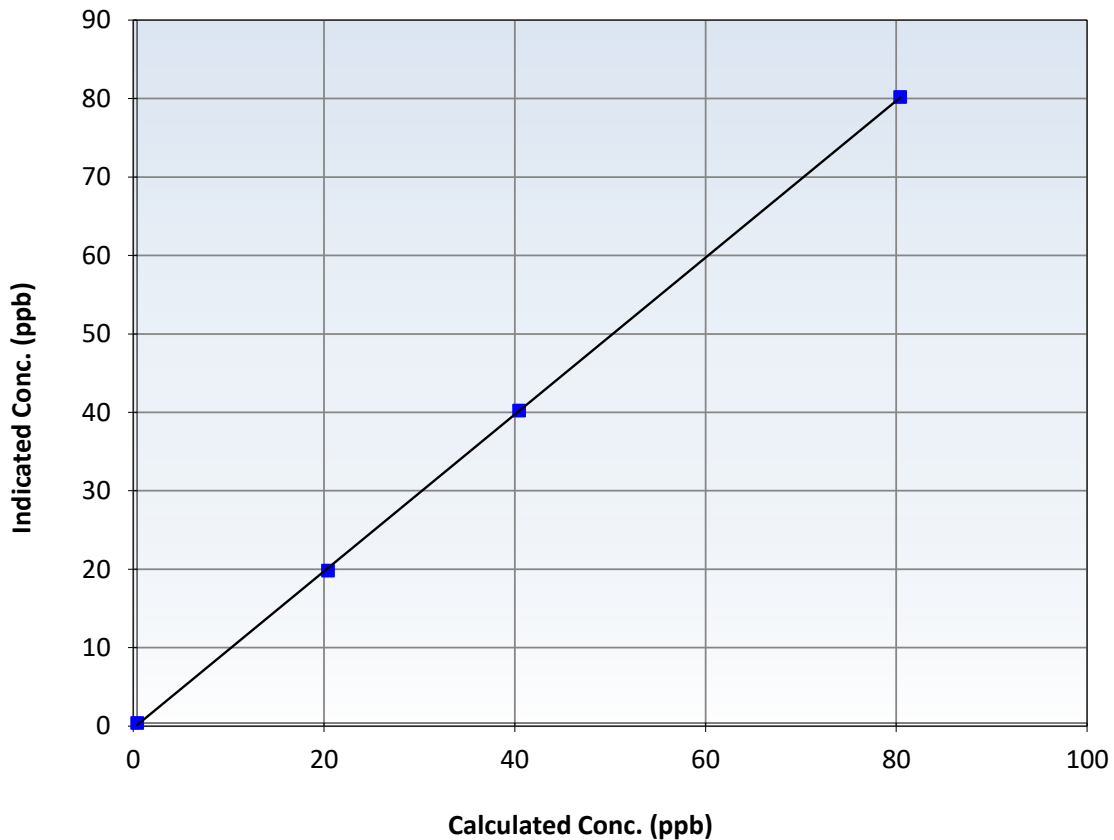
Station Information

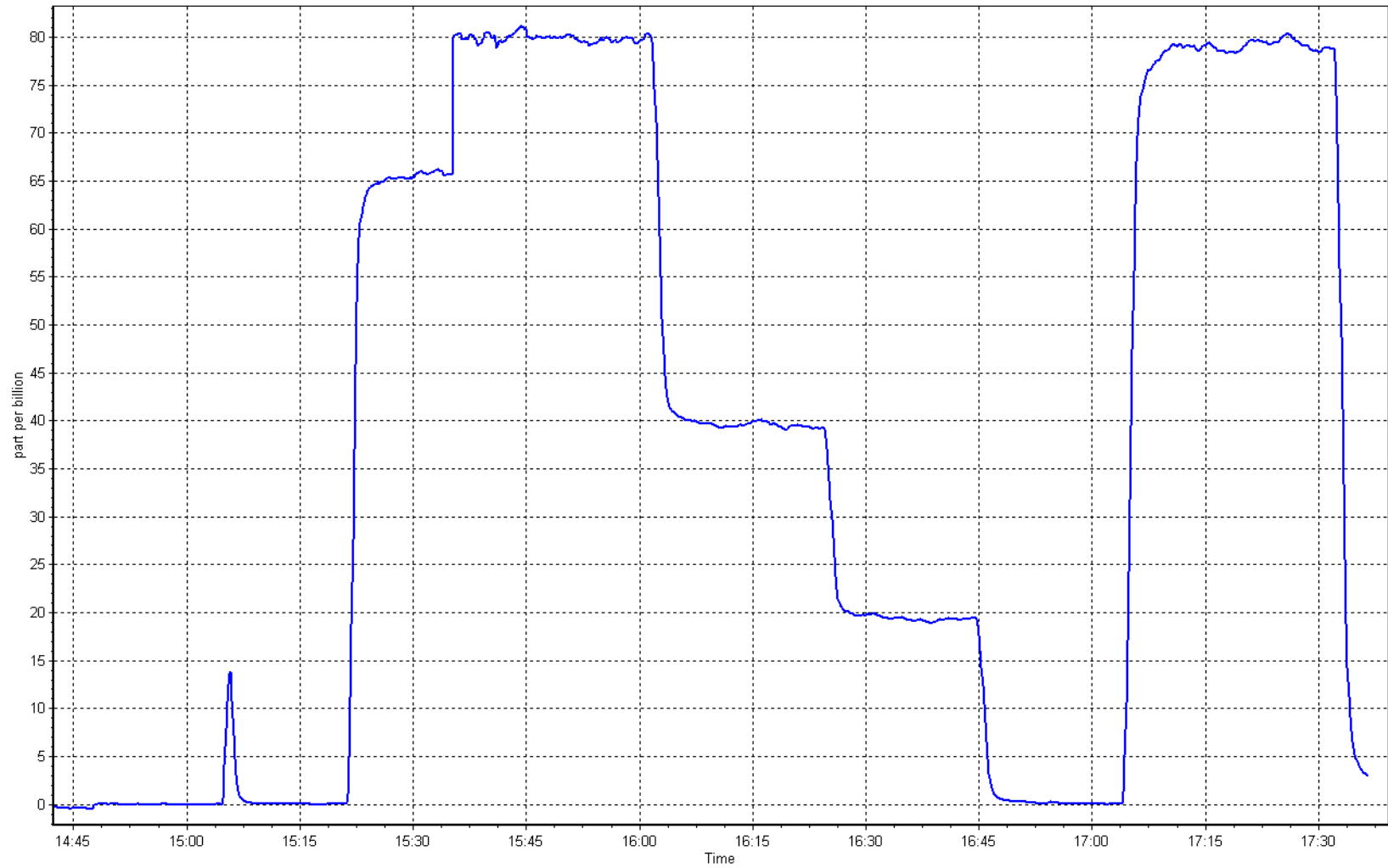
Calibration Date:	July 28, 2026	Previous Calibration:	NA
Station Name:	Stony Mountain	Station Number:	AMS18
Start Time (MST):	14:45	End Time (MST):	17:36
Analyzer make:	Thermo 43IQ-TLE	Analyzer serial #:	12530443166

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	0.999942		≥ 0.995
80.0	79.8	1.0026	Slope	0.999656		0.90 - 1.10
40.1	39.8	1.0064	Intercept	-0.259043		+/-3
20.0	19.4	1.0322				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Stony Mountain
Calibration Date: July 7, 2026
Start time (MST): 12:10
Reason: Routine

Station number: AMS 18
Last Cal Date: June 10, 2026
End time (MST): 15:53

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
THC Range: 0 - 20 ppm

Analyzer serial #: 1170050130
NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.84E-04	2.81E-04	NMHC SP Ratio:	4.75E-05
CH ₄ Retention time:	14.8	15.2	NMHC Peak Area:	187959
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	78.1	16.82	16.44	1.023
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.44	Prev response	16.71	*% 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	78.1	16.82	16.81	1.001
Mid point	4960	39.1	8.42	8.29	1.016
Low point	4981	19.5	4.20	4.09	1.027
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	16.82	16.32	1.031
Average Correction Factor					1.014

Notes: Changed the inlet filter and N2 cylinder after as founds. 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	----
As found High point	4921	78.1	8.93	8.75	1.021
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.75	Prev response	8.85	*% change	-1.2%
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	----
High point	4921	78.1	8.93	8.92	1.001
Mid point	4960	39.1	4.47	4.40	1.016
Low point	4981	19.5	2.23	2.17	1.030
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	8.93	8.61	1.038
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	----
As found High point	4921	78.1	7.89	7.70	1.025
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.70	Prev response	7.86	*% change	-2.2%
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	----
High point	4921	78.1	7.89	7.88	1.001
Mid point	4960	39.1	3.95	3.88	1.017
Low point	4981	19.5	1.97	1.92	1.023
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	7.89	7.71	1.023
Average Correction Factor					1.014

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.995870	1.000719
THC Cal Offset:	-0.037363	-0.068307
CH ₄ Cal Slope:	0.999542	1.000475
CH ₄ Cal Offset:	-0.022394	-0.030365
NMHC Cal Slope:	0.992511	1.000564
NMHC Cal Offset:	-0.014769	-0.037742

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

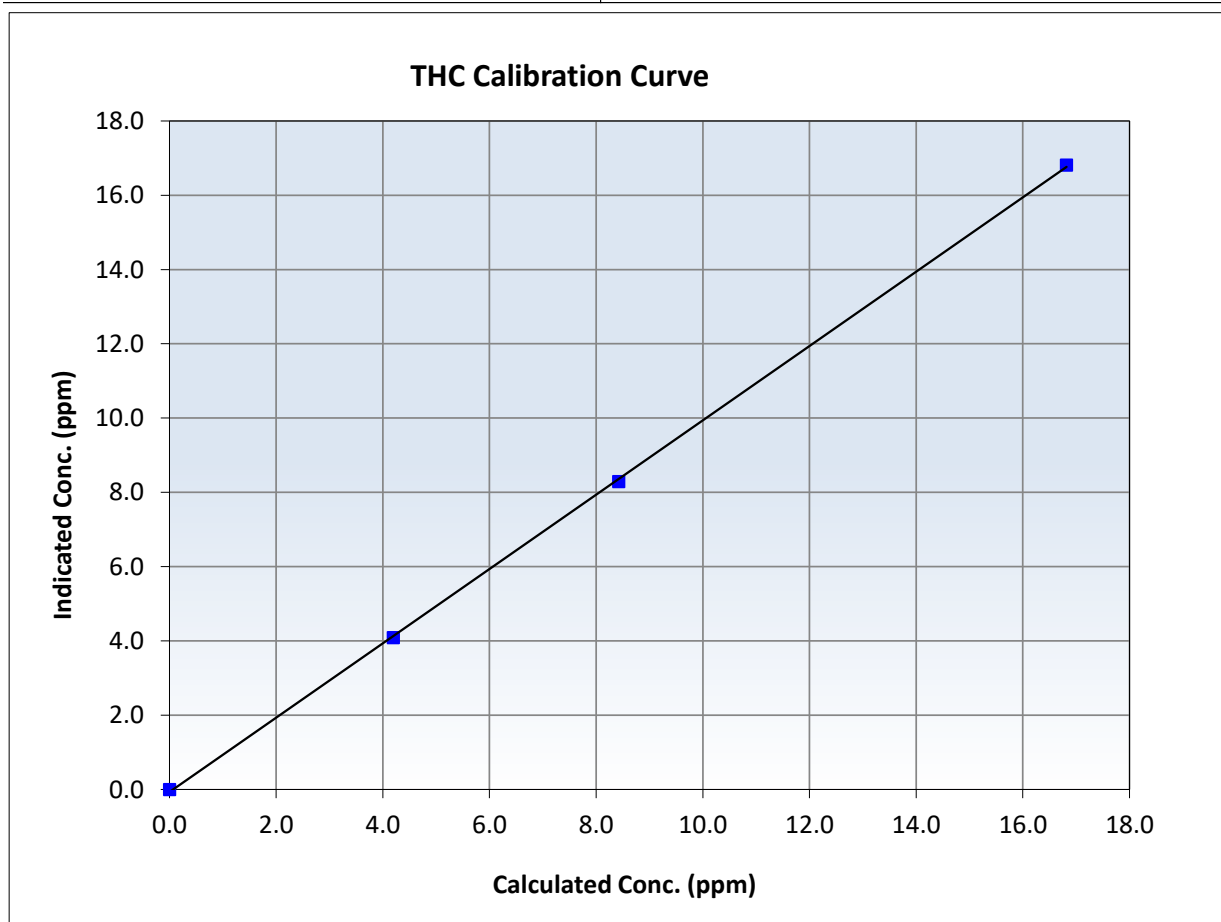
THC Calibration Summary

Station Information

Calibration Date:	July 7, 2026	Previous Calibration:	June 10, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	12:10	End Time (MST):	15:53
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

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	0.999911	≥ 0.995
16.82	16.81	1.0006	Slope	1.000719	$0.90 - 1.10$
8.42	8.29	1.0160	Intercept	-0.068307	± 0.5
4.20	4.09	1.0268			





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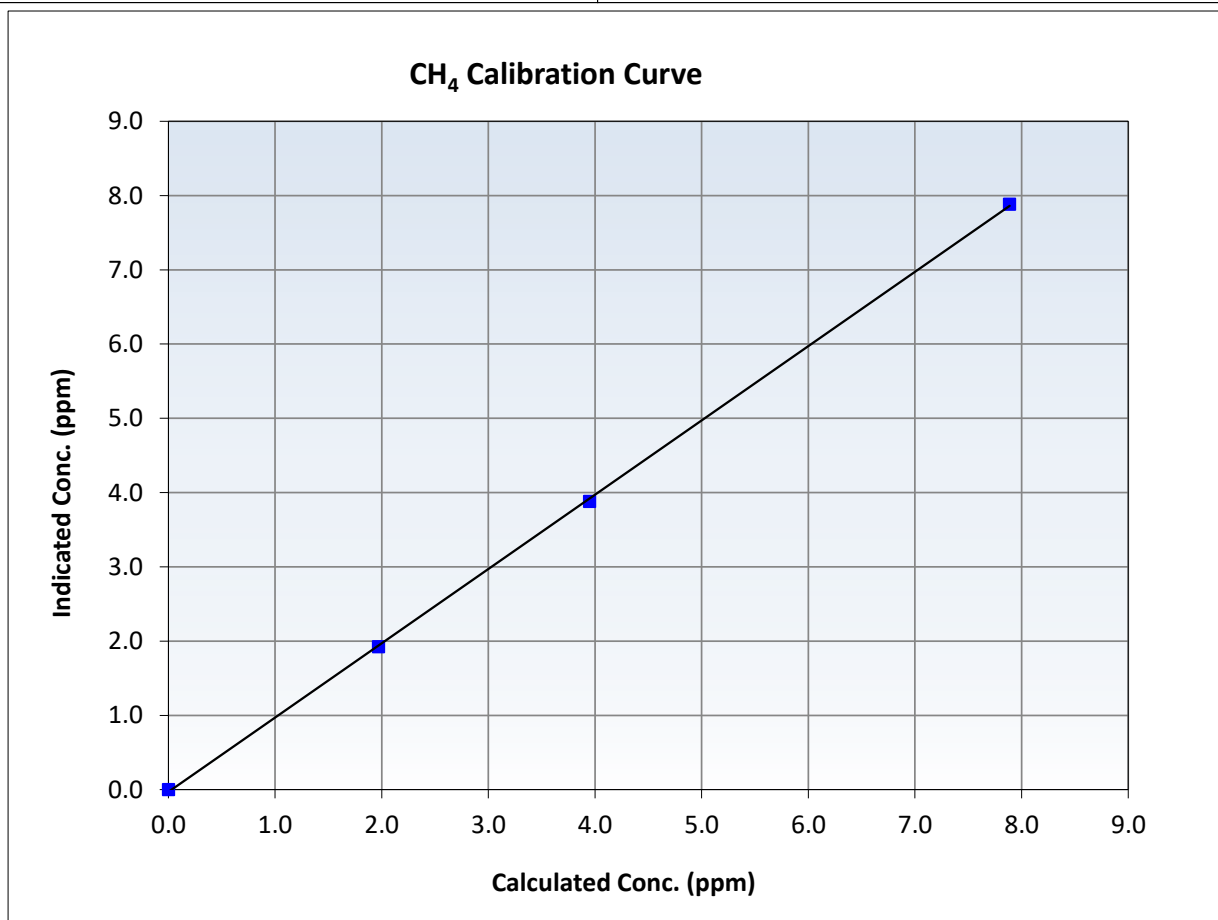
CH₄ Calibration Summary

Station Information

Calibration Date:	July 7, 2026	Previous Calibration:	June 10, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	12:10	End Time (MST):	15:53
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	0.999909	<i>≥0.995</i>
7.89	7.88	1.0005	Slope	1.000475	<i>0.90 - 1.10</i>
3.95	3.88	1.0170	Intercept	-0.030365	<i>+/-0.5</i>
1.97	1.92	1.0233			





Wood Buffalo Environmental Association

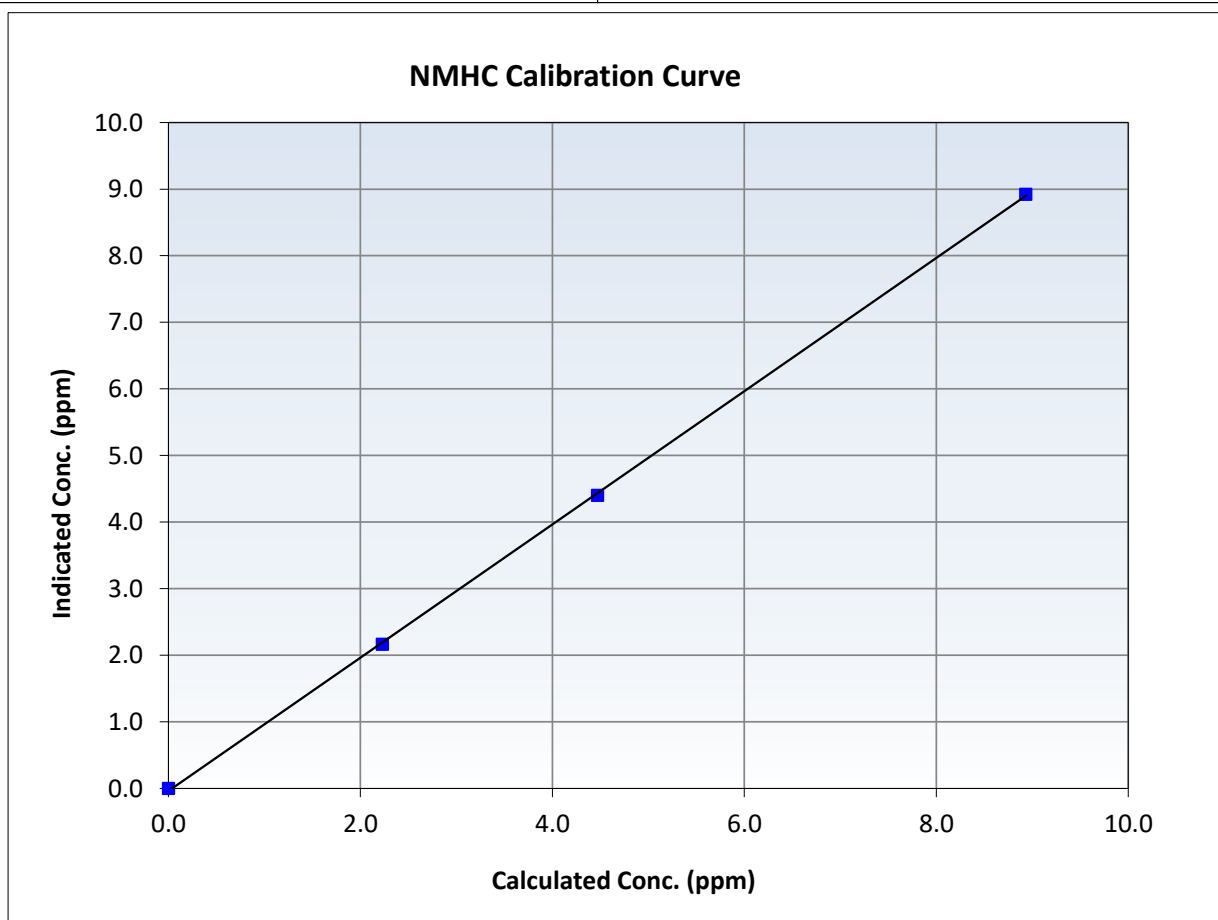
NMHC Calibration Summary

Station Information

Calibration Date:	July 7, 2026	Previous Calibration:	June 10, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	12:10	End Time (MST):	15:53
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

Calibration Data

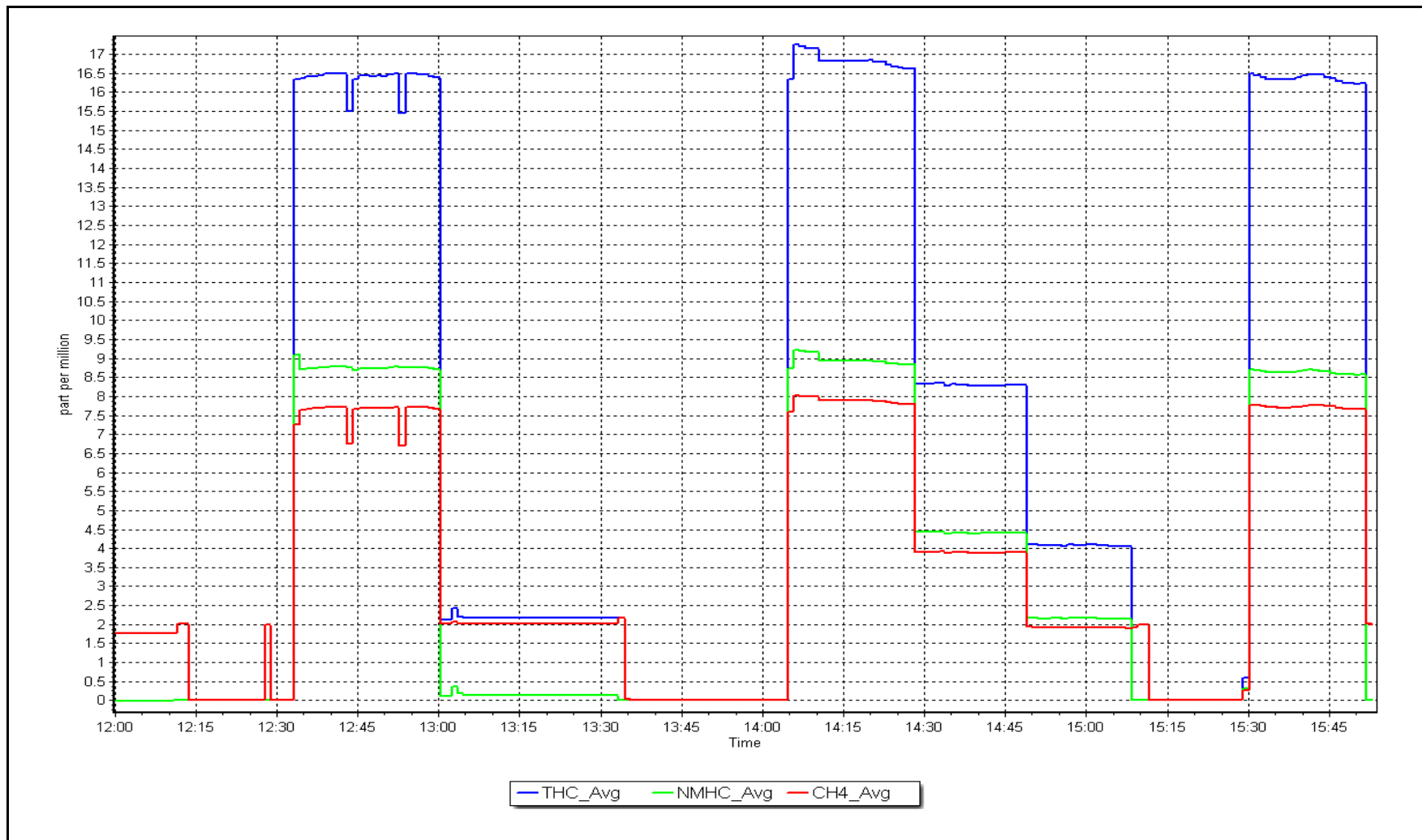
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999911	≥ 0.995
8.93	8.92	1.0010	Slope	1.000564	0.90 - 1.10
4.47	4.40	1.0156	Intercept	-0.037742	± 0.5
2.23	2.17	1.0298			



NMHC Calibration Plot

Date: July 7, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Stony Mountain
Calibration Date: July 21, 2026
Start time (MST): 15:15
Reason: Maintenance

Station number: AMS 18
Last Cal Date: July 7, 2026
End time (MST): 17:45

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
THC Range: 0 - 20 ppm

Analyzer serial #: 1170050130
NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.81E-04	2.81E-04	NMHC SP Ratio:	4.65E-05	4.60E-05
CH ₄ Retention time:	15.2	14.8	NMHC Peak Area:	192148	193991
Zero Chromatogram:	ON	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					
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	78.1	16.82	16.61	1.013
Mid point	4960	39.1	8.42	8.32	1.012
Low point	4981	19.5	4.20	4.11	1.023
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	16.82	16.40	1.026
Average Correction Factor					1.016

Notes: Replaced the pump and actuator as part of maintenance. Replaced the H₂ cylinder and adjusted the window timing accordingly. 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	4921	78.1	8.93	8.83	1.012
Mid point	4960	39.1	4.47	4.43	1.010
Low point	4981	19.5	2.23	2.19	1.018
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	8.93	8.68	1.030
Average Correction Factor					1.013

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	78.1	7.89	7.78	1.014
Mid point	4960	39.1	3.95	3.89	1.015
Low point	4981	19.5	1.97	1.92	1.028
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	7.89	7.73	1.021
Average Correction Factor					1.019

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	1.000719	0.988367
THC Cal Offset:	-0.068307	-0.016149
CH ₄ Cal Slope:	1.000475	0.987285
CH ₄ Cal Offset:	-0.030365	-0.011589
NMHC Cal Slope:	1.000564	0.989106
NMHC Cal Offset:	-0.037742	-0.003961

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

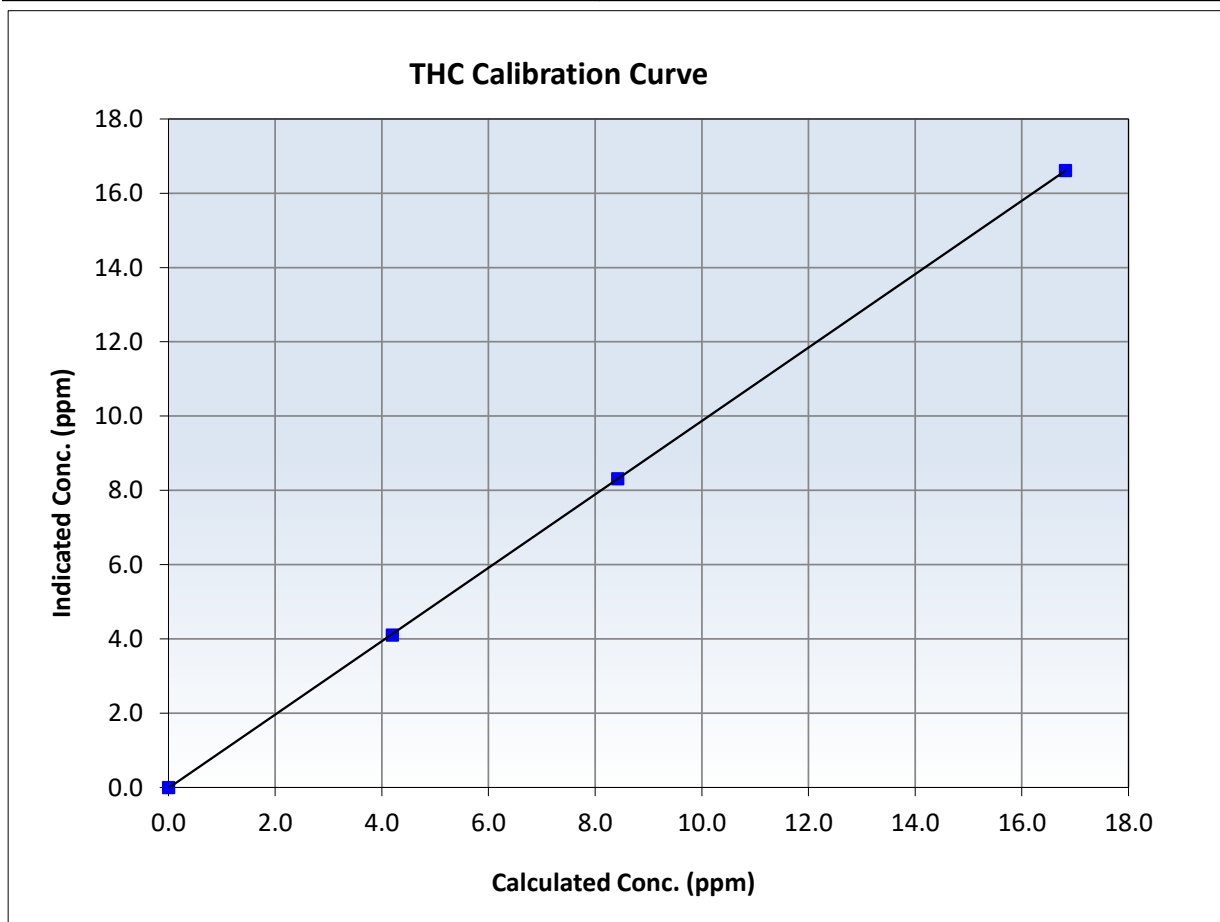
THC Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	July 7, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	15:15	End Time (MST):	17:45
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

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	0.999992	≥ 0.995
16.82	16.61	1.0126	Slope	0.988367	0.90 - 1.10
8.42	8.32	1.0125	Intercept	-0.016149	± 0.5
4.20	4.11	1.0228			





Wood Buffalo Environmental Association

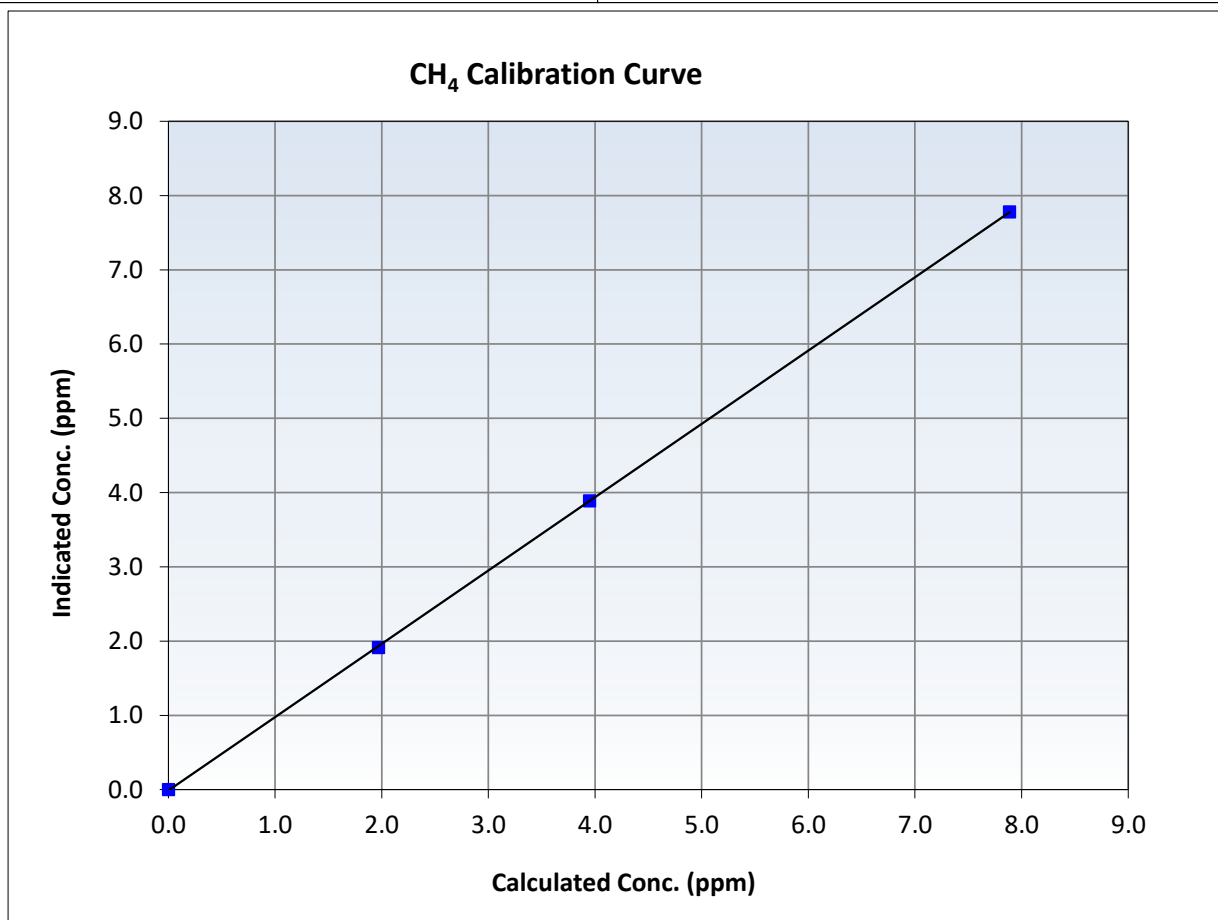
CH₄ Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	July 7, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	15:15	End Time (MST):	17:45
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	0.00	----	Correlation Coefficient	0.999986	≥ 0.995
7.89	7.78	1.0140	Slope	0.987285	0.90 - 1.10
3.95	3.89	1.0152	Intercept	-0.011589	± 0.5
1.97	1.92	1.0282			





Wood Buffalo Environmental Association

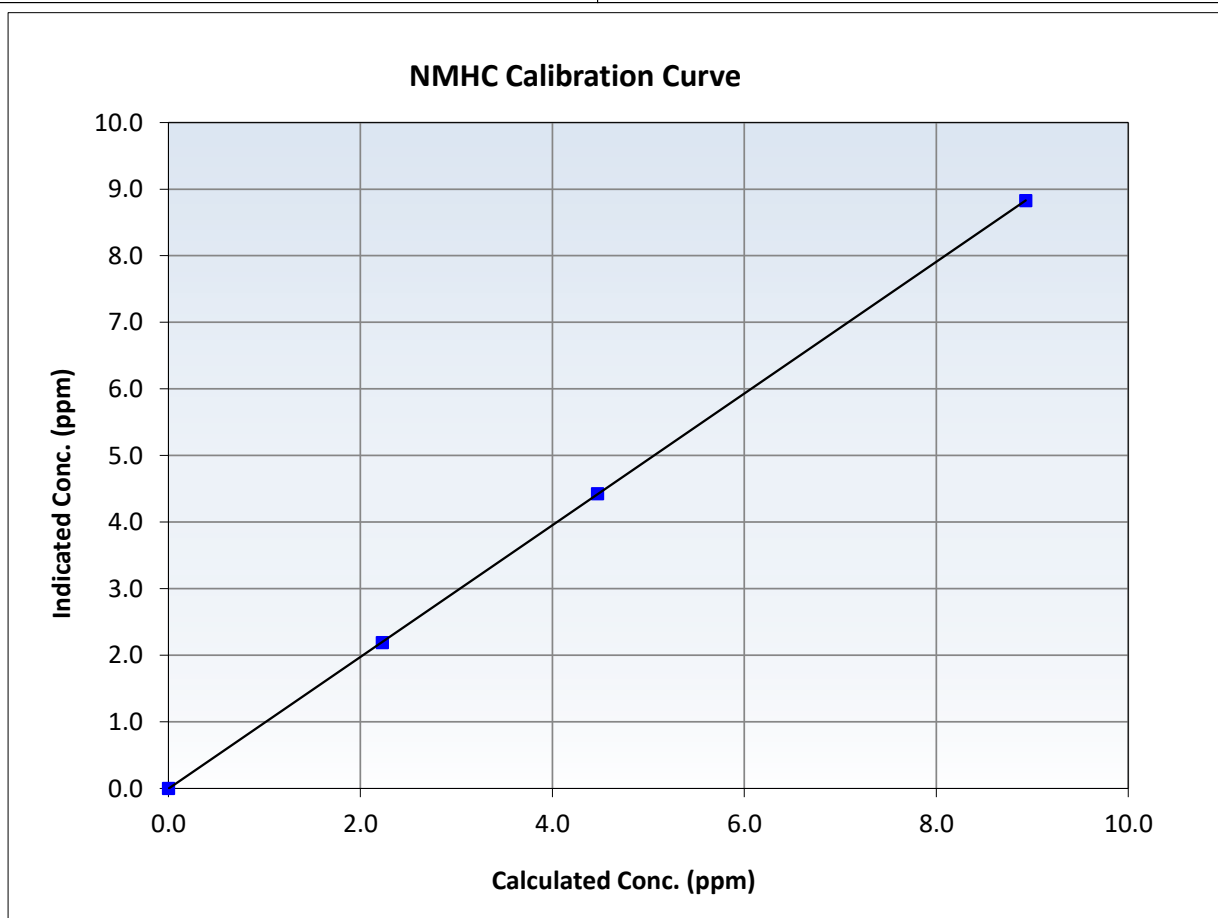
NMHC Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	July 7, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	15:15	End Time (MST):	17:45
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

Calibration Data

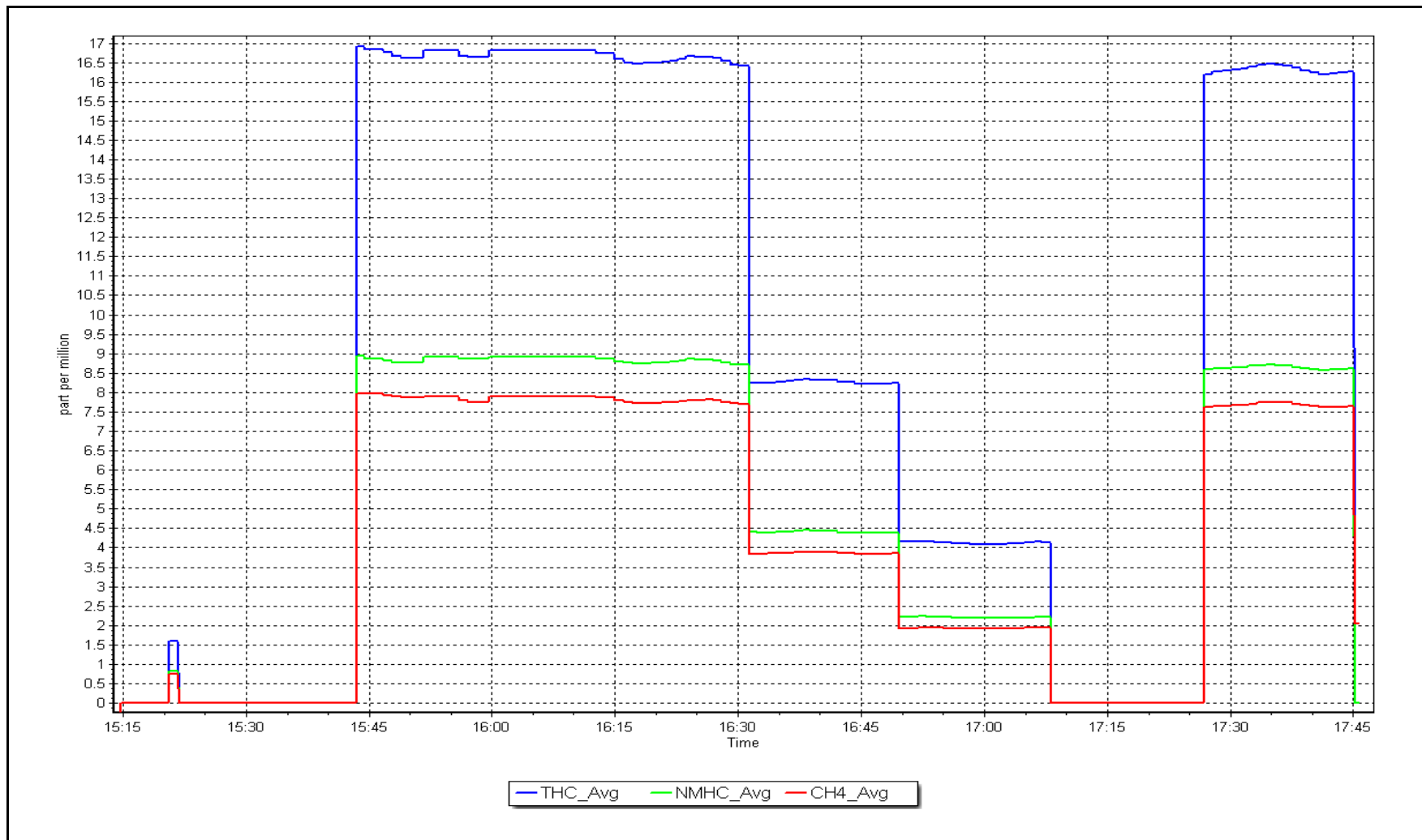
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999995	≥ 0.995
8.93	8.83	1.0117	Slope	0.989106	0.90 - 1.10
4.47	4.43	1.0099	Intercept	-0.003961	± 0.5
2.23	2.19	1.0180			



NMHC Calibration Plot

Date: July 21, 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: July 10, 2026
Last Cal Date: June 25, 2026
Start time (MST): 11:00
End time (MST): 15:42
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	0.2	0.1	0.2	----	----
AF High point	4933	66.6	803.3	800.6	2.7	787.6	784.3	3.3	1.0201	1.0209
AF Mid point										
AF Low point										
New cyl resp										
Previous Respo 4933	NO _x = 800.0 ppb	NO = 797.9 ppb	* = > +/-5% change initiates investigation			*Percent Change		NO _x = -1.6%		
Baseline Corr 1st pt	NO _x = 787.4 ppb	NO = 784.2 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 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:	1.162	1.185	NO bkgnd or offset:	11.5	11.8
NOX coeff or slope:	0.996	0.996	NOX bkgnd or offset:	11.6	11.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	218.9	218.6

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.997829	0.999850
NO _x Cal Offset:	-1.548789	-1.808995
NO Cal Slope:	1.000053	1.003351
NO Cal Offset:	-2.690051	-3.269647
NO ₂ Cal Slope:	1.003433	0.992216
NO ₂ Cal Offset:	-0.841693	-0.003241

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	0.4	0.2	0.2	----	----
High point	4933	66.6	803.3	800.6	2.7	802.4	801.8	0.6	1.0011	0.9985
Mid point	4967	33.3	401.6	400.2	1.3	398.7	396.4	2.2	1.0072	1.0097
Low point	4983	16.6	200.2	199.5	0.7	196.1	193.6	2.5	1.0210	1.0307
As left zero	5000	0.0	0.0	0.0	0.0	0.4	0.2	0.2	----	----
As left span	4933	66.6	803.3	385.8	417.5	802.2	385.8	416.5	1.0013	1.0000
Average Correction Factor									1.0097	1.0130

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	799.0	385.2	416.5	413.5	1.0072	99.3%
Mid GPT point	799.0	592.6	209.1	206.8	1.0109	98.9%
Low GPT point	799.0	697.5	104.2	103.5	1.0064	99.4%
Average Correction Factor					1.0082	99.2%

Notes:

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

Calibration Performed By:

Mohammed Kashif



Wood Buffalo Environmental Association

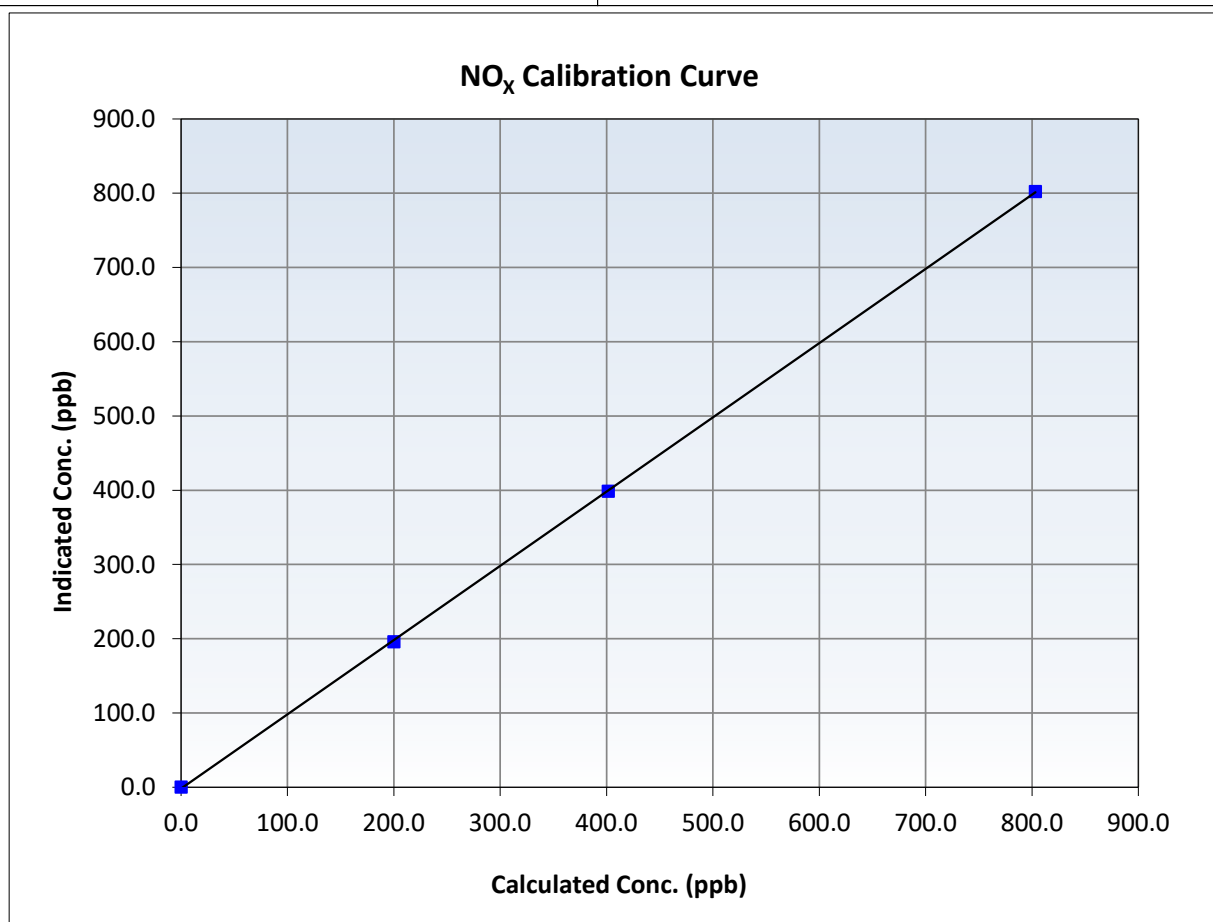
NO_x Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 25, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:00	End Time (MST):	15:42
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	0.4	----	Correlation Coefficient	0.999965	≥0.995
803.3	802.4	1.0011	Slope	0.999850	0.90 - 1.10
401.6	398.7	1.0072	Intercept	-1.808995	+/-20
200.2	196.1	1.0210			





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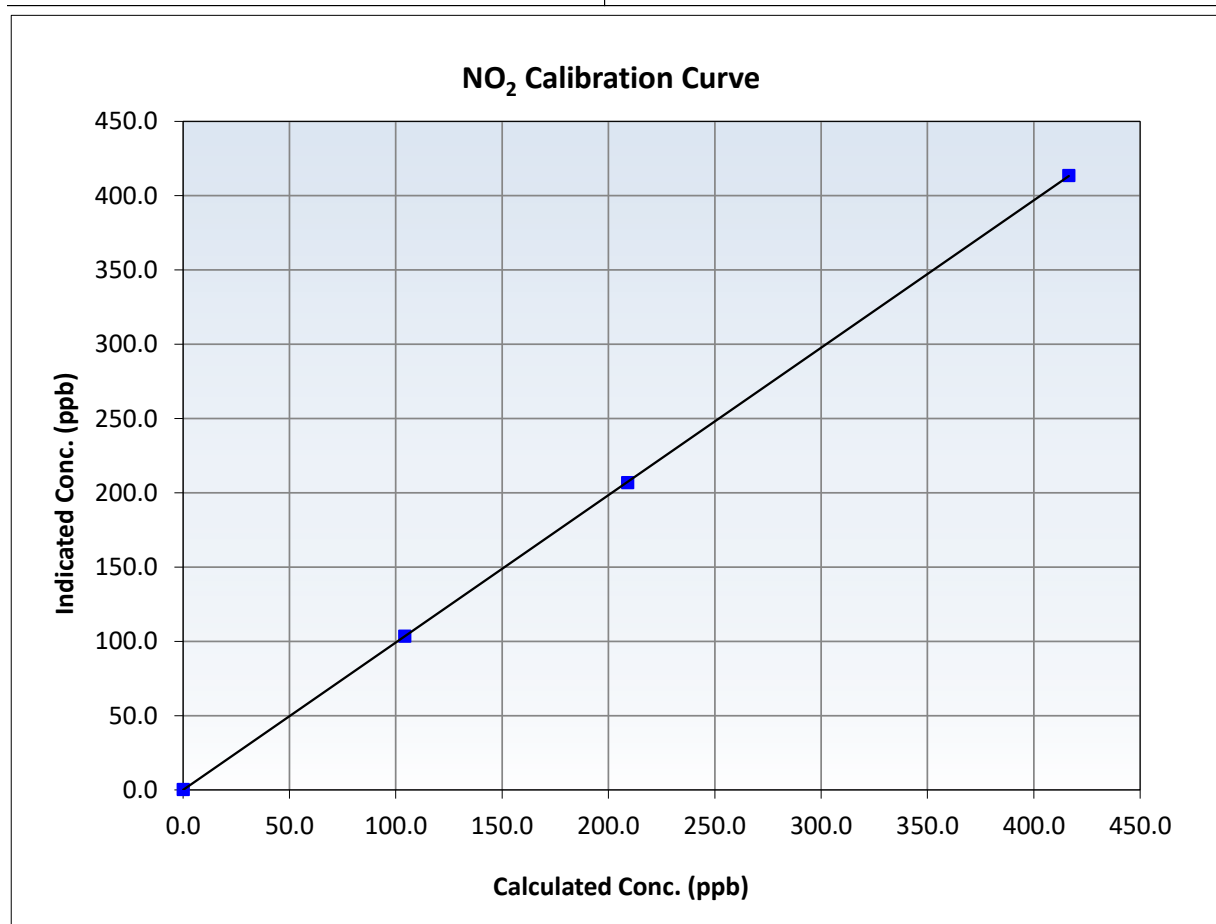
NO₂ Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 25, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:00	End Time (MST):	15:42
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1501663731

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.0	0.2	----	Correlation Coefficient	0.999994	<i>≥0.995</i>
416.5	413.5	1.0072	Slope	0.992216	<i>0.90 - 1.10</i>
209.1	206.8	1.0109	Intercept	-0.003241	<i>+/-20</i>
104.2	103.5	1.0064			





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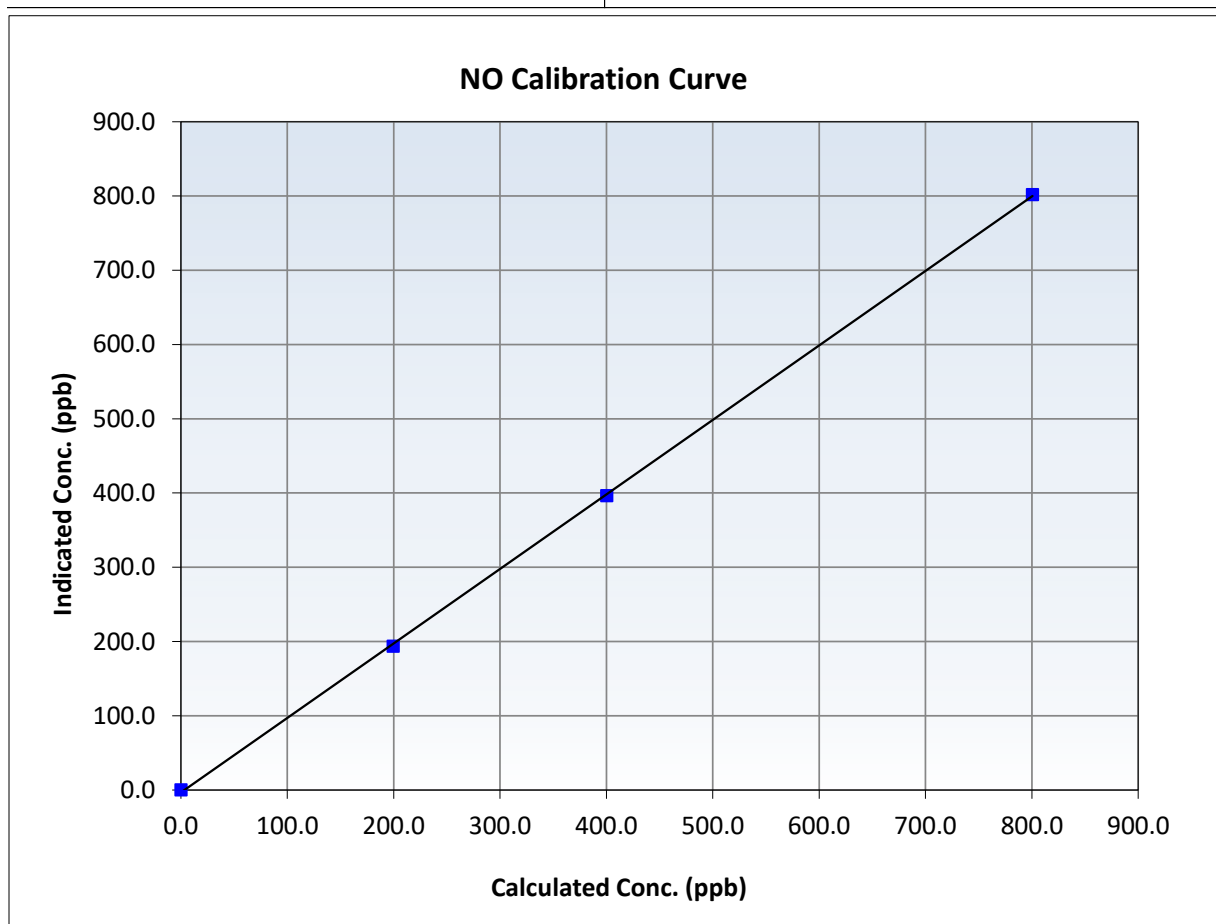
NO Calibration Summary

Station Information

Calibration Date:	July 10, 2026	Previous Calibration:	June 25, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:00	End Time (MST):	15:42
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1501663731

Calibration Data

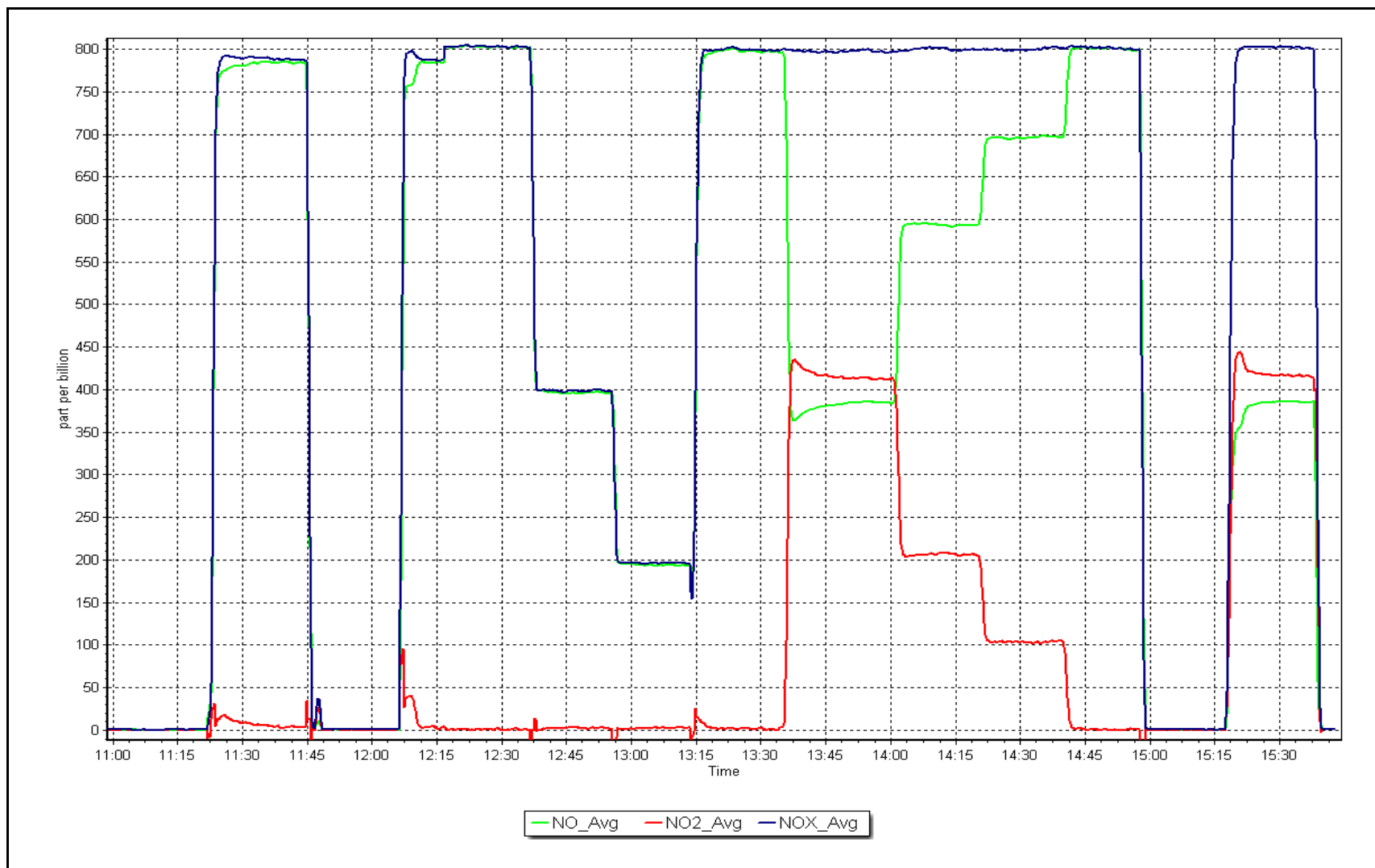
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999915	≥ 0.995
800.6	801.8	0.9985	Slope	1.003351	$0.90 - 1.10$
400.2	396.4	1.0097	Intercept	-3.269647	± 20
199.5	193.6	1.0307			



NO_x Calibration Plot

Date: July 10, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Stony Mountain
Calibration Date: July 23, 2026
Start time (MST): 10:25
Reason: Routine

Station number: AMS 18
Last Cal Date: June 2, 2026
End time (MST): 13:34

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:	1.002400	1.010743	Backgd or Offset:	2.8	2.8
Calibration intercept:	0.780000	0.520000	Coeff or Slope:	0.980	0.992

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	0.8	----
As found High point	4888	1155.7	400.0	398.9	1.005
As found Mid point					
As found Low point					
Baseline Corr As found:	398.1	Previous response	401.7	*% 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- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	NA	0.0	0.4	----
High point	4888	1155.7	400.0	404.7	0.988
Mid point	4888	894.4	200.0	202.9	0.986
Low point	4888	762.7	100.0	101.6	0.984
As left zero	5000	NA	0.0	1.1	----
As left span	4812	1155.7	400.0	405.5	0.986
Average Correction Factor					0.986

Notes: Sample inlet filter changed and adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

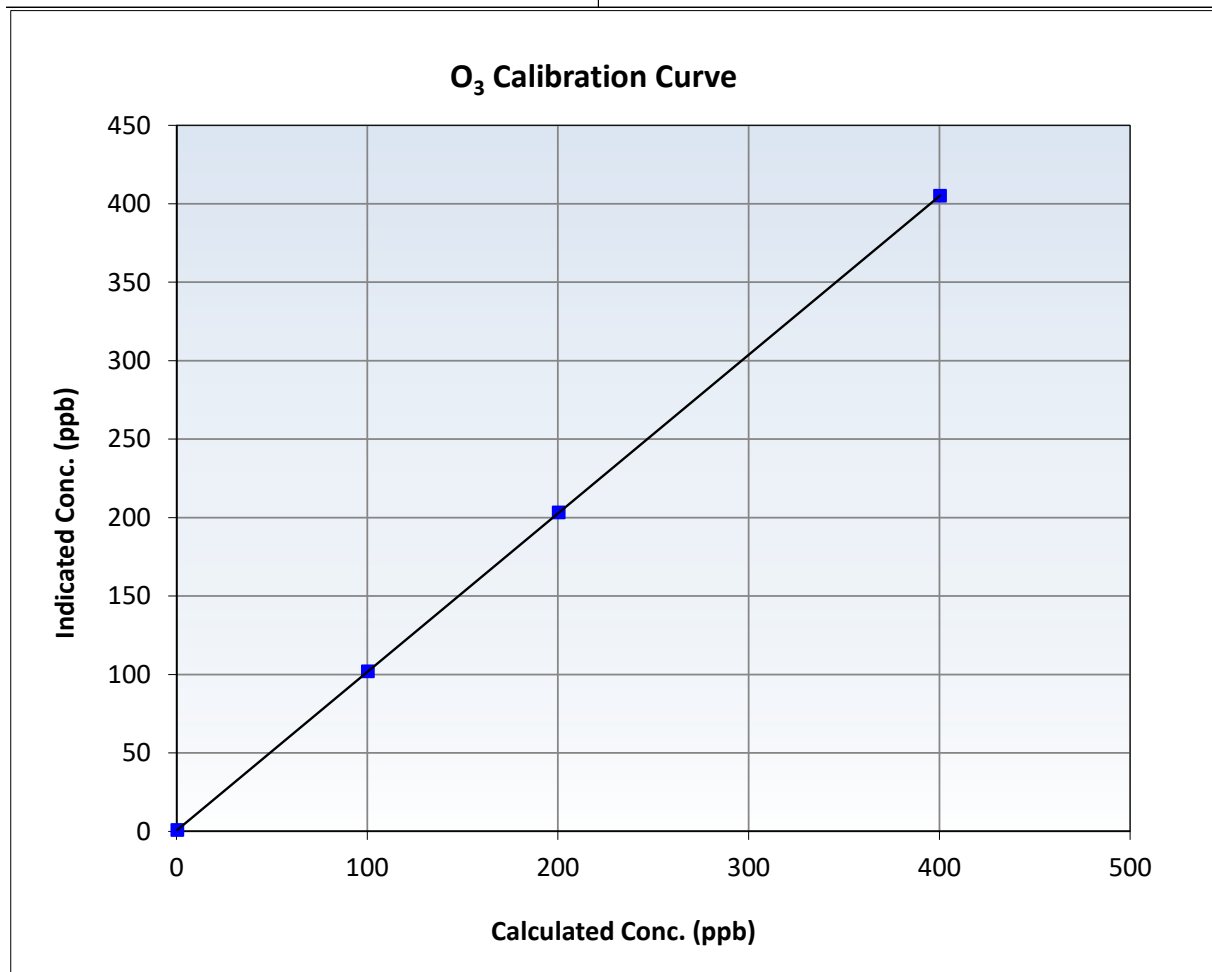
O₃ Calibration Summary

Station Information

Calibration Date:	July 23, 2026	Previous Calibration:	June 2, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	10:25	End Time (MST):	13:34
Analyzer make:	API T400	Analyzer serial #:	825

Calibration Data

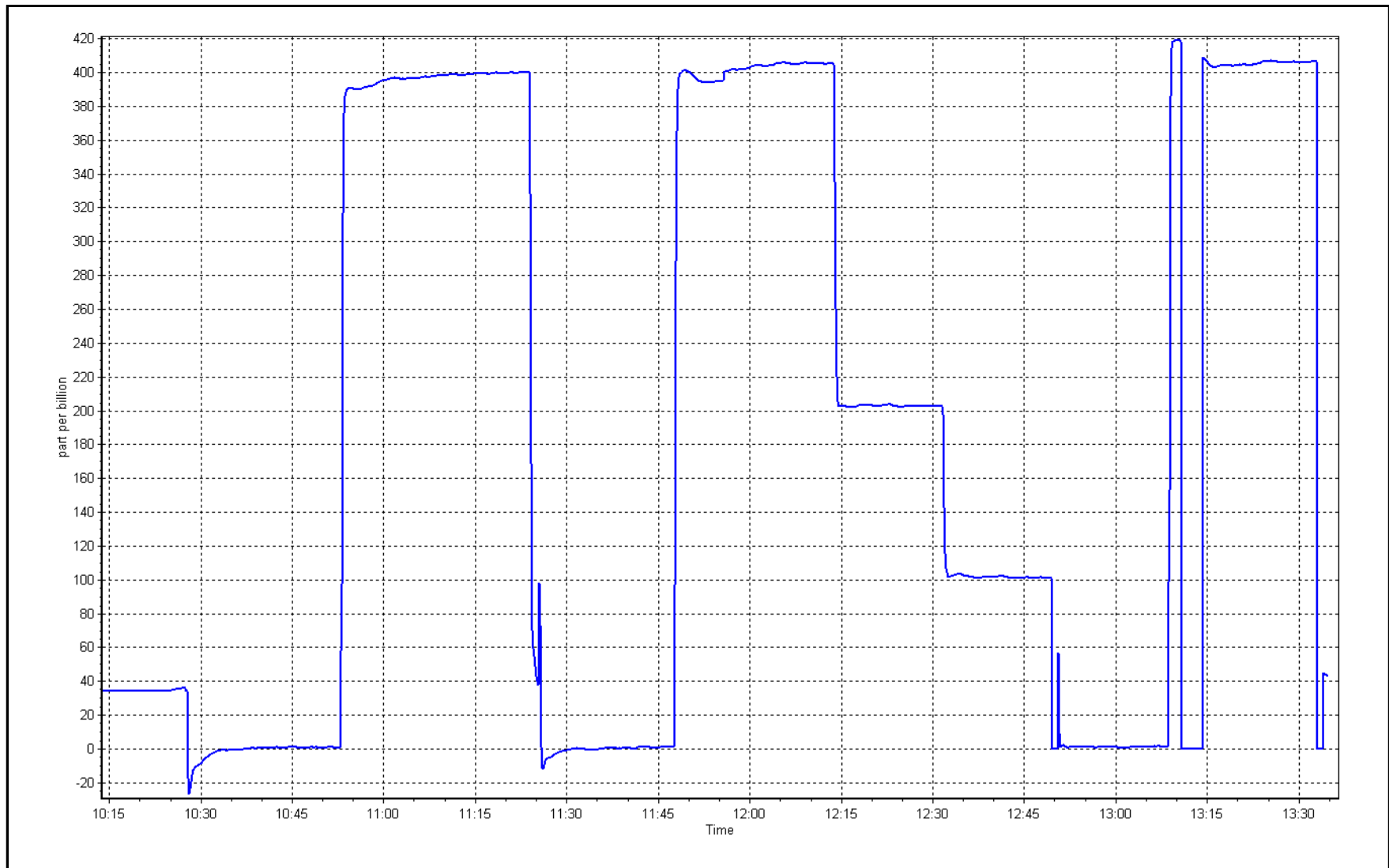
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999999	≥0.995
400.0	404.7	0.9884	Slope	1.010743	0.90 - 1.10
200.0	202.9	0.9857	Intercept	0.520000	+/- 5
100.0	101.6	0.9843			



O₃ Calibration Plot

Date: July 23, 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: July 10, 2026 Last Cal Date: June 4, 2026
Start time (MST): 13:48 End time (MST): 14:10
Analyzer Make: API T640 S/N: 645
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)	20.8	20.33	20.8	☐	+/- 2 °C
P (mmHg)	697.8	697.28	697.8	☐	+/- 10 mmHg
Flow (LPM)	5.01	4.975	5.01	☐	+/- 0.25 LPM
PW% (pump)	35	----	35	☐	>80%
Zero Verification	PM w/o HEPA: 2.4		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: June 4, 2026
Date Disposable Filter Changed: June 4, 2026

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

Annual Maintenance

Date Sample Tube Cleaned: May 21, 2026
Date RH/T Sensor Cleaned: May 21, 2026

Notes: Flow, pressure, temperature, and PMT checked. No issues. Leak check passed.

Calibration by: Mohammed Kashif



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS19
FIREBAG
JULY 2026**

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Firebag Station number: AMS 19
Calibration Date: July 21, 2026 Last Cal Date: June 5, 2026
Start time (MST): 10:41 End time (MST): 13:52
Reason: Routine

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:	0.997038	1.000937	Backgd or Offset:	2.08	2.02
Calibration intercept:	-1.443498	-1.282752	Coeff or Slope:	1.112	1.077

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	-0.8	----
As found High point	4922	78.5	800.2	821.6	0.973
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	822.4	Previous response	796.4	*% change	3.2%
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	-0.5	----
High point	4922	78.5	800.2	800.1	1.000
Mid point	4961	39.2	399.6	398.2	1.003
Low point	4980	19.6	199.8	198.0	1.009
As left zero	5000	0.0	0.0	-0.6	----
As left span	4922	78.5	800.2	802.1	0.998
Average Correction Factor:					1.004

Notes: Inlet filter changed after as founds. Span adjusted.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

SO₂ Calibration Summary

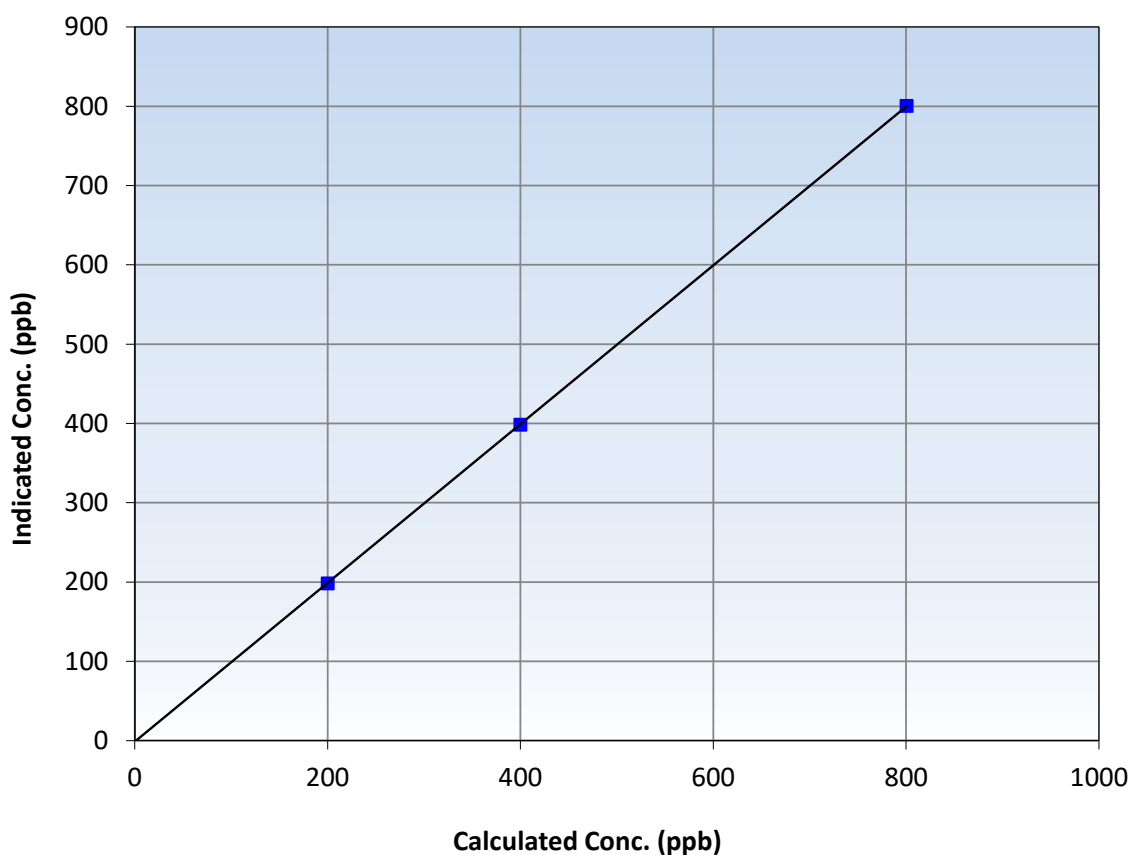
Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 5, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	10:41	End Time (MST):	13:52
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	-0.5	----	Correlation Coefficient	0.999996	≥0.995
800.2	800.1	1.0001	Slope	1.000937	0.90 - 1.10
399.6	398.2	1.0035	Intercept	-1.282752	+/-30
199.8	198.0	1.0092			

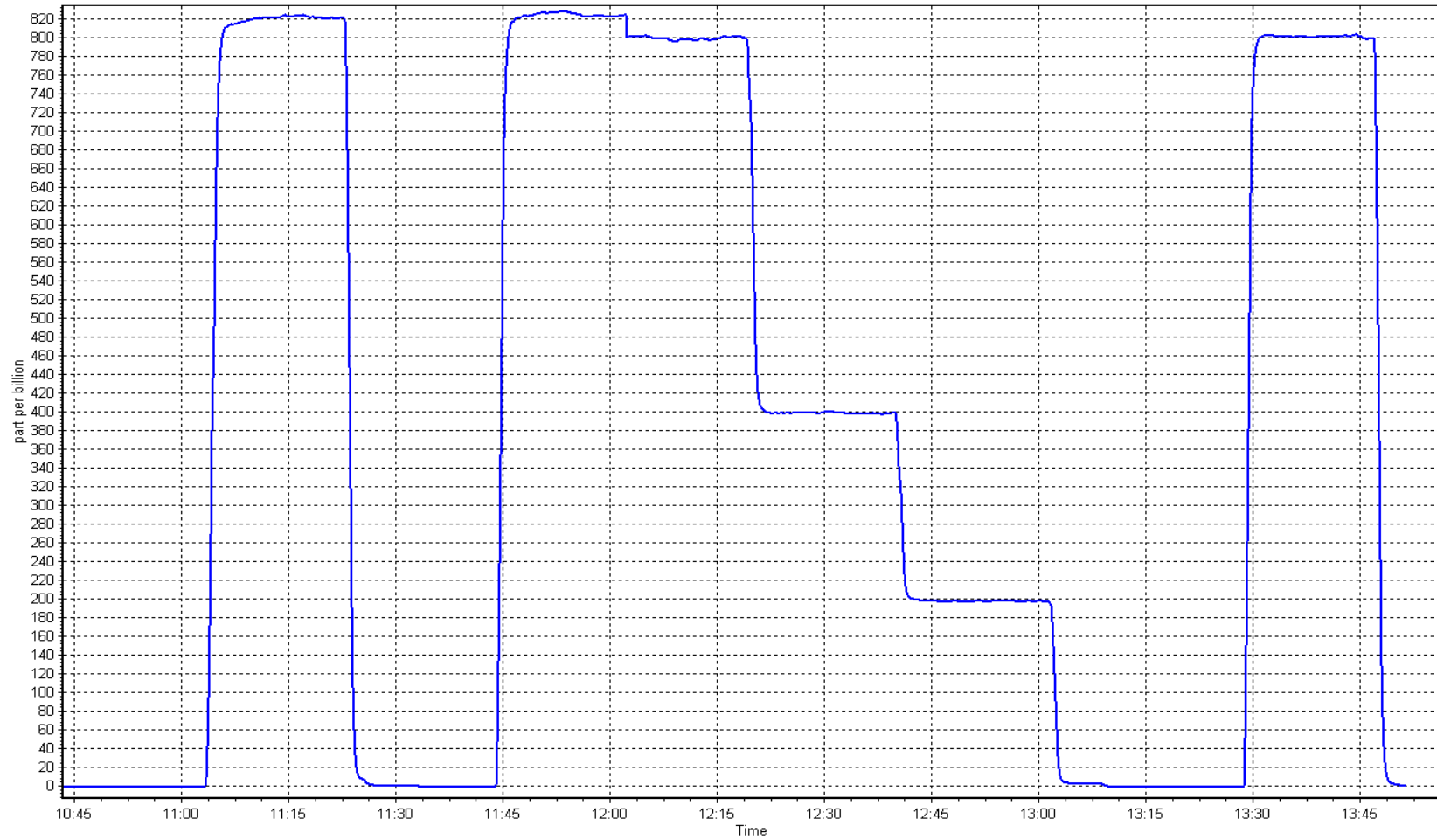
SO₂ Calibration Curve



SO2 Calibration Plot

Date: July 21, 2026

Location: Firebag





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Firebag Station number: AMS 19
Calibration Date: July 17, 2026 Last Cal Date: June 8, 2026
Start time (MST): 9:50 End time (MST): 14:02
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:	1.005191	1.011907	Backgd or Offset:	3.14	3.08
Calibration intercept:	-0.600000	-0.460000	Coeff or Slope:	1.208	1.208

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	-0.4	----
As found High point	4924	75.6	80.0	81.6	0.975
As found Mid point	4962	37.8	40.0	40.4	0.980
As found Low point	4981	18.9	20.0	19.5	1.005
New cylinder response					
Baseline Corr As found:	82.0	Prev response:	79.80	*% change:	2.7%
Baseline Corr 2nd AF pt:	40.8	AF Slope:	1.027481	AF Intercept:	-0.680000
Baseline Corr 3rd AF pt:	19.9	AF Correlation:	0.999940	* = > +/-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	4924	75.6	80.0	80.5	0.994
Mid point	4962	37.8	40.0	40.1	0.997
Low point	4981	18.9	20.0	19.5	1.025
As left zero	5000	0.0	0.0	-0.2	----
As left span	4924	75.6	80.0	79.7	1.004
SO2 Scrubber Check	4922	78.5	785.0	-0.1	----
Date of last scrubber change:		18-Jan-23		Ave Corr Factor	1.005
Date of last converter efficiency test:		November 26, 2024		106.2% efficiency	

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

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

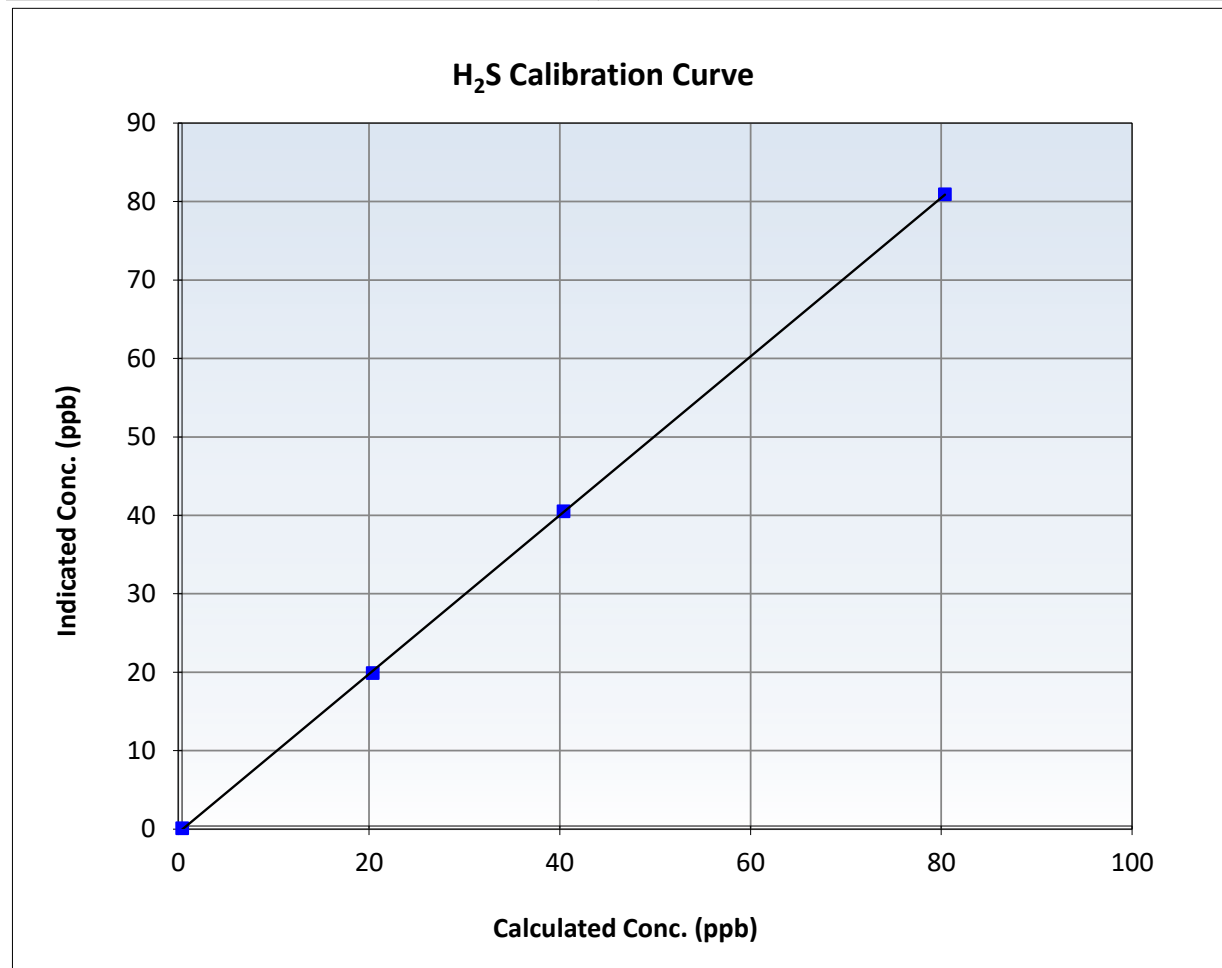
H2S Calibration Summary

Station Information

Calibration Date:	July 17, 2026	Previous Calibration:	June 8, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:50	End Time (MST):	14:02
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1151680032

Calibration Data

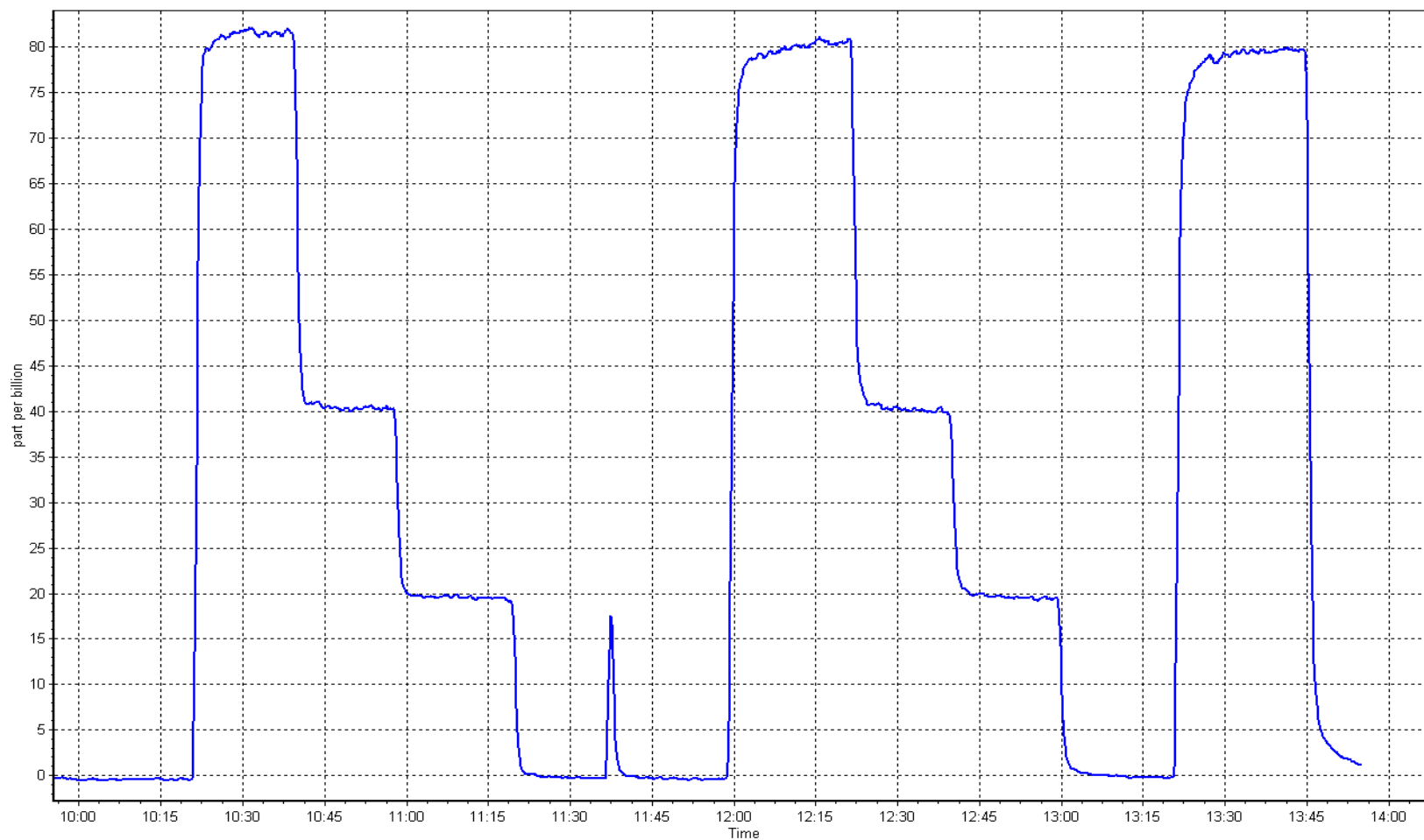
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999969	≥ 0.995
80.0	80.5	0.9936	Slope	1.011907	$0.90 - 1.10$
40.0	40.1	0.9973	Intercept	-0.460000	± 3
20.0	19.5	1.0254			



H2S Calibration Plot

Date: July 17, 2026

Location: Firebag





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Firebag
Calibration Date: July 21, 2026
Start time (MST): 10:41
Reason: Routine

Station number: AMS 19
Last Cal Date: June 5, 2026
End time (MST): 13:52

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 Range: 0 - 20 ppm

Analyzer serial #: 1336160089

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	0.983194	0.994799	Background: 2.13	2.35
Calibration intercept:	0.123157	-0.085594	Coefficient: 3.800	3.844

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	4922	78.5	16.75	16.67	1.003
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.69	Previous response	16.59	*% 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	

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	4922	78.5	16.75	16.62	1.008
Mid point	4961	39.2	8.36	8.17	1.024
Low point	4980	19.6	4.18	4.04	1.035
As left zero	4999	0.0	0.00	0.02	----
As left span	4922	78.4	16.73	16.70	1.002
Average Correction Factor					1.022

Notes:

Inlet filter changed after as founds. No changes made.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

THC Calibration Summary

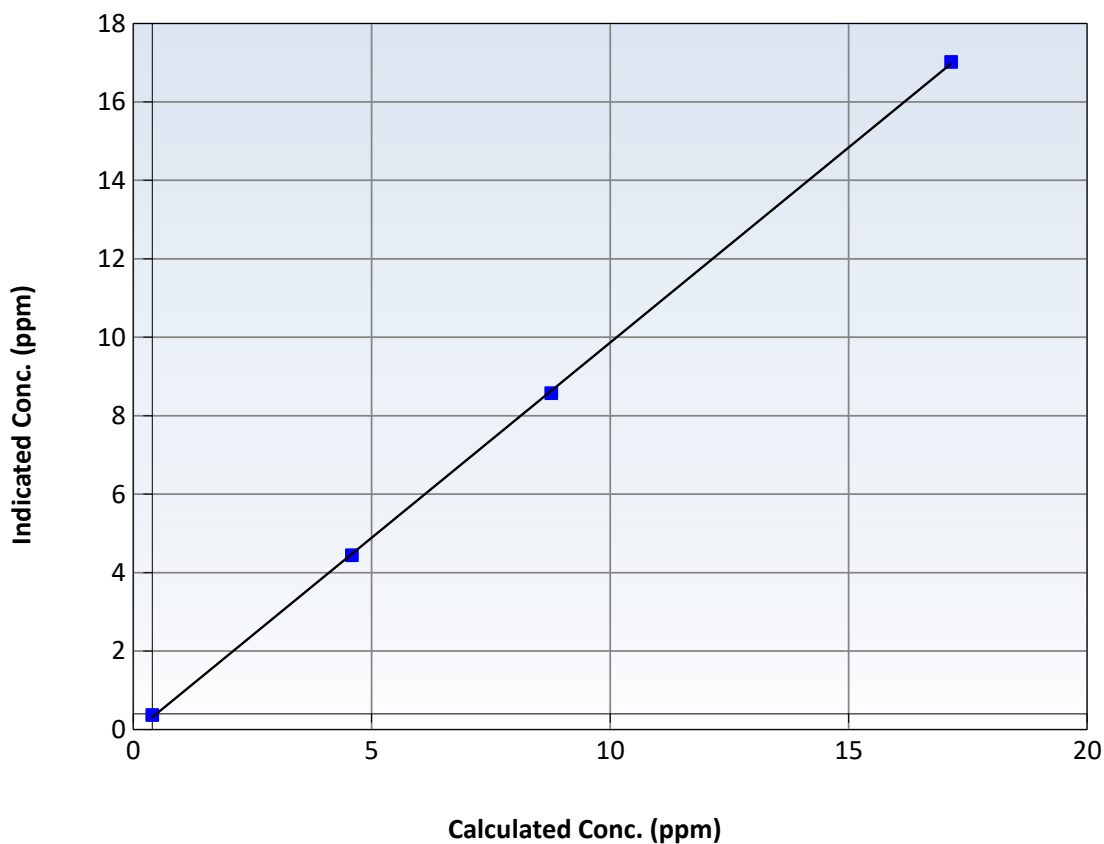
Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 5, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	10:41	End Time (MST):	13:52
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	-0.03	----	Correlation Coefficient	0.999934	≥ 0.995
16.75	16.62	1.0080	Slope	0.994799	$0.90 - 1.10$
8.36	8.17	1.0237	Intercept	-0.085594	± 1.5
4.18	4.04	1.0345			

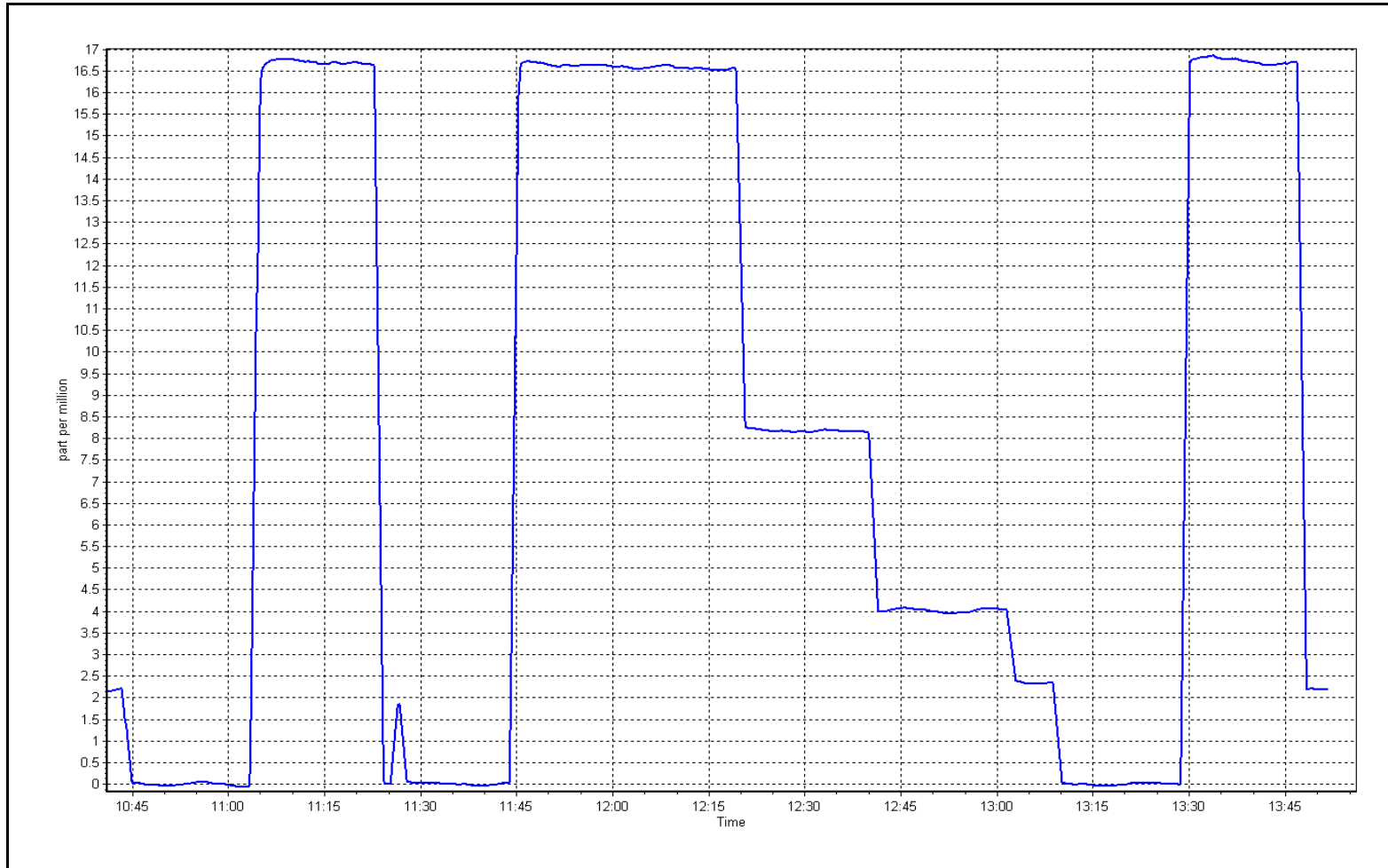
THC Calibration Curve



THC Calibration Plot

Date: July 21, 2026

Location: Firebag





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:	0.931	0.931	NO bkgnd or offset:	4.7	4.7
NOX coeff or slope:	0.991	0.991	NOX bkgnd or offset:	4.7	4.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	167.6	167.6

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.992914	0.997472
NO _x Cal Offset:	-1.007927	-0.727962
NO Cal Slope:	0.995434	1.000867
NO Cal Offset:	-1.967905	-1.887950
NO ₂ Cal Slope:	0.995884	0.994605
NO ₂ Cal Offset:	-0.802919	-0.996137

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	0.0	0.3	----	----
High point	4936	64.4	799.8	797.2	2.6	797.3	796.6	0.6	1.0031	1.0008
Mid point	4968	32.2	399.9	398.6	1.3	398.5	397.2	1.3	1.0035	1.0036
Low point	4984	16.1	200.0	199.3	0.6	197.0	195.0	2.1	1.0150	1.0221
As left zero	5000	0	0.0	0.0	0.0	0.3	0.0	0.3	----	----
As left span	4936	64.4	799.8	395.2	404.6	794.4	395.2	399.2	1.0068	1.0000
Average Correction Factor									1.0072	1.0088

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	0.3	----	----
High GPT point	791.1	390.2	403.5	401.1	1.0059	99.4%
Mid GPT point	791.1	598.4	195.3	192.2	1.0160	98.4%
Low GPT point	791.1	680.1	113.6	110.9	1.0241	97.6%
Average Correction Factor					1.0154	98.5%

Notes:

Inlet filter changed after as founds. Span adjusted

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

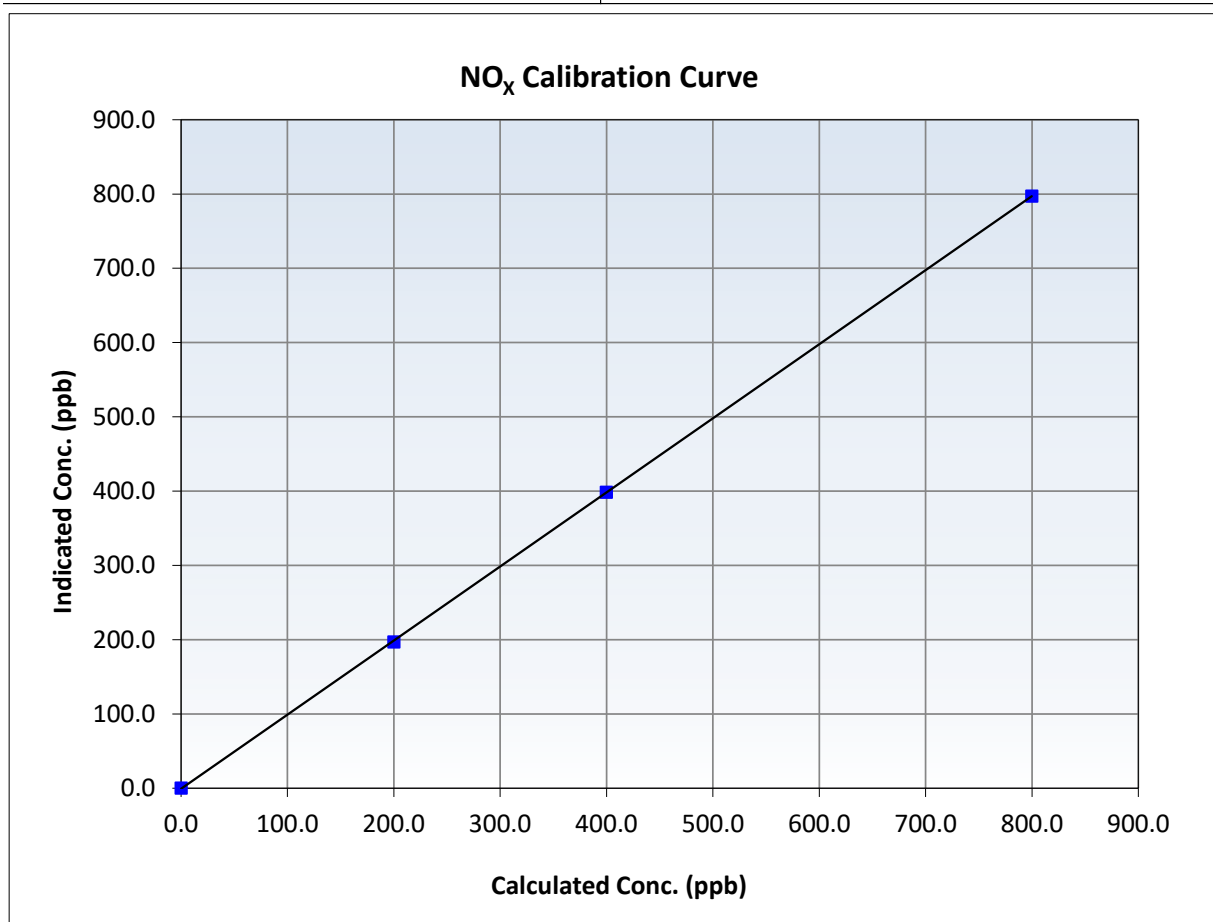
NO_x Calibration Summary

Station Information

Calibration Date:	July 22, 2026	Previous Calibration:	June 22, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:53	End Time (MST):	14:43
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	0.4	----	Correlation Coefficient	0.999987	≥0.995
799.8	797.3	1.0031	Slope	0.997472	0.90 - 1.10
399.9	398.5	1.0035	Intercept	-0.727962	+/-20
200.0	197.0	1.0150			





Wood Buffalo Environmental Association

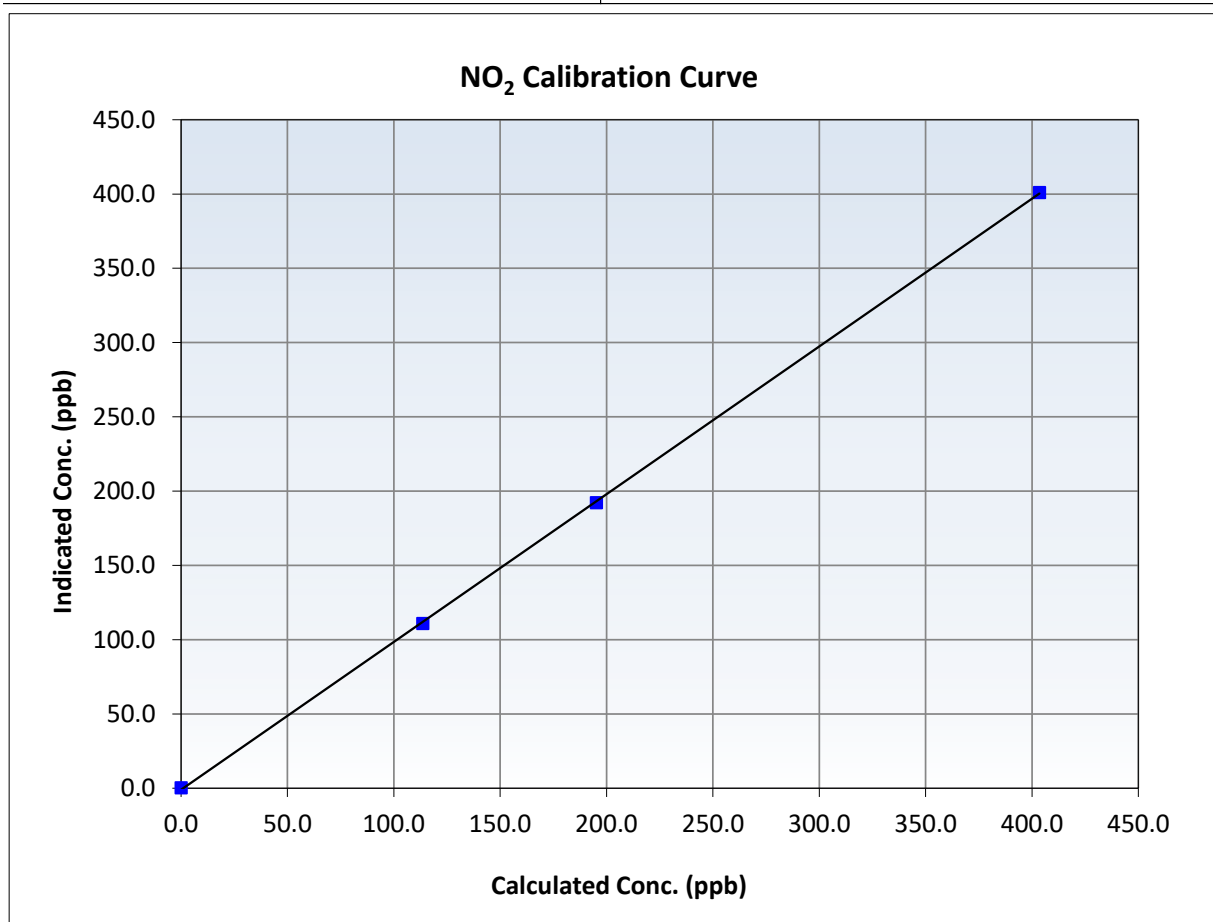
NO₂ Calibration Summary

Station Information

Calibration Date:	July 22, 2026	Previous Calibration:	June 22, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:53	End Time (MST):	14:43
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	0.3	----	Correlation Coefficient	0.999948	≥0.995
403.5	401.1	1.0059	Slope	0.994605	0.90 - 1.10
195.3	192.2	1.0160	Intercept	-0.996137	+/-20
113.6	110.9	1.0241			





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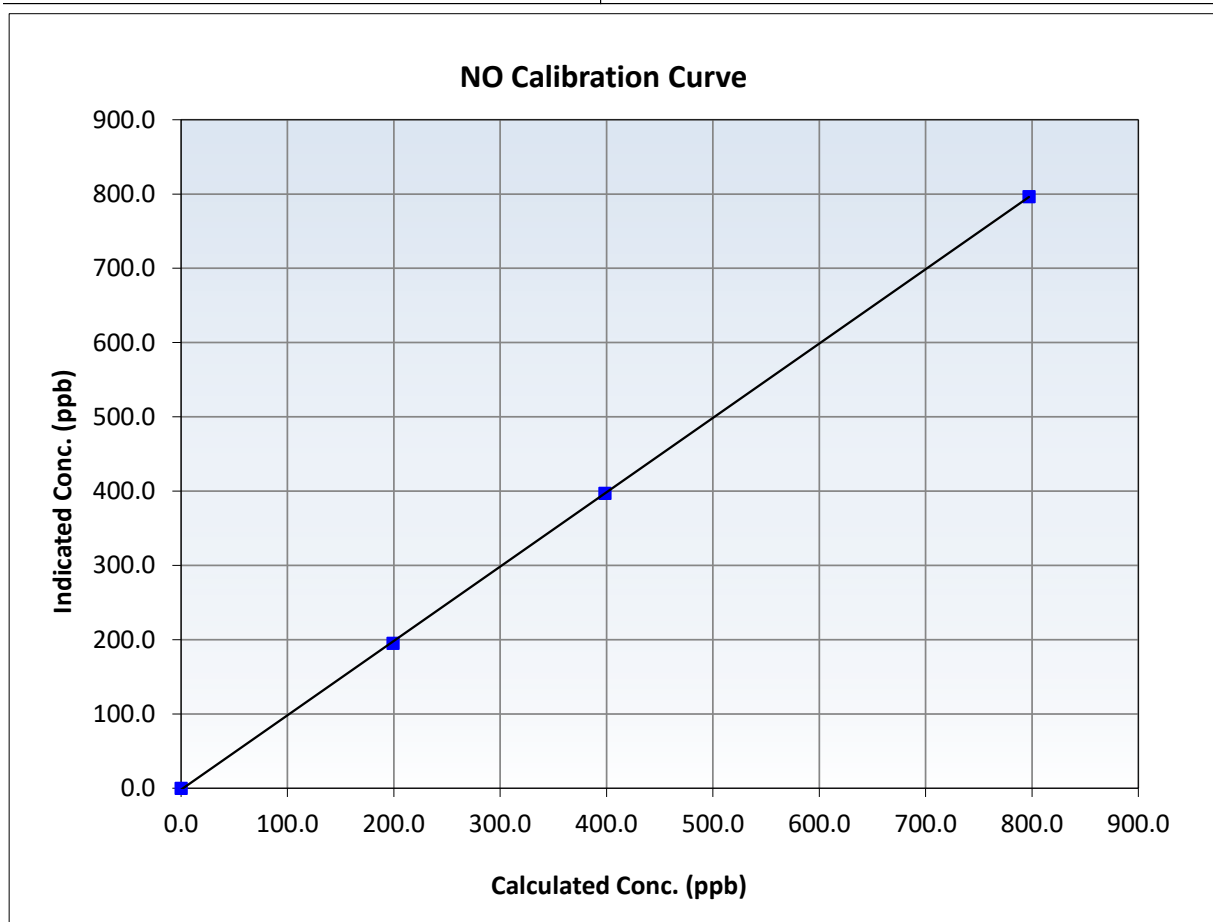
NO Calibration Summary

Station Information

Calibration Date:	July 22, 2026	Previous Calibration:	June 22, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:53	End Time (MST):	14:43
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661309

Calibration Data

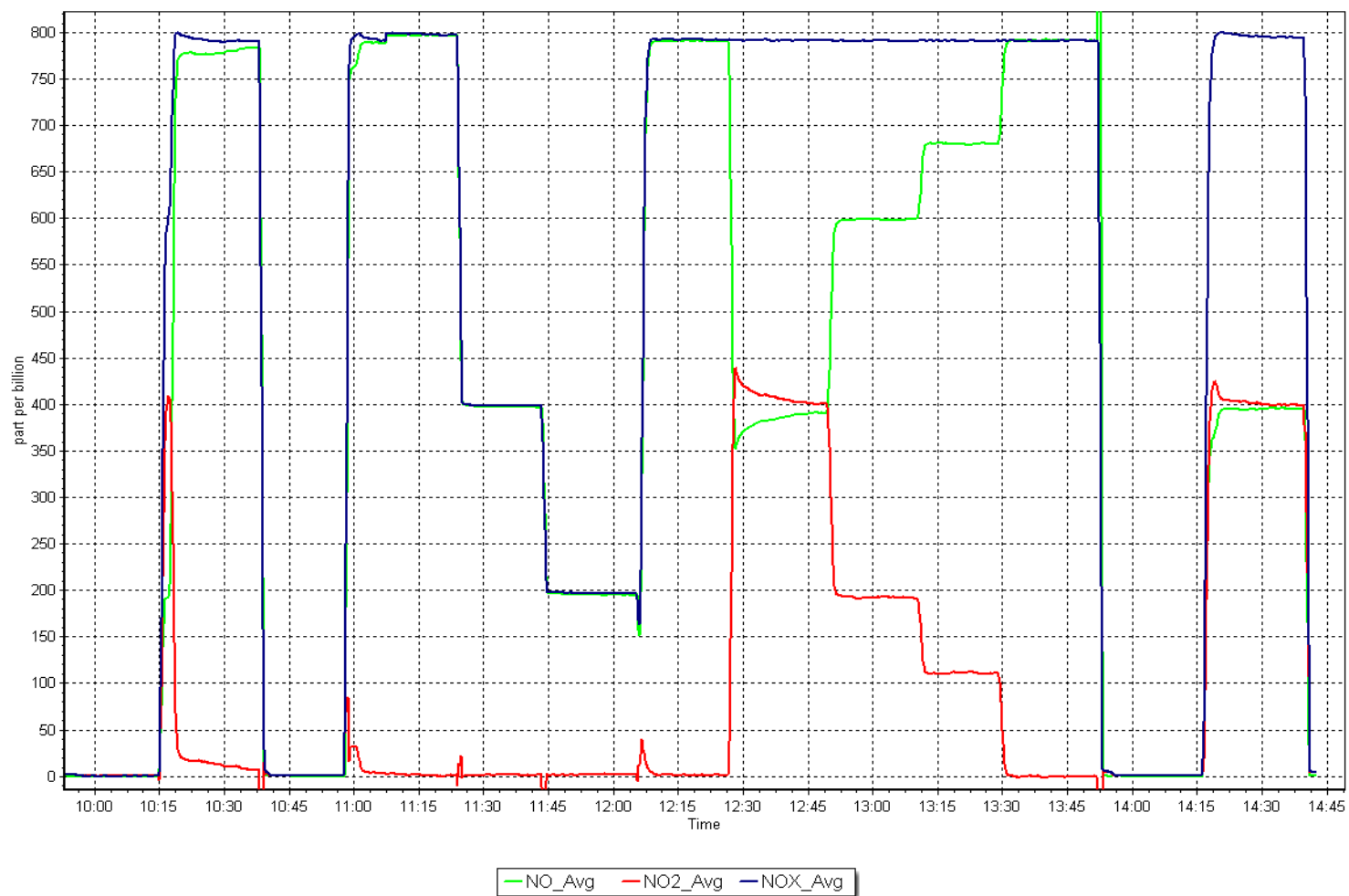
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999969	≥ 0.995
797.2	796.6	1.0008	Slope	1.000867	$0.90 - 1.10$
398.6	397.2	1.0036	Intercept	-1.887950	± 20
199.3	195.0	1.0221			



NO_x Calibration Plot

Date: July 22, 2026

Location: Firebag





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS20 MACKAY RIVER JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: MacKay River Station number: AMS 20
Calibration Date: July 2, 2026 Last Cal Date: June 15, 2026
Start time (MST): 8:10 End time (MST): 10:35
Reason: Routine

Calibration Standards

Cal Gas Concentration: 49.15 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC409669
Removed Cal Gas Conc: 49.15 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Model: API T700 Serial Number: 5706
Zero Air Gen Model: API 701 Serial Number: 4888

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1501301450
Analyzer Range: 0-1000ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001188	1.009458	Backgd or Offset:	21.0	21.0
Calibration intercept:	-0.675723	0.005358	Coeff or Slope:	0.921	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	-0.3	----
As found High point	4919	81.4	800.1	802.9	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	803.2	Previous response	800.4	*% 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	4919	81.4	800.1	807.7	0.991
Mid point	4959	40.7	400.1	404.0	0.990
Low point	4980	20.3	199.5	201.1	0.992
As left zero	5000	0.0	0.0	-0.2	----
As left span	4919	81.4	800.1	805.2	0.994
Average Correction Factor:					0.991

Notes: No Maintenance or adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

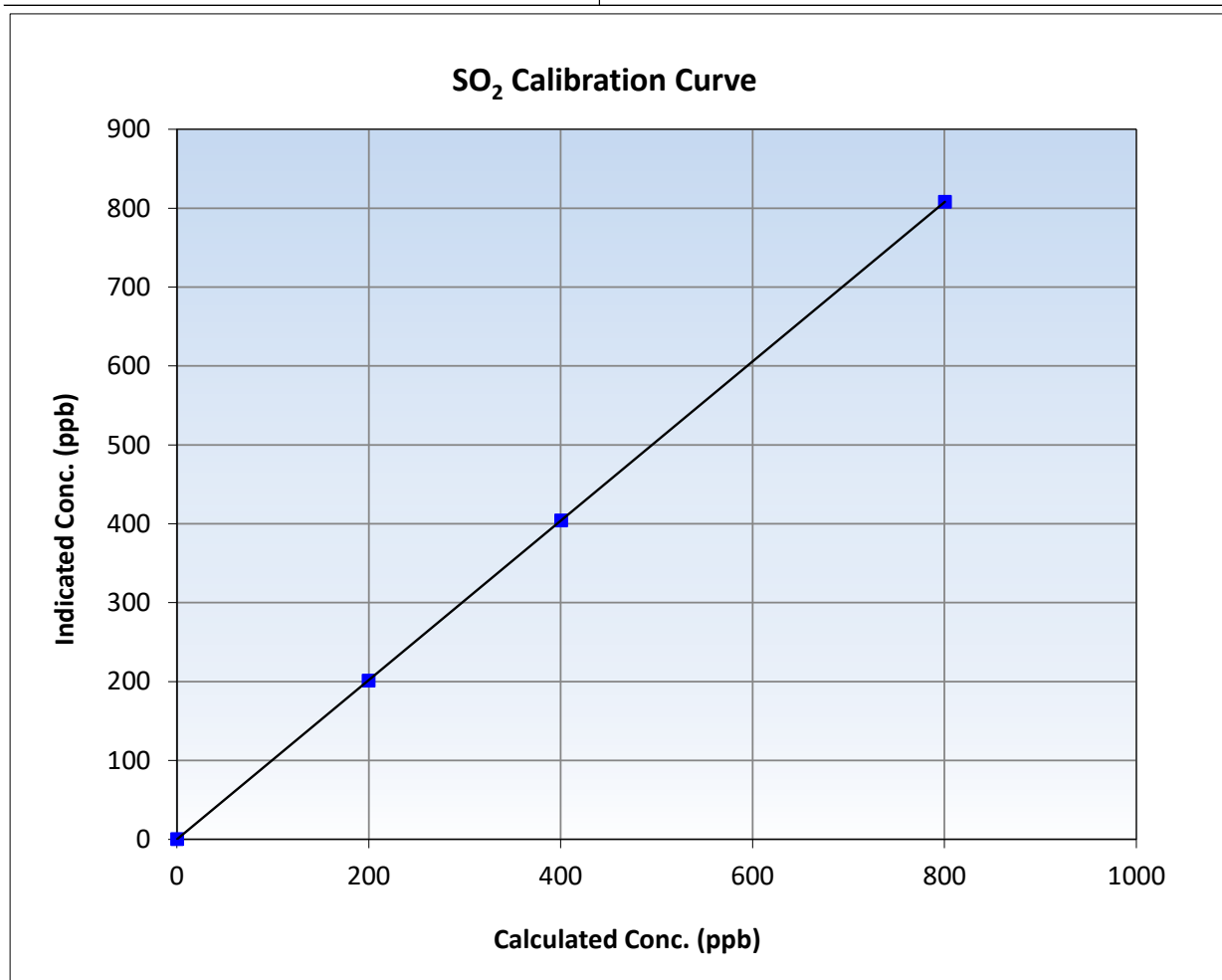
SO₂ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 15, 2026
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	8:10	End Time (MST):	10:35
Analyzer make:	Thermo 43i	Analyzer serial #:	1501301450

Calibration Data

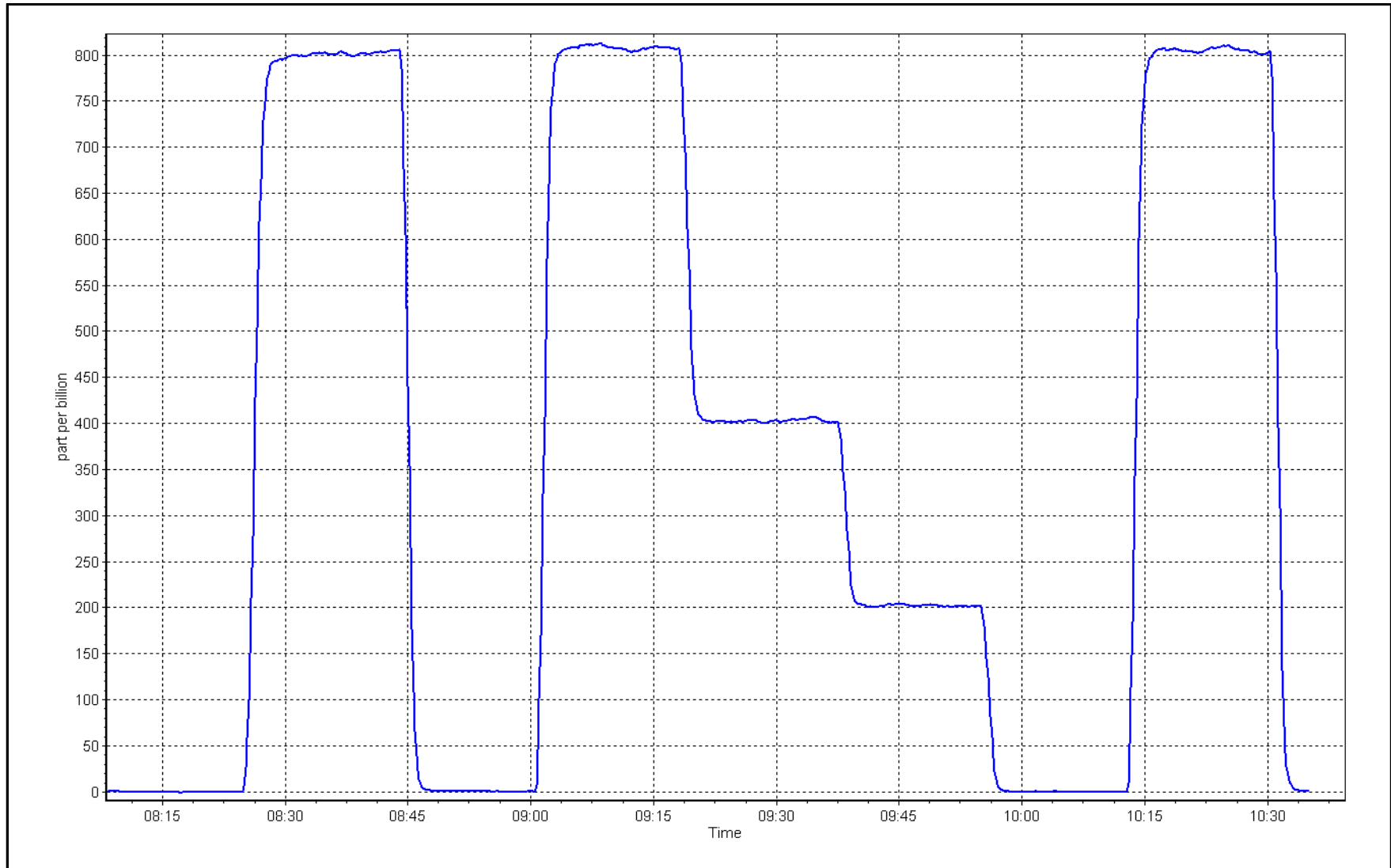
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	1.000000	≥0.995
800.1	807.7	0.9906	Slope	1.009458	0.90 - 1.10
400.1	404.0	0.9904	Intercept	0.005358	+/-30
199.5	201.1	0.9922			



SO2 Calibration Plot

Date: July 2, 2026

Location: MacKay River





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: MacKay River
Calibration Date: July 20, 2026
Start time (MST): 8:14
Reason: Routine

Station number: AMS 20
Last Cal Date: June 17, 2026
End time (MST): 12:17

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:	1.007509	1.011229	Backgd or Offset:	3.90	3.90
Calibration intercept:	-0.063797	0.155986	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	-0.1	----
As found High point	4919	80.6	80.0	81.7	0.978
As found Mid point	4960	40.3	40.0	40.9	0.976
As found Low point	4980	20.2	20.0	20.3	0.982
New cylinder response					
Baseline Corr As found:	81.8	Prev response:	80.50	*% change:	1.6%
Baseline Corr 2nd AF pt:	41.0	AF Slope:	1.023520	AF Intercept:	-0.124199
Baseline Corr 3rd AF pt:	20.4	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	0.0	----
High point	4919	80.6	80.0	80.9	0.988
Mid point	4960	40.3	40.0	40.8	0.981
Low point	4980	20.2	20.0	20.5	0.977
As left zero	5000	0.0	0.0	0.2	----
As left span	4919	80.6	80.0	79.7	1.003
SO2 Scrubber Check	4982	81.3	802.8	0.0	----
Date of last scrubber change:	25-May-23			Ave Corr Factor	0.982
Date of last converter efficiency test:					

Notes: Sox scrubber checked after the calibrator zero. No adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

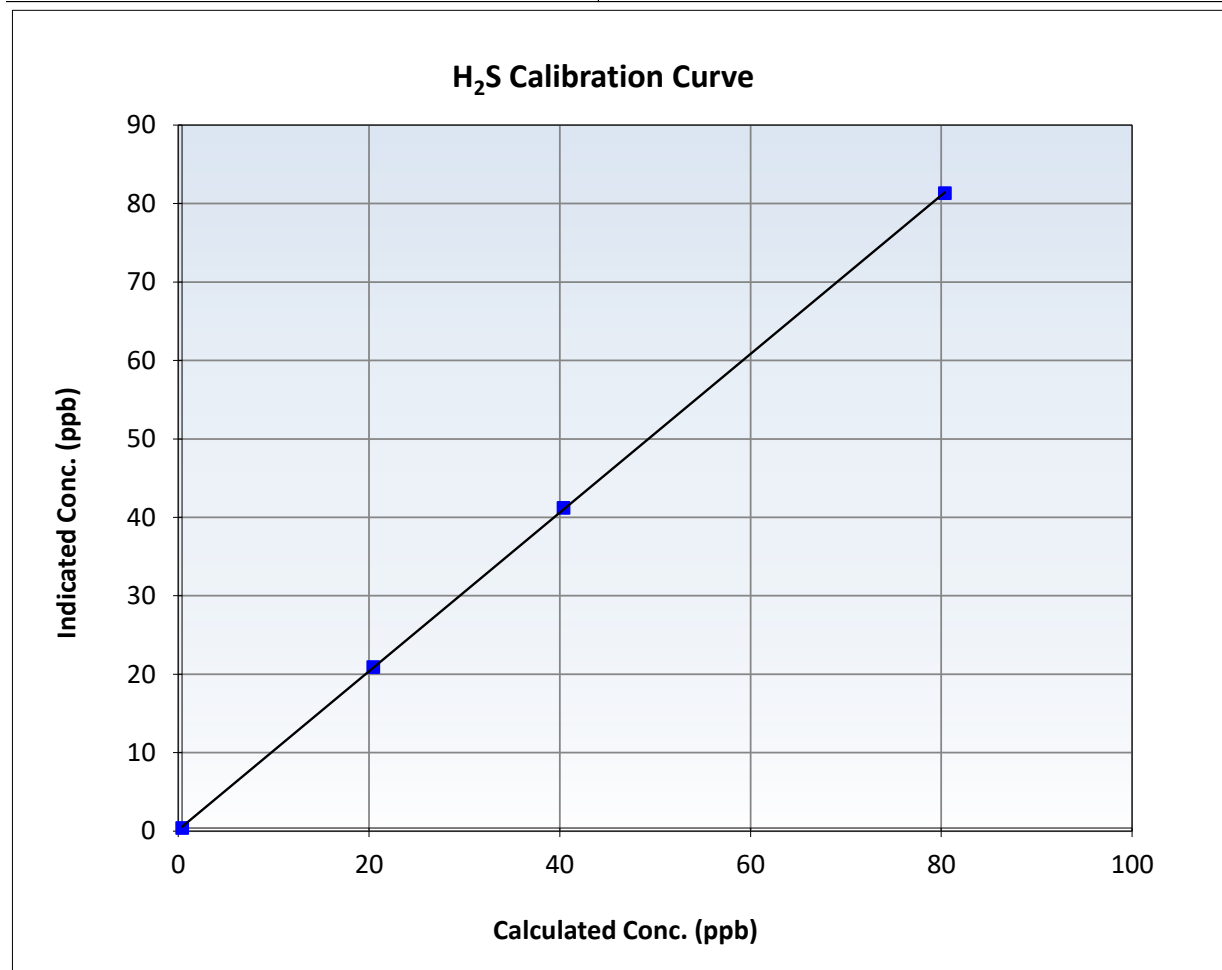
H₂S Calibration Summary

Station Information

Calibration Date:	July 20, 2026	Previous Calibration:	June 17, 2026
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	8:14	End Time (MST):	12:17
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1236656117

Calibration Data

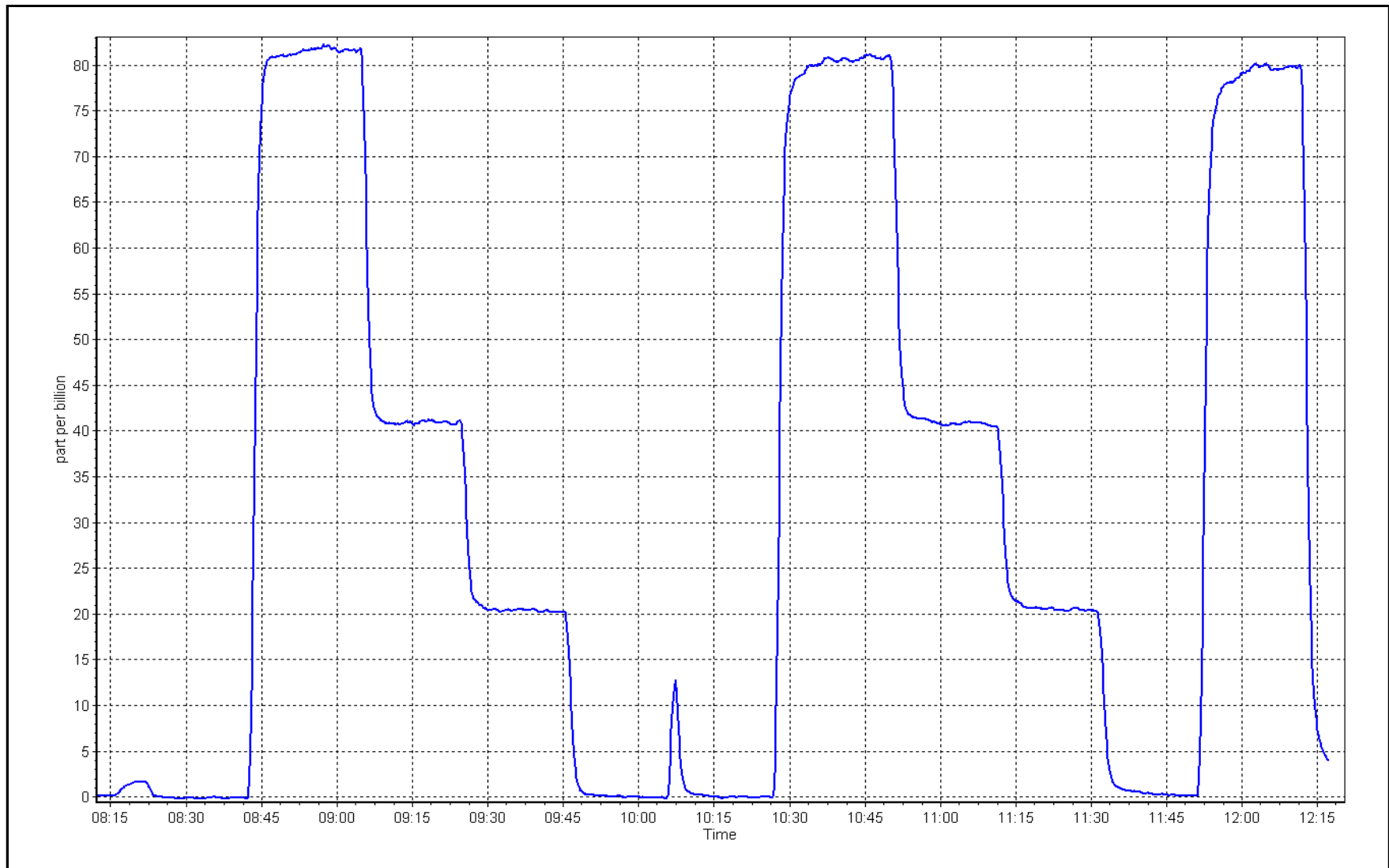
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999978		≥0.995
80.0	80.9	0.9884	Slope	1.011229		0.90 - 1.10
40.0	40.8	0.9805	Intercept	0.155986		+/-3
20.0	20.5	0.9774				



H₂S Calibration Plot

Date: July 20, 2026

Location: MacKay River





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: MacKay River
Calibration Date: July 2, 2026
Start time (MST): 8:10
Reason: Routine

Station number: AMS 20
Last Cal Date: June 15, 2026
End time (MST): 10:34

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:	1.083965	0.999947	Background:	2.880	2.880
Calibration intercept:	-1.285113	-0.107186	Coefficient:	4.410	4.410

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	-0.12	----
As found High point	4919	81.4	17.46	17.44	0.994
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	17.56	Previous response	17.64	*% 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	

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	-0.11	----
High point	4919	81.4	17.46	17.36	1.006
Mid point	4959	40.7	8.73	8.62	1.013
Low point	4980	20.3	4.35	4.25	1.024
As left zero	5000	0.0	0.00	-0.13	----
As left span	4919	81.4	17.46	17.44	1.001
Average Correction Factor					1.014

Notes:

Hydrogen cylinder changed out. No adjustments done.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

THC Calibration Summary

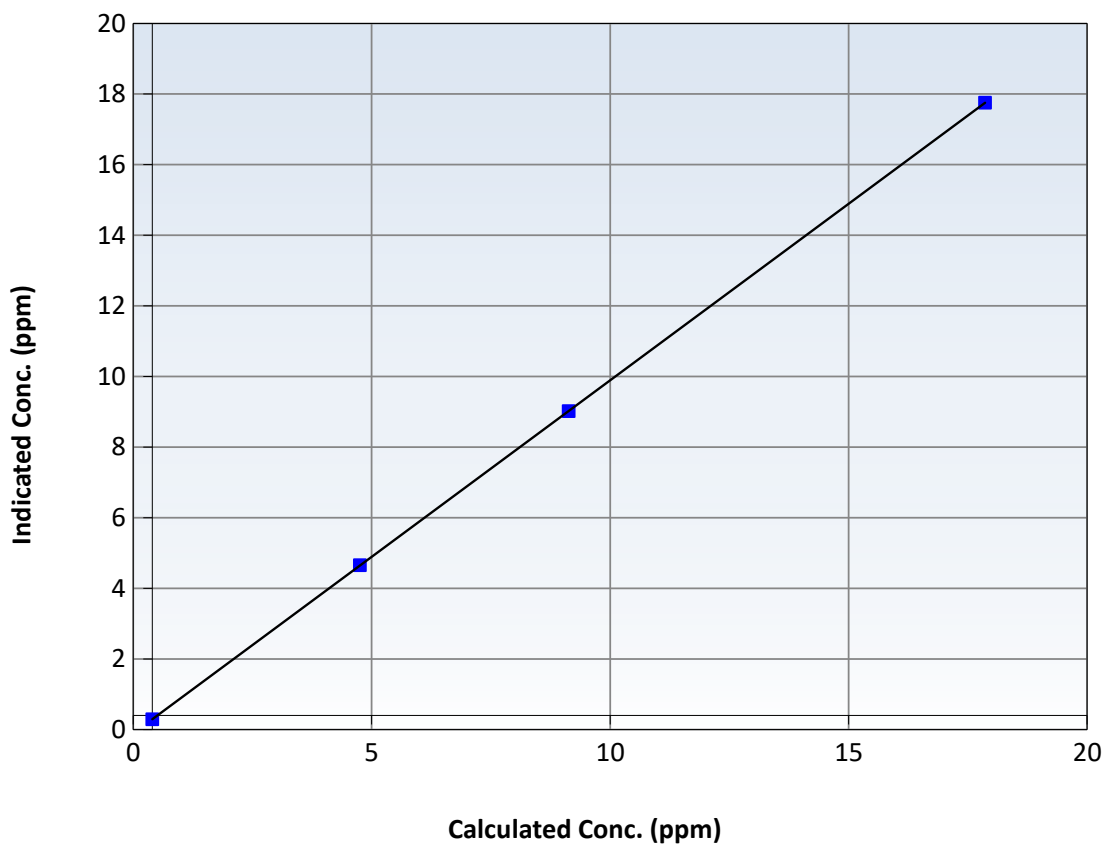
Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 15, 2026
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	8:10	End Time (MST):	10:34
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	-0.11	----	Correlation Coefficient	1.000000	≥ 0.995
17.46	17.36	1.0061	Slope	0.999947	$0.90 - 1.10$
8.73	8.62	1.0133	Intercept	-0.107186	± 1.5
4.35	4.25	1.0240			

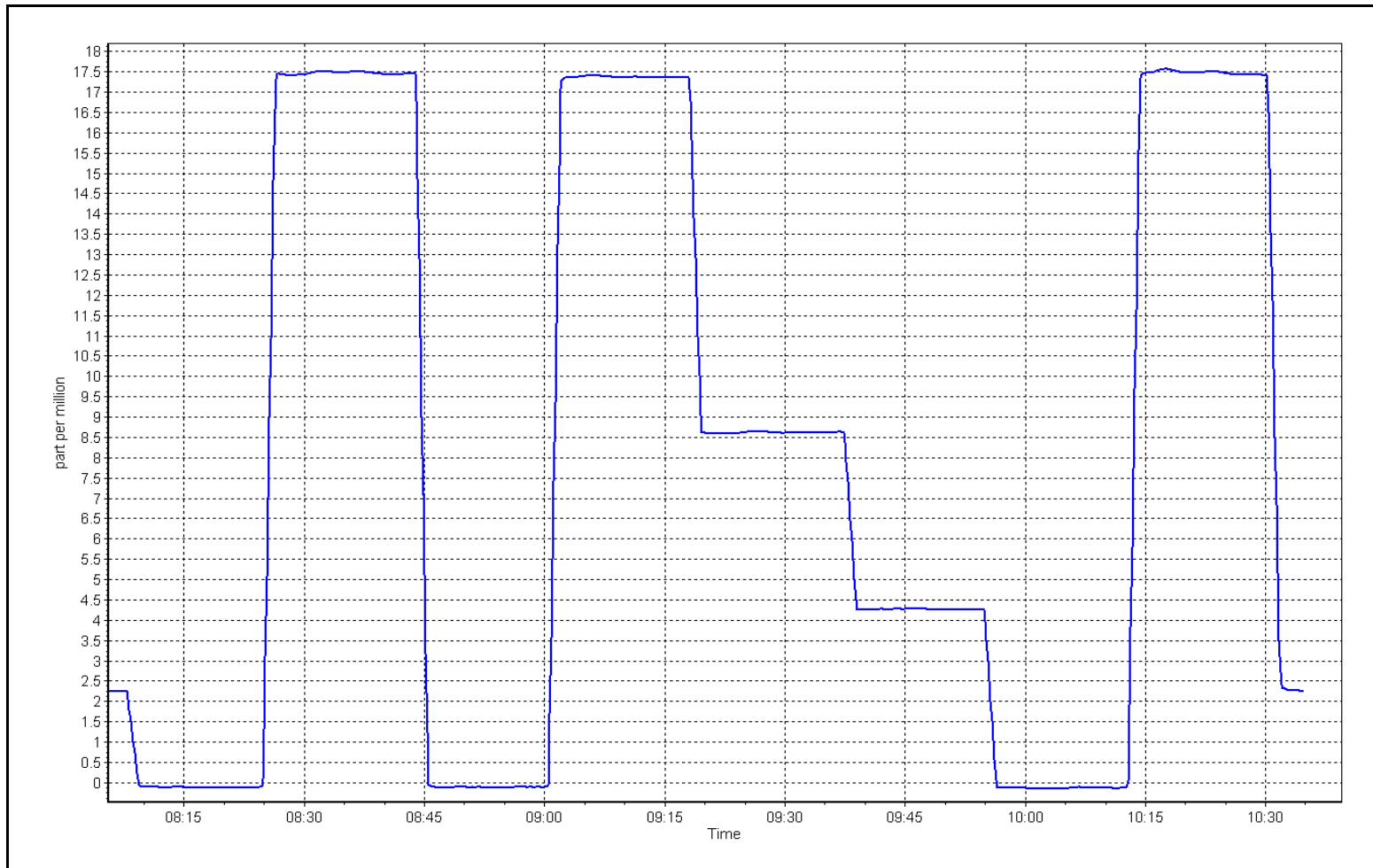
THC Calibration Curve



THC Calibration Plot

Date: July 2, 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: July 14, 2026
Last Cal Date: June 16, 2026
Start time (MST): 7:40
End time (MST): 11:53
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	808.3	804.0	4.1	0.9909	0.9948
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 805.7 ppb	NO = 803.2 ppb				* = > +/-5% change initiates investigation			*Percent Change	NO _x = 0.3%
Baseline Corr 1st pt	NO _x = 808.5 ppb	NO = 804.0 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: 1505164379

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.065	1.065	NO bkgnd or offset:	2.9	2.9
NOX coeff or slope:	0.991	0.991	NOX bkgnd or offset:	3.2	3.2
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	154.6	154.6

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.004608	1.005949
NO _x Cal Offset:	0.891487	1.171032
NO Cal Slope:	1.004741	1.005957
NO Cal Offset:	-0.387239	-0.287689
NO ₂ Cal Slope:	0.999103	1.000714
NO ₂ Cal Offset:	0.002443	-0.612187

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	4935	64.6	801.1	799.8	1.3	806.3	804.4	2.0	0.9936	0.9943
Mid point	4968	32.3	400.5	399.9	0.6	405.1	402.1	2.9	0.9886	0.9944
Low point	4984	16.2	200.9	200.5	0.3	204.1	200.7	3.4	0.9842	0.9992
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.2	-0.2	----	----
As left span	4935	64.6	801.1	432.6	368.5	805.0	432.6	372.4	0.9952	1.0000
Average Correction Factor									0.9888	0.9960

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	800.9	430.4	371.8	371.6	1.0005	99.9%
Mid GPT point	800.9	610.7	191.5	191.0	1.0026	99.7%
Low GPT point	800.9	703.4	98.8	97.7	1.0112	98.9%
Average Correction Factor					1.0048	99.5%

Notes: No Maintenance or adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

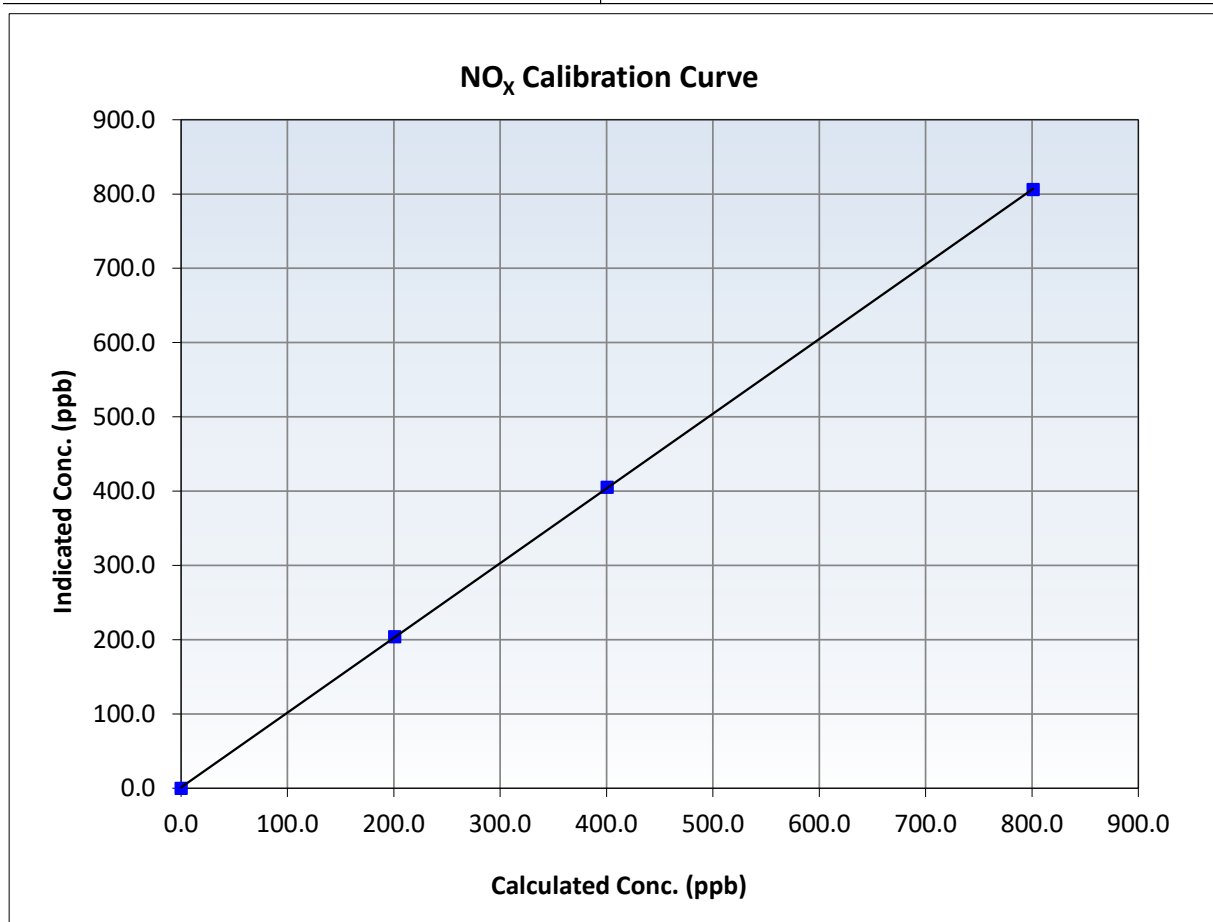
NO_x Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 16, 2026
Station Name:	Mackay River	Station Number:	AMS 20
Start Time (MST):	7:40	End Time (MST):	11:53
Analyzer make:	Thermo 42i		1505164379

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
801.1	806.3	0.9936	Slope	1.005949	0.90 - 1.10
400.5	405.1	0.9886	Intercept	1.171032	+/-20
200.9	204.1	0.9842			





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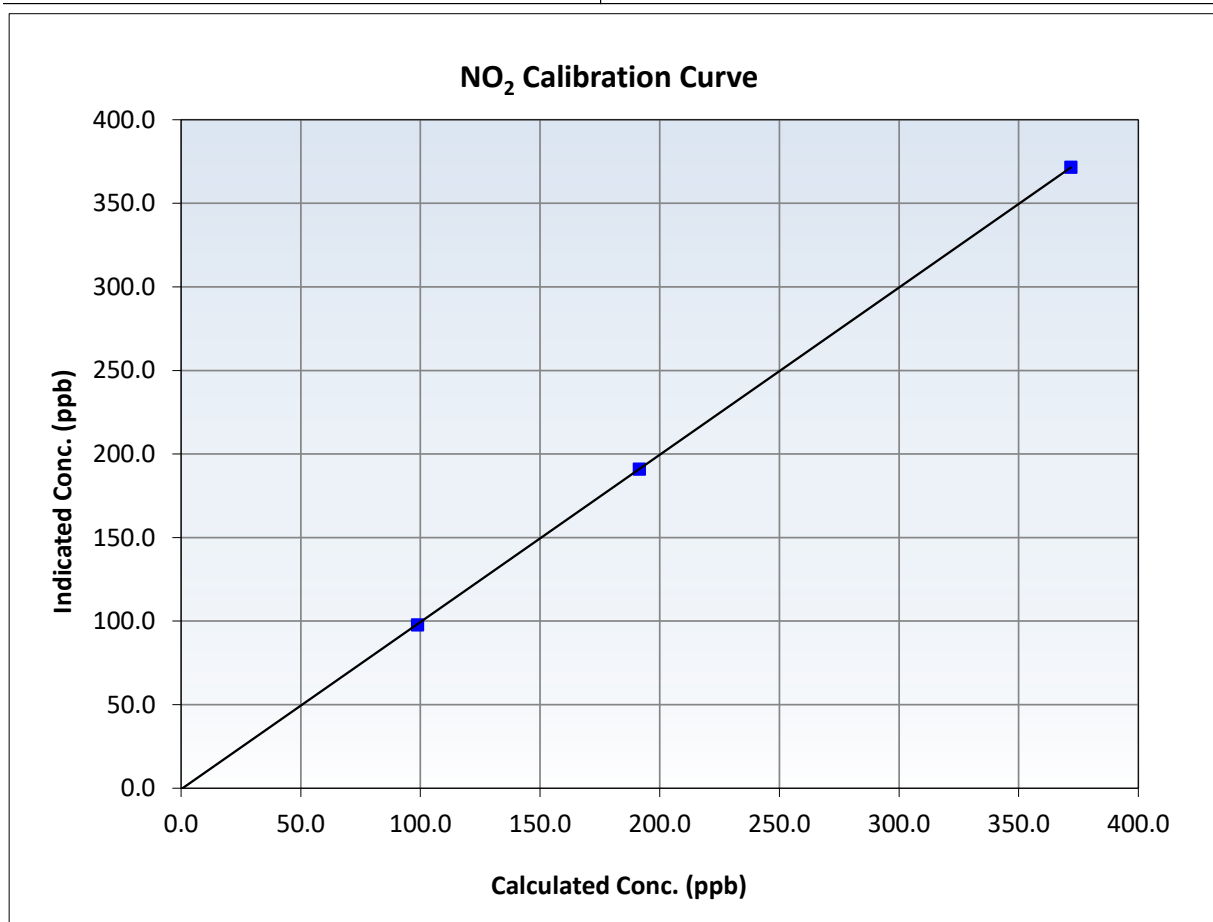
NO₂ Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 16, 2026
Station Name:	Mackay River	Station Number:	AMS 20
Start Time (MST):	7:40	End Time (MST):	11:53
Analyzer make:	Thermo 42i		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	0.999993	≥ 0.995
371.8	371.6	1.0005	Slope	1.000714	0.90 - 1.10
191.5	191.0	1.0026	Intercept	-0.612187	+/-20
98.8	97.7	1.0112			





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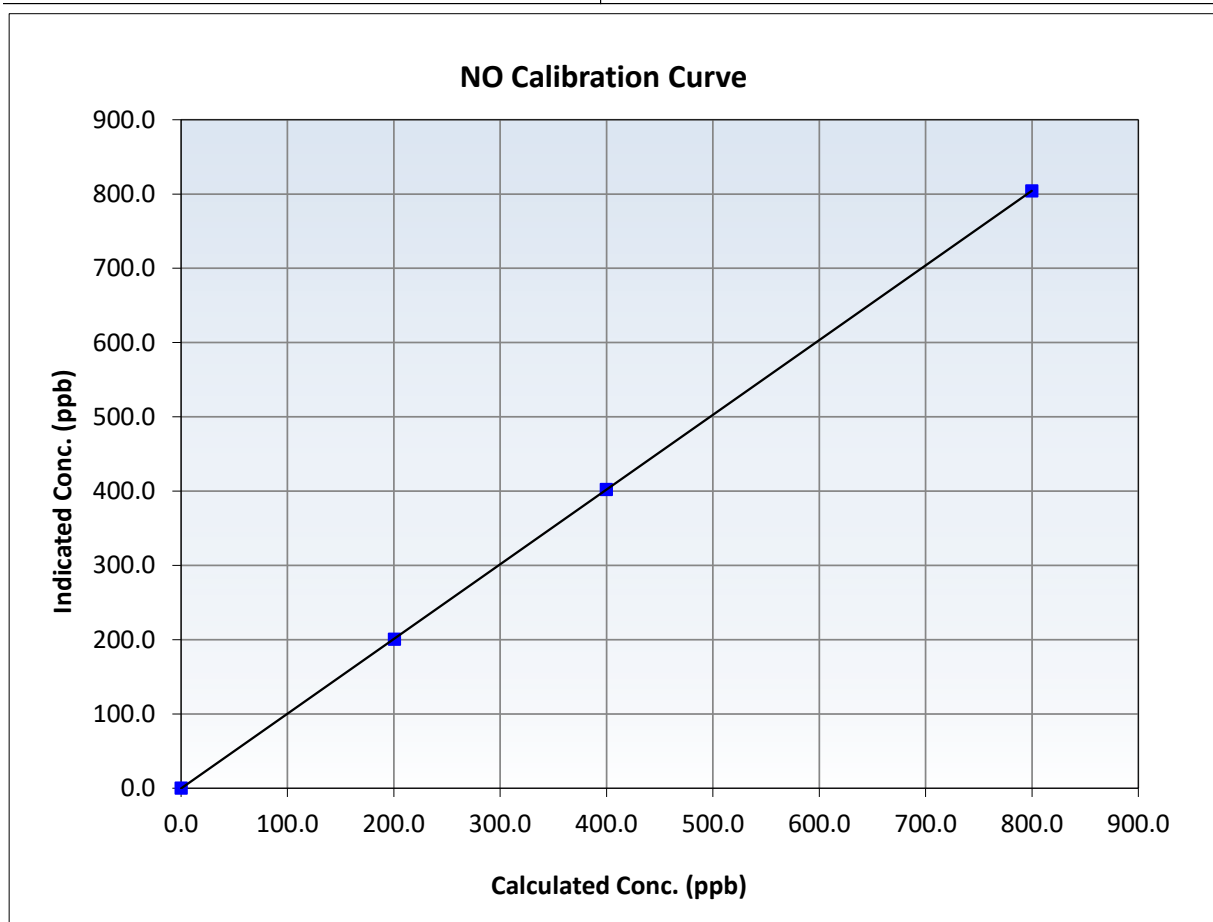
NO Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 16, 2026
Station Name:	Mackay River	Station Number:	AMS 20
Start Time (MST):	7:40	End Time (MST):	11:53
Analyzer make:	Thermo 42i	6:50:00 AM	1505164379

Calibration Data

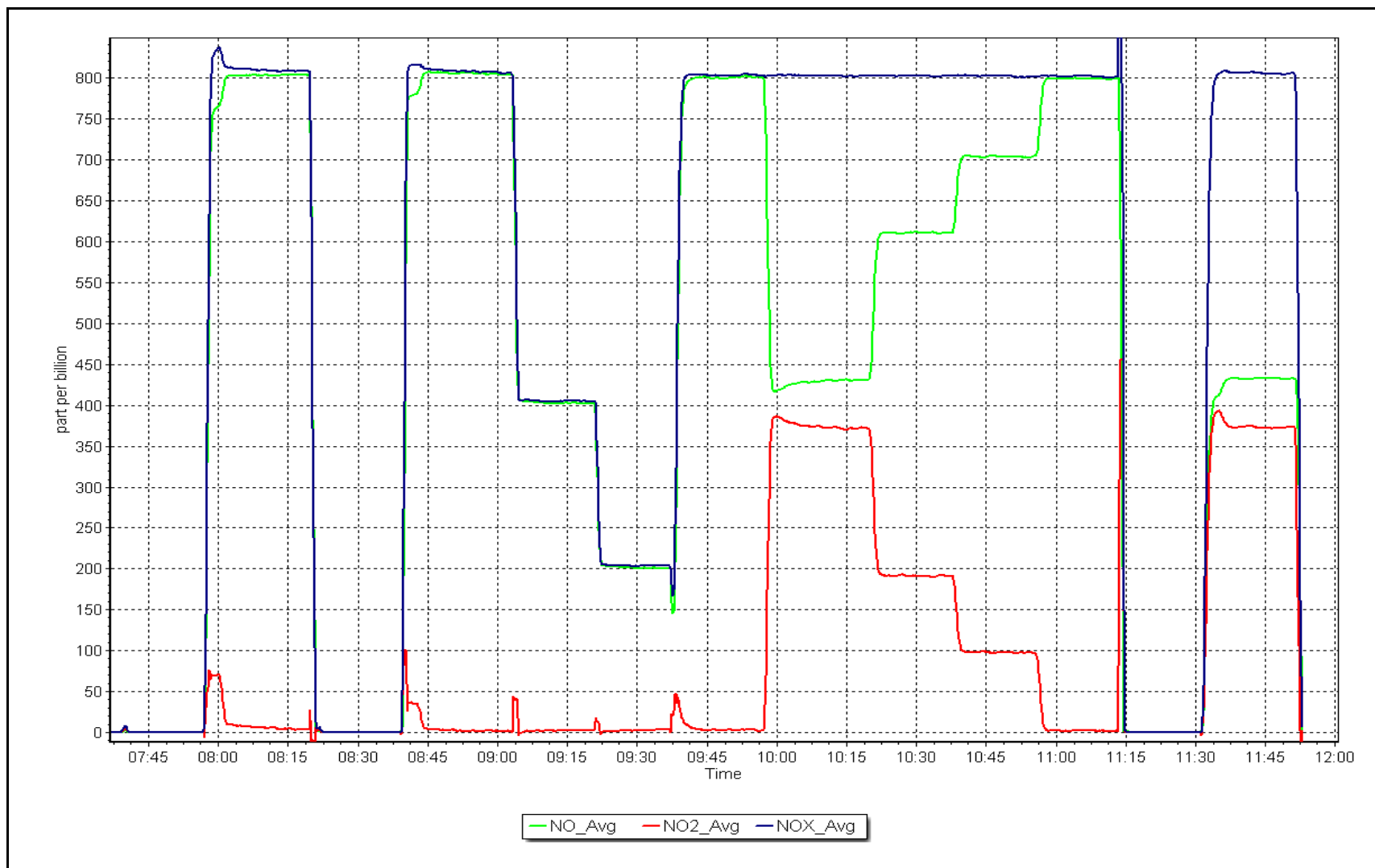
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999998	≥ 0.995
799.8	804.4	0.9943	Slope	1.005957	0.90 - 1.10
399.9	402.1	0.9944	Intercept	-0.287689	+/-20
200.5	200.7	0.9992			



NO_x Calibration Plot

Date: July 14, 2026

Location: MacKay River





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS21
CONKLIN
JULY 2026**

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Conklin
Calibration Date: July 2, 2026
Start time (MST): 10:35
Reason: Routine

Station number: AMS 21
Last Cal Date: June 9, 2026
End time (MST): 14:30

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:	0.997563	0.996733	Backgd or Offset:	31.5	31.0
Calibration intercept:	2.577427	2.118083	Coeff or Slope:	0.893	0.887

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	803.4	0.996
As found Mid point	4960	39.8	400.7	403.5	0.993
As found Low point	4980	19.9	200.4	206.5	0.970
New cylinder response					
Baseline Corr As found:	803.5	Previous response	801.0	*% change	0.3%
Baseline Corr 2nd AF pt:	403.6	AF Slope:	1.001818	AF Intercept:	2.336633
Baseline Corr 3rd AF pt:	206.6	AF Correlation:	0.999948	* = > +/-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	800.3	799.4	1.001
Mid point	4960	39.8	400.7	400.8	1.000
Low point	4980	19.9	200.4	205.0	0.977
As left zero	5000	0.0	0.0	0.0	----
As left span	4921	79.5	800.3	799.3	1.001
Average Correction Factor:					0.993

Notes: MPAF completed because NMHC needed it. Span adjusted.

Calibration Performed By: Devin Russell



Wood Buffalo Environmental Association

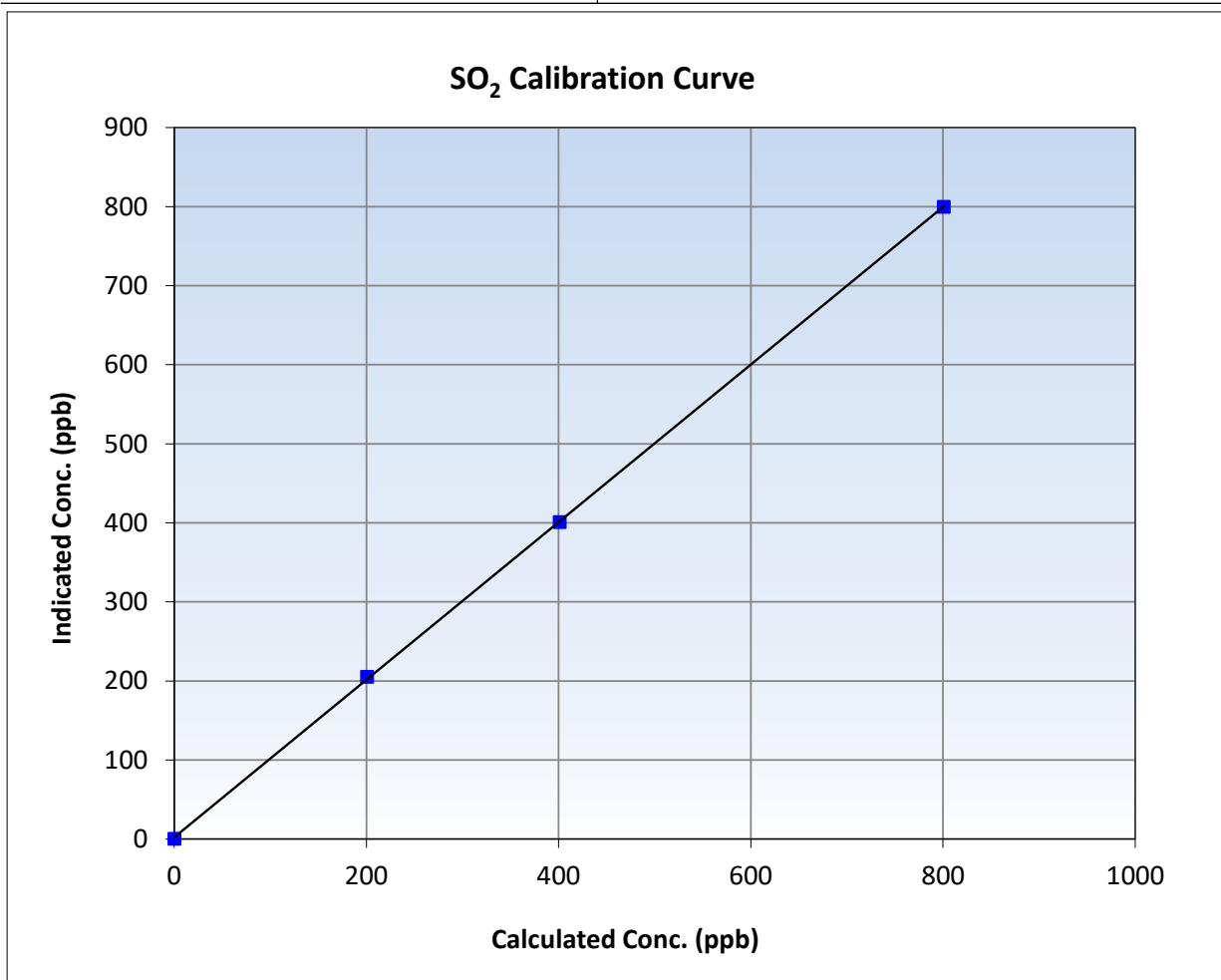
SO₂ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 9, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:35	End Time (MST):	14:30
Analyzer make:	Thermo 43i	Analyzer serial #:	1428701363

Calibration Data

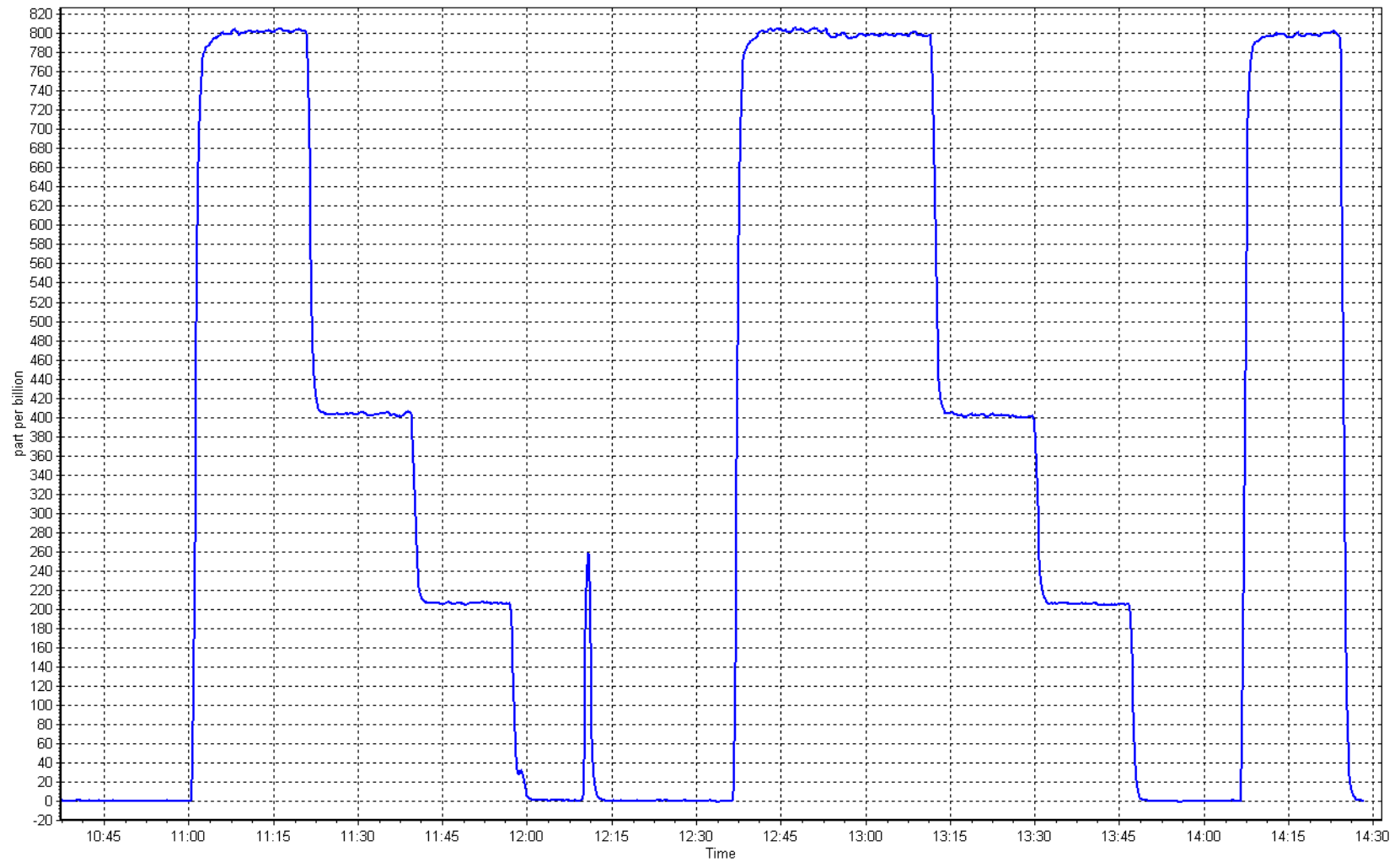
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999957	≥0.995
800.3	799.4	1.0012	Slope	0.996733	0.90 - 1.10
400.7	400.8	0.9998	Intercept	2.118083	+/-30
200.4	205.0	0.9774			



SO2 Calibration Plot

Date: July 2, 2026

Location: Conklin





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Conklin
Calibration Date: July 29, 2026
Start time (MST): 10:25
Reason: Routine

Station number: AMS 21
Last Cal Date: June 25, 2026
End time (MST): 15:31

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:	1.011577	1.005865	Backgd or Offset:	3.08	3.08
Calibration intercept:	0.081128	0.180997	Coeff or Slope:	1.408	1.408

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	-0.2	----
As found High point	4921	79.1	80.0	80.3	0.994
As found Mid point	4961	39.5	40.0	40.7	0.977
As found Low point	4980	19.7	19.9	20.6	0.959
New cylinder response					
Baseline Corr As found:	80.5	Prev response:	81.06	*% change:	-0.7%
Baseline Corr 2nd AF pt:	40.9	AF Slope:	1.003433	AF Intercept:	0.241071
Baseline Corr 3rd AF pt:	20.8	AF Correlation:	0.999855	* = > +/-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	4921	79.1	80.0	80.6	0.993
Mid point	4961	39.5	40.0	40.4	0.989
Low point	4980	19.7	19.9	20.6	0.968
As left zero	5000	0.0	0.0	-0.1	----
As left span	4921	79.1	80.0	81.7	0.980
SO2 Scrubber Check	4921	79.5	794.9	0.0	----
Date of last scrubber change:	August 6, 2025		Ave Corr Factor		0.983
Date of last converter efficiency test:	October 7, 2025				

Notes: Sox scrubber checked after calibrator zero. No adjustments done.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

TRS Calibration Summary

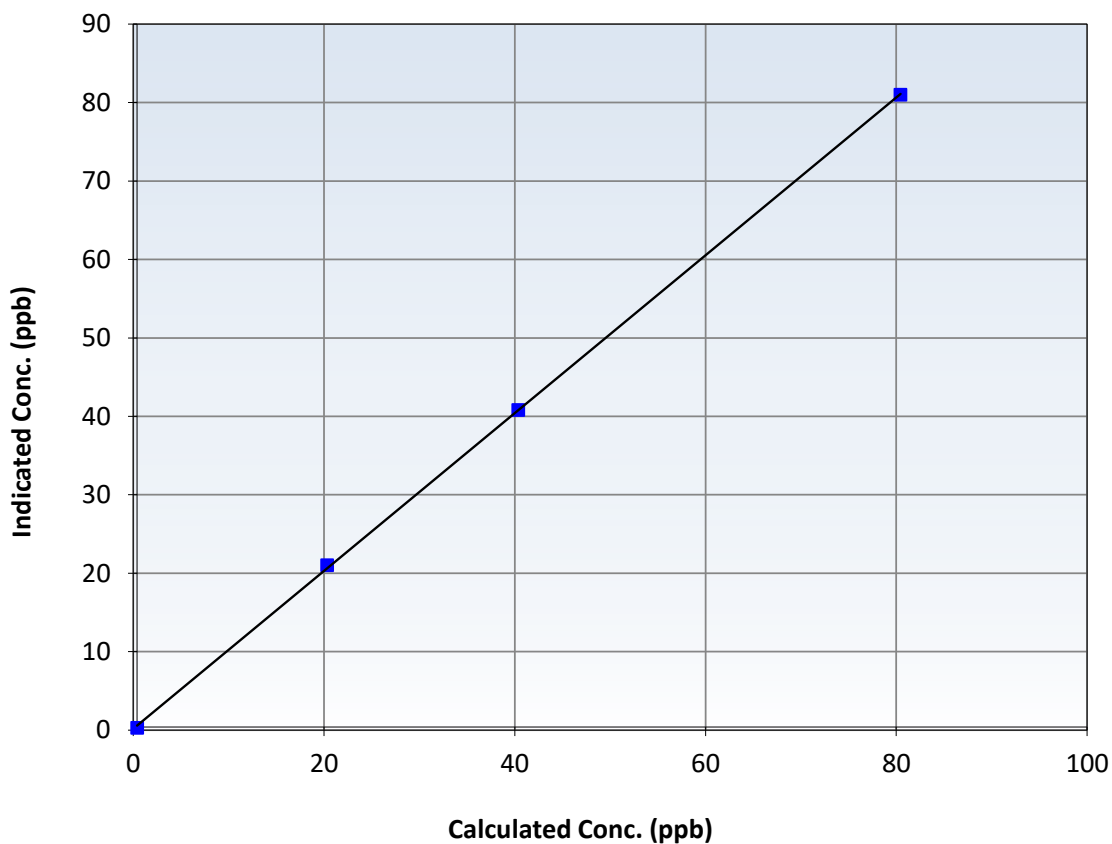
Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	June 25, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:25	End Time (MST):	15:31
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	-0.1	----	Correlation Coefficient	0.999938	≥ 0.995
80.0	80.6	0.9931	Slope	1.005865	$0.90 - 1.10$
40.0	40.4	0.9894	Intercept	0.180997	± 3
19.9	20.6	0.9678			

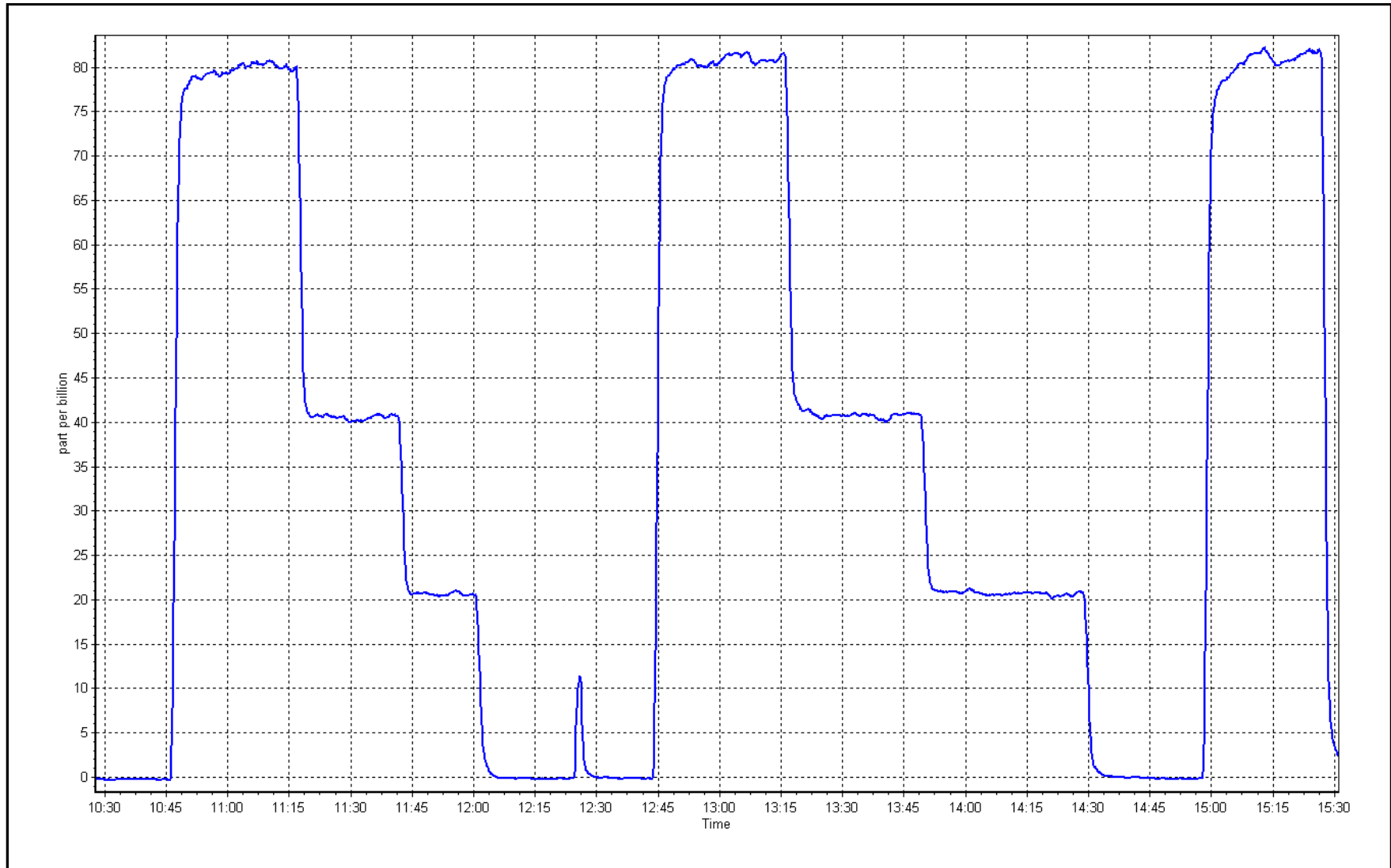
TRS Calibration Curve



TRS Calibration Plot

Date: July 29, 2026

Location: Conklin





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Conklin
Calibration Date: July 2, 2026
Start time (MST): 10:35
Reason: Routine

Station number: AMS 21
Last Cal Date: June 9, 2026
End time (MST): 14:30

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:	2.62E-04	2.60E-04	NMHC SP Ratio:	5.50E-05
CH ₄ Retention time:	13.0	12.8	NMHC Peak Area:	162961
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	79.5	16.97	17.10	0.993
As found Mid point	4960	39.8	8.50	8.59	0.989
As found Low point	4980	19.9	4.25	4.40	0.966
New cylinder response					
Baseline Corr AF:	17.10	Prev response	17.02	*% change	0.4%
Baseline Corr 2nd AF:	8.59	AF Slope:	1.005145	AF Intercept:	0.054445
Baseline Corr 3rd AF:	4.40	AF Correlation:	0.999944	* = > +/-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	17.03	0.997
Mid point	4960	39.8	8.50	8.55	0.994
Low point	4980	19.9	4.25	4.37	0.971
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	16.97	17.01	0.998
Average Correction Factor					0.987

Notes:

H2 and N2 cylinders replaced 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))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.5	8.96	9.04	0.991
As found Mid point	4960	39.8	4.49	4.54	0.989
As found Low point	4980	19.9	2.24	2.33	0.964
New cylinder response					
Baseline Corr AF:	9.04	Prev response	9.00	*% change	0.4%
Baseline Corr 2nd AF:	4.54	AF Slope:	1.006456	AF Intercept:	0.027888
Baseline Corr 3rd AF:	2.33	AF Correlation:	0.999943	* = > +/-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	79.5	8.96	9.03	0.993
Mid point	4960	39.8	4.49	4.52	0.992
Low point	4980	19.9	2.24	2.30	0.974
As left zero	5000	0.0	0.00	0.00	0.994
As left span	4921	79.5	8.96	9.02	0.986
Average Correction Factor					0.986

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	8.05	0.995
As found Mid point	4960	39.8	4.01	4.06	0.989
As found Low point	4980	19.9	2.01	2.07	0.967
New cylinder response					
Baseline Corr AF:	8.05	Prev response	8.02	*% change	0.4%
Baseline Corr 2nd AF:	4.06	AF Slope:	1.003264	AF Intercept:	0.027758
Baseline Corr 3rd AF:	2.07	AF Correlation:	0.999941	* = > +/-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	79.5	8.01	8.00	1.001
Mid point	4960	39.8	4.01	4.03	0.995
Low point	4980	19.9	2.01	2.07	0.968
As left zero	5000	0.0	0.00	0.00	1.002
As left span	4921	79.5	8.01	7.99	0.988
Average Correction Factor					0.988

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.999866	1.001037
THC Cal Offset:	0.053667	0.050467
CH ₄ Cal Slope:	0.997171	0.995959
CH ₄ Cal Offset:	0.030370	0.032373
NMHC Cal Slope:	1.001802	1.005307
NMHC Cal Offset:	0.023898	0.018894

Calibration Performed By: Devin Russell



Wood Buffalo Environmental Association

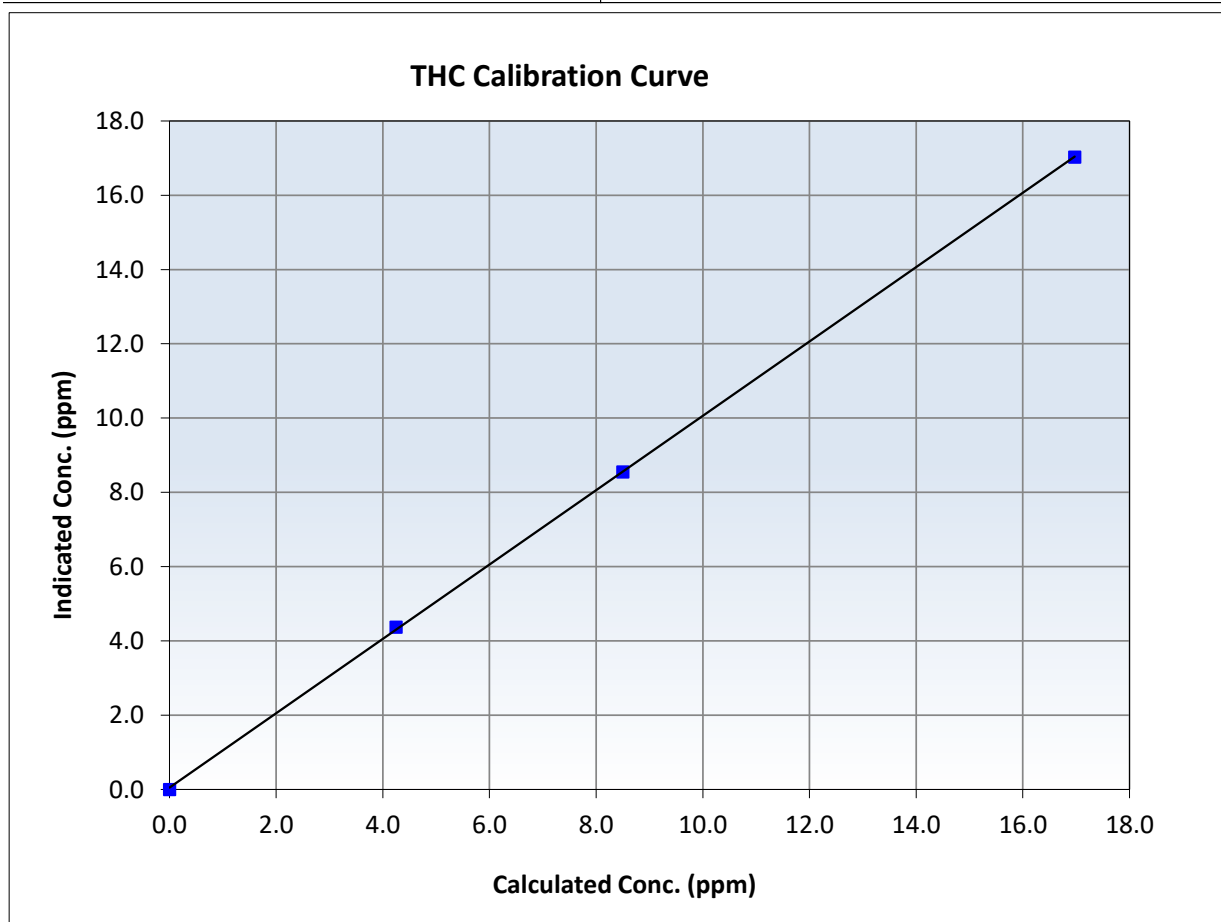
THC Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 9, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:35	End Time (MST):	14:30
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	0.999951	<i>≥0.995</i>
16.97	17.03	0.9969	Slope	1.001037	<i>0.90 - 1.10</i>
8.50	8.55	0.9936	Intercept	0.050467	<i>+/-0.5</i>
4.25	4.37	0.9714			





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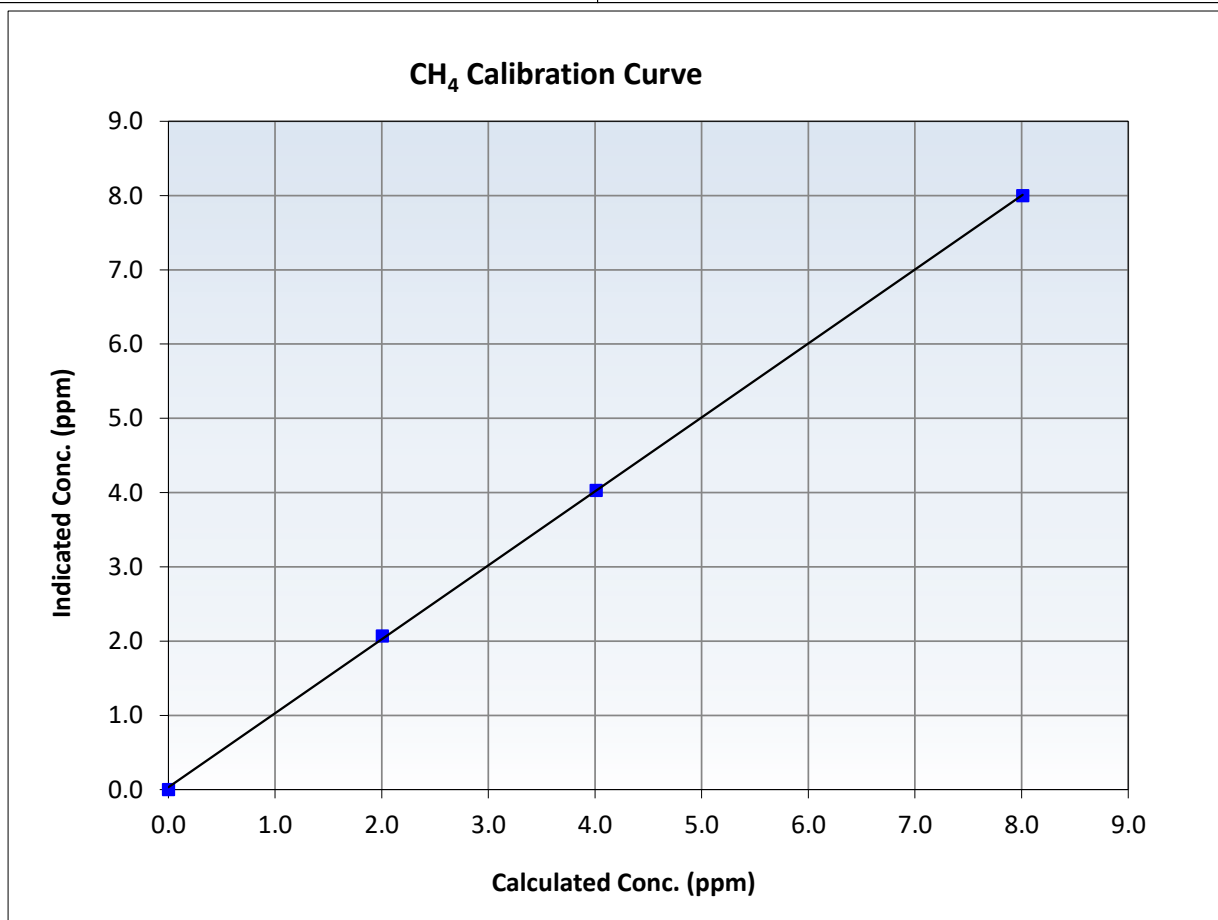
CH₄ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 9, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:35	End Time (MST):	14:30
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	0.999916	≥ 0.995
8.01	8.00	1.0015	Slope	0.995959	$0.90 - 1.10$
4.01	4.03	0.9954	Intercept	0.032373	± 0.5
2.01	2.07	0.9682			





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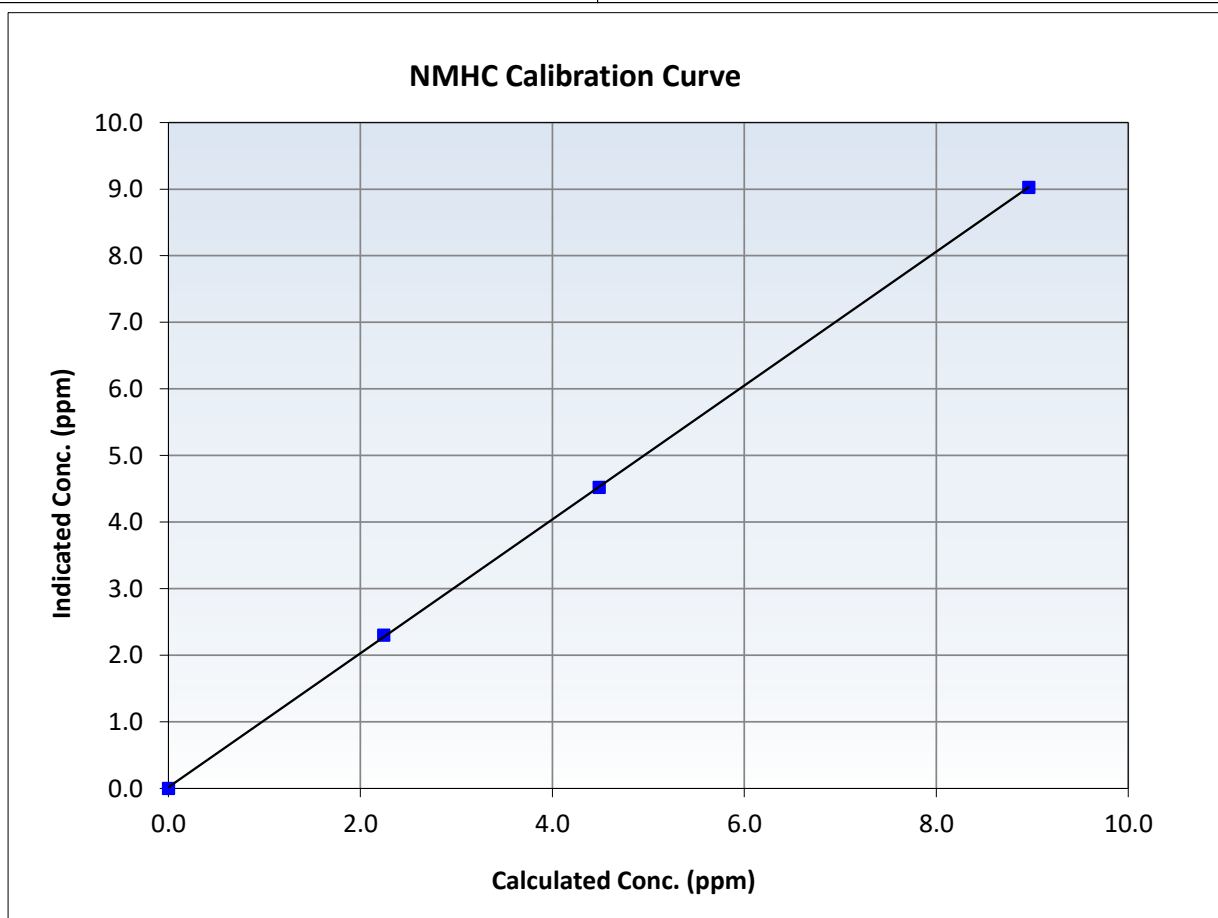
NMHC Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 9, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:35	End Time (MST):	14:30
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430011

Calibration Data

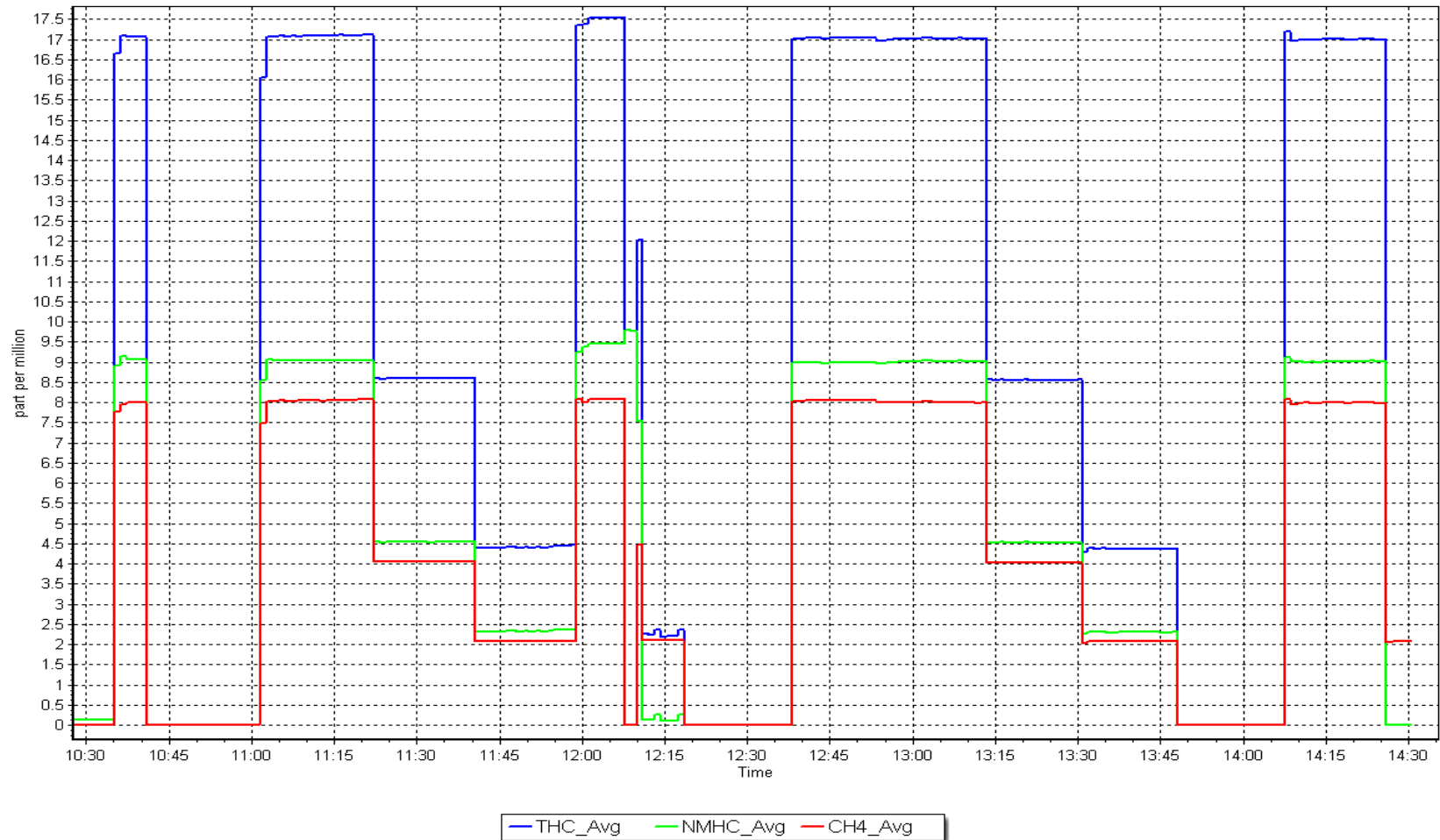
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999971	<i>≥0.995</i>
8.96	9.03	0.9931	Slope	1.005307	<i>0.90 - 1.10</i>
4.49	4.52	0.9920	Intercept	0.018894	<i>+/-0.5</i>
2.24	2.30	0.9739			



NMHC Calibration Plot

Date: July 2, 2026

Location: Conklin





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Conklin
Station number: AMS 21
Calibration Date: July 15, 2026
Last Cal Date: June 19, 2026
Start time (MST): 10:41
End time (MST): 15:58
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	0.2	0.3	0.0	----	----
AF High point	4918	82.0	802.0	800.3	1.6	803.0	798.8	3.9	0.9990	1.0023
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 802.3 ppb	NO = 800.8 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = 0.1%
Baseline Corr 1st pt	NO _x = 802.8 ppb	NO = 798.5 ppb	<u>As Found Statistics</u>		*Percent Change	NO = -0.3%
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: 1218153356

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.617	0.616	NO bkgnd or offset:	2.9	2.9
NOX coeff or slope:	0.995	0.994	NOX bkgnd or offset:	3.0	3.0
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	164.1	164.1

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.996193	0.996151
NO _x Cal Offset:	3.408060	3.448065
NO Cal Slope:	0.998278	0.999620
NO Cal Offset:	1.868035	1.948043
NO ₂ Cal Slope:	1.001258	0.995798
NO ₂ Cal Offset:	-0.131685	-0.445542

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	0.3	0.4	-0.1	----	----
High point	4918	82.0	802.0	800.3	1.6	801.1	801.5	-0.4	1.0011	0.9985
Mid point	4959	41.0	401.0	400.2	0.8	403.4	401.8	1.6	0.9940	0.9959
Low point	4980	20.5	200.5	200.1	0.4	207.0	204.1	3.0	0.9685	0.9802
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	391.7	410.3	801.1	391.7	409.4	1.0011	1.0000
Average Correction Factor									0.9878	0.9916

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	799.5	391.3	409.8	407.8	1.0050	99.5%
Mid GPT point	799.5	593.6	207.5	206.2	1.0065	99.4%
Low GPT point	799.5	695.5	105.6	104.3	1.0128	98.7%
Average Correction Factor					1.0081	99.2%

Notes:

Span adjusted.

Calibration Performed By:

Aswin Sasi Kumar



Wood Buffalo Environmental Association

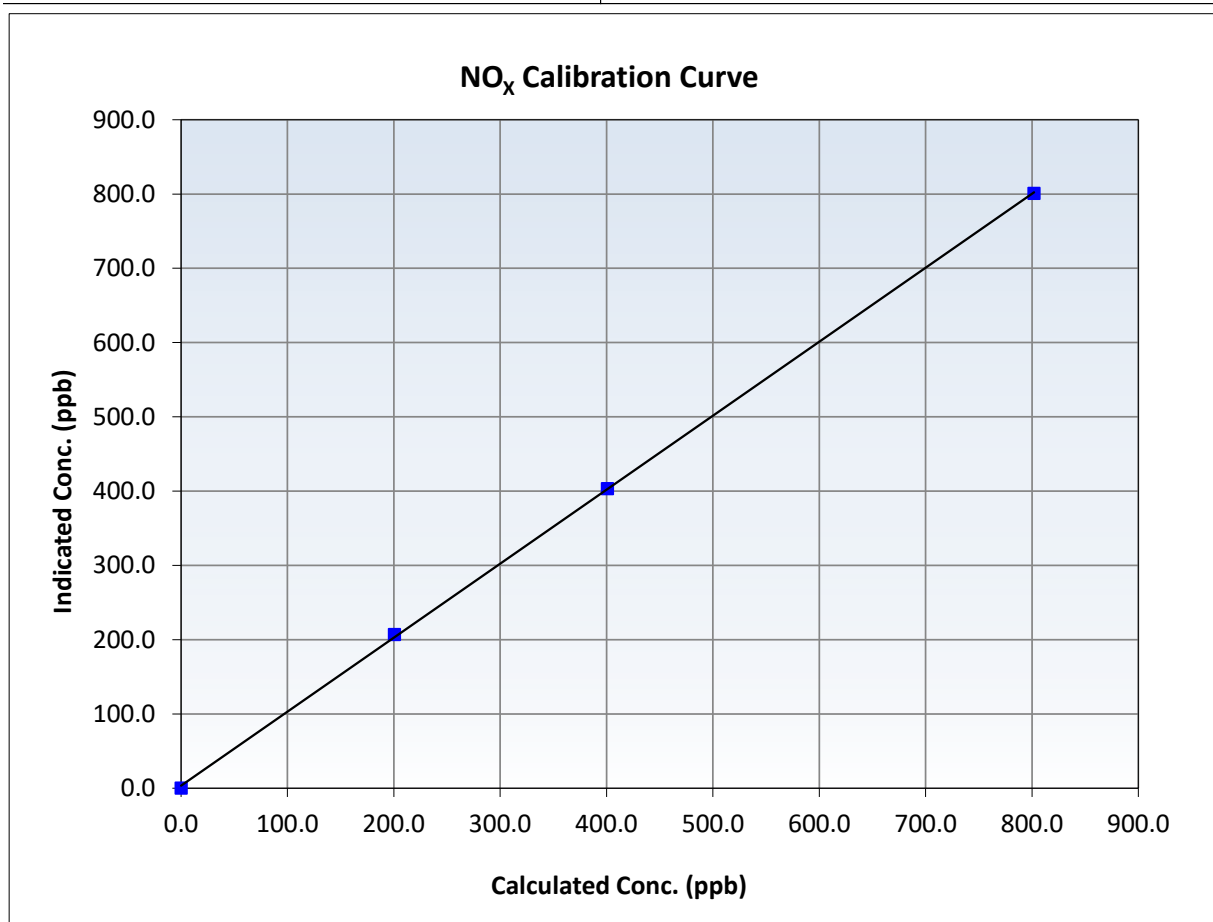
NO_x Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 19, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:41	End Time (MST):	15:58
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	0.999924	≥0.995
802.0	801.1	1.0011	Slope	0.996151	0.90 - 1.10
401.0	403.4	0.9940	Intercept	3.448065	+/-20
200.5	207.0	0.9685			





Wood Buffalo Environmental Association

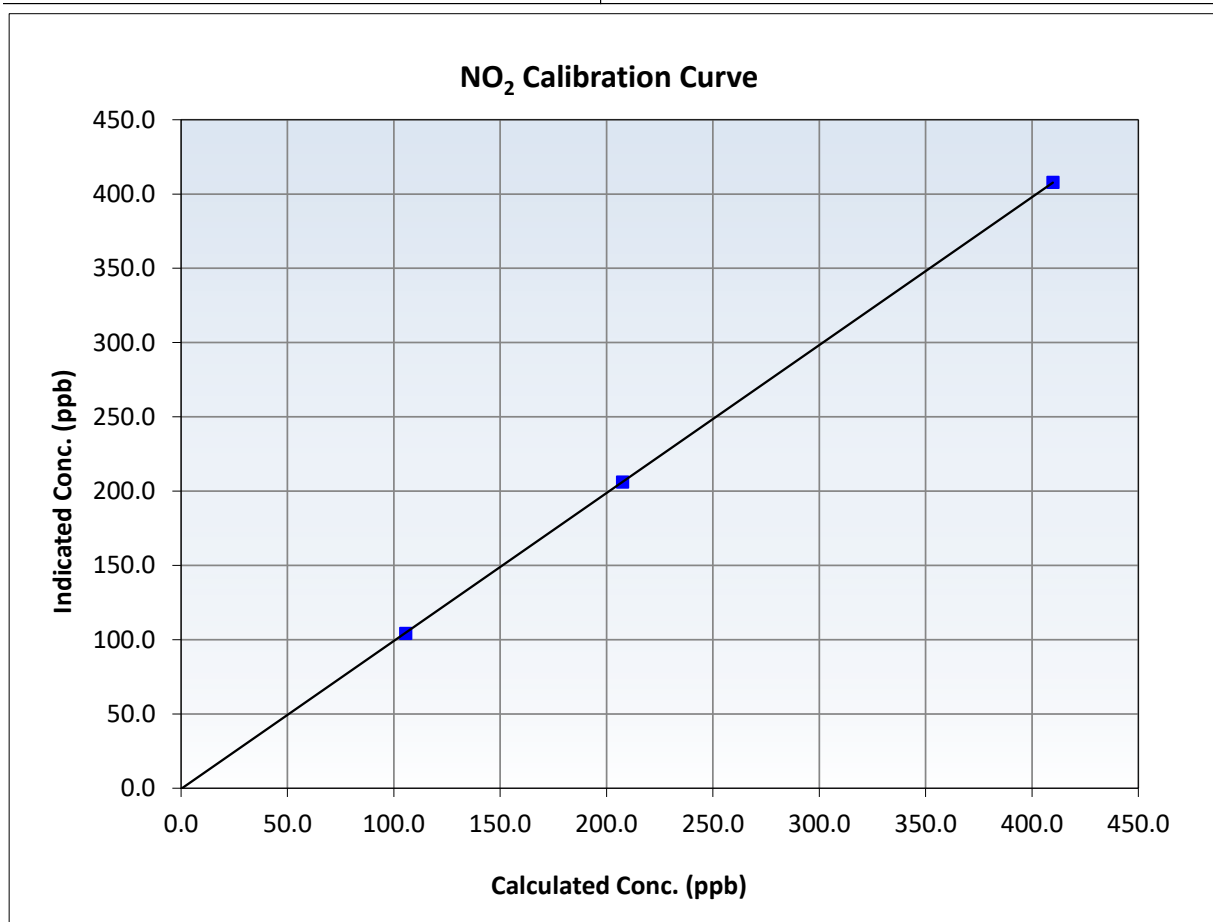
NO₂ Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 19, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:41	End Time (MST):	15:58
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	0.999996	≥0.995
409.8	407.8	1.0050	Slope	0.995798	0.90 - 1.10
207.5	206.2	1.0065	Intercept	-0.445542	+/-20
105.6	104.3	1.0128			





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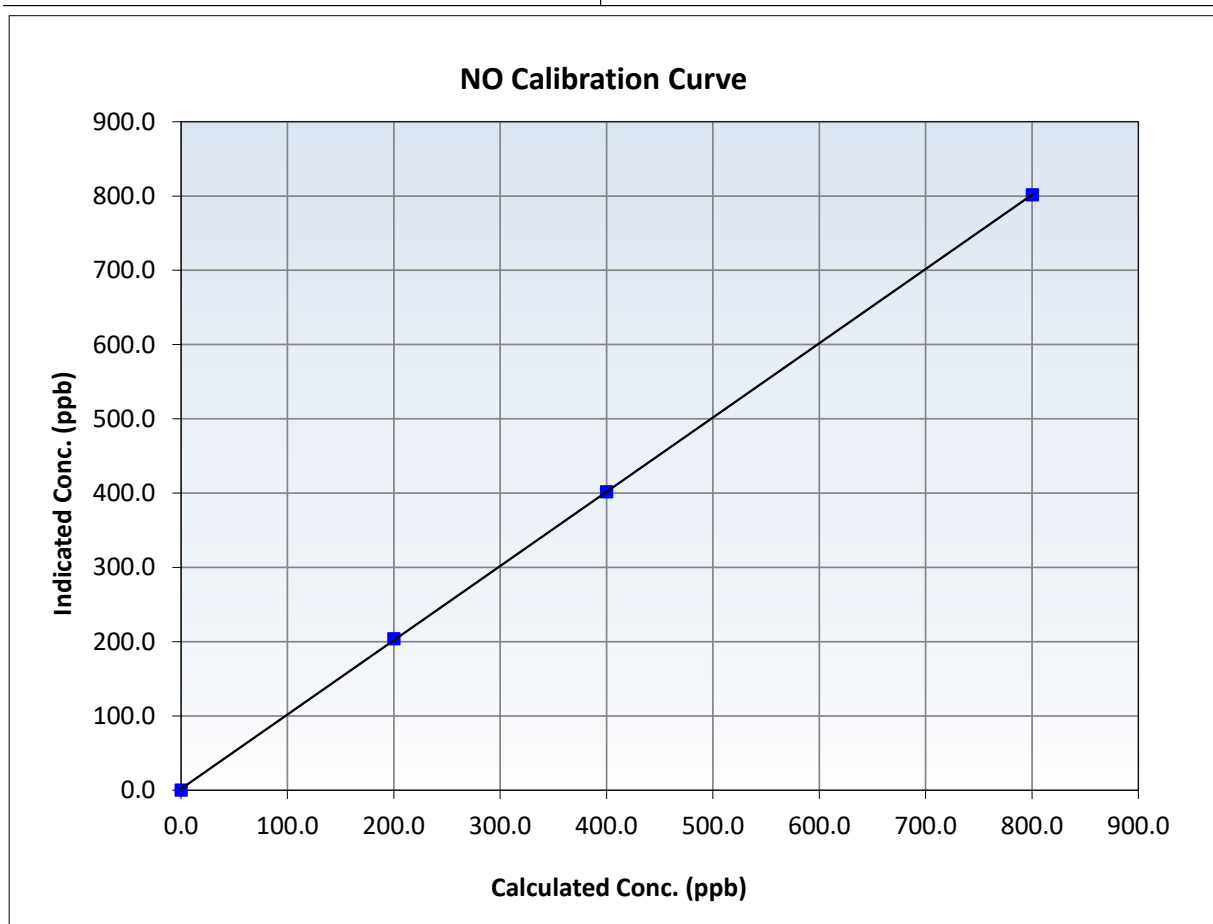
NO Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 19, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:41	End Time (MST):	15:58
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153356

Calibration Data

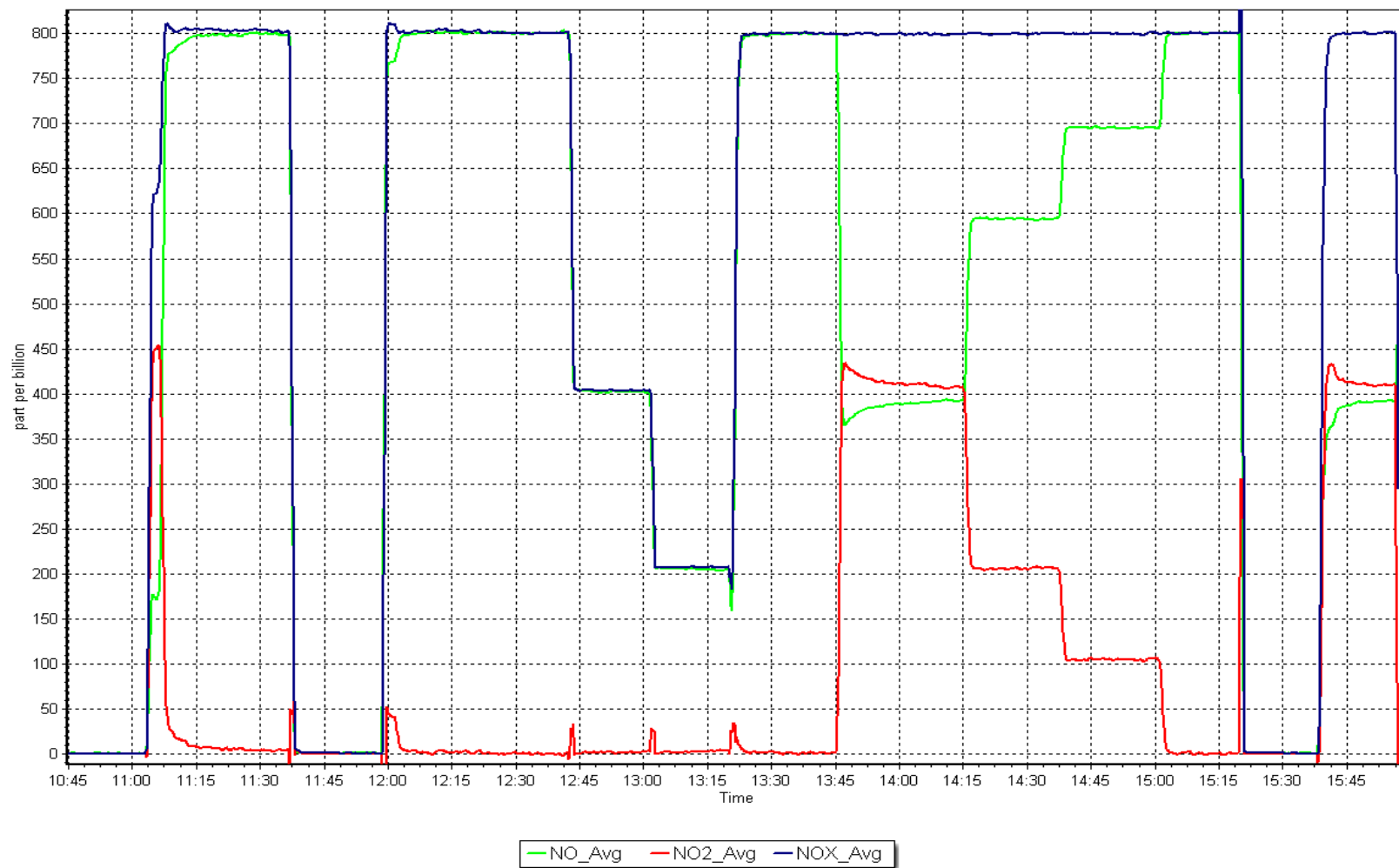
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999979	≥ 0.995
800.3	801.5	0.9985	Slope	0.999620	$0.90 - 1.10$
400.2	401.8	0.9959	Intercept	1.948043	± 20
200.1	204.1	0.9802			



NO_x Calibration Plot

Date: July 15, 2026

Location: Conklin





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Conklin
Calibration Date: July 20, 2026
Start time (MST): 11:14
Reason: Routine

Station number: AMS 21
Last Cal Date: June 4, 2026
End time (MST): 14:34

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:	1.000514	1.001514	Backgd or Offset:	0.2	0.2
Calibration intercept:	0.860000	0.160000	Coeff or Slope:	1.230	1.213

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	-0.5	----
As found High point	5000	1036.7	400.0	402.9	0.992
As found Mid point					
As found Low point					
Baseline Corr As found:	403.4	Previous response	401.1	*% 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	

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	-0.3	----
High point	5000	1037.8	400.0	400.6	0.999
Mid point	5000	865.1	200.0	200.5	0.998
Low point	5000	748.0	100.0	100.9	0.991
As left zero	5000	800.0	0.0	0.1	----
As left span	5000	1033.9	400.0	405.5	0.986
Average Correction Factor					0.996

Notes:

Span adjusted.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

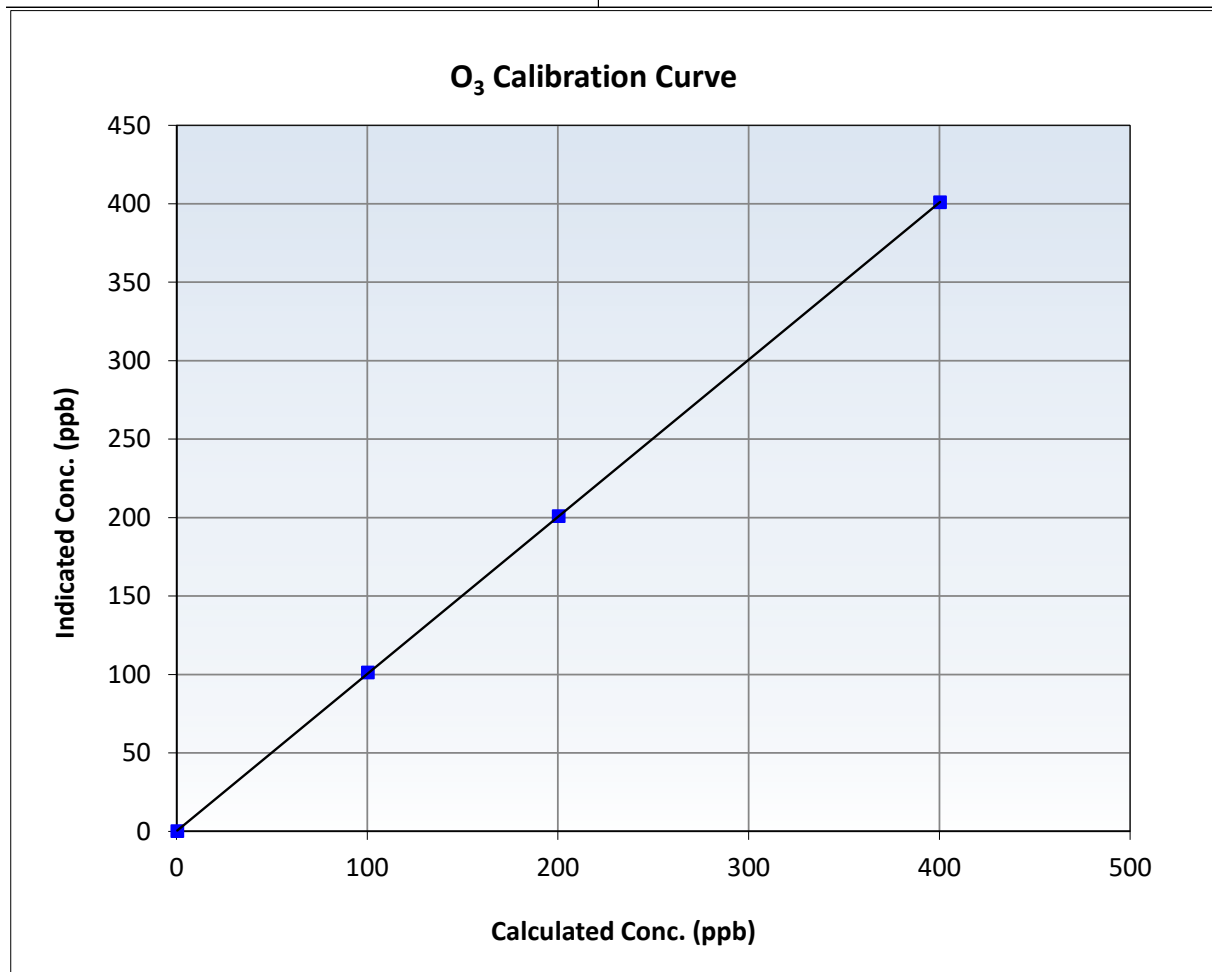
O₃ Calibration Summary

Station Information

Calibration Date:	July 20, 2026	Previous Calibration:	June 4, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	11:14	End Time (MST):	14:34
Analyzer make:	Thermo 49i	Analyzer serial #:	1300156233

Calibration Data

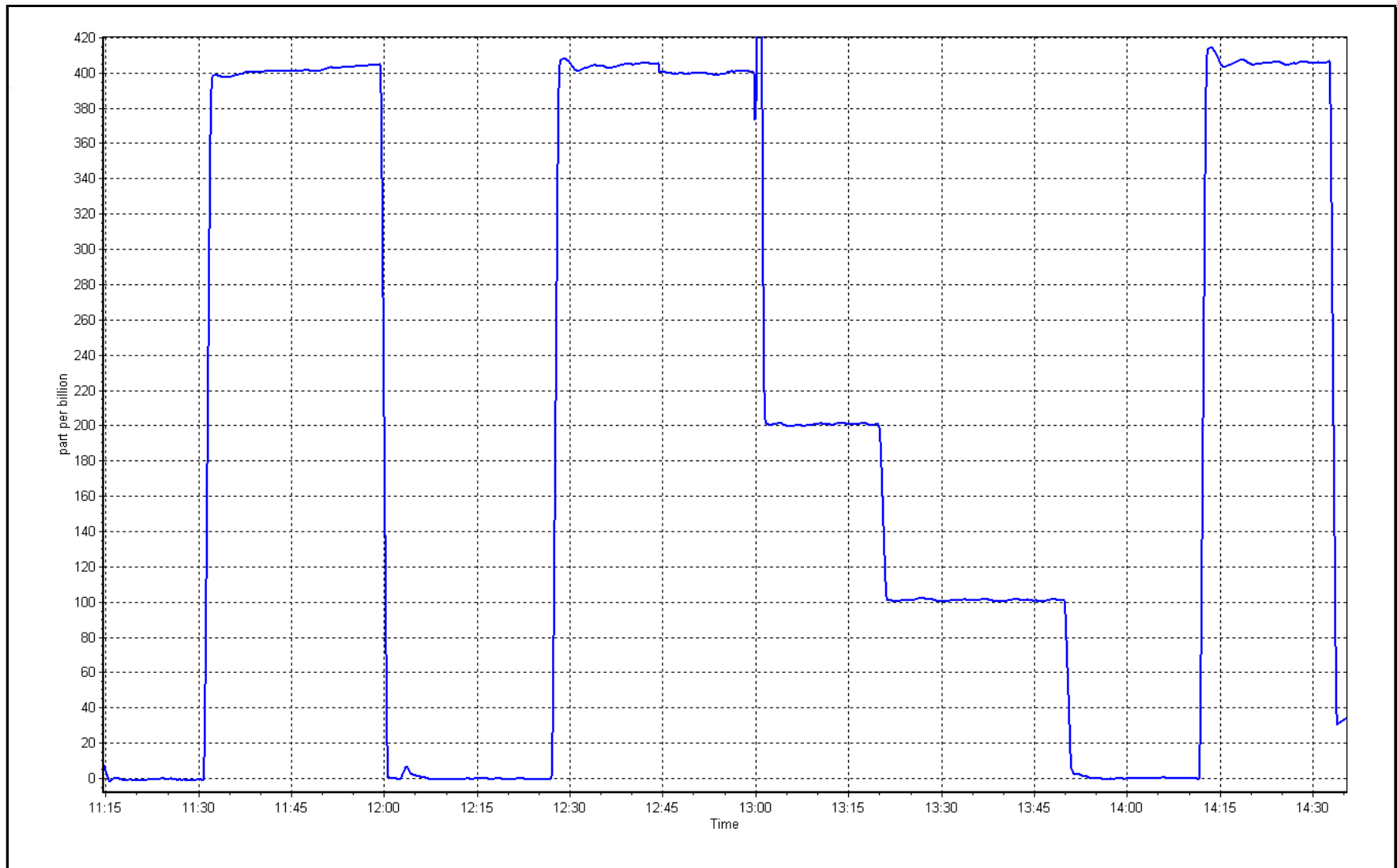
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999993	≥0.995
400.0	400.6	0.9985	Slope	1.001514	0.90 - 1.10
200.0	200.5	0.9975	Intercept	0.160000	+/- 5
100.0	100.9	0.9911			



O₃ Calibration Plot

Date: July 20, 2026

Location: Conklin





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Conklin
Calibration Date: July 29, 2026
Start time (MST): 14:40
Station number: AMS 21
Last Cal Date: June 25, 2026
End time (MST): 15:13
Analyzer Make: API T640
Particulate Fraction: PM_{2.5}
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)	22.40	22.00	22.40	☐	+/- 2 °C
P (mmHg)	704.70	704.50	704.70	☐	+/- 10 mmHg
Flow (LPM)	5.00	4.89	5.00	☐	+/- 0.25 LPM
PW% (pump)	45	----	45	☐	>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: 10.90 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: June 25, 2026

Date Disposable Filter Changed: June 25, 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
JULY 2026**

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Janvier Station number: AMS 22
Calibration Date: July 3, 2026 Last Cal Date: June 23, 2026
Start time (MST): 9:19 End time (MST): 11:59
Reason: Routine

Calibration Standards

Cal Gas Concentration: 49.82 ppm Cal Gas Exp Date: April 9, 2033
Cal Gas Cylinder #: CC494522
Removed Cal Gas Conc: 49.82 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 3806
Zero Air Gen Model: Teledyne API T701H Serial Number: 363

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1152430006
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004263	1.001405	Backgd or Offset:	27.8	27.8
Calibration intercept:	1.114460	0.715334	Coeff or Slope:	1.025	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	-0.1	----
As found High point	4920	80.3	800.1	804.3	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	804.4	Previous response	804.6	*% 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	0.3	----
High point	4920	80.3	800.1	801.6	0.998
Mid point	4960	40.2	400.5	402.3	0.996
Low point	4980	20.1	200.3	201.5	0.994
As left zero					
As left span					

Average Correction Factor: 0.996

Notes: Changed the inlet filter after as founds. Adjusted span only. Lost power during as lefts.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

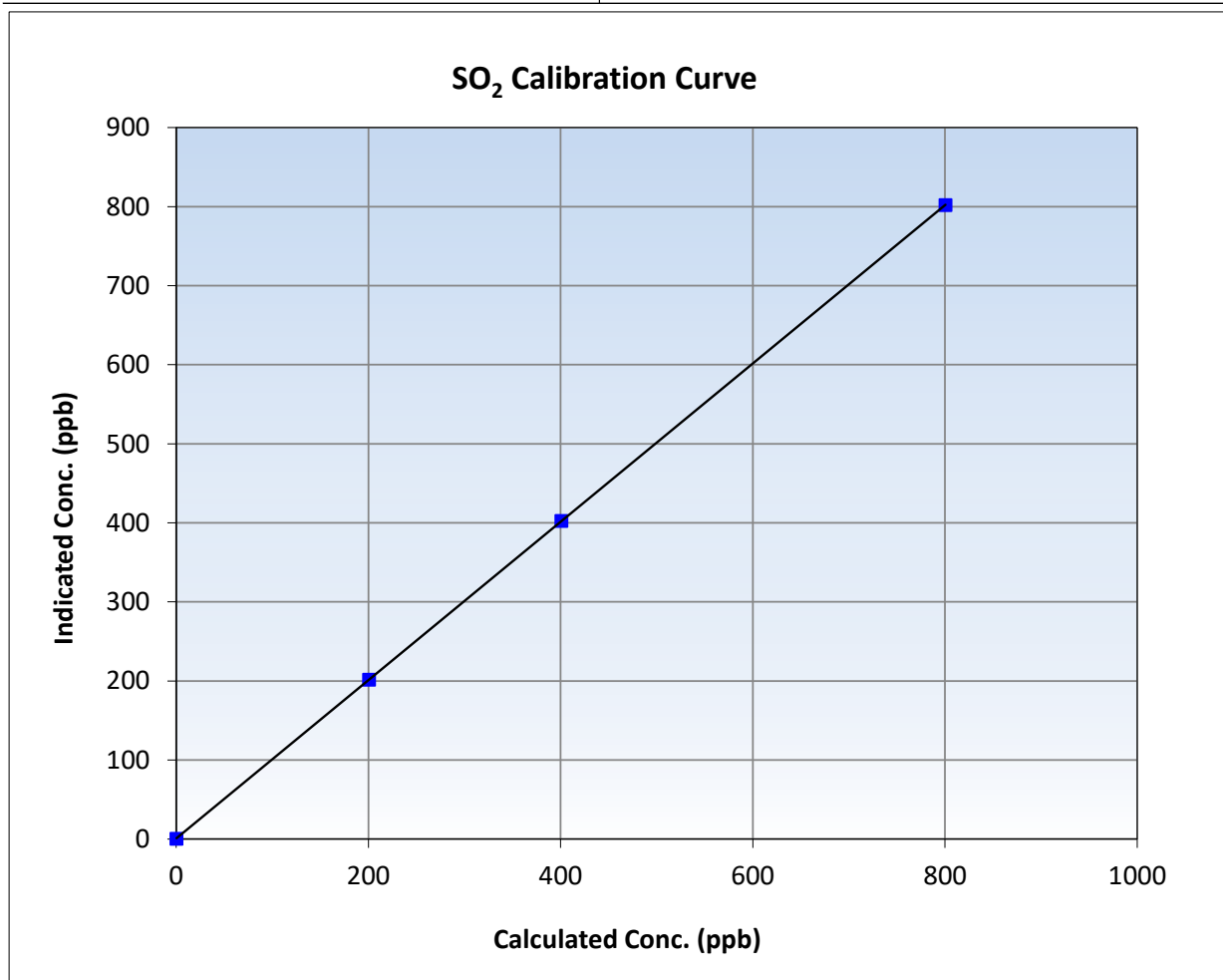
SO₂ Calibration Summary

Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 23, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:19	End Time (MST):	11:59
Analyzer make:	Thermo 43i	Analyzer serial #:	1152430006

Calibration Data

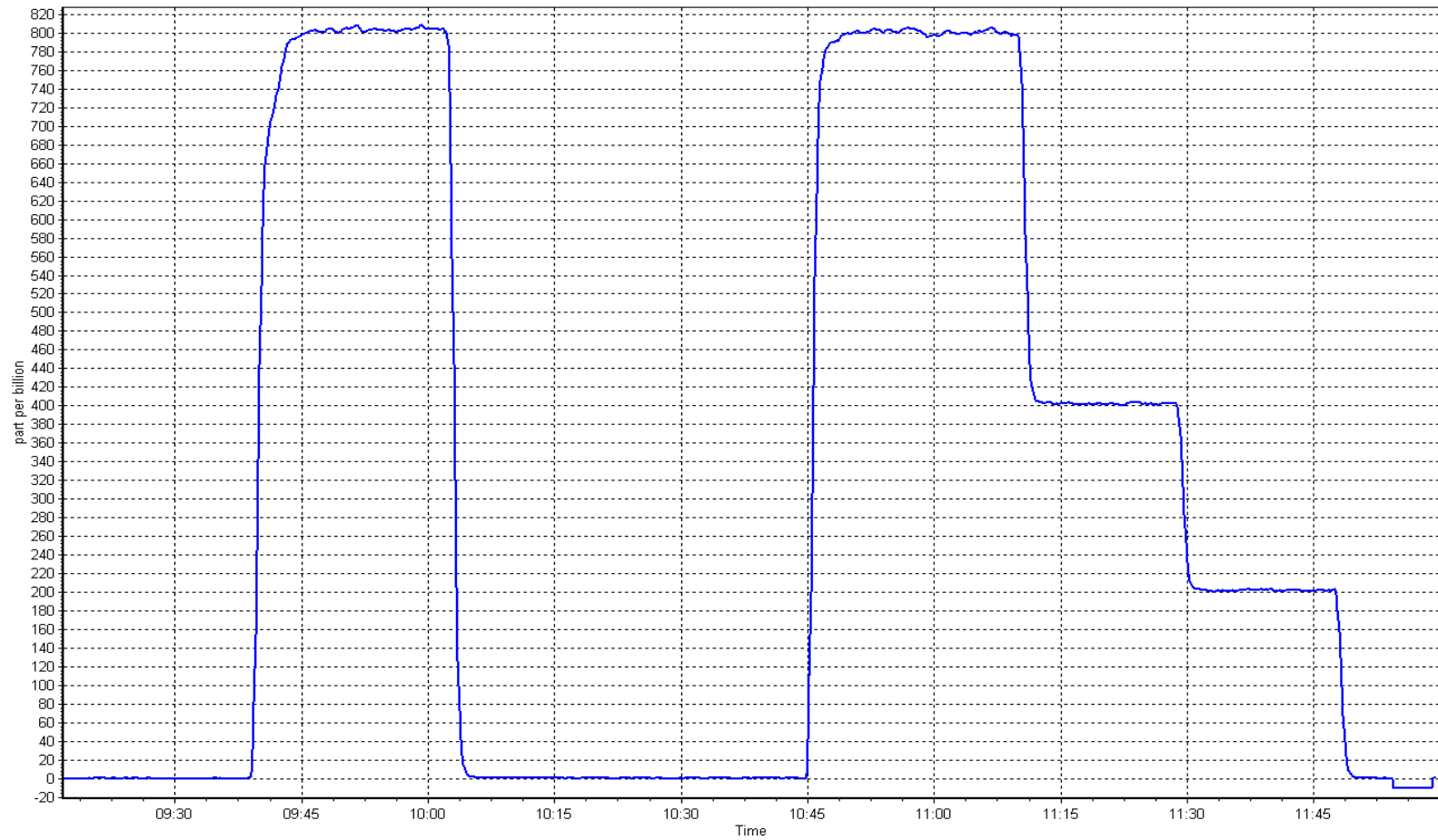
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.3	----	Correlation Coefficient	0.999998	≥0.995
800.1	801.6	0.9981	Slope	1.001405	0.90 - 1.10
400.5	402.3	0.9956	Intercept	0.715334	+/-30
200.3	201.5	0.9939			



SO2 Calibration Plot

Date: July 3, 2026

Location: Janvier





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Janvier Station number: AMS 22
Calibration Date: July 28, 2026 Last Cal Date: June 25, 2026
Start time (MST): 8:53 End time (MST): 12:30
Reason: Maintenance

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:	1.016092	1.011797	Backgd or Offset:	3.95	3.95
Calibration intercept:	-0.179176	0.121099	Coeff or Slope:	1.235	1.235

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	-0.4	----
As found High point	4920	79.7	80.0	78.3	1.017
As found Mid point	4960	39.8	40.0	38.8	1.019
As found Low point	4980	19.9	20.0	19.3	1.014
New cylinder response					
Baseline Corr As found:	78.7	Prev response:	81.13	*% change:	-3.1%
Baseline Corr 2nd AF pt:	39.2	AF Slope:	0.983102	AF Intercept:	-0.399816
Baseline Corr 3rd AF pt:	19.7	AF Correlation:	0.999997	* = > +/-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	-0.3	----
High point	4920	79.7	80.0	80.8	0.990
Mid point	4960	39.8	40.0	41.0	0.975
Low point	4980	19.9	20.0	20.6	0.970
As left zero	5000	0.0	0.0	-0.1	----
As left span	4920	79.7	80.0	83.1	0.963
SO2 Scrubber Check	4920	79.8	798.0	-0.1	----
Date of last scrubber change:	6-May-26		Ave Corr Factor		0.978
Date of last converter efficiency test:					

Notes: Here to address low span response. Changed the inlet filter after as founds. Scrubber test performed, No adjustment made.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

TRS Calibration Summary

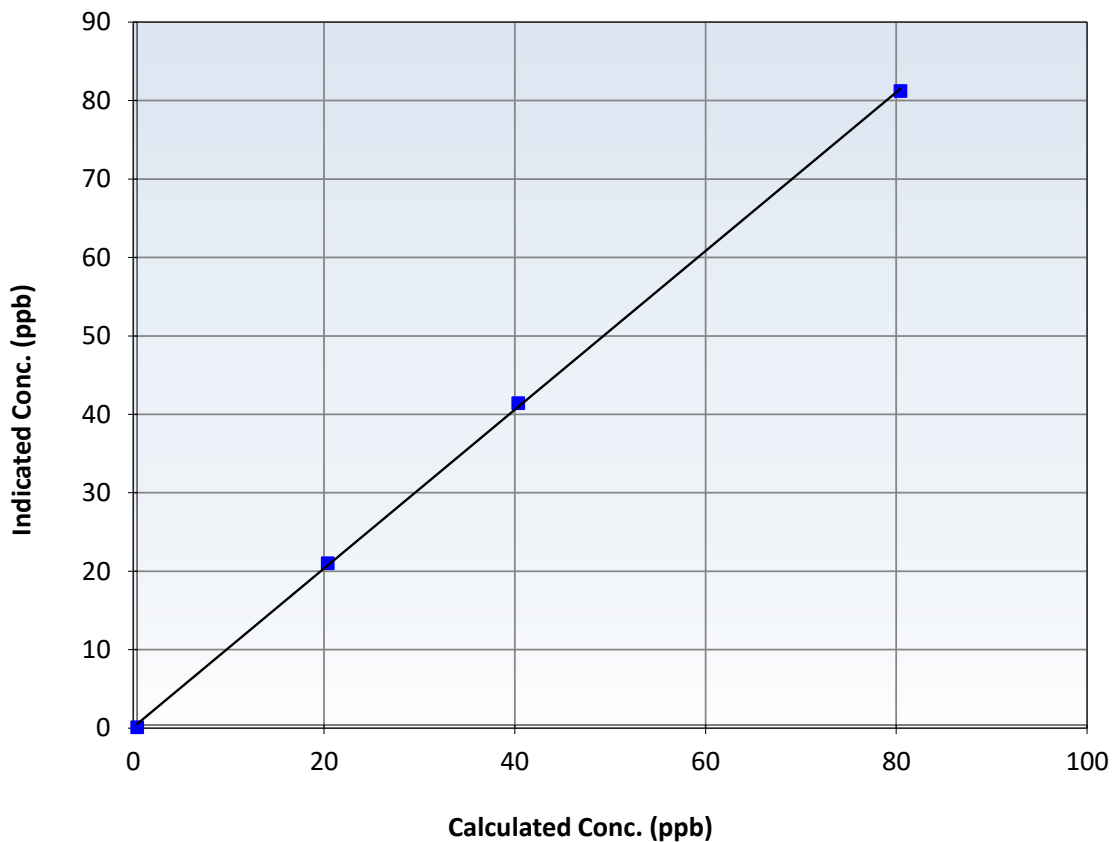
Station Information

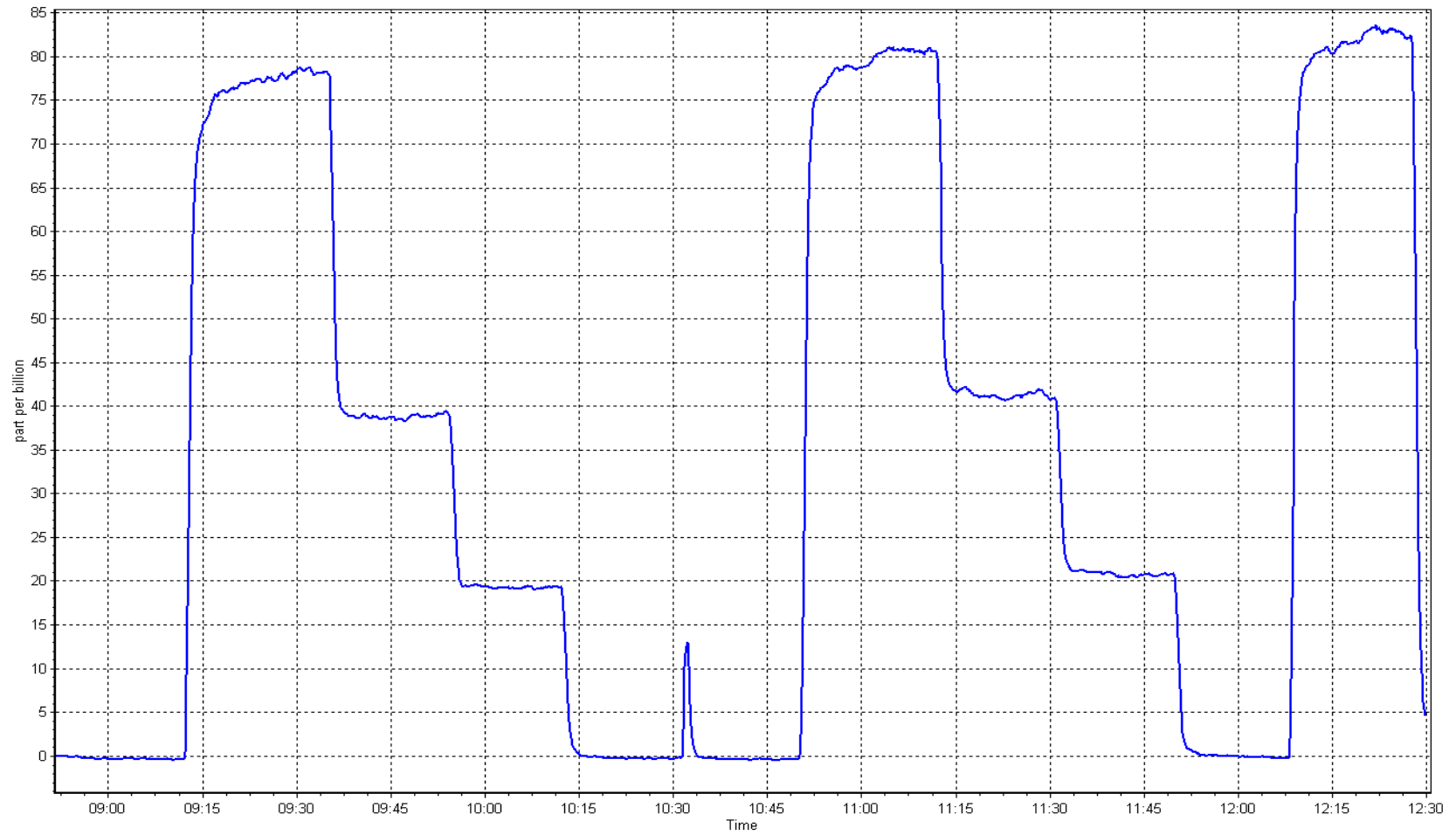
Calibration Date:	July 28, 2026	Previous Calibration:	June 25, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	8:53	End Time (MST):	12:30
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1151680031

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999852		≥ 0.995
80.0	80.8	0.9904	Slope	1.011797		$0.90 - 1.10$
40.0	41.0	0.9747	Intercept	0.121099		± 3
20.0	20.6	0.9699				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Janvier
Calibration Date: July 3, 2026
Start time (MST): 9:19
Reason: Routine

Station number: AMS 22
Last Cal Date: June 23, 2026
End time (MST): 11:59

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 T700
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	2.60E-04	NMHC SP Ratio:	5.61E-05	5.61E-05
CH ₄ Retention time:	11.8	11.8	NMHC Peak Area:	159752	159752
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	17.01	0.998
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.01	Prev response	16.98	*% change	0.2%
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	17.00	0.999
Mid point	4960	40.2	8.50	8.44	1.007
Low point	4980	20.1	4.25	4.24	1.003
As left zero					
As left span					

Average Correction Factor 1.003

Notes: Changed sample inlet filter. Adjusted the span only. Lost communication during as lefts.



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	8.95	1.001
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.95	Prev response	8.96	*% change	-0.1%
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	4920	80.3	8.96	8.96	1.000
Mid point	4960	40.2	4.49	4.48	1.002
Low point	4980	20.1	2.24	2.26	0.992
As left zero					
As left span					

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))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	80.3	8.02	8.06	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.06	Prev response	8.01	*% change	0.6%
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	4920	80.3	8.02	8.04	0.998
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					
As left span					

Average Correction Factor 1.009

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.001329	1.000777
THC Cal Offset:	-0.028314	-0.020712
CH ₄ Cal Slope:	1.002539	1.002852
CH ₄ Cal Offset:	-0.030229	-0.026830
NMHC Cal Slope:	1.000232	0.999237
NMHC Cal Offset:	0.001715	0.005118

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

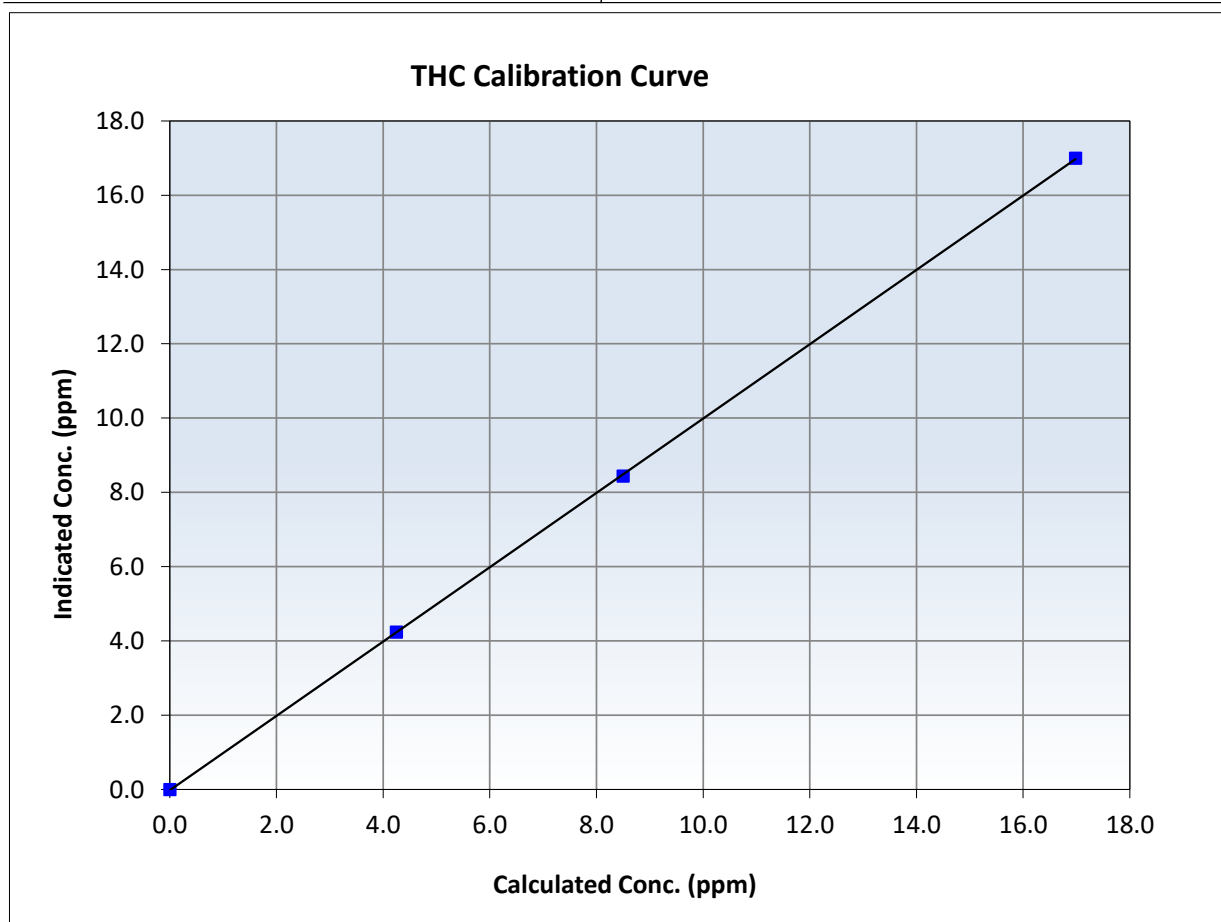
THC Calibration Summary

Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 23, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:19	End Time (MST):	11:59
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	0.999980	≥ 0.995
16.98	17.00	0.9991	Slope	1.000777	$0.90 - 1.10$
8.50	8.44	1.0072	Intercept	-0.020712	± 0.5
4.25	4.24	1.0033			





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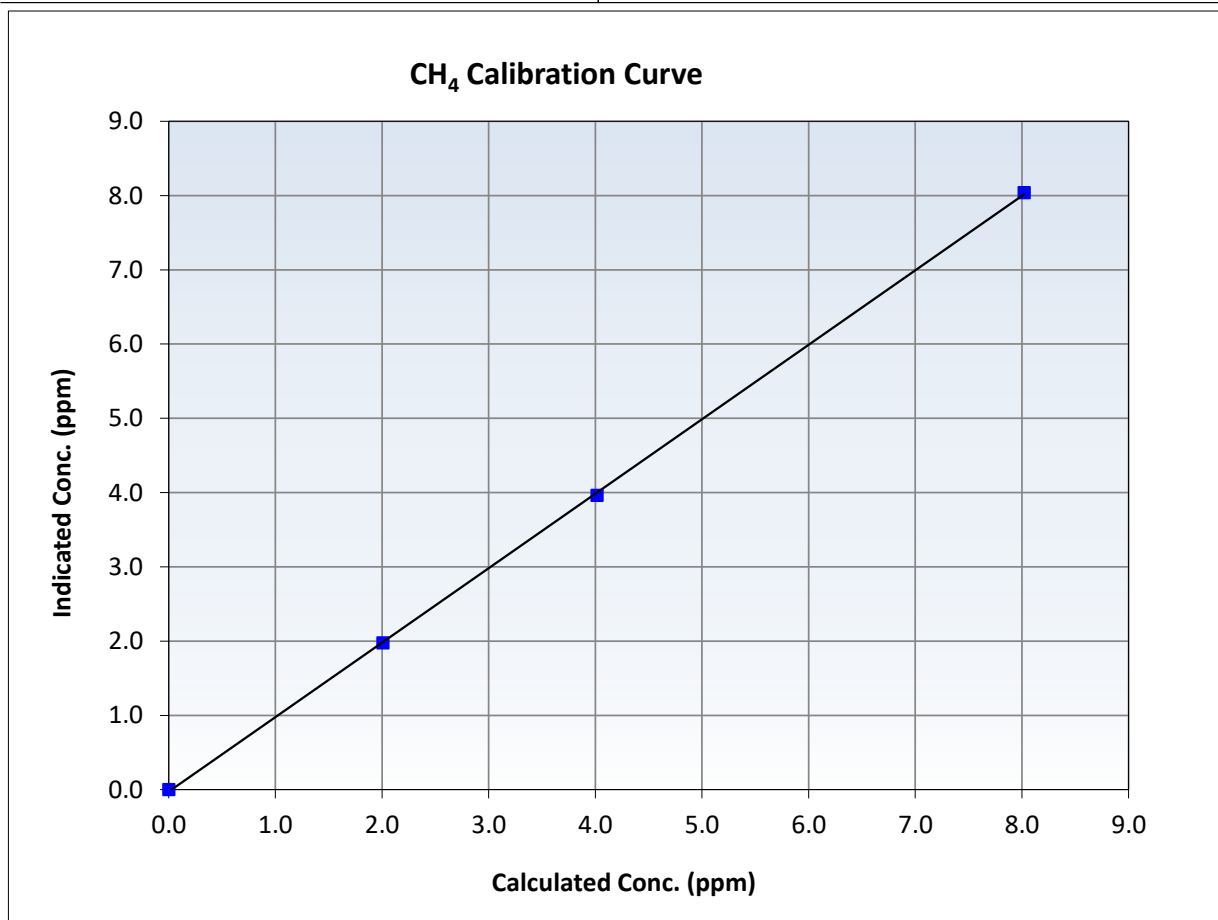
CH₄ Calibration Summary

Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 23, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:19	End Time (MST):	11:59
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	0.999924	≥ 0.995
8.02	8.04	0.9978	Slope	1.002852	$0.90 - 1.10$
4.02	3.96	1.0133	Intercept	-0.026830	± 0.5
2.01	1.98	1.0162			





Wood Buffalo Environmental Association

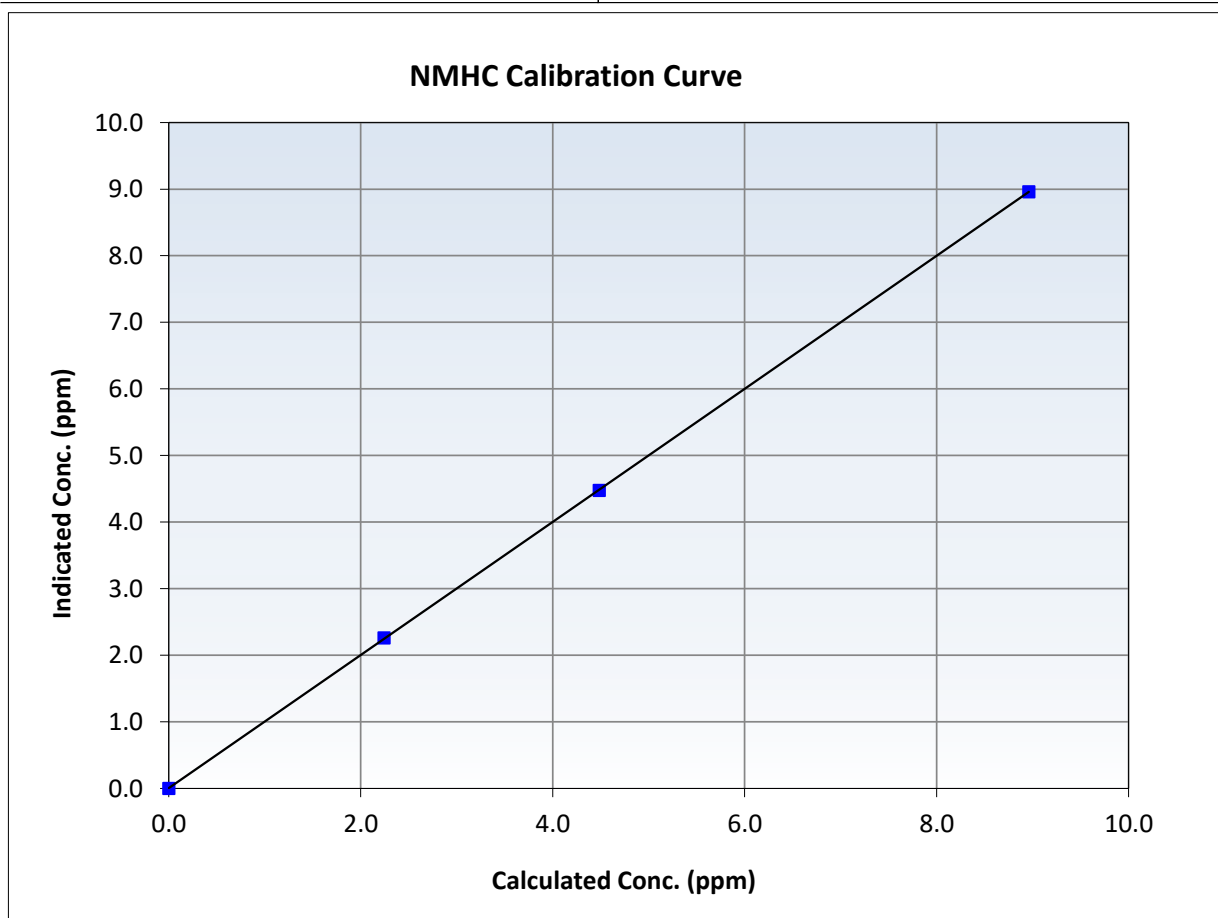
NMHC Calibration Summary

Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 23, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:19	End Time (MST):	11:59
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

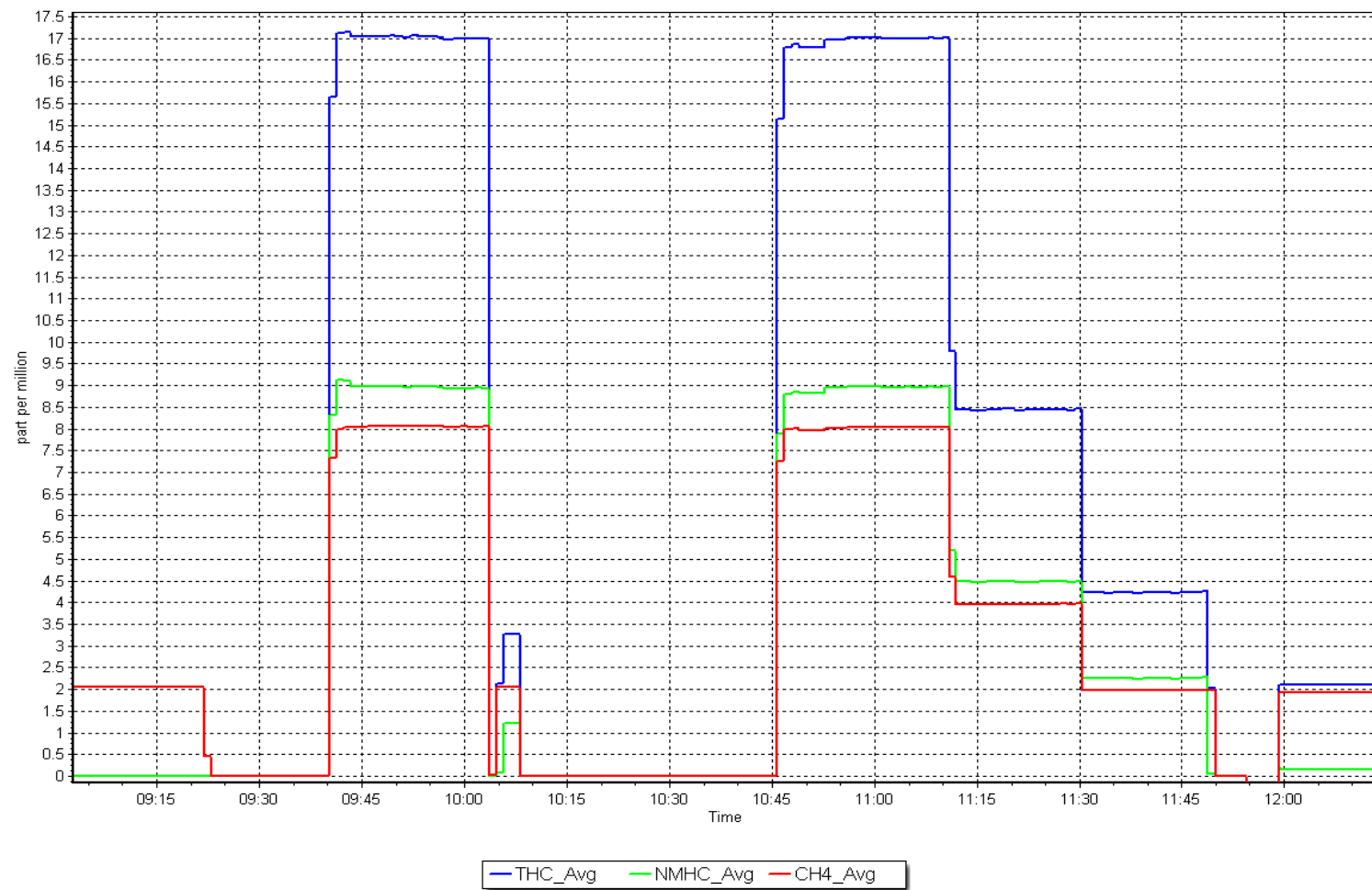
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999991	≥ 0.995
8.96	8.96	0.9999	Slope	0.999237	$0.90 - 1.10$
4.49	4.48	1.0022	Intercept	0.005118	± 0.5
2.24	2.26	0.9920			



NMHC Calibration Plot

Date: July 3, 2026

Location: Janvier





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Janvier
 Calibration Date: July 22, 2026
 Start time (MST): 10:56
 Reason: Cylinder Change

Station number: AMS 22
 Last Cal Date: July 3, 2026
 End time (MST): 12:25

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 T700
 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	2.60E-04	NMHC SP Ratio:	5.61E-05	5.61E-05
CH ₄ Retention time:	11.8	11.8	NMHC Peak Area:	159752	159752
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	17.06	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.06	Prev response	16.97	*% change	0.5%
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					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	16.98	16.95	1.002
Average Correction Factor					

Notes:

Changed H2 after as founds. No adjustment made.



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	----
As found High point	4920	80.3	8.96	9.02	0.993
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.02	Prev response	8.96	*% change	0.7%
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					----
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	8.96	8.94	1.002
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	----
As found High point	4920	80.3	8.02	8.03	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.03	Prev response	8.02	*% 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					----
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	8.02	8.01	1.002
Average Correction Factor					

Calibration Statistics

	<u>Start</u>	
THC Cal Slope:	1.000777	
THC Cal Offset:	-0.020712	
CH ₄ Cal Slope:	1.002852	
CH ₄ Cal Offset:	-0.026830	
NMHC Cal Slope:	0.999237	
NMHC Cal Offset:	0.005118	

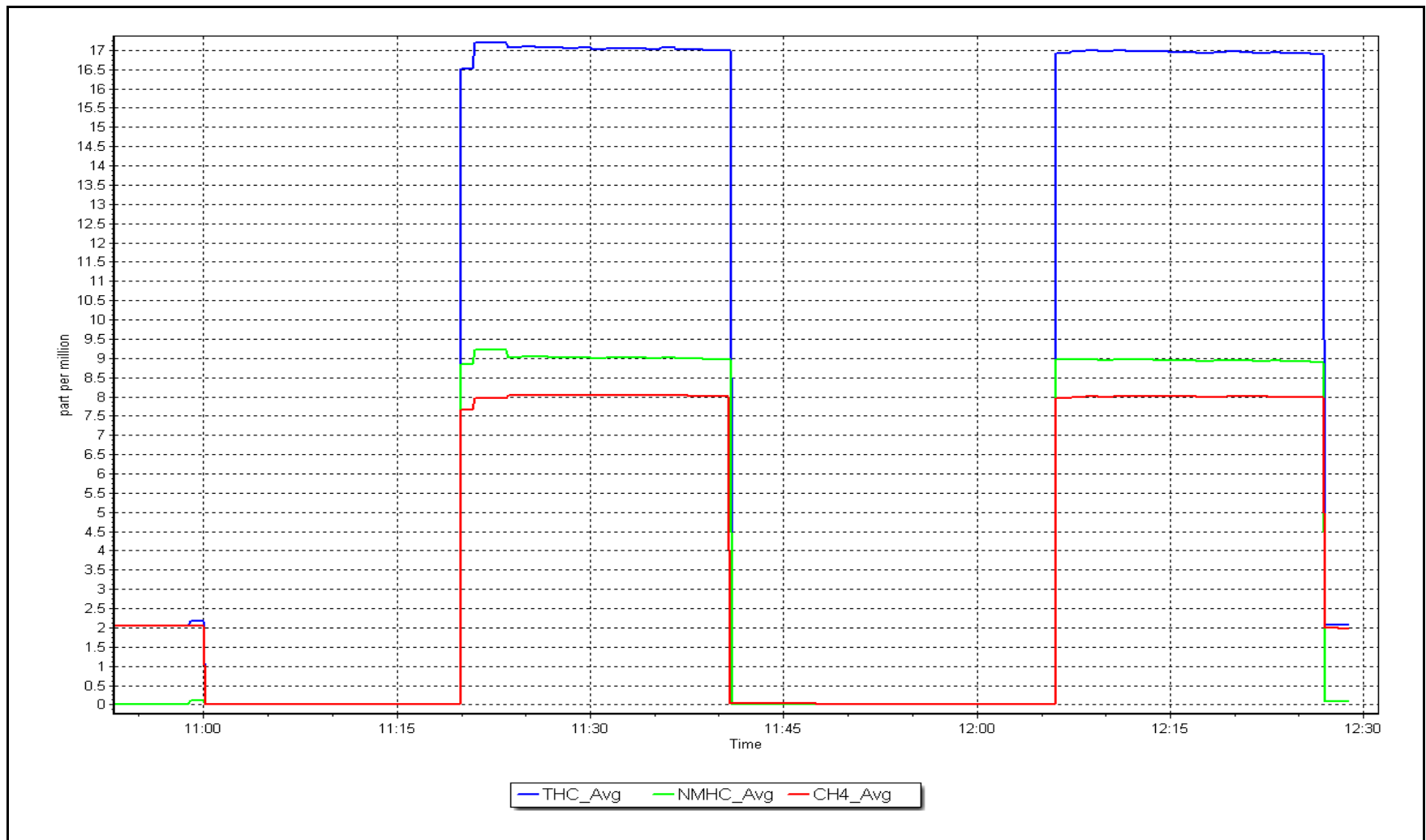
Finish

Calibration Performed By: Jan Castro

NMHC Calibration Plot

Date: July 22, 2026

Location: Janvier





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Janvier
Station number: AMS 22
Calibration Date: July 29, 2026
Last Cal Date: June 29, 2026
Start time (MST): 8:54
End time (MST): 13:06
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 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	-0.3	0.0	----	----
AF High point	4918	82.0	802.0	800.3	1.6	789.7	784.9	4.8	1.0151	1.0193
AF Mid point										
AF Low point										
New cyl resp										

Previous Response NO_x = 800.8 ppb NO = 799.5 ppb * = > +/-5% change initiates investigation *Percent Change NO_x = -1.4%
Baseline Corr 1st pt NO_x = 790.0 ppb NO = 785.2 ppb As Found Statistics *Percent Change NO = -1.8%
Baseline Corr 2nd pt NO_x = NA ppb NO = NA ppb As found NO_x r²: Nx SI: Nx Int:
Baseline Corr 3rd pt NO_x = NA ppb NO = NA ppb 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 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1229254994

Calibration Statistics

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.070	1.088	NO bkgnd or offset:	2.8	3.0	NO _x Cal Slope:	1.001621	1.000182
NOX coeff or slope:	0.993	0.994	NOX bkgnd or offset:	3.0	3.1	NO _x Cal Offset:	-2.476138	-3.896283
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	172.6	175.0	NO Cal Slope:	1.004159	1.001661
						NO Cal Offset:	-4.196220	-5.296396
						NO ₂ Cal Slope:	0.997898	0.997580
						NO ₂ Cal Offset:	0.065315	0.146832

Instrument Settings

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	-0.1	0.1	----	----
High point	4918	82.0	802.0	800.3	1.6	800.7	799.6	1.1	1.0016	1.0009
Mid point	4960	41.0	400.9	400.1	0.8	393.5	390.9	2.6	1.0188	1.0235
Low point	4980	20.5	200.5	200.1	0.4	193.8	191.2	2.7	1.0344	1.0463
As left zero	5000	0.0	0.0	0.0	0.0	0.1	-0.2	0.2	----	----
As left span	4918	82.0	802.0	399.3	402.7	801.9	399.3	402.6	1.0001	1.0000
Average Correction Factor									1.0183	1.0236

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	797.7	396.6	402.7	402.2	1.0013	99.9%
Mid GPT point	797.7	596.8	202.5	201.3	1.0062	99.4%
Low GPT point	797.7	699.2	100.1	100.7	0.9944	100.6%
Average Correction Factor					1.0006	99.9%

Notes: Sample inlet filter was changed after as founds. Adjusted span only. Used 2nd NO reference point due to drift.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

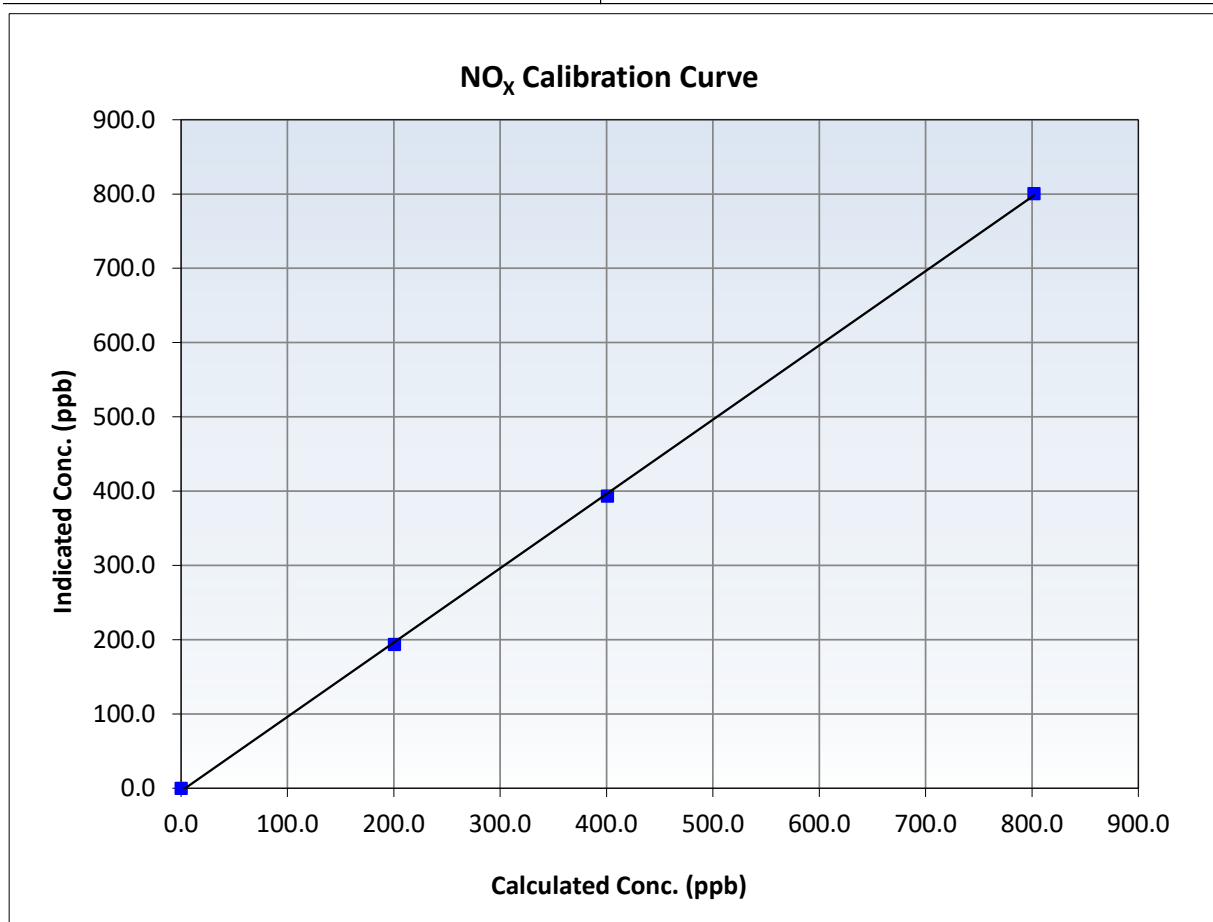
NO_x Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	June 29, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	8:54	End Time (MST):	13:06
Analyzer make:	Thermo 42i	Analyzer serial #:	1229254994

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	0.999880	<i>≥0.995</i>
802.0	800.7	1.0016	Slope	1.000182	<i>0.90 - 1.10</i>
400.9	393.5	1.0188	Intercept	-3.896283	<i>+/-20</i>
200.5	193.8	1.0344			





Wood Buffalo Environmental Association

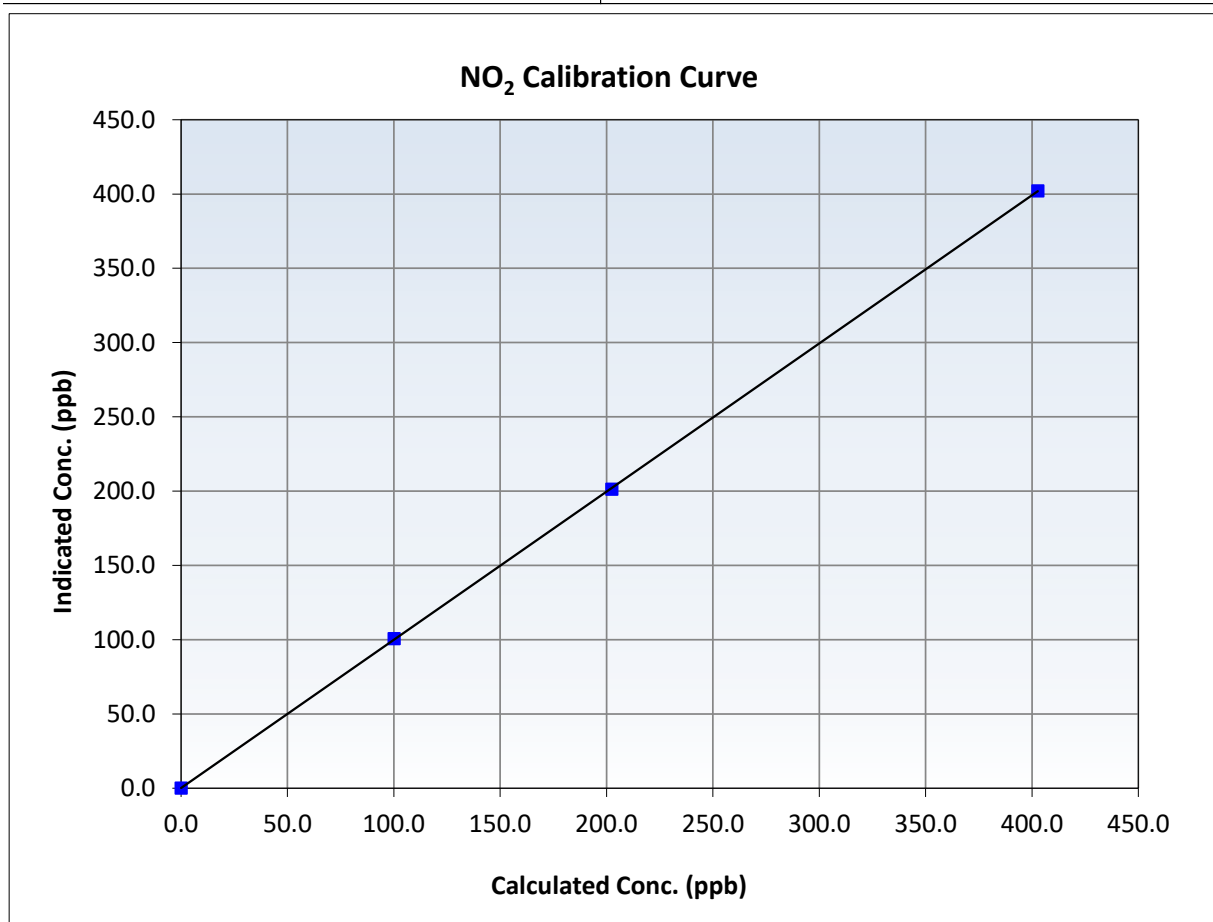
NO₂ Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	June 29, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	8:54	End Time (MST):	13:06
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	0.999985	≥0.995
402.7	402.2	1.0013	Slope	0.997580	0.90 - 1.10
202.5	201.3	1.0062	Intercept	0.146832	+/-20
100.1	100.7	0.9944			





Wood Buffalo Environmental Association

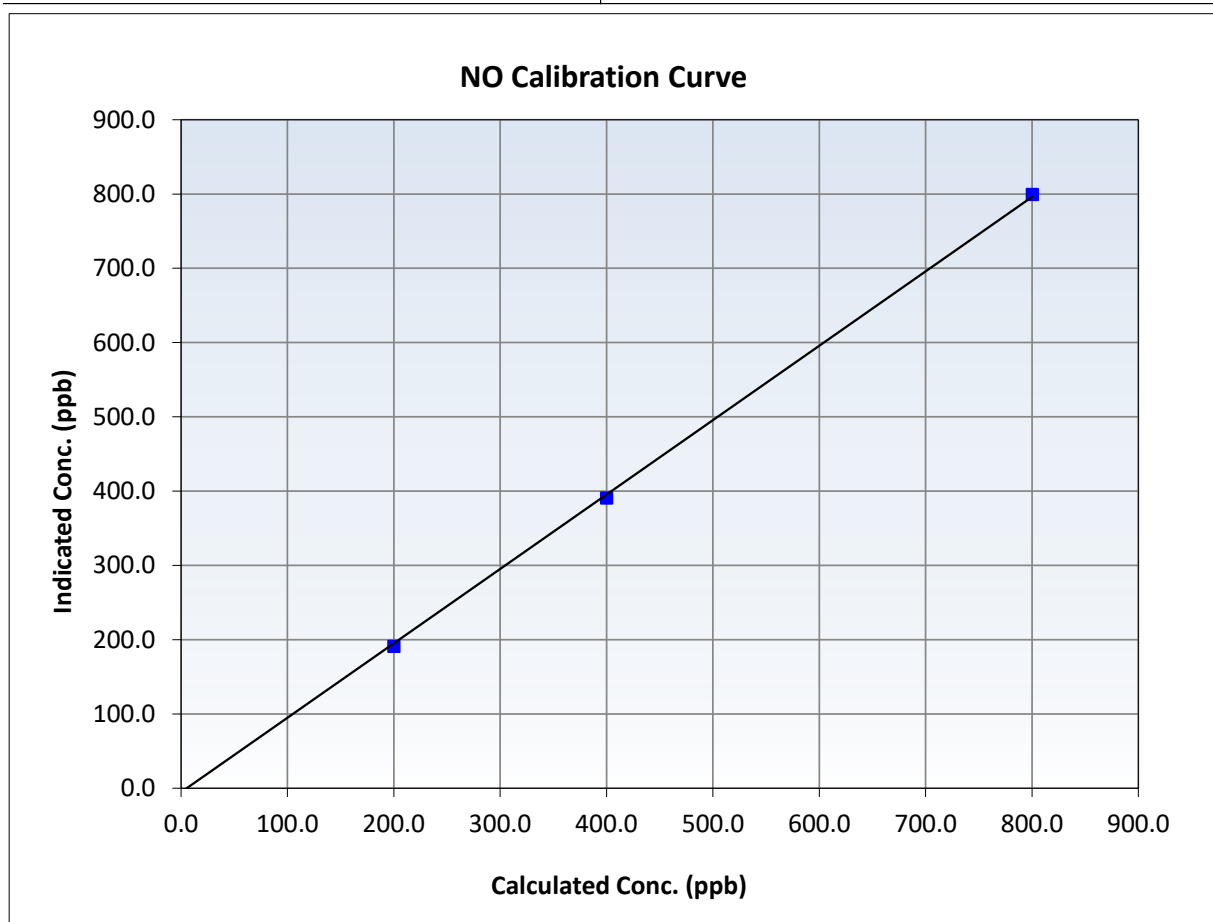
NO Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	June 29, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	8:54	End Time (MST):	13:06
Analyzer make:	Thermo 42i	Analyzer serial #:	1229254994

Calibration Data

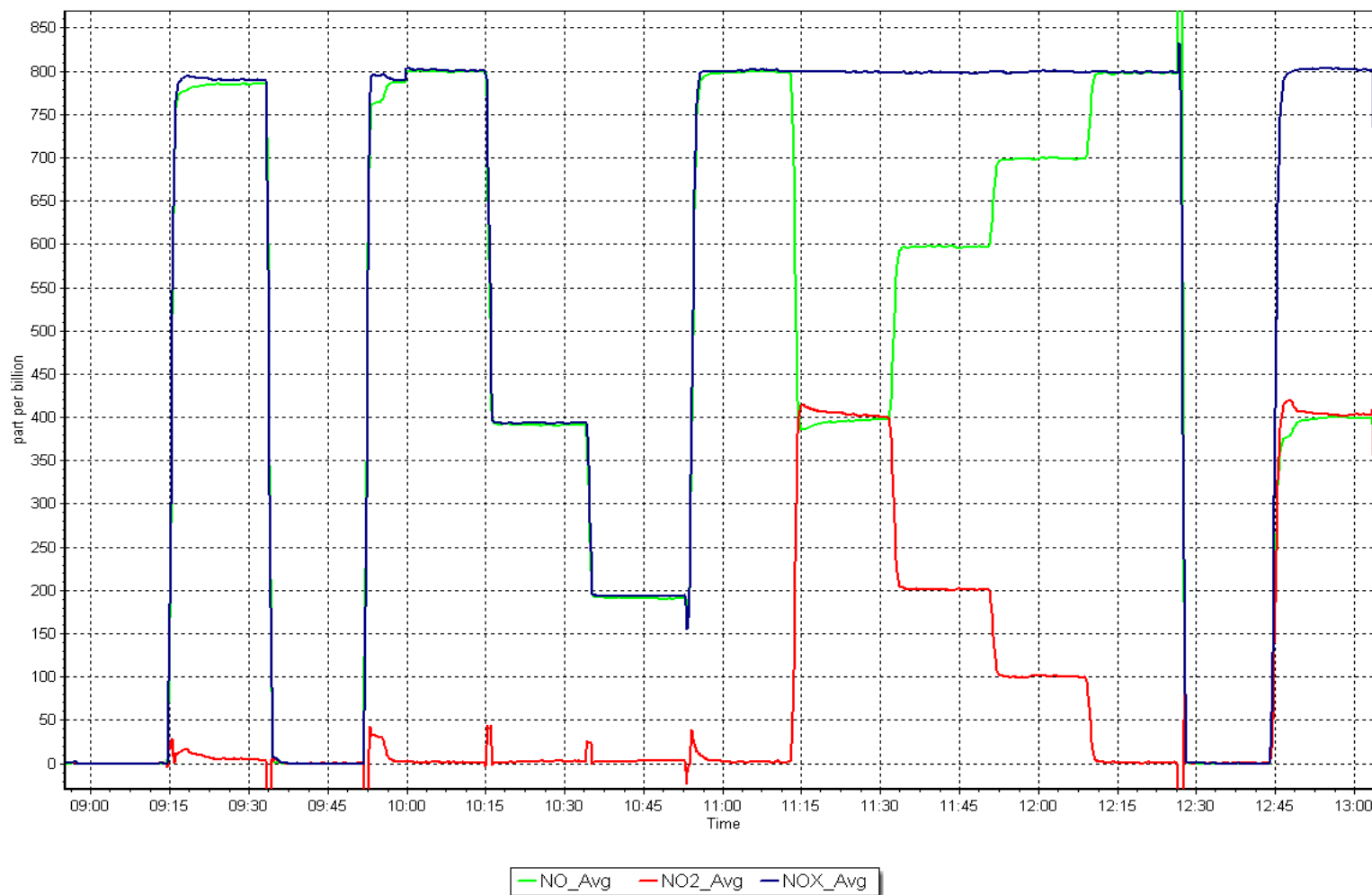
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999791	≥ 0.995
800.3	799.6	1.0009	Slope	1.001661	$0.90 - 1.10$
400.1	390.9	1.0235	Intercept	-5.296396	± 20
200.1	191.2	1.0463			



NO_x Calibration Plot

Date: July 29, 2026

Location: Janvier





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Janvier
Calibration Date: July 8, 2026
Start time (MST): 9:30
Reason: Routine

Station number: AMS 22
Last Cal Date: June 22, 2026
End time (MST): 12:12

Calibration Standards

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

Serial Number: 3806
Serial Number: 363

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:	0.999857	1.009400	Backgd or Offset:	-0.2	-0.2
Calibration intercept:	0.100000	0.180000	Coeff or Slope:	1.348	1.340

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	-0.4	----
As found High point	5000	928.3	400.0	404.9	0.987
As found Mid point					
As found Low point					
Baseline Corr As found:	405.3	Previous response	400.0	*% change	1.3%
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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	800.0	0.0	0.2	----
High point	5000	929.2	400.0	403.9	0.990
Mid point	5000	767.3	200.0	202.2	0.989
Low point	5000	688.9	100.0	101.0	0.990
As left zero	5000	800.0	0.0	0.2	----
As left span	5000	926.9	400.0	408.3	0.980
Average Correction Factor					0.990

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

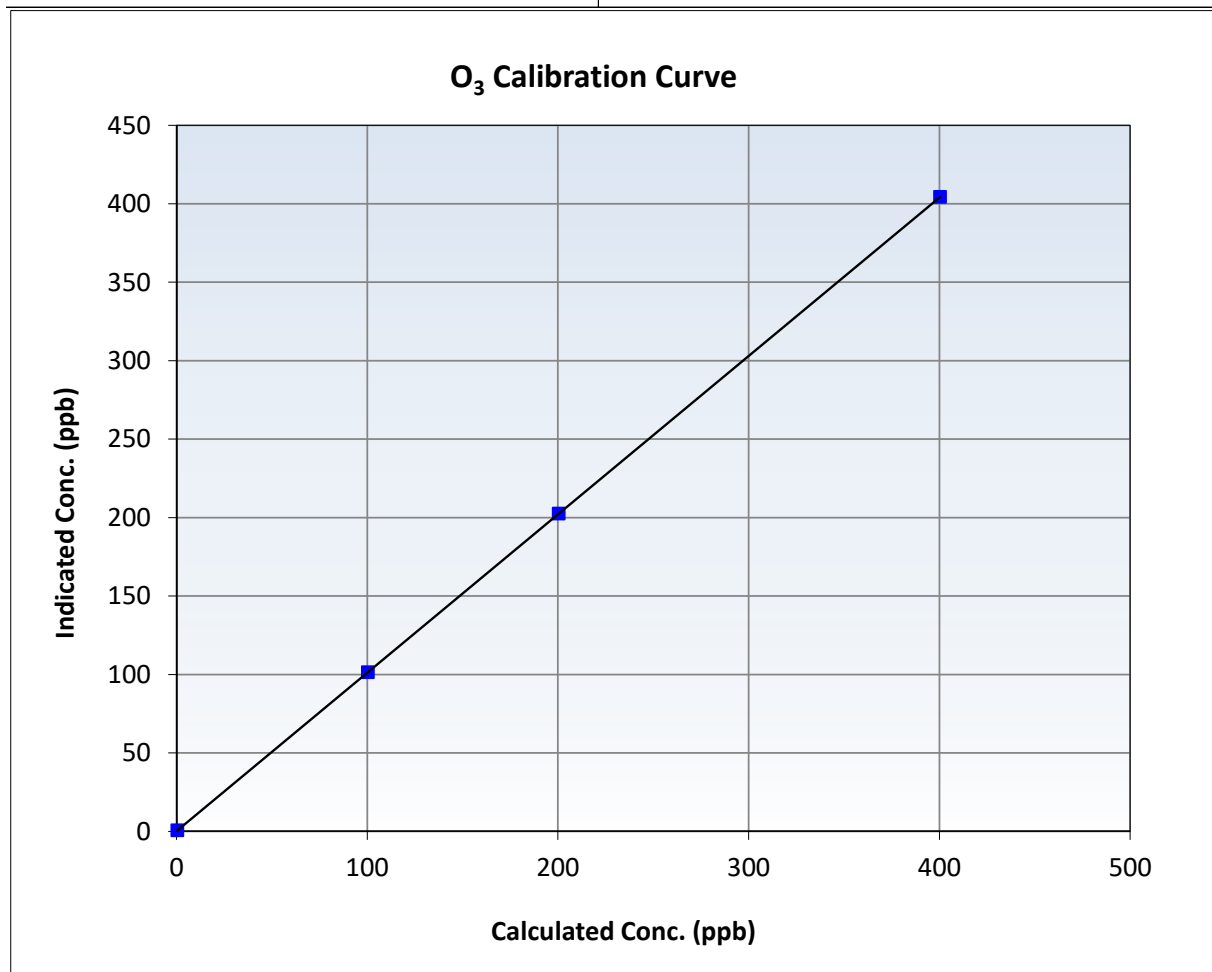
O₃ Calibration Summary

Station Information

Calibration Date:	July 8, 2026	Previous Calibration:	June 22, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:30	End Time (MST):	12:12
Analyzer make:	Thermo 49i	Analyzer serial #:	1227254861

Calibration Data

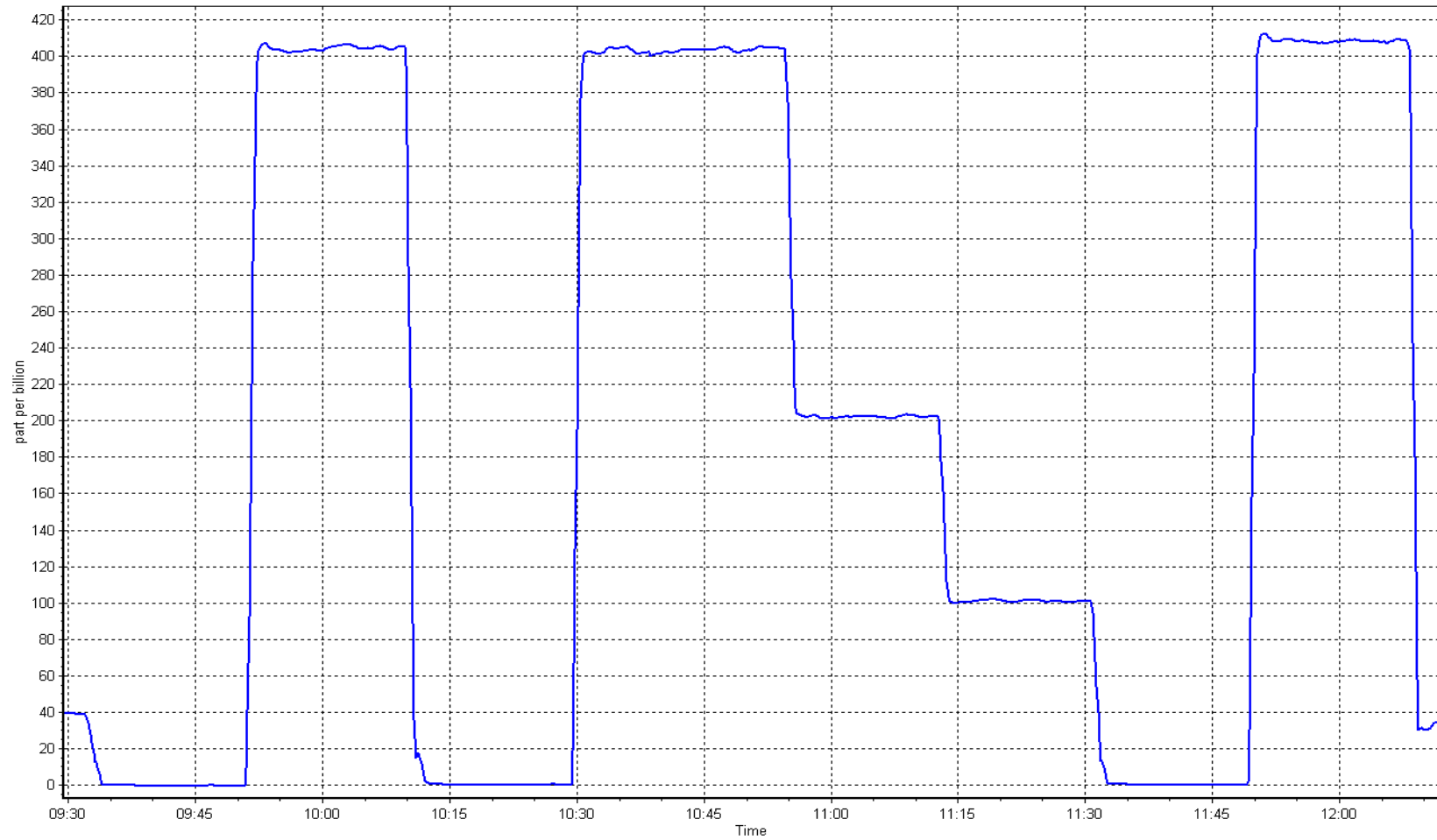
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	1.000000	≥0.995
400.0	403.9	0.9903	Slope	1.009400	0.90 - 1.10
200.0	202.2	0.9891	Intercept	0.180000	+/- 5
100.0	101.0	0.9901			



O₃ Calibration Plot

Date: July 8, 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: July 22, 2026 Last Cal Date: June 29, 2026
Start time (MST): 11:50 End time (MST): 12:38

Analyzer Make: Teledyne API T640 S/N: 871
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)	25.30	25.62	25.30	☐	+/- 2 °C
P (mmHg)	715.20	716.76	715.20	☐	+/- 10 mmHg
Flow (LPM)	4.98	4.90	4.98	☐	+/- 0.25 LPM
PW% (pump)	31	----	31	☐	>80%
Zero Verification	PM w/o HEPA: 50.30		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	10.2	10.00	10.9	☒	10.9 +/- 0.5

Date Optical Chamber Cleaned: July 22, 2026
Date Disposable Filter Changed: July 22, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0.00 <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, pressure and pump PWM. Leak check passed. PMT adjusted. Leak check passed.

Calibration by: Jan Castro



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS23
FORT HILLS
JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Fort Hills Station number: AMS 23
Calibration Date: July 13, 2026 Last Cal Date: June 1, 2026
Start time (MST): 9:13 End time (MST): 13:05
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:	0.999619	0.998460	Backgd or Offset:	19.2	18.7
Calibration intercept:	-0.539365	-0.359261	Coeff or Slope:	1.070	1.044

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	794.9	1.006
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	794.9	Previous response	798.6	*% 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	-0.2	----
High point	4921	79.4	799.5	798.4	1.001
Mid point	4960	39.7	399.8	397.5	1.006
Low point	4980	19.8	199.4	199.4	1.000
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.4	799.5	799.8	1.000
Average Correction Factor:					1.002

Notes: Inlet filter changed after as founds. No adjustments made.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

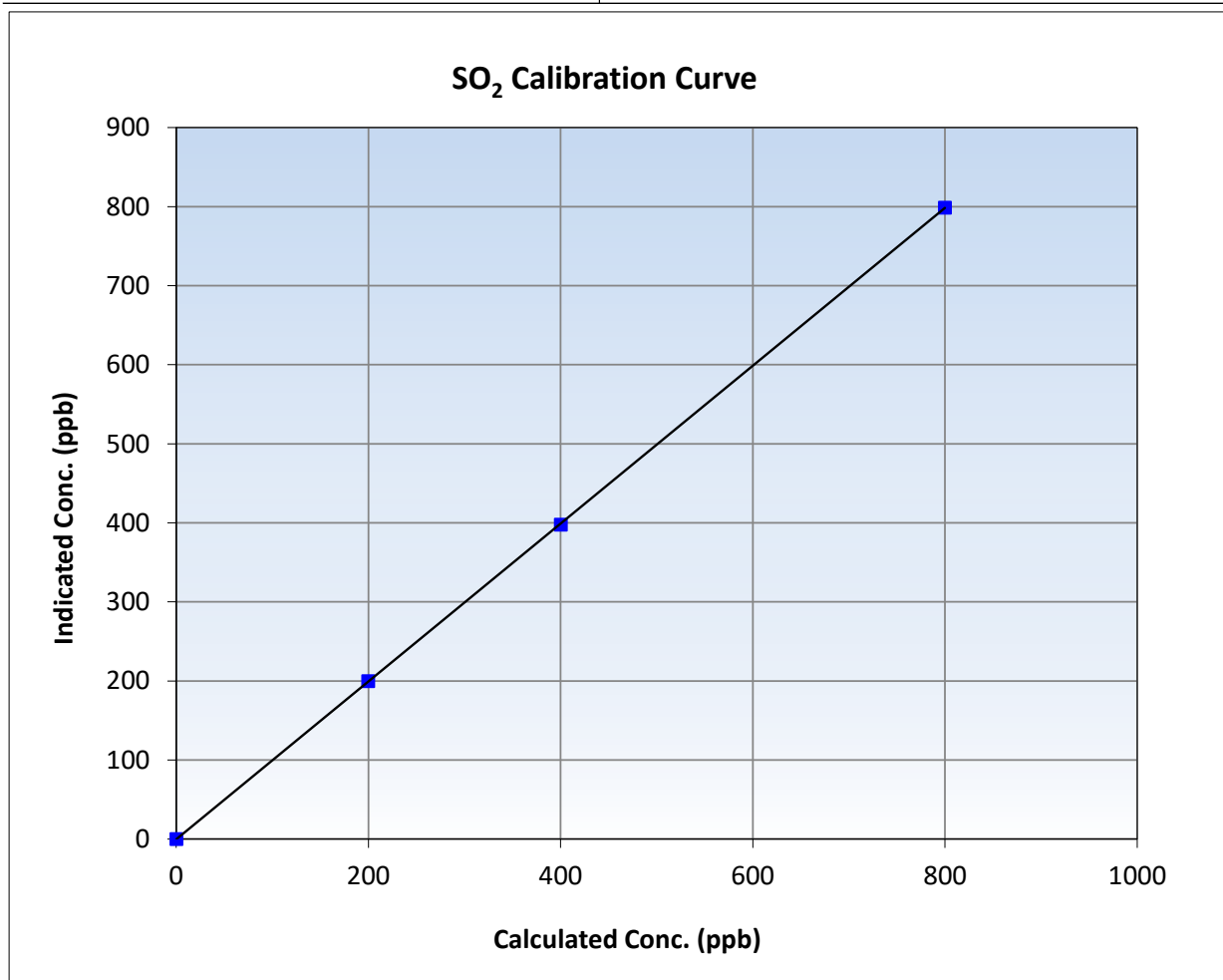
SO₂ Calibration Summary

Station Information

Calibration Date:	July 13, 2026	Previous Calibration:	June 1, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	9:13	End Time (MST):	13:05
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290012

Calibration Data

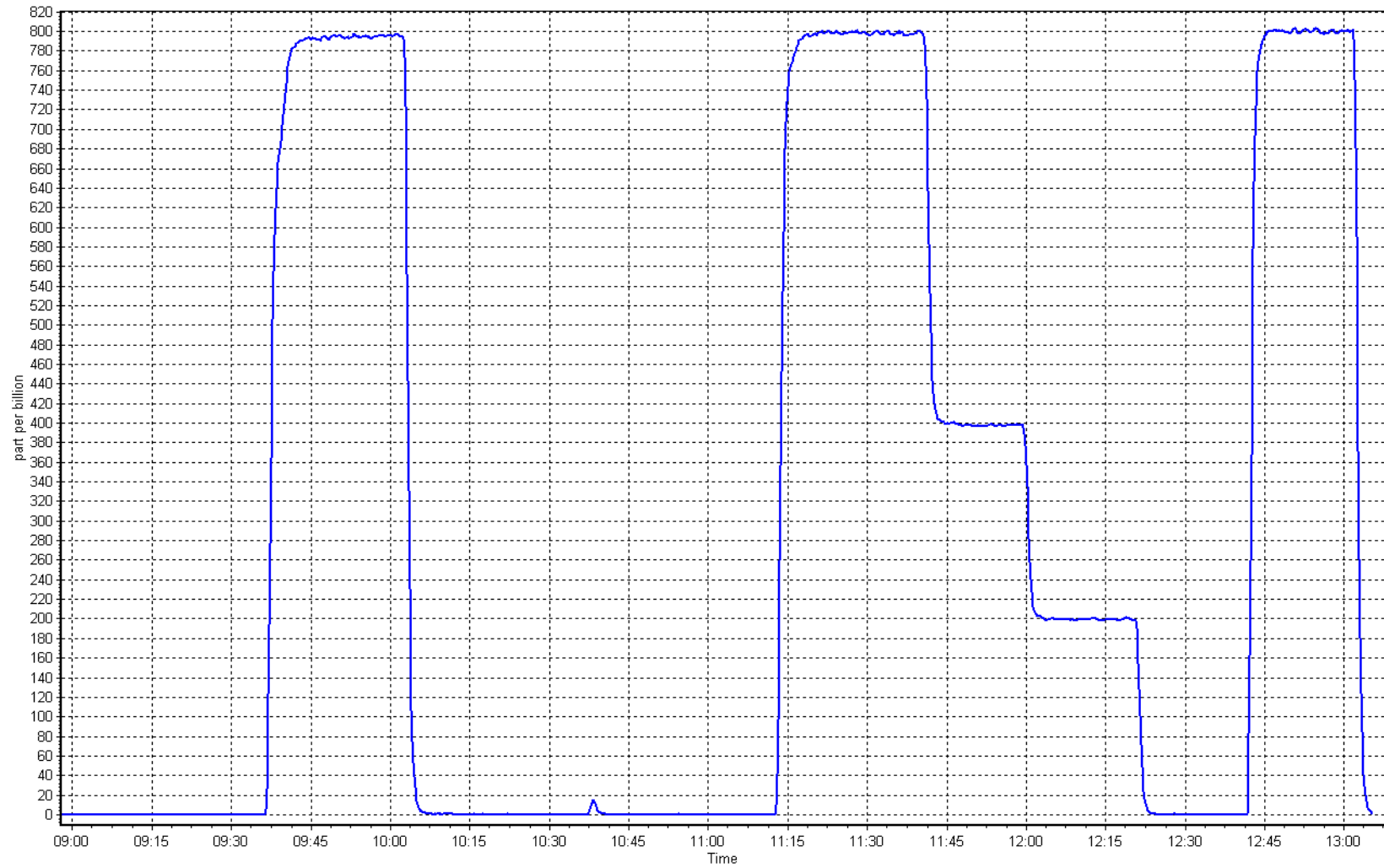
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999993	≥0.995
799.5	798.4	1.0014	Slope	0.998460	0.90 - 1.10
399.8	397.5	1.0058	Intercept	-0.359261	+/-30
199.4	199.4	1.0000			



SO2 Calibration Plot

Date: July 13, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Fort Hills
Calibration Date: July 2, 2026
Start time (MST): 10:15
Reason: Routine

Station number: AMS 23
Last Cal Date: June 15, 2026
End time (MST): 15:13

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:	1.006105	0.991668	Backgd or Offset:	0.96	0.96
Calibration intercept:	0.041859	-0.077943	Coeff or Slope:	1.025	1.025

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	79.0	1.013
As found Mid point	4959	41.3	40.0	39.3	1.020
As found Low point	4979	20.7	20.0	19.9	1.012
New cylinder response					
Baseline Corr As found:	78.9	Prev response:	80.49	*% change:	-2.0%
Baseline Corr 2nd AF pt:	39.2	AF Slope:	0.986237	AF Intercept:	0.062121
Baseline Corr 3rd AF pt:	19.8	AF Correlation:	0.999986	* = > +/-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	79.3	1.008
Mid point	4959	41.3	40.0	39.4	1.015
Low point	4979	20.7	20.0	19.8	1.012
As left zero	5000	0.0	0.0	0.0	----
As left span	4917	82.6	80.0	79.6	1.005
SO2 Scrubber Check	4920	80.3	803.0	0.1	----
Date of last scrubber change:	April 28, 2026			Ave Corr Factor	1.012
Date of last converter efficiency test:					

Notes: Changed sample inlet filter after as founds. SOx scrubber checked after the calibrator zero. No adjustments made.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

H₂S Calibration Summary

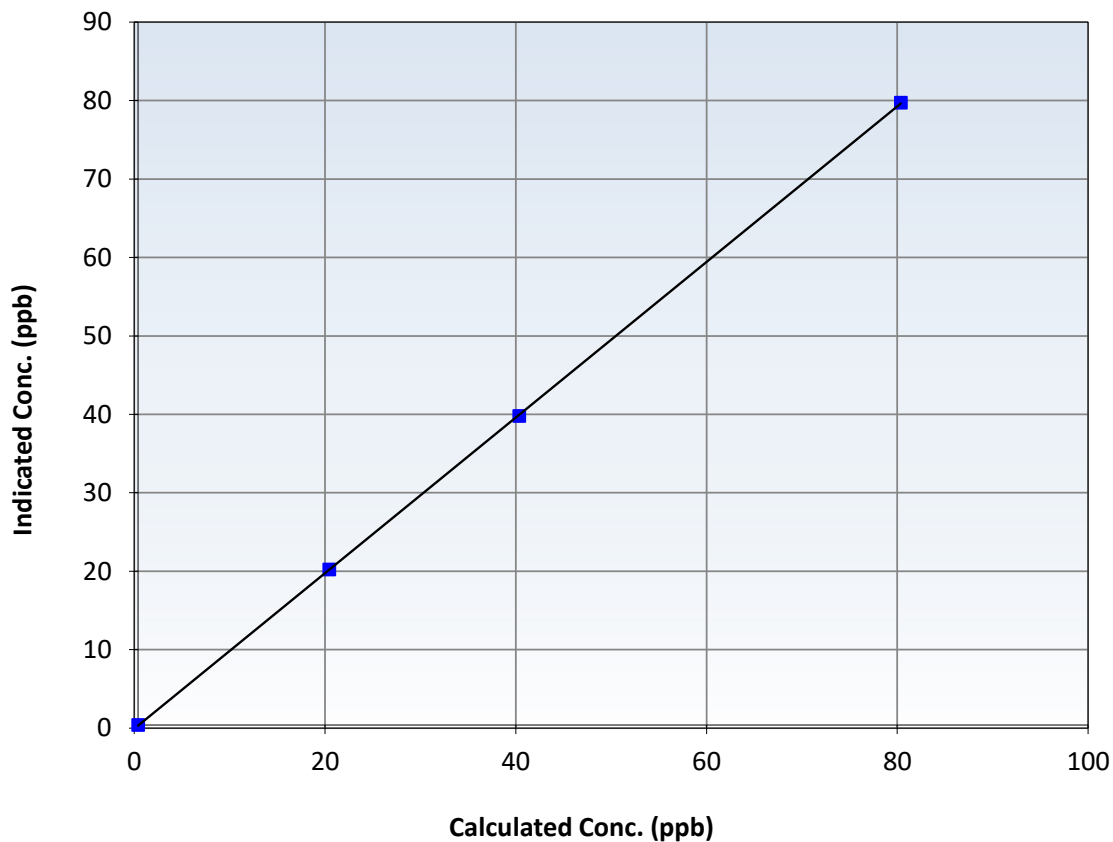
Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 15, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:15	End Time (MST):	15:13
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	0.0	----	Correlation Coefficient	0.999988		≥0.995
80.0	79.3	1.0084	Slope	0.991668		0.90 - 1.10
40.0	39.4	1.0146	Intercept	-0.077943		+/-3
20.0	19.8	1.0121				

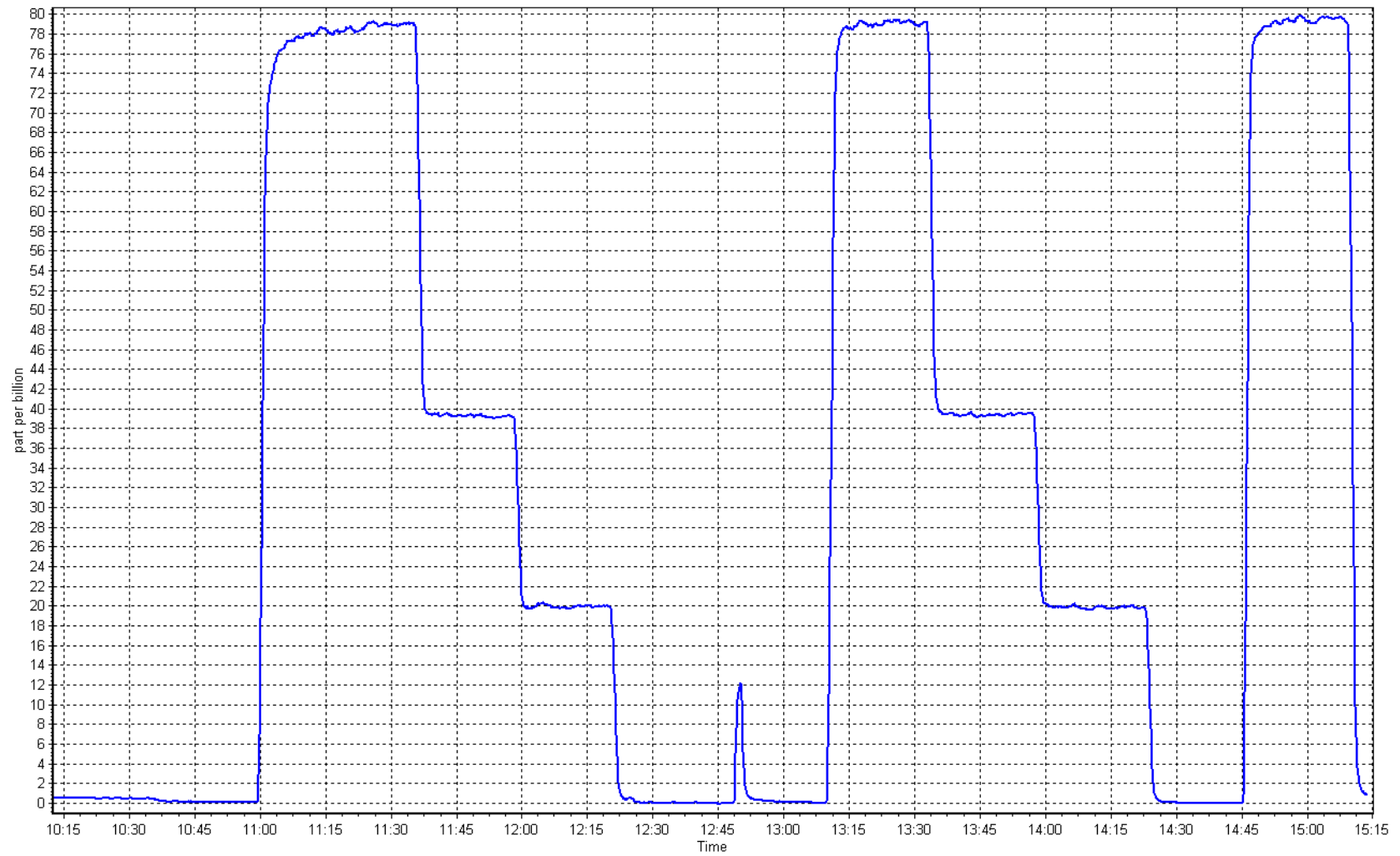
H₂S Calibration Curve



H₂S Calibration Plot

Date: July 2, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Fort Hills Station number: AMS 23
Calibration Date: July 2, 2026 Last Cal Date: June 15, 2026
Start time (MST): 10:15 End time (MST): 15:13
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.84 ppm Cal Gas Exp Date: August 28, 2027
Cal Gas Cylinder #: DT0021910
Removed Cal Gas Conc: 4.84 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Make/Model: API T700 Serial Number: 5762
ZAG Make/Model: API T701 Serial Number: 1117

Analyzer Information

Analyzer make: Thermo 43i TLE Analyzer serial #: 1300156232
Converter make: CDN-101 Converter serial #: 594
Analyzer Range: 0 - 100 ppb Converter Temp: 800 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.009251	1.030836	Backgd or Offset:	1.97	1.99
Calibration intercept:	0.181775	-0.098606	Coeff or Slope:	0.994	0.994

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	80.4	0.995
As found Mid point	4959	41.3	40.0	40.3	0.992
As found Low point	4979	20.7	20.0	20.0	1.002
New cylinder response					
Baseline Corr As found:	80.4	Prev response:	80.88	*% change:	-0.6%
Baseline Corr 2nd AF pt:	40.3	AF Slope:	1.006247	AF Intercept:	-0.038128
Baseline Corr 3rd AF pt:	20.0	AF Correlation:	0.999991	* = > +/-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	82.3	0.972
Mid point	4959	41.3	40.0	41.2	0.970
Low point	4979	20.7	20.0	20.5	0.978
As left zero	5000	0.0	0.0	0.0	----
As left span	4917	82.6	80.0	83.7	0.955
SO2 Scrubber Check	4920	80.3	803.0	0.2	----
Date of last scrubber change:				Ave Corr Factor	0.973
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. No adjustments made.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

TRS Calibration Summary

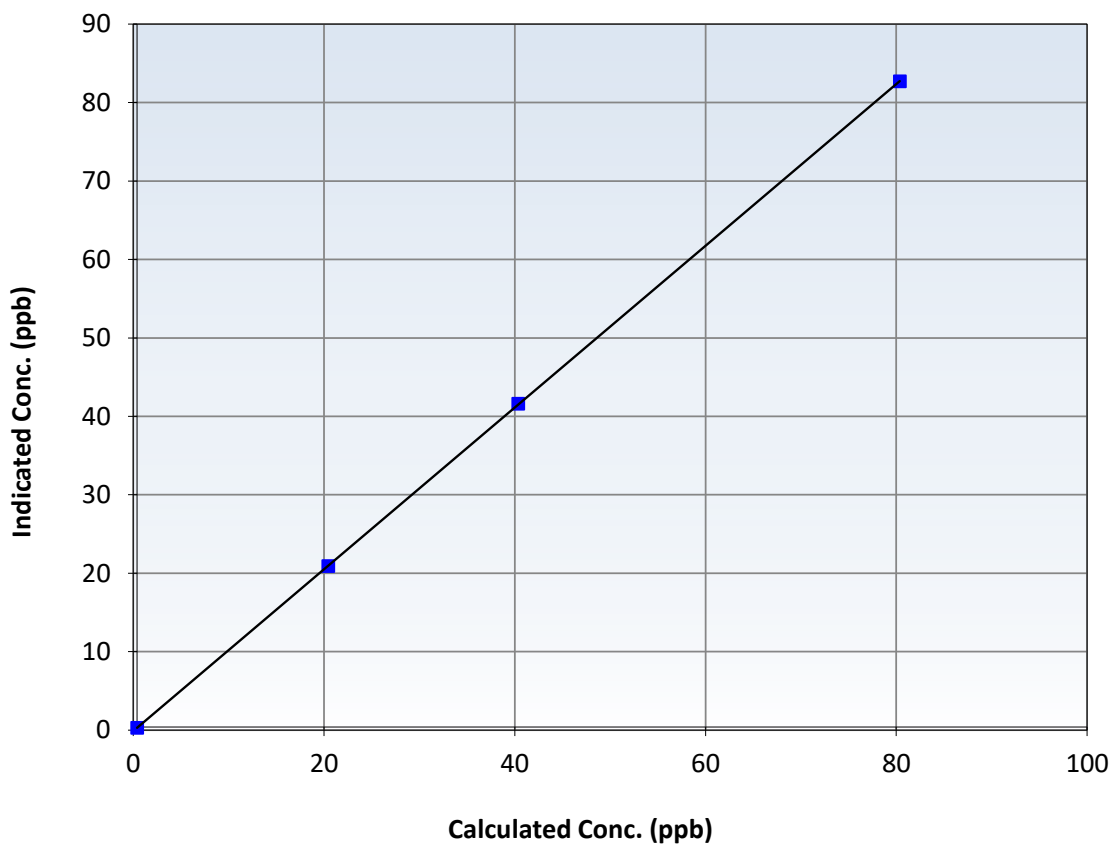
Station Information

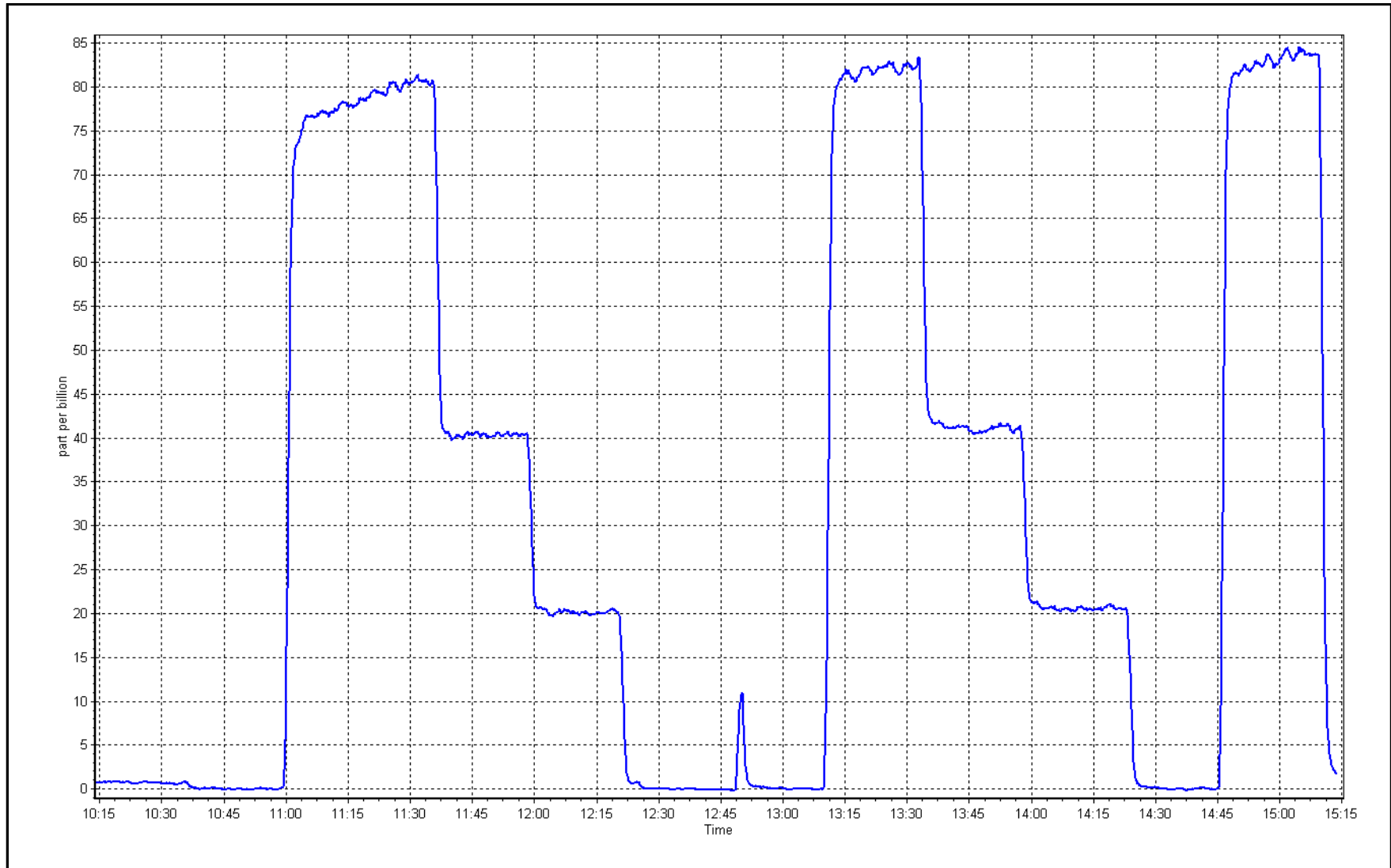
Calibration Date:	July 2, 2026	Previous Calibration:	June 15, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:15	End Time (MST):	15:13
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1300156232

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999997		≥ 0.995
80.0	82.3	0.9716	Slope	1.030836		0.90 - 1.10
40.0	41.2	0.9703	Intercept	-0.098606		+/-3
20.0	20.5	0.9775				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Fort Hills
 Calibration Date: July 13, 2026
 Start time (MST): 9:13
 Reason: Routine

Station number: AMS 23
 Last Cal Date: June 23, 2026
 End time (MST): 13:05

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 #: 1172750023
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	3.12E-04	3.16E-04	NMHC SP Ratio:	5.67E-05
CH ₄ Retention time:	15.6	15.6	NMHC Peak Area:	157033
Zero Chromatogram:	ON	ON	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	79.4	16.92	16.76	1.010
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.75	Prev response	16.89	*% change	-0.9%
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	79.4	16.92	16.92	1.000
Mid point	4960	39.7	8.46	8.43	1.003
Low point	4980	19.8	4.22	4.25	0.994
As left zero	5000	0.0	0.00	0.02	----
As left span	4921	79.4	16.92	16.93	0.999
Average Correction Factor					0.999

Notes: Inlet filter and N₂ cylinder were changed after as founds. 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	79.4	8.91	8.86	1.006
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.86	Prev response	8.89	*% 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) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.4	8.91	8.90	1.001
Mid point	4960	39.7	4.46	4.44	1.003
Low point	4980	19.8	2.22	2.24	0.994
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	8.91	8.92	1.000
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))
As found zero	5000	0.0	0.00	0.02	Limit = 0.90-1.10
As found High point	4921	79.4	8.01	7.90	1.015
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.89	Prev response	8.01	*% change	-1.5%
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	0.02	----
High point	4921	79.4	8.01	8.01	1.000
Mid point	4960	39.7	4.00	3.99	1.004
Low point	4980	19.8	2.00	2.01	0.995
As left zero	5000	0.0	0.00	0.02	----
As left span	4921	79.4	8.01	8.01	0.999
Average Correction Factor					0.999

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.998288	0.998395
THC Cal Offset:	0.001421	0.014627
CH ₄ Cal Slope:	1.000957	0.998018
CH ₄ Cal Offset:	-0.006384	0.010409
NMHC Cal Slope:	0.997889	0.998324
NMHC Cal Offset:	-0.002988	0.004817

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

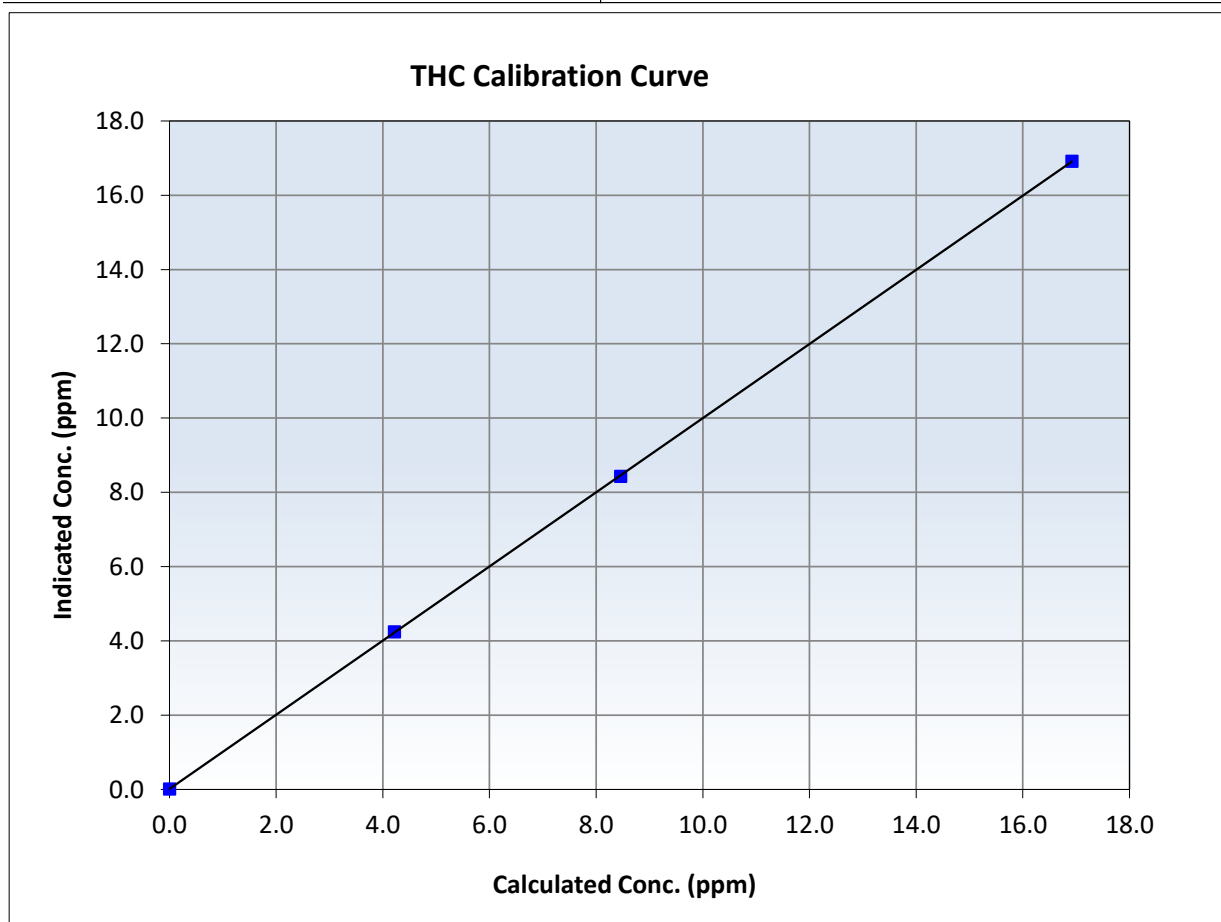
THC Calibration Summary

Station Information

Calibration Date:	July 13, 2026	Previous Calibration:	June 23, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	9:13	End Time (MST):	13:05
Analyzer make:	Thermo 55i	Analyzer serial #:	1172750023

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.02	----	Correlation Coefficient	0.999991	≥ 0.995
16.92	16.92	1.0001	Slope	0.998395	$0.90 - 1.10$
8.46	8.43	1.0035	Intercept	0.014627	± 0.5
4.22	4.25	0.9938			





Wood Buffalo Environmental Association

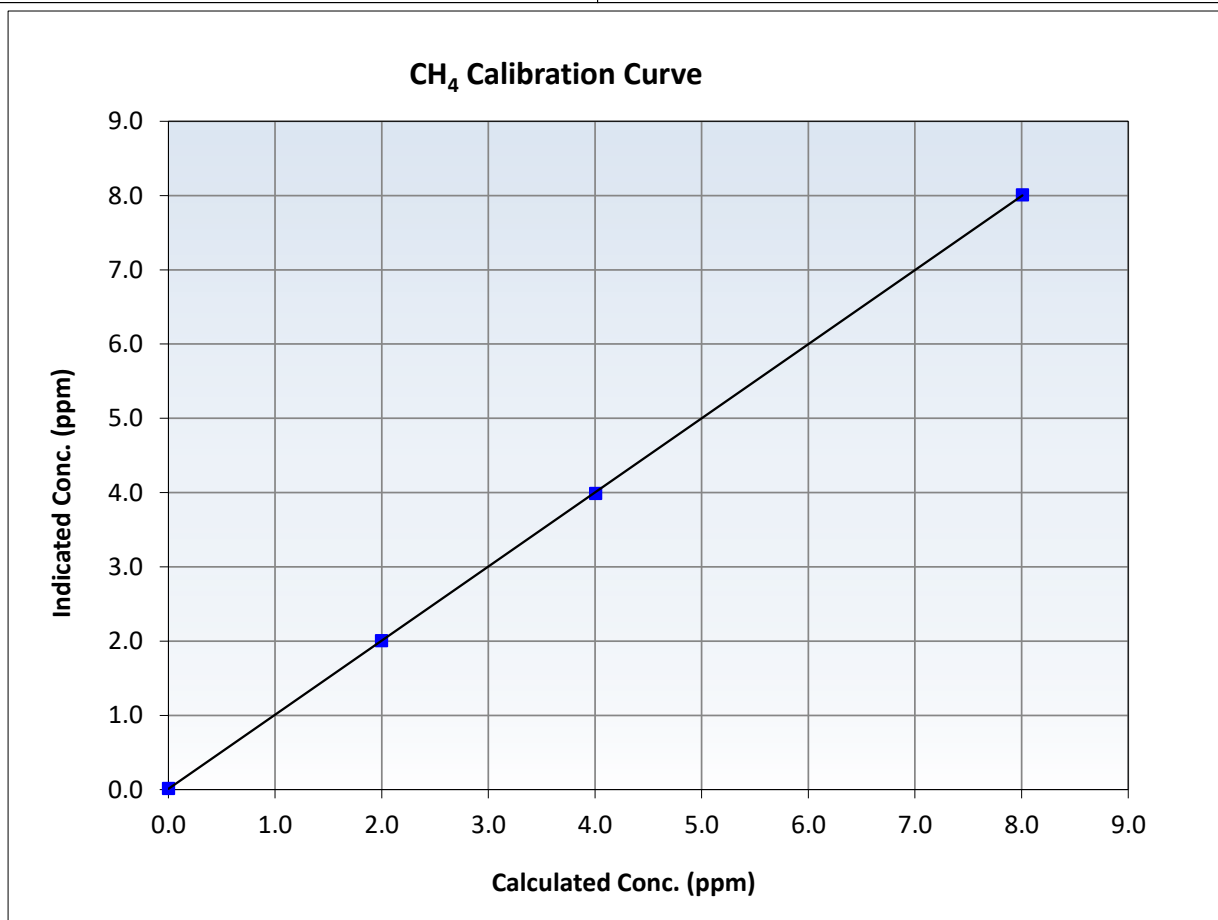
CH₄ Calibration Summary

Station Information

Calibration Date:	July 13, 2026	Previous Calibration:	June 23, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	9:13	End Time (MST):	13:05
Analyzer make:	Thermo 55i	Analyzer serial #:	1172750023

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.02	----	Correlation Coefficient	0.999988	≥ 0.995
8.01	8.01	0.9997	Slope	0.998018	$0.90 - 1.10$
4.00	3.99	1.0039	Intercept	0.010409	± 0.5
2.00	2.01	0.9946			





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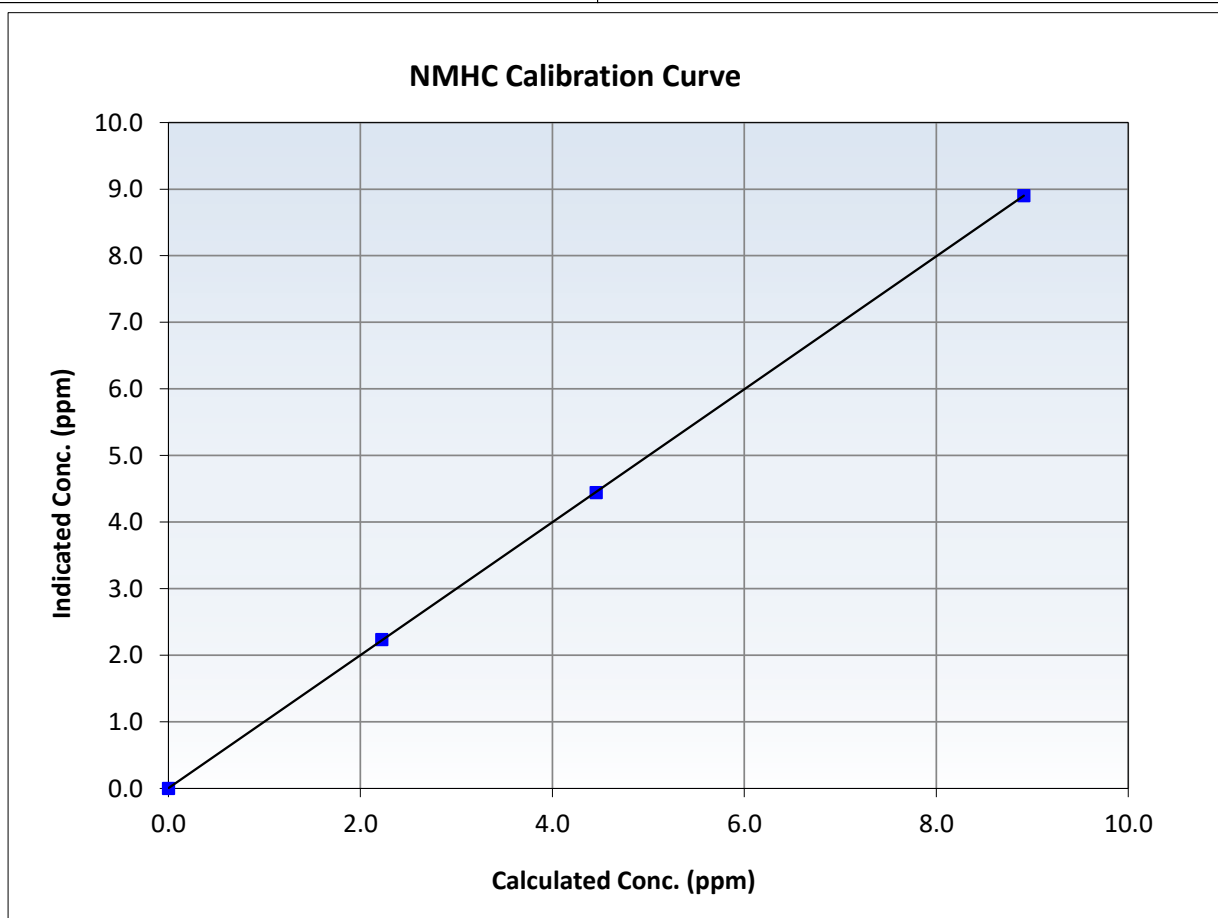
NMHC Calibration Summary

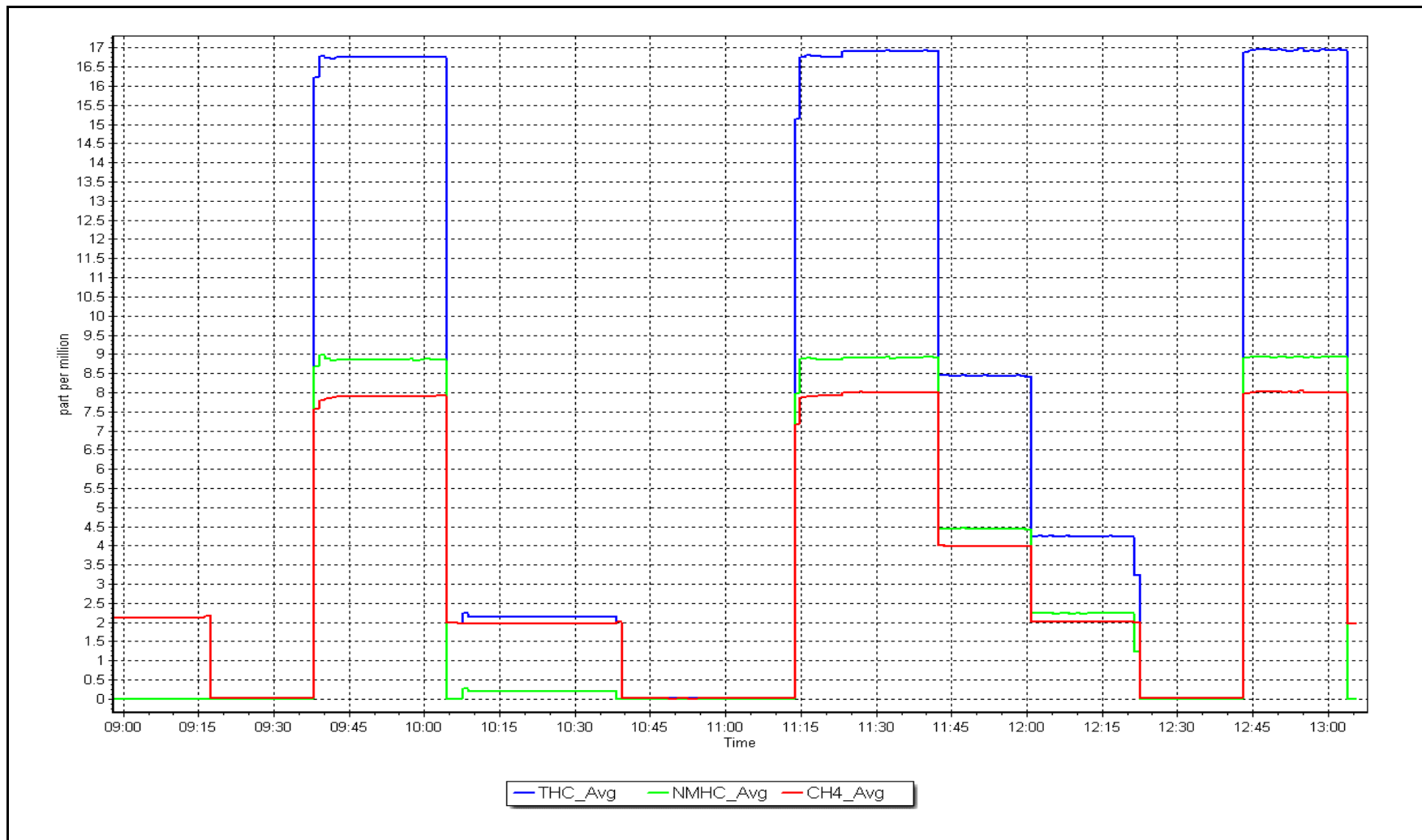
Station Information

Calibration Date:	July 13, 2026	Previous Calibration:	June 23, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	9:13	End Time (MST):	13:05
Analyzer make:	Thermo 55i	Analyzer serial #:	1172750023

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	0.999993	<i>≥0.995</i>
8.91	8.90	1.0009	Slope	0.998324	<i>0.90 - 1.10</i>
4.46	4.44	1.0029	Intercept	0.004817	<i>+/-0.5</i>
2.22	2.24	0.9936			







Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Fort Hills
Station number: AMS 23
Calibration Date: July 20, 2026
Last Cal Date: June 12, 2026
Start time (MST): 10:23
End time (MST): 15:26
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: 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	-0.1	-0.1	0.0	----	----
AF High point	4933	66.6	803.3	800.6	2.7	791.0	790.1	0.8	1.0154	1.0132
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 804.1 ppb	NO = 802.8 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -1.6%	
Baseline Corr 1st pt	NO _x = 791.1 ppb	NO = 790.2 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: API T200
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 4260

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.470	0.475	NO bkgnd or offset:	-1.1	-1.1
NOX coeff or slope:	0.464	0.469	NOX bkgnd or offset:	-0.1	-0.1
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	8.3	8.3

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.000713	0.996616
NO _x Cal Offset:	0.312910	0.552018
NO Cal Slope:	1.004359	1.000634
NO Cal Offset:	-1.247618	-0.668417
NO ₂ Cal Slope:	0.990115	0.991631
NO ₂ Cal Offset:	-0.098904	-1.185645

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	0.2	0.0	----	----
High point	4933	66.6	803.3	800.6	2.7	801.1	801.2	-0.1	1.0027	0.9992
Mid point	4967	33.3	401.6	400.2	1.3	400.4	398.4	2.1	1.0029	1.0046
Low point	4983	16.6	200.2	199.5	0.7	200.8	198.8	2.0	0.9971	1.0038
As left zero	5000	0.0	0.0	0.0	0.0	0.2	0.2	0.0	----	----
As left span	4933	66.6	803.3	402.6	400.7	793.5	402.6	390.9	1.0123	1.0000
Average Correction Factor									1.0009	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	0.0	----	----
High GPT point	796.5	401.6	397.6	393.5	1.0103	99.0%
Mid GPT point	796.5	600.2	199.0	196.0	1.0151	98.5%
Low GPT point	796.5	696.7	102.5	98.9	1.0360	96.5%
Average Correction Factor					1.0205	98.0%

Notes:

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

Calibration Performed By:

Mohammed Kashif



Wood Buffalo Environmental Association

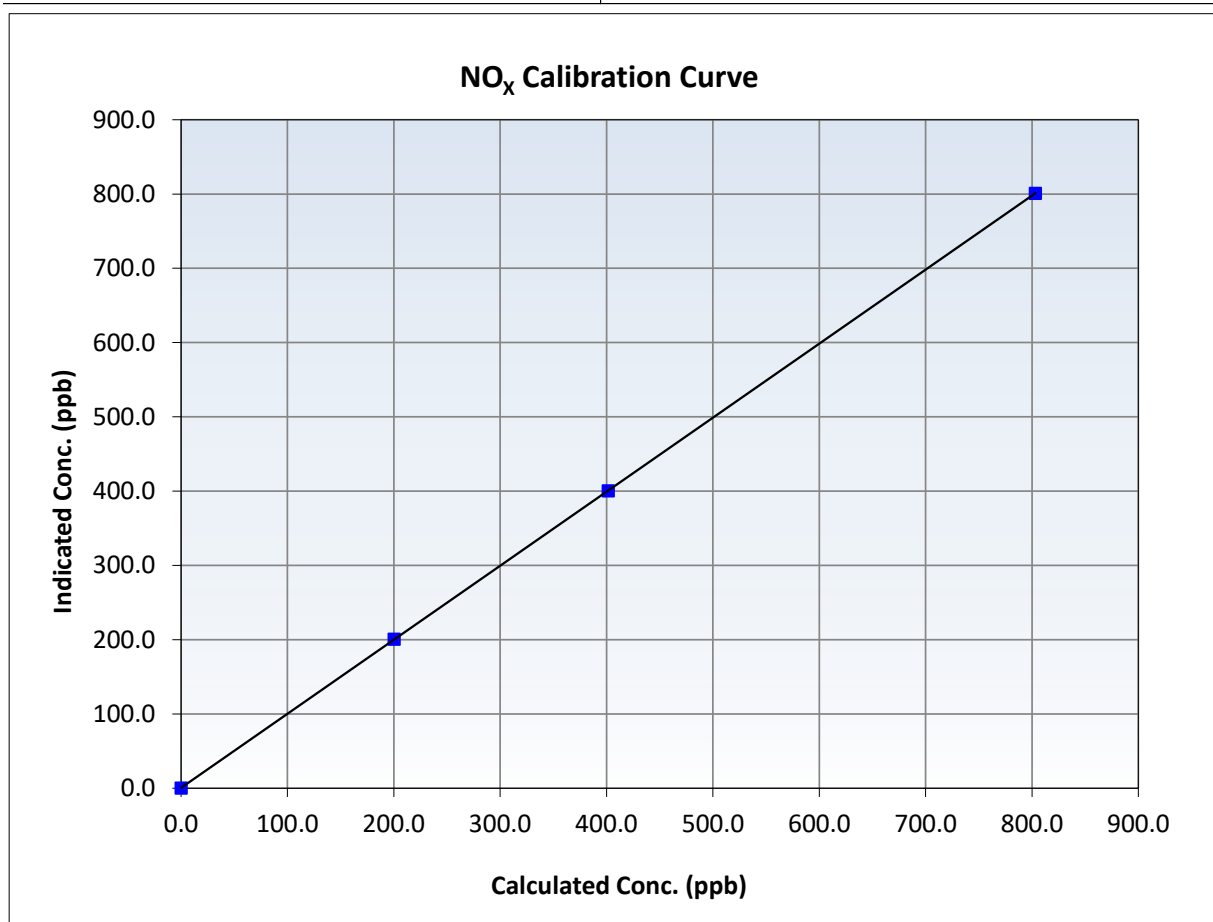
NO_x Calibration Summary

Station Information

Calibration Date:	July 20, 2026	Previous Calibration:	June 12, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:23	End Time (MST):	15:26
Analyzer make:	API T200	Analyzer serial #:	4260

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
803.3	801.1	1.0027	Slope	0.996616	0.90 - 1.10
401.6	400.4	1.0029	Intercept	0.552018	+/-20
200.2	200.8	0.9971			





Wood Buffalo Environmental Association

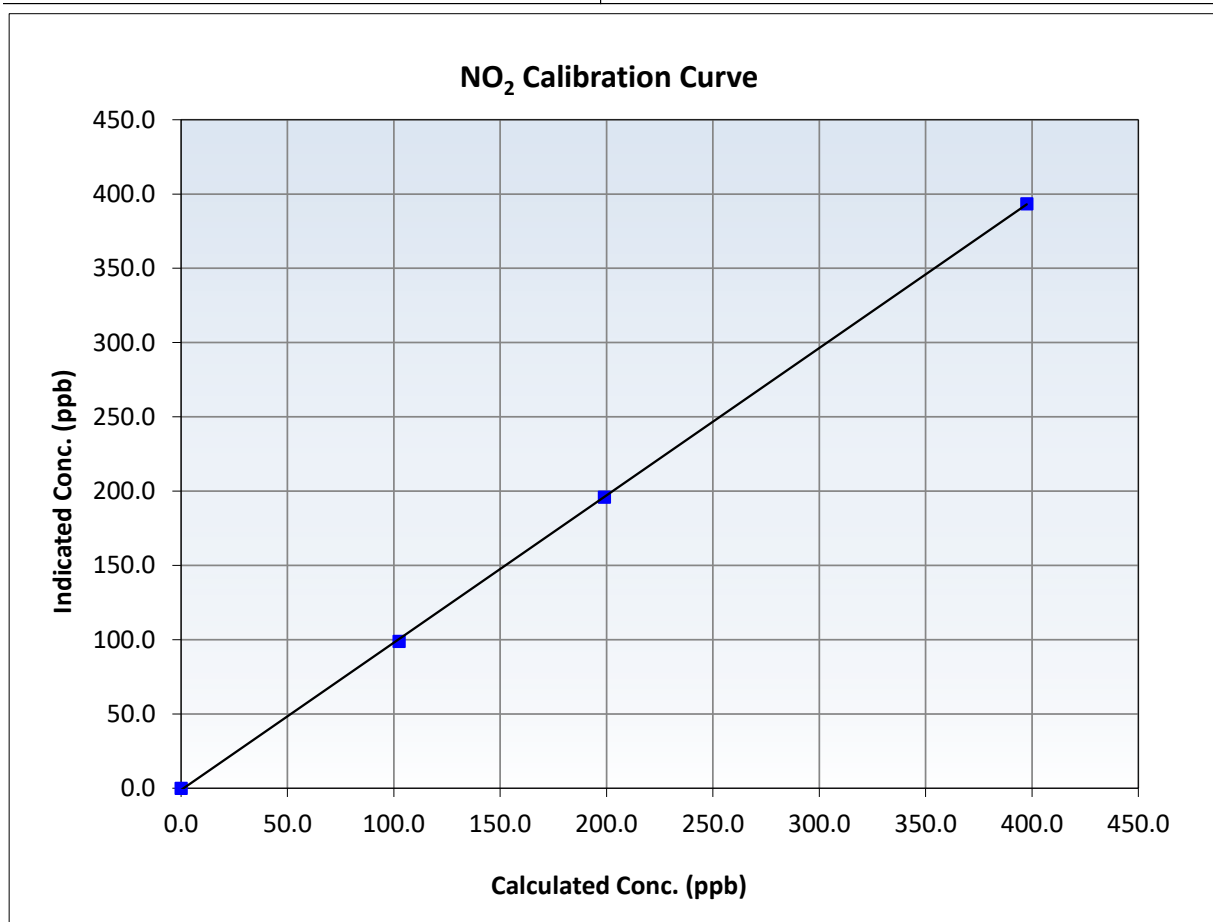
NO₂ Calibration Summary

Station Information

Calibration Date:	July 20, 2026	Previous Calibration:	June 12, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:23	End Time (MST):	15:26
Analyzer make:	API T200	Analyzer serial #:	4260

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	0.999953	≥ 0.995
397.6	393.5	1.0103	Slope	0.991631	$0.90 - 1.10$
199.0	196.0	1.0151	Intercept	-1.185645	± 20
102.5	98.9	1.0360			





Wood Buffalo Environmental Association

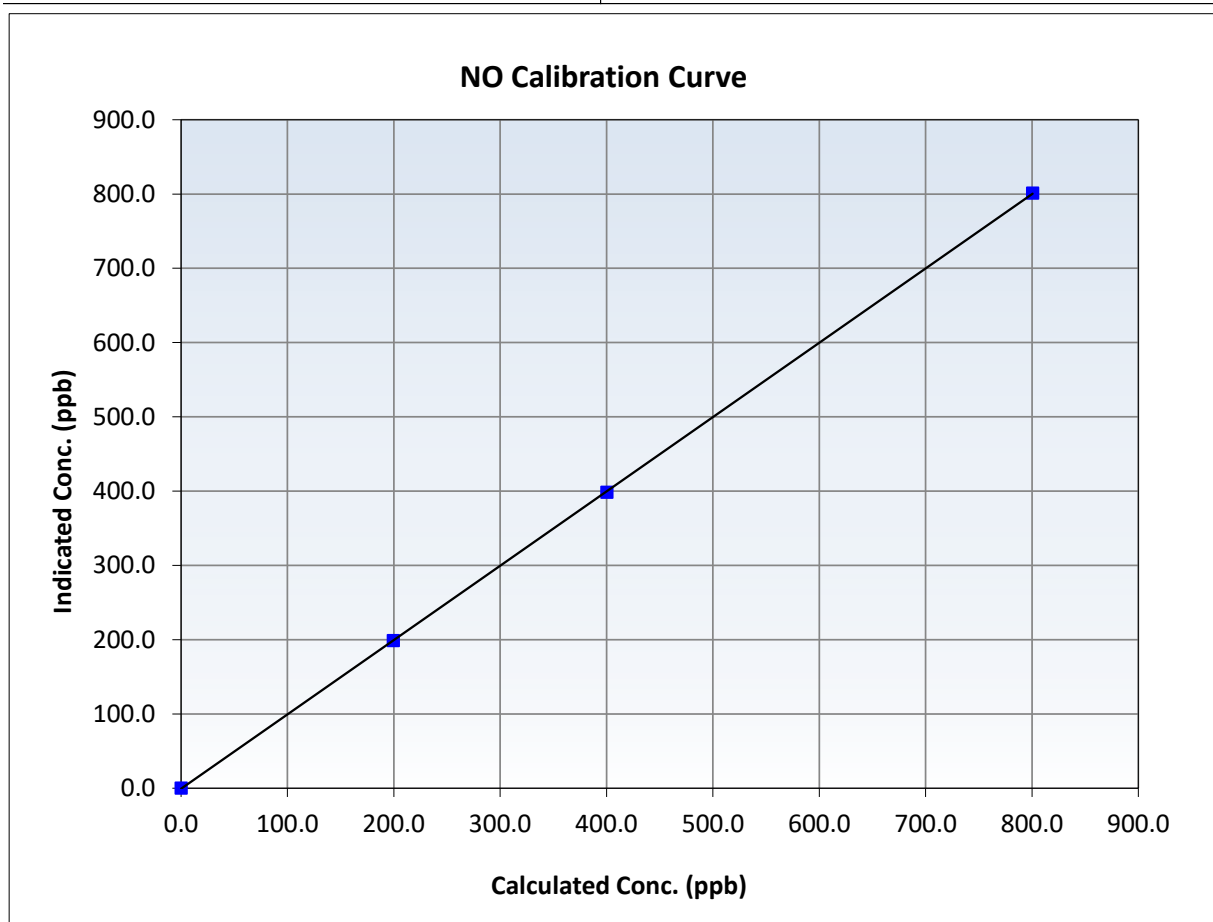
NO Calibration Summary

Station Information

Calibration Date:	July 20, 2026	Previous Calibration:	June 12, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:23	End Time (MST):	15:26
Analyzer make:	API T200	Analyzer serial #:	4260

Calibration Data

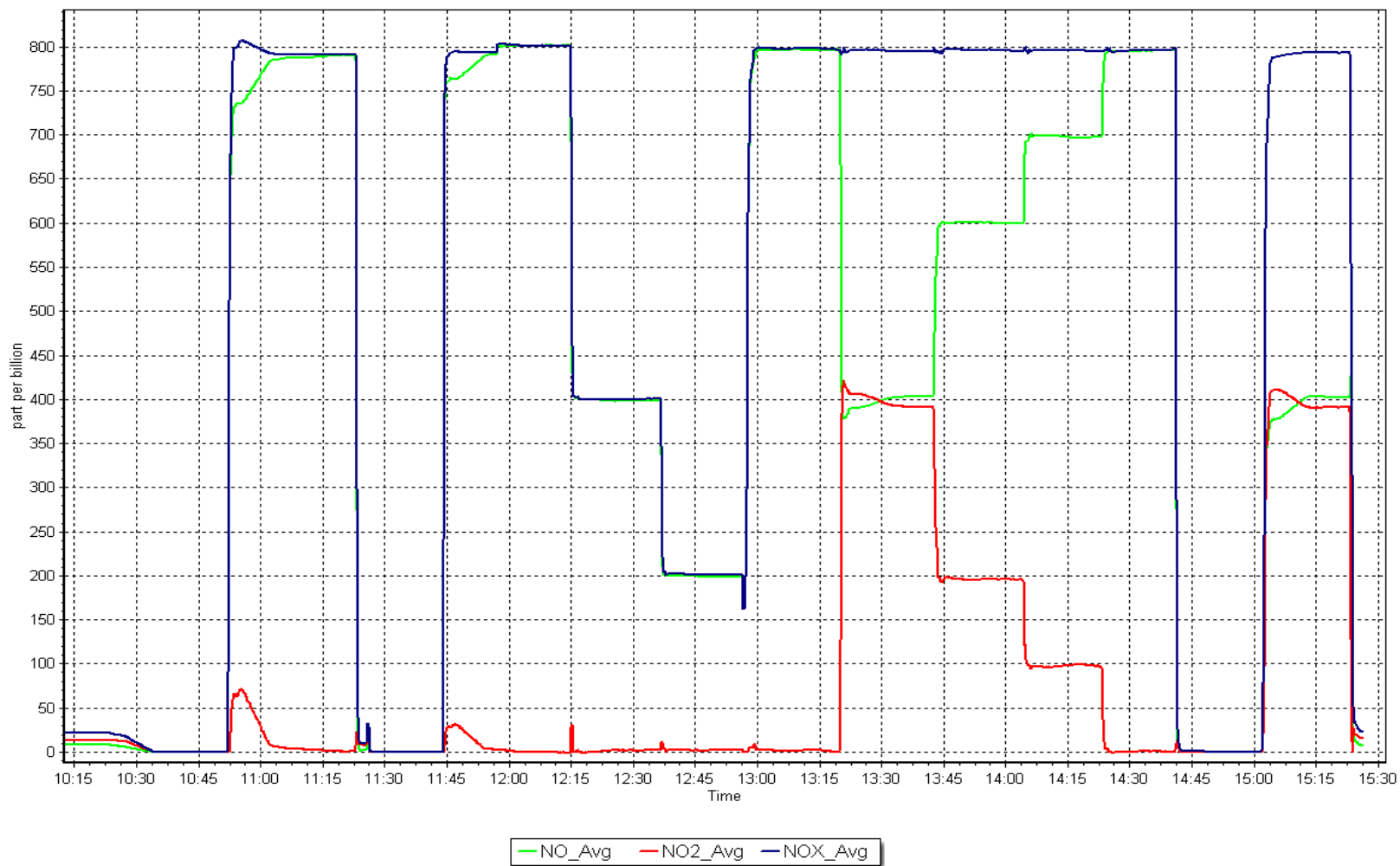
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999990	≥ 0.995
800.6	801.2	0.9992	Slope	1.000634	$0.90 - 1.10$
400.2	398.4	1.0046	Intercept	-0.668417	± 20
199.5	198.8	1.0038			



NO_x Calibration Plot

Date: July 20, 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: July 20, 2026 Last Cal Date: June 12, 2026
Start time (MST): 13:05 End time (MST): 14:30

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)	19.3	18.95	19.3	☐	+/- 2 °C
P (mmHg)	739.8	739.17	739.8	☐	+/- 10 mmHg
Flow (LPM)	4.96	4.988	4.96	☐	+/- 0.25 LPM
PW% (pump)	32	----	32	☐	>80%
Zero Verification	PM w/o HEPA: 121.2		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: 16-Jul-26
Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	10.6	10.8	10.8	☐	+/- 0.5

Date Optical Chamber Cleaned: July 20, 2026
Date Disposable Filter Changed: July 20, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: July 20, 2026
Date RH/T Sensor Cleaned: July 20, 2026

Notes: Leak check, flow, and PMT were checked before and after cleaning. After cleaning the optical chamber, the PMT verified at 10.8 and no adjustments made. Leak check passed.

Calibration by: Mohammed Kashif



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS25 WASKŌW OHCI PIMÂTISIWIN JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Waskow ohci Pimatisiwin Station number: AMS 25
Calibration Date: July 8, 2026 Last Cal Date: June 1, 2026
Start time (MST): 11:15 End time (MST): 14:04
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:	0.999355	1.001812	Backgd or Offset:	10.7	10.7
Calibration intercept:	0.387529	0.427901	Coeff or Slope:	1.035	1.035

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	80.5	800.1	818.7	0.977
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	818.6	Previous response	800.0	*% change	2.3%
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	0.3	----
High point	4920	80.5	800.1	802.0	0.998
Mid point	4960	40.2	399.6	400.5	0.998
Low point	4980	20.1	199.8	200.9	0.994
As left zero	5000	0.0	0.0	0.2	----
As left span	4920	80.5	800.1	804.7	0.994
Average Correction Factor:					0.997

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

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

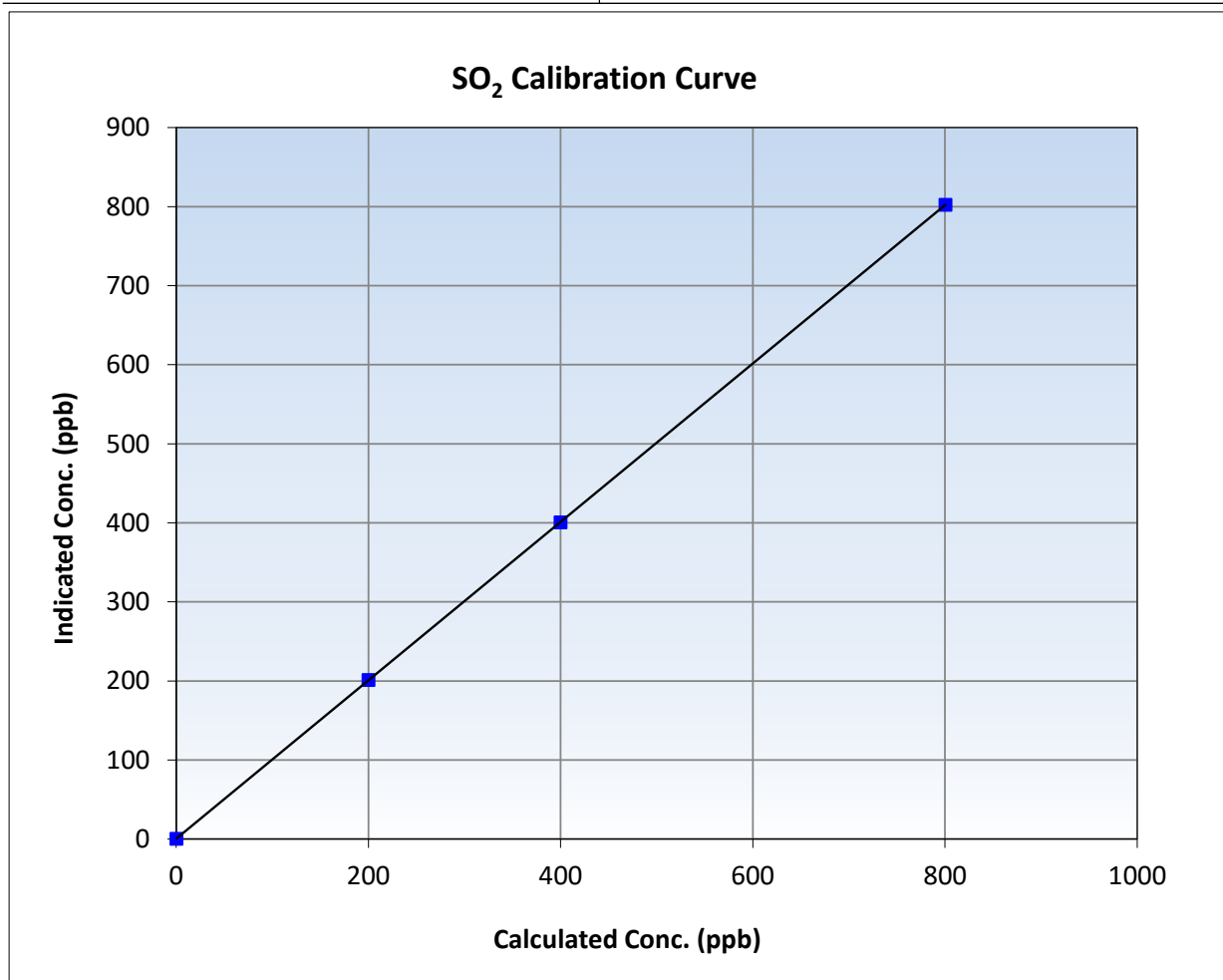
SO₂ Calibration Summary

Station Information

Calibration Date:	July 8, 2026	Previous Calibration:	June 1, 2026
Station Name:	Waskow ohci Pimatisiwin	Station Number:	AMS 25
Start Time (MST):	11:15	End Time (MST):	14:04
Analyzer make:	Thermo 43i	Analyzer serial #:	1118148497

Calibration Data

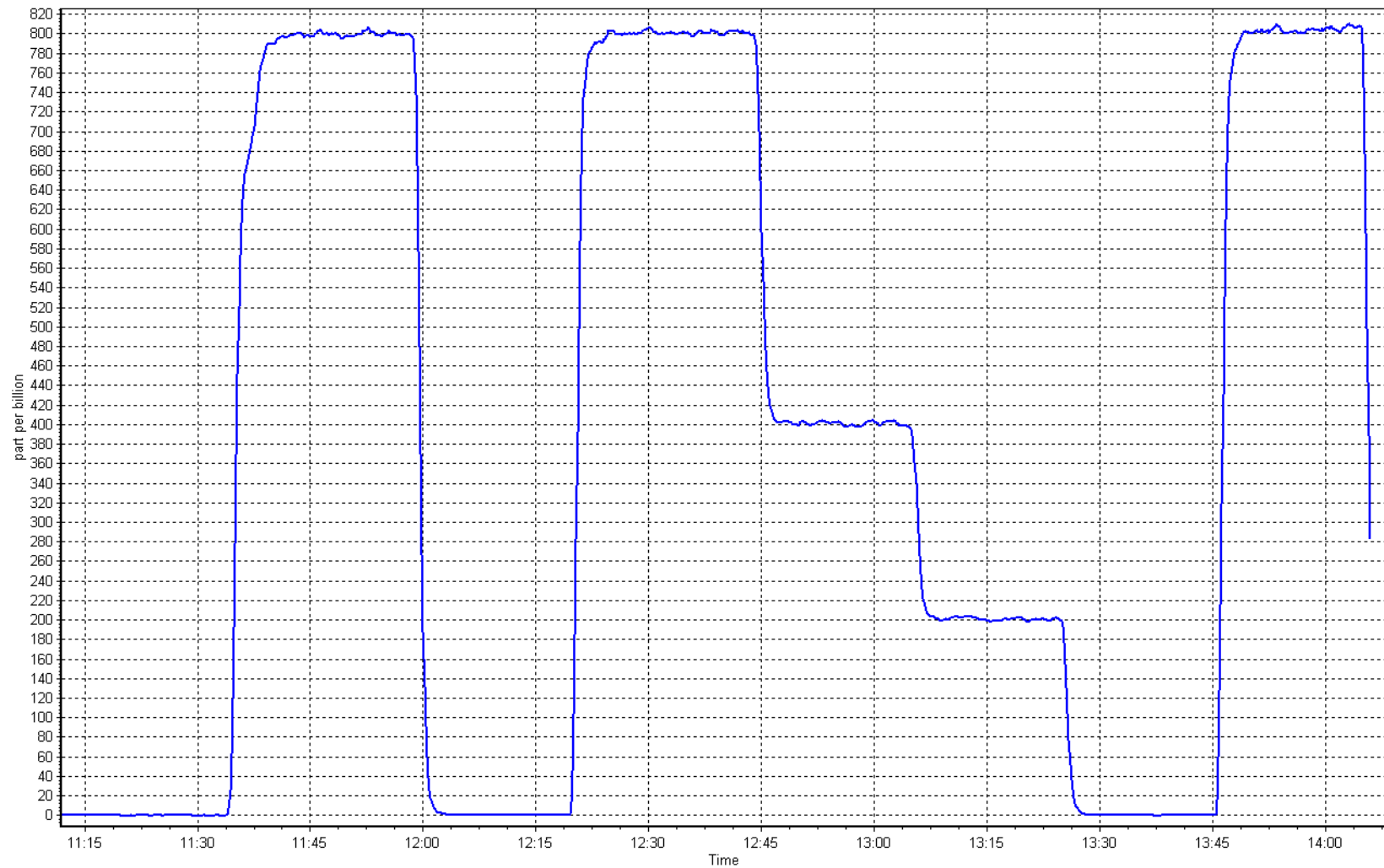
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	1.000000	≥0.995
800.1	802.0	0.9976	Slope	1.001812	0.90 - 1.10
399.6	400.5	0.9977	Intercept	0.427901	+/-30
199.8	200.9	0.9945			



SO2 Calibration Plot

Date: July 8, 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: July 7, 2026 Last Cal Date: June 23, 2026
Start time (MST): 9:26 End time (MST): 14:12
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 #: 1218153358
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:	0.995513	0.993940	Backgd or Offset:	2.42
Calibration intercept:	0.142171	0.322232	Coeff or Slope:	1.057

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	80.5	80.0	78.8	1.017
As found Mid point	4960	40.3	40.1	39.5	1.017
As found Low point	4980	20.1	20.0	19.8	1.014
New cylinder response					
Baseline Corr As found:	78.7	Prev response:	79.81	*% change:	-1.4%
Baseline Corr 2nd AF pt:	39.4	AF Slope:	0.983231	AF Intercept:	0.122215
Baseline Corr 3rd AF pt:	19.7	AF Correlation:	0.999999	* = > +/-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	4919	80.5	80.0	79.8	1.003
Mid point	4960	40.3	40.1	40.2	0.996
Low point	4980	20.1	20.0	20.3	0.984
As left zero	5000	0.0	0.0	0.4	----
As left span	4920	80.0	800.0	792.0	1.010
SO2 Scrubber Check				0.0	
Date of last scrubber change:				Ave Corr Factor	0.994
Date of last converter efficiency test:		February 12, 2025		111.0% efficiency	

Notes: Changed the inlet filter after the as founds. Adjusted the span. Scrubber check passed.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

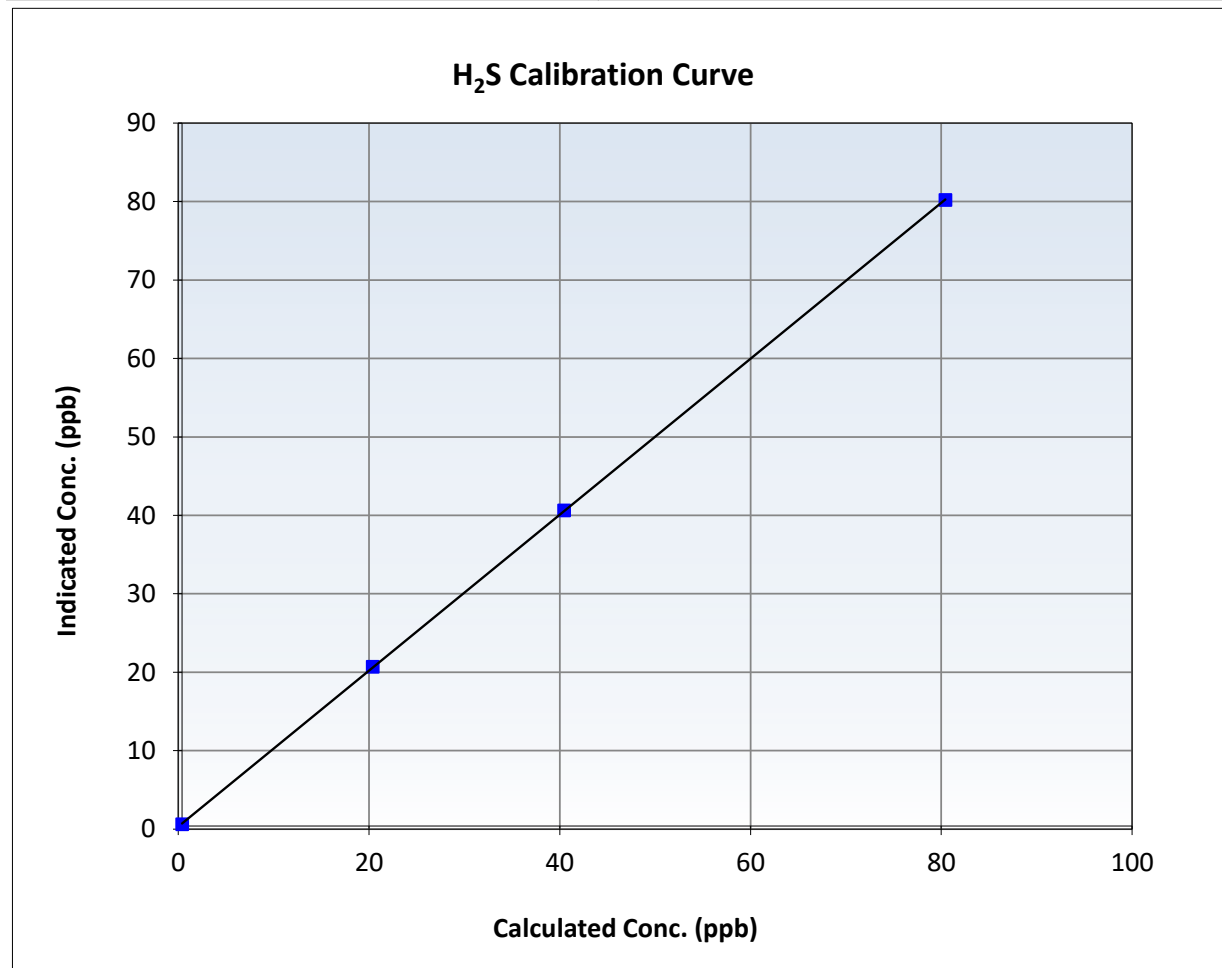
H₂S Calibration Summary

Station Information

Calibration Date:	July 7, 2026	Previous Calibration:	June 23, 2026
Station Name:	Waskow ohci Pimatisiwin	Station Number:	AMS 25
Start Time (MST):	9:26	End Time (MST):	14:12
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1218153358

Calibration Data

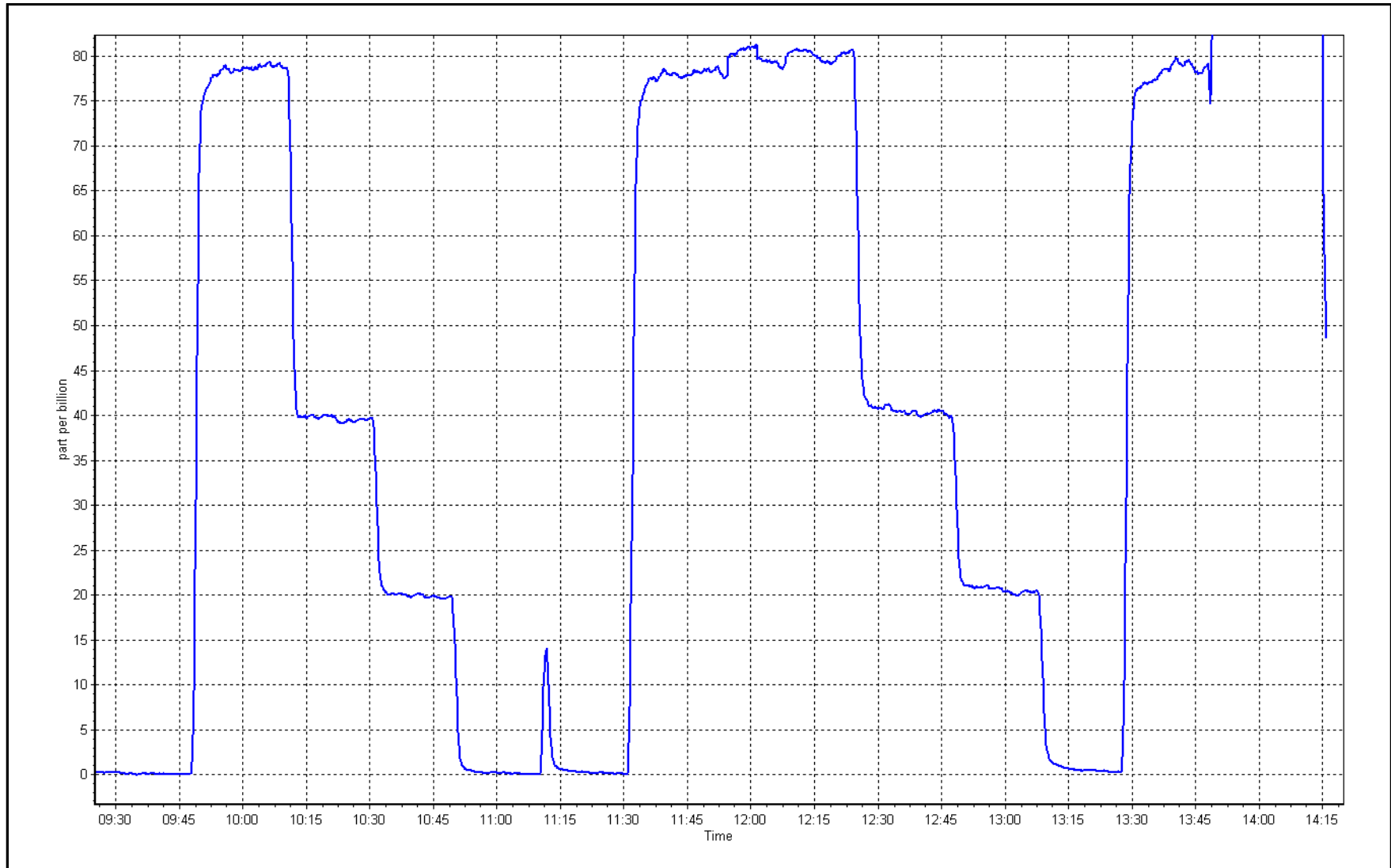
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999989		≥0.995
80.0	79.8	1.0028	Slope	0.993940		0.90 - 1.10
40.1	40.2	0.9964	Intercept	0.322232		+/-3
20.0	20.3	0.9842				



H₂S Calibration Plot

Date: July 7, 2026

Location: Waskow ohci Pimatisiwin





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS27
JACKFISH 2/3
JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Jackfish 2/3 Station number: AMS 27
Calibration Date: July 9, 2026 Last Cal Date: June 16, 2026
Start time (MST): 9:05 End time (MST): 12:36
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.70 ppm Cal Gas Exp Date: April 15, 2034
Cal Gas Cylinder #: CC316820
Removed Cal Gas Conc: 50.58 ppm Rem Gas Exp Date: December 29, 2028
Removed Gas Cyl #: SG9133974BAL
Calibrator Model: API T700 Diff between cyl: -1.2%
Zero Air Gen Model: API 701 Serial Number: 5252
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:	1.001908	0.994678	Backgd or Offset:	10.8
Calibration intercept:	-0.114472	1.707661	Coeff or Slope:	0.896

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	800.2	804.6	0.994
As found Mid point					
As found Low point					
New cylinder response	4921	78.9	800.1	794.6	1.007
Baseline Corr As found:	805.0	Previous response	801.6	*% 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	-0.3	----
High point	4921	78.9	800.1	796.4	1.005
Mid point	4961	39.4	399.5	400.4	0.998
Low point	4980	19.7	199.8	202.2	0.988
As left zero	5000	0.0	0.0	-0.6	----
As left span	4921	78.9	800.1	805.4	0.993
Average Correction Factor:					0.997

Notes: Changed the sample inlet filter after as founds. Span adjusted.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

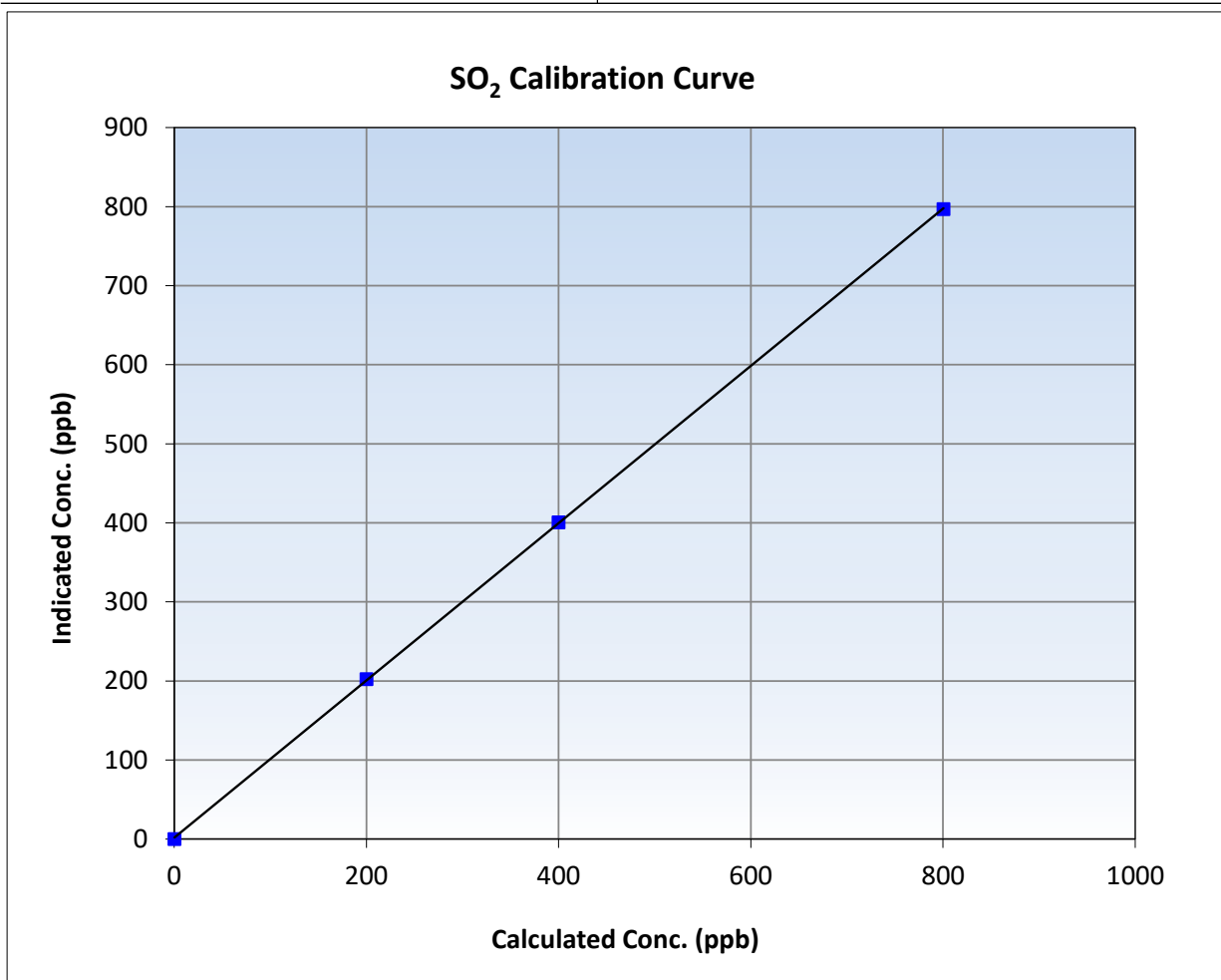
SO₂ Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 16, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:05	End Time (MST):	12:36
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	12124313138

Calibration Data

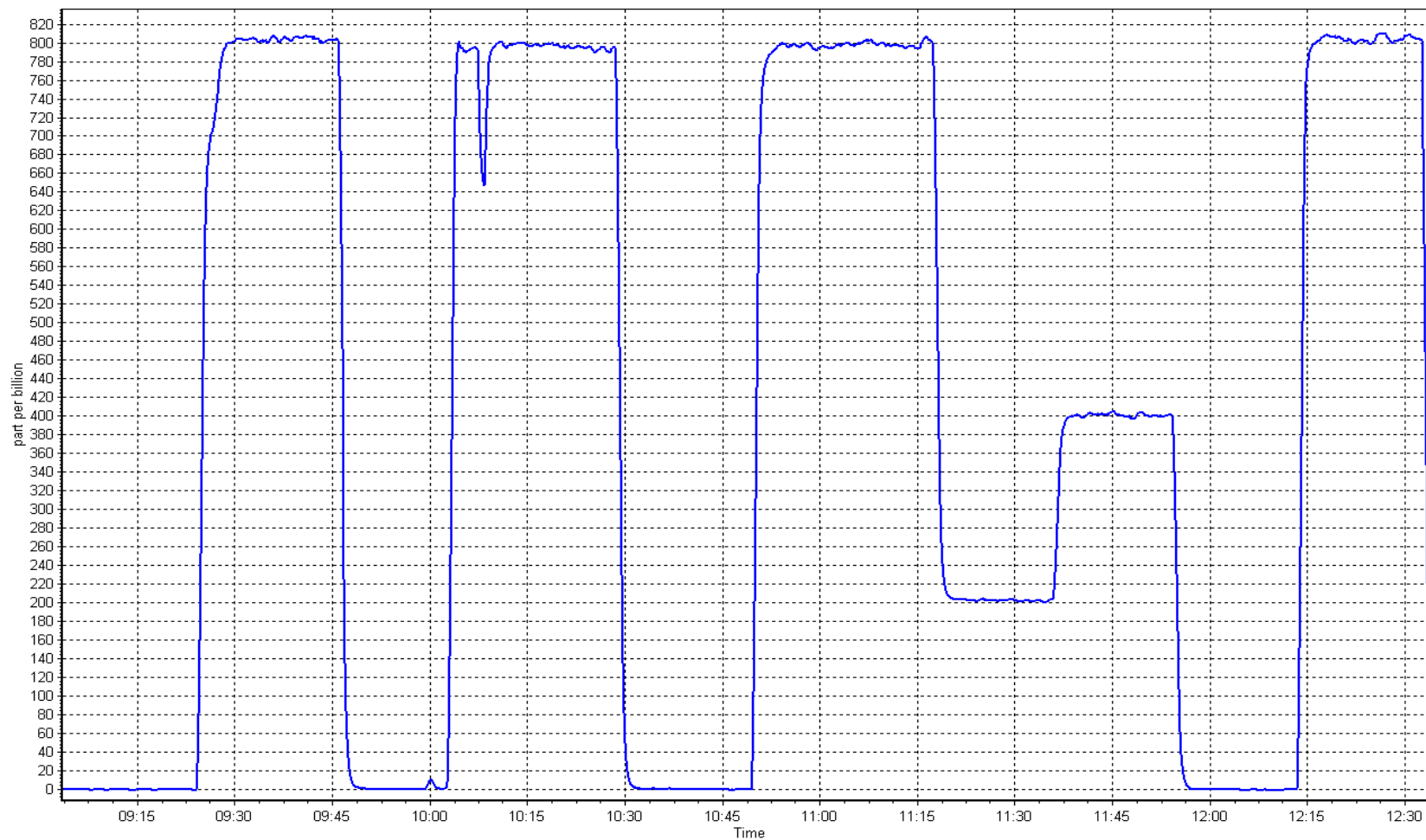
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999970	≥0.995
800.1	796.4	1.0046	Slope	0.994678	0.90 - 1.10
399.5	400.4	0.9977	Intercept	1.707661	+/-30
199.8	202.2	0.9880			



SO2 Calibration Plot

Date: July 9, 2026

Location: Jackfish 2/3





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Jackfish 2/3
Calibration Date: July 21, 2026
Start time (MST): 9:26
Reason: Routine

Station number: AMS 27
Last Cal Date: June 24, 2026
End time (MST): 13:22

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:	1.009005	1.007861	Backgd or Offset:	3.2	3.1
Calibration intercept:	-0.280955	-0.440912	Coeff or Slope:	1.015	1.000

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	-0.4	----
As found High point	4918	82.1	80.0	80.8	0.985
As found Mid point	4959	41.1	40.0	39.9	0.993
As found Low point	4979	20.5	20.0	19.7	0.993
New cylinder response					
Baseline Corr As found:	81.2	Prev response:	80.40	*% change:	1.0%
Baseline Corr 2nd AF pt:	40.3	AF Slope:	1.015719	AF Intercept:	-0.540876
Baseline Corr 3rd AF pt:	20.1	AF Correlation:	0.999977	* = > +/-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	-0.4	----
High point	4918	82.1	80.0	80.2	0.997
Mid point	4959	41.1	40.0	39.8	1.006
Low point	4979	20.5	20.0	19.7	1.014
As left zero	5000	0.0	0.0	-0.3	----
As left span	4918	82.1	80.0	8.0	9.971
SO2 Scrubber Check	4921	79.1	791.0	0.1	----
Date of last scrubber change:	18-Nov-25			Ave Corr Factor	1.006
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

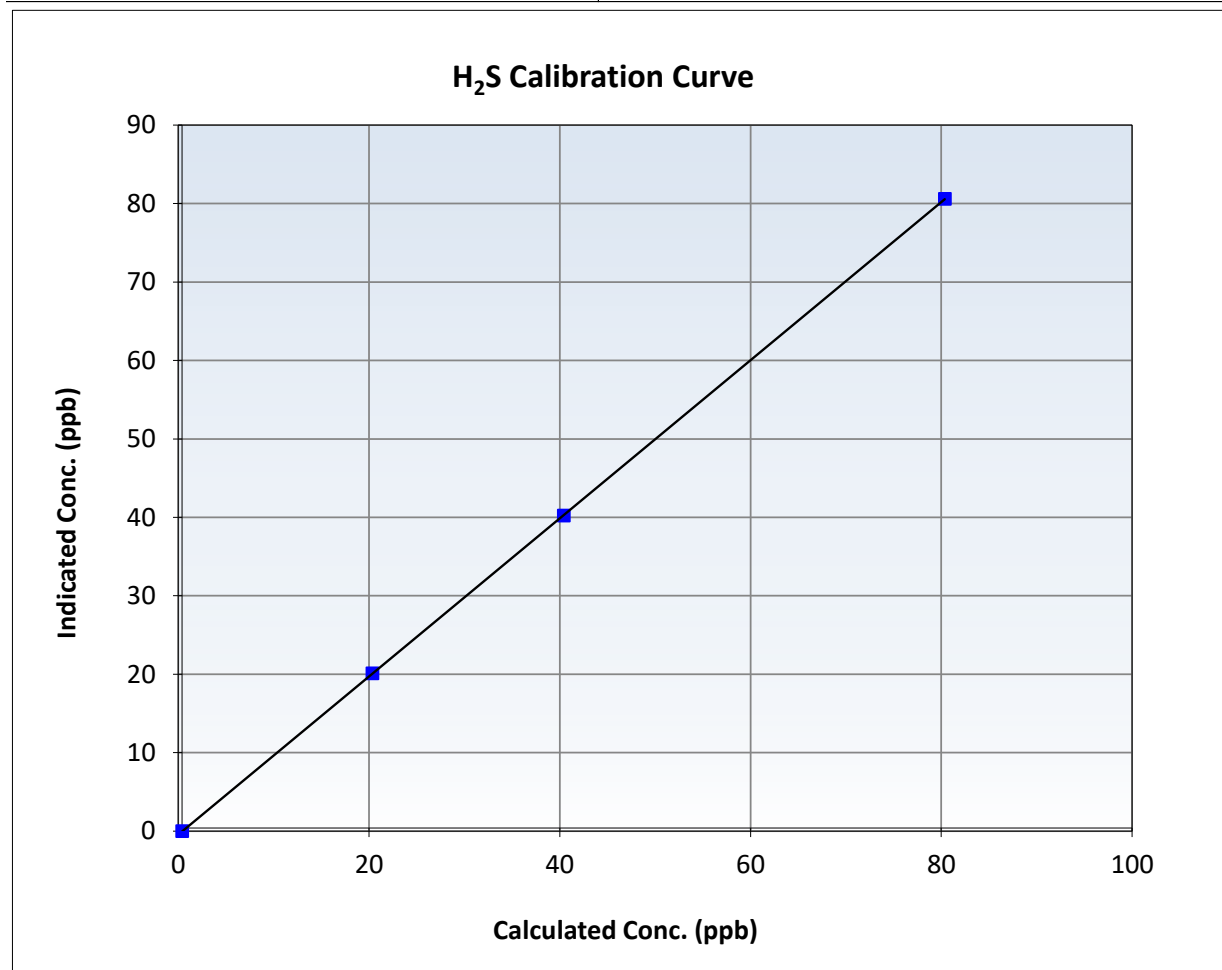
H₂S Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 24, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:26	End Time (MST):	13:22
Analyzer make:	Thermo 43iQ	Analyzer serial #:	12228021055

Calibration Data

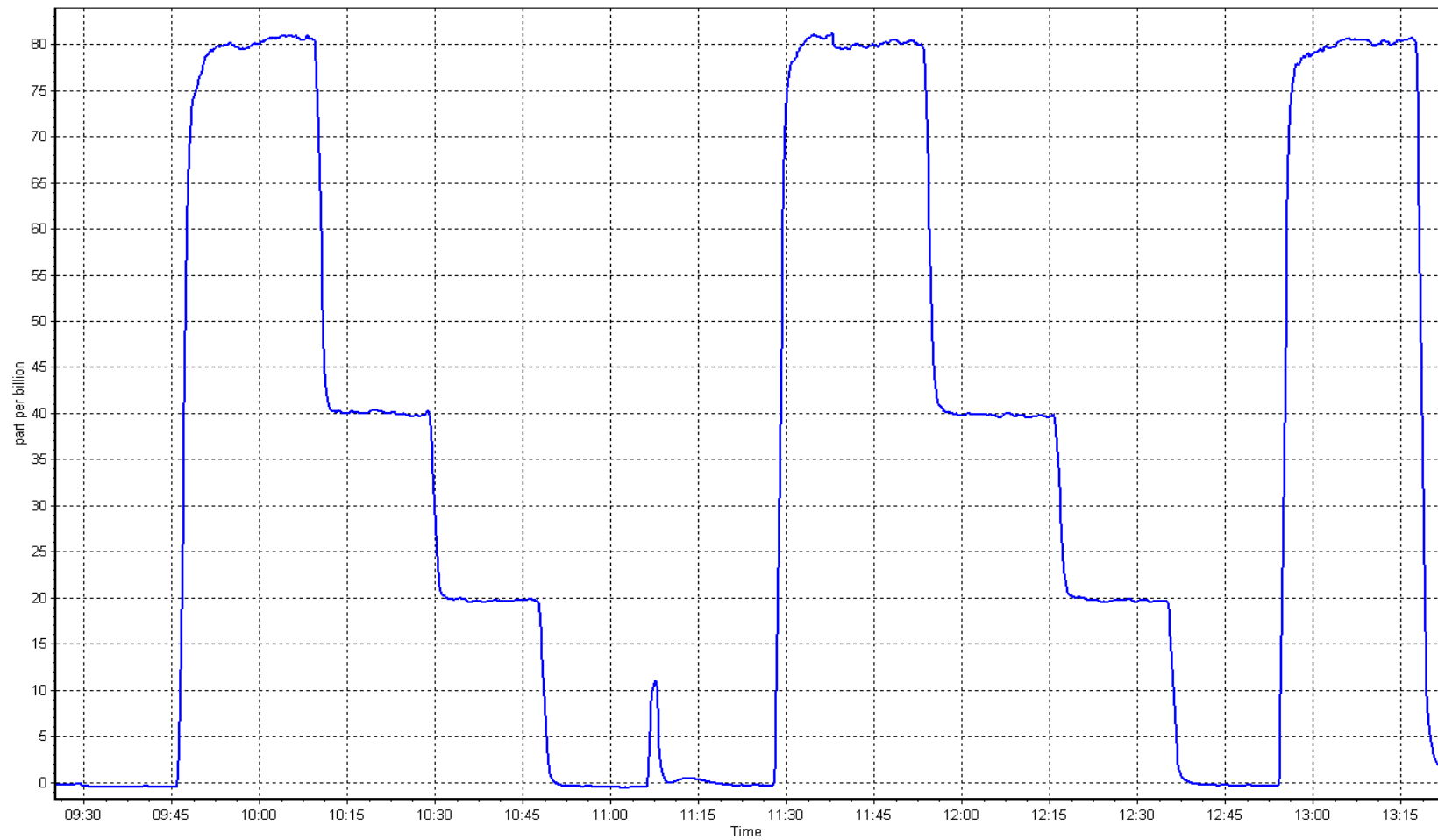
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.4	----	Correlation Coefficient	0.999996	≥ 0.995
80.0	80.2	0.9971	Slope	1.007861	$0.90 - 1.10$
40.0	39.8	1.0058	Intercept	-0.440912	± 3
20.0	19.7	1.0137			



H₂S Calibration Plot

Date: July 21, 2026

Location: Jackfish 2/3





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NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Jackfish 2/3
Station number: AMS 27
Calibration Date: July 14, 2026
Last Cal Date: June 23, 2026
Start time (MST): 9:22
End time (MST): 13:34
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 T700
ZAG make/model: Teledyne API T701H
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: 5252
Serial Number: 268

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	4934	66.4	800.7	799.4	1.3	810.3	806.1	4.4	0.9881	0.9917
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 802.5 ppb	NO = 801.1 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = 1.0%
Baseline Corr 1st pt	NO _x = 810.4 ppb	NO = 806.1 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						



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NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermoscientific
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 12400232072

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.000768	0.997271
NO _x Cal Offset:	1.203928	1.603976
NO Cal Slope:	1.002974	0.999914
NO Cal Offset:	-0.636007	0.084020
NO ₂ Cal Slope:	1.001331	0.997988
NO ₂ Cal Offset:	1.180589	0.758600

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.185	1.032	NO bkgnd or offset:	0.8	0.7
NOX coeff or slope:	0.990	0.993	NOX bkgnd or offset:	1.0	0.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	163.0	149.2

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	0.2	0.2	-0.1	----	----
High point	4934	66.4	800.7	799.4	1.3	799.2	799.3	-0.2	1.0019	1.0001
Mid point	4967	33.2	400.4	399.7	0.7	402.3	400.2	2.1	0.9952	0.9988
Low point	4983	16.6	200.2	199.9	0.3	202.2	199.5	2.7	0.9902	1.0019
As left zero	5000	0.0	0.0	0.0	0.0	0.2	0.2	0.1	----	----
As left span	4934	66.4	800.7	381.4	419.3	799.7	381.4	418.3	1.0013	1.0000
Average Correction Factor									0.9958	1.0003

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	796.2	375.1	422.4	421.8	1.0015	99.9%
Mid GPT point	796.2	582.3	215.2	216.2	0.9955	100.5%
Low GPT point	796.2	680.6	116.9	118.2	0.9892	101.1%
Average Correction Factor					0.9954	100.5%

Notes:

Changed inlet filter after as founds. Adjusted span only.

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

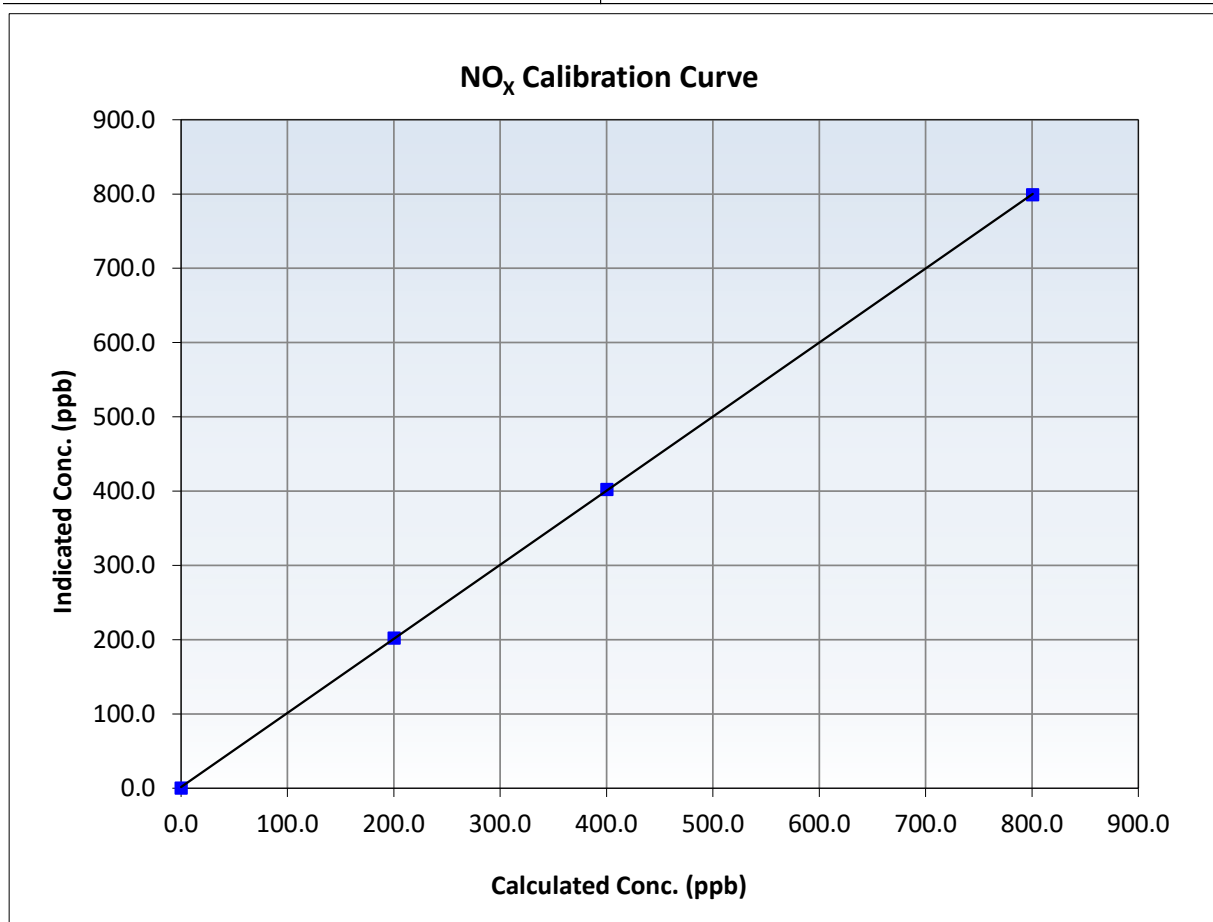
NO_x Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 23, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:22	End Time (MST):	13:34
Analyzer make:	Thermoscientific	Analyzer serial #:	12400232072

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	0.999984	≥0.995
800.7	799.2	1.0019	Slope	0.997271	0.90 - 1.10
400.4	402.3	0.9952	Intercept	1.603976	+/-20
200.2	202.2	0.9902			





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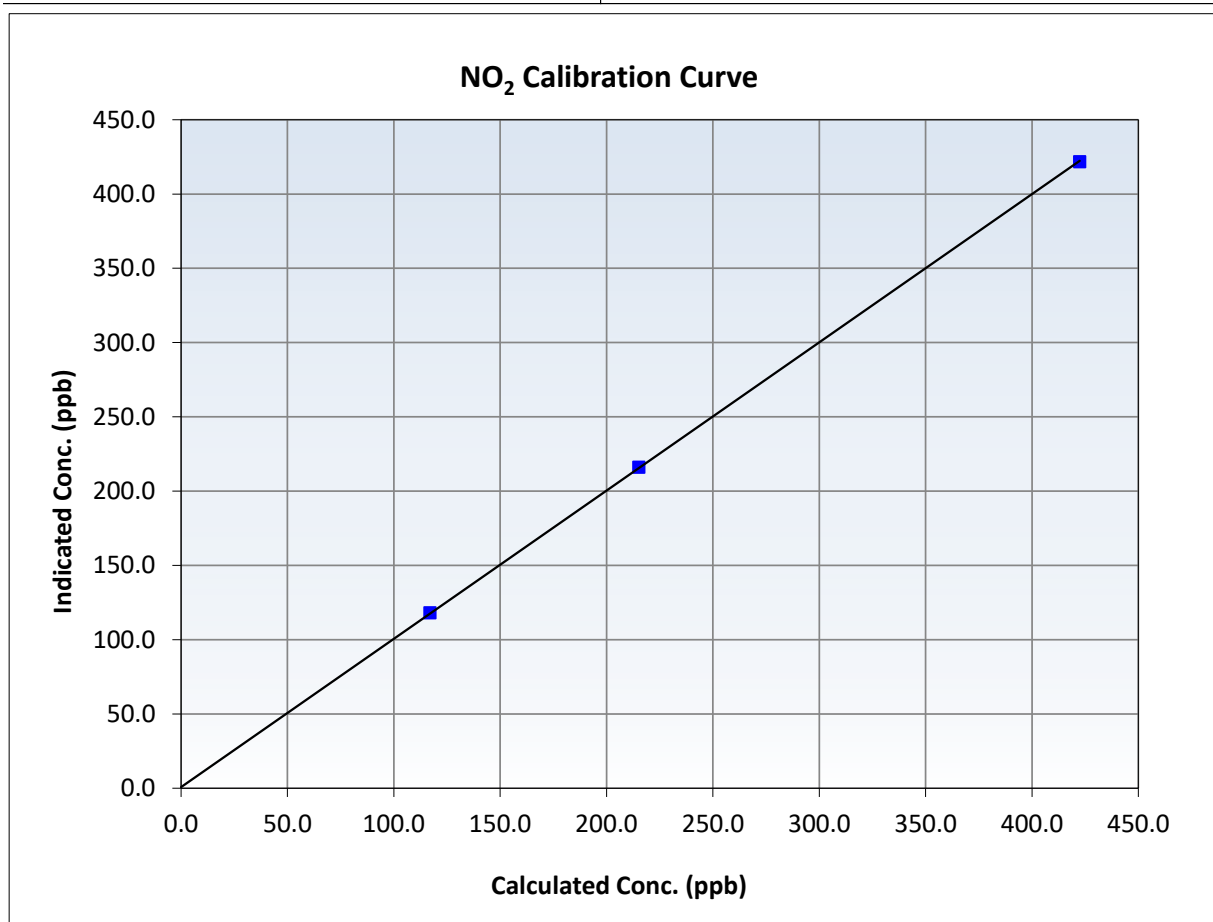
NO₂ Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 23, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:22	End Time (MST):	13:34
Analyzer make:	Thermoscientific	Analyzer serial #:	12400232072

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
422.4	421.8	1.0015	Slope	0.997988	0.90 - 1.10
215.2	216.2	0.9955	Intercept	0.758600	+/-20
116.9	118.2	0.9892			





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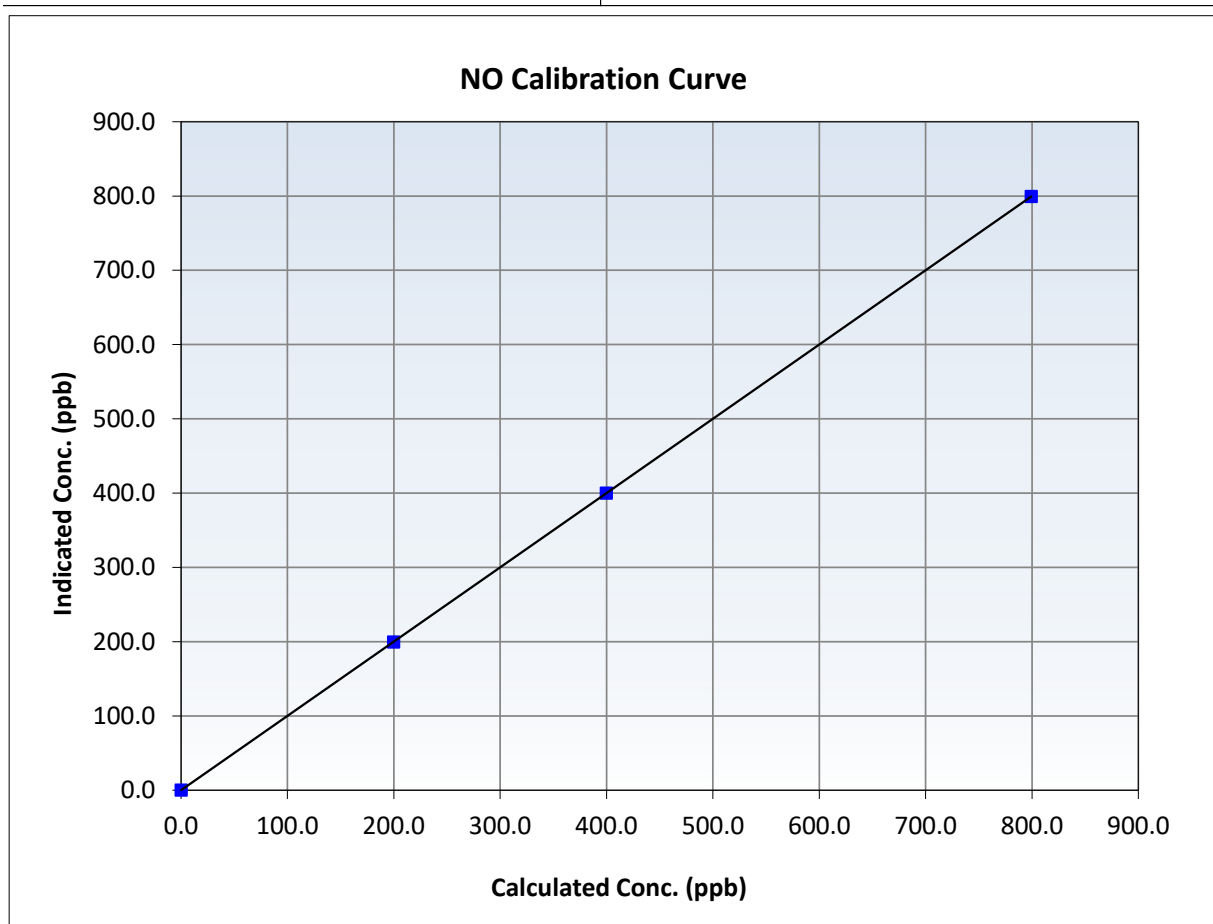
NO Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 23, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:22	End Time (MST):	13:34
Analyzer make:	Thermoscientific	Analyzer serial #:	12400232072

Calibration Data

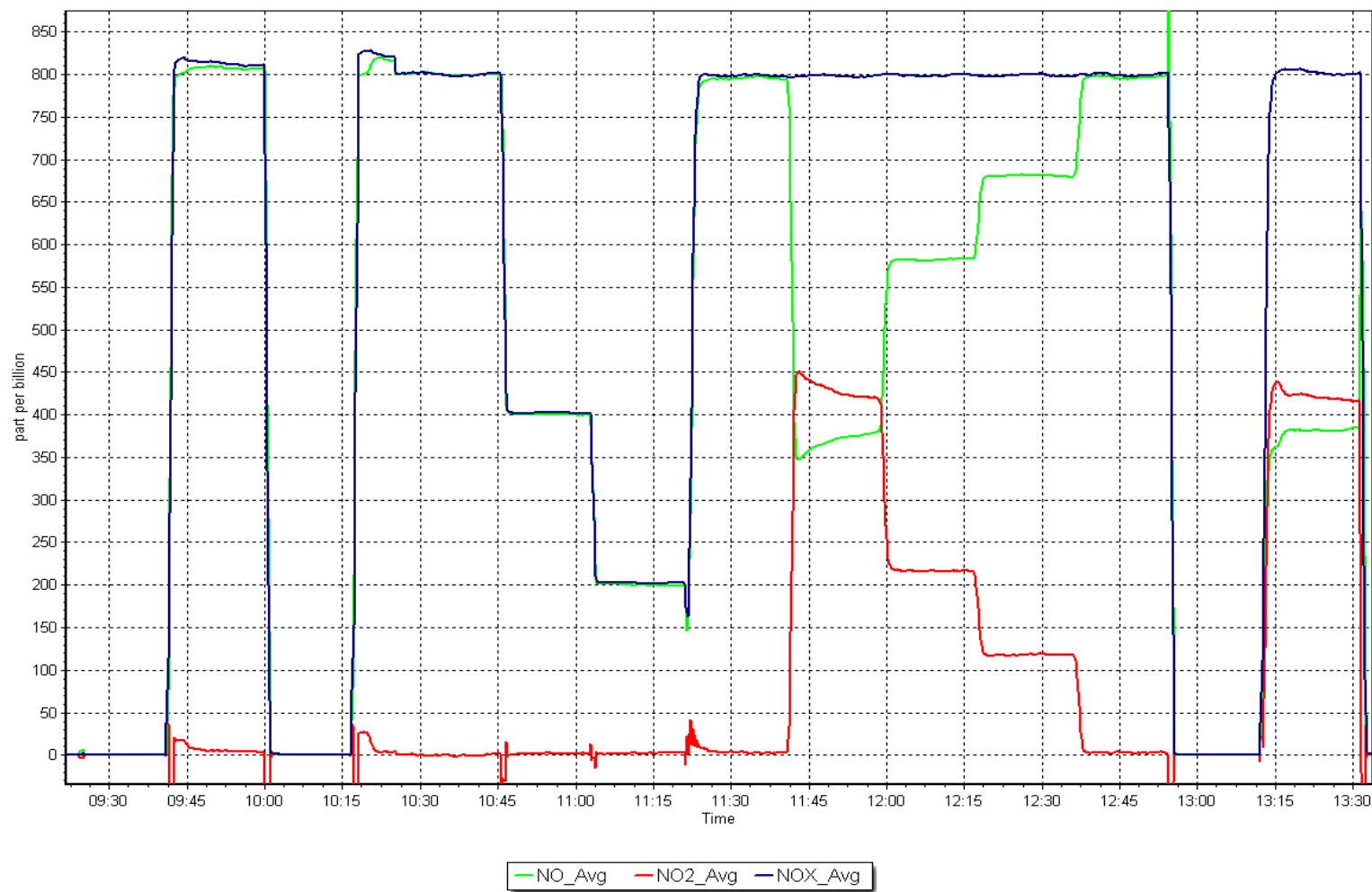
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999999	≥ 0.995
799.4	799.3	1.0001	Slope	0.999914	0.90 - 1.10
399.7	400.2	0.9988	Intercept	0.084020	+/-20
199.9	199.5	1.0019			



NO_x Calibration Plot

Date: July 14, 2026

Location: Jackfish 2/3





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS29
SURMONT 2
JULY 2026**

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Surmont 2
Calibration Date: July 24, 2026
Start time (MST): 7:34
Reason: Routine

Station number: AMS 29
Last Cal Date: June 2, 2026
End time (MST): 9:57

Calibration Standards

Cal Gas Concentration: 49.95 ppm
Cal Gas Cylinder #: CC356229
Removed Cal Gas Conc: 49.95 ppm
Removed Gas Cyl #: NA
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 5472
Serial Number: 1402

Analyzer Information

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

Serial Number: 1170050150

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.008230	1.006686	Backgd or Offset:	14.5	14.5
Calibration intercept:	-1.379251	-0.939254	Coeff or Slope:	0.946	0.946

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	80.1	800.2	803.8	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	804.1	Previous response	805.4	*% 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	0.4	----
High point	4920	80.1	800.2	805.0	0.994
Mid point	4960	40.0	399.6	401.5	0.995
Low point	4980	20.0	199.8	198.3	1.008
As left zero	5000	0.0	0.0	0.3	----
As left span	4920	80.1	800.2	803.9	0.995
Average Correction Factor:					0.999

Notes: No maintenance or adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

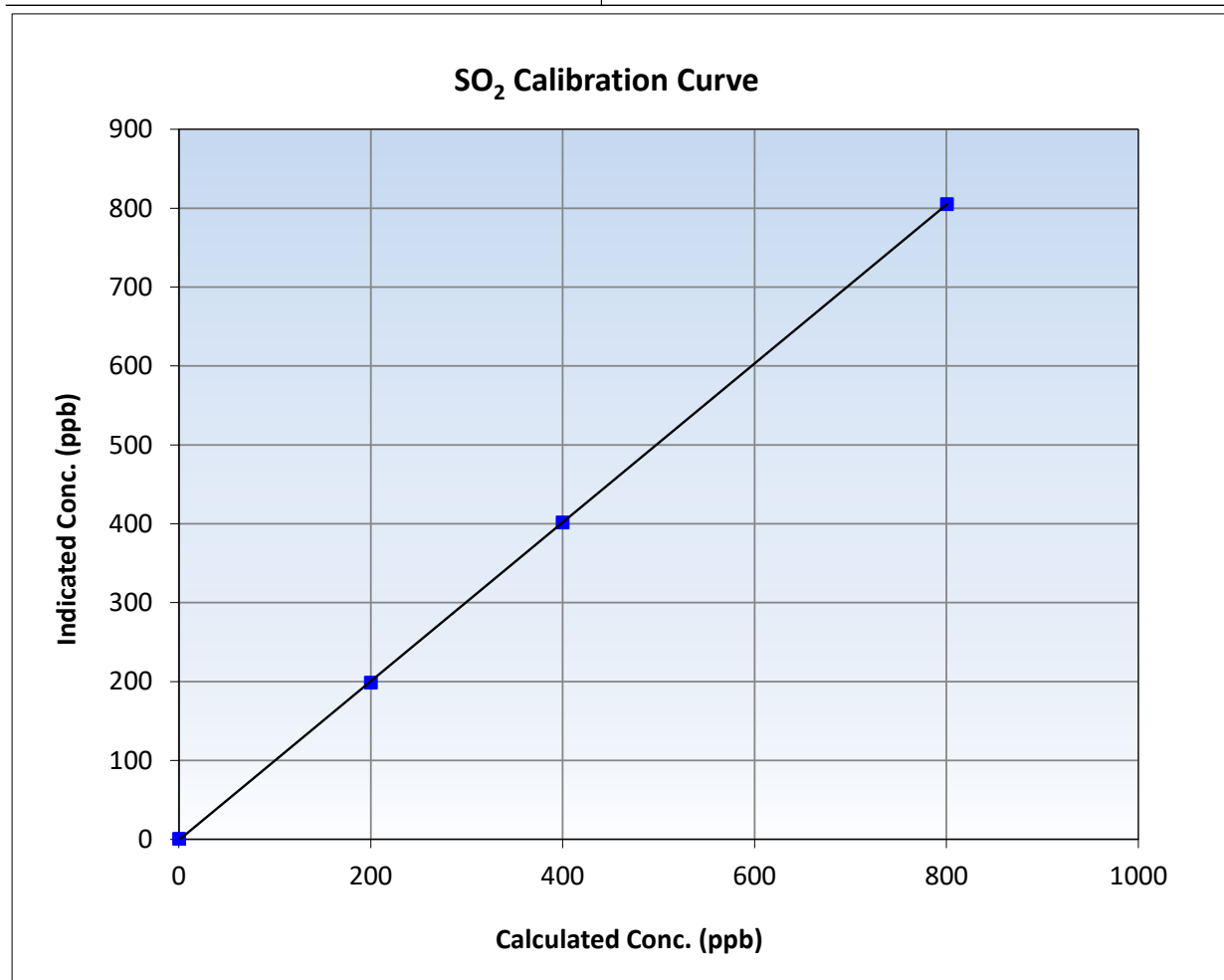
SO₂ Calibration Summary

Station Information

Calibration Date:	July 24, 2026	Previous Calibration:	June 2, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	7:34	End Time (MST):	9:57
Analyzer make:	Thermo 43i	Analyzer serial #:	1170050150

Calibration Data

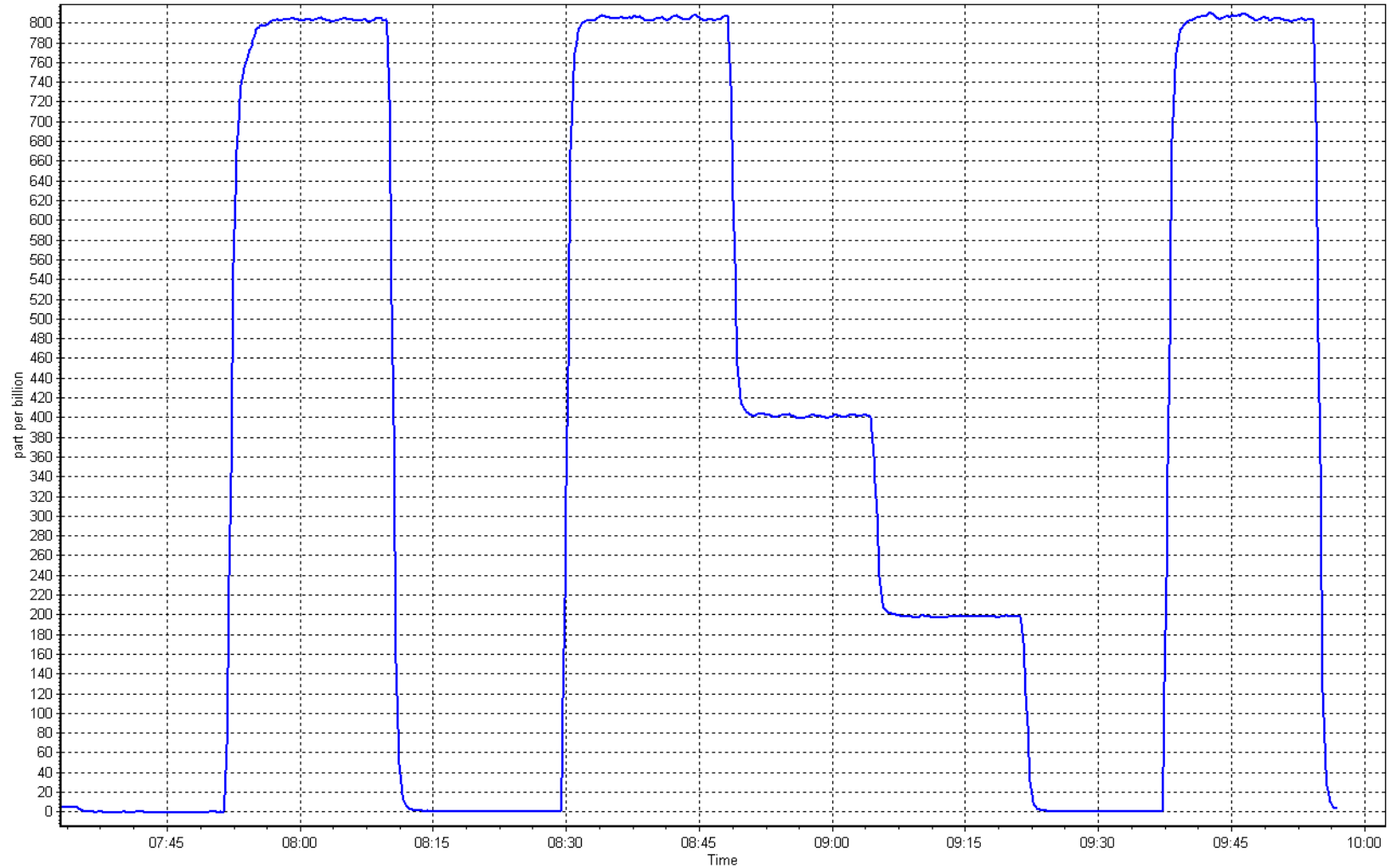
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999984	≥0.995
800.2	805.0	0.9940	Slope	1.006686	0.90 - 1.10
399.6	401.5	0.9953	Intercept	-0.939254	+/-30
199.8	198.3	1.0076			



SO2 Calibration Plot

Date: July 24, 2026

Location: Surmont 2





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Surmont 2
Calibration Date: July 23, 2026
Start time (MST): 8:20
Reason: Routine

Station number: AMS 29
Last Cal Date: June 4, 2026
End time (MST): 12:12

Calibration Standards

Cal Gas Concentration: 4.750 ppm
Cal Gas Cylinder #: CC737848
Removed Cal Gas Conc: 4.750 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: 5472
Serial Number: 1402

Analyzer Information

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

Analyzer serial #: 1200326170
Converter serial #: 2022-220
Converter Temp: 325.0 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.010741	1.003025	Backgd or Offset:	1.00	1.00
Calibration intercept:	-0.120485	-0.100482	Coeff or Slope:	1.036	1.036

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	81.7	0.978
As found Mid point	4958	42.1	40.0	41.0	0.973
As found Low point	4979	21.1	20.0	20.0	0.995
New cylinder response					
Baseline Corr As found:	81.8	Prev response:	80.73	*% change:	1.3%
Baseline Corr 2nd AF pt:	41.1	AF Slope:	1.024457	AF Intercept:	-0.200491
Baseline Corr 3rd AF pt:	20.1	AF Correlation:	0.999960	* = > +/-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	80.1	0.999
Mid point	4958	42.1	40.0	40.1	0.997
Low point	4979	21.1	20.0	19.9	1.005
As left zero	5000	0.0	0.0	0.1	----
As left span	4916	84.2	80.0	78.8	1.015
SO2 Scrubber Check	4919	81.3	813.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	1.000
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

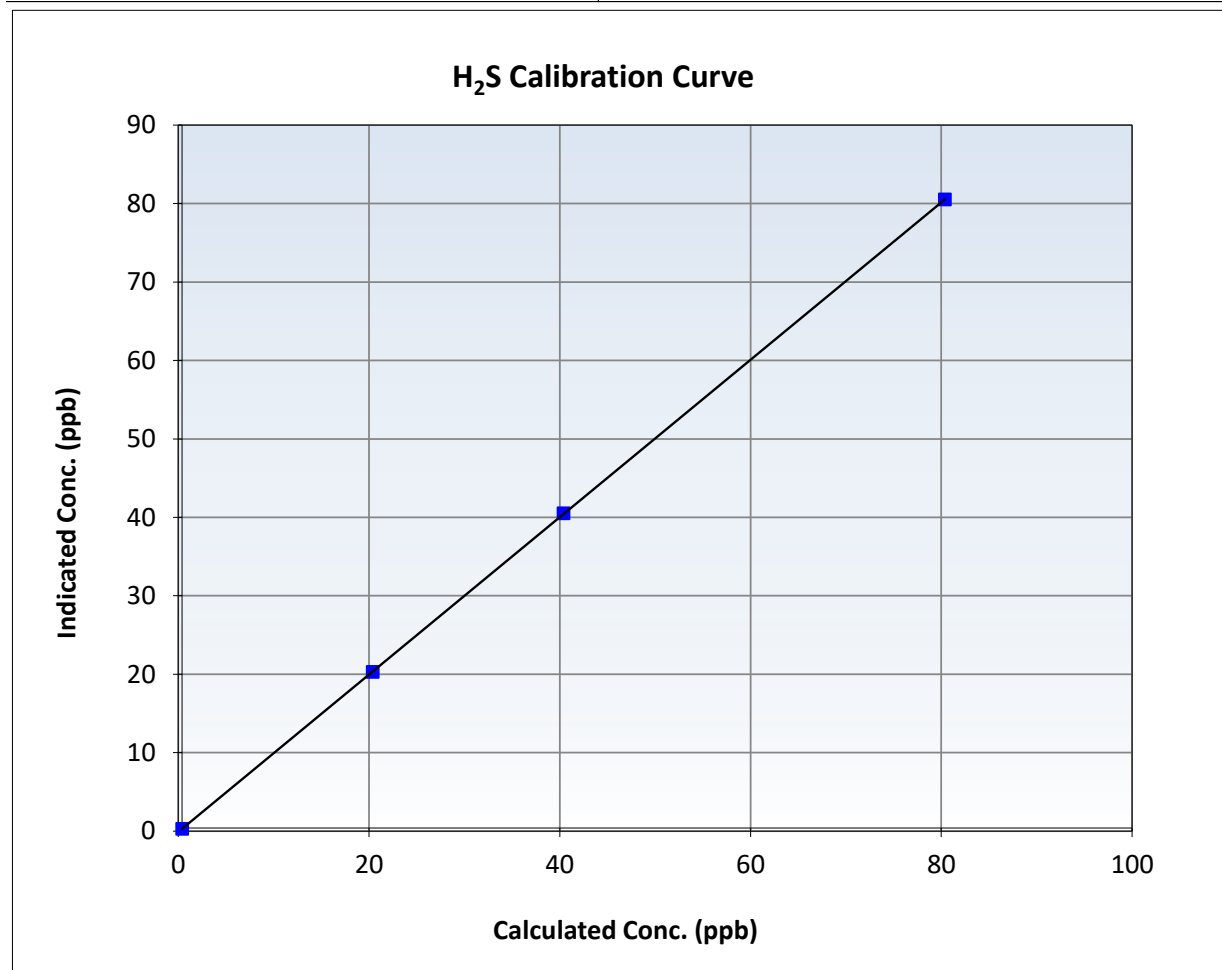
H₂S Calibration Summary

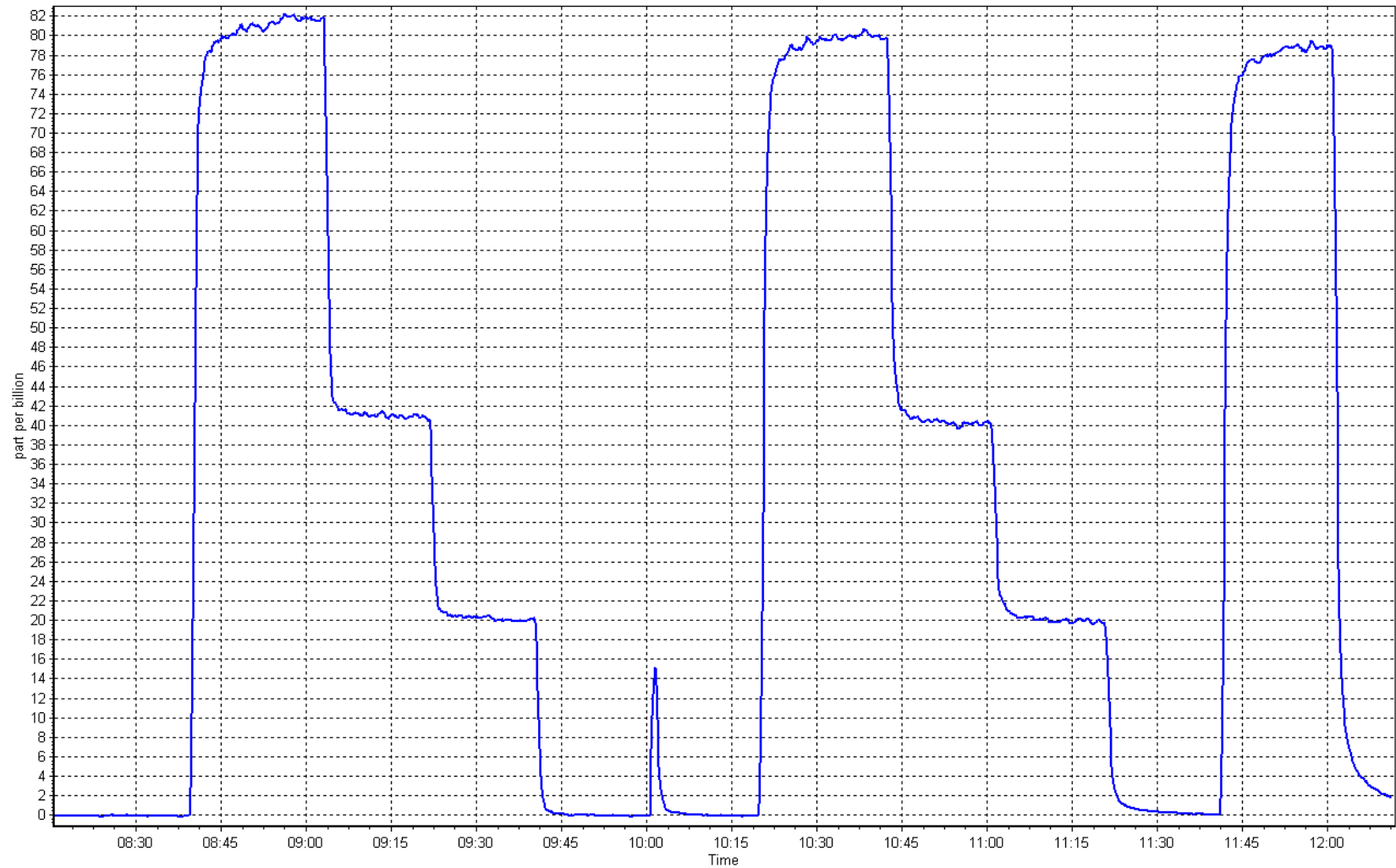
Station Information

Calibration Date:	July 23, 2026	Previous Calibration:	June 4, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	8:20	End Time (MST):	12:12
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	0.999997		≥ 0.995
80.0	80.1	0.9986	Slope	1.003025		$0.90 - 1.10$
40.0	40.1	0.9974	Intercept	-0.100482		± 3
20.0	19.9	1.0049				







Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Surmont 2
Calibration Date: July 24, 2026
Start time (MST): 7:34
Reason: Routine

Station number: AMS 29
Last Cal Date: June 3, 2026
End time (MST): 9:58

Calibration Standards

Gas Cert Reference: CC356229
CH4 Cal Gas Conc. 503.7 ppm
C3H8 Cal Gas Conc. 204.8 ppm
Removed Gas Cert: NA
Removed CH4 Conc. 503.7 ppm
Removed C3H8 Conc. 204.8 ppm
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701

Cal Gas Expiry Date: October 9, 2032
CH4 Equiv Conc. 1066.9 ppm
Removed Gas Expiry: NA
CH4 Equiv Conc. 1066.9 ppm
Diff between cyl:
Serial Number: 5472
Serial Number: 1402

Analyzer Information

Analyzer make: Thermo 51i-LT
Analyzer Range: 0 - 20 ppm

Analyzer serial #: 1180540021

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.998891	0.996334	Background:	1.98	2.26
Calibration intercept:	-0.004344	-0.012987	Coefficient:	3.876	3.924

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	0.19	----
As found High point	4920	80.1	17.09	17.09	1.011
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.90	Previous response	17.07	*% 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	0.06	----
High point	4920	80.1	17.09	17.06	1.002
Mid point	4960	40.0	8.54	8.45	1.011
Low point	4980	20.0	4.27	4.18	1.022
As left zero	5000	0.0	0.00	0.05	----
As left span	4920	80.1	17.09	17.00	1.005
Average Correction Factor					1.012

Notes: No Maintenance done. Zero and Span adjusted.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

THC Calibration Summary

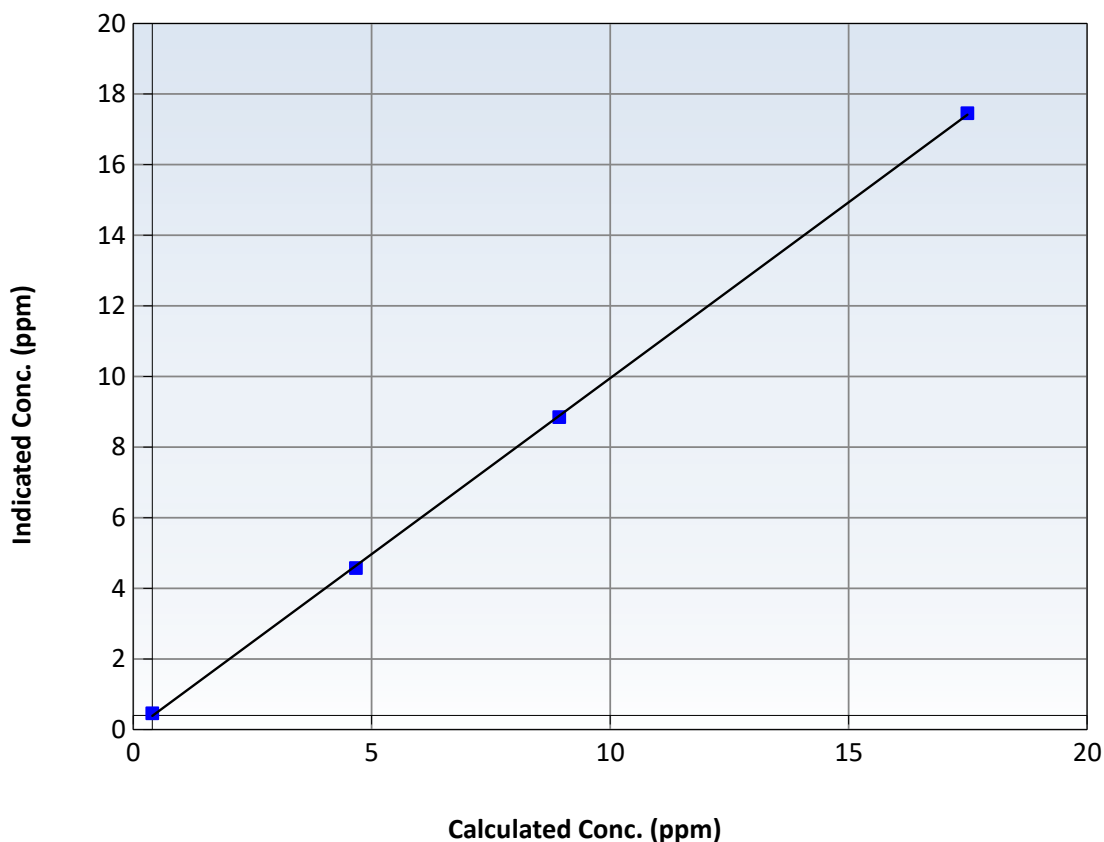
Station Information

Calibration Date:	July 24, 2026	Previous Calibration:	June 3, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	7:34	End Time (MST):	9:58
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	0.06	----	Correlation Coefficient	0.999920	≥ 0.995
17.09	17.06	1.0022	Slope	0.996334	$0.90 - 1.10$
8.54	8.45	1.0107	Intercept	-0.012987	± 1.5
4.27	4.18	1.0222			

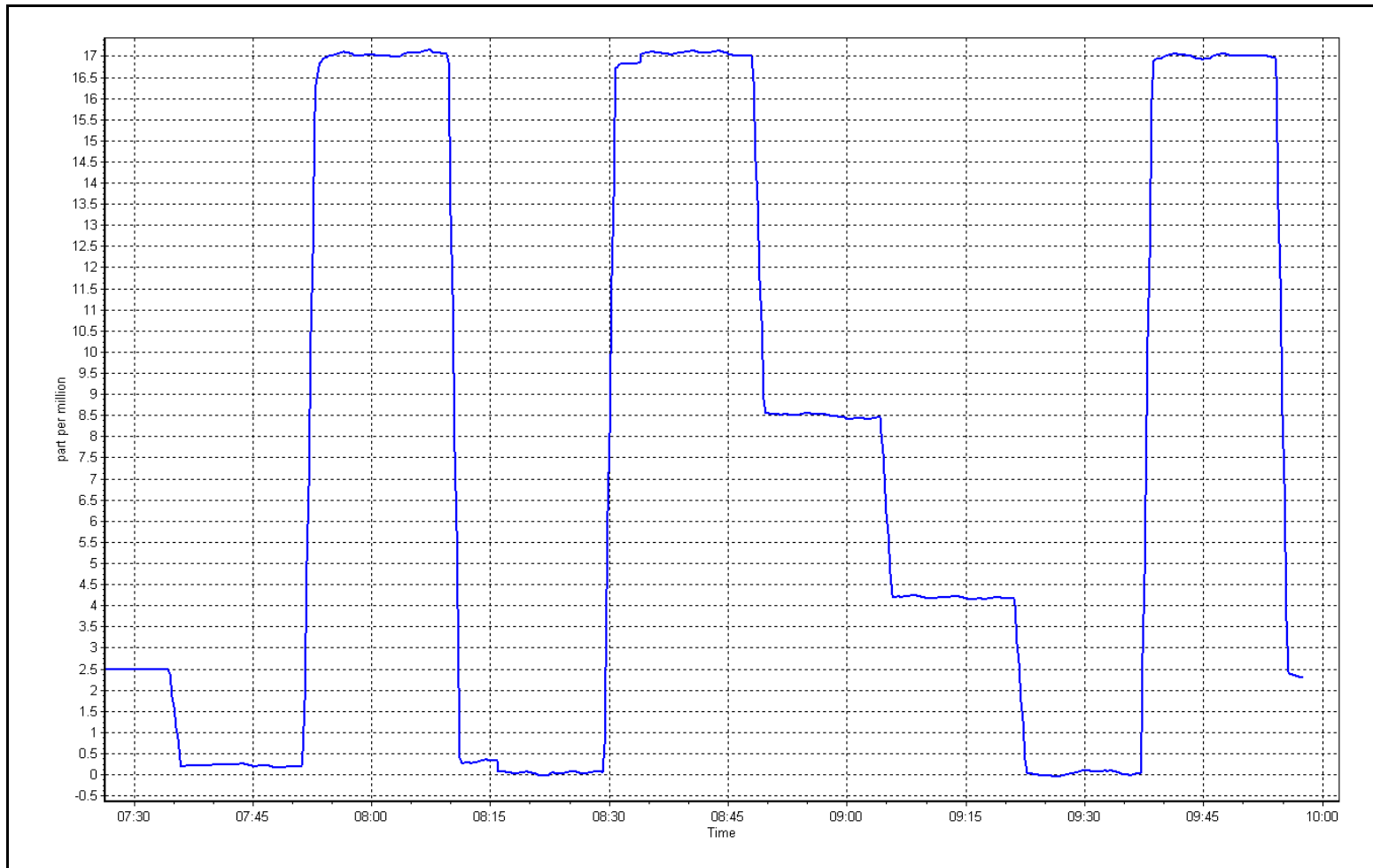
THC Calibration Curve



THC Calibration Plot

Date: July 24, 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: July 21, 2026
Last Cal Date: June 18, 2026
Start time (MST): 7:40
End time (MST): 12:00
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	800.4	794.6	5.8	1.0035	1.0074
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 807.1 ppb	NO = 802.7 ppb							*Percent Change	NO _x = -0.8%
Baseline Corr 1st pt	NO _x = 800.3 ppb	NO = 794.6 ppb							*Percent Change	NO = -1.0%
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 r ² :			Nx SI:	Nx Int:
						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

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.971	0.971	NO bkgnd or offset:	8.9	8.9
NOX coeff or slope:	0.996	0.996	NOX bkgnd or offset:	9.0	9.0
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	155.5	155.5

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.005801	0.992891
NO _x Cal Offset:	-0.688857	-0.128942
NO Cal Slope:	1.005441	0.992759
NO Cal Offset:	-2.088985	-1.949055
NO ₂ Cal Slope:	1.003877	1.002469
NO ₂ Cal Offset:	0.276351	-0.274137

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	0.3	0.2	0.1	----	----
High point	4933	66.7	803.1	800.4	2.7	796.9	793.2	3.7	1.0078	1.0091
Mid point	4967	33.3	400.9	399.6	1.3	399.5	395.4	4.1	1.0035	1.0106
Low point	4983	16.7	201.1	200.4	0.7	197.9	193.7	4.2	1.0161	1.0347
As left zero	5000	0	0.0	0.0	0.0	0.3	0.3	0.1	----	----
As left span	4933	66.7	803.1	438.1	365.0	790.1	438.1	352.0	1.0165	1.0000
Average Correction Factor									1.0091	1.0181

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	787.0	438.9	350.8	351.7	0.9974	100.3%
Mid GPT point	787.0	622.0	167.7	167.1	1.0034	99.7%
Low GPT point	787.0	703.8	85.9	85.8	1.0008	99.9%
Average Correction Factor					1.0005	99.9%

Notes:

No maintenance or adjustments done.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

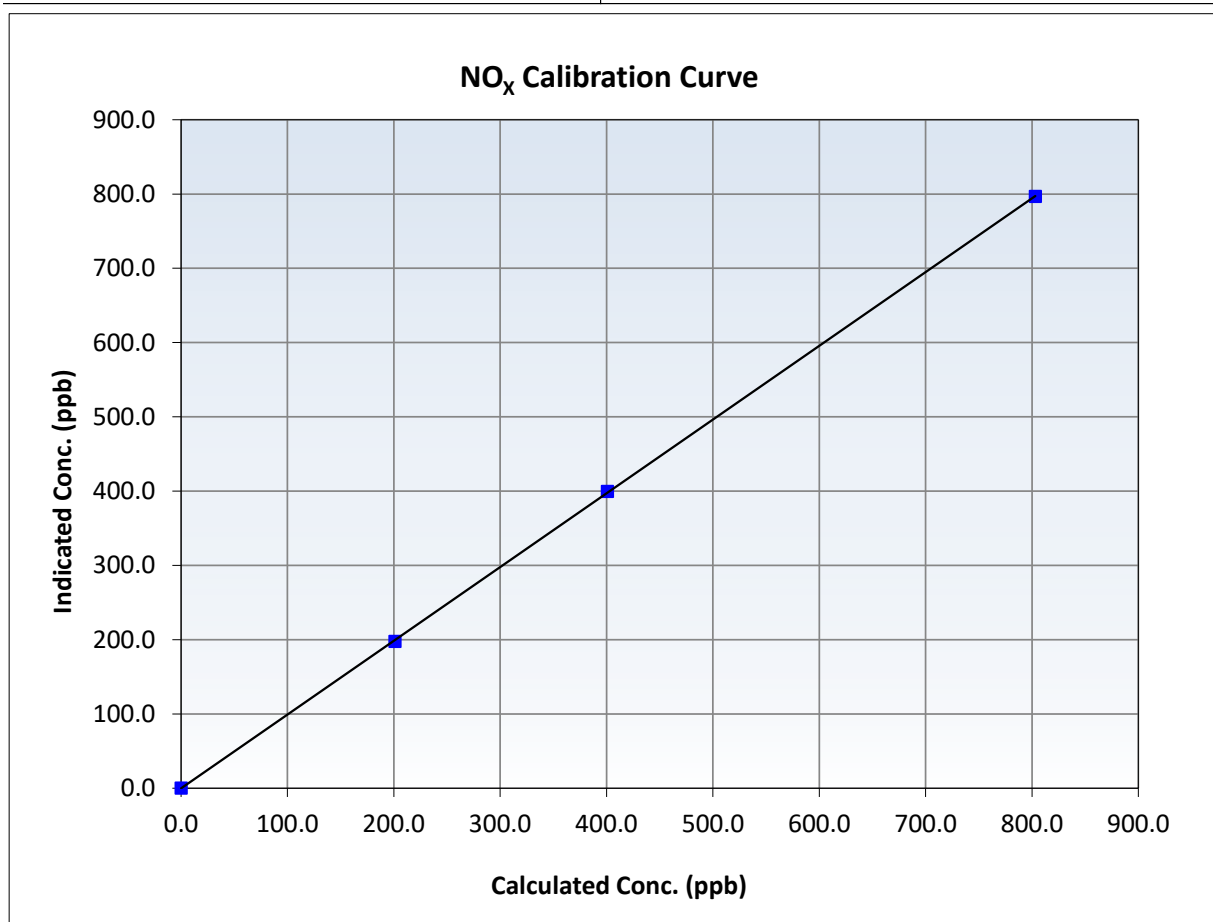
NO_x Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 18, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	7:40	End Time (MST):	12:00
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	0.3	----	Correlation Coefficient	0.999984	≥0.995
803.1	796.9	1.0078	Slope	0.992891	0.90 - 1.10
400.9	399.5	1.0035	Intercept	-0.128942	+/-20
201.1	197.9	1.0161			





Wood Buffalo Environmental Association

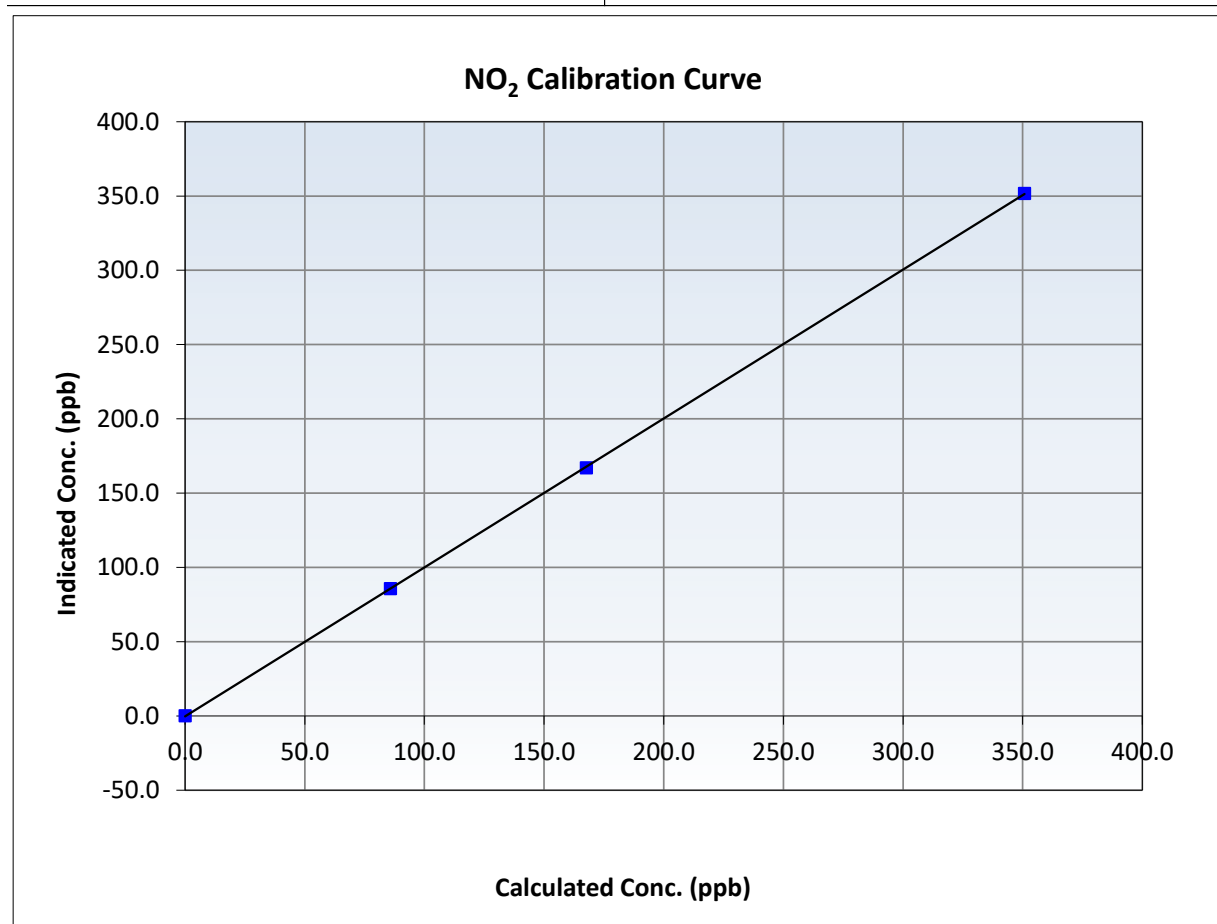
NO₂ Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 18, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	7:40	End Time (MST):	12:00
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	0.999989	≥0.995
350.8	351.7	0.9974	Slope	1.002469	0.90 - 1.10
167.7	167.1	1.0034	Intercept	-0.274137	+/-20
85.9	85.8	1.0008			





Wood Buffalo Environmental Association

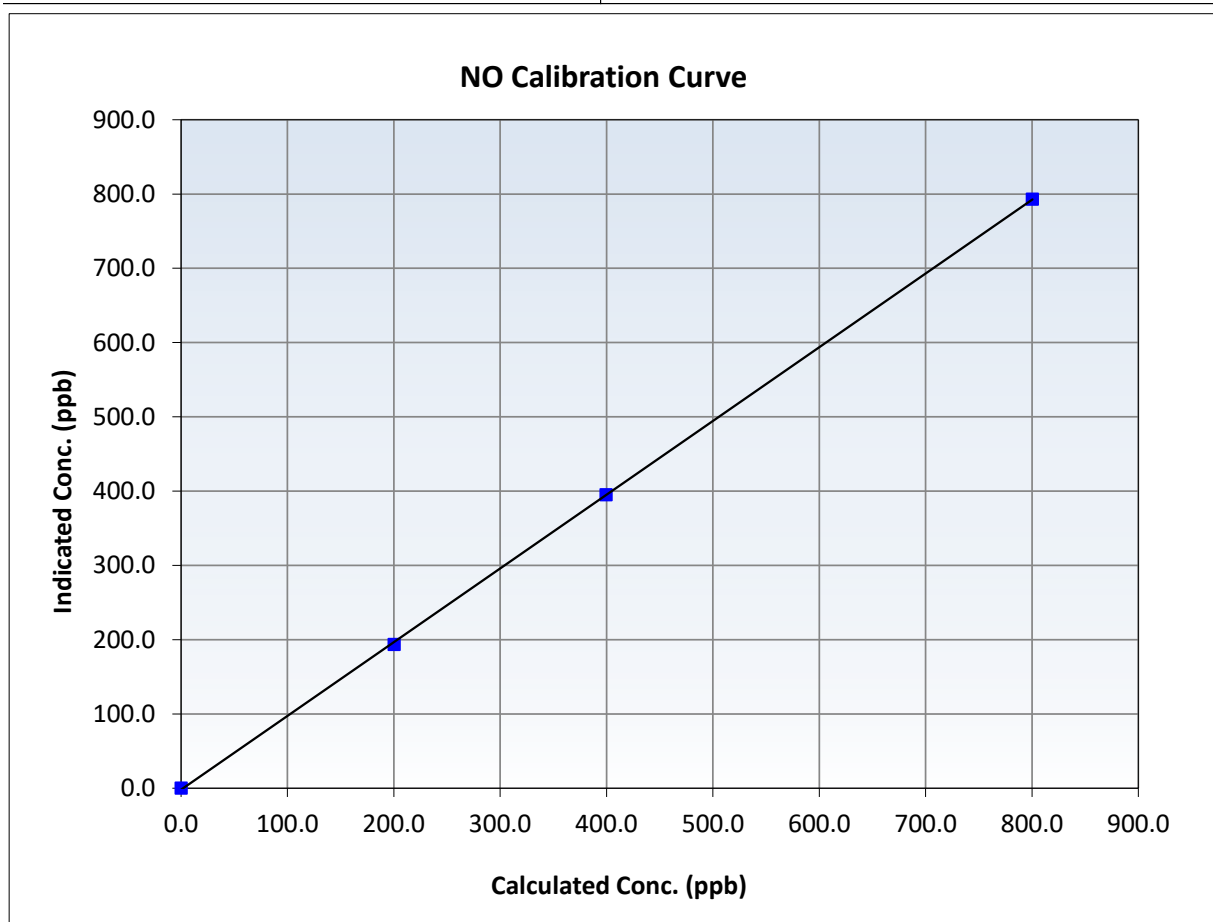
NO Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 18, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	7:40	End Time (MST):	12:00
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661329

Calibration Data

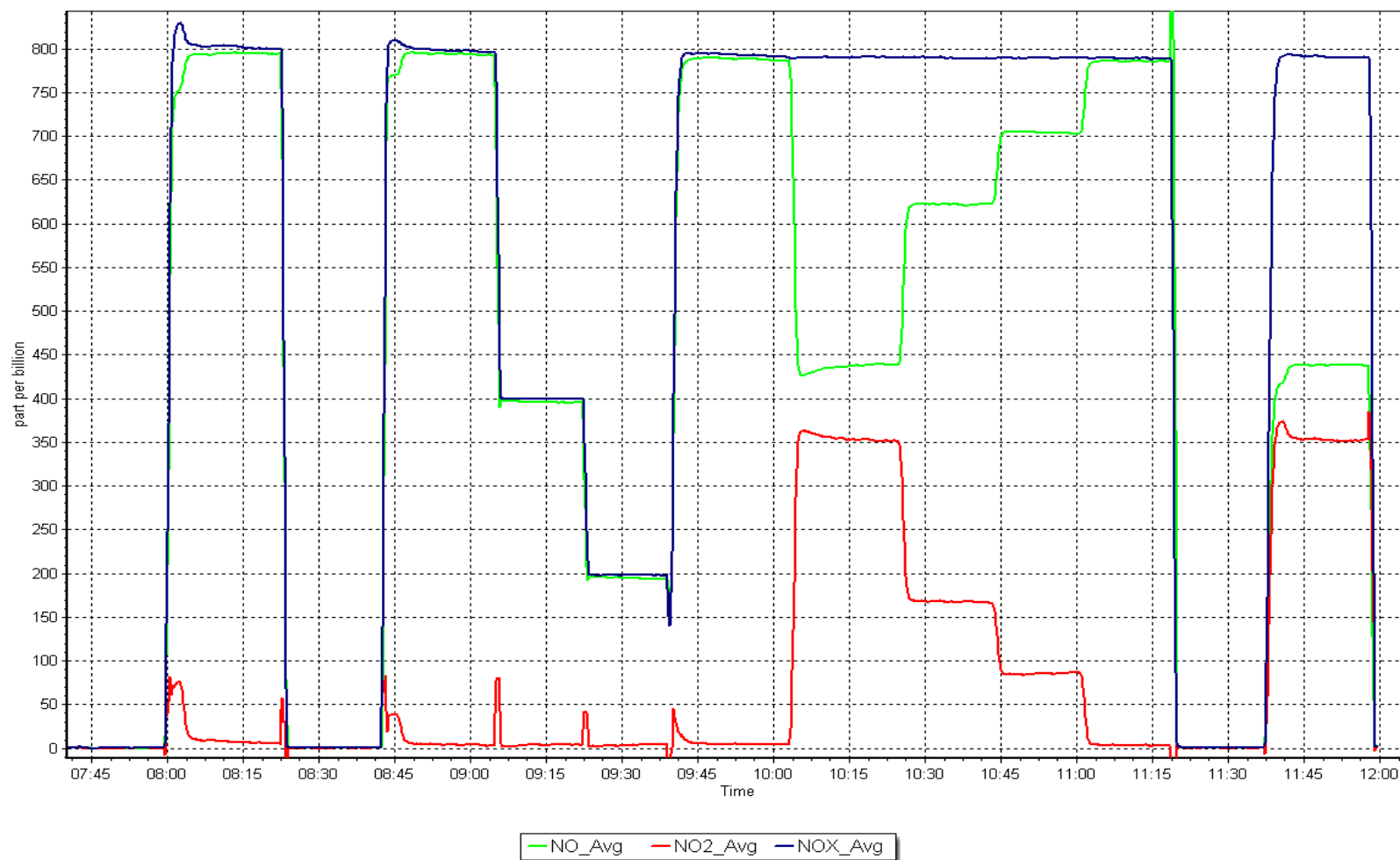
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999953	≥ 0.995
800.4	793.2	1.0091	Slope	0.992759	$0.90 - 1.10$
399.6	395.4	1.0106	Intercept	-1.949055	± 20
200.4	193.7	1.0347			



NO_x Calibration Plot

Date: July 21, 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: July 23, 2026 Last Cal Date: June 18, 2026
Start time (MST): 7:55 End time (MST): 8:19

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)	24.3	24	24.3	☐	+/- 2 °C
P (mmHg)	706.1	705.3	706.1	☐	+/- 10 mmHg
Flow (LPM)	4.99	5.01	4.99	☐	+/- 0.25 LPM
PW% (pump)	36	----	36	☐	>80%
Zero Verification	PM w/o HEPA: 27.4		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: May 5, 2026
Date Disposable Filter Changed: May 5, 2026

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

Annual Maintenance

Date Sample Tube Cleaned: May 5, 2026
Date RH/T Sensor Cleaned: May 5, 2026

Notes: No adjustments done. Leak check passed.

Calibration by: Melissa Lemay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS30
ELLS RIVER
JULY 2026**

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Ells River Station number: AMS 30
Calibration Date: July 2, 2026 Last Cal Date: June 3, 2026
Start time (MST): 9:21 End time (MST): 13:02
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:	1.009011	1.009996	Backgd or Offset:	10.8	10.9
Calibration intercept:	-1.355162	-0.674935	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	0.2	----
As found High point	4918	82.1	800.5	803.0	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	802.8	Previous response	806.3	*% 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	0.3	----
High point	4918	82.1	800.5	808.4	0.990
Mid point	4959	41.0	399.8	402.2	0.994
Low point	4979	20.5	199.9	200.5	0.997
As left zero	5000	0.0	0.0	0.4	----
As left span	4918	82.1	800.5	808.4	0.990
Average Correction Factor:					0.994

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

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

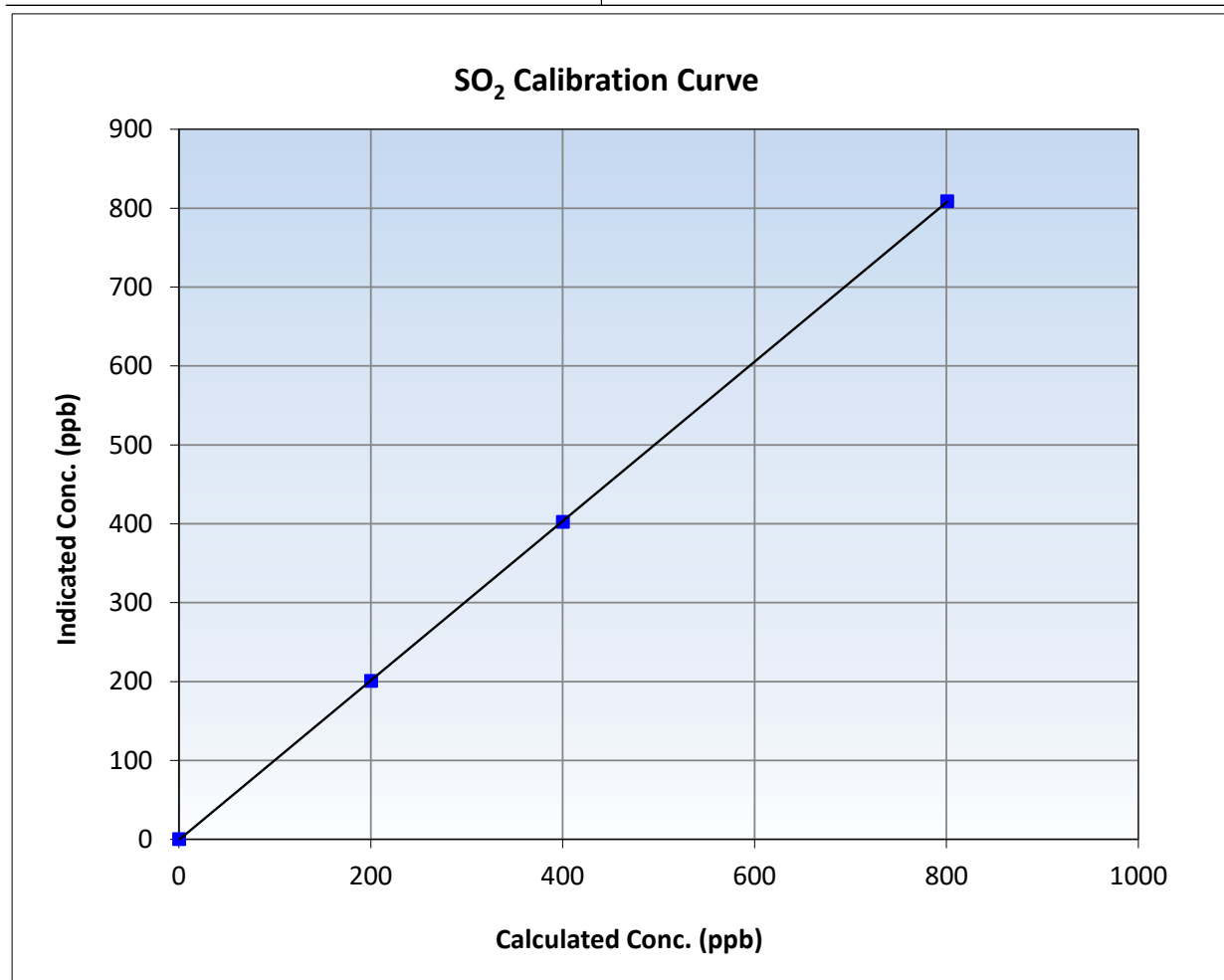
SO₂ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:21	End Time (MST):	13:02
Analyzer make:	Thermo 43i	Analyzer serial #:	1008841397

Calibration Data

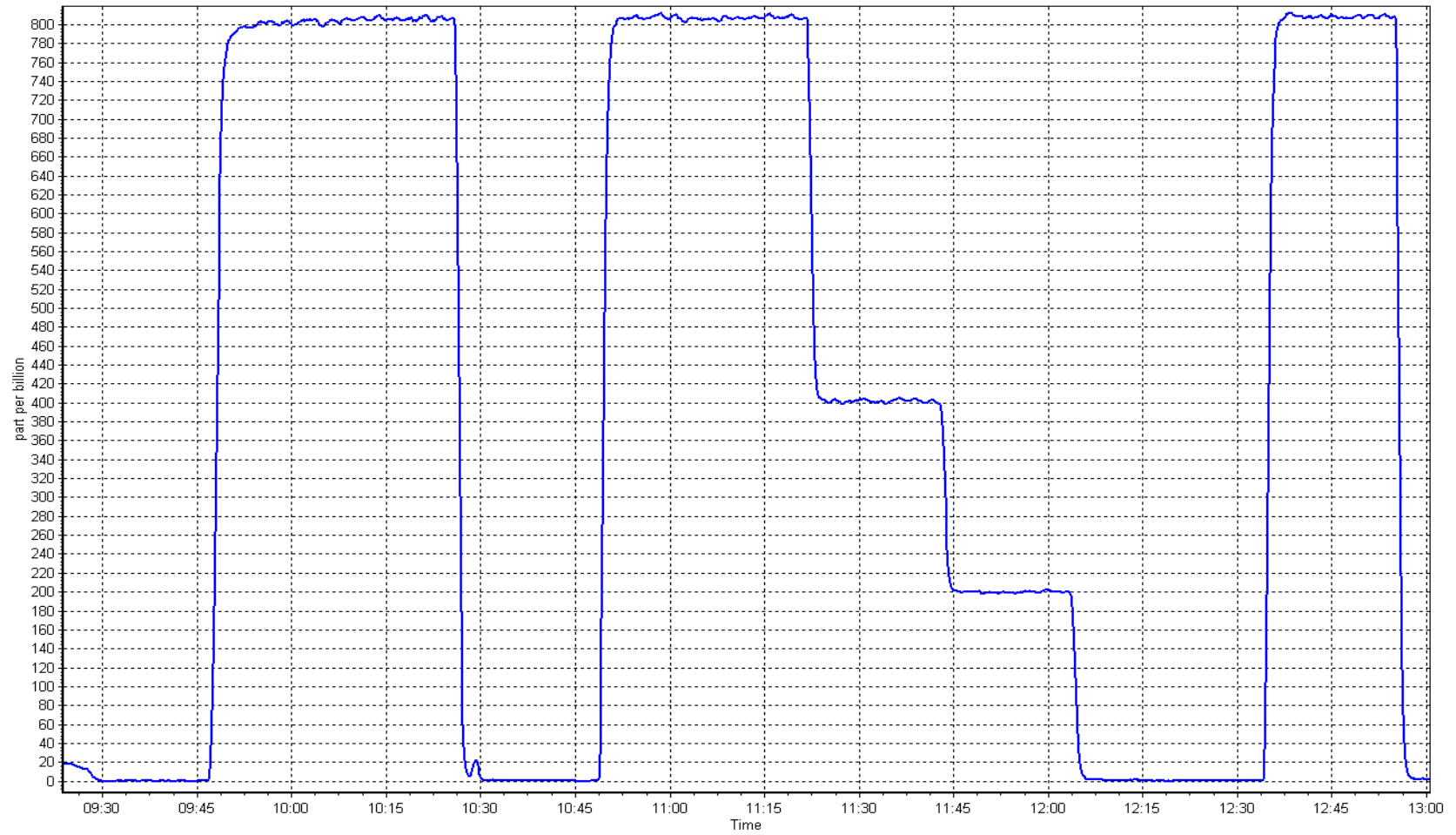
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999993	≥0.995
800.5	808.4	0.9902	Slope	1.009996	0.90 - 1.10
399.8	402.2	0.9939	Intercept	-0.674935	+/-30
199.9	200.5	0.9970			



SO2 Calibration Plot

Date: July 2, 2026

Location: Ells River





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Ells River
Calibration Date: July 9, 2026
Start time (MST): 9:24
Reason: Routine

Station number: AMS 30
Last Cal Date: June 4, 2026
End time (MST): 13:11

Calibration Standards

Cal Gas Concentration: 4.99 ppm
Cal Gas Cylinder #: CC505806
Removed Cal Gas Conc: 4.99 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: API T700
ZAG Make/Model: API 701H

Cal Gas Exp Date: November 15, 2026
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 5707
Serial Number: 358

Analyzer Information

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

Analyzer serial #: 1170050152
Converter serial #: 632
Converter Temp: 800 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000475	0.988911	Backgd or Offset:	3.86
Calibration intercept:	-0.220485	-0.040686	Coeff or Slope:	1.232

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	-0.2	----
As found High point	4920	80.2	80.0	78.7	1.014
As found Mid point	4960	40.1	40.0	39.5	1.008
As found Low point	4980	20.0	20.0	19.4	1.018
New cylinder response					
Baseline Corr As found:	78.9	Prev response:	79.85	*% change:	-1.2%
Baseline Corr 2nd AF pt:	39.7	AF Slope:	0.986487	AF Intercept:	-0.180839
Baseline Corr 3rd AF pt:	19.6	AF Correlation:	0.999983	* = > +/-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	79.1	1.012
Mid point	4960	40.1	40.0	39.5	1.013
Low point	4980	20.0	20.0	19.8	1.008
As left zero	5000	0.0	0.0	-0.1	----
As left span	4920	80.2	80.0	79.7	1.004
SO2 Scrubber Check	4918	82.0	820.0	0.1	----
Date of last scrubber change:	16-Dec-25		Ave Corr Factor		1.011
Date of last converter efficiency test:					

Notes: Inlet filter changed after as founds, scrubber check passed. No changes made.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

TRS Calibration Summary

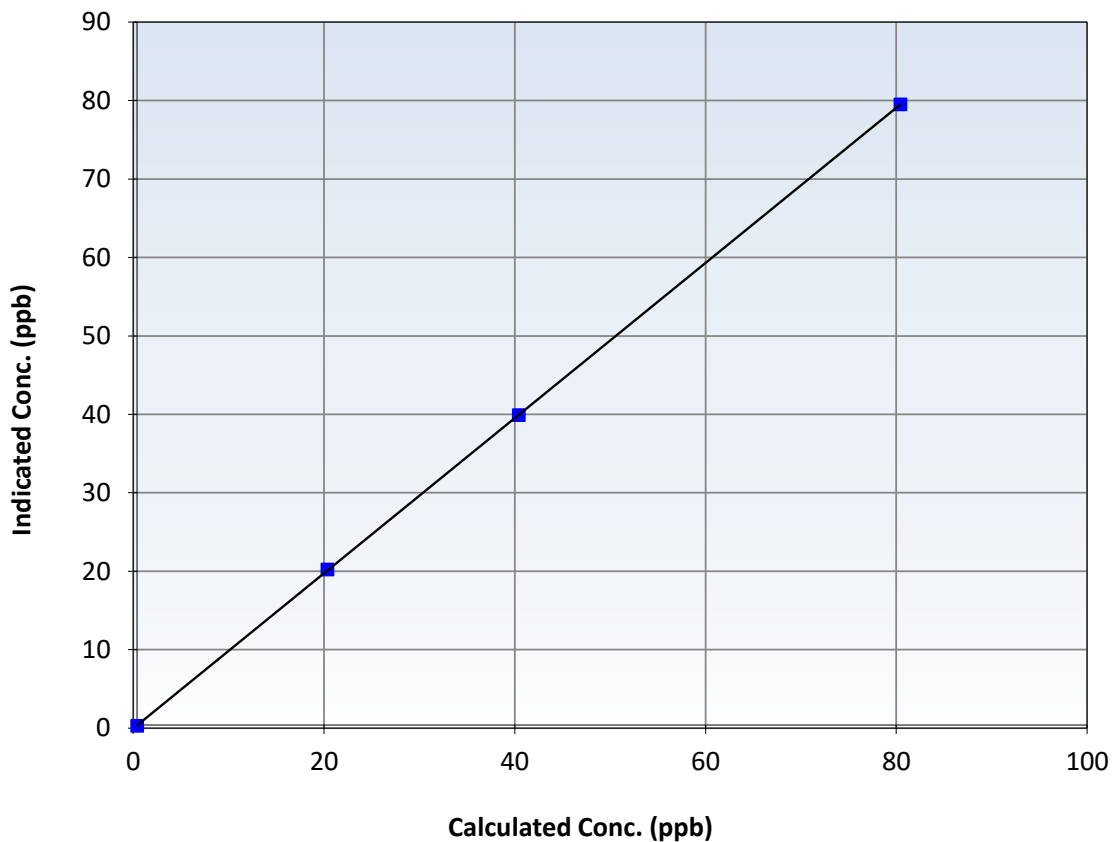
Station Information

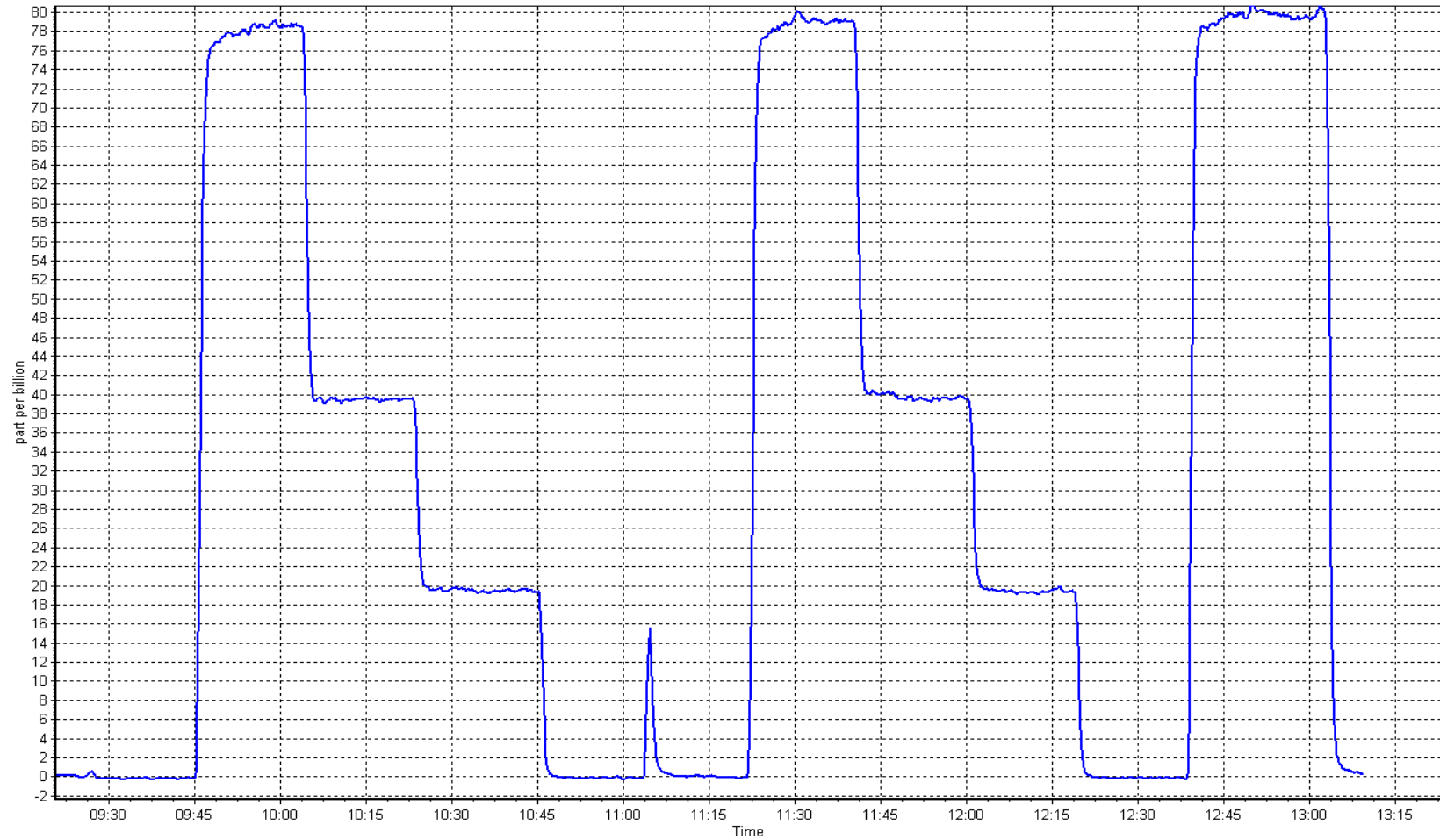
Calibration Date:	July 9, 2026	Previous Calibration:	June 4, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:24	End Time (MST):	13:11
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1170050152

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	0.999996	≥ 0.995
80.0	79.1	1.0118	Slope	0.988911	$0.90 - 1.10$
40.0	39.5	1.0131	Intercept	-0.040686	± 3
20.0	19.8	1.0081			

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Ells River
 Calibration Date: July 2, 2026
 Start time (MST): 9:21
 Reason: Routine

Station number: AMS 30
 Last Cal Date: June 3, 2026
 End time (MST): 13:02

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

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	3.35E-04	4.33E-04	NMHC SP Ratio:	6.24E-05
CH ₄ Retention time:	17.0	17.4	NMHC Peak Area:	150083
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	4918	82.1	17.51	16.66	1.051
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.66	Prev response	17.48	*% change	-4.9%
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	17.50	1.001
Mid point	4959	41.0	8.74	8.67	1.009
Low point	4979	20.5	4.37	4.32	1.013
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	17.51	17.52	1.000
Average Correction Factor					1.008

Notes:

Inlet filter changed after as founds and N₂/H₂ swapped, 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	4918	82.1	9.36	9.07	1.031
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.07	Prev response	9.34	*% change	-3.0%
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)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4918	82.1	9.36	9.35	1.001
Mid point	4959	41.0	4.67	4.66	1.004
Low point	4979	20.5	2.34	2.32	1.006
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	9.36	9.37	0.999
Average Correction Factor					1.003

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	7.59	1.075
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.59	Prev response	8.14	*% change	-7.2%
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	8.15	1.001
Mid point	4959	41.0	4.07	4.01	1.015
Low point	4979	20.5	2.04	1.99	1.022
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	8.15	8.15	1.000
Average Correction Factor					1.013

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.001023	0.999958
THC Cal Offset:	-0.048609	-0.036204
CH ₄ Cal Slope:	1.001865	1.000336
CH ₄ Cal Offset:	-0.033746	-0.028547
NMHC Cal Slope:	1.000058	0.999751
NMHC Cal Offset:	-0.014663	-0.007657

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

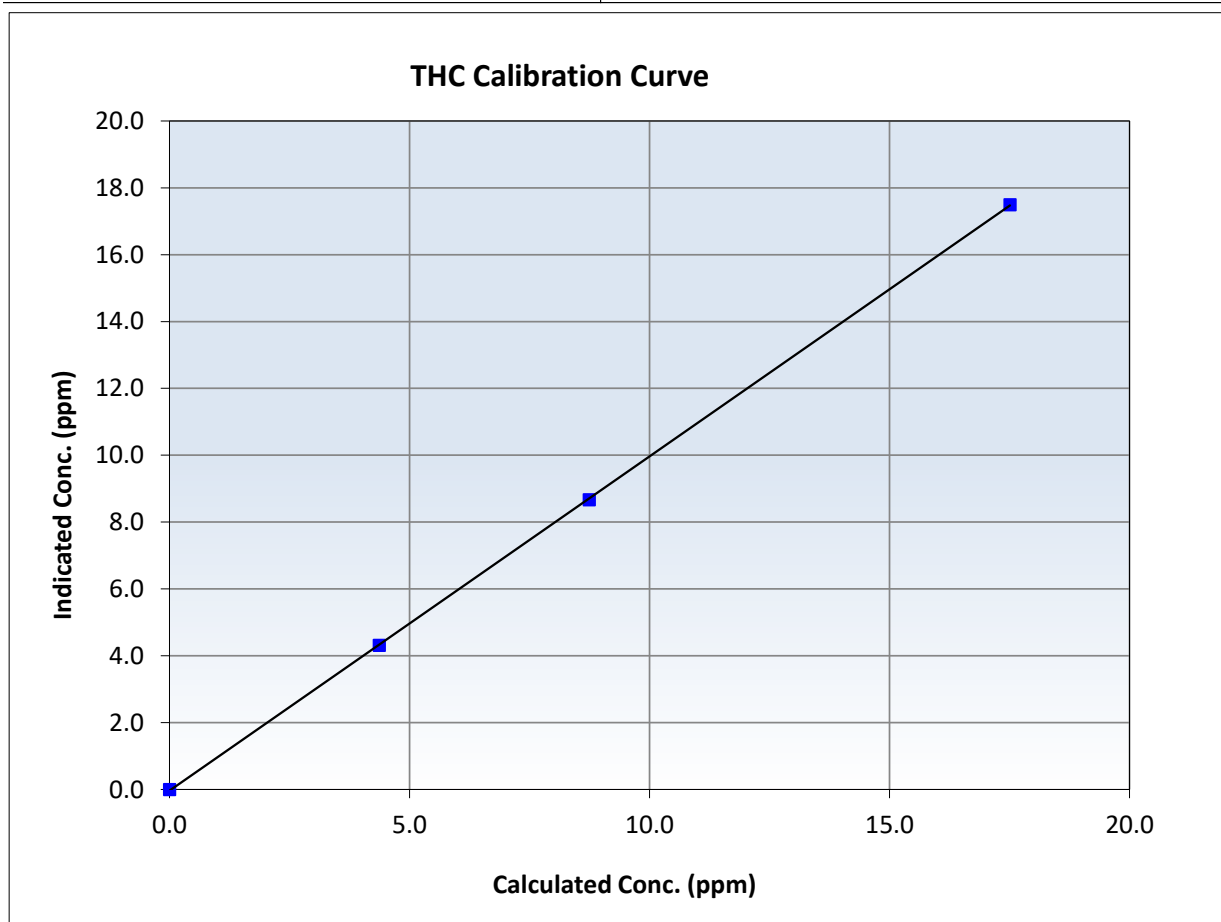
THC Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:21	End Time (MST):	13:02
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585649

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	0.999975	≥ 0.995
17.51	17.50	1.0006	Slope	0.999958	$0.90 - 1.10$
8.74	8.67	1.0091	Intercept	-0.036204	± 0.5
4.37	4.32	1.0131			





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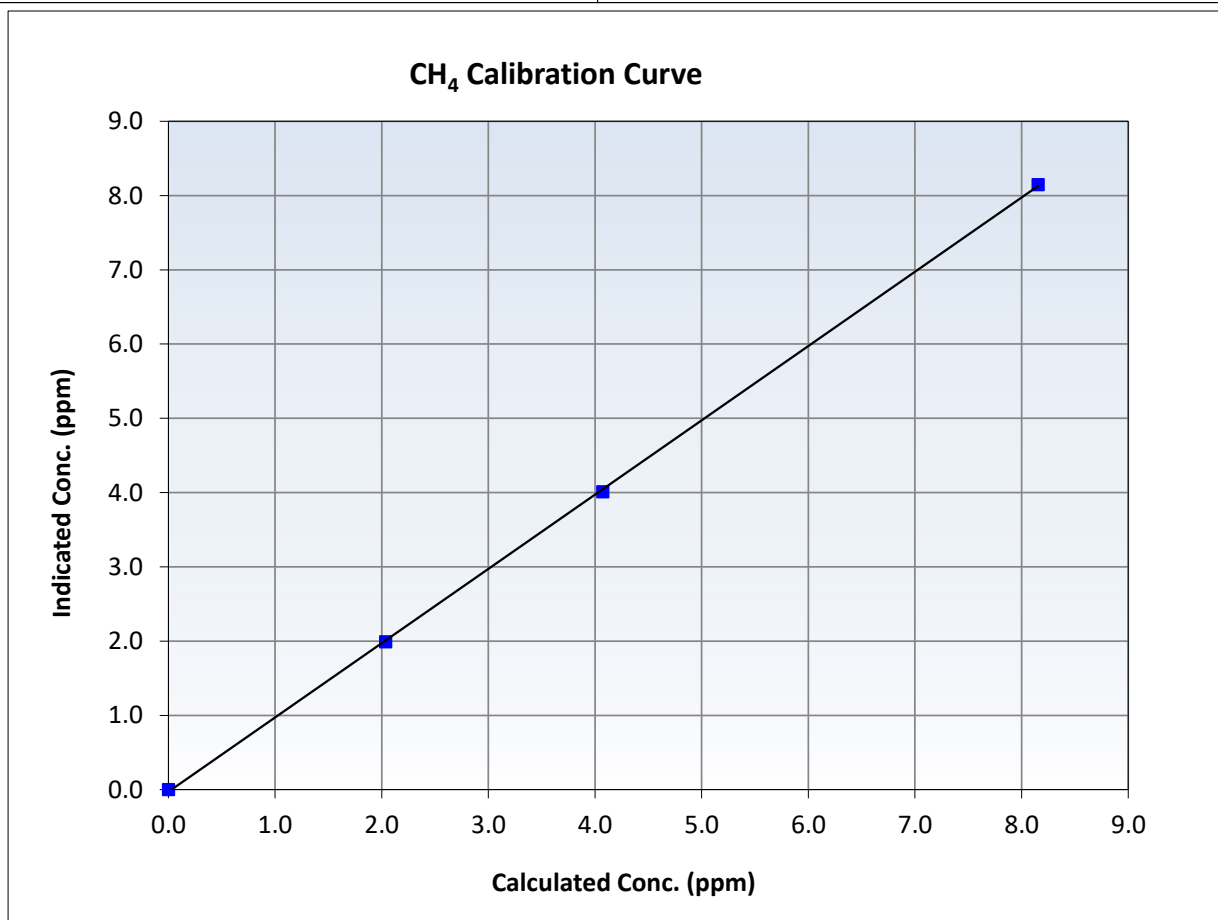
CH₄ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:21	End Time (MST):	13:02
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585649

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	0.999928	<i>≥0.995</i>
8.15	8.15	1.0006	Slope	1.000336	<i>0.90 - 1.10</i>
4.07	4.01	1.0152	Intercept	-0.028547	<i>+/-0.5</i>
2.04	1.99	1.0217			





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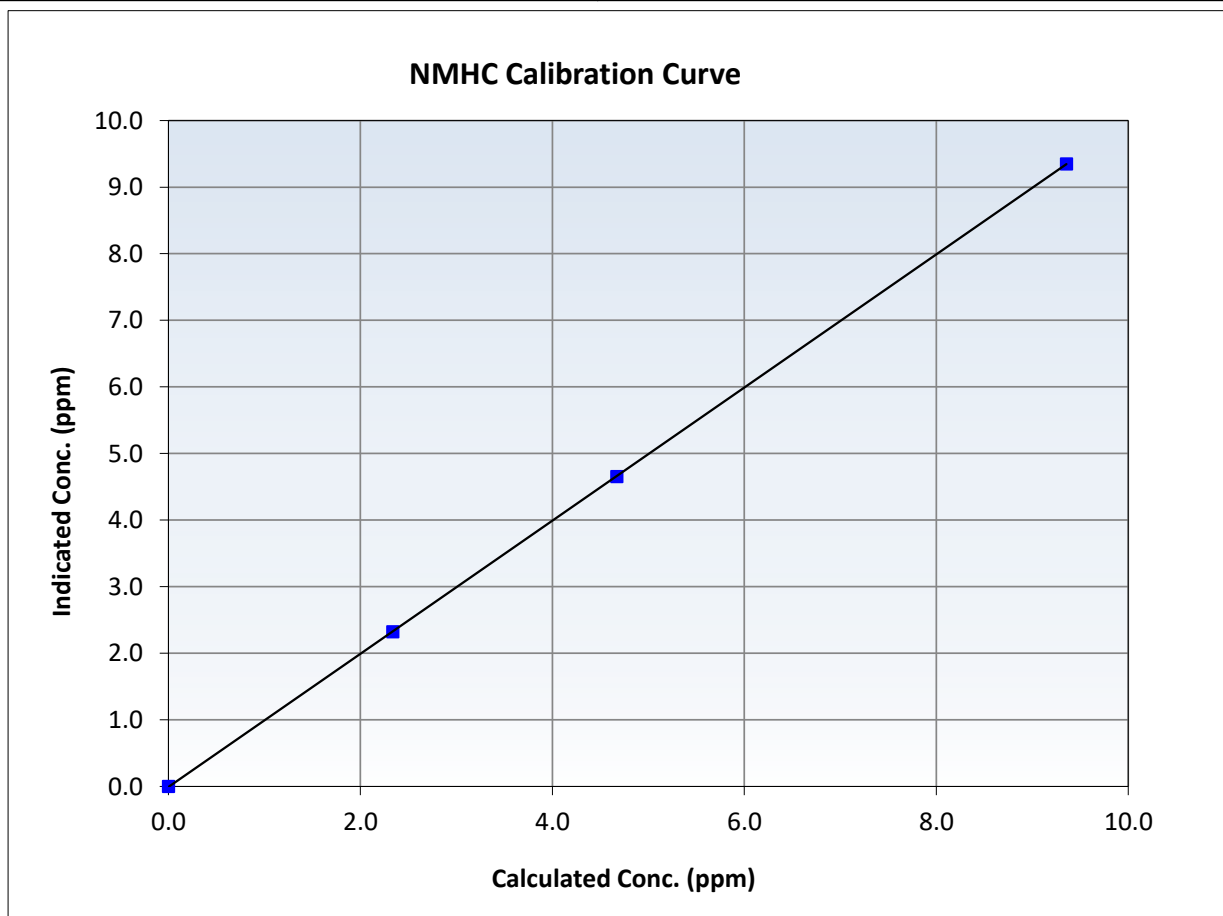
NMHC Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:21	End Time (MST):	13:02
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585649

Calibration Data

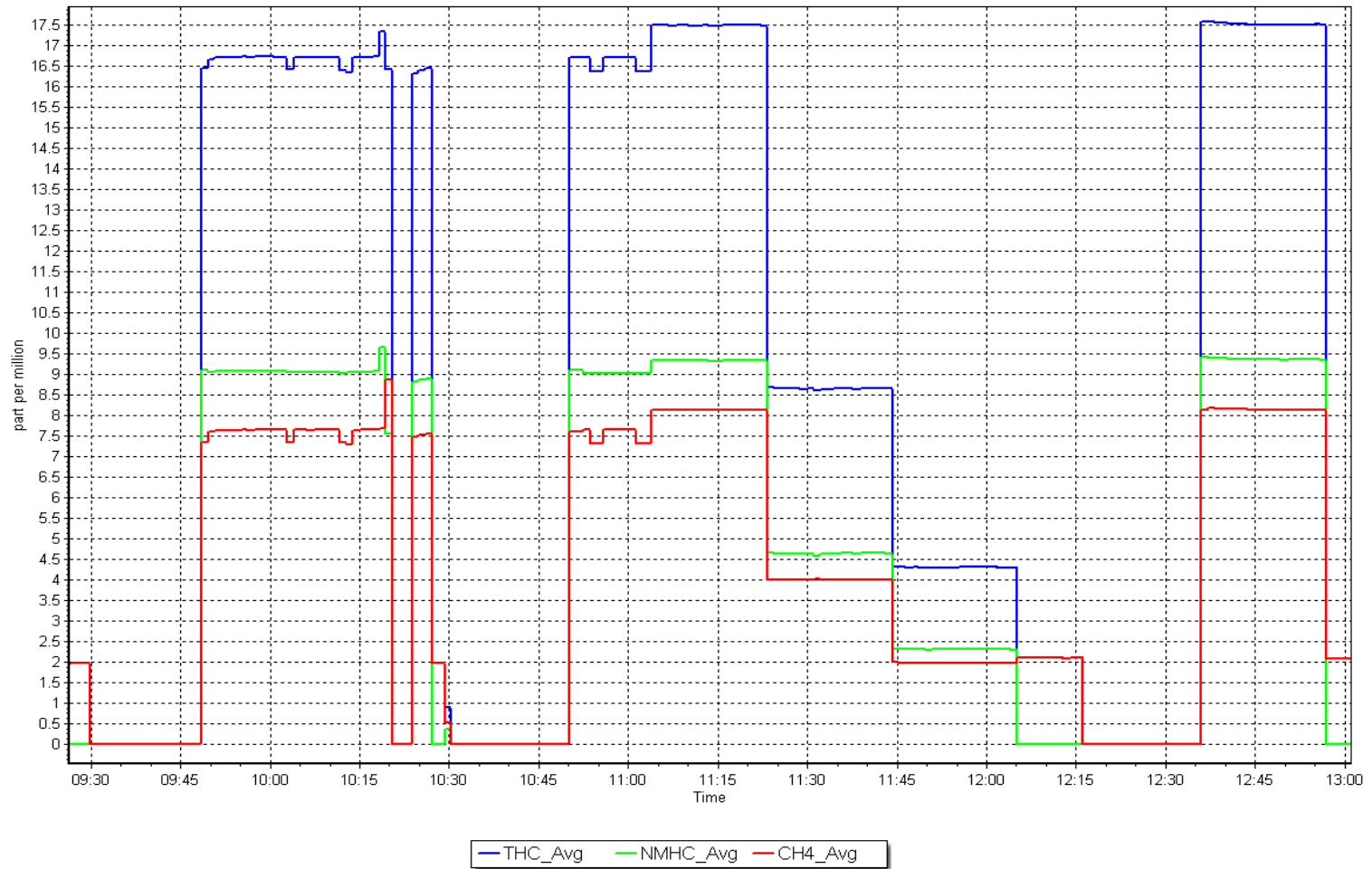
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999996	<i>≥0.995</i>
9.36	9.35	1.0005	Slope	0.999751	<i>0.90 - 1.10</i>
4.67	4.66	1.0035	Intercept	-0.007657	<i>+/-0.5</i>
2.34	2.32	1.0058			



NMHC Calibration Plot

Date: July 2, 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: July 3, 2026
Last Cal Date: June 25, 2026
Start time (MST): 8:45
End time (MST): 13:44
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	0.9	1.2	-0.3	----	----
AF High point	4932	67.7	803.0	800.3	2.7	781.5	781.8	-0.3	1.0287	1.0252
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 802.6 ppb	NO = 807.1 ppb							*Percent Change	NO _x = -2.8%
Baseline Corr 1st pt	NO _x = 780.6 ppb	NO = 780.6 ppb							*Percent Change	NO = -3.4%
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 r ² :							Nx SI:	Nx Int:
	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 ppb

Serial Number: 723

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.007	1.022	NO bkgnd or offset:	2.7	1.1
NOX coeff or slope:	0.988	1.012	NOX bkgnd or offset:	-1.8	1.5
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	6.1	6.0

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.997176	0.998346
NO _x Cal Offset:	1.943317	0.182614
NO Cal Slope:	1.008852	1.003613
NO Cal Offset:	-0.236287	-1.578074
NO ₂ Cal Slope:	0.979556	0.982074
NO ₂ Cal Offset:	0.761916	1.052373

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	-0.6	-0.9	0.4	----	----
High point	4932	67.7	803.0	800.3	2.7	801.0	801.7	-0.7	1.0025	0.9982
Mid point	4966	33.8	400.9	399.5	1.4	402.1	399.7	2.3	0.9970	0.9996
Low point	4983	16.9	200.4	199.8	0.7	200.2	197.8	2.4	1.0012	1.0099
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.3	-0.3	----	----
As left span	4932	67.7	803.0	400.7	402.3	799.3	400.7	398.6	1.0046	1.0000
Average Correction Factor									1.0002	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	0.4	----	----
High GPT point	797.7	397.6	402.8	396.4	1.0162	98.4%
Mid GPT point	797.7	602.4	198.0	195.6	1.0123	98.8%
Low GPT point	797.7	702.0	98.4	98.5	0.9991	100.1%
Average Correction Factor					1.0092	99.1%

Notes:

Inlet filter changed after as founds, zero adjusted, span adjusted.

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

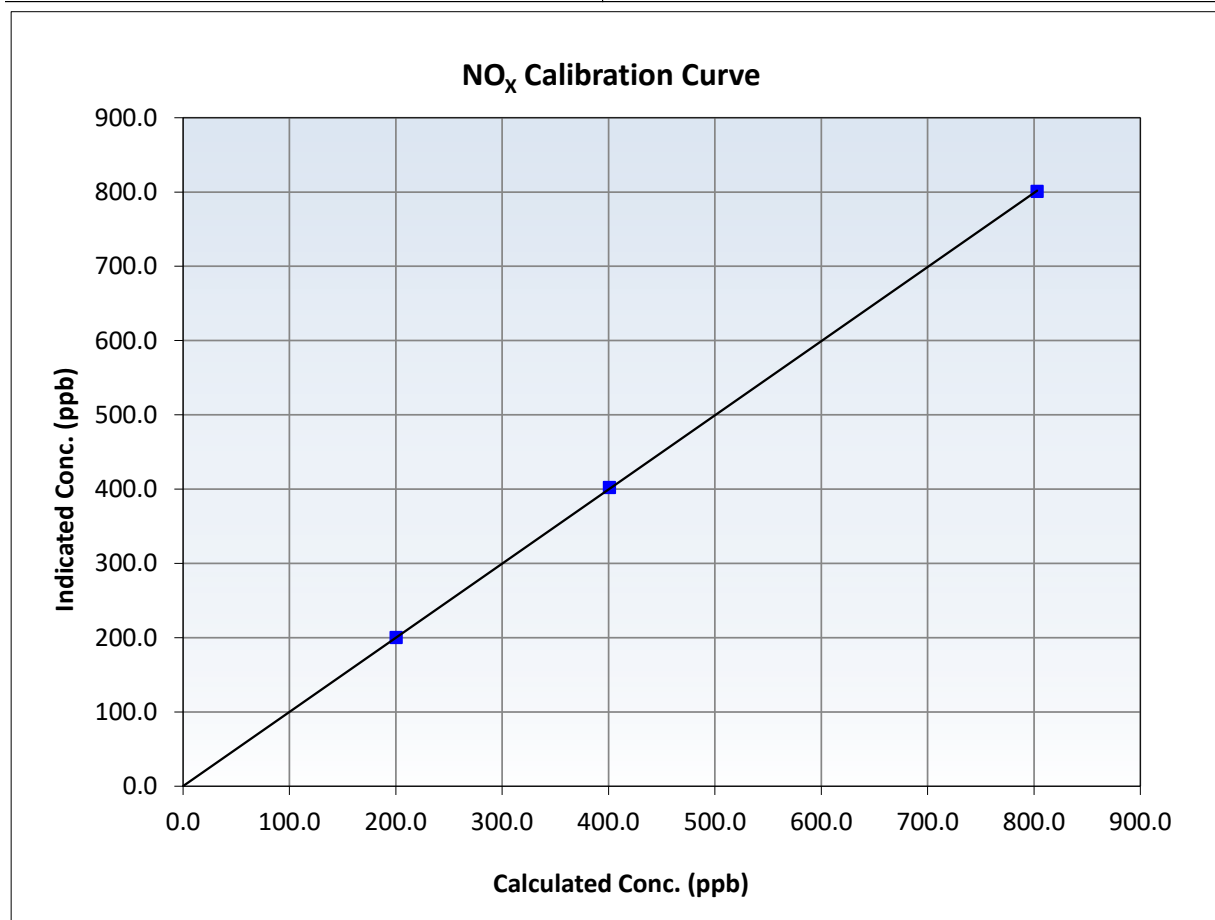
NO_x Calibration Summary

Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 25, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	8:45	End Time (MST):	13:44
Analyzer make:	Teledyne API T200	Analyzer serial #:	723

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	0.999988	≥0.995
803.0	801.0	1.0025	Slope	0.998346	0.90 - 1.10
400.9	402.1	0.9970	Intercept	0.182614	+/-20
200.4	200.2	1.0012			





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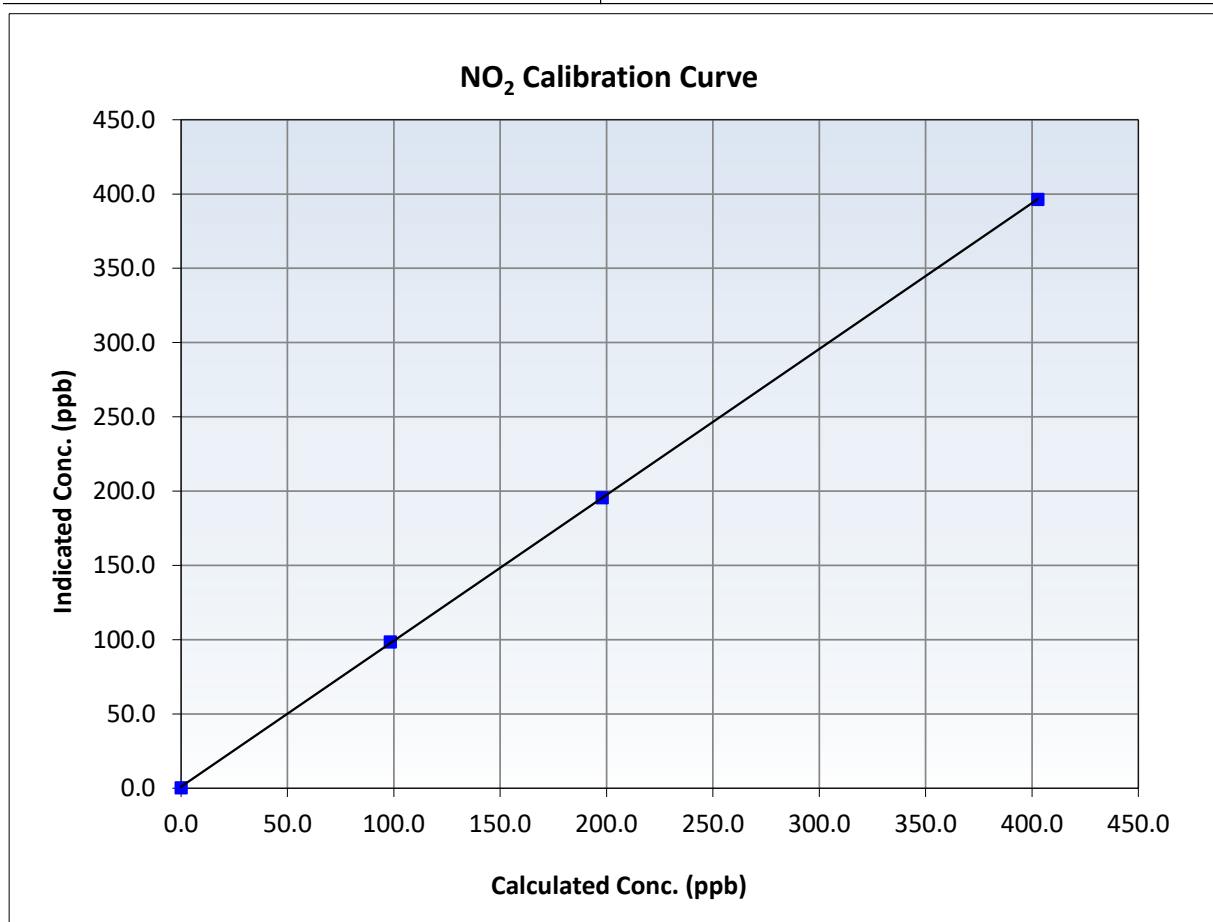
NO₂ Calibration Summary

Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 25, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	8:45	End Time (MST):	13:44
Analyzer make:	Teledyne API T200	Analyzer serial #:	723

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	0.999987	≥0.995
402.8	396.4	1.0162	Slope	0.982074	0.90 - 1.10
198.0	195.6	1.0123	Intercept	1.052373	+/-20
98.4	98.5	0.9991			





Wood Buffalo Environmental Association

NO Calibration Summary

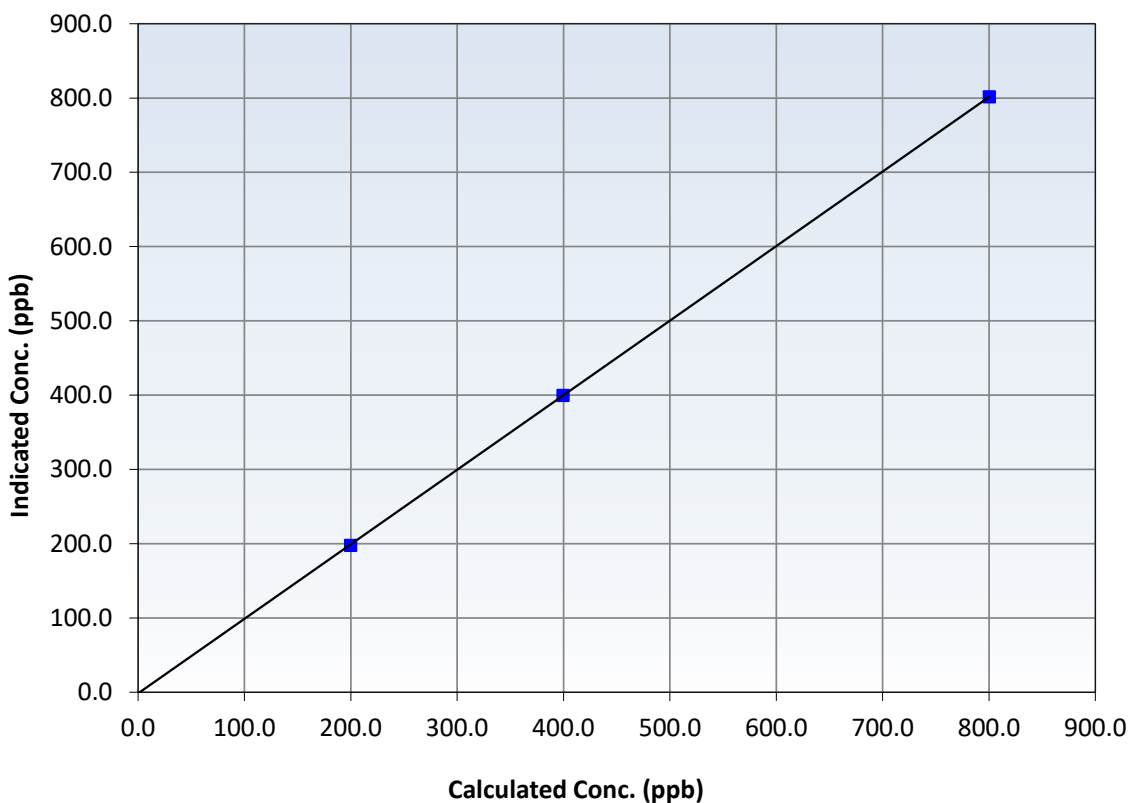
Station Information

Calibration Date:	July 3, 2026	Previous Calibration:	June 25, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	8:45	End Time (MST):	13:44
Analyzer make:	Teledyne API T200	Analyzer serial #:	723

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	0.999995	≥ 0.995
800.3	801.7	0.9982	Slope	1.003613	$0.90 - 1.10$
399.5	399.7	0.9996	Intercept	-1.578074	± 20
199.8	197.8	1.0099			

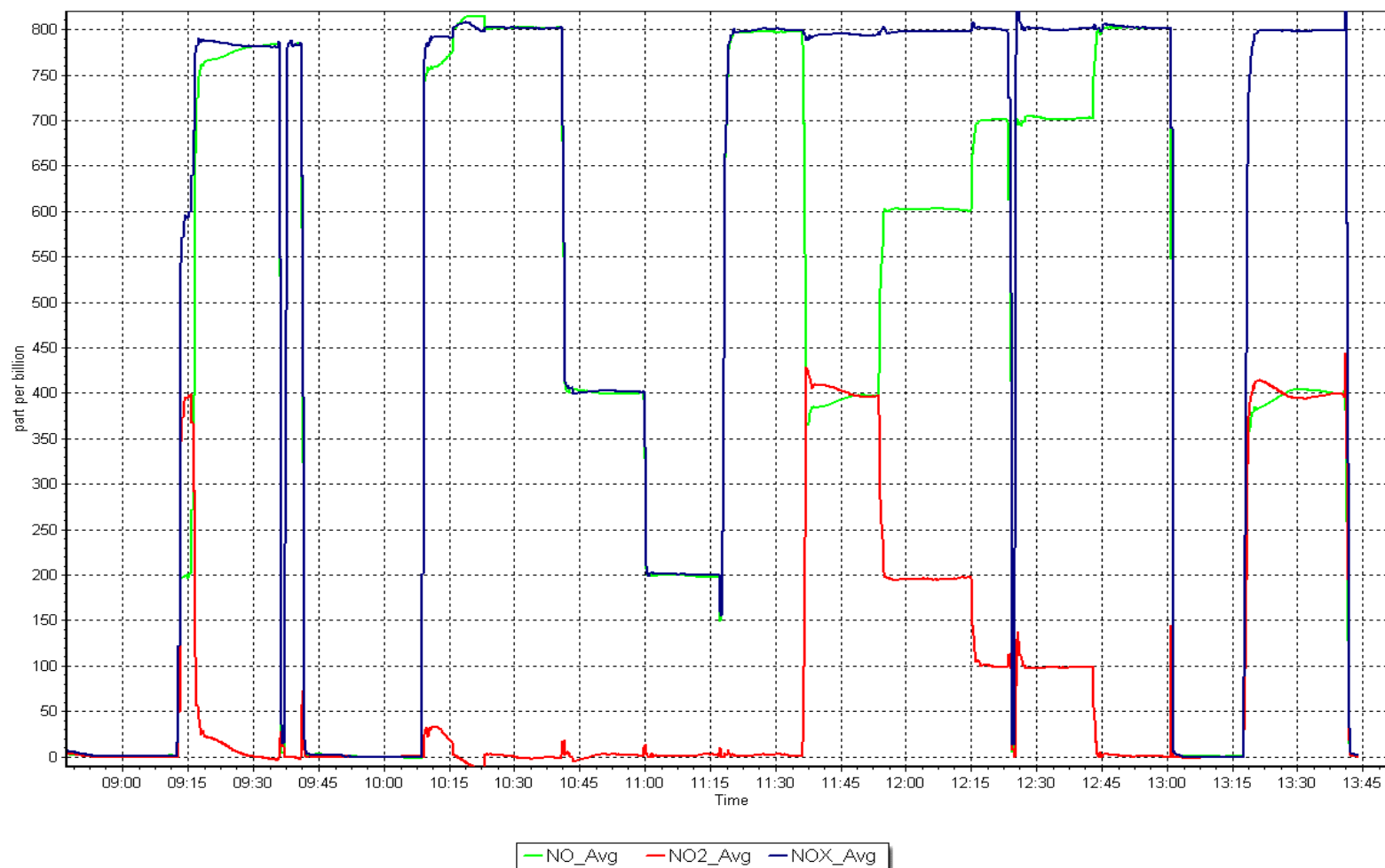
NO Calibration Curve



NO_x Calibration Plot

Date: July 3, 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: July 14, 2026
Last Cal Date: July 3, 2026
Start time (MST): 8:45
End time (MST): 15:00
Reason: Maintenance

Calibration Standards

NO Gas Cylinder #: DT0027487
NO_x Cal Gas Conc: 59.30 ppm
Removed Cylinder #: NA
Removed Gas NO_x Conc: 59.30 ppm
NO_x 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	-1.3	-1.0	-0.3	----	----
AF High point	4932	67.7	803.0	800.3	2.7	786.0	784.7	1.3	1.0199	1.0185
AF Mid point	4966	33.8	400.9	399.5	1.4	396.9	392.6	4.3	1.0067	1.0151
AF Low point	4983	16.9	200.4	199.8	0.7	197.5	193.8	3.7	1.0082	1.0255

New cyl resp

Previous Response	NO _x = 801.8 ppb	NO = 801.6 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = -1.8%
Baseline Corr 1st pt	NO _x = 787.3 ppb	NO = 785.7 ppb	<u>As Found Statistics</u>		*Percent Change	NO = -2.0%
Baseline Corr 2nd pt	NO _x = 398.2 ppb	NO = 393.6 ppb	As found	NO _x r ² : 0.999947	Nx SI: 0.980239	Nx Int: 0.639
Baseline Corr 3rd pt	NO _x = 198.8 ppb	NO = 194.8 ppb	As found	NO r ² : 0.999990	NO SI: 0.982562	NO Int: -1.263
			As found	NO ₂ r ² : 1.000000	NO ₂ SI: 0.985523	NO ₂ Int: -0.300

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	791.5	386.1	408.1	401.9	1.0154	98.5%
As found mid GPT point	791.5					
As found low GPT point	791.5					



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Teledyne API T200
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 723

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.022	1.037	NO bkgnd or offset:	1.1	2.3
NOX coeff or slope:	1.012	1.026	NOX bkgnd or offset:	1.5	1.2
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	6.0	5.7

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.998346	0.996826
NO _x Cal Offset:	0.182614	-0.358670
NO Cal Slope:	1.003613	0.999844
NO Cal Offset:	-1.578074	-1.759459
NO ₂ Cal Slope:	0.982074	0.989017
NO ₂ Cal Offset:	1.052373	0.974952

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	-0.7	0.5	----	----
High point	4932	67.7	803.0	800.3	2.7	800.0	798.9	1.1	1.0037	1.0017
Mid point	4966	33.8	400.9	399.5	1.4	399.6	397.2	2.5	1.0032	1.0059
Low point	4983	16.9	200.4	199.8	0.7	199.0	196.9	2.2	1.0072	1.0145
As left zero	5000	0.0	0.0	0.0	0.0	0.2	-0.2	0.3	----	----
As left span	4932	67.7	803.0	392.6	410.4	794.0	392.6	401.5	1.0113	1.0000
Average Correction Factor									1.0047	1.0074

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	793.9	389.3	407.3	403.5	1.0094	99.1%
Mid GPT point	793.9	598.5	198.1	197.4	1.0036	99.6%
Low GPT point	793.9	698.7	97.9	98.1	0.9980	100.2%
Average Correction Factor					1.0037	99.6%

Notes:

Pump changed after MPAF, charcoal in filter changed. Zero adjusted, span adjusted

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

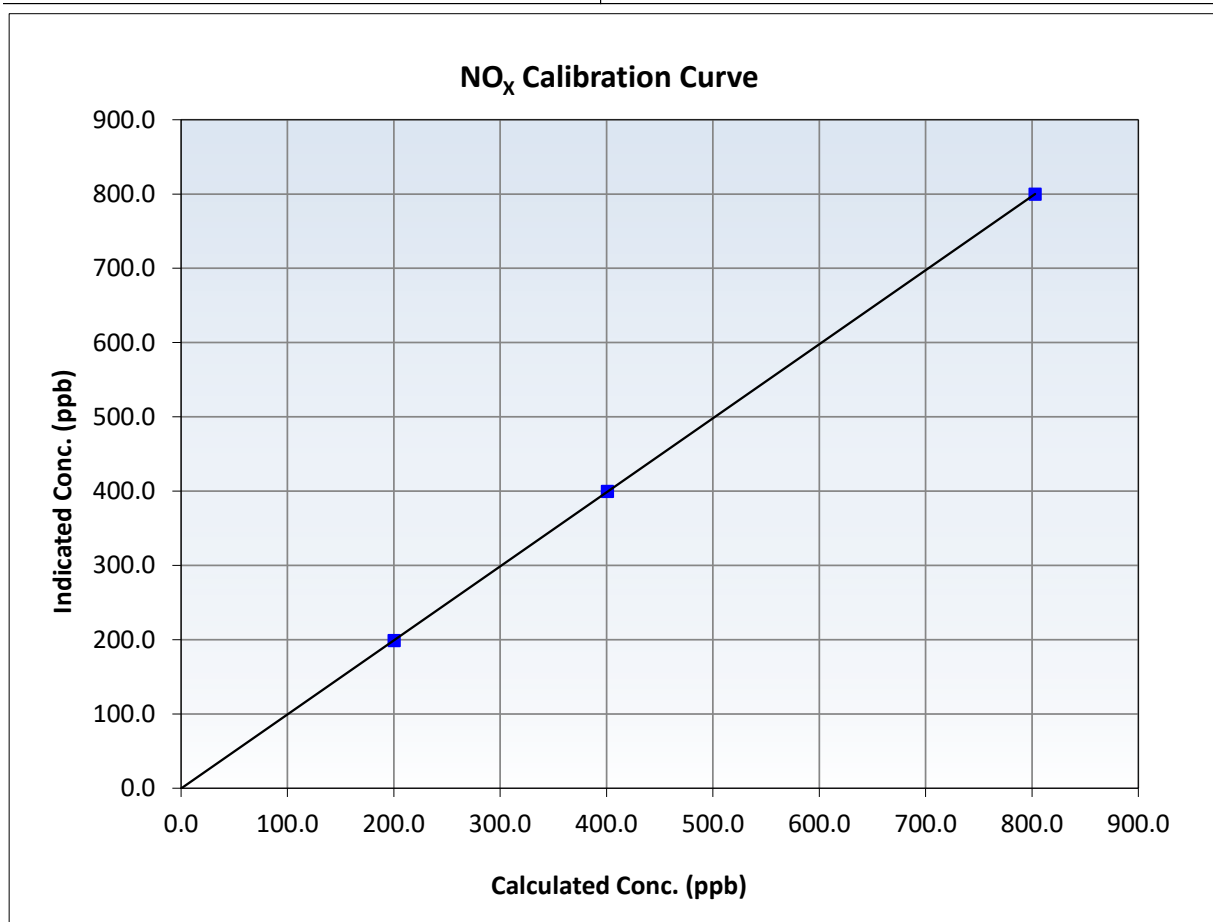
NO_x Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	July 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	8:45	End Time (MST):	15:00
Analyzer make:	Teledyne API T200	Analyzer serial #:	723

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
803.0	800.0	1.0037	Slope	0.996826	0.90 - 1.10
400.9	399.6	1.0032	Intercept	-0.358670	+/-20
200.4	199.0	1.0072			





Wood Buffalo Environmental Association

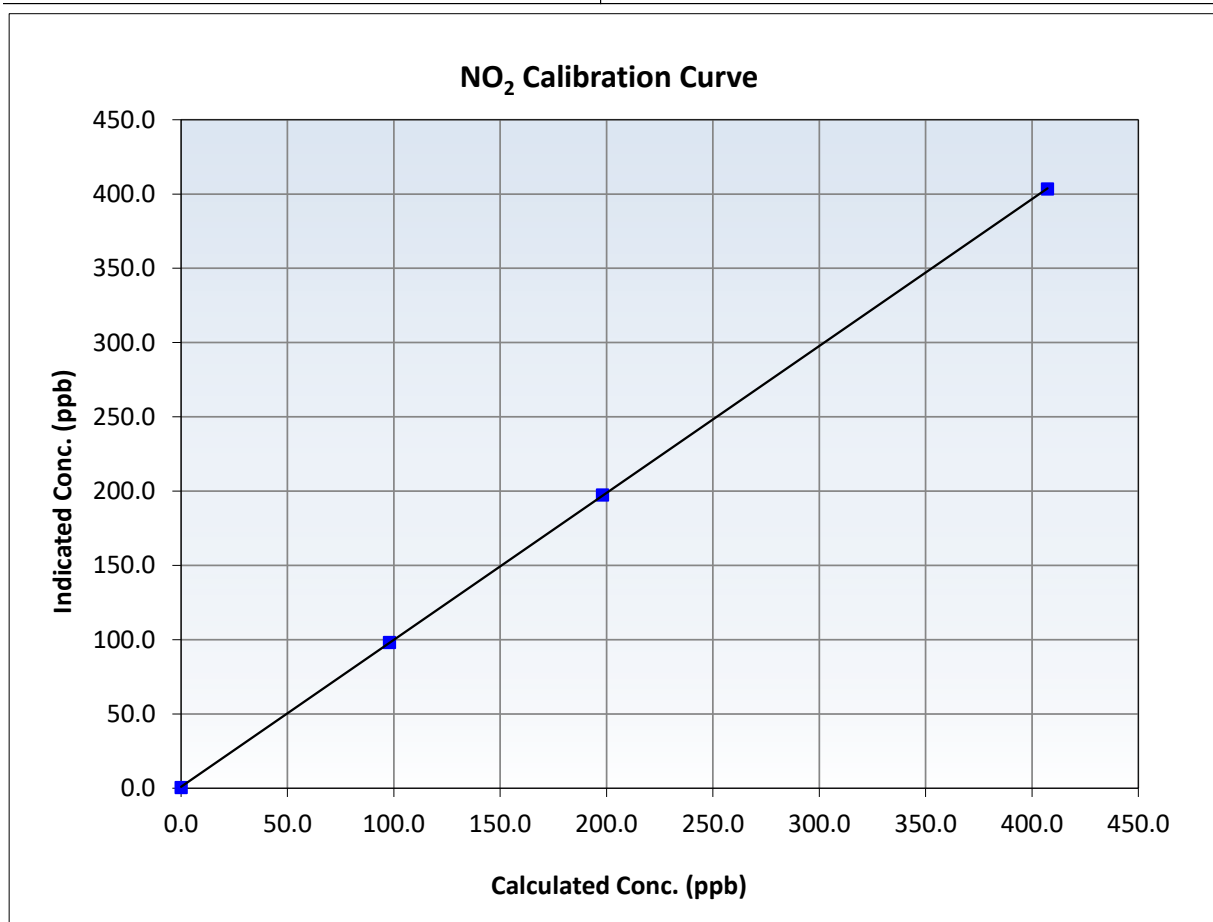
NO₂ Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	July 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	8:45	End Time (MST):	15:00
Analyzer make:	Teledyne API T200	Analyzer serial #:	723

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	0.999993	≥ 0.995
407.3	403.5	1.0094	Slope	0.989017	0.90 - 1.10
198.1	197.4	1.0036	Intercept	0.974952	+/-20
97.9	98.1	0.9980			





Wood Buffalo Environmental Association

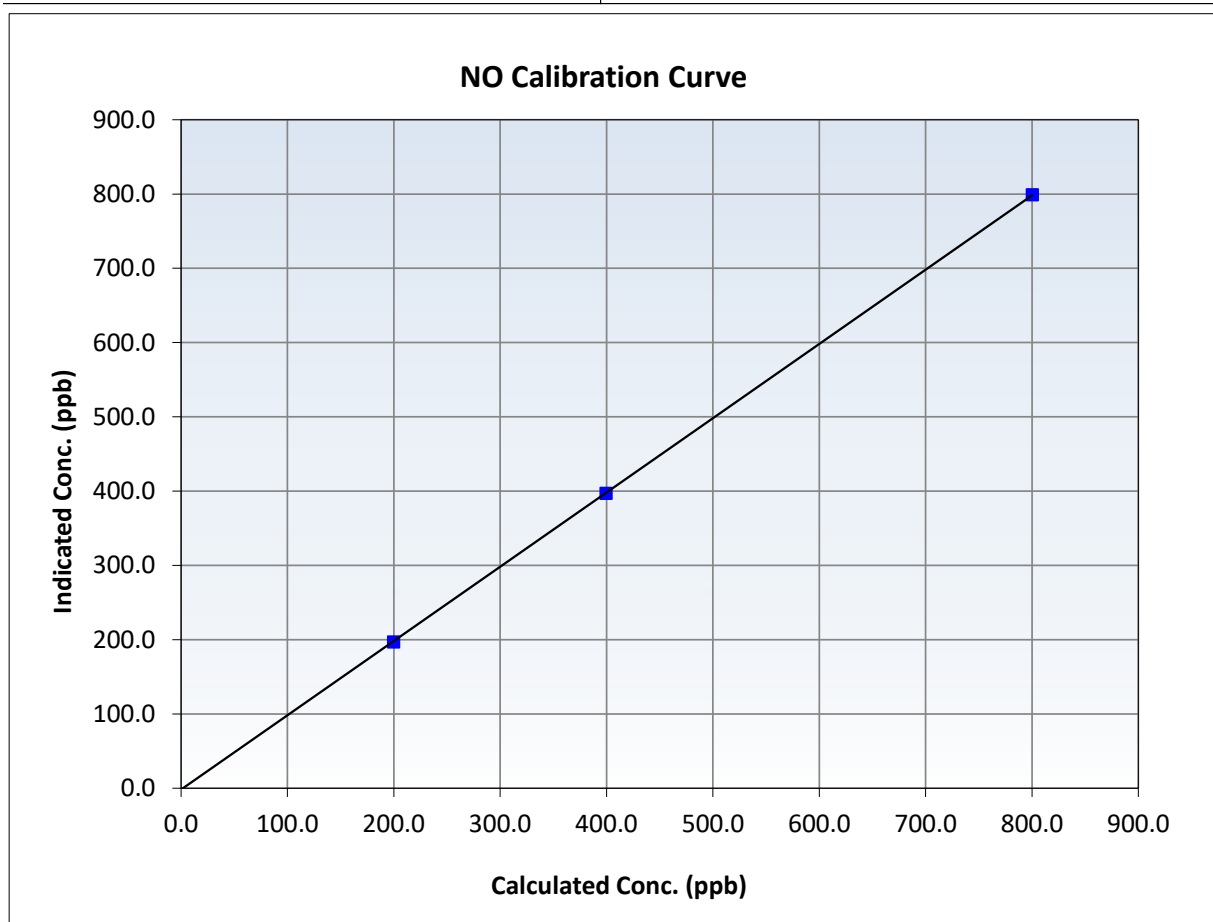
NO Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	July 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	8:45	End Time (MST):	15:00
Analyzer make:	Teledyne API T200	Analyzer serial #:	723

Calibration Data

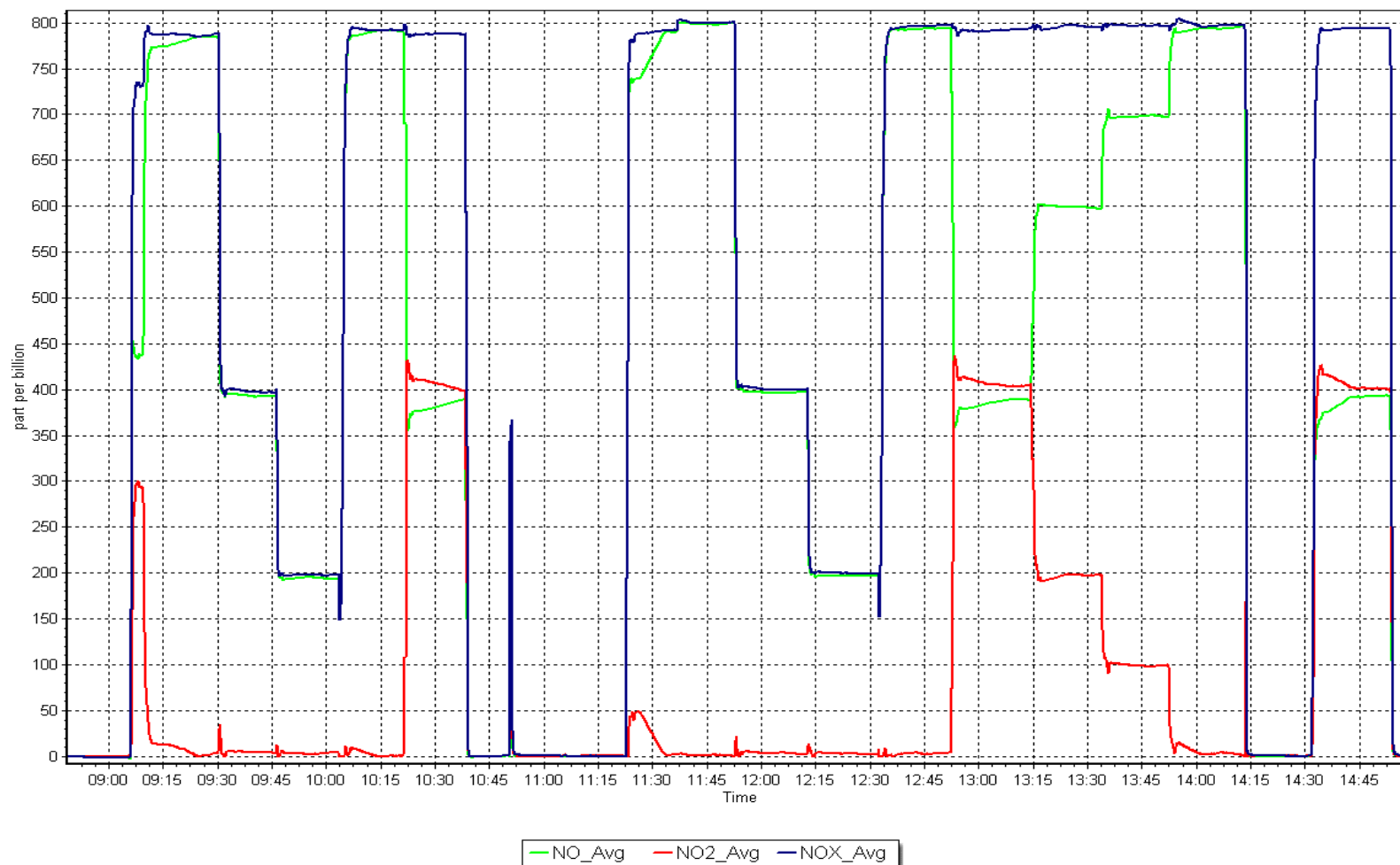
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.7	----	Correlation Coefficient	0.999992	≥ 0.995
800.3	798.9	1.0017	Slope	0.999844	$0.90 - 1.10$
399.5	397.2	1.0059	Intercept	-1.759459	± 20
199.8	196.9	1.0145			



NO_x Calibration Plot

Date: July 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: July 15, 2026 Last Cal Date: June 11, 2026
Start time (MST): 8:50 End time (MST): 9:07

Analyzer Make: API T640 S/N: 875
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)	22.30	22.29	22.30	☐	+/- 2 °C
P (mmHg)	734.00	736.32	734.00	☐	+/- 10 mmHg
Flow (LPM)	4.99	4.98	4.99	☐	+/- 0.25 LPM
PW% (pump)	31		31	☐	>80%
Zero Verification	PM w/o HEPA: 8.9		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: 10.90 Expiry Date: January 30, 2027
Lot No.: 100128-050-051

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

Date Optical Chamber Cleaned: May 21, 2026
Date Disposable Filter Changed: April 5, 2026

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

Annual Maintenance

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

Notes: Temperature, flow, pressure and PW% verified. No adjustments made. Leak check passed.

Calibration by: Jason Brooks



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS31
BLACKROD
JULY 2026**

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Blackrod Station number: AMS 31
Calibration Date: July 23, 2026 Last Cal Date: June 18, 2026
Start time (MST): 9:35 End time (MST): 12:52
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.25 ppm Cal Gas Exp Date: March 10, 2031
Cal Gas Cylinder #: CC327023
Removed Cal Gas Conc: 50.25 ppm Rem Gas Exp Date: N/A
Removed Gas Cyl #: N/A Diff between cyl:
Calibrator Model: Teledyne T700 Serial Number: 1220
Zero Air Gen Model: Teledyne N701H Serial Number: 72

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1160290014
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001979	0.999404	Backgd or Offset:	39.8	38.6
Calibration intercept:	-0.442255	0.158267	Coeff or Slope:	0.982	0.964

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	-0.8	----
As found High point	4921	79.5	798.9	815.1	0.979
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	815.9	Previous response	800.0	*% 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	

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	798.9	798.5	1.000
Mid point	4960	39.8	400.0	400.2	1.000
Low point	4980	19.9	200.0	199.8	1.001
As left zero	5000	0.0	0.0	0.2	----
As left span	4921	79.5	798.9	799.4	0.999
Average Correction Factor:					1.000

Notes: Sample inlet filter was changed after as founds. Adjusted zero and span.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

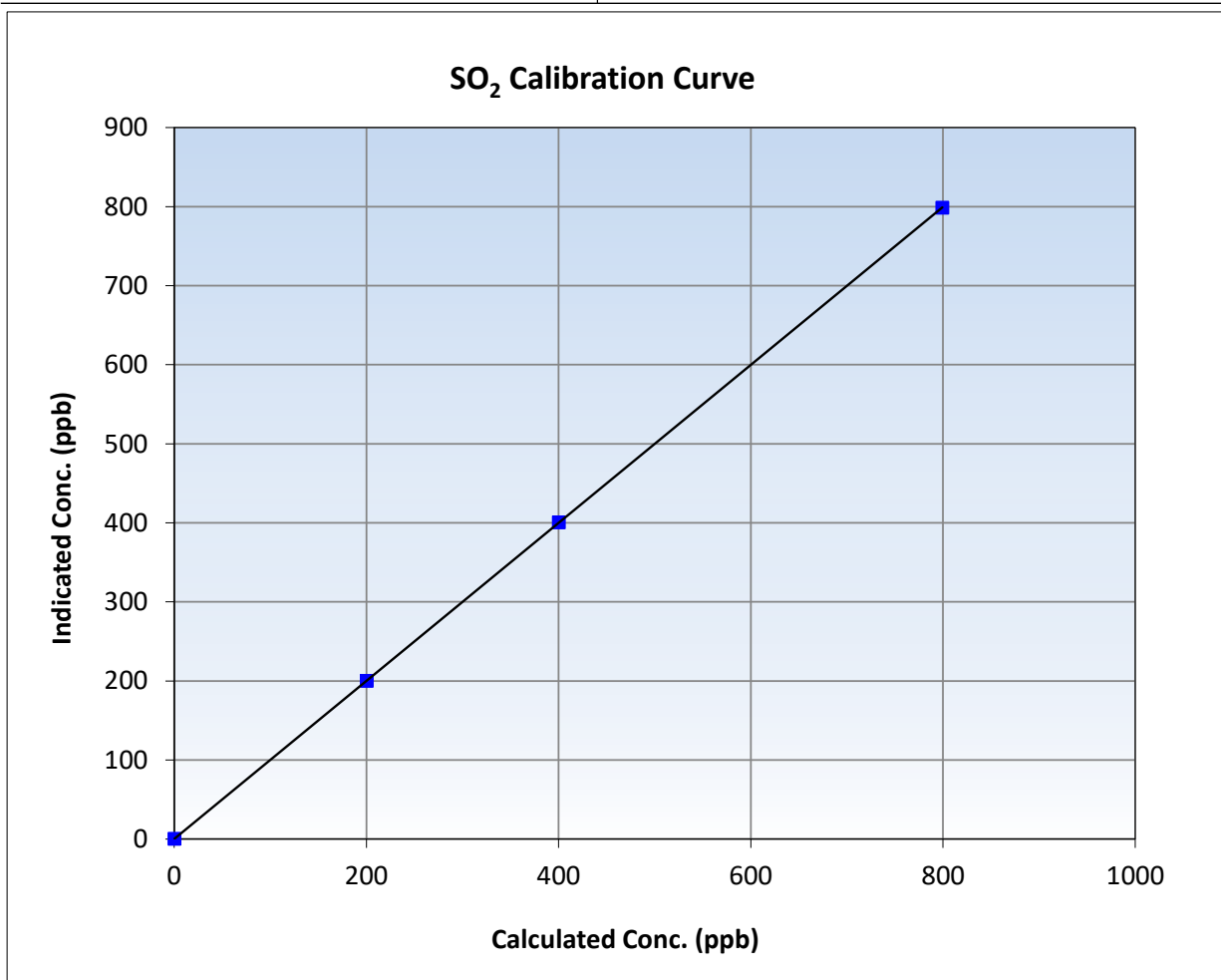
SO₂ Calibration Summary

Station Information

Calibration Date:	July 23, 2026	Previous Calibration:	June 18, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:35	End Time (MST):	12:52
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290014

Calibration Data

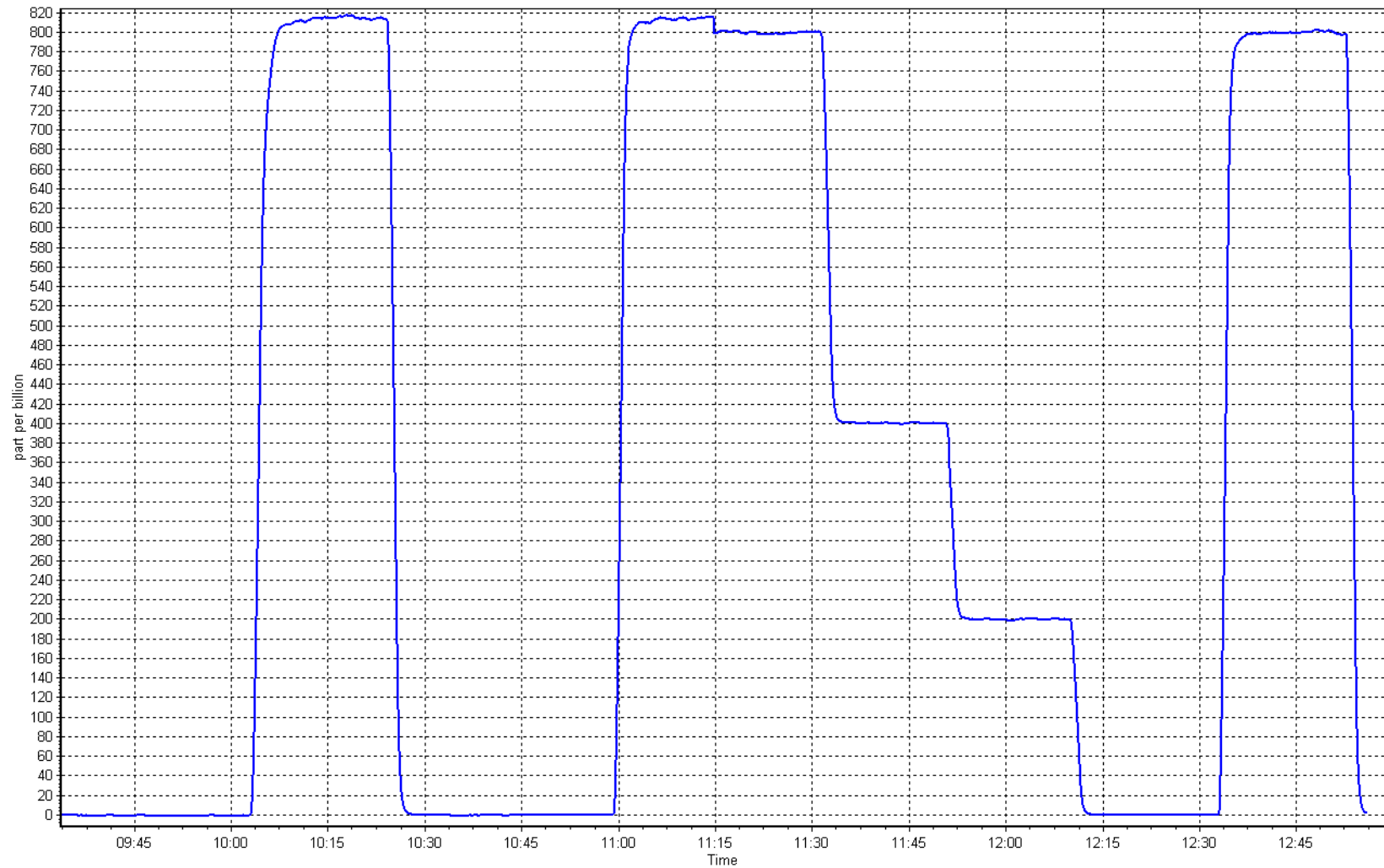
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	1.000000	≥0.995
798.9	798.5	1.0005	Slope	0.999404	0.90 - 1.10
400.0	400.2	0.9995	Intercept	0.158267	+/-30
200.0	199.8	1.0010			



SO2 Calibration Plot

Date: July 23, 2026

Location: Blackrod





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Blackrod Station number: AMS 31
Calibration Date: July 8, 2026 Last Cal Date: June 17, 2026
Start time (MST): 9:11 End time (MST): 13:57
Reason: Routine

Calibration Standards

Cal Gas Concentration: 5.42 ppm Cal Gas Exp Date: March 19, 2027
Cal Gas Cylinder #: DT0016926
Removed Cal Gas Conc: 5.42 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 1220
ZAG Make/Model: Teledyne API N701H Serial Number: 72

Analyzer Information

Analyzer make: Thermo 43iQTL Analyzer serial #: 12228021056
Converter make: Global Converter serial #: 2023-266
Analyzer Range: 0 - 100 ppb Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001192	1.005474	Backgd or Offset:	2.74
Calibration intercept:	0.019576	-0.280364	Coeff or Slope:	0.969

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	4926	73.8	80.0	80.0	0.999
As found Mid point	4963	36.9	40.0	40.1	0.995
As found Low point	4982	18.5	20.1	20.2	0.988
New cylinder response					
Baseline Corr As found:	80.1	Prev response:	80.12	*% change:	0.0%
Baseline Corr 2nd AF pt:	40.2	AF Slope:	1.000479	AF Intercept:	0.019532
Baseline Corr 3rd AF pt:	20.3	AF Correlation:	0.999990	* = > +/-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	80.2	0.998
Mid point	4963	36.9	40.0	40.0	1.000
Low point	4982	18.5	20.1	19.6	1.023
As left zero	5000	0.0	0.0	-0.2	----
As left span	4926	73.8	80.0	79.4	1.008
SO2 Scrubber Check	4921	79.5	794.9	-0.1	----
Date of last scrubber change:		27-Aug-25		Ave Corr Factor	1.007
Date of last converter efficiency test:		October 9, 2025			

Notes: Sample inlet filter and DMC board was changed after multipoint as founds. SO2 scrubber done and passed. Adjusted zero and span.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

H₂S Calibration Summary

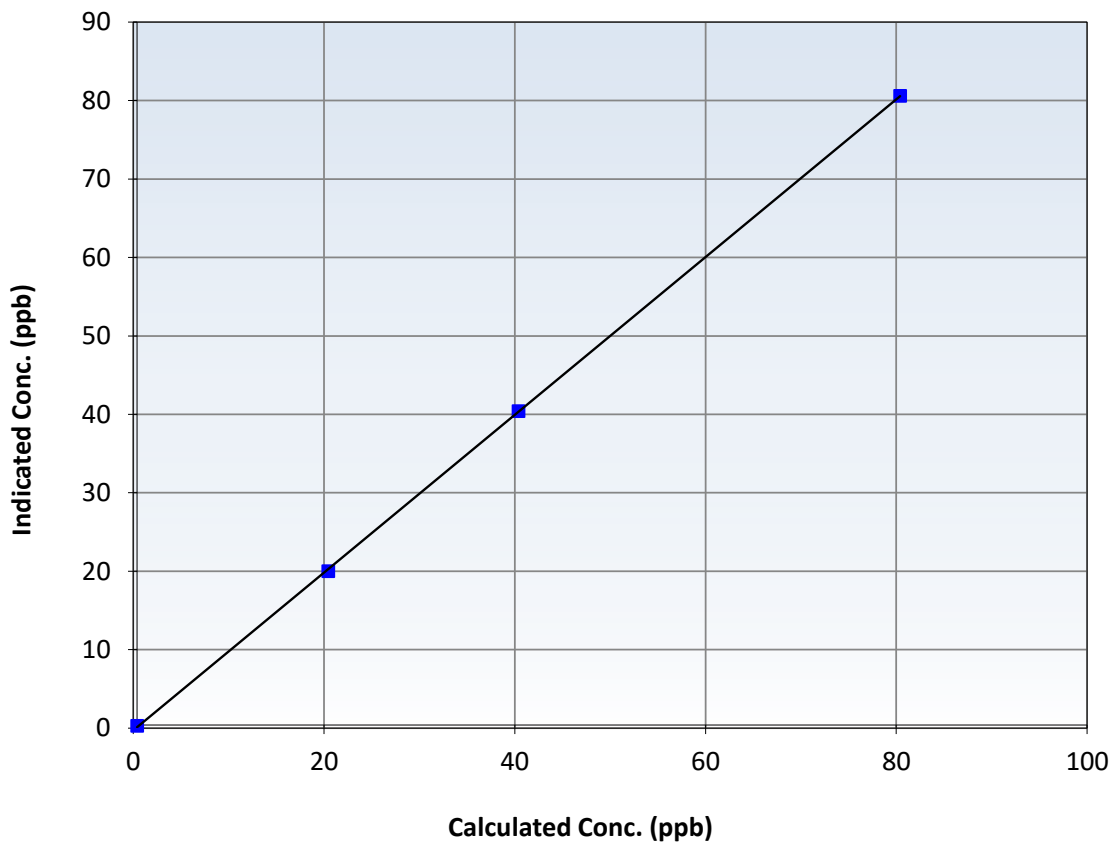
Station Information

Calibration Date:	July 8, 2026	Previous Calibration:	June 17, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:11	End Time (MST):	13:57
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	0.999967		≥ 0.995
80.0	80.2	0.9975	Slope	1.005474		$0.90 - 1.10$
40.0	40.0	1.0000	Intercept	-0.280364		± 3
20.1	19.6	1.0231				

H₂S Calibration Curve



H₂S Calibration Plot

Date: July 8, 2026

Location: Blackrod





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Blackrod
Calibration Date: July 23, 2026
Start time (MST): 9:35
Reason: Routine

Station number: AMS 31
Last Cal Date: June 18, 2026
End time (MST): 12:52

Calibration Standards

Gas Cert Reference: CC327023
CH4 Cal Gas Conc. 499.9 ppm
C3H8 Cal Gas Conc. 203.0 ppm
Removed Gas Cert: NA
Removed CH4 Conc. 499.9 ppm
Removed C3H8 Conc. 203.0 ppm
Calibrator Make/Model: Teledyne T700
ZAG Make/Model: Teledyne API N701H

Cal Gas Expiry Date: March 10, 2031
CH4 Equiv Conc. 1058.2 ppm
Removed Gas Expiry: NA
CH4 Equiv Conc. 1058.2 ppm
Diff between cyl:
Serial Number: 1220
Serial Number: 72

Analyzer Information

Analyzer make: Thermo 51i- LT
Analyzer Range: 0 - 20 ppm

Analyzer serial #: 1505164380

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004923	0.999845	Background:	2.010	2.010
Calibration intercept:	0.011088	0.030732	Coefficient:	3.173	3.173

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)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.03	----
As found High point	4921	79.5	16.82	16.87	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.84	Previous response	16.92	*% 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	

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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.03	----
High point	4921	79.5	16.82	16.85	0.998
Mid point	4960	39.8	8.42	8.45	0.997
Low point	4980	19.9	4.21	4.25	0.990
As left zero	5000	0.0	0.00	0.03	----
As left span	4921	79.5	16.82	16.94	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

THC Calibration Summary

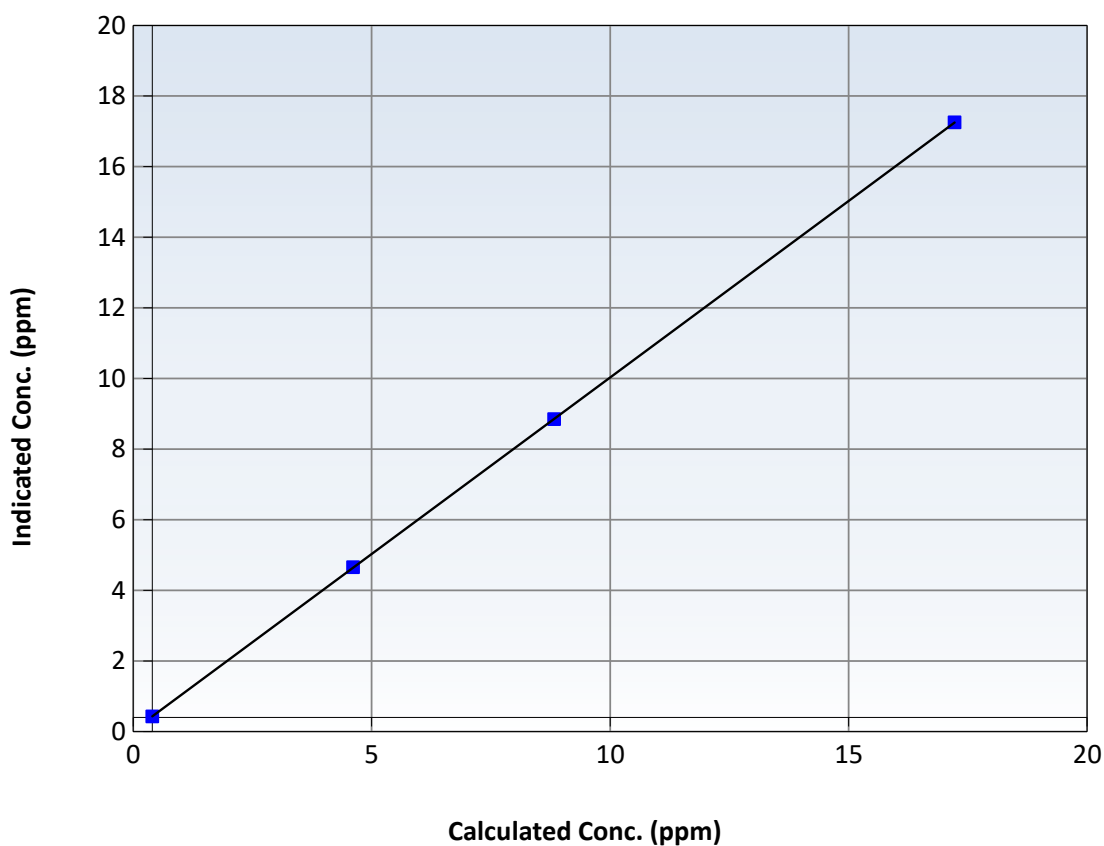
Station Information

Calibration Date:	July 23, 2026	Previous Calibration:	June 18, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:35	End Time (MST):	12:52
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	0.03	----	Correlation Coefficient	0.999999	≥ 0.995
16.82	16.85	0.9983	Slope	0.999845	$0.90 - 1.10$
8.42	8.45	0.9974	Intercept	0.030732	± 1.5
4.21	4.25	0.9902			

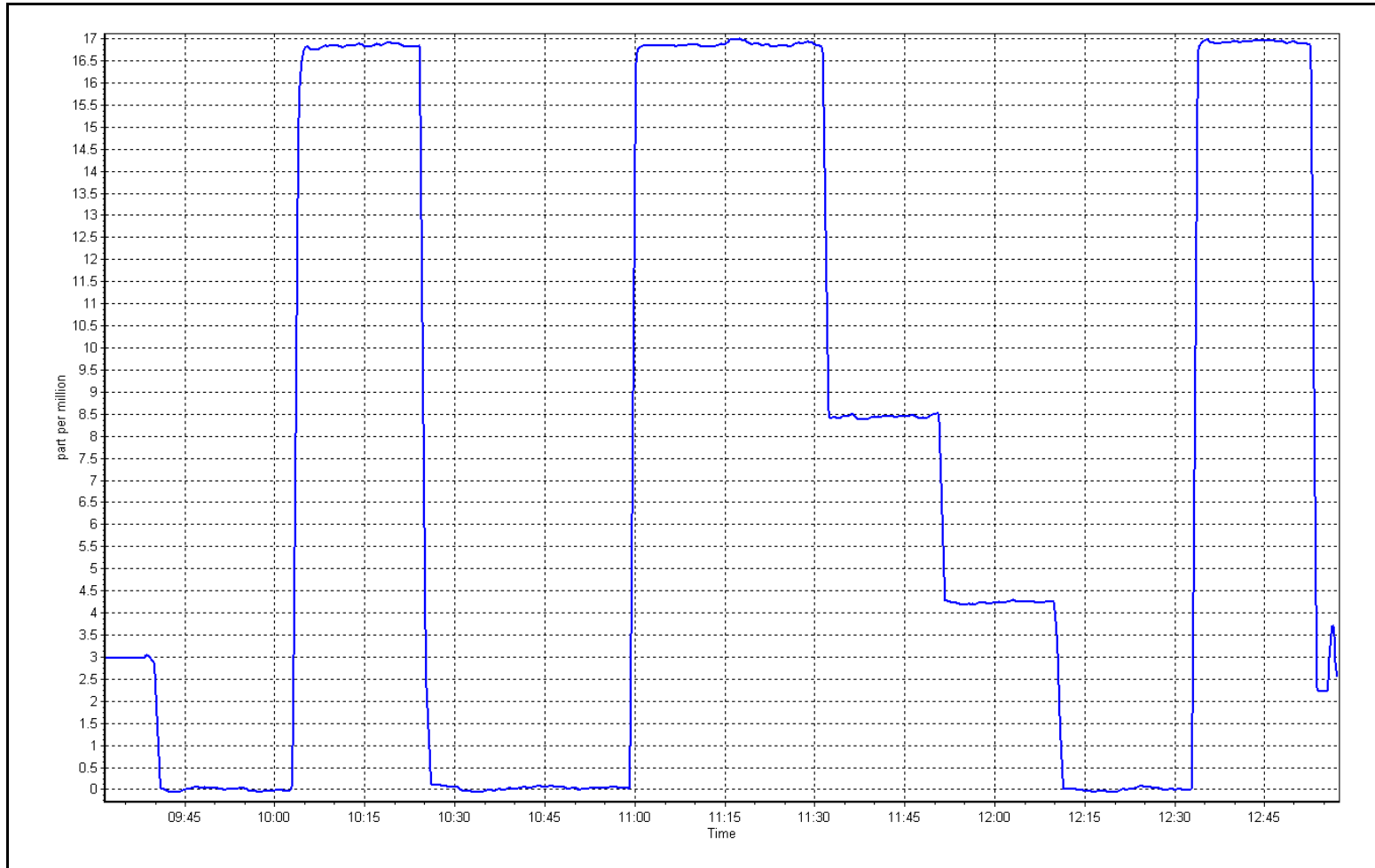
THC Calibration Curve



THC Calibration Plot

Date: July 23, 2026

Location: Blackrod





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Blackrod
Station number: AMS 31
Calibration Date: July 28, 2026
Last Cal Date: June 16, 2026
Start time (MST): 9:31
End time (MST): 13:41
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 T750
ZAG make/model: Teledyne API 751H
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: 281
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	0.0	-0.1	0.1	----	----
AF High point	4932	67.7	803.0	800.3	2.7	811.5	806.1	5.5	0.9895	0.9926
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 800.1 ppb	NO = 796.2 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = 1.4%
Baseline Corr 1st pt	NO _x = 811.5 ppb	NO = 806.2 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: 1173480006

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.968	0.968	NO bkgnd or offset:	2.3	2.3
NOX coeff or slope:	0.995	0.995	NOX bkgnd or offset:	2.3	2.3
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	145.3	147.1

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.995686	1.002543
NO _x Cal Offset:	0.641519	2.484322
NO Cal Slope:	0.995644	1.003138
NO Cal Offset:	-0.540042	1.562974
NO ₂ Cal Slope:	1.001435	0.999629
NO ₂ Cal Offset:	-0.065029	-0.142206

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	4932	67.7	803.0	800.3	2.7	806.1	803.5	2.7	0.9961	0.9960
Mid point	4966	33.8	400.9	399.5	1.4	406.3	403.4	2.9	0.9867	0.9904
Low point	4983	16.9	200.4	199.8	0.7	205.2	203.2	2.1	0.9768	0.9831
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
As left span	4932	67.7	803.0	496.0	307.0	795.6	496.0	299.6	1.0093	1.0000
Average Correction Factor									0.9865	0.9898

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	803.2	413.2	392.7	392.5	1.0005	99.9%
Mid GPT point	803.2	608.7	197.2	197.0	1.0011	99.9%
Low GPT point	803.2	706.5	99.4	98.9	1.0051	99.5%
Average Correction Factor					1.0022	99.8%

Notes: Sample inlet filter was changed after as founds. No adjustment made. Used 2nd NO point because of drift.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

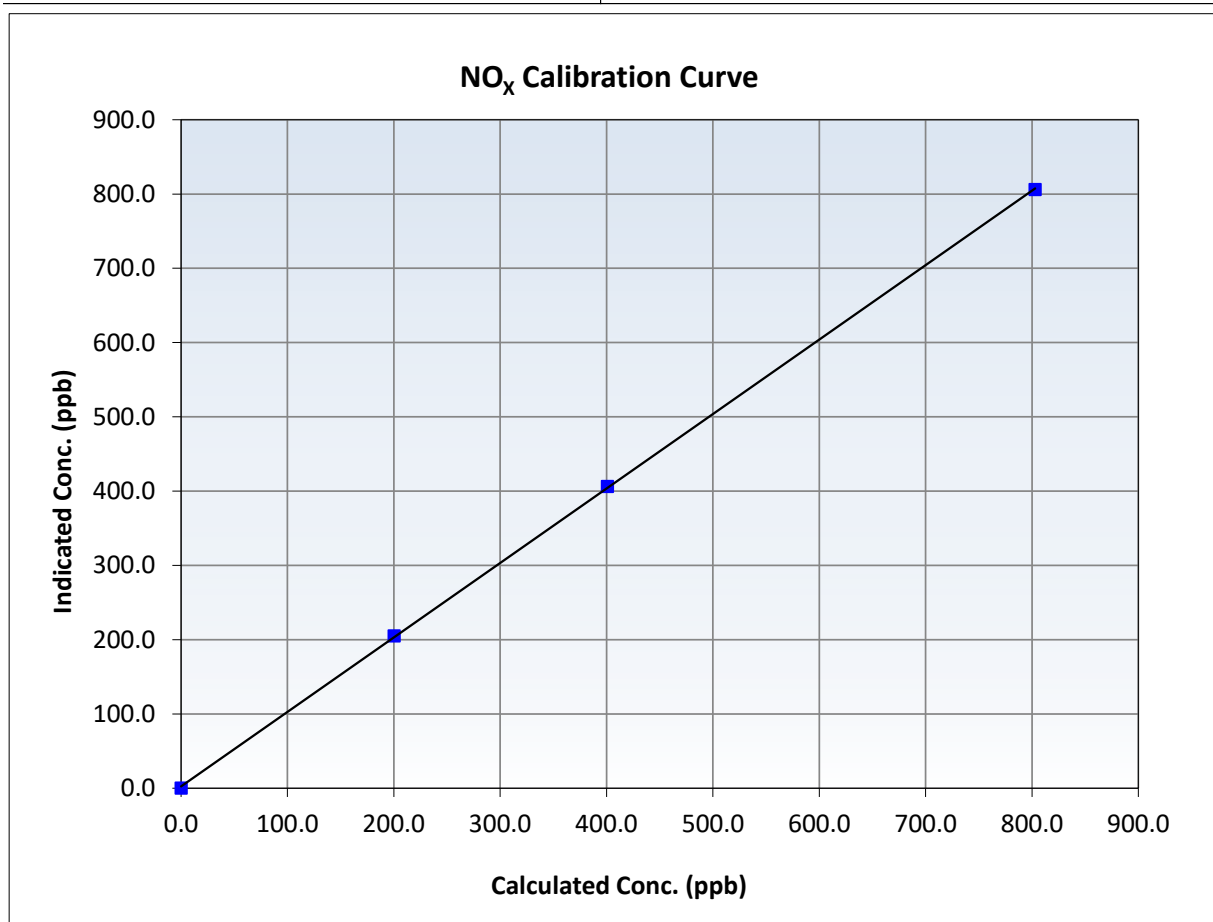
NO_x Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 16, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:31	End Time (MST):	13:41
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	0.999961	≥0.995
803.0	806.1	0.9961	Slope	1.002543	0.90 - 1.10
400.9	406.3	0.9867	Intercept	2.484322	+/-20
200.4	205.2	0.9768			





Wood Buffalo Environmental Association

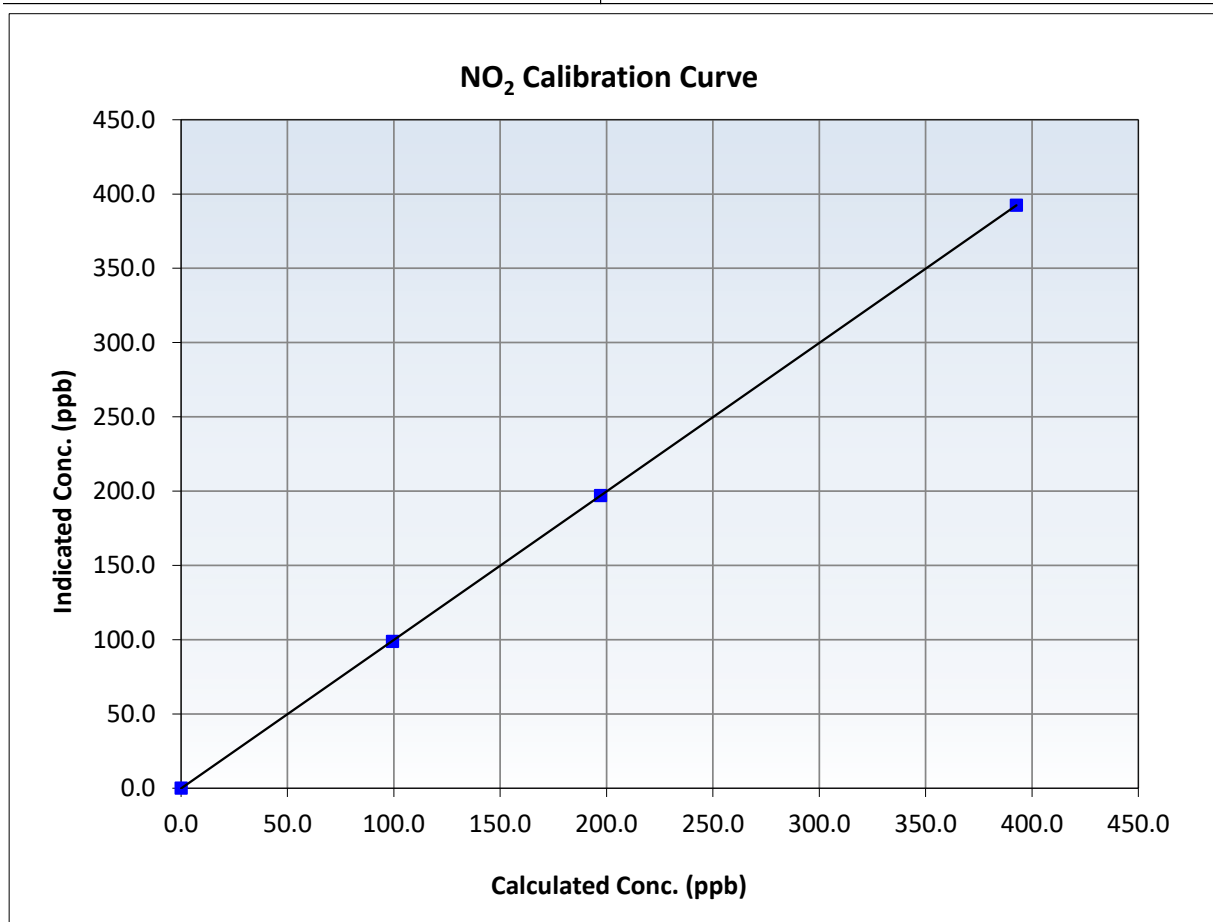
NO₂ Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 16, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:31	End Time (MST):	13:41
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
392.7	392.5	1.0005	Slope	0.999629	0.90 - 1.10
197.2	197.0	1.0011	Intercept	-0.142206	+/-20
99.4	98.9	1.0051			





Wood Buffalo Environmental Association

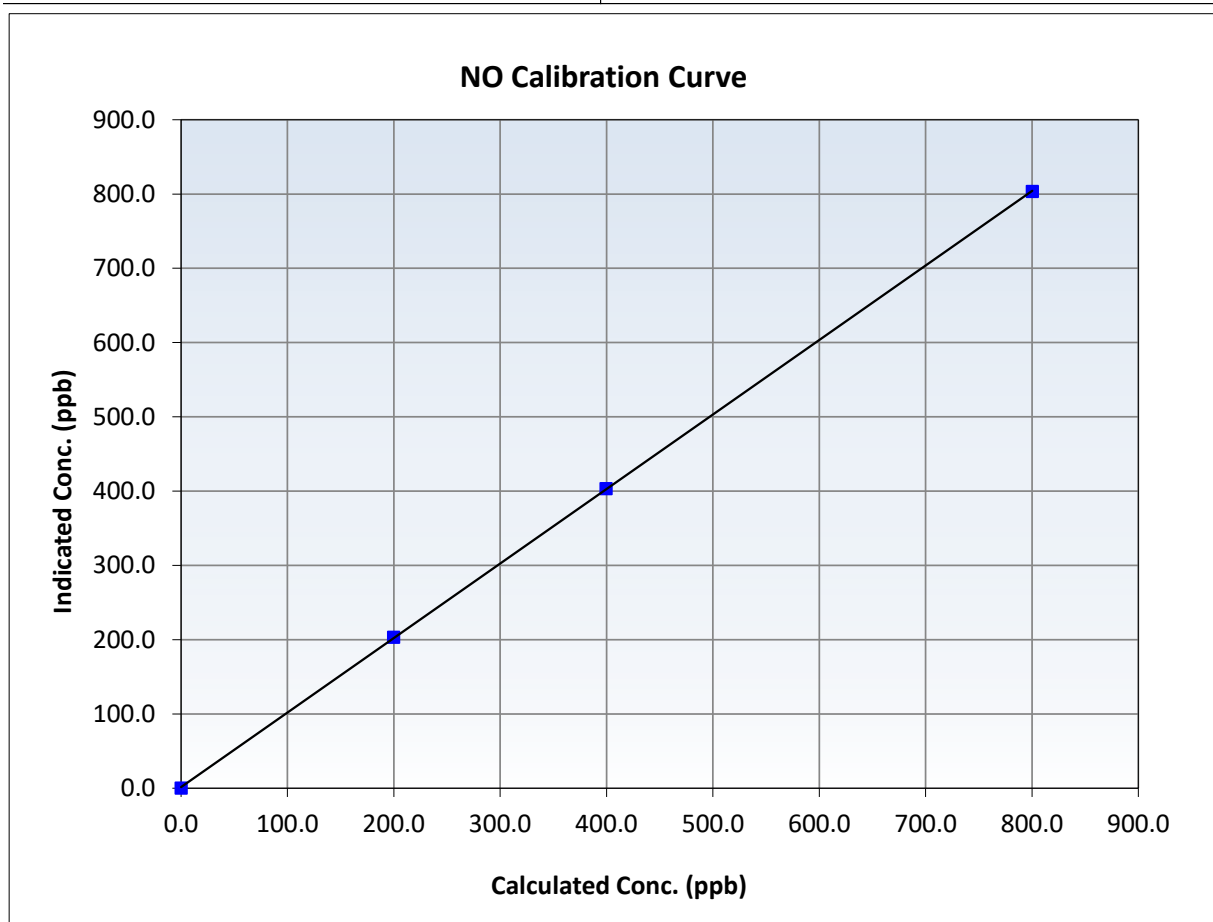
NO Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 16, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:31	End Time (MST):	13:41
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

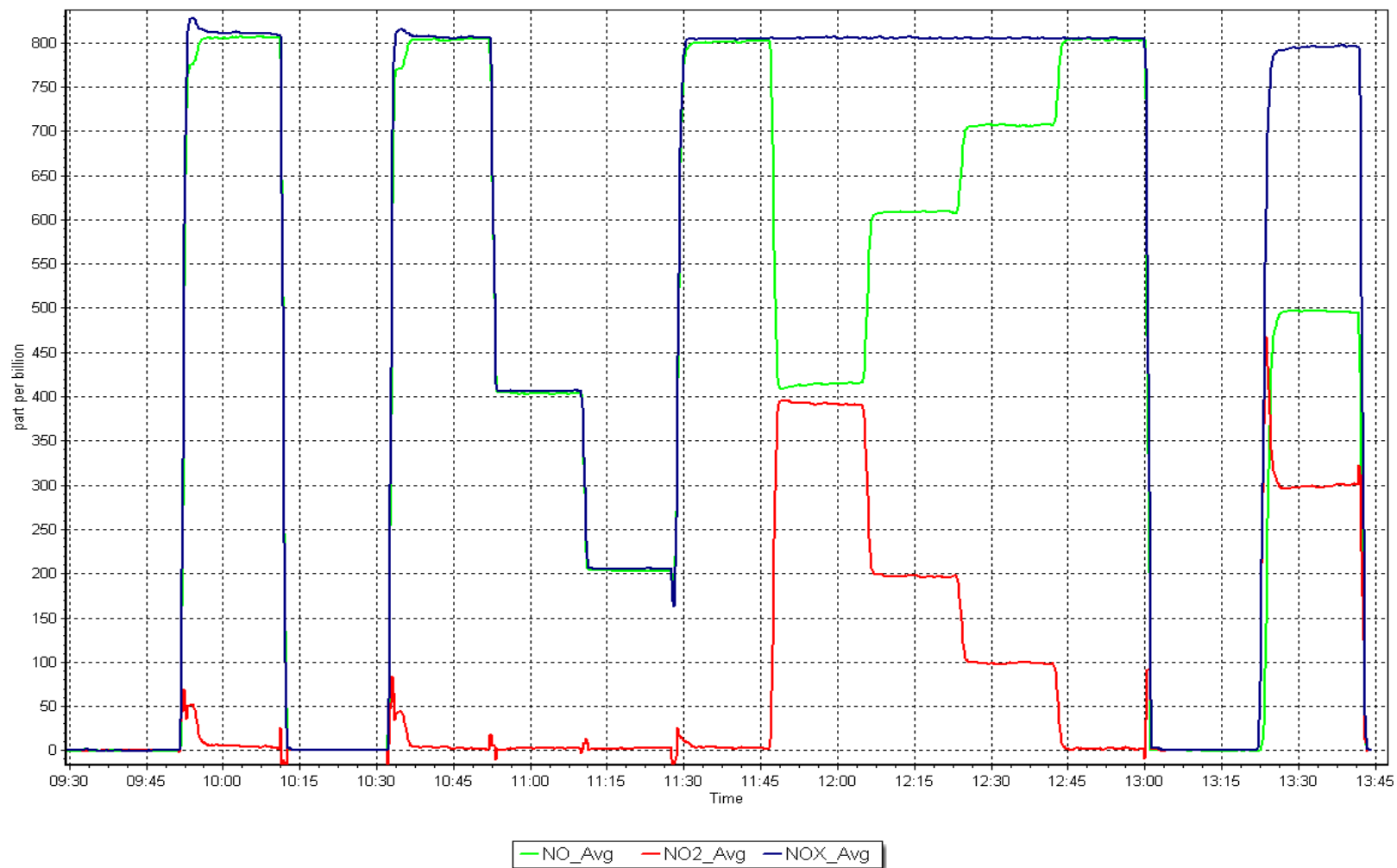
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999984	≥ 0.995
800.3	803.5	0.9960	Slope	1.003138	$0.90 - 1.10$
399.5	403.4	0.9904	Intercept	1.562974	± 20
199.8	203.2	0.9831			



NO_x Calibration Plot

Date: July 28, 2026

Location: Blackrod





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS32
PIHEW POINT
JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Pihew Point Station number: AMS 32
Calibration Date: July 2, 2026 Last Cal Date: June 18, 2026
Start time (MST): 8:57 End time (MST): 12:25
Reason: Routine

Calibration Standards

Cal Gas Concentration: 51.31 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: SA150969A
Removed Cal Gas Conc: 51.31 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: Teledyne T700 Serial Number: 3804
Zero Air Gen Model: Teledyne T701H Serial Number: 692

Analyzer Information

Analyzer make: Thermo 43i-TLE Serial Number: 1180540019
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.997762	1.003702	Backgd or Offset:	5.10	5.10
Calibration intercept:	-0.852036	-0.631983	Coeff or Slope:	1.168	1.168

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	4922	78.0	800.4	800.0	1.000
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	800.3	Previous response	797.8	*% 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	0.0	----
High point	4922	78.0	800.4	803.0	0.997
Mid point	4961	39.0	400.2	401.0	0.998
Low point	4981	19.5	200.1	199.4	1.003
As left zero	5000	0.0	0.0	-0.2	----
As left span	4922	78.0	800.4	804.0	0.996
Average Correction Factor:					0.999

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

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

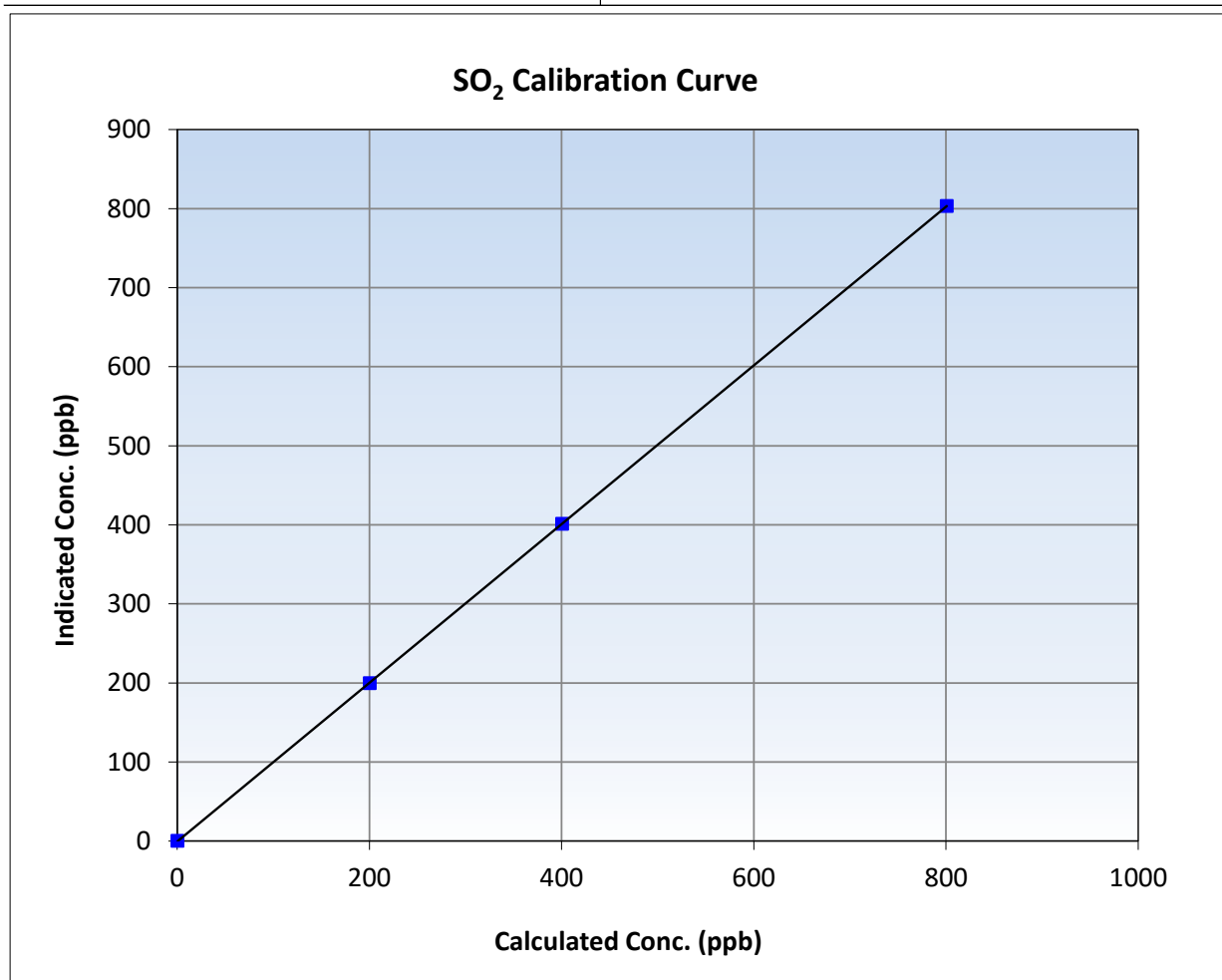
SO₂ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 18, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	8:57	End Time (MST):	12:25
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1180540019

Calibration Data

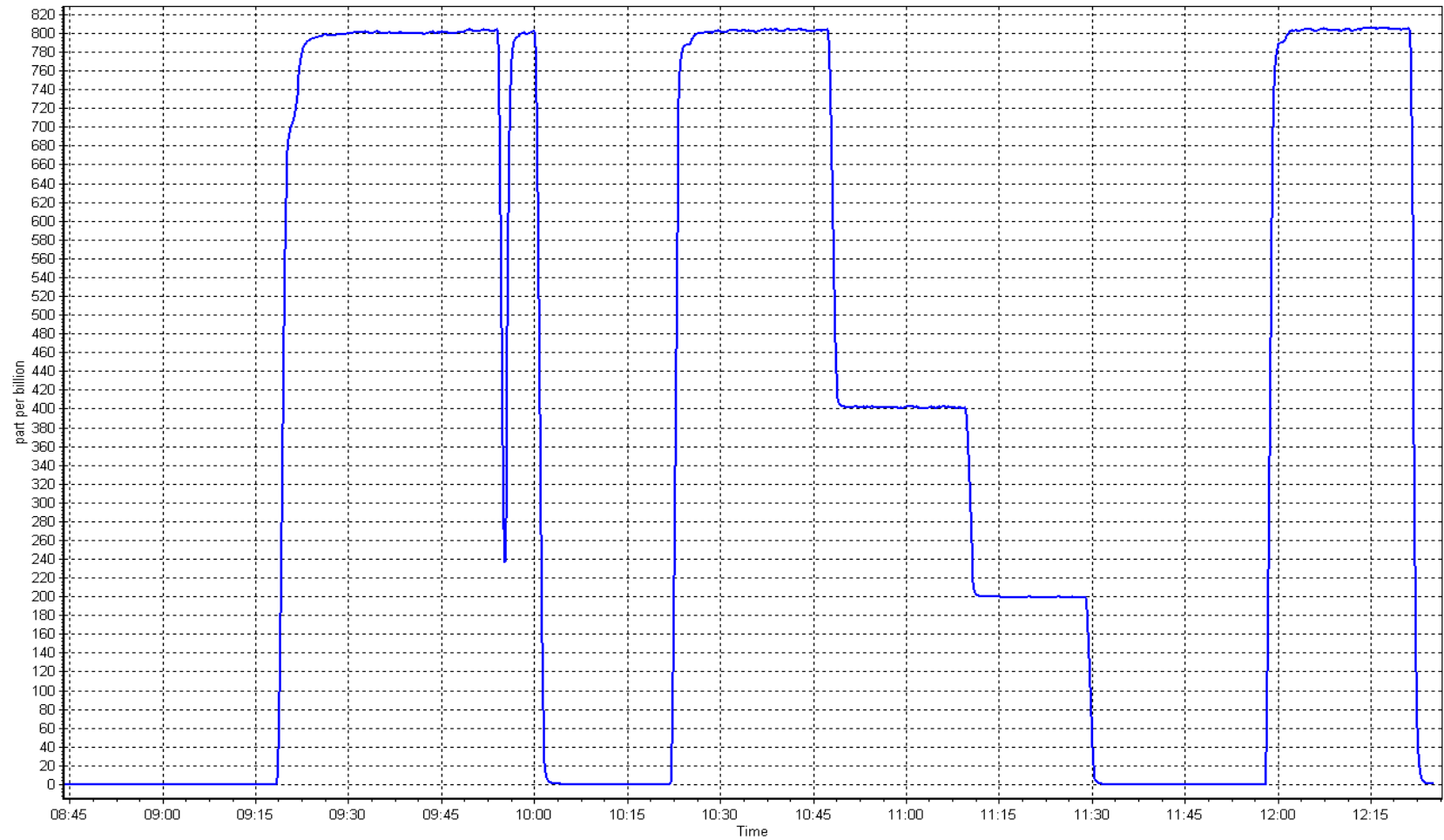
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999997	≥0.995
800.4	803.0	0.9968	Slope	1.003702	0.90 - 1.10
400.2	401.0	0.9980	Intercept	-0.631983	+/-30
200.1	199.4	1.0035			



SO2 Calibration Plot

Date: July 2, 2026

Location: Pihow Point





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Pihew Point Station number: AMS 32
Calibration Date: July 31, 2026 Last Cal Date: June 10, 2026
Start time (MST): 8:35 End time (MST): 12:58
Reason: Routine

Calibration Standards

Cal Gas Concentration: 5.30 ppm Cal Gas Exp Date: March 19, 2027
Cal Gas Cylinder #: DT0035169
Removed Cal Gas Conc: 5.30 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne T700 Serial Number: 3804
ZAG Make/Model: Teledyne T701H Serial Number: 692

Analyzer Information

Analyzer make: Thermo 43iQ-TLE Analyzer serial #: 1200025752
Converter make: Global G150 Converter serial #: 2024-288
Analyzer Range: 0 - 100 ppb Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.006486	1.002201	Backgd or Offset:	1.59	1.54
Calibration intercept:	-0.182250	-0.082232	Coeff or Slope:	0.870	0.843

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	75.5	80.0	81.6	0.982
As found Mid point	4962	37.7	40.0	41.0	0.977
As found Low point	4981	18.9	20.0	20.4	0.987
New cylinder response					
Baseline Corr As found:	81.5	Prev response:	80.36	*% change:	1.4%
Baseline Corr 2nd AF pt:	40.9	AF Slope:	1.019196	AF Intercept:	0.097830
Baseline Corr 3rd AF pt:	20.3	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	-0.1	----
High point	4925	75.5	80.0	80.1	0.999
Mid point	4962	37.7	40.0	40.0	0.999
Low point	4981	18.9	20.0	20.0	1.002
As left zero	5000	0.0	0.0	-0.1	----
As left span	4925	75.5	80.0	80.4	0.995
SO2 Scrubber Check	4921	79.5	794.9	0.1	----
Date of last scrubber change:	30-Jul-25		Ave Corr Factor		1.000
Date of last converter efficiency test:	NA				

Notes: Changed sample inlet filter after as founds. Adjusted span. Scrubber check was done after cal zero, passed.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

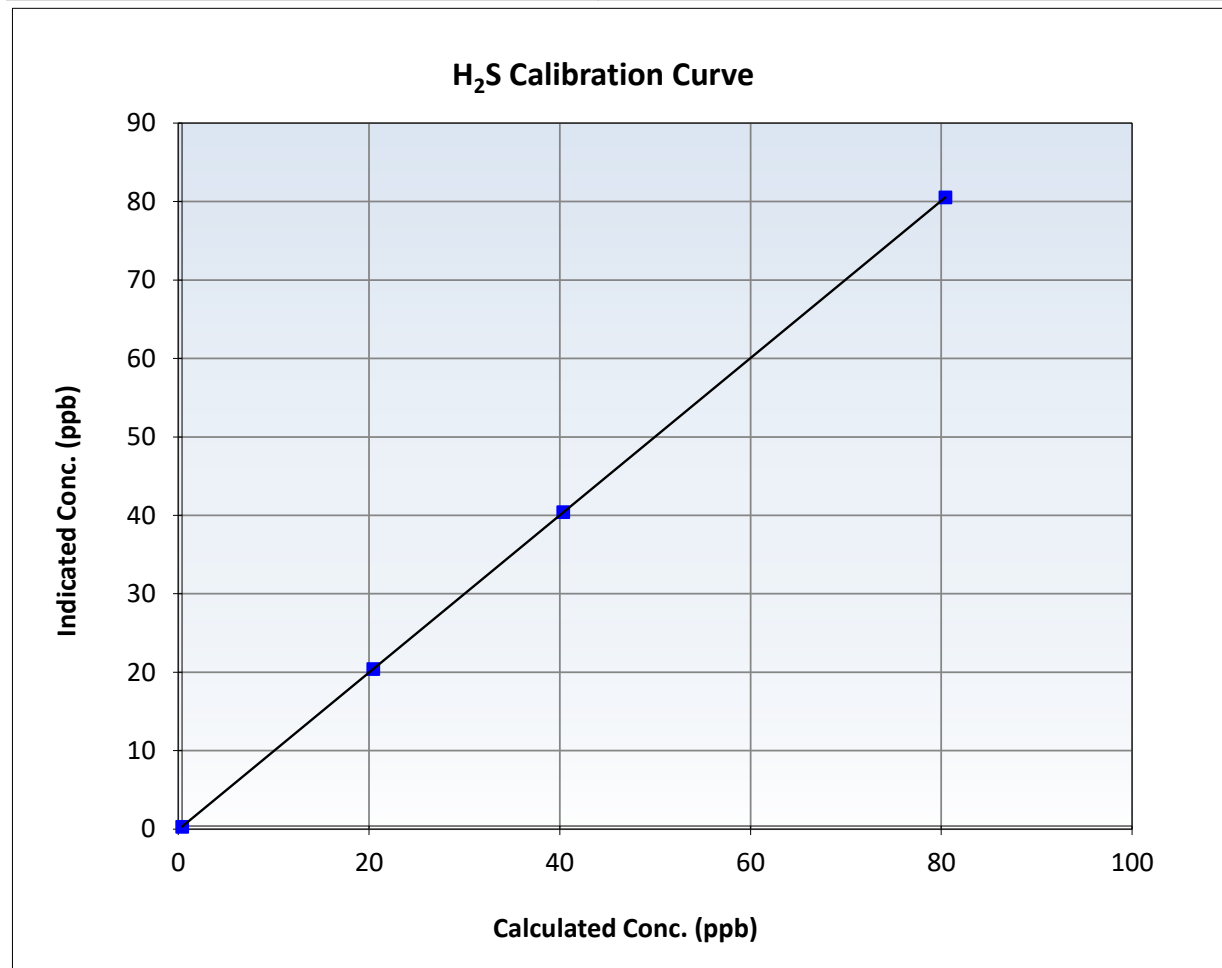
H₂S Calibration Summary

Station Information

Calibration Date:	July 31, 2026	Previous Calibration:	June 10, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	8:35	End Time (MST):	12:58
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	1200025752

Calibration Data

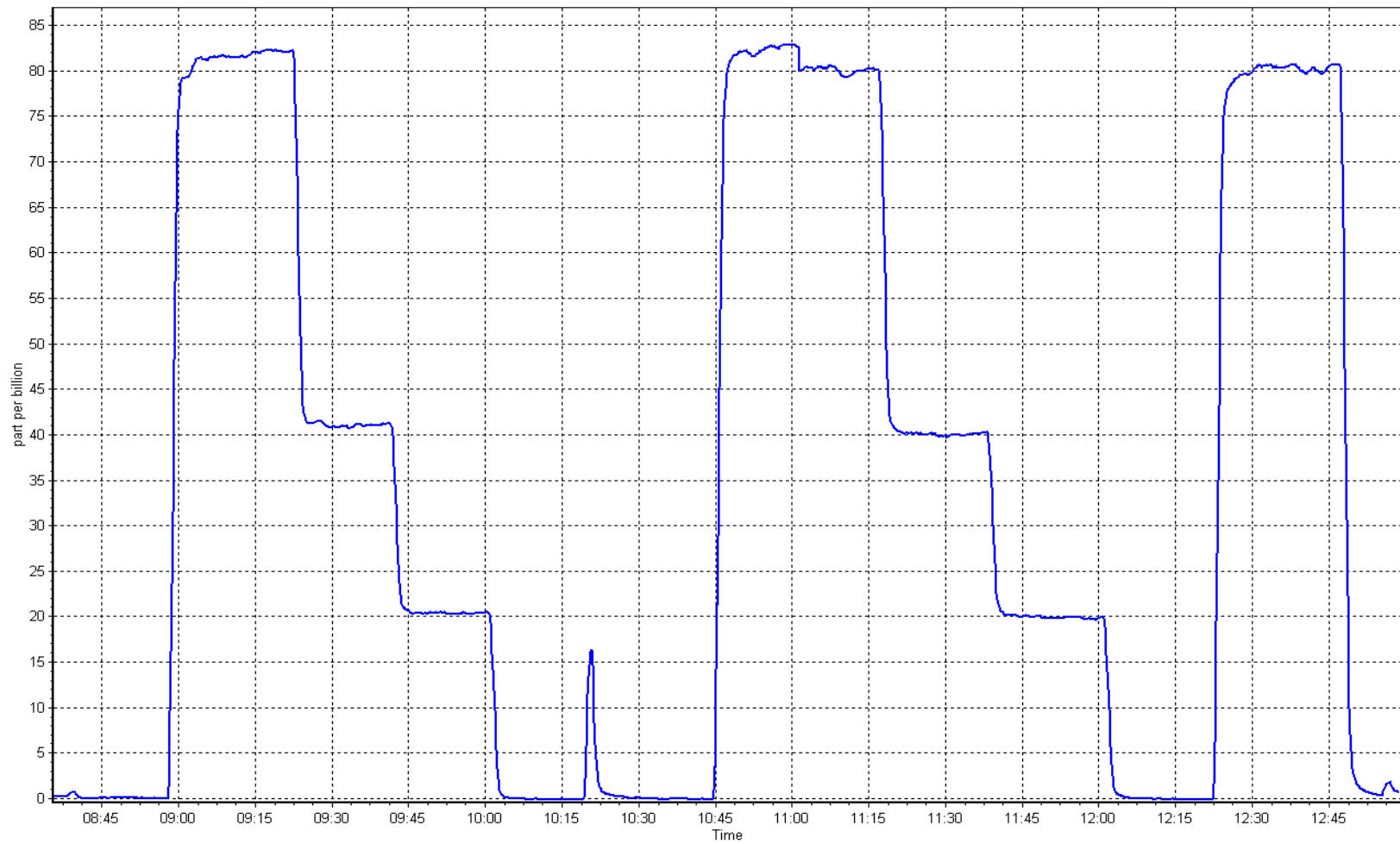
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	1.000000		≥0.995
80.0	80.1	0.9990	Slope	1.002201		0.90 - 1.10
40.0	40.0	0.9991	Intercept	-0.082232		+/-3
20.0	20.0	1.0017				



H₂S Calibration Plot

Date: July 31, 2026

Location: Pihew Point





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Piheew Point
 Calibration Date: July 2, 2026
 Start time (MST): 8:57
 Reason: Routine

Station number: AMS 32
 Last Cal Date: June 18, 2026
 End time (MST): 12:25

Calibration Standards

Gas Cert Reference:	SA150969A	Cal Gas Expiry Date:	October 9, 2032
CH ₄ Cal Gas Conc.	499.9 ppm	CH ₄ Equiv Conc.	1061.5 ppm
C ₃ H ₈ Cal Gas Conc.	204.2 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH ₄ Conc.	499.9 ppm	CH ₄ Equiv Conc.	1061.5 ppm
Removed C ₃ H ₈ Conc.	204.2 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne T700	Serial Number:	3804
Zero Air Gen model:	Teledyne T701H	Serial Number:	692

Analyzer Information

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

Analyzer serial #: 1218153355
 NMHC/CH₄ Range: 0 - 10 ppm

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.77E-04	2.77E-04	NMHC SP Ratio:	4.66E-05
CH ₄ Retention time:	15.6	15.6	NMHC Peak Area:	187788
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	4922	78.0	16.56	16.53	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.53	Prev response	16.50	*% change	0.2%
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	4922	78.0	16.56	16.46	1.006
Mid point	4961	39.0	8.28	8.24	1.005
Low point	4981	19.5	4.14	4.10	1.011
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.0	16.56	16.47	1.005
Average Correction Factor					1.007

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



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	78.0	8.76	8.74	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.74	Prev response	8.72	*% 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) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4922	78.0	8.76	8.70	1.007
Mid point	4961	39.0	4.38	4.37	1.003
Low point	4981	19.5	2.19	2.17	1.008
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.0	8.76	8.69	1.008
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	4922	78.0	7.80	7.79	1.001
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.79	Prev response	7.79	*% change	0.1%
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) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4922	78.0	7.80	7.76	1.005
Mid point	4961	39.0	3.90	3.87	1.008
Low point	4981	19.5	1.95	1.92	1.013
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.0	7.80	7.78	1.002
Average Correction Factor					1.009

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.998363	0.994498
THC Cal Offset:	-0.033436	-0.005436
CH ₄ Cal Slope:	1.000250	0.995751
CH ₄ Cal Offset:	-0.015122	-0.008523
NMHC Cal Slope:	0.997153	0.993474
NMHC Cal Offset:	-0.019113	0.002487

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

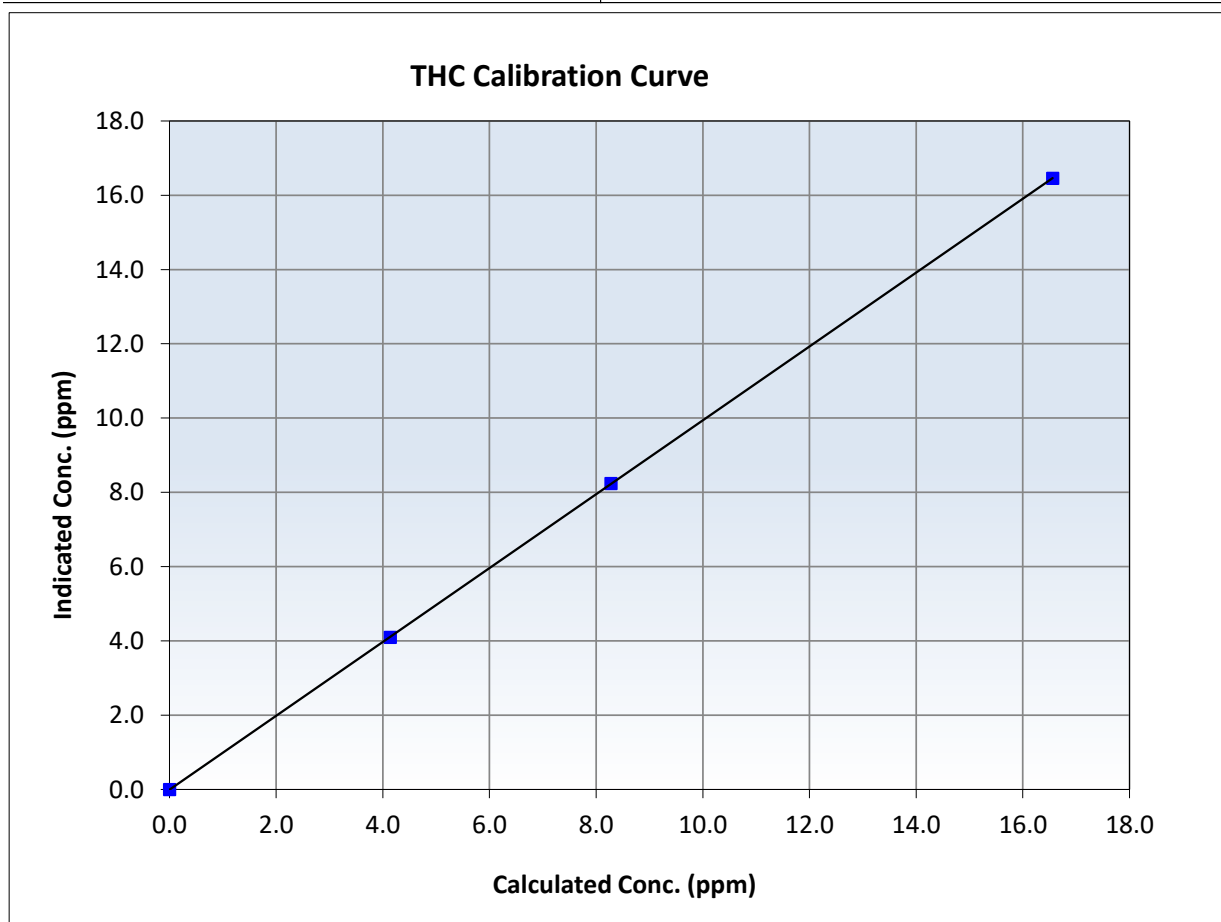
THC Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 18, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	8:57	End Time (MST):	12:25
Analyzer make:	Thermo 55i	Analyzer serial #:	1218153355

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
16.56	16.46	1.0060	Slope	0.994498	$0.90 - 1.10$
8.28	8.24	1.0048	Intercept	-0.005436	± 0.5
4.14	4.10	1.0106			





Wood Buffalo Environmental Association

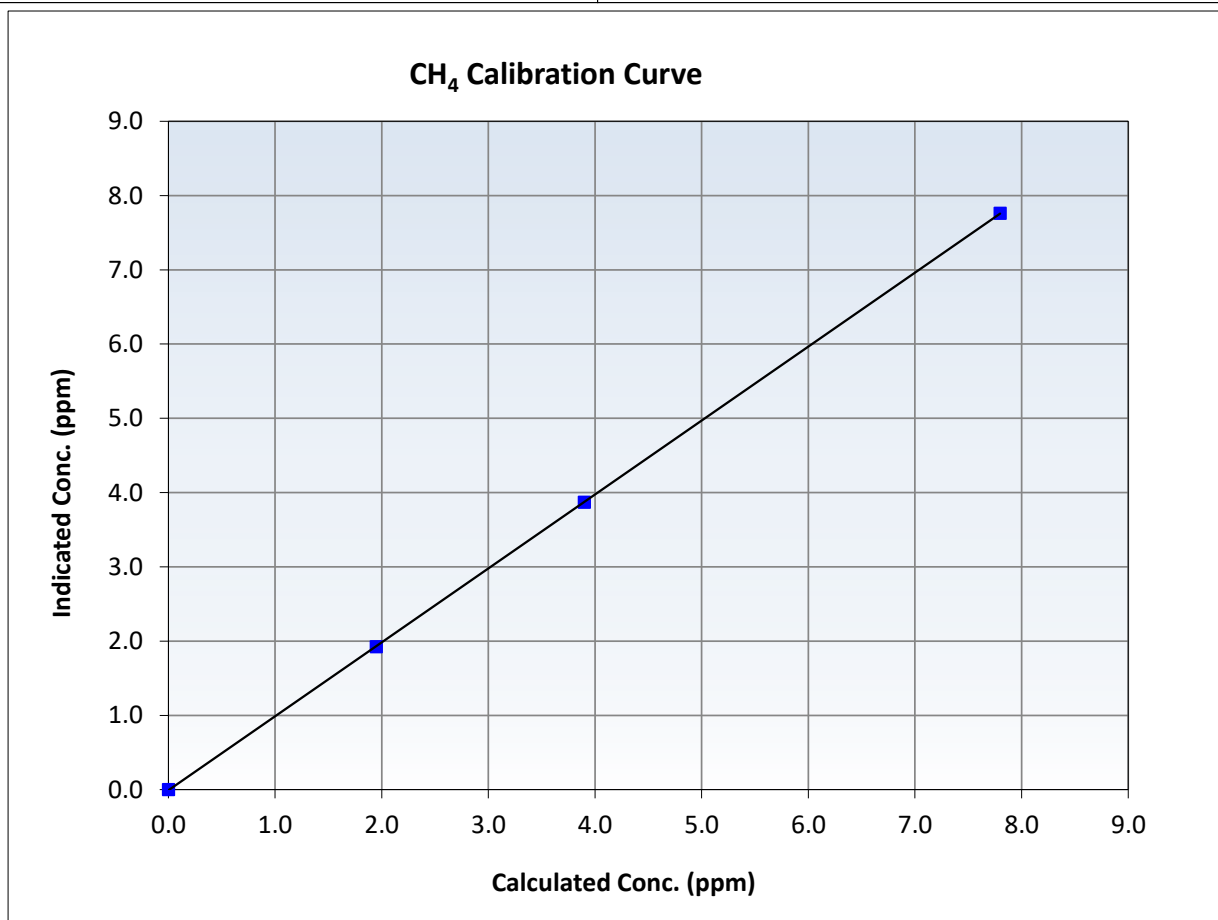
CH₄ Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 18, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	8:57	End Time (MST):	12:25
Analyzer make:	Thermo 55i	Analyzer serial #:	1218153355

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
7.80	7.76	1.0048	Slope	0.995751		$0.90 - 1.10$
3.90	3.87	1.0076	Intercept	-0.008523		± 0.5
1.95	1.92	1.0132				





Wood Buffalo Environmental Association

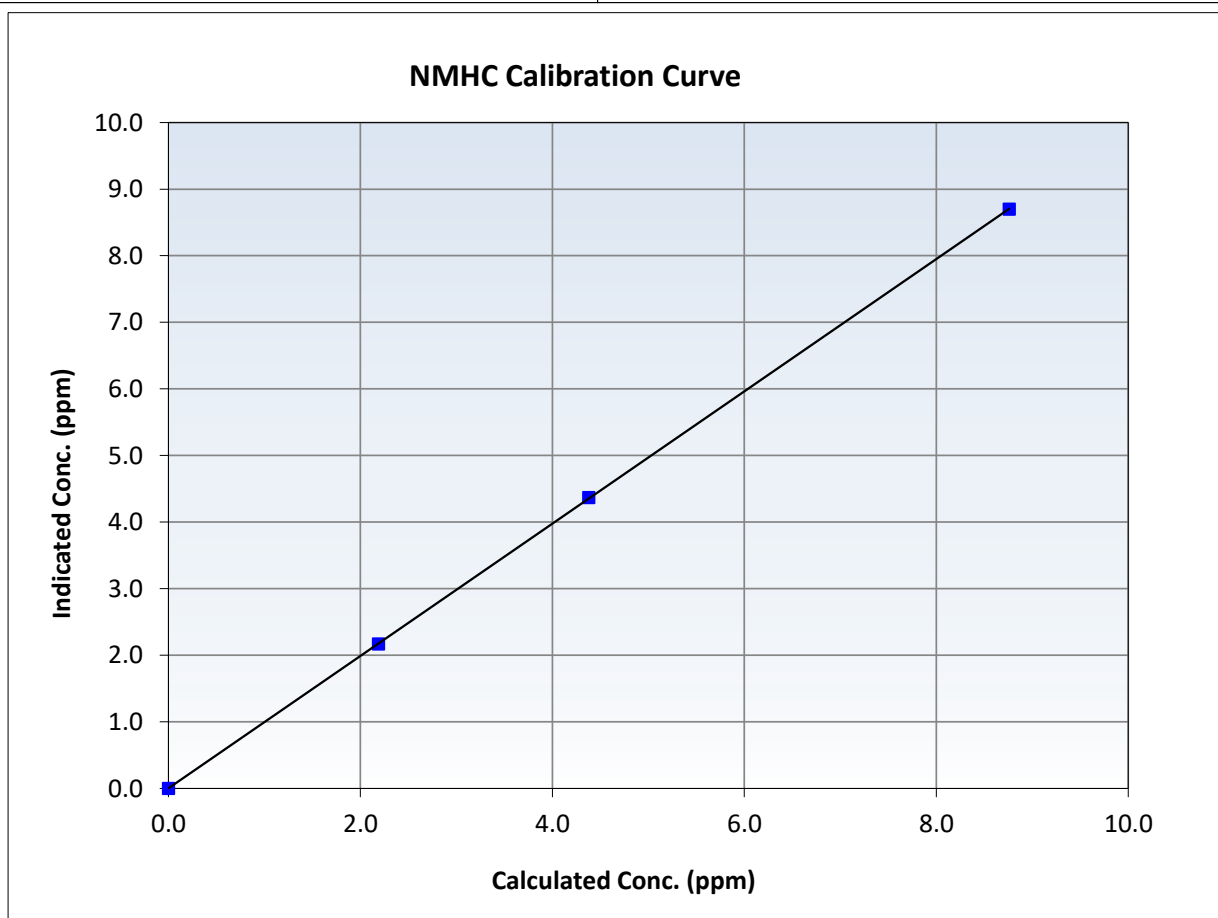
NMHC Calibration Summary

Station Information

Calibration Date:	July 2, 2026	Previous Calibration:	June 18, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	8:57	End Time (MST):	12:25
Analyzer make:	Thermo 55i	Analyzer serial #:	1218153355

Calibration Data

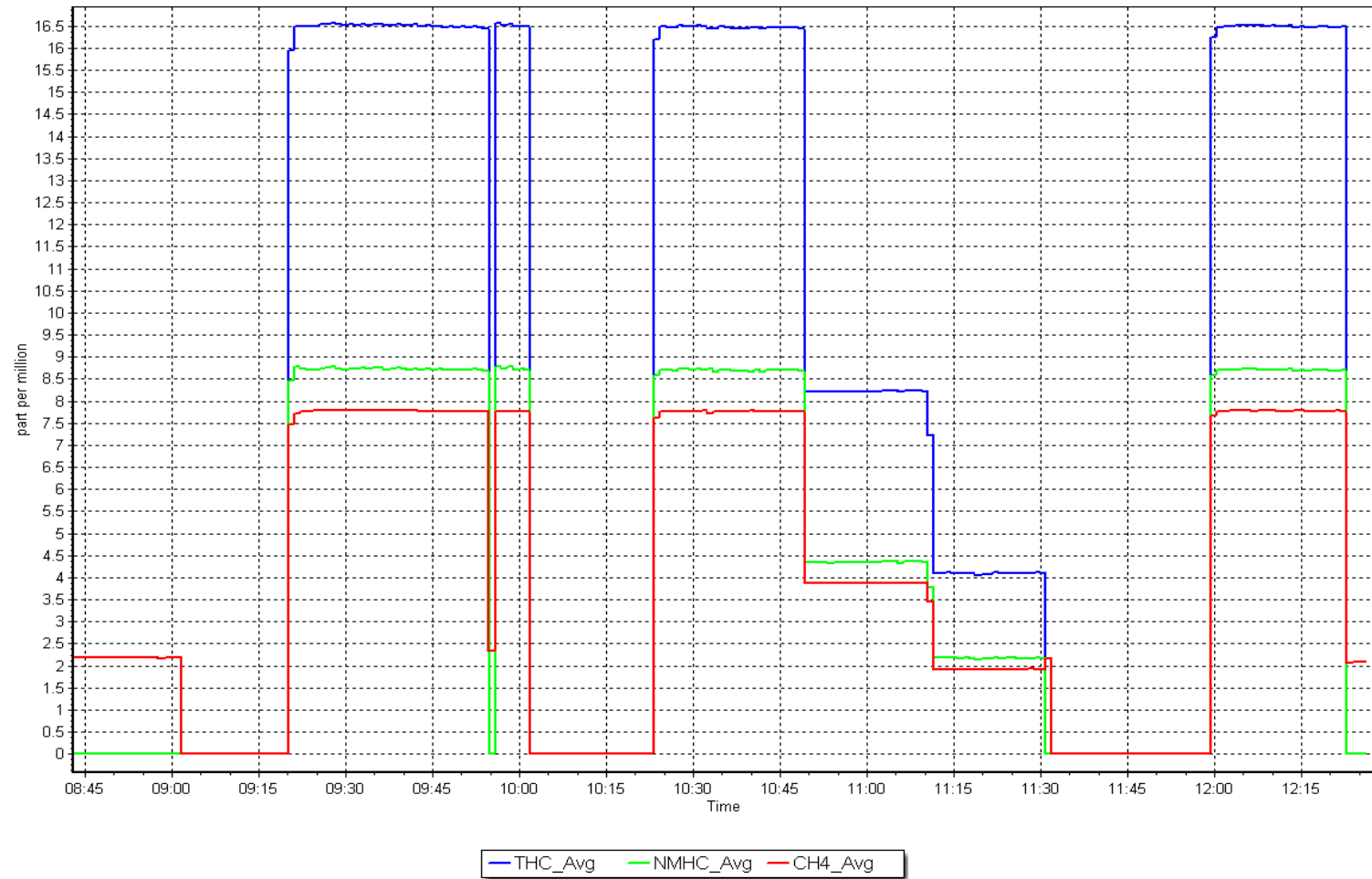
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999994	<i>≥0.995</i>
8.76	8.70	1.0069	Slope	0.993474	<i>0.90 - 1.10</i>
4.38	4.37	1.0028	Intercept	0.002487	<i>+/-0.5</i>
2.19	2.17	1.0082			



NMHC Calibration Plot

Date: July 2, 2026

Location: Pihow Point





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS33 MONDAY CREEK JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Monday Creek Station number: AMS 33
Calibration Date: July 17, 2026 Last Cal Date: June 9, 2026
Start time (MST): 11:24 End time (MST): 14:38
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.62 ppm Cal Gas Exp Date: March 10, 2031
Cal Gas Cylinder #: EB0008522
Removed Cal Gas Conc: 50.62 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: Teledyne T700 Serial Number: 3253
Zero Air Gen Model: Teledyne T701H Serial Number: 832

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1152430005
Analyzer Range: 0- 1000 ppb

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.003566	0.997229	Backgd or Offset:	32.4
Calibration intercept:	1.122476	0.542218	Coeff or Slope:	0.981

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) Limit = 0.90-1.10
As found zero	5000	0.0	0.0	0.3	----
As found High point	4921	79.1	800.8	812.9	0.985
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	812.6	Previous response	804.8	*% 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	

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) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4921	79.1	800.8	798.5	1.003
Mid point	4961	39.5	399.9	400.5	0.998
Low point	4980	19.8	200.5	200.5	1.000
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.1	800.8	799.0	1.002
Average Correction Factor:					1.000

Notes: Sample inlet filter was changed after as founds. Adjusted the zero and span.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

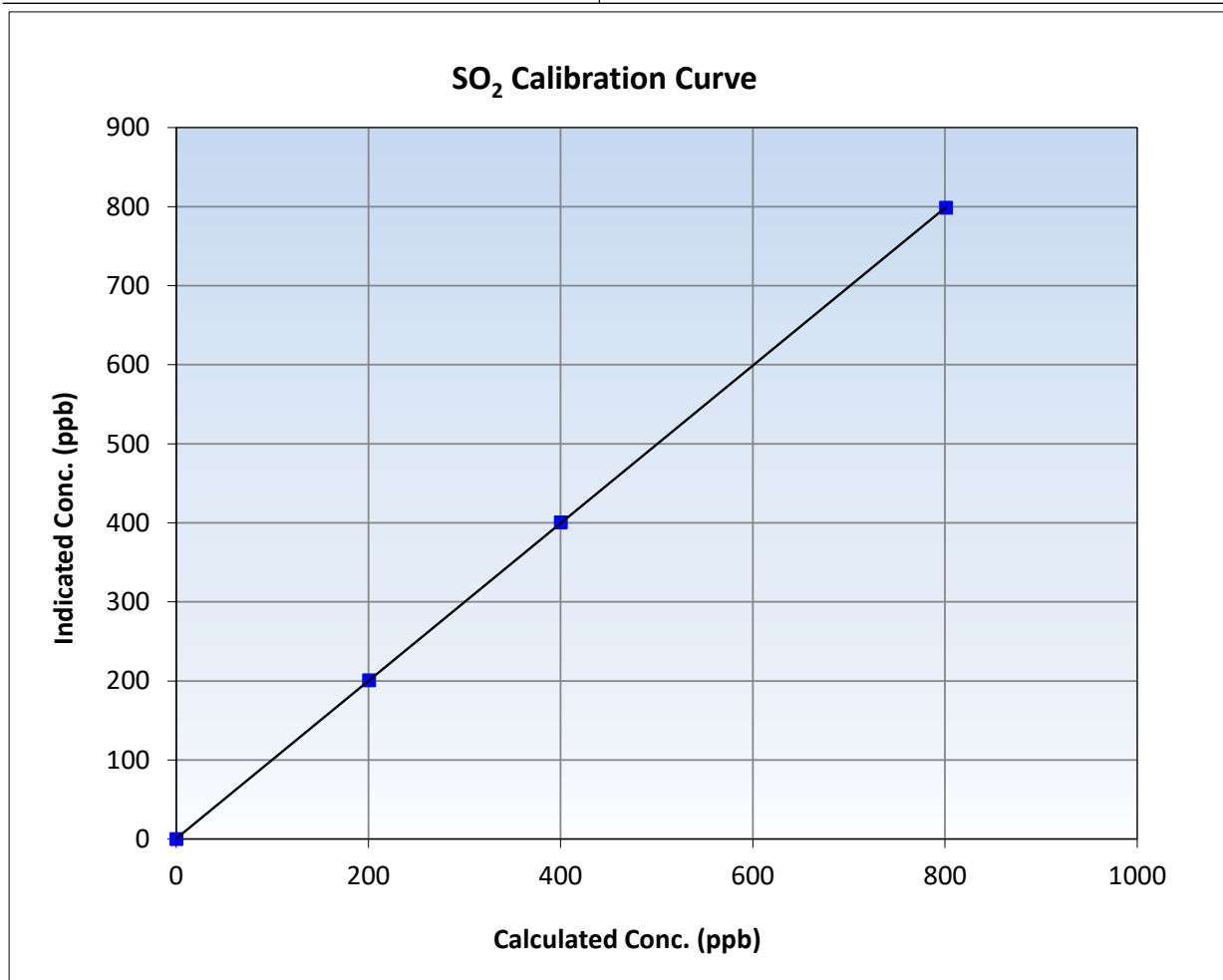
SO₂ Calibration Summary

Station Information

Calibration Date:	July 17, 2026	Previous Calibration:	June 9, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:24	End Time (MST):	14:38
Analyzer make:	Thermo 43i	Analyzer serial #:	1152430005

Calibration Data

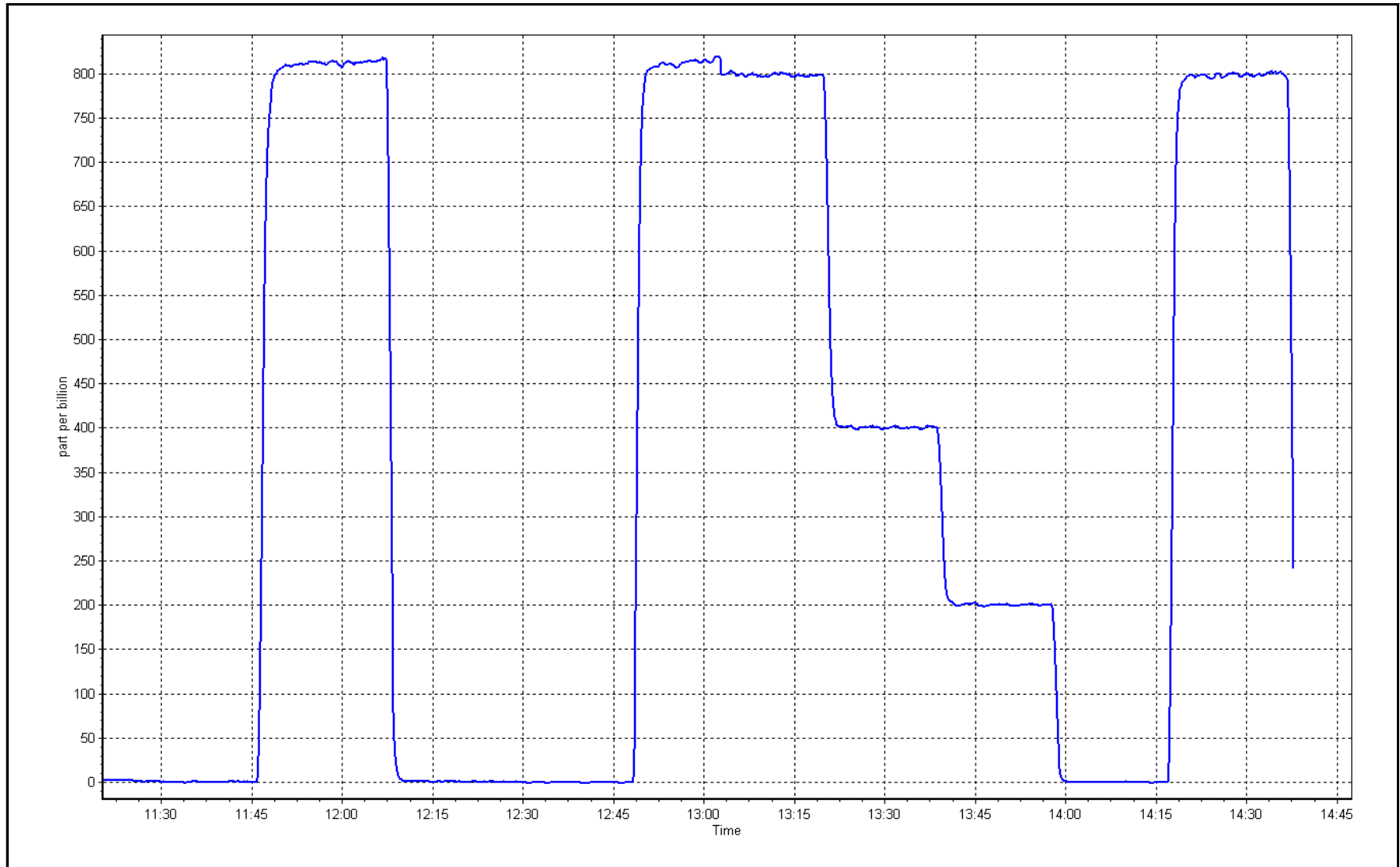
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999994	≥0.995
800.8	798.5	1.0029	Slope	0.997229	0.90 - 1.10
399.9	400.5	0.9984	Intercept	0.542218	+/-30
200.5	200.5	0.9998			



SO2 Calibration Plot

Date: July 17, 2026

Location: Monday Creek





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Monday Creek
Calibration Date: July 14, 2026
Start time (MST): 11:31
Reason: Routine

Station number: AMS 33
Last Cal Date: June 11, 2026
End time (MST): 15:48

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:	1.001140	1.004998	Backgd or Offset:	1.50	1.50
Calibration intercept:	0.038397	-0.021605	Coeff or Slope:	1.063	1.063

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	4921	79.2	80.0	82.7	0.966
As found Mid point	4960	39.6	40.0	41.3	0.966
As found Low point	4980	19.8	20.0	20.5	0.971
New cylinder response					
Baseline Corr As found:	82.8	Prev response:	80.12	*% change:	3.2%
Baseline Corr 2nd AF pt:	41.4	AF Slope:	1.035574	AF Intercept:	-0.141657
Baseline Corr 3rd AF pt:	20.6	AF Correlation:	0.999998	* = > +/-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	4921	79.2	80.0	80.4	0.995
Mid point	4960	39.6	40.0	40.1	0.997
Low point	4980	19.8	20.0	20.1	0.995
As left zero	5000	0.0	0.0	0.2	----
As left span	4921	79.2	80.0	79.2	1.010
SO2 Scrubber Check	4921	79.1	791.0	0.0	----
Date of last scrubber change:	11-Apr-24			Ave Corr Factor	0.996
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

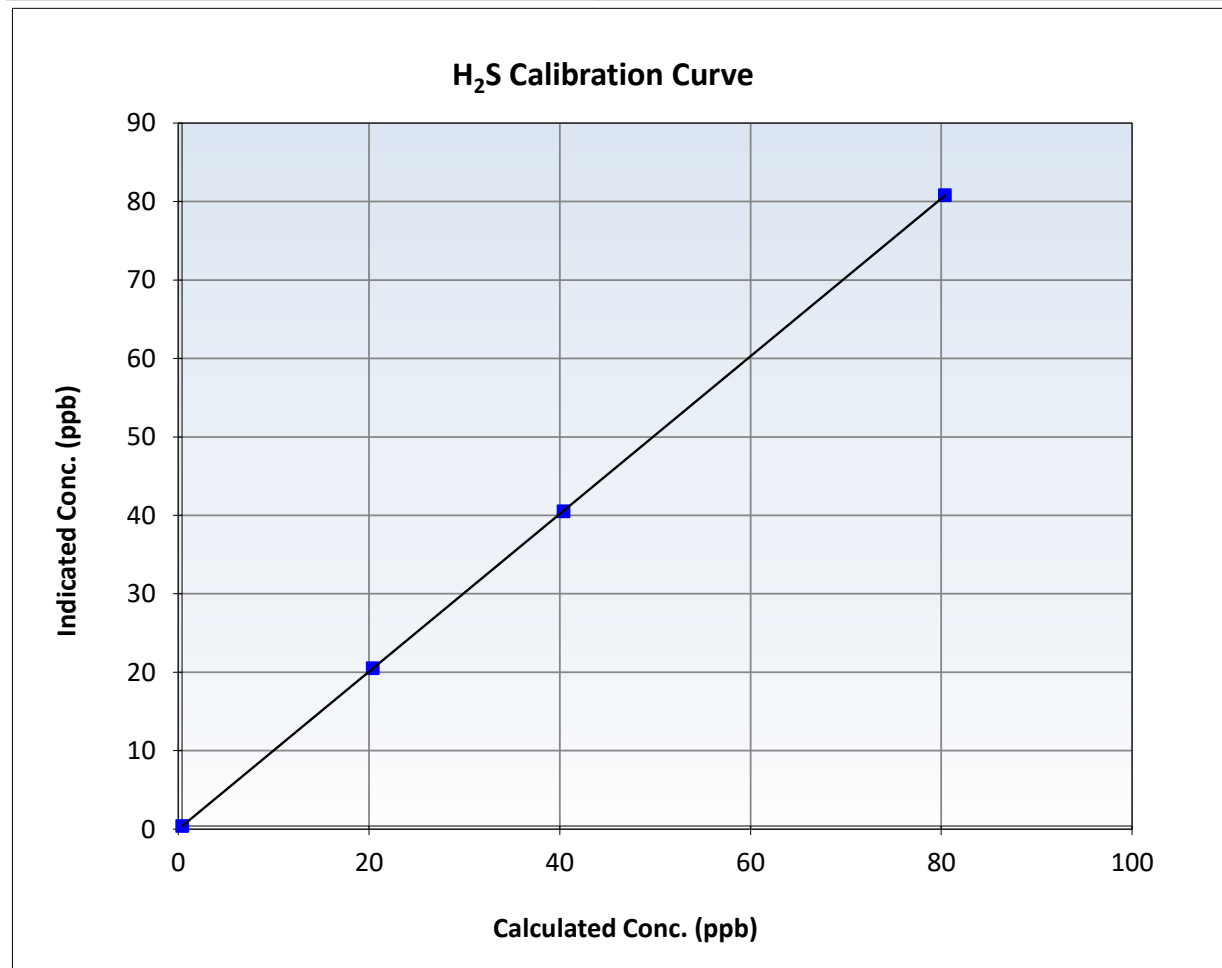
H₂S Calibration Summary

Station Information

Calibration Date:	July 14, 2026	Previous Calibration:	June 11, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:31	End Time (MST):	15:48
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12333331547

Calibration Data

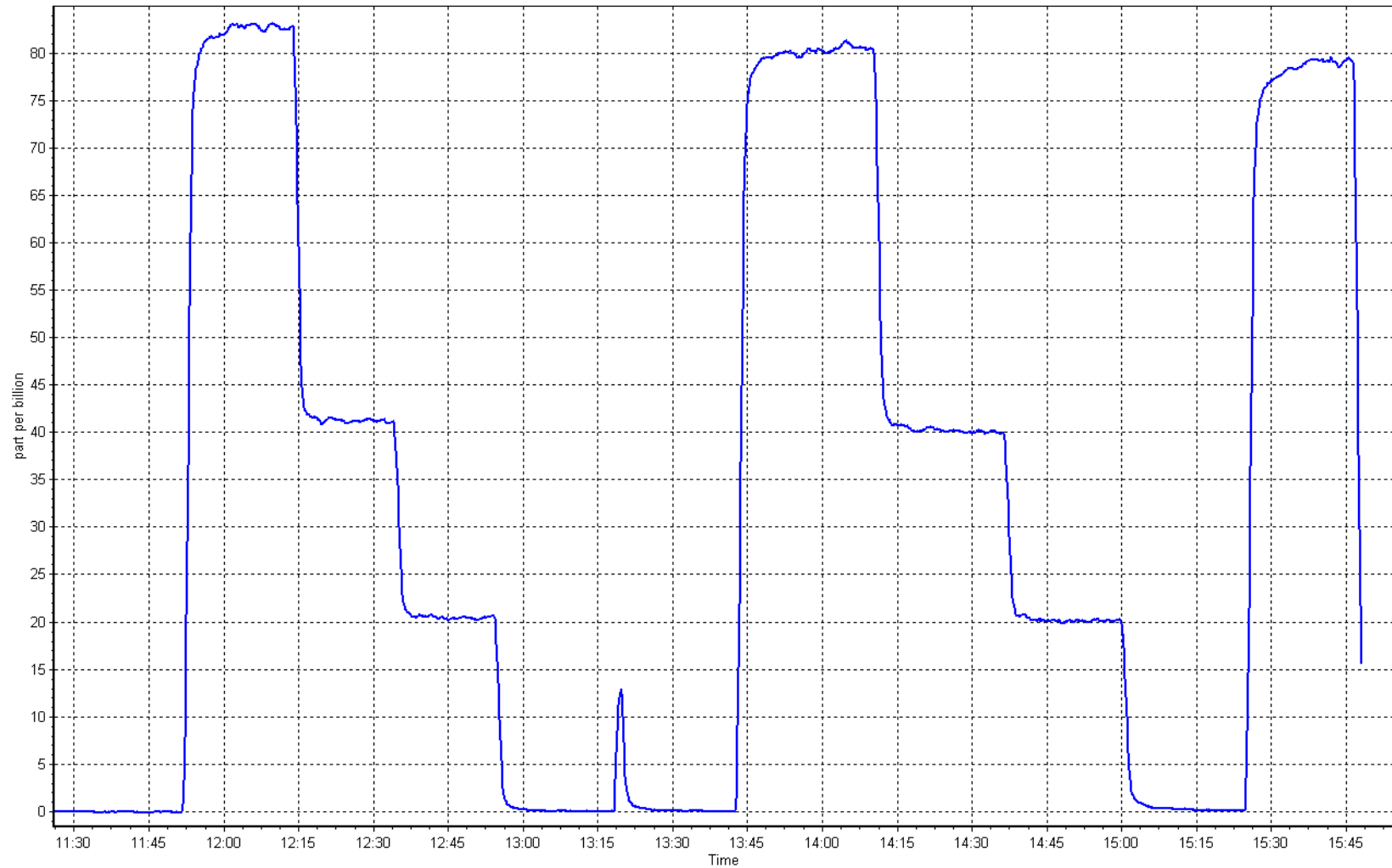
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999998		≥ 0.995
80.0	80.4	0.9949	Slope	1.004998		0.90 - 1.10
40.0	40.1	0.9975	Intercept	-0.021605		+/-3
20.0	20.1	0.9950				



H2S Calibration Plot

Date: July 14, 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: July 27, 2026
 Last Cal Date: June 25, 2026
 Start time (MST): 11:30
 End time (MST): 15:54
 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 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 ₂ 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	801.6	797.0	4.5	1.0015	1.0032
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 804.2 ppb	NO = 802.5 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.3%	
Baseline Corr 1st pt	NO _x = 801.7 ppb	NO = 797.1 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 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: 1170050148

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.000393	0.997219
NO _x Cal Offset:	0.926629	1.266570
NO Cal Slope:	1.003458	0.999772
NO Cal Offset:	0.066537	0.206274
NO ₂ Cal Slope:	0.994171	0.997754
NO ₂ Cal Offset:	-1.067654	-0.560369

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:	158.7	159.3

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	0.0	0.0	0.0	----	----
High point	4918	82.1	802.9	799.6	3.3	801.4	799.5	1.8	1.0019	1.0002
Mid point	4959	41.1	401.9	400.3	1.6	402.5	400.7	1.8	0.9986	0.9990
Low point	4980	20.5	200.5	199.7	0.8	202.6	199.9	2.7	0.9895	0.9987
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
As left span	4918	82.1	802.9	392.8	410.1	802.5	392.8	409.6	1.0005	1.0000
Average Correction Factor									0.9967	0.9993

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	799.0	388.5	413.8	412.5	1.0031	99.7%
Mid GPT point	799.0	601.0	201.3	200.2	1.0054	99.5%
Low GPT point	799.0	700.4	101.9	100.4	1.0148	98.5%
Average Correction Factor					1.0078	99.2%

Notes:

The sample inlet filter was changed after the as founds. No adjustments made.

Calibration Performed By:

Rene Chamberland



Wood Buffalo Environmental Association

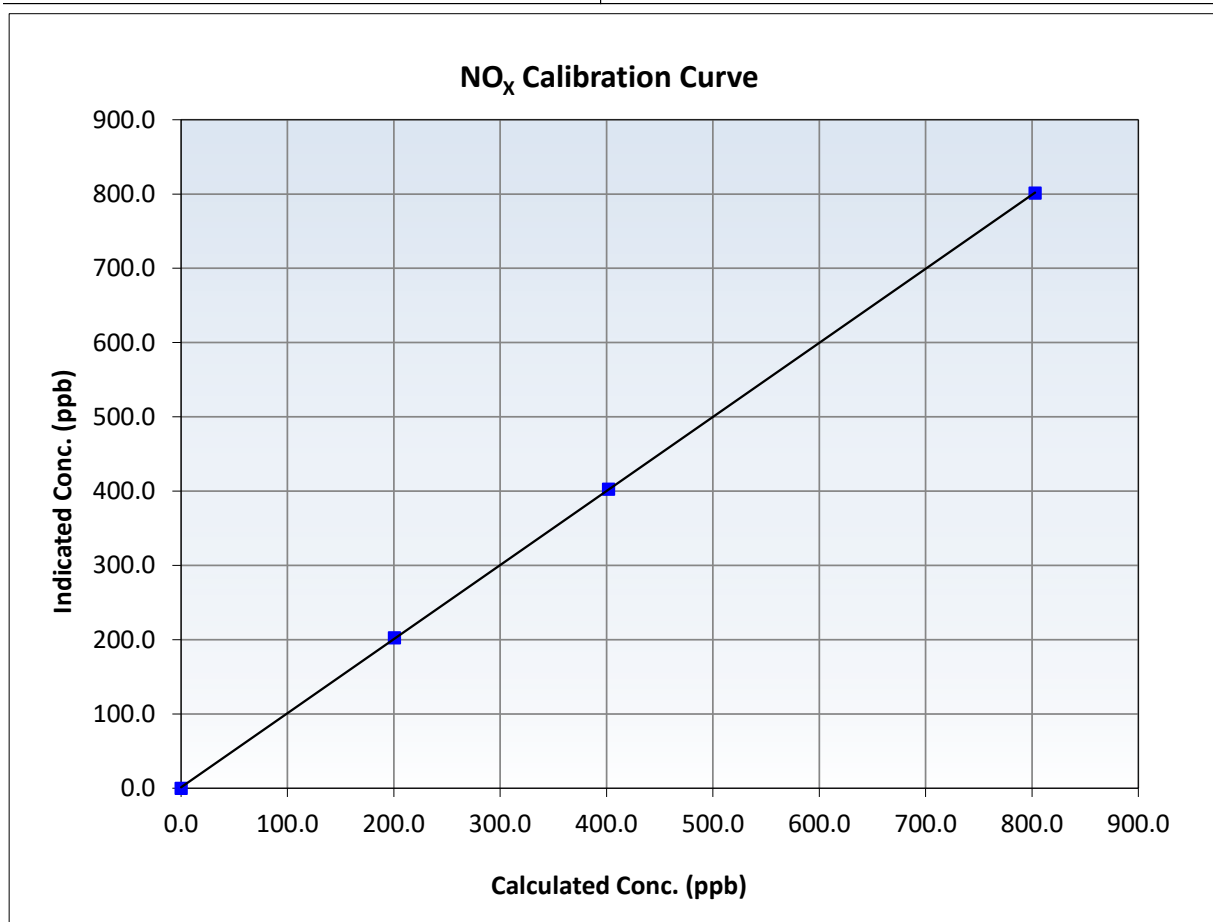
NO_x Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 25, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:30	End Time (MST):	15:54
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	0.999988	≥0.995
802.9	801.4	1.0019	Slope	0.997219	0.90 - 1.10
401.9	402.5	0.9986	Intercept	1.266570	+/-20
200.5	202.6	0.9895			





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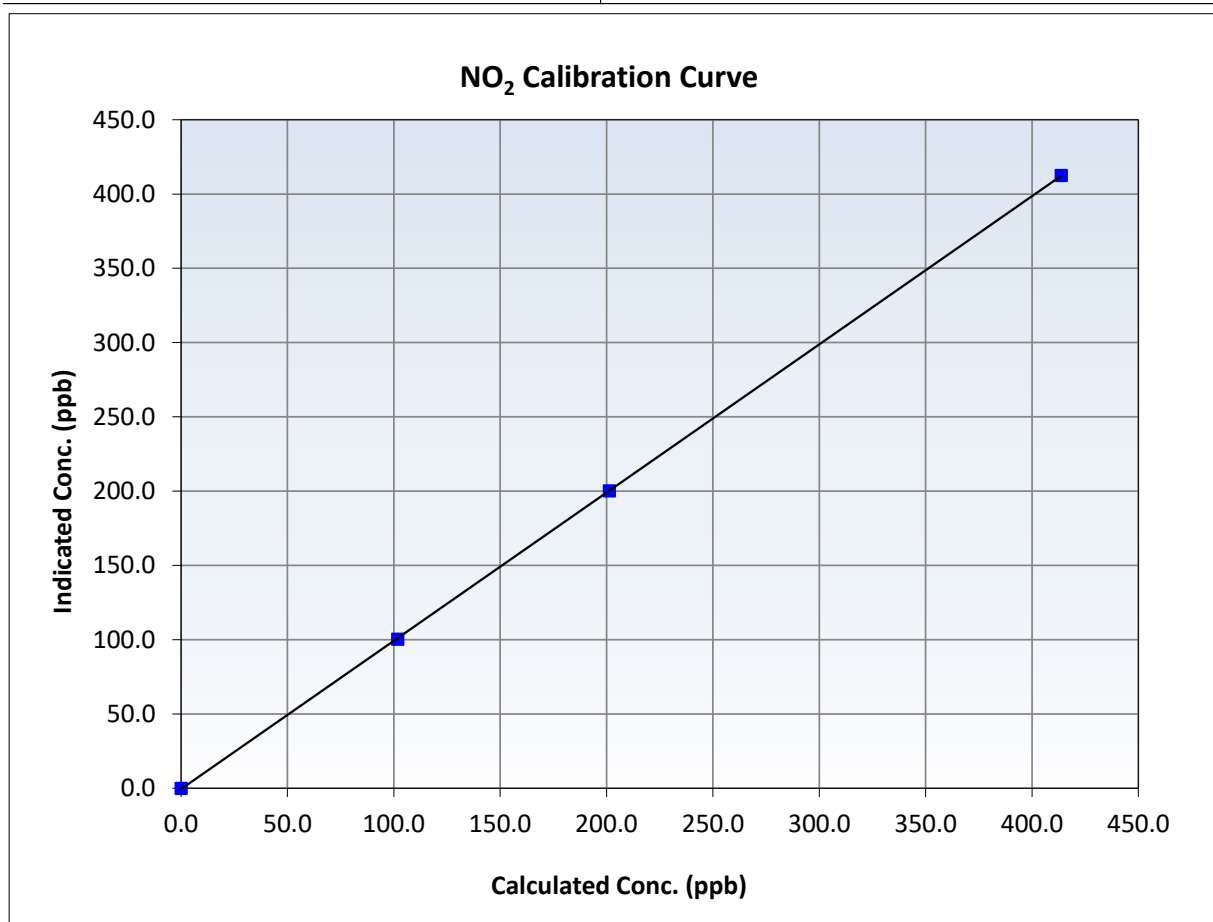
NO₂ Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 25, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:30	End Time (MST):	15:54
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	0.999991	≥0.995
413.8	412.5	1.0031	Slope	0.997754	0.90 - 1.10
201.3	200.2	1.0054	Intercept	-0.560369	+/-20
101.9	100.4	1.0148			





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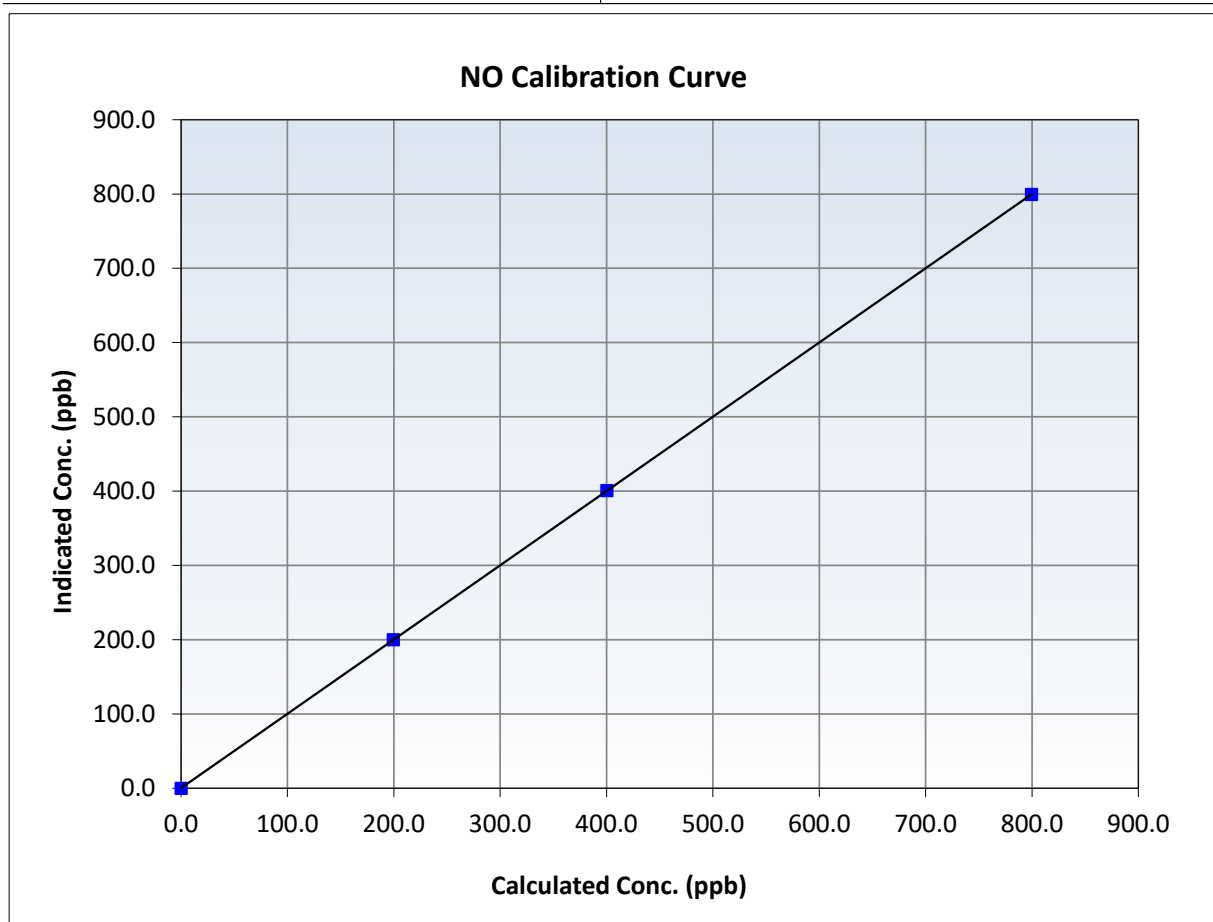
NO Calibration Summary

Station Information

Calibration Date:	July 27, 2026	Previous Calibration:	June 25, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:30	End Time (MST):	15:54
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

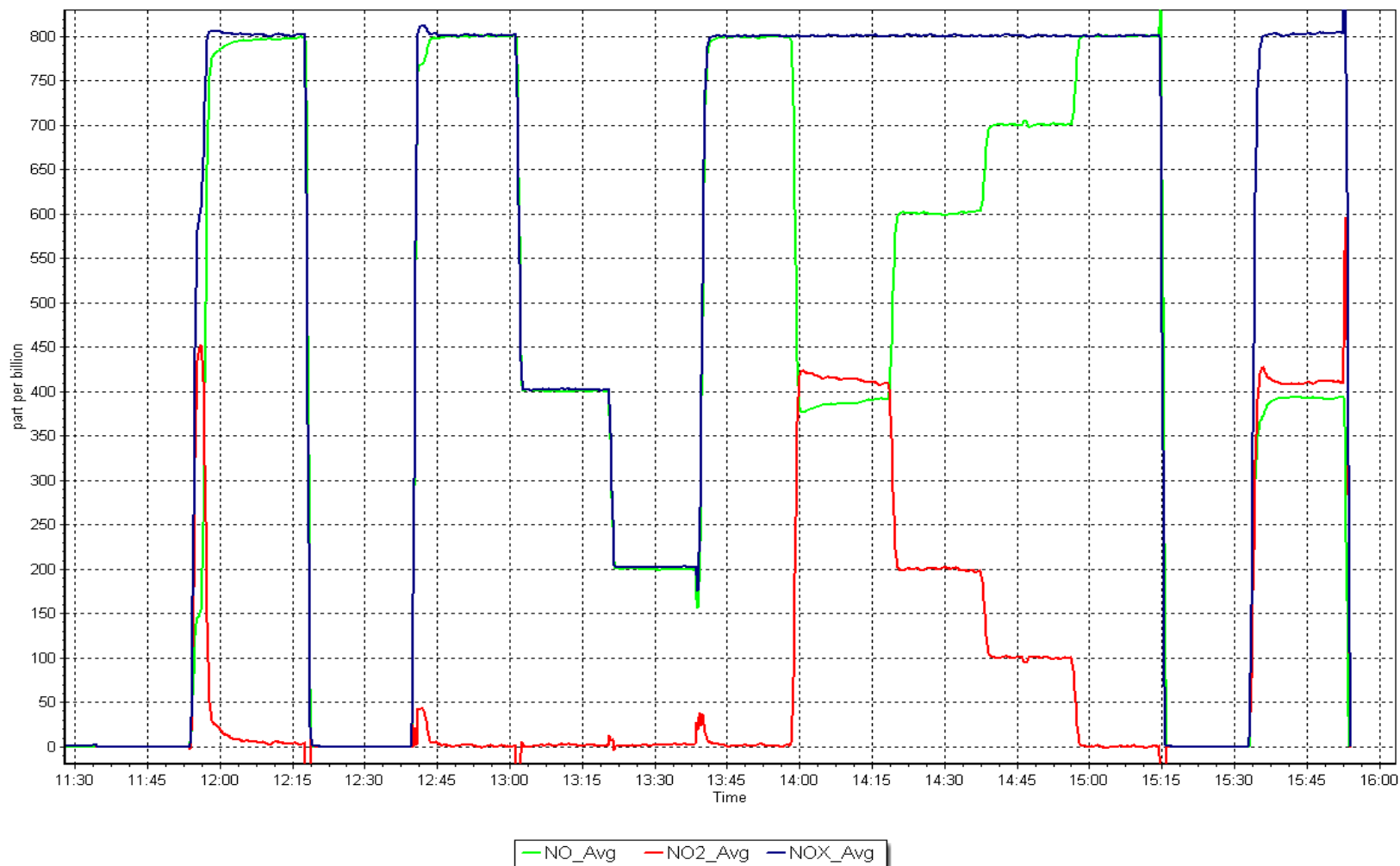
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	1.000000	≥ 0.995
799.6	799.5	1.0002	Slope	0.999772	0.90 - 1.10
400.3	400.7	0.9990	Intercept	0.206274	+/-20
199.7	199.9	0.9987			



NO_x Calibration Plot

Date: July 27, 2026

Location: Monday Creek





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS34 HANGINGSTONE EXPANSION JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Hangingstone Expansion Station number: AMS 34
Calibration Date: July 21, 2026 Last Cal Date: June 19, 2026
Start time (MST): 7:29 End time (MST): 10:55
Reason: Routine

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 T700 Serial Number: 2659
Zero Air Gen Model: Teledyne API 701 Serial Number: 953

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:	1.006459	0.994883	Backgd or Offset:	14.9	15.3
Calibration intercept:	-0.601310	-1.299105	Coeff or Slope:	1.143	1.143

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	0.8	----
As found High point	4919	81.0	799.8	805.5	0.994
As found Mid point	4959	40.5	399.9	400.5	1.001
As found Low point	4980	20.3	200.4	199.6	1.008
New cylinder response					
Baseline Corr As found:	804.7	Previous response	804.4	*% change	0.0%
Baseline Corr 2nd AF pt:	399.7	AF Slope:	1.006974	AF Intercept:	-0.881365
Baseline Corr 3rd AF pt:	198.8	AF Correlation:	0.999979	* = > +/-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	4919	81.0	799.8	795.3	1.006
Mid point	4959	40.5	399.9	395.3	1.012
Low point	4980	20.3	200.4	197.1	1.017
As left zero	5000	0.0	0.0	0.2	----
As left span	4919	81.0	799.8	793.8	1.008
Average Correction Factor:					1.011

Notes: Pump changed out. Zero Adjusted.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

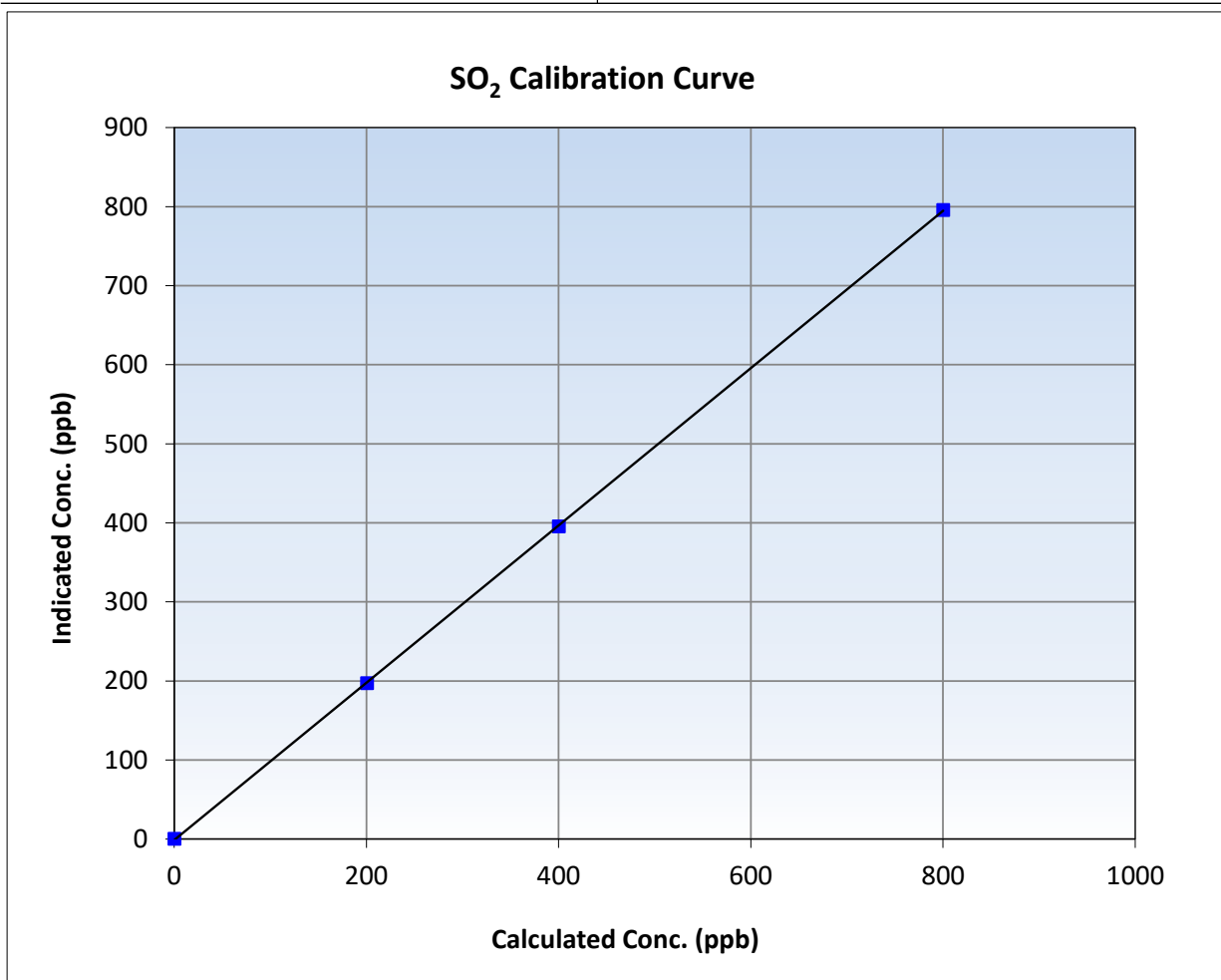
SO₂ Calibration Summary

Station Information

Calibration Date:	July 21, 2026	Previous Calibration:	June 19, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:29	End Time (MST):	10:55
Analyzer make:	Thermo 43i	Analyzer serial #:	1173410001

Calibration Data

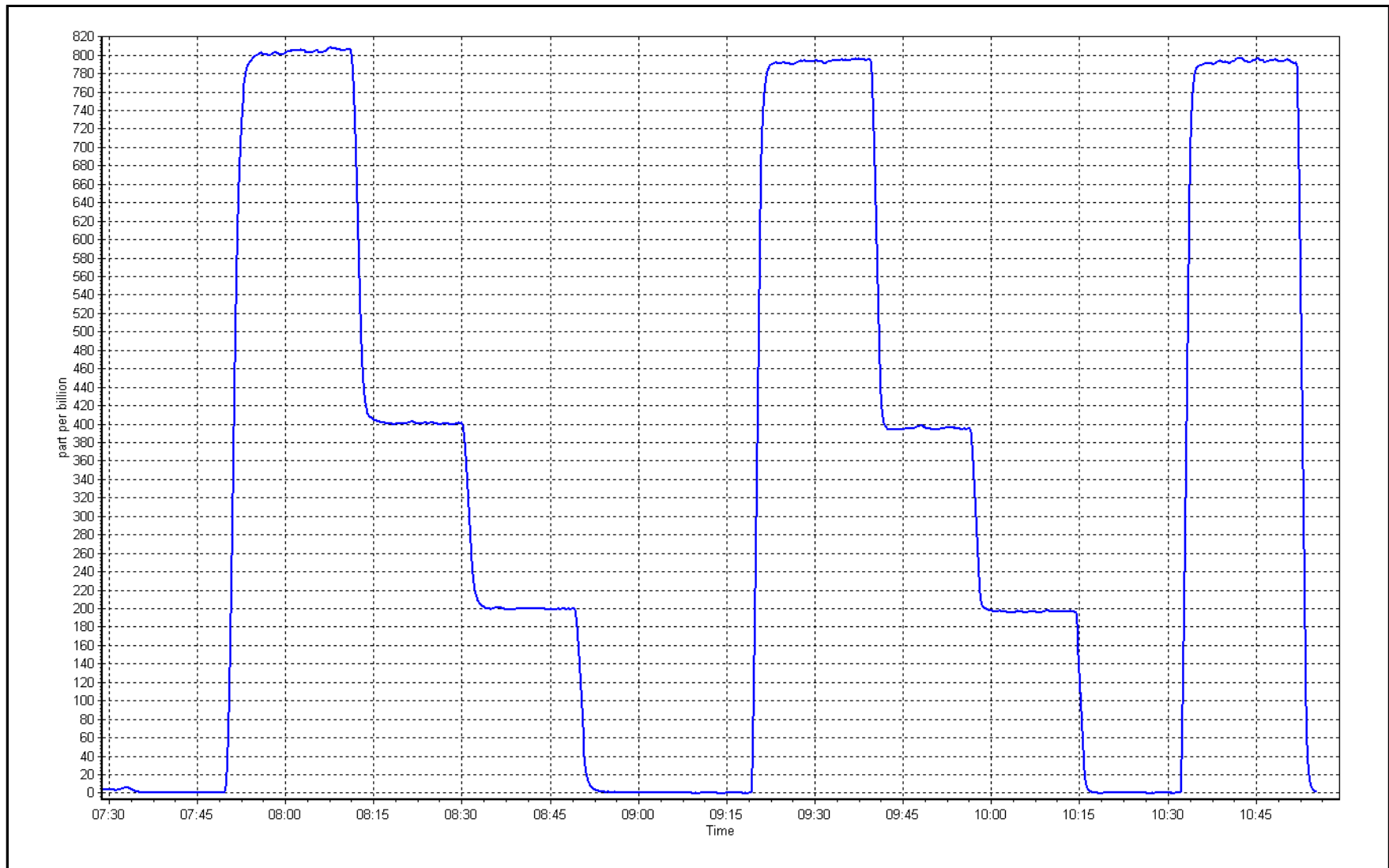
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999984	≥0.995
799.8	795.3	1.0057	Slope	0.994883	0.90 - 1.10
399.9	395.3	1.0117	Intercept	-1.299105	+/-30
200.4	197.1	1.0169			



SO2 Calibration Plot

Date: July 21, 2026

Location: Hangingstone Expansion





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Hangingstone Expansion Station number: AMS 34
Calibration Date: July 28, 2026 Last Cal Date: June 23, 2026
Start time (MST): 7:05 End time (MST): 11:18
Reason: Routine

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 T700 Serial Number: 2659
ZAG Make/Model: API T701 Serial Number: 953

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:	0.998631	0.995628	Backgd or Offset:	4.21
Calibration intercept:	0.100808	-0.019074	Coeff or Slope:	1.402

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	4922	77.8	80.0	82.1	0.973
As found Mid point	4961	38.9	40.0	40.9	0.975
As found Low point	4981	19.5	20.0	20.3	0.982
New cylinder response					
Baseline Corr As found:	82.2	Prev response:	79.96	*% change:	2.7%
Baseline Corr 2nd AF pt:	41.0	AF Slope:	1.028650	AF Intercept:	-0.199771
Baseline Corr 3rd AF pt:	20.4	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	4922	77.8	80.0	79.5	1.006
Mid point	4961	38.9	40.0	40.1	0.997
Low point	4981	19.5	20.0	19.7	1.017
As left zero	5000	0.0	0.0	0.1	----
As left span	4922	77.8	80.0	78.7	1.016
SO2 Scrubber Check	4919	81.0	810.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	1.007
Date of last converter efficiency test:					

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

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

H₂S Calibration Summary

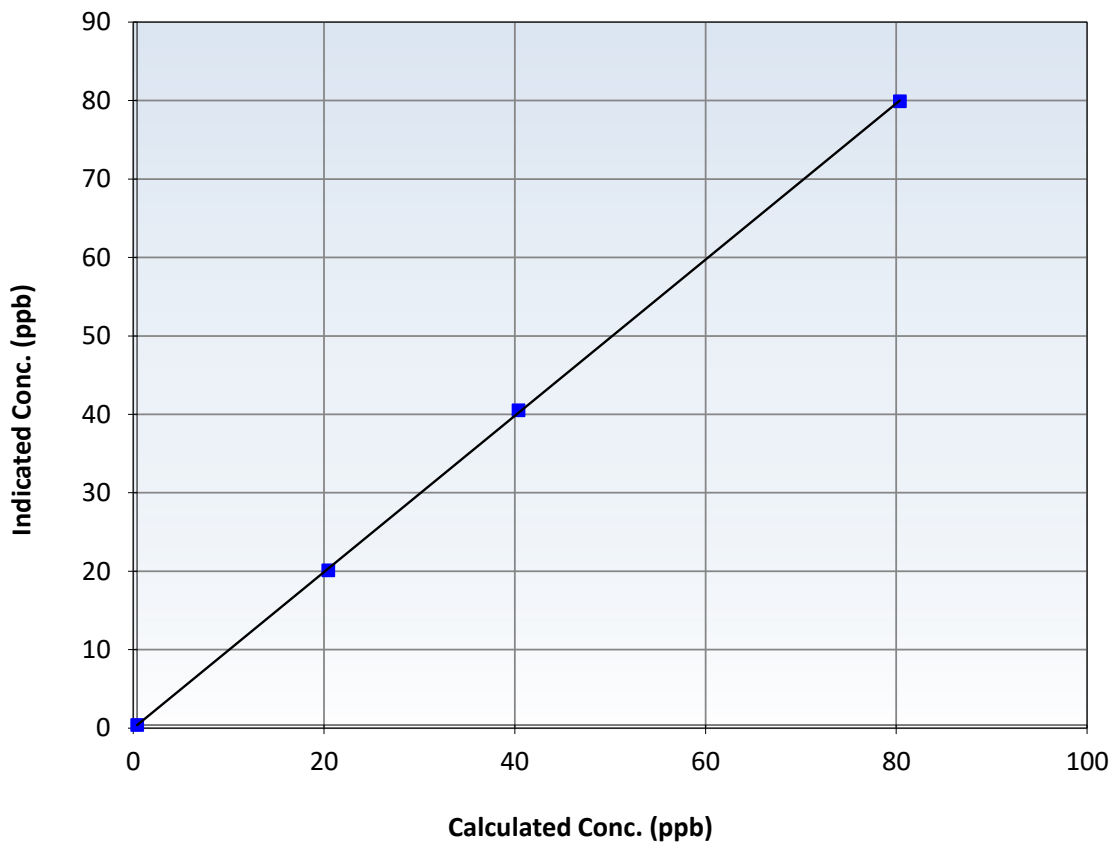
Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	June 23, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:05	End Time (MST):	11:18
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	0.0	----	Correlation Coefficient	0.999953		≥ 0.995
80.0	79.5	1.0059	Slope	0.995628		$0.90 - 1.10$
40.0	40.1	0.9971	Intercept	-0.019074		± 3
20.0	19.7	1.0173				

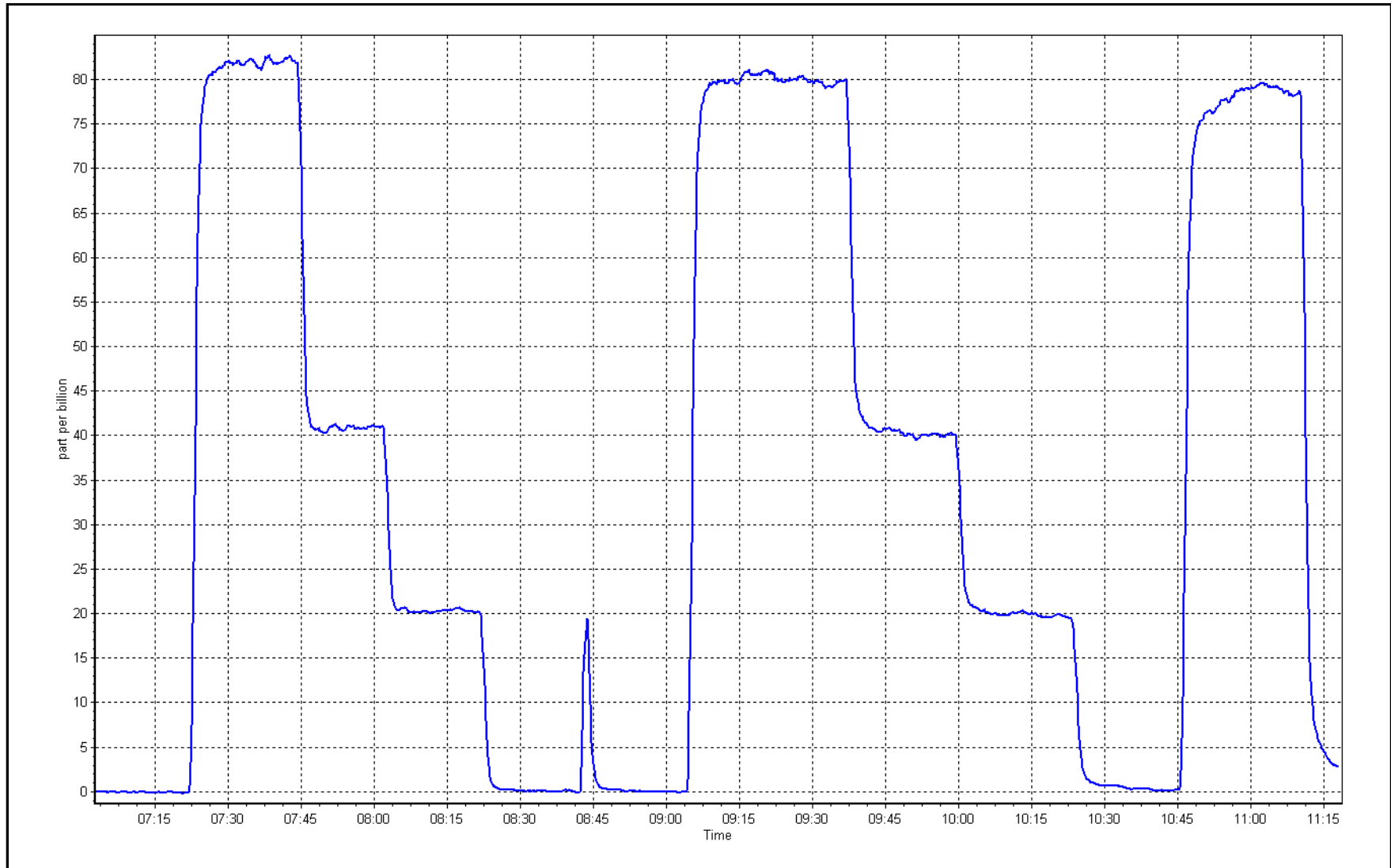
H₂S Calibration Curve



H₂S Calibration Plot

Date: July 28, 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: July 13, 2026
Last Cal Date: June 22, 2026
Start time (MST): 6:08
End time (MST): 10:20
Reason: Routine

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	-0.2	-0.2	0.0	----	----
AF High point	4915	84.4	800.7	800.7	0.0	801.9	797.3	4.7	0.9983	1.0040
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 807.0 ppb	NO = 803.6 ppb	* = > +/-5% change initiates investigation			*Percent Change	NO _x = -0.6%			
Baseline Corr 1st pt	NO _x = 802.1 ppb	NO = 797.5 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: 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:	1.060	1.060	NO bkgnd or offset:	0.2	0.2
NOX coeff or slope:	1.059	1.059	NOX bkgnd or offset:	0.4	0.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	4.5	4.5

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.008445	1.004863
NO _x Cal Offset:	-0.428071	-0.048053
NO Cal Slope:	1.005448	1.001251
NO Cal Offset:	-1.428031	-1.108000
NO ₂ Cal Slope:	1.002224	1.003173
NO ₂ Cal Offset:	1.450359	0.627204

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	0.0	0.0	0.0	----	----
High point	4915	84.4	800.7	800.7	0.0	804.3	801.0	3.4	0.9955	0.9996
Mid point	4957	42.2	400.4	400.4	0.0	403.1	399.7	3.4	0.9932	1.0017
Low point	4978	21.1	200.2	200.2	0.0	200.5	197.9	2.6	0.9985	1.0116
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	394.4	406.3	797.6	394.4	403.2	1.0039	1.0000
Average Correction Factor									0.9957	1.0043

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	799.9	396.1	403.8	405.1	0.9968	100.3%
Mid GPT point	799.9	590.9	209.0	211.4	0.9886	101.1%
Low GPT point	799.9	690.6	109.3	110.4	0.9900	101.0%
Average Correction Factor					0.9918	100.8%

Notes:

No Maintenance or adjustments done.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

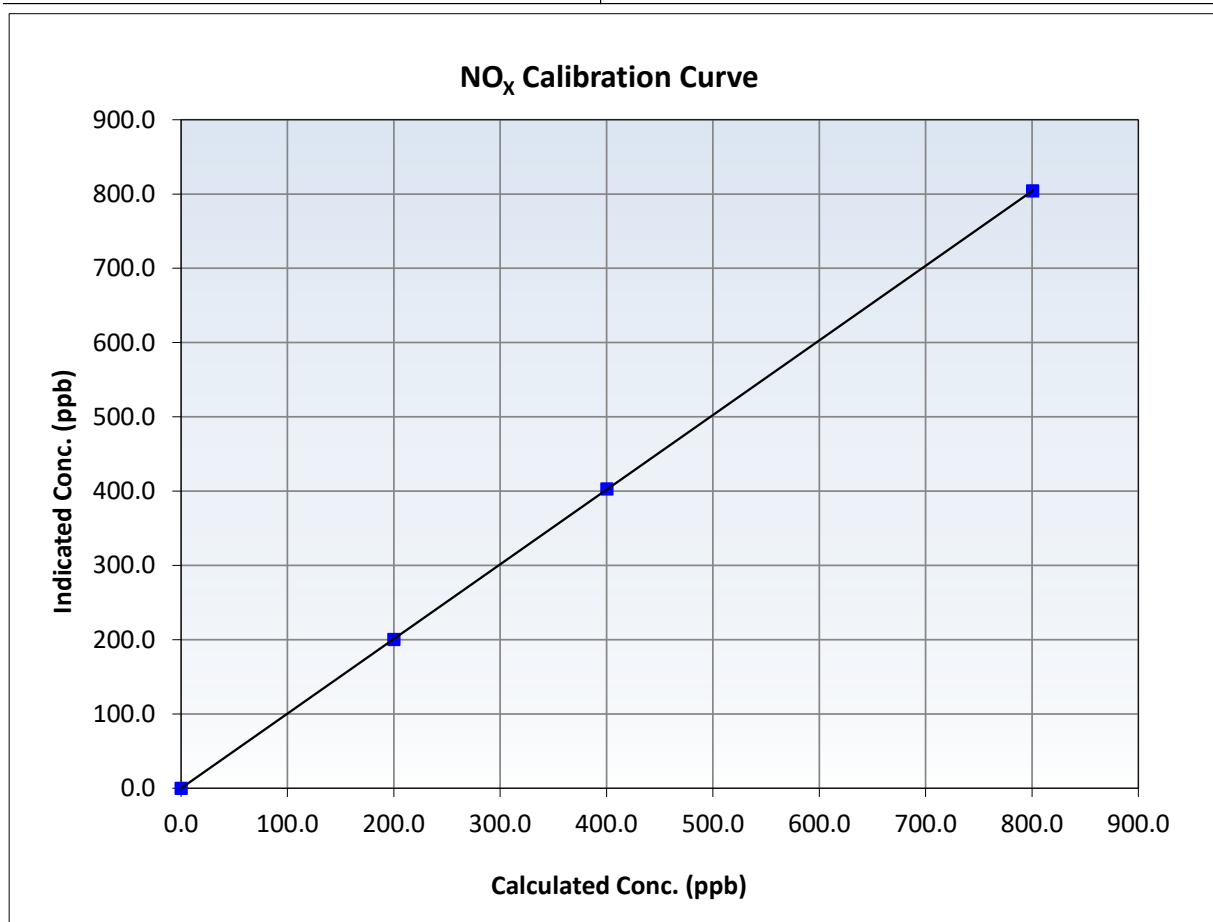
NO_x Calibration Summary

Station Information

Calibration Date:	July 13, 2026	Previous Calibration:	June 22, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	6:08	End Time (MST):	10:20
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	0.0	----	Correlation Coefficient	0.999997	≥0.995
800.7	804.3	0.9955	Slope	1.004863	0.90 - 1.10
400.4	403.1	0.9932	Intercept	-0.048053	+/-20
200.2	200.5	0.9985			





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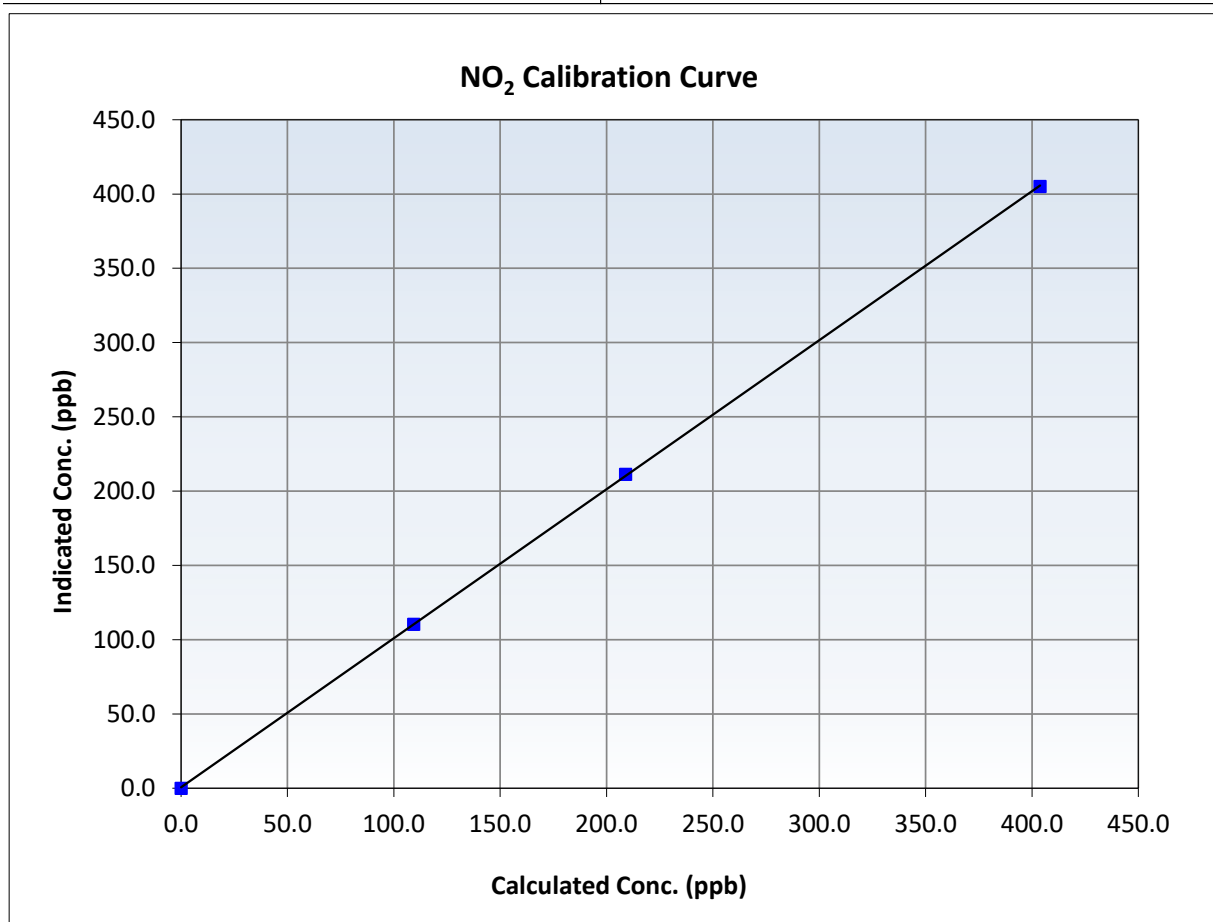
NO₂ Calibration Summary

Station Information

Calibration Date:	July 13, 2026	Previous Calibration:	June 22, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	6:08	End Time (MST):	10:20
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	0.0	----	Correlation Coefficient	0.999977	≥ 0.995
403.8	405.1	0.9968	Slope	1.003173	$0.90 - 1.10$
209.0	211.4	0.9886	Intercept	0.627204	± 20
109.3	110.4	0.9900			





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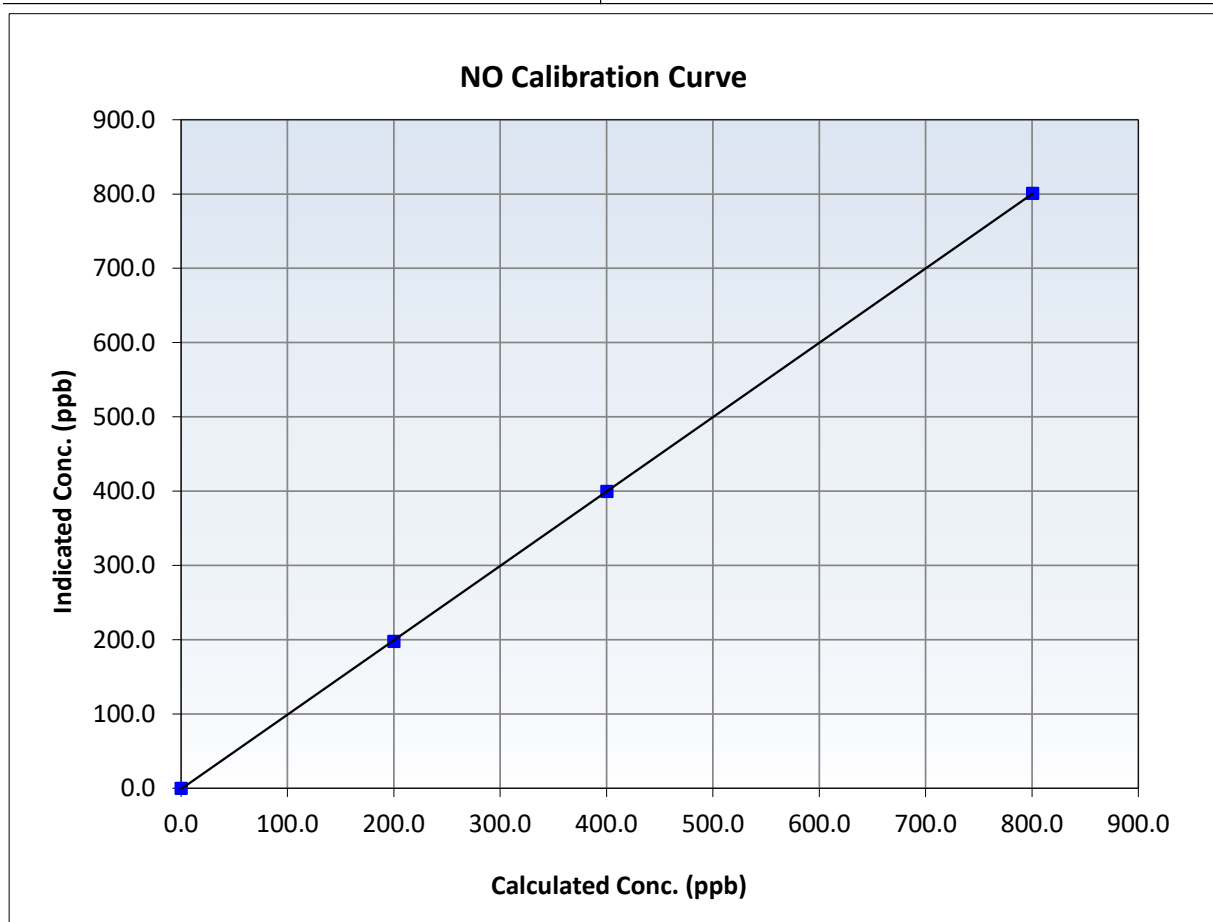
NO Calibration Summary

Station Information

Calibration Date:	July 13, 2026	Previous Calibration:	June 22, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	6:08	End Time (MST):	10:20
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

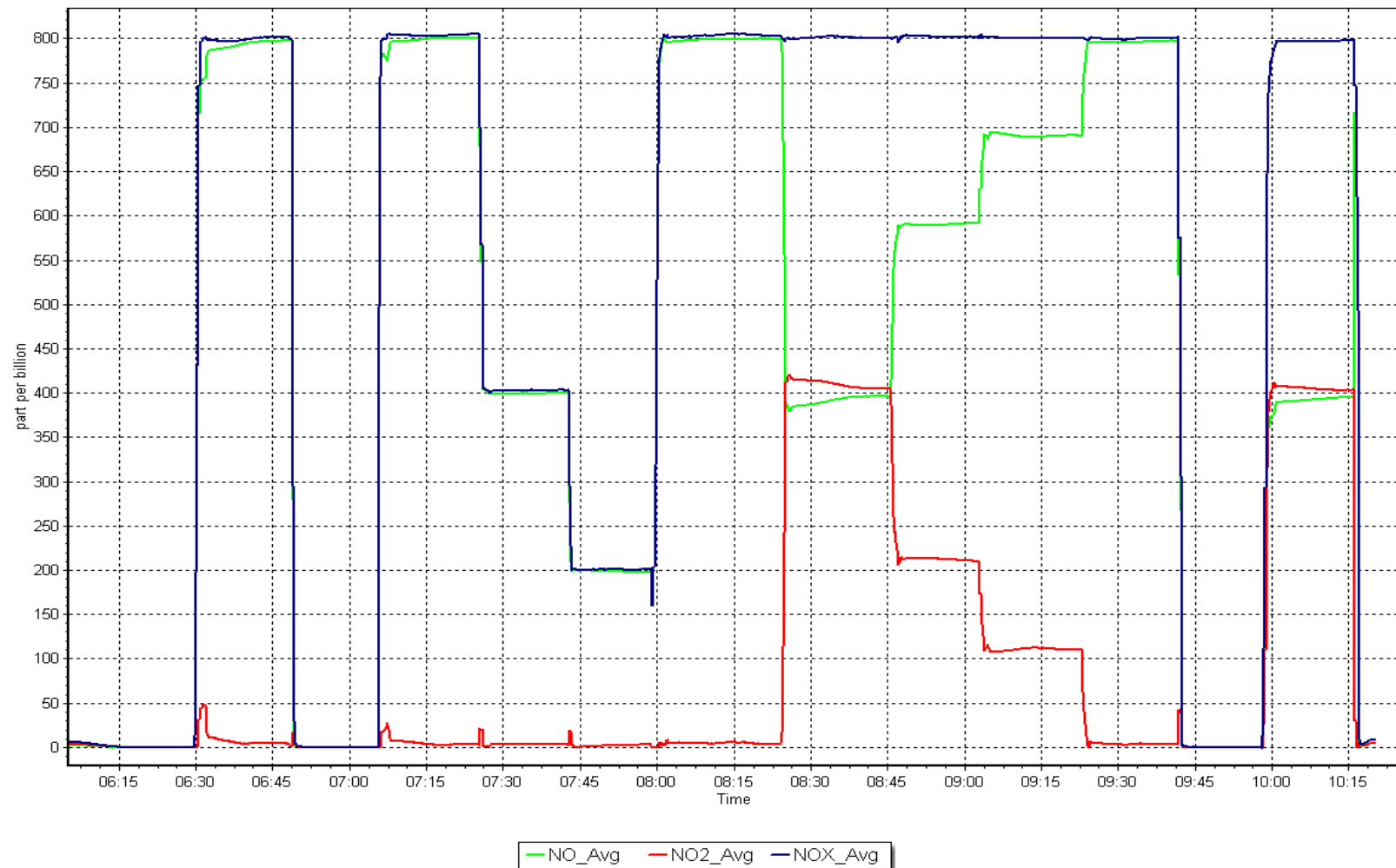
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999990	≥ 0.995
800.7	801.0	0.9996	Slope	1.001251	$0.90 - 1.10$
400.4	399.7	1.0017	Intercept	-1.108000	± 20
200.2	197.9	1.0116			



NO_x Calibration Plot

Date: July 13, 2026

Location: Hangingstone Expansion





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS505
SAWBONES BAY
JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Sawbones Bay Station number: AMS 505
Calibration Date: July 15, 2026 Last Cal Date: June 24, 2026
Start time (MST): 11:00 End time (MST): 14:25
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: 260

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:	1.006471	1.004581	Backgd or Offset:	22.5	22.5
Calibration intercept:	0.103426	-1.035624	Coeff or Slope:	1.111	1.106

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	802.8	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	802.9	Previous response	804.1	*% 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	

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	79.8	798.8	802.0	0.996
Mid point	4960	39.9	399.4	399.8	0.999
Low point	4980	20.0	200.2	198.7	1.008
As left zero	5000	0.0	0.0	0.2	----
As left span	4920	79.8	798.8	803.0	0.995
Average Correction Factor:					1.001

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

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

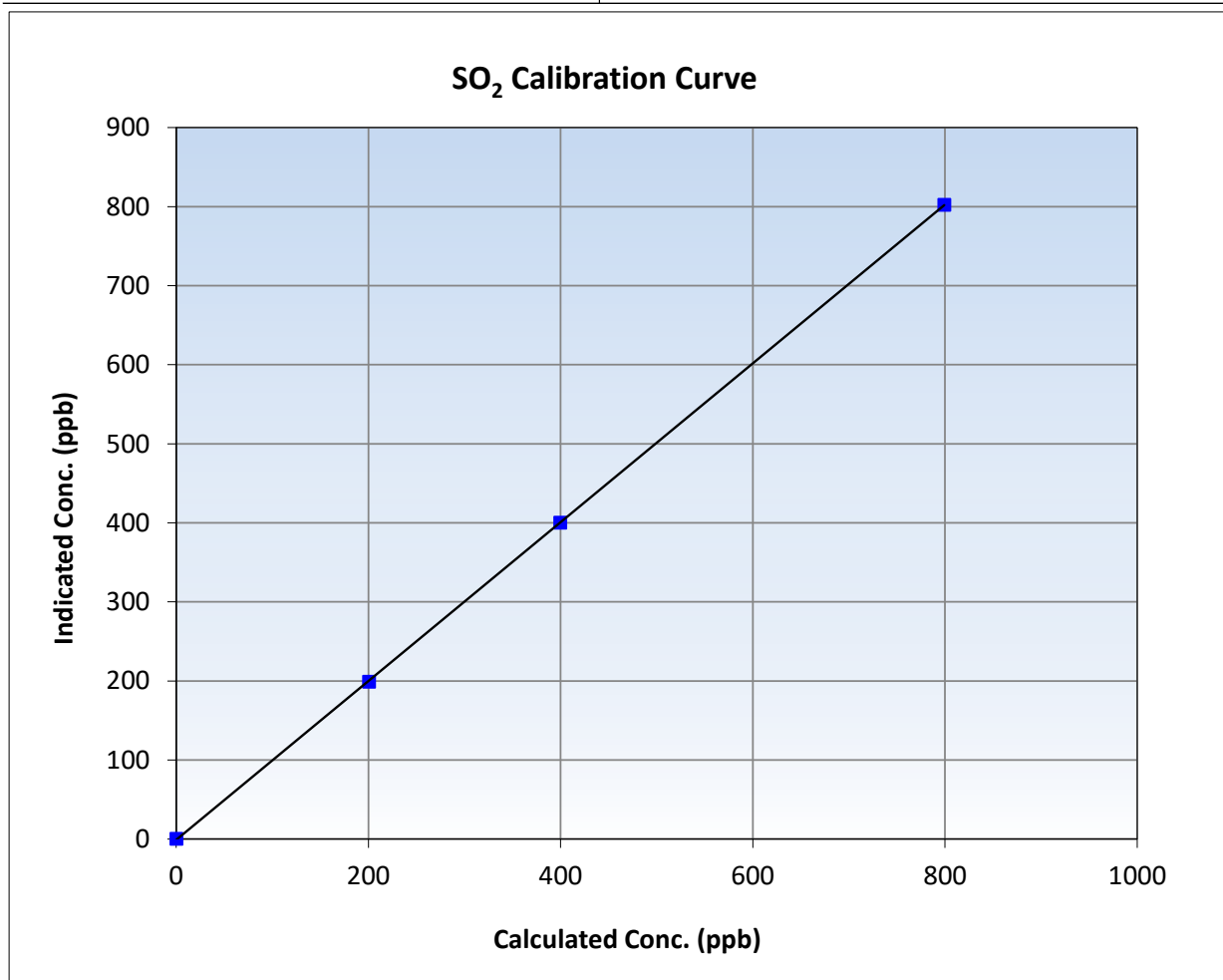
SO₂ Calibration Summary

Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 24, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	11:00	End Time (MST):	14:25
Analyzer make:	Thermo 43i	Analyzer serial #:	0710321323

Calibration Data

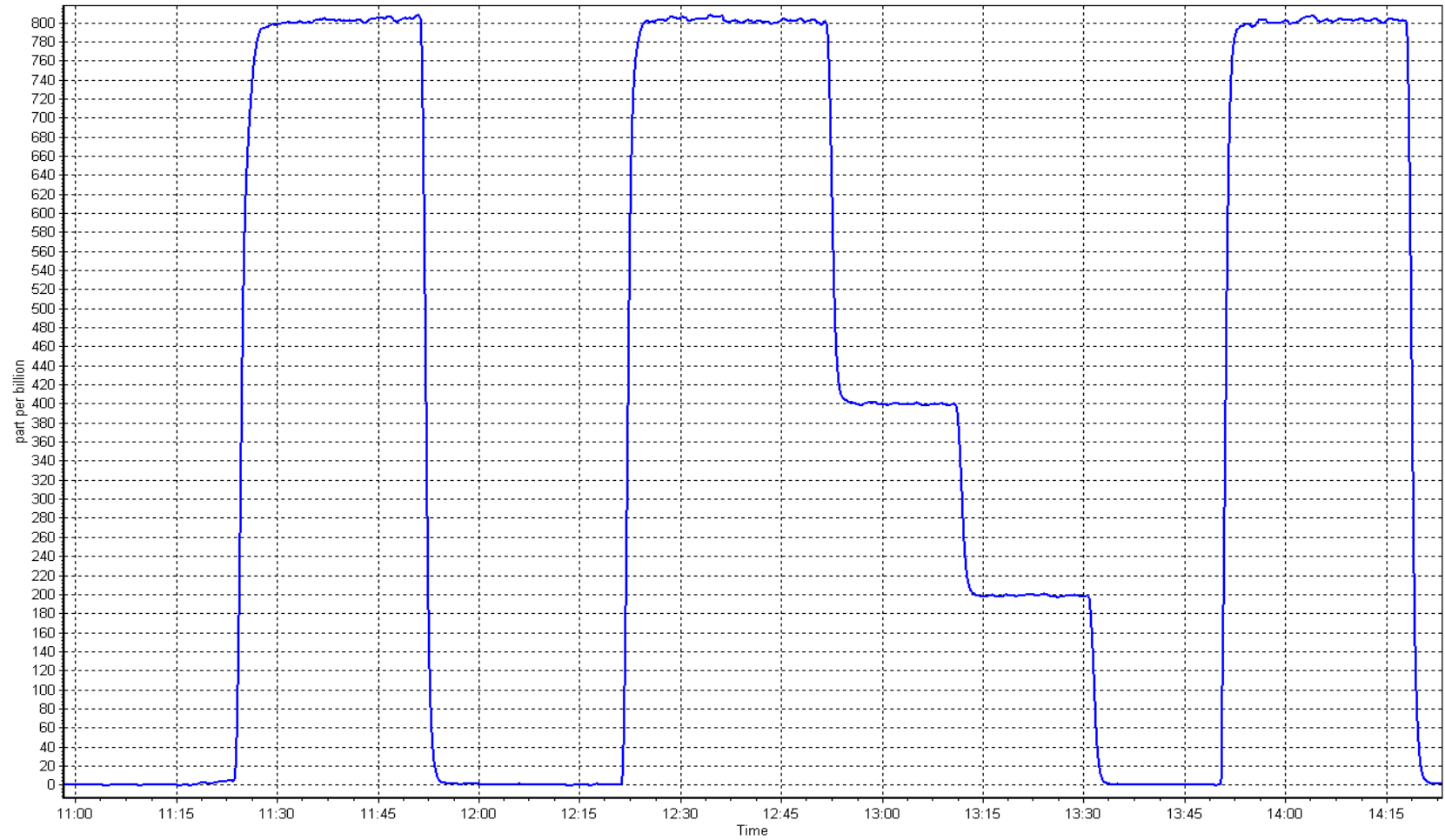
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999989	≥0.995
798.8	802.0	0.9960	Slope	1.004581	0.90 - 1.10
399.4	399.8	0.9990	Intercept	-1.035624	+/-30
200.2	198.7	1.0075			



SO2 Calibration Plot

Date: July 15, 2026

Location: Sawbones Bay





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Sawbones Bay Station number: AMS 505
Calibration Date: July 17, 2026 Last Cal Date: June 23, 2026
Start time (MST): 10:38 End time (MST): 16:25
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 T700 Serial Number: 3807
ZAG Make/Model: Teledyne API T701H Serial Number: 260

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:	0.994740	1.002459	Backgd or Offset:	1.17
Calibration intercept:	-0.120000	-0.240000	Coeff or Slope:	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	4925	76.0	79.9	79.7	1.000
As found Mid point	4962	38.0	40.0	39.8	0.999
As found Low point	4981	19.0	20.0	19.8	0.999
New cylinder response					
Baseline Corr As found:	79.9	Prev response:	79.40	*% change:	0.6%
Baseline Corr 2nd AF pt:	40.0	AF Slope:	0.999520	AF Intercept:	-0.183198
Baseline Corr 3rd AF pt:	20.0	AF Correlation:	1.000000	* = > +/-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	4924	76.0	80.0	80.0	0.999
Mid point	4962	38.0	40.0	39.7	1.007
Low point	4981	19.0	20.0	19.7	1.015
As left zero	5000	0.0	0.0	0.1	----
As left span	4925	76.0	79.9	78.4	1.020
SO2 Scrubber Check	4920	79.8	798.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	1.007
Date of last converter efficiency test:					

Notes: Changed inlet filter after as founds. SO2 scrubber check done and passed. Adjusted span.

Calibration Performed By: Braiden Boutilier



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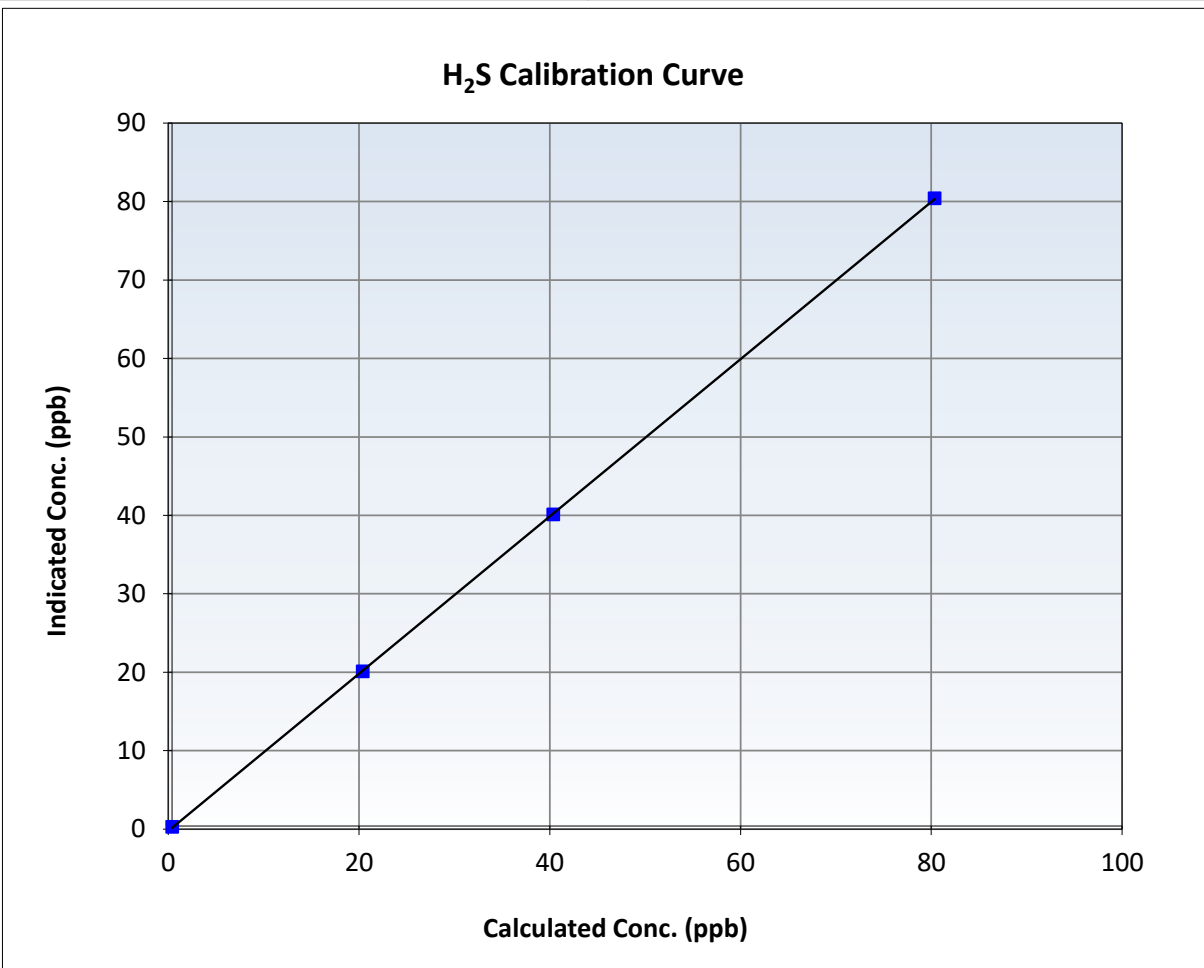
H₂S Calibration Summary

Station Information

Calibration Date:	July 17, 2026	Previous Calibration:	June 23, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:38	End Time (MST):	16:25
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12113311965

Calibration Data

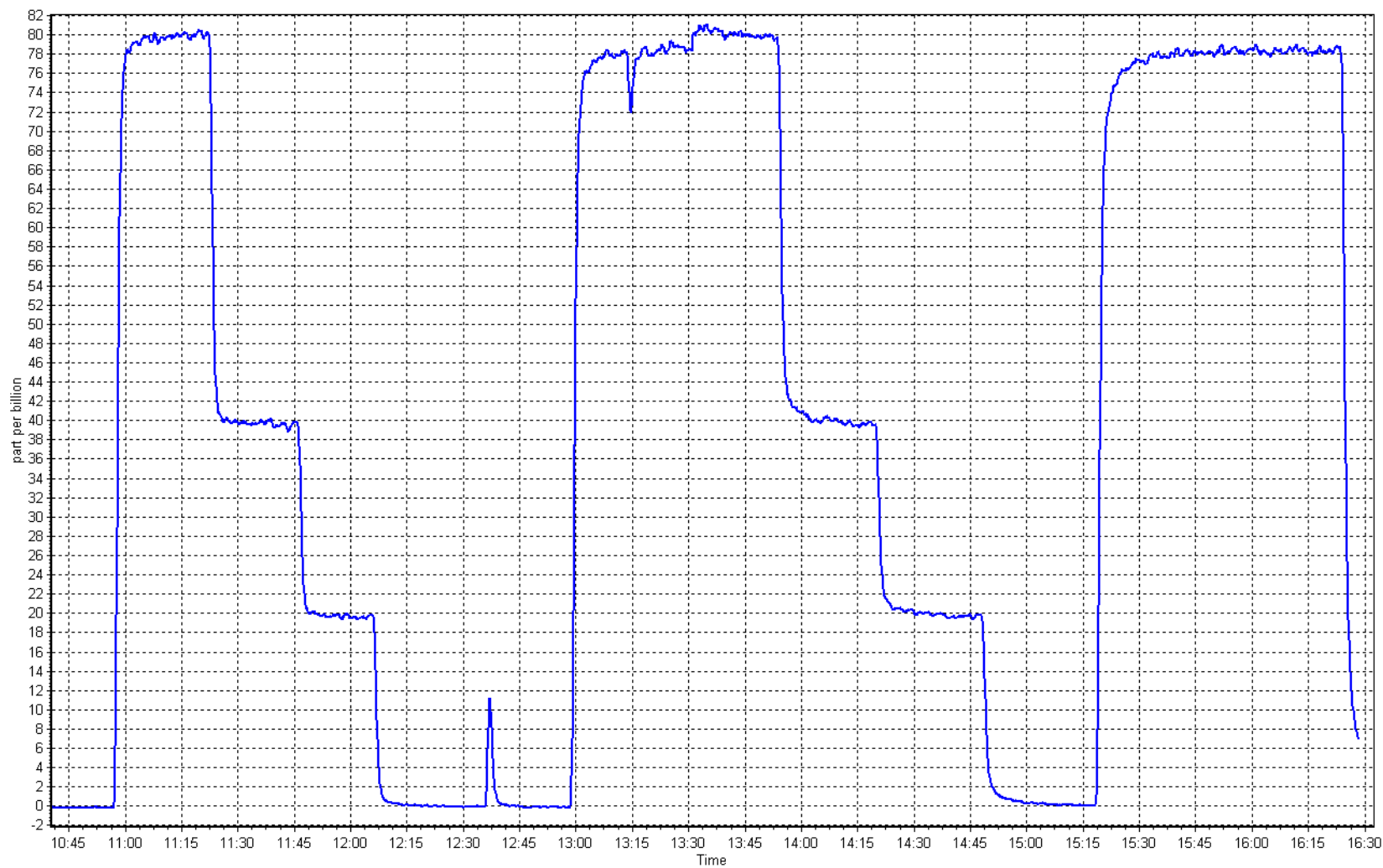
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999984		≥ 0.995
80.0	80.0	0.9994	Slope	1.002459		$0.90 - 1.10$
40.0	39.7	1.0070	Intercept	-0.240000		± 3
20.0	19.7	1.0146				



H2S Calibration Plot

Date: July 17, 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: July 29, 2026
Last Cal Date: June 16, 2026
Start time (MST): 10:35
End time (MST): 15:40
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0009786
NO_x Cal Gas Conc: 60.10 ppm
Removed Cylinder #: NA
Removed Gas NO_x Conc: 60.10 ppm
NO_x 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 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	-0.4	0.1	----	----
AF High point	4933	66.7	801.8	800.4	1.3	799.9	796.6	3.4	1.0020	1.0043
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 800.0 ppb	NO = 798.6 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = 0.0%	
Baseline Corr 1st pt	NO _x = 800.2 ppb	NO = 797.0 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -0.2%	
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: 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:	0.960	0.960	NO bkgnd or offset:	0.7	0.7
NOX coeff or slope:	0.959	0.959	NOX bkgnd or offset:	1.1	1.1
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:	0.997811	0.999093
NO _x Cal Offset:	-0.049895	-1.249329
NO Cal Slope:	0.998674	0.999816
NO Cal Offset:	-0.769920	-1.769771
NO ₂ Cal Slope:	0.997178	1.001142
NO ₂ Cal Offset:	-0.461297	0.604708

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	4933	66.7	801.8	800.4	1.3	799.9	799.1	0.9	1.0024	1.0017
Mid point	4967	33.3	400.2	399.6	0.7	399.4	397.7	1.6	1.0021	1.0047
Low point	4983	16.7	200.7	200.4	0.3	197.4	196.4	1.0	1.0170	1.0204
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	----	----
As left span	4933	66.7	801.8	383.5	418.3	795.1	383.5	411.6	1.0084	1.0000
Average Correction Factor									1.0071	1.0089

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	796.8	390.1	408.0	408.6	0.9986	100.1%
Mid GPT point	796.8	616.4	181.7	183.6	0.9898	101.0%
Low GPT point	796.8	705.6	92.5	93.4	0.9907	100.9%
Average Correction Factor					0.9931	100.7%

Notes:

Changed inlet filter after as founds. No adjustments made.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

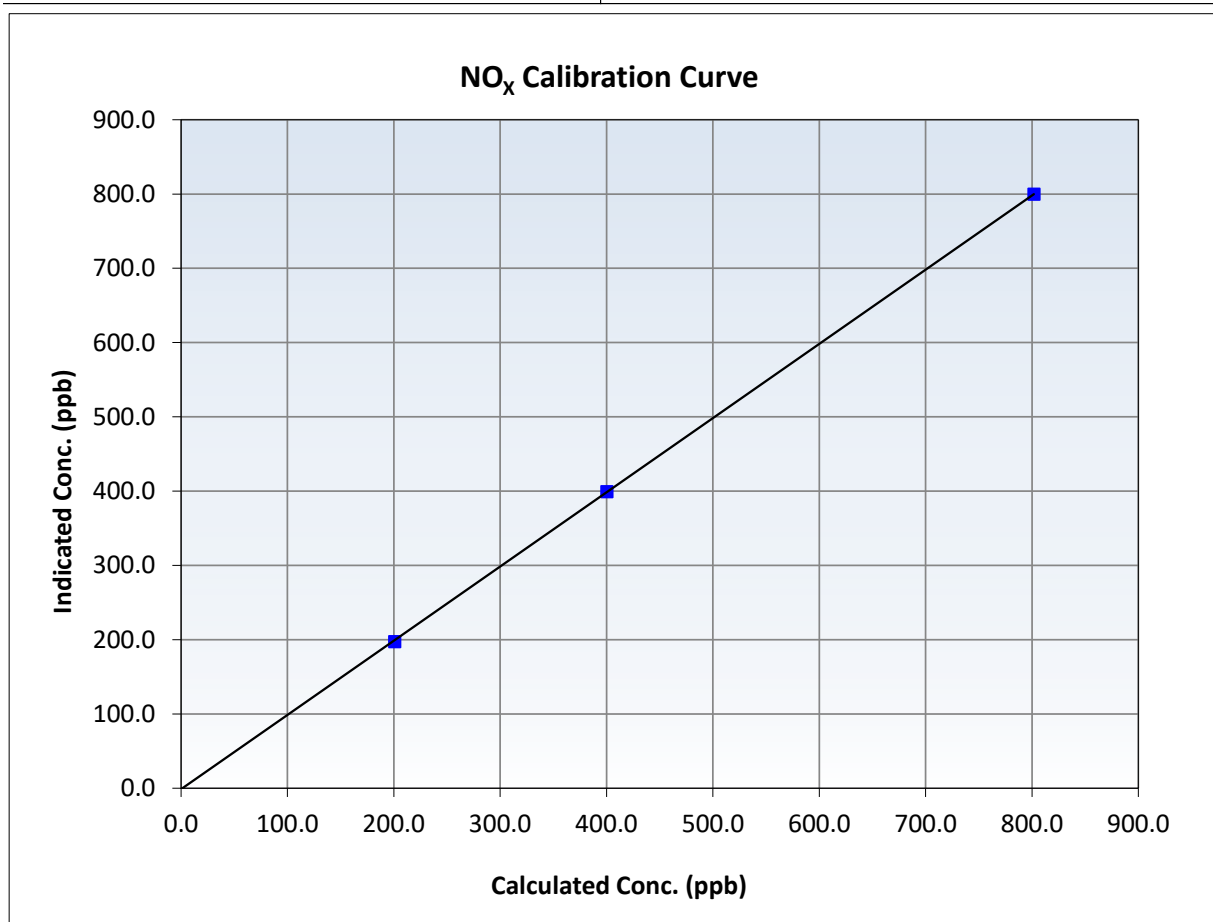
NO_x Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	June 16, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:35	End Time (MST):	15:40
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	-0.2	----	Correlation Coefficient	0.999985	≥0.995
801.8	799.9	1.0024	Slope	0.999093	0.90 - 1.10
400.2	399.4	1.0021	Intercept	-1.249329	+/-20
200.7	197.4	1.0170			





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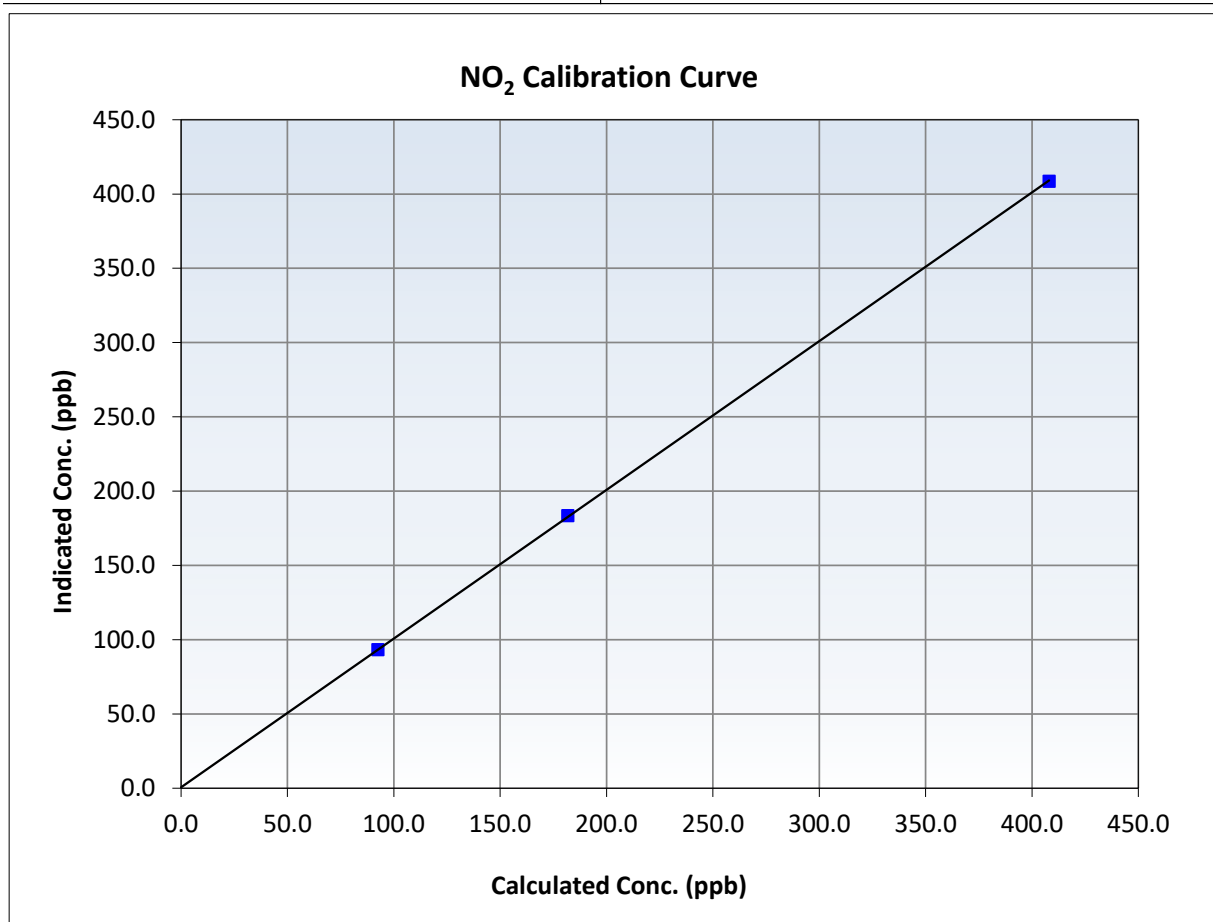
NO₂ Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	June 16, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:35	End Time (MST):	15:40
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	0.999979	≥0.995
408.0	408.6	0.9986	Slope	1.001142	0.90 - 1.10
181.7	183.6	0.9898	Intercept	0.604708	+/-20
92.5	93.4	0.9907			





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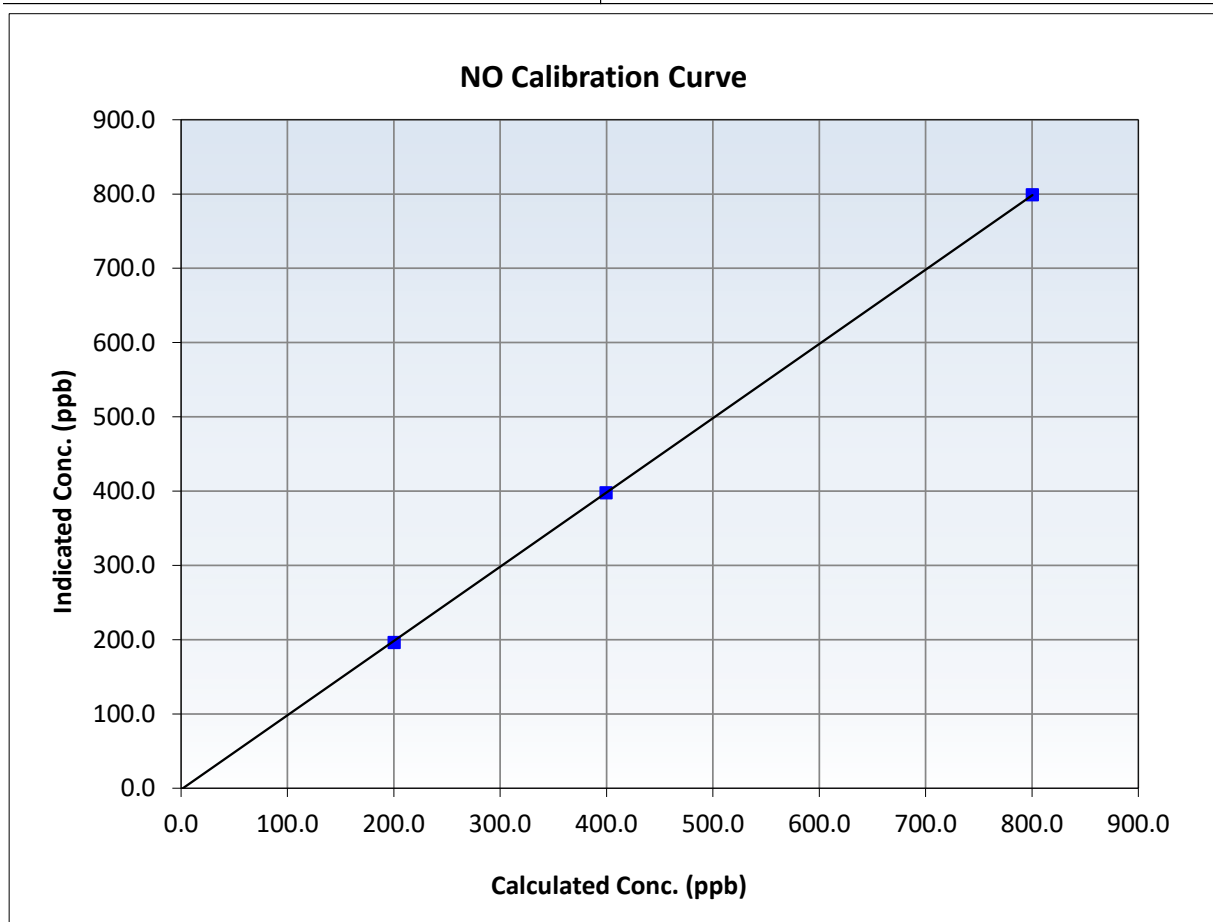
NO Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	June 16, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:35	End Time (MST):	15:40
Analyzer make:	API T200	Analyzer serial #:	4259

Calibration Data

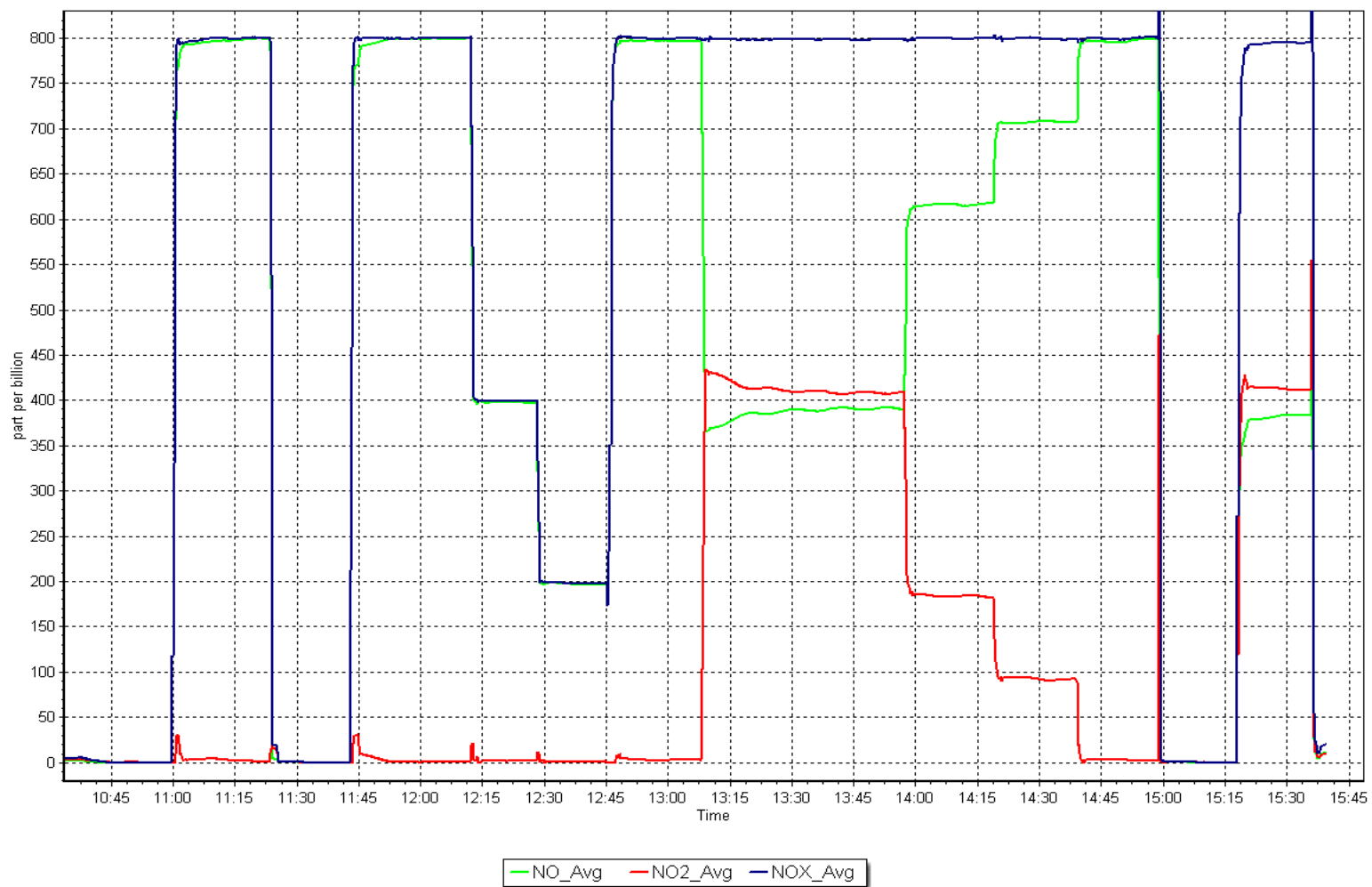
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999977	≥ 0.995
800.4	799.1	1.0017	Slope	0.999816	$0.90 - 1.10$
399.6	397.7	1.0047	Intercept	-1.769771	± 20
200.4	196.4	1.0204			



NO_x Calibration Plot

Date: July 29, 2026

Location: Sawbones Bay





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS506
JACKFISH 1
JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Jackfish 1 Station number: AMS 506
Calibration Date: June 26, 2026 Last Cal Date:
Start time (MST): 9:52 End time (MST): 12:24
Reason: Install

Calibration Standards

Cal Gas Concentration: 50.52 ppm Cal Gas Exp Date: December 29, 2028
Cal Gas Cylinder #: CC274266
Removed Cal Gas Conc: 50.52 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 3252
Zero Air Gen Model: Teledyne API 701 Serial Number: 4427

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1160290011
Analyzer Range: 0-1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:		1.002929	Backgd or Offset:		21.6
Calibration intercept:		0.443956	Coeff or Slope:		0.993

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	0.0	----
High point	4921	79.2	800.2	803.0	0.997
Mid point	4960	39.6	400.2	401.3	0.997
Low point	4980	19.8	200.1	202.0	0.990
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.2	800.2	803.4	0.996
Average Correction Factor:					0.995

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

Calibration Performed By: Jan Castro



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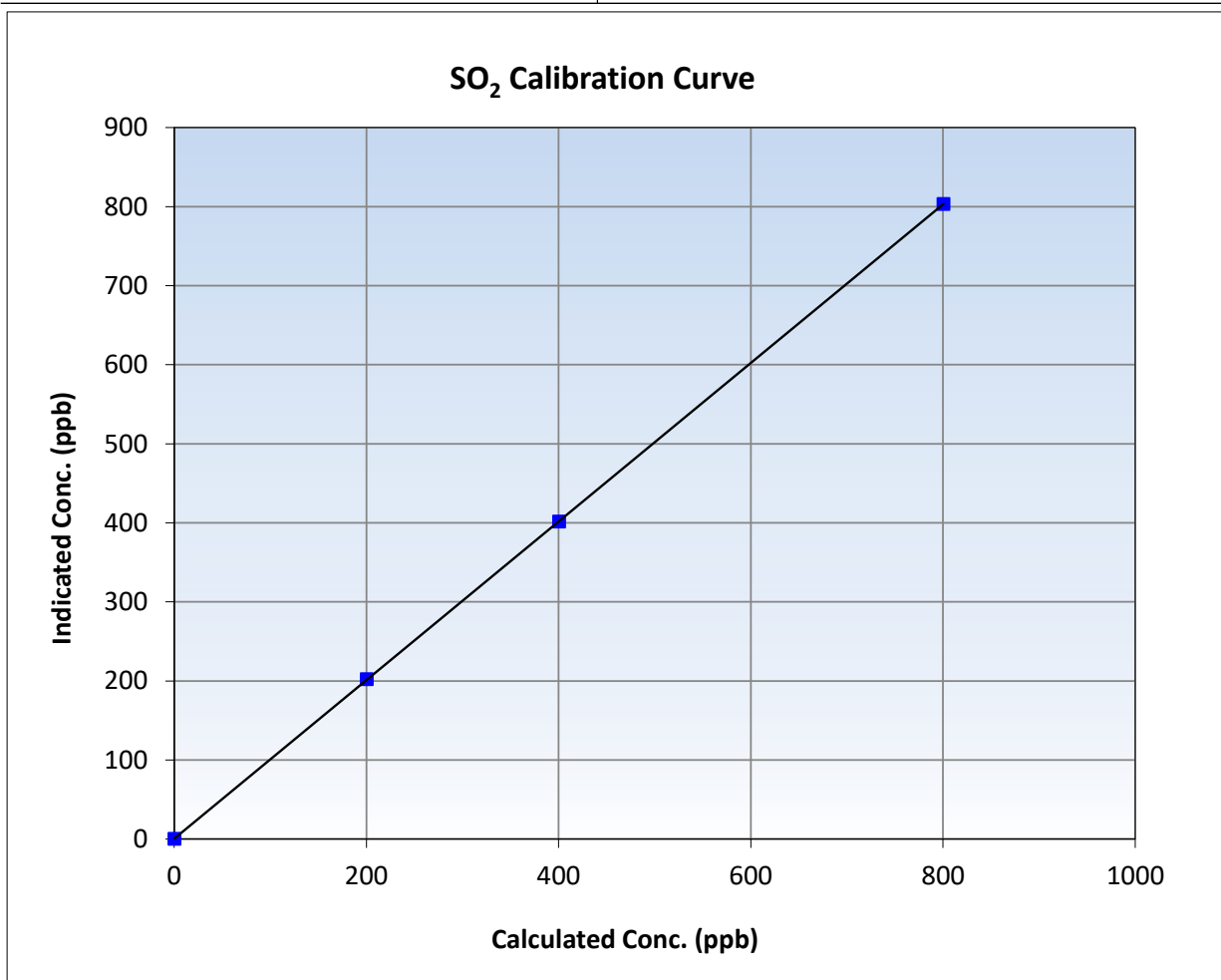
SO₂ Calibration Summary

Station Information

Calibration Date:	June 26, 2026	Previous Calibration:	
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:52	End Time (MST):	12:24
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290011

Calibration Data

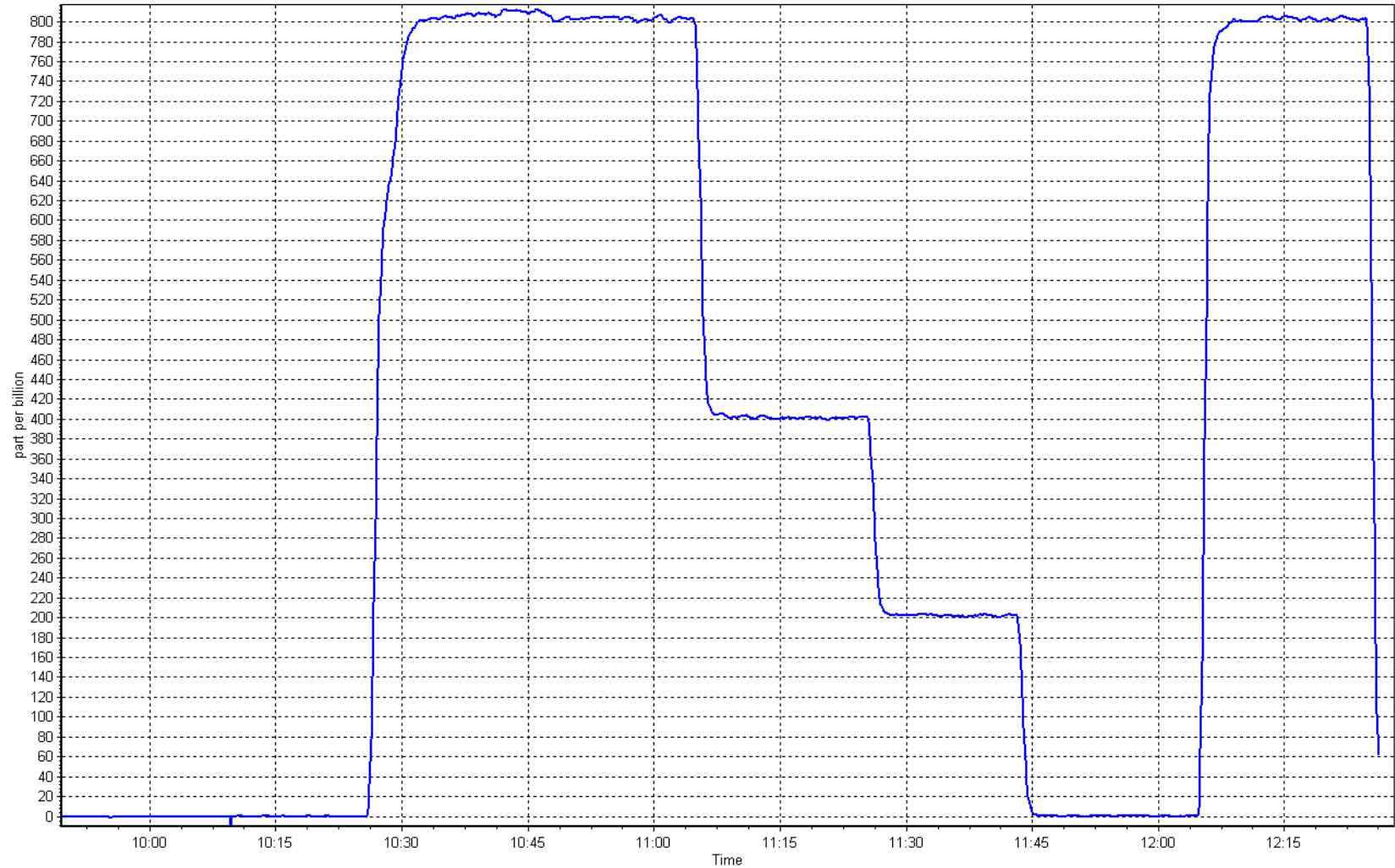
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999997	≥0.995
800.2	803.0	0.9965	Slope	1.002929	0.90 - 1.10
400.2	401.3	0.9971	Intercept	0.443956	+/-30
200.1	202.0	0.9904			



SO2 Calibration Plot

Date: June 26, 2026

Location: Jackfish 1





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SO₂ Calibration Report

Station Information

Station Name: Jackfish 1 Station number: AMS 506
Calibration Date: July 9, 2026 Last Cal Date: June 26, 2026
Start time (MST): 9:36 End time (MST): 12:39
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.52 ppm Cal Gas Exp Date: December 29, 2028
Cal Gas Cylinder #: CC274266
Removed Cal Gas Conc: 50.52 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 3252
Zero Air Gen Model: Teledyne API 701 Serial Number: 4427

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1160290011
Analyzer Range: 0-1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002929	1.004400	Backgd or Offset:	21.6	21.5
Calibration intercept:	0.443956	-0.396013	Coeff or Slope:	0.993	0.990

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	79.2	800.2	806.2	0.993
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	806.1	Previous response	803.0	*% 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	0.4	----
High point	4921	79.2	800.2	804.0	0.995
Mid point	4960	39.6	400.2	400.3	1.000
Low point	4980	19.8	200.1	200.3	0.999
As left zero	5000	0.0	0.0	0.3	----
As left span	4921	79.2	800.2	811.1	0.987
Average Correction Factor:					0.998

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

Calibration Performed By: Jan Castro



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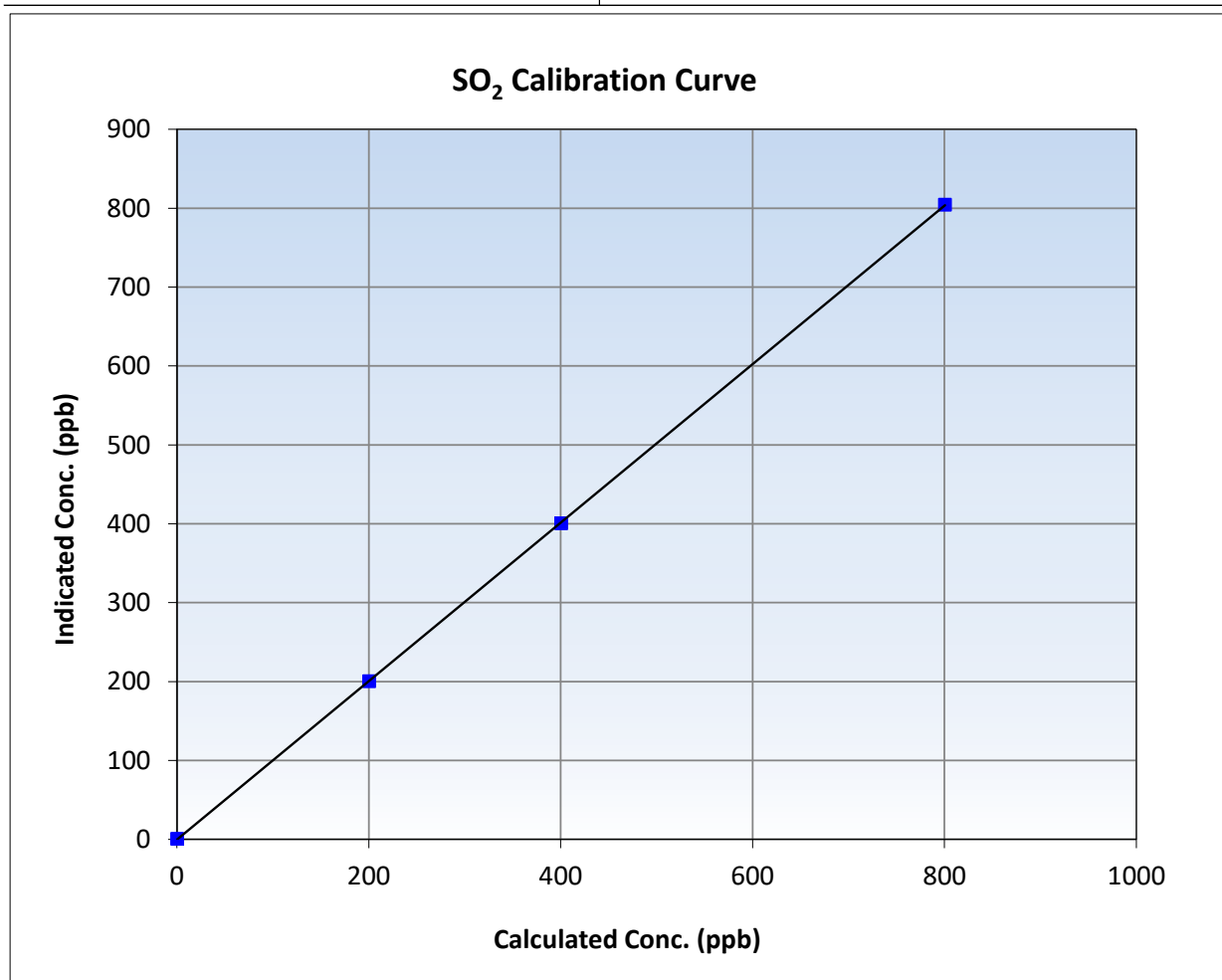
SO₂ Calibration Summary

Station Information

Calibration Date:	July 9, 2026	Previous Calibration:	June 26, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:36	End Time (MST):	12:39
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290011

Calibration Data

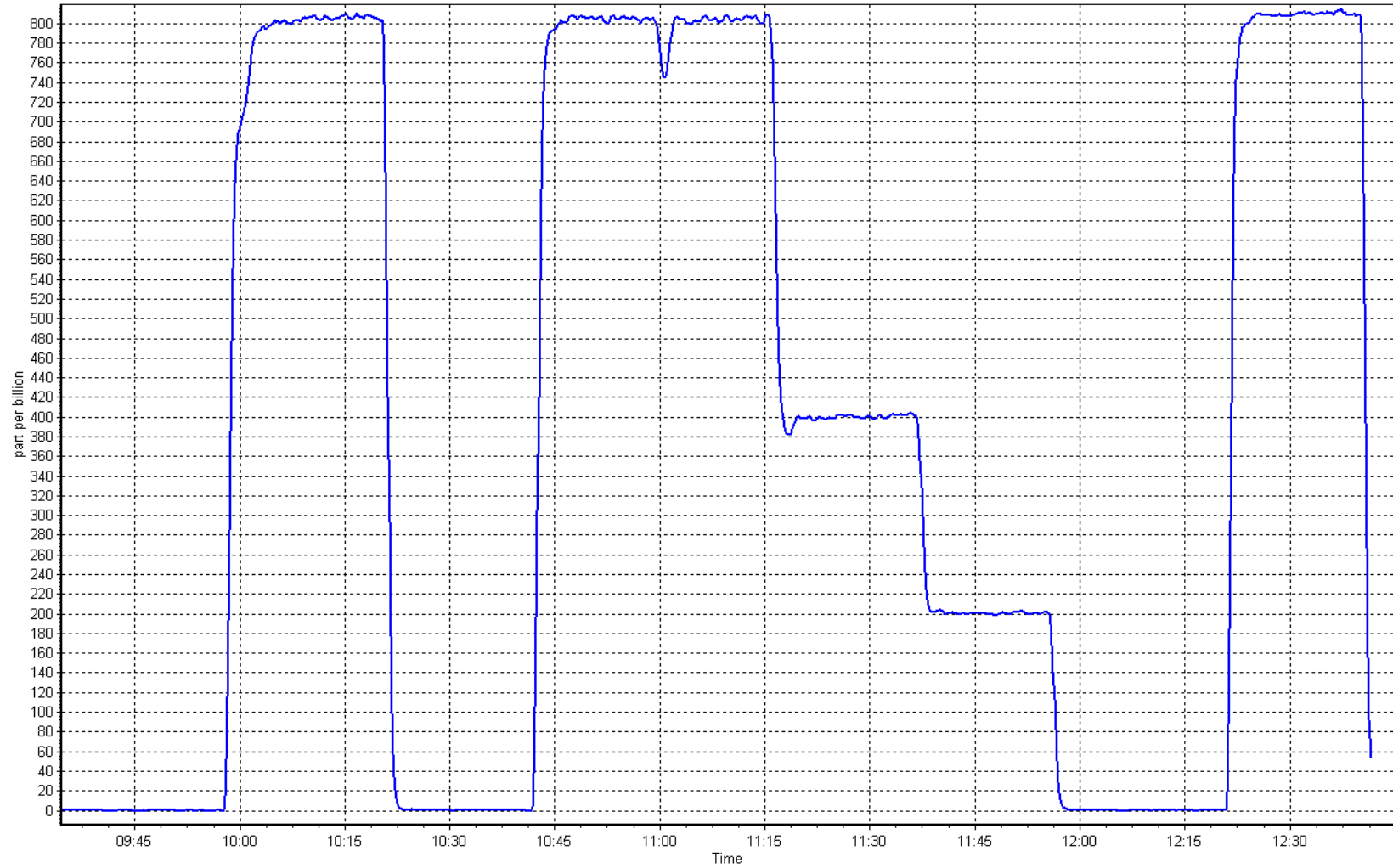
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999993	≥0.995
800.2	804.0	0.9953	Slope	1.004400	0.90 - 1.10
400.2	400.3	0.9996	Intercept	-0.396013	+/-30
200.1	200.3	0.9988			



SO2 Calibration Plot

Date: July 9, 2026

Location: Jackfish 1





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H₂S Calibration Report

Station Information

Station Name: Jackfish 1
Calibration Date: June 25, 2026
Start time (MST): 13:25
Reason: Install

Station number: AMS 506
Last Cal Date:
End time (MST): 16:16

Calibration Standards

Cal Gas Concentration: 4.89 ppm
Cal Gas Cylinder #: CC737971
Removed Cal Gas Conc: 4.89 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: API 701

Cal Gas Exp Date: September 5, 2027
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3252
Serial Number: 4427

Analyzer Information

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

Analyzer serial #: 1180540020
Converter serial #: 2022- 218
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:		1.006303	Backgd or Offset:		4.0
Calibration intercept:		0.140903	Coeff or Slope:		1.230

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	0.0	----
High point	4918	81.8	80.0	80.6	0.993
Mid point	4959	40.9	40.0	40.4	0.990
Low point	4980	20.4	19.9	20.4	0.978
As left zero					
As left span					
SO2 Scrubber Check	4921	79.2	792.0	-0.1	----
Date of last scrubber change:				Ave Corr Factor	0.987
Date of last converter efficiency test:					

Notes: Sample inlet filter and pump was changed before calibrator zero. SO2 scrubber check done and passed. Adjusted zero and span.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

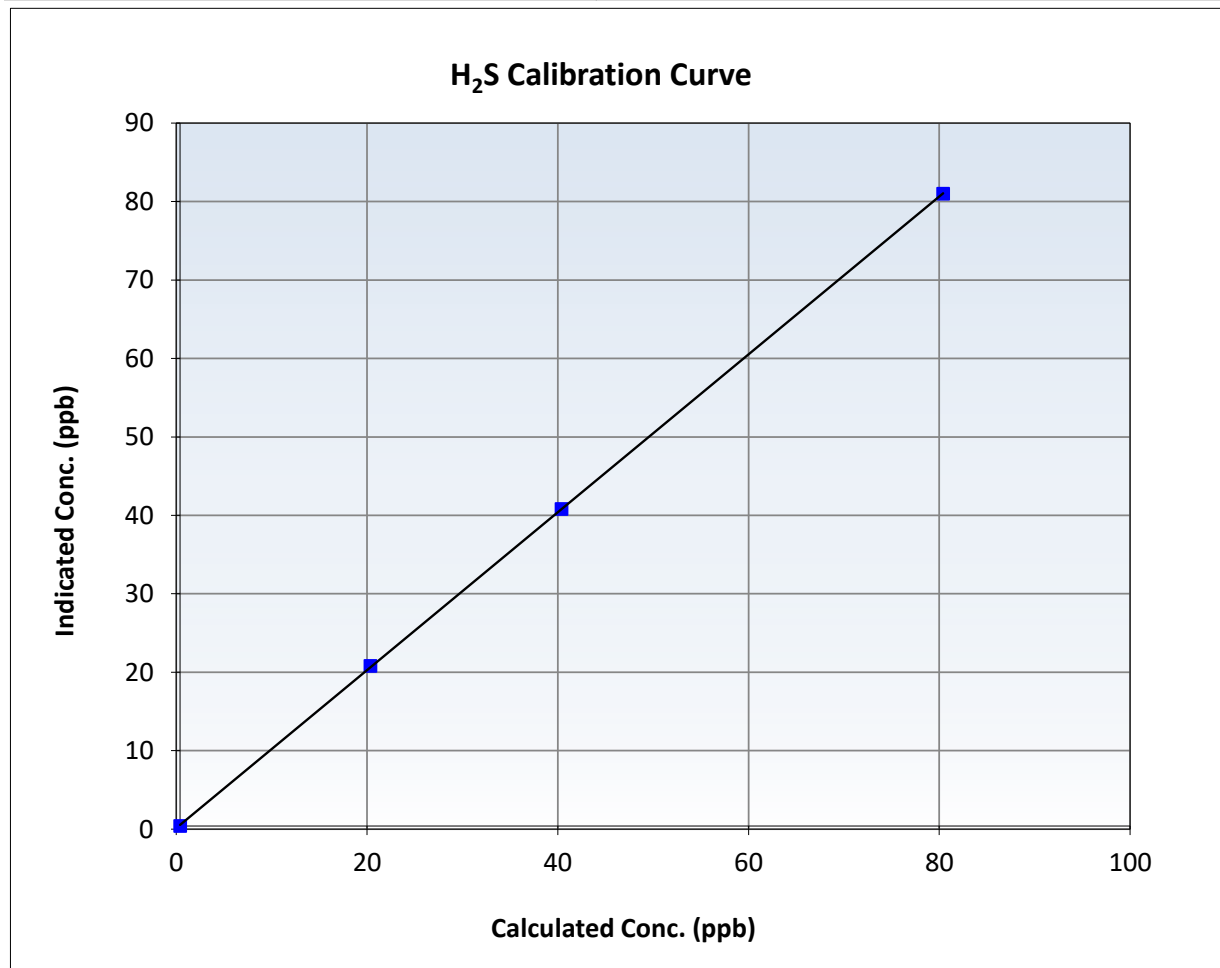
H₂S Calibration Summary

Station Information

Calibration Date:	June 25, 2026	Previous Calibration:	
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	13:25	End Time (MST):	16:16
Analyzer make:	Thermo 43i- TLE	Analyzer serial #:	1180540020

Calibration Data

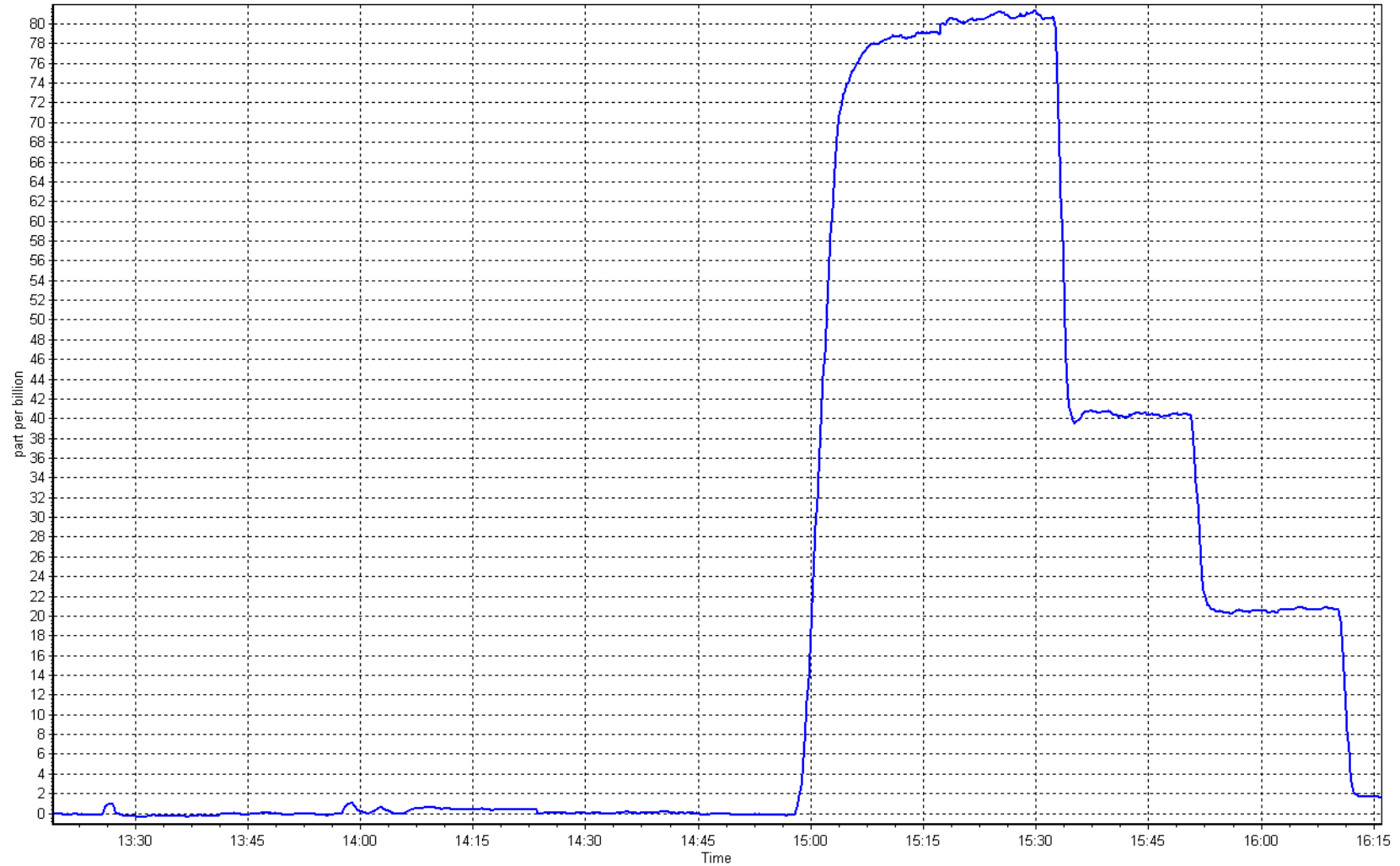
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999984	≥ 0.995
80.0	80.6	0.9926	Slope	1.006303	$0.90 - 1.10$
40.0	40.4	0.9901	Intercept	0.140903	± 3
19.9	20.4	0.9779			



H₂S Calibration Plot

Date: June 25, 2026

Location: Jackfish 1





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H₂S Calibration Report

Station Information

Station Name: Jackfish 1
Calibration Date: July 15, 2026
Start time (MST): 9:42
Reason: Routine

Station number: AMS 506
Last Cal Date: June 25, 2026
End time (MST): 13:44

Calibration Standards

Cal Gas Concentration: 4.89 ppm
Cal Gas Cylinder #: CC737971
Removed Cal Gas Conc: 4.89 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: API 701

Cal Gas Exp Date: September 5, 2027
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3252
Serial Number: 4427

Analyzer Information

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

Analyzer serial #: 1180540020
Converter serial #: 2022- 218
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.006303	0.995596	Backgd or Offset:	4.0	3.5
Calibration intercept:	0.140903	-0.259466	Coeff or Slope:	1.230	1.183

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	-0.5	----
As found High point	4918	81.8	80.0	81.3	0.978
As found Mid point	4959	40.9	40.0	40.4	0.978
As found Low point	4980	20.4	19.9	19.9	0.978
New cylinder response					
Baseline Corr As found:	81.8	Prev response:	80.65	*% change:	1.4%
Baseline Corr 2nd AF pt:	40.9	AF Slope:	1.022445	AF Intercept:	-0.498857
Baseline Corr 3rd AF pt:	20.4	AF Correlation:	1.000000	* = > +/-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	4918	81.8	80.0	79.5	1.006
Mid point	4959	40.9	40.0	39.4	1.015
Low point	4980	20.4	19.9	19.5	1.023
As left zero	5000	0.0	0.0	0.0	----
As left span	4918	81.8	80.0	79.0	1.013
SO2 Scrubber Check	4921	79.2	792.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	1.015
Date of last converter efficiency test:					

Notes: Sample inlet filter was changed after multipoint as founds. SO2 scrubber check done and passed.
Adjusted zero and span.

Calibration Performed By: Jan Castro



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H₂S Calibration Summary

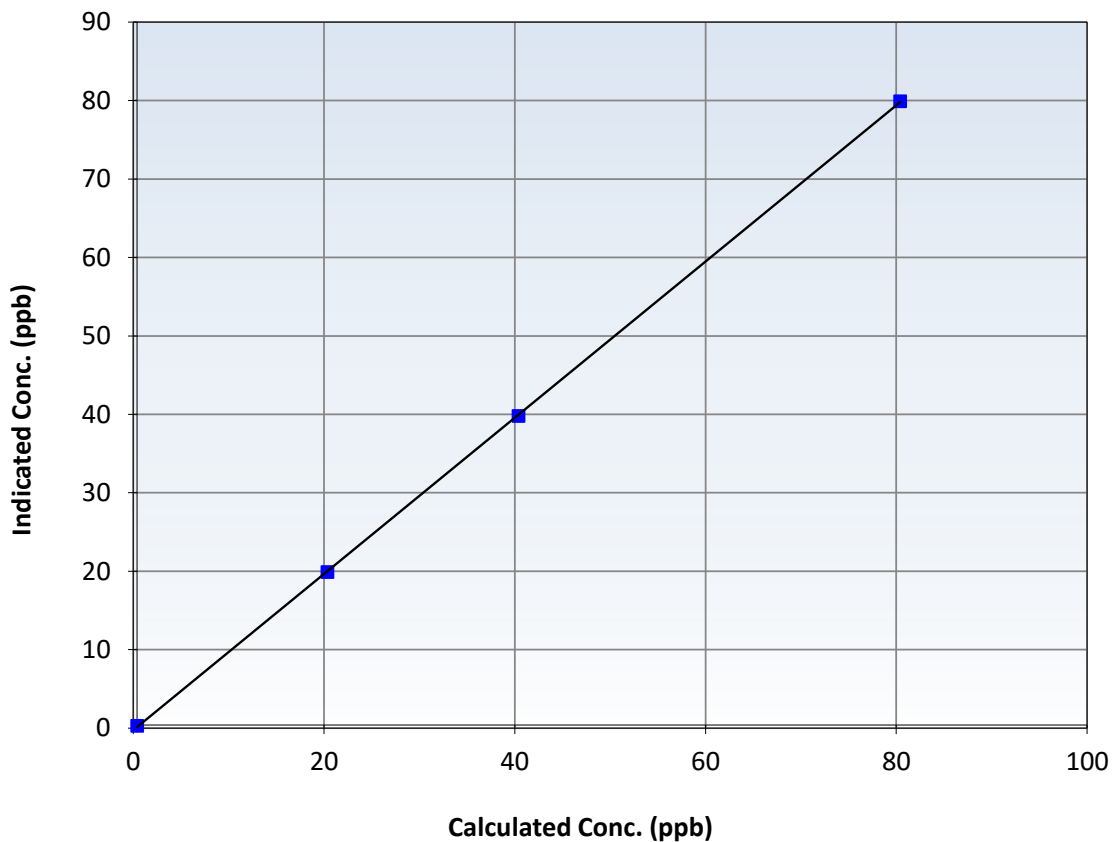
Station Information

Calibration Date:	July 15, 2026	Previous Calibration:	June 25, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:42	End Time (MST):	13:44
Analyzer make:	Thermo 43i- TLE	Analyzer serial #:	1180540020

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	0.999978	≥0.995
80.0	79.5	1.0063	Slope	0.995596	0.90 - 1.10
40.0	39.4	1.0153	Intercept	-0.259466	+/-3
19.9	19.5	1.0231			

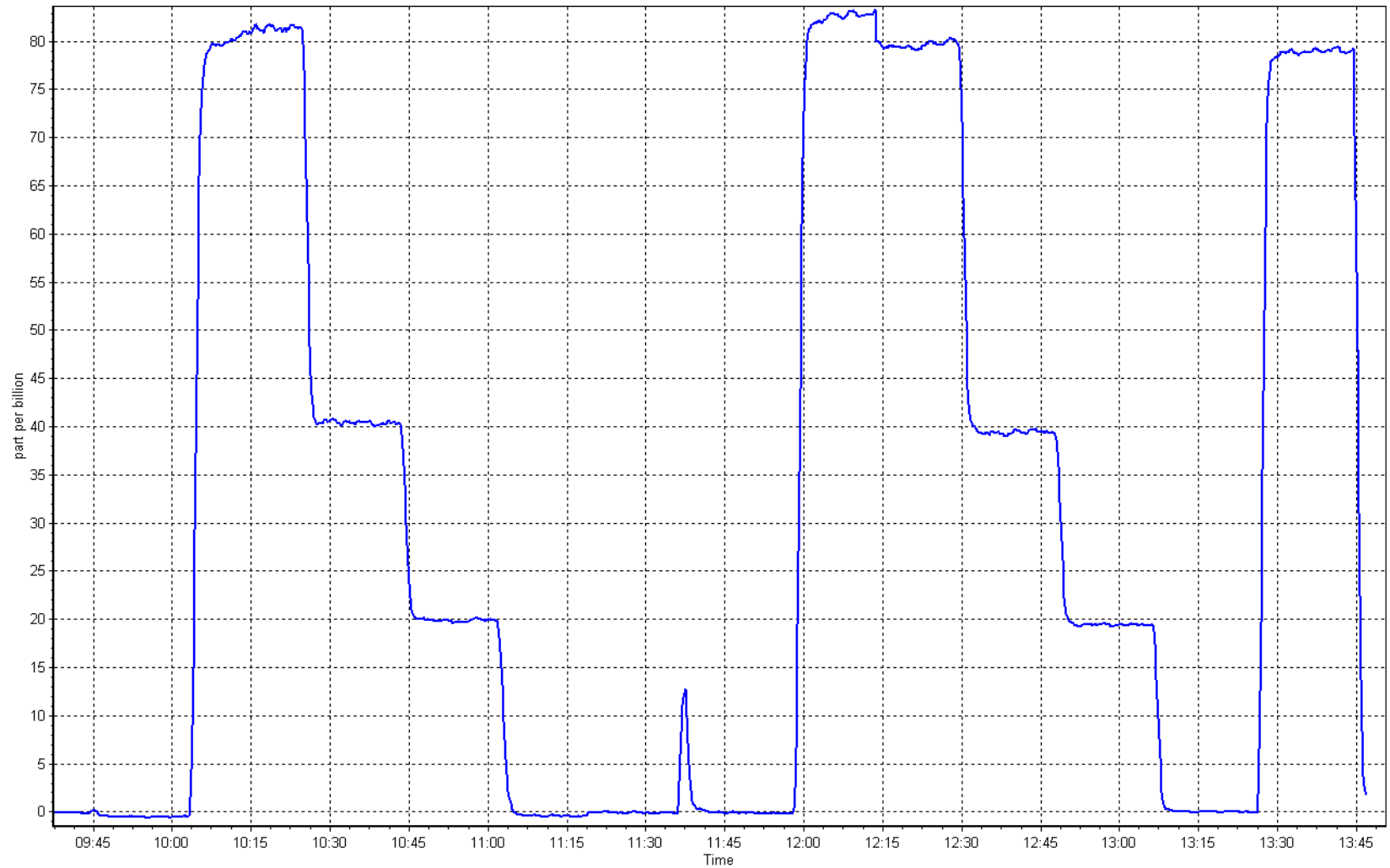
H₂S Calibration Curve



H₂S Calibration Plot

Date: July 15, 2026

Location: Jackfish 1





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H₂S Calibration Report

Station Information

Station Name: Jackfish 1
Calibration Date: July 29, 2026
Start time (MST): 10:12
Reason: Maintenance

Station number: AMS 506
Last Cal Date: July 15, 2026
End time (MST): 14:25

Calibration Standards

Cal Gas Concentration: 4.89 ppm
Cal Gas Cylinder #: CC737971
Removed Cal Gas Conc: 4.89 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: API 701

Cal Gas Exp Date: September 5, 2027
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3252
Serial Number: 4427

Analyzer Information

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

Analyzer serial #: 1180540020
Converter serial #: 2022- 218
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.995596	0.996882	Backgd or Offset:	3.5	3.6
Calibration intercept:	-0.259466	-0.079441	Coeff or Slope:	1.183	1.183

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	4918	81.8	80.0	77.1	1.036
As found Mid point	4959	40.9	40.0	38.4	1.039
As found Low point	4980	20.4	19.9	19.0	1.044
New cylinder response					
Baseline Corr As found:	77.2	Prev response:	79.39	*% change:	-2.8%
Baseline Corr 2nd AF pt:	38.5	AF Slope:	0.965461	AF Intercept:	-0.180077
Baseline Corr 3rd AF pt:	19.1	AF Correlation:	0.999995	* = > +/-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	4918	81.8	80.0	79.7	1.004
Mid point	4959	40.9	40.0	39.8	1.005
Low point	4980	20.4	19.9	19.7	1.013
As left zero	5000	0.0	0.0	-0.1	----
As left span	4918	81.8	80.0	79.9	1.001
SO2 Scrubber Check	4921	79.2	792.0	-0.1	----
Date of last scrubber change:				Ave Corr Factor	1.007
Date of last converter efficiency test:					

Notes: Sample inlet filter was changed after multipoint as founds. SO2 scrubber check done and passed.
No adjustment made.

Calibration Performed By: Jan Castro



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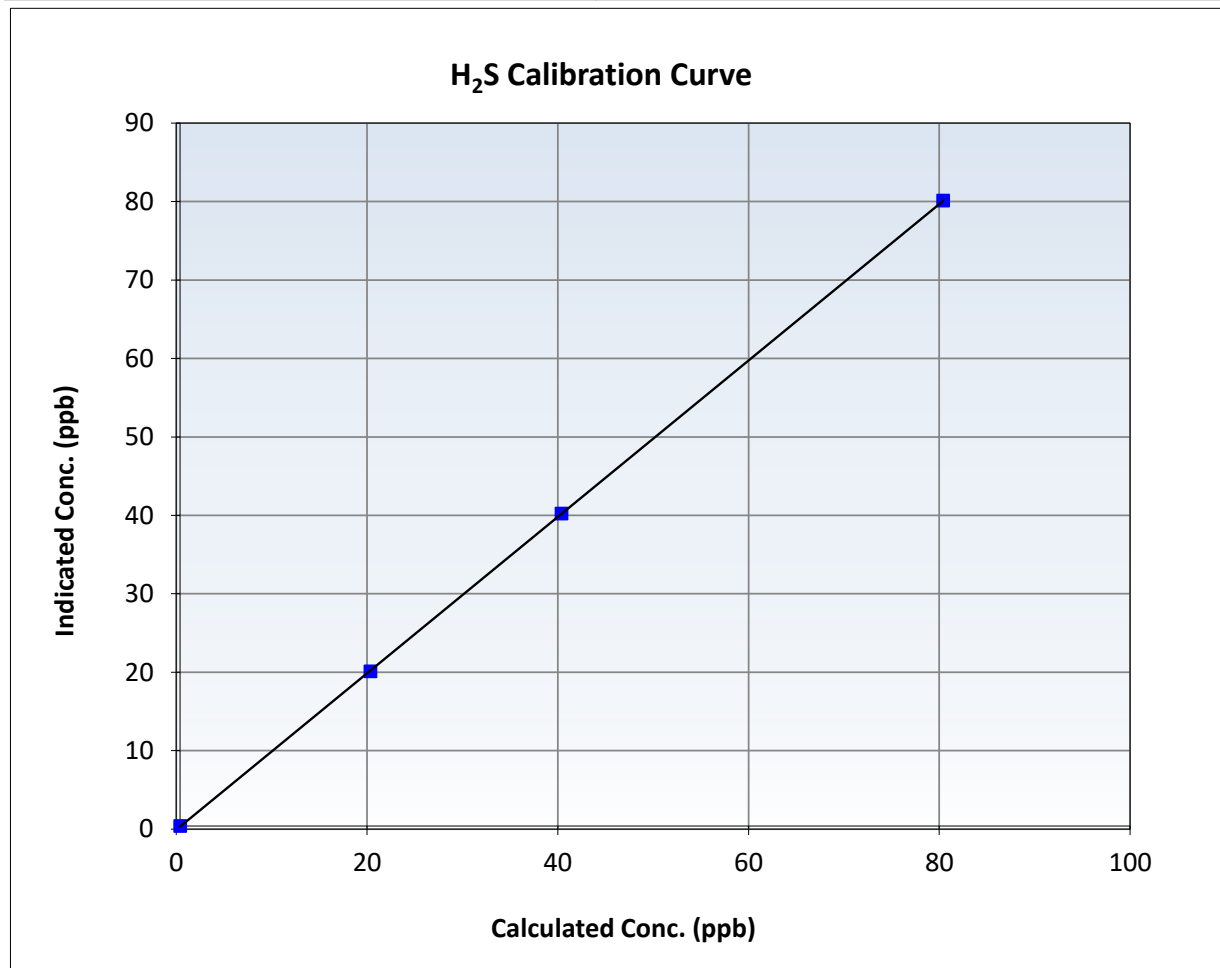
H₂S Calibration Summary

Station Information

Calibration Date:	July 29, 2026	Previous Calibration:	July 15, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	10:12	End Time (MST):	14:25
Analyzer make:	Thermo 43i- TLE	Analyzer serial #:	1180540020

Calibration Data

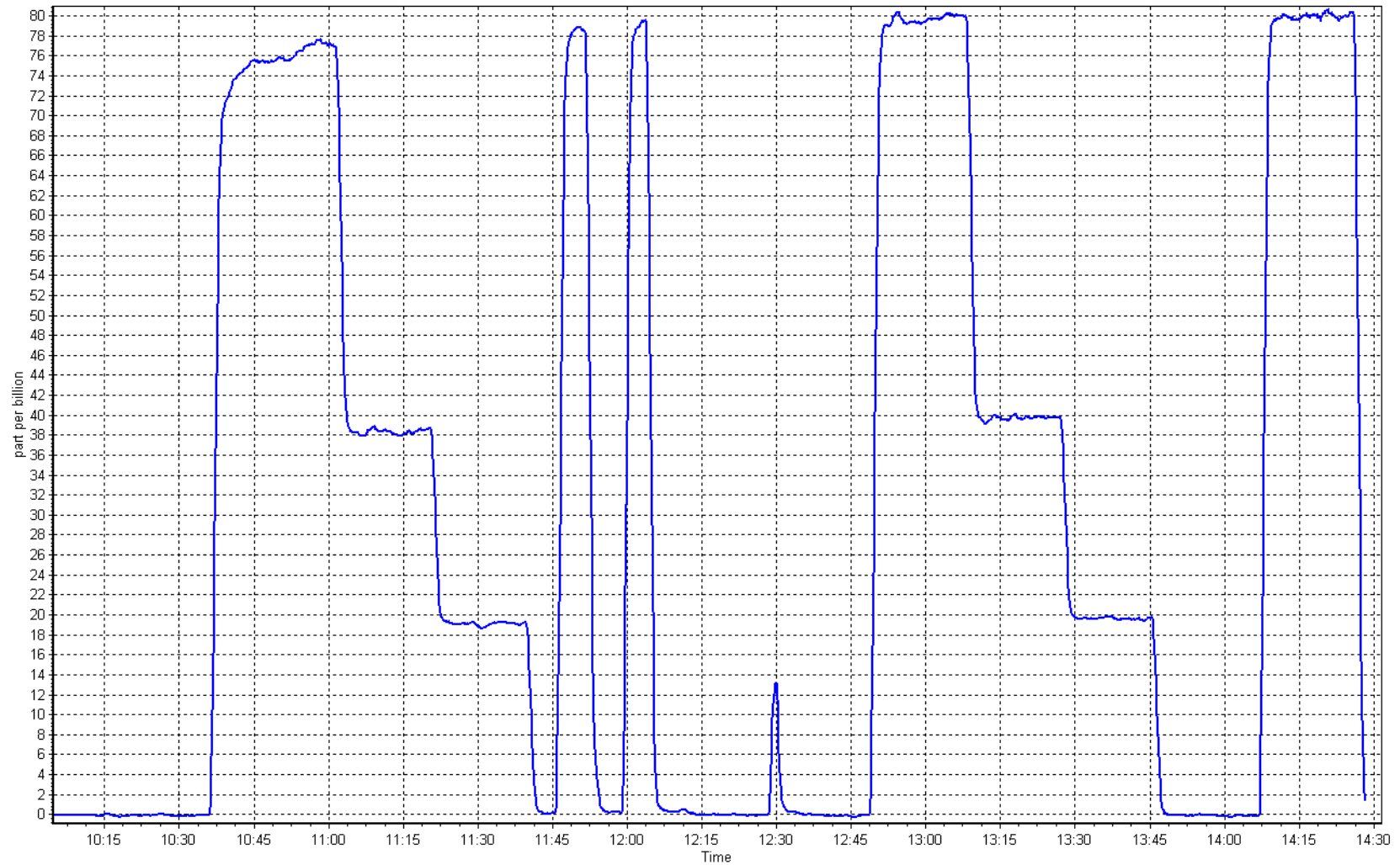
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999995		≥0.995
80.0	79.7	1.0038	Slope	0.996882		0.90 - 1.10
40.0	39.8	1.0051	Intercept	-0.079441		+/-3
19.9	19.7	1.0127				



H₂S Calibration Plot

Date: July 29, 2026

Location: Jackfish 1





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Jackfish 1
Station number: AMS 506
Calibration Date: June 25, 2026
Last Cal Date:
Start time (MST): 9:22
End time (MST): 13:24
Reason: Install

Calibration Standards

NO Gas Cylinder #: DT0022706
NOX Cal Gas Conc: 60.20 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 60.20 ppm
NOX gas Diff:
Calibrator Model: API T700
ZAG make/model: API 701
Cal Gas Expiry Date: January 5, 2032
NO Cal Gas Conc: 60.10 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 60.10 ppm
NO gas Diff:
Serial Number: 3252
Serial Number: 4427

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: 12400232071

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.019		NO bkgnd or offset:	0.7	
NOX coeff or slope:	0.992		NOX bkgnd or offset:	0.8	
NO2 coeff or slope:	1.000		Reaction cell Press:	172.9	

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:		0.999024
NO _x Cal Offset:		1.513261
NO Cal Slope:		0.999160
NO Cal Offset:		0.872416
NO ₂ Cal Slope:		0.994385
NO ₂ Cal Offset:		-0.651618

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	0.0	0.0	0.0	----	----
High point	4933	66.6	801.9	800.6	1.3	802.4	800.8	1.5	0.9994	0.9997
Mid point	4967	33.3	400.9	400.2	0.7	401.3	399.9	1.4	0.9990	1.0009
Low point	4983	16.6	199.9	199.5	0.3	203.7	202.0	1.7	0.9812	0.9879
As left zero	5000	0.0	0.0	0.0	0.0	0.2	0.2	0.0	----	----
As left span	4933	66.6	801.9	397.5	404.4	778.8	397.5	381.4	1.0297	1.0000
Average Correction Factor									0.9932	0.9962

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	799.6	400.5	400.4	397.3	1.0079	99.2%
Mid GPT point	799.6	587.3	213.6	213.2	1.0020	99.8%
Low GPT point	799.6	686.6	114.3	111.2	1.0282	97.3%
Average Correction Factor					1.0127	98.8%

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

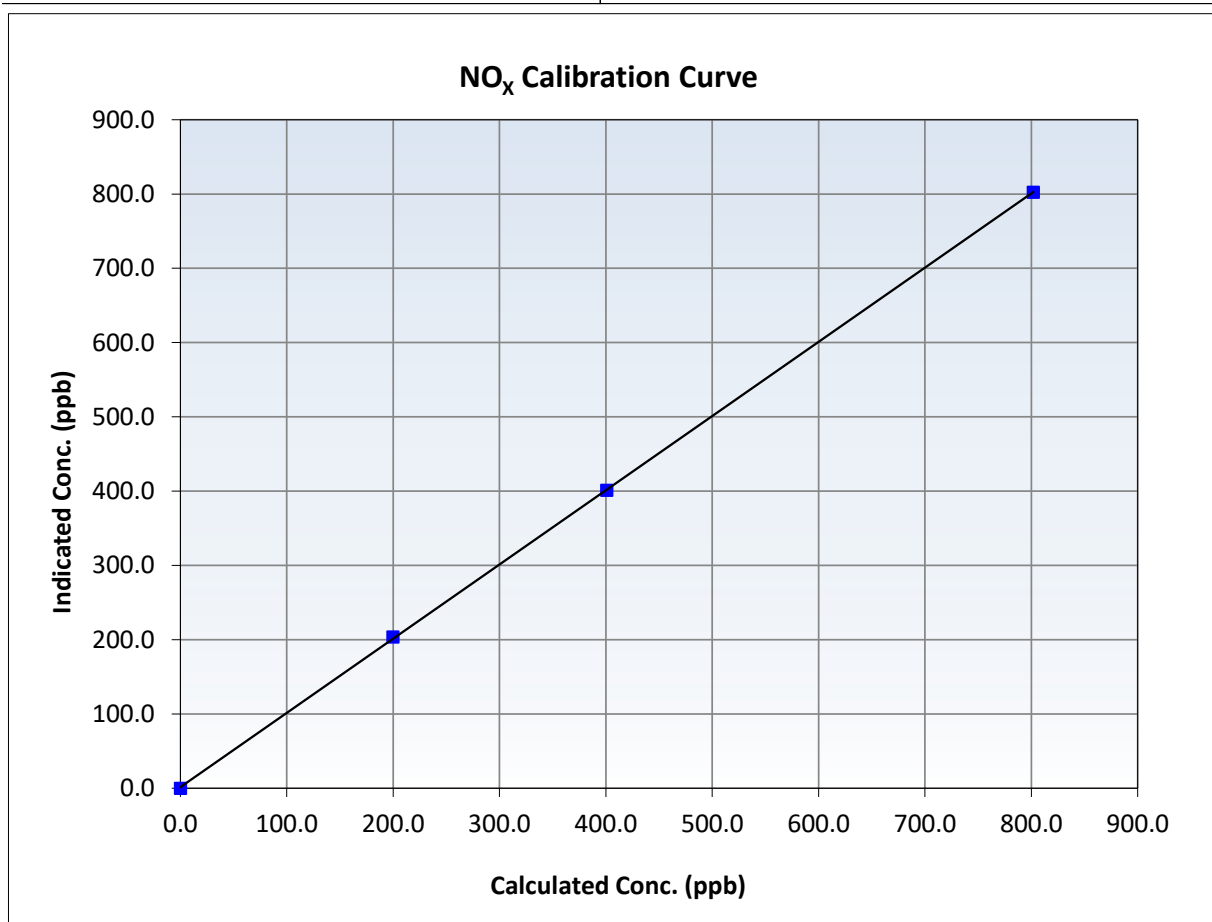
NO_x Calibration Summary

Station Information

Calibration Date:	June 25, 2026	Previous Calibration:	
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:22	End Time (MST):	13:24
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

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	0.999974	≥ 0.995
801.9	802.4	0.9994	Slope	0.999024	$0.90 - 1.10$
400.9	401.3	0.9990	Intercept	1.513261	± 20
199.9	203.7	0.9812			





Wood Buffalo Environmental Association

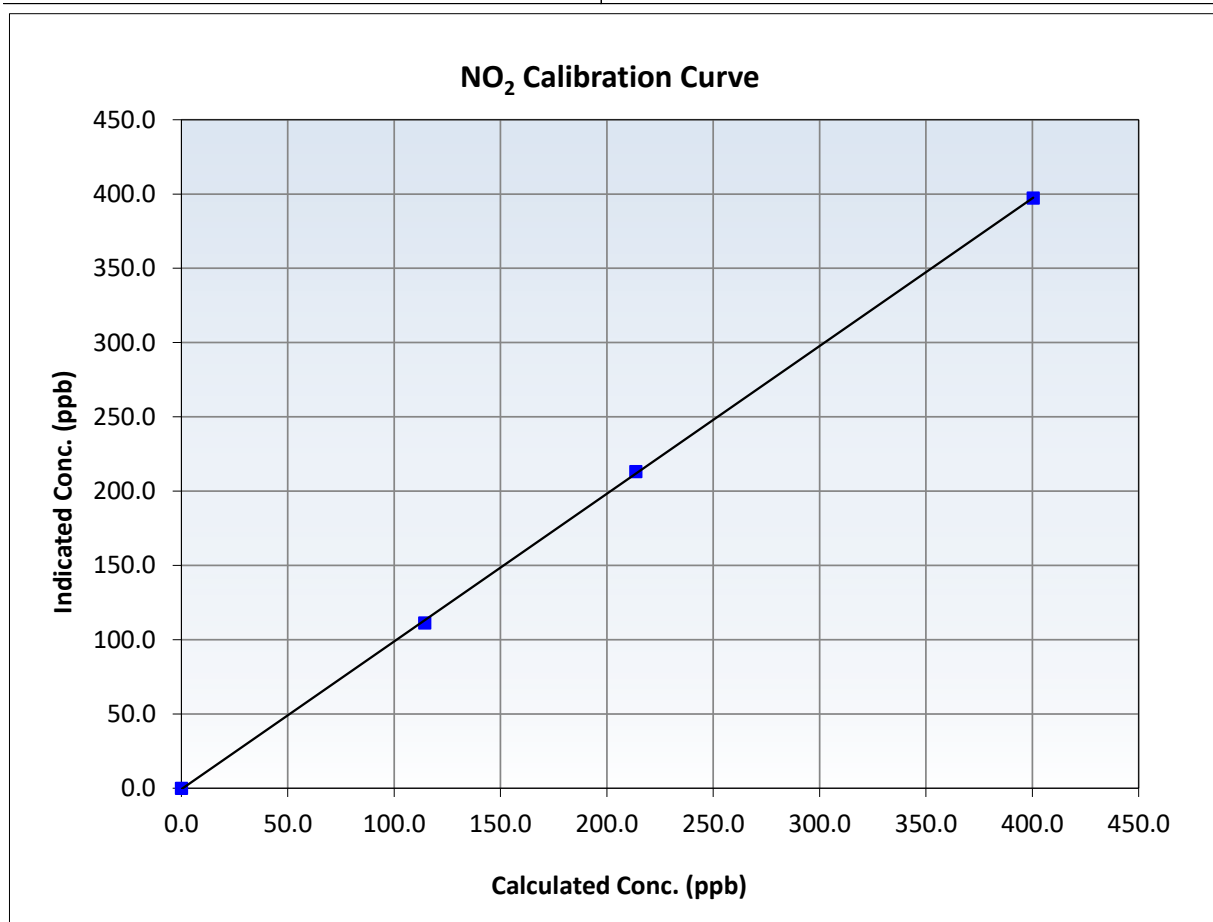
NO₂ Calibration Summary

Station Information

Calibration Date:	June 25, 2026	Previous Calibration:	
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:22	End Time (MST):	13:24
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

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	0.999931	≥0.995
400.4	397.3	1.0079	Slope	0.994385	0.90 - 1.10
213.6	213.2	1.0020	Intercept	-0.651618	+/-20
114.3	111.2	1.0282			





Wood Buffalo Environmental Association

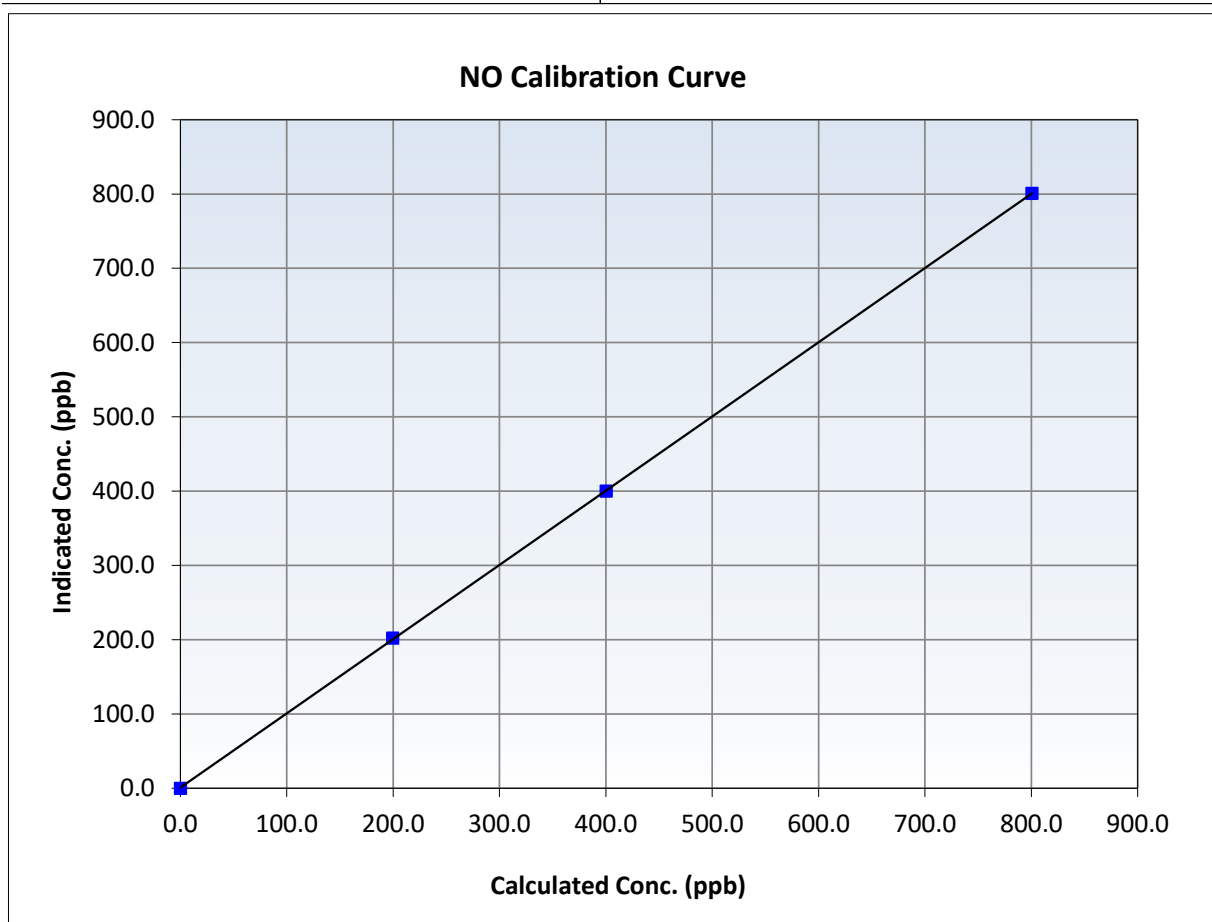
NO Calibration Summary

Station Information

Calibration Date:	June 25, 2026	Previous Calibration:	
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:22	End Time (MST):	13:24
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

Calibration Data

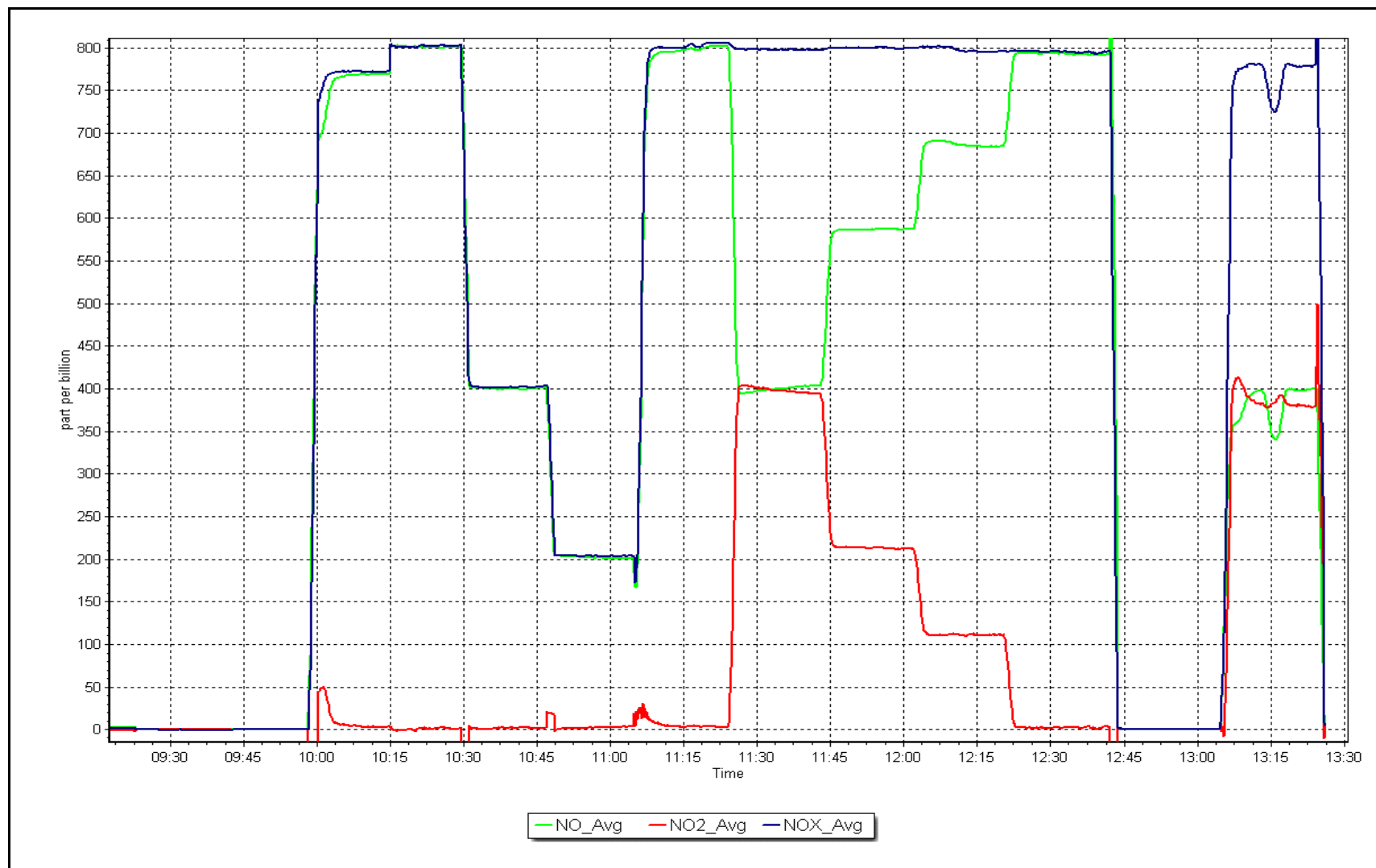
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999987	≥ 0.995
800.6	800.8	0.9997	Slope	0.999160	$0.90 - 1.10$
400.2	399.9	1.0009	Intercept	0.872416	± 20
199.5	202.0	0.9879			



NO_x Calibration Plot

Date: June 25, 2026

Location: Jackfish 1





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

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

Serial Number: 12400232071

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.019	1.019	NO bkgnd or offset:	0.7	0.7
NOX coeff or slope:	0.992	0.992	NOX bkgnd or offset:	0.8	0.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	172.9	168.9

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999024	1.001022
NO _x Cal Offset:	1.513261	0.412587
NO Cal Slope:	0.999160	1.000963
NO Cal Offset:	0.872416	-0.908633
NO ₂ Cal Slope:	0.994385	0.999233
NO ₂ Cal Offset:	-0.651618	1.069281

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	0.2	0.0	----	----
High point	4933	66.6	801.9	800.6	1.3	803.2	801.2	2.1	0.9984	0.9992
Mid point	4967	33.3	400.9	400.2	0.7	401.4	398.6	2.8	0.9988	1.0041
Low point	4983	16.6	199.9	199.5	0.3	201.0	198.1	2.9	0.9944	1.0073
As left zero	5000	0.0	0.0	0.0	0.0	0.2	0.2	0.0	----	----
As left span	4933	66.6	801.9	373.9	428.0	789.1	373.9	415.2	1.0163	1.0000
Average Correction Factor									0.9972	1.0036

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	794.2	375.3	420.2	420.1	1.0003	100.0%
Mid GPT point	794.2	580.4	215.1	217.5	0.9891	101.1%
Low GPT point	794.2	682.9	112.6	114.1	0.9871	101.3%
Average Correction Factor					0.9922	100.8%

Notes: Sample inlet filter was changed after as founds. No adjustment made. Used 2nd NO point because of drift.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

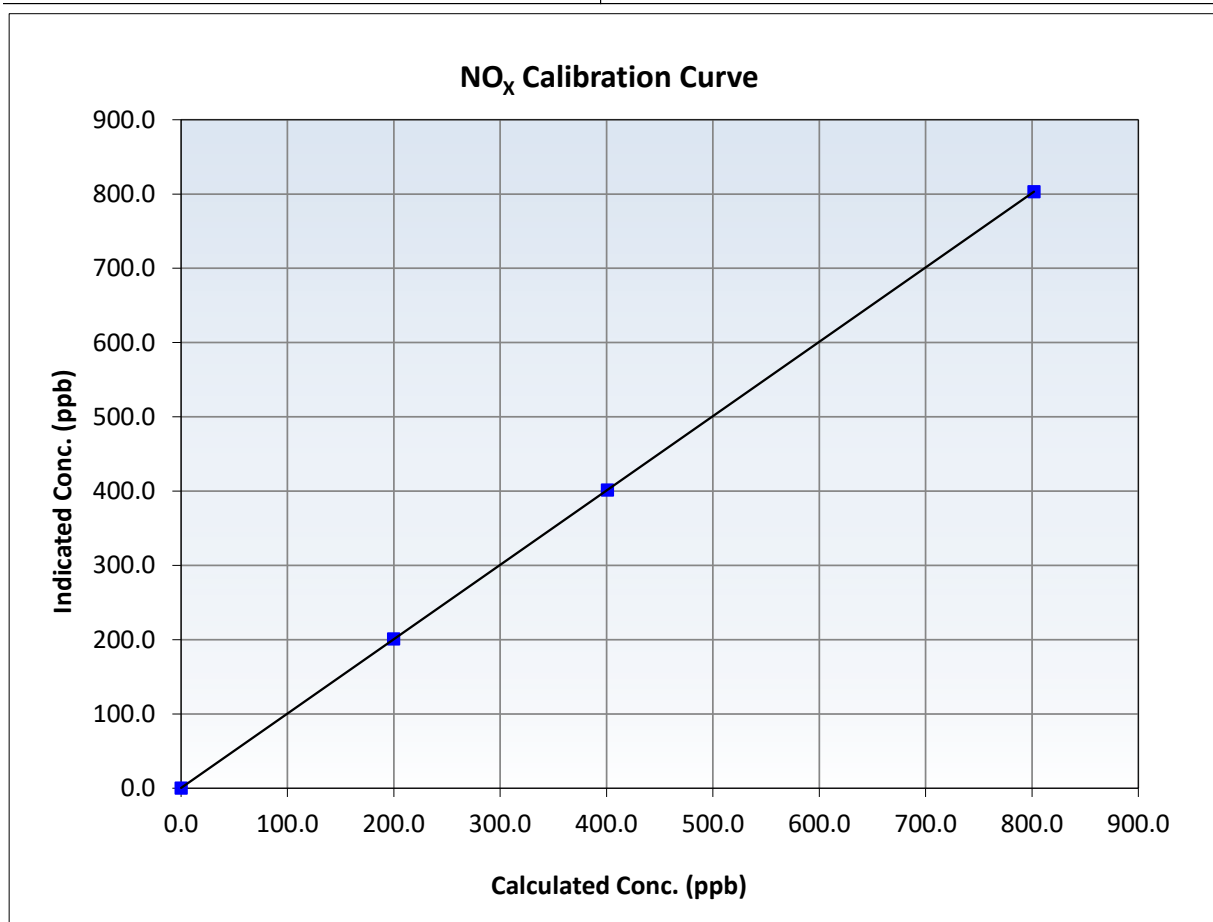
NO_x Calibration Summary

Station Information

Calibration Date:	July 30, 2026	Previous Calibration:	June 25, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	10:17	End Time (MST):	14:48
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.2	----	Correlation Coefficient	0.999999	≥0.995
801.9	803.2	0.9984	Slope	1.001022	0.90 - 1.10
400.9	401.4	0.9988	Intercept	0.412587	+/-20
199.9	201.0	0.9944			





Wood Buffalo Environmental Association

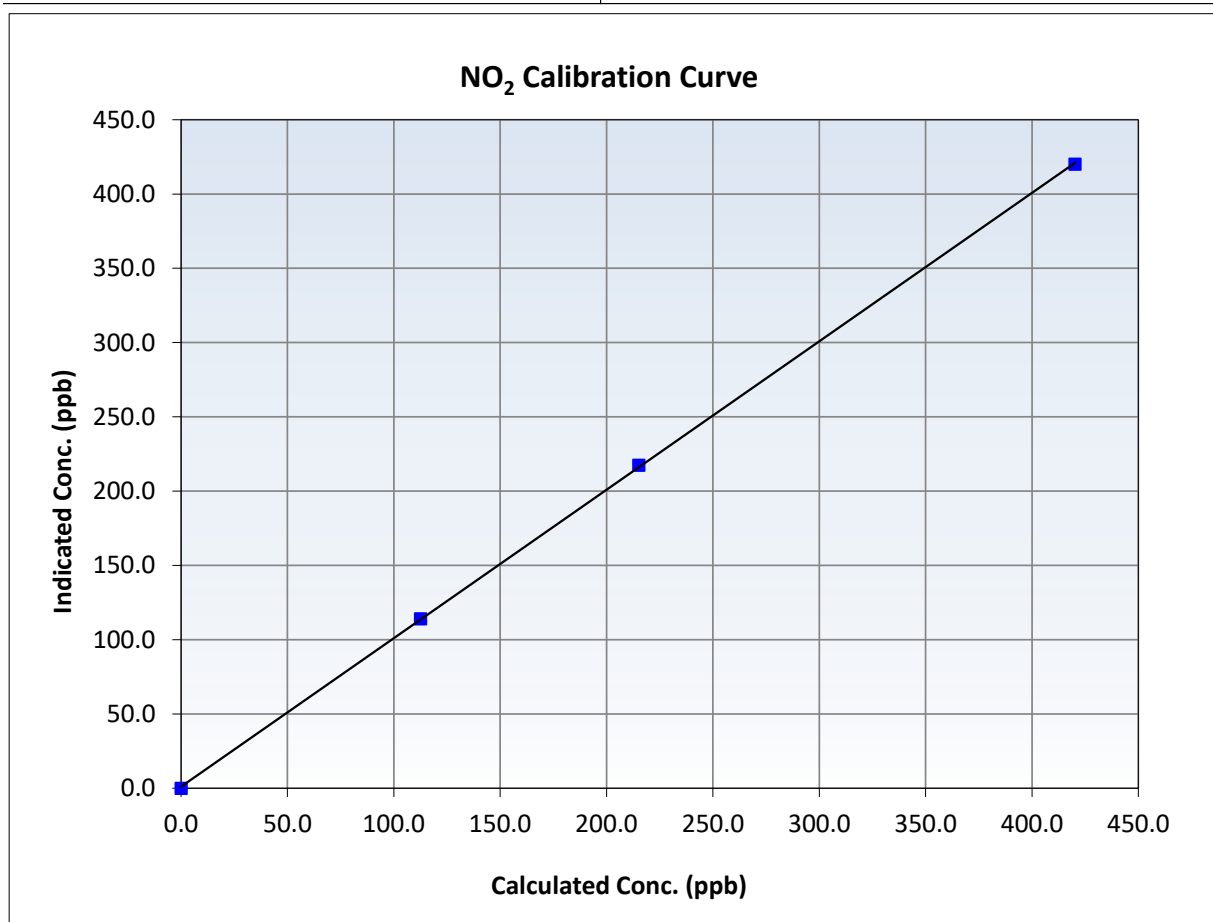
NO₂ Calibration Summary

Station Information

Calibration Date:	July 30, 2026	Previous Calibration:	June 25, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	10:17	End Time (MST):	14:48
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

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	0.999955	≥ 0.995
420.2	420.1	1.0003	Slope	0.999233	$0.90 - 1.10$
215.1	217.5	0.9891	Intercept	1.069281	± 20
112.6	114.1	0.9871			





Wood Buffalo Environmental Association

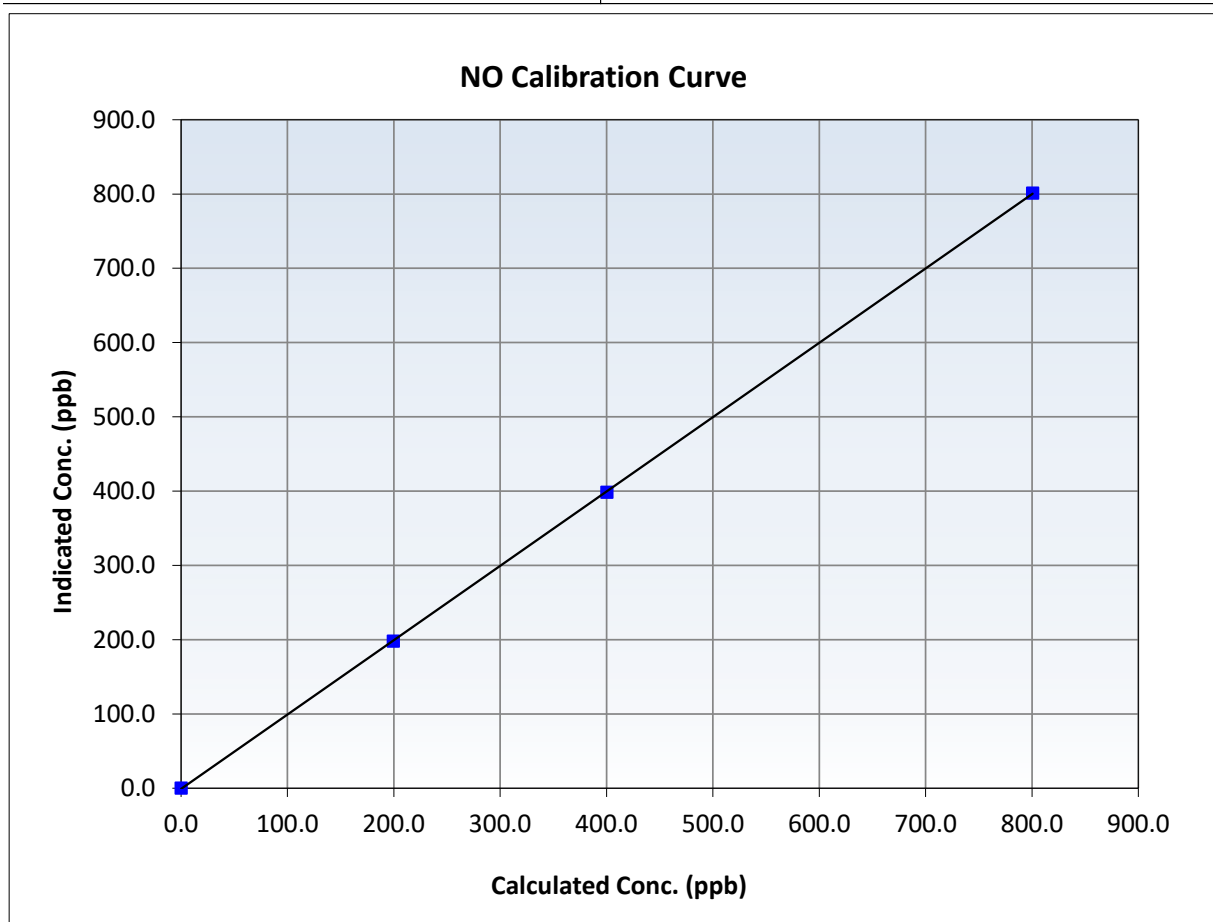
NO Calibration Summary

Station Information

Calibration Date:	July 30, 2026	Previous Calibration:	June 25, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	10:17	End Time (MST):	14:48
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

Calibration Data

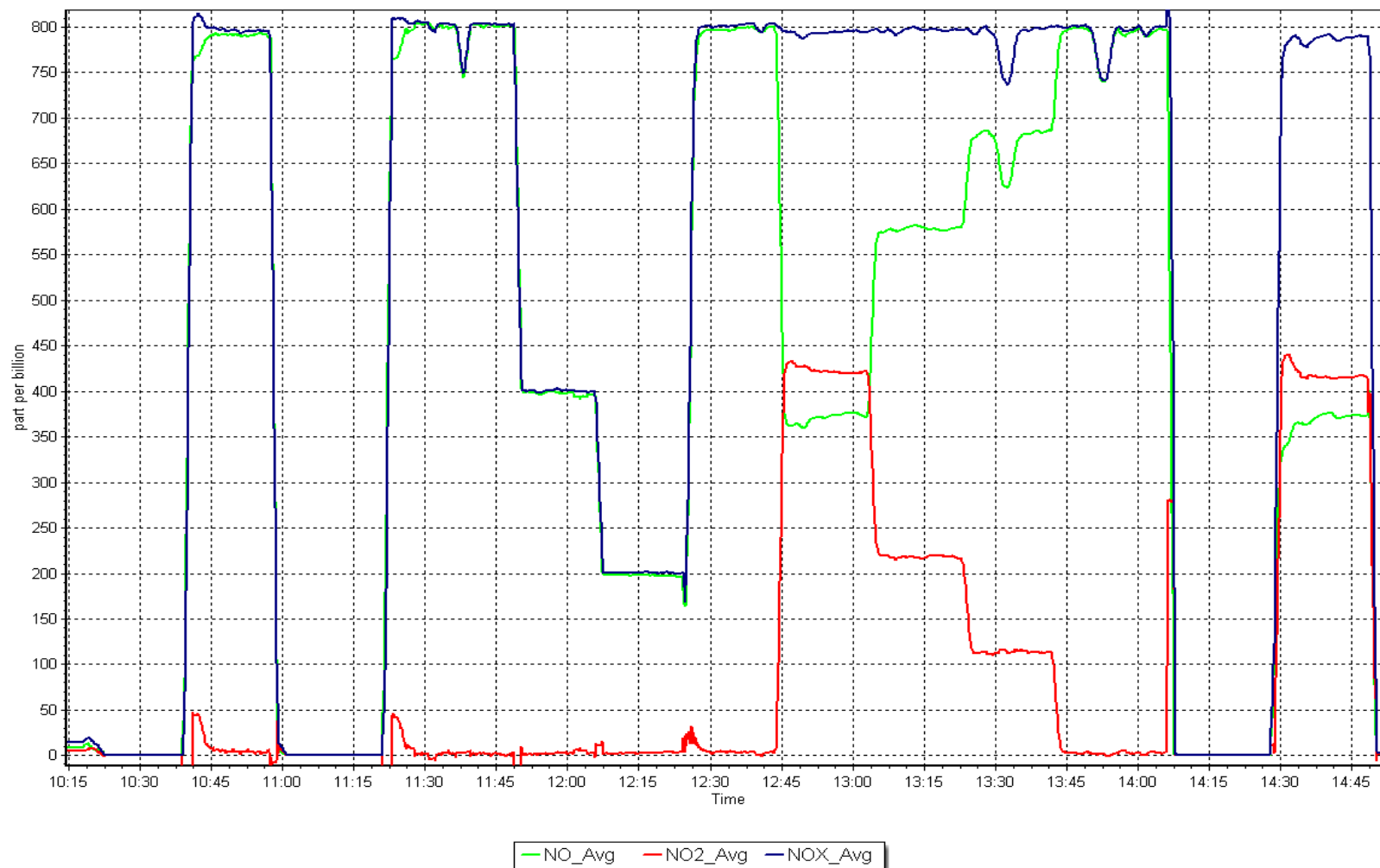
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999990	≥ 0.995
800.6	801.2	0.9992	Slope	1.000963	$0.90 - 1.10$
400.2	398.6	1.0041	Intercept	-0.908633	± 20
199.5	198.1	1.0073			



NO_x Calibration Plot

Date: July 30, 2026

Location: Jackfish 1





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Jackfish 1
Station number: AMS 506
Calibration Date: July 31, 2026
Last Cal Date: July 30, 2026
Start time (MST): 14:34
End time (MST): 18:16
Reason: Install

Calibration Standards

NO Gas Cylinder #: DT0022706
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: API 701
Cal Gas Expiry Date: January 5, 2032
NO Cal Gas Conc: 60.10 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 60.10 ppm
NO gas Diff:
Serial Number: 3252
Serial Number: 4427

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 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 710321429

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.935		NO bkgnd or offset:	9.1	
NOX coeff or slope:	0.994		NOX bkgnd or offset:	10.3	
NO2 coeff or slope:	1.000		Reaction cell Press:	187.5	

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:		0.993485
NO _x Cal Offset:		0.730665
NO Cal Slope:		0.995153
NO Cal Offset:		-0.249545
NO ₂ Cal Slope:		1.001744
NO ₂ Cal Offset:		1.315439

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	0.1	0.1	----	----
High point	4933	66.6	801.9	800.6	1.3	797.1	796.9	0.2	1.0061	1.0046
Mid point	4967	33.3	400.9	400.2	0.7	399.5	397.1	2.4	1.0035	1.0079
Low point	4983	16.6	199.9	199.5	0.3	199.7	198.5	1.2	1.0009	1.0053
As left zero	5000	0.0	0.0	0.0	0.0					
As left span	4933	66.6	801.9	0.0	801.9					

Average Correction Factor

1.0035	1.0059
--------	--------

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	791.4	364.5	428.2	429.3	0.9975	100.2%
Mid GPT point	791.4	568.9	223.8	227.1	0.9856	101.5%
Low GPT point	791.4	675.2	117.5	119.7	0.9819	101.8%
Average Correction Factor					0.9883	101.2%

Notes: No removal done. Sample inlet filter was changed before calibrator zero. Adjusted zero and span.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

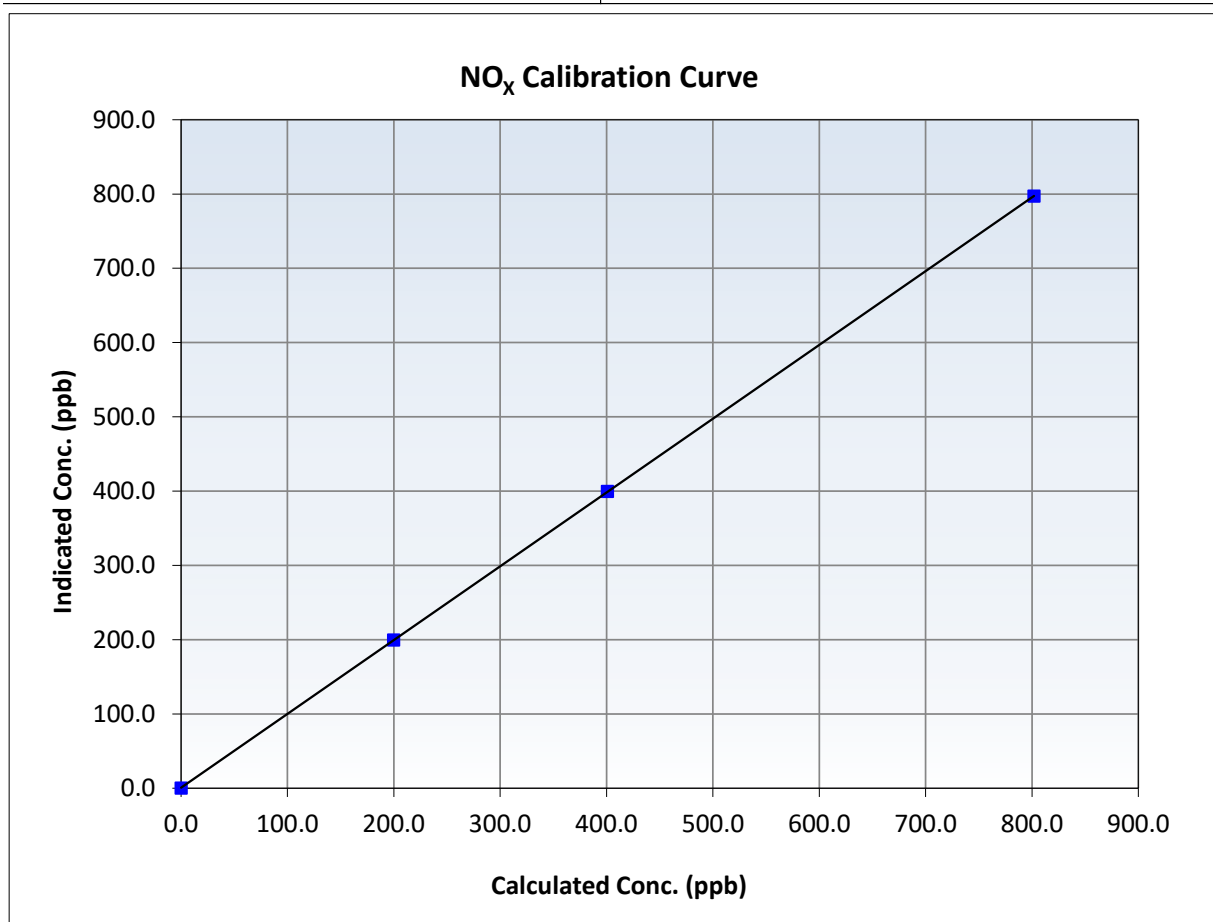
NO_x Calibration Summary

Station Information

Calibration Date:	July 31, 2026	Previous Calibration:	July 30, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	14:34	End Time (MST):	18:16
Analyzer make:	Thermo 42i	Analyzer serial #:	710321429

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
801.9	797.1	1.0061	Slope	0.993485	0.90 - 1.10
400.9	399.5	1.0035	Intercept	0.730665	+/-20
199.9	199.7	1.0009			





Wood Buffalo Environmental Association

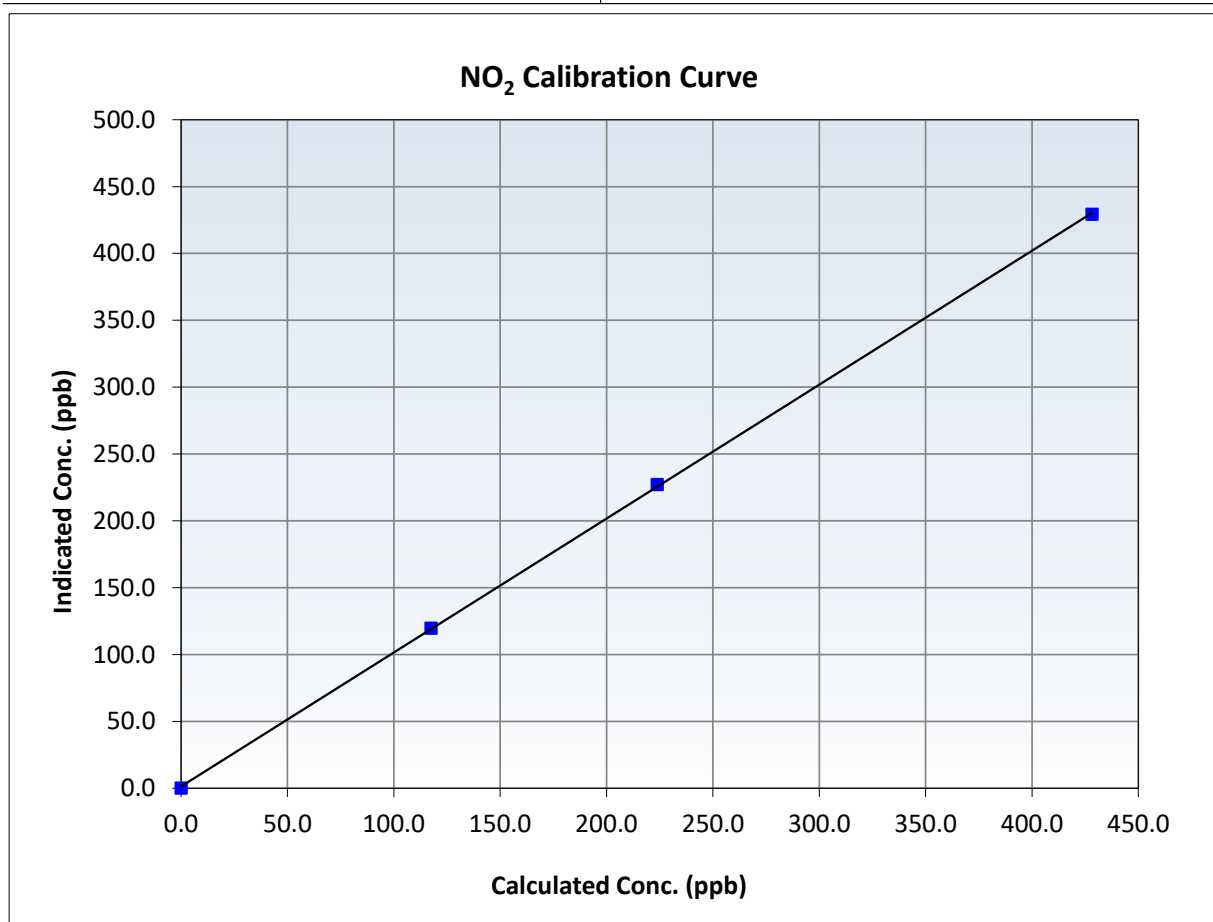
NO₂ Calibration Summary

Station Information

Calibration Date:	July 31, 2026	Previous Calibration:	July 30, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	14:34	End Time (MST):	18:16
Analyzer make:	Thermo 42i	Analyzer serial #:	710321429

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.0	0.1	----	Correlation Coefficient	0.999947	<i>≥0.995</i>
428.2	429.3	0.9975	Slope	1.001744	<i>0.90 - 1.10</i>
223.8	227.1	0.9856	Intercept	1.315439	<i>+/-20</i>
117.5	119.7	0.9819			





Wood Buffalo Environmental Association

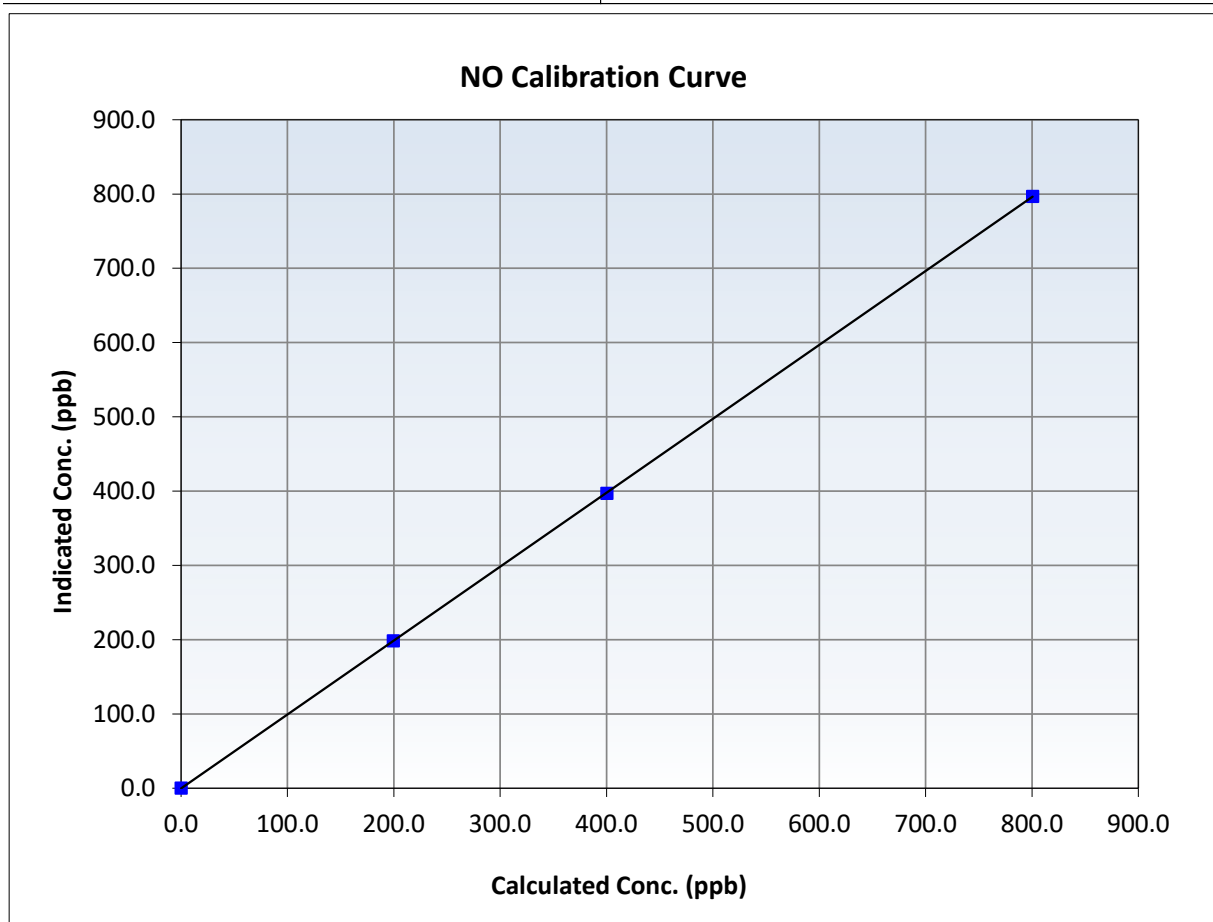
NO Calibration Summary

Station Information

Calibration Date:	July 31, 2026	Previous Calibration:	July 30, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	14:34	End Time (MST):	18:16
Analyzer make:	Thermo 42i	Analyzer serial #:	710321429

Calibration Data

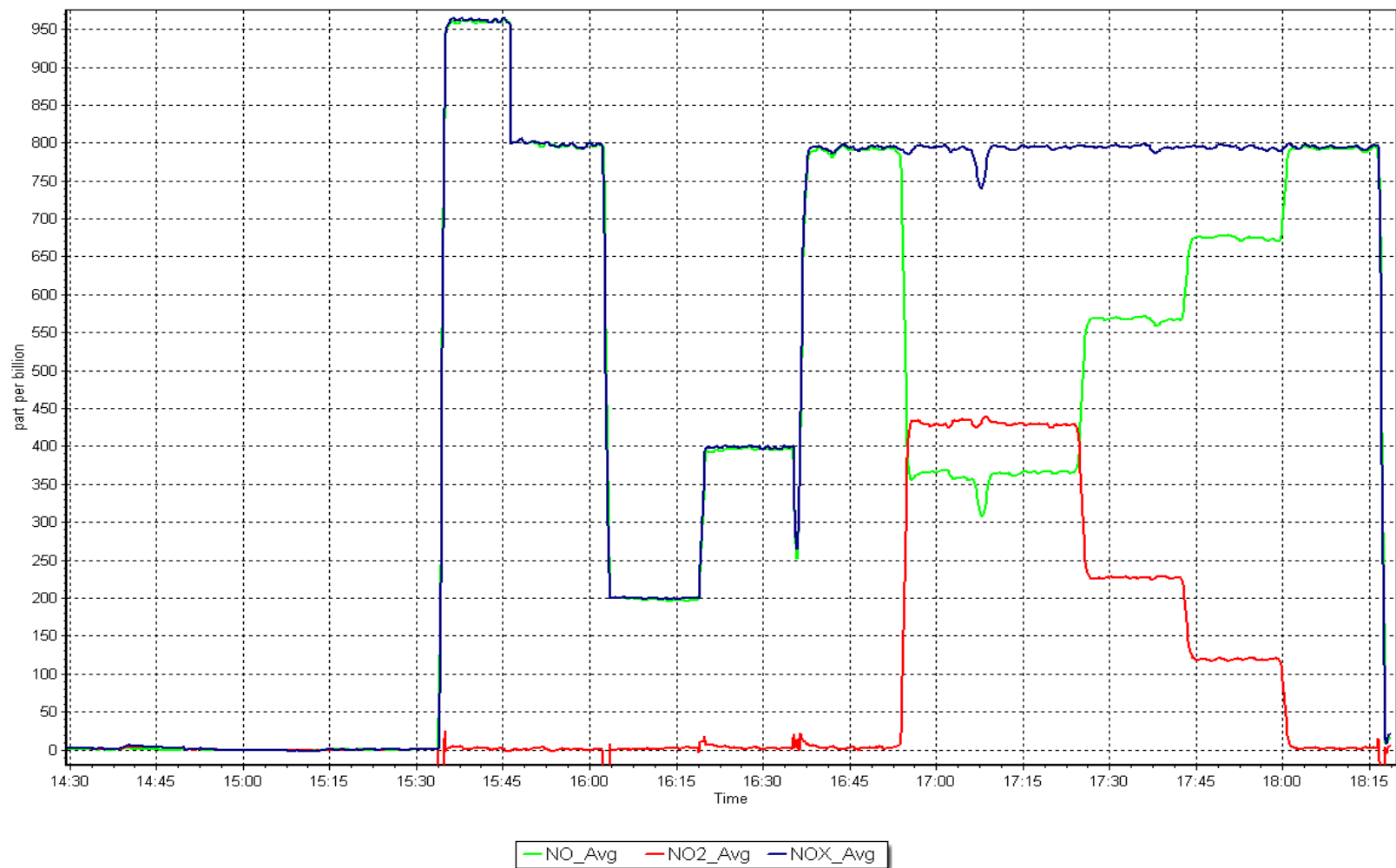
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.1	----	Correlation Coefficient	0.999996	≥ 0.995
800.6	796.9	1.0046	Slope	0.995153	0.90 - 1.10
400.2	397.1	1.0079	Intercept	-0.249545	+/-20
199.5	198.5	1.0053			



NO_x Calibration Plot

Date: July 31, 2026

Location: Jackfish 1





Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name: Jackfish 1 Station Number: AMS 506
Calibration Date: June 26, 2026 Prev Cal Date:
Start Time (MST): 10:48 End Time (MST): 11:41
Tower Height (m): 10.0 Reason: Install

Wind Speed Calibration

Sensor make/model: Met One 010C-1 Serial Number: Y18362
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	20.3	0.7%
400	39.4	39.4	0.1%
600	58.6	58.7	0.2%
800	77.8	77.7	-0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999996	≥ 0.9995
Calculated slope		1.000474	$0.98 - 1.02$
Calculated intercept		-0.072984	± 2

Wind Direction Calibration

Sensor make/model: Met One 020C-1 Serial Number: R14654
As Found Declination (deg east of True North): NA As Left Declination (deg east of True North): 13
Solar noon (MST): 13:26 Calc Declination*: 12.45 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	13.3	0.9%
90	91.3	0.4%
180	181.3	0.4%
270	271.1	0.3%
350	350.2	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999992	≥ 0.9995
Calculated slope		1.007404	$0.97 - 1.03$
Calculated intercept		-2.783342	± 5

Notes: No adjustment needed. Bearings inspected and good. Confirmed true north using a compass.

Calibration Performed By: Jan Castro



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS508
KIRBY NORTH
JULY 2026

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

August 31, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Kirby North
Calibration Date: July 6, 2026
Start time (MST): 13:15
Reason: Install

Station number: AMS 508
Last Cal Date: NA
End time (MST): 15:38

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:		1.002706	Backgd or Offset:		30.3
Calibration intercept:		-1.252076	Coeff or Slope:		1.085

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	4921	78.8	799.7	801.5	0.998
Mid point	4961	39.4	399.8	397.7	1.005
Low point	4980	19.7	199.9	199.5	1.002
As left zero	5000	0.0	0.0	-0.5	----
As left span	4921	78.8	799.7	802.3	0.997
Average Correction Factor:					1.002

Notes: Instrument installed, span adjusted

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

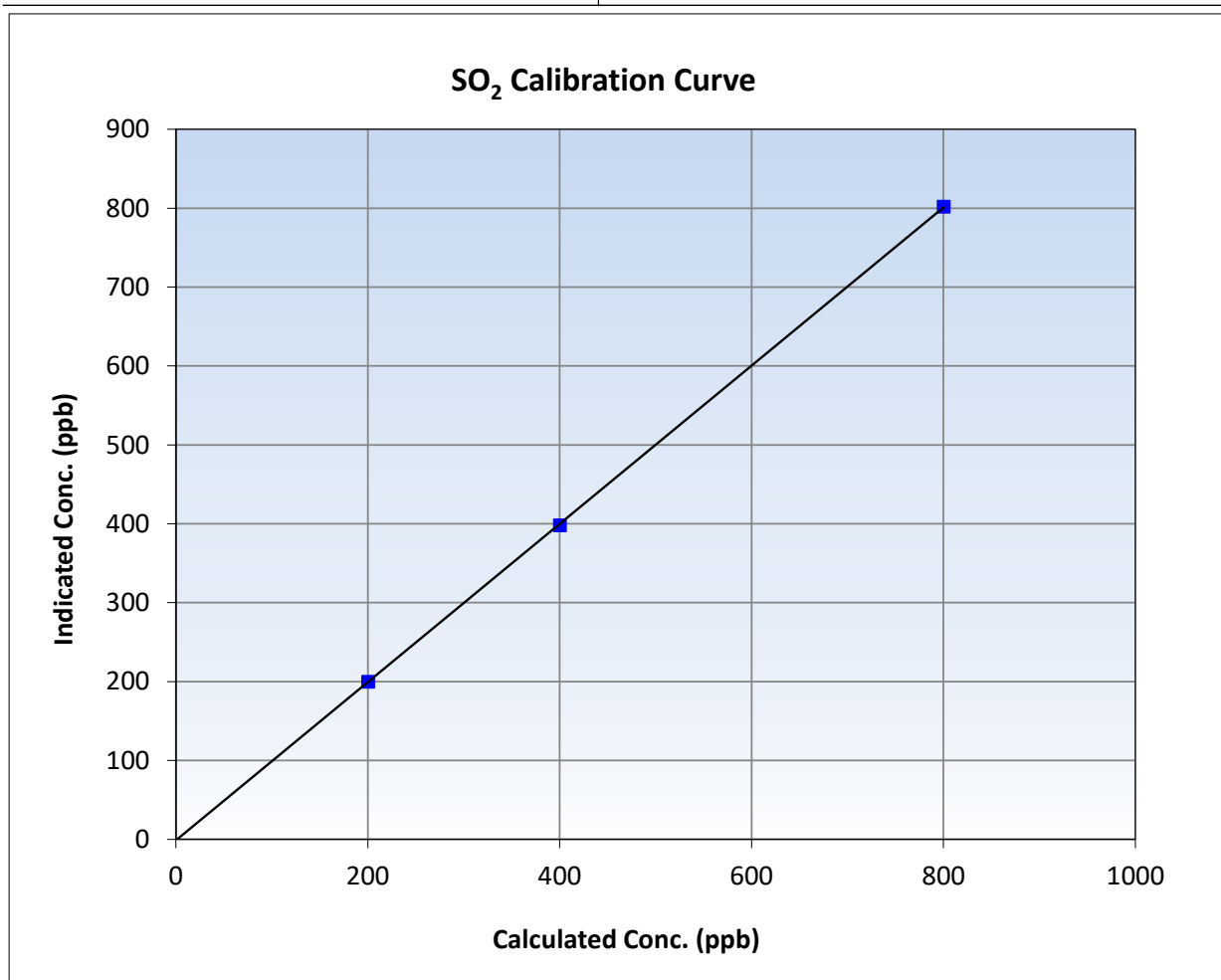
SO₂ Calibration Summary

Station Information

Calibration Date:	July 6, 2026	Previous Calibration:	NA
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	13:15	End Time (MST):	15:38
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	1182340007

Calibration Data

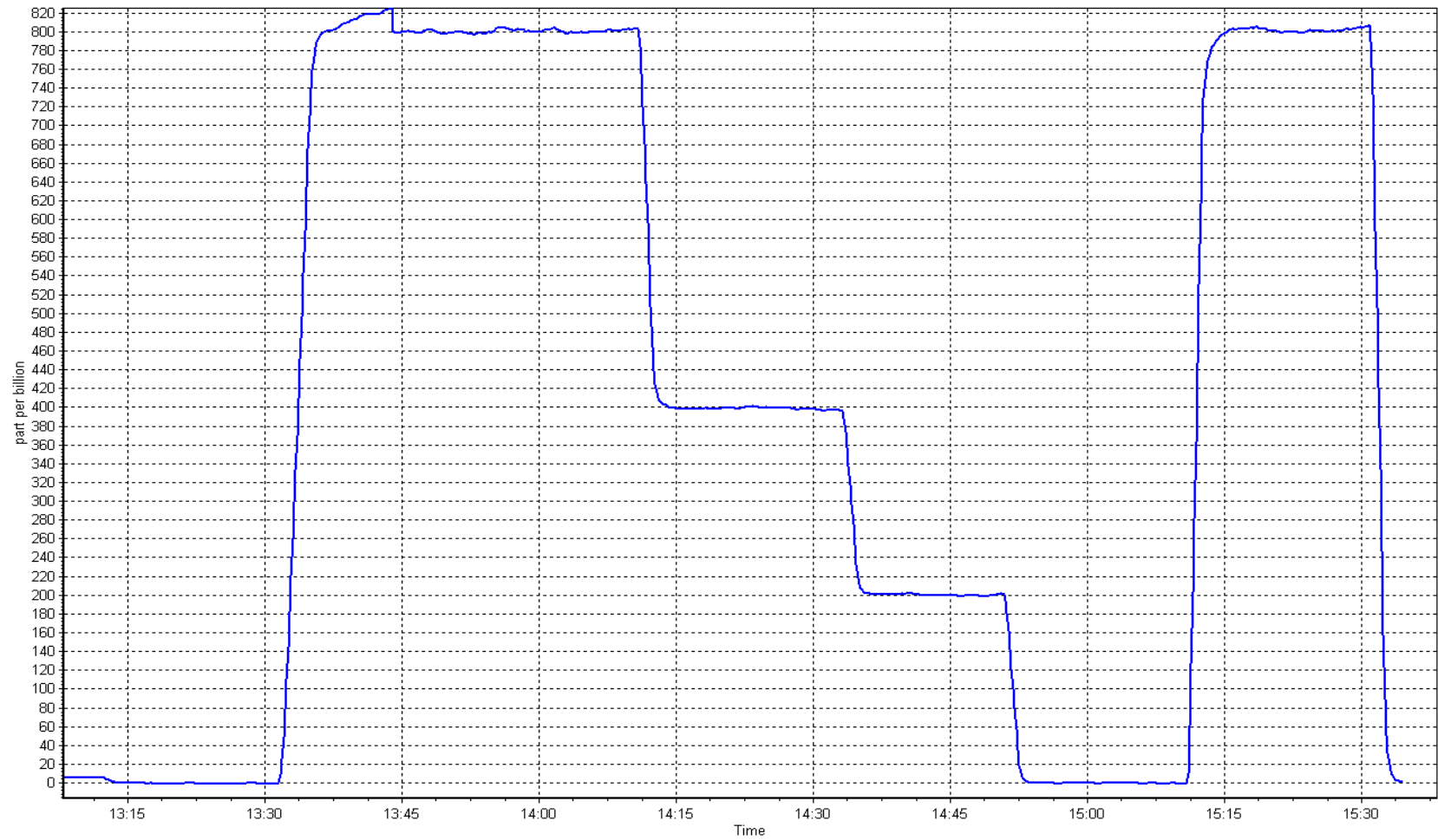
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.5	----	Correlation Coefficient	0.999985	≥0.995
799.7	801.5	0.9977	Slope	1.002706	0.90 - 1.10
399.8	397.7	1.0053	Intercept	-1.252076	+/-30
199.9	199.5	1.0021			



SO2 Calibration Plot

Date: July 6, 2026

Location: Kirby North





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Kirby North
Calibration Date: July 7, 2026
Start time (MST): 10:40
Reason: Install

Station number: AMS 508
Last Cal Date:
End time (MST): 13:52

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 T700
ZAG Make/Model: Teledyne API T701H

Cal Gas Exp Date: November 15, 2026
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 2445
Serial Number: 880

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:		1.010672	Backgd or Offset:		1.71
Calibration intercept:		-0.220000	Coeff or Slope:		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					
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	0.0	----
High point	4921	79.2	80.0	80.8	0.990
Mid point	4960	39.6	40.0	39.9	1.002
Low point	4980	19.8	20.0	19.9	1.005
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.2	80.0	79.0	1.013
SO2 Scrubber Check				0.0	
Date of last scrubber change:		July 25, 2023		Ave Corr Factor	0.999
Date of last converter efficiency test:		September 18, 2025		102.4% efficiency	

Notes: Instrument installed, no changes made.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

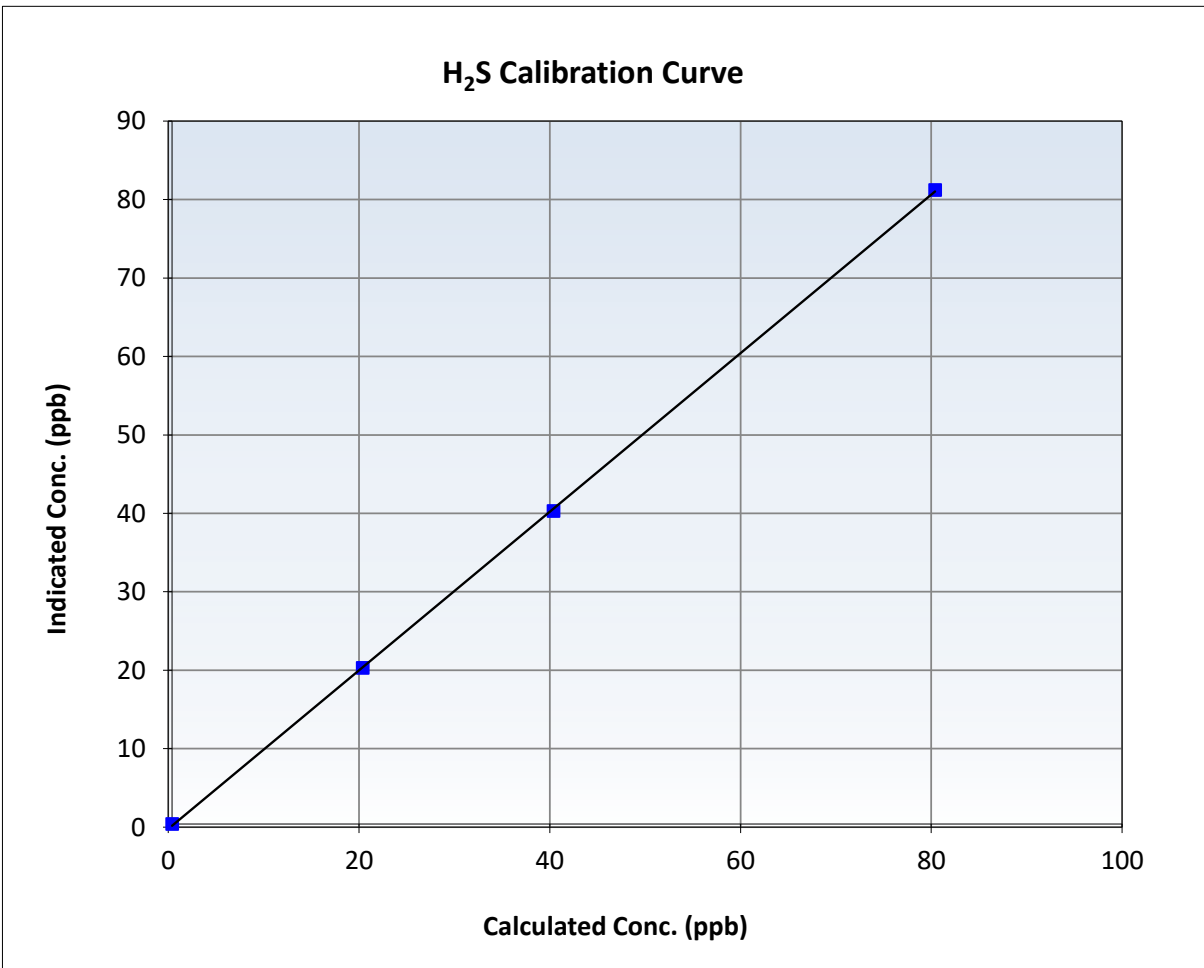
H2S Calibration Summary

Station Information

Calibration Date:	July 7, 2026	Previous Calibration:	
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	10:40	End Time (MST):	13:52
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1150840012

Calibration Data

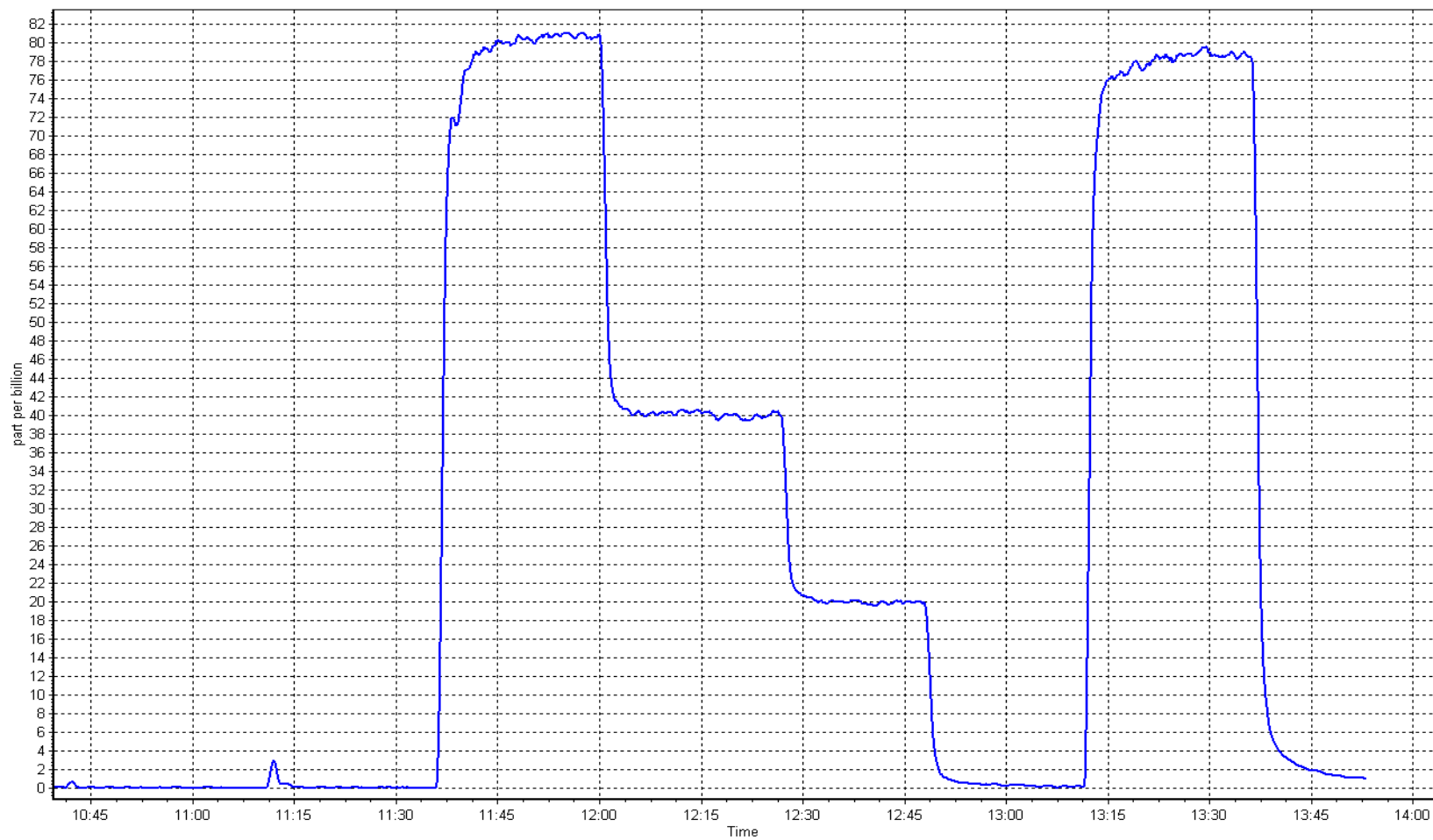
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999950		≥ 0.995
80.0	80.8	0.9900	Slope	1.010672		$0.90 - 1.10$
40.0	39.9	1.0024	Intercept	-0.220000		± 3
20.0	19.9	1.0049				



H2S Calibration Plot

Date: July 7, 2026

Location: Kirby North





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Kirby North
Calibration Date: July 6, 2026
Start time (MST): 13:16
Reason: Install

Station number: AMS 508
Last Cal Date: NA
End time (MST): 15:38

Calibration Standards

Gas Cert Reference: CC255918
CH4 Cal Gas Conc. 506.4 ppm
C3H8 Cal Gas Conc. 205.0 ppm
Removed Gas Cert:
Removed CH4 Conc. 506.4 ppm
Removed C3H8 Conc. 205.0 ppm
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701H

Cal Gas Expiry Date: October 9, 2032
CH4 Equiv Conc. 1070.2 ppm
Removed Gas Expiry:
CH4 Equiv Conc. 1070.2 ppm
Diff between cyl:
Serial Number: 2445
Serial Number: 880

Analyzer Information

Analyzer make: Thermo 51i-LT
Analyzer Range: 0 - 20 ppm

Analyzer serial #: 1182340005

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.988187		Background:		1.98
Calibration intercept:	0.117167		Coefficient:		3.305

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 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	

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	0.19	
High point	4921	78.8	16.87	16.81	1.003
Mid point	4961	39.4	8.43	8.44	0.999
Low point	4980	19.7	4.22	4.19	1.005
As left zero	5000	0.0	0.00	0.08	----
As left span	4921	78.8	16.87	16.76	1.007
Average Correction Factor					1.002

Notes:

Instrument Installed, span adjusted

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

THC Calibration Summary

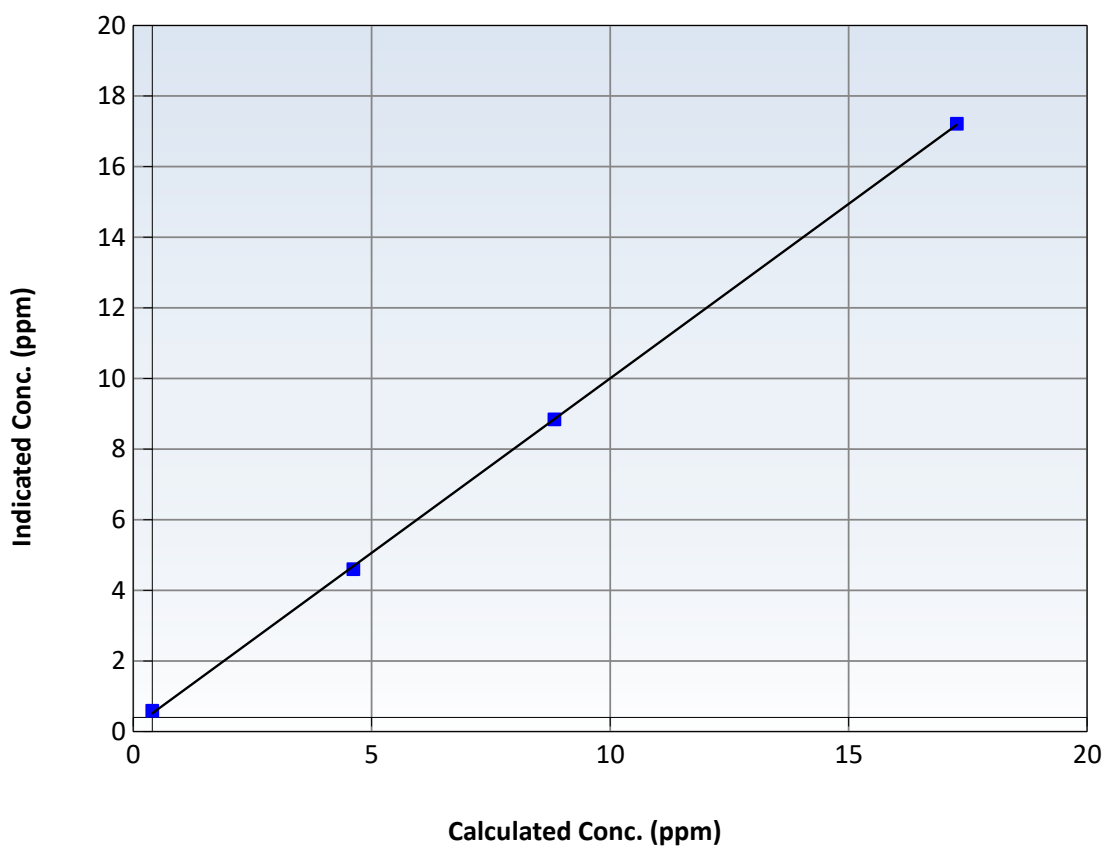
Station Information

Calibration Date:	July 6, 2026	Previous Calibration:	NA
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	13:16	End Time (MST):	15:38
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	0.19	----	Correlation Coefficient	0.999909	≥ 0.995
16.87	16.81	1.0033	Slope	0.988187	$0.90 - 1.10$
8.43	8.44	0.9987	Intercept	0.117167	± 1.5
4.22	4.19	1.0054			

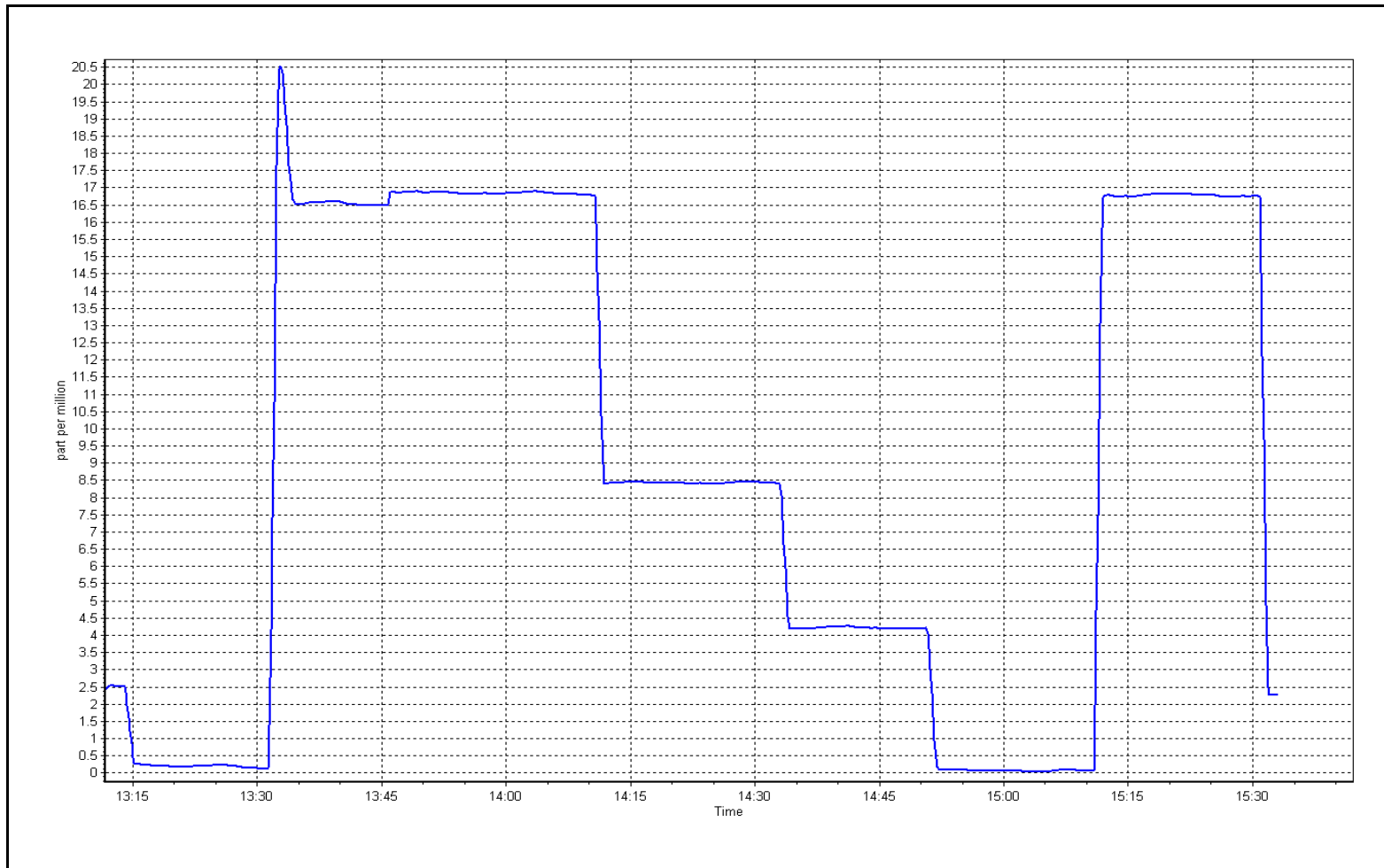
THC Calibration Curve



THC Calibration Plot

Date: July 6, 2026

Location: Kirby North





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Kirby North
Station number: AMS 508
Calibration Date: July 8, 2026
Last Cal Date:
Start time (MST): 10:30
End time (MST): 14:25
Reason: Install

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 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 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1173480006

Calibration Statistics

Start Finish

NO_x Cal Slope: 1.001185
NO_x Cal Offset: -1.473589
NO Cal Slope: 1.008997
NO Cal Offset: -2.373575
NO₂ Cal Slope: 0.988000
NO₂ Cal Offset: -0.893256

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.761		NO bkgnd or offset:	8.6	
NOX coeff or slope:	0.984		NOX bkgnd or offset:	9.1	
NO2 coeff or slope:	1.000		Reaction cell Press:	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	-1.0	-0.4	-0.6	----	----
High point	4933	66.8	801.6	800.3	1.3	801.4	806.2	-4.6	1.0003	0.9927
Mid point	4967	33.4	400.8	400.1	0.7	399.4	400.1	-0.7	1.0035	1.0001
Low point	4983	16.7	200.4	200.1	0.3	198.8	197.7	1.1	1.0080	1.0120
As left zero	5000	0.0	0.0	0.0	0.0	-0.9	-0.3	-0.6	----	----
As left span	4933	66.8	801.6	409.2	392.4	798.2	409.2	388.9	1.0043	1.0000
Average Correction Factor									1.0039	1.0016

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	-0.6	----	----
High GPT point	802.2	410.1	393.4	387.9	1.0143	98.6%
Mid GPT point	802.2	644.5	159.0	156.2	1.0182	98.2%
Low GPT point	802.2	728.1	75.4	73.3	1.0291	97.2%
Average Correction Factor					1.0205	98.0%

Notes:

Instrument installed, span adjusted

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

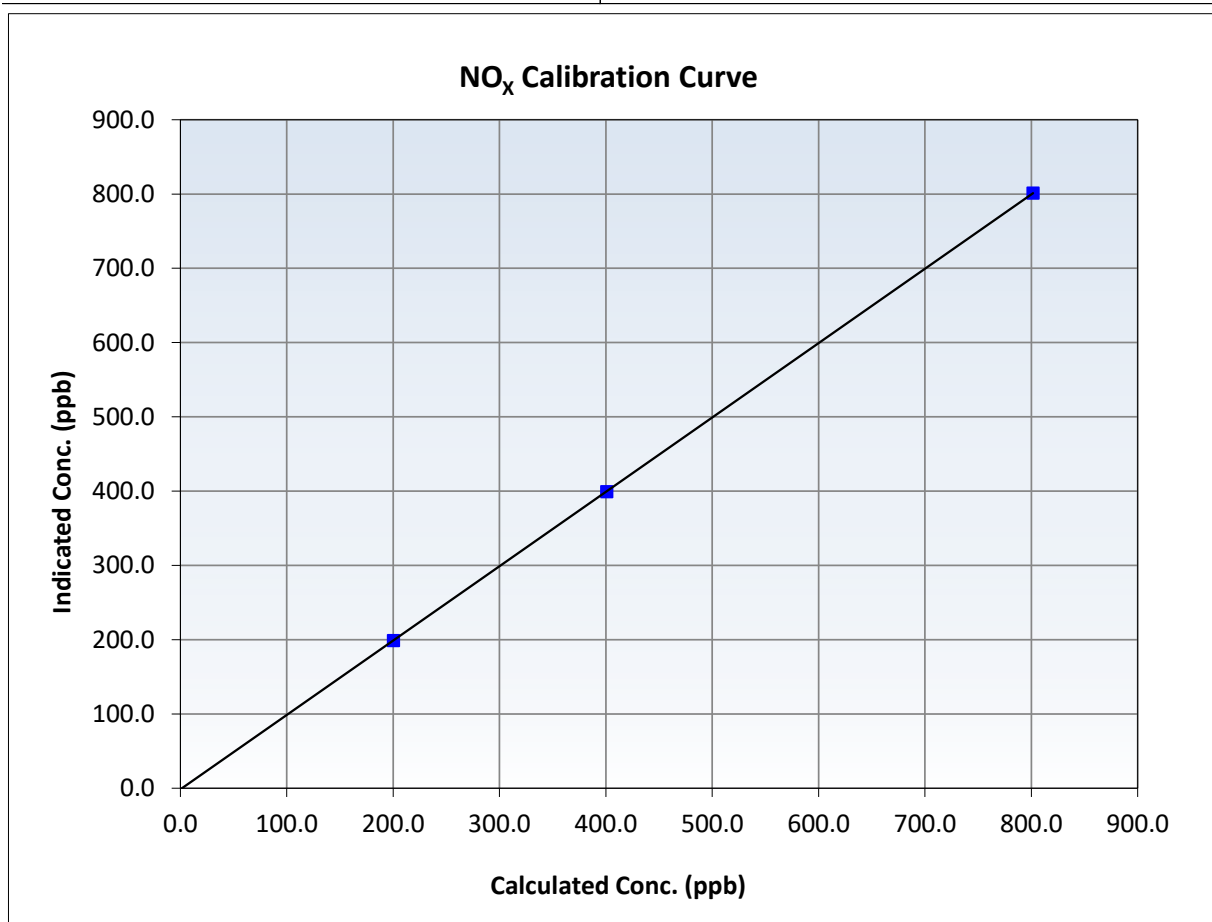
NO_x Calibration Summary

Station Information

Calibration Date:	July 8, 2026	Previous Calibration:	
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	10:30	End Time (MST):	14:25
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	-1.0	----	Correlation Coefficient	0.999998	≥ 0.995
801.6	801.4	1.0003	Slope	1.001185	0.90 - 1.10
400.8	399.4	1.0035	Intercept	-1.473589	+/-20
200.4	198.8	1.0080			





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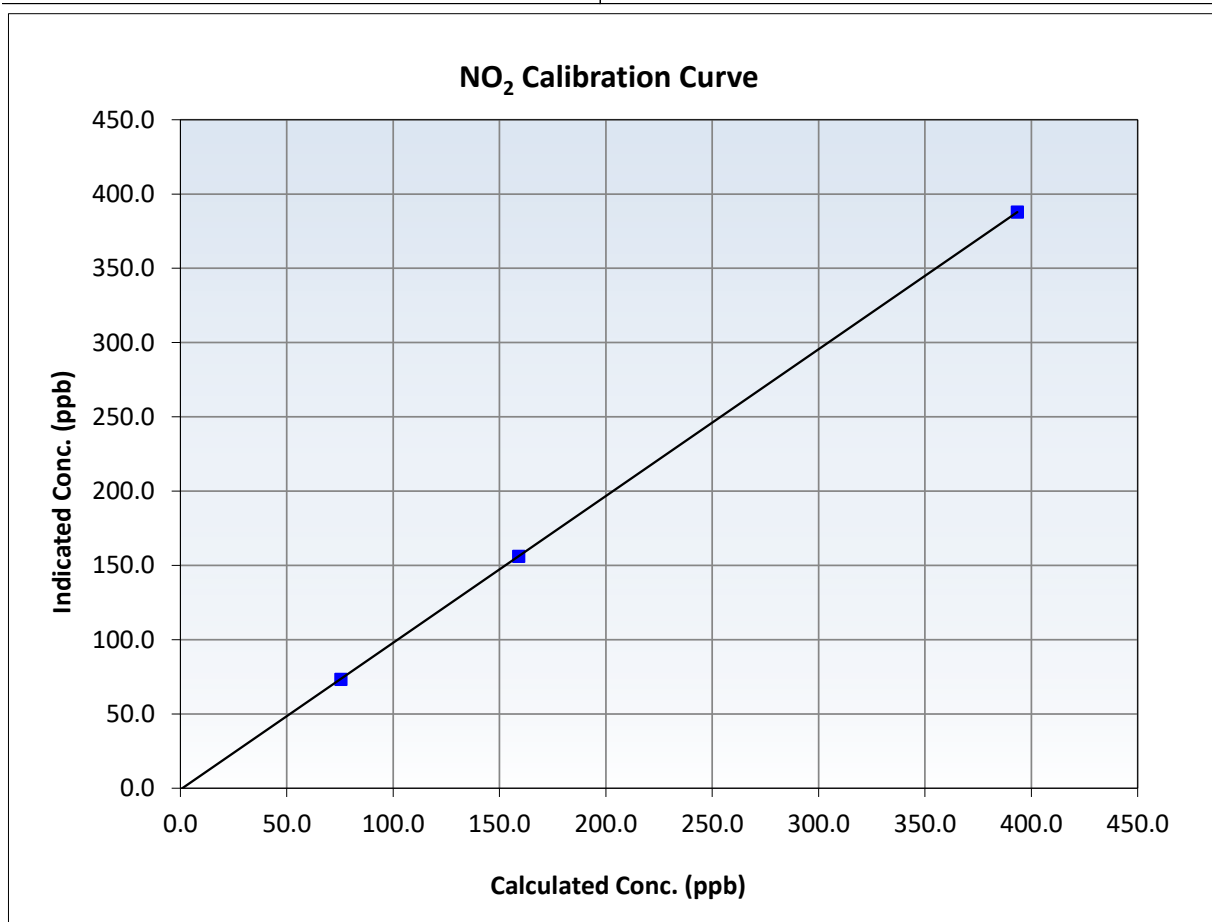
NO₂ Calibration Summary

Station Information

Calibration Date:	July 8, 2026	Previous Calibration:	
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	10:30	End Time (MST):	14:25
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	-0.6	----	Correlation Coefficient	0.999998	≥0.995
393.4	387.9	1.0143	Slope	0.988000	0.90 - 1.10
159.0	156.2	1.0182	Intercept	-0.893256	+/-20
75.4	73.3	1.0291			





Wood Buffalo Environmental Association

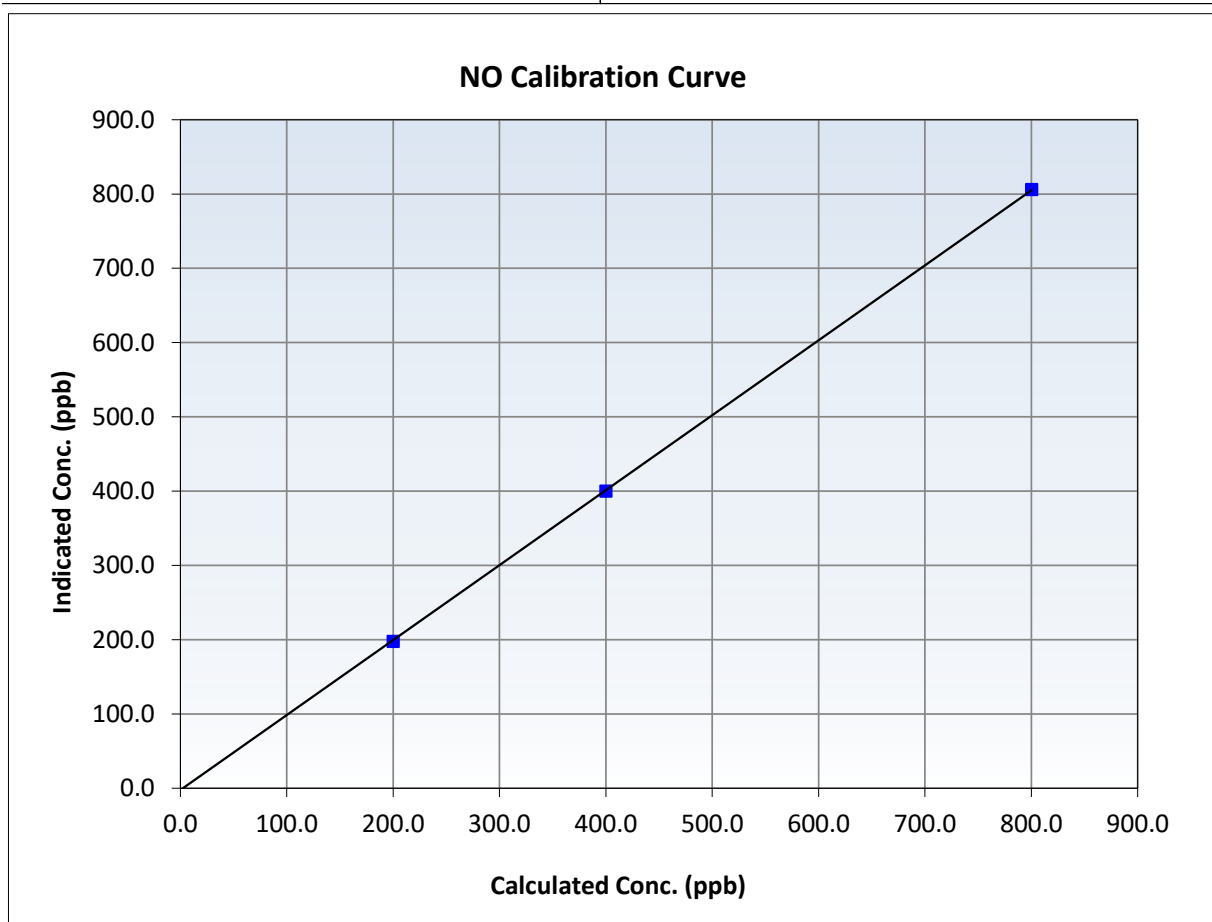
NO Calibration Summary

Station Information

Calibration Date:	July 8, 2026	Previous Calibration:	
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	10:30	End Time (MST):	14:25
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

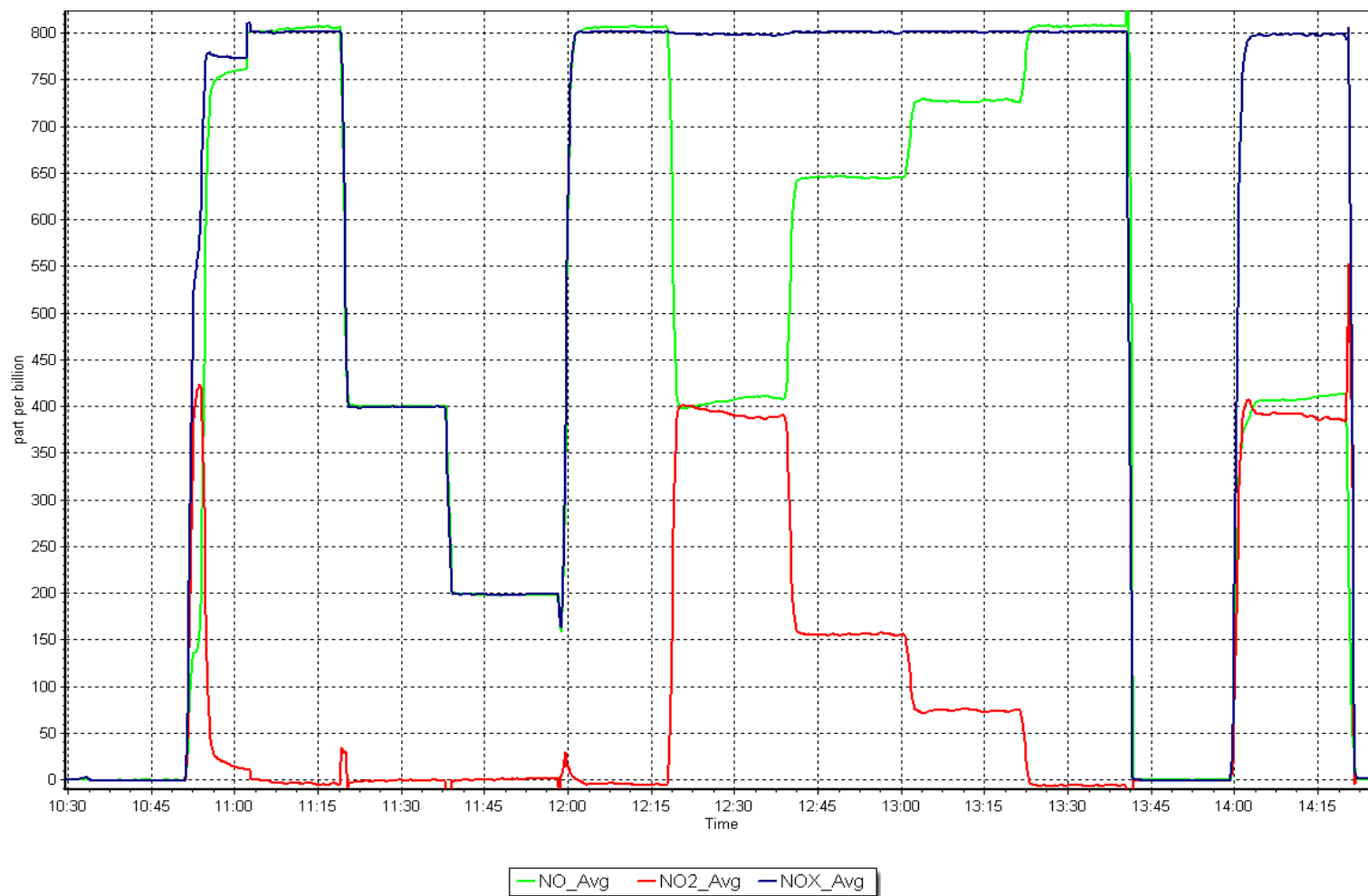
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	-0.4	----	Correlation Coefficient	0.999972	≥ 0.995
800.3	806.2	0.9927	Slope	1.008997	0.90 - 1.10
400.1	400.1	1.0001	Intercept	-2.373575	+/-20
200.1	197.7	1.0120			



NO_x Calibration Plot

Date: July 8, 2026

Location: Kirby North





Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Kirby North	Station Number:	AMS 508
Calibration Date:	July 7, 2026	Prev Cal Date:	
Start Time (MST):	10:50	End Time (MST):	10:58
Tower Height (m):	10.0	Reason:	Install

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	X16479
WS Calibrator:	MetOne 053	Serial Number:	CA 03988

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	0.7%
400	39.4	39.1	-0.7%
600	58.6	59.0	0.8%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999999	0.999969	≥ 0.9995
Calculated slope	0.998909	0.997457	$0.98 - 1.02$
Calculated intercept	0.030357	0.017401	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020D	Serial Number:	D13601
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):	13:28	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	8.4	-0.4%
90	87.2	-0.8%
180	177.9	-0.6%
270	270.9	0.2%
350	350.7	0.2%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999977	0.999972	≥ 0.9995
Calculated slope	0.995429	0.990256	$0.97 - 1.03$
Calculated intercept	0.501444	2.724448	± 5

Notes: Install at Kirby North

Calibration Performed By: Jason Brooks



End of Report