



**WOOD BUFFALO
ENVIRONMENTAL ASSOCIATION**

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Wood Buffalo Environmental Association

AUGUST 2026

MONTHLY CALIBRATION REPORT

CONTINUOUS MONITORING

September 29, 2026

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





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS01 BERTHA GANTER - FORT MCKAY AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
Calibration Date: August 12, 2026 Last Cal Date: July 14, 2026
Start time (MST): 10:23 End time (MST): 14:05
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: 261

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:	0.995354	1.010049	Backgd or Offset:	22.1	22.8
Calibration intercept:	-0.793445	-0.713904	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	-0.5	----
As found High point	4918	81.3	800.3	807.8	0.990
As found Mid point	4959	40.7	400.6	402.9	0.993
As found Low point	4979	20.3	199.8	201.7	0.988
New cylinder response					
Baseline Corr As found:	808.3	Previous response	795.8	*% change	1.6%
Baseline Corr 2nd AF pt:	403.4	AF Slope:	1.009703	AF Intercept:	-0.592942
Baseline Corr 3rd AF pt:	202.2	AF Correlation:	0.999996	* = > +/-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	4918	81.3	800.3	807.5	0.991
Mid point	4959	40.7	400.6	404.4	0.991
Low point	4979	20.3	199.8	200.5	0.997
As left zero	5000	0.0	0.0	-0.3	----
As left span	4918	81.3	800.3	810.7	0.987
Average Correction Factor:					0.993

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

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

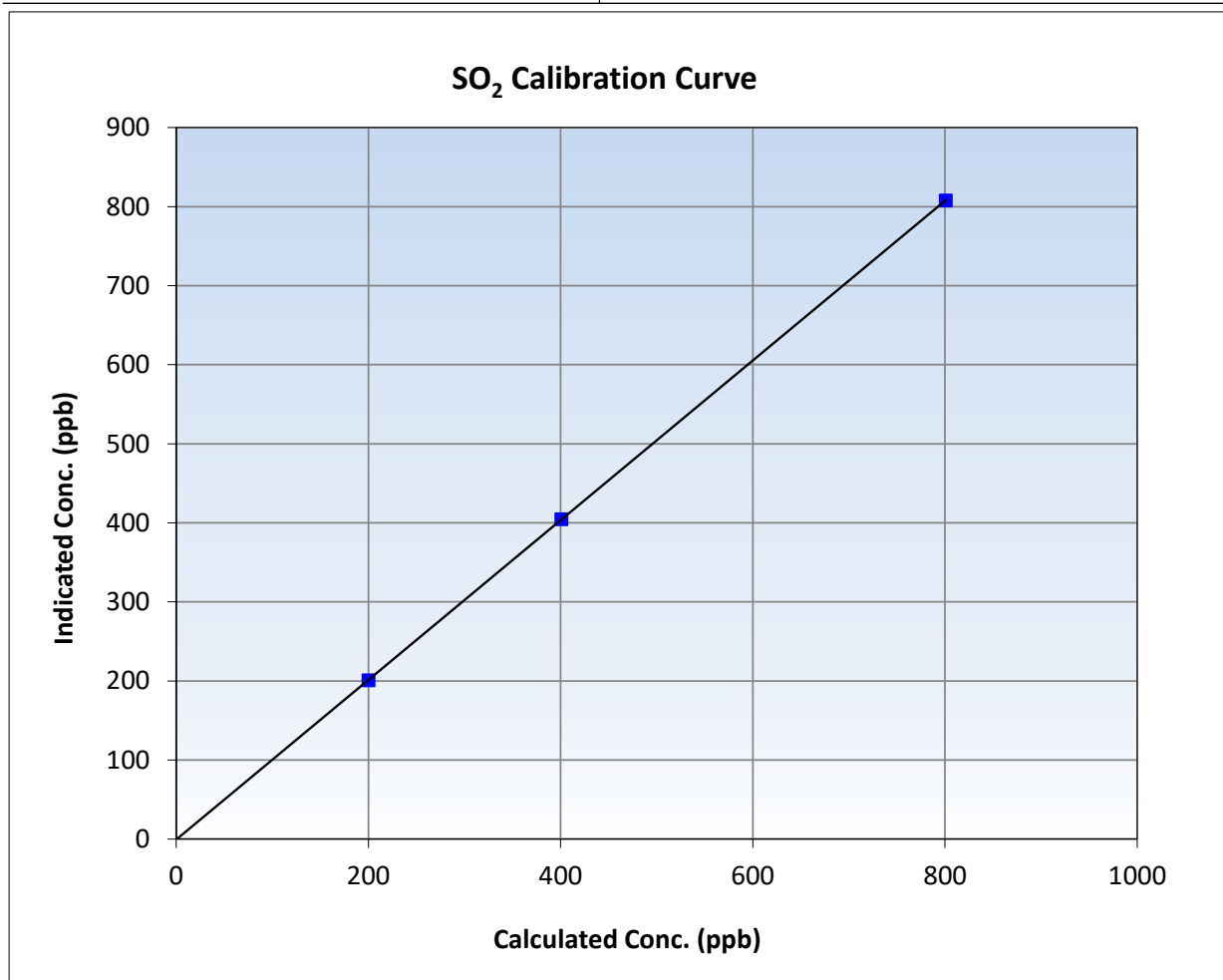
SO₂ Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 14, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:23	End Time (MST):	14:05
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1501301448

Calibration Data

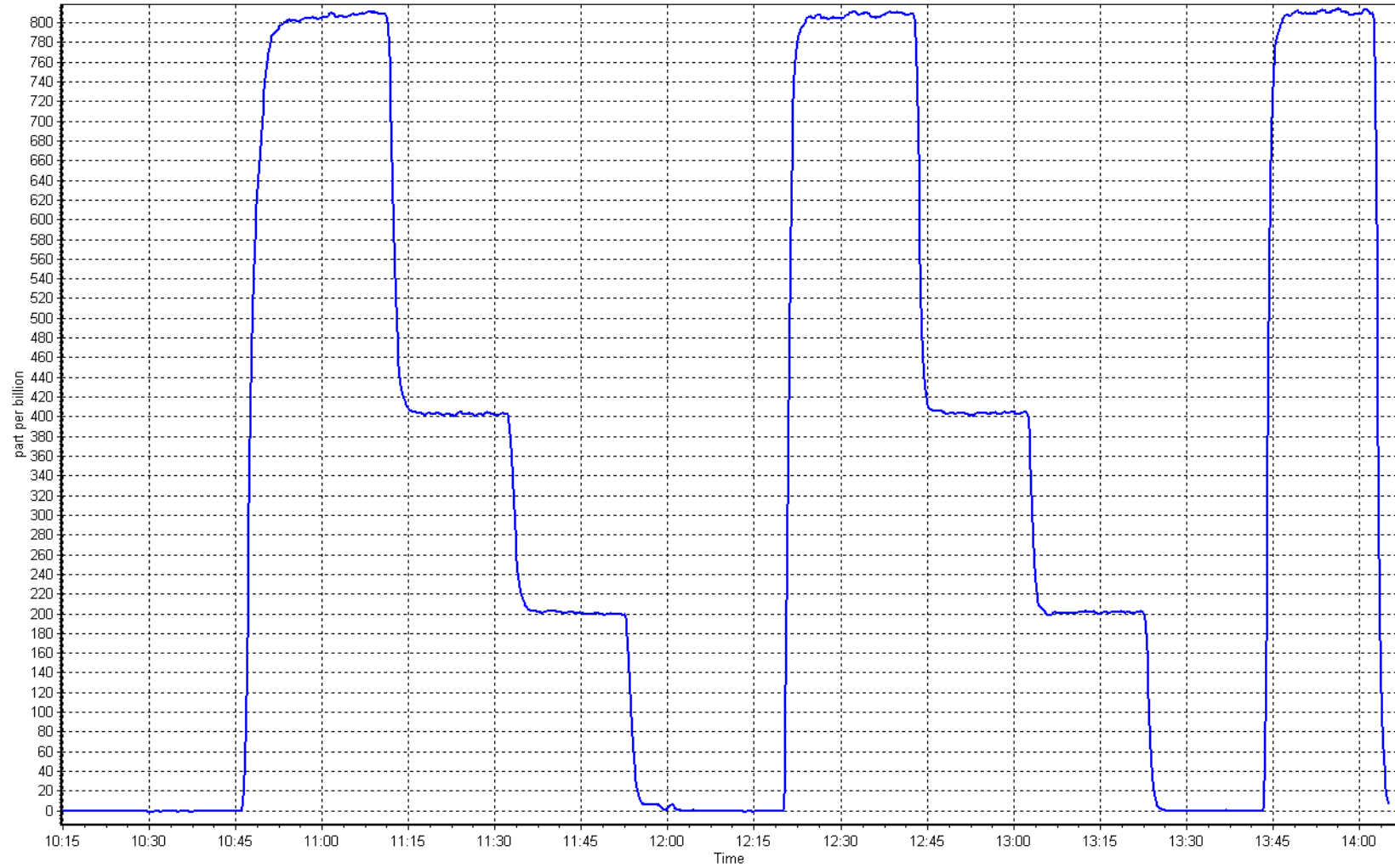
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.5	----	Correlation Coefficient	0.999998	≥0.995
800.3	807.5	0.9910	Slope	1.010049	0.90 - 1.10
400.6	404.4	0.9906	Intercept	-0.713904	+/-30
199.8	200.5	0.9966			



SO2 Calibration Plot

Date: August 12, 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: August 19, 2026 Last Cal Date: July 30, 2026
Start time (MST): 9:03 End time (MST): 13:50
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	1.020688	Backgd or Offset:	1.82	1.83
Calibration intercept:	-0.078194	-0.218449	Coeff or Slope:	1.012	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	0.0	----
As found High point	4917	82.6	80.0	81.4	0.982
As found Mid point	4959	41.3	40.0	40.4	0.990
As found Low point	4979	20.7	20.0	20.1	0.997
New cylinder response					
Baseline Corr As found:	81.4	Prev response:	80.30	*% change:	1.3%
Baseline Corr 2nd AF pt:	40.4	AF Slope:	1.018828	AF Intercept:	-0.178365
Baseline Corr 3rd AF pt:	20.1	AF Correlation:	0.999976	* = > +/-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	81.5	0.981
Mid point	4959	41.3	40.0	40.4	0.990
Low point	4979	20.7	20.0	20.2	0.992
As left zero	5000	0.0	0.0	0.0	----
As left span	4917	82.6	80.0	80.8	0.990
SO2 Scrubber Check	4919	81.3	813.0	0.0	----
Date of last scrubber change:	January 25, 2024		Ave Corr Factor		0.988
Date of last converter efficiency test:	November 7, 2024		107.9% efficiency		

Notes: Changed inlet filter and zero/span valve after as founds. No adjustments made. Scrubber check passed.

Calibration Performed By: Mohammed Kashif



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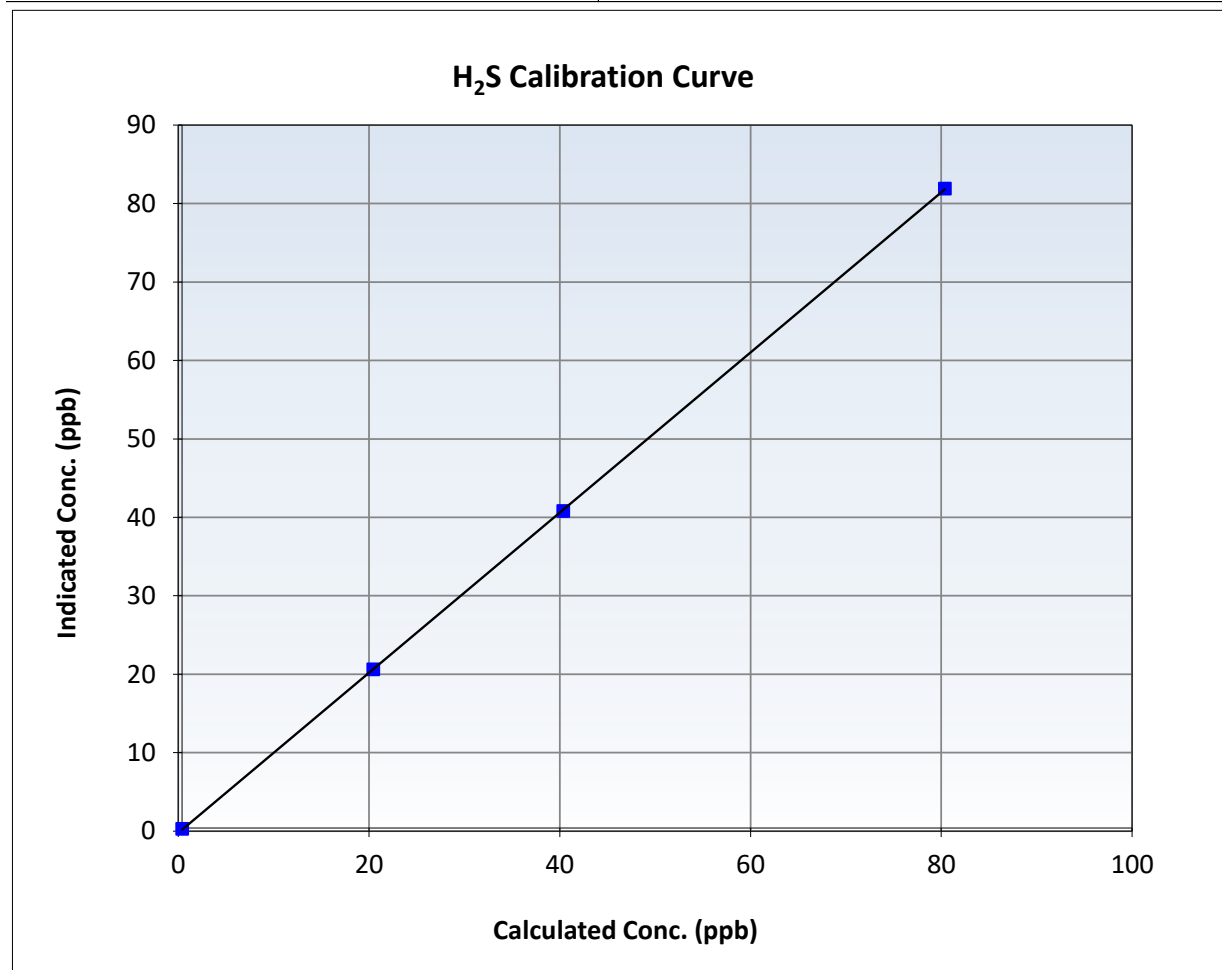
H₂S Calibration Summary

Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 30, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:03	End Time (MST):	13:50
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	1200326167

Calibration Data

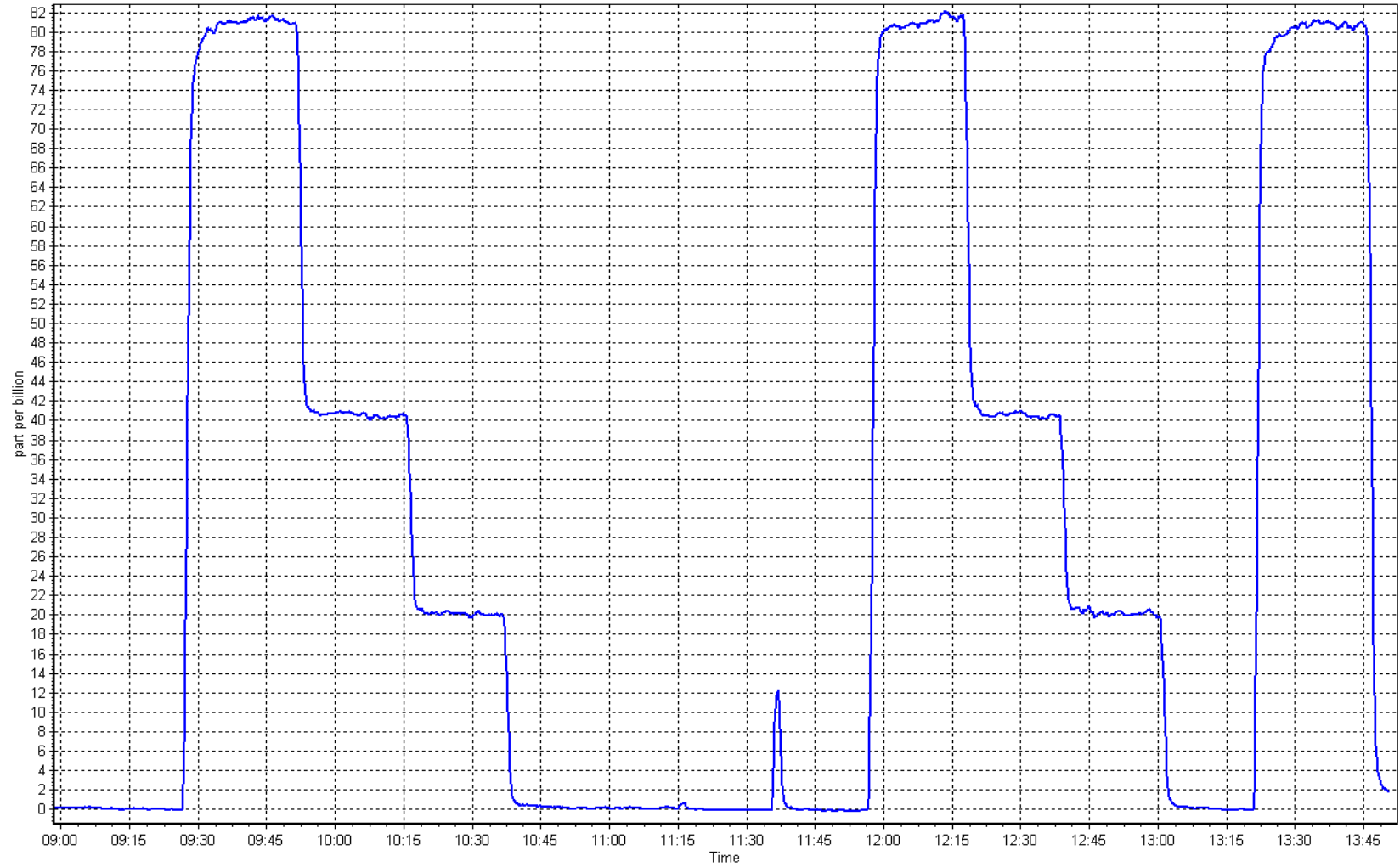
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999984		≥0.995
80.0	81.5	0.9811	Slope	1.020688		0.90 - 1.10
40.0	40.4	0.9895	Intercept	-0.218449		+/-3
20.0	20.2	0.9920				



H₂S Calibration Plot

Date: August 19, 2026

Location: Bertha Ganter-Fort McKay





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
Calibration Date: August 19, 2026 Last Cal Date: July 30, 2026
Start time (MST): 9:03 End time (MST): 13:50
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:	1.007962	1.009248	Backgd or Offset:	2.11
Calibration intercept:	-0.198124	-0.218146	Coeff or Slope:	1.112

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4917	82.6	80.0	79.4	1.006
As found Mid point	4959	41.3	40.0	39.7	1.004
As found Low point	4979	20.7	20.0	20.0	0.997
New cylinder response					
Baseline Corr As found:	79.5	Prev response:	80.40	*% change:	-1.1%
Baseline Corr 2nd AF pt:	39.8	AF Slope:	0.993528	AF Intercept:	-0.018017
Baseline Corr 3rd AF pt:	20.1	AF Correlation:	0.999994	* = > +/-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	80.5	0.993
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	80.5	0.993
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 and zero/span valve after as founds. No adjustments made. Scrubber check passed.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

TRS Calibration Summary

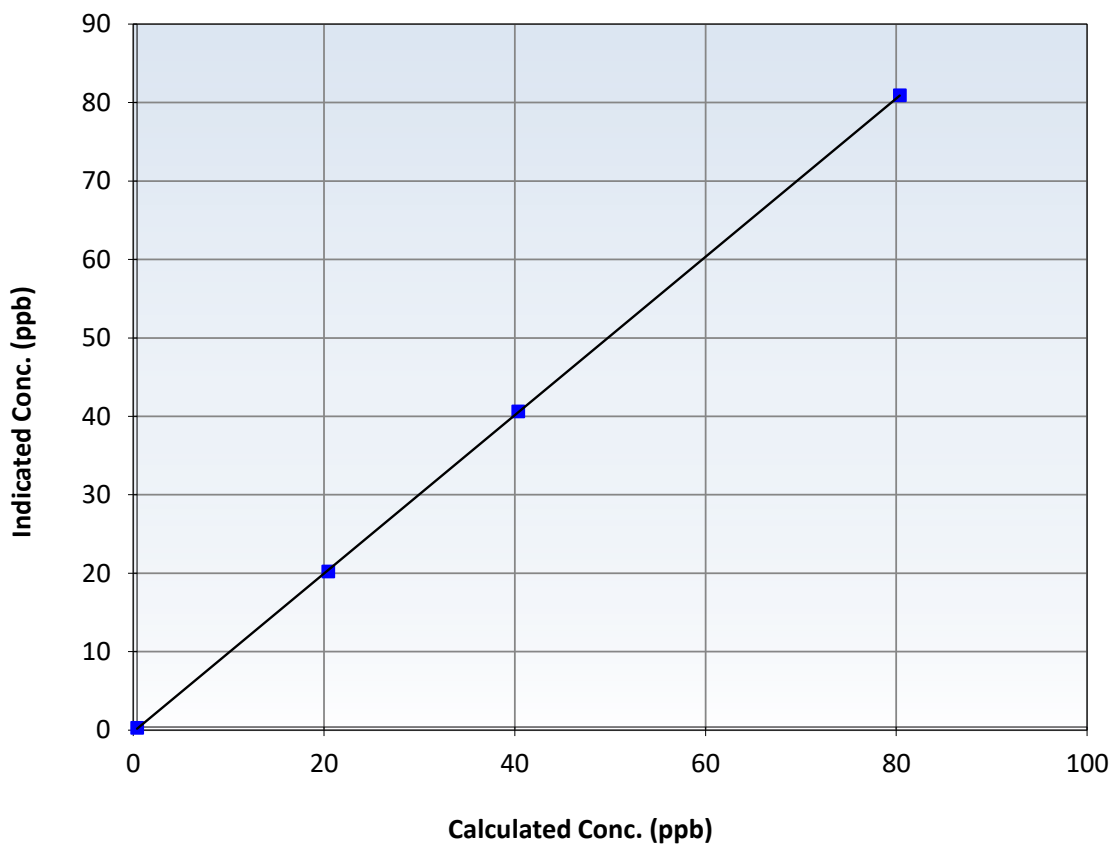
Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 30, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:03	End Time (MST):	13:50
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	80.5	0.9933	Slope	1.009248		$0.90 - 1.10$
40.0	40.2	0.9944	Intercept	-0.218146		± 3
20.0	19.8	1.0121				

TRS Calibration Curve



TRS Calibration Plot

Date: August 19, 2026

Location: Bertha Ganter-Fort McKay





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
Calibration Date: August 27, 2026 Last Cal Date: August 19, 2026
Start time (MST): 9:15 End time (MST): 12:55
Reason: Maintenance

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 #: 555
Analyzer Range: 0 - 100 ppb Converter Temp: 850 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.009248	1.003392	Backgd or Offset:	2.11
Calibration intercept:	-0.218146	0.161790	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					
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	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	20.4	0.982
As left zero	5000	0.0	0.0	0.0	----
As left span	4917	82.6	80.0	80.5	0.993
SO2 Scrubber Check	4919	81.3	813.0	0.0	----
Date of last scrubber change:	December 17, 2021			Ave Corr Factor	0.990
Date of last converter efficiency test:					

Notes: As founds could not be performed due to a faulty converter. The converter was replaced, and the calibration procedure was completed. No adjustments were required.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

TRS Calibration Summary

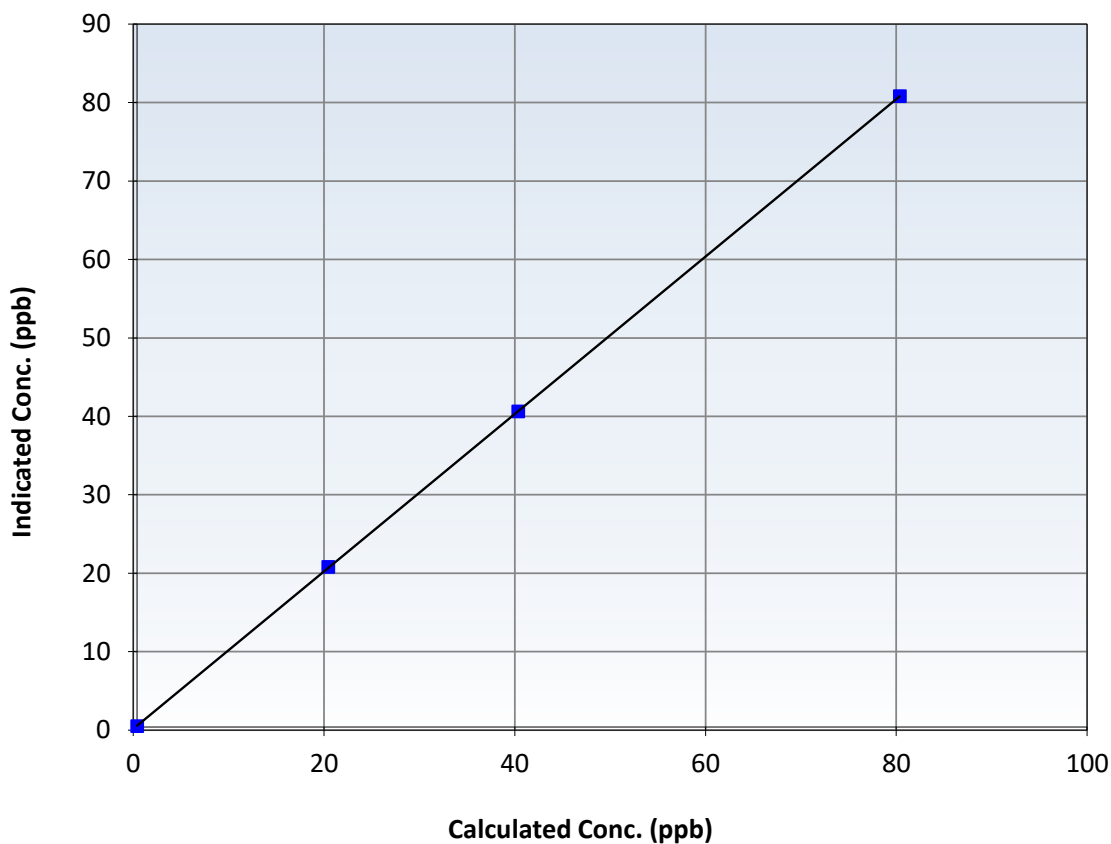
Station Information

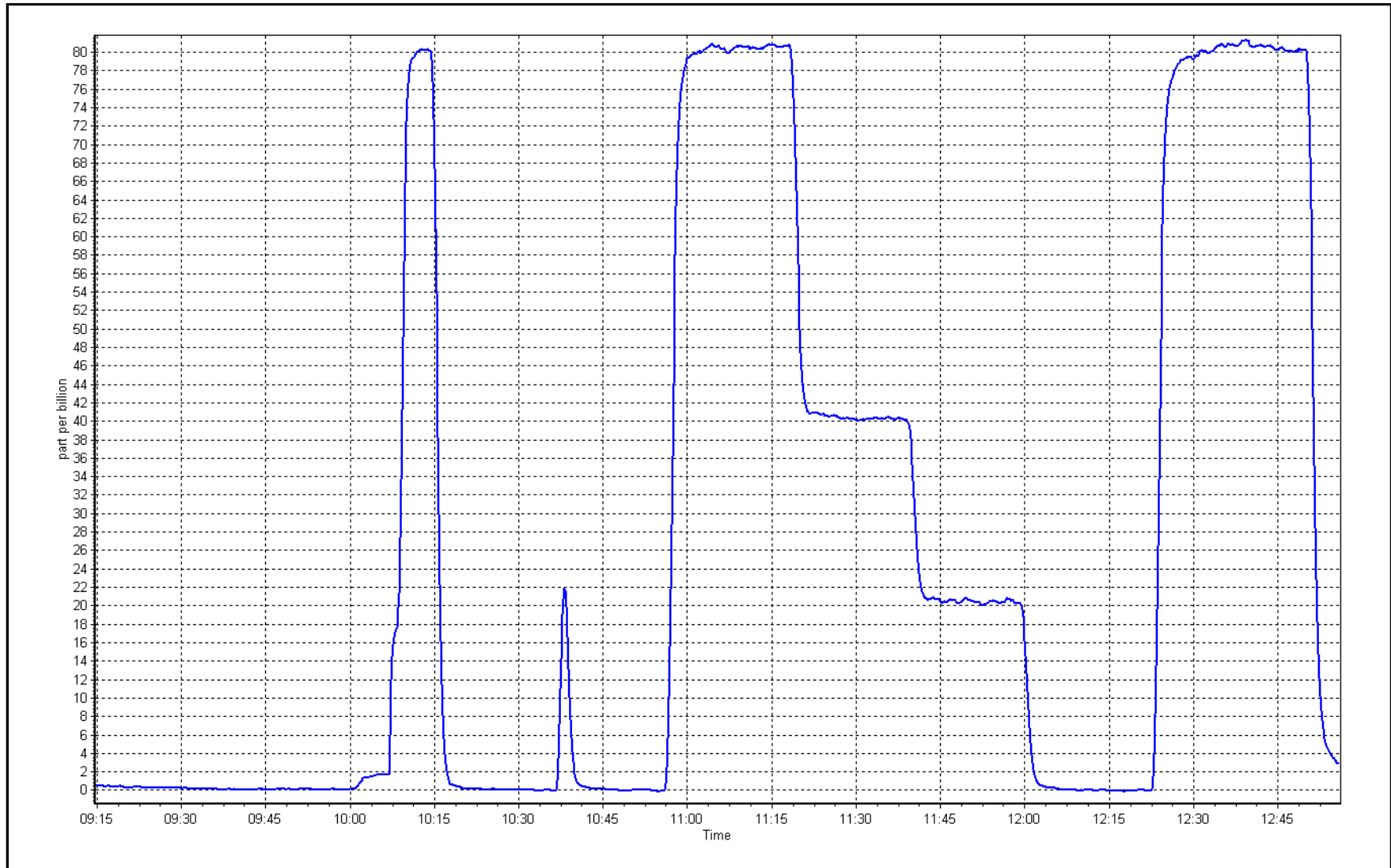
Calibration Date:	August 27, 2026	Previous Calibration:	August 19, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:15	End Time (MST):	12:55
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	12113311966

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	0.999992		≥ 0.995
80.0	80.4	0.9946	Slope	1.003392		0.90 - 1.10
40.0	40.2	0.9944	Intercept	0.161790		+/-3
20.0	20.4	0.9823				

TRS Calibration Curve







Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Bertha Ganter-Fort McKay Station number: AMS 01
Calibration Date: August 28, 2026 Last Cal Date: August 19, 2026
Start time (MST): 11:11 End time (MST): 13:42
Reason: Maintenance

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 #: 629
Analyzer Range: 0 - 100 ppb Converter Temp: 825 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.009248	1.000531	Backgd or Offset:	2.11	2.12
Calibration intercept:	-0.218146	0.261933	Coeff or Slope:	1.112	1.116

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	4917	82.6	80.0	80.1	0.998
Mid point	4959	41.3	40.0	40.6	0.985
Low point	4979	20.7	20.0	20.3	0.987
As left zero	5000	0.0	0.0	0.2	----
As left span	4917	82.6	80.0	80.9	0.988
SO2 Scrubber Check	4919	81.3	813.0		----
Date of last scrubber change:	December 17, 2021			Ave Corr Factor	0.990
Date of last converter efficiency test:					

Notes: As founds could not be performed due to a faulty converter and pump. The converter and pump were replaced, and the calibration procedure was completed. Adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

TRS Calibration Summary

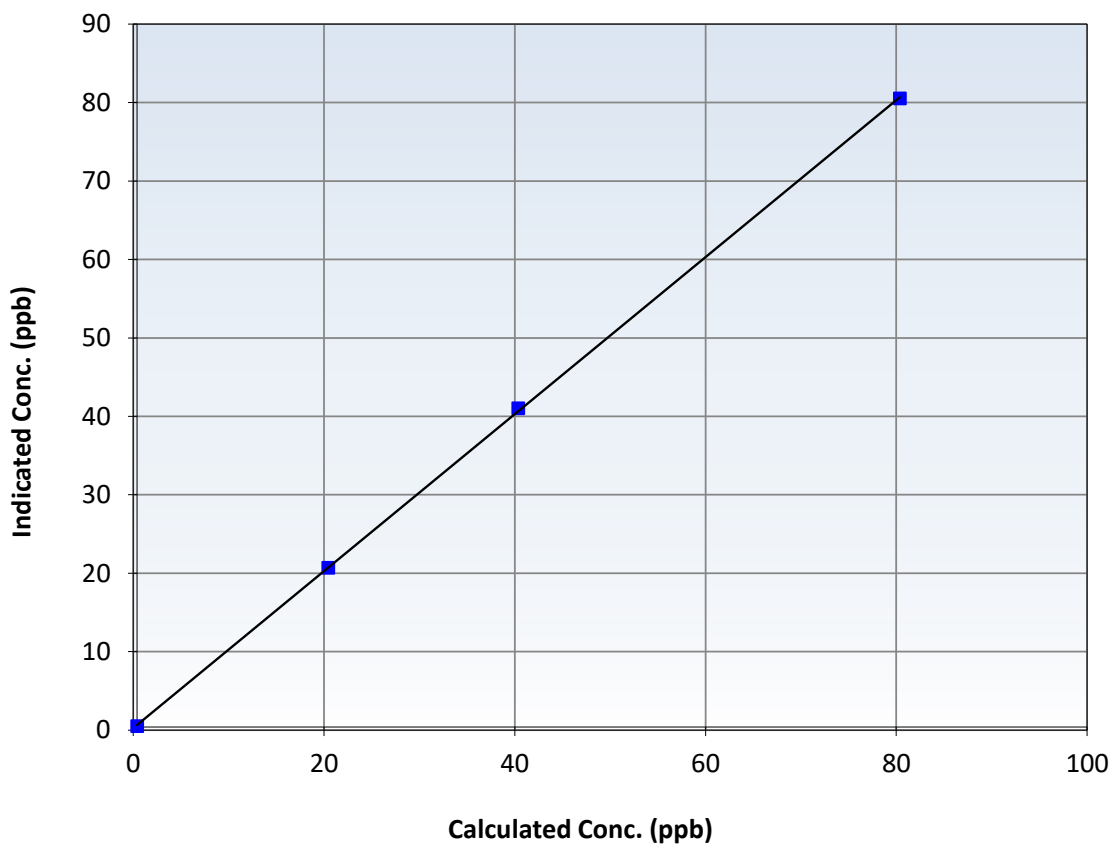
Station Information

Calibration Date:	August 28, 2026	Previous Calibration:	August 19, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:11	End Time (MST):	13:42
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	0.999951		≥ 0.995
80.0	80.1	0.9983	Slope	1.000531		$0.90 - 1.10$
40.0	40.6	0.9846	Intercept	0.261933		± 3
20.0	20.3	0.9871				

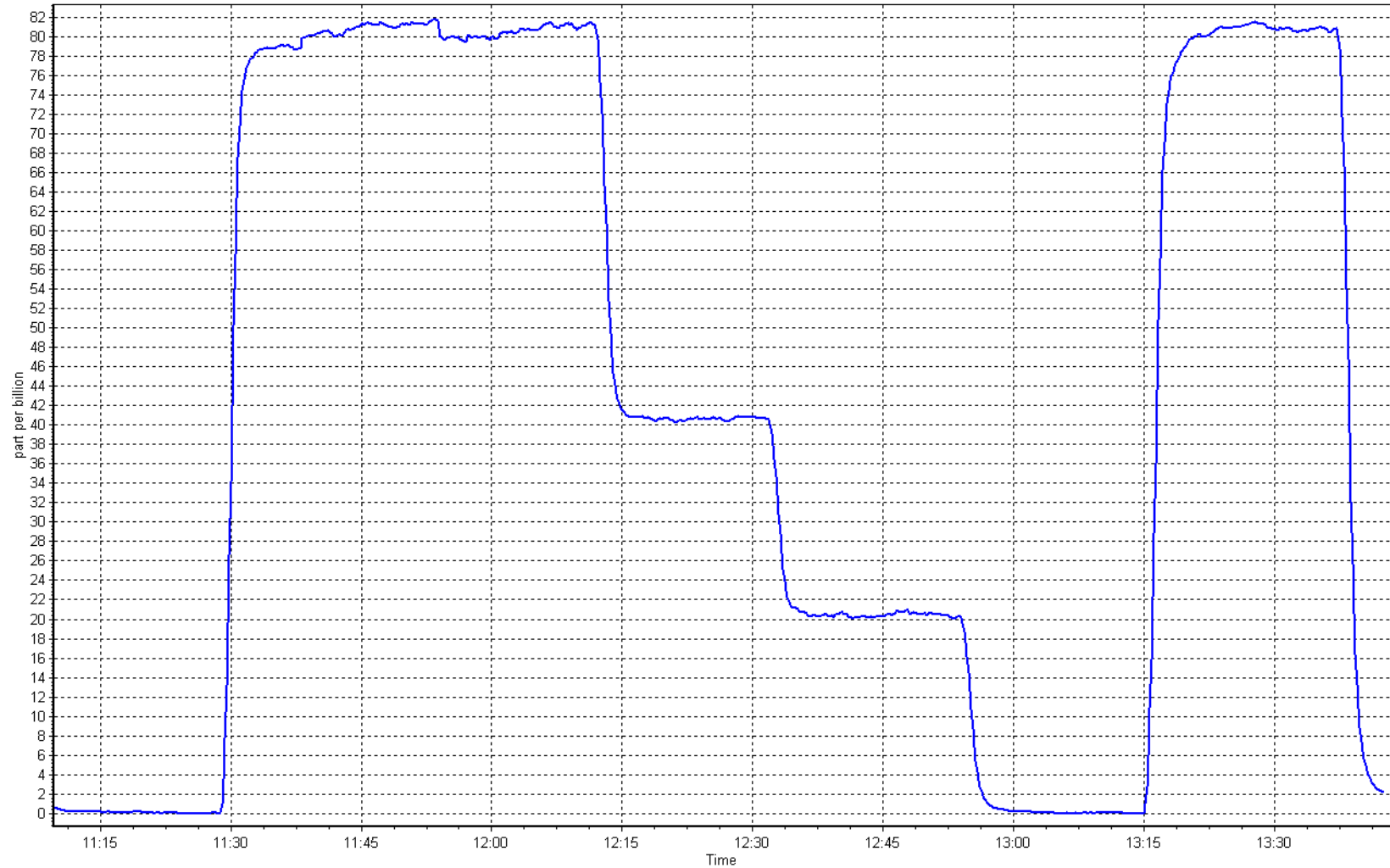
TRS Calibration Curve



TRS Calibration Plot

Date: August 28, 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: August 12, 2026 Last Cal Date: July 14, 2026
 Start time (MST): 10:23 End time (MST): 14:05
 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: 261

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	17.21	1.003
As found Mid point	4959	40.7	8.64	8.67	0.997
As found Low point	4979	20.3	4.31	4.37	0.987
New cylinder response					
Baseline Corr AF:	17.21	Prev response	17.64	*% change	-2.5%
Baseline Corr 2nd AF:	8.67	AF Slope:	0.995804	AF Intercept:	0.038537
Baseline Corr 3rd AF:	4.37	AF Correlation:	0.999977	* = > +/-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	17.27	1.000
Mid point	4959	40.7	8.64	8.62	1.003
Low point	4979	20.3	4.31	4.33	0.996
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	17.27	17.31	0.997
Average Correction Factor					1.000

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	9.16	1.003
As found Mid point	4959	40.7	4.60	4.64	0.991
As found Low point	4979	20.3	2.29	2.35	0.974
New cylinder response					
Baseline Corr AF:	9.16	Prev response	9.45	*% change	-3.2%
Baseline Corr 2nd AF:	4.64	AF Slope:	0.995285	AF Intercept:	0.038270
Baseline Corr 3rd AF:	2.35	AF Correlation:	0.999918	* = > +/-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	9.21	0.997
Mid point	4959	40.7	4.60	4.60	1.000
Low point	4979	20.3	2.29	2.32	0.990
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	9.18	9.26	0.991
Average Correction Factor					0.996

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4918	81.3	8.09	8.06	1.003
As found Mid point	4959	40.7	4.05	4.03	1.005
As found Low point	4979	20.3	2.02	2.02	1.001
New cylinder response					
Baseline Corr AF:	8.06	Prev response	8.19	*% change	-1.6%
Baseline Corr 2nd AF:	4.03	AF Slope:	0.996577	AF Intercept:	-0.000131
Baseline Corr 3rd AF:	2.02	AF Correlation:	0.999998	* = > +/-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	8.07	1.003
Mid point	4959	40.7	4.05	4.02	1.006
Low point	4979	20.3	2.02	2.01	1.003
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	8.09	8.05	1.004
Average Correction Factor					1.004

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.020505	0.999548
THC Cal Offset:	0.016160	0.001752
CH ₄ Cal Slope:	1.013930	0.997227
CH ₄ Cal Offset:	-0.007526	-0.002930
NMHC Cal Slope:	1.026321	1.001816
NMHC Cal Offset:	0.024085	0.004283

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

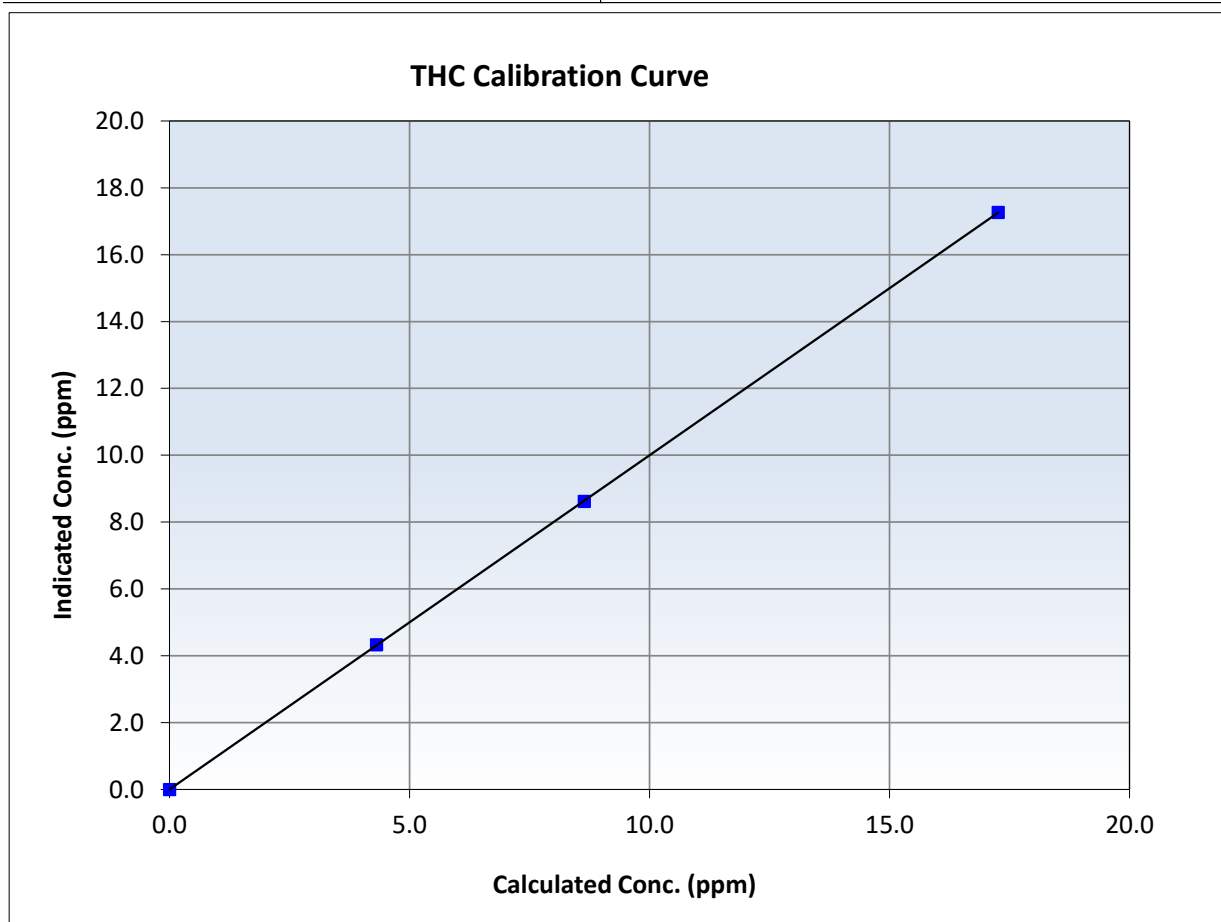
THC Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 14, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:23	End Time (MST):	14:05
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	0.999995	<i>≥0.995</i>
17.27	17.27	0.9999	Slope	0.999548	<i>0.90 - 1.10</i>
8.64	8.62	1.0028	Intercept	0.001752	<i>+/-0.5</i>
4.31	4.33	0.9964			





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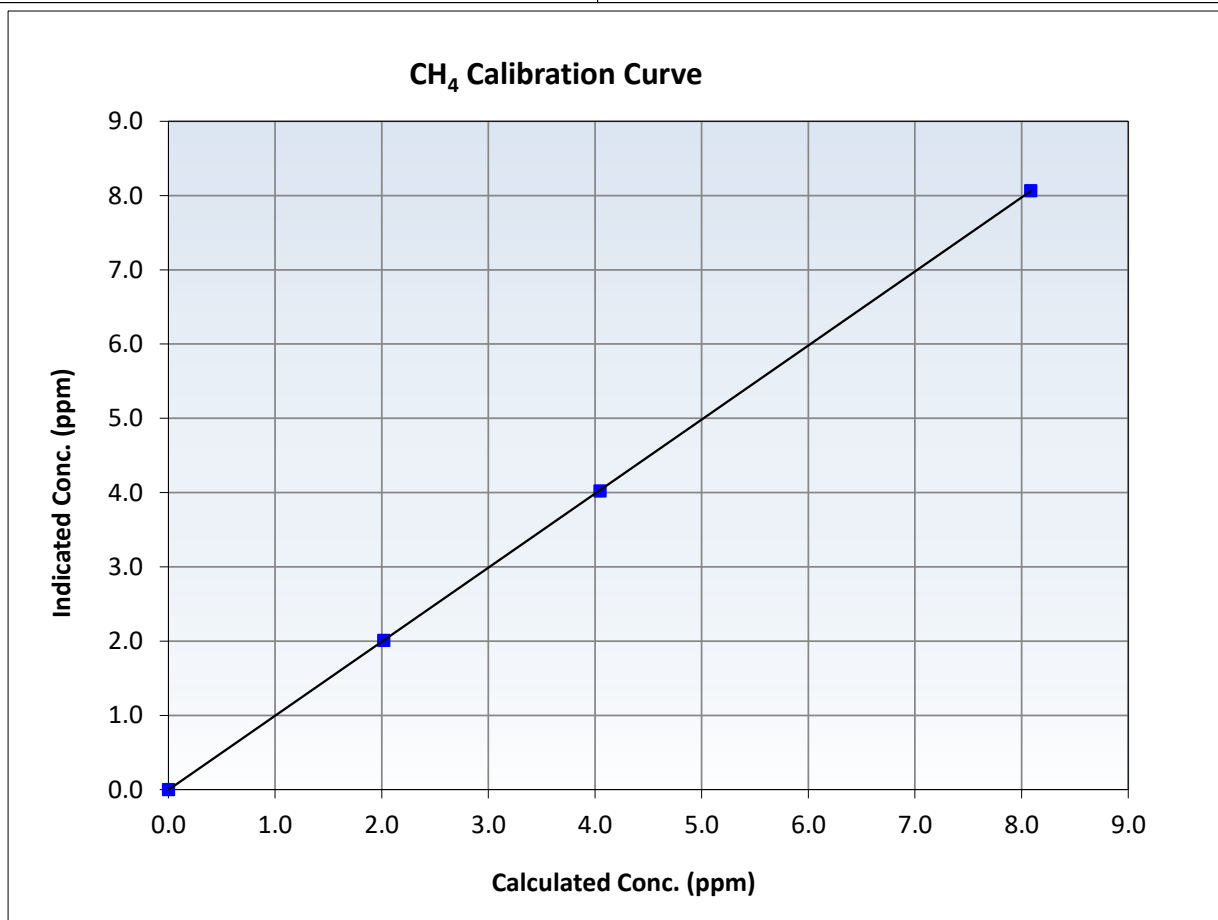
CH₄ Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 14, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:23	End Time (MST):	14:05
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	0.999996	≥ 0.995
8.09	8.07	1.0026	Slope	0.997227	$0.90 - 1.10$
4.05	4.02	1.0061	Intercept	-0.002930	± 0.5
2.02	2.01	1.0034			





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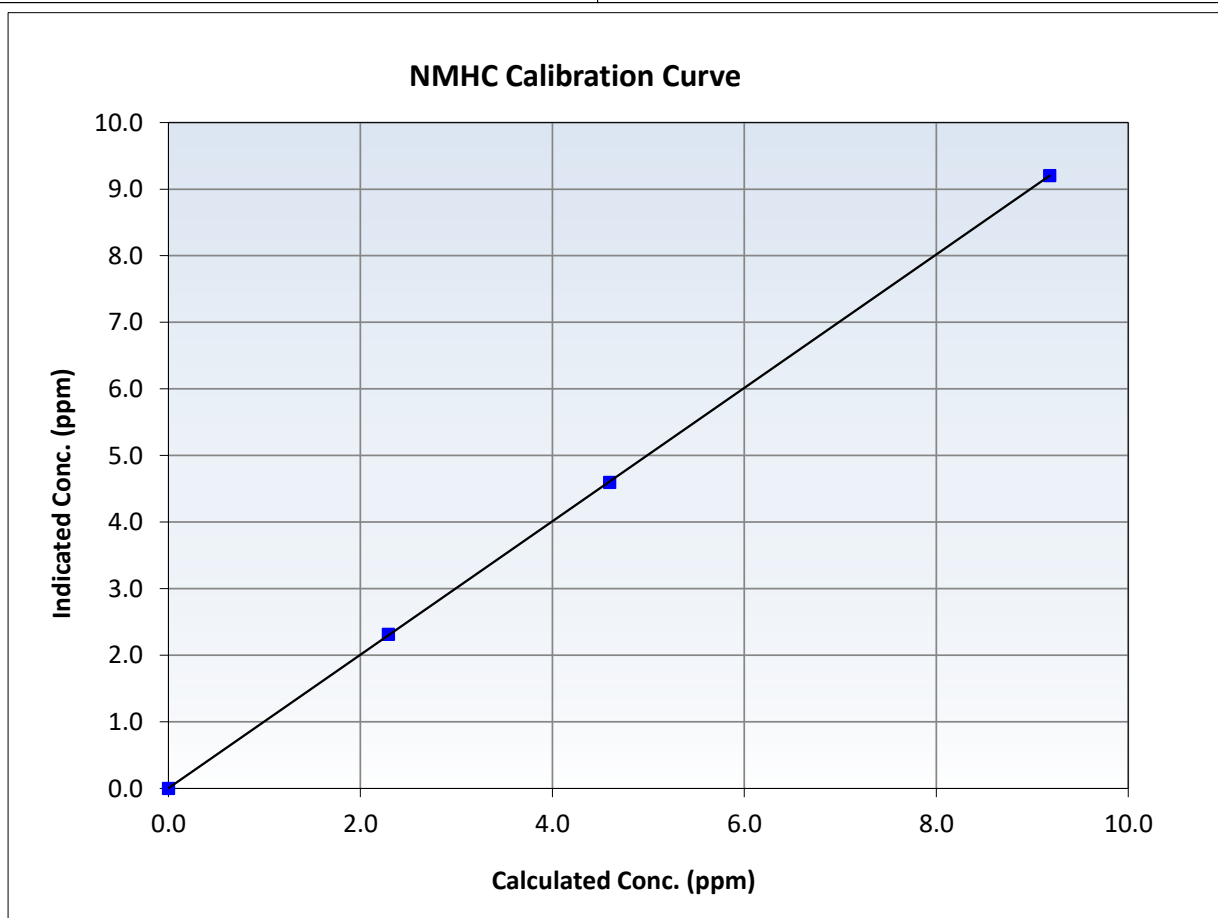
NMHC Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 14, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:23	End Time (MST):	14:05
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

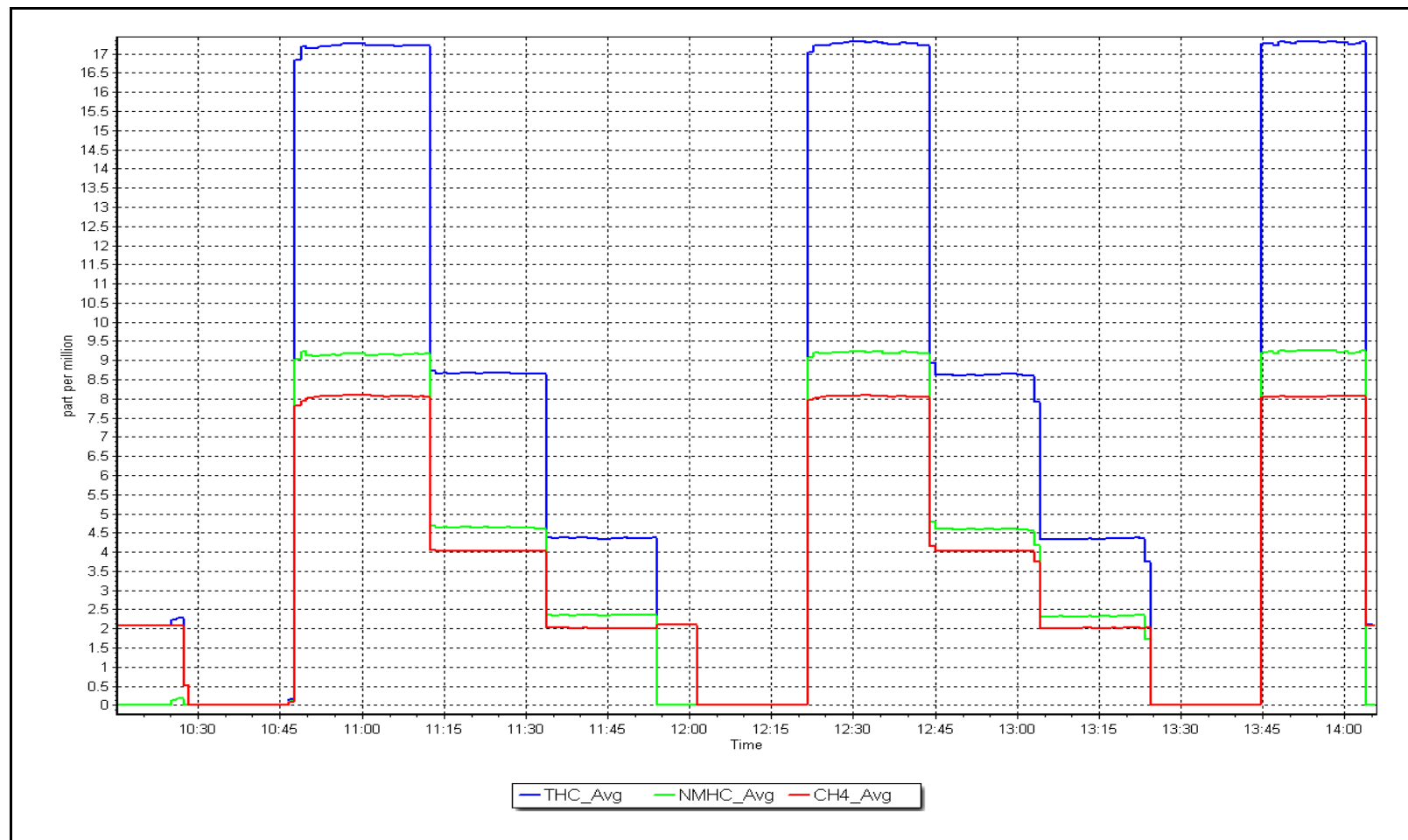
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999992	≥ 0.995
9.18	9.21	0.9974	Slope	1.001816	0.90 - 1.10
4.60	4.60	1.0000	Intercept	0.004283	± 0.5
2.29	2.32	0.9903			



NMHC Calibration Plot

Date: August 12, 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: August 11, 2026
Last Cal Date: July 9, 2026
Start time (MST): 10:22
End time (MST): 15:02
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: 261

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.0	0.0	0.1	----	----
AF High point	4932	67.6	803.1	800.4	2.7	825.1	822.7	2.3	0.9733	0.9729
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 804.0 ppb	NO = 800.3 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = 2.6%
Baseline Corr 1st pt	NO _x = 825.1 ppb	NO = 822.7 ppb	<u>As Found Statistics</u>		*Percent Change	NO = 2.7%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb	As found	NO _x r ² :	Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb	As found	NO r ² :	NO SI:	NO Int:
			As found	NO ₂ r ² :	NO2 SI:	NO ₂ Int:

As Found GPT Calibration Data

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



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

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

Serial Number: 1336160088

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.769	0.748	NO bkgnd or offset:	2.2	2.2
NOX coeff or slope:	0.996	0.998	NOX bkgnd or offset:	2.3	2.3
NO2 coeff or slope:	0.999	0.999	Reaction cell Press:	160.3	161.5

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.000766	0.999442
NO _x Cal Offset:	0.280000	0.320000
NO Cal Slope:	1.001562	1.001519
NO Cal Offset:	-1.340000	-1.100000
NO ₂ Cal Slope:	1.002653	0.996932
NO ₂ Cal Offset:	-0.586458	0.537954

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	67.6	803.1	800.4	2.7	802.8	801.0	1.9	1.0004	0.9992
Mid point	4966	33.8	401.5	400.2	1.4	402.0	399.4	2.6	0.9989	1.0020
Low point	4983	16.9	200.8	200.1	0.7	200.9	197.9	3.0	0.9994	1.0111
As left zero	5000	0.0	0.0	0.0	0.0	0.4	0.0	0.4	----	----
As left span	4932	67.6	803.1	400.5	402.6	801.0	400.5	400.5	1.0026	1.0000
Average Correction Factor									0.9995	1.0041

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	797.2	398.6	401.3	400.3	1.0025	99.7%
Mid GPT point	797.2	596.8	203.1	203.5	0.9981	100.2%
Low GPT point	797.2	699.0	100.9	101.4	0.9951	100.5%
Average Correction Factor					0.9986	100.1%

Notes:

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

Calibration Performed By:

Mohammed Kashif



Wood Buffalo Environmental Association

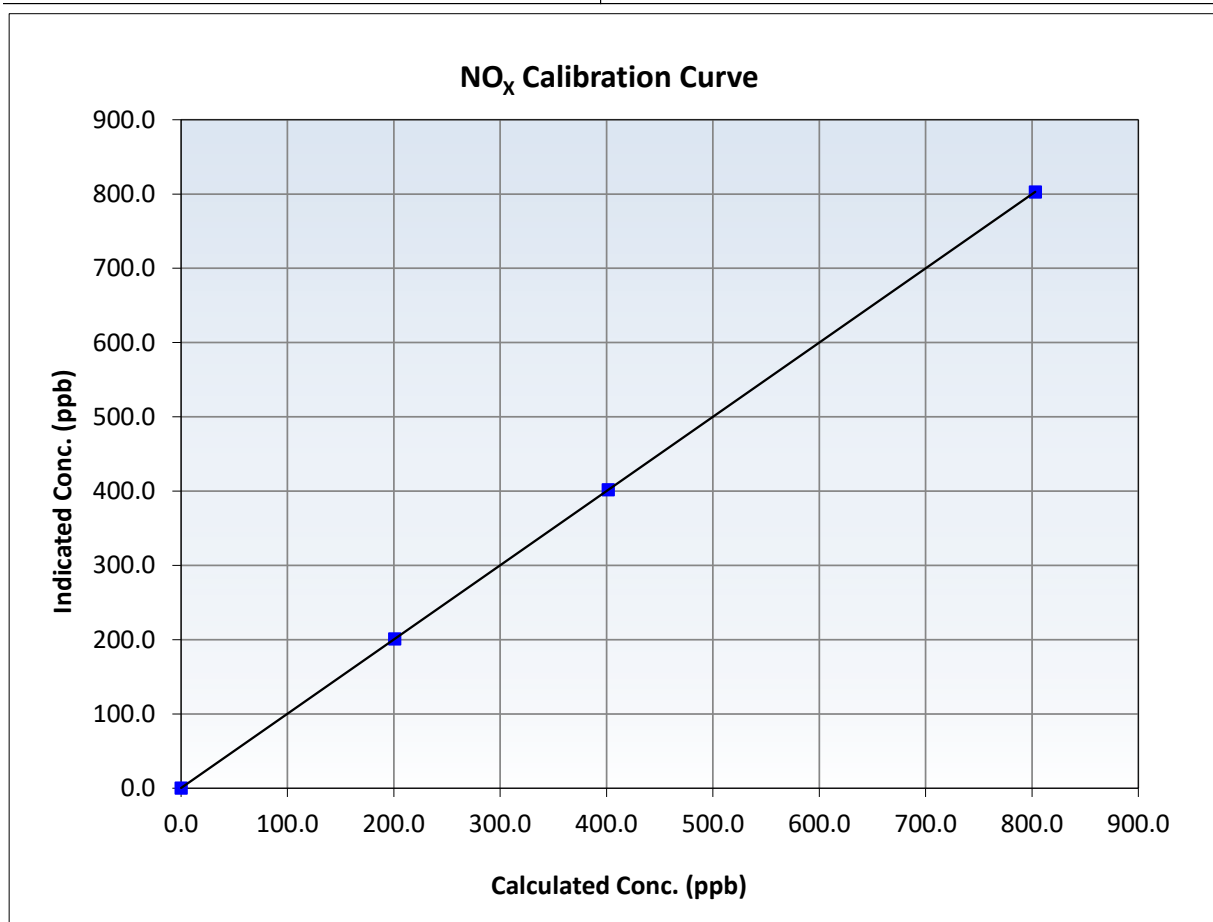
NO_x Calibration Summary

Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 9, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:22	End Time (MST):	15:02
Analyzer make:	Thermo 42i	Analyzer serial #:	1336160088

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	1.000000	<i>≥0.995</i>
803.1	802.8	1.0004	Slope	0.999442	<i>0.90 - 1.10</i>
401.5	402.0	0.9989	Intercept	0.320000	<i>+/-20</i>
200.8	200.9	0.9994			





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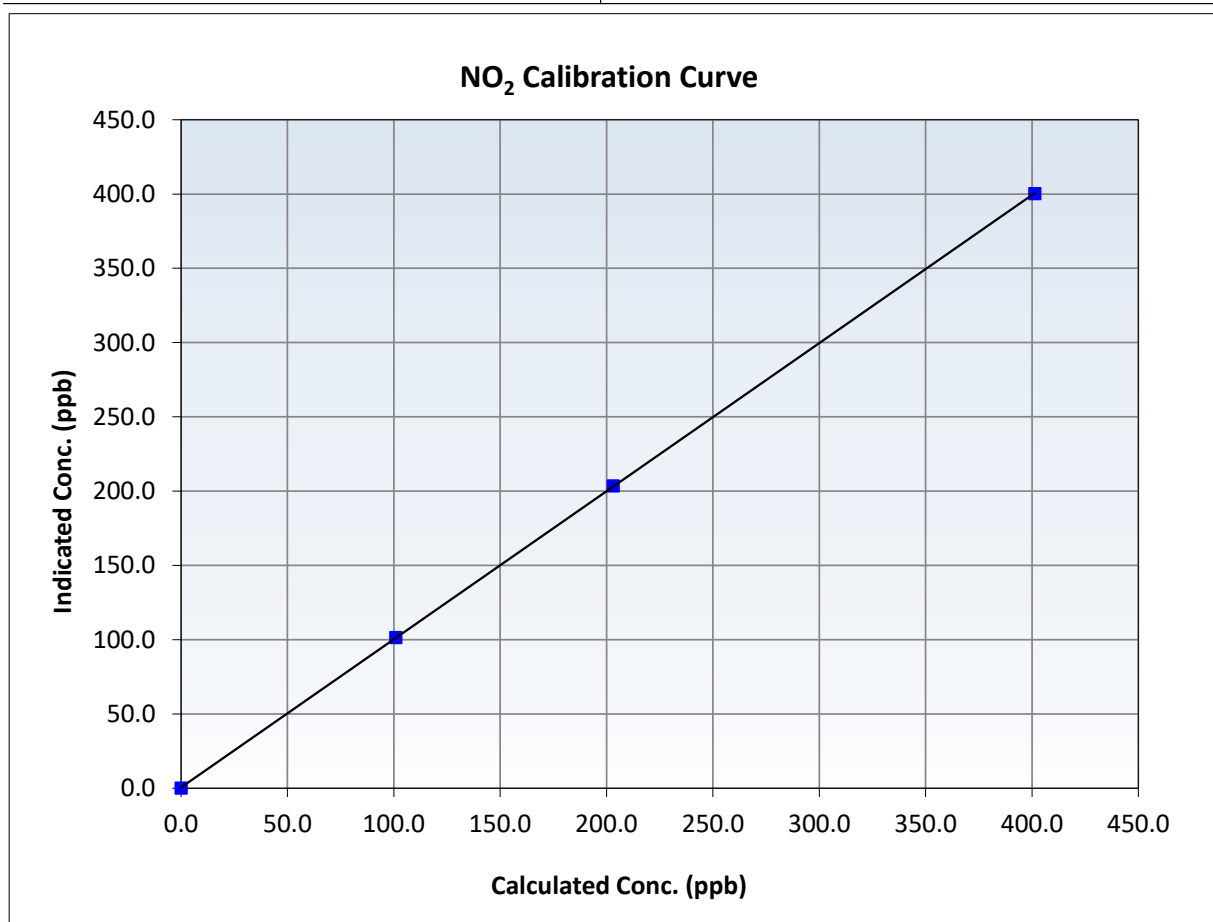
NO₂ Calibration Summary

Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 9, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:22	End Time (MST):	15:02
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	0.1	----	Correlation Coefficient	0.999993	≥0.995
401.3	400.3	1.0025	Slope	0.996932	0.90 - 1.10
203.1	203.5	0.9981	Intercept	0.537954	+/-20
100.9	101.4	0.9951			





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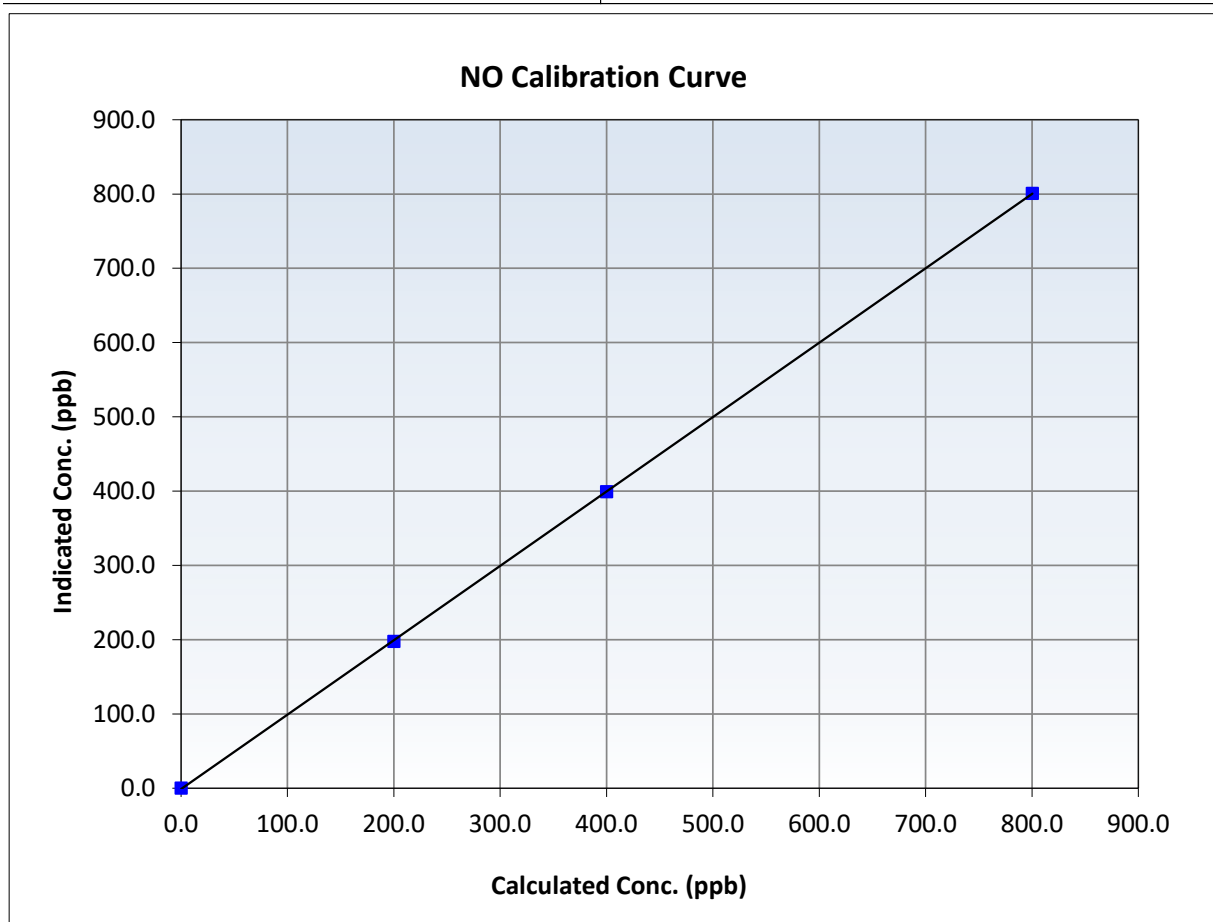
NO Calibration Summary

Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 9, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:22	End Time (MST):	15:02
Analyzer make:	Thermo 42i	Analyzer serial #:	1336160088

Calibration Data

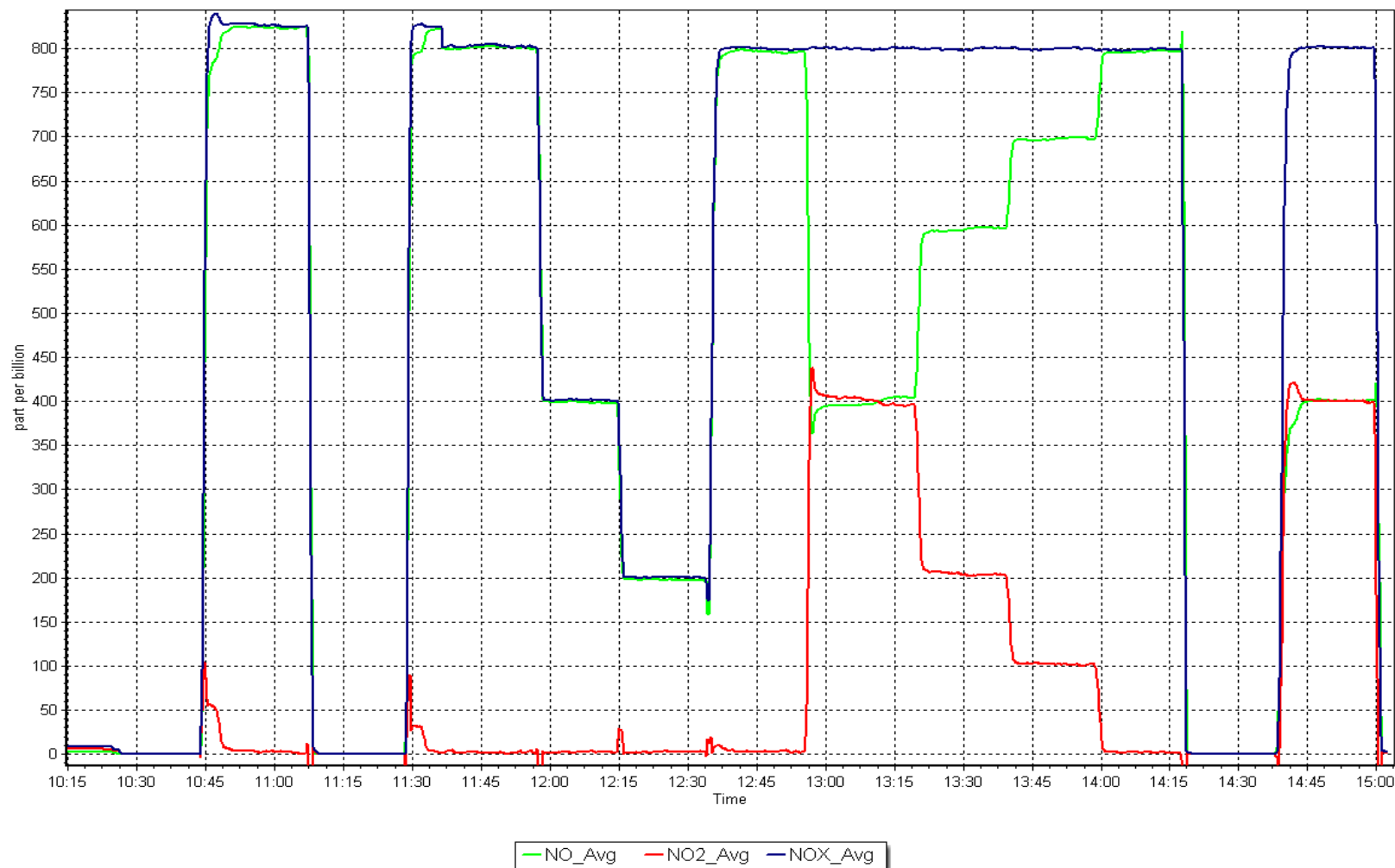
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.1	----	Correlation Coefficient	0.999989	≥ 0.995
800.4	801.0	0.9992	Slope	1.001519	0.90 - 1.10
400.2	399.4	1.0020	Intercept	-1.100000	+/-20
200.1	197.9	1.0111			



NO_x Calibration Plot

Date: August 11, 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: August 5, 2026 Last Cal Date: July 15, 2026
Start time (MST): 9:54 End time (MST): 14:34
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: 261

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:	1.002686	1.007600	Backgd or Offset:	2.6	1.9
Calibration intercept:	-0.220000	0.620000	Coeff or Slope:	1.010	1.021

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	399.0	0.999
As found Mid point	5000	755.0	200.0	199.9	0.994
As found Low point	5000	661.2	100.0	100.3	0.984
Baseline Corr As found:	400.3	Previous response	400.9	*% change	-0.1%
Baseline Corr 2nd AF pt:	201.2	AF Slope:	0.999743	AF Intercept:	-0.480000
Baseline Corr 3rd AF pt:	101.6	AF Correlation:	0.999981	* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	5000	880.4	400.0	403.3	0.992
Mid point	5000	755.0	200.0	202.7	0.987
Low point	5000	661.2	100.0	101.7	0.983
As left zero	5000	0.0	0.0	-0.1	----
As left span	5000	880.4	400.0	406.6	0.984
Average Correction Factor					0.987

Notes: Changed the inlet filter and daily zero/span valve after as founds. Adjusted both zero and span.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

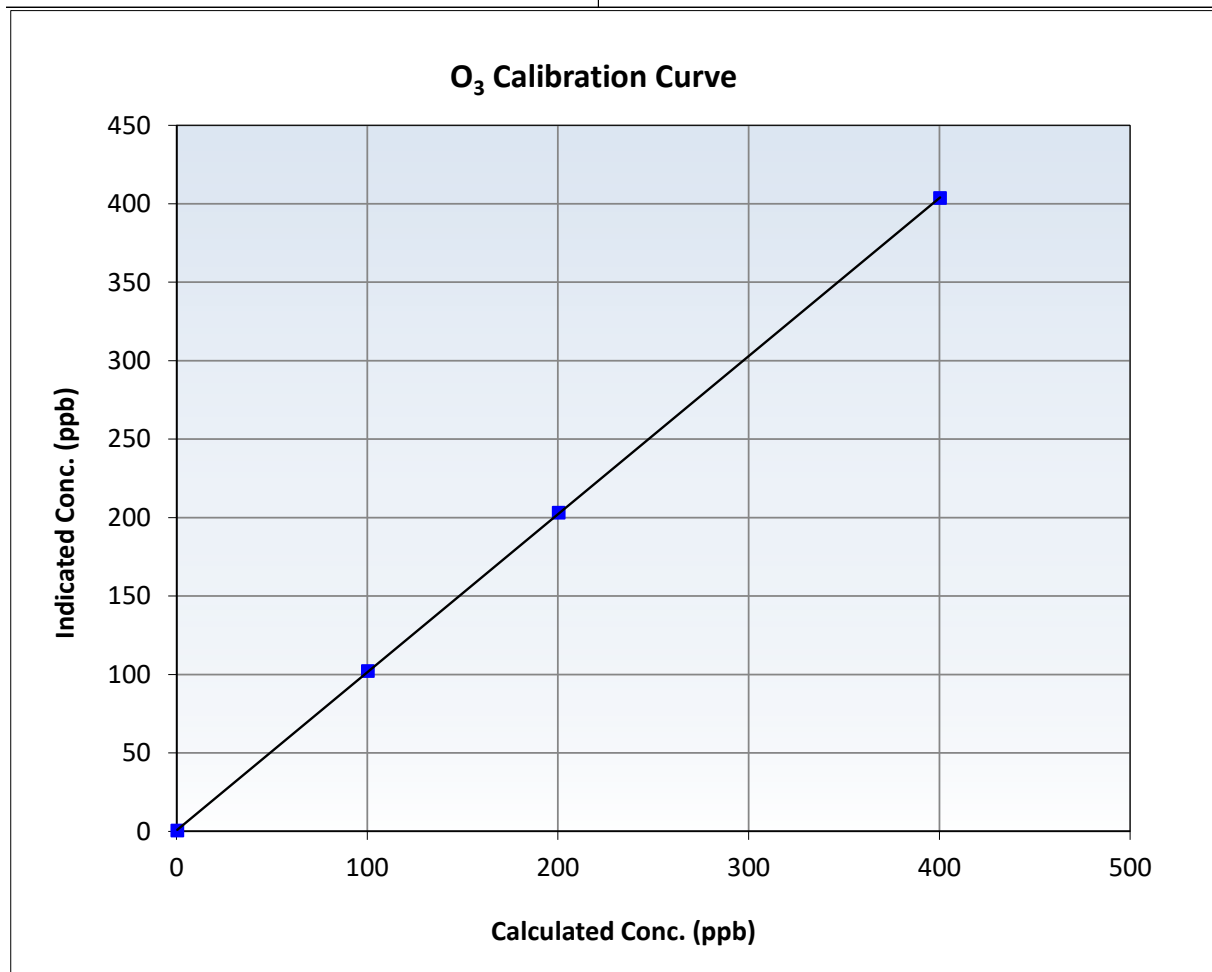
O₃ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 15, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:54	End Time (MST):	14:34
Analyzer make:	Teledyne API T400	Analyzer serial #:	7045

Calibration Data

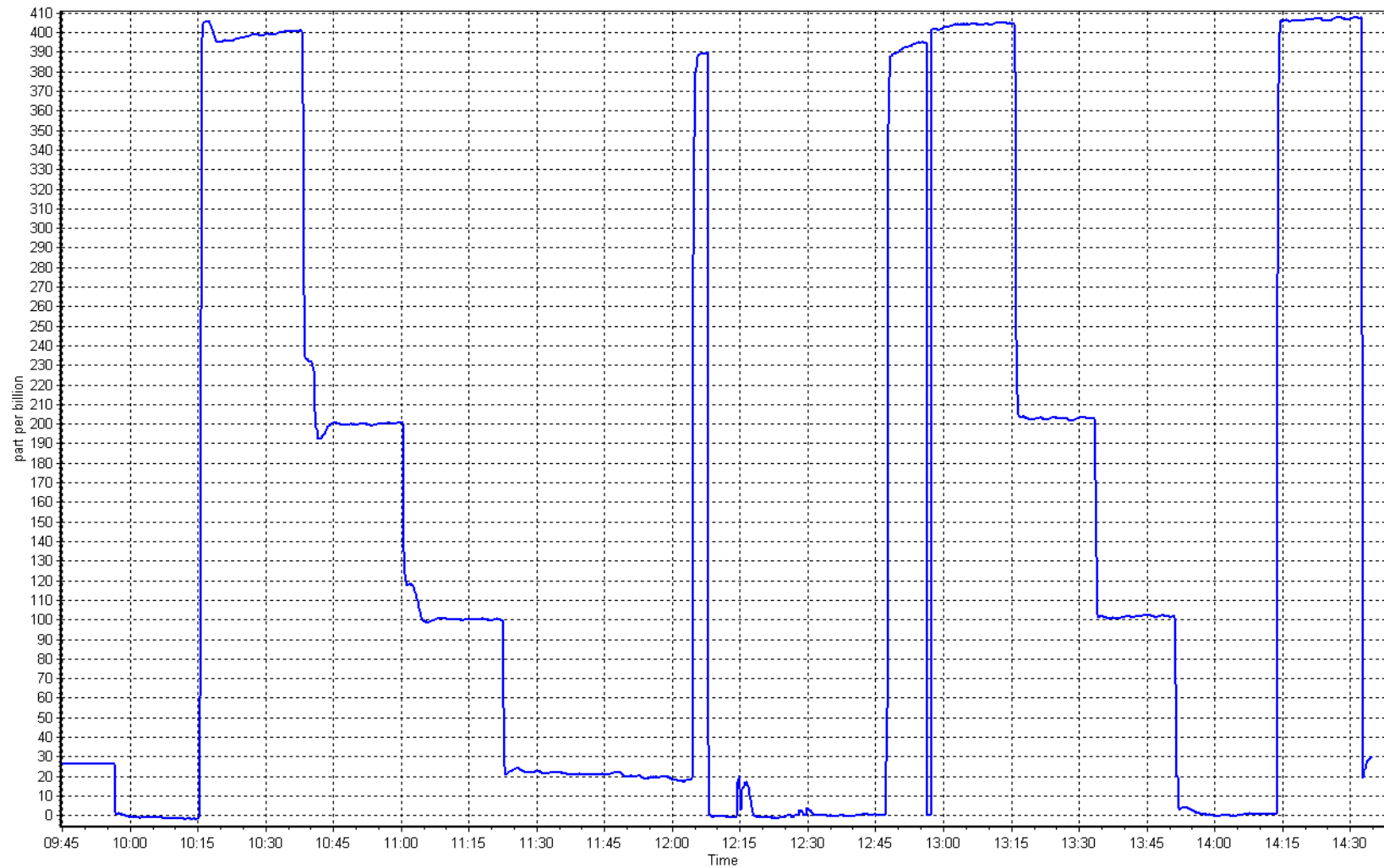
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999991	≥0.995
400.0	403.3	0.9918	Slope	1.007600	0.90 - 1.10
200.0	202.7	0.9867	Intercept	0.620000	+/- 5
100.0	101.7	0.9833			



O₃ Calibration Plot

Date: August 5, 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: August 11, 2026 Last Cal Date: July 9, 2026
Start time (MST): 12:16 End time (MST): 13:39

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)	21.70	20.8	21.70	☐	+/- 2 °C
P (mmHg)	738.50	737.49	738.50	☐	+/- 10 mmHg
Flow (LPM)	5.00	4.997	5.00	☐	+/- 0.25 LPM
PW% (pump)	30	NA	30	☐	>80%
Zero Verification	PM w/o HEPA:	10.80	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 29, 2027
Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	8.3	10.9	10.9	☒	10.9 +/- 0.5

Date Optical Chamber Cleaned: August 11, 2026
Date Disposable Filter Changed: August 11, 2026

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

Annual Maintenance

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

Notes: Leak check, flow, and PMT were checked before and after cleaning. After cleaning the optical chamber, the PMT adjustment was 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:	August 25, 2026	Last Cal Date:	July 27, 2026
Start time (MST):	10:08	End time (MST):	14:43
NH3 Cal Date:	August 26, 2026	Last Cal Date:	July 27, 2026
Start time (MST):	9:21	End time (MST):	17:17
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	0.971	Nt coefficient:	1.011	0.983
NOX coefficient:	1.010	0.975	NO bkgrnd:	0.0	0.0
NO2 coefficient:	1.000	1.000	NOX bkgrnd:	0.0	0.0
NH3 coefficient:	0.971	0.986	Nt bkgrnd:	0.0	0.0

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.001392	0.998617
NO _x Cal Offset:	0.160000	-0.840000
NO Cal Slope:	1.001134	1.002847
NO Cal Offset:	-2.540000	-0.740000
NO ₂ Cal Slope:	1.012041	0.996970
NO ₂ Cal Offset:	1.470889	-0.936088
NH3 Cal Slope:	0.990686	1.003312
NH3 Cal Offset:	5.911145	4.967805
Nt Cal Slope:	0.994135	1.005873
Nt Cal Offset:	6.115003	5.304732



Wood Buffalo Environmental Association

NO_x - NO - NO₂ Calibration Report

NO_x / NO / Nt As Found Data

Set Point	Dilution flow rate (scm)	Source gas flow rate (scm)	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	0.5	-0.3	0.3	----	----
As found span	4932	67.6	803.1	800.4	803.1	827.5	817.8	823.0	0.9705	0.9787
AF GPT span	4932	67.6	803.1	-----	803.1	805.5	-----	808.6	0.9970	-----
new NO cyl rp										

Baseline Corr As Fd Nt = 822.7 ppb NO_x = 827.0 ppb NO = 818.1 ppb

Previous Response Nt = 804.49 ppb NO_x = 804.4 ppb NO = 798.8 ppb

**NO_x Δ (NO to GPT response) = 0.5%

* = > +/-2% difference initiates investigation

*Percent Change Nt(NO) = 2.2%

*Percent Change NO_x = 2.7%

*Percent Change NO = 2.4%

* = > +/-5% change initiates investigation

NO_x / NO / Nt 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 Nt concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibration zero	5000	0.0	0.0	0.0	0.0	0.1	-0.2	0.0	----	----
High point	4932	67.6	803.1	800.4	803.1	801.5	802.0	803.1	1.0020	0.9980
Mid point	4966	33.8	401.5	400.2	401.5	400.0	400.9	402.3	1.0039	0.9982
Low point	4983	16.9	200.8	200.1	200.8	198.5	199.0	202.2	1.0114	1.0055
Average Correction Factor									1.0058	1.0006

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	0.8	----	----
Calibration zero	----	----	0.0	0.3	----	----
High GPT point (400 ppb O3)	799.9	399.6	403.0	401.4	1.0040	99.6%
Mid GPT point (200 ppb O3)	799.9	595.4	207.2	205.3	1.0093	99.1%
Low GPT point (100 ppb O3)	799.9	697.4	105.2	102.5	1.0264	97.4%
Average Correction Factor					1.0132	98.7%



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	0.0	-0.1	0.1	----	----
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					*Percent Change	NH ₃ = NA

* = > +/-5% change initiates investigation

NH₃ Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated Nt concentration (ppb) (Cc)	Calculated NOX concentration (ppb) (Cc)	Calculated NH ₃ concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH ₃ concentration (ppb) (Ic)	Nt Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NH ₃ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibration zero	5000	0.0	0.0	0.0	0.0	0.0	0.1	-0.2	----	----
High point	2930	70.5	1799.6	0.0	1799.6	1812.2	4.7	1807.5	0.993	0.996
Mid point	2961	39.2	1000.6	0.0	1000.6	1015.1	3.6	1011.7	0.986	0.989
Low point	2980	19.6	500.3	0.0	500.3	513.9	1.4	512.4	0.974	0.976
Average Correction Factor									0.9841	0.9870
NH ₃ Previous Converter Efficiency =			97.1 %							
NH ₃ Current Converter Efficiency =			97.1 %							

Notes: Changed the sample inlet filter after as founds. Adjusted the NO_x, NO, NT, and NH₃ span.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

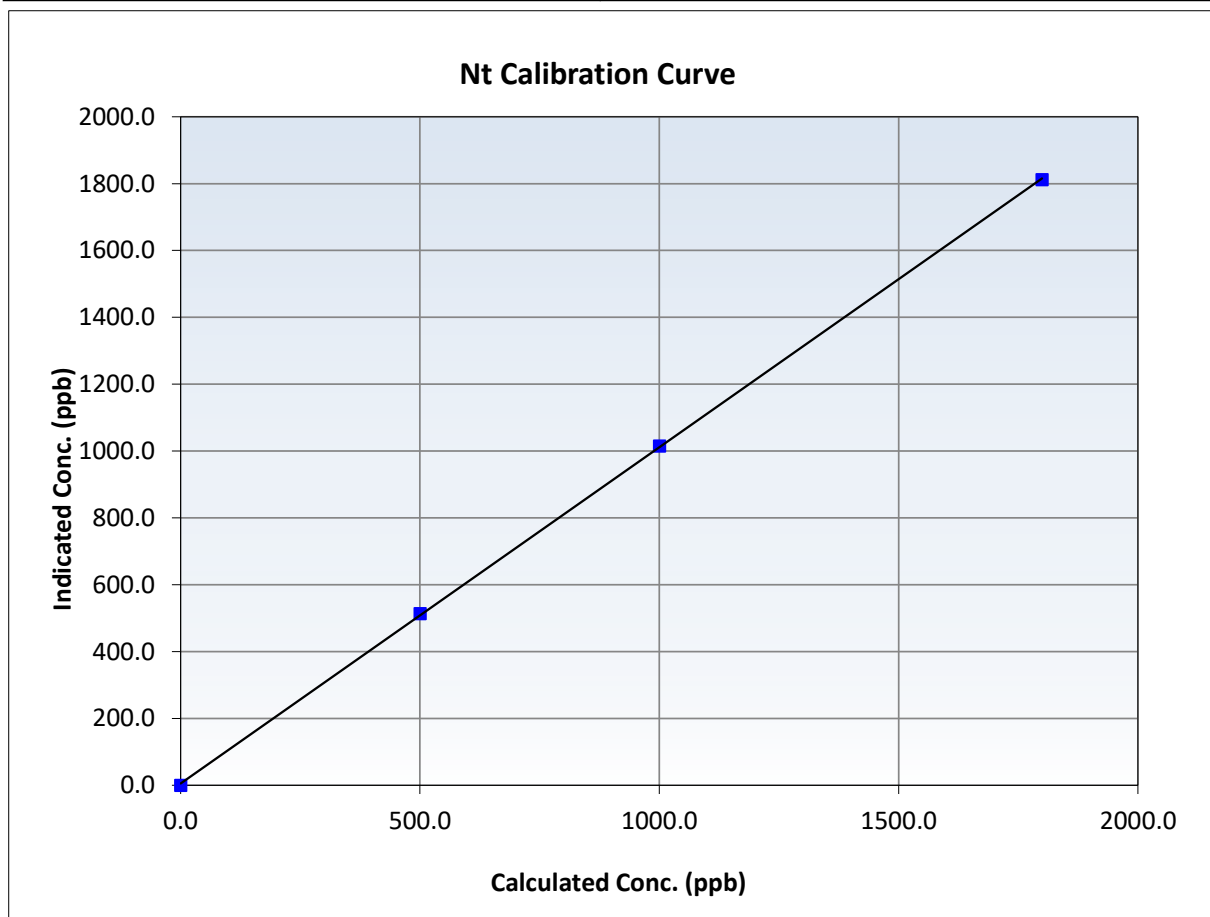
Nt Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 27, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:21	End Time (MST):	17:17
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	0.999956	≥ 0.995
1799.6	1812.2	0.9931	Slope	1.005873	0.90 - 1.10
1000.6	1015.1	0.9858	Intercept	5.304732	+/-20
500.3	513.9	0.9736			





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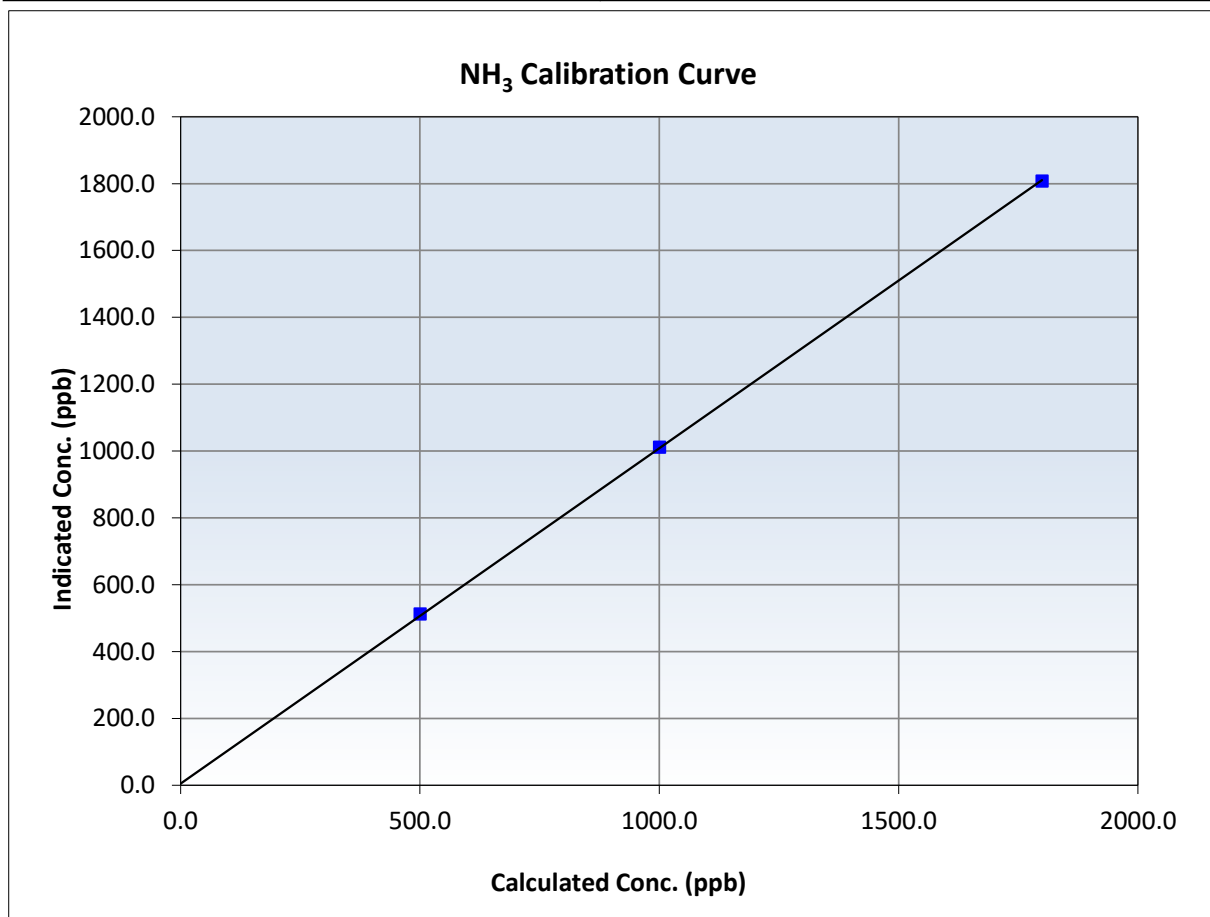
NH₃ Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 27, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	9:21	End Time (MST):	17:17
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	0.999959	≥0.995
1799.6	1807.5	0.9956	Slope	1.003312	0.90 - 1.10
1000.6	1011.7	0.9891	Intercept	4.967805	+/-20
500.3	512.4	0.9764			





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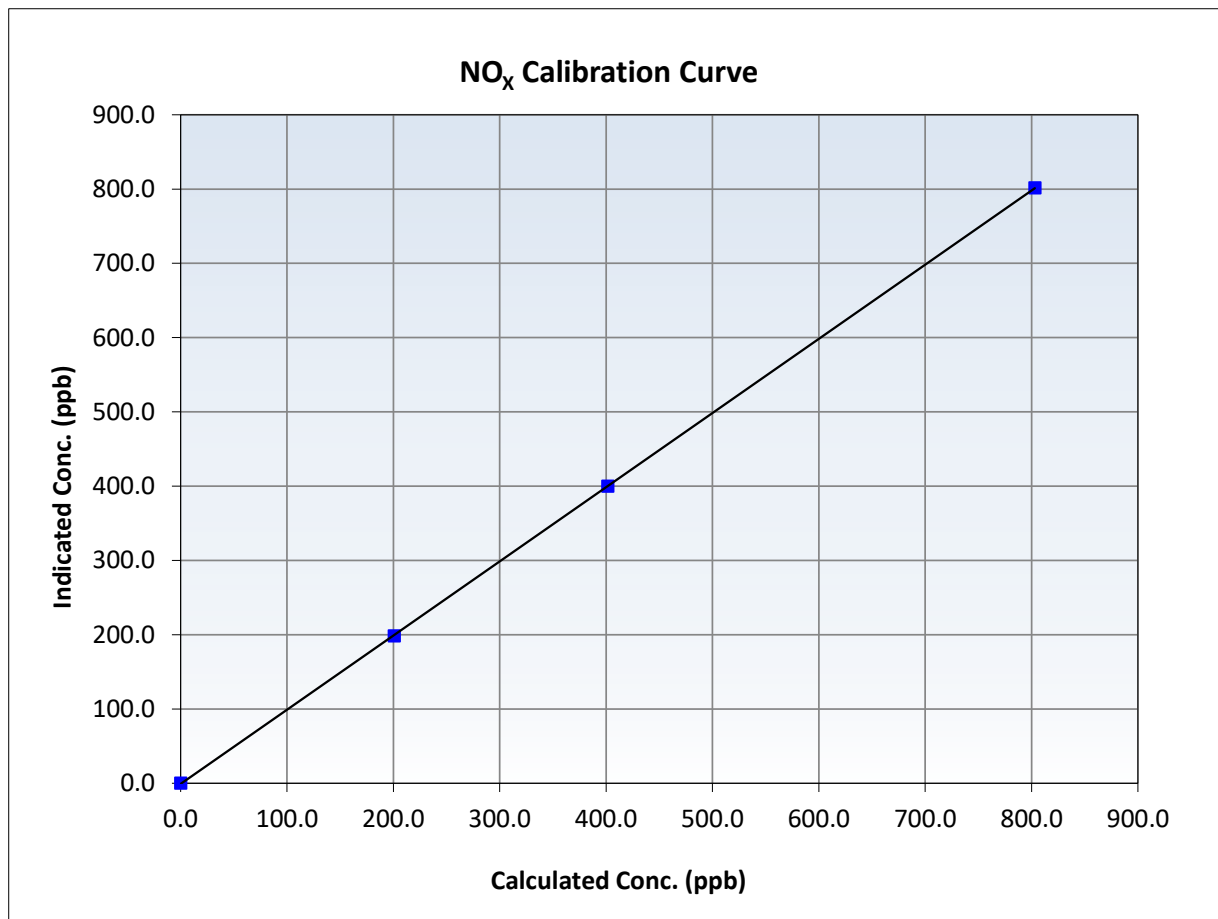
NO_x Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 27, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:08	End Time (MST):	14:43
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999993	≥0.995
803.1	801.5	1.0020	Slope	0.998617	0.90 - 1.10
401.5	400.0	1.0039	Intercept	-0.840000	+/-20
200.8	198.5	1.0114			





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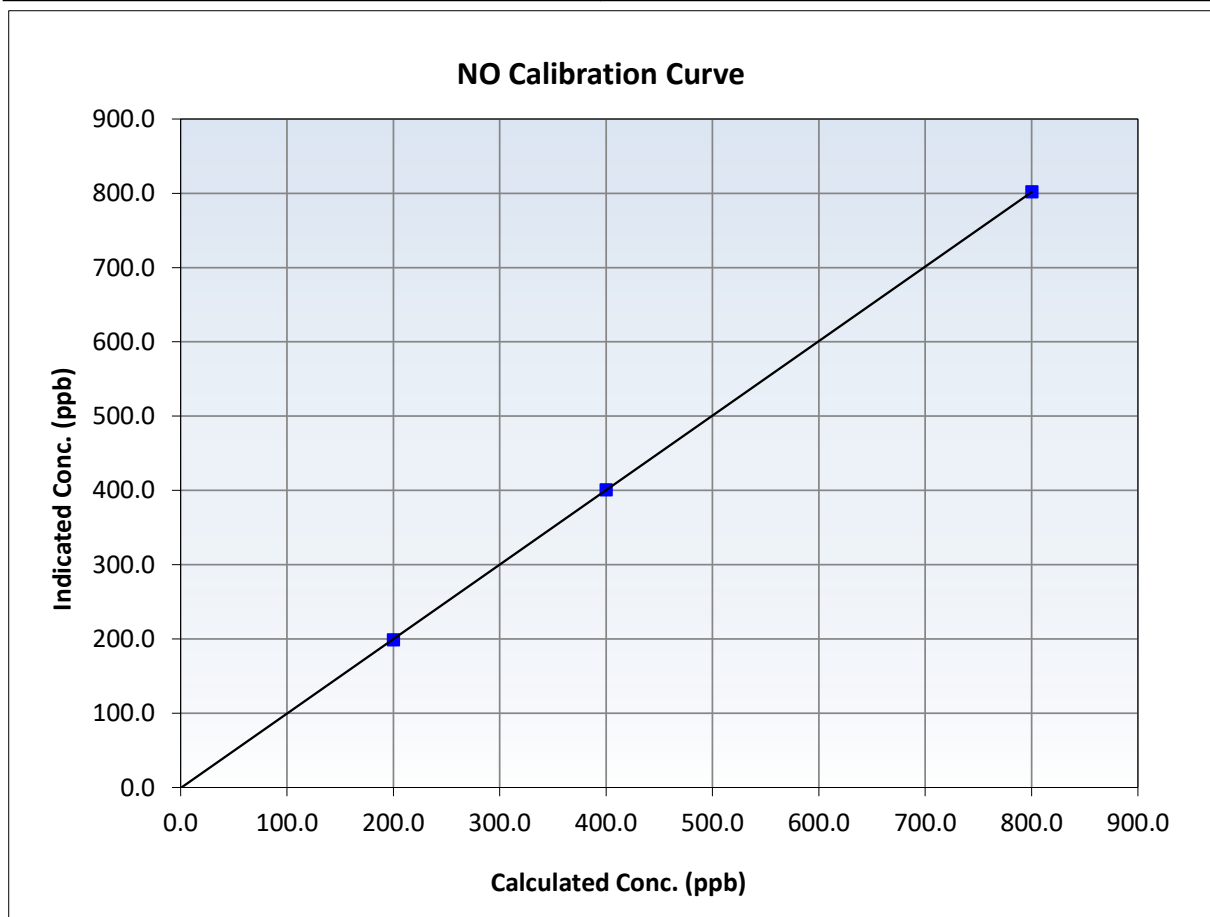
NO Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 27, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:08	End Time (MST):	14:43
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	0.999996	≥ 0.995
800.4	802.0	0.9980	Slope	1.002847	0.90 - 1.10
400.2	400.9	0.9982	Intercept	-0.740000	+/-20
200.1	199.0	1.0055			





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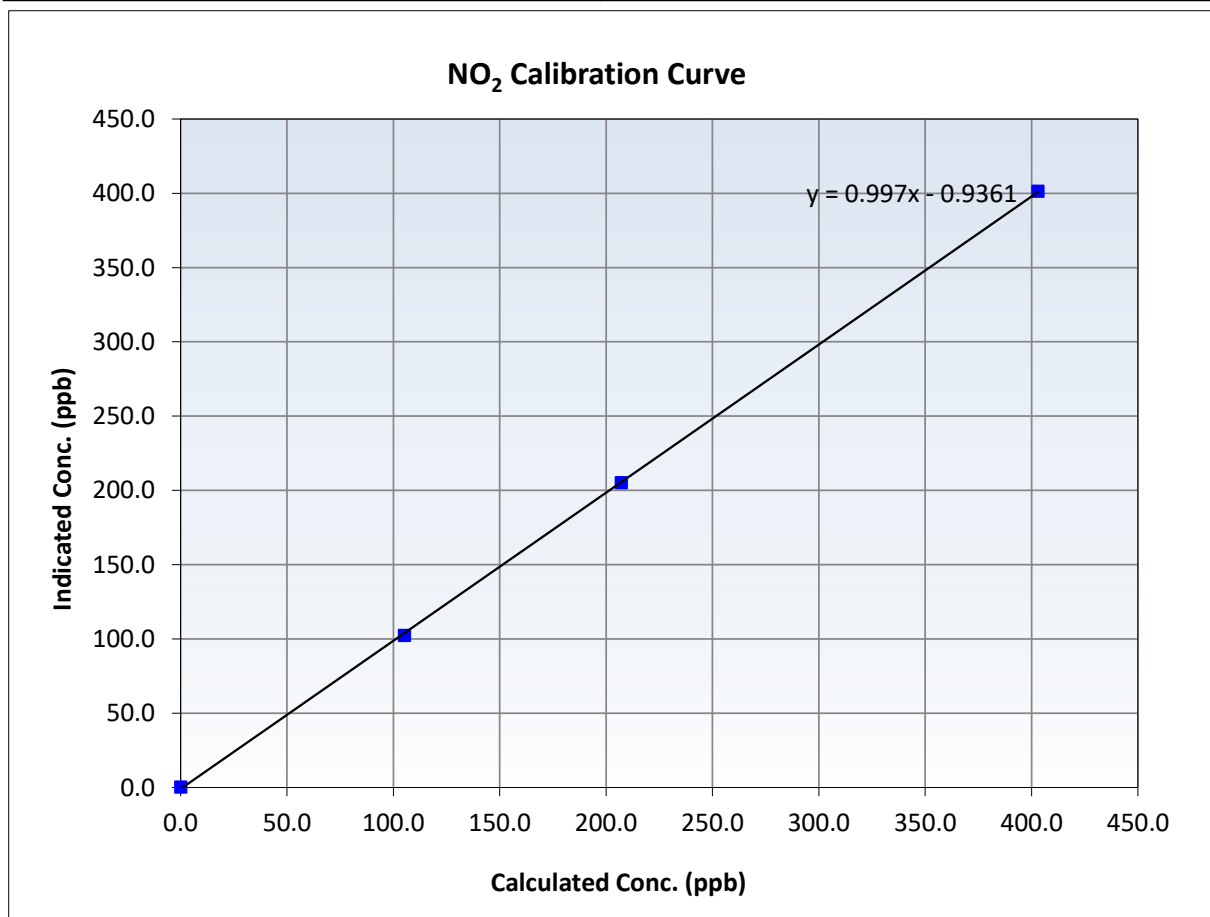
NO₂ Calibration Summary

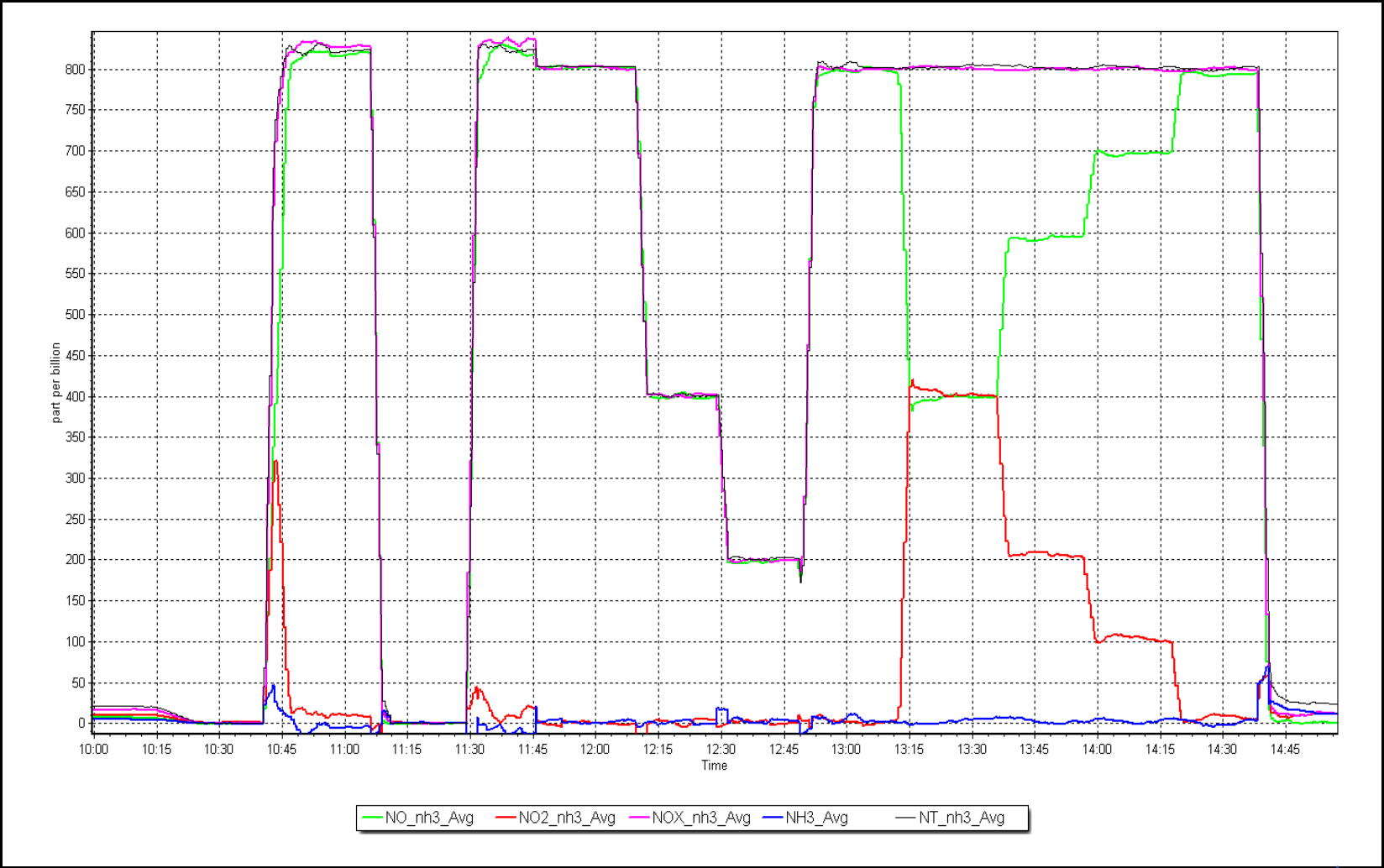
Station Information

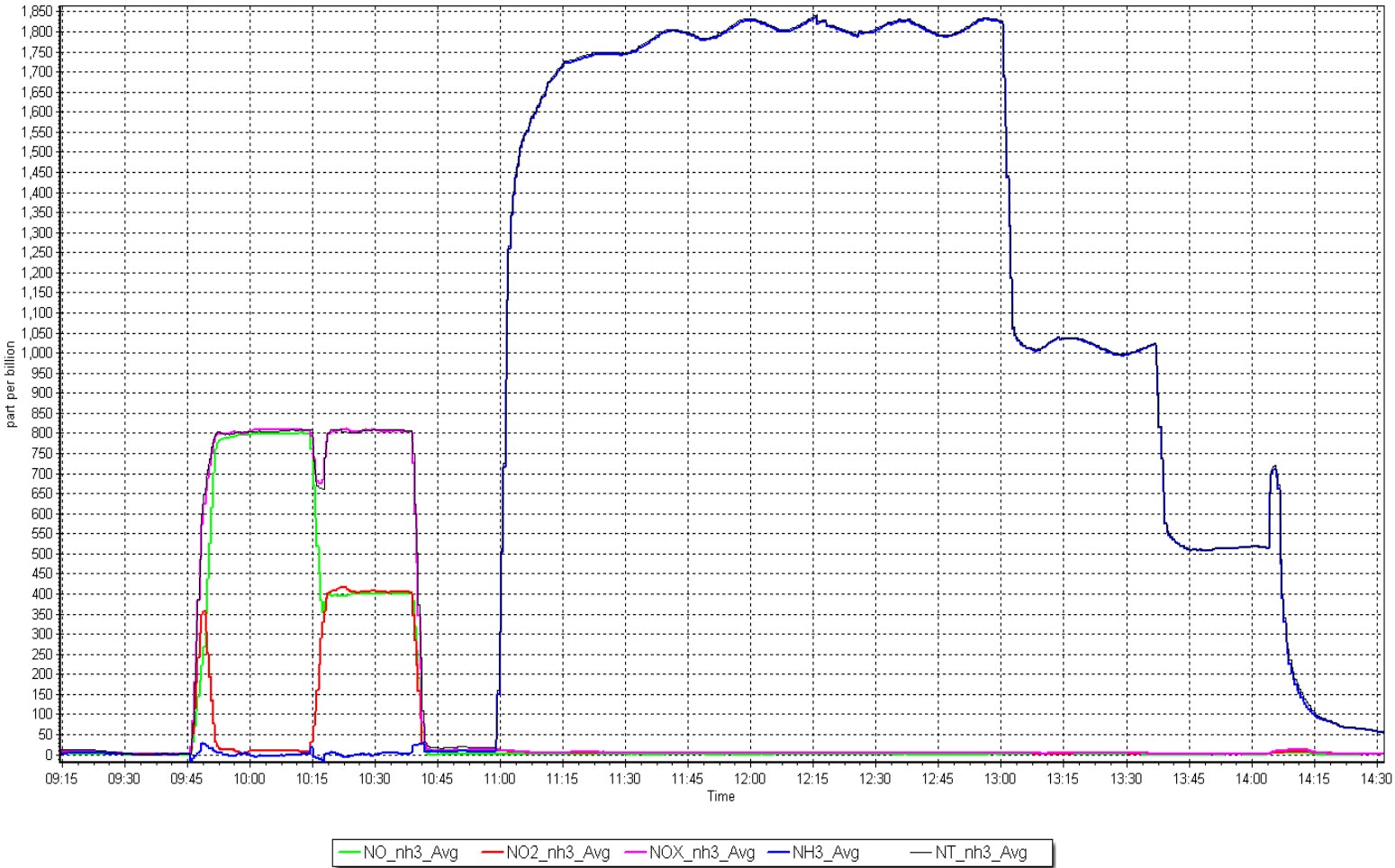
Calibration Date:	August 25, 2026	Previous Calibration:	July 27, 2026
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	10:08	End Time (MST):	14:43
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999954	≥ 0.995
403.0	401.4	1.0040	Slope	0.996970	0.90 - 1.10
207.2	205.3	1.0093	Intercept	-0.936088	+/-20
105.2	102.5	1.0264			









WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS04 BUFFALO VIEWPOINT AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Buffalo Viewpoint
Calibration Date: August 5, 2026
Start time (MST): 9:30
Reason: Routine

Station number: AMS 04
Last Cal Date: July 28, 2026
End time (MST): 14:45

Calibration Standards

Cal Gas Concentration: 50.26 ppm
Cal Gas Cylinder #: CC250460
Removed Cal Gas Conc: 50.06 ppm
Removed Gas Cyl #: CC147416
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701

Cal Gas Exp Date: April 15, 2034
Rem Gas Exp Date: January 5, 2029
Diff between cyl: -1.6%
Serial Number: 3808
Serial Number: 362

Analyzer Information

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

Serial Number: 1410661331

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000200	0.998971	Backgd or Offset:	1.6	1.6
Calibration intercept:	1.460000	1.306334	Coeff or Slope:	1.002	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	4920	79.7	801.2	797.5	1.005
Baseline Corr As found:	810.4	Previous response	802.6	*% 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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4920	79.7	801.2	801.0	1.000
Mid point	4960	39.8	400.1	401.8	0.996
Low point	4980	19.9	200.0	202.2	0.989
As left zero	5000	0.0	0.0	0.1	----
As left span	4920	79.7	801.2	800.2	1.001
Average Correction Factor:					0.995

Notes: Calibrations gas changed out. No adjustments needed.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

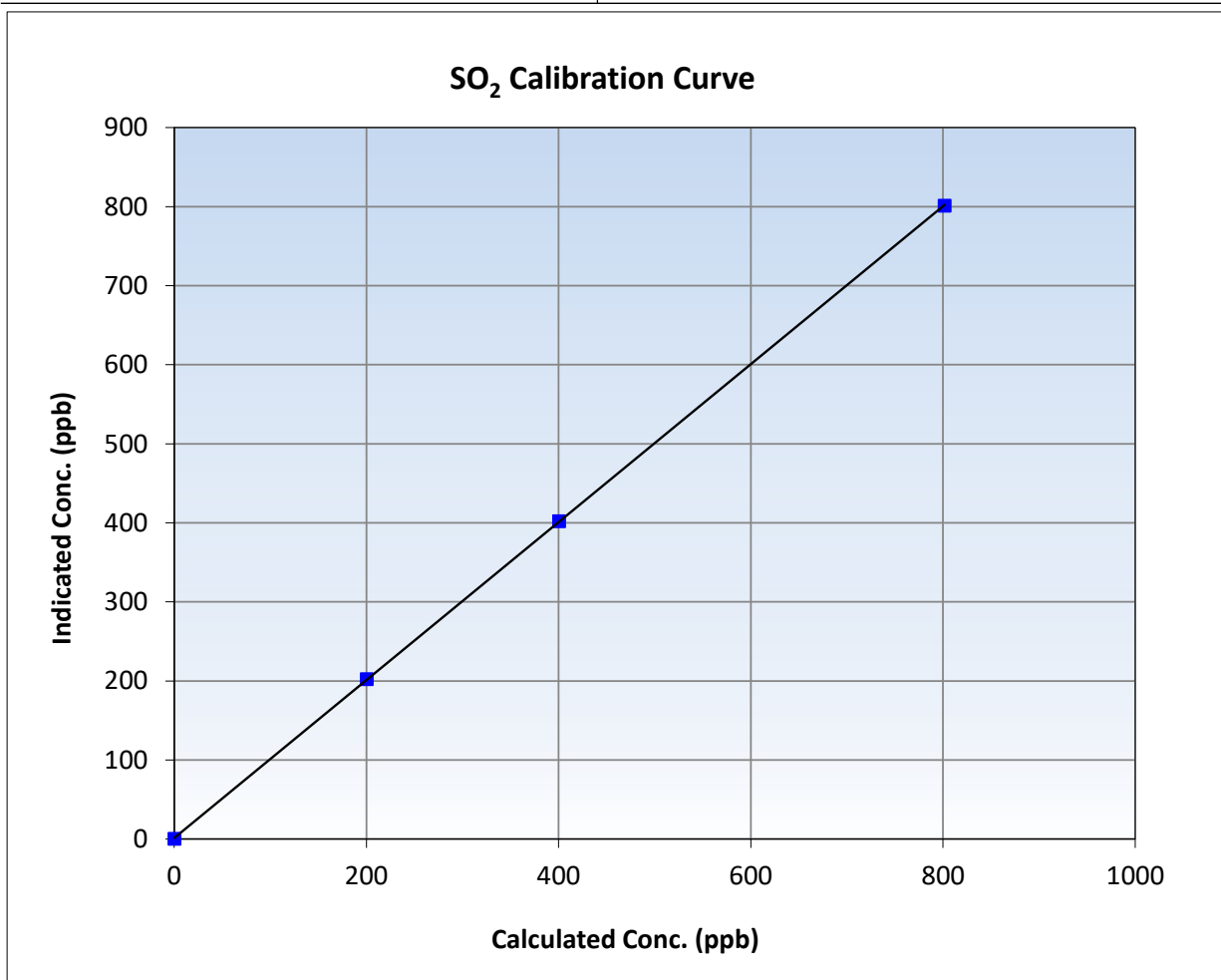
SO₂ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 28, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:30	End Time (MST):	14:45
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1410661331

Calibration Data

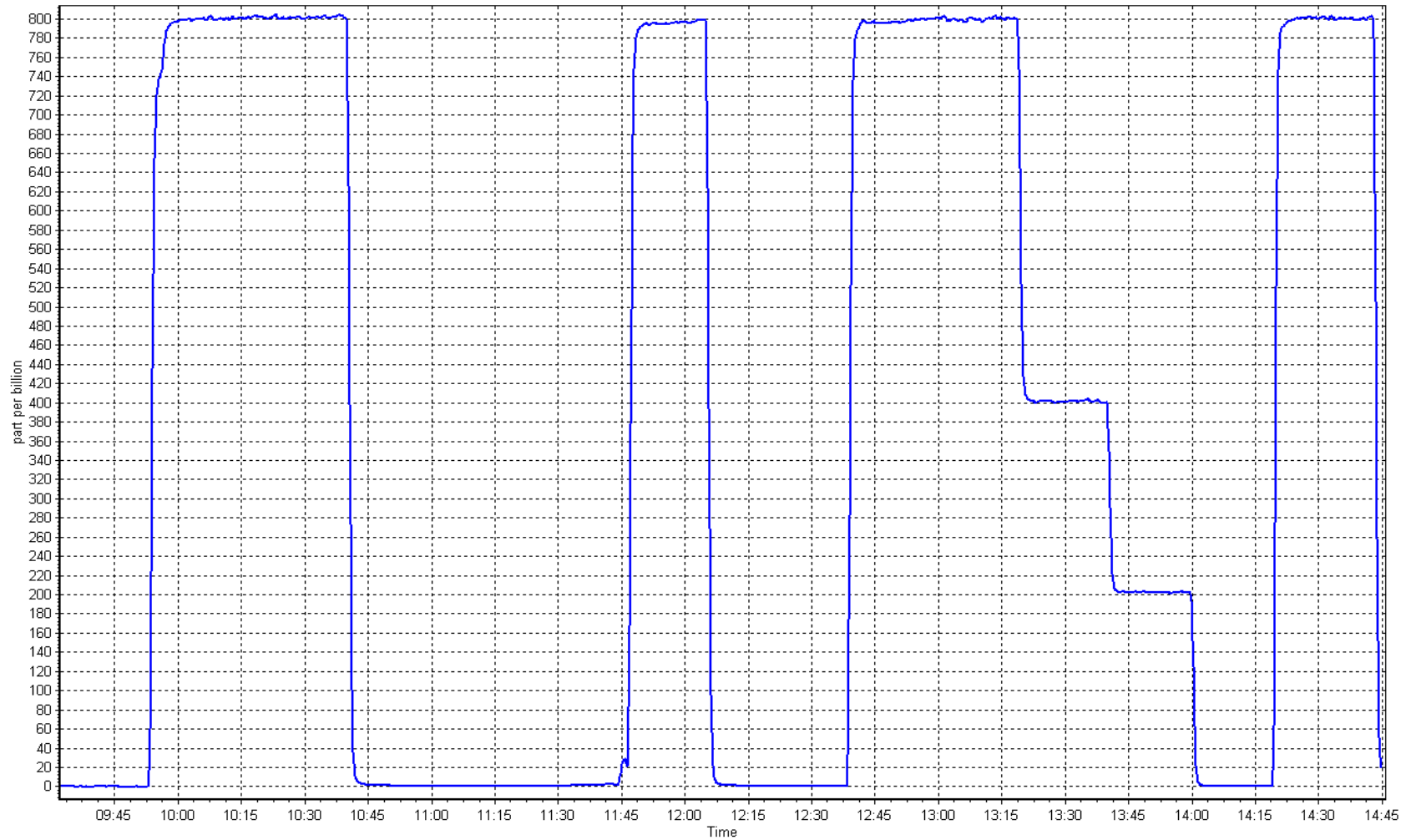
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999989	≥0.995
801.2	801.0	1.0002	Slope	0.998971	0.90 - 1.10
400.1	401.8	0.9957	Intercept	1.306334	+/-30
200.0	202.2	0.9893			



SO2 Calibration Plot

Date: August 5, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Buffalo Viewpoint
Calibration Date: August 10, 2026
Start time (MST): 10:17
Reason: Routine

Station number: AMS 04
Last Cal Date: July 6, 2026
End time (MST): 15:19

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:	1.002149	0.994288	Backgd or Offset:	2.12
Calibration intercept:	-0.141790	-0.041718	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	0.1	----
As found High point	4917	83.3	80.0	79.2	1.011
As found Mid point	4958	41.7	40.0	39.8	1.008
As found Low point	4979	20.8	20.0	19.7	1.019
New cylinder response					
Baseline Corr As found:	79.1	Prev response:	79.99	*% change:	-1.1%
Baseline Corr 2nd AF pt:	39.7	AF Slope:	0.990004	AF Intercept:	0.058173
Baseline Corr 3rd AF pt:	19.6	AF Correlation:	0.999991	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4917	83.3	80.0	79.5	1.006
Mid point	4958	41.7	40.0	39.7	1.008
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	-0.1	----
Date of last scrubber change:		12-Mar-26		Ave Corr Factor	1.008
Date of last converter efficiency test:					

Notes: No adjustment needed.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

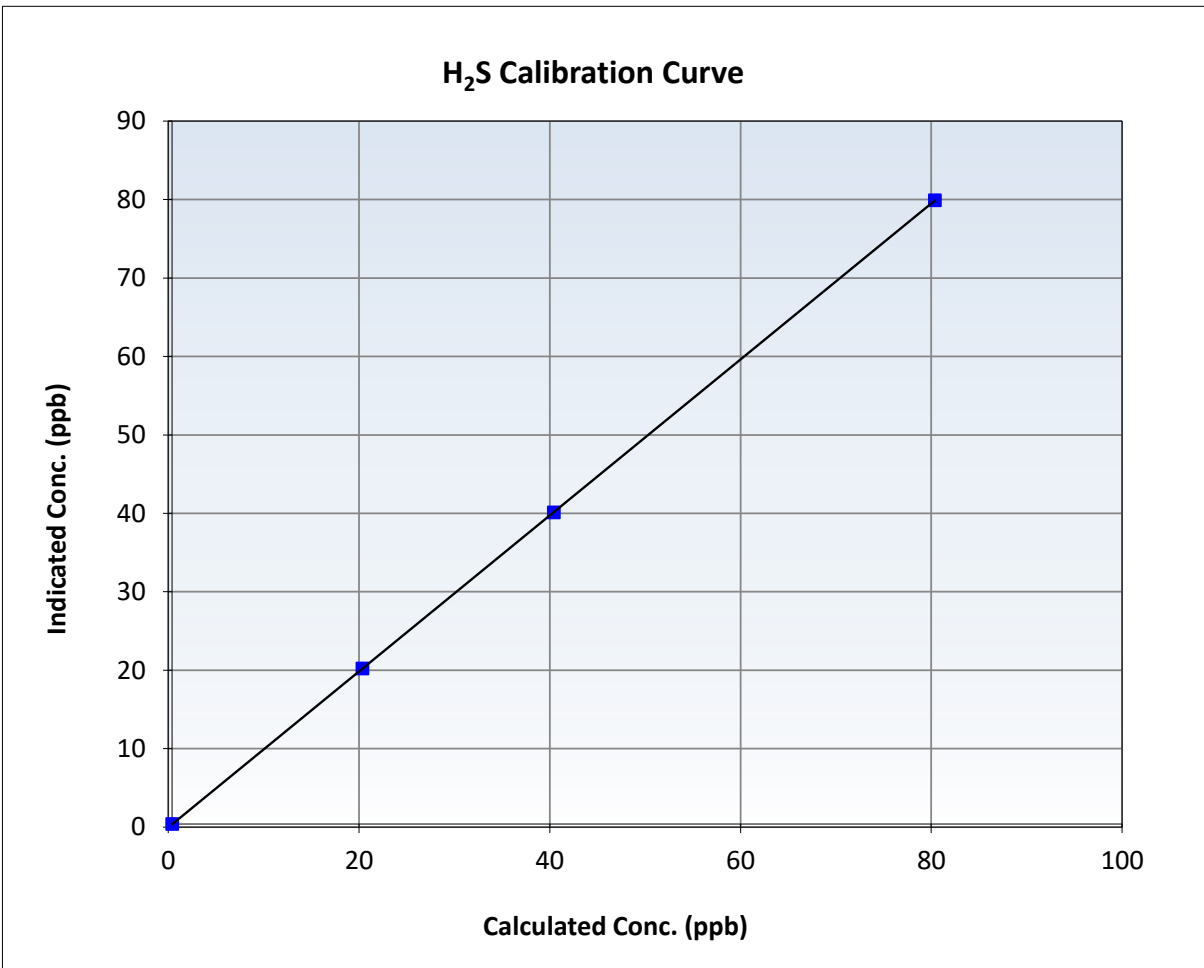
H₂S Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 6, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	10:17	End Time (MST):	15:19
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1008841400

Calibration Data

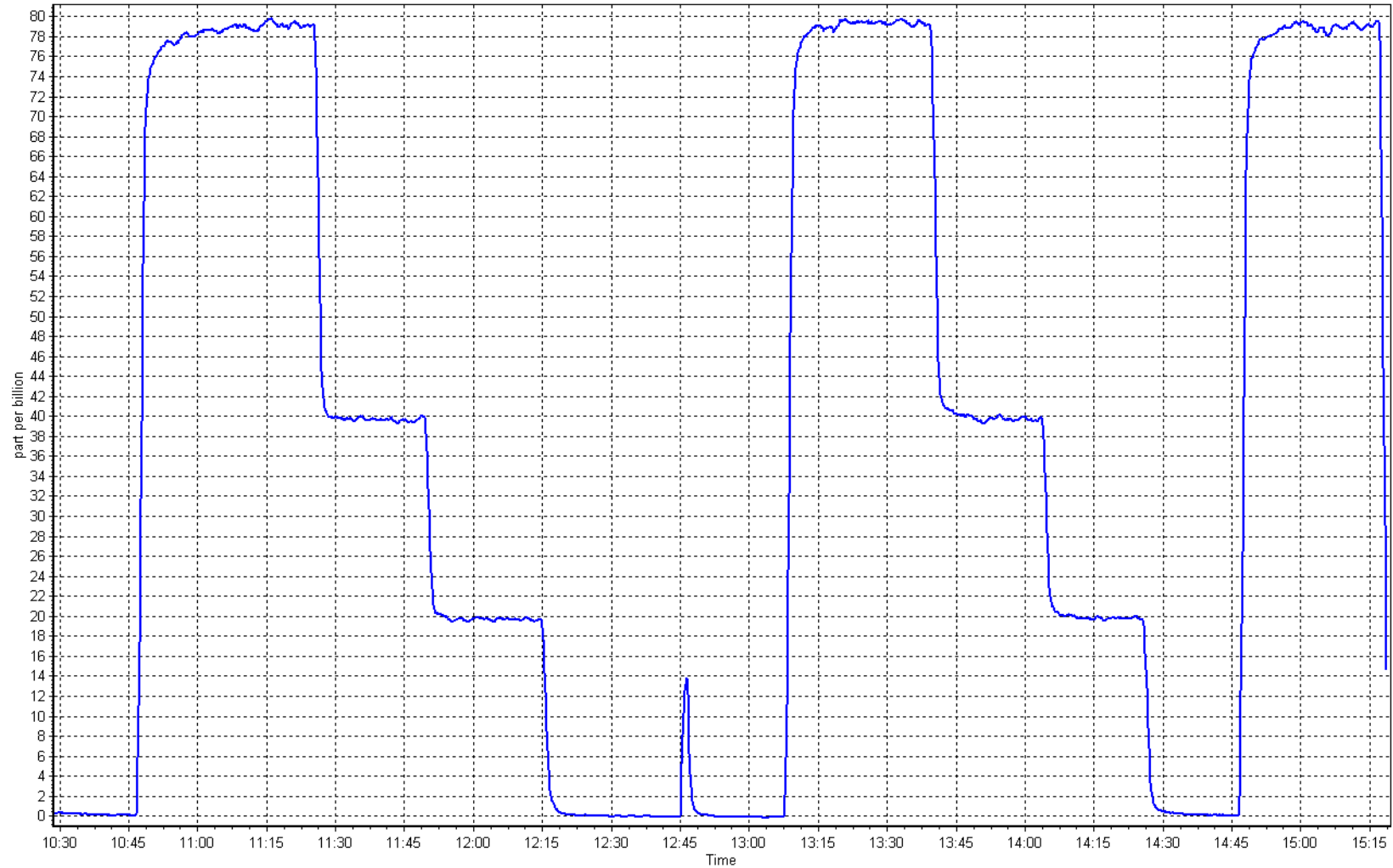
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999998		≥ 0.995
80.0	79.5	1.0058	Slope	0.994288		0.90 - 1.10
40.0	39.7	1.0084	Intercept	-0.041718		+/-3
20.0	19.8	1.0085				



H₂S Calibration Plot

Date: August 10, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Buffalo Viewpoint
Calibration Date: August 5, 2026
Start time (MST): 9:30
Reason: Routine

Station number: AMS 04
Last Cal Date: July 28, 2026
End time (MST): 14:45

Calibration Standards

Gas Cert Reference:	CC250460	Cal Gas Expiry Date:	April 15, 2034
CH ₄ Cal Gas Conc.	500.0 ppm	CH ₄ Equiv Conc.	1056.1 ppm
C ₃ H ₈ Cal Gas Conc.	202.2 ppm		
Removed Gas Cert:	CC147416	Removed Gas Expiry:	January 5, 2029
Removed CH ₄ Conc.	498.9 ppm	CH ₄ Equiv Conc.	1070.9 ppm
Removed C ₃ H ₈ Conc.	208.0 ppm	Diff between cyl (THC):	1.7%
Diff between cyl (CH ₄):	-0.5%	Diff between cyl (NM):	3.7%
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>
CH ₄ SP Ratio:	2.44E-04	2.45E-04	NMHC SP Ratio:	4.74E-05
CH ₄ Retention time:	11.4	11.4	NMHC Peak Area:	192940
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	17.22	0.995
As found Mid point					
As found Low point					
New cylinder response	4920	79.7	16.83	17.21	0.978
Baseline Corr AF:	17.22	Prev response	17.15	*% 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	4920	79.7	16.83	16.82	1.001
Mid point	4960	39.8	8.41	8.44	0.996
Low point	4980	19.9	4.20	4.22	0.996
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.7	16.83	16.86	0.999
Average Correction Factor					0.998

Notes:

Calibration gas and N2 cylinder changed out. Span adjusted.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	80.0	9.15	9.17	0.998
As found Mid point					
As found Low point					
New cylinder response	4920	79.7	8.86	9.22	0.961
Baseline Corr AF:	9.17	Prev response	9.12	*% change	0.5%
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	79.7	8.86	8.84	1.003
Mid point	4960	39.8	4.43	4.45	0.995
Low point	4980	19.9	2.21	2.22	0.996
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.7	8.86	8.87	1.000
Average Correction Factor					0.998

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	80.0	7.98	8.04	0.992
As found Mid point					
As found Low point					
New cylinder response	4920	79.7	7.97	7.99	0.998
Baseline Corr AF:	8.04	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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.7	7.97	7.98	0.998
Mid point	4960	39.8	3.98	3.99	0.997
Low point	4980	19.9	1.99	2.00	0.997
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.7	7.97	8.00	0.997
Average Correction Factor					0.997

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	1.000620	0.999217
THC Cal Offset:	0.006800	0.015736
CH ₄ Cal Slope:	1.005441	1.001686
CH ₄ Cal Offset:	-0.001800	0.002454
NMHC Cal Slope:	0.995842	0.996984
NMHC Cal Offset:	0.009400	0.013082

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

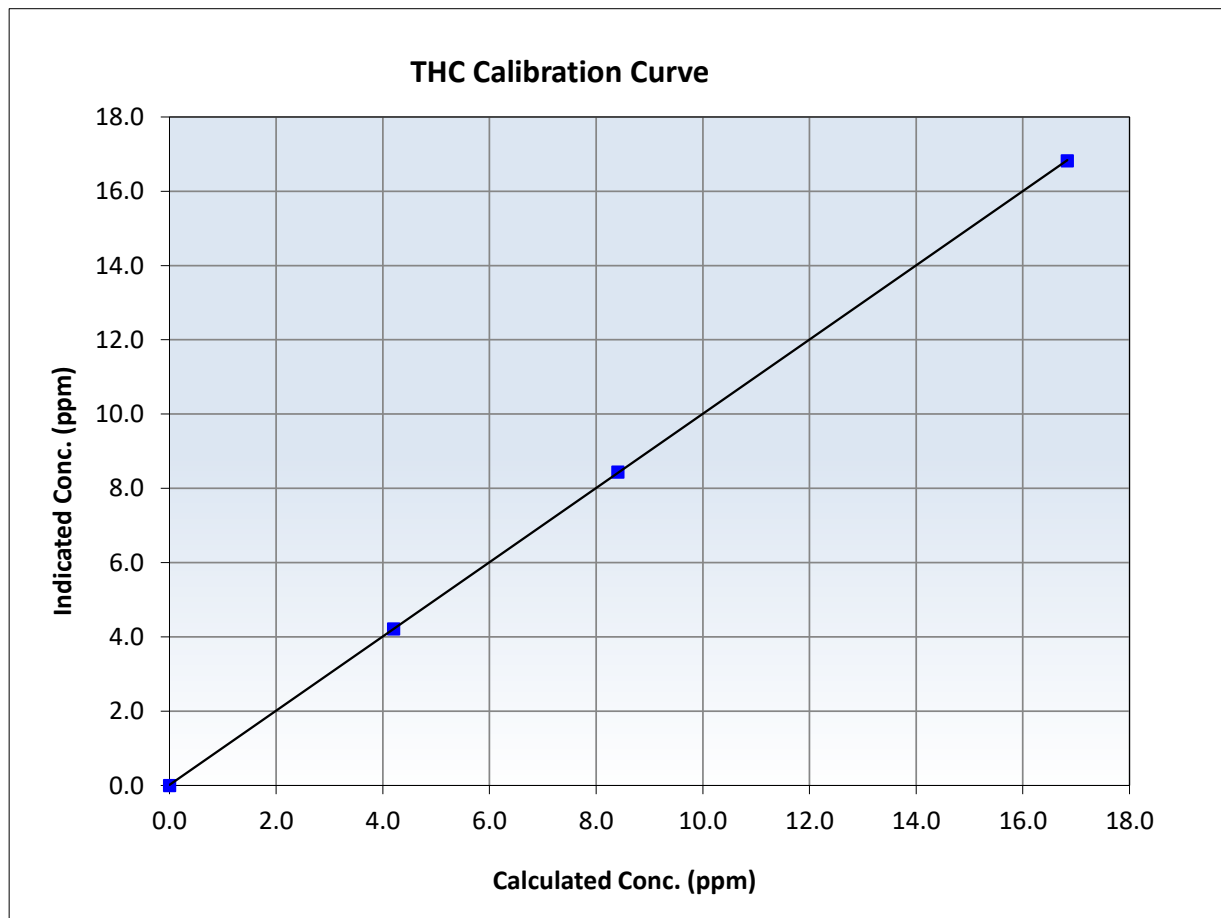
THC Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 28, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:30	End Time (MST):	14:45
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999993	≥ 0.995
16.83	16.82	1.0007	Slope	0.999217	$0.90 - 1.10$
8.41	8.44	0.9958	Intercept	0.015736	± 0.5
4.20	4.22	0.9962			





Wood Buffalo Environmental Association

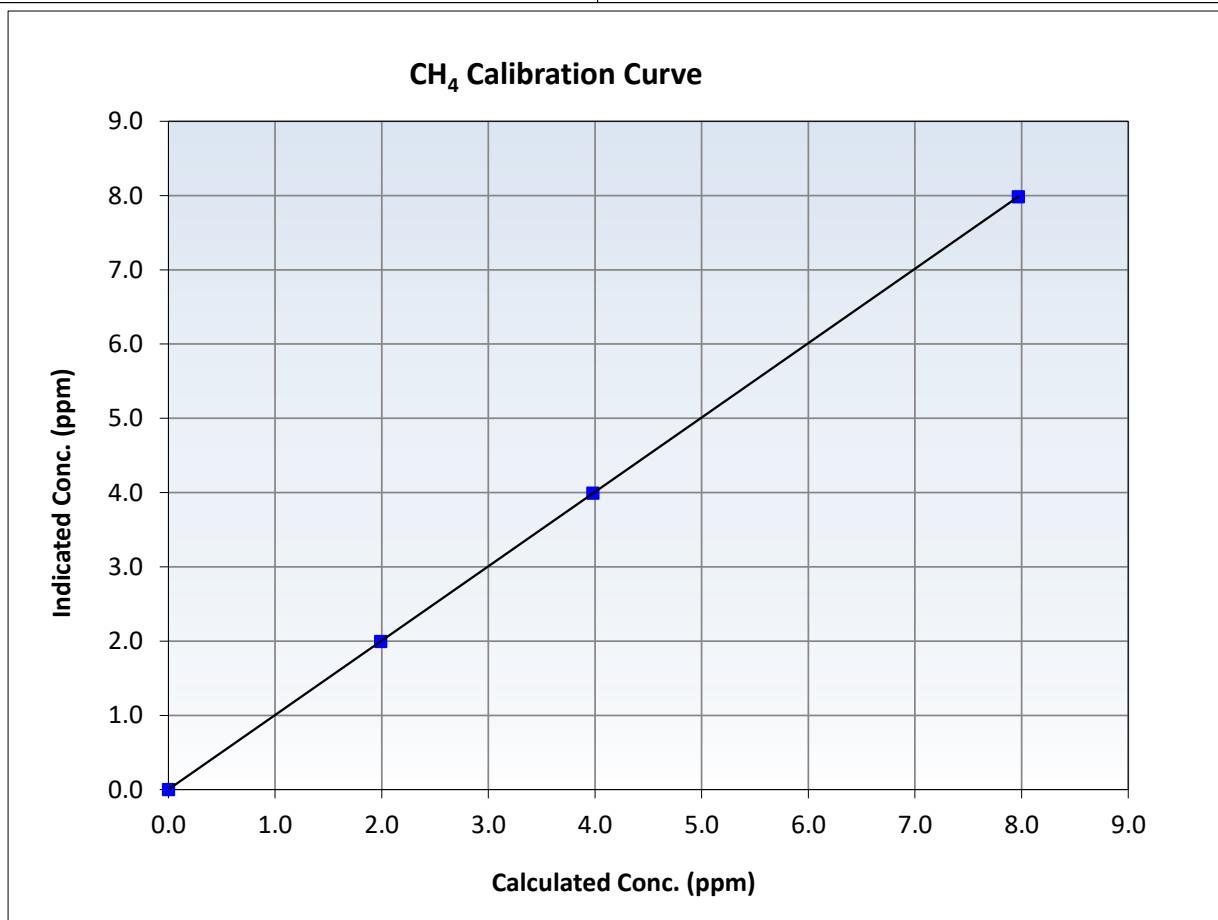
CH₄ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 28, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:30	End Time (MST):	14:45
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999999		≥0.995
7.97	7.98	0.9983	Slope	1.001686		0.90 - 1.10
3.98	3.99	0.9965	Intercept	0.002454		+/-0.5
1.99	2.00	0.9970				





Wood Buffalo Environmental Association

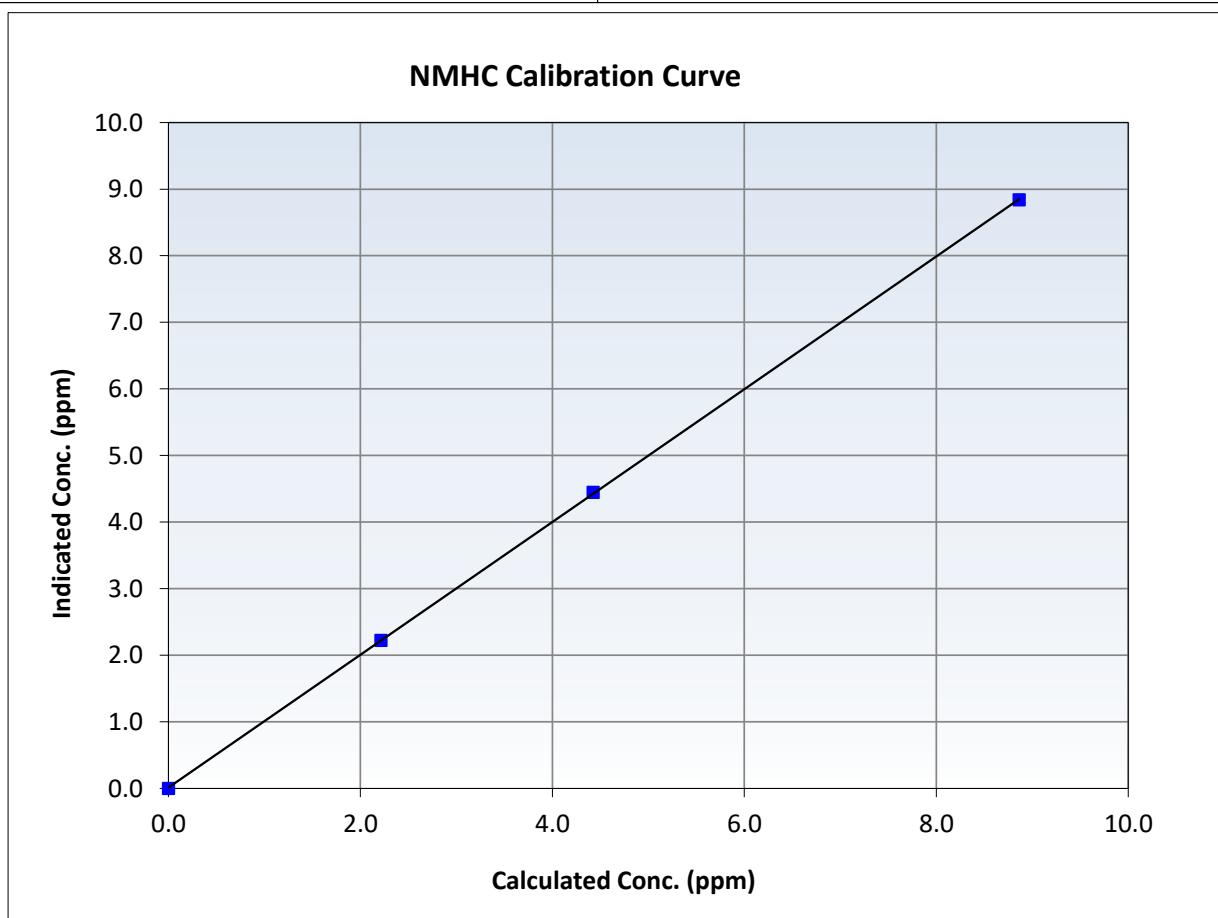
NMHC Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 28, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:30	End Time (MST):	14:45
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

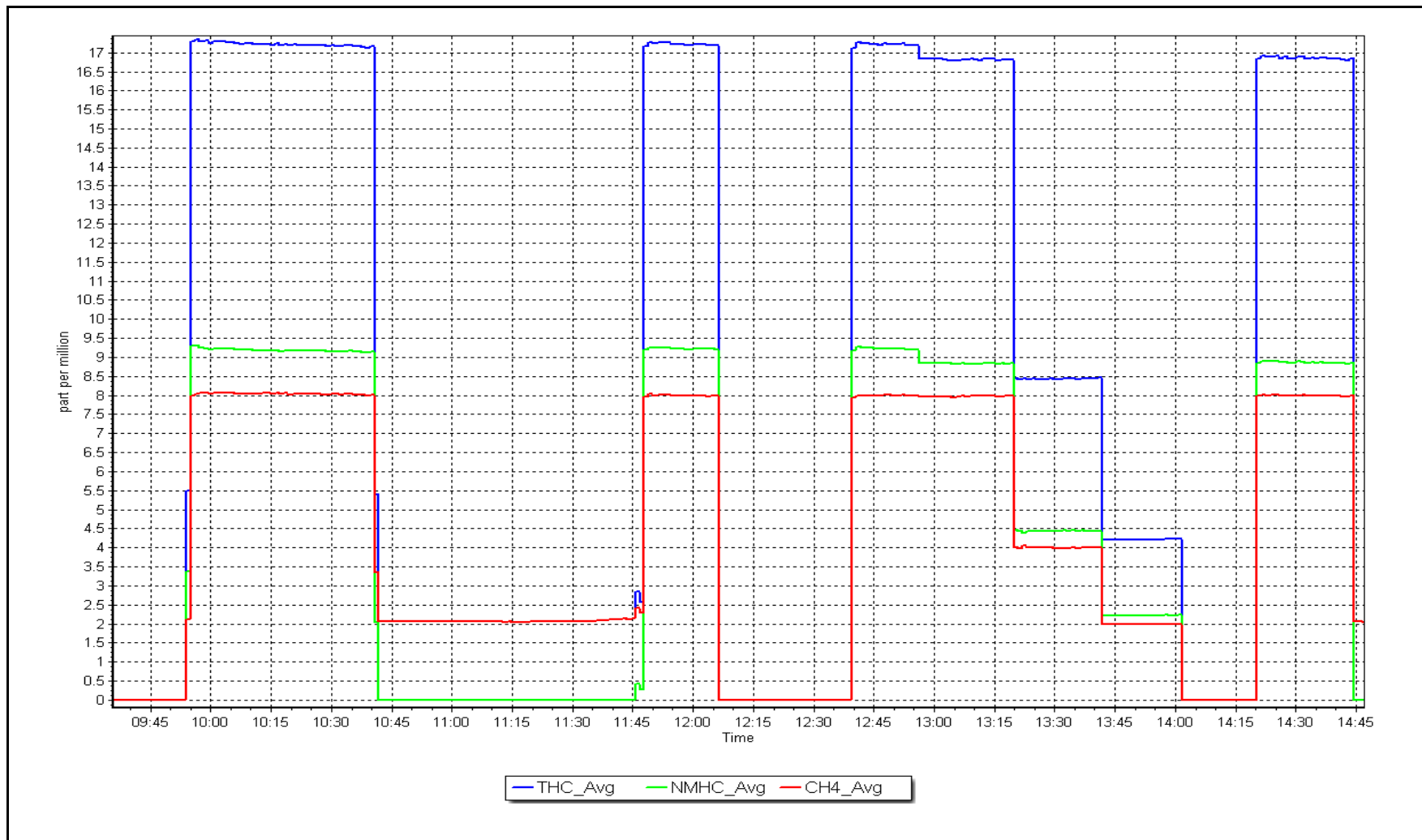
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999982	<i>≥0.995</i>
8.86	8.84	1.0028	Slope	0.996984	<i>0.90 - 1.10</i>
4.43	4.45	0.9954	Intercept	0.013082	<i>+/-0.5</i>
2.21	2.22	0.9956			



NMHC Calibration Plot

Date: August 5, 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: August 12, 2026
Last Cal Date: July 17, 2026
Start time (MST): 9:50
End time (MST): 14:58
Reason: Routine

Calibration Standards

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

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-2.8	-1.5	-1.3	----	----
AF High point	4918	81.8	800.0	798.4	1.6	795.6	793.8	1.8	1.0020	1.0039
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 799.6 ppb	NO = 799.3 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.2%	
Baseline Corr 1st pt	NO _x = 798.4 ppb	NO = 795.3 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -0.5%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	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>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.093	1.093	NO bkgnd or offset:	4.7	3.3
NOX coeff or slope:	0.994	0.994	NOX bkgnd or offset:	6.1	3.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	181.4	182.0

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999651	0.998065
NO _x Cal Offset:	-0.113340	0.566610
NO Cal Slope:	1.001643	0.998709
NO Cal Offset:	-0.393814	-0.594281
NO ₂ Cal Slope:	0.997126	1.000986
NO ₂ Cal Offset:	0.162619	0.583668

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	-0.2	-0.1	----	----
High point	4918	81.8	800.0	798.4	1.6	798.4	796.8	1.6	1.0020	1.0020
Mid point	4959	40.9	400.0	399.2	0.8	400.9	398.4	2.5	0.9978	1.0020
Low point	4980	20.4	199.5	199.1	0.4	200.1	197.5	2.5	0.9970	1.0080
As left zero	5000	0.0	0.0	0.2	-0.2	0.1	0.2	-0.1	----	----
As left span	4918	81.8	800.0	403.0	800.0	798.6	403.0	395.6	1.0018	1.0000
Average Correction Factor									0.9989	1.0040

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	794.2	399.9	395.9	396.5	0.9986	100.1%
Mid GPT point	794.2	614.3	181.5	183.0	0.9920	100.8%
Low GPT point	794.2	706.6	89.2	90.3	0.9882	101.2%
Average Correction Factor					0.9929	100.7%

Notes:

Zero adjusted.

Calibration Performed By:

Aswin Sasi Kumar



Wood Buffalo Environmental Association

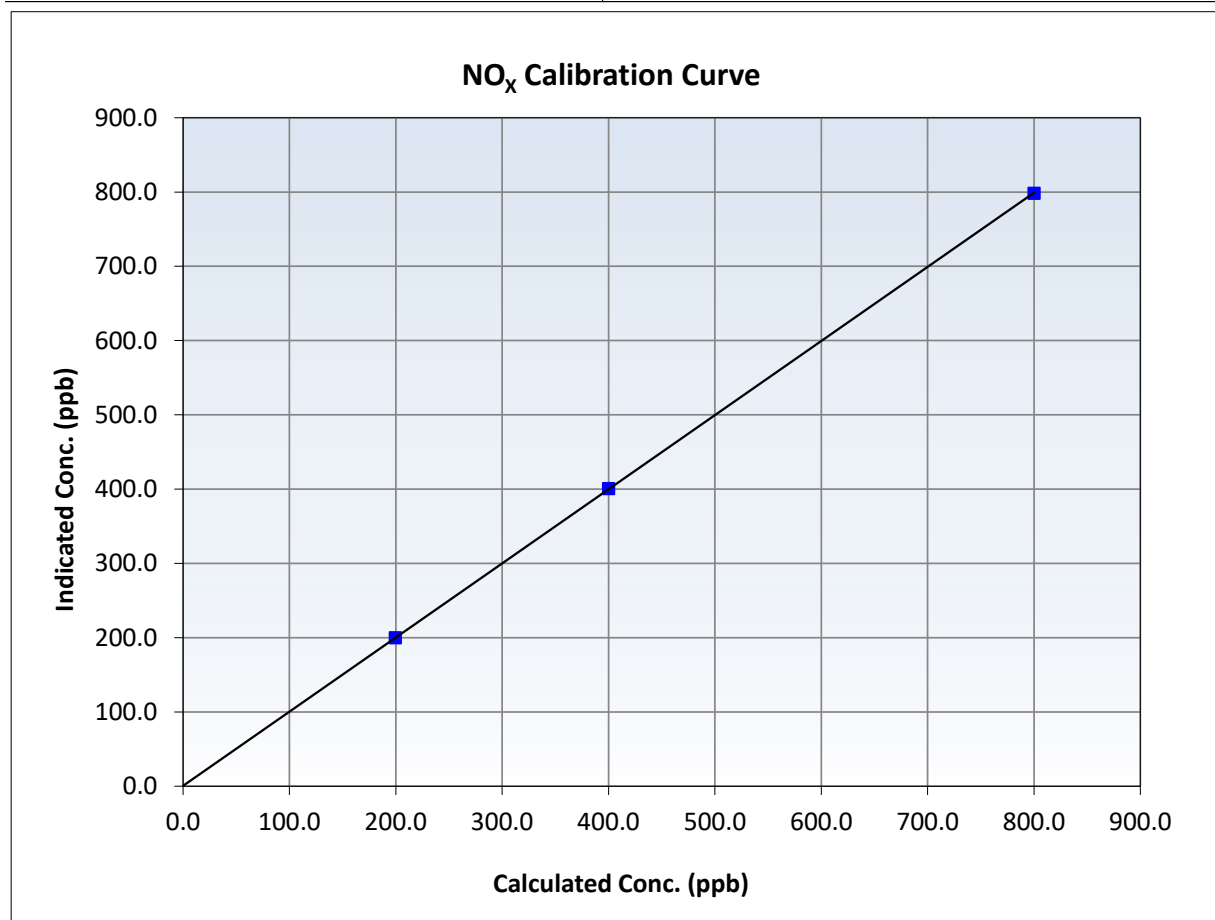
NO_x Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 17, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:50	End Time (MST):	14:58
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

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	0.999993	<i>≥0.995</i>
800.0	798.4	1.0020	Slope	0.998065	<i>0.90 - 1.10</i>
400.0	400.9	0.9978	Intercept	0.566610	<i>+/-20</i>
199.5	200.1	0.9970			





Wood Buffalo Environmental Association

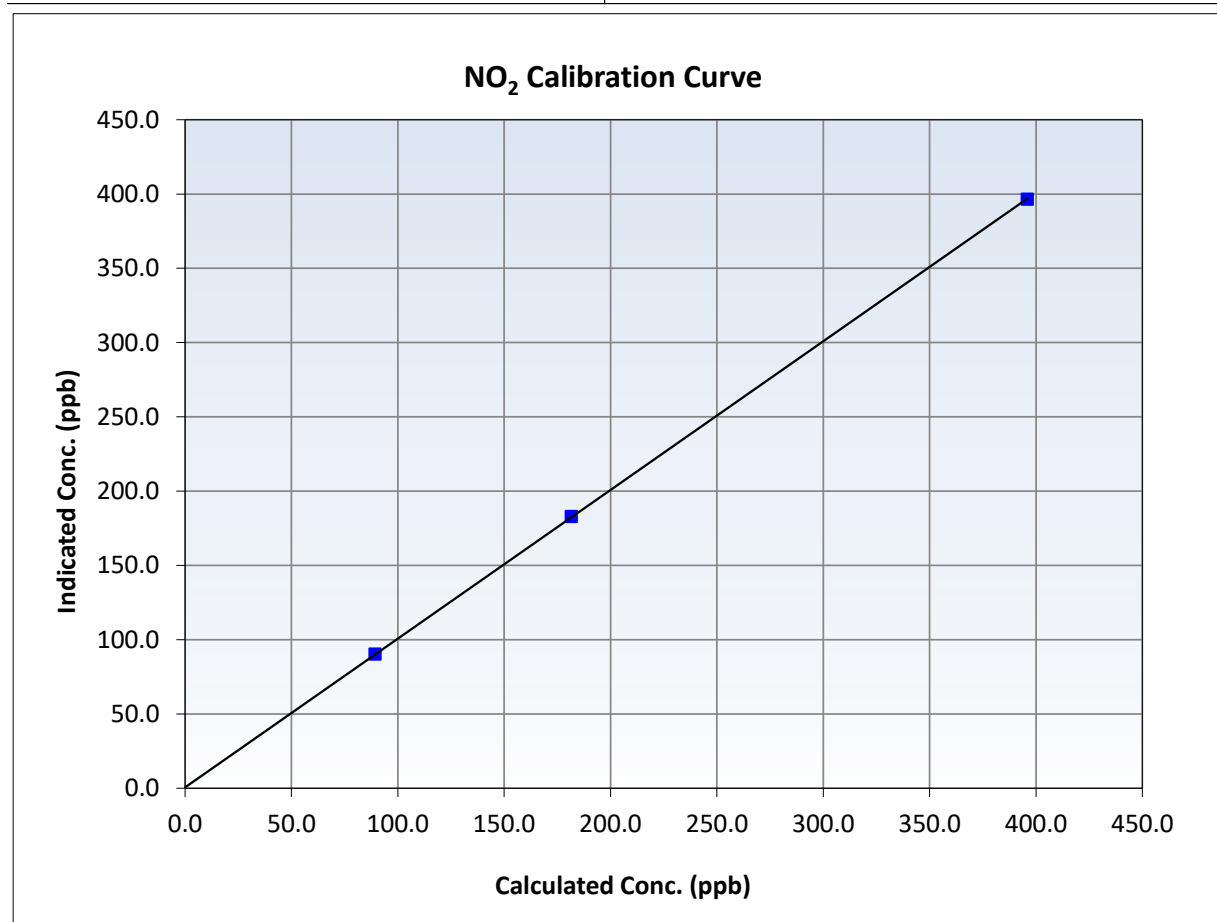
NO₂ Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 17, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:50	End Time (MST):	14:58
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999985	≥0.995
395.9	396.5	0.9986	Slope	1.000986	0.90 - 1.10
181.5	183.0	0.9920	Intercept	0.583668	+/-20
89.2	90.3	0.9882			





Wood Buffalo Environmental Association

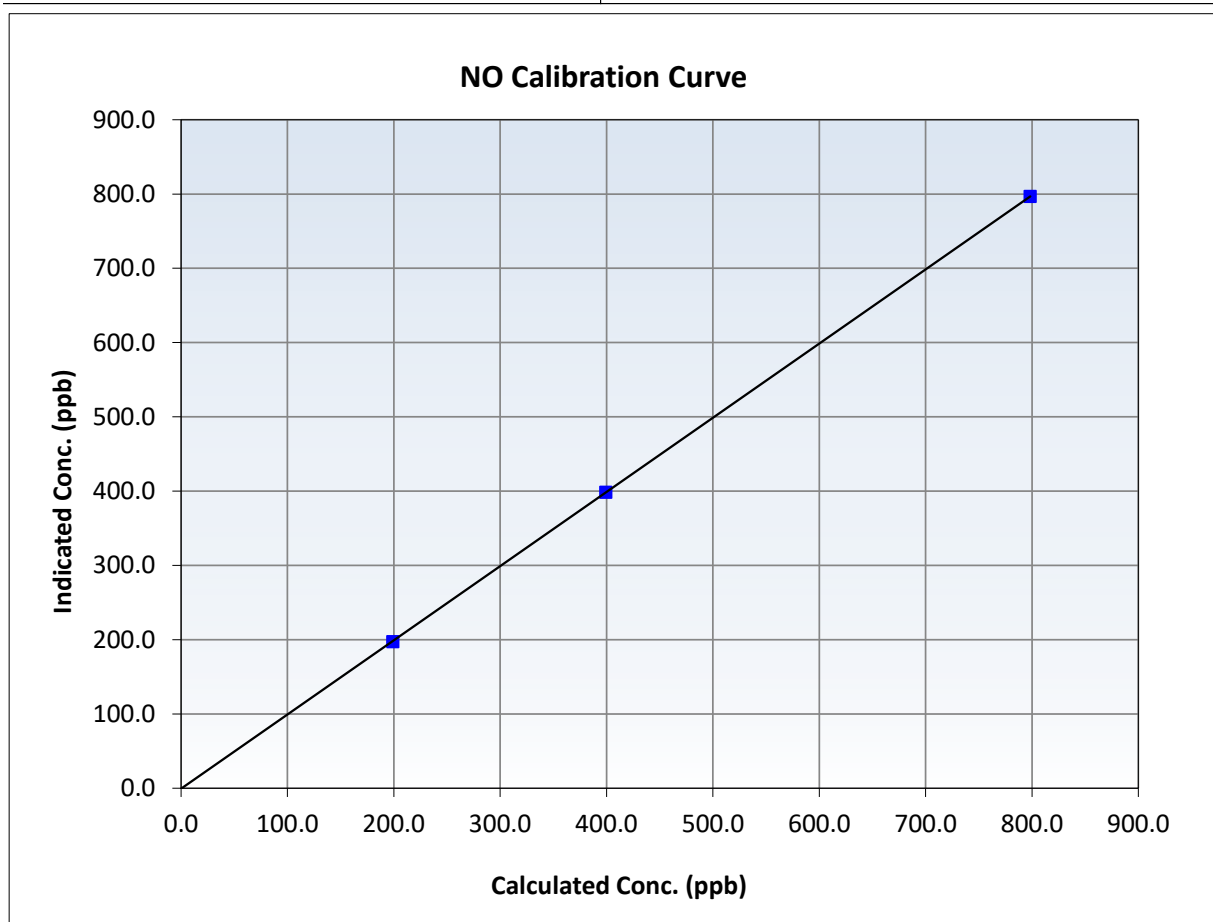
NO Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 17, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:50	End Time (MST):	14:58
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

Calibration Data

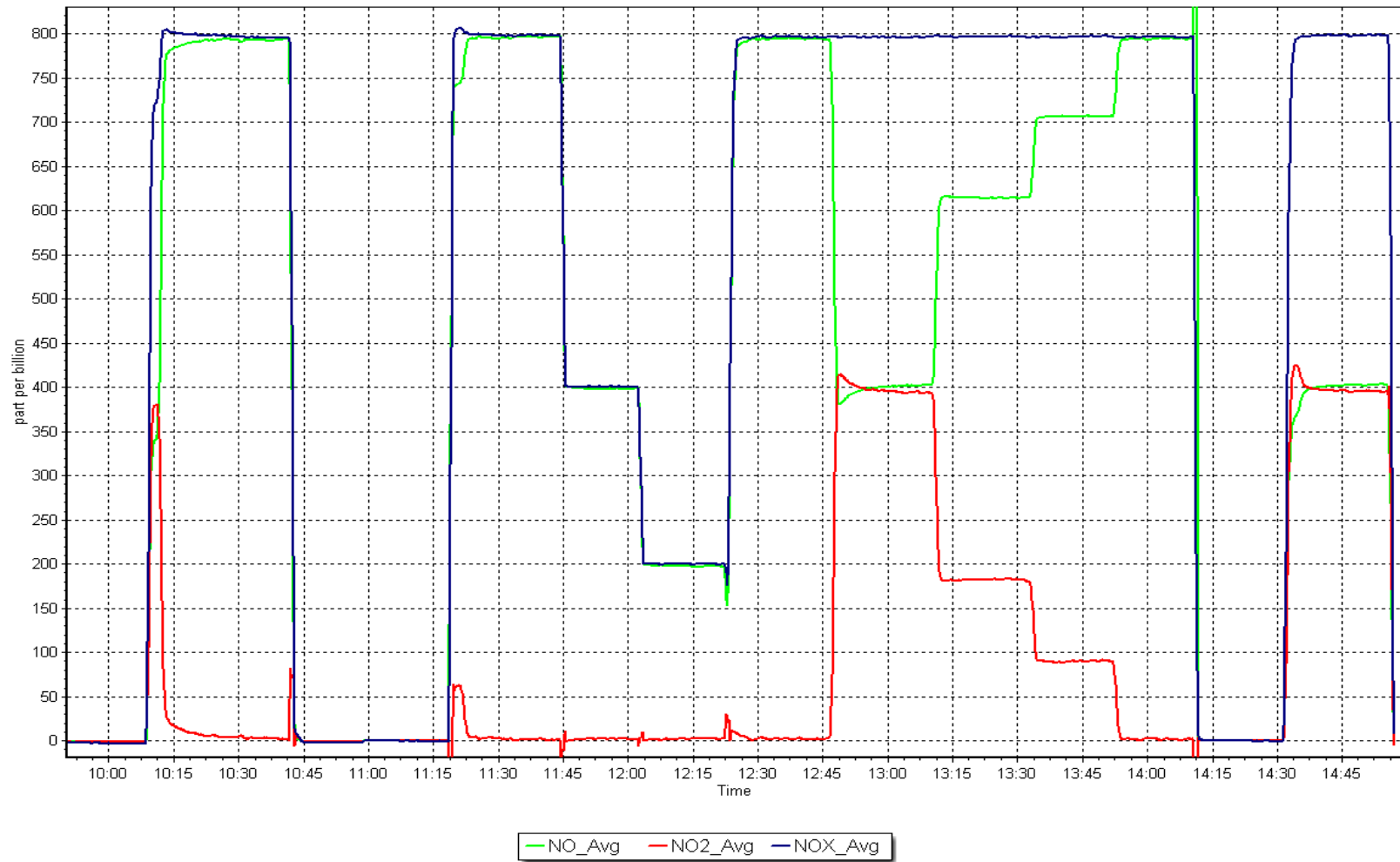
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	-0.2	----	Correlation Coefficient	0.999998	≥ 0.995
798.4	796.8	1.0020	Slope	0.998709	0.90 - 1.10
399.2	398.4	1.0020	Intercept	-0.594281	+/-20
199.1	197.5	1.0080			



NO_x Calibration Plot

Date: August 12, 2026

Location: Buffalo Viewpoint





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Buffalo Viewpoint
Calibration Date: August 20, 2026
Start time (MST): 10:00
Reason: Routine

Station number: AMS 04
Last Cal Date: July 7, 2026
End time (MST): 13:45

Calibration Standards

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

Serial Number: 3808
Serial Number: 362

Analyzer Information

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

Analyzer serial #: 2961

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004629	1.002429	Backgd or Offset:	-0.7	-0.7
Calibration intercept:	0.240000	0.900000	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	0.0	0.0	1.4	----
As found High point	5000	1071.2	400.0	401.4	1.000
As found Mid point					
As found Low point					
Baseline Corr As found:	400.0	Previous response	402.1	*% 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	

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	1072.6	400.0	401.5	0.996
Mid point	5000	864.1	200.0	202.0	0.990
Low point	5000	742.1	100.0	101.4	0.986
As left zero	5000	0.0	0.0	-0.1	----
As left span	5000	1072.4	400.0	405.2	0.987
Average Correction Factor					0.991

Notes: No adjustments needed.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

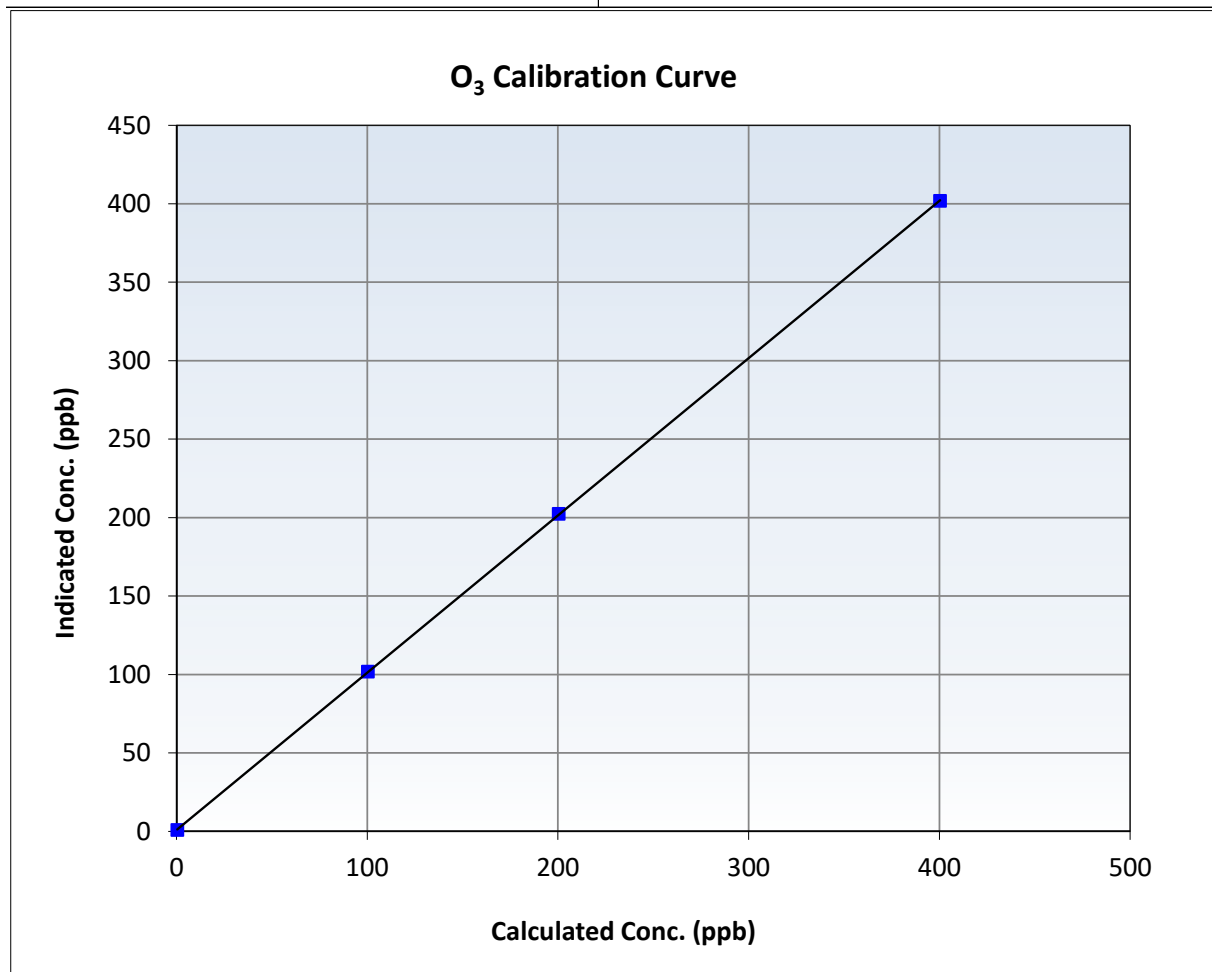
O₃ Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 7, 2026
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	10:00	End Time (MST):	13:45
Analyzer make:	Teledyne API T400	Analyzer serial #:	2961

Calibration Data

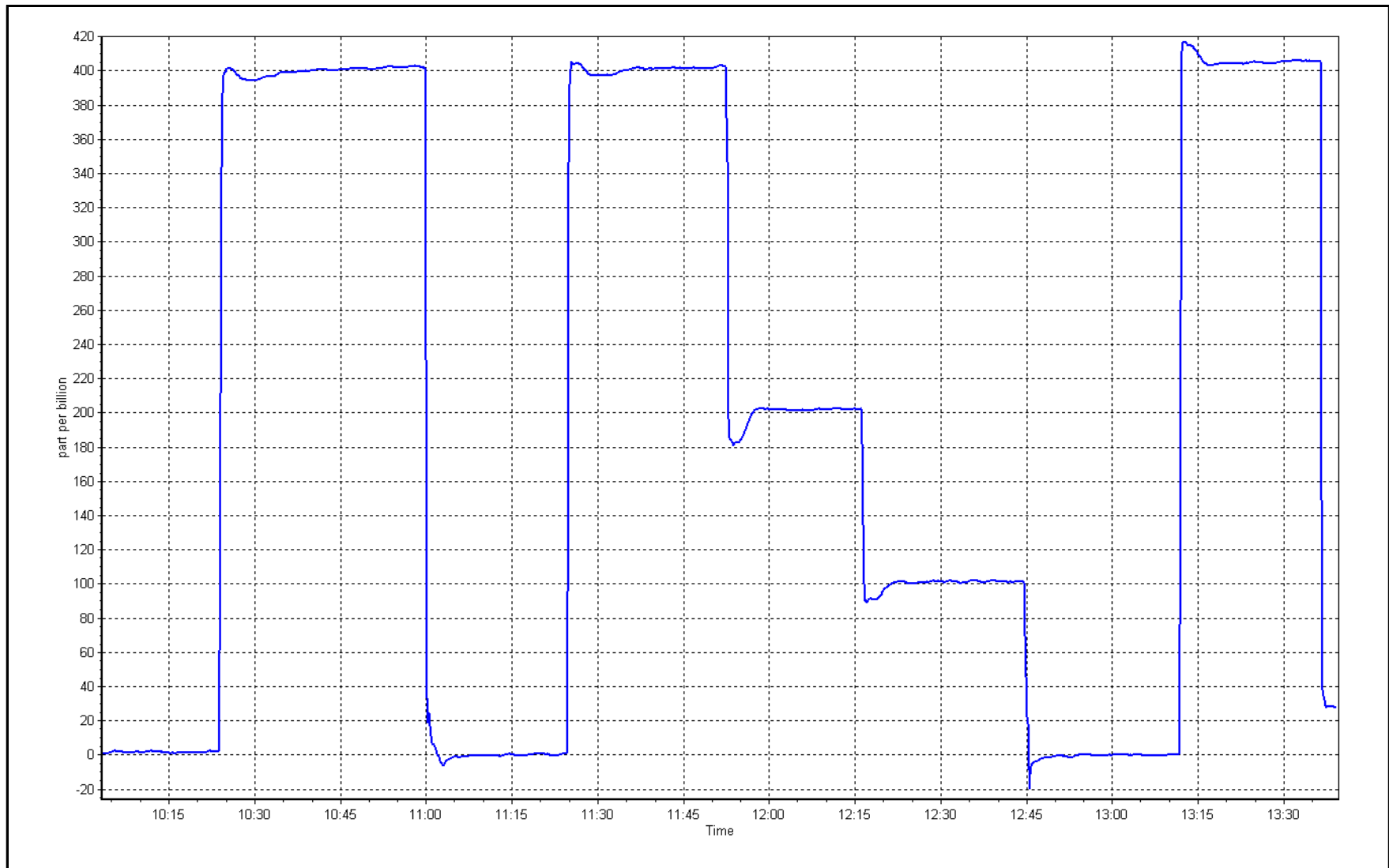
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999991	≥0.995
400.0	401.5	0.9963	Slope	1.002429	0.90 - 1.10
200.0	202.0	0.9901	Intercept	0.900000	+/- 5
100.0	101.4	0.9862			



O₃ Calibration Plot

Date: August 20, 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: August 20, 2026 Last Cal Date: July 31, 2026
Start time (MST): 13:50 End time (MST): 14:20

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)	24.8	23.4	24.8	☐	+/- 2 °C
P (mmHg)	730.7	728.6	730.7	☐	+/- 10 mmHg
Flow (LPM)	4.96	4.94	4.96	☐	+/- 0.25 LPM
PW% (pump)	35	----	35	☐	>80%
Zero Verification	PM w/o HEPA: 21.6		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	N/A	N/A	☐	+/- 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 checks done.

Notes:

Calibration by: Aswin Sasi Kumar



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS05
MANNIX
AUGUST 2026**

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Mannix
Calibration Date: August 19, 2026
Start time (MST): 10:15
Reason: Routine

Station number: AMS 05
Last Cal Date: July 10, 2026
End time (MST): 13:31

Calibration Standards

Cal Gas Concentration: 50.06 ppm
Cal Gas Cylinder #: CC308040
Removed Cal Gas Conc: 50.06 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: October 22, 2032
Diff between cyl:
Serial Number: 5470
Serial Number: 361

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 1000 ppb

Serial Number: 1008841399

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000980	1.002135	Backgd or Offset:	11.4	11.4
Calibration intercept:	-0.916881	-1.496464	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	798.6	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	798.6	Previous response	799.8	*% 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	79.9	800.0	801.2	0.998
Mid point	4960	40.0	400.5	398.6	1.005
Low point	4980	20.0	200.2	197.6	1.013
As left zero	5000	0.0	0.0	0.3	----
As left span	4920	79.9	800.0	803.3	0.996
Average Correction Factor:					1.006

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

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

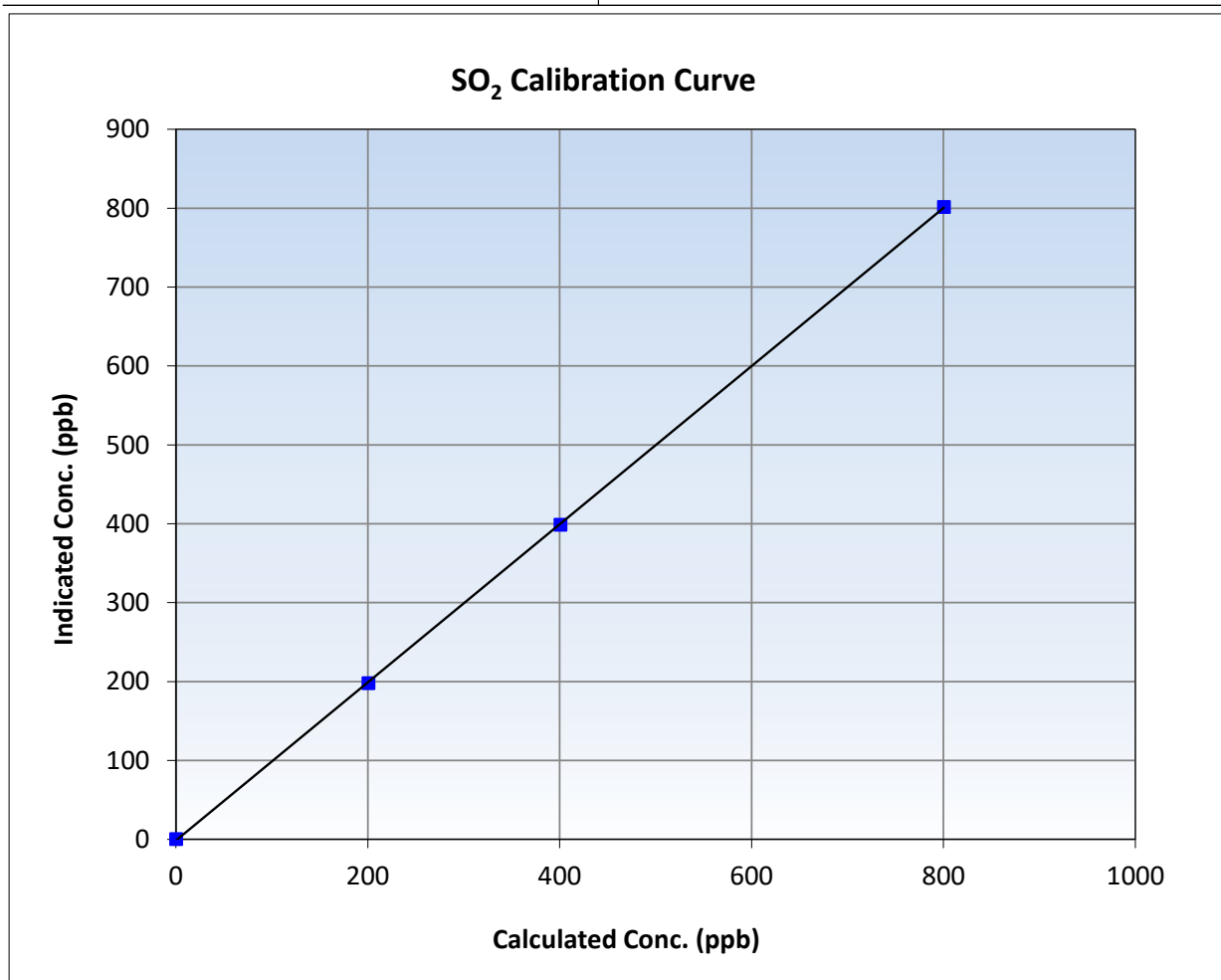
SO₂ Calibration Summary

Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 10, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	10:15	End Time (MST):	13:31
Analyzer make:	Thermo 43i	Analyzer serial #:	1008841399

Calibration Data

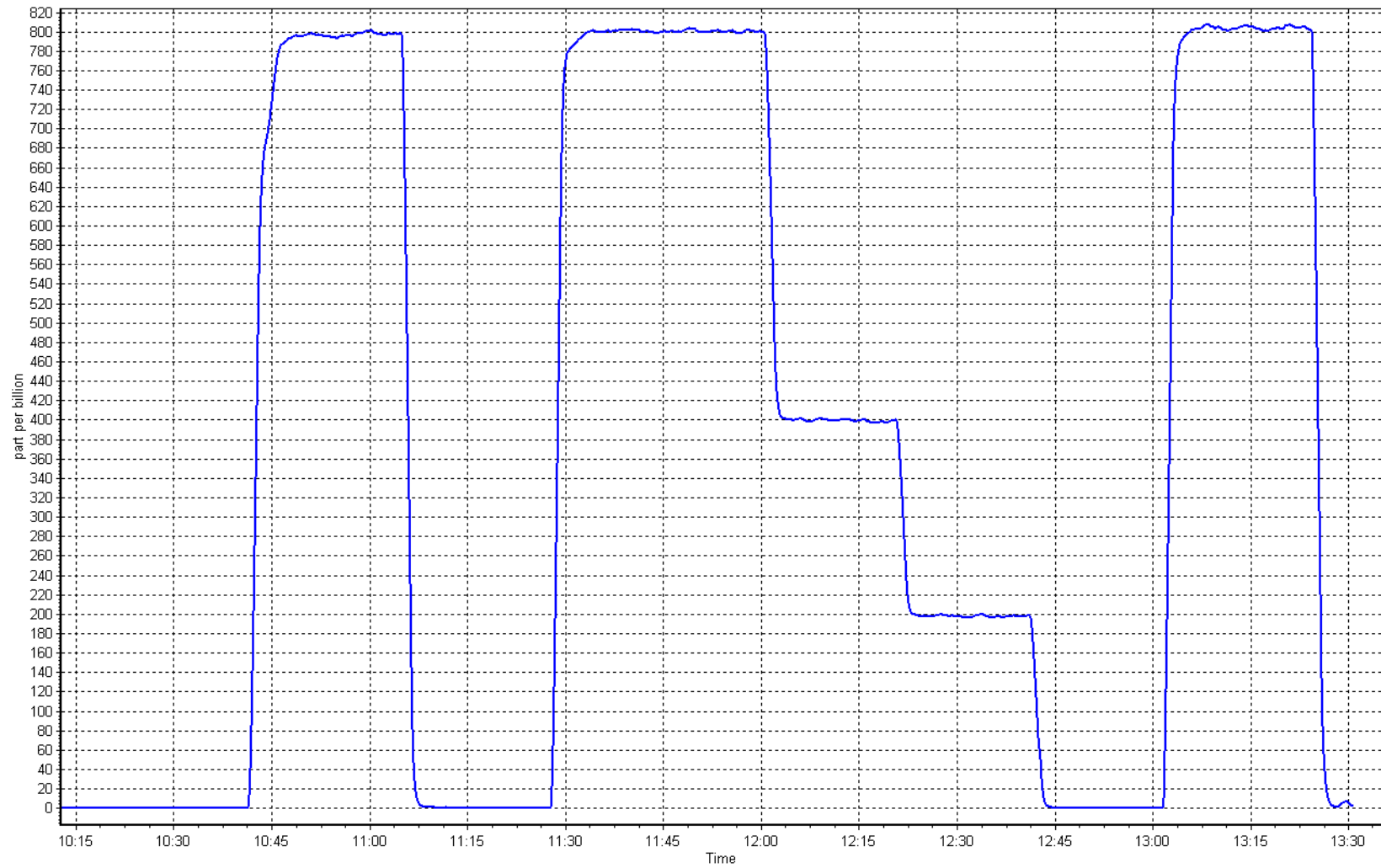
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999977	≥0.995
800.0	801.2	0.9985	Slope	1.002135	0.90 - 1.10
400.5	398.6	1.0047	Intercept	-1.496464	+/-30
200.2	197.6	1.0134			



SO2 Calibration Plot

Date: August 19, 2026

Location: Mannix





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Mannix
Calibration Date: August 21, 2026
Start time (MST): 9:35
Reason: Routine

Station number: AMS 05
Last Cal Date: July 9, 2026
End time (MST): 13:50

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:	0.996400	1.002833	Backgd or Offset:	1.24	1.24
Calibration intercept:	0.182384	0.082274	Coeff or Slope:	1.020	1.020

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.1	----
As found High point	4919	80.6	80.0	80.7	0.992
As found Mid point	4960	40.3	40.0	40.3	0.994
As found Low point	4980	20.2	20.0	20.1	1.002
New cylinder response					
Baseline Corr As found:	80.6	Prev response:	79.86	*% change:	0.9%
Baseline Corr 2nd AF pt:	40.2	AF Slope:	1.008695	AF Intercept:	0.002138
Baseline Corr 3rd AF pt:	20.0	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	0.2	----
High point	4919	80.6	80.0	80.3	0.996
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	79.2	1.010
SO2 Scrubber Check	4920	80.3	803.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	0.997
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

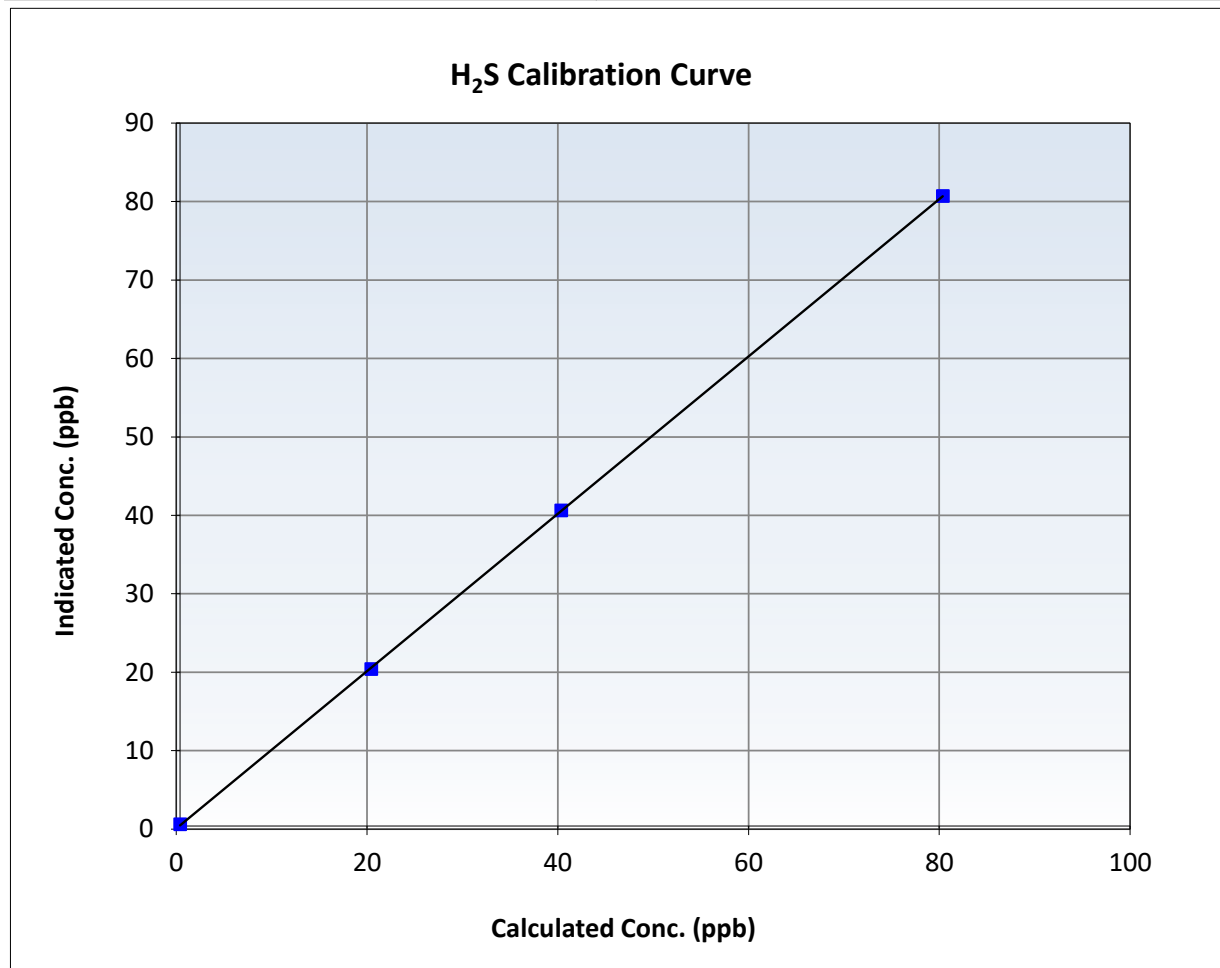
H₂S Calibration Summary

Station Information

Calibration Date:	August 21, 2026	Previous Calibration:	July 9, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	9:35	End Time (MST):	13:50
Analyzer make:	Thermo 43iQ	Analyzer serial #:	1200326169

Calibration Data

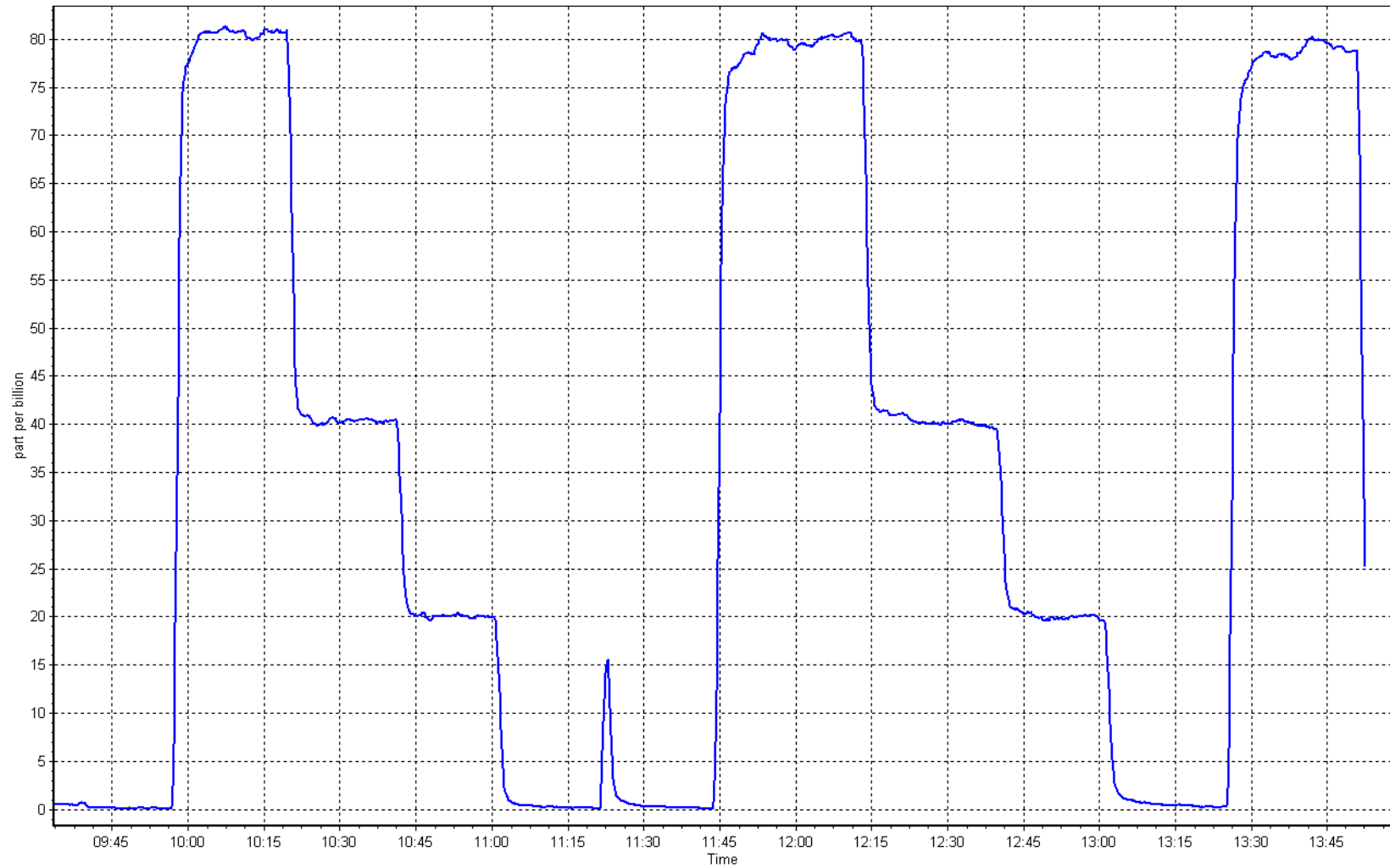
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999987		≥0.995
80.0	80.3	0.9958	Slope	1.002833		0.90 - 1.10
40.0	40.2	0.9944	Intercept	0.082274		+/-3
20.0	20.0	1.0019				



H₂S Calibration Plot

Date: August 21, 2026

Location: Mannix





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Mannix
 Calibration Date: August 19, 2026
 Start time (MST): 10:15
 Reason: Routine

Station number: AMS 05
 Last Cal Date: July 10, 2026
 End time (MST): 13:31

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:	2.66E-04	2.71E-04	NMHC SP Ratio:	5.13E-05	5.02E-05
CH ₄ Retention time:	13.9	14.1	NMHC Peak Area:	170601	174438
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	16.78	0.998
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.78	Prev response	16.67	*% change	0.6%
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	4920	79.9	16.74	16.70	1.003
Mid point	4960	40.0	8.38	8.32	1.008
Low point	4980	20.0	4.19	4.13	1.015
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	16.74	16.72	1.001
Average Correction Factor					1.008

Notes: Sample inlet filter was 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)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	8.75	8.93	0.980
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.93	Prev response	8.76	*% change	1.9%
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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	8.75	8.72	1.002
Mid point	4960	40.0	4.38	4.35	1.006
Low point	4980	20.0	2.19	2.16	1.012
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	8.75	8.74	1.001
Average Correction Factor					1.007

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	7.99	7.85	1.019
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.85	Prev response	7.91	*% change	-0.8%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	7.99	7.98	1.003
Mid point	4960	40.0	4.00	3.97	1.009
Low point	4980	20.0	2.00	1.97	1.018
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	7.99	7.98	1.002
Average Correction Factor					1.010

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.999003	0.998138
THC Cal Offset:	-0.049888	-0.028300
CH ₄ Cal Slope:	0.993913	0.998448
CH ₄ Cal Offset:	-0.033336	-0.017956
NMHC Cal Slope:	1.003316	0.998142
NMHC Cal Offset:	-0.016752	-0.010944

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

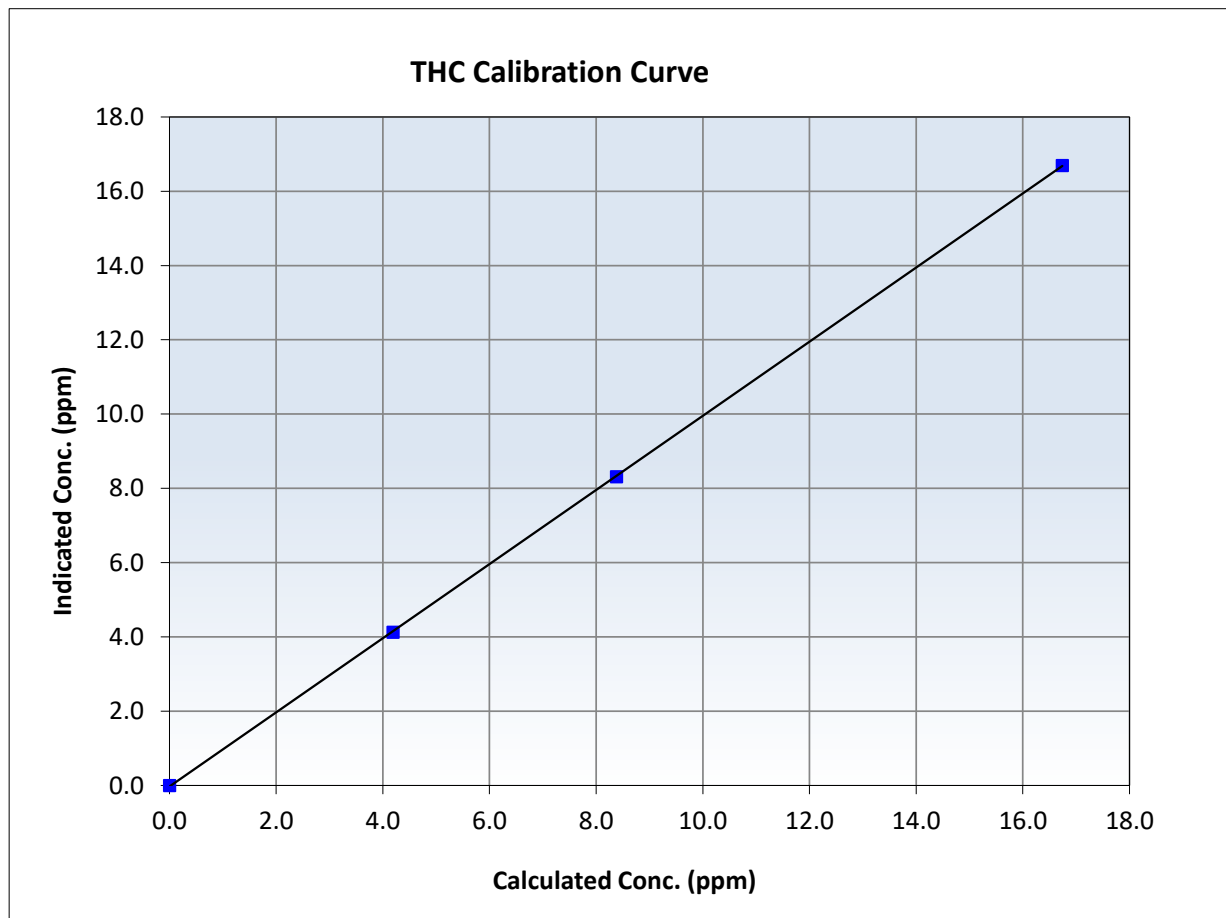
THC Calibration Summary

Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 10, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	10:15	End Time (MST):	13:31
Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381

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	0.999986	≥ 0.995
16.74	16.70	1.0026	Slope	0.998138	$0.90 - 1.10$
8.38	8.32	1.0077	Intercept	-0.028300	± 0.5
4.19	4.13	1.0146			





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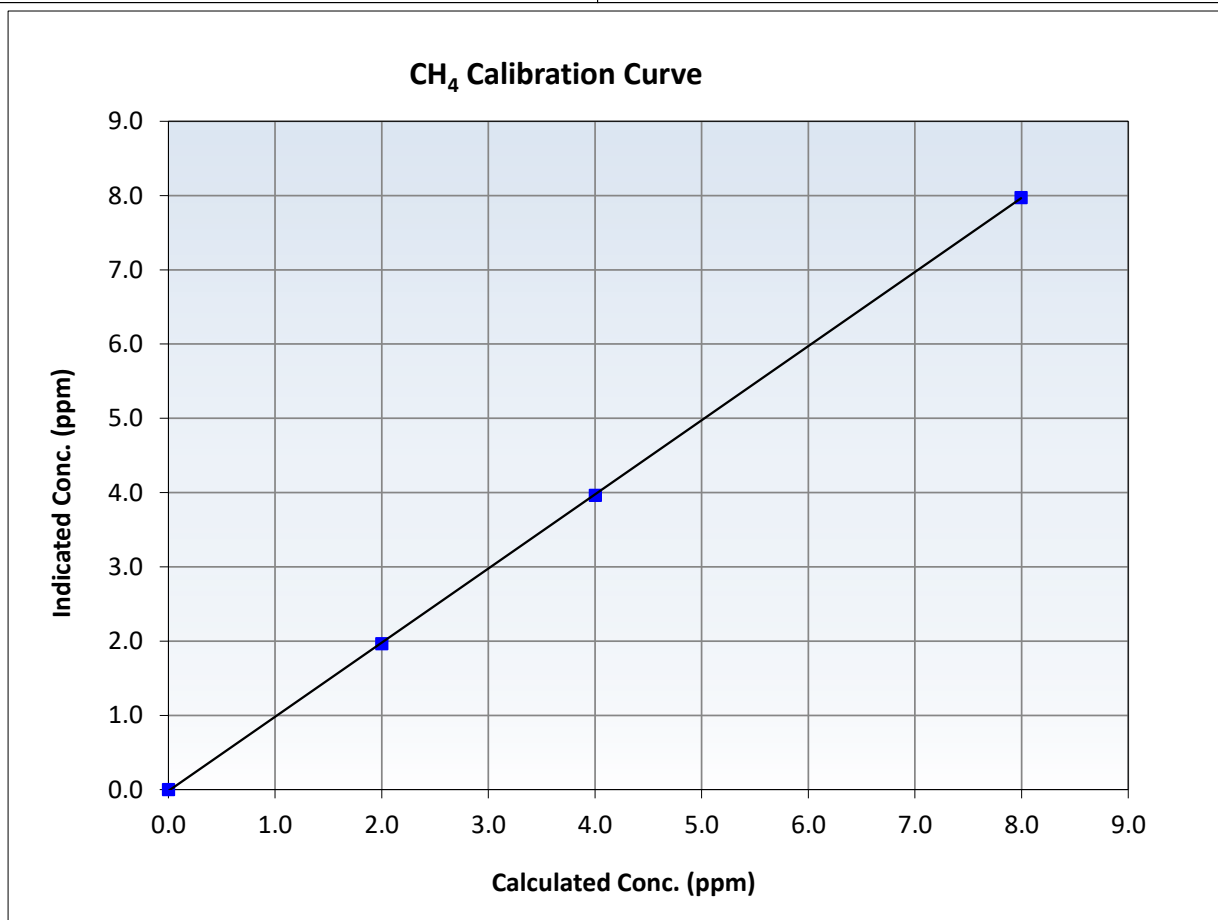
CH₄ Calibration Summary

Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 10, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	10:15	End Time (MST):	13:31
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	0.999976	<i>≥0.995</i>
7.99	7.98	1.0025	Slope	0.998448	<i>0.90 - 1.10</i>
4.00	3.97	1.0094	Intercept	-0.017956	<i>+/-0.5</i>
2.00	1.97	1.0184			





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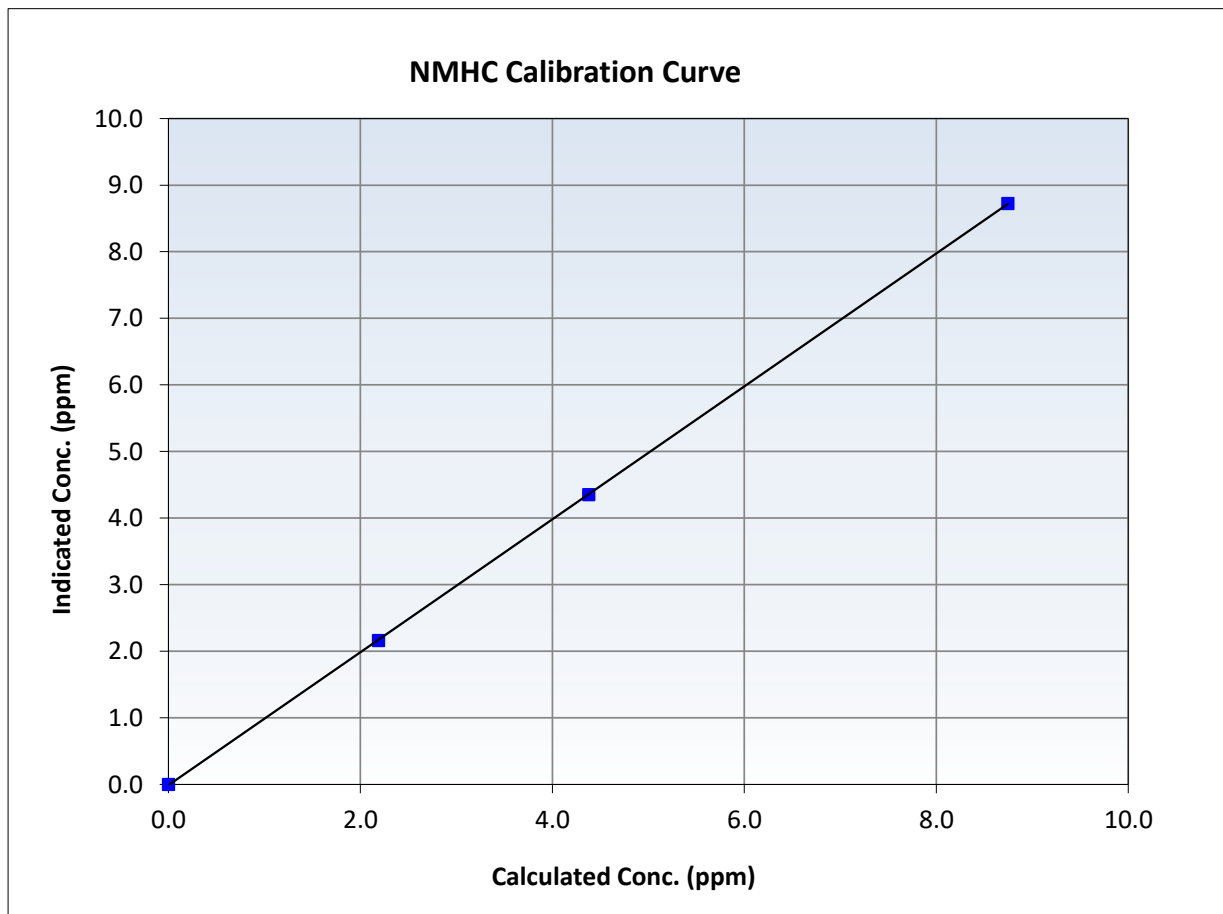
NMHC Calibration Summary

Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 10, 2026
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	10:15	End Time (MST):	13:31
Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381

Calibration Data

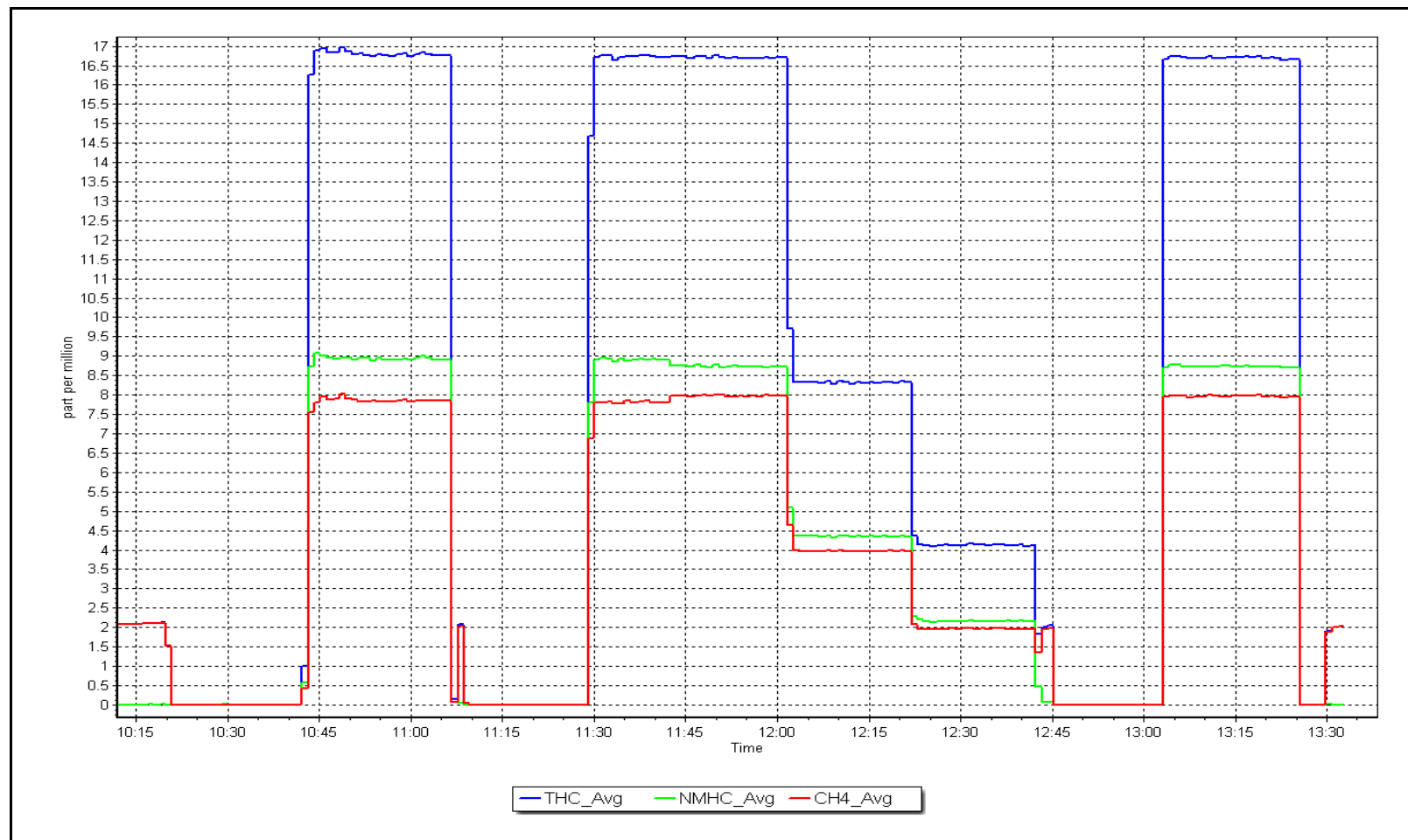
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999993	<i>≥0.995</i>
8.75	8.72	1.0024	Slope	0.998142	<i>0.90 - 1.10</i>
4.38	4.35	1.0060	Intercept	-0.010944	<i>+/-0.5</i>
2.19	2.16	1.0116			



NMHC Calibration Plot

Date: August 19, 2026

Location: Mannix





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS06
PATRICIA MCINNES
AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: August 14, 2026
Start time (MST): 9:10
Reason: Routine

Station number: AMS 06
Last Cal Date: July 9, 2026
End time (MST): 13:18

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:	1.003693	1.001048	Backgd or Offset:	28.2	27.8
Calibration intercept:	0.241953	0.942918	Coeff or Slope:	1.012	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	-0.3	----
As found High point	4920	79.9	800.3	798.0	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	798.3	Previous response	803.5	*% change	-0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4920	79.9	800.3	801.0	0.999
Mid point	4960	39.9	399.6	403.4	0.991
Low point	4980	20.0	200.3	201.0	0.997
As left zero	5000	0.0	0.0	0.1	----
As left span	4920	79.9	800.3	803.1	0.997
Average Correction Factor:					0.995

Notes:

Swapped sample inlet filter as founds. Adjusted zero.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

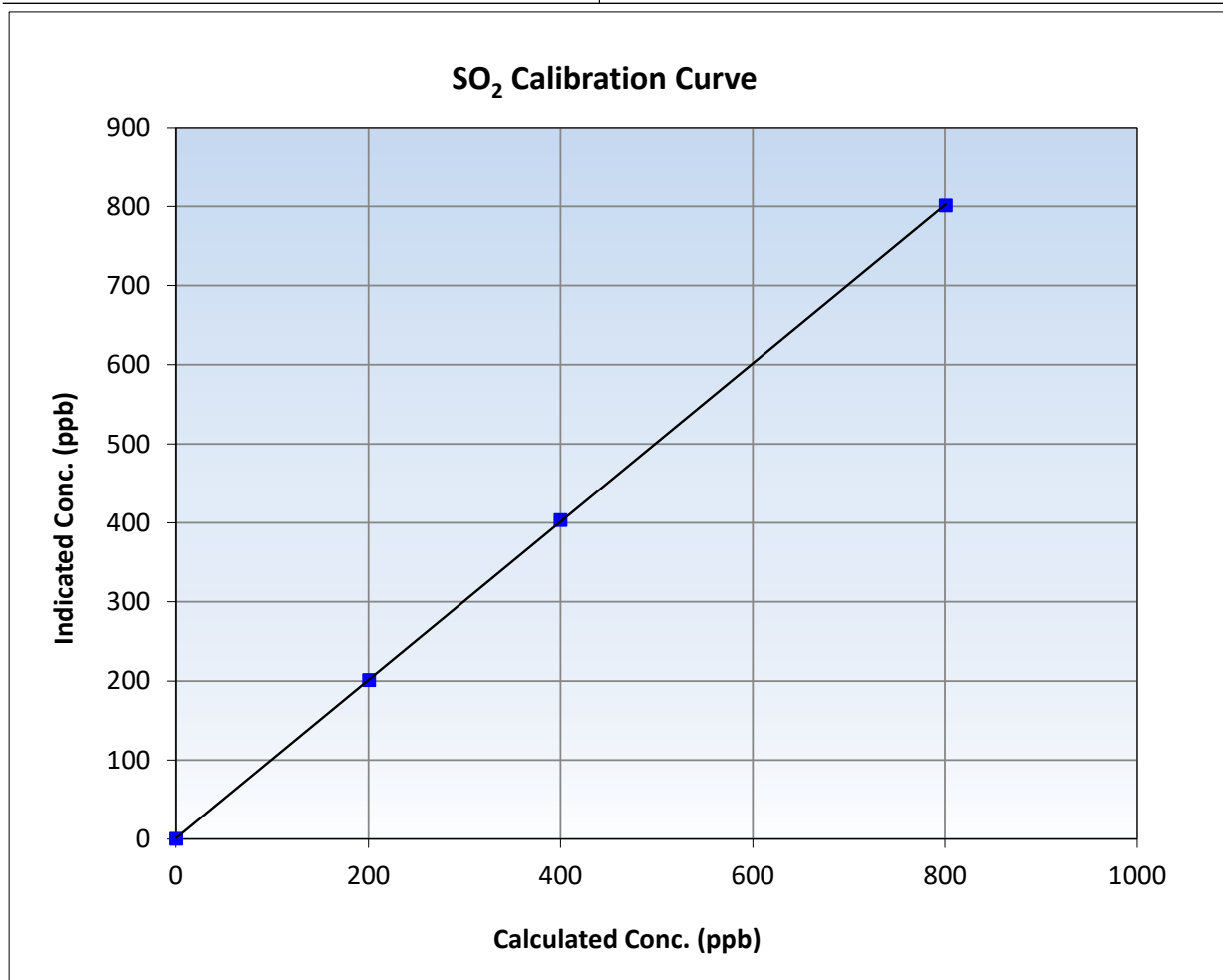
SO₂ Calibration Summary

Station Information

Calibration Date:	August 14, 2026	Previous Calibration:	July 9, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:10	End Time (MST):	13:18
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290013

Calibration Data

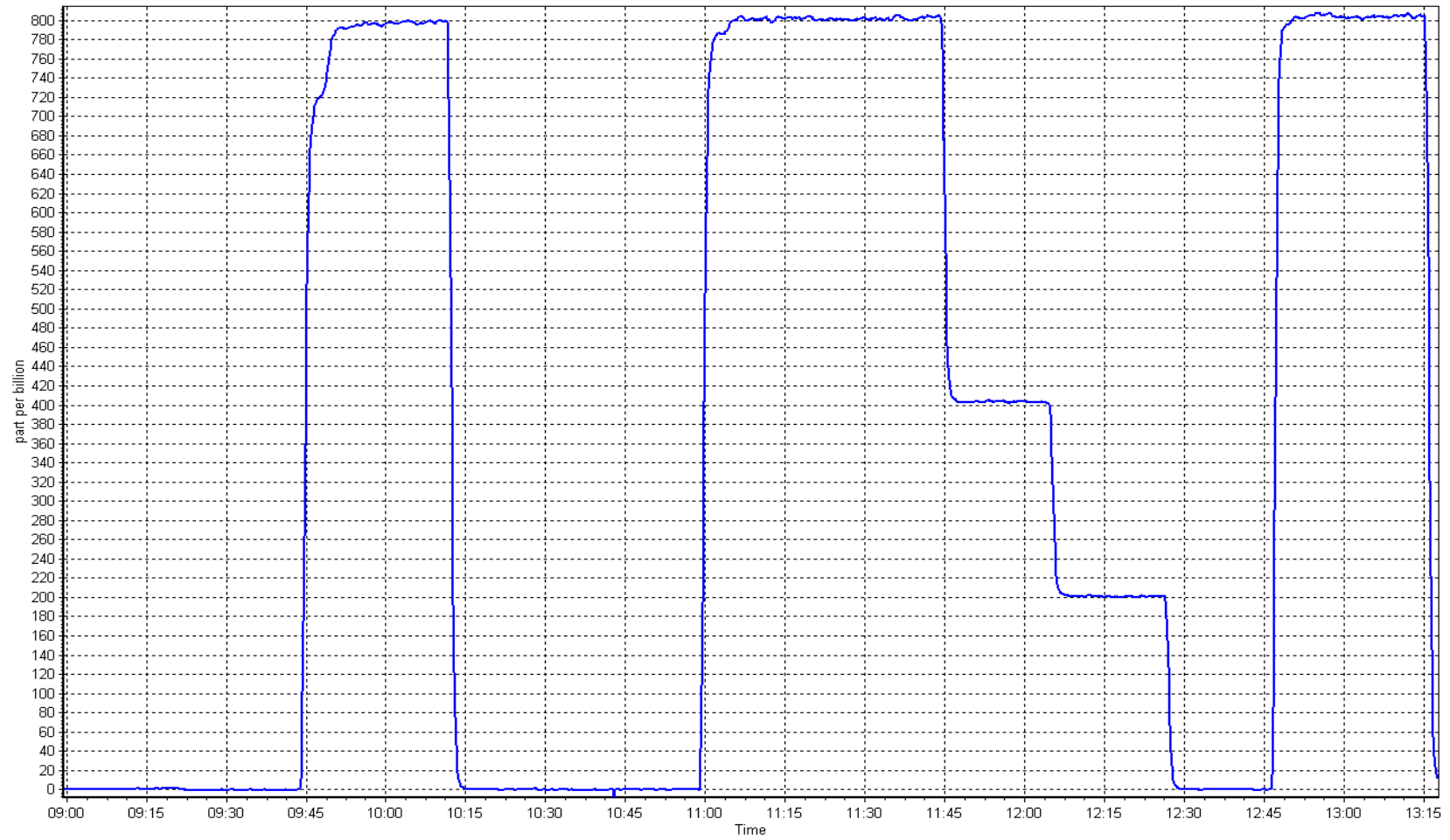
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999978	≥0.995
800.3	801.0	0.9991	Slope	1.001048	0.90 - 1.10
399.6	403.4	0.9907	Intercept	0.942918	+/-30
200.3	201.0	0.9966			



SO2 Calibration Plot

Date: August 14, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Patricia McInnes
 Calibration Date: August 14, 2026
 Start time (MST): 9:10
 Reason: Routine

Station number: AMS 06
 Last Cal Date: July 10, 2026
 End time (MST): 13:18

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	3.02E-04	NMHC SP Ratio:	4.55E-05
CH ₄ Retention time:	15.5	15.9	NMHC Peak Area:	192455
Zero Chromatogram:	ON	ON	Flat Baseline:	ON
				190406

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	16.77	16.38	1.024
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.38	Prev response	16.78	*% change	-2.4%
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	4920	79.9	16.77	16.77	1.000
Mid point	4960	39.9	8.37	8.38	0.999
Low point	4980	20.0	4.20	4.15	1.012
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	16.83	16.84	1.000
Average Correction Factor					1.004

Notes: Swapped inlet filter, hydrogen and nitrogen cylinder after as founds. Adjusted 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	8.76	8.60	1.018
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.60	Prev response	8.74	*% change	-1.6%
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	----
High point	4920	79.9	8.76	8.76	1.000
Mid point	4960	39.9	4.37	4.37	1.001
Low point	4980	20.0	2.19	2.15	1.018
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.79	8.77	1.003
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	----
As found High point	4920	79.9	8.01	7.78	1.029
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.78	Prev response	8.03	*% change	-3.2%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	8.01	8.02	1.000
Mid point	4960	39.9	4.00	4.01	0.999
Low point	4980	20.0	2.01	2.00	1.005
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.04	8.07	0.997
Average Correction Factor					1.001

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.001881	1.001097
THC Cal Offset:	-0.024756	-0.018751
CH ₄ Cal Slope:	1.003433	1.000851
CH ₄ Cal Offset:	-0.007379	-0.003579
NMHC Cal Slope:	1.000017	1.001635
NMHC Cal Offset:	-0.017177	-0.016373

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

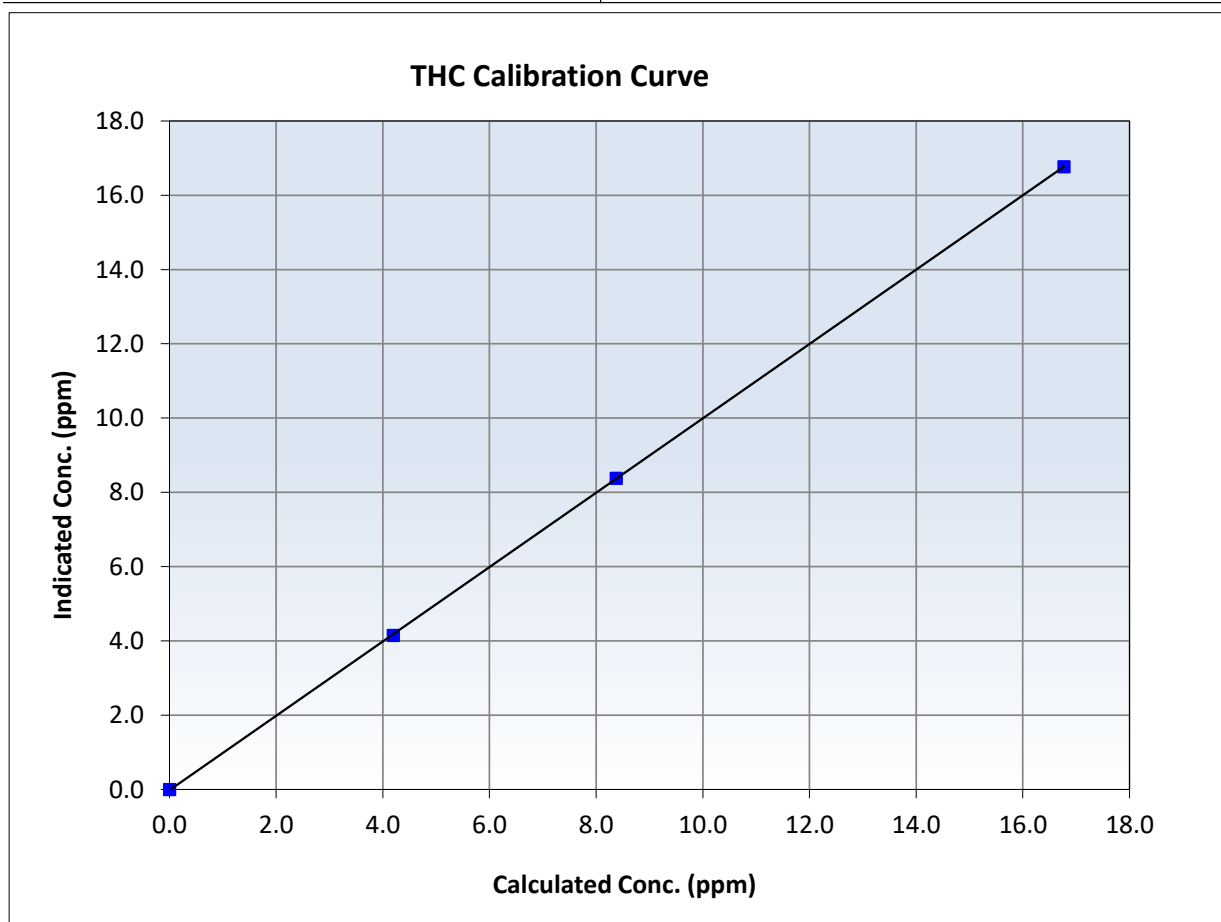
THC Calibration Summary

Station Information

Calibration Date:	August 14, 2026	Previous Calibration:	July 10, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:10	End Time (MST):	13:18
Analyzer make:	Thermo 55i	Analyzer serial #:	1118148494

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
16.77	16.77	0.9999	Slope	1.001097		0.90 - 1.10
8.37	8.38	0.9994	Intercept	-0.018751		± 0.5
4.20	4.15	1.0118				





Wood Buffalo Environmental Association

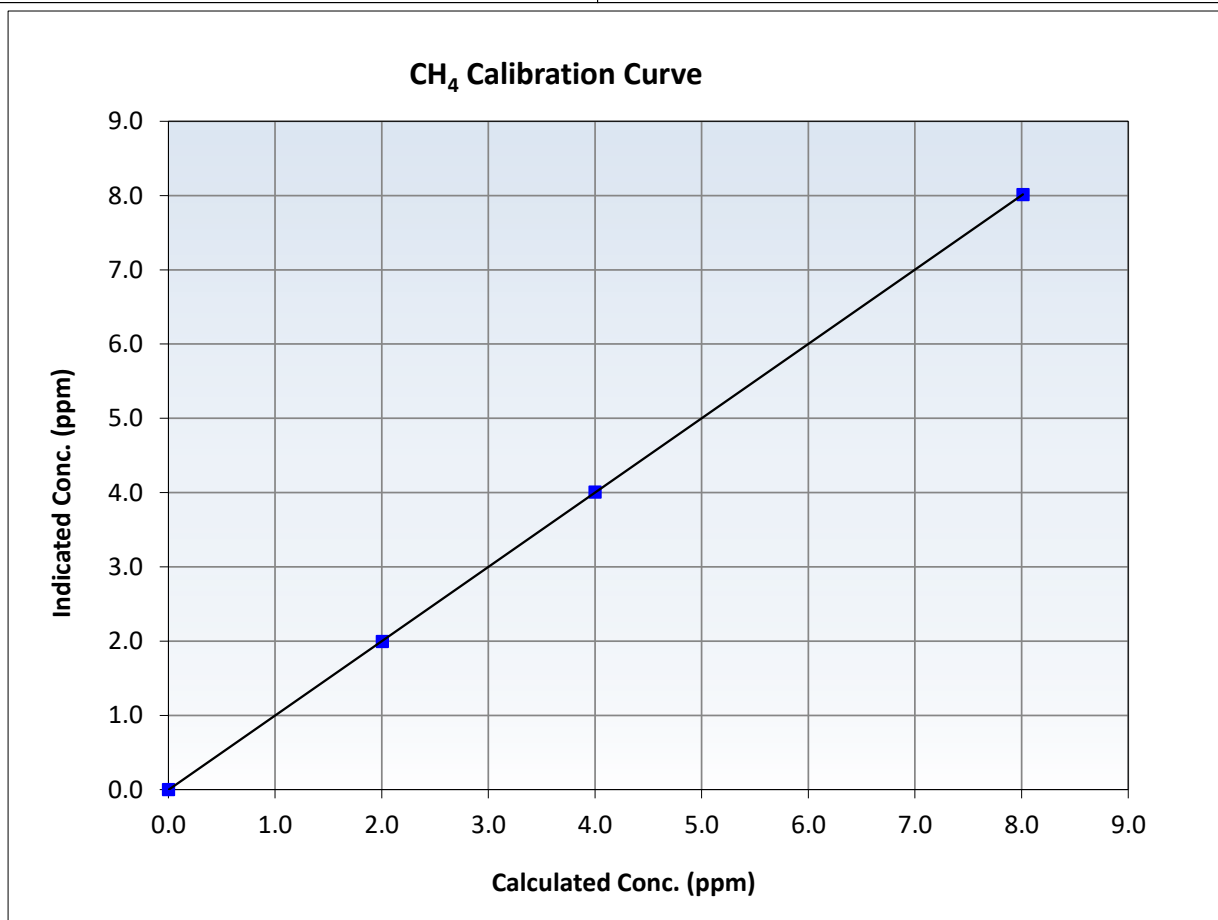
CH₄ Calibration Summary

Station Information

Calibration Date:	August 14, 2026	Previous Calibration:	July 10, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:10	End Time (MST):	13:18
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	0.999996	<i>≥0.995</i>
8.01	8.02	0.9997	Slope	1.000851	<i>0.90 - 1.10</i>
4.00	4.01	0.9986	Intercept	-0.003579	<i>+/-0.5</i>
2.01	2.00	1.0053			





Wood Buffalo Environmental Association

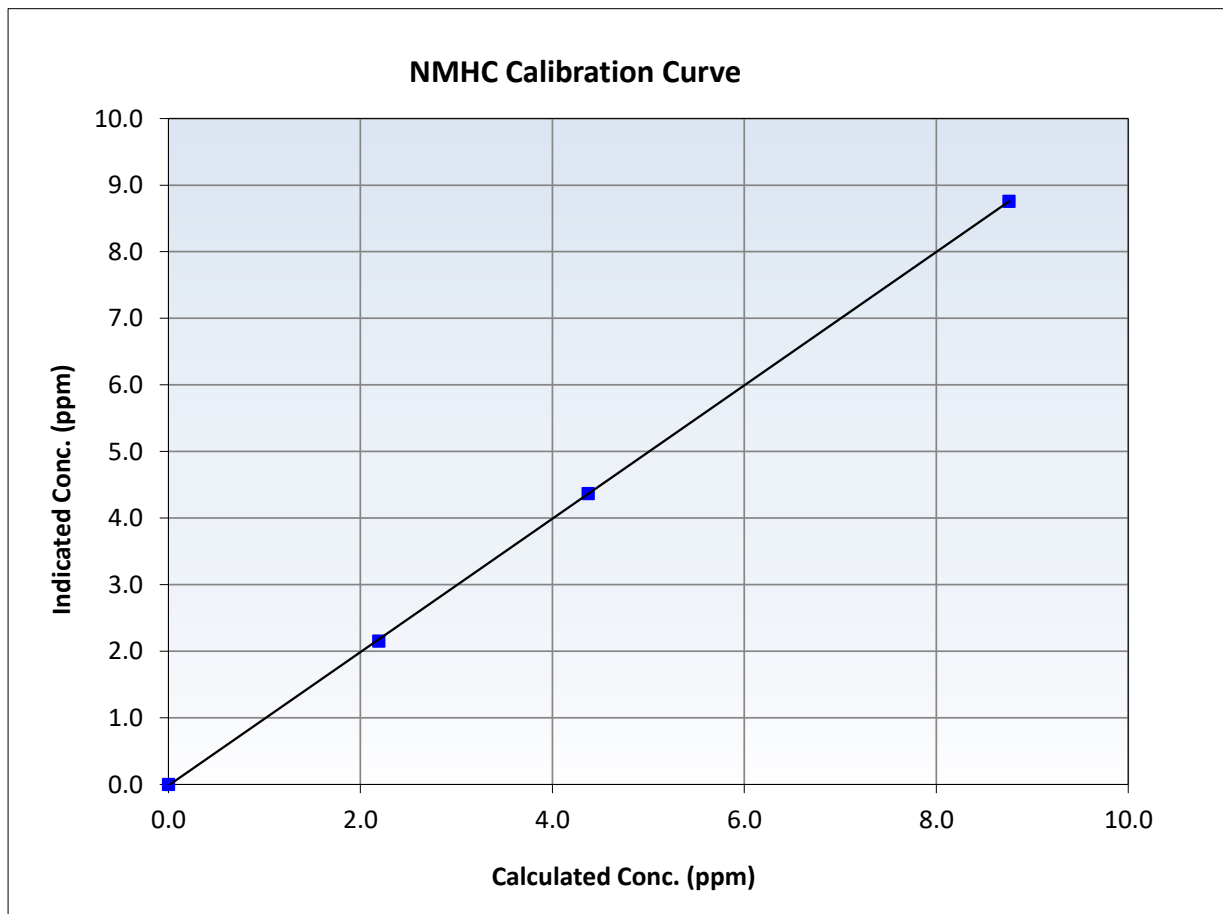
NMHC Calibration Summary

Station Information

Calibration Date:	August 14, 2026	Previous Calibration:	July 10, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:10	End Time (MST):	13:18
Analyzer make:	Thermo 55i	Analyzer serial #:	1118148494

Calibration Data

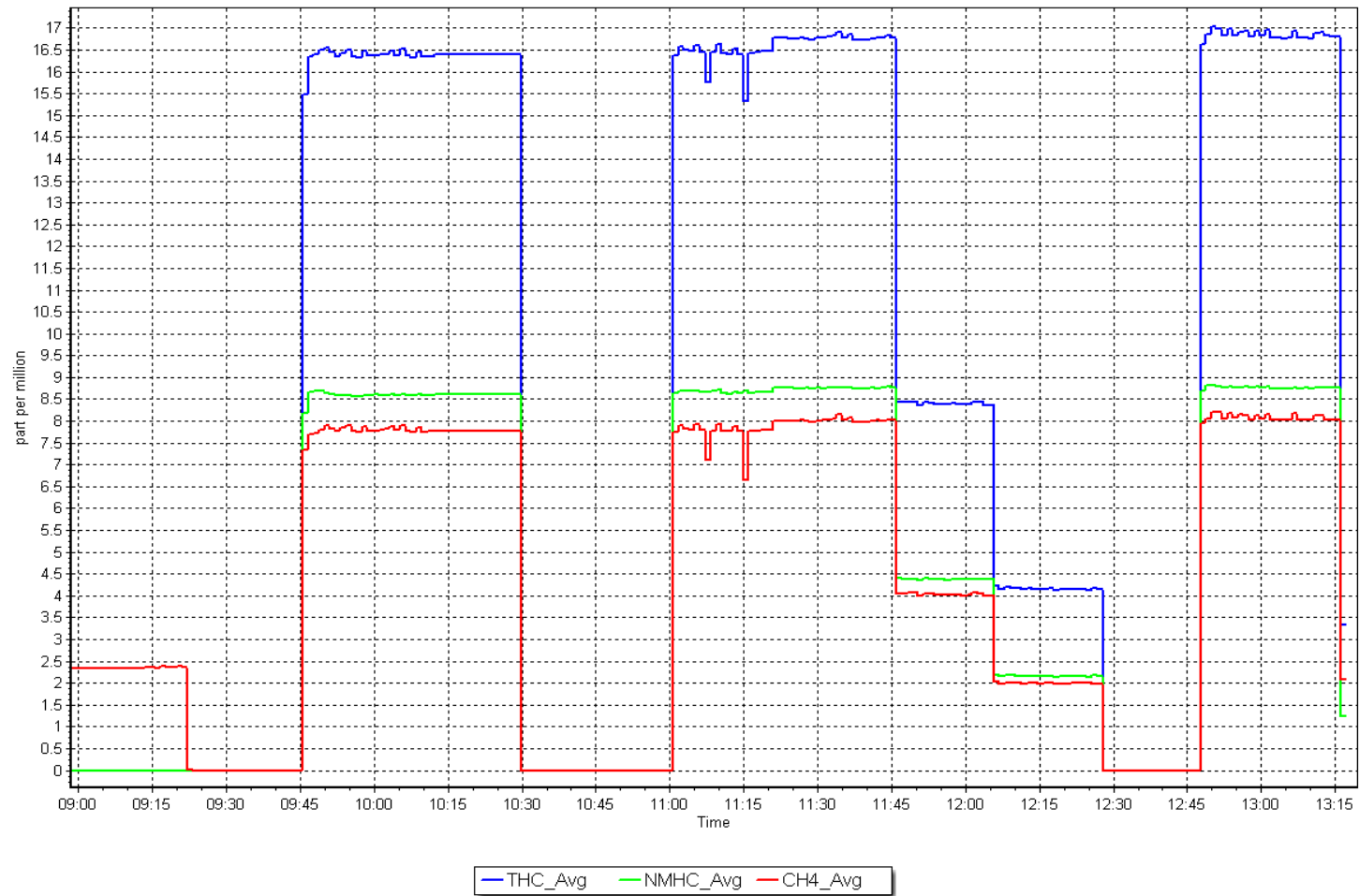
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999977		<i>≥0.995</i>
8.76	8.76	0.9998	Slope	1.001635		<i>0.90 - 1.10</i>
4.37	4.37	1.0009	Intercept	-0.016373		<i>+/-0.5</i>
2.19	2.15	1.0178				



NMHC Calibration Plot

Date: August 14, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Patricia McInnes
 Calibration Date: August 17, 2026
 Start time (MST): 8:50
 Reason: Maintenance

Station number: AMS 06
 Last Cal Date: August 14, 2026
 End time (MST): 14:36

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:	3.02E-04	3.00E-04	NMHC SP Ratio:	4.60E-05
CH ₄ Retention time:	15.9	15.5	NMHC Peak Area:	190406
Zero Chromatogram:	ON	ON	Flat Baseline:	ON
				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	79.9	16.77	16.78	0.999
As found Mid point	4960	39.9	8.37	8.33	1.005
As found Low point	4980	20.0	4.20	4.13	1.016
New cylinder response					
Baseline Corr AF:	16.78	Prev response	16.77	*% change	0.1%
Baseline Corr 2nd AF:	8.33	AF Slope:	1.001658	AF Intercept:	-0.037702
Baseline Corr 3rd AF:	4.13	AF Correlation:	0.999977	* = > +/-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	16.77	16.74	1.002
Mid point	4960	39.9	8.37	8.42	0.995
Low point	4980	20.0	4.20	4.12	1.018
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	16.83	16.81	1.002
Average Correction Factor					1.005

Notes:

Maintenance completed to troubleshoot CH₄ dips seen frequently during sampling. Swapped out actuator after MPAF's. Adjusted span.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	79.9	8.76	8.73	1.003
As found Mid point	4960	39.9	4.37	4.36	1.002
As found Low point	4980	20.0	2.19	2.14	1.024
New cylinder response					
Baseline Corr AF:	8.73	Prev response	8.76	*% change	-0.3%
Baseline Corr 2nd AF:	4.36	AF Slope:	0.998621	AF Intercept:	-0.017238
Baseline Corr 3rd AF:	2.14	AF Correlation:	0.999964	* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	79.9	8.76	8.75	1.001
Mid point	4960	39.9	4.37	4.37	1.002
Low point	4980	20.0	2.19	2.15	1.022
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.79	8.75	1.005
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))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	79.9	8.01	8.05	0.995
As found Mid point	4960	39.9	4.00	3.96	1.010
As found Low point	4980	20.0	2.01	1.99	1.008
New cylinder response					
Baseline Corr AF:	8.05	Prev response	8.02	*% change	0.4%
Baseline Corr 2nd AF:	3.96	AF Slope:	1.004965	AF Intercept:	-0.021665
Baseline Corr 3rd AF:	1.99	AF Correlation:	0.999936	* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	79.9	8.01	7.98	1.004
Mid point	4960	39.9	4.00	4.05	0.988
Low point	4980	20.0	2.01	1.98	1.014
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.2	8.04	8.06	0.997
Average Correction Factor					1.002

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.001097	0.999914
THC Cal Offset:	-0.018751	-0.014322
CH ₄ Cal Slope:	1.000851	0.998076
CH ₄ Cal Offset:	-0.003579	0.004649
NMHC Cal Slope:	1.001635	1.000708
NMHC Cal Offset:	-0.016373	-0.018572

Calibration Performed By: Braiden Boutillier



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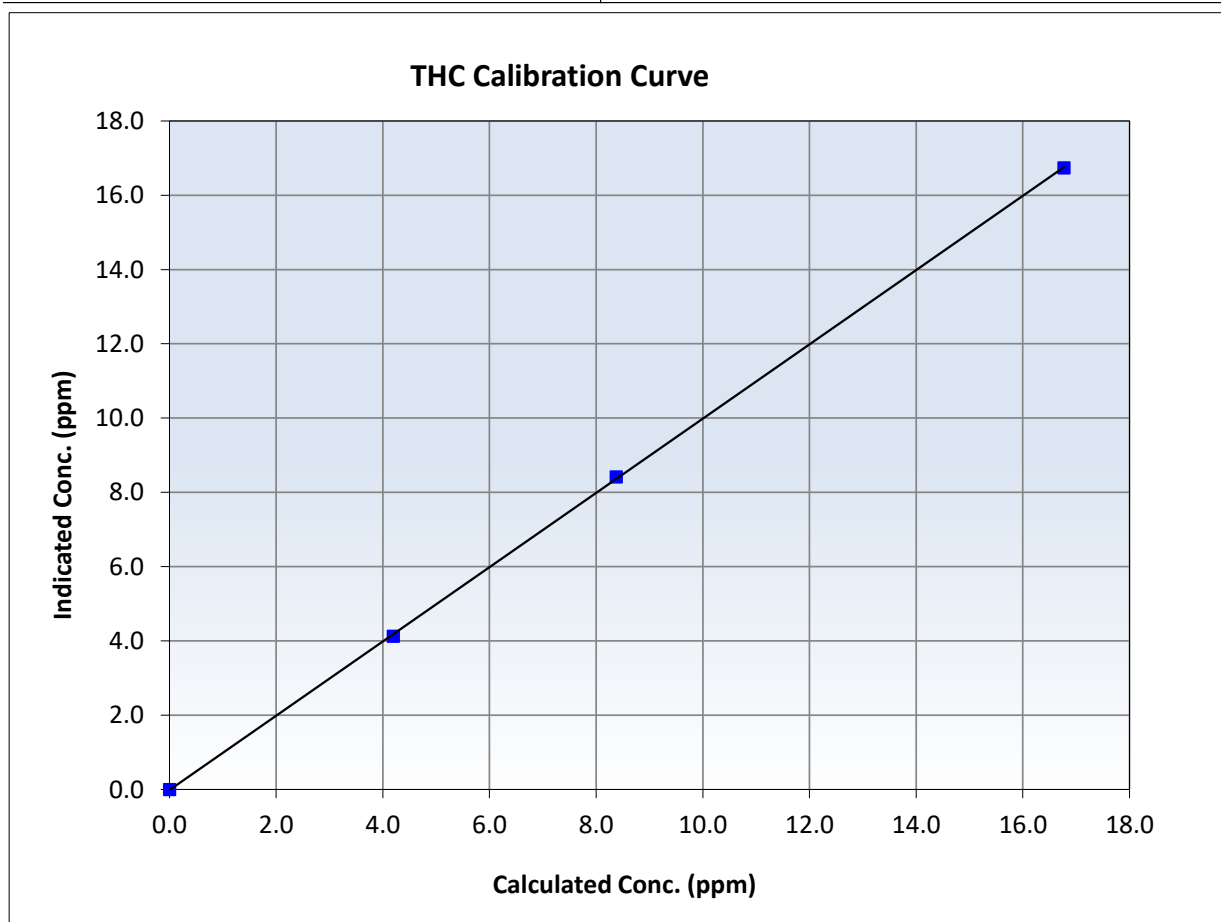
THC Calibration Summary

Station Information

Calibration Date:	August 17, 2026	Previous Calibration:	August 14, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:50	End Time (MST):	14:36
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	0.999951		≥ 0.995
16.77	16.74	1.0018	Slope	0.999914		0.90 - 1.10
8.37	8.42	0.9947	Intercept	-0.014322		± 0.5
4.20	4.12	1.0179				





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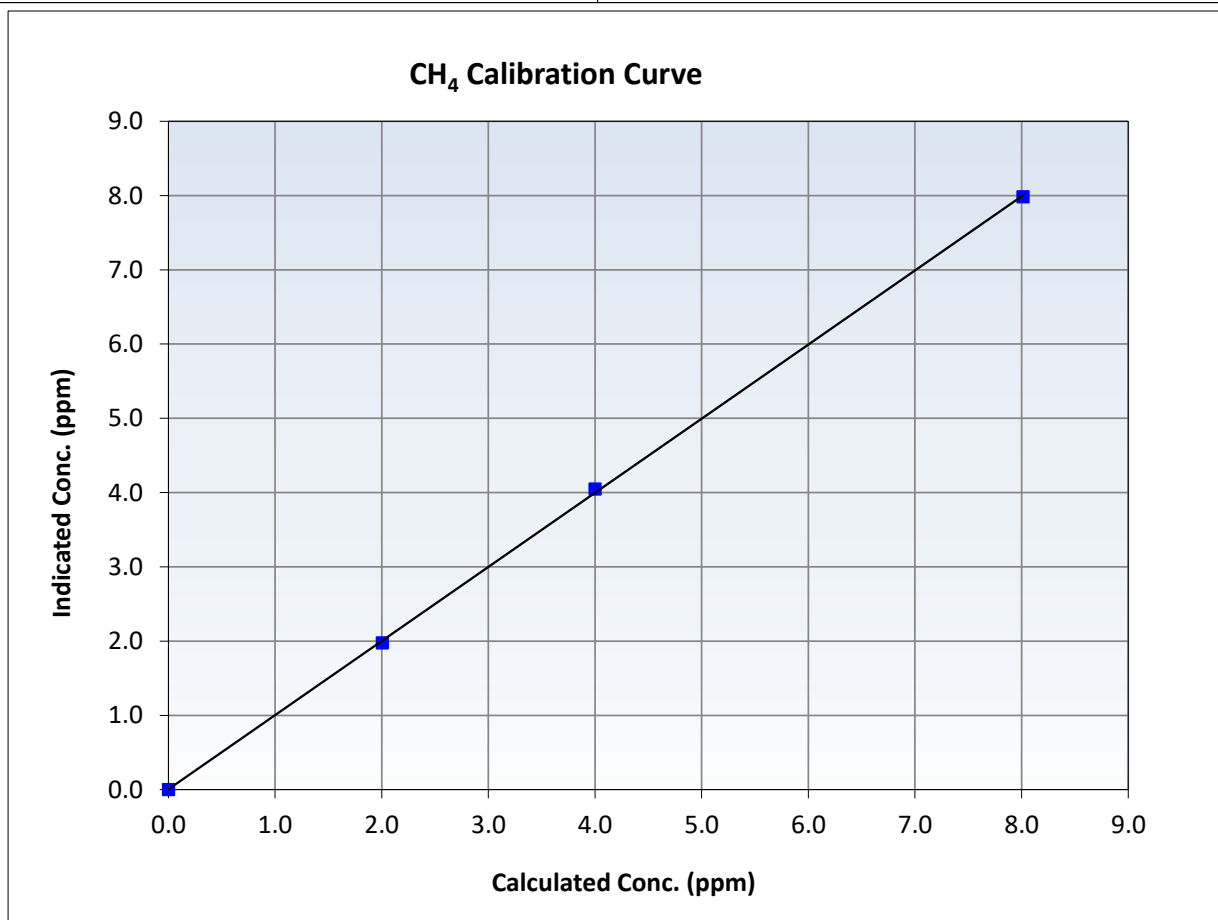
CH₄ Calibration Summary

Station Information

Calibration Date:	August 17, 2026	Previous Calibration:	August 14, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:50	End Time (MST):	14:36
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	0.999890	<i>≥0.995</i>
8.01	7.98	1.0037	Slope	0.998076	<i>0.90 - 1.10</i>
4.00	4.05	0.9880	Intercept	0.004649	<i>+/-0.5</i>
2.01	1.98	1.0140			





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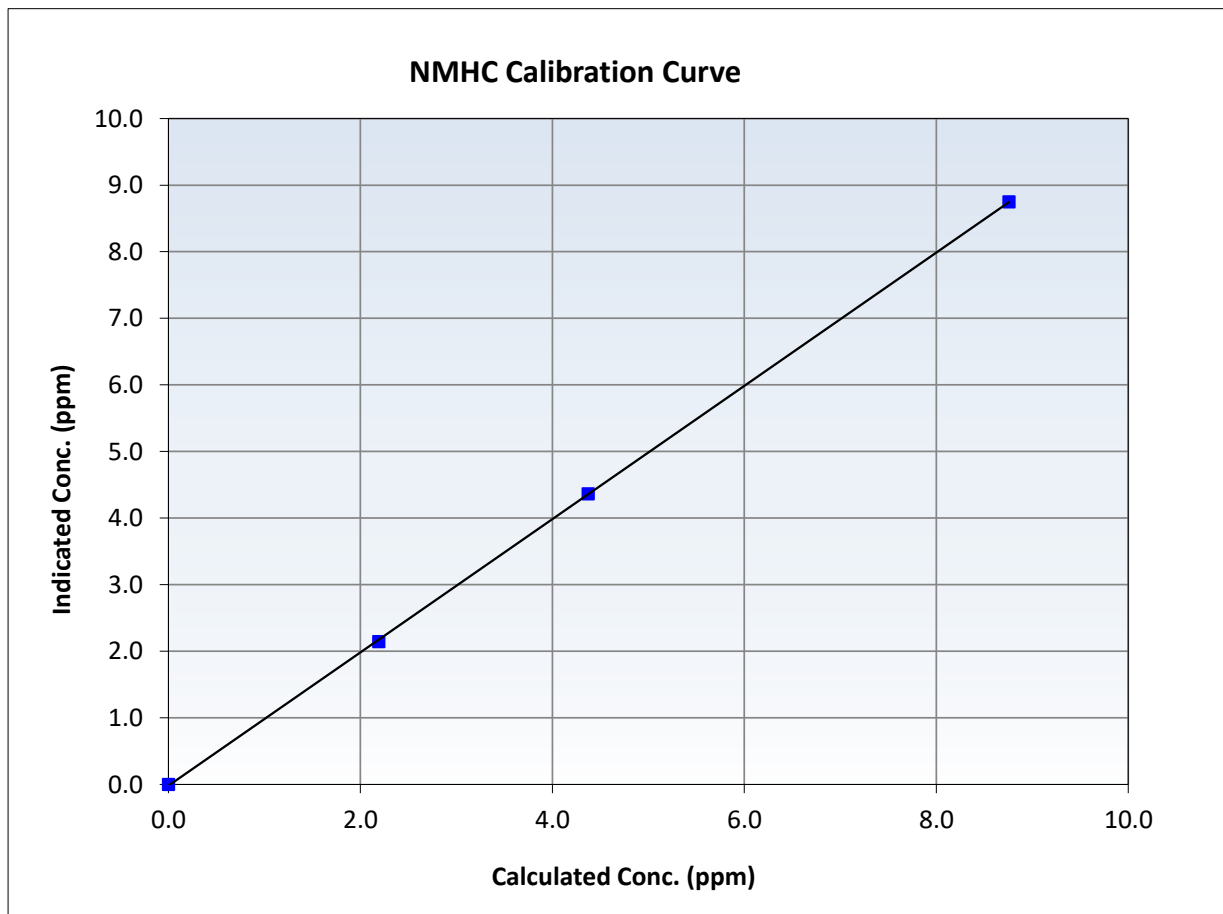
NMHC Calibration Summary

Station Information

Calibration Date:	August 17, 2026	Previous Calibration:	August 14, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:50	End Time (MST):	14:36
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	0.999970	<i>≥0.995</i>
8.76	8.75	1.0010	Slope	1.000708	<i>0.90 - 1.10</i>
4.37	4.37	1.0020	Intercept	-0.018572	<i>+/-0.5</i>
2.19	2.15	1.0216			



NMHC Calibration Plot

Date: August 17, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Patricia McInnes
Station number: AMS 06
Calibration Date: August 27, 2026
Last Cal Date: July 28, 2026
Start time (MST): 9:20
End time (MST): 14:59
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	-0.4	-0.4	0.0	----	----
AF High point	4935	64.6	803.7	799.8	3.9	793.2	788.8	4.4	1.0127	1.0134
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 803.2 ppb	NO = 800.6 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -1.2%	
Baseline Corr 1st pt	NO _x = 793.6 ppb	NO = 789.2 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -1.4%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	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:	0.997806	0.998787
NO _x Cal Offset:	1.272646	0.852496
NO Cal Slope:	1.002824	1.000180
NO Cal Offset:	-1.466131	-1.265518
NO ₂ Cal Slope:	0.997530	1.002426
NO ₂ Cal Offset:	0.387888	0.234442

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.889	0.910	NO bkgnd or offset:	3.9	4.0
NOX coeff or slope:	0.994	0.996	NOX bkgnd or offset:	4.4	4.6
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	156.6	154.5

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	0.0	-0.2	0.2	----	----
High point	4935	64.6	803.7	799.8	3.9	802.7	798.7	4.1	1.0012	1.0014
Mid point	4968	32.3	401.8	399.9	1.9	403.9	399.7	4.2	0.9948	1.0004
Low point	4984	16.2	201.5	200.5	1.0	202.1	197.2	4.9	0.9971	1.0170
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
As left span	4935	64.6	803.7	385.9	417.8	798.4	385.9	412.5	1.0066	1.0000
Average Correction Factor									0.9977	1.0062

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.2	----	----
High GPT point	793.4	384.3	413.0	414.2	0.9970	100.3%
Mid GPT point	793.4	597.7	199.6	200.3	0.9964	100.4%
Low GPT point	793.4	695.5	101.8	102.3	0.9949	100.5%
Average Correction Factor					0.9961	100.4%

Notes:

Inlet filter changed after as founds. Adjusted span.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

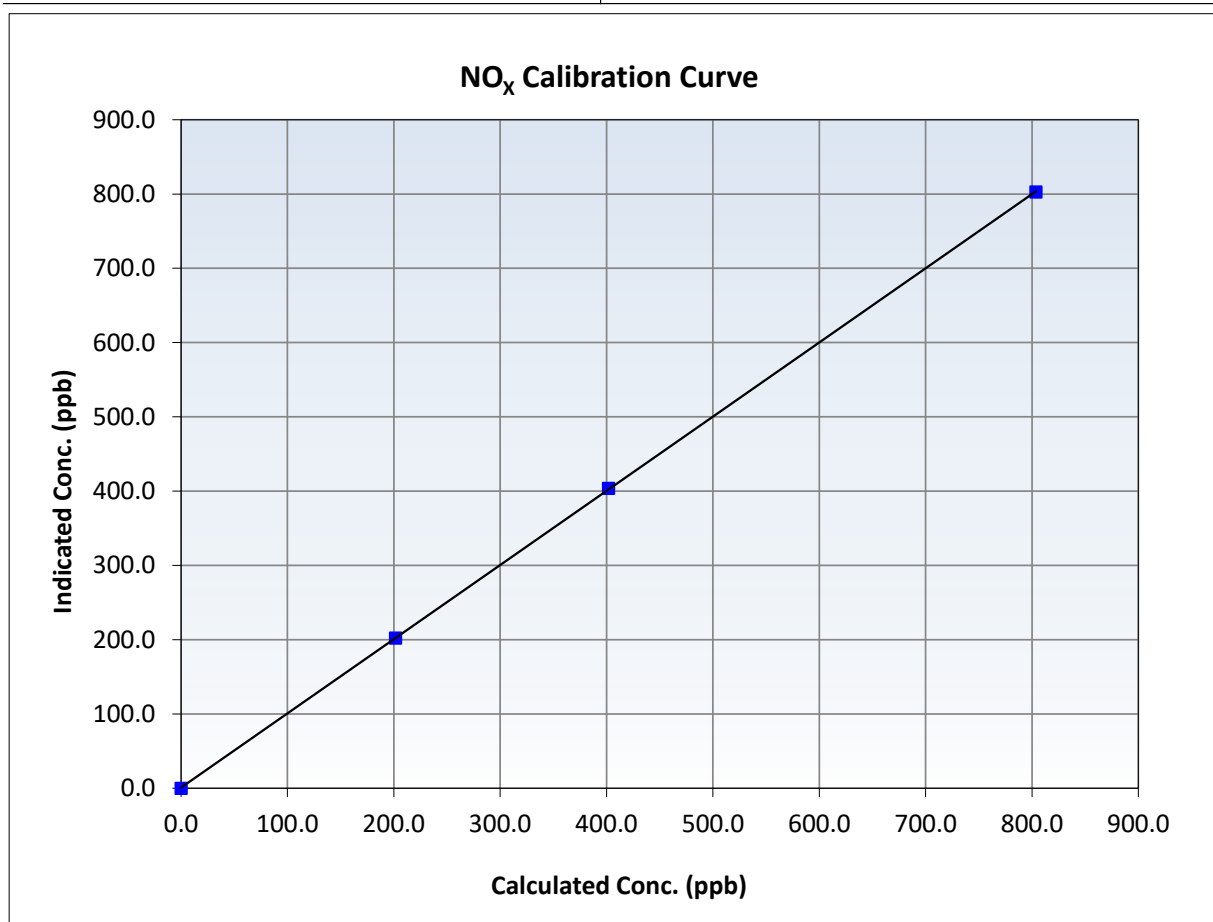
NO_x Calibration Summary

Station Information

Calibration Date:	August 27, 2026	Previous Calibration:	July 28, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:20	End Time (MST):	14:59
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

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	0.999987	≥0.995
803.7	802.7	1.0012	Slope	0.998787	0.90 - 1.10
401.8	403.9	0.9948	Intercept	0.852496	+/-20
201.5	202.1	0.9971			





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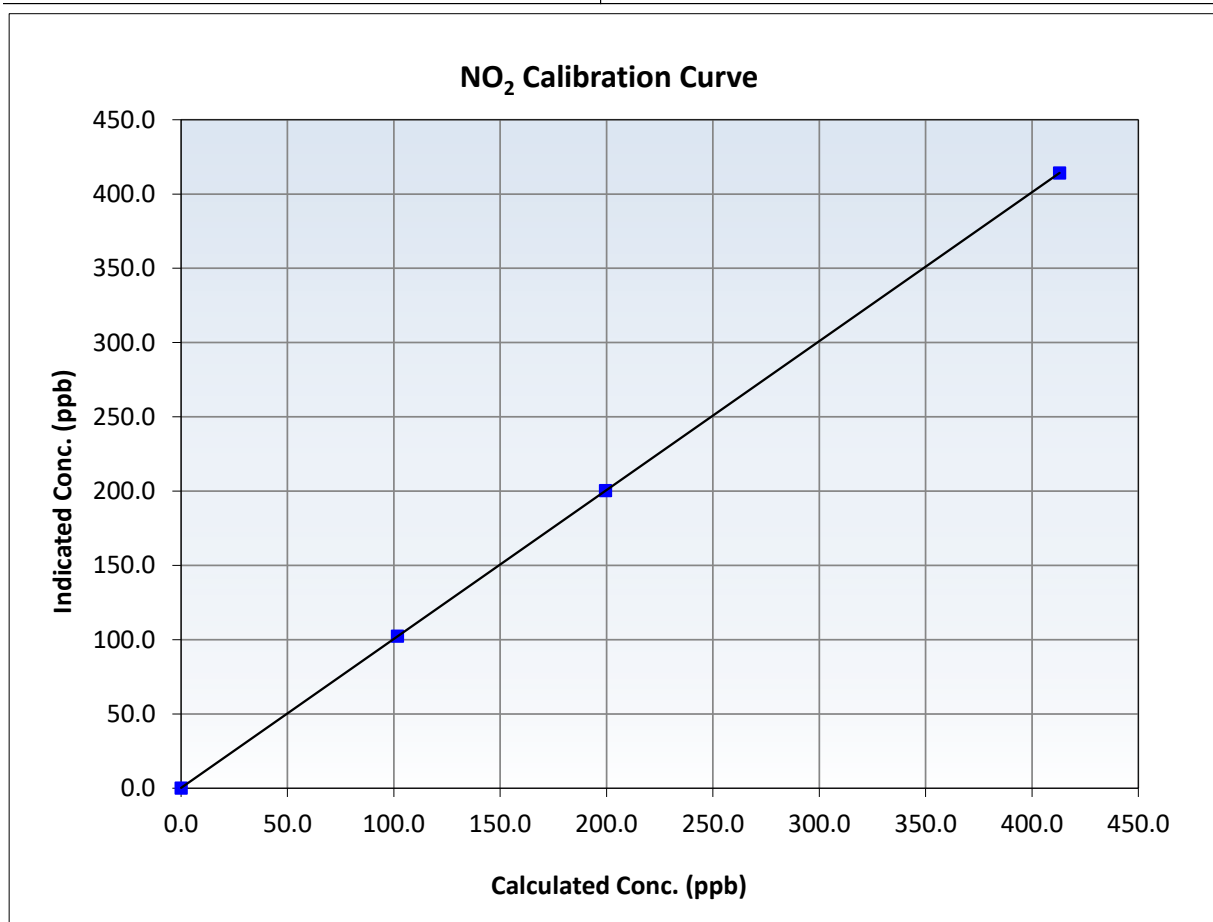
NO₂ Calibration Summary

Station Information

Calibration Date:	August 27, 2026	Previous Calibration:	July 28, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:20	End Time (MST):	14:59
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

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	1.000000	<i>≥0.995</i>
413.0	414.2	0.9970	Slope	1.002426	<i>0.90 - 1.10</i>
199.6	200.3	0.9964	Intercept	0.234442	<i>+/-20</i>
101.8	102.3	0.9949			





Wood Buffalo Environmental Association

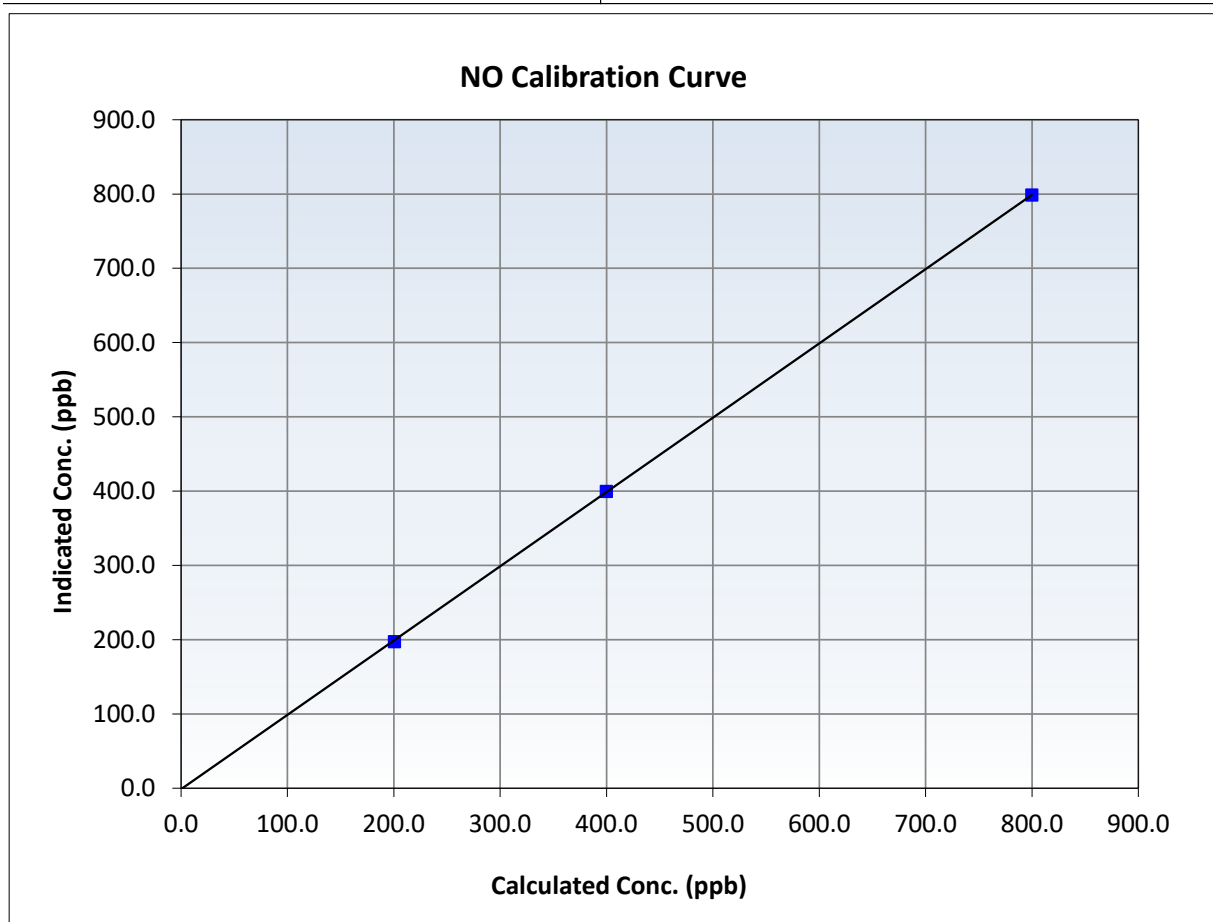
NO Calibration Summary

Station Information

Calibration Date:	August 27, 2026	Previous Calibration:	July 28, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:20	End Time (MST):	14:59
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

Calibration Data

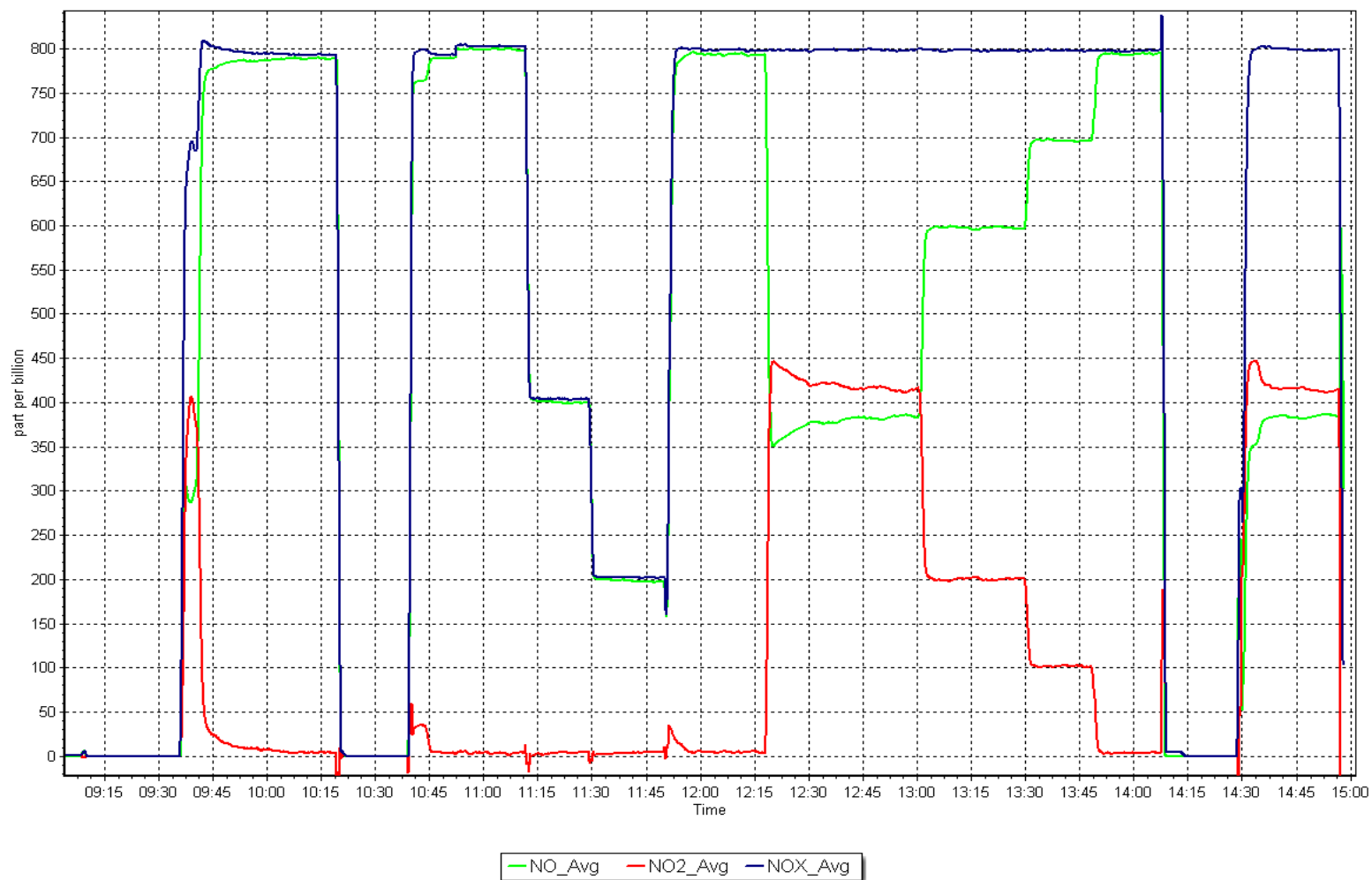
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999981	≥ 0.995
799.8	798.7	1.0014	Slope	1.000180	$0.90 - 1.10$
399.9	399.7	1.0004	Intercept	-1.265518	± 20
200.5	197.2	1.0170			



NO_x Calibration Plot

Date: August 27, 2026

Location: Patricia McInnes





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Patricia McInnes
Calibration Date: August 25, 2026
Start time (MST): 10:20
Reason: Routine

Station number: AMS 06
Last Cal Date: July 22, 2026
End time (MST): 13:25

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:	1.002914	1.000486	Backgd or Offset:	3.5	3.6
Calibration intercept:	0.540000	0.740000	Coeff or Slope:	1.026	1.038

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted
					Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	800.0	0.0	0.0	----
As found High point	5000	907.0	400.0	390.1	1.025
As found Mid point					
As found Low point					
Baseline Corr As found:	390.1	Previous response	401.7	*% change	-3.0%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	800.0	0.0	0.0	----
High point	5000	907.0	400.0	400.5	0.999
Mid point	5000	792.4	200.0	201.4	0.993
Low point	5000	686.5	100.0	101.4	0.986
As left zero	5000	800.0	0.0	-0.1	----
As left span	5000	907.0	400.0	402.6	0.994
Average Correction Factor					0.993

Notes: Sample inlet filter changed after as founds. Span adjusted.

Calibration Performed By: Devin Russell



Wood Buffalo Environmental Association

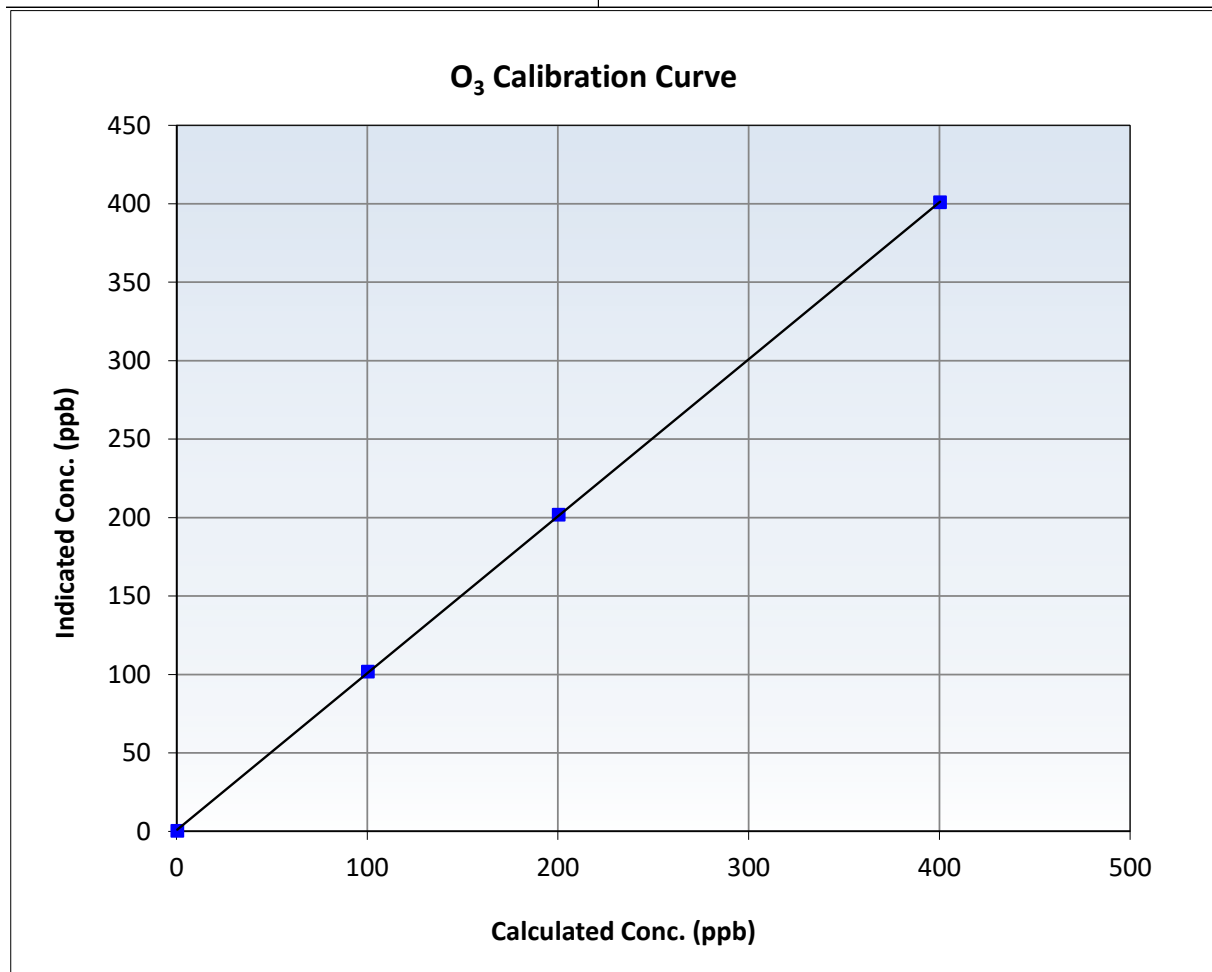
O₃ Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 22, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	10:20	End Time (MST):	13:25
Analyzer make:	Teledyne API T400	Analyzer serial #:	7046

Calibration Data

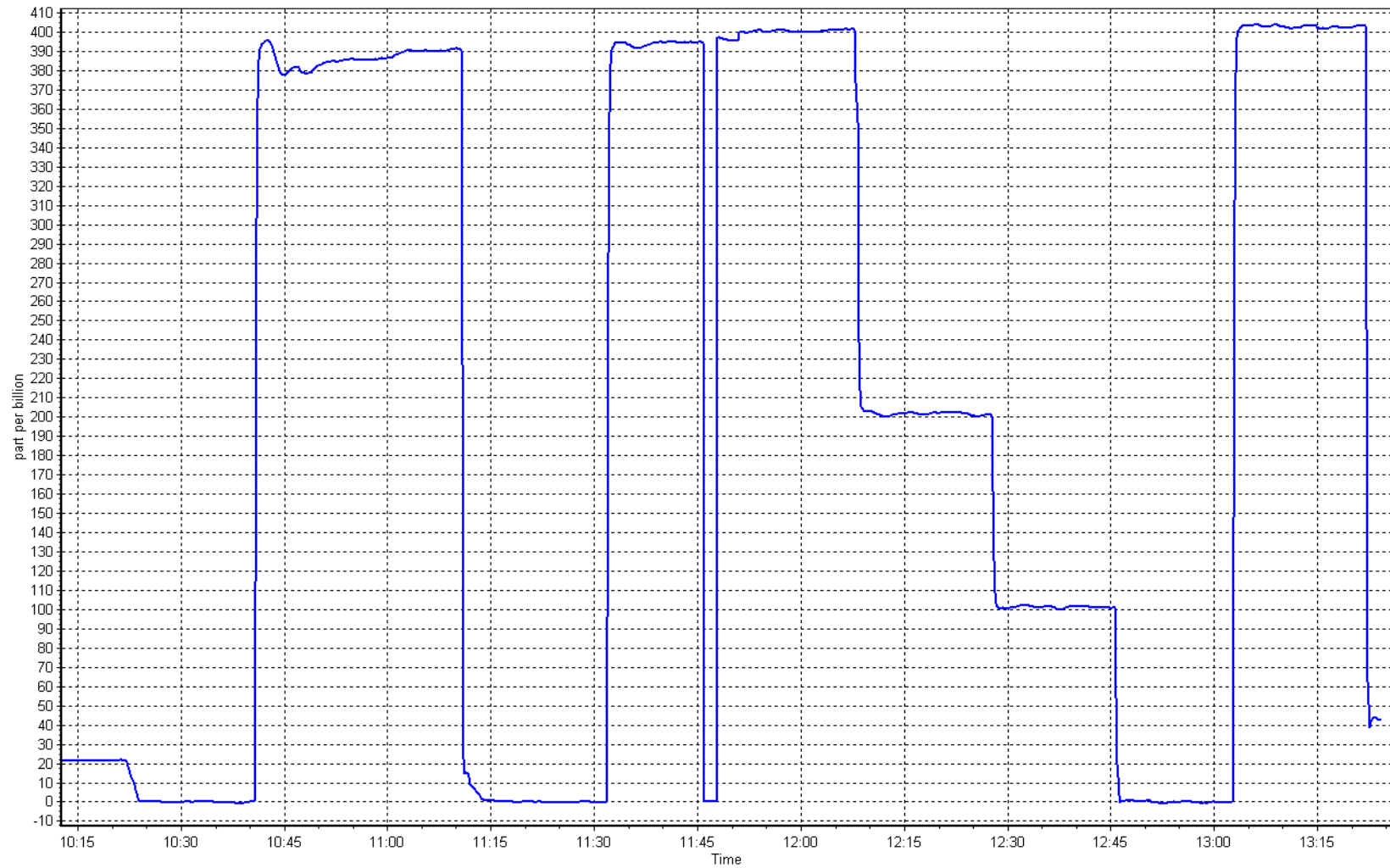
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999984	≥ 0.995
400.0	400.5	0.9988	Slope	1.000486	$0.90 - 1.10$
200.0	201.4	0.9930	Intercept	0.740000	± 5
100.0	101.4	0.9862			



O₃ Calibration Plot

Date: August 25, 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: August 27, 2026 Last Cal Date: July 28, 2026
Start time (MST): 11:49 End time (MST): 13:23

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)	25.0	24.53	25.0	☐	+/- 2 °C
P (mmHg)	724.3	723.74	724.3	☐	+/- 10 mmHg
Flow (LPM)	4.99	5.027	4.99	☐	+/- 0.25 LPM
PW% (pump)	29	----	29	☐	>80%
Zero Verification	PM w/o HEPA: 18.9		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	10.9	11.0	11.0	☐	+/- 0.5

Date Optical Chamber Cleaned: August 27, 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:	August 12, 2026	Last Cal Date:	July 21, 2026
Start time (MST):	8:40	End time (MST):	12:57
NH3 Cal Date:	August 12, 2026	Last Cal Date:	July 21, 2026
Start time (MST):	13:20	End time (MST):	17:20
Reason:	Routine		

Calibration Standards

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

Analyzer Information

Analyzer model:	API T201	Analyzer serial #:	215
Converter model:	API T501	Converter serial #:	147
NH3 Range (ppb):	0 - 2000 ppb	Reaction cell Press:	5.70
NOX Range (ppb):	0 - 1000 ppb	Sample Flow:	561

	<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:	1.007264	1.005018
NO _x Cal Offset:	0.170913	0.310878
NO Cal Slope:	1.007742	1.002399
NO Cal Offset:	-1.187601	-0.467237
NO ₂ Cal Slope:	0.995112	0.996546
NO ₂ Cal Offset:	0.274280	1.563711
NH3 Cal Slope:	1.002911	1.000539
NH3 Cal Offset:	3.435908	12.043705
Nt Cal Slope:	1.006228	1.003796
Nt Cal Offset:	3.573396	12.080350



Wood Buffalo Environmental Association

NO_x - NO - NO₂ Calibration Report

NO_x / NO / Nt As Found Data

Set Point	Dilution flow rate (scm)	Source gas flow rate (scm)	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	-0.1	-0.3	----	----
As found span	4935	64.6	803.7	799.8	803.7	806.7	801.3	808.9	0.9963	0.9981
AF GPT span										
new NO cyl rp										

Baseline Corr As Fd Nt = 809.2 ppb NO_x = 807.0 ppb NO = 801.4 ppb
 Previous Response Nt = 812.27 ppb NO_x = 809.7 ppb NO = 804.8 ppb

*Percent Change Nt_(NO) = -0.4%
 *Percent Change NO_x = -0.3%
 *Percent Change NO = -0.4%

**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 (scm)	Source gas flow rate (scm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated Nt concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibration zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	-0.1	----	----
High point	4935	64.6	803.7	799.8	803.7	807.9	801.8	808.9	0.9948	0.9975
Mid point	4968	32.3	401.8	399.9	401.8	404.3	399.4	406.8	0.9938	1.0011
Low point	4984	16.2	201.5	200.5	201.5	203.0	200.3	203.5	0.9927	1.0012
Average Correction Factor									0.9938	1.0000

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	-0.2	----	----
Calibration zero	----	----	0.0	-0.2	----	----
High GPT point (400 ppb O3)	798.6	384.5	418.0	417.5	1.0011	99.9%
Mid GPT point (200 ppb O3)	798.6	600.0	202.5	203.5	0.9950	100.5%
Low GPT point (100 ppb O3)	798.6	703.9	98.6	102.0	0.9664	103.5%
Average Correction Factor					0.9875	101.3%



Wood Buffalo Environmental Association NH₃ - N_T Calibration Report

NH₃ As Found Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated Nt concentration (ppb) (Cc)	Calculated NOX concentration (ppb) (Cc)	Calculated NH ₃ concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH ₃ concentration (ppb) (Ic)	Baseline corr Nt Correction factor (Cc/(Ic-zero)) <i>Limit = 0.9 - 1.1</i>	Baseline corr NH ₃ Correction factor (Cc/(Ic-zero)) <i>Limit = 0.9 - 1.1</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.3	-0.3	0.0	----	----
AF High point	3419	81.3	1800.1	0.0	1800.1	1769.9	6.5	1763.5	1.017	1.021
AF Mid point										
AF Low point										
new NH ₃ cyl rp										
Baseline Corr As Fd	Nt = 1770.2 ppb	NH ₃ = 1763.5 ppb							*Percent Change	Nt _(NH₃) = -2.5%
Previous Response	Nt = 1814.8 ppb	NH ₃ = 1808.7 ppb							*Percent Change	NH ₃ = -2.6%

* = > +/-5% change initiates investigation

NH₃ Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated Nt concentration (ppb) (Cc)	Calculated NOX concentration (ppb) (Cc)	Calculated NH ₃ concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH ₃ concentration (ppb) (Ic)	Nt Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NH ₃ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibration zero	5000	0.0	0.0	0.0	0.0	-0.1	0.1	-0.1	----	----
High point	3419	81.3	1800.1	0.0	1800.1	1808.0	6.2	1802.0	0.996	0.999
Mid point	3455	45.2	1000.8	0.0	1000.8	1033.0	3.9	1030.0	0.969	0.972
Low point	3477	22.6	500.5	0.0	500.5	521.3	1.9	519.4	0.960	0.964
Average Correction Factor									0.9748	0.9781
NH ₃ Previous Converter Efficiency =			96.0 %							
NH ₃ Current Converter Efficiency =			95.7 %							

Notes:

Changed the inlet filter after as founds. Adjusted NH₃ span.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

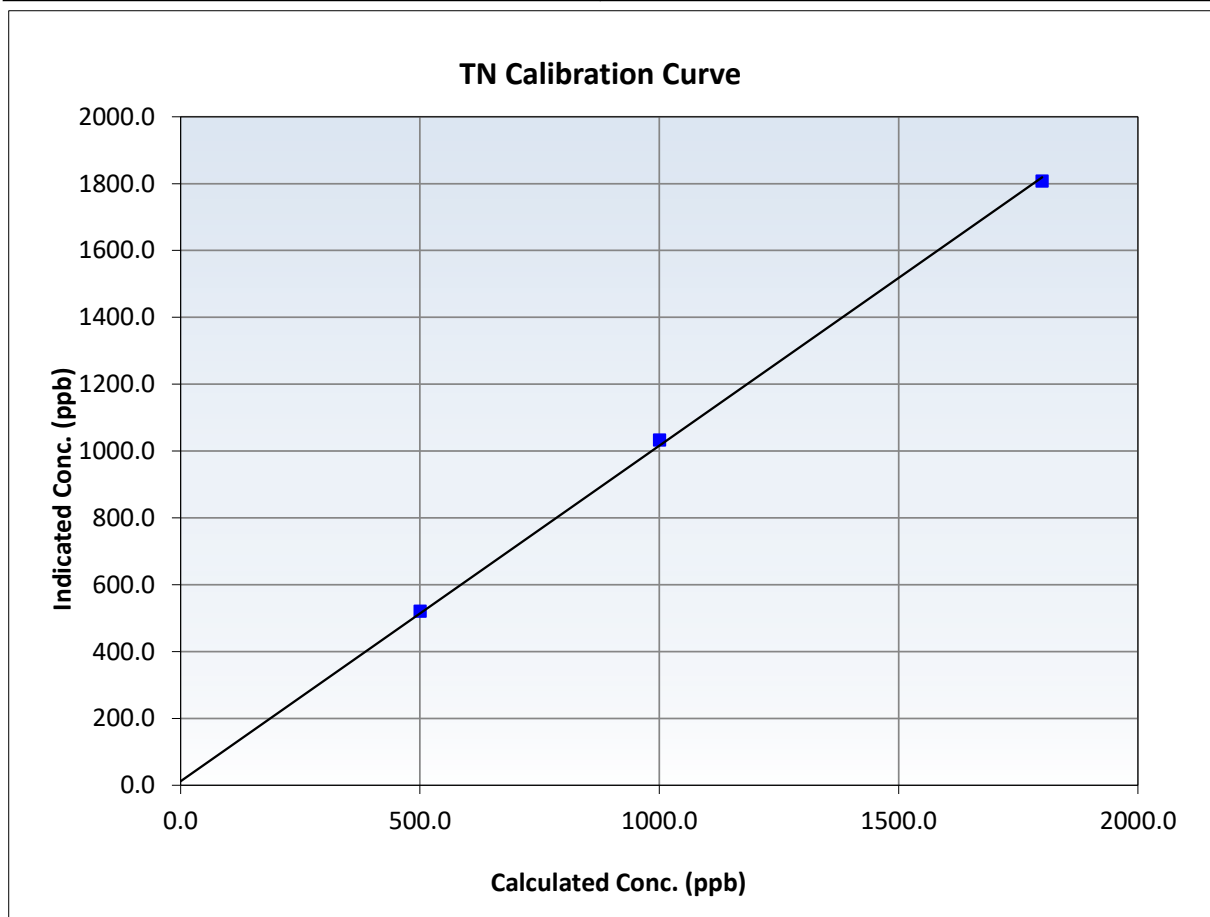
Nt Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 21, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	13:20	End Time (MST):	17:20
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	0.999673	≥ 0.995
1800.1	1808.0	0.9956	Slope	1.003796	0.90 - 1.10
1000.8	1033.0	0.9688	Intercept	12.080350	+/-20
500.5	521.3	0.9601			





Wood Buffalo Environmental Association

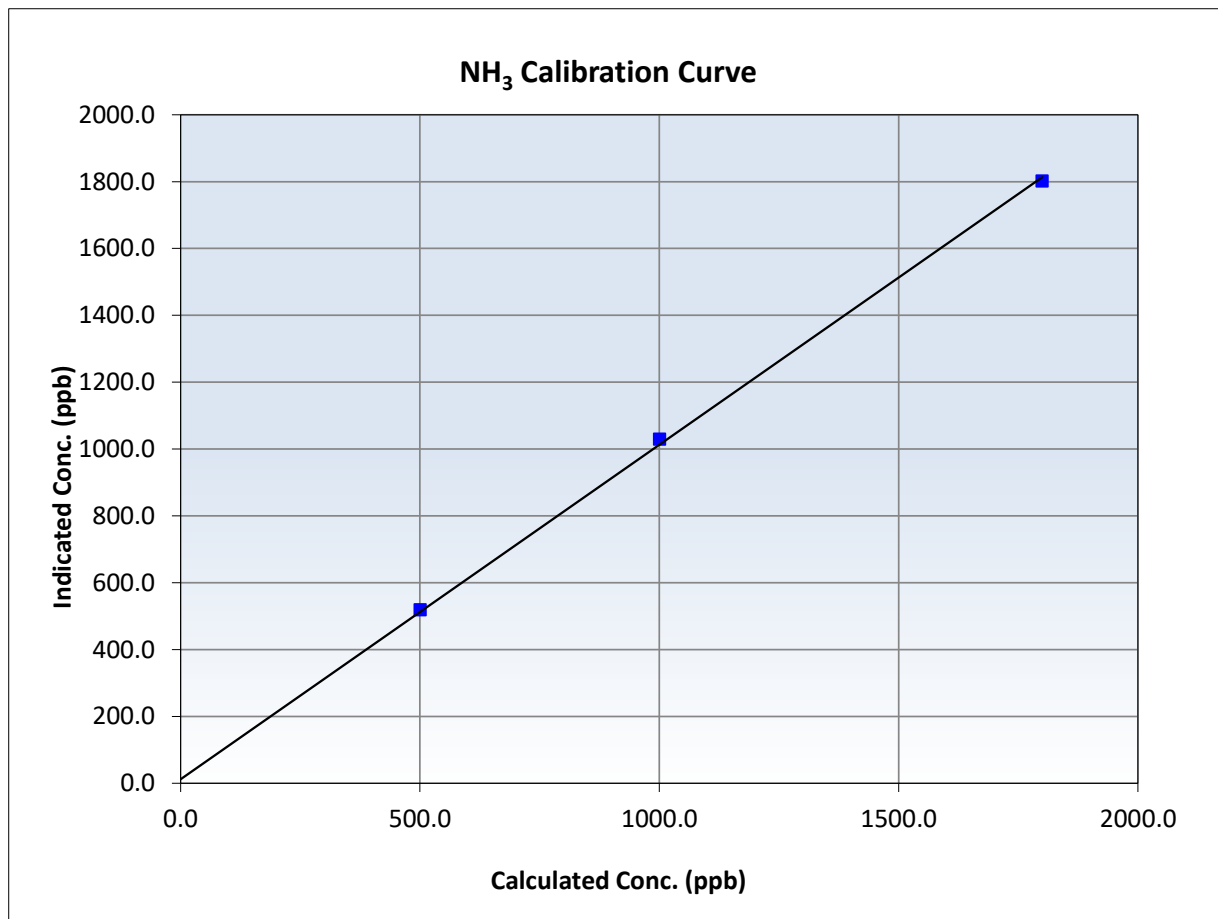
NH₃ Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 21, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	13:20	End Time (MST):	17:20
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	0.999667	≥0.995
1800.1	1802.0	0.9989	Slope	1.000539	0.90 - 1.10
1000.8	1030.0	0.9717	Intercept	12.043705	+/-20
500.5	519.4	0.9636			





Wood Buffalo Environmental Association

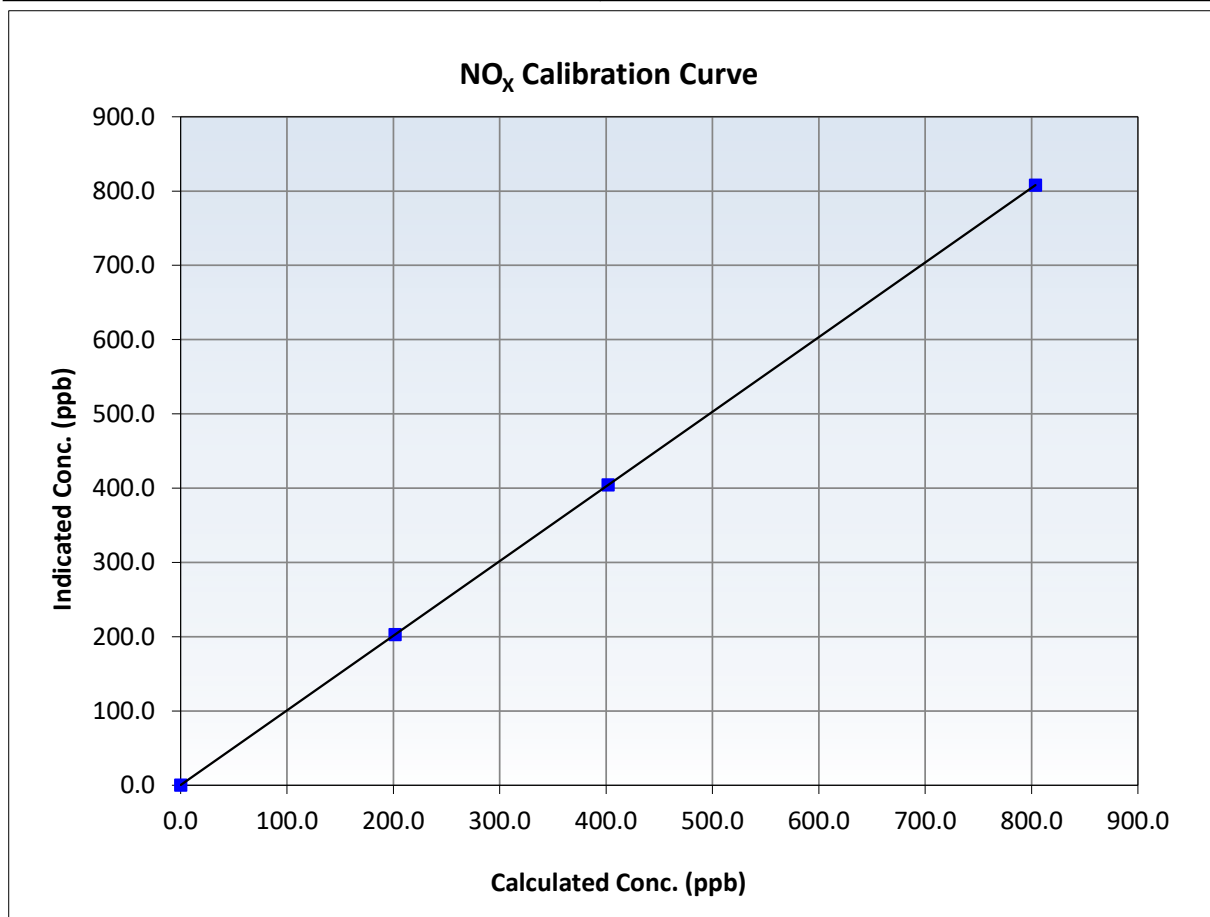
NO_x Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 21, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:40	End Time (MST):	12:57
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	1.000000	≥0.995
803.7	807.9	0.9948	Slope	1.005018	0.90 - 1.10
401.8	404.3	0.9938	Intercept	0.310878	+/-20
201.5	203.0	0.9927			





Wood Buffalo Environmental Association

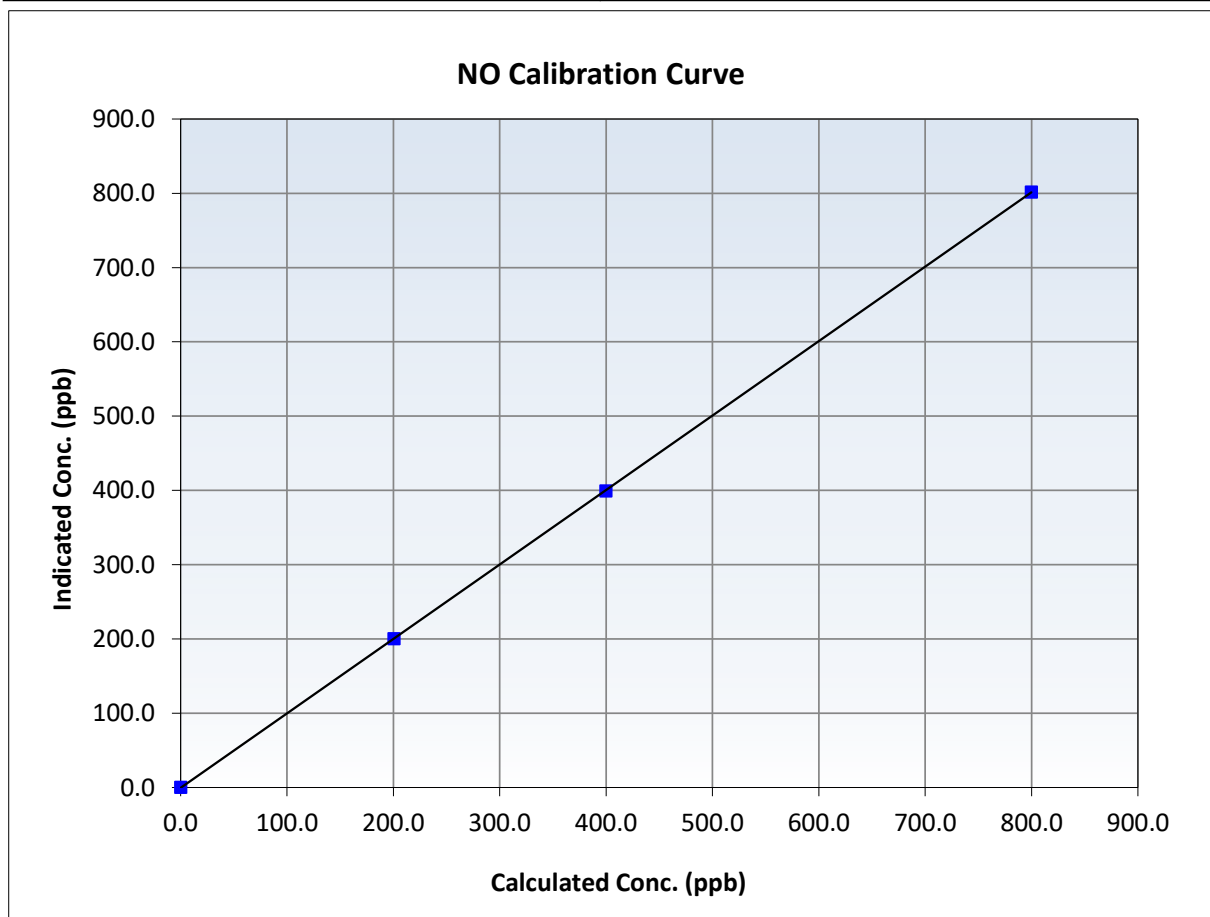
NO Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 21, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:40	End Time (MST):	12:57
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	0.2	----	Correlation Coefficient	0.999995	≥ 0.995
799.8	801.8	0.9975	Slope	1.002399	0.90 - 1.10
399.9	399.4	1.0011	Intercept	-0.467237	+/-20
200.5	200.3	1.0012			





Wood Buffalo Environmental Association

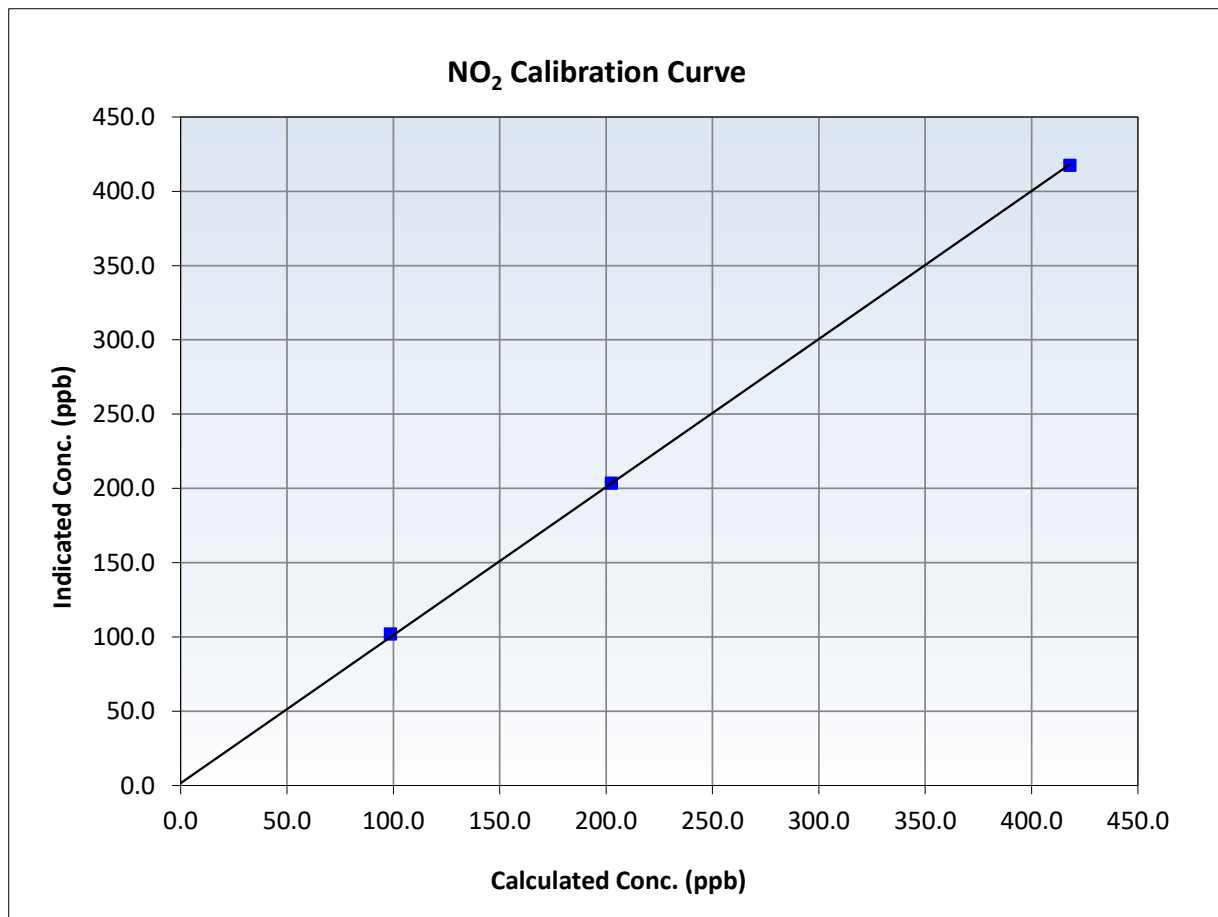
NO₂ Calibration Summary

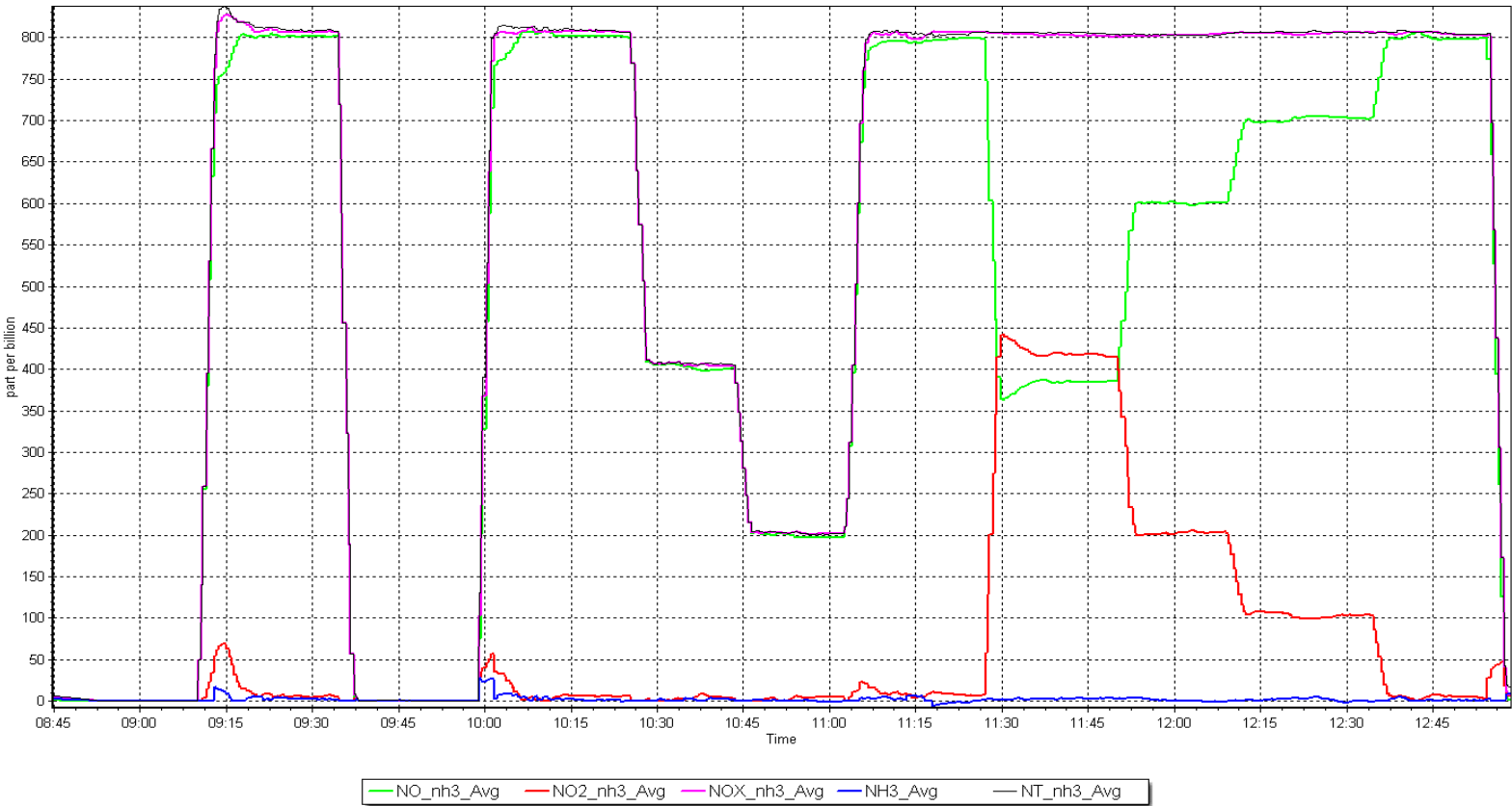
Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 21, 2026
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:40	End Time (MST):	12:57
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	-0.2	----	Correlation Coefficient	0.999913	≥0.995
418.0	417.5	1.0011	Slope	0.996546	0.90 - 1.10
202.5	203.5	0.9950	Intercept	1.563711	+/-20
98.6	102.0	0.9664			

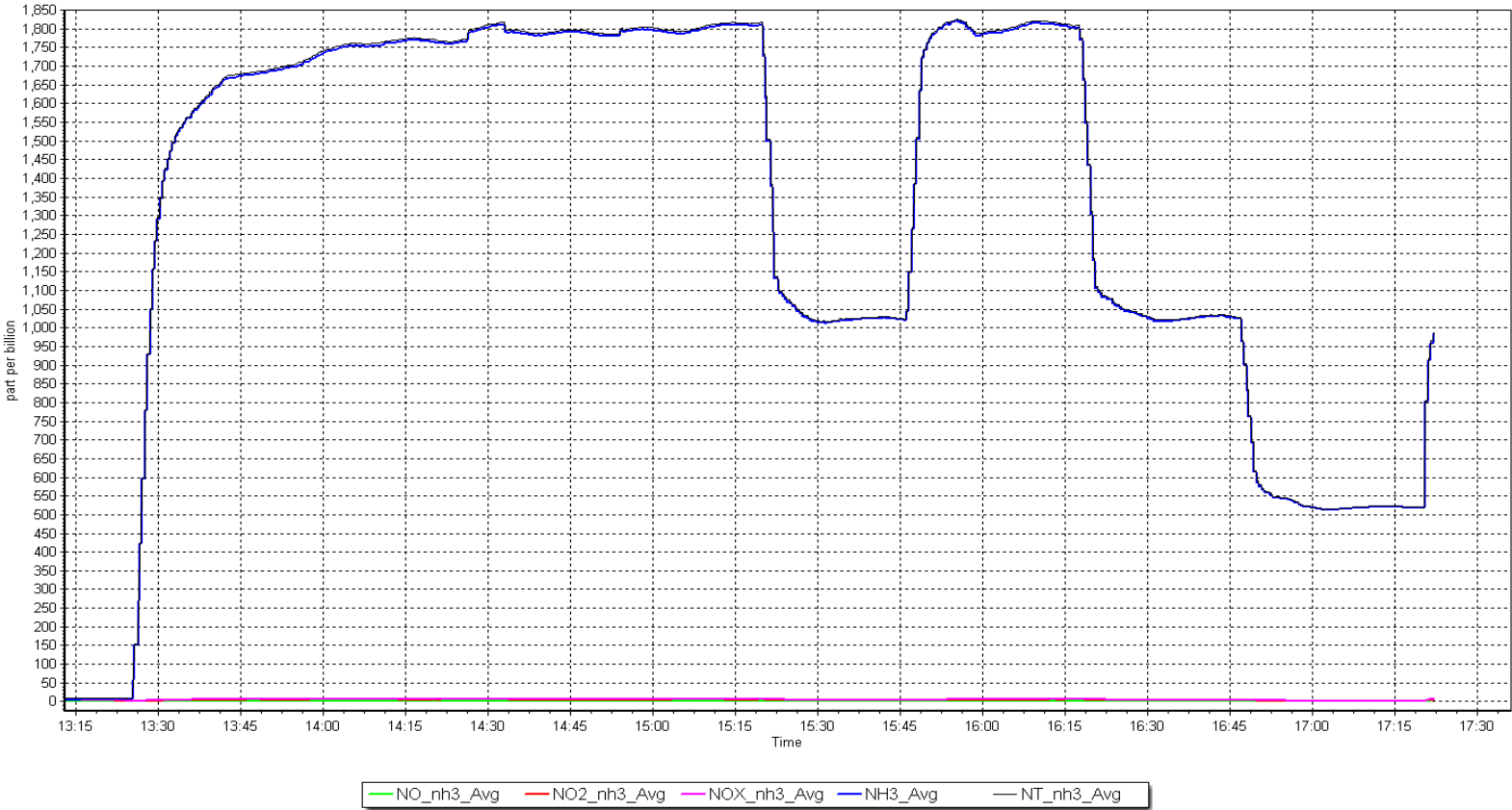




NH₃ Calibration Plot

Date: August 12, 2026

Location: Patricia McInnes





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS07 ATHABASCA VALLEY AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Athabasca Valley Station number: AMS07
Calibration Date: August 7, 2026 Last Cal Date: July 23, 2026
Start time (MST): 9:28 End time (MST): 12:18
Reason: Routine

Calibration Standards

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

Analyzer Information

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

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999547	1.003424	Backgd or Offset:	2.73	2.73
Calibration intercept:	2.604403	2.623543	Coeff or Slope:	0.856	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	802.1	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	802.0	Previous response	801.2	*% change	0.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4920	79.8	799.0	802.4	0.996
Mid point	4960	39.9	399.5	407.0	0.982
Low point	4980	20.0	200.2	204.3	0.980
As left zero	5000	0.0	0.0	0.2	----
As left span	4920	79.8	799.0	805.4	0.992
Average Correction Factor:					0.986

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

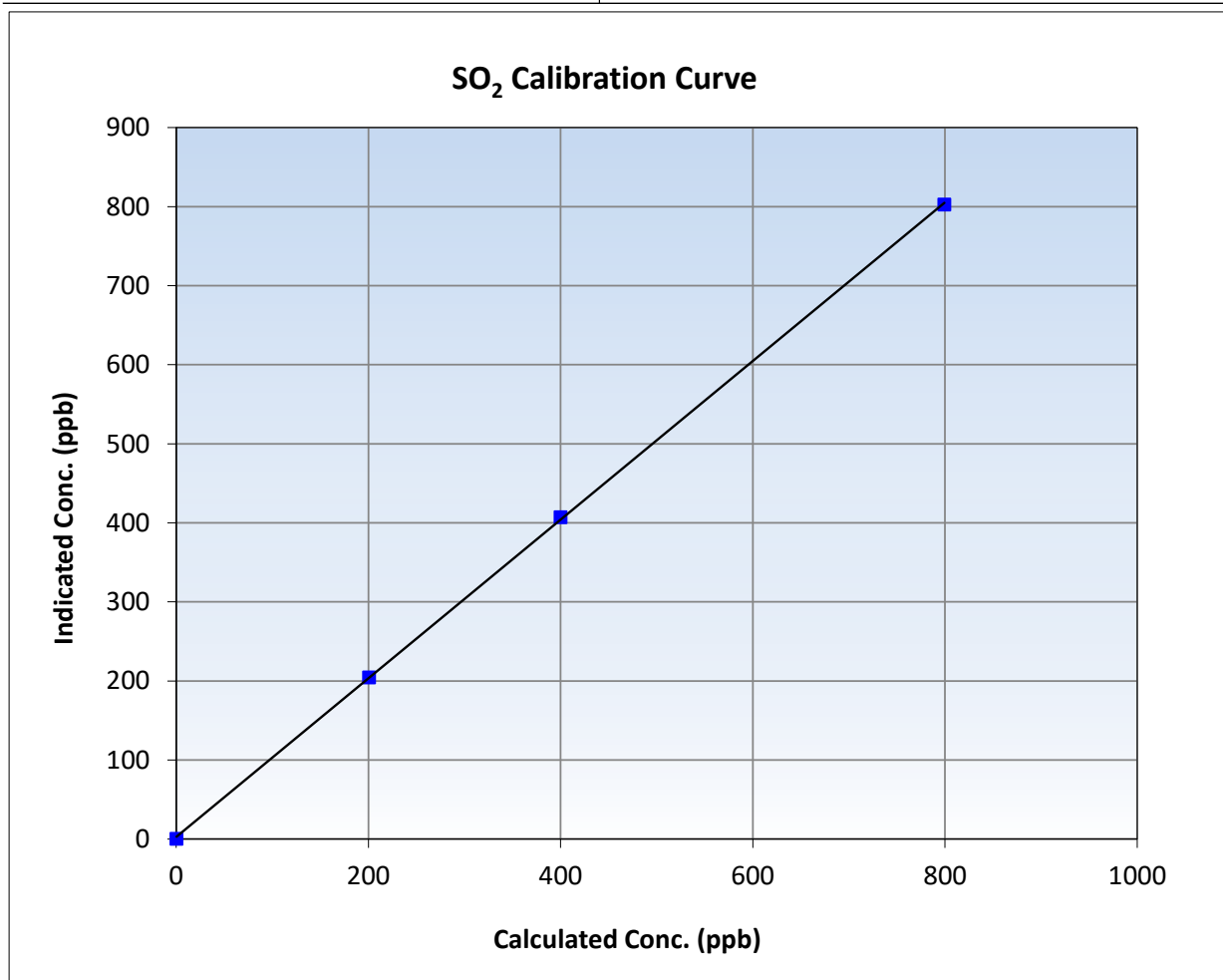
SO₂ Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 23, 2026
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	9:28	End Time (MST):	12:18
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1507864683

Calibration Data

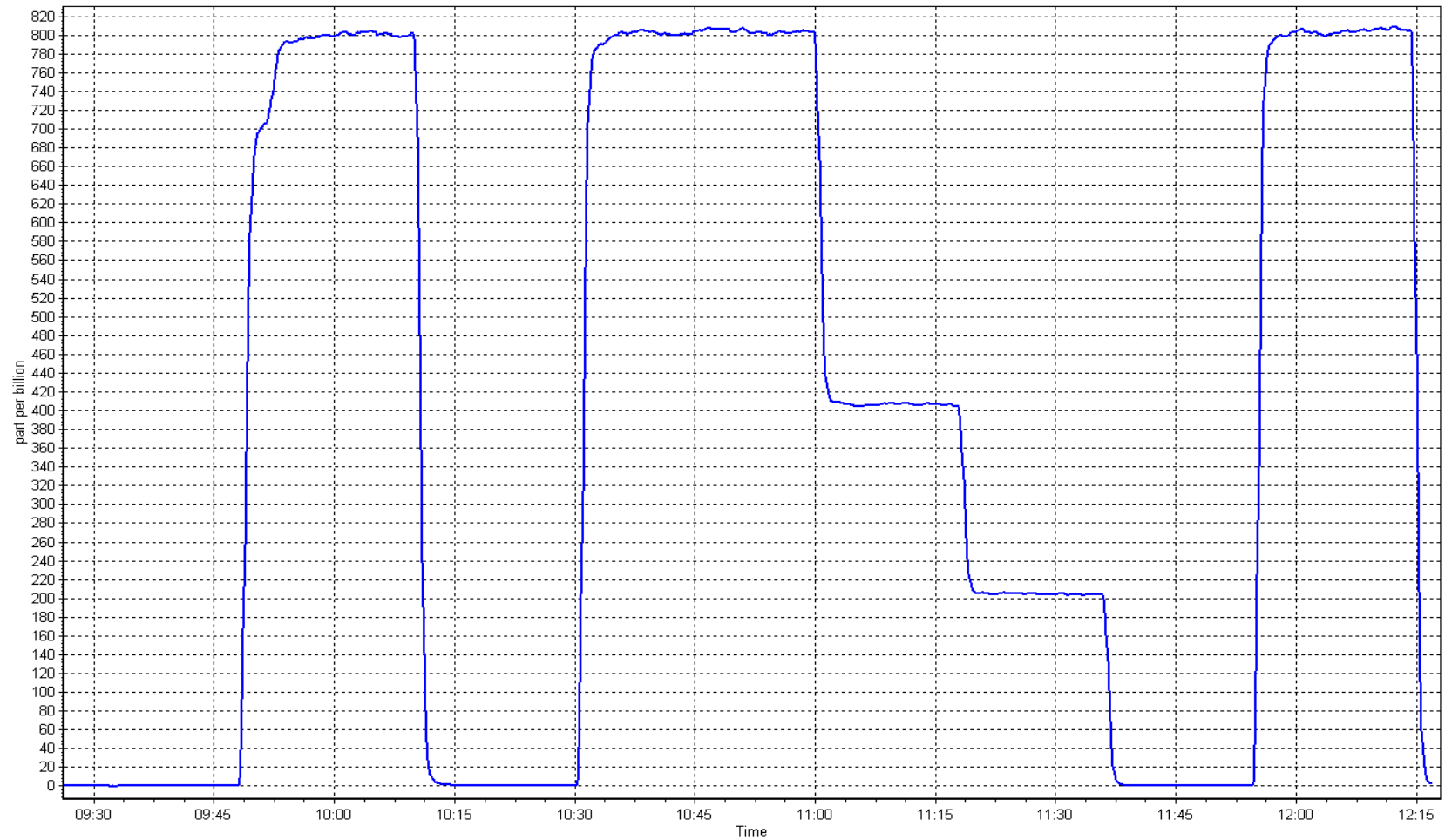
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999937	≥0.995
799.0	802.4	0.9957	Slope	1.003424	0.90 - 1.10
399.5	407.0	0.9815	Intercept	2.623543	+/-30
200.2	204.3	0.9801			



SO2 Calibration Plot

Date: August 7, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: August 10, 2026
Start time (MST): 9:18
Reason: Routine

Station number: AMS07
Last Cal Date: July 20, 2026
End time (MST): 13:57

Calibration Standards

Cal Gas Concentration: 4.70 ppm
Cal Gas Cylinder #: SX12538
Removed Cal Gas Conc: 5.25 ppm
Removed Gas Cyl #: CC504080
Calibrator Make/Model: API T700
ZAG Make/Model: API T701H

Cal Gas Exp Date: June 22, 2028
Rem Gas Exp Date: January 3, 2026
Diff between cyl: -2.2%
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:	1.008001	1.000973	Backgd or Offset:	1.9	1.9
Calibration intercept:	-0.122353	-0.499166	Coeff or Slope:	1.097	1.104

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	500	0.0	0.0	-0.6	----
As found High point	4925	75.5	79.3	78.5	1.002
As found Mid point	4962	37.7	39.6	39.0	1.000
As found Low point	4981	18.9	19.8	19.6	0.982
New cylinder response	4915	85.1	80.0	77.5	1.032
Baseline Corr As found:	79.1	Prev response:	79.78	*% change:	-0.9%
Baseline Corr 2nd AF pt:	39.6	AF Slope:	0.996318	AF Intercept:	-0.422292
Baseline Corr 3rd AF pt:	20.2	AF Correlation:	0.999971	* = > +/-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	-0.4	----
High point	4915	85.1	80.0	79.7	1.004
Mid point	4957	42.6	40.0	39.3	1.019
Low point	4979	21.3	20.0	19.6	1.021
As left zero	5000	0.0	0.0	-0.4	----
As left span	4915	85.1	80.0	80.6	0.992
SO2 Scrubber Check	4920	79.8	798.0	0.0	----
Date of last scrubber change:	9-Jul-26		Ave Corr Factor		1.015
Date of last converter efficiency test:	Friday, April 22, 2022				

Notes: Changed inlet filter and H2S cylinder. Scrubber check passed. Adjusted span only.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

TRS Calibration Summary

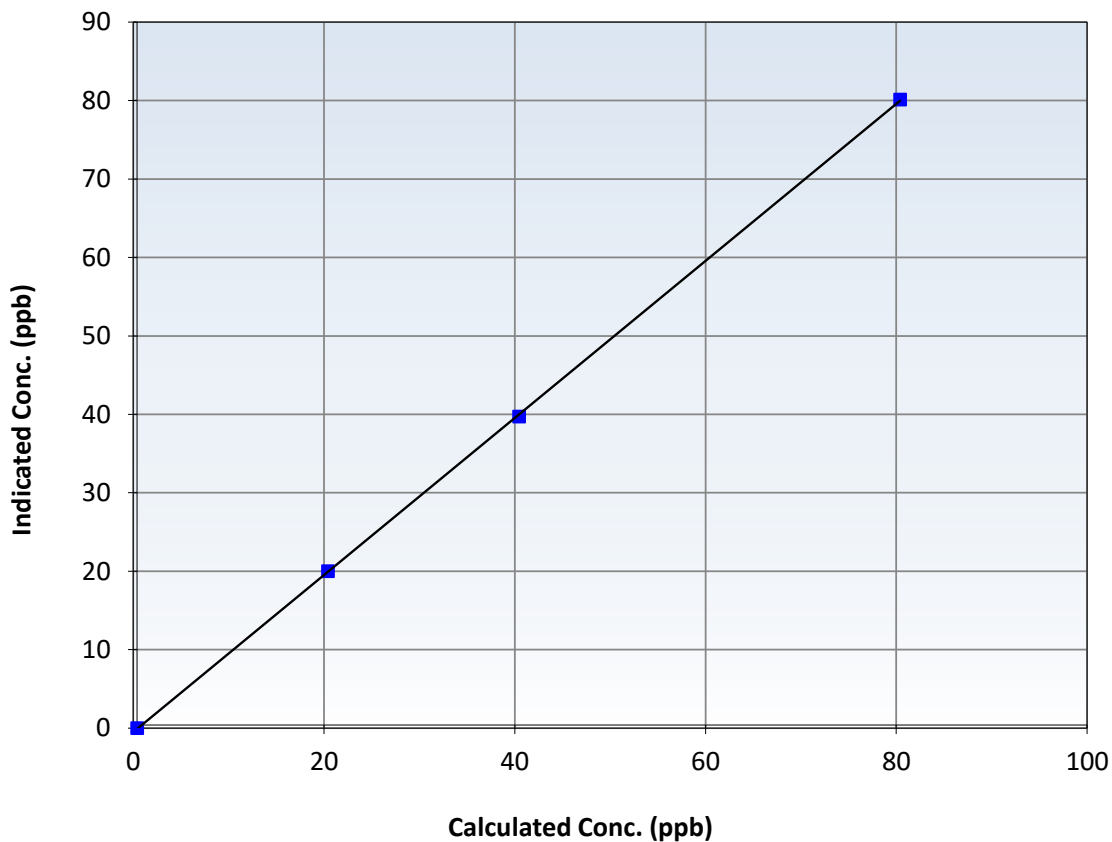
Station Information

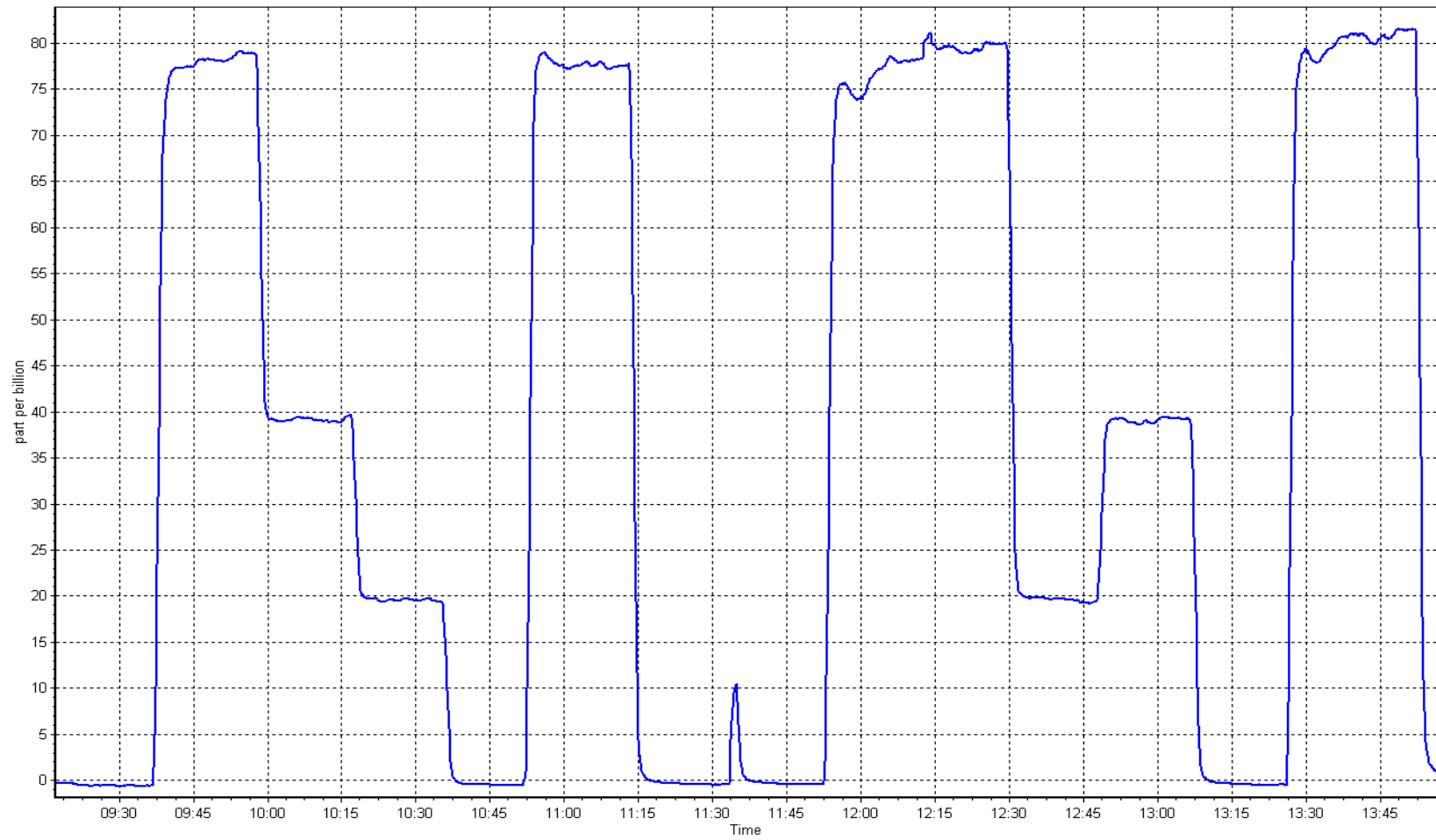
Calibration Date:	August 10, 2026	Previous Calibration:	July 20, 2026
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	9:18	End Time (MST):	13:57
Analyzer make:	Thermo 43iQ TL	Analyzer serial #:	12522542352

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.4	----	Correlation Coefficient	0.999968		≥ 0.995
80.0	79.7	1.0037	Slope	1.000973		$0.90 - 1.10$
40.0	39.3	1.0190	Intercept	-0.499166		± 3
20.0	19.6	1.0215				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Athabasca Valley
 Calibration Date: August 7, 2026
 Start time (MST): 9:28
 Reason: Routine

Station number: AMS 07
 Last Cal Date: July 23, 2026
 End time (MST): 12:18

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	3.13E-04	NMHC SP Ratio:	6.19E-05
CH ₄ Retention time:	14.4	14.6	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	16.88	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.88	Prev response	16.94	*% 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	4920	79.8	16.91	16.94	0.998
Mid point	4960	39.9	8.46	8.52	0.993
Low point	4980	20.0	4.24	4.33	0.980
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	16.91	16.99	0.995
Average Correction Factor					0.990

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	9.04	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.04	Prev response	9.02	*% 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	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	0.977
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	9.00	9.06	0.994
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	7.84	1.010
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.84	Prev response	7.92	*% change	-1.0%
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) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	7.92	7.94	0.998
Mid point	4960	39.9	3.96	3.98	0.995
Low point	4980	20.0	1.98	2.02	0.983
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	7.92	7.94	0.997
Average Correction Factor					0.992

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.999066	1.000432
THC Cal Offset:	0.040845	0.041239
CH ₄ Cal Slope:	0.998321	1.001339
CH ₄ Cal Offset:	0.012659	0.013452
NMHC Cal Slope:	0.999837	0.999672
NMHC Cal Offset:	0.027986	0.027387

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

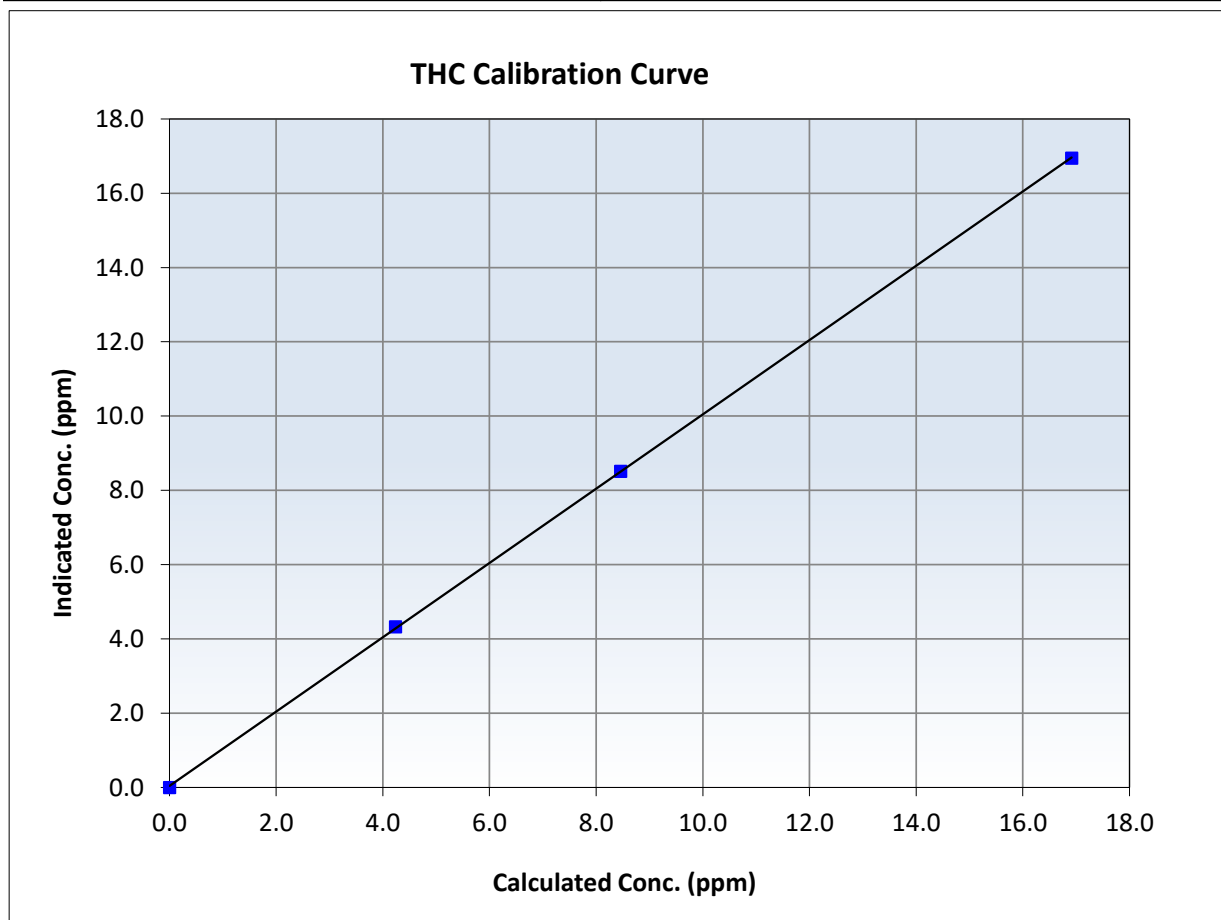
THC Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 23, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	9:28	End Time (MST):	12:18
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	16.94	0.9982	Slope	1.000432	$0.90 - 1.10$
8.46	8.52	0.9930	Intercept	0.041239	± 0.5
4.24	4.33	0.9797			





Wood Buffalo Environmental Association

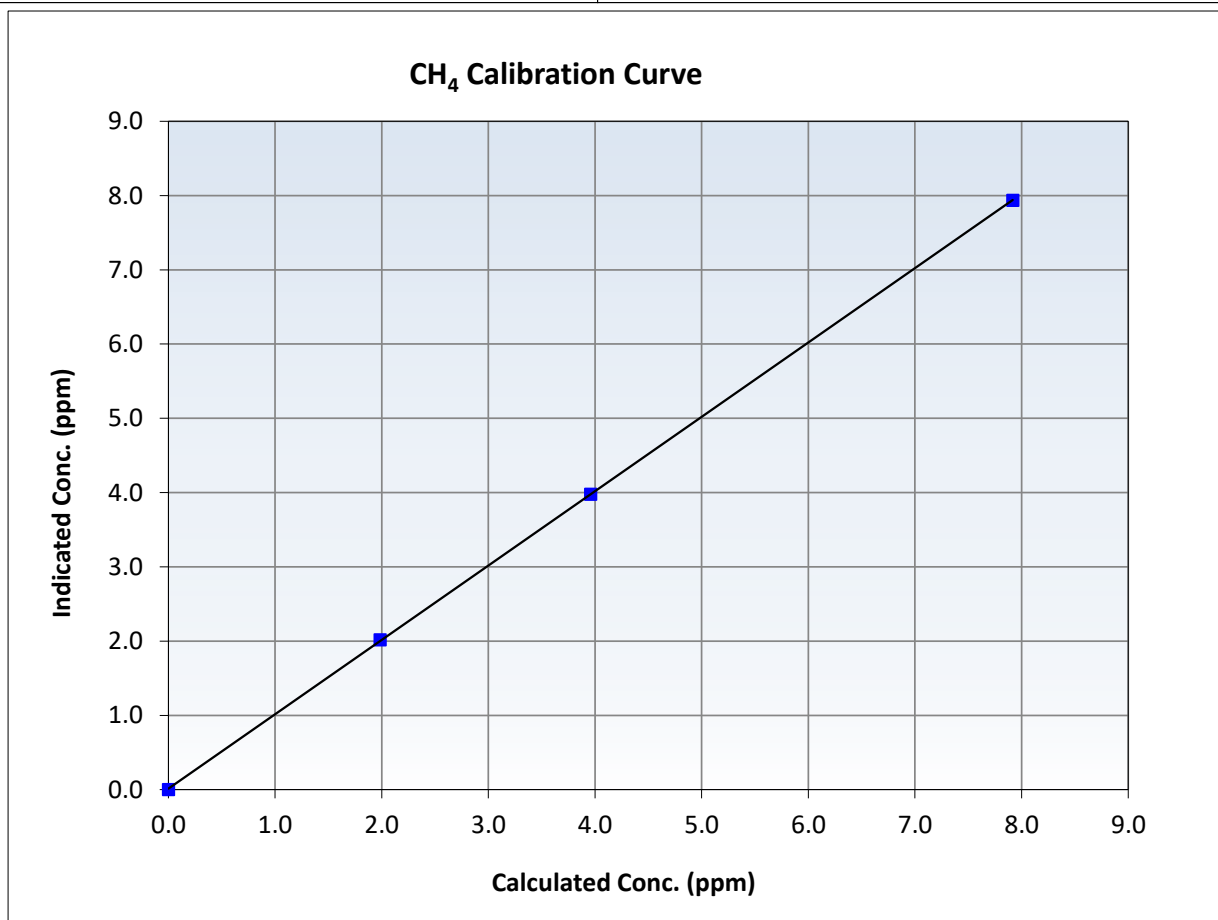
CH₄ Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 23, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	9:28	End Time (MST):	12:18
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999985	≥ 0.995
7.92	7.94	0.9975	Slope	1.001339	$0.90 - 1.10$
3.96	3.98	0.9953	Intercept	0.013452	± 0.5
1.98	2.02	0.9832			





Wood Buffalo Environmental Association

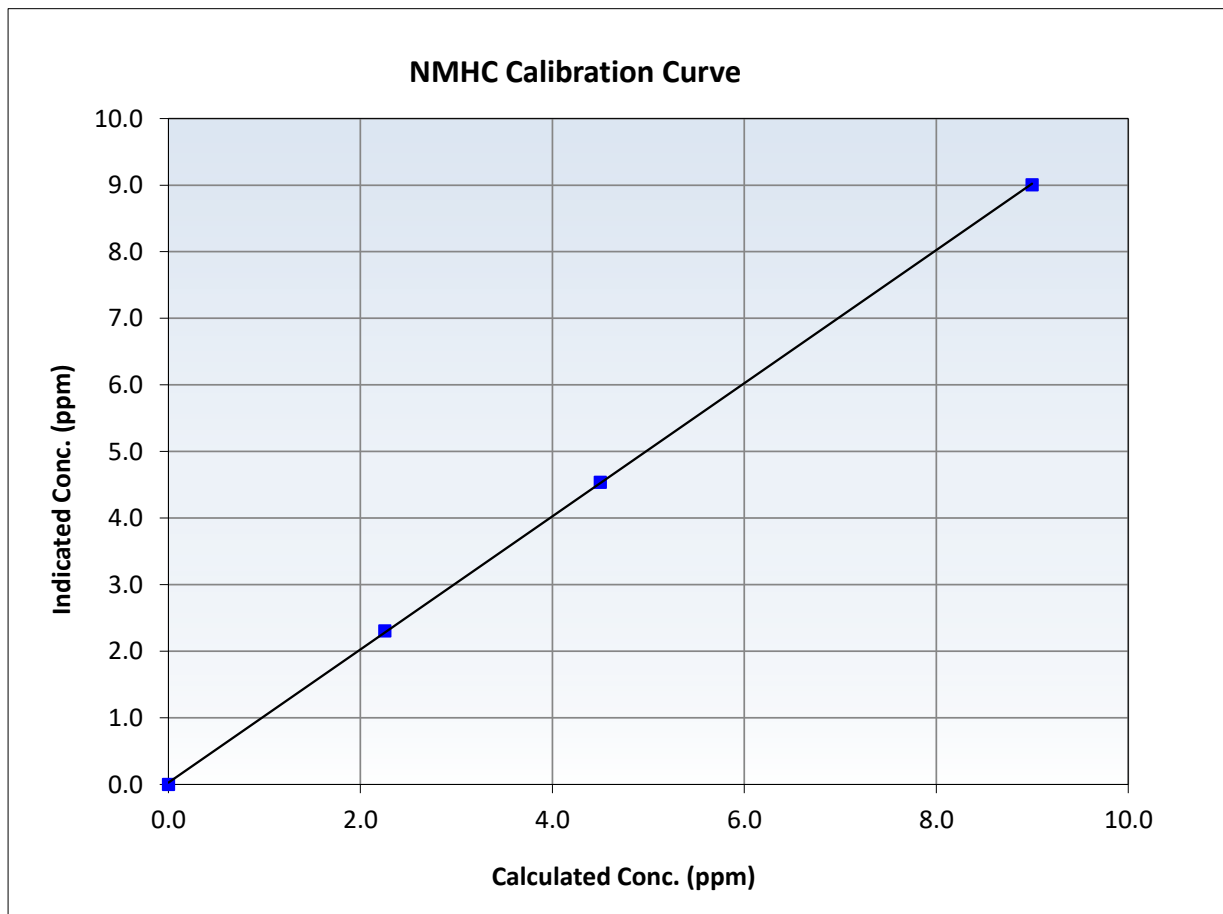
NMHC Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 23, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	9:28	End Time (MST):	12:18
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

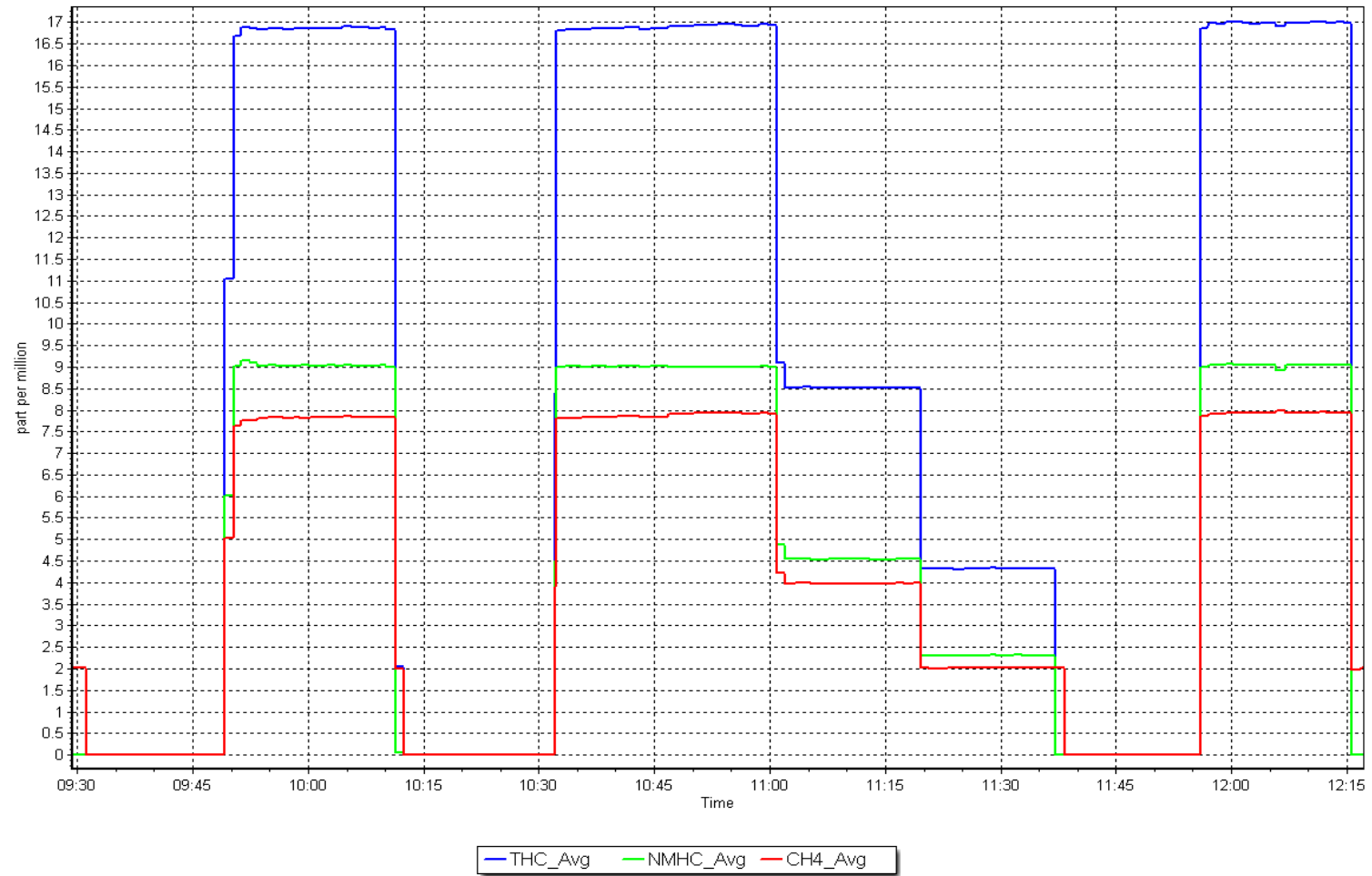
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999957	<i>≥0.995</i>
9.00	9.01	0.9989	Slope	0.999672	<i>0.90 - 1.10</i>
4.50	4.54	0.9909	Intercept	0.027387	<i>+/-0.5</i>
2.26	2.31	0.9770			



NMHC Calibration Plot

Date: August 7, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Athabasca Valley
Station number: AMS 07
Calibration Date: August 19, 2026
Last Cal Date: July 15, 2026
Start time (MST): 8:50
End time (MST): 13:02
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	-0.3	-0.2	-0.1	----	----
AF High point	4933	66.8	803.0	800.3	2.7	805.5	799.0	6.7	0.9965	1.0014
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 804.1 ppb	NO = 799.2 ppb	<i>* = > +/-5% change initiates investigation</i>		*Percent Change	NO _x = 0.2%
Baseline Corr 1st pt	NO _x = 805.8 ppb	NO = 799.2 ppb	<u>As Found Statistics</u>		*Percent Change	NO = 0.0%
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:	0.999119	1.002037
NO _x Cal Offset:	1.851908	1.951883
NO Cal Slope:	0.996486	0.999042
NO Cal Offset:	1.691961	1.571938
NO ₂ Cal Slope:	1.006652	1.006076
NO ₂ Cal Offset:	1.092849	1.424774

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:	6.5	6.5
NOX coeff or slope:	1.005	1.005	NOX bkgnd or offset:	6.8	6.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	187.5	184.2

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOX concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOX concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	----	----
High point	4933	66.8	803.0	800.3	2.7	805.2	799.9	5.3	0.9972	1.0005
Mid point	4966	33.4	401.5	400.2	1.3	406.3	403.3	2.9	0.9882	0.9923
Low point	4983	16.7	200.7	200.1	0.7	204.5	202.4	2.0	0.9816	0.9885
As left zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	----	----
As left span	4933	66.8	803.0	398.7	404.3	806.6	398.7	407.9	0.9955	1.0000
Average Correction Factor									0.9890	0.9938

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	796.8	397.2	402.3	405.3	0.9925	100.8%
Mid GPT point	796.8	599.0	200.5	204.2	0.9817	101.9%
Low GPT point	796.8	697.1	102.4	105.6	0.9694	103.2%
Average Correction Factor					0.9812	101.9%

Notes:

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

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

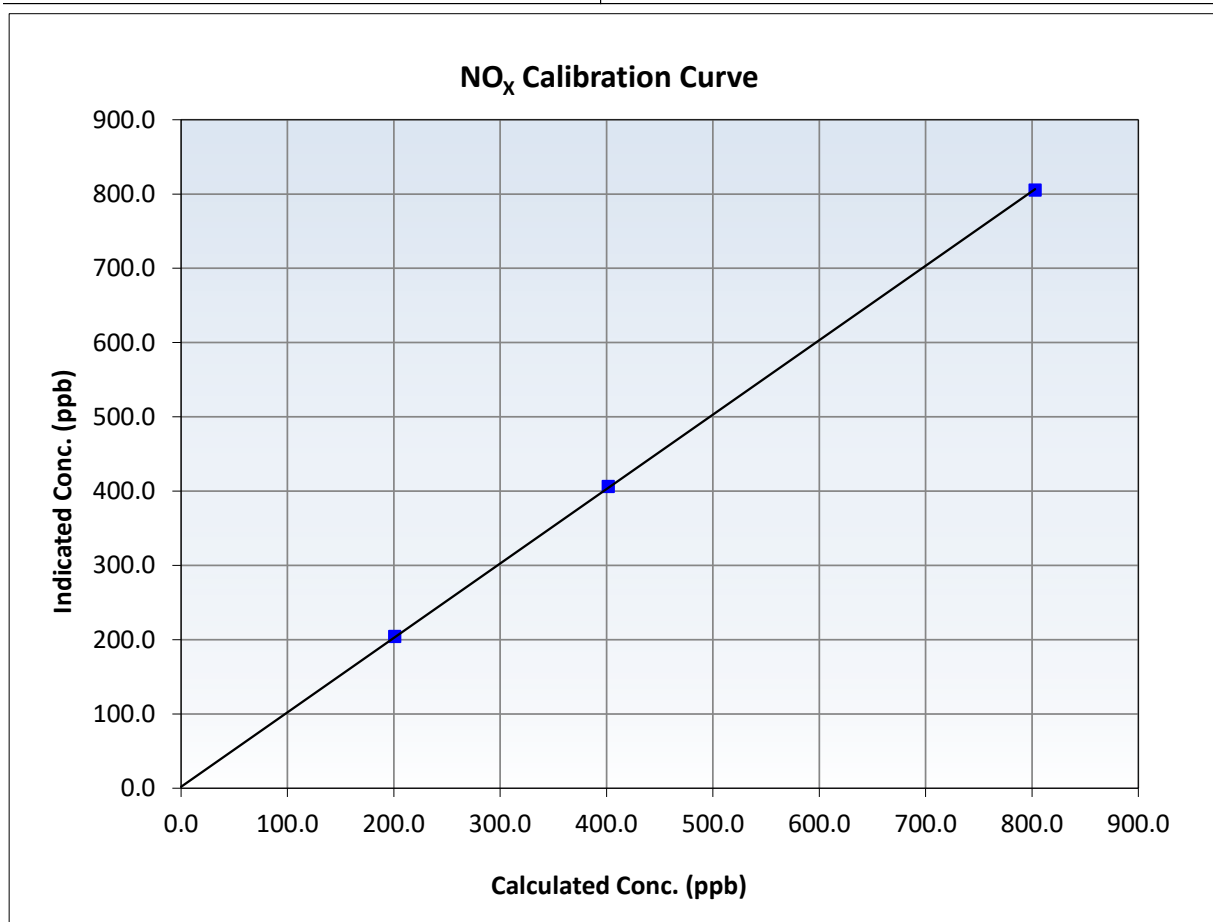
NO_x Calibration Summary

Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 15, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:50	End Time (MST):	13:02
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	0.999966	≥0.995
803.0	805.2	0.9972	Slope	1.002037	0.90 - 1.10
401.5	406.3	0.9882	Intercept	1.951883	+/-20
200.7	204.5	0.9816			





Wood Buffalo Environmental Association

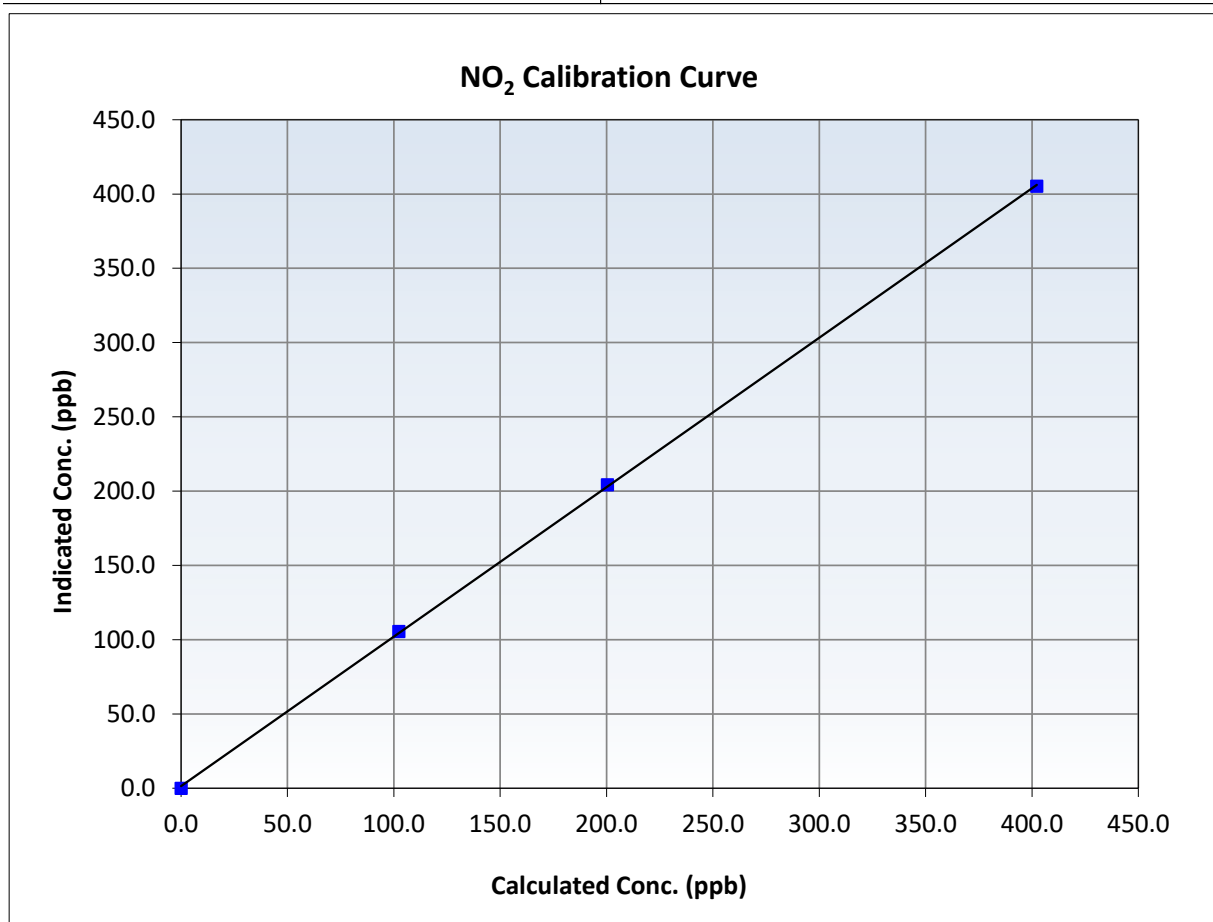
NO₂ Calibration Summary

Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 15, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:50	End Time (MST):	13:02
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	0.999941	≥0.995
402.3	405.3	0.9925	Slope	1.006076	0.90 - 1.10
200.5	204.2	0.9817	Intercept	1.424774	+/-20
102.4	105.6	0.9694			





Wood Buffalo Environmental Association

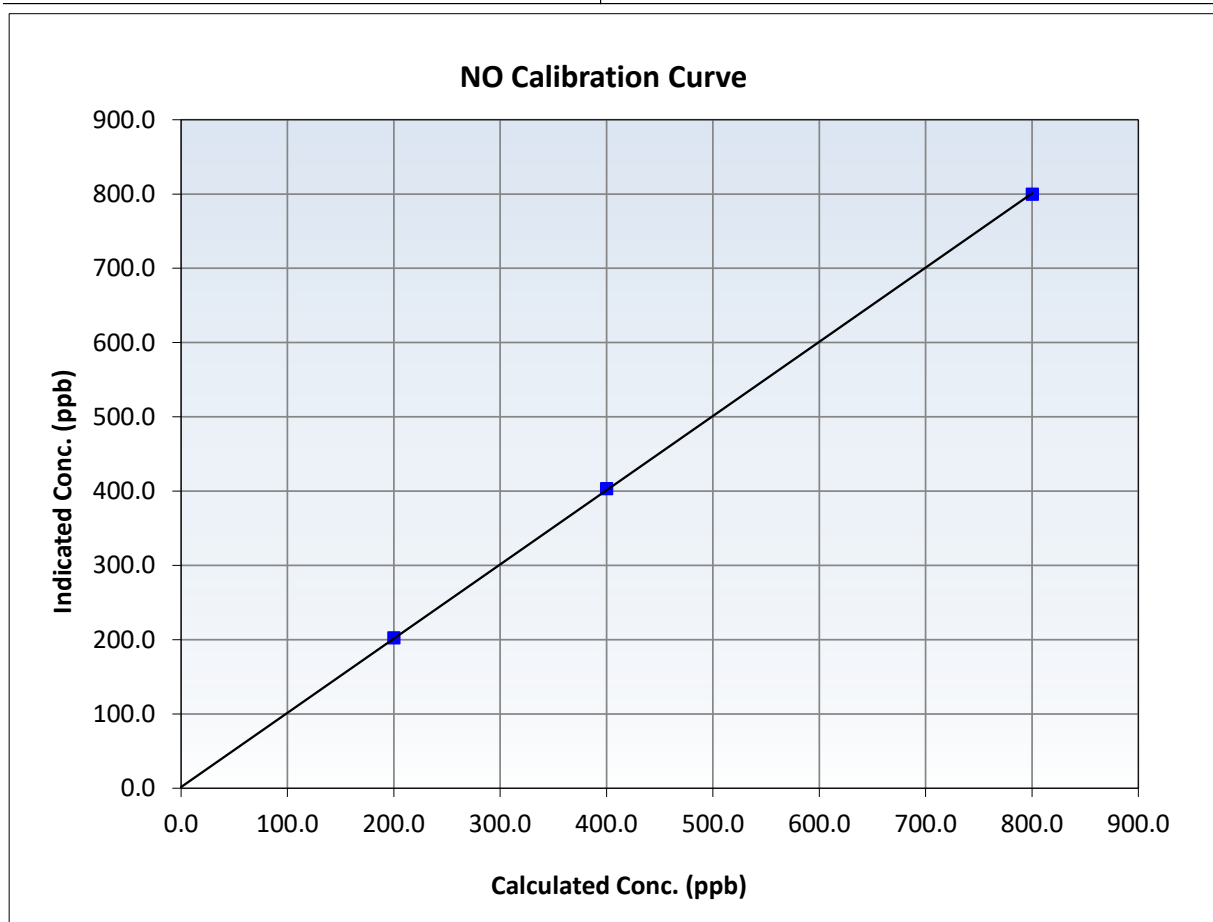
NO Calibration Summary

Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 15, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	8:50	End Time (MST):	13:02
Analyzer make:	Thermo 42i	Analyzer serial #:	1160120024

Calibration Data

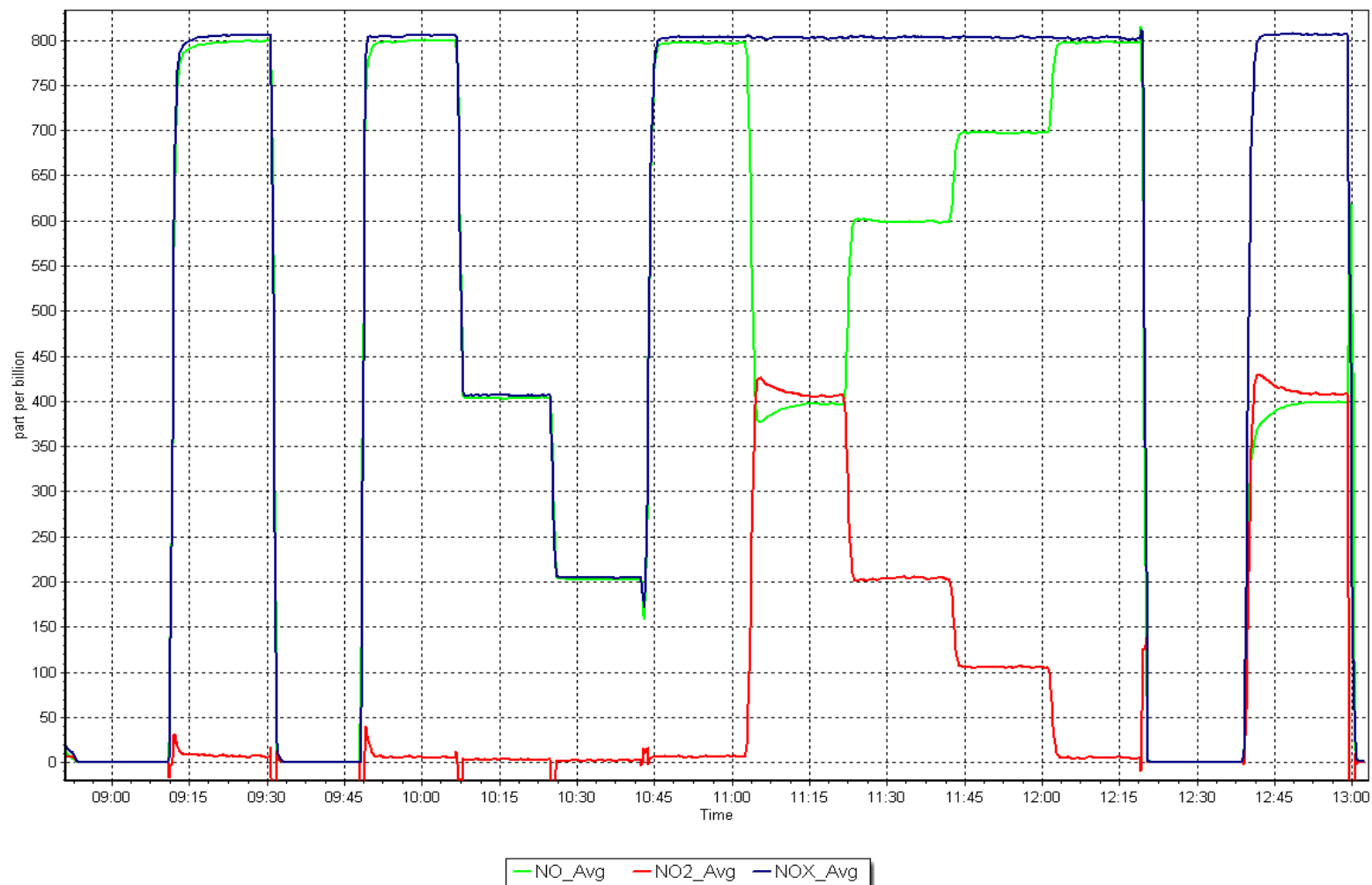
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999975	≥ 0.995
800.3	799.9	1.0005	Slope	0.999042	$0.90 - 1.10$
400.2	403.3	0.9923	Intercept	1.571938	± 20
200.1	202.4	0.9885			



NO_x Calibration Plot

Date: August 19, 2026

Location: Athabasca Valley





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Athabasca Valley
Calibration Date: August 5, 2026
Start time (MST): 10:42
Reason: Routine

Station number: AMS07
Last Cal Date: July 2, 2026
End time (MST): 13:48

Calibration Standards

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

Serial Number: 3805
Serial Number: 198

Analyzer Information

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

Analyzer serial #: 1507964700

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.996343	0.999771	Backgd or Offset:	-0.2	-0.2
Calibration intercept:	-0.160000	-0.060000	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	-0.6	----
As found High point	5000	1876.6	400.0	398.6	1.002
As found Mid point					
As found Low point					
Baseline Corr As found:	399.2	Previous response	398.4	*% 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	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	NA	0.0	-0.1	----
High point	5000	1876.6	400.0	399.8	1.001
Mid point	5000	1253.9	200.0	200.0	1.000
Low point	5000	957.2	100.0	99.9	1.001
As left zero	5000	NA	0.0	0.0	----
As left span	5000	1876.6	400.0	402.5	0.994
Average Correction Factor					1.001

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

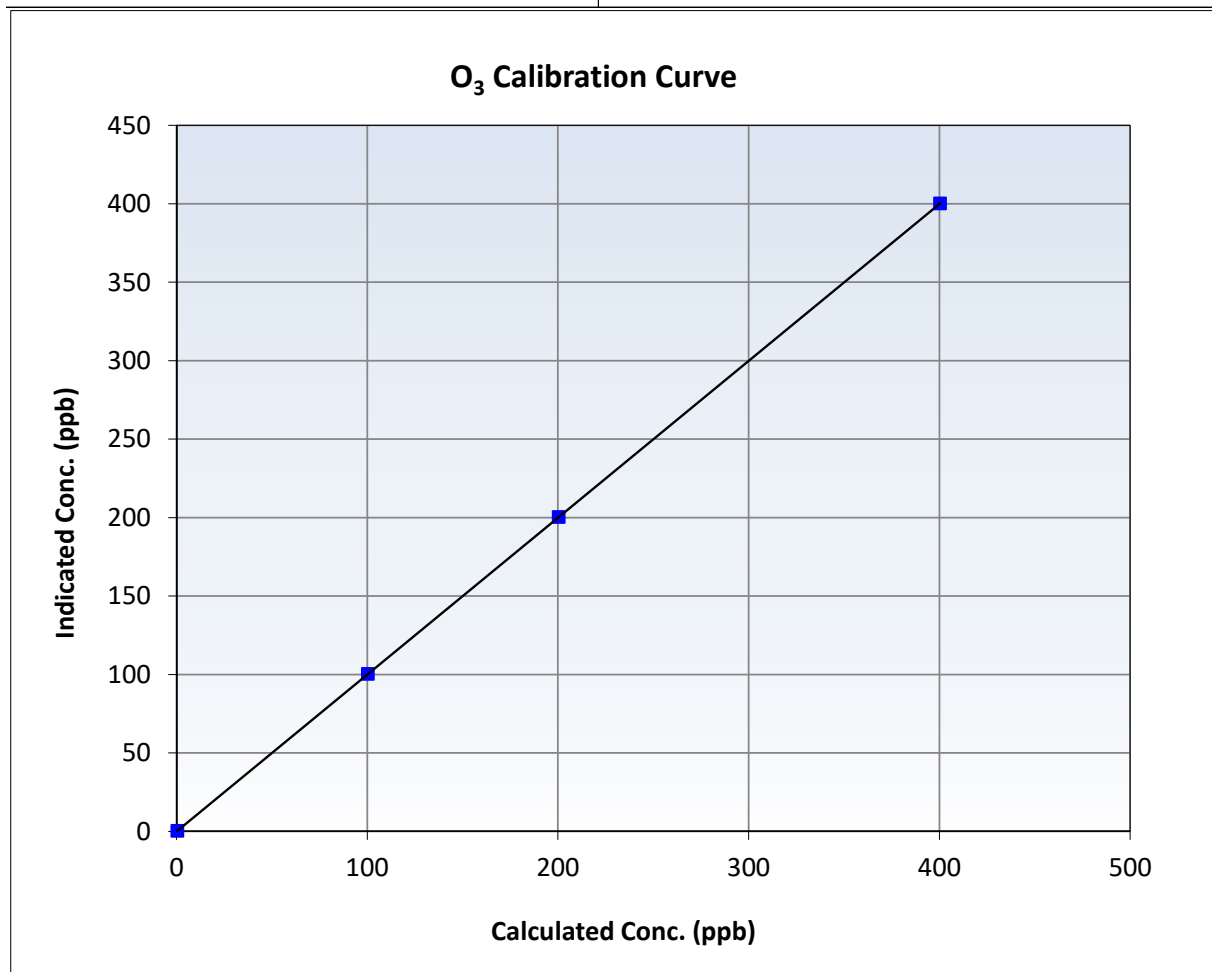
O₃ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 2, 2026
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	10:42	End Time (MST):	13:48
Analyzer make:	Thermo 49i	Analyzer serial #:	1507964700

Calibration Data

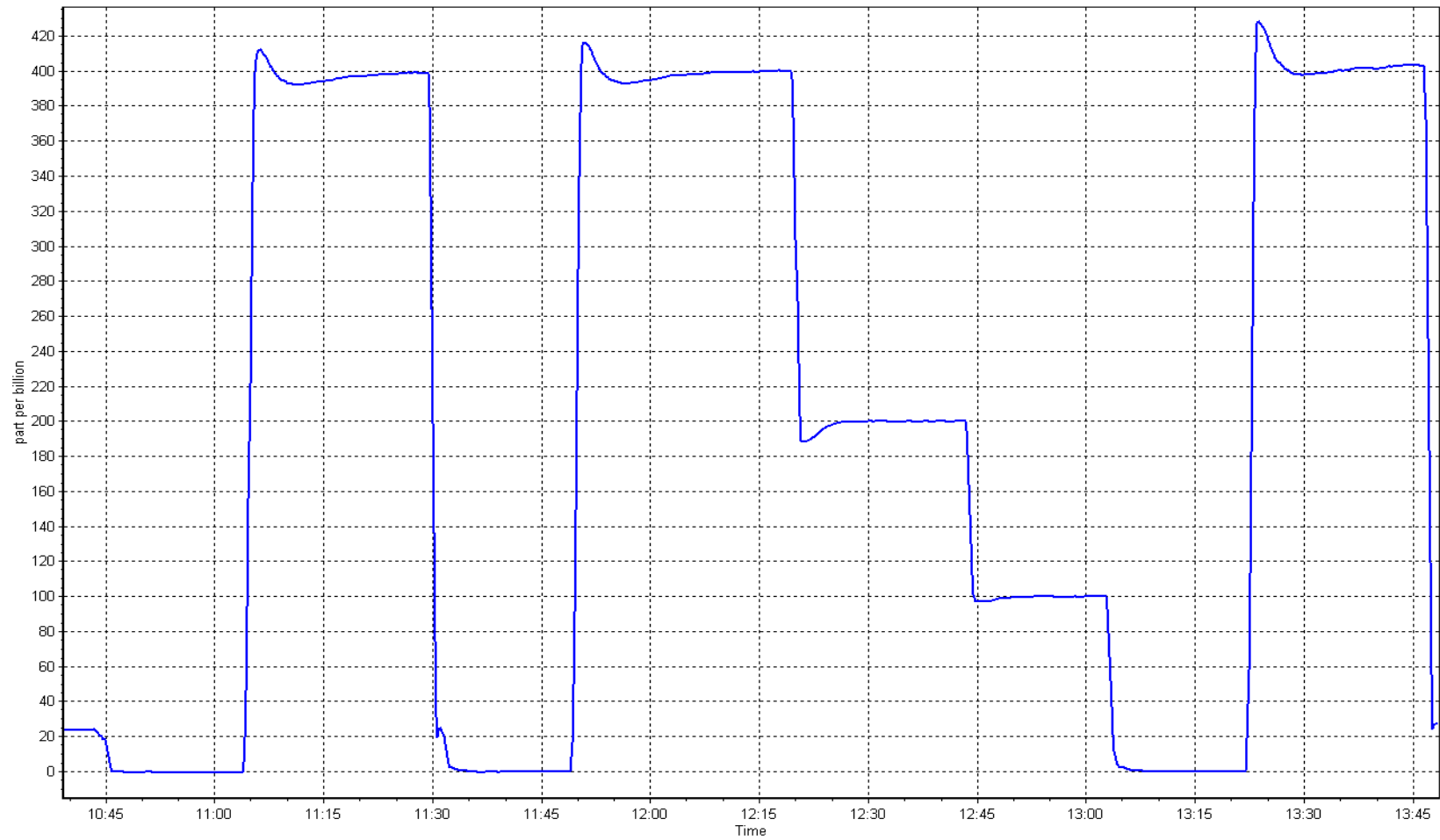
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	1.000000	≥ 0.995
400.0	399.8	1.0005	Slope	0.999771	$0.90 - 1.10$
200.0	200.0	1.0000	Intercept	-0.060000	± 5
100.0	99.9	1.0010			



O₃ Calibration Plot

Date: August 5, 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: August 19, 2026 Last Cal Date: July 24, 2026
Start time (MST): 10:52 End time (MST): 11:04

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)	26.50	24.89	26.50	☐	+/- 2 °C
P (mmHg)	732.80	732.66	732.80	☐	+/- 10 mmHg
Flow (LPM)	5.01	4.93	5.01	☐	+/- 0.25 LPM
PW% (pump)	32	----	32	☐	>80%
Zero Verification	PM w/o HEPA: 6.10		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				☐	+/- 0.5

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

Post- maintenance Zero Verification: PM w/ HEPA: <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: August 6, 2026
Start time (MST): 9:11
Reason: Routine

Station number: AMS 07
Last Cal Date: July 13, 2026
End time (MST): 13:57

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:	0.995297	0.999664	Backgd or Offset:	-3.110	-3.050
Calibration intercept:	0.398018	0.134040	Coeff or Slope:	0.978	0.962

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	0.0	----
As found High point	4932	67.8	40.0	40.6	0.988
As found Mid point	4966	33.9	20.0	20.6	0.973
As found Low point	4983	16.9	10.0	10.5	0.955
New cylinder response					
Baseline Corr As found:	40.55	Prev response:	40.25	*% change:	0.7%
Baseline Corr 2nd AF pt:	20.6	AF Slope:	1.010376	AF Intercept:	0.205199
Baseline Corr 3rd AF pt:	10.5	AF Correlation:	0.999885	* = > +/-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	0.0	----
High point	4932	67.8	40.0	40.1	1.000
Mid point	4966	33.9	20.0	20.3	0.985
Low point	4983	16.9	10.0	10.2	0.976
As left zero	5000	0.0	0.0	-0.1	----
As left span	4932	67.8	40.0	40.1	0.998
Average Correction Factor					0.987

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

CO Calibration Summary

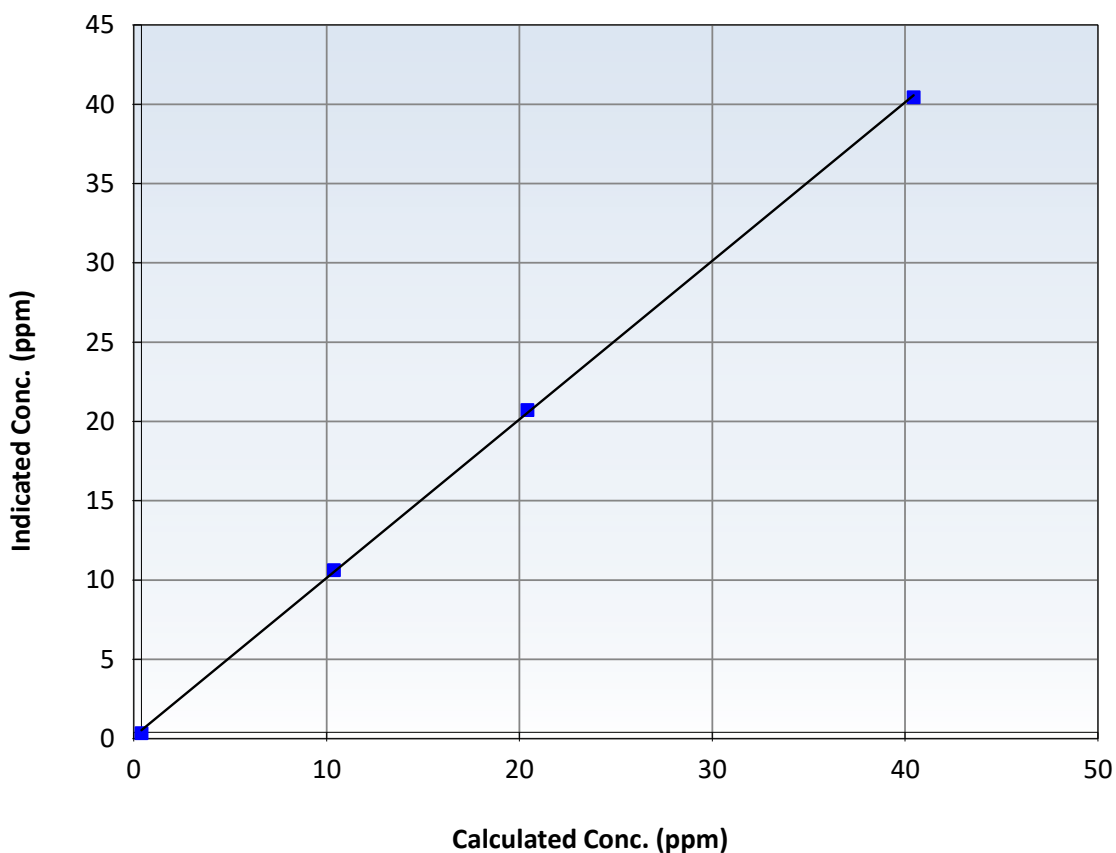
Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 13, 2026
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	9:11	End Time (MST):	13:57
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	0.0	----	Correlation Coefficient	0.999901	≥0.995
40.0	40.1	0.9999	Slope	0.999664	0.90 - 1.10
20.0	20.3	0.9853	Intercept	0.134040	+/-1.5
10.0	10.2	0.9757			

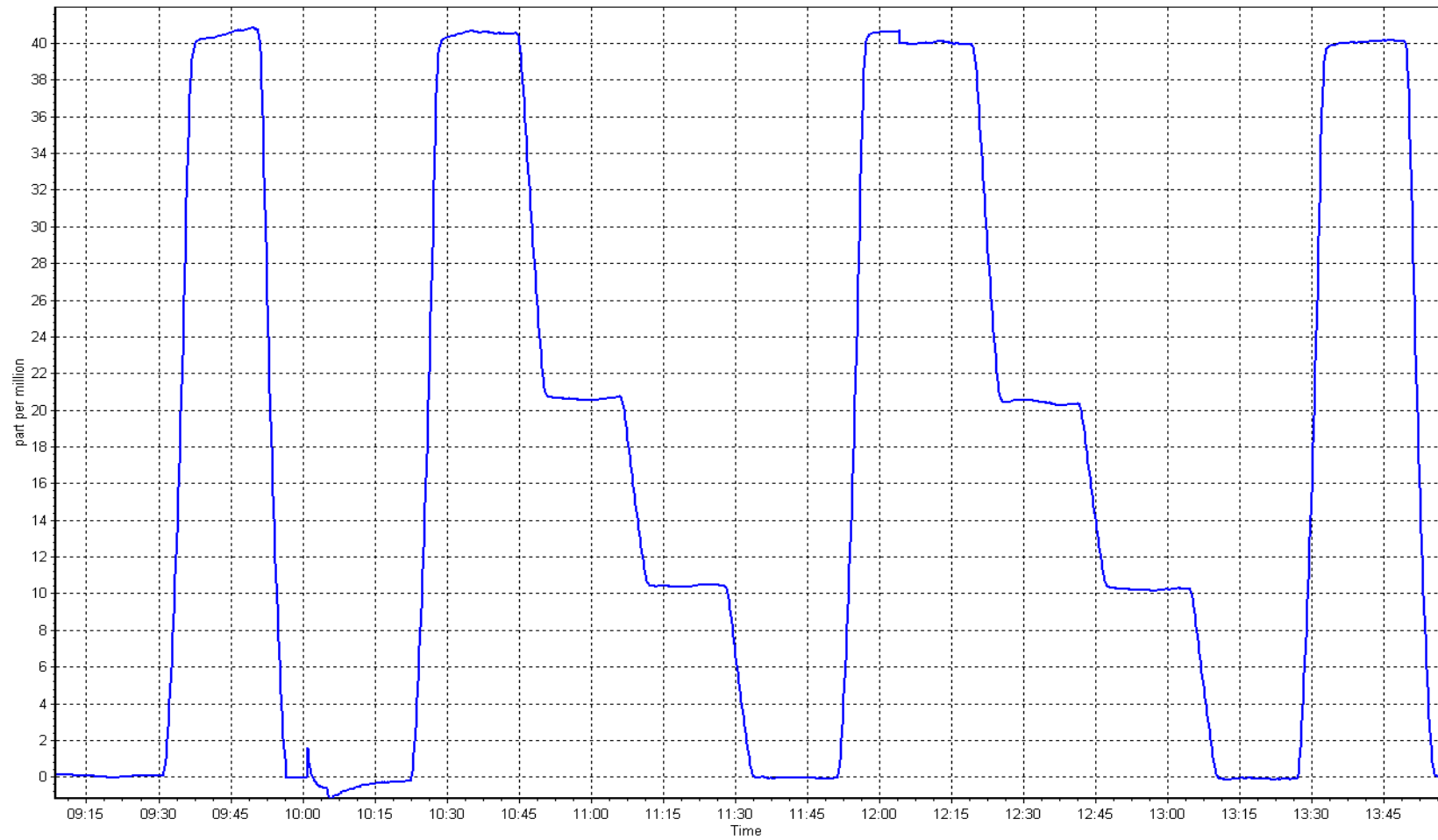
CO Calibration Curve



CO Calibration Plot

Date: August 6, 2026

Location: Athabasca Valley





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS08 FORT CHIPEWYAN AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Fort Chipewyan Station number: AMS 08
Calibration Date: August 6, 2026 Last Cal Date: July 20, 2026
Start time (MST): 9:39 End time (MST): 12:27
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:	1.009771	1.001190	Backgd or Offset:	3.49	3.39
Calibration intercept:	0.693348	0.574983	Coeff or Slope:	1.004	0.977

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.5	----
As found High point	4920	80.3	800.4	819.2	0.976
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	819.7	Previous response	808.9	*% 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	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4920	80.3	800.4	801.3	0.999
Mid point	4960	40.2	400.7	402.8	0.995
Low point	4980	20.1	200.4	201.5	0.994
As left zero	5000	0.0	0.0	-0.2	----
As left span	4920	80.3	800.4	801.9	0.998
Average Correction Factor:					0.996

Notes: Changed inlet filter after as founds. Made adjustment to HIGH point span.

Calibration Performed By: Matthew Courtoreille



Wood Buffalo Environmental Association

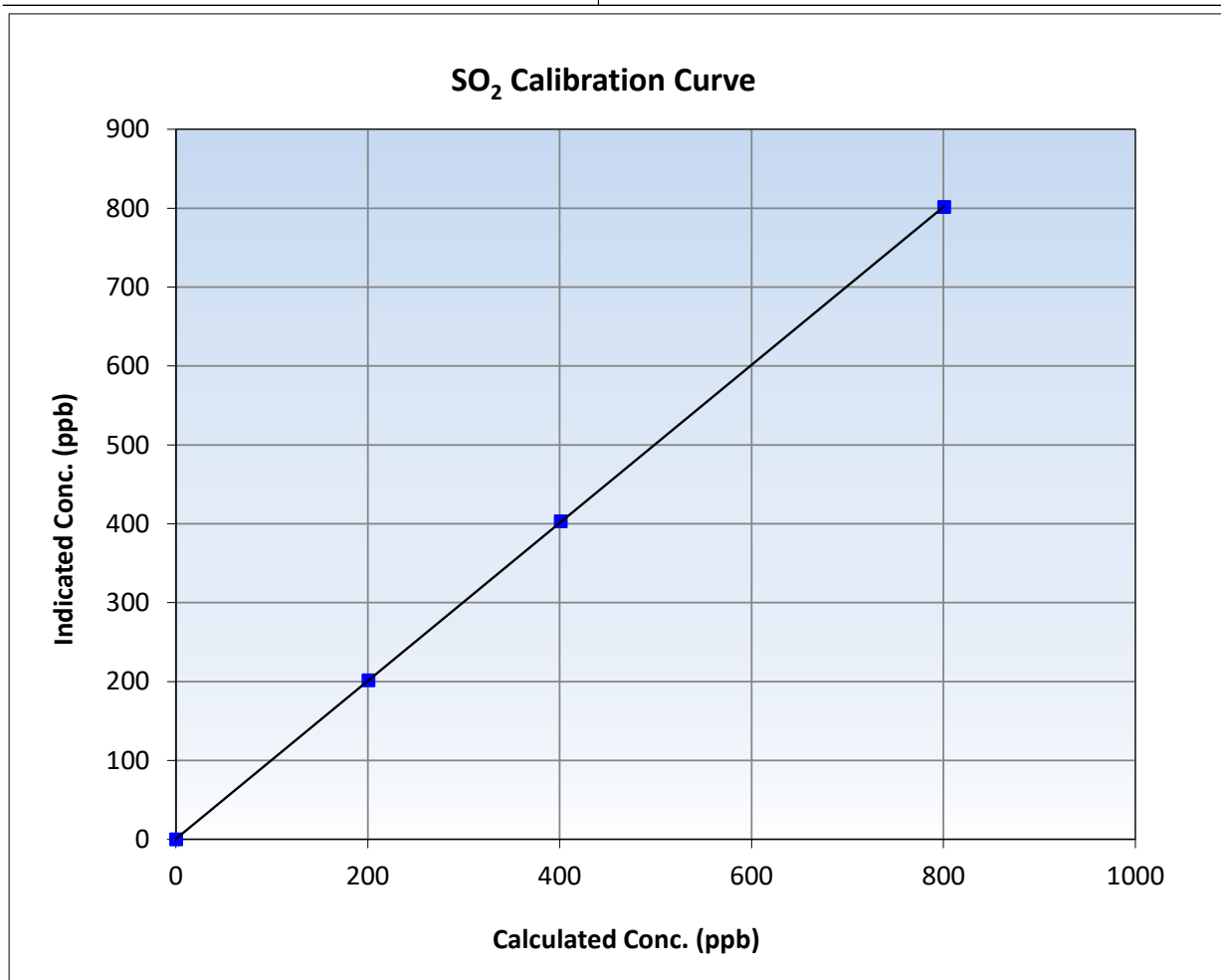
SO₂ Calibration Summary

Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 20, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:39	End Time (MST):	12:27
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1170050147

Calibration Data

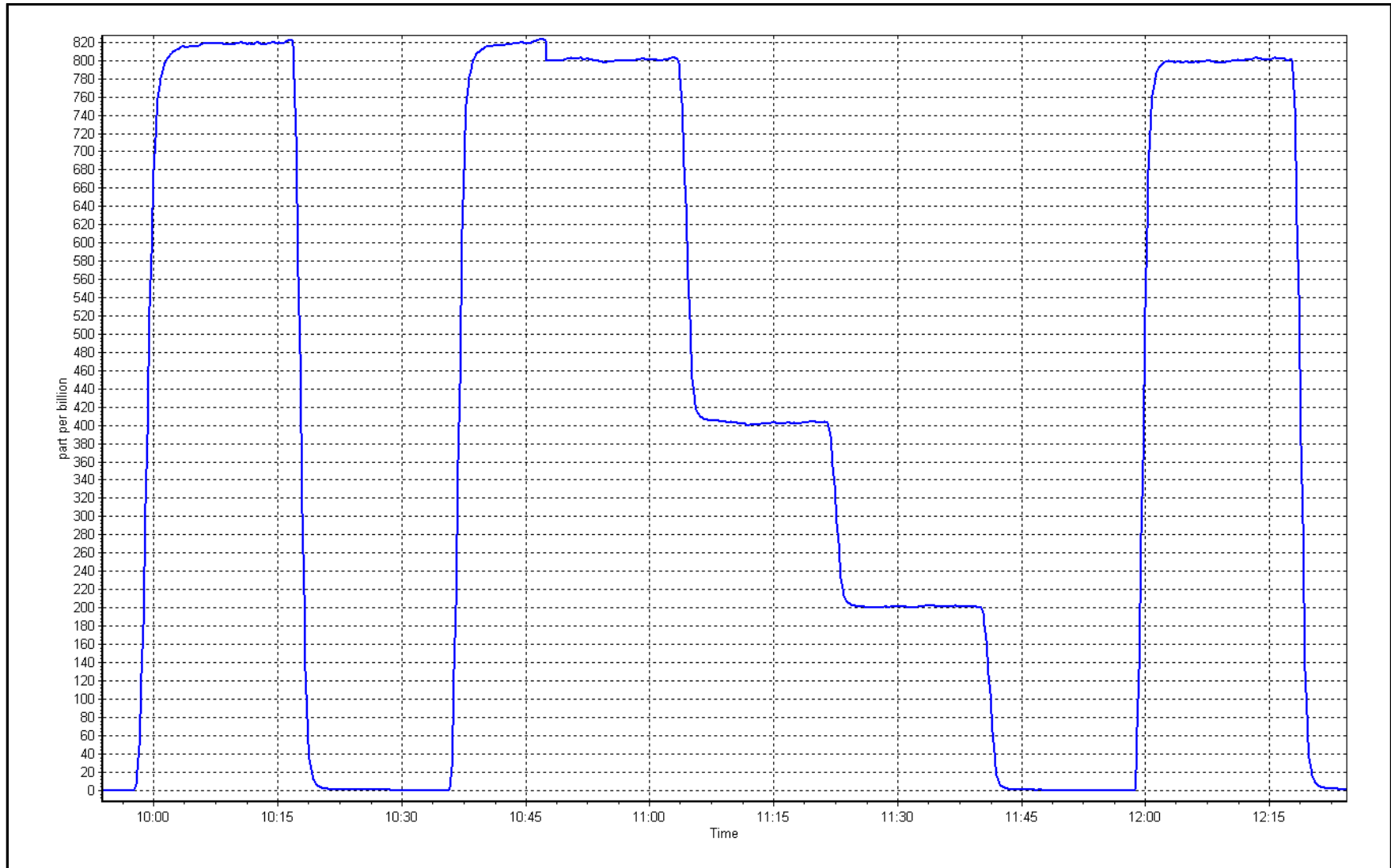
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999994	≥0.995
800.4	801.3	0.9989	Slope	1.001190	0.90 - 1.10
400.7	402.8	0.9948	Intercept	0.574983	+/-30
200.4	201.5	0.9943			



SO2 Calibration Plot

Date: August 6, 2026

Location: Fort Chipewyan





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Fort Chipewyan Station number: AMS 08
Calibration Date: August 12, 2026 Last Cal Date: July 24, 2026
Start time (MST): 9:13 End time (MST): 13:15
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:	1.009959	0.992521	Backgd or Offset:	3.3	3.0
Calibration intercept:	-0.318015	-0.257789	Coeff or Slope:	1.248	1.147

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4917	82.6	80.0	86.8	0.920
As found Mid point	4959	41.3	40.0	42.8	0.932
As found Low point	4979	20.7	20.0	20.6	0.968
New cylinder response					
Baseline Corr As found:	86.9	Prev response:	80.44	*% change:	7.4%
Baseline Corr 2nd AF pt:	42.9	AF Slope:	1.090584	AF Intercept:	-0.639433
Baseline Corr 3rd AF pt:	20.7	AF Correlation:	0.999820	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4917	82.6	80.0	79.2	1.010
Mid point	4959	41.3	40.0	39.4	1.015
Low point	4979	20.7	20.0	19.3	1.038
As left zero	5000	0.0	0.0	0.4	----
As left span	4917	82.6	80.0	81.0	0.987
SO2 Scrubber Check	4920	80.3	803.0	-0.1	----
Date of last scrubber change:	July 24, 2026		Ave Corr Factor		1.021
Date of last converter efficiency test:					

Notes: Changed inlet filter after as founds. Adjusted span high point.

Calibration Performed By: Matthew Courtoireille



Wood Buffalo Environmental Association

TRS Calibration Summary

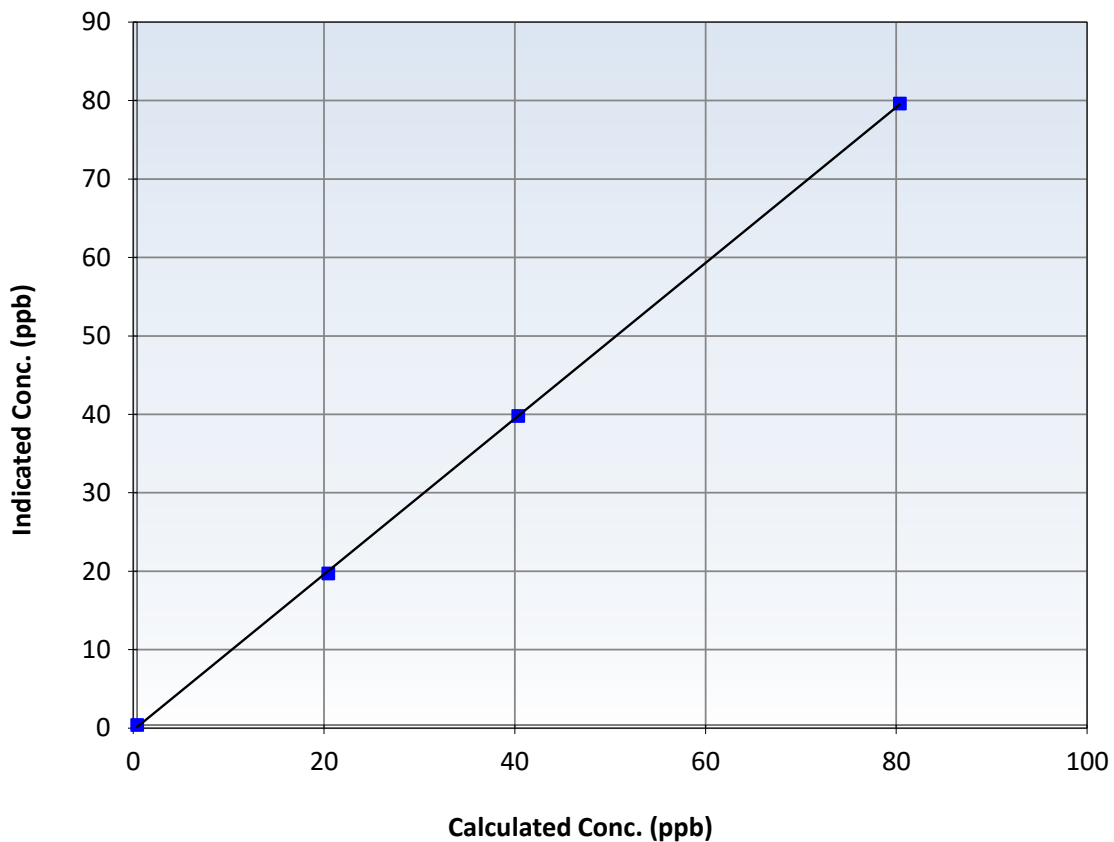
Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 24, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:13	End Time (MST):	13:15
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	0.0	----	Correlation Coefficient	0.999946		≥ 0.995
80.0	79.2	1.0096	Slope	0.992521		$0.90 - 1.10$
40.0	39.4	1.0146	Intercept	-0.257789		± 3
20.0	19.3	1.0383				

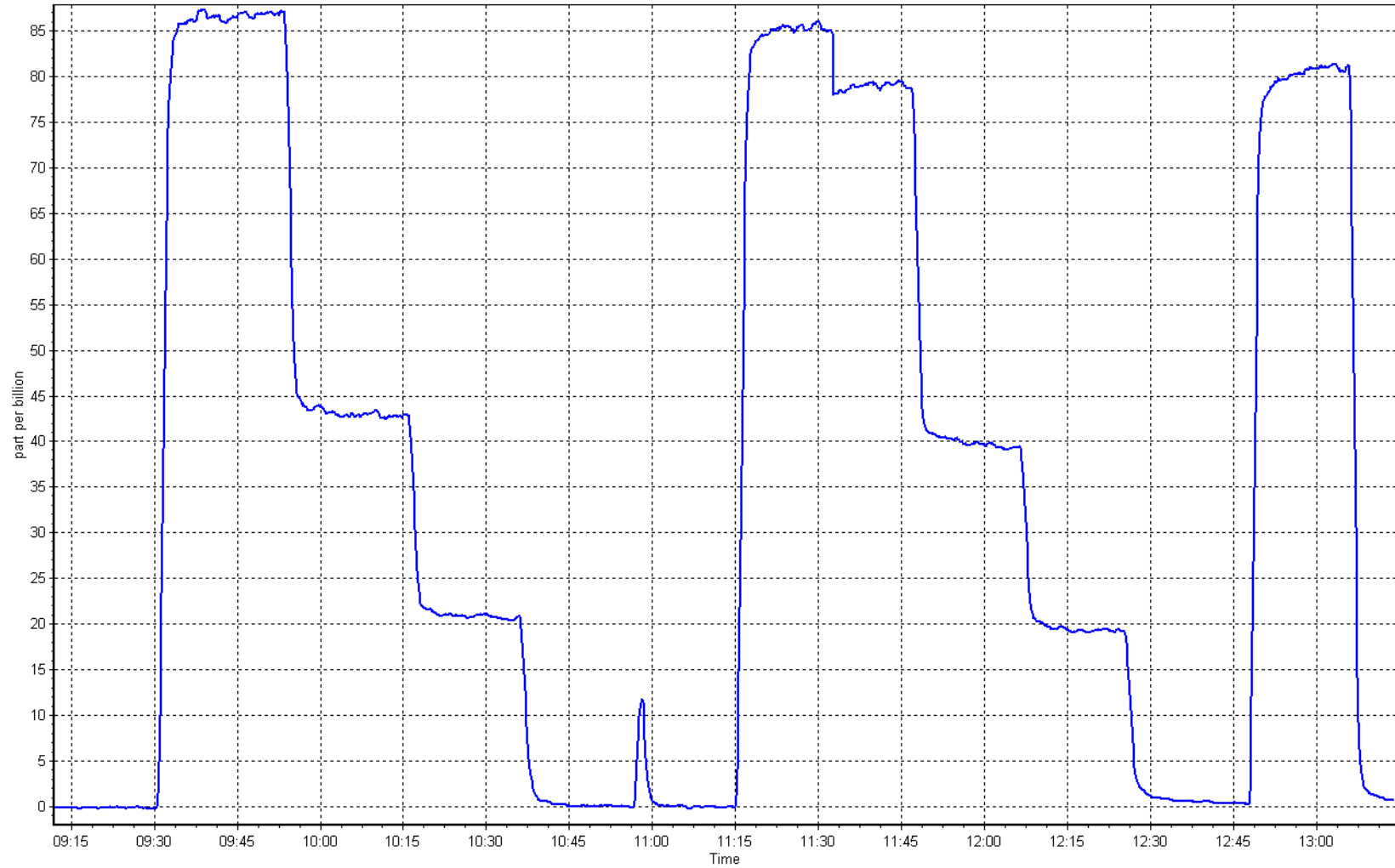
TRS Calibration Curve



TRS Calibration Plot

Date: August 12, 2026

Location: Fort Chipewyan





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Fort Chipewyan
 Station number: AMS 08
 Calibration Date: August 7, 2026
 Last Cal Date: July 22, 2026
 Start time (MST): 8:40
 End time (MST): 12:58
 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 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 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	0.0	----	----
AF High point	4933	66.7	801.8	800.4	1.3	797.1	794.9	2.1	1.0059	1.0069
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 801.5 ppb	NO = 800.0 ppb								
Baseline Corr 1st pt	NO _x = 797.1 ppb	NO = 795.0 ppb								
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb								
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb								
* = > +/-5% change initiates investigation As Found Statistics As found NO_x r²: As found NO r²: As found NO₂ r²: *Percent Change Nx SI: NO SI: NO2 SI: NO_x = -0.6% NO = -0.6% Nx Int: NO Int: NO₂ 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: 1426262592

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.998192	0.992332
NO _x Cal Offset:	1.194509	0.774519
NO Cal Slope:	0.999441	0.993958
NO Cal Offset:	0.014536	-0.465512
NO ₂ Cal Slope:	0.998938	0.998011
NO ₂ Cal Offset:	0.318169	0.128835

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.006	1.006	NO bkgnd or offset:	6.3	6.3
NOX coeff or slope:	0.995	0.995	NOX bkgnd or offset:	6.3	6.3
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	177.0	171.9

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	NO _x Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	0.0	----	----
High point	4933	66.7	801.8	800.4	1.3	796.0	795.4	0.6	1.0073	1.0063
Mid point	4967	33.3	400.2	399.6	0.7	398.5	396.6	1.9	1.0044	1.0075
Low point	4983	16.7	200.7	200.4	0.3	200.5	197.9	2.6	1.0012	1.0126
As left zero	5000	0.0	0.0	0.0	0.0	0.2	0.2	0.1	----	----
As left span	4933	66.7	801.8	391.6	410.2	799.6	391.6	407.7	1.0027	1.0000
Average Correction Factor									1.0043	1.0088

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	0.0	----	----
High GPT point	793.7	387.5	407.5	406.6	1.0023	99.8%
Mid GPT point	793.7	592.7	202.3	202.7	0.9982	100.2%
Low GPT point	793.7	692.2	102.8	102.5	1.0033	99.7%
Average Correction Factor					1.0013	99.9%

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

Calibration Performed By: Matthew Courtoreille



Wood Buffalo Environmental Association

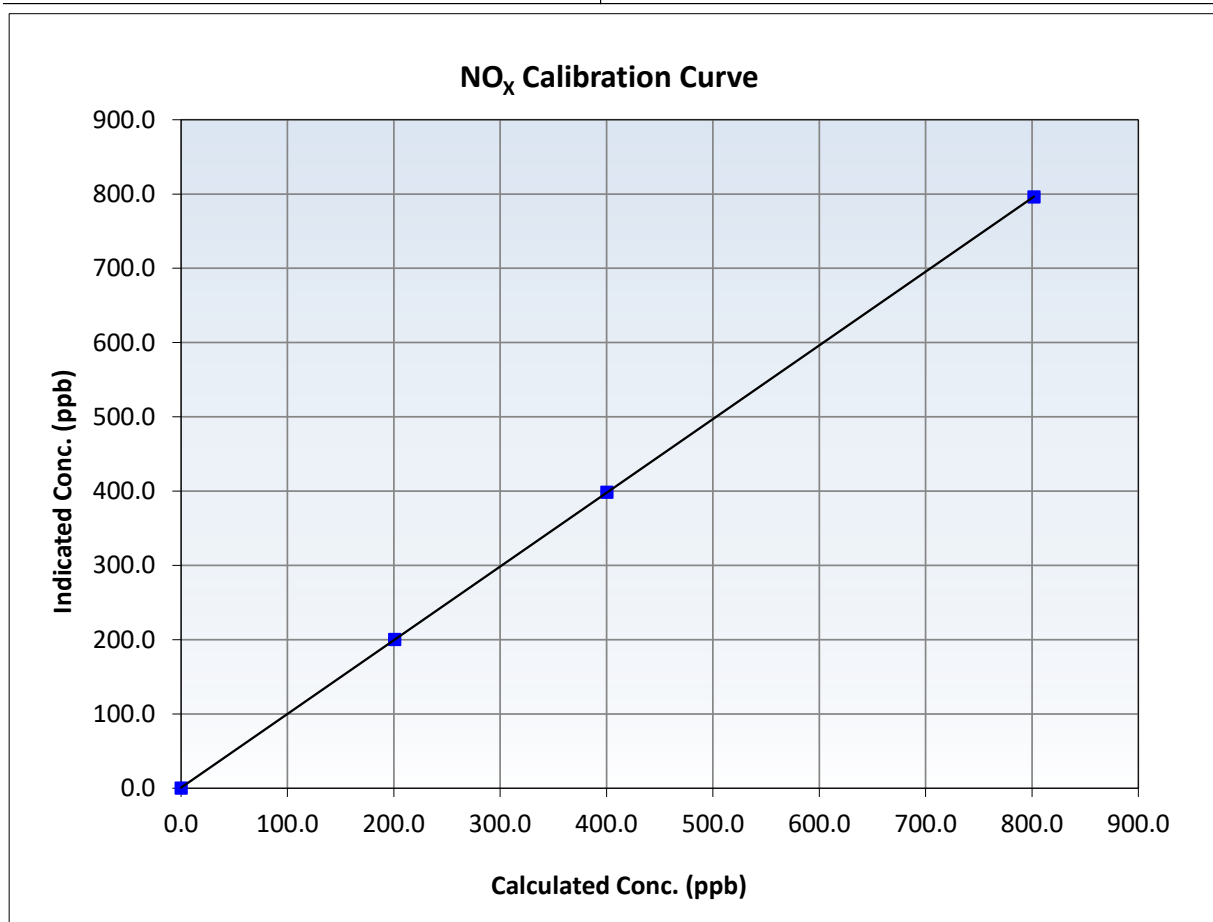
NO_x Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 22, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	8:40	End Time (MST):	12:58
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	0.999997	≥0.995
801.8	796.0	1.0073	Slope	0.992332	0.90 - 1.10
400.2	398.5	1.0044	Intercept	0.774519	+/-20
200.7	200.5	1.0012			





Wood Buffalo Environmental Association

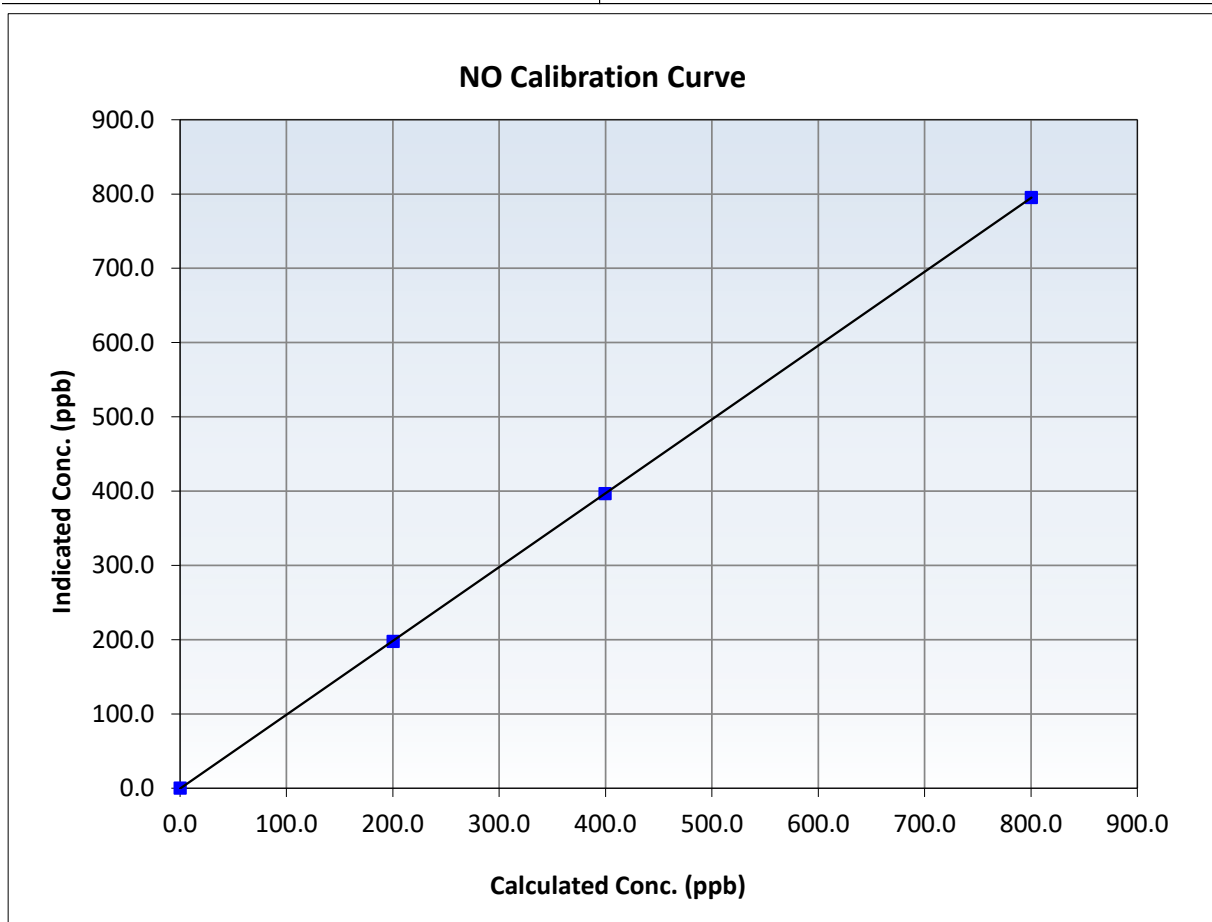
NO Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 22, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	8:40	End Time (MST):	12:58
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	0.2	----	Correlation Coefficient	0.999997	≥ 0.995
800.4	795.4	1.0063	Slope	0.993958	0.90 - 1.10
399.6	396.6	1.0075	Intercept	-0.465512	+/-20
200.4	197.9	1.0126			





Wood Buffalo Environmental Association

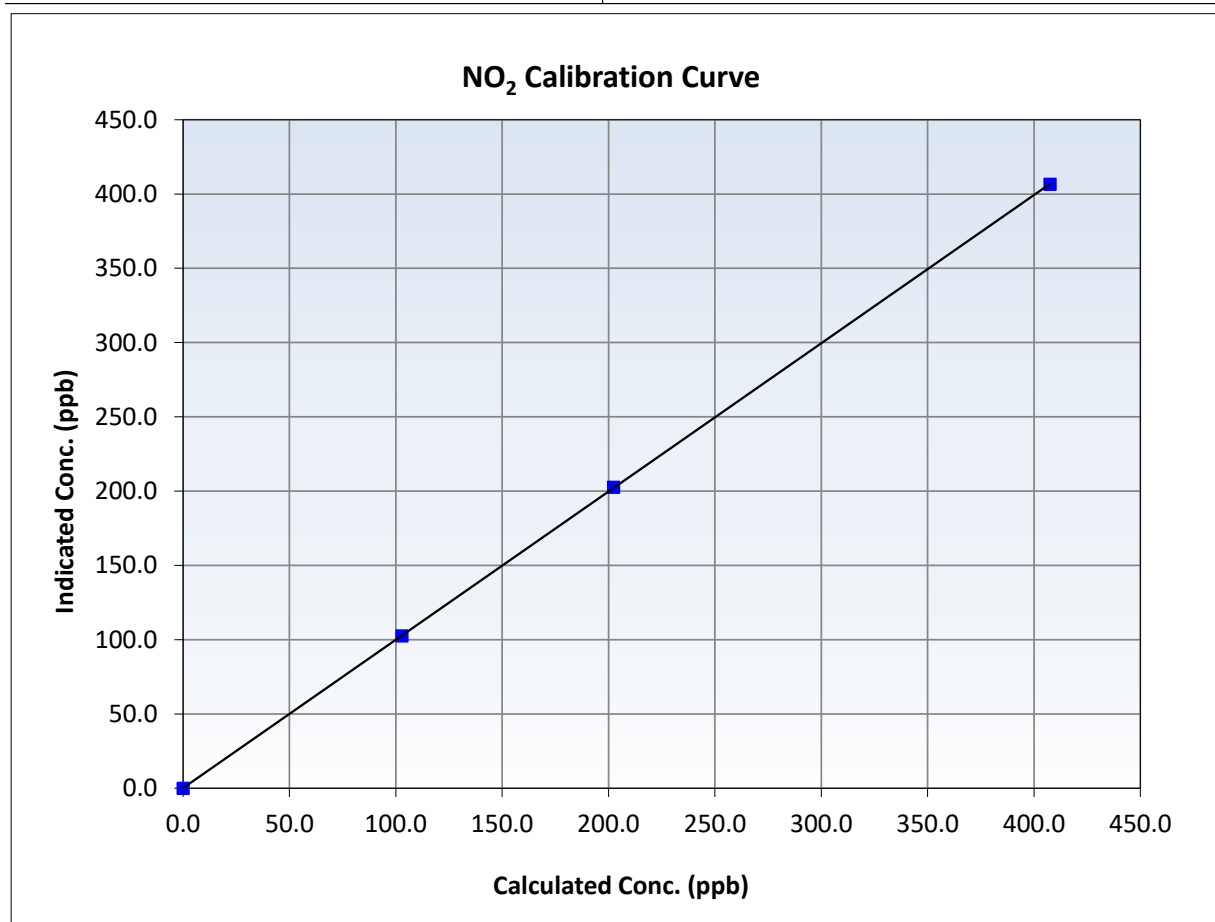
NO₂ Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 22, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	8:40	End Time (MST):	12:58
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262592

Calibration Data

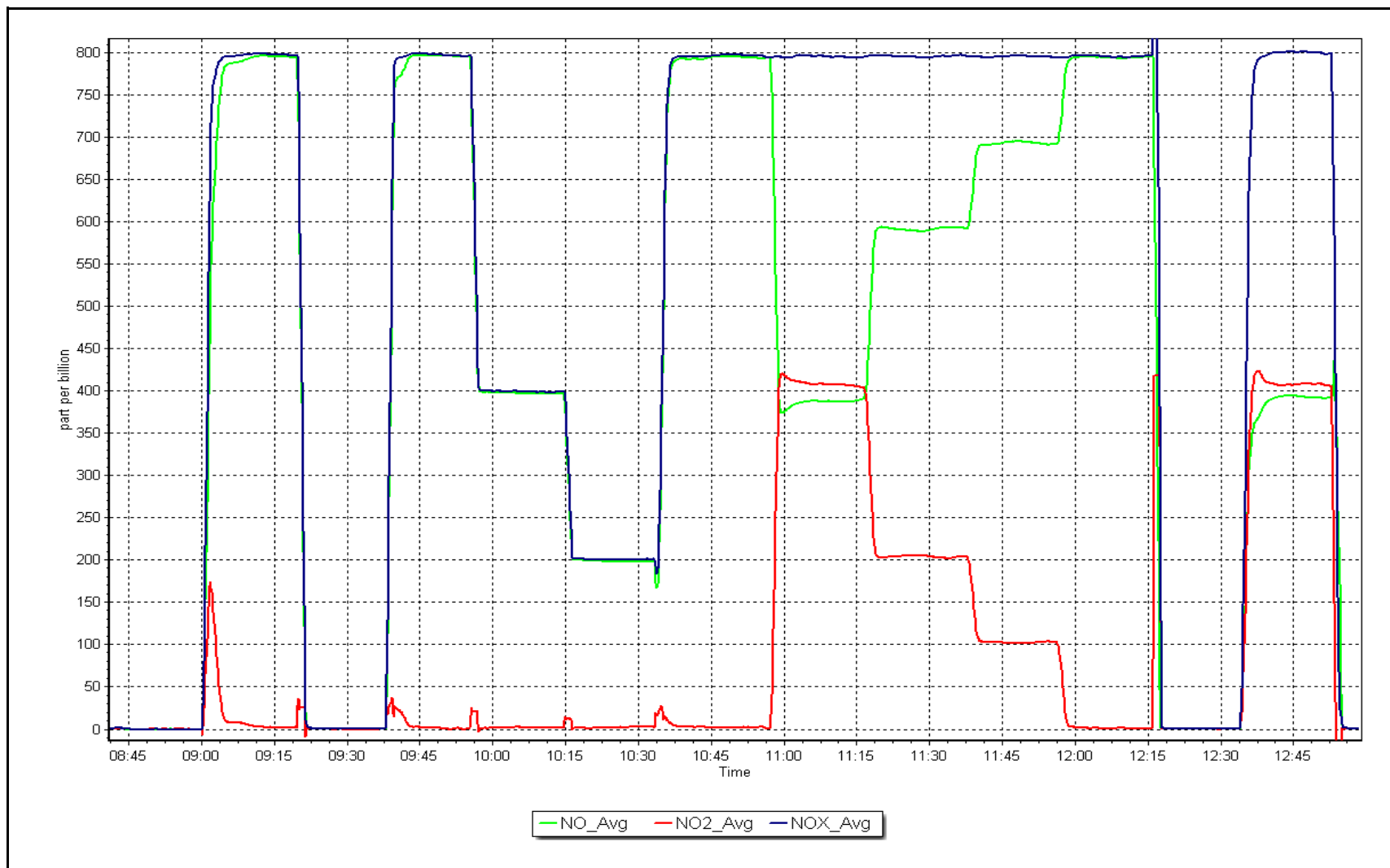
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.0	0.0	----	Correlation Coefficient	0.999994	<i>≥0.995</i>
407.5	406.6	1.0023	Slope	0.998011	<i>0.90 - 1.10</i>
202.3	202.7	0.9982	Intercept	0.128835	<i>+/-20</i>
102.8	102.5	1.0033			



NO_x Calibration Plot

Date: August 7, 2026

Location: Fort Chipewyan





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Fort Chipewyan
Calibration Date: August 5, 2026
Start time (MST): 12:22
Reason: Routine

Station number: AMS 08
Last Cal Date: July 16, 2026
End time (MST): 15:12

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:	1.009400	0.995971	Backgd or Offset:	-2.7	-4.8
Calibration intercept:	-0.420000	3.080000	Coeff or Slope:	1.002	0.907

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	968.7	400.0	402.6	0.990
As found Mid point					
As found Low point					
Baseline Corr As found:	403.9	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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	2.3	----
High point	5000	968.7	400.0	401.1	0.997
Mid point	5000	820.5	200.0	202.6	0.987
Low point	5000	720.0	100.0	103.5	0.966
As left zero	5000	0.0	0.0	1.1	----
As left span	5000	968.7	400.0	401.1	0.997
Average Correction Factor					0.984

Notes: Changed inlet filters after as founds. Adjustments made to Zero and span high point.

Calibration Performed By: Matthew Courtoreille



Wood Buffalo Environmental Association

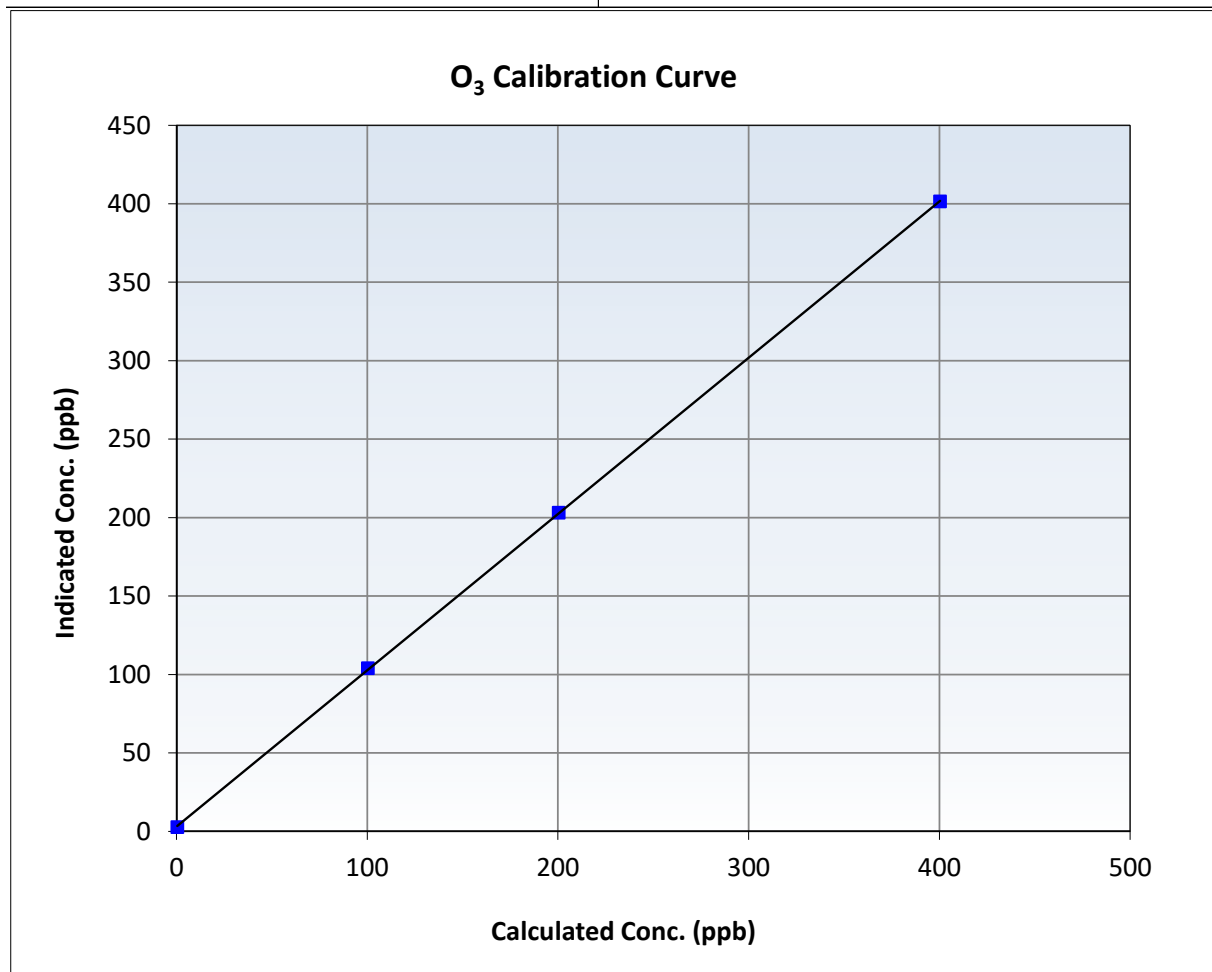
O₃ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 16, 2026
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	12:22	End Time (MST):	15:12
Analyzer make:	Thermo 49i	Analyzer serial #:	1152220026

Calibration Data

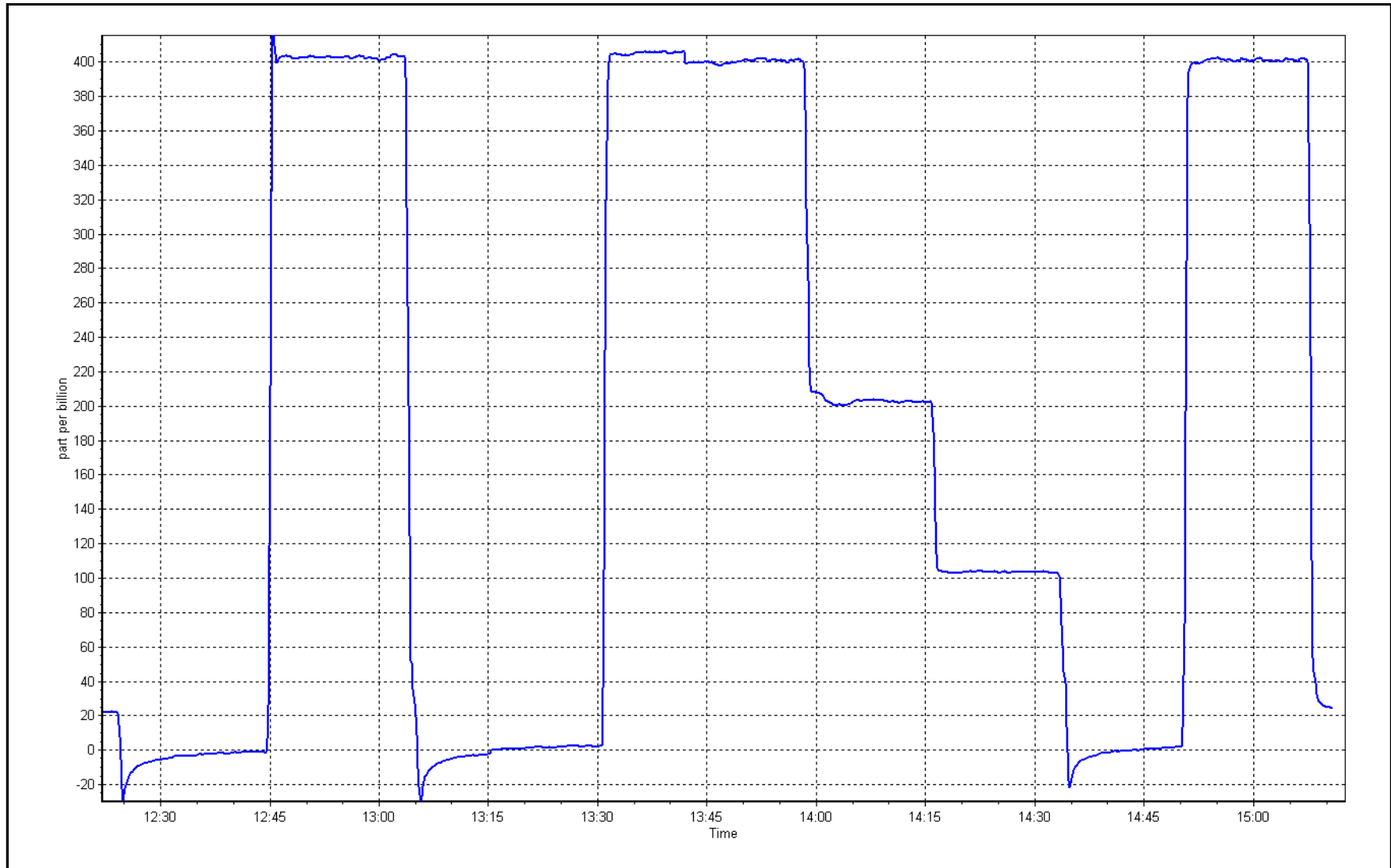
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	2.3	----	Correlation Coefficient	0.999982	≥0.995
400.0	401.1	0.9973	Slope	0.995971	0.90 - 1.10
200.0	202.6	0.9872	Intercept	3.080000	+/- 5
100.0	103.5	0.9662			



O₃ Calibration Plot

Date: August 5, 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: August 21, 2026 Last Cal Date: July 23, 2026
Start time (MST): 15:49 End time (MST): 16:09

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)	21.2	20.21	21.2	☐	+/- 2 °C
P (mmHg)	740.4	742.70	740.4	☐	+/- 10 mmHg
Flow (LPM)	4.96	4.93	4.96	☐	+/- 0.25 LPM
PW% (pump)	28%	NA	28%	☐	>80%
Zero Verification	PM w/o HEPA: 29.10		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: alicat did each pramaters and pm 2.5 was different from 3.89 to 29.1. leak check passed.

Calibration by: Matthew Courtoreille



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS09 BARGE LANDING AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Barge Landing Station number: AMS 09
Calibration Date: August 25, 2026 Last Cal Date: July 28, 2026
Start time (MST): 10:06 End time (MST): 13:55
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.56 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC705748
Removed Cal Gas Conc: 50.56 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: API T700P Serial Number: 2464
Zero Air Gen Model: APIT701 Serial Number: 5613

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1118148498
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000045	0.997012	Backgd or Offset:	12.2	12.5
Calibration intercept:	-0.578871	-0.217894	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	0.2	----
As found High point	4921	79.1	799.8	798.7	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	798.5	Previous response	799.3	*% 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	

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	797.0	1.004
Mid point	4961	39.5	399.4	398.7	1.002
Low point	4980	19.8	200.2	198.9	1.007
As left zero	5000	0.0	0.0	0.0	----
As left span	4921	79.1	799.8	793.4	1.008
Average Correction Factor:					1.004

Notes: Changed sample inlet filter after as founds. Adjusted zero.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

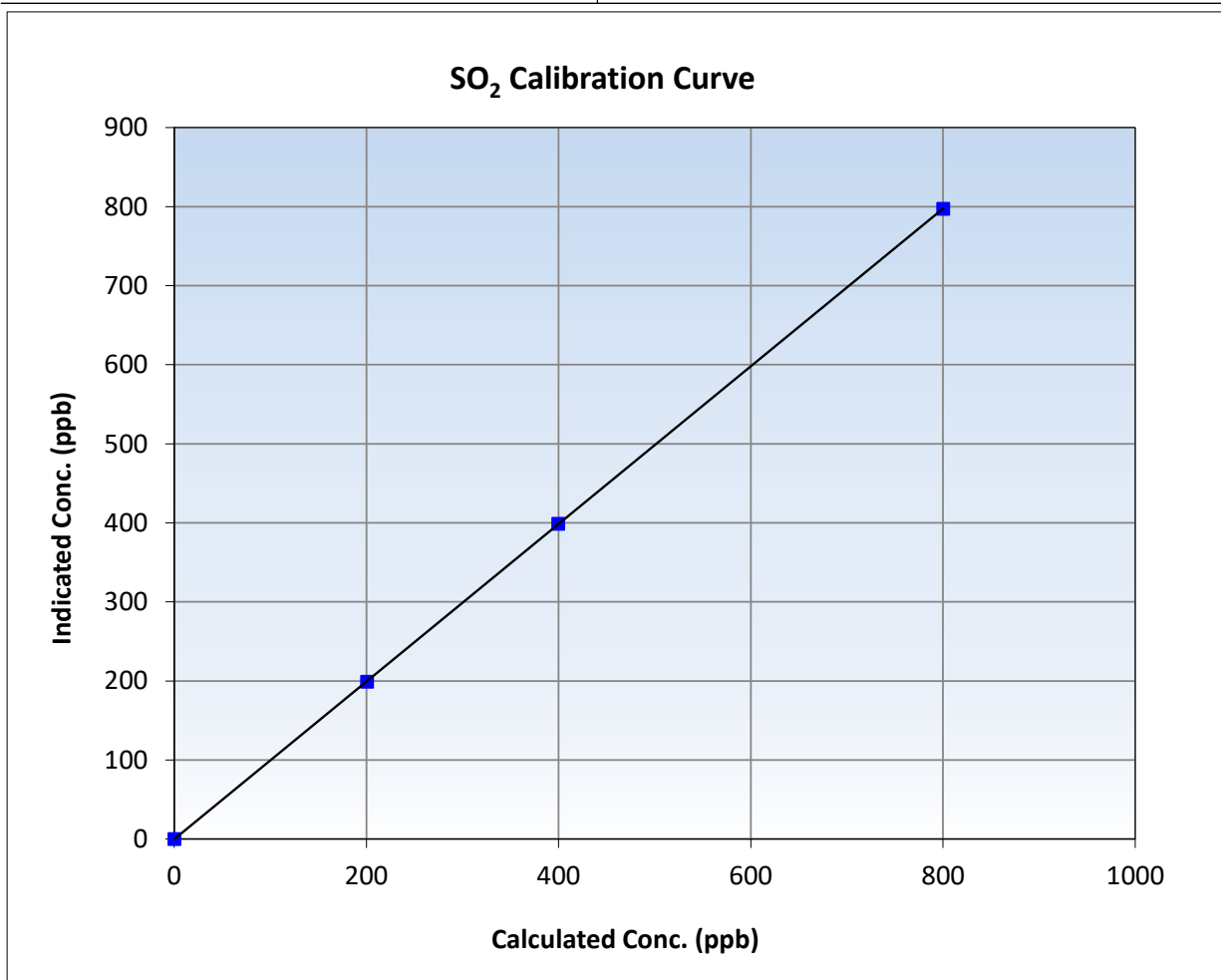
SO₂ Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 28, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:06	End Time (MST):	13:55
Analyzer make:	Thermo 43i	Analyzer serial #:	1118148498

Calibration Data

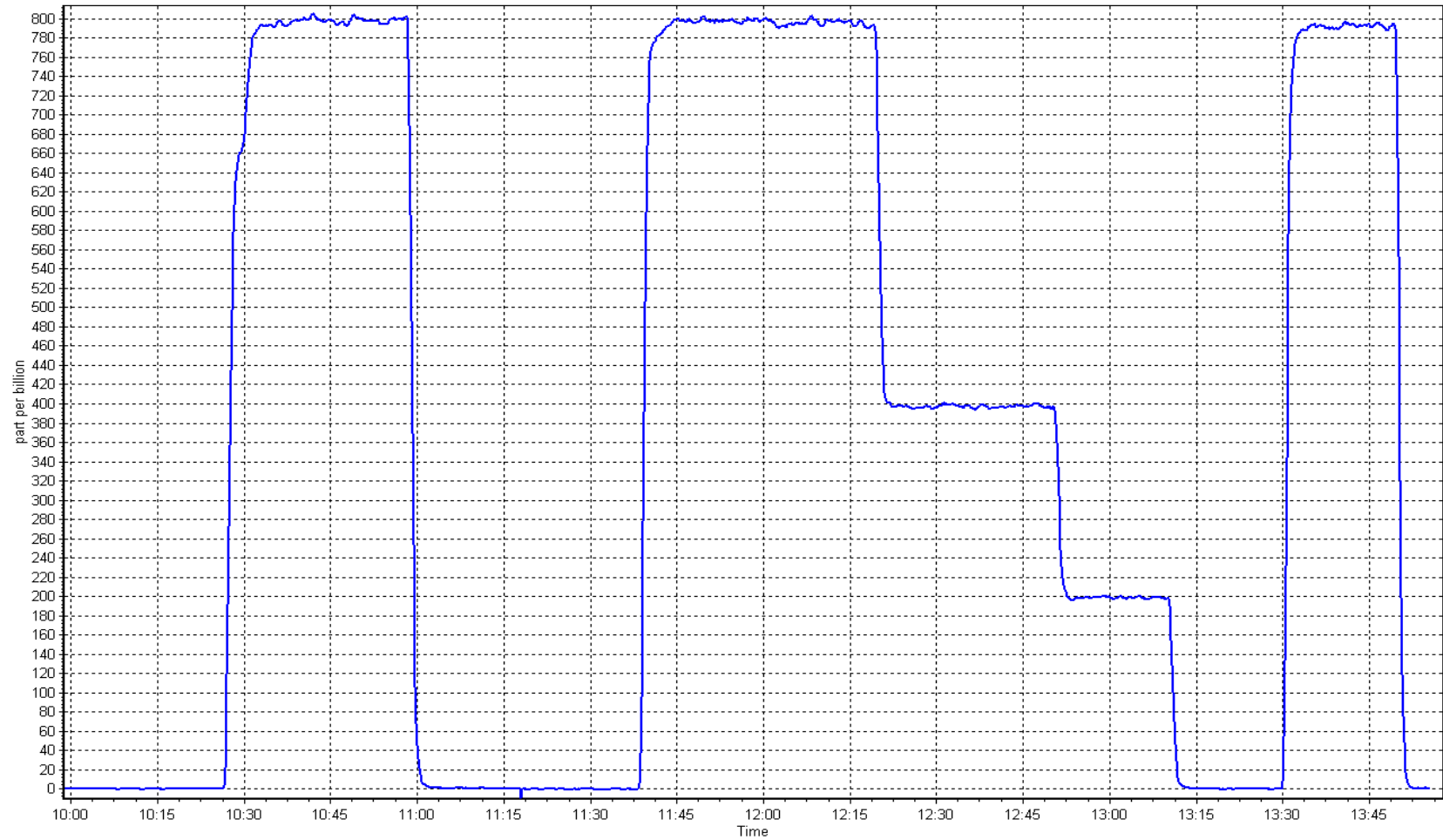
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999998	≥0.995
799.8	797.0	1.0036	Slope	0.997012	0.90 - 1.10
399.4	398.7	1.0017	Intercept	-0.217894	+/-30
200.2	198.9	1.0067			



SO2 Calibration Plot

Date: August 25, 2026

Location: Barge Landing





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Barge Landing
Calibration Date: August 6, 2026
Start time (MST): 9:19
Reason: Routine

Station number: AMS 09
Last Cal Date: July 7, 2026
End time (MST): 14:55

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:	1.010827	1.006543	Backgd or Offset:	1.830	1.810
Calibration intercept:	-0.060390	-0.060433	Coeff or Slope:	0.710	0.702

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	4923	77.4	80.0	80.3	0.996
As found Mid point	4961	38.7	40.0	40.1	0.996
As found Low point	4981	19.3	20.0	20.1	0.988
New cylinder response					
Baseline Corr As found:	80.4	Prev response:	80.85	*% change:	-0.6%
Baseline Corr 2nd AF pt:	40.2	AF Slope:	1.003831	AF Intercept:	-0.040468
Baseline Corr 3rd AF pt:	20.2	AF Correlation:	0.999995	* = > +/-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	4923	77.4	80.0	80.5	0.994
Mid point	4961	38.7	40.0	40.2	0.996
Low point	4981	19.3	20.0	20.1	0.993
As left zero	5000	0.0	0.0	-0.1	----
As left span	4923	77.4	80.0	80.6	0.993
SO2 Scrubber Check	4920	80.2	802.0	0.1	----
Date of last scrubber change:	8-Jul-25		Ave Corr Factor		0.994
Date of last converter efficiency test:					

Notes: Changed the sample inlet filter after as founds. Adjusted span. SOx scrubber check done after cal zero, passed.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

TRS Calibration Summary

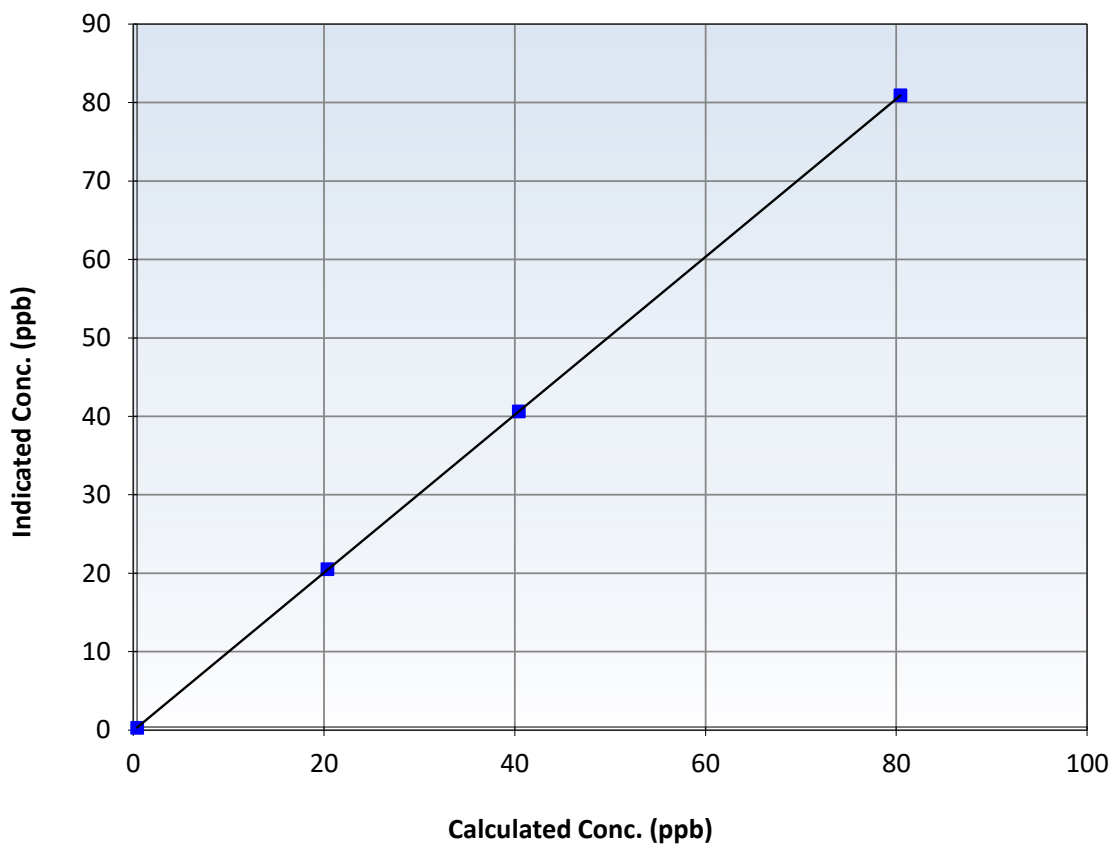
Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 7, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:19	End Time (MST):	14:55
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	-0.1	----	Correlation Coefficient	0.999998		≥ 0.995
80.0	80.5	0.9943	Slope	1.006543		$0.90 - 1.10$
40.0	40.2	0.9957	Intercept	-0.060433		± 3
20.0	20.1	0.9930				

TRS Calibration Curve



TRS Calibration Plot

Date: August 6, 2026

Location: Barge Landing





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Barge Landing
 Calibration Date: August 25, 2026
 Start time (MST): 10:06
 Reason: Routine

Station number: AMS 09
 Last Cal Date: July 28, 2026
 End time (MST): 13:55

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:	2.35E-04	2.37E-04	NMHC SP Ratio:	5.53E-05
CH ₄ Retention time:	14.6	14.6	NMHC Peak Area:	161025
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF
				5.61E-05
				158727
				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	16.76	1.009
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.76	Prev response	16.88	*% change	-0.7%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	16.91	16.92	0.999
Mid point	4961	39.5	8.44	8.37	1.008
Low point	4980	19.8	4.23	4.17	1.016
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	16.91	16.97	0.997
Average Correction Factor					1.008

Notes:

Changed sample inlet filter after as founds. Adjusted 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	79.1	8.91	8.83	1.009
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.83	Prev response	8.89	*% 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	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4921	79.1	8.91	8.92	0.999
Mid point	4961	39.5	4.45	4.41	1.008
Low point	4980	19.8	2.23	2.19	1.019
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	8.91	8.94	0.997
Average Correction Factor					1.009

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.1	8.00	7.93	1.008
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.93	Prev response	7.99	*% change	-0.7%
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	4921	79.1	8.00	8.00	1.000
Mid point	4961	39.5	3.99	3.96	1.008
Low point	4980	19.8	2.00	1.98	1.013
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	8.00	8.03	0.996
Average Correction Factor					1.007

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.001601	1.001634
THC Cal Offset:	-0.058182	-0.043179
CH ₄ Cal Slope:	1.001174	1.000874
CH ₄ Cal Offset:	-0.021991	-0.017191
NMHC Cal Slope:	1.001688	1.002329
NMHC Cal Offset:	-0.035789	-0.025788

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

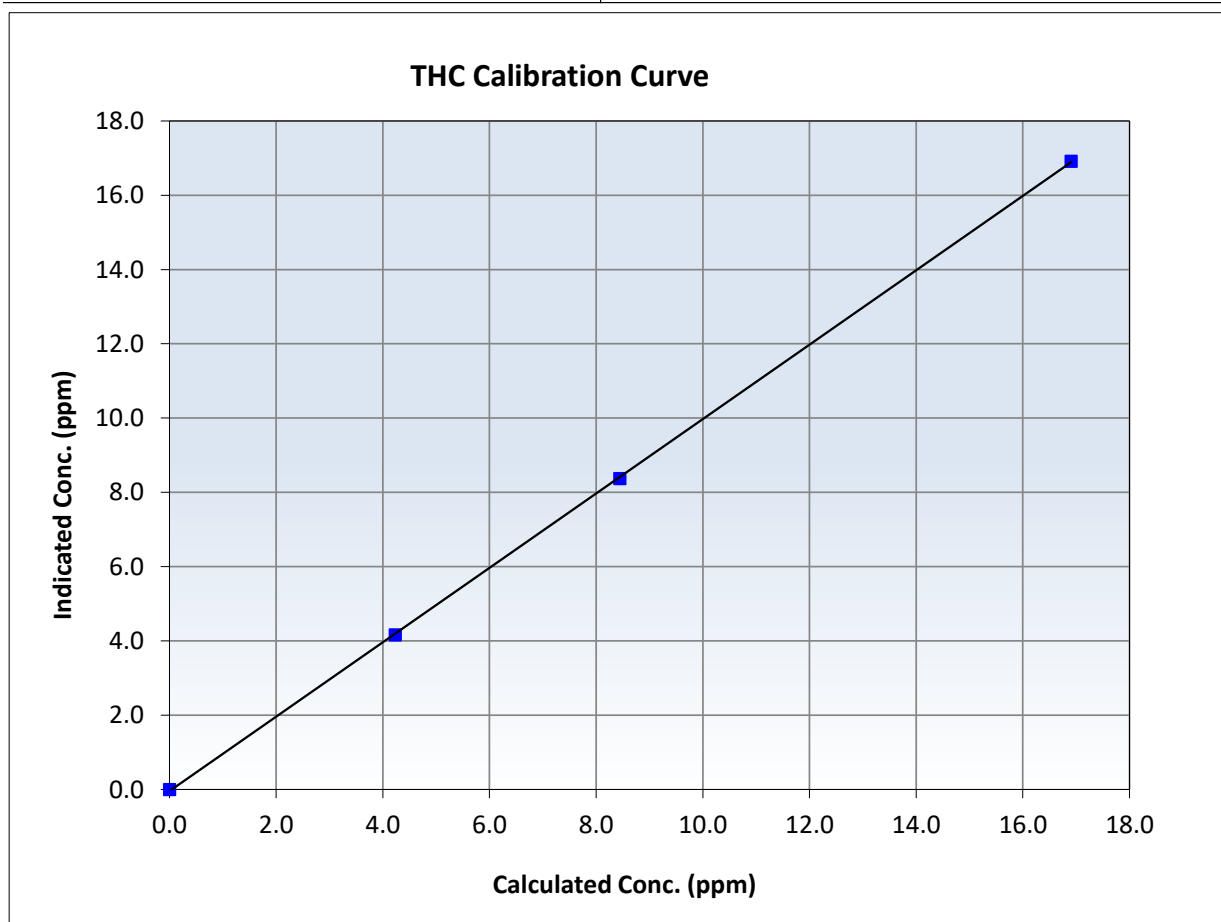
THC Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 28, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:06	End Time (MST):	13:55
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	0.999967	≥ 0.995
16.91	16.92	0.9993	Slope	1.001634	$0.90 - 1.10$
8.44	8.37	1.0082	Intercept	-0.043179	± 0.5
4.23	4.17	1.0162			





Wood Buffalo Environmental Association

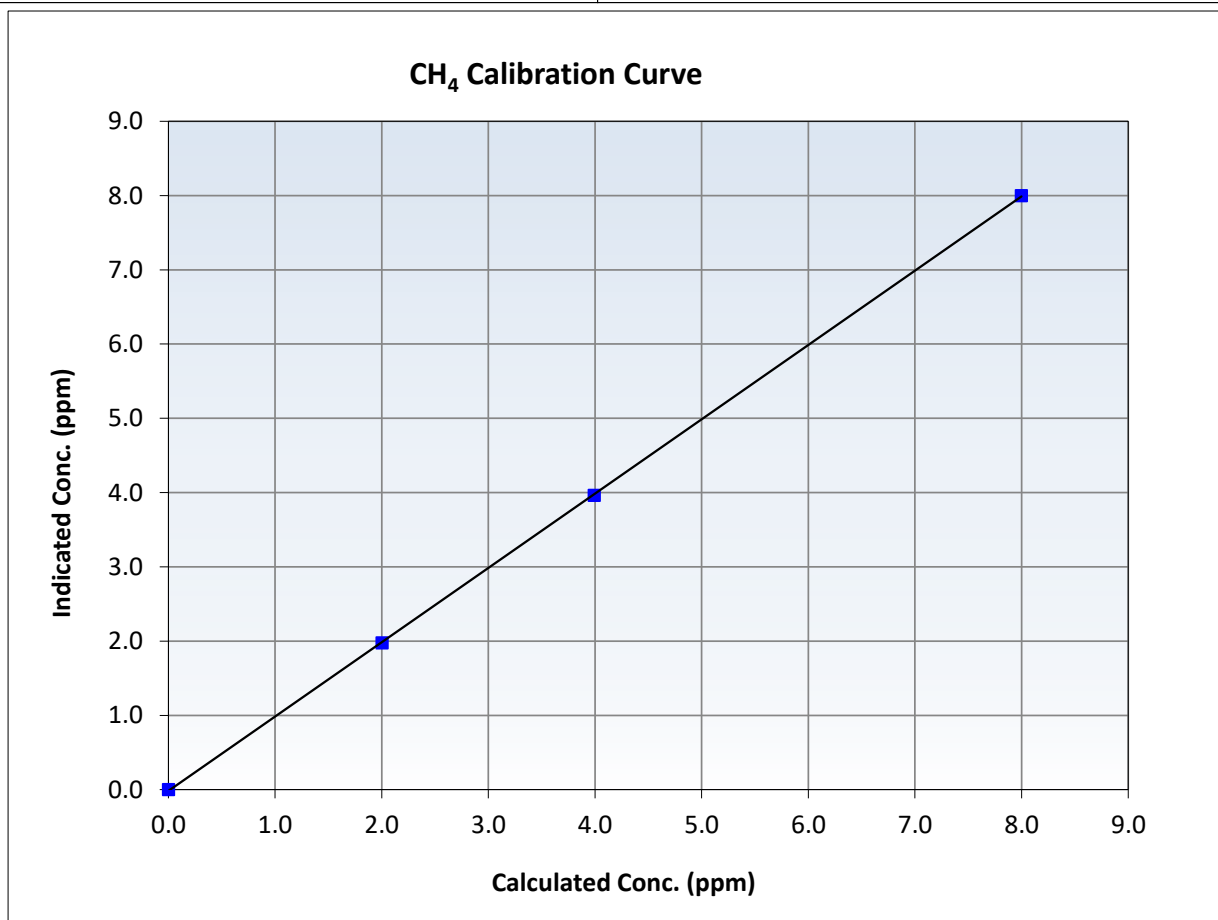
CH₄ Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 28, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:06	End Time (MST):	13:55
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	0.999975		<i>≥0.995</i>
8.00	8.00	0.9998	Slope	1.000874		<i>0.90 - 1.10</i>
3.99	3.96	1.0080	Intercept	-0.017191		<i>+/-0.5</i>
2.00	1.98	1.0133				





Wood Buffalo Environmental Association

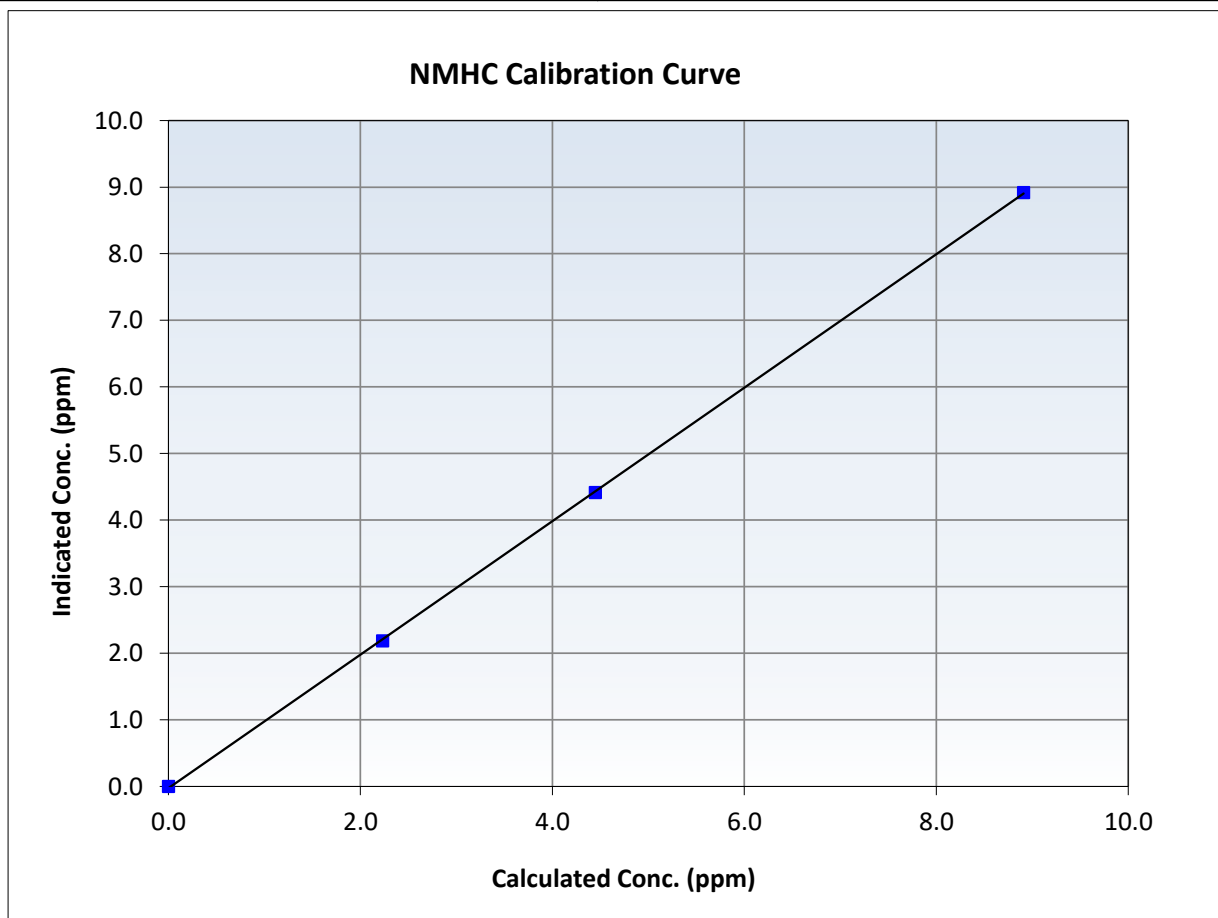
NMHC Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 28, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:06	End Time (MST):	13:55
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585650

Calibration Data

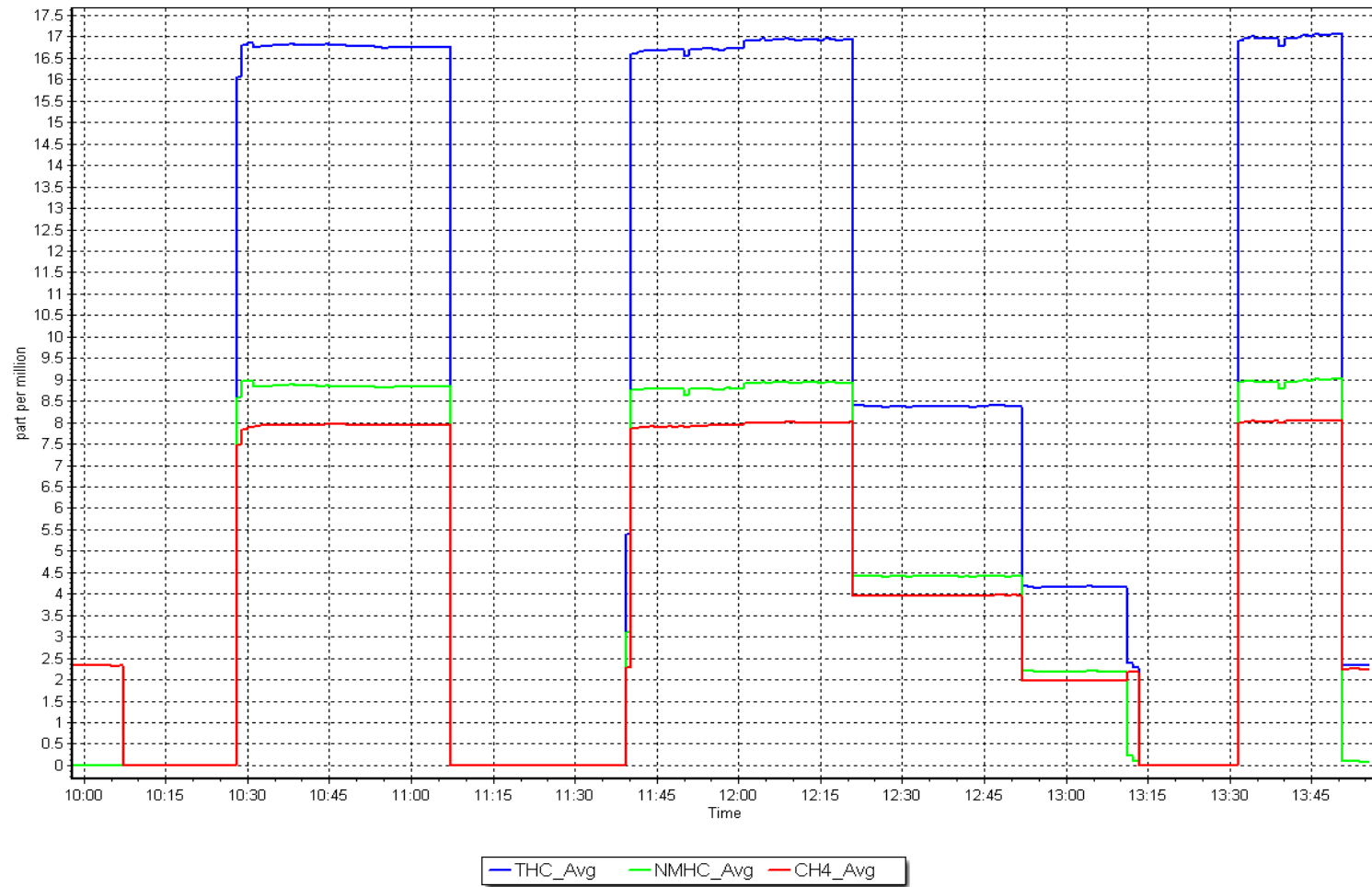
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999960	≥ 0.995
8.91	8.92	0.9988	Slope	1.002329	$0.90 - 1.10$
4.45	4.41	1.0081	Intercept	-0.025788	± 0.5
2.23	2.19	1.0189			



NMHC Calibration Plot

Date: August 25, 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: August 13, 2026
Last Cal Date: July 14, 2026
Start time (MST): 10:35
End time (MST): 15:43
Reason: Routine

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	0.6	0.4	0.2	----	----
AF High point	4915	85.3	808.3	800.8	7.5	802.0	785.5	16.5	1.0086	1.0200
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 808.5 ppb	NO = 801.1 ppb				* = > +/-5% change initiates investigation			*Percent Change	NO _x = -0.9%
Baseline Corr 1st pt	NO _x = 801.4 ppb	NO = 785.1 ppb				<u>As Found Statistics</u>			*Percent Change	NO = -2.0%
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:	0.952	0.963	NO bkgnd or offset:	-4.9	-3.1
NOX coeff or slope:	0.952	0.961	NOX bkgnd or offset:	-4.7	-2.5
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:	1.001252	0.991789
NO _x Cal Offset:	-0.852331	1.667530
NO Cal Slope:	1.002932	0.989357
NO Cal Offset:	-2.054149	0.724610
NO ₂ Cal Slope:	1.000855	1.000647
NO ₂ Cal Offset:	-0.809619	0.877661

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	0.3	0.0	----	----
High point	4915	85.3	808.3	800.8	7.5	802.0	792.5	9.4	1.0079	1.0105
Mid point	4957	42.6	403.7	400.0	3.7	404.7	397.5	7.2	0.9976	1.0062
Low point	4979	21.3	201.8	200.0	1.9	201.9	198.4	3.5	0.9996	1.0078
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.2	-0.2	----	----
As left span	4915	85.3	808.3	404.0	404.3	802.8	404.0	398.6	1.0069	1.0000
Average Correction Factor									1.0017	1.0082

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	798.3	404.5	401.3	401.9	0.9985	100.1%
Mid GPT point	798.3	592.7	213.1	214.7	0.9926	100.7%
Low GPT point	798.3	693.2	112.6	114.4	0.9843	101.6%
Average Correction Factor					0.9918	100.8%

Notes:

Swapped inlet filter after as founds. Adjusted zero and span.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

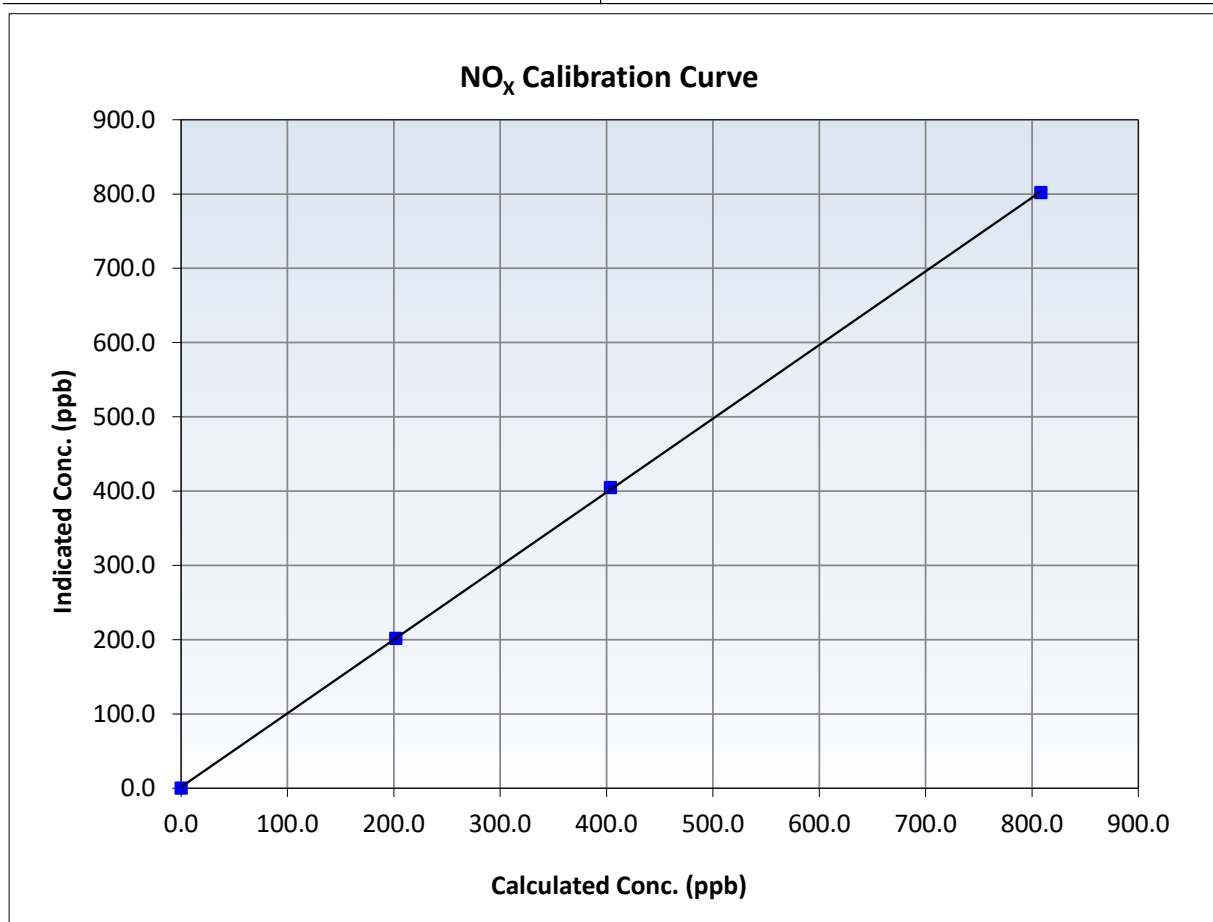
NO_x Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	July 14, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:35	End Time (MST):	15:43
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	0.3	----	Correlation Coefficient	0.999970	≥0.995
808.3	802.0	1.0079	Slope	0.991789	0.90 - 1.10
403.7	404.7	0.9976	Intercept	1.667530	+/-20
201.8	201.9	0.9996			





Wood Buffalo Environmental Association

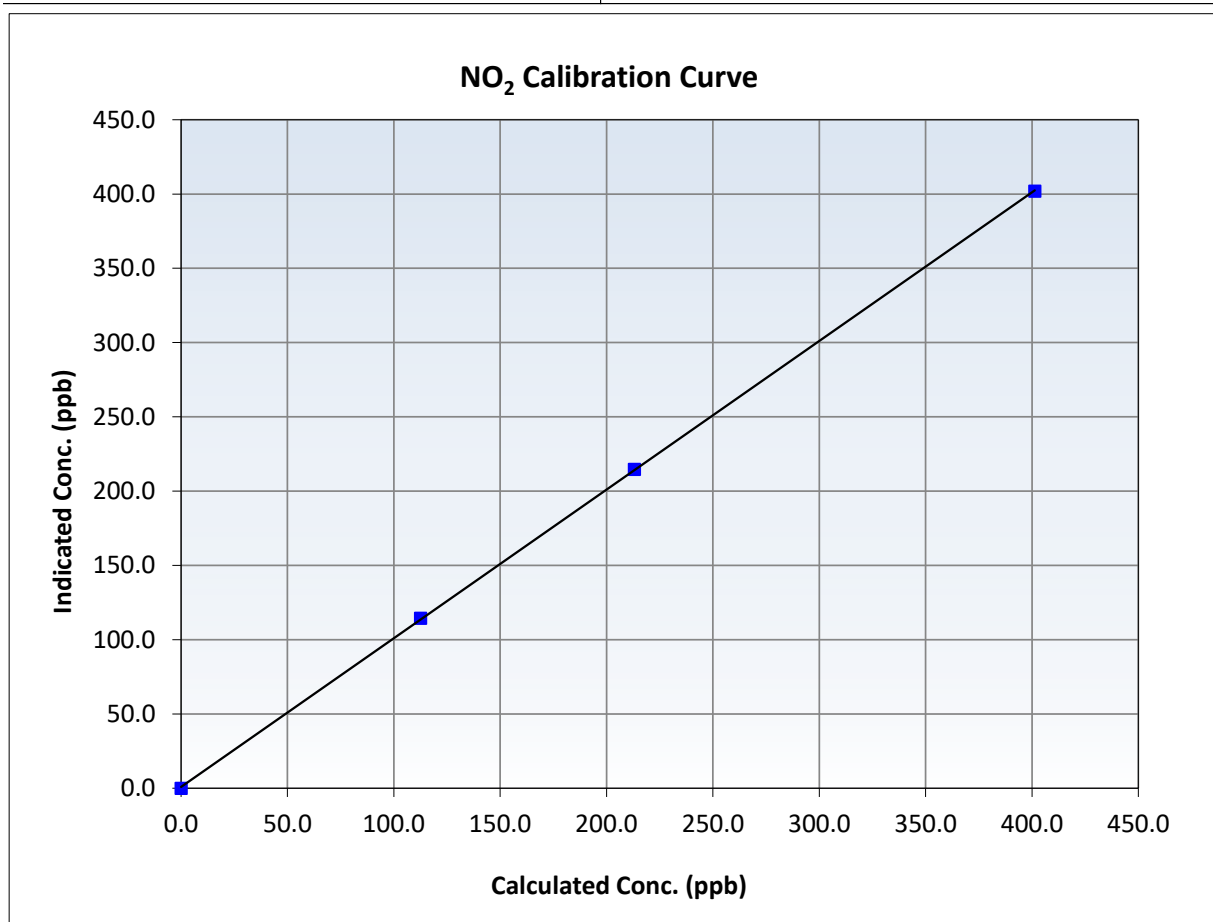
NO₂ Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	July 14, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:35	End Time (MST):	15:43
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	0.999976	≥0.995
401.3	401.9	0.9985	Slope	1.000647	0.90 - 1.10
213.1	214.7	0.9926	Intercept	0.877661	+/-20
112.6	114.4	0.9843			





Wood Buffalo Environmental Association

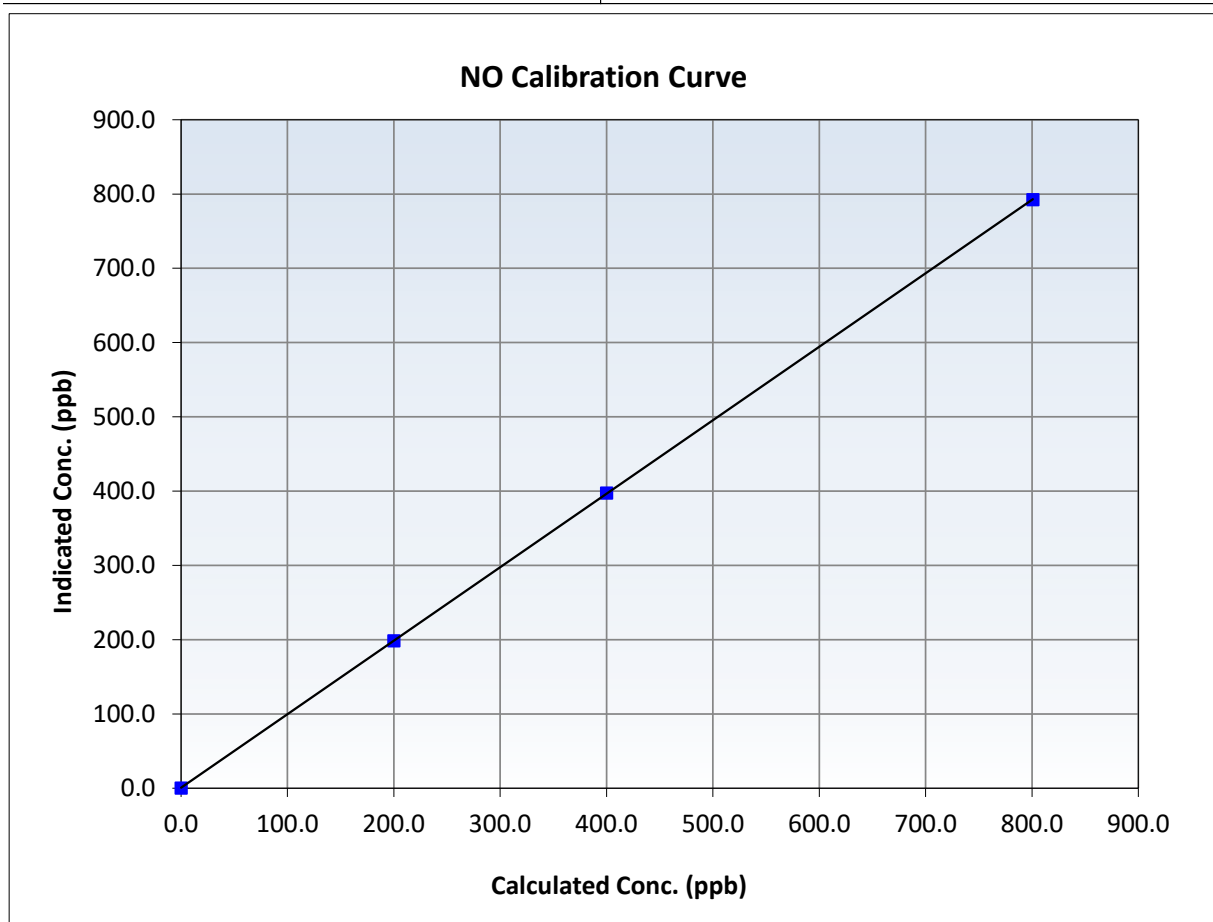
NO Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	July 14, 2026
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:35	End Time (MST):	15:43
Analyzer make:	Teledyne API T200	Analyzer serial #:	1035

Calibration Data

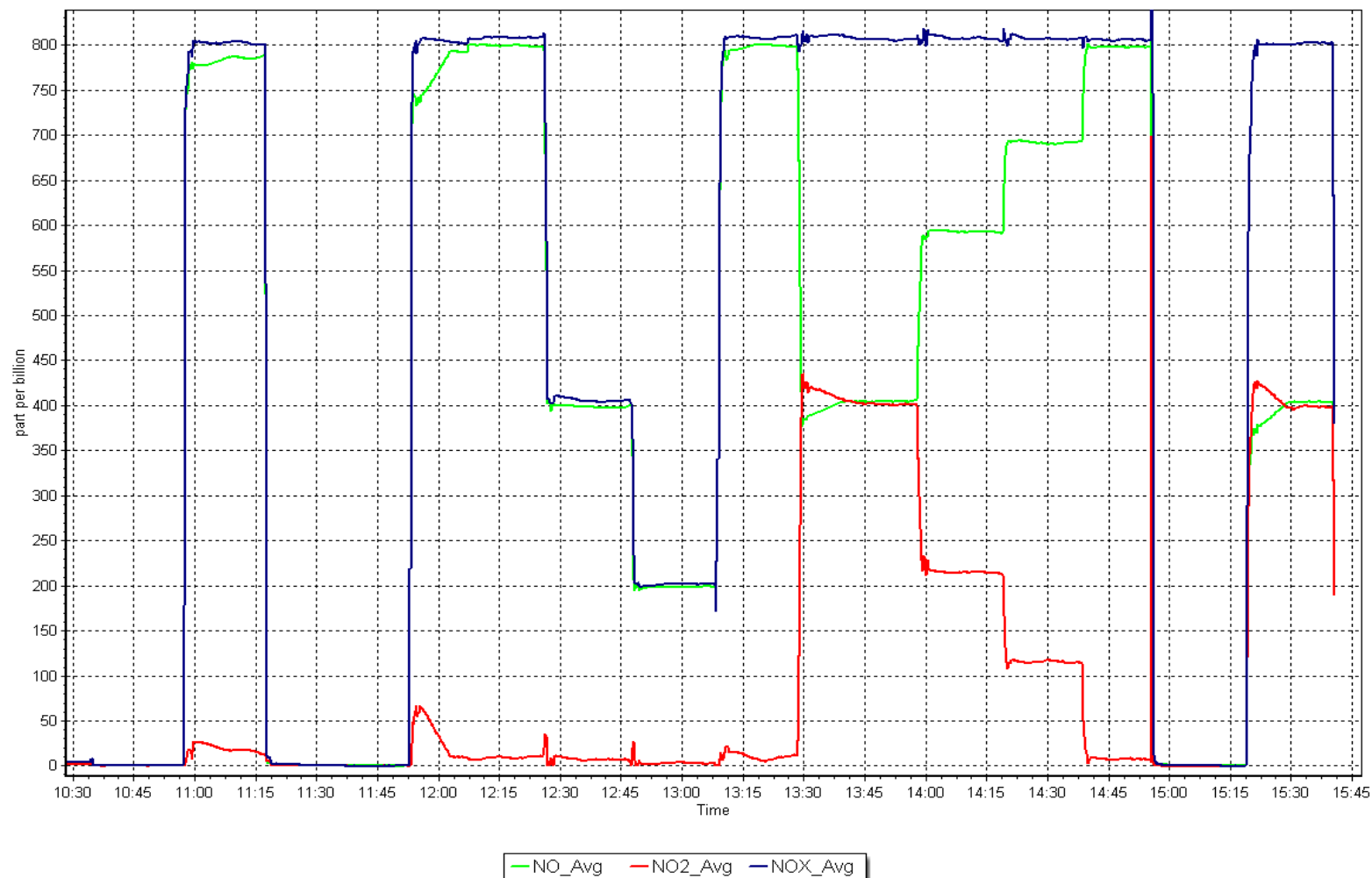
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999995	≥ 0.995
800.8	792.5	1.0105	Slope	0.989357	$0.90 - 1.10$
400.0	397.5	1.0062	Intercept	0.724610	± 20
200.0	198.4	1.0078			



NO_x Calibration Plot

Date: August 13, 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: August 25, 2026 Last Cal Date: July 14, 2026
Start time (MST): 12:26 End time (MST): 13:04

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)	23.5	23.13	23.5	☐	+/- 2 °C
P (mmHg)	739.8	739.12	739.8	☐	+/- 10 mmHg
Flow (LPM)	5.00	4.965	5.00	☐	+/- 0.25 LPM
PW% (pump)	29	----	29	☐	>80%
Zero Verification	PM w/o HEPA: 19.0		PM w/ HEPA: 0.1		<0.2 ug/m3

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

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

Quarterly Calibration Test

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

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

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

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

Annual Maintenance

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

Notes: Verified flow, pressure, temperature and pump power. Leak check passed.

Calibration by: Braiden Boutilier



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS11 LOWER CAMP AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Lower Camp Station number: AMS 11
Calibration Date: August 26, 2026 Last Cal Date: July 27, 2026
Start time (MST): 9:31 End time (MST): 12:41
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:	1.000700	0.999073	Backgd or Offset:	19.7	19.4
Calibration intercept:	1.747027	1.667100	Coeff or Slope:	1.022	1.017

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.3	----
As found High point	4918	82.1	800.5	802.3	0.998
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	802.0	Previous response	802.8	*% change	-0.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4918	82.1	800.5	801.1	0.999
Mid point	4959	41.1	400.7	401.6	0.998
Low point	4980	20.5	199.9	203.3	0.983
As left zero	5000	0.0	0.0	0.3	----
As left span	4918	82.1	800.5	799.4	1.001
Average Correction Factor:					0.993

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

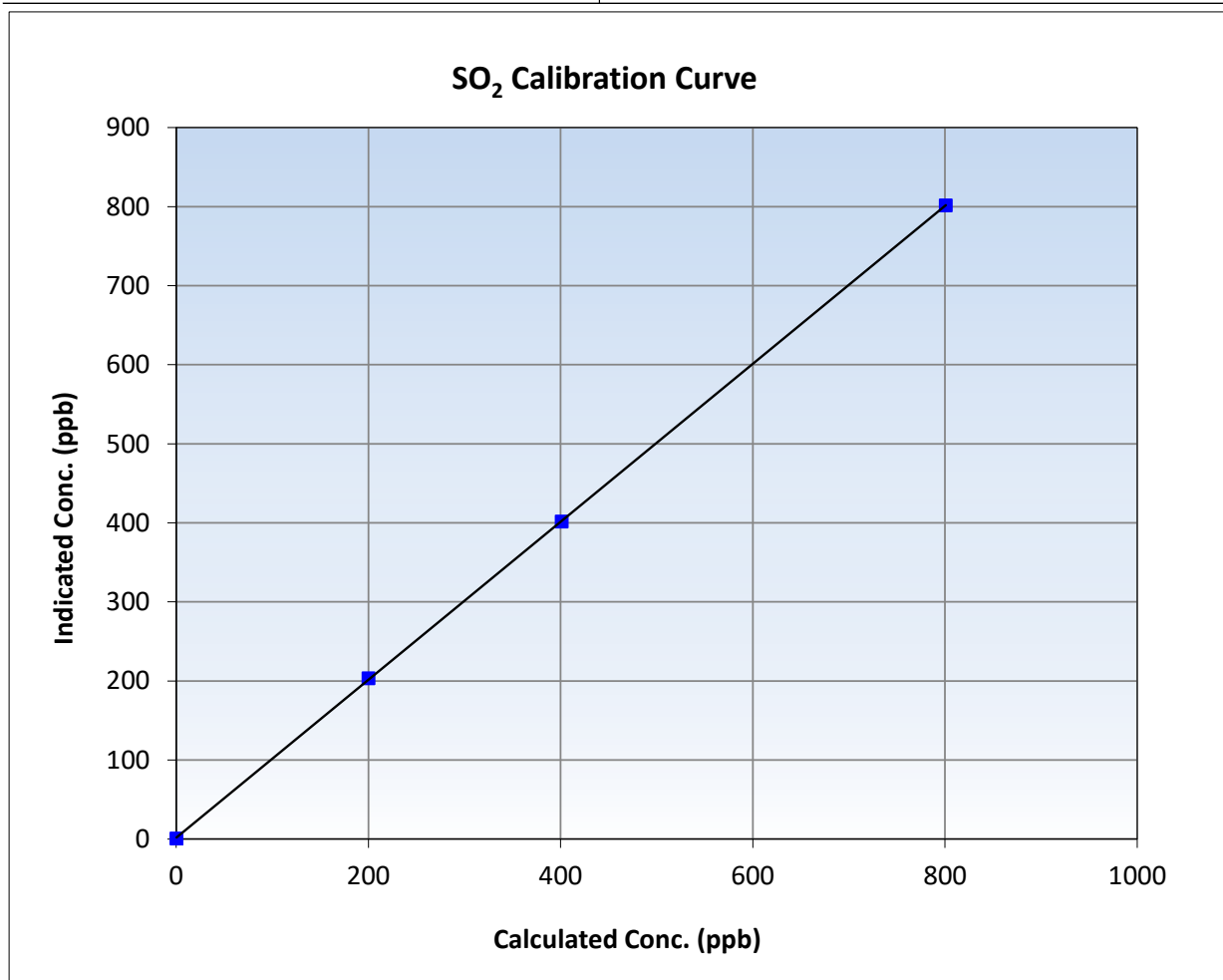
SO₂ Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 27, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:31	End Time (MST):	12:41
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	0.999984	≥0.995
800.5	801.1	0.9992	Slope	0.999073	0.90 - 1.10
400.7	401.6	0.9978	Intercept	1.667100	+/-30
199.9	203.3	0.9831			



SO2 Calibration Plot

Date: July 27, 2026

Location: Lower Camp





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Lower Camp Station number: AMS 11
Calibration Date: August 28, 2026 Last Cal Date: July 22, 2026
Start time (MST): 9:12 End time (MST): 12:55
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:	1.000444	0.994729	Backgd or Offset:	2.4
Calibration intercept:	0.340806	0.340808	Coeff or Slope:	0.783

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4917	82.8	80.0	80.1	0.999
As found Mid point	4959	41.4	40.0	40.5	0.987
As found Low point	4979	20.7	20.0	20.5	0.975
New cylinder response					
Baseline Corr As found:	80.1	Prev response:	80.36	*% change:	-0.3%
Baseline Corr 2nd AF pt:	40.5	AF Slope:	1.000015	AF Intercept:	0.280810
Baseline Corr 3rd AF pt:	20.5	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	0.0	----
High point	4917	82.8	80.0	79.7	1.004
Mid point	4959	41.4	40.0	40.4	0.990
Low point	4979	20.7	20.0	20.5	0.975
As left zero	5000	0.0	0.0	0.1	----
As left span	4923	82.8	79.9	79.7	1.002
SO2 Scrubber Check	4932	82.2	819.7	0.0	----
Date of last scrubber change:				Ave Corr Factor	0.990
Date of last converter efficiency test:					

Notes: Inlet filter changed after as founds, scrubber check passed. No adjustment.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

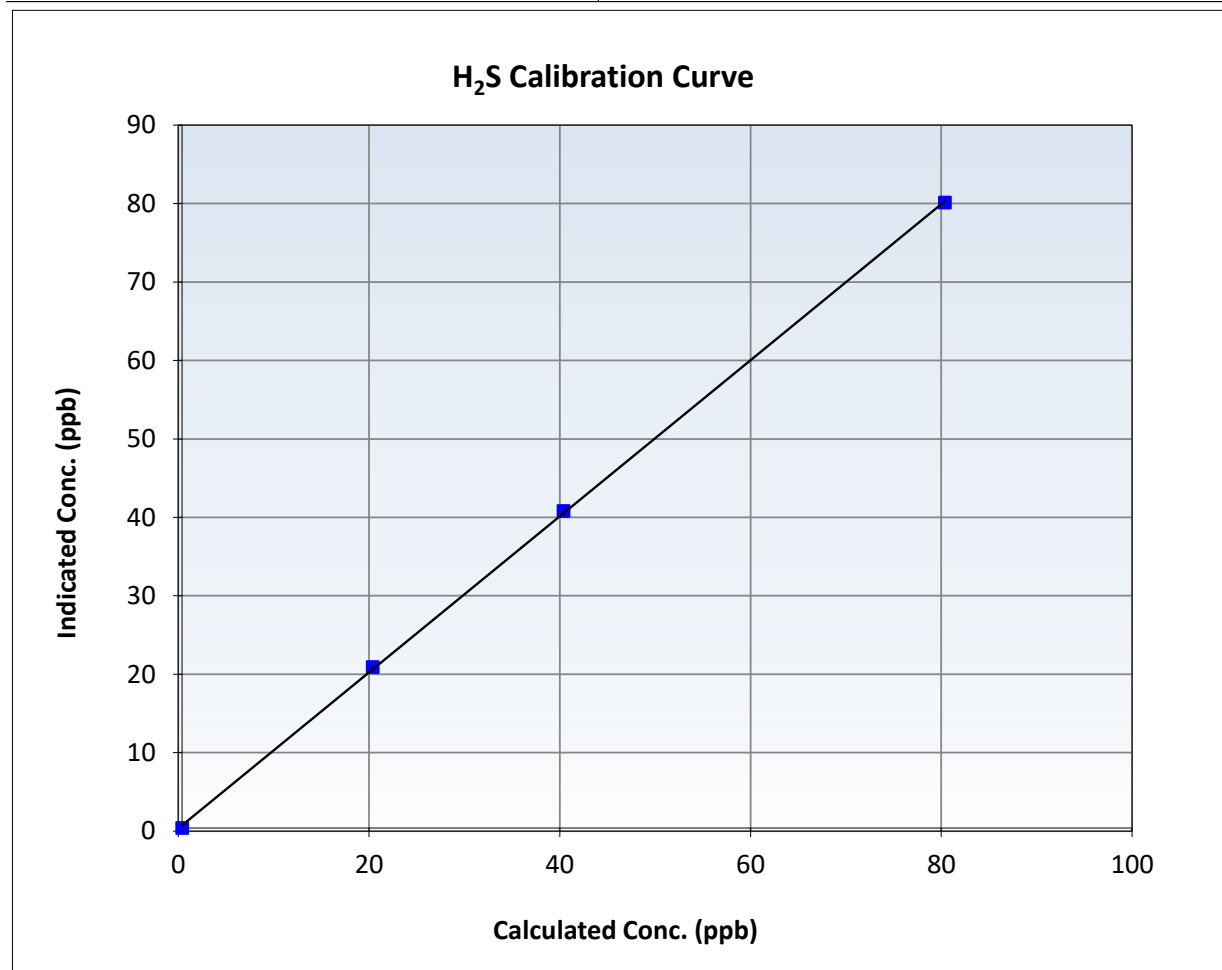
H₂S Calibration Summary

Station Information

Calibration Date:	August 28, 2026	Previous Calibration:	July 22, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:12	End Time (MST):	12:55
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	1203169745

Calibration Data

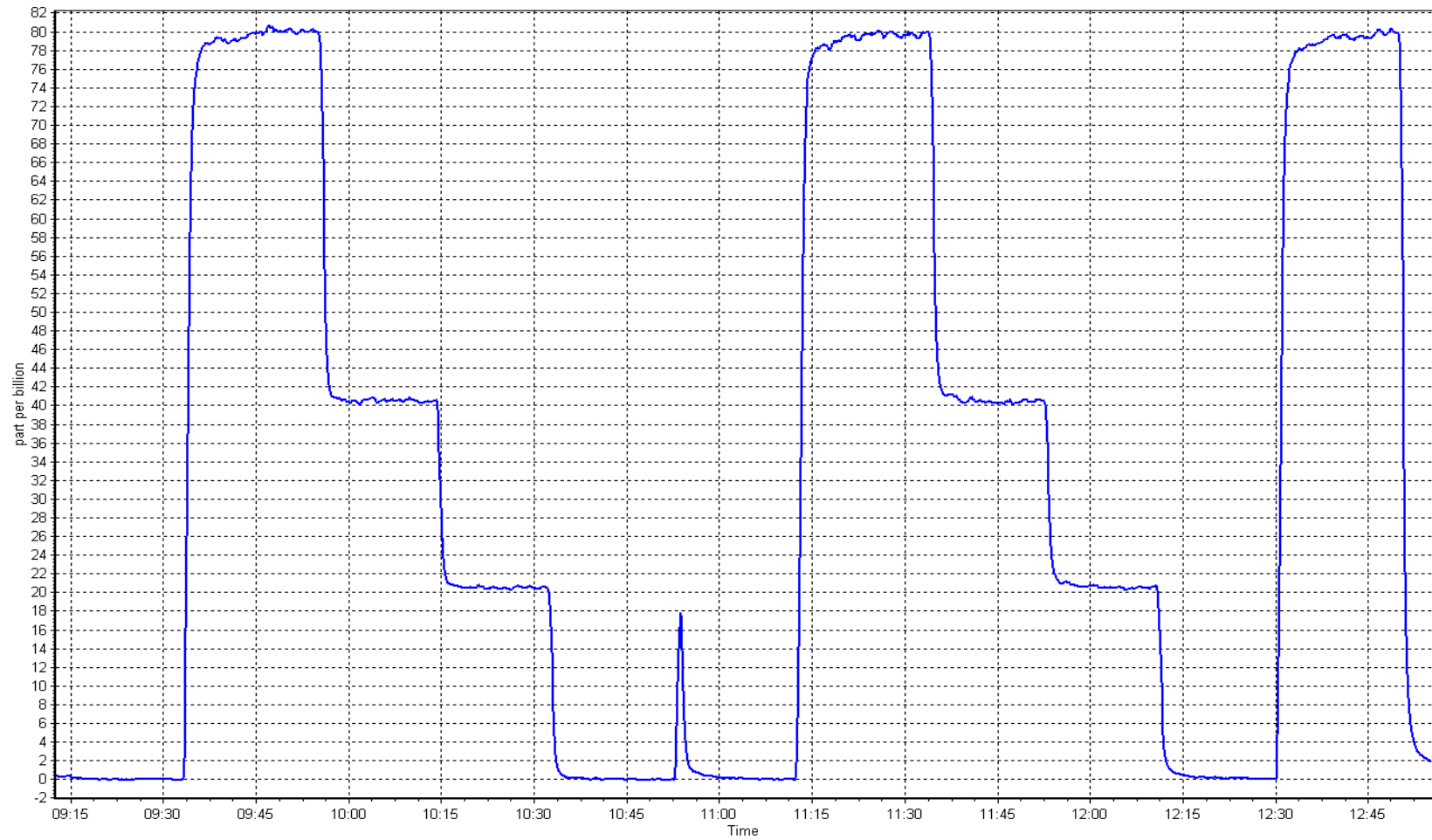
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999911		≥0.995
80.0	79.7	1.0036	Slope	0.994729		0.90 - 1.10
40.0	40.4	0.9898	Intercept	0.340808		+/-3
20.0	20.5	0.9755				



H₂S Calibration Plot

Date: August 28, 2026

Location: Lower Camp





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Lower Camp
Calibration Date: August 26, 2026
Start time (MST): 9:31
Reason: Routine

Station number: AMS 11
Last Cal Date: July 27, 2026
End time (MST): 12:41

Calibration Standards

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

Analyzer Information

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

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

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.24E-04	2.23E-04	NMHC SP Ratio:	5.21E-05
CH ₄ Retention time:	13.2	13.2	NMHC Peak Area:	178567
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	17.69	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.69	Prev response	17.57	*% change	0.7%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	17.60	17.63	0.998
Mid point	4959	41.1	8.81	8.87	0.994
Low point	4980	20.5	4.39	4.52	0.973
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	17.60	17.71	0.994
Average Correction Factor					0.988

Notes: Inlet filter changed after as founds, H₂ and N₂ cylinder were swapped. 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	9.43	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.43	Prev response	9.29	*% 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) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	9.31	9.34	0.997
Mid point	4959	41.1	4.66	4.71	0.990
Low point	4980	20.5	2.32	2.40	0.967
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	9.31	9.40	0.991
Average Correction Factor					0.985

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	8.27	1.003
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.27	Prev response	8.28	*% 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) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	8.29	8.29	0.999
Mid point	4959	41.1	4.15	4.16	0.998
Low point	4980	20.5	2.07	2.11	0.979
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	8.29	8.31	0.997
Average Correction Factor					0.992

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.995630	0.999895
THC Cal Offset:	0.047150	0.053557
CH ₄ Cal Slope:	0.997437	0.998966
CH ₄ Cal Offset:	0.015672	0.017876
NMHC Cal Slope:	0.994341	1.000379
NMHC Cal Offset:	0.030680	0.036080

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

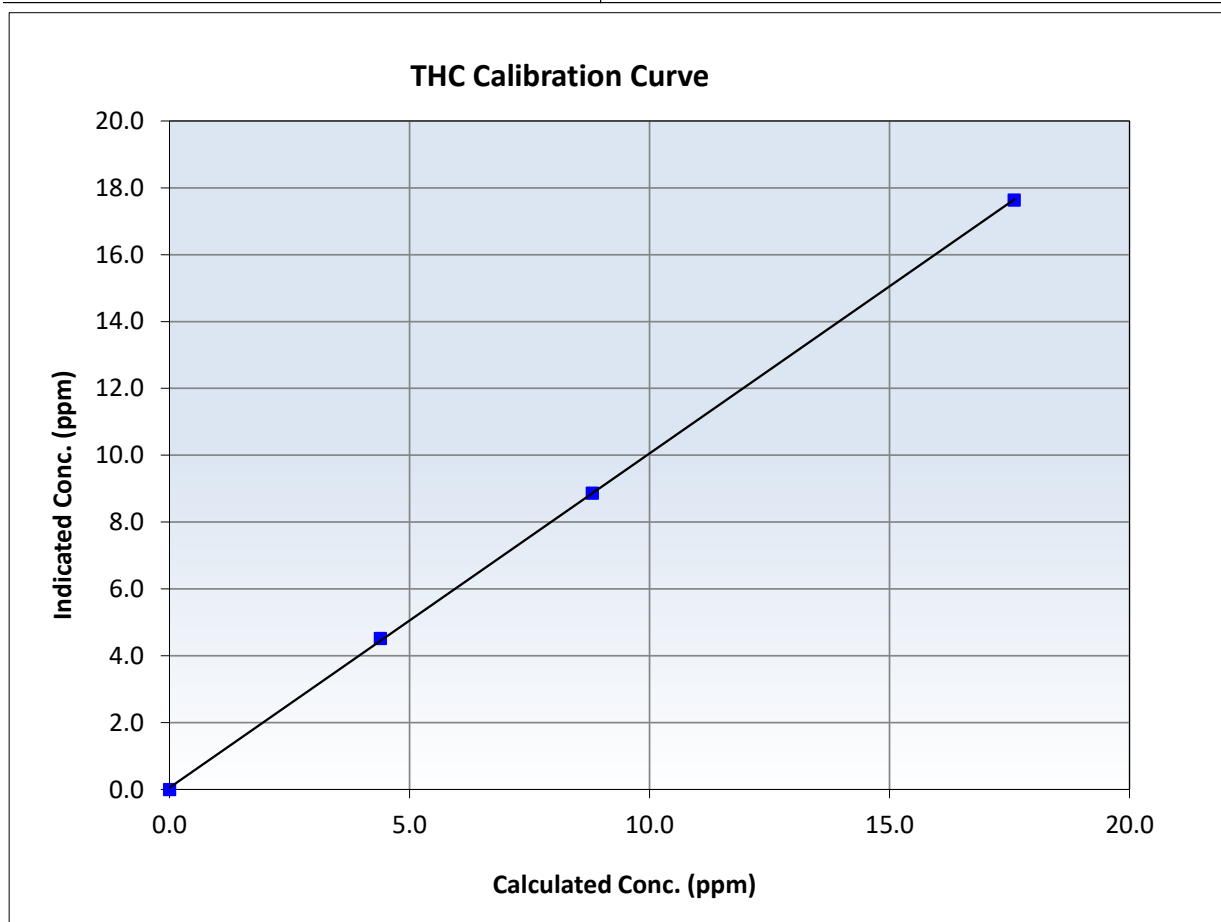
THC Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 27, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:31	End Time (MST):	12:41
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	0.999953	≥ 0.995
17.60	17.63	0.9982	Slope	0.999895	$0.90 - 1.10$
8.81	8.87	0.9936	Intercept	0.053557	± 0.5
4.39	4.52	0.9730			





Wood Buffalo Environmental Association

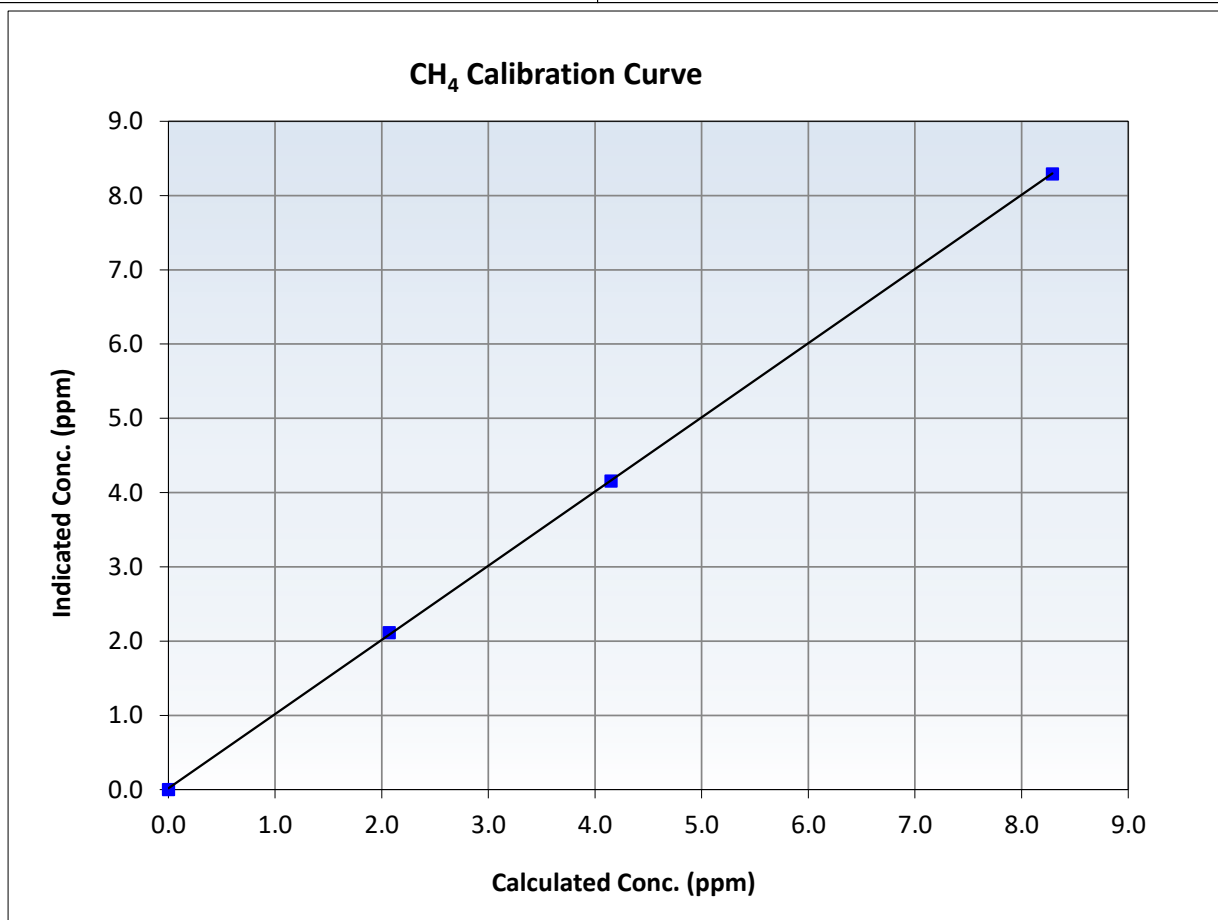
CH₄ Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 27, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:31	End Time (MST):	12:41
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999970	≥ 0.995
8.29	8.29	0.9994	Slope	0.998966	$0.90 - 1.10$
4.15	4.16	0.9982	Intercept	0.017876	± 0.5
2.07	2.11	0.9794			





Wood Buffalo Environmental Association

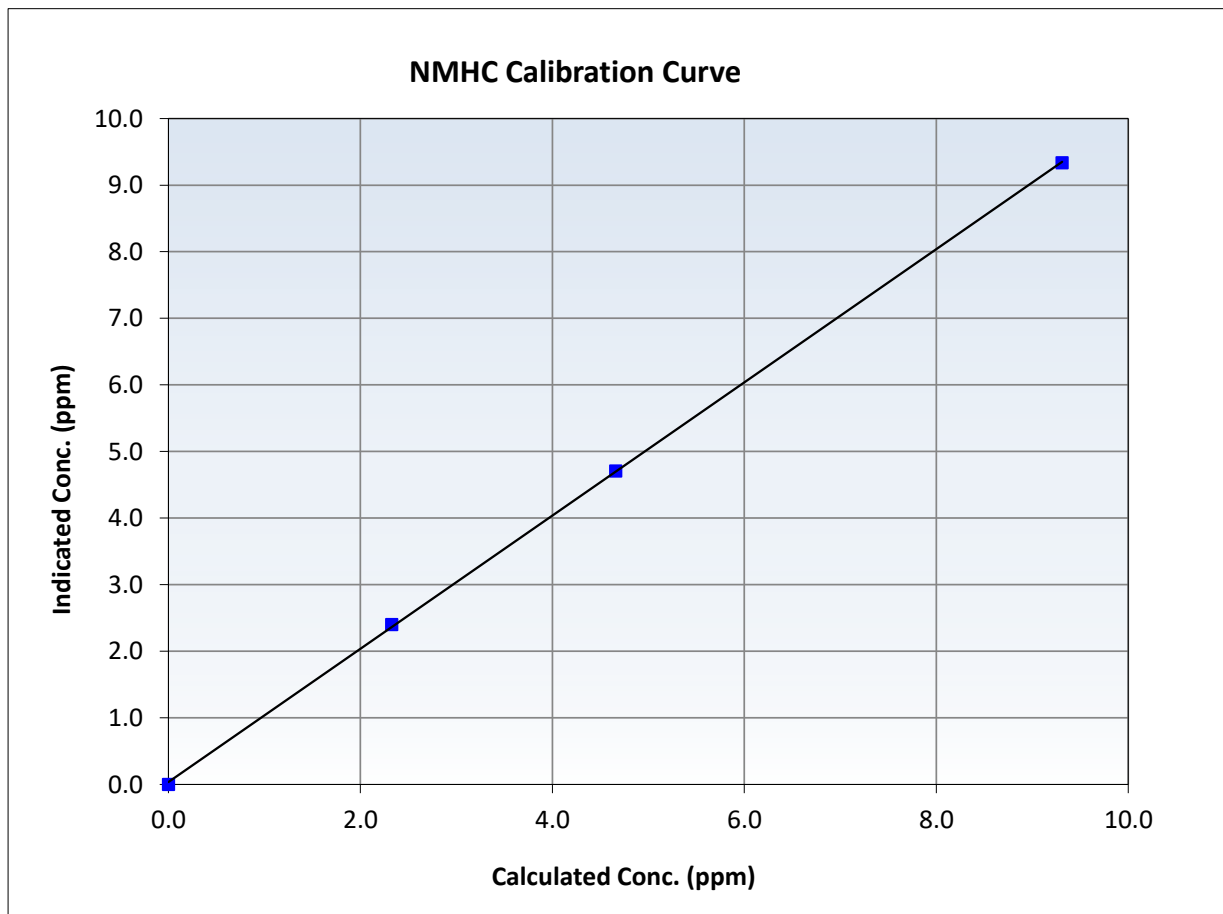
NMHC Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 27, 2026
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	9:31	End Time (MST):	12:41
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012

Calibration Data

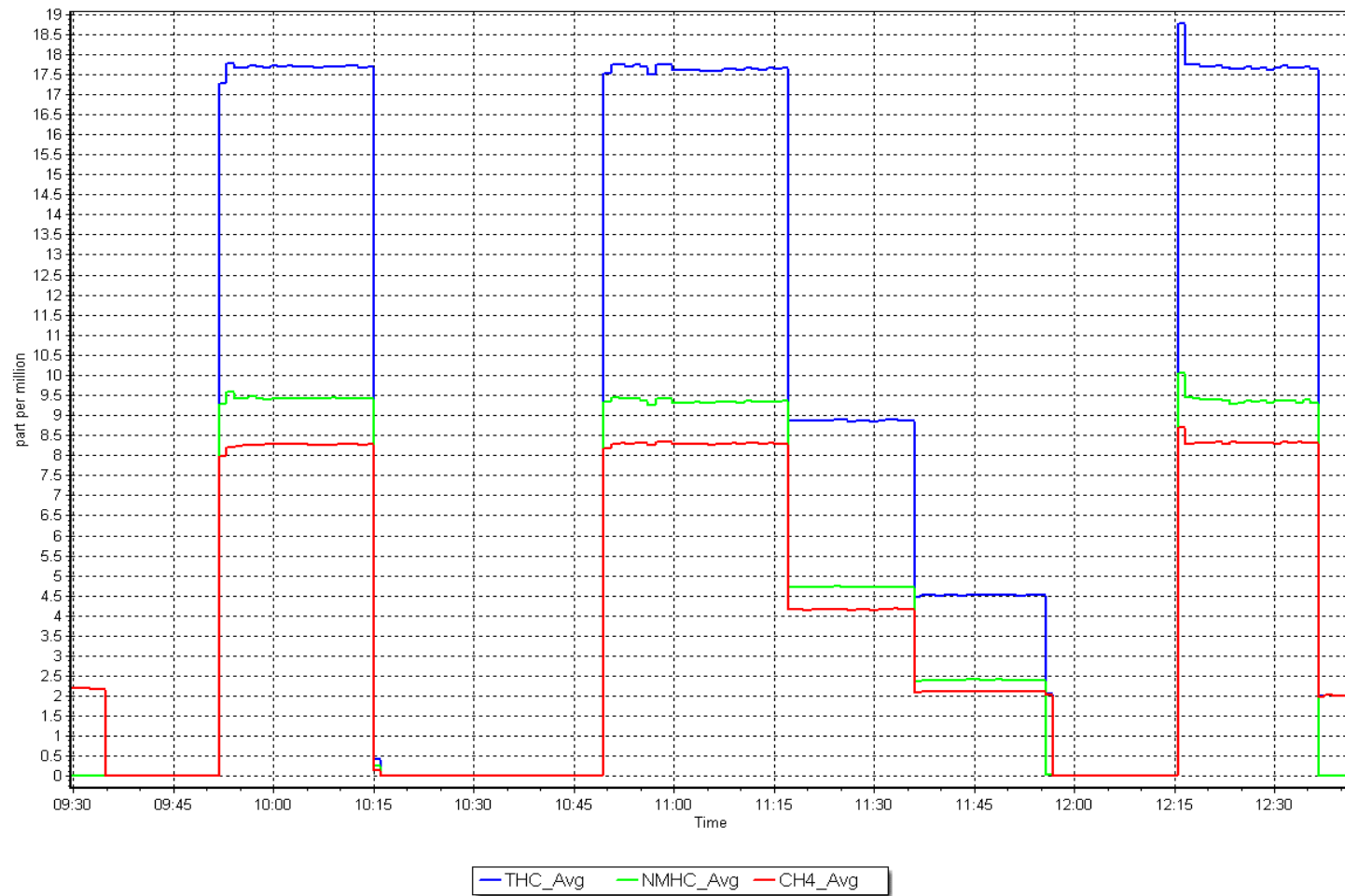
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999929	≥ 0.995
9.31	9.34	0.9974	Slope	1.000379	$0.90 - 1.10$
4.66	4.71	0.9898	Intercept	0.036080	± 0.5
2.32	2.40	0.9674			



NMHC Calibration Plot

Date: August 26, 2026

Location: Lower Camp





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS13 FORT MCKAY SOUTH AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: August 10, 2026
Start time (MST): 10:46
Reason: Routine

Station number: AMS 13
Last Cal Date: July 2, 2026
End time (MST): 14:03

Calibration Standards

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

Cal Gas Exp Date: April 16, 2034
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 2657
Serial Number: 1118

Analyzer Information

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

Serial Number: 1331259320

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000292	0.999835	Backgd or Offset:	3.03	3.03
Calibration intercept:	0.001915	0.462054	Coeff or Slope:	0.962	0.987

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.3	----
As found High point	4921	79.1	800.3	777.1	1.029
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	777.4	Previous response	800.6	*% change	-3.0%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4921	79.1	800.3	800.1	1.000
Mid point	4961	39.5	399.6	401.0	0.997
Low point	4980	19.8	200.3	201.0	0.997
As left zero	5000	0.0	0.0	-0.1	----
As left span	4921	79.1	800.3	800.1	1.000

Average Correction Factor: 0.998

Notes: Changed inlet filter and fan back filter after as founds. Adjusted span only.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

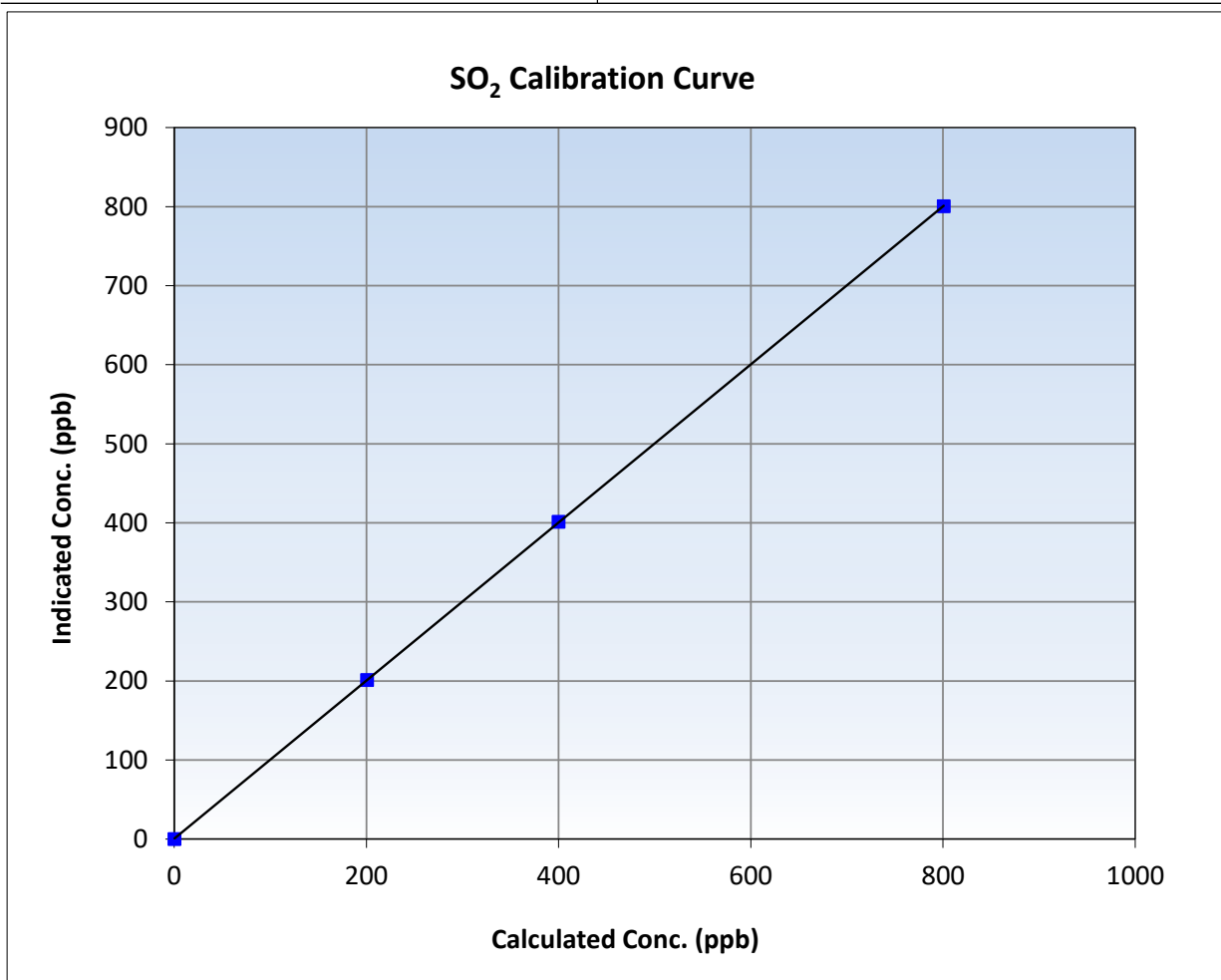
SO₂ Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 2, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:46	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	0.999995	≥0.995
800.3	800.1	1.0003	Slope	0.999835	0.90 - 1.10
399.6	401.0	0.9966	Intercept	0.462054	+/-30
200.3	201.0	0.9967			



SO2 Calibration Plot

Date: August 10, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: August 19, 2026
Start time (MST): 9:55
Reason: Routine

Station number: AMS 13
Last Cal Date: July 20, 2026
End time (MST): 14:24

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:	1.006561	1.007135	Backgd or Offset:	3.62	3.77
Calibration intercept:	-0.098401	-0.218405	Coeff or Slope:	1.08	1.130

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	4918	81.6	79.6	74.0	1.079
As found Mid point	4959	40.8	39.8	37.3	1.073
As found Low point	4980	20.4	19.9	18.4	1.094
New cylinder response					
Baseline Corr As found:	73.8	Prev response:	80.07	*% change:	-8.5%
Baseline Corr 2nd AF pt:	37.1	AF Slope:	0.927930	AF Intercept:	0.141474
Baseline Corr 3rd AF pt:	18.2	AF Correlation:	0.999968	* = > +/-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	39.8	1.001
Low point	4980	20.4	19.9	19.6	1.016
As left zero	5000	0.0	0.0	0.0	----
As left span	4918	81.6	79.6	80.4	0.991
SO2 Scrubber Check	4921	79.1	791.0	0.0	----
Date of last scrubber change:		July 20, 2026		Ave Corr Factor	1.004
Date of last converter efficiency test:					

Notes: Changed inlet filter 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

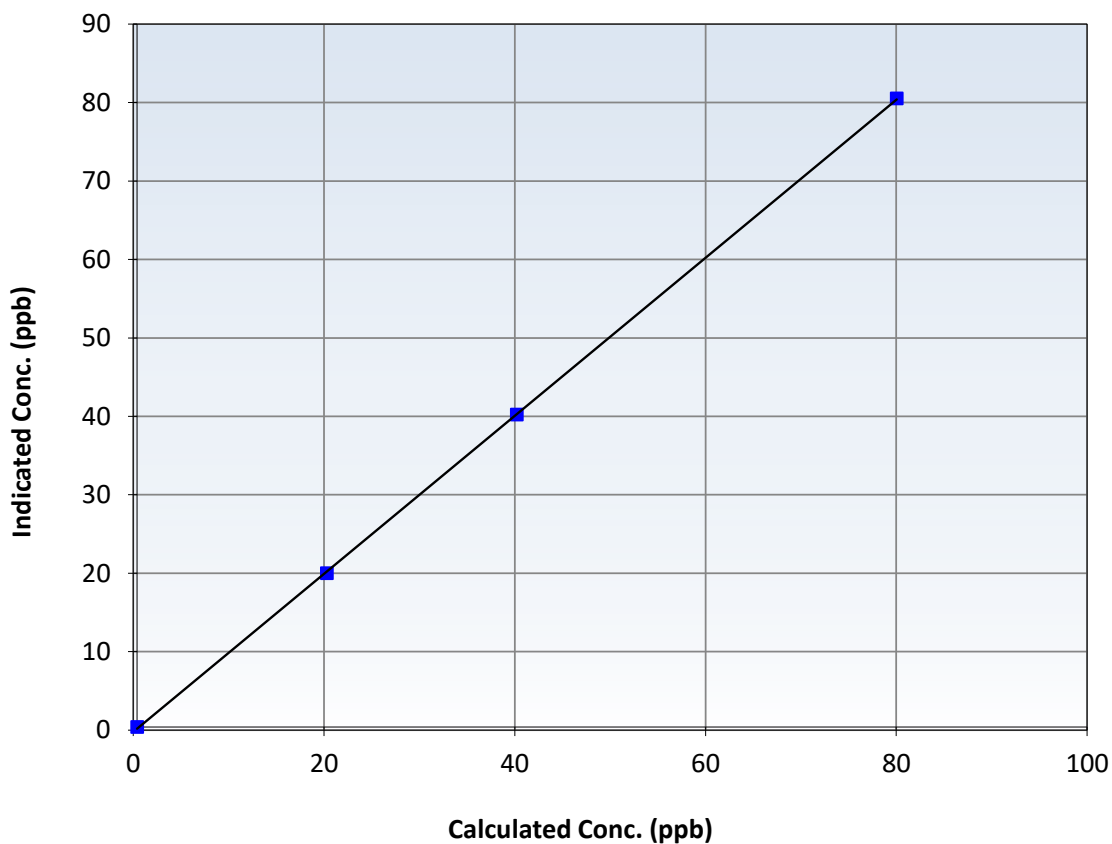
Station Information

Calibration Date:	August 19, 2026	Previous Calibration:	July 20, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:55	End Time (MST):	14:24
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	0.999966		≥ 0.995
79.6	80.1	0.9944	Slope	1.007135		$0.90 - 1.10$
39.8	39.8	1.0006	Intercept	-0.218405		± 3
19.9	19.6	1.0158				

TRS Calibration Curve



TRS Calibration Plot

Date: August 19, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Fort McKay South
Calibration Date: August 10, 2026
Start time (MST): 10:46
Reason: Routine

Station number: AMS 13
Last Cal Date: July 2, 2026
End time (MST): 14:03

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:	NA	Removed Gas Expiry:	NA
Removed CH ₄ Conc.	499.0 ppm	CH ₄ Equiv Conc.	1053.7 ppm
Removed C ₃ H ₈ Conc.	201.7 ppm	Diff between cyl (THC):	
Diff between cyl (CH ₄):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	2657
Zero Air Gen model:	Teledyne API T701	Serial Number:	1118

Analyzer Information

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

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

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
CH ₄ SP Ratio:	2.94E-04	3.18E-04	NMHC SP Ratio:	4.27E-05
CH ₄ Retention time:	16.80	16.60	NMHC Peak Area:	205344
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	0.00	----
As found High point	4921	79.1	16.67	15.93	1.046
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	15.93	Prev response	16.58	*% change	-4.0%
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	4921	79.1	16.67	16.58	1.005
Mid point	4961	39.5	8.32	8.31	1.002
Low point	4980	19.8	4.17	4.10	1.019
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	16.67	16.61	1.004
Average Correction Factor					1.009

Notes:

Sample inlet filter and fan back filter was changed after as founds. Adjusted zero chromatogram and span.



Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

NMHC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	8.77	8.73	1.006
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.73	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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	8.77	8.78	0.999
Mid point	4961	39.5	4.38	4.36	1.006
Low point	4980	19.8	2.20	2.16	1.017
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	8.77	8.75	1.003
Average Correction Factor					1.007

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	7.89	7.21	1.095
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.21	Prev response	7.82	*% change	-8.5%
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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	7.89	7.80	1.012
Mid point	4961	39.5	3.94	3.95	0.997
Low point	4980	19.8	1.98	1.94	1.021
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	7.89	7.86	1.004
Average Correction Factor					1.010

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.997399	0.995989
THC Cal Offset:	-0.048965	-0.015937
CH ₄ Cal Slope:	0.993258	0.990165
CH ₄ Cal Offset:	-0.020181	0.004247
NMHC Cal Slope:	1.001137	1.001723
NMHC Cal Offset:	-0.028584	-0.020584

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

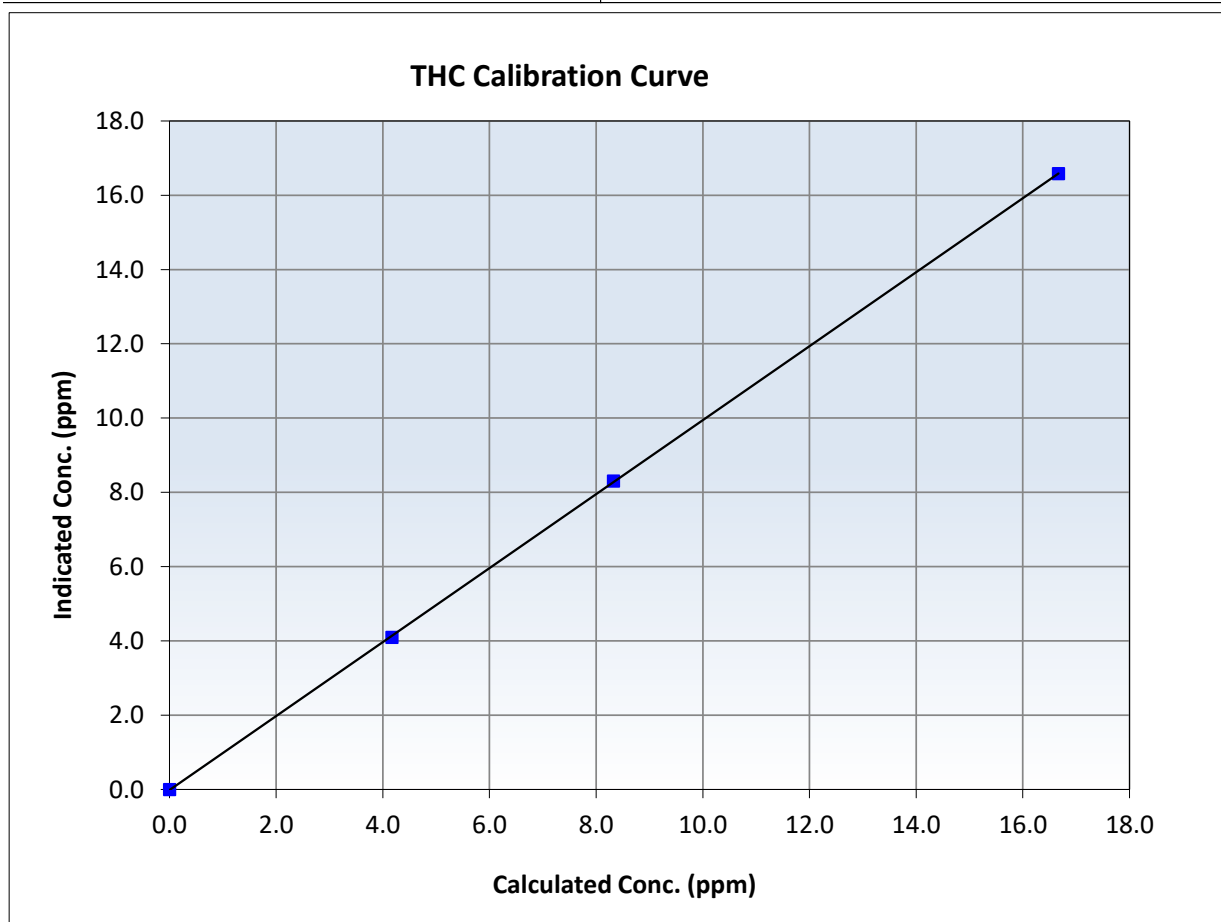
THC Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 2, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:46	End Time (MST):	14:03
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.00	0.00	----	Correlation Coefficient	0.999977	≥ 0.995
16.67	16.58	1.0054	Slope	0.995989	$0.90 - 1.10$
8.32	8.31	1.0018	Intercept	-0.015937	± 0.5
4.17	4.10	1.0187			





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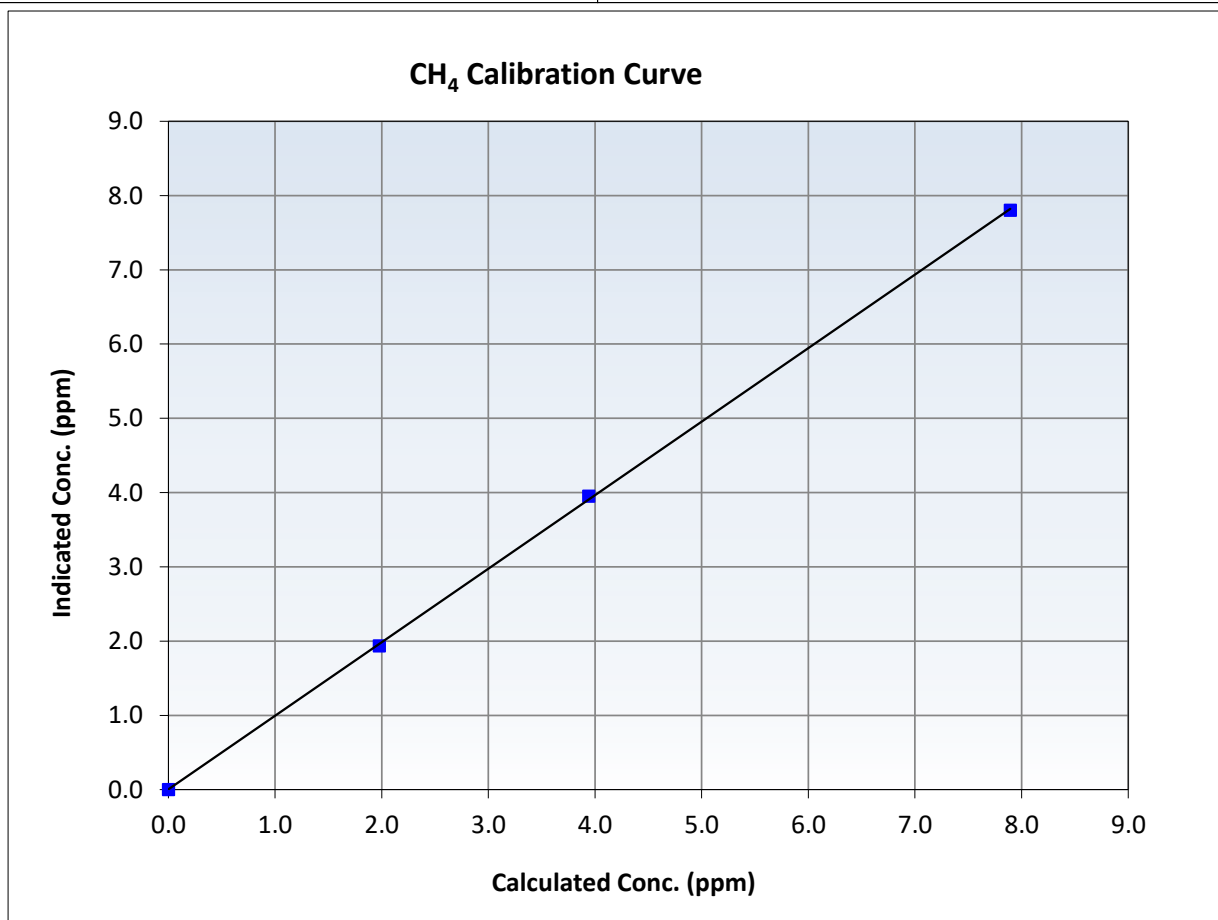
CH₄ Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 2, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:46	End Time (MST):	14:03
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	0.999910	<i>≥0.995</i>
7.89	7.80	1.0115	Slope	0.990165	<i>0.90 - 1.10</i>
3.94	3.95	0.9971	Intercept	0.004247	<i>+/-0.5</i>
1.98	1.94	1.0207			





Wood Buffalo Environmental Association

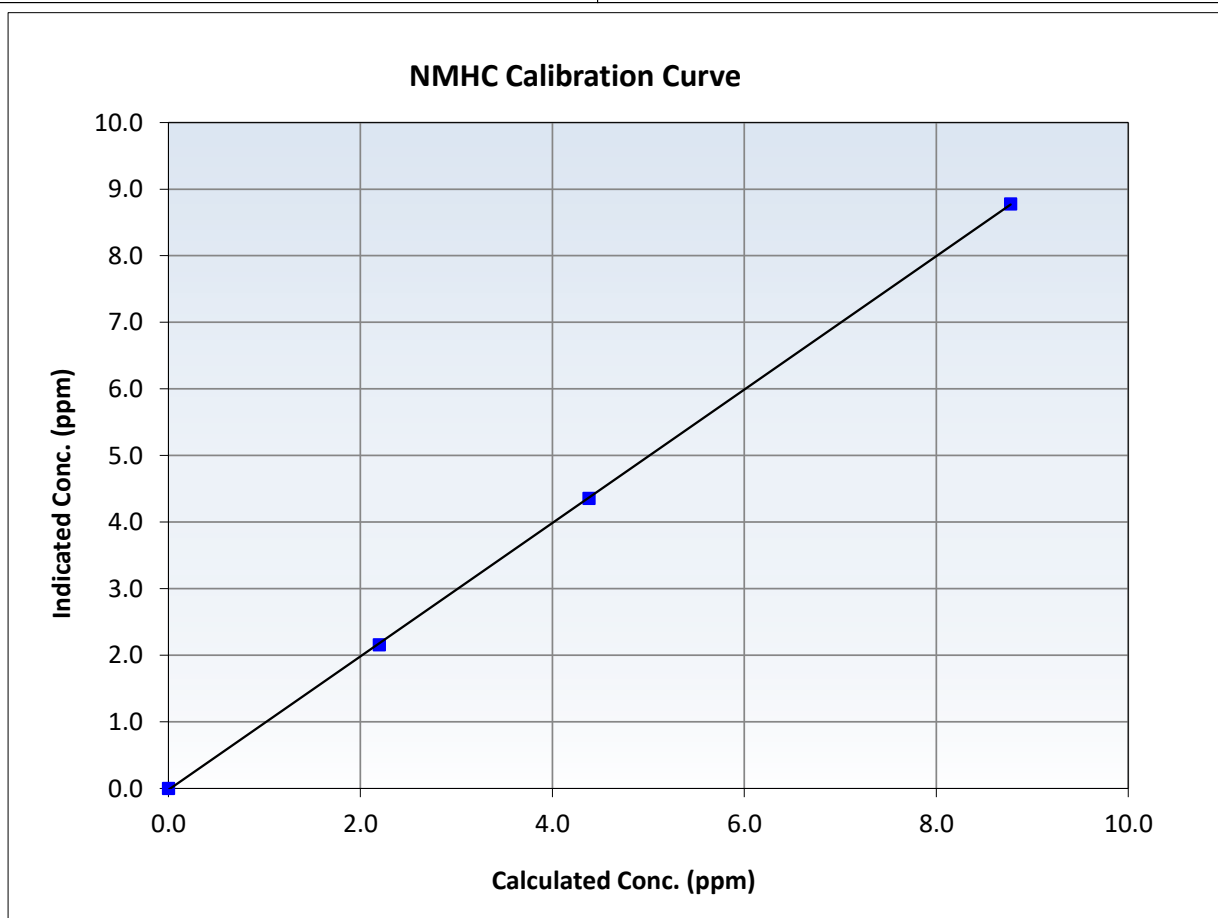
NMHC Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 2, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:46	End Time (MST):	14:03
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

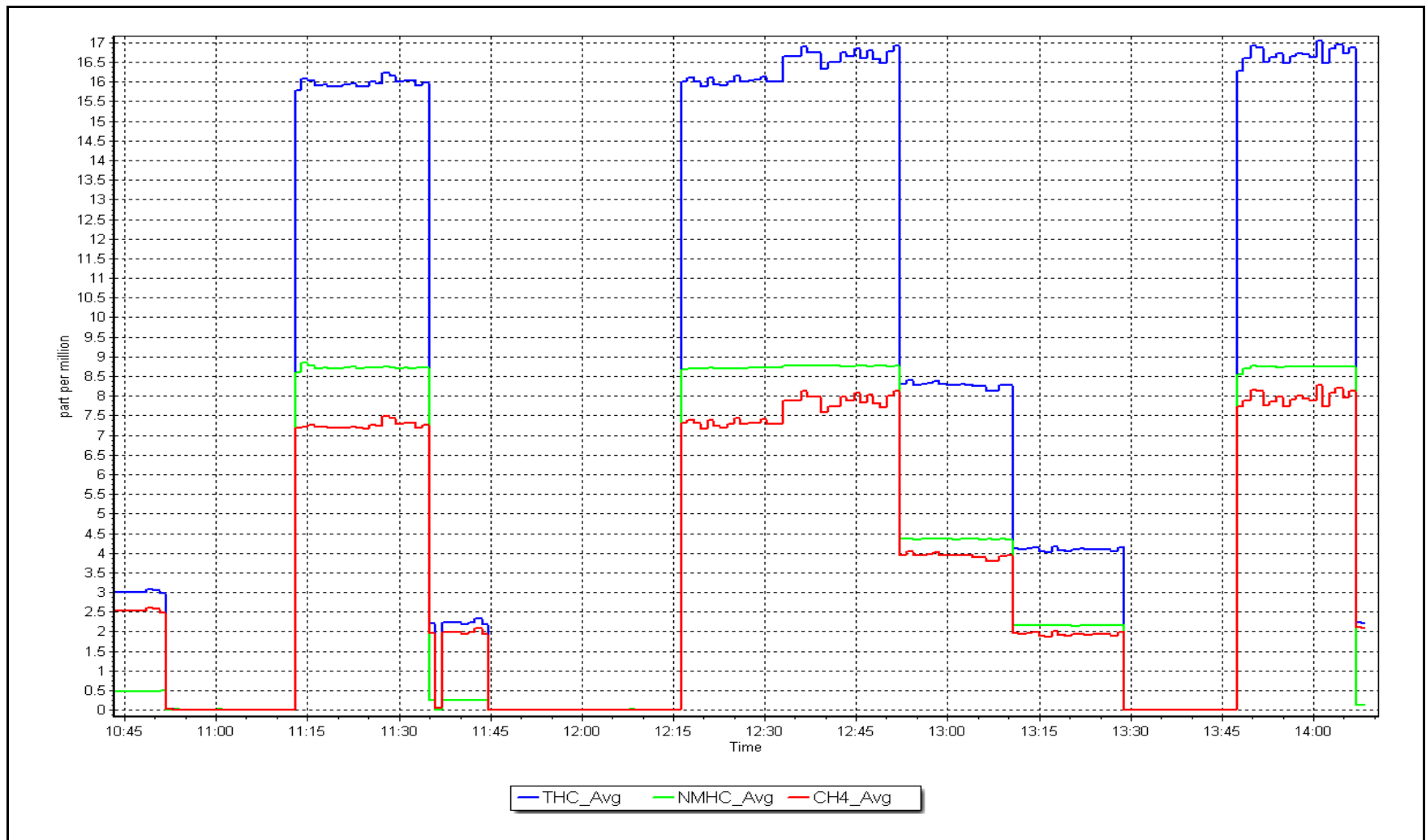
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999975	<i>≥0.995</i>
8.77	8.78	0.9994	Slope	1.001723	<i>0.90 - 1.10</i>
4.38	4.36	1.0056	Intercept	-0.020584	<i>+/-0.5</i>
2.20	2.16	1.0169			



NMHC Calibration Plot

Date: August 10, 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: August 14, 2026
Last Cal Date: July 27, 2026
Start time (MST): 9:27
End time (MST): 13:24
Reason: Routine

Calibration Standards

NO Gas Cylinder #: T2UP1RP
NO_x Cal Gas Conc: 48.25 ppm
Removed Cylinder #: NA
Removed Gas NO_x Conc: 48.25 ppm
NO_x gas Diff:
Calibrator Model: Teledyne API 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	-0.1	-0.1	0.0	----	----
AF High point	4917	83.5	805.7	799.5	6.2	815.9	807.4	8.4	0.9874	0.9901
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 803.3 ppb	NO = 796.9 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = 1.6%	
Baseline Corr 1st pt	NO _x = 816.0 ppb	NO = 807.5 ppb				<u>As Found Statistics</u>		*Percent Change	NO = 1.3%	
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 42iQ
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 12300522720

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.001630	1.007898
NO _x Cal Offset:	-3.692300	-4.253098
NO Cal Slope:	1.002578	1.008009
NO Cal Offset:	-4.690084	-5.290748
NO ₂ Cal Slope:	1.005049	1.014102
NO ₂ Cal Offset:	0.166098	0.736324

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.135	1.135	NO bkgnd or offset:	4.0	4.0
NOX coeff or slope:	1.000	1.000	NOX bkgnd or offset:	4.2	4.2
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	165.3	167.9

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	4917	83.5	805.7	799.5	6.2	810.2	803.7	6.6	0.9944	0.9948
Mid point	4958	41.8	403.4	400.3	3.1	399.2	394.2	5.0	1.0105	1.0155
Low point	4979	20.9	201.7	200.1	1.5	195.7	192.2	3.5	1.0306	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	402.8	402.9	787.7	402.8	384.9	1.0228	1.0000
Average Correction Factor									1.0118	1.0172

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO ₂ concentration (ppb) (Ic)	NO ₂ Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	Converter Efficiency <i>Limit = 96-104%</i>
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	786.6	406.2	386.6	392.1	0.9859	101.4%
Mid GPT point	786.6	592.3	200.5	205.1	0.9775	102.3%
Low GPT point	786.6	690.6	102.2	104.8	0.9750	102.6%
Average Correction Factor					0.9795	102.1%

Notes:

Sample inlet filter was changed after as founds. No adjustment made. Used 2nd NO point because of drift.

Jan Castro



Wood Buffalo Environmental Association

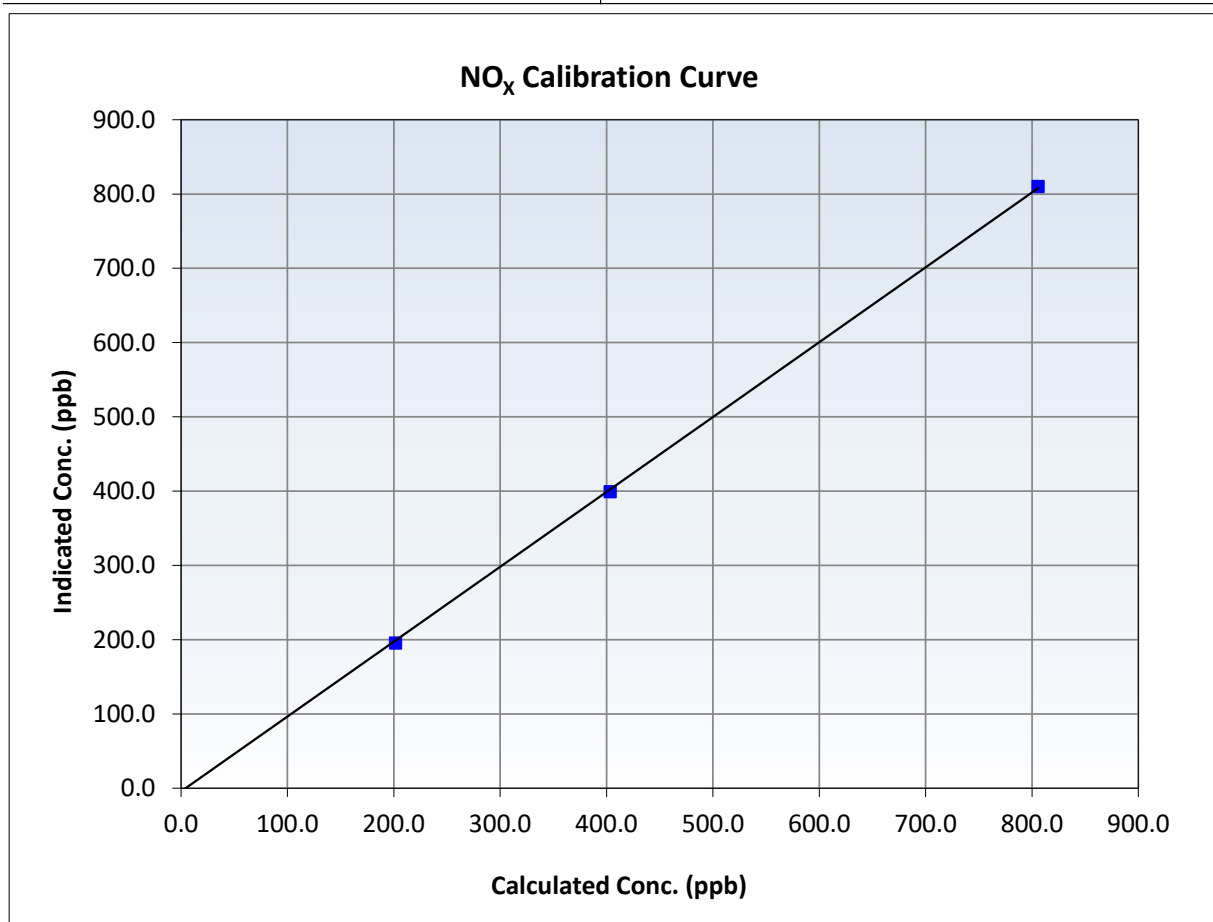
NO_x Calibration Summary

Station Information

Calibration Date:	August 14, 2026	Previous Calibration:	July 27, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:27	End Time (MST):	13:24
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	0.999881	≥0.995
805.7	810.2	0.9944	Slope	1.007898	0.90 - 1.10
403.4	399.2	1.0105	Intercept	-4.253098	+/-20
201.7	195.7	1.0306			





Wood Buffalo Environmental Association

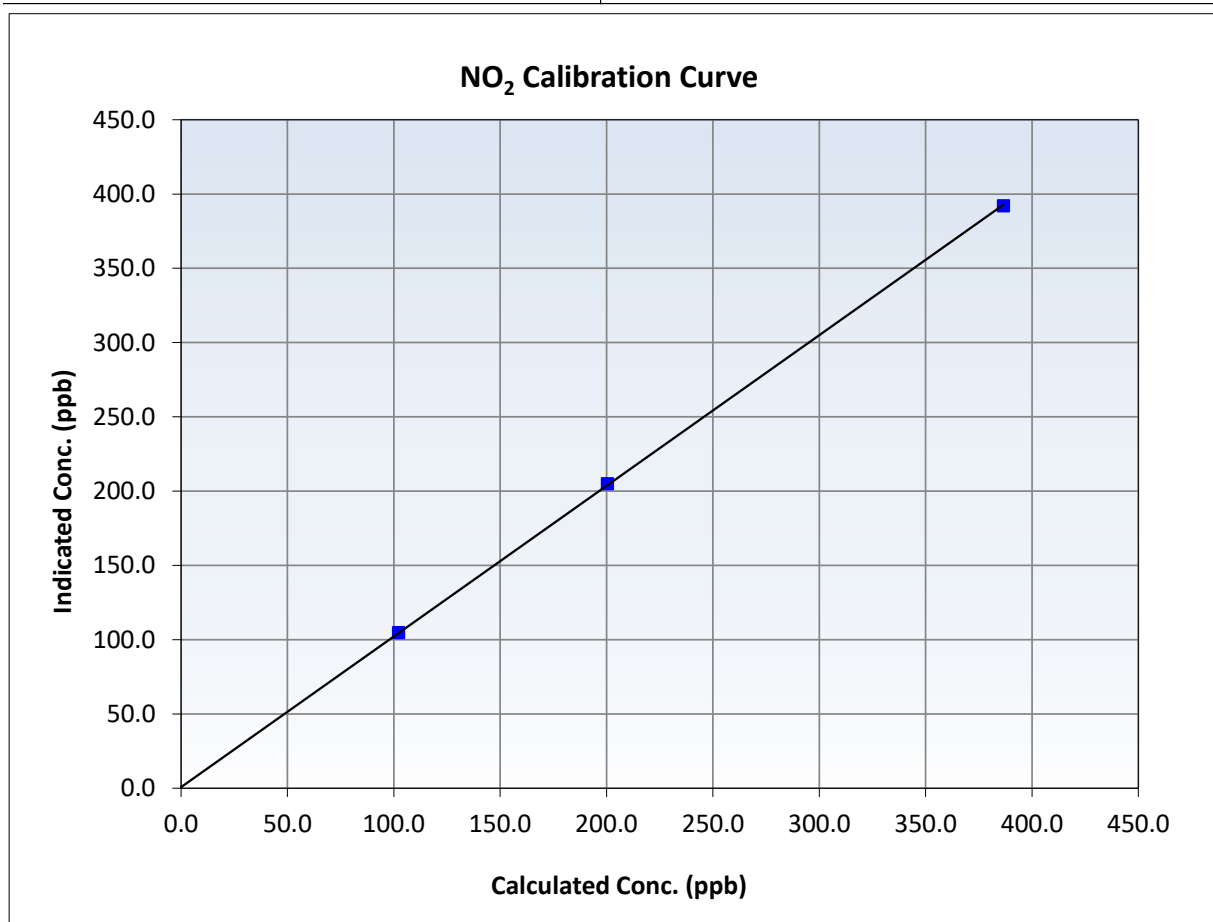
NO₂ Calibration Summary

Station Information

Calibration Date:	August 14, 2026	Previous Calibration:	July 27, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:27	End Time (MST):	13:24
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	-0.1	----	Correlation Coefficient	0.999971	≥0.995
386.6	392.1	0.9859	Slope	1.014102	0.90 - 1.10
200.5	205.1	0.9775	Intercept	0.736324	+/-20
102.2	104.8	0.9750			





Wood Buffalo Environmental Association

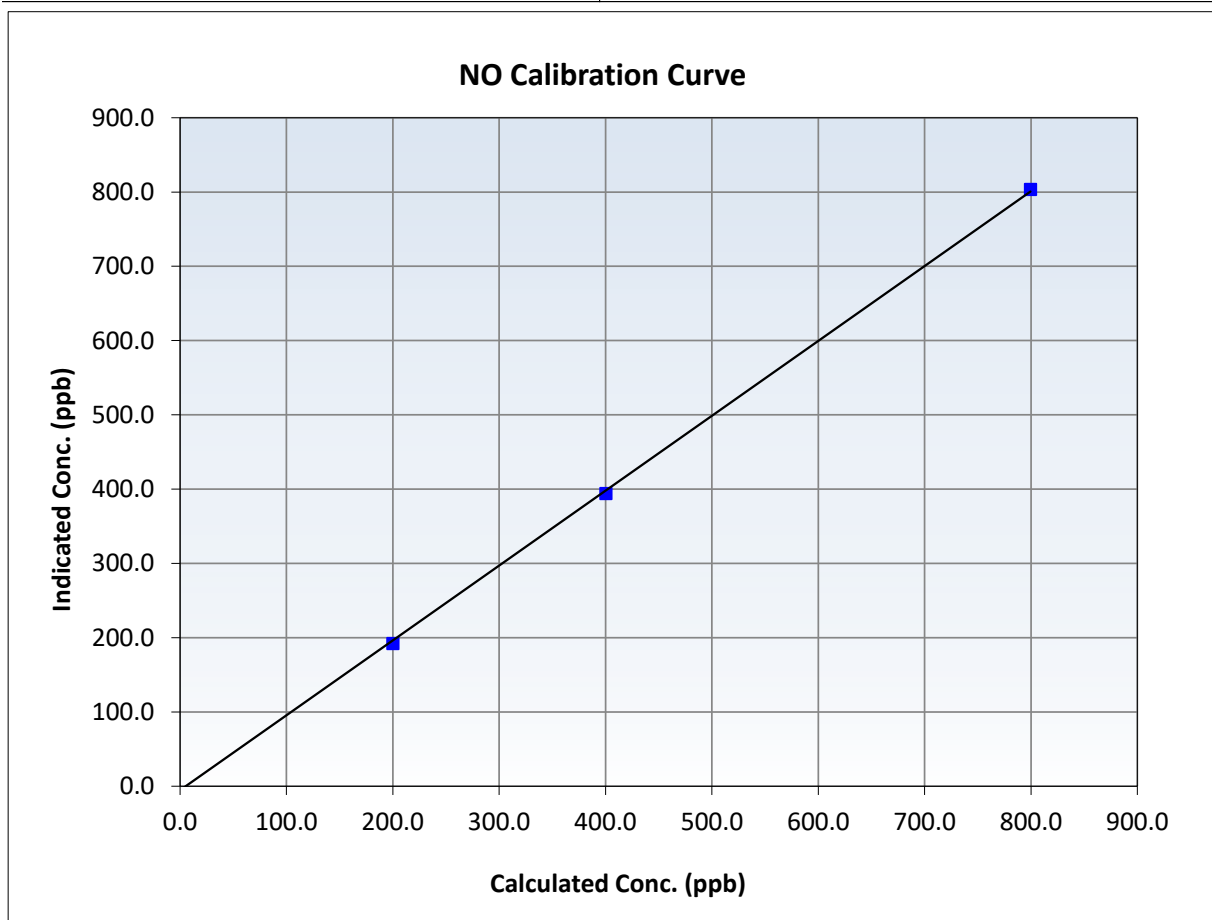
NO Calibration Summary

Station Information

Calibration Date:	August 14, 2026	Previous Calibration:	July 27, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	9:27	End Time (MST):	13:24
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12300522720
			14:18

Calibration Data

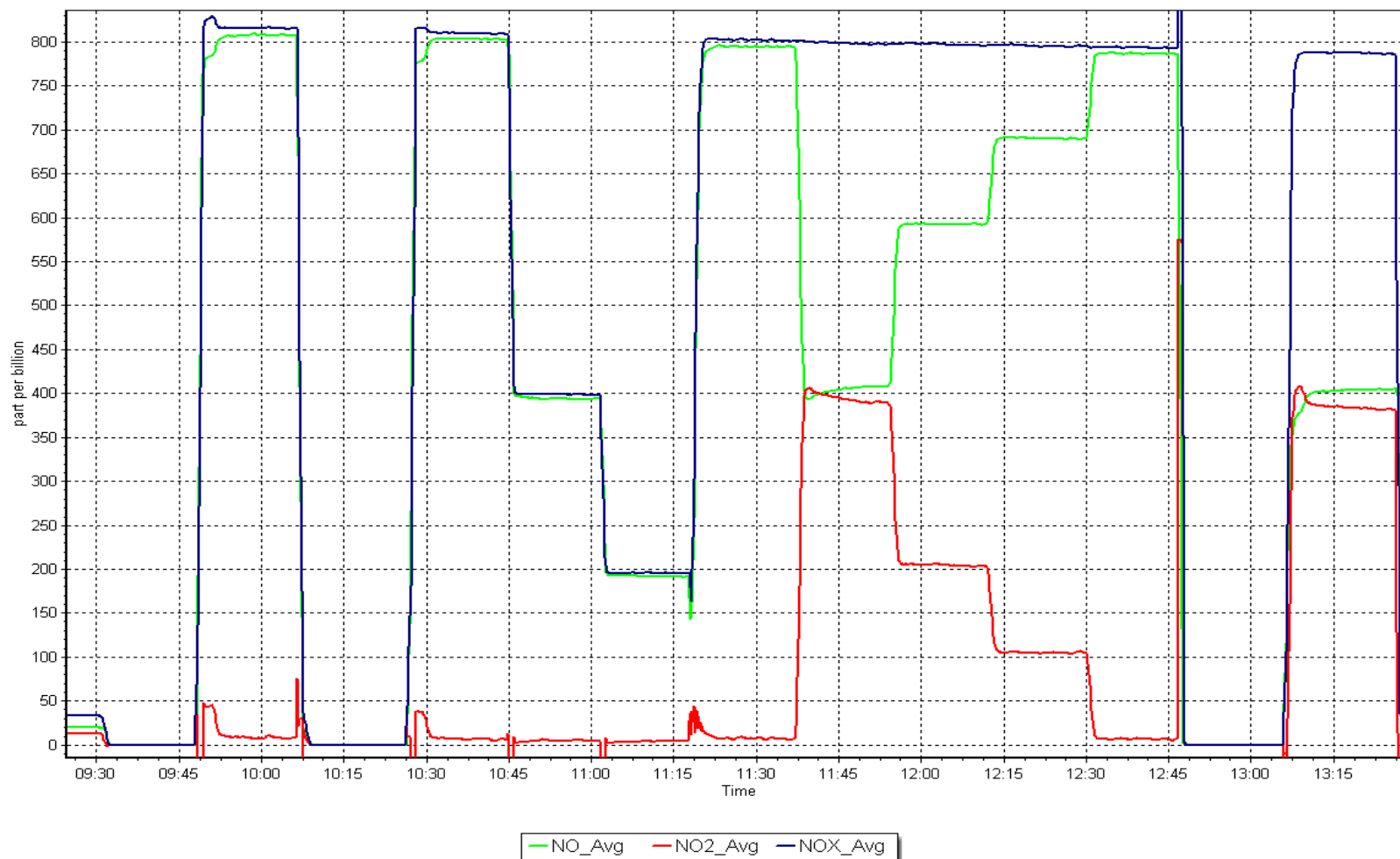
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	-0.1	----	Correlation Coefficient	0.999801	≥ 0.995
799.5	803.7	0.9948	Slope	1.008009	0.90 - 1.10
400.3	394.2	1.0155	Intercept	-5.290748	+/-20
200.1	192.2	1.0413			



NO_x Calibration Plot

Date: August 14, 2026

Location: Fort McKay South





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Fort McKay South Station number: AMS 13
Calibration Date: August 6, 2026 Last Cal Date: July 10, 2026
Start time (MST): 10:11 End time (MST): 13:36
Reason: Routine

Calibration Standards

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

Analyzer Information

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

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.997714	1.000829	Backgd or Offset:	0.2	0.6
Calibration intercept:	1.000000	0.480000	Coeff or Slope:	1.656	1.666

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	1003.0	400.0	396.1	1.010
As found Mid point					
As found Low point					
Baseline Corr As found:	396.2	Previous response	400.1	*% 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	

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	1005.4	400.0	400.3	0.999
Mid point	5000	814.6	200.0	201.4	0.993
Low point	5000	695.3	100.0	101.1	0.989
As left zero	5000	800.0	0.0	-0.3	----
As left span	5000	1004.2	400.0	401.7	0.996
Average Correction Factor					0.994

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

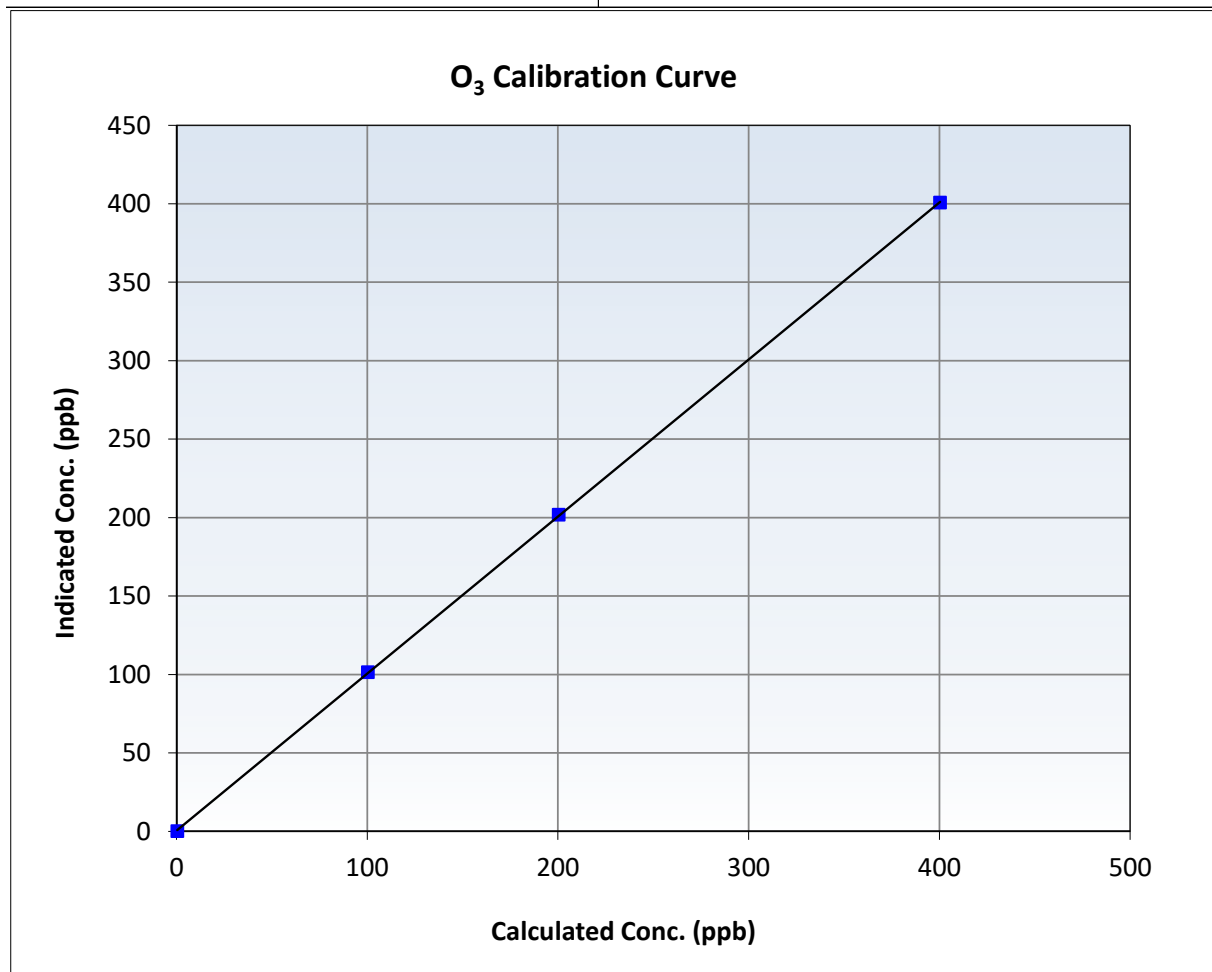
O₃ Calibration Summary

Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 10, 2026
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:11	End Time (MST):	13:36
Analyzer make:	Thermo 49i	Analyzer serial #:	1426262595

Calibration Data

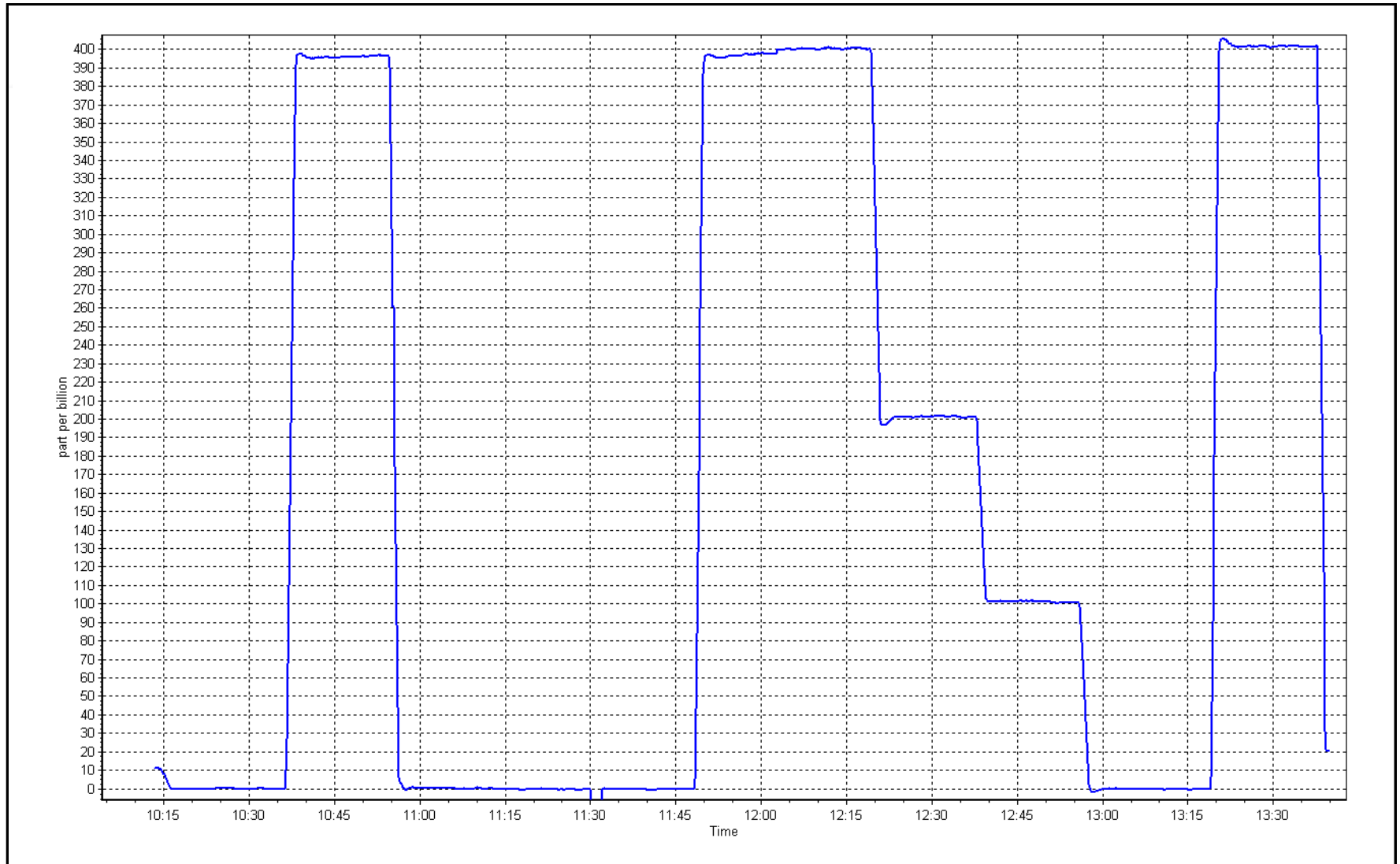
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999980	≥0.995
400.0	400.3	0.9993	Slope	1.000829	0.90 - 1.10
200.0	201.4	0.9930	Intercept	0.480000	+/- 5
100.0	101.1	0.9891			



O₃ Calibration Plot

Date: August 6, 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: August 19, 2026 Last Cal Date: July 7, 2026
Start time (MST): 12:57 End time (MST): 13:10

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)	23.60	23.58	23.60	☐	+/- 2 °C
P (mmHg)	729.50	729.05	729.50	☐	+/- 10 mmHg
Flow (LPM vol)	5.00	5.00	5.00	☐	+/- 0.25 LPM
PW% (pump)	46	----	46	☐	>80%
Zero Verification	PM w/o HEPA: 4.20		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 30, 2027
Lot No.: 100128-050-042

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

Date Optical Chamber Cleaned: July 7, 2026
Date Disposable Filter Changed: July 7, 2026

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

Annual Maintenance

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

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

Calibration by: Jan Castro



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS14
ANZAC
AUGUST 2026**

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Anzac Station number: AMS 14
Calibration Date: August 20, 2026 Last Cal Date: July 15, 2026
Start time (MST): 9:33 End time (MST): 12:23
Reason: Routine

Calibration Standards

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

Analyzer Information

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

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.003079	1.001608	Backgd or Offset:	28.4	29.6
Calibration intercept:	0.569426	0.309645	Coeff or Slope:	1.117	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	1.1	----
As found High point	4920	79.5	800.2	808.0	0.992
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	806.9	Previous response	803.2	*% 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	0.4	----
High point	4920	79.5	800.2	801.8	0.998
Mid point	4960	39.8	400.6	401.5	0.998
Low point	4980	19.9	200.3	200.8	0.997
As left zero	5000	0.0	0.0	0.2	----
As left span	4920	79.5	800.2	803.5	0.996
Average Correction Factor:					0.998

Notes: Inlet filter changed after As Finds, slight adjustments to both zero and span.

Calibration Performed By: Ryan Power



Wood Buffalo Environmental Association

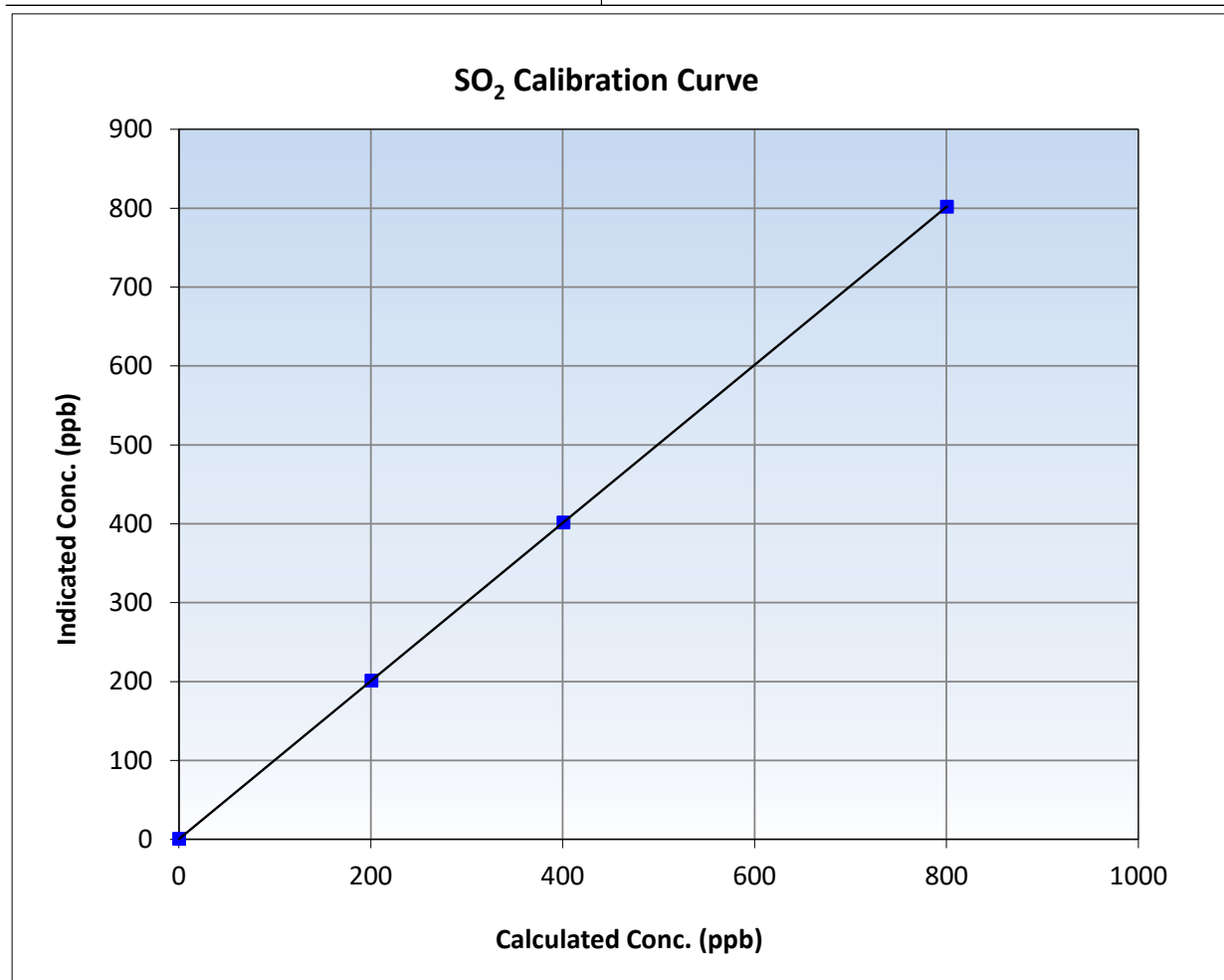
SO₂ Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 15, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	9:33	End Time (MST):	12:23
Analyzer make:	Thermo 43i	Analyzer serial #:	0710321322

Calibration Data

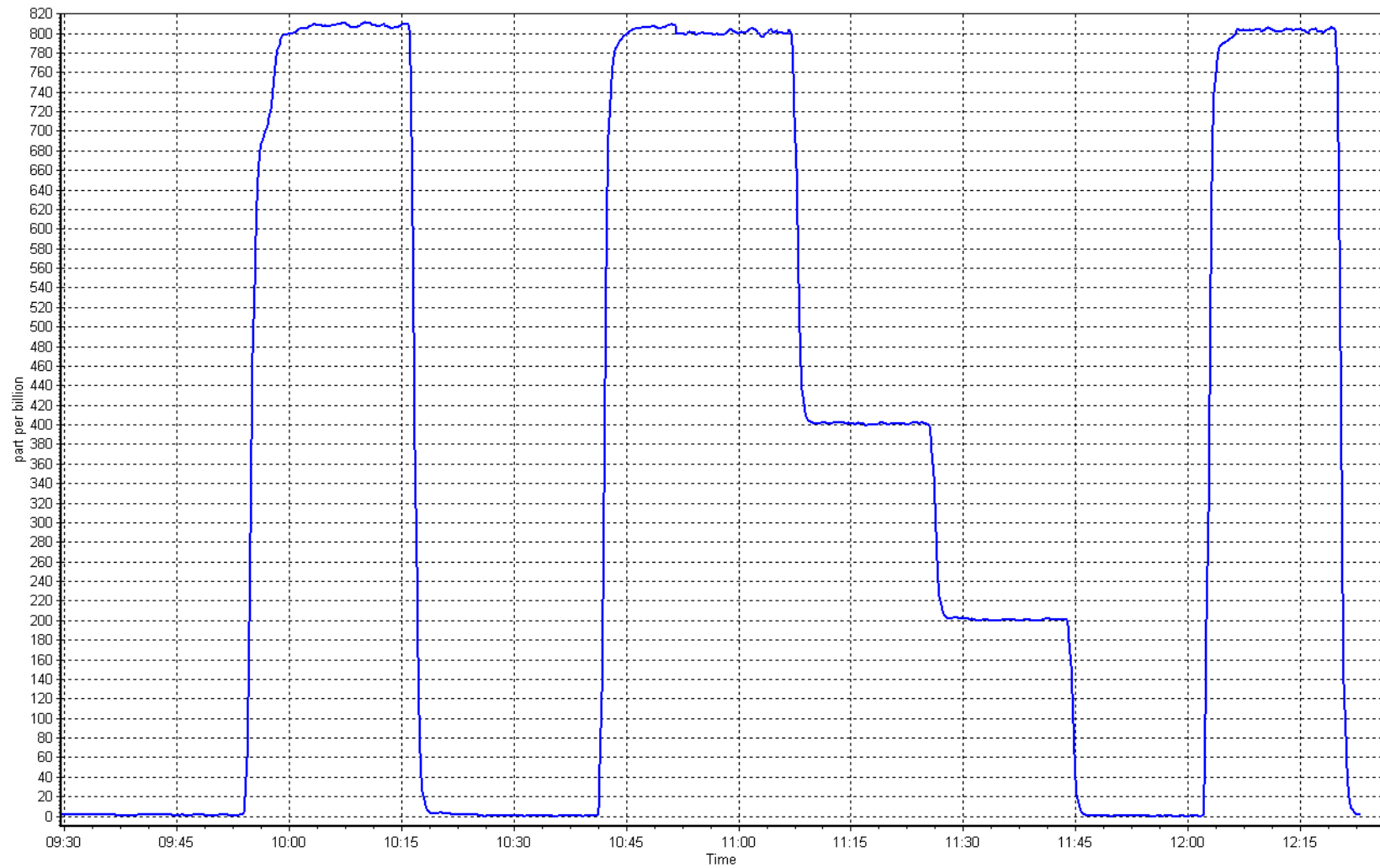
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	1.000000	≥0.995
800.2	801.8	0.9980	Slope	1.001608	0.90 - 1.10
400.6	401.5	0.9977	Intercept	0.309645	+/-30
200.3	200.8	0.9974			



SO2 Calibration Plot

Date: August 20, 2026

Location: Anzac





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Anzac
Calibration Date: August 18, 2026
Start time (MST): 8:54
Reason: Routine

Station number: AMS 14
Last Cal Date: July 7, 2026
End time (MST): 12:55

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:	0.987424	1.006283	Backgd or Offset:	2.20	2.29
Calibration intercept:	-0.181572	-0.241597	Coeff or Slope:	0.948	0.984

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	77.9	1.025
As found Mid point	4960	39.6	40.0	38.9	1.026
As found Low point	4980	19.8	20.0	19.2	1.036
New cylinder response					
Baseline Corr As found:	78.0	Prev response:	78.80	*% change:	-1.0%
Baseline Corr 2nd AF pt:	39.0	AF Slope:	0.975994	AF Intercept:	-0.181561
Baseline Corr 3rd AF pt:	19.3	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4921	79.2	80.0	80.4	0.995
Mid point	4960	39.6	40.0	39.8	1.005
Low point	4980	19.8	20.0	19.7	1.015
As left zero	5000	0.0	0.0	0.0	----
As left span	4921	79.2	80.0	78.2	1.023
SO2 Scrubber Check	4921	79.5	794.9	0.0	----
Date of last scrubber change:	28-May-25		Ave Corr Factor		1.005
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. Adjusted span only.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

TRS Calibration Summary

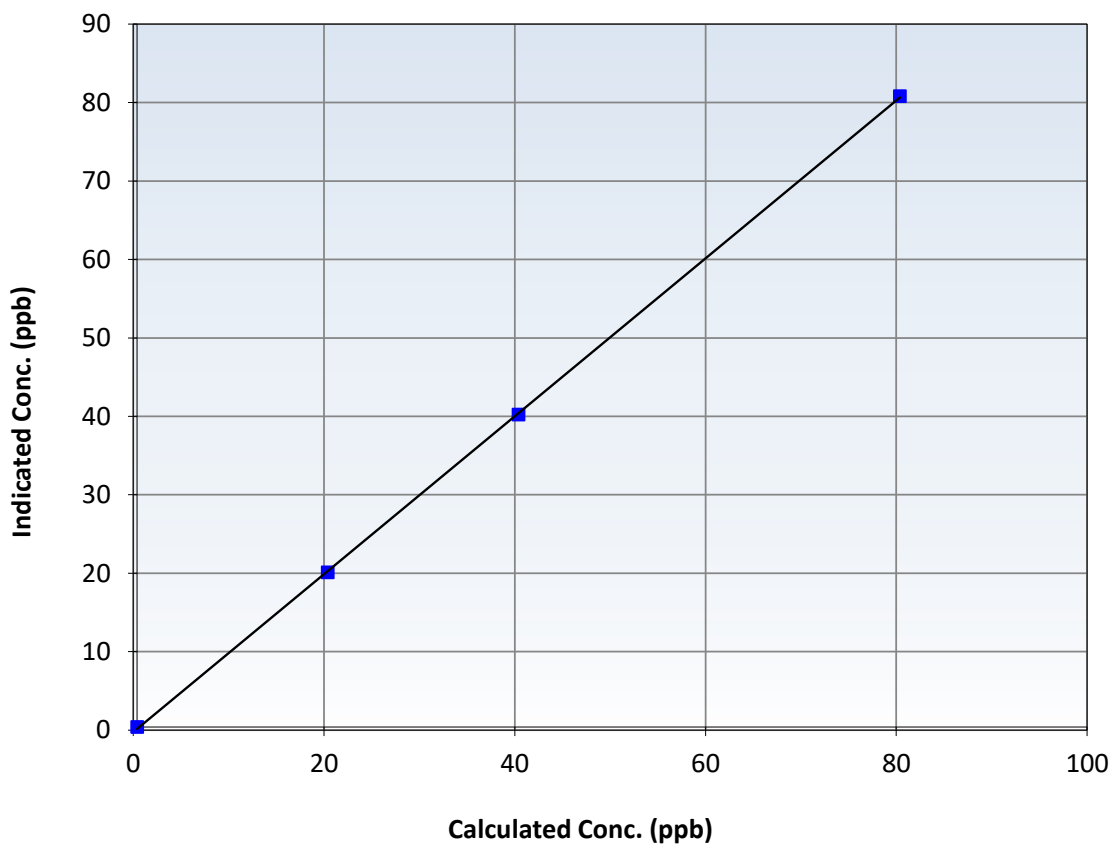
Station Information

Calibration Date:	August 18, 2026	Previous Calibration:	July 7, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	8:54	End Time (MST):	12:55
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	0.999955		≥ 0.995
80.0	80.4	0.9949	Slope	1.006283		$0.90 - 1.10$
40.0	39.8	1.0050	Intercept	-0.241597		± 3
20.0	19.7	1.0152				

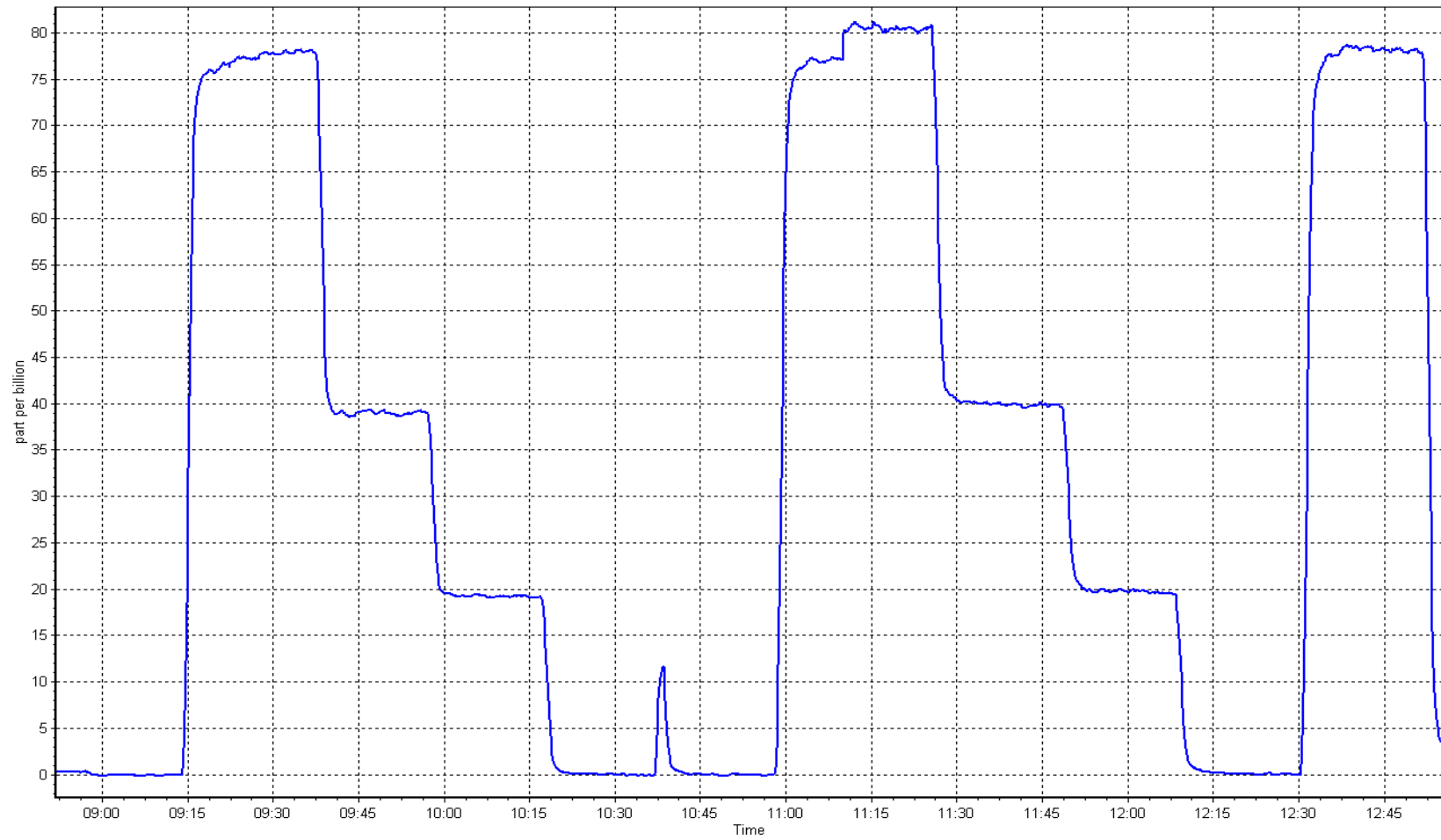
TRS Calibration Curve



TRS Calibration Plot

Date: August 18, 2026

Location: Anzac





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Anzac
 Calibration Date: August 20, 2026
 Start time (MST): 9:33
 Reason: Routine

Station number: AMS 14
 Last Cal Date: July 29, 2026
 End time (MST): 12:21

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:	4.23E-04	4.23E-04	NMHC SP Ratio:	6.63E-05
CH ₄ Retention time:	17.0	17.0	NMHC Peak Area:	135090
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	16.97	1.001
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.97	Prev response	16.98	*% change	-0.1%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.5	17.00	16.93	1.004
Mid point	4960	39.8	8.51	8.38	1.016
Low point	4980	19.9	4.25	4.17	1.020
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	17.00	16.79	1.012
Average Correction Factor					1.013

Notes:

H2 and inlet filter changed after As Finds. 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	4920	79.5	8.96	8.94	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.94	Prev response	8.96	*% change	-0.2%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	79.5	8.96	8.93	1.004
Mid point	4960	39.8	4.49	4.44	1.010
Low point	4980	19.9	2.24	2.22	1.012
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	8.96	8.85	1.013
Average Correction Factor					1.009

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFZero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4920	79.5	8.04	8.04	1.000
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.04	Prev response	8.03	*% 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)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	79.5	8.04	8.01	1.003
Mid point	4960	39.8	4.02	3.93	1.022
Low point	4980	19.9	2.01	1.95	1.030
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	8.04	7.95	1.011
Average Correction Factor					1.019

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.000956	0.997054
THC Cal Offset:	-0.027819	-0.047791
CH ₄ Cal Slope:	1.001821	0.997751
CH ₄ Cal Offset:	-0.022295	-0.035479
NMHC Cal Slope:	1.000792	0.996646
NMHC Cal Offset:	-0.006924	-0.012912

Calibration Performed By: Ryan Power



Wood Buffalo Environmental Association

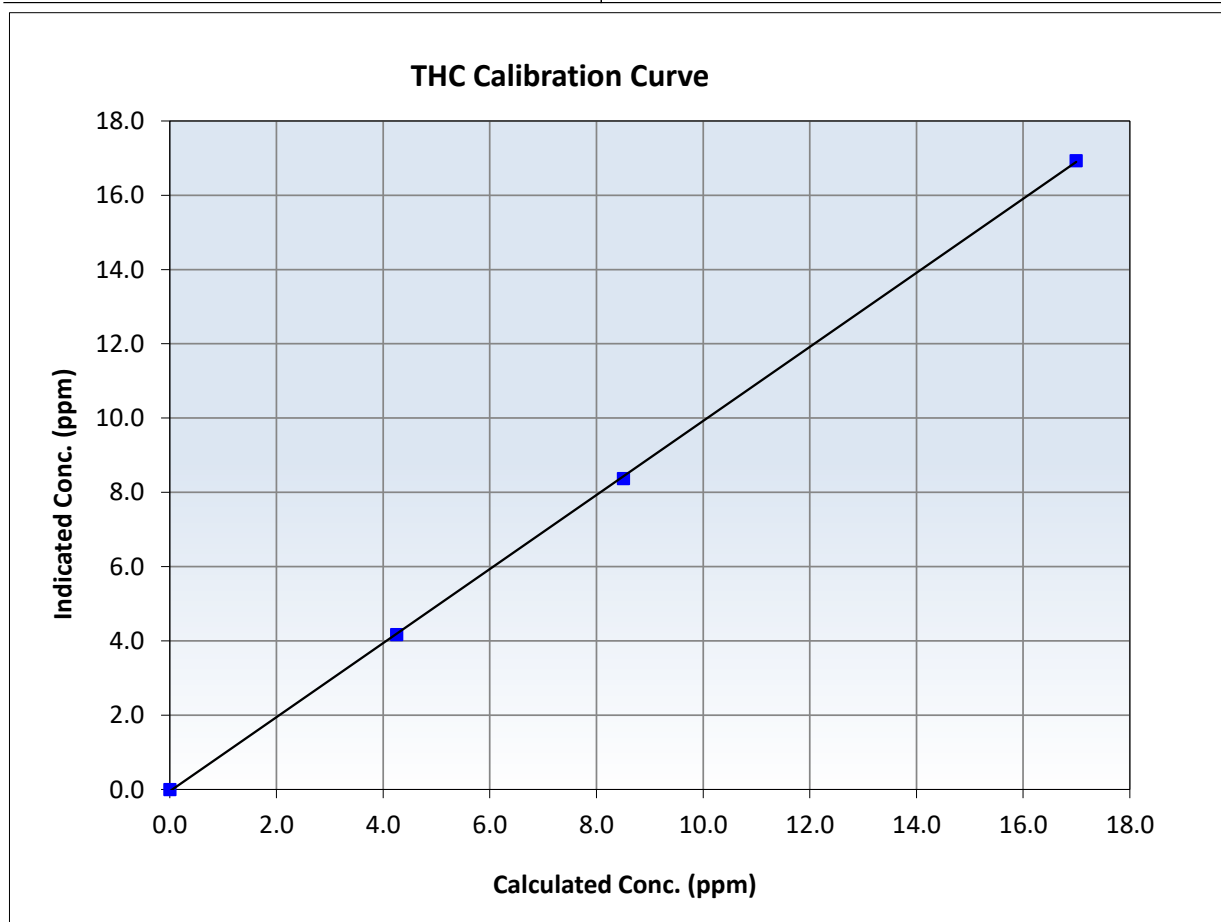
THC Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 29, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	9:33	End Time (MST):	12:21
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

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
17.00	16.93	1.0037	Slope	0.997054	$0.90 - 1.10$
8.51	8.38	1.0157	Intercept	-0.047791	± 0.5
4.25	4.17	1.0203			





Wood Buffalo Environmental Association

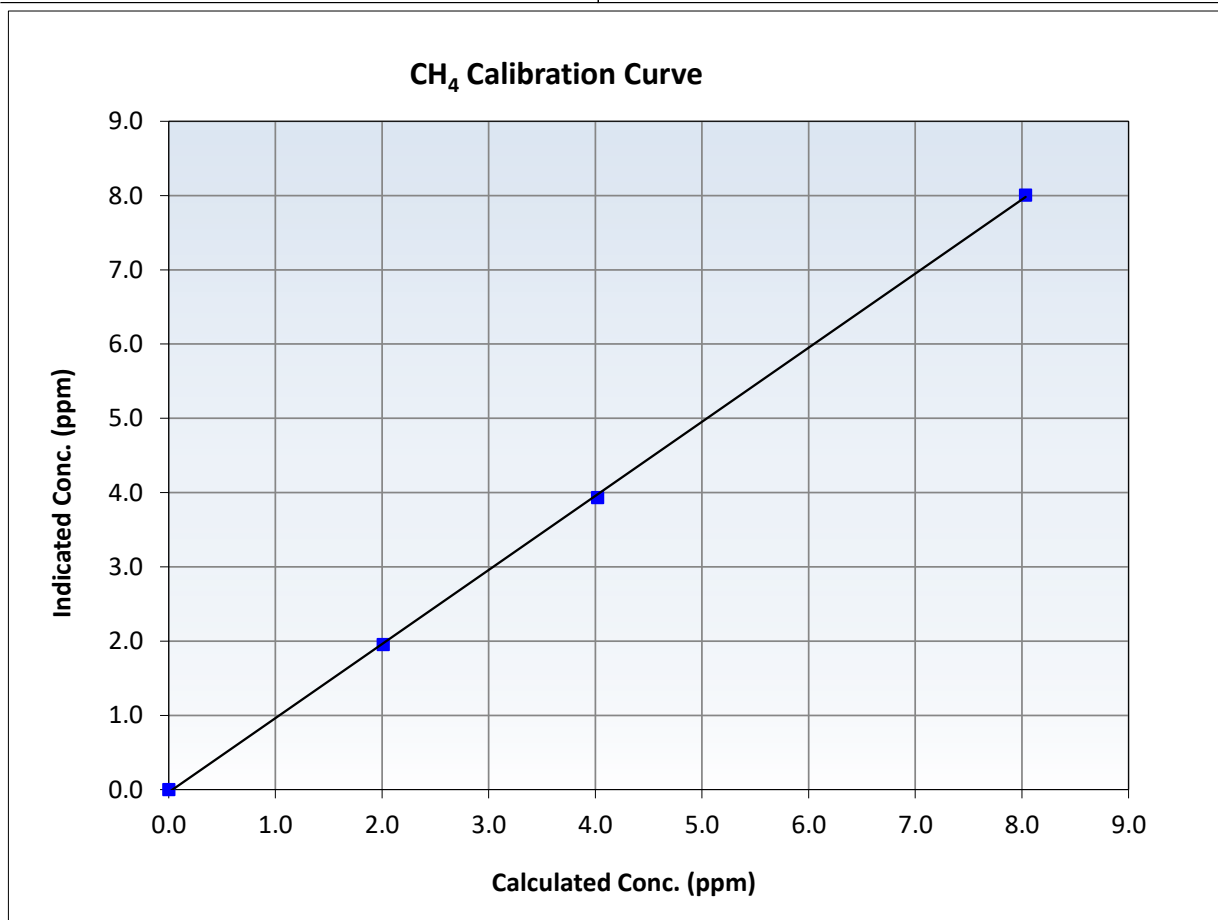
CH₄ Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 29, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	9:33	End Time (MST):	12:21
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	0.999880	≥ 0.995
8.04	8.01	1.0034	Slope	0.997751	$0.90 - 1.10$
4.02	3.93	1.0225	Intercept	-0.035479	± 0.5
2.01	1.95	1.0298			





Wood Buffalo Environmental Association

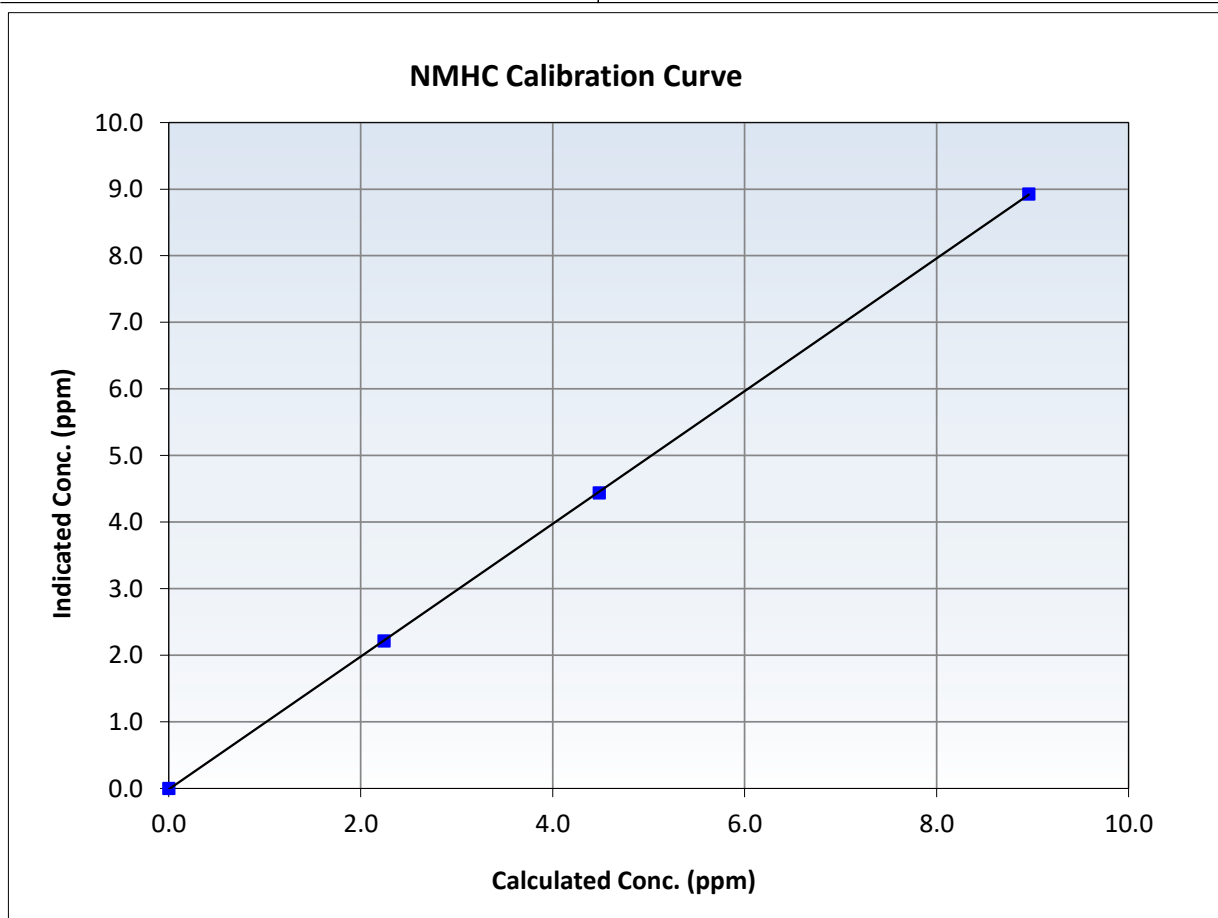
NMHC Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 29, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	9:33	End Time (MST):	12:21
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

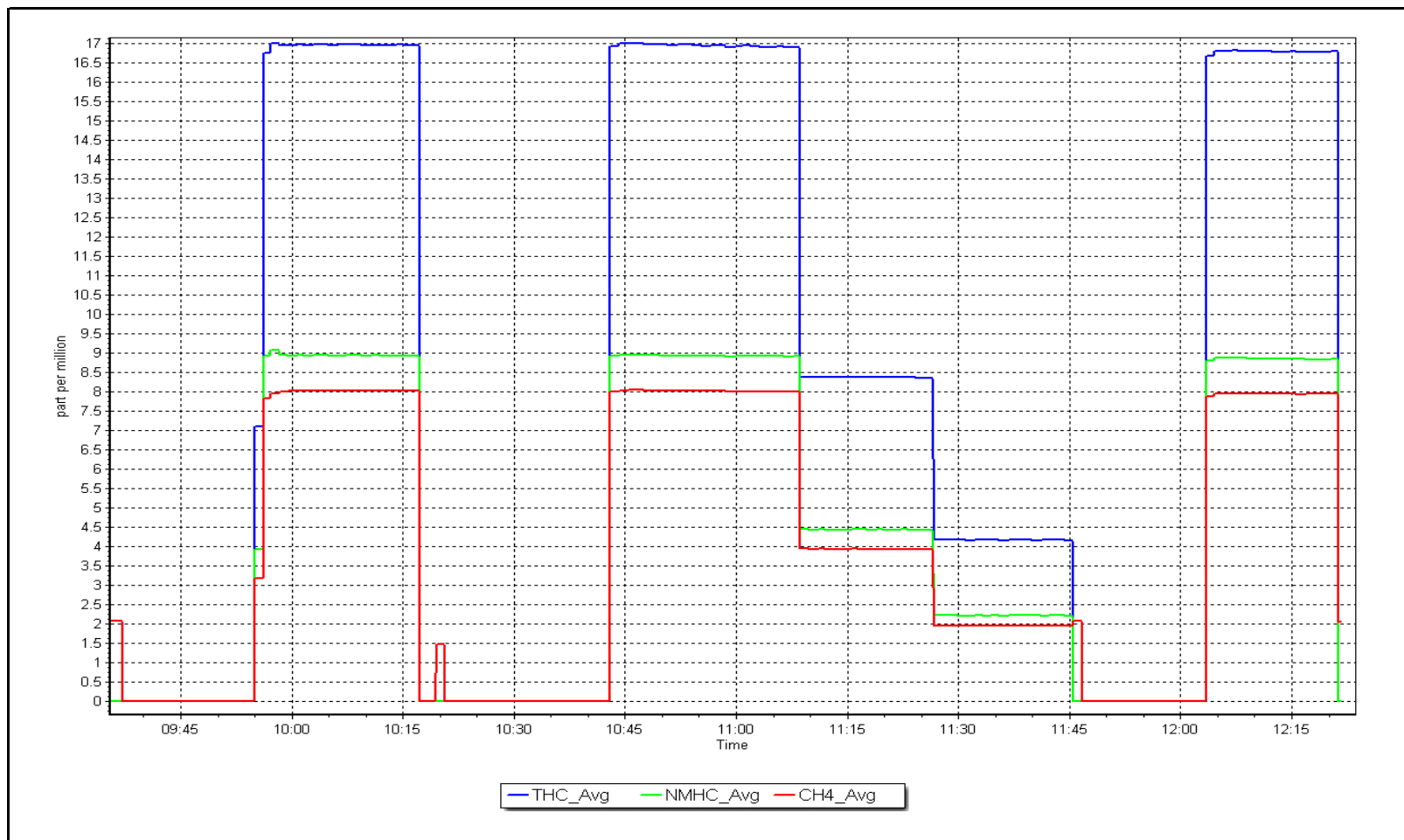
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999987	<i>≥0.995</i>
8.96	8.93	1.0037	Slope	0.996646	<i>0.90 - 1.10</i>
4.49	4.44	1.0100	Intercept	-0.012912	<i>+/-0.5</i>
2.24	2.22	1.0120			



NMHC Calibration Plot

Date: August 20, 2026

Location: Anzac





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Anzac
Station number: AMS 14
Calibration Date: August 25, 2026
Last Cal Date: July 27, 2026
Start time (MST): 7:15
End time (MST): 11:41
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	801.8	796.9	4.8	1.0025	1.0035
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 795.9 ppb	NO = 792.3 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = 0.7%
Baseline Corr 1st pt	NO _x = 801.6 ppb	NO = 796.9 ppb	<u>As Found Statistics</u>		*Percent Change	NO = 0.6%
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb	As found	NO _x r ² :	Nx SI:	Nx Int:
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb	As found	NO r ² :	NO SI:	NO Int:
			As found	NO ₂ r ² :	NO2 SI:	NO ₂ Int:

As Found GPT Calibration Data

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



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo 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:	152.1	152.1

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.989357	0.994137
NO _x Cal Offset:	0.768357	1.086941
NO Cal Slope:	0.991852	0.999029
NO Cal Offset:	-0.810186	-0.672078
NO ₂ Cal Slope:	0.996262	0.995415
NO ₂ Cal Offset:	-0.876749	-0.614729

Dilution Calibration Data

Set Point	Dilution flow rate (scm)	Source gas flow rate (scm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.3	0.1	0.2	----	----
High point	4934	66.2	803.6	799.7	4.0	799.6	798.6	1.0	1.0050	1.0013
Mid point	4967	33.1	401.8	399.8	2.0	401.0	398.4	2.6	1.0021	1.0036
Low point	4983	16.6	201.5	200.5	1.0	202.2	198.9	3.3	0.9967	1.0083
As left zero	5000	0.0	0.0	0.0	0.0	0.4	0.1	0.2	----	----
As left span	4934	66.2	803.6	380.3	423.3	797.3	380.3	417.0	1.0079	1.0000
Average Correction Factor									1.0013	1.0044

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	796.1	376.9	423.2	421.1	1.0049	99.5%
Mid GPT point	796.1	581.2	218.9	216.7	1.0100	99.0%
Low GPT point	796.1	688.2	111.9	110.0	1.0170	98.3%
Average Correction Factor					1.0107	98.9%

Notes:

No Maintenance or adjustments done.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

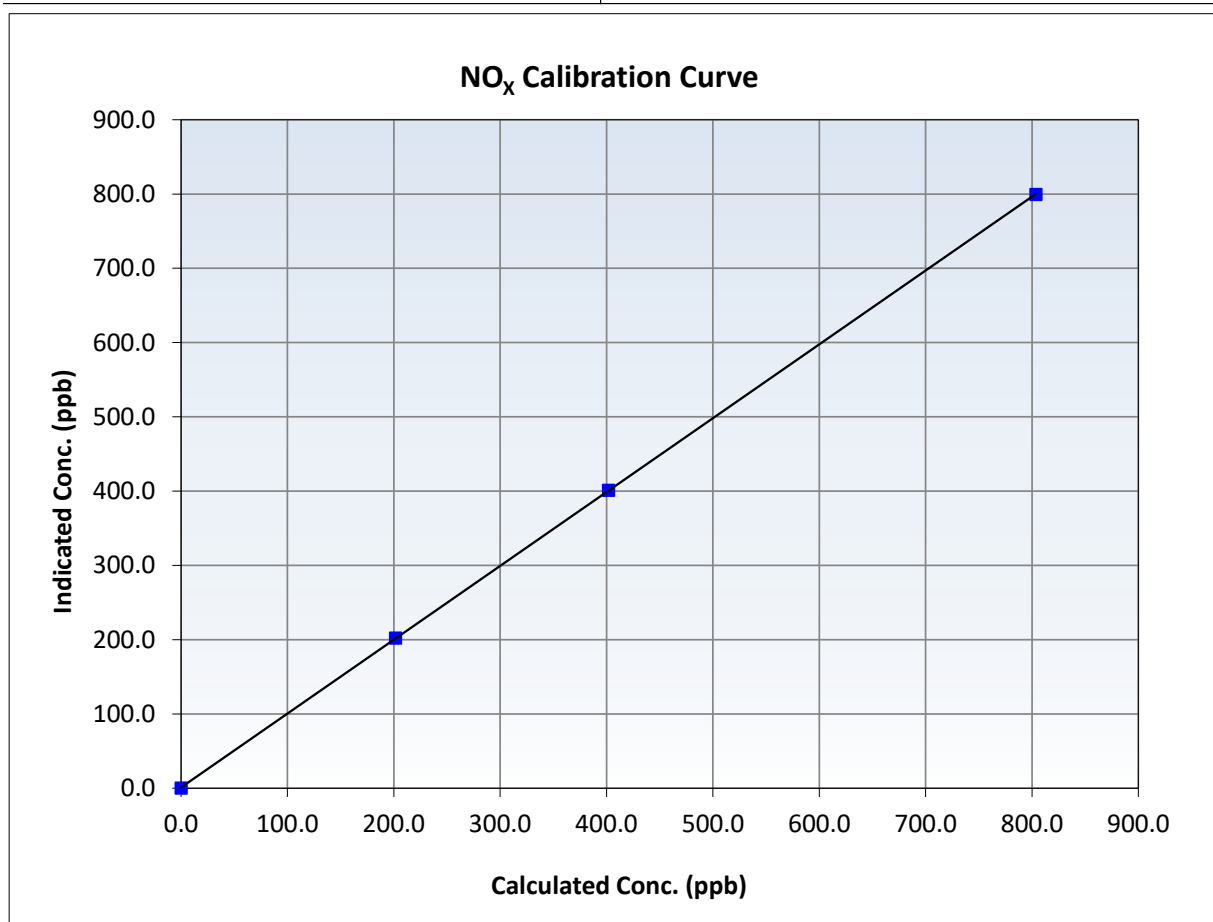
NO_x Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 27, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	7:15	End Time (MST):	11:41
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	0.999996	≥0.995
803.6	799.6	1.0050	Slope	0.994137	0.90 - 1.10
401.8	401.0	1.0021	Intercept	1.086941	+/-20
201.5	202.2	0.9967			





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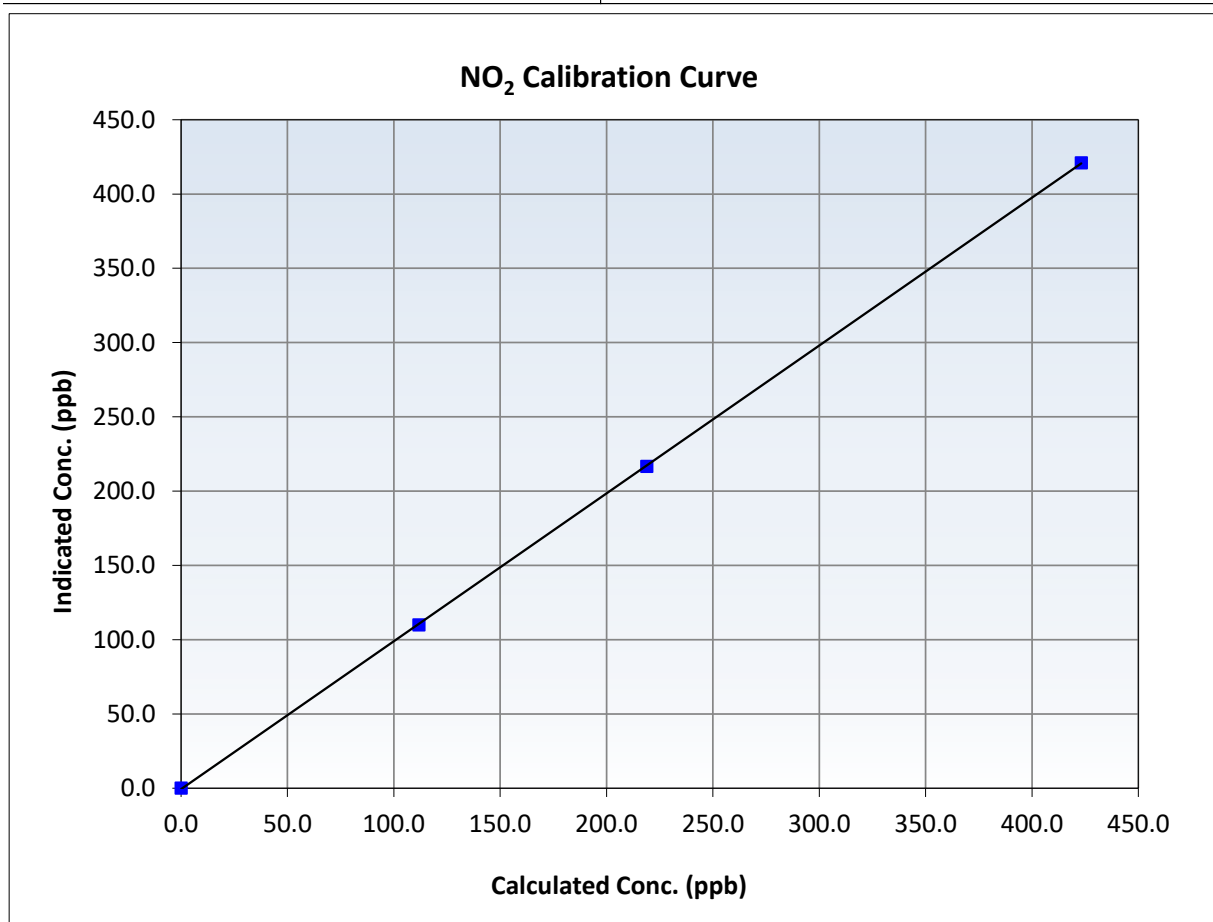
NO₂ Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 27, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	7:15	End Time (MST):	11:41
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	0.999982	≥0.995
423.2	421.1	1.0049	Slope	0.995415	0.90 - 1.10
218.9	216.7	1.0100	Intercept	-0.614729	+/-20
111.9	110.0	1.0170			





Wood Buffalo Environmental Association

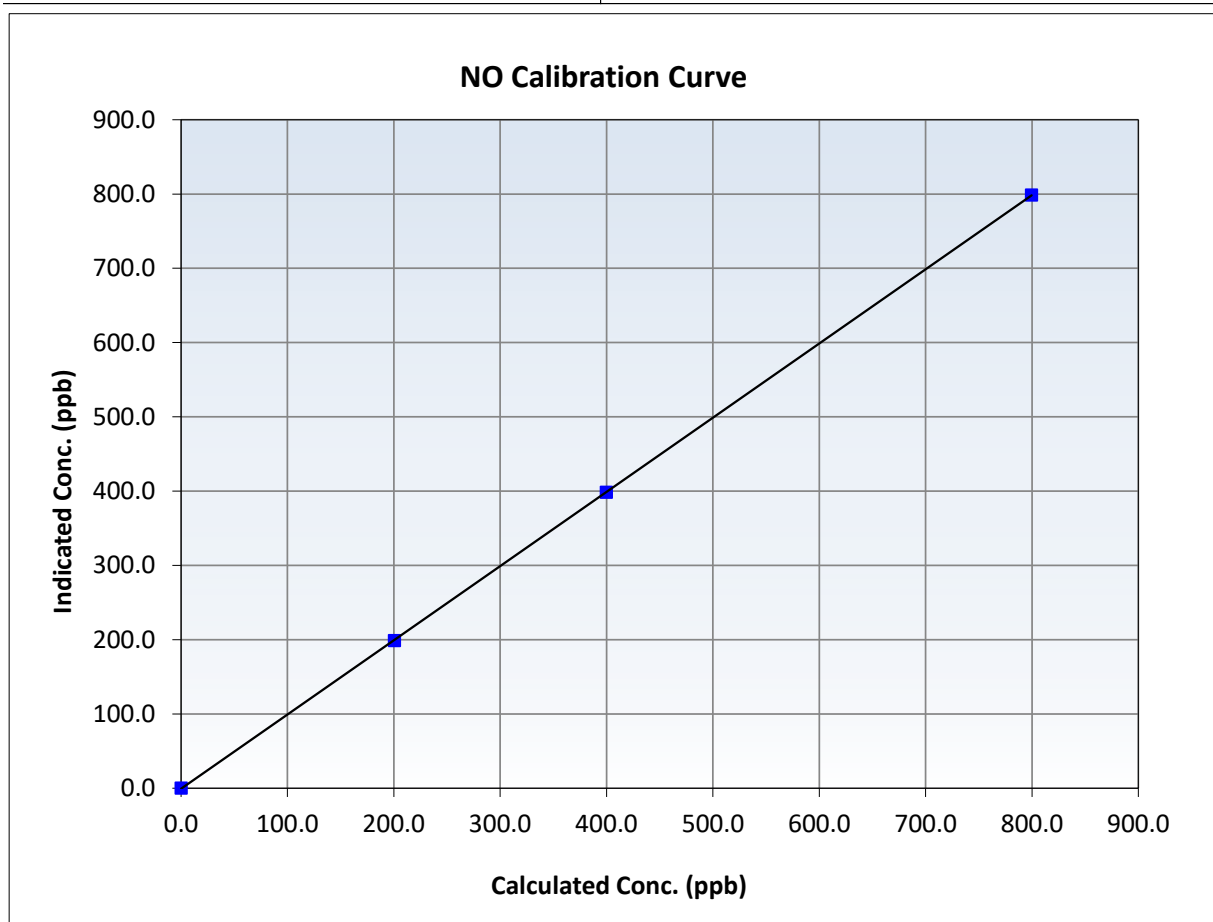
NO Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 27, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	7:15	End Time (MST):	11:41
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430008

Calibration Data

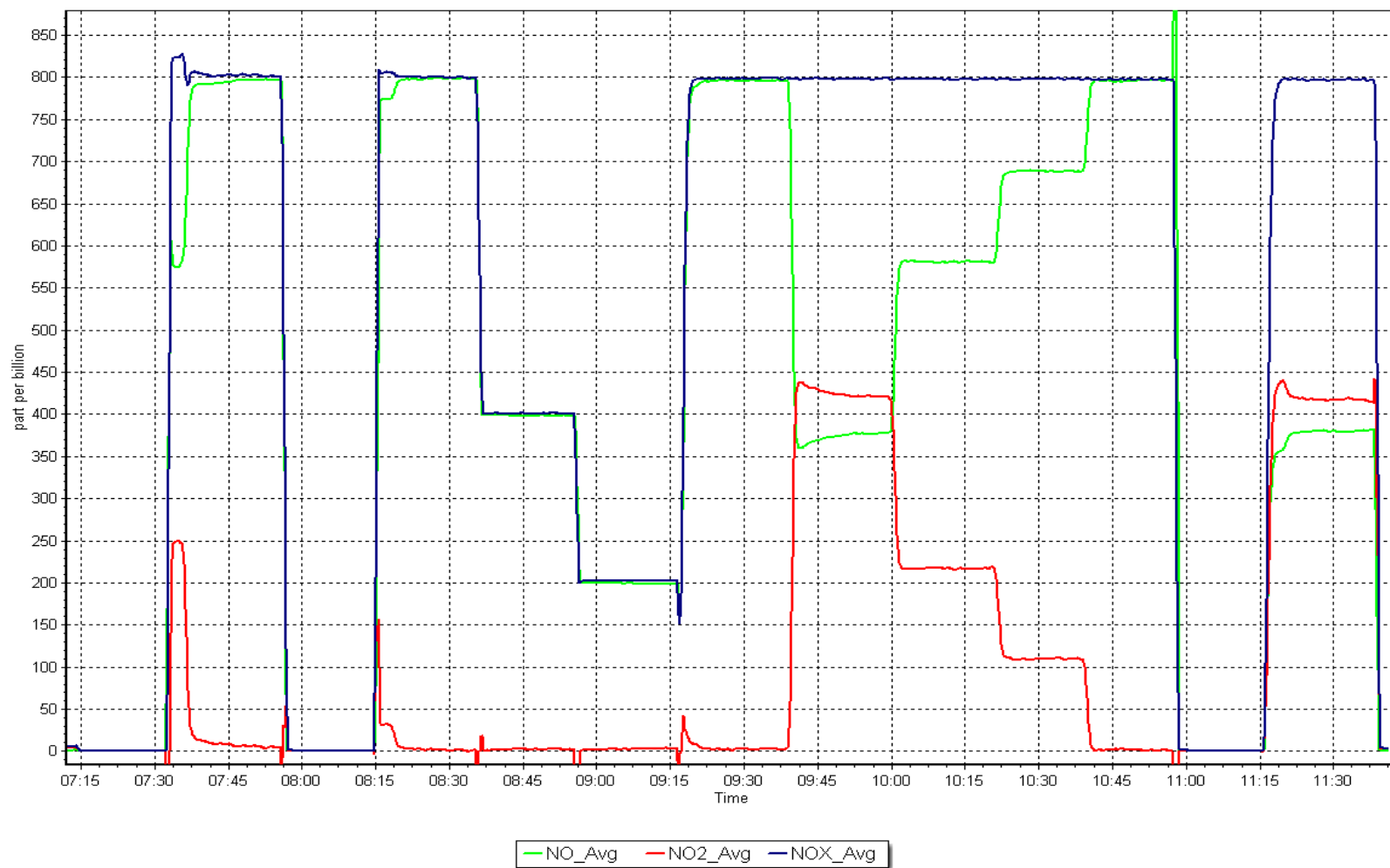
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.1	----	Correlation Coefficient	0.999996	≥ 0.995
799.7	798.6	1.0013	Slope	0.999029	0.90 - 1.10
399.8	398.4	1.0036	Intercept	-0.672078	+/-20
200.5	198.9	1.0083			



NO_x Calibration Plot

Date: August 25, 2026

Location: Anzac





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Anzac
Calibration Date: August 5, 2026
Start time (MST): 7:15
Reason: Routine

Station number: AMS 14
Last Cal Date: July 3, 2026
End time (MST): 11:39

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:	1.007143	1.000943	Backgd or Offset:	-0.8	-0.8
Calibration intercept:	0.300000	0.460000	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	-0.9	----
As found High point	5000	933.6	400.0	400.1	0.998
As found Mid point	5000	807.4	200.0	200.4	0.994
As found Low point	5000	711.3	100.0	100.3	0.988
Baseline Corr As found:	401.0	Previous response	403.2	*% change	-0.5%
Baseline Corr 2nd AF pt:	201.3	AF Slope:	1.001914	AF Intercept:	-0.360000
Baseline Corr 3rd AF pt:	101.2	AF Correlation:	0.999991	* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.4	----
High point	5000	935.1	400.0	400.6	0.999
Mid point	5000	807.7	200.0	201.3	0.994
Low point	5000	711.2	100.0	100.2	0.998
As left zero	5000	0.0	0.0	0.9	----
As left span	5000	935.1	400.0	402.4	0.994
Average Correction Factor					0.997

Notes: Drier added after sample port. No adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

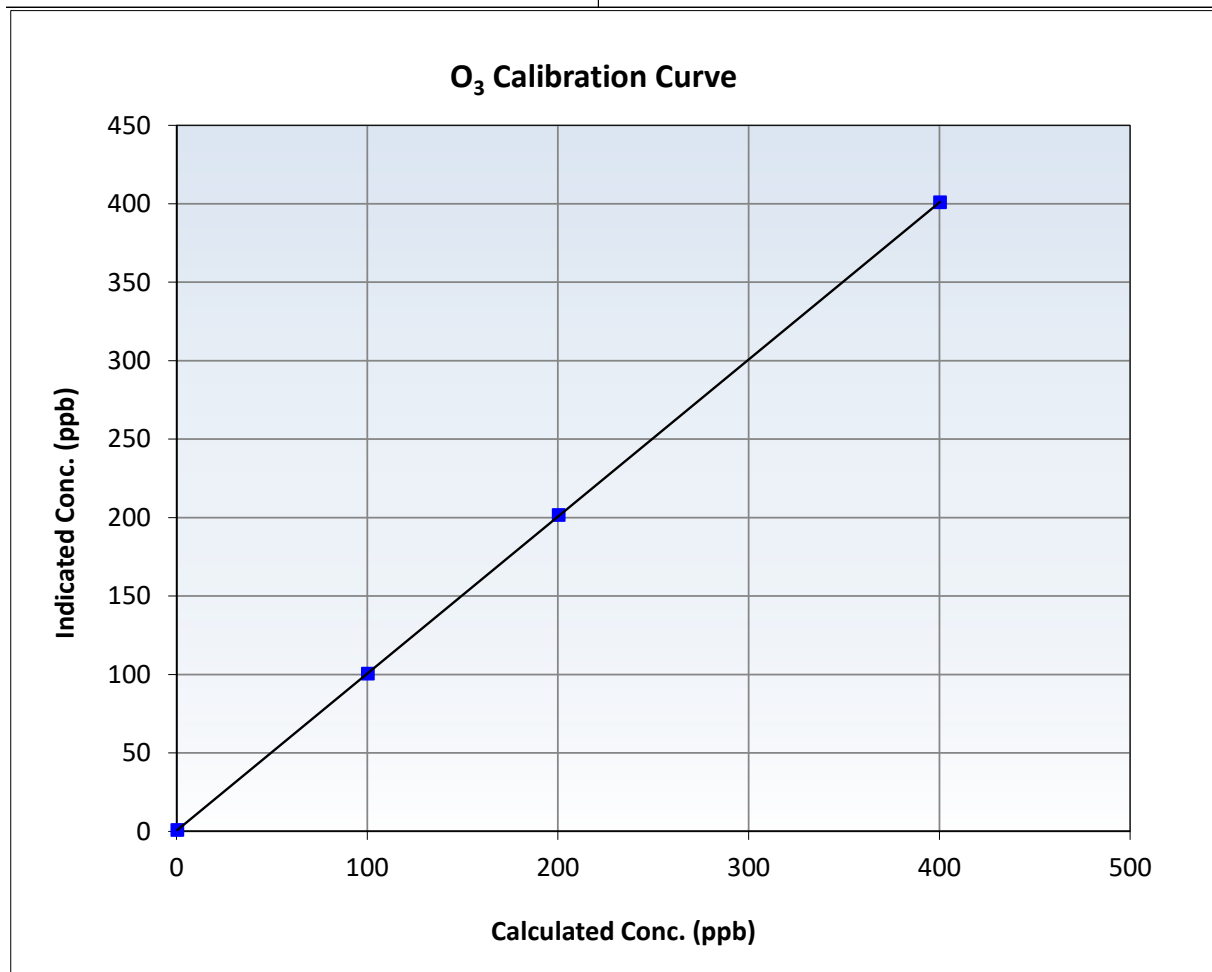
O₃ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 3, 2026
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	7:15	End Time (MST):	11:39
Analyzer make:	Thermo 49i	Analyzer serial #:	1152220023

Calibration Data

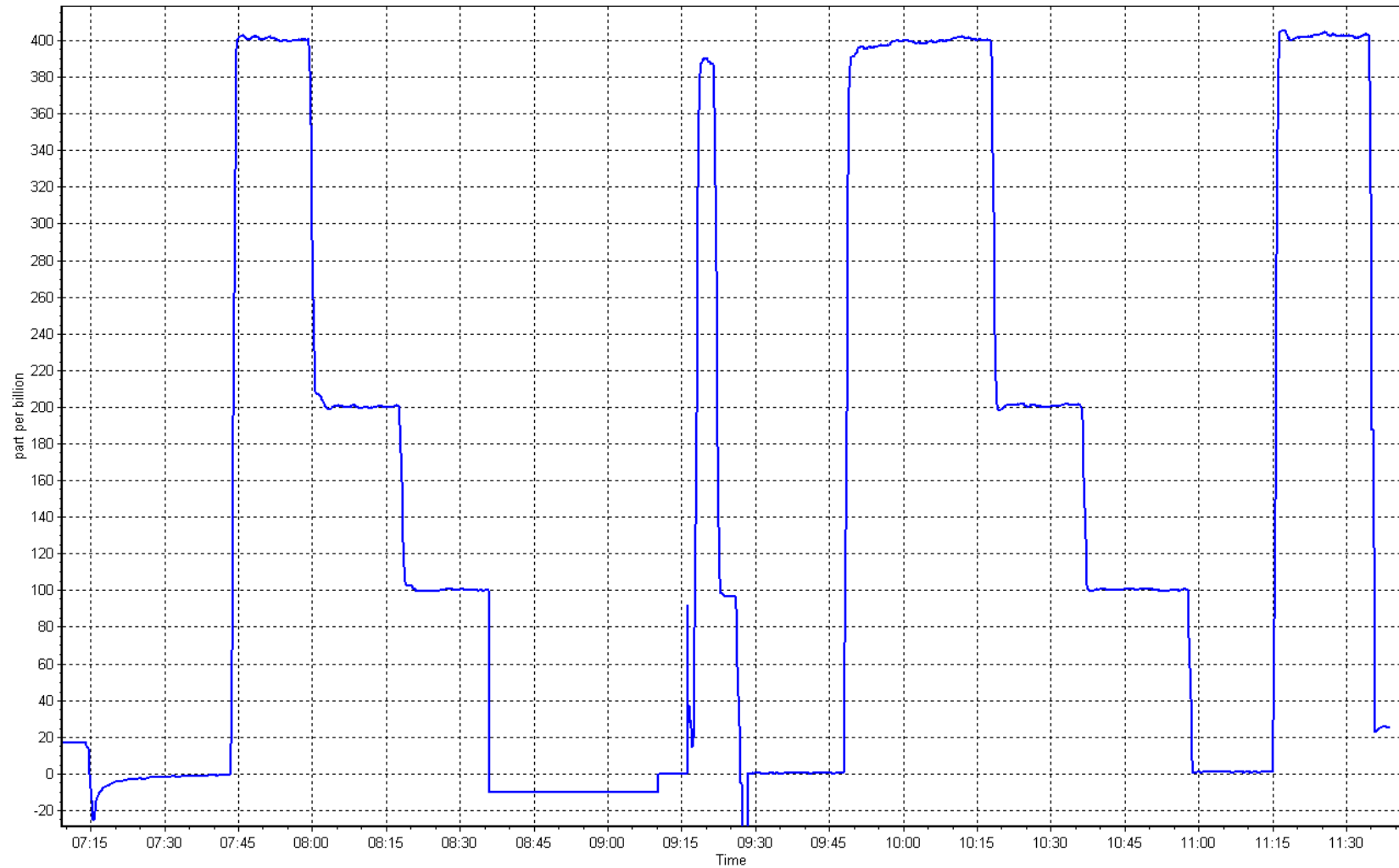
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999993	≥0.995
400.0	400.6	0.9985	Slope	1.000943	0.90 - 1.10
200.0	201.3	0.9935	Intercept	0.460000	+/- 5
100.0	100.2	0.9980			



O₃ Calibration Plot

Date: August 5, 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: August 25, 2026 Last Cal Date: July 27, 2026
Start time (MST): 8:23 End time (MST): 9:23

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)	18.40	18.90	18.40	☐	+/- 2 °C
P (mmHg)	720.00	721.6	720.00	☐	+/- 10 mmHg
Flow (LPM)	5.00	5.00	5.00	☐	+/- 0.25 LPM
PW% (pump)	35	----	35	☐	>80%
Zero Verification	PM w/o HEPA:	19.90	PM w/ HEPA:	0.00	<0.2 ug/m3

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

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

Quarterly Calibration Test

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

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	10.1	11.0	11	☐	+/- 0.5

Date Optical Chamber Cleaned: August 25, 2026
Date Disposable Filter Changed: August 25, 2026

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

Annual Maintenance

Date Sample Tube Cleaned: August 25, 2026
Date RH/T Sensor Cleaned: August 25, 2026

Notes: Leak check, PMT, Flow checked before and after optical chamber cleaning.

Calibration by: Melissa Lemay



Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Anzac Station number: AMS 14
Calibration Date: August 31, 2026 Last Cal Date: August 25, 2026
Start time (MST): 8:00 End time (MST): 9:14

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)	15.00	15.20	15.00	☐	+/- 2 °C
P (mmHg)	710.20	711.4	710.20	☐	+/- 10 mmHg
Flow (LPM)	5.00	4.95	5.00	☐	+/- 0.25 LPM
PW% (pump)	35	----	35	☐	>80%
Zero Verification	PM w/o HEPA:	3.70	PM w/ HEPA:	0.00	<0.2 ug/m3

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

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

Quarterly Calibration Test

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

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	10	10.0	10	☐	+/- 0.5

Date Optical Chamber Cleaned: August 25, 2026
Date Disposable Filter Changed: August 25, 2026

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

Annual Maintenance

Date Sample Tube Cleaned: August 25, 2026
Date RH/T Sensor Cleaned: August 25, 2026

Notes: Removal Calibration as optical chamber screw is stripped and unable to take optical chamber a part to clean.

Calibration by: Melissa Lemay



Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Anzac Station number: AMS 14
Calibration Date: August 31, 2026 Last Cal Date: August 25, 2026
Start time (MST): 8:00 End time (MST): 9:14

Analyzer Make: AP T640 S/N: 1546
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)	16.30	15.80	16.30	☐	+/- 2 °C
P (mmHg)	706.30	711.4	706.30	☐	+/- 10 mmHg
Flow (LPM)	5.02	5.06	5.02	☐	+/- 0.25 LPM
PW% (pump)	37	----	37	☐	>80%
Zero Verification	PM w/o HEPA:	3.80	PM w/ HEPA:	0.00	<0.2 ug/m3

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

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

Quarterly Calibration Test

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

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

Date Optical Chamber Cleaned: August 25, 2026
Date Disposable Filter Changed: August 25, 2026

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

Annual Maintenance

Date Sample Tube Cleaned: August 25, 2026
Date RH/T Sensor Cleaned: August 25, 2026

Notes: Install calibration.

Calibration by: Melissa Lemay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS17
WAPASU
AUGUST 2026**

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Wapasu Station number: AMS17
Calibration Date: August 11, 2026 Last Cal Date: July 3, 2026
Start time (MST): 9:45 End time (MST): 13:10
Reason: Routine

Calibration Standards

Cal Gas Concentration: 50.12 ppm Cal Gas Exp Date: April 9, 2033
Cal Gas Cylinder #: CC422255
Removed Cal Gas Conc: 50.12 ppm Rem Gas Exp Date:
Removed Gas Cyl #: N/A Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 2448
Zero Air Gen Model: Teledyne API 701H Serial Number: 1238

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1218153459
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.002778	0.998606	Backgd or Offset:	14.7	14.7
Calibration intercept:	-0.795861	-0.335181	Coeff or Slope:	1.088	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	0.3	----
As found High point	4920	79.8	799.9	805.0	0.994
As found Mid point	4960	39.9	400.0	403.7	0.991
As found Low point	4980	20.0	200.5	202.3	0.992
New cylinder response					
Baseline Corr As found:	804.7	Previous response	801.4	*% change	0.4%
Baseline Corr 2nd AF pt:	403.4	AF Slope:	1.005952	AF Intercept:	0.643169
Baseline Corr 3rd AF pt:	202.0	AF Correlation:	0.999998	* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4920	79.8	799.9	798.8	1.001
Mid point	4960	39.9	400.0	398.7	1.003
Low point	4980	20.0	200.5	199.4	1.005
As left zero	5000	0.0	0.0	0.4	----
As left span	4920	79.8	799.9	798.6	1.002
Average Correction Factor:					1.003

Notes: Sample inlet filter and external pump was changed after multipoint as founds. No adjustment made.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

SO₂ Calibration Summary

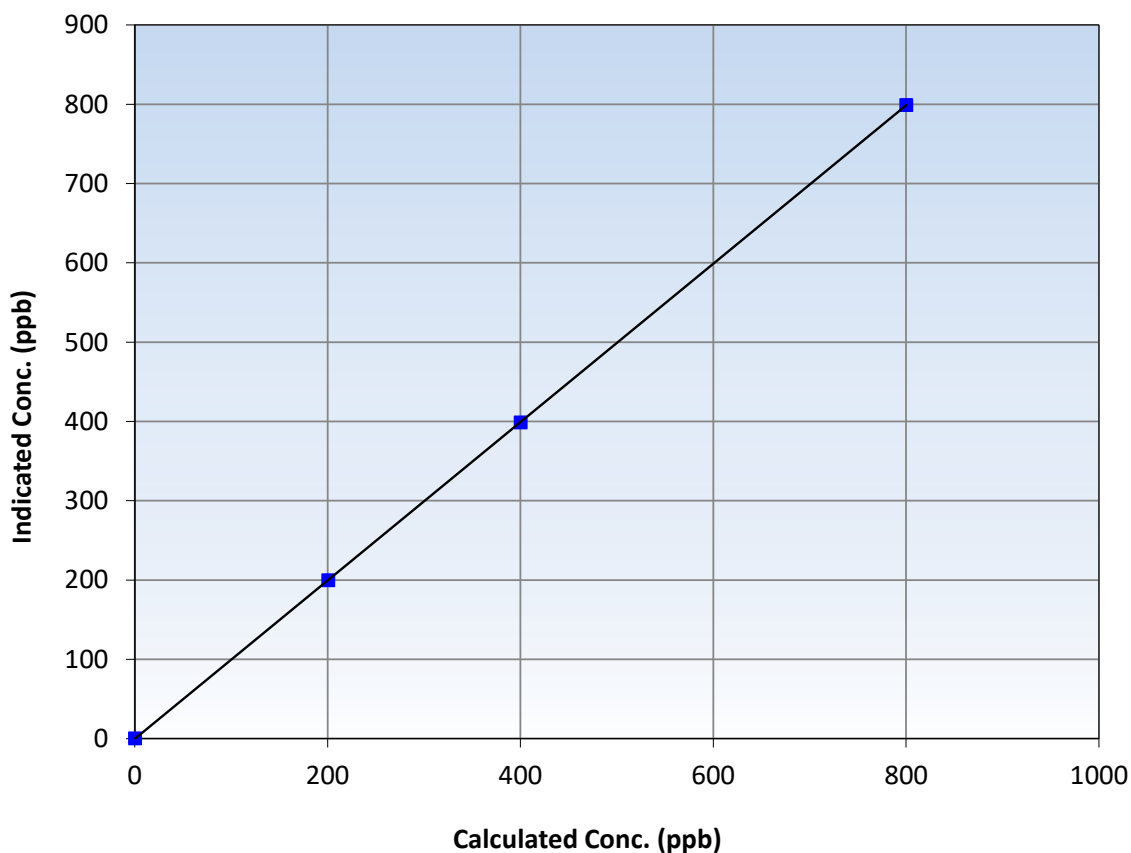
Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 3, 2026
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	9:45	End Time (MST):	13:10
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	0.2	----	Correlation Coefficient	0.999998	≥0.995
799.9	798.8	1.0014	Slope	0.998606	0.90 - 1.10
400.0	398.7	1.0032	Intercept	-0.335181	+/-30
200.5	199.4	1.0054			

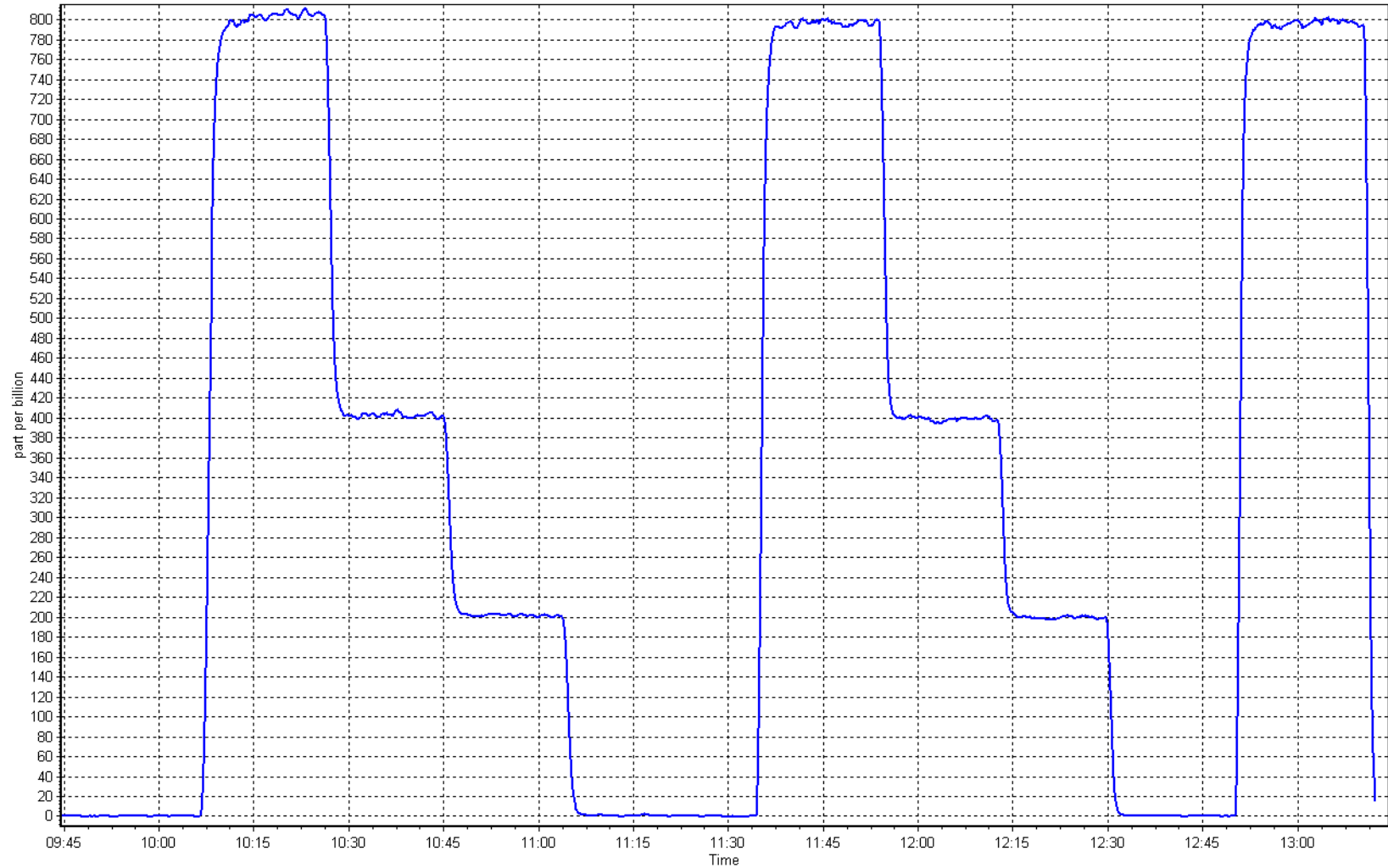
SO₂ Calibration Curve



SO2 Calibration Plot

Date: August 11, 2026

Location: Wapasu





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Wapasu
Calibration Date: August 17, 2026
Start time (MST): 10:39
Reason: Routine

Station number: AMS 17
Last Cal Date: July 30, 2026
End time (MST): 15:11

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:	0.996639	1.003209	Backgd or Offset:	2.55
Calibration intercept:	0.180281	0.100255	Coeff or Slope:	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	0.2	----
As found High point	4916	83.9	80.0	80.3	0.999
As found Mid point	4958	41.9	40.0	40.3	0.997
As found Low point	4979	21.0	20.0	20.3	0.997
New cylinder response					
Baseline Corr As found:	80.1	Prev response:	79.95	*% change:	0.2%
Baseline Corr 2nd AF pt:	40.1	AF Slope:	1.000640	AF Intercept:	0.240186
Baseline Corr 3rd AF pt:	20.1	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	4916	83.9	80.0	80.3	0.997
Mid point	4958	41.9	40.0	40.4	0.989
Low point	4979	21.0	20.0	20.2	0.992
As left zero	5000	0.0	0.0	0.0	----
As left span	4916	83.9	80.0	80.0	1.001
SO2 Scrubber Check	4920	79.8	798.0	-0.1	----
Date of last scrubber change:	N/A		Ave Corr Factor		
Date of last converter efficiency test:	N/A		0.993		

Notes: Sample inlet filter and DMC board was changed after multipoint as founds. SO2 scrubber check done and passed. Adjusted zero and span.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

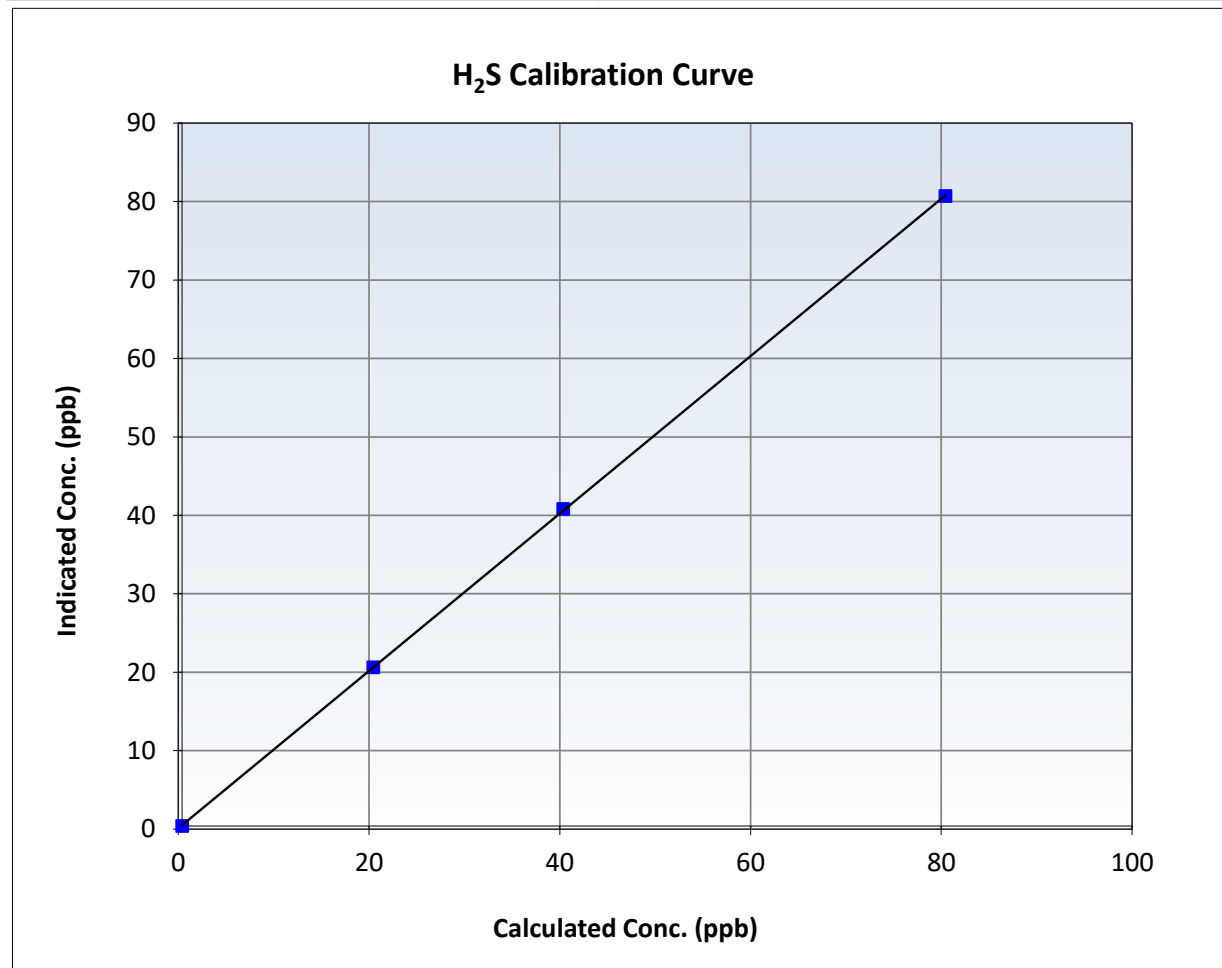
H₂S Calibration Summary

Station Information

Calibration Date:	August 17, 2026	Previous Calibration:	July 30, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	10:39	End Time (MST):	15:11
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	0.999983	≥ 0.995
80.0	80.3	0.9968	Slope	1.003209	$0.90 - 1.10$
40.0	40.4	0.9894	Intercept	0.100255	± 3
20.0	20.2	0.9918			



H₂S Calibration Plot

Date: August 17, 2026

Location: Wapasu





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Wapasu
Calibration Date: August 11, 2026
Start time (MST): 9:45
Reason: Routine

Station number: AMS17
Last Cal Date: July 3, 2026
End time (MST): 13:10

Calibration Standards

Gas Cert Reference: CC422255
CH4 Cal Gas Conc. 499.6 ppm
C3H8 Cal Gas Conc. 203.4 ppm
Removed Gas Cert: n/a
Removed CH4 Conc. 499.6 ppm
Removed C3H8 Conc. 203.4 ppm
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API 701H

Cal Gas Expiry Date: April 9, 2033
CH4 Equiv Conc. 1059.0 ppm
Removed Gas Expiry: 1059.0 ppm
CH4 Equiv Conc. 1059.0 ppm
Diff between cyl:
Serial Number: 2448
Serial Number: 1238

Analyzer Information

Analyzer make: Thermo 51i-LT
Analyzer Range: 0 - 20 ppm

Analyzer serial #: 1218153352

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.997641	0.994185	Background:	2.770	2.770
Calibration intercept:	0.044472	0.099290	Coefficient:	4.323	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)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.08	----
As found High point	4920	79.8	16.90	16.88	1.006
As found Mid point	4960	39.9	8.45	8.48	1.005
As found Low point	4980	20.0	4.24	4.35	0.990
New cylinder response					
Baseline Corr As found:	16.80	Previous response	16.91	*% change	-0.6%
Baseline Corr 2nd AF pt:	8.41	AF Slope:	0.992761	AF Intercept:	0.103073
Baseline Corr 3rd AF pt:	4.28	AF Correlation:	0.999980	* = > +/-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	0.12	----
High point	4920	79.8	16.90	16.93	0.999
Mid point	4960	39.9	8.45	8.45	1.000
Low point	4980	20.0	4.24	4.31	0.983
As left zero	5000	0.0	0.00	0.15	----
As left span	4920	79.8	16.90	16.95	0.997
Average Correction Factor					0.994

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

THC Calibration Summary

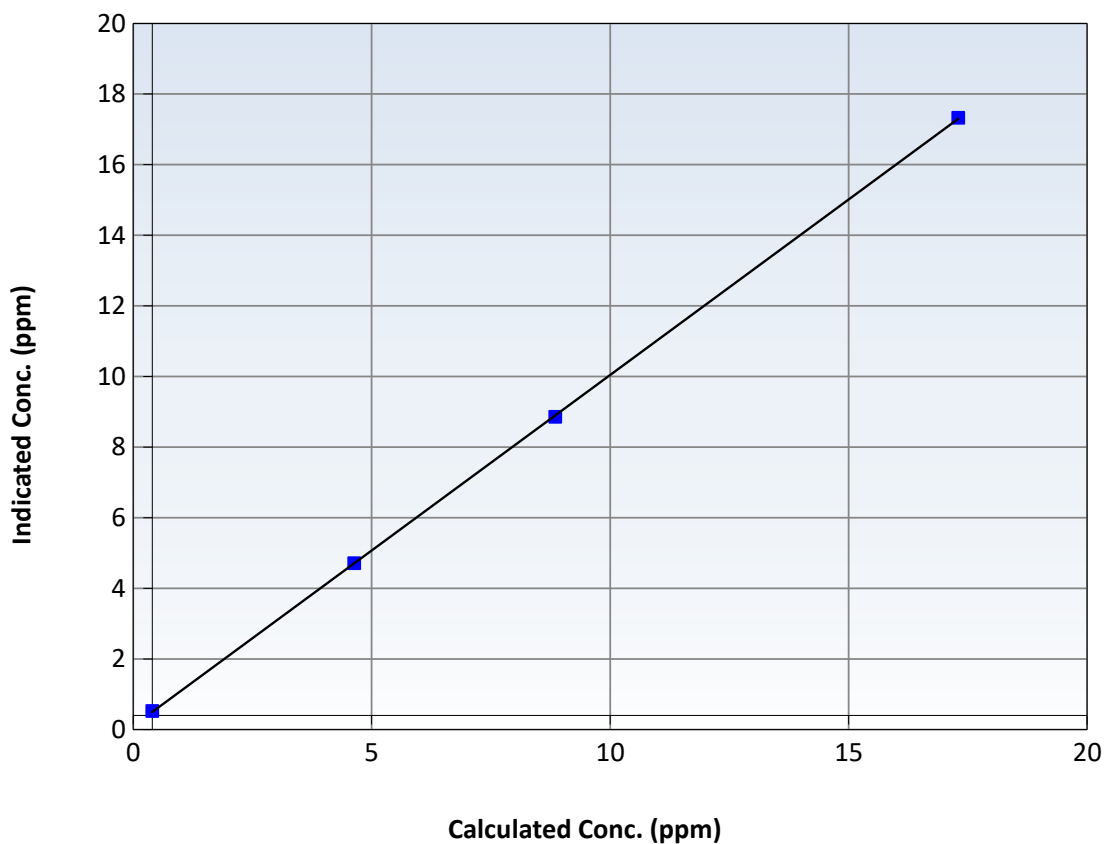
Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 3, 2026
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	9:45	End Time (MST):	13:10
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	0.12	----	Correlation Coefficient	0.999979	≥ 0.995
16.90	16.93	0.9986	Slope	0.994185	$0.90 - 1.10$
8.45	8.45	0.9996	Intercept	0.099290	± 1.5
4.24	4.31	0.9828			

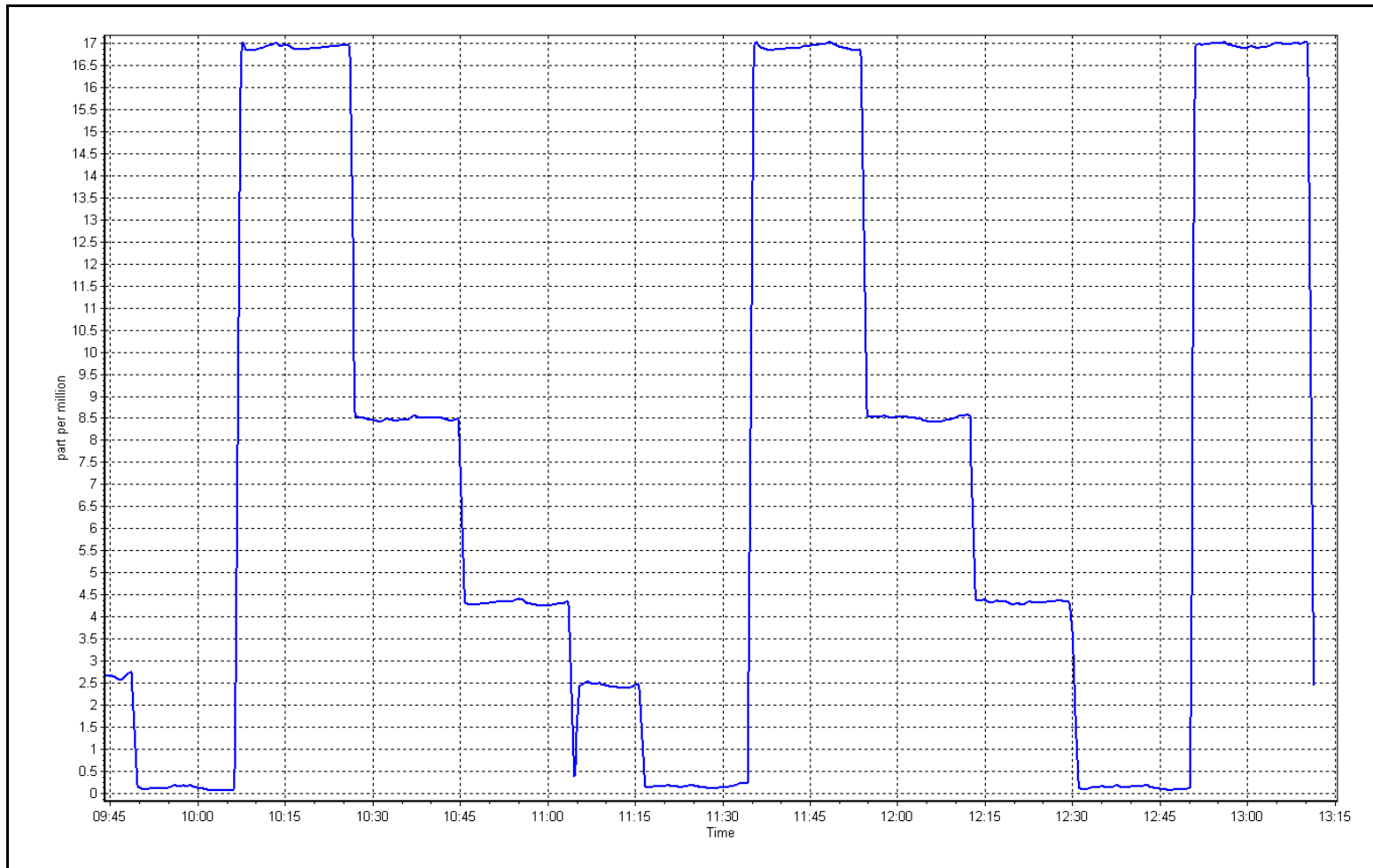
THC Calibration Curve



THC Calibration Plot

Date: August 11, 2026

Location: Wapasu





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Wapasu
Station number: AMS 17
Calibration Date: August 20, 2026
Last Cal Date: July 17, 2026
Start time (MST): 9:42
End time (MST): 14:00
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 NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	-0.1	0.2	-0.3	----	----
AF High point	4934	65.6	804.3	800.4	3.9	801.5	795.0	6.4	1.0034	1.0070
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 805.3 ppb	NO = 800.4 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.5%	
Baseline Corr 1st pt	NO _x = 801.6 ppb	NO = 794.8 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 Scientific 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1218153460

Instrument Settings

	<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.048	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:	4.0	4.0
Reaction cell Press:	222.0	223.5

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.998723	0.996564
NO _x Cal Offset:	1.996143	2.056113
NO Cal Slope:	0.998995	0.995896
NO Cal Offset:	0.796008	0.955962
NO ₂ Cal Slope:	1.002689	1.002669
NO ₂ Cal Offset:	-0.061367	0.041081

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	0.4	-0.3	----	----
High point	4934	65.6	804.3	800.4	3.9	802.6	797.7	4.9	1.0021	1.0034
Mid point	4967	32.8	402.1	400.2	2.0	403.8	400.0	3.8	0.9959	1.0004
Low point	4984	16.4	201.0	200.1	1.0	204.5	200.6	3.9	0.9831	0.9973
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.3	-0.3	----	----
As left span	4934	65.6	804.3	391.9	412.4	804.0	391.9	412.0	1.0004	1.0000
Average Correction Factor									0.9937	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	-0.3	----	----
High GPT point	797.1	390.0	411.0	412.0	0.9977	100.2%
Mid GPT point	797.1	595.6	205.4	206.2	0.9963	100.4%
Low GPT point	797.1	695.7	105.3	106.0	0.9937	100.6%
Average Correction Factor					0.9959	100.4%

Notes:

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

Calibration Performed By:

Jan Castro



Wood Buffalo Environmental Association

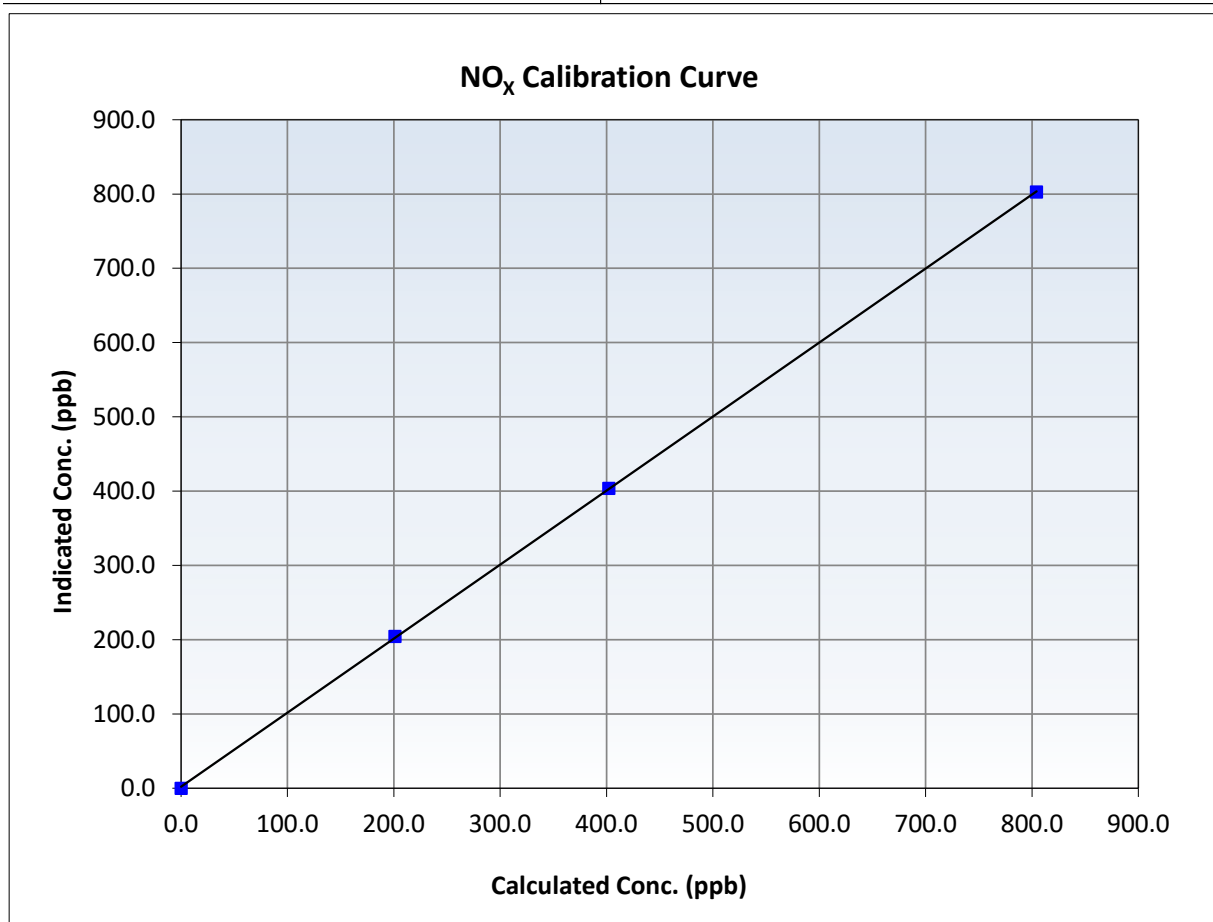
NO_x Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 17, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	9:42	End Time (MST):	14:00
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	0.0	----	Correlation Coefficient	0.999970	≥0.995
804.3	802.6	1.0021	Slope	0.996564	0.90 - 1.10
402.1	403.8	0.9959	Intercept	2.056113	+/-20
201.0	204.5	0.9831			





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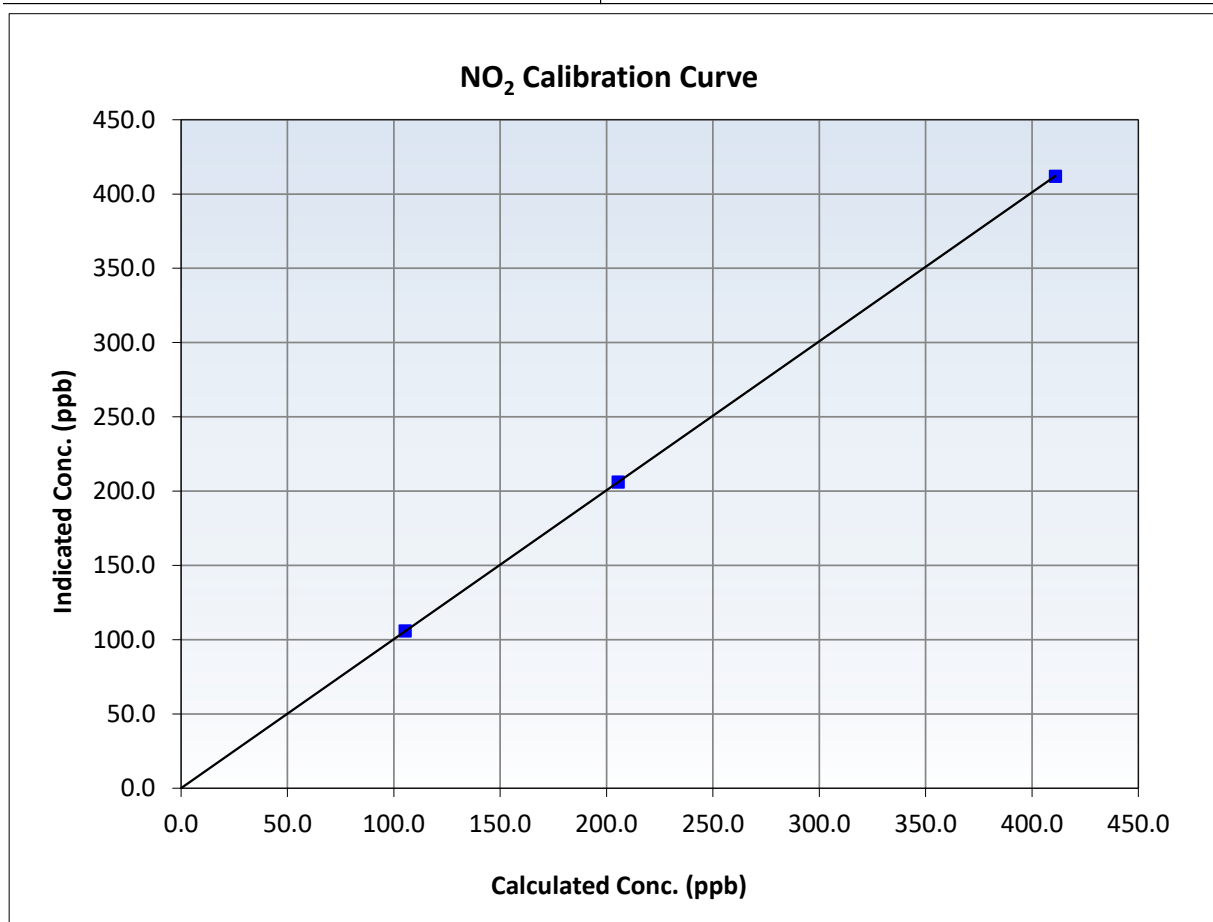
NO₂ Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 17, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	9:42	End Time (MST):	14:00
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	0.999997	≥0.995
411.0	412.0	0.9977	Slope	1.002669	0.90 - 1.10
205.4	206.2	0.9963	Intercept	0.041081	+/-20
105.3	106.0	0.9937			





Wood Buffalo Environmental Association

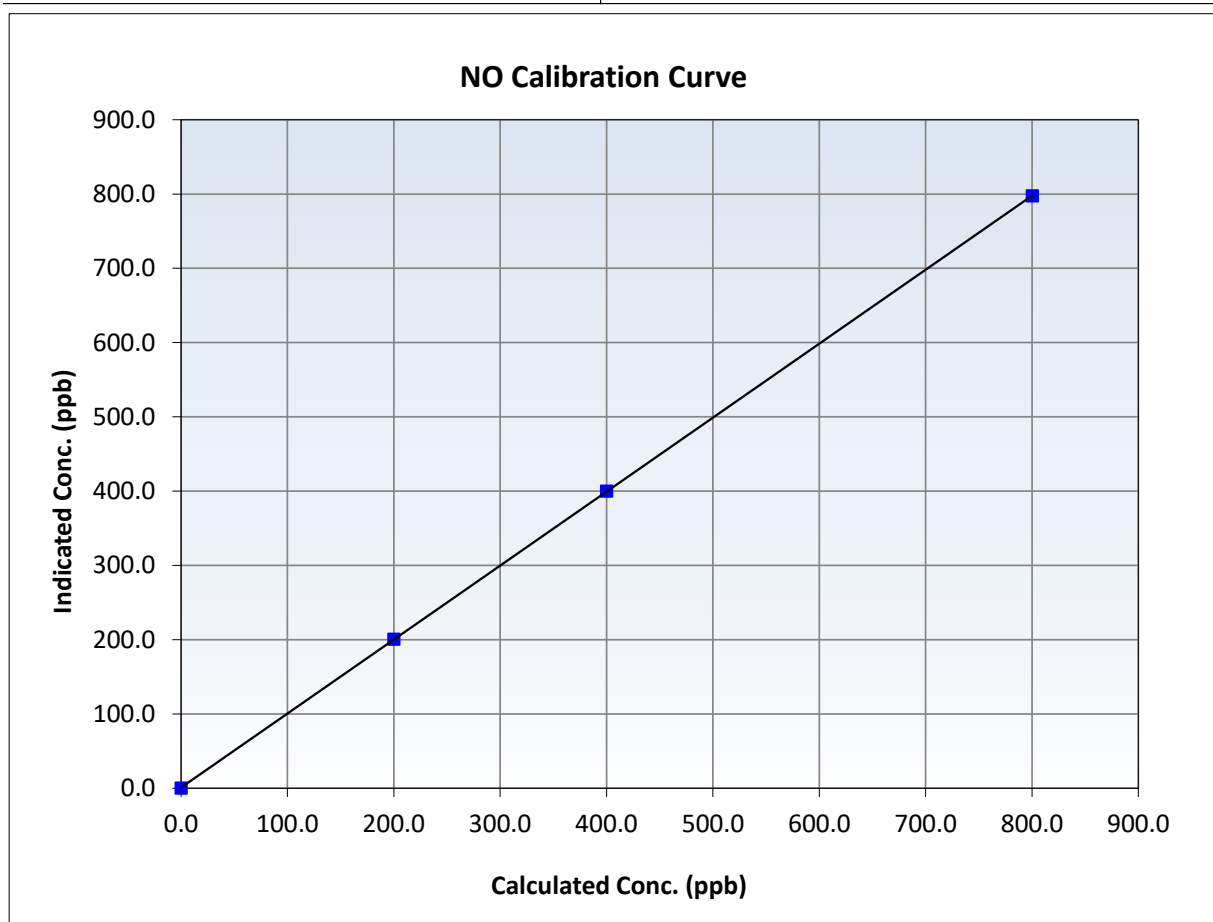
NO Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 17, 2026
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	9:42	End Time (MST):	14:00
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1218153460

Calibration Data

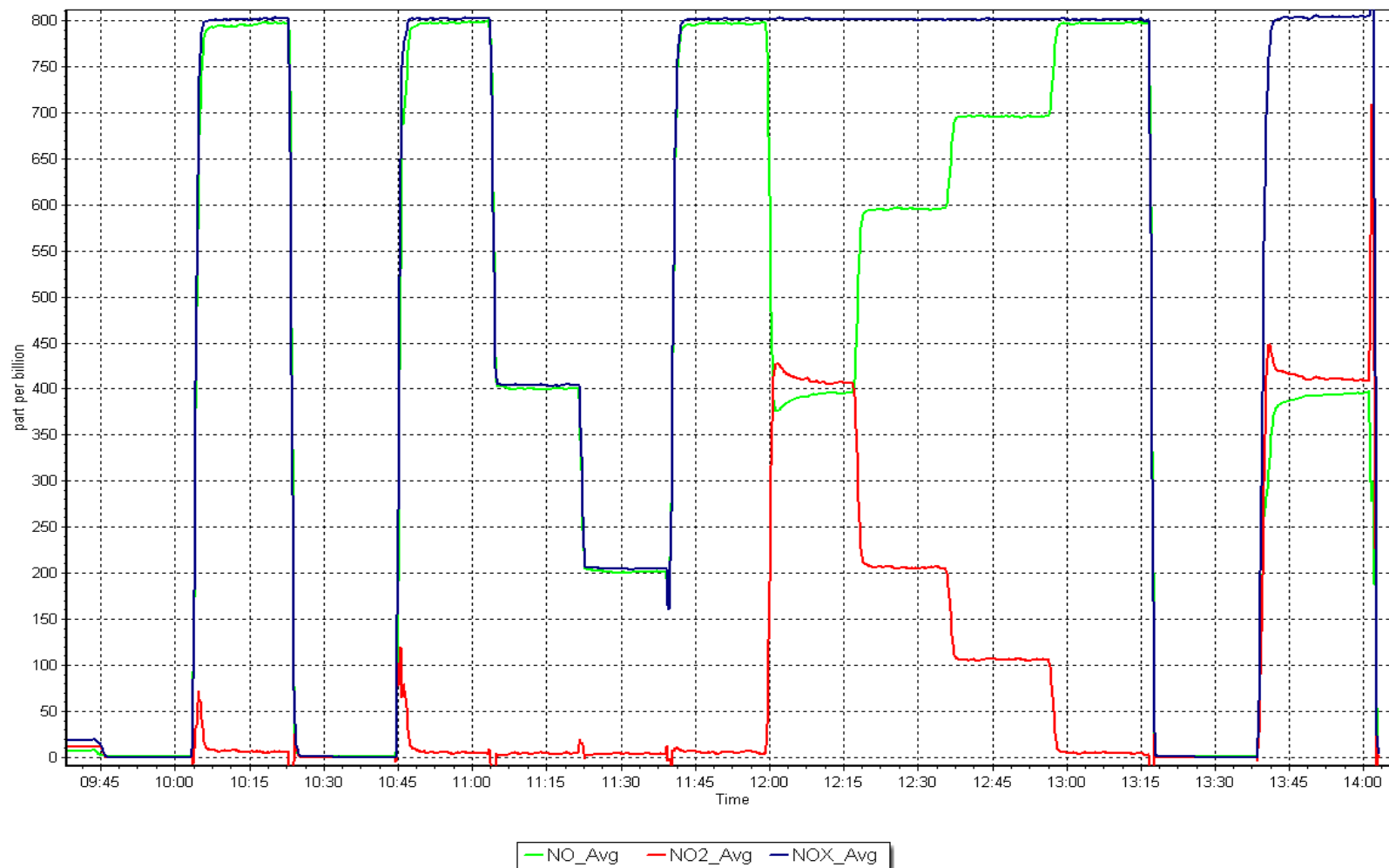
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.4	----	Correlation Coefficient	0.999998	≥ 0.995
800.4	797.7	1.0034	Slope	0.995896	$0.90 - 1.10$
400.2	400.0	1.0004	Intercept	0.955962	± 20
200.1	200.6	0.9973			



NO_x Calibration Plot

Date: August 20, 2026

Location: Wapasu





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Wapasu
Calibration Date: August 7, 2026
Start time (MST): 10:09
Reason: Routine

Station number: AMS17
Last Cal Date: July 6, 2026
End time (MST): 13:20

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:	1.005829	0.997571	Backgd or Offset:	-0.4	-0.6
Calibration intercept:	-0.020000	0.400000	Coeff or Slope:	1.013	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	200.0	0.0	-0.4	----
As found High point	5000	1001.8	400.0	398.5	1.003
As found Mid point					
As found Low point					
Baseline Corr As found:	398.9	Previous response	402.3	*% change	-0.9%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O₃ Calibration Data

Set Point	Total air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	200.0	0.0	0.2	----
High point	5000	1005.7	400.0	399.1	1.002
Mid point	5000	850.6	200.0	200.7	0.997
Low point	5000	744.2	100.0	99.9	1.001
As left zero	5000	800.0	0.0	0.3	----
As left span	5000	1002.8	400.0	405.4	0.987
Average Correction Factor					1.000

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

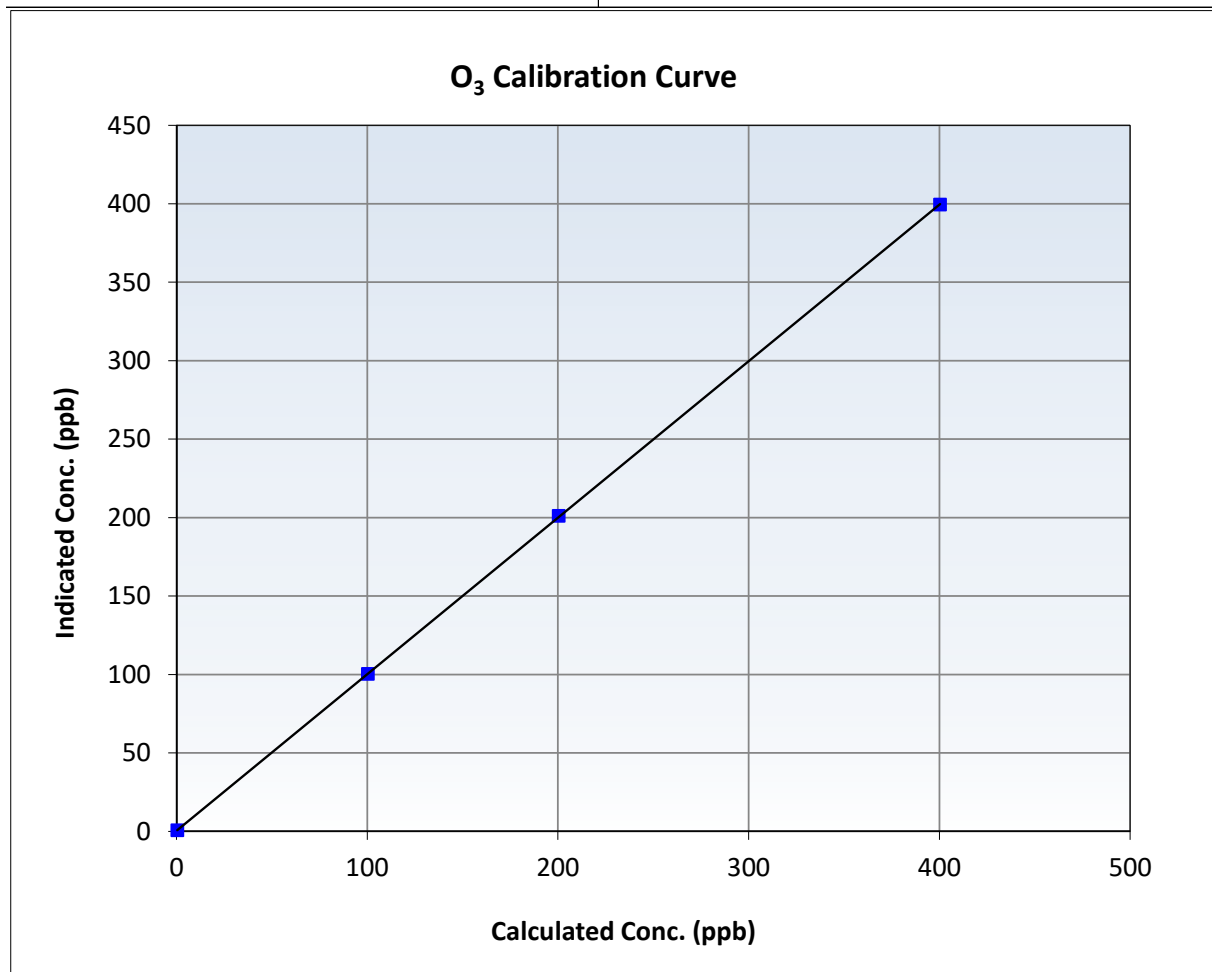
O₃ Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 6, 2026
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	10:09	End Time (MST):	13:20
Analyzer make:	Thermo Scientific 49i	Analyzer serial #:	1501663734

Calibration Data

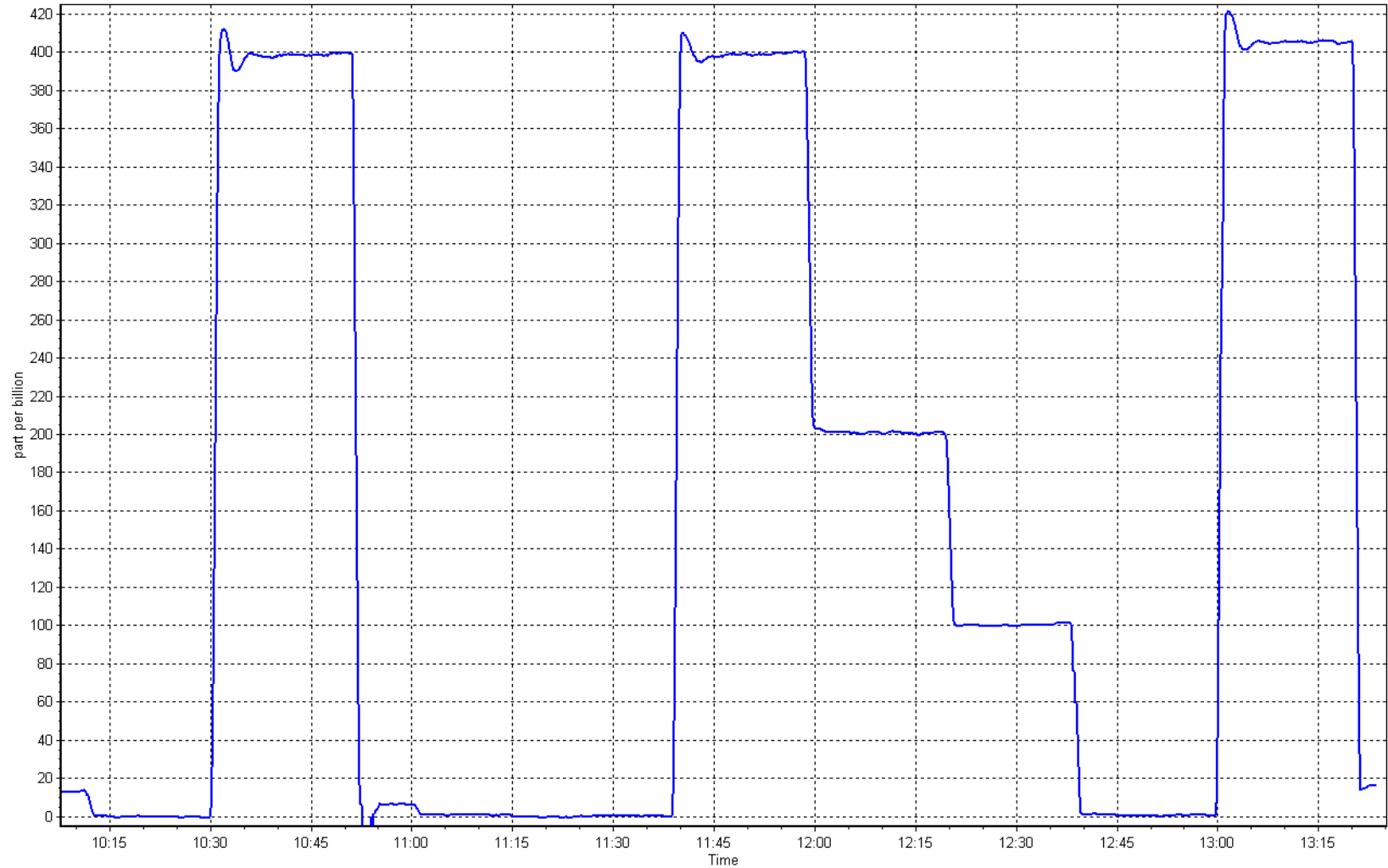
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999990	≥0.995
400.0	399.1	1.0023	Slope	0.997571	0.90 - 1.10
200.0	200.7	0.9965	Intercept	0.400000	+/- 5
100.0	99.9	1.0010			



O₃ Calibration Plot

Date: August 7, 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: August 17, 2026 Last Cal Date: July 30, 2026
Start time (MST): 12:11 End time (MST): 13:02

Analyzer Make: Teledyne API T640 S/N: 1183
Particulate Fraction: PM2.5

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

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	17.90	17.87	17.90	☐	+/- 2 °C
P (mmHg)	714.30	717.27	714.30	☐	+/- 10 mmHg
Flow (LPM)	5.00	4.81	5.00	☐	+/- 0.25 LPM
PW% (pump)	55	----	55	☐	>80%
Zero Verification	PM w/o HEPA: 23.00		PM w/ HEPA: 0.00		<0.2 ug/m3

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

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

Quarterly Calibration Test

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

Parameter	As found	Post maintenance	As left	Adjusted	(Limits)
PMT Peak Test	10.00	9.90	10.90	☒	+/- 0.5

Date Optical Chamber Cleaned: August 17, 2026
Date Disposable Filter Changed: August 17, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0.00 <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. Adjusted PMT. Leak check passed.

Calibration by: Jan Castro



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Wapasu	Station Number:	AMS 17
Calibration Date:	August 20, 2026	Prev Cal Date:	November 18, 2025
Start Time (MST):	11:09	End Time (MST):	13:15
Tower Height (m):	10.0	Reason:	Routine

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	N14664
WS Calibrator:	MetOne 053	Serial Number:	CA 05230

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.3	0.7%
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)	0.999968	0.999998	≥ 0.9995
Calculated slope	1.000443	0.999451	$0.98 - 1.02$
Calculated intercept	0.028279	-0.052868	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	P19942
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):	13:27	Calc Declination*:	12.82 Degrees
WD Calibrator:	Met One 040	* - calculated declination as per NOAA website	

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	10.5	0.1%
90	89.6	-0.1%
180	179.6	-0.1%
270	269.5	-0.1%
350	349.4	-0.2%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999998	0.999998	≥ 0.9995
Calculated slope	0.996562	1.002652	$0.97 - 1.03$
Calculated intercept	0.519161	-0.196621	± 5

Notes: No adjustment needed. WS/WD bearings inspected and good.

Calibration Performed By: Jan Castro



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS18 STONY MOUNTAIN AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Stony Mountain
Calibration Date: August 13, 2026
Start time (MST): 11:28
Reason: Routine

Station number: AMS 18
Last Cal Date: July 7, 2026
End time (MST): 14:56

Calibration Standards

Cal Gas Concentration: 51.22 ppm
Cal Gas Cylinder #: CC417455
Removed Cal Gas Conc: 51.22 ppm
Removed Gas Cyl #: CC417455
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API 701

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 2658
Serial Number: 4890

Analyzer Information

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

Serial Number: JC1501301453

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.010696	1.011438	Backgd or Offset:	27.1	26.7
Calibration intercept:	-0.357919	-1.217646	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	-0.2	----
As found High point	4921	78.1	800.2	804.7	0.994
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	804.9	Previous response	808.4	*% 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	0.1	----
High point	4921	78.1	800.2	808.7	0.989
Mid point	4960	39.1	400.6	403.6	0.993
Low point	4981	19.5	199.7	199.3	1.002
As left zero	5000	0.0	0.0	0.2	----
As left span	4921	78.1	800.2	807.9	0.990
Average Correction Factor:					0.995

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

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

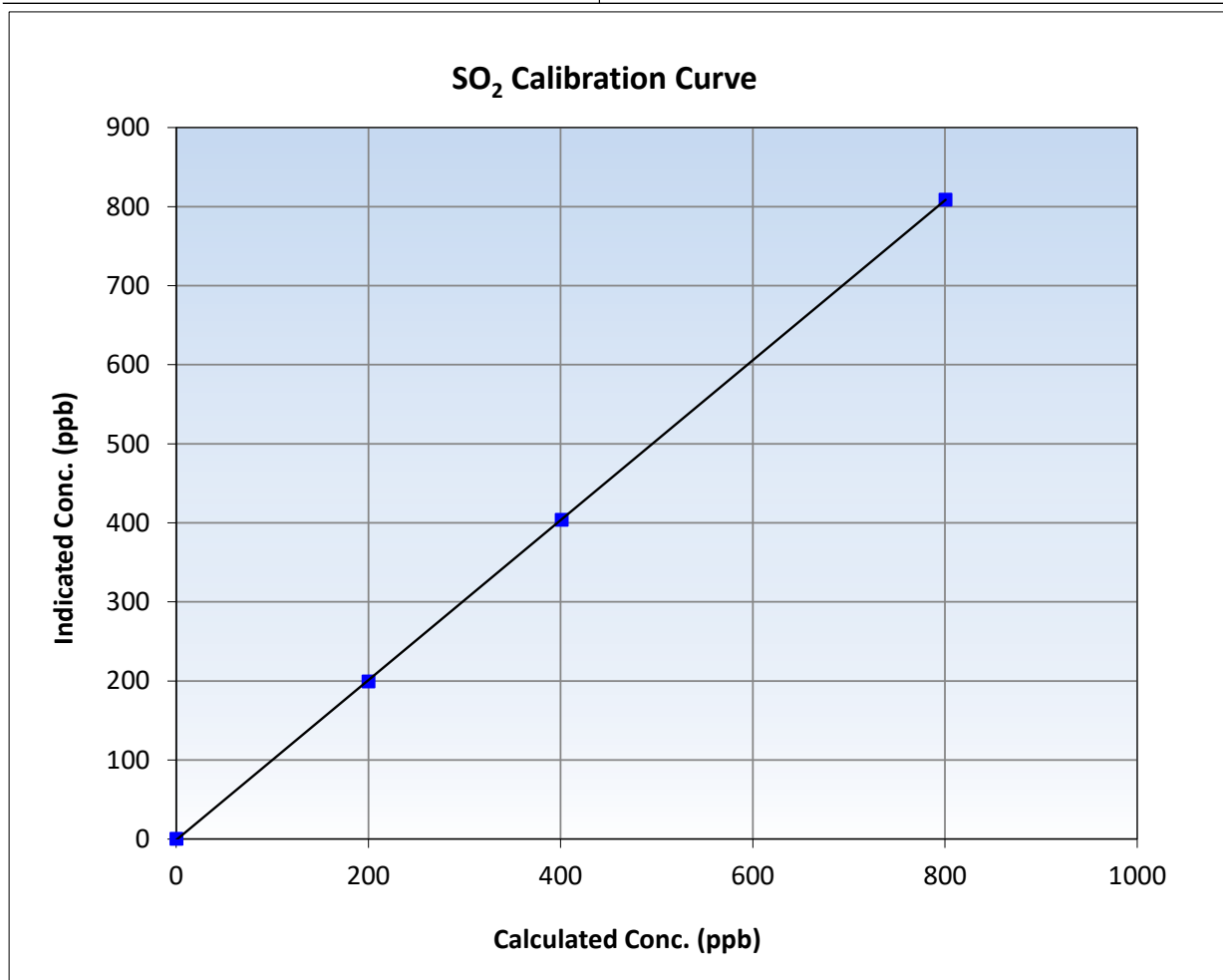
SO₂ Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	July 7, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:28	End Time (MST):	14:56
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1501301453

Calibration Data

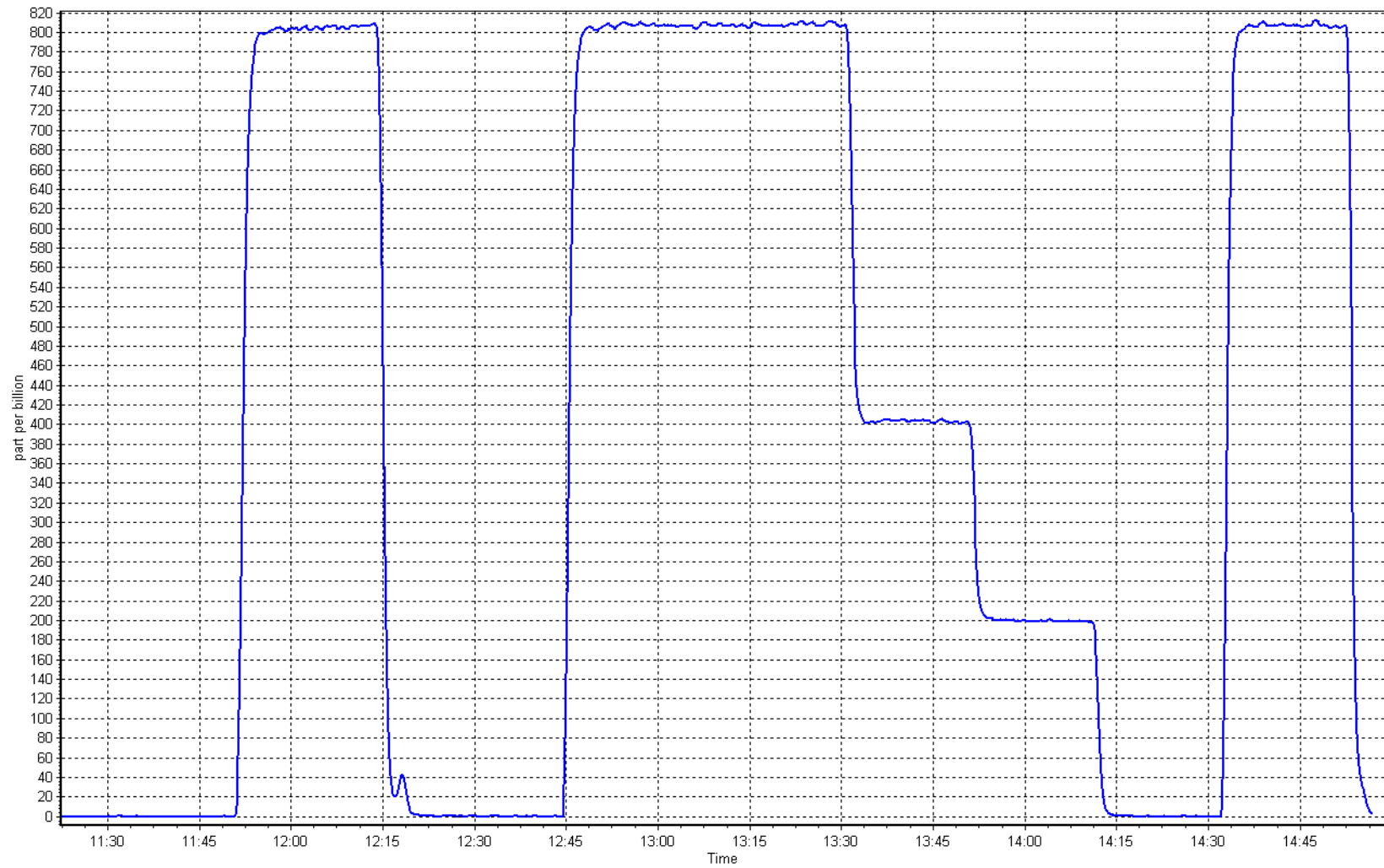
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999988	≥0.995
800.2	808.7	0.9895	Slope	1.011438	0.90 - 1.10
400.6	403.6	0.9926	Intercept	-1.217646	+/-30
199.7	199.3	1.0022			



SO2 Calibration Plot

Date: August 13, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Stony Mountain Station number: AMS18
Calibration Date: August 31, 2026 Last Cal Date: July 28, 2026
Start time (MST): 11:04 End time (MST): 15:15
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 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:	0.999656	0.994656	Backgd or Offset:	0.50
Calibration intercept:	-0.259043	-0.258947	Coeff or Slope:	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	5000	0.0	0.0	-0.1	----
As found High point	4917	82.3	80.0	80.2	0.996
As found Mid point	4958	41.2	40.1	40.2	0.994
As found Low point	4979	20.6	20.0	19.5	1.022
New cylinder response					
Baseline Corr As found:	80.3	Prev response:	79.72	*% change:	0.7%
Baseline Corr 2nd AF pt:	40.3	AF Slope:	1.005943	AF Intercept:	-0.279245
Baseline Corr 3rd AF pt:	19.6	AF Correlation:	0.999943	* = > +/-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	79.4	1.008
Mid point	4958	41.2	40.1	39.6	1.011
Low point	4979	20.6	20.0	19.3	1.038
As left zero	5000	0.0	0.0	0.1	----
As left span	4917	82.3	80.0	78.3	1.022
SO2 Scrubber Check	4923	77.1	771.0	0.0	----
Date of last scrubber change:	17-Dec-21		Ave Corr Factor		1.019
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



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TRS Calibration Summary

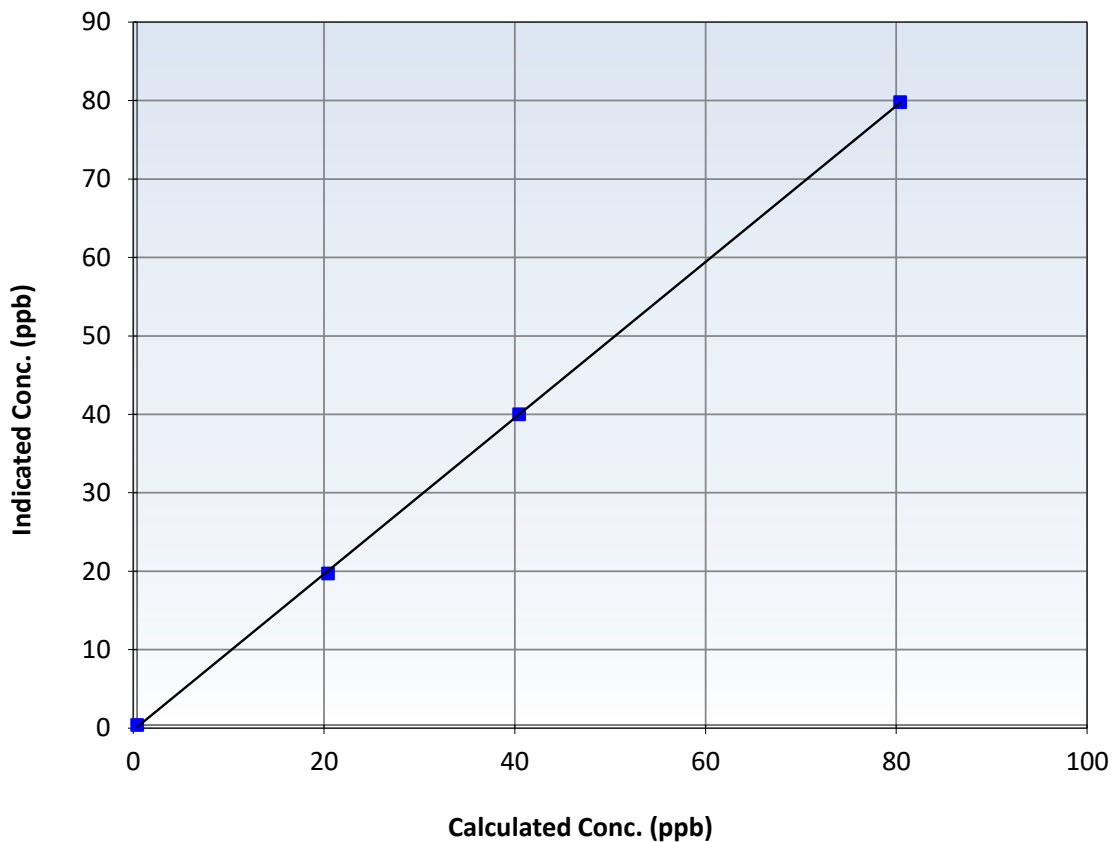
Station Information

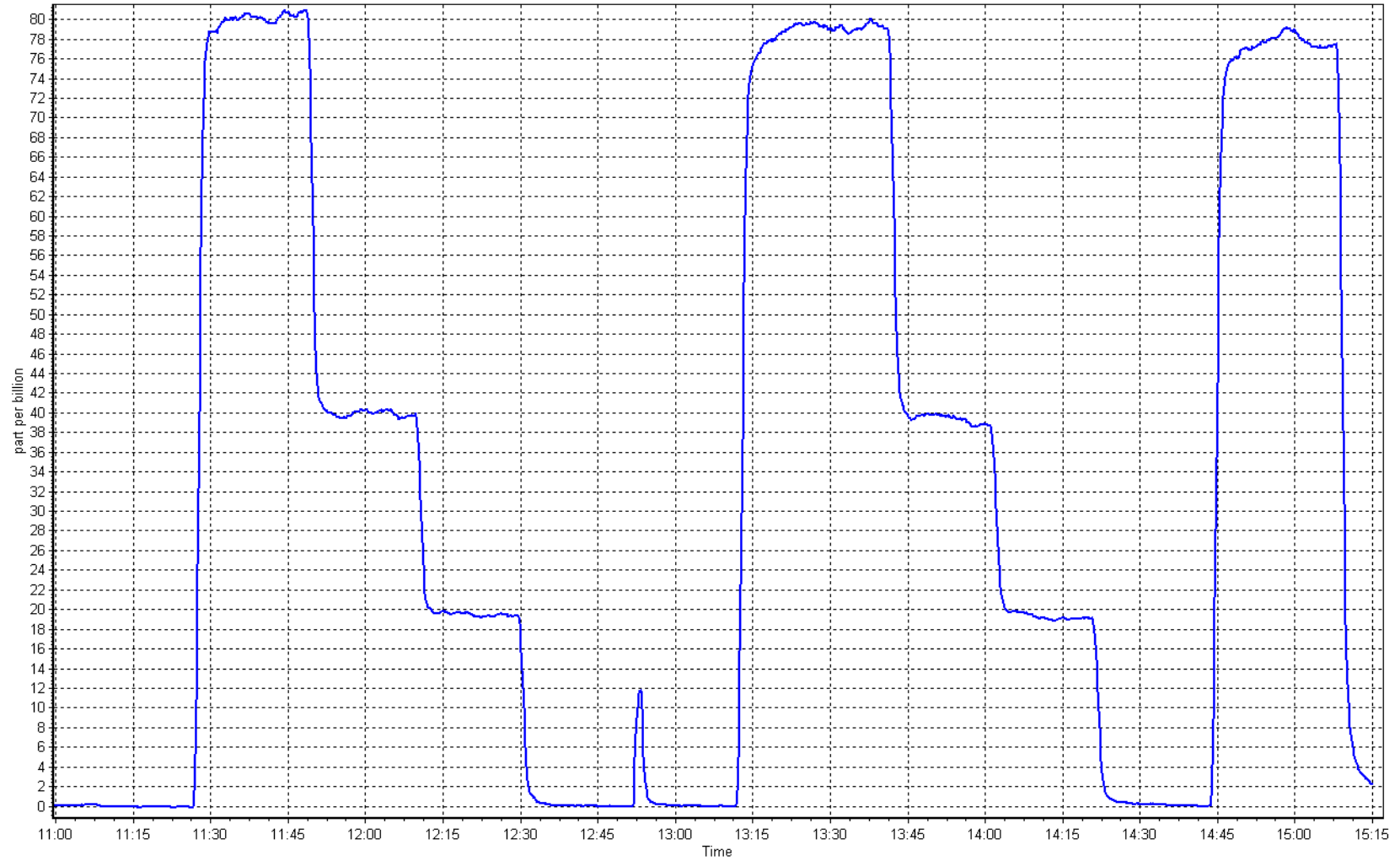
Calibration Date:	August 31, 2026	Previous Calibration:	July 28, 2026
Station Name:	Stony Mountain	Station Number:	AMS18
Start Time (MST):	11:04	End Time (MST):	15:15
Analyzer make:	Thermo 43IQ-TLE	Analyzer serial #:	12530443166

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	79.4	1.0076	Slope	0.994656		0.90 - 1.10
40.1	39.6	1.0114	Intercept	-0.258947		+/-3
20.0	19.3	1.0376				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Stony Mountain
Calibration Date: August 13, 2026
Start time (MST): 11:28
Reason: Routine

Station number: AMS 18
Last Cal Date: July 21, 2026
End time (MST): 14:56

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 (CH ₄):		Diff between cyl (THC):	
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	2.94E-04	NMHC SP Ratio:	4.60E-05	4.89E-05
CH ₄ Retention time:	14.8	14.8	NMHC Peak Area:	193991	182721
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	0.02	----
As found High point	4921	78.1	16.82	16.06	1.049
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.04	Prev response	16.61	*% change	-3.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.02	----
High point	4921	78.1	16.82	16.68	1.008
Mid point	4960	39.1	8.42	8.41	1.002
Low point	4981	19.5	4.20	4.20	1.001
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	16.82	16.77	1.003
Average Correction Factor					1.004

Notes: Changed sample inlet filter. Performed zero chromatogram and adjusted zero then span was 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	78.1	8.93	8.47	1.055
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.47	Prev response	8.83	*% change	-4.3%
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	4921	78.1	8.93	8.85	1.009
Mid point	4960	39.1	4.47	4.47	1.000
Low point	4981	19.5	2.23	2.23	0.998
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	8.93	8.89	1.005
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	0.02	Limit = 0.90-1.10
As found High point	4921	78.1	7.89	7.59	1.042
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.57	Prev response	7.78	*% 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	0.02	Limit = 0.95-1.05
High point	4921	78.1	7.89	7.83	1.008
Mid point	4960	39.1	3.95	3.94	1.004
Low point	4981	19.5	1.97	1.96	1.004
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	7.89	7.88	1.001
Average Correction Factor					1.005

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.988367	0.990419
THC Cal Offset:	-0.016149	0.036250
CH ₄ Cal Slope:	0.987285	0.990674
CH ₄ Cal Offset:	-0.011589	0.015213
NMHC Cal Slope:	0.989106	0.990296
NMHC Cal Offset:	-0.003961	0.018636

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

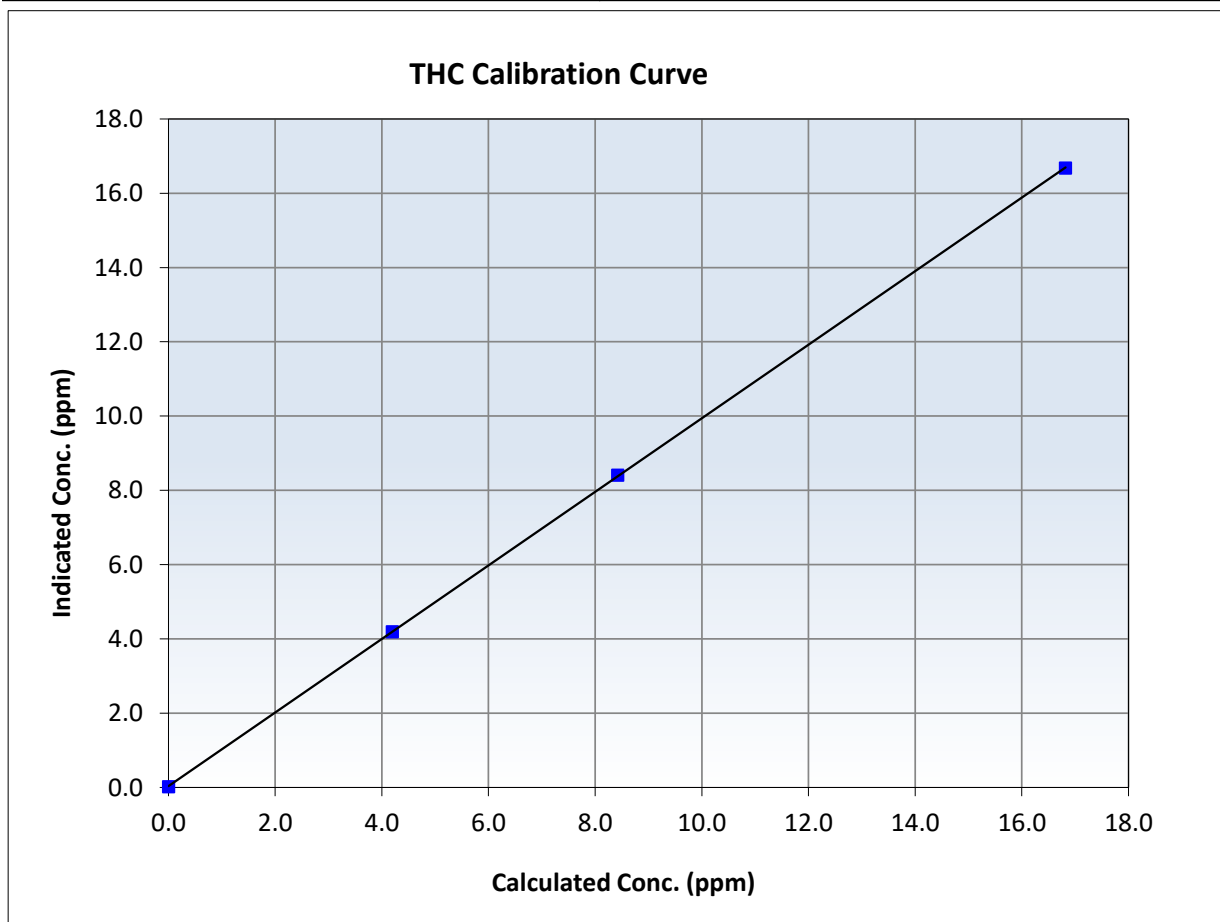
THC Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	July 21, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:28	End Time (MST):	14:56
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	0.02	----	Correlation Coefficient	0.999990	≥ 0.995
16.82	16.68	1.0084	Slope	0.990419	$0.90 - 1.10$
8.42	8.41	1.0015	Intercept	0.036250	± 0.5
4.20	4.20	1.0008			





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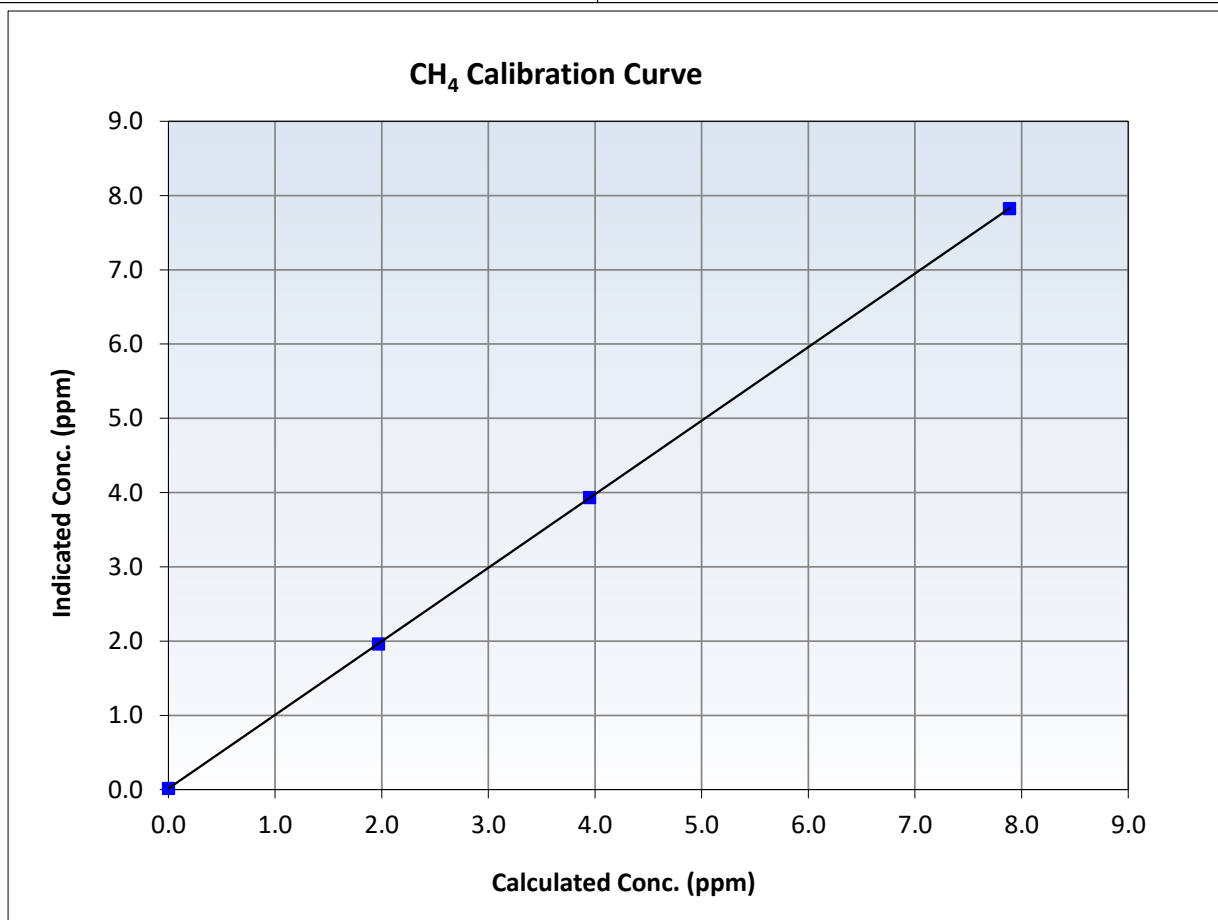
CH₄ Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	July 21, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:28	End Time (MST):	14:56
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	0.02	----	Correlation Coefficient	0.999997	<i>≥0.995</i>
7.89	7.83	1.0078	Slope	0.990674	<i>0.90 - 1.10</i>
3.95	3.94	1.0036	Intercept	0.015213	<i>+/-0.5</i>
1.97	1.96	1.0040			





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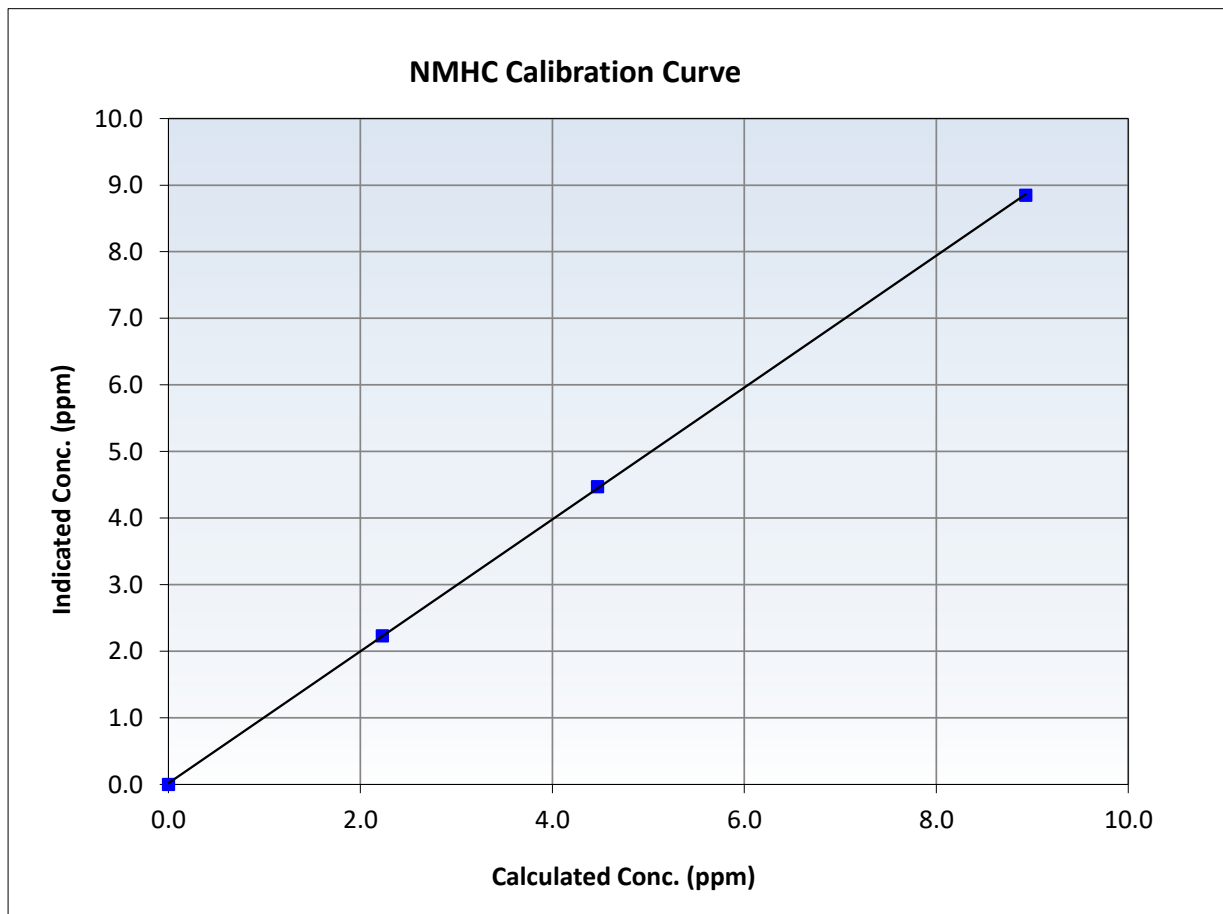
NMHC Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	July 21, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:28	End Time (MST):	14:56
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

Calibration Data

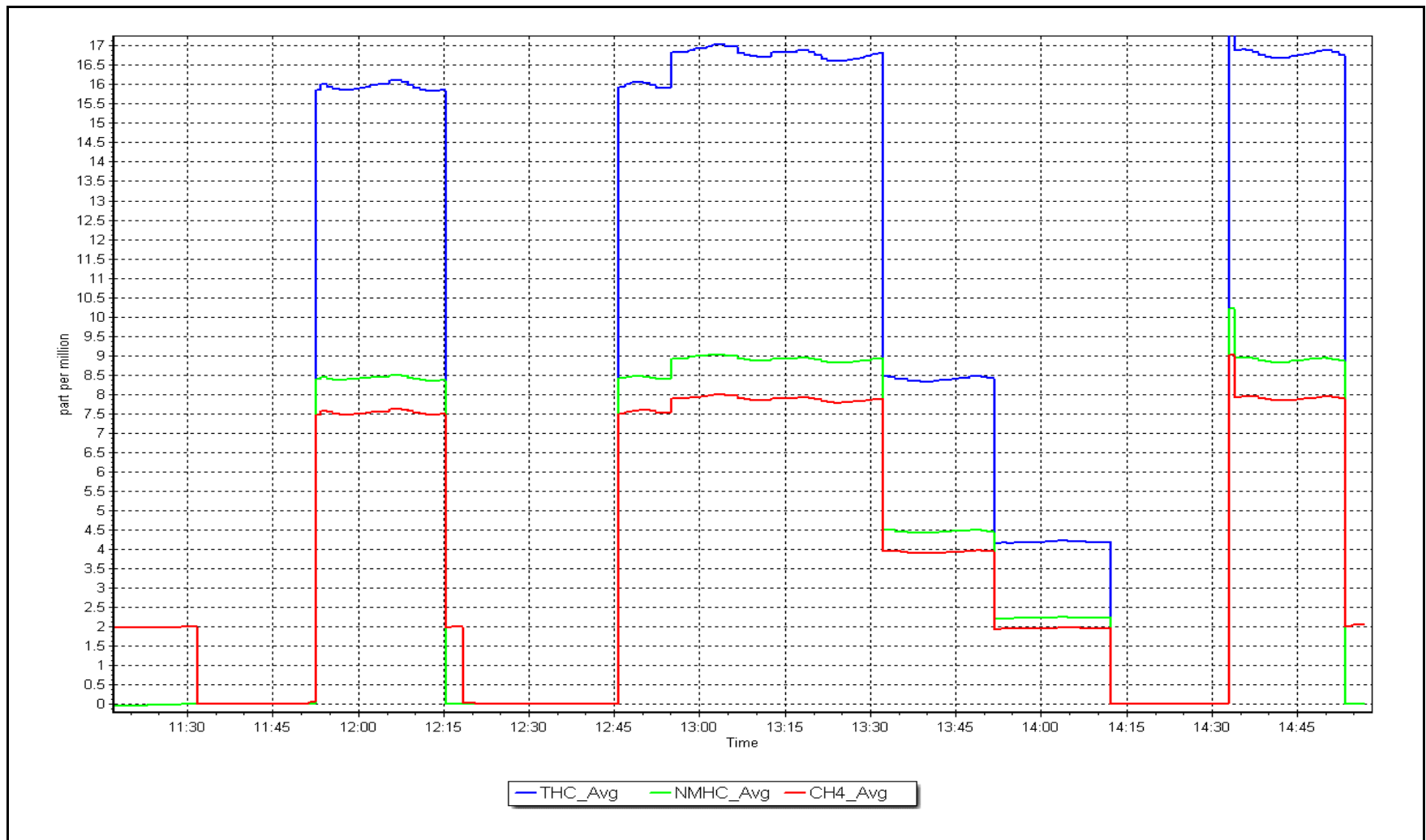
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999970	<i>≥0.995</i>
8.93	8.85	1.0094	Slope	0.990296	<i>0.90 - 1.10</i>
4.47	4.47	0.9997	Intercept	0.018636	<i>+/-0.5</i>
2.23	2.23	0.9980			



NMHC Calibration Plot

Date: August 13, 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: August 20, 2026
Last Cal Date: July 10, 2026
Start time (MST): 11:30
End time (MST): 16:27
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0045516
NOX Cal Gas Conc: 60.30 ppm
Removed Cylinder #: N/A
Removed Gas NOX Conc: 60.30 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API 701
Cal Gas Expiry Date: November 17, 2026
NO Cal Gas Conc: 60.10 ppm
Removed Gas Exp Date: N/A
Removed Gas NO Conc: 60.10 ppm
NO gas Diff:
Serial Number: 2658
Serial Number: 4890

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.1	0.1	-0.1	----	----
AF High point	4933	66.6	803.3	800.6	2.7	878.7	875.6	3.0	0.9143	0.9144
AF Mid point										
AF Low point										
New cyl resp										
Previous Respo 4933	NO _x = 801.3 ppb	NO = 800.0 ppb								
Baseline Corr 1st pt	NO _x = 878.6 ppb	NO = 875.5 ppb								
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb								
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb								
* = > +/-5% change initiates investigation										
*Percent Change										
NO_x = 8.8%										
*Percent Change										
NO = 8.6%										
As Found Statistics										
As found NO_x r²:										
Nx SI:										
Nx Int:										
As found NO r²:										
NO SI:										
NO Int:										
As found NO₂ r²:										
NO₂ SI:										
NO₂ Int:										

As Found GPT Calibration Data

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



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

Analyzer Make: Thermo Scientific 42i Serial Number: 1501663731
NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.185	1.079	NO bkgnd or offset:	11.8	10.7
NOX coeff or slope:	0.996	0.997	NOX bkgnd or offset:	11.8	10.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	218.6	220.7

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999850	0.998400
NO _x Cal Offset:	-1.808995	-2.249424
NO Cal Slope:	1.003351	1.001582
NO Cal Offset:	-3.269647	-3.450199
NO ₂ Cal Slope:	0.992216	0.999723
NO ₂ Cal Offset:	-0.003241	0.277198

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	0.2	0.2	0.0	----	----
High point	4933	66.6	803.3	800.6	2.7	801.0	800.3	0.5	1.0028	1.0004
Mid point	4967	33.3	401.6	400.2	1.3	397.3	395.4	1.9	1.0108	1.0122
Low point	4983	16.6	200.2	199.5	0.7	195.3	192.9	2.4	1.0252	1.0345
As left zero	5000	0.0	0.0	0.0	0.0	0.3	0.3	0.0	----	----
As left span	4933	66.6	803.3	384.8	418.5	807.5	384.8	422.7	0.9947	1.0000
Average Correction Factor									1.0129	1.0157

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	799.2	380.8	421.1	421.1	0.9999	100.0%
Mid GPT point	799.2	598.1	203.8	204.1	0.9984	100.2%
Low GPT point	799.2	700.7	101.2	101.7	0.9947	100.5%
Average Correction Factor					0.9977	100.2%

Notes:

An investigation was conducted, diagnostics were consistent with previous calibration results. No issues were identified with the setup, and the flow remained within acceptable limits. Changed the inlet filter after as founds. Adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

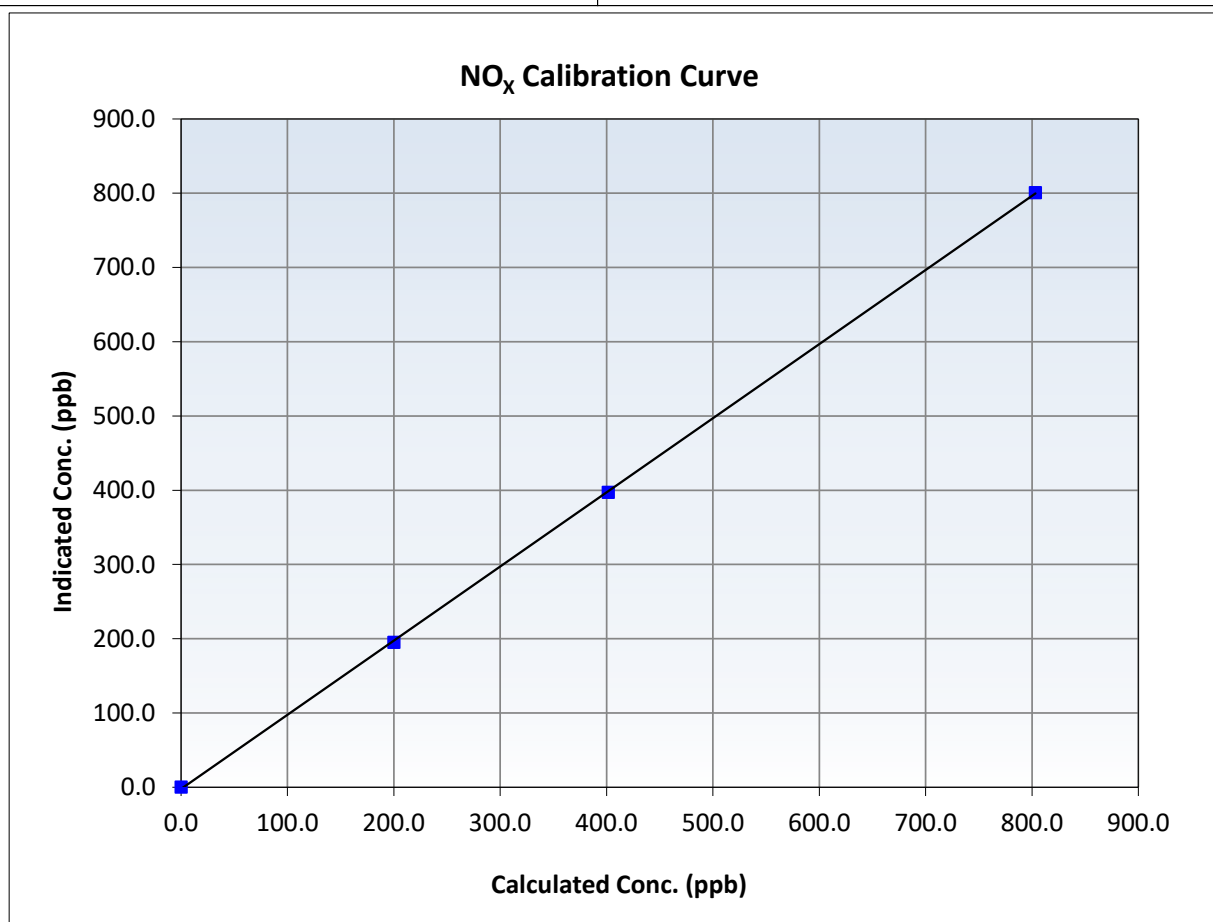
NO_x Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 10, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:30	End Time (MST):	16:27
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	0.999957	≥0.995
803.3	801.0	1.0028	Slope	0.998400	0.90 - 1.10
401.6	397.3	1.0108	Intercept	-2.249424	+/-20
200.2	195.3	1.0252			





Wood Buffalo Environmental Association

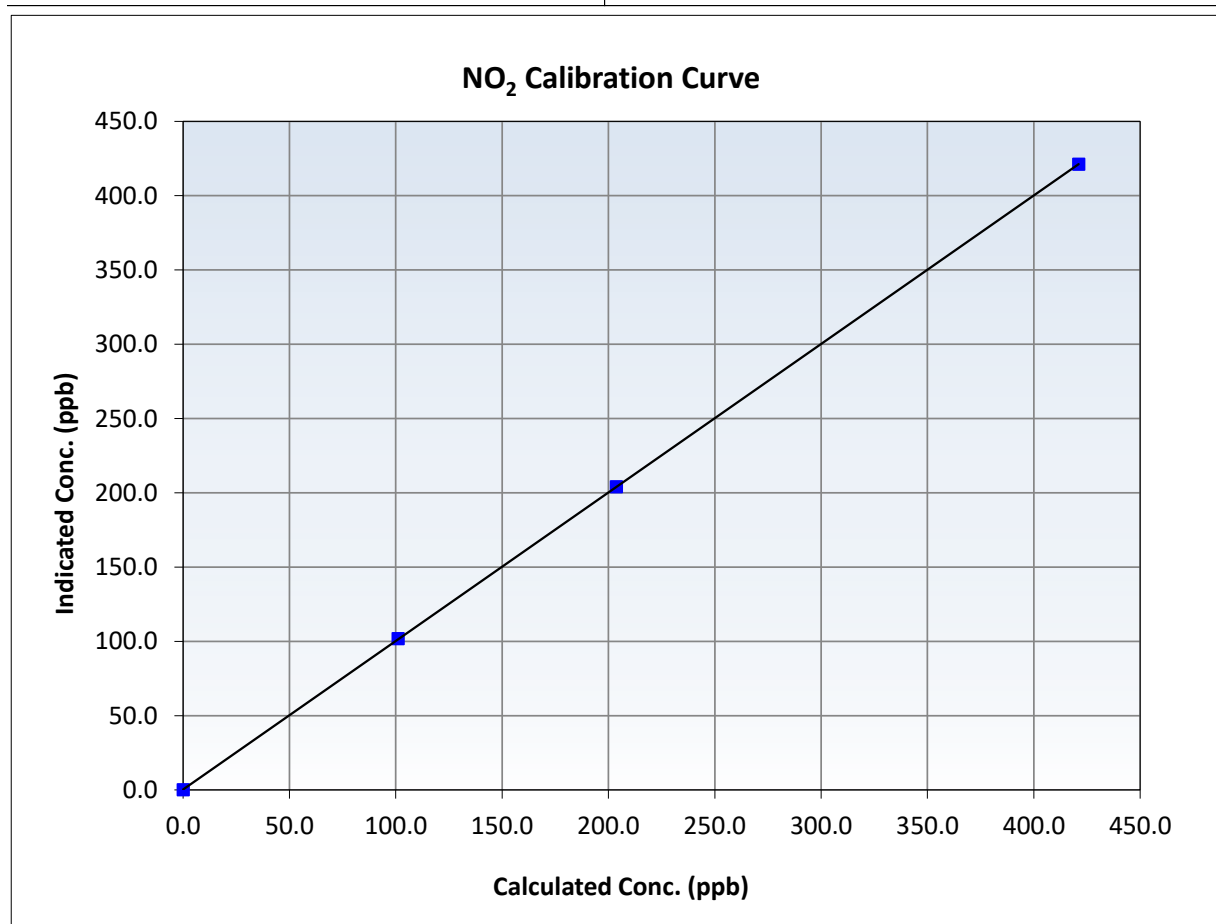
NO₂ Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 10, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:30	End Time (MST):	16:27
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	0.0	----	Correlation Coefficient	0.999998	<i>≥0.995</i>
421.1	421.1	0.9999	Slope	0.999723	<i>0.90 - 1.10</i>
203.8	204.1	0.9984	Intercept	0.277198	<i>+/-20</i>
101.2	101.7	0.9947			





Wood Buffalo Environmental Association

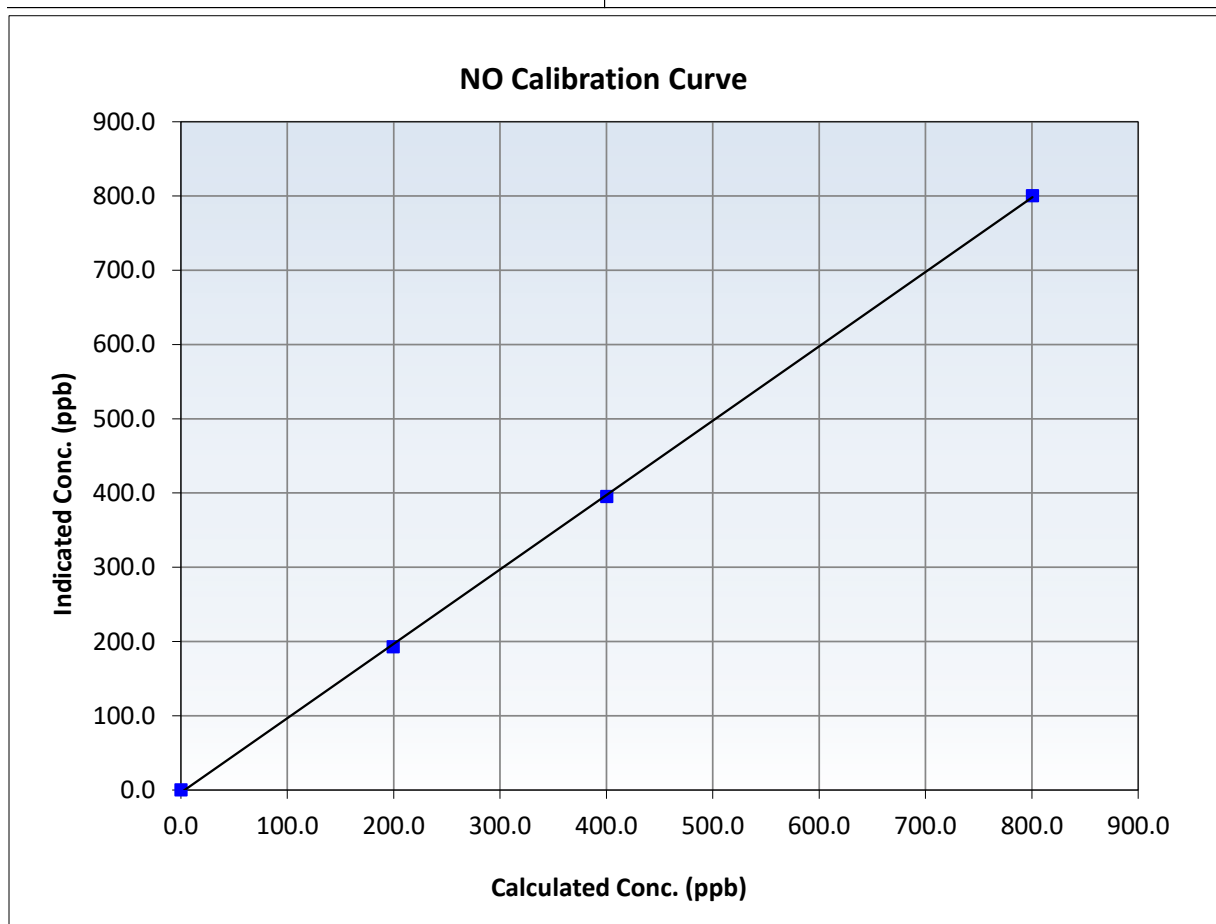
NO Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 10, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:30	End Time (MST):	16:27
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1501663731

Calibration Data

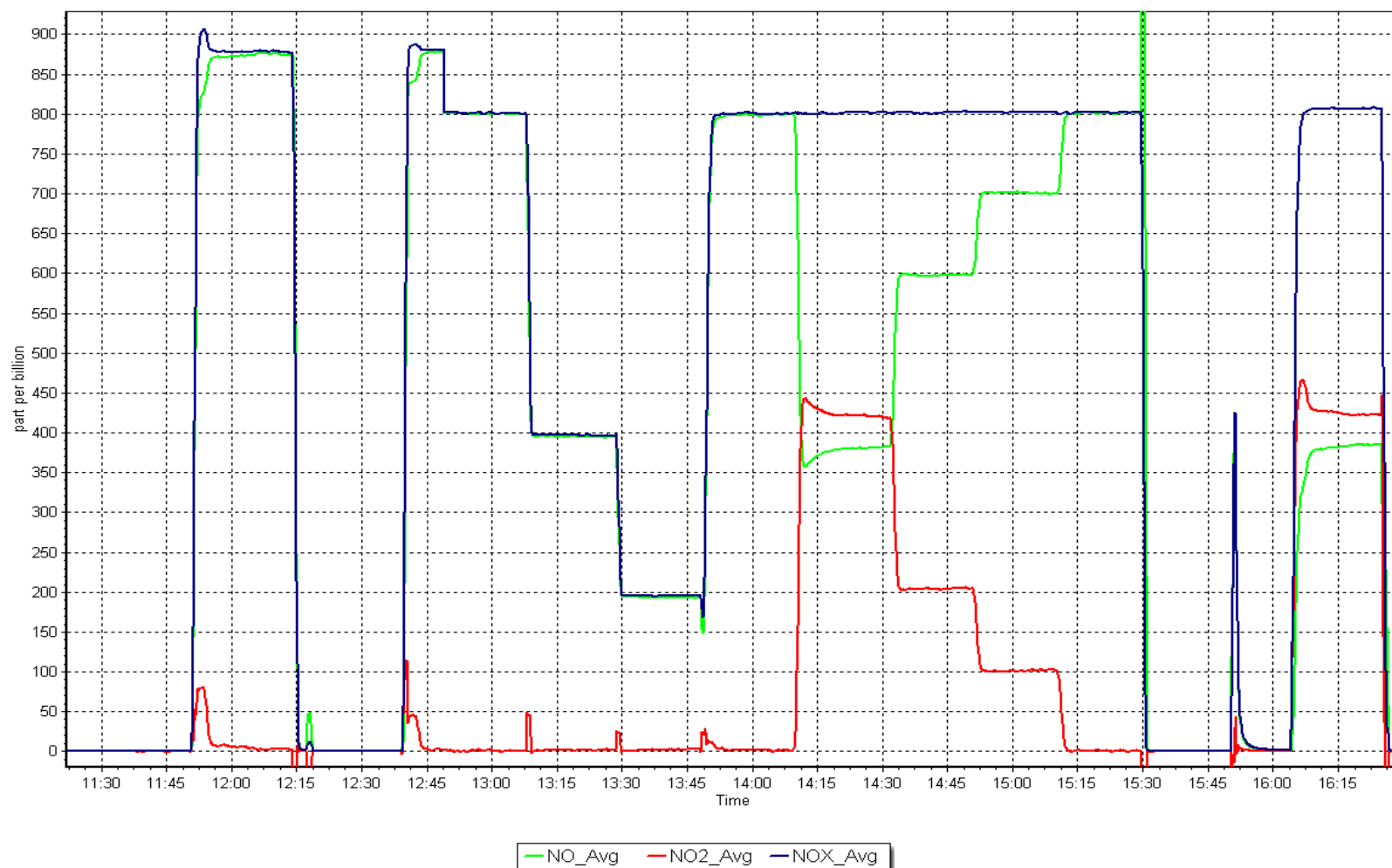
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999905	≥ 0.995
800.6	800.3	1.0004	Slope	1.001582	$0.90 - 1.10$
400.2	395.4	1.0122	Intercept	-3.450199	± 20
199.5	192.9	1.0345			



NO_x Calibration Plot

Date: August 20, 2026

Location: Stony Mountain





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Stony Mountain
Calibration Date: August 24, 2026
Start time (MST): 11:10
Reason: Routine

Station number: AMS 18
Last Cal Date: July 23, 2026
End time (MST): 14:27

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:	1.010743	0.999314	Backgd or Offset:	2.8	2.8
Calibration intercept:	0.520000	0.620000	Coeff or Slope:	0.992	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	399.4	1.004
As found Mid point					
As found Low point					
Baseline Corr As found:	398.6	Previous response	404.8	*% change	-1.6%
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- AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	NA	0.0	0.3	----
High point	4888	1155.7	400.0	400.2	1.000
Mid point	4888	894.4	200.0	200.6	0.997
Low point	4888	762.7	100.0	100.9	0.991
As left zero	5000	NA	0.0	1.3	----
As left span	4812	1155.7	400.0	405.5	0.986
Average Correction Factor					0.996

Notes: Sample inlet filter changed and no adjustments made.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

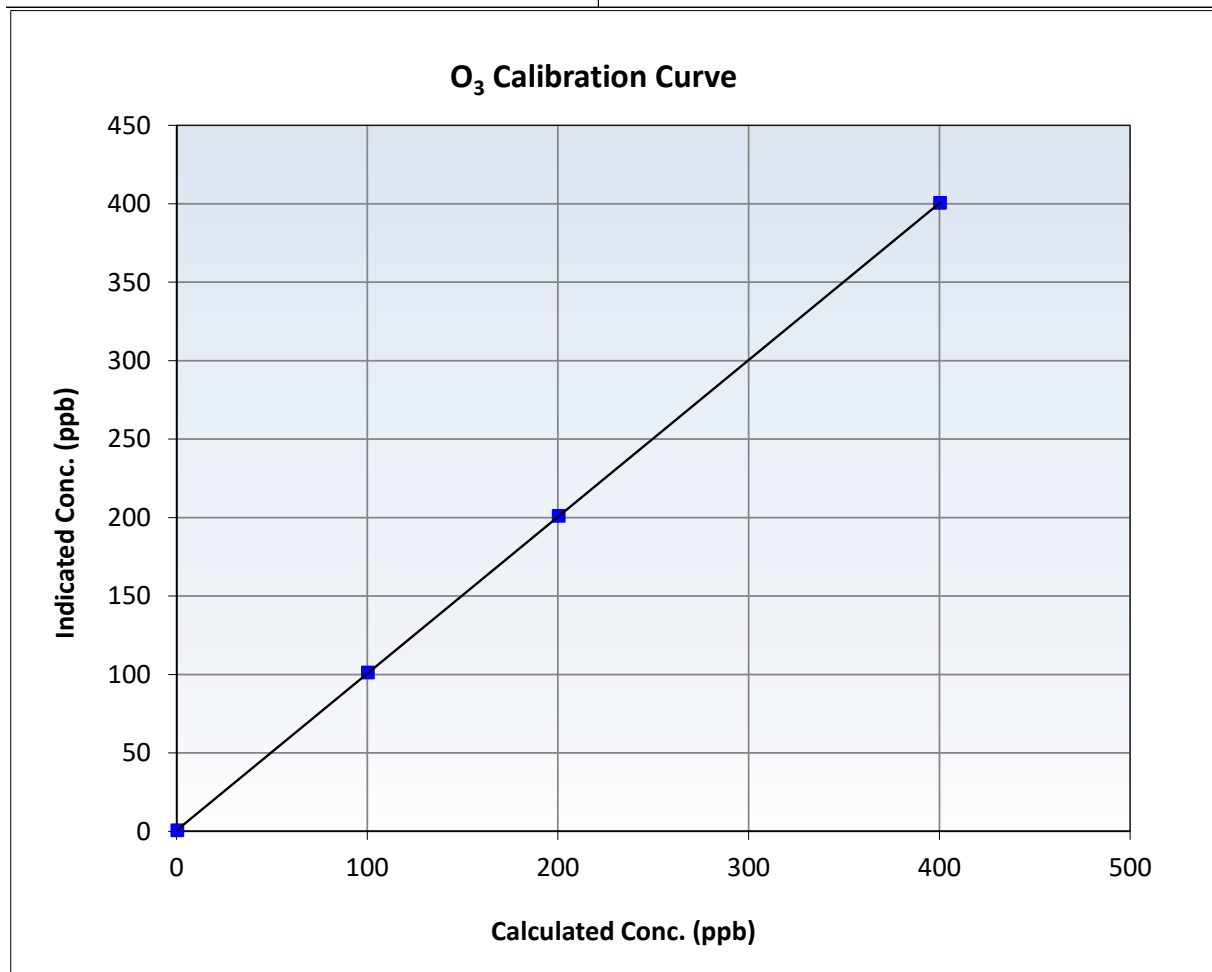
O₃ Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 23, 2026
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:10	End Time (MST):	14:27
Analyzer make:	API T400	Analyzer serial #:	825

Calibration Data

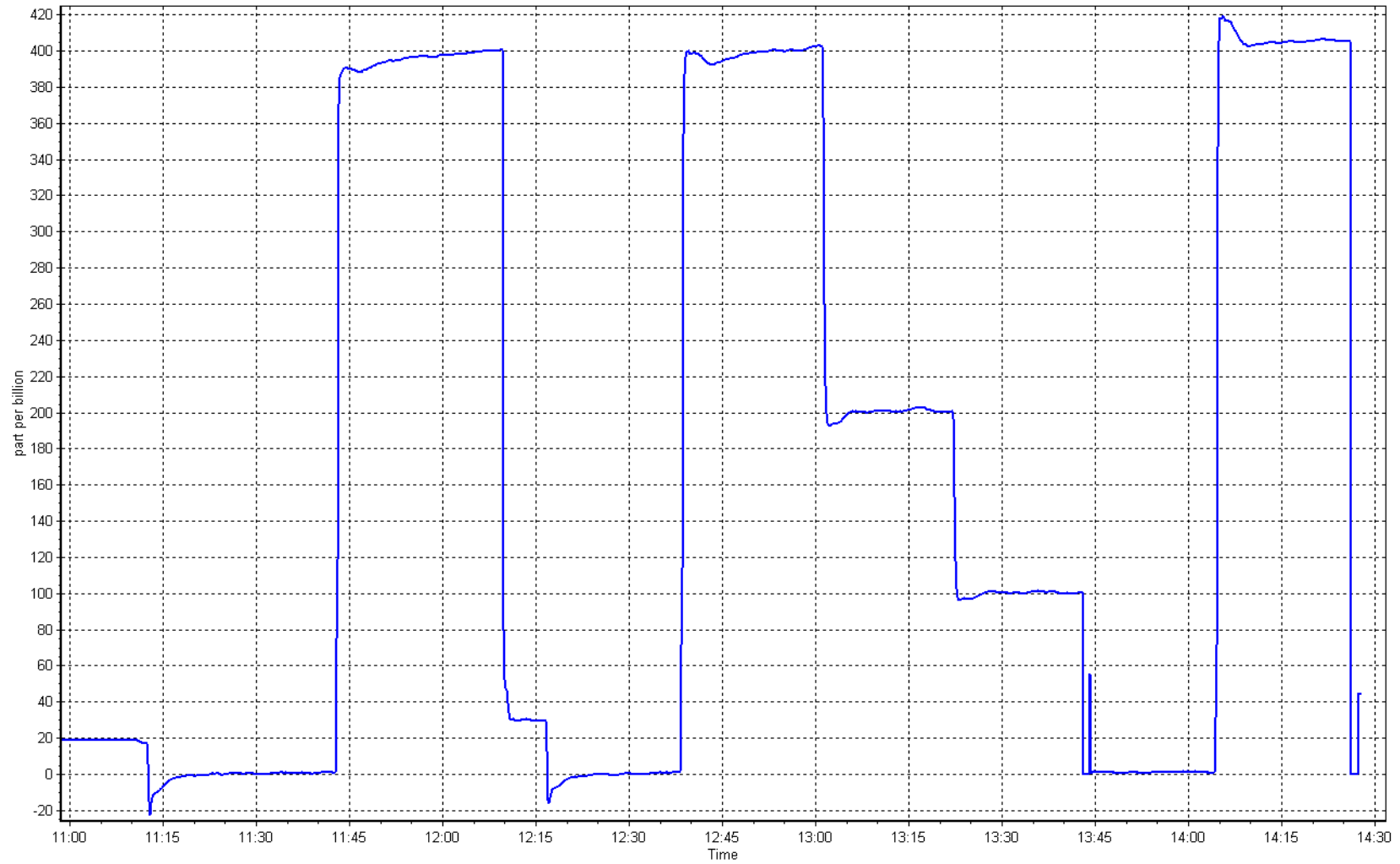
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999997	≥0.995
400.0	400.2	0.9995	Slope	0.999314	0.90 - 1.10
200.0	200.6	0.9970	Intercept	0.620000	+/- 5
100.0	100.9	0.9911			



O₃ Calibration Plot

Date: August 24, 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: August 31, 2026 Last Cal Date: July 10, 2026
Start time (MST): 14:29 End time (MST): 14:57

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)	22.7	22.78	22.7	☐	+/- 2 °C
P (mmHg)	697.7	697.44	697.7	☐	+/- 10 mmHg
Flow (LPM)	5.01	5.001	5.01	☐	+/- 0.25 LPM
PW% (pump)	35	----	35	☐	>80%
Zero Verification	PM w/o HEPA:	1.8	PM w/ HEPA:	0.0	<0.2 ug/m3

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

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

Quarterly Calibration Test

SPAN DUST Refractive Index: 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. Leak check passed.

Calibration by: Mohammed Kashif



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS19 FIREBAG AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Firebag
Calibration Date: August 24, 2026
Start time (MST): 11:09
Reason: Routine

Station number: AMS 19
Last Cal Date: July 21, 2026
End time (MST): 13:58

Calibration Standards

Cal Gas Concentration: 50.97 ppm
Cal Gas Cylinder #: CC705799
Removed Cal Gas Conc: 50.97 ppm
Removed Gas Cyl #:
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701H

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5258
Serial Number: 201

Analyzer Information

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

Serial Number: 12530443167

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.000937	1.013033	Backgd or Offset:	2.02	2.02
Calibration intercept:	-1.282752	-1.540430	Coeff or Slope:	1.077	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	-0.7	----
As found High point	4922	78.5	800.2	807.0	0.991
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	807.7	Previous response	799.7	*% 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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.4	----
High point	4922	78.5	800.2	809.6	0.988
Mid point	4961	39.2	399.6	402.9	0.992
Low point	4980	19.6	199.8	199.6	1.001
As left zero	5000	0.0	0.0	-0.5	----
As left span	4922	78.5	800.2	809.1	0.989
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

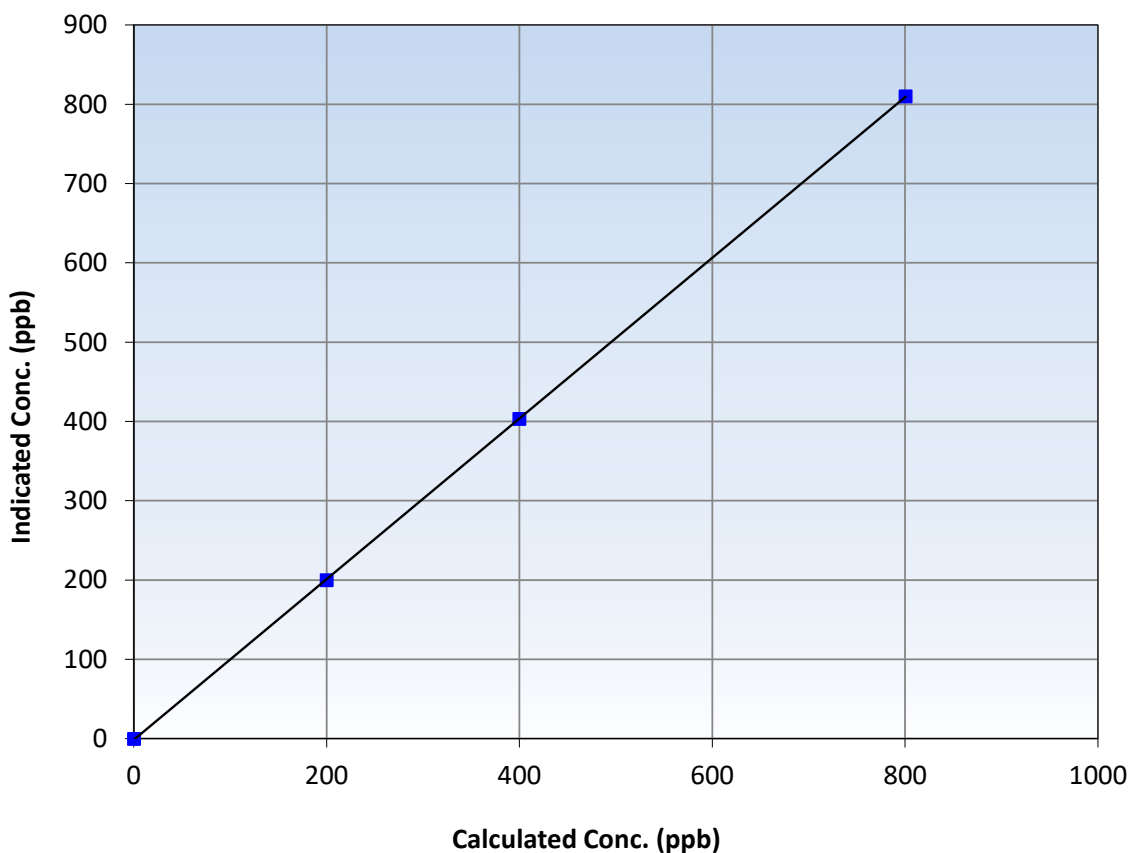
Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 21, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	11:09	End Time (MST):	13:58
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	-0.4	----	Correlation Coefficient	0.999991	≥0.995
800.2	809.6	0.9884	Slope	1.013033	0.90 - 1.10
399.6	402.9	0.9918	Intercept	-1.540430	+/-30
199.8	199.6	1.0011			

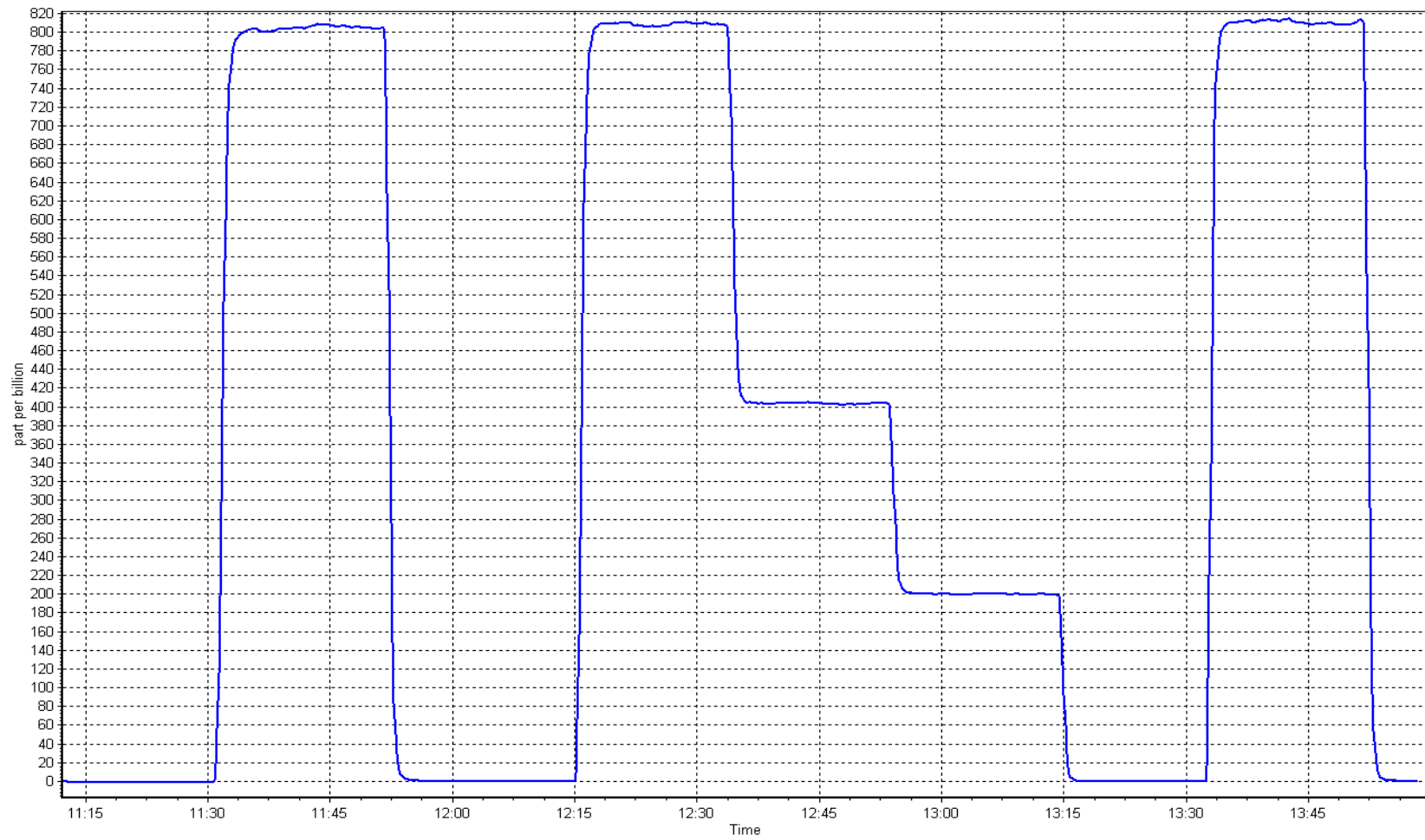
SO₂ Calibration Curve



SO2 Calibration Plot

Date: August 24, 2026

Location: Firebag





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Firebag Station number: AMS 19
Calibration Date: August 25, 2026 Last Cal Date: July 17, 2026
Start time (MST): 9:44 End time (MST): 13:45
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:	1.011907	1.012192	Backgd or Offset:	3.08
Calibration intercept:	-0.460000	-0.320000	Coeff or Slope:	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	40.3	0.983
As found Low point	4981	18.9	20.0	19.7	0.995
New cylinder response					
Baseline Corr As found:	82.0	Prev response:	80.48	*% change:	1.9%
Baseline Corr 2nd AF pt:	40.7	AF Slope:	1.026481	AF Intercept:	-0.620000
Baseline Corr 3rd AF pt:	20.1	AF Correlation:	0.999967	* = > +/-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	80.6	0.992
Mid point	4962	37.8	40.0	40.3	0.992
Low point	4981	18.9	20.0	19.8	1.010
As left zero	5000	0.0	0.0	-0.2	----
As left span	4924	75.6	80.0	81.1	0.986
SO2 Scrubber Check	4922	78.5	785.0	0.0	----
Date of last scrubber change:		18-Jan-23		Ave Corr Factor	0.998
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

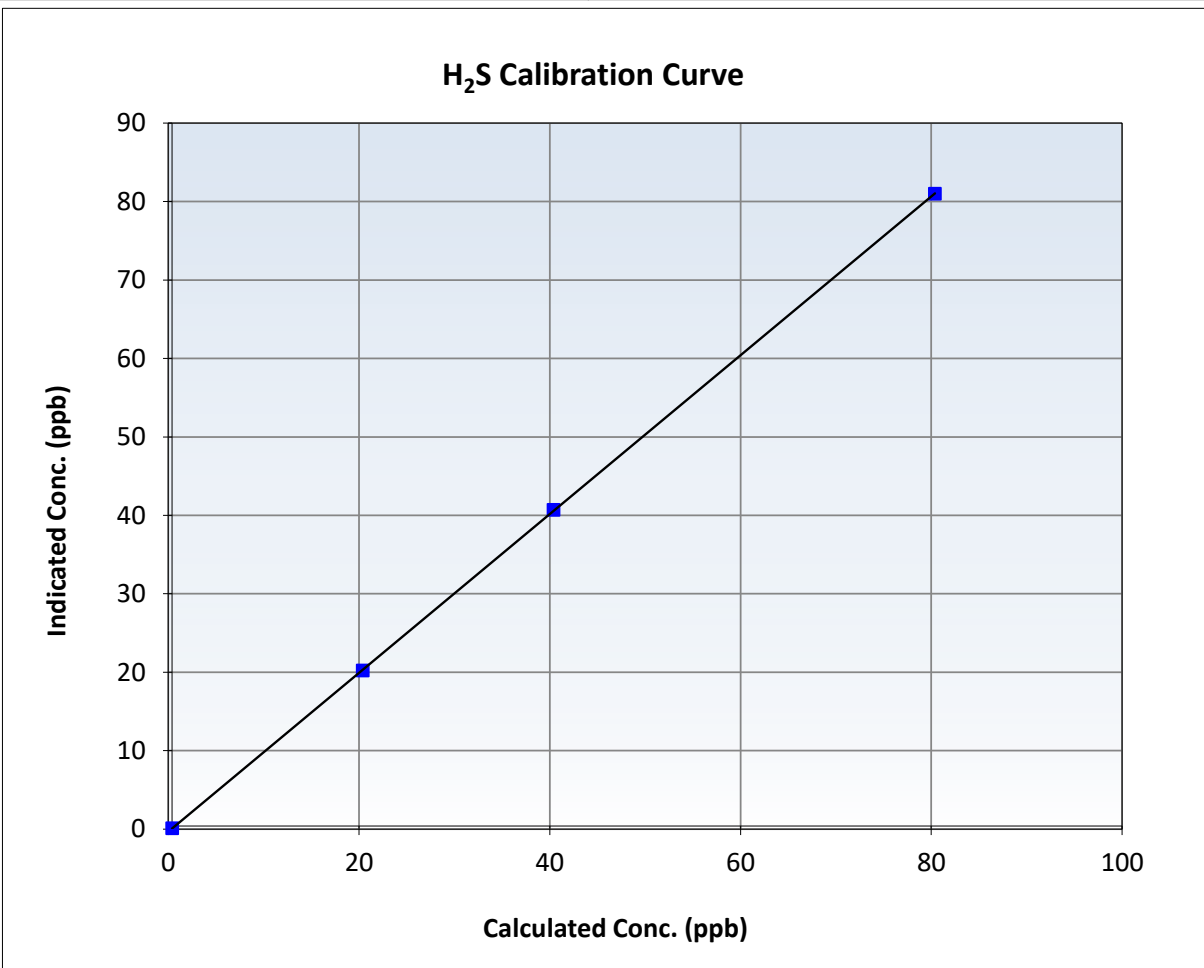
H2S Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 17, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:44	End Time (MST):	13:45
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1151680032

Calibration Data

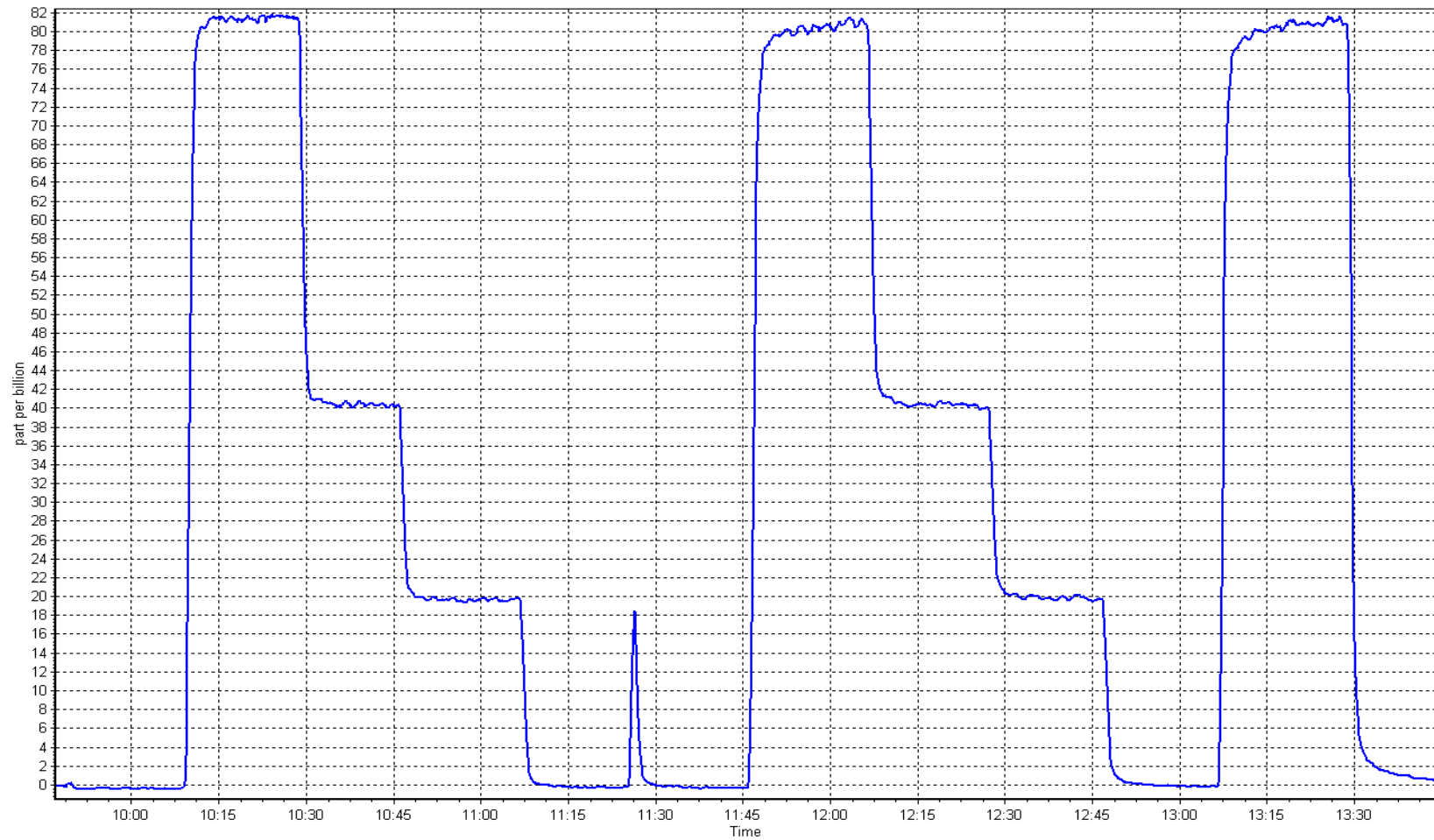
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999990	≥ 0.995
80.0	80.6	0.9924	Slope	1.012192	$0.90 - 1.10$
40.0	40.3	0.9924	Intercept	-0.320000	± 3
20.0	19.8	1.0099			



H2S Calibration Plot

Date: August 25, 2026

Location: Firebag





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Firebag
Calibration Date: August 24, 2026
Start time (MST): 11:09
Reason: Routine

Station number: AMS 19
Last Cal Date: July 21, 2026
End time (MST): 13:58

Calibration Standards

Gas Cert Reference: CC705799
CH4 Cal Gas Conc. 505.1 ppm
C3H8 Cal Gas Conc. 204.3 ppm
Removed Gas Cert:
Removed CH4 Conc. 505.1 ppm
Removed C3H8 Conc. 204.3 ppm
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701H

Cal Gas Expiry Date: October 9, 2032
CH4 Equiv Conc. 1066.9 ppm
Removed Gas Expiry:
CH4 Equiv Conc. 1066.9 ppm
Diff between cyl:
Serial Number: 5258
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:	0.994799	0.984662	Background:	2.35	2.35
Calibration intercept:	-0.085594	0.010404	Coefficient:	3.844	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	-0.08	----
As found High point	4922	78.5	16.75	16.47	1.012
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.55	Previous response	16.58	*% 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	

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	-0.01	----
High point	4922	78.5	16.75	16.50	1.015
Mid point	4961	39.2	8.36	8.23	1.017
Low point	4980	19.6	4.18	4.17	1.004
As left zero	4999	0.0	0.00	-0.02	----
As left span	4922	78.4	16.73	16.64	1.006
Average Correction Factor					1.012

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

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

THC Calibration Summary

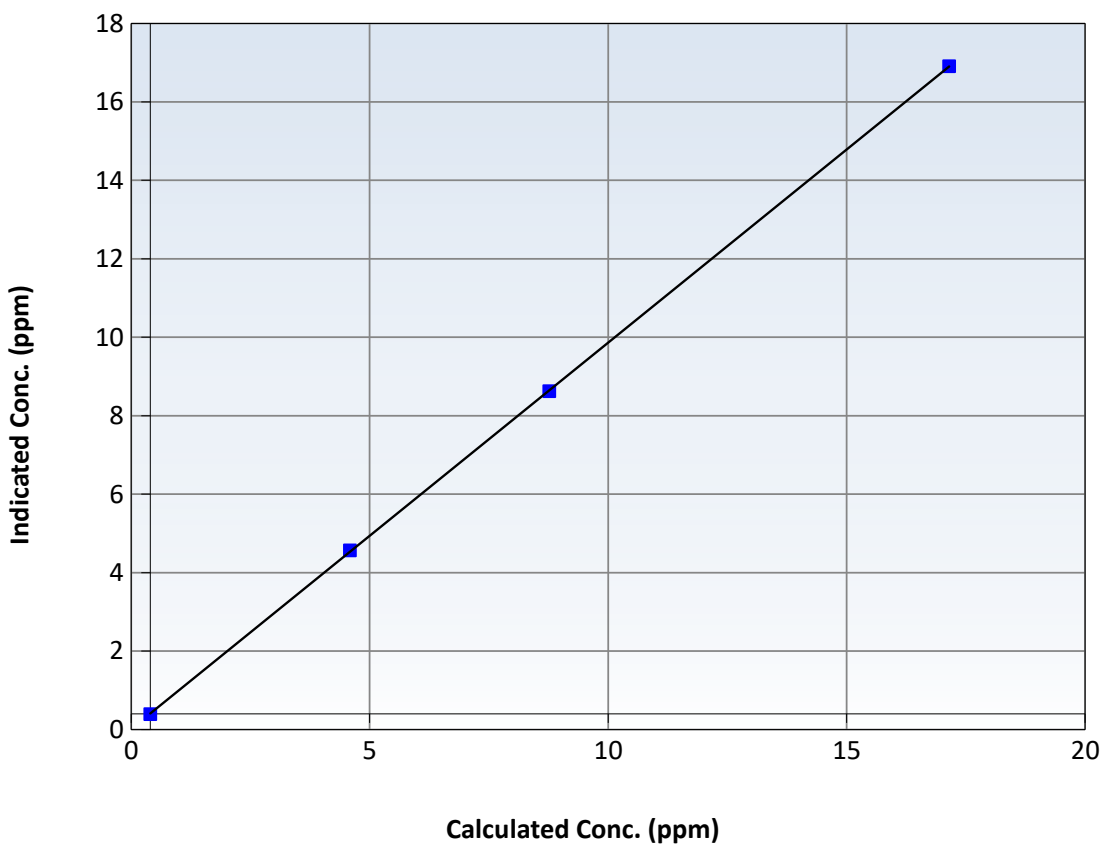
Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 21, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	11:09	End Time (MST):	13:58
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	-0.01	----	Correlation Coefficient	0.999985	≥ 0.995
16.75	16.50	1.0149	Slope	0.984662	$0.90 - 1.10$
8.36	8.23	1.0167	Intercept	0.010404	± 1.5
4.18	4.17	1.0035			

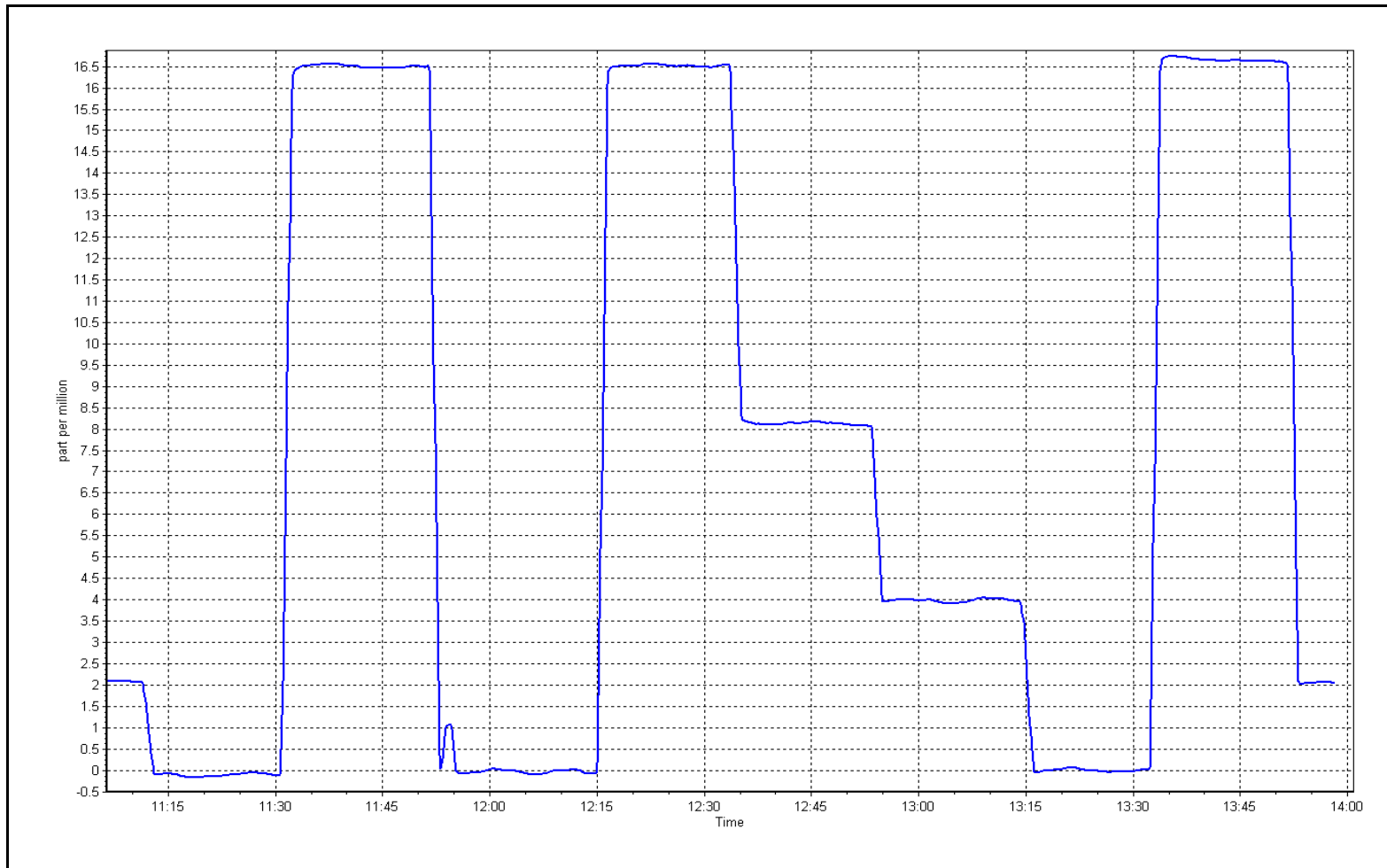
THC Calibration Curve



THC Calibration Plot

Date: August 24, 2026

Location: Firebag





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Firebag
Station number: AMS 19
Calibration Date: August 26, 2026
Last Cal Date: July 22, 2026
Start time (MST): 9:43
End time (MST): 14:15
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0045593
NOX Cal Gas Conc: 62.10 ppm
Removed Cylinder #:
Removed Gas NOX Conc: 62.10 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701H
Cal Gas Expiry Date: July 22, 2032
NO Cal Gas Conc: 61.90 ppm
Removed Gas Exp Date:
Removed Gas NO Conc: 61.90 ppm
NO gas Diff:
Serial Number: 5258
Serial Number: 201

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated 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	4936	64.4	799.8	797.2	2.6	797.7	788.9	8.8	1.0026	1.0104
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 797.0 ppb	NO = 796.0 ppb								
Baseline Corr 1st pt	NO _x = 797.7 ppb	NO = 789.0 ppb								
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb								
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb								
* = > +/-5% change initiates investigation										
*Percent Change										
NO_x = 0.1%										
*Percent Change										
NO = -0.9%										
As Found Statistics										
As found NO_x r²:										
Nx SI:										
Nx Int:										
As found NO r²:										
NO SI:										
NO Int:										
As found NO₂ r²:										
NO₂ SI:										
NO₂ Int:										

As Found GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated 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: 1410661309

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.997472	0.995514
NO _x Cal Offset:	-0.727962	-0.867949
NO Cal Slope:	1.000867	0.997326
NO Cal Offset:	-1.887950	-1.927922
NO ₂ Cal Slope:	0.994605	0.995800
NO ₂ Cal Offset:	-0.996137	-0.546457

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.942	0.942	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

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.2	0.0	0.2	----	----
High point	4936	64.4	799.8	797.2	2.6	795.5	793.7	1.8	1.0054	1.0044
Mid point	4968	32.2	399.9	398.6	1.3	397.8	395.9	1.8	1.0053	1.0069
Low point	4984	16.1	200.0	199.3	0.6	196.4	194.1	2.3	1.0181	1.0269
As left zero	5000	0	0.0	0.0	0.0	0.2	0.0	0.2	----	----
As left span	4936	64.4	799.8	396.4	403.4	792.5	396.4	396.2	1.0092	1.0000
Average Correction Factor									1.0096	1.0127

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	788.3	390.9	400.0	398.1	1.0047	99.5%
Mid GPT point	788.3	601.5	189.4	187.8	1.0084	99.2%
Low GPT point	788.3	679.8	111.1	109.2	1.0172	98.3%
Average Correction Factor					1.0101	99.0%

Notes:

Inlet filter changed after as founds. No changes made.

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

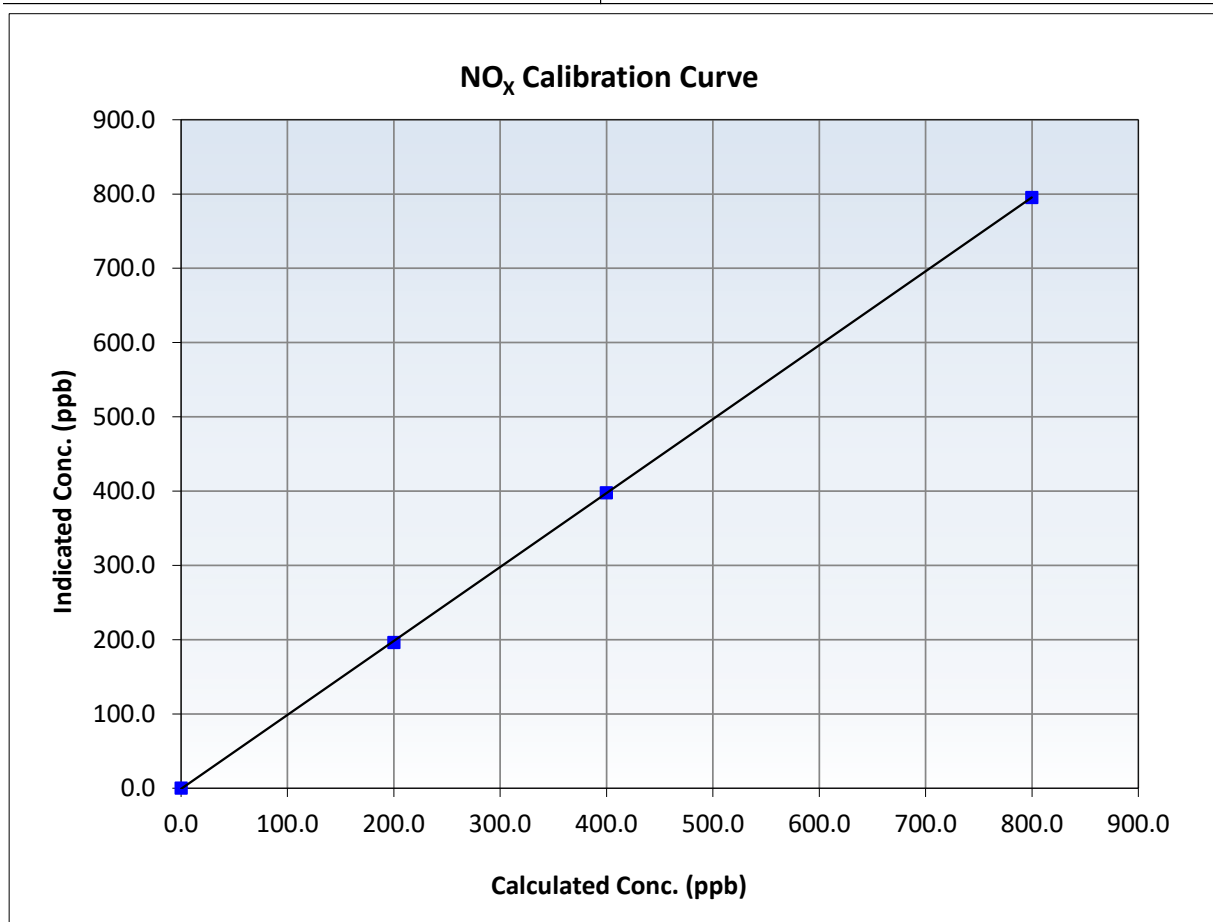
NO_x Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 22, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:43	End Time (MST):	14:15
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	0.2	----	Correlation Coefficient	0.999986	≥0.995
799.8	795.5	1.0054	Slope	0.995514	0.90 - 1.10
399.9	397.8	1.0053	Intercept	-0.867949	+/-20
200.0	196.4	1.0181			





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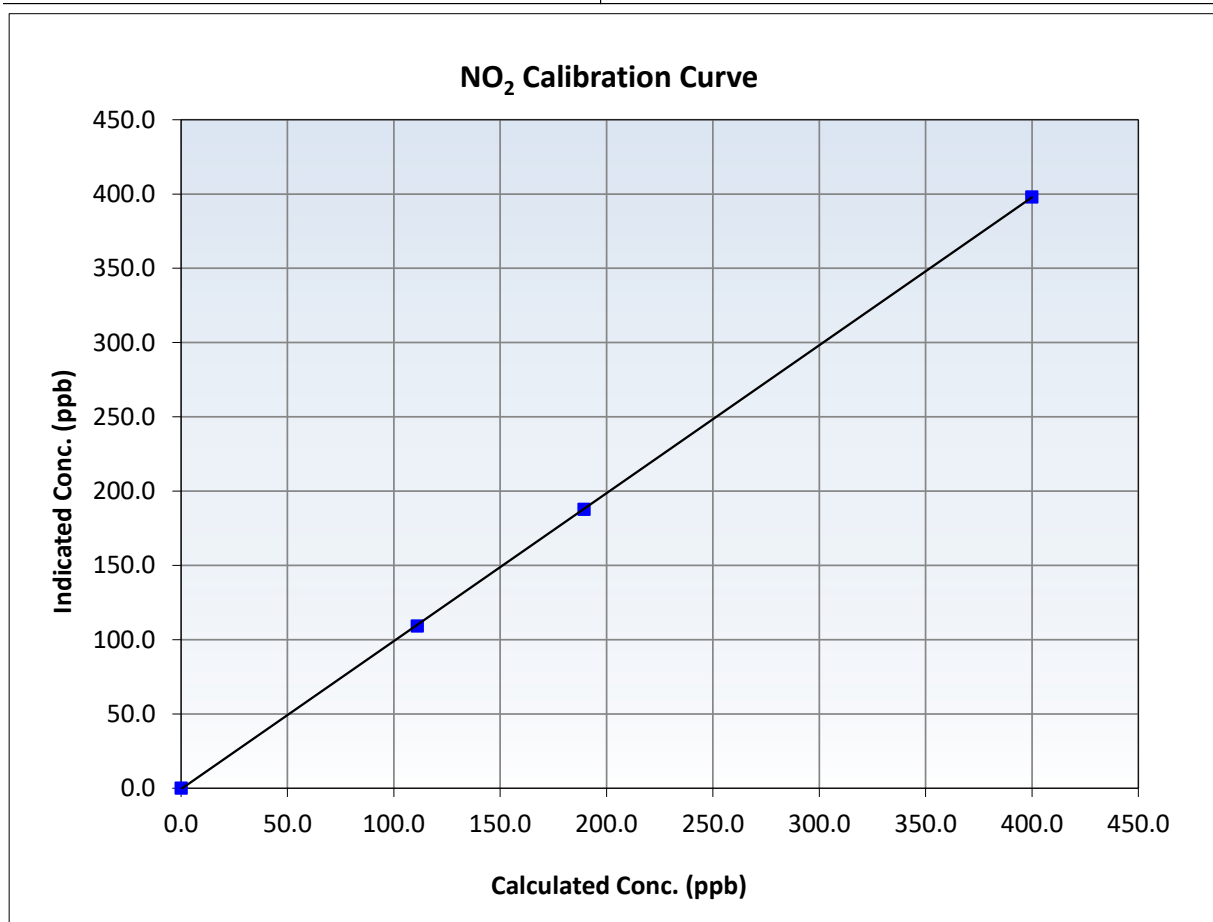
NO₂ Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 22, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:43	End Time (MST):	14:15
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	0.2	----	Correlation Coefficient	0.999983	≥0.995
400.0	398.1	1.0047	Slope	0.995800	0.90 - 1.10
189.4	187.8	1.0084	Intercept	-0.546457	+/-20
111.1	109.2	1.0172			





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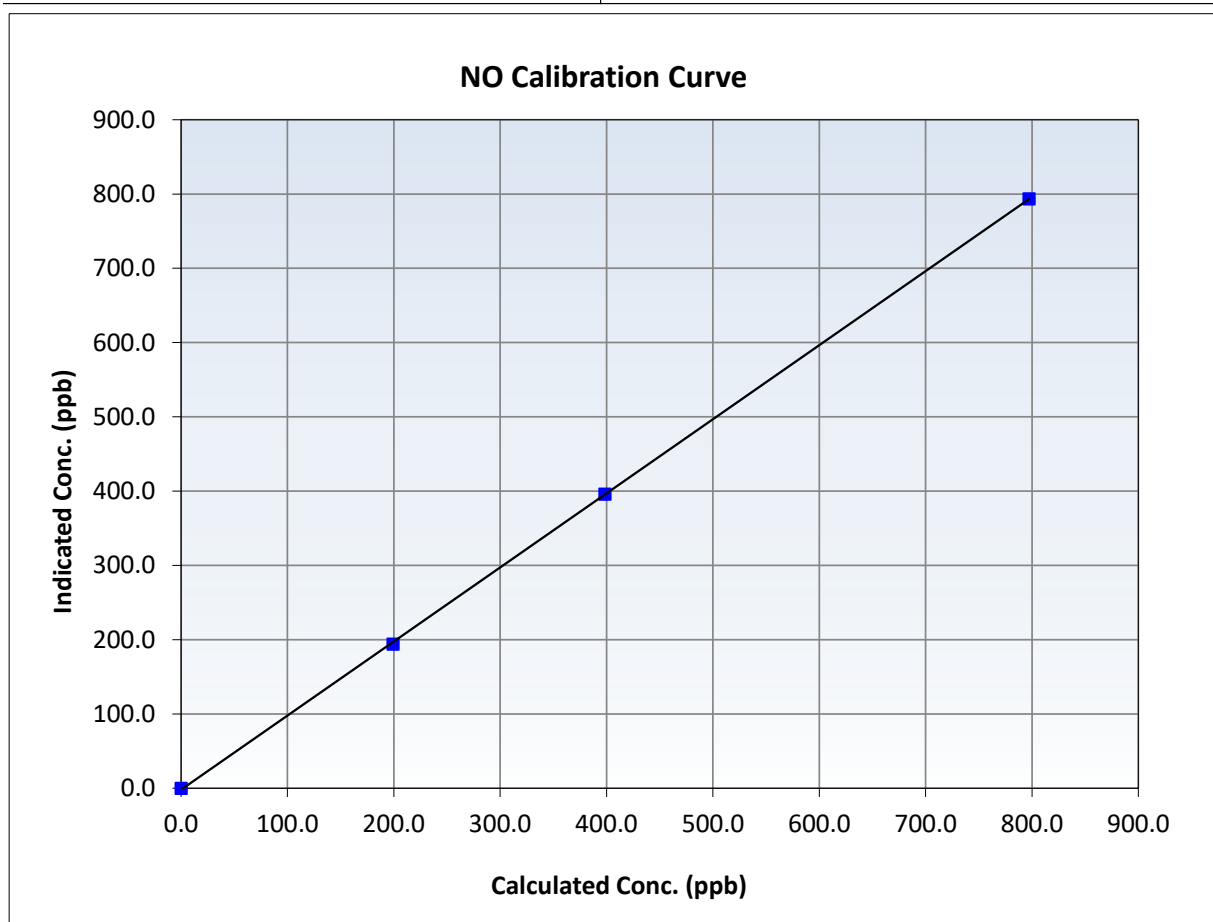
NO Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 22, 2026
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	9:43	End Time (MST):	14:15
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661309

Calibration Data

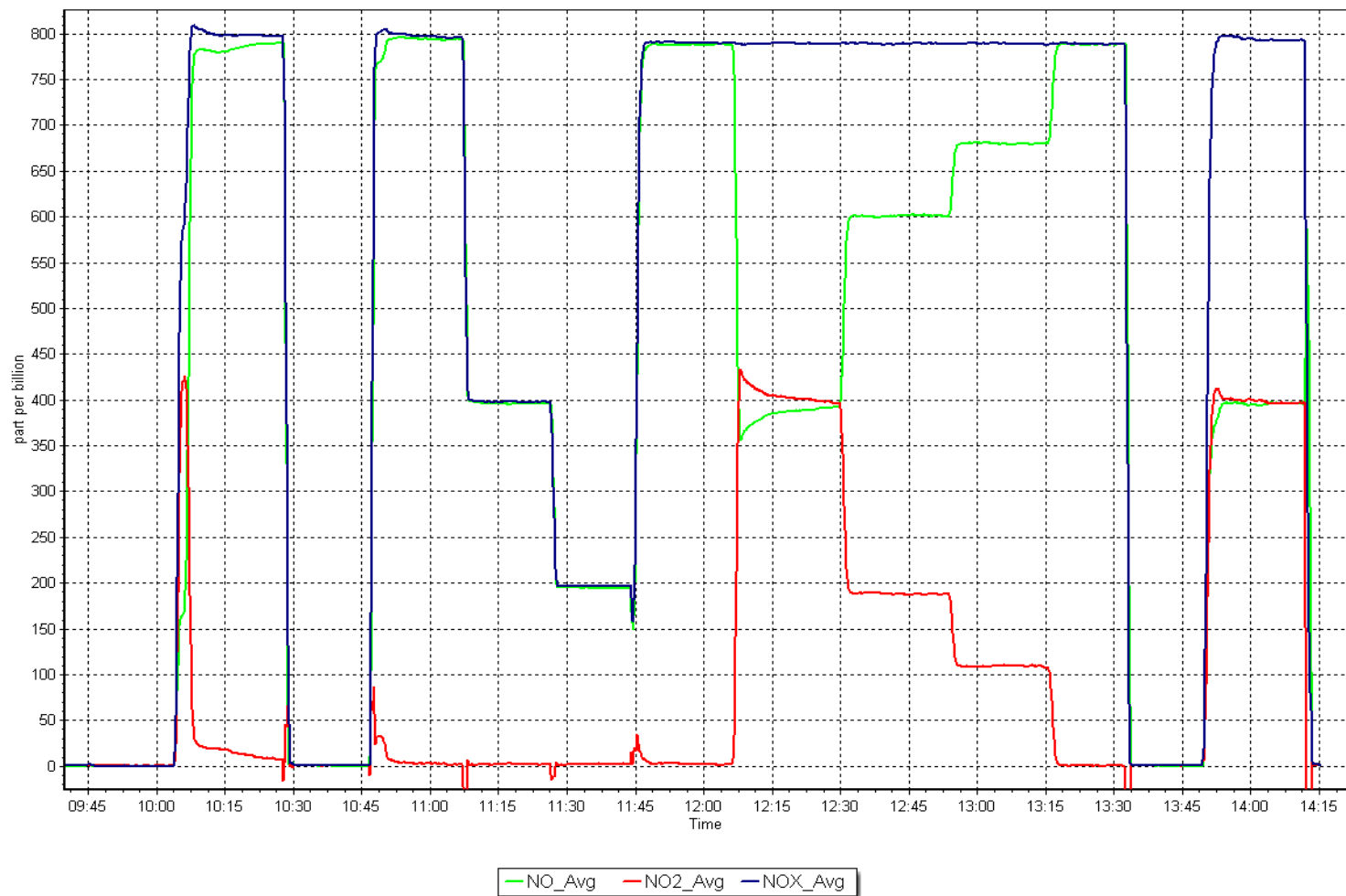
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999966	≥ 0.995
797.2	793.7	1.0044	Slope	0.997326	$0.90 - 1.10$
398.6	395.9	1.0069	Intercept	-1.927922	± 20
199.3	194.1	1.0269			



NO_x Calibration Plot

Date: August 26, 2026

Location: Firebag





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS20 MACKAY RIVER AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: MacKay River
Calibration Date: August 20, 2026
Start time (MST): 10:13
Reason: Routine

Station number: AMS 20
Last Cal Date: July 2, 2026
End time (MST): 14:57

Calibration Standards

Cal Gas Concentration: 49.15 ppm
Cal Gas Cylinder #: CC409669
Removed Cal Gas Conc: 49.15 ppm
Removed Gas Cyl #:
Calibrator Model: API T700
Zero Air Gen Model: API 701

Cal Gas Exp Date: October 9, 2032
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5706
Serial Number: 4888

Analyzer Information

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

Serial Number: 1501301450

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.009458	0.995790	Backgd or Offset:	21.0	20.8
Calibration intercept:	0.005358	-0.236789	Coeff or Slope:	0.921	0.909

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	804.5	0.994
As found Mid point	4959	40.7	400.1	401.9	0.995
As found Low point	4980	20.3	199.5	201.1	0.991
New cylinder response					
Baseline Corr As found:	804.8	Previous response	807.7	*% change	-0.4%
Baseline Corr 2nd AF pt:	402.2	AF Slope:	1.005544	AF Intercept:	-0.074916
Baseline Corr 3rd AF pt:	201.4	AF Correlation:	0.999999	* = > +/-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	796.7	1.004
Mid point	4959	40.7	400.1	397.6	1.006
Low point	4980	20.3	199.5	198.8	1.004
As left zero	5000	0.0	0.0	-0.1	----
As left span	4919	81.4	800.1	797.1	1.004
Average Correction Factor:					1.005

Notes: Changed sample inlet filter after as founds. Adjusted span.

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

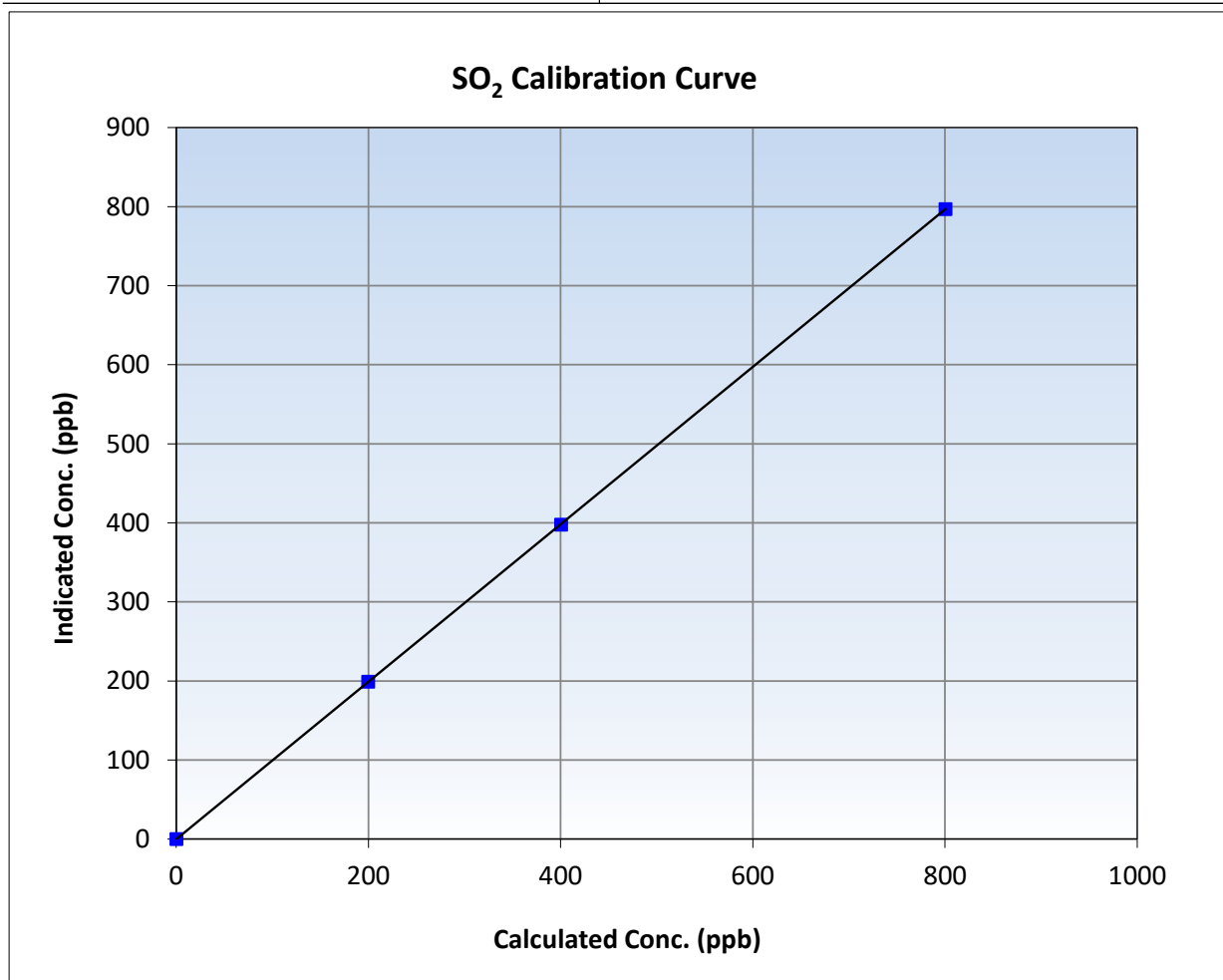
SO₂ Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 2, 2026
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	10:13	End Time (MST):	14:57
Analyzer make:	Thermo 43i	Analyzer serial #:	1501301450

Calibration Data

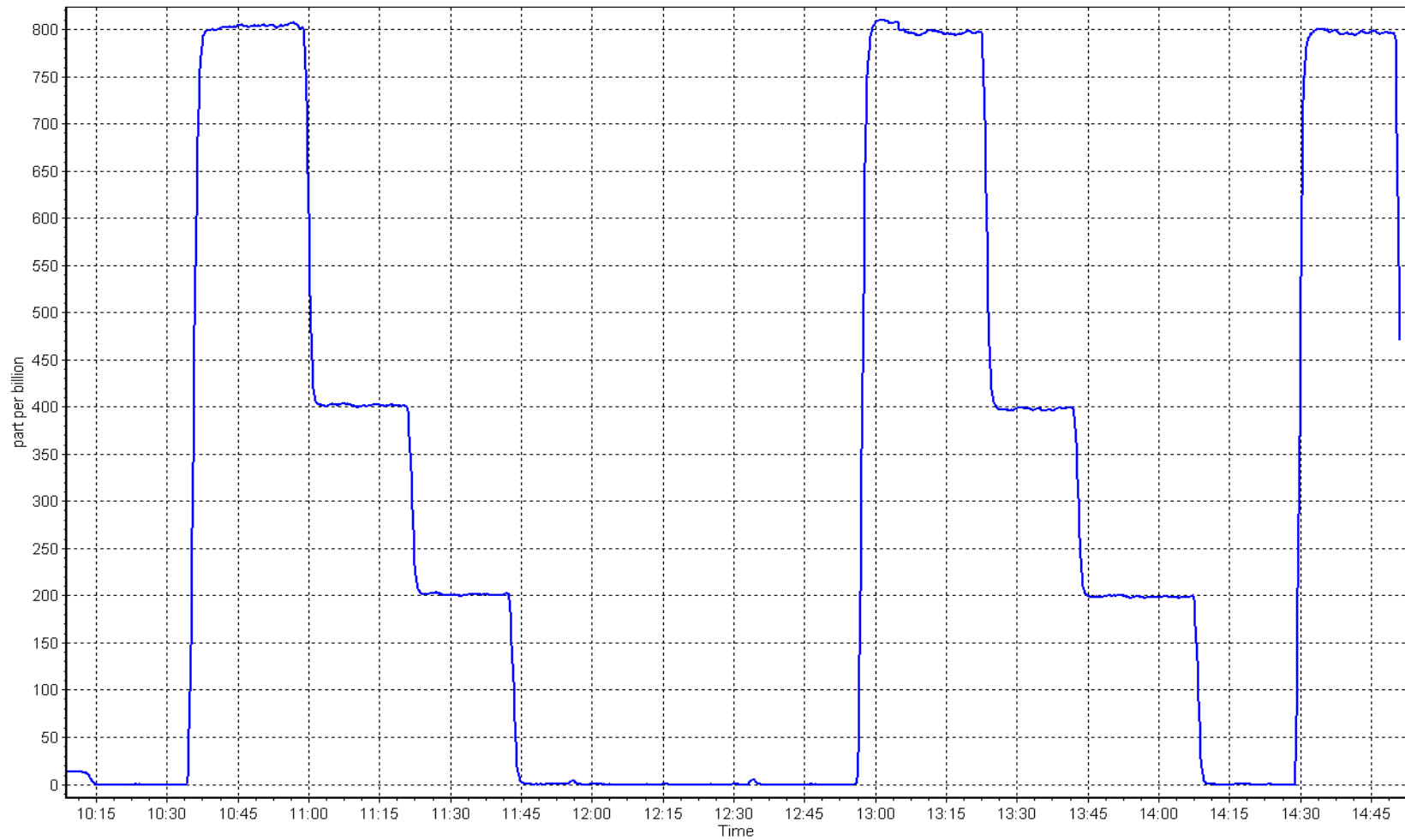
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999999	≥0.995
800.1	796.7	1.0043	Slope	0.995790	0.90 - 1.10
400.1	397.6	1.0063	Intercept	-0.236789	+/-30
199.5	198.8	1.0037			



SO2 Calibration Plot

Date: August 20, 2026

Location: MacKay River





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: MacKay River Station number: AMS 20
Calibration Date: August 11, 2026 Last Cal Date: July 20, 2026
Start time (MST): 8:10 End time (MST): 12:21
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.96 ppm Cal Gas Exp Date: September 22, 2028
Cal Gas Cylinder #: CC737854
Removed Cal Gas Conc: 4.96 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Make/Model: API T700 Serial Number: 5706
ZAG Make/Model: API 701 Serial Number: 4888

Analyzer Information

Analyzer make: Thermo 43i TLE Analyzer serial #: 1236656117
Converter make: Global Converter serial #: 2022-226
Analyzer Range: 0 - 100 ppb Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.011229	1.009227	Backgd or Offset:	3.90	3.90
Calibration intercept:	0.155986	0.076081	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	81.6	0.979
As found Mid point	4960	40.3	40.0	40.7	0.981
As found Low point	4980	20.2	20.0	20.3	0.982
New cylinder response					
Baseline Corr As found:	81.7	Prev response:	81.02	*% change:	0.8%
Baseline Corr 2nd AF pt:	40.8	AF Slope:	1.021947	AF Intercept:	-0.144158
Baseline Corr 3rd AF pt:	20.4	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	0.0	----
High point	4919	80.6	80.0	80.7	0.991
Mid point	4960	40.3	40.0	40.6	0.985
Low point	4980	20.2	20.0	20.3	0.987
As left zero	5000	0.0	0.0	0.1	----
As left span	4919	80.6	80.0	79.5	1.006
SO2 Scrubber Check	4982	81.3	802.8	-0.1	----
Date of last scrubber change:	25-May-23		Ave Corr Factor		0.988
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

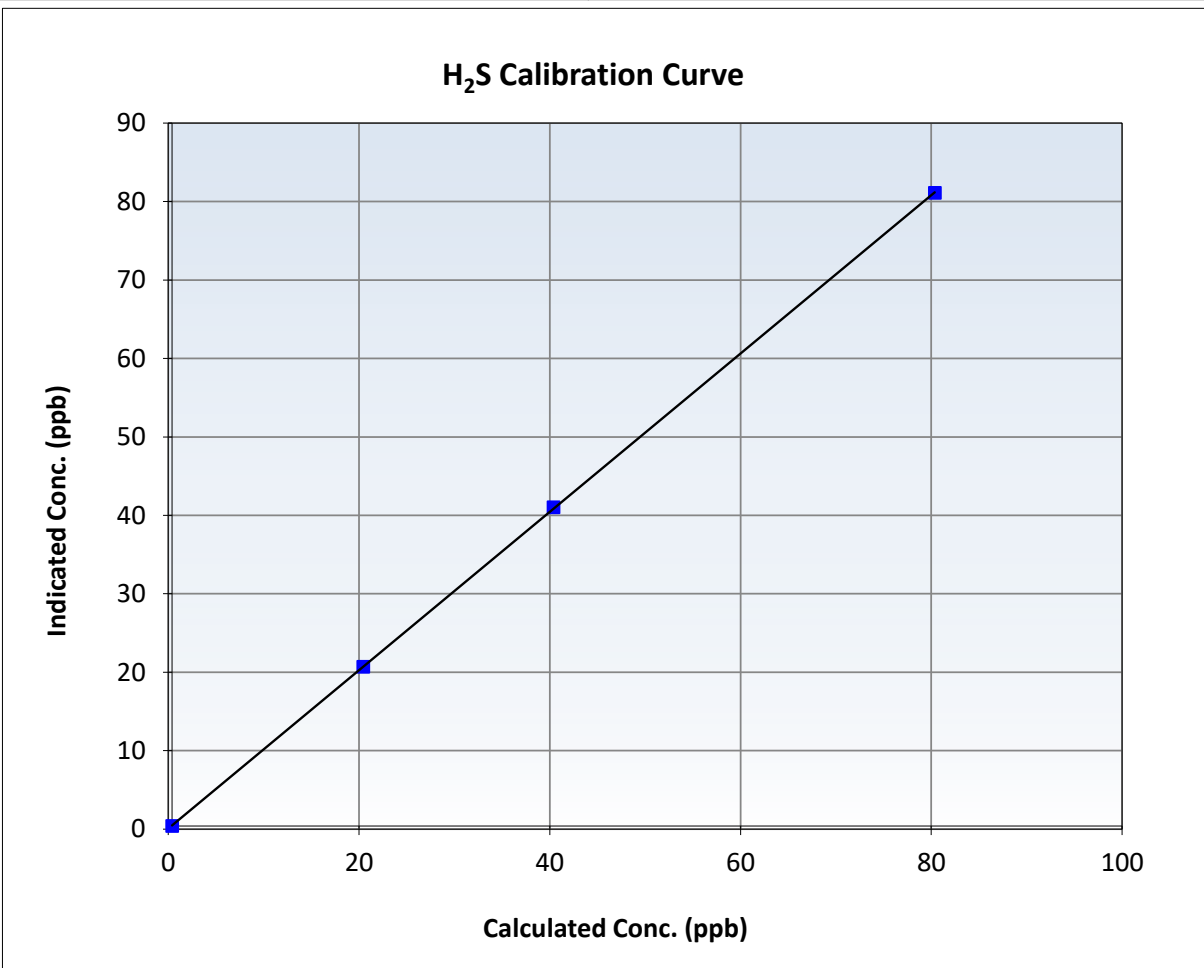
H₂S Calibration Summary

Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 20, 2026
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	8:10	End Time (MST):	12:21
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1236656117

Calibration Data

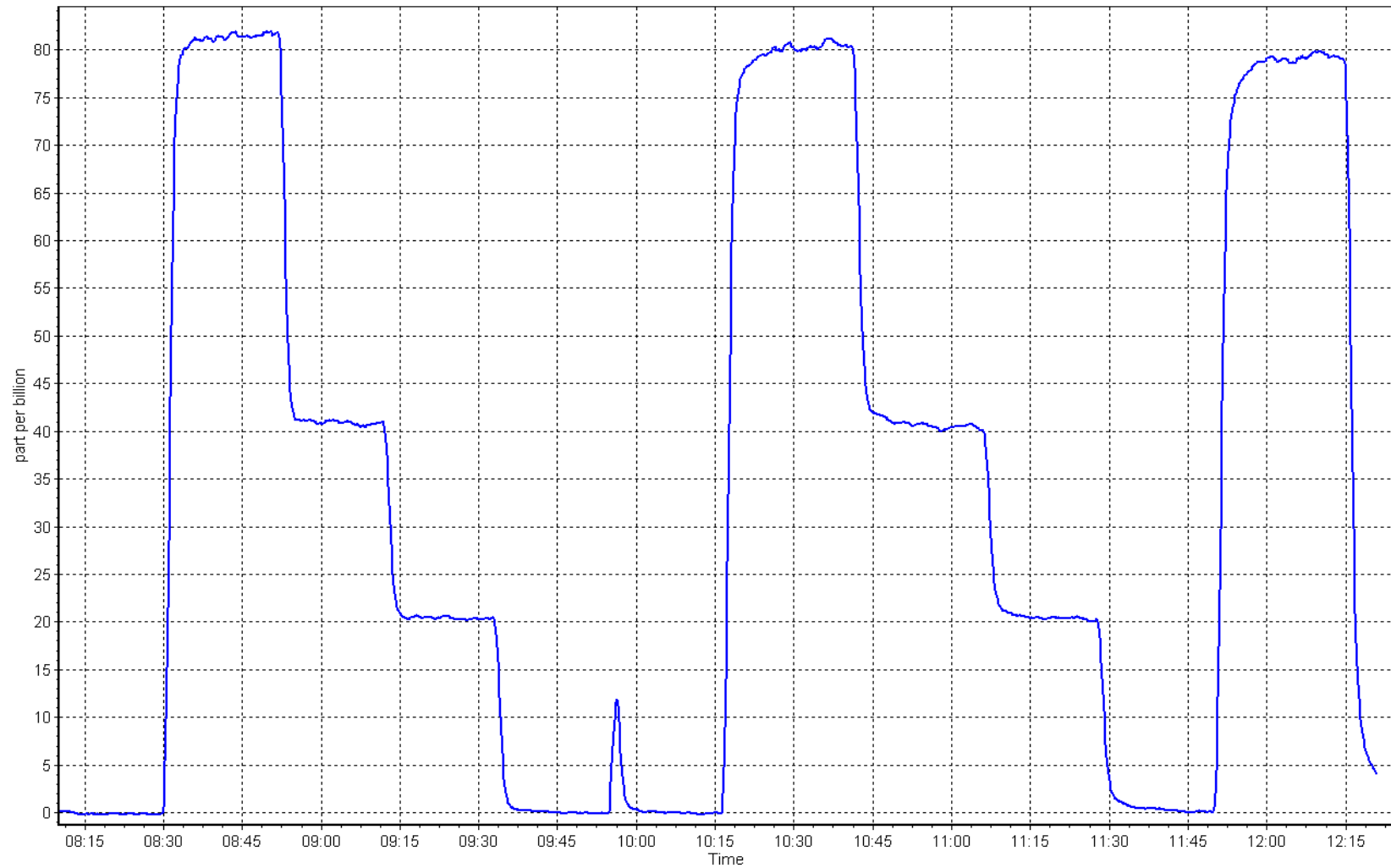
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999990	≥0.995
80.0	80.7	0.9909	Slope	1.009227	0.90 - 1.10
40.0	40.6	0.9853	Intercept	0.076081	+/-3
20.0	20.3	0.9871			



H₂S Calibration Plot

Date: August 11, 2026

Location: MacKay River





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: MacKay River
Calibration Date: August 20, 2026
Start time (MST): 10:13
Reason: Routine

Station number: AMS 20
Last Cal Date: July 2, 2026
End time (MST): 14:57

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:	0.999947	1.004804	Background:	2.880	2.62
Calibration intercept:	-0.107186	-0.032779	Coefficient:	4.410	4.285

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	-0.20	----
As found High point	4919	81.4	17.46	14.27	1.207
As found Mid point	4959	40.7	8.73	6.96	1.220
As found Low point	4980	20.3	4.35	3.36	1.225
New cylinder response					
Baseline Corr As found:	14.47	Previous response	17.35	*% change	-20.0%
Baseline Corr 2nd AF pt:	7.16	AF Slope:	0.828997	AF Intercept:	-0.237081
Baseline Corr 3rd AF pt:	3.56	AF Correlation:	0.999959	* = > +/-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	0.01	----
High point	4919	81.4	17.46	17.54	0.996
Mid point	4959	40.7	8.73	8.70	1.004
Low point	4980	20.3	4.35	4.32	1.008
As left zero	5000	0.0	0.00	-0.10	----
As left span	4919	81.4	17.46	17.54	0.996
Average Correction Factor					1.003

Notes: Maintenance completed, swapped weak internal pump. Adjusted span.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

THC Calibration Summary

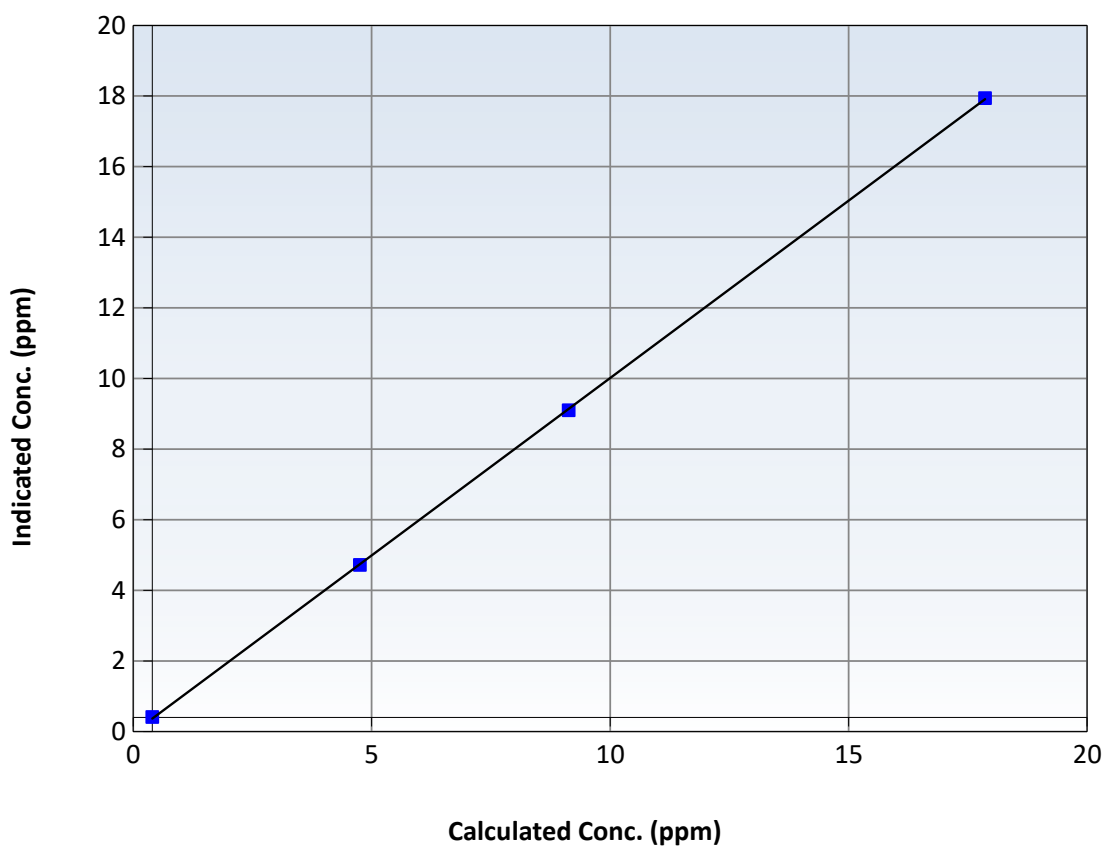
Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 2, 2026
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	10:13	End Time (MST):	14:57
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	0.01	----	Correlation Coefficient	0.999973	≥ 0.995
17.46	17.54	0.9956	Slope	1.004804	$0.90 - 1.10$
8.73	8.70	1.0037	Intercept	-0.032779	± 1.5
4.35	4.32	1.0083			

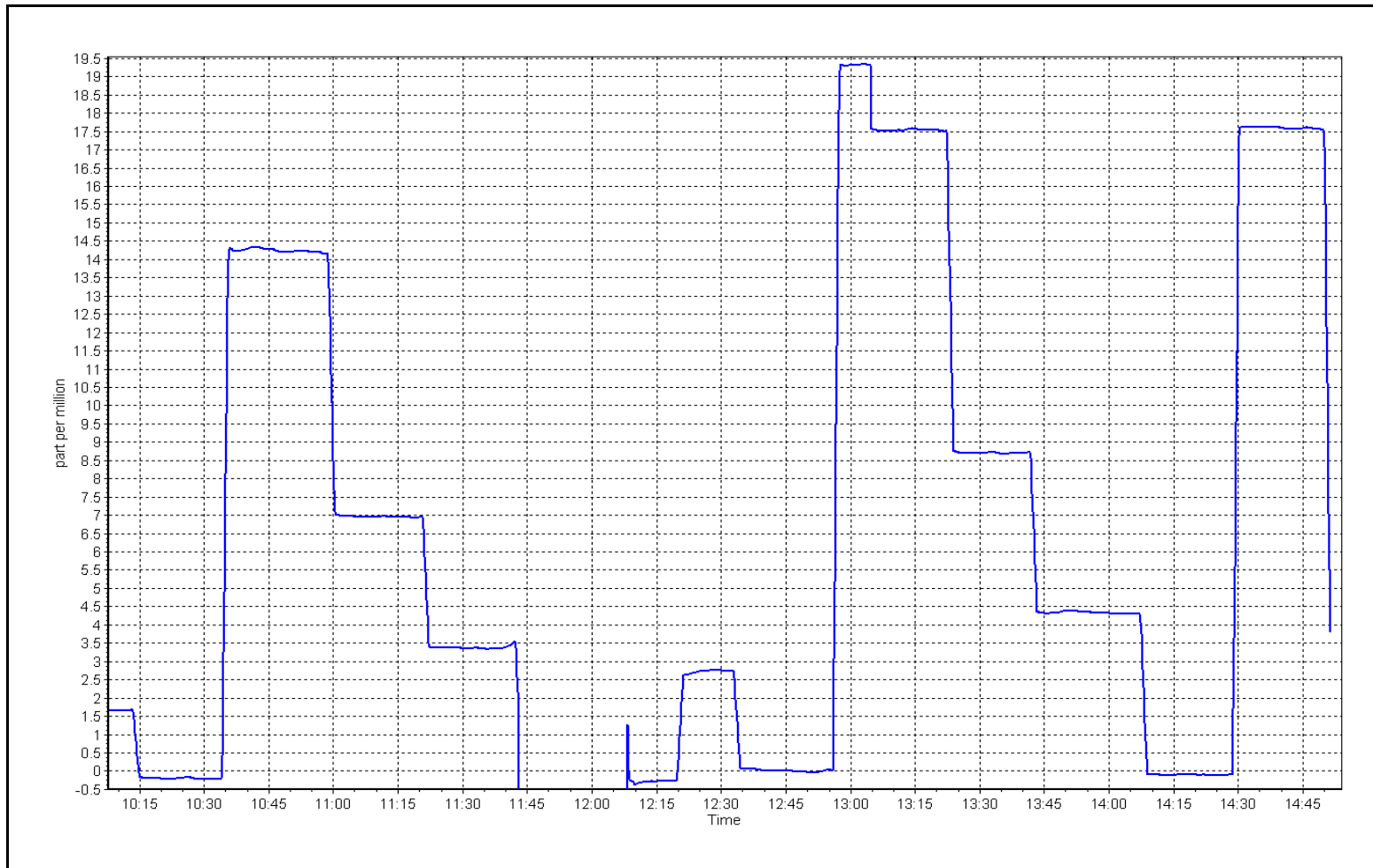
THC Calibration Curve



THC Calibration Plot

Date: August 20, 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: August 10, 2026
Last Cal Date: January 0, 1900
Start time (MST): 7:50
End time (MST): 12:12
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	807.3	804.1	3.2	0.9921	0.9947
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 807.0 ppb	NO = 804.3 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = 0.1%	
Baseline Corr 1st pt	NO _x = 807.5 ppb	NO = 804.1 ppb				<u>As Found Statistics</u>		*Percent Change	NO = 0.0%	
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	153.4

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.005949	1.005778
NO _x Cal Offset:	1.171032	1.031141
NO Cal Slope:	1.005957	1.006699
NO Cal Offset:	-0.287689	-0.547622
NO ₂ Cal Slope:	1.000714	1.001160
NO ₂ Cal Offset:	-0.612187	-0.534128

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	806.1	804.8	1.3	0.9938	0.9938
Mid point	4968	32.3	400.5	399.9	0.6	404.8	402.2	2.6	0.9894	0.9942
Low point	4984	16.2	200.9	200.5	0.3	203.8	200.2	3.6	0.9856	1.0017
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	436.1	365.0	803.8	436.1	367.8	0.9966	1.0000
Average Correction Factor									0.9896	0.9966

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	801.8	434.9	368.2	368.3	0.9997	100.0%
Mid GPT point	801.8	613.6	189.5	188.9	1.0031	99.7%
Low GPT point	801.8	705.4	97.7	97.0	1.0071	99.3%
Average Correction Factor					1.0033	99.7%

Notes: No Maintenance or adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

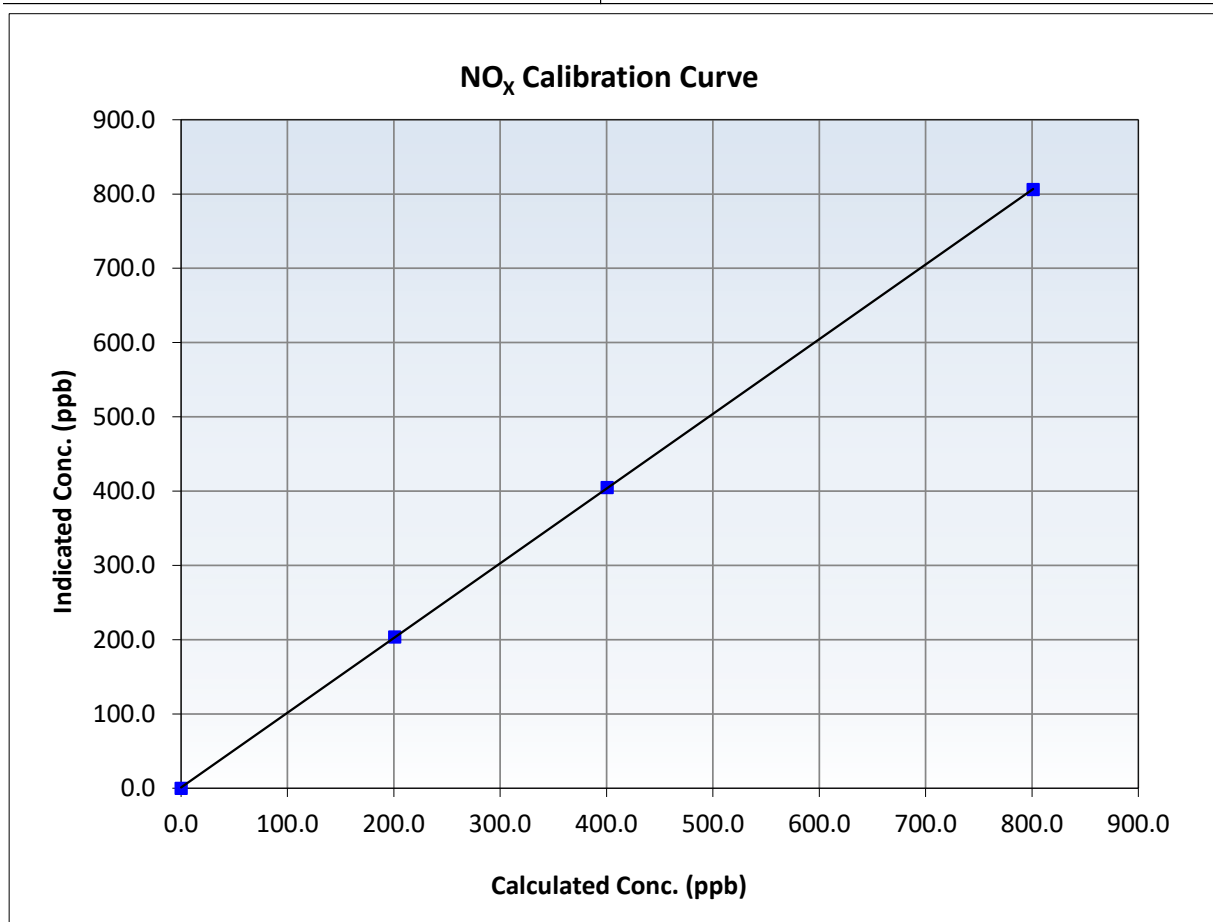
NO_x Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	January 0, 1900
Station Name:	Mackay River	Station Number:	AMS 20
Start Time (MST):	7:50	End Time (MST):	12:12
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	0.999992	≥0.995
801.1	806.1	0.9938	Slope	1.005778	0.90 - 1.10
400.5	404.8	0.9894	Intercept	1.031141	+/-20
200.9	203.8	0.9856			





Wood Buffalo Environmental Association

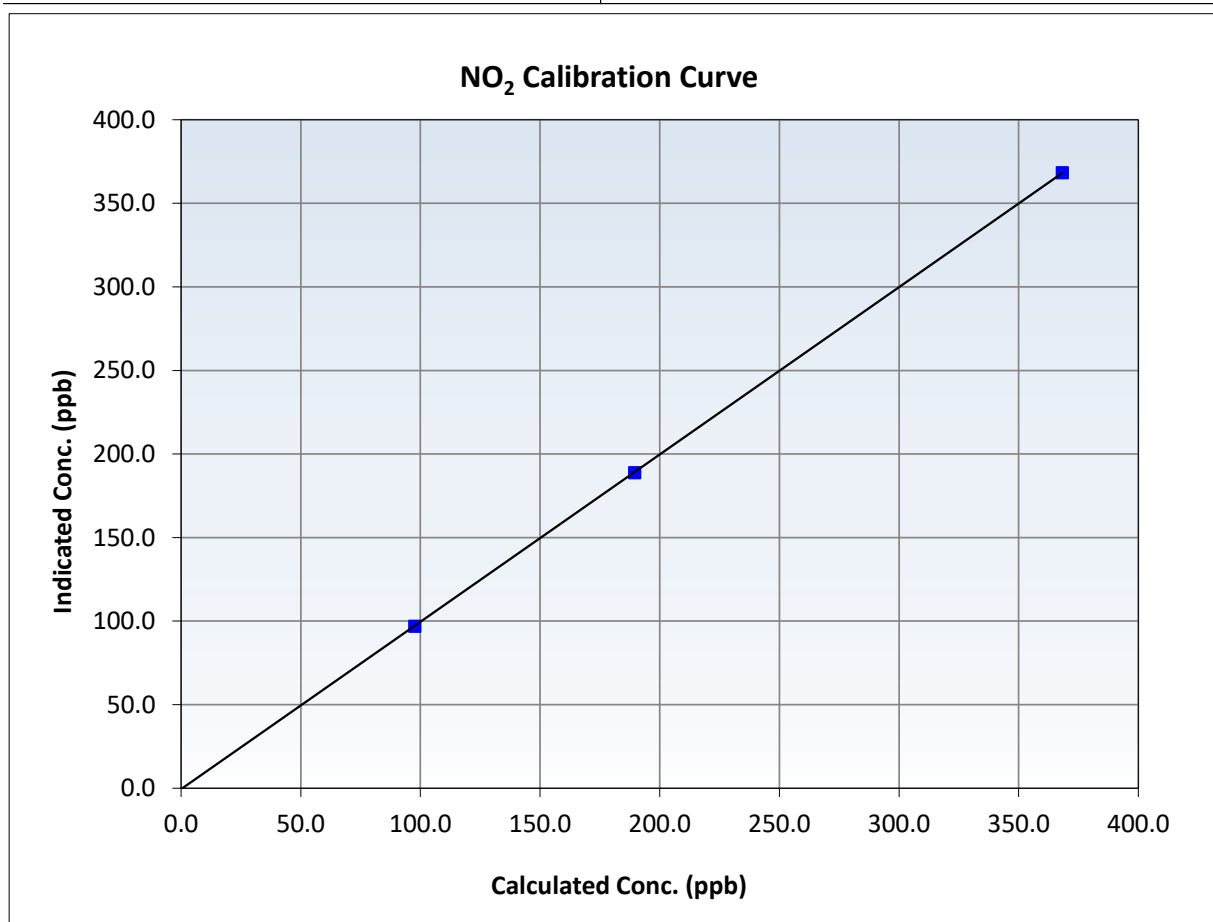
NO₂ Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	January 0, 1900
Station Name:	Mackay River	Station Number:	AMS 20
Start Time (MST):	7:50	End Time (MST):	12:12
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	0.999996	≥ 0.995
368.2	368.3	0.9997	Slope	1.001160	0.90 - 1.10
189.5	188.9	1.0031	Intercept	-0.534128	+/-20
97.7	97.0	1.0071			





Wood Buffalo Environmental Association

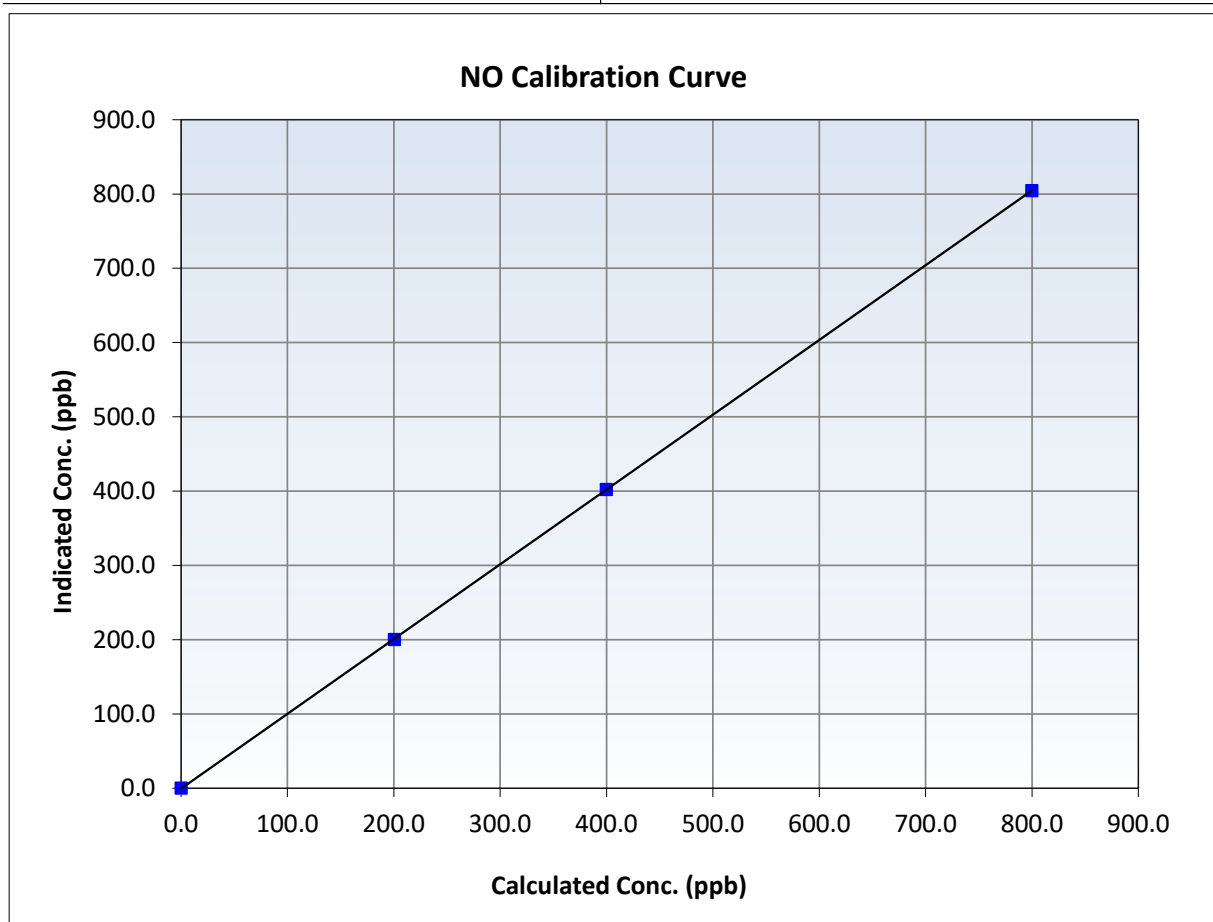
NO Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	January 0, 1900
Station Name:	Mackay River	Station Number:	AMS 20
Start Time (MST):	7:50	End Time (MST):	12:12
Analyzer make:	Thermo 42i	6:50:00 AM	1505164379

Calibration Data

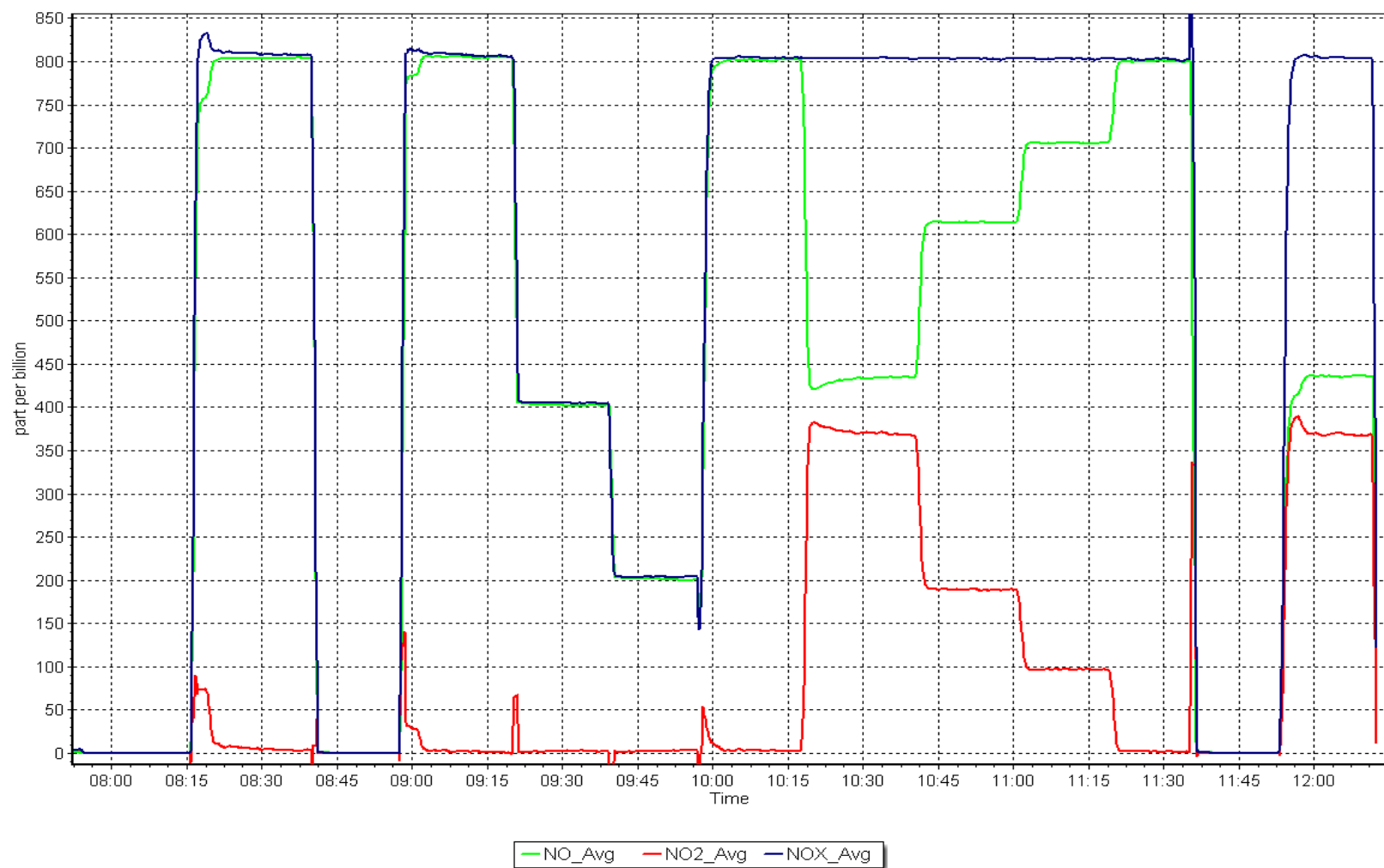
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999995	≥ 0.995
799.8	804.8	0.9938	Slope	1.006699	$0.90 - 1.10$
399.9	402.2	0.9942	Intercept	-0.547622	± 20
200.5	200.2	1.0017			



NO_x Calibration Plot

Date: August 10, 2026

Location: MacKay River





Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Mackay River	Station Number:	AMS 20
Calibration Date:	August 11, 2026	Prev Cal Date:	April 29, 2026
Start Time (MST):	7:33	End Time (MST):	8:10
Tower Height (m):	10m	Reason:	Removal

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	D16124
WS Calibrator:	MetOne 053	Serial Number:	R10866

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.4	0.1%
600	58.6	58.5	-0.1%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999998	0.999999	≥ 0.9995
Calculated slope	0.998443	0.999473	$0.98 - 1.02$
Calculated intercept	0.026636	0.026227	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	N9937
As Found Declination (deg east of True North):	<u>14</u>	As Left Declination (deg east of True North):	<u>14</u>
Solar noon (MST):	12:26:58	Calc Declination*:	13.89 Degrees
WD Calibrator:	Met One 040	* - calculated declination as per NOAA website	

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10		
90		
180		
270		
350		

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

Notes: WS removed due to flatlining

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name: MacKay River Station Number: AMS 20
Calibration Date: August 11, 2026 Prev Cal Date:
Start Time (MST): 7:33 End Time (MST): 8:10
Tower Height (m): 10m Reason: Install

Wind Speed Calibration

Sensor make/model: Met One 010C-1 Serial Number: B4128
WS Calibrator: MetOne 053 Serial Number: R10866

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.2	0.2%
400	39.4	39.4	0.1%
600	58.6	58.5	-0.1%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999999	≥ 0.9995
Calculated slope		0.999979	$0.98 - 1.02$
Calculated intercept		-0.013577	± 2

Wind Direction Calibration

Sensor make/model: Met One 020C-1 Serial Number: N9937
As Found Declination (deg east of True North): 14 As Left Declination (deg east of True North): 14
Solar noon (MST): 12:26:58 Calc Declination*: 13.89 Degrees
WD Calibrator: Met One 040
* - calculated declination as per NOAA website

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10		
90		
180		
270		
350		

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

Notes: WS installed due to old WS flat lining

Calibration Performed By: Melissa Lemay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS21
CONKLIN
AUGUST 2026**

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Conklin
Calibration Date: August 24, 2026
Start time (MST): 10:00
Reason: Routine

Station number: AMS 21
Last Cal Date: July 2, 2026
End time (MST): 13:16

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:	0.996733	1.002232	Backgd or Offset:	31.0	31.0
Calibration intercept:	2.118083	2.516641	Coeff or Slope:	0.887	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	804.1	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	804.2	Previous response	799.8	*% 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	0.1	----
High point	4921	79.5	800.3	804.0	0.995
Mid point	4960	39.8	400.7	403.6	0.993
Low point	4980	19.9	200.4	206.9	0.968
As left zero	5000	0.0	0.0	-0.3	----
As left span	4921	79.5	800.3	805.7	0.993
Average Correction Factor:					0.986

Notes: No adjustment needed.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

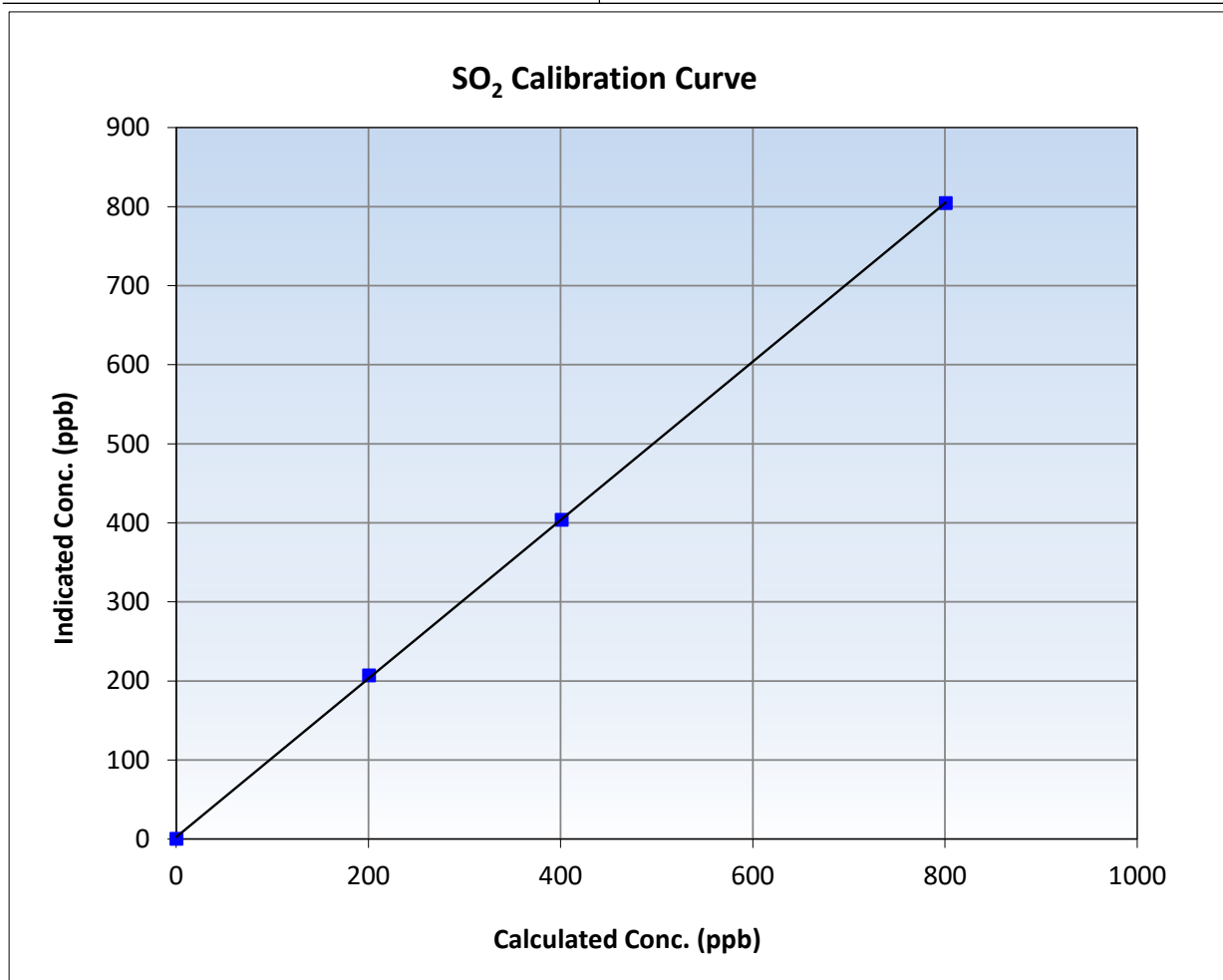
SO₂ Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 2, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:00	End Time (MST):	13:16
Analyzer make:	Thermo 43i	Analyzer serial #:	1428701363

Calibration Data

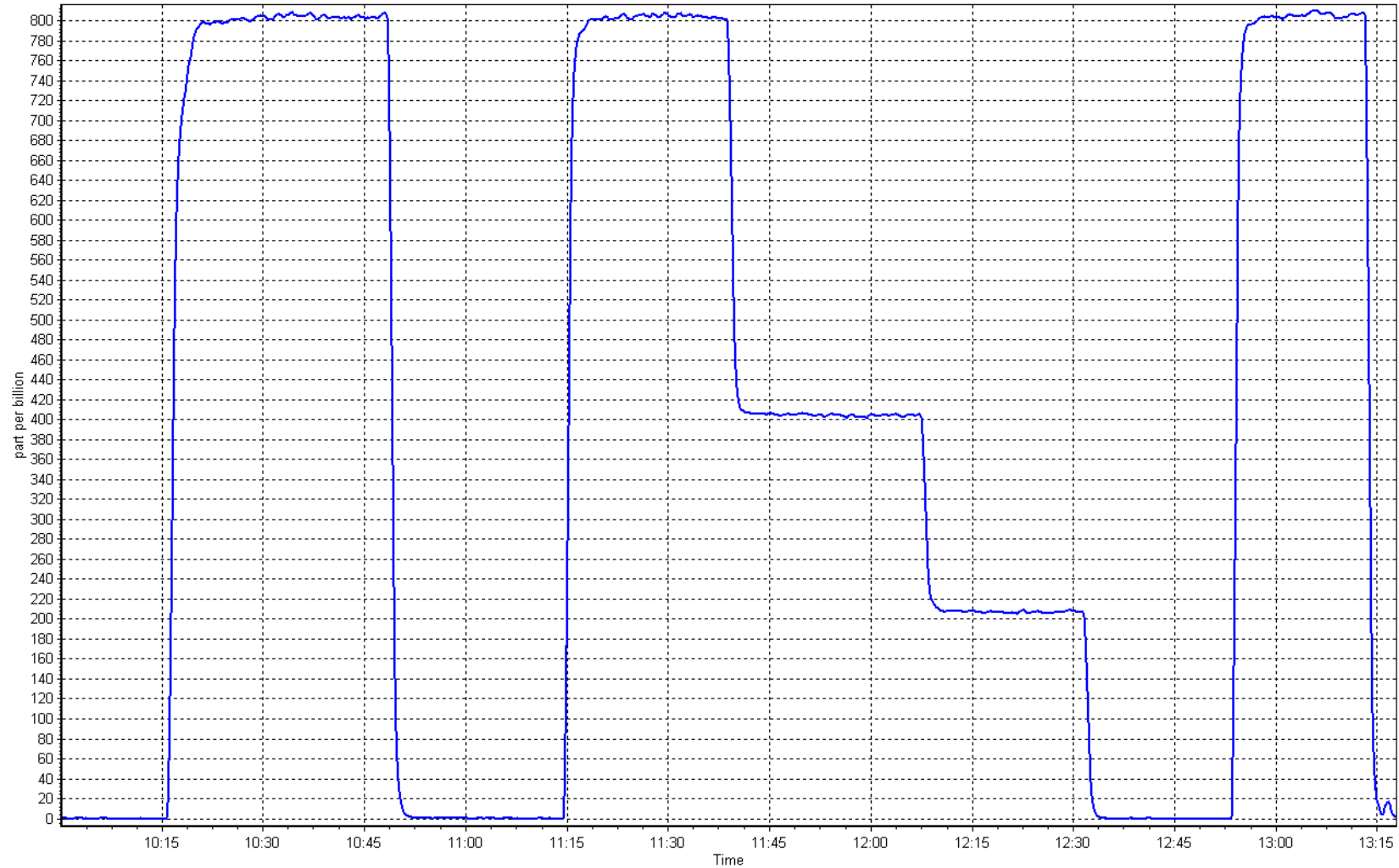
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999945	≥0.995
800.3	804.0	0.9954	Slope	1.002232	0.90 - 1.10
400.7	403.6	0.9929	Intercept	2.516641	+/-30
200.4	206.9	0.9684			



SO2 Calibration Plot

Date: August 24, 2026

Location: Conklin





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Conklin
Calibration Date: August 27, 2026
Start time (MST): 10:46
Reason: Routine

Station number: AMS 21
Last Cal Date: July 29, 2026
End time (MST): 15:54

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:	1.005865	1.007579	Backgd or Offset:	3.08	3.08
Calibration intercept:	0.180997	0.021006	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	40.5	0.982
As found Low point	4980	19.7	19.9	20.5	0.963
New cylinder response					
Baseline Corr As found:	80.5	Prev response:	80.70	*% change:	-0.2%
Baseline Corr 2nd AF pt:	40.7	AF Slope:	1.003579	AF Intercept:	0.160992
Baseline Corr 3rd AF pt:	20.7	AF Correlation:	0.999907	* = > +/-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	4921	79.1	80.0	80.6	0.993
Mid point	4961	39.5	40.0	40.3	0.992
Low point	4980	19.7	19.9	20.4	0.977
As left zero	5000	0.0	0.0	-0.1	----
As left span	4921	79.1	80.0	81.0	0.988
SO2 Scrubber Check	4921	79.5	794.9	0.1	----
Date of last scrubber change:	August 6, 2025			Ave Corr Factor	0.987
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

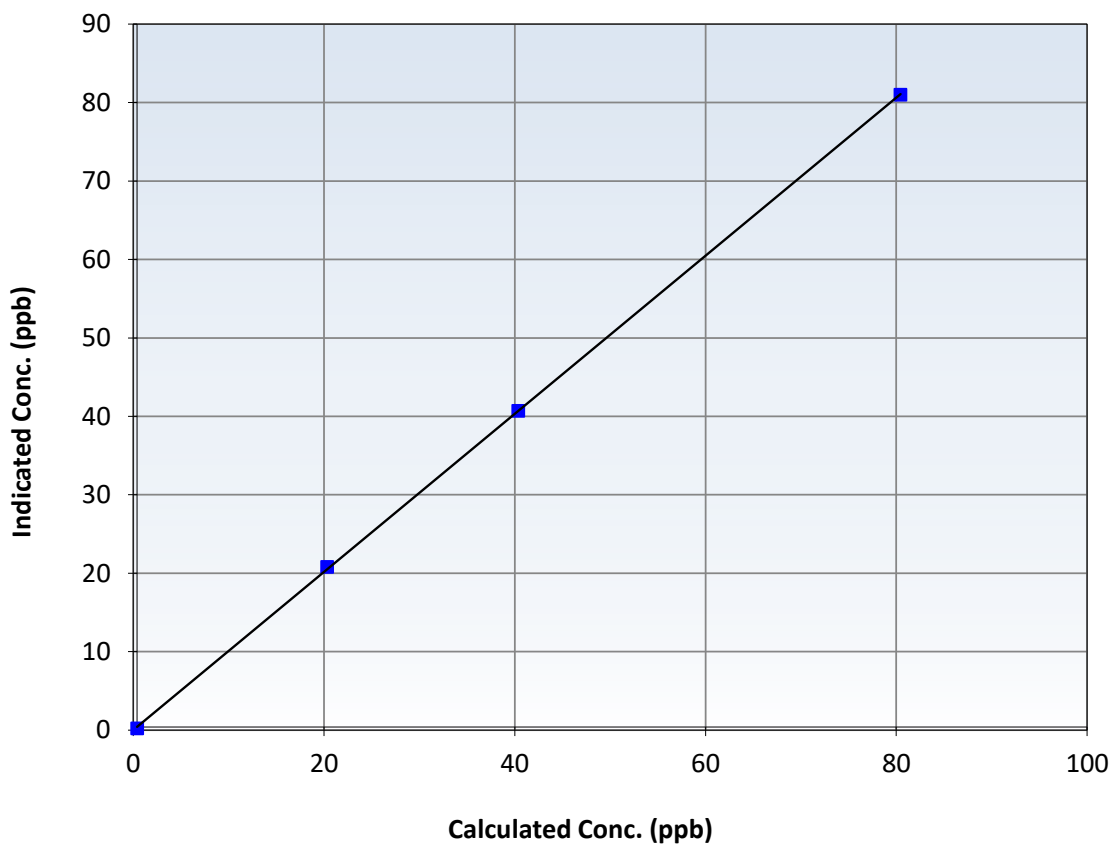
Station Information

Calibration Date:	August 27, 2026	Previous Calibration:	July 29, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:46	End Time (MST):	15:54
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	-0.2	----	Correlation Coefficient	0.999961		≥ 0.995
80.0	80.6	0.9931	Slope	1.007579		$0.90 - 1.10$
40.0	40.3	0.9918	Intercept	0.021006		± 3
19.9	20.4	0.9773				

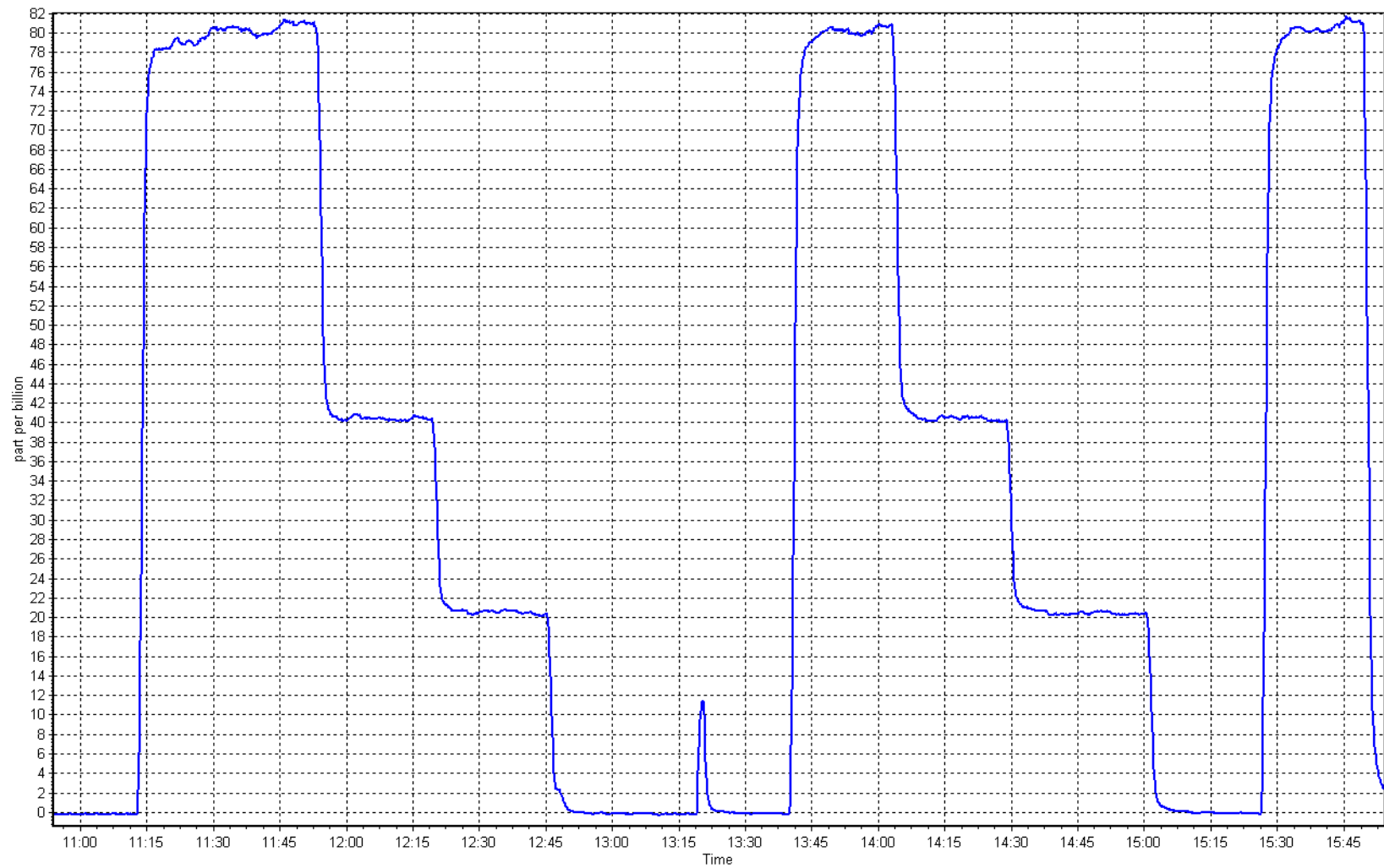
TRS Calibration Curve



TRS Calibration Plot

Date: August 27, 2026

Location: Conklin





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Conklin
 Calibration Date: August 24, 2026
 Start time (MST): 10:00
 Reason: Routine

Station number: AMS 21
 Last Cal Date: July 2, 2026
 End time (MST): 13:16

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	16.99	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.99	Prev response	17.04	*% change	-0.3%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	16.97	17.00	0.998
Mid point	4960	39.8	8.50	8.53	0.997
Low point	4980	19.9	4.25	4.34	0.978
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	16.97	16.98	0.999
Average Correction Factor					0.991

Notes:

No adjustment 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	79.5	8.96	8.98	0.998
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.98	Prev response	9.03	*% 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) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	8.96	8.98	0.998
Mid point	4960	39.8	4.49	4.49	1.000
Low point	4980	19.9	2.24	2.27	0.989
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.96	8.98	0.998
Average Correction Factor					0.996

CH₄ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero))
As found zero	5000	0.0	0.00	0.00	Limit = 0.90-1.10
As found High point	4921	79.5	8.01	8.01	1.000
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.01	Prev response	8.01	*% 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) Limit = 0.95-1.05
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	8.01	8.02	0.999
Mid point	4960	39.8	4.01	4.04	0.993
Low point	4980	19.9	2.01	2.07	0.967
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.01	8.00	1.001
Average Correction Factor					0.986

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.001037	0.999898
THC Cal Offset:	0.050467	0.037679
CH ₄ Cal Slope:	0.995959	0.998769
CH ₄ Cal Offset:	0.032373	0.030768
NMHC Cal Slope:	1.005307	1.000907
NMHC Cal Offset:	0.018894	0.006911

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

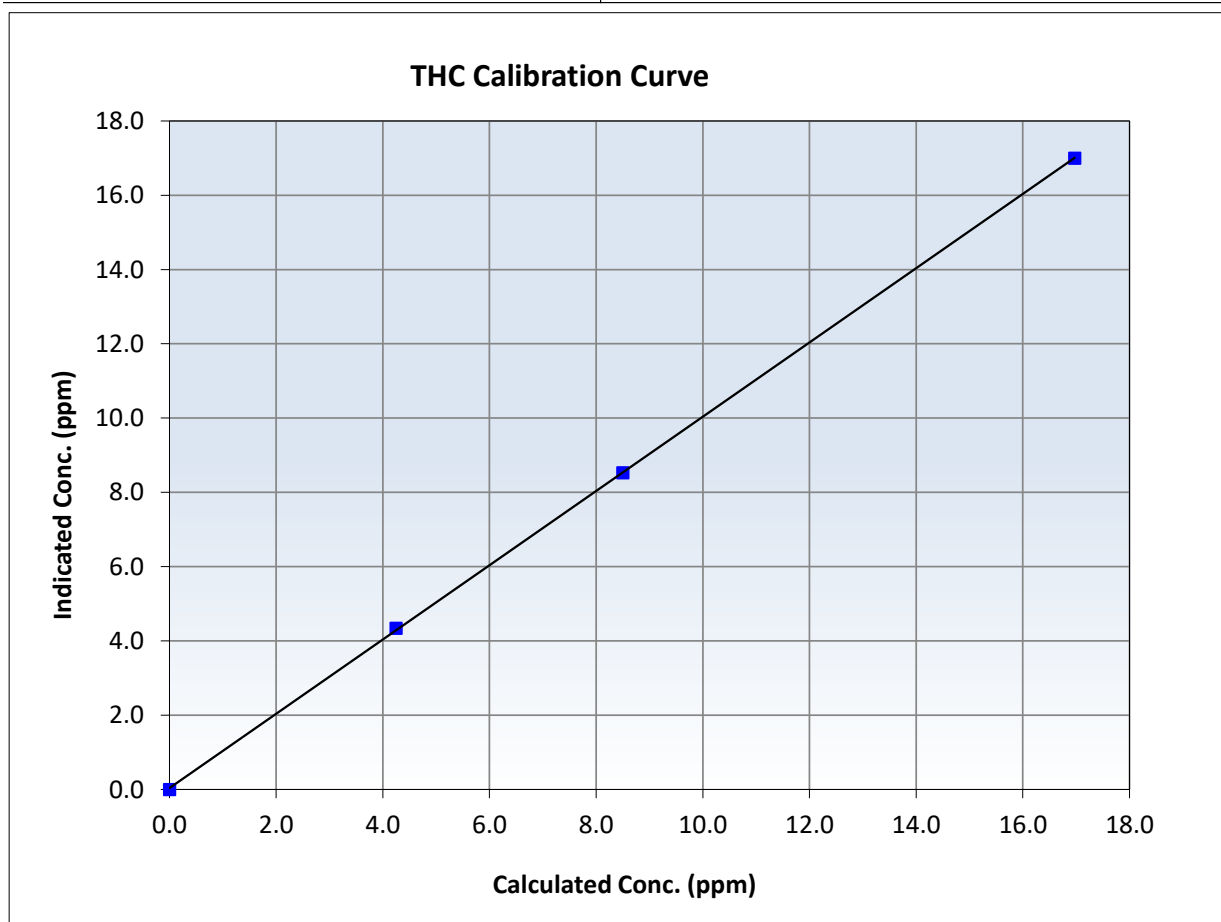
THC Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 2, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:00	End Time (MST):	13:16
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430011

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	0.999969	≥ 0.995
16.97	17.00	0.9984	Slope	0.999898	$0.90 - 1.10$
8.50	8.53	0.9968	Intercept	0.037679	± 0.5
4.25	4.34	0.9783			





Wood Buffalo Environmental Association

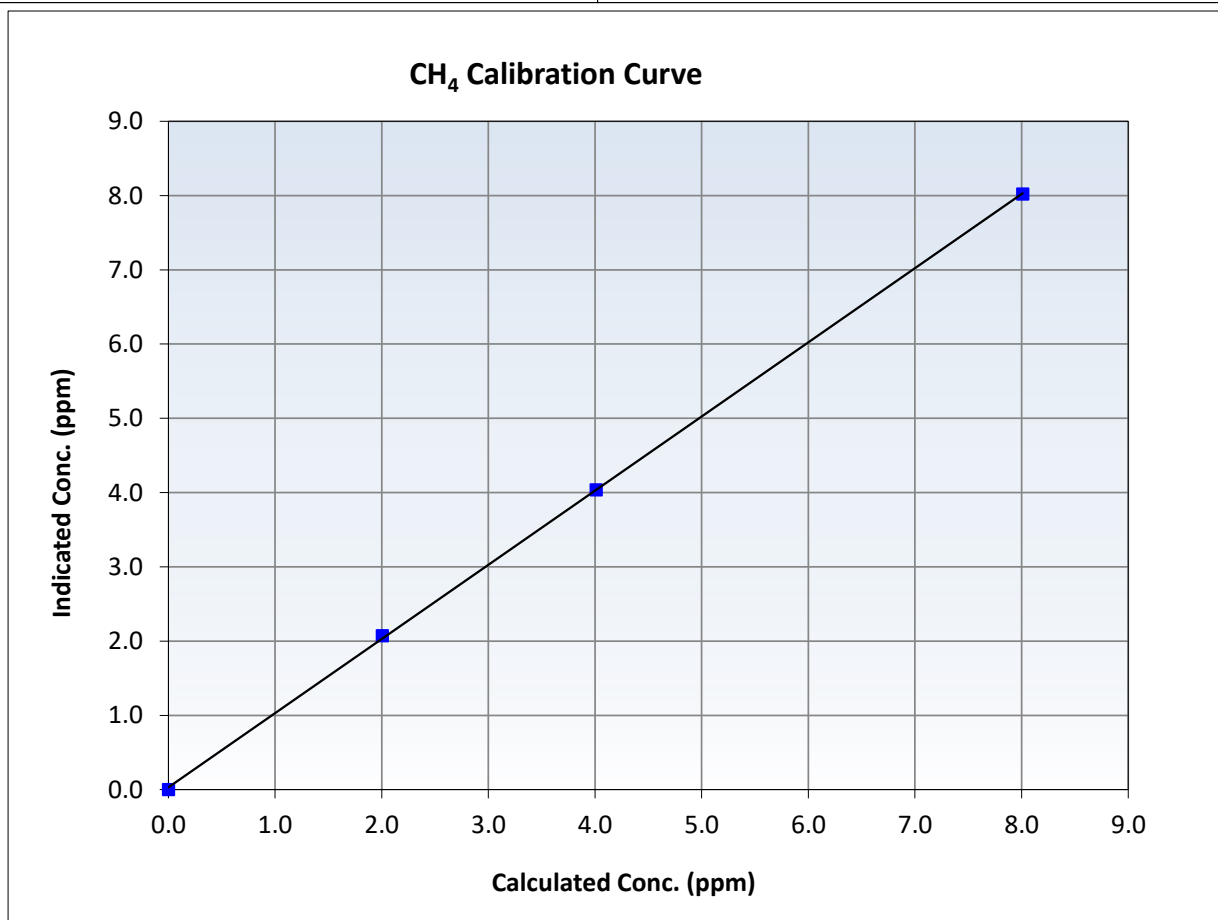
CH₄ Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 2, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:00	End Time (MST):	13:16
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	0.999923	<i>≥0.995</i>
8.01	8.02	0.9987	Slope	0.998769	<i>0.90 - 1.10</i>
4.01	4.04	0.9934	Intercept	0.030768	<i>+/-0.5</i>
2.01	2.07	0.9668			





Wood Buffalo Environmental Association

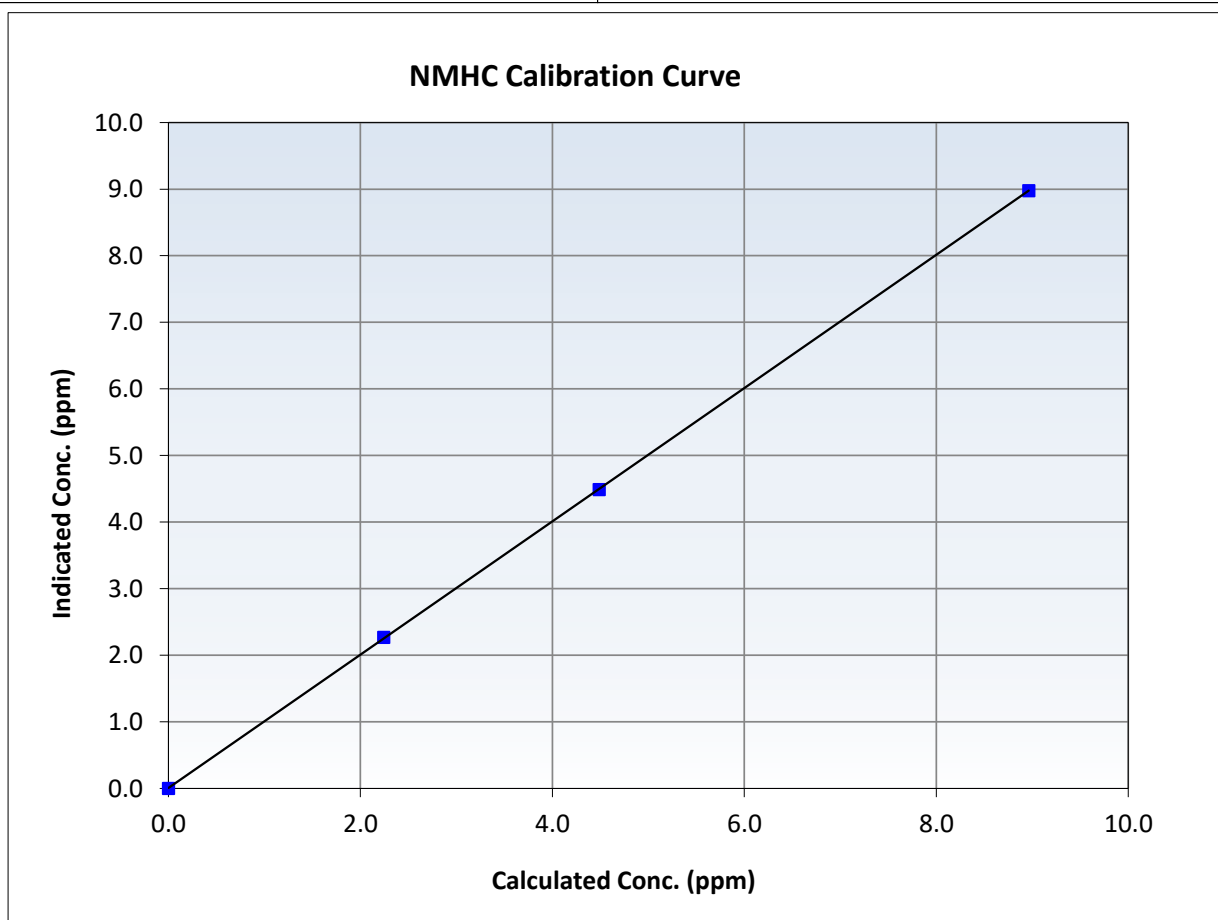
NMHC Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 2, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:00	End Time (MST):	13:16
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430011

Calibration Data

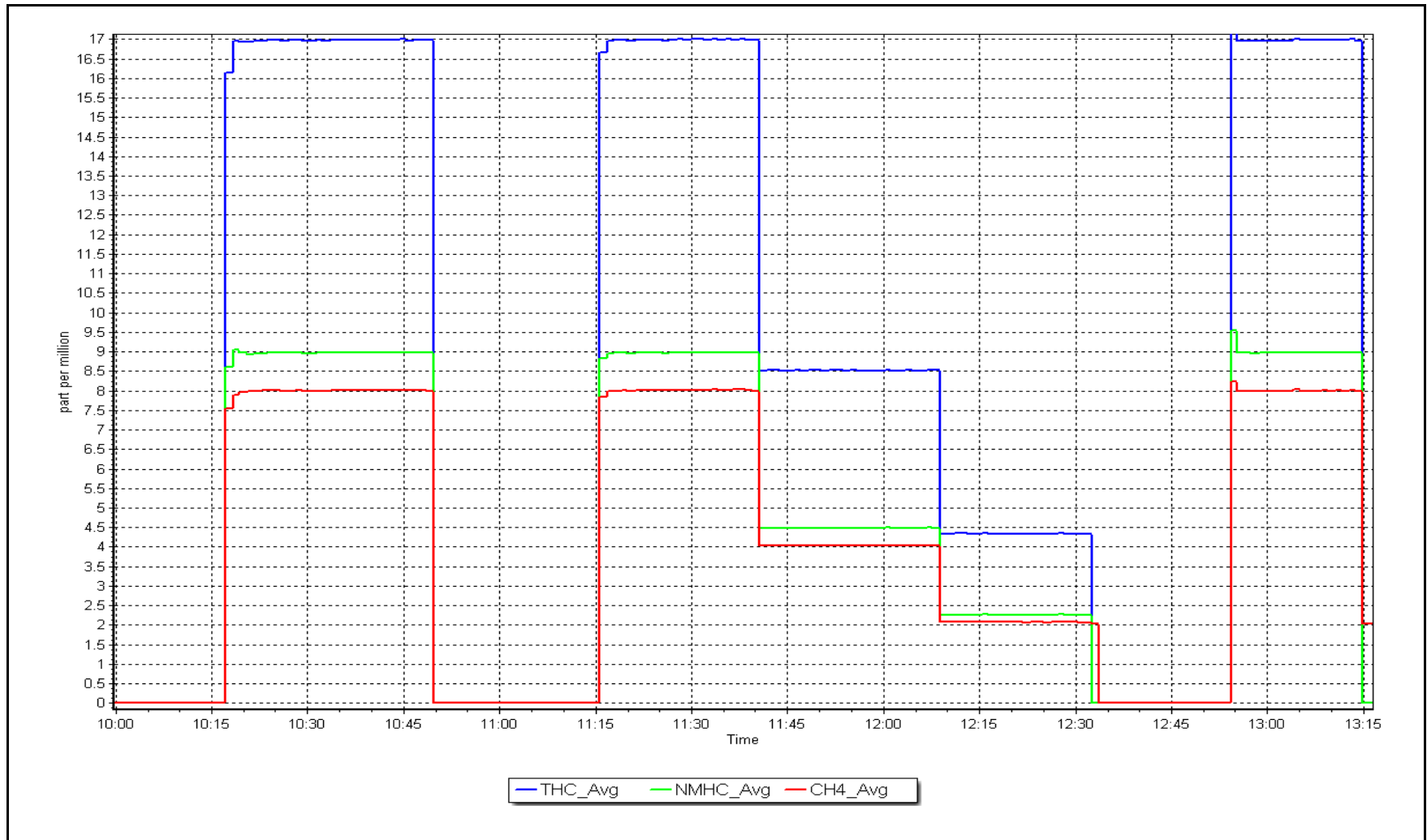
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999990	<i>≥0.995</i>
8.96	8.98	0.9982	Slope	1.000907	<i>0.90 - 1.10</i>
4.49	4.49	0.9999	Intercept	0.006911	<i>+/-0.5</i>
2.24	2.27	0.9889			



NMHC Calibration Plot

Date: August 24, 2026

Location: Conklin





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Conklin
Station number: AMS 21
Calibration Date: August 25, 2026
Last Cal Date: July 15, 2026
Start time (MST): 10:23
End time (MST): 15:50
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	0.2	-0.1	----	----
AF High point	4918	82.0	802.0	800.3	1.6	804.7	802.9	1.8	0.9968	0.9970
AF Mid point										
AF Low point										
New cyl resp										

Previous Response NO_x = 802.3 ppb NO = 802.0 ppb
Baseline Corr 1st pt NO_x = 804.5 ppb NO = 802.7 ppb
Baseline Corr 2nd pt NO_x = NA ppb NO = NA ppb
Baseline Corr 3rd pt NO_x = NA ppb NO = NA ppb

* = > +/-5% change initiates investigation

*Percent Change NO_x = 0.3%

*Percent Change NO = 0.1%

As Found Statistics

As found NO_x r²:
As found NO r²:
As found NO₂ r²:
Nx SI:
NO SI:
NO₂ SI:
Nx Int:
NO Int:
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: 1218153356

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.616	0.613	NO bkgnd or offset:	2.9	2.9
NOX coeff or slope:	0.994	0.997	NOX bkgnd or offset:	3.0	3.0
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	164.1	166.5

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.996151	0.997561
NO _x Cal Offset:	3.448065	3.828075
NO Cal Slope:	0.999620	0.997507
NO Cal Offset:	1.948043	2.188029
NO ₂ Cal Slope:	0.995798	0.998944
NO ₂ Cal Offset:	-0.445542	0.859911

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	0.3	0.0	----	----
High point	4918	82.0	802.0	800.3	1.6	802.2	799.8	2.5	0.9997	1.0007
Mid point	4959	41.0	401.0	400.2	0.8	405.2	401.6	3.5	0.9896	0.9964
Low point	4980	20.5	200.5	200.1	0.4	207.6	204.1	3.5	0.9657	0.9802
As left zero	5000	0.0	0.0	0.0	0.0	0.3	0.3	0.0	----	----
As left span	4918	82.0	802.0	392.0	410.0	803.4	392.0	411.4	0.9982	1.0000
Average Correction Factor									0.9850	0.9924

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	798.9	391.4	409.1	409.0	1.0003	100.0%
Mid GPT point	798.9	593.5	207.0	208.5	0.9930	100.7%
Low GPT point	798.9	697.4	103.1	104.5	0.9870	101.3%
Average Correction Factor					0.9934	100.7%

Notes:

Span adjusted.

Calibration Performed By:

Aswin Sasi Kumar



Wood Buffalo Environmental Association

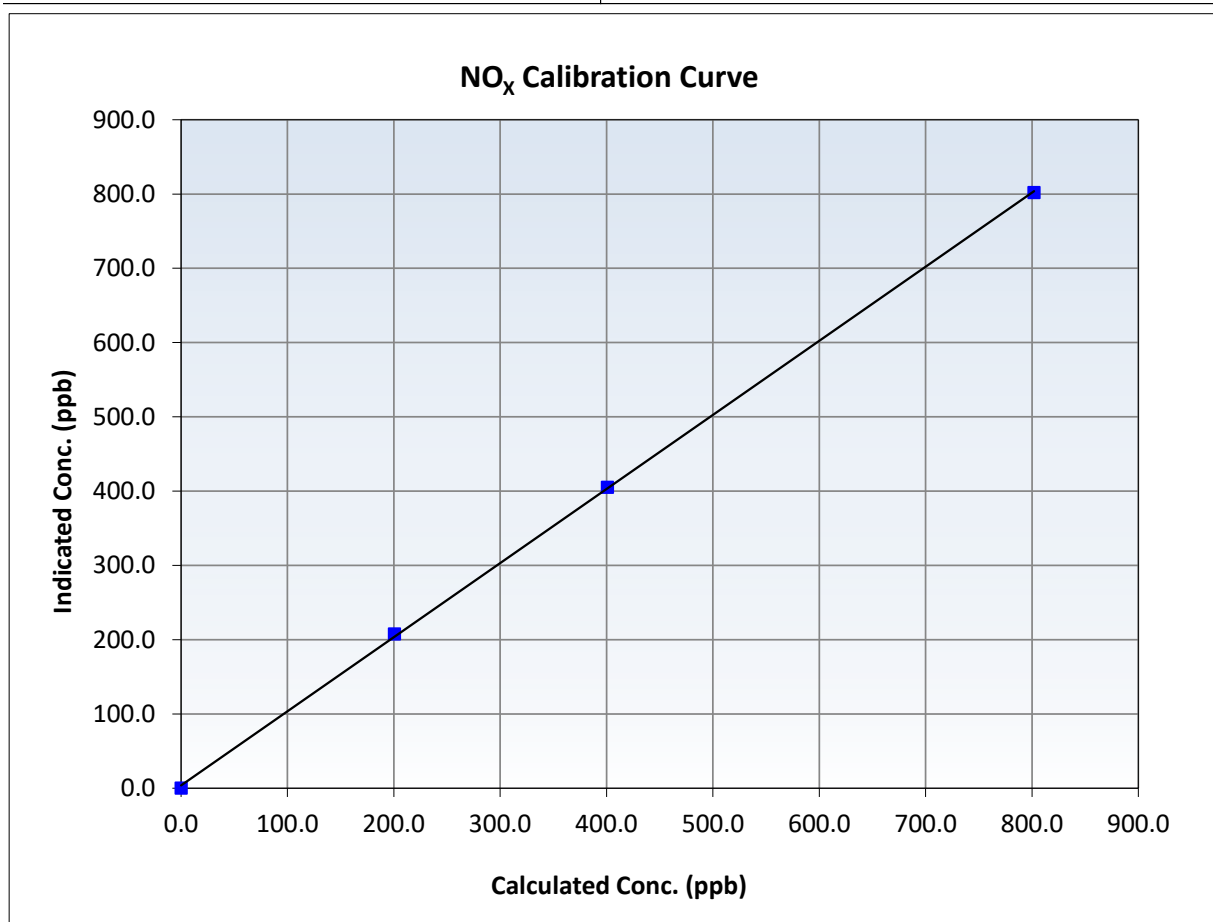
NO_x Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 15, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:23	End Time (MST):	15:50
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153356

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	0.999910	<i>≥0.995</i>
802.0	802.2	0.9997	Slope	0.997561	<i>0.90 - 1.10</i>
401.0	405.2	0.9896	Intercept	3.828075	<i>+/-20</i>
200.5	207.6	0.9657			





Wood Buffalo Environmental Association

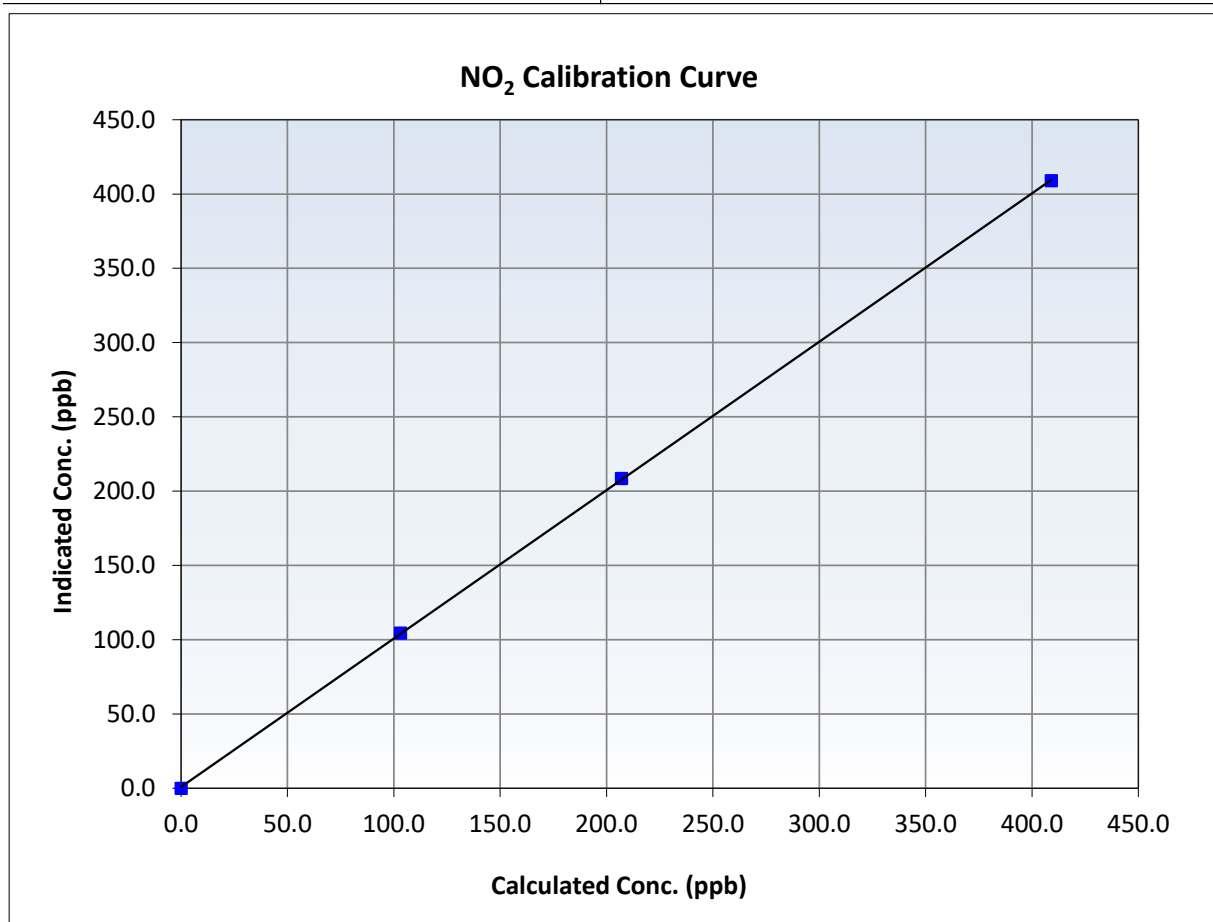
NO₂ Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 15, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:23	End Time (MST):	15:50
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	0.0	----	Correlation Coefficient	0.999977	≥0.995
409.1	409.0	1.0003	Slope	0.998944	0.90 - 1.10
207.0	208.5	0.9930	Intercept	0.859911	+/-20
103.1	104.5	0.9870			





Wood Buffalo Environmental Association

NO Calibration Summary

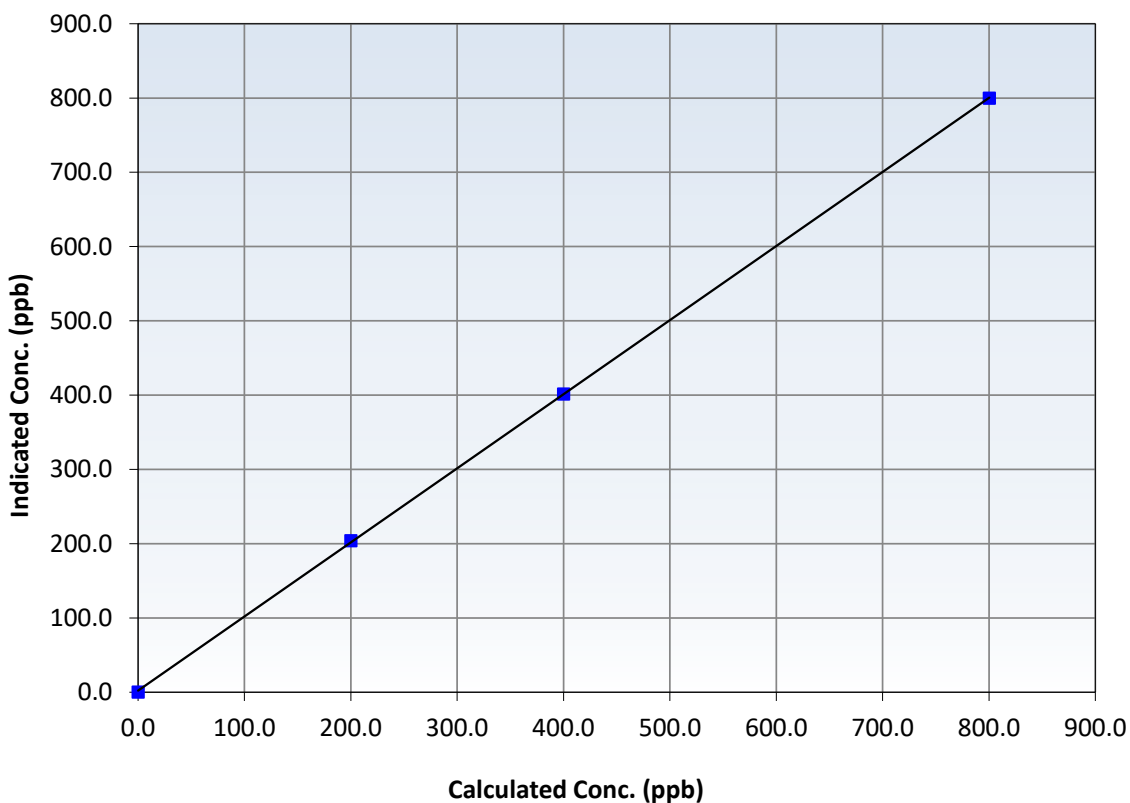
Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 15, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:23	End Time (MST):	15:50
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	0.999972	≥ 0.995
800.3	799.8	1.0007	Slope	0.997507	$0.90 - 1.10$
400.2	401.6	0.9964	Intercept	2.188029	± 20
200.1	204.1	0.9802			

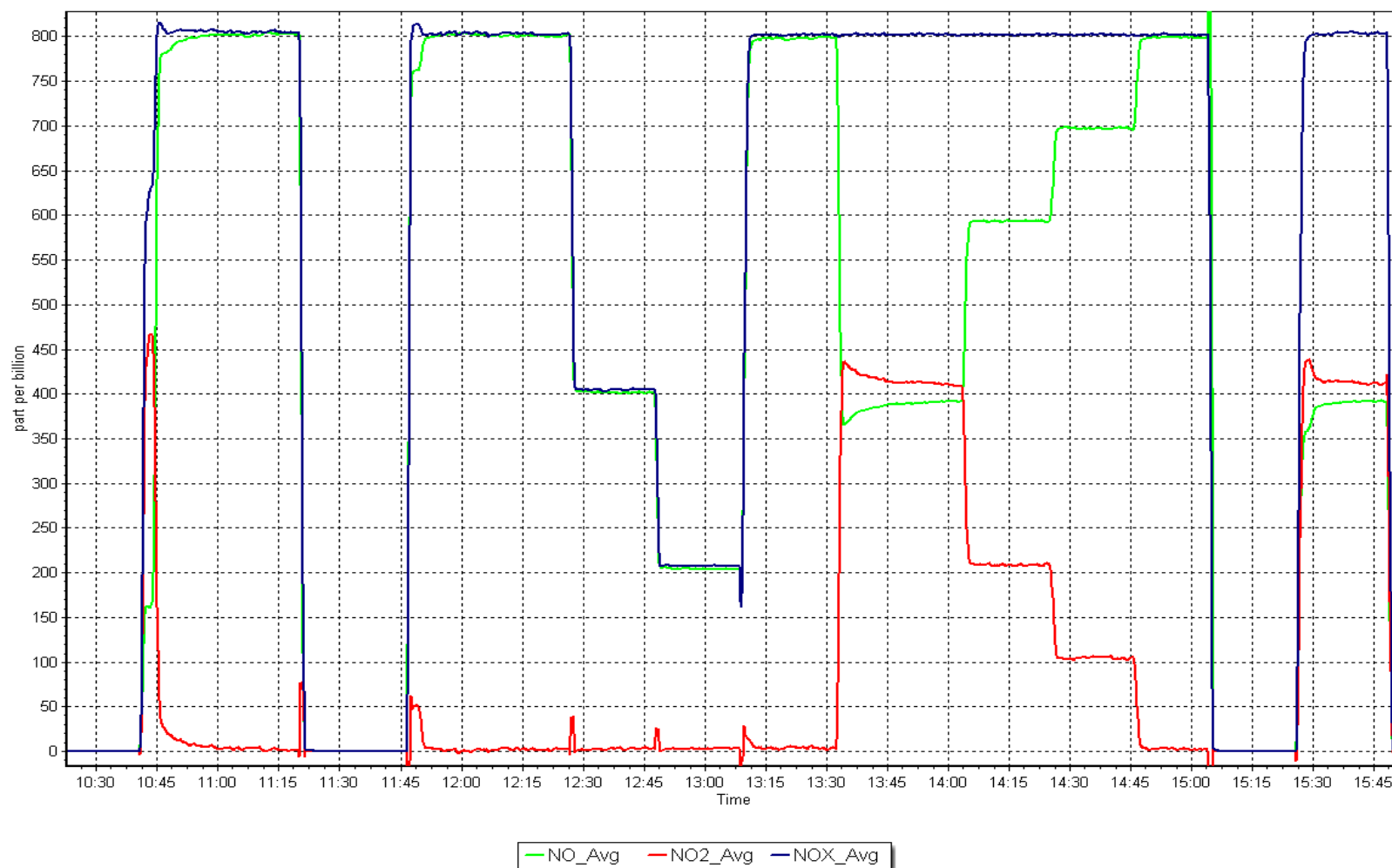
NO Calibration Curve



NO_x Calibration Plot

Date: August 25, 2026

Location: Conklin





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Conklin
Calibration Date: August 6, 2026
Start time (MST): 10:35
Reason: Routine

Station number: AMS 21
Last Cal Date: July 20, 2026
End time (MST): 13:45

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:	1.001514	0.999629	Backgd or Offset:	0.2	0.2
Calibration intercept:	0.160000	0.640000	Coeff or Slope:	1.213	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	-0.9	----
As found High point	5000	1036.7	400.0	396.3	1.007
As found Mid point					
As found Low point					
Baseline Corr As found:	397.2	Previous response	400.8	*% 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	800.0	0.0	-0.1	----
High point	5000	1037.8	400.0	400.1	1.000
Mid point	5000	865.1	200.0	201.0	0.995
Low point	5000	748.0	100.0	101.3	0.987
As left zero	5000	800.0	0.0	-0.1	----
As left span	5000	1028.2	400.0	403.8	0.991
Average Correction Factor					0.994

Notes: No adjustments performed.

Calibration Performed By: Aswin Sasi Kumar



Wood Buffalo Environmental Association

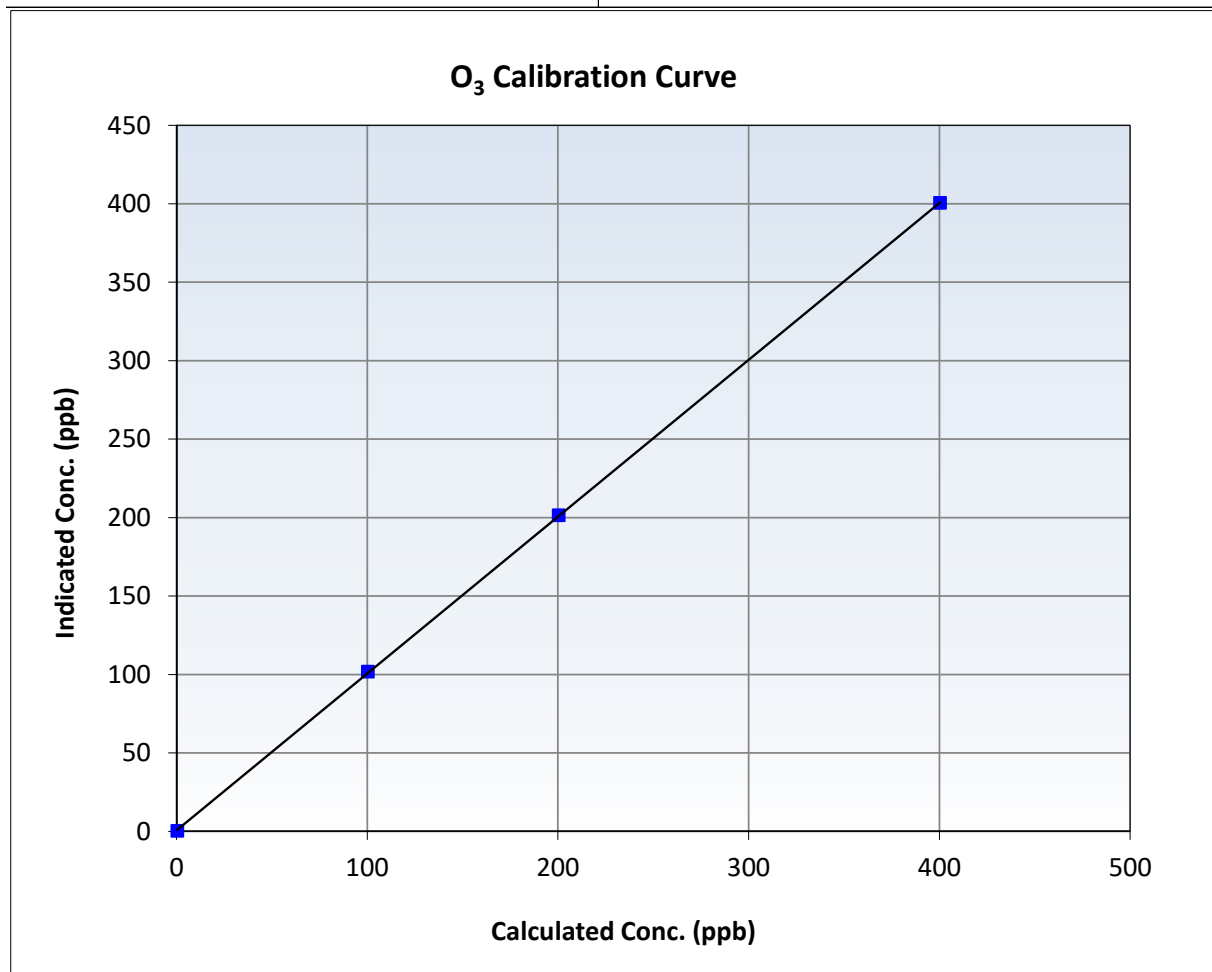
O₃ Calibration Summary

Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 20, 2026
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:35	End Time (MST):	13:45
Analyzer make:	Thermo 49i	Analyzer serial #:	1300156233

Calibration Data

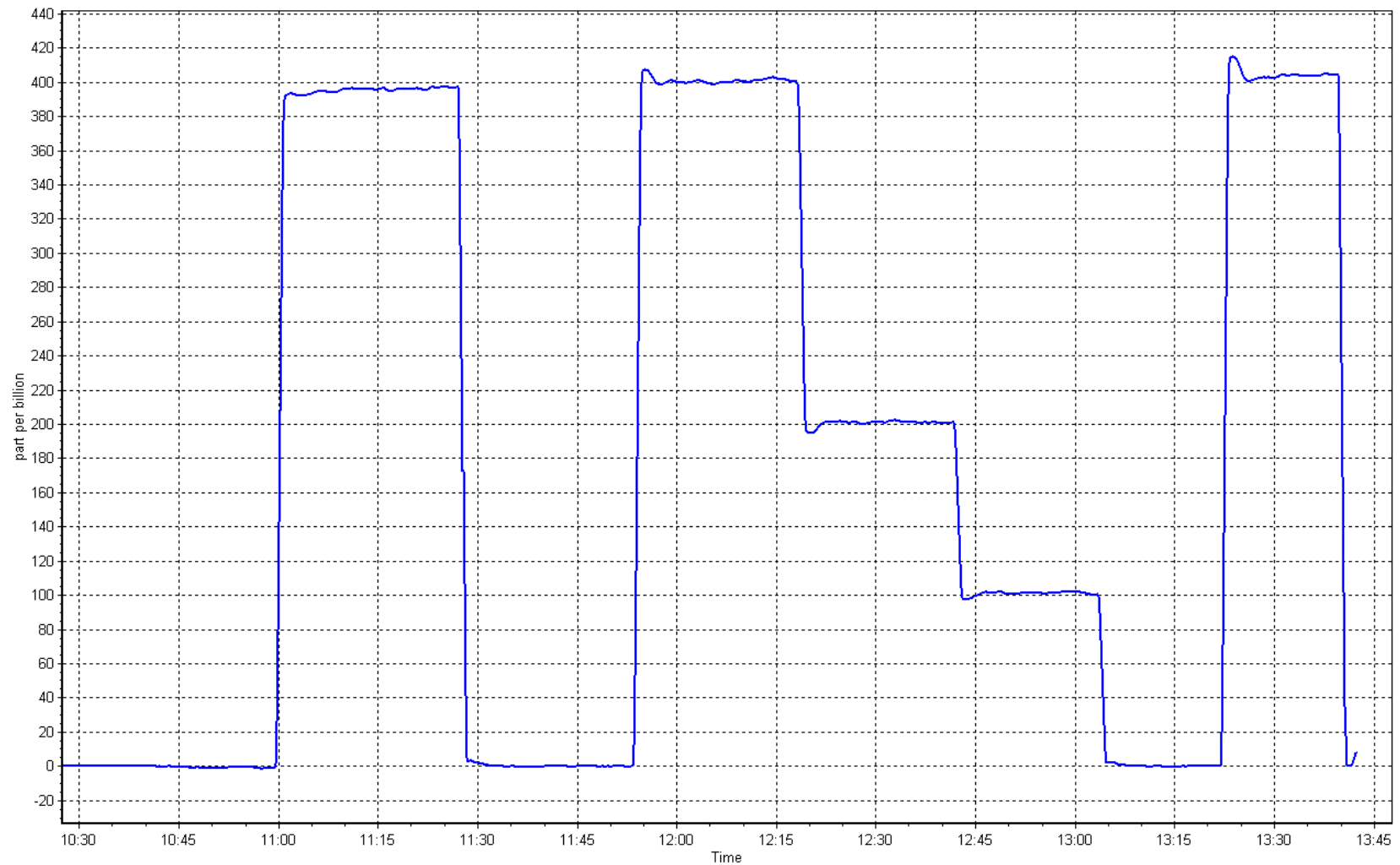
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999984	≥0.995
400.0	400.1	0.9998	Slope	0.999629	0.90 - 1.10
200.0	201.0	0.9950	Intercept	0.640000	+/- 5
100.0	101.3	0.9872			



O₃ Calibration Plot

Date: August 6, 2026

Location: Conklin





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Conklin
Calibration Date: August 27, 2026
Start time (MST): 14:53
Station number: AMS 21
Last Cal Date: July 29, 2026
End time (MST): 15:40
Analyzer Make: API T640
Particulate Fraction: PM2.5
S/N: 1266
Flow Meter Make/Model: Alicat FP-25BT
Temp/RH standard: Alicat FP-25BT
S/N: 388748
S/N: 388748

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	29.50	29.50	29.50	☐	+/- 2 °C
P (mmHg)	703.60	704.50	703.60	☐	+/- 10 mmHg
Flow (LPM)	4.97	4.85	4.97	☐	+/- 0.25 LPM
PW% (pump)	45	----	45	☐	>80%
Zero Verification	PM w/o HEPA: 11.60		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: 10.90 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

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Conklin	Station Number:	AMS 21
Calibration Date:	August 17, 2026	Prev Cal Date:	September 16, 2025
Start Time (MST):	11:45	End Time (MST):	12:20
Tower Height (m):	10.0	Reason:	Removal

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	G3211
WS Calibrator:	MetOne 053	Serial Number:	CA05230

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.4	0.1%
600	58.6	58.5	0.0%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999999	≥ 0.9995
Calculated slope		0.998909	$0.98 - 1.02$
Calculated intercept		0.030357	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	G3858
As Found Declination (deg east of True North):	<u>NA</u>	As Left Declination (deg east of True North):	<u>13</u>
Solar noon (MST):	13:19	Calc Declination*:	12.86 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	7.2	-0.8%
90	88.9	-0.3%
180	182.8	0.8%
270	275.4	1.5%
355	359.0	1.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999951	≥ 0.9995
Calculated slope		0.977281	$0.97 - 1.03$
Calculated intercept		2.482047	± 5

Notes: WS and WD sensors removed. WS maxing out periodically and WD potentiometer was >1% out at 270 and 355 degrees. Confirmed true north alignment using a compass.

Calibration Performed By: Devin Russell



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Conklin	Station Number:	AMS 21
Calibration Date:	August 17, 2026	Prev Cal Date:	NA
Start Time (MST):	12:20	End Time (MST):	12:50
Tower Height (m):	10.0	Reason:	Install

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	P22393
WS Calibrator:	MetOne 053	Serial Number:	CA05230

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.4	0.1%
600	58.6	58.5	0.0%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999999	≥ 0.9995
Calculated slope		0.998909	$0.98 - 1.02$
Calculated intercept		0.030357	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	P22886
As Found Declination (deg east of True North):	<u>NA</u>	As Left Declination (deg east of True North):	<u>13</u>
Solar noon (MST):	13:19	Calc Declination*:	12.86 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	9.6	-0.1%
90	90.7	0.2%
180	179.9	0.0%
270	270.9	0.2%
355	357.1	0.6%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999992	≥ 0.9995
Calculated slope		0.994039	$0.97 - 1.03$
Calculated intercept		0.448629	± 5

Notes: WS and WD installation. Previous sensors removed because of sensor issues. True north alignment confirmed using compass.

Calibration Performed By: Devin Russell



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS22
JANVIER
AUGUST 2026**

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Janvier
Calibration Date: August 24, 2026
Start time (MST): 9:50
Reason: Routine

Station number: AMS 22
Last Cal Date: July 3, 2026
End time (MST): 12:47

Calibration Standards

Cal Gas Concentration: 49.82 ppm
Cal Gas Cylinder #: CC494522
Removed Cal Gas Conc: 49.82 ppm
Removed Gas Cyl #: NA
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API T701H

Cal Gas Exp Date: April 9, 2033
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3806
Serial Number: 363

Analyzer Information

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

Serial Number: 1152430006

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001405	0.999863	Backgd or Offset:	27.8	27.8
Calibration intercept:	0.715334	1.255438	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	797.7	1.003
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	797.8	Previous response	801.9	*% change	-0.5%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4920	80.3	800.1	800.7	0.999
Mid point	4960	40.2	400.5	402.3	0.996
Low point	4980	20.1	200.3	202.4	0.989
As left zero	5000	0.0	0.0	0.5	----
As left span	4920	80.3	800.1	803.5	0.996
Average Correction Factor:					0.995

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

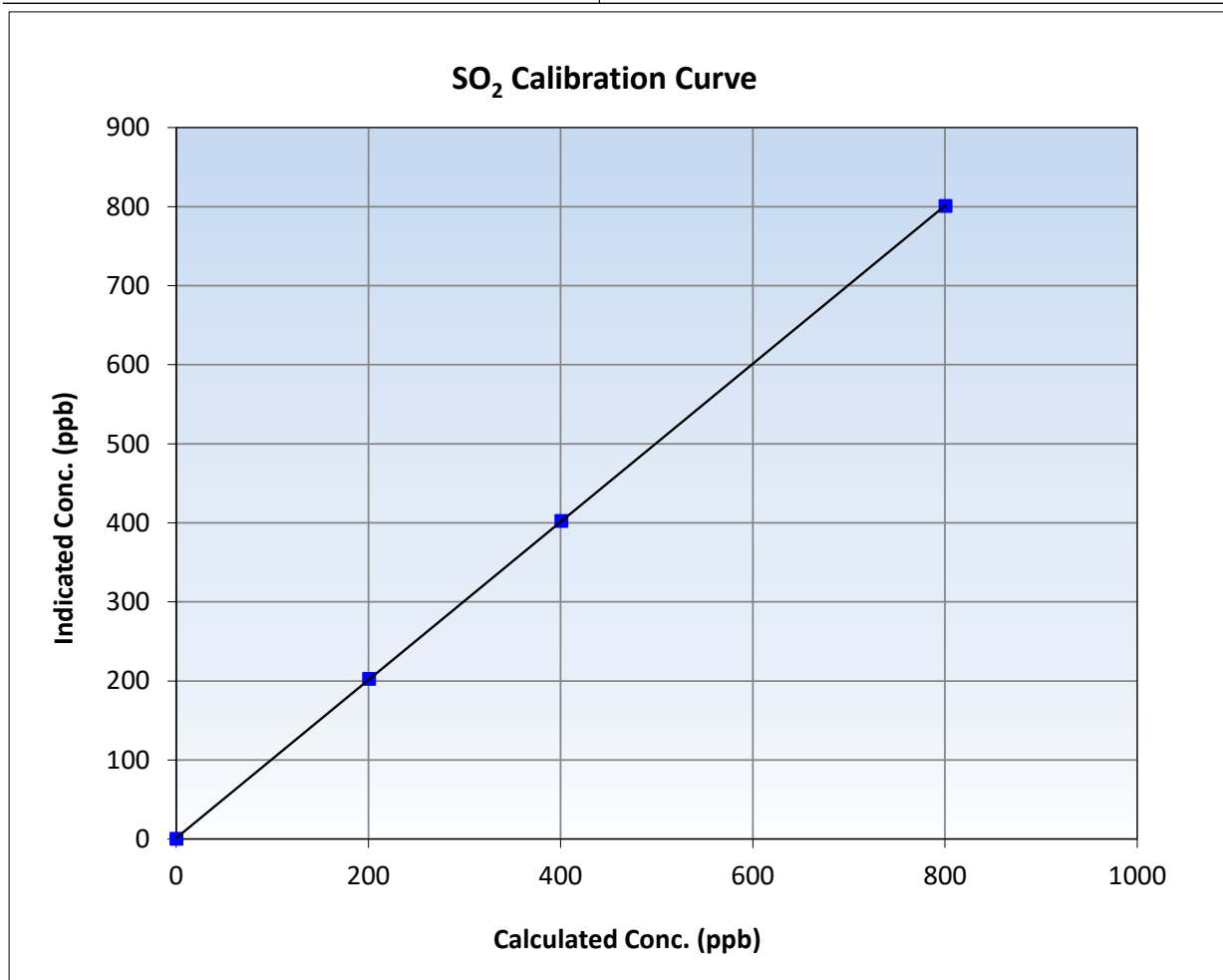
SO₂ Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 3, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:50	End Time (MST):	12:47
Analyzer make:	Thermo 43i	Analyzer serial #:	1152430006

Calibration Data

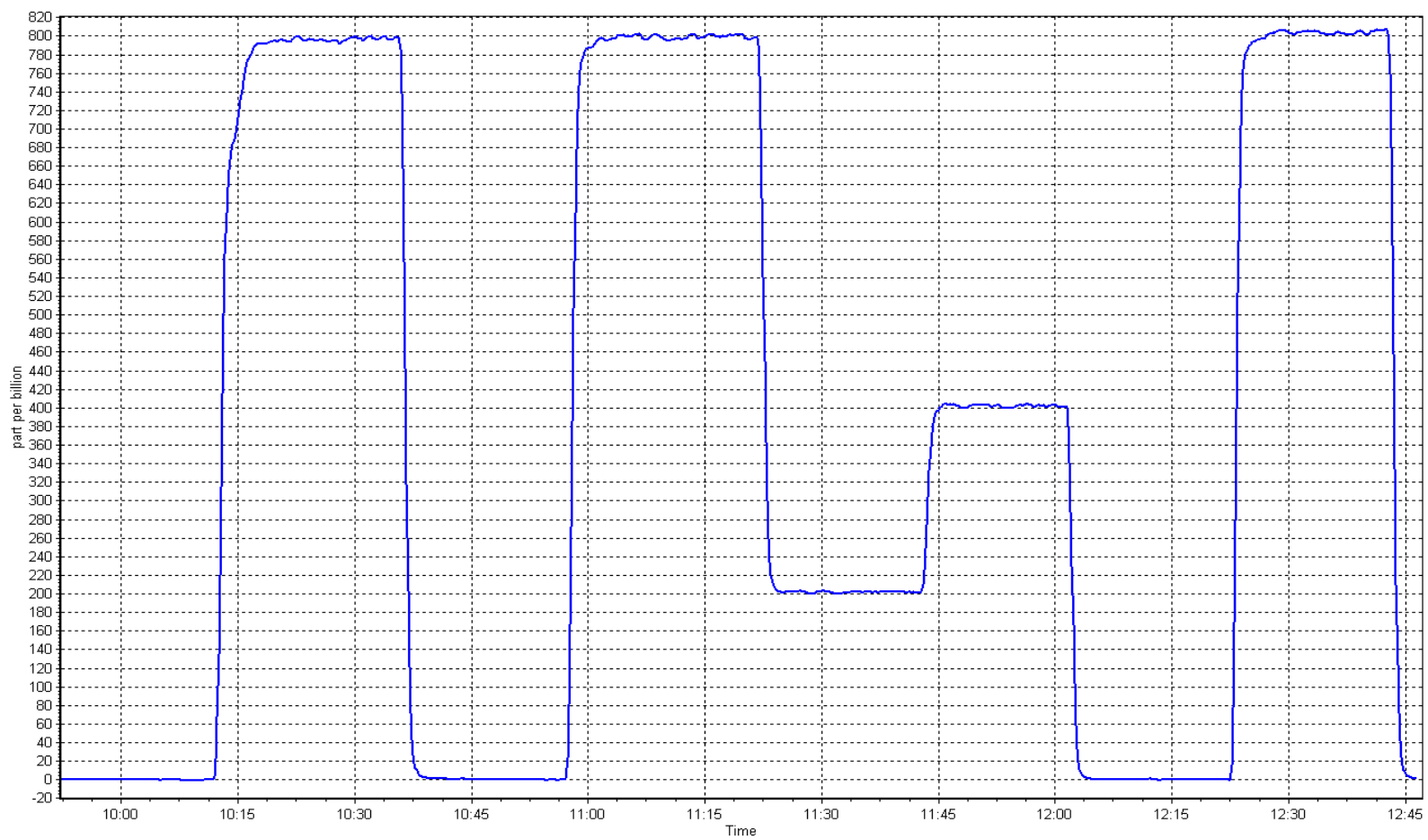
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999993	≥0.995
800.1	800.7	0.9992	Slope	0.999863	0.90 - 1.10
400.5	402.3	0.9956	Intercept	1.255438	+/-30
200.3	202.4	0.9895			



SO2 Calibration Plot

Date: August 24, 2026

Location: Janvier





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Janvier
Calibration Date: August 25, 2026
Start time (MST): 9:17
Reason: Routine

Station number: AMS 22
Last Cal Date: July 28, 2026
End time (MST): 13:08

Calibration Standards

Cal Gas Concentration: 5.02 ppm
Cal Gas Cylinder #: CC424047
Removed Cal Gas Conc: 5.02 ppm
Removed Gas Cyl #: NA
Calibrator Make/Model: Teledyne API T700
ZAG Make/Model: Teledyne API T701

Cal Gas Exp Date: November 15, 2026
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3806
Serial Number: 691

Analyzer Information

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

Analyzer serial #: 1151680031
Converter serial #: 620
Converter Temp: 850 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.011797	1.007089	Backgd or Offset:	3.95	3.76
Calibration intercept:	0.121099	-0.039138	Coeff or Slope:	1.235	1.165

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	83.7	0.952
As found Mid point	4960	39.8	40.0	42.4	0.934
As found Low point	4980	19.9	20.0	21.2	0.925
New cylinder response					
Baseline Corr As found:	84.1	Prev response:	81.09	*% change:	3.6%
Baseline Corr 2nd AF pt:	42.8	AF Slope:	1.049499	AF Intercept:	0.001872
Baseline Corr 3rd AF pt:	21.6	AF Correlation:	0.999869	* = > +/-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	80.4	0.995
Mid point	4960	39.8	40.0	40.4	0.989
Low point	4980	19.9	20.0	20.3	0.984
As left zero	5000	0.0	0.0	-0.1	----
As left span	4920	79.7	80.0	79.9	1.002
SO2 Scrubber Check	4920	79.8	798.0	0.1	----
Date of last scrubber change:	6-May-26		Ave Corr Factor		0.990
Date of last converter efficiency test:					

Notes: Changed the inlet filter after as founds. Scrubber test performed, Adjusted span only.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

TRS Calibration Summary

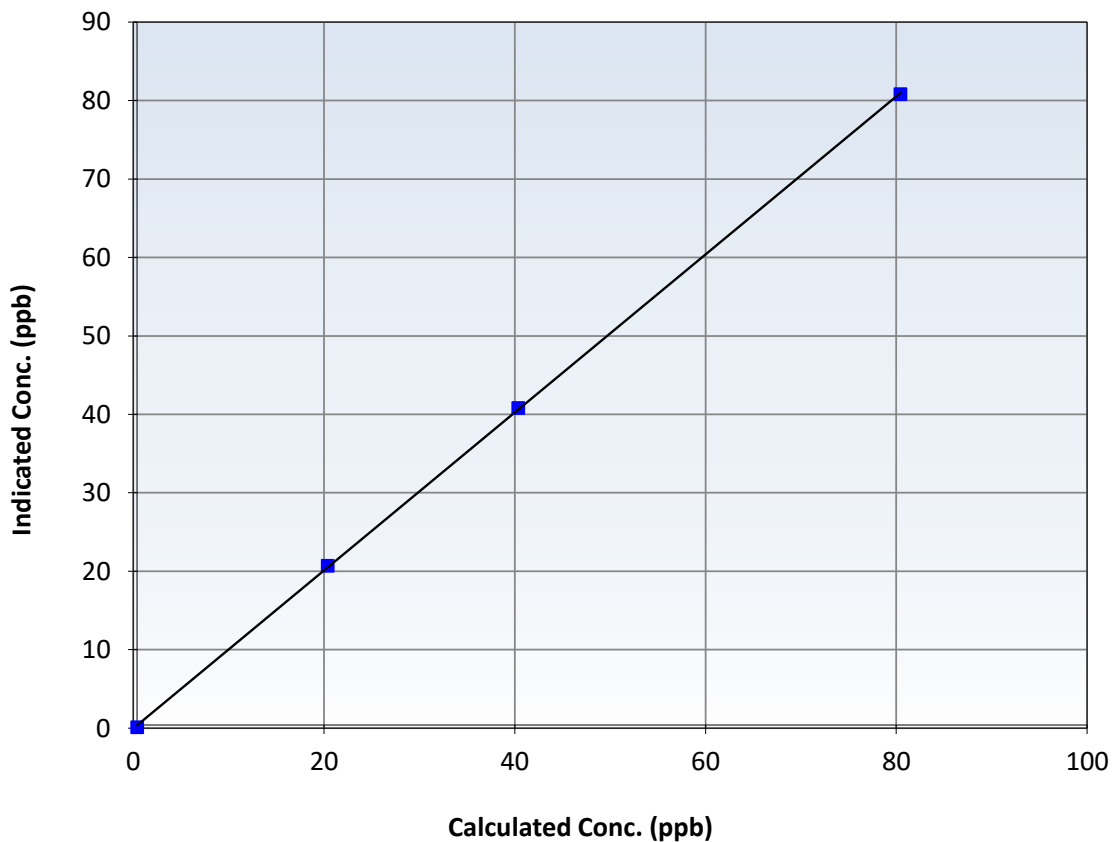
Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 28, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:17	End Time (MST):	13:08
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	0.999950		≥ 0.995
80.0	80.4	0.9953	Slope	1.007089		$0.90 - 1.10$
40.0	40.4	0.9891	Intercept	-0.039138		± 3
20.0	20.3	0.9842				

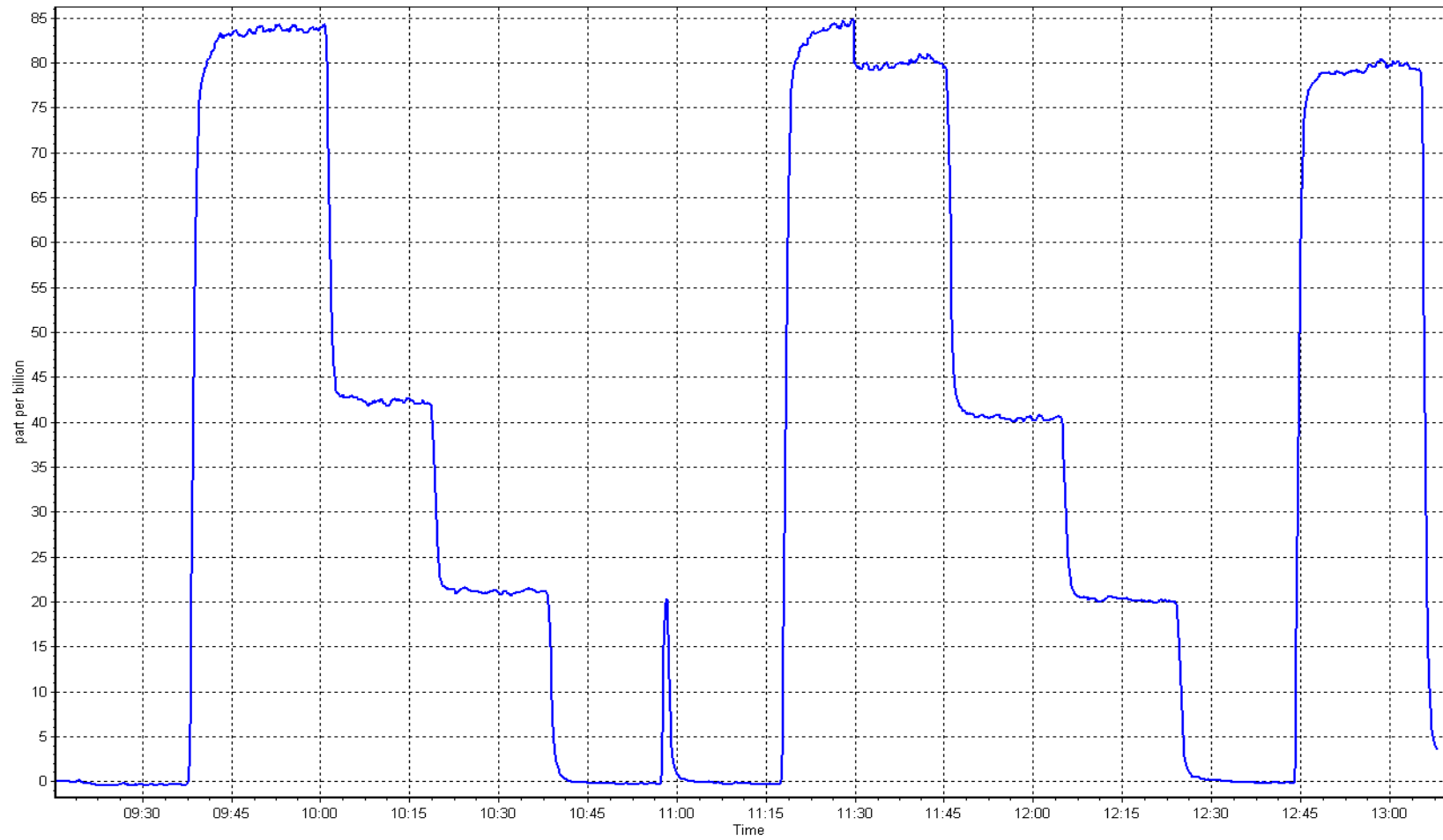
TRS Calibration Curve



TRS Calibration Plot

Date: August 25, 2026

Location: Janvier





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Janvier
 Calibration Date: August 24, 2026
 Start time (MST): 9:50
 Reason: Routine

Station number: AMS 22
 Last Cal Date: July 3, 2026
 End time (MST): 12:47

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	2.64E-04	NMHC SP Ratio:	5.61E-05
CH ₄ Retention time:	11.8	11.8	NMHC Peak Area:	159752
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF
				5.73E-05
				156302
				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	16.84	1.008
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.84	Prev response	16.97	*% change	-0.8%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	80.3	16.98	16.93	1.003
Mid point	4960	40.2	8.50	8.43	1.009
Low point	4980	20.1	4.25	4.21	1.009
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	16.98	17.09	0.994
Average Correction Factor					1.007

Notes:

Changed sample inlet filter. Adjusted the 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	80.3	8.96	8.89	1.008
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.89	Prev response	8.96	*% change	-0.8%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	80.3	8.96	8.93	1.004
Mid point	4960	40.2	4.49	4.48	1.002
Low point	4980	20.1	2.24	2.25	0.998
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	8.96	9.03	0.992
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	80.3	8.02	7.95	1.009
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.95	Prev response	8.02	*% change	-0.8%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	0.00	Limit = 0.95-1.05
High point	4920	80.3	8.02	8.01	1.001
Mid point	4960	40.2	4.02	3.95	1.017
Low point	4980	20.1	2.01	1.96	1.022
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	8.02	8.06	0.995
Average Correction Factor					1.014

Calibration Statistics

	Start	Finish
THC Cal Slope:	1.000777	0.997123
THC Cal Offset:	-0.020712	-0.020302
CH ₄ Cal Slope:	1.002852	0.999418
CH ₄ Cal Offset:	-0.026830	-0.029022
NMHC Cal Slope:	0.999237	0.995629
NMHC Cal Offset:	0.005118	0.007520

Calibration Performed By: Sean Bala



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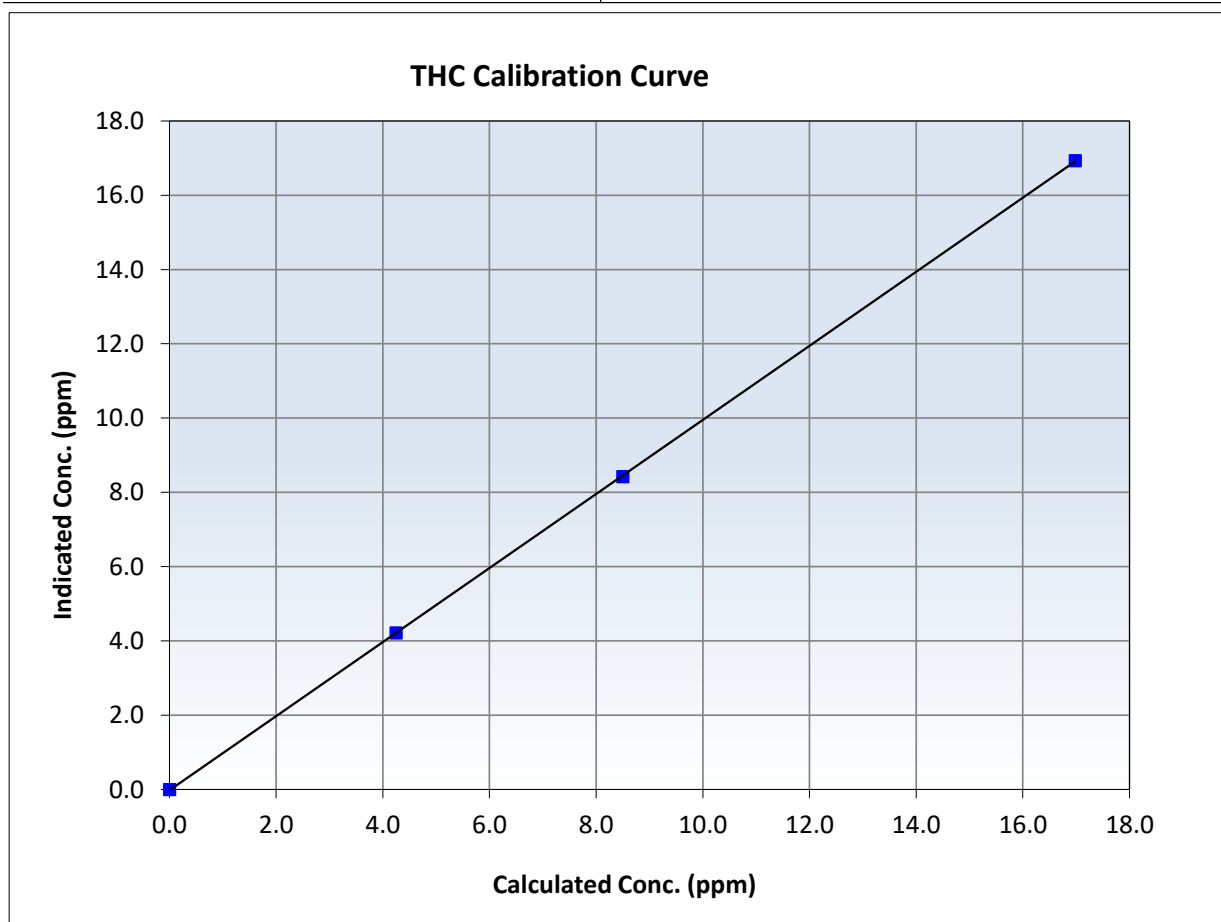
THC Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 3, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:50	End Time (MST):	12:47
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	0.999989	≥ 0.995
16.98	16.93	1.0031	Slope	0.997123	$0.90 - 1.10$
8.50	8.43	1.0090	Intercept	-0.020302	± 0.5
4.25	4.21	1.0093			





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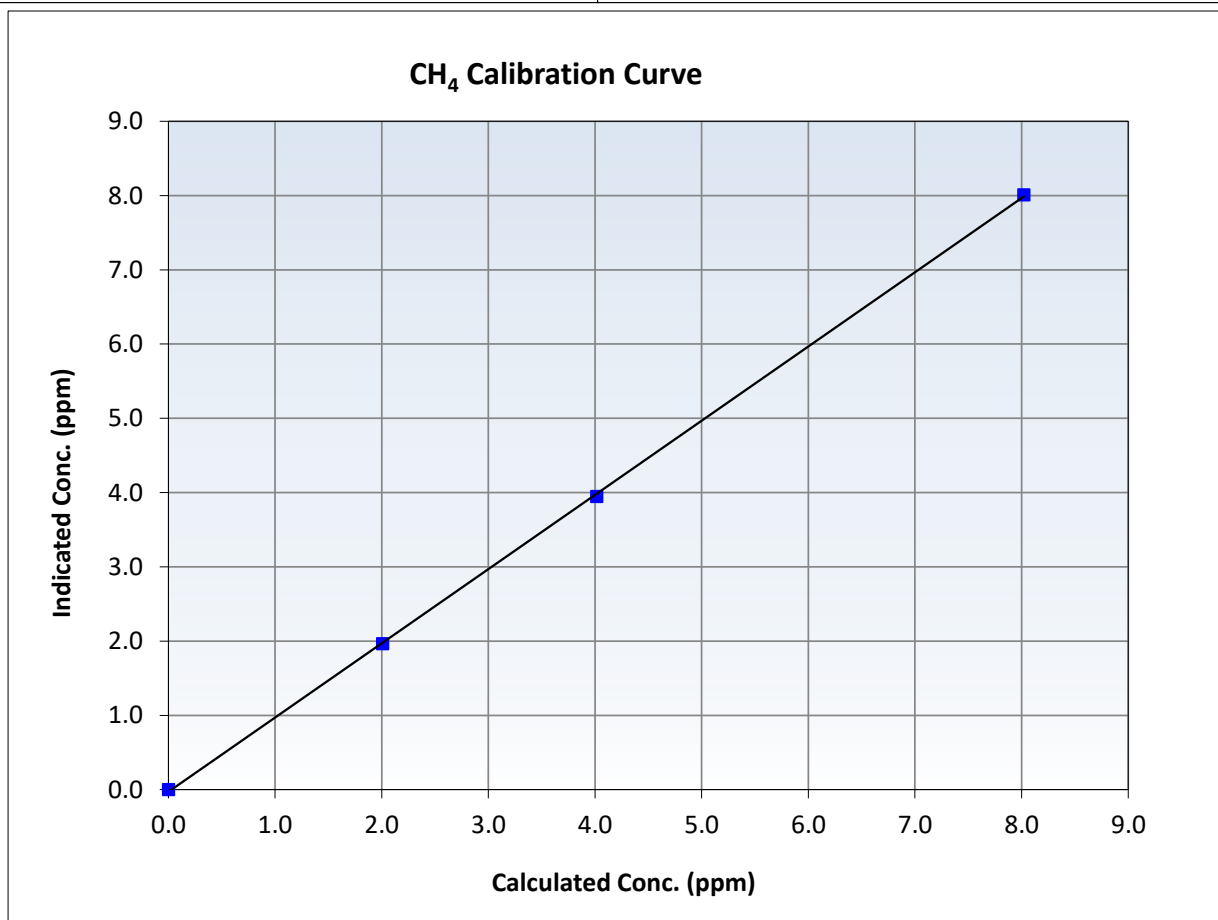
CH₄ Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 3, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:50	End Time (MST):	12:47
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999917	<i>≥0.995</i>
8.02	8.01	1.0014	Slope	0.999418	<i>0.90 - 1.10</i>
4.02	3.95	1.0174	Intercept	-0.029022	<i>+/-0.5</i>
2.01	1.96	1.0224			





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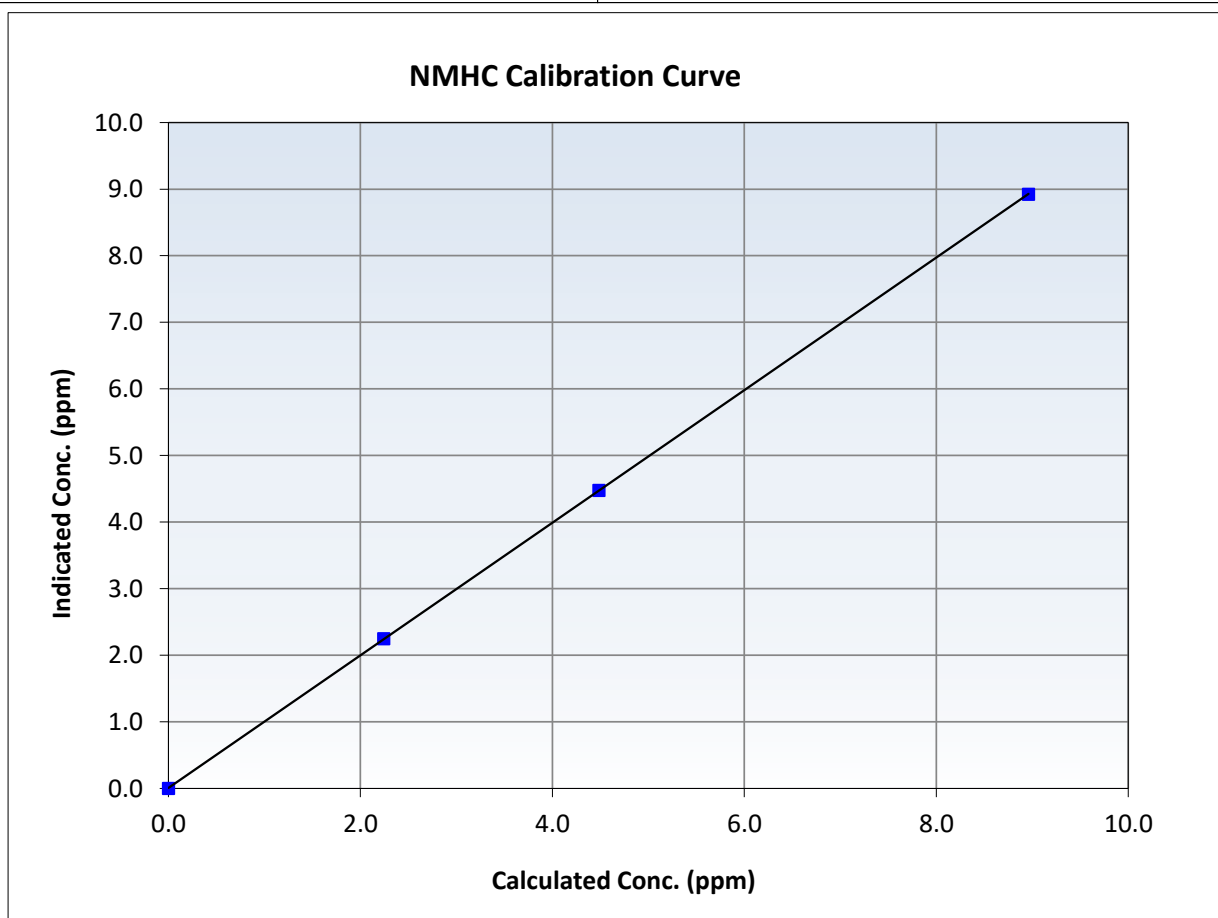
NMHC Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 3, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:50	End Time (MST):	12:47
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

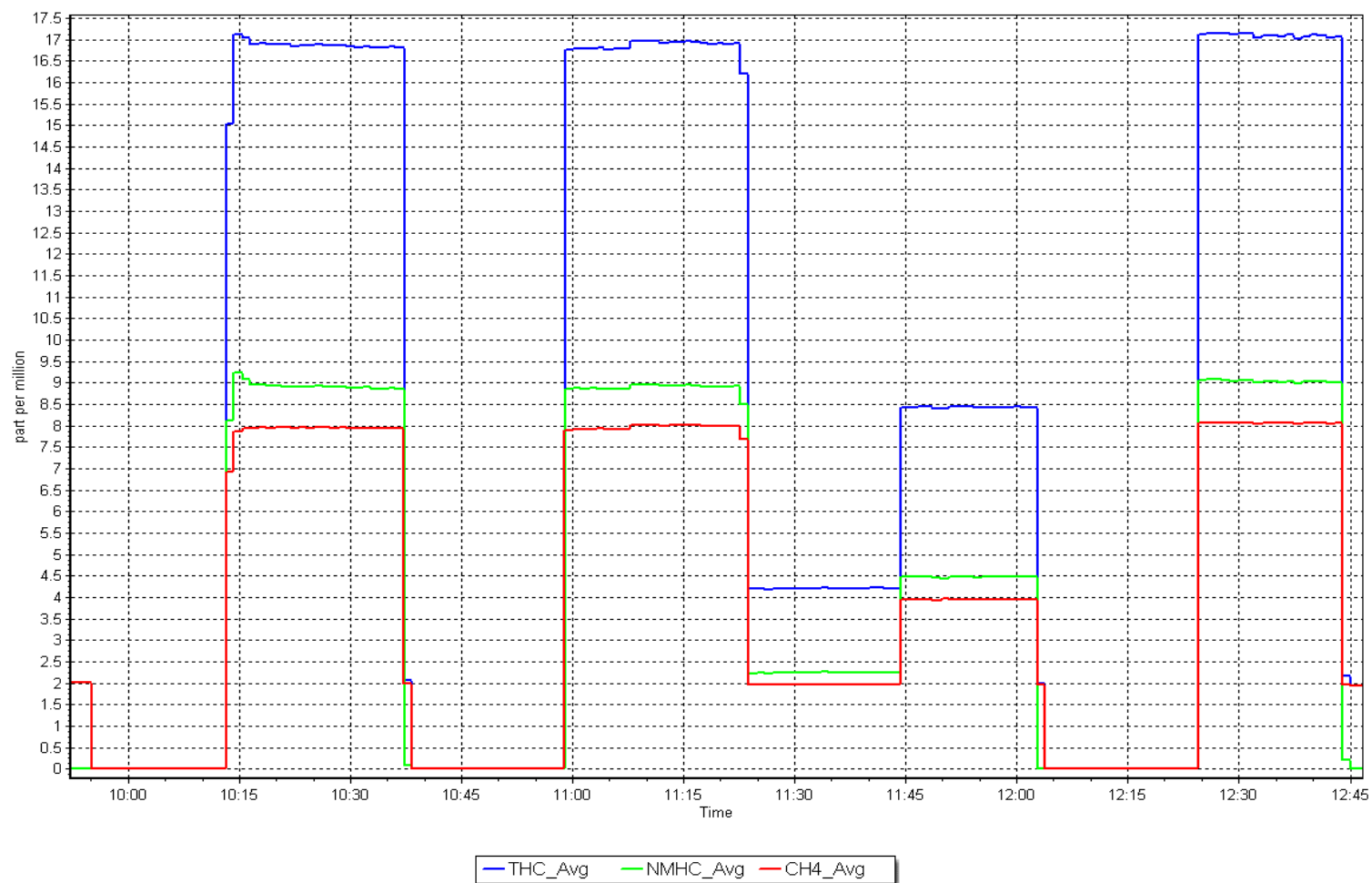
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999997	<i>≥0.995</i>
8.96	8.93	1.0040	Slope	0.995629	<i>0.90 - 1.10</i>
4.49	4.48	1.0018	Intercept	0.007520	<i>+/-0.5</i>
2.24	2.25	0.9978			



NMHC Calibration Plot

Date: August 24, 2026

Location: Janvier





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Janvier
 Station number: AMS 22
 Calibration Date: August 27, 2026
 Last Cal Date: July 29, 2026
 Start time (MST): 8:59
 End time (MST): 13:05
 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	795.1	789.3	5.8	1.0082	1.0136
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 798.2 ppb	NO = 796.4 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.4%
Baseline Corr 1st pt	NO _x = 795.4 ppb	NO = 789.6 ppb	<u>As Found Statistics</u>		*Percent Change	NO = -0.9%
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 42i
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 1229254994

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.000182	1.003674
NO _x Cal Offset:	-3.896283	-4.496251
NO Cal Slope:	1.001661	1.002989
NO Cal Offset:	-5.296396	-5.736402
NO ₂ Cal Slope:	0.997580	1.001807
NO ₂ Cal Offset:	0.146832	0.523047

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.088	1.102	NO bkgnd or offset:	3.0	3.0
NOX coeff or slope:	0.994	0.995	NOX bkgnd or offset:	3.1	3.1
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	175.0	176.2

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	-0.1	0.3	----	----
High point	4918	82.0	802.0	800.3	1.6	803.3	800.5	2.8	0.9983	0.9998
Mid point	4960	41.0	400.9	400.1	0.8	393.8	390.6	3.2	1.0180	1.0243
Low point	4980	20.5	200.5	200.1	0.4	193.3	190.7	2.6	1.0371	1.0491
As left zero	5000	0.0	0.0	0.0	0.0	0.2	-0.1	0.3	----	----
As left span	4918	82.0	802.0	397.2	404.8	804.7	397.2	407.5	0.9966	1.0000
Average Correction Factor									1.0178	1.0244

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	799.2	393.8	407.0	408.2	0.9972	100.3%
Mid GPT point	799.2	597.8	203.0	204.0	0.9953	100.5%
Low GPT point	799.2	698.1	102.7	103.7	0.9907	100.9%
Average Correction Factor					0.9944	100.6%

Notes:

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

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

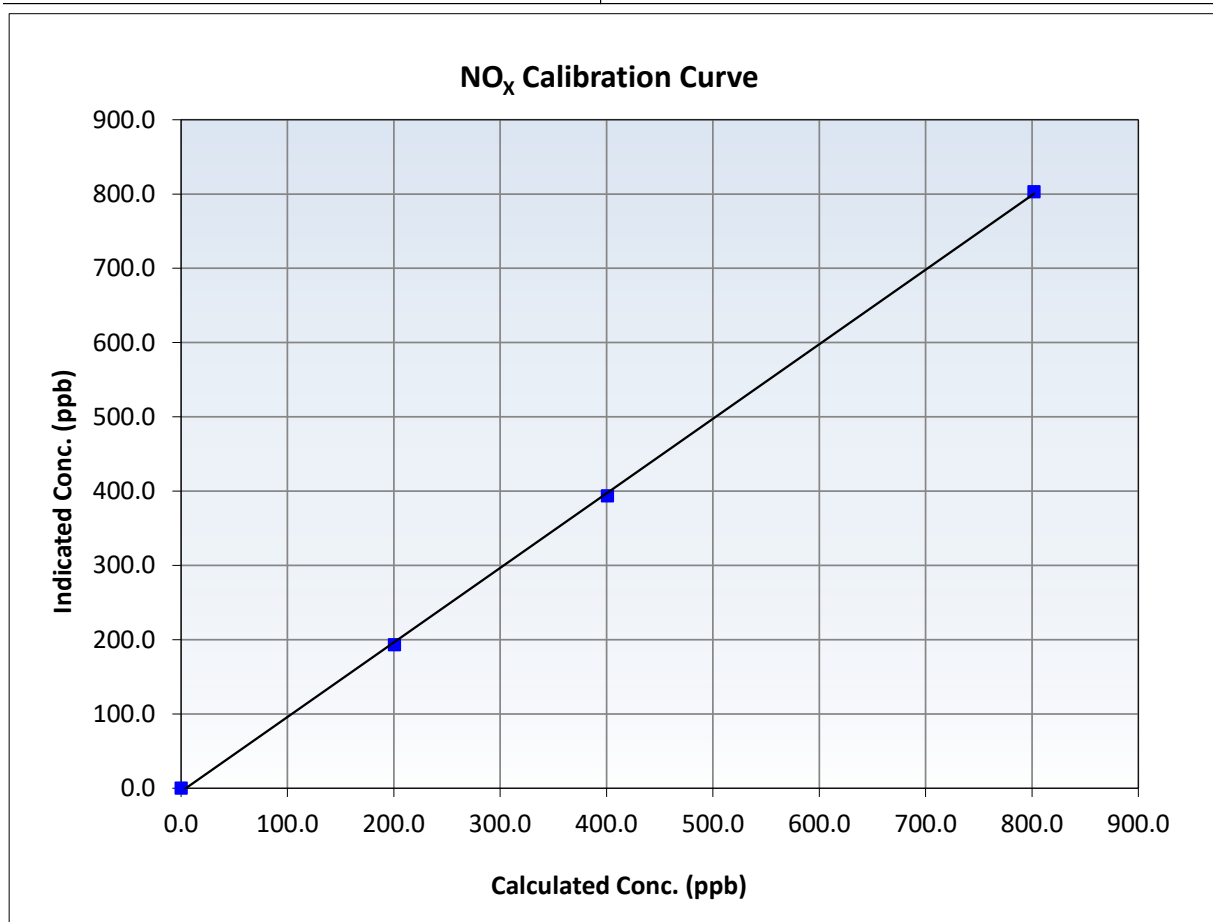
NO_x Calibration Summary

Station Information

Calibration Date:	August 27, 2026	Previous Calibration:	July 29, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	8:59	End Time (MST):	13:05
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	0.999837	≥0.995
802.0	803.3	0.9983	Slope	1.003674	0.90 - 1.10
400.9	393.8	1.0180	Intercept	-4.496251	+/-20
200.5	193.3	1.0371			





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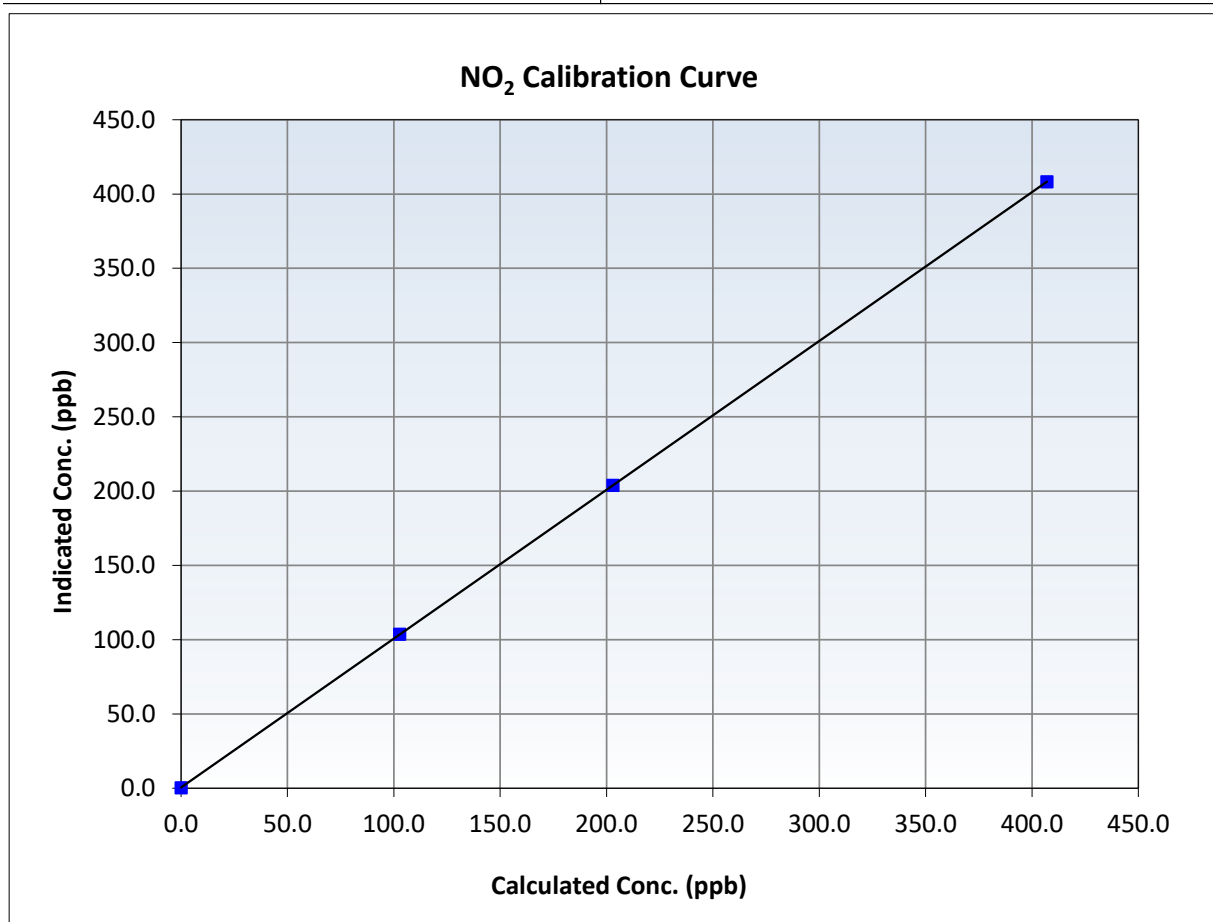
NO₂ Calibration Summary

Station Information

Calibration Date:	August 27, 2026	Previous Calibration:	July 29, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	8:59	End Time (MST):	13:05
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	0.3	----	Correlation Coefficient	0.999999	≥0.995
407.0	408.2	0.9972	Slope	1.001807	0.90 - 1.10
203.0	204.0	0.9953	Intercept	0.523047	+/-20
102.7	103.7	0.9907			





Wood Buffalo Environmental Association

NO Calibration Summary

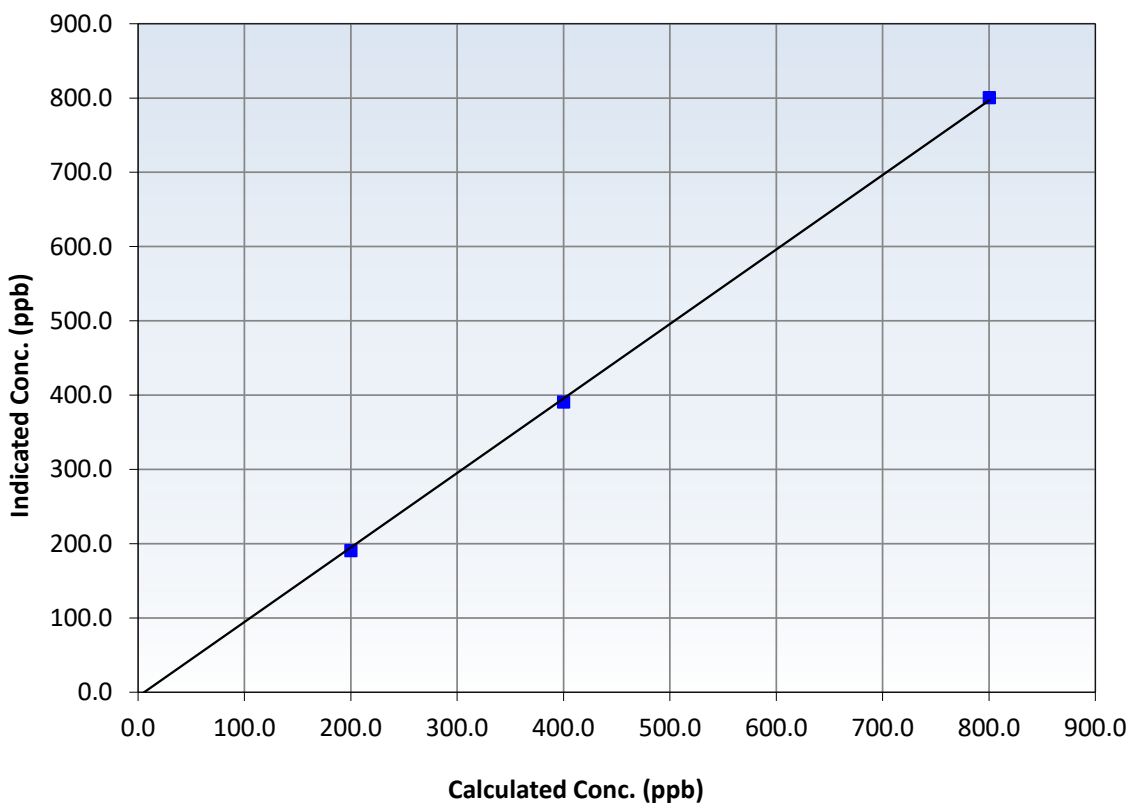
Station Information

Calibration Date:	August 27, 2026	Previous Calibration:	July 29, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	8:59	End Time (MST):	13:05
Analyzer make:	Thermo 42i	Analyzer serial #:	1229254994

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	-0.1	----	Correlation Coefficient	0.999755	≥ 0.995
800.3	800.5	0.9998	Slope	1.002989	0.90 - 1.10
400.1	390.6	1.0243	Intercept	-5.736402	+/-20
200.1	190.7	1.0491			

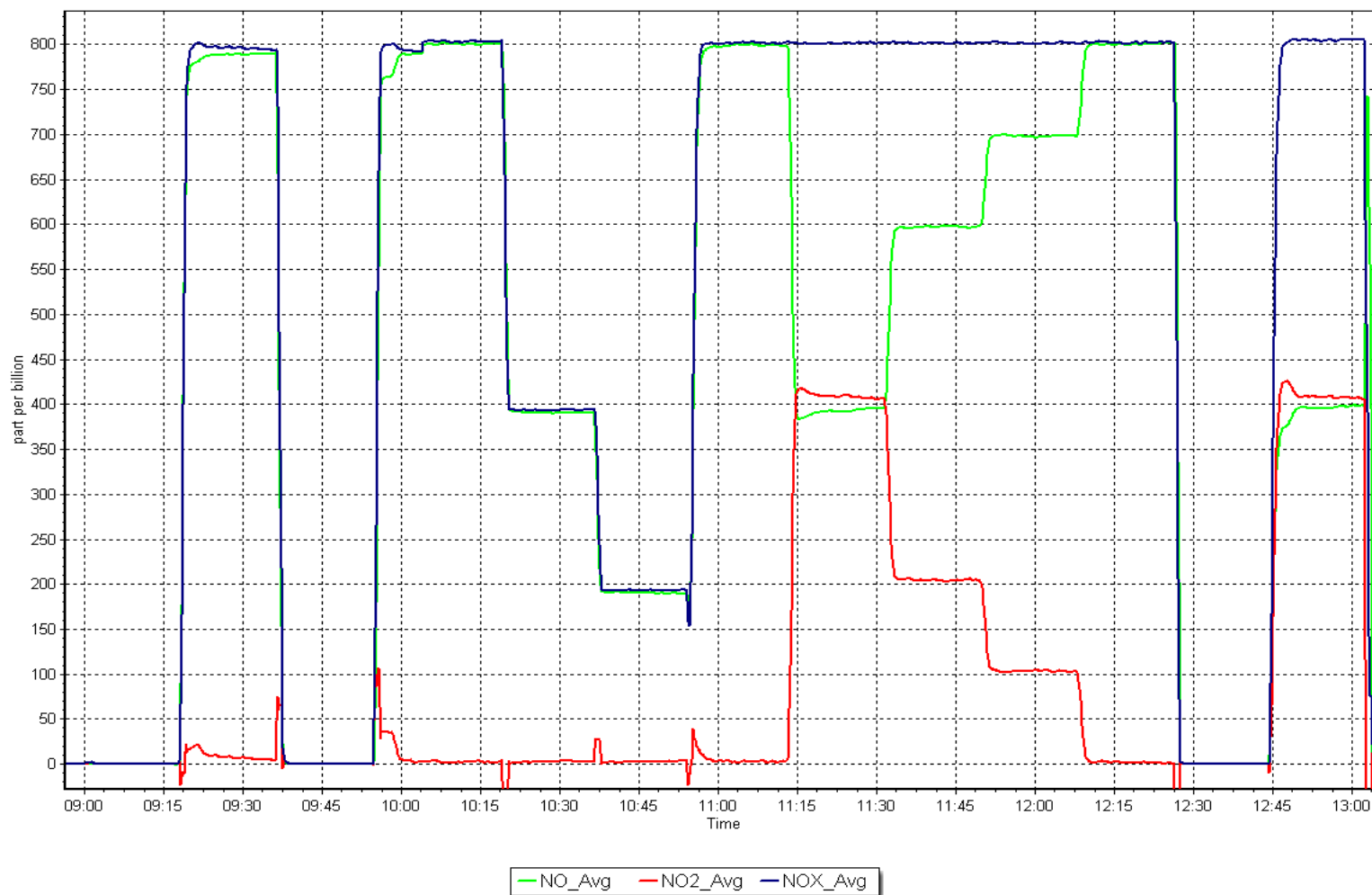
NO Calibration Curve



NO_x Calibration Plot

Date: August 27, 2026

Location: Janvier





Wood Buffalo Environmental Association

O₃ Calibration Report

Station Information

Station Name: Janvier
Calibration Date: August 21, 2026
Start time (MST): 9:37
Reason: Routine

Station number: AMS 22
Last Cal Date: July 8, 2026
End time (MST): 12:18

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:	1.009400	1.001771	Backgd or Offset:	-0.2	-0.2
Calibration intercept:	0.180000	0.040000	Coeff or Slope:	1.340	1.347

O₃ As Found Data

Set Point	Dilution air flow rate (sccm)	Calibrator Lamp Voltage Drive (mV)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	800.0	0.0	-0.2	----
As found High point	5000	928.3	400.0	396.4	1.009
As found Mid point					
As found Low point					
Baseline Corr As found:	396.6	Previous response	403.9	*% 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	

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	929.2	400.0	400.8	0.998
Mid point	5000	767.3	200.0	200.3	0.999
Low point	5000	688.9	100.0	100.2	0.998
As left zero	5000	800.0	0.0	0.2	----
As left span	5000	926.9	400.0	403.8	0.991
Average Correction Factor					0.998

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

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

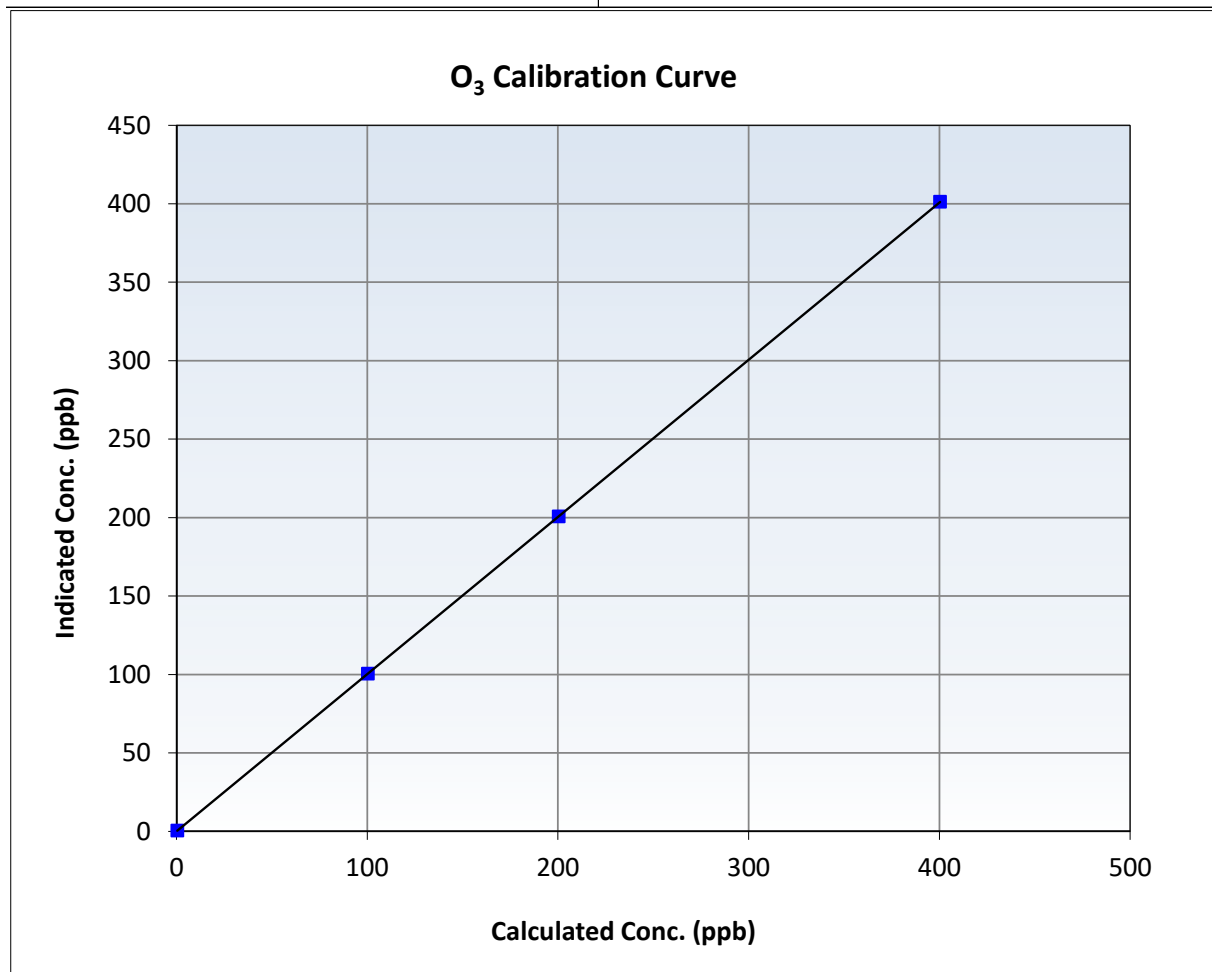
O₃ Calibration Summary

Station Information

Calibration Date:	August 21, 2026	Previous Calibration:	July 8, 2026
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	9:37	End Time (MST):	12:18
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	0.1	----	Correlation Coefficient	1.000000	≥0.995
400.0	400.8	0.9980	Slope	1.001771	0.90 - 1.10
200.0	200.3	0.9985	Intercept	0.040000	+/- 5
100.0	100.2	0.9980			



O₃ Calibration Plot

Date: August 21, 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: August 24, 2026 Last Cal Date: July 22, 2026
Start time (MST): 10:22 End time (MST): 10:32

Analyzer Make: Teledyne API T640 S/N: 871
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)	21.80	22.07	21.80	☐	+/- 2 °C
P (mmHg)	714.90	717.31	714.90	☐	+/- 10 mmHg
Flow (LPM)	5.02	5.19	5.02	☐	+/- 0.25 LPM
PW% (pump)	32	----	32	☐	>80%
Zero Verification	PM w/o HEPA: 3.60		PM w/ HEPA: 0.0		<0.2 ug/m3

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

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

Quarterly Calibration Test

SPAN DUST Refractive Index: 10.9 Expiry Date: October 6, 2024
Lot No.: 100128-050-042

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

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

Removal calibration. Verified the flow, temperature, pressure and pump PWM. Leak check passed.

Calibration by: Sean Bala



Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Janvier Station number: AMS 22
Calibration Date: August 24, 2026 Last Cal Date: NA
Start time (MST): 10:42 End time (MST): 11:04

Analyzer Make: Teledyne API T640 S/N: 766
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)	20.80	22.07	20.80	☐	+/- 2 °C
P (mmHg)	720.06	717.46	720.06	☐	+/- 10 mmHg
Flow (LPM)	5.02	5.13	5.02	☐	+/- 0.25 LPM
PW% (pump)	30	----	30	☐	>80%
Zero Verification	PM w/o HEPA: 10.30		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				☐	10.9 +/- 0.5

Date Optical Chamber Cleaned: _____
Date Disposable Filter Changed: _____

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:

Install calibration. Verified the flow, temperature, pressure and pump PWM. Leak check passed.

Calibration by: Sean Bala



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS23
FORT HILLS
AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Fort Hills Station number: AMS 23
Calibration Date: August 10, 2026 Last Cal Date: July 13, 2026
Start time (MST): 10:51 End time (MST): 14:09
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:	0.998460	1.002377	Backgd or Offset:	18.7	18.7
Calibration intercept:	-0.359261	-0.578756	Coeff or Slope:	1.044	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	799.9	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	799.9	Previous response	797.9	*% 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	0.1	----
High point	4921	79.4	799.5	801.6	0.997
Mid point	4960	39.7	399.8	398.5	1.003
Low point	4980	19.8	199.4	199.5	0.999
As left zero	5000	0.0	0.0	0.2	----
As left span	4921	79.4	799.5	803.0	0.996
Average Correction Factor:					1.000

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

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

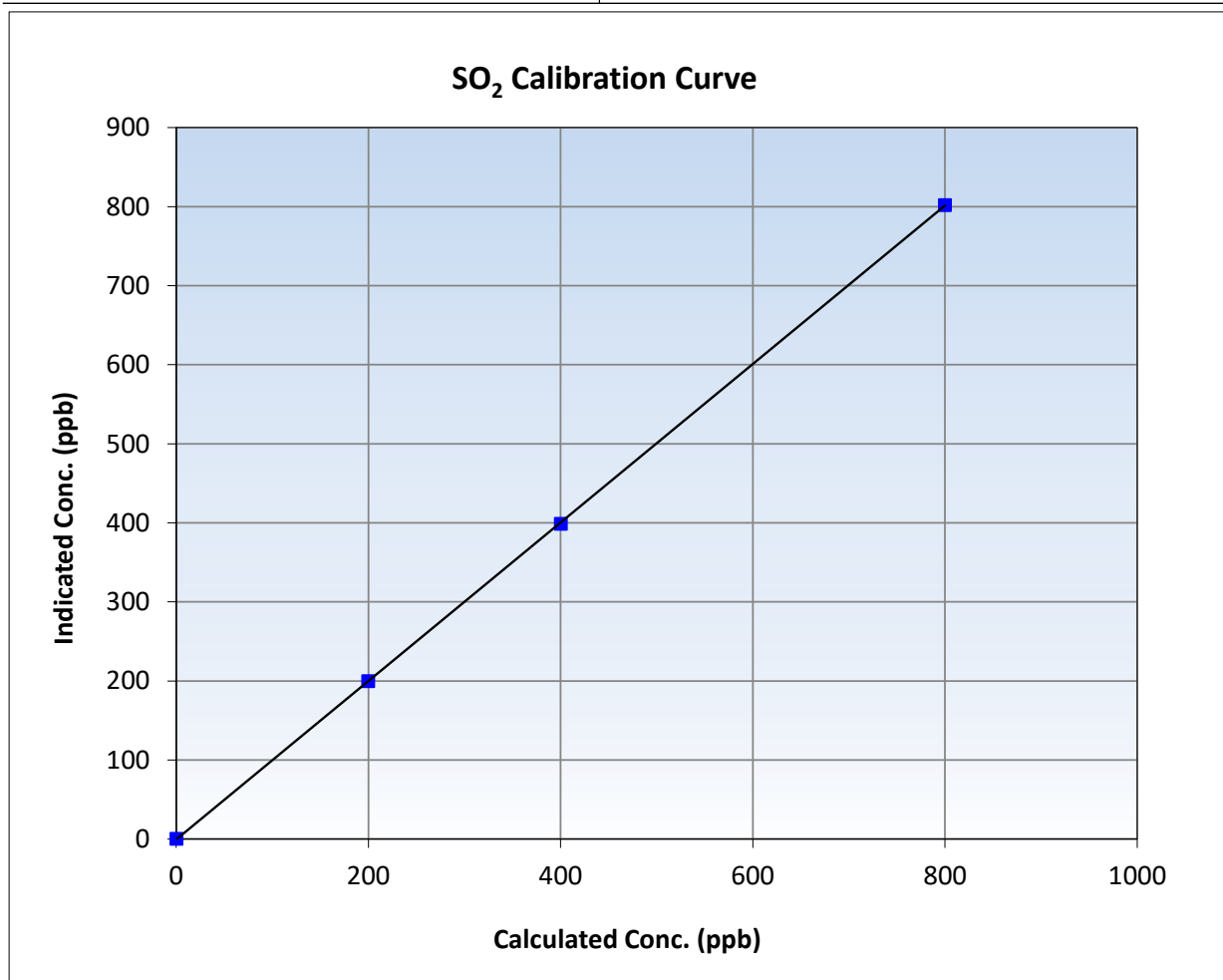
SO₂ Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 13, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:51	End Time (MST):	14:09
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290012

Calibration Data

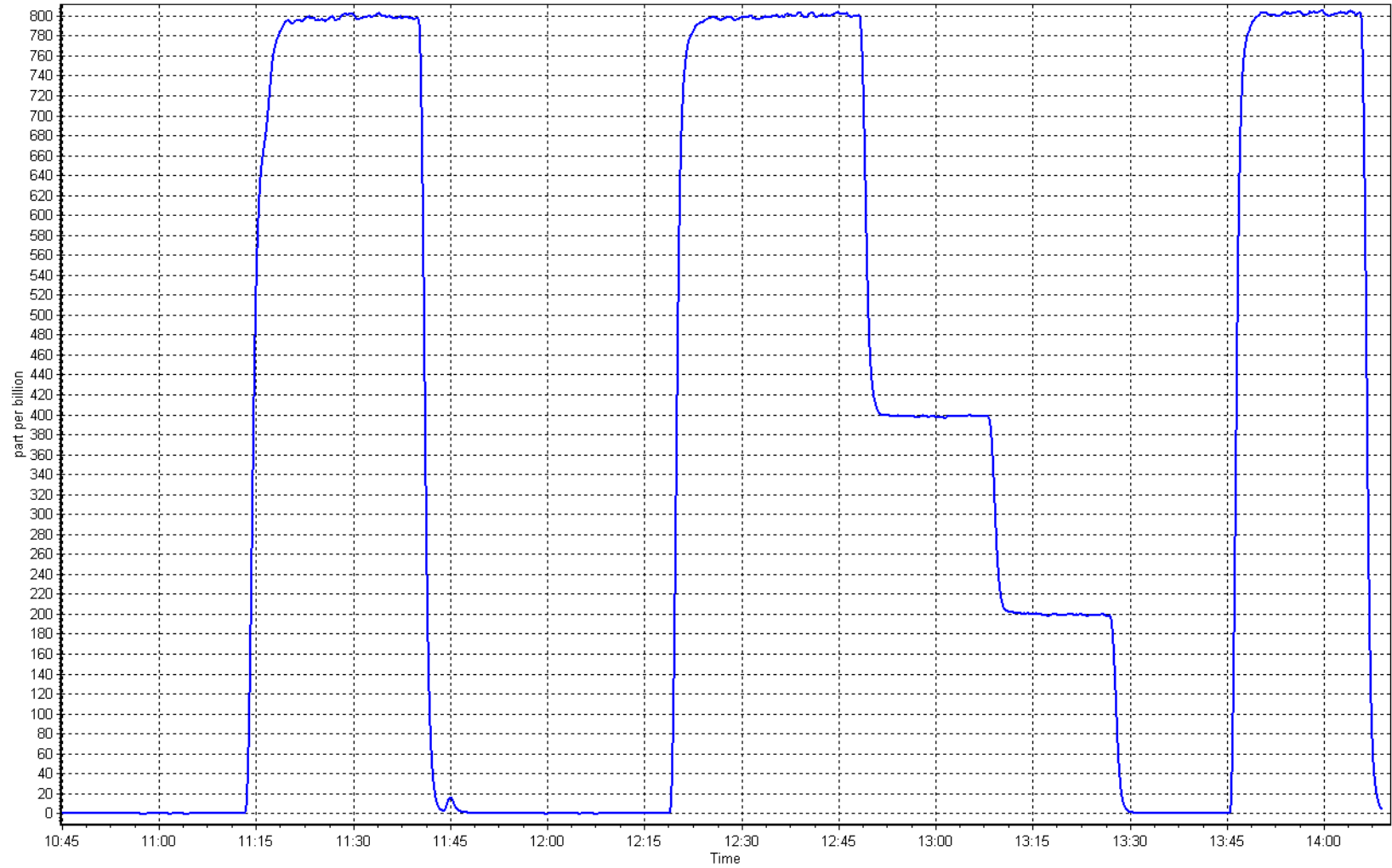
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999989	≥0.995
799.5	801.6	0.9974	Slope	1.002377	0.90 - 1.10
399.8	398.5	1.0033	Intercept	-0.578756	+/-30
199.4	199.5	0.9995			



SO2 Calibration Plot

Date: August 10, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Fort Hills
Calibration Date: August 6, 2026
Start time (MST): 10:12
Reason: Routine

Station number: AMS 23
Last Cal Date: July 2, 2026
End time (MST): 14:28

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:	0.991668	0.997388	Backgd or Offset:	0.96	0.96
Calibration intercept:	-0.077943	0.021916	Coeff or Slope:	1.025	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	0.0	----
As found High point	4917	82.6	80.0	78.3	1.021
As found Mid point	4959	41.3	40.0	39.1	1.022
As found Low point	4979	20.7	20.0	19.8	1.012
New cylinder response					
Baseline Corr As found:	78.3	Prev response:	79.22	*% change:	-1.2%
Baseline Corr 2nd AF pt:	39.1	AF Slope:	0.978375	AF Intercept:	0.062242
Baseline Corr 3rd AF pt:	19.8	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4917	82.6	80.0	79.8	1.002
Mid point	4959	41.3	40.0	39.8	1.004
Low point	4979	20.7	20.0	20.1	0.997
As left zero	5000	0.0	0.0	0.0	----
As left span	4917	82.6	80.0	80.2	0.997
SO ₂ Scrubber Check	4920	80.3	803.0	0.1	----
Date of last scrubber change:	April 28, 2026		Ave Corr Factor		1.001
Date of last converter efficiency test:					

Notes: Changed sample inlet filter after as founds. SO_x scrubber checked after the calibrator zero.
Adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

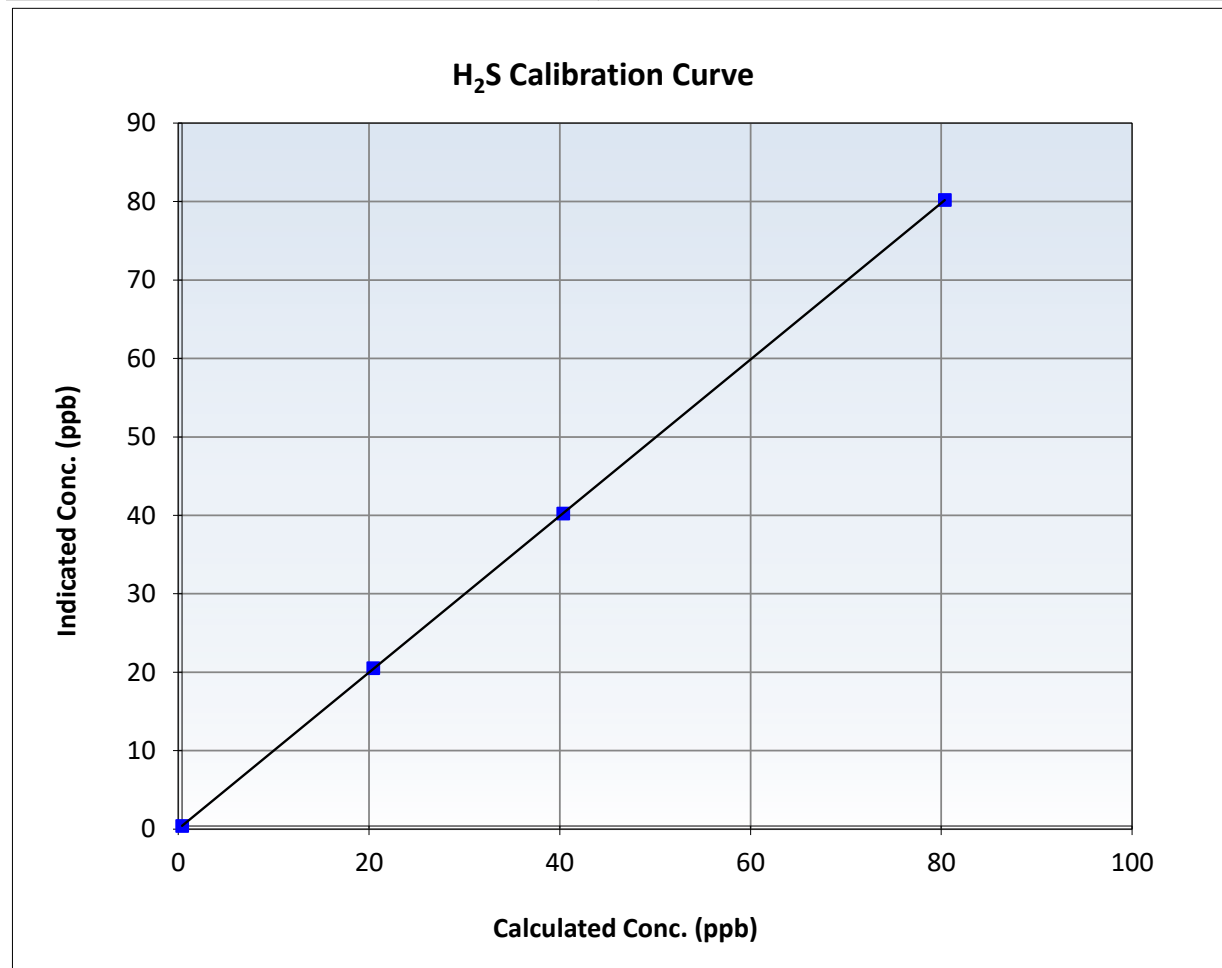
H₂S Calibration Summary

Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 2, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:12	End Time (MST):	14:28
Analyzer make:	Thermo 43iQ Trace level	Analyzer serial #:	1200326168

Calibration Data

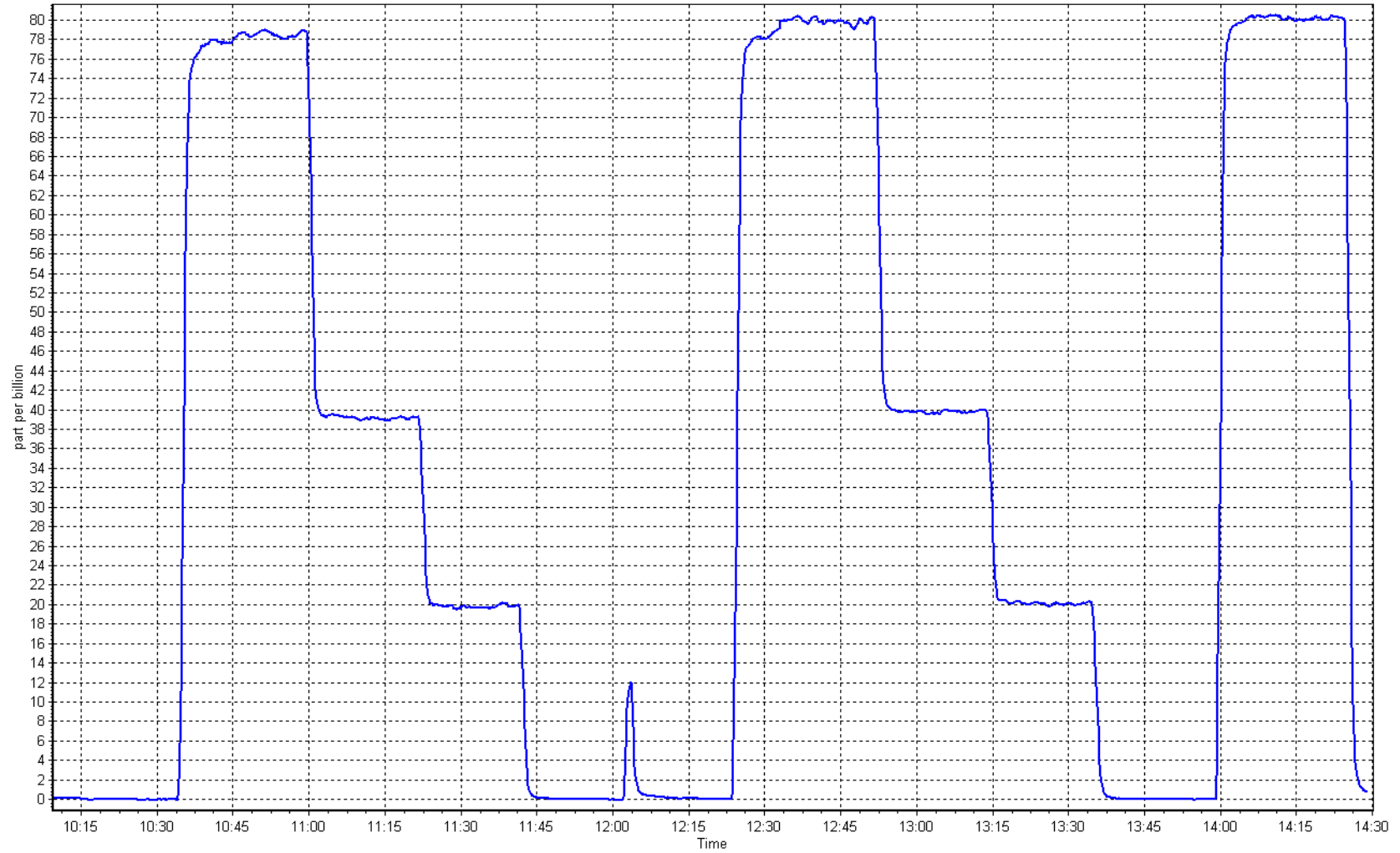
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999995		≥0.995
80.0	79.8	1.0020	Slope	0.997388		0.90 - 1.10
40.0	39.8	1.0044	Intercept	0.021916		+/-3
20.0	20.1	0.9970				



H₂S Calibration Plot

Date: August 6, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Fort Hills
Calibration Date: August 6, 2026
Start time (MST): 10:12
Reason: Routine

Station number: AMS 23
Last Cal Date: July 2, 2026
End time (MST): 14:28

Calibration Standards

Cal Gas Concentration: 4.84 ppm
Cal Gas Cylinder #: DT0021910
Removed Cal Gas Conc: 4.84 ppm
Removed Gas Cyl #:
Calibrator Make/Model: API T700
ZAG Make/Model: API T701

Cal Gas Exp Date: August 28, 2027
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 5762
Serial Number: 1117

Analyzer Information

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

Analyzer serial #: 1300156232
Converter serial #: 594
Converter Temp: 800 degC

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.030836	1.017687	Backgd or Offset:	1.99	1.95
Calibration intercept:	-0.098606	-0.138443	Coeff or Slope:	0.994	0.968

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	80.2	0.997
As found Mid point	4959	41.3	40.0	40.1	0.997
As found Low point	4979	20.7	20.0	20.1	0.997
New cylinder response					
Baseline Corr As found:	80.2	Prev response:	82.33	*% change:	-2.7%
Baseline Corr 2nd AF pt:	40.1	AF Slope:	1.002961	AF Intercept:	0.001865
Baseline Corr 3rd AF pt:	20.1	AF Correlation:	1.000000	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4917	82.6	80.0	81.4	0.982
Mid point	4959	41.3	40.0	40.2	0.994
Low point	4979	20.7	20.0	20.3	0.987
As left zero	5000	0.0	0.0	0.0	----
As left span	4917	82.6	80.0	81.9	0.976
SO2 Scrubber Check	4920	80.3	803.0	0.1	----
Date of last scrubber change:				Ave Corr Factor	0.988
Date of last converter efficiency test:		March 13, 2024		110.3%	efficiency

Notes: Changed sample inlet filter after as founds. SOx scrubber checked after the calibrator zero.
Adjusted span only.

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

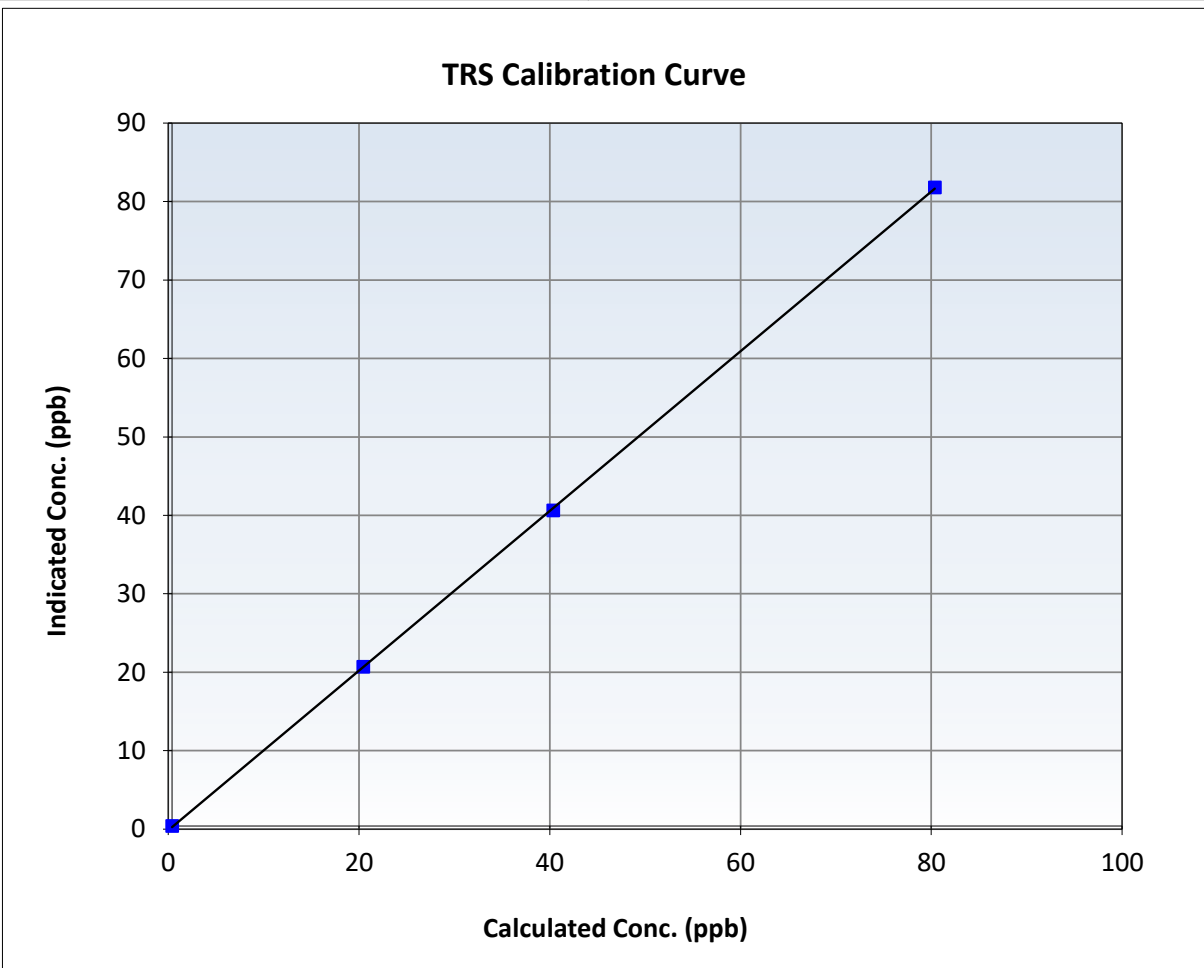
TRS Calibration Summary

Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 2, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:12	End Time (MST):	14:28
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1300156232

Calibration Data

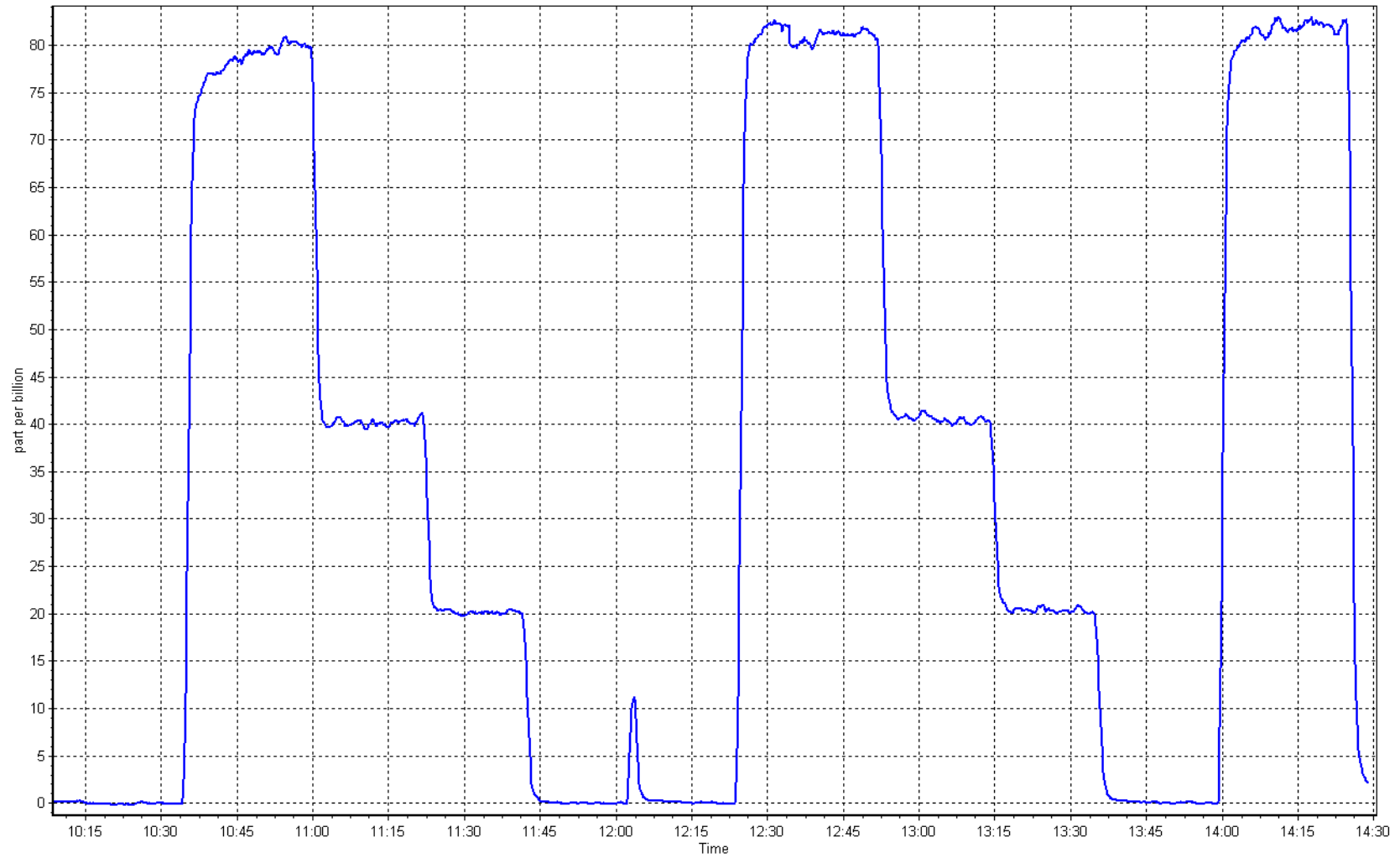
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999954		≥ 0.995
80.0	81.4	0.9823	Slope	1.017687		$0.90 - 1.10$
40.0	40.2	0.9944	Intercept	-0.138443		± 3
20.0	20.3	0.9871				



TRS Calibration Plot

Date: August 6, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Fort Hills
 Calibration Date: August 10, 2026
 Start time (MST): 10:51
 Reason: Routine

Station number: AMS 23
 Last Cal Date: July 13, 2026
 End time (MST): 14:09

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:	3.16E-04	3.16E-04	NMHC SP Ratio:	5.70E-05
CH ₄ Retention time:	15.6	15.6	NMHC Peak Area:	156405
Zero Chromatogram:	ON	OFF	Flat Baseline:	ON
				5.62E-05
				158457
				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	0.02	----
As found High point	4921	79.4	16.92	16.96	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.94	Prev response	16.91	*% 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	79.4	16.92	16.92	1.000
Mid point	4960	39.7	8.46	8.43	1.004
Low point	4980	19.8	4.22	4.23	0.997
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	16.92	16.94	0.999
Average Correction Factor					1.000

Notes: Inlet filter was 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	8.93	0.998
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.93	Prev response	8.90	*% 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	4921	79.4	8.91	8.91	1.000
Mid point	4960	39.7	4.46	4.45	1.002
Low point	4980	19.8	2.22	2.24	0.993
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	8.91	8.92	0.999
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	0.02	Limit = 0.90-1.10
As found High point	4921	79.4	8.01	8.03	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.01	Prev response	8.00	*% 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	4921	79.4	8.01	8.01	1.000
Mid point	4960	39.7	4.00	3.98	1.006
Low point	4980	19.8	2.00	2.00	1.001
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	8.01	8.01	0.999
Average Correction Factor					1.002

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.998395	0.999530
THC Cal Offset:	0.014627	-0.000770
CH ₄ Cal Slope:	0.998018	1.000030
CH ₄ Cal Offset:	0.010409	-0.006388
NMHC Cal Slope:	0.998324	0.998927
NMHC Cal Offset:	0.004817	0.005218

Calibration Performed By: Mohammed Kashif



Wood Buffalo Environmental Association

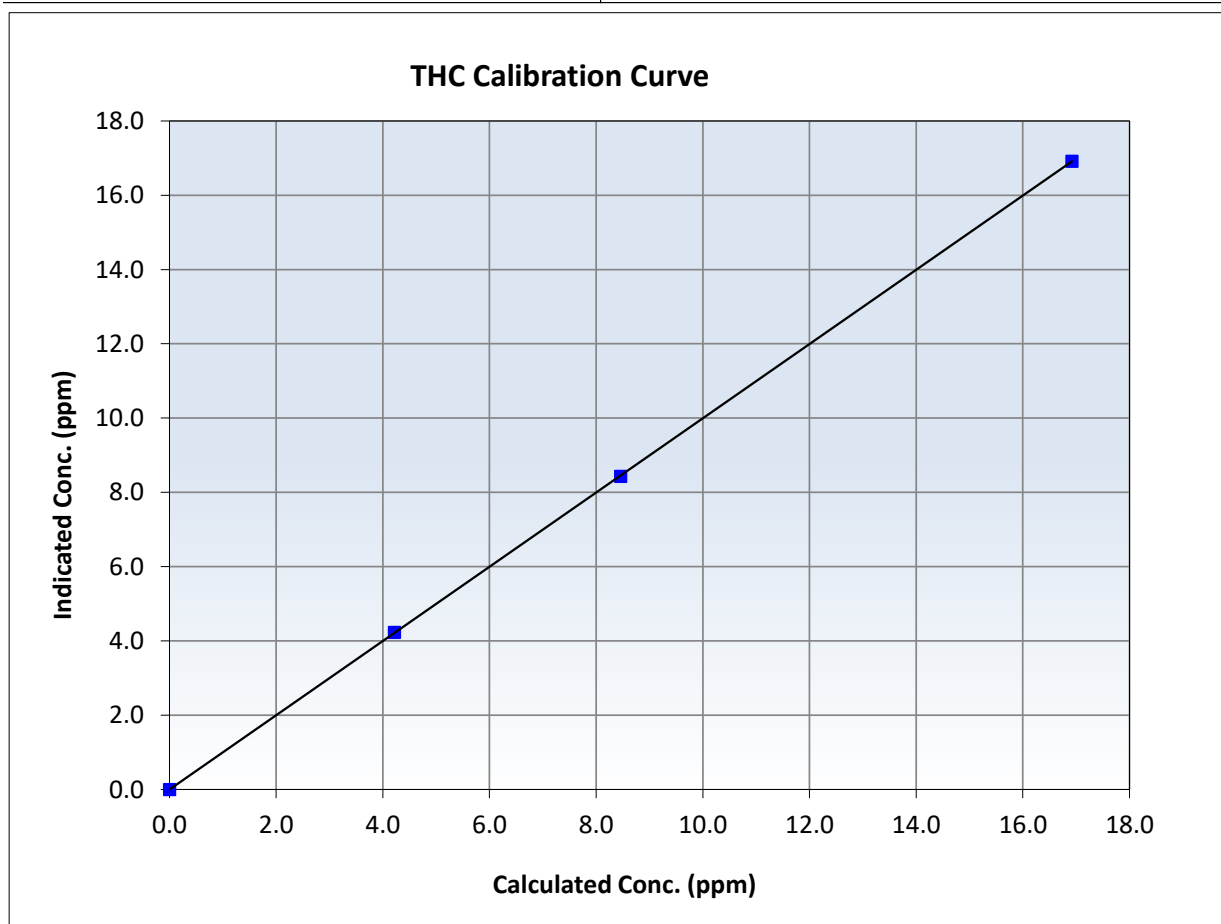
THC Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 13, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:51	End Time (MST):	14:09
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	0.00	----	Correlation Coefficient	0.999994		≥ 0.995
16.92	16.92	1.0000	Slope	0.999530		$0.90 - 1.10$
8.46	8.43	1.0036	Intercept	-0.000770		± 0.5
4.22	4.23	0.9969				





Wood Buffalo Environmental Association

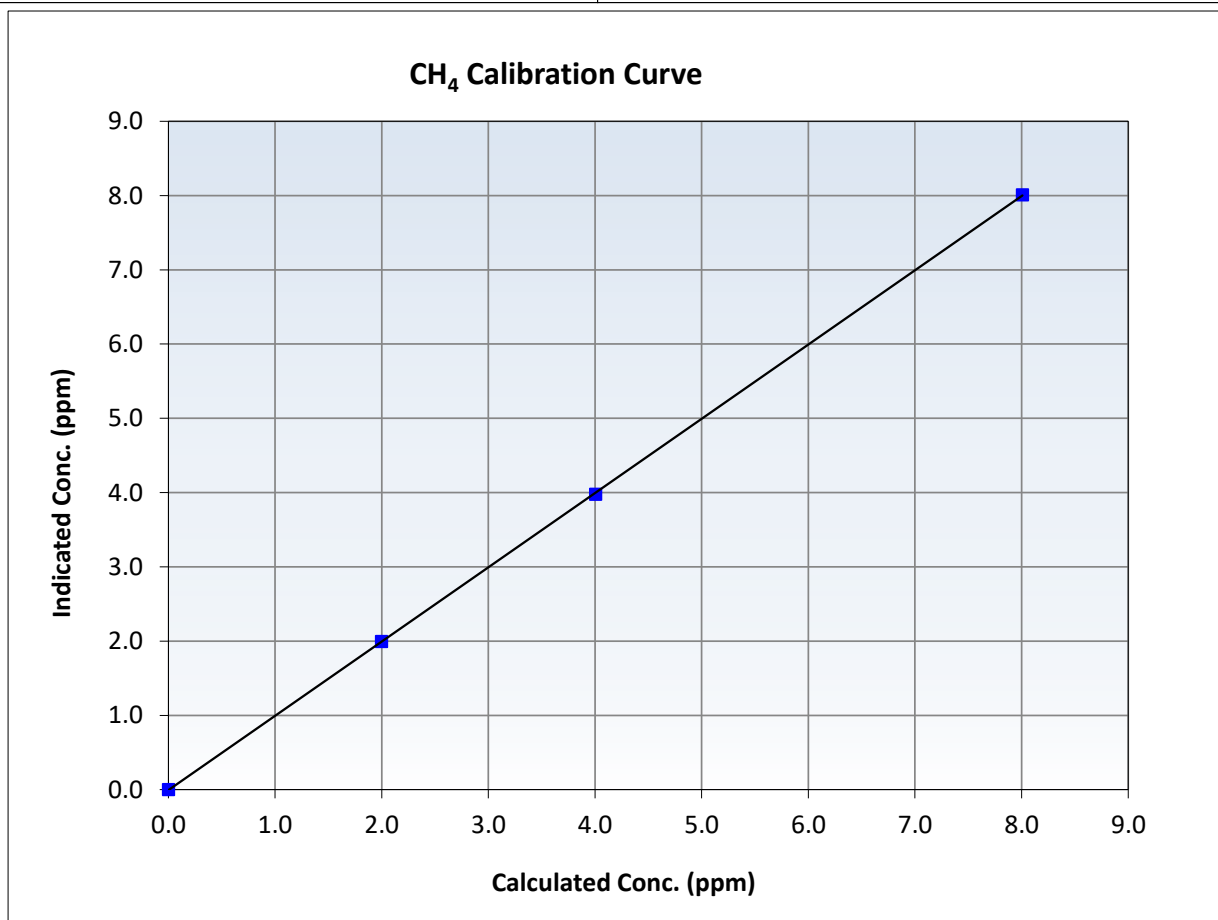
CH₄ Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 13, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:51	End Time (MST):	14:09
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	0.00	----	Correlation Coefficient	0.999986		≥ 0.995
8.01	8.01	0.9997	Slope	1.000030		$0.90 - 1.10$
4.00	3.98	1.0064	Intercept	-0.006388		± 0.5
2.00	2.00	1.0011				





Wood Buffalo Environmental Association

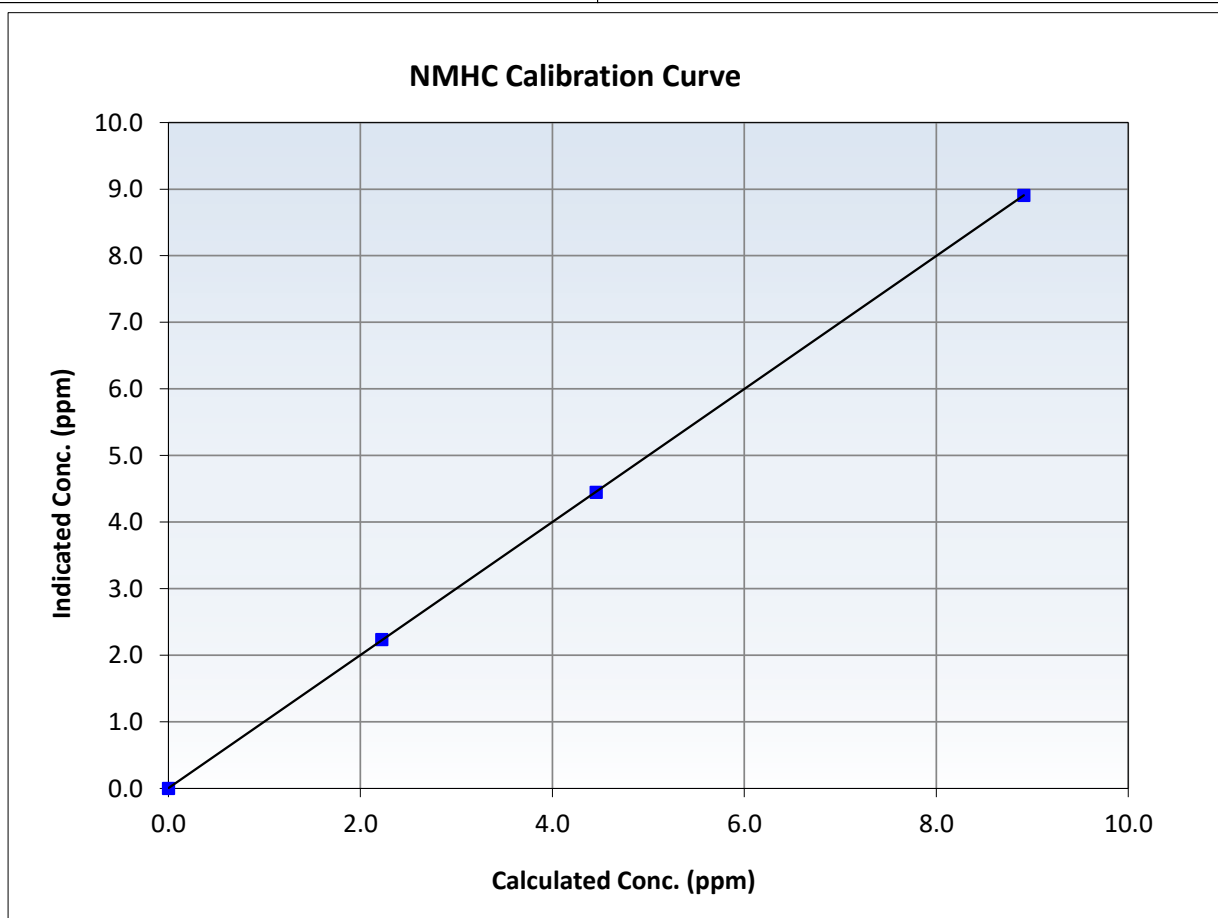
NMHC Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 13, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:51	End Time (MST):	14:09
Analyzer make:	Thermo 55i	Analyzer serial #:	1172750023

Calibration Data

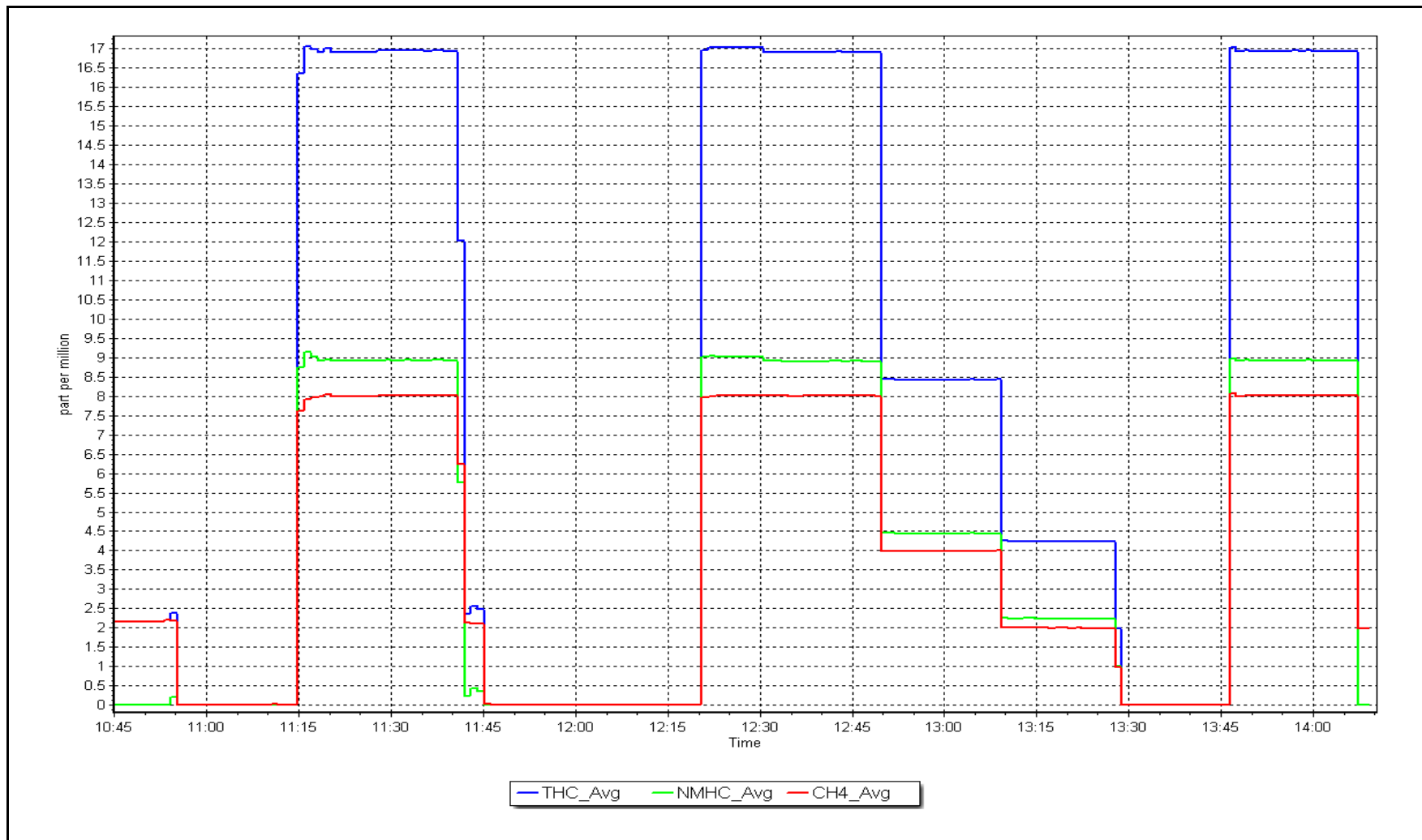
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999994	<i>≥0.995</i>
8.91	8.91	1.0004	Slope	0.998927	<i>0.90 - 1.10</i>
4.46	4.45	1.0018	Intercept	0.005218	<i>+/-0.5</i>
2.22	2.24	0.9932			



NMHC Calibration Plot

Date: August 10, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Fort Hills
 Station number: AMS 23
 Calibration Date: August 17, 2026
 Last Cal Date: July 20, 2026
 Start time (MST): 10:47
 End time (MST): 15:47
 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	-0.2	0.1	----	----
AF High point	4933	66.6	803.3	800.6	2.7	799.5	797.8	1.7	1.0046	1.0033
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 801.1 ppb	NO = 800.4 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.2%	
Baseline Corr 1st pt	NO _x = 799.6 ppb	NO = 798.0 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 :	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:	0.475	0.475	NO bkgnd or offset:	-1.1	-1.1
NOX coeff or slope:	0.469	0.469	NOX bkgnd or offset:	-0.1	-0.1
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	8.3	8.4

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.996616	0.994937
NO _x Cal Offset:	0.552018	0.291729
NO Cal Slope:	1.000634	0.999079
NO Cal Offset:	-0.668417	-1.148908
NO ₂ Cal Slope:	0.991631	0.992444
NO ₂ Cal Offset:	-1.185645	-0.533664

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	0.1	0.0	----	----
High point	4933	66.6	803.3	800.6	2.7	799.8	799.8	0.0	1.0043	1.0010
Mid point	4967	33.3	401.6	400.2	1.3	398.7	396.7	2.0	1.0072	1.0089
Low point	4983	16.6	200.2	199.5	0.7	200.5	197.9	2.6	0.9986	1.0083
As left zero	5000	0.0	0.0	0.0	0.0	0.2	0.3	0.0	----	----
As left span	4933	66.6	803.3	409.4	393.9	793.0	409.4	383.6	1.0129	1.0000
Average Correction Factor									1.0034	1.0061

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	794.0	408.9	387.8	384.6	1.0082	99.2%
Mid GPT point	794.0	600.5	196.2	193.8	1.0122	98.8%
Low GPT point	794.0	698.0	98.7	96.9	1.0182	98.2%
Average Correction Factor					1.0129	98.7%

Notes:

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

Calibration Performed By:

Mohammed Kashif



Wood Buffalo Environmental Association

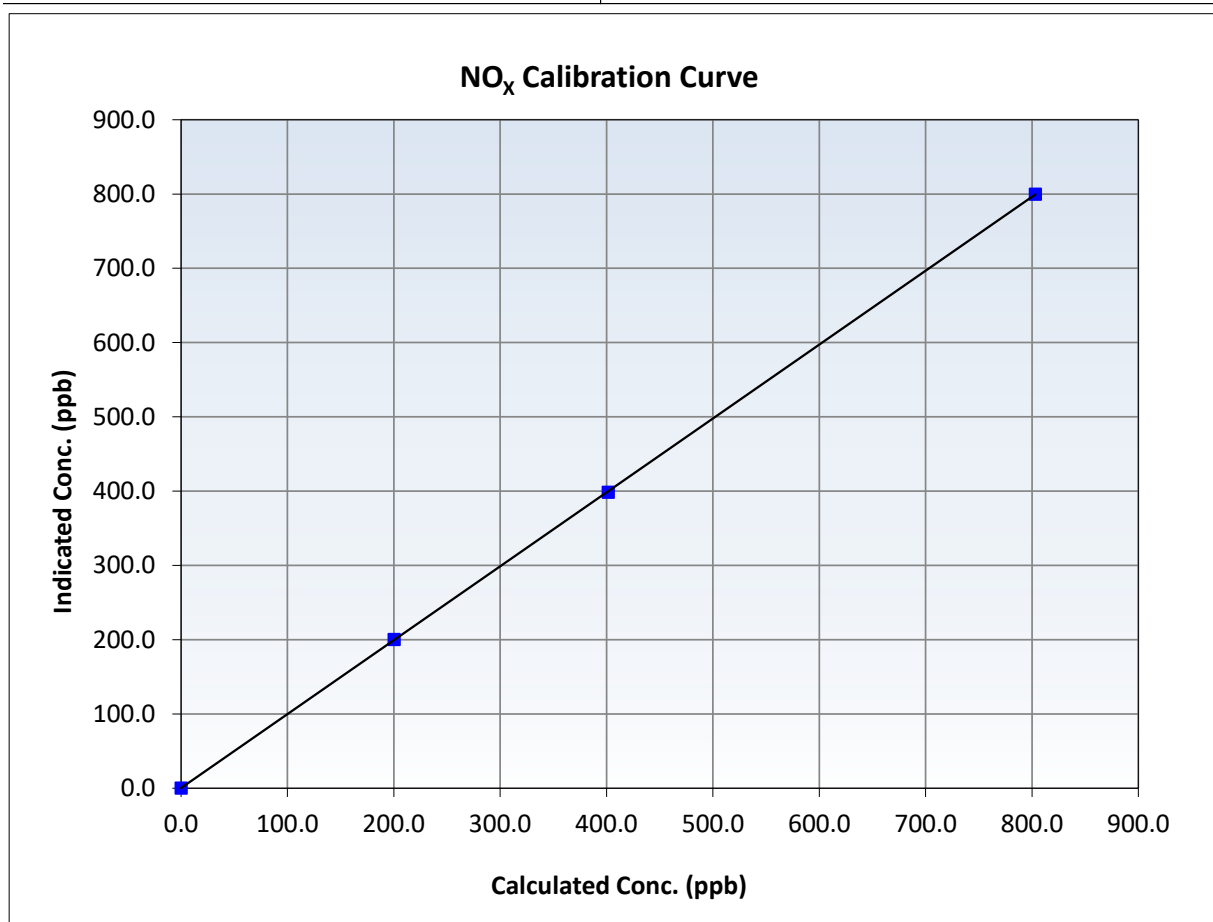
NO_x Calibration Summary

Station Information

Calibration Date:	August 17, 2026	Previous Calibration:	July 20, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:47	End Time (MST):	15:47
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	0.1	----	Correlation Coefficient	0.999993	≥0.995
803.3	799.8	1.0043	Slope	0.994937	0.90 - 1.10
401.6	398.7	1.0072	Intercept	0.291729	+/-20
200.2	200.5	0.9986			





Wood Buffalo Environmental Association

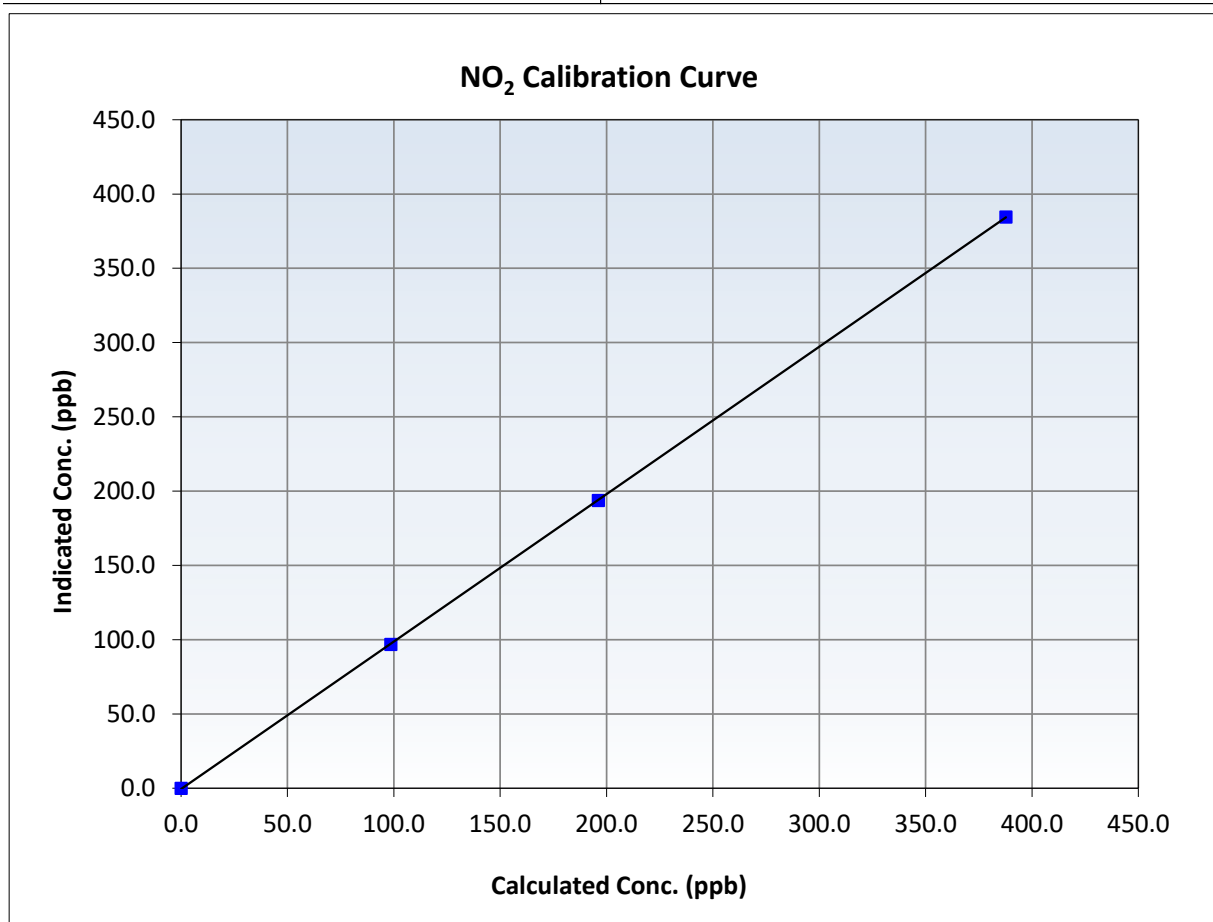
NO₂ Calibration Summary

Station Information

Calibration Date:	August 17, 2026	Previous Calibration:	July 20, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:47	End Time (MST):	15:47
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	0.999991	≥0.995
387.8	384.6	1.0082	Slope	0.992444	0.90 - 1.10
196.2	193.8	1.0122	Intercept	-0.533664	+/-20
98.7	96.9	1.0182			





Wood Buffalo Environmental Association

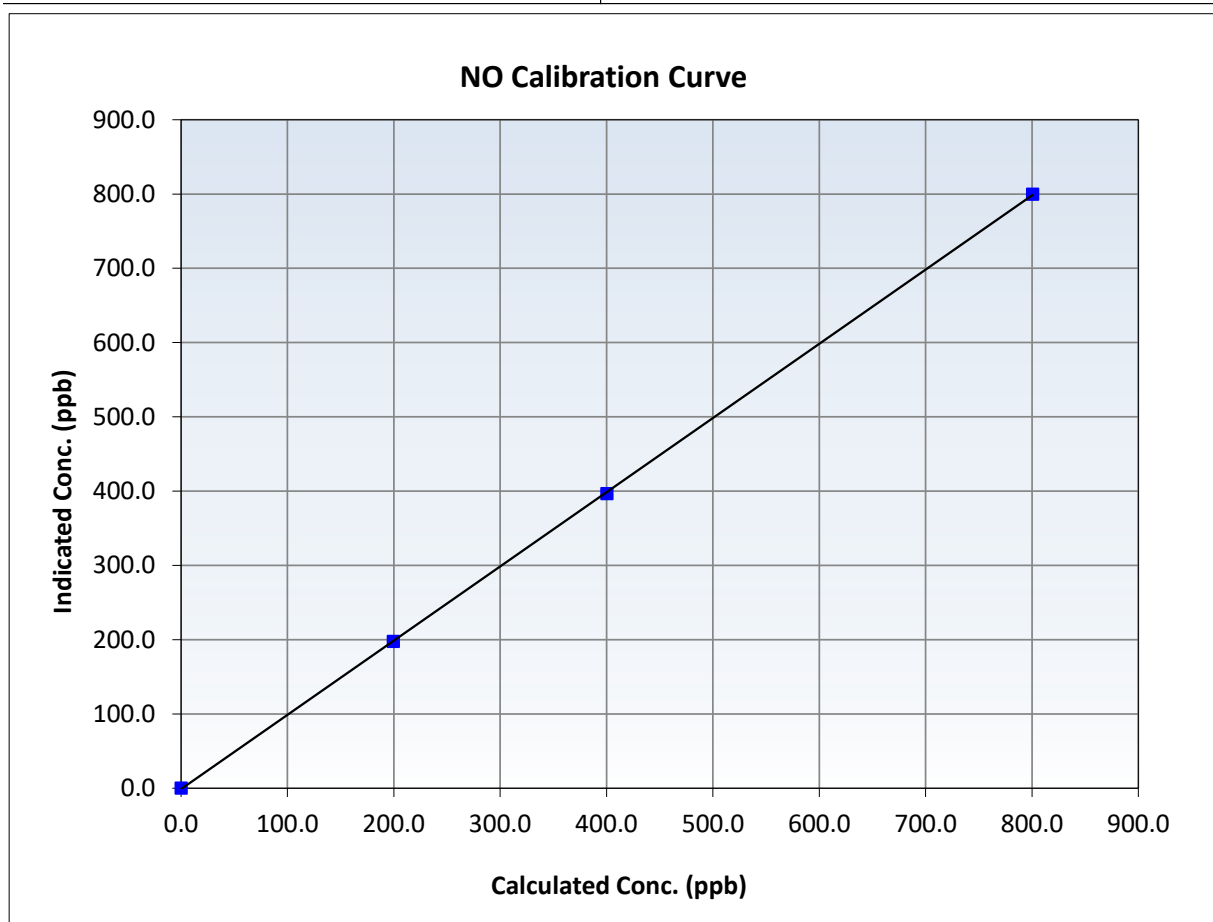
NO Calibration Summary

Station Information

Calibration Date:	August 17, 2026	Previous Calibration:	July 20, 2026
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	10:47	End Time (MST):	15:47
Analyzer make:	API T200	Analyzer serial #:	4260

Calibration Data

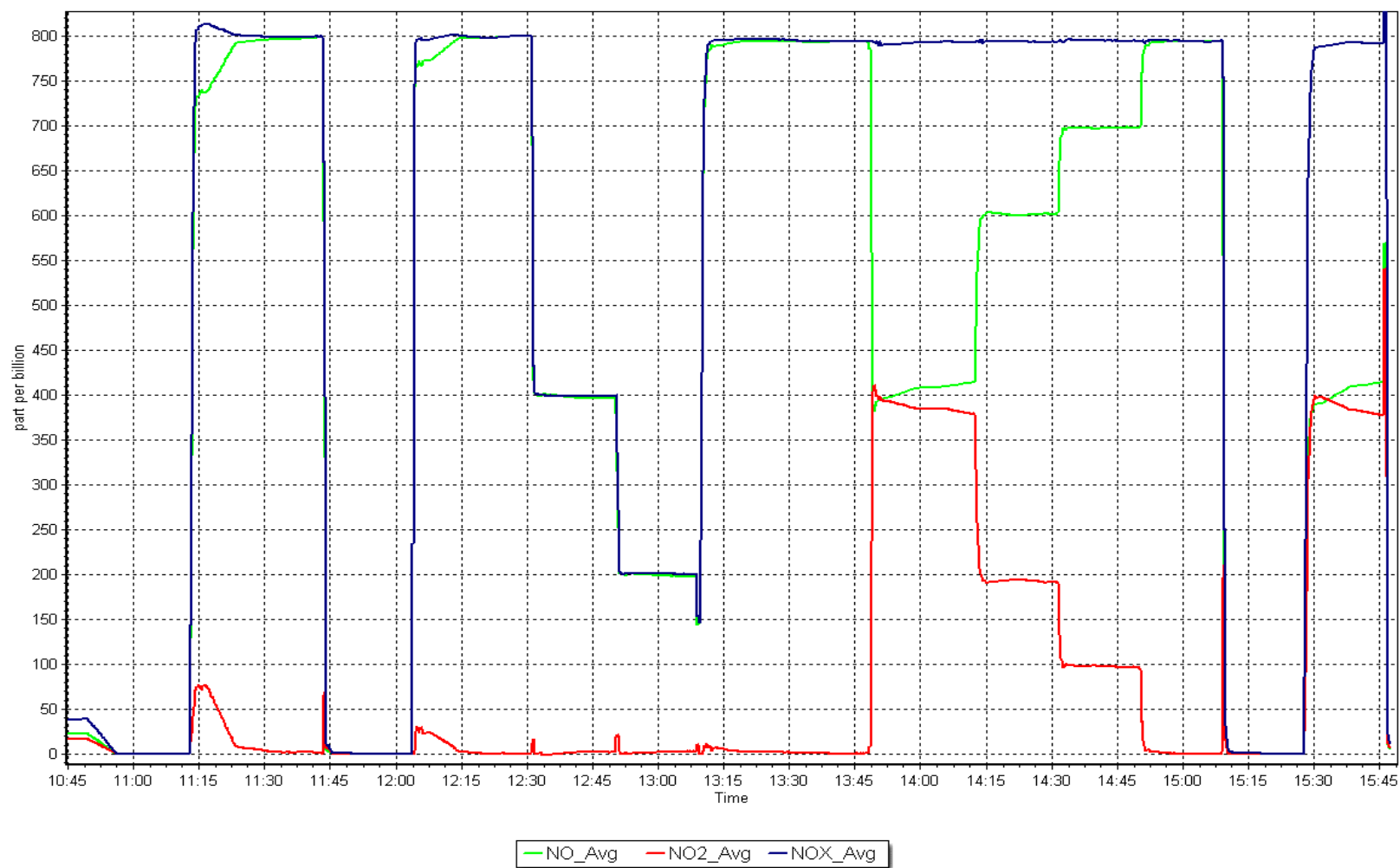
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999980	≥ 0.995
800.6	799.8	1.0010	Slope	0.999079	$0.90 - 1.10$
400.2	396.7	1.0089	Intercept	-1.148908	± 20
199.5	197.9	1.0083			



NO_x Calibration Plot

Date: August 17, 2026

Location: Fort Hills





Wood Buffalo Environmental Association

T640 PM_{2.5} CALIBRATION

Version-01-2024

Station Information

Station Name: Fort Hills
Calibration Date: August 17, 2026
Start time (MST): 14:12
Station number: AMS 23
Last Cal Date: July 20, 2026
End time (MST): 15:14
Analyzer Make: API T640
Particulate Fraction: PM2.5
S/N: 320
Flow Meter Make/Model: Alicat FP-25BT
Temp/RH standard: Alicat FP-25BT
S/N: 388749
S/N: 388749

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	(Limits)
T (°C)	19.9	19.74	19.9	☐	+/- 2 °C
P (mmHg)	735.1	734.44	735.1	☐	+/- 10 mmHg
Flow (LPM)	5.00	5.018	5.00	☐	+/- 0.25 LPM
PW% (pump)	30	----	30	☐	>80%
Zero Verification	PM w/o HEPA: 46.6		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	10.8	11.2	10.8	☒	+/- 0.5

Date Optical Chamber Cleaned: August 17, 2026
Date Disposable Filter Changed: August 17, 2026

Post- maintenance Zero Verification: PM w/ HEPA: 0 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: August 17, 2026
Date RH/T Sensor Cleaned: August 17, 2026

Notes: Leak check, flow, and PMT were checked before and after cleaning. After cleaning the optical chamber, the PMT verified at 11.2 hence PMT was adjusted. Leak check passed.

Calibration by: Mohammed Kashif



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Fort Hills	Station Number:	AMS 23
Calibration Date:	August 17, 2026	Prev Cal Date:	May 27, 2025
Start Time (MST):	11:55	End Time (MST):	13:48
Tower Height (m):	10.0	Reason:	Routine

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	B17268
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	20.1	20.3	0.7%
400	39.4	39.4	0.0%
600	58.5	58.7	0.2%
800	77.8	77.8	0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999999	0.999998	≥ 0.9995
Calculated slope	0.999473	0.999078	$0.98 - 1.02$
Calculated intercept	0.026227	-0.039058	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	B14267
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):	12:30	Calc Declination*:	13.21 Degrees
WD Calibrator:	Met One 040	* - calculated declination as per NOAA website	

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	11.8	0.5%
90	90.9	0.2%
180	180.0	0.0%
270	270.1	0.0%
350	351.2	0.3%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999993	0.999988	≥ 0.9995
Calculated slope	0.996746	1.002333	$0.97 - 1.03$
Calculated intercept	-0.034243	-1.192132	± 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

AMS25 WASKŌW OHCI PIMÂTISIWIN AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Waskow ohci Pimatisiwin Station number: AMS 25
Calibration Date: August 5, 2026 Last Cal Date: July 8, 2026
Start time (MST): 10:07 End time (MST): 13:35
Reason: Routine

Calibration Standards

Cal Gas Concentration: 49.70 ppm Cal Gas Exp Date: March 10, 2031
Cal Gas Cylinder #: CC342445
Removed Cal Gas Conc: 49.70 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Model: API T700 Serial Number: 621
Zero Air Gen Model: API T701 Serial Number: 4765

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1118148497
Analyzer Range: 0-1000ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.001812	0.999185	Backgd or Offset:	10.7	10.7
Calibration intercept:	0.427901	-0.052858	Coeff or Slope:	1.035	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	0.0	----
As found High point	4920	80.5	800.1	804.3	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	804.3	Previous response	802.0	*% 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	0.3	----
High point	4920	80.5	800.1	799.7	1.000
Mid point	4960	40.2	399.6	398.6	1.002
Low point	4980	20.1	199.8	199.5	1.001
As left zero	5000	0.0	0.0	0.3	----
As left span	4920	80.5	800.1	798.6	1.002
Average Correction Factor:					1.001

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

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

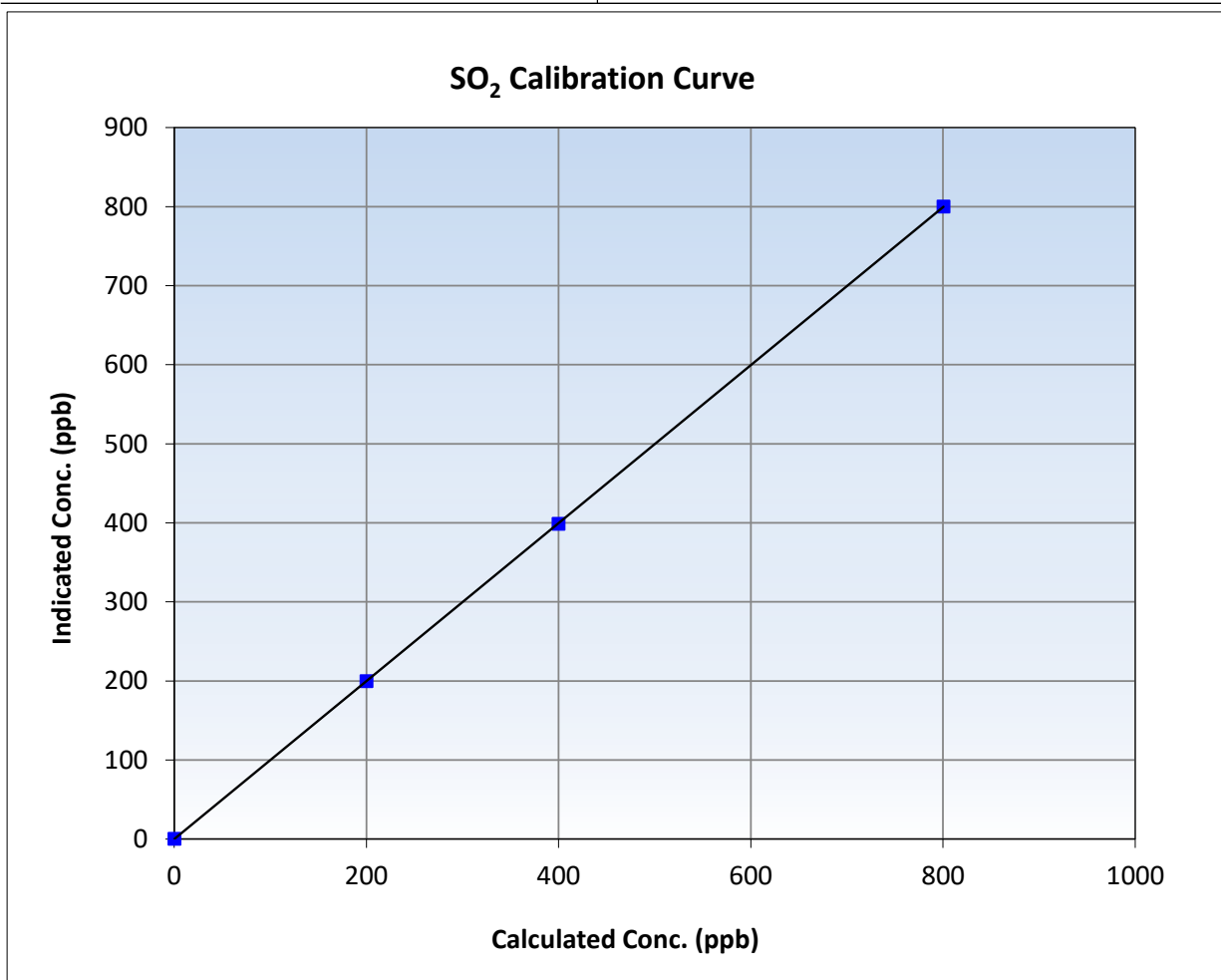
SO₂ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 8, 2026
Station Name:	Waskow ohci Pimatisiwin	Station Number:	AMS 25
Start Time (MST):	10:07	End Time (MST):	13:35
Analyzer make:	Thermo 43i	Analyzer serial #:	1118148497

Calibration Data

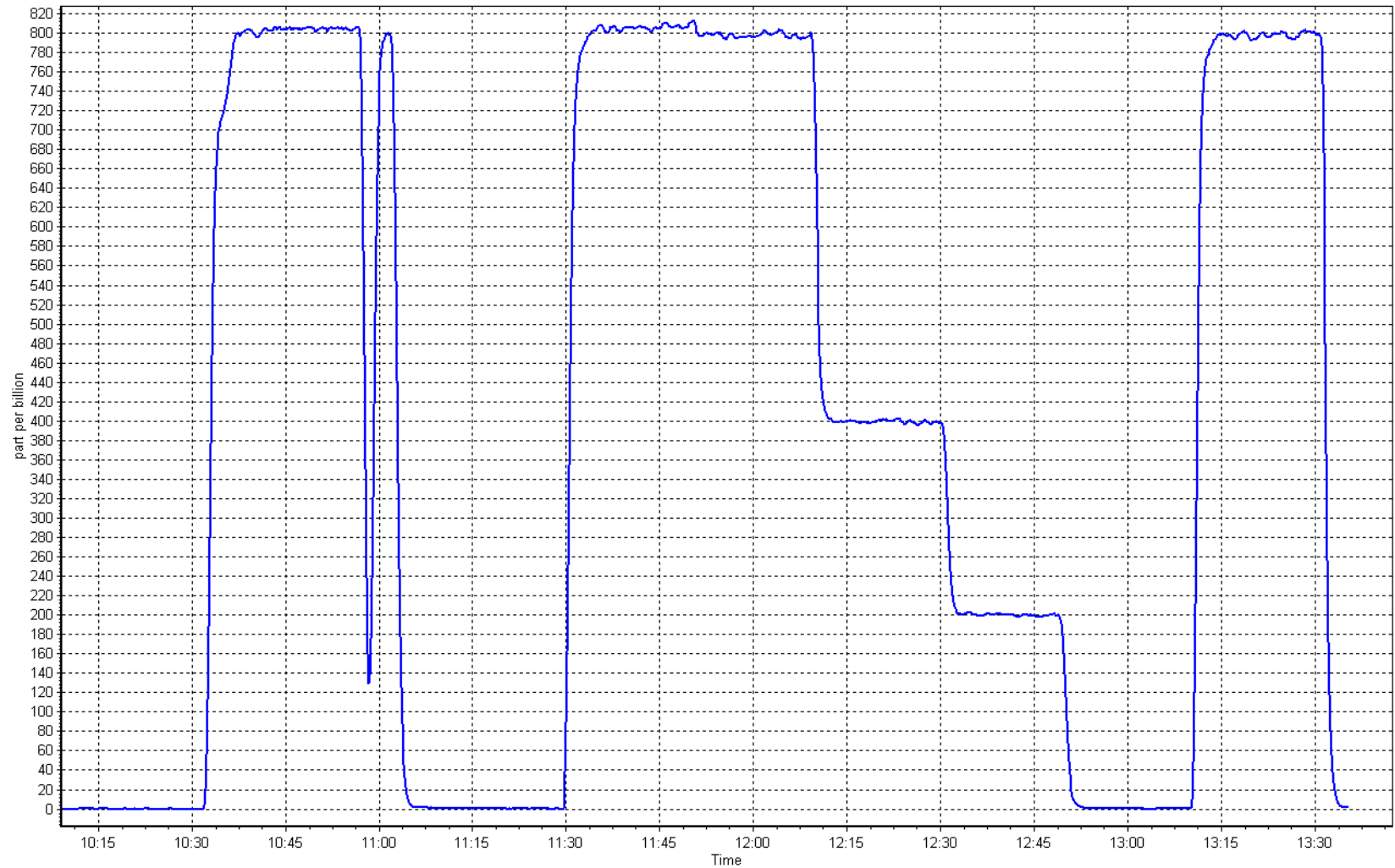
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999998	≥0.995
800.1	799.7	1.0005	Slope	0.999185	0.90 - 1.10
399.6	398.6	1.0024	Intercept	-0.052858	+/-30
199.8	199.5	1.0015			



SO2 Calibration Plot

Date: August 5, 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: August 28, 2026 Last Cal Date: July 7, 2026
Start time (MST): 9:45 End time (MST): 14:44
Reason: Routine

Calibration Standards

Cal Gas Concentration: 5.41 ppm Cal Gas Exp Date: April 16, 2029
Cal Gas Cylinder #: CC526685
Removed Cal Gas Conc: 4.97 ppm Rem Gas Exp Date: January 3, 2026
Removed Gas Cyl #: CC517099 Diff between cyl: -0.4%
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:	0.993940	0.994079	Backgd or Offset:	2.47
Calibration intercept:	0.322232	0.279637	Coeff or Slope:	1.079

H₂S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.2	----
As found High point	4919	80.5	80.0	80.1	1.002
As found Mid point	4960	40.3	40.1	40.5	0.994
As found Low point	4980	20.1	20.0	20.4	0.989
New cylinder response	4926	73.9	80.0	79.7	1.003
Baseline Corr As found:	79.9	Prev response:	79.86	*% change:	0.0%
Baseline Corr 2nd AF pt:	40.3	AF Slope:	0.997797	AF Intercept:	0.362190
Baseline Corr 3rd AF pt:	20.2	AF Correlation:	0.999978	* = > +/-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	4926	73.9	80.0	79.8	1.002
Mid point	4963	37.0	40.0	40.0	1.001
Low point	4982	18.5	20.0	20.2	0.991
As left zero	5000	0.0	0.0	0.3	----
As left span	4926	73.9	800.0	809.4	0.988
SO2 Scrubber Check				0.0	
Date of last scrubber change:				Ave Corr Factor	0.998
Date of last converter efficiency test:		February 12, 2025		102.0%	efficiency

Notes: Changed the inlet filter and calibration gas cylinder after the as founds. No adjustments made.
Scrubber check passed.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

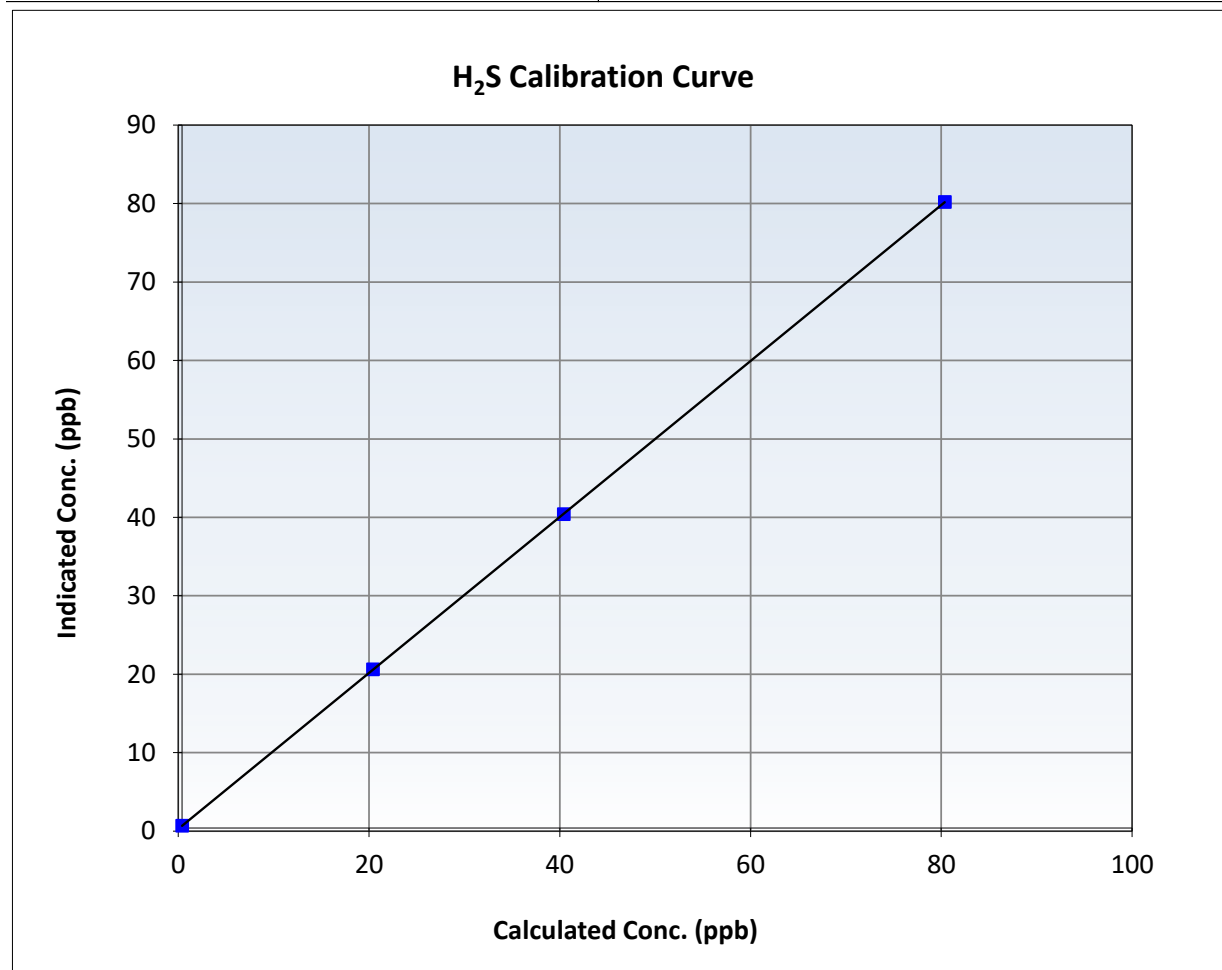
H₂S Calibration Summary

Station Information

Calibration Date:	August 28, 2026	Previous Calibration:	July 7, 2026
Station Name:	Waskow ohci Pimatisiwin	Station Number:	AMS 25
Start Time (MST):	9:45	End Time (MST):	14:44
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1218153358

Calibration Data

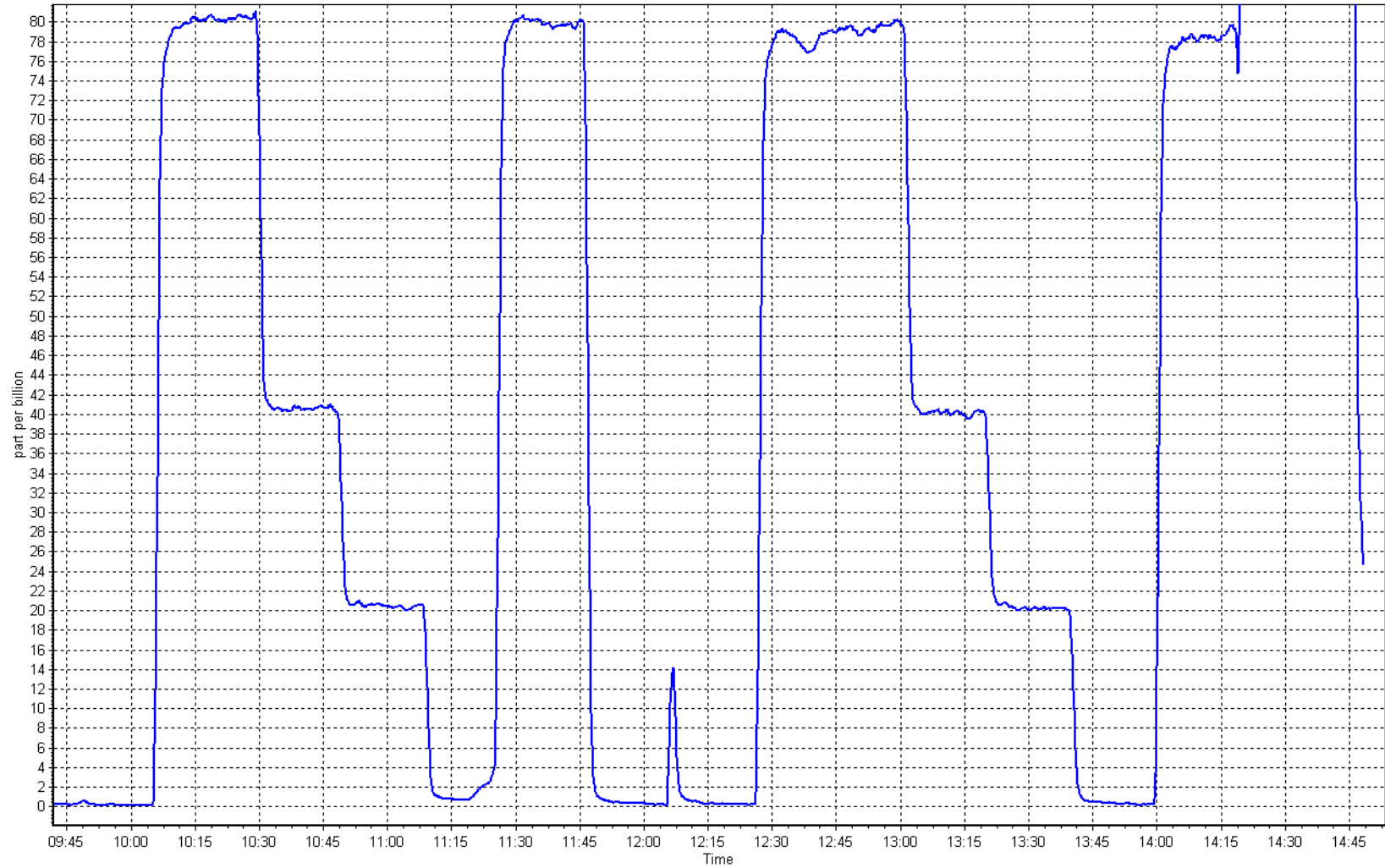
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999998		≥0.995
80.0	79.8	1.0020	Slope	0.994079		0.90 - 1.10
40.0	40.0	1.0009	Intercept	0.279637		+/-3
20.0	20.2	0.9908				



H₂S Calibration Plot

Date: August 28, 2026

Location: Waskow ohci Pimatisiwin





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS27
JACKFISH 2/3
AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Jackfish 2/3 Station number: AMS 27
Calibration Date: August 12, 2026 Last Cal Date: July 9, 2026
Start time (MST): 9:30 End time (MST): 12:16
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: 50.70 ppm Rem Gas Exp Date:
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: API T700 Serial Number: 5252
Zero Air Gen Model: API 701 Serial Number: 268

Analyzer Information

Analyzer make: Thermo 43iQ-TL Serial Number: 12124313138
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.994678	0.997952	Backgd or Offset:	10.8	10.7
Calibration intercept:	1.707661	0.287382	Coeff or Slope:	0.903	0.898

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.3	----
As found High point	4921	78.9	800.1	800.6	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	800.9	Previous response	797.5	*% 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	798.5	1.002
Mid point	4961	39.4	399.5	399.0	1.001
Low point	4980	19.7	199.8	200.4	0.997
As left zero	5000	0.0	0.0	-0.6	----
As left span	4921	78.9	800.1	801.0	0.999
Average Correction Factor:					1.000

Notes: Changed the sample inlet filter after as founds. Span adjusted.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

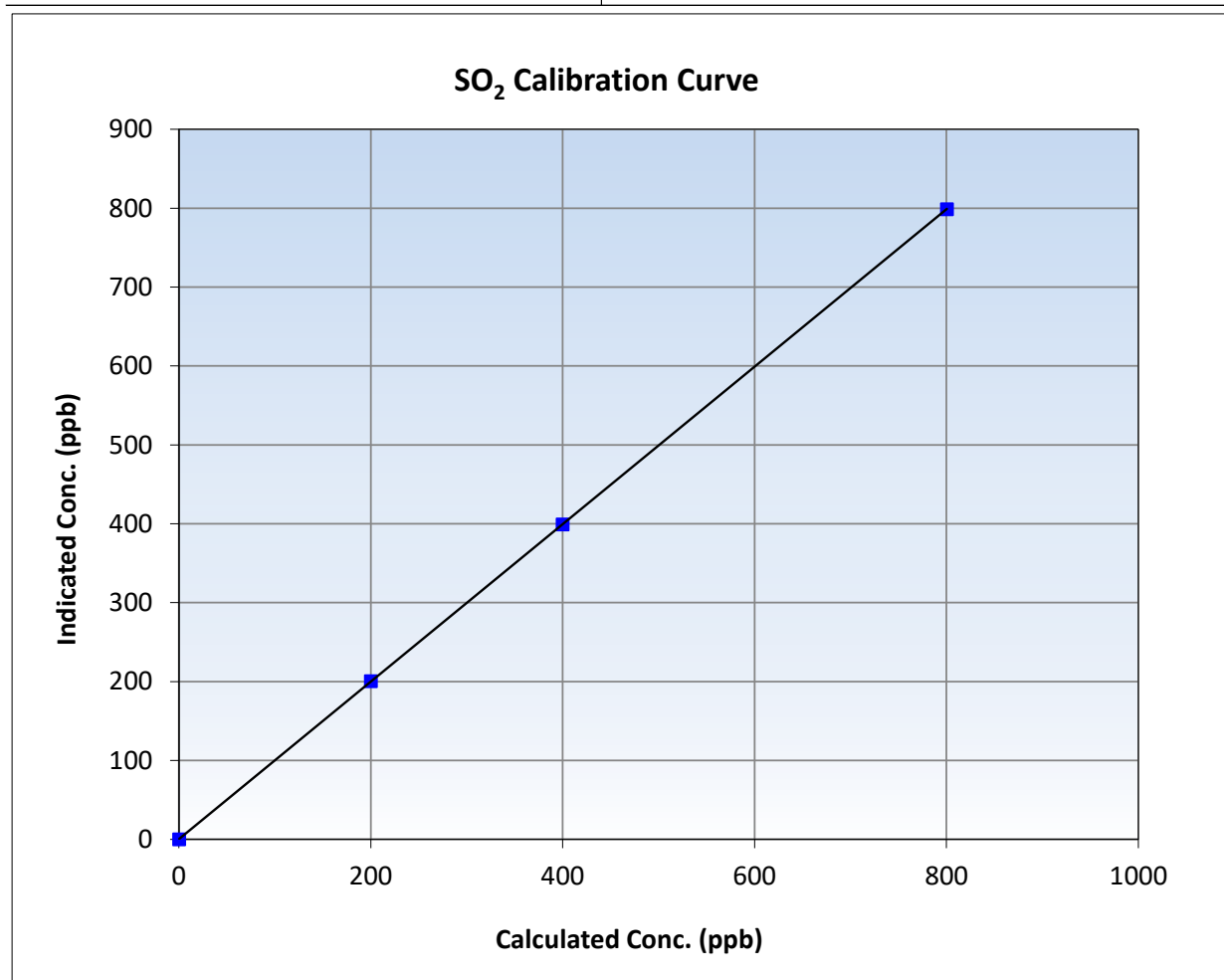
SO₂ Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 9, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:30	End Time (MST):	12:16
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	12124313138

Calibration Data

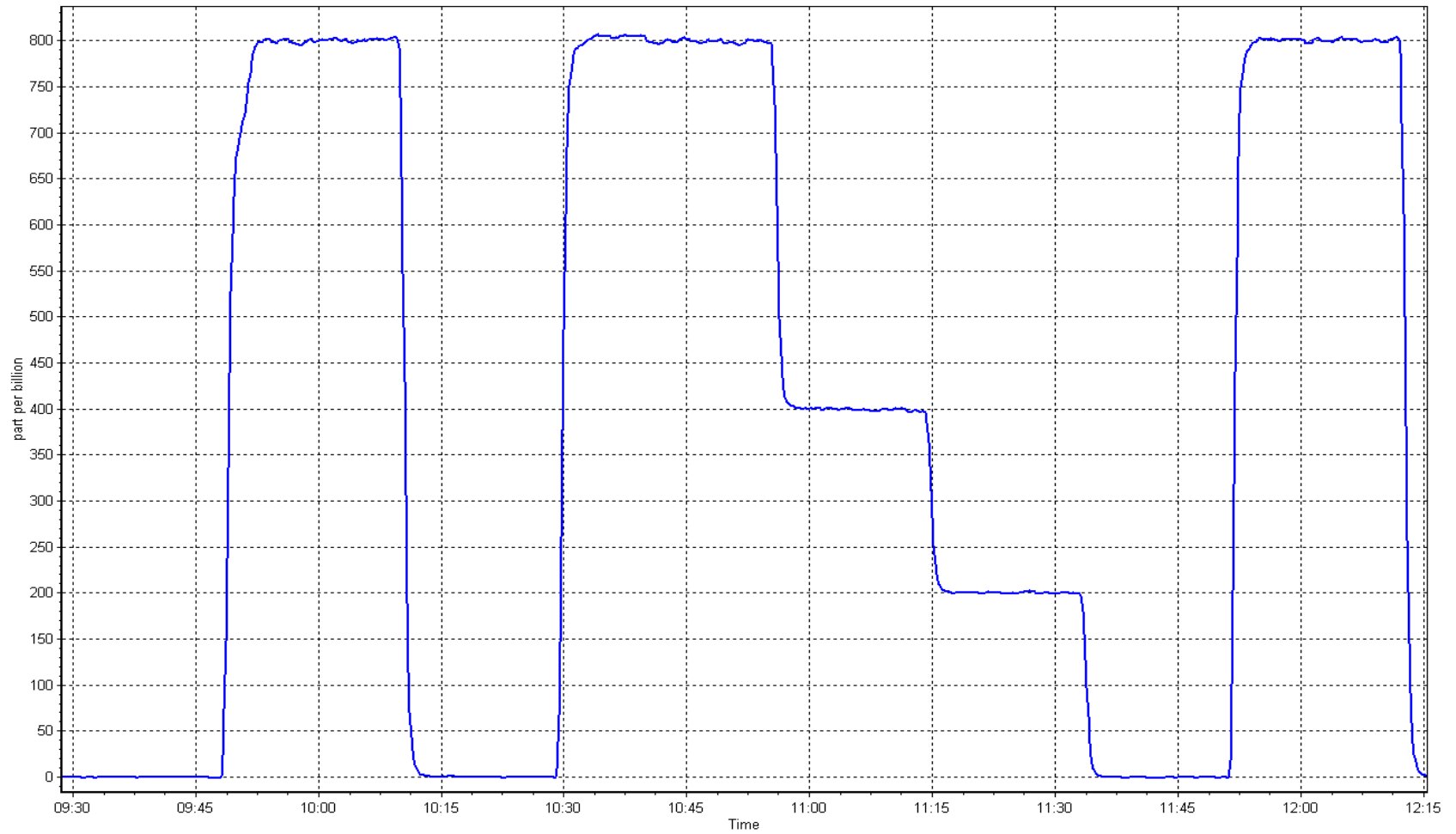
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.3	----	Correlation Coefficient	0.999997	≥0.995
800.1	798.5	1.0020	Slope	0.997952	0.90 - 1.10
399.5	399.0	1.0012	Intercept	0.287382	+/-30
199.8	200.4	0.9969			



SO2 Calibration Plot

Date: August 12, 2026

Location: Jackfish 2/3





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Jackfish 2/3
Calibration Date: August 20, 2026
Start time (MST): 8:22
Reason: Routine

Station number: AMS 27
Last Cal Date: July 21, 2026
End time (MST): 12:35

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:	1.007861	0.985142	Backgd or Offset:	3.1	3.1
Calibration intercept:	-0.440912	0.079030	Coeff or Slope:	1.000	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	78.9	1.008
As found Mid point	4959	41.1	40.0	39.1	1.013
As found Low point	4979	20.5	20.0	19.4	1.009
New cylinder response					
Baseline Corr As found:	79.3	Prev response:	80.15	*% change:	-1.1%
Baseline Corr 2nd AF pt:	39.5	AF Slope:	0.991427	AF Intercept:	-0.440869
Baseline Corr 3rd AF pt:	19.8	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4918	82.1	80.0	78.9	1.013
Mid point	4959	41.1	40.0	39.5	1.013
Low point	4979	20.5	20.0	19.6	1.019
As left zero	5000	0.0	0.0	-0.1	----
As left span	4918	82.1	80.0	79.2	1.010
SO2 Scrubber Check	4921	79.1	791.0	-0.2	----
Date of last scrubber change:		18-Nov-25		Ave Corr Factor	1.015
Date of last converter efficiency test:		April 23, 2025			

Notes: Sample inlet filter was changed after multipoint as founds. DMC board was changed as well. SO2 scrubber check done and passed. No adjustment.

Calibration Performed By: Sean Bala



Wood Buffalo Environmental Association

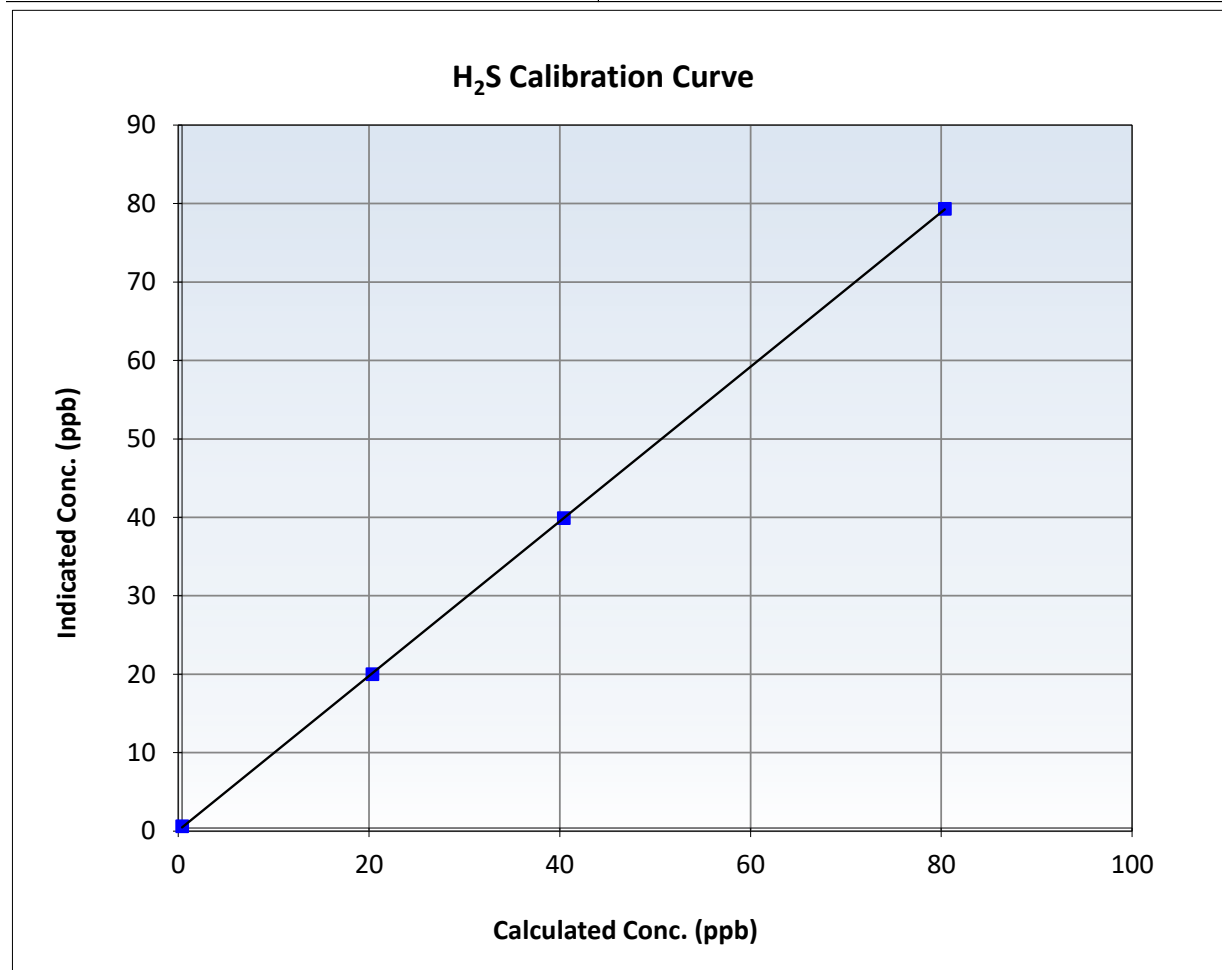
H₂S Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 21, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	8:22	End Time (MST):	12:35
Analyzer make:	Thermo 43iQ	Analyzer serial #:	12228021055

Calibration Data

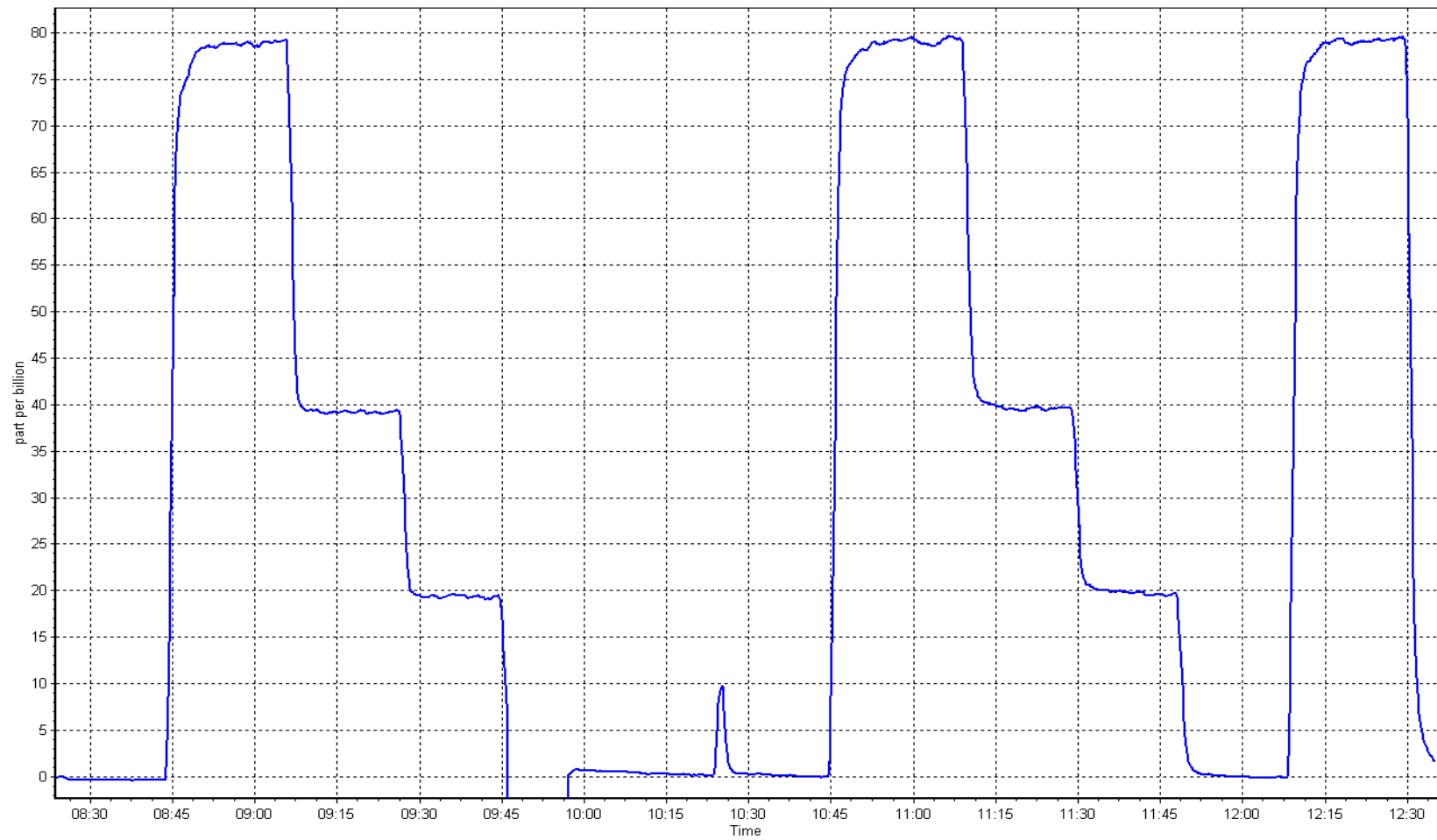
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999988		≥ 0.995
80.0	78.9	1.0135	Slope	0.985142		0.90 - 1.10
40.0	39.5	1.0134	Intercept	0.079030		+/-3
20.0	19.6	1.0188				



H₂S Calibration Plot

Date: August 20, 2026

Location: Jackfish 2/3





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Jackfish 2/3
Station number: AMS 27
Calibration Date: August 11, 2026
Last Cal Date: July 14, 2026
Start time (MST): 9:21
End time (MST): 13:45
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 NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.1	0.1	0.0	----	----
AF High point	4934	66.4	800.7	799.4	1.3	811.4	807.6	3.7	0.9870	0.9900
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 800.1 ppb	NO = 799.4 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = 1.4%
Baseline Corr 1st pt	NO _x = 811.3 ppb	NO = 807.5 ppb	<u>As Found Statistics</u>		*Percent Change	NO = 1.0%
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: Thermoscientific
NOX Range (ppb): 0 - 1000 ppb

Serial Number: 12400232072

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.997271	0.997514
NO _x Cal Offset:	1.603976	1.443974
NO Cal Slope:	0.999914	0.999257
NO Cal Offset:	0.084020	0.364019
NO ₂ Cal Slope:	0.997988	1.002986
NO ₂ Cal Offset:	0.758600	-0.028909

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	1.032	1.010	NO bkgnd or offset:	0.7	0.7
NOX coeff or slope:	0.993	0.990	NOX bkgnd or offset:	0.8	0.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	149.2	144.4

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	-0.1	----	----
High point	4934	66.4	800.7	799.4	1.3	799.3	798.9	0.4	1.0018	1.0006
Mid point	4967	33.2	400.4	399.7	0.7	402.1	400.4	1.7	0.9957	0.9983
Low point	4983	16.6	200.2	199.9	0.3	202.1	199.9	2.2	0.9907	0.9999
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	387.9	412.8	798.6	387.9	410.7	1.0027	1.0000
Average Correction Factor									0.9960	0.9996

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	795.8	378.4	418.7	420.1	0.9967	100.3%
Mid GPT point	795.8	582.6	214.5	214.6	0.9997	100.0%
Low GPT point	795.8	682.8	114.3	115.1	0.9933	100.7%
Average Correction Factor					0.9966	100.3%

Notes:

Changed inlet filter after as founds. Adjusted span only.

Calibration Performed By:

Sean Bala



Wood Buffalo Environmental Association

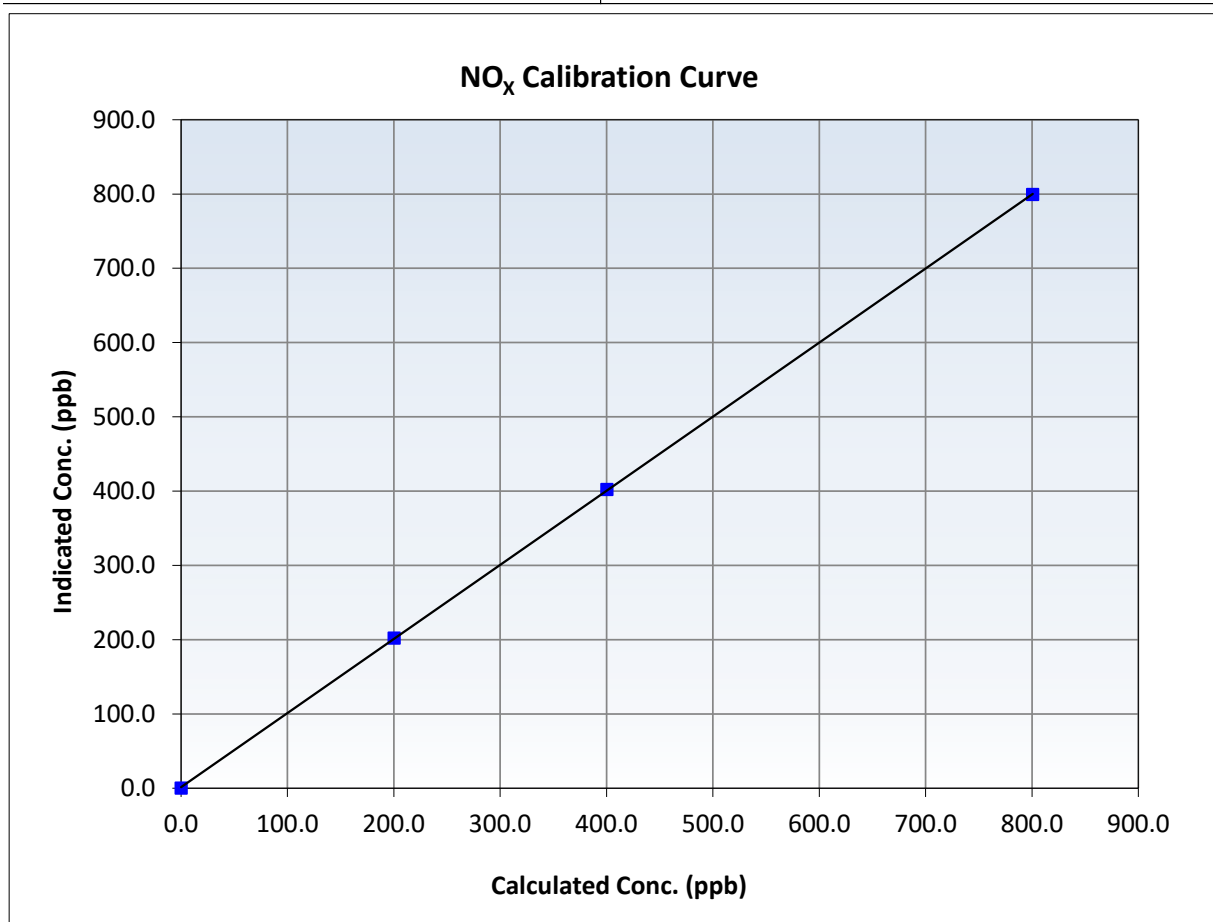
NO_x Calibration Summary

Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 14, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:21	End Time (MST):	13:45
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	0.999985	≥0.995
800.7	799.3	1.0018	Slope	0.997514	0.90 - 1.10
400.4	402.1	0.9957	Intercept	1.443974	+/-20
200.2	202.1	0.9907			





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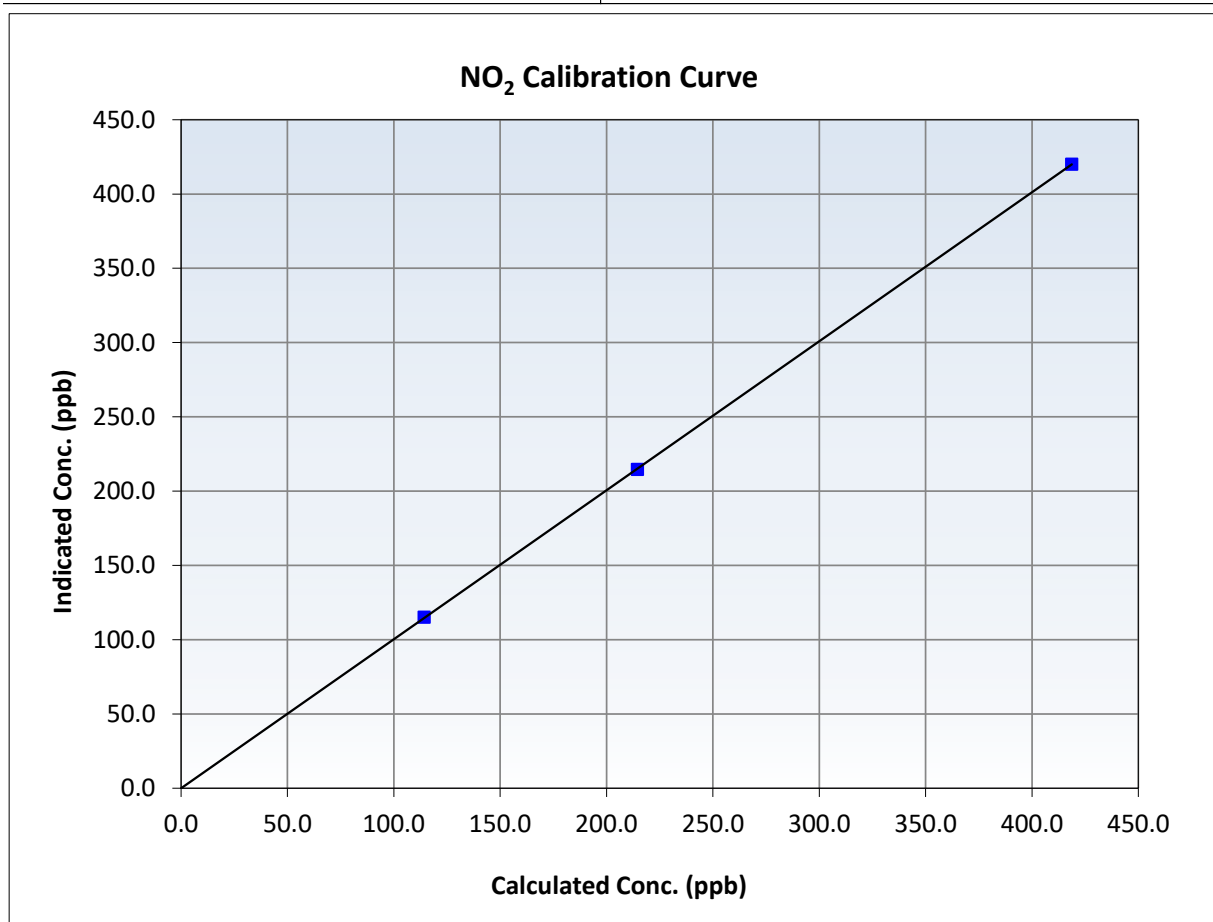
NO₂ Calibration Summary

Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 14, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:21	End Time (MST):	13:45
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	0.999994	≥0.995
418.7	420.1	0.9967	Slope	1.002986	0.90 - 1.10
214.5	214.6	0.9997	Intercept	-0.028909	+/-20
114.3	115.1	0.9933			





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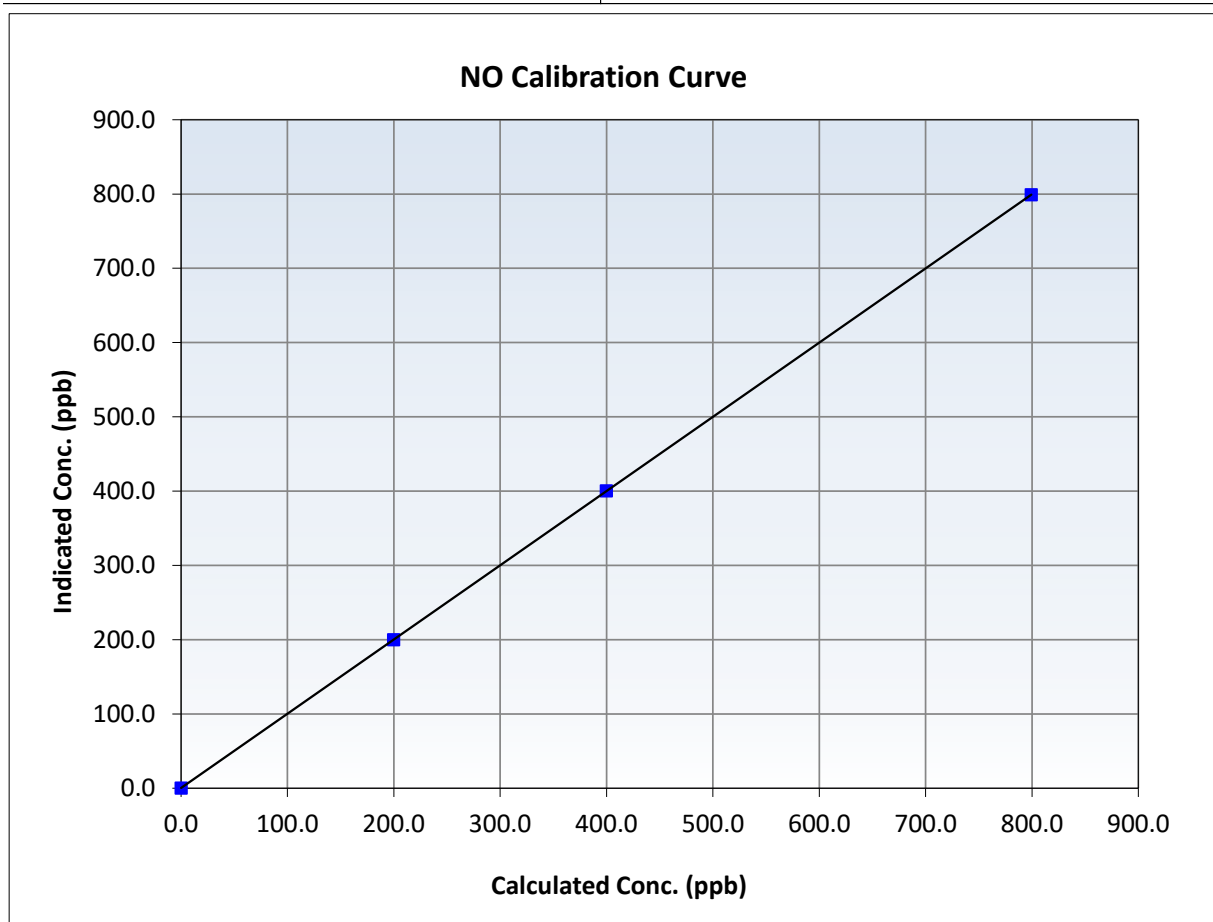
NO Calibration Summary

Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 14, 2026
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	9:21	End Time (MST):	13:45
Analyzer make:	Thermoscientific	Analyzer serial #:	12400232072

Calibration Data

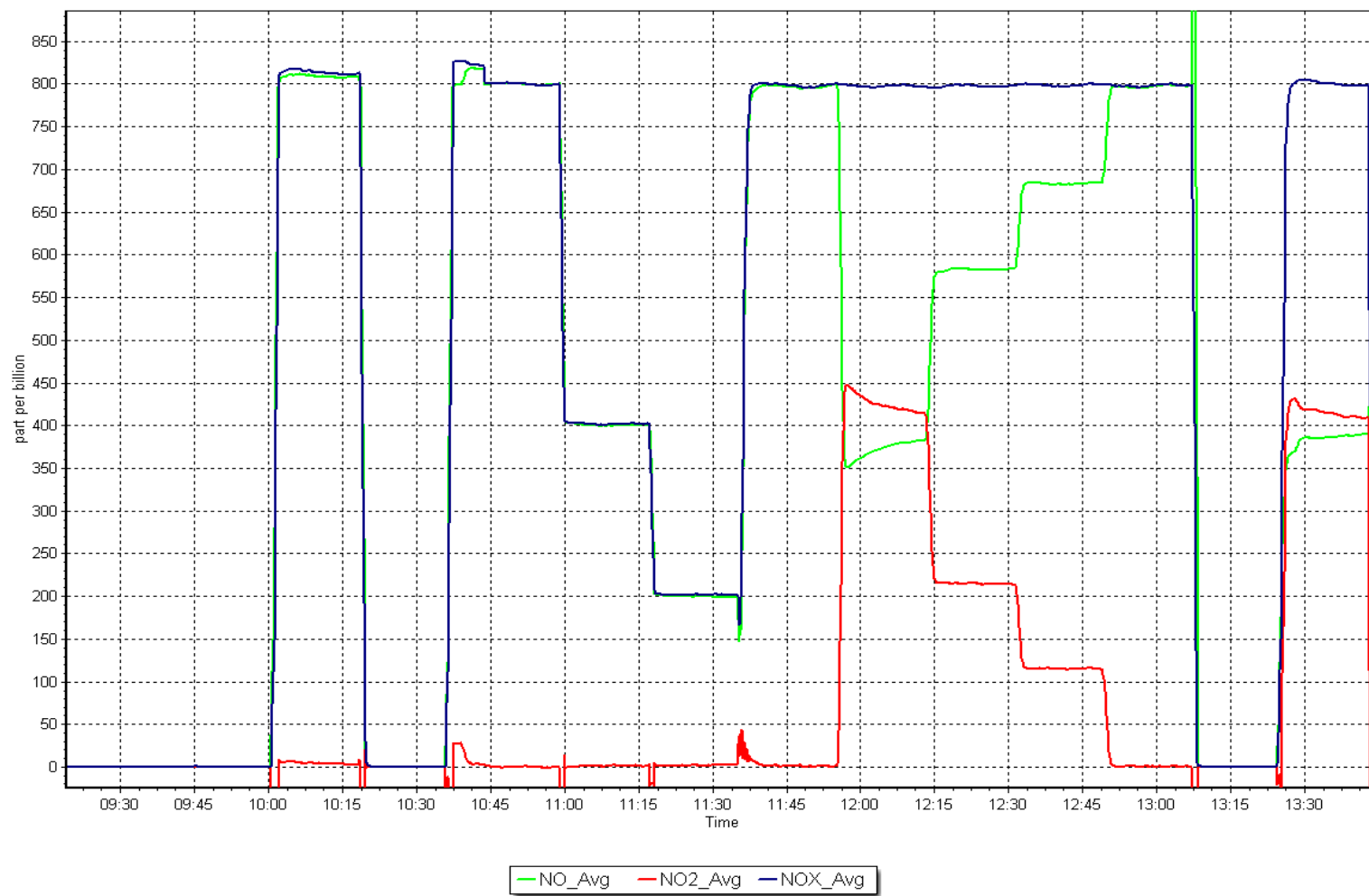
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999999	≥ 0.995
799.4	798.9	1.0006	Slope	0.999257	0.90 - 1.10
399.7	400.4	0.9983	Intercept	0.364019	+/-20
199.9	199.9	0.9999			



NO_x Calibration Plot

Date: August 11, 2026

Location: Jackfish 2/3





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

**AMS29
SURMONT 2
AUGUST 2026**

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Surmont 2 Station number: AMS 29
Calibration Date: August 26, 2026 Last Cal Date: July 24, 2026
Start time (MST): 9:10 End time (MST): 11:53
Reason: Routine

Calibration Standards

Cal Gas Concentration: 49.95 ppm Cal Gas Exp Date: October 9, 2032
Cal Gas Cylinder #: CC356229
Removed Cal Gas Conc: 49.95 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Model: Teledyne API T700 Serial Number: 5472
Zero Air Gen Model: Teledyne API T701 Serial Number: 1402

Analyzer Information

Analyzer make: Thermo 43i Serial Number: 1170050150
Analyzer Range: 0 - 1000 ppb

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.006686	1.011057	Backgd or Offset:	14.5
Calibration intercept:	-0.939254	-1.318762	Coeff or Slope:	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	-0.1	----
As found High point	4920	80.1	800.2	807.7	0.991
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	807.8	Previous response	804.6	*% 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	0.1	----
High point	4920	80.1	800.2	808.5	0.990
Mid point	4960	40.0	399.6	401.8	0.995
Low point	4980	20.0	199.8	199.4	1.002
As left zero	5000	0.0	0.0	0.2	----
As left span	4920	80.1	800.2	809.7	0.988
Average Correction Factor:					0.995

Notes: No maintenance or adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

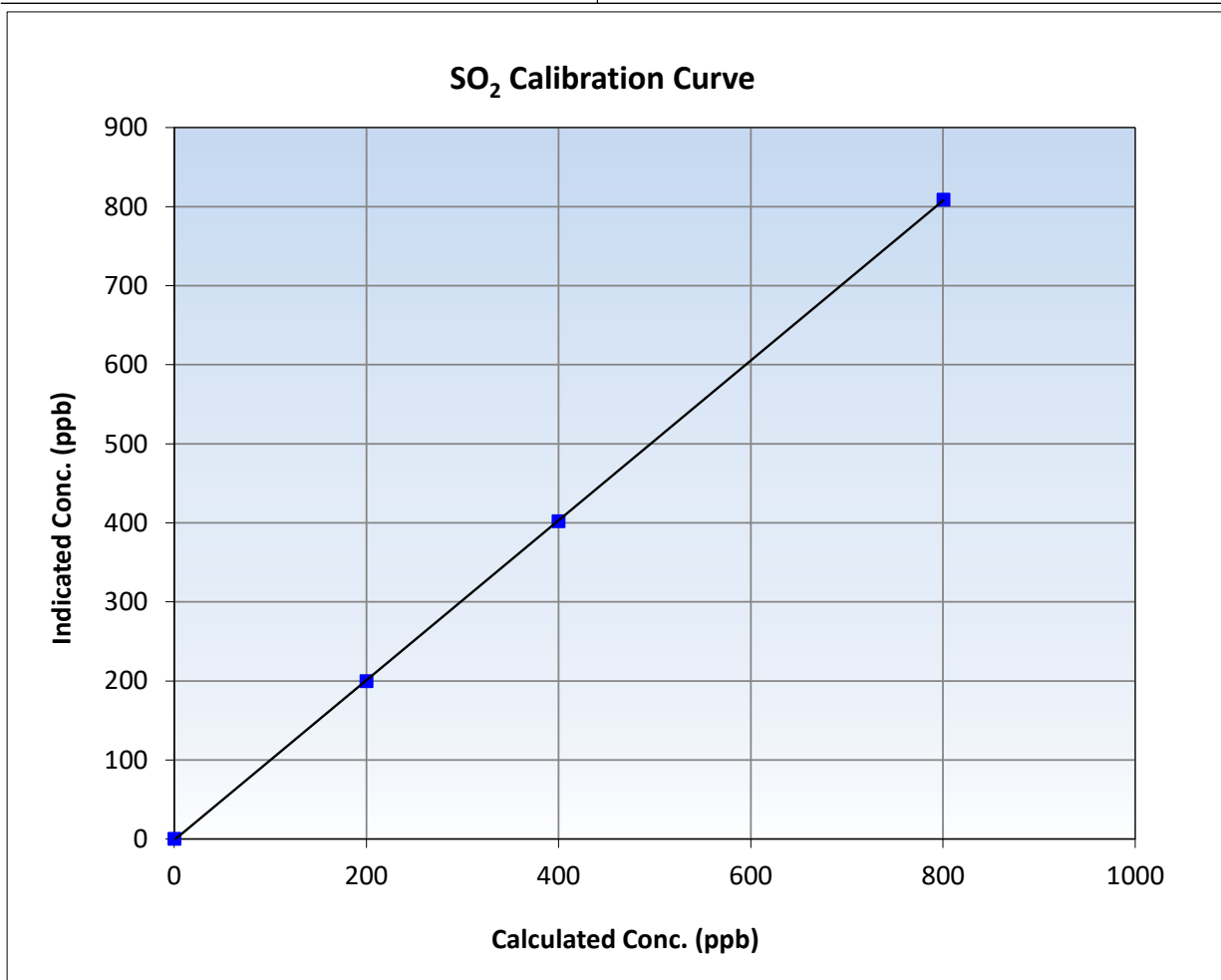
SO₂ Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 24, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	9:10	End Time (MST):	11:53
Analyzer make:	Thermo 43i	Analyzer serial #:	1170050150

Calibration Data

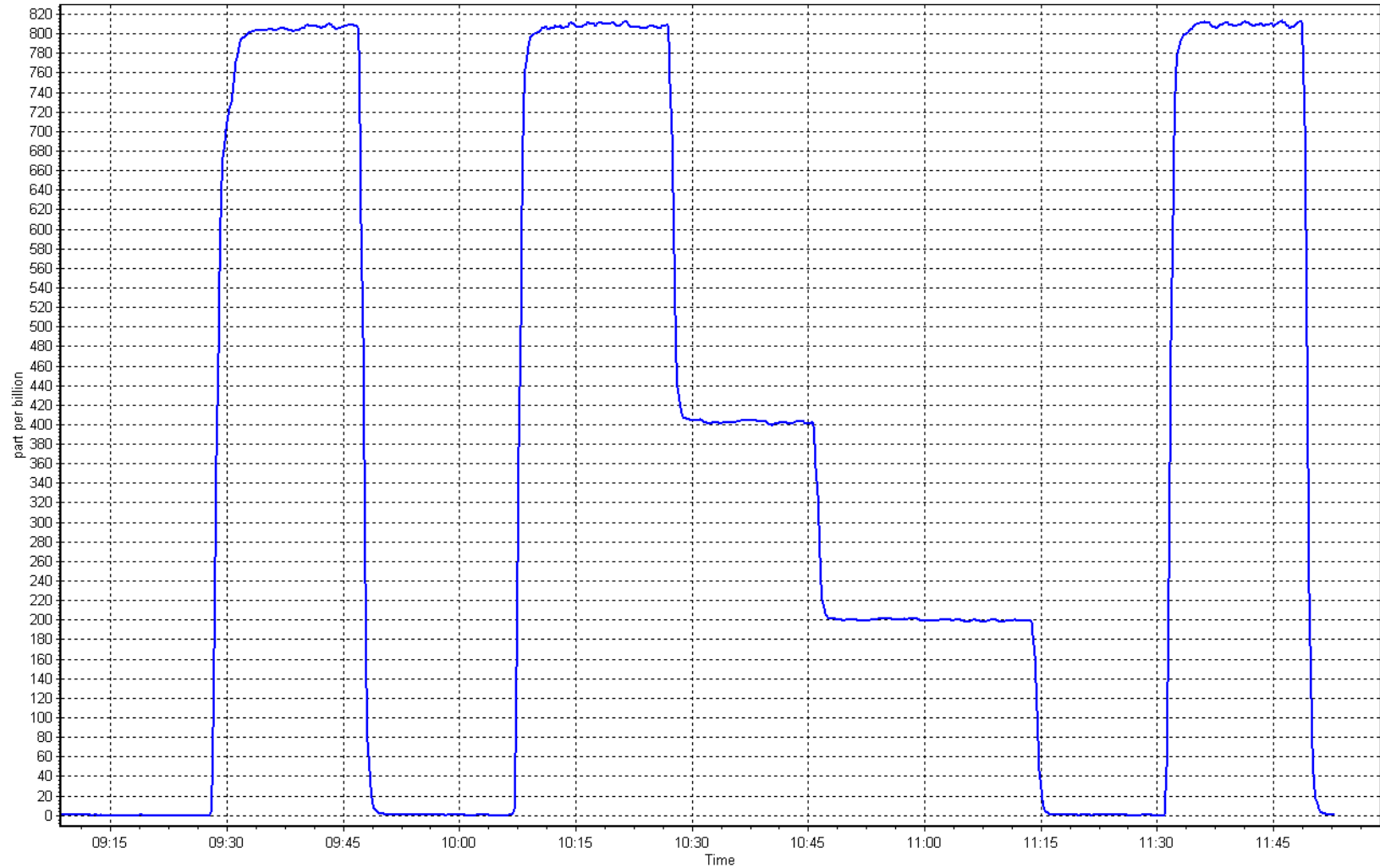
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999986	≥0.995
800.2	808.5	0.9897	Slope	1.011057	0.90 - 1.10
399.6	401.8	0.9945	Intercept	-1.318762	+/-30
199.8	199.4	1.0020			



SO2 Calibration Plot

Date: August 26, 2026

Location: Surmont 2





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Surmont 2 Station number: AMS 29
Calibration Date: August 6, 2026 Last Cal Date: July 23, 2026
Start time (MST): 7:40 End time (MST): 11:46
Reason: Routine

Calibration Standards

Cal Gas Concentration: 4.750 ppm Cal Gas Exp Date: August 28, 2027
Cal Gas Cylinder #: CC737848
Removed Cal Gas Conc: 4.750 ppm Rem Gas Exp Date: NA
Removed Gas Cyl #: NA Diff between cyl:
Calibrator Make/Model: Teledyne API T700 Serial Number: 5472
ZAG Make/Model: Teledyne API T701 Serial Number: 1402

Analyzer Information

Analyzer make: Thermo 43iQ-TLE Analyzer serial #: 1200326170
Converter make: Global Converter serial #: 2022-220
Analyzer Range: 0 - 100 ppb Converter Temp: 325.0 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.003025	1.013455	Backgd or Offset:	1.00
Calibration intercept:	-0.100482	-0.140486	Coeff or Slope:	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	82.5	0.968
As found Mid point	4958	42.1	40.0	41.0	0.973
As found Low point	4979	21.1	20.0	20.3	0.980
New cylinder response					
Baseline Corr As found:	82.6	Prev response:	80.13	*% change:	3.0%
Baseline Corr 2nd AF pt:	41.1	AF Slope:	1.033459	AF Intercept:	-0.240494
Baseline Corr 3rd AF pt:	20.4	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	4916	84.2	80.0	80.9	0.989
Mid point	4958	42.1	40.0	40.5	0.988
Low point	4979	21.1	20.0	20.0	1.000
As left zero	5000	0.0	0.0	0.1	----
As left span	4916	84.2	80.0	79.9	1.001
SO2 Scrubber Check	4919	81.3	813.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	0.992
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

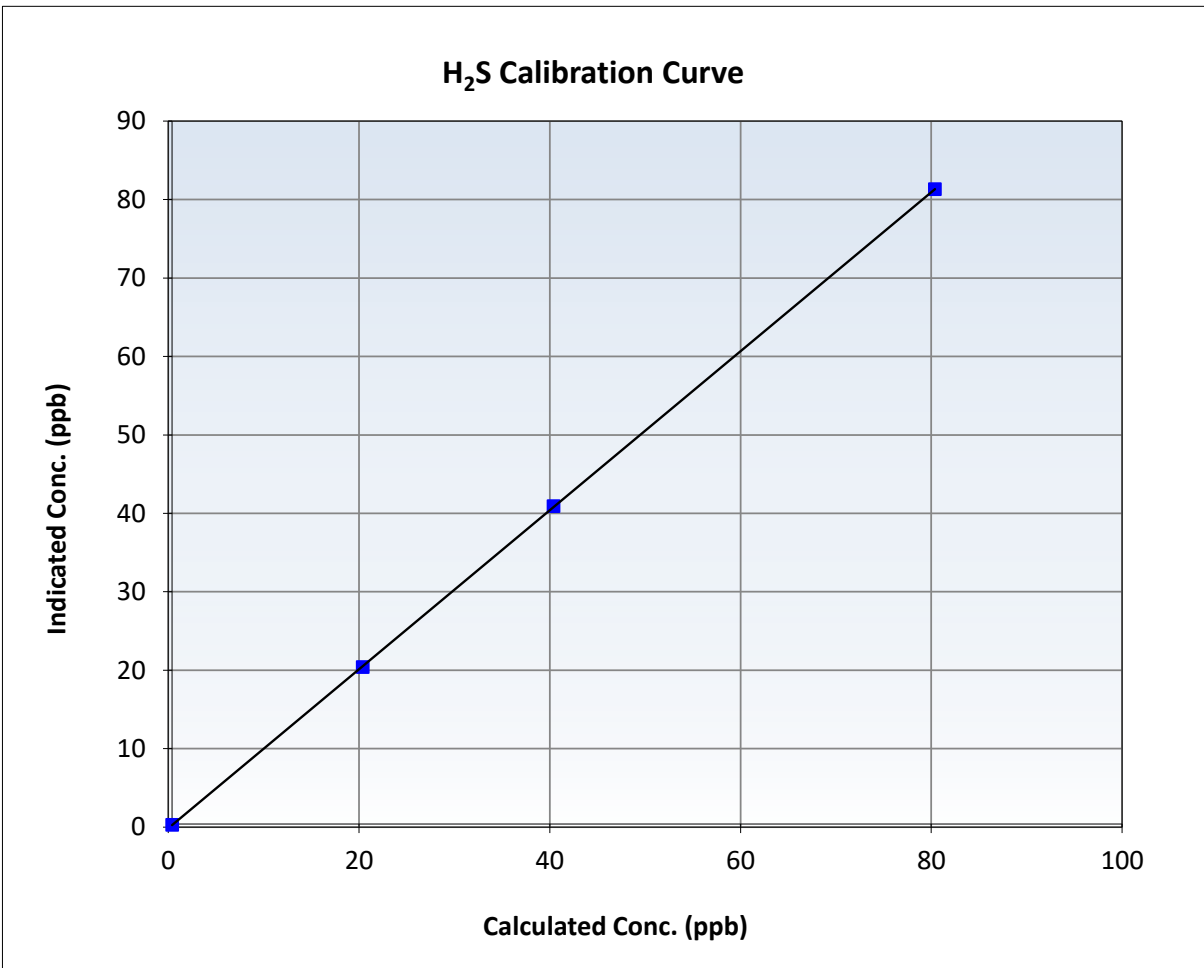
H2S Calibration Summary

Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 23, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	7:40	End Time (MST):	11:46
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	1200326170

Calibration Data

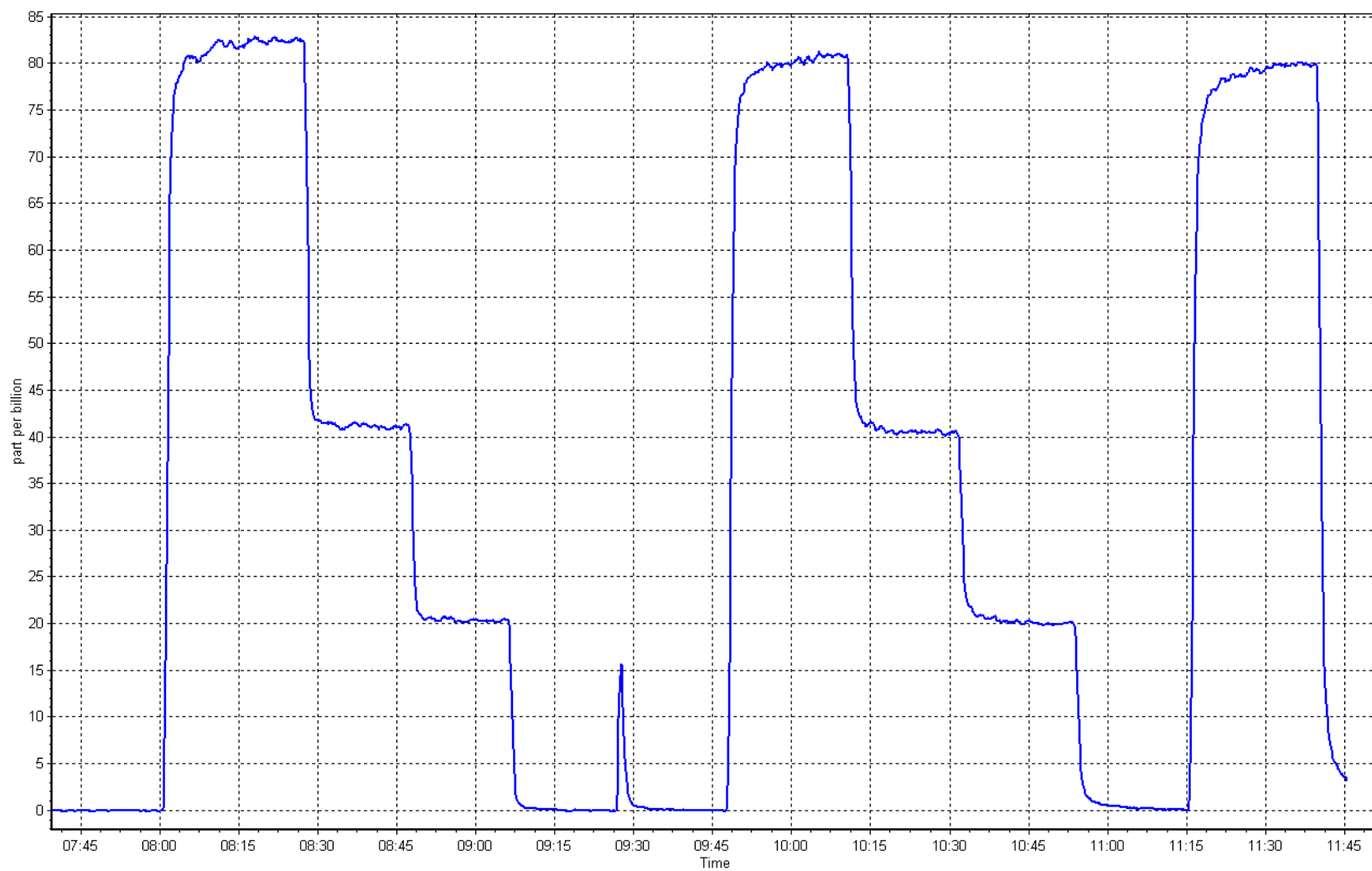
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999992		≥ 0.995
80.0	80.9	0.9887	Slope	1.013455		$0.90 - 1.10$
40.0	40.5	0.9875	Intercept	-0.140486		± 3
20.0	20.0	0.9999				



H2S Calibration Plot

Date: August 6, 2026

Location: Surmont 2





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Surmont 2
Calibration Date: August 26, 2026
Start time (MST): 9:10
Reason: Routine

Station number: AMS 29
Last Cal Date: July 24, 2026
End time (MST): 11:52

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:	0.996334	1.000820	Background:	2.26	2.26
Calibration intercept:	-0.012987	0.036235	Coefficient:	3.924	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	-0.01	----
As found High point	4920	80.1	17.09	17.03	1.003
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	17.04	Previous response	17.02	*% 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	

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	0.08	----
High point	4920	80.1	17.09	17.18	0.995
Mid point	4960	40.0	8.54	8.51	1.003
Low point	4980	20.0	4.27	4.29	0.994
As left zero	5000	0.0	0.00	0.04	----
As left span	4920	80.1	17.09	17.10	1.000
Average Correction Factor					0.997

Notes:

No Maintenance or adjustments done.

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

THC Calibration Summary

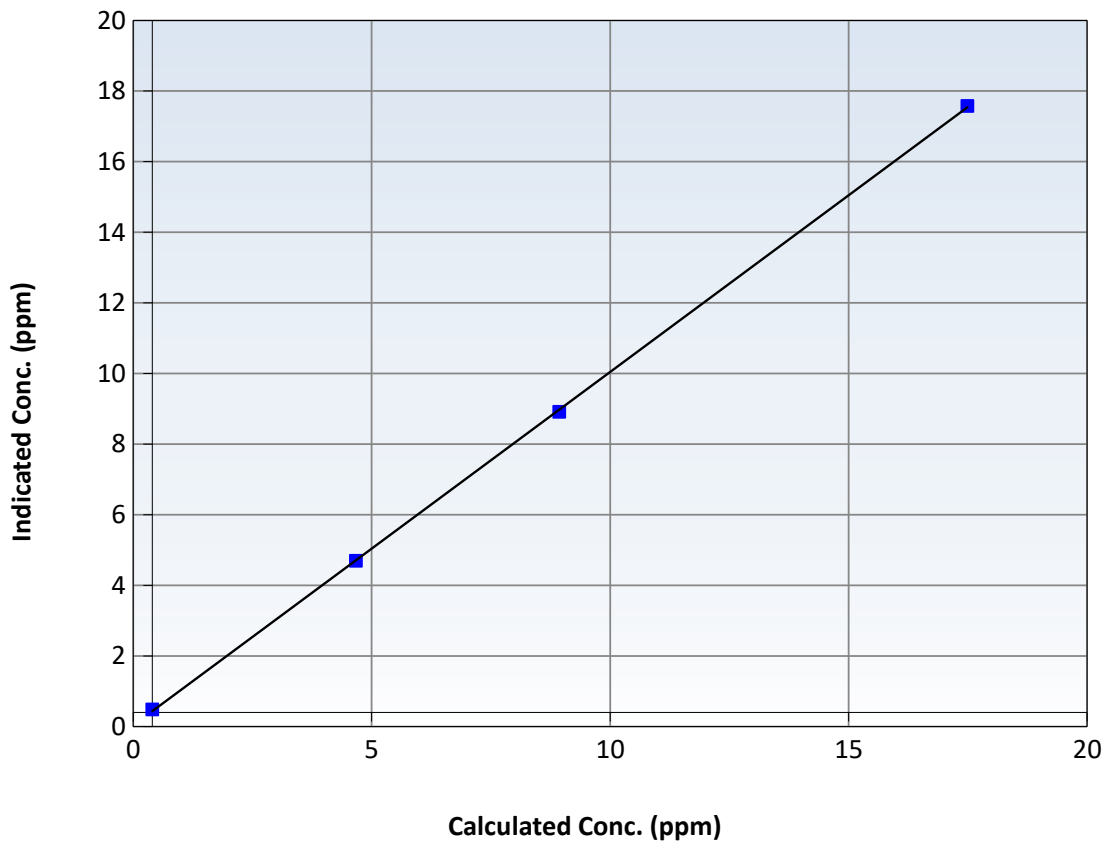
Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 24, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	9:10	End Time (MST):	11:52
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	0.08	----	Correlation Coefficient	0.999953	≥ 0.995
17.09	17.18	0.9950	Slope	1.000820	$0.90 - 1.10$
8.54	8.51	1.0026	Intercept	0.036235	± 1.5
4.27	4.29	0.9939			

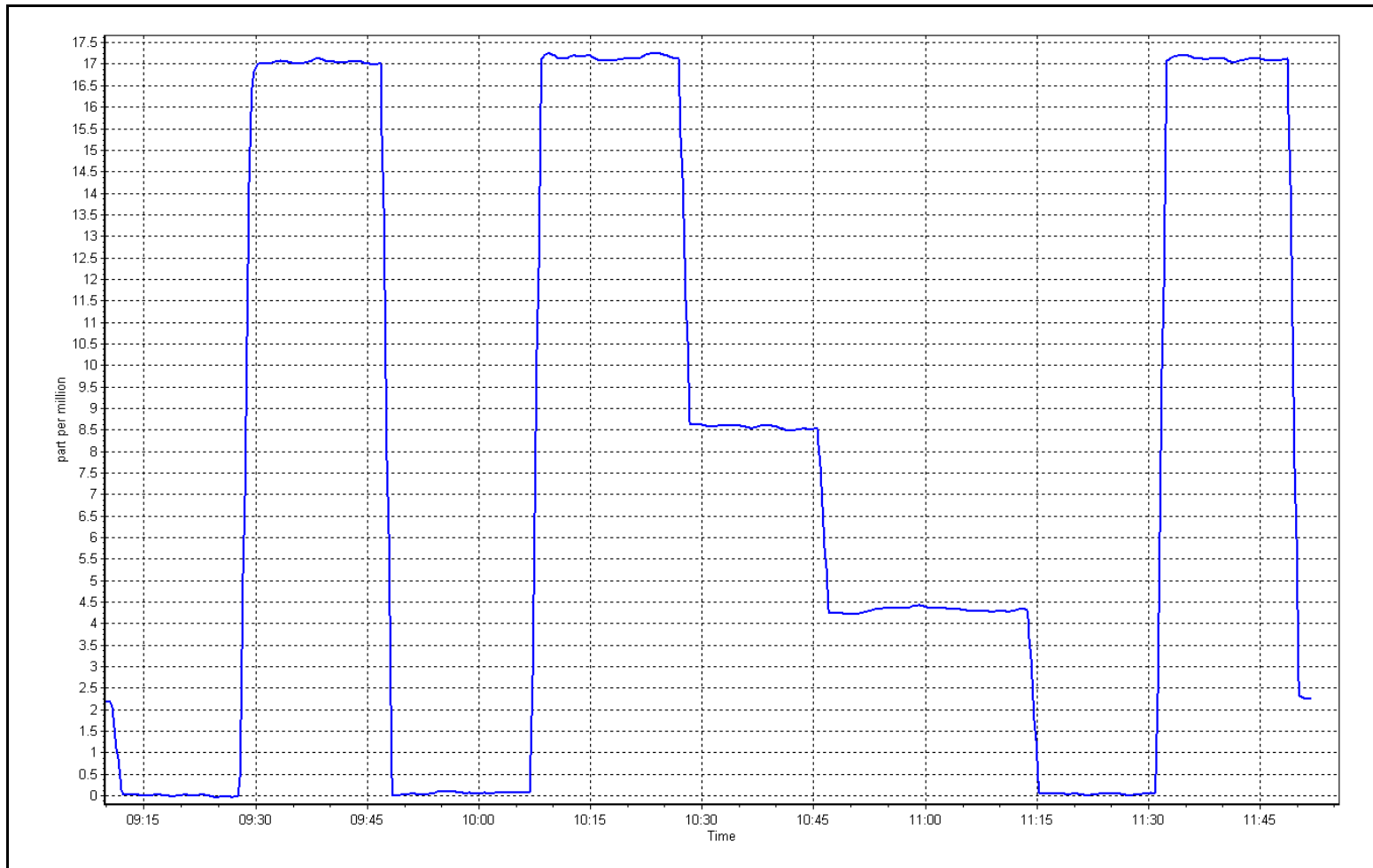
THC Calibration Curve



THC Calibration Plot

Date: August 26, 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: August 12, 2026
Last Cal Date: July 21, 2026
Start time (MST): 7:52
End time (MST): 10:45
Reason: As Found

Calibration Standards

NO Gas Cylinder #: CC218007
NO_x Cal Gas Conc: 60.20 ppm
Removed Cylinder #: NA
Removed Gas NO_x Conc: 60.20 ppm
NO_x 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 (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)	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	0.1	-0.1	----	----
AF High point	4933	66.7	803.1	800.4	2.7	808.5	803.6	4.9	0.9933	0.9962
AF Mid point	4967	33.3	400.9	399.6	1.3	405.4	400.6	4.8	0.9889	0.9977
AF Low point	4983	16.7	201.1	200.4	0.7	201.0	196.4	4.6	1.0004	1.0209
New cyl resp										
Previous Response	NO _x = 797.3 ppb	NO = 792.7 ppb							*Percent Change	NO _x = 1.4%
Baseline Corr 1st pt	NO _x = 808.5 ppb	NO = 803.5 ppb							*Percent Change	NO = 1.3%
Baseline Corr 2nd pt	NO _x = 405.4 ppb	NO = 400.5 ppb							Nx SI: 1.007566	Nx Int: -0.209
Baseline Corr 3rd pt	NO _x = 201.0 ppb	NO = 196.3 ppb							NO SI: 1.005812	NO Int: -1.969
									NO ₂ SI: 1.004816	NO ₂ Int: 0.107

* = > +/-5% change initiates investigation

As Found Statistics

As found NO_x r²: 0.999986

As found NO r²: 0.999957

As found NO₂ r²: 0.999976

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	-0.1	----	----
As found high GPT point	797.7	441.8	358.6	360.0	0.9960	100.4%
As found mid GPT point	797.7	630.7	169.7	171.7	0.9882	101.2%
As found low GPT point	797.7	712.7	87.7	87.7	0.9996	100.0%



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>
NO coeff or slope:	0.971	0.971
NOX coeff or slope:	0.996	0.996
NO2 coeff or slope:	1.000	1.000

	<u>Start</u>	<u>Finish</u>
NO bkgnd or offset:	8.9	8.9
NOX bkgnd or offset:	9.0	9.0
Reaction cell Press:	156.1	156.1

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.992891	
NO _x Cal Offset:	-0.128942	
NO Cal Slope:	0.992759	
NO Cal Offset:	-1.949055	
NO ₂ Cal Slope:	1.002469	
NO ₂ Cal Offset:	-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
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:

As founds before cleaning reaction cell and changing the Orings in the reaction cell.

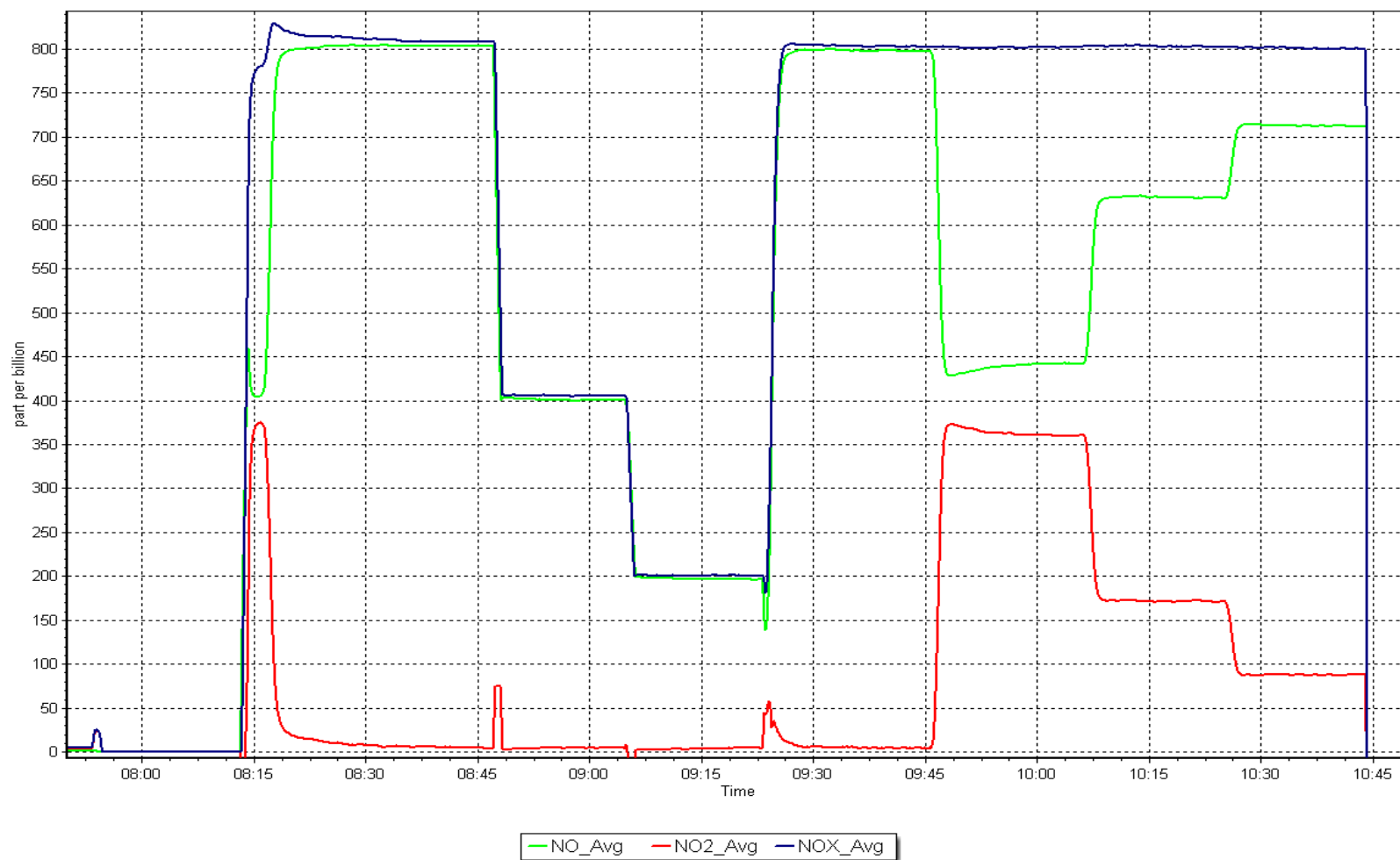
Calibration Performed By:

Melissa Lemay

NO_x Calibration Plot

Date: August 12, 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: August 13, 2026
Last Cal Date: August 12, 2026
Start time (MST): 8:00
End time (MST): 11:59
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										
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 :	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>
NO coeff or slope:	0.971	0.979
NOX coeff or slope:	0.996	0.995
NO2 coeff or slope:	1.000	1.000

	<u>Start</u>	<u>Finish</u>
NO bkgnd or offset:	8.9	9.0
NOX bkgnd or offset:	9.0	9.1
Reaction cell Press:	157.6	157.8

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.992891	0.998214
NO _x Cal Offset:	-0.128942	0.451293
NO Cal Slope:	0.992759	0.999385
NO Cal Offset:	-1.949055	-1.068728
NO ₂ Cal Slope:	1.002469	0.992693
NO ₂ Cal Offset:	-0.274137	-0.824652

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	0.1	0.0	----	----
High point	4933	66.7	803.1	800.4	2.7	801.3	798.8	2.4	1.0023	1.0021
Mid point	4967	33.3	400.9	399.6	1.3	402.8	399.7	3.2	0.9953	0.9997
Low point	4983	16.7	201.1	200.4	0.7	200.2	196.7	3.5	1.0044	1.0189
As left zero	5000	0	0.0	0.0	0.0	0.3	0.3	0.0	----	----
As left span	4933	66.7	803.1	446.0	357.1	794.5	446.0	348.6	1.0108	1.0000
Average Correction Factor									1.0007	1.0069

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	793.3	445.3	350.7	347.8	1.0082	99.2%
Mid GPT point	793.3	629.0	167.0	164.1	1.0175	98.3%
Low GPT point	793.3	710.6	85.4	83.4	1.0236	97.7%
Average Correction Factor					1.0164	98.4%

Notes:

Calibration after reaction cell cleaning and oring replacements. Span adjusted.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

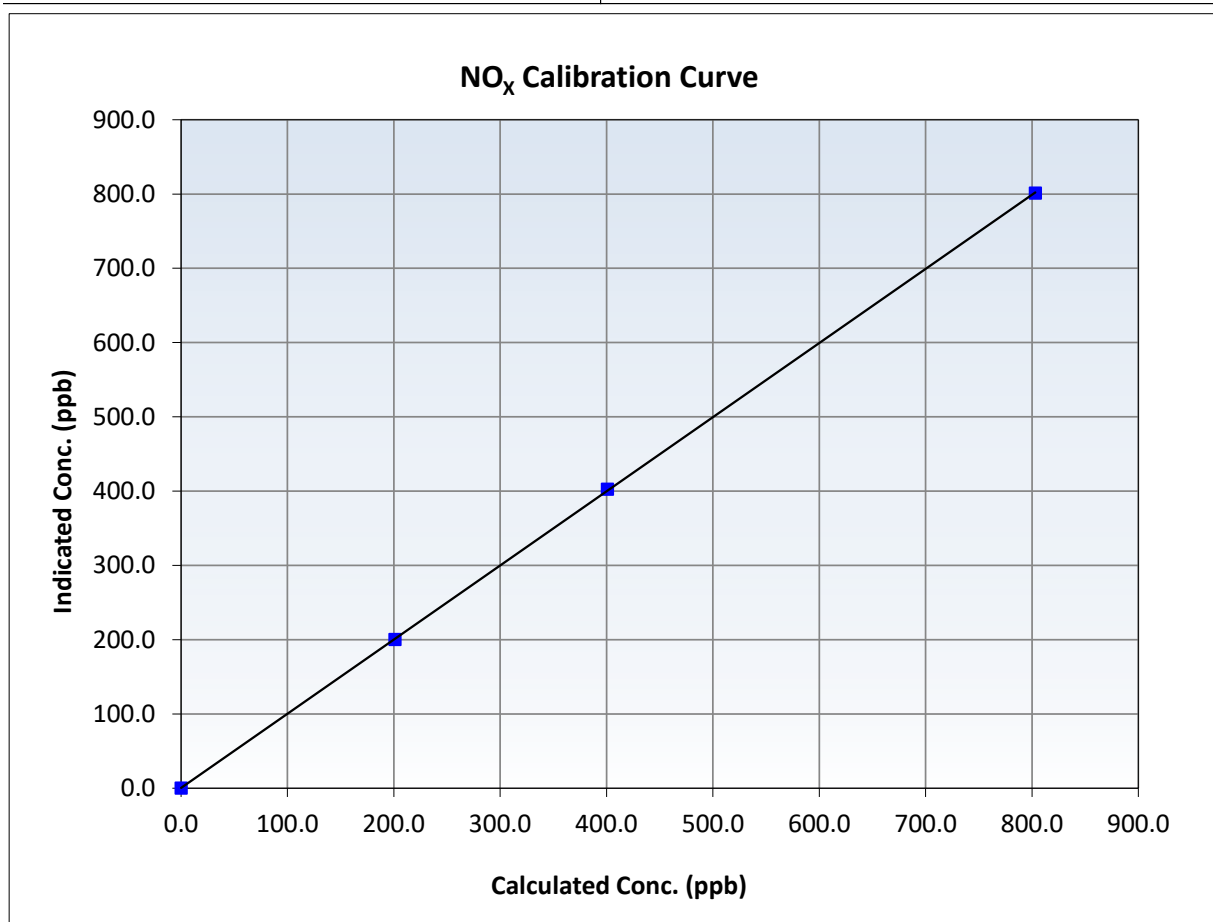
NO_x Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	August 12, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	8:00	End Time (MST):	11:59
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	0.999982	≥0.995
803.1	801.3	1.0023	Slope	0.998214	0.90 - 1.10
400.9	402.8	0.9953	Intercept	0.451293	+/-20
201.1	200.2	1.0044			





Wood Buffalo Environmental Association

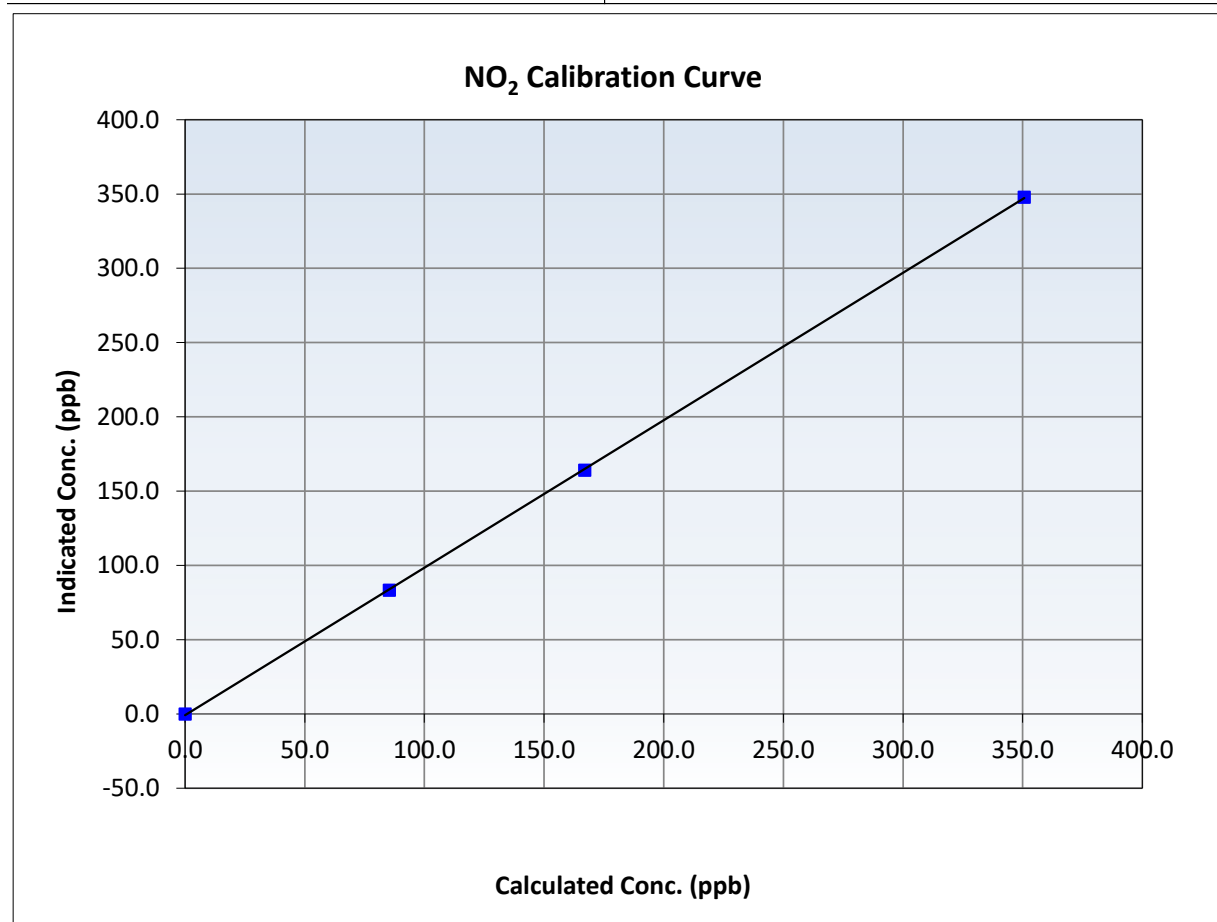
NO₂ Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	August 12, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	8:00	End Time (MST):	11:59
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661329

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999971	≥0.995
350.7	347.8	1.0082	Slope	0.992693	0.90 - 1.10
167.0	164.1	1.0175	Intercept	-0.824652	+/-20
85.4	83.4	1.0236			





Wood Buffalo Environmental Association

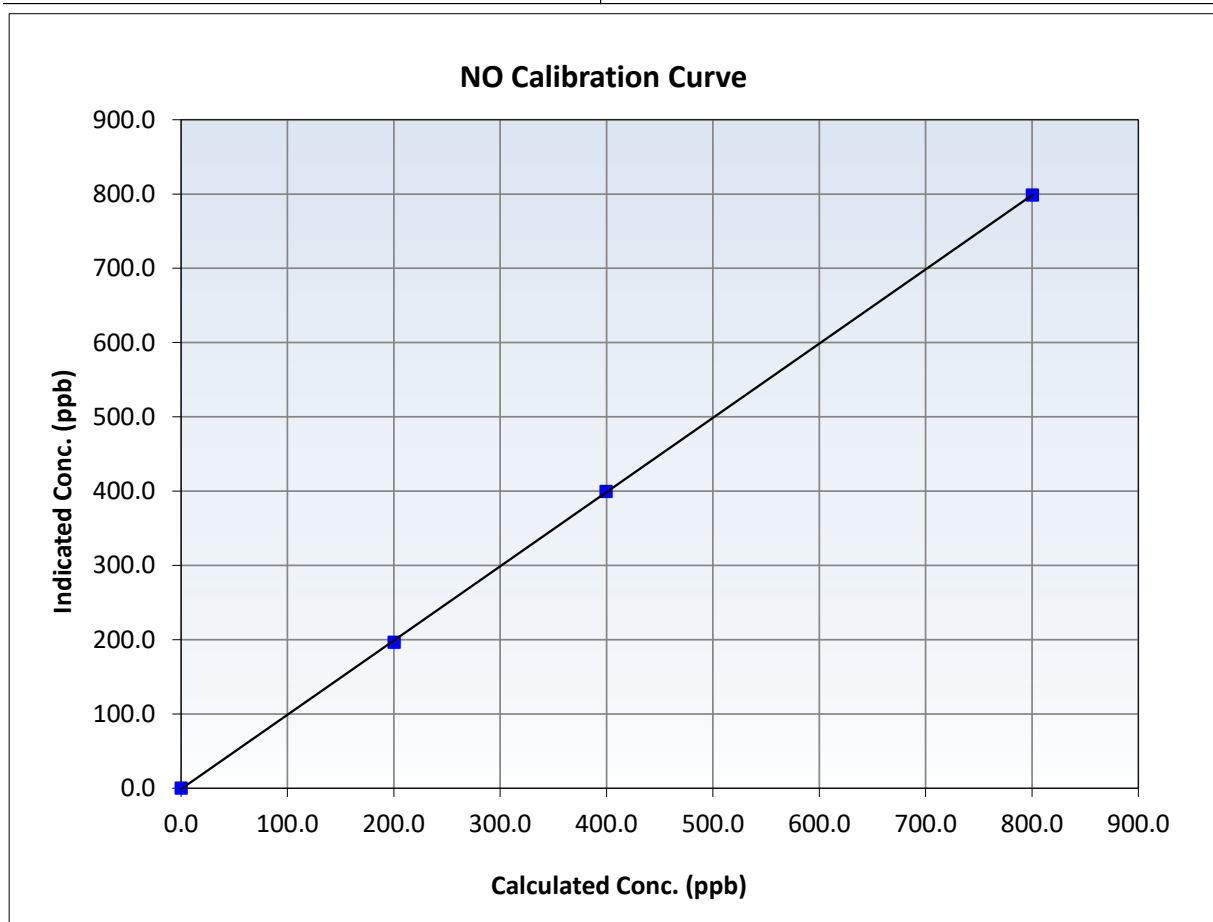
NO Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	August 12, 2026
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	8:00	End Time (MST):	11:59
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661329

Calibration Data

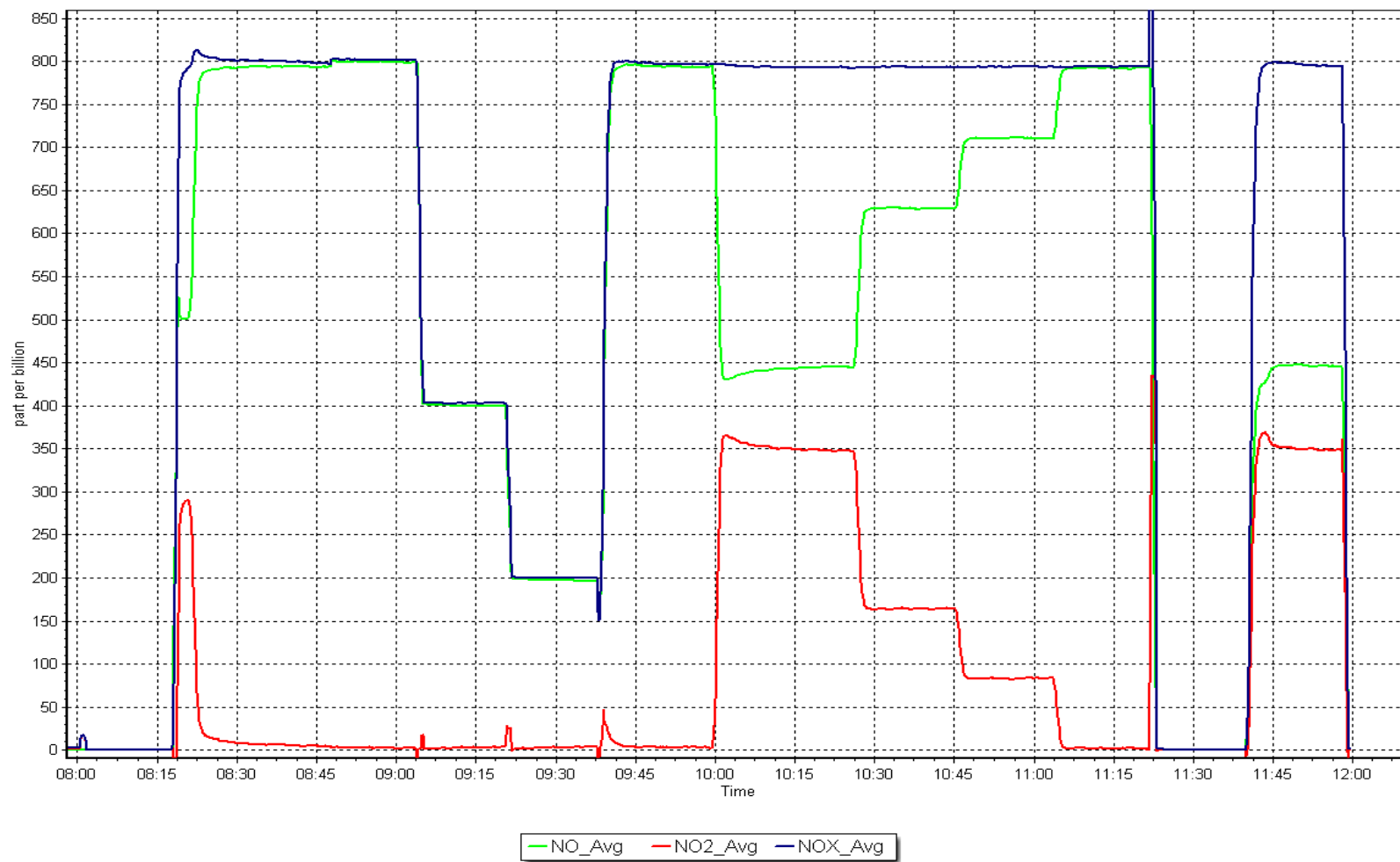
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999972	≥ 0.995
800.4	798.8	1.0021	Slope	0.999385	$0.90 - 1.10$
399.6	399.7	0.9997	Intercept	-1.068728	± 20
200.4	196.7	1.0189			



NO_x Calibration Plot

Date: August 13, 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: August 26, 2026 Last Cal Date: July 23, 2026
Start time (MST): 7:52 End time (MST): 8:54

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)	20.9	20	20.9	☐	+/- 2 °C
P (mmHg)	706.1	705.3	706.1	☐	+/- 10 mmHg
Flow (LPM)	716.10	715.10	716.10	☐	+/- 0.25 LPM
PW% (pump)	58	----	58	☐	>80%
Zero Verification	PM w/o HEPA: _____	5.9	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: July 16, 2026
Lot No.: 100128-050-050

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

Date Optical Chamber Cleaned: August 26, 2026
Date Disposable Filter Changed: August 26, 2026

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

Annual Maintenance

Date Sample Tube Cleaned: August 26, 2026
Date RH/T Sensor Cleaned: August 26, 2026

Notes: Leak, PMT, and Flow checked before and after optical chamber cleaning and filter change out.

Calibration by: Melissa Lemay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS30 ELLS RIVER AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Ells River
Calibration Date: August 7, 2026
Start time (MST): 9:29
Reason: Routine

Station number: AMS 30
Last Cal Date: July 2, 2026
End time (MST): 12:33

Calibration Standards

Cal Gas Concentration: 48.75 ppm
Cal Gas Cylinder #: CC350110
Removed Cal Gas Conc: 48.75 ppm
Removed Gas Cyl #: NA
Calibrator Model: API T700
Zero Air Gen Model: API T701H

Cal Gas Exp Date: March 10, 2031
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 5707
Serial Number: 358

Analyzer Information

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

Serial Number: 1008841397

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.009996	1.010125	Backgd or Offset:	10.9	10.9
Calibration intercept:	-0.674935	-1.495096	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	0.1	----
As found High point	4918	82.1	800.5	804.8	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	804.7	Previous response	807.8	*% 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	807.9	0.991
Mid point	4959	41.0	399.8	401.6	0.995
Low point	4979	20.5	199.9	198.5	1.007
As left zero	5000	0.0	0.0	0.4	----
As left span	4918	82.1	800.5	810.5	0.988
Average Correction Factor:					0.998

Notes:

Inlet filter changed after as founds, no changes made.

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

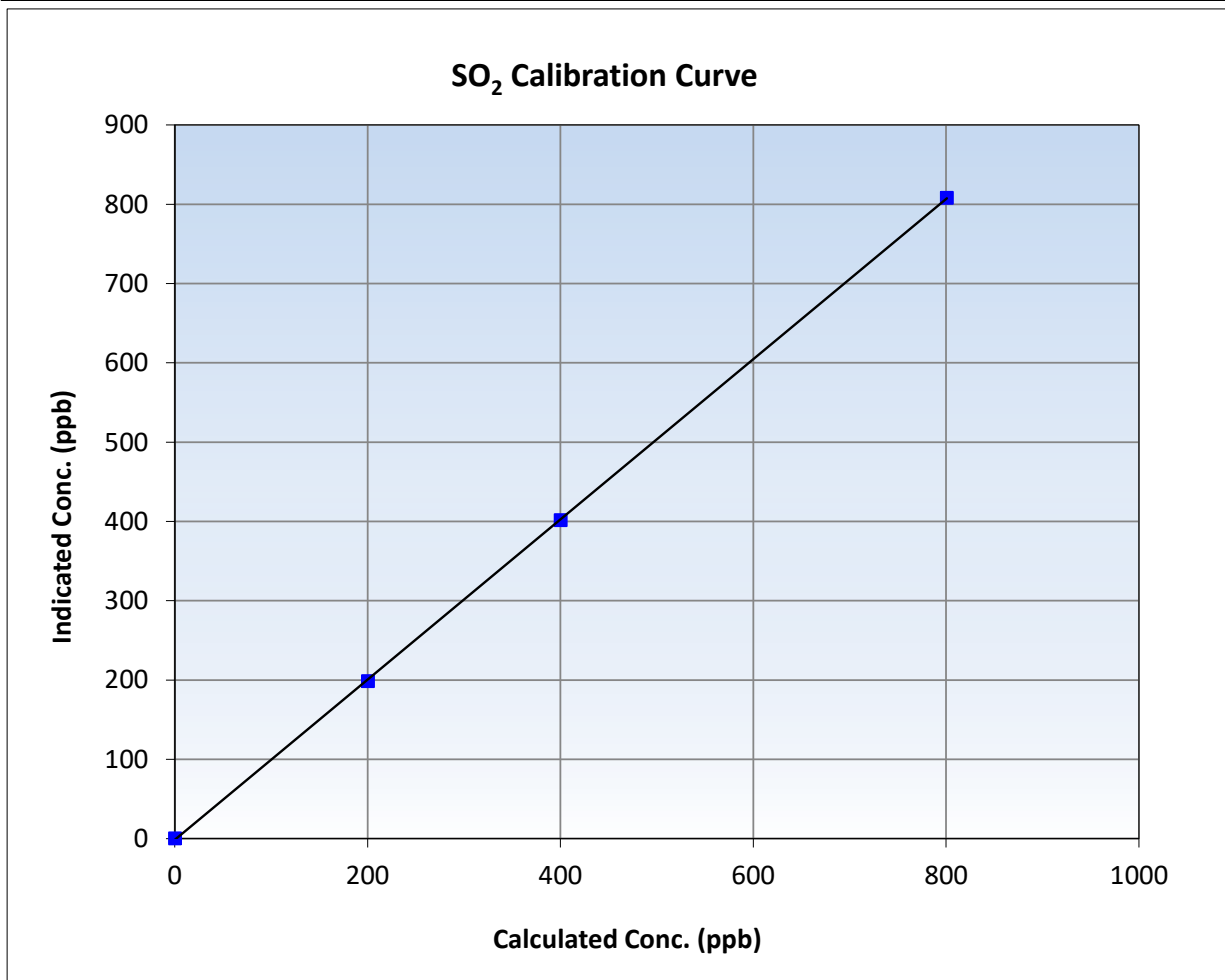
SO₂ Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 2, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:29	End Time (MST):	12:33
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	0.999977	≥0.995
800.5	807.9	0.9908	Slope	1.010125	0.90 - 1.10
399.8	401.6	0.9954	Intercept	-1.495096	+/-30
199.9	198.5	1.0070			



SO2 Calibration Plot

Date: August 7, 2026

Location: Ells River





Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name: Ells River
Calibration Date: August 11, 2026
Start time (MST): 9:04
Reason: Routine

Station number: AMS 30
Last Cal Date: July 9, 2026
End time (MST): 13:41

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:	0.988911	1.007189	Backgd or Offset:	3.85	3.94
Calibration intercept:	-0.040686	0.019507	Coeff or Slope:	1.232	1.271

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4920	80.2	80.0	76.4	1.046
As found Mid point	4960	40.1	40.0	38.1	1.048
As found Low point	4980	20.0	20.0	19.0	1.045
New cylinder response					
Baseline Corr As found:	76.5	Prev response:	79.11	*% change:	-3.4%
Baseline Corr 2nd AF pt:	38.2	AF Slope:	0.955648	AF Intercept:	-0.101371
Baseline Corr 3rd AF pt:	19.1	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	4920	80.2	80.0	80.5	0.994
Mid point	4960	40.1	40.0	40.7	0.983
Low point	4980	20.0	20.0	19.9	1.003
As left zero	5000	0.0	0.0	0.2	----
As left span	4920	80.2	80.0	80.8	0.991
SO2 Scrubber Check	4918	82.0	820.0	0.0	----
Date of last scrubber change:	16-Dec-25		Ave Corr Factor		0.994
Date of last converter efficiency test:					

Notes: Inlet filter changed after as founds. Scrubber check passed, span adjusted.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

TRS Calibration Summary

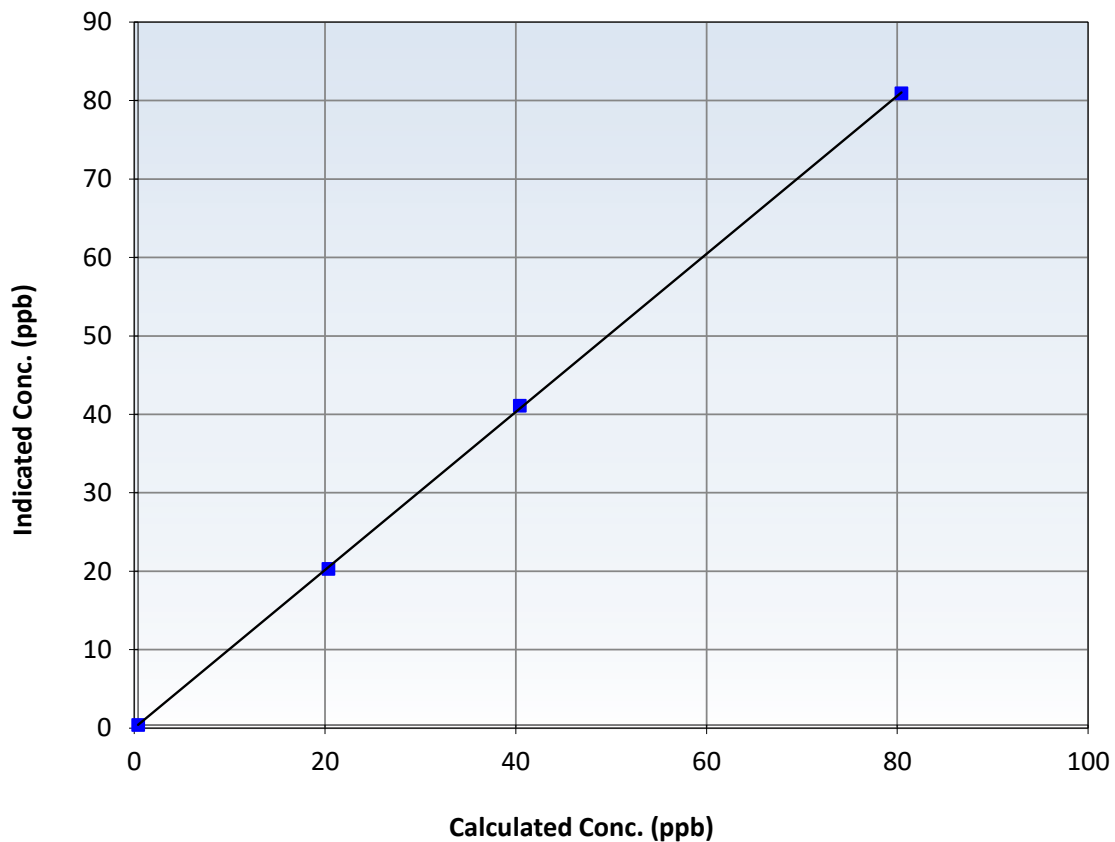
Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 9, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:04	End Time (MST):	13:41
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	0.0	----	Correlation Coefficient	0.999942		≥ 0.995
80.0	80.5	0.9942	Slope	1.007189		$0.90 - 1.10$
40.0	40.7	0.9833	Intercept	0.019507		± 3
20.0	19.9	1.0030				

TRS Calibration Curve







Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Ells River
 Calibration Date: August 7, 2026
 Start time (MST): 9:29
 Reason: Routine

Station number: AMS 30
 Last Cal Date: July 2, 2026
 End time (MST): 12:33

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:	4.33E-04	4.33E-04	NMHC SP Ratio:	8.25E-05
CH ₄ Retention time:	17.4	17.4	NMHC Peak Area:	113453
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	17.15	1.021
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.15	Prev response	17.47	*% 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	17.51	17.19	1.019
Mid point	4959	41.0	8.74	8.49	1.030
Low point	4979	20.5	4.37	4.22	1.037
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	17.51	17.17	1.020
Average Correction Factor					1.029

Notes:

Inlet filter changed after as founds, no changes 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)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.00	0.00	----
As found High point	4918	82.1	9.36	9.19	1.018
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.19	Prev response	9.35	*% change	-1.7%
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) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	9.36	9.21	1.015
Mid point	4959	41.0	4.67	4.57	1.023
Low point	4979	20.5	2.34	2.28	1.027
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	9.36	9.19	1.018
Average Correction Factor					1.022

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	4918	82.1	8.15	7.96	1.025
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.96	Prev response	8.13	*% change	-2.1%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH₄ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	8.15	7.97	1.023
Mid point	4959	41.0	4.07	3.92	1.039
Low point	4979	20.5	2.04	1.94	1.049
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	8.15	7.98	1.022
Average Correction Factor					1.037

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
THC Cal Slope:	0.999958	0.982344
THC Cal Offset:	-0.036204	-0.049083
CH ₄ Cal Slope:	1.000336	0.978514
CH ₄ Cal Offset:	-0.028547	-0.030988
NMHC Cal Slope:	0.999751	0.985351
NMHC Cal Offset:	-0.007657	-0.017495

Calibration Performed By: Jason Brooks



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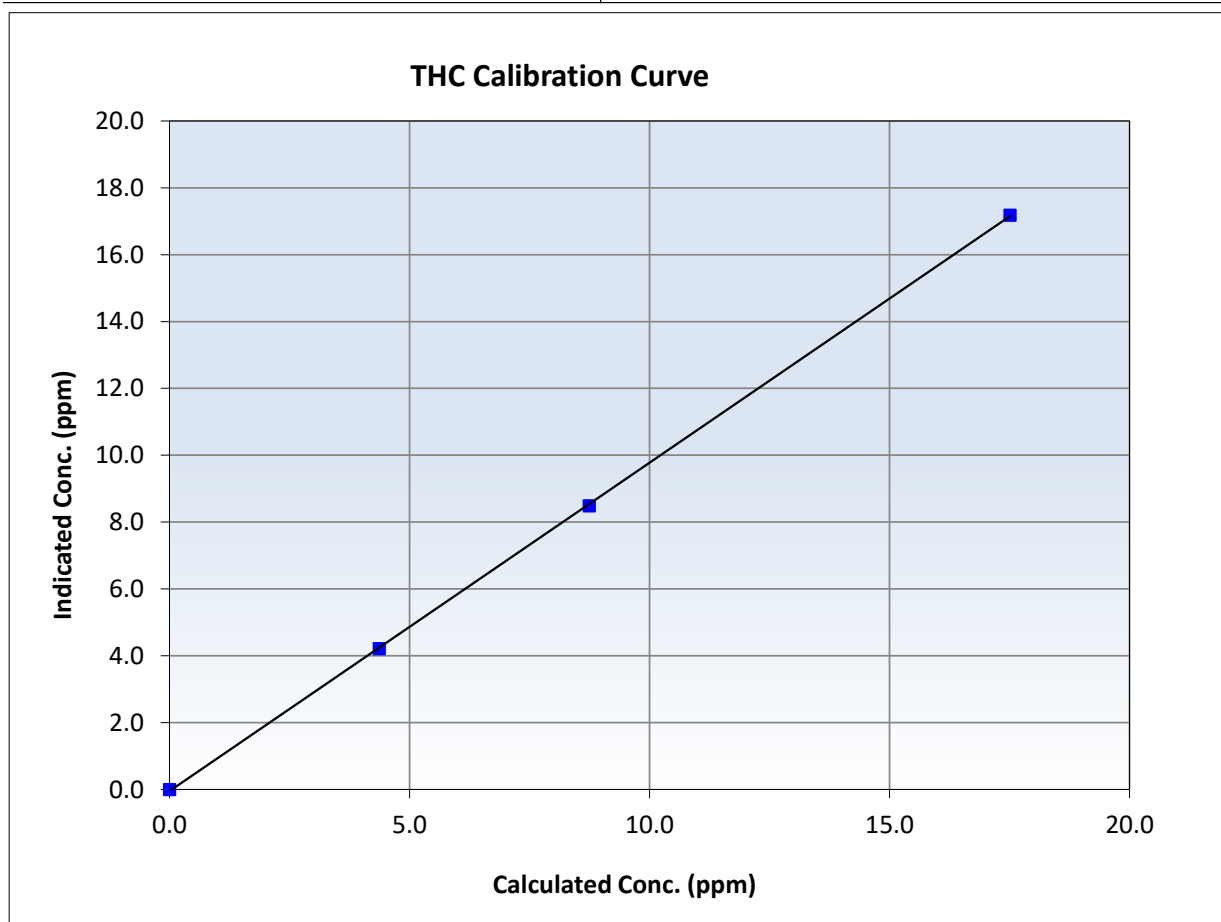
THC Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 2, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:29	End Time (MST):	12:33
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585649

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999954	≥ 0.995
17.51	17.19	1.0188	Slope	0.982344	0.90 - 1.10
8.74	8.49	1.0303	Intercept	-0.049083	± 0.5
4.37	4.22	1.0369			





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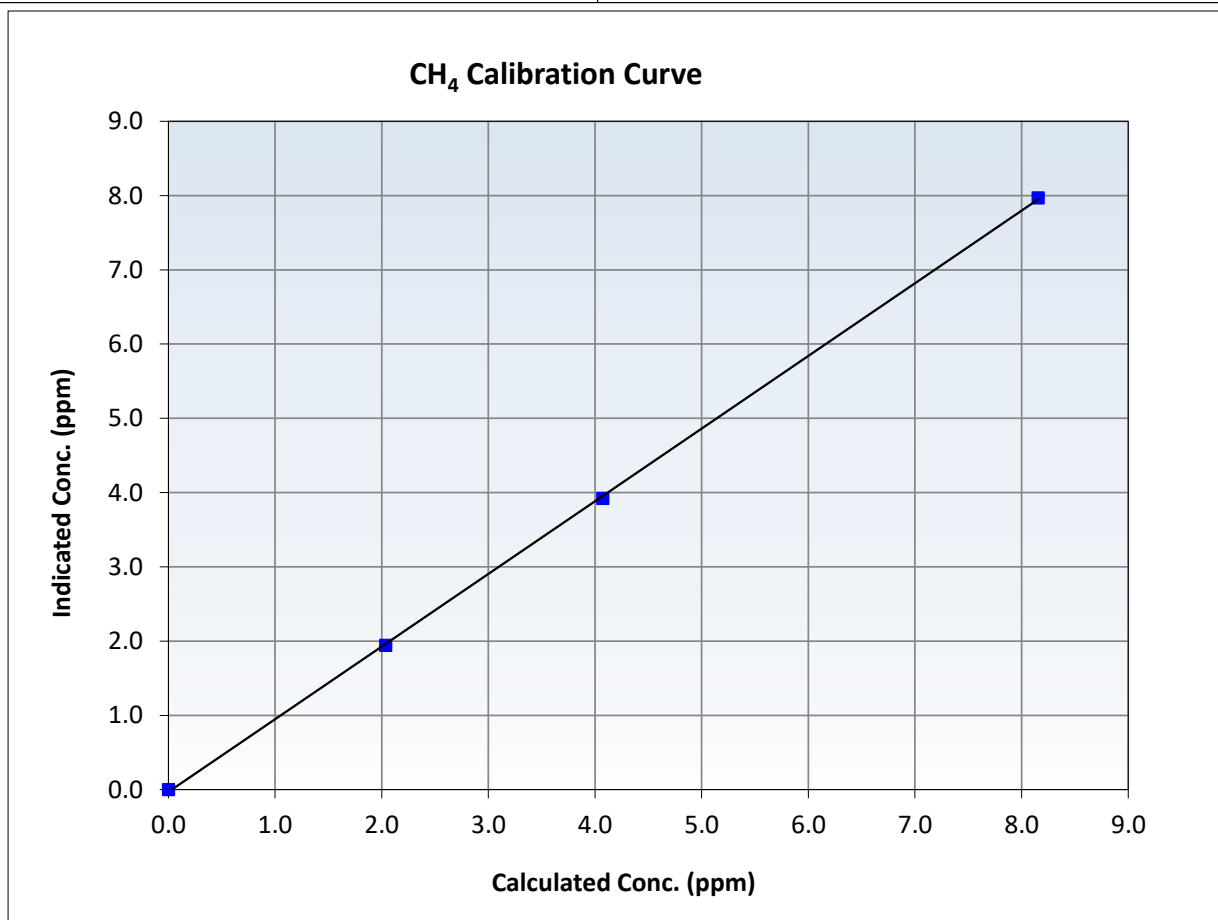
CH₄ Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 2, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:29	End Time (MST):	12:33
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	0.999918		≥ 0.995
8.15	7.97	1.0232	Slope	0.978514		0.90 - 1.10
4.07	3.92	1.0385	Intercept	-0.030988		+/-0.5
2.04	1.94	1.0485				





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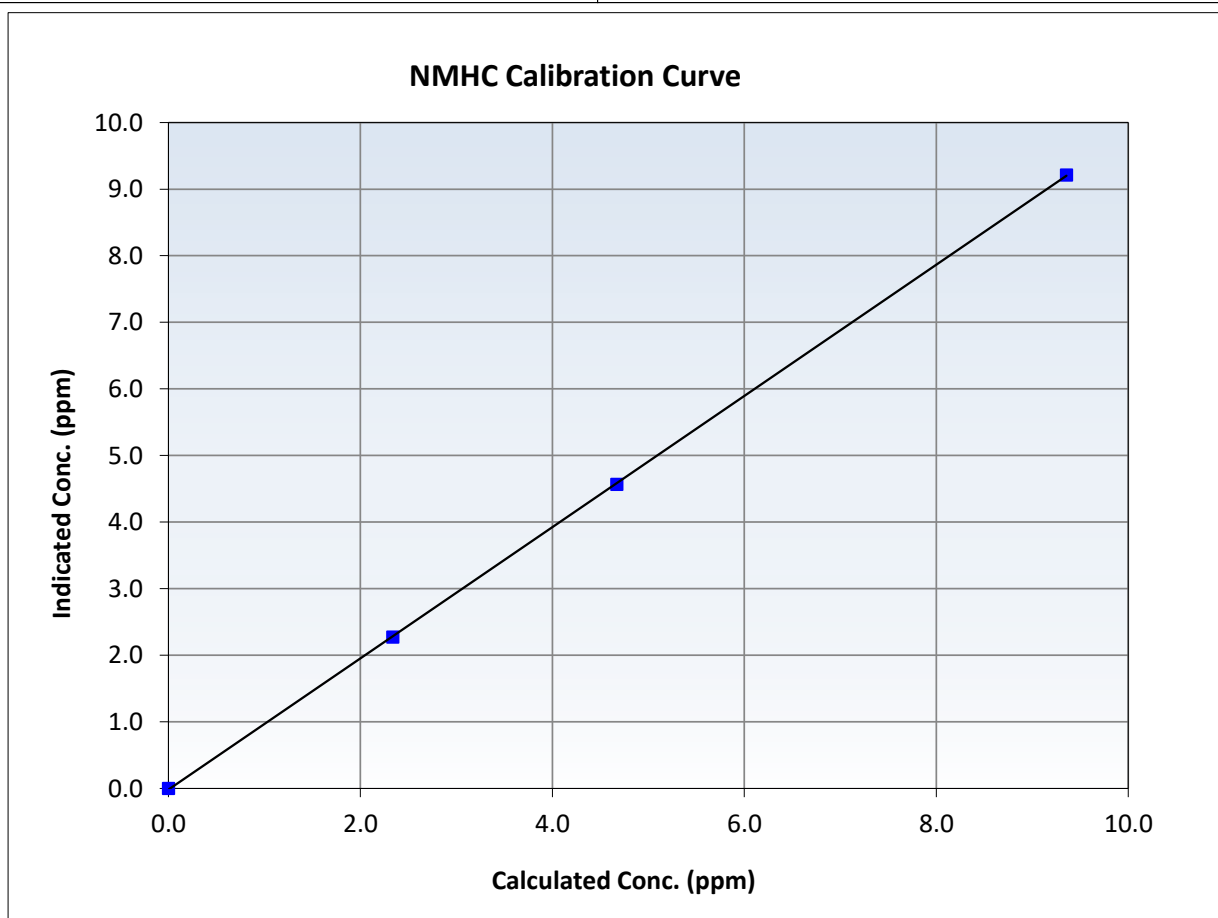
NMHC Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 2, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:29	End Time (MST):	12:33
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585649

Calibration Data

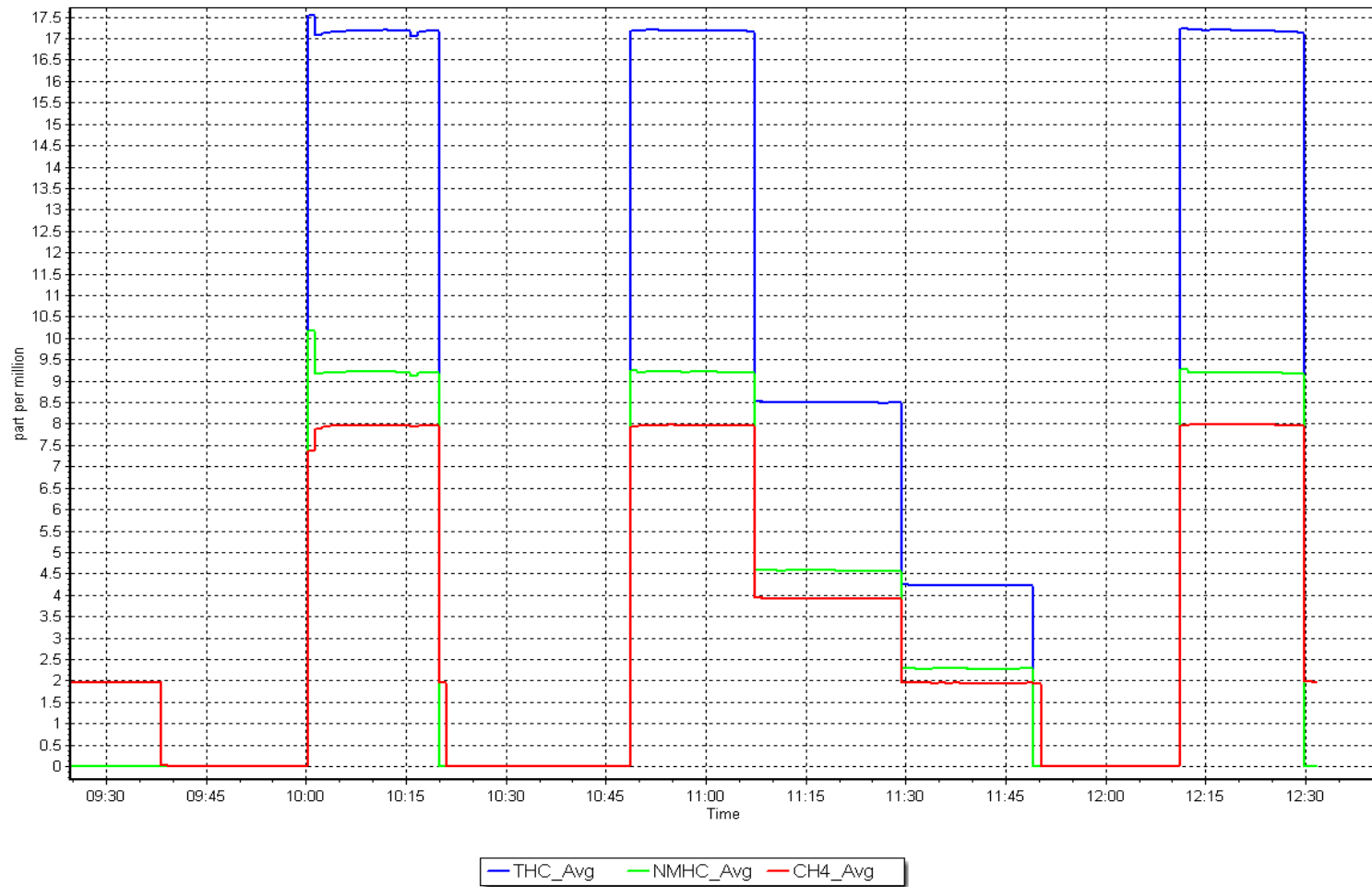
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999979	<i>≥0.995</i>
9.36	9.21	1.0154	Slope	0.985351	<i>0.90 - 1.10</i>
4.67	4.57	1.0233	Intercept	-0.017495	<i>+/-0.5</i>
2.34	2.28	1.0270			



NMHC Calibration Plot

Date: August 7, 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: August 10, 2026
Last Cal Date: July 3, 2026
Start time (MST): 9:34
End time (MST): 13:56
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 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	-1.4	0.8	----	----
AF High point	4932	67.7	803.0	800.3	2.7	775.2	769.5	5.7	1.0350	1.0381
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 800.1 ppb	NO = 798.4 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -3.1%	
Baseline Corr 1st pt	NO _x = 775.8 ppb	NO = 770.9 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -3.6%	
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: 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	1.072	NO bkgnd or offset:	1.1	2.3
NOX coeff or slope:	1.012	1.061	NOX bkgnd or offset:	1.5	1.2
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	6.0	5.2

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.996826	0.998375
NO _x Cal Offset:	-0.358670	0.122336
NO Cal Slope:	0.999844	1.000343
NO Cal Offset:	-1.759459	-1.758861
NO ₂ Cal Slope:	0.989017	0.992633
NO ₂ Cal Offset:	0.974952	0.835321

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.3	-1.0	0.7	----	----
High point	4932	67.7	803.0	800.3	2.7	801.2	798.9	2.2	1.0022	1.0017
Mid point	4966	33.8	400.9	399.5	1.4	401.7	398.3	3.3	0.9980	1.0031
Low point	4983	16.9	200.4	199.8	0.7	199.9	196.8	3.1	1.0027	1.0151
As left zero	5000	0.0	0.0	0.0	0.0	0.0	-0.7	0.7	----	----
As left span	4932	67.7	803.0	395.3	407.7	794.5	395.3	399.2	1.0107	1.0000
Average Correction Factor									1.0010	1.0066

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	0.7	----	----
High GPT point	796.5	391.6	407.6	405.3	1.0057	99.4%
Mid GPT point	796.5	602.4	196.8	196.5	1.0016	99.8%
Low GPT point	796.5	702.4	96.8	96.9	0.9991	100.1%
Average Correction Factor					1.0021	99.8%

Notes:

Inlet filter changed after as founds, span adjusted.

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

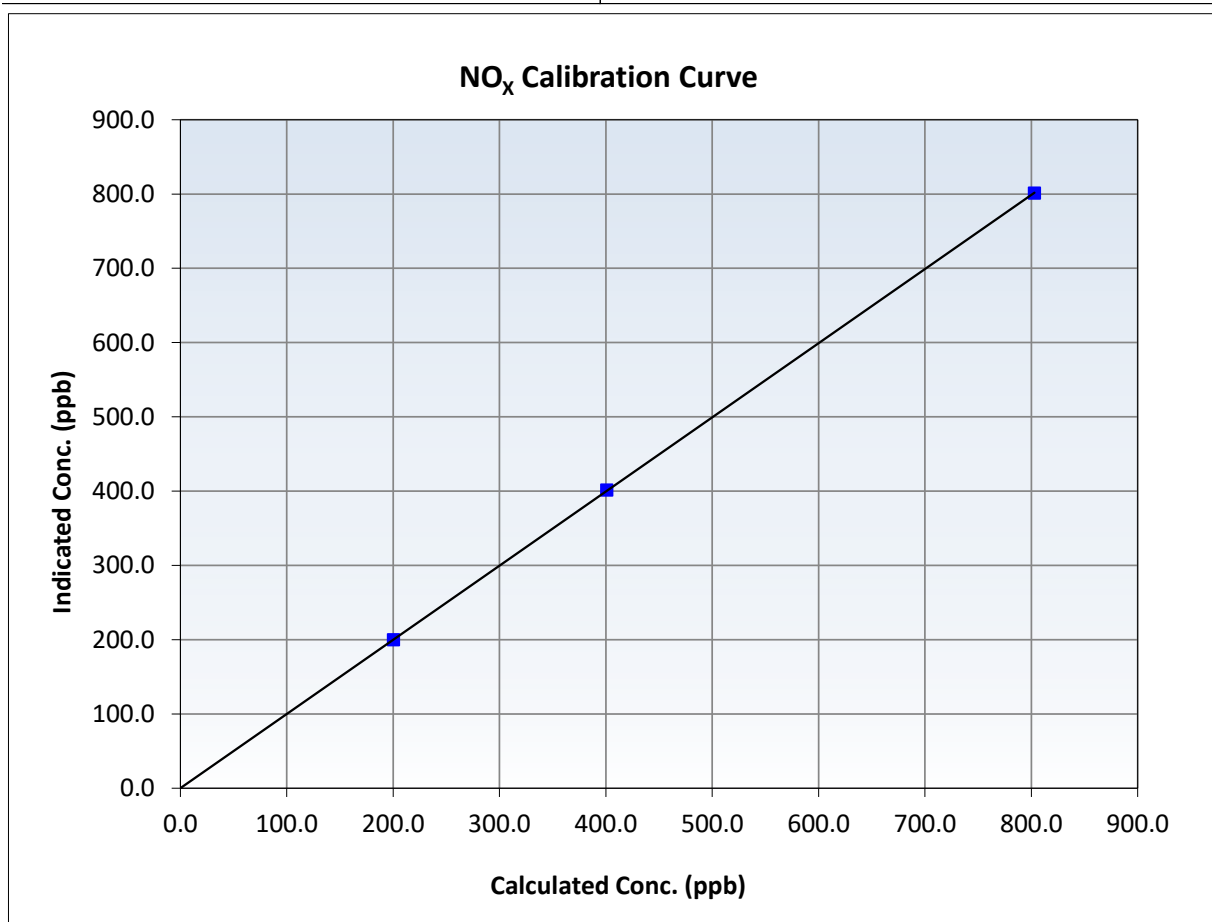
NO_x Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:34	End Time (MST):	13:56
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	-0.3	----	Correlation Coefficient	0.999993	≥ 0.995
803.0	801.2	1.0022	Slope	0.998375	0.90 - 1.10
400.9	401.7	0.9980	Intercept	0.122336	+/-20
200.4	199.9	1.0027			





Wood Buffalo Environmental Association

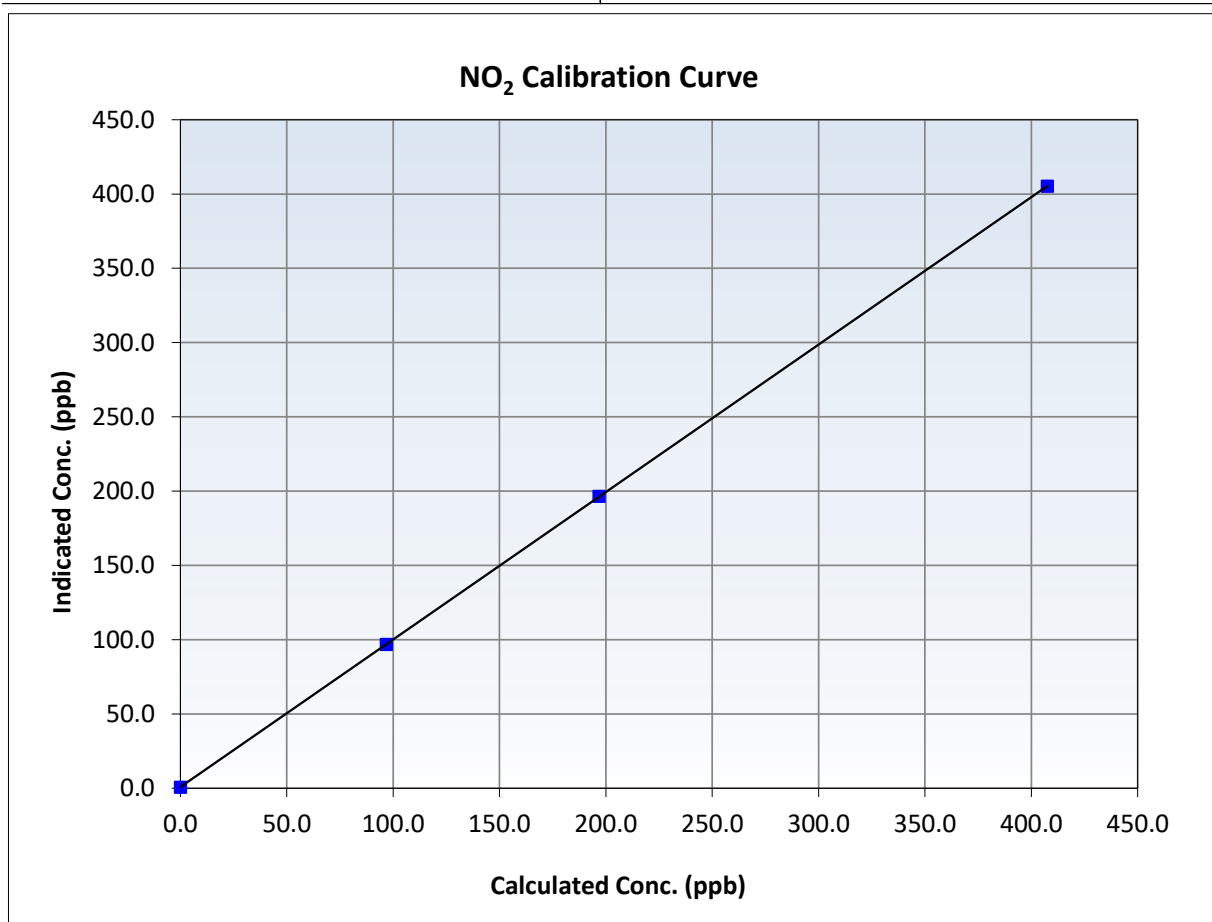
NO₂ Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:34	End Time (MST):	13:56
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	0.999999	≥ 0.995
407.6	405.3	1.0057	Slope	0.992633	$0.90 - 1.10$
196.8	196.5	1.0016	Intercept	0.835321	± 20
96.8	96.9	0.9991			





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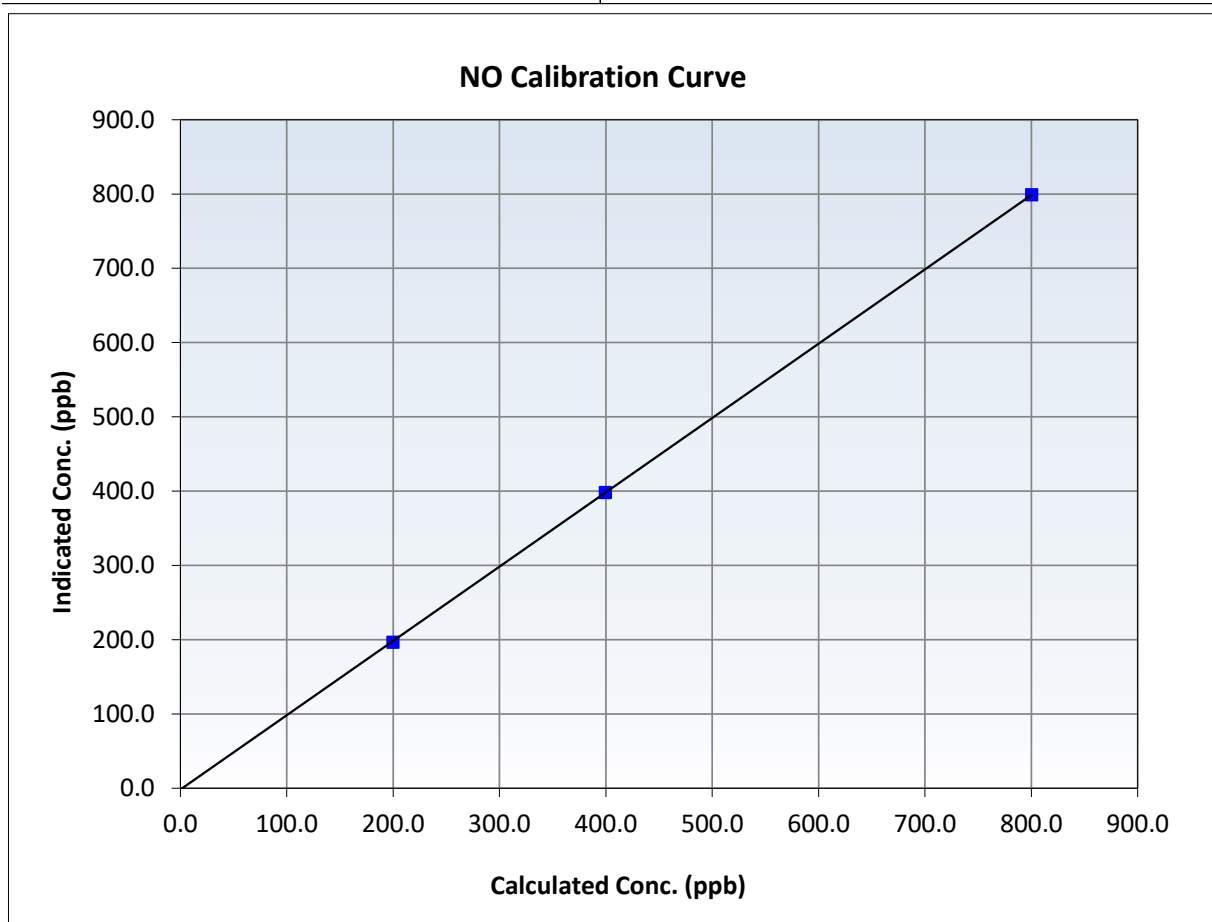
NO Calibration Summary

Station Information

Calibration Date:	August 10, 2026	Previous Calibration:	July 3, 2026
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	9:34	End Time (MST):	13:56
Analyzer make:	Teledyne API T200	Analyzer serial #:	723

Calibration Data

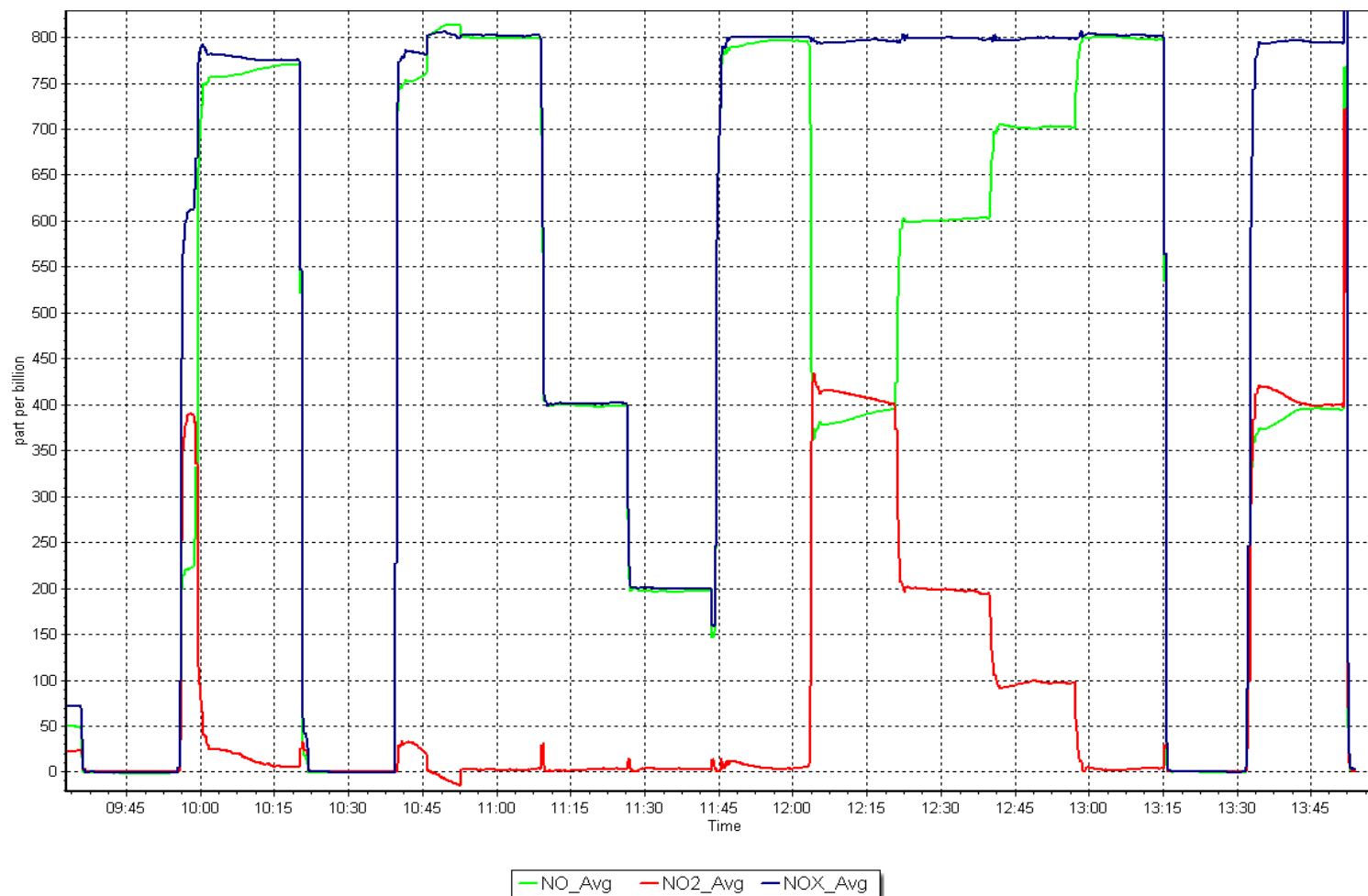
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-1.0	----	Correlation Coefficient	0.999993	≥ 0.995
800.3	798.9	1.0017	Slope	1.000343	0.90 - 1.10
399.5	398.3	1.0031	Intercept	-1.758861	+/-20
199.8	196.8	1.0151			



NO_x Calibration Plot

Date: August 10, 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: August 7, 2026 Last Cal Date: July 15, 2026
Start time (MST): 10:31 End time (MST): 12:32

Analyzer Make: API T640 S/N: 209
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)	17.50	17.53	22.30	☐	+/- 2 °C
P (mmHg)	734.50	733.86	734.00	☐	+/- 10 mmHg
Flow (LPM)	4.98	5.22	4.99	☐	+/- 0.25 LPM
PW% (pump)	34		31	☐	>80%
Zero Verification	PM w/o HEPA: 6.4		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: 10.90 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
AUGUST 2026**

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Blackrod Station number: AMS 31
Calibration Date: August 13, 2026 Last Cal Date: July 23, 2026
Start time (MST): 9:58 End time (MST): 13:40
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:	0.999404	0.998117	Backgd or Offset:	38.6	38.6
Calibration intercept:	0.158267	0.158586	Coeff or Slope:	0.964	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	0.3	----
As found High point	4921	79.5	798.9	798.0	1.001
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	797.7	Previous response	798.6	*% 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	0.0	----
High point	4921	79.5	798.9	797.5	1.002
Mid point	4960	39.8	400.0	399.4	1.002
Low point	4980	19.9	200.0	200.0	1.000
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	79.5	798.9	798.5	1.000
Average Correction Factor:					1.001

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

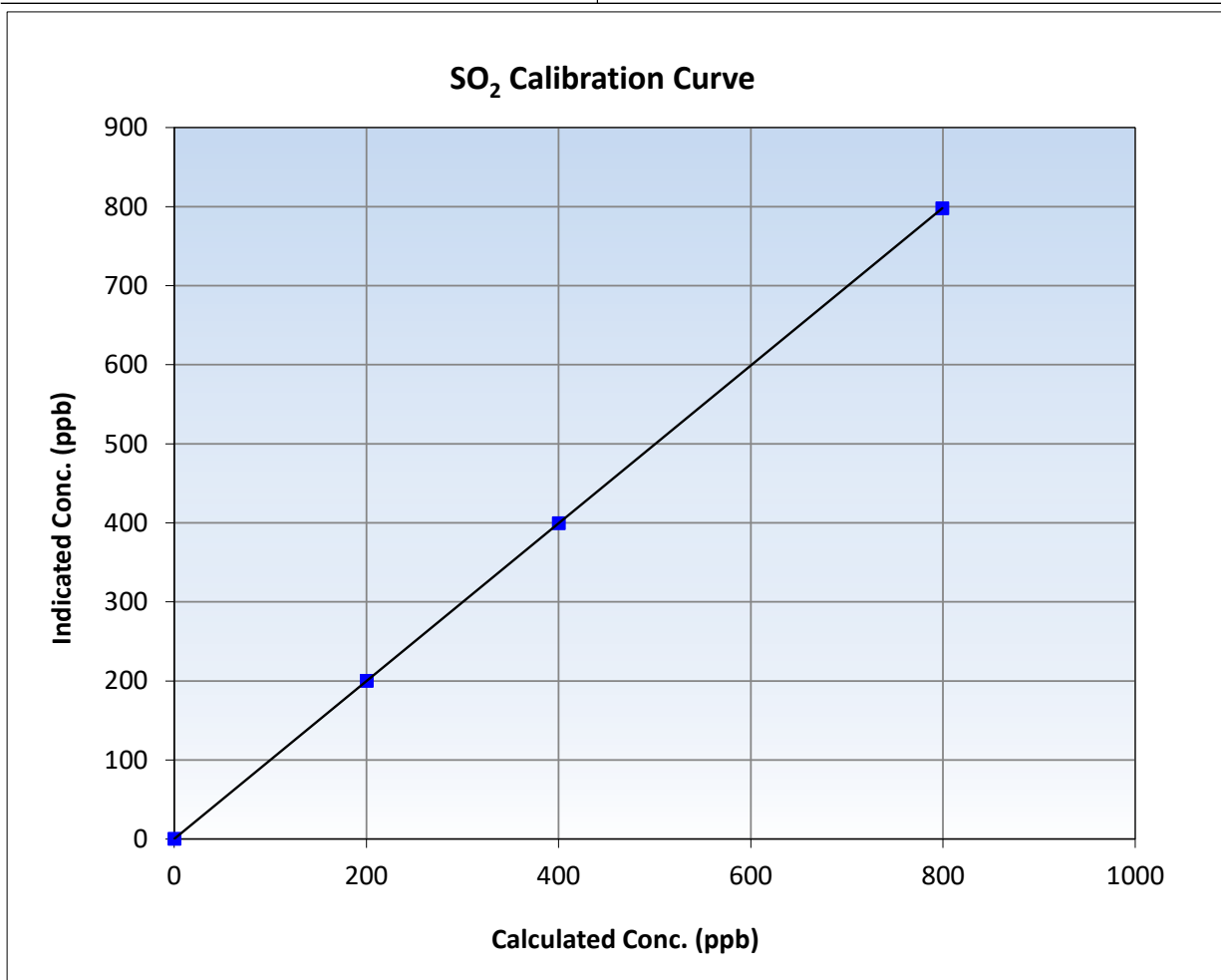
SO₂ Calibration Summary

Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	July 23, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:58	End Time (MST):	13:40
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290014

Calibration Data

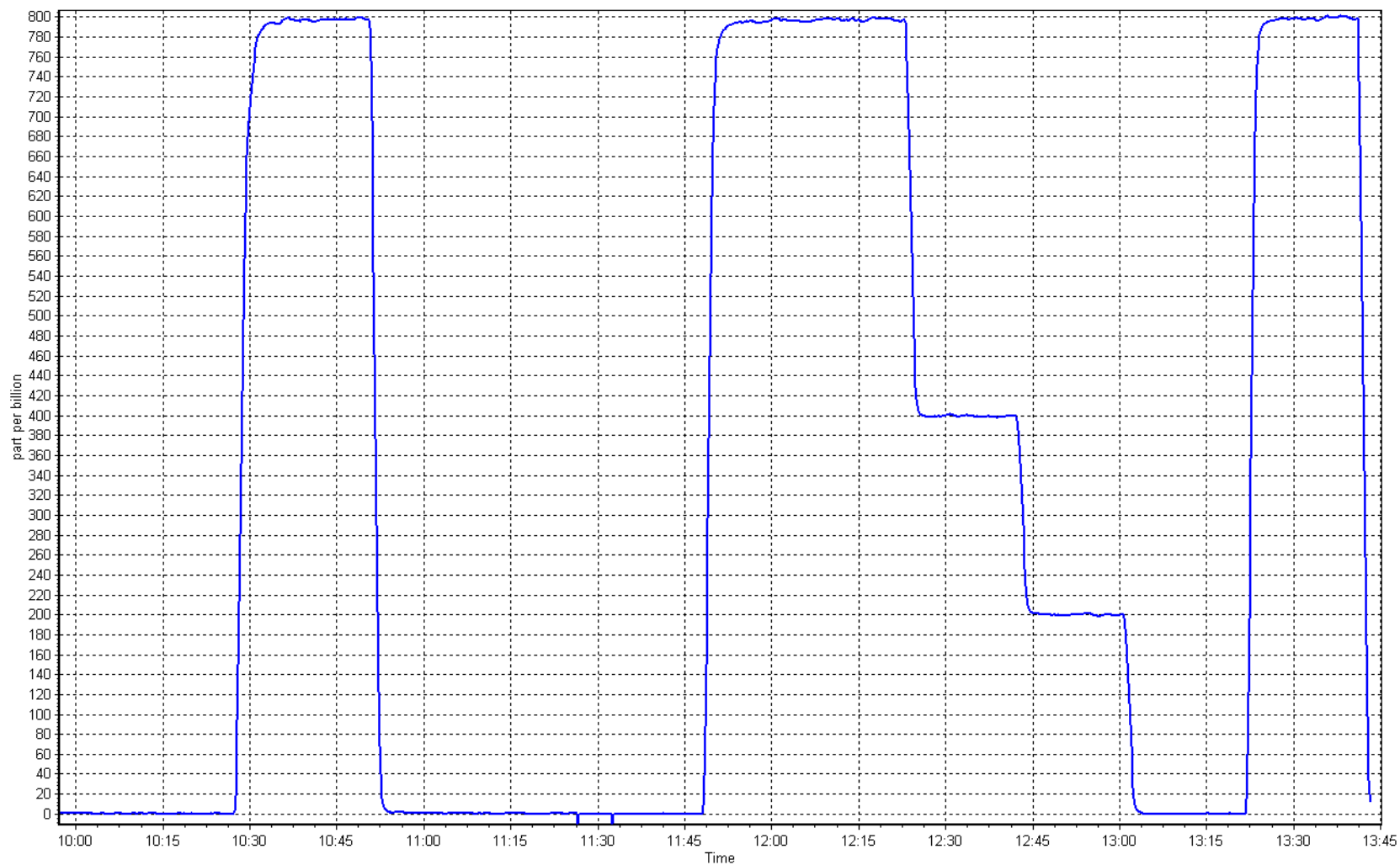
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	1.000000	≥0.995
798.9	797.5	1.0017	Slope	0.998117	0.90 - 1.10
400.0	399.4	1.0015	Intercept	0.158586	+/-30
200.0	200.0	1.0000			



SO2 Calibration Plot

Date: August 13, 2026

Location: Blackrod





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Blackrod Station number: AMS 31
Calibration Date: August 12, 2026 Last Cal Date: July 8, 2026
Start time (MST): 9:26 End time (MST): 13:55
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: Direct Optics G150 Converter serial #: 2026- 100
Analyzer Range: 0 - 100 ppb Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:	1.005474	0.998189	Backgd or Offset:	2.91
Calibration intercept:	-0.280364	-0.100302	Coeff or Slope:	0.946

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	-0.3	----
As found High point	4926	73.8	80.0	78.9	1.010
As found Mid point	4963	36.9	40.0	39.4	1.008
As found Low point	4982	18.5	20.1	19.5	1.013
New cylinder response					
Baseline Corr As found:	79.2	Prev response:	80.16	*% change:	-1.2%
Baseline Corr 2nd AF pt:	39.7	AF Slope:	0.990332	AF Intercept:	-0.300170
Baseline Corr 3rd AF pt:	19.8	AF Correlation:	0.999997	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4926	73.8	80.0	79.8	1.003
Mid point	4963	36.9	40.0	39.8	1.005
Low point	4982	18.5	20.1	19.8	1.013
As left zero	5000	0.0	0.0	-0.2	----
As left span	4926	73.8	80.0	79.7	1.004
SO2 Scrubber Check	4921	79.5	794.9	-0.2	----
Date of last scrubber change:	27-Aug-25		Ave Corr Factor		1.007
Date of last converter efficiency test:					

Notes: Sample inlet filter and converter was changed after multipoint as founds. SO2 scrubber done and passed. No adjustment made.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

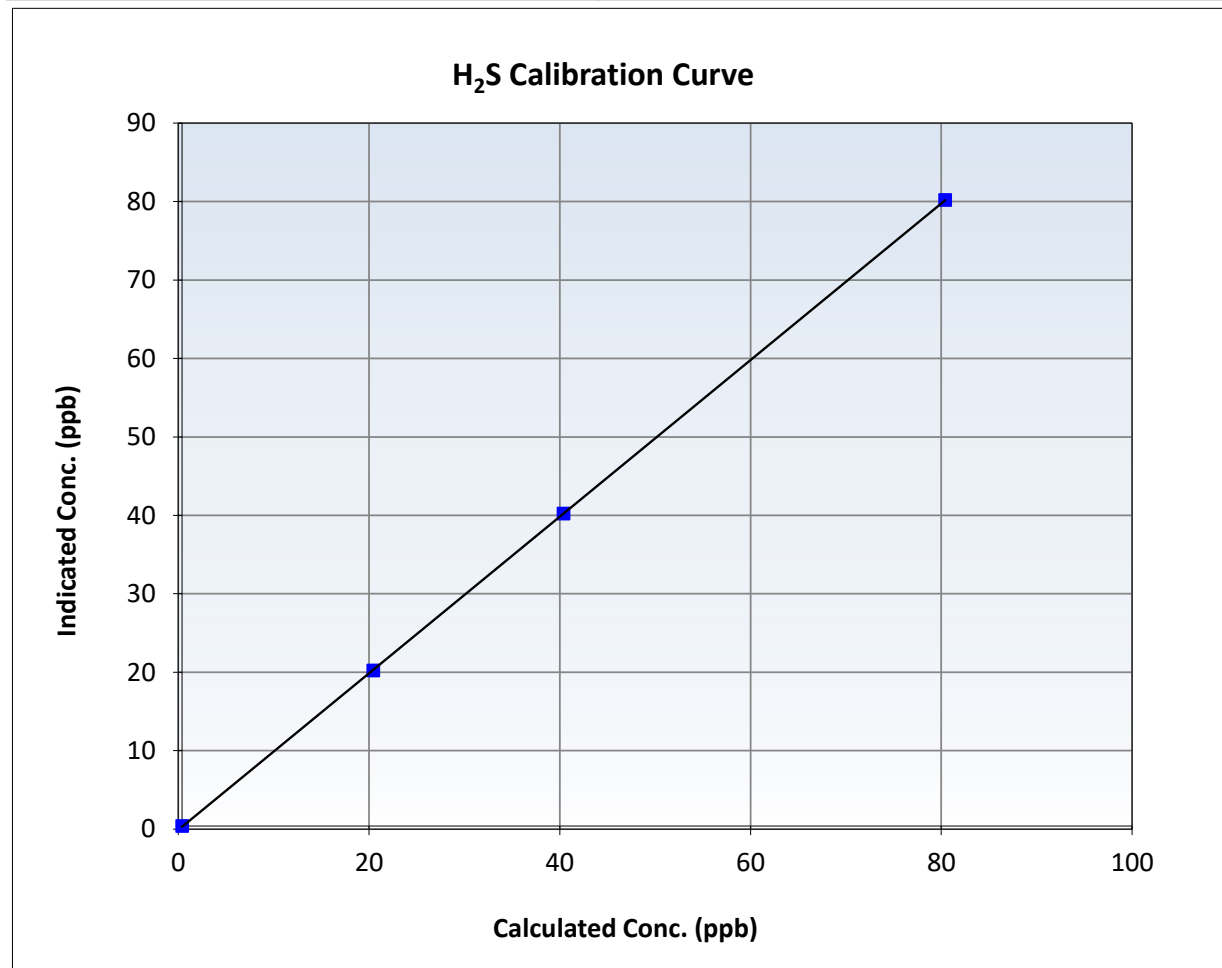
H₂S Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	July 8, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:26	End Time (MST):	13:55
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12228021056

Calibration Data

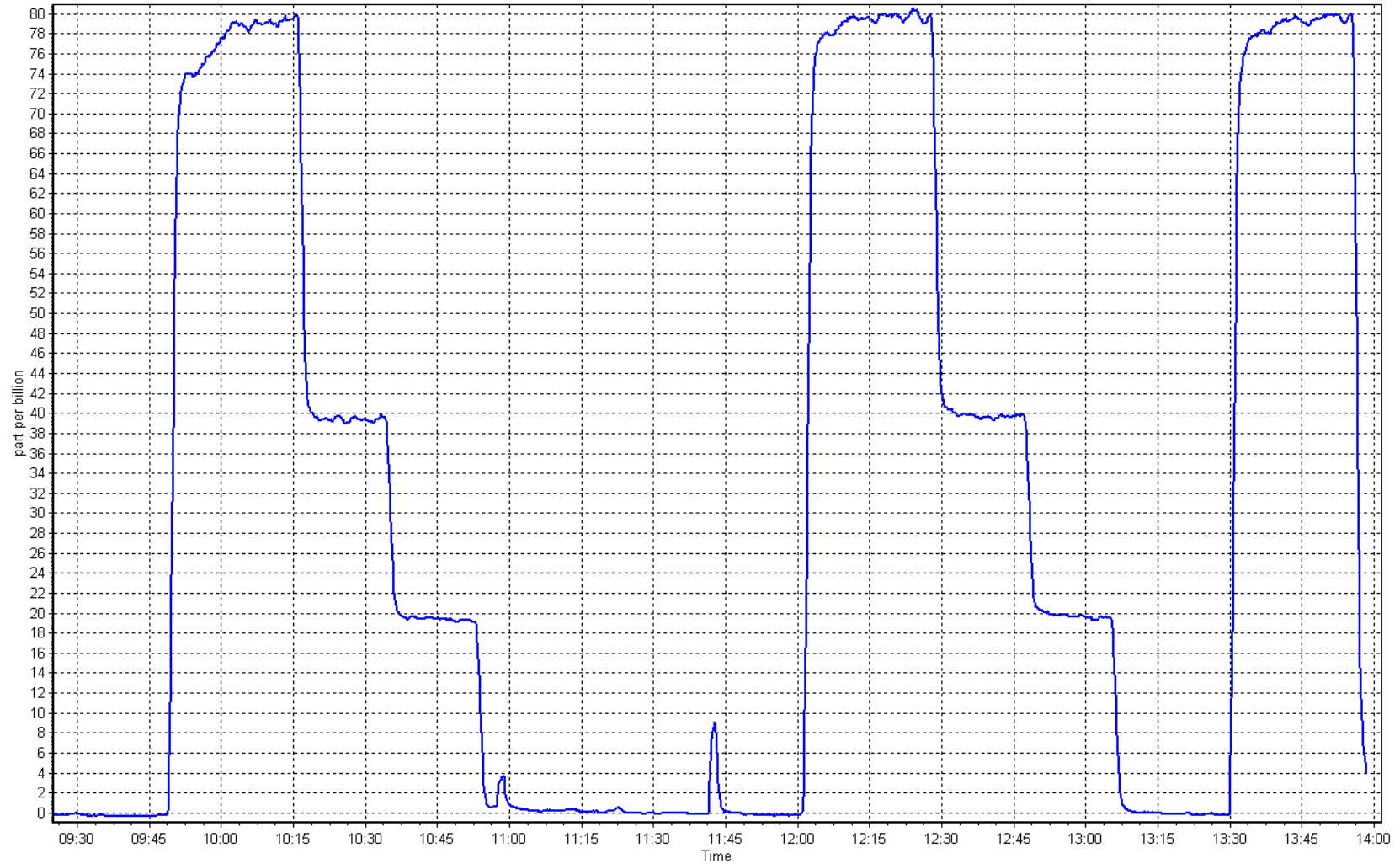
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999993		≥ 0.995
80.0	79.8	1.0025	Slope	0.998189		$0.90 - 1.10$
40.0	39.8	1.0050	Intercept	-0.100302		± 3
20.1	19.8	1.0127				



H₂S Calibration Plot

Date: August 12, 2026

Location: Blackrod





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Blackrod Station number: AMS 31
Calibration Date: August 13, 2026 Last Cal Date: July 23, 2026
Start time (MST): 9:58 End time (MST): 13:40
Reason: Routine

Calibration Standards

Gas Cert Reference: CC327023 Cal Gas Expiry Date: March 10, 2031
CH4 Cal Gas Conc. 499.9 ppm CH4 Equiv Conc. 1058.2 ppm
C3H8 Cal Gas Conc. 203.0 ppm
Removed Gas Cert: NA Removed Gas Expiry: NA
Removed CH4 Conc. 499.9 ppm CH4 Equiv Conc. 1058.2 ppm
Removed C3H8 Conc. 203.0 ppm Diff between cyl:
Calibrator Make/Model: Teledyne T700 Serial Number: 1220
ZAG Make/Model: Teledyne API N701H Serial Number: 72

Analyzer Information

Analyzer make: Thermo 51i- LT Analyzer serial #: 1505164380
Analyzer Range: 0 - 20 ppm

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	0.999845	1.001455	Background:	2.010	2.160
Calibration intercept:	0.030732	-0.037874	Coefficient:	3.173	3.142

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	0.08	----
As found High point	4921	79.5	16.82	17.04	0.992
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.96	Previous response	16.85	*% change	0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
Calibrator zero	5000	0.0	0.00	-0.03	----
High point	4921	79.5	16.82	16.81	1.001
Mid point	4960	39.8	8.42	8.40	1.003
Low point	4980	19.9	4.21	4.17	1.011
As left zero	5000	0.0	0.00	-0.02	----
As left span	4921	79.5	16.82	16.87	0.997
Average Correction Factor					1.005

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

THC Calibration Summary

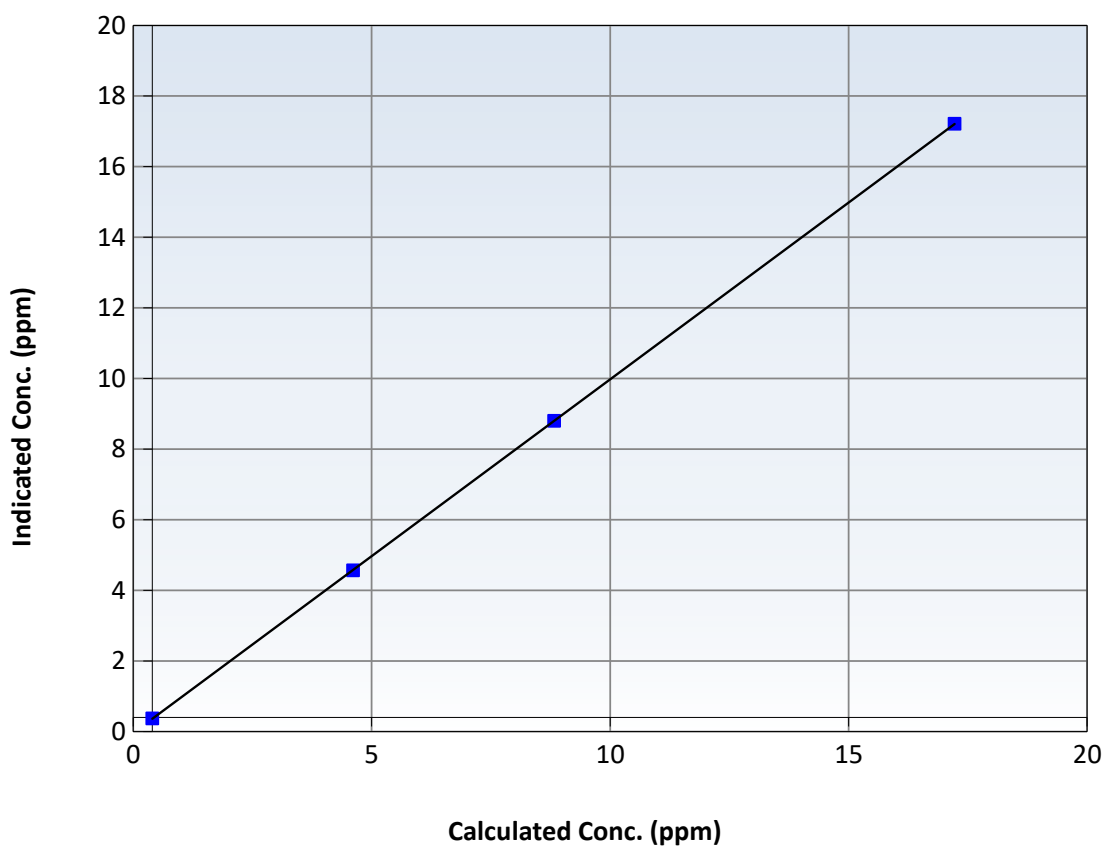
Station Information

Calibration Date:	August 13, 2026	Previous Calibration:	July 23, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:58	End Time (MST):	13:40
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	0.999998	≥ 0.995
16.82	16.81	1.0006	Slope	1.001455	$0.90 - 1.10$
8.42	8.40	1.0028	Intercept	-0.037874	± 1.5
4.21	4.17	1.0112			

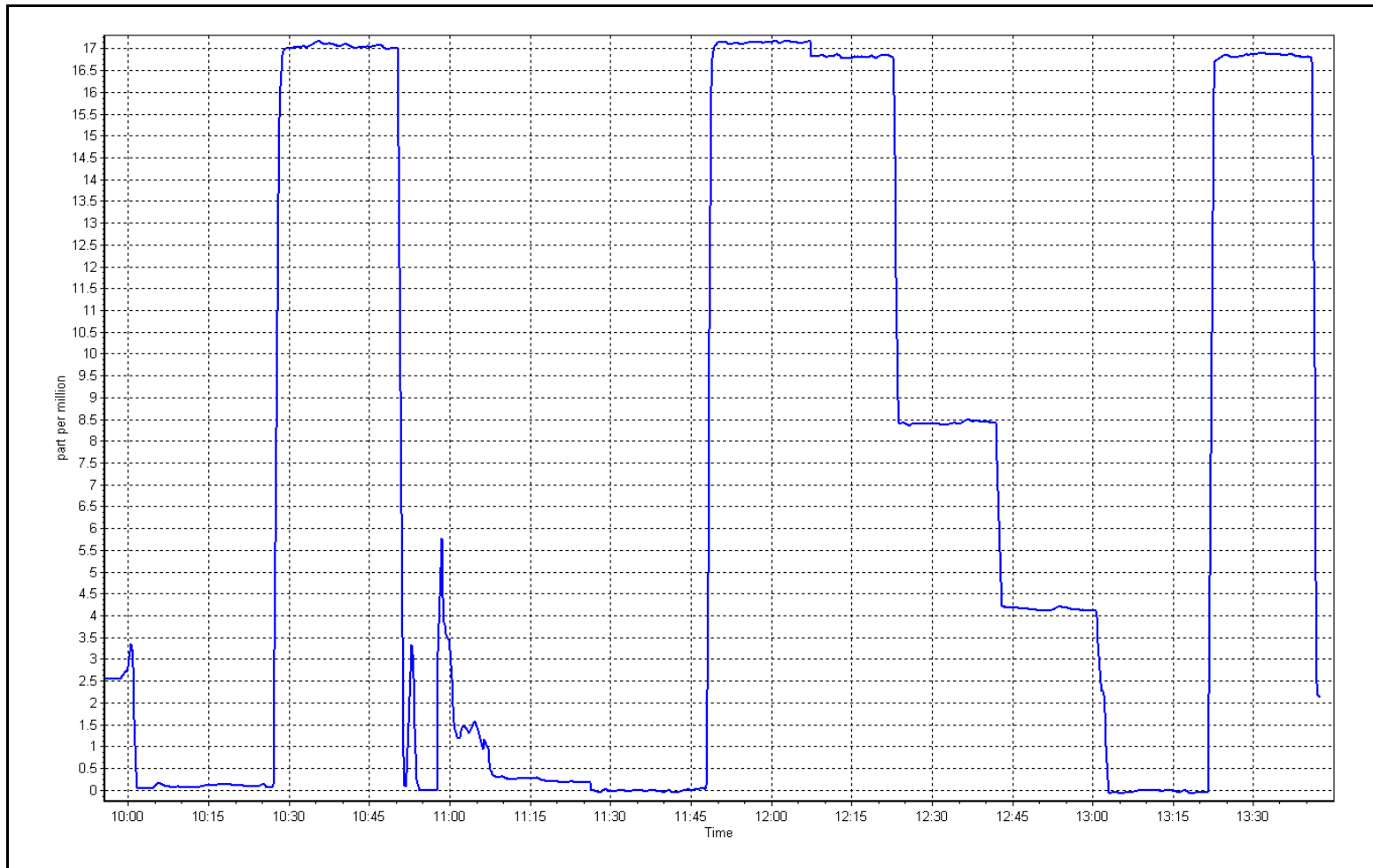
THC Calibration Curve



THC Calibration Plot

Date: August 13, 2026

Location: Blackrod





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: Blackrod
Station number: AMS 31
Calibration Date: August 24, 2026
Last Cal Date: July 28, 2026
Start time (MST): 9:26
End time (MST): 14:56
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0035071
NOX Cal Gas Conc: 59.30 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 59.30 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T750
ZAG make/model: Teledyne API N701H
Cal Gas Expiry Date: January 9, 2032
NO Cal Gas Conc: 59.10 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 59.10 ppm
NO gas Diff:
Serial Number: 281
Serial Number: 72

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NO _x concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO ₂ concentration (ppb) (Cc)	Indicated NO _x concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO ₂ concentration (ppb) (Ic)	Baseline Adjusted NO _x Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90 - 1.10</i>
As found zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
AF High point	4932	67.7	803.0	800.3	2.7	811.1	806.7	4.3	0.9901	0.9920
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO _x = 807.5 ppb	NO = 804.3 ppb	* = > +/-5% change initiates investigation		*Percent Change	NO _x = 0.4%
Baseline Corr 1st pt	NO _x = 811.0 ppb	NO = 806.7 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: 1173480006

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.002543	1.002172
NO _x Cal Offset:	2.484322	2.964335
NO Cal Slope:	1.003138	1.001695
NO Cal Offset:	1.562974	2.042898
NO ₂ Cal Slope:	0.999629	1.001825
NO ₂ Cal Offset:	-0.142206	0.175820

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:	147.1	148.6

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	0.2	0.1	0.1	----	----
High point	4932	67.7	803.0	800.3	2.7	806.2	802.6	3.6	0.9960	0.9971
Mid point	4966	33.8	400.9	399.5	1.4	406.4	403.5	2.9	0.9864	0.9902
Low point	4983	16.9	200.4	199.8	0.7	206.4	203.9	2.5	0.9711	0.9797
As left zero	5000	0.0	0.0	0.0	0.0	0.3	0.0	0.3	----	----
As left span	4932	67.7	803.0	376.5	426.5	793.6	376.5	417.1	1.0118	1.0000
Average Correction Factor									0.9845	0.9890

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	798.4	403.8	397.3	398.2	0.9978	100.2%
Mid GPT point	798.4	601.2	199.9	200.4	0.9975	100.2%
Low GPT point	798.4	701.2	99.9	100.4	0.9951	100.5%
Average Correction Factor					0.9968	100.3%

Notes:

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

Calibration Performed By:

Jan Castro



Wood Buffalo Environmental Association

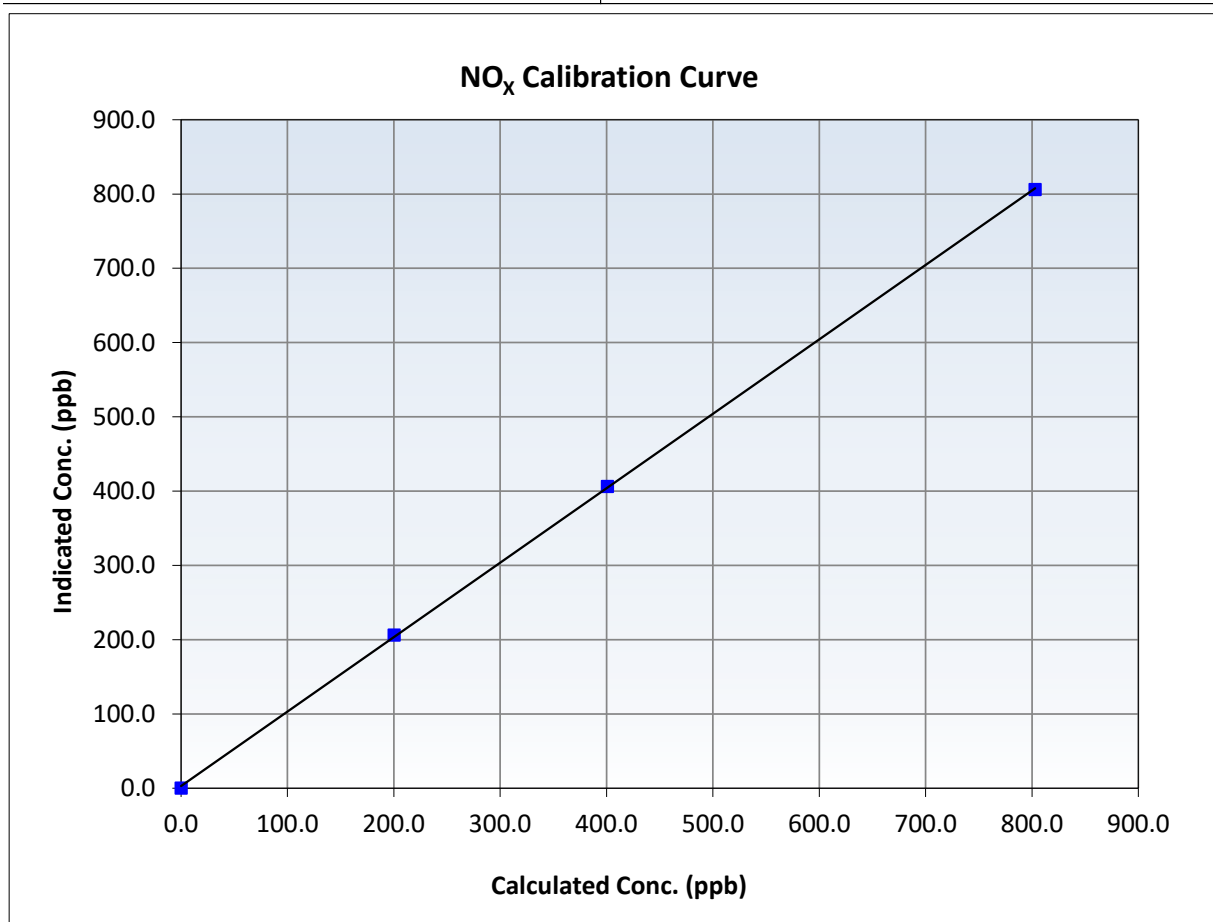
NO_x Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 28, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:26	End Time (MST):	14:56
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.2	----	Correlation Coefficient	0.999946	≥ 0.995
803.0	806.2	0.9960	Slope	1.002172	$0.90 - 1.10$
400.9	406.4	0.9864	Intercept	2.964335	± 20
200.4	206.4	0.9711			





Wood Buffalo Environmental Association

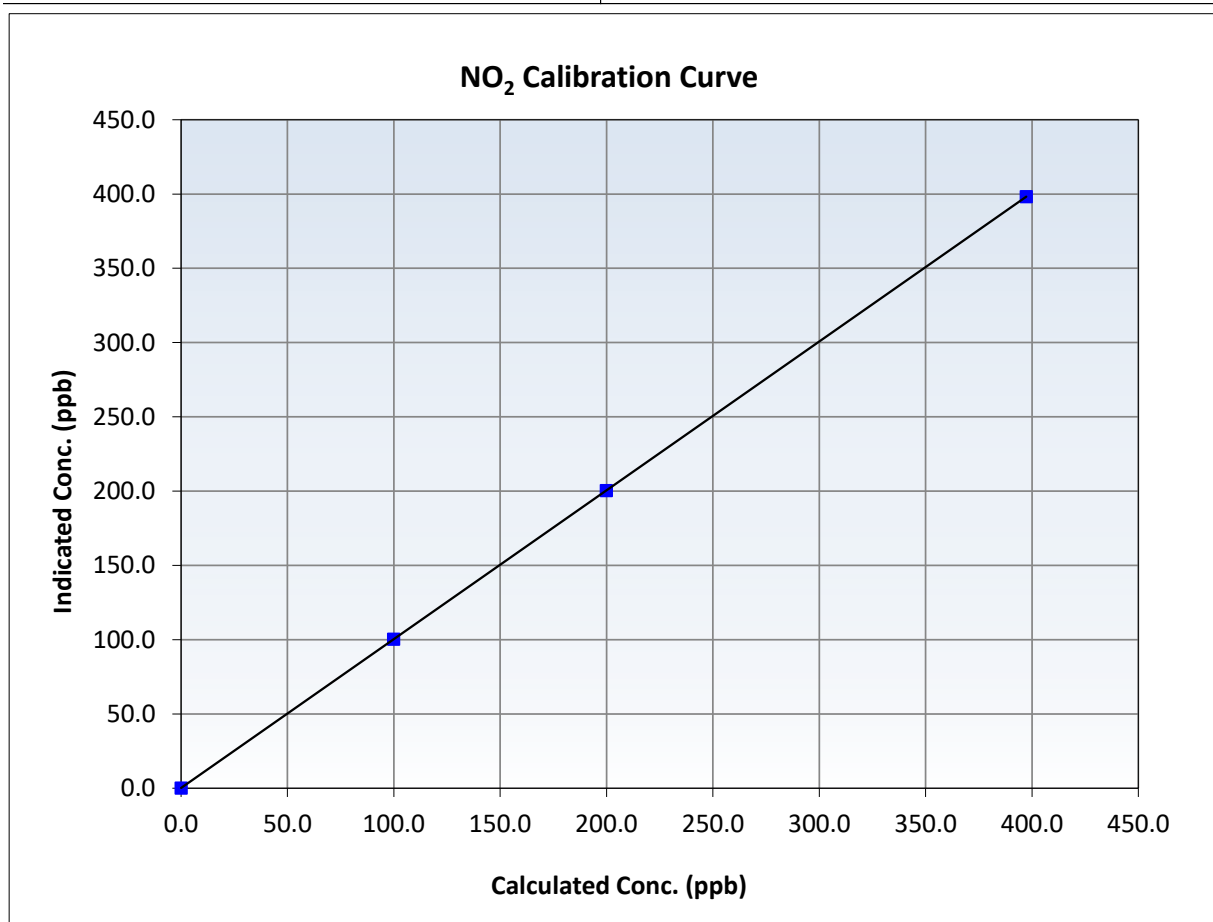
NO₂ Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 28, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:26	End Time (MST):	14:56
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	1.000000	≥0.995
397.3	398.2	0.9978	Slope	1.001825	0.90 - 1.10
199.9	200.4	0.9975	Intercept	0.175820	+/-20
99.9	100.4	0.9951			





Wood Buffalo Environmental Association

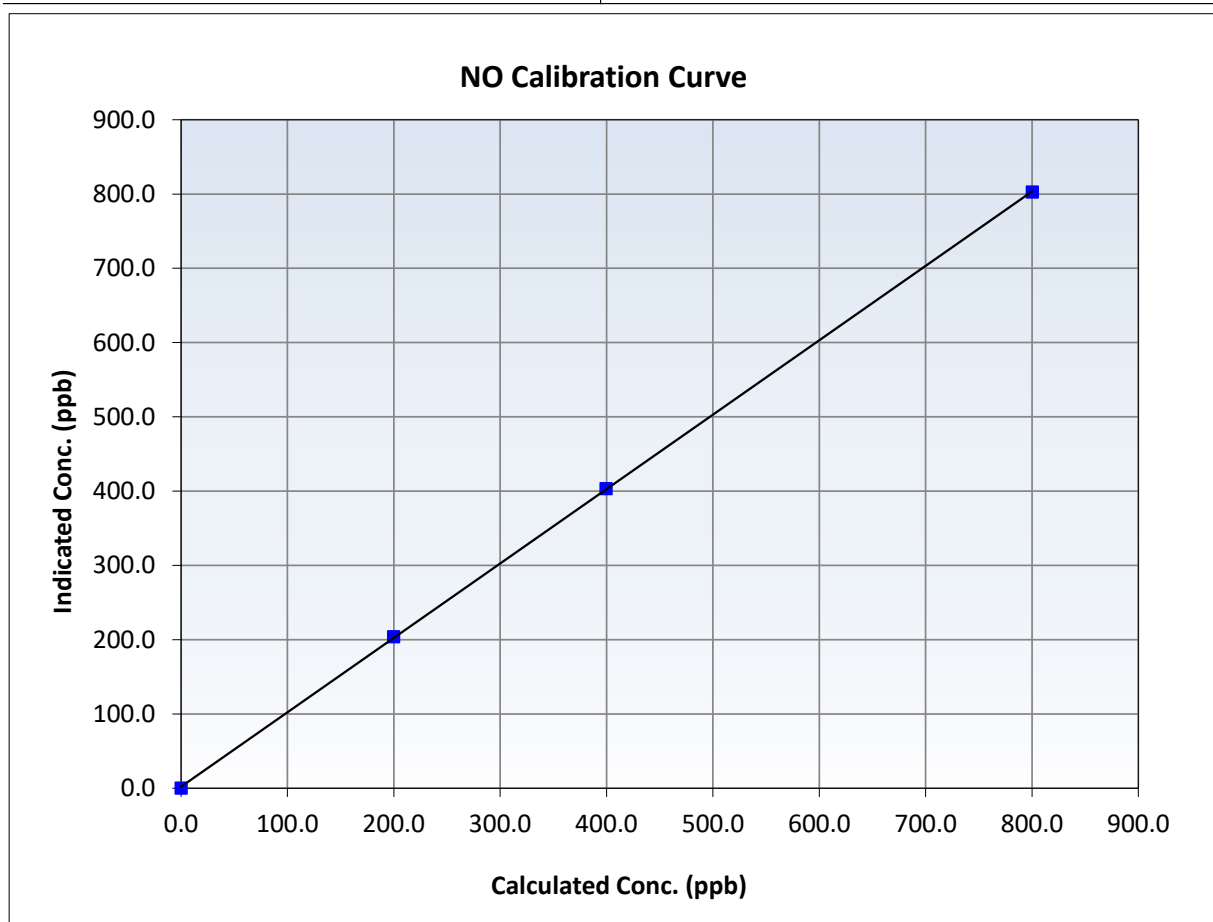
NO Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 28, 2026
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	9:26	End Time (MST):	14:56
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

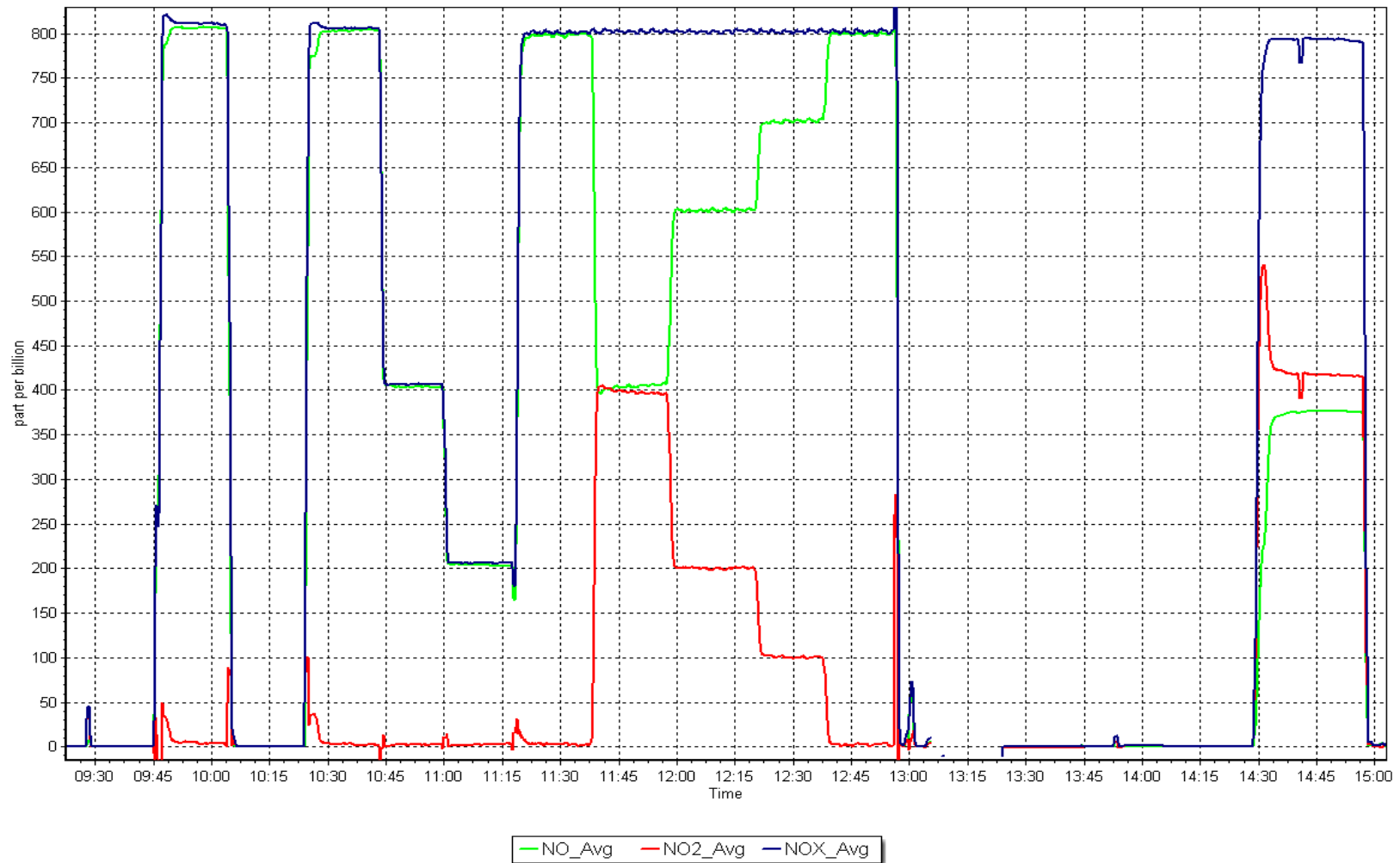
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999973	≥ 0.995
800.3	802.6	0.9971	Slope	1.001695	$0.90 - 1.10$
399.5	403.5	0.9902	Intercept	2.042898	± 20
199.8	203.9	0.9797			



NO_x Calibration Plot

Date: August 24, 2026

Location: Blackrod





Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Blackrod	Station Number:	AMS 31
Calibration Date:	August 24, 2026	Prev Cal Date:	June 10, 2025
Start Time (MST):	11:14	End Time (MST):	15:21
Tower Height (m):	10.0	Reason:	Routine

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	E15359
WS Calibrator:	MetOne 053	Serial Number:	CA05230

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)	0.999999	0.999996	≥ 0.9995
Calculated slope	0.999473	1.000474	$0.98 - 1.02$
Calculated intercept	0.026227	-0.072984	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	E13779
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):	13:33	Calc Declination*:	13.61 Degrees
WD Calibrator:	Met One 040	<i>* - calculated declination as per NOAA website</i>	

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) <i>Limit = +/- 1%</i>
10	9.7	-0.1%
90	87.1	-0.8%
180	181.9	0.5%
270	273.5	1.0%
350	352.8	0.8%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)	0.999993	0.999931	≥ 0.9995
Calculated slope	0.997062	0.985224	$0.97 - 1.03$
Calculated intercept	-0.149220	1.666523	± 5

Notes: All points within limits. Bearings inspected and both good. Confirmed true north using a compass.

Calibration Performed By: Jan Castro



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS32
PIHEW POINT
AUGUST 2026**

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Pihew Point Station number: AMS 32
Calibration Date: August 5, 2026 Last Cal Date: July 2, 2026
Start time (MST): 8:38 End time (MST): 13:44
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:	1.003702	1.003102	Backgd or Offset:	5.10	4.89
Calibration intercept:	-0.631983	-0.371984	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	800.8	0.999
As found Mid point	4961	39.0	400.2	401.1	0.997
As found Low point	4981	19.5	200.1	199.1	1.003
New cylinder response					
Baseline Corr As found:	801.1	Previous response	802.8	*% change	-0.2%
Baseline Corr 2nd AF pt:	401.4	AF Slope:	1.001317	AF Intercept:	-0.472002
Baseline Corr 3rd AF pt:	199.4	AF Correlation:	0.999996	* = > +/-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	802.6	0.997
Mid point	4961	39.0	400.2	401.3	0.997
Low point	4981	19.5	200.1	199.7	1.002
As left zero	5000	0.0	0.0	0.0	----
As left span	4922	78.0	800.4	801.8	0.998
Average Correction Factor:					0.999

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

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

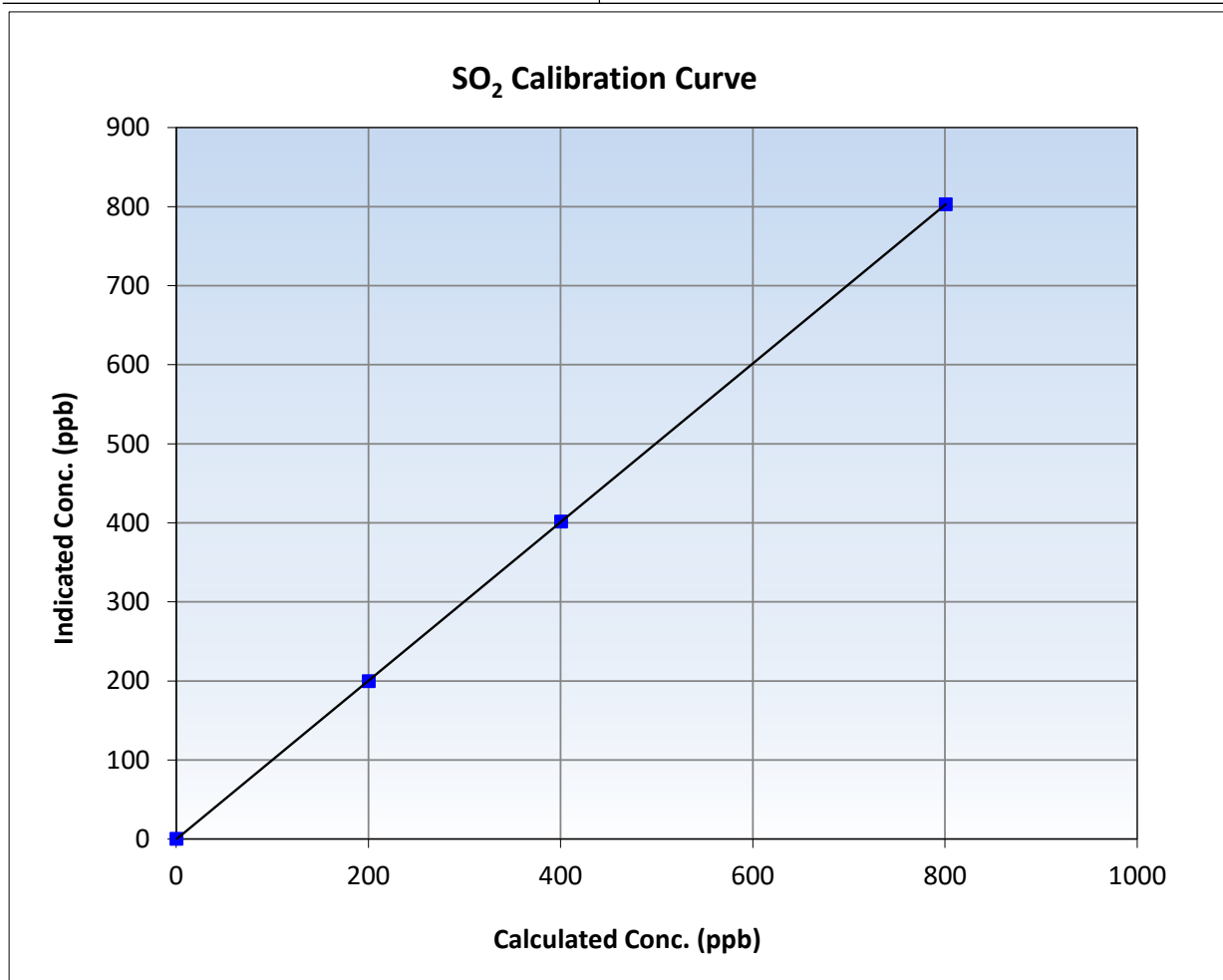
SO₂ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 2, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	8:38	End Time (MST):	13:44
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1180540019

Calibration Data

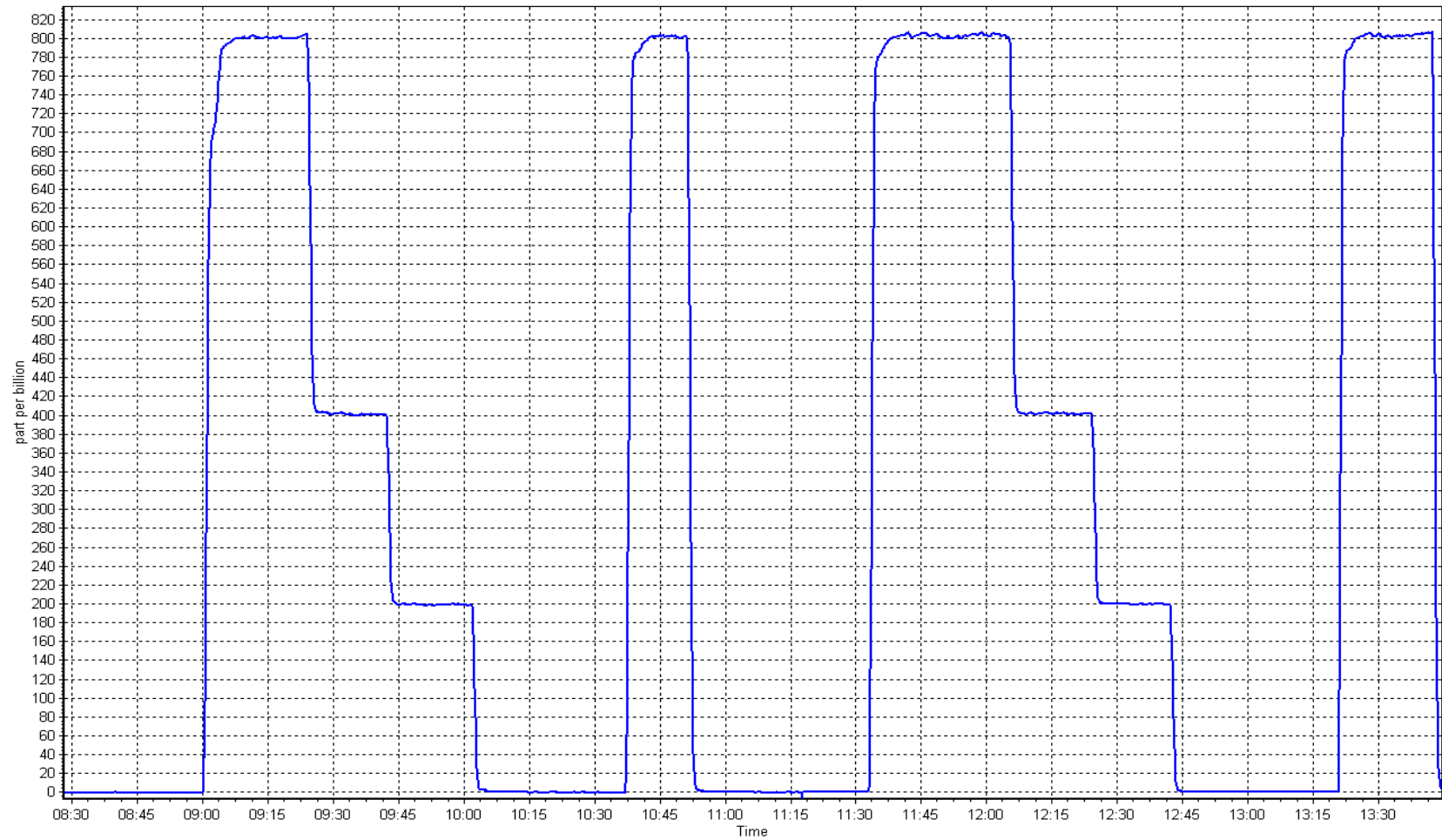
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999998	≥0.995
800.4	802.6	0.9973	Slope	1.003102	0.90 - 1.10
400.2	401.3	0.9973	Intercept	-0.371984	+/-30
200.1	199.7	1.0019			



SO2 Calibration Plot

Date: August 5, 2026

Location: Pihow Point





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Pihew Point Station number: AMS 32
Calibration Date: August 11, 2026 Last Cal Date: July 31, 2026
Start time (MST): 9:07 End time (MST): 13:55
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:	1.002201	0.996629	Backgd or Offset:	1.54	1.54
Calibration intercept:	-0.082232	-0.162187	Coeff or Slope:	0.843	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	0.3	----
As found High point	4925	75.5	80.0	79.3	1.013
As found Mid point	4962	37.7	40.0	39.9	1.009
As found Low point	4981	18.9	20.0	19.8	1.027
New cylinder response					
Baseline Corr As found:	79.0	Prev response:	80.12	*% change:	-1.4%
Baseline Corr 2nd AF pt:	39.6	AF Slope:	0.988627	AF Intercept:	0.217930
Baseline Corr 3rd AF pt:	19.5	AF Correlation:	0.999974	* = > +/-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	79.6	1.005
Mid point	4962	37.7	40.0	39.7	1.007
Low point	4981	18.9	20.0	19.7	1.017
As left zero	5000	0.0	0.0	0.0	----
As left span	4925	75.5	80.0	79.8	1.003
SO2 Scrubber Check	4921	79.5	794.9	0.1	----
Date of last scrubber change:	30-Jul-25		Ave Corr Factor		1.010
Date of last converter efficiency test:	NA				

Notes: Changed sample inlet filter after as founds. No adjustments made. Scrubber check was done after cal zero, passed.

Calibration Performed By: Braiden Boutilier



Wood Buffalo Environmental Association

H₂S Calibration Summary

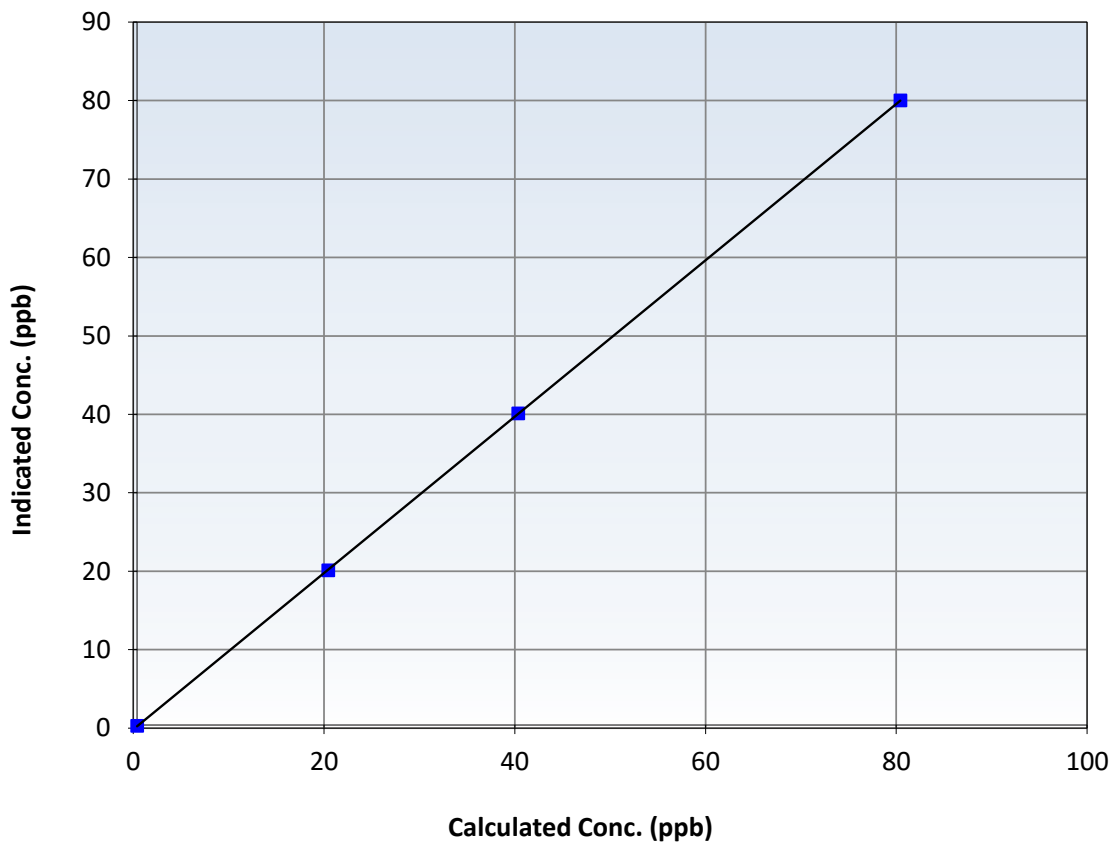
Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	July 31, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	9:07	End Time (MST):	13:55
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	0.999995		≥ 0.995
80.0	79.6	1.0053	Slope	0.996629		$0.90 - 1.10$
40.0	39.7	1.0067	Intercept	-0.162187		± 3
20.0	19.7	1.0170				

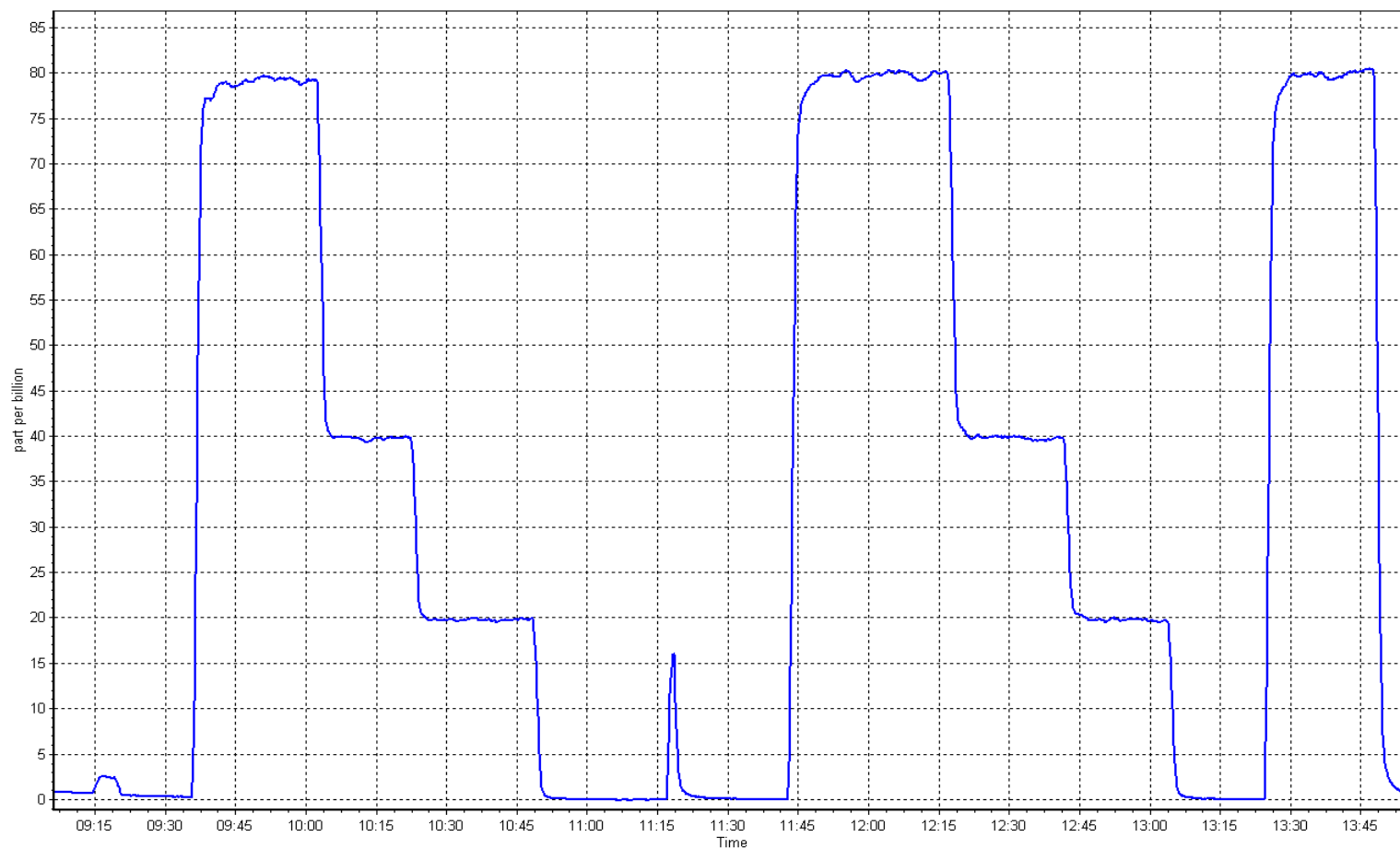
H₂S Calibration Curve



H₂S Calibration Plot

Date: August 11, 2026

Location: Pihew Point





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Pihew Point
Calibration Date: August 5, 2026
Start time (MST): 8:38
Reason: Routine

Station number: AMS 32
Last Cal Date: July 2, 2026
End time (MST): 13:44

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	2.74E-04	NMHC SP Ratio:	4.66E-05
CH ₄ Retention time:	15.6	15.4	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	16.48	1.005
As found Mid point	4961	39.0	8.28	8.19	1.011
As found Low point	4981	19.5	4.14	4.08	1.014
New cylinder response					
Baseline Corr AF:	16.48	Prev response	16.50	*% change	-0.1%
Baseline Corr 2nd AF:	8.19	AF Slope:	0.995706	AF Intercept:	-0.025435
Baseline Corr 3rd AF:	4.08	AF Correlation:	0.999987	* = > +/-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	16.56	1.000
Mid point	4961	39.0	8.28	8.28	1.000
Low point	4981	19.5	4.14	4.08	1.014
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.0	16.56	16.50	1.004
Average Correction Factor					1.004

Notes:

Changed sample inlet filter and actuator after as founds. Adjusted 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	4922	78.0	8.76	8.94	0.980
As found Mid point	4961	39.0	4.38	4.43	0.988
As found Low point	4981	19.5	2.19	2.22	0.986
New cylinder response					
Baseline Corr AF:	8.94	Prev response	8.72	*% change	2.5%
Baseline Corr 2nd AF:	4.43	AF Slope:	1.020544	AF Intercept:	-0.012511
Baseline Corr 3rd AF:	2.22	AF Correlation:	0.999979	* = > +/-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	4922	78.0	8.76	8.76	1.000
Mid point	4961	39.0	4.38	4.39	0.997
Low point	4981	19.5	2.19	2.16	1.013
As left zero	5000	0.0	0.00	0.00	1.005
As left span	4922	78.0	8.76	8.72	1.003
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	4922	78.0	7.80	7.54	1.034
As found Mid point	4961	39.0	3.90	3.75	1.039
As found Low point	4981	19.5	1.95	1.86	1.048
New cylinder response					
Baseline Corr AF:	7.54	Prev response	7.79	*% change	-3.2%
Baseline Corr 2nd AF:	3.75	AF Slope:	0.968244	AF Intercept:	-0.013925
Baseline Corr 3rd AF:	1.86	AF Correlation:	0.999984	* = > +/-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	4922	78.0	7.80	7.80	1.000
Mid point	4961	39.0	3.90	3.88	1.004
Low point	4981	19.5	1.95	1.92	1.014
As left zero	5000	0.0	0.00	0.00	1.002
As left span	4922	78.0	7.80	7.78	1.006
Average Correction Factor					1.006

Calibration Statistics

	Start	Finish
THC Cal Slope:	0.998363	1.001234
THC Cal Offset:	-0.033436	-0.022235
CH ₄ Cal Slope:	1.000250	1.001188
CH ₄ Cal Offset:	-0.015122	-0.014322
NMHC Cal Slope:	0.997153	1.001223
NMHC Cal Offset:	-0.019113	-0.008713

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

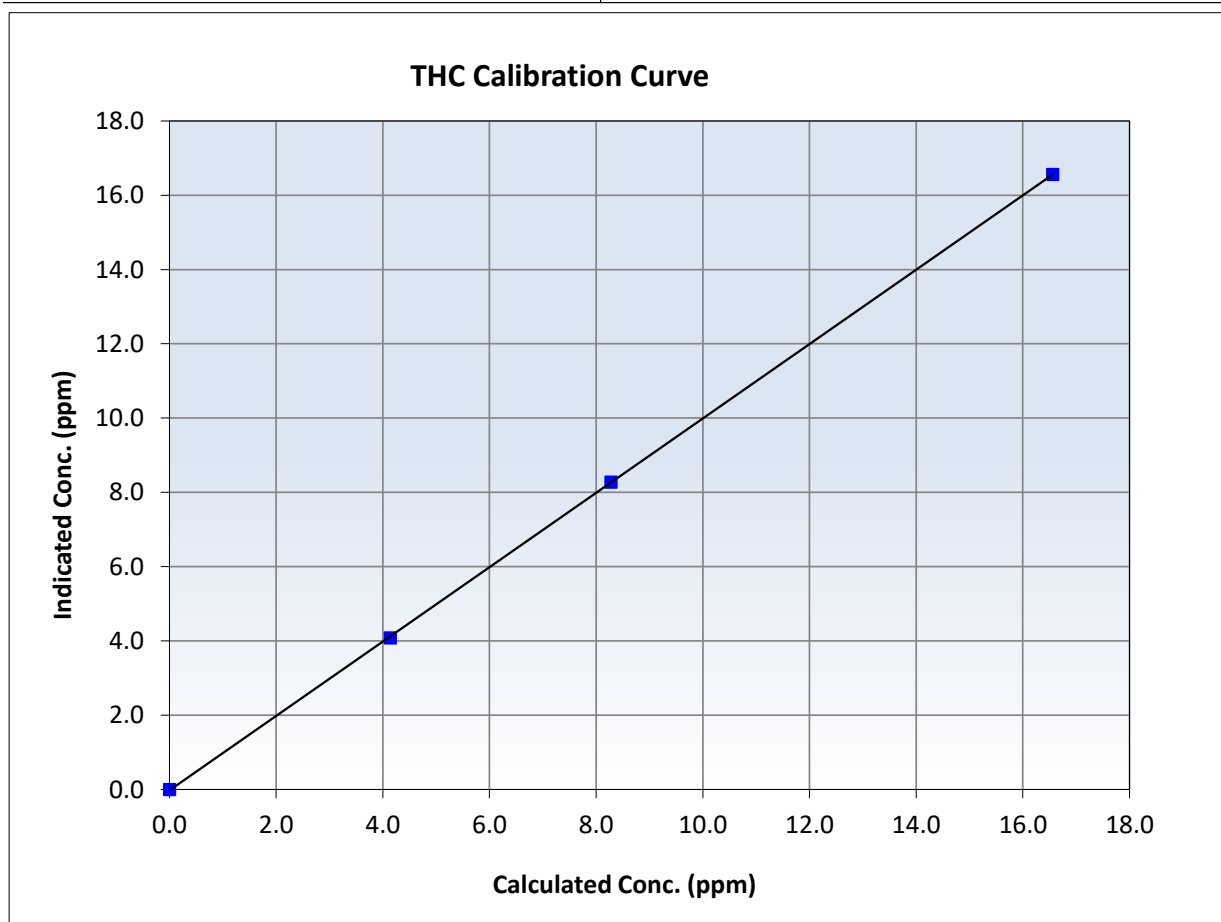
THC Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 2, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	8:38	End Time (MST):	13:44
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	0.999986	≥ 0.995
16.56	16.56	0.9999	Slope	1.001234	$0.90 - 1.10$
8.28	8.28	0.9999	Intercept	-0.022235	± 0.5
4.14	4.08	1.0135			





Wood Buffalo Environmental Association

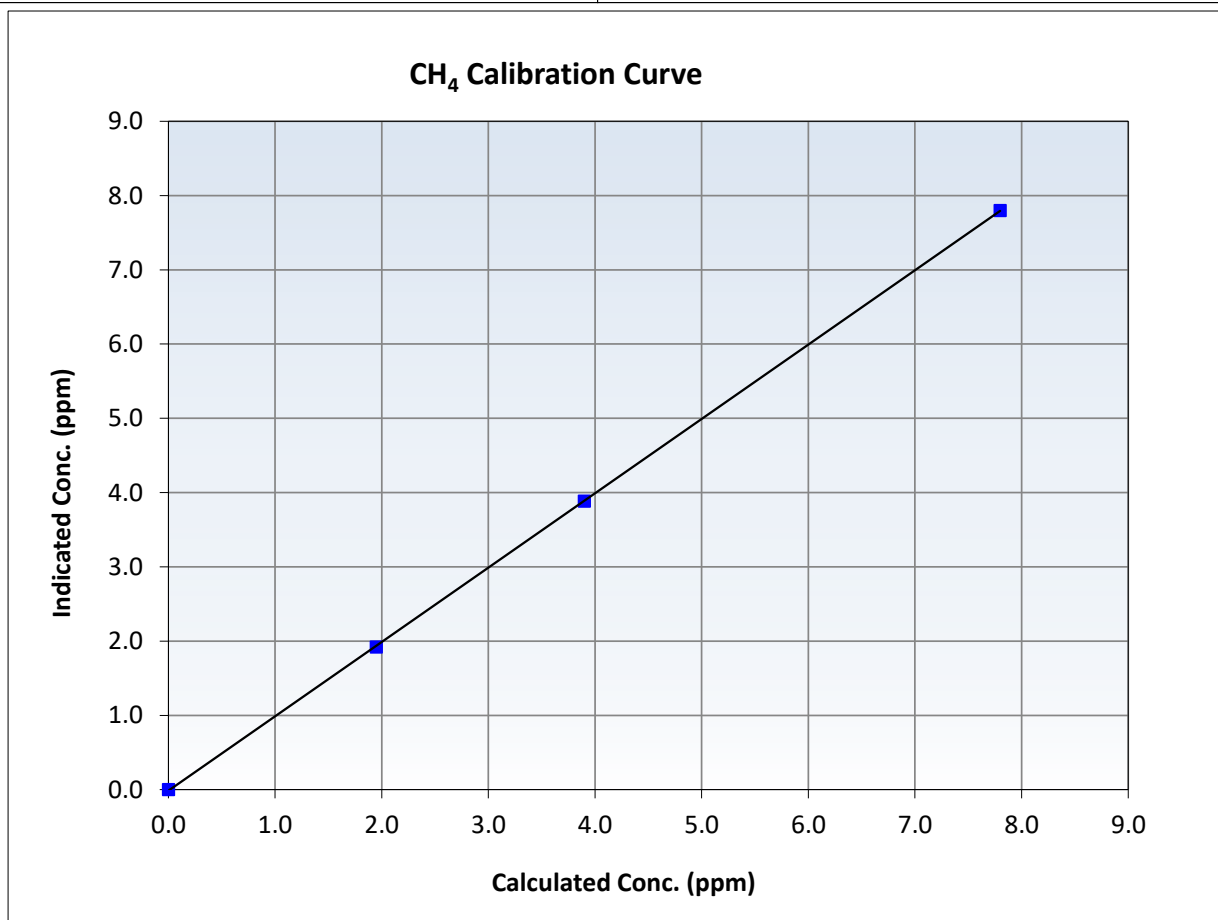
CH₄ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 2, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	8:38	End Time (MST):	13:44
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	0.999984		≥0.995
7.80	7.80	0.9998	Slope	1.001188		0.90 - 1.10
3.90	3.88	1.0039	Intercept	-0.014322		+/-0.5
1.95	1.92	1.0143				





Wood Buffalo Environmental Association

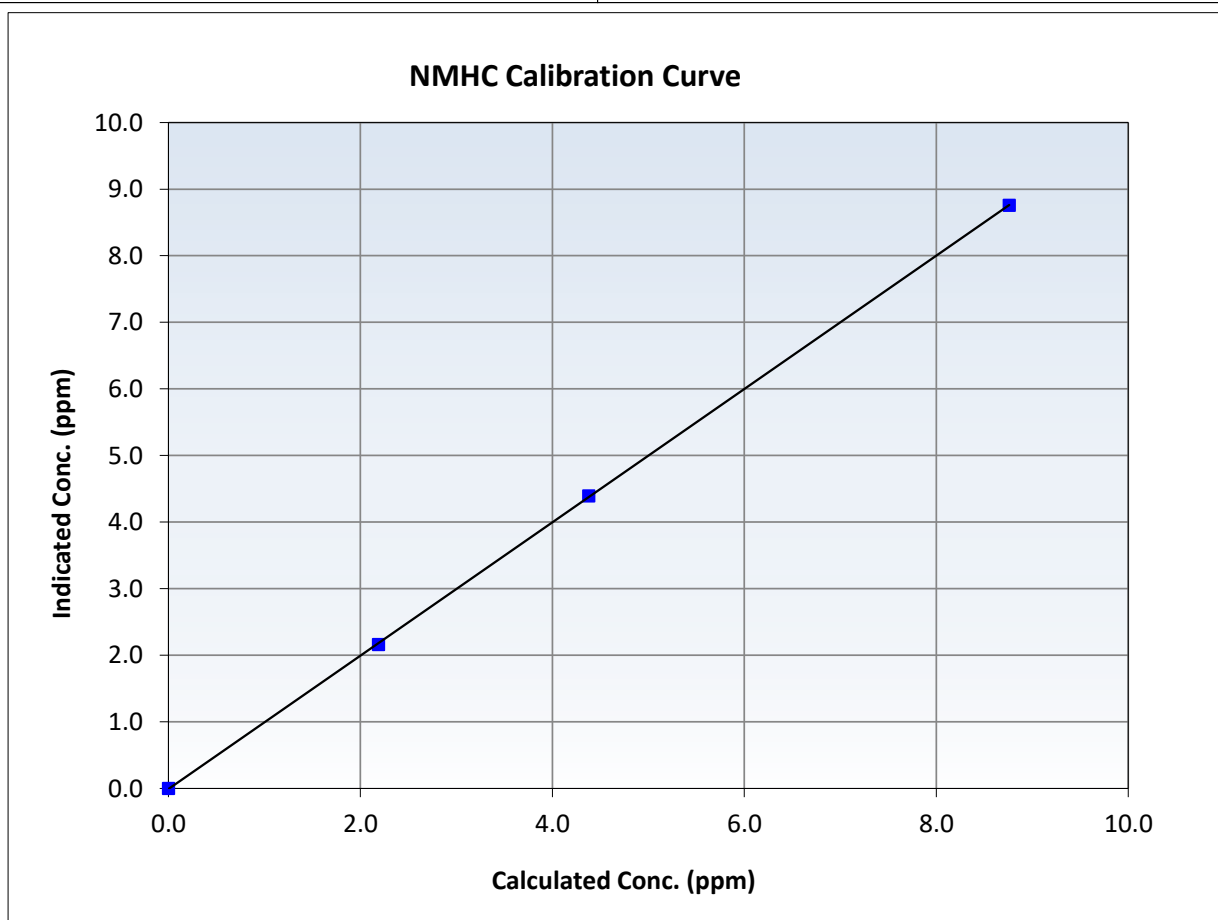
NMHC Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 2, 2026
Station Name:	Pihew Point	Station Number:	AMS 32
Start Time (MST):	8:38	End Time (MST):	13:44
Analyzer make:	Thermo 55i	Analyzer serial #:	1218153355

Calibration Data

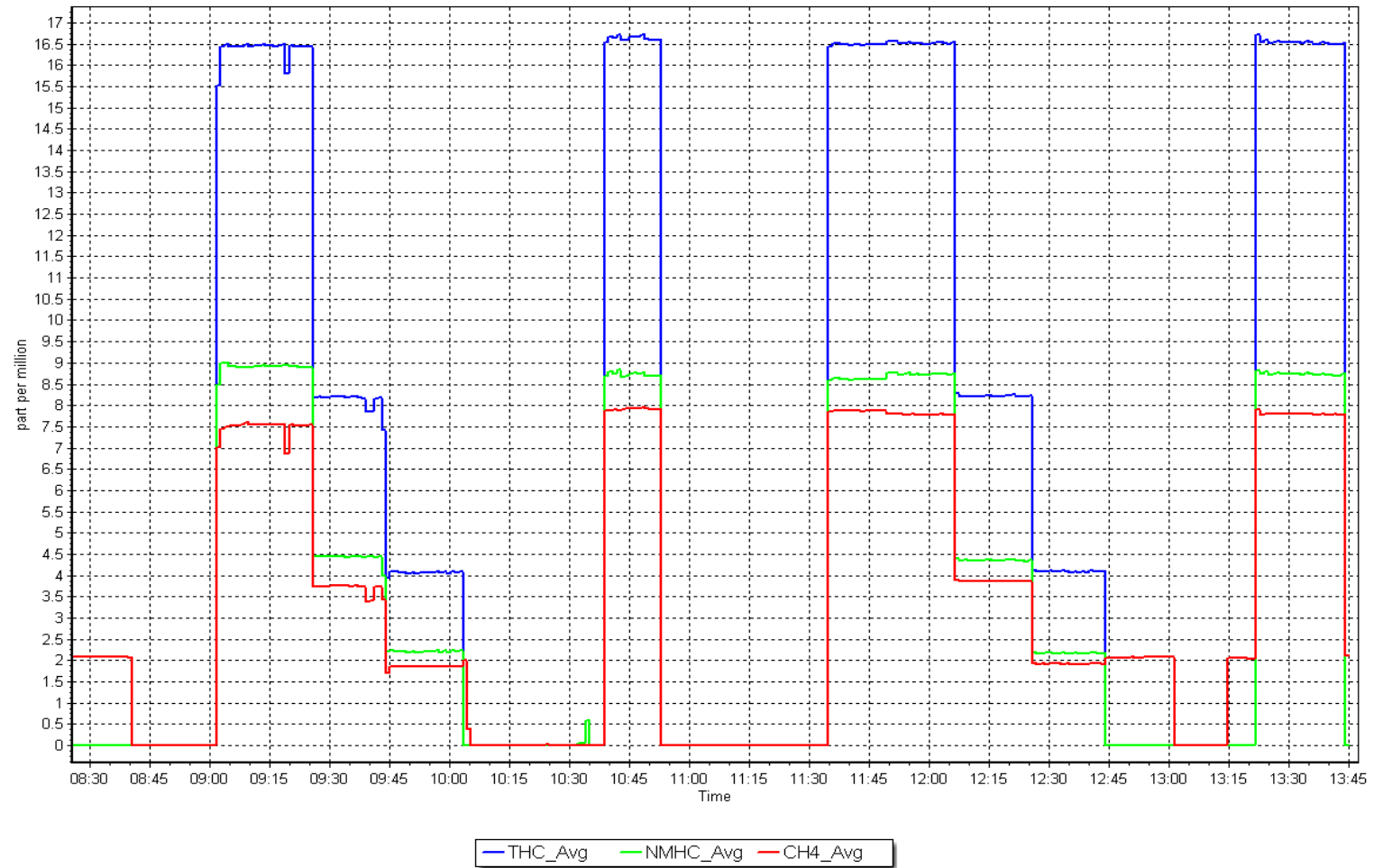
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.00	0.00	----	Correlation Coefficient	0.999981	<i>≥0.995</i>
8.76	8.76	1.0000	Slope	1.001223	<i>0.90 - 1.10</i>
4.38	4.39	0.9973	Intercept	-0.008713	<i>+/-0.5</i>
2.19	2.16	1.0129			



NMHC Calibration Plot

Date: August 5, 2026

Location: Pihew Point





Wood Buffalo Environmental Association

THC / CH₄ / NMHC Calibration Report

Station Information

Station Name: Pihew Point
Calibration Date: August 24, 2026
Start time (MST): 9:34
Reason: Cylinder Change

Station number: AMS 32
Last Cal Date: August 5, 2026
End time (MST): 11:20

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:	2.74E-04	2.74E-04	NMHC SP Ratio:	4.74E-05
CH ₄ Retention time:	15.4	15.4	NMHC Peak Area:	184687
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	16.52	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.52	Prev response	16.56	*% 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	4922	78.0	16.56	16.50	1.004
Average Correction Factor					

Notes:

Swapped hydrogen and nitrogen cylinders.



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	4922	78.0	8.76	8.88	0.987
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.88	Prev response	8.76	*% change	1.3%
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					----
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.0	8.76	8.86	0.989
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	4922	78.0	7.80	7.64	1.020
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.64	Prev response	7.79	*% change	-2.0%
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					----
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.0	7.80	7.64	1.021
Average Correction Factor					

Calibration Statistics

	<u>Start</u>	
THC Cal Slope:	1.001234	
THC Cal Offset:	-0.022235	
CH ₄ Cal Slope:	1.001188	
CH ₄ Cal Offset:	-0.014322	
NMHC Cal Slope:	1.001223	
NMHC Cal Offset:	-0.008713	

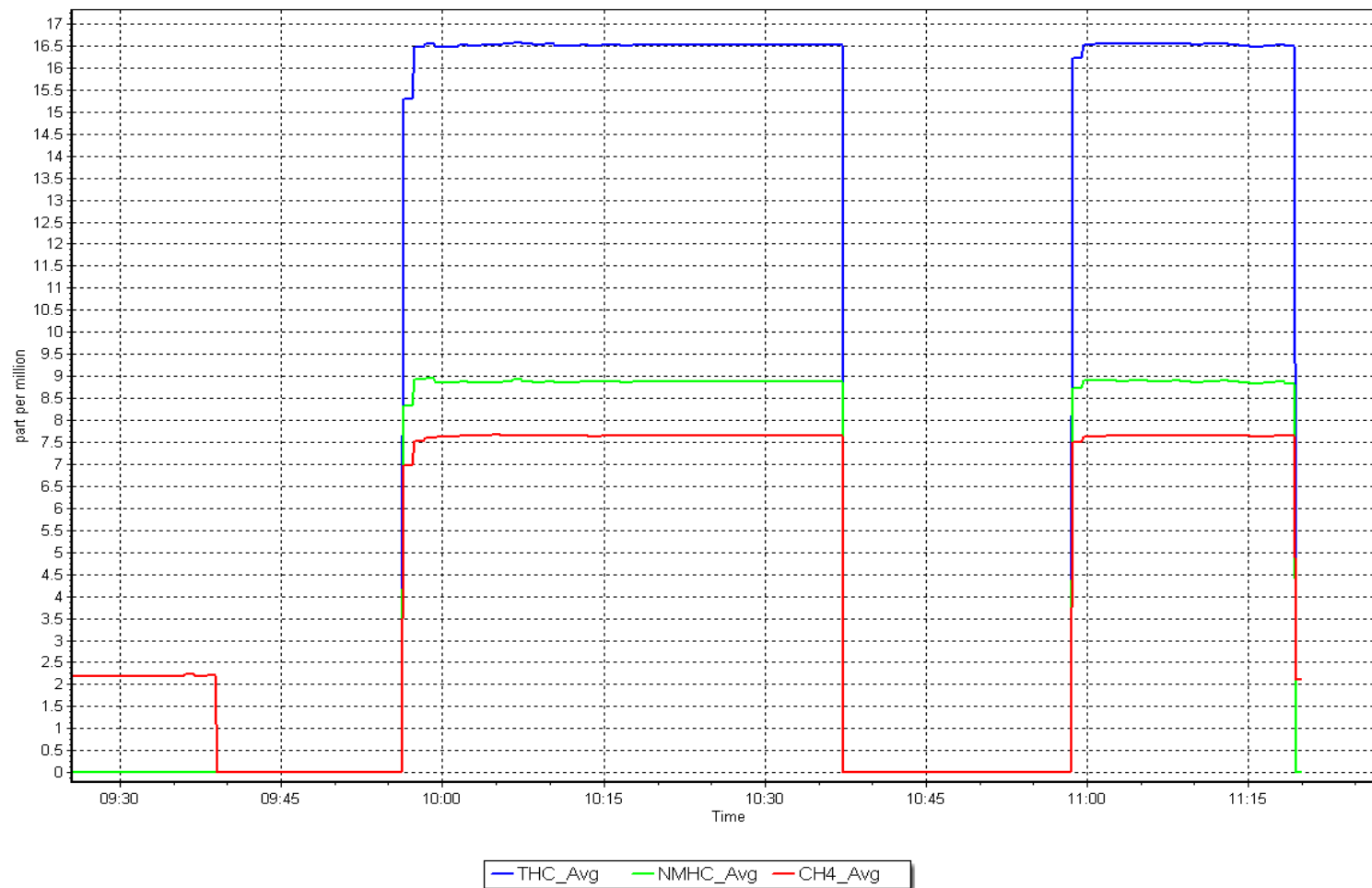
Finish

Calibration Performed By: Braiden Boutilier

NMHC Calibration Plot

Date: August 24, 2026

Location: Pihew Point





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS33 MONDAY CREEK AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Monday Creek Station number: AMS 33
Calibration Date: August 26, 2026 Last Cal Date: July 17, 2026
Start time (MST): 11:27 End time (MST): 14:03
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:	0.997229	0.995830	Backgd or Offset:	32.1	32.1
Calibration intercept:	0.542218	0.682322	Coeff or Slope:	0.962	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	-0.1	----
As found High point	4921	79.1	800.8	798.1	1.003
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	798.2	Previous response	799.1	*% 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	0.3	----
High point	4921	79.1	800.8	797.6	1.004
Mid point	4961	39.5	399.9	400.1	0.999
Low point	4980	19.8	200.5	200.0	1.002
As left zero	5000	0.0	0.0	0.0	----
As left span	4921	79.1	800.8	799.5	1.002
Average Correction Factor:					1.002

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

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

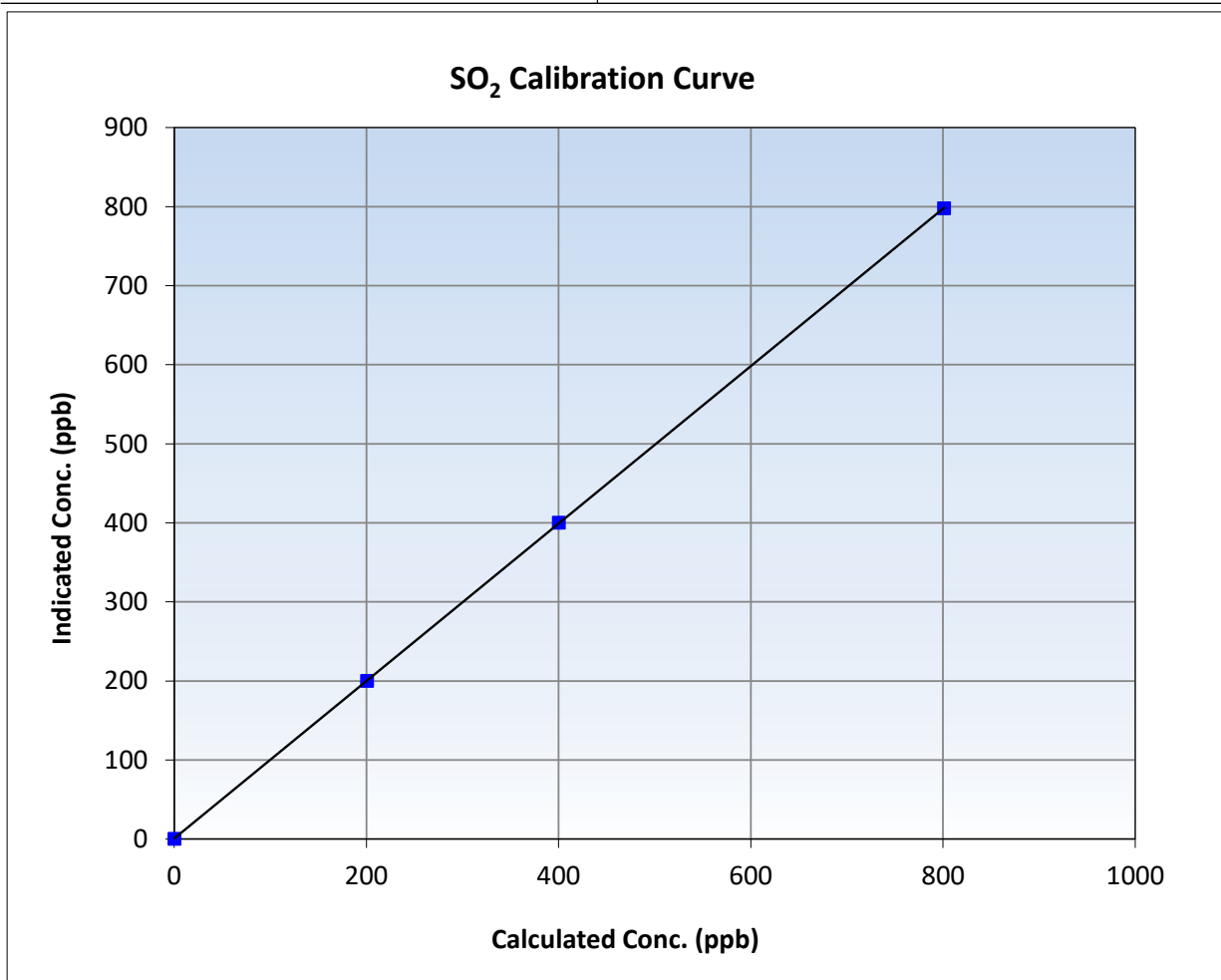
SO₂ Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 17, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:27	End Time (MST):	14:03
Analyzer make:	Thermo 43i	Analyzer serial #:	1152430005

Calibration Data

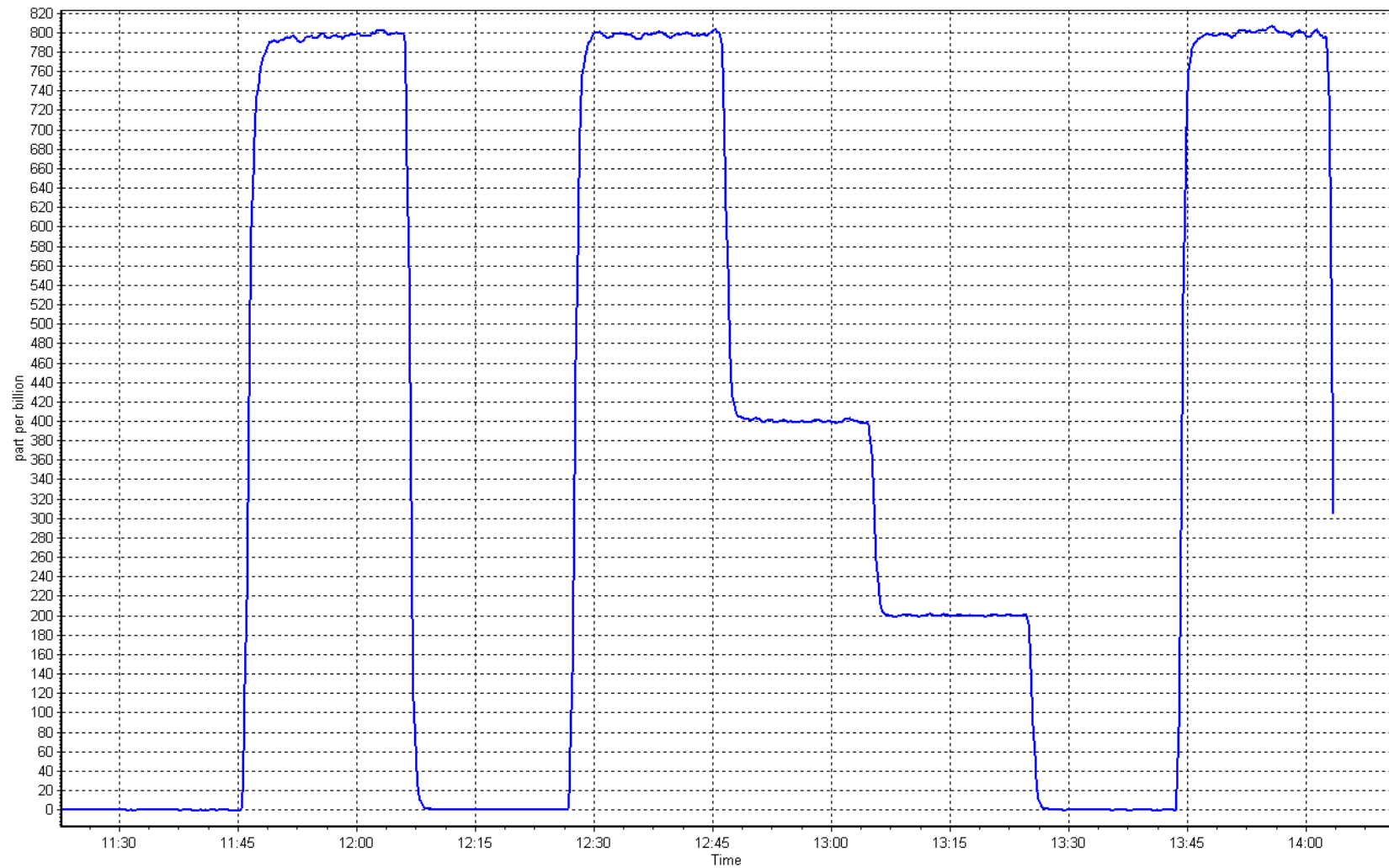
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999994	≥0.995
800.8	797.6	1.0040	Slope	0.995830	0.90 - 1.10
399.9	400.1	0.9994	Intercept	0.682322	+/-30
200.5	200.0	1.0023			



SO2 Calibration Plot

Date: August 26, 2026

Location: Monday Creek





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Monday Creek
Calibration Date: August 25, 2026
Start time (MST): 11:46
Reason: Routine

Station number: AMS 33
Last Cal Date: July 14, 2026
End time (MST): 15:51

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 T701

Cal Gas Exp Date: November 15, 2026
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 3253
Serial Number: 4297

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:	1.004998	1.001140	Backgd or Offset:	1.50	1.47
Calibration intercept:	-0.021605	0.038397	Coeff or Slope:	1.063	1.039

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	83.5	0.957
As found Mid point	4960	39.6	40.0	41.6	0.959
As found Low point	4980	19.8	20.0	20.6	0.966
New cylinder response					
Baseline Corr As found:	83.6	Prev response:	80.37	*% change:	3.9%
Baseline Corr 2nd AF pt:	41.7	AF Slope:	1.045861	AF Intercept:	-0.201670
Baseline Corr 3rd AF pt:	20.7	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	4921	79.2	80.0	80.1	0.999
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	0.3	----
As left span	4921	79.2	80.0	82.2	0.973
SO2 Scrubber Check	4921	79.1	791.0	0.1	----
Date of last scrubber change:		11-Apr-24		Ave Corr Factor	0.997
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.
Adjusted the span.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

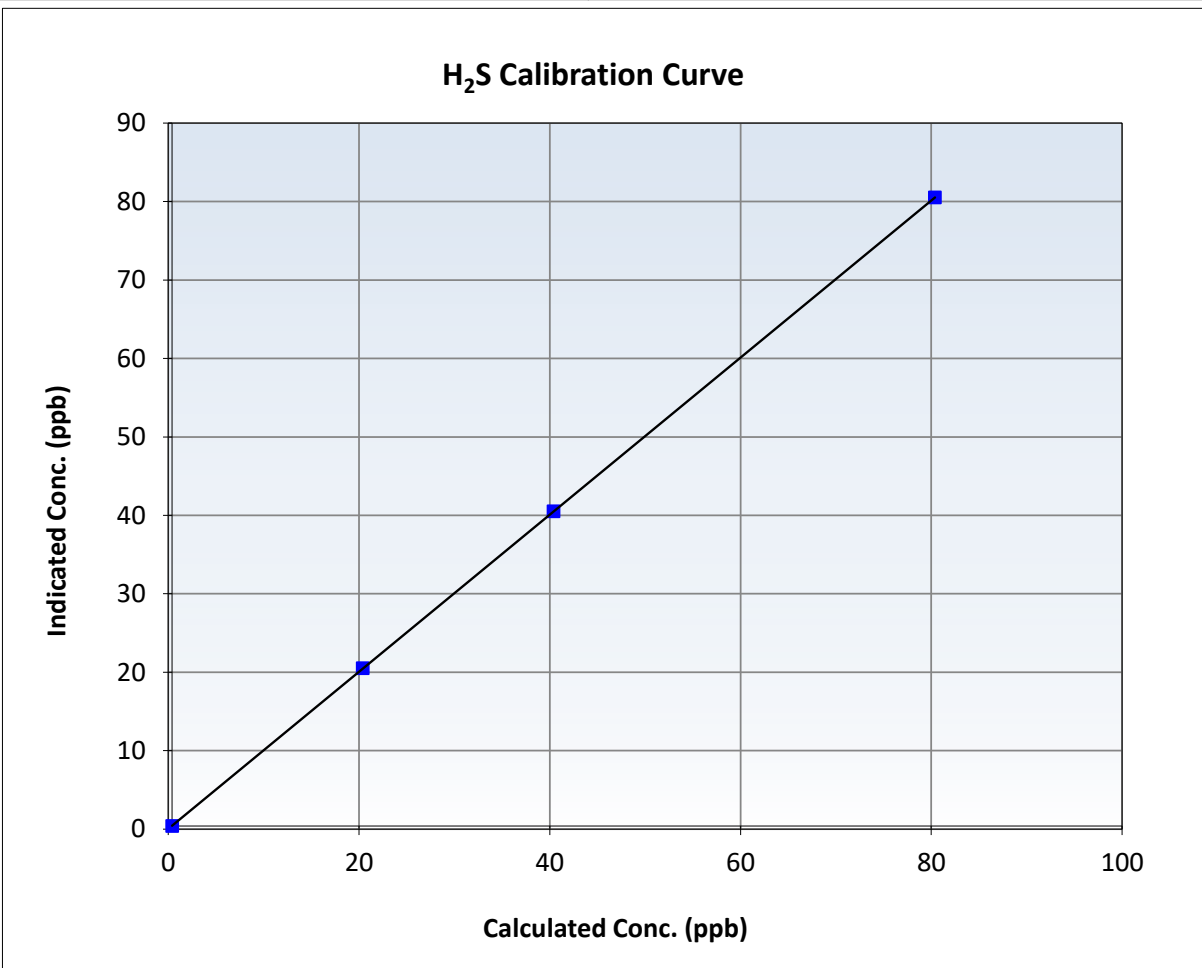
H2S Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 14, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:46	End Time (MST):	15:51
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12333331547

Calibration Data

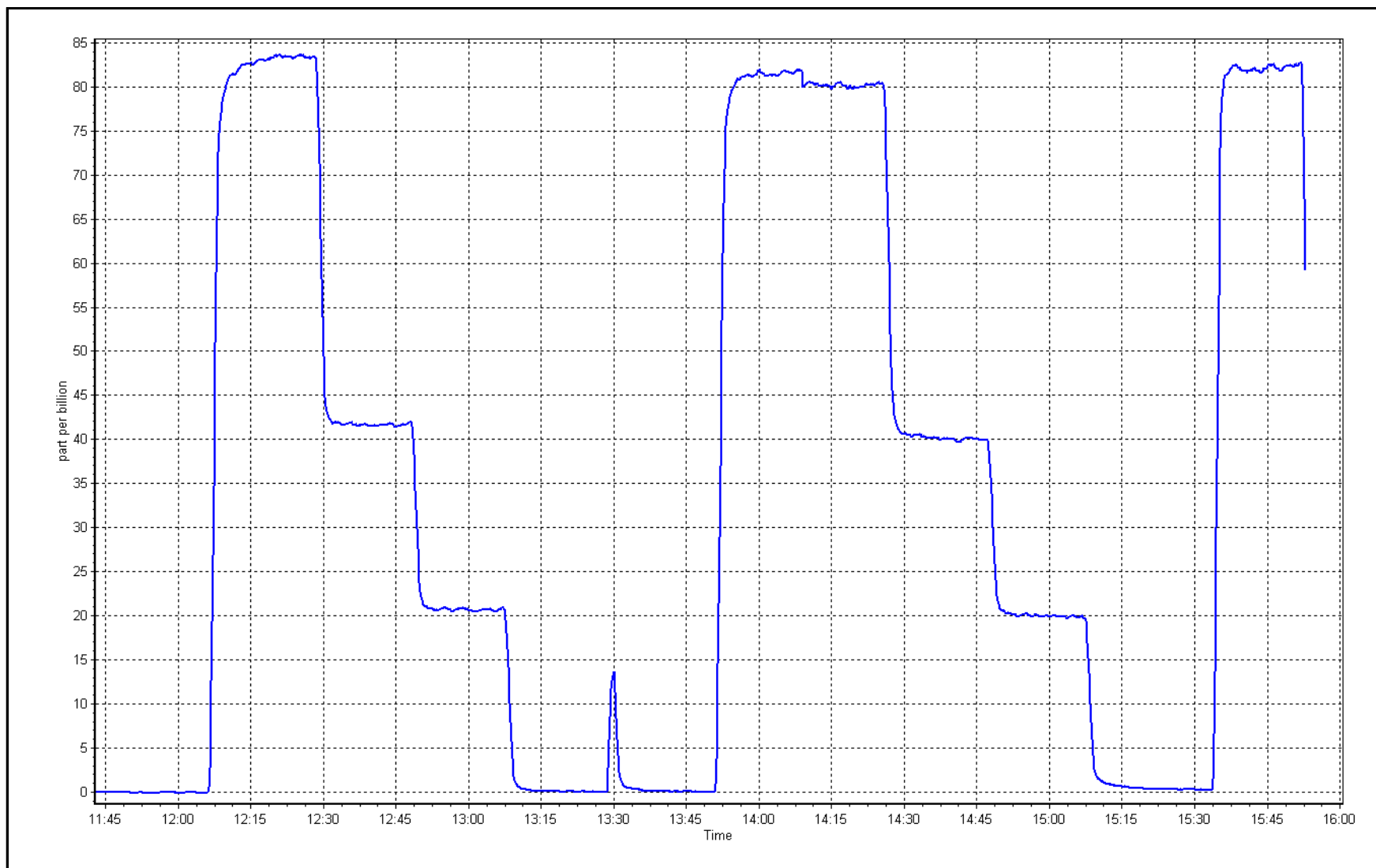
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999999	≥ 0.995
80.0	80.1	0.9986	Slope	1.001140	$0.90 - 1.10$
40.0	40.1	0.9975	Intercept	0.038397	± 3
20.0	20.1	0.9950			



H2S Calibration Plot

Date: August 25, 2026

Location: Monday Creek





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:	0.997219	0.999297
NO _x Cal Offset:	1.266570	0.686517
NO Cal Slope:	0.999772	1.003301
NO Cal Offset:	0.206274	-0.453403
NO ₂ Cal Slope:	0.997754	0.997432
NO ₂ Cal Offset:	-0.560369	-0.278617

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:	159.3	159.6

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.1	0.1	0.1	----	----
High point	4918	82.1	802.9	799.6	3.3	802.8	802.2	0.7	1.0002	0.9968
Mid point	4959	41.1	401.9	400.3	1.6	402.5	400.6	1.9	0.9986	0.9993
Low point	4980	20.5	200.5	199.7	0.8	201.7	199.5	2.2	0.9939	1.0008
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	323.2	479.7	804.4	323.2	481.2	0.9982	1.0000
Average Correction Factor									0.9976	0.9989

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	800.8	339.9	464.2	463.0	1.0026	99.7%
Mid GPT point	800.8	610.4	193.7	192.2	1.0077	99.2%
Low GPT point	800.8	707.4	96.7	96.2	1.0050	99.5%
Average Correction Factor					1.0051	99.5%

Notes:

The sample inlet filter was changed after the as founds. No adjustments made.

Calibration Performed By:

Rene Chamberland



Wood Buffalo Environmental Association

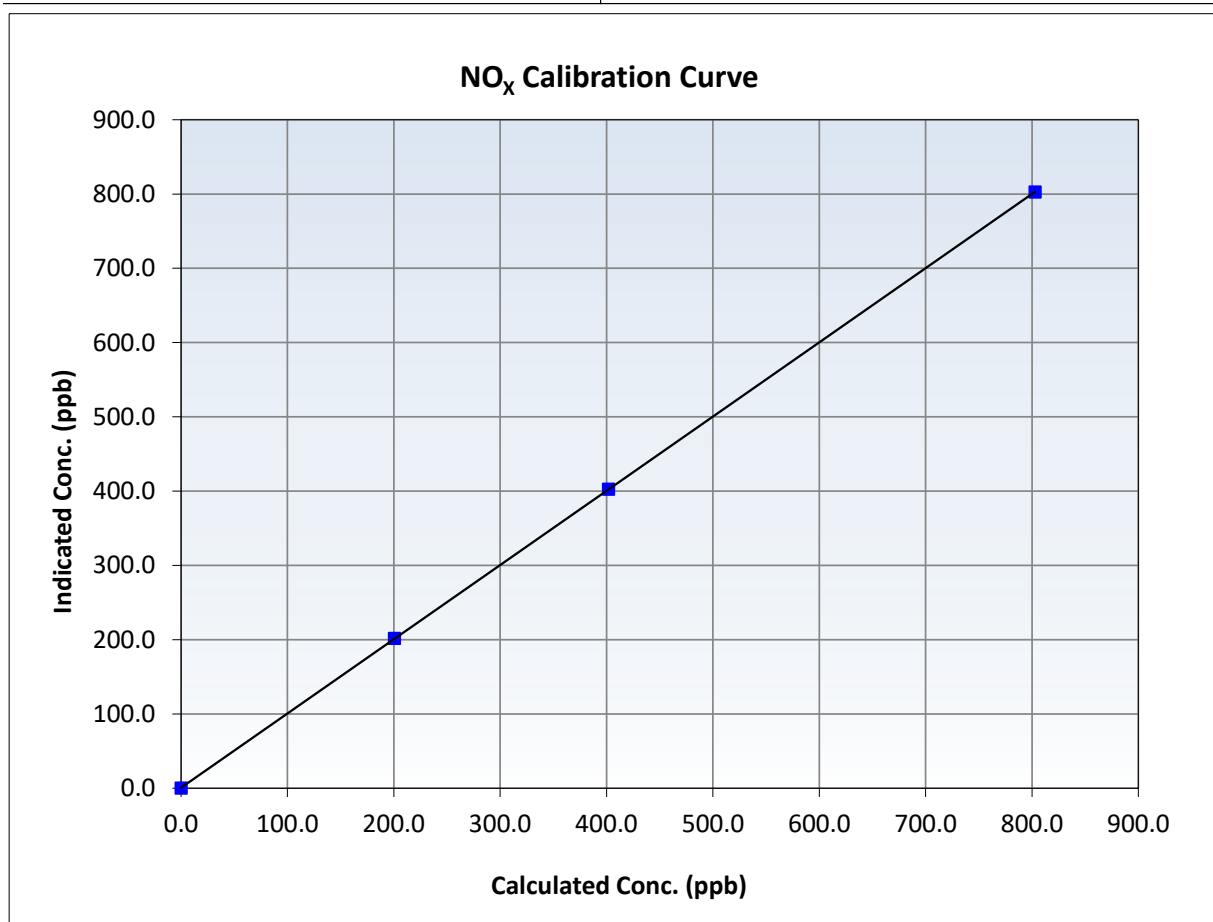
NO_x Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 27, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:30	End Time (MST):	16:06
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999997	≥0.995
802.9	802.8	1.0002	Slope	0.999297	0.90 - 1.10
401.9	402.5	0.9986	Intercept	0.686517	+/-20
200.5	201.7	0.9939			





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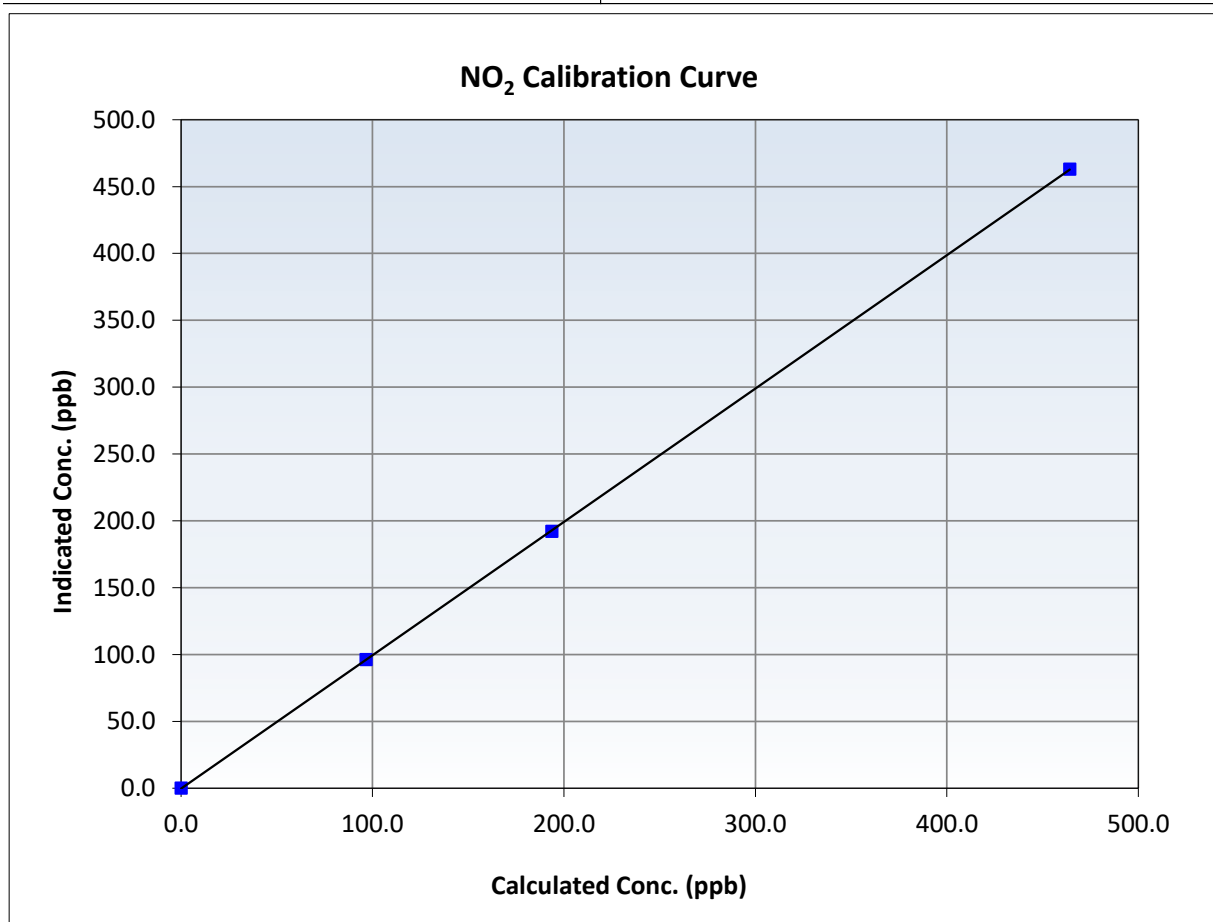
NO₂ Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 27, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:30	End Time (MST):	16:06
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999994	≥0.995
464.2	463.0	1.0026	Slope	0.997432	0.90 - 1.10
193.7	192.2	1.0077	Intercept	-0.278617	+/-20
96.7	96.2	1.0050			





Wood Buffalo Environmental Association

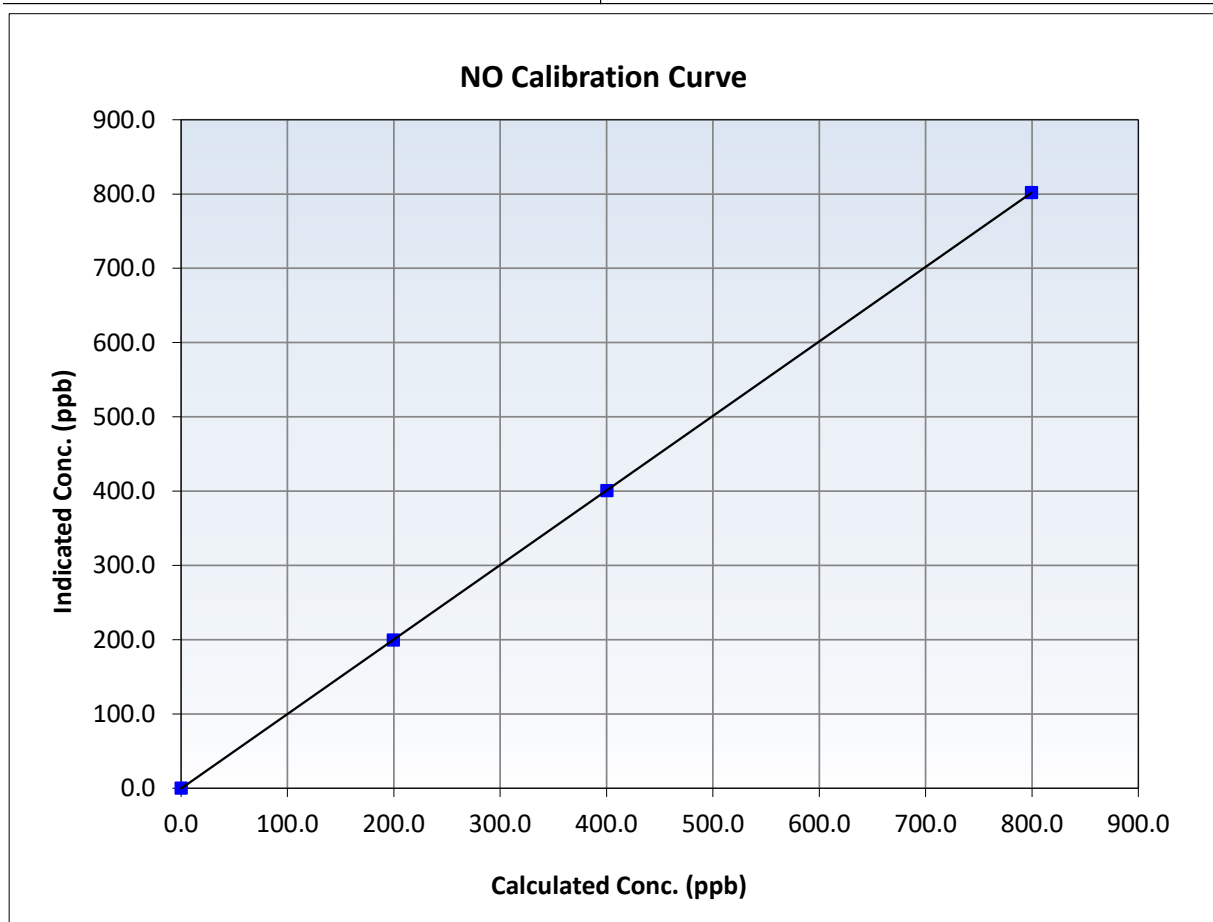
NO Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 27, 2026
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:30	End Time (MST):	16:06
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

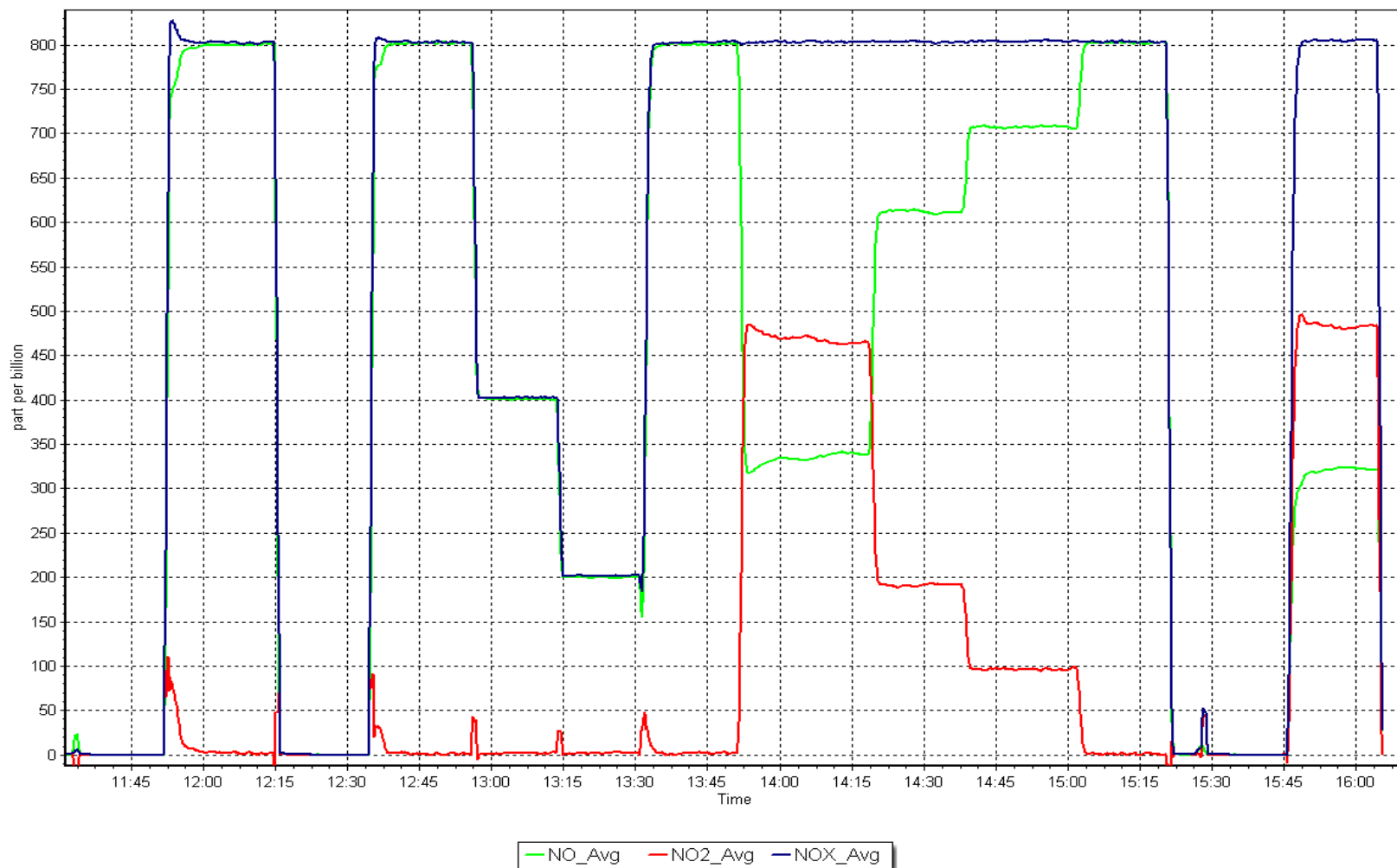
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999997	≥ 0.995
799.6	802.2	0.9968	Slope	1.003301	0.90 - 1.10
400.3	400.6	0.9993	Intercept	-0.453403	+/-20
199.7	199.5	1.0008			



NO_x Calibration Plot

Date: August 24, 2026

Location: Monday Creek





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS34 HANGINGSTONE EXPANSION AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Hangingstone Expansion Station number: AMS 34
Calibration Date: August 7, 2026 Last Cal Date: July 21, 2026
Start time (MST): 6:56 End time (MST): 9:26
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:	0.994883	0.991810	Backgd or Offset:	15.3	15.3
Calibration intercept:	-1.299105	-0.998377	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	0.2	----
As found High point	4919	81.0	799.8	792.9	1.009
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	792.7	Previous response	794.4	*% 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	4919	81.0	799.8	792.9	1.009
Mid point	4959	40.5	399.9	395.0	1.012
Low point	4980	20.3	200.4	196.5	1.020
As left zero	5000	0.0	0.0	0.2	----
As left span	4919	81.0	799.8	792.9	1.009
Average Correction Factor:					1.014

Notes:

Calibration Performed By: Melissa Lemay



Wood Buffalo Environmental Association

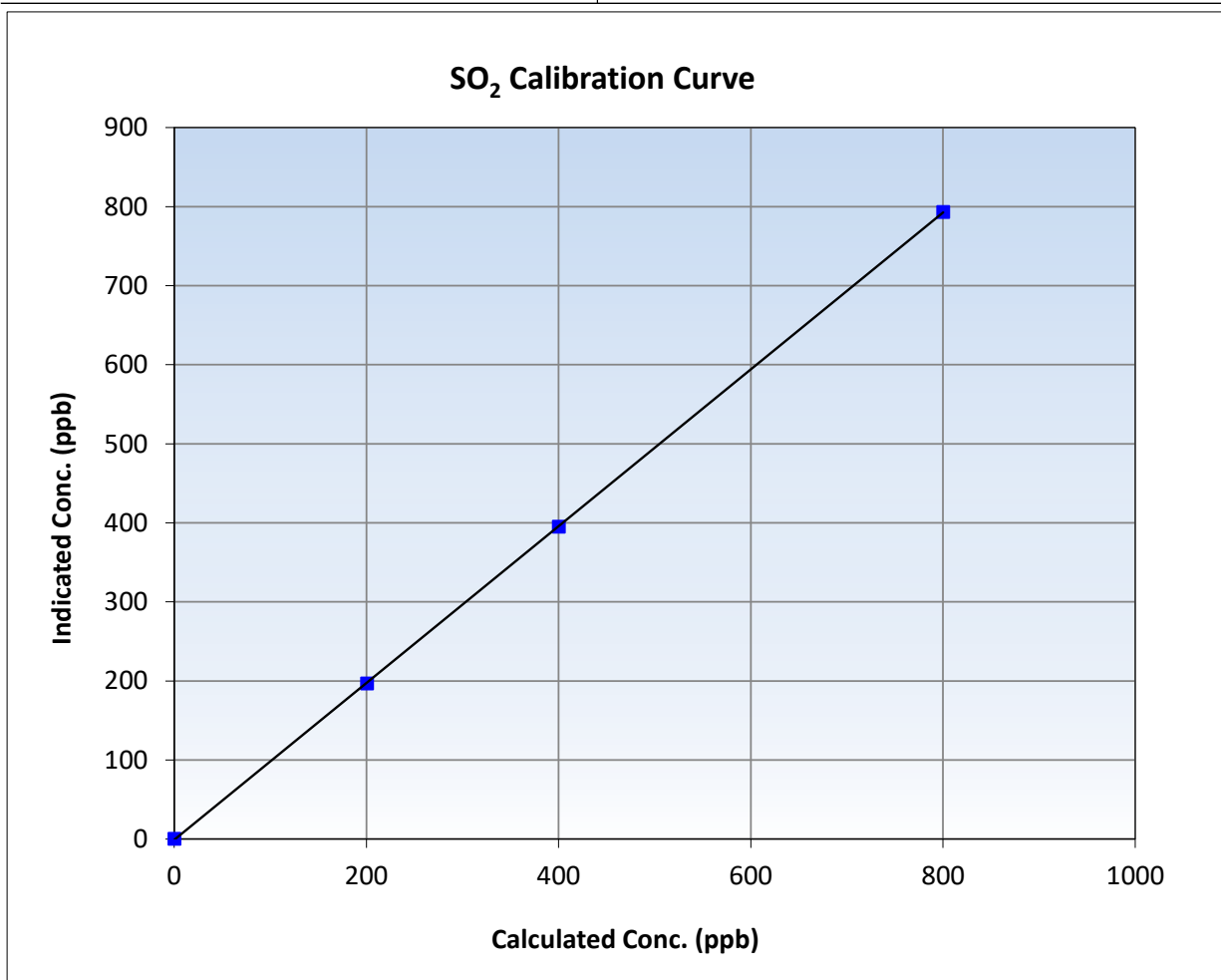
SO₂ Calibration Summary

Station Information

Calibration Date:	August 7, 2026	Previous Calibration:	July 21, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	6:56	End Time (MST):	9:26
Analyzer make:	Thermo 43i	Analyzer serial #:	1173410001

Calibration Data

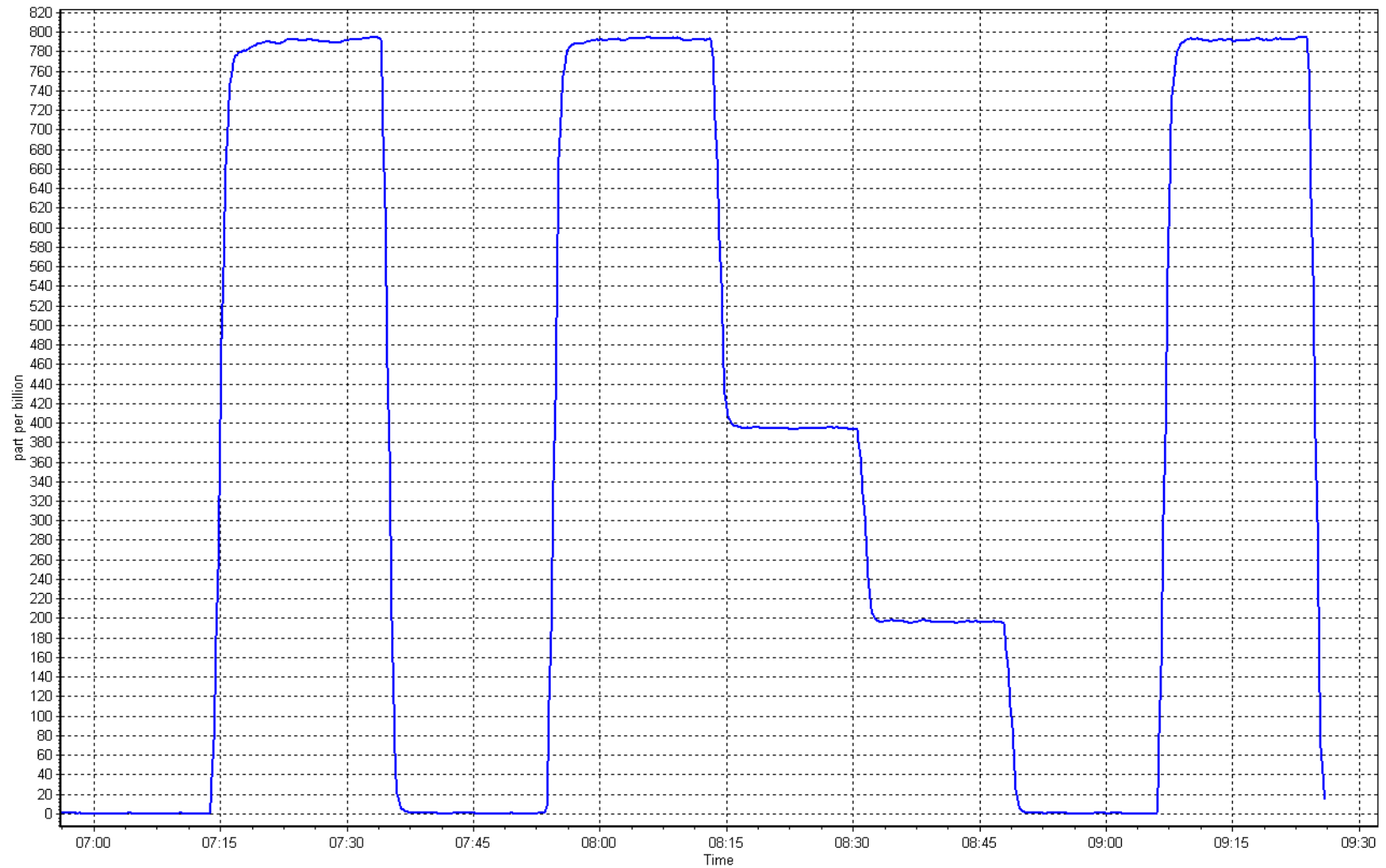
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.3	----	Correlation Coefficient	0.999988	≥0.995
799.8	792.9	1.0087	Slope	0.991810	0.90 - 1.10
399.9	395.0	1.0125	Intercept	-0.998377	+/-30
200.4	196.5	1.0200			



SO2 Calibration Plot

Date: August 7, 2026

Location: Hangingstone Expansion





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Hangingstone Expansion Station number: AMS 34
Calibration Date: August 14, 2026 Last Cal Date: July 28, 2026
Start time (MST): 7:03 End time (MST): 10:32
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 T701H Serial Number: 196

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:	0.995628	1.016071	Backgd or Offset:	4.19
Calibration intercept:	-0.019074	0.040466	Coeff or Slope:	1.386

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	81.7	0.978
As found Mid point	4961	38.9	40.0	40.8	0.978
As found Low point	4981	19.5	20.0	20.2	0.987
New cylinder response					
Baseline Corr As found:	81.8	Prev response:	79.60	*% change:	2.7%
Baseline Corr 2nd AF pt:	40.9	AF Slope:	1.023790	AF Intercept:	-0.179666
Baseline Corr 3rd AF pt:	20.3	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	0.1	----
High point	4922	77.8	80.0	81.3	0.984
Mid point	4961	38.9	40.0	40.7	0.982
Low point	4981	19.5	20.0	20.3	0.987
As left zero	5000	0.0	0.0	0.1	----
As left span	4922	77.8	80.0	81.8	0.978
SO2 Scrubber Check	4919	81.0	810.0	-0.1	----
Date of last scrubber change:				Ave Corr Factor	0.984
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

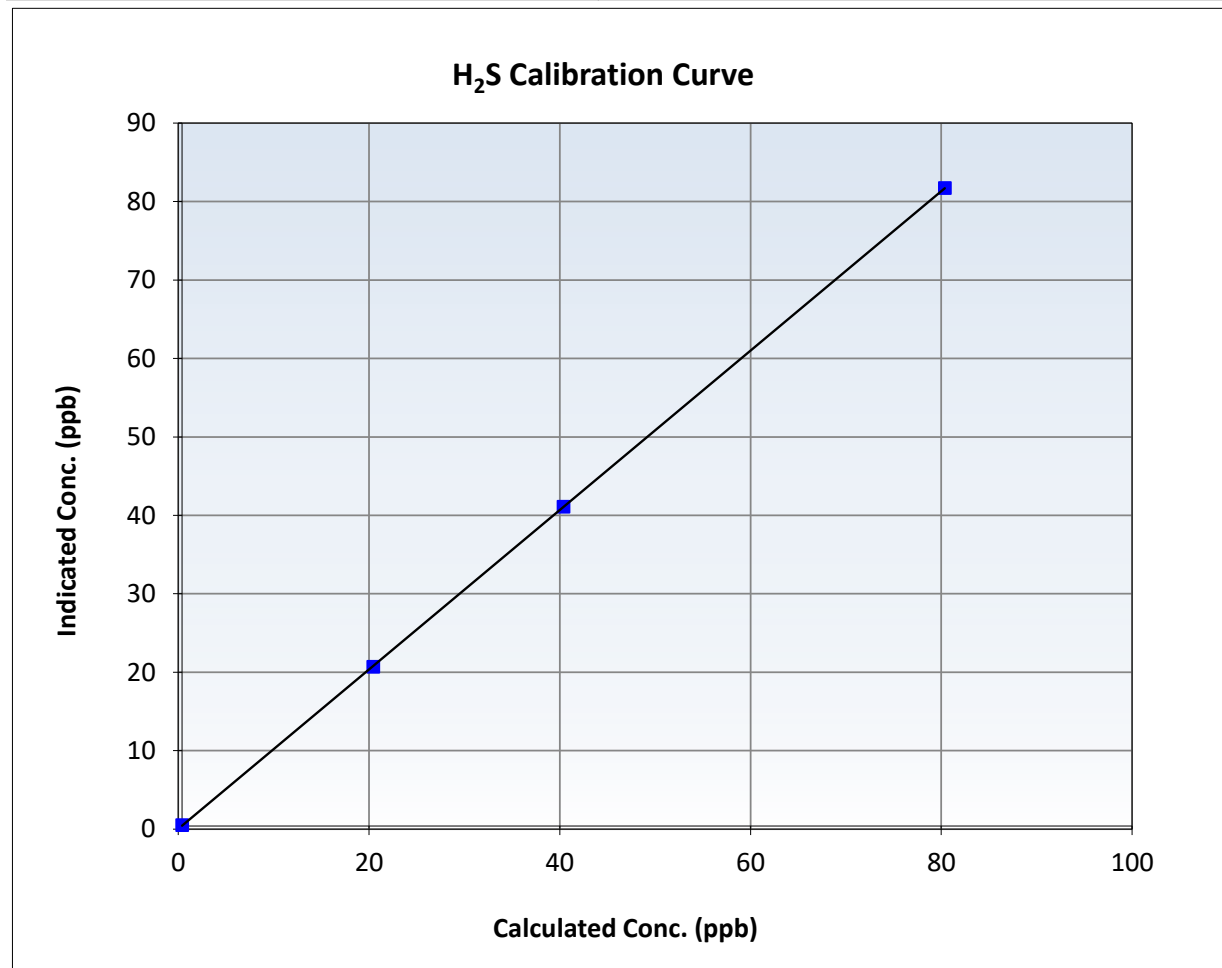
H₂S Calibration Summary

Station Information

Calibration Date:	July 28, 2026	Previous Calibration:	July 28, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:03	End Time (MST):	10:32
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1336160090

Calibration Data

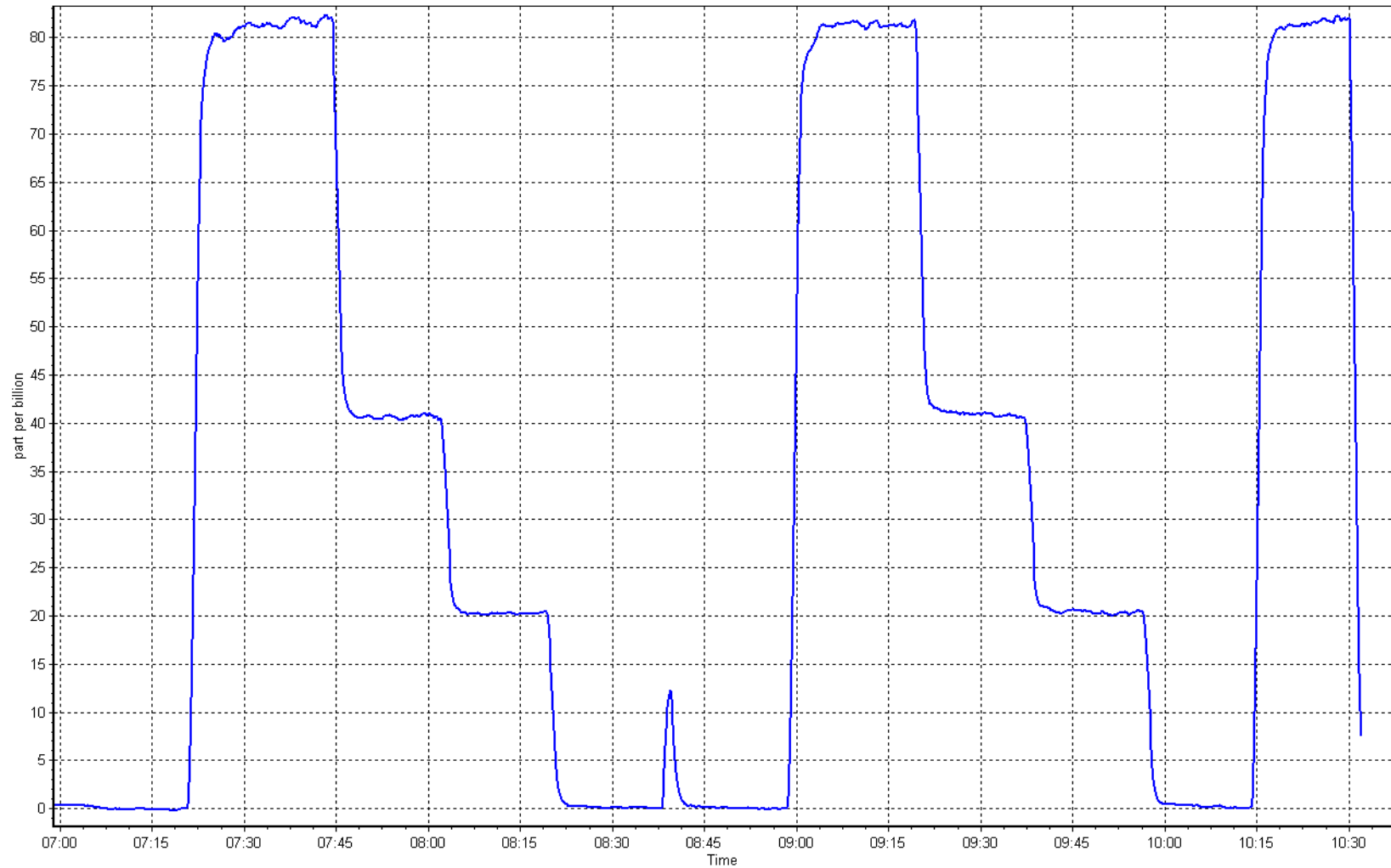
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999996		≥0.995
80.0	81.3	0.9836	Slope	1.016071		0.90 - 1.10
40.0	40.7	0.9824	Intercept	0.040466		+/-3
20.0	20.3	0.9872				



H₂S Calibration Plot

Date: August 14, 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: August 24, 2026
Last Cal Date: July 13, 2026
Start time (MST): 7:23
End time (MST): 11:50
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	-0.1	0.0	----	----
AF High point	4915	84.4	800.7	800.7	0.0	804.3	801.0	3.1	0.9953	0.9995
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 804.6 ppb	NO = 800.6 ppb							*Percent Change	NO _x = 0.0%
Baseline Corr 1st pt	NO _x = 804.5 ppb	NO = 801.1 ppb							*Percent Change	NO = 0.1%
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

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:	1.004863	1.009059
NO _x Cal Offset:	-0.048053	-0.068089
NO Cal Slope:	1.001251	1.006176
NO Cal Offset:	-1.108000	-0.808046
NO ₂ Cal Slope:	1.003173	1.004391
NO ₂ Cal Offset:	0.627204	0.143139

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	-0.1	0.0	-0.1	----	----
High point	4915	84.4	800.7	800.7	0.0	807.6	805.1	2.5	0.9915	0.9946
Mid point	4957	42.2	400.4	400.4	0.0	404.8	402.1	2.7	0.9891	0.9957
Low point	4978	21.1	200.2	200.2	0.0	201.4	199.5	2.0	0.9940	1.0035
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	----	----
As left span	4915	84.4	800.7	393.3	407.4	799.0	393.3	405.7	1.0021	1.0000
Average Correction Factor									0.9915	0.9979

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	801.0	399.2	401.8	403.5	0.9958	100.4%
Mid GPT point	801.0	597.7	203.3	204.7	0.9932	100.7%
Low GPT point	801.0	693.8	107.2	107.9	0.9935	100.7%
Average Correction Factor					0.9942	100.6%

Notes:

No Maintenance or adjustments done.

Calibration Performed By:

Melissa Lemay



Wood Buffalo Environmental Association

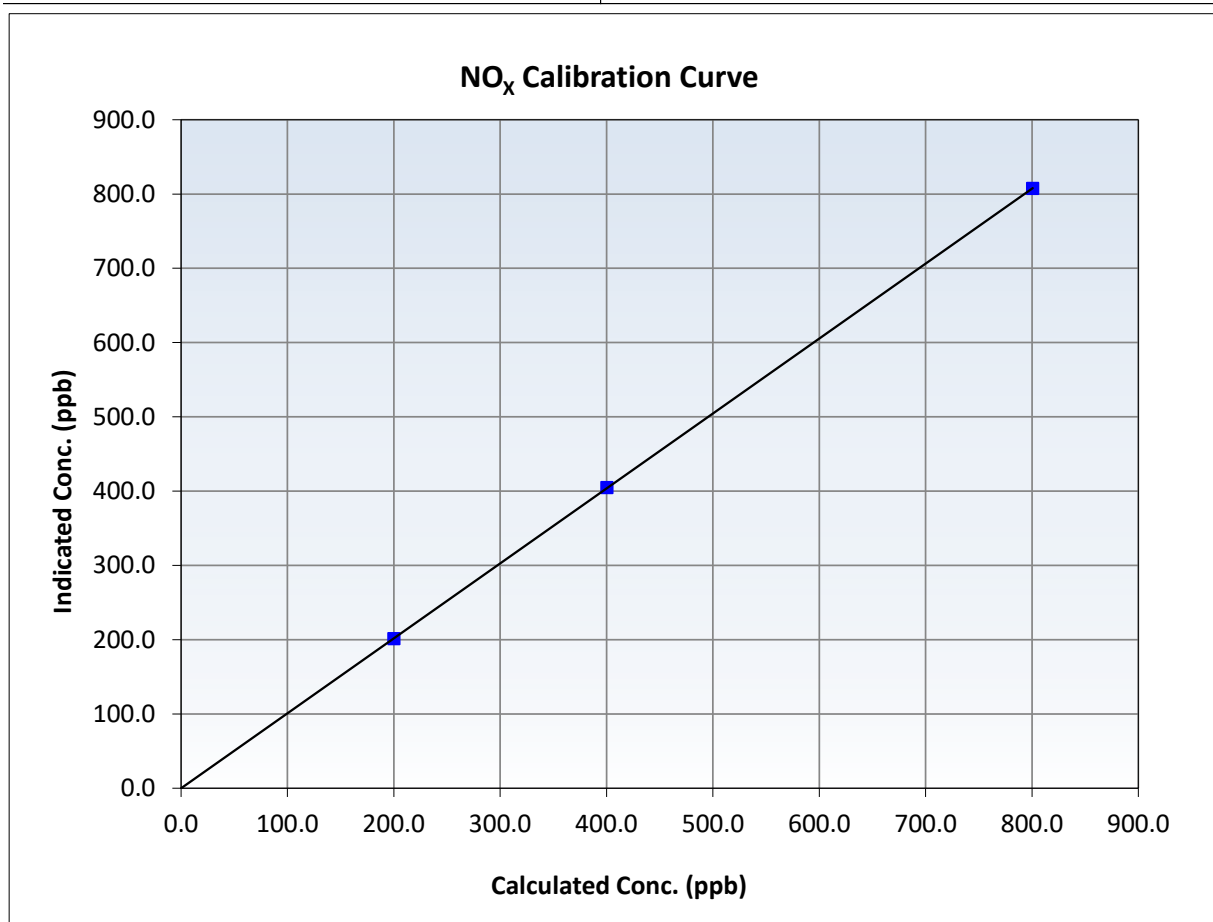
NO_x Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 13, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:23	End Time (MST):	11:50
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999997	≥0.995
800.7	807.6	0.9915	Slope	1.009059	0.90 - 1.10
400.4	404.8	0.9891	Intercept	-0.068089	+/-20
200.2	201.4	0.9940			





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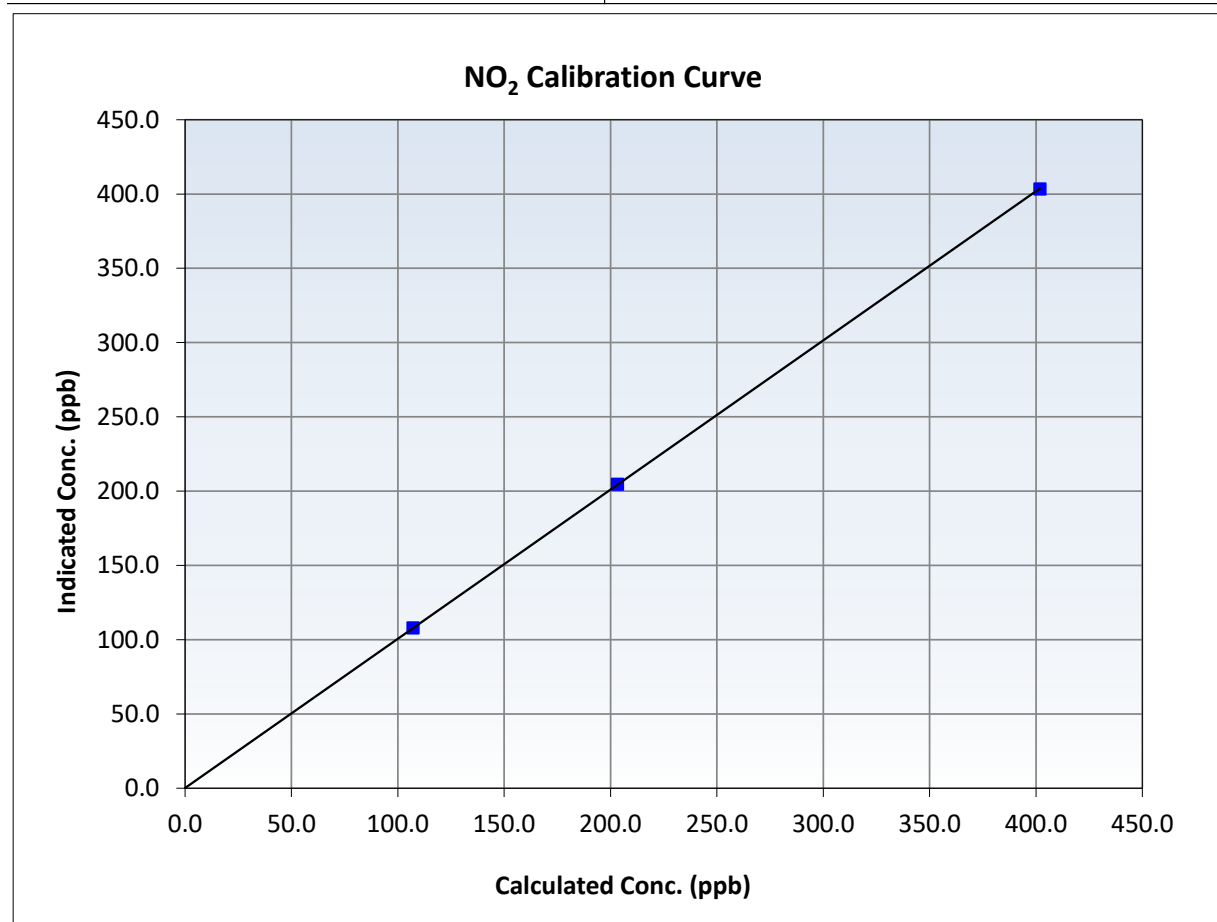
NO₂ Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 13, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:23	End Time (MST):	11:50
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999997	≥ 0.995
401.8	403.5	0.9958	Slope	1.004391	0.90 - 1.10
203.3	204.7	0.9932	Intercept	0.143139	+/-20
107.2	107.9	0.9935			





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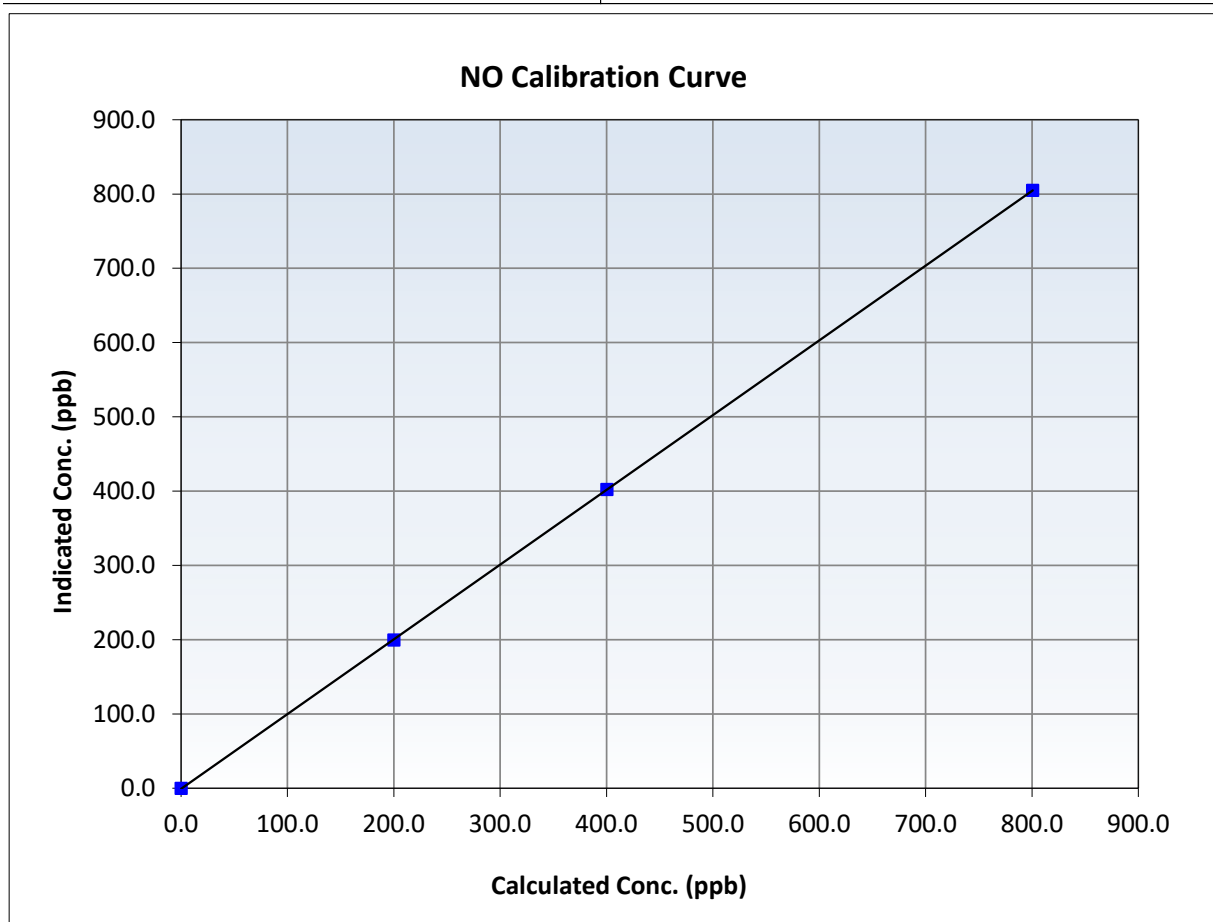
NO Calibration Summary

Station Information

Calibration Date:	August 24, 2026	Previous Calibration:	July 13, 2026
Station Name:	Hangingstone Expansion	Station Number:	AMS 34
Start Time (MST):	7:23	End Time (MST):	11:50
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

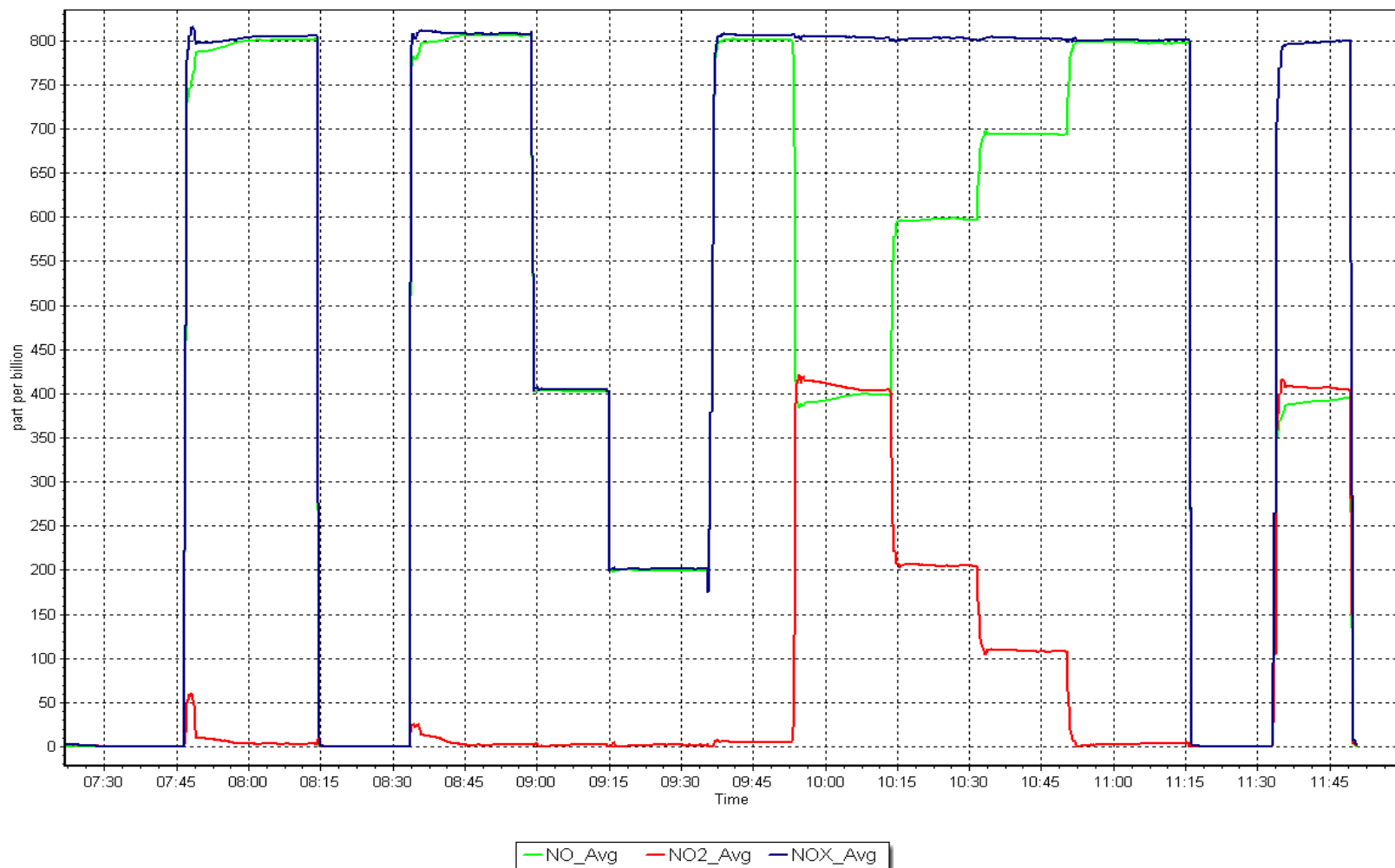
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.0	----	Correlation Coefficient	0.999994	≥ 0.995
800.7	805.1	0.9946	Slope	1.006176	0.90 - 1.10
400.4	402.1	0.9957	Intercept	-0.808046	+/-20
200.2	199.5	1.0035			



NO_x Calibration Plot

Date: August 24, 2026

Location: Hangingstone Expansion





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS505 SAWBONES BAY AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Sawbones Bay Station number: AMS 505
Calibration Date: August 28, 2026 Last Cal Date: July 15, 2026
Start time (MST): 10:12 End time (MST): 13:41
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:	1.004581	1.001346	Backgd or Offset:	22.5	22.9
Calibration intercept:	-1.035624	-1.854882	Coeff or Slope:	1.106	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	0.0	----
As found High point	4920	79.8	798.8	796.0	1.004
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	796.0	Previous response	801.5	*% change	-0.7%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO₂ Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4920	79.8	798.8	799.0	1.000
Mid point	4960	39.9	399.4	397.0	1.006
Low point	4980	20.0	200.2	197.0	1.016
As left zero	5000	0.0	0.0	-0.1	----
As left span	4920	79.8	798.8	807.0	0.990
Average Correction Factor:					1.007

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

Calibration Performed By: Braiden Boutillier



Wood Buffalo Environmental Association

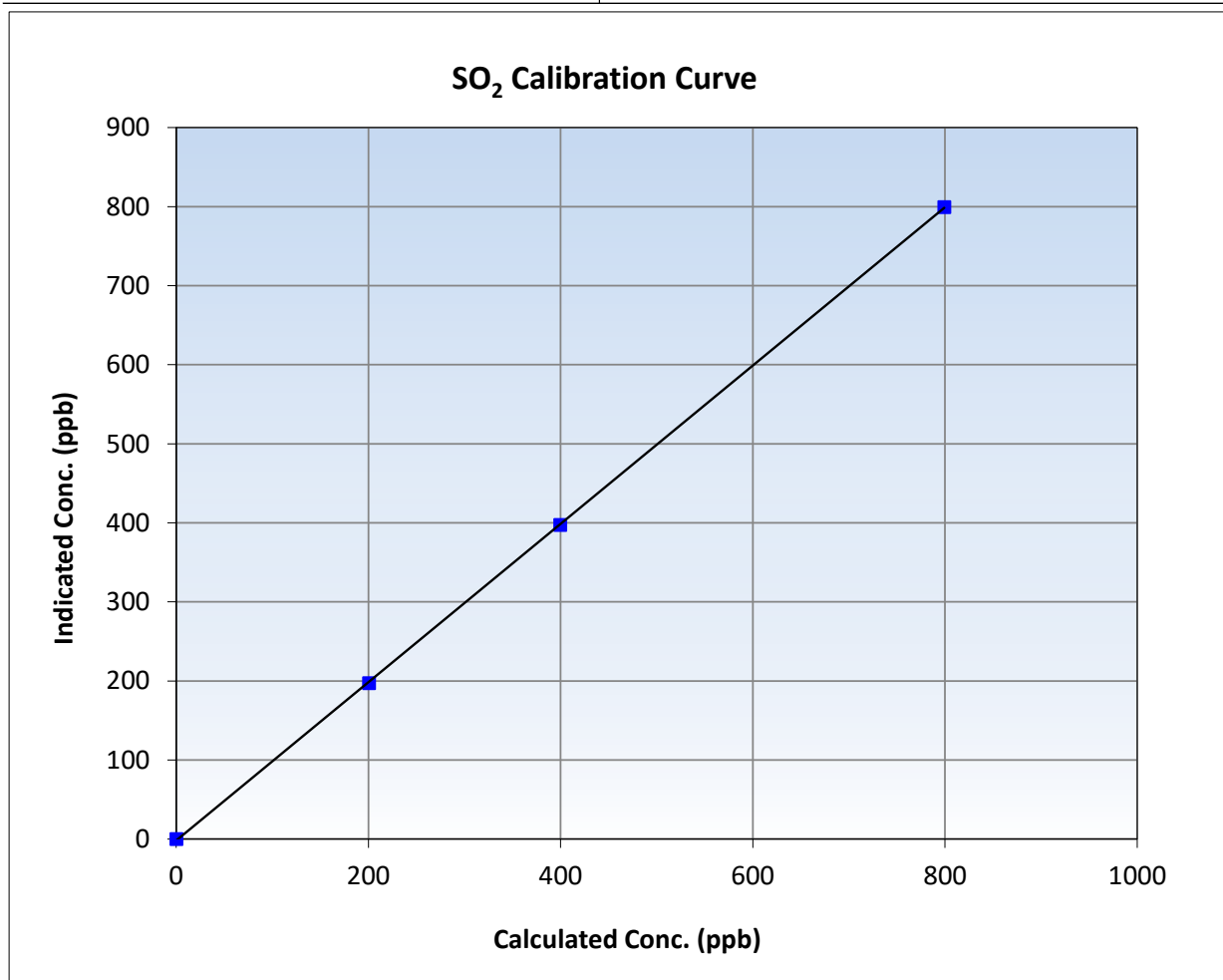
SO₂ Calibration Summary

Station Information

Calibration Date:	August 28, 2026	Previous Calibration:	July 15, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:12	End Time (MST):	13:41
Analyzer make:	Thermo 43i	Analyzer serial #:	0710321323

Calibration Data

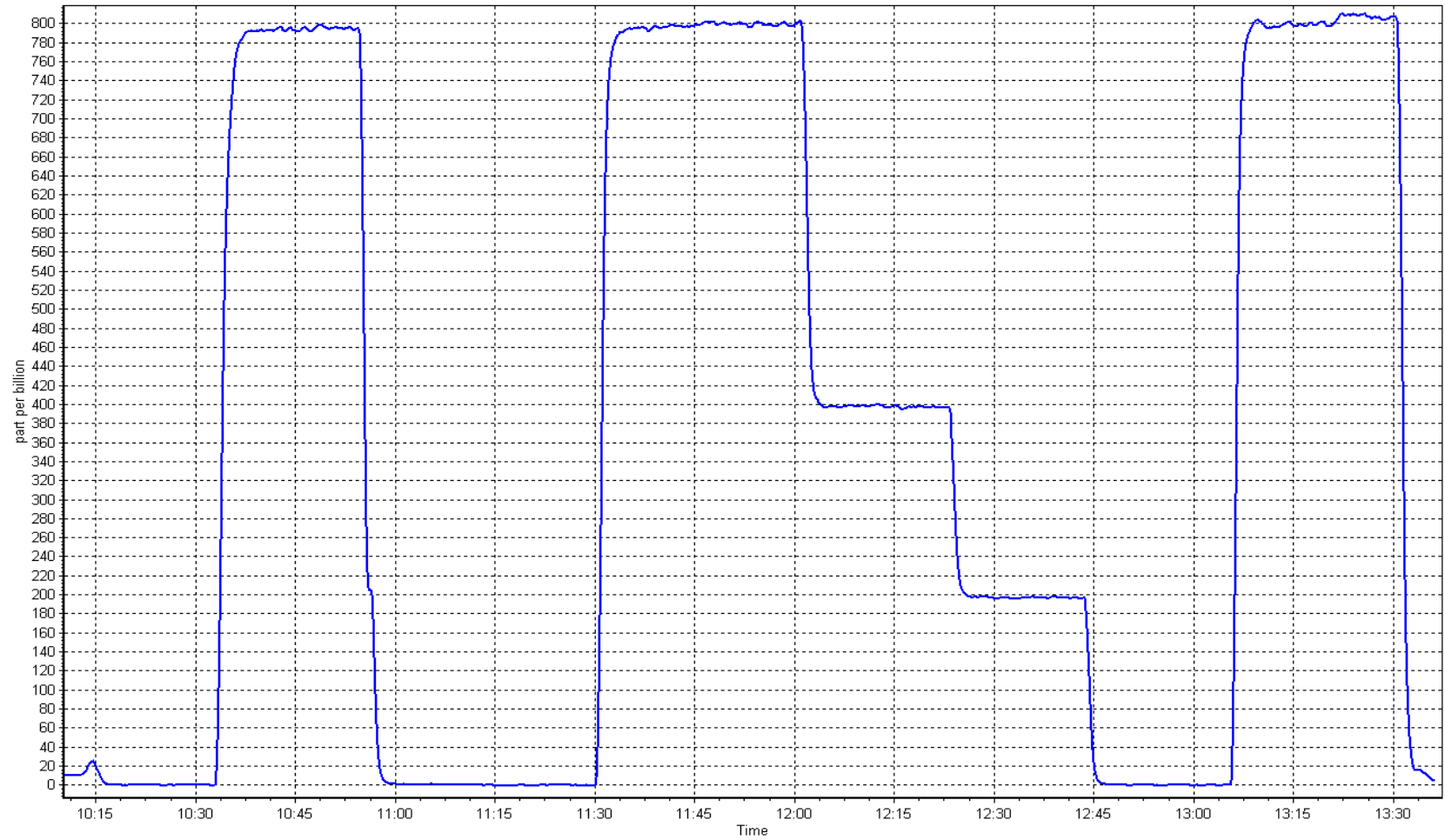
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999978	≥0.995
798.8	799.0	0.9998	Slope	1.001346	0.90 - 1.10
399.4	397.0	1.0061	Intercept	-1.854882	+/-30
200.2	197.0	1.0162			



SO2 Calibration Plot

Date: August 28, 2026

Location: Sawbones Bay





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Sawbones Bay Station number: AMS 505
Calibration Date: August 21, 2026 Last Cal Date: July 17, 2026
Start time (MST): 10:34 End time (MST): 15:49
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:	1.002459	1.002030	Backgd or Offset:	1.19
Calibration intercept:	-0.240000	-0.200000	Coeff or Slope:	1.087

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.1	----
As found High point	4925	76.0	79.9	82.0	0.976
As found Mid point	4962	38.0	40.0	41.0	0.977
As found Low point	4981	19.0	20.0	20.3	0.990
New cylinder response					
Baseline Corr As found:	81.9	Prev response:	79.89	*% change:	2.5%
Baseline Corr 2nd AF pt:	40.9	AF Slope:	1.025683	AF Intercept:	-0.023274
Baseline Corr 3rd AF pt:	20.2	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	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	19.8	1.009
As left zero	5000	0.0	0.0	0.1	----
As left span	4925	76.0	79.9	78.9	1.013
SO2 Scrubber Check	4920	79.8	798.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	1.005
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



Wood Buffalo Environmental Association

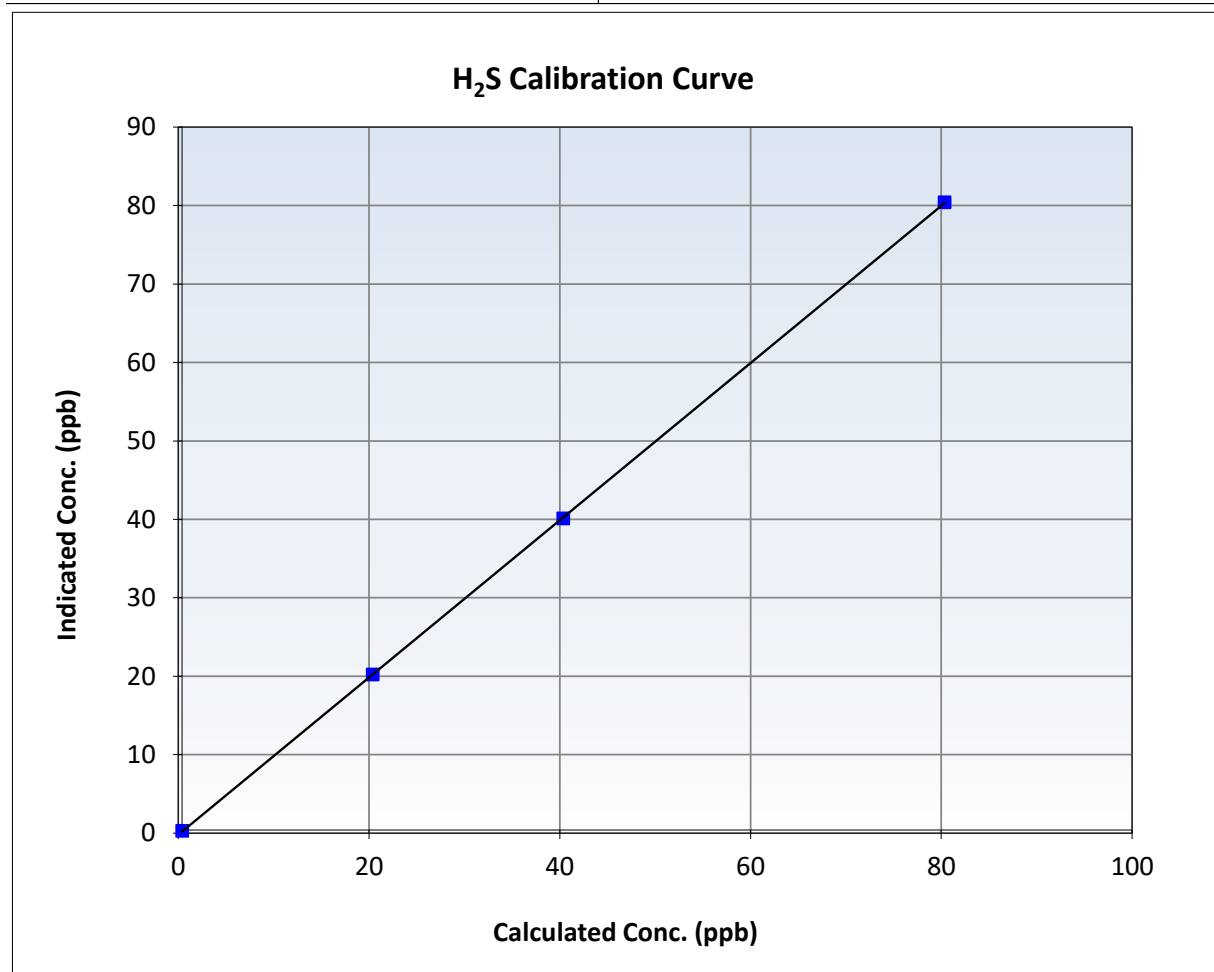
H₂S Calibration Summary

Station Information

Calibration Date:	August 21, 2026	Previous Calibration:	July 17, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:34	End Time (MST):	15:49
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12113311965

Calibration Data

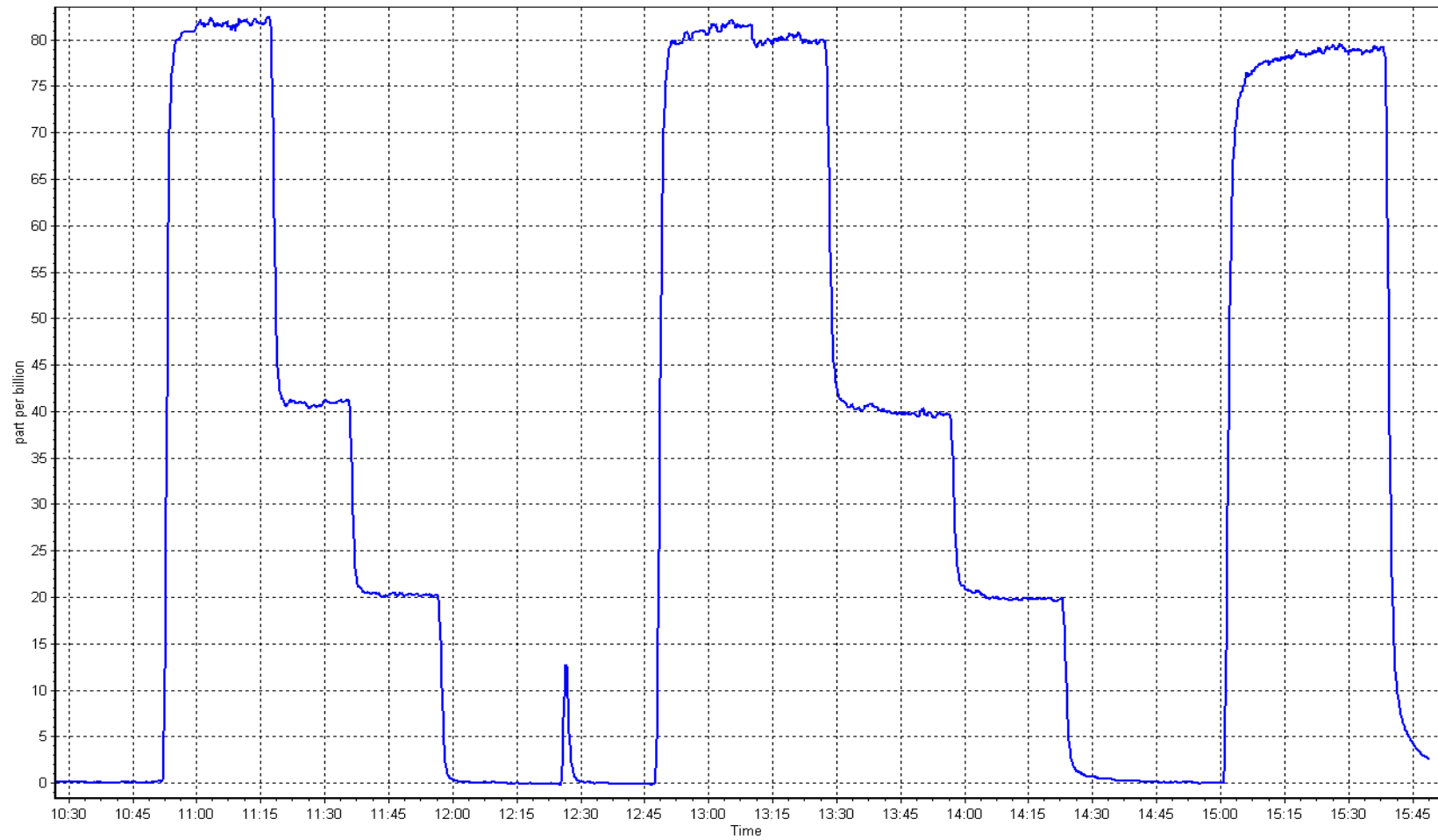
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	-0.1	----	Correlation Coefficient	0.999988		≥ 0.995
80.0	80.0	0.9994	Slope	1.002030		$0.90 - 1.10$
40.0	39.7	1.0070	Intercept	-0.200000		± 3
20.0	19.8	1.0095				



H2S Calibration Plot

Date: August 21, 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: August 26, 2026
Last Cal Date: July 29, 2026
Start time (MST): 10:37
End time (MST): 15:37
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	-0.4	-0.4	0.0	----	----
AF High point	4933	66.7	801.8	800.4	1.3	794.6	790.7	3.9	1.0085	1.0118
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 799.8 ppb	NO = 798.5 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = -0.6%	
Baseline Corr 1st pt	NO _x = 795.0 ppb	NO = 791.1 ppb				<u>As Found Statistics</u>		*Percent Change	NO = -0.9%	
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: 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	0.964	NO bkgnd or offset:	0.7	-5.4
NOX coeff or slope:	0.959	0.963	NOX bkgnd or offset:	1.1	-4.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	3.8	3.8

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.999093	1.000563
NO _x Cal Offset:	-1.249329	-0.590043
NO Cal Slope:	0.999816	1.000488
NO Cal Offset:	-1.769771	-0.929978
NO ₂ Cal Slope:	1.001142	0.994588
NO ₂ Cal Offset:	0.604708	0.226432

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	66.7	801.8	800.4	1.3	801.7	800.1	1.3	1.0001	1.0004
Mid point	4967	33.3	400.2	399.6	0.7	400.1	399.0	1.1	1.0004	1.0014
Low point	4983	16.7	200.7	200.4	0.3	199.6	198.5	1.1	1.0057	1.0096
As left zero	5000	0.0	0.0	0.0	0.0	2.8	2.9	-0.1	----	----
As left span	4933	66.7	801.8	394.2	407.6	797.4	394.2	403.2	1.0055	1.0000
Average Correction Factor									1.0021	1.0038

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	798.8	391.2	408.9	406.9	1.0050	99.5%
Mid GPT point	798.8	615.8	184.3	183.5	1.0045	99.5%
Low GPT point	798.8	708.3	91.8	91.9	0.9993	100.1%
Average Correction Factor					1.0029	99.7%

Notes:

Changed inlet filter after as founds. Adjusted span.

Calibration Performed By:

Braiden Boutilier



Wood Buffalo Environmental Association

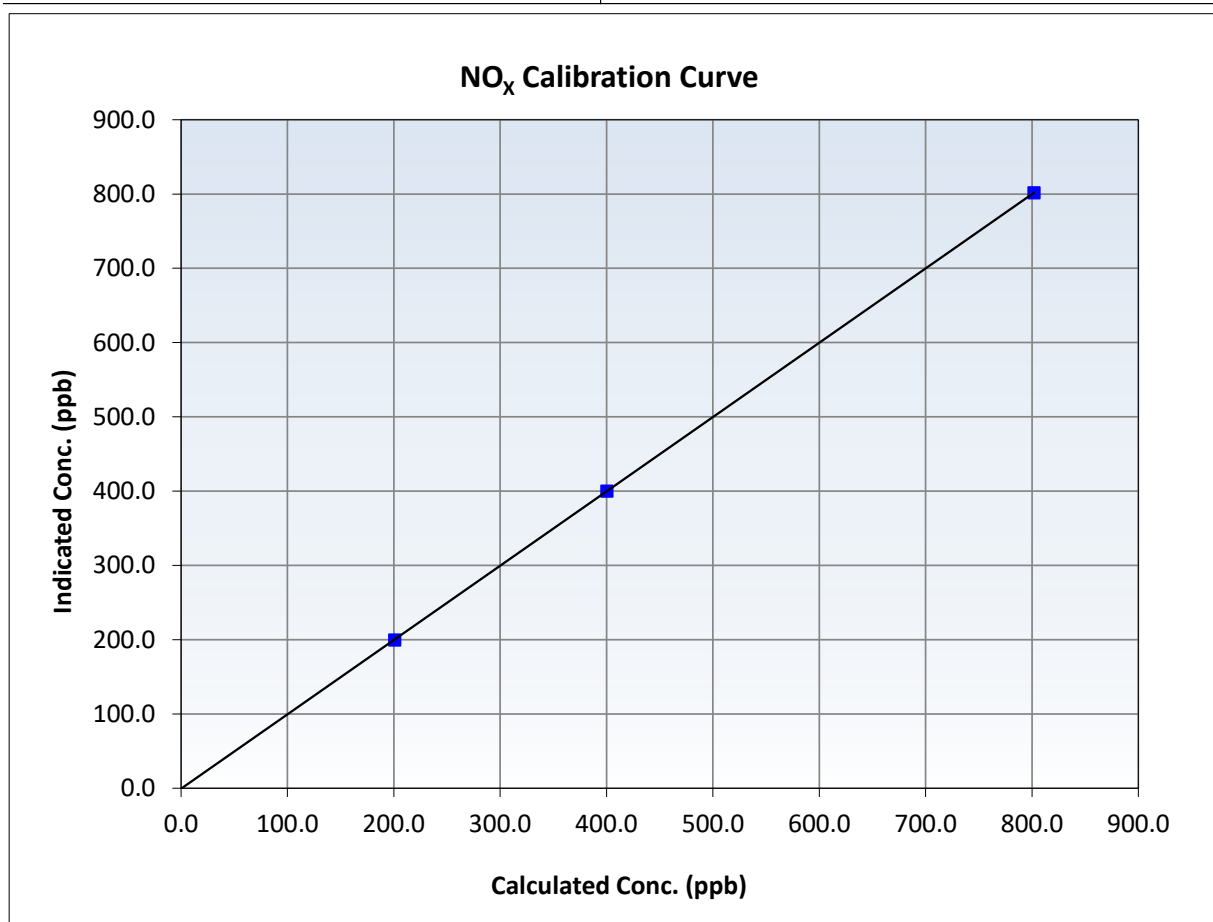
NO_x Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 29, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:37	End Time (MST):	15:37
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	0.999998	≥0.995
801.8	801.7	1.0001	Slope	1.000563	0.90 - 1.10
400.2	400.1	1.0004	Intercept	-0.590043	+/-20
200.7	199.6	1.0057			





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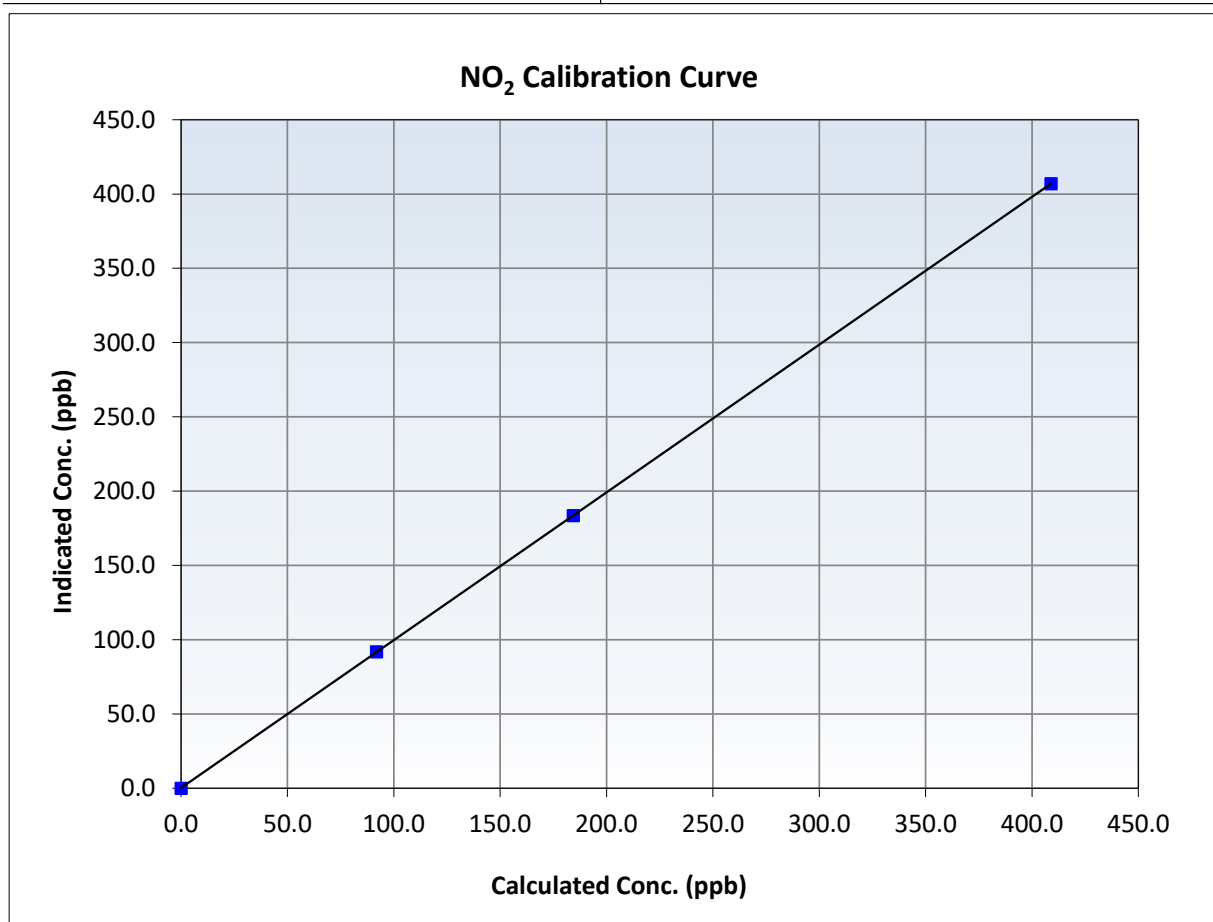
NO₂ Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 29, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:37	End Time (MST):	15:37
Analyzer make:	API T200	Analyzer serial #:	4259

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999998	≥0.995
408.9	406.9	1.0050	Slope	0.994588	0.90 - 1.10
184.3	183.5	1.0045	Intercept	0.226432	+/-20
91.8	91.9	0.9993			





Wood Buffalo Environmental Association

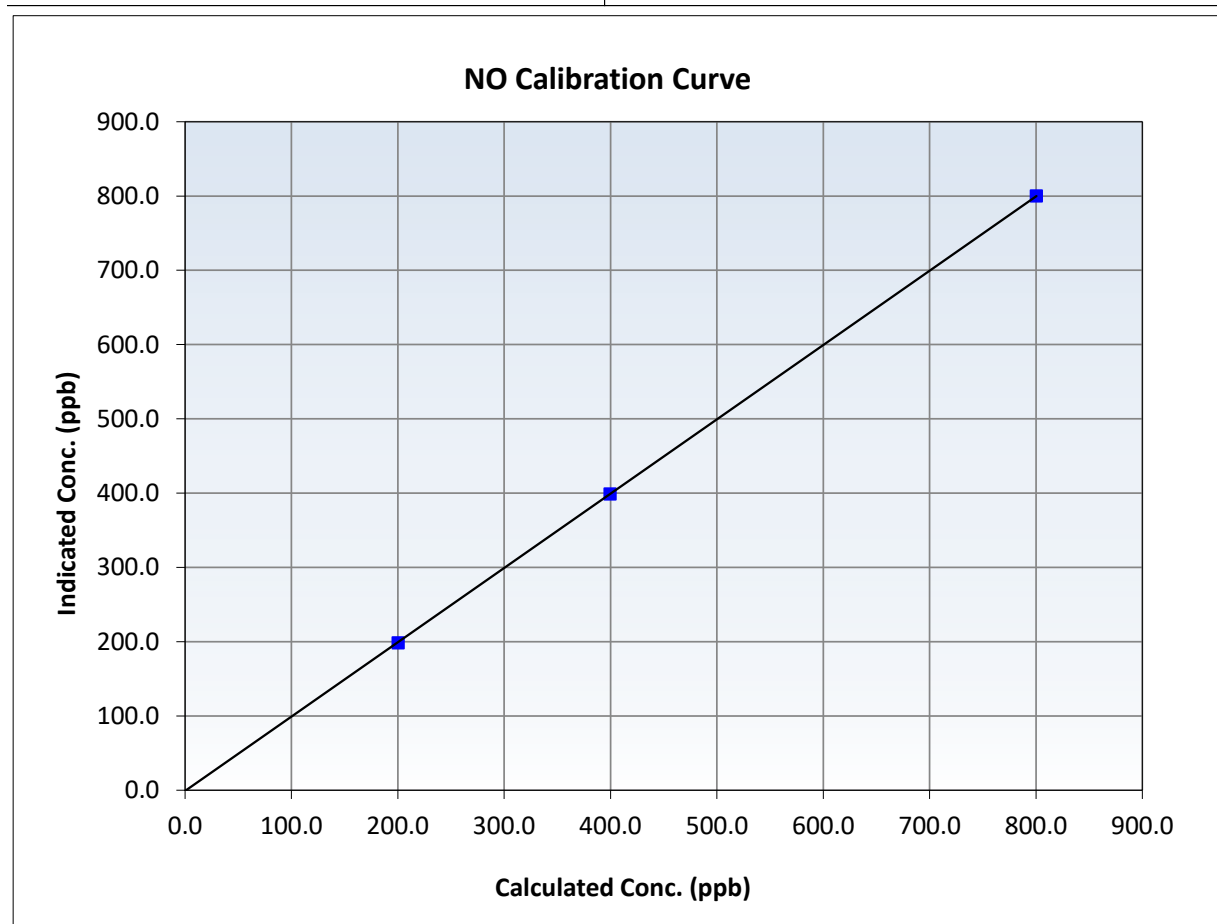
NO Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 29, 2026
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:37	End Time (MST):	15:37
Analyzer make:	API T200	Analyzer serial #:	4259

Calibration Data

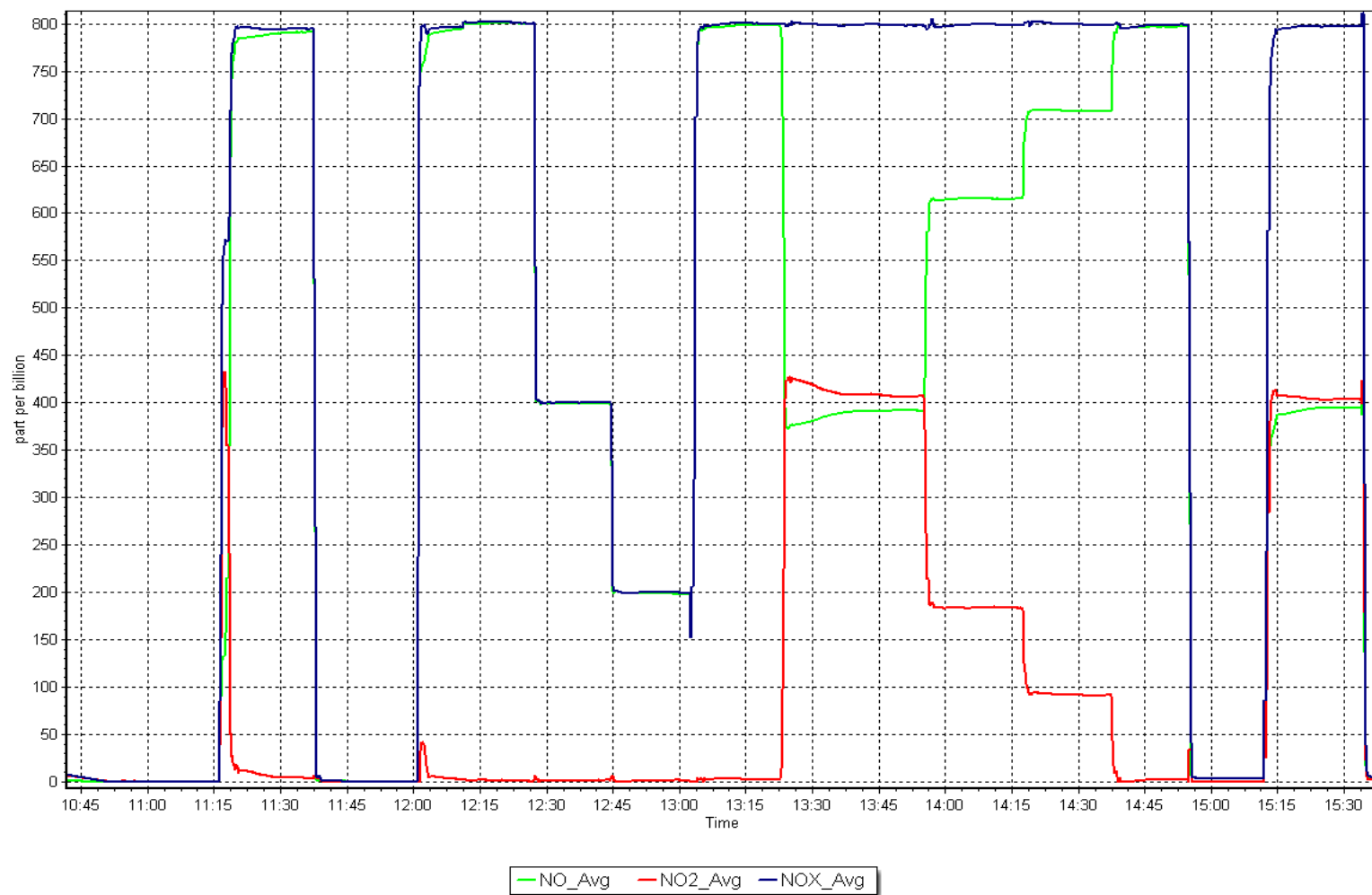
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	-0.2	----	Correlation Coefficient	0.999995	≥ 0.995
800.4	800.1	1.0004	Slope	1.000488	$0.90 - 1.10$
399.6	399.0	1.0014	Intercept	-0.929978	± 20
200.4	198.5	1.0096			



NO_x Calibration Plot

Date: August 26, 2026

Location: Sawbones Bay





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS506
JACKFISH 1
AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Jackfish 1
Calibration Date: August 18, 2026
Start time (MST): 10:43
Reason: Routine

Station number: AMS 506
Last Cal Date: July 9, 2026
End time (MST): 13:35

Calibration Standards

Cal Gas Concentration: 50.52 ppm
Cal Gas Cylinder #: CC274266
Removed Cal Gas Conc: 50.52 ppm
Removed Gas Cyl #: NA
Calibrator Model: Teledyne API T700
Zero Air Gen Model: Teledyne API 701

Cal Gas Exp Date: December 29, 2028
Rem Gas Exp Date: NA
Diff between cyl:
Serial Number: 1185
Serial Number: 4427

Analyzer Information

Analyzer make: Thermo 43i
Analyzer Range: 0-1000 ppb
Serial Number: 1160290011

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:	1.004400	1.002043	Backgd or Offset:	21.5	21.3
Calibration intercept:	-0.396013	-0.395987	Coeff or Slope:	0.990	0.974

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.2	----
As found High point	4921	79.2	800.2	810.4	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	810.2	Previous response	803.3	*% 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	79.2	800.2	802.0	0.998
Mid point	4960	39.6	400.2	399.6	1.001
Low point	4980	19.8	200.1	199.8	1.001
As left zero	5000	0.0	0.0	0.4	----
As left span	4921	79.2	800.2	802.2	0.998
Average Correction Factor:					1.000

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

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

SO₂ Calibration Summary

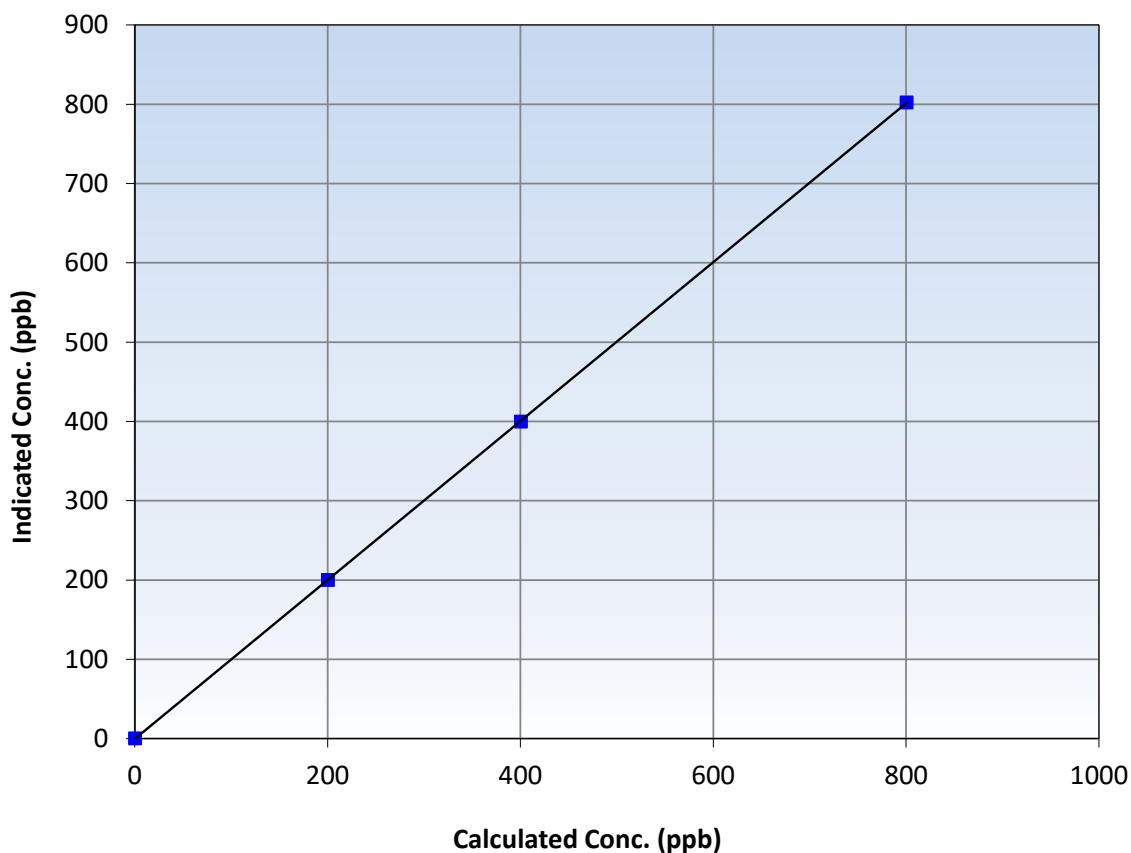
Station Information

Calibration Date:	August 18, 2026	Previous Calibration:	July 9, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	10:43	End Time (MST):	13:35
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	0.3	----	Correlation Coefficient	0.999995	≥0.995
800.2	802.0	0.9978	Slope	1.002043	0.90 - 1.10
400.2	399.6	1.0014	Intercept	-0.395987	+/-30
200.1	199.8	1.0013			

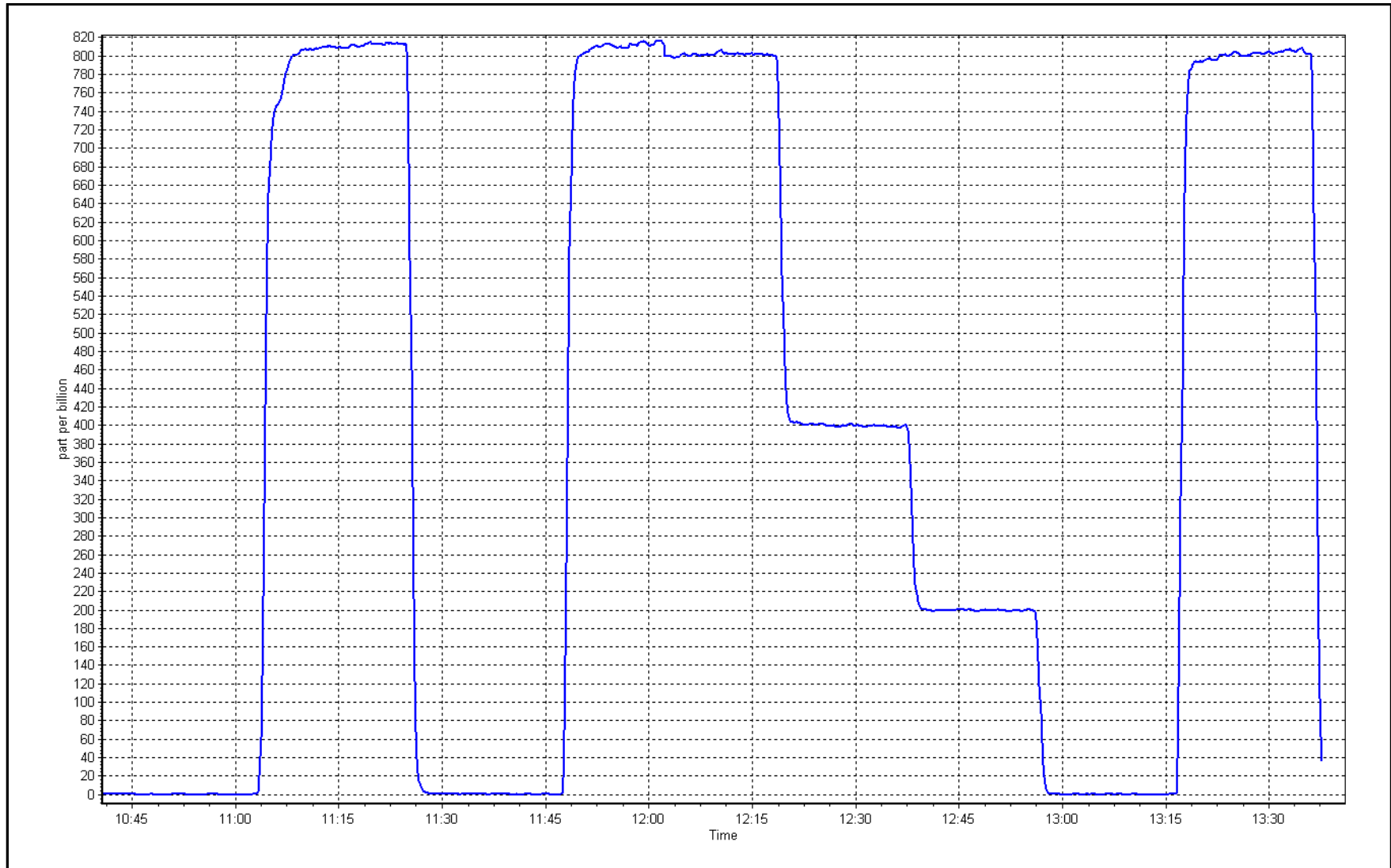
SO₂ Calibration Curve



SO2 Calibration Plot

Date: August 18, 2026

Location: Jackfish 1





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: Jackfish 1
Calibration Date: August 26, 2026
Start time (MST): 9:48
Reason: Routine

Station number: AMS 506
Last Cal Date: July 29, 2026
End time (MST): 13:54

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: 1185
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:	0.996882	1.004735	Backgd or Offset:	3.6	3.5
Calibration intercept:	-0.079441	-0.179207	Coeff or Slope:	1.183	1.175

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	4918	81.8	80.0	79.0	1.013
As found Mid point	4959	40.9	40.0	39.5	1.013
As found Low point	4980	20.4	19.9	19.5	1.023
New cylinder response					
Baseline Corr As found:	79.0	Prev response:	79.67	*% change:	-0.9%
Baseline Corr 2nd AF pt:	39.5	AF Slope:	0.988313	AF Intercept:	-0.079633
Baseline Corr 3rd AF pt:	19.5	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

H₂S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4918	81.8	80.0	80.3	0.996
Mid point	4959	40.9	40.0	39.8	1.005
Low point	4980	20.4	19.9	19.9	1.002
As left zero	5000	0.0	0.0	-0.1	----
As left span	4918	81.8	80.0	80.7	0.991
SO2 Scrubber Check	4921	79.2	792.0	0.0	----
Date of last scrubber change:				Ave Corr Factor	1.001
Date of last converter efficiency test:					

Notes: Sample inlet filter was changed after multipoint as founds. SO2 scrubber check done and passed.
Adjusted span only.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

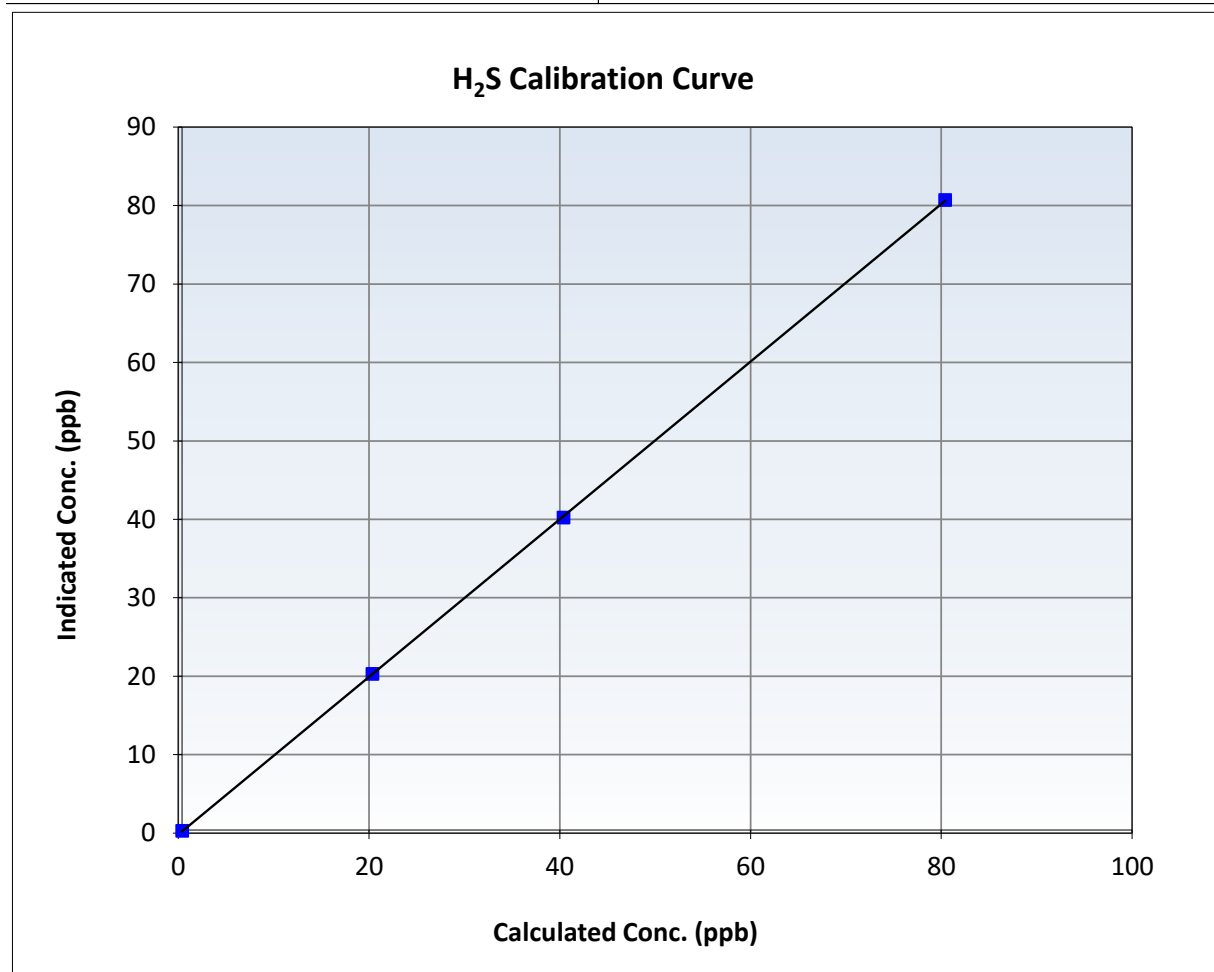
H₂S Calibration Summary

Station Information

Calibration Date:	August 26, 2026	Previous Calibration:	July 29, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:48	End Time (MST):	13:54
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	0.999983		≥0.995
80.0	80.3	0.9963	Slope	1.004735		0.90 - 1.10
40.0	39.8	1.0051	Intercept	-0.179207		+/-3
19.9	19.9	1.0025				



H₂S Calibration Plot

Date: August 26, 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: August 25, 2026
Last Cal Date: July 31, 2026
Start time (MST): 9:41
End time (MST): 14:15
Reason: Routine

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: 1185
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	5000	0.0	0.0	0.0	0.0	-1.1	0.0	-1.0	----	----
AF High point	4933	66.6	801.9	800.6	1.3	832.2	827.3	4.9	0.9624	0.9677
AF Mid point										
AF Low point										
New cyl resp										
Previous Response	NO _x = 797.4 ppb	NO = 796.5 ppb				* = > +/-5% change initiates investigation		*Percent Change	NO _x = 4.3%	
Baseline Corr 1st pt	NO _x = 833.3 ppb	NO = 827.3 ppb				<u>As Found Statistics</u>		*Percent Change	NO = 3.7%	
Baseline Corr 2nd pt	NO _x = NA ppb	NO = NA ppb				As found	NO _x r ² :	Nx SI:	Nx Int:	
Baseline Corr 3rd pt	NO _x = NA ppb	NO = NA ppb				As found	NO r ² :	NO SI:	NO Int:	
						As found	NO ₂ r ² :	NO ₂ SI:	NO ₂ Int:	

As Found GPT Calibration Data

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



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

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

Serial Number: 710321429

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.935	0.906	NO bkgnd or offset:	9.1	8.7
NOX coeff or slope:	0.994	0.993	NOX bkgnd or offset:	10.3	8.8
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	187.5	188.7

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	0.993485	0.999881
NO _x Cal Offset:	0.730665	0.812599
NO Cal Slope:	0.995153	1.001617
NO Cal Offset:	-0.249545	0.012354
NO ₂ Cal Slope:	1.001744	1.000916
NO ₂ Cal Offset:	1.315439	0.655273

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	----	----
High point	4933	66.6	801.9	800.6	1.3	802.2	802.2	0.0	0.9997	0.9980
Mid point	4967	33.3	400.9	400.2	0.7	402.1	400.0	2.1	0.9970	1.0006
Low point	4983	16.6	199.9	199.5	0.3	201.6	200.5	1.1	0.9915	0.9953
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.1	0.0	----	----
As left span	4933	66.6	801.9	442.0	359.9	803.6	442.0	361.6	0.9979	1.0000
Average Correction Factor									0.9961	0.9980

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	800.6	442.9	359.0	359.7	0.9981	100.2%
Mid GPT point	800.6	618.5	183.4	184.4	0.9948	100.5%
Low GPT point	800.6	708.1	93.8	95.5	0.9825	101.8%
Average Correction Factor					0.9918	100.8%

Notes: Sample inlet filter was changed after as founds. Adjusted zero and span. Used 2nd NO point because of drift.

Calibration Performed By: Jan Castro



Wood Buffalo Environmental Association

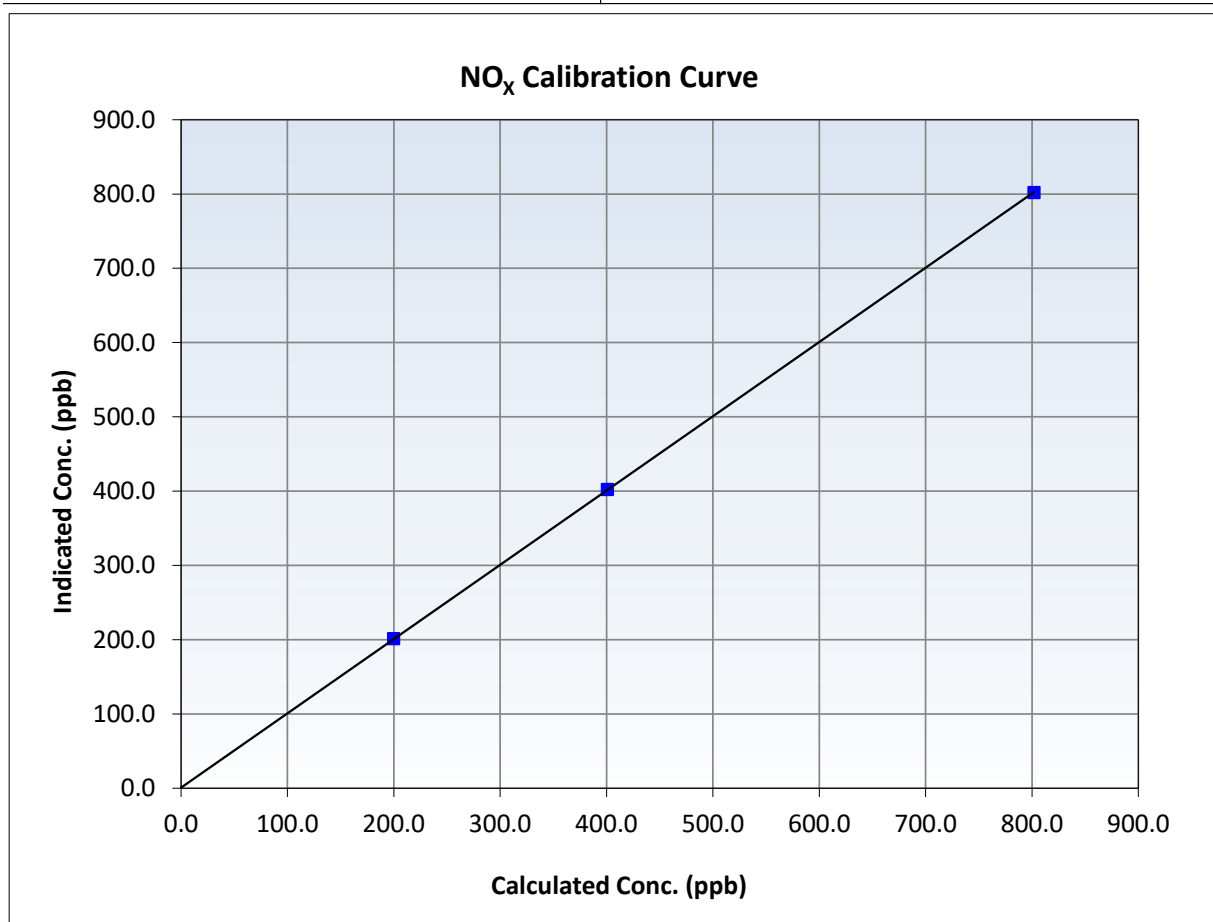
NO_x Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 31, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:41	End Time (MST):	14:15
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	-0.1	----	Correlation Coefficient	0.999994	≥0.995
801.9	802.2	0.9997	Slope	0.999881	0.90 - 1.10
400.9	402.1	0.9970	Intercept	0.812599	+/-20
199.9	201.6	0.9915			





Wood Buffalo Environmental Association

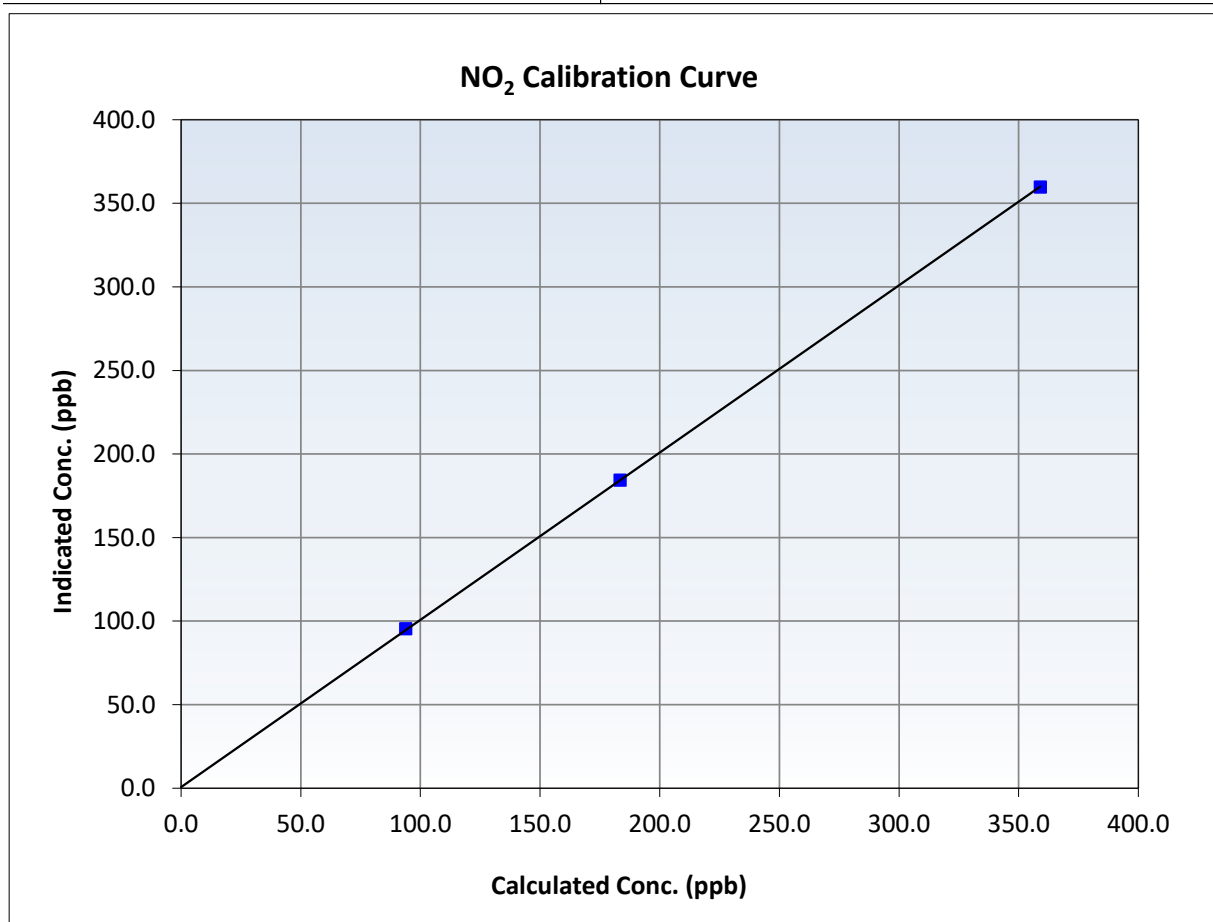
NO₂ Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 31, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:41	End Time (MST):	14:15
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	-0.1	----	Correlation Coefficient	0.999978	≥ 0.995
359.0	359.7	0.9981	Slope	1.000916	$0.90 - 1.10$
183.4	184.4	0.9948	Intercept	0.655273	± 20
93.8	95.5	0.9825			





Wood Buffalo Environmental Association

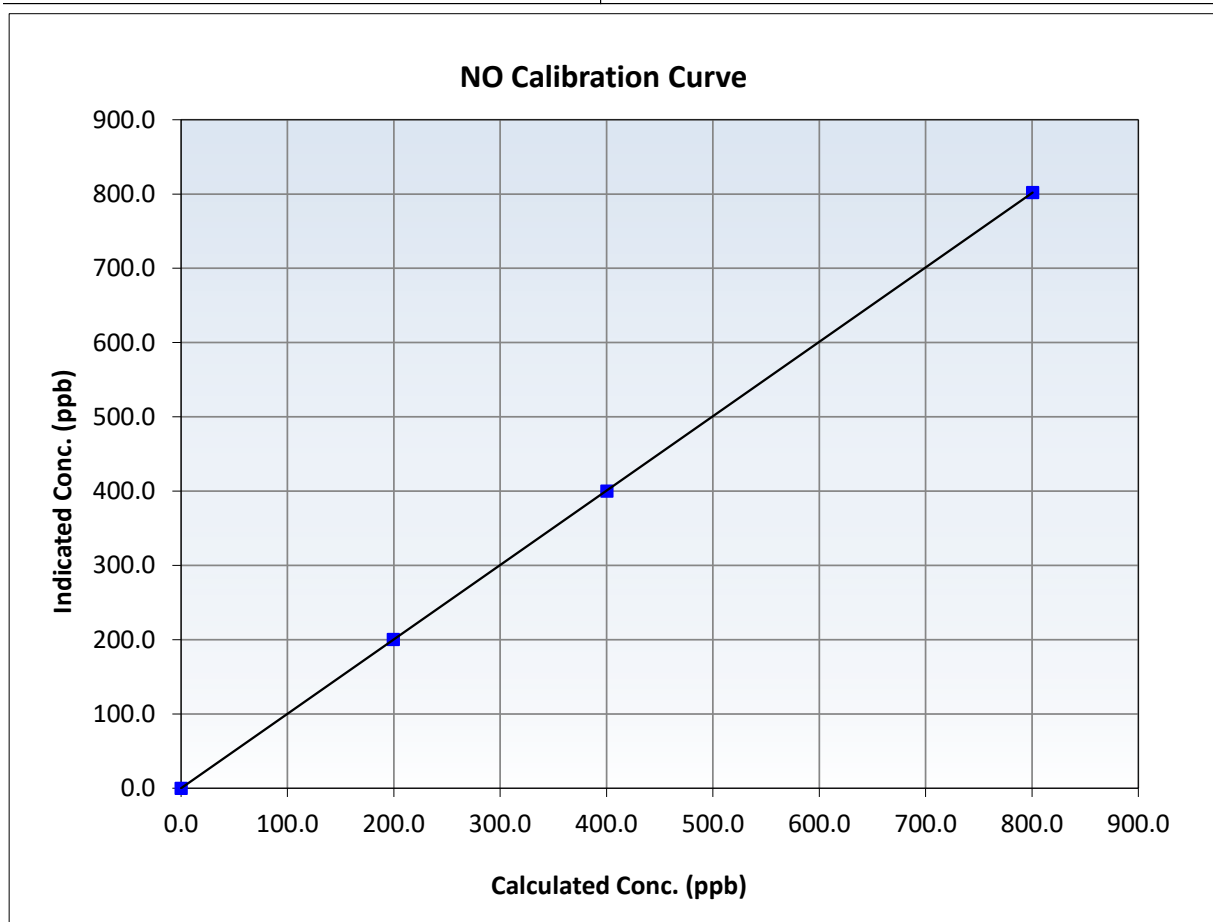
NO Calibration Summary

Station Information

Calibration Date:	August 25, 2026	Previous Calibration:	July 31, 2026
Station Name:	Jackfish 1	Station Number:	AMS 506
Start Time (MST):	9:41	End Time (MST):	14:15
Analyzer make:	Thermo 42i	Analyzer serial #:	710321429

Calibration Data

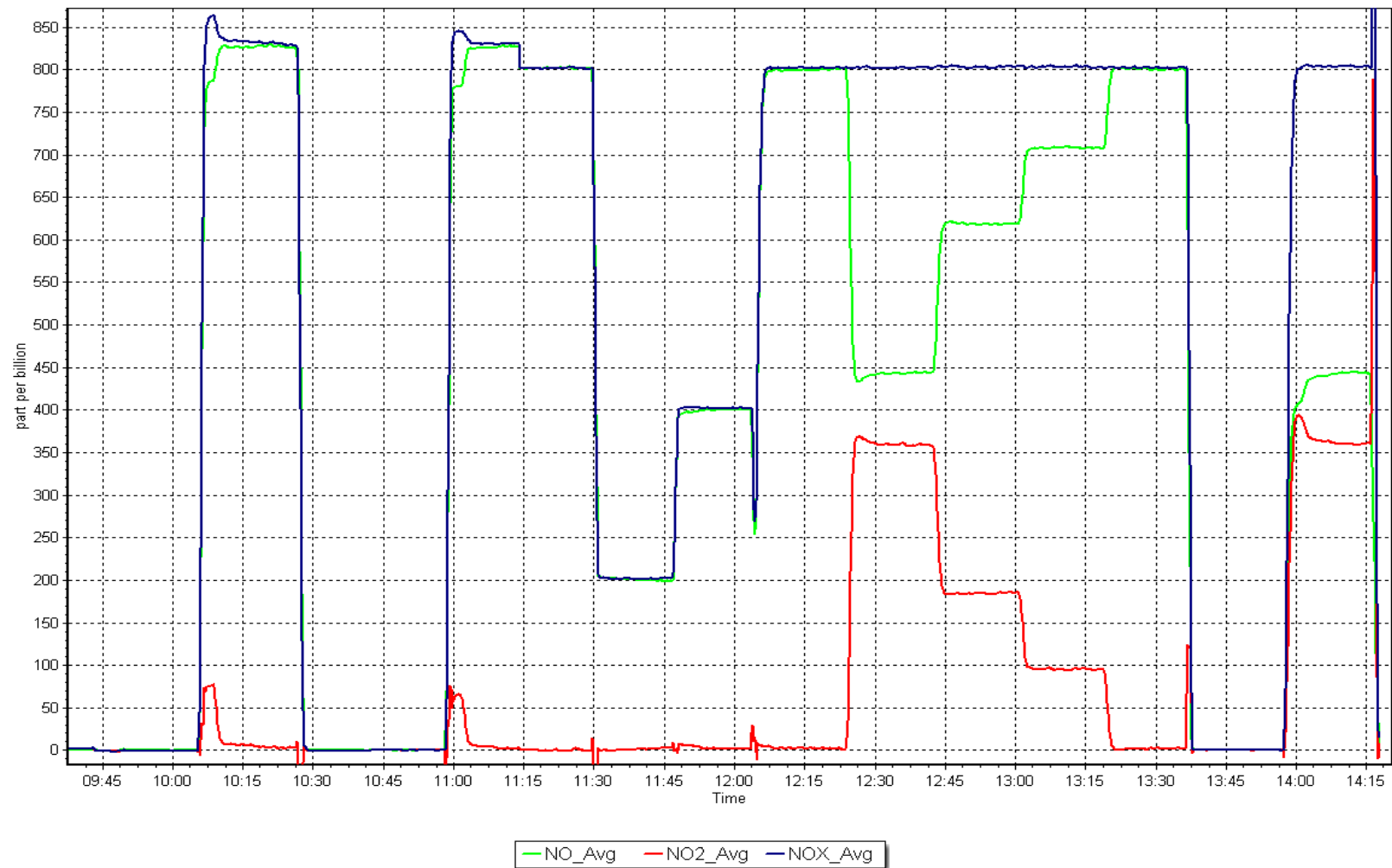
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999996	≥ 0.995
800.6	802.2	0.9980	Slope	1.001617	$0.90 - 1.10$
400.2	400.0	1.0006	Intercept	0.012354	± 20
199.5	200.5	0.9953			



NO_x Calibration Plot

Date: August 25, 2026

Location: Jackfish 1





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS508
KIRBY NORTH
AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: Kirby North
Calibration Date: August 6, 2026
Start time (MST): 10:47
Reason: Routine

Station number: AMS 508
Last Cal Date: July 6, 2026
End time (MST): 13:55

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	0.999977	Backgd or Offset:	30.3	30.6
Calibration intercept:	-1.252076	0.527919	Coeff or Slope:	1.085	1.099

SO₂ As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.5	----
As found High point	4921	78.8	799.7	788.7	1.015
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	788.2	Previous response	800.6	*% change	-1.6%
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	0.5	----
High point	4921	78.8	799.7	800.7	0.999
Mid point	4961	39.4	399.8	398.8	1.003
Low point	4980	19.7	199.9	201.5	0.992
As left zero	5000	0.0	0.0	0.7	----
As left span	4921	78.8	799.7	802.8	0.996
Average Correction Factor:					0.998

Notes: Inlet filter changed after as founds, span adjusted.

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

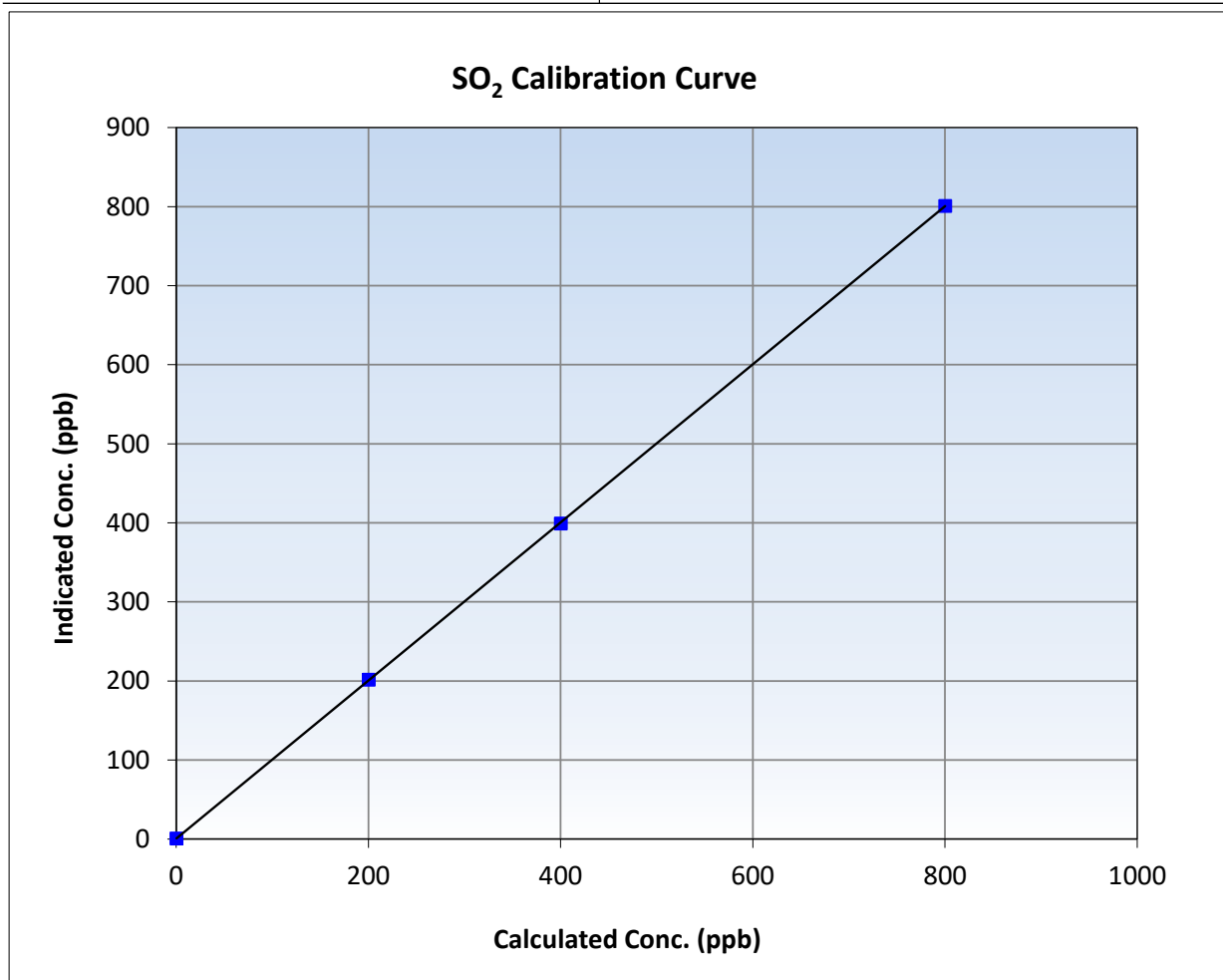
SO₂ Calibration Summary

Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 6, 2026
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	10:47	End Time (MST):	13:55
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	1182340007

Calibration Data

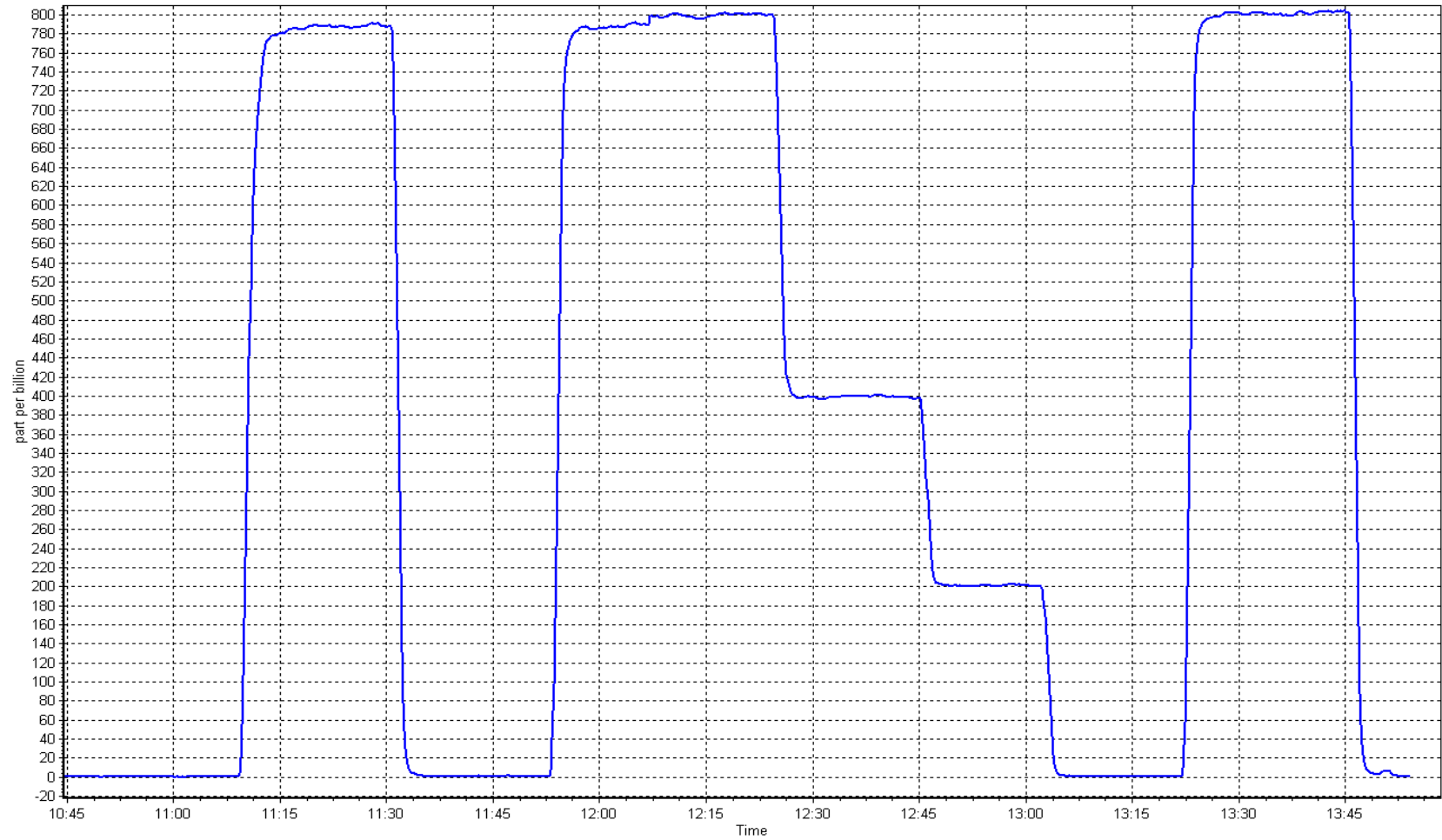
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.5	----	Correlation Coefficient	0.999990	≥0.995
799.7	800.7	0.9987	Slope	0.999977	0.90 - 1.10
399.8	398.8	1.0025	Intercept	0.527919	+/-30
199.9	201.5	0.9922			



SO2 Calibration Plot

Date: August 6, 2026

Location: Kirby North





Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name: Kirby South
Calibration Date: August 20, 2026
Start time (MST): 10:27
Reason: Routine

Station number: AMS 507
Last Cal Date: July 7, 2026
End time (MST): 14:40

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	1.009815	Backgd or Offset:	1.71	1.71
Calibration intercept:	-0.220000	-0.140000	Coeff or Slope:	1.072	1.072

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) <i>Limit = 0.90-1.10</i>
As found zero	5000	0.0	0.0	0.0	----
As found High point	4921	79.2	80.0	83.3	0.960
As found Mid point	4960	39.6	40.0	41.4	0.966
As found Low point	4980	19.8	20.0	20.4	0.980
New cylinder response					
Baseline Corr As found:	83.3	Prev response:	80.63	*% change:	3.2%
Baseline Corr 2nd AF pt:	41.4	AF Slope:	1.042819	AF Intercept:	-0.220000
Baseline Corr 3rd AF pt:	20.4	AF Correlation:	0.999968	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4921	79.2	80.0	80.8	0.990
Mid point	4960	39.6	40.0	40.0	1.000
Low point	4980	19.8	20.0	19.9	1.005
As left zero	5000	0.0	0.0	0.3	----
As left span	4921	79.2	80.0	78.3	1.022
SO2 Scrubber Check				0.0	
Date of last scrubber change:		July 25, 2023		Ave Corr Factor	0.998
Date of last converter efficiency test:		September 18, 2025		102.4% efficiency	

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

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

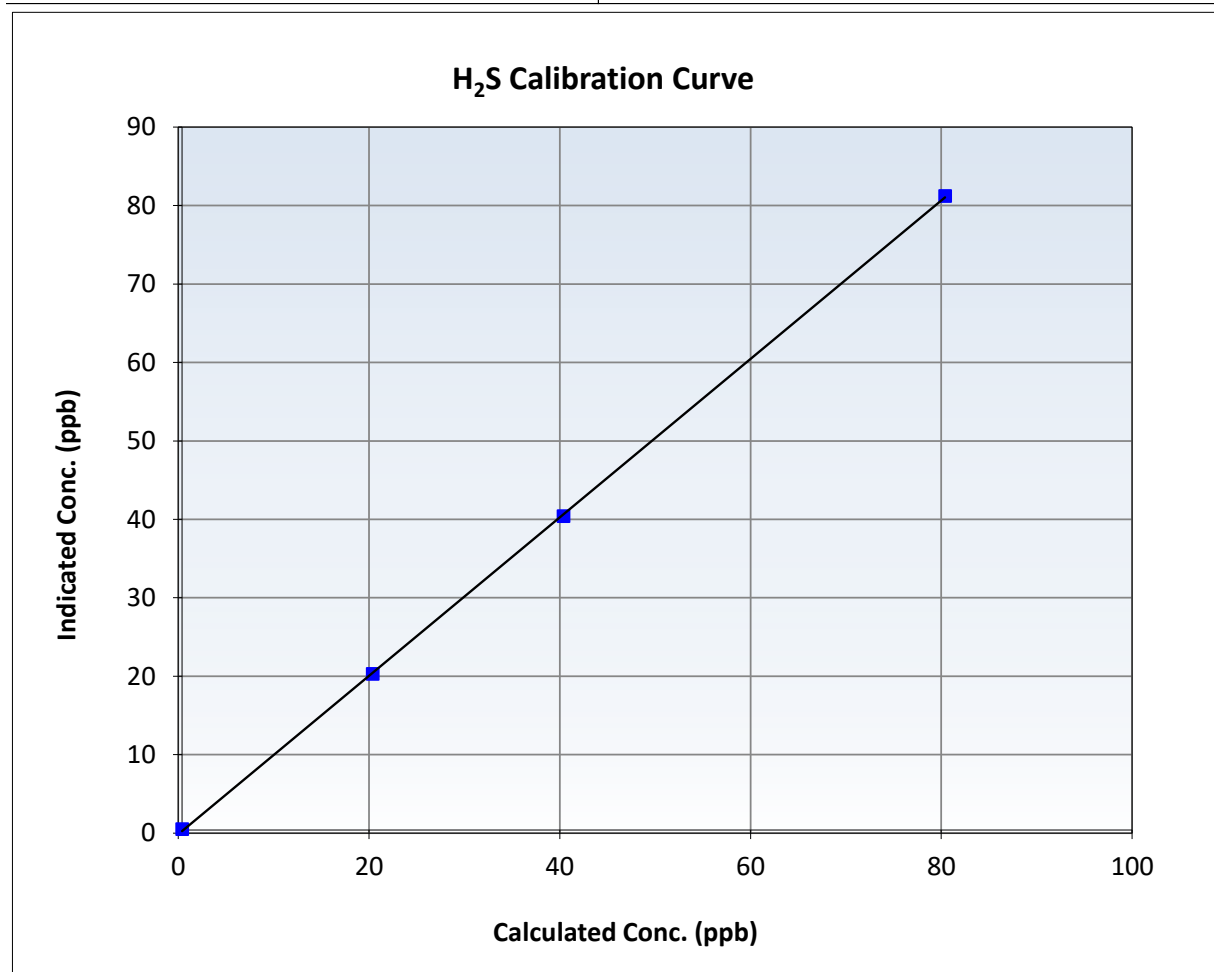
H₂S Calibration Summary

Station Information

Calibration Date:	August 20, 2026	Previous Calibration:	July 7, 2026
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	10:27	End Time (MST):	14:40
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1150840012

Calibration Data

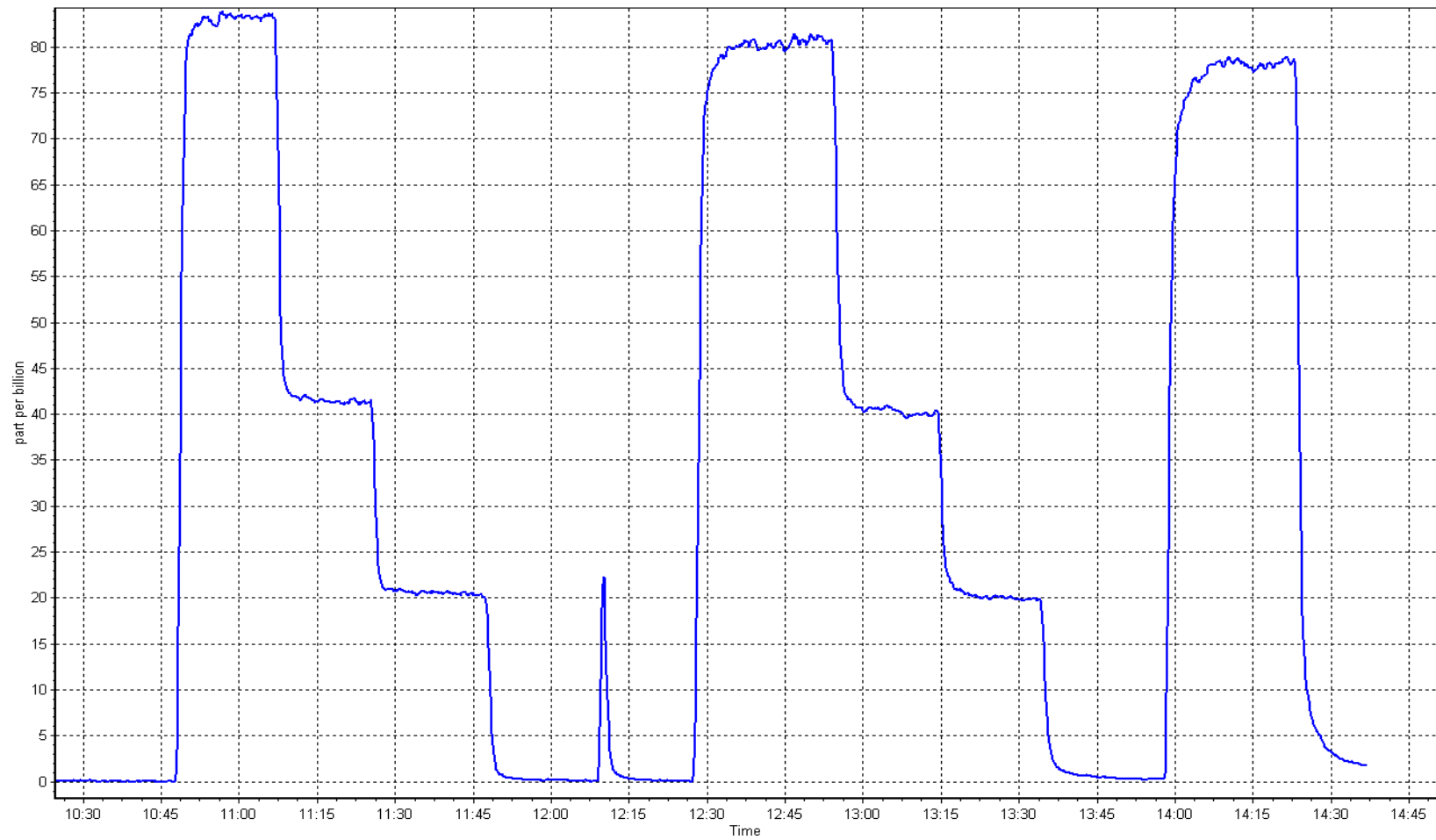
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation			<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999952		≥0.995
80.0	80.8	0.9900	Slope	1.009815		0.90 - 1.10
40.0	40.0	0.9999	Intercept	-0.140000		+/-3
20.0	19.9	1.0049				



H2S Calibration Plot

Date: August 20, 2026

Location: Kirby South





Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name: Kirby North
Calibration Date: August 6, 2026
Start time (MST): 10:47
Reason: Routine

Station number: AMS 508
Last Cal Date: July 6, 2026
End time (MST): 13:55

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	1.002661	Background:	1.98	1.98
Calibration intercept:	0.117167	0.055369	Coefficient:	3.305	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))
As found zero	5000	0.0	0.00	0.06	----
As found High point	4921	78.8	16.87	16.99	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.93	Previous response	16.78	*% 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	

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	0.07	
High point	4921	78.8	16.87	16.97	0.994
Mid point	4961	39.4	8.43	8.50	0.992
Low point	4980	19.7	4.22	4.27	0.987
As left zero	5000	0.0	0.00	0.09	----
As left span	4921	78.8	16.87	17.05	0.989
Average Correction Factor					0.991

Notes:

Inlet filter changed after as founds. No changes made

Calibration Performed By: Jason Brooks



Wood Buffalo Environmental Association

THC Calibration Summary

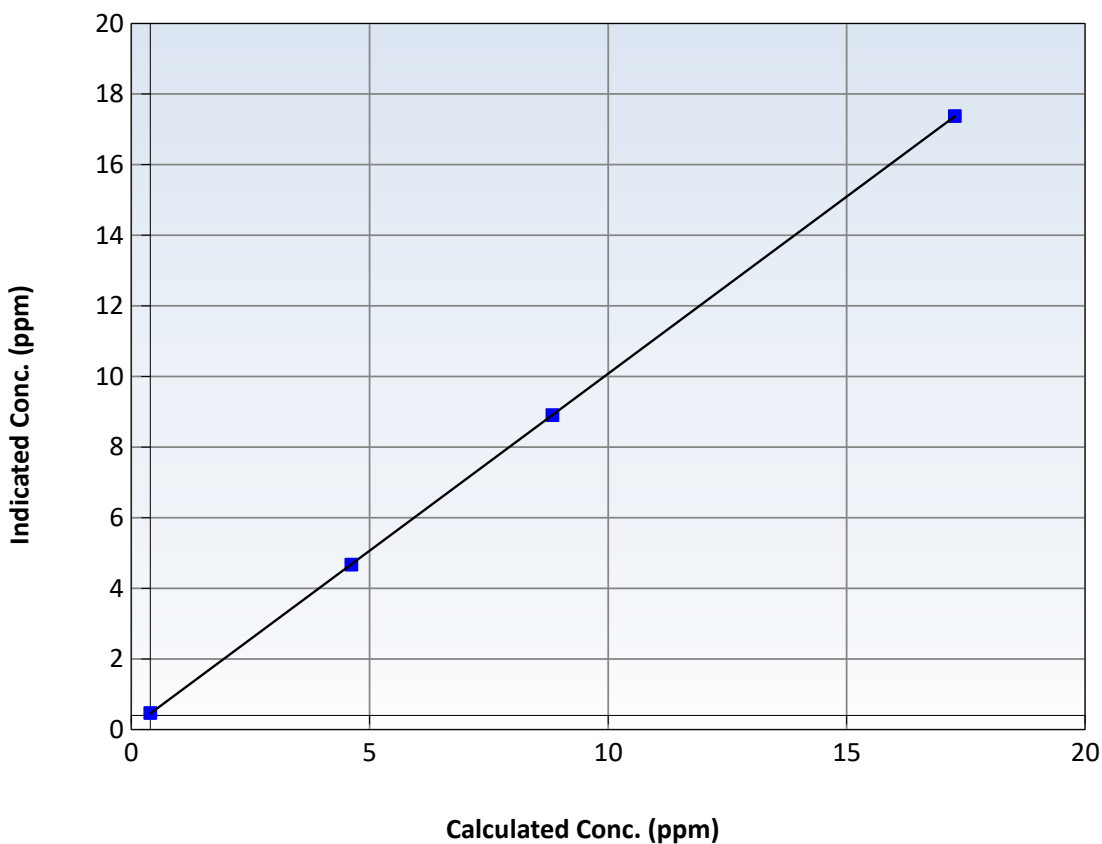
Station Information

Calibration Date:	August 6, 2026	Previous Calibration:	July 6, 2026
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	10:47	End Time (MST):	13:55
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	0.07	----	Correlation Coefficient	0.999997	≥ 0.995
16.87	16.97	0.9937	Slope	1.002661	$0.90 - 1.10$
8.43	8.50	0.9919	Intercept	0.055369	± 1.5
4.22	4.27	0.9873			

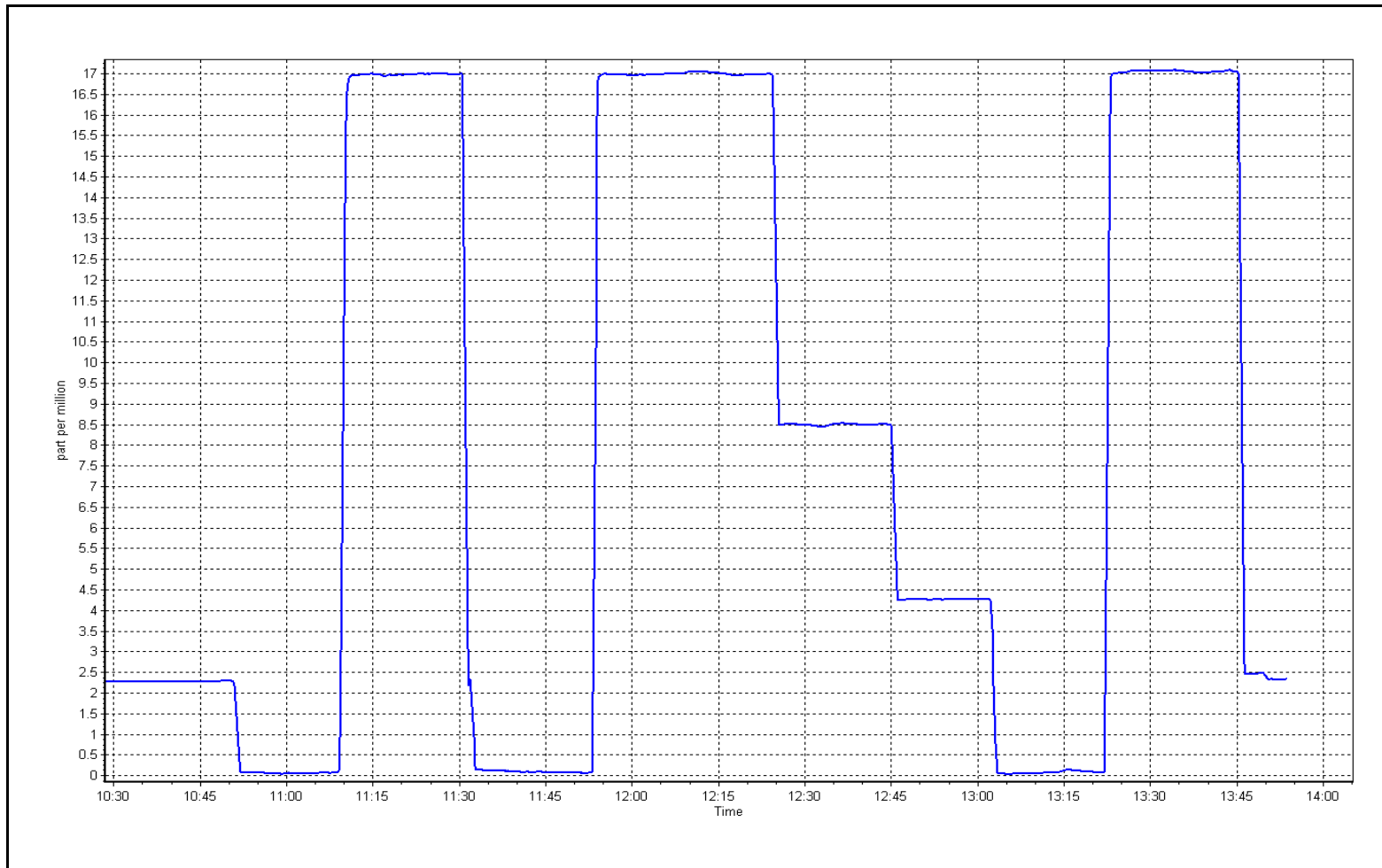
THC Calibration Curve



THC Calibration Plot

Date: August 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: August 5, 2026
Last Cal Date: July 8, 2026
Start time (MST): 10:42
End time (MST): 17:05
Reason: Routine

Calibration Standards

NO Gas Cylinder #: DT0019572
NOX Cal Gas Conc: 60.00 ppm
Removed Cylinder #: NA
Removed Gas NOX Conc: 60.00 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T700
ZAG make/model: Teledyne API T701H
Cal Gas Expiry Date: January 5, 2032
NO Cal Gas Conc: 59.90 ppm
Removed Gas Exp Date: NA
Removed Gas NO Conc: 59.90 ppm
NO gas Diff:
Serial Number: 2445
Serial Number: 880

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated 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	-0.9	-0.2	-0.7	----	----
AF High point	4933	66.8	801.6	800.3	1.3	800.5	803.6	-3.0	1.0003	0.9956
AF Mid point	4966	33.4	400.8	400.2	0.7	395.5	396.4	-0.9	1.0112	1.0090
AF Low point	4983	16.7	200.4	200.1	0.3	195.3	194.2	1.1	1.0215	1.0292

New cyl resp

Previous Response	NO _x = 801.1 ppb	NO = 805.1 ppb	* = > +/-5% change initiates investigation	*Percent Change	NO _x = 0.0%
Baseline Corr 1st pt	NO _x = 801.4 ppb	NO = 803.8 ppb	<u>As Found Statistics</u>	*Percent Change	NO = -0.2%
Baseline Corr 2nd pt	NO _x = 396.4 ppb	NO = 396.6 ppb	As found NO _x r ² : 0.999950	Nx SI: 1.000869	Nx Int: -3.428
Baseline Corr 3rd pt	NO _x = 196.2 ppb	NO = 194.4 ppb	As found NO r ² : 0.999902	NO SI: 1.006424	NO Int: -3.888
			As found NO ₂ r ² : 0.999842	NO2 SI: 0.978918	NO ₂ Int: -3.198

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	-0.7	----	----
As found high GPT point	806.7	404.7	403.3	392.6	1.0273	97.3%
As found mid GPT point	806.7	639.2	168.8	160.9	1.0493	95.3%
As found low GPT point	806.7	724.8	83.2	76.0	1.0952	91.3%



Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Analyzer Information

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

Serial Number: 1173480006

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:	1.001185	1.001670
NO _x Cal Offset:	-1.473589	-3.493631
NO Cal Slope:	1.008997	1.000686
NO Cal Offset:	-2.373575	-4.013666
NO ₂ Cal Slope:	0.988000	0.992946
NO ₂ Cal Offset:	-0.893256	1.121973

Instrument Settings

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
NO coeff or slope:	0.761	0.769	NO bkgnd or offset:	8.6	8.6
NOX coeff or slope:	0.984	0.997	NOX bkgnd or offset:	9.1	9.3
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	145.6	145.6

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	-0.7	-0.1	-0.6	----	----
High point	4933	66.8	801.6	800.3	1.3	801.2	799.1	2.1	1.0005	1.0015
Mid point	4967	33.4	400.8	400.1	0.7	395.6	393.5	2.0	1.0131	1.0169
Low point	4983	16.7	200.4	200.1	0.3	195.1	192.9	2.2	1.0272	1.0371
As left zero	5000	0.0	0.0	0.0	0.0	-0.7	-0.1	-0.6	----	----
As left span	4933	66.8	801.6	399.6	402.0	797.1	399.6	397.5	1.0057	1.0000
Average Correction Factor									1.0136	1.0185

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	-0.6	----	----
High GPT point	797.0	399.1	399.2	396.7	1.0064	99.4%
Mid GPT point	797.0	629.8	168.5	169.9	0.9920	100.8%
Low GPT point	797.0	714.6	83.7	85.4	0.9805	102.0%
Average Correction Factor					0.9930	100.7%

Notes:

Inlet filter changed after as found, pump changed, span adjusted.

Calibration Performed By:

Jason Brooks



Wood Buffalo Environmental Association

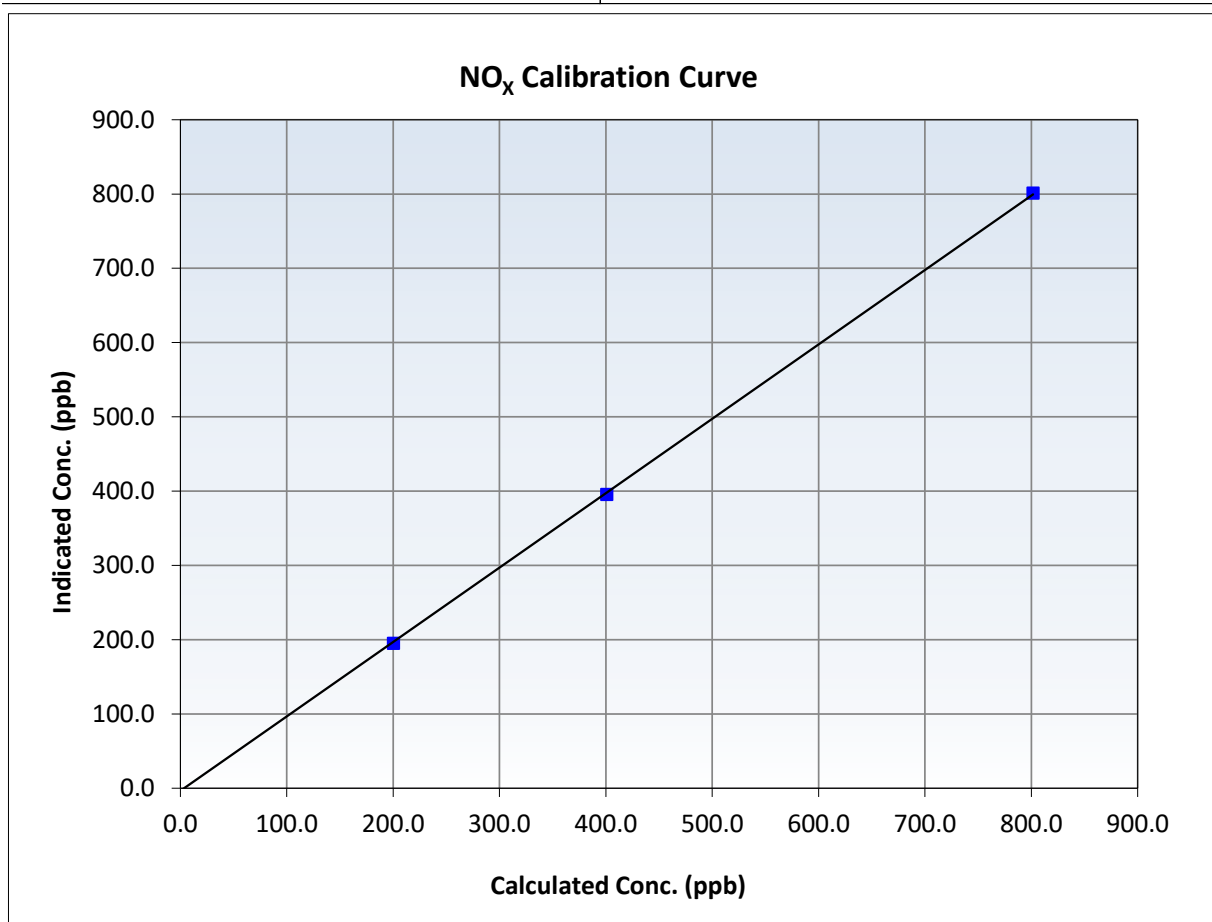
NO_x Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 8, 2026
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	10:42	End Time (MST):	17:05
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<i>Limits</i>
0.0	-0.7	----	Correlation Coefficient	0.999940	<i>≥0.995</i>
801.6	801.2	1.0005	Slope	1.001670	<i>0.90 - 1.10</i>
400.8	395.6	1.0131	Intercept	-3.493631	<i>+/-20</i>
200.4	195.1	1.0272			





Wood Buffalo Environmental Association

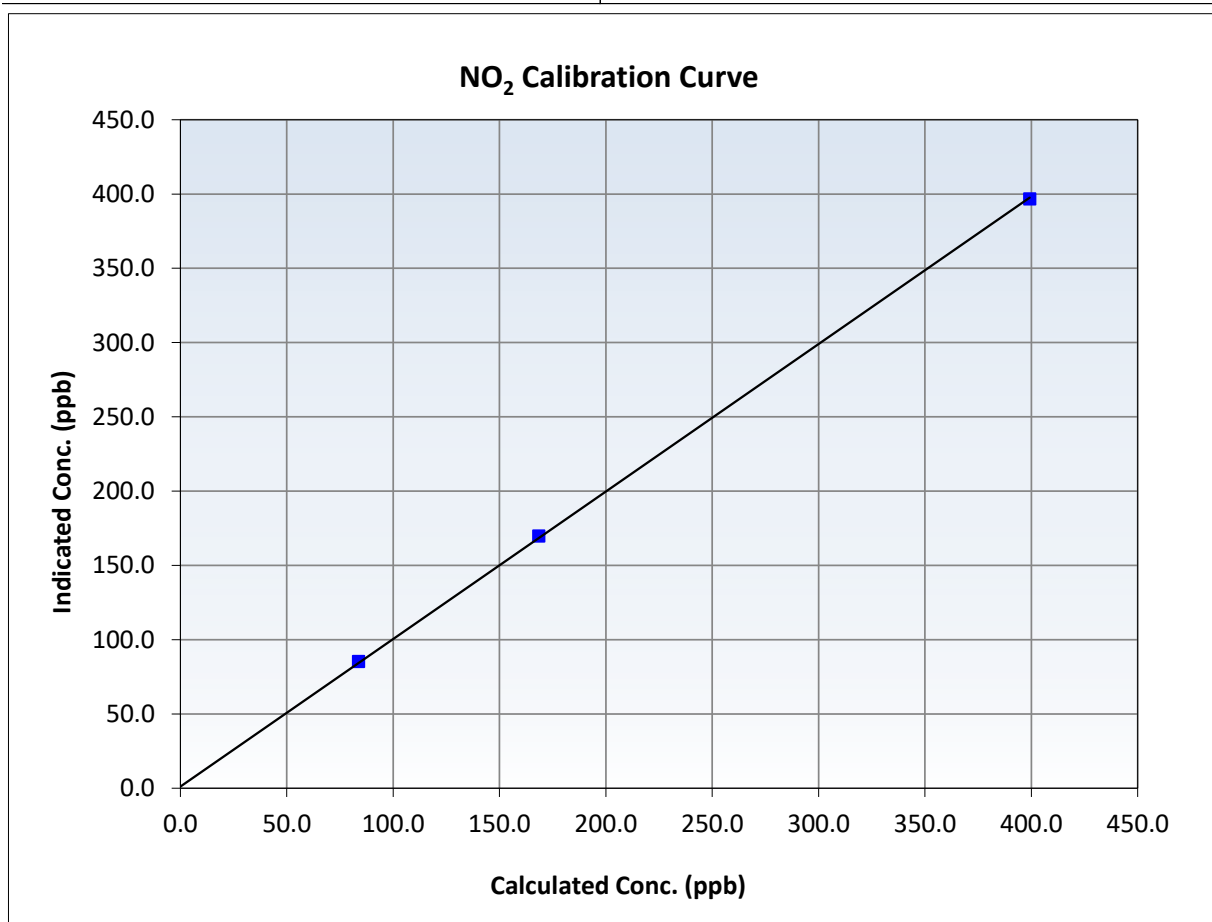
NO₂ Calibration Summary

Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 8, 2026
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	10:42	End Time (MST):	17:05
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	0.999920	≥0.995
399.2	396.7	1.0064	Slope	0.992946	0.90 - 1.10
168.5	169.9	0.9920	Intercept	1.121973	+/-20
83.7	85.4	0.9805			





Wood Buffalo Environmental Association

NO Calibration Summary

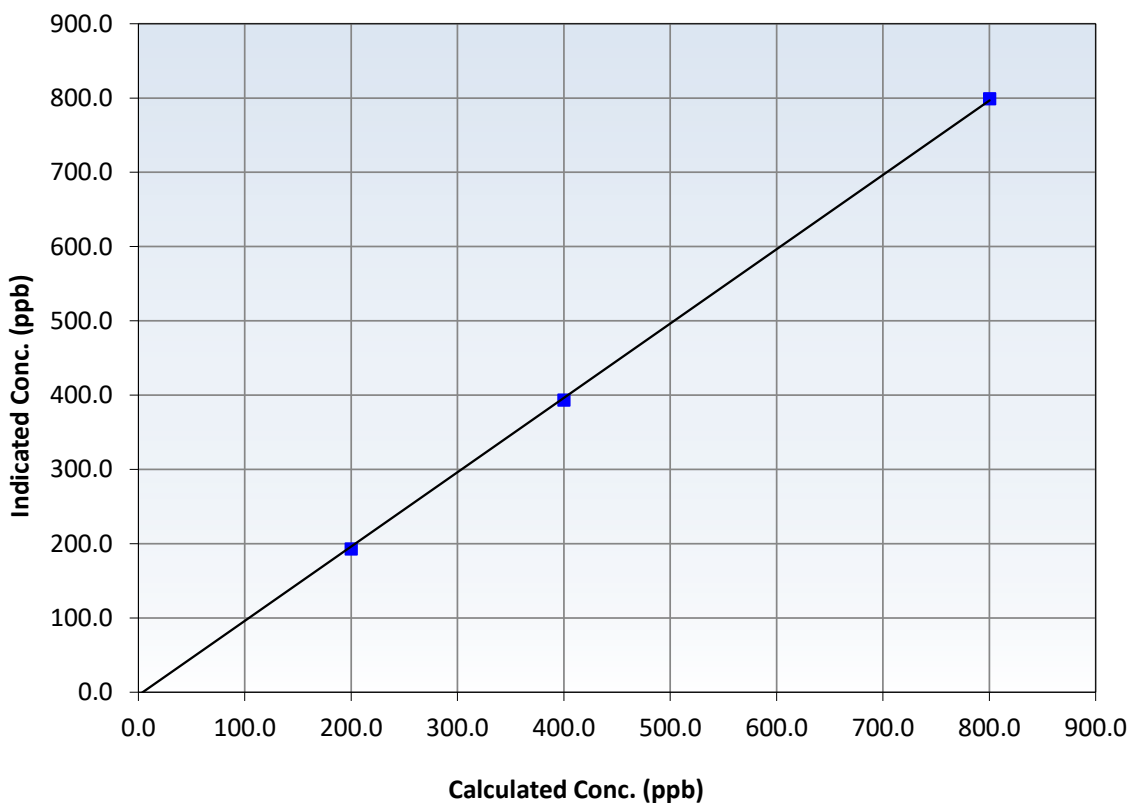
Station Information

Calibration Date:	August 5, 2026	Previous Calibration:	July 8, 2026
Station Name:	Kirby North	Station Number:	AMS 508
Start Time (MST):	10:42	End Time (MST):	17:05
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	0.999887	≥ 0.995
800.3	799.1	1.0015	Slope	1.000686	0.90 - 1.10
400.1	393.5	1.0169	Intercept	-4.013666	+/-20
200.1	192.9	1.0371			

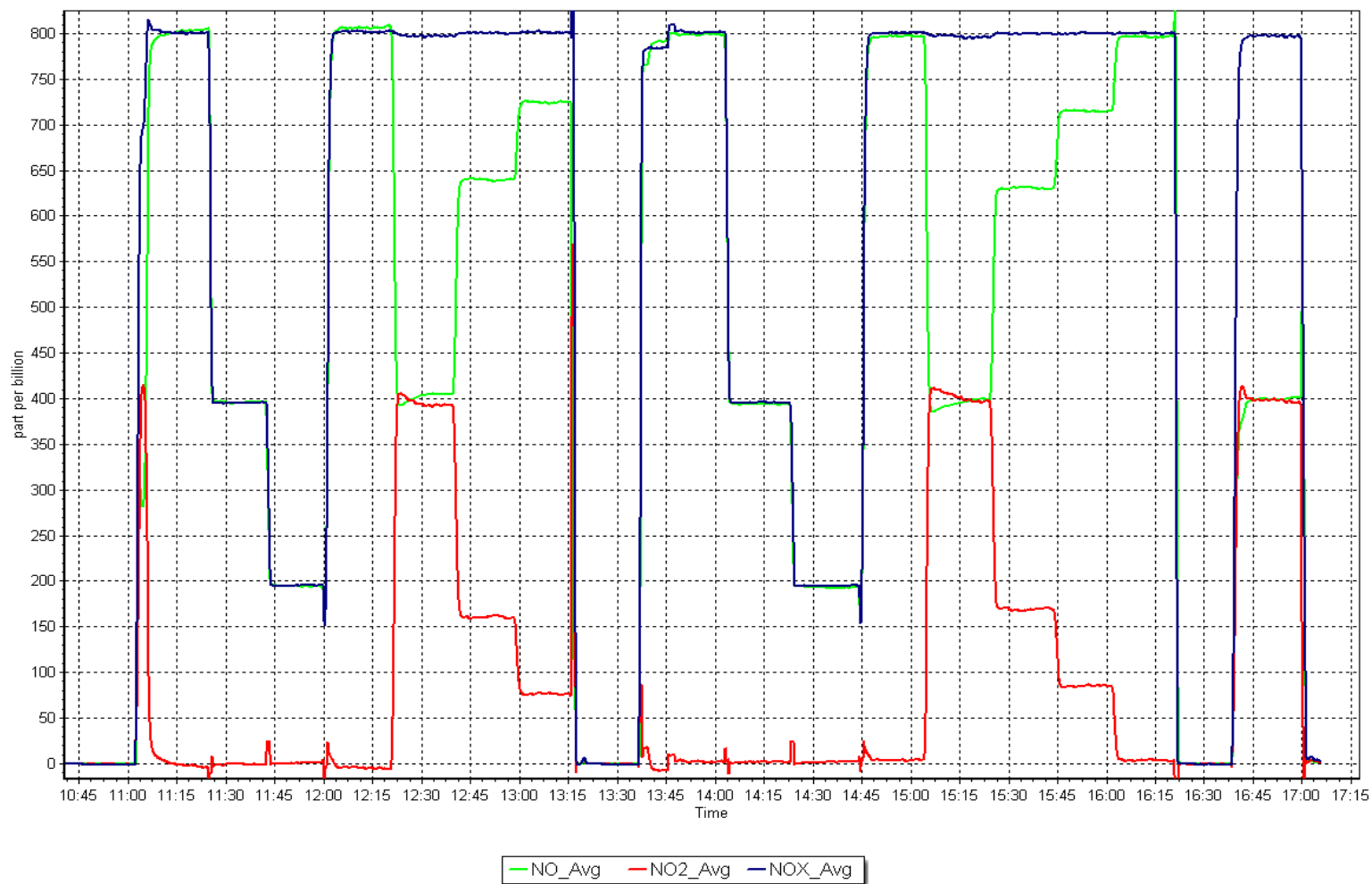
NO Calibration Curve



NO_x Calibration Plot

Date: August 5, 2026

Location: Kirby North





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS513
EBRT
AUGUST 2026

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

September 29, 2026



Wood Buffalo Environmental Association

SO₂ Calibration Report

Station Information

Station Name: EBRT Station number: AMS 513
Calibration Date: August 11, 2026 Last Cal Date: NA
Start time (MST): 14:24 End time (MST): 18:00
Reason: Install

Calibration Standards

Cal Gas Concentration: 50.01 ppm Cal Gas Exp Date: April 15, 2034
Cal Gas Cylinder #: CC475657
Removed Cal Gas Conc: 50.01 ppm Rem Gas Exp Date:
Removed Gas Cyl #: Diff between cyl:
Calibrator Model: Teledyne API T750 Serial Number: 281
Zero Air Gen Model: Teledyne API T700 Serial Number: 4891

Analyzer Information

Analyzer make: Thermo 43i Serial Number: JC1404901075
Analyzer Range: 0-1000ppb

	<u>Start</u>	<u>Finish</u>		<u>Start</u>	<u>Finish</u>
Calibration slope:		1.001471	Backgd or Offset:		26.0
Calibration intercept:		0.340000	Coeff or Slope:		0.719

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	0.1	----
High point	4920	80.0	800.2	801.9	0.998
Mid point	4960	40.0	400.1	400.1	1.000
Low point	4980	20.0	200.0	201.6	0.992
As left zero	5000	0.0	0.0	0.4	----
As left span	4920	80.0	800.2	799.9	1.000
Average Correction Factor:					0.997

Notes: Install calibration for a new station deployment. Adjusted the zero and span.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

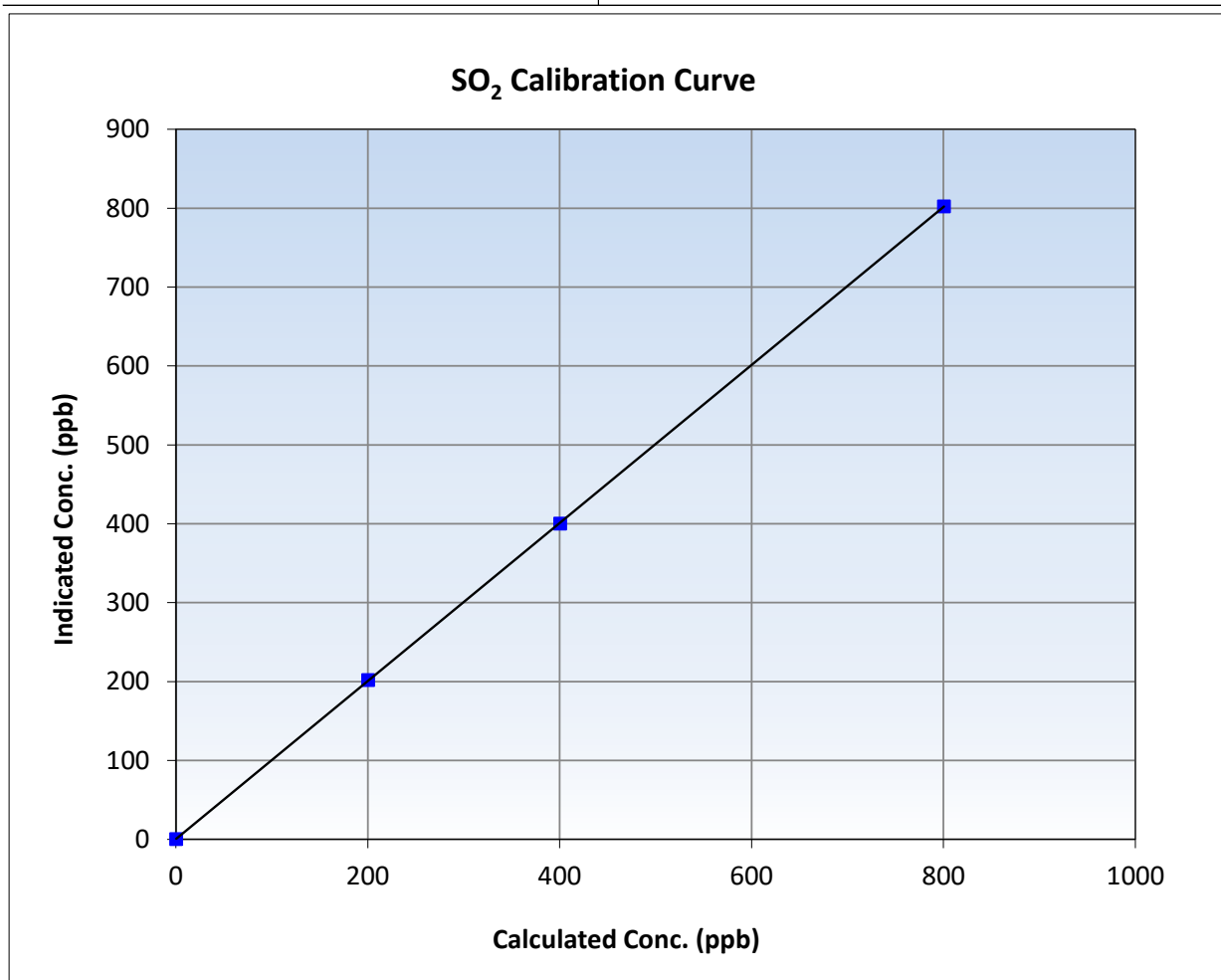
SO₂ Calibration Summary

Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	NA
Station Name:	EBRT	Station Number:	AMS 513
Start Time (MST):	14:24	End Time (MST):	18:00
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1404901075

Calibration Data

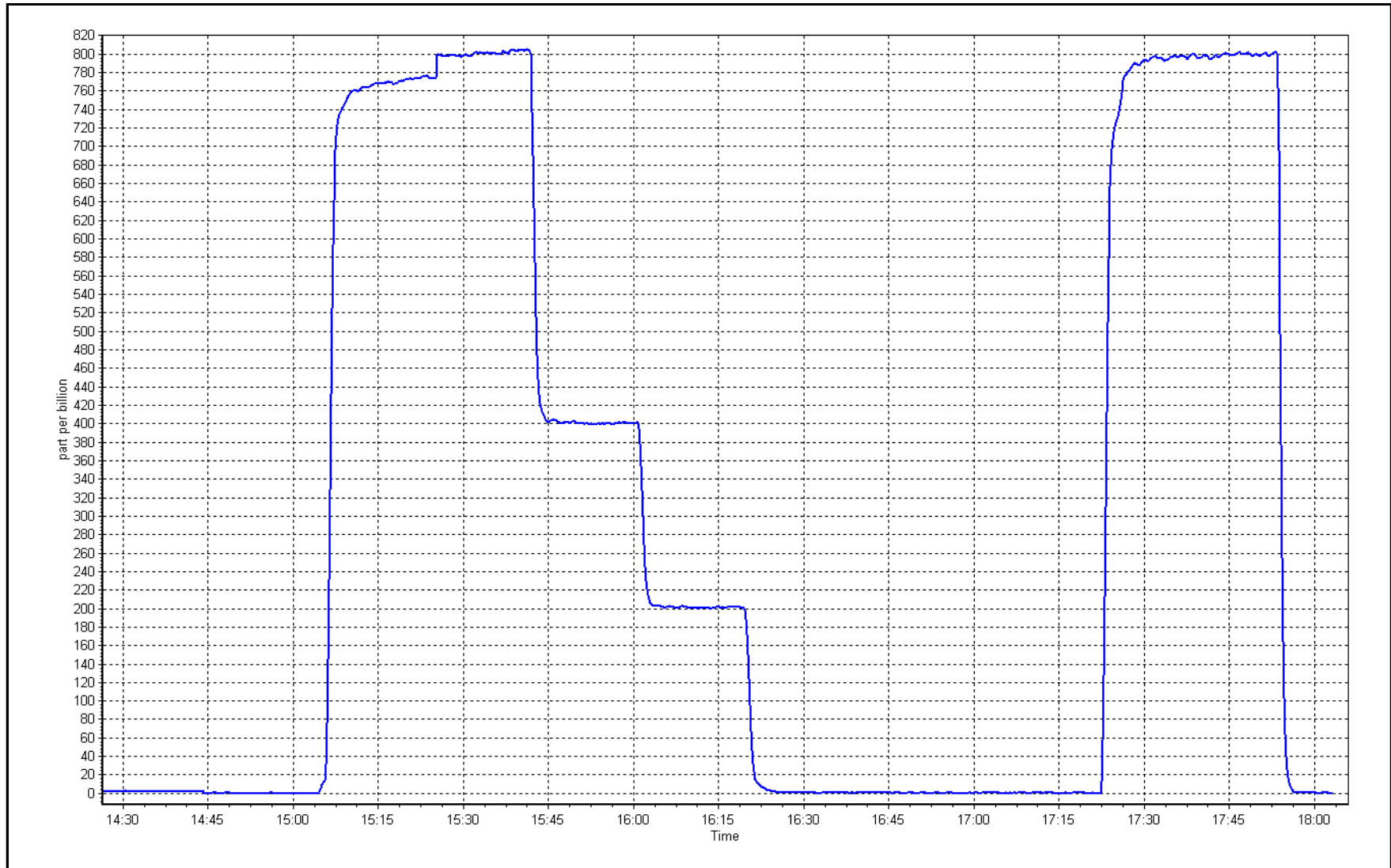
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.1	----	Correlation Coefficient	0.999995	≥0.995
800.2	801.9	0.9978	Slope	1.001471	0.90 - 1.10
400.1	400.1	1.0000	Intercept	0.340000	+/-30
200.0	201.6	0.9923			



SO2 Calibration Plot

Date: August 11, 2026

Location: EBRT





Wood Buffalo Environmental Association

H₂S Calibration Report

Station Information

Station Name: EBRT
Calibration Date: August 11, 2026
Start time (MST): 12:15
Reason: Install

Station number: AMS 513
Last Cal Date: NA
End time (MST): 17:15

Calibration Standards

Cal Gas Concentration: 4.60 ppm
Cal Gas Cylinder #: CC13654
Removed Cal Gas Conc: 4.60 ppm
Removed Gas Cyl #:
Calibrator Make/Model: Teledyne API T750
ZAG Make/Model: Teledyne API T700
Cal Gas Exp Date: June 22, 2028
Rem Gas Exp Date:
Diff between cyl:
Serial Number: 281
Serial Number: 4891

Analyzer Information

Analyzer make: Thermo 43iQTL
Converter make: Global G150
Analyzer Range: 0 - 100 ppb
Analyzer serial #: 12426335706
Converter serial #: 2023-267
Converter Temp: 325 degC

	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
Calibration slope:		1.003591	Backgd or Offset:	2.3
Calibration intercept:		-0.439338	Coeff or Slope:	1.053

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	0.2	----
High point	4913.0	87.0	80.0	80.3	0.997
Mid point	4957.0	44.0	40.5	39.6	1.022
Low point	4978.0	22.0	20.2	19.4	1.043
As left zero	5000.0	0.0	0.0	0.0	----
As left span	4913.0	87.0	80.0	79.2	1.011
SO2 Scrubber Check	4920	80.0	800.0	-0.1	----
Date of last scrubber change:				Ave Corr Factor	1.021
Date of last converter efficiency test:					

Notes: Install calibration for a new station deployment. Adjusted the span.

Calibration Performed By: Rene Chamberland



Wood Buffalo Environmental Association

H₂S/TRS Calibration Summary

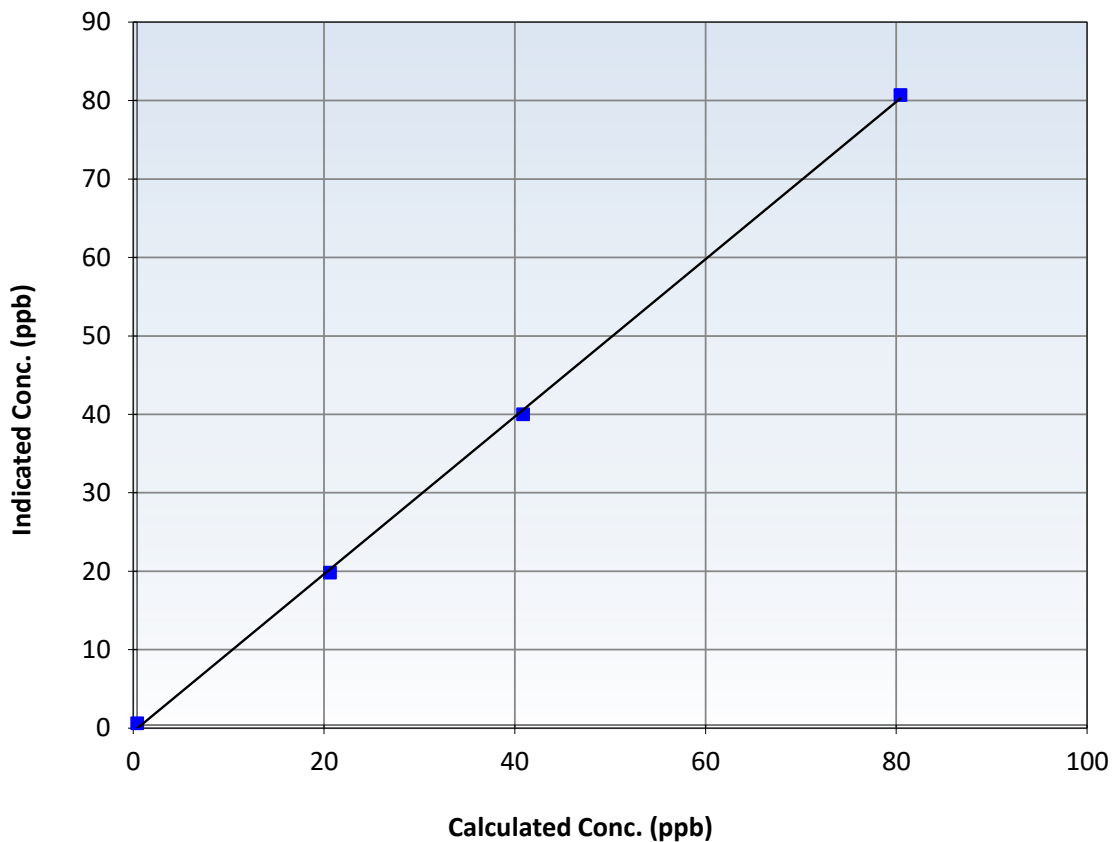
Station Information

Calibration Date:	August 11, 2026	Previous Calibration:	NA
Station Name:	EBRT	Station Number:	AMS 513
Start Time (MST):	12:15	End Time (MST):	17:15
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12426335706

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	0.999678	≥ 0.995
80.0	80.3	0.9968	Slope	1.003591	$0.90 - 1.10$
40.5	39.6	1.0220	Intercept	-0.439338	± 3
20.2	19.4	1.0433			

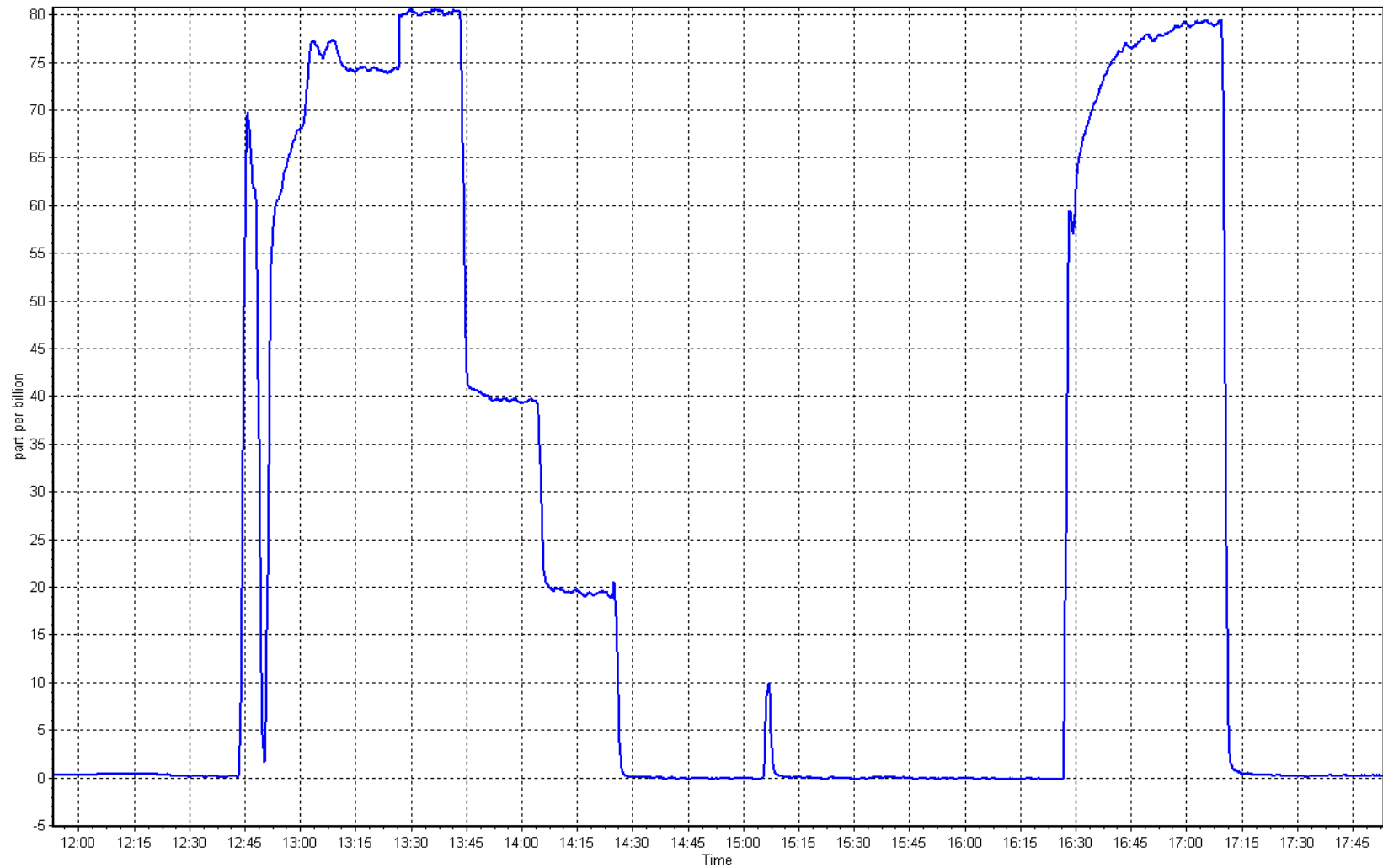
H₂S/TRS Calibration Curve



H₂S/TRS Calibration Plot

Date: August 11, 2026

Location: EBRT





Wood Buffalo Environmental Association

NO_x \ NO \ NO₂ Calibration Report

Station Information

Station Name: EBRT
Station number: AMS 513
Calibration Date: August 12, 2026
Last Cal Date: NA
Start time (MST): 10:49
End time (MST): 14:52
Reason: Install

Calibration Standards

NO Gas Cylinder #: CC424105
NOX Cal Gas Conc: 59.90 ppm
Removed Cylinder #:
Removed Gas NOX Conc: 59.90 ppm
NOX gas Diff:
Calibrator Model: Teledyne API T750
ZAG make/model: Teledyne API T700
Cal Gas Expiry Date: July 19, 2032
NO Cal Gas Conc: 59.90 ppm
Removed Gas Exp Date:
Removed Gas NO Conc: 59.90 ppm
NO gas Diff:
Serial Number: 281
Serial Number: 4891

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						



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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:		1.053	NO bkgnd or offset:		0.6
NOX coeff or slope:		0.992	NOX bkgnd or offset:		0.8
NO2 coeff or slope:		1.000	Reaction cell Press:		146.2

Calibration Statistics

	<u>Start</u>	<u>Finish</u>
NO _x Cal Slope:		0.996397
NO _x Cal Offset:		1.268026
NO Cal Slope:		1.000024
NO Cal Offset:		1.648087
NO ₂ Cal Slope:		0.990849
NO ₂ Cal Offset:		0.741934

Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>	NO Correction factor (Cc/Ic) <i>Limit = 0.95-1.05</i>
Cal zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
High point	4933	66.8	800.3	800.3	0.0	797.9	800.8	-2.7	1.0030	0.9994
Mid point	4967	33.4	400.1	400.1	0.0	401.1	403.6	-2.5	0.9975	0.9913
Low point	4983	16.7	200.1	200.1	0.0	201.4	202.7	-1.3	0.9934	0.9871
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
As left span	4821	66.8	818.6	336.1	464.2	794.6	336.1	458.6	1.0302	1.0000
Average Correction Factor									0.9980	0.9926

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	809.4	399.7	409.7	406.1	1.0089	99.1%
Mid GPT point	809.4	604.4	205.0	205.0	1.0000	100.0%
Low GPT point	809.4	706.4	103.0	102.9	1.0010	99.9%
Average Correction Factor					1.0033	99.7%

Notes: Install calibration for a new station. No adjustments made.

Calibration Performed By: Rene Chamberland



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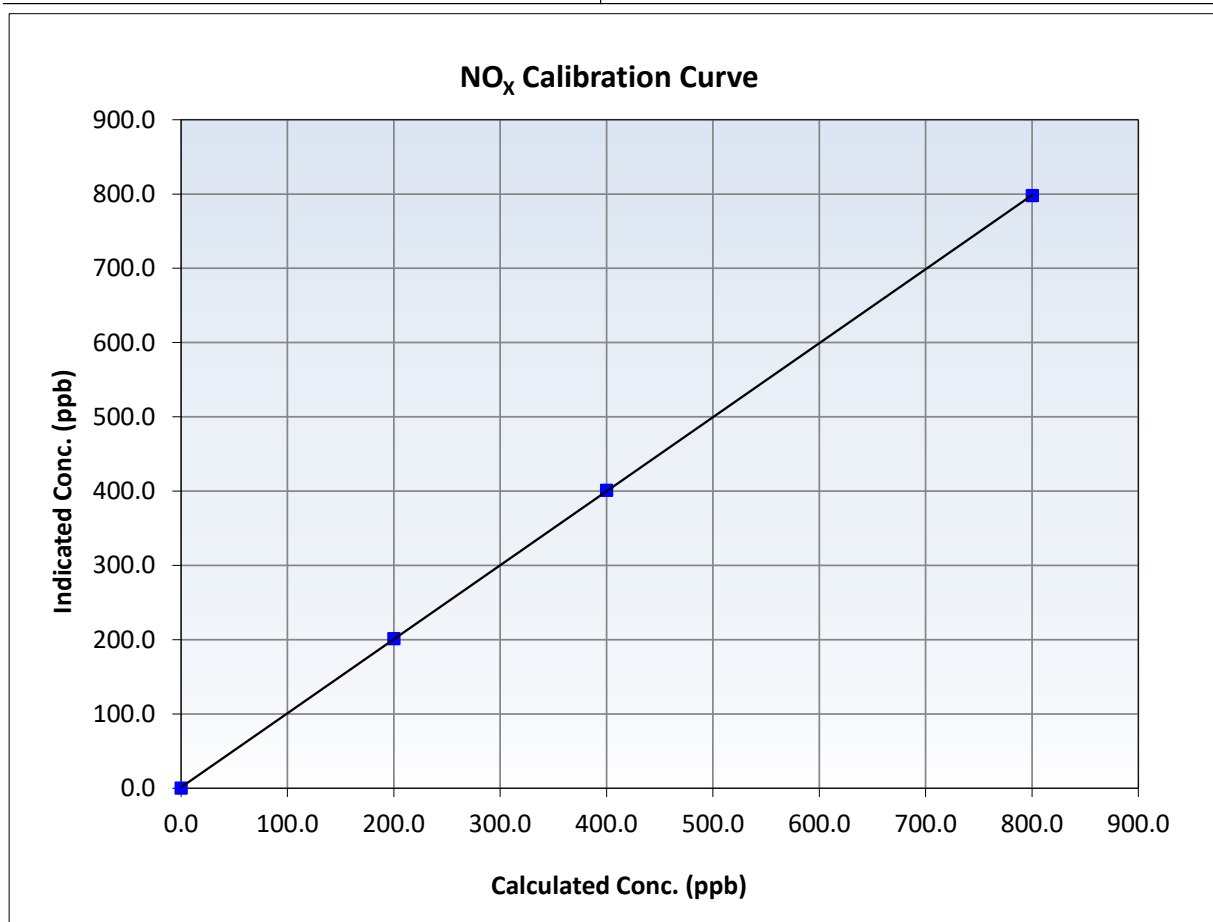
NO_x Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	NA
Station Name:	EBRT	Station Number:	AMS 513
Start Time (MST):	10:49	End Time (MST):	14:52
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	0.1	----	Correlation Coefficient	0.999989	≥0.995
800.3	797.9	1.0030	Slope	0.996397	0.90 - 1.10
400.1	401.1	0.9975	Intercept	1.268026	+/-20
200.1	201.4	0.9934			





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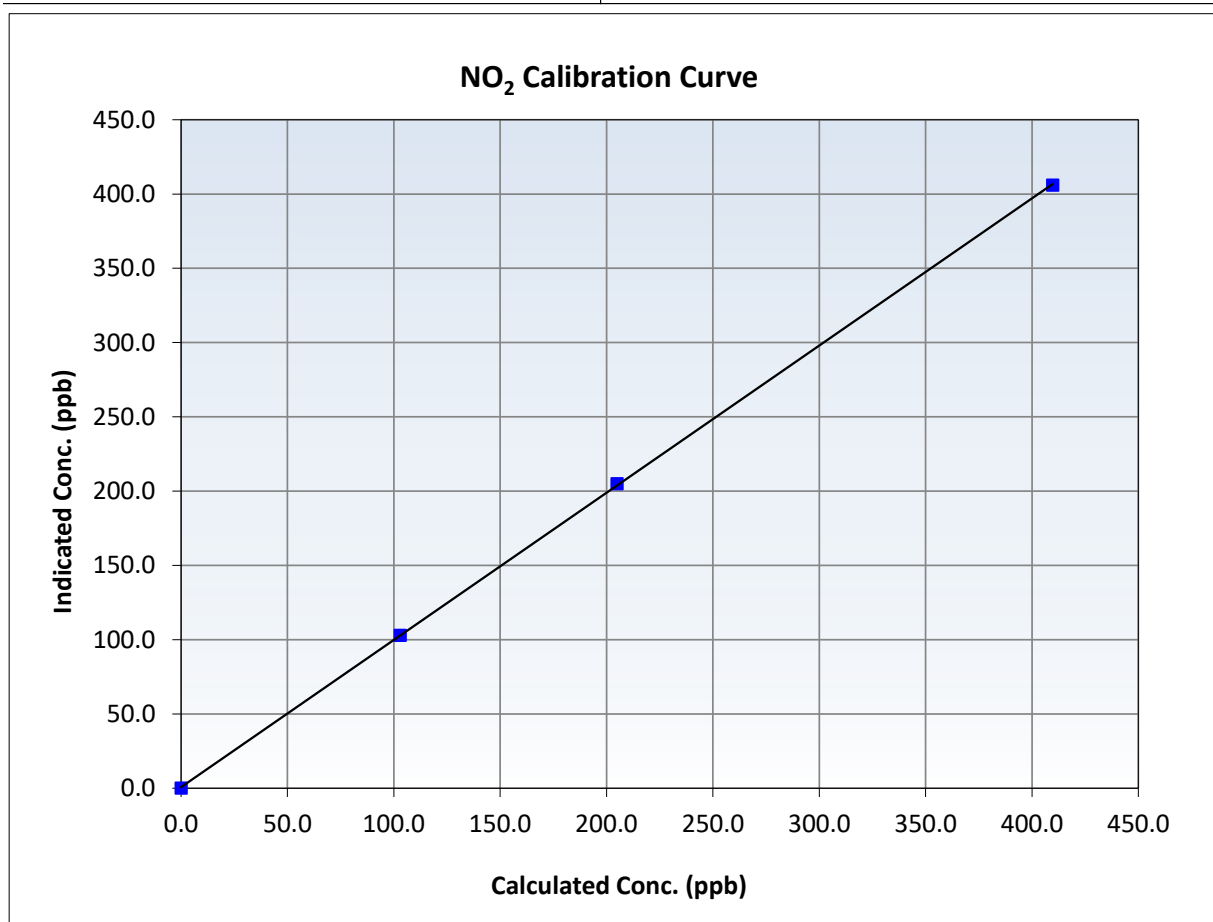
NO₂ Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	NA
Station Name:	EBRT	Station Number:	AMS 513
Start Time (MST):	10:49	End Time (MST):	14:52
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	0.1	----	Correlation Coefficient	0.999977	≥ 0.995
409.7	406.1	1.0089	Slope	0.990849	0.90 - 1.10
205.0	205.0	1.0000	Intercept	0.741934	+/-20
103.0	102.9	1.0010			





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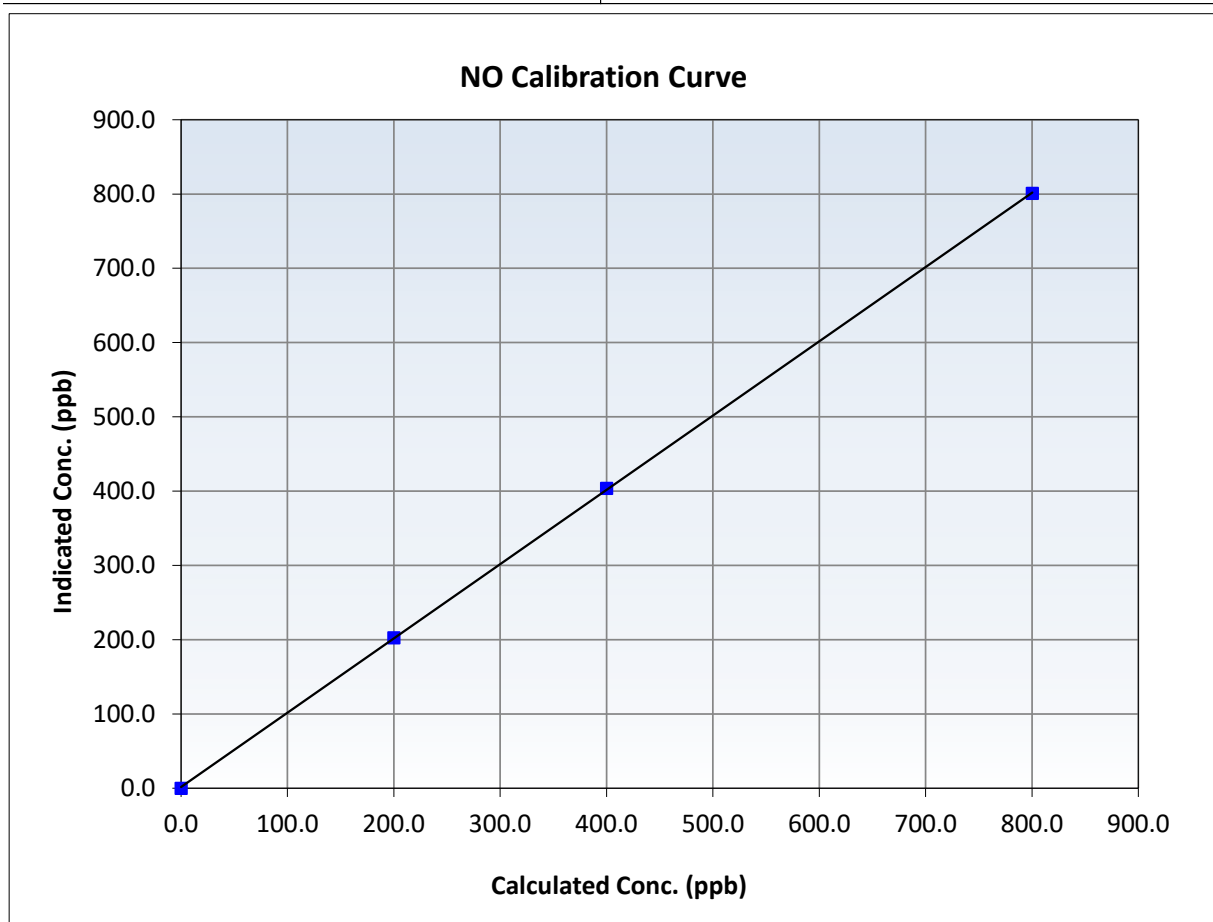
NO Calibration Summary

Station Information

Calibration Date:	August 12, 2026	Previous Calibration:	NA
Station Name:	EBRT	Station Number:	AMS 513
Start Time (MST):	10:49	End Time (MST):	14:52
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

Calibration Data

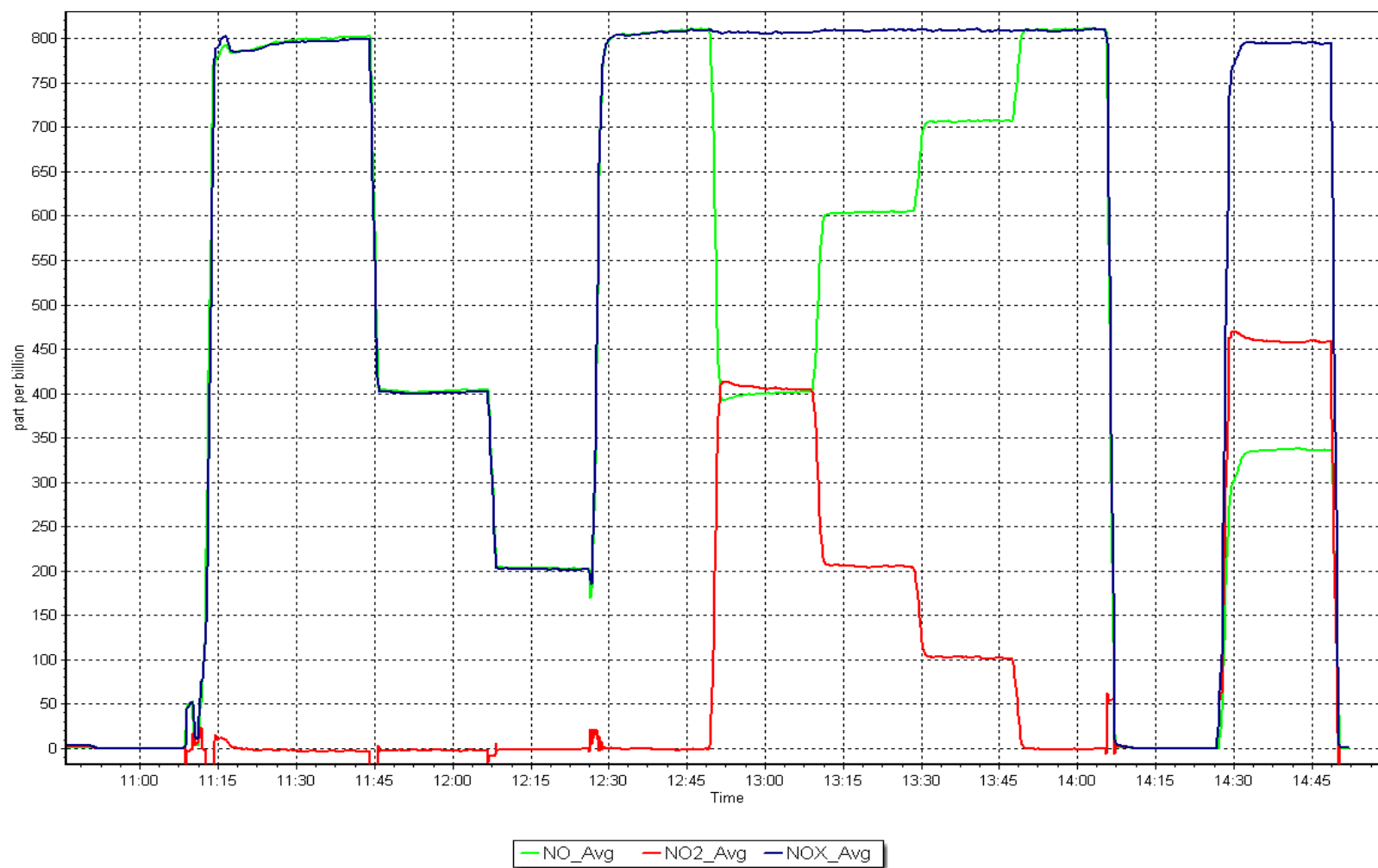
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		<u>Limits</u>
0.0	0.0	----	Correlation Coefficient	0.999976	≥ 0.995
800.3	800.8	0.9994	Slope	1.000024	$0.90 - 1.10$
400.1	403.6	0.9913	Intercept	1.648087	± 20
200.1	202.7	0.9871			



NO_x Calibration Plot

Date: August 12, 2026

Location: EBRT





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Wind Speed/Direction Calibration Report

Station Information

Station Name:	EBRT	Station Number:	AMS 513
Calibration Date:	August 12, 2026	Prev Cal Date:	NA
Start Time (MST):	11:45	End Time (MST):	13:00
Tower Height (m):	NA	Reason:	Install

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	Y18364
WS Calibrator:	MetOne 053	Serial Number:	CA 05230

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error <i>Limit = +/- 1.5%</i>
0	0.0	0.0	---
200	20.2	20.3	0.4%
400	39.4	39.4	0.1%
600	58.6	58.5	0.0%
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		0.999569	$0.98 - 1.02$
Calculated intercept		-0.025684	± 2

Wind Direction Calibration

Sensor make/model:	Met One 020C-1	Serial Number:	P10614
As Found Declination (deg east of True North):	<u>NA</u>	As Left Declination (deg east of True North):	<u>13</u>
Solar noon (MST):	NA	Calc Declination*:	12.8 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	13.0	0.8%
90	91.7	0.5%
180	181.2	0.3%
270	270.4	0.1%
350	349.6	-0.1%

	<u>Start</u>	<u>Finish</u>	<u>Limits</u>
Correl Coeff (r^2)		0.999999	≥ 0.9995
Calculated slope		1.009325	$0.97 - 1.03$
Calculated intercept		-2.881538	± 5

Notes: Install calibration for EBRT.

Calibration Performed By: Rene Chamberland & Devin Russel



End of Report