WOOD BUFFALO
ENVIRONMENTAL ASSOCIATION

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Wood Buffalo Environmental Association

DECEMBER 2025

MONTHLY CALIBRATION REPORT

CONTINUOUS MONITORING

January 30, 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
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Bertha Ganter-Fort McKay	Station number:	AMS 01
Calibration Date:	December 11, 2025	Last Cal Date:	November 3, 2025
Start time (MST):	11:48	End time (MST):	15:10
Reason:	Routine		

Calibration Standards

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

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	JC1501301448	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.996496	1.000423	Backgd or Offset:	21.5	21.4
Calibration intercept:	-0.293182	-0.293328	Coeff or Slope:	0.875	0.888

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4918	81.3	800.3	788.1	1.015
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	788.3	Previous response	797.2	*% change	-1.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4918	81.3	800.3	800.6	1.000
Mid point	4959	40.7	400.6	399.9	1.002
Low point	4979	20.3	199.8	199.6	1.001
As left zero	5000	0.0	0.0	0.0	----
As left span	4918	81.3	800.3	802.5	0.997
				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

SO_2 Calibration Summary

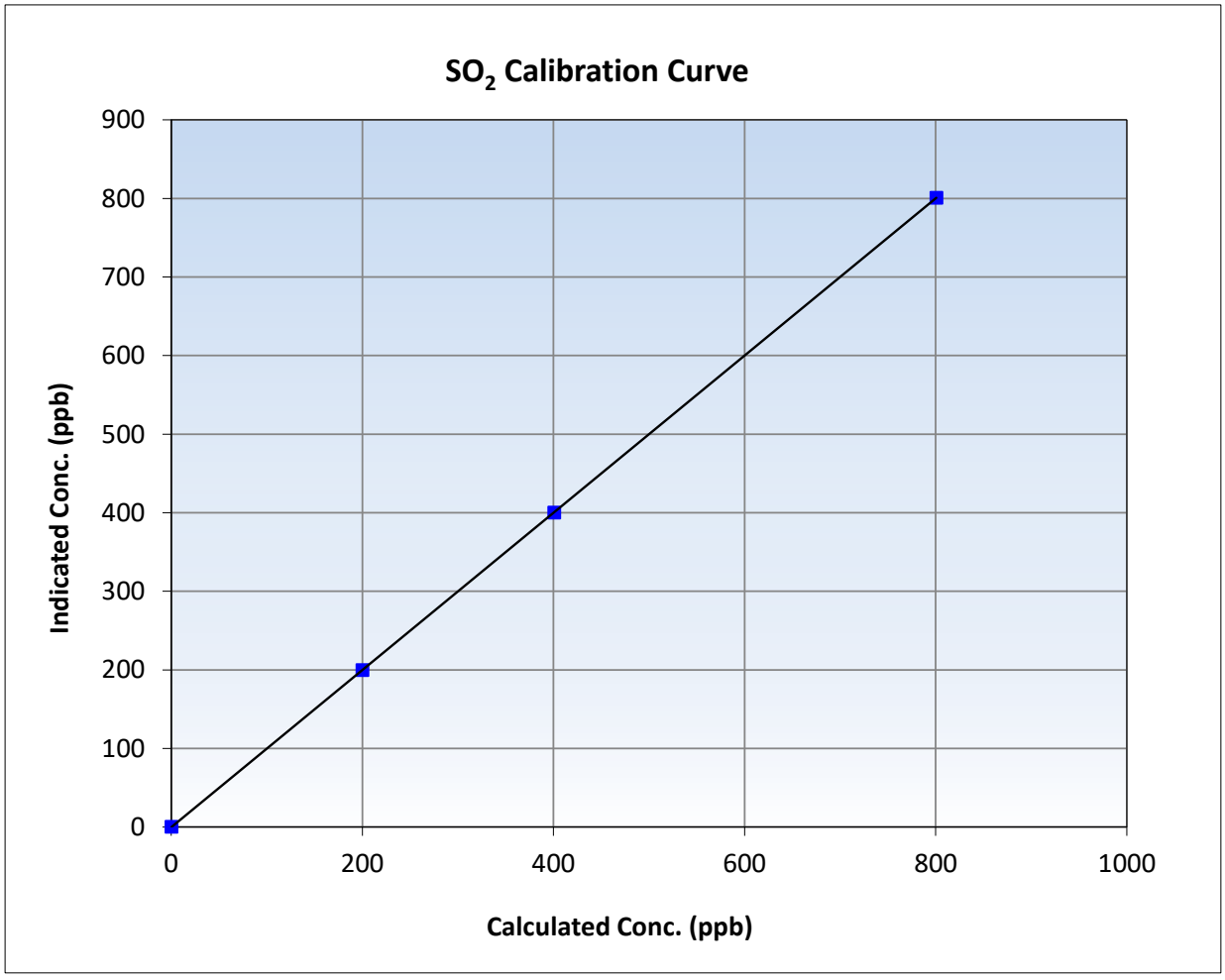
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 3, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:48	End Time (MST):	15:10
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1501301448

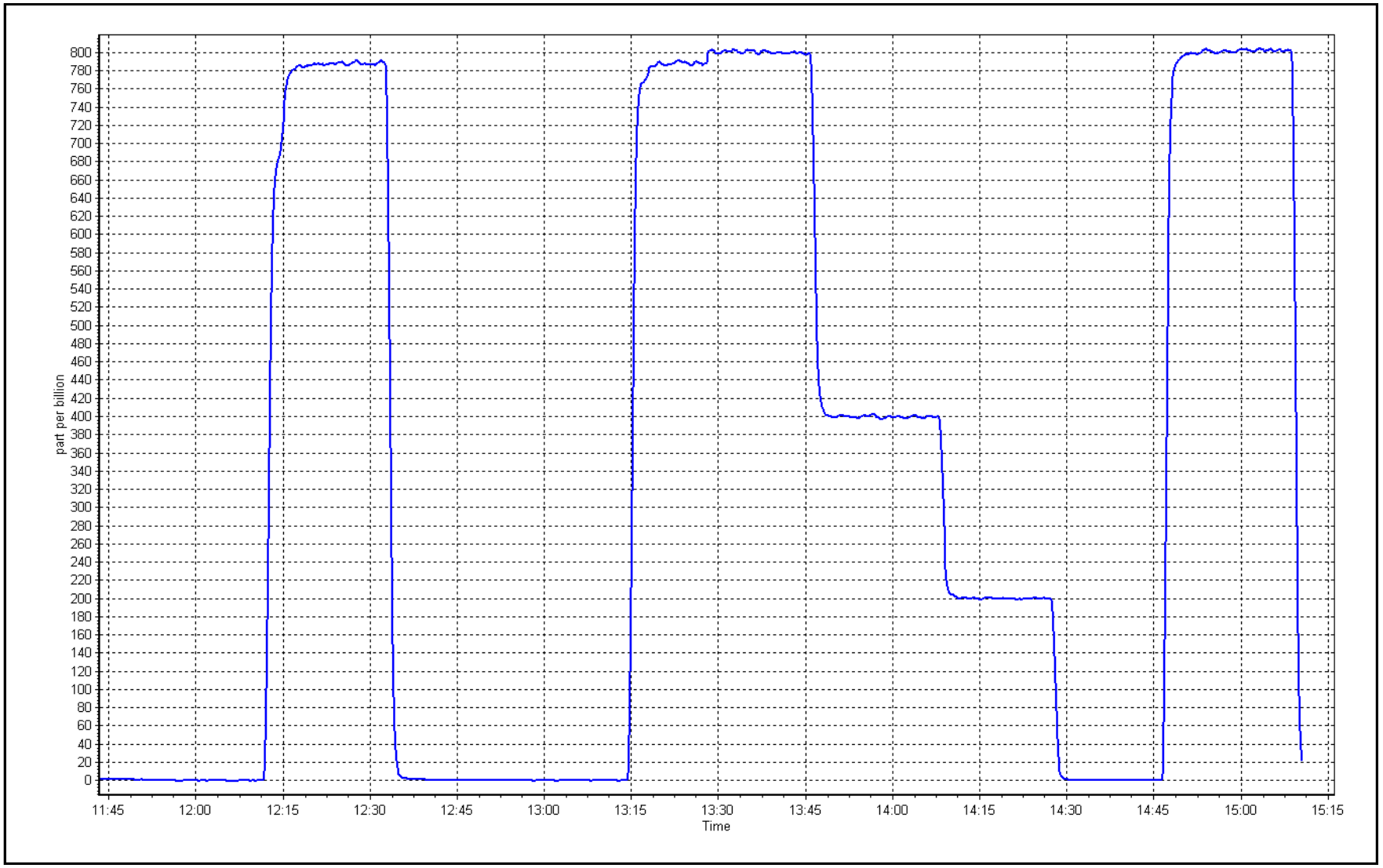
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
800.3	800.6	0.9996
400.6	399.9	1.0017
199.8	199.6	1.0011

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999999	*≥0.995*
Slope	1.000423	*0.90 - 1.10*
Intercept	-0.293328	*+/-30*



SO2 Calibration Plot Date: December 11, 2025 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:	December 10, 2025	Last Cal Date:	November 4, 2025
Start time (MST):	12:17	End time (MST):	16:33
Reason:	Routine		

Calibration Standards

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

Analyzer Information

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

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.003817	0.992949	Backgd or Offset:	2.13	2.13
Calibration intercept:	-0.178082	-0.197762	Coeff or Slope:	1.119	1.119

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4917	82.6	80.0	78.9	1.012
As found Mid point	4959	41.3	40.0	39.4	1.012
As found Low point	4979	20.7	20.0	20.1	0.992
New cylinder response					

Baseline Corr As found:	79.0	Prev response:	80.09	*% change:	-1.4%
Baseline Corr 2nd AF pt:	39.5	AF Slope:	0.986240	AF Intercept:	0.062030
Baseline Corr 3rd AF pt:	20.2	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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4917	82.6	80.0	79.3	1.008
Mid point	4959	41.3	40.0	39.5	1.012
Low point	4979	20.7	20.0	19.3	1.038
As left zero	5000	0.0	0.0	0.2	----
As left span	4917	82.6	80.0	78.7	1.016
SO2 Scrubber Check	4919	81.3	813.0	-0.1	----

Date of last scrubber change:	December 17, 2021	Ave Corr Factor	1.020
Date of last converter efficiency test:			

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

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

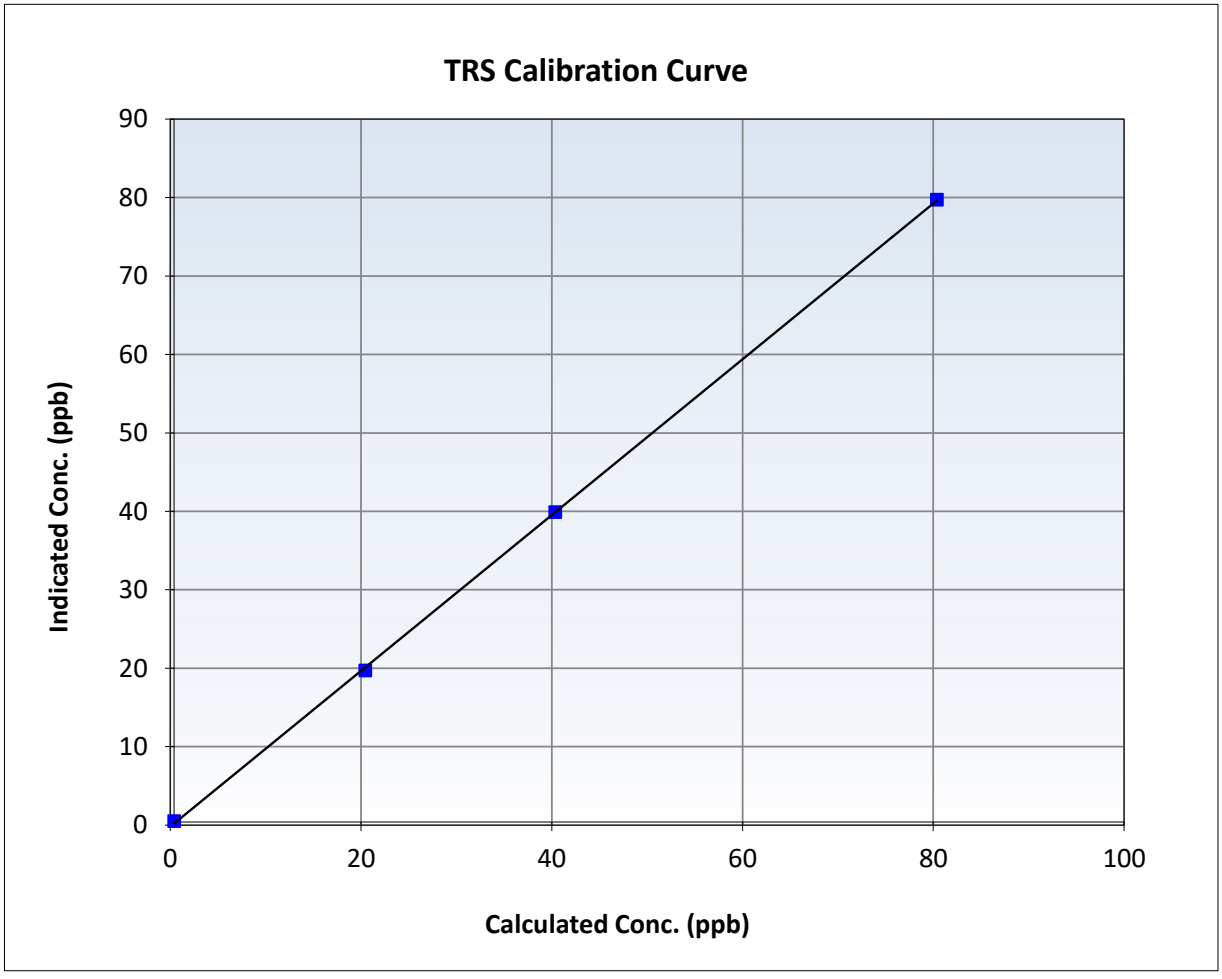
TRS Calibration Summary

Station Information

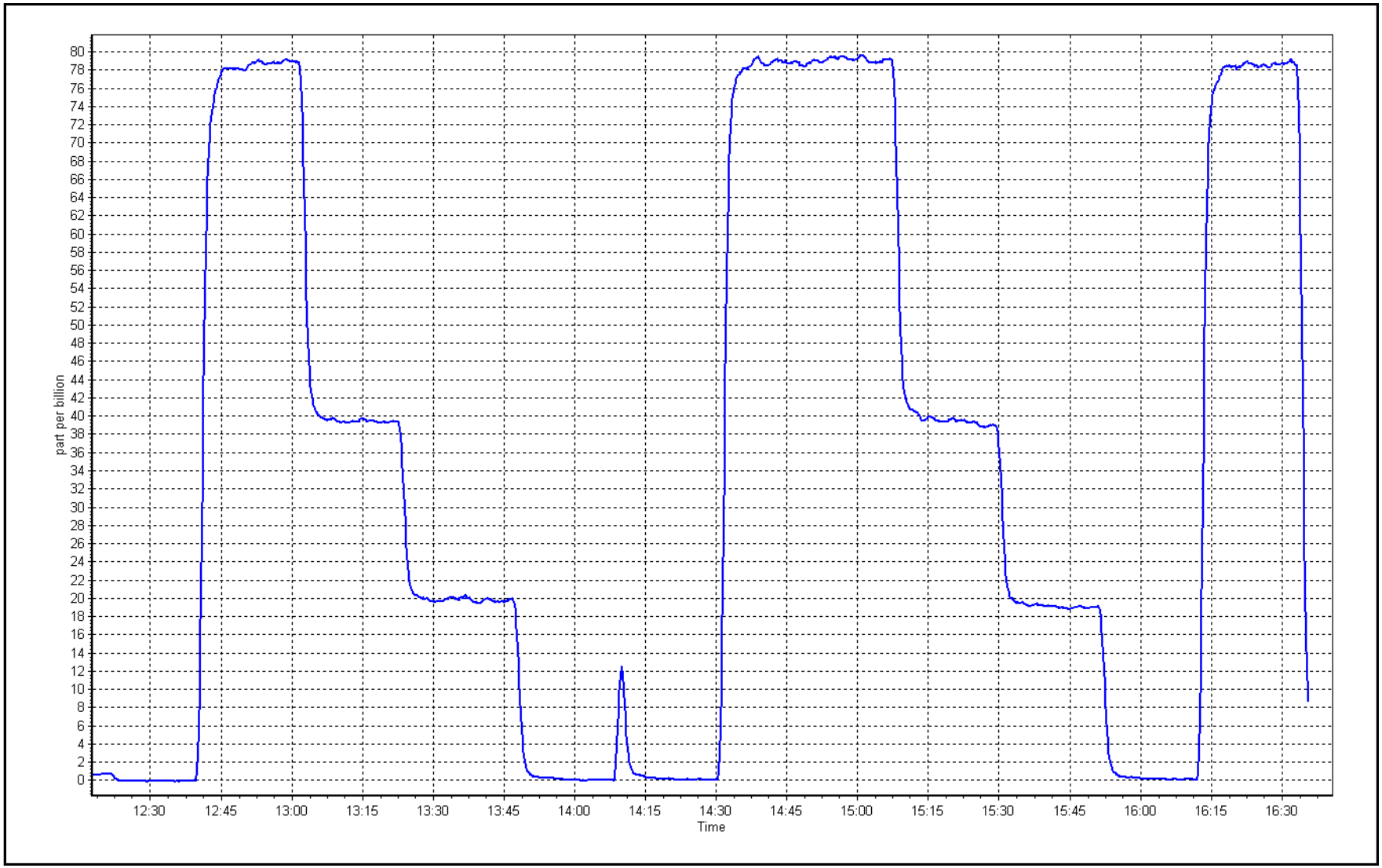
Calibration Date:	December 10, 2025	Previous Calibration:	November 4, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	12:17	End Time (MST):	16:33
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	12113311966

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.1	----	Correlation Coefficient	0.999925	*≥0.995*
80.0	79.3	1.0084	Slope	0.992949	*0.90 - 1.10*
40.0	39.5	1.0121			
20.0	19.3	1.0383	Intercept	-0.197762	*+/-3*



TRS Calibration Plot Date: December 10, 2025 Location: Bertha Ganter-Fort McKay



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Bertha Ganter-Fort McKay	Station number:	AMS 01
Calibration Date:	December 10, 2025	Last Cal Date:	November 4, 2025
Start time (MST):	12:17	End time (MST):	16:33
Reason:	Routine		

Calibration Standards

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

Analyzer Information

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

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.001244	0.986094	Backgd or Offset:	2.01	2.01
Calibration intercept:	-0.138038	0.242119	Coeff or Slope:	0.973	0.973

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4917	82.6	80.0	78.0	1.026
As found Mid point	4959	41.3	40.0	39.3	1.020
As found Low point	4979	20.7	20.0	20.0	1.007
New cylinder response					

Baseline Corr As found:	77.9	Prev response:	79.92	*% change:	-2.6%
Baseline Corr 2nd AF pt:	39.2	AF Slope:	0.972944	AF Intercept:	0.302317
Baseline Corr 3rd AF pt:	19.9	AF Correlation:	0.999969	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4917	82.6	80.0	79.1	1.011
Mid point	4959	41.3	40.0	39.6	1.009
Low point	4979	20.7	20.0	20.1	0.997
As left zero	5000	0.0	0.0	0.4	----
As left span	4917	82.6	80.0	78.6	1.017
SO2 Scrubber Check	4919	81.3	813.0	-0.3	----

Date of last scrubber change:		January 25, 2024		Ave Corr Factor	1.006
Date of last converter efficiency test:		November 7, 2024		107.9%	efficiency

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

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

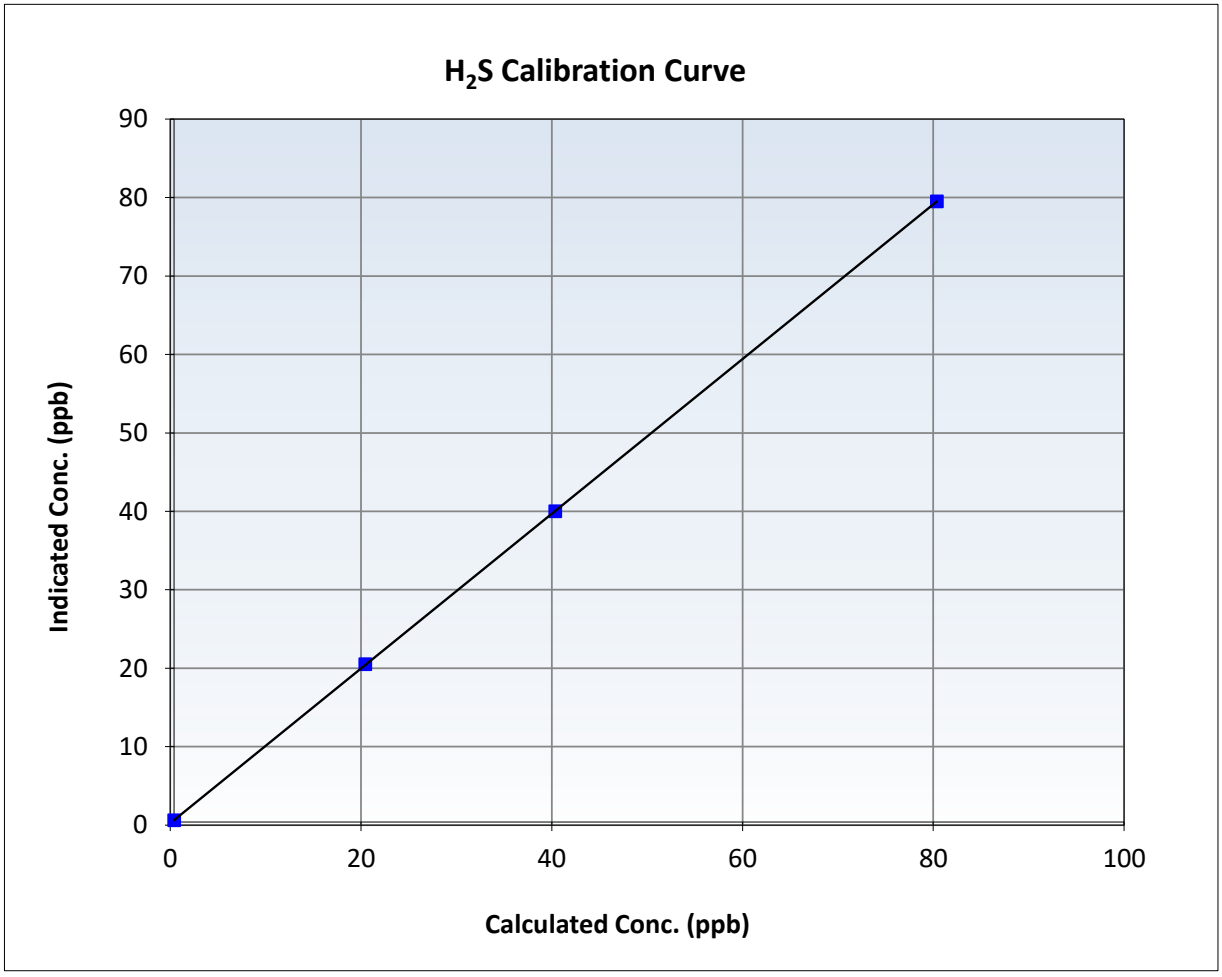
H_2S Calibration Summary

Station Information

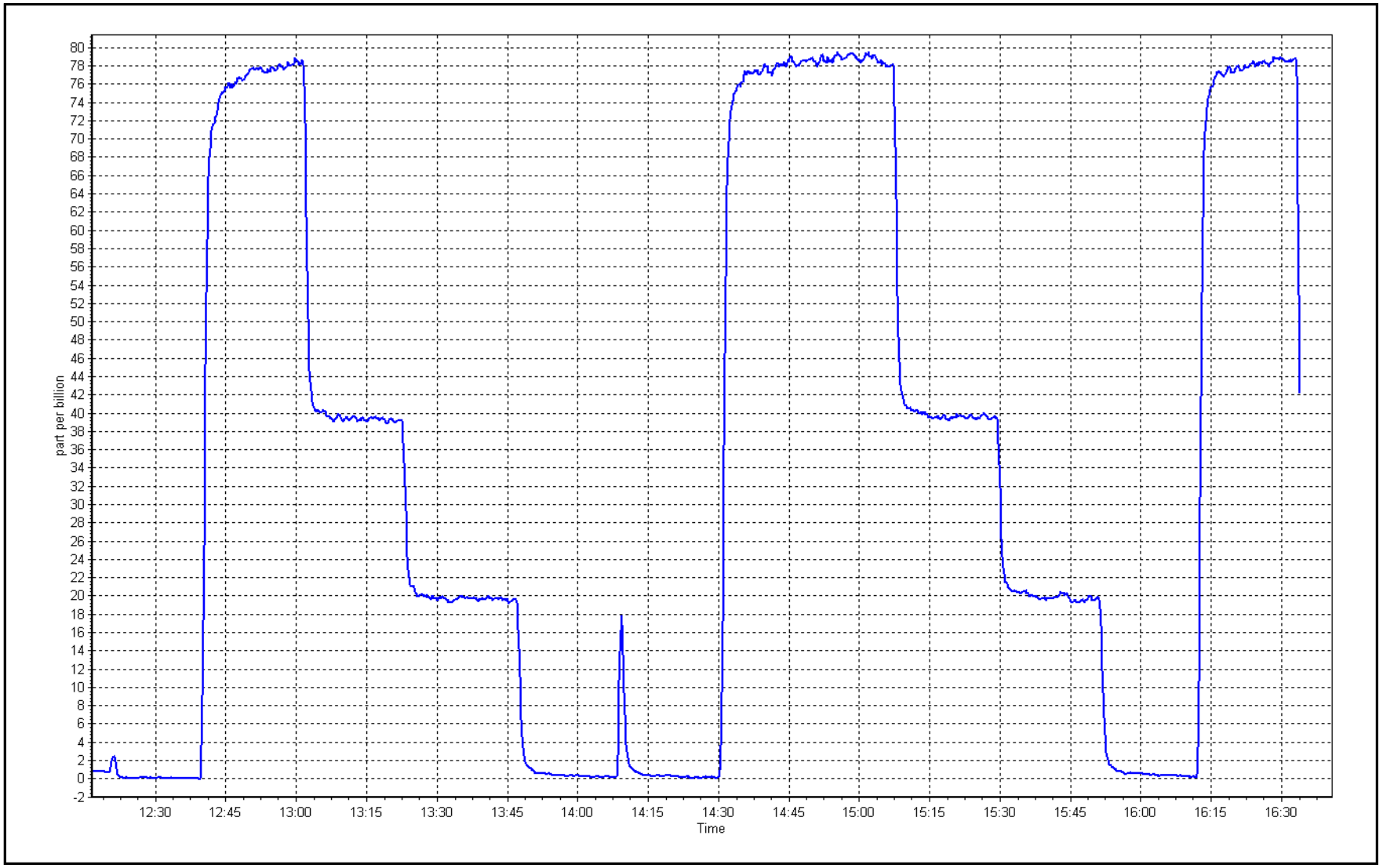
Calibration Date:	December 10, 2025	Previous Calibration:	November 4, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	12:17	End Time (MST):	16:33
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	1200326167

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.2	----	Correlation Coefficient	0.999996	*≥0.995*
80.0	79.1	1.0109	Slope	0.986094	*0.90 - 1.10*
40.0	39.6	1.0095			
20.0	20.1	0.9970	Intercept	0.242119	*+/-3*



H_2S Calibration Plot Date: December 10, 2025 Location: Bertha Ganter-Fort McKay



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Bertha Ganter-Fort McKay	Station number:	AMS 01
Calibration Date:	December 11, 2025	Last Cal Date:	November 3, 2025
Start time (MST):	11:48	End time (MST):	15:10
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC418809		Cal Gas Expiry Date:	March 10, 2031	
CH4 Cal Gas Conc.	497.2	ppm	CH4 Equiv Conc.	1061.8	ppm
C3H8 Cal Gas Conc.	205.3	ppm			
Removed Gas Cert:	NA		Removed Gas Expiry:	NA	
Removed CH4 Conc.	497.2	ppm	CH4 Equiv Conc.	1061.8	ppm
Removed C3H8 Conc.	205.3	ppm	Diff between cyl (THC):		
Diff between cyl (CH_4):			Diff between cyl (NM):		
Calibrator Model:	Teledyne API T700		Serial Number:	3565	
Zero Air Gen model:	Teledyne API T701		Serial Number:	146	

Analyzer Information

Analyzer make:	Thermo 55i		Analyzer serial #:	1193585648	
THC Range:	0 - 20 ppm		NMHC/CH4 Range:	0 - 10 ppm	
	Start	***Finish***		***Start***	***Finish***
CH4 SP Ratio:	2.51E-04	2.47E-04	NMHC SP Ratio:	4.96E-05	4.79E-05
CH4 Retention time:	15.0	15.0	NMHC Peak Area:	185005	191465
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4918	81.3	17.27	17.54	0.984
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	17.54	Prev response	17.26	*% change	1.6%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	81.3	17.27	17.29	0.998
Mid point	4959	40.7	8.64	8.63	1.002
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	17.30	0.998
				Average Correction Factor	0.999

Notes: Changed the inlet filter and H2 cylinder after as founds. Adjusted the span.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4918	81.3	9.18	9.41	0.976
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.41	Prev response	9.17	*% change	2.5%
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	81.3	9.18	9.21	0.997
Mid point	4959	40.7	4.60	4.59	1.001
Low point	4979	20.3	2.29	2.31	0.993
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	9.18	9.20	0.998
				Average Correction Factor	0.997

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4918	81.3	8.09	8.14	0.994
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.13	Prev response	8.09	*% change	0.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	81.3	8.09	8.09	1.000
Mid point	4959	40.7	4.05	4.04	1.003
Low point	4979	20.3	2.02	2.02	0.999
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	8.09	8.09	0.999
				Average Correction Factor	1.001

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	0.999410	1.001116
THC Cal Offset:	0.007543	-0.000848
CH4 Cal Slope:	1.001776	0.999912
CH4 Cal Offset:	-0.006527	-0.001930
NMHC Cal Slope:	0.997326	1.002364
NMHC Cal Offset:	0.014070	0.000083

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

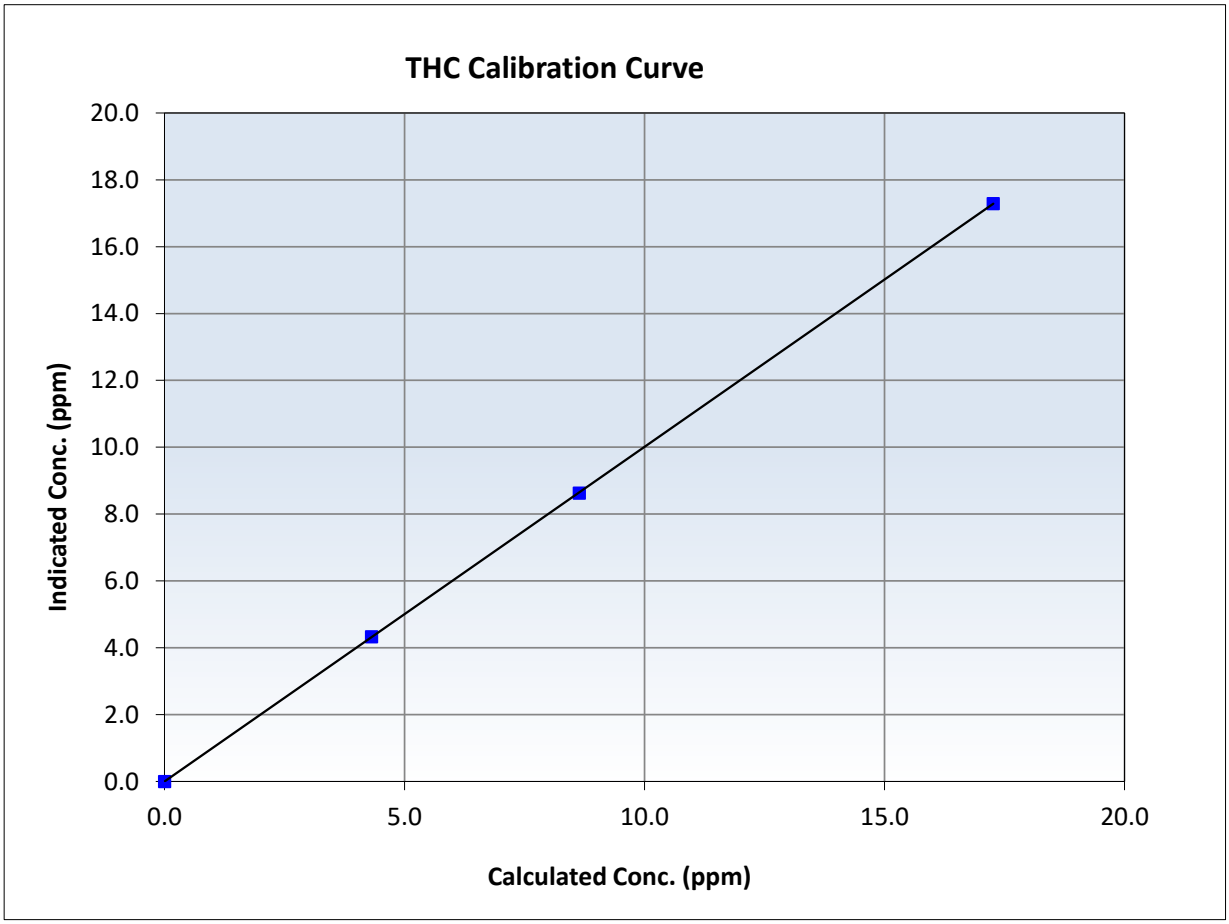
THC Calibration Summary

Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 3, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:48	End Time (MST):	15:10
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999995	≥0.995
17.27	17.29	0.9985	Slope	1.001116	0.90 - 1.10
8.64	8.63	1.0015	Intercept	-0.000848	+/-0.5
4.31	4.33	0.9959			



Wood Buffalo Environmental Association

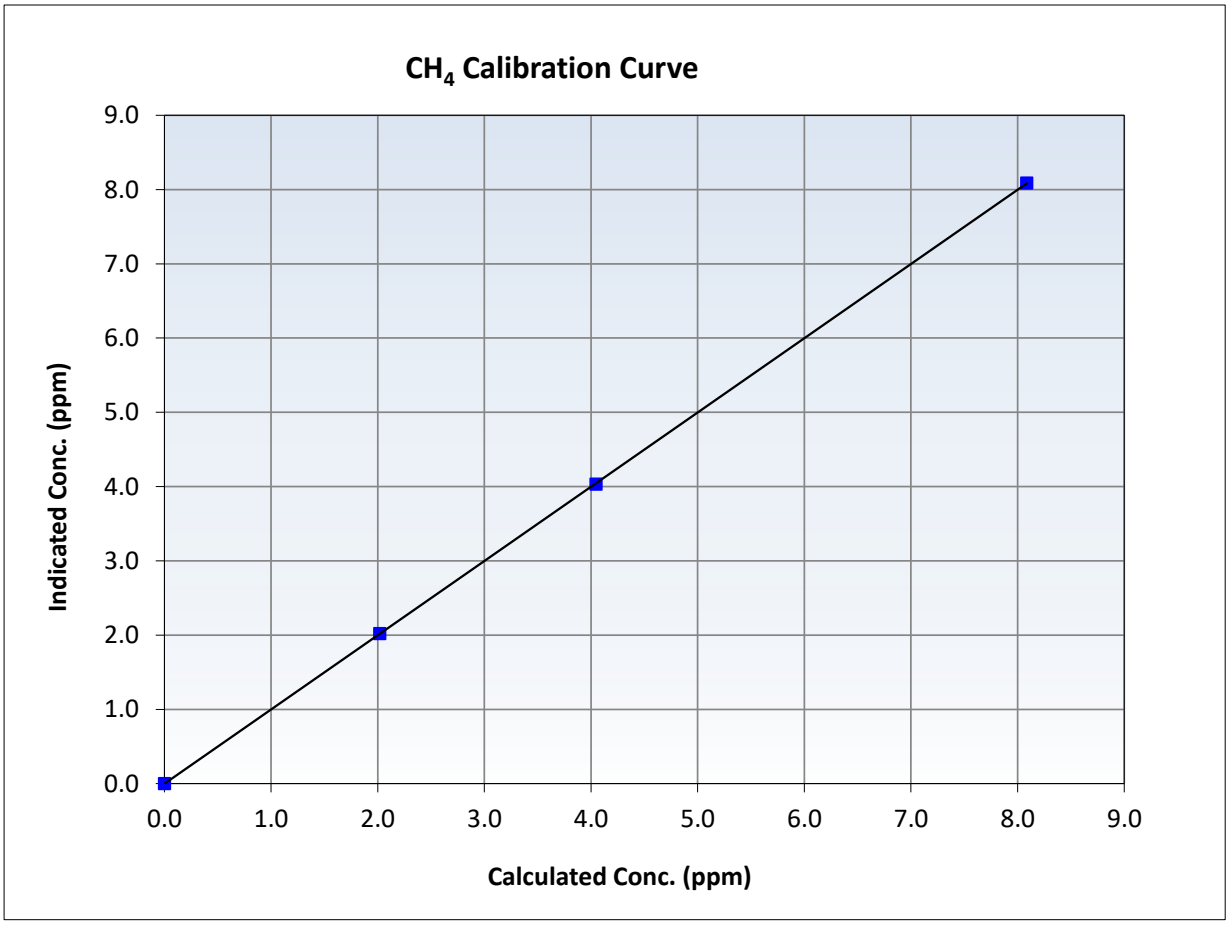
CH_4 Calibration Summary

Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 3, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:48	End Time (MST):	15:10
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999996	≥0.995
8.09	8.09	0.9998	Slope	0.999912	0.90 - 1.10
4.05	4.04	1.0031			
2.02	2.02	0.9990	Intercept	-0.001930	+/-0.5



Wood Buffalo Environmental Association

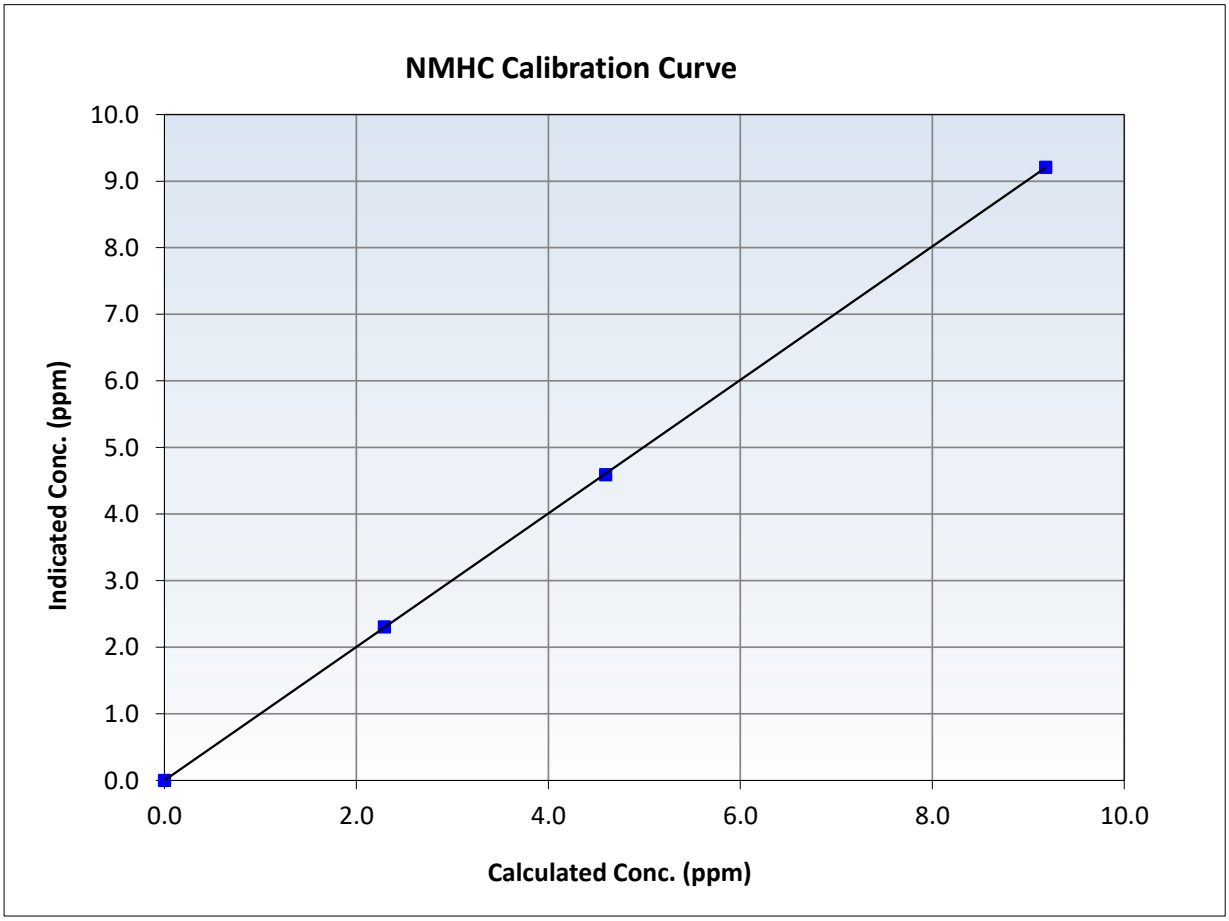
NMHC Calibration Summary

Station Information

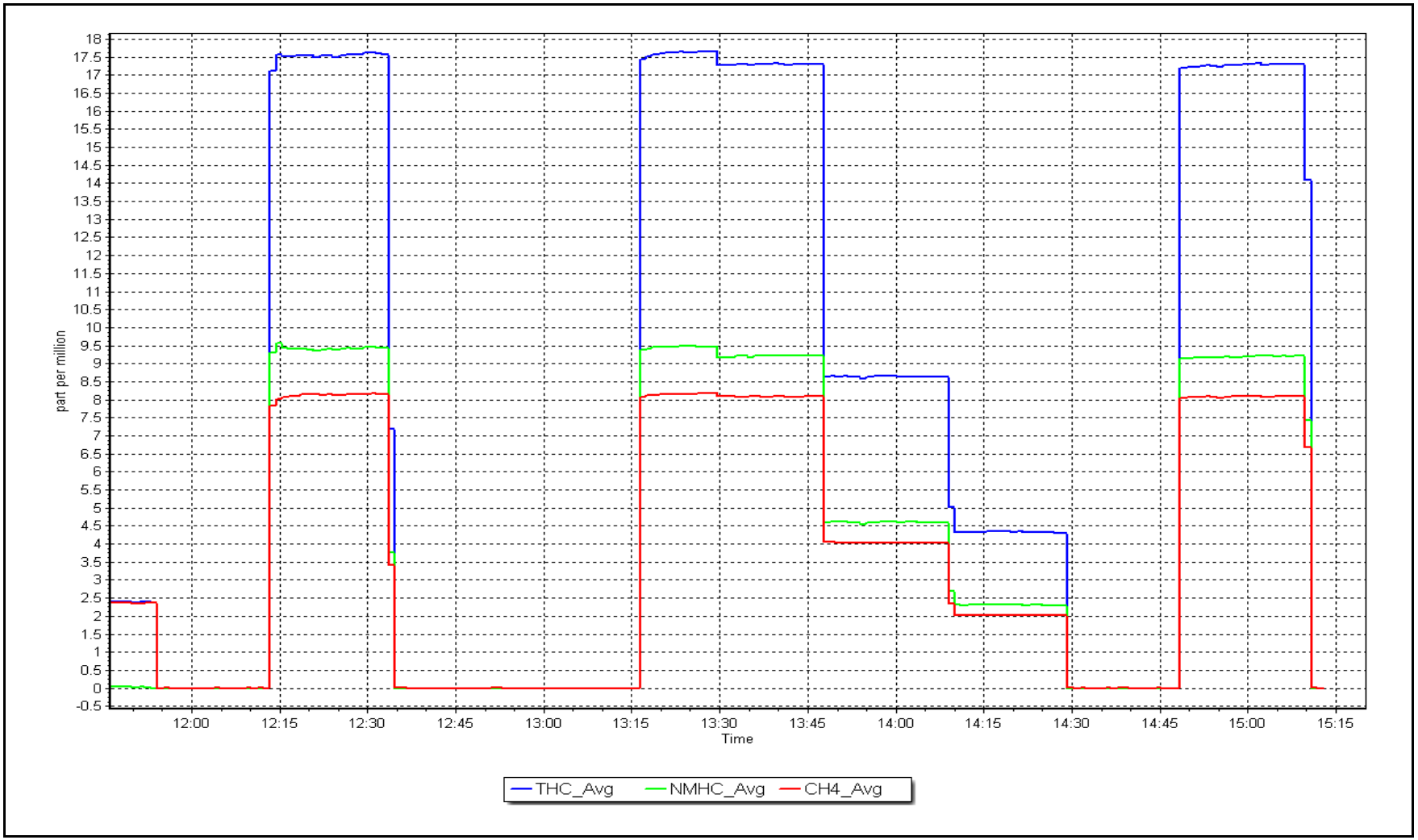
Calibration Date:	December 11, 2025	Previous Calibration:	November 3, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:48	End Time (MST):	15:10
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999993	≥0.995
9.18	9.21	0.9971	Slope	1.002364	0.90 - 1.10
4.60	4.59	1.0009			
2.29	2.31	0.9933	Intercept	0.000083	+/-0.5



NMHC Calibration Plot Date: December 11, 2025 Location: Bertha Ganter-Fort McKay



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Bertha Ganter-Fort McKay	Station number:	AMS 01
Calibration Date:	December 31, 2025	Last Cal Date:	December 11, 2025
Start time (MST):	12:23	End time (MST):	15:22
Reason:	Maintenance		

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 (CH_4):			Diff between cyl (NM):		
Calibrator Model:	Teledyne API T700		Serial Number:	3565	
Zero Air Gen model:	Teledyne API T701		Serial Number:	146	

Analyzer Information

Analyzer make:	Thermo 55i		Analyzer serial #:	1193585648	
THC Range:	0 - 20 ppm		NMHC/CH4 Range:	0 - 10 ppm	
	Start	***Finish***		***Start***	***Finish***
CH4 SP Ratio:	2.47E-04	2.48E-04	NMHC SP Ratio:	4.79E-05	4.76E-05
CH4 Retention time:	15.0	15.0	NMHC Peak Area:	191465	192877
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	81.3	17.27	17.15	1.007
Mid point	4959	40.7	8.64	8.57	1.009
Low point	4979	20.3	4.31	4.30	1.003
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	17.27	17.14	1.007
				Average Correction Factor	1.006

Notes: As founds could not be completed. Changed the pump. Adjusted the span.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	81.3	9.18	9.08	1.011
Mid point	4959	40.7	4.60	4.54	1.011
Low point	4979	20.3	2.29	2.29	1.002
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	81.3	9.18	9.07	1.012
				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)) *Limit = 0.90-1.10*
As found zero					
As found High point					
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	NA	Prev response	NA	*% change	NA
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
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	8.07	1.002
				Average Correction Factor	1.004

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	1.001116	0.992719
THC Cal Offset:	-0.000848	0.004349
CH4 Cal Slope:	0.999912	0.997170
CH4 Cal Offset:	-0.001930	-0.002730
NMHC Cal Slope:	1.002364	0.988326
NMHC Cal Offset:	0.000083	0.007479

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

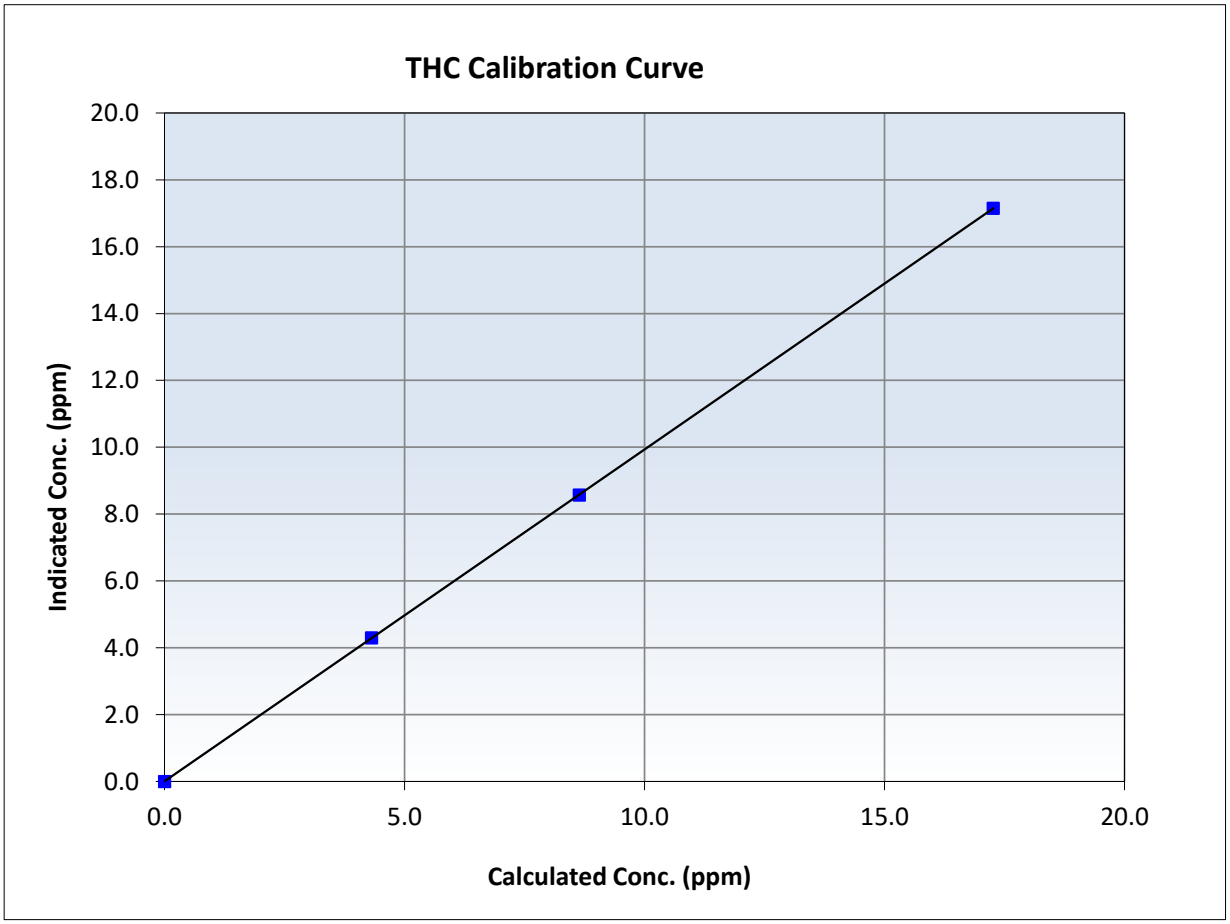
THC Calibration Summary

Station Information

Calibration Date:	December 31, 2025	Previous Calibration:	December 11, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	12:23	End Time (MST):	15:22
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999997	*≥0.995*
17.27	17.15	1.0068	Slope	0.992719	*0.90 - 1.10*
8.64	8.57	1.0088	Intercept	0.004349	*+/-0.5*
4.31	4.30	1.0027			



Wood Buffalo Environmental Association

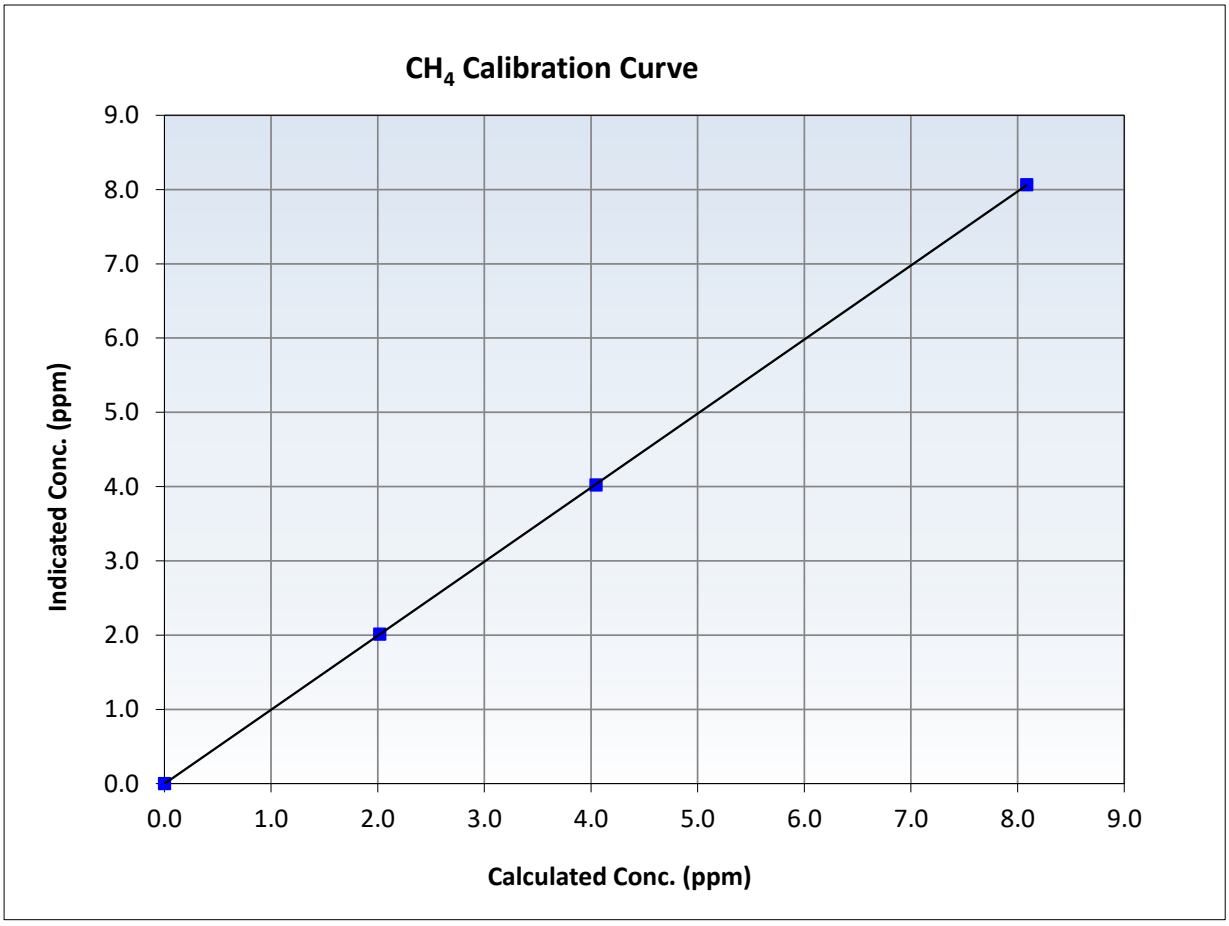
CH_4 Calibration Summary

Station Information

Calibration Date:	December 31, 2025	Previous Calibration:	December 11, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	12:23	End Time (MST):	15:22
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	0.999995	*≥0.995*
8.09	8.07	1.0026	Slope	0.997170	*0.90 - 1.10*
4.05	4.02	1.0063			
2.02	2.01	1.0029	Intercept	-0.002730	*+/-0.5*



Wood Buffalo Environmental Association

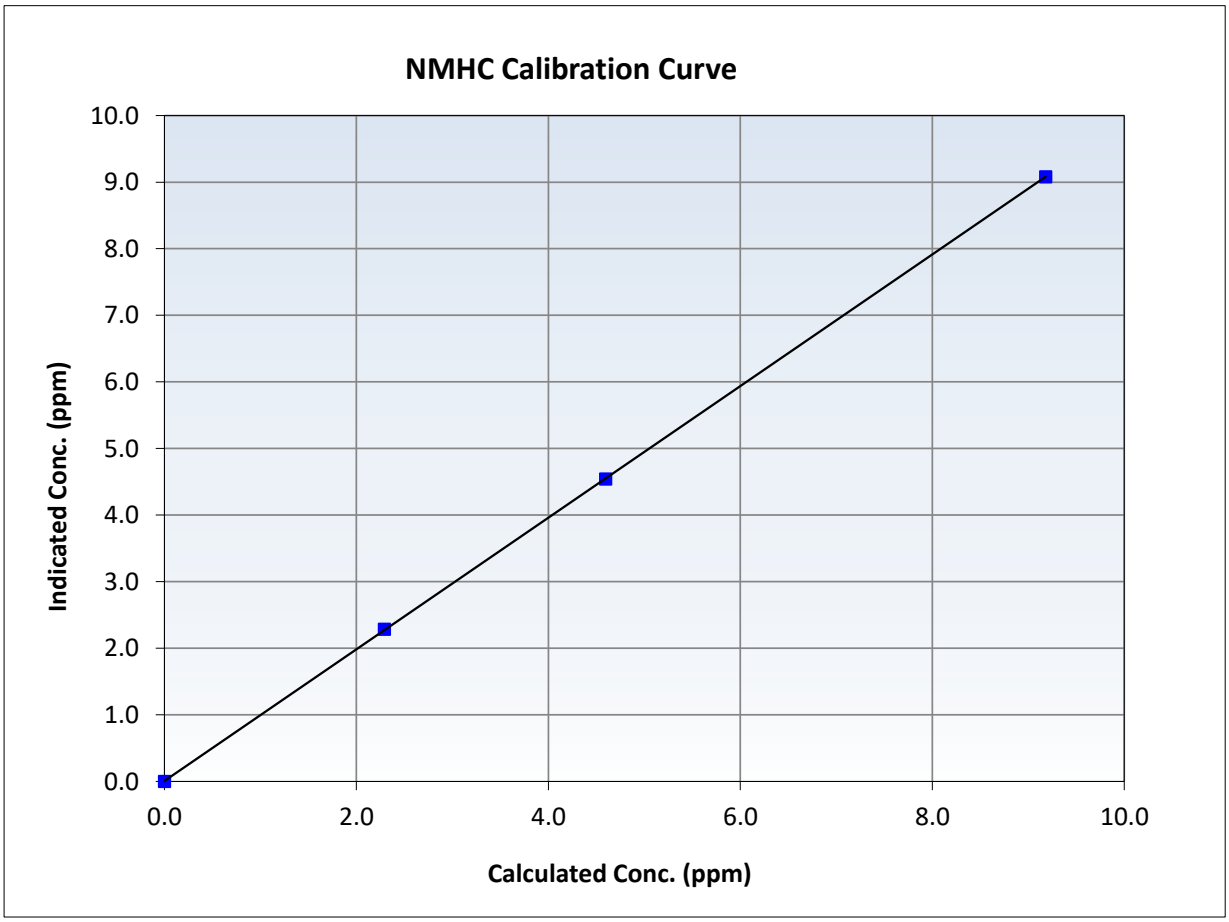
NMHC Calibration Summary

Station Information

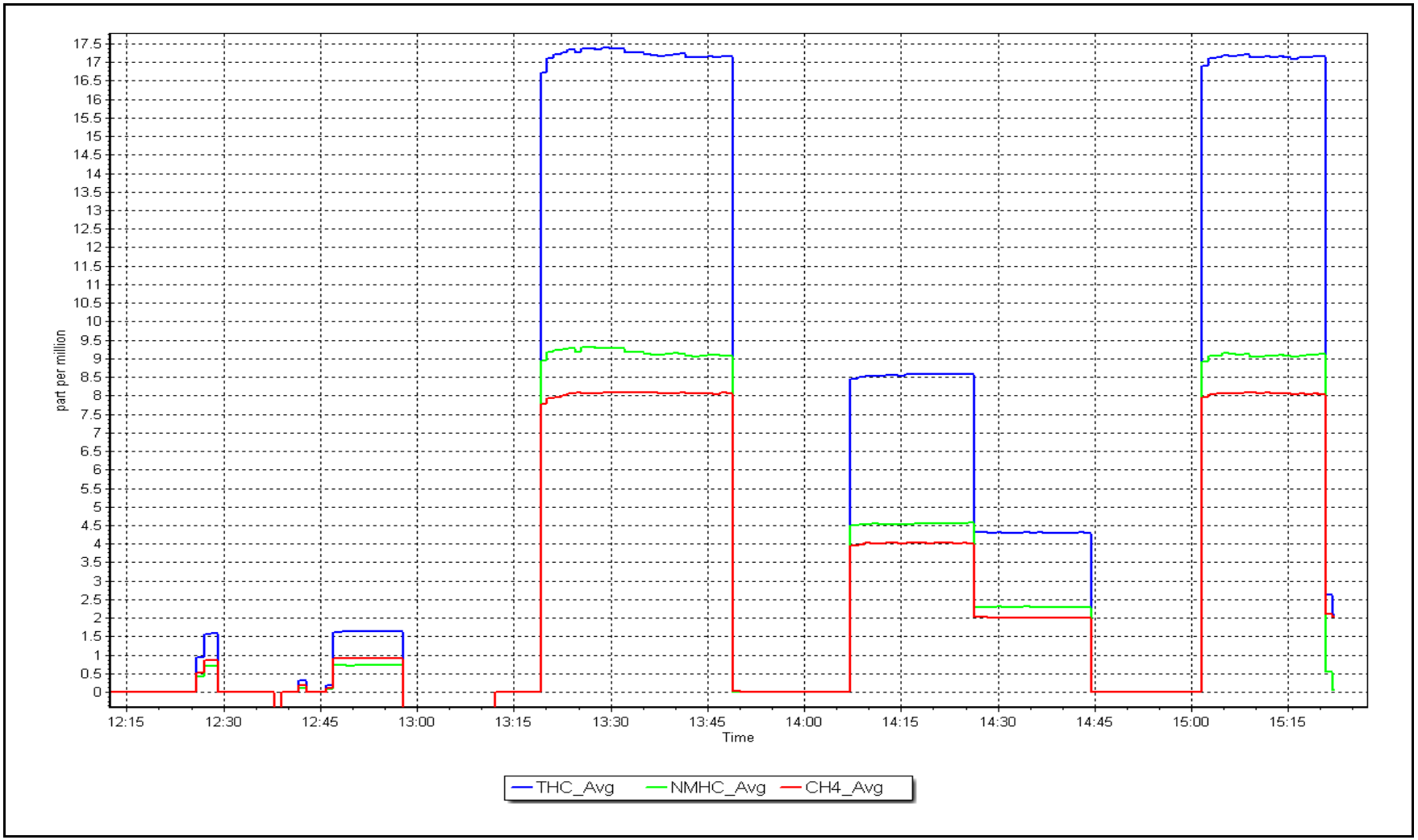
Calibration Date:	December 31, 2025	Previous Calibration:	December 11, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	12:23	End Time (MST):	15:22
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585648

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999994	*≥0.995*
9.18	9.08	1.0110	Slope	0.988326	*0.90 - 1.10*
4.60	4.54	1.0114	Intercept	0.007479	*+/-0.5*
2.29	2.29	1.0024			



NMHC Calibration Plot Date: December 31, 2025 Location: Bertha Ganter-Fort McKay



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Bertha Ganter-Fort McKay
Station number:	AMS 01
Calibration Date:	December 4, 2025
Last Cal Date:	November 11, 2025
Start time (MST):	12:08
End time (MST):	16:44
Reason:	Routine

Calibration Standards

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

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	0.4	0.0	0.4	----	----
AF High point	4932	67.6	803.1	800.4	2.7	809.4	804.3	5.1	0.9927	0.9951
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 802.3 ppb	NO = 799.7 ppb
Baseline Corr 1st pt	NO_X = 809.0 ppb	NO = 804.3 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 = 0.8%

*Percent Change NO = 0.6%

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i
Serial Number: 1336160088
NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	0.752	0.745	NO bkgnd or offset:	2.2	2.2
NOX coeff or slope:	0.994	0.998	NOX bkgnd or offset:	2.3	2.3
NO2 coeff or slope:	0.999	0.999	Reaction cell Press:	160.3	159.7

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	0.999343	0.999798
NO_X Cal Offset:	-0.220000	0.220000
NO Cal Slope:	1.001148	1.000920
NO Cal Offset:	-1.620000	-1.040000
NO_2 Cal Slope:	0.995090	1.000193
NO_2 Cal Offset:	-1.054014	-0.637373

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.4	0.1	0.4	----	----
High point	4932	67.6	803.1	800.4	2.7	803.2	800.7	2.5	0.9999	0.9996
Mid point	4966	33.8	401.5	400.2	1.4	401.7	398.8	2.9	0.9996	1.0035
Low point	4983	16.9	200.8	200.1	0.7	200.7	198.2	2.5	1.0004	1.0096
As left zero	5000	0.0	0.0	0.0	0.0	0.4	-0.1	0.5	----	----
As left span	4932	67.6	803.1	372.6	430.5	806.4	372.6	433.6	0.9959	1.0000
							Average Correction Factor		0.9999	1.0042

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.4	----	----
High GPT point	796.4	392.6	406.5	406.5	1.0000	100.0%
Mid GPT point	796.4	594.9	204.2	203.0	1.0059	99.4%
Low GPT point	796.4	695.8	103.3	101.7	1.0158	98.4%
				Average Correction Factor	1.0072	99.3%

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

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

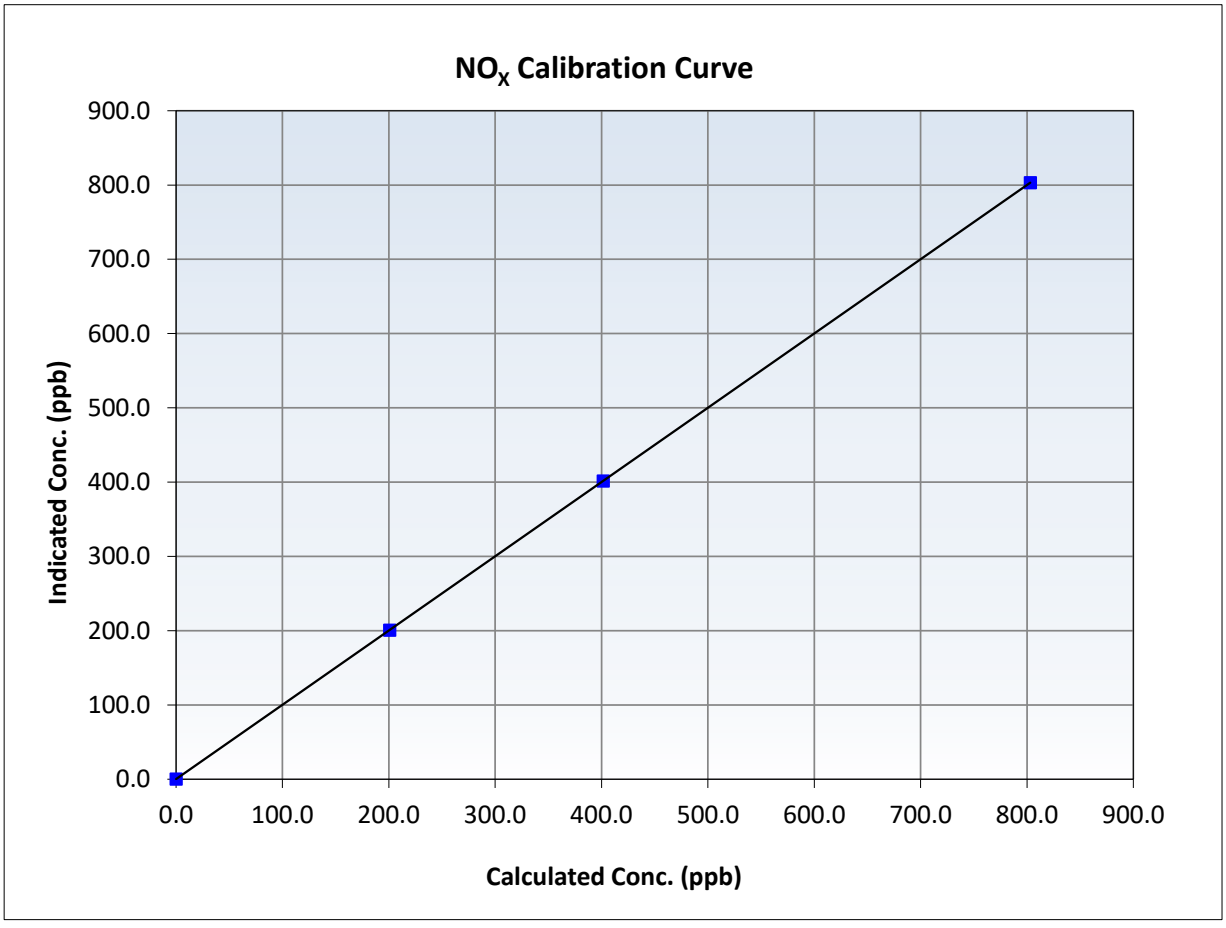
NO_X Calibration Summary

Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 11, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	12:08	End Time (MST):	16:44
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	0.4	----	Correlation Coefficient	1.000000	*≥0.995*
803.1	803.2	0.9999	Slope	0.999798	*0.90 - 1.10*
401.5	401.7	0.9996	Intercept	0.220000	*+/-20*
200.8	200.7	1.0004			



Wood Buffalo Environmental Association

NO_2 Calibration Summary

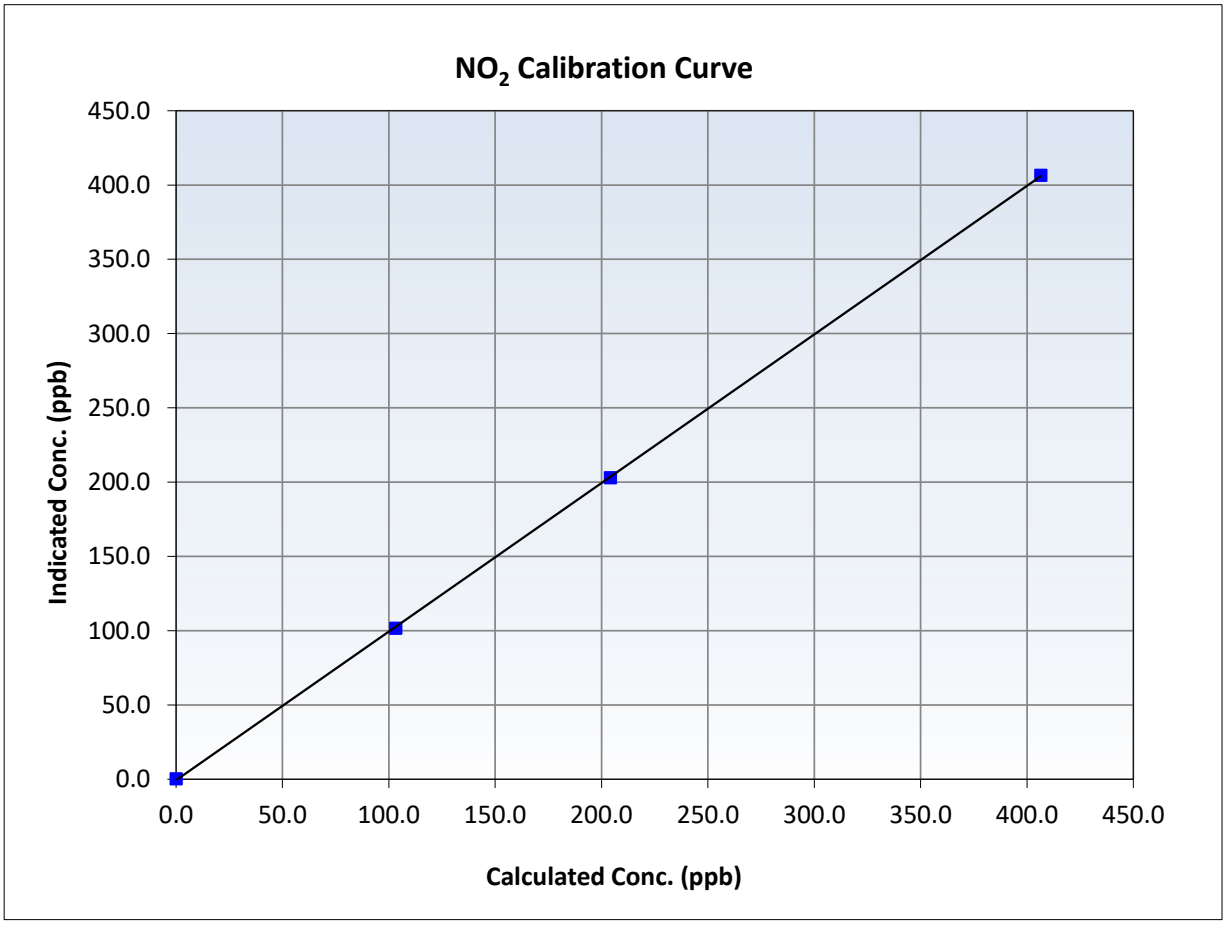
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 11, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	12:08	End Time (MST):	16:44
Analyzer make:	Thermo 42i	Analyzer serial #:	1336160088

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.4	----
406.5	406.5	1.0000
204.2	203.0	1.0059
103.3	101.7	1.0158

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999970	*≥0.995*
Slope	1.000193	*0.90 - 1.10*
Intercept	-0.637373	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

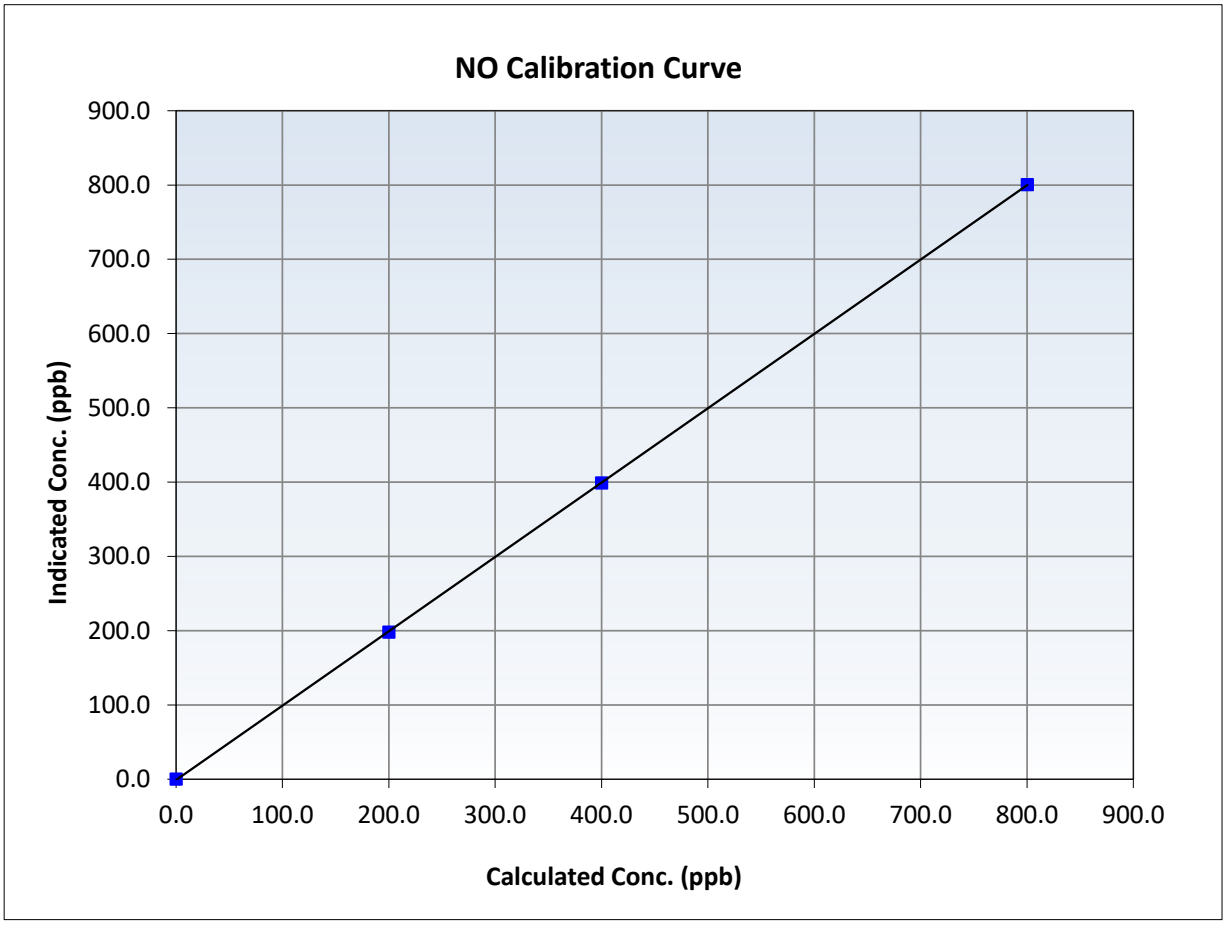
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 11, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	12:08	End Time (MST):	16:44
Analyzer make:	Thermo 42i	Analyzer serial #:	1336160088

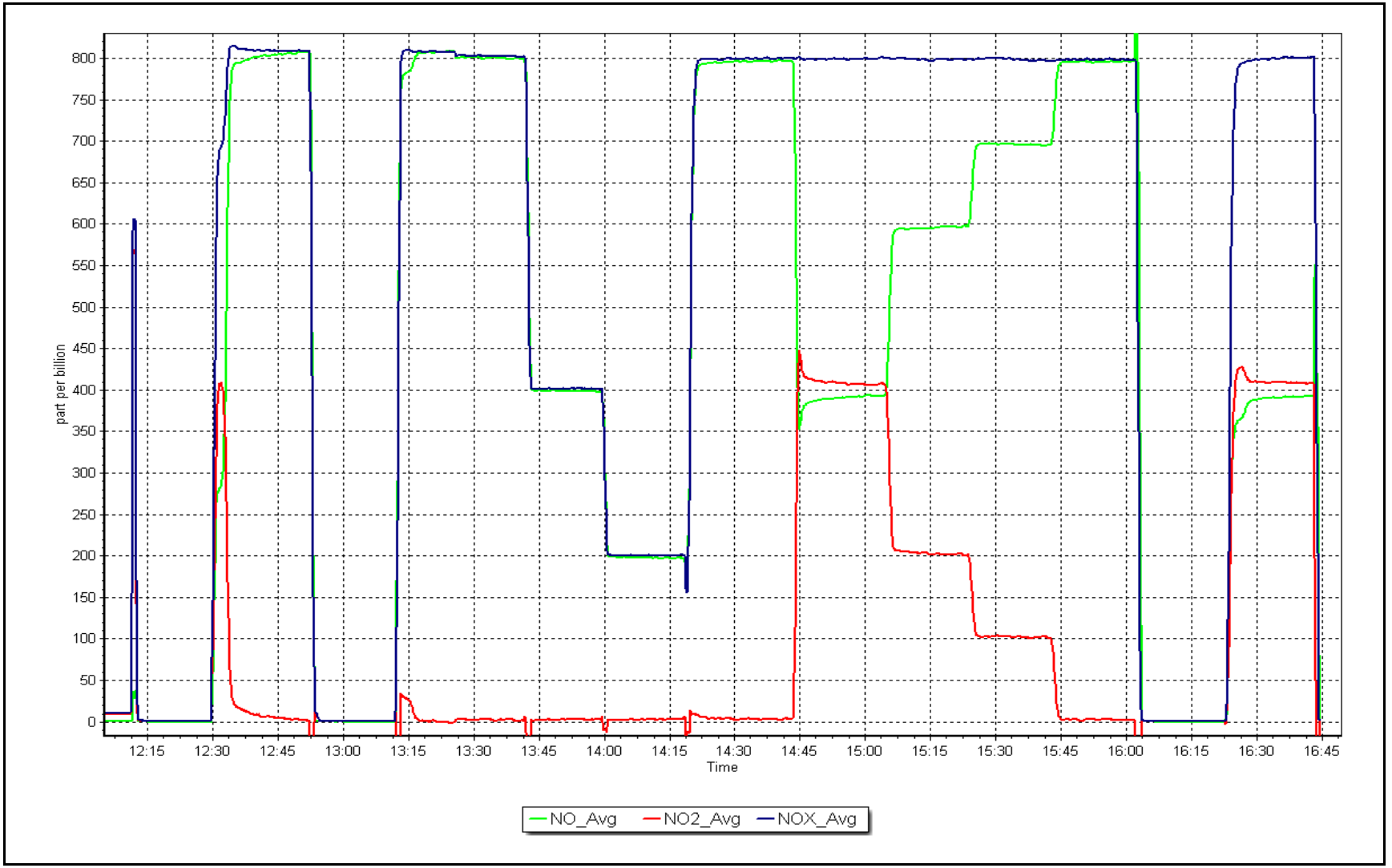
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
800.4	800.7	0.9996
400.2	398.8	1.0035
200.1	198.2	1.0096

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999991	*≥0.995*
Slope	1.000920	*0.90 - 1.10*
Intercept	-1.040000	*+/-20*



NO_X Calibration Plot Date: December 4, 2025 Location: Bertha Ganter-Fort McKay



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Bertha Ganter-Fort McKay	Station number:	AMS 01
Calibration Date:	December 3, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	11:31	End time (MST):	14:32
Reason:	Routine		

Calibration Standards

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

Analyzer Information

Analyzer make:	Teledyne API T400		Analyzer serial #:	7045	
Analyzer Range	0 - 500 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.000514	1.001714	Backgd or Offset:	1.4	2.6
Calibration intercept:	0.560000	0.800000	Coeff or Slope:	1.039	1.072

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.6	----
As found High point	5000	863.1	400.0	385.8	1.038
As found Mid point					
As found Low point					
Baseline Corr As found:	385.2	Previous response	400.8	*% change	-4.0%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.2	----
High point	5000	863.1	400.0	401.2	0.997
Mid point	5000	744.0	200.0	201.4	0.993
Low point	5000	651.7	100.0	101.6	0.984
As left zero	5000	0.0	0.0	-0.1	----
As left span	5000	863.1	400.0	404.7	0.988
				Average Correction Factor	0.991

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

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

O_3 Calibration Summary

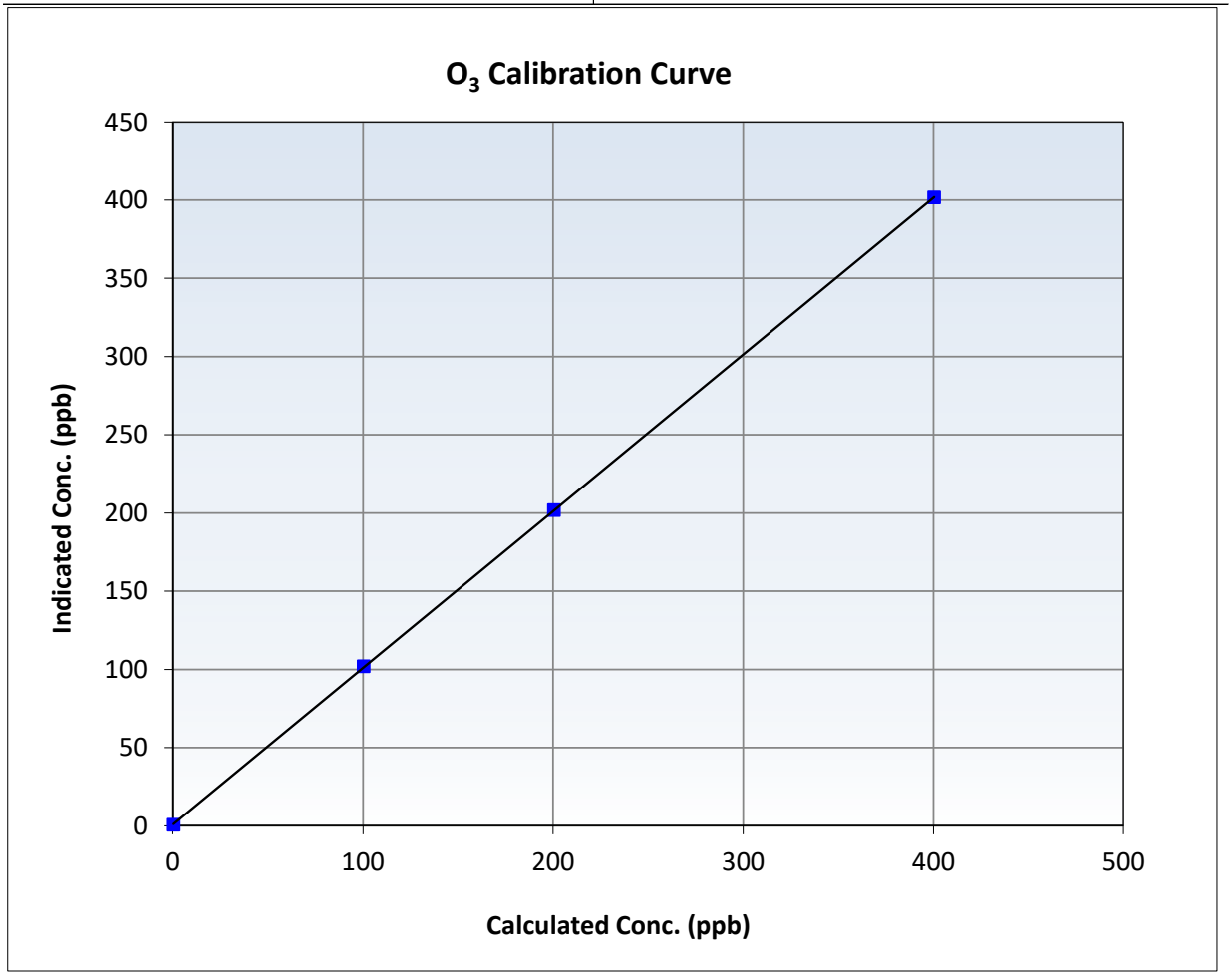
Station Information

Calibration Date:	December 3, 2025	Previous Calibration:	November 17, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:31	End Time (MST):	14:32
Analyzer make:	Teledyne API T400	Analyzer serial #:	7045

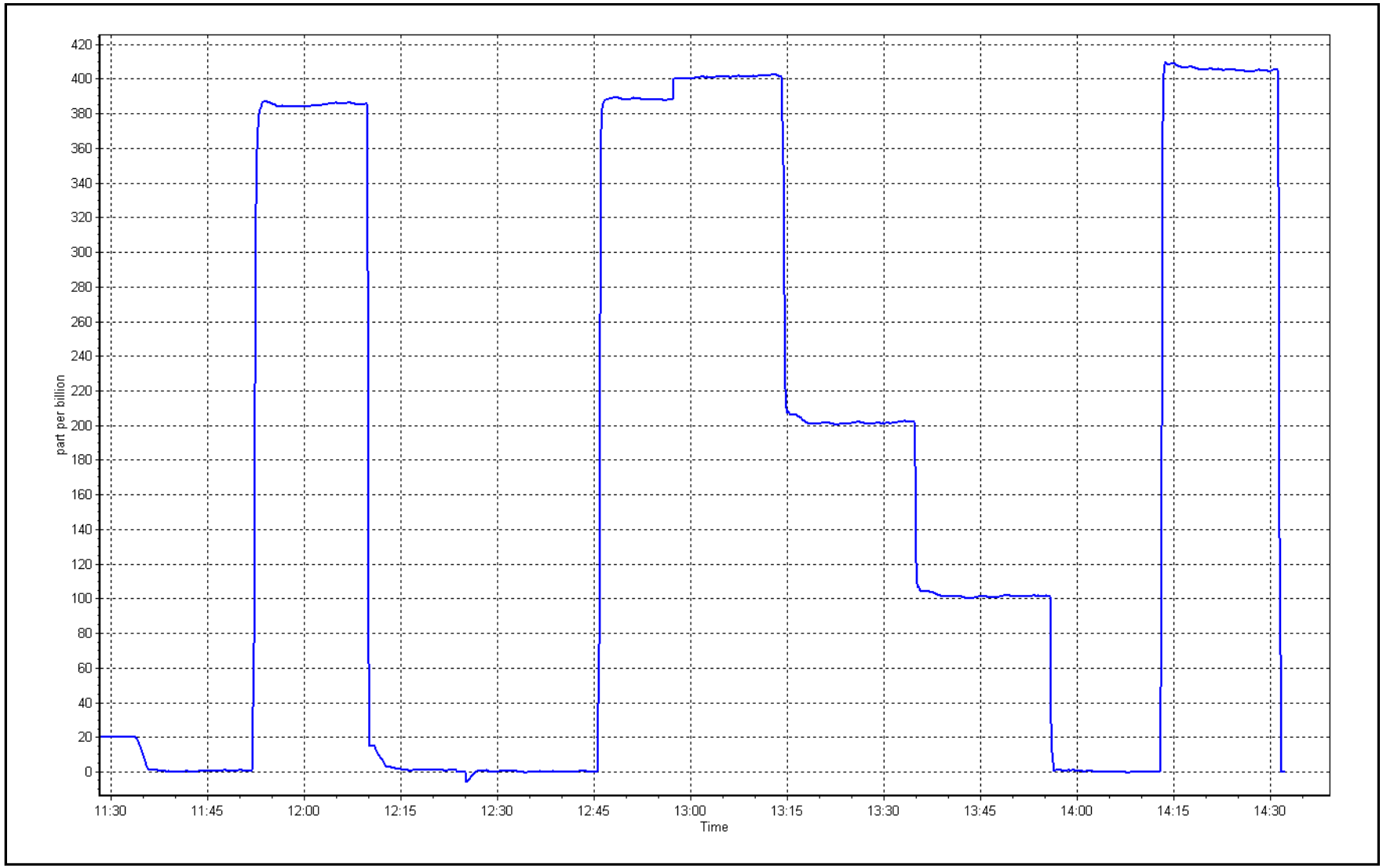
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
400.0	401.2	0.9970
200.0	201.4	0.9930
100.0	101.6	0.9843

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999990	*≥0.995*
Slope	1.001714	*0.90 - 1.10*
Intercept	0.800000	*+/- 5*



O_3 Calibration Plot Date: December 3, 2025 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:	December 11, 2025	Last Cal Date:	November 14, 2025
Start time (MST):	12:11	End time (MST):	13:40
Analyzer Make:	Teledyne API T640	S/N:	323
Particulate Fraction:	PM2.5		
Flow Meter Make/Model:	Alicat FP-25BT	S/N:	388752
Temp/RH standard:	Alicat FP-25BT	S/N:	388752

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	*(Limits)*
T (°C)	-21.2	-22.4	-21.2	☐	+/- 2 °C
P (mmHg)	749	748.09	749	☐	+/- 10 mmHg
Flow (LPM)	5	4.952	5	☐	+/- 0.25 LPM
PW% (pump)	42		42	☐	>80%
Zero Verification	PM w/o HEPA:	2.5	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: June 10, 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: NA

Date Disposable Filter Changed: NA

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

Annual Maintenance

Date Sample Tube Cleaned: NA

Date RH/T Sensor Cleaned: NA

Notes: Flow, temperature, and pressure were verified. Leak check passed.

Calibration by: Rene Chamberland

Wood Buffalo Environmental Association

Nt - NOX - NH3 Calibration Report

Station Information

Station Name:	Bertha Ganter-Fort McKay	Station number:	AMS 01
NOX Cal Date:	December 8, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	11:30	End time (MST):	16:00
NH3 Cal Date:	December 9, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	11:40	End time (MST):	14:58
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:	77.80	ppm	NH3 Gas Cylinder #:	CC711249
			NH3 Cal Gas Expiry:	December 31, 2025
Removed NH3 Conc:	77.80	ppm	Removed Cylinder #:	NA
NH3 gas Diff:			Removed cyl Expiry:	NA
Calibrator Model:	API T700		Serial Number:	3565
ZAG make/model:	API T701		Serial Number:	146

Analyzer Information

Analyzer model:	API T201		Analyzer serial #:	152	
Converter model:	API T501		Converter serial #:	484	
NH3 Range (ppb):	0 - 2000 ppb		Reaction cell Press:	7.30	
NOX Range (ppb):	0 - 1000 ppb		Sample Flow:	553	
	Start	***Finish***		***Start***	***Finish***
NO coefficient:	1.093	1.020	Nt coefficient:	1.136	1.035
NOX coefficient:	1.122	1.025	NO bkgrnd:	-0.1	-0.1
NO2 coefficient:	1.000	1.000	NOX bkgrnd:	0.0	0.0
NH3 coefficient:	0.970	0.970	Nt bkgrnd:	0.0	0.0

Calibration Statistics

	Start	***Finish***
NO_X Cal Slope:	1.005206	1.004209
NO_X Cal Offset:	0.220000	-1.180000
NO Cal Slope:	1.004175	1.008687
NO Cal Offset:	0.820000	-2.860000
NO_2 Cal Slope:	0.983228	1.006307
NO_2 Cal Offset:	0.140606	1.715340
NH3 Cal Slope:	1.001563	1.004436
NH3 Cal Offset:	1.006481	-3.739477
Nt Cal Slope:	1.004131	1.007036
Nt Cal Offset:	1.512338	-3.735237

Wood Buffalo Environmental Association

NO_X - NO - NO_2 Calibration Report

NOx / NO / Nt As Found Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated Nt concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	Baseline corr NOx Correction factor (Cc/Ic) *Limit = 0.9 - 1.0*	Baseline corr NO Correction factor (Cc/Ic) *Limit = 0.9 - 1.0*
As found zero	5000	0.0	0.0	0.0	0.0	0.6	0.6	0.5	----	----
As found span	4932	67.6	803.1	800.4	803.1	882.0	859.9	888.7	0.9105	0.9308
AF GPT span	4932	67.6	803.2	-----	803.2	800.8	-----	802.7	1.0029	-----
new NO cyl rp										

Baseline Corr As Fd	Nt =	888.2 ppb	NO_X =	881.4 ppb	NO =	859.3 ppb	
Previous Response	Nt =	807.92 ppb	NO_X =	807.5 ppb	NO =	804.5 ppb	
**NO_X Δ (NO to GPT response) =		-9.2%					

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

*Percent Change	$Nt_{(NO)}$ =	9.0%
*Percent Change	NO_X =	8.4%
*Percent Change	NO =	6.4%

* = > +/-5% change initiates investigation

NOx / NO / Nt Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated Nt concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibration zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.0	----	----
High point	4932	67.6	803.1	800.4	803.1	805.1	806.3	807.1	0.9975	0.9927
Mid point	4966	33.8	401.5	400.2	401.5	403.9	398.2	401.5	0.9942	1.0050
Low point	4983	16.9	200.8	200.1	200.8	197.5	196.9	199.5	1.0166	1.0162
								Average Correction Factor	1.0027	1.0046

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
As Found zero	----	----	0.0	0.0	----	----
Calibration zero	----	----	0.0	0.1	----	----
High GPT point (400 ppb O3)	791.8	390.7	403.8	406.5	0.9934	100.7%
Mid GPT point (200 ppb O3)	791.8	597.4	197.1	203.3	0.9695	103.1%
Low GPT point (100 ppb O3)	791.8	693.6	100.9	103.2	0.9778	102.3%
				Average Correction Factor	0.9802	102.0%

Wood Buffalo Environmental Association
NH_3 - 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 NH3 concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH3 concentration (ppb) (Ic)	Baseline corr Nt Correction factor (Cc/(Ic-zero)) *Limit = 0.9 - 1.1*	Baseline corr NH3 Correction factor (Cc/(Ic-zero)) *Limit = 0.9 - 1.1*
As found zero	5000	0.0	0.0	0.0	0.0	0.9	0.6	0.3	----	----
AF High point	2931	69.4	1799.8	0.0	1799.8	1810.5	4.8	1805.7	0.995	0.997
AF Mid point										
AF Low point										
new NH3 cyl rp										

Baseline Corr As Fd Nt = 1809.6 ppb NH3 = 1805.4 ppb *Percent Change $Nt_{(NH3)}$ = 0.0%

Previous Response Nt = 1808.7 ppb NH3 = 1803.6 ppb * = > +/-5% change initiates investigation *Percent Change NH3 = 0.1%

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 NH3 concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH3 concentration (ppb) (Ic)	Nt Correction factor (Cc/Ic) *Limit = 0.95-1.05*	NH3 Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibration zero	5000	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	----	----
High point	2931	69.4	1799.8	0.0	1799.8	1810.5	4.8	1805.7	0.994	0.997
Mid point	2961	38.6	1001.0	0.0	1001.0	1003.4	2.2	1001.0	0.998	1.000
Low point	2981	19.3	500.5	0.0	500.5	495.7	1.3	494.4	1.010	1.012
								Average Correction Factor	1.0005	1.0030

NH3 Previous Converter Efficiency = 97.0 %
NH3 Current Converter Efficiency = 97.0 %

Notes: Changed the inlet filter after as founds. Adjusted the NOx, NO, NT spans.

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

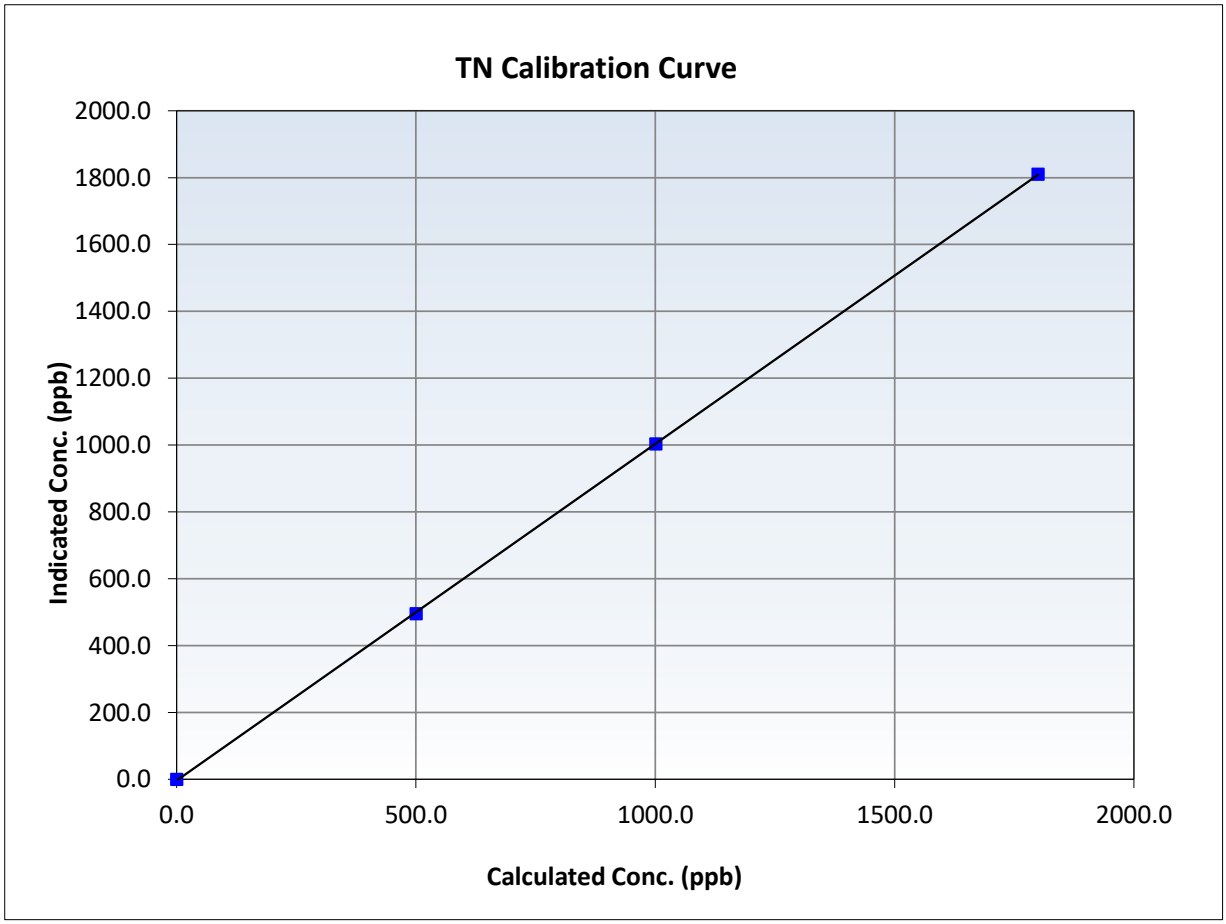
Nt Calibration Summary

Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 17, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:30	End Time (MST):	16:00
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.0	----	Correlation Coefficient	0.999978	*≥0.995*
1799.8	1810.5	0.9941	Slope	1.007036	*0.90 - 1.10*
1001.0	1003.4	0.9976			
500.5	495.7	1.0097	Intercept	-3.735237	*+/-20*



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NH_3 Calibration Summary

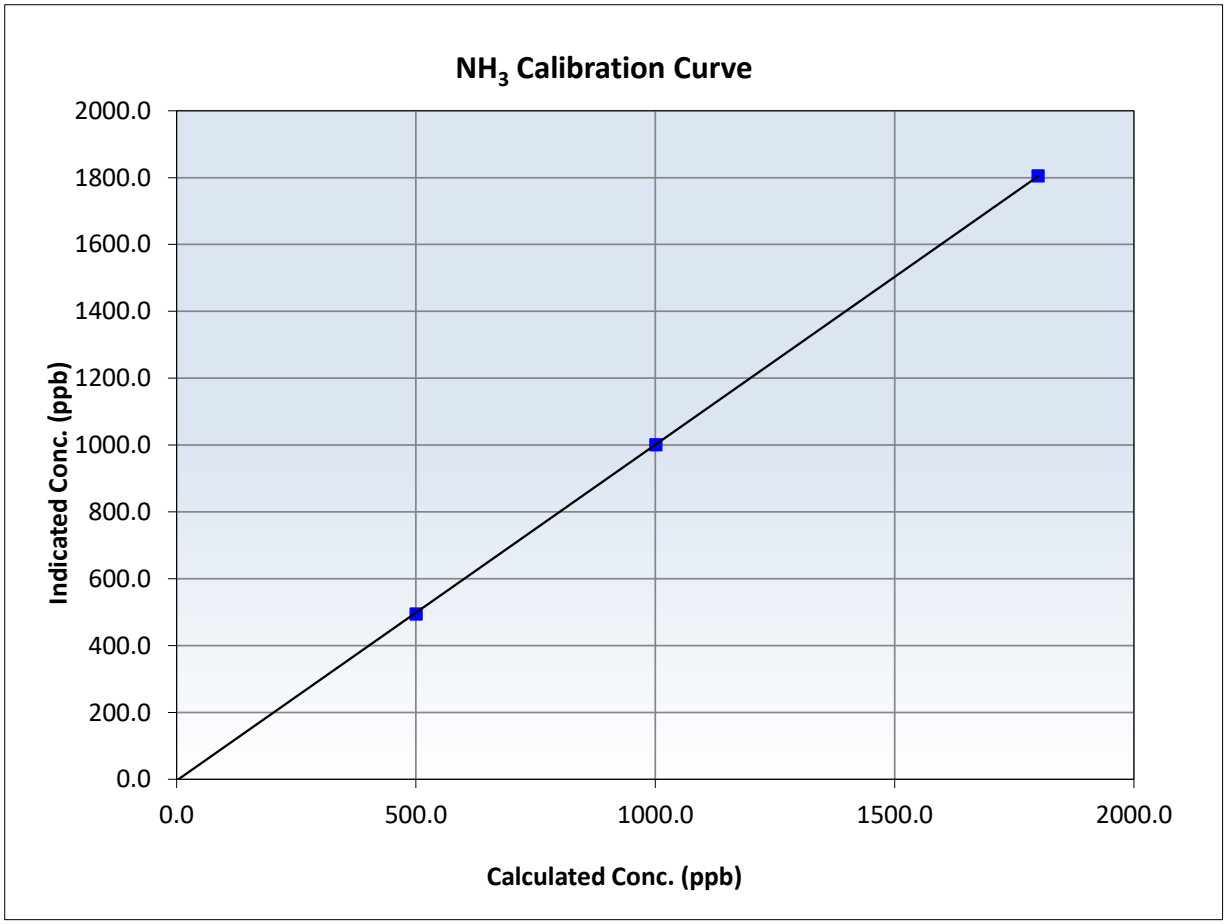
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 17, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:30	End Time (MST):	16:00
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
1799.8	1805.7	0.9967
1001.0	1001.0	1.0000
500.5	494.4	1.0124

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999979	*≥0.995*
Slope	1.004436	*0.90 - 1.10*
Intercept	-3.739477	*+/-20*



Wood Buffalo Environmental Association

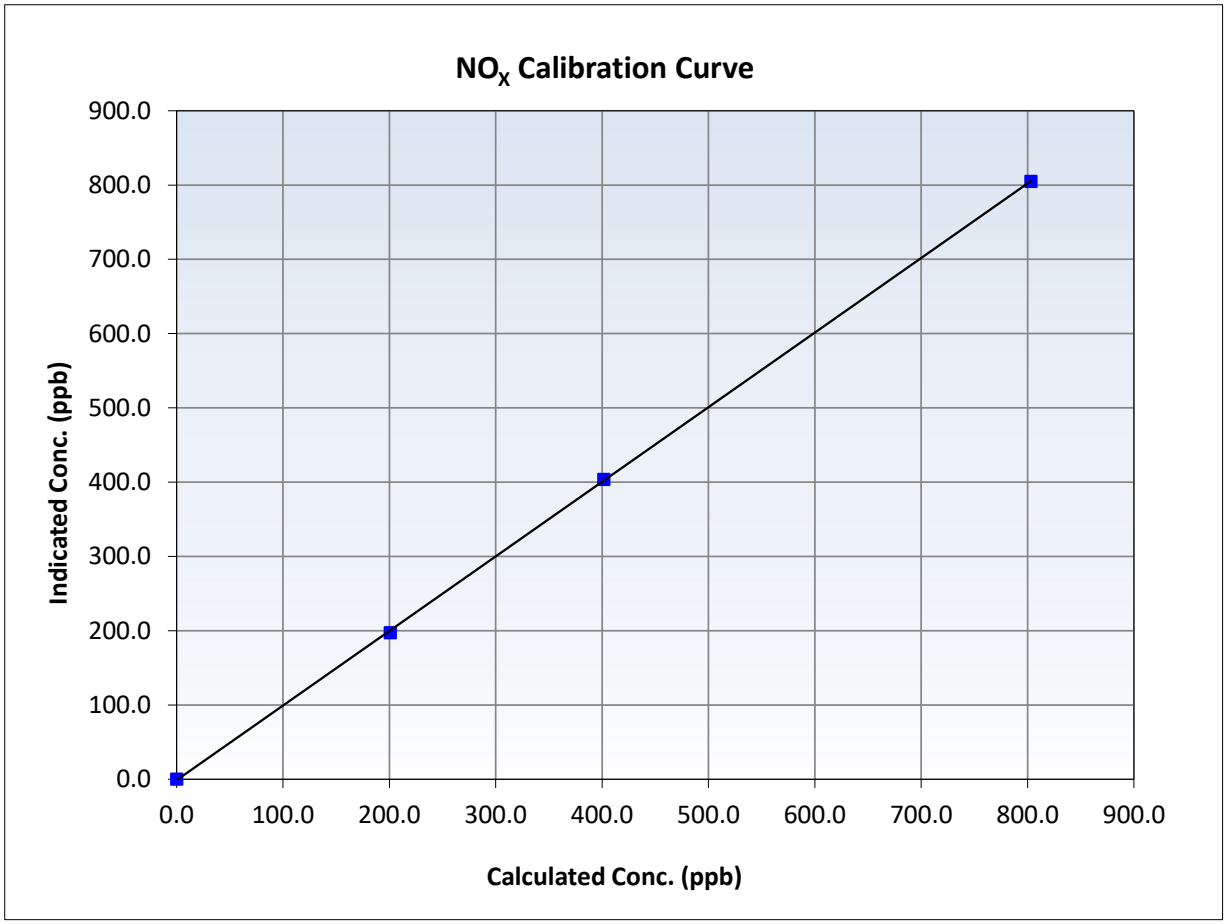
NO_X Calibration Summary

Station Information

Calibration Date:	December 8, 2025	Previous Calibration:	November 17, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:30	End Time (MST):	16:00
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.1	----	Correlation Coefficient	0.999961	*≥0.995*
803.1	805.1	0.9975	Slope	1.004209	*0.90 - 1.10*
401.5	403.9	0.9942	Intercept	-1.180000	*+/-20*
200.8	197.5	1.0166			



Wood Buffalo Environmental Association

NO Calibration Summary

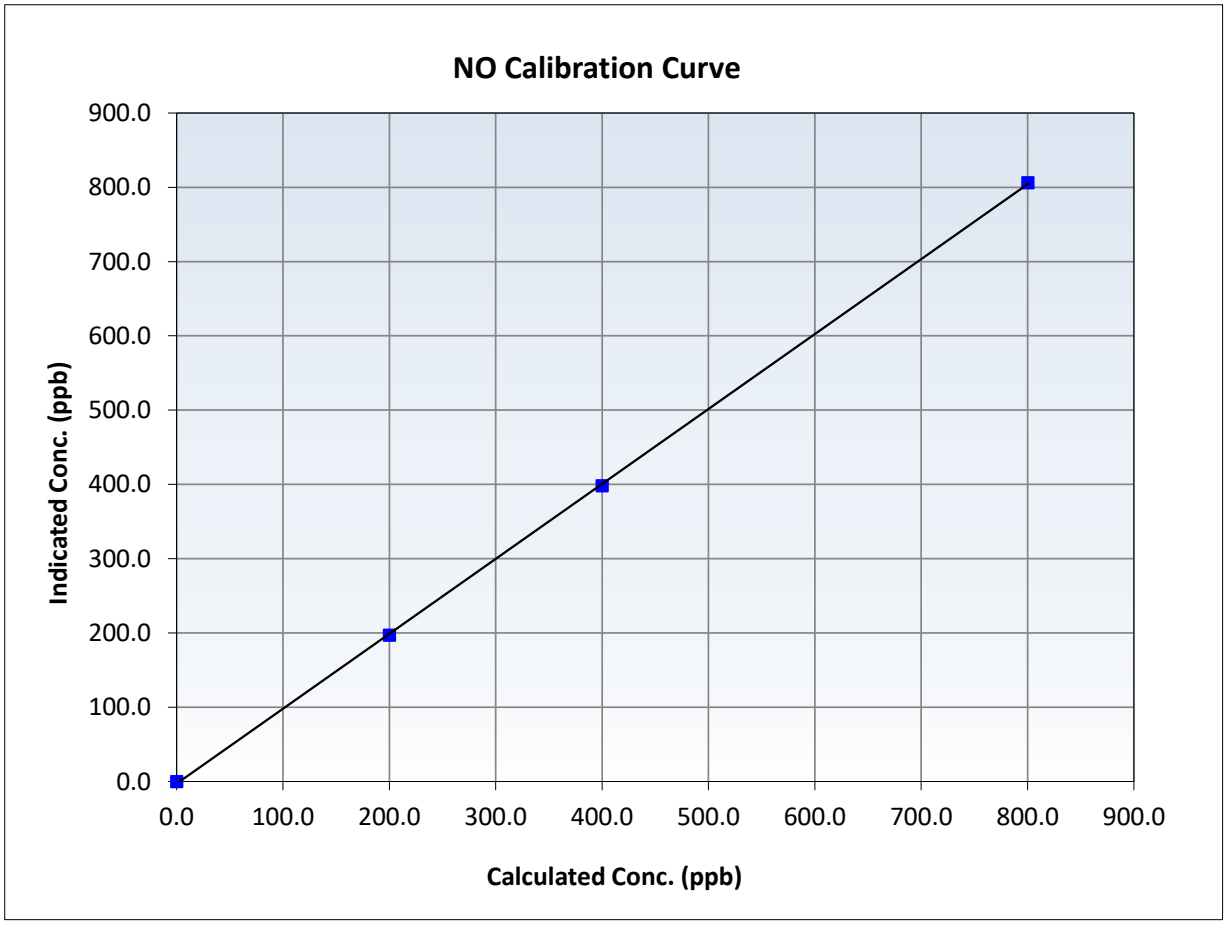
Station Information

Calibration Date:	December 8, 2025	Previous Calibration:	November 17, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:30	End Time (MST):	16:00
Analyzer make:	API T201	Analyzer serial #:	152

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
800.4	806.3	0.9927
400.2	398.2	1.0050
200.1	196.9	1.0162

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999937	*≥0.995*
Slope	1.008687	*0.90 - 1.10*
Intercept	-2.860000	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

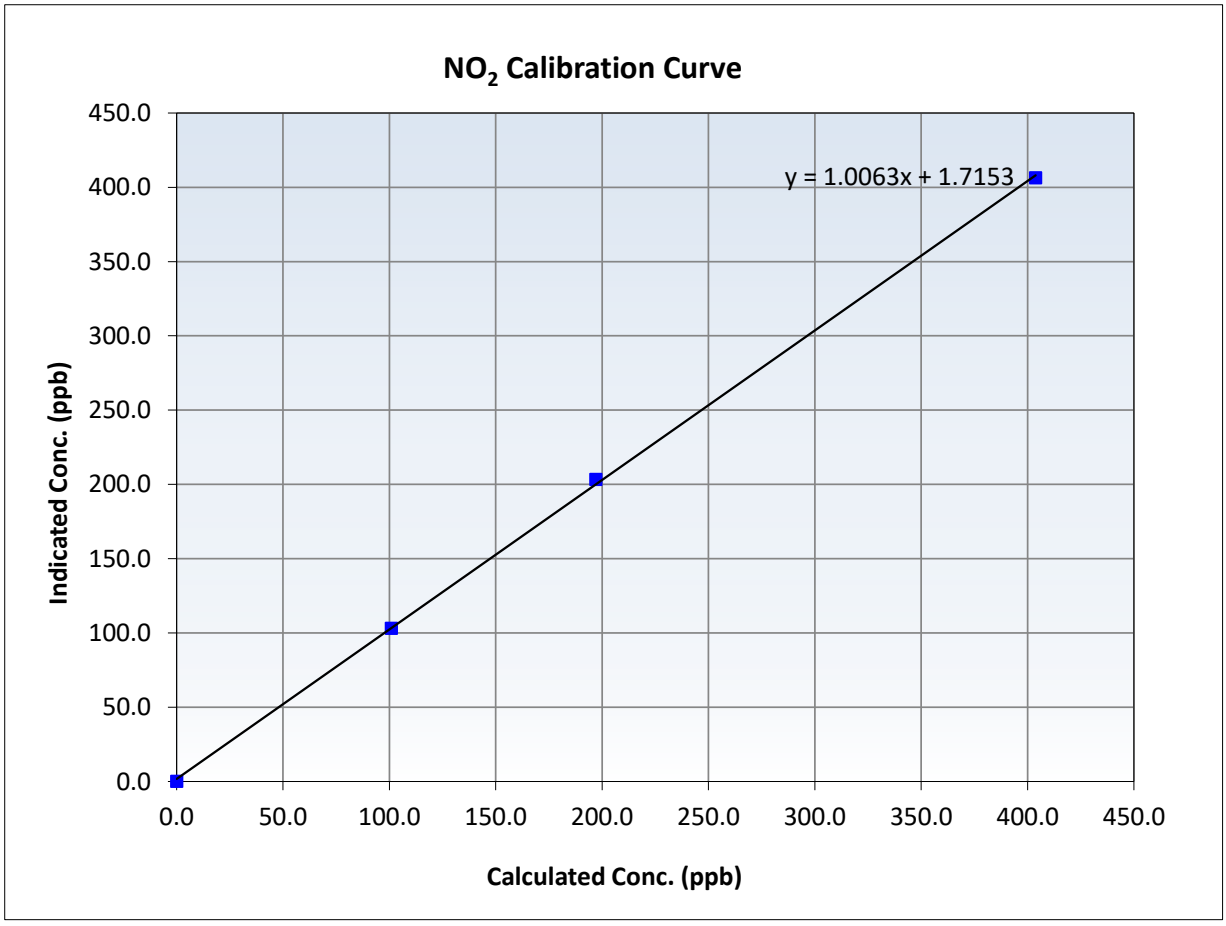
Station Information

Calibration Date:	December 8, 2025	Previous Calibration:	November 17, 2025
Station Name:	Bertha Ganter-Fort McKay	Station Number:	AMS 01
Start Time (MST):	11:30	End Time (MST):	16:00
Analyzer make:	API T201	Analyzer serial #:	152

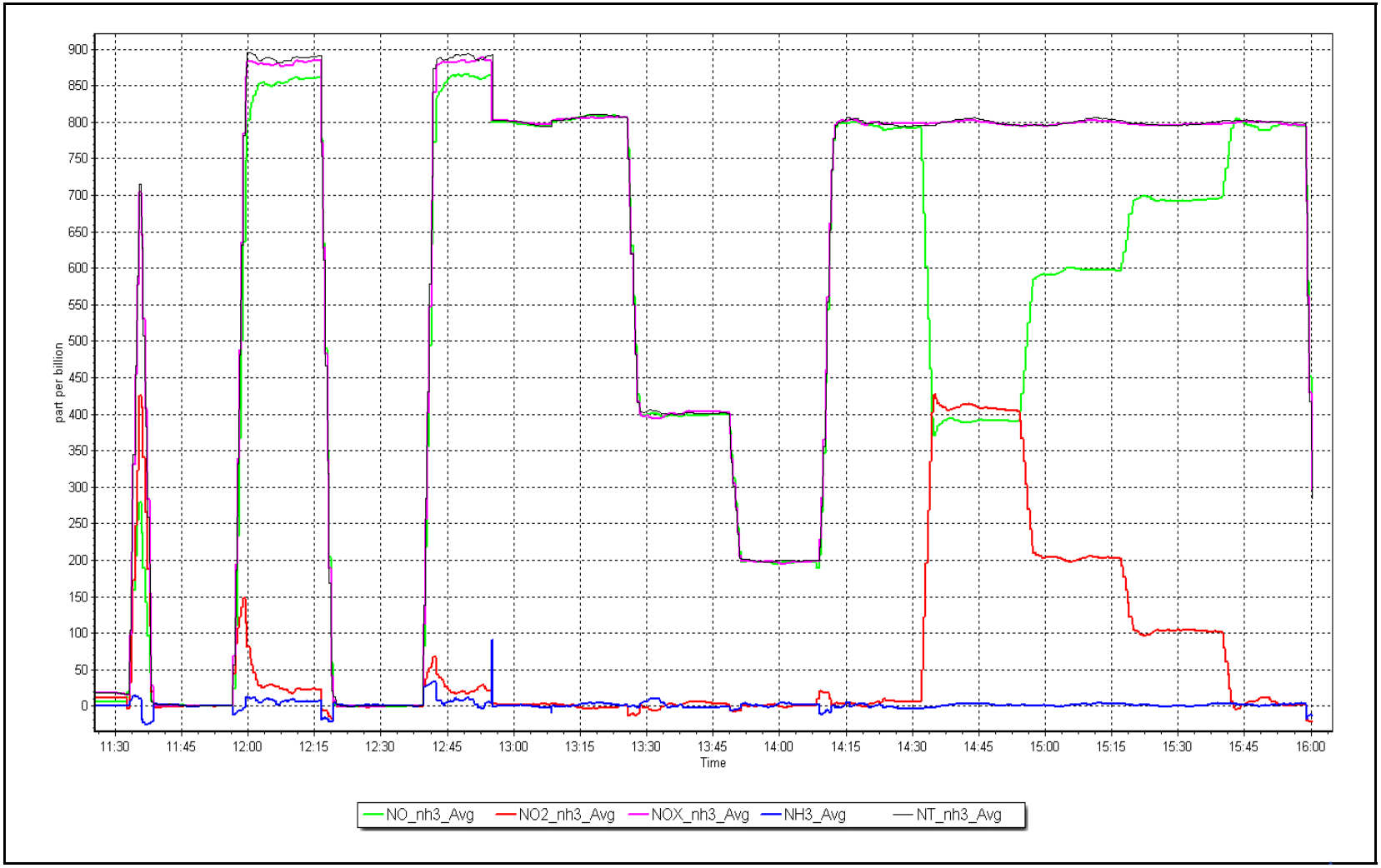
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
403.8	406.5	0.9934
197.1	203.3	0.9695
100.9	103.2	0.9778

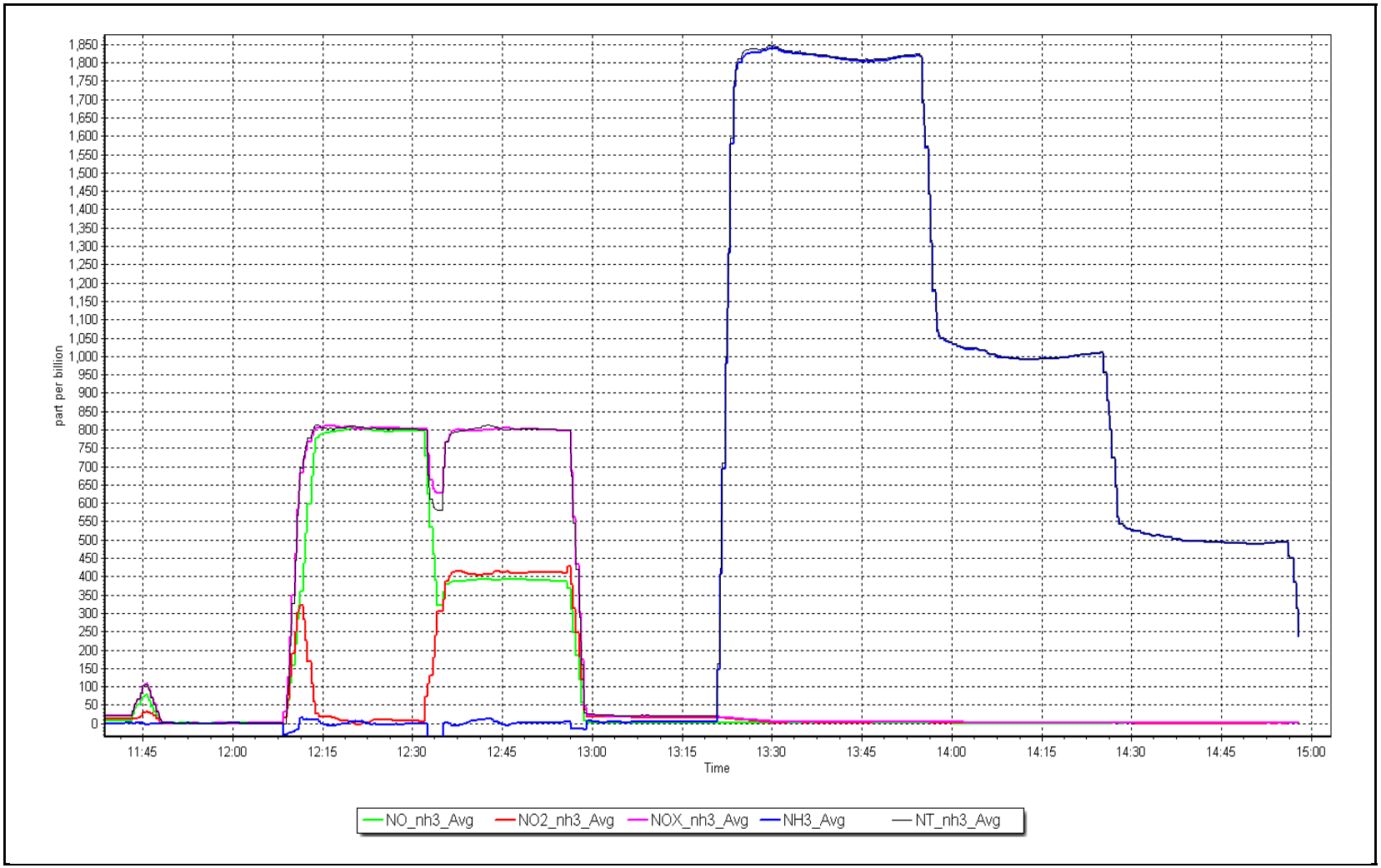
Statistical Evaluation		*Limits*
Correlation Coefficient	0.999827	*≥0.995*
Slope	1.006307	*0.90 - 1.10*
Intercept	1.715340	*+/-20*



NO_X Calibration Plot Date: December 8, 2025 Location: Bertha Ganter-Fort McKay



NH_3 Calibration Plot Date: December 9, 2025 Location: Bertha Ganter-Fort McKay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS02
MILDRED LAKE
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Mildred Lake	Station number:	AMS 02
Calibration Date:	December 15, 2025	Last Cal Date:	November 6, 2025
Start time (MST):	11:04	End time (MST):	16:31
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.99	ppm	Cal Gas Exp Date:	October 9, 2032
Cal Gas Cylinder #:	EB0112903			
Removed Cal Gas Conc:	50.99	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Model:	Teledyne API T700		Serial Number:	1185
Zero Air Gen Model:	Teledyne API T701		Serial Number:	4891

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	JC1404901075	
Analyzer Range:	0-1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.999500	1.004008	Backgd or Offset:	24.3	25.1
Calibration intercept:	-0.351922	-0.930144	Coeff or Slope:	0.762	0.785

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4913	78.6	803.0	772.0	1.040
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	772.2	Previous response	802.2	*% change	-3.9%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4913	78.4	801.0	803.0	0.997
Mid point	4961	39.2	399.8	402.0	0.994
Low point	4980	19.6	199.9	197.6	1.012
As left zero	5000	0.0	0.0	-0.2	----
As left span	4913	78.4	801.0	805.0	0.995
				Average Correction Factor:	1.001

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

SO_2 Calibration Summary

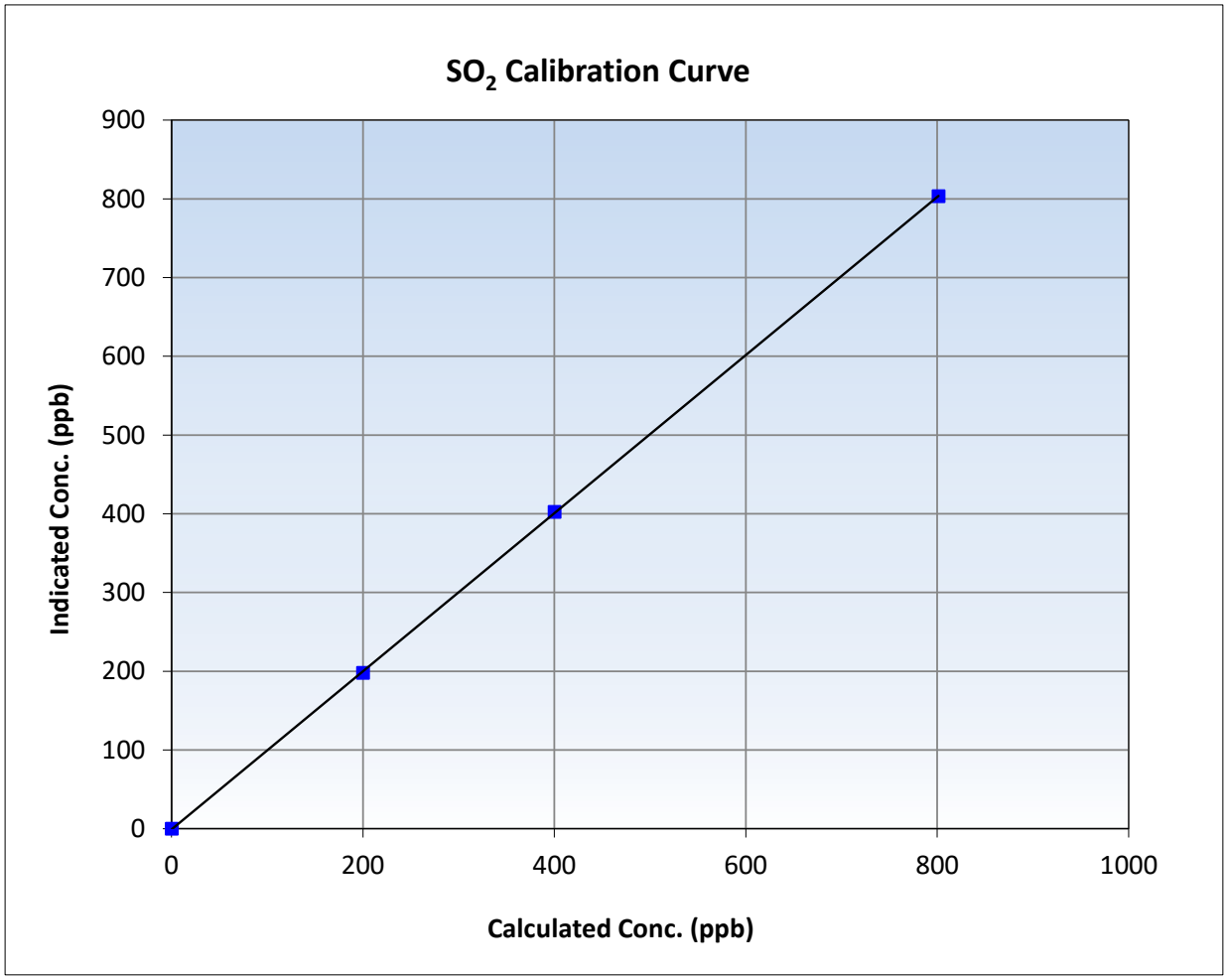
Station Information

Calibration Date:	December 15, 2025	Previous Calibration:	November 6, 2025
Station Name:	Mildred Lake	Station Number:	AMS 02
Start Time (MST):	11:04	End Time (MST):	16:31
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1404901075

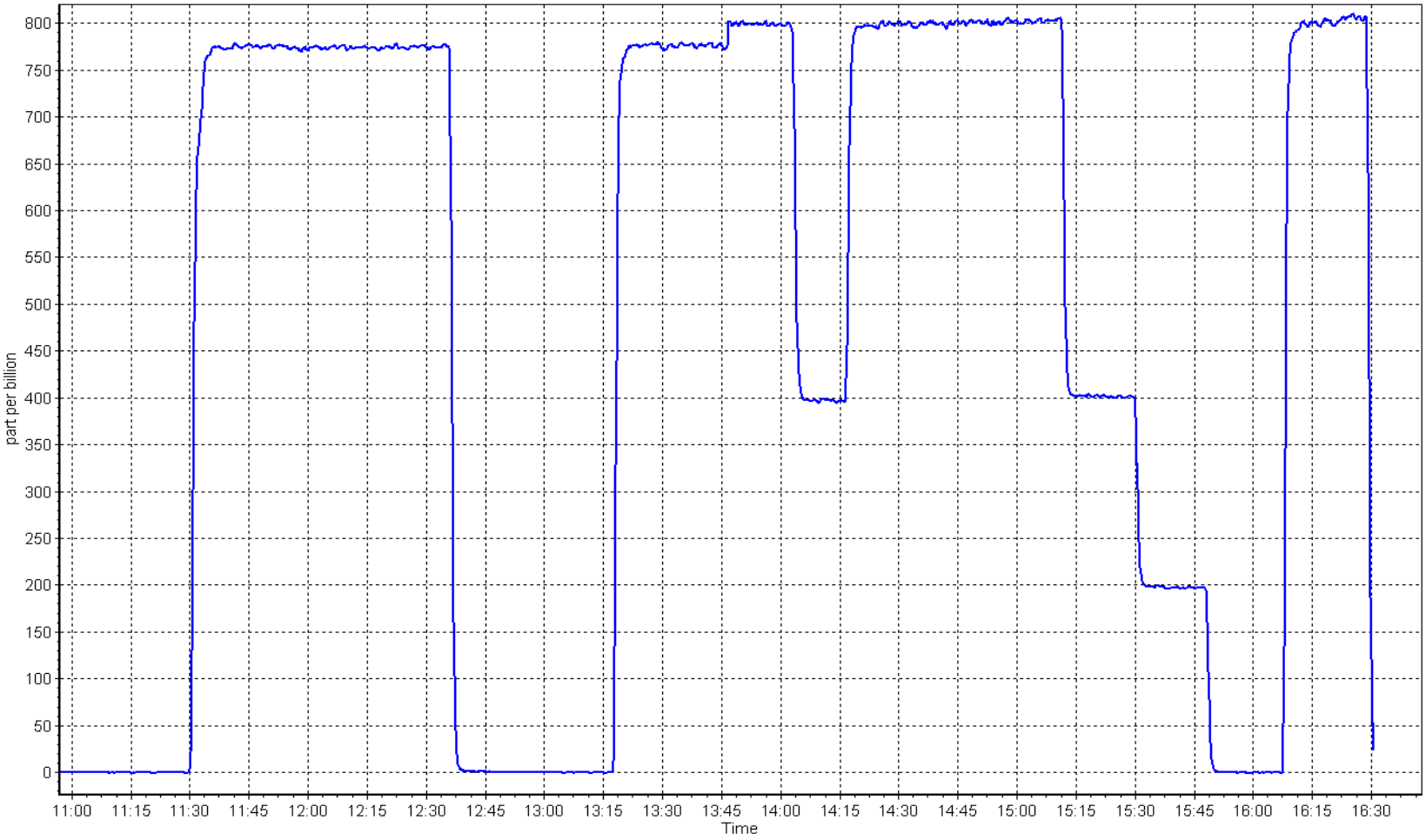
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
801.0	803.0	0.9975
399.8	402.0	0.9944
199.9	197.6	1.0115

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999978	*≥0.995*
Slope	1.004008	*0.90 - 1.10*
Intercept	-0.930144	*+/-30*



SO2 Calibration Plot Date: December 15, 2025 Location: Mildred Lake



Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name:	Mildred Lake	Station number:	AMS 02
Calibration Date:	December 10, 2025	Last Cal Date:	November 19, 2025
Start time (MST):	10:15	End time (MST):	16:13
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.75	ppm	Cal Gas Exp Date:	August 28, 2027
Cal Gas Cylinder #:	CC700774			
Removed Cal Gas Conc:	4.75	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	Teledyne API T700		Serial Number:	1185
ZAG Make/Model:	Teledyne API T701		Serial Number:	4891

Analyzer Information

Analyzer make:	Thermo 43iQTL		Analyzer serial #:	12333331546
Converter make:	Global G150		Converter serial #:	2023-267
Analyzer Range	0 - 100 ppb		Converter Temp:	325 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.998125	0.997696	Backgd or Offset:	1.39	1.58
Calibration intercept:	0.120000	0.060000	Coeff or Slope:	0.957	0.965

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.2	----
As found High point	4916	84.2	80.0	79.3	1.011
As found Mid point	4958	42.1	40.0	39.9	1.007
As found Low point	4979	21.1	20.0	20.0	1.010
New cylinder response					

Baseline Corr As found:	79.1	Prev response:	79.96	*% change:	-1.1%
Baseline Corr 2nd AF pt:	39.7	AF Slope:	0.988981	AF Intercept:	0.240000
Baseline Corr 3rd AF pt:	19.8	AF Correlation:	0.999995	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4916	84.2	80.0	79.8	1.002
Mid point	4958	42.1	40.0	40.1	0.997
Low point	4979	21.1	20.0	20.0	1.000
As left zero	5000	0.0	0.0	0.0	----
As left span	4916	84.2	80.0	80.8	0.990
SO2 Scrubber Check	4922	78.4	783.9	0.0	----
Date of last scrubber change:		July 16, 2024		Ave Corr Factor	1.000
Date of last converter efficiency test:		NA			

Notes: Changed sample inlet filter after multipoint as founds. SO2 scrubber check done and passed. Adjusted zero and span.

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

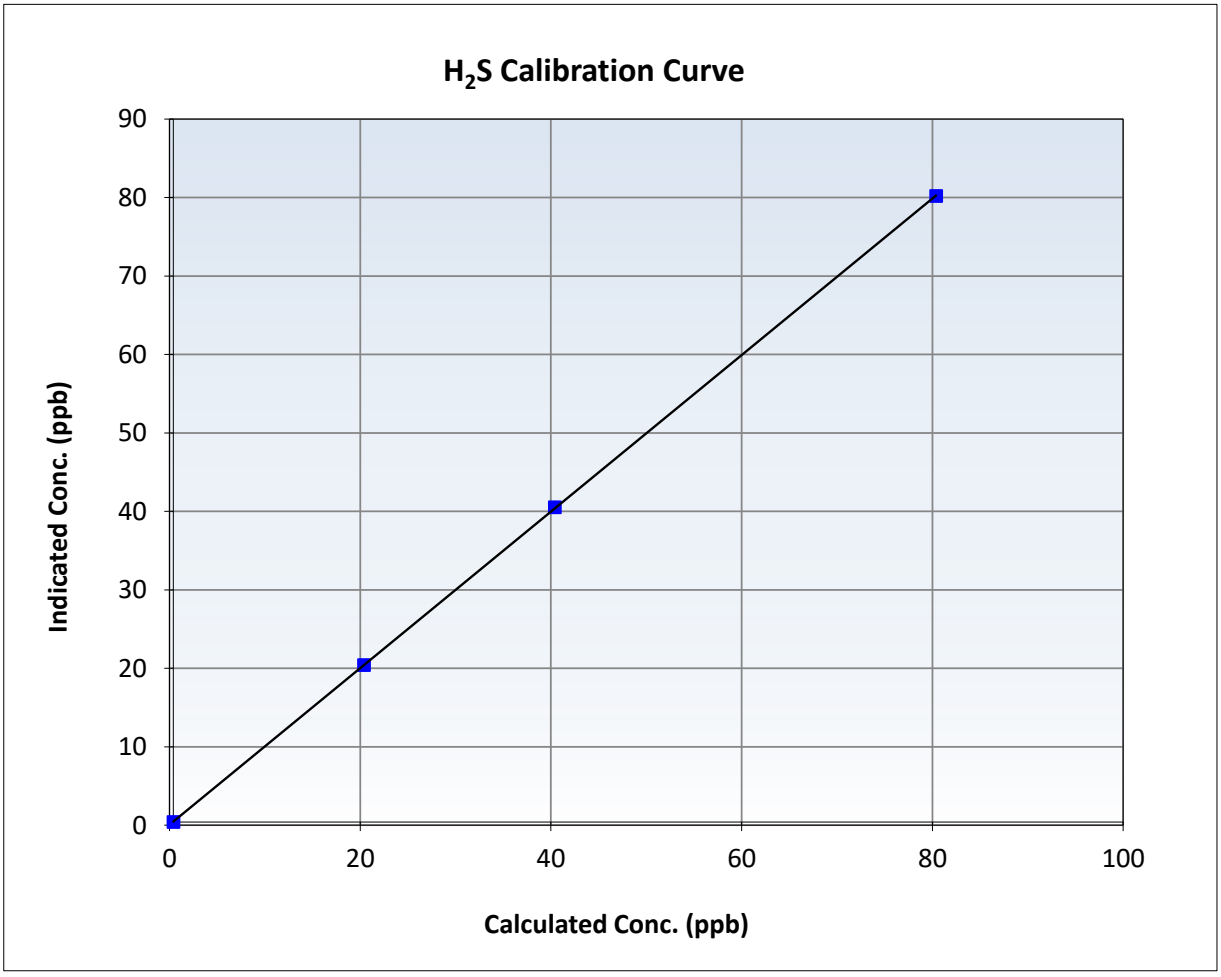
H2S Calibration Summary

Station Information

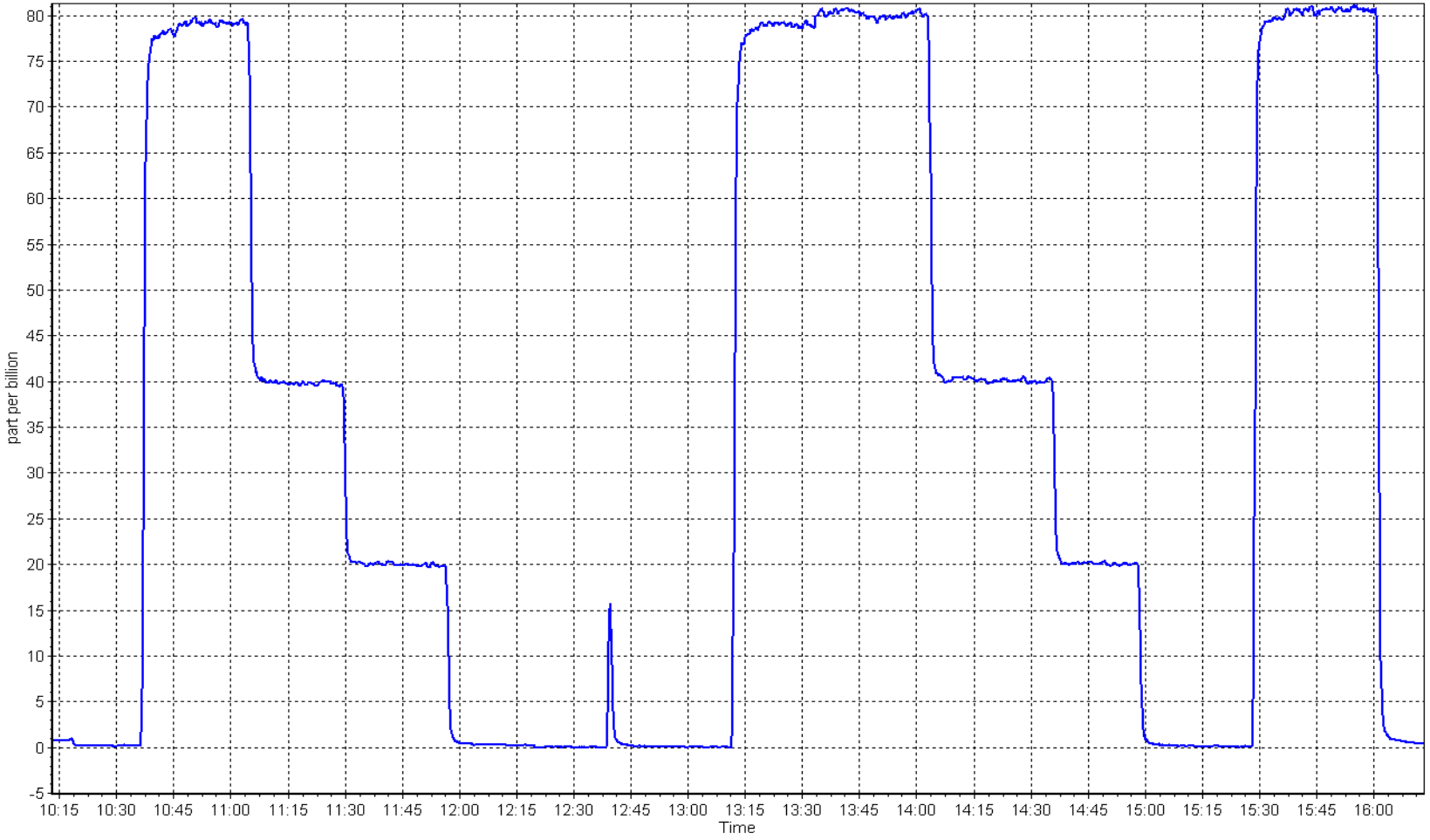
Calibration Date:	December 10, 2025	Previous Calibration:	November 19, 2025
Station Name:	Mildred Lake	Station Number:	AMS 02
Start Time (MST):	10:15	End Time (MST):	16:13
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12333331546

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.0	----	Correlation Coefficient	0.999992	*≥0.995*
80.0	79.8	1.0024	Slope	0.997696	*0.90 - 1.10*
40.0	40.1	0.9974			
20.0	20.0	0.9999	Intercept	0.060000	*+/-3*



H2S Calibration Plot Date: December 10, 2025 Location: Mildred Lake



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Mildred Lake	Station number:	AMS 02
Calibration Date:	December 15, 2025	Last Cal Date:	November 6, 2025
Start time (MST):	11:04	End time (MST):	16:31
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	EB0112903	Cal Gas Expiry Date:	October 9, 2032
CH4 Cal Gas Conc.	503.1 ppm	CH4 Equiv Conc.	1067.1 ppm
C3H8 Cal Gas Conc.	205.1 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	503.1 ppm	CH4 Equiv Conc.	1067.1 ppm
Removed C3H8 Conc.	205.1 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	1185
Zero Air Gen model:	Teledyne API T701	Serial Number:	4891

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1180320040
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	5.10E-04	4.90E-04	NMHC SP Ratio:	7.72E-05	7.83E-05
CH4 Retention time:	15.9	15.7	NMHC Peak Area:	114549	112894
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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4922	78.4	16.73	16.95	0.987
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	16.95	Prev response	16.68	*% change	1.6%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	
High point	4922	78.4	16.73	16.77	0.998
Mid point	4961	39.2	8.37	8.39	0.997
Low point	4980	19.6	4.18	4.16	1.007
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.4	16.73	16.81	0.995
				Average Correction Factor	1.001

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

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4922	78.4	8.84	8.70	1.016
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.70	Prev response	8.80	*% change	-1.1%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4922	78.4	8.84	8.86	0.998
Mid point	4961	39.2	4.42	4.49	0.986
Low point	4980	19.6	2.21	2.24	0.987
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.4	8.84	8.89	0.995
				Average Correction Factor	0.990

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4922	78.4	7.89	8.25	0.956
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.25	Prev response	7.89	*% change	4.3%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4922	78.4	7.89	7.91	0.997
Mid point	4961	39.2	3.94	3.90	1.010
Low point	4980	19.6	1.97	1.92	1.030
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.4	7.89	7.92	0.996
				Average Correction Factor	1.012

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	0.998576	1.003125
THC Cal Offset:	-0.025466	-0.014268
CH4 Cal Slope:	1.006365	1.005032
CH4 Cal Offset:	-0.046325	-0.035726
NMHC Cal Slope:	0.992261	1.001643
NMHC Cal Offset:	0.020659	0.020857

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

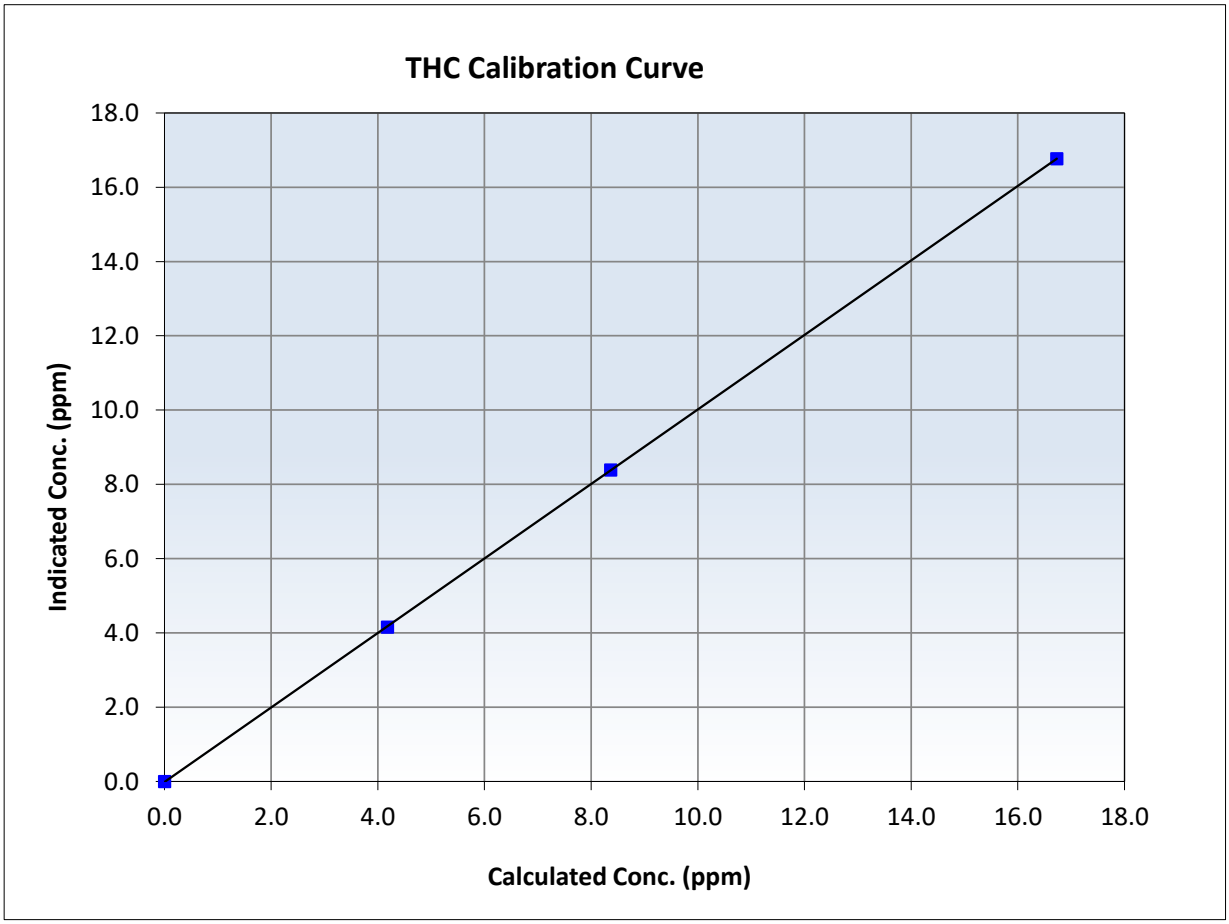
THC Calibration Summary

Station Information

Calibration Date:	December 15, 2025	Previous Calibration:	November 6, 2025
Station Name:	Mildred Lake	Station Number:	AMS 02
Start Time (MST):	11:04	End Time (MST):	16:31
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320040

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999993	≥0.995
16.73	16.77	0.9977	Slope	1.003125	0.90 - 1.10
8.37	8.39	0.9972	Intercept	-0.014268	+/-0.5
4.18	4.16	1.0068			



Wood Buffalo Environmental Association

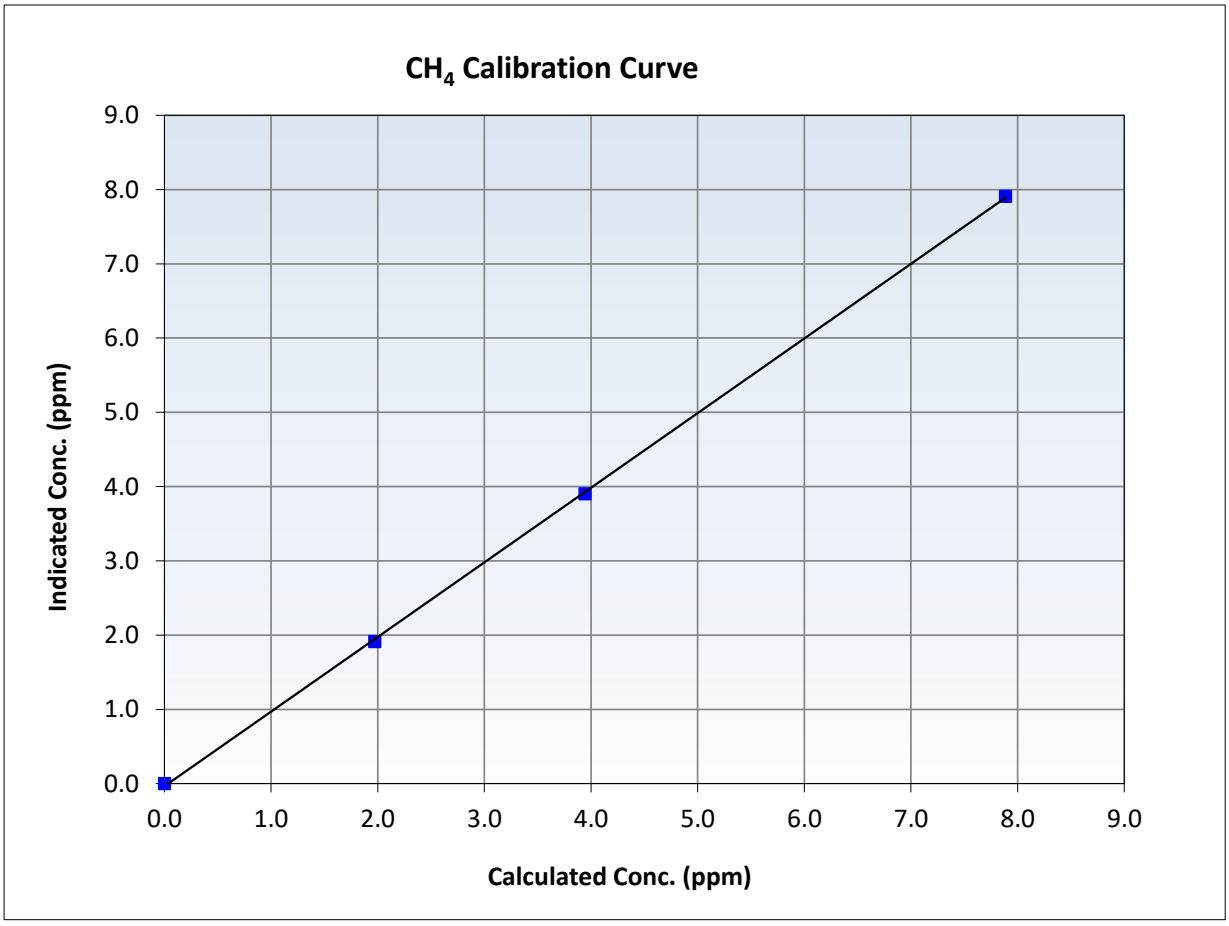
CH_4 Calibration Summary

Station Information

Calibration Date:	December 15, 2025	Previous Calibration:	November 6, 2025
Station Name:	Mildred Lake	Station Number:	AMS 02
Start Time (MST):	11:04	End Time (MST):	16:31
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320040

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999905	≥0.995
7.89	7.91	0.9970	Slope	1.005032	0.90 - 1.10
3.94	3.90	1.0103	Intercept	-0.035726	+/-0.5
1.97	1.92	1.0298			



Wood Buffalo Environmental Association

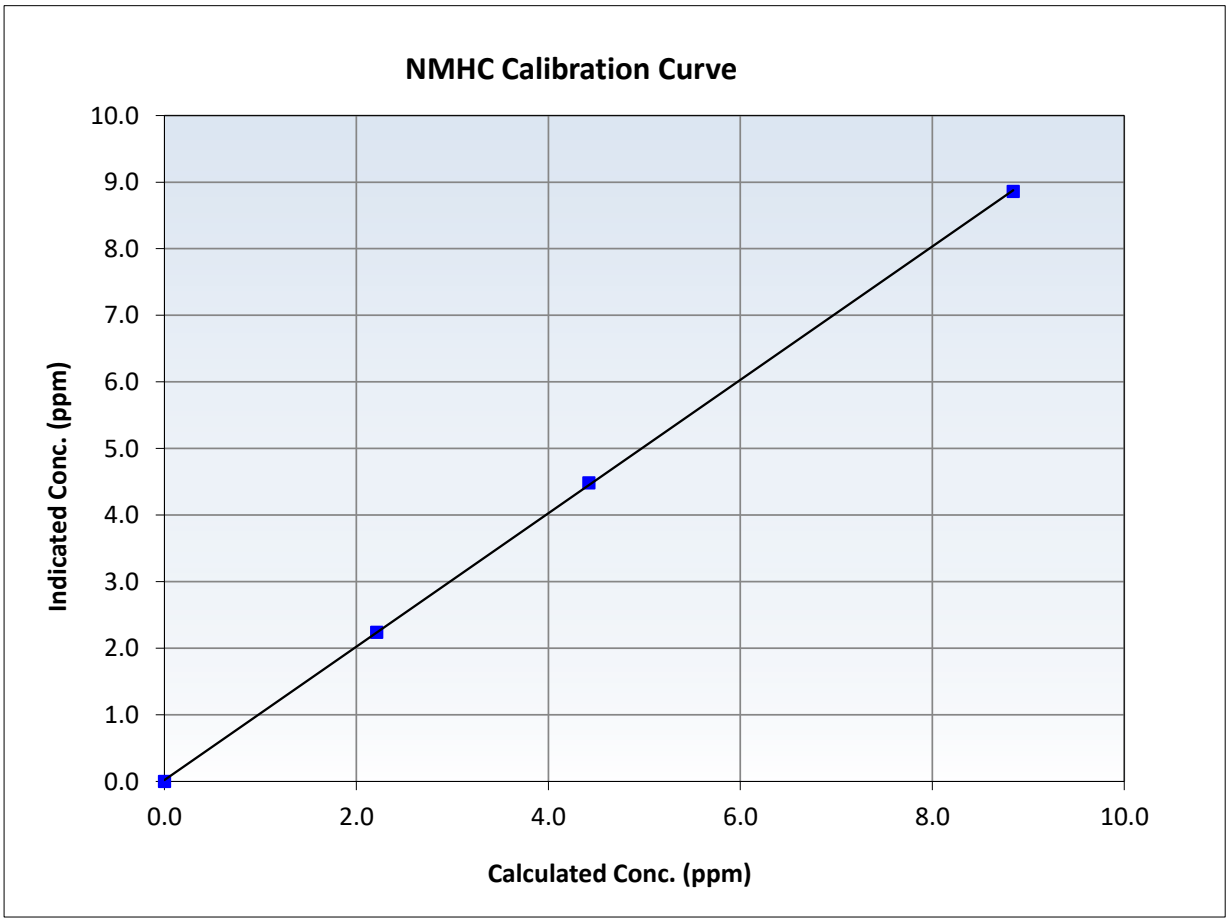
NMHC Calibration Summary

Station Information

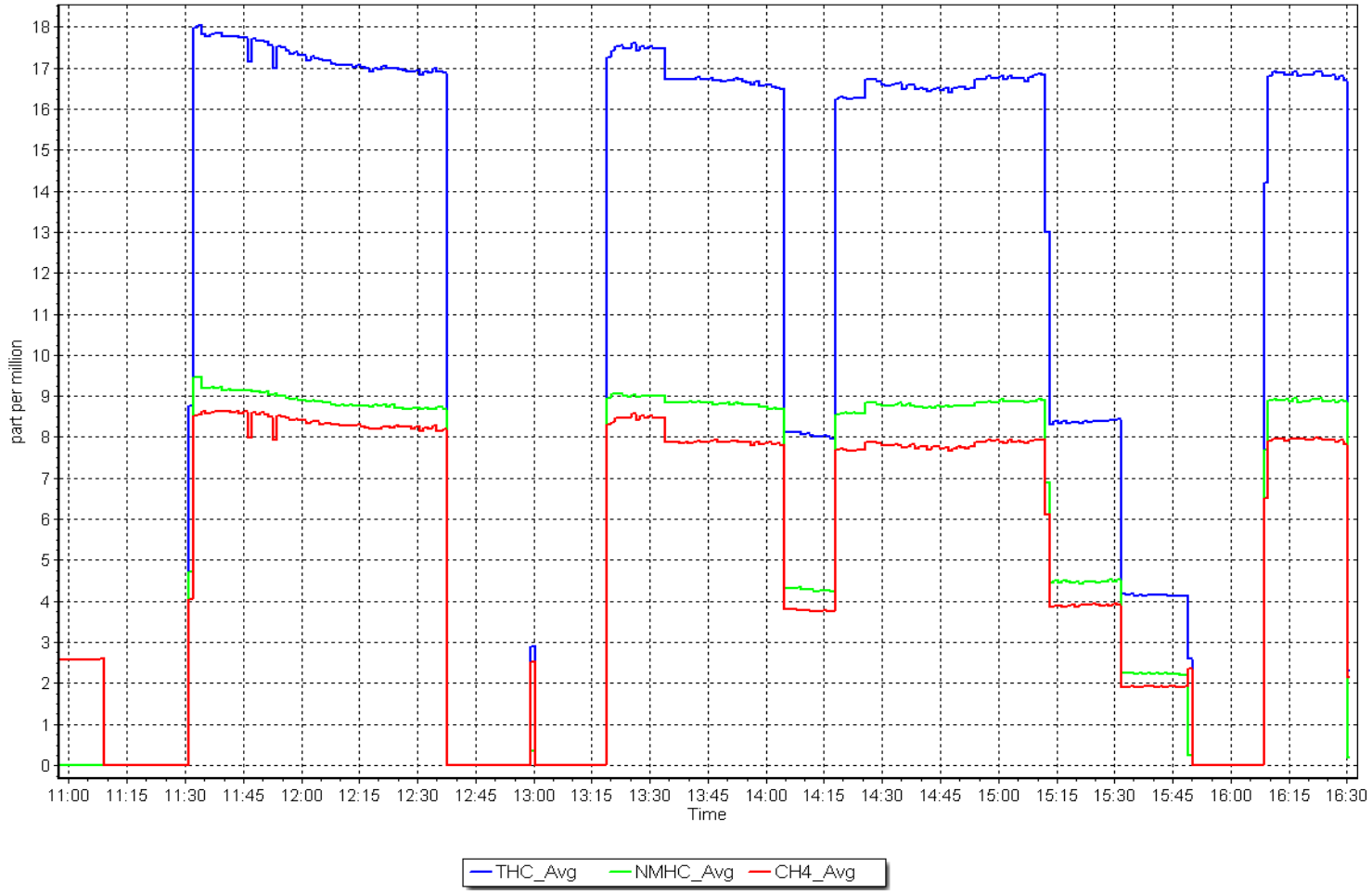
Calibration Date:	December 15, 2025	Previous Calibration:	November 6, 2025
Station Name:	Mildred Lake	Station Number:	AMS 02
Start Time (MST):	11:04	End Time (MST):	16:31
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320040

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
8.84	8.86	0.9981	Slope	1.001643	0.90 - 1.10
4.42	4.49	0.9859	Intercept	0.020857	+/-0.5
2.21	2.24	0.9870			



NMHC Calibration Plot Date: December 15, 2025 Location: Mildred Lake



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Mildred Lake	Station number:	AMS 02
Calibration Date:	December 23, 2025	Last Cal Date:	December 15, 2025
Start time (MST):	10:25	End time (MST):	12:32
Reason:	Cylinder Change		

Calibration Standards

Gas Cert Reference:	EB0112903	Cal Gas Expiry Date:	October 9, 2032
CH4 Cal Gas Conc.	503.1 ppm	CH4 Equiv Conc.	1067.1 ppm
C3H8 Cal Gas Conc.	205.1 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	503.1 ppm	CH4 Equiv Conc.	1067.1 ppm
Removed C3H8 Conc.	205.1 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	1185
Zero Air Gen model:	Teledyne API T701	Serial Number:	4891

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1180320040
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	4.90E-04	4.90E-04	NMHC SP Ratio:	7.83E-05	7.83E-05
CH4 Retention time:	15.7	15.7	NMHC Peak Area:	112894	112894
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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4922	78.4	16.73	16.78	0.997
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	16.78	Prev response	16.77	*% 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)) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.4	16.73	16.72	1.001
				Average Correction Factor	

Notes: Swapped hydrogen cylinder.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4922	78.4	8.84	8.95	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.95	Prev response	8.88	*% 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) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.4	8.84	8.93	0.990
				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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4922	78.4	7.89	7.84	1.007
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.84	Prev response	7.89	*% 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

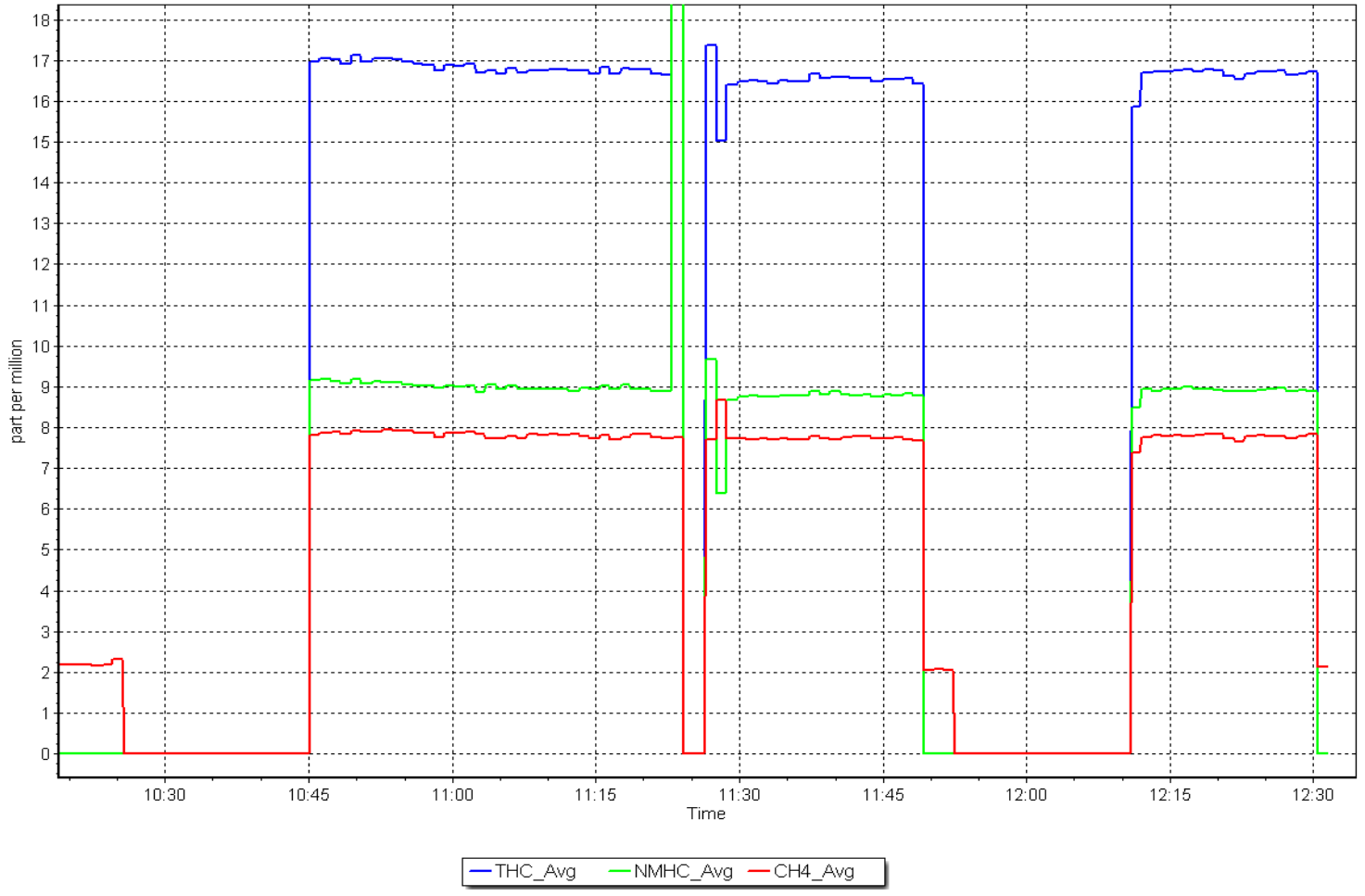
Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4922	78.4	7.89	7.79	1.012
				Average Correction Factor	

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	1.003125	
THC Cal Offset:	-0.014268	
CH4 Cal Slope:	1.005032	
CH4 Cal Offset:	-0.035726	
NMHC Cal Slope:	1.001643	
NMHC Cal Offset:	0.020857	

Calibration Performed By: Braiden Boutilier

NMHC Calibration Plot Date: December 23, 2025 Location: Mildred Lake



Wood Buffalo Environmental Association

Wind Speed/Direction Calibration Report

Station Information

Station Name:	Mildred Lake	Station Number:	AMS 02
Calibration Date:	December 10, 2025	Prev Cal Date:	September 5, 2024
Start Time (MST):	14:00	End Time (MST):	14:30
Tower Height (m):	10.0	Reason:	Routine

Wind Speed Calibration

Sensor make/model:	Met One 010C-1	Serial Number:	E5130
WS Calibrator:	MetOne 053	Serial Number:	CA 05230

Shaft RPM (Hz)	Calculated Speed (K/hr) (Cv)	Indicated Speed (K/hr) (Iv)	% Error *Limit = +/- 1.5%*
0	0.0	0.0	---
200	20.2	20.1	-0.3%
400	39.4	39.4	0.1%
600	58.6	58.7	0.2%
800	77.8	77.8	0.1%

	Start	***Finish***	*Limits*
Correl Coeff (r^2)	0.999999	0.999999	*≥0.9995*
Calculated slope	0.999564	0.998137	*0.98 - 1.02*
Calculated intercept	-0.025288	0.030641	*+/- 2*

Wind Direction Calibration

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

Physical Direction (Degrees) (Cv)	Indicated Direction (Degrees) (Iv)	% Error (based on 360° FS) *Limit = +/- 1%*
10	10.2	0.1%
90	88.7	-0.4%
180	179.8	0.0%
270	273.7	1.0%
350	353.0	0.8%

	Start	***Finish***	*Limits*
Correl Coeff (r^2)	0.999916	0.999954	*≥0.9995*
Calculated slope	0.991388	0.987526	*0.97 - 1.03*
Calculated intercept	1.719781	1.176799	*+/- 5*

Notes: Verified sensor readings. Aligned using compass. Both sensors were within acceptable limits.

Calibration Performed By: Braiden Boutilier

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS04
BUFFALO VIEWPOINT
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Buffalo Viewpoint	Station number:	AMS 04
Calibration Date:	December 19, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	7:22	End time (MST):	10:05
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.87	ppm	Cal Gas Exp Date:	March 10, 2031
Cal Gas Cylinder #:	CC446753			
Removed Cal Gas Conc:	50.87	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Model:	Teledyne API T700		Serial Number:	3808
Zero Air Gen Model:	Teledyne API T701		Serial Number:	362

Analyzer Information

Analyzer make:	Thermo 43i-LTE		Serial Number:	1410661331	
Analyzer Range:	0-1000ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.000741	1.003285	Backgd or Offset:	1.62	1.62
Calibration intercept:	1.695669	0.355708	Coeff or Slope:	1.016	1.016

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4921	78.6	799.7	802.2	0.997
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	802.3	Previous response	802.0	*% change	0.0%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4921	78.6	799.7	802.8	0.996
Mid point	4961	39.3	399.8	401.0	0.997
Low point	4980	19.6	199.4	201.1	0.992
As left zero	5000	0.0	0.0	0.2	----
As left span	4921	78.6	799.7	805.4	0.993
				Average Correction Factor:	0.995

Notes: No adjustments or maintenance done.

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

SO_2 Calibration Summary

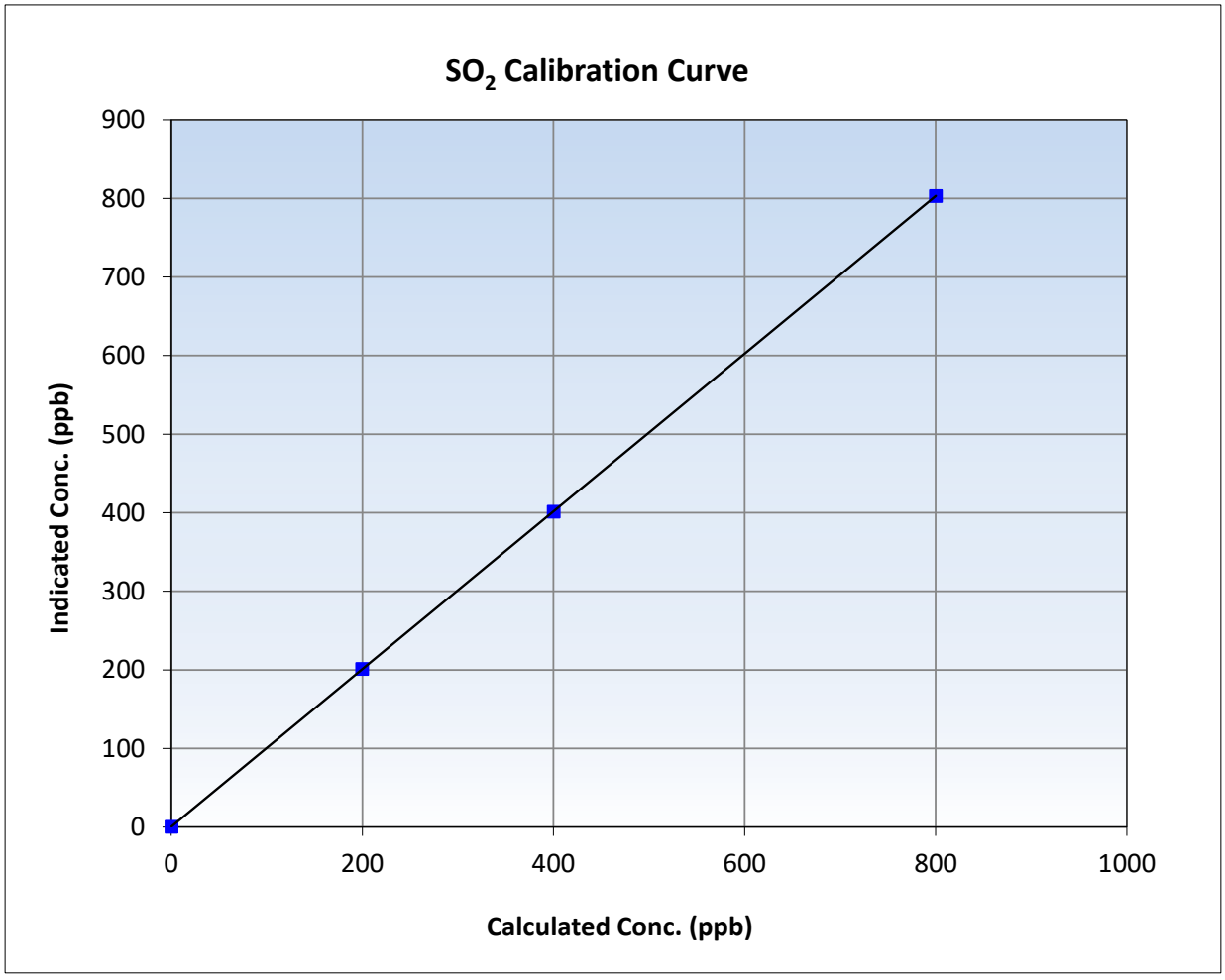
Station Information

Calibration Date:	December 19, 2025	Previous Calibration:	November 17, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	7:22	End Time (MST):	10:05
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1410661331

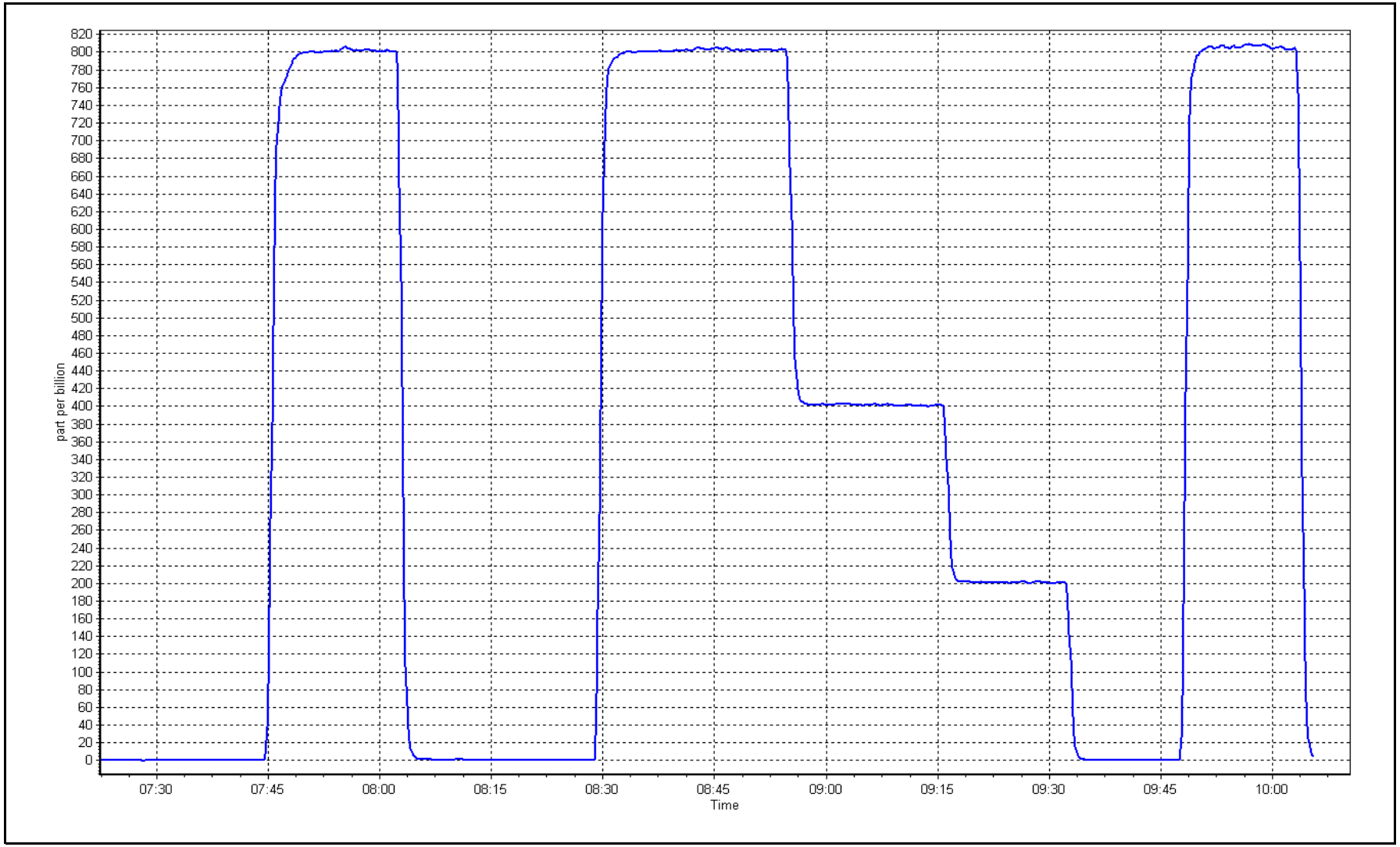
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
799.7	802.8	0.9962
399.8	401.0	0.9970
199.4	201.1	0.9917

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999998	*≥0.995*
Slope	1.003285	*0.90 - 1.10*
Intercept	0.355708	*+/-30*



SO2 Calibration Plot Date: December 19, 2025 Location: Buffalo Viewpoint



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Buffalo Viewpoint	Station number:	AMS 04
Calibration Date:	December 2, 2025	Last Cal Date:	November 21, 2025
Start time (MST):	8:35	End time (MST):	12:42
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.80	ppm	Cal Gas Exp Date:	August 28, 2027
Cal Gas Cylinder #:	DT0037528			
Removed Cal Gas Conc:	4.80	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Make/Model:	Teledyne API T700		Serial Number:	3808
ZAG Make/Model:	Teledyne API T701H		Serial Number:	362

Analyzer Information

Analyzer make:	Thermo 43i-LTE		Analyzer serial #:	1008841400	
Converter make:	Global		Converter serial #:	2022-200	
Analyzer Range	0 - 100 ppb		Converter Temp:	325	degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.978001	0.981858	Backgd or Offset:	1.86	1.86
Calibration intercept:	0.178189	0.218228	Coeff or Slope:	1.077	1.077

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4917	83.3	80.0	79.6	1.006
As found Mid point	4958	41.7	40.0	39.8	1.008
As found Low point	4979	20.8	20.0	19.9	1.009
New cylinder response					

Baseline Corr As found:	79.5	Prev response:	78.38	*% change:	1.4%
Baseline Corr 2nd AF pt:	39.7	AF Slope:	0.994288	AF Intercept:	0.058282
Baseline Corr 3rd AF pt:	19.8	AF Correlation:	0.999998	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4917	83.3	80.0	78.7	1.016
Mid point	4958	41.7	40.0	39.6	1.011
Low point	4979	20.8	20.0	19.8	1.009
As left zero	5000	0.0	0.0	0.2	----
As left span	4917	83.3	80.0	78.3	1.021
SO2 Scrubber Check	4920	80.0	800.0	0.0	----
Date of last scrubber change:		16-May-23		Ave Corr Factor	1.012
Date of last converter efficiency test:					

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

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

H_2S Calibration Summary

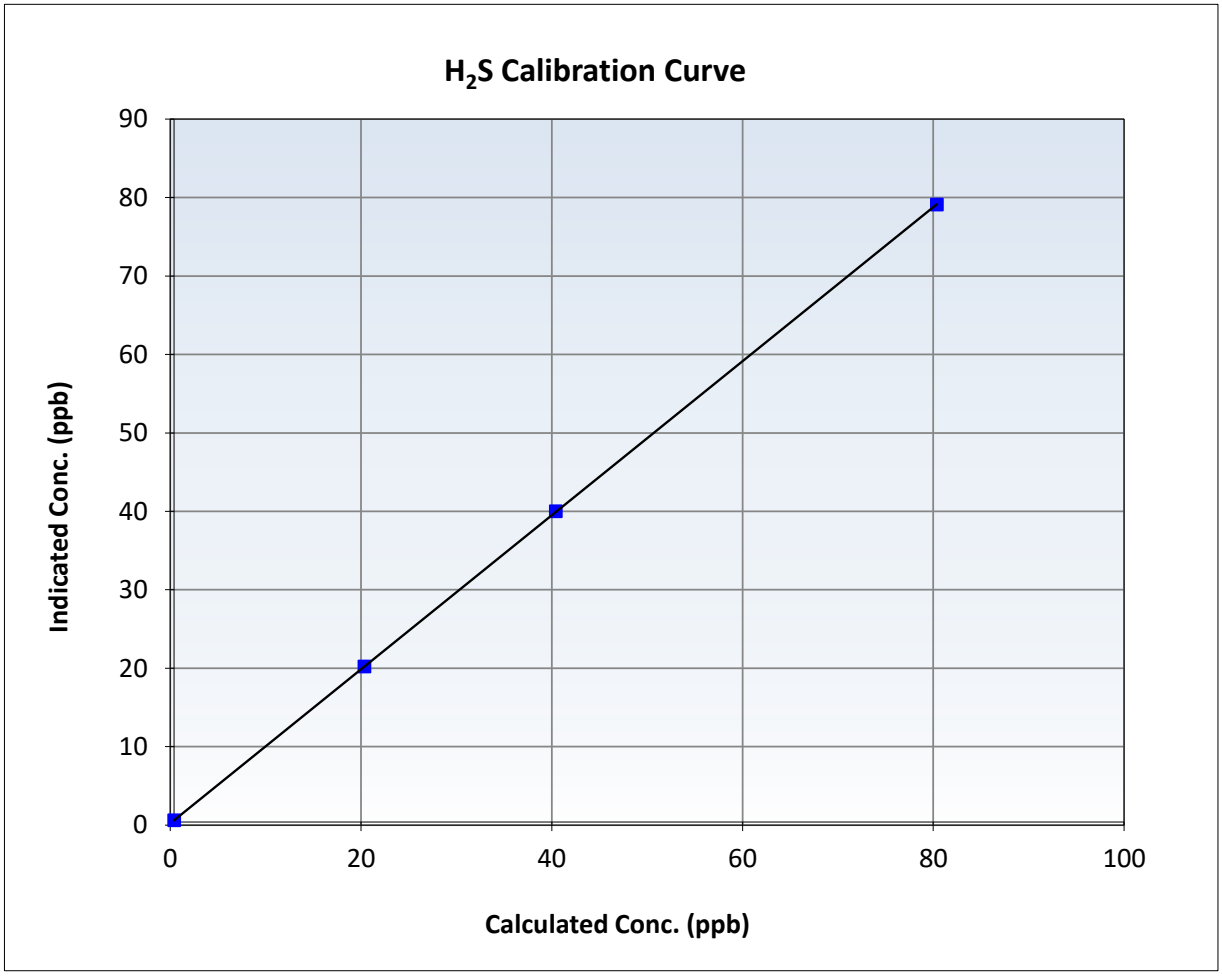
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 21, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	8:35	End Time (MST):	12:42
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1008841400

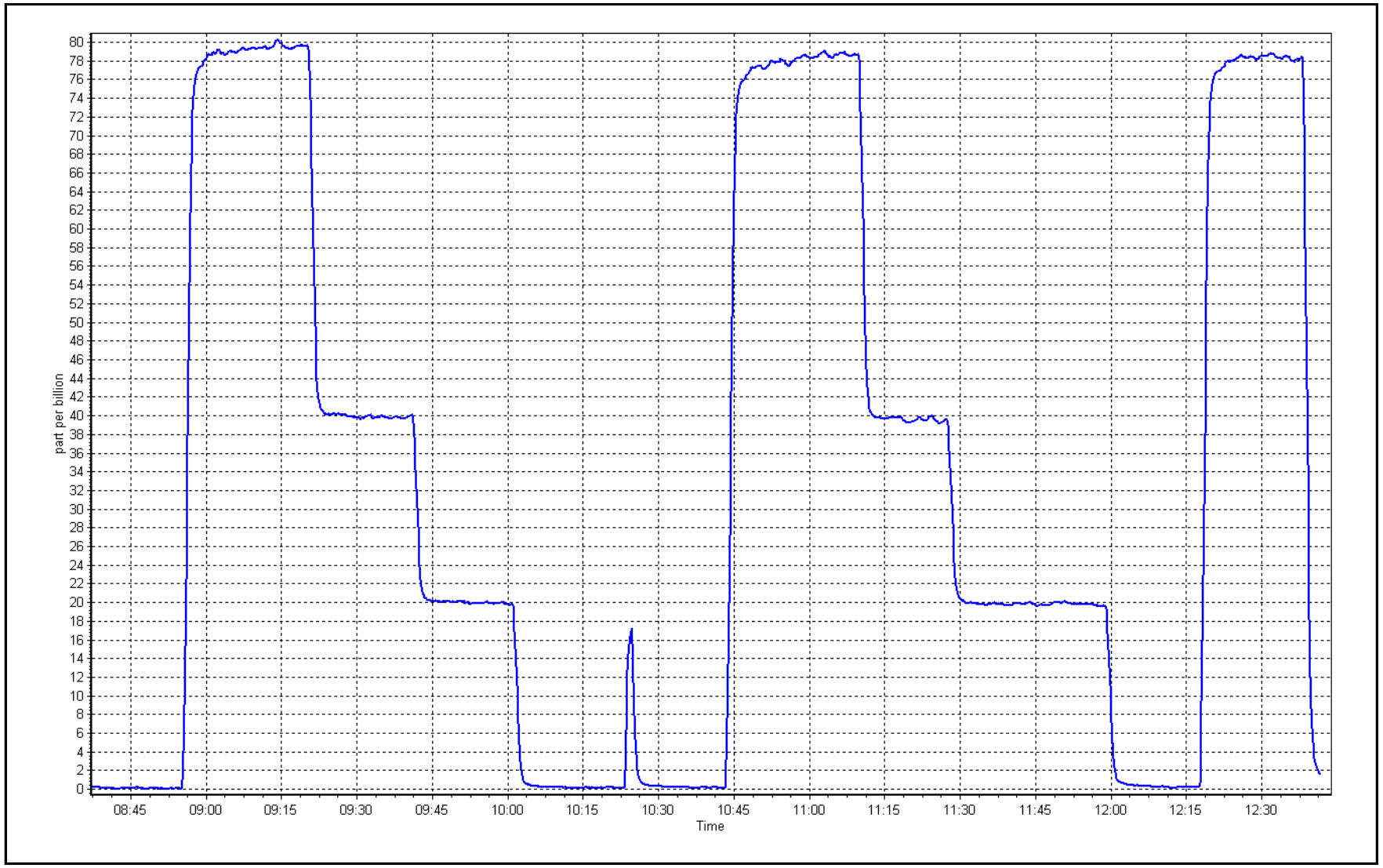
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
80.0	78.7	1.0161
40.0	39.6	1.0110
20.0	19.8	1.0085

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999998	*≥0.995*
Slope	0.981858	*0.90 - 1.10*
Intercept	0.218228	*+/-3*



H_2S Calibration Plot Date: December 2, 2025 Location: Buffalo Viewpoint



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Buffalo Viewpoint	Station number:	AMS 04
Calibration Date:	December 18, 2025	Last Cal Date:	December 2, 2025
Start time (MST):	7:10	End time (MST):	8:34
Reason:	Other: Linearity Check		

Calibration Standards

Cal Gas Concentration:	4.80	ppm	Cal Gas Exp Date:	August 28, 2027
Cal Gas Cylinder #:	DT0037528			
Removed Cal Gas Conc:	4.80	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Make/Model:	Teledyne API T700		Serial Number:	3808
ZAG Make/Model:	Teledyne API T701H		Serial Number:	362

Analyzer Information

Analyzer make:	Thermo 43i-LTE		Analyzer serial #:	1008841400
Converter make:	Global		Converter serial #:	2022-200
Analyzer Range	0 - 100 ppb		Converter Temp:	325 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.981858		Backgd or Offset:	1.86	1.86
Calibration intercept:	0.218228		Coeff or Slope:	1.077	1.077

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4917	83.3	80.0	78.0	1.026
As found Mid point	4958	41.7	40.0	39.3	1.021
As found Low point	4979	20.8	20.0	19.6	1.024
New cylinder response					

Baseline Corr As found:	77.9	Prev response:	78.73	*% change:	-1.1%
Baseline Corr 2nd AF pt:	39.2	AF Slope:	0.974285	AF Intercept:	0.158210
Baseline Corr 3rd AF pt:	19.5	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero					
As left span					
SO2 Scrubber Check					

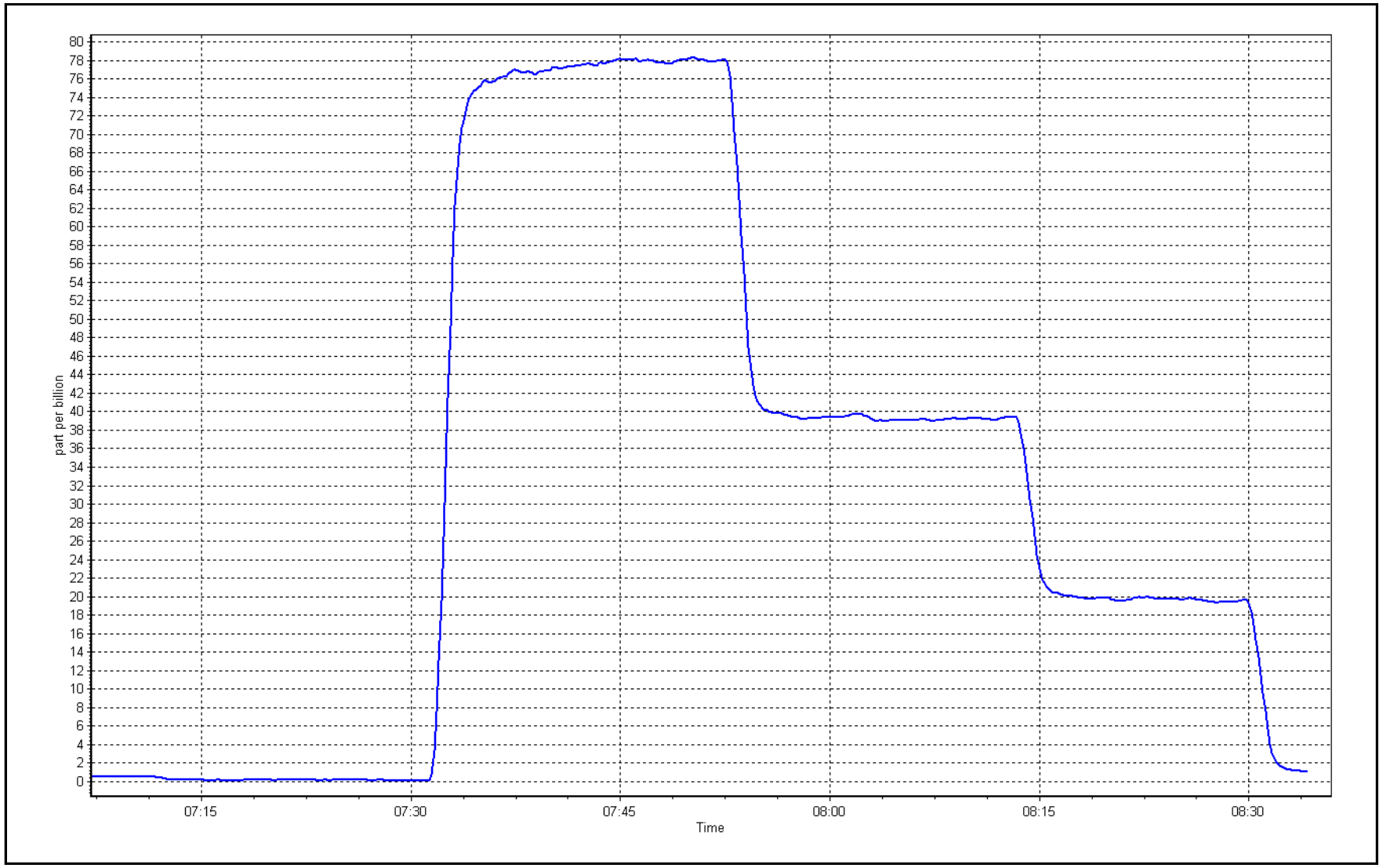
Date of last scrubber change: 16-May-23 Ave Corr Factor

Date of last converter efficiency test:

Notes: Linearity Check Done Power off for more than 4 days.

Calibration Performed By: Melissa Lemay

H_2S Calibration Plot Date: December 18, 2025 Location: Buffalo Viewpoint



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Buffalo Viewpoint	Station number:	AMS 04
Calibration Date:	December 19, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	7:22	End time (MST):	10:04
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC446753	Cal Gas Expiry Date:	March 10, 2031
CH4 Cal Gas Conc.	497.2 ppm	CH4 Equiv Conc.	1058.2 ppm
C3H8 Cal Gas Conc.	204.0 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	497.2 ppm	CH4 Equiv Conc.	1058.2 ppm
Removed C3H8 Conc.	204.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	3808
Zero Air Gen model:	Teledyne API T701	Serial Number:	362

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	3.49E-04	3.23E-04	NMHC SP Ratio:	6.01E-04	5.40E-04
CH4 Retention time:	15.2	15.4	NMHC Peak Area:	146689	163322
Zero Chromatogram:	OFF	OFF	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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.6	16.64	18.36	0.906
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	18.36	Prev response	16.59	*% change	9.6%
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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	78.6	16.64	16.61	1.001
Mid point	4961	39.3	8.32	8.23	1.011
Low point	4980	19.6	4.15	4.06	1.022
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.6	16.64	16.60	1.002
				Average Correction Factor	1.011

Notes: Hydrogen Cylinder changed. Span adjusted.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.6	8.82	9.87	0.894
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.87	Prev response	8.82	*% change	10.6%
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	78.6	8.82	8.80	1.002
Mid point	4961	39.3	4.41	4.38	1.007
Low point	4980	19.6	2.20	2.17	1.015
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.6	8.82	8.79	1.003
				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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.6	7.82	8.49	0.921
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.49	Prev response	7.77	*% change	8.4%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	78.6	7.82	7.81	1.001
Mid point	4961	39.3	3.91	3.85	1.015
Low point	4980	19.6	1.95	1.90	1.029
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.6	7.82	7.81	1.001
				Average Correction Factor	1.015

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	0.999427	0.999834
THC Cal Offset:	-0.032747	-0.047957
CH4 Cal Slope:	0.998253	1.000944
CH4 Cal Offset:	-0.031916	-0.032113
NMHC Cal Slope:	1.000506	0.998461
NMHC Cal Offset:	-0.001231	-0.014844

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

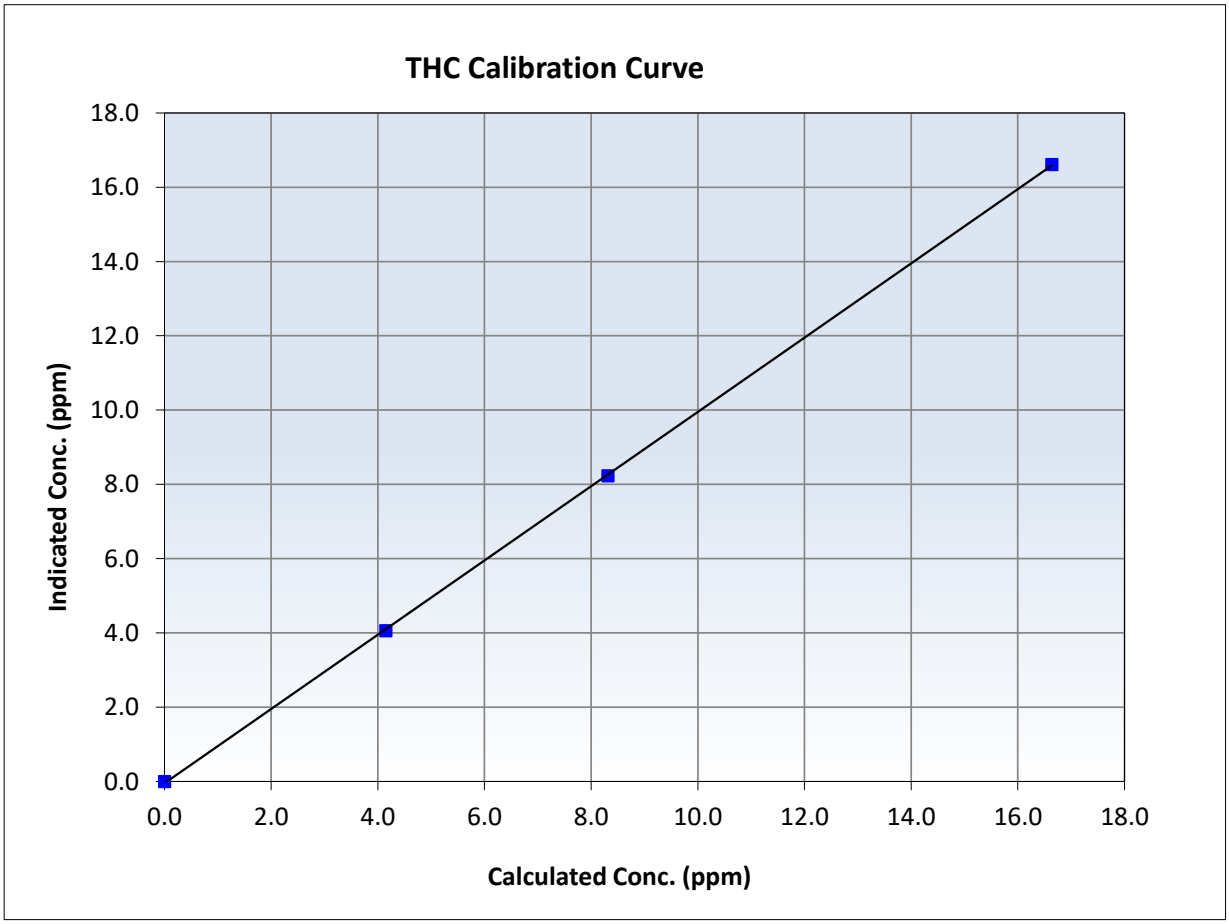
THC Calibration Summary

Station Information

Calibration Date:	December 19, 2025	Previous Calibration:	November 17, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	7:22	End Time (MST):	10:04
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999960	≥0.995
16.64	16.61	1.0013	Slope	0.999834	0.90 - 1.10
8.32	8.23	1.0106			
4.15	4.06	1.0215	Intercept	-0.047957	+/-0.5



Wood Buffalo Environmental Association

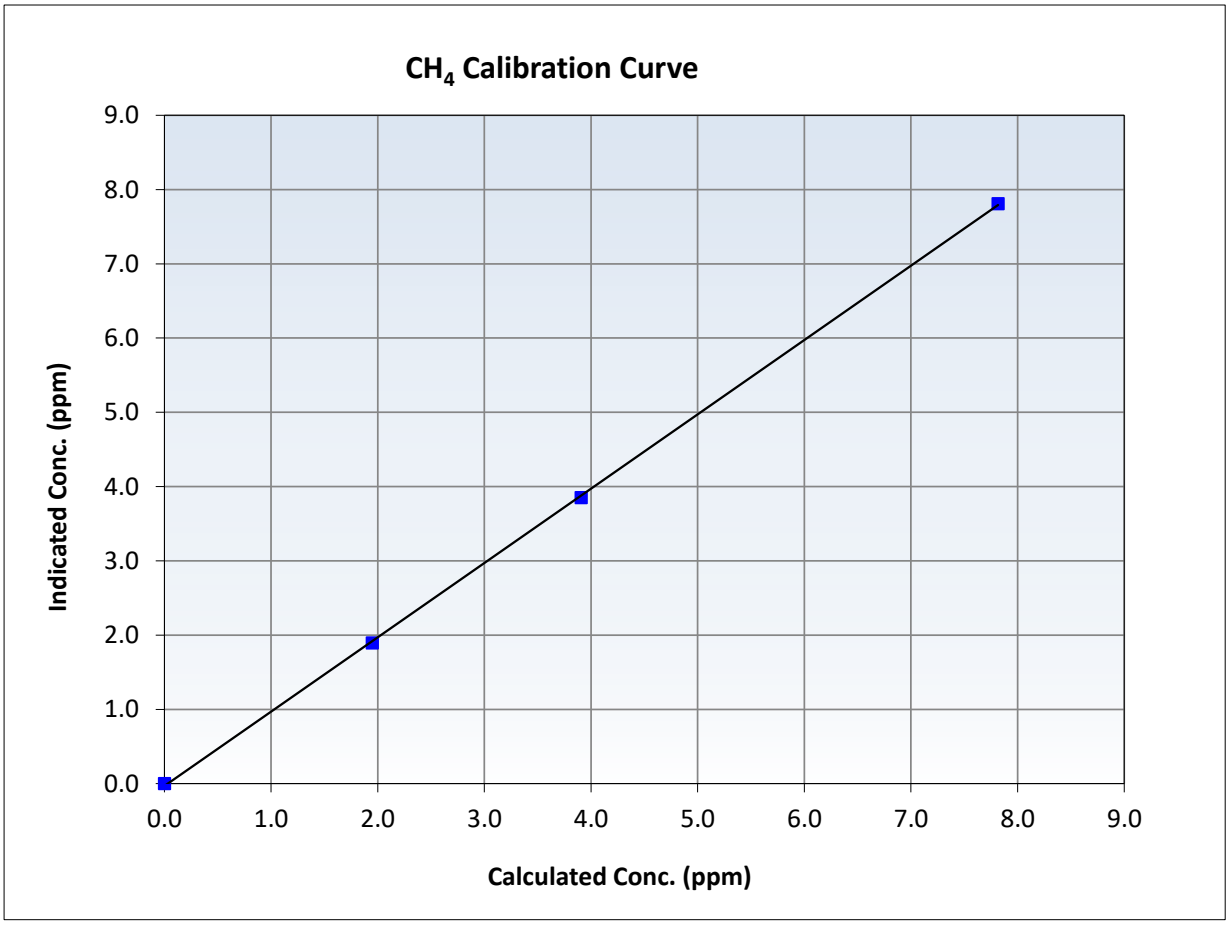
CH_4 Calibration Summary

Station Information

Calibration Date:	December 19, 2025	Previous Calibration:	November 17, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	7:22	End Time (MST):	10:04
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999916	≥0.995
7.82	7.81	1.0006	Slope	1.000944	0.90 - 1.10
3.91	3.85	1.0147			
1.95	1.90	1.0286	Intercept	-0.032113	+/-0.5



Wood Buffalo Environmental Association

NMHC Calibration Summary

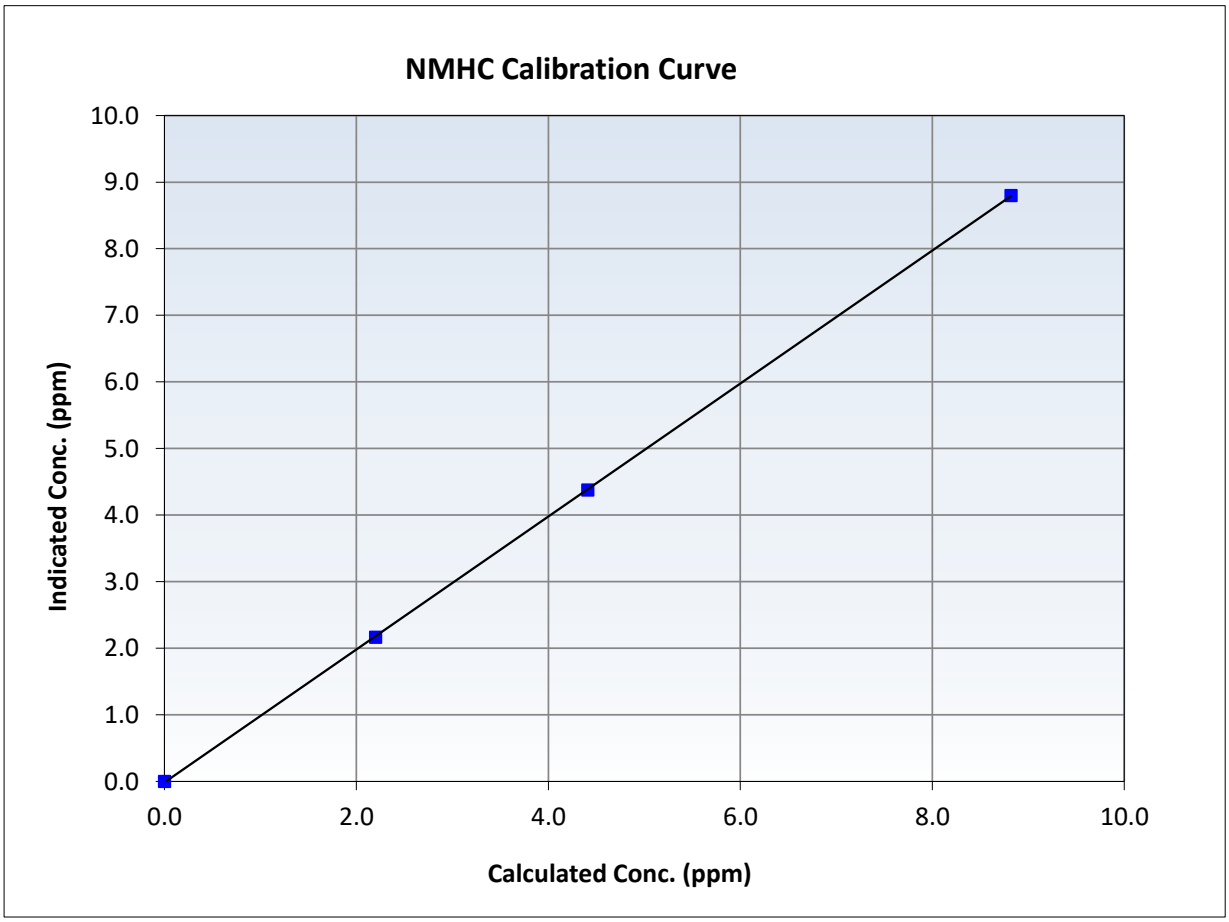
Station Information

Calibration Date:	December 19, 2025	Previous Calibration:	November 17, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	7:22	End Time (MST):	10:04
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

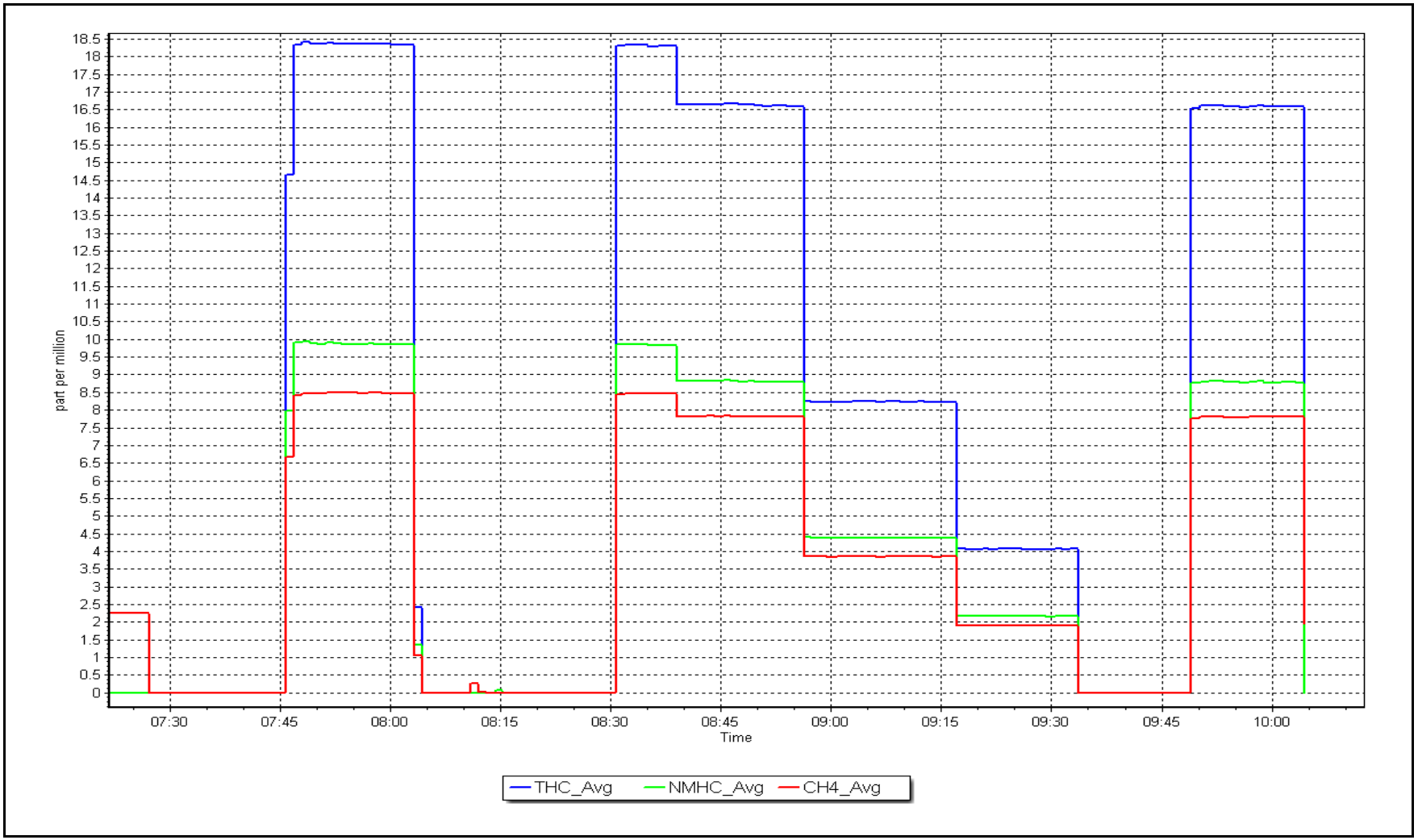
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.00	----
8.82	8.80	1.0023
4.41	4.38	1.0069
2.20	2.17	1.0149

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999987	*≥0.995*
Slope	0.998461	*0.90 - 1.10*
Intercept	-0.014844	*+/-0.5*



NMHC Calibration Plot Date: December 19, 2025 Location: Buffalo Viewpoint



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Buffalo Viewpoint	Station number:	AMS 04
Calibration Date:	December 23, 2025	Last Cal Date:	December 19, 2025
Start time (MST):	9:05	End time (MST):	11:40
Reason:	Maintenance		

Calibration Standards

Gas Cert Reference:	CC446753	Cal Gas Expiry Date:	March 10, 2031
CH4 Cal Gas Conc.	497.2 ppm	CH4 Equiv Conc.	1058.2 ppm
C3H8 Cal Gas Conc.	204.0 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	497.2 ppm	CH4 Equiv Conc.	1058.2 ppm
Removed C3H8 Conc.	204.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	3808
Zero Air Gen model:	Teledyne API T701	Serial Number:	362

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	3.23E-04	3.40E-04	NMHC SP Ratio:	5.40E-04	5.78E-04
CH4 Retention time:	15.4	15.2	NMHC Peak Area:	163322	152505
Zero Chromatogram:	OFF	OFF	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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.6	16.64	15.73	1.058
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	15.73	Prev response	16.59	*% change	-5.4%
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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	78.6	16.64	16.58	1.004
Mid point	4961	39.3	8.32	8.18	1.017
Low point	4980	19.6	4.15	4.02	1.032
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.6	16.64	16.51	1.008
				Average Correction Factor	1.017

Notes: Power switched back to Powerline not generator. Nightly Spans 5% low. Dec 19,2025 calibrations were over 10% high. Span adjusted.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.6	8.82	8.27	1.067
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.27	Prev response	8.79	*% change	-6.3%
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	78.6	8.82	8.77	1.006
Mid point	4961	39.3	4.41	4.36	1.012
Low point	4980	19.6	2.20	2.15	1.022
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.6	8.82	8.74	1.009
				Average Correction Factor	1.013

CH4 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.6	7.82	7.47	1.047
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.47	Prev response	7.79	*% change	-4.4%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	78.6	7.82	7.81	1.001
Mid point	4961	39.3	3.91	3.82	1.023
Low point	4980	19.6	1.95	1.87	1.043
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.6	7.82	7.78	1.005
				Average Correction Factor	1.022

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	0.999834	0.998015
THC Cal Offset:	-0.047957	-0.066973
CH4 Cal Slope:	1.000944	1.000990
CH4 Cal Offset:	-0.032113	-0.047520
NMHC Cal Slope:	0.998461	0.995249
NMHC Cal Offset:	-0.014844	-0.019453

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

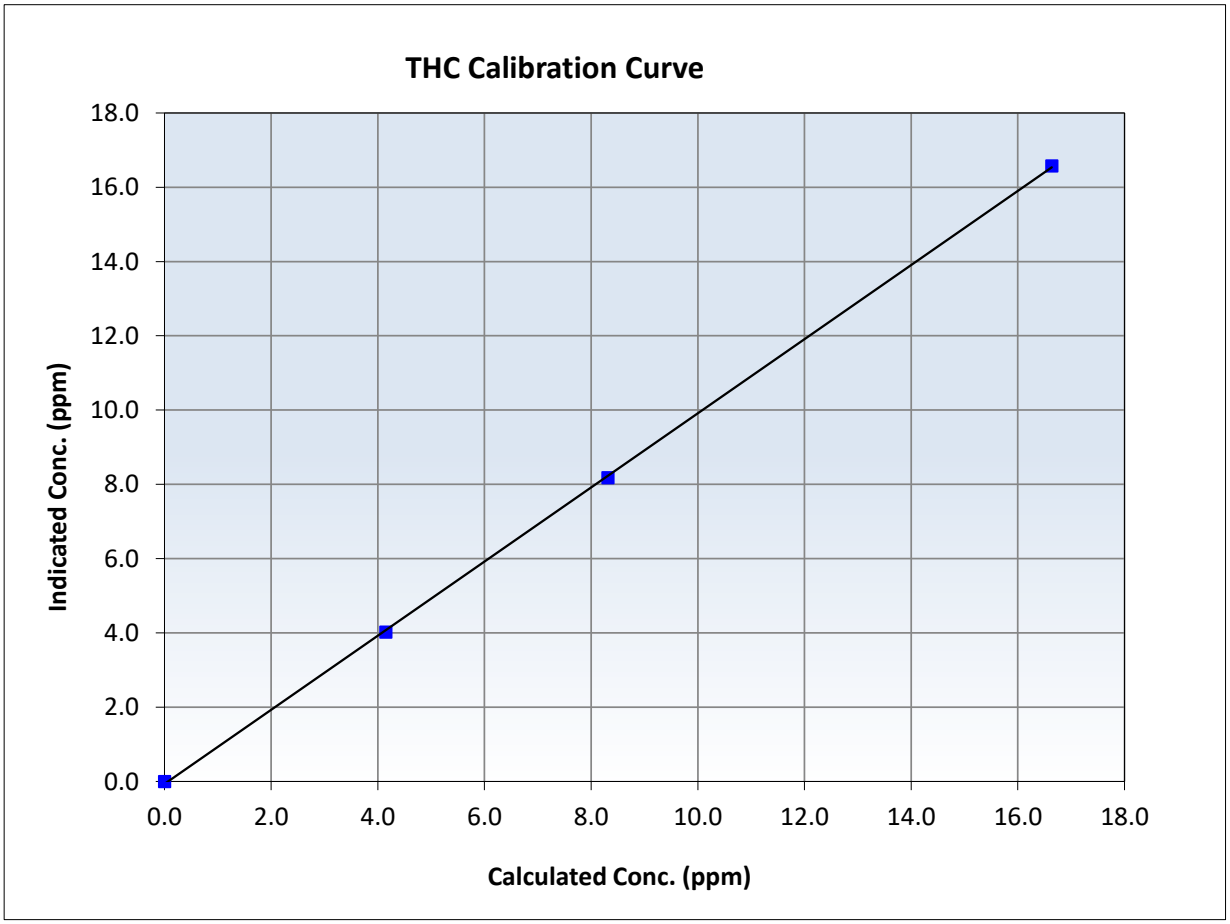
THC Calibration Summary

Station Information

Calibration Date:	December 23, 2025	Previous Calibration:	December 19, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:05	End Time (MST):	11:40
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999921	*≥0.995*
16.64	16.58	1.0036	Slope	0.998015	*0.90 - 1.10*
8.32	8.18	1.0170			
4.15	4.02	1.0317	Intercept	-0.066973	*+/-0.5*



Wood Buffalo Environmental Association

CH_4 Calibration Summary

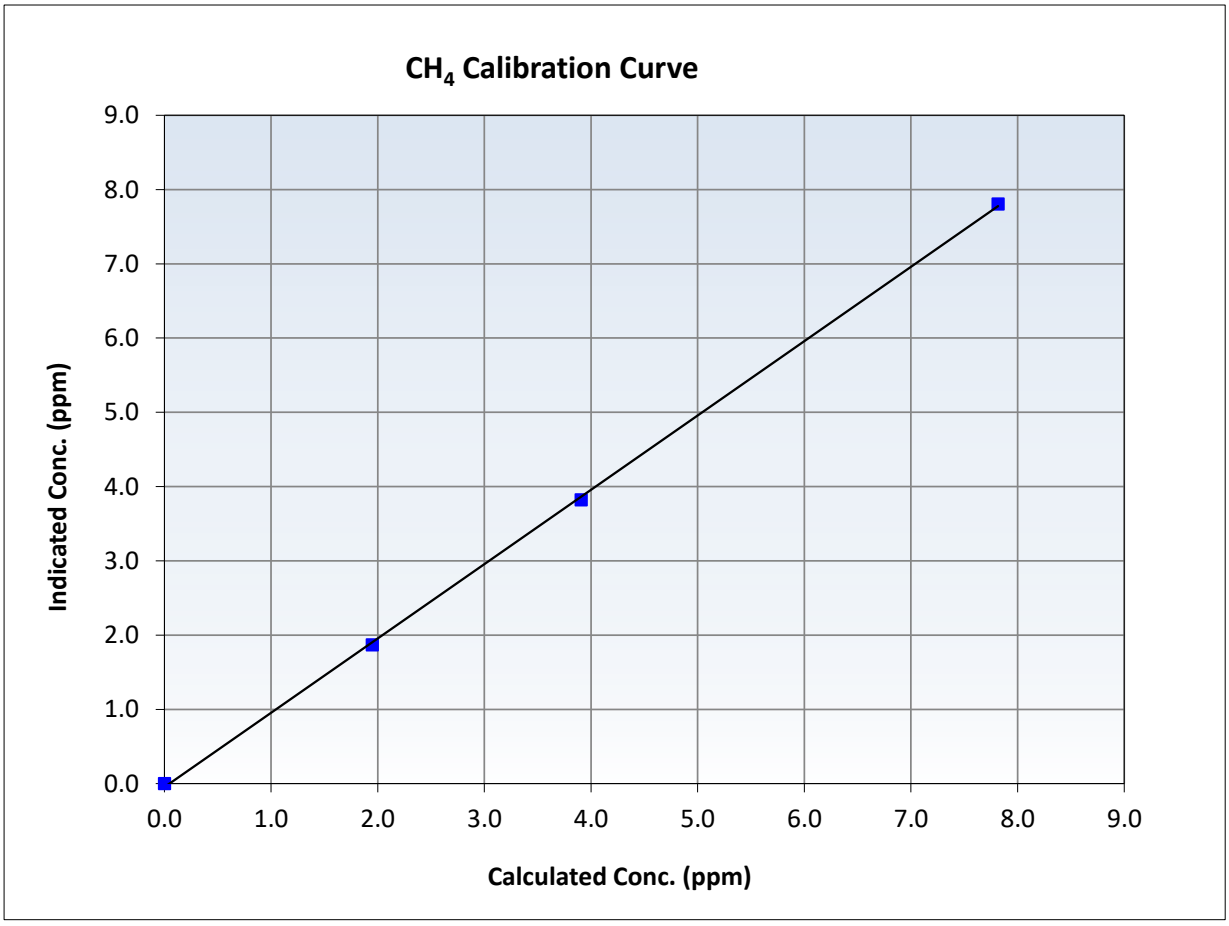
Station Information

Calibration Date:	December 23, 2025	Previous Calibration:	December 19, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:05	End Time (MST):	11:40
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.00	----
7.82	7.81	1.0012
3.91	3.82	1.0227
1.95	1.87	1.0429

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999814	*≥0.995*
Slope	1.000990	*0.90 - 1.10*
Intercept	-0.047520	*+/-0.5*



Wood Buffalo Environmental Association

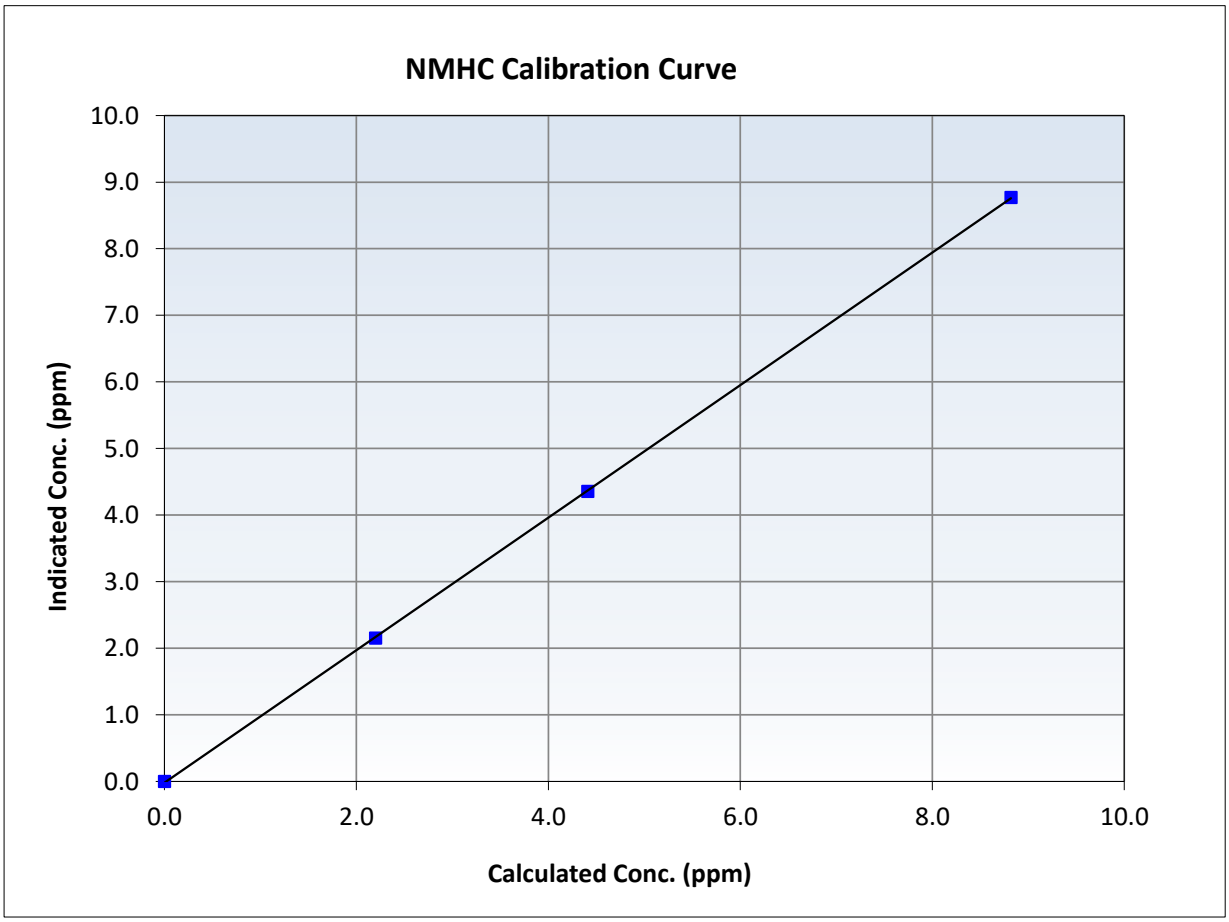
NMHC Calibration Summary

Station Information

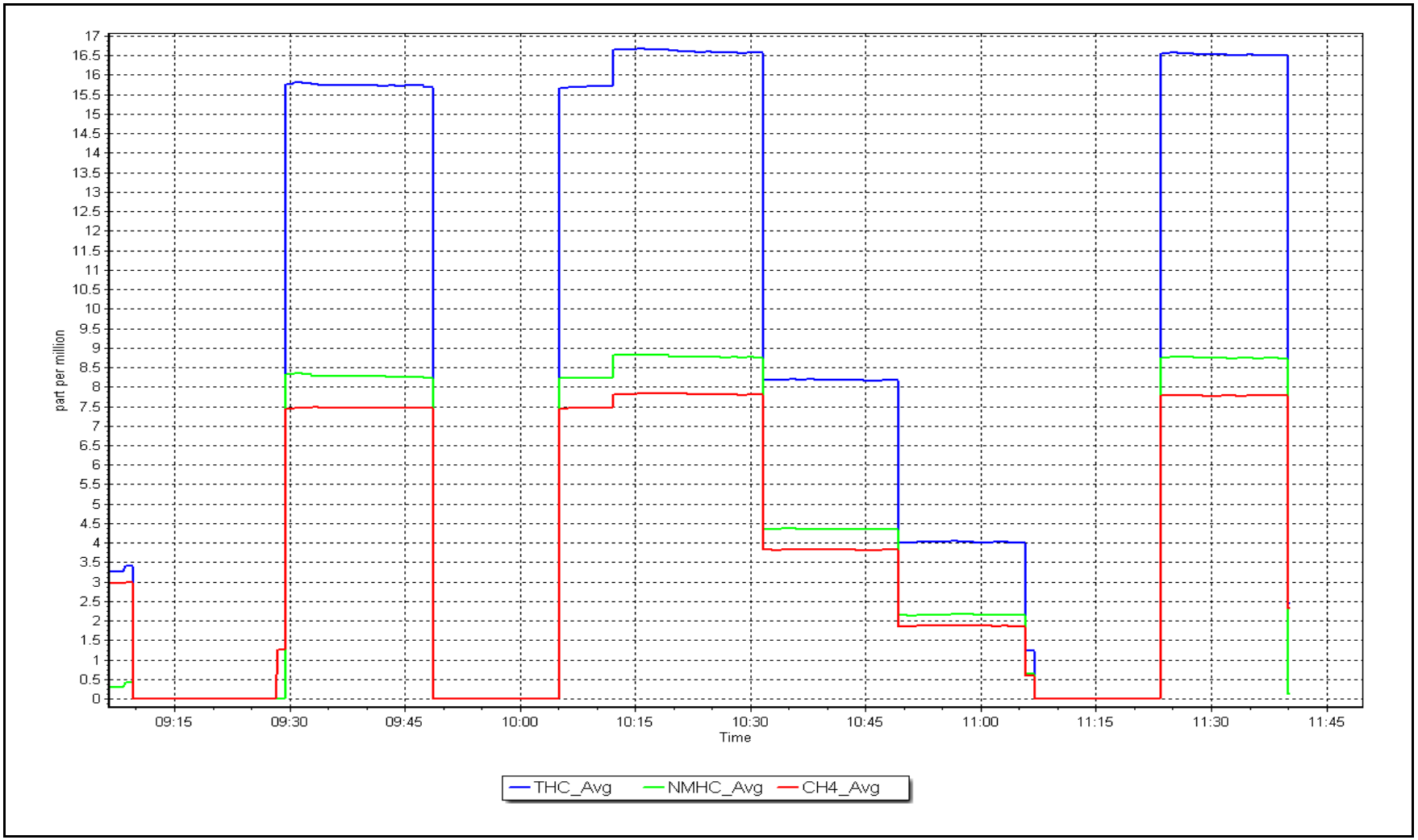
Calibration Date:	December 23, 2025	Previous Calibration:	December 19, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	9:05	End Time (MST):	11:40
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320038

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999977	≥0.995
8.82	8.77	1.0058	Slope	0.995249	0.90 - 1.10
4.41	4.36	1.0122			
2.20	2.15	1.0220	Intercept	-0.019453	+/-0.5



NMHC Calibration Plot Date: December 23, 2025 Location: Buffalo Viewpoint



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Buffalo Viewpoint
Station number:	AMS 04
Calibration Date:	December 18, 2025
Last Cal Date:	November 5, 2025
Start time (MST):	8:30
End time (MST):	12:04
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	CC324979	Cal Gas Expiry Date:	November 3, 2032
NOX Cal Gas Conc:	48.90 ppm	NO Cal Gas Conc:	48.80 ppm
Removed Cylinder #:		Removed Gas Exp Date:	
Removed Gas NOX Conc:	48.90 ppm	Removed Gas NO Conc:	48.80 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	3808
ZAG make/model:	Teledyne API T701	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
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	As Found Statistics	*Percent Change	NO =	NA
Baseline Corr 2nd pt	NO_X = NA	ppb	NO = NA	ppb	As found NO_X r^2:	Nx Sl:	Nx Int:	
Baseline Corr 3rd pt	NO_X = NA	ppb	NO = NA	ppb	As found NO r^2:	NO Sl:	NO Int:	
					As found NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Teledyne API T200 Serial Number: 721

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	1.003	1.063	NO bkgnd or offset:	-0.6	-0.6
NOX coeff or slope:	0.996	1.055	NOX bkgnd or offset:	-0.7	-0.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	4.8	4.8

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	0.996779	1.001939
NO_X Cal Offset:	1.166469	-1.713832
NO Cal Slope:	0.997937	1.001533
NO Cal Offset:	-0.174526	-3.055294
NO_2 Cal Slope:	0.991741	0.999089
NO_2 Cal Offset:	1.486706	-0.172967

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.2	0.0	0.2	----	----
High point	4918	81.8	800.0	798.4	1.6	800.8	797.7	3.2	0.9990	1.0009
Mid point	4959	40.9	400.0	399.2	0.8	398.2	396.4	1.8	1.0045	1.0070
Low point	4980	20.4	199.5	199.1	0.4	196.2	192.5	3.7	1.0168	1.0342
As left zero	5000	0.0	0.0	0.9	-0.9	1.0	0.9	0.2	----	----
As left span	4918	81.8	800.0	404.7	800.0	790.3	404.7	385.6	1.0123	1.0000
							Average Correction Factor		1.0068	1.0140

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.2	----	----
High GPT point	790.2	405.5	386.3	386.0	1.0009	99.9%
Mid GPT point	790.2	599.8	192.0	191.5	1.0028	99.7%
Low GPT point	790.2	693.4	98.4	97.8	1.0065	99.4%
				Average Correction Factor	1.0034	99.7%

Notes: Pump and charcoal Changed out. No as founds as power has been out for more than 4 days. Span Adjusted. Due to drifting during the GPT the 2nd NO point used.

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

NO_X Calibration Summary

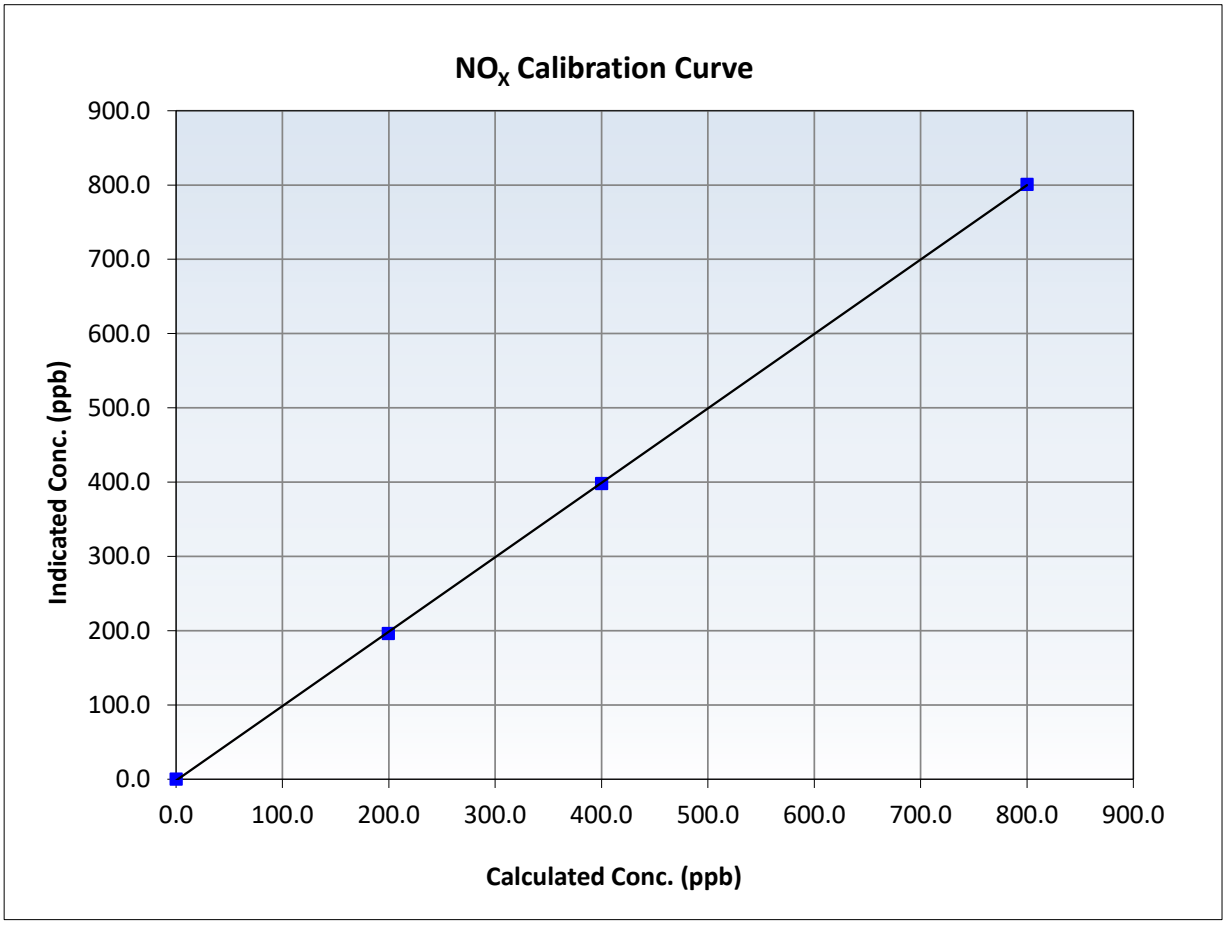
Station Information

Calibration Date:	December 18, 2025	Previous Calibration:	November 5, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	8:30	End Time (MST):	12:04
Analyzer make:	Teledyne API T200	Analyzer serial #:	721

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
800.0	800.8	0.9990
400.0	398.2	1.0045
199.5	196.2	1.0168

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999974	*≥0.995*
Slope	1.001939	*0.90 - 1.10*
Intercept	-1.713832	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

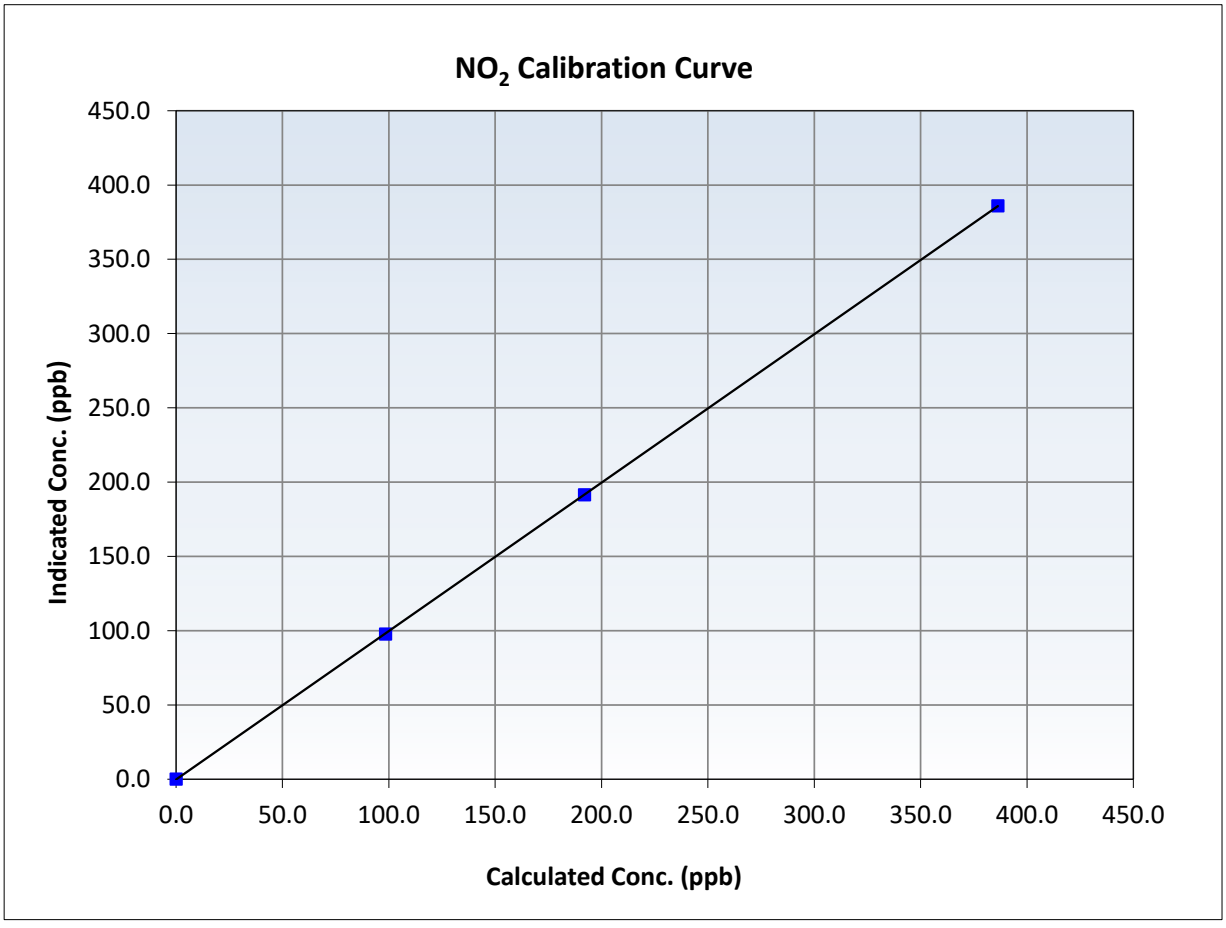
Station Information

Calibration Date:	December 18, 2025	Previous Calibration:	November 5, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	8:30	End Time (MST):	12:04
Analyzer make:	Teledyne API T200	Analyzer serial #:	721

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
386.3	386.0	1.0009
192.0	191.5	1.0028
98.4	97.8	1.0065

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999996	*≥0.995*
Slope	0.999089	*0.90 - 1.10*
Intercept	-0.172967	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

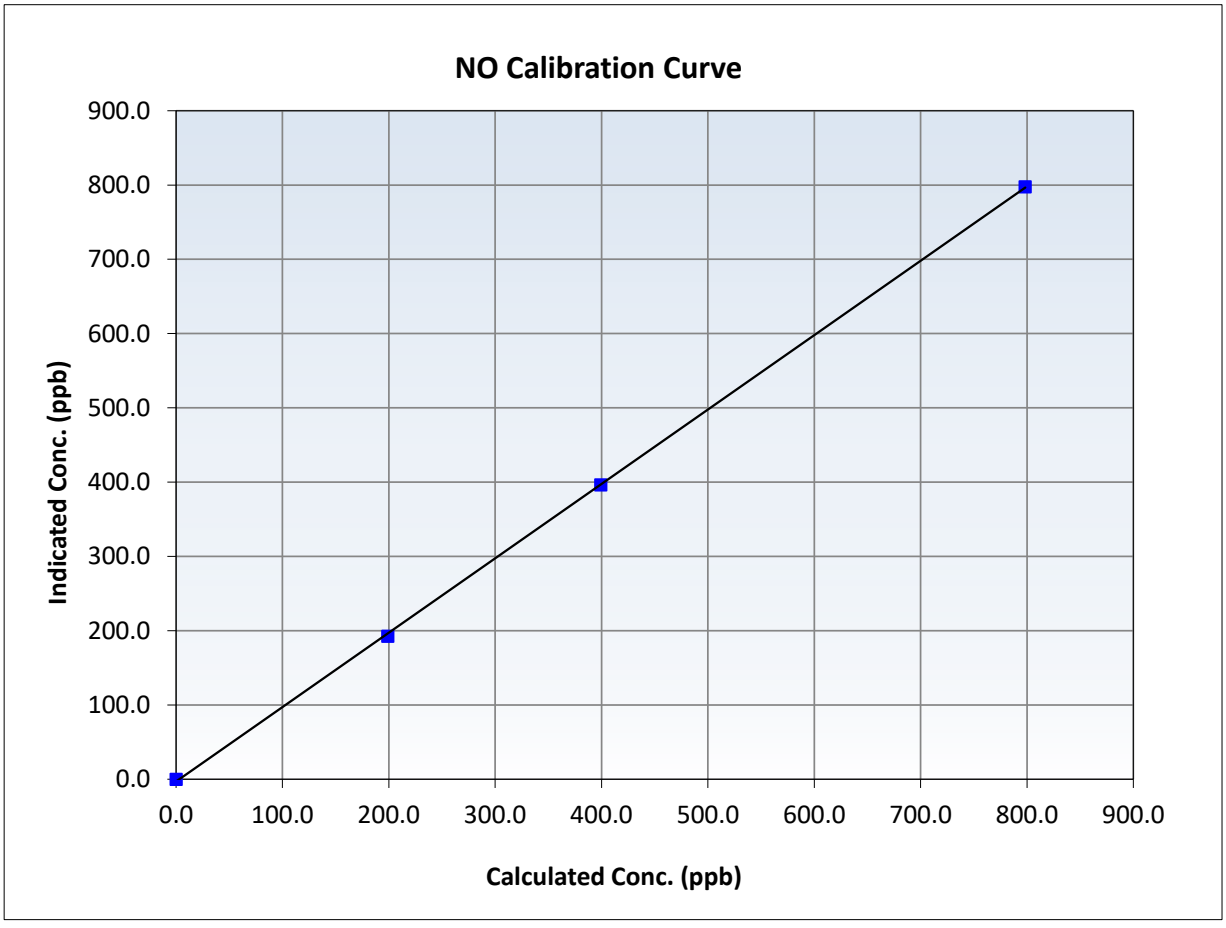
Station Information

Calibration Date:	December 18, 2025	Previous Calibration:	November 5, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	8:30	End Time (MST):	12:04
Analyzer make:	Teledyne API T200	Analyzer serial #:	721

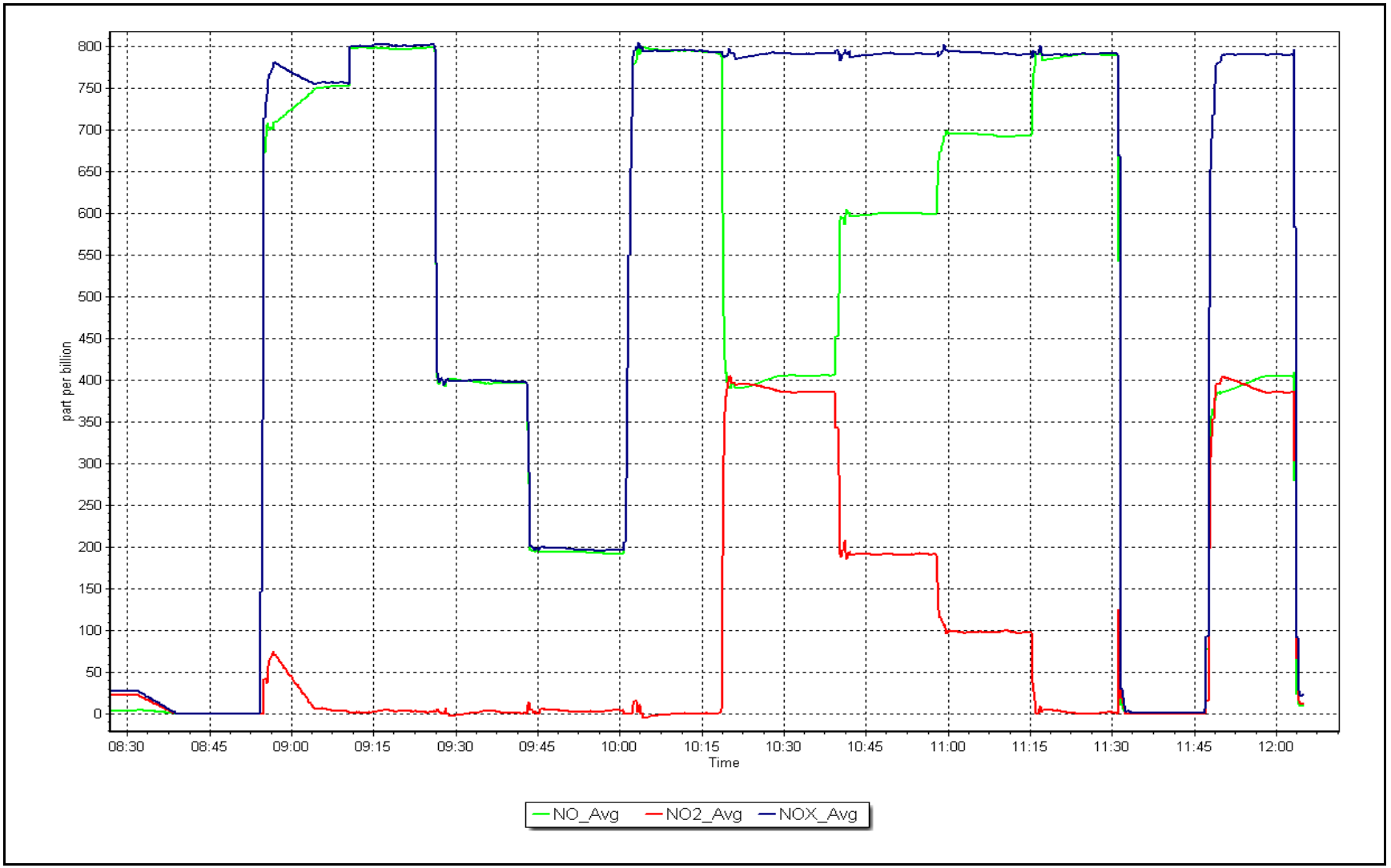
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
798.4	797.7	1.0009
399.2	396.4	1.0070
199.1	192.5	1.0342

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999927	*≥0.995*
Slope	1.001533	*0.90 - 1.10*
Intercept	-3.055294	*+/-20*



NO_X Calibration Plot Date: December 18, 2025 Location: Buffalo Viewpoint



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Buffalo Viewpoint	Station number:	AMS 04
Calibration Date:	December 17, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	10:05	End time (MST):	13:00
Reason:	Routine		

Calibration Standards

O3 generation mode:	Photometer		
Calibrator Make/Model:	Teledyne API T700	Serial Number:	3808
ZAG Make/Model:	Teledyne API T701	Serial Number:	362

Analyzer Information

Analyzer make:	Teledyne API T400		Analyzer serial #:	2961	
Analyzer Range	0 - 500 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.999943	0.991743	Backgd or Offset:	-1.0	-1.0
Calibration intercept:	0.460000	0.920000	Coeff or Slope:	1.008	1.008

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.1	----
As found High point	5000	1017.5	400.0	395.2	1.012
As found Mid point					
As found Low point					
Baseline Corr As found:	395.3	Previous response	400.4	*% 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	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	5000	1017.6	400.0	397.1	1.007
Mid point	5000	834.5	200.0	200.0	1.000
Low point	5000	720.3	100.0	100.7	0.993
As left zero	5000	0.0	0.0	0.0	----
As left span	5000	1013.5	400.0	399.5	1.001
				Average Correction Factor	1.000

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

Calibration Performed By: Devin Russell

Wood Buffalo Environmental Association

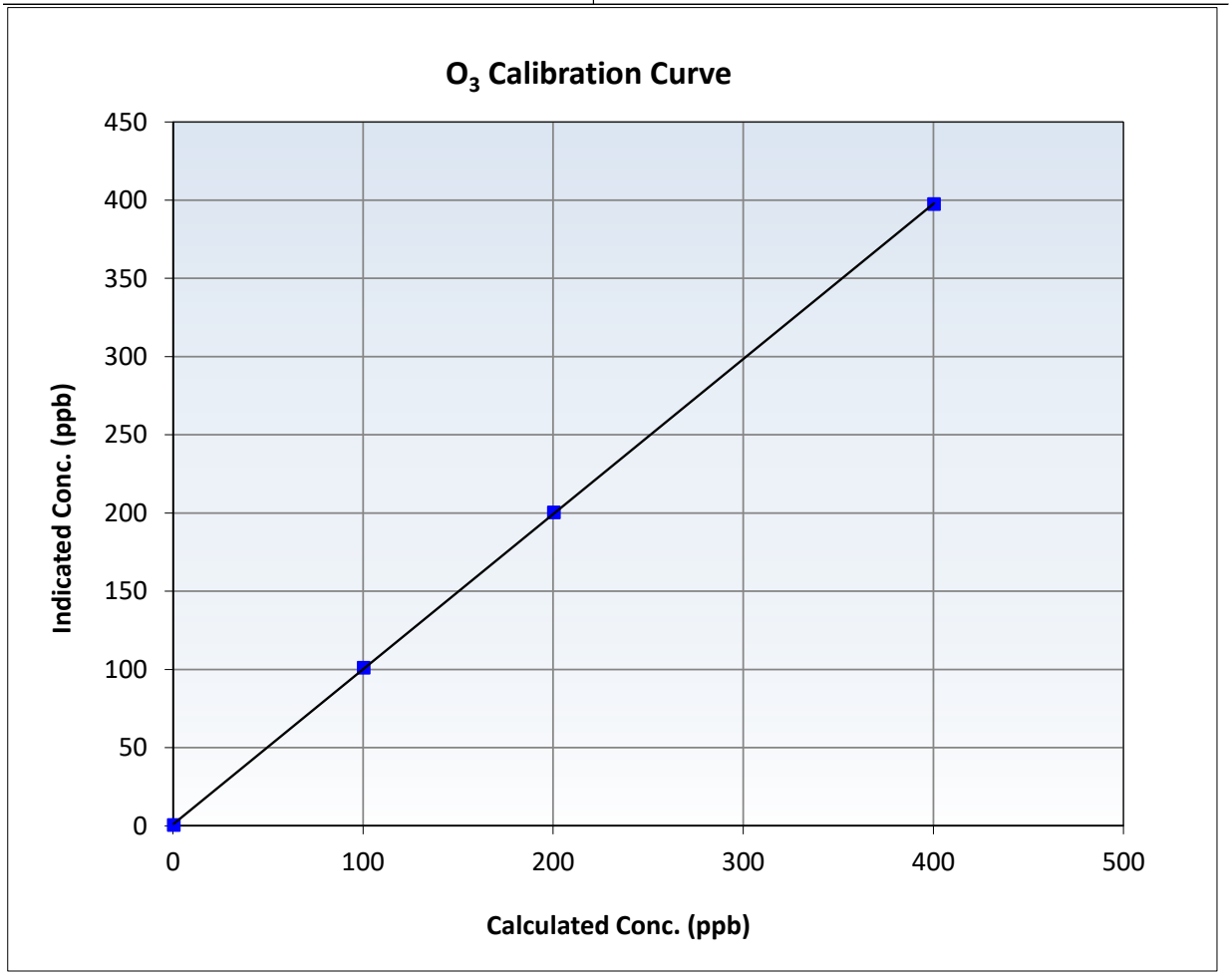
O_3 Calibration Summary

Station Information

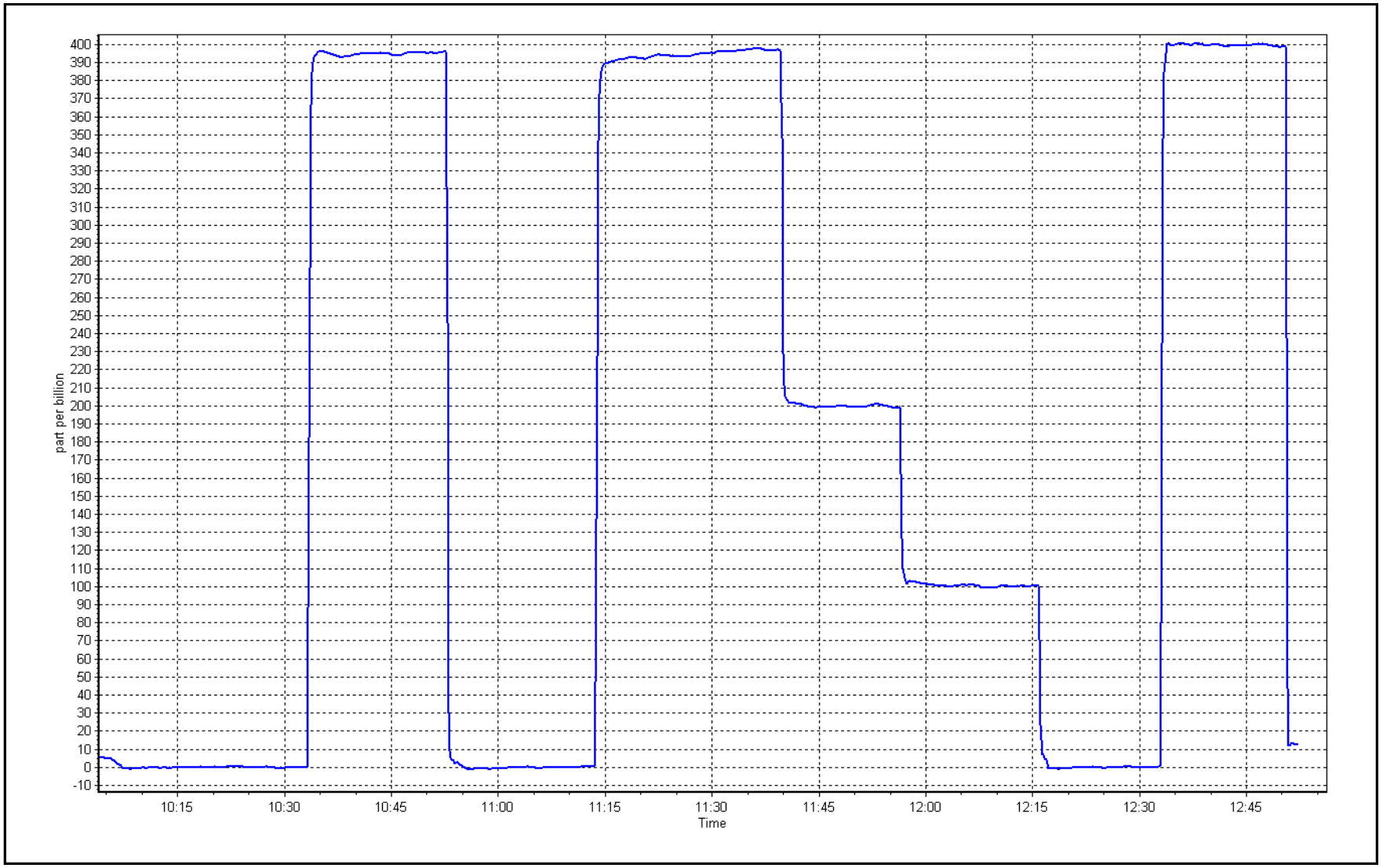
Calibration Date:	December 17, 2025	Previous Calibration:	November 17, 2025
Station Name:	Buffalo Viewpoint	Station Number:	AMS 04
Start Time (MST):	10:05	End Time (MST):	13:00
Analyzer make:	Teledyne API T400	Analyzer serial #:	2961

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.1	----	Correlation Coefficient	0.999979	≥0.995
400.0	397.1	1.0073	Slope	0.991743	0.90 - 1.10
200.0	200.0	1.0000			
100.0	100.7	0.9930	Intercept	0.920000	+/- 5



O_3 Calibration Plot Date: December 17, 2025 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:	December 18, 2025	Last Cal Date:	November 21, 2025
Start time (MST):	8:15	End time (MST):	9:10
Analyzer Make:	Teledyne API T640	S/N:	321
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)	-28.1	-29.0	-28.1	☐	+/- 2 °C
P (mmHg)	727.9	729.9	727.9	☐	+/- 10 mmHg
Flow (LPM)	5.00	5.20	5.00	☐	+/- 0.25 LPM
PW% (pump)	44	-----	44	☐	>80%
Zero Verification	PM w/o HEPA:	5.7	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	9.5	10.8	10.8	☐	+/- 0.5

Date Optical Chamber Cleaned: December 18, 2025

Date Disposable Filter Changed: December 18, 2025

Post- maintenance Zero Verification: PM w/ HEPA: 0 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: December 18, 2025

Date RH/T Sensor Cleaned: December 18, 2025

Notes: No adjustments done. Leak Check, PMT and Flow checked before and after optical chamber cleaning.

Calibration by: Melissa Lemay

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS05
MANNIX
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Mannix	Station number:	AMS 05
Calibration Date:	December 4, 2025	Last Cal Date:	November 12, 2025
Start time (MST):	6:52	End time (MST):	9:46
Reason:	Routine		

Calibration Standards

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

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1008841399	
Analyzer Range:	1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.004936	1.005580	Backgd or Offset:	11.0	11.0
Calibration intercept:	-1.177173	-0.920059	Coeff or Slope:	0.944	0.944

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4920	79.9	800.0	803.4	0.996
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	803.4	Previous response	802.7	*% change	0.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4920	79.9	800.0	803.6	0.995
Mid point	4960	40.0	400.5	402.6	0.995
Low point	4980	20.0	200.2	198.5	1.009
As left zero	5000	0.0	0.0	0.0	----
As left span	4920	79.9	800.0	805.6	0.993
				Average Correction Factor:	1.000

Notes: No Maintenance or adjustments done.

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

SO_2 Calibration Summary

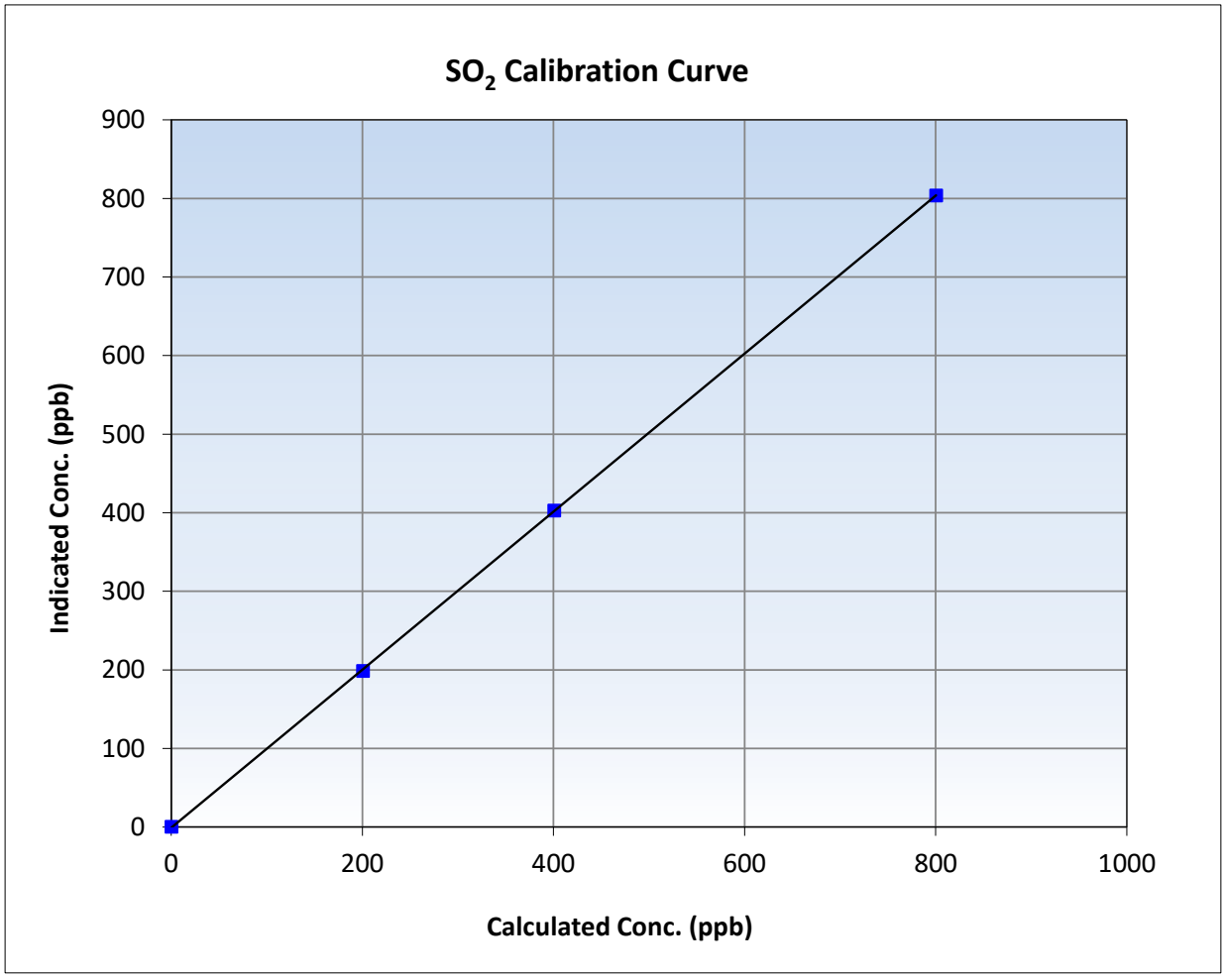
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 12, 2025
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	6:52	End Time (MST):	9:46
Analyzer make:	Thermo 43i	Analyzer serial #:	1008841399

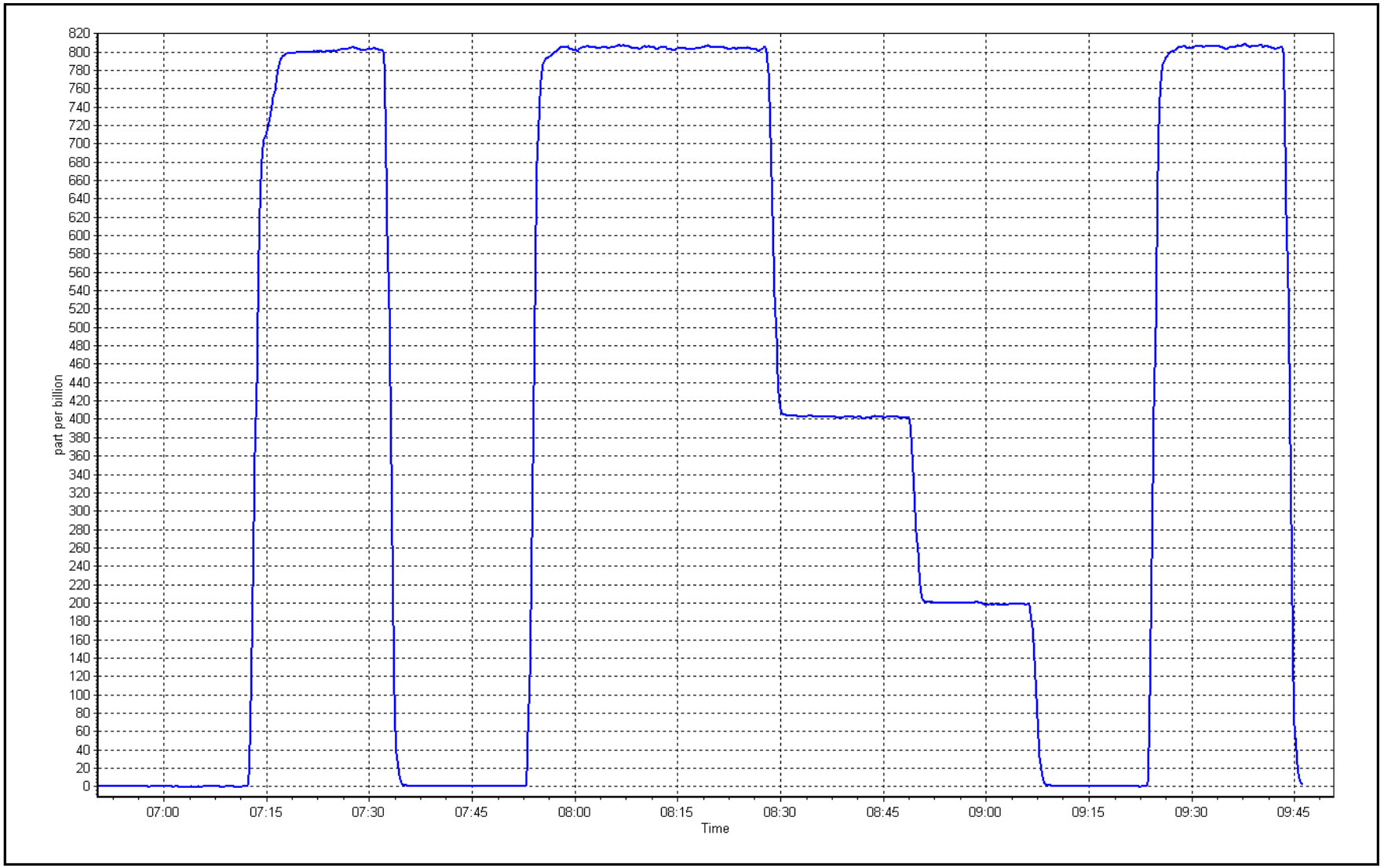
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
800.0	803.6	0.9955
400.5	402.6	0.9947
200.2	198.5	1.0088

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999984	*≥0.995*
Slope	1.005580	*0.90 - 1.10*
Intercept	-0.920059	*+/-30*



SO2 Calibration Plot Date: December 4, 2025 Location: Mannix



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Mannix	Station number:	AMS 05
Calibration Date:	December 10, 2025	Last Cal Date:	November 14, 2025
Start time (MST):	7:30	End time (MST):	11:50
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.96	ppm	Cal Gas Exp Date:	November 15, 2026
Cal Gas Cylinder #:	DT0037363			
Removed Cal Gas Conc:	4.96	ppm	Rem Gas Exp Date:	N/A
Removed Gas Cyl #:	N/A		Diff between cyl:	
Calibrator Make/Model:	API T700		Serial Number:	5470
ZAG Make/Model:	API T701		Serial Number:	361

Analyzer Information

Analyzer make:	Thermo 43iQ		Analyzer serial #:	1200326169	
Converter make:	Global		Converter serial #:	2022-225	
Analyzer Range	0 - 100 ppb		Converter Temp:	325	degC
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.005408	0.991681	Backgd or Offset:	1.26	1.26
Calibration intercept:	0.242153	0.422498	Coeff or Slope:	1.040	1.040

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.2	----
As found High point	4919	80.6	80.0	79.7	1.006
As found Mid point	4960	40.3	40.0	40.4	0.994
As found Low point	4980	20.2	20.0	20.2	1.002
New cylinder response					
Baseline Corr As found:	79.5	Prev response:	80.64	*% change:	-1.4%
Baseline Corr 2nd AF pt:	40.2	AF Slope:	0.994542	AF Intercept:	0.322378
Baseline Corr 3rd AF pt:	20.0	AF Correlation:	0.999959	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4919	80.6	80.0	79.6	1.005
Mid point	4960	40.3	40.0	40.4	0.989
Low point	4980	20.2	20.0	20.1	0.997
As left zero	5000	0.0	0.0	0.5	----
As left span	4919	80.6	80.0	79.5	1.006
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: SOx scrubber check after calibrator zero. No adjustments done.

Calibration Performed By: Param Kaur

Wood Buffalo Environmental Association

H_2S Calibration Summary

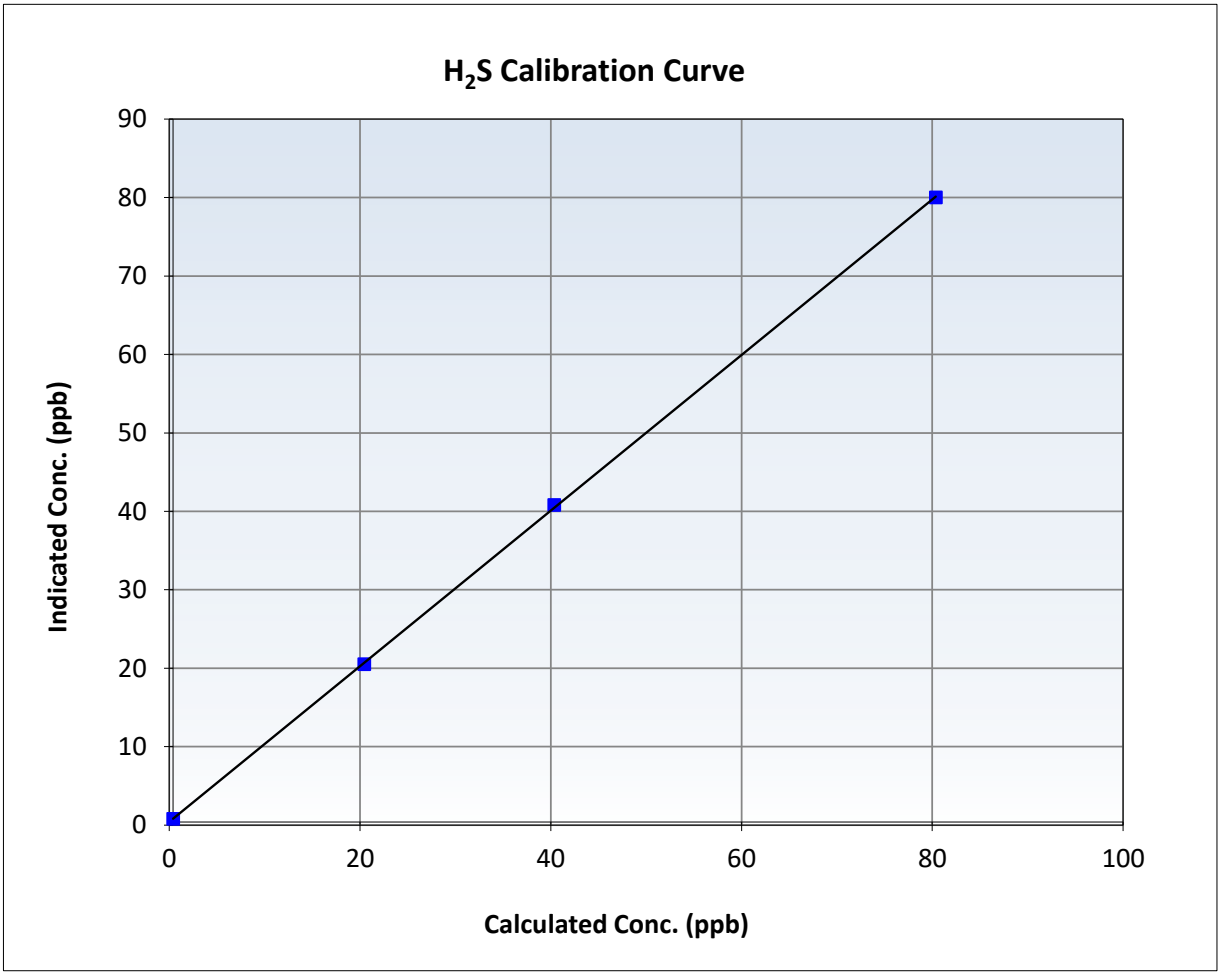
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 14, 2025
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	7:30	End Time (MST):	11:50
Analyzer make:	Thermo 43iQ	Analyzer serial #:	1200326169

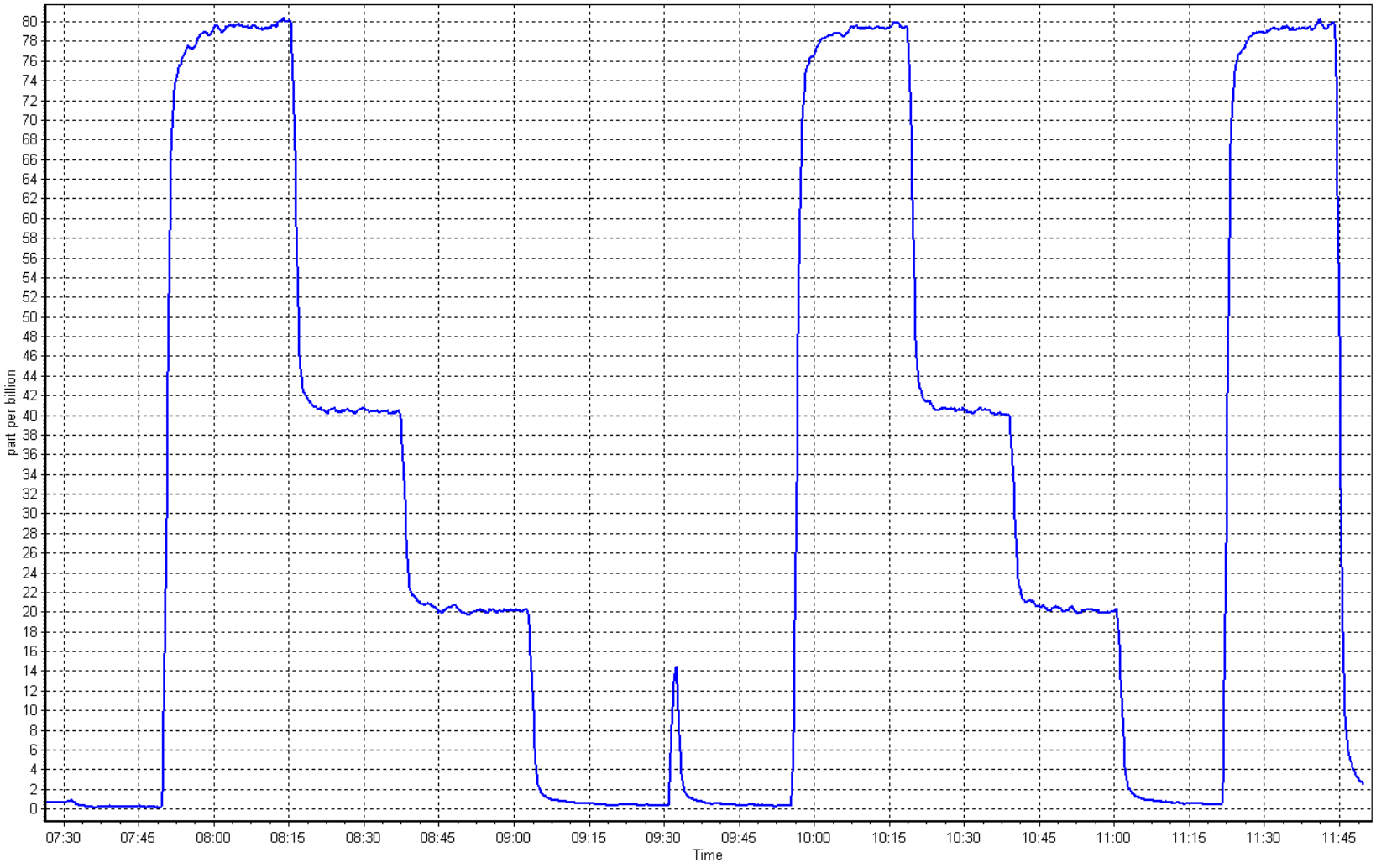
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.4	----
80.0	79.6	1.0045
40.0	40.4	0.9895
20.0	20.1	0.9969

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999952	*≥0.995*
Slope	0.991681	*0.90 - 1.10*
Intercept	0.422498	*+/-3*



H_2S Calibration Plot Date: December 10, 2025 Location: Mannix



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Mannix	Station number:	AMS 05
Calibration Date:	December 4, 2025	Last Cal Date:	November 12, 2025
Start time (MST):	6:52	End time (MST):	9:45
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC308040	Cal Gas Expiry Date:	October 22, 2032
CH4 Cal Gas Conc.	500.3 ppm	CH4 Equiv Conc.	1047.6 ppm
C3H8 Cal Gas Conc.	199.0 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	500.3 ppm	CH4 Equiv Conc.	1047.6 ppm
Removed C3H8 Conc.	199.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	API T700	Serial Number:	5470
Zero Air Gen model:	API T701	Serial Number:	361

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	2.65E-04	2.57E-04	NMHC SP Ratio:	4.99E-05	4.84E-05
CH4 Retention time:	13.7	13.9	NMHC Peak Area:	175327	180863
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	16.74	17.30	0.967
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.30	Prev response	16.82	*% change	2.8%
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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	16.74	16.70	1.002
Mid point	4960	40.0	8.38	8.42	0.995
Low point	4980	20.0	4.19	4.18	1.002
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	16.74	16.71	1.002
				Average Correction Factor	1.000

Notes: Hydrogen Cylinder changed. Span adjusted.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	8.75	9.03	0.969
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.03	Prev response	8.77	*% change	2.8%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	8.75	8.70	1.005
Mid point	4960	40.0	4.38	4.38	1.000
Low point	4980	20.0	2.19	2.17	1.007
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	8.75	8.72	1.003
				Average Correction Factor	1.004

CH4 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	7.99	8.28	0.966
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.28	Prev response	8.05	*% change	2.8%
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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.9	7.99	8.01	0.999
Mid point	4960	40.0	4.00	4.04	0.991
Low point	4980	20.0	2.00	2.01	0.996
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	7.99	7.99	1.000
				Average Correction Factor	0.995

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	1.005029	0.998101
THC Cal Offset:	-0.002544	0.013467
CH4 Cal Slope:	1.005829	1.001427
CH4 Cal Offset:	0.007214	0.009618
NMHC Cal Slope:	1.003997	0.995061
NMHC Cal Offset:	-0.009358	0.003849

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

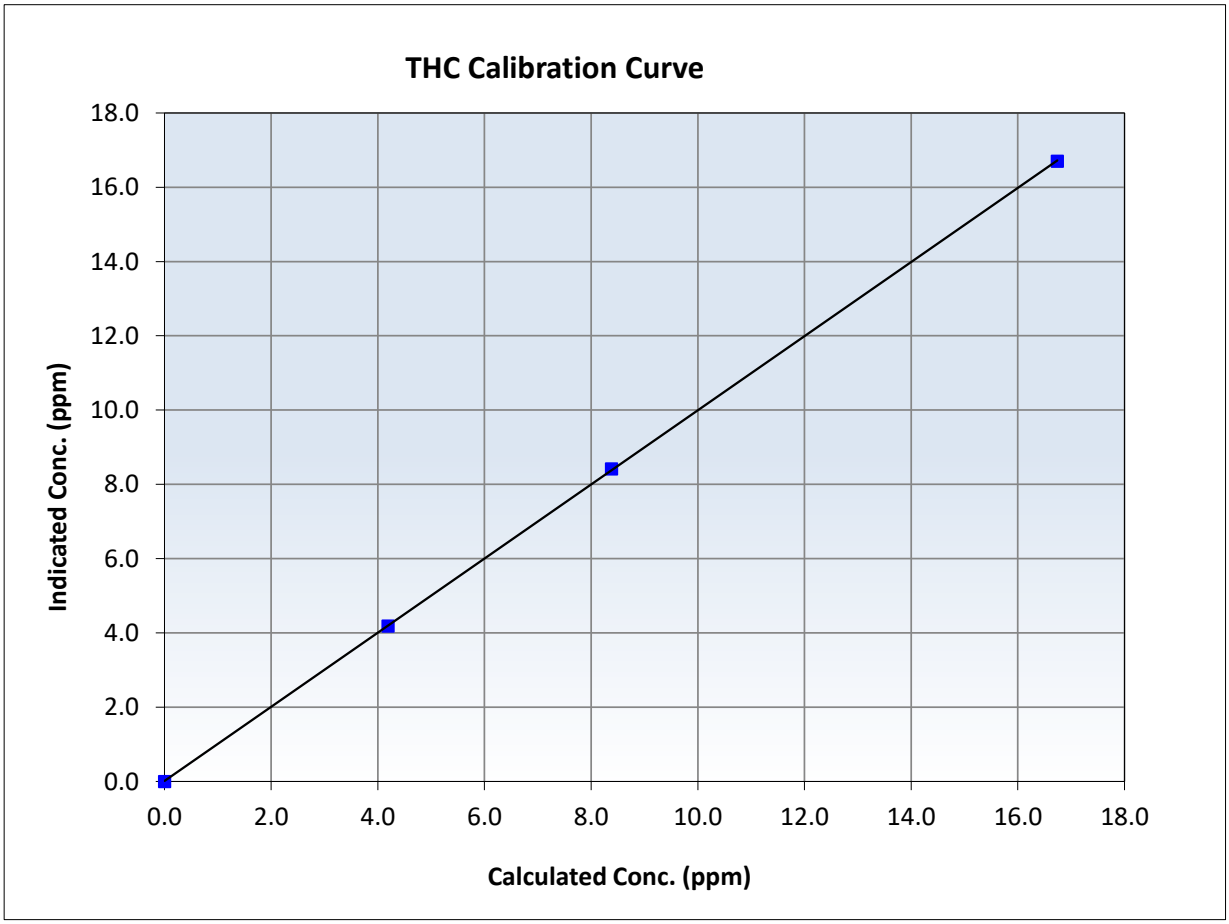
THC Calibration Summary

Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 12, 2025
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	6:52	End Time (MST):	9:45
Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999984	≥0.995
16.74	16.70	1.0022	Slope	0.998101	0.90 - 1.10
8.38	8.42	0.9953	Intercept	0.013467	+/-0.5
4.19	4.18	1.0017			



Wood Buffalo Environmental Association

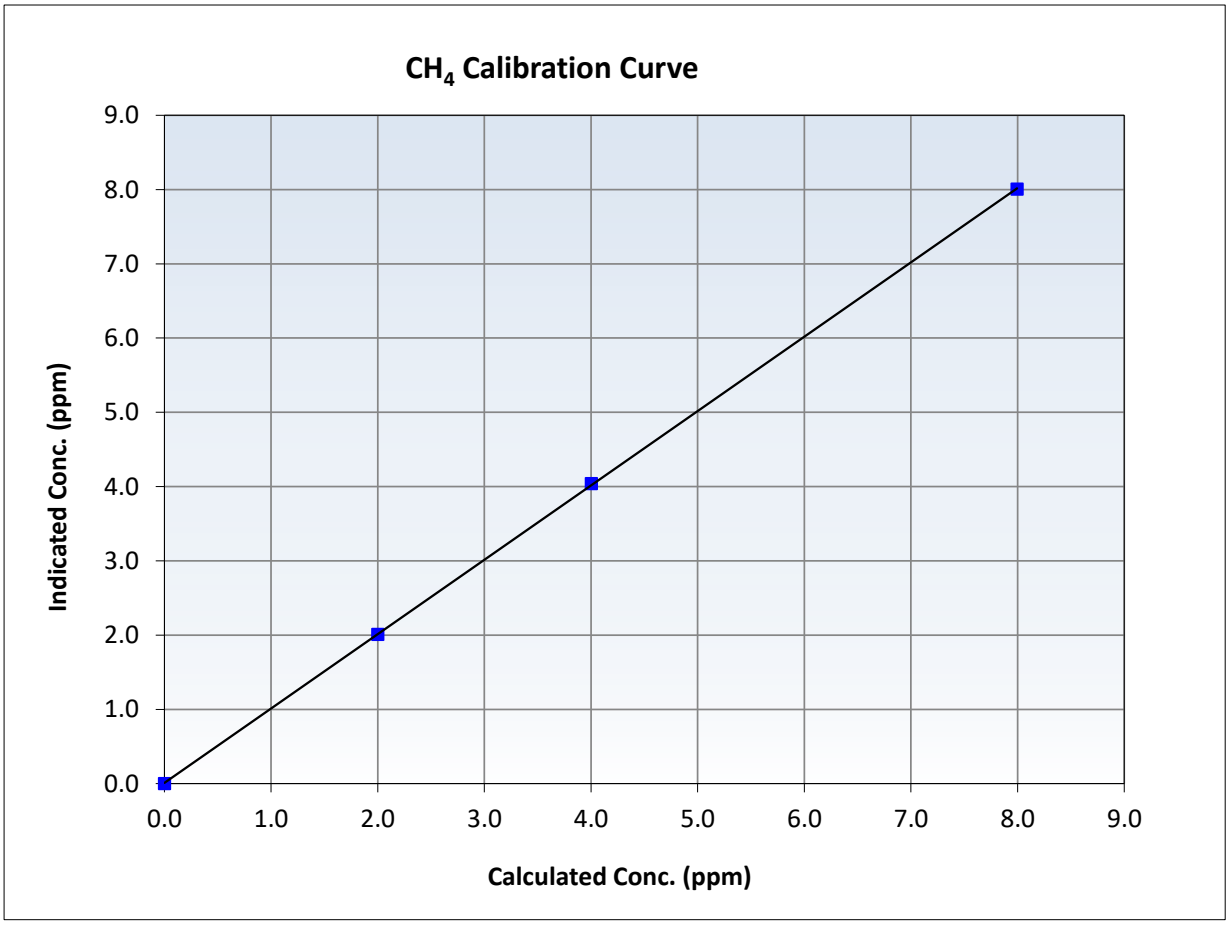
CH_4 Calibration Summary

Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 12, 2025
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	6:52	End Time (MST):	9:45
Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999981	*≥0.995*
7.99	8.01	0.9986	Slope	1.001427	*0.90 - 1.10*
4.00	4.04	0.9907			
2.00	2.01	0.9961	Intercept	0.009618	*+/-0.5*



Wood Buffalo Environmental Association

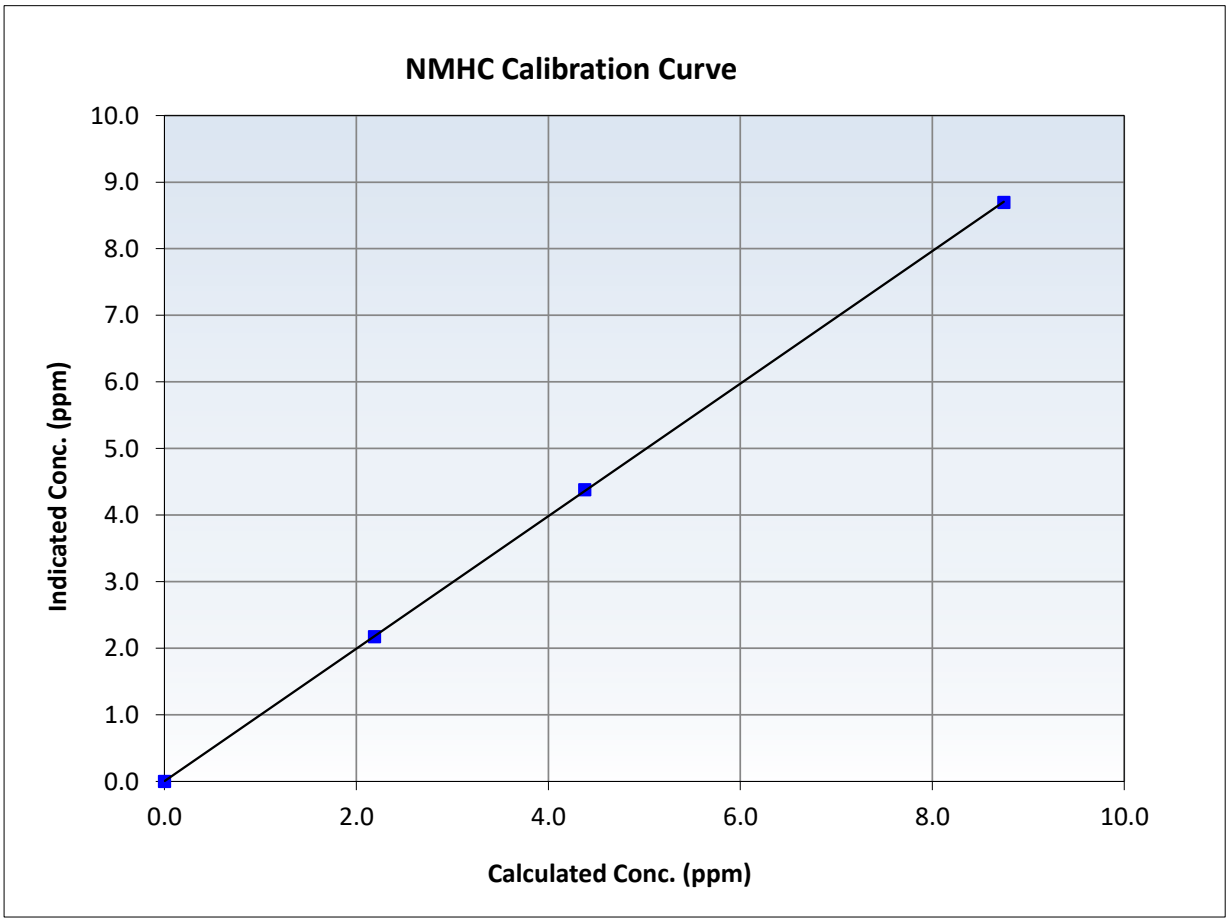
NMHC Calibration Summary

Station Information

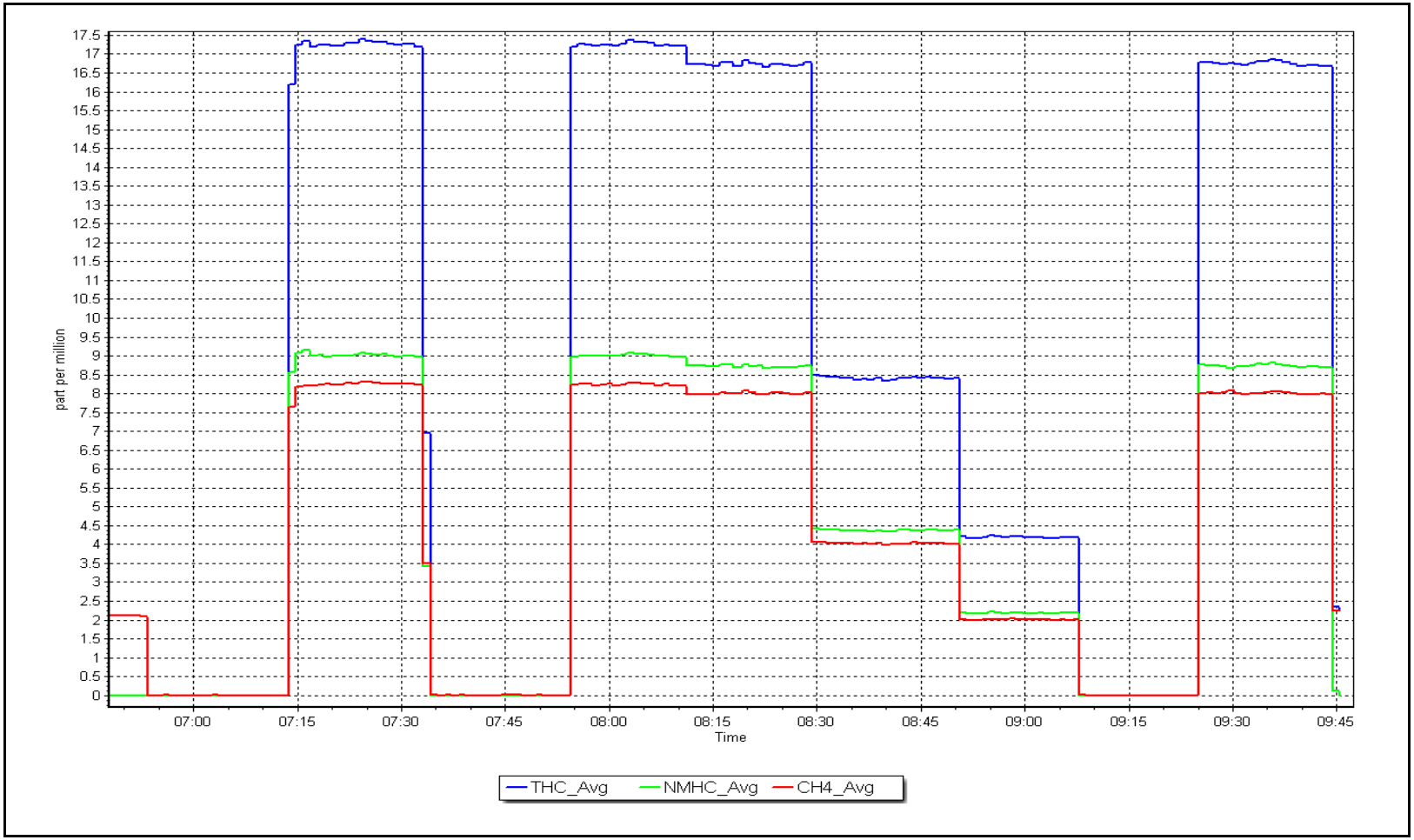
Calibration Date:	December 4, 2025	Previous Calibration:	November 12, 2025
Station Name:	Mannix	Station Number:	AMS 05
Start Time (MST):	6:52	End Time (MST):	9:45
Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999987	≥0.995
8.75	8.70	1.0054	Slope	0.995061	0.90 - 1.10
4.38	4.38	0.9995	Intercept	0.003849	+/-0.5
2.19	2.17	1.0069			



NMHC Calibration Plot Date: December 4, 2025 Location: Mannix



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Mannix	Station number:	AMS 05
Calibration Date:	December 22, 2025	Last Cal Date:	December 4, 2025
Start time (MST):	7:53	End time (MST):	9:10
Reason:	Cylinder Change	Nitrogen Cylinder Change	

Calibration Standards

Gas Cert Reference:	CC308040	Cal Gas Expiry Date:	October 22, 2032
CH4 Cal Gas Conc.	500.3 ppm	CH4 Equiv Conc.	1047.6 ppm
C3H8 Cal Gas Conc.	199.0 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	500.3 ppm	CH4 Equiv Conc.	1047.6 ppm
Removed C3H8 Conc.	199.0 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	API T700	Serial Number:	5470
Zero Air Gen model:	API T701	Serial Number:	361

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	15005164381
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	2.57E-04	2.57E-04	NMHC SP Ratio:	4.84E-05	4.84E-05
CH4 Retention time:	13.9	13.9	NMHC Peak Area:	180863	180863
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	16.74	16.63	1.007
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	16.63	Prev response	16.82	*% change	-1.2%
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)) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	16.74	16.62	1.007
				Average Correction Factor	

Notes: Nitrogen Cylinder Change.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	8.75	8.70	1.005
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.70	Prev response	8.77	*% 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) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	8.75	8.71	1.005
				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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.9	7.99	7.93	1.009
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.93	Prev response	8.05	*% change	-1.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

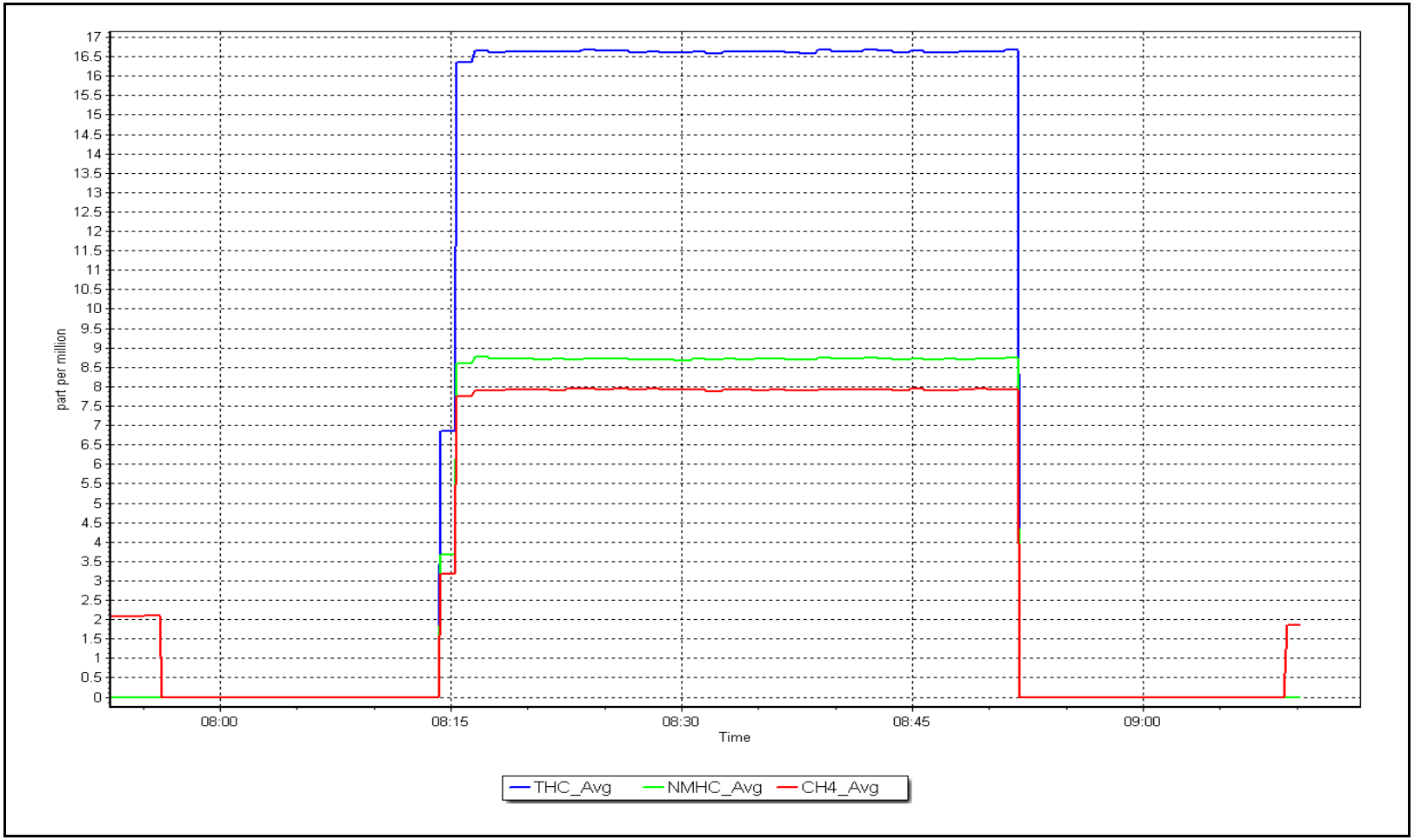
Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.9	7.99	7.92	1.009
				Average Correction Factor	

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	1.005029	
THC Cal Offset:	-0.002544	
CH4 Cal Slope:	1.005829	
CH4 Cal Offset:	0.007214	
NMHC Cal Slope:	1.003997	
NMHC Cal Offset:	-0.009358	

Calibration Performed By: Melissa Lemay

NMHC Calibration Plot Date: December 22, 2025 Location: Mannix



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS06
PATRICIA MCINNES
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Patricia McInnes	Station number:	AMS 06
Calibration Date:	December 19, 2025	Last Cal Date:	November 10, 2025
Start time (MST):	10:46	End time (MST):	13:40
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.08	ppm	Cal Gas Exp Date:	October 22, 2032
Cal Gas Cylinder #:	CC255448			
Removed Cal Gas Conc:	50.08	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Model:	API T700		Serial Number:	3566
Zero Air Gen Model:	API T701		Serial Number:	4602

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1160290013	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.999065	0.999863	Backgd or Offset:	18.3	18.6
Calibration intercept:	1.785433	1.904020	Coeff or Slope:	0.919	0.931

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.3	----
As found High point	4920	79.8	799.3	786.8	1.016
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	786.5	Previous response	800.3	*% change	-1.8%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4920	79.8	799.3	800.1	0.999
Mid point	4960	39.9	399.6	403.0	0.992
Low point	4980	20.0	200.3	203.2	0.986
As left zero	5000	0.0	0.0	0.3	----
As left span	4920	79.8	799.3	801.0	0.998
				Average Correction Factor:	0.992

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

SO_2 Calibration Summary

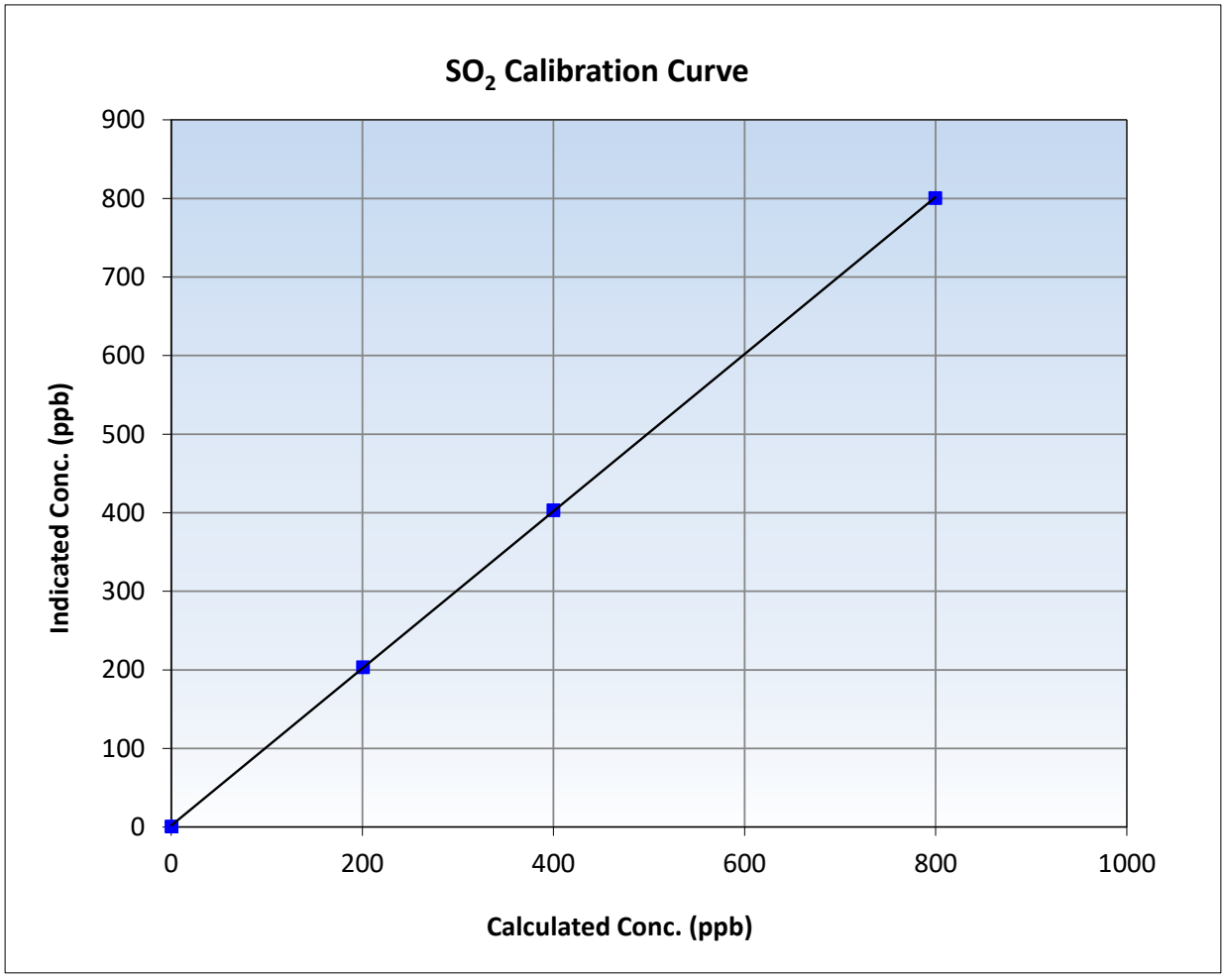
Station Information

Calibration Date:	December 19, 2025	Previous Calibration:	November 10, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	10:46	End Time (MST):	13:40
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290013

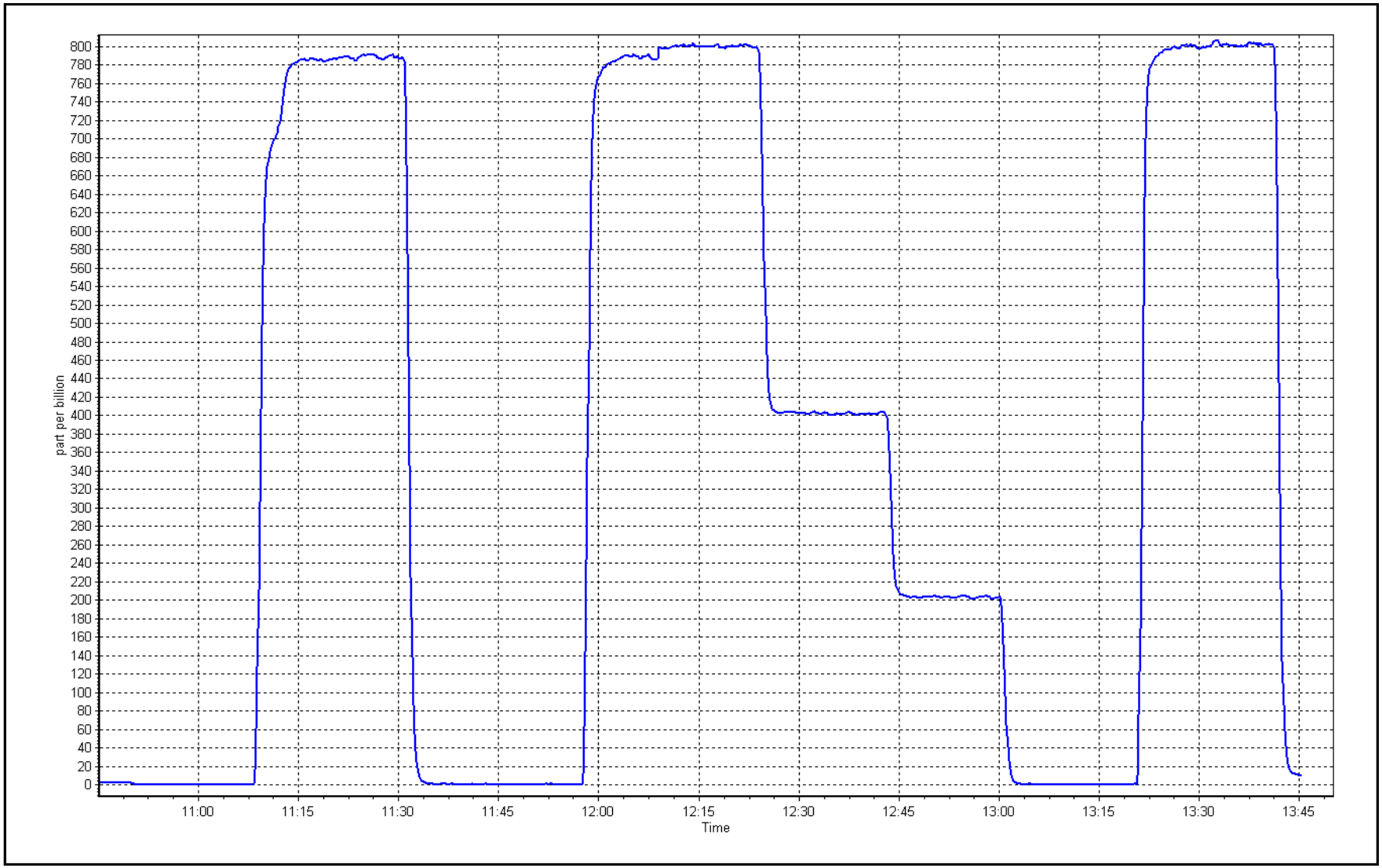
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.4	----
799.3	800.1	0.9990
399.6	403.0	0.9917
200.3	203.2	0.9858

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999981	*≥0.995*
Slope	0.999863	*0.90 - 1.10*
Intercept	1.904020	*+/-30*



SO2 Calibration Plot Date: December 19, 2025 Location: Patricia McInnes



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name:	Patricia McInnes	Station number:	AMS 06
Calibration Date:	December 9, 2025	Last Cal Date:	November 5, 2025
Start time (MST):	8:54	End time (MST):	13:06
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.760	ppm	Cal Gas Exp Date:	August 28, 2027
Cal Gas Cylinder #:	DT0014585			
Removed Cal Gas Conc:	4.760	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Make/Model:	API T700		Serial Number:	3566
ZAG Make/Model:	API T701		Serial Number:	4602

Analyzer Information

Analyzer make:	Thermo 43i TLE		Analyzer serial #:	1218153358	
Converter make:	CDN-101		Converter serial #:	621	
Analyzer Range	0 - 100 ppb		Converter Temp:	825	degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.003687	1.003687	Backgd or Offset:	1.99	1.99
Calibration intercept:	0.260000	0.160000	Coeff or Slope:	1.146	1.146

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.2	----
As found High point	4916	84.0	80.0	81.6	0.982
As found Mid point	4958	42.0	40.0	41.3	0.973
As found Low point	4979	21.0	20.0	20.3	0.995
New cylinder response					

Baseline Corr As found:	81.4	Prev response:	80.52	*% change:	1.1%
Baseline Corr 2nd AF pt:	41.1	AF Slope:	1.019551	AF Intercept:	0.180000
Baseline Corr 3rd AF pt:	20.1	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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4916	84.0	80.0	80.4	0.995
Mid point	4958	42.0	40.0	40.6	0.985
Low point	4979	21.0	20.0	19.7	1.015
As left zero	5000	0.0	0.0	0.4	----
As left span	4916	84.0	80.0	81.3	0.984
SO2 Scrubber Check				0.0	
Date of last scrubber change:		Monday, December 20, 2021		Ave Corr Factor	0.998
Date of last converter efficiency test:					

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

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

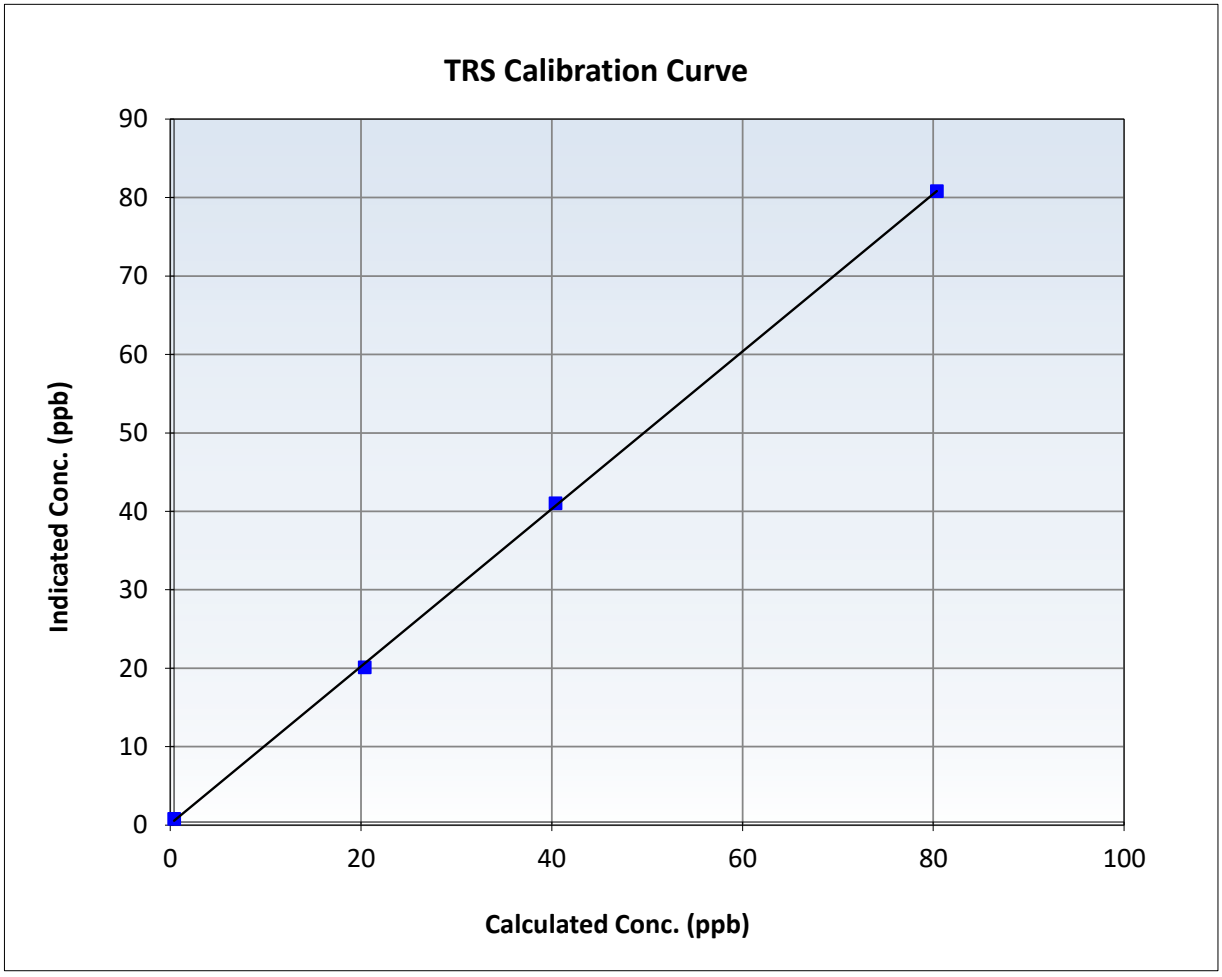
TRS Calibration Summary

Station Information

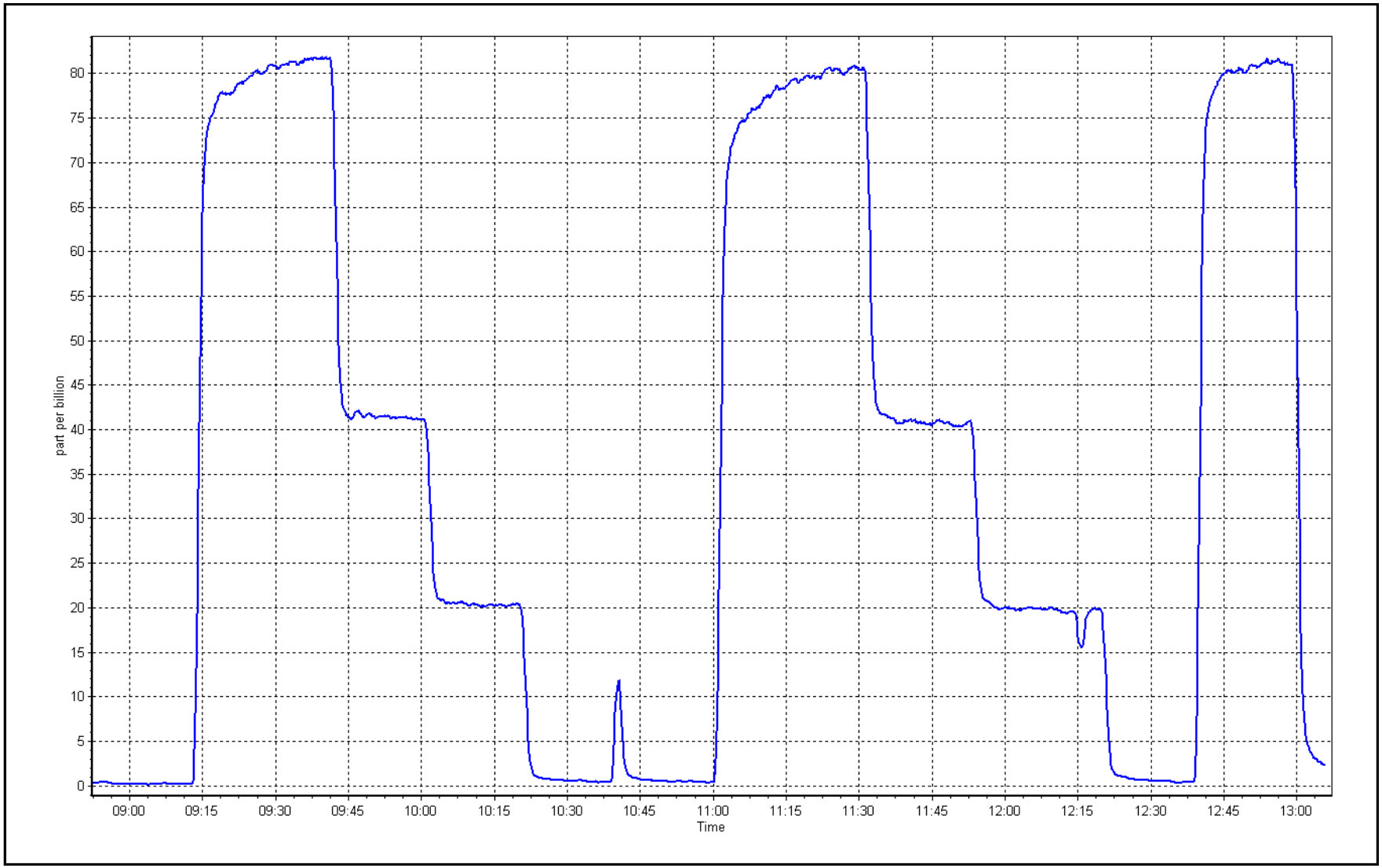
Calibration Date:	December 9, 2025	Previous Calibration:	November 5, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	8:54	End Time (MST):	13:06
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1218153358

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.4	----	Correlation Coefficient	0.999878	*≥0.995*
80.0	80.4	0.9946	Slope	1.003687	*0.90 - 1.10*
40.0	40.6	0.9848			
20.0	19.7	1.0148	Intercept	0.160000	*+/-3*



TRS Calibration Plot Date: December 9, 2025 Location: Patricia McInnes



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Patricia McInnes	Station number:	AMS 06
Calibration Date:	December 19, 2025	Last Cal Date:	November 10, 2025
Start time (MST):	10:46	End time (MST):	13:40
Reason:	Routine		

Calibration Standards

Gas Cert Reference:		CC255448	Cal Gas Expiry Date:	October 22, 2032	
CH4 Cal Gas Conc.	501.4	ppm	CH4 Equiv Conc.	1049.5	ppm
C3H8 Cal Gas Conc.	199.3	ppm			
Removed Gas Cert:			Removed Gas Expiry:		
Removed CH4 Conc.	501.4	ppm	CH4 Equiv Conc.	1049.5	ppm
Removed C3H8 Conc.	199.3	ppm	Diff between cyl (THC):		
Diff between cyl (CH_4):			Diff between cyl (NM):		
Calibrator Model:	API T700		Serial Number:	3566	
Zero Air Gen model:	API T701		Serial Number:	4602	

Analyzer Information

Analyzer make:	Thermo 55i		Analyzer serial #:	1118148494	
THC Range:	0 - 20 ppm		NMHC/CH4 Range:	0 - 10 ppm	
	Start	***Finish***		***Start***	***Finish***
CH4 SP Ratio:	2.65E-04	2.65E-04	NMHC SP Ratio:	5.25E-05	5.25E-05
CH4 Retention time:	14.2	14.2	NMHC Peak Area:	166553	166553
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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	16.75	16.78	0.998
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	16.78	Prev response	16.74	*% 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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	16.75	16.78	0.998
Mid point	4960	39.9	8.37	8.36	1.002
Low point	4980	20.0	4.20	4.17	1.007
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	16.75	16.75	1.000
				Average Correction Factor	1.002

Notes: Changed the inlet filter and H2 after as founds. No adjustment made.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	8.75	8.66	1.010
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.66	Prev response	8.76	*% change	-1.1%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	8.75	8.66	1.010
Mid point	4960.1	39.9	4.37	4.36	1.004
Low point	4980	20.0	2.19	2.20	0.997
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	8.75	8.67	1.009
				Average Correction Factor	1.004

CH4 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	8.00	8.12	0.986
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.12	Prev response	7.99	*% change	1.6%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	8.00	8.12	0.985
Mid point	4960.1	39.9	4.00	4.00	1.000
Low point	4980	20.0	2.01	1.97	1.018
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	8.00	8.09	0.989
				Average Correction Factor	1.001

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	0.999409	1.002437
THC Cal Offset:	0.004998	-0.021200
CH4 Cal Slope:	1.000363	1.016787
CH4 Cal Offset:	-0.017801	-0.037824
NMHC Cal Slope:	0.998314	0.989113
NMHC Cal Offset:	0.023400	0.016625

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

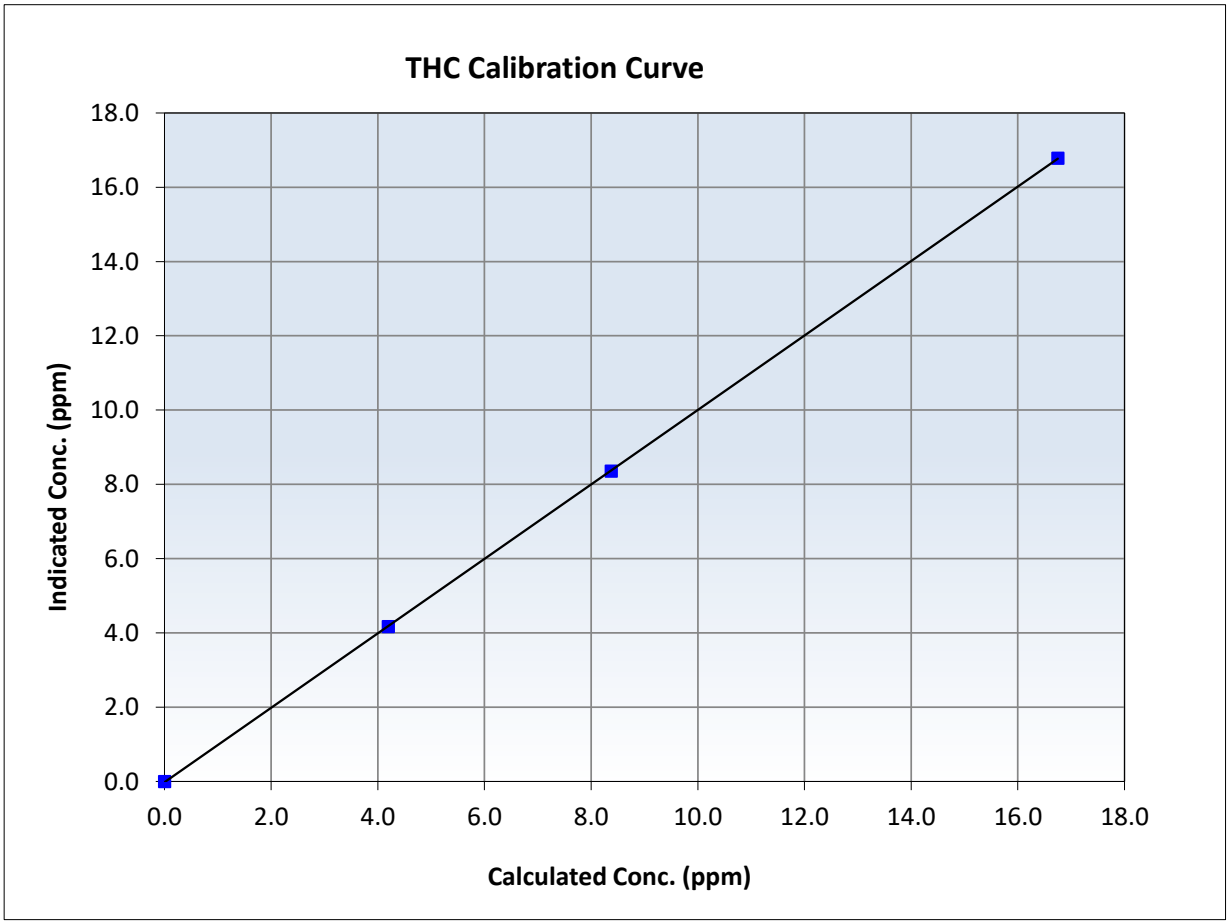
THC Calibration Summary

Station Information

Calibration Date:	December 19, 2025	Previous Calibration:	November 10, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	10:46	End Time (MST):	13:40
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	0.999992	≥0.995
16.75	16.78	0.9981	Slope	1.002437	0.90 - 1.10
8.37	8.36	1.0021			
4.20	4.17	1.0067	Intercept	-0.021200	+/-0.5



Wood Buffalo Environmental Association

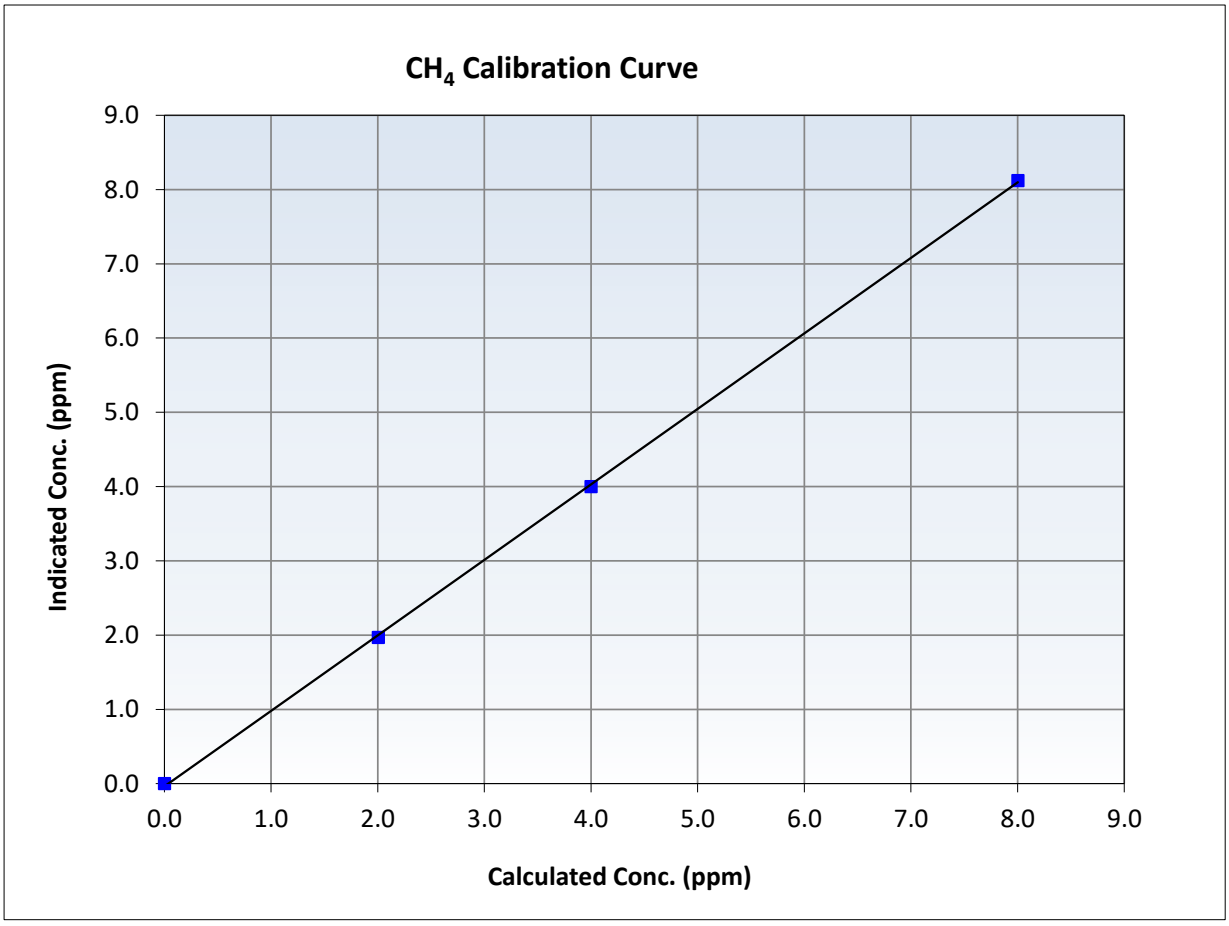
CH_4 Calibration Summary

Station Information

Calibration Date:	December 19, 2025	Previous Calibration:	November 10, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	10:46	End Time (MST):	13:40
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	0.999897	≥0.995
8.00	8.12	0.9854	Slope	1.016787	0.90 - 1.10
4.00	4.00	0.9998			
2.01	1.97	1.0181	Intercept	-0.037824	+/-0.5



Wood Buffalo Environmental Association

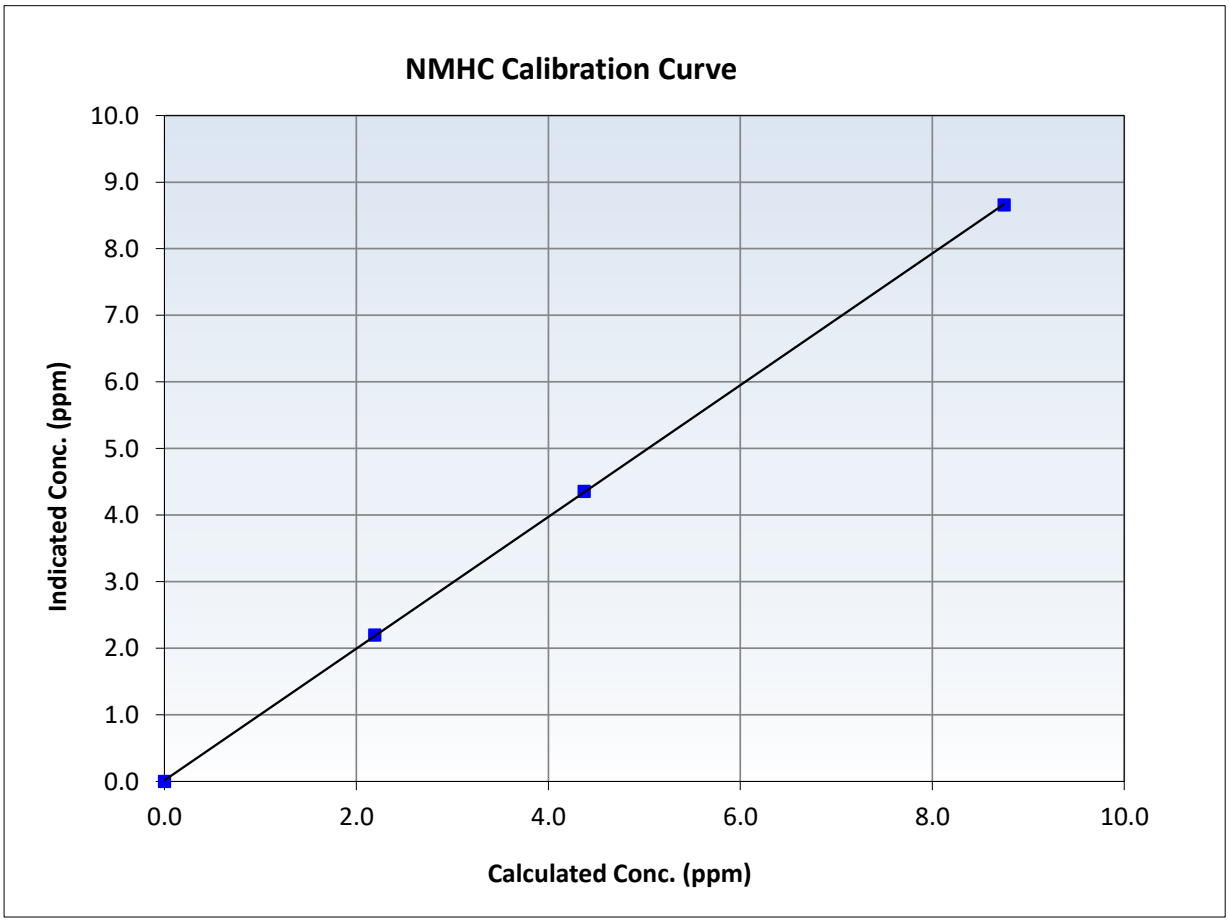
NMHC Calibration Summary

Station Information

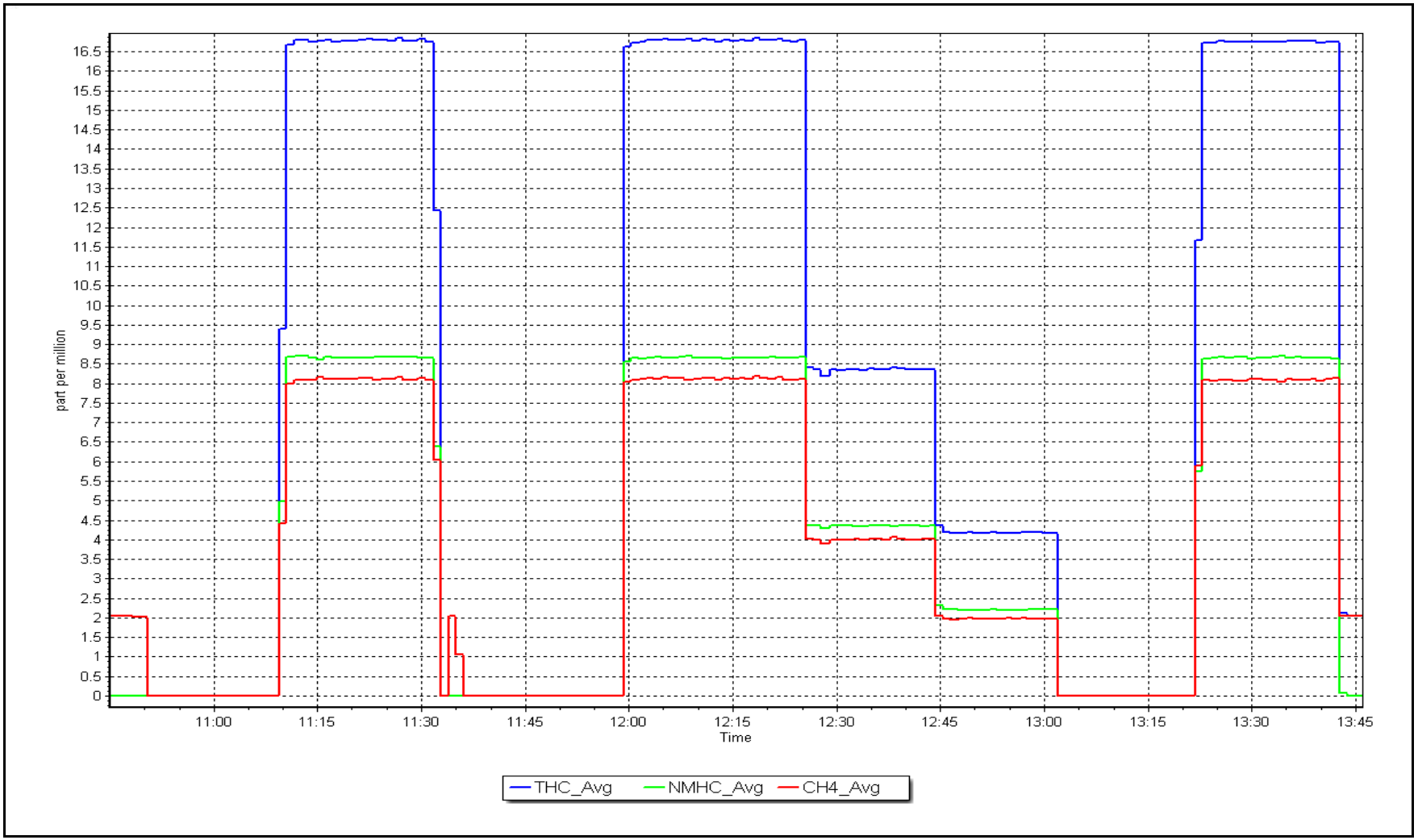
Calibration Date:	December 19, 2025	Previous Calibration:	November 10, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	10:46	End Time (MST):	13:40
Analyzer make:	Thermo 55i	Analyzer serial #:	1118148494

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999982	≥0.995
8.75	8.66	1.0102	Slope	0.989113	0.90 - 1.10
4.37	4.36	1.0043	Intercept	0.016625	+/-0.5
2.19	2.20	0.9970			



NMHC Calibration Plot Date: December 19, 2025 Location: Patricia McInnes



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Patricia McInnes
Station number:	AMS 06
Calibration Date:	December 5, 2025
Last Cal Date:	November 14, 2025
Start time (MST):	10:29
End time (MST):	15:50
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0036234	Cal Gas Expiry Date:	July 22, 2032
NOX Cal Gas Conc:	62.2 ppm	NO Cal Gas Conc:	61.90 ppm
Removed Cylinder #:		Removed Gas Exp Date:	
Removed Gas NOX Conc:	62.20 ppm	Removed Gas NO Conc:	61.90 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	3566
ZAG make/model:	Teledyne API T701	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.2	0.0	-0.3	----	----
AF High point	4935	64.6	803.7	799.8	3.9	821.2	814.2	7.0	0.9784	0.9823
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X =	807.5 ppb	NO =	802.0 ppb	* = > +/-5% change initiates investigation	*Percent Change	NO_X = 1.7%
Baseline Corr 1st pt	NO_X =	821.4 ppb	NO =	814.2 ppb	As Found Statistics	*Percent Change	NO = 1.5%
Baseline Corr 2nd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO_X r^2:	Nx Sl:	Nx Int:
Baseline Corr 3rd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO r^2:	NO Sl:	NO Int:
					As found NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1172750022

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	0.893	0.878	NO bkgnd or offset:	3.6	3.5
NOX coeff or slope:	0.997	0.998	NOX bkgnd or offset:	3.9	3.9
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	159.3	161.2

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	1.001848	0.999018
NO_X Cal Offset:	2.350913	2.671459
NO Cal Slope:	1.002112	0.999712
NO Cal Offset:	0.533026	0.873162
NO_2 Cal Slope:	0.998443	1.002366
NO_2 Cal Offset:	0.071833	0.167588

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.7	0.4	0.3	----	----
High point	4935	64.6	803.7	799.8	3.9	804.4	800.1	4.1	0.9991	0.9996
Mid point	4968	32.3	401.8	399.9	1.9	405.6	401.2	4.4	0.9906	0.9966
Low point	4984	16.2	201.5	200.5	1.0	205.6	201.6	3.9	0.9802	0.9948
As left zero	5000	0.0	0.0	0.0	0.0	0.6	0.4	0.2	----	----
As left span	4935	64.6	803.7	394.7	409.0	800.5	394.7	405.9	1.0040	1.0000
							Average Correction Factor		0.9900	0.9970

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.3	----	----
High GPT point	796.9	391.8	409.0	410.2	0.9970	100.3%
Mid GPT point	796.9	595.5	205.3	205.8	0.9975	100.3%
Low GPT point	796.9	696.3	104.5	104.8	0.9969	100.3%
				Average Correction Factor	0.9971	100.3%

Notes: Changed the inlet filter after as founds. Span adjusted.

Calibration Performed By: Parampreet Kaur

Wood Buffalo Environmental Association

NO_X Calibration Summary

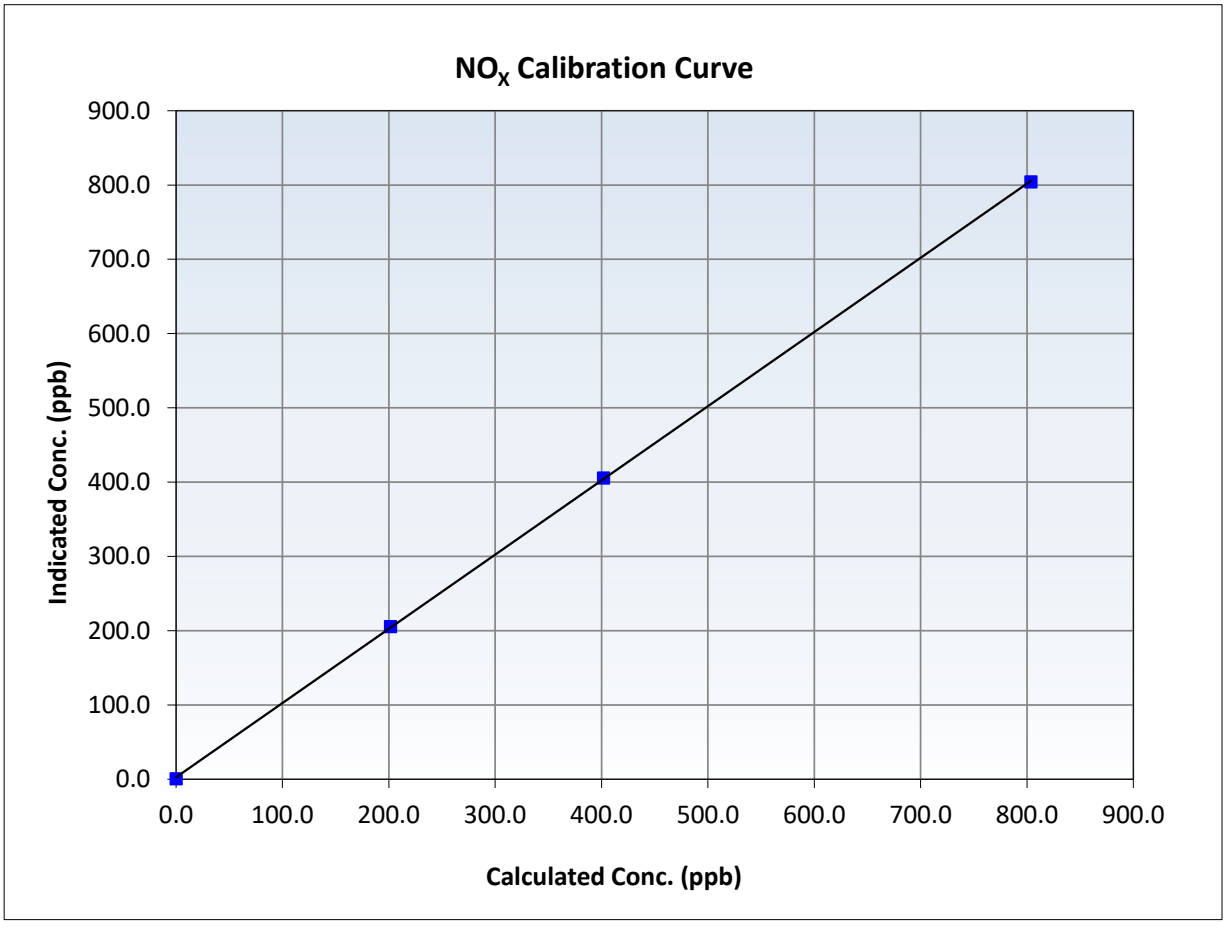
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 14, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	10:29	End Time (MST):	15:50
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.7	----
803.7	804.4	0.9991
401.8	405.6	0.9906
201.5	205.6	0.9802

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999971	*≥0.995*
Slope	0.999018	*0.90 - 1.10*
Intercept	2.671459	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

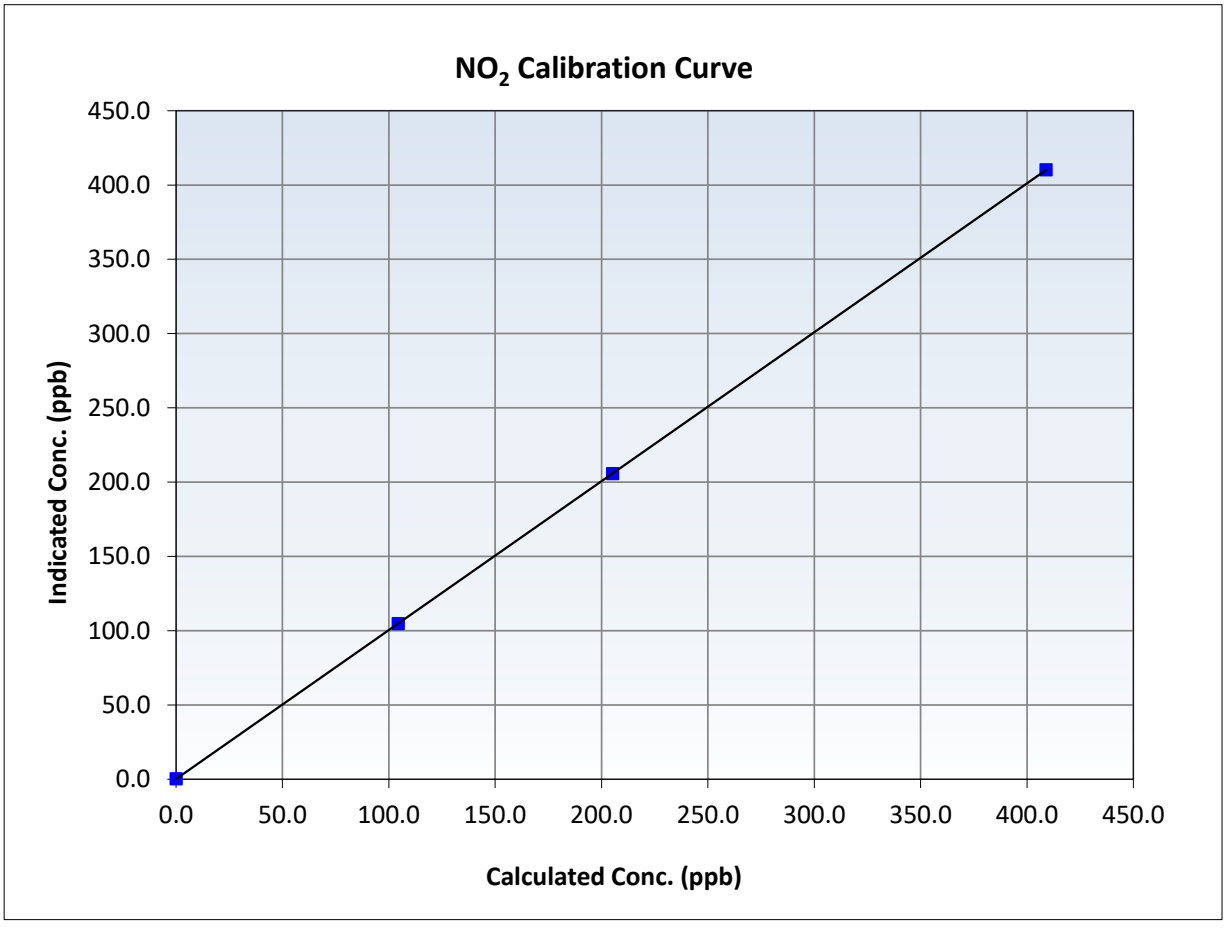
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 14, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	10:29	End Time (MST):	15:50
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.3	----
409.0	410.2	0.9970
205.3	205.8	0.9975
104.5	104.8	0.9969

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999999	*≥0.995*
Slope	1.002366	*0.90 - 1.10*
Intercept	0.167588	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

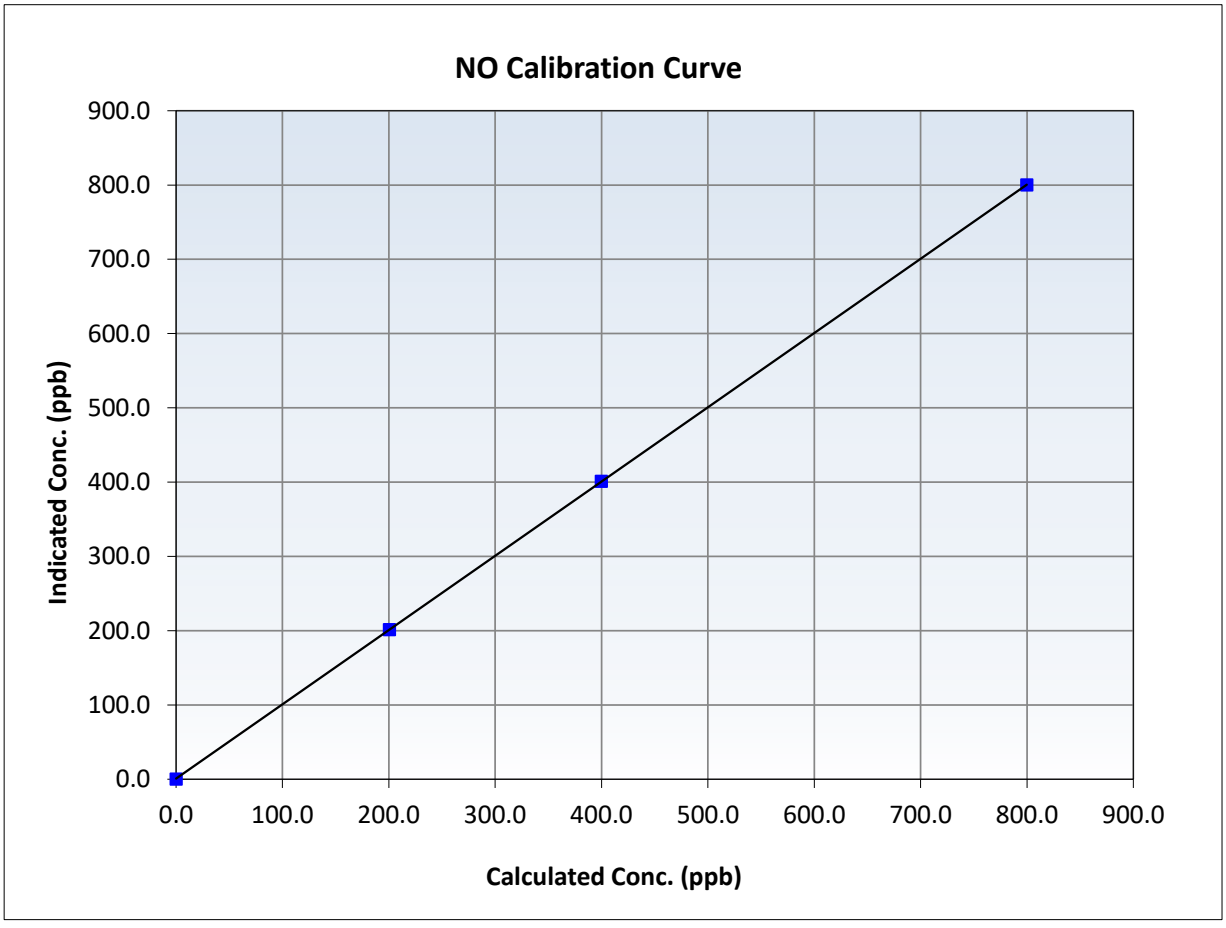
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 14, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	10:29	End Time (MST):	15:50
Analyzer make:	Thermo 42i	Analyzer serial #:	1172750022

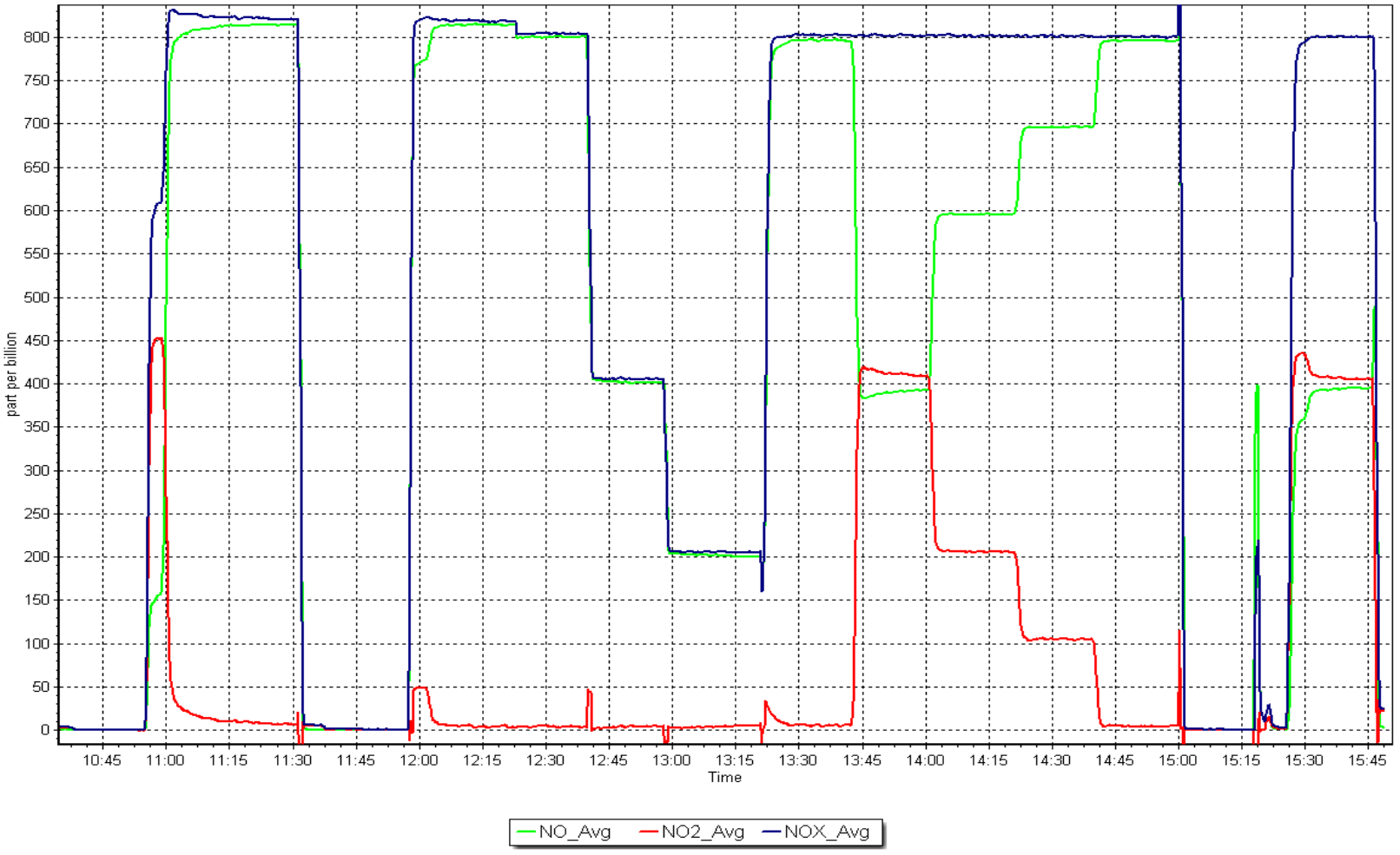
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.4	----
799.8	800.1	0.9996
399.9	401.2	0.9966
200.5	201.6	0.9948

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999998	*≥0.995*
Slope	0.999712	*0.90 - 1.10*
Intercept	0.873162	*+/-20*



NO_X Calibration Plot Date: December 5, 2025 Location: Patricia McInnes



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Patricia McInnes	Station number:	AMS 06
Calibration Date:	December 22, 2025	Last Cal Date:	November 10, 2025
Start time (MST):	10:29	End time (MST):	13:21
Reason:	Routine		

Calibration Standards

O3 generation mode:	Photometer		
Calibrator Make/Model:	API T700	Serial Number:	3566
ZAG Make/Model:	API T701	Serial Number:	4602

Analyzer Information

Analyzer make:	Thermo 49i		Analyzer serial #:	1300156234	
Analyzer Range	0 - 500 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.004000	1.006571	Backgd or Offset:	-1.1	-1.1
Calibration intercept:	1.000000	0.700000	Coeff or Slope:	1.020	1.020

O_3 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)) *Limit = 0.90-1.10*
As found zero	5000	800.0	0.0	0.4	----
As found High point	5000	1049.8	400.0	401.8	0.997
As found Mid point					
As found Low point					
Baseline Corr As found:	401.4	Previous response	402.6	*% 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	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	800.0	0.0	0.6	----
High point	5000	1048.9	400.0	403.1	0.992
Mid point	5000	834.0	200.0	202.6	0.987
Low point	5000	706.1	100.0	101.1	0.989
As left zero	5000	800.0	0.0	0.8	----
As left span	5000	1049.9	400.0	405.5	0.986
				Average Correction Factor	0.990

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

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

O_3 Calibration Summary

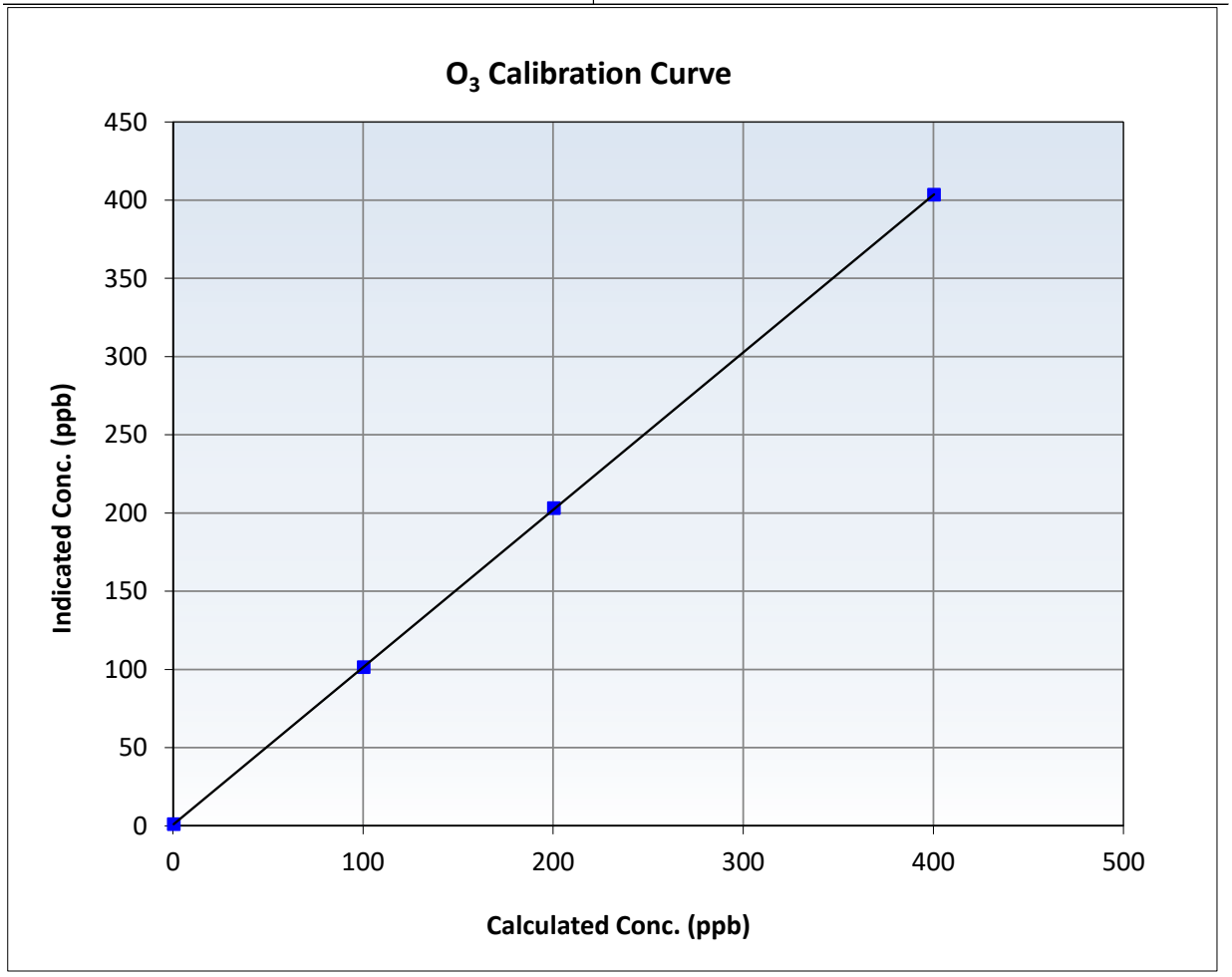
Station Information

Calibration Date:	December 22, 2025	Previous Calibration:	November 10, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	10:29	End Time (MST):	13:21
Analyzer make:	Thermo 49i	Analyzer serial #:	1300156234

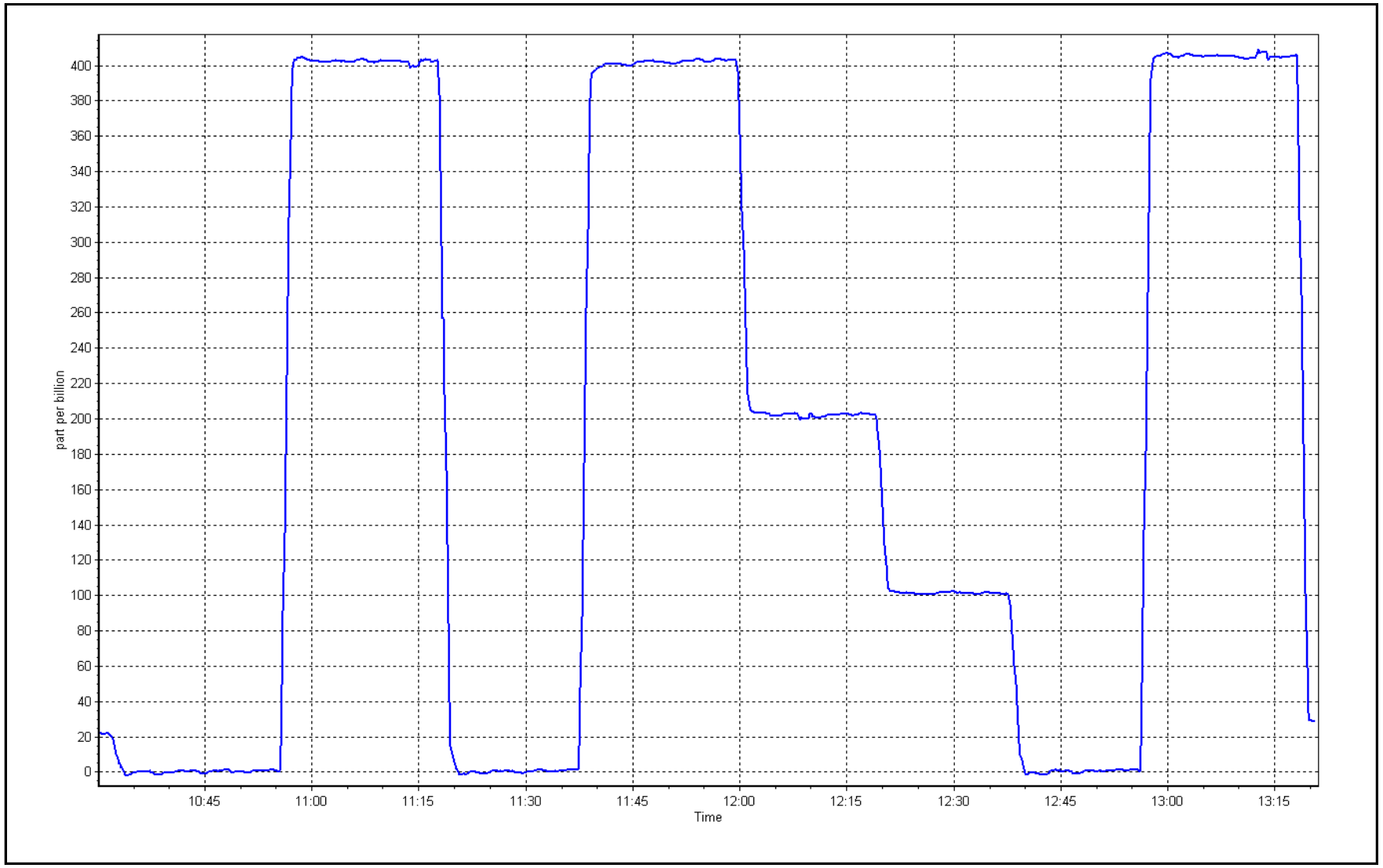
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.6	----
400.0	403.1	0.9923
200.0	202.6	0.9872
100.0	101.1	0.9891

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999995	*≥0.995*
Slope	1.006571	*0.90 - 1.10*
Intercept	0.700000	*+/- 5*



O_3 Calibration Plot Date: December 22, 2025 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:	December 19, 2025	Last Cal Date:	November 18, 2025
Start time (MST):	13:50	End time (MST):	14:32
Analyzer Make:	API T640	S/N:	1547
Particulate Fraction:	PM2.5		
Flow Meter Make/Model:	Alicat FP-25BT	S/N:	388754
Temp/RH standard:	Alicat FP-25BT	S/N:	388754

Parameter	As found	Measured	As left	Adjusted	*(Limits)*
T (^{o}C)	-24.60	-25.89	-24.60	☐	+/- 2 ^{o}C
P (mmHg)	721.20	718.12	721.20	☐	+/- 10 mmHg
Flow (LPM)	4.97	4.91	4.97	☐	+/- 0.25 LPM
PW% (pump)	37	-----	37	☐	>80%
Zero Verification	PM w/o HEPA:	3.40	PM w/ HEPA:	0.00	<0.2 ug/m3

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

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

Quarterly Calibration Test

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

Parameter	As found	Post maintenance	As left	Adjusted	*(Limits)*
PMT Peak Test	10.7	11.0	11.0	☐	+/- 0.5

Date Optical Chamber Cleaned: December 19, 2025

Date Disposable Filter Changed: December 19, 2025

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

Calibration by: Jan Castro

Wood Buffalo Environmental Association

Nt - NOX - NH3 Calibration Report

Station Information

Station Name:	Patricia McInnes	Station number:	AMS 06
NOX Cal Date:	December 4, 2025	Last Cal Date:	November 18, 2025
Start time (MST):	9:37	End time (MST):	13:37
NH3 Cal Date:	December 4, 2025	Last Cal Date:	November 18, 2025
Start time (MST):	13:47	End time (MST):	17:52
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
			NH3 Cal Gas Expiry:	September 10, 2026
Removed NH3 Conc:	75.0	ppm	Removed Cylinder #:	CC709372
NH3 gas Diff:	2.0%		Removed cyl Expiry:	December 31, 2025
Calibrator Model:	API T700		Serial Number:	3566
ZAG make/model:	API T701		Serial Number:	4602

Analyzer Information

Analyzer model:	API T201		Analyzer serial #:	215
Converter model:	API T501		Converter serial #:	147
NH3 Range (ppb):	0 - 2000 ppb		Reaction cell Press:	6.00
NOX Range (ppb):	0 - 1000 ppb		Sample Flow:	25.3

	Start	*Finish*		*Start*	*Finish*
NO coefficient:	1.033	1.033	Nt coefficient:	1.007	1.008
NOX coefficient:	1.028	1.028	NO bkgrnd:	0.2	0.2
NO2 coefficient:	1.000	1.000	NOX bkgrnd:	-0.1	-0.1
NH3 coefficient:	0.950	0.950	Nt bkgrnd:	1.7	3.5

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	1.008420	1.011931
NO_X Cal Offset:	1.789202	1.529231
NO Cal Slope:	1.012790	1.014820
NO Cal Offset:	-0.429575	0.009796
NO_2 Cal Slope:	0.990408	0.993425
NO_2 Cal Offset:	-1.214169	0.970865
NH3 Cal Slope:	0.990998	0.978370
NH3 Cal Offset:	5.402369	-0.309136
Nt Cal Slope:	0.994860	0.981947
Nt Cal Offset:	5.667320	0.013529

Wood Buffalo Environmental Association

NO_X - NO - NO_2 Calibration Report

NOx / NO / Nt As Found Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated Nt concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	Baseline corr NOx Correction factor (Cc/Ic) *Limit = 0.9 - 1.0*	Baseline corr NO Correction factor (Cc/Ic) *Limit = 0.9 - 1.0*
As found zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.4	----	----
As found span	4935	64.6	803.7	799.8	803.7	817.3	810.3	817.3	0.9833	0.9871
AF GPT span										
new NO cyl rp										

Baseline Corr As Fd	Nt =	817.7	ppb	NO_X =	817.4	ppb	NO =	810.5 ppb
Previous Response	Nt =	805.22	ppb	NO_X =	812.2	ppb	NO =	809.6 ppb

**NO_X Δ (NO to GPT response) =

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

*Percent Change $Nt_{(NO)}$ = 1.5%

*Percent Change NO_X = 0.6%

*Percent Change NO = 0.1%

* = > +/-5% change initiates investigation

NOx / NO / Nt Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated Nt concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated Nt concentration (ppb) (Ic)	NOx Correction factor (Cc/Ic) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibration zero	5000	0.0	0.0	0.0	0.0	0.2	0.0	0.1	----	----
High point	4935	64.6	803.7	799.8	803.7	813.7	811.7	813.7	0.9877	0.9854
Mid point	4968	32.3	401.8	399.9	401.8	410.1	405.7	410.1	0.9797	0.9856
Low point	4984	16.2	201.5	200.5	201.5	205.9	203.6	205.8	0.9787	0.9850
								Average Correction Factor	0.9821	0.9853

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
As Found zero	----	----	0.0	0.1	----	----
Calibration zero	----	----	0.0	0.3	----	----
High GPT point (400 ppb O3)	802.4	395.8	410.5	407.5	1.0073	99.3%
Mid GPT point (200 ppb O3)	802.4	604.0	202.3	205.1	0.9862	101.4%
Low GPT point (100 ppb O3)	802.4	702.3	104.0	103.0	1.0095	99.1%
				Average Correction Factor	1.0010	99.9%

Wood Buffalo Environmental Association
NH_3 - 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 NH3 concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH3 concentration (ppb) (Ic)	Baseline corr Nt Correction factor (Cc/(Ic-zero)) *Limit = 0.9 - 1.1*	Baseline corr NH3 Correction factor (Cc/(Ic-zero)) *Limit = 0.9 - 1.1*
As found zero	5000	0.0	0.0	0.0	0.0	-0.4	-0.1	-0.3	----	----
AF High point	3416	84.0	1800.0	0.0	1800.0	1736.9	6.6	1730.5	1.036	1.040
AF Mid point										
AF Low point										
new NH3 cyl rp	3419	81.3	1800.1	----	1800.1	1770.9	----	1764.3	1.016	1.020

Baseline Corr As Fd Nt = 1737.3 ppb NH3 = 1730.8 ppb *Percent Change $Nt_{(NH3)}$ = -3.4%

Previous Response Nt = 1796.4 ppb NH3 = 1789.2 ppb * = > +/-5% change initiates investigation *Percent Change NH3 = -3.4%

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 NH3 concentration (ppb) (Cc)	Indicated Nt concentration (ppb) (Ic)	Indicated NOX concentration (ppb) (Ic)	Indicated NH3 concentration (ppb) (Ic)	Nt Correction factor (Cc/Ic) *Limit = 0.95-1.05*	NH3 Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibration zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	-0.1	----	----
High point	3419	81.3	1800.1	0.0	1800.1	1770.9	6.7	1764.3	1.016	1.020
Mid point	3455	45.2	1000.8	0.0	1000.8	974.2	4.2	970.0	1.027	1.032
Low point	3477	22.6	500.5	0.0	500.5	496.6	2.1	494.5	1.008	1.012
								Average Correction Factor	1.0172	1.0214

NH3 Previous Converter Efficiency = 95.0 %

NH3 Current Converter Efficiency = 95.0 %

Notes: Changed the inlet filter after as founds. Adjusted TNx zero only. Used 2nd NO point because of drift. NH3 cylinder replaced. No adjustment for NH3.

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

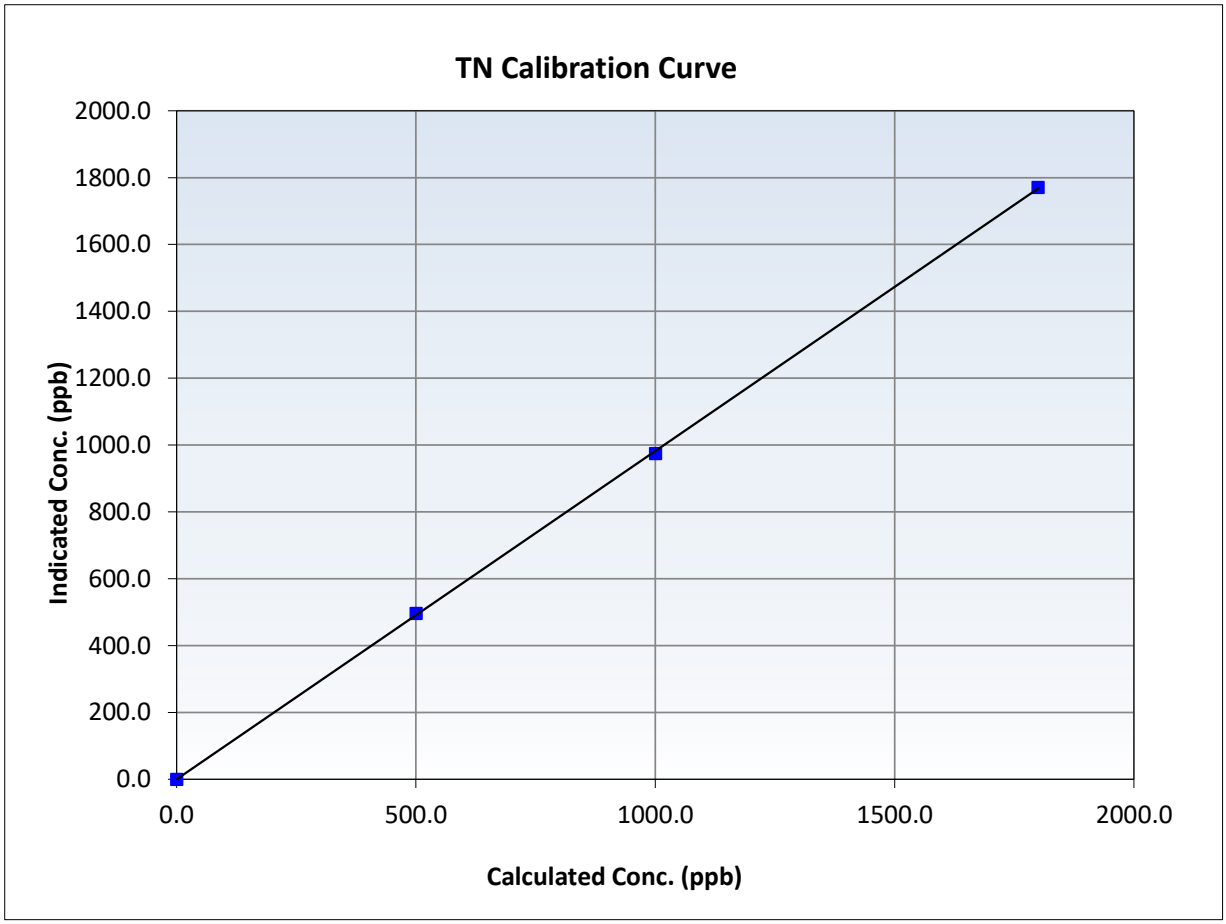
Nt Calibration Summary

Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 18, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:37	End Time (MST):	13:37
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.1	----	Correlation Coefficient	0.999935	*≥0.995*
1800.1	1770.9	1.0165	Slope	0.981947	*0.90 - 1.10*
1000.8	974.2	1.0273			
500.5	496.6	1.0078	Intercept	0.013529	*+/-20*



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NH_3 Calibration Summary

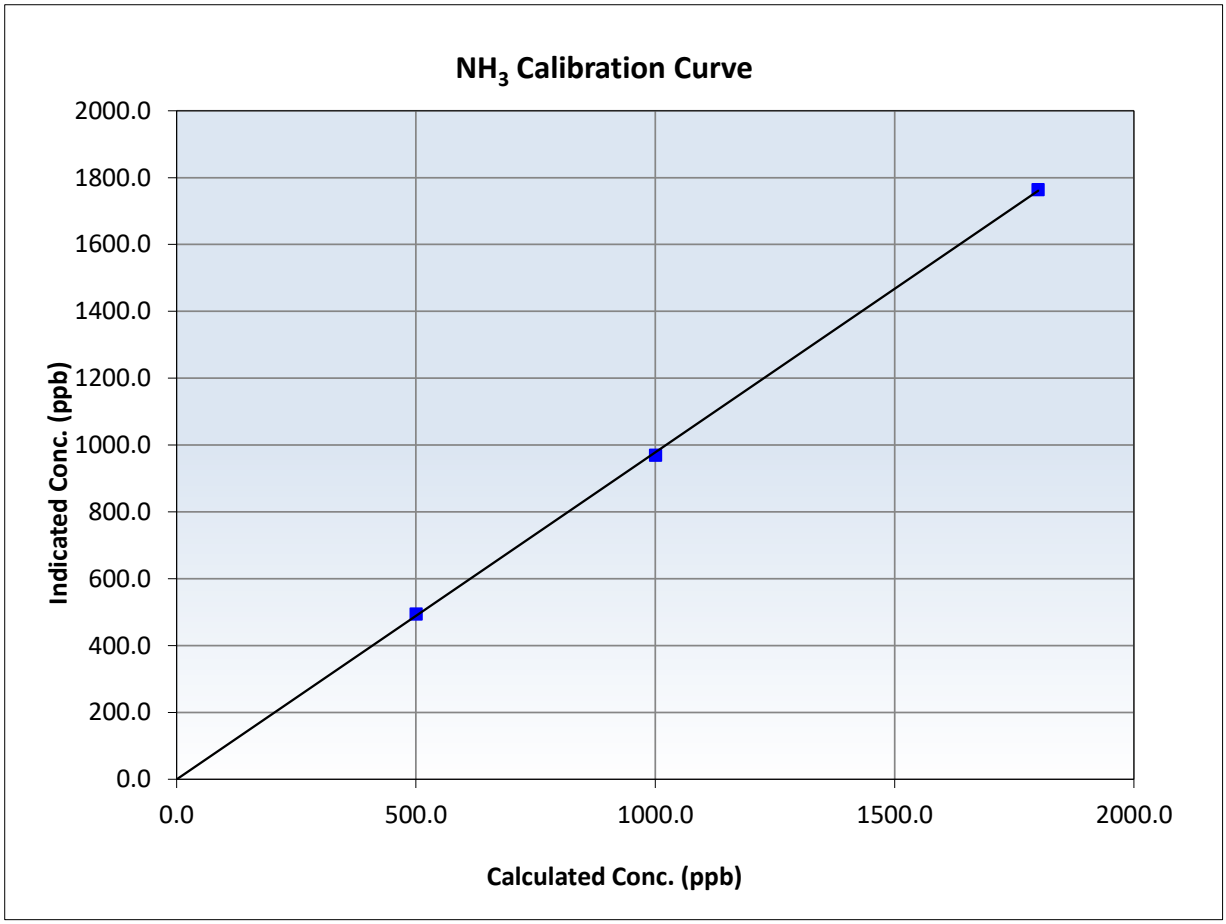
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 18, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:37	End Time (MST):	13:37
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
1800.1	1764.3	1.0203
1000.8	970.0	1.0318
500.5	494.5	1.0121

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999931	*≥0.995*
Slope	0.978370	*0.90 - 1.10*
Intercept	-0.309136	*+/-20*



Wood Buffalo Environmental Association

NO_X Calibration Summary

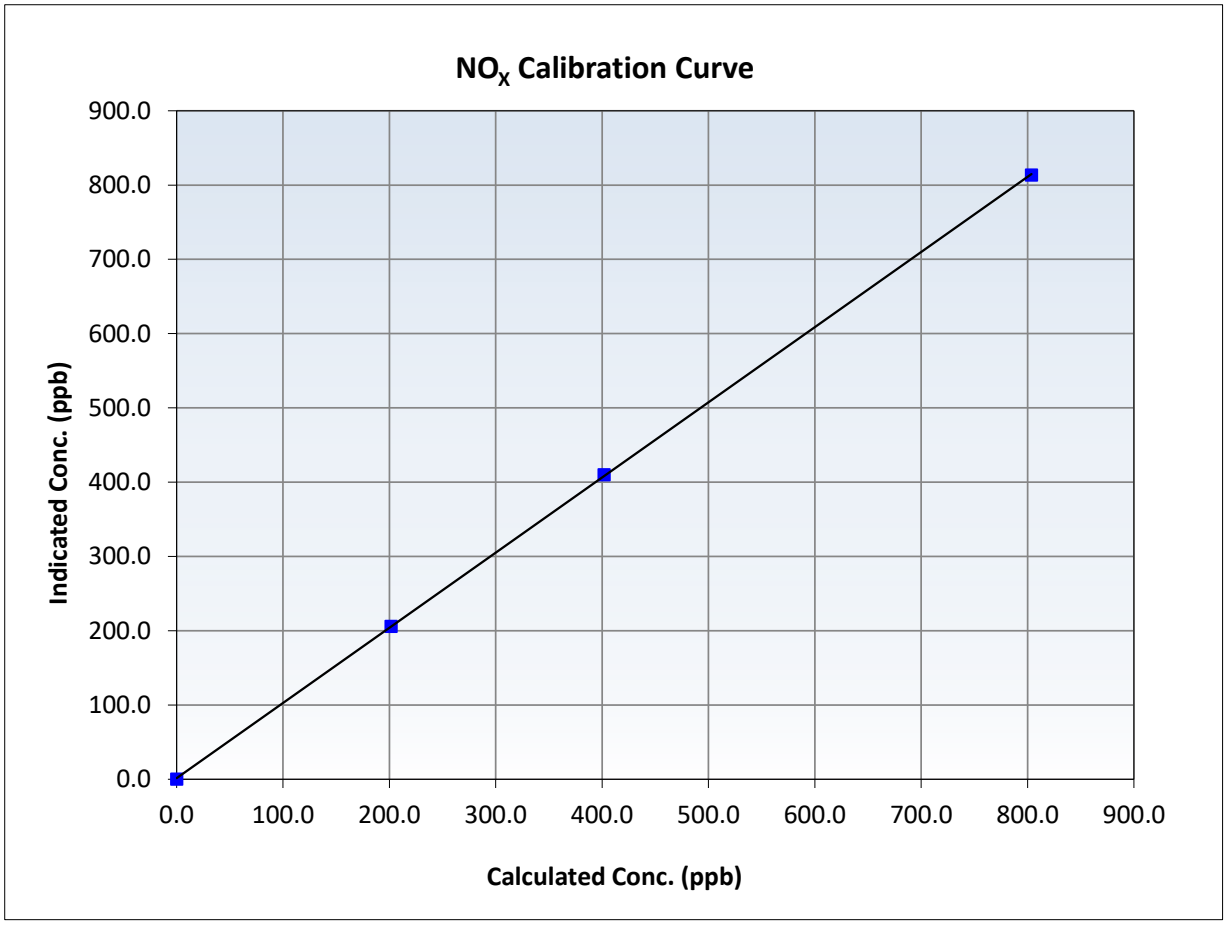
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 18, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:37	End Time (MST):	13:37
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
803.7	813.7	0.9877
401.8	410.1	0.9797
201.5	205.9	0.9787

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999980	*≥0.995*
Slope	1.011931	*0.90 - 1.10*
Intercept	1.529231	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

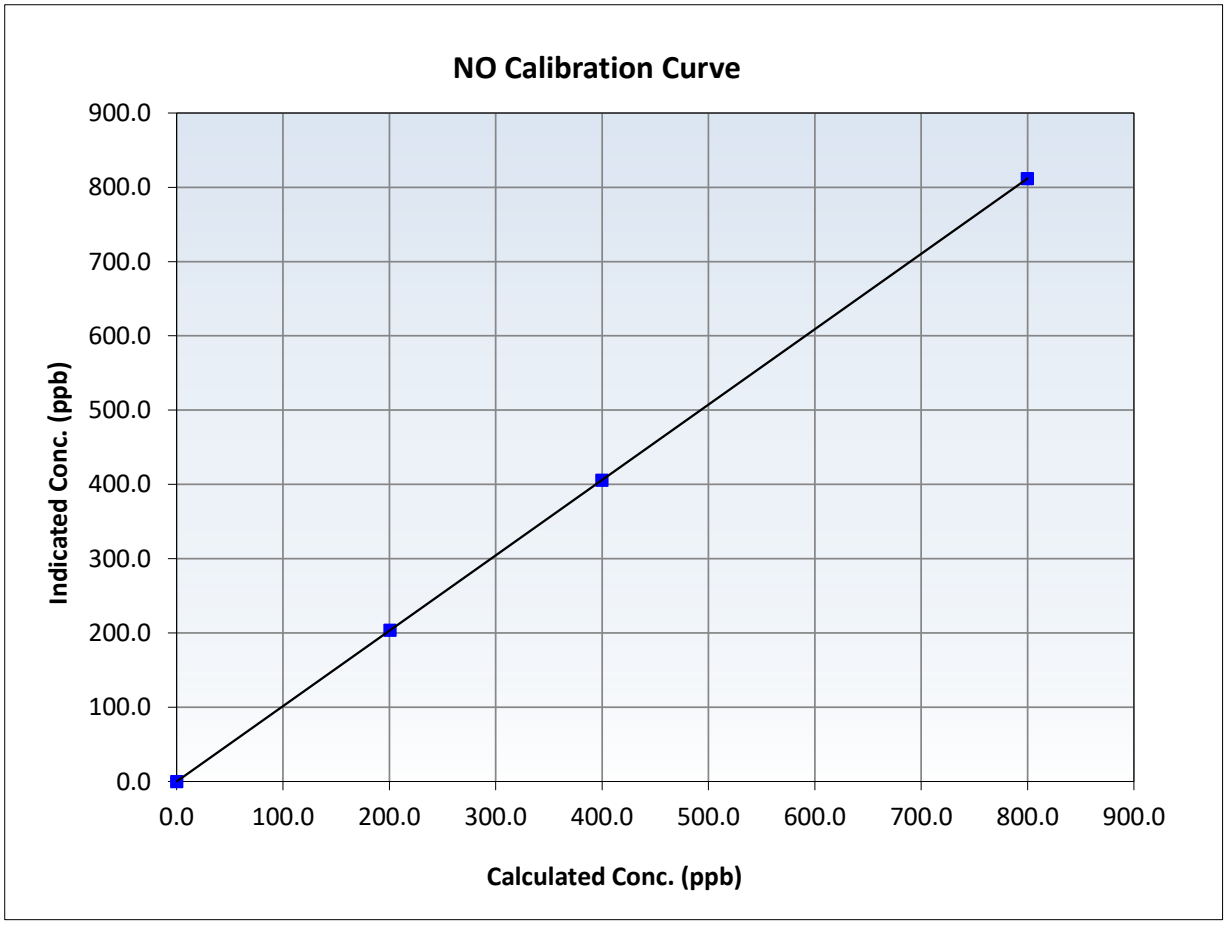
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 18, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:37	End Time (MST):	13:37
Analyzer make:	API T201	Analyzer serial #:	215

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
799.8	811.7	0.9854
399.9	405.7	0.9856
200.5	203.6	0.9850

Statistical Evaluation		*Limits*
Correlation Coefficient	1.000000	*≥0.995*
Slope	1.014820	*0.90 - 1.10*
Intercept	0.009796	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

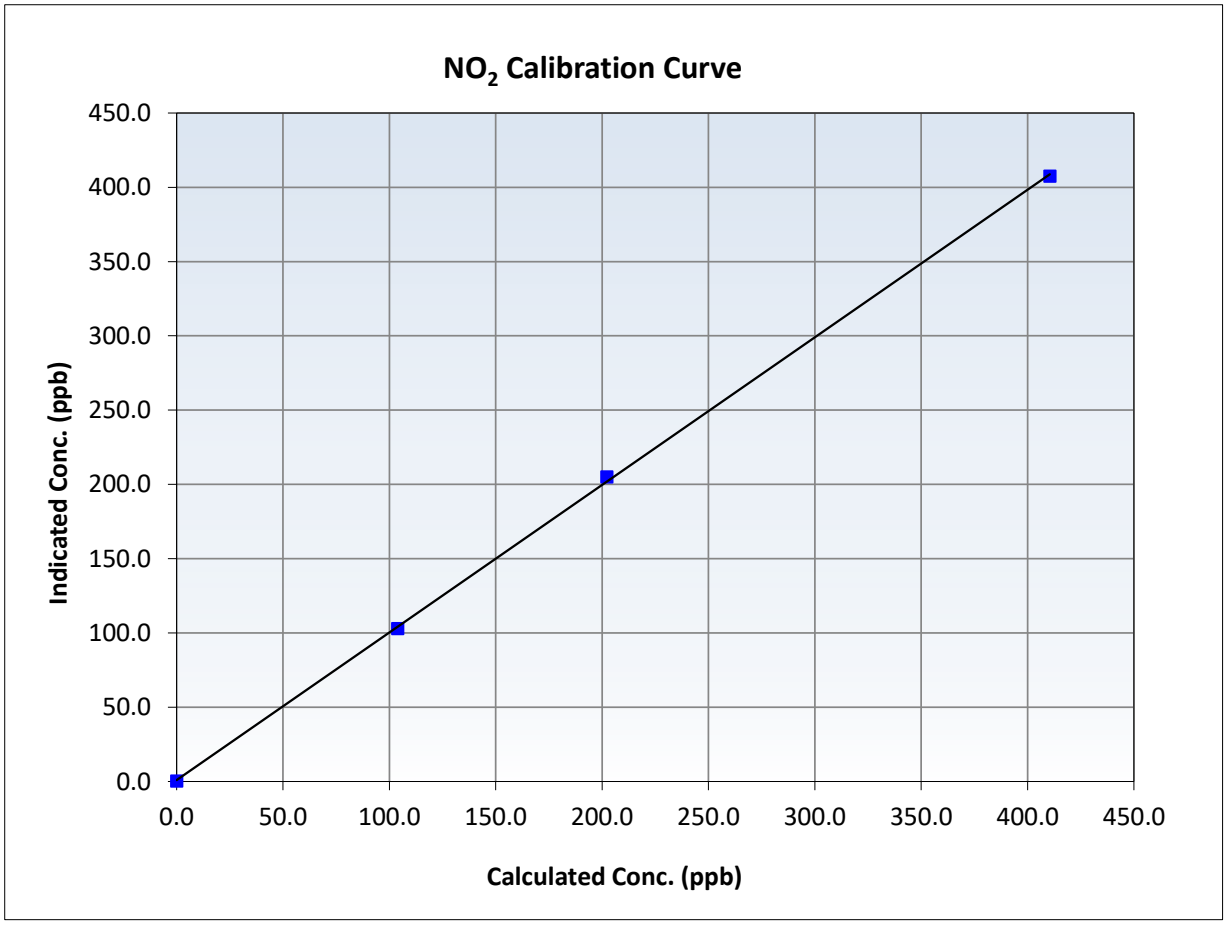
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 18, 2025
Station Name:	Patricia McInnes	Station Number:	AMS 06
Start Time (MST):	9:37	End Time (MST):	13:37
Analyzer make:	API T201	Analyzer serial #:	215

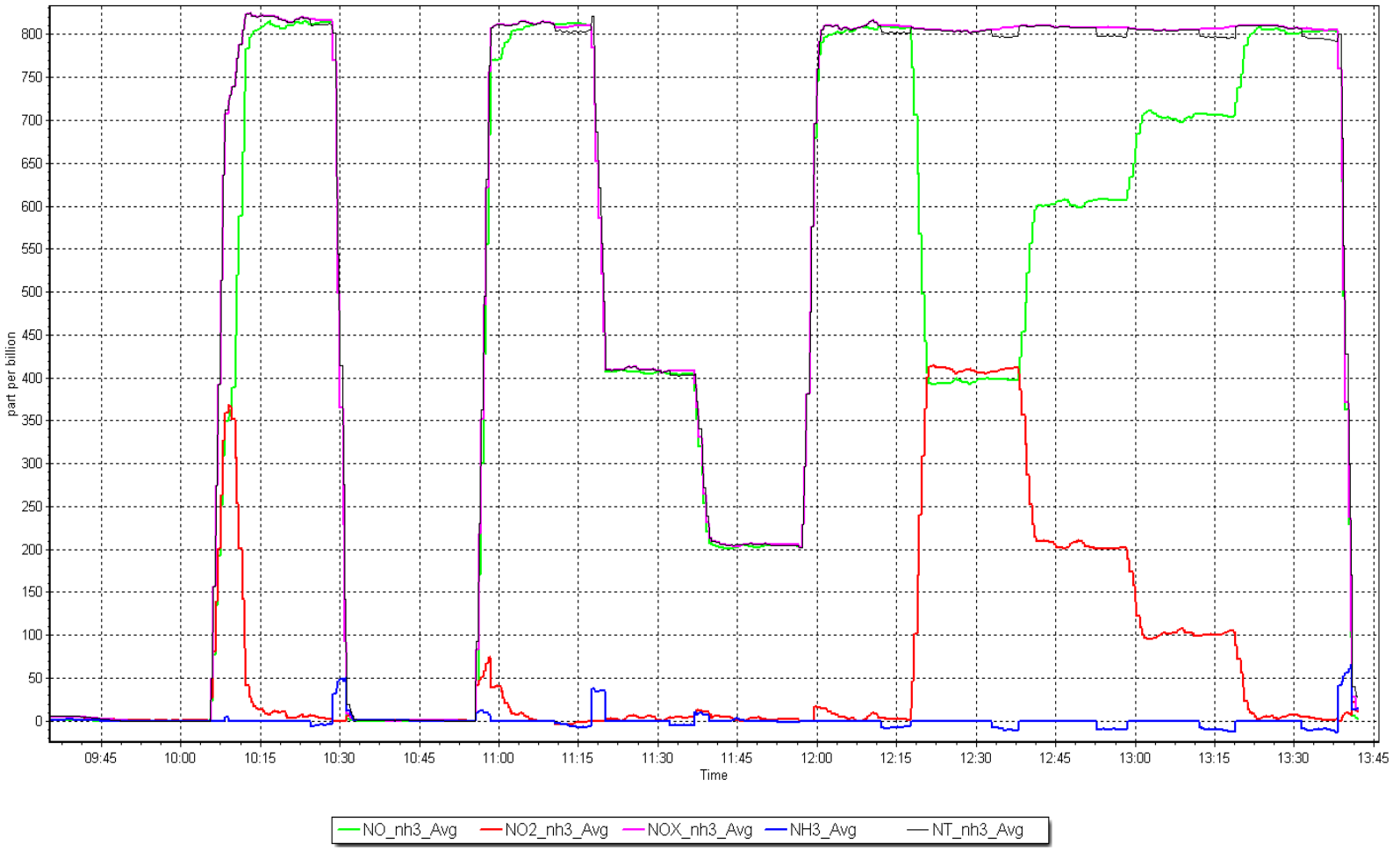
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.3	----
410.5	407.5	1.0073
202.3	205.1	0.9862
104.0	103.0	1.0095

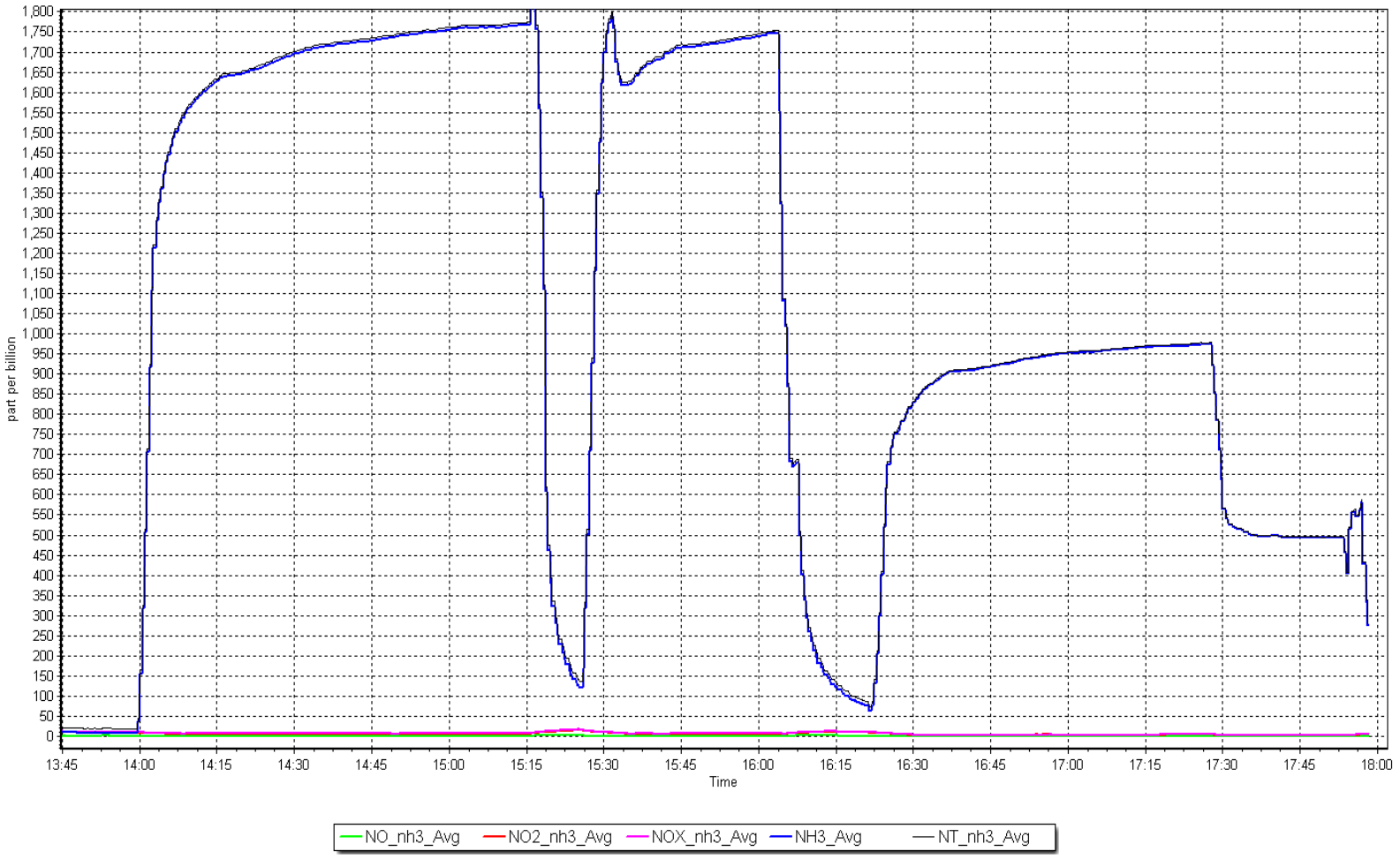
Statistical Evaluation		*Limits*
Correlation Coefficient	0.999848	*≥0.995*
Slope	0.993425	*0.90 - 1.10*
Intercept	0.970865	*+/-20*



NO_X Calibration Plot Date: December 4, 2025 Location: Patricia McInnes



NH_3 Calibration Plot Date: December 4, 2025 Location: Patricia McInnes



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS07
ATHABASCA VALLEY
DECEMBER 2025

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

January 30, 2025

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Athabasca Valley	Station number:	AMS07
Calibration Date:	December 10, 2025	Last Cal Date:	November 21, 2025
Start time (MST):	13:05	End time (MST):	16:09
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				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.000892	0.996686	Backgd or Offset:	2.73	2.73
Calibration intercept:	2.083907	2.404670	Coeff or Slope:	0.859	0.859

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4920	79.8	799.0	794.2	1.006
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	794.2	Previous response	801.8	*% change	-1.0%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4920	79.8	799.0	797.2	1.002
Mid point	4960	39.9	399.5	403.1	0.991
Low point	4980	20.0	200.2	203.1	0.986
As left zero	5000	0.0	0.0	0.2	----
As left span	4920	79.8	799.0	799.9	0.999
				Average Correction Factor:	0.993

Notes: No adjustments needed.

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

SO_2 Calibration Summary

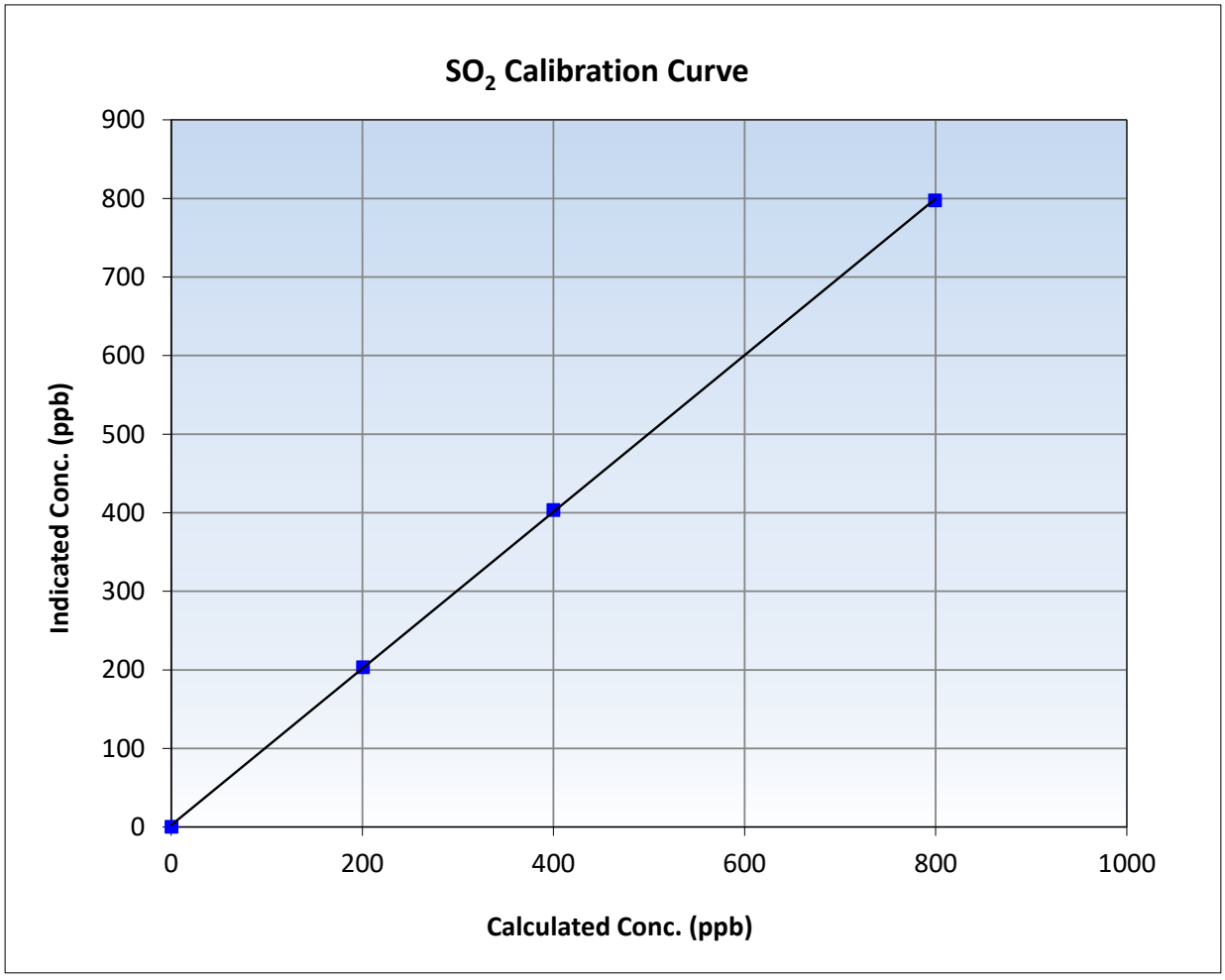
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 21, 2025
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	13:05	End Time (MST):	16:09
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1507864683

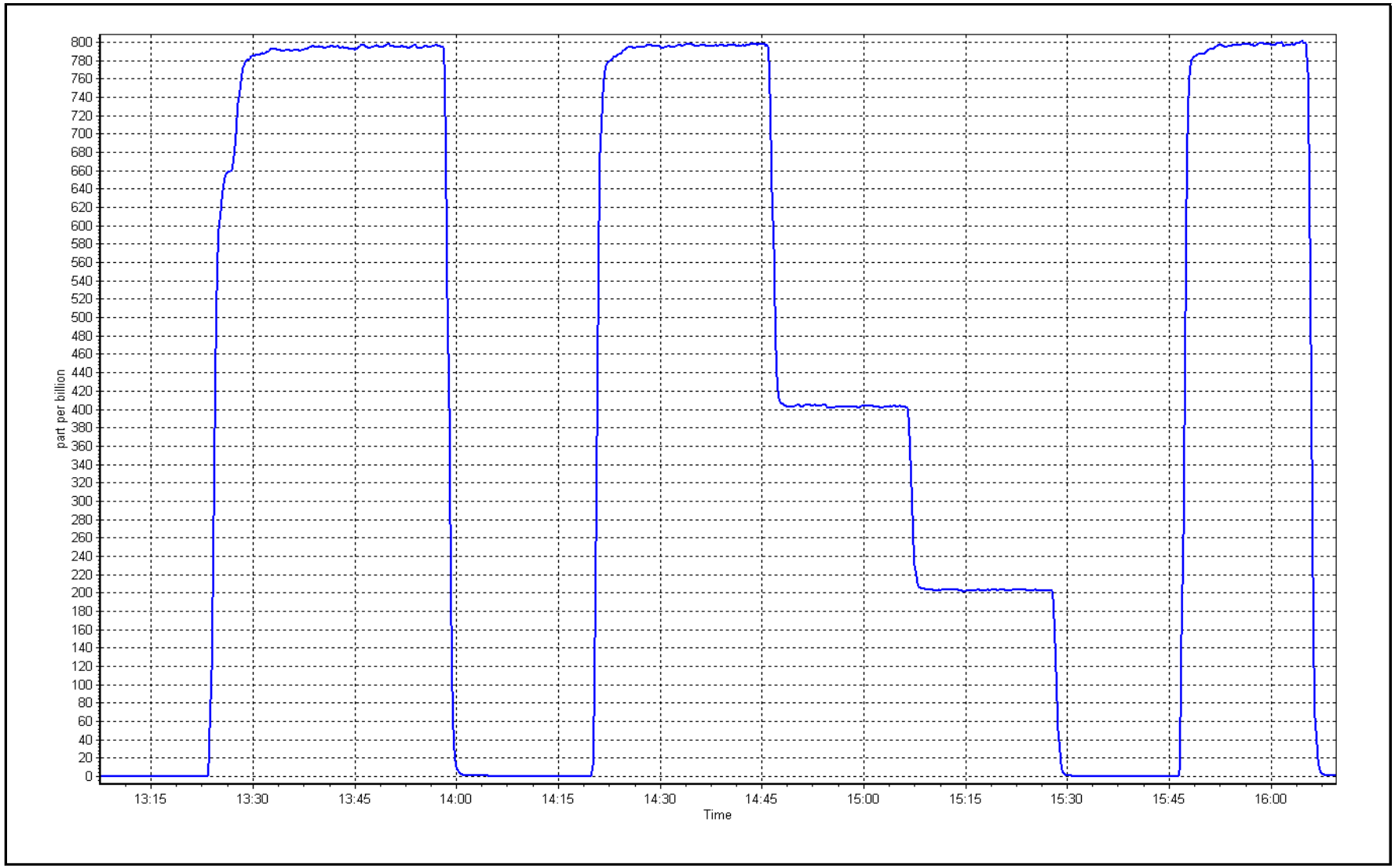
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.3	----
799.0	797.2	1.0022
399.5	403.1	0.9910
200.2	203.1	0.9859

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999958	*≥0.995*
Slope	0.996686	*0.90 - 1.10*
Intercept	2.404670	*+/-30*



SO2 Calibration Plot Date: December 10, 2025 Location: Athabasca Valley



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name:	Athabasca Valley	Station number:	AMS07
Calibration Date:	December 18, 2025	Last Cal Date:	November 19, 2025
Start time (MST):	10:15	End time (MST):	14:36
Reason:	Routine		

Calibration Standards

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

Analyzer Information

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

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.999347	0.994592	Backgd or Offset:	2.7	2.6
Calibration intercept:	0.077880	0.217869	Coeff or Slope:	0.884	0.884

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4925	75.5	79.3	78.5	1.010
As found Mid point	4962	37.7	39.6	39.6	1.000
As found Low point	4981	18.9	19.8	19.9	0.997
New cylinder response					

Baseline Corr As found:	78.5	Prev response:	79.29	*% change:	-1.0%
Baseline Corr 2nd AF pt:	39.6	AF Slope:	0.989824	AF Intercept:	0.177891
Baseline Corr 3rd AF pt:	19.9	AF Correlation:	0.999966	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4925	75.5	79.3	79.0	1.004
Mid point	4962	37.7	39.6	39.8	0.995
Low point	4981	18.9	19.9	20.0	0.993
As left zero	5000	0.0	0.0	0.5	----
As left span	4925	75.5	79.3	79.5	0.998
SO2 Scrubber Check	4920	79.2	792.1	0.1	----

Date of last scrubber change:	8-Aug-25	Ave Corr Factor	0.997
Date of last converter efficiency test:	Friday, April 22, 2022		

Notes: No adjustments needed.

Calibration Performed By: Parampreet Kaur, Sean Bala

Wood Buffalo Environmental Association

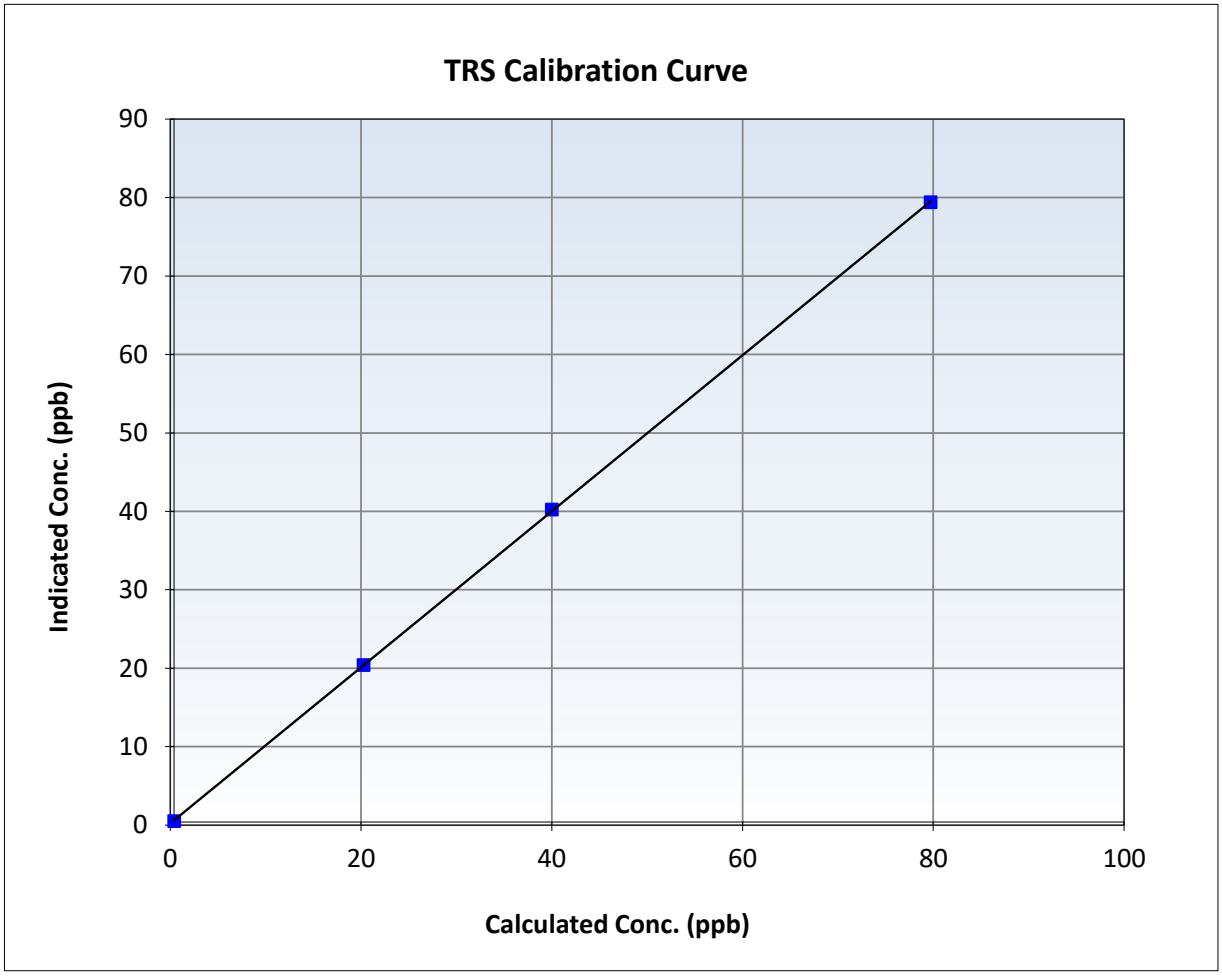
TRS Calibration Summary

Station Information

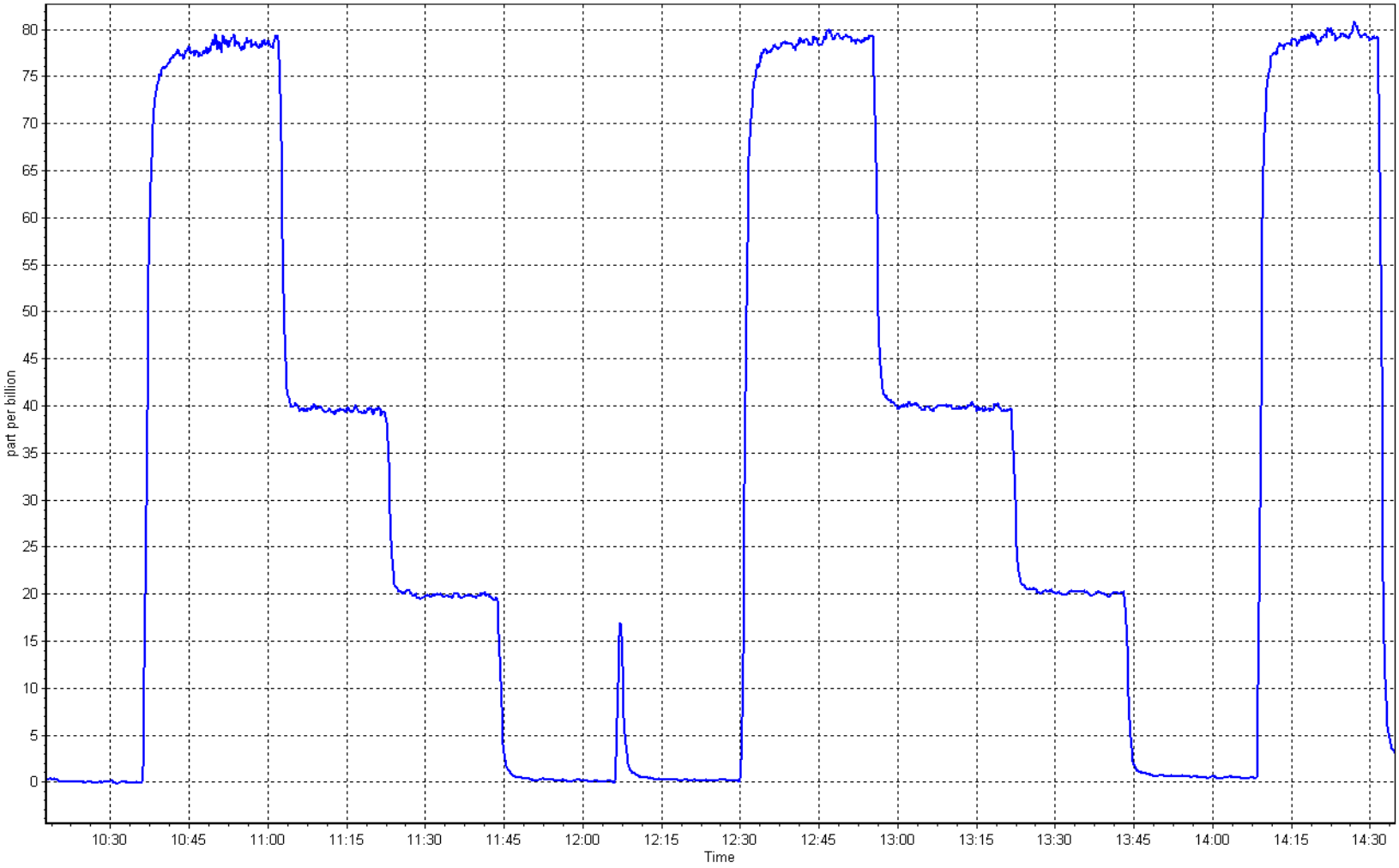
Calibration Date:	December 18, 2025	Previous Calibration:	November 19, 2025
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	10:15	End Time (MST):	14:36
Analyzer make:	Thermo 43i LTE	Analyzer serial #:	1180540018

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.1	----	Correlation Coefficient	0.999982	*≥0.995*
79.3	79.0	1.0040	Slope	0.994592	*0.90 - 1.10*
39.6	39.8	0.9952			
19.9	20.0	0.9928	Intercept	0.217869	*+/-3*



TRS Calibration Plot Date: December 18, 2025 Location: Athabasca Valley



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Athabasca Valley	Station number:	AMS 07
Calibration Date:	December 10, 2025	Last Cal Date:	November 21, 2025
Start time (MST):	13:05	End time (MST):	16:09
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC320556	Cal Gas Expiry Date:	March 10, 2031
CH4 Cal Gas Conc.	496.0 ppm	CH4 Equiv Conc.	1059.8 ppm
C3H8 Cal Gas Conc.	205.0 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH4 Conc.	496.0 ppm	CH4 Equiv Conc.	1059.8 ppm
Removed C3H8 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	Analyzer serial #:	1331259520
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	2.73E-04	2.73E-04	NMHC SP Ratio:	5.25E-05	5.25E-05
CH4 Retention time:	14.4	14.4	NMHC Peak Area:	171388	171388
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	16.91	16.94	0.999
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	16.94	Prev response	16.90	*% 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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	16.91	16.85	1.004
Mid point	4960	39.9	8.46	8.44	1.002
Low point	4980	20.0	4.24	4.26	0.994
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	16.91	16.84	1.005
				Average Correction Factor	1.000

Notes: No adjustments needed.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	9.00	8.98	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.98	Prev response	8.99	*% 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	8.92	1.009
Mid point	4960	39.9	4.50	4.46	1.008
Low point	4980	20.0	2.26	2.26	0.999
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	9.00	8.93	1.008
				Average Correction Factor	1.005

CH4 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	7.92	7.95	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.95	Prev response	7.91	*% change	0.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	7.92	7.93	0.998
Mid point	4960	39.9	3.96	3.97	0.996
Low point	4980	20.0	1.98	2.01	0.990
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	7.92	7.91	1.001
				Average Correction Factor	0.995

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	0.997815	0.995409
THC Cal Offset:	0.019859	0.018669
CH4 Cal Slope:	0.999244	1.001323
CH4 Cal Offset:	-0.000539	0.008256
NMHC Cal Slope:	0.996990	0.990434
NMHC Cal Offset:	0.019197	0.010013

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

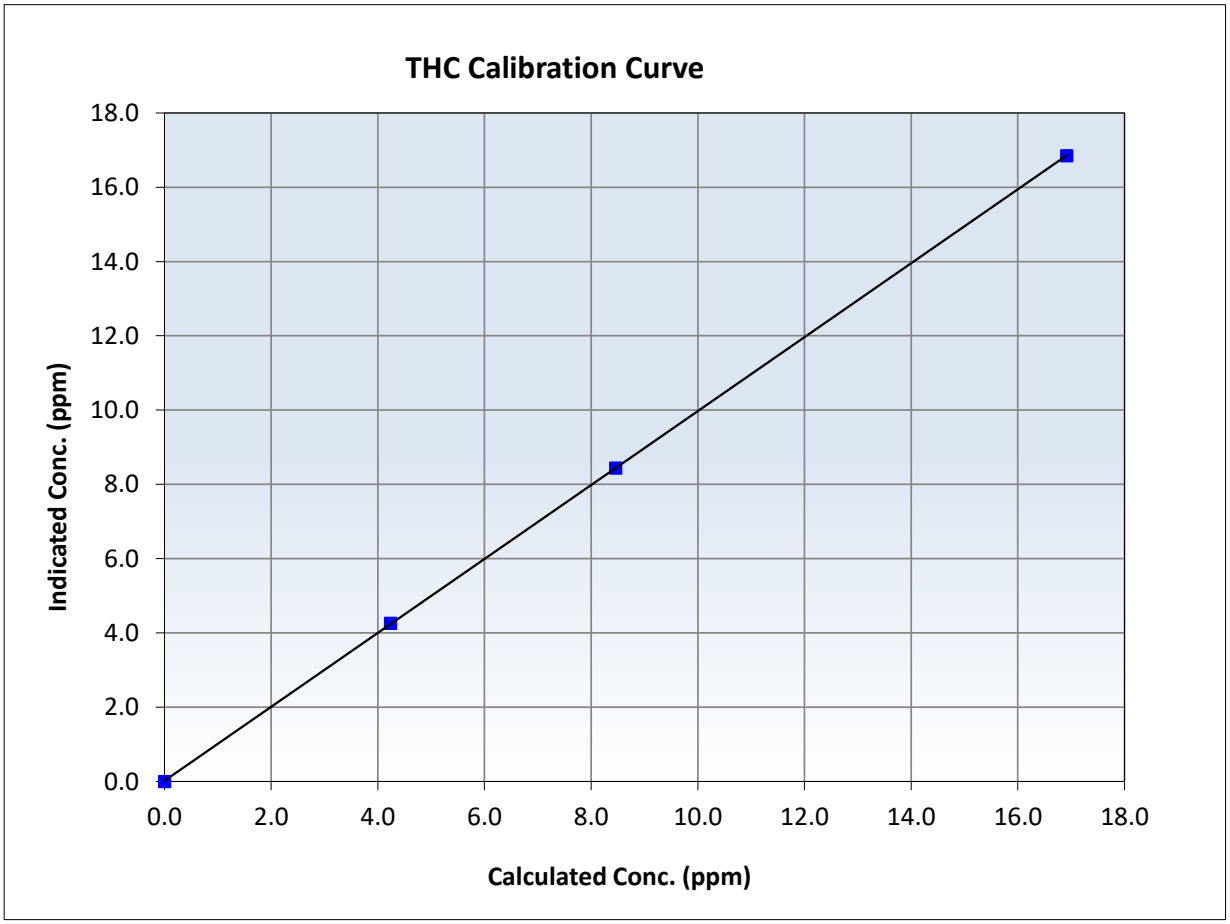
THC Calibration Summary

Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 21, 2025
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	13:05	End Time (MST):	16:09
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	0.999994	≥0.995
16.91	16.85	1.0039	Slope	0.995409	0.90 - 1.10
8.46	8.44	1.0024	Intercept	0.018669	+/-0.5
4.24	4.26	0.9944			



Wood Buffalo Environmental Association

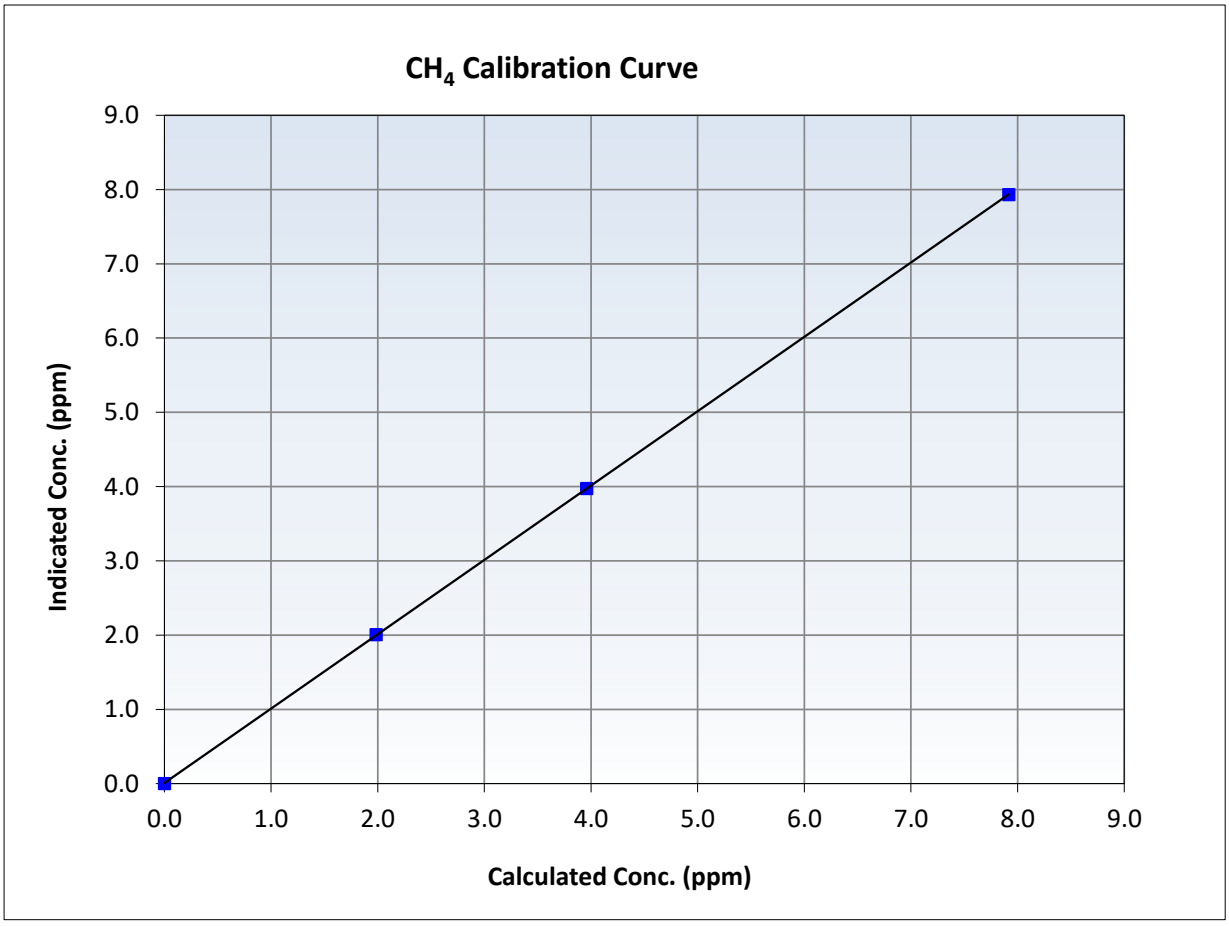
CH_4 Calibration Summary

Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 21, 2025
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	13:05	End Time (MST):	16:09
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	0.999995	≥0.995
7.92	7.93	0.9980	Slope	1.001323	0.90 - 1.10
3.96	3.97	0.9963			
1.98	2.01	0.9895	Intercept	0.008256	+/-0.5



Wood Buffalo Environmental Association

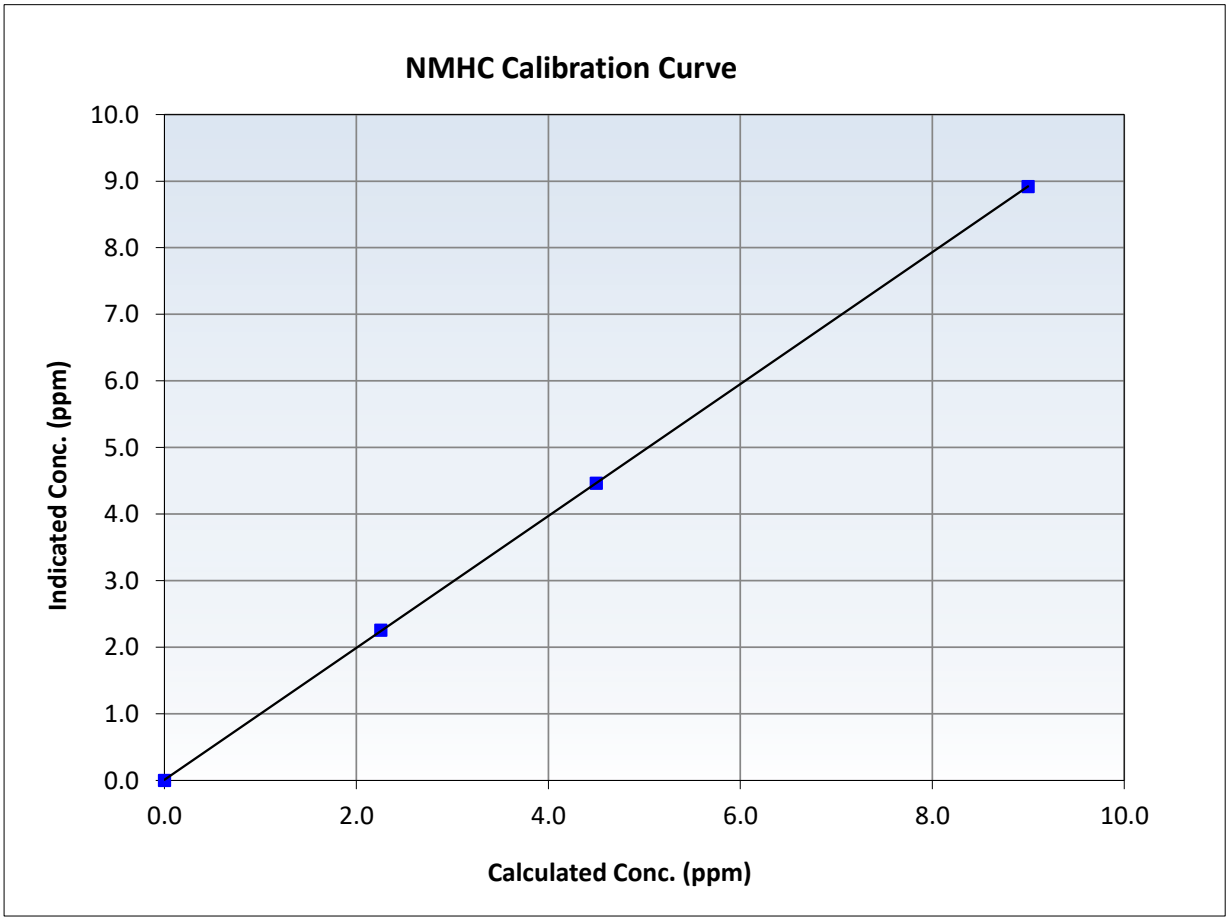
NMHC Calibration Summary

Station Information

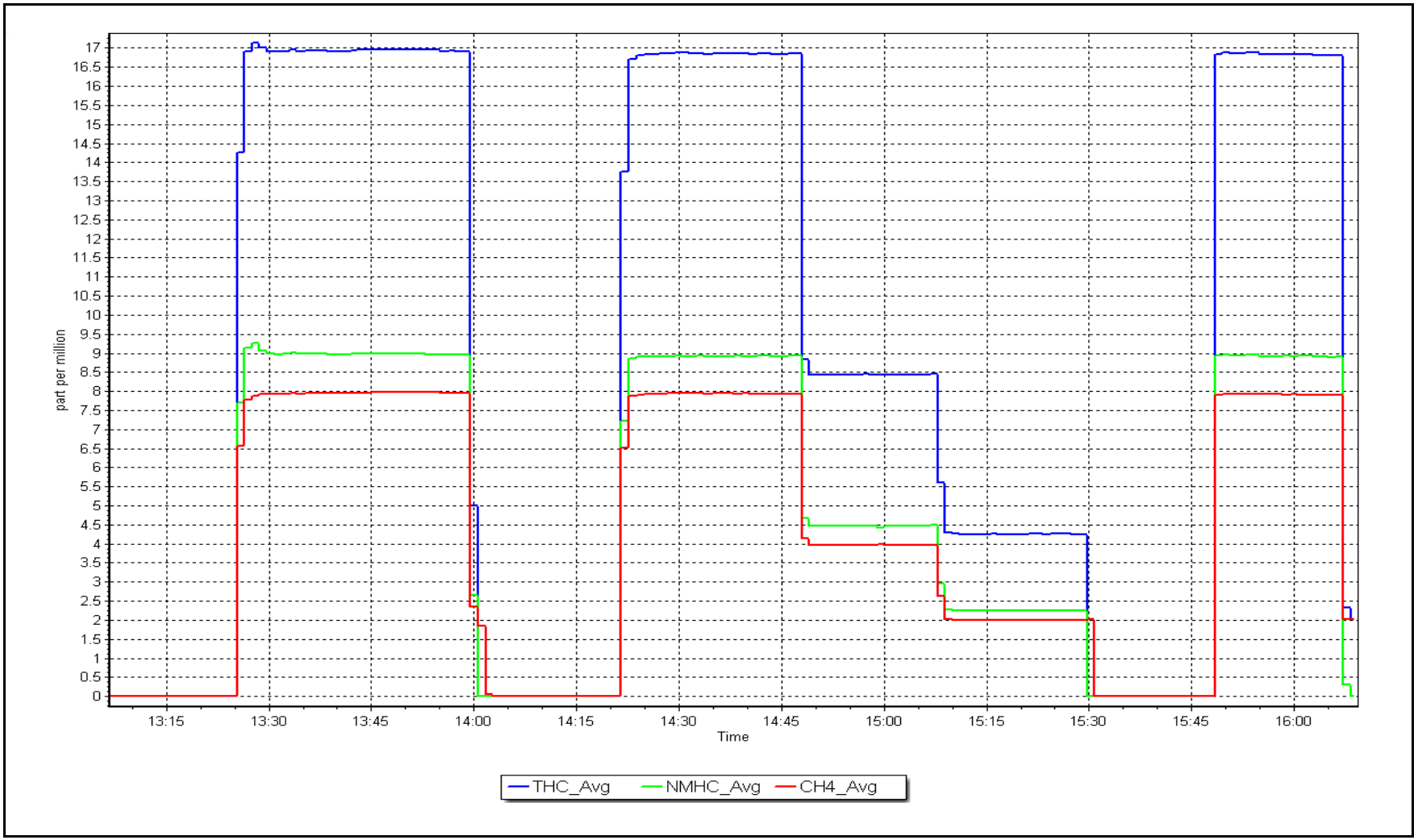
Calibration Date:	December 10, 2025	Previous Calibration:	November 21, 2025
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	13:05	End Time (MST):	16:09
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259520

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999993	≥0.995
9.00	8.92	1.0088	Slope	0.990434	0.90 - 1.10
4.50	4.46	1.0078			
2.26	2.26	0.9987	Intercept	0.010013	+/-0.5



NMHC Calibration Plot Date: December 10, 2025 Location: Athabasca Valley



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Athabasca Valley
Station number:	AMS 07
Calibration Date:	December 4, 2025
Last Cal Date:	November 7, 2025
Start time (MST):	10:47
End time (MST):	15:40
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0033919	Cal Gas Expiry Date:	January 9, 2032
NOX Cal Gas Conc:	60.10 ppm	NO Cal Gas Conc:	59.90 ppm
Removed Cylinder #:	N/A	Removed Gas Exp Date:	N/A
Removed Gas NOX Conc:	60.10 ppm	Removed Gas NO Conc:	59.90 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	API T700	Serial Number:	3805
ZAG make/model:	API T701H	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	----	----
AF High point	4933	66.8	803.0	800.3	2.7	802.0	796.7	5.3	1.0012	1.0044
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X =	803.9 ppb	NO =	801.0 ppb	* = > +/-5% change initiates investigation	*Percent Change	NO_X = -0.2%
Baseline Corr 1st pt	NO_X =	802.0 ppb	NO =	796.8 ppb	As Found Statistics	*Percent Change	NO = -0.5%
Baseline Corr 2nd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO_X r^2:	Nx Sl:	Nx Int:
Baseline Corr 3rd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO r^2:	NO Sl:	NO Int:
					As found NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1160120024

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	Finish		Start	Finish
NO coeff or slope:	0.909	0.913	NO bkgnd or offset:	6.3	6.4
NOX coeff or slope:	1.004	1.002	NOX bkgnd or offset:	6.6	6.6
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	185.7	183.9

Calibration Statistics

	Start	Finish
NO_X Cal Slope:	0.998479	0.999276
NO_X Cal Offset:	2.151910	2.271907
NO Cal Slope:	0.998642	1.000870
NO Cal Offset:	1.811941	1.831923
NO_2 Cal Slope:	1.004105	0.999285
NO_2 Cal Offset:	0.749299	0.472275

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.5	0.1	0.5	----	----
High point	4933	66.8	803.0	800.3	2.7	803.4	801.6	1.9	0.9995	0.9984
Mid point	4966	33.4	401.5	400.2	1.3	405.5	404.3	1.2	0.9902	0.9898
Low point	4983	16.7	200.7	200.1	0.7	203.9	203.1	0.9	0.9845	0.9851
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.1	0.0	----	----
As left span	4933	66.8	803.0	401.4	401.6	805.2	401.4	403.8	0.9972	1.0000
							Average Correction Factor		0.9914	0.9911

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.5	----	----
High GPT point	798.9	399.9	401.7	401.9	0.9994	100.1%
Mid GPT point	798.9	599.1	202.5	202.7	0.9989	100.1%
Low GPT point	798.9	698.7	102.9	103.3	0.9959	100.4%
				Average Correction Factor	0.9981	100.2%

Notes: Span adjusted.

Calibration Performed By: Aswin Sasi Kumar, Parampreet Kaur

Wood Buffalo Environmental Association

NO_X Calibration Summary

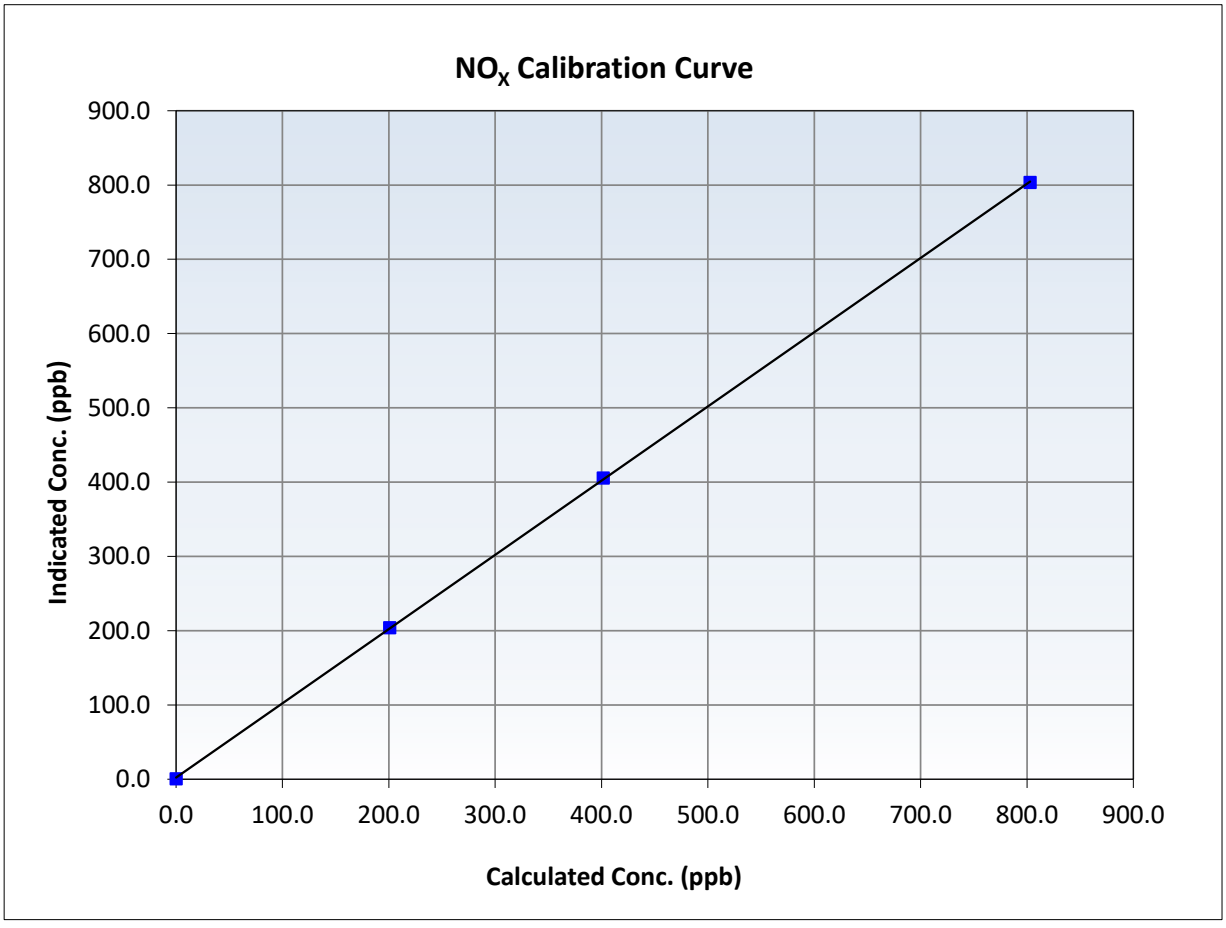
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 7, 2025
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	10:47	End Time (MST):	15:40
Analyzer make:	Thermo 42i	Analyzer serial #:	1160120024

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.5	----
803.0	803.4	0.9995
401.5	405.5	0.9902
200.7	203.9	0.9845

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999972	*≥0.995*
Slope	0.999276	*0.90 - 1.10*
Intercept	2.271907	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

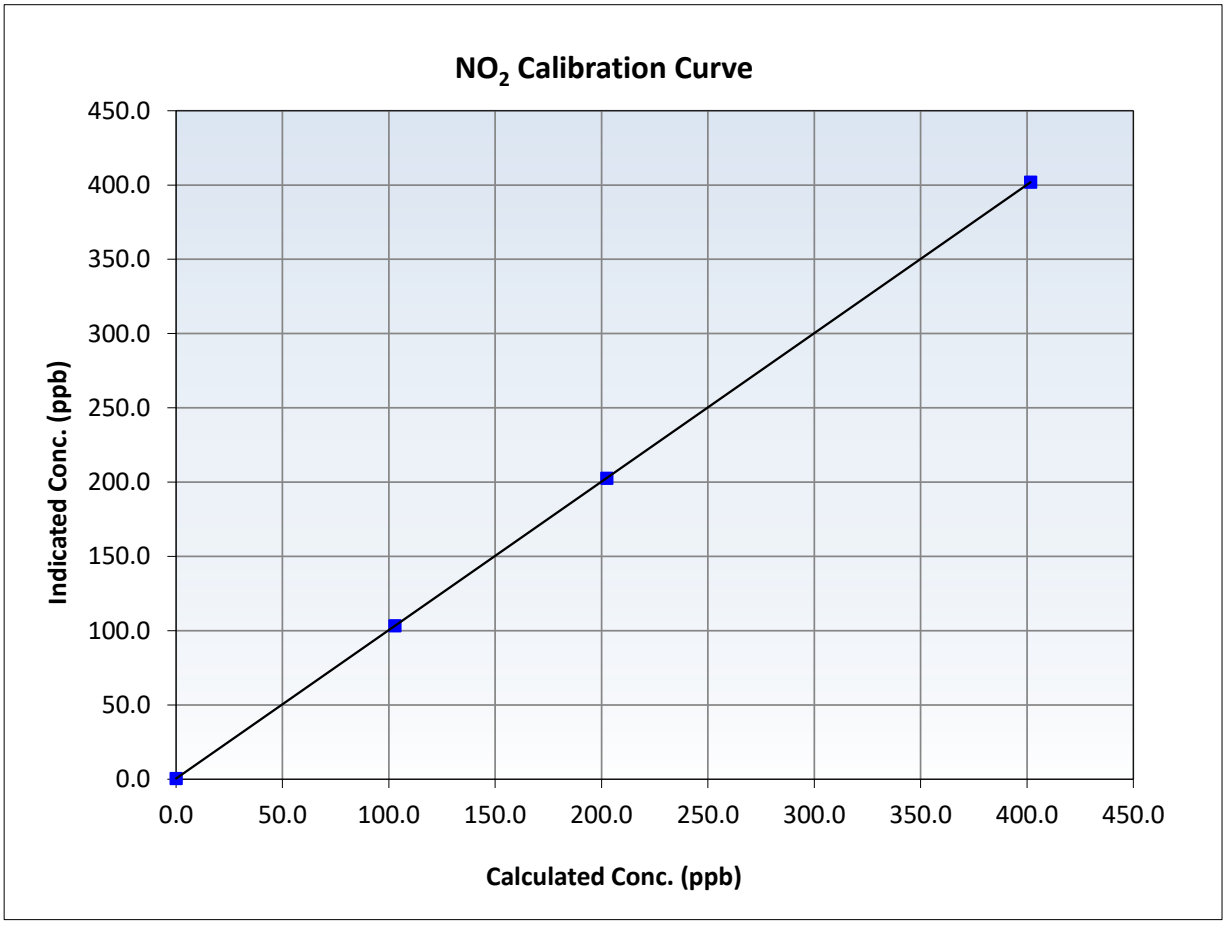
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 7, 2025
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	10:47	End Time (MST):	15:40
Analyzer make:	Thermo 42i	Analyzer serial #:	1160120024

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.5	----
401.7	401.9	0.9994
202.5	202.7	0.9989
102.9	103.3	0.9959

Statistical Evaluation		*Limits*
Correlation Coefficient	1.000000	*≥0.995*
Slope	0.999285	*0.90 - 1.10*
Intercept	0.472275	*+/-20*



Wood Buffalo Environmental Association

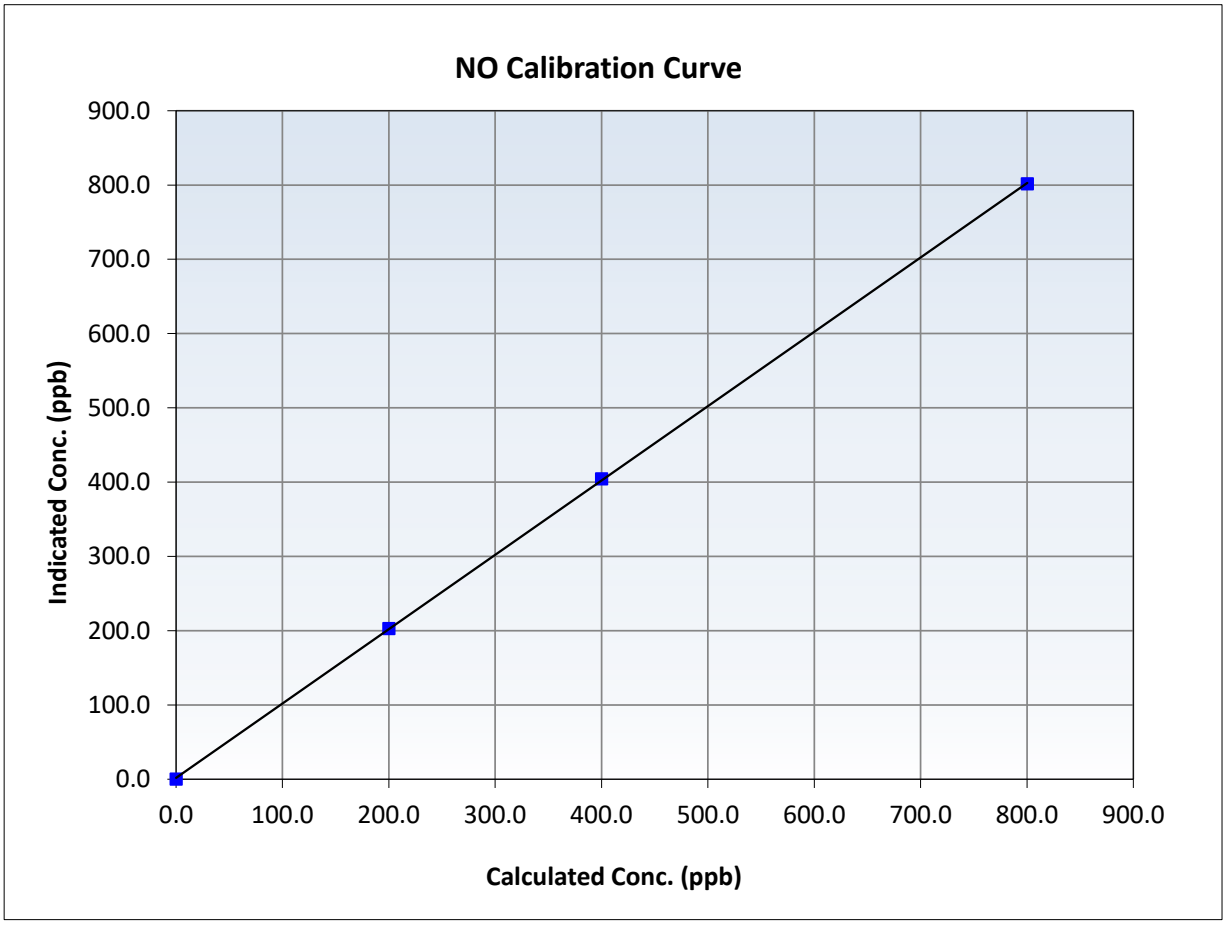
NO Calibration Summary

Station Information

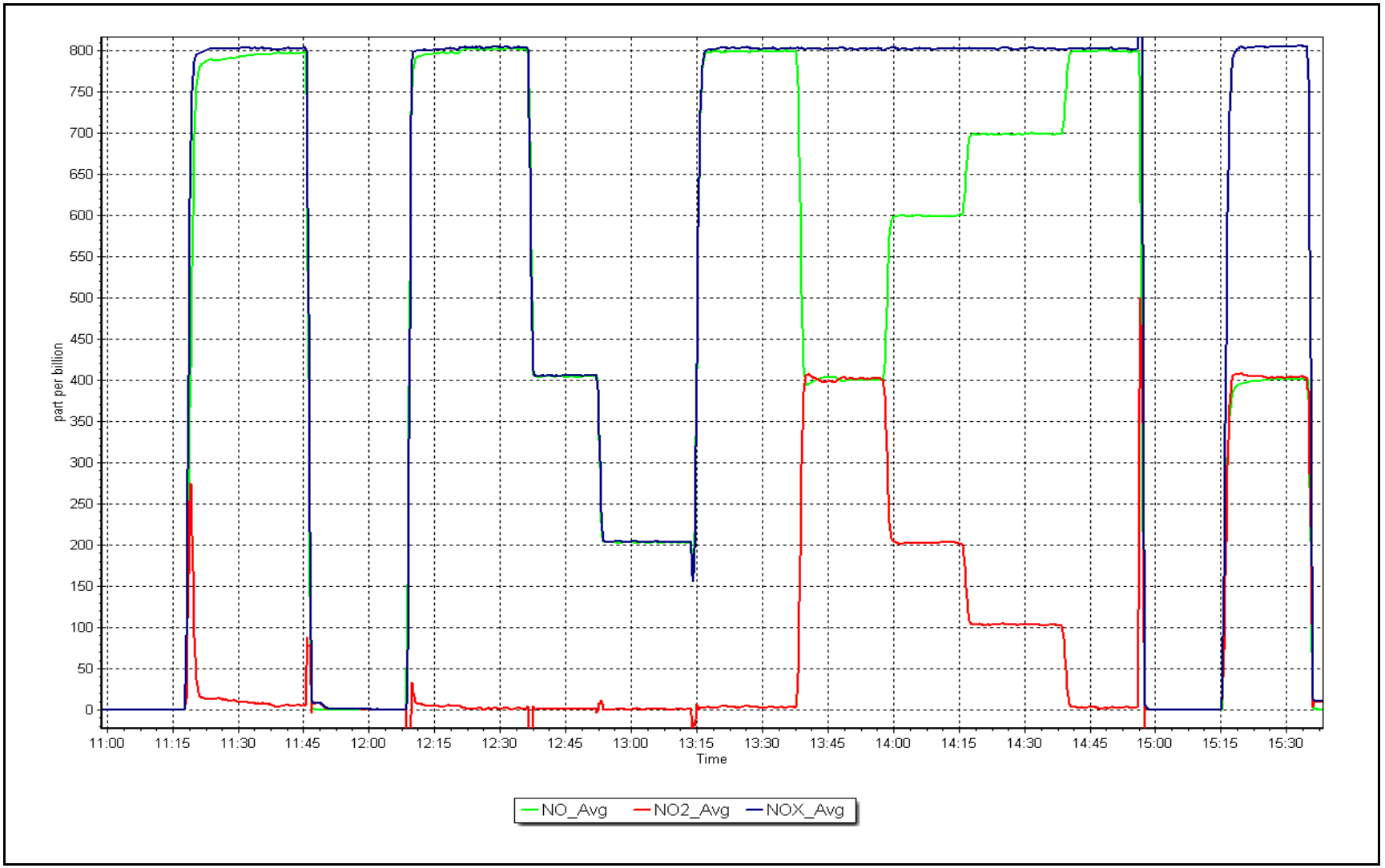
Calibration Date:	December 4, 2025	Previous Calibration:	November 7, 2025
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	10:47	End Time (MST):	15:40
Analyzer make:	Thermo 42i	Analyzer serial #:	1160120024

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.1	----	Correlation Coefficient	0.999974	≥0.995
800.3	801.6	0.9984	Slope	1.000870	0.90 - 1.10
400.2	404.3	0.9898	Intercept	1.831923	+/-20
200.1	203.1	0.9851			



NO_X Calibration Plot Date: December 4, 2025 Location: Athabasca Valley



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Athabasca Valley	Station number:	AMS07
Calibration Date:	December 1, 2025	Last Cal Date:	November 4, 2025
Start time (MST):	11:01	End time (MST):	14:21
Reason:	Routine		

Calibration Standards

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

Analyzer Information

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

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.006714	1.001400	Backgd or Offset:	-1.8	-0.2
Calibration intercept:	0.100000	-0.020000	Coeff or Slope:	1.556	1.002

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	NA	0.0	0.0	----
As found High point	5000	1705.1	400.0	403.2	0.992
As found Mid point					
As found Low point					
Baseline Corr As found:	403.2	Previous response	402.8	*% 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	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	NA	0.0	0.0	----
High point	5000	1705.1	400.0	400.5	0.999
Mid point	5000	1172.8	200.0	200.4	0.998
Low point	5000	921.2	100.0	100.0	1.000
As left zero	5000	NA	0.0	0.0	----
As left span	5000	1582.6	400.0	404.0	0.990
				Average Correction Factor	0.999

Notes: Span adjusted.

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

O_3 Calibration Summary

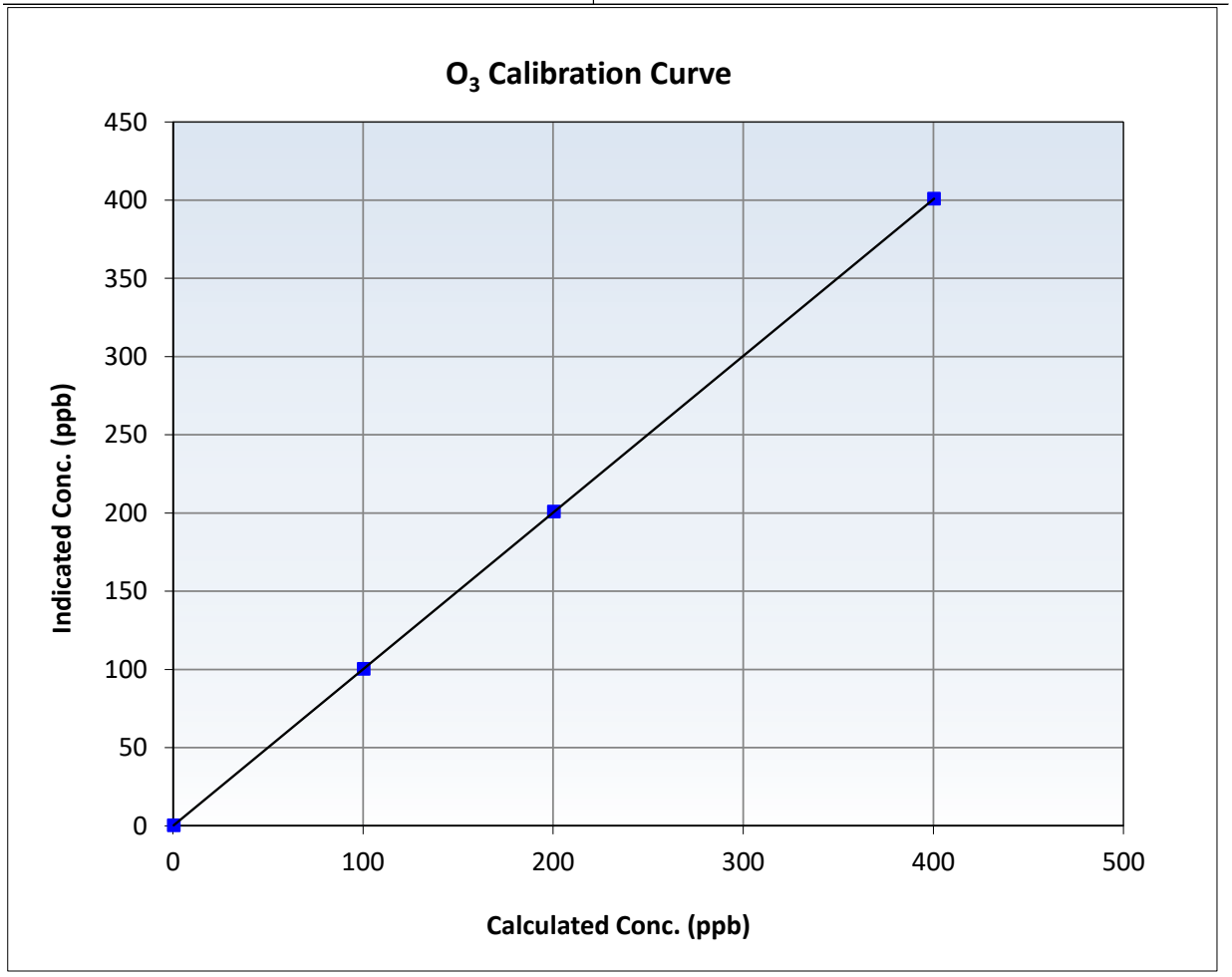
Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 4, 2025
Station Name:	Athabasca Valley	Station Number:	AMS07
Start Time (MST):	11:01	End Time (MST):	14:21
Analyzer make:	Thermo 49i	Analyzer serial #:	1507964700

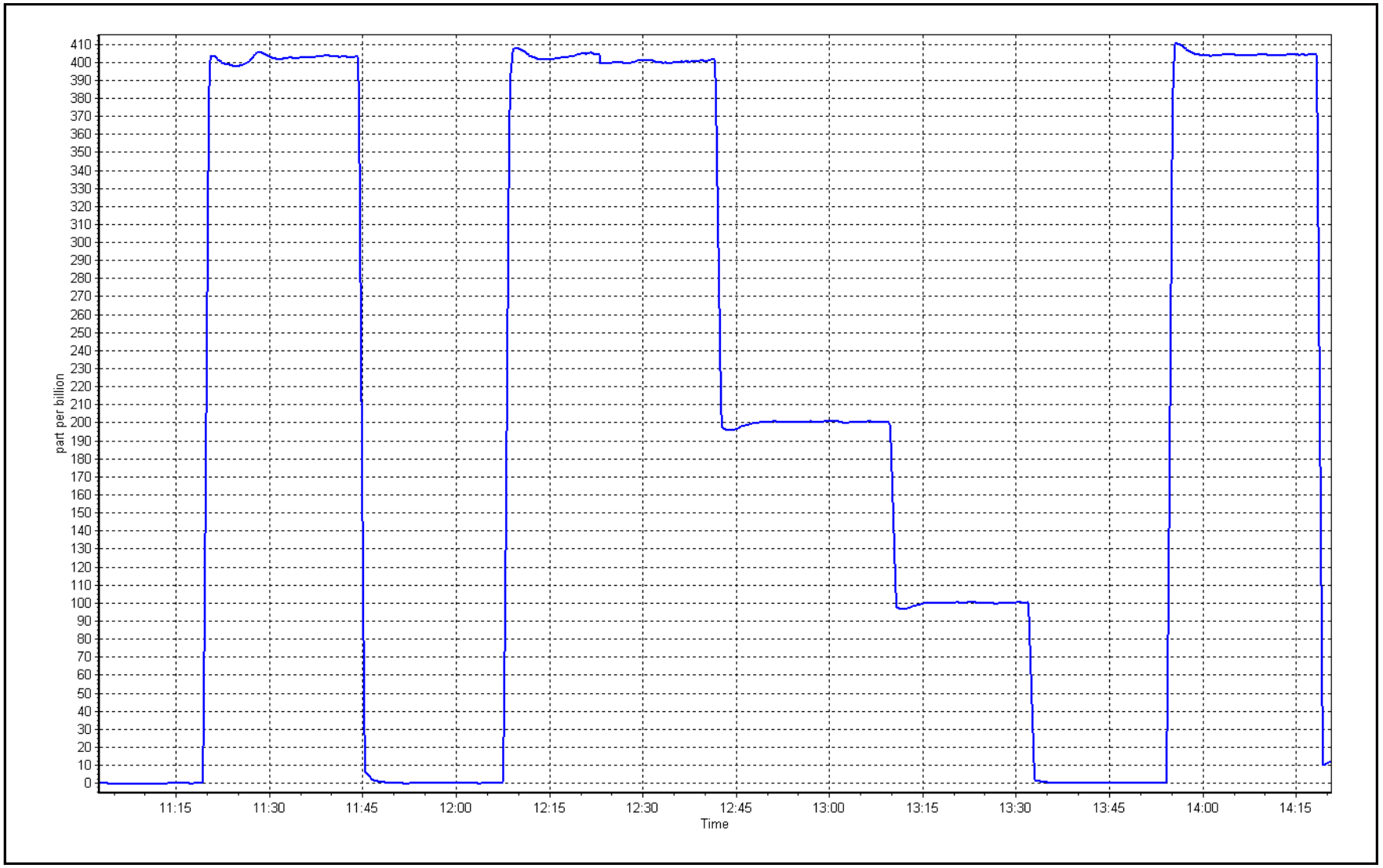
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
400.0	400.5	0.9988
200.0	200.4	0.9980
100.0	100.0	1.0000

Statistical Evaluation		*Limits*
Correlation Coefficient	1.000000	*≥0.995*
Slope	1.001400	*0.90 - 1.10*
Intercept	-0.020000	*+/- 5*



O_3 Calibration Plot Date: December 1, 2025 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:	December 18, 2025	Last Cal Date:	November 24, 2025
Start time (MST):	12:54	End time (MST):	13:23
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 (^{o}C)	-23.20	-24.23	-23.20	☐	+/- 2 ^{o}C
P (mmHg)	734.31	733.49	734.31	☐	+/- 10 mmHg
Flow (LPM)	5.02	5.01	5.02	☐	+/- 0.25 LPM
PW% (pump)	39	-----	39	☐	>80%
Zero Verification	PM w/o HEPA:	4.20	PM w/ HEPA:	0.10	<0.2 ug/m3

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

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

Quarterly Calibration Test

SPAN DUST — Refractive Index: 10.9 — Expiry Date: July 16, 2026

Lot No.: 100128-050-050

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

Date Optical Chamber Cleaned: November 24, 2025

Date Disposable Filter Changed: November 24, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: October 9, 2025

Date RH/T Sensor Cleaned: October 9, 2025

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

Calibration by: Sean Bala, Parampreet Kaur

Wood Buffalo Environmental Association

CO Calibration Report

Station Information

Station Name:	Athabasca Valley	Station number:	AMS 07
Calibration Date:	December 10, 2025	Last Cal Date:	November 4, 2025
Start time (MST):	10:13	End time (MST):	13:05
Reason:	Routine		

Calibration Standards

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

Analyzer Information

Analyzer make:	Thermo 48i-TLE		Analyzer serial #:	1408761381	
Analyzer Range:	0 - 50 ppm				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.996326	0.997638	Backgd or Offset:	5.170	5.170
Calibration intercept:	0.179992	0.222017	Coeff or Slope:	1.077	1.077

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) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4932	67.8	40.0	40.1	1.001
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr As found:	40.01	Prev response:	40.08	*% 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	

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) *Limit = 0.95-1.05*
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	20.4	0.982
Low point	4983	16.9	10.0	10.3	0.969
As left zero	5000	0.0	0.0	0.0	----
As left span	4932	67.8	40.0	40.0	1.001
				Average Correction Factor	0.984

Notes: No adjustments made.

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

CO Calibration Summary

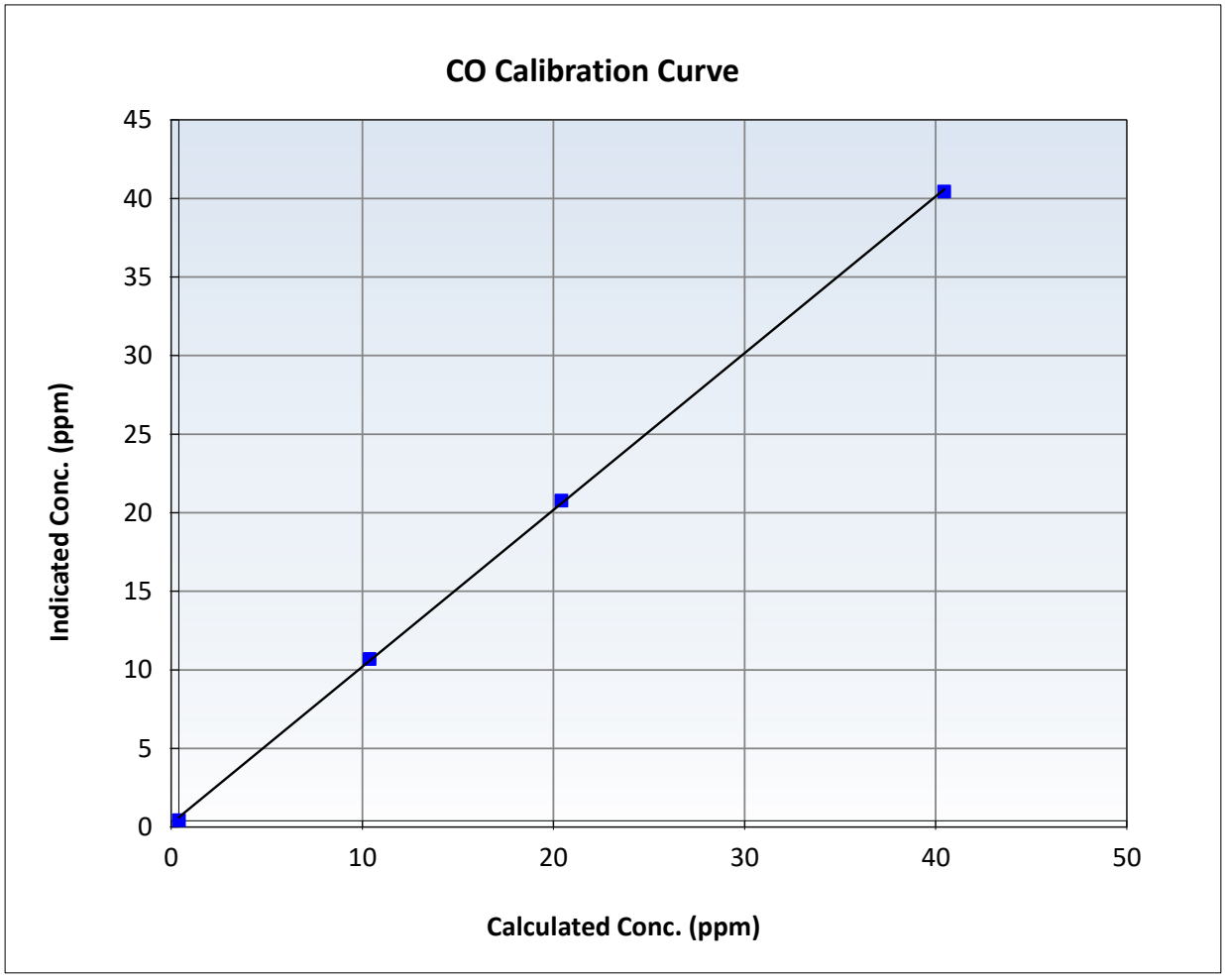
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 4, 2025
Station Name:	Athabasca Valley	Station Number:	AMS 07
Start Time (MST):	10:13	End Time (MST):	13:05
Analyzer make:	Thermo 48i-TLE	Analyzer serial #:	1408761381

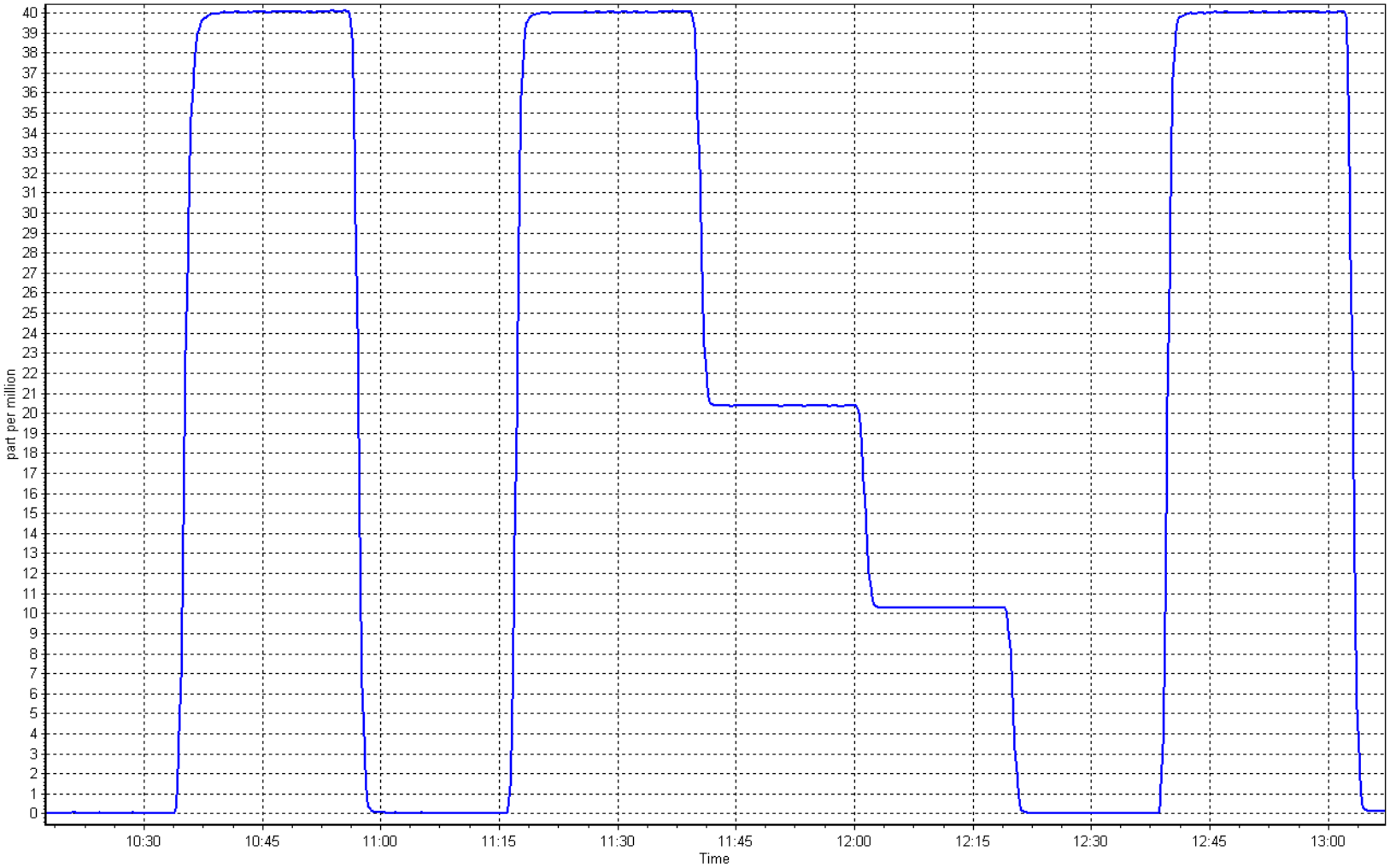
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
40.0	40.1	0.9999
20.0	20.4	0.9824
10.0	10.3	0.9691

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999890	*≥0.995*
Slope	0.997638	*0.90 - 1.10*
Intercept	0.222017	*+/-1.5*



CO Calibration Plot Date: December 10, 2025 Location: Athabasca Valley



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS08
FORT CHIPEWYAN
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Fort Chipewyan	Station number:	AMS 08
Calibration Date:	December 5, 2025	Last Cal Date:	November 18 2025
Start time (MST):	8:19	End time (MST):	11:09
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:	1236656116	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.007484	1.006171	Backgd or Offset:	1.9	1.9
Calibration intercept:	0.194751	0.154810	Coeff or Slope:	1.029	1.029

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4920	80.3	800.4	804.7	0.995
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	804.6	Previous response	806.6	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4920	80.3	800.4	805.7	0.993
Mid point	4960	40.2	400.7	402.8	0.995
Low point	4980	20.1	200.4	201.9	0.992
As left zero	5000	0.0	0.0	0.3	----
As left span	4920	80.3	800.4	802.7	0.997
				Average Correction Factor:	0.994

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

Calibration Performed By: Matthew Courtoreille

Wood Buffalo Environmental Association

SO_2 Calibration Summary

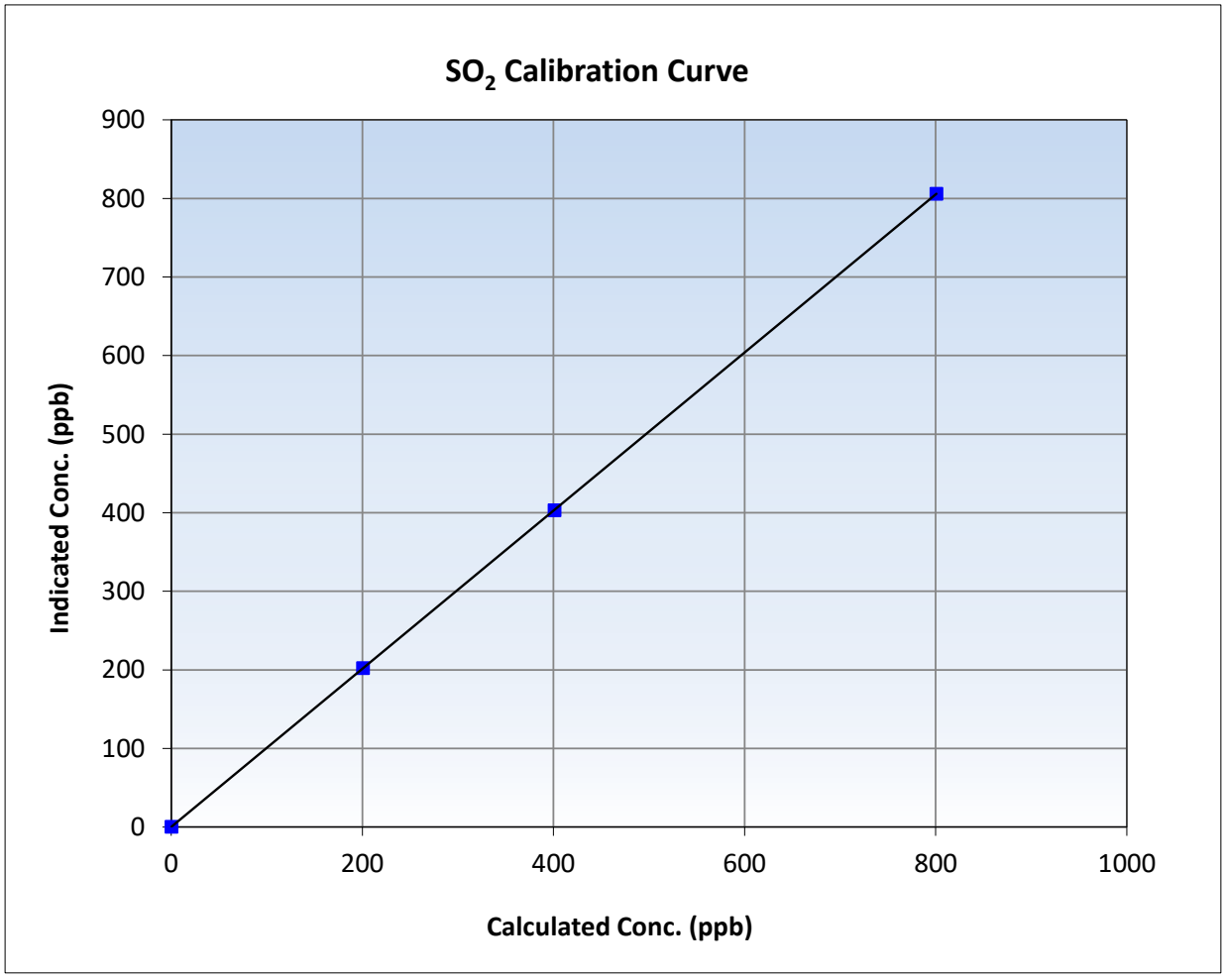
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 18 2025
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	8:19	End Time (MST):	11:09
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1236656116

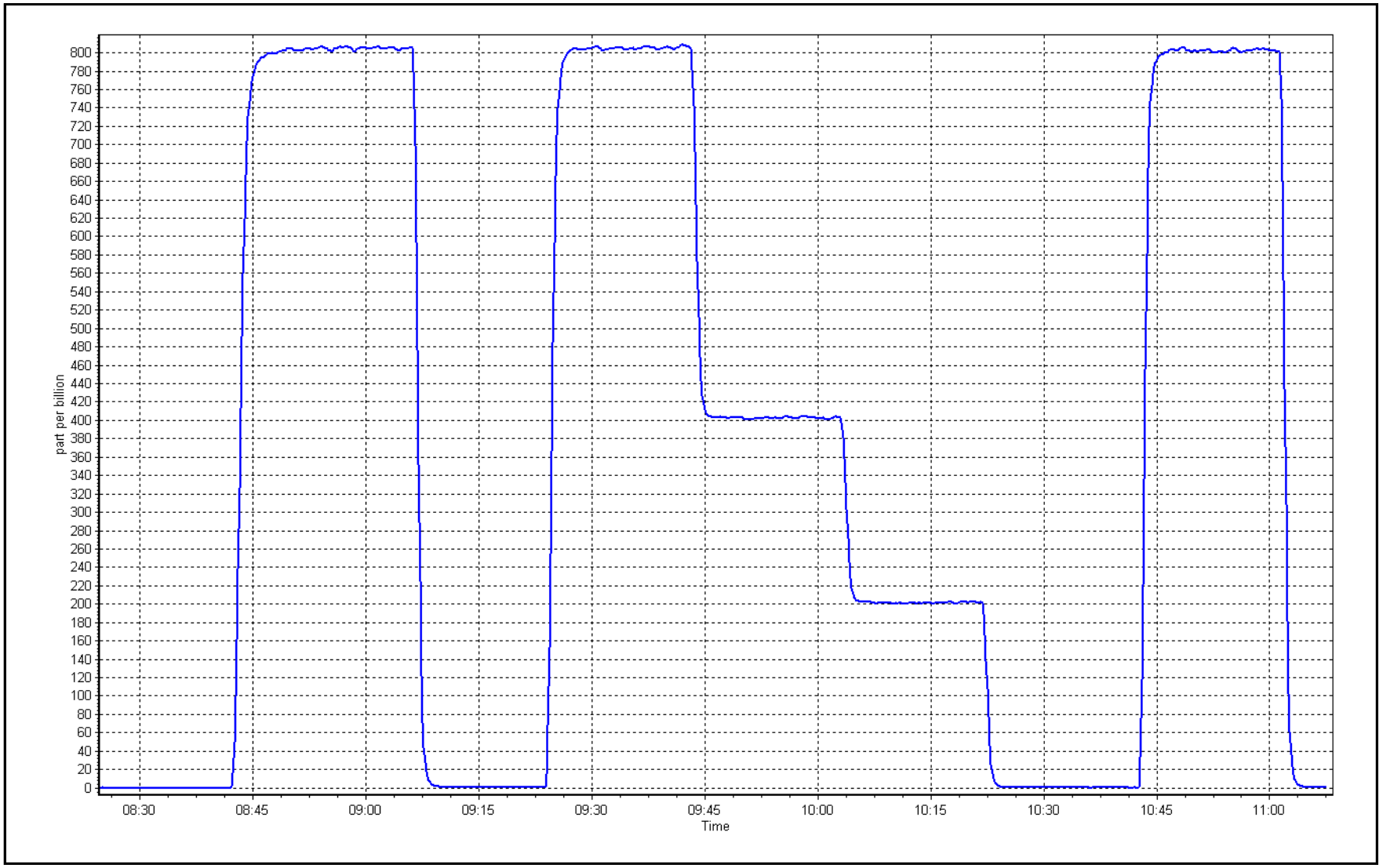
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.3	----
800.4	805.7	0.9934
400.7	402.8	0.9948
200.4	201.9	0.9923

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999999	*≥0.995*
Slope	1.006171	*0.90 - 1.10*
Intercept	0.154810	*+/-30*



SO2 Calibration Plot Date: December 5, 2025 Location: Fort Chipewyan



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name:	Fort Chipewyan	Station number:	AMS 08
Calibration Date:	December 10, 2025	Last Cal Date:	November 13 2025
Start time (MST):	9:38	End time (MST):	14:27
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

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.013110	1.022547	Backgd or Offset:	2.8	3.6
Calibration intercept:	-0.078292	-0.158523	Coeff or Slope:	1.158	1.206

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.2	----
As found High point	4917	82.6	80.0	78.9	1.011
As found Mid point	4959	41.3	40.0	39.6	1.004
As found Low point	4979	20.7	20.0	19.7	1.007
New cylinder response					

Baseline Corr As found:	79.1	Prev response:	80.93	*% change:	-2.3%
Baseline Corr 2nd AF pt:	39.8	AF Slope:	0.989238	AF Intercept:	-0.117875
Baseline Corr 3rd AF pt:	19.9	AF Correlation:	0.999987	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	-0.2	----
High point	4917	82.6	80.0	81.6	0.980
Mid point	4959	41.3	40.0	40.7	0.982
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	81.3	0.984
SO2 Scrubber Check	4920	80.3	803.0	-0.1	----
Date of last scrubber change:		May 15, 2025		Ave Corr Factor	0.981
Date of last converter efficiency test:					

Notes: Changed inlet filter after as founds. Made adjustment to Zero then srubber check went well, span high point was adjusted too.

Calibration Performed By: Matthew Courtoreille

Wood Buffalo Environmental Association

TRS Calibration Summary

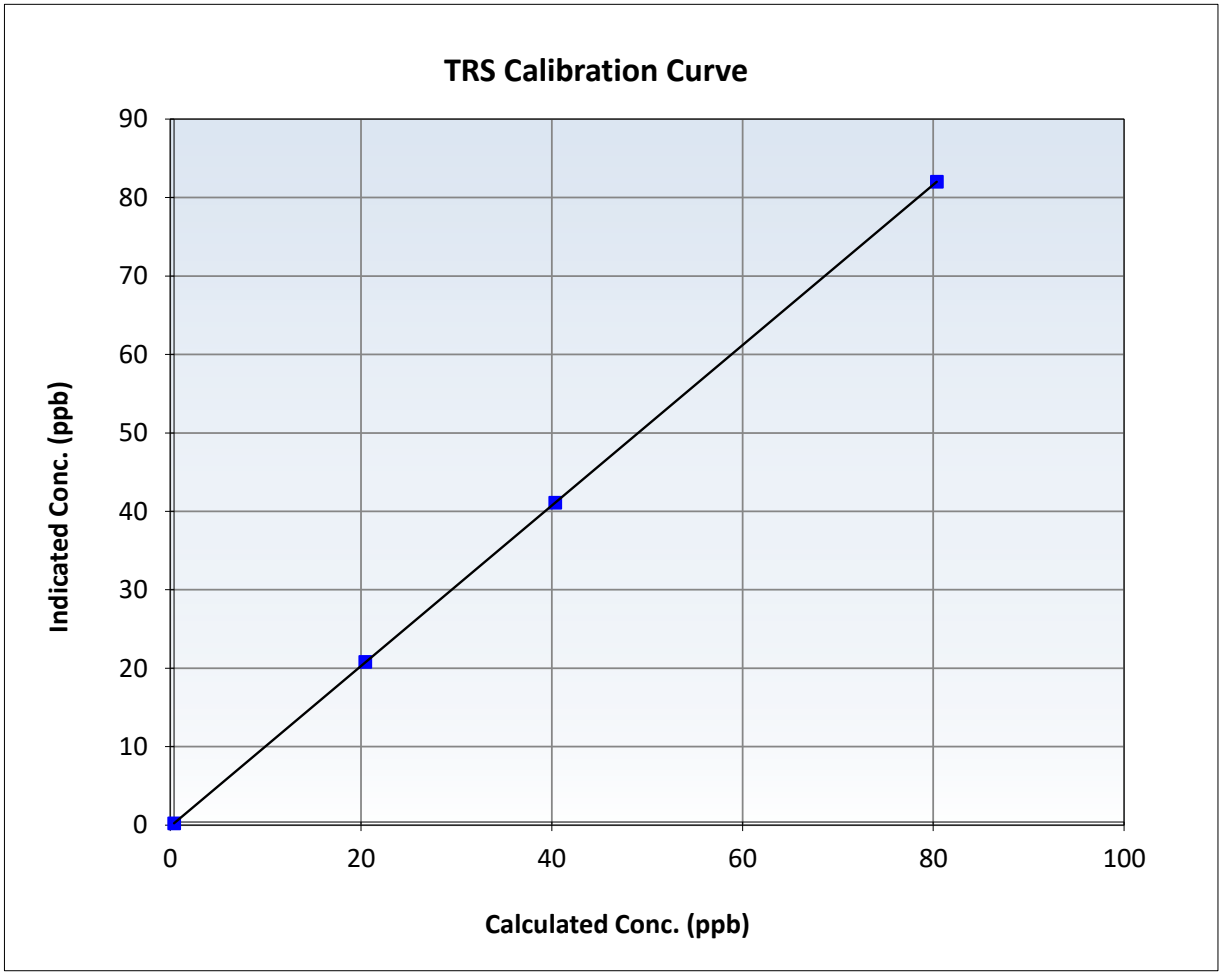
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 13 2025
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:38	End Time (MST):	14:27
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1218153461

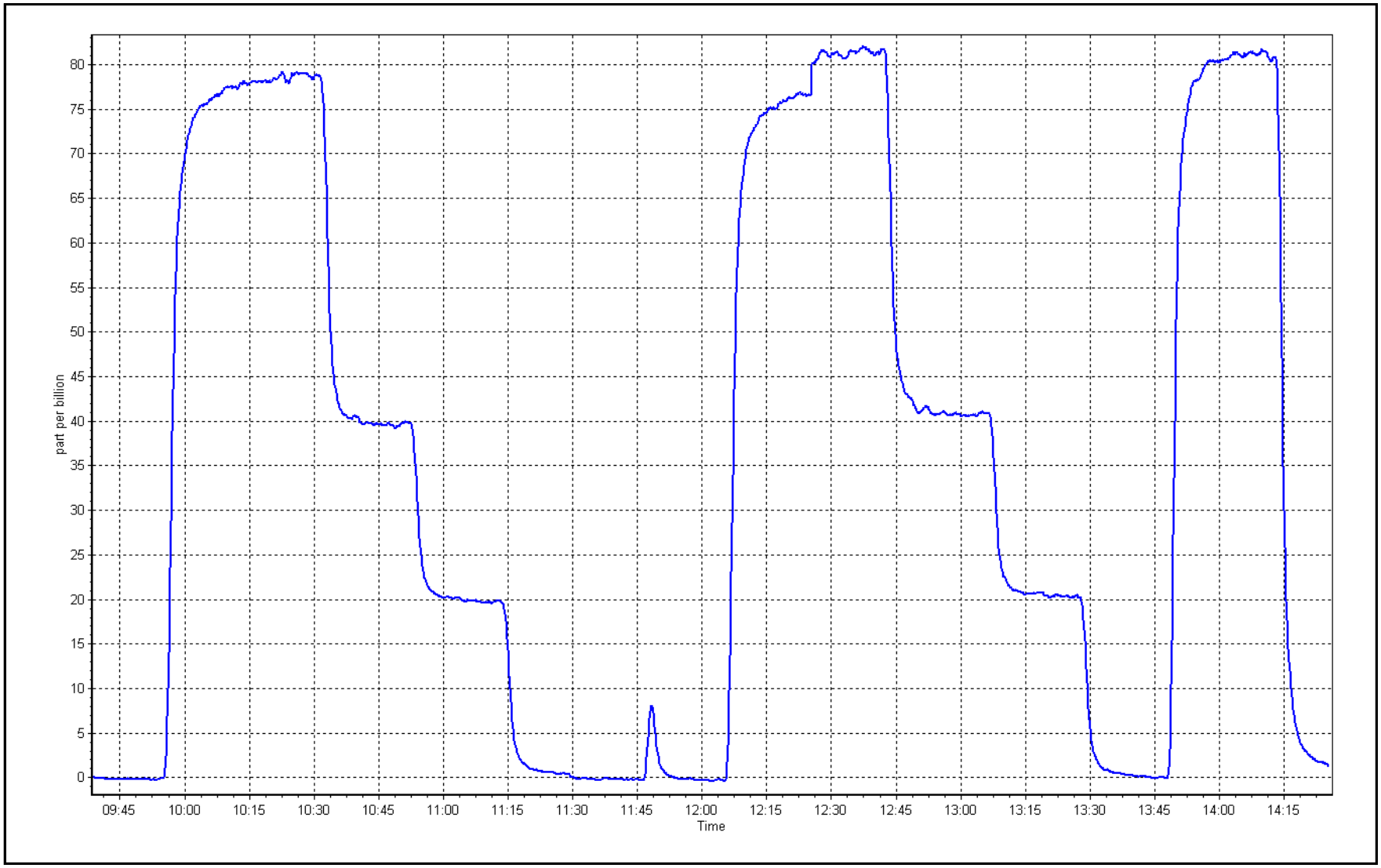
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
80.0	81.6	0.9799
40.0	40.7	0.9822
20.0	20.4	0.9823

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999998	*≥0.995*
Slope	1.022547	*0.90 - 1.10*
Intercept	-0.158523	*+/-3*



TRS Calibration Plot Date: December 10, 2025 Location: Fort Chipewyan



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Fort Chipewyan
Station number:	AMS 08
Calibration Date:	December 8, 2025
Last Cal Date:	November 17, 2025
Start time (MST):	13:31
End time (MST):	18:12
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	CC358100	Cal Gas Expiry Date:	January 5, 2032
NOX Cal Gas Conc:	60.10 ppm	NO Cal Gas Conc:	60.00 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	60.10 ppm	Removed Gas NO Conc:	60.00 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	3810
ZAG make/model:	Teledyne API T701H	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-1.1	-0.3	-0.8	----	----
AF High point	4933	66.7	801.8	800.4	1.3	699.3	697.4	1.9	1.1447	1.1473
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 809.0 ppb	NO = 806.9 ppb
Baseline Corr 1st pt	NO_X = 700.4 ppb	NO = 697.7 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

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	NO_2 Int:

*Percent Change	NO_X = -15.5%
*Percent Change	NO = -15.6%

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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42iQ Serial Number: 12124313137

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	0.806	0.974	NO bkgnd or offset:	0.8	0.8
NOX coeff or slope:	0.996	0.995	NOX bkgnd or offset:	1.6	1.9
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	159.2	182.7

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	1.008650	0.999818
NO_X Cal Offset:	0.236078	-0.725766
NO Cal Slope:	1.008966	1.000913
NO Cal Offset:	-0.745227	-0.925832
NO_2 Cal Slope:	1.008746	1.004459
NO_2 Cal Offset:	0.862590	0.990922

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.9	0.0	-0.9	----	----
High point	4933	66.7	801.8	800.4	1.3	800.9	800.8	0.1	1.0011	0.9996
Mid point	4967	33.3	400.2	399.6	0.7	399.3	398.3	1.1	1.0024	1.0032
Low point	4983	16.7	200.7	200.4	0.3	200.3	198.9	1.4	1.0022	1.0075
As left zero	5000	0.0	0.0	0.0	0.0	-1.0	0.0	-1.0	----	----
As left span	4933	66.7	801.8	399.5	402.3	806.0	399.5	406.6	0.9948	1.0000
							Average Correction Factor		1.0019	1.0034

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	-0.9	----	----
High GPT point	794.5	394.3	401.5	403.5	0.9951	100.5%
Mid GPT point	794.5	593.6	202.2	204.7	0.9880	101.2%
Low GPT point	794.5	696.7	99.1	102.7	0.9653	103.6%
				Average Correction Factor	0.9828	101.8%

Notes: Changed filter after as founds. Made adjustment to Zero; No and not Nox. Also, adjusted span high point. Towards end, I used they second reference point in calibrations.

Calibration Performed By: Matthew Courtoreille

Wood Buffalo Environmental Association

NO_X Calibration Summary

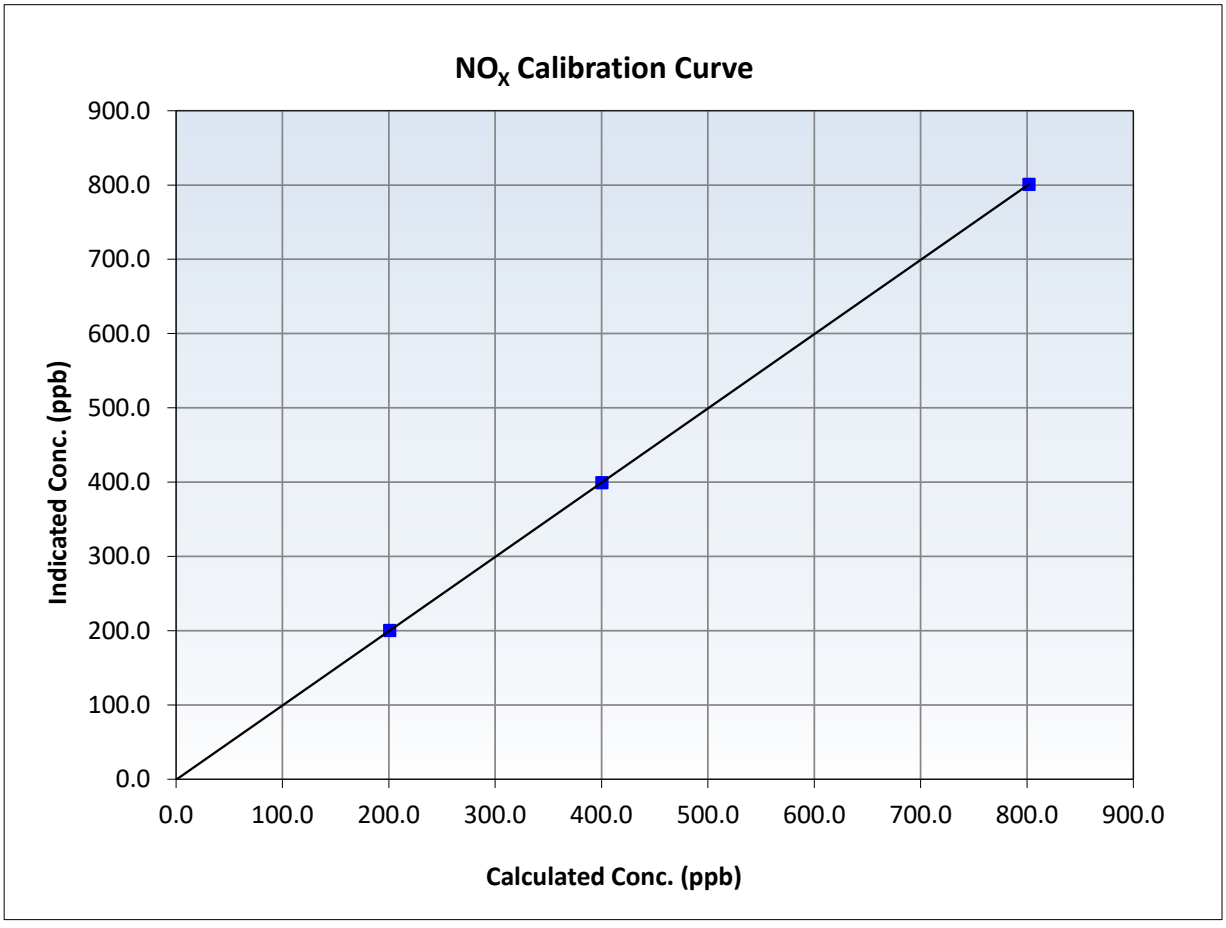
Station Information

Calibration Date:	December 8, 2025	Previous Calibration:	November 17, 2025
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	13:31	End Time (MST):	18:12
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12124313137

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.9	----
801.8	800.9	1.0011
400.2	399.3	1.0024
200.7	200.3	1.0022

Statistical Evaluation		Limits
Correlation Coefficient	1.000000	≥0.995
Slope	0.999818	0.90 - 1.10
Intercept	-0.725766	+/-20



Wood Buffalo Environmental Association

NO_2 Calibration Summary

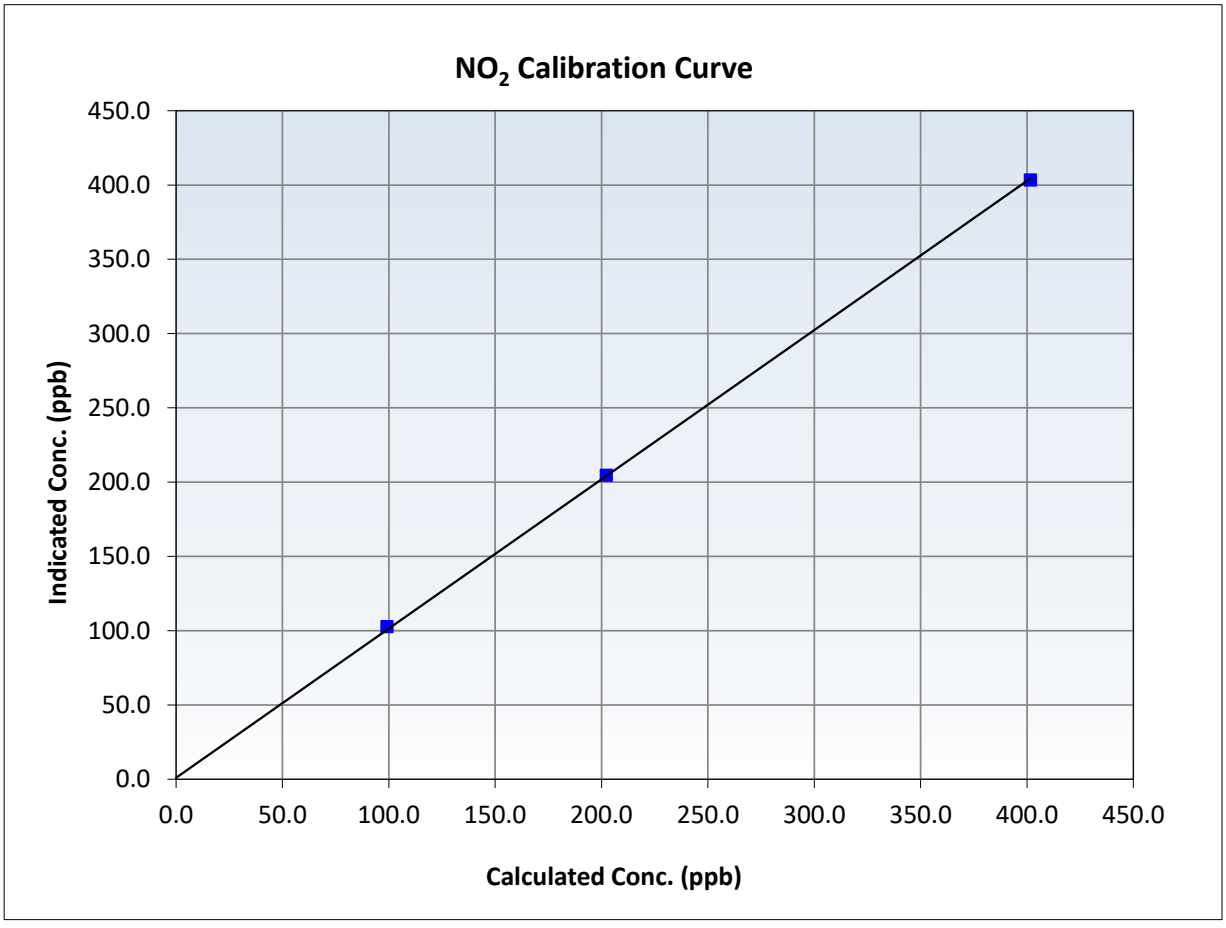
Station Information

Calibration Date:	December 8, 2025	Previous Calibration:	November 17, 2025
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	13:31	End Time (MST):	18:12
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12124313137

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.9	----
401.5	403.5	0.9951
202.2	204.7	0.9880
99.1	102.7	0.9653

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999898	*≥0.995*
Slope	1.004459	*0.90 - 1.10*
Intercept	0.990922	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

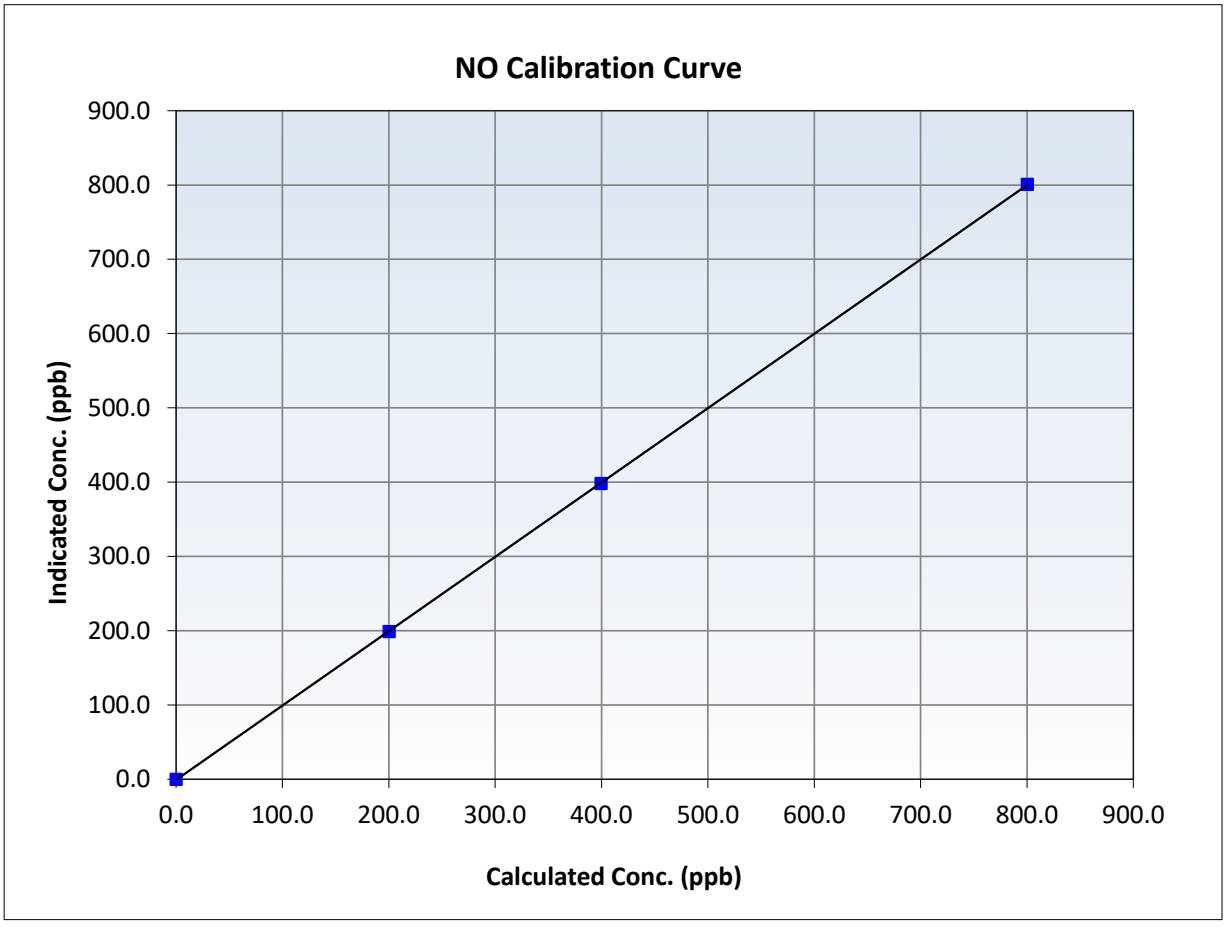
Station Information

Calibration Date:	December 8, 2025	Previous Calibration:	November 17, 2025
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	13:31	End Time (MST):	18:12
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12124313137

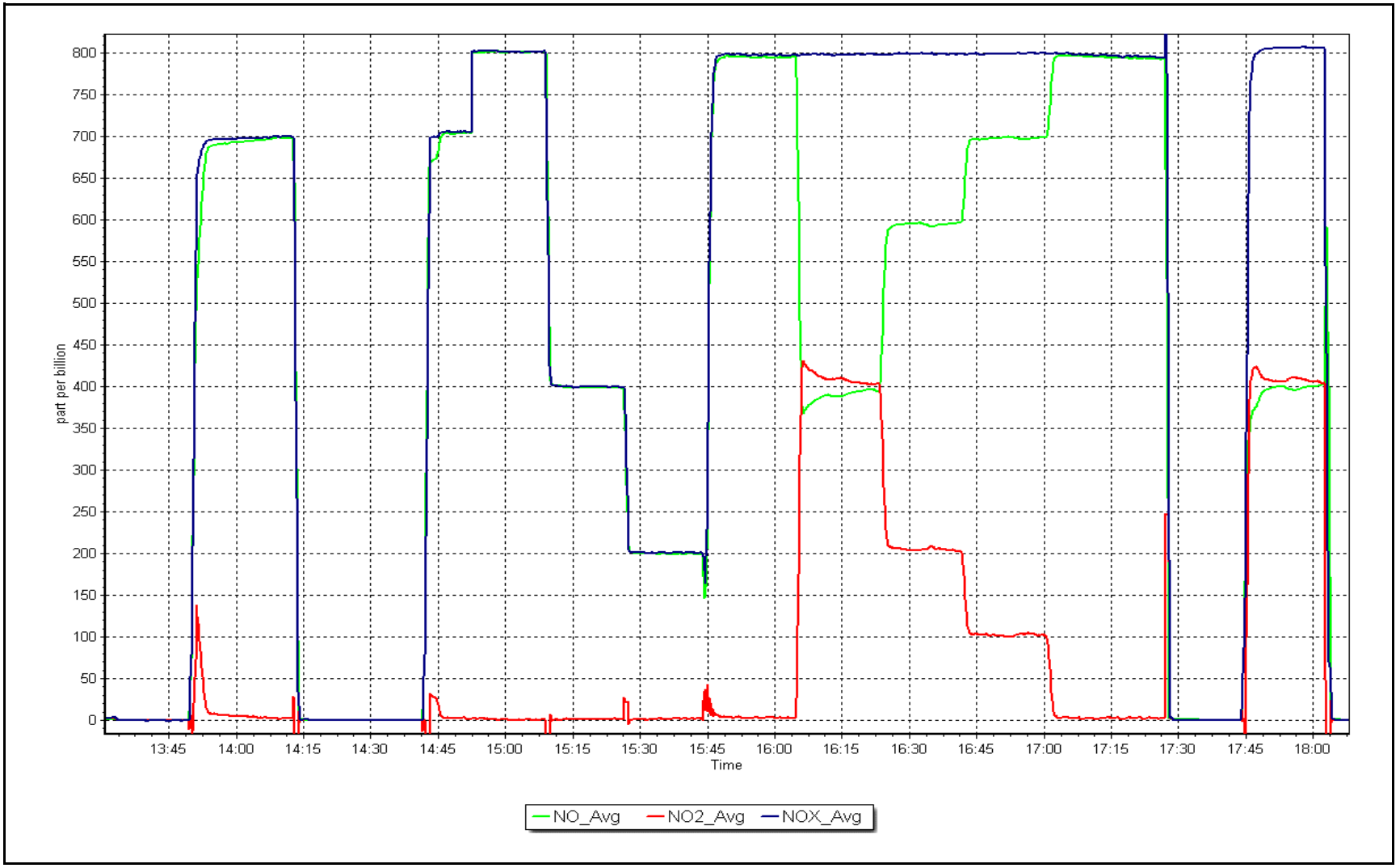
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
800.4	800.8	0.9996
399.6	398.3	1.0032
200.4	198.9	1.0075

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999994	*≥0.995*
Slope	1.000913	*0.90 - 1.10*
Intercept	-0.925832	*+/-20*



NO_X Calibration Plot Date: December 8, 2025 Location: Fort Chipewyan



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Fort Chipewyan
Station number:	AMS 08
Calibration Date:	December 22, 2025
Last Cal Date:	December 8, 2025
Start time (MST):	15:03
End time (MST):	17:46
Reason:	Removal

Calibration Standards

NO Gas Cylinder #:	CC358100	Cal Gas Expiry Date:	January 5, 2032
NOX Cal Gas Conc:	60.10 ppm	NO Cal Gas Conc:	60.00 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	60.10 ppm	Removed Gas NO Conc:	60.00 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	3810
ZAG make/model:	Teledyne API T701H	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-1.2	-0.2	-1.0	----	----
AF High point	4933	66.7	801.8	800.4	1.3	795.6	793.7	2.0	1.0063	1.0082
AF Mid point	4967	33.3	400.2	399.6	0.7	396.7	395.2	1.5	1.0059	1.0106
AF Low point	4983	16.7	200.7	200.4	0.3	199.5	197.5	2.0	1.0002	1.0137
New cyl resp										

Previous Response	NO_X = 809.0 ppb	NO = 806.9 ppb
Baseline Corr 1st pt	NO_X = 796.8 ppb	NO = 793.9 ppb
Baseline Corr 2nd pt	NO_X = 397.9 ppb	NO = 395.4 ppb
Baseline Corr 3rd pt	NO_X = 200.7 ppb	NO = 197.5 ppb

* = > +/-5% change initiates investigation

As Found Statistics

As found	NO_X r^2: 0.999997	*Percent Change	NO_X = -1.5%
As found	NO r^2: 0.999997	*Percent Change	NO = -1.6%
As found	NO_2 r^2: 0.999998	Nx Sl: 0.993289	Nx Int: -0.686
		NO Sl: 0.992145	NO Int: -0.806
		NO2 Sl: 1.003737	NO_2 Int: -0.714

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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
As Found GPT zero	----	----	0.0	-1.0	----	----
As found high GPT point	790.3	386.4	405.2	405.9	0.9984	100.2%
As found mid GPT point	790.3	587.7	203.9	204.1	0.9992	100.1%
As found low GPT point	790.3	690.8	100.8	100.8	1.0003	100.0%

Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42iQ
Serial Number: 12124313137
NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	Finish		Start	Finish
NO coeff or slope:	0.806	0.974	NO bkgnd or offset:	0.8	0.8
NOX coeff or slope:	0.996	0.995	NOX bkgnd or offset:	1.6	1.9
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	159.2	182.7

Calibration Statistics

	Start	Finish
NO_X Cal Slope:	1.008650	
NO_X Cal Offset:	0.236078	
NO Cal Slope:	1.008966	
NO Cal Offset:	-0.745227	
NO_2 Cal Slope:	1.008746	
NO_2 Cal Offset:	0.862590	

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero										
High point										
Mid point										
Low point										
As left zero										
As left span										
								Average Correction Factor		

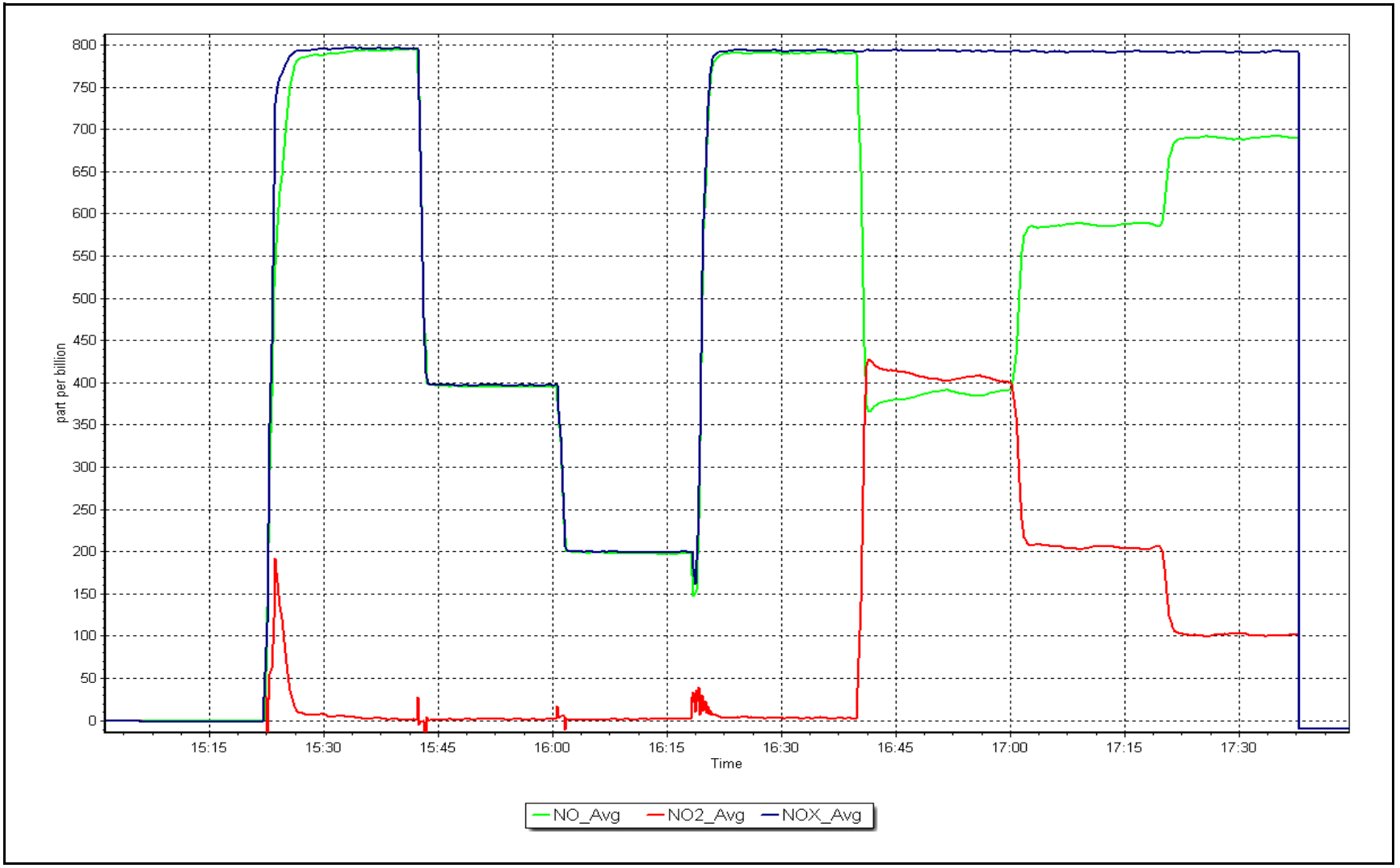
GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero						
High GPT point						
Mid GPT point						
Low GPT point						
				Average Correction Factor		

Notes: Nox removal.

Calibration Performed By: Matthew Courtoreille

NO_X Calibration Plot Date: December 22, 2025 Location: Fort Chipewyan



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Fort Chipewyan
Station number:	AMS 08
Calibration Date:	December 31, 2025
Last Cal Date:	December 24, 2025
Start time (MST):	9:45
End time (MST):	13:37
Reason:	Install

Calibration Standards

NO Gas Cylinder #:	CC358100	Cal Gas Expiry Date:	January 5, 2032
NOX Cal Gas Conc:	60.10 ppm	NO Cal Gas Conc:	60.00 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	60.10 ppm	Removed Gas NO Conc:	60.00 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	3810
ZAG make/model:	Teledyne API T701H	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero										
AF High point										
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X =	NA	ppb	NO =	NA	ppb			
Baseline Corr 1st pt	NO_X =	NA	ppb	NO =	NA	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 =	NA		
*Percent Change	NO =	NA		
As Found Statistics				
As found	NO_X r^2:	Nx Sl:	Nx Int:	
As found	NO r^2:	NO Sl:	NO Int:	
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1426262592

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	Finish		Start	Finish
NO coeff or slope:	NA	1.103	NO bkgnd or offset:	NA	5.0
NOX coeff or slope:	NA	0.996	NOX bkgnd or offset:	NA	5.3
NO2 coeff or slope:	NA	1.000	Reaction cell Press:	NA	178.5

Calibration Statistics

	Start	Finish
NO_X Cal Slope:	1.008650	1.000358
NO_X Cal Offset:	0.236078	0.935069
NO Cal Slope:	1.008966	1.000183
NO Cal Offset:	-0.745227	0.154966
NO_2 Cal Slope:	1.008746	1.001471
NO_2 Cal Offset:	0.862590	-0.034943

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.2	0.1	-0.3	----	----
High point	4933	66.7	801.8	800.4	1.3	802.2	800.5	1.4	0.9995	0.9999
Mid point	4967	33.3	400.2	399.6	0.7	402.6	400.5	2.1	0.9941	0.9977
Low point	4983	16.7	200.7	200.4	0.3	202.4	200.2	2.2	0.9918	1.0010
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	0.3	-0.3	----	----
As left span	4933	66.7	801.8	396.2	405.6	797.8	396.2	401.6	1.0050	1.0000
							Average Correction Factor		0.9951	0.9995

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NO Reference concentration (ppb)	Indicated NO Drop concentration (ppb)	Calculated NO2 concentration (ppb) (Cc)	Indicated NO2 concentration (ppb) (Ic)	NO2 Correction factor (Cc/Ic) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	-0.3	----	----
High GPT point	797.9	397.6	401.6	402.1	0.9988	100.1%
Mid GPT point	797.9	596.3	202.9	203.2	0.9987	100.1%
Low GPT point	797.9	698.3	100.9	101.4	0.9954	100.5%
				Average Correction Factor	0.9976	100.2%

Notes: Nox Install. Remote calibrated. Very accurate

Calibration Performed By: Ryan Power

Wood Buffalo Environmental Association

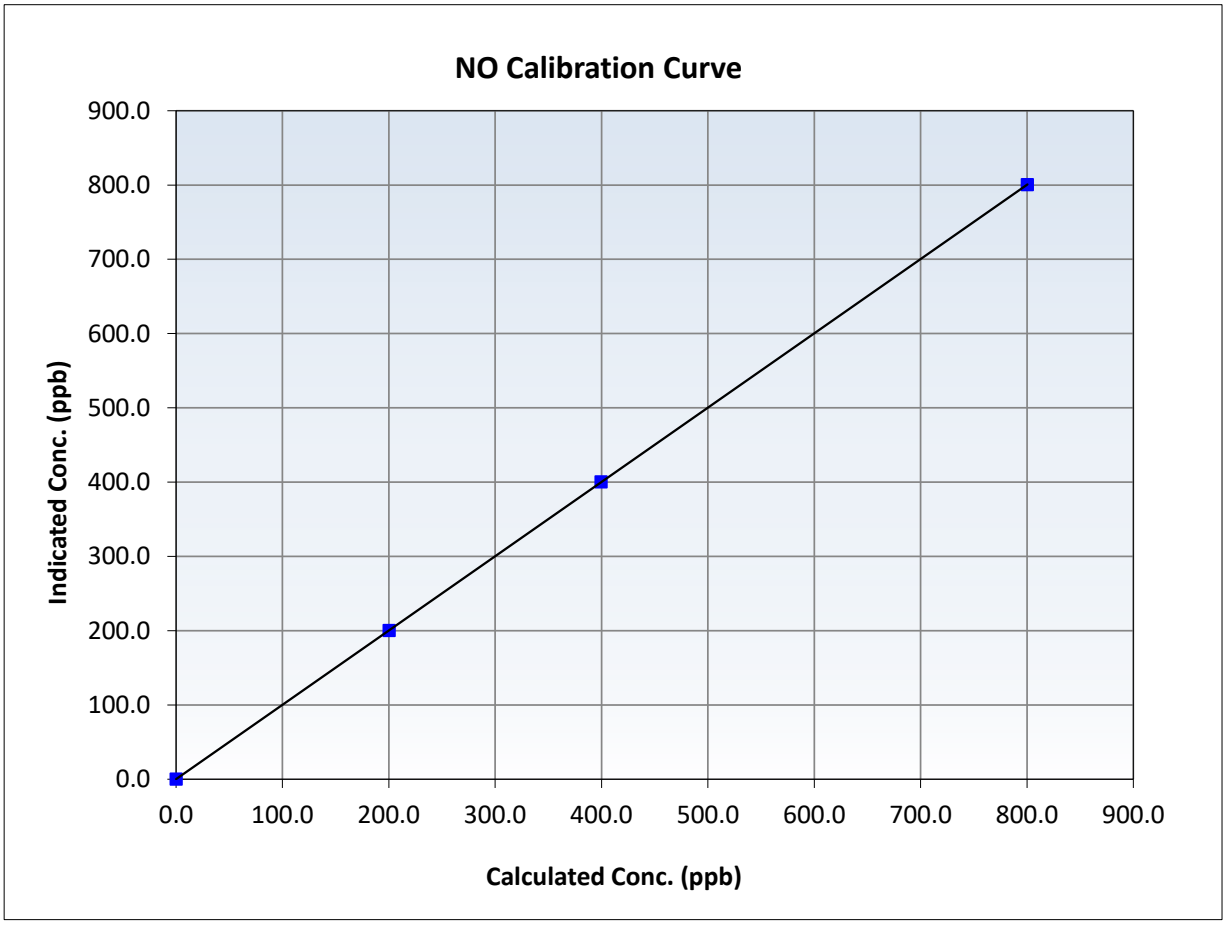
NO Calibration Summary

Station Information

Calibration Date:	December 31, 2025	Previous Calibration:	December 24, 2025
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:45	End Time (MST):	13:37
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262592

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.1	----	Correlation Coefficient	0.999998	≥0.995
800.4	800.5	0.9999	Slope	1.000183	0.90 - 1.10
399.6	400.5	0.9977	Intercept	0.154966	+/-20
200.4	200.2	1.0010			



Wood Buffalo Environmental Association

NO_X Calibration Summary

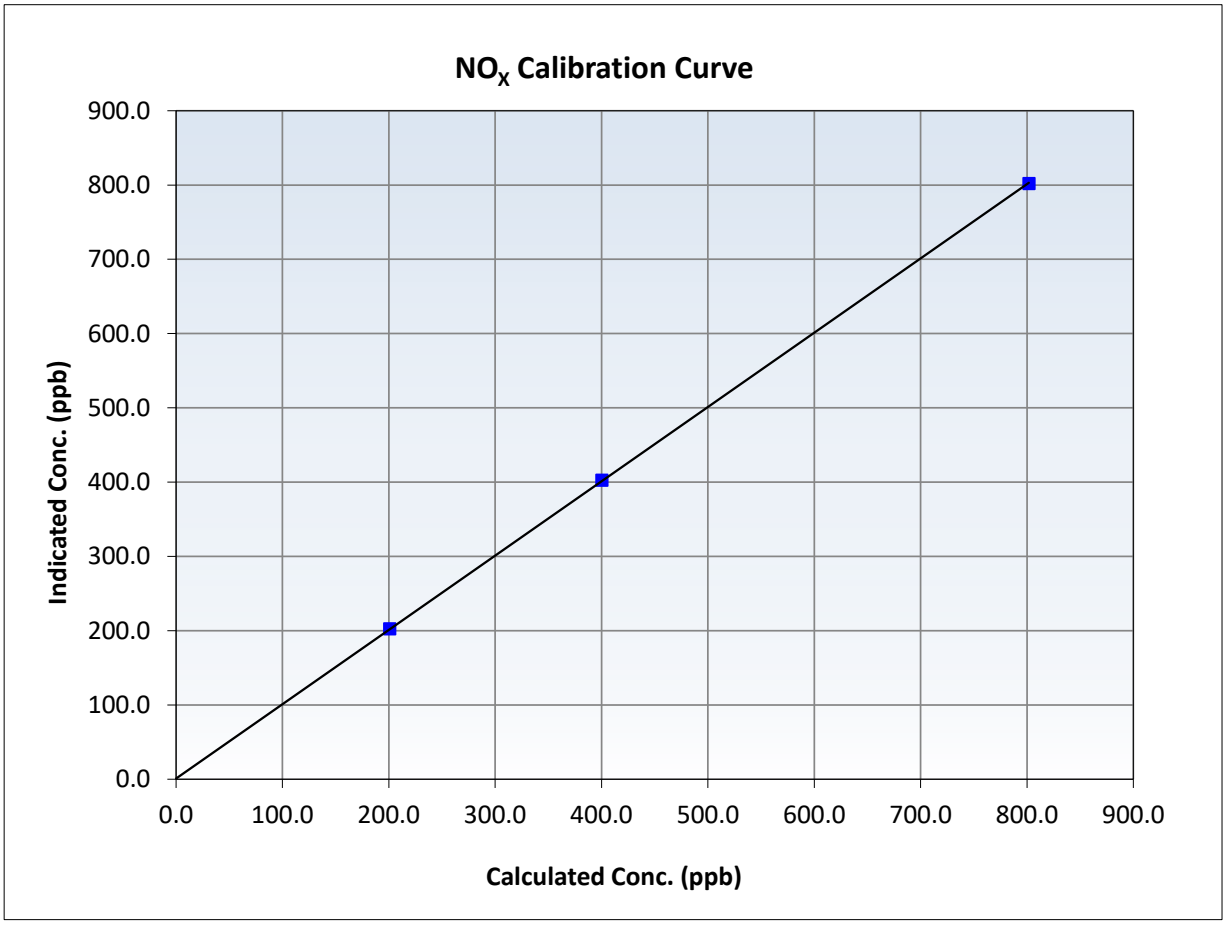
Station Information

Calibration Date:	December 31, 2025	Previous Calibration:	December 24, 2025
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:45	End Time (MST):	13:37
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262592

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
801.8	802.2	0.9995
400.2	402.6	0.9941
200.7	202.4	0.9918

Statistical Evaluation		Limits
Correlation Coefficient	0.999989	≥0.995
Slope	1.000358	0.90 - 1.10
Intercept	0.935069	+/-20



Wood Buffalo Environmental Association

NO_2 Calibration Summary

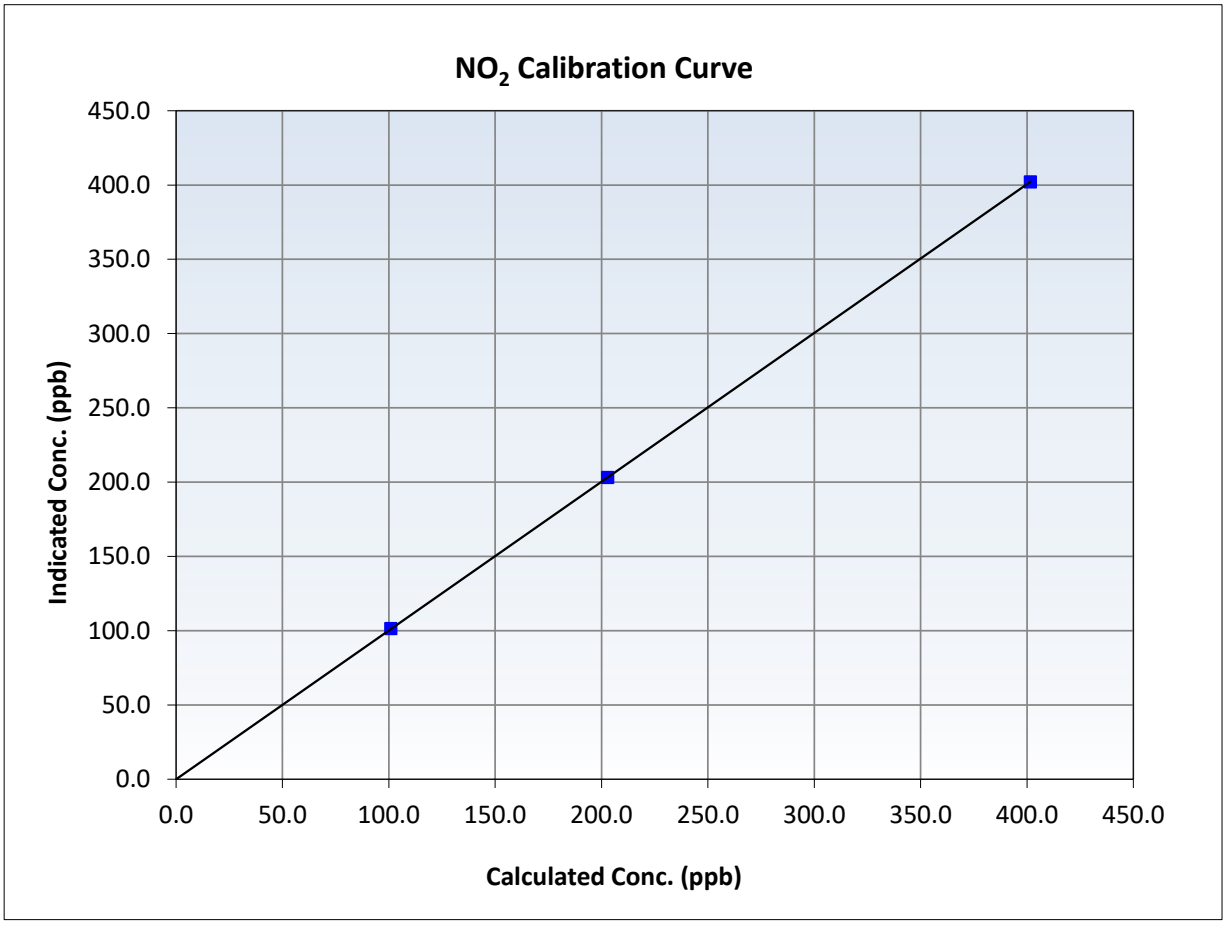
Station Information

Calibration Date:	December 31, 2025	Previous Calibration:	December 24, 2025
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	9:45	End Time (MST):	13:37
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262592

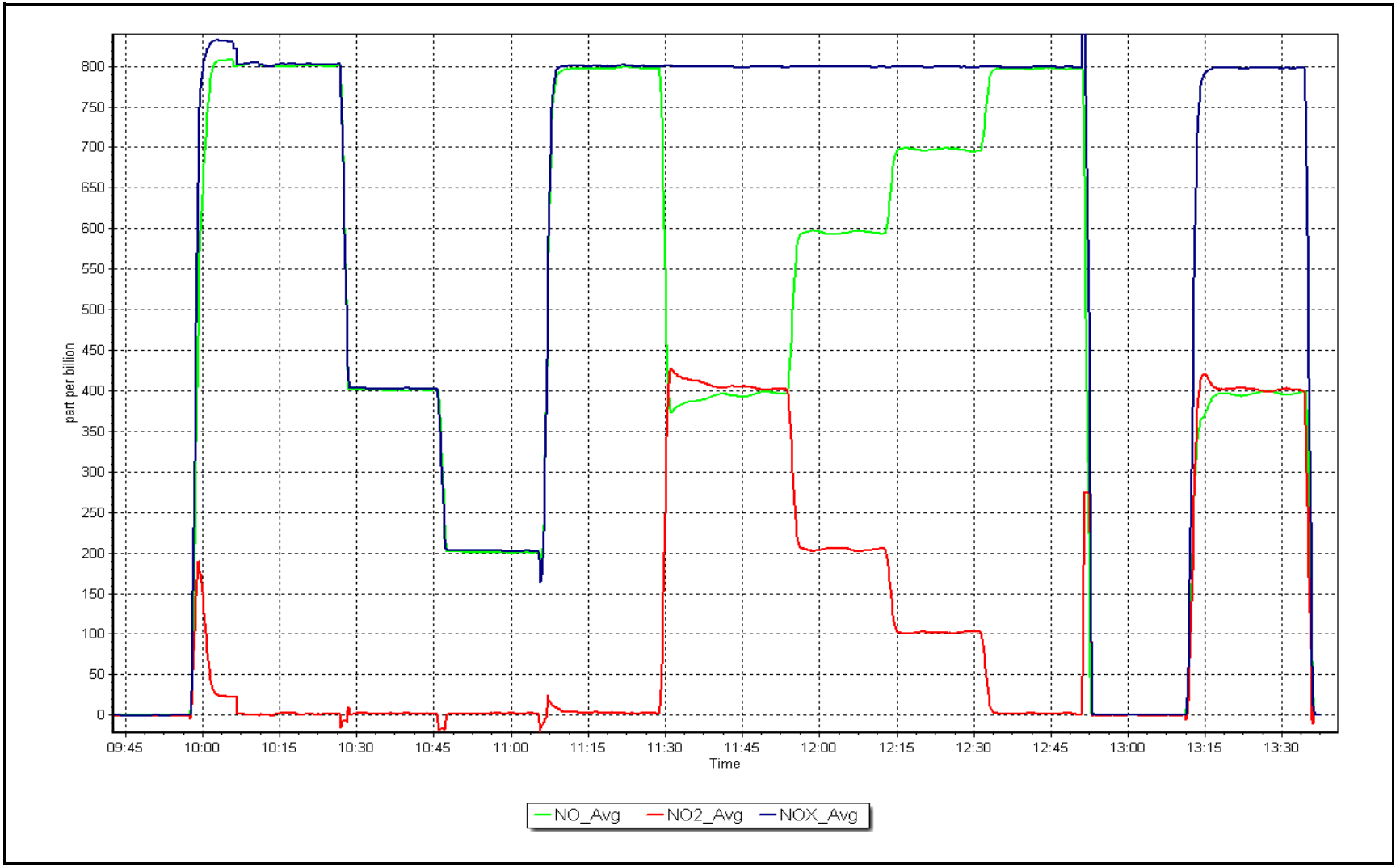
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.3	----
401.6	402.1	0.9988
202.9	203.2	0.9987
100.9	101.4	0.9954

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999998	*≥0.995*
Slope	1.001471	*0.90 - 1.10*
Intercept	-0.034943	*+/-20*



NO_X Calibration Plot Date: December 31, 2025 Location: Fort Chipewyan



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Fort Chipewyan	Station number:	AMS 08
Calibration Date:	December 5, 2025	Last Cal Date:	November 10 2025
Start time (MST):	14:35	End time (MST):	17:13
Reason:	Routine		

Calibration Standards

O3 generation mode:	Photometer		
Calibrator Make/Model:	Teledyne API T700	Serial Number:	3810
ZAG Make/Model:	Teledyne API T701	Serial Number:	135

Analyzer Information

Analyzer make:	Thermo 49i		Analyzer serial #:	1152220026	
Analyzer Range	0 - 500 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.000143	1.003314	Backgd or Offset:	-2.6	-2.6
Calibration intercept:	1.400000	1.520000	Coeff or Slope:	0.995	1.002

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.5	----
As found High point	5000	968.7	400.0	400.9	0.999
As found Mid point					
As found Low point					
Baseline Corr As found:	400.4	Previous response	401.5	*% 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	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.9	----
High point	5000	968.7	400.0	402.6	0.994
Mid point	5000	820.5	200.0	202.3	0.989
Low point	5000	720.0	100.0	102.6	0.975
As left zero	5000	0.0	0.0	0.9	----
As left span	5000	968.7	400.0	405.1	0.987
				Average Correction Factor	0.986

Notes: Changed inlet filters after as founds. Made adjustment to high point span.

Calibration Performed By: Matthew Courtoreille

Wood Buffalo Environmental Association

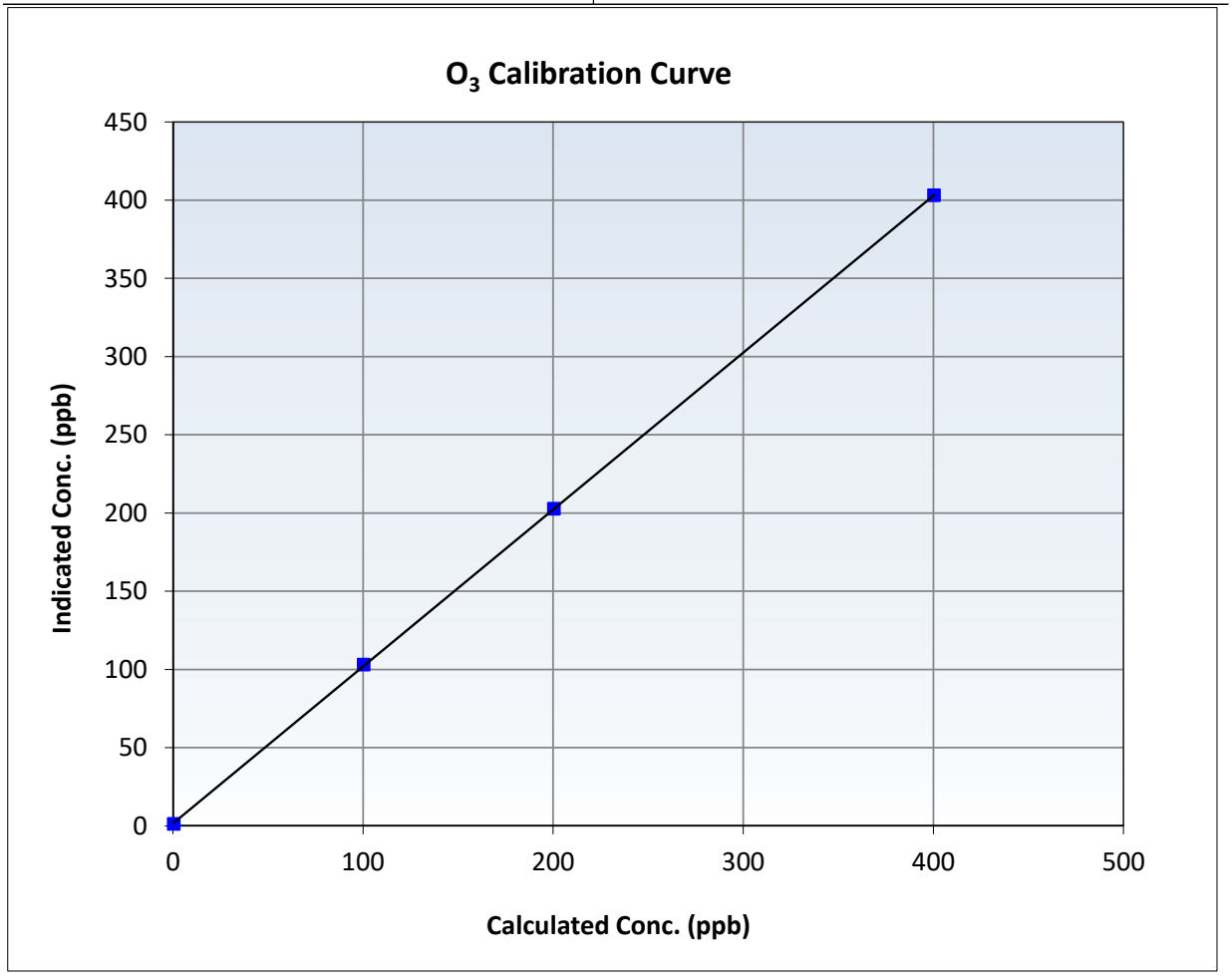
O_3 Calibration Summary

Station Information

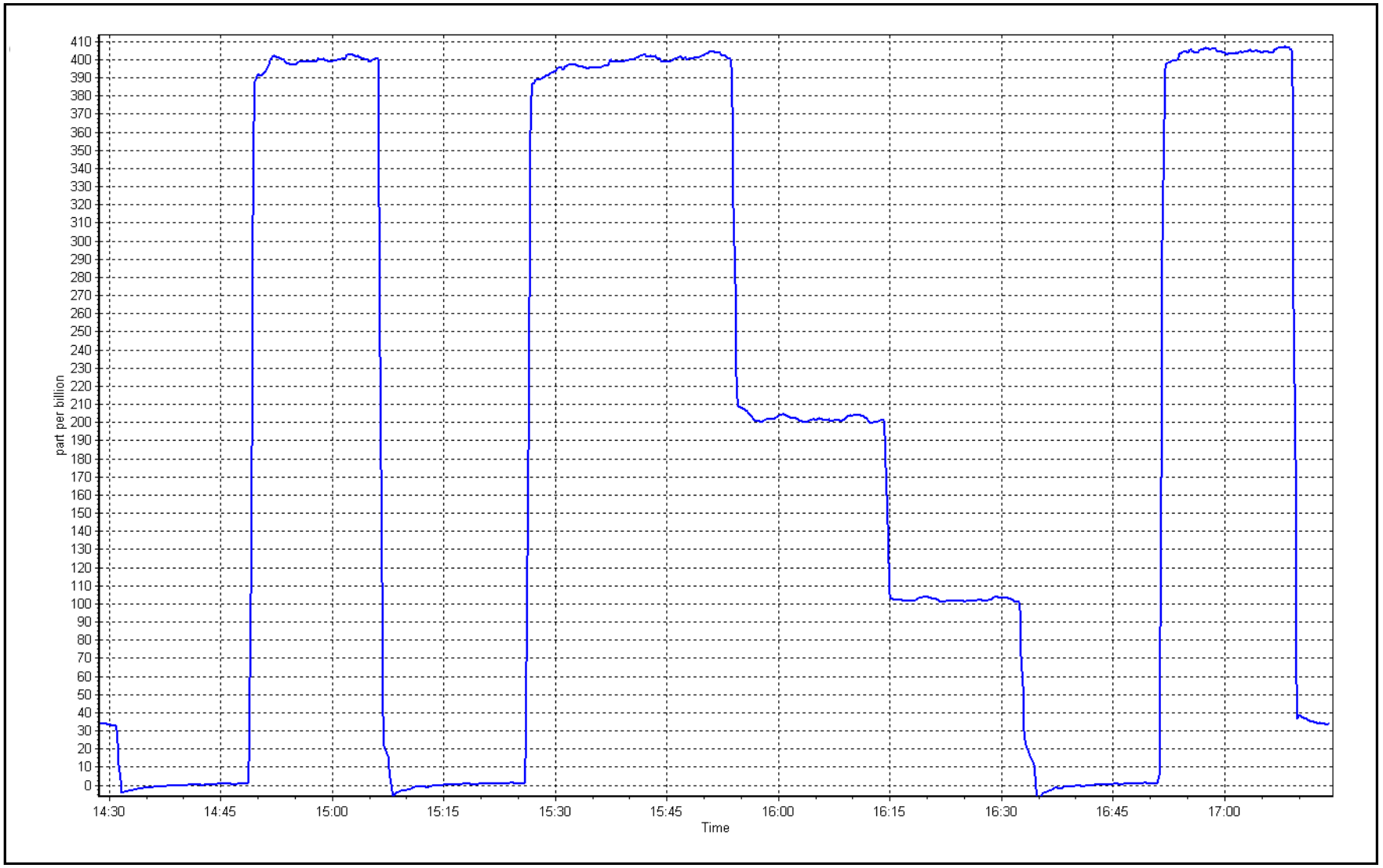
Calibration Date:	December 5, 2025	Previous Calibration:	November 10 2025
Station Name:	Fort Chipewyan	Station Number:	AMS 08
Start Time (MST):	14:35	End Time (MST):	17:13
Analyzer make:	Thermo 49i	Analyzer serial #:	1152220026

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.9	----	Correlation Coefficient	0.999988	*≥0.995*
400.0	402.6	0.9935	Slope	1.003314	*0.90 - 1.10*
200.0	202.3	0.9886			
100.0	102.6	0.9747	Intercept	1.520000	*+/- 5*



O_3 Calibration Plot Date: December 5, 2025 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:	December 3, 2025	Last Cal Date:	November 18 2025
Start time (MST):	12:00	End time (MST):	13:47
Analyzer Make:	Teledyne API T640	S/N:	319
Particulate Fraction:	PM2.5		
Flow Meter Make/Model:	Alicat FP-25BT	S/N:	388749
Temp/RH standard:	Alicat FP-25BT	S/N:	388749

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	*(Limits)*
T (°C)	-12.1	-12.61	-12.1	☐	+/- 2 °C
P (mmHg)	733.7	734.30	733.7	☐	+/- 10 mmHg
Flow (LPM)	5.09	5.04	5.09	☐	+/- 0.25 LPM
PW% (pump)	35%	NA	35%	☐	>80%
Zero Verification	PM w/o HEPA:	26.30	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	10.7	10.9	10.9	☑	+/- 0.5

Date Optical Chamber Cleaned: December 3, 2025

Date Disposable Filter Changed: December 3, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: December 3, 2025

Date RH/T Sensor Cleaned: December 3, 2025

Notes: Adjusted PMT only. Leak check passed. Head cleaned.

Calibration by: Mohammed Kashif

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS09
BARGE LANDING
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Barge Landing	Station number:	AMS 09
Calibration Date:	December 5, 2025	Last Cal Date:	November 18, 2025
Start time (MST):	10:34	End time (MST):	13:26
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 T700		Serial Number:	3812
Zero Air Gen Model:	APIT701		Serial Number:	4888

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1118148498	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.002401	1.006548	Backgd or Offset:	12.2	12.2
Calibration intercept:	-0.478253	-1.179075	Coeff or Slope:	1.044	1.036

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4921	79.1	799.8	811.4	0.986
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	811.4	Previous response	801.3	*% change	1.2%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4921	79.1	799.8	804.8	0.994
Mid point	4961	39.5	399.4	399.3	1.000
Low point	4980	19.8	200.2	199.8	1.002
As left zero	5000	0.0	0.0	-0.1	----
As left span	4921	79.1	799.8	807.0	0.991
				Average Correction Factor:	0.999

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

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

SO_2 Calibration Summary

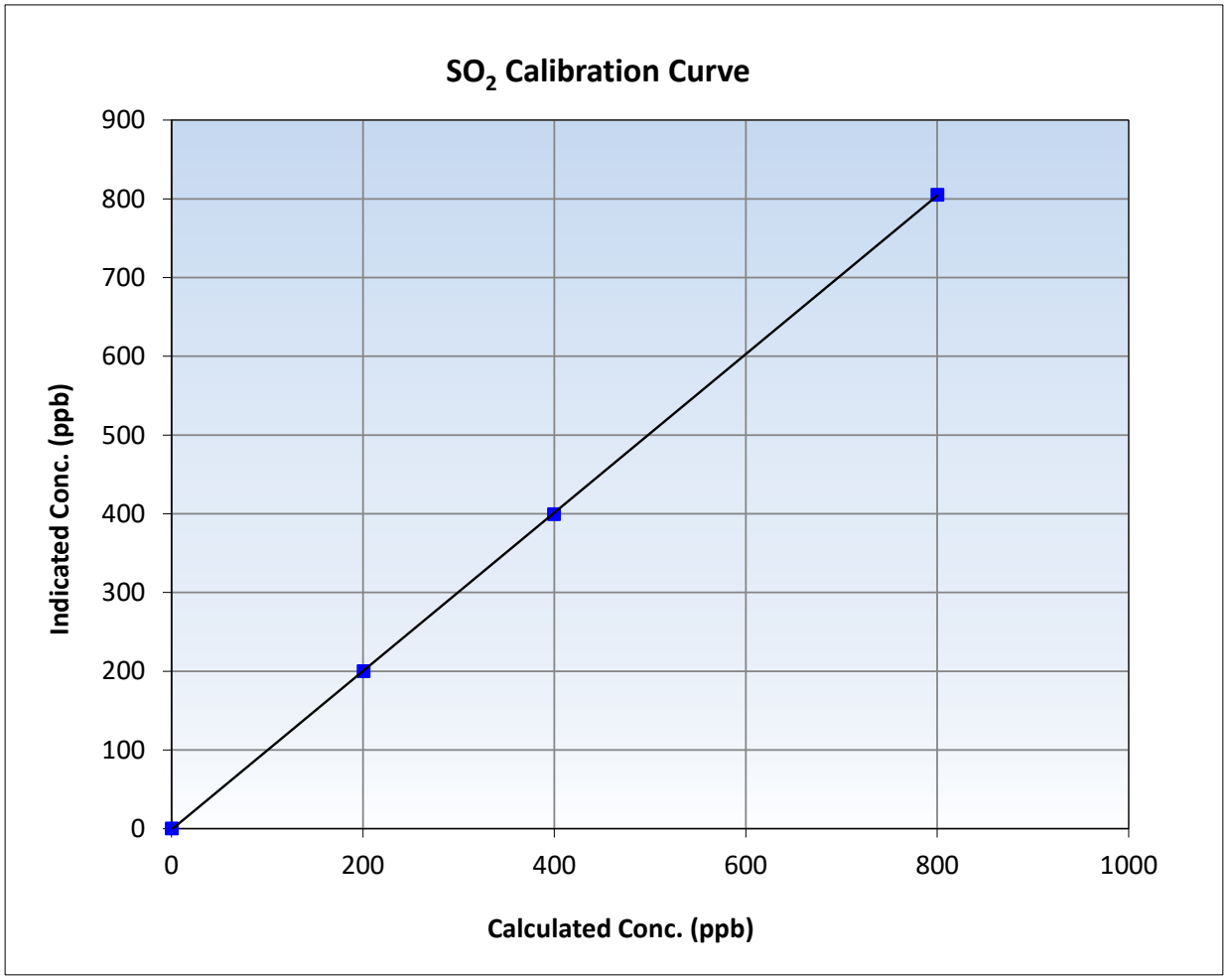
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 18, 2025
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:34	End Time (MST):	13:26
Analyzer make:	Thermo 43i	Analyzer serial #:	1118148498

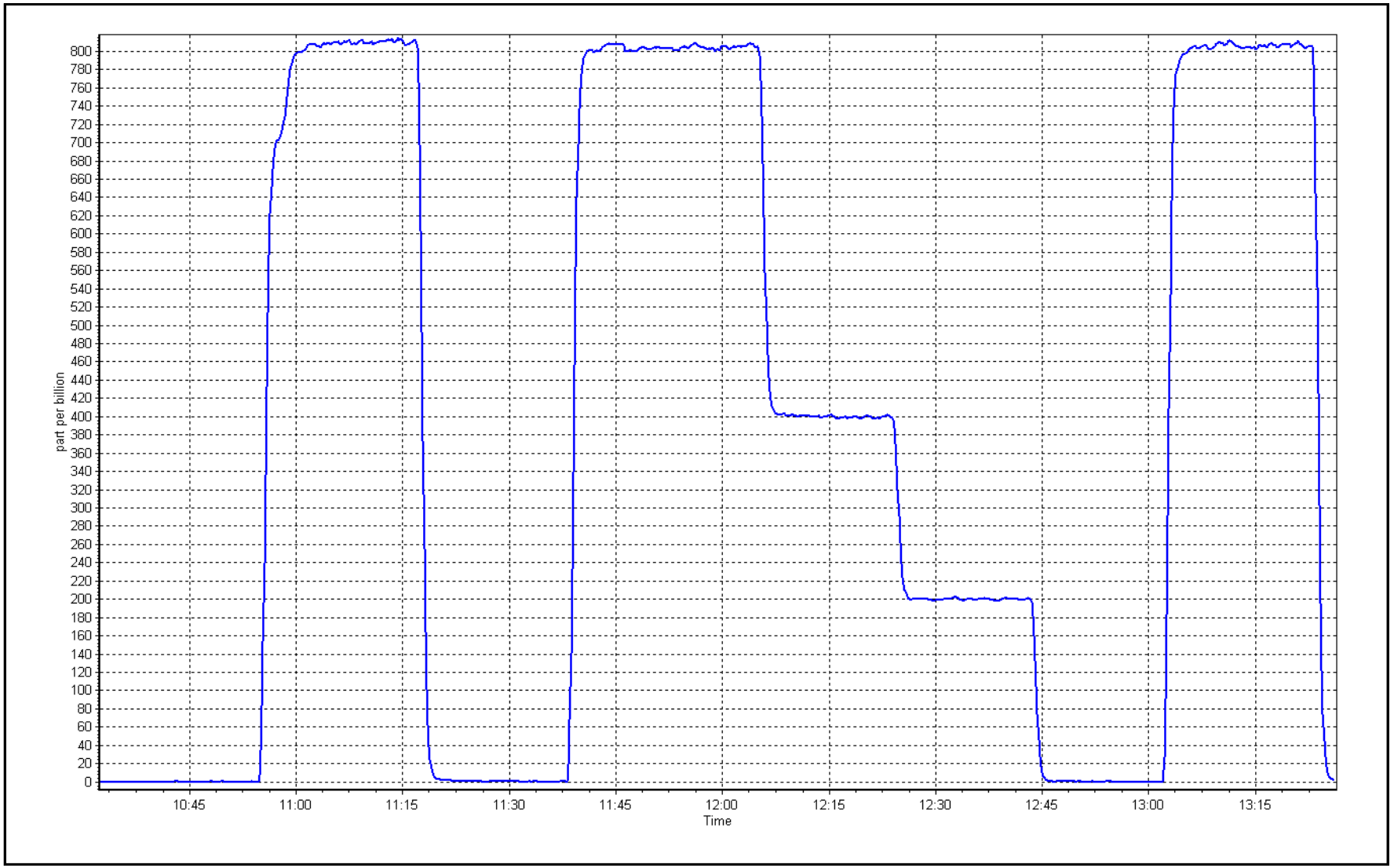
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
799.8	804.8	0.9938
399.4	399.3	1.0002
200.2	199.8	1.0021

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999986	*≥0.995*
Slope	1.006548	*0.90 - 1.10*
Intercept	-1.179075	*+/-30*



SO2 Calibration Plot Date: December 5, 2025 Location: Barge Landing



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name:	Barge Landing	Station number:	AMS 09
Calibration Date:	December 4, 2025	Last Cal Date:	November 4, 2025
Start time (MST):	9:55	End time (MST):	13:50
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.17	ppm	Cal Gas Exp Date:	August 22, 2026
Cal Gas Cylinder #:	CC511415			
Removed Cal Gas Conc:	5.17	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	API T700		Serial Number:	3812
ZAG Make/Model:	API T701		Serial Number:	5613

Analyzer Information

Analyzer make:	Thermo 43iQ-TLE		Analyzer serial #:	1203169744
Converter make:	CDN-101		Converter serial #:	519
Analyzer Range	0 - 100 ppb		Converter Temp:	830 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.005119	1.004546	Backgd or Offset:	1.780	1.890
Calibration intercept:	-0.260552	-0.040511	Coeff or Slope:	0.690	0.729

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4923	77.4	80.0	75.5	1.059
As found Mid point	4961	38.7	40.0	37.7	1.059
As found Low point	4981	19.3	20.0	18.9	1.050
New cylinder response					

Baseline Corr As found:	75.6	Prev response:	80.19	*% change:	-6.1%
Baseline Corr 2nd AF pt:	37.8	AF Slope:	0.943875	AF Intercept:	-0.041632
Baseline Corr 3rd AF pt:	19.0	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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4923	77.4	80.0	80.4	0.996
Mid point	4961	38.7	40.0	40.1	0.998
Low point	4981	19.3	20.0	20.0	0.998
As left zero	5000	0.0	0.0	0.0	----
As left span	4923	77.4	80.0	80.7	0.992
SO2 Scrubber Check	4920	80.2	802.0	0.0	----

Date of last scrubber change:	8-Jul-25	Ave Corr Factor	0.997
Date of last converter efficiency test:			

Notes: Changed inlet filter after as founds. Scrubber test was done after calibrator zero and passed. Adjusted span only.

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

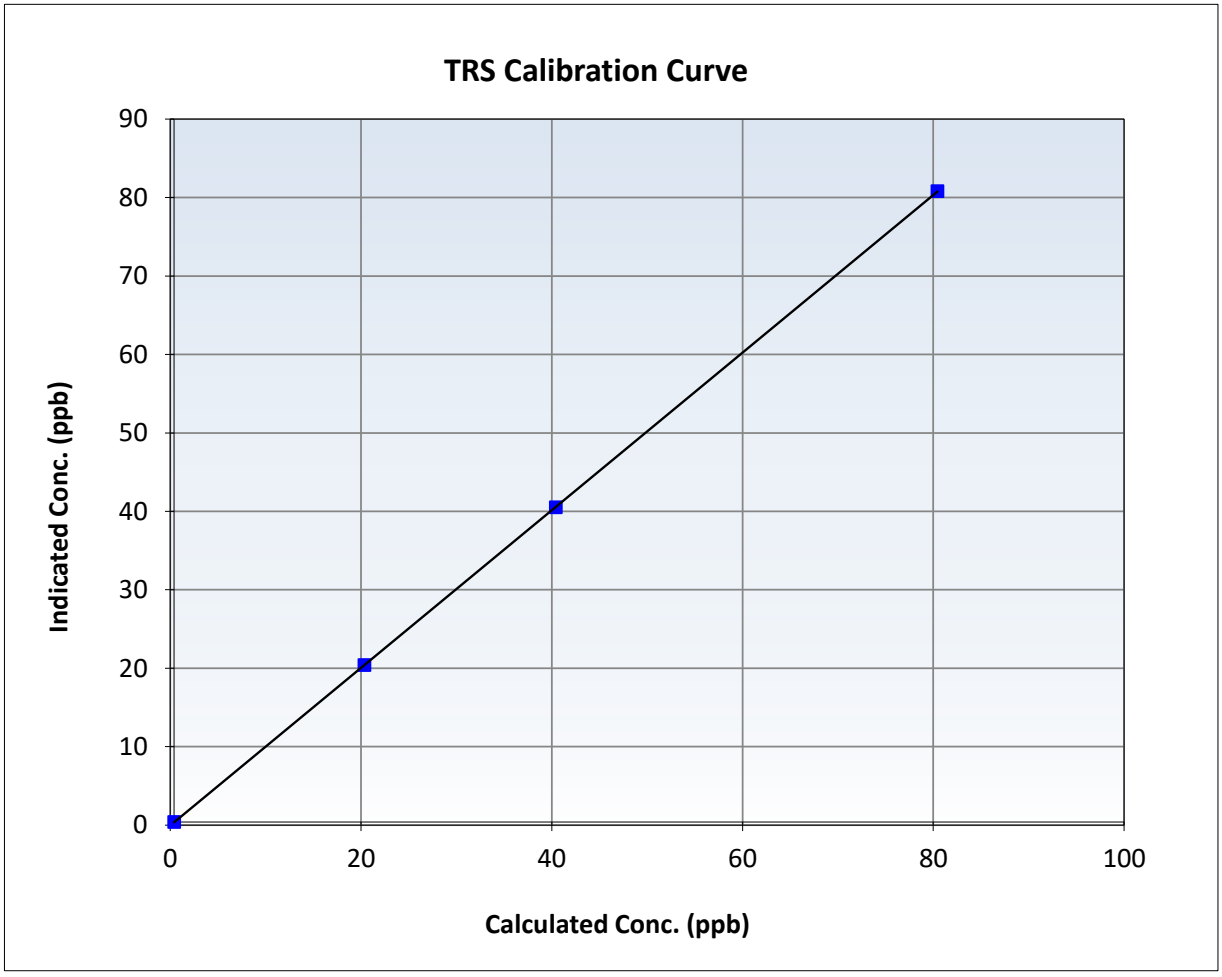
TRS Calibration Summary

Station Information

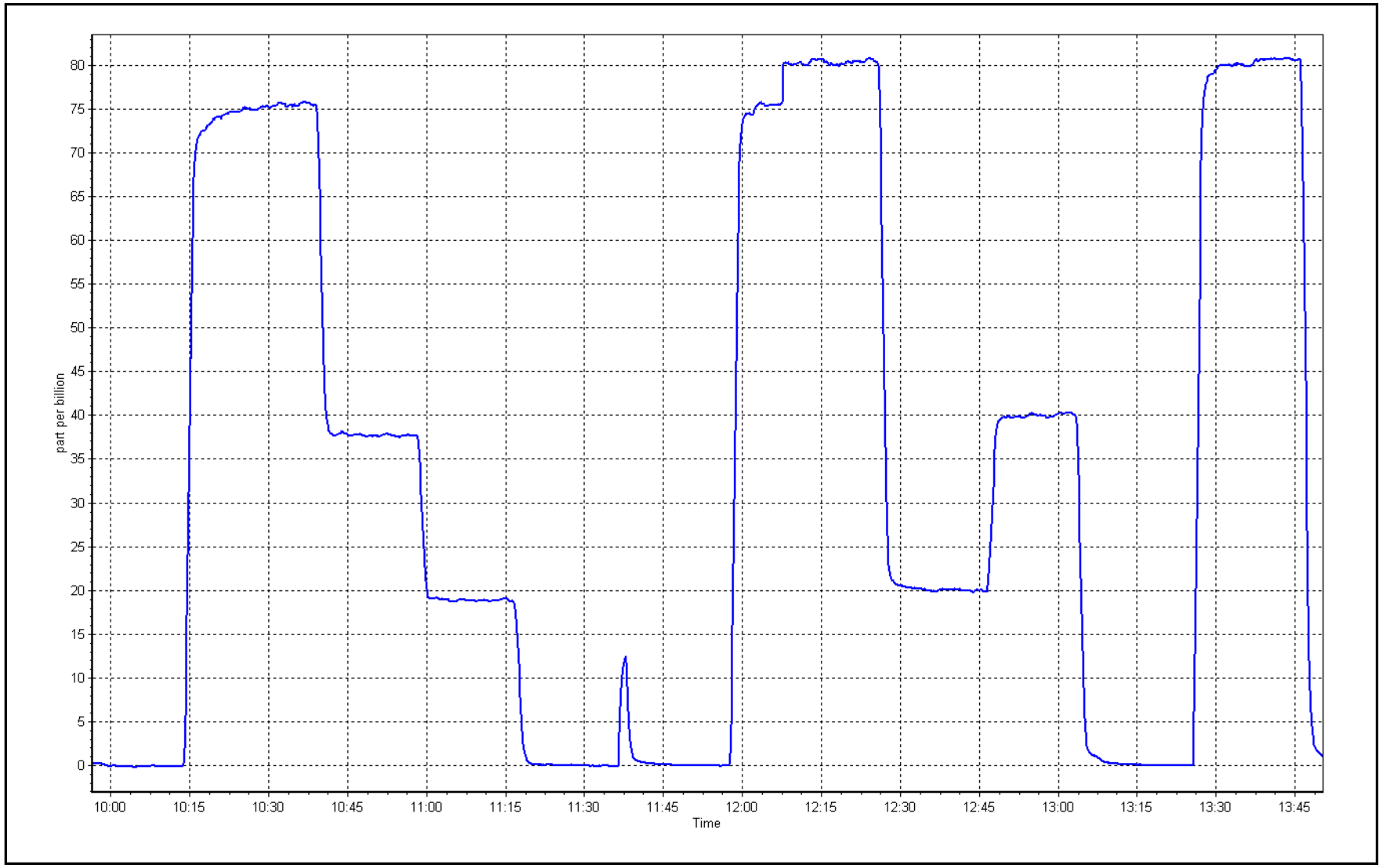
Calibration Date:	December 4, 2025	Previous Calibration:	November 4, 2025
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	9:55	End Time (MST):	13:50
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	1203169744

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.0	----	Correlation Coefficient	0.999998	*≥0.995*
80.0	80.4	0.9955	Slope	1.004546	*0.90 - 1.10*
40.0	40.1	0.9982			
20.0	20.0	0.9979	Intercept	-0.040511	*+/-3*



TRS Calibration Plot Date: December 4, 2025 Location: Barge Landing



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Barge Landing	Station number:	AMS 09
Calibration Date:	December 5, 2025	Last Cal Date:	November 18, 2025
Start time (MST):	10:34	End time (MST):	13:26
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC705748	Cal Gas Expiry Date:	October 9, 2032
CH4 Cal Gas Conc.	505.6 ppm	CH4 Equiv Conc.	1068.8 ppm
C3H8 Cal Gas Conc.	204.8 ppm		
Removed Gas Cert:	CC151285	Removed Gas Expiry:	January 5, 2025
Removed CH4 Conc.	505.6 ppm	CH4 Equiv Conc.	1068.8 ppm
Removed C3H8 Conc.	204.8 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:	APIT701	Serial Number:	5613

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1193585650
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	2.40E-04	2.35E-04	NMHC SP Ratio:	5.85E-05	5.77E-05
CH4 Retention time:	14.4	14.4	NMHC Peak Area:	152305	154344
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	16.91	17.24	0.981
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.24	Prev response	16.88	*% change	2.1%
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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	16.91	16.88	1.002
Mid point	4961	39.5	8.44	8.35	1.011
Low point	4980	19.8	4.23	4.14	1.021
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	16.91	16.91	1.000
				Average Correction Factor	1.011

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

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	8.91	9.08	0.982
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.08	Prev response	8.89	*% change	2.0%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	8.91	8.88	1.003
Mid point	4961	39.5	4.45	4.40	1.010
Low point	4980	19.8	2.23	2.19	1.018
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	8.91	8.92	0.999
				Average Correction Factor	1.011

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	8.00	8.17	0.979
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.17	Prev response	7.99	*% change	2.2%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	8.00	8.00	1.000
Mid point	4961	39.5	3.99	3.95	1.012
Low point	4980	19.8	2.00	1.95	1.025
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	8.00	7.99	1.001
				Average Correction Factor	1.012

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	1.001268	0.999416
THC Cal Offset:	-0.052971	-0.047777
CH4 Cal Slope:	1.001961	1.001217
CH4 Cal Offset:	-0.026992	-0.028391
NMHC Cal Slope:	1.001018	0.997903
NMHC Cal Offset:	-0.026179	-0.019787

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

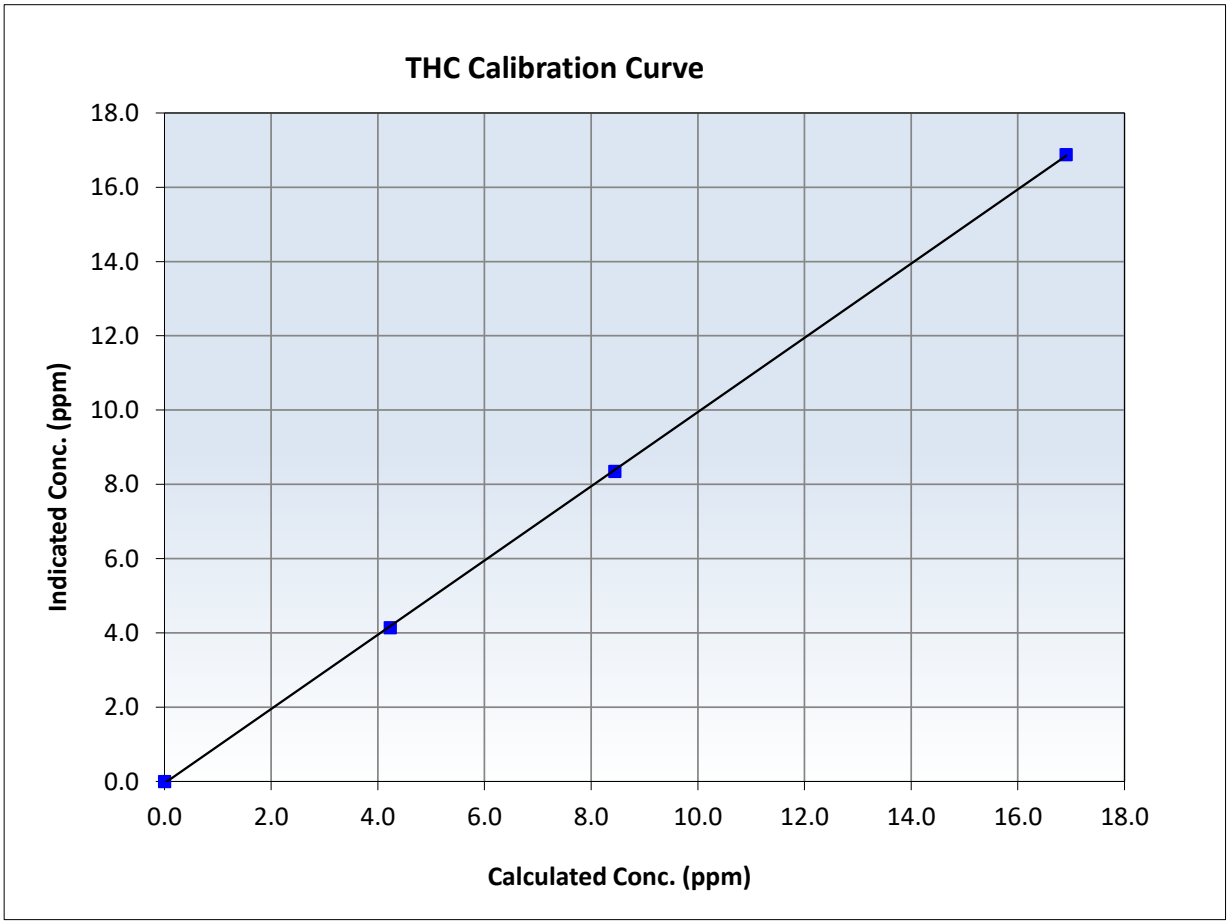
THC Calibration Summary

Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 18, 2025
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:34	End Time (MST):	13:26
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585650

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999961	*≥0.995*
16.91	16.88	1.0017	Slope	0.999416	*0.90 - 1.10*
8.44	8.35	1.0109	Intercept	-0.047777	*+/-0.5*
4.23	4.14	1.0214			



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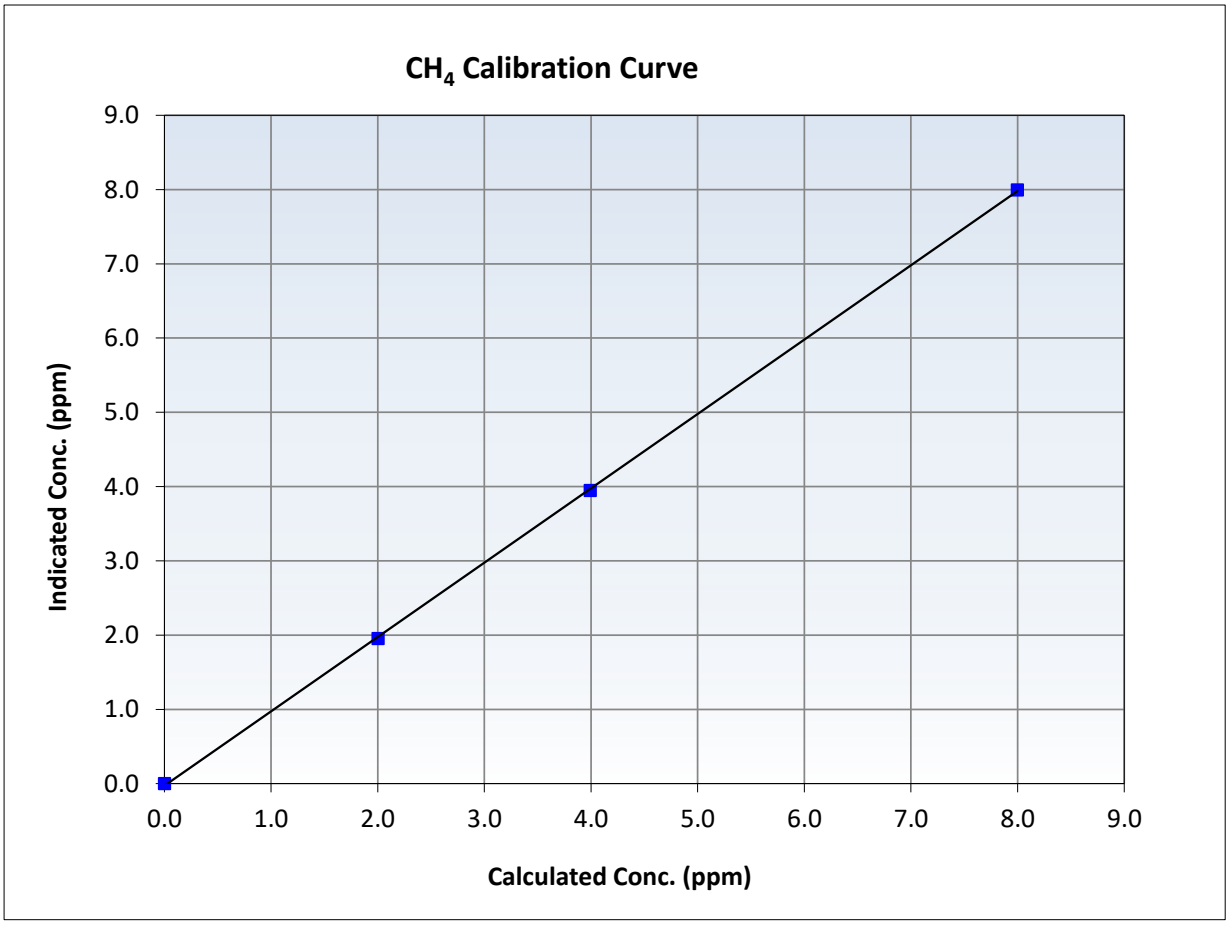
CH_4 Calibration Summary

Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 18, 2025
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:34	End Time (MST):	13:26
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585650

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999939	≥0.995
8.00	8.00	1.0002	Slope	1.001217	0.90 - 1.10
3.99	3.95	1.0119			
2.00	1.95	1.0247	Intercept	-0.028391	+/-0.5



Wood Buffalo Environmental Association

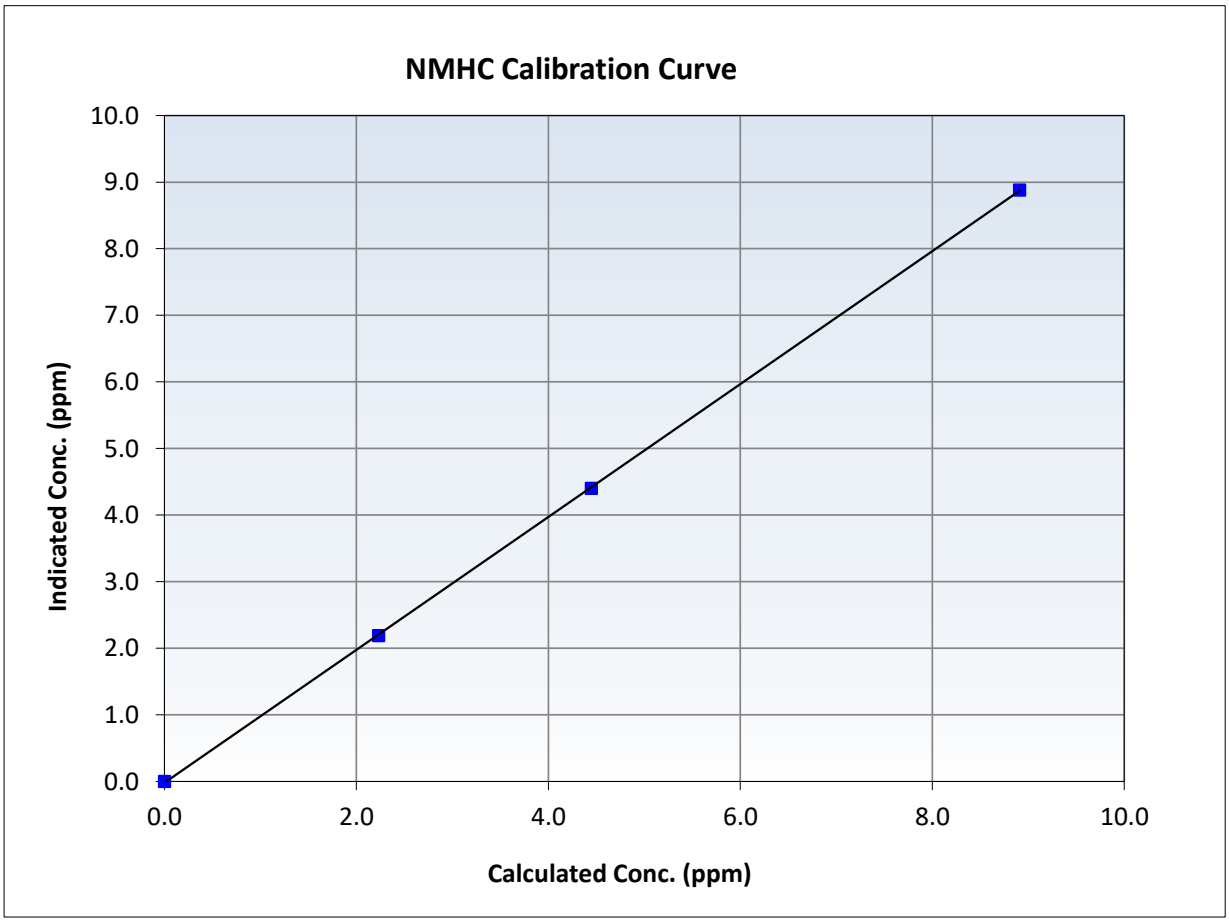
NMHC Calibration Summary

Station Information

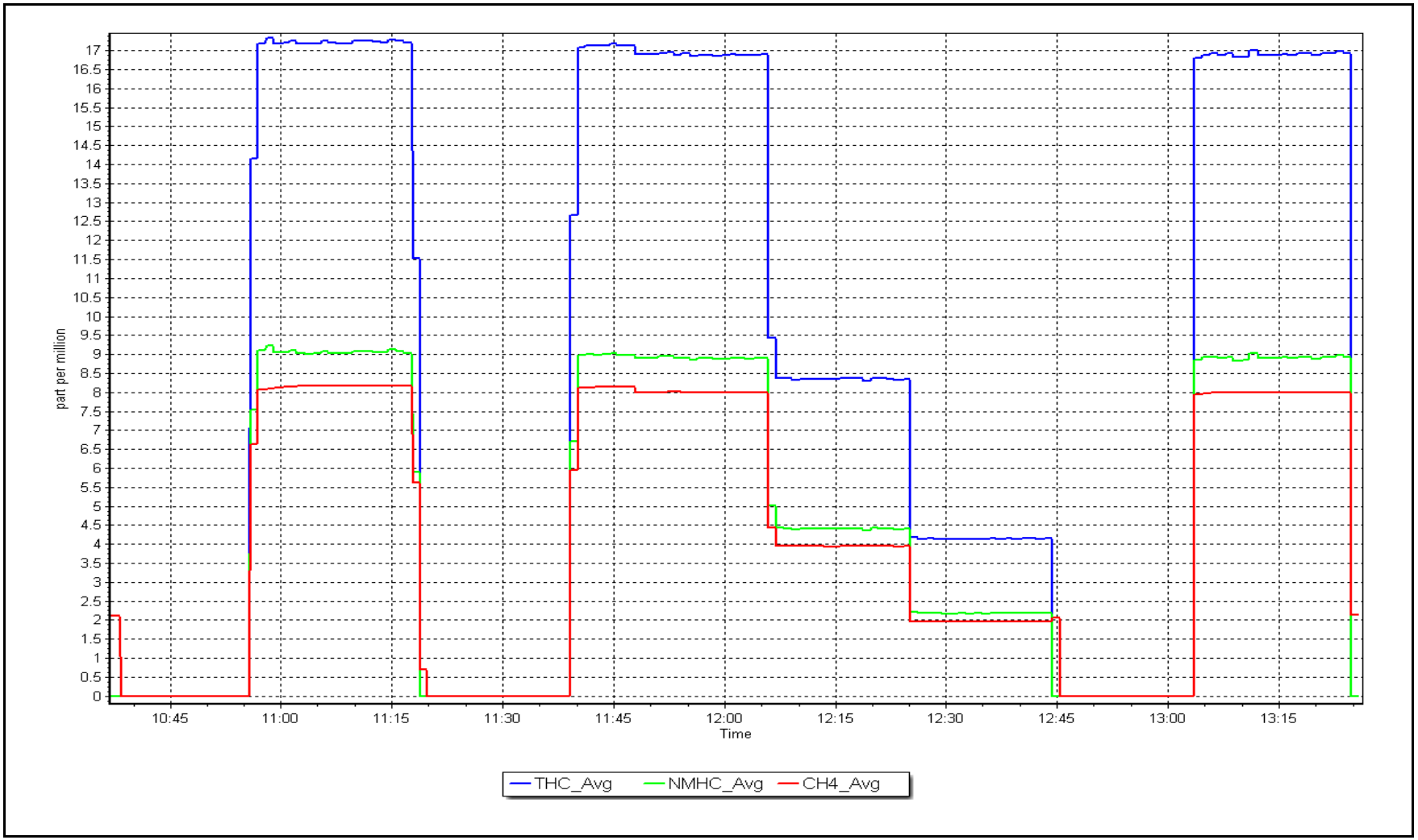
Calibration Date:	December 5, 2025	Previous Calibration:	November 18, 2025
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:34	End Time (MST):	13:26
Analyzer make:	Thermo 55i	Analyzer serial #:	1193585650

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999976	≥0.995
8.91	8.88	1.0030	Slope	0.997903	0.90 - 1.10
4.45	4.40	1.0102			
2.23	2.19	1.0184	Intercept	-0.019787	+/-0.5



NMHC Calibration Plot Date: December 5, 2025 Location: Barge Landing



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Barge Landing
Station number:	AMS 09
Calibration Date:	December 11, 2025
Last Cal Date:	November 13, 2025
Start time (MST):	10:11
End time (MST):	14:25
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	T2Y1KDH	Cal Gas Expiry Date:	November 17, 2026
NOX Cal Gas Conc:	47.38 ppm	NO Cal Gas Conc:	46.94 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	47.38 ppm	Removed Gas NO Conc:	46.94 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	API 700	Serial Number:	3812
ZAG make/model:	API T701	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.3	0.0	-0.3	----	----
AF High point	4915	85.3	808.3	800.7	7.5	828.3	822.6	5.7	0.9754	0.9734
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 806.7 ppb	NO = 799.9 ppb
Baseline Corr 1st pt	NO_X = 828.6 ppb	NO = 822.6 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 r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	NO_2 Int:

*Percent Change	NO_X = 2.6%
*Percent Change	NO = 2.8%

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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1426262593

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	1.103	1.098	NO bkgnd or offset:	10.1	10.1
NOX coeff or slope:	0.999	1.002	NOX bkgnd or offset:	10.4	10.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	176.2	177.1

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	0.996914	0.998937
NO_X Cal Offset:	0.918075	-0.622111
NO Cal Slope:	0.998810	0.999211
NO Cal Offset:	0.076317	-1.264087
NO_2 Cal Slope:	1.003032	1.003707
NO_2 Cal Offset:	-0.820375	0.074394

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	0.1	-0.2	----	----
High point	4915	85.3	808.3	800.7	7.5	806.9	799.4	7.5	1.0017	1.0017
Mid point	4957	42.6	403.7	400.0	3.7	402.8	398.1	4.7	1.0023	1.0047
Low point	4979	21.3	201.8	200.0	1.9	200.2	196.9	3.4	1.0081	1.0155
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	406.5	401.8	807.0	406.5	400.5	1.0016	1.0000
							Average Correction Factor		1.0040	1.0073

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	-0.2	----	----
High GPT point	796.4	405.3	398.6	400.0	0.9965	100.3%
Mid GPT point	796.4	609.4	194.5	195.5	0.9949	100.5%
Low GPT point	796.4	699.8	104.1	104.8	0.9934	100.7%
				Average Correction Factor	0.9949	100.5%

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

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

NO_X Calibration Summary

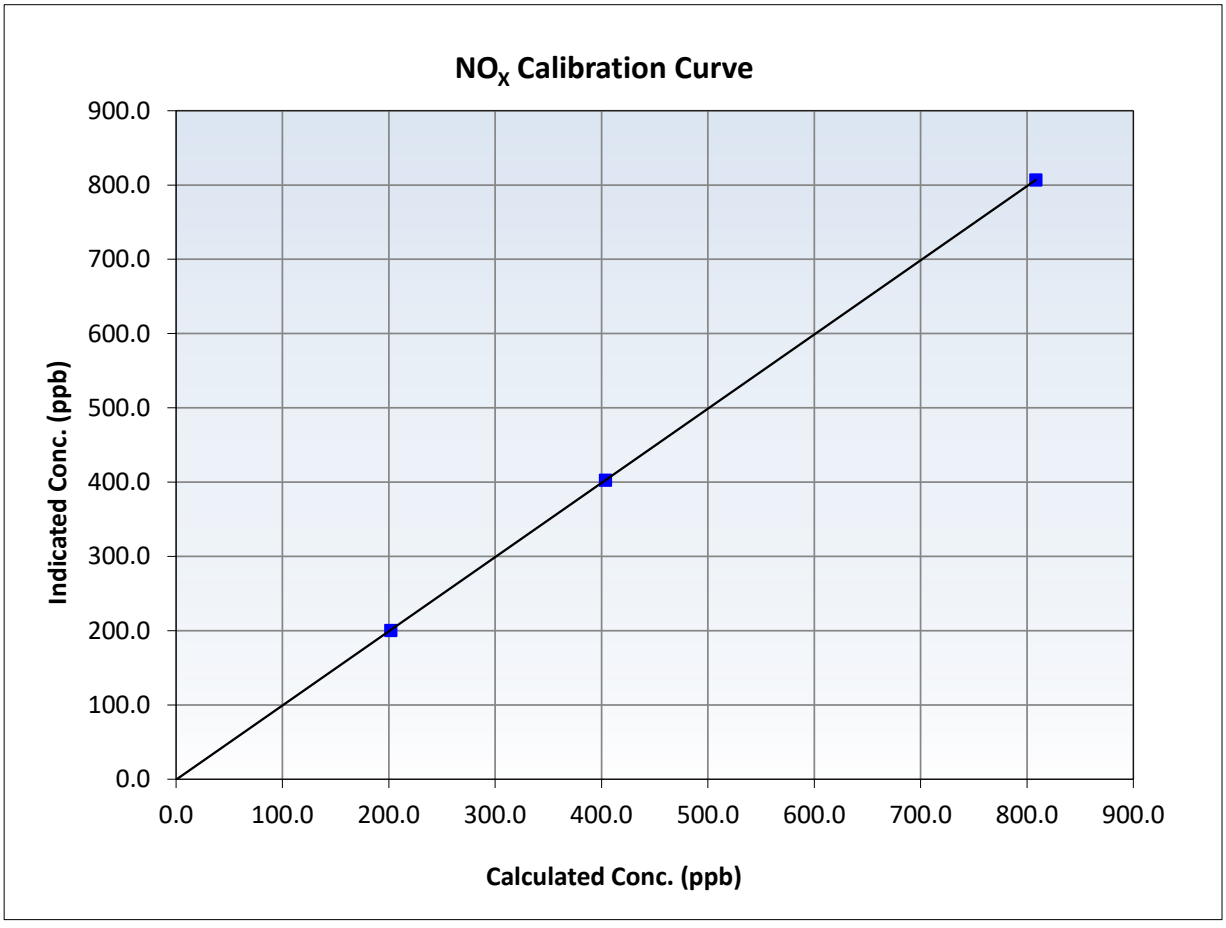
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 13, 2025
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:11	End Time (MST):	14:25
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262593

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
808.3	806.9	1.0017
403.7	402.8	1.0023
201.8	200.2	1.0081

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999997	*≥0.995*
Slope	0.998937	*0.90 - 1.10*
Intercept	-0.622111	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

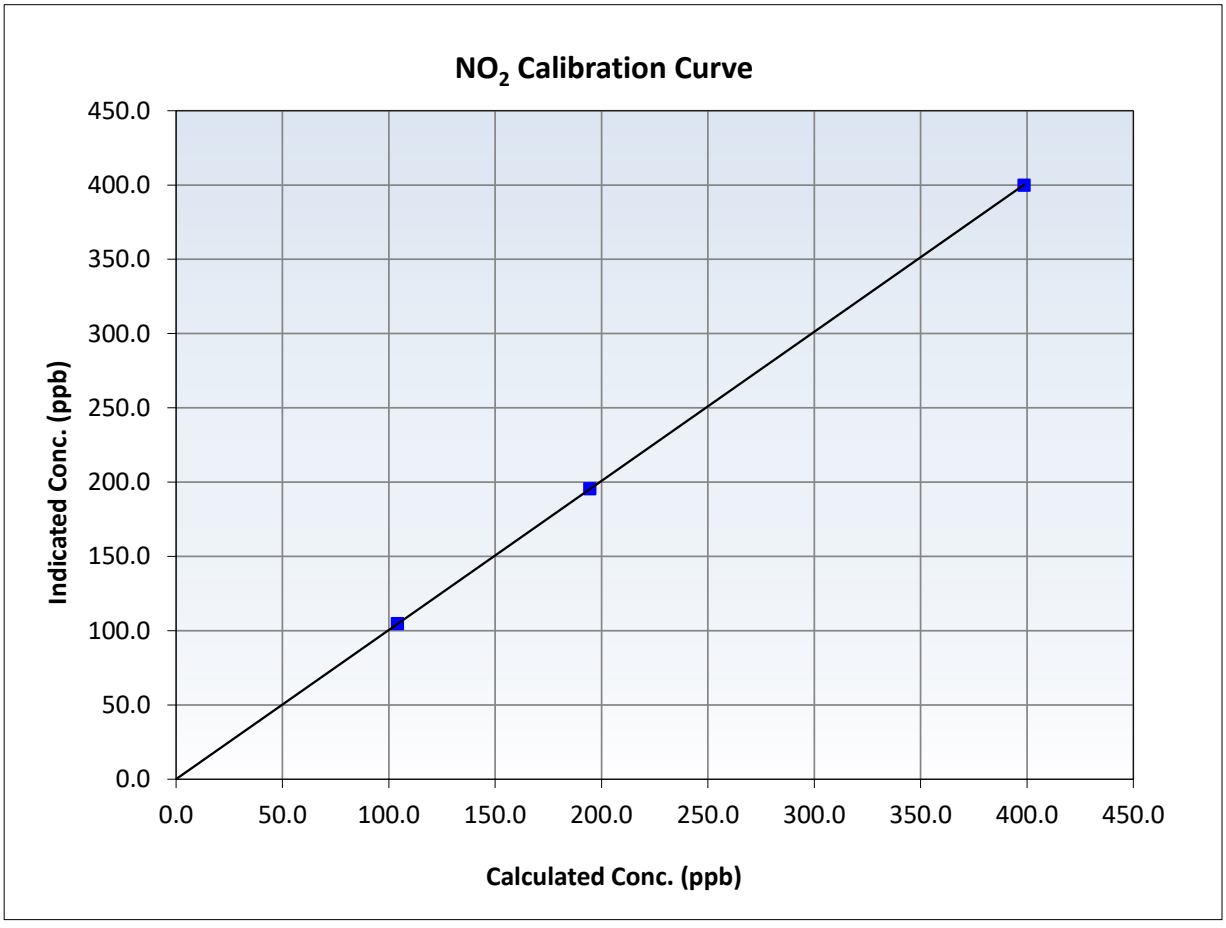
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 13, 2025
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:11	End Time (MST):	14:25
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262593

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
398.6	400.0	0.9965
194.5	195.5	0.9949
104.1	104.8	0.9934

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999998	*≥0.995*
Slope	1.003707	*0.90 - 1.10*
Intercept	0.074394	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

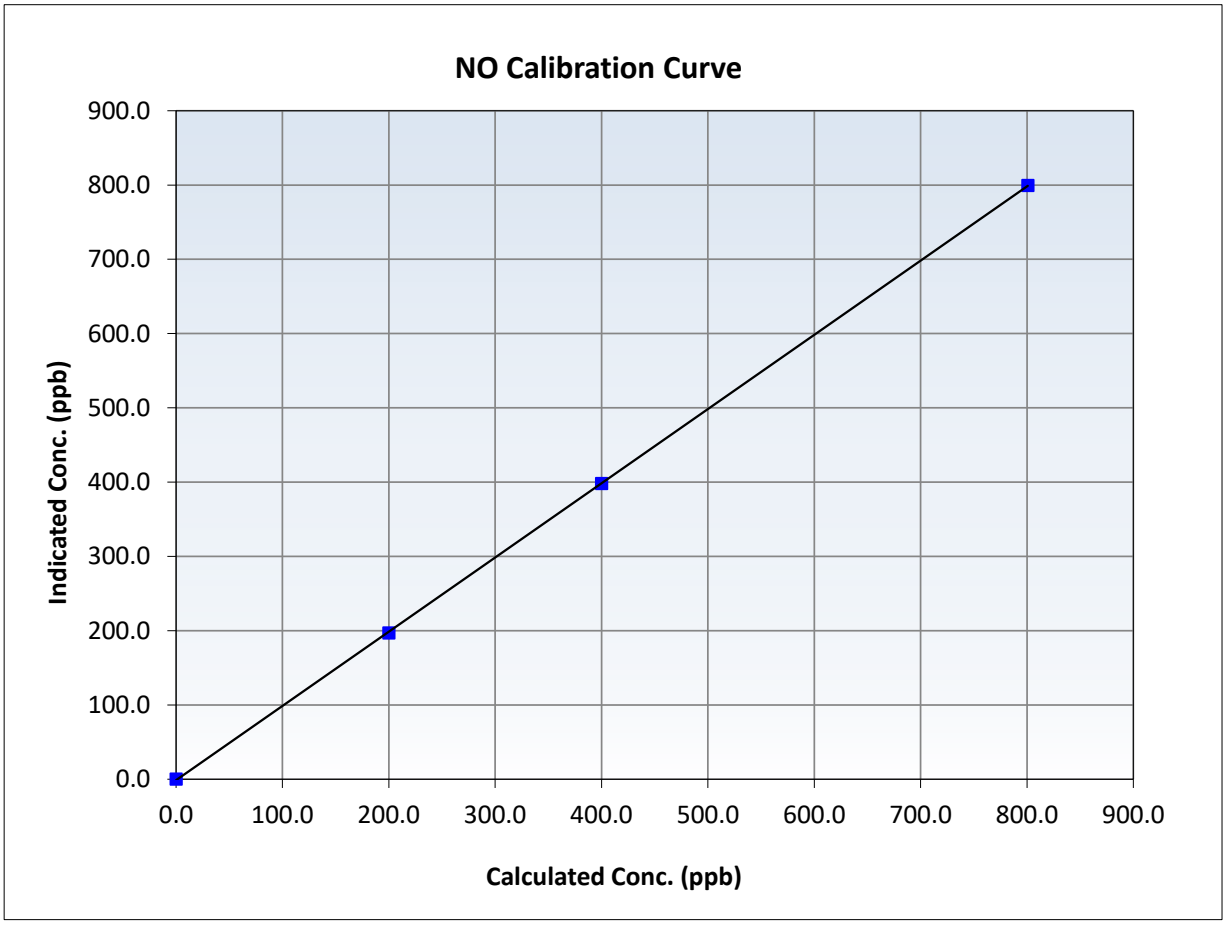
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 13, 2025
Station Name:	Barge Landing	Station Number:	AMS 09
Start Time (MST):	10:11	End Time (MST):	14:25
Analyzer make:	Thermo 42i	Analyzer serial #:	1426262593

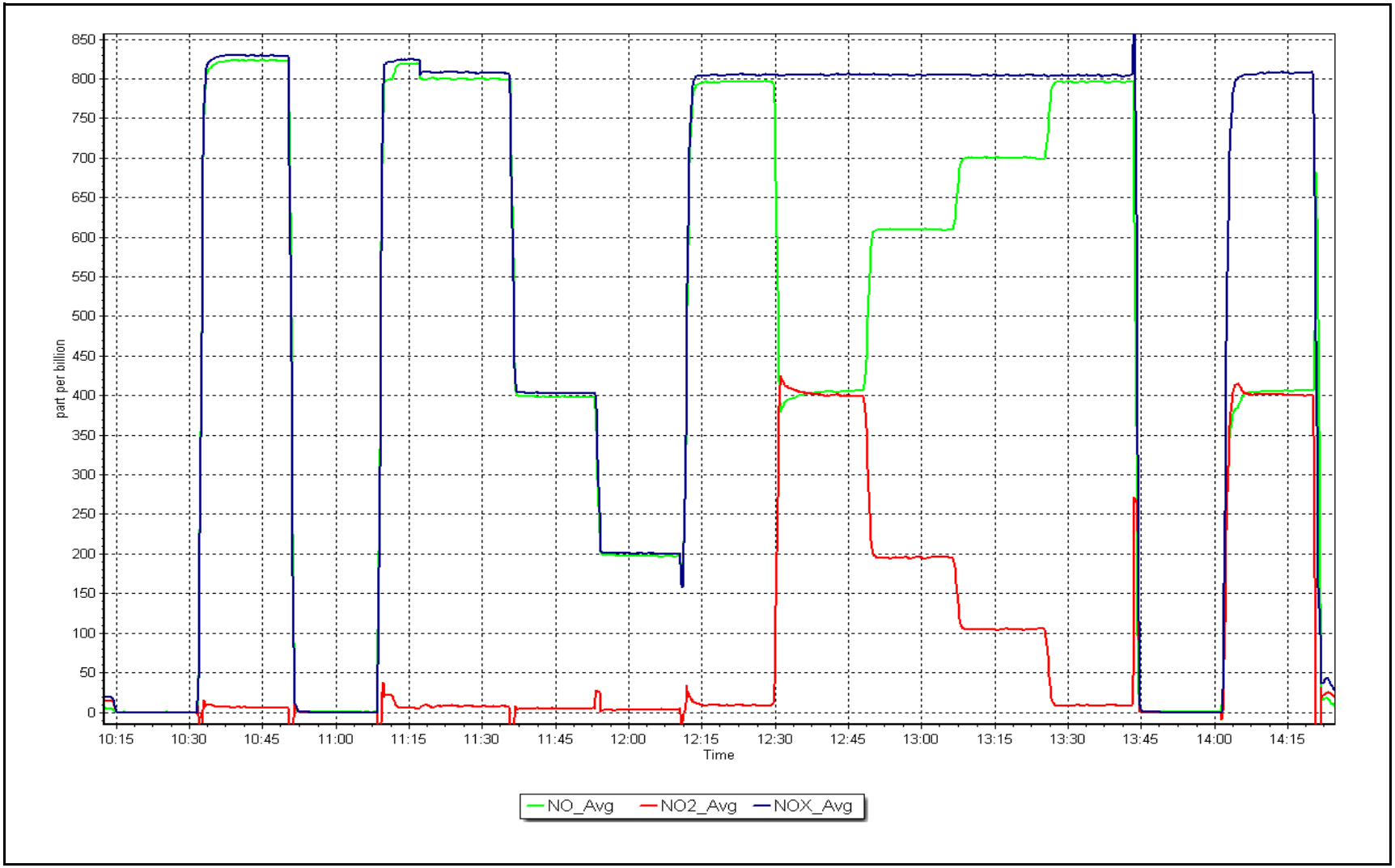
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
800.7	799.4	1.0017
400.0	398.1	1.0047
200.0	196.9	1.0155

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999986	*≥0.995*
Slope	0.999211	*0.90 - 1.10*
Intercept	-1.264087	*+/-20*



NO_X Calibration Plot Date: December 11, 2025 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:	December 11, 2025	Last Cal Date:	November 14, 2025
Start time (MST):	13:05	End time (MST):	13:25
Analyzer Make:	API T640	S/N:	2237
Particulate Fraction:	PM2.5		
Flow Meter Make/Model:	Alicat FP-25	S/N:	388746
Temp/RH standard:	Alicat FP-25	S/N:	388746

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	*(Limits)*
T (°C)	-21.40	-21.85	-21.40	☐	+/- 2 °C
P (mmHg)	747.50	745.40	747.50	☐	+/- 10 mmHg
Flow (LPM)	5.00	4.96	5.00	☐	+/- 0.25 LPM
PW% (pump)	36	-----	36	☐	>80%
Zero Verification	PM w/o HEPA:	3.40	PM w/ HEPA:	0.00	<0.2 ug/m3

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

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

Quarterly Calibration Test

SPAN DUST — Refractive Index: 10.9 — Expiry Date: 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: October 20, 2025

Date Disposable Filter Changed: October 20, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: July 22, 2025

Date RH/T Sensor Cleaned: July 22, 2025

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

Calibration by: Sean Bala

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS11
LOWER CAMP
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Lower Camp	Station number:	AMS 11
Calibration Date:	December 2, 2025	Last Cal Date:	November 24, 2025
Start time (MST):	12:47	End time (MST):	17:21
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	48.75	ppm	Cal Gas Exp Date:	October 9, 2032
Cal Gas Cylinder #:	CC741503			
Removed Cal Gas Conc:	48.75	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:	CC741503		Diff between cyl:	
Calibrator Model:	Teledyne API T750		Serial Number:	423
Zero Air Gen Model:	Teledyne API T751H		Serial Number:	321

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	100841398	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.001427	0.999686	Backgd or Offset:	18.9	18.9
Calibration intercept:	-0.821507	-0.851970	Coeff or Slope:	1.029	1.036

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.3	----
As found High point	4911	82.0	800.6	794.1	1.008
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	794.4	Previous response	800.9	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4911	82.0	800.6	800.1	1.001
Mid point	4950	41.0	400.5	398.6	1.005
Low point	4970	20.5	200.3	198.8	1.007
As left zero	5000	0.0	0.0	-0.2	----
As left span	4911	82.0	800.6	801.5	0.999
				Average Correction Factor:	1.004

Notes: Used portable calibartor and ZAG. Changed the sample inlet filter. Adjusted span only.

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

SO_2 Calibration Summary

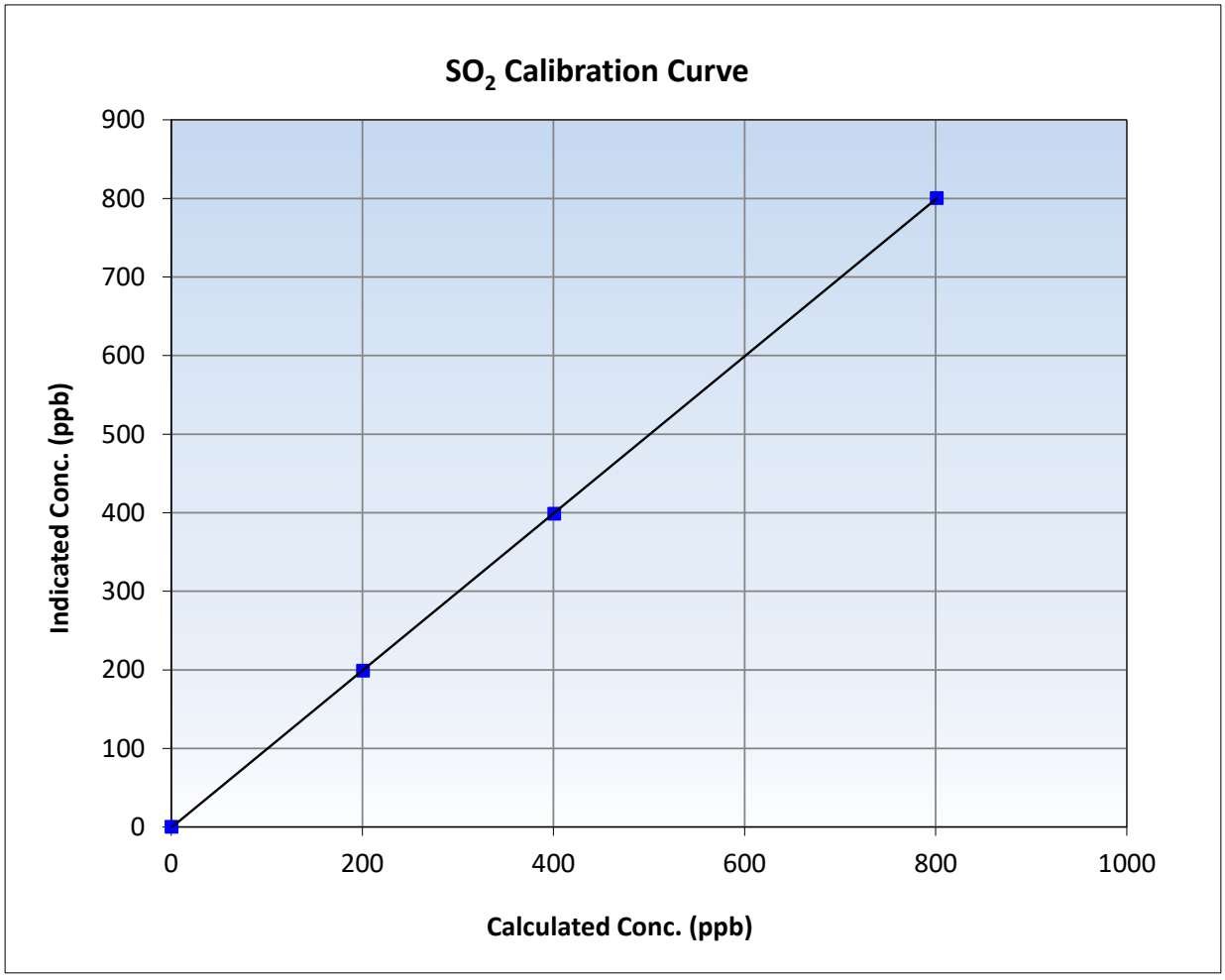
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 24, 2025
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	12:47	End Time (MST):	17:21
Analyzer make:	Thermo 43i	Analyzer serial #:	100841398

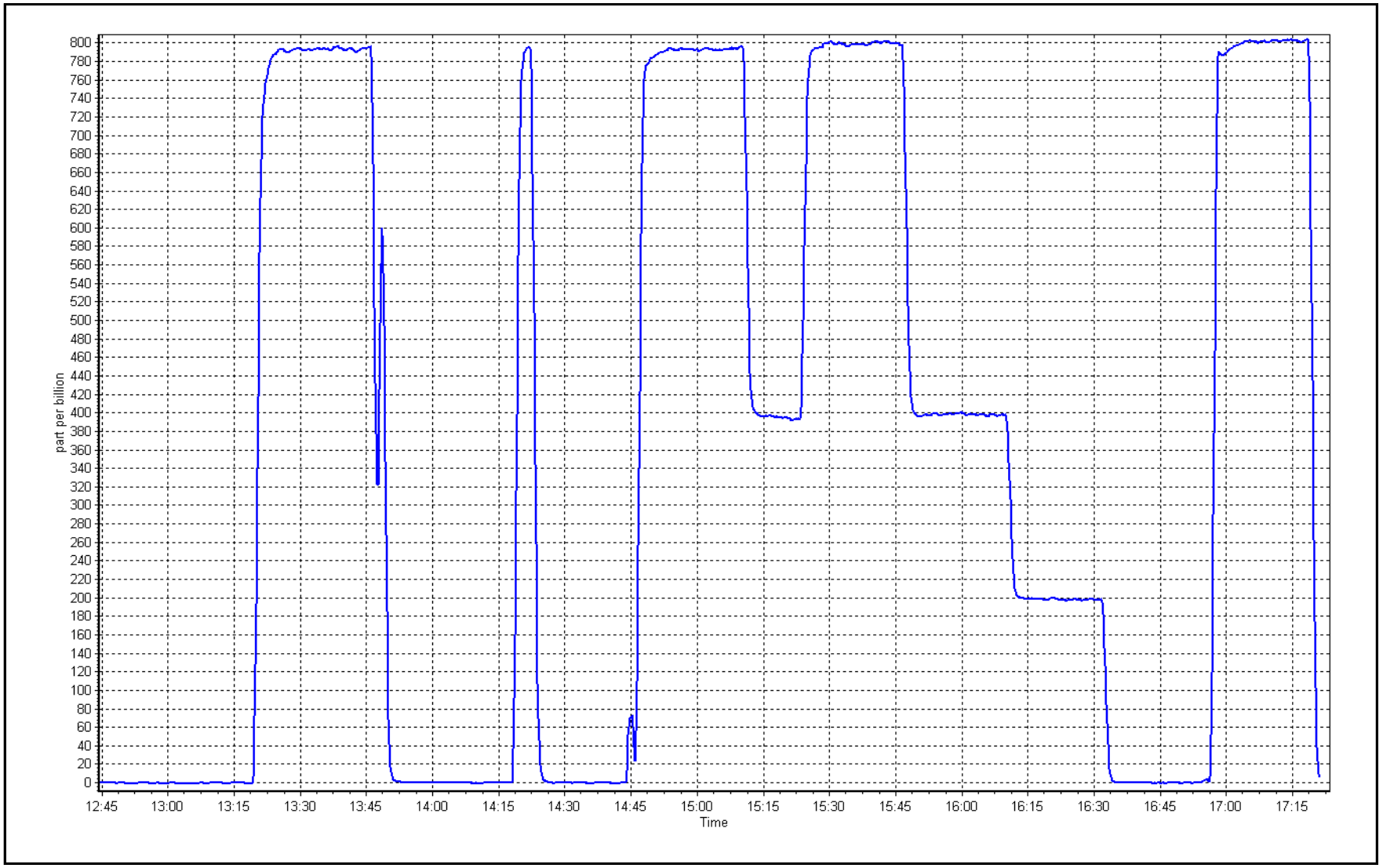
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
800.6	800.1	1.0007
400.5	398.6	1.0047
200.3	198.8	1.0073

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999994	*≥0.995*
Slope	0.999686	*0.90 - 1.10*
Intercept	-0.851970	*+/-30*



SO2 Calibration Plot Date: December 2, 2025 Location: Lower Camp



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Lower Camp	Station number:	AMS 11
Calibration Date:	December 2, 2025	Last Cal Date:	November 25, 2025
Start time (MST):	12:15	End time (MST):	16:45
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.83	ppm	Cal Gas Exp Date:	August 28, 2028
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		Analyzer serial #:	1203169745	
Converter make:	Global G150		Converter serial #:	2022-223	
Analyzer Range	0 - 100 ppb		Converter Temp:	325	degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.022591	1.016730	Backgd or Offset:	2.5	2.5
Calibration intercept:	0.128071	0.208089	Coeff or Slope:	0.808	0.808

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4923	82.8	79.9	81.5	0.980
As found Mid point	4967	41.5	40.0	41.0	0.976
As found Low point	4999	20.8	20.0	20.6	0.972
New cylinder response					

Baseline Corr As found:	81.5	Prev response:	81.83	*% change:	-0.4%
Baseline Corr 2nd AF pt:	41.0	AF Slope:	1.019589	AF Intercept:	0.108102
Baseline Corr 3rd AF pt:	20.6	AF Correlation:	0.999991	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4923	82.8	79.9	81.3	0.983
Mid point	4967	41.5	40.0	41.2	0.971
Low point	4999	20.8	20.0	20.5	0.976
As left zero	5000	0.0	0.0	0.2	----
As left span	4923	82.8	79.9	81.6	0.979
SO2 Scrubber Check	4932	82.2	819.7	0.0	----
Date of last scrubber change:				Ave Corr Factor	0.977
Date of last converter efficiency test:					

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

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

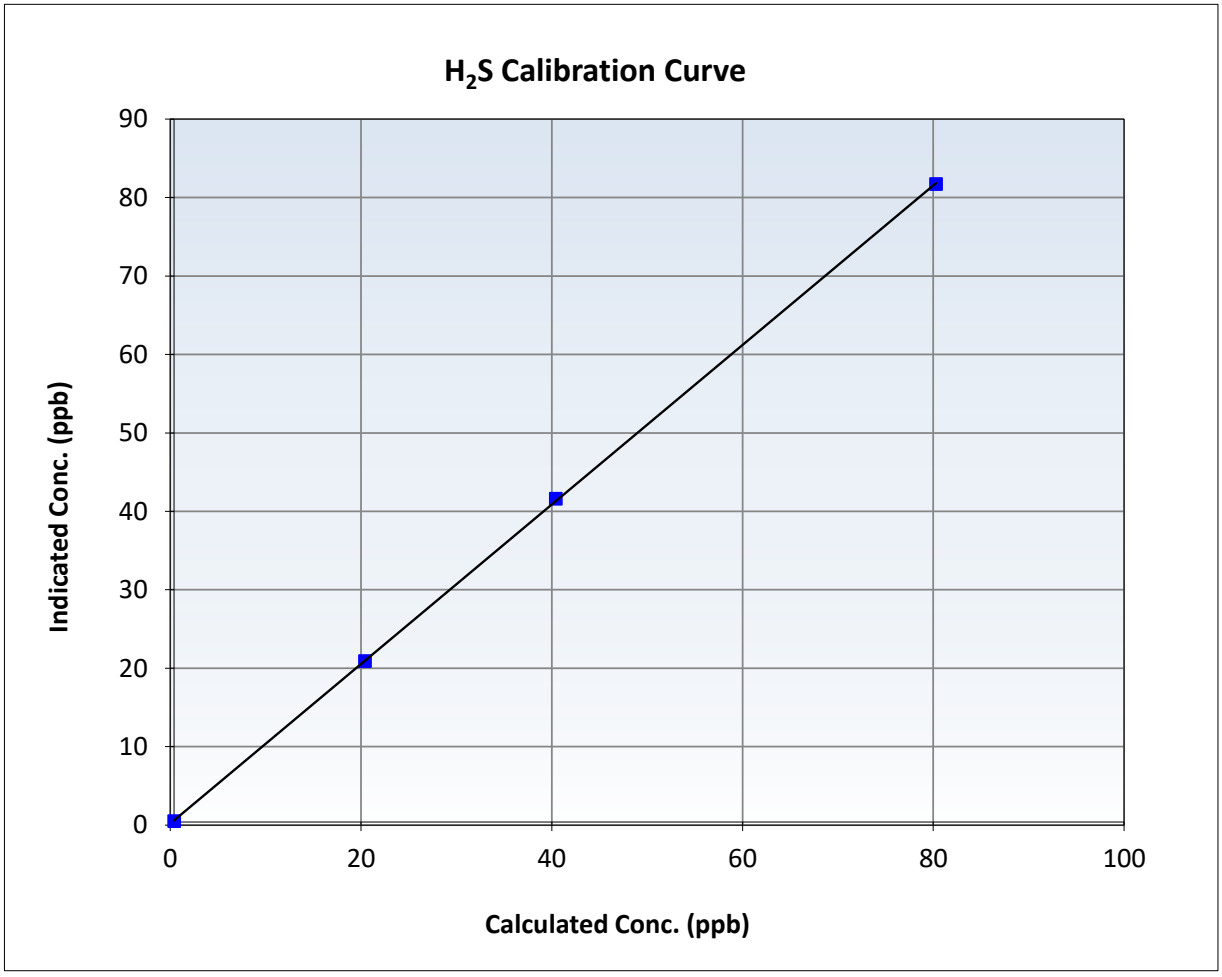
H_2S Calibration Summary

Station Information

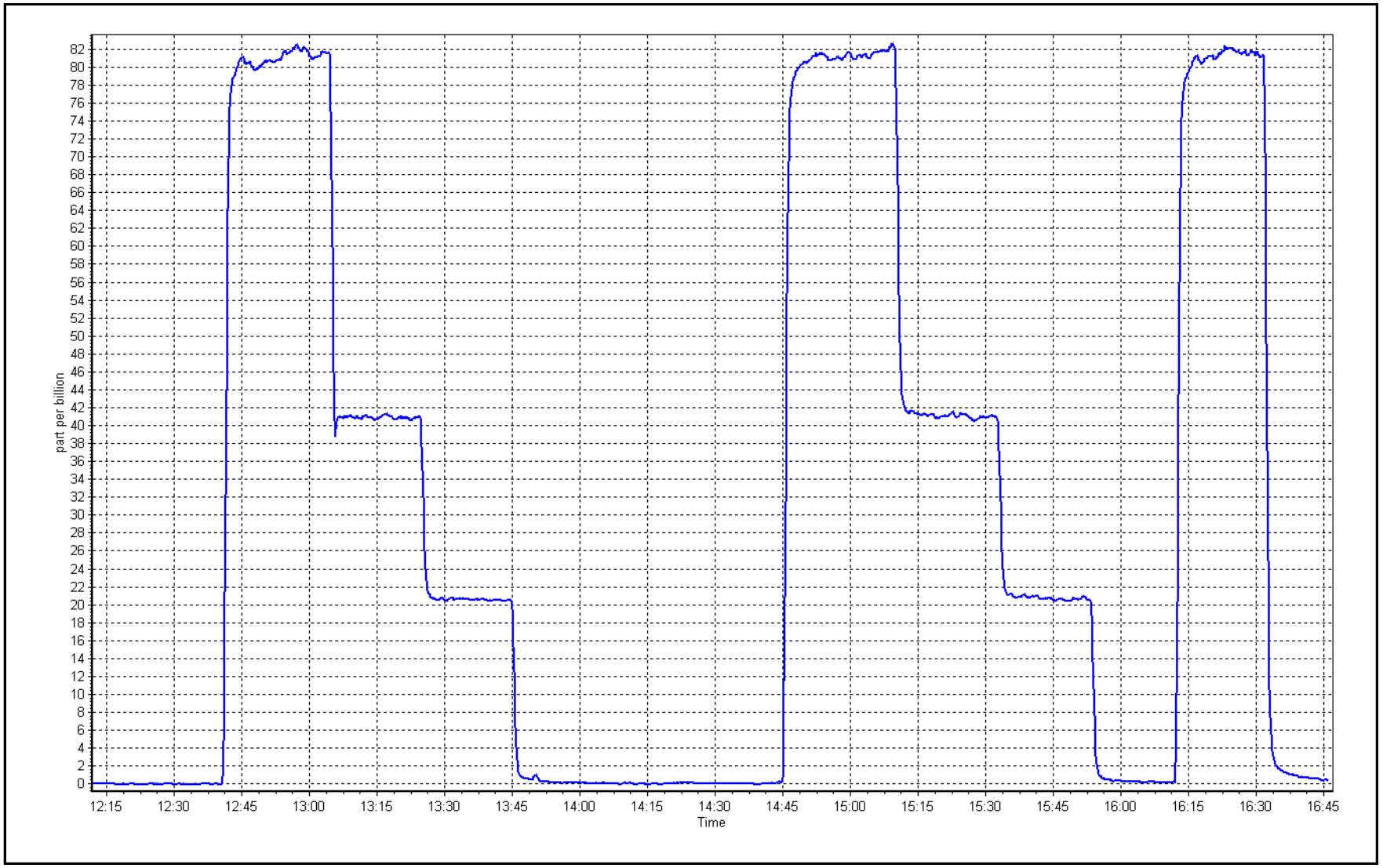
Calibration Date:	December 2, 2025	Previous Calibration:	November 25, 2025
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	12:15	End Time (MST):	16:45
Analyzer make:	Thermo 43iQ	Analyzer serial #:	1203169745

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.1	----	Correlation Coefficient	0.999966	*≥0.995*
79.9	81.3	0.9827	Slope	1.016730	*0.90 - 1.10*
40.0	41.2	0.9714			
20.0	20.5	0.9763	Intercept	0.208089	*+/-3*



H_2S Calibration Plot Date: December 2, 2025 Location: Lower Camp



Wood Buffalo Environmental Association

THC / CH4 / NMHC Calibration Report

Station Information

Station Name:	Lower Camp	Station number:	AMS 11
Calibration Date:	December 2, 2025	Last Cal Date:	November 24, 2025
Start time (MST):	12:47	End time (MST):	17:21
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC741503	Cal Gas Expiry Date:	October 9, 2032	
CH4 Cal Gas Conc.	504.8 ppm	CH4 Equiv Conc.	1071.9	ppm
C3H8 Cal Gas Conc.	206.2 ppm			
Removed Gas Cert:		Removed Gas Expiry:		
Removed CH4 Conc.	504.8 ppm	CH4 Equiv Conc.	1071.9	ppm
Removed C3H8 Conc.	206.2 ppm	Diff between cyl (THC):		
Diff between cyl (CH_4):		Diff between cyl (NM):		
Calibrator Model:	Teledyne API T750	Serial Number:	423	
Zero Air Gen model:	Teledyne API T751H	Serial Number:	321	

Analyzer Information

Analyzer make:	Thermo 55i		Analyzer serial #:	1152430012	
THC Range:	0 - 20 ppm		NMHC/CH4 Range:	0 - 10 ppm	
	Start	***Finish***		***Start***	***Finish***
CH4 SP Ratio:	2.18E-04	2.31E-04	NMHC SP Ratio:	5.05E-05	5.22E-05
CH4 Retention time:	13.2	13.2	NMHC Peak Area:	184241	178392
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4911	82.0	17.60	16.91	1.041
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.91	Prev response	17.66	*% change	-4.4%
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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4911	82.0	17.60	17.67	0.996
Mid point	4950	41.0	8.81	8.84	0.996
Low point	4970	20.5	4.40	4.41	0.999
As left zero	5000	0.0	0.00	0.00	----
As left span	4911	82.0	17.60	17.68	0.996
				Average Correction Factor	0.997

Notes: Used portable calibartor and ZAG. Changed the sample inlet filter. Adjusted span only.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4911	82.0	9.31	9.02	1.032
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.02	Prev response	9.40	*% change	-4.2%
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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4911	82.0	9.31	9.30	1.002
Mid point	4950	41.0	4.66	4.68	0.994
Low point	4970	20.5	2.33	2.34	0.997
As left zero	5000	0.0	0.00	0.00	----
As left span	4911	82.0	9.31	9.32	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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4911	82.0	8.29	7.89	1.050
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.89	Prev response	8.26	*% change	-4.7%
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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4911	82.0	8.29	8.37	0.990
Mid point	4950	41.0	4.15	4.16	0.997
Low point	4970	20.5	2.07	2.07	1.001
As left zero	5000	0.0	0.00	0.00	----
As left span	4911	82.0	8.29	8.36	0.992
				Average Correction Factor	0.996

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	1.000264	1.004123
THC Cal Offset:	0.054905	-0.003994
CH4 Cal Slope:	0.999194	1.010643
CH4 Cal Offset:	-0.023512	-0.015552
NMHC Cal Slope:	1.000982	0.998195
NMHC Cal Offset:	0.078618	0.011558

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

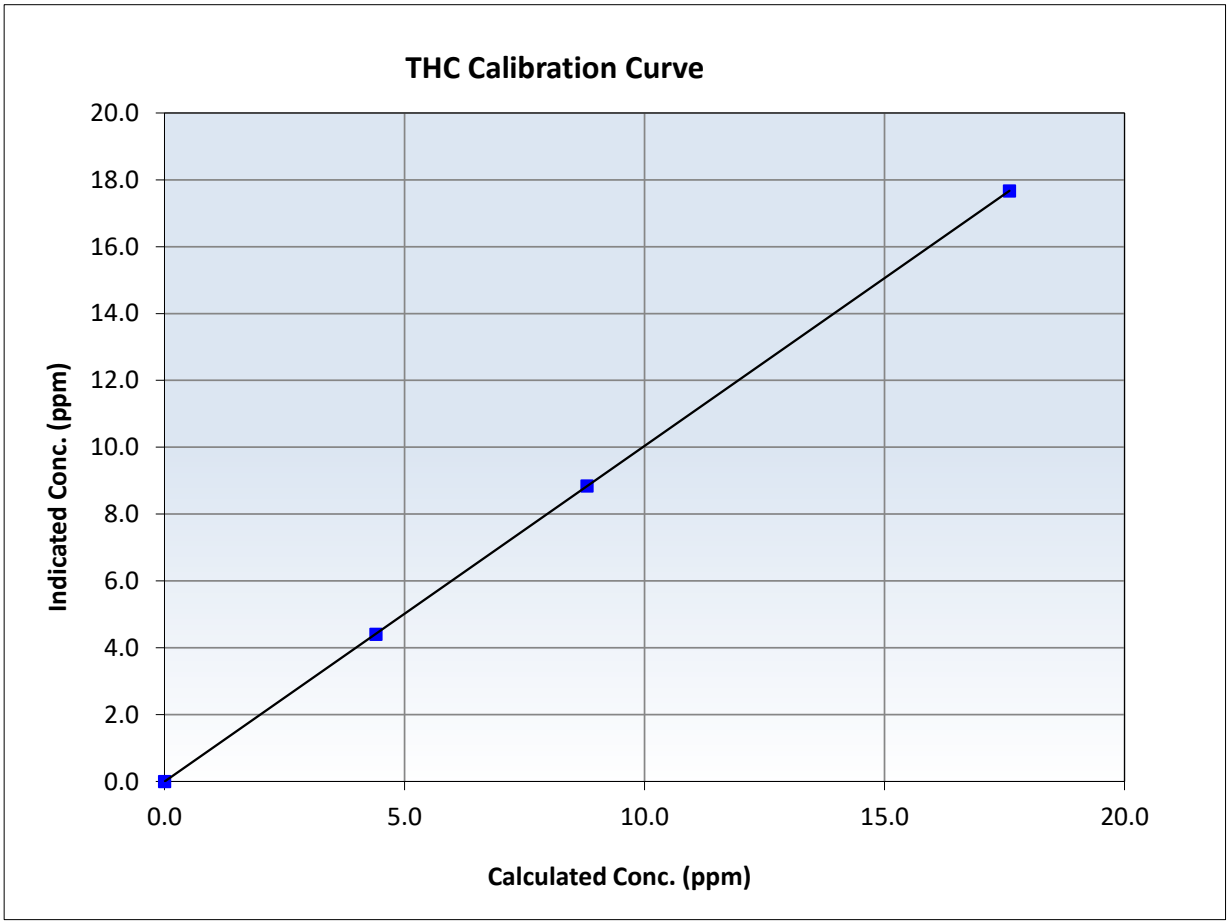
THC Calibration Summary

Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 24, 2025
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	12:47	End Time (MST):	17:21
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999999	≥0.995
17.60	17.67	0.9962	Slope	1.004123	0.90 - 1.10
8.81	8.84	0.9957	Intercept	-0.003994	+/-0.5
4.40	4.41	0.9989			



Wood Buffalo Environmental Association

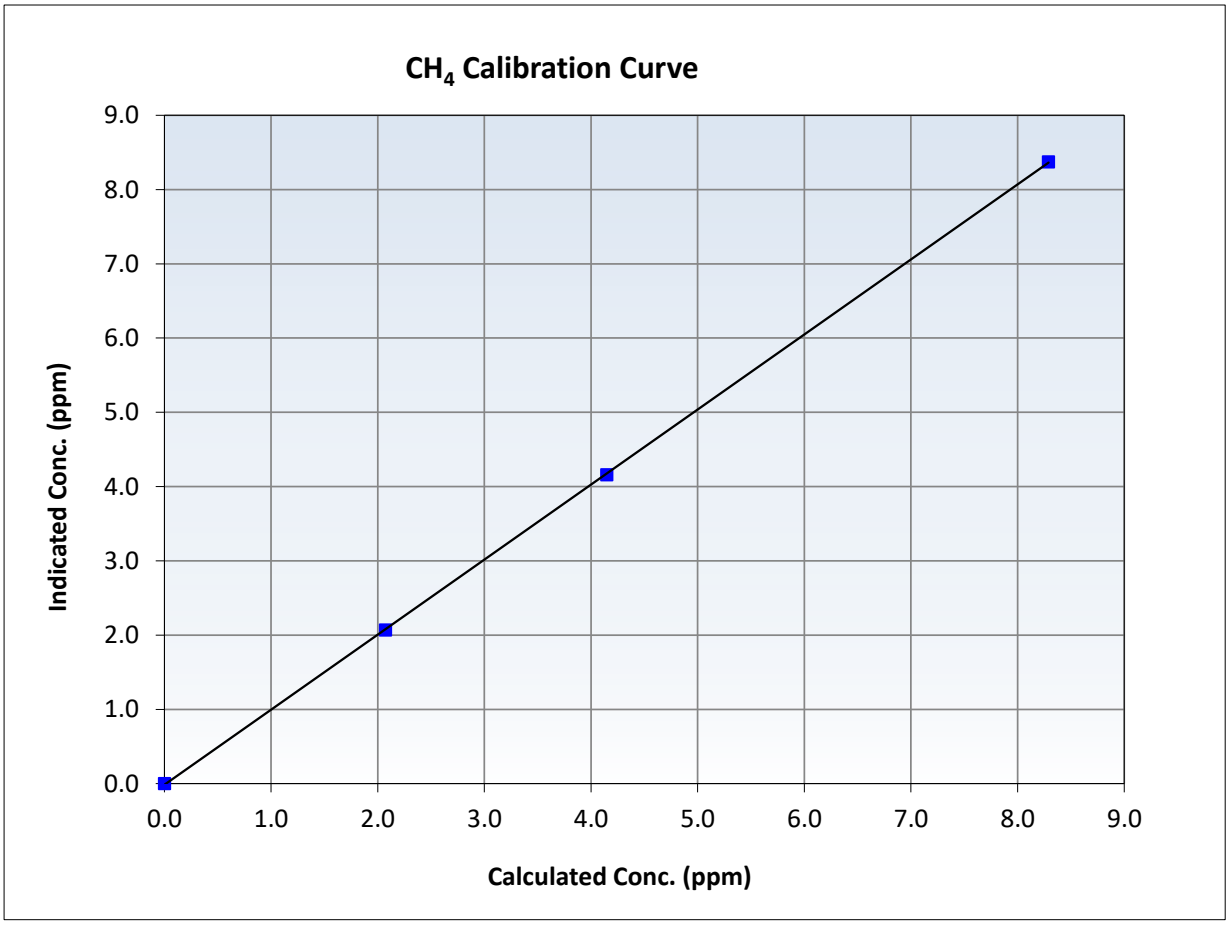
CH_4 Calibration Summary

Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 24, 2025
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	12:47	End Time (MST):	17:21
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999980	≥0.995
8.29	8.37	0.9900	Slope	1.010643	0.90 - 1.10
4.15	4.16	0.9973			
2.07	2.07	1.0013	Intercept	-0.015552	+/-0.5



Wood Buffalo Environmental Association

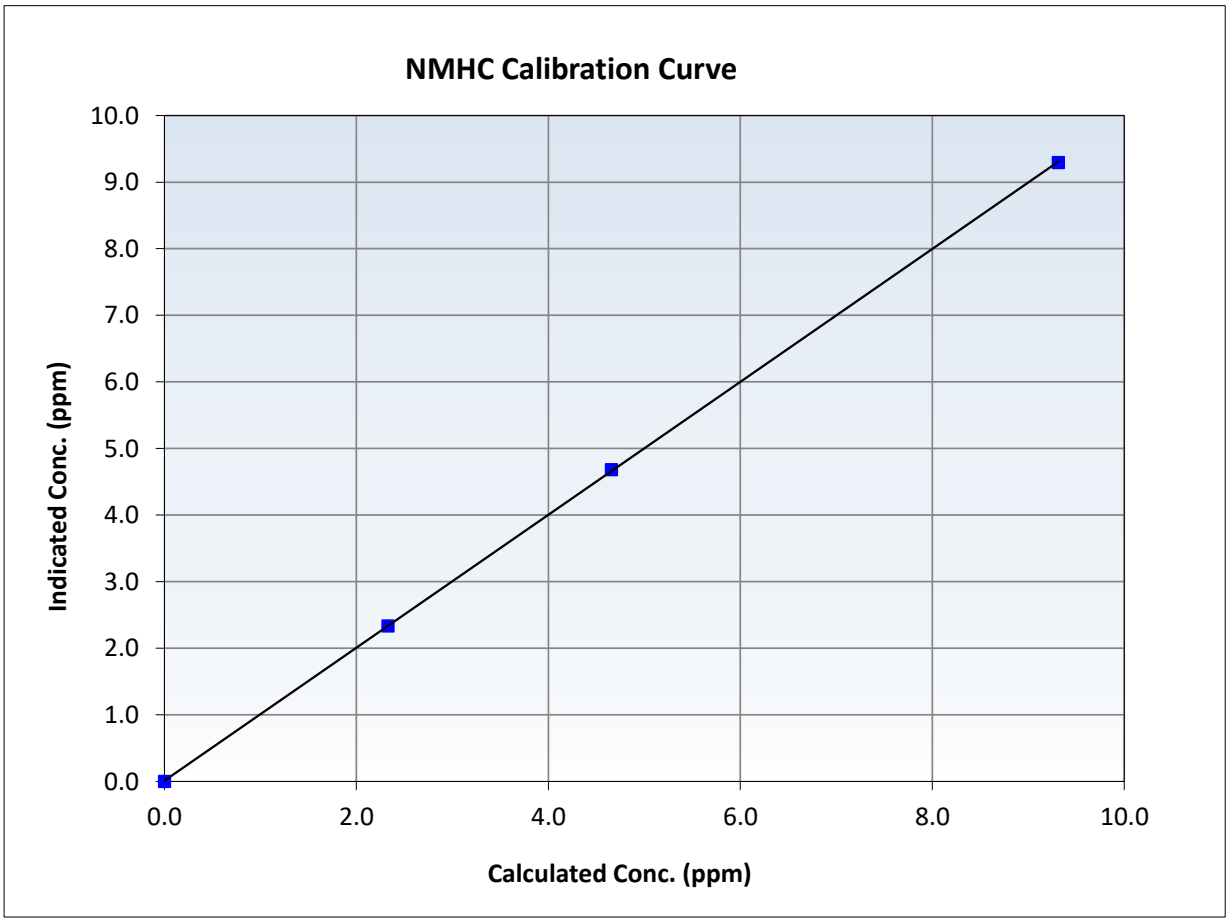
NMHC Calibration Summary

Station Information

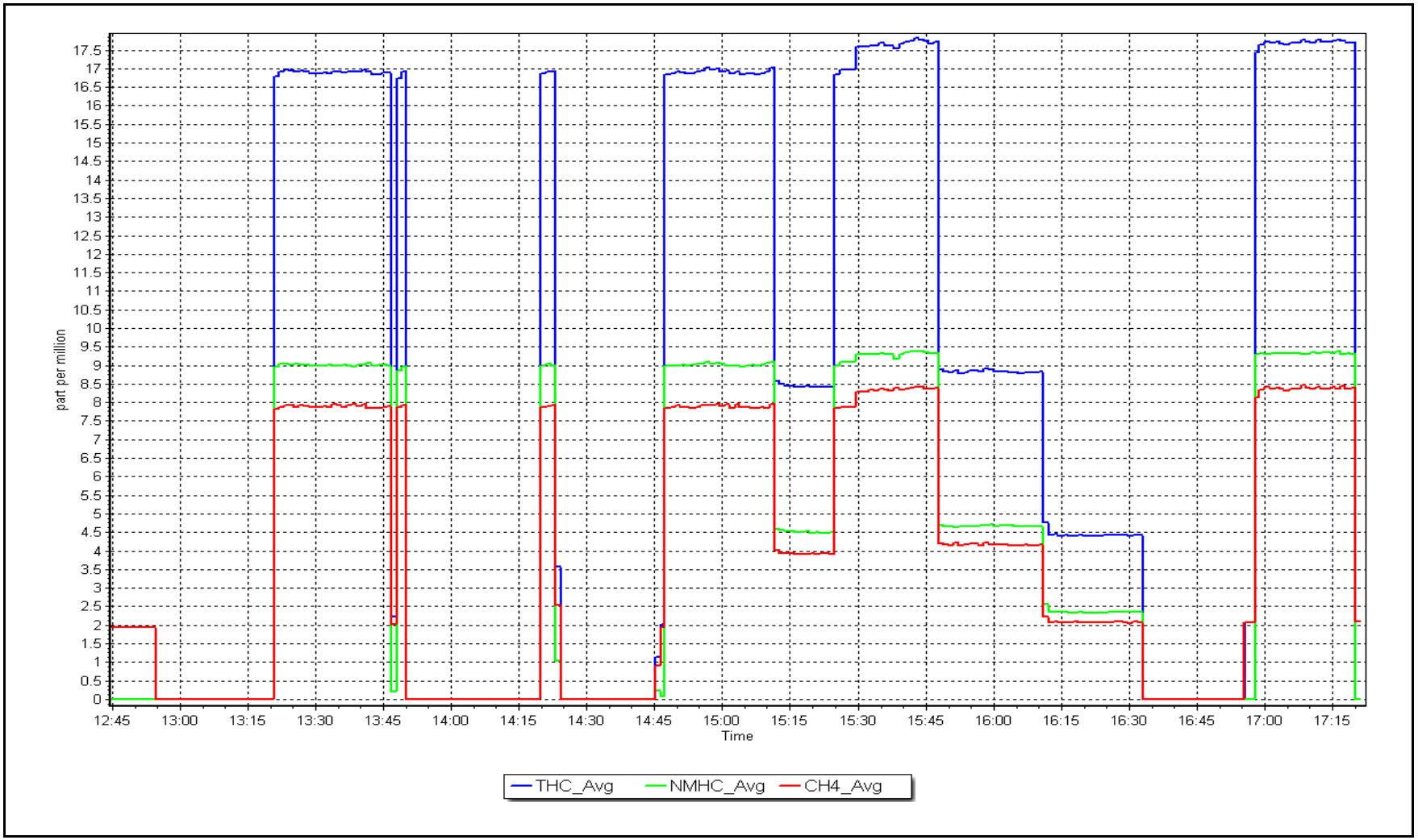
Calibration Date:	December 2, 2025	Previous Calibration:	November 24, 2025
Station Name:	Lower Camp	Station Number:	AMS 11
Start Time (MST):	12:47	End Time (MST):	17:21
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999984	*≥0.995*
9.31	9.30	1.0018	Slope	0.998195	*0.90 - 1.10*
4.66	4.68	0.9945	Intercept	0.011558	*+/-0.5*
2.33	2.34	0.9967			



NMHC Calibration Plot Date: December 2, 2025 Location: Lower Camp



Wood Buffalo Environmental Association

THC / CH4 / NMHC Calibration Report

Station Information

Station Name:	Lower Camp	Station number:	AMS 11
Calibration Date:	December 23, 2025	Last Cal Date:	December 2, 2025
Start time (MST):	13:45	End time (MST):	15:11
Reason:	Cylinder Change		

Calibration Standards

Gas Cert Reference:	CC741503	Cal Gas Expiry Date:	October 9, 2032	
CH4 Cal Gas Conc.	504.8 ppm	CH4 Equiv Conc.	1071.9	ppm
C3H8 Cal Gas Conc.	206.2 ppm			
Removed Gas Cert:		Removed Gas Expiry:		
Removed CH4 Conc.	504.8 ppm	CH4 Equiv Conc.	1071.9	ppm
Removed C3H8 Conc.	206.2 ppm	Diff between cyl (THC):		
Diff between cyl (CH_4):		Diff between cyl (NM):		
Calibrator Model:	Teledyne API T750	Serial Number:	423	
Zero Air Gen model:	Teledyne API T751H	Serial Number:	321	

Analyzer Information

Analyzer make:	Thermo 55i		Analyzer serial #:	1152430012	
THC Range:	0 - 20 ppm		NMHC/CH4 Range:	0 - 10 ppm	
	Start	***Finish***		***Start***	***Finish***
CH4 SP Ratio:	2.31E-04	2.31E-04	NMHC SP Ratio:	5.22E-05	5.22E-05
CH4 Retention time:	13.2	13.2	NMHC Peak Area:	178392	178392
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4911	82.0	17.60	17.77	0.991
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.77	Prev response	17.67	*% change	0.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4911	82.0	17.60	17.88	0.985
				Average Correction Factor	

Notes: Changed the H2 cylinder after as founds.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4911	82.0	9.31	9.38	0.993
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.38	Prev response	9.31	*% 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) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4911	82.0	9.31	9.36	0.995
				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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4911	82.0	8.29	8.38	0.989
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.38	Prev response	8.36	*% 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

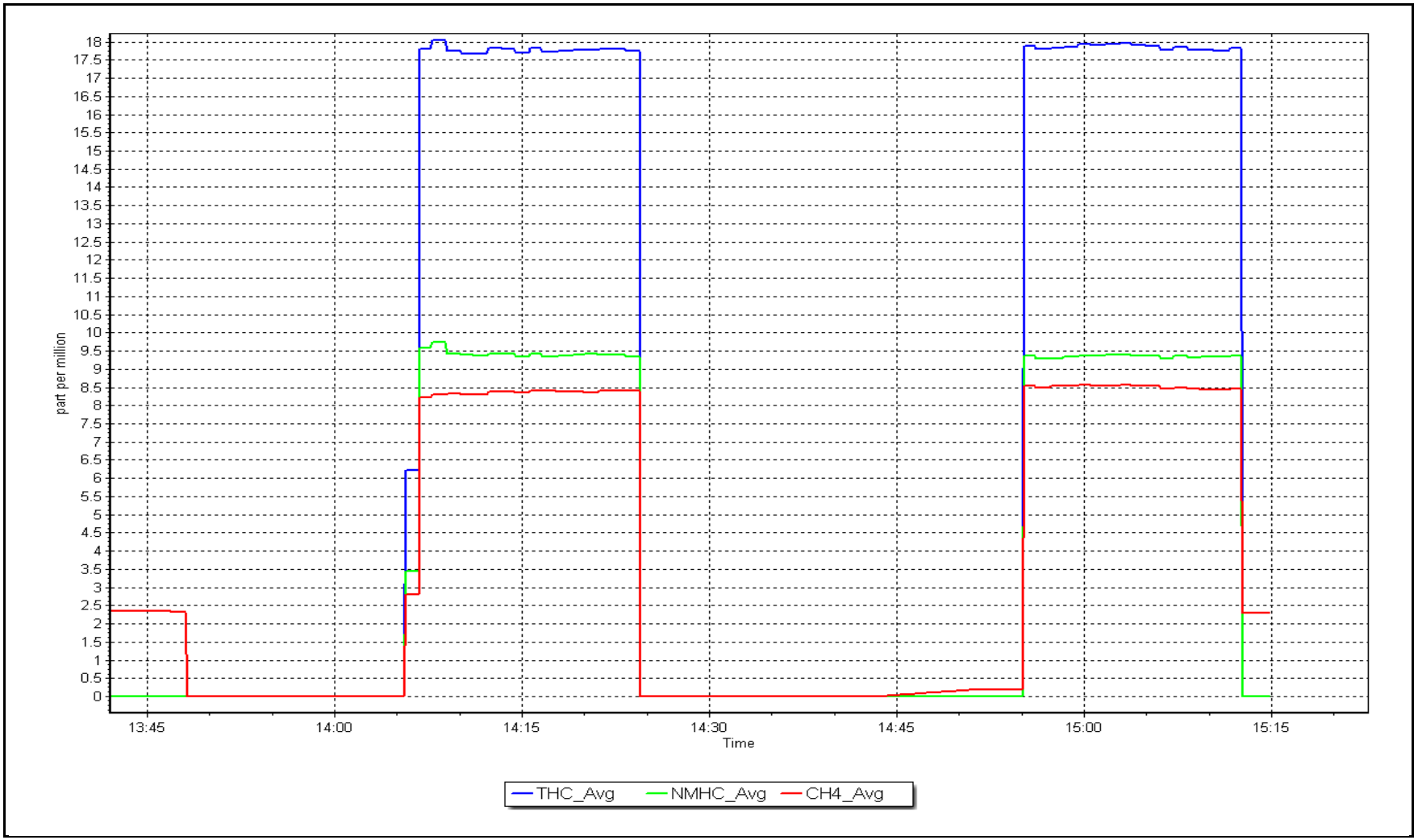
Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4911	82.0	8.29	8.52	0.973
				Average Correction Factor	

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	1.004123	
THC Cal Offset:	-0.003994	
CH4 Cal Slope:	1.010643	
CH4 Cal Offset:	-0.015552	
NMHC Cal Slope:	0.998195	
NMHC Cal Offset:	0.011558	

Calibration Performed By: Rene Chamberland

NMHC Calibration Plot Date: December 23, 2025 Location: Lower Camp



Wood Buffalo Environmental Association

THC / CH4 / NMHC Calibration Report

Station Information

Station Name:	Lower Camp	Station number:	AMS 11
Calibration Date:	December 30, 2025	Last Cal Date:	December 23, 2025
Start time (MST):	11:21	End time (MST):	13:00
Reason:	Cylinder Change		

Calibration Standards

Gas Cert Reference:	CC741503	Cal Gas Expiry Date:	October 9, 2032
CH4 Cal Gas Conc.	504.8 ppm	CH4 Equiv Conc.	1071.9 ppm
C3H8 Cal Gas Conc.	206.2 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	504.8 ppm	CH4 Equiv Conc.	1071.9 ppm
Removed C3H8 Conc.	206.2 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T750	Serial Number:	423
Zero Air Gen model:	Teledyne API T751H	Serial Number:	321

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1152430012
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	2.31E-04	2.31E-04	NMHC SP Ratio:	5.22E-05	5.22E-05
CH4 Retention time:	13.2	13.2	NMHC Peak Area:	178392	178392
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4911	82.0	17.60	17.88	0.985
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.88	Prev response	17.67	*% change	1.2%
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)) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4911	82.0	17.60	17.80	0.989
				Average Correction Factor	

Notes: Changed the N2 cylinder after as founds.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4911	82.0	9.31	9.41	0.990
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.41	Prev response	9.31	*% change	1.0%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4911	82.0	9.31	9.38	0.993
				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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4911	82.0	8.29	8.47	0.979
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.47	Prev response	8.36	*% change	1.3%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

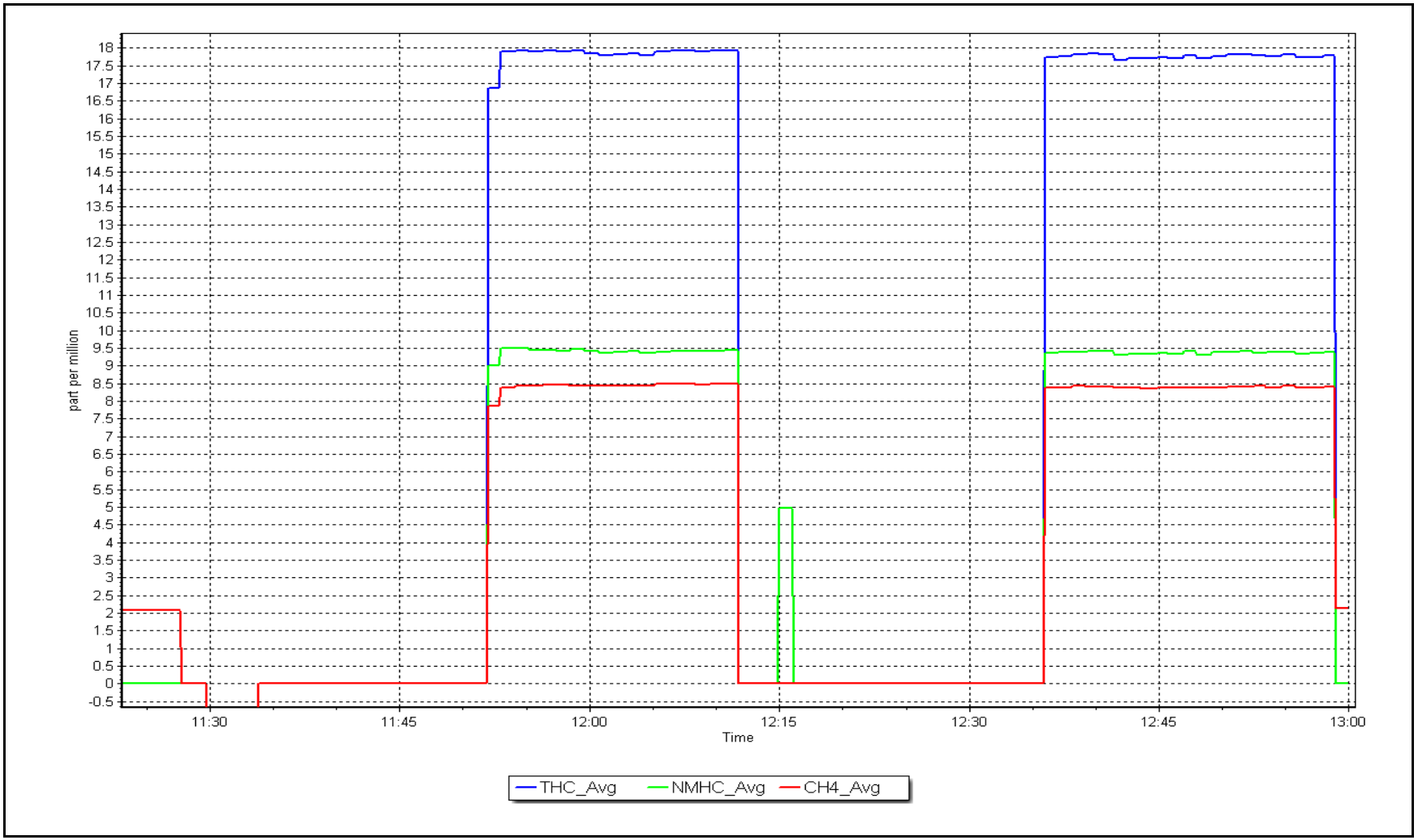
Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero					
High point					
Mid point					
Low point					
As left zero	5000	0.0	0.00	0.00	----
As left span	4911	82.0	8.29	8.41	0.985
				Average Correction Factor	

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	1.004123	
THC Cal Offset:	-0.003994	
CH4 Cal Slope:	1.010643	
CH4 Cal Offset:	-0.015552	
NMHC Cal Slope:	0.998195	
NMHC Cal Offset:	0.011558	

Calibration Performed By: Sean Bala

NMHC Calibration Plot Date: December 30, 2025 Location: Lower Camp



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS13
FORT MCKAY SOUTH
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Fort McKay South	Station number:	AMS 13
Calibration Date:	December 17, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	10:13	End time (MST):	13:39
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.55	ppm	Cal Gas Exp Date:	December 29, 2028
Cal Gas Cylinder #:	CC260812			
Removed Cal Gas Conc:	50.55	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Model:	Teledyne API T750		Serial Number:	281
Zero Air Gen Model:	Teledyne API 751H		Serial Number:	321

Analyzer Information

Analyzer make:	Thermo 43i-TLE		Serial Number:	1331259320	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.998301	0.999543	Backgd or Offset:	4.23	3.40
Calibration intercept:	0.305308	-0.254296	Coeff or Slope:	0.969	0.992

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-1.4	----
As found High point	4921	79.1	799.7	780.9	1.022
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	782.3	Previous response	798.6	*% change	-2.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4921	79.1	799.7	799.1	1.001
Mid point	4960	39.5	399.4	399.0	1.001
Low point	4980	19.8	200.2	199.6	1.003
As left zero	5000	0.0	0.0	-0.3	----
As left span	4921	79.1	799.7	800.6	0.999
				Average Correction Factor:	1.002

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

Calibration Performed By: Sean Bala, Parampreet Kaur

Wood Buffalo Environmental Association

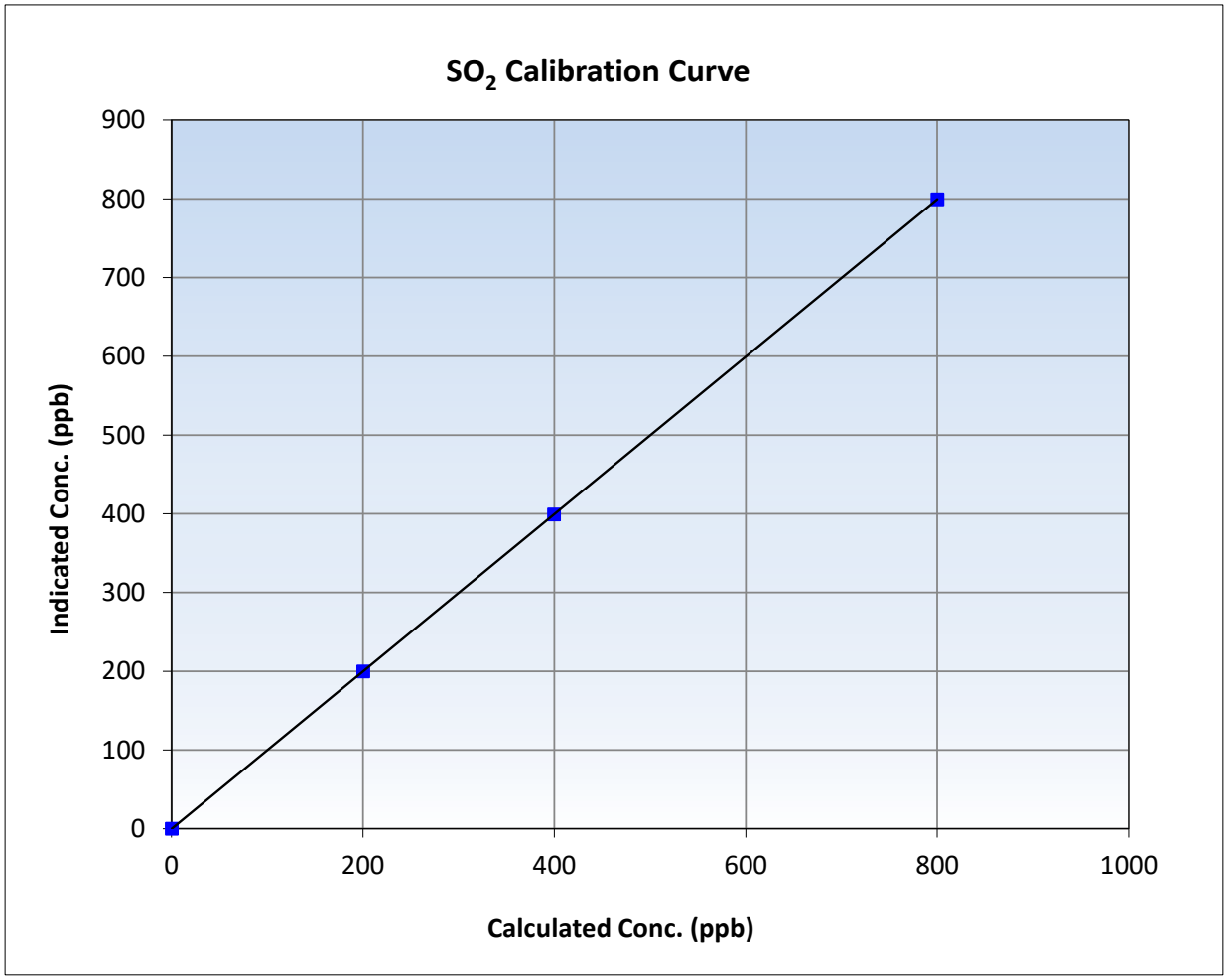
SO_2 Calibration Summary

Station Information

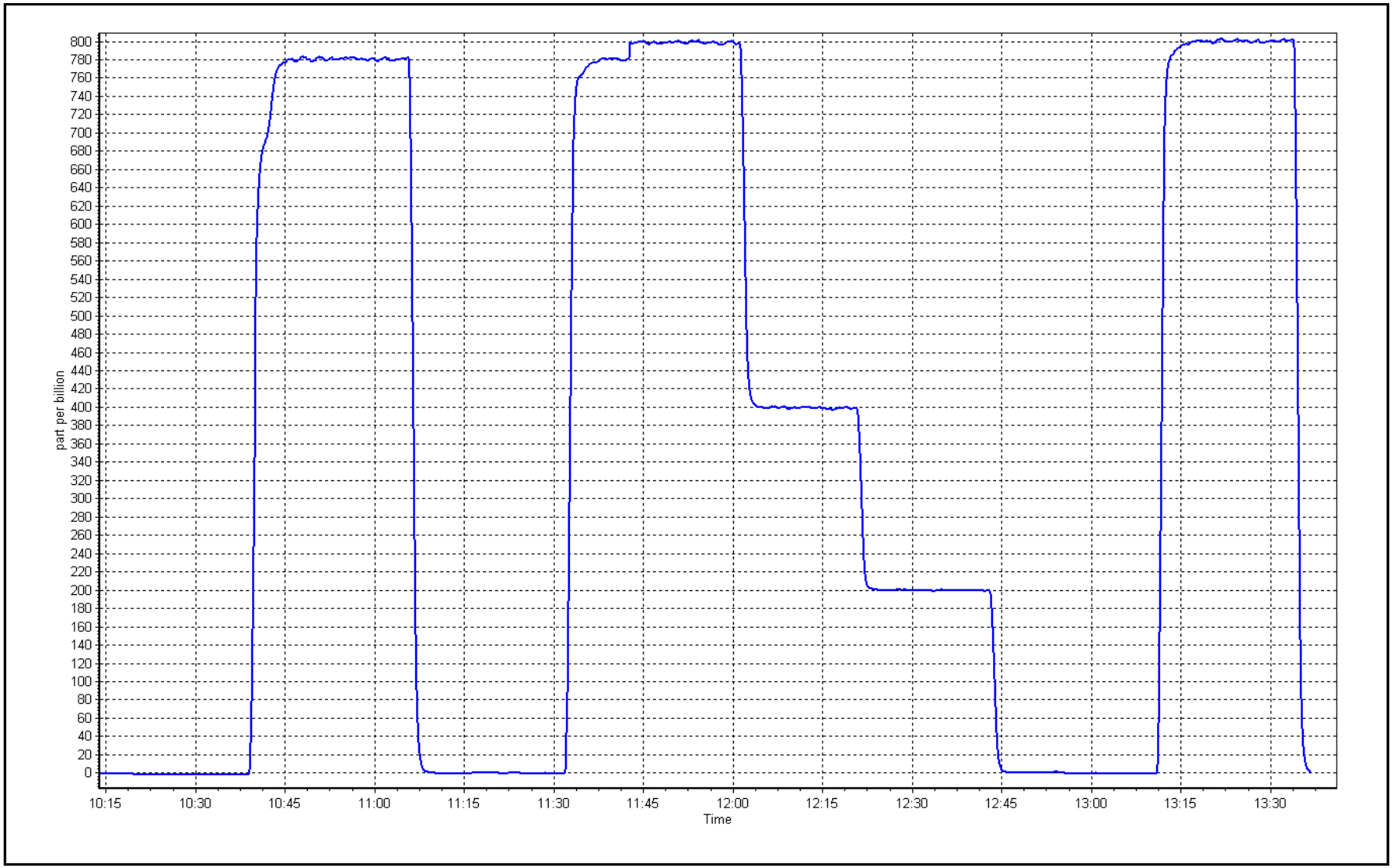
Calibration Date:	December 17, 2025	Previous Calibration:	November 17, 2025
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:13	End Time (MST):	13:39
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1331259320

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	-0.1	----	Correlation Coefficient	1.000000	*≥0.995*
799.7	799.1	1.0007	Slope	0.999543	*0.90 - 1.10*
399.4	399.0	1.0010			
200.2	199.6	1.0029	Intercept	-0.254296	*+/-30*



SO2 Calibration Plot Date: December 17, 2025 Location: Fort McKay South



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name:	Fort McKay South	Station number:	AMS 13
Calibration Date:	December 15, 2025	Last Cal Date:	November 24, 2025
Start time (MST):	10:29	End time (MST):	14:25
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.88	ppm	Cal Gas Exp Date:	September 5, 2027
Cal Gas Cylinder #:	CC500241			
Removed Cal Gas Conc:	4.88	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:	CC500241		Diff between cyl:	
Calibrator Make/Model:	Teledyne API T700		Serial Number:	2657
ZAG Make/Model:	Teledyne API T701		Serial Number:	1118

Analyzer Information

Analyzer make:	Thermo 43i TLE		Analyzer serial #:	1180540017
Converter make:	CDN-101		Converter serial #:	521
Analyzer Range	0 - 100 ppb		Converter Temp:	800 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.999960	0.991925	Backgd or Offset:	3.36	3.36
Calibration intercept:	0.081584	0.161571	Coeff or Slope:	1.09	1.09

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.4	----
As found High point	4918	81.6	79.6	78.6	1.019
As found Mid point	4959	40.8	39.8	39.3	1.024
As found Low point	4980	20.4	19.9	19.5	1.042
New cylinder response					

Baseline Corr As found:	78.2	Prev response:	79.73	*% change:	-2.0%
Baseline Corr 2nd AF pt:	38.9	AF Slope:	0.983459	AF Intercept:	0.181557
Baseline Corr 3rd AF pt:	19.1	AF Correlation:	0.999963	* = > +/-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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4918	81.6	79.6	79.3	1.004
Mid point	4959	40.8	39.8	39.5	1.008
Low point	4980	20.4	19.9	19.7	1.011
As left zero	5000	0.0	0.0	0.4	----
As left span	4918	81.6	79.6	79.3	1.004
SO2 Scrubber Check	4921	79.1	791.0	0.1	----
Date of last scrubber change:		7-Aug-25		Ave Corr Factor	1.008
Date of last converter efficiency test:					

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

Calibration Performed By: Sean Bala, Parampreet Kaur

Wood Buffalo Environmental Association

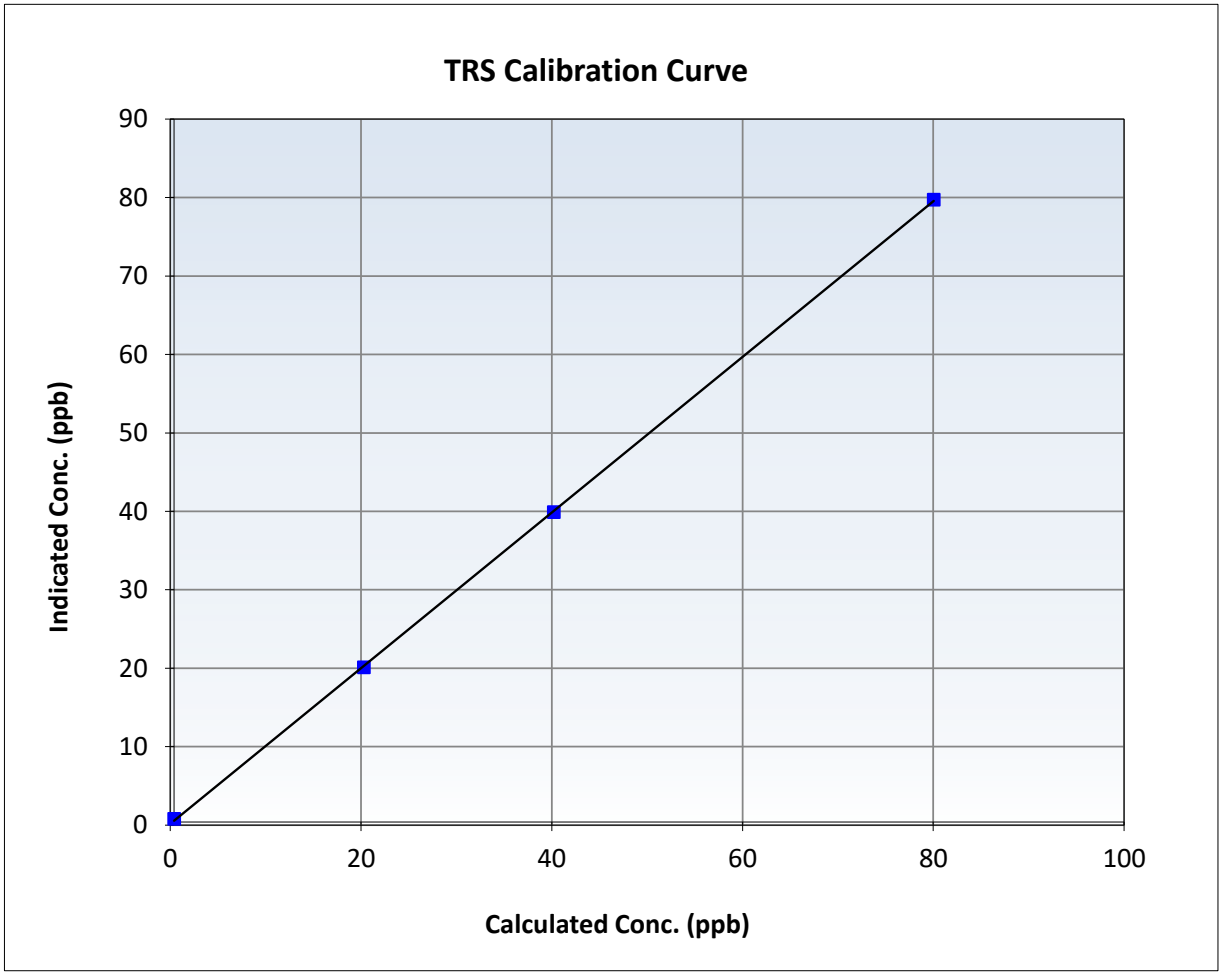
TRS Calibration Summary

Station Information

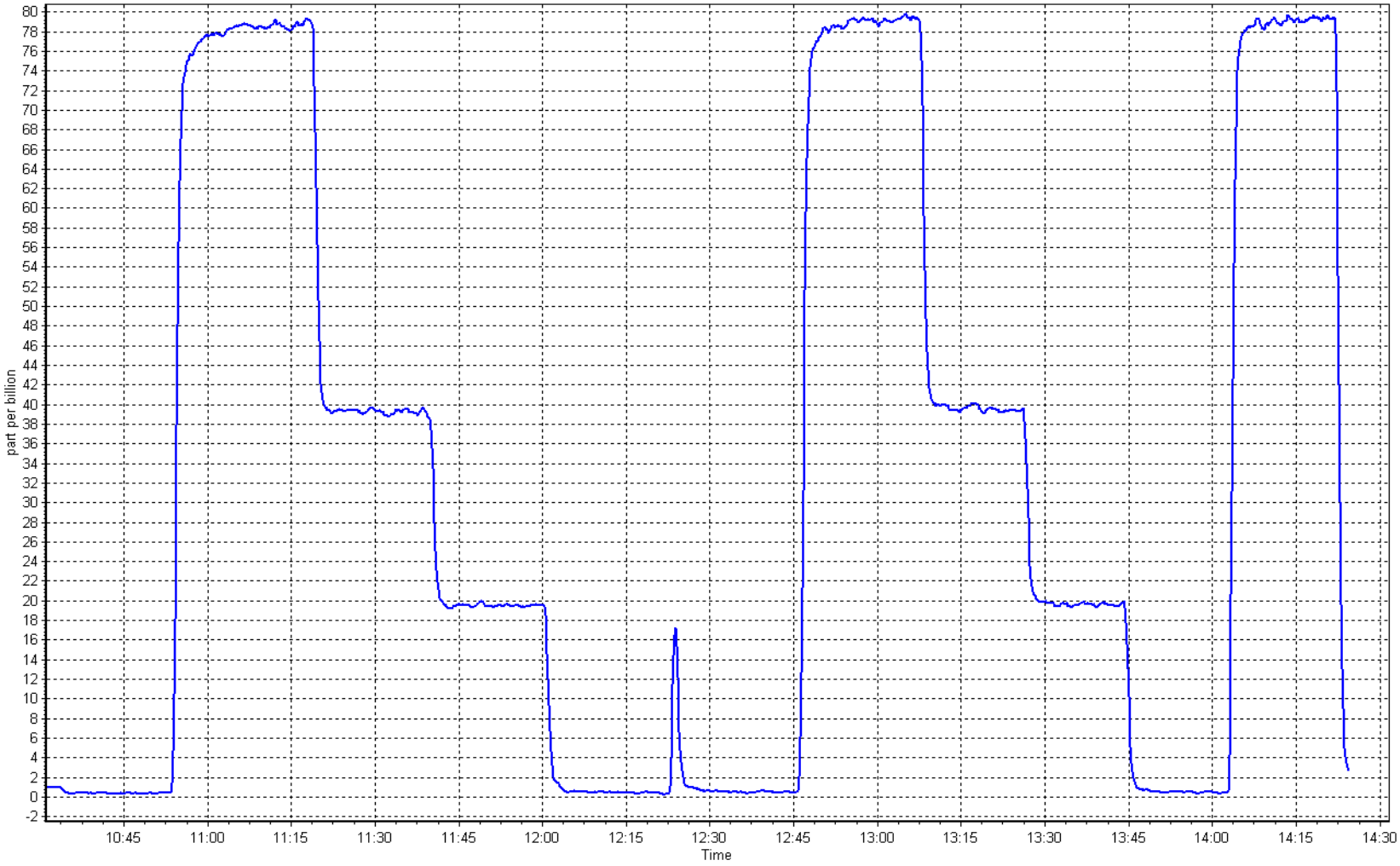
Calibration Date:	December 15, 2025	Previous Calibration:	November 24, 2025
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:29	End Time (MST):	14:25
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1180540017

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.4	----	Correlation Coefficient	0.999958	*≥0.995*
79.6	79.3	1.0044	Slope	0.991925	*0.90 - 1.10*
39.8	39.5	1.0082			
19.9	19.7	1.0106	Intercept	0.161571	*+/-3*



TRS Calibration Plot Date: December 15, 2025 Location: Fort McKay South



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Fort McKay South	Station number:	AMS 13
Calibration Date:	December 17, 2025	Last Cal Date:	November 19, 2025
Start time (MST):	10:13	End time (MST):	13:39
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC260812	Cal Gas Expiry Date:	Friday, December 29, 2028
CH4 Cal Gas Conc.	503.6 ppm	CH4 Equiv Conc.	1077.5 ppm
C3H8 Cal Gas Conc.	208.7 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	
Removed CH4 Conc.	503.6 ppm	CH4 Equiv Conc.	1077.5 ppm
Removed C3H8 Conc.	208.7 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T750	Serial Number:	281
Zero Air Gen model:	Teledyne API 751H	Serial Number:	321

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	3.07E-04	3.10E-04	NMHC SP Ratio:	4.61E-05	4.62E-05
CH4 Retention time:	16.00	16.00	NMHC Peak Area:	196813	196471
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	17.05	17.00	1.003
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	17.00	Prev response	16.97	*% 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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.1	17.05	17.08	0.998
Mid point	4960	39.5	8.51	8.51	1.001
Low point	4980	19.8	4.27	4.18	1.022
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	17.05	17.12	0.996
				Average Correction Factor	1.007

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

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	9.08	9.08	1.000
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.08	Prev response	9.05	*% 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	79.1	9.08	9.08	1.000
Mid point	4960	39.5	4.53	4.52	1.004
Low point	4980	19.8	2.27	2.23	1.019
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	9.08	9.08	1.000
				Average Correction Factor	1.008

CH4 As Found Data

Set Point	Dilution air flow rate (sccm)	16	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	196813
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.1	7.97	7.92	1.006
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.92	Prev response	7.92	*% 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	79.1	7.97	8.00	0.995
Mid point	4960	39.5	3.98	3.99	0.997
Low point	4980	19.8	1.99	1.95	1.024
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.1	7.97	8.04	0.991
				Average Correction Factor	1.005

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	0.997962	1.003802
THC Cal Offset:	-0.038699	-0.044490
CH4 Cal Slope:	0.995809	1.006970
CH4 Cal Offset:	-0.016138	-0.023531
NMHC Cal Slope:	0.999826	1.001223
NMHC Cal Offset:	-0.022962	-0.020759

Calibration Performed By: Sean Bala, Parampreet Kaur

Wood Buffalo Environmental Association

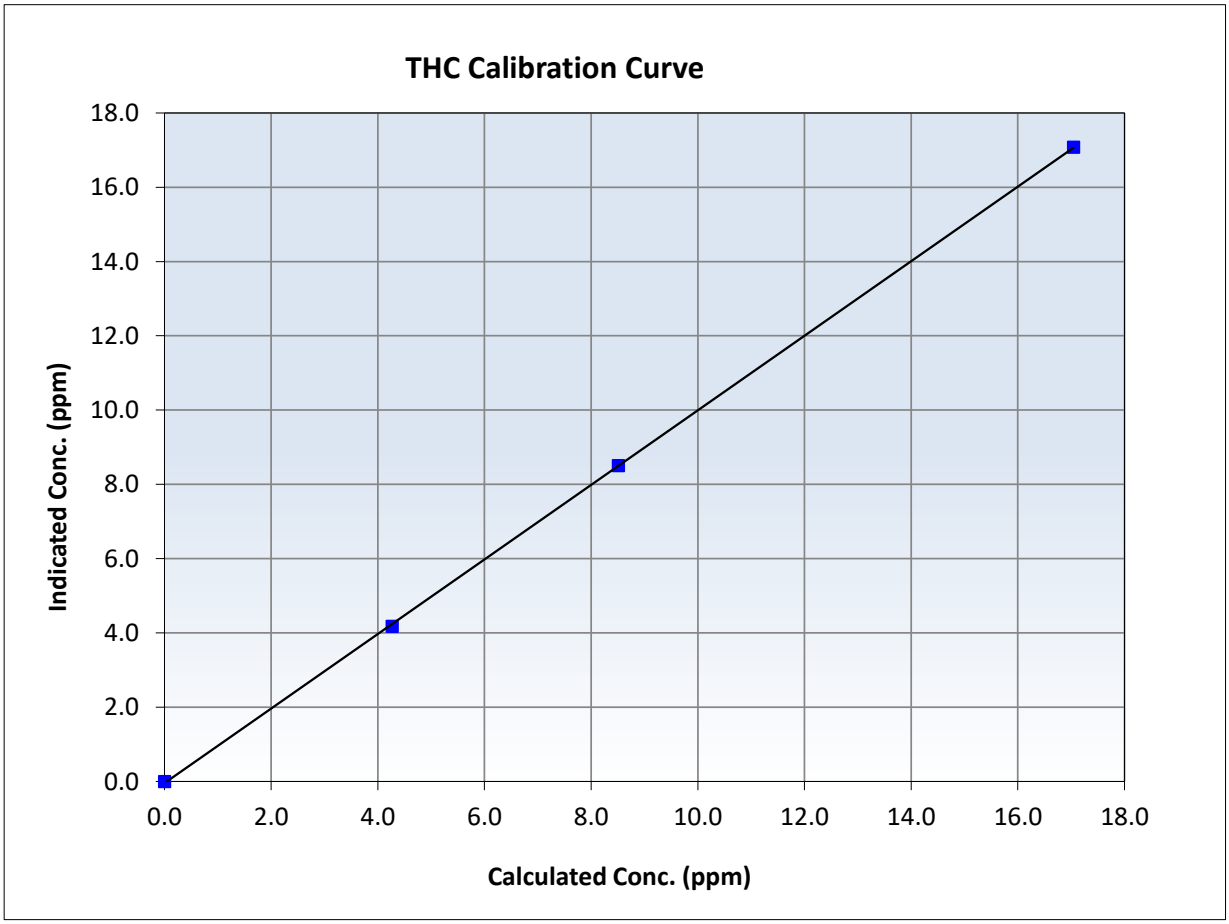
THC Calibration Summary

Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 19, 2025
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:13	End Time (MST):	13:39
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999962	≥0.995
17.05	17.08	0.9980	Slope	1.003802	0.90 - 1.10
8.51	8.51	1.0010			
4.27	4.18	1.0216	Intercept	-0.044490	+/-0.5



Wood Buffalo Environmental Association

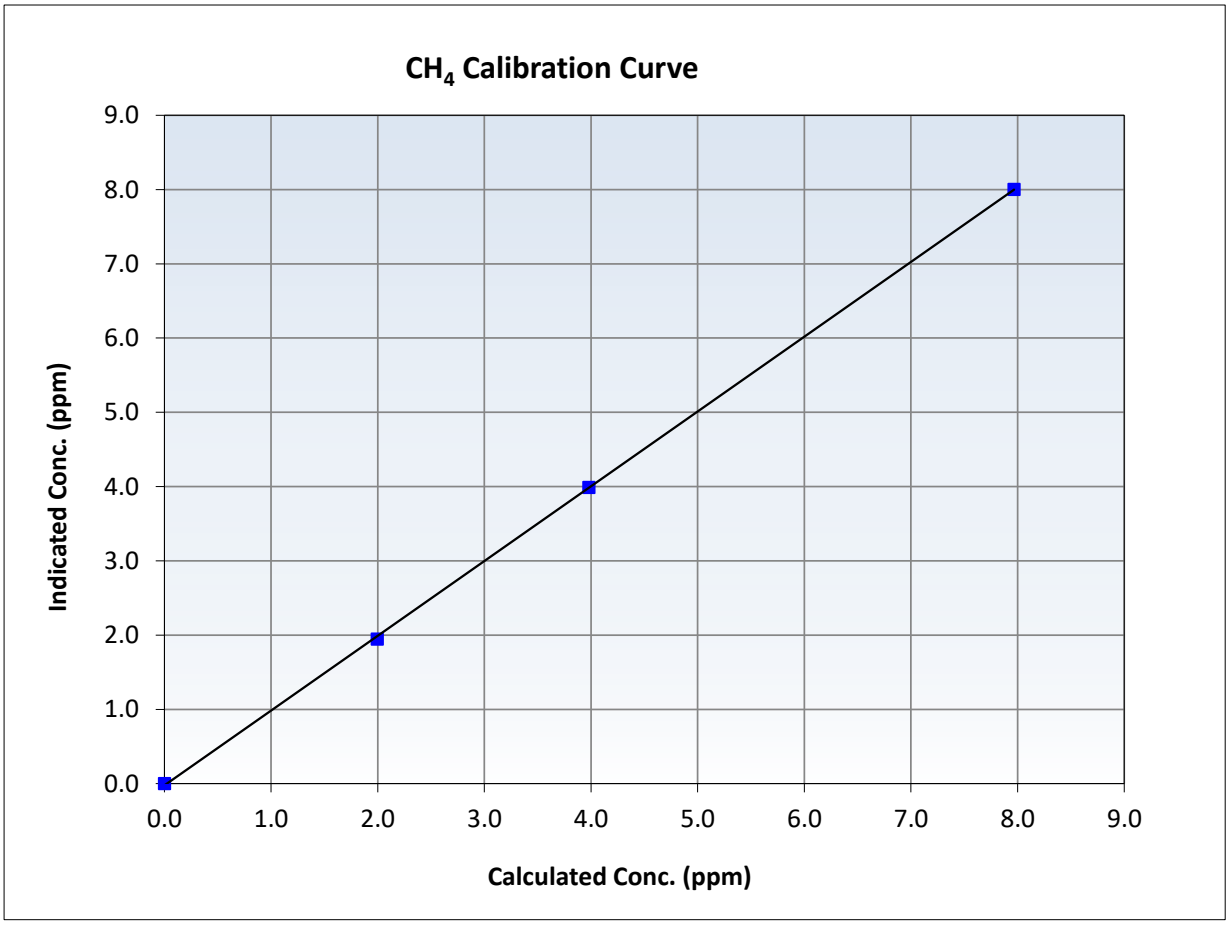
CH_4 Calibration Summary

Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 19, 2025
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:13	End Time (MST):	13:39
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999943	≥0.995
7.97	8.00	0.9954	Slope	1.006970	0.90 - 1.10
3.98	3.99	0.9970			
1.99	1.95	1.0238	Intercept	-0.023531	+/-0.5



Wood Buffalo Environmental Association

NMHC Calibration Summary

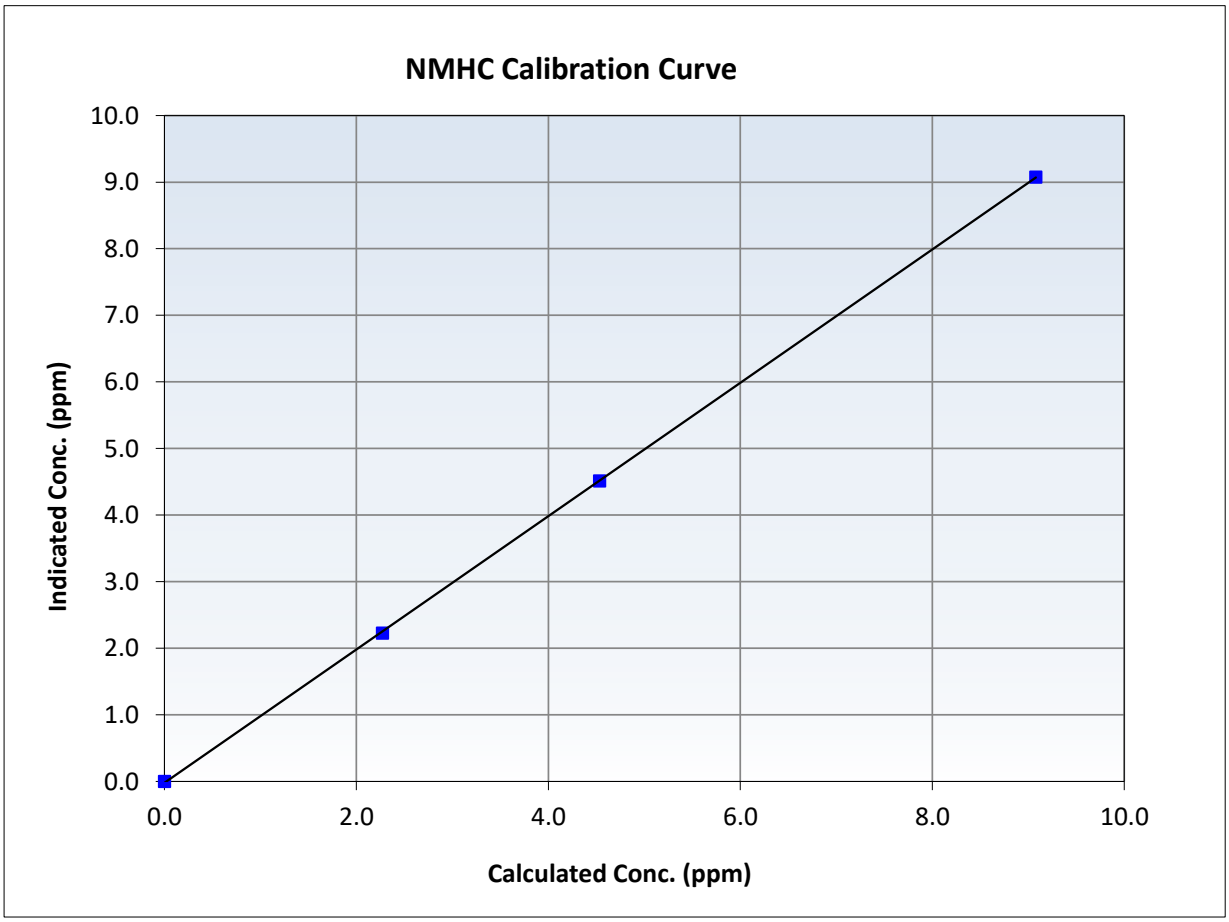
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 19, 2025
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:13	End Time (MST):	13:39
Analyzer make:	Thermo 55i	Analyzer serial #:	1181490018

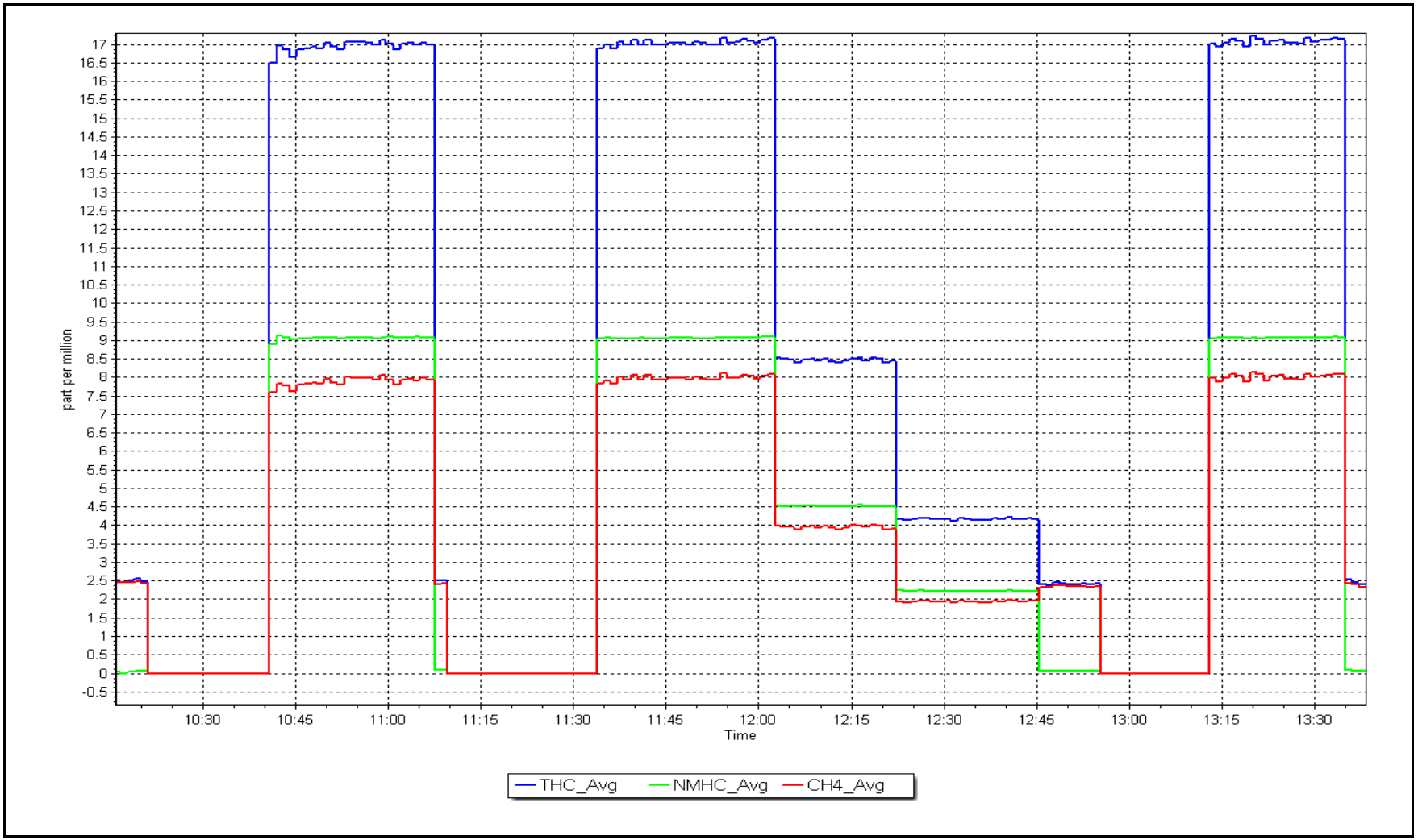
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.00	----
9.08	9.08	1.0001
4.53	4.52	1.0043
2.27	2.23	1.0192

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999975	*≥0.995*
Slope	1.001223	*0.90 - 1.10*
Intercept	-0.020759	*+/-0.5*



NMHC Calibration Plot Date: December 17, 2025 Location: Fort McKay South



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Fort McKay South
Station number:	AMS 13
Calibration Date:	December 16, 2025
Last Cal Date:	November 12, 2025
Start time (MST):	10:03
End time (MST):	14:18
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	T2UP1RP	Cal Gas Expiry Date:	November 17, 2026
NOX Cal Gas Conc:	48.25 ppm	NO Cal Gas Conc:	47.88 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	48.25 ppm	Removed Gas NO Conc:	47.88 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	2657
ZAG make/model:	Teledyne APIT701	Serial Number:	1118

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	----	----
AF High point	4917	83.5	805.7	799.5	6.2	814.2	802.5	11.5	0.9894	0.9963
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X =	806.6 ppb	NO =	797.9 ppb	* = > +/-5% change initiates investigation	*Percent Change	NO_X = 0.9%
Baseline Corr 1st pt	NO_X =	814.3 ppb	NO =	802.5 ppb	As Found Statistics	*Percent Change	NO = 0.6%
Baseline Corr 2nd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO_X r^2:	Nx Sl:	Nx Int:
Baseline Corr 3rd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO r^2:	NO Sl:	NO Int:
					As found NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42iQ Serial Number: 12300522720

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	1.126	1.125	NO bkgnd or offset:	3.0	3.0
NOX coeff or slope:	0.596	0.993	NOX bkgnd or offset:	3.2	3.2
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	162.1	160.9

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	1.004510	1.000723
NO_X Cal Offset:	-2.733107	-2.572306
NO Cal Slope:	1.002736	1.002665
NO Cal Offset:	-3.770487	-3.970410
NO_2 Cal Slope:	0.984281	0.975925
NO_2 Cal Offset:	2.392924	1.128677

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.2	0.1	0.0	----	----
High point	4917	83.5	805.7	799.5	6.2	805.4	800.0	5.4	1.0004	0.9994
Mid point	4958	41.8	403.4	400.3	3.1	398.8	394.5	4.3	1.0115	1.0147
Low point	4979	20.9	201.7	200.1	1.5	197.1	193.2	3.9	1.0233	1.0359
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	----	----
As left span	4917	83.5	805.7	404.1	401.6	788.5	404.1	384.5	1.0218	1.0000
							Average Correction Factor		1.0117	1.0167

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.0	----	----
High GPT point	795.5	401.6	400.1	390.6	1.0243	97.6%
Mid GPT point	795.5	599.7	202.0	200.0	1.0099	99.0%
Low GPT point	795.5	699.7	102.0	101.0	1.0097	99.0%
				Average Correction Factor	1.0146	98.6%

Notes: Adjusted span only.

Calibration Performed By: Parampreet Kaur, Sean Bala

Wood Buffalo Environmental Association

NO_X Calibration Summary

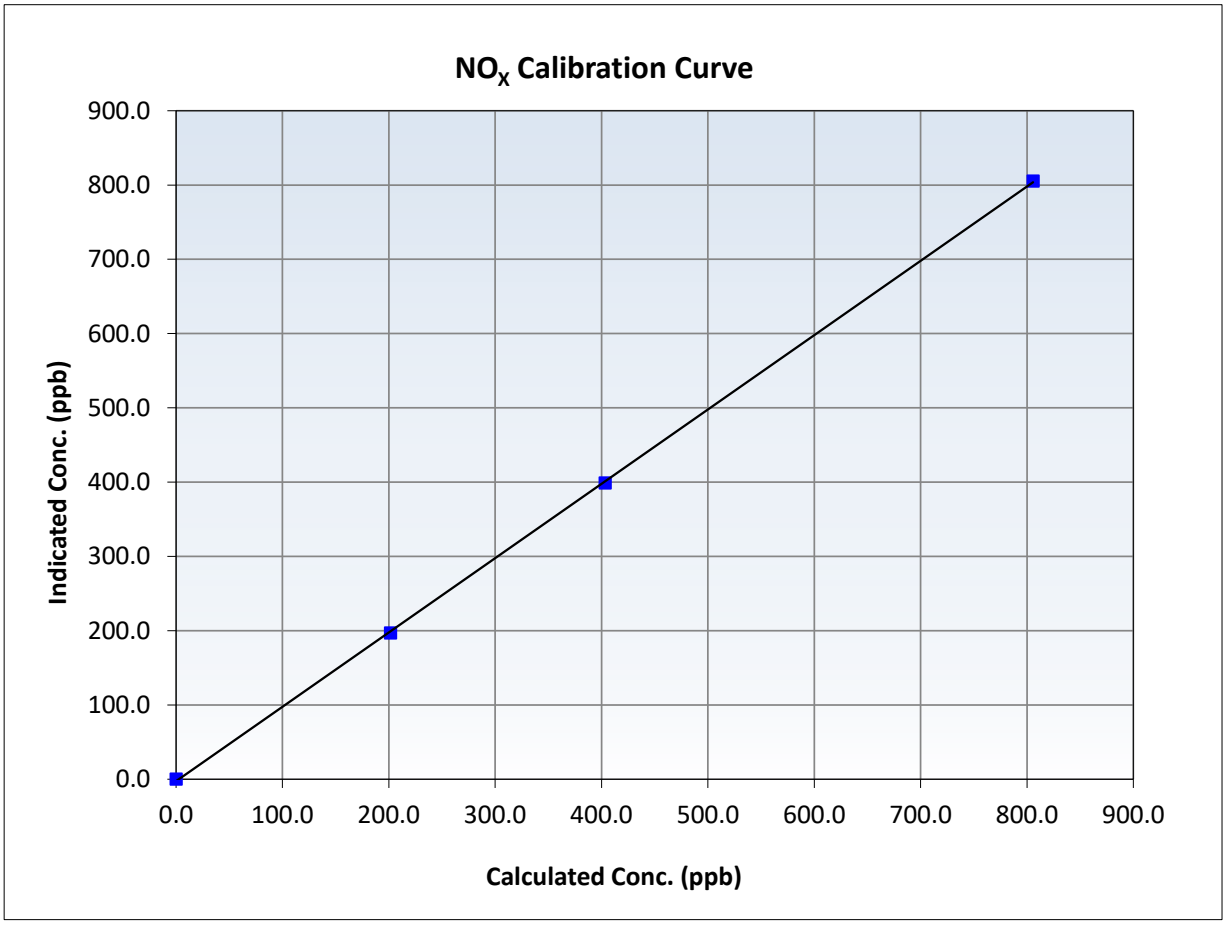
Station Information

Calibration Date:	December 16, 2025	Previous Calibration:	November 12, 2025
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:03	End Time (MST):	14:18
Analyzer make:	Thermo 42iQ	Analyzer serial #: 14:18	12300522720

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
805.7	805.4	1.0004
403.4	398.8	1.0115
201.7	197.1	1.0233

Statistical Evaluation		Limits
Correlation Coefficient	0.999942	≥0.995
Slope	1.000723	0.90 - 1.10
Intercept	-2.572306	+/-20



Wood Buffalo Environmental Association

NO_2 Calibration Summary

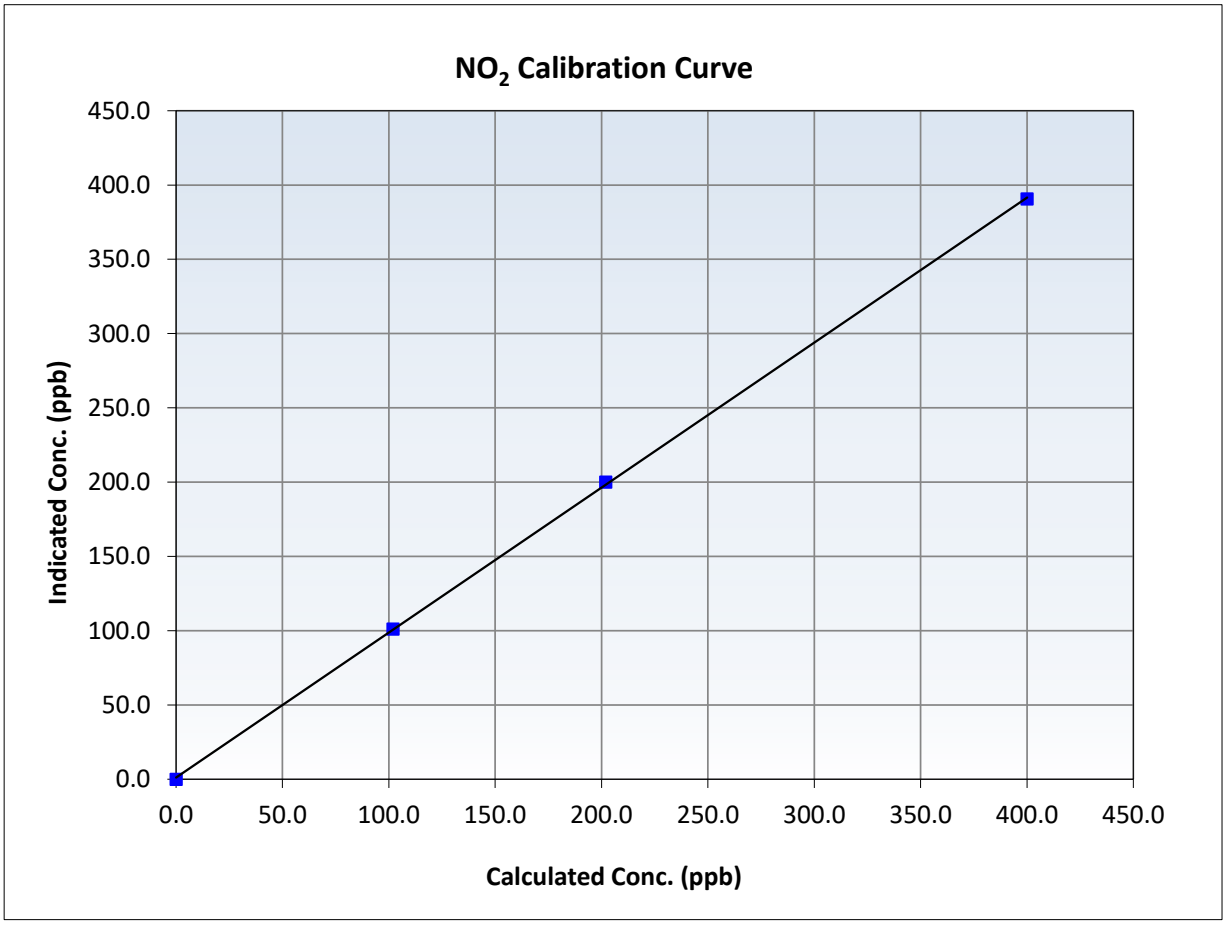
Station Information

Calibration Date:	December 16, 2025	Previous Calibration:	November 12, 2025
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:03	End Time (MST):	14:18
Analyzer make:	Thermo 42iQ	Analyzer serial #: 14:18	12300522720

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
400.1	390.6	1.0243
202.0	200.0	1.0099
102.0	101.0	1.0097

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999935	*≥0.995*
Slope	0.975925	*0.90 - 1.10*
Intercept	1.128677	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

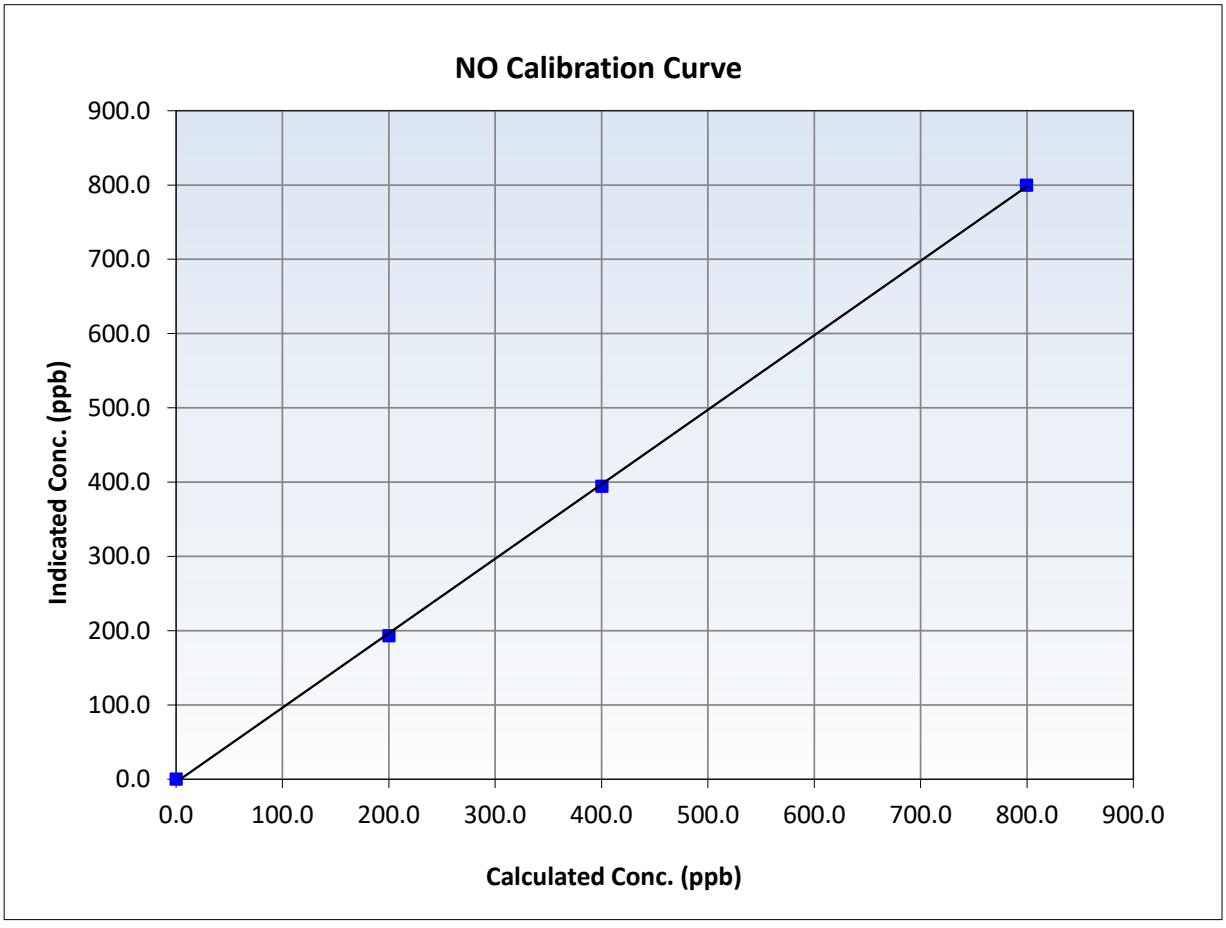
Station Information

Calibration Date:	December 16, 2025	Previous Calibration:	November 12, 2025
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:03	End Time (MST):	14:18
Analyzer make:	Thermo 42iQ	Analyzer serial #: 14:18	12300522720

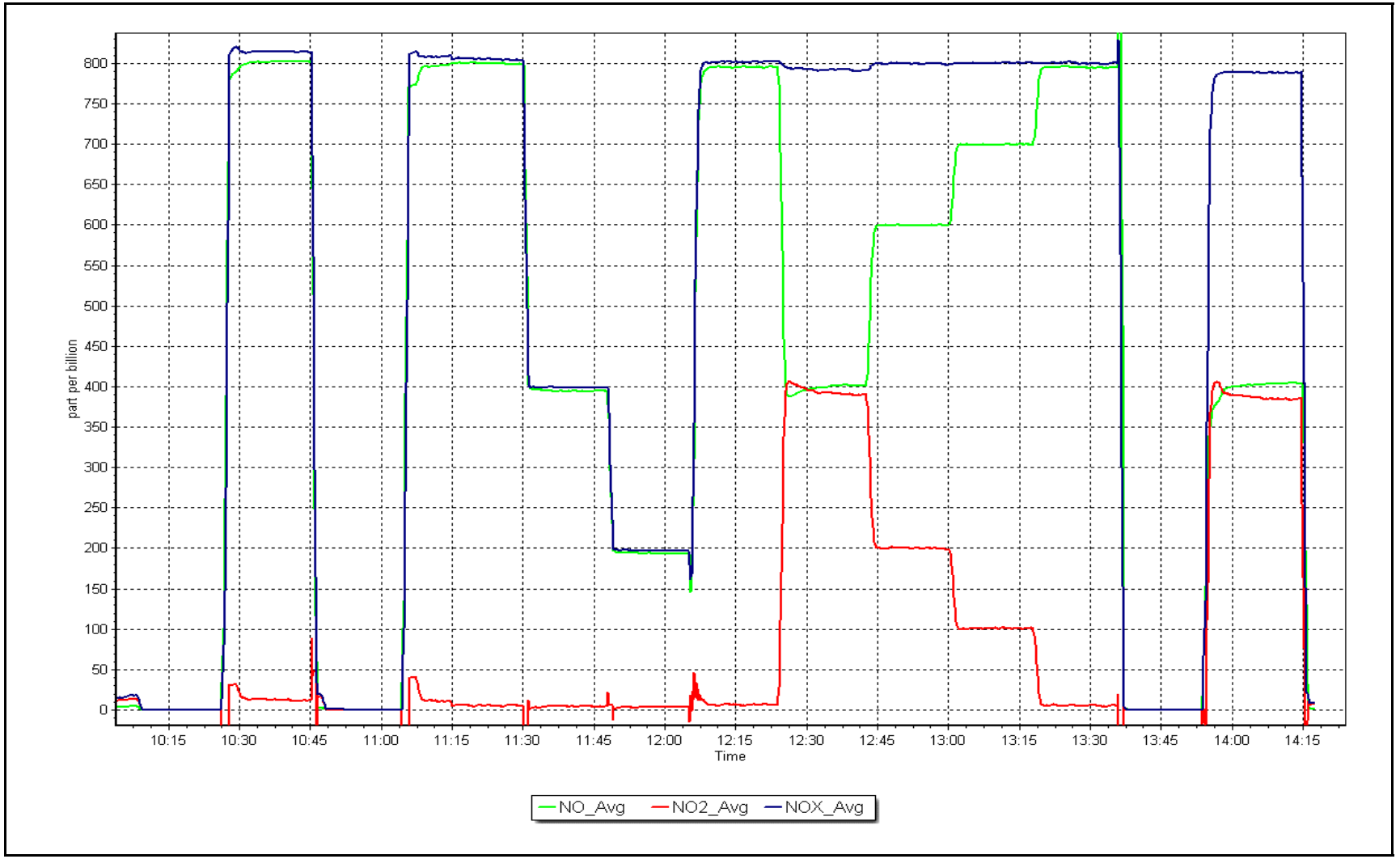
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
799.5	800.0	0.9994
400.3	394.5	1.0147
200.1	193.2	1.0359

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999879	*≥0.995*
Slope	1.002665	*0.90 - 1.10*
Intercept	-3.970410	*+/-20*



NO_X Calibration Plot Date: December 16, 2025 Location: Fort McKay South



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Fort McKay South	Station number:	AMS 13
Calibration Date:	December 1, 2025	Last Cal Date:	November 3, 2025
Start time (MST):	10:58	End time (MST):	13:45
Reason:	Routine		

Calibration Standards

O3 generation mode:	Photometer		
Calibrator Make/Model:	Teledyne API T750	Serial Number:	281
ZAG Make/Model:	Teledyne API 751H	Serial Number:	321

Analyzer Information

Analyzer make:	Teledyne API T400		Analyzer serial #:	7413	
Analyzer Range	0 - 500 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.002943	1.000114	Backgd or Offset:	-2.8	-2.8
Calibration intercept:	1.260000	1.580000	Coeff or Slope:	1.025	1.025

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	800.0	0.0	0.1	----
As found High point	5000	984.4	400.0	400.5	0.999
As found Mid point					
As found Low point					
Baseline Corr As found:	400.4	Previous response	402.4	*% 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	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	800.0	0.0	0.5	----
High point	5000	984.4	400.0	400.9	0.998
Mid point	5000	799.8	200.0	202.7	0.987
Low point	5000	682.8	100.0	102.3	0.978
As left zero	5000	800.0	0.0	0.6	----
As left span	5000	984.4	400.0	404.3	0.989
				Average Correction Factor	0.987

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

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

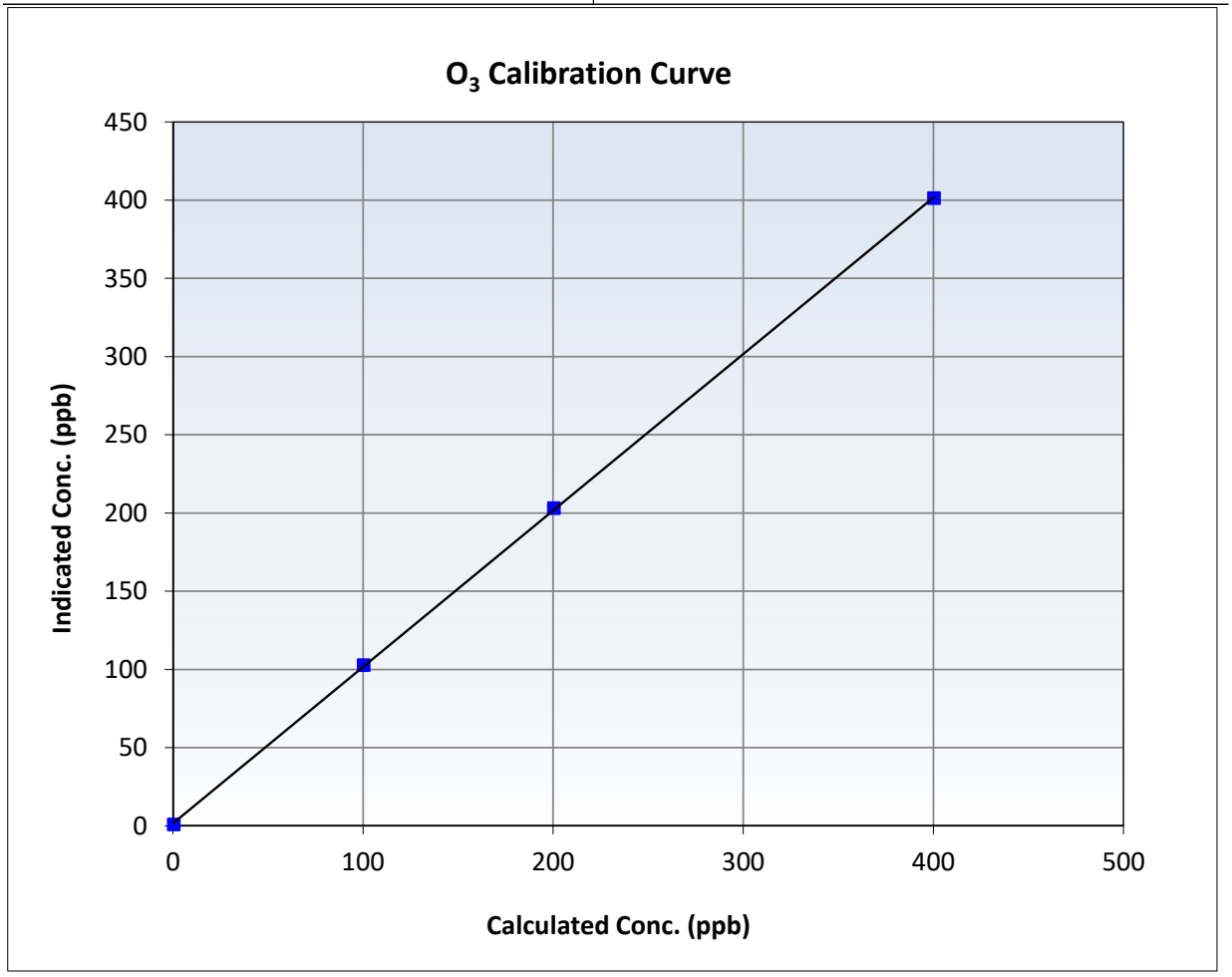
O_3 Calibration Summary

Station Information

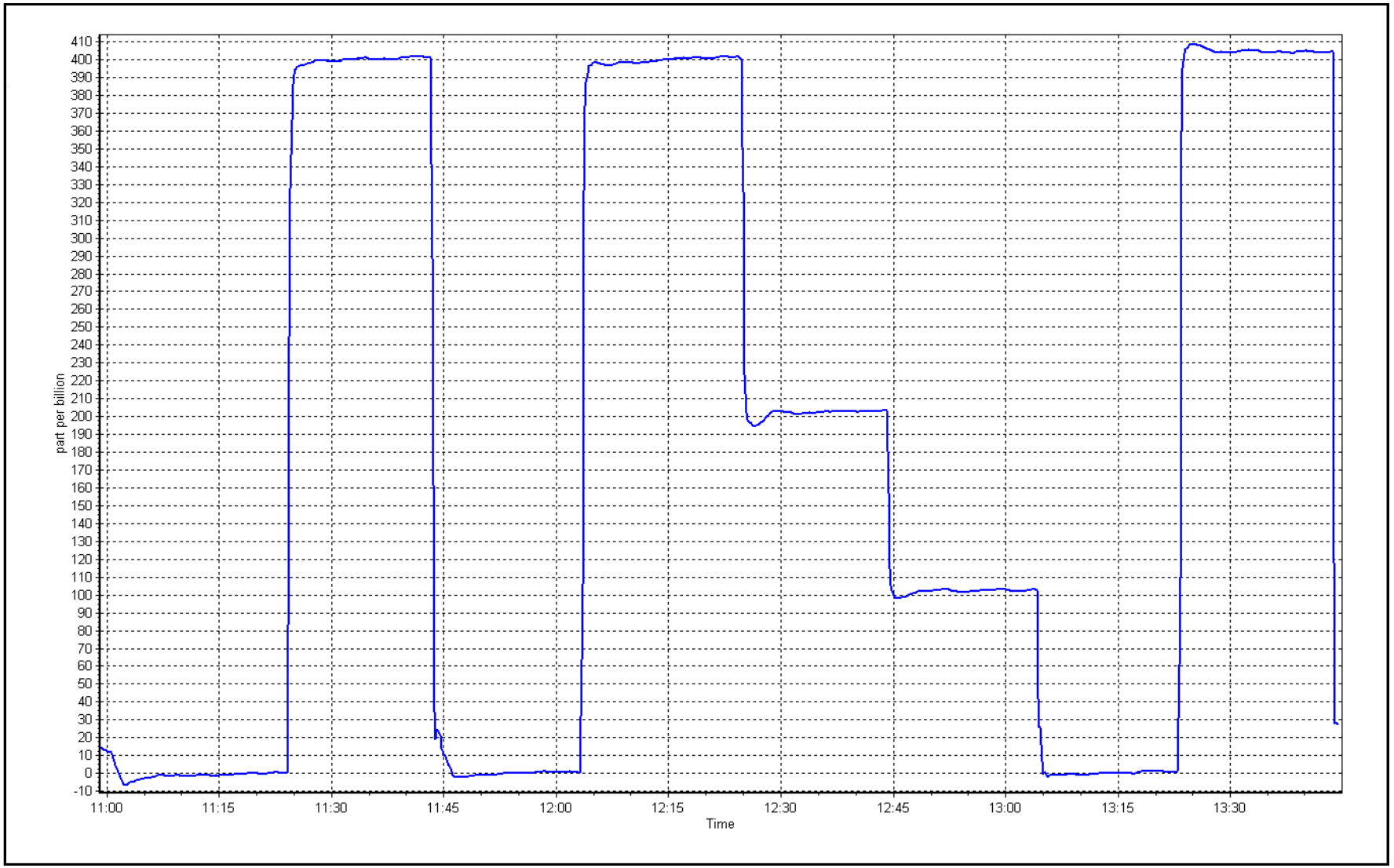
Calibration Date:	December 1, 2025	Previous Calibration:	November 3, 2025
Station Name:	Fort McKay South	Station Number:	AMS 13
Start Time (MST):	10:58	End Time (MST):	13:45
Analyzer make:	Teledyne API T400	Analyzer serial #:	7413

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.5	----	Correlation Coefficient	0.999961	*≥0.995*
400.0	400.9	0.9978	Slope	1.000114	*0.90 - 1.10*
200.0	202.7	0.9867			
100.0	102.3	0.9775	Intercept	1.580000	*+/- 5*



O_3 Calibration Plot Date: December 1, 2025 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:	December 16, 2025	Last Cal Date:	November 24, 2025
Start time (MST):	11:30	End time (MST):	12:15
Analyzer Make:	Teledyne API T640	S/N:	1335
Particulate Fraction:	PM2.5		
Flow Meter Make/Model:	Alicat FP-25	S/N:	388746
Temp/RH standard:	Alicat FP-25	S/N:	388746

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	*(Limits)*
T (^{o}C)	-19.1	-19.72	-19.1	☐	+/- 2 ^{o}C
P (mmHg)	729.0	730.00	729.0	☐	+/- 10 mmHg
Flow (LPM)	4.98	5.02	4.98	☐	+/- 0.25 LPM
PW% (pump)	49	-----	49	☐	>80%
Zero Verification	PM w/o HEPA:	3.4	PM w/ HEPA:	0.0	<0.2 ug/m3

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

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

Quarterly Calibration Test

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

Parameter	As found	Post maintenance	As left	Adjusted	*(Limits)*
PMT Peak Test	9.1	10.1	10.9	☑	+/- 0.5

Date Optical Chamber Cleaned: December 16, 2025

Date Disposable Filter Changed: December 16, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: June 2, 2025

Date RH/T Sensor Cleaned: June 2, 2025

Notes: Verified the Pressure, temperature and flow. Leak check passed. PMT peak test adjusted.

Calibration by: Sean Bala

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:	December 19, 2025	Last Cal Date:	December 16, 2025
Start time (MST):	10:51	End time (MST):	12:35
Analyzer Make:	Teledyne API T640	S/N:	1335
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)	-25.00	-25.83	-25.34	☐	+/- 2 °C
P (mmHg)	727.40	729.78	729.80	☐	+/- 10 mmHg
Flow (LPM)	5.06	4.17	4.932	☐	+/- 0.25 LPM
PW% (pump)	49	-----	49	☐	>80%
Zero Verification	PM w/o HEPA:	48.9	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: June 10, 2024 — Lot No.: 100128-050-042

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

Date Optical Chamber Cleaned: December 19, 2025

Date Disposable Filter Changed: December 16, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: June 2, 2025

Date RH/T Sensor Cleaned: June 2, 2025

Notes: Investigated issue with irregularly high readings. Cleaned chamber, second PMT test passed. Verified temperature, pressure and flow. No adjustments made. Leak checks all passed.

Calibration by: Braiden Boutilier

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS14
ANZAC
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Anzac	Station number:	AMS 14
Calibration Date:	December 5, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	11:19	End time (MST):	14:32
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:	3060
Zero Air Gen Model:	API T701H		Serial Number:	357

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	0710321322	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.008288	1.002105	Backgd or Offset:	25.6	25.4
Calibration intercept:	-0.727248	0.028161	Coeff or Slope:	1.111	1.111

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.5	----
As found High point	4937	79.6	798.4	800.6	0.998
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	800.1	Previous response	804.3	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.6	----
High point	4937	79.6	798.4	800.7	0.997
Mid point	4977	39.7	398.2	398.0	1.001
Low point	4992	19.7	197.8	198.2	0.998
As left zero	5000	0.0	0.0	0.7	----
As left span	4937	79.6	798.4	803.0	0.994
				Average Correction Factor:	0.999

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

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

SO_2 Calibration Summary

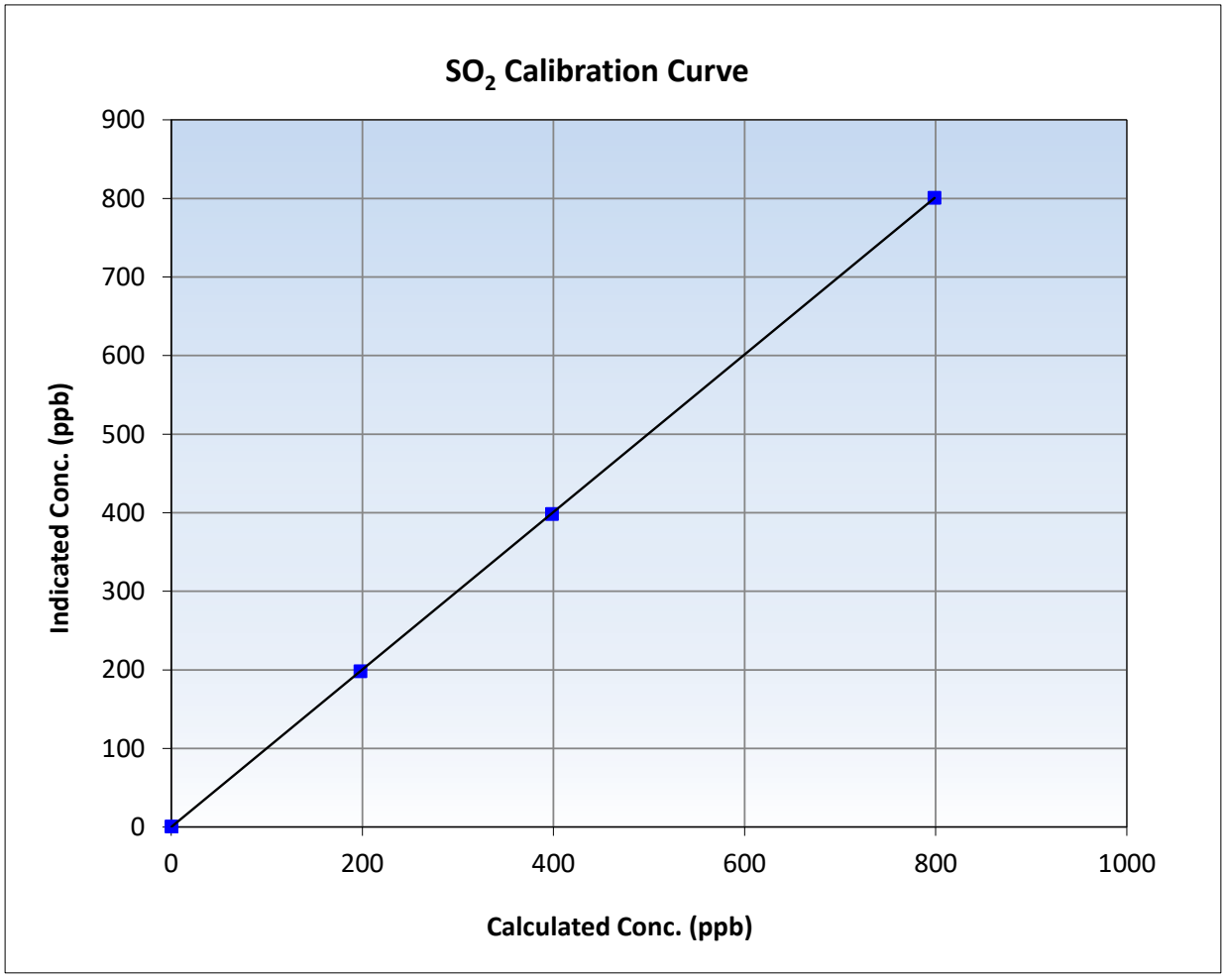
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 17, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	11:19	End Time (MST):	14:32
Analyzer make:	Thermo 43i	Analyzer serial #:	0710321322

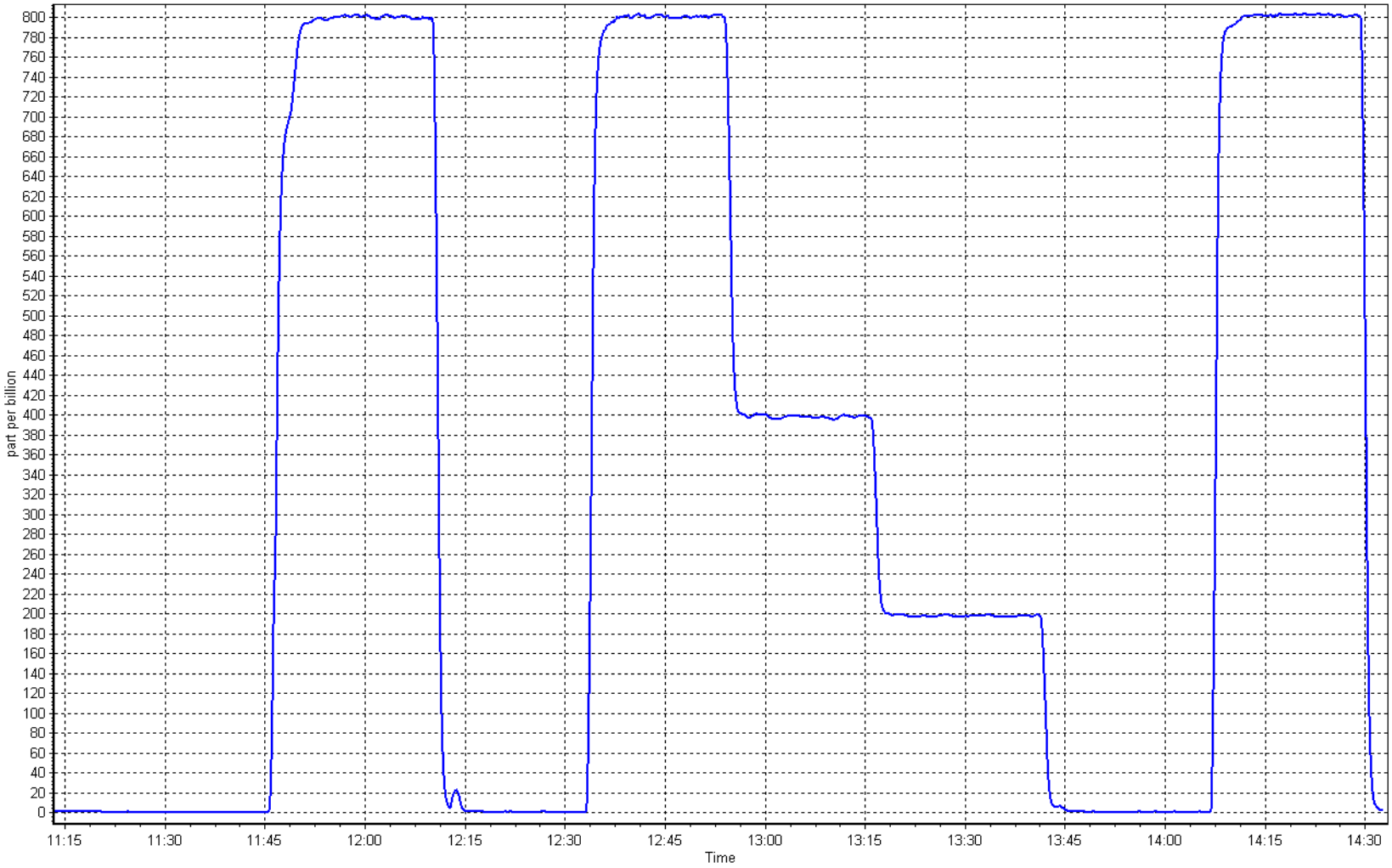
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.6	----
798.4	800.7	0.9972
398.2	398.0	1.0005
197.8	198.2	0.9980

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999995	*≥0.995*
Slope	1.002105	*0.90 - 1.10*
Intercept	0.028161	*+/-30*



SO2 Calibration Plot Date: December 5, 2025 Location: Anzac



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name:	Anzac	Station number:	AMS 14
Calibration Date:	December 11, 2025	Last Cal Date:	November 26, 2025
Start time (MST):	10:47	End time (MST):	16:20
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.15	ppm	Cal Gas Exp Date:	January 3, 2026
Cal Gas Cylinder #:	CC510379			
Removed Cal Gas Conc:	5.15	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	API T700		Serial Number:	3060
ZAG Make/Model:	API 701H		Serial Number:	357

Analyzer Information

Analyzer make:	Thermo 43i-TLE		Analyzer serial #:	1218153582
Converter make:	CD Nova CDN-101		Converter serial #:	631
Analyzer Range	0 - 100 ppb		Converter Temp:	800 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.985897	1.010603	Backgd or Offset:	2.28	2.38
Calibration intercept:	0.061300	-0.078584	Coeff or Slope:	0.990	1.027

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4922	77.7	80.0	77.9	1.026
As found Mid point	4961	38.9	40.1	39.3	1.017
As found Low point	4981	19.4	20.0	19.0	1.046
New cylinder response					
Baseline Corr As found:	78.0	Prev response:	78.97	*% change:	-1.2%
Baseline Corr 2nd AF pt:	39.4	AF Slope:	0.976667	AF Intercept:	-0.178862
Baseline Corr 3rd AF pt:	19.1	AF Correlation:	0.999926	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4922	77.7	80.0	80.9	0.989
Mid point	4961	38.9	40.1	40.3	0.994
Low point	4981	19.4	20.0	19.8	1.009
As left zero	5000	0.0	0.0	0.4	----
As left span	4922	77.7	80.0	81.0	0.988
SO2 Scrubber Check	4921	79.5	794.9	0.1	----
Date of last scrubber change:		28-May-25		Ave Corr Factor	0.997
Date of last converter efficiency test:		September 16, 2025		103.4%	efficiency

Notes: Changed sample inlet filter after as founds. Ran scrubber check after calibrator zero and it passed. Adjusted span only.

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

TRS Calibration Summary

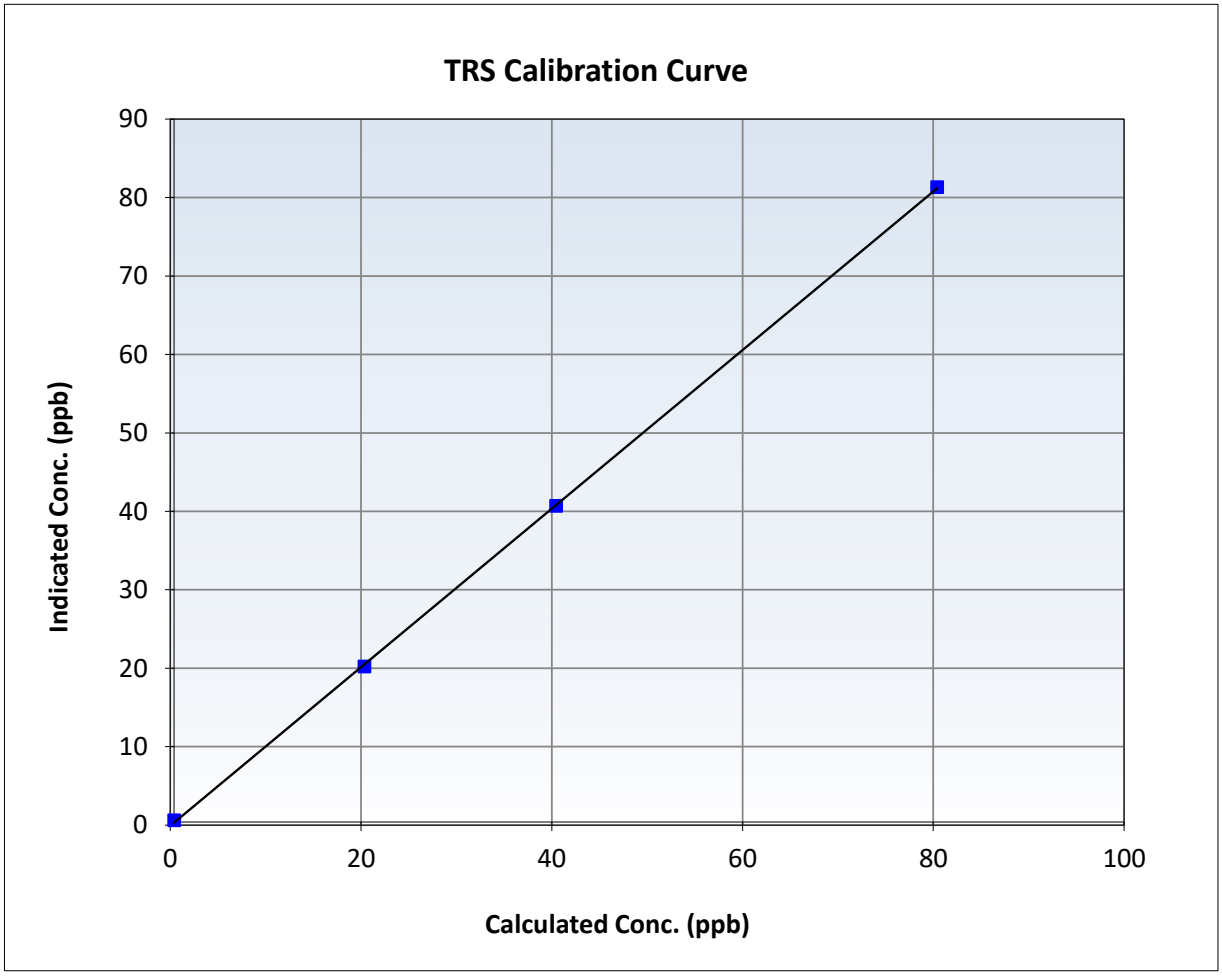
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 26, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	10:47	End Time (MST):	16:20
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1218153582

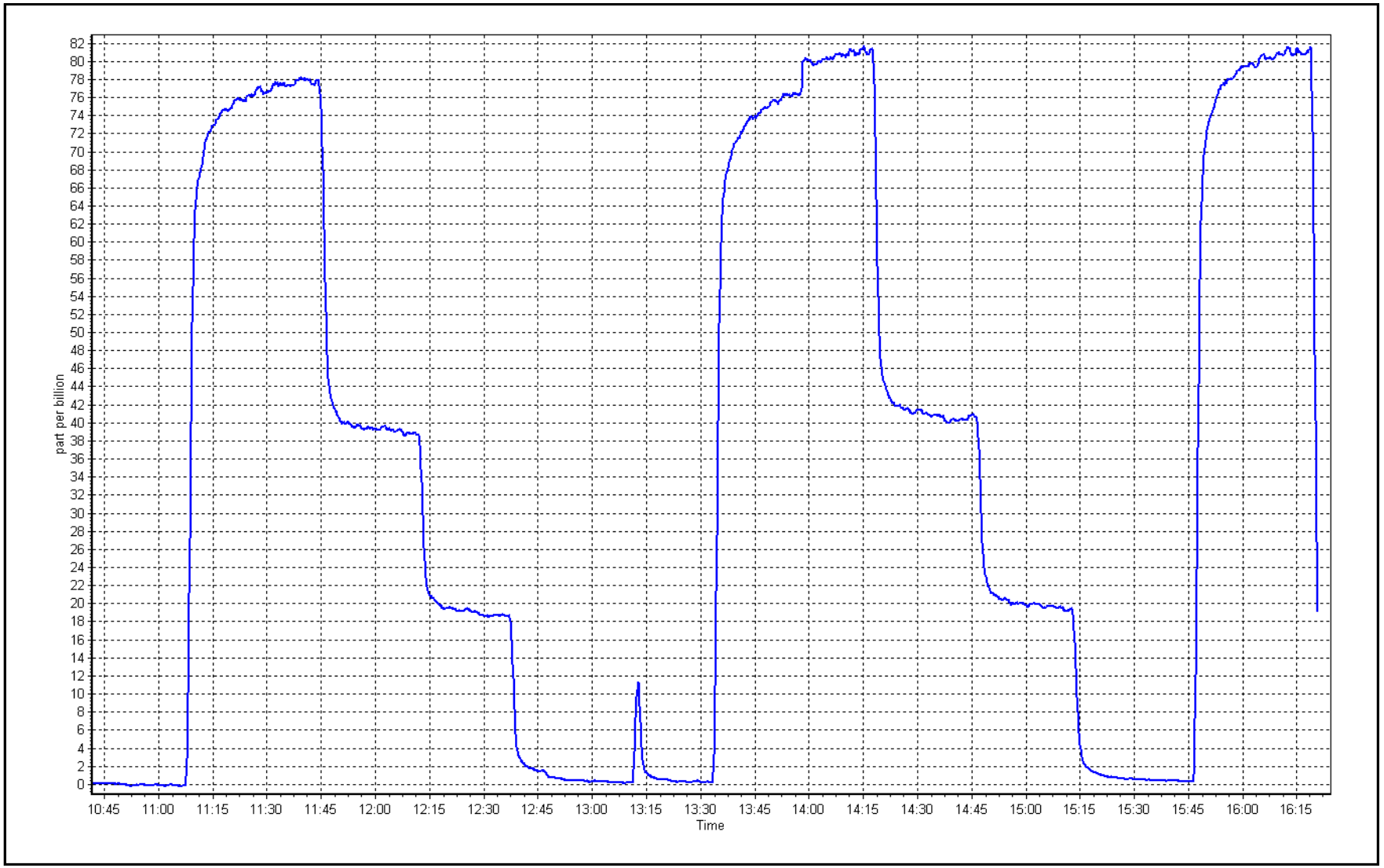
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
80.0	80.9	0.9889
40.1	40.3	0.9939
20.0	19.8	1.0087

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999945	*≥0.995*
Slope	1.010603	*0.90 - 1.10*
Intercept	-0.078584	*+/-3*



TRS Calibration Plot Date: December 11, 2025 Location: Anzac



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Anzac	Station number:	AMS 14
Calibration Date:	December 5, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	11:19	End time (MST):	14:32
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC462030	Cal Gas Expiry Date:	October 9, 2032
CH4 Cal Gas Conc.	505.3 ppm	CH4 Equiv Conc.	1068.8 ppm
C3H8 Cal Gas Conc.	204.9 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH4 Conc.	505.3 ppm	CH4 Equiv Conc.	1068.8 ppm
Removed C3H8 Conc.	204.9 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	API T700	Serial Number:	3060
Zero Air Gen model:	API 701H	Serial Number:	357

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	Finish		Start	Finish
CH4 SP Ratio:	2.96E-04	2.96E-04	NMHC SP Ratio:	5.87E-05	5.87E-05
CH4 Retention time:	15.1	15.1	NMHC Peak Area:	152289	152289
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4937	79.6	16.96	17.11	0.991
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	17.11	Prev response	16.86	*% change	1.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4937	79.6	16.96	17.07	0.993
Mid point	4977	39.7	8.46	8.30	1.020
Low point	4992	19.7	4.20	4.08	1.030
As left zero	5000	0.0	0.00	0.00	----
As left span	4937	79.6	16.96	17.04	0.995
				Average Correction Factor	0.995

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

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4937	79.6	8.94	9.02	0.991
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.02	Prev response	8.89	*% 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	4937	79.6	8.94	9.01	0.993
Mid point	4977	39.7	4.46	4.41	1.011
Low point	4992	19.7	2.21	2.18	1.017
As left zero	5000	0.0	0.00	0.00	----
As left span	4937	79.6	8.94	8.99	0.995
				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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4937	79.6	8.02	8.09	0.992
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.09	Prev response	7.97	*% change	1.4%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4937	79.6	8.02	8.06	0.995
Mid point	4977	39.7	4.00	3.89	1.029
Low point	4992	19.7	1.99	1.90	1.045
As left zero	5000	0.0	0.00	0.00	----
As left span	4937	79.6	8.02	8.06	0.995
				Average Correction Factor	1.023

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	0.996009	1.008316
THC Cal Offset:	-0.035840	-0.104967
CH4 Cal Slope:	0.998784	1.007522
CH4 Cal Offset:	-0.037171	-0.065761
NMHC Cal Slope:	0.994020	1.008312
NMHC Cal Offset:	0.000134	-0.037410

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

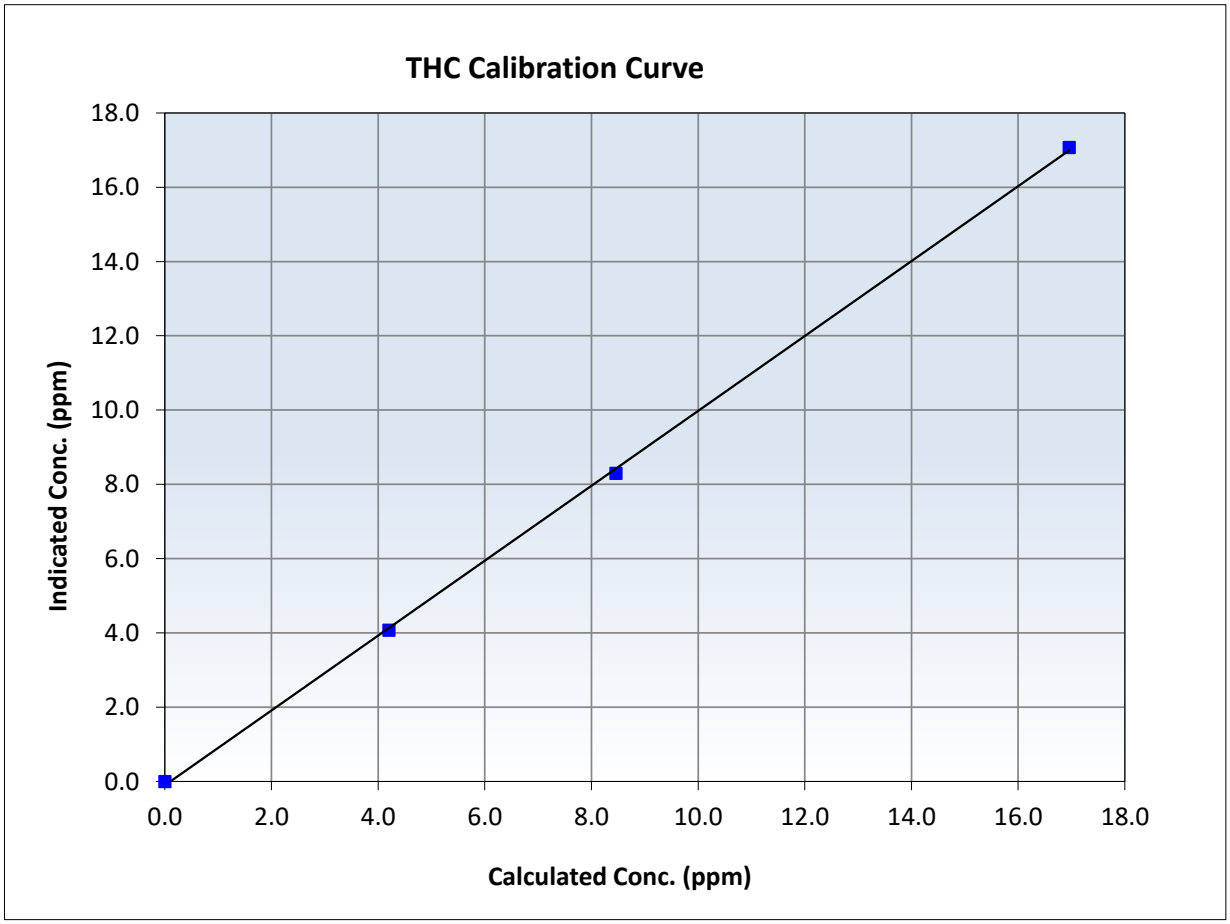
THC Calibration Summary

Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 17, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	11:19	End Time (MST):	14:32
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	0.999773	≥0.995
16.96	17.07	0.9934	Slope	1.008316	0.90 - 1.10
8.46	8.30	1.0196			
4.20	4.08	1.0304	Intercept	-0.104967	+/-0.5



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CH_4 Calibration Summary

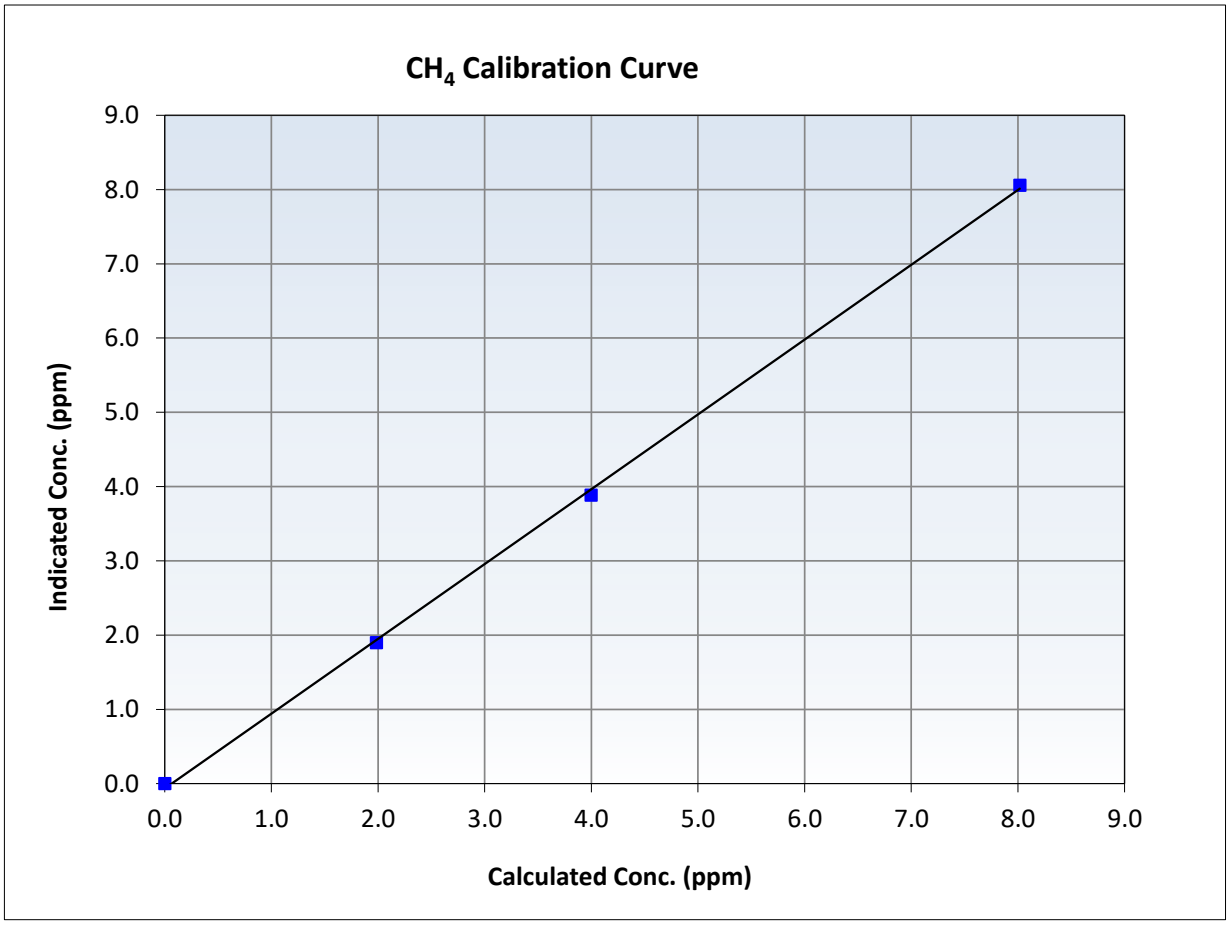
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 17, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	11:19	End Time (MST):	14:32
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.00	----
8.02	8.06	0.9948
4.00	3.89	1.0293
1.99	1.90	1.0454

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999610	*≥0.995*
Slope	1.007522	*0.90 - 1.10*
Intercept	-0.065761	*+/-0.5*



Wood Buffalo Environmental Association

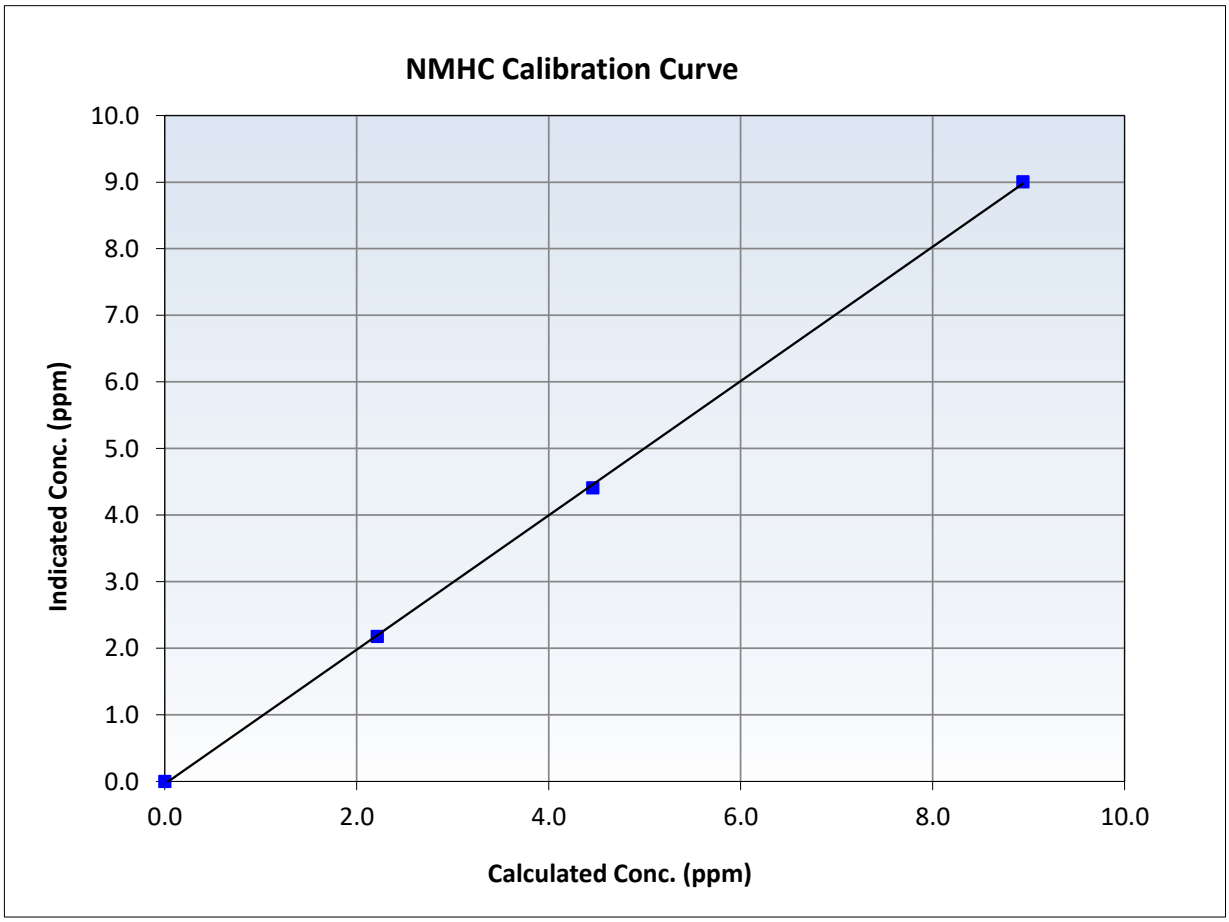
NMHC Calibration Summary

Station Information

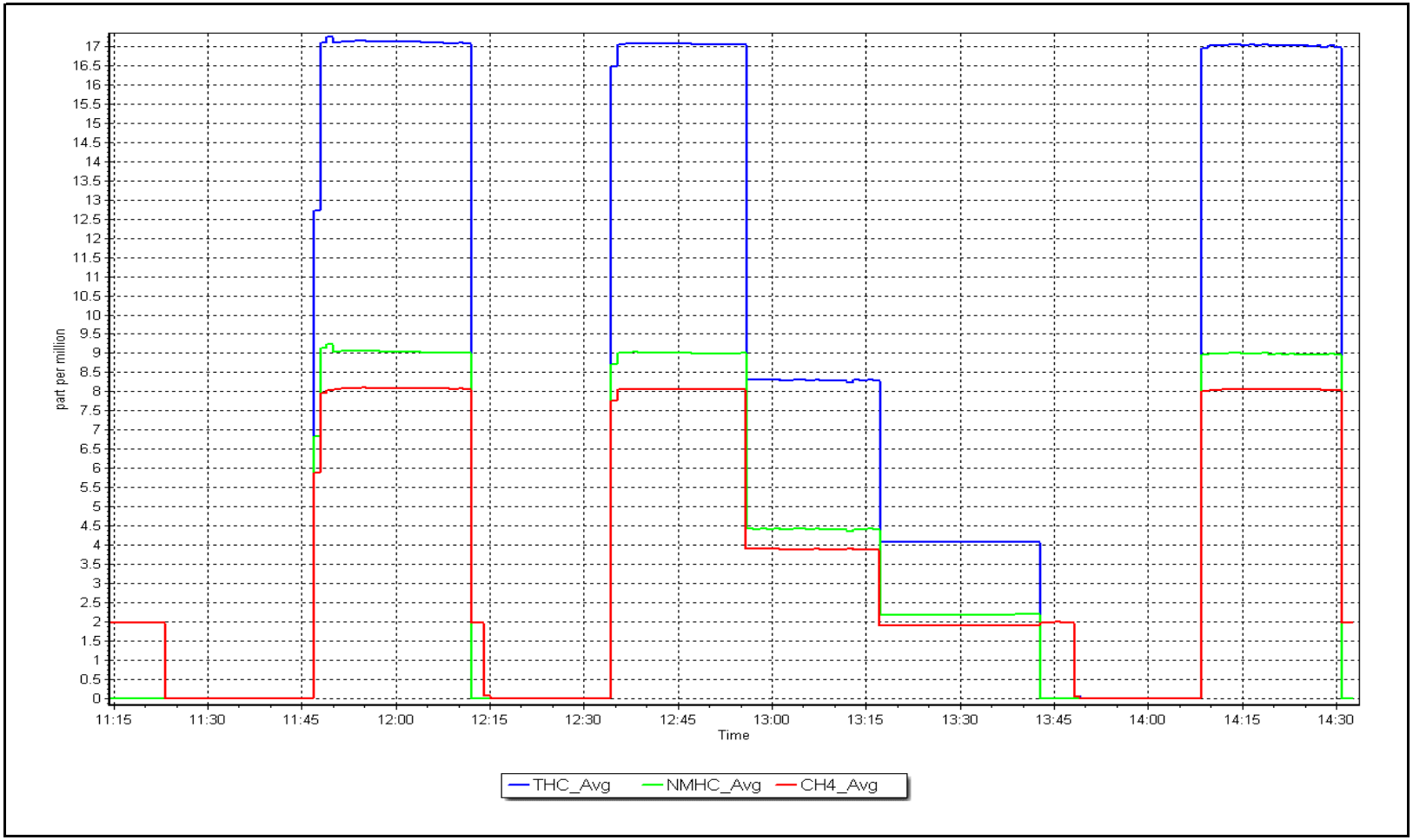
Calibration Date:	December 5, 2025	Previous Calibration:	November 17, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	11:19	End Time (MST):	14:32
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999892	≥0.995
8.94	9.01	0.9928	Slope	1.008312	0.90 - 1.10
4.46	4.41	1.0109			
2.21	2.18	1.0169	Intercept	-0.037410	+/-0.5



NMHC Calibration Plot Date: December 5, 2025 Location: Anzac



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Anzac	Station number:	AMS 14
Calibration Date:	December 12, 2025	Last Cal Date:	December 5, 2025
Start time (MST):	11:30	End time (MST):	19:35
Reason:	Maintenance		

Calibration Standards

Gas Cert Reference:	CC462030	Cal Gas Expiry Date:	October 9, 2032
CH4 Cal Gas Conc.	505.3 ppm	CH4 Equiv Conc.	1068.8 ppm
C3H8 Cal Gas Conc.	204.9 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH4 Conc.	505.3 ppm	CH4 Equiv Conc.	1068.8 ppm
Removed C3H8 Conc.	204.9 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	API T700	Serial Number:	3060
Zero Air Gen model:	API 701H	Serial Number:	357

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	***Finish***		***Start***	***Finish***
CH4 SP Ratio:	2.96E-04	3.95E-04	NMHC SP Ratio:	5.87E-05	5.41E-05
CH4 Retention time:	15.1	17.1	NMHC Peak Area:	152289	165711
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.5	17.00	17.29	0.983
As found Mid point	4960	39.8	8.51	8.40	1.013
As found Low point	4980	19.9	4.25	4.14	1.029
New cylinder response					

Baseline Corr AF:	17.29	Prev response	17.03	*% change	1.5%
Baseline Corr 2nd AF:	8.40	AF Slope:	1.019441	AF Intercept:	-0.127829
Baseline Corr 3rd AF:	4.14	AF Correlation:	0.999688	* = > +/-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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.5	17.00	17.08	0.995
Mid point	4960	39.8	8.51	8.49	1.002
Low point	4980	19.9	4.25	4.24	1.004
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	17.00	17.28	0.983
				Average Correction Factor	0.983

Notes: Adjusted the carrier pressure to 25 psi and then modified the window timings accordingly. Only the span was adjusted.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.5	8.96	9.16	0.979
As found Mid point	4960	39.8	4.49	4.48	1.002
As found Low point	4980	19.9	2.24	2.22	1.010
New cylinder response					
Baseline Corr AF:	9.16	Prev response	9.00	*% change	1.7%
Baseline Corr 2nd AF:	4.48	AF Slope:	1.023209	AF Intercept:	-0.049342
Baseline Corr 3rd AF:	2.22	AF Correlation:	0.999820	* = > +/-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	79.5	8.96	9.00	0.996
Mid point	4960	39.8	4.49	4.49	0.999
Low point	4980	19.9	2.24	2.25	0.998
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	8.96	9.11	0.983
				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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.5	8.04	8.13	0.988
As found Mid point	4960	39.8	4.02	3.92	1.026
As found Low point	4980	19.9	2.01	1.92	1.050
New cylinder response					
Baseline Corr AF:	8.13	Prev response	8.03	*% change	1.2%
Baseline Corr 2nd AF:	3.92	AF Slope:	1.015324	AF Intercept:	-0.078286
Baseline Corr 3rd AF:	1.92	AF Correlation:	0.999494	* = > +/-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	79.5	8.04	8.08	0.994
Mid point	4960	39.8	4.02	4.00	1.005
Low point	4980	19.9	2.01	1.99	1.011
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.5	8.04	8.17	0.983
				Average Correction Factor	1.003

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	1.008316	1.005476
THC Cal Offset:	-0.104967	-0.027439
CH4 Cal Slope:	1.008292	1.006943
CH4 Cal Offset:	-0.066956	-0.022307
NMHC Cal Slope:	1.008312	1.004173
NMHC Cal Offset:	-0.037410	-0.004932

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

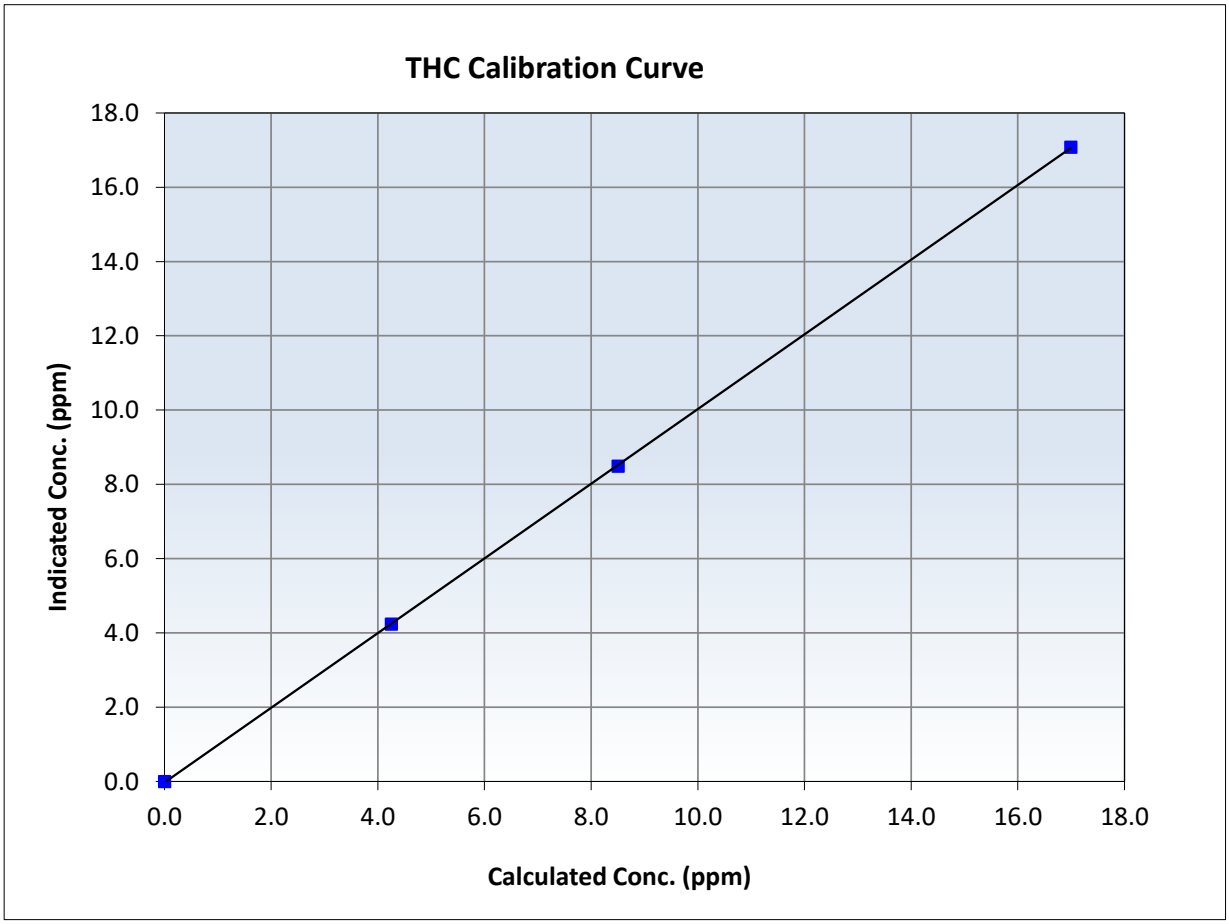
THC Calibration Summary

Station Information

Calibration Date:	December 12, 2025	Previous Calibration:	December 5, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	11:30	End Time (MST):	19:35
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	0.999983	≥0.995
17.00	17.08	0.9949	Slope	1.005476	0.90 - 1.10
8.51	8.49	1.0020			
4.25	4.24	1.0040	Intercept	-0.027439	+/-0.5



Wood Buffalo Environmental Association

CH_4 Calibration Summary

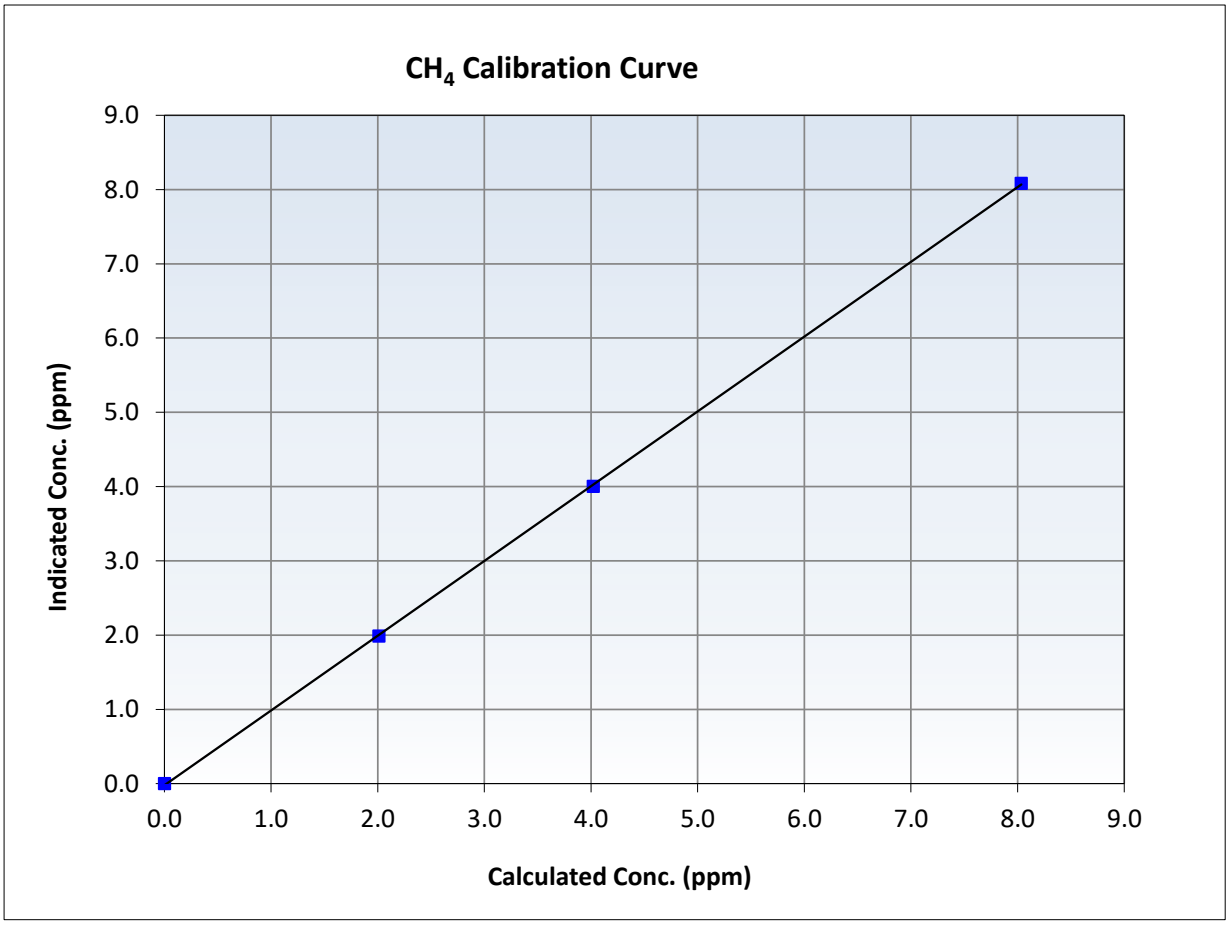
Station Information

Calibration Date:	December 12, 2025	Previous Calibration:	December 5, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	11:30	End Time (MST):	19:35
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.00	----
8.04	8.08	0.9939
4.02	4.00	1.0046
2.01	1.99	1.0111

Statistical Evaluation		Limits
Correlation Coefficient	0.999958	≥0.995
Slope	1.006943	0.90 - 1.10
Intercept	-0.022307	+/-0.5



Wood Buffalo Environmental Association

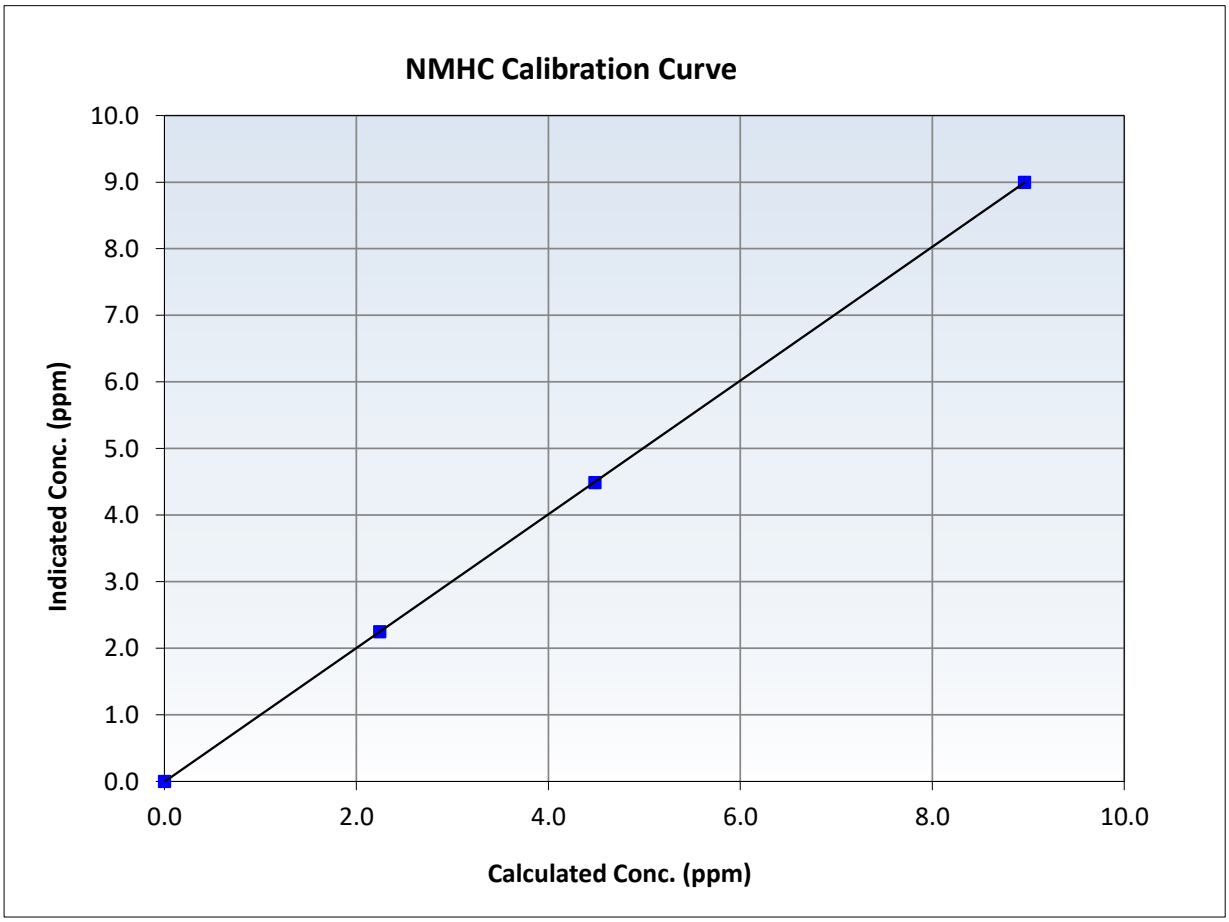
NMHC Calibration Summary

Station Information

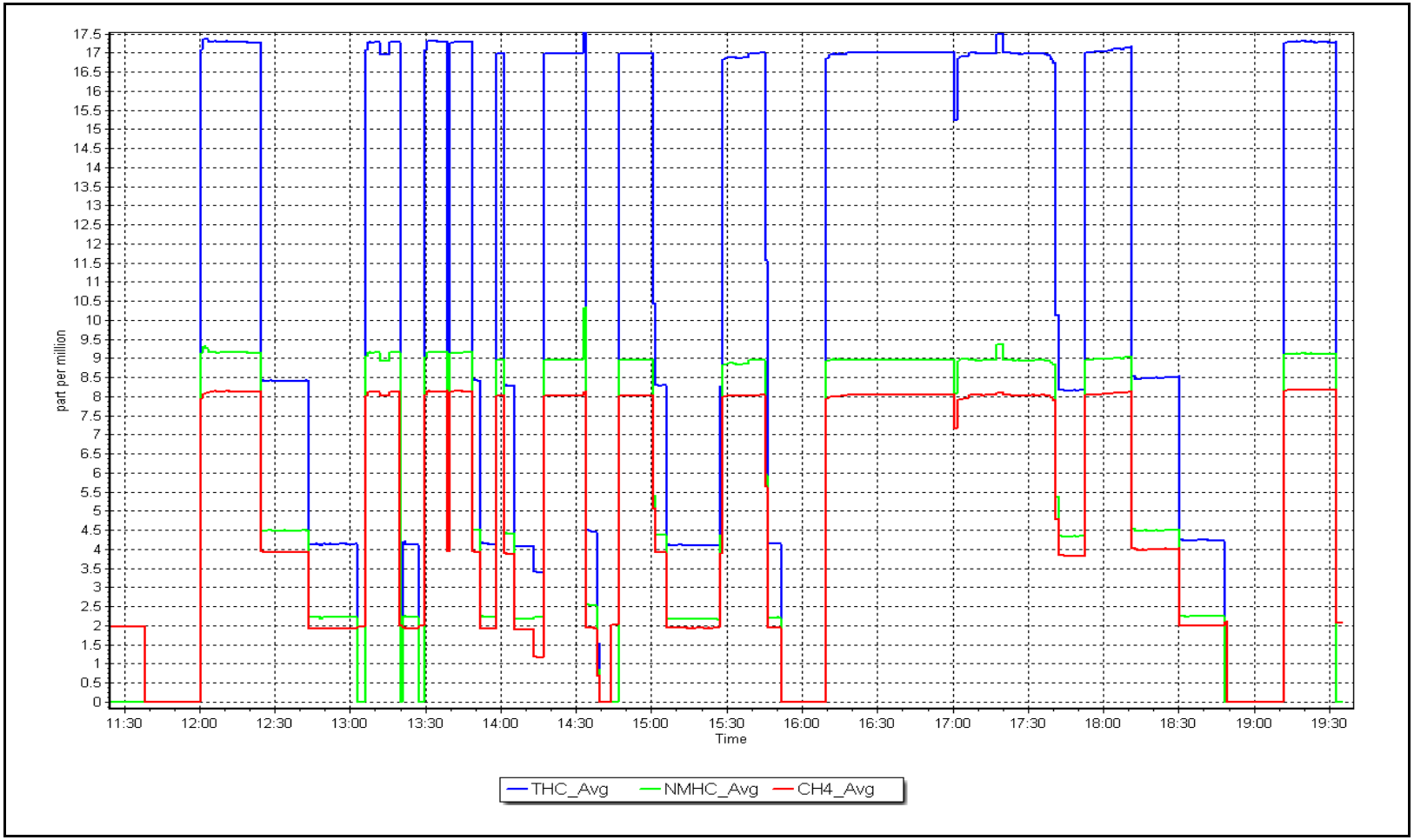
Calibration Date:	December 12, 2025	Previous Calibration:	December 5, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	11:30	End Time (MST):	19:35
Analyzer make:	Thermo 55i	Analyzer serial #:	1331259521

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999996	≥0.995
8.96	9.00	0.9958	Slope	1.004173	0.90 - 1.10
4.49	4.49	0.9994	Intercept	-0.004932	+/-0.5
2.24	2.25	0.9976			



NMHC Calibration Plot Date: December 12, 2025 Location: Anzac



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Anzac
Station number:	AMS 14
Calibration Date:	December 12, 2025
Last Cal Date:	November 6, 2025
Start time (MST):	12:00
End time (MST):	17:00
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0037092		Cal Gas Expiry Date:	May 16, 2031	
NOX Cal Gas Conc:	60.7	ppm	NO Cal Gas Conc:	60.40	ppm
Removed Cylinder #:	NA		Removed Gas Exp Date:	NA	
Removed Gas NOX Conc:	60.70	ppm	Removed Gas NO Conc:	60.40	ppm
NOX gas Diff:			NO gas Diff:		
Calibrator Model:	Teledyne API T750		Serial Number:	282	
ZAG make/model:	Teledyne API T751H		Serial Number:	529	

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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	----	----
AF High point	4952	66.4	803.1	799.2	4.0	803.4	793.2	10.1	0.9997	1.0074
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 800.5 ppb	NO = 796.6 ppb
Baseline Corr 1st pt	NO_X = 803.4 ppb	NO = 793.3 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 r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	NO_2 Int:

*Percent Change	NO_X = 0.4%
*Percent Change	NO = -0.4%

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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i

Serial Number: 1152430008

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	1.347	1.357	NO bkgnd or offset:	3.7	3.7
NOX coeff or slope:	1.002	1.002	NOX bkgnd or offset:	3.7	3.7
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	150.6	151.5

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	0.997154	1.002806
NO_X Cal Offset:	-0.395907	-0.813209
NO Cal Slope:	0.999461	1.000131
NO Cal Offset:	-2.095797	-1.809755
NO_2 Cal Slope:	1.002788	1.005100
NO_2 Cal Offset:	0.577852	0.813324

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.3	0.1	0.2	----	----
High point	4952	66.4	803.1	799.2	4.0	805.2	798.4	6.7	0.9974	1.0010
Mid point	4967	33.1	401.8	399.8	2.0	401.4	397.2	4.2	1.0011	1.0066
Low point	4983	16.6	201.5	200.5	1.0	200.3	196.8	3.5	1.0062	1.0190
As left zero	5000	0.0	0.0	0.0	0.0	0.2	0.0	0.2	----	----
As left span	4820	66.2	822.4	418.7	384.4	819.2	418.7	400.4	1.0039	1.0000
								Average Correction Factor	1.0016	1.0089

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.2	----	----
High GPT point	793.4	405.1	392.3	394.7	0.9938	100.6%
Mid GPT point	793.4	597.8	199.6	201.9	0.9885	101.2%
Low GPT point	793.4	695.4	102.0	103.8	0.9824	101.8%
				Average Correction Factor	0.9882	101.2%

Notes: Used portable calibartor and ZAG. Sample inlet filter was changed after as founds. Adjusted span only.

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

NO_X Calibration Summary

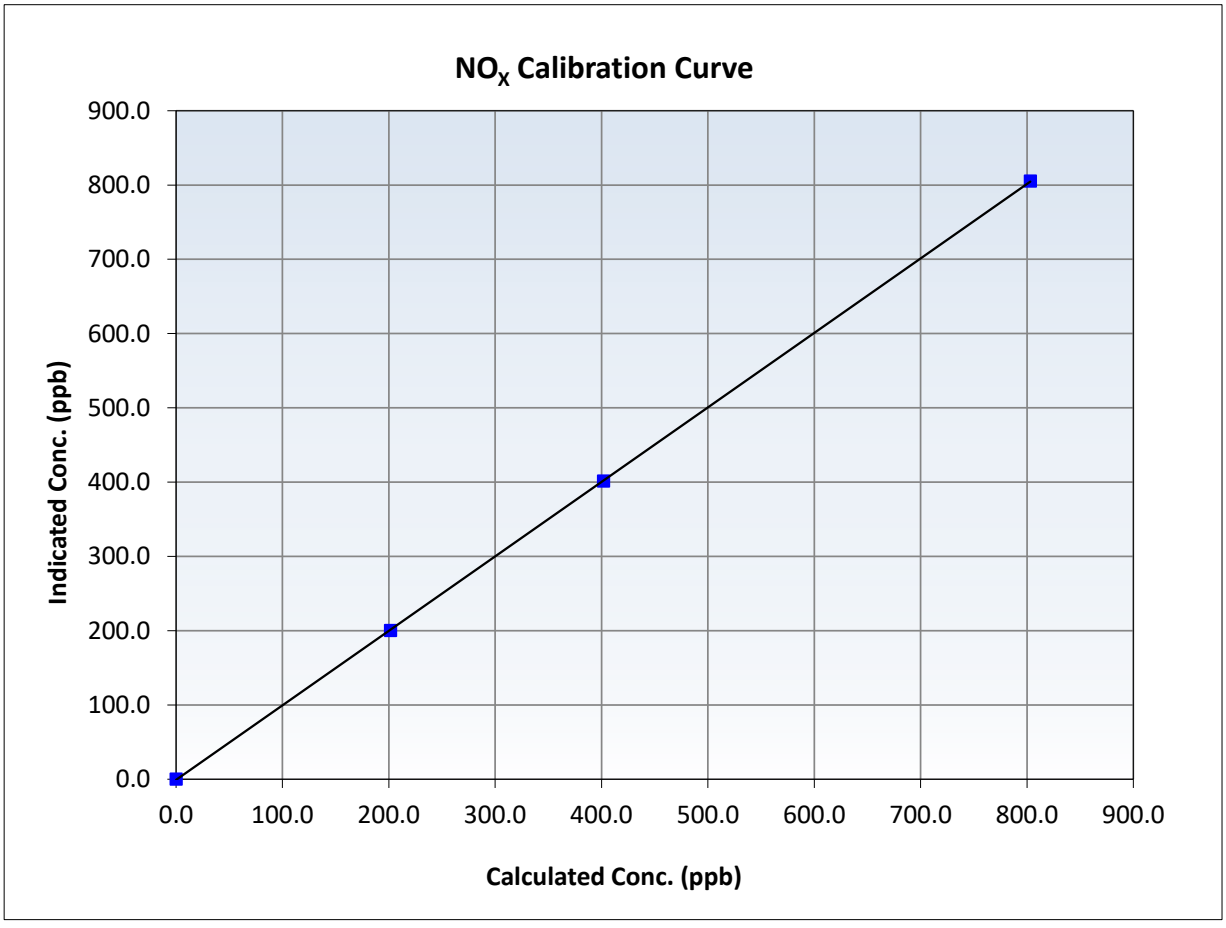
Station Information

Calibration Date:	December 12, 2025	Previous Calibration:	November 6, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	12:00	End Time (MST):	17:00
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.3	----
803.1	805.2	0.9974
401.8	401.4	1.0011
201.5	200.3	1.0062

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999991	*≥0.995*
Slope	1.002806	*0.90 - 1.10*
Intercept	-0.813209	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

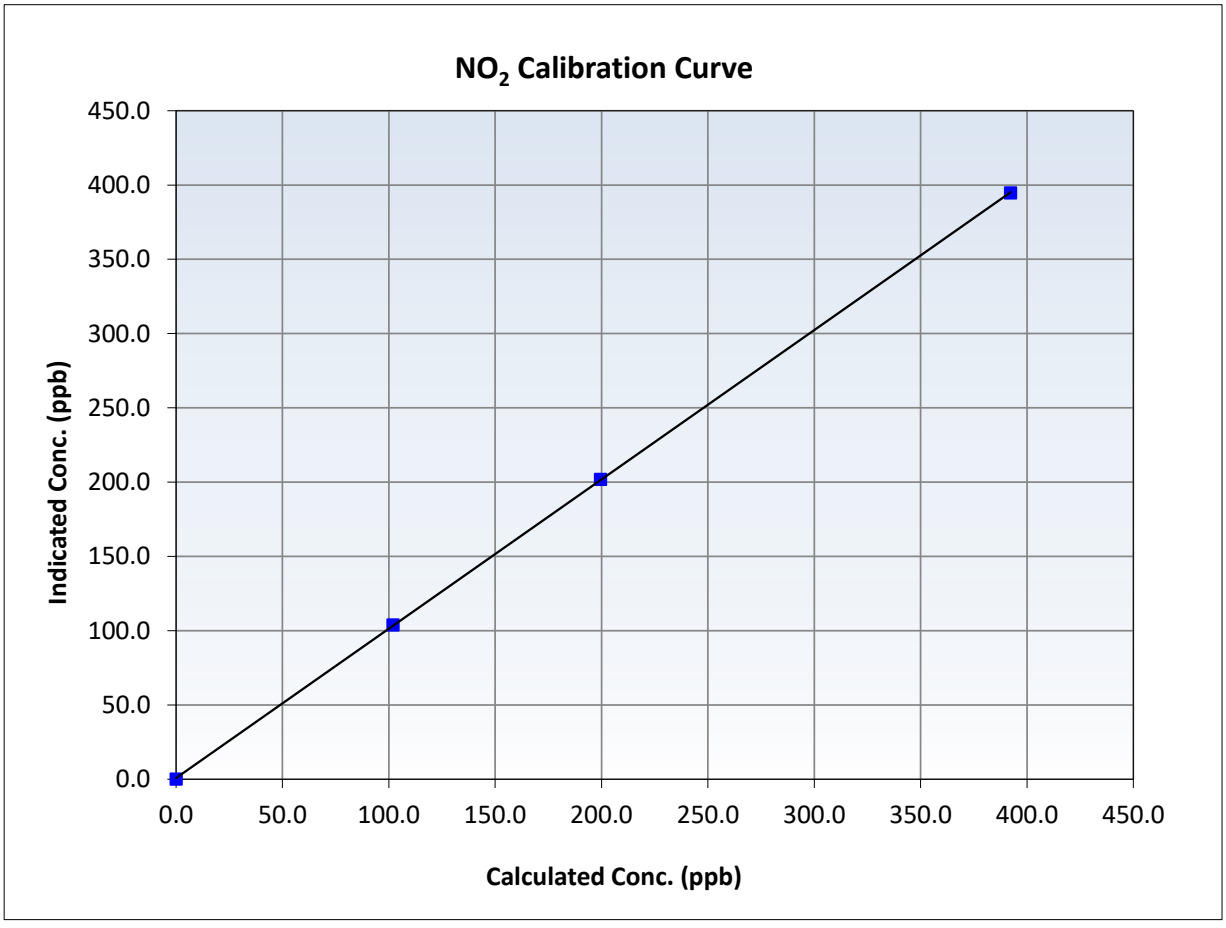
Station Information

Calibration Date:	December 12, 2025	Previous Calibration:	November 6, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	12:00	End Time (MST):	17:00
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
392.3	394.7	0.9938
199.6	201.9	0.9885
102.0	103.8	0.9824

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999988	*≥0.995*
Slope	1.005100	*0.90 - 1.10*
Intercept	0.813324	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

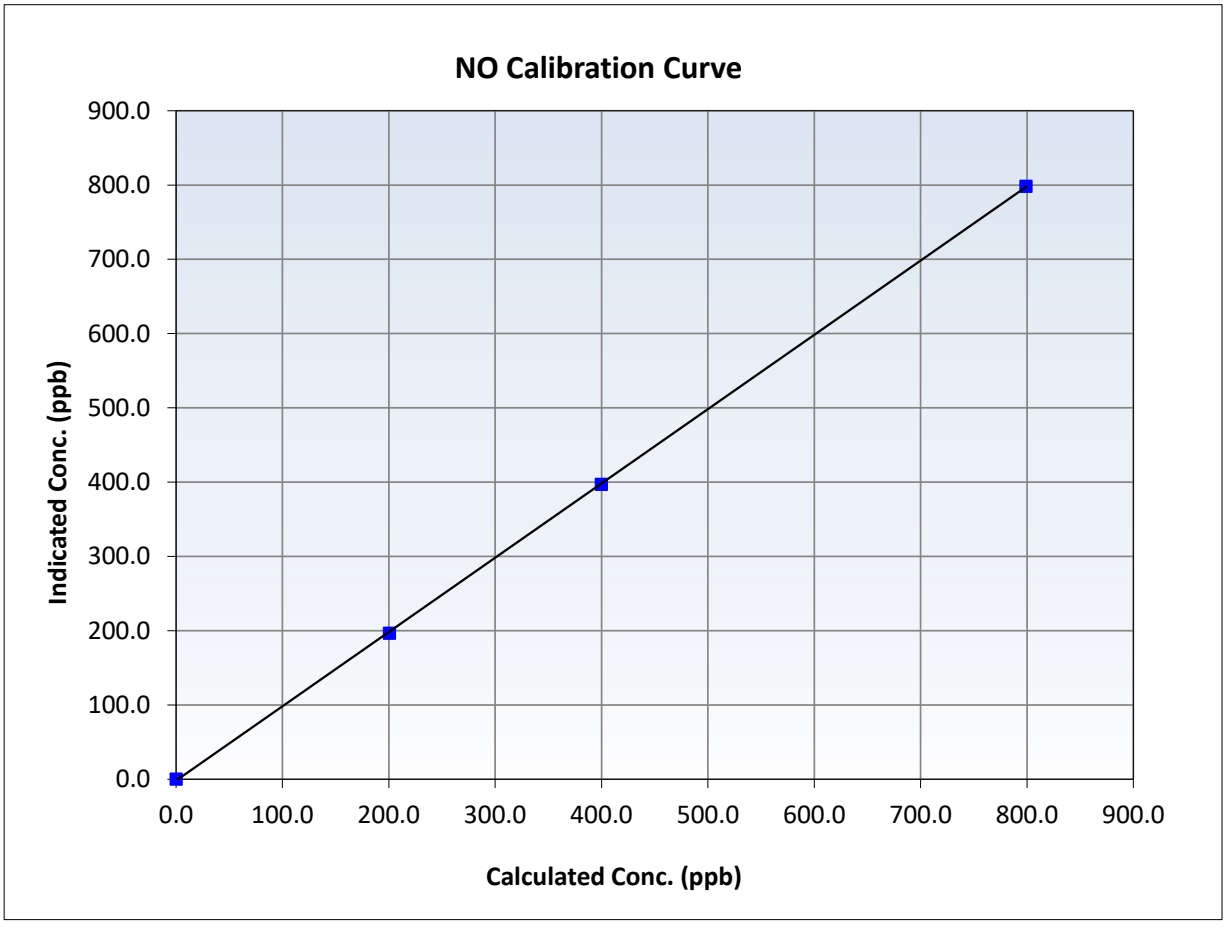
Station Information

Calibration Date:	December 12, 2025	Previous Calibration:	November 6, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	12:00	End Time (MST):	17:00
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430008

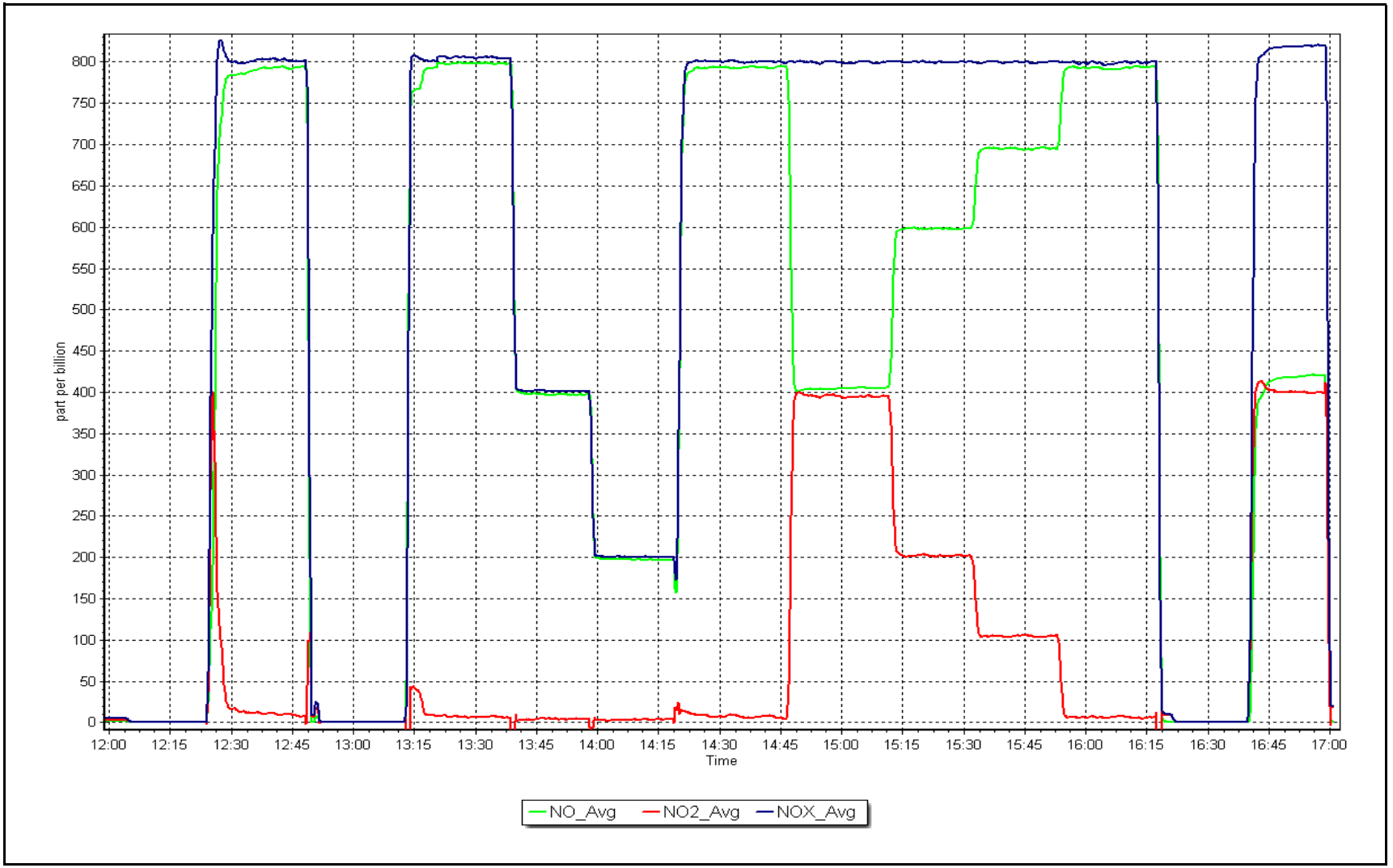
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
799.2	798.4	1.0010
399.8	397.2	1.0066
200.5	196.8	1.0190

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999974	*≥0.995*
Slope	1.000131	*0.90 - 1.10*
Intercept	-1.809755	*+/-20*



NO_X Calibration Plot Date: December 12, 2025 Location: Anzac



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O_3 Calibration Report

Station Information

Station Name:	Anzac	Station number:	AMS 14
Calibration Date:	December 1, 2025	Last Cal Date:	November 4, 2025
Start time (MST):	11:18	End time (MST):	15:05
Reason:	Routine		

Calibration Standards

O3 generation mode:	Photometer		
Calibrator Make/Model:	API T700	Serial Number:	3060
ZAG Make/Model:	API 701H	Serial Number:	357

Analyzer Information

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

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.996943	1.001571	Backgd or Offset:	0.5	1.6
Calibration intercept:	0.460000	-0.300000	Coeff or Slope:	1.689	1.689

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.9	----
As found High point	5000	941.3	400.0	401.0	1.000
As found Mid point					
As found Low point					
Baseline Corr As found:	400.1	Previous response	399.2	*% 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	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	-0.6	----
High point	5000	941.3	400.0	400.2	1.000
Mid point	5000	820.3	200.0	200.1	1.000
Low point	5000	724.3	100.0	100.2	0.998
As left zero	5000	0.0	0.0	-0.3	----
As left span	5000	941.3	400.0	403.0	0.993
				Average Correction Factor	0.999

Notes: Sample inlet filter changed after asfounds. Adjusted zero only.

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

O_3 Calibration Summary

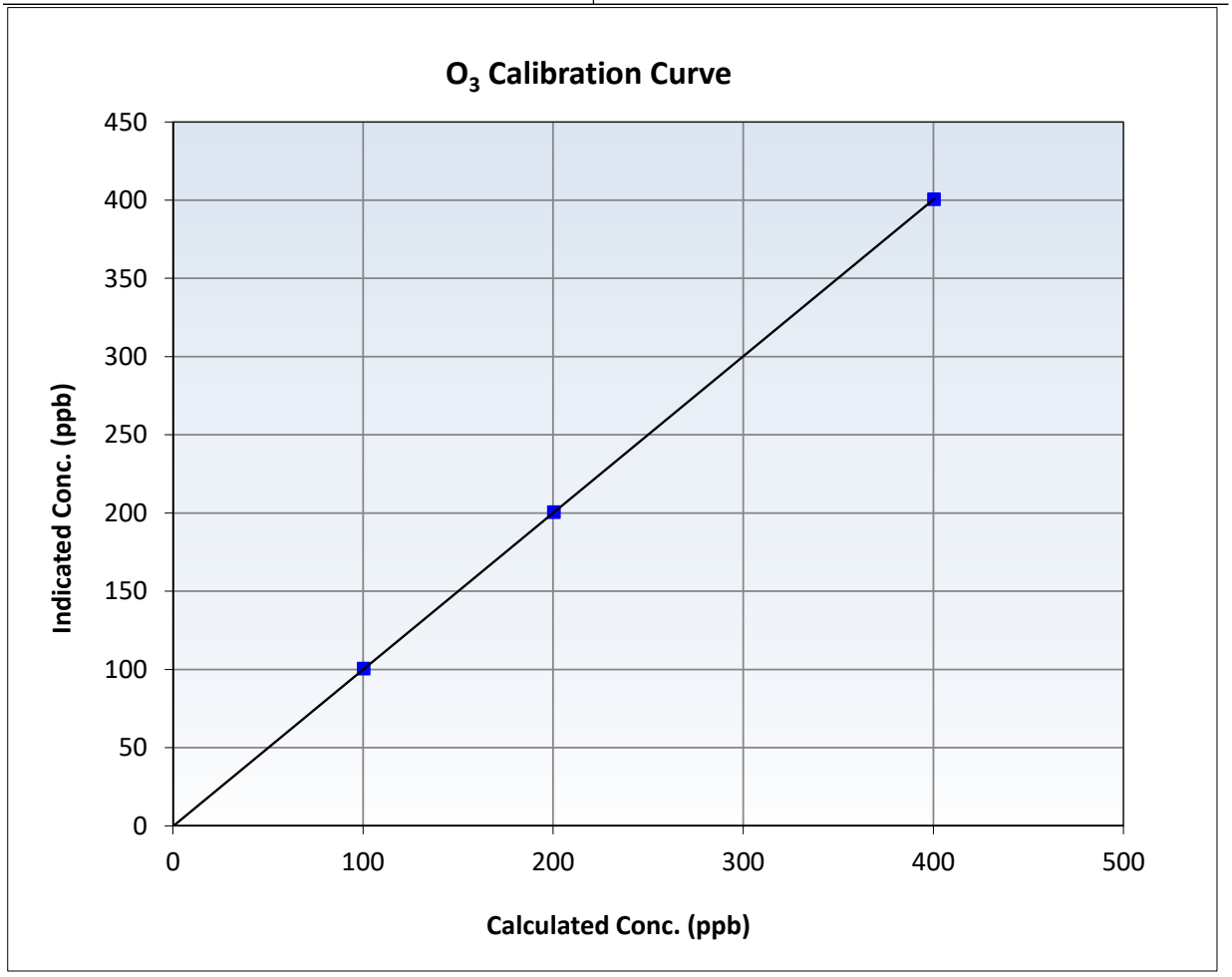
Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 4, 2025
Station Name:	Anzac	Station Number:	AMS 14
Start Time (MST):	11:18	End Time (MST):	15:05
Analyzer make:	Thermo 49i	Analyzer serial #:	1426262595

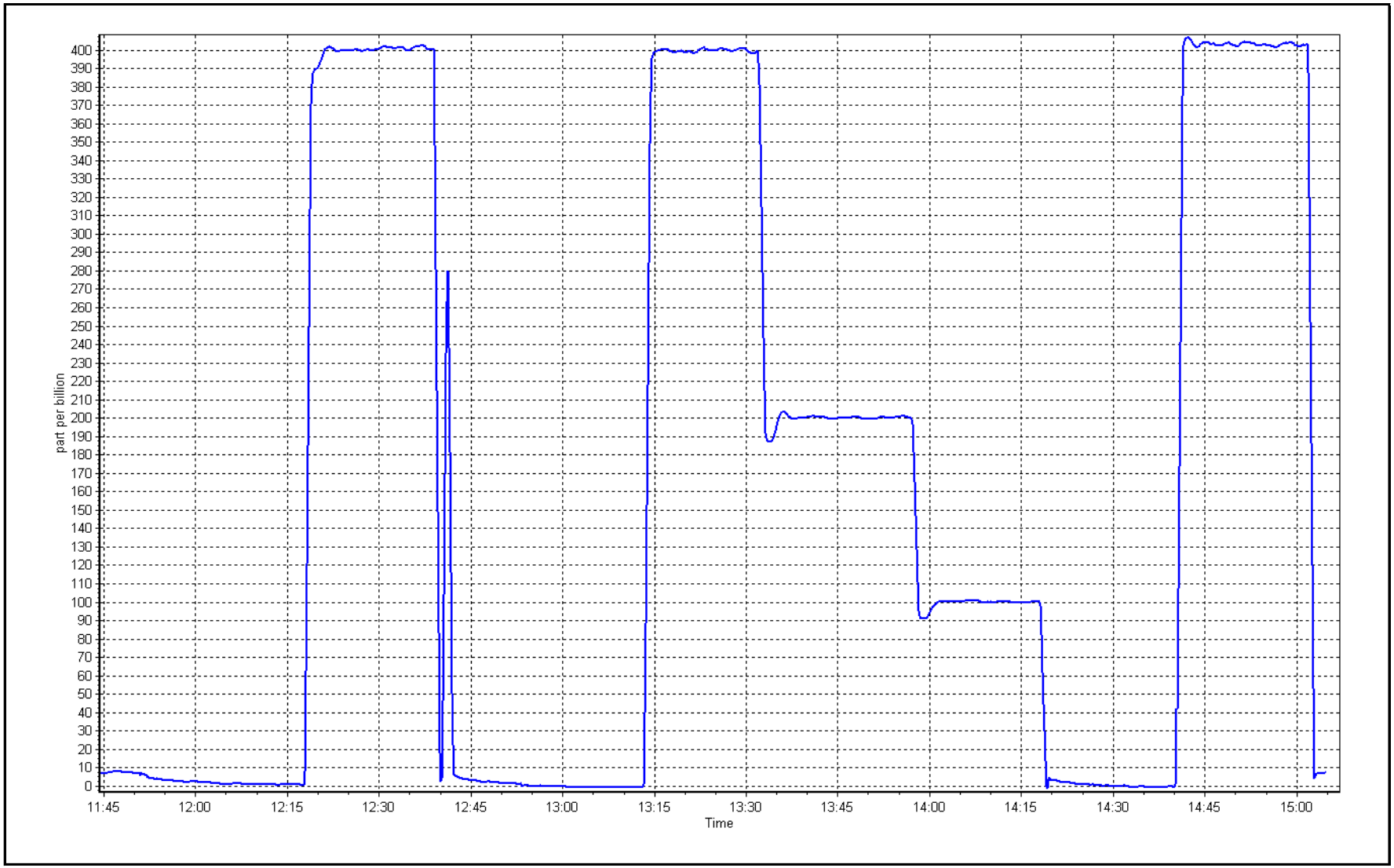
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.6	----
400.0	400.2	0.9995
200.0	200.1	0.9995
100.0	100.2	0.9980

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999997	*≥0.995*
Slope	1.001571	*0.90 - 1.10*
Intercept	-0.300000	*+/- 5*



O_3 Calibration Plot Date: December 1, 2025 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:	December 11, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	12:48	End time (MST):	14:25
Analyzer Make:	AP T640	S/N:	825
Particulate Fraction:	PM2.5		
Flow Meter Make/Model:	Alicat FP-25BT	S/N:	388749
Temp/RH standard:	Alicat FP-25BT	S/N:	388749

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	*(Limits)*
T (°C)	-22.5	-21.29	-22.5	☐	+/- 2 °C
P (mmHg)	723.3	725.22	723.3	☐	+/- 10 mmHg
Flow (LPM)	5.010	4.99	5.010	☐	+/- 0.25 LPM
PW% (pump)	43	-----	43	☐	>80%
Zero Verification	PM w/o HEPA:	10.7	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	10	10.0	10.9	☑	+/- 0.5

Date Optical Chamber Cleaned: December 11, 2025

Date Disposable Filter Changed: December 11, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: August 26, 2025

Date RH/T Sensor Cleaned: August 26, 2025

Notes: Performed quarterly maintenance. Adjustments PMT only. Leak check passed. Head cleaned.

Calibration by: Mohammed Kashif

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS17
WAPASU
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Wapasu	Station number:	AMS17
Calibration Date:	December 11, 2025	Last Cal Date:	November 20, 2025
Start time (MST):	11:58	End time (MST):	14:50
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:	2449
Zero Air Gen Model:	Teledyne API 701H		Serial Number:	1238

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1218153459	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.006606	0.998918	Backgd or Offset:	15.8	15.4
Calibration intercept:	-2.636066	-2.694411	Coeff or Slope:	1.133	1.113

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.7	----
As found High point	4920	79.8	799.9	811.5	0.985
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	812.2	Previous response	802.6	*% change	1.2%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	-0.3	----
High point	4920	79.8	799.9	797.7	1.003
Mid point	4960	39.9	400.0	395.3	1.012
Low point	4980	20.0	200.5	195.4	1.026
As left zero	5000	0.0	0.0	-0.1	----
As left span	4920	79.8	799.9	800.9	0.999
				Average Correction Factor:	1.014

Notes: Span adjusted.

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

SO_2 Calibration Summary

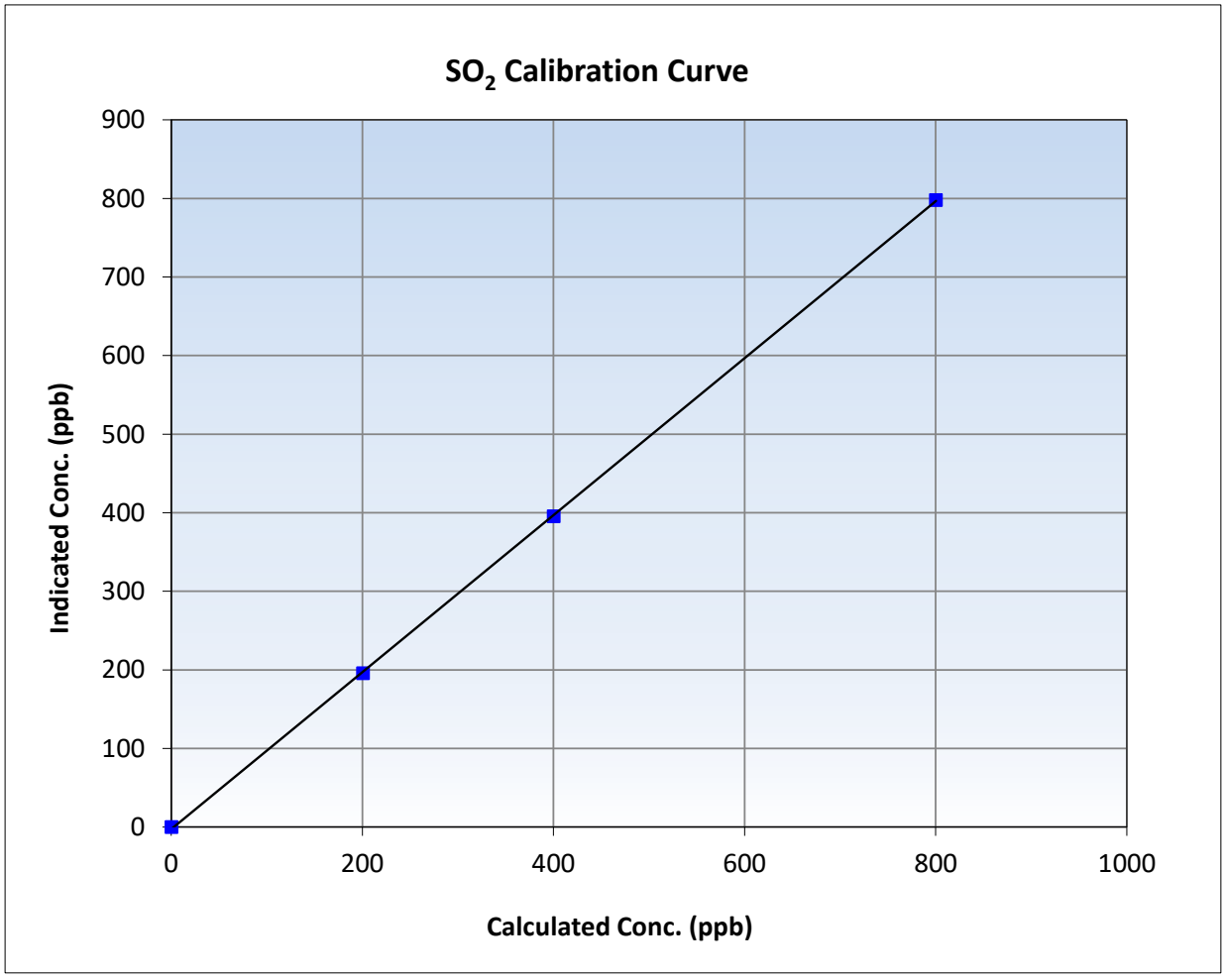
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 20, 2025
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	11:58	End Time (MST):	14:50
Analyzer make:	Thermo 43i	Analyzer serial #:	1218153459

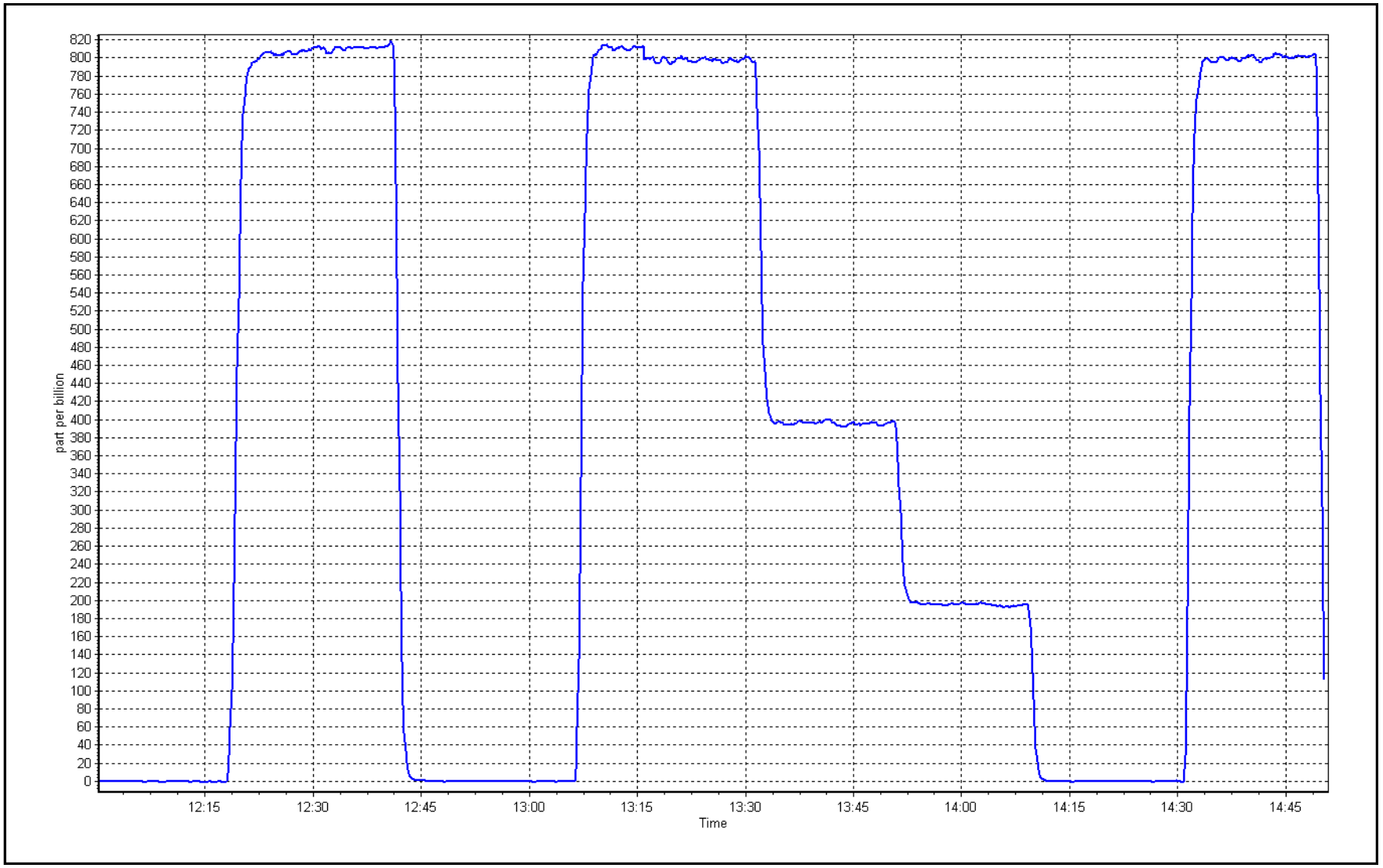
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.3	----
799.9	797.7	1.0028
400.0	395.3	1.0118
200.5	195.4	1.0260

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999958	*≥0.995*
Slope	0.998918	*0.90 - 1.10*
Intercept	-2.694411	*+/-30*



SO2 Calibration Plot Date: December 11, 2025 Location: Wapasu



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Wapasu	Station number:	AMS 17
Calibration Date:	December 18, 2025	Last Cal Date:	November 24, 2025
Start time (MST):	11:21	End time (MST):	15:18
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.77	ppm	Cal Gas Exp Date:	August 28, 2027
Cal Gas Cylinder #:	DT20029267			
Removed Cal Gas Conc:	4.77	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Make/Model:	API T700		Serial Number:	2449
ZAG Make/Model:	API T701H		Serial Number:	359

Analyzer Information

Analyzer make:	Thermo 450i		Analyzer serial #:	1218153583	
Converter make:	CD Nova		Converter serial #:	N/A	
Analyzer Range	0 - 100 ppb		Converter Temp:	340	degC
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.989933	1.000923	Backgd or Offset:	12.9	13.6
Calibration intercept:	-0.159925	0.380268	Coeff or Slope:	1.099	1.150

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4916	83.9	80.0	77.9	1.029
As found Mid point	4958	41.9	40.0	38.7	1.036
As found Low point	4979	21.0	20.0	19.2	1.049
New cylinder response					

Baseline Corr As found:	77.8	Prev response:	79.08	*% change:	-1.6%
Baseline Corr 2nd AF pt:	38.6	AF Slope:	0.973222	AF Intercept:	-0.099847
Baseline Corr 3rd AF pt:	19.1	AF Correlation:	0.999970	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4916	83.9	80.0	80.4	0.996
Mid point	4958	41.9	40.0	40.6	0.985
Low point	4979	21.0	20.0	20.4	0.982
As left zero	5000	0.0	0.0	0.5	----
As left span	4916	83.9	80.0	80.0	1.001
SO2 Scrubber Check	4921	79.4	793.9	0.1	----
Date of last scrubber change:		N/A		Ave Corr Factor	0.987
Date of last converter efficiency test:		N/A			

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

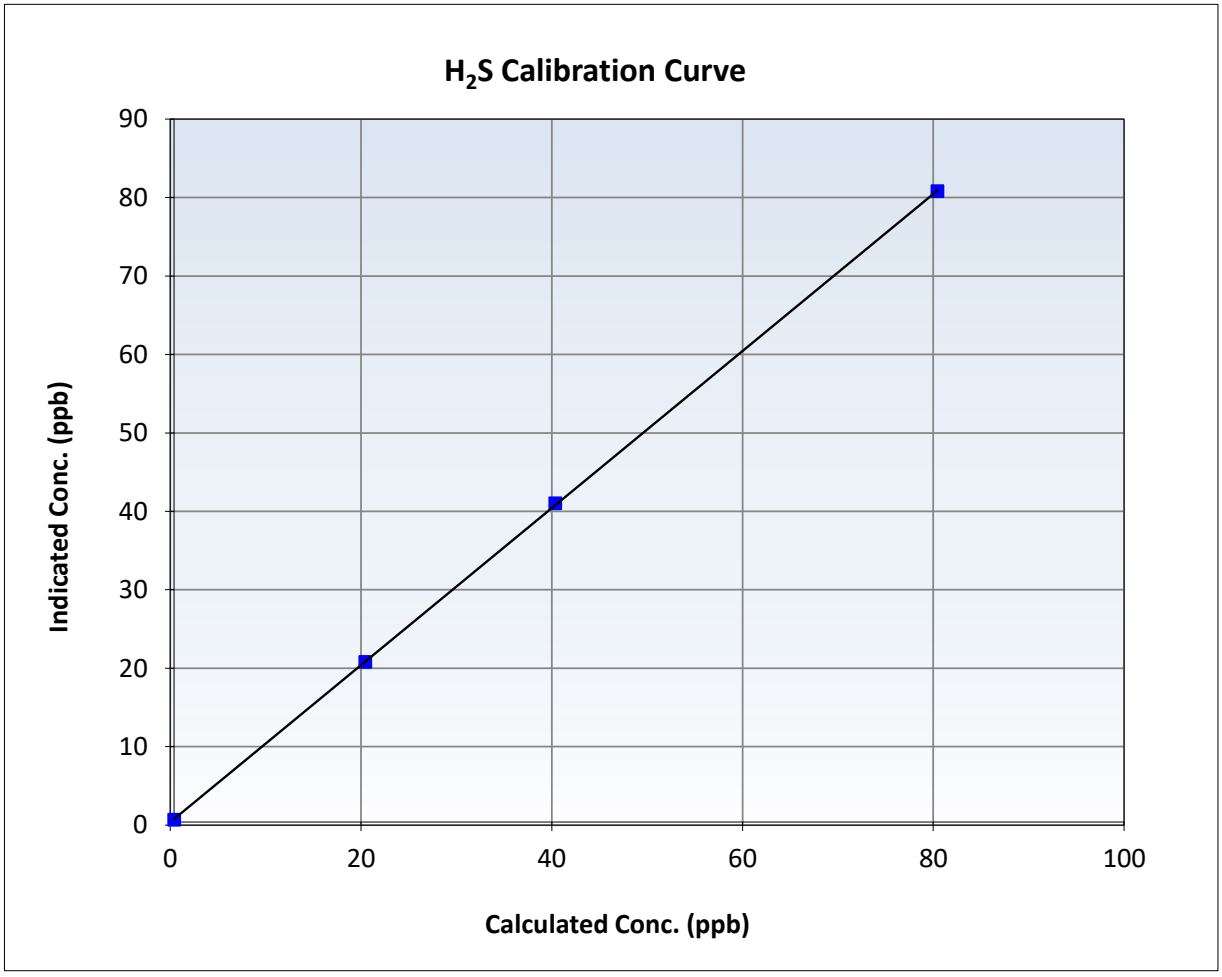
H_2S Calibration Summary

Station Information

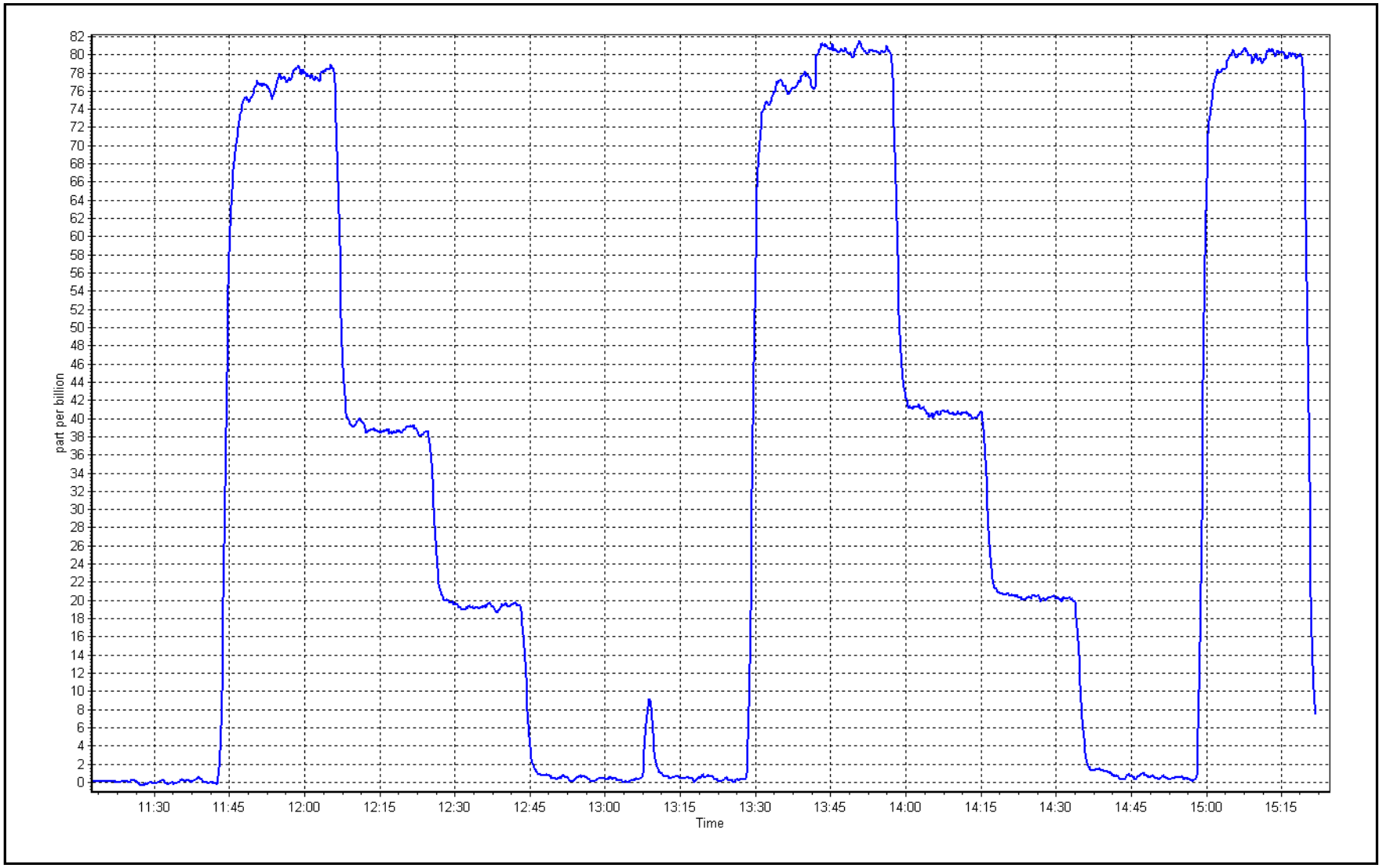
Calibration Date:	December 18, 2025	Previous Calibration:	November 24, 2025
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	11:21	End Time (MST):	15:18
Analyzer make:	Thermo 450i	Analyzer serial #:	1218153583

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.3	----	Correlation Coefficient	0.999983	*≥0.995*
80.0	80.4	0.9955	Slope	1.000923	*0.90 - 1.10*
40.0	40.6	0.9846			
20.0	20.4	0.9821	Intercept	0.380268	*+/-3*



H_2S Calibration Plot Date: December 18, 2025 Location: Wapasu



Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name:	Wapasu	Station number:	AMS17
Calibration Date:	December 11, 2025	Last Cal Date:	November 20, 2025
Start time (MST):	11:58	End time (MST):	14:50
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC422255		Cal Gas Expiry Date:	April 9, 2033	
CH4 Cal Gas Conc.	499.6	ppm	CH4 Equiv Conc.	1059.0	ppm
C3H8 Cal Gas Conc.	203.4	ppm			
Removed Gas Cert:		n/a	Removed Gas Expiry:		
Removed CH4 Conc.	499.6	ppm	CH4 Equiv Conc.	1059.0	ppm
Removed C3H8 Conc.	203.4	ppm	Diff between cyl:		
Calibrator Make/Model:	Teledyne API T700		Serial Number:	2449	
ZAG Make/Model:	Teledyne API 701H		Serial Number:	1238	

Analyzer Information

Analyzer make:	Thermo 51i-LT		Analyzer serial #:	1218153352	
Analyzer Range:	0 - 20 ppm				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.005532	1.001085	Background:	3.200	3.090
Calibration intercept:	-0.141145	-0.089502	Coefficient:	4.397	4.353

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	-0.12	----
As found High point	4920	79.8	16.90	16.98	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	17.10	Previous response	16.85	*% change	1.5%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	16.90	16.88	1.001
Mid point	4960	39.9	8.45	8.31	1.017
Low point	4980	20.0	4.24	4.08	1.039
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	16.81	16.93	0.993
				Average Correction Factor	1.019

Notes: Zero and span adjusted.

Calibration Performed By: Aswin Sasi Kumar

Version 03-2024

CALS_292

Wood Buffalo Environmental Association

THC Calibration Summary

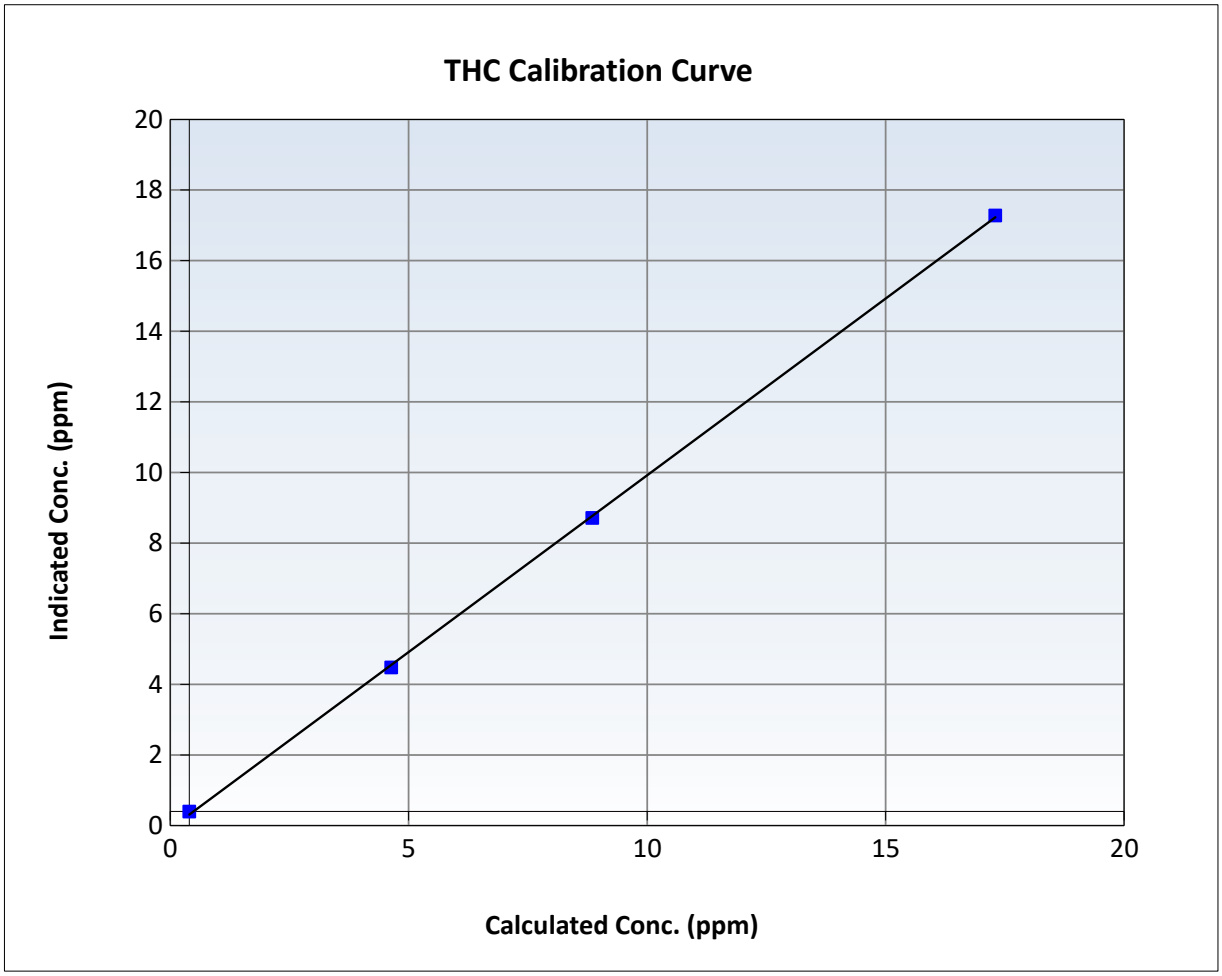
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 20, 2025
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	11:58	End Time (MST):	14:50
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1218153352

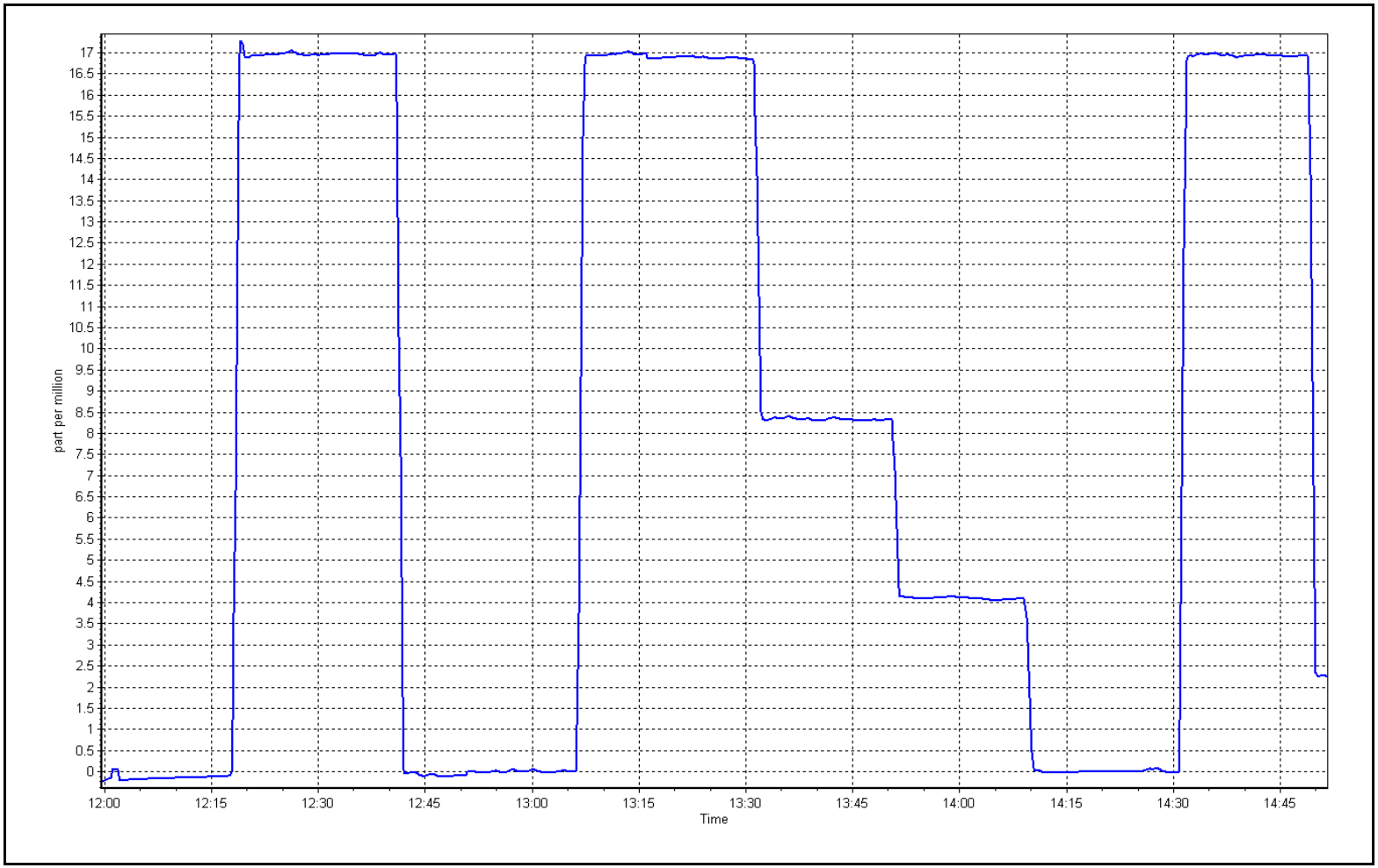
Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.00	----
16.90	16.88	1.0013
8.45	8.31	1.0168
4.24	4.08	1.0395

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999878	*≥0.995*
Slope	1.001085	*0.90 - 1.10*
Intercept	-0.089502	*+/-1.5*



THC Calibration Plot Date: December 11, 2025 Location: Wapasu



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Wapasu
Station number:	AMS 17
Calibration Date:	December 17, 2025
Last Cal Date:	November 18, 2025
Start time (MST):	11:20
End time (MST):	15:26
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0045177	Cal Gas Expiry Date:	July 19, 2032
NOX Cal Gas Conc:	61.30 ppm	NO Cal Gas Conc:	61.00 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	
Removed Gas NOX Conc:	61.30 ppm	Removed Gas NO Conc:	61.00 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	API T700	Serial Number:	2449
ZAG make/model:	API T701H	Serial Number:	359

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.4	-0.1	-0.3	----	----
AF High point	4934	65.6	804.3	800.4	3.9	785.6	780.0	5.6	1.0233	1.0260
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 803.5 ppb	NO = 799.2 ppb
Baseline Corr 1st pt	NO_X = 786.0 ppb	NO = 780.1 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 = -2.2%

*Percent Change NO = -2.4%

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo Scientific 42i
Serial Number: 1218153460
NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	0.885	0.905	NO bkgnd or offset:	3.0	3.1
NOX coeff or slope:	0.997	0.998	NOX bkgnd or offset:	3.4	3.5
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	198.1	201.0

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	1.001654	1.000514
NO_X Cal Offset:	-2.120010	-0.883933
NO Cal Slope:	1.002467	1.000880
NO Cal Offset:	-3.180009	-2.264069
NO_2 Cal Slope:	0.999452	1.003993
NO_2 Cal Offset:	-1.155064	0.418424

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.2	0.0	-0.3	----	----
High point	4934	65.6	804.3	800.4	3.9	804.2	800.0	4.3	1.0001	1.0005
Mid point	4967	32.8	402.1	400.2	2.0	401.1	397.0	4.1	1.0026	1.0080
Low point	4984	16.4	201.0	200.1	1.0	199.6	195.8	3.7	1.0073	1.0218
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	0.1	-0.3	----	----
As left span	4934	65.6	804.3	394.4	409.9	806.5	394.4	412.1	0.9973	1.0000
							Average Correction Factor		1.0033	1.0101

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	-0.3	----	----
High GPT point	799.3	396.1	407.1	408.9	0.9957	100.4%
Mid GPT point	799.3	604.2	199.0	200.4	0.9932	100.7%
Low GPT point	799.3	703.9	99.3	101.0	0.9835	101.7%
				Average Correction Factor	0.9908	100.9%

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

NO_X Calibration Summary

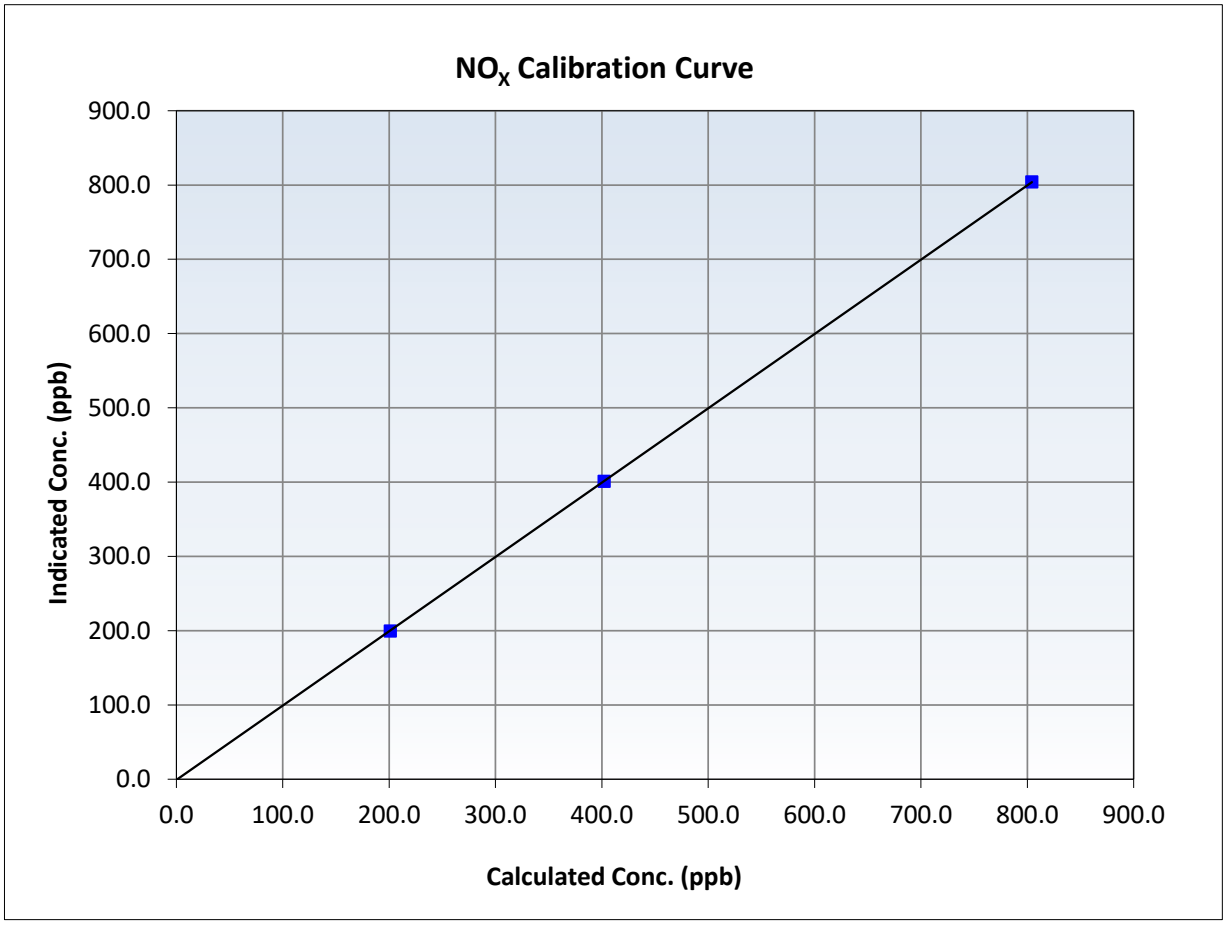
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 18, 2025
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	11:20	End Time (MST):	15:26
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1218153460

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
804.3	804.2	1.0001
402.1	401.1	1.0026
201.0	199.6	1.0073

Statistical Evaluation		Limits
Correlation Coefficient	0.999997	≥0.995
Slope	1.000514	0.90 - 1.10
Intercept	-0.883933	+/-20



Wood Buffalo Environmental Association

NO_2 Calibration Summary

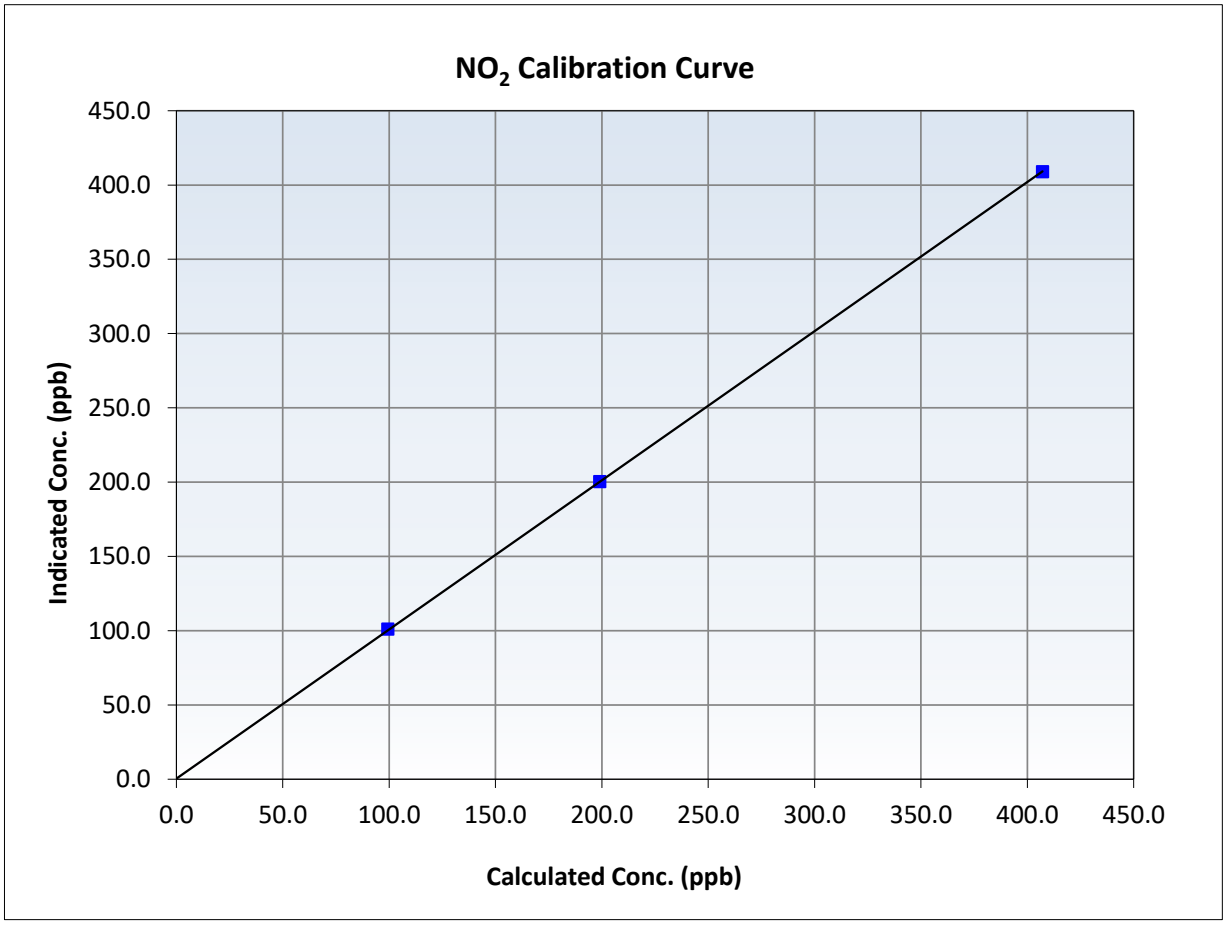
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 18, 2025
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	11:20	End Time (MST):	15:26
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1218153460

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.3	----
407.1	408.9	0.9957
199.0	200.4	0.9932
99.3	101.0	0.9835

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999985	*≥0.995*
Slope	1.003993	*0.90 - 1.10*
Intercept	0.418424	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

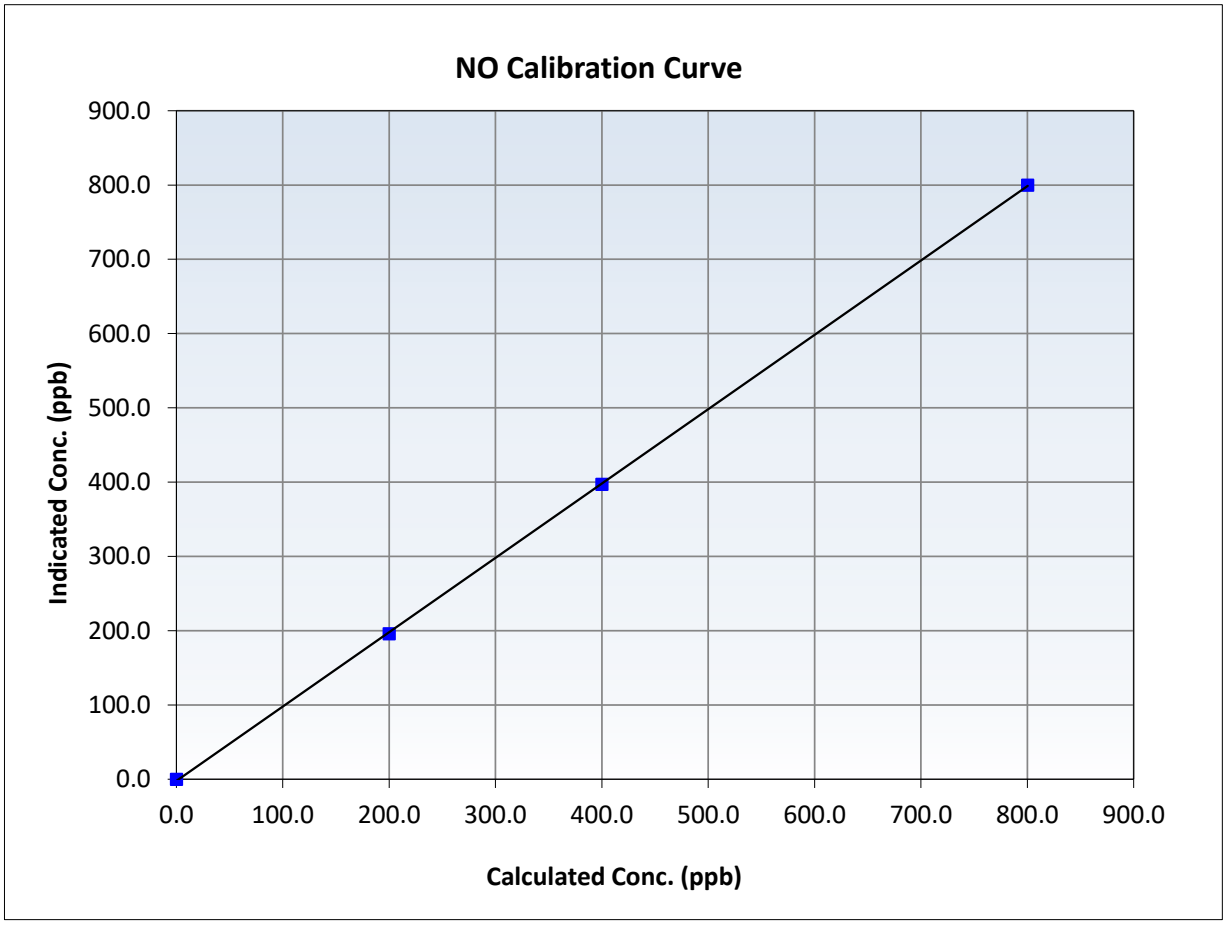
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 18, 2025
Station Name:	Wapasu	Station Number:	AMS 17
Start Time (MST):	11:20	End Time (MST):	15:26
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1218153460

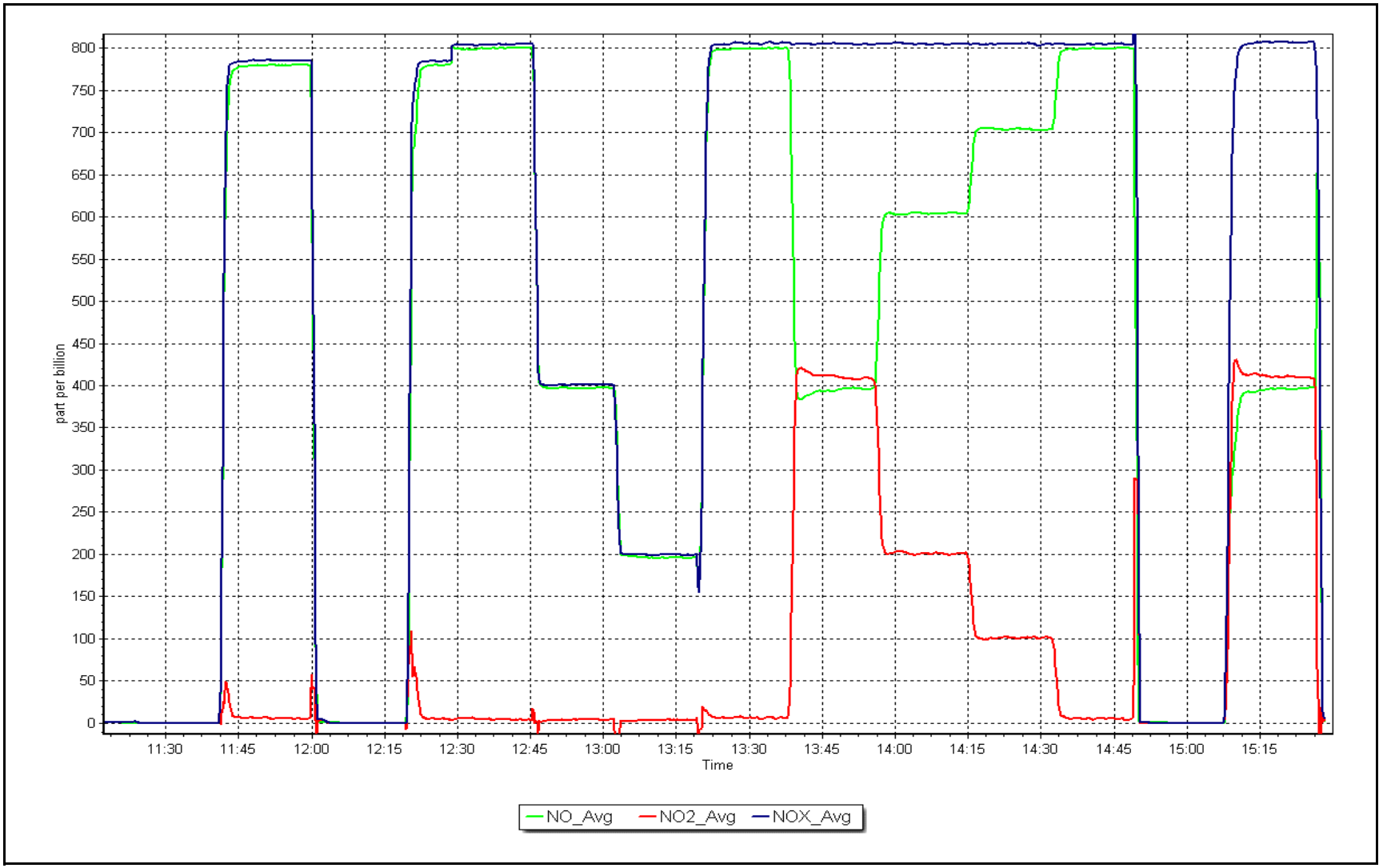
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
800.4	800.0	1.0005
400.2	397.0	1.0080
200.1	195.8	1.0218

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999963	*≥0.995*
Slope	1.000880	*0.90 - 1.10*
Intercept	-2.264069	*+/-20*



NO_X Calibration Plot Date: December 17, 2025 Location: Wapasu



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Wapasu	Station number:	AMS17
Calibration Date:	December 2, 2025	Last Cal Date:	November 5, 2025
Start time (MST):	10:40	End time (MST):	13:37
Reason:	Routine		

Calibration Standards

O3 generation mode:	Photometer		
Calibrator Make/Model:	API T700	Serial Number:	2449
ZAG Make/Model:	API T701H	Serial Number:	359

Analyzer Information

Analyzer make:	Thermo Scientific 49i	Analyzer serial #:	1501663734
Analyzer Range	0 - 500 ppb		

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.006029	1.008514	Backgd or Offset:	0.1	0.1
Calibration intercept:	-1.380000	-1.540000	Coeff or Slope:	1.043	1.043

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.3	----
As found High point	5000	1104.7	400.0	401.9	0.995
As found Mid point					
As found Low point					
Baseline Corr As found:	402.2	Previous response	401.0	*% 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	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	-0.3	----
High point	5000	1104.7	400.0	402.5	0.994
Mid point	5000	917.3	200.0	199.5	1.003
Low point	5000	797.9	100.0	98.1	1.019
As left zero	5000	0.0	0.0	-0.4	----
As left span	5000	1104.7	400.0	408.9	0.978
				Average Correction Factor	1.005

Notes: No adjustments made.

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

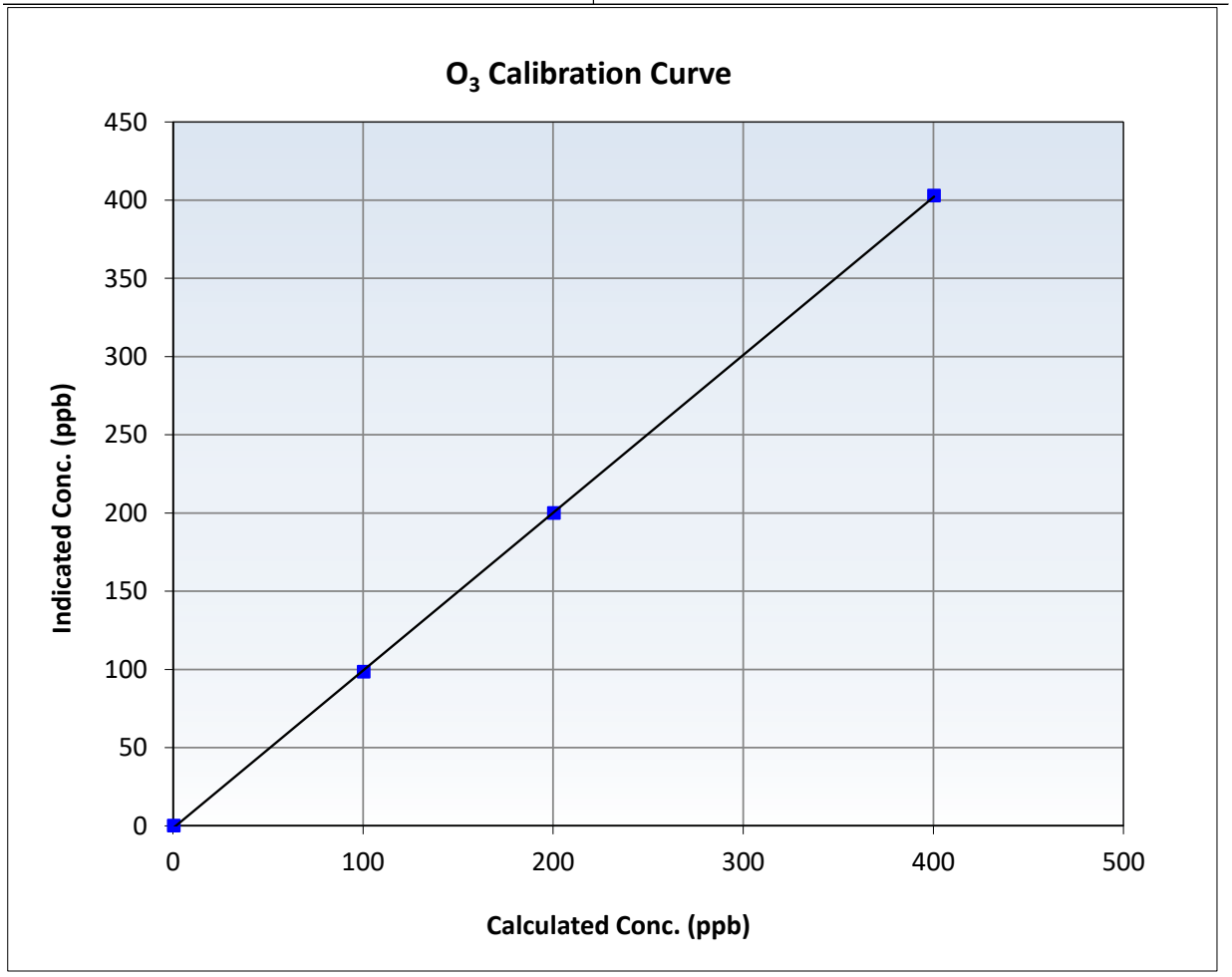
O_3 Calibration Summary

Station Information

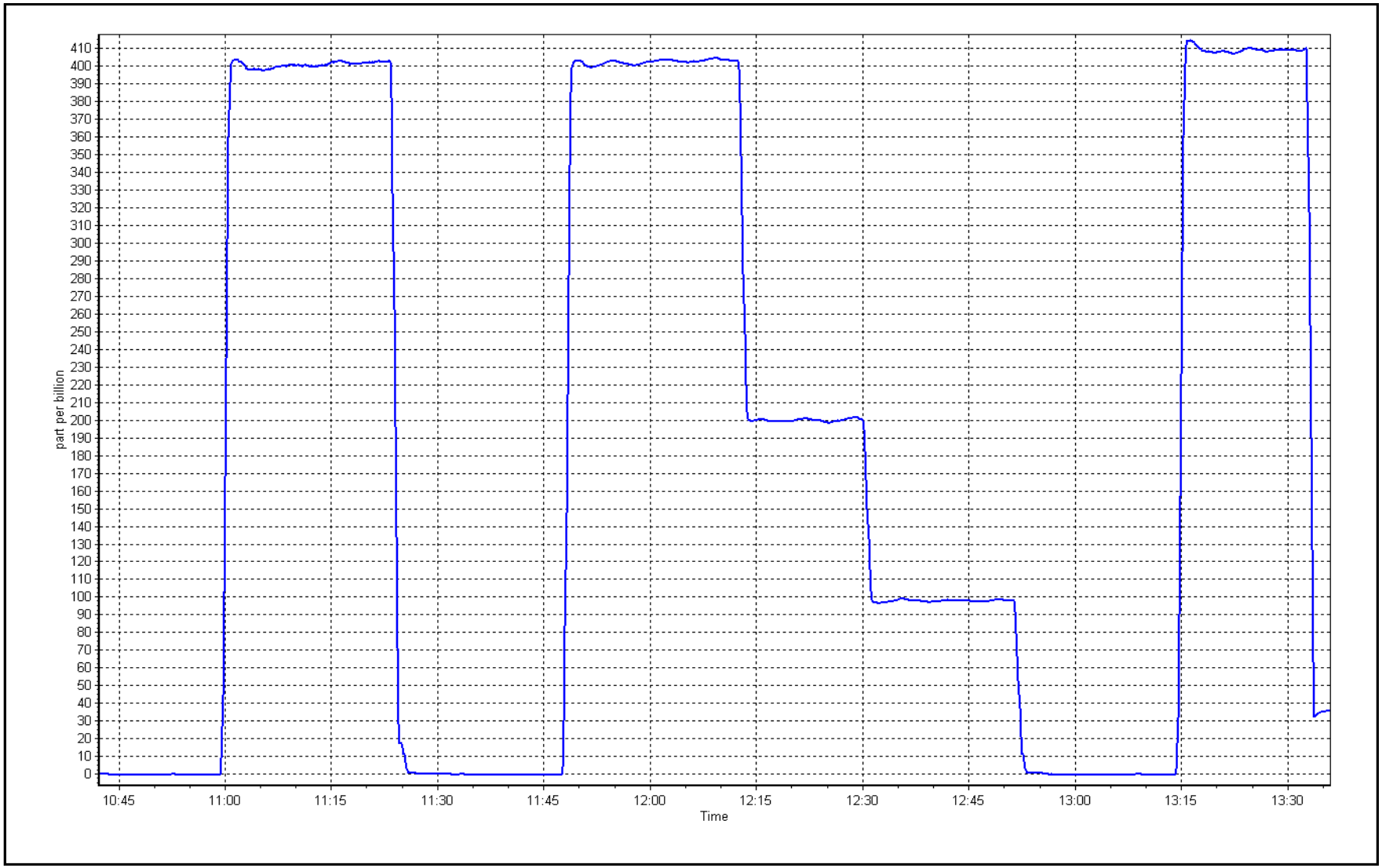
Calibration Date:	December 2, 2025	Previous Calibration:	November 5, 2025
Station Name:	Wapasu	Station Number:	AMS17
Start Time (MST):	10:40	End Time (MST):	13:37
Analyzer make:	Thermo Scientific 49i	Analyzer serial #:	1501663734

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	-0.3	----	Correlation Coefficient	0.999957	≥0.995
400.0	402.5	0.9938	Slope	1.008514	0.90 - 1.10
200.0	199.5	1.0025			
100.0	98.1	1.0194	Intercept	-1.540000	+/- 5



O_3 Calibration Plot Date: December 2, 2025 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:	December 18, 2025	Last Cal Date:	November 24, 2025
Start time (MST):	12:45	End time (MST):	13:45
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)	-19.00	-19.60	-19.00	☐	+/- 2 °C
P (mmHg)	708.10	710.29	708.10	☐	+/- 10 mmHg
Flow (LPM)	5.00	5.18	5.00	☐	+/- 0.25 LPM
PW% (pump)	42	-----	42	☐	>80%
Zero Verification	PM w/o HEPA:	1.90	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: October 6, 2024 — Lot No.: 100128-050-042

Parameter	As found	Post maintenance	As left	Adjusted	*(Limits)*
PMT Peak Test	8.50	11.00	11.00	☐	+/- 0.5

Date Optical Chamber Cleaned: December 18, 2025

Date Disposable Filter Changed: December 18, 2025

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. No adjustment needed. Leak check passed.

Calibration by: Jan Castro

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS18
STONY MOUNTAIN
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Stony Mountain	Station number:	AMS 18
Calibration Date:	December 17, 2025	Last Cal Date:	November 26, 2025
Start time (MST):	11:50	End time (MST):	15:03
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	51.22	ppm	Cal Gas Exp Date:	October 9, 2032
Cal Gas Cylinder #:	CC417455			
Removed Cal Gas Conc:	51.22	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	CC417455		Diff between cyl:	
Calibrator Model:	Teledyne API T700		Serial Number:	2658
Zero Air Gen Model:	Teledyne API 701		Serial Number:	4890

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	JC1501301453	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.001599	0.997530	Backgd or Offset:	25.9	25.9
Calibration intercept:	-1.597660	-1.297845	Coeff or Slope:	0.816	0.816

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.5	----
As found High point	4921	78.1	800.2	796.2	1.006
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	795.7	Previous response	799.9	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.7	----
High point	4921	78.1	800.2	797.9	1.003
Mid point	4960	39.1	400.6	397.4	1.008
Low point	4981	19.5	199.7	195.9	1.020
As left zero	5000	0.0	0.0	0.7	----
As left span	4921	78.1	800.2	798.7	1.002
				Average Correction Factor:	1.010

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

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

SO_2 Calibration Summary

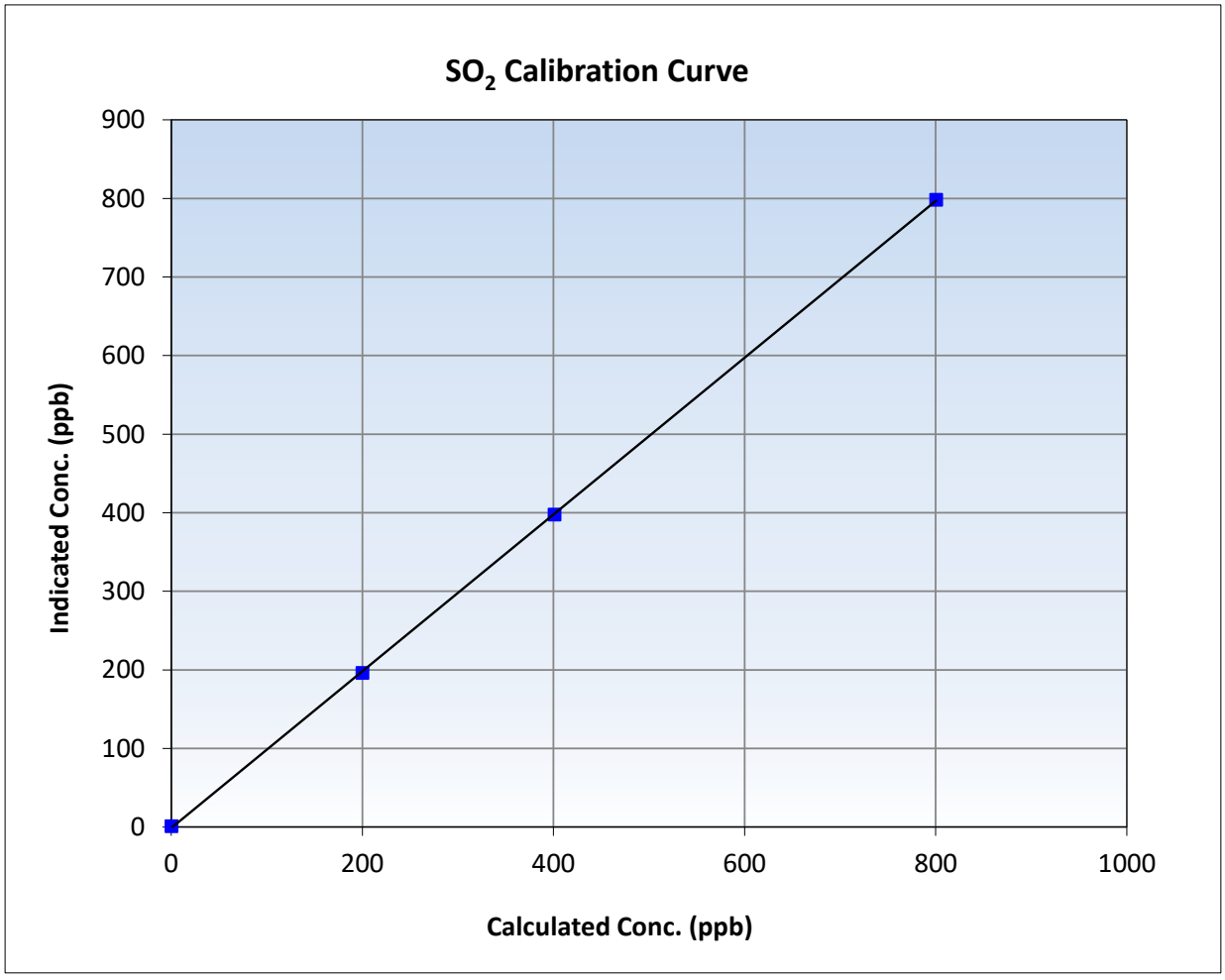
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 26, 2025
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:50	End Time (MST):	15:03
Analyzer make:	Thermo 43i	Analyzer serial #:	JC1501301453

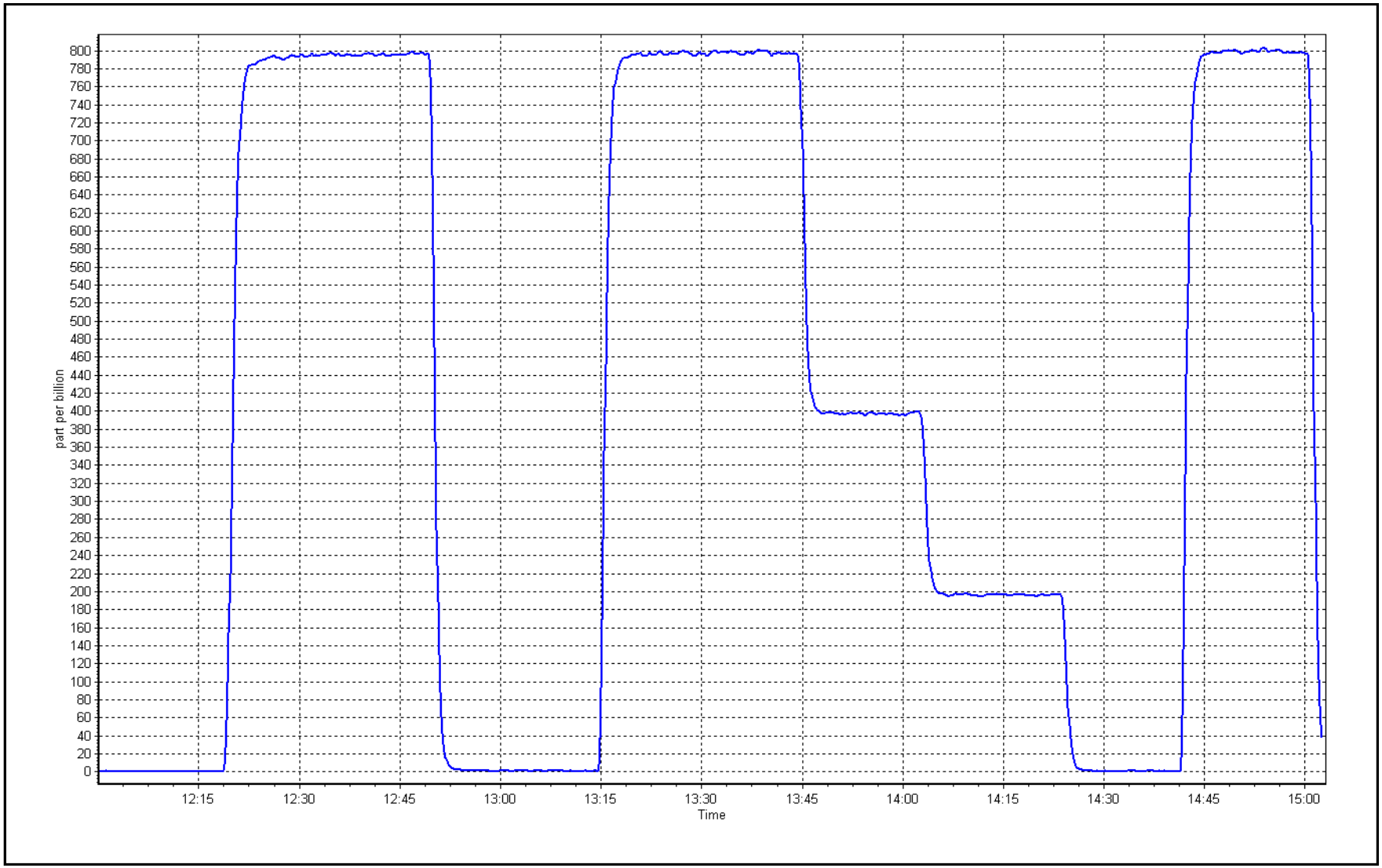
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.7	----
800.2	797.9	1.0029
400.6	397.4	1.0081
199.7	195.9	1.0196

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999971	*≥0.995*
Slope	0.997530	*0.90 - 1.10*
Intercept	-1.297845	*+/-30*



SO2 Calibration Plot Date: December 17, 2025 Location: Stony Mountain



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name:	Stony Mountain	Station number:	AMS18
Calibration Date:	December 16, 2025	Last Cal Date:	November 27, 2025
Start time (MST):	12:06	End time (MST):	17:17
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.86	ppm	Cal Gas Exp Date:	May 9, 2027
Cal Gas Cylinder #:	CC523103			
Removed Cal Gas Conc:	4.86	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Make/Model:	Teledyne API T700		Serial Number:	2658
ZAG Make/Model:	Teledyne API T701		Serial Number:	4890

Analyzer Information

Analyzer make:	Thermo 43i-TLE		Analyzer serial #:	1218153359
Converter make:	CD Nova CDN-101		Converter serial #:	555
Analyzer Range	0 - 100 ppb		Converter Temp:	800 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.998224	0.979372	Backgd or Offset:	2.94	3.10
Calibration intercept:	-0.058902	0.301312	Coeff or Slope:	1.181	1.245

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4917	82.3	80.0	74.9	1.070
As found Mid point	4958	41.2	40.1	37.4	1.074
As found Low point	4979	20.6	20.0	18.7	1.077
New cylinder response					

Baseline Corr As found:	74.8	Prev response:	79.81	*% change:	-6.7%
Baseline Corr 2nd AF pt:	37.3	AF Slope:	0.935231	AF Intercept:	0.022168
Baseline Corr 3rd AF pt:	18.6	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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4917	82.3	80.0	78.7	1.017
Mid point	4958	41.2	40.1	39.5	1.014
Low point	4979	20.6	20.0	19.8	1.011
As left zero	5000	0.0	0.0	0.7	----
As left span	4917	82.3	80.0	78.6	1.018
SO2 Scrubber Check	4923	77.1	771.0	0.0	----
Date of last scrubber change:		17-Dec-21		Ave Corr Factor	1.014
Date of last converter efficiency test:					

Notes: SOX scrubber tested. Span adjusted.

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

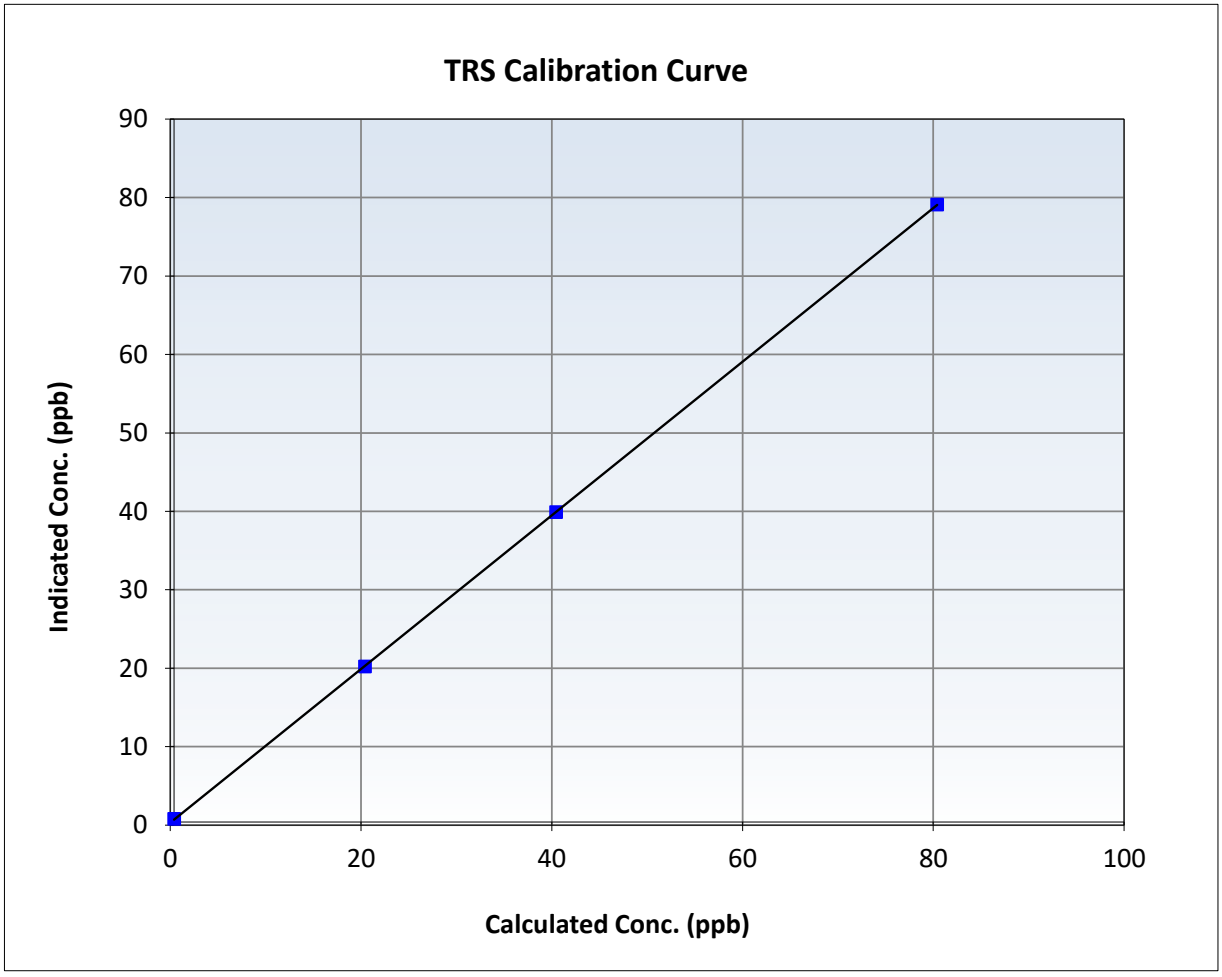
TRS Calibration Summary

Station Information

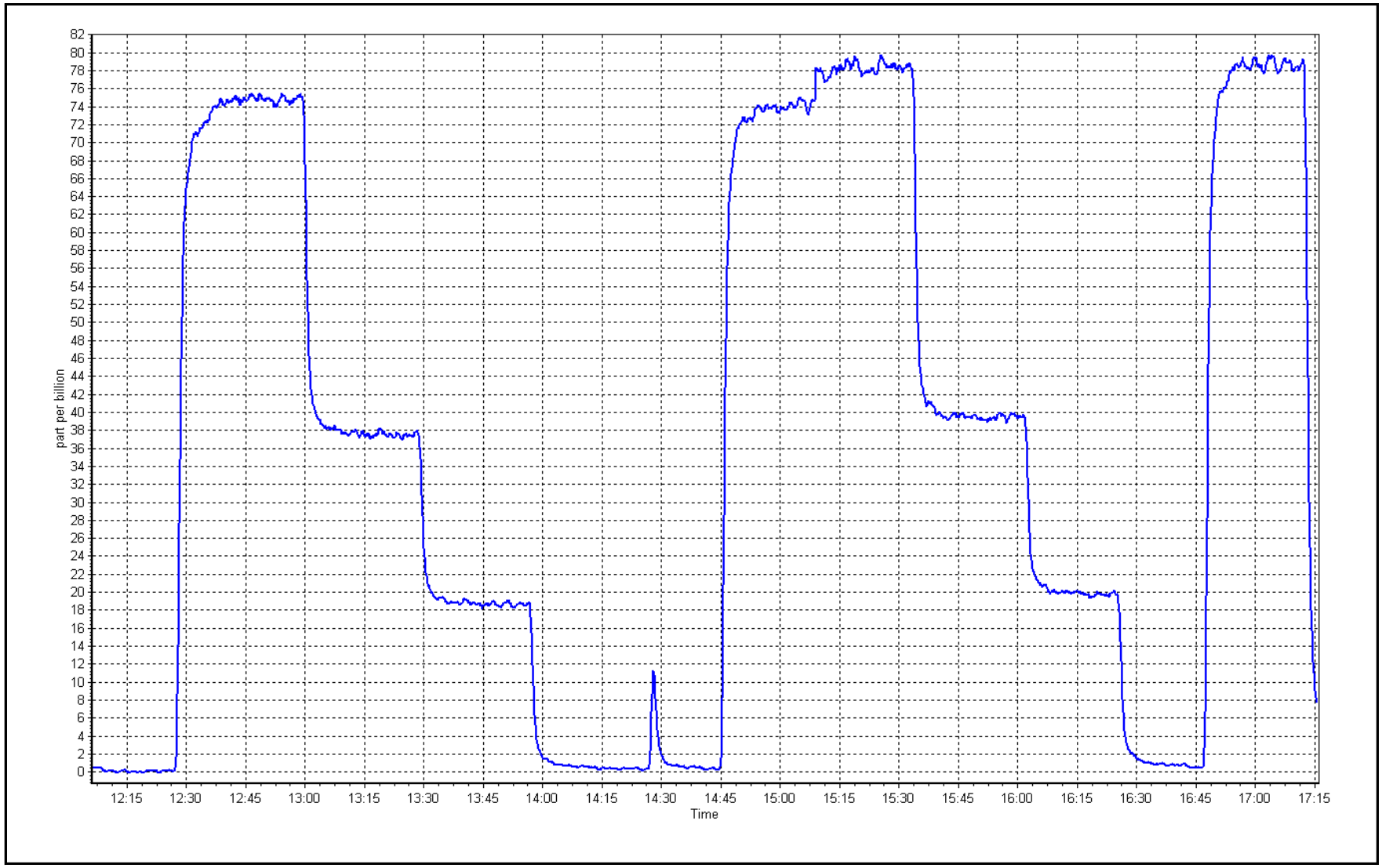
Calibration Date:	December 16, 2025	Previous Calibration:	November 27, 2025
Station Name:	Stony Mountain	Station Number:	AMS18
Start Time (MST):	12:06	End Time (MST):	17:17
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1218153359

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.4	----	Correlation Coefficient	0.999993	*≥0.995*
80.0	78.7	1.0166	Slope	0.979372	*0.90 - 1.10*
40.1	39.5	1.0140			
20.0	19.8	1.0114	Intercept	0.301312	*+/-3*



TRS Calibration Plot Date: December 16, 2025 Location: Stony Mountain



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Stony Mountain	Station number:	AMS 18
Calibration Date:	December 17, 2025	Last Cal Date:	November 26, 2025
Start time (MST):	11:50	End time (MST):	15:03
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	XC026809B	Cal Gas Expiry Date:	January 12, 2029
CH4 Cal Gas Conc.	504.9 ppm	CH4 Equiv Conc.	1076.6 ppm
C3H8 Cal Gas Conc.	207.9 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH4 Conc.	504.9 ppm	CH4 Equiv Conc.	1076.6 ppm
Removed C3H8 Conc.	207.9 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	Teledyne API T700	Serial Number:	2658
Zero Air Gen model:	Teledyne API T701	Serial Number:	4890

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	2.67E-04	2.72E-04	NMHC SP Ratio:	4.97E-05	5.15E-05
CH4 Retention time:	14.8	14.8	NMHC Peak Area:	179853	173441
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.01	----
As found High point	4921	78.1	16.82	16.32	1.032
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	16.30	Prev response	16.73	*% change	-2.6%
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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.01	----
High point	4921	78.1	16.82	16.85	0.998
Mid point	4960	39.1	8.42	8.42	1.000
Low point	4981	19.5	4.20	4.19	1.001
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	78.1	16.82	16.95	0.992
				Average Correction Factor	1.000

Notes: Adjusted the span.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	78.1	8.93	8.61	1.037
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.61	Prev response	8.88	*% change	-3.0%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

NMHC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	78.1	8.93	8.95	0.999
Mid point	4960	39.1	4.47	4.48	0.999
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	9.01	0.991
				Average Correction Factor	0.999

CH4 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.01	----
As found High point	4921	78.1	7.89	7.70	1.026
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	7.69	Prev response	7.85	*% 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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.01	----
High point	4921	78.1	7.89	7.91	0.998
Mid point	4960	39.1	3.95	3.95	1.001
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	7.94	0.993
				Average Correction Factor	1.001

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	0.996109	1.001490
THC Cal Offset:	-0.026123	-0.000728
CH4 Cal Slope:	0.996234	1.001522
CH4 Cal Offset:	-0.005977	-0.000978
NMHC Cal Slope:	0.995793	1.001423
NMHC Cal Offset:	-0.019347	-0.000349

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

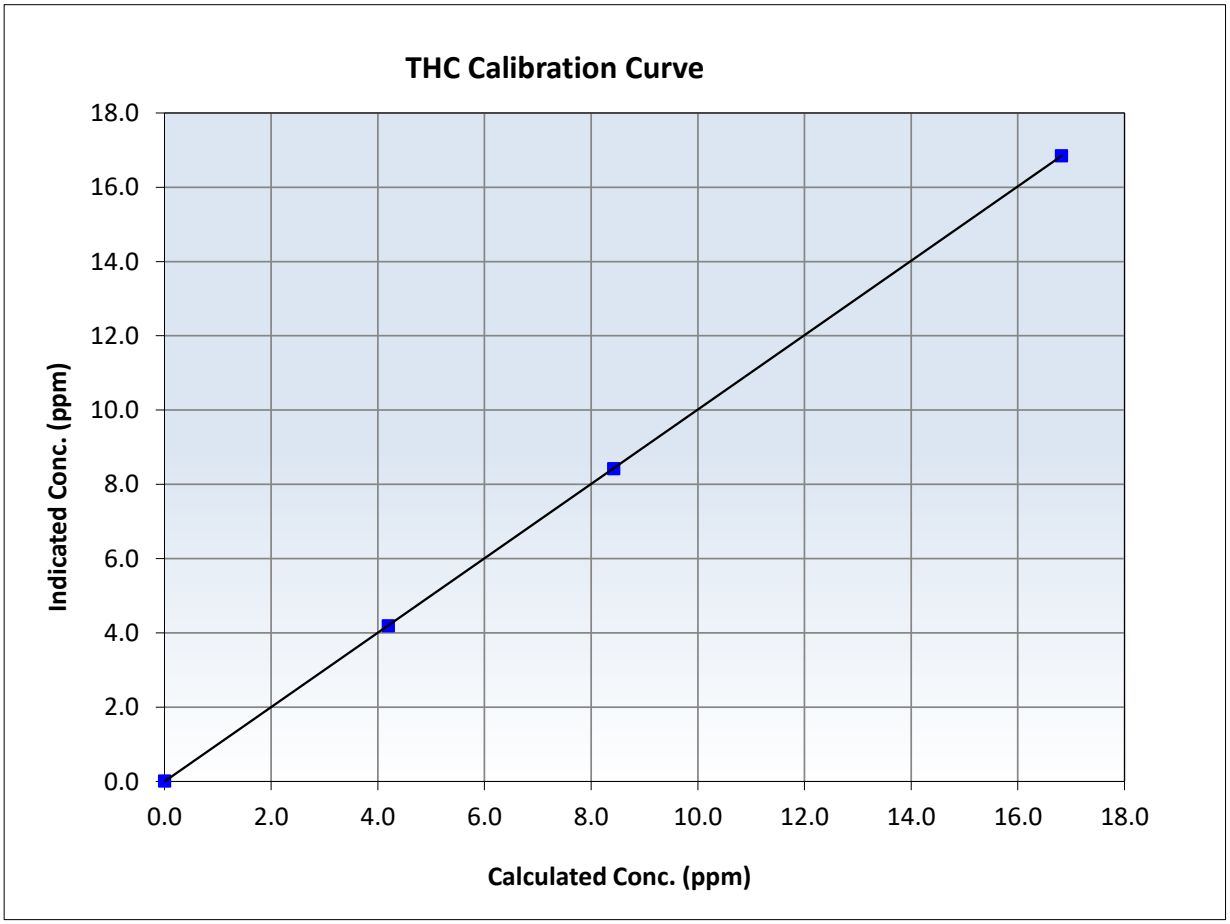
THC Calibration Summary

Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 26, 2025
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:50	End Time (MST):	15:03
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.01	----	Correlation Coefficient	0.999998	*≥0.995*
16.82	16.85	0.9982	Slope	1.001490	*0.90 - 1.10*
8.42	8.42	0.9996	Intercept	-0.000728	*+/-0.5*
4.20	4.19	1.0011			



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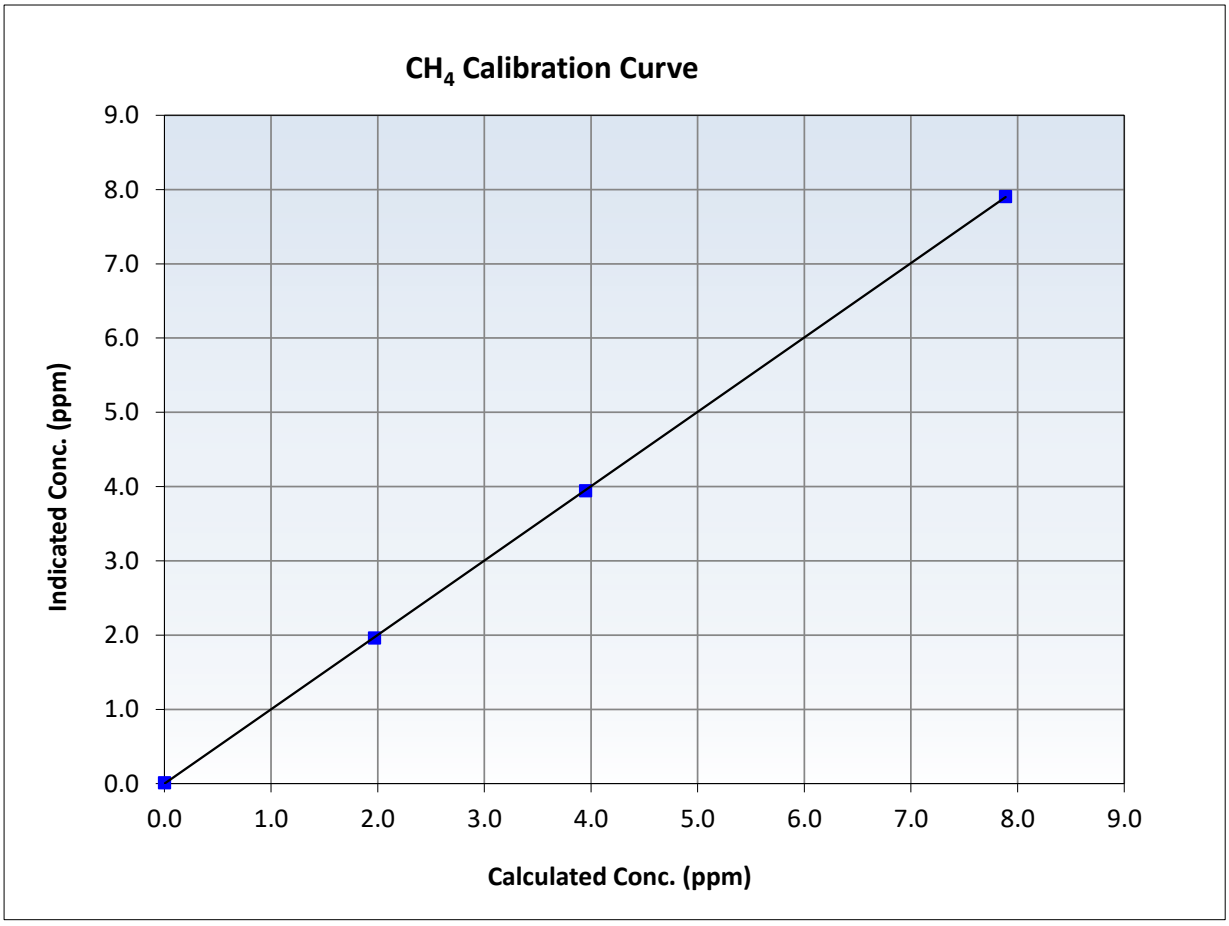
CH_4 Calibration Summary

Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 26, 2025
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:50	End Time (MST):	15:03
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.01	----	Correlation Coefficient	0.999989	≥0.995
7.89	7.91	0.9977	Slope	1.001522	0.90 - 1.10
3.95	3.95	1.0010			
1.97	1.96	1.0040	Intercept	-0.000978	+/-0.5



Wood Buffalo Environmental Association

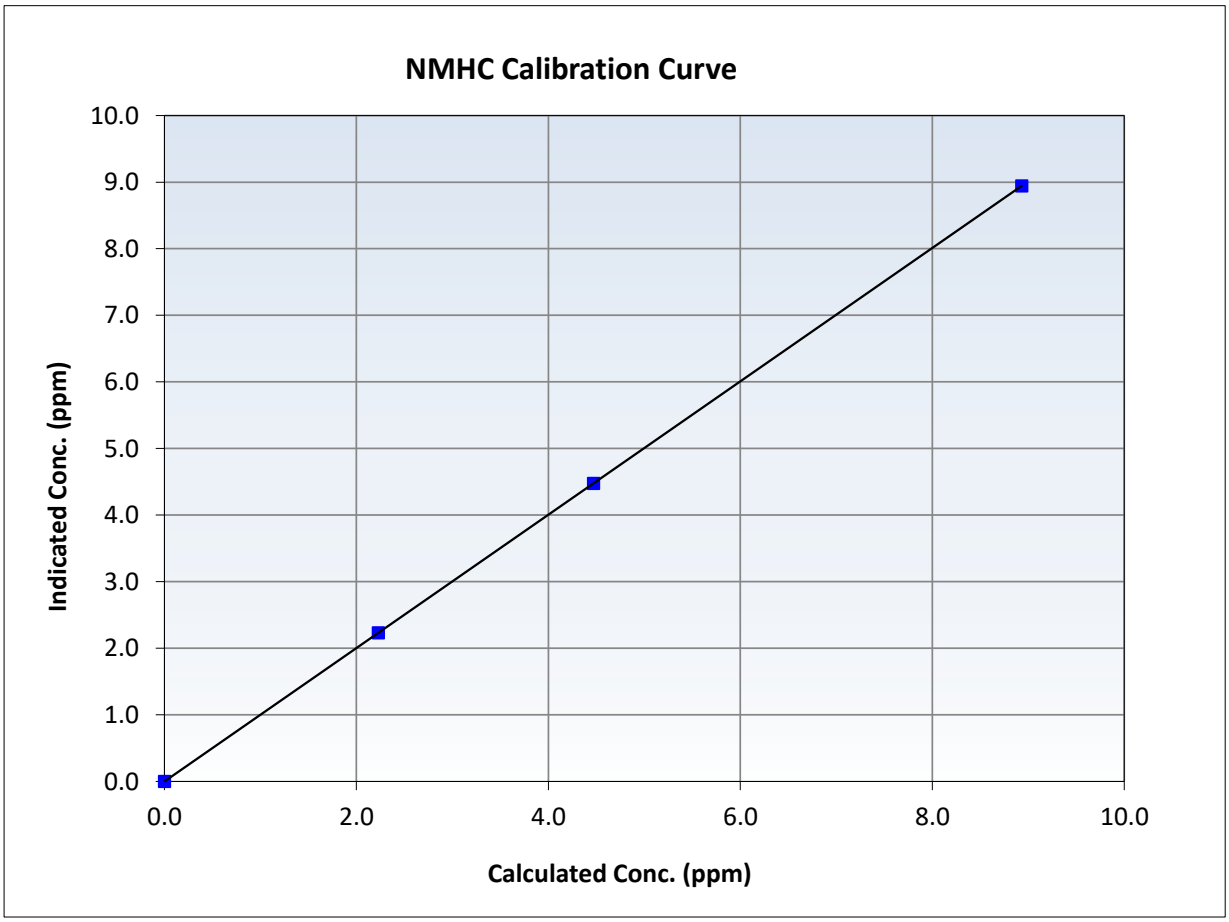
NMHC Calibration Summary

Station Information

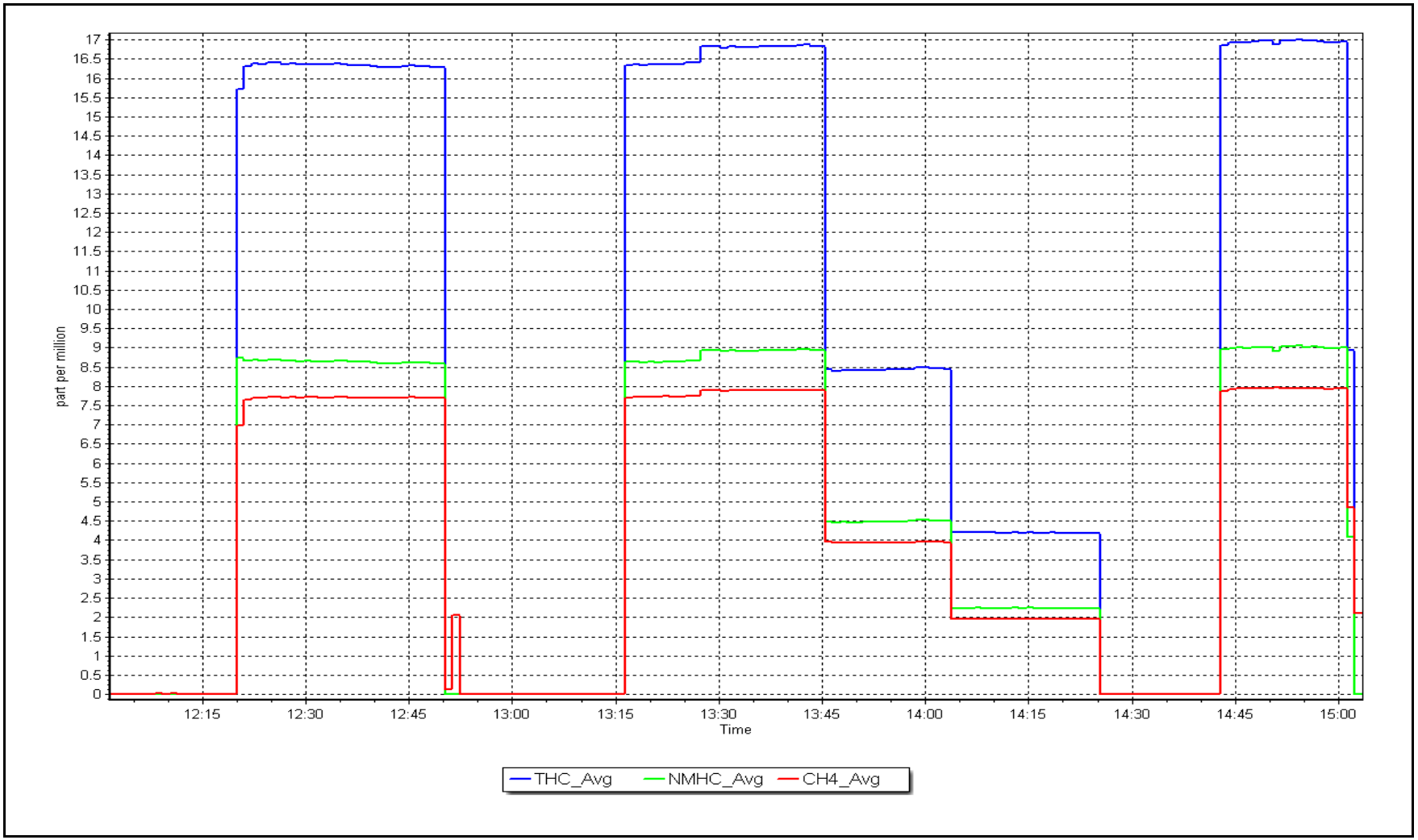
Calibration Date:	December 17, 2025	Previous Calibration:	November 26, 2025
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:50	End Time (MST):	15:03
Analyzer make:	Thermo 55i	Analyzer serial #:	1170050130

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	1.000000	*≥0.995*
8.93	8.95	0.9985	Slope	1.001423	*0.90 - 1.10*
4.47	4.48	0.9990	Intercept	-0.000349	*+/-0.5*
2.23	2.23	0.9984			



NMHC Calibration Plot Date: December 17, 2025 Location: Stony Mountain



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Stony Mountain
Station number:	AMS 18
Calibration Date:	December 18, 2025
Last Cal Date:	November 6, 2025
Start time (MST):	12:20
End time (MST):	17:26
Reason:	Routine

Calibration Standards

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

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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-2.9	-0.2	-2.7	----	----
AF High point	4933	66.6	803.3	800.6	2.7	819.9	818.1	1.9	0.9763	0.9784
AF Mid point										
AF Low point										
New cyl resp										

Previous Respo	4933	NO_X =	800.0 ppb	NO =	798.6 ppb		
Baseline Corr 1st pt		NO_X =	822.8 ppb	NO =	818.3 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 =	2.8%	
*Percent Change	NO =	2.4%	
Nx Sl:	Nx Int:		
NO Sl:	NO Int:		
NO2 Sl:	NO_2 Int:		

As Found Statistics

As found	NO_X r^2:
As found	NO r^2:
As found	NO_2 r^2:

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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo Scientific 42i Serial Number: 1501663731

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	1.117	1.097	NO bkgnd or offset:	11.2	10.9
NOX coeff or slope:	1.000	1.001	NOX bkgnd or offset:	14.0	11.0
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	219.8	216.8

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	0.999010	1.001044
NO_X Cal Offset:	-2.488659	-1.528163
NO Cal Slope:	1.000380	1.001266
NO Cal Offset:	-2.329568	-2.689590
NO_2 Cal Slope:	1.001371	1.007381
NO_2 Cal Offset:	-1.144685	-0.226180

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	----	----
High point	4933	66.6	803.3	800.6	2.7	803.4	800.3	3.1	0.9998	1.0004
Mid point	4967	33.3	401.6	400.2	1.3	399.5	396.5	2.9	1.0052	1.0094
Low point	4983	16.6	200.2	199.5	0.7	197.5	194.7	2.8	1.0137	1.0249
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.0	0.1	----	----
As left span	4933	66.6	803.3	385.6	417.7	803.0	385.6	417.5	1.0003	1.0000
							Average Correction Factor		1.0062	1.0116

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.1	----	----
High GPT point	798.1	388.7	412.1	415.1	0.9927	100.7%
Mid GPT point	798.1	597.1	203.7	204.6	0.9954	100.5%
Low GPT point	798.1	696.8	104.0	104.3	0.9968	100.3%
				Average Correction Factor	0.9950	100.5%

Notes: Zero and span adjusted.

Calibration Performed By: Aswin Sasi Kumar

Wood Buffalo Environmental Association

NO_X Calibration Summary

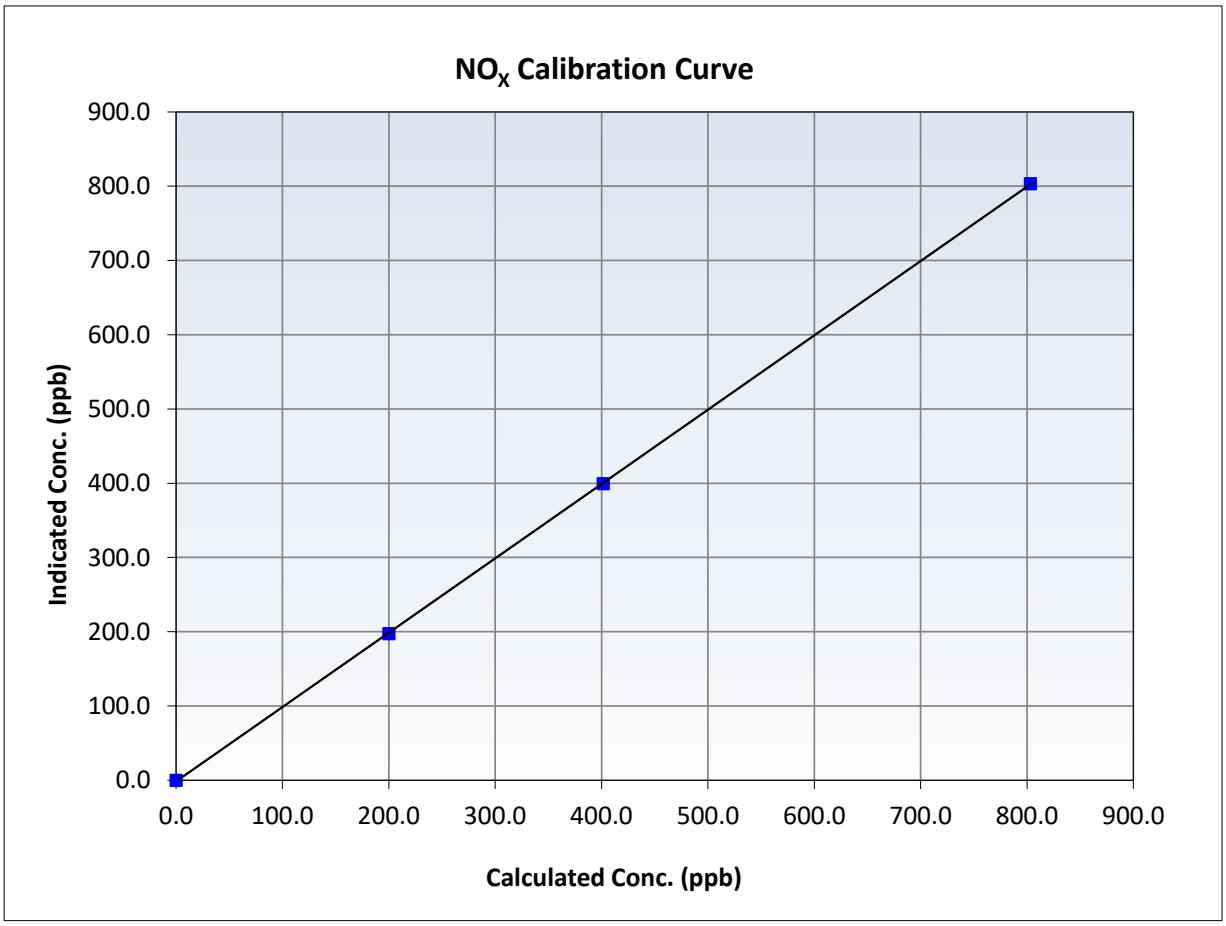
Station Information

Calibration Date:	December 18, 2025	Previous Calibration:	November 6, 2025
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	12:20	End Time (MST):	17:26
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1501663731

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
803.3	803.4	0.9998
401.6	399.5	1.0052
200.2	197.5	1.0137

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999983	*≥0.995*
Slope	1.001044	*0.90 - 1.10*
Intercept	-1.528163	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

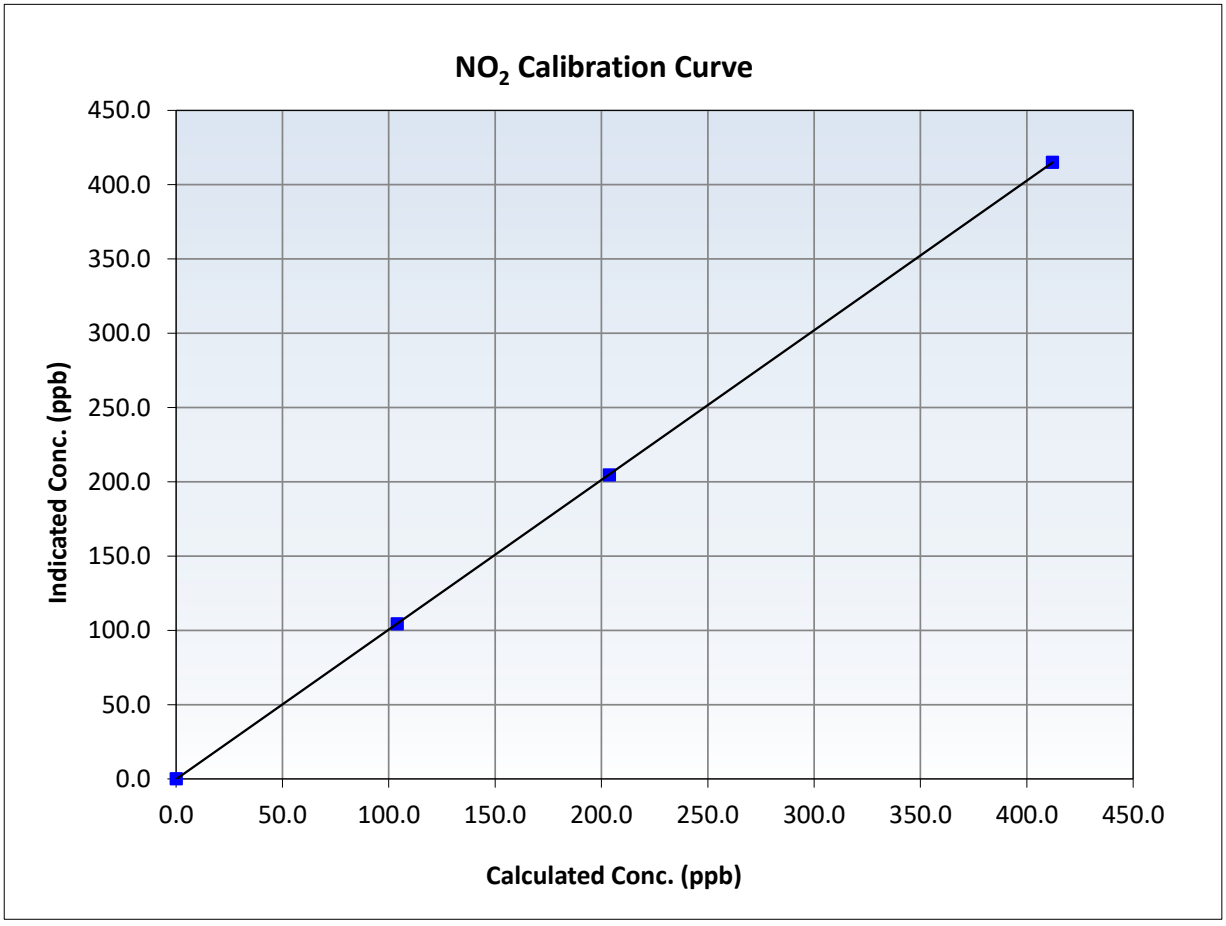
Station Information

Calibration Date:	December 18, 2025	Previous Calibration:	November 6, 2025
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	12:20	End Time (MST):	17:26
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1501663731

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
412.1	415.1	0.9927
203.7	204.6	0.9954
104.0	104.3	0.9968

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999997	*≥0.995*
Slope	1.007381	*0.90 - 1.10*
Intercept	-0.226180	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

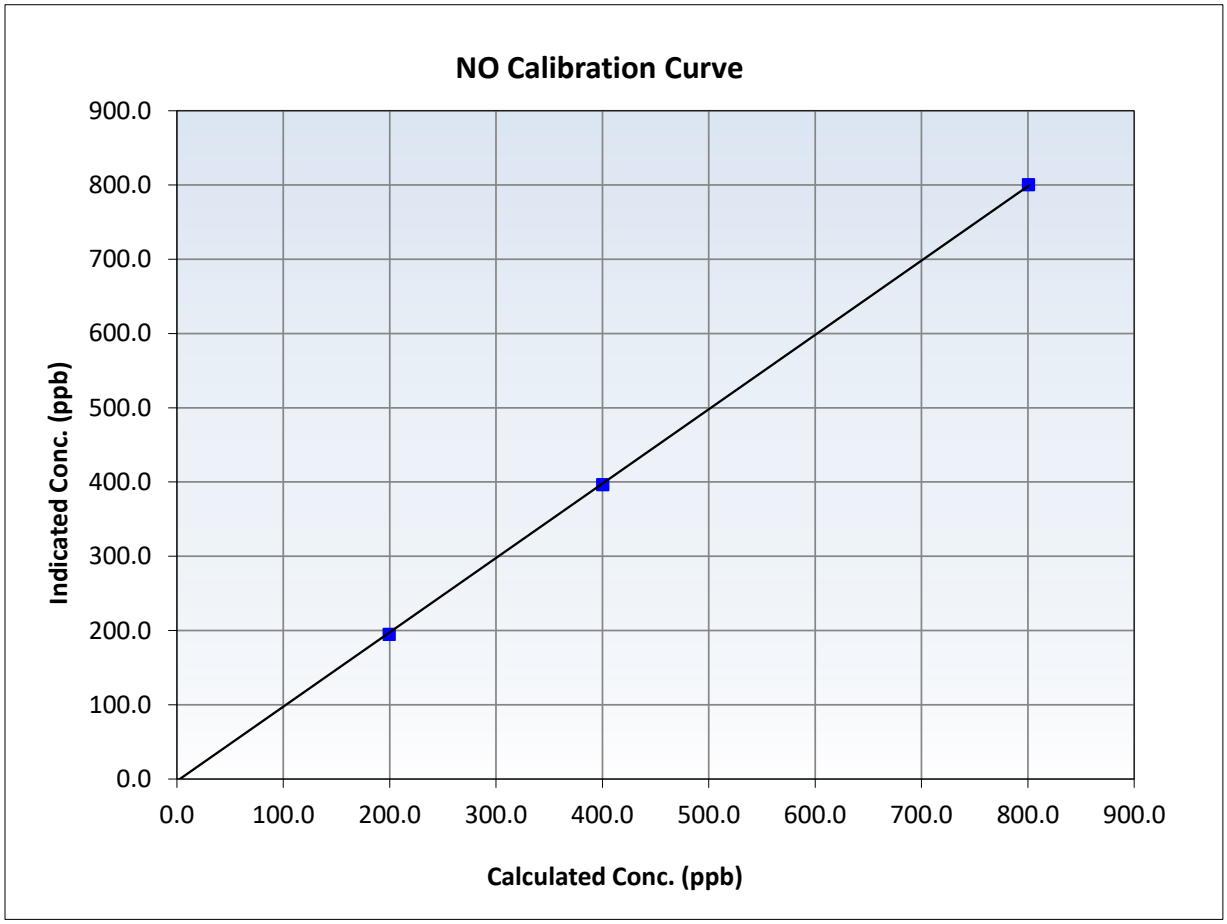
Station Information

Calibration Date:	December 18, 2025	Previous Calibration:	November 6, 2025
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	12:20	End Time (MST):	17:26
Analyzer make:	Thermo Scientific 42i	Analyzer serial #:	1501663731

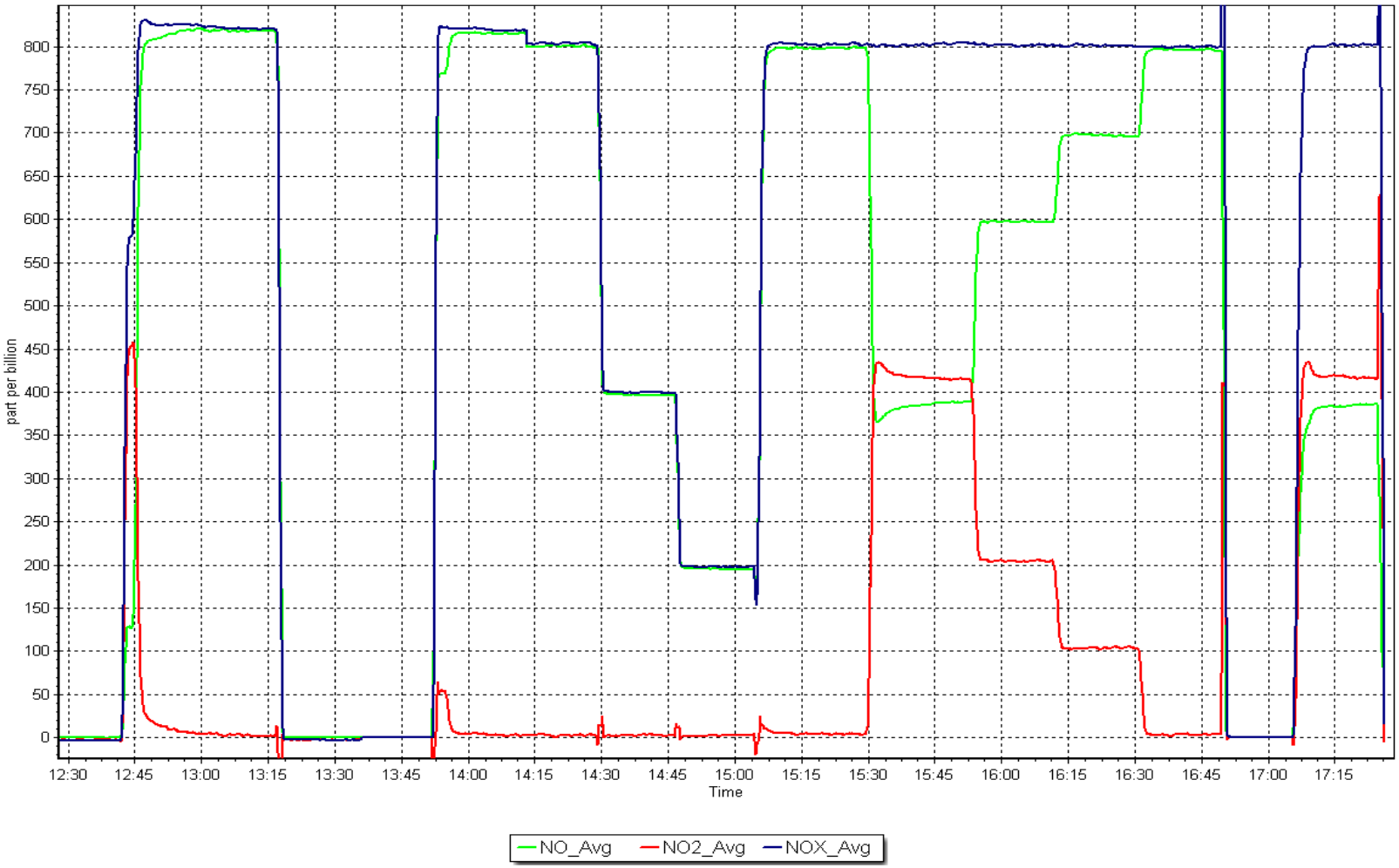
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
800.6	800.3	1.0004
400.2	396.5	1.0094
199.5	194.7	1.0249

Statistical Evaluation		Limits
Correlation Coefficient	0.999952	≥0.995
Slope	1.001266	0.90 - 1.10
Intercept	-2.689590	+/-20



NO_X Calibration Plot Date: December 18, 2025 Location: Stony Mountain



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Stony Mountain	Station number:	AMS 18
Calibration Date:	December 3, 2025	Last Cal Date:	November 25, 2025
Start time (MST):	11:03	End time (MST):	14:19
Reason:	Routine		

Calibration Standards

O3 generation mode:	Photometer		
Calibrator Make/Model:	Teledyne API T700	Serial Number:	2658
ZAG Make/Model:	Teledyne API 701H	Serial Number:	4890

Analyzer Information

Analyzer make:	API T400		Analyzer serial #:	825	
Analyzer Range	0 - 500 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.999286	0.997029	Backgd or Offset:	3.1	3.1
Calibration intercept:	0.500000	-0.180000	Coeff or Slope:	1.010	1.010

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	NA	0.0	-0.8	----
As found High point	4888	1141.2	400.0	400.0	0.998
As found Mid point					
As found Low point					
Baseline Corr As found:	400.8	Previous response	400.2	*% 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	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	NA	0.0	-0.6	----
High point	4888	1138.1	400.0	398.4	1.004
Mid point	4888	884.5	200.0	199.5	1.003
Low point	4888	741.4	100.0	99.9	1.001
As left zero	5000	NA	0.0	-0.4	----
As left span	4812	1097.9	400.0	399.6	1.001
				Average Correction Factor	1.003

Notes: No adjustments made.

Calibration Performed By: Aswin Sasi Kumar, Parampreet Kaur

Wood Buffalo Environmental Association

O_3 Calibration Summary

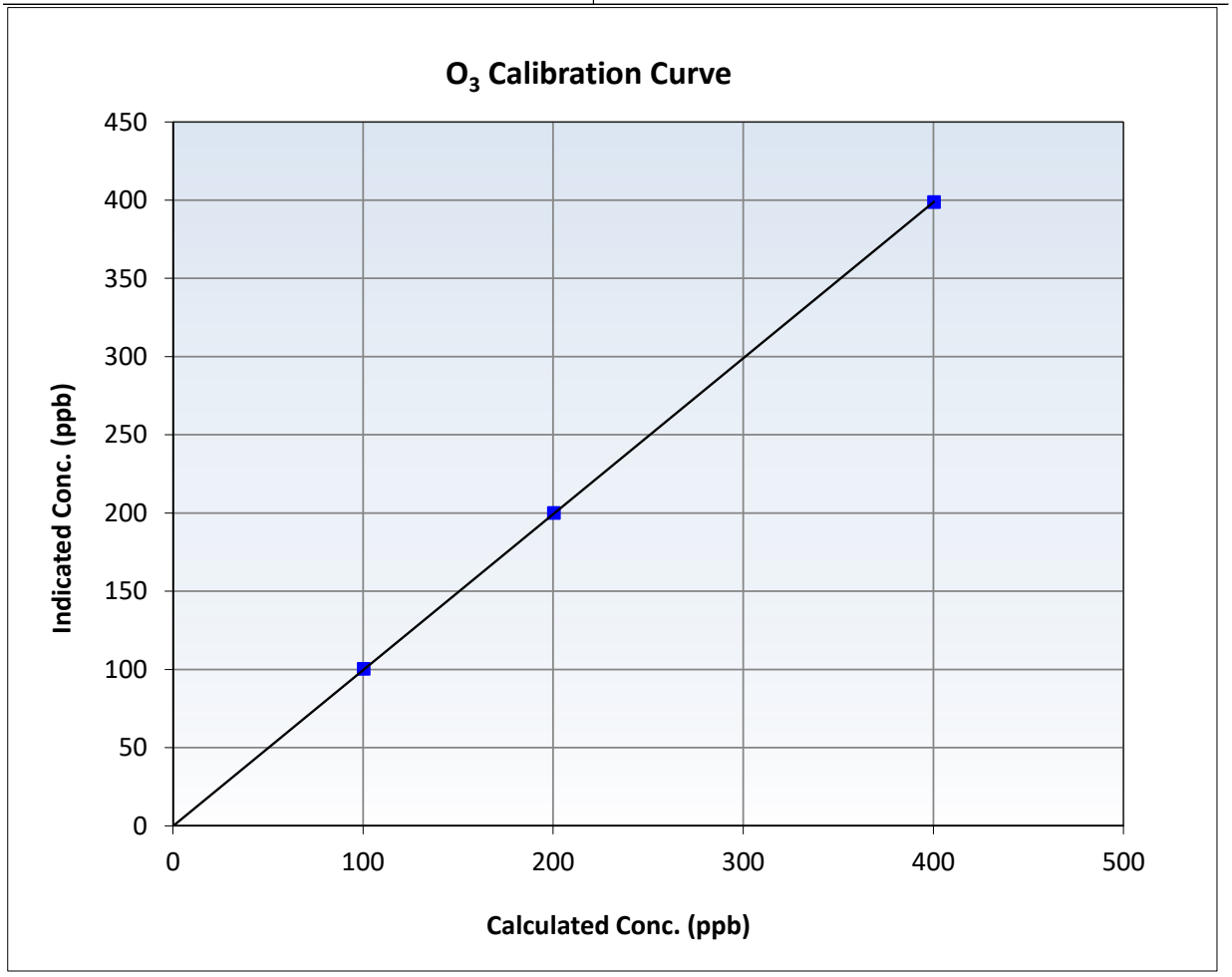
Station Information

Calibration Date:	December 3, 2025	Previous Calibration:	November 25, 2025
Station Name:	Stony Mountain	Station Number:	AMS 18
Start Time (MST):	11:03	End Time (MST):	14:19
Analyzer make:	API T400	Analyzer serial #:	825

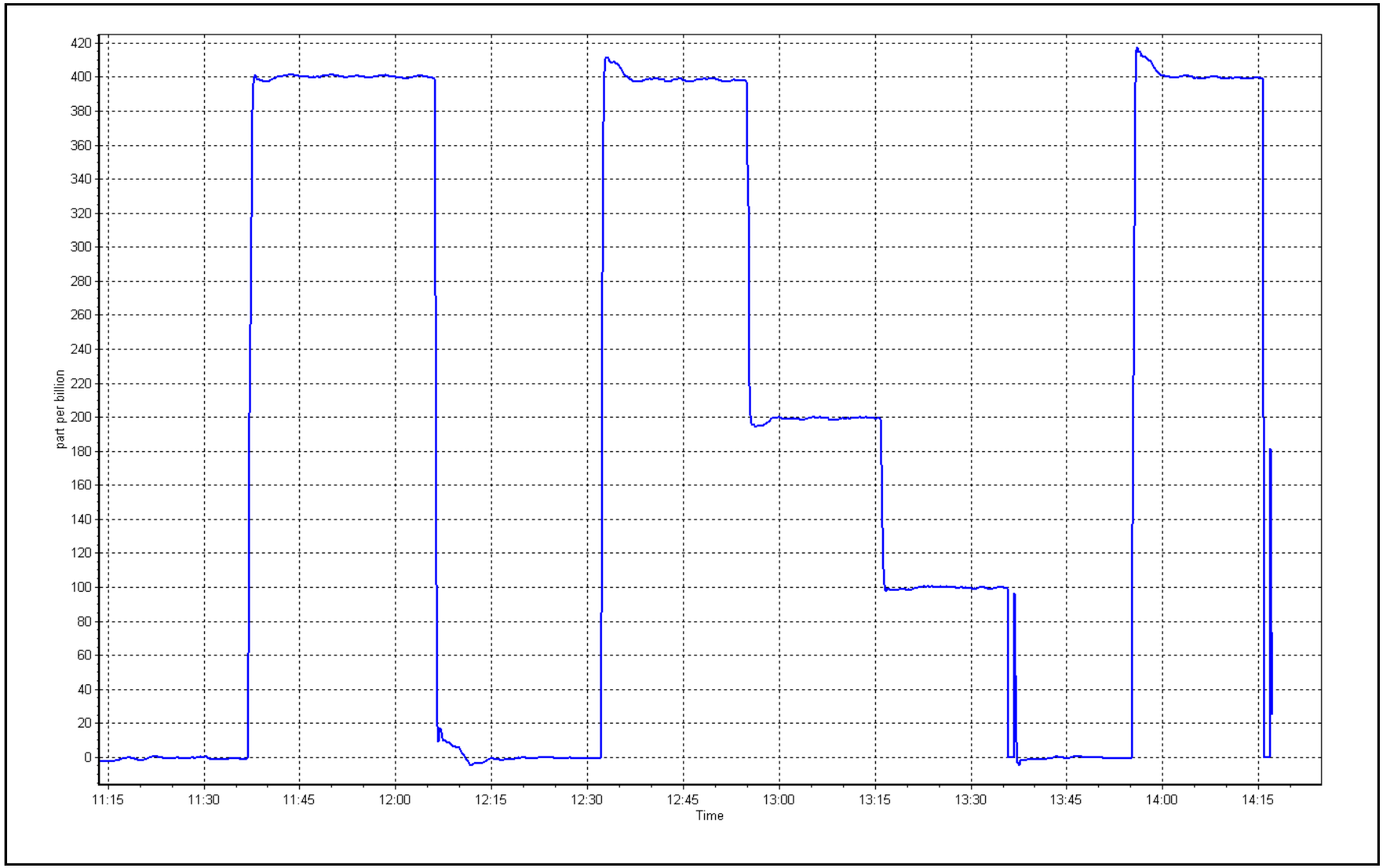
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.6	----
400.0	398.4	1.0040
200.0	199.5	1.0025
100.0	99.9	1.0010

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999995	*≥0.995*
Slope	0.997029	*0.90 - 1.10*
Intercept	-0.180000	*+/- 5*



O_3 Calibration Plot Date: December 3, 2025 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:	December 18, 2025	Last Cal Date:	November 27, 2025
Start time (MST):	15:40	End time (MST):	16:36
Analyzer Make:	API T640	S/N:	324
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)	-18	-19.1	-18	☐	+/- 2 °C
P (mmHg)	690.7	694.50	690.7	☐	+/- 10 mmHg
Flow (LPM)	5.01	4.95	5.01	☐	+/- 0.25 LPM
PW% (pump)	41	-----	41	☐	>80%
Zero Verification	PM w/o HEPA:	3.8	PM w/ HEPA:	0.0	<0.2 ug/m3

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

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

Quarterly Calibration Test

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

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

Date Optical Chamber Cleaned: November 27, 2025

Date Disposable Filter Changed: October 31, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: September 23, 2025

Date RH/T Sensor Cleaned: September 23, 2025

Notes: Flow, pressure and temp checked. Leak check passed.

Calibration by: Aswin Sasi Kumar

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS19
FIREBAG
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Firebag	Station number:	AMS 19
Calibration Date:	December 11, 2025	Last Cal Date:	November 13, 2025
Start time (MST):	11:38	End time (MST):	15:07
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.97	ppm	Cal Gas Exp Date:	October 9, 2032
Cal Gas Cylinder #:	CC705799			
Removed Cal Gas Conc:	50.97	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Model:	Teledyne API T700		Serial Number:	1607
Zero Air Gen Model:	Teledyne API T701H		Serial Number:	201

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1410661308	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.999159	0.999545	Backgd or Offset:	13.3	11.3
Calibration intercept:	0.140000	1.280000	Coeff or Slope:	1.001	1.008

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	4999	0.0	0.0	-2.0	----
As found High point	4922	78.4	799.2	793.6	1.005
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	795.6	Previous response	798.7	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	4999	0.0	0.0	0.0	----
High point	4922	78.4	799.2	799.1	1.000
Mid point	4961	39.2	399.6	402.5	0.993
Low point	4980	19.6	199.8	201.5	0.992
As left zero	4999	0.0	0.0	0.0	----
As left span	4922	78.4	799.2	801.0	0.998
				Average Correction Factor:	0.995

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

SO_2 Calibration Summary

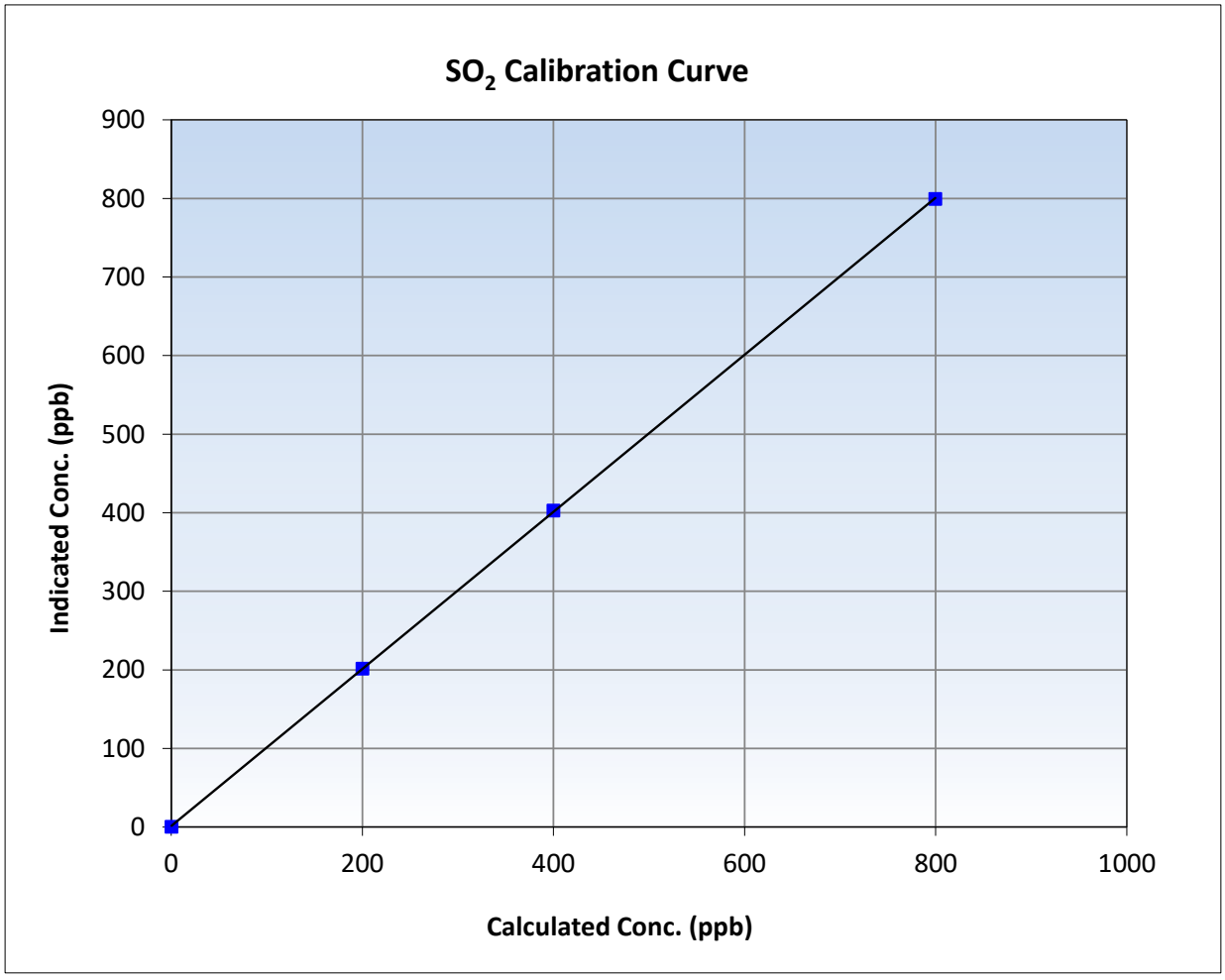
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 13, 2025
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	11:38	End Time (MST):	15:07
Analyzer make:	Thermo 43i	Analyzer serial #:	1410661308

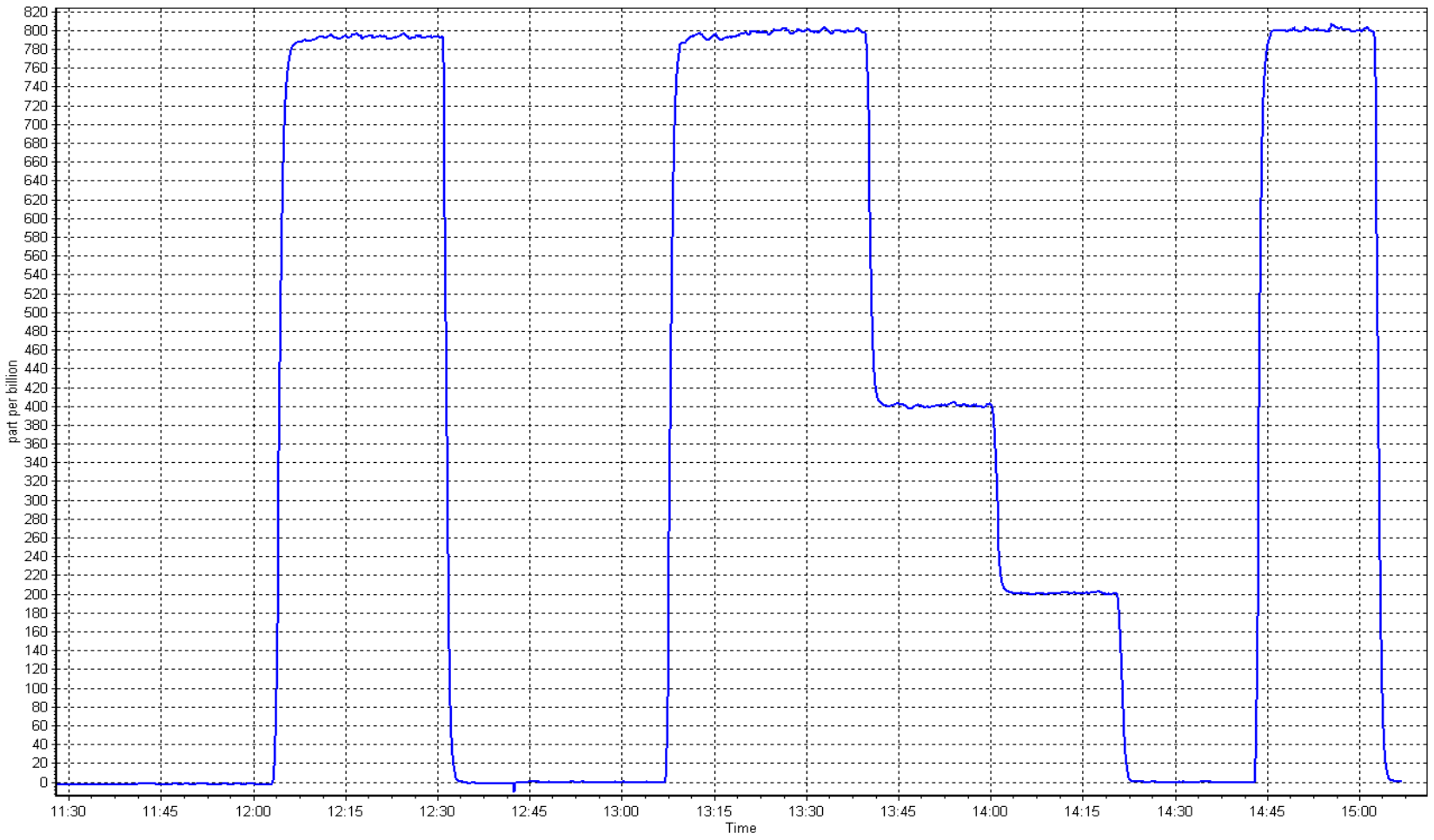
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
799.2	799.1	1.0001
399.6	402.5	0.9928
199.8	201.5	0.9916

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999982	*≥0.995*
Slope	0.999545	*0.90 - 1.10*
Intercept	1.280000	*+/-30*



SO2 Calibration Plot Date: December 11, 2025 Location: Firebag



Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name:	Firebag	Station number:	AMS 19
Calibration Date:	December 16, 2025	Last Cal Date:	November 10, 2025
Start time (MST):	11:51	End time (MST):	17:30
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.29	ppm	Cal Gas Exp Date:	March 19, 2027
Cal Gas Cylinder #:	DT0010492			
Removed Cal Gas Conc:	5.29	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	Teledyne API T700		Serial Number:	1607
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

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.995046	1.006048	Backgd or Offset:	2.87	3.45
Calibration intercept:	0.080000	0.020000	Coeff or Slope:	1.211	1.274

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.2	----
As found High point	4924	75.6	80.0	77.0	1.041
As found Mid point	4962	37.8	40.0	39.0	1.031
As found Low point	4981	18.9	20.0	19.7	1.025
New cylinder response					

Baseline Corr As found:	76.8	Prev response:	79.67	*% change:	-3.7%
Baseline Corr 2nd AF pt:	38.8	AF Slope:	0.959468	AF Intercept:	0.400000
Baseline Corr 3rd AF pt:	19.5	AF Correlation:	0.999961	* = > +/-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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4924	75.6	80.0	80.5	0.994
Mid point	4962	37.8	40.0	40.2	0.995
Low point	4981	18.9	20.0	20.2	0.990
As left zero	5000	0.0	0.0	0.1	----
As left span	4924	75.6	80.0	79.8	1.002
SO2 Scrubber Check				0.0	
Date of last scrubber change:		18-Jan-23		Ave Corr Factor	0.993
Date of last converter efficiency test:		November 26, 2024		106.2%	efficiency

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

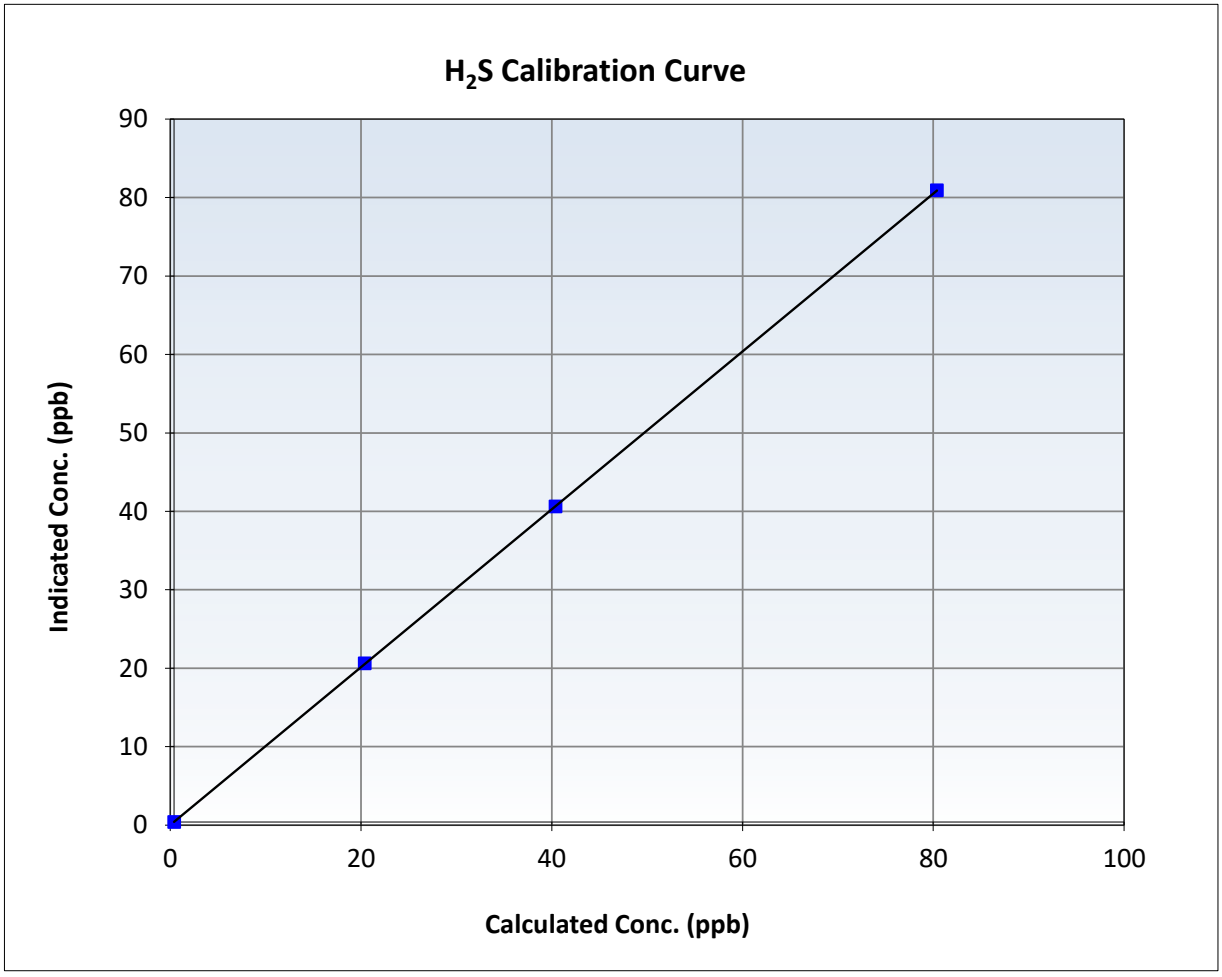
H2S Calibration Summary

Station Information

Calibration Date:	December 16, 2025	Previous Calibration:	November 10, 2025
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	11:51	End Time (MST):	17:30
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1151680032

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.0	----	Correlation Coefficient	0.999998	*≥0.995*
80.0	80.5	0.9936	Slope	1.006048	*0.90 - 1.10*
40.0	40.2	0.9948			
20.0	20.2	0.9899	Intercept	0.020000	*+/-3*



H2S Calibration Plot Date: December 16, 2025 Location: Firebag

Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name:	Firebag	Station number:	AMS 19
Calibration Date:	December 11, 2025	Last Cal Date:	November 13, 2025
Start time (MST):	11:38	End time (MST):	15:07
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC705799		Cal Gas Expiry Date:	October 9, 2032	
CH4 Cal Gas Conc.	505.1	ppm	CH4 Equiv Conc.	1066.9	ppm
C3H8 Cal Gas Conc.	204.3	ppm			
Removed Gas Cert:			Removed Gas Expiry:		
Removed CH4 Conc.	505.1	ppm	CH4 Equiv Conc.	1066.9	ppm
Removed C3H8 Conc.	204.3	ppm	Diff between cyl:		
Calibrator Make/Model:	Teledyne API T700		Serial Number:	1607	
ZAG Make/Model:	Teledyne API T701H		Serial Number:	201	

Analyzer Information

Analyzer make:	Thermo 51i-LT		Analyzer serial #:	1336160089	
Analyzer Range:	0 - 20 ppm				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.005458	1.002418	Background:	2.09	2.20
Calibration intercept:	-0.096135	-0.054134	Coefficient:	3.902	3.862

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	4999	0.0	0.00	0.14	----
As found High point	4922	78.4	16.73	17.04	0.990
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.90	Previous response	16.72	*% change	1.0%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	4999	0.0	0.00	-0.04	----
High point	4922	78.4	16.73	16.73	1.000
Mid point	4961	39.2	8.36	8.30	1.008
Low point	4980	19.6	4.18	4.14	1.010
As left zero	4999	0.0	0.00	-0.02	----
As left span	4922	78.4	16.73	16.86	0.992
				Average Correction Factor	1.006

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

THC Calibration Summary

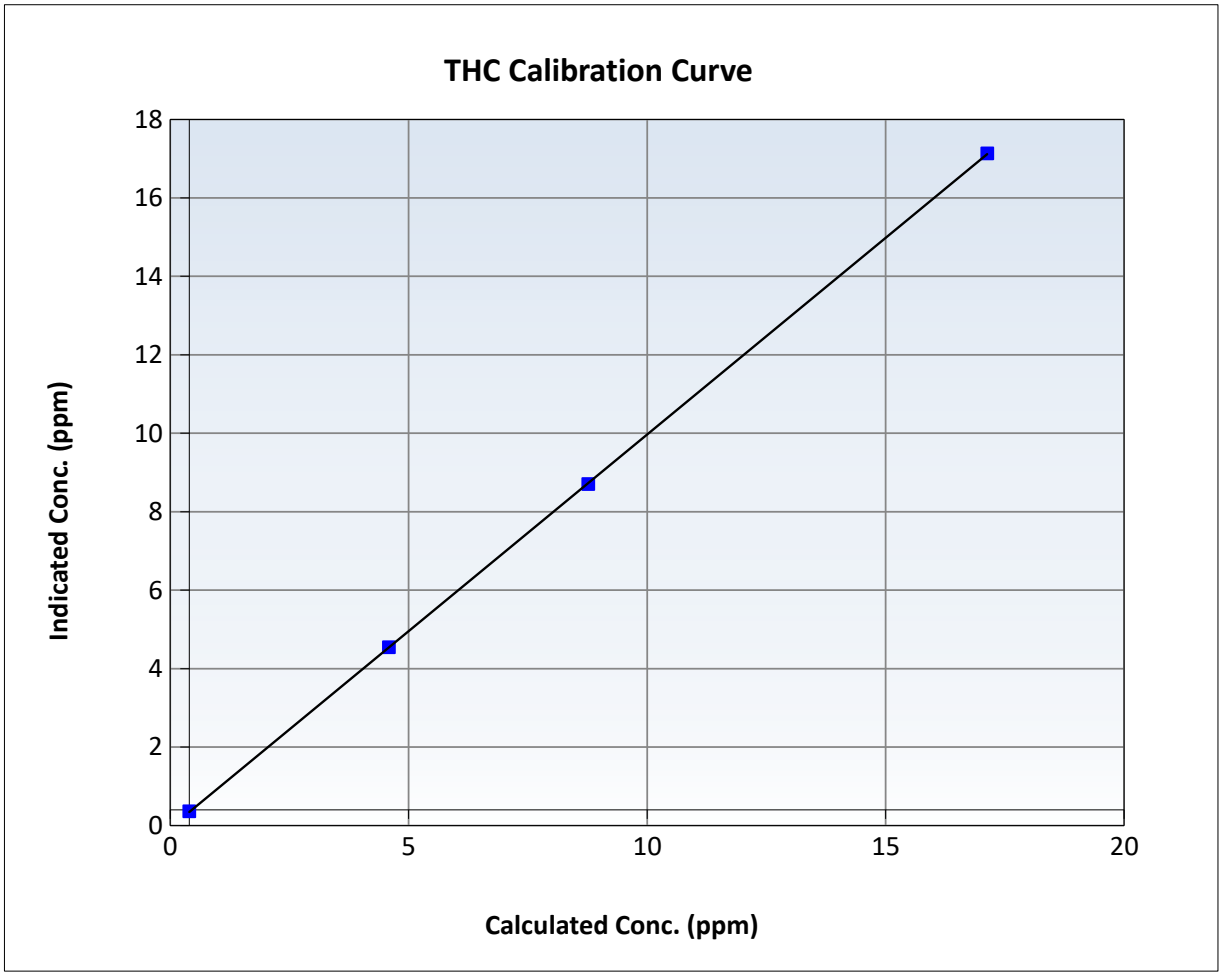
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 13, 2025
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	11:38	End Time (MST):	15:07
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1336160089

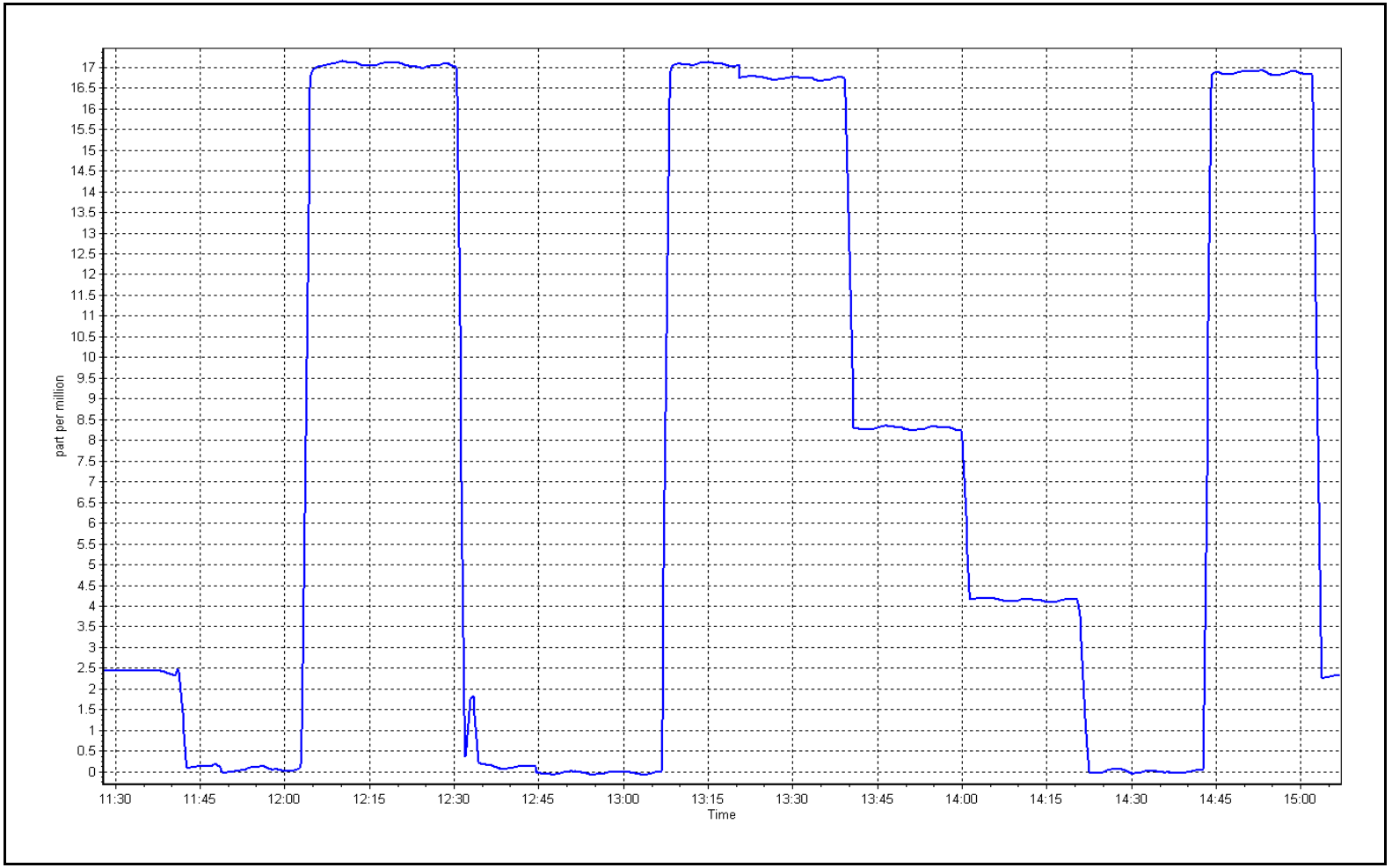
Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	-0.04	----
16.73	16.73	1.0000
8.36	8.30	1.0078
4.18	4.14	1.0096

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999991	*≥0.995*
Slope	1.002418	*0.90 - 1.10*
Intercept	-0.054134	*+/-1.5*



THC Calibration Plot Date: December 11, 2025 Location: Firebag



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Firebag
Station number:	AMS 19
Calibration Date:	December 9, 2025
Last Cal Date:	November 12, 2025
Start time (MST):	11:27
End time (MST):	15:48
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0044018	Cal Gas Expiry Date:	November 3, 2031
NOX Cal Gas Conc:	48.90 ppm	NO Cal Gas Conc:	48.70 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	48.90 ppm	Removed Gas NO Conc:	48.70 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	1607
ZAG make/model:	Teledyne API T701H	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.3	-0.3	0.0	----	----
AF High point	4918	82.1	802.9	799.7	3.3	812.0	808.0	4.5	0.9885	0.9893
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 803.7 ppb	NO = 800.2 ppb
Baseline Corr 1st pt	NO_X = 812.3 ppb	NO = 808.3 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 r^2:	*Percent Change	NO_X = 1.1%
As found	NO r^2:	*Percent Change	NO = 1.0%
As found	NO_2 r^2:	Nx Sl:	Nx Int:
		NO Sl:	NO Int:
		NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1410661309

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	Finish		Start	Finish
NO coeff or slope:	0.922	0.922	NO bkgnd or offset:	4.6	4.6
NOX coeff or slope:	0.993	0.993	NOX bkgnd or offset:	4.6	4.6
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	163.6	162.0

Calibration Statistics

	Start	Finish
NO_X Cal Slope:	0.999427	1.008577
NO_X Cal Offset:	1.179966	0.340108
NO Cal Slope:	1.000087	1.007889
NO Cal Offset:	0.459895	0.279897
NO_2 Cal Slope:	0.999118	0.997750
NO_2 Cal Offset:	-0.454709	-0.034924

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	----	----
High point	4918	82.1	802.9	799.7	3.3	810.0	806.0	3.2	0.9913	0.9921
Mid point	4959	41.1	402.0	400.3	1.6	405.8	404.1	1.7	0.9905	0.9906
Low point	4980	20.5	200.5	199.7	0.8	203.1	201.8	1.3	0.9871	0.9894
As left zero	5000	0	0.0	0.0	0.0	-0.1	-0.1	0.0	----	----
As left span	4918	82.1	802.9	395.2	407.7	809.0	395.2	414.0	0.9925	1.0000
							Average Correction Factor		0.9897	0.9907

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.0	----	----
High GPT point	802.0	394.8	410.5	409.6	1.0022	99.8%
Mid GPT point	802.0	599.7	205.6	204.9	1.0033	99.7%
Low GPT point	802.0	704.8	100.5	100.3	1.0018	99.8%
				Average Correction Factor	1.0024	99.8%

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

NO_X Calibration Summary

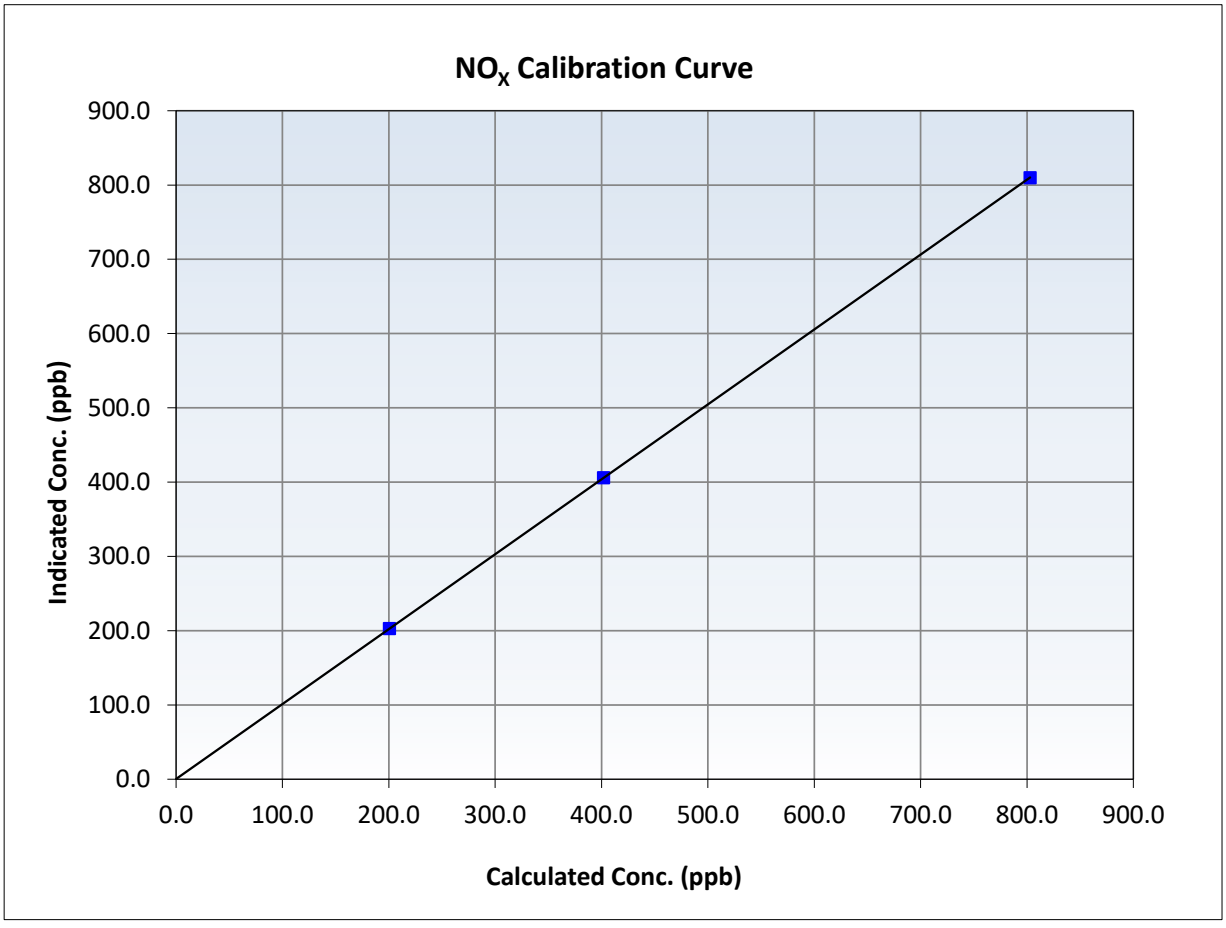
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 12, 2025
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	11:27	End Time (MST):	15:48
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661309

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
802.9	810.0	0.9913
402.0	405.8	0.9905
200.5	203.1	0.9871

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999999	*≥0.995*
Slope	1.008577	*0.90 - 1.10*
Intercept	0.340108	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

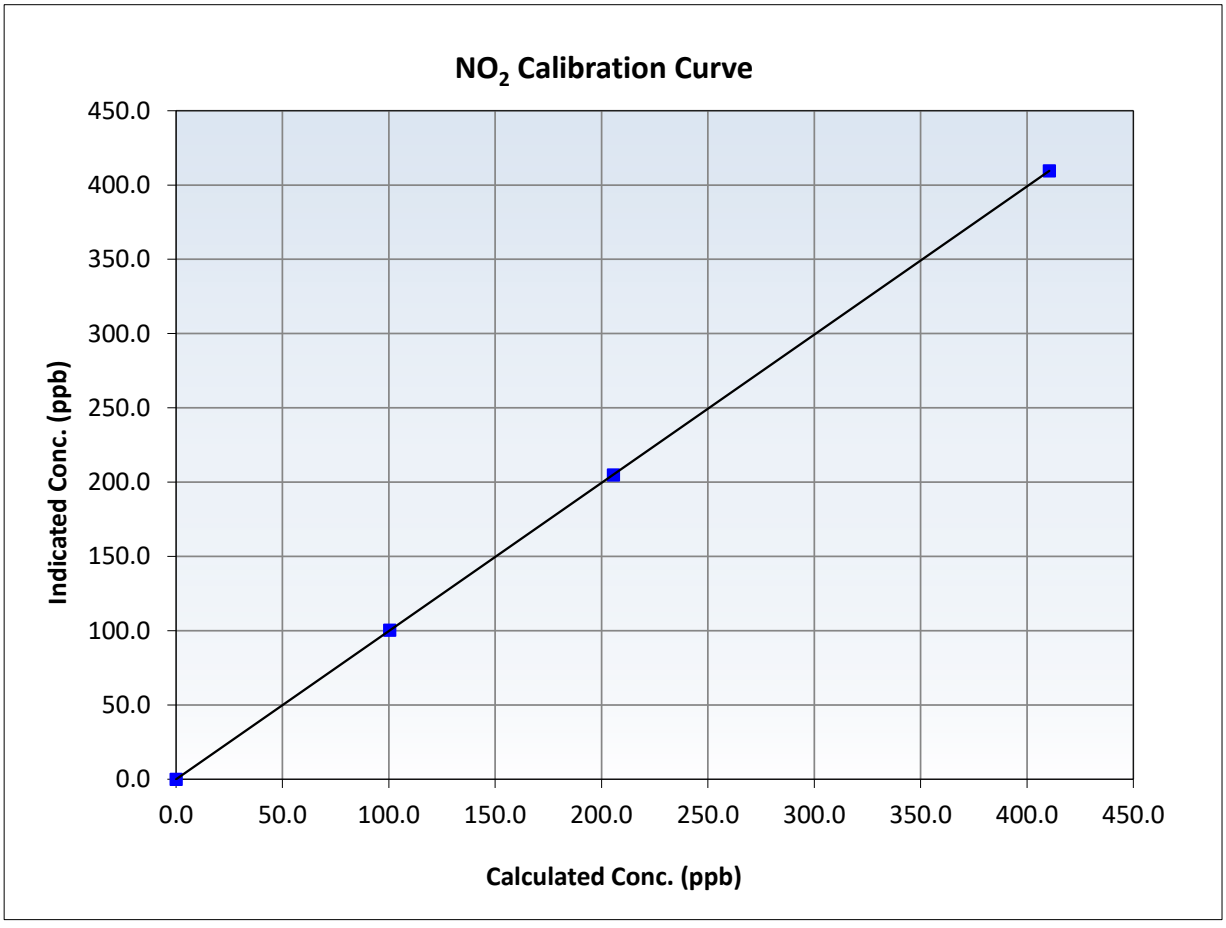
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 12, 2025
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	11:27	End Time (MST):	15:48
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661309

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
410.5	409.6	1.0022
205.6	204.9	1.0033
100.5	100.3	1.0018

Statistical Evaluation		Limits
Correlation Coefficient	0.999999	≥0.995
Slope	0.997750	0.90 - 1.10
Intercept	-0.034924	+/-20



Wood Buffalo Environmental Association

NO Calibration Summary

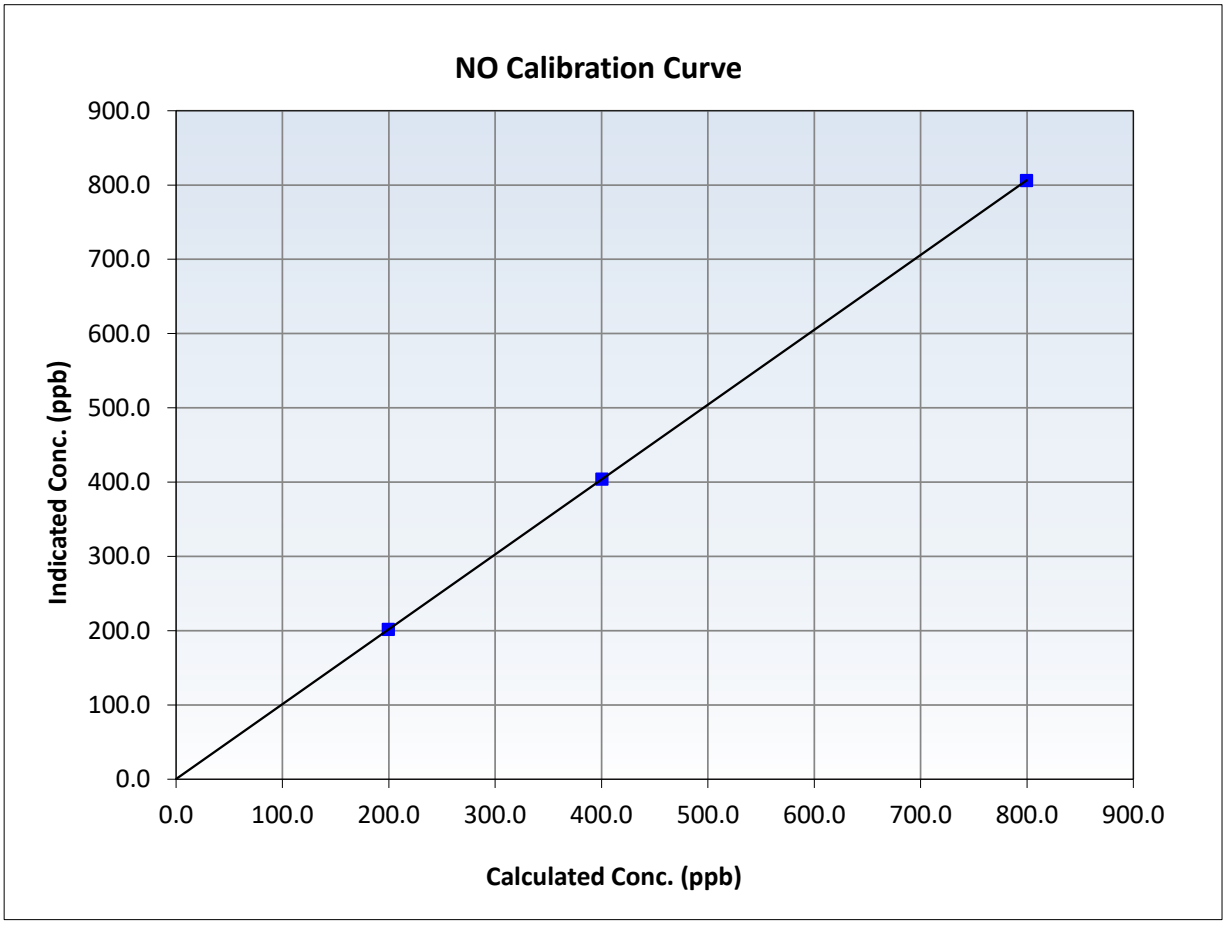
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 12, 2025
Station Name:	Firebag	Station Number:	AMS 19
Start Time (MST):	11:27	End Time (MST):	15:48
Analyzer make:	Thermo 42i	Analyzer serial #:	1410661309

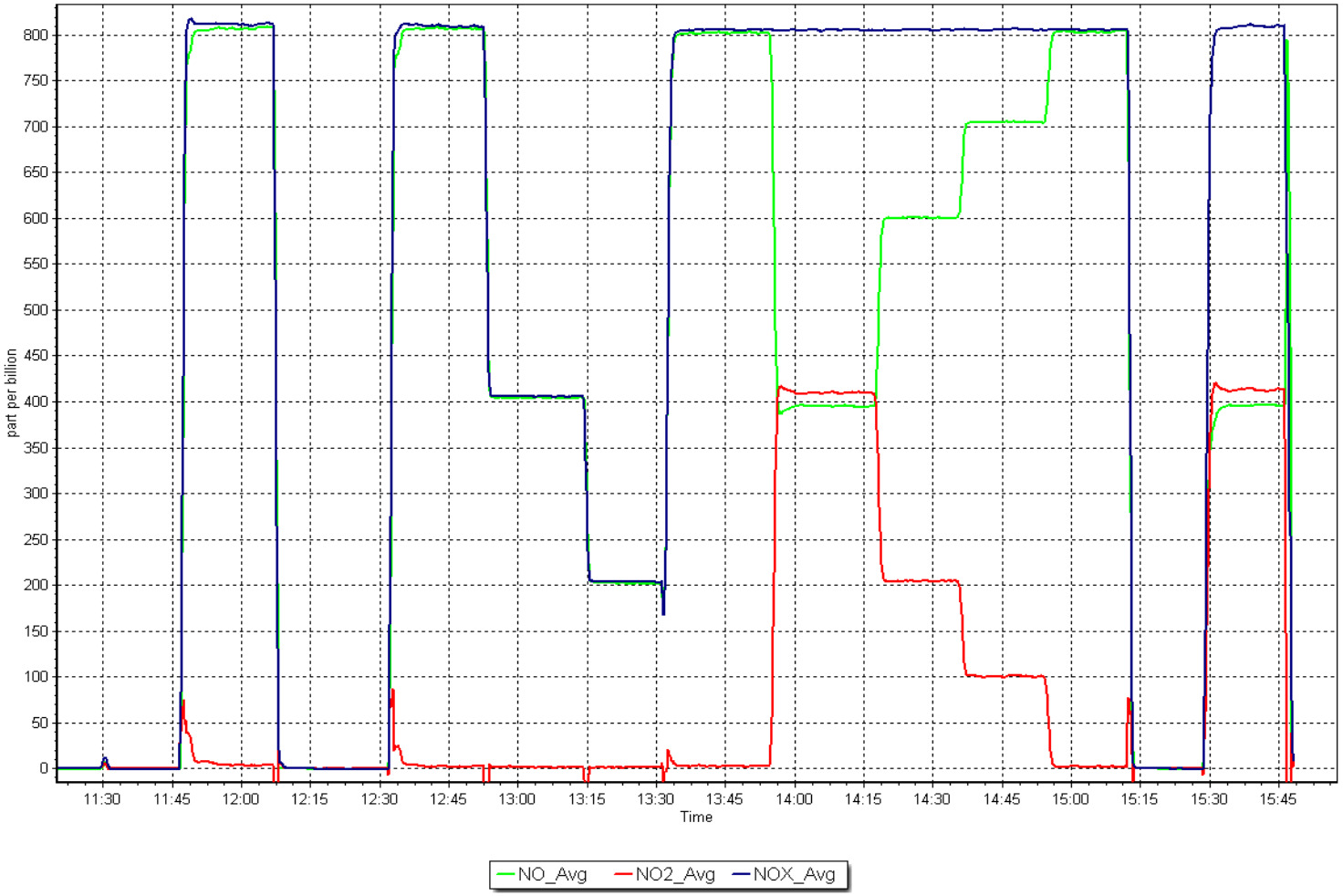
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
799.7	806.0	0.9921
400.3	404.1	0.9906
199.7	201.8	0.9894

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999999	*≥0.995*
Slope	1.007889	*0.90 - 1.10*
Intercept	0.279897	*+/-20*



NO_X Calibration Plot Date: December 9, 2025 Location: Firebag



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS20
MACKAY RIVER
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	MacKay River	Station number:	AMS 20
Calibration Date:	December 5, 2025	Last Cal Date:	November 10, 2025
Start time (MST):	8:37	End time (MST):	11:53
Reason:	Routine		

Calibration Standards

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

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1501301450	
Analyzer Range:	0-1000ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.997334	0.997204	Backgd or Offset:	20.4	20.4
Calibration intercept:	-0.376941	-0.056655	Coeff or Slope:	0.932	0.932

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4919	81.4	800.1	798.8	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	798.8	Previous response	797.6	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4919	81.4	800.1	798.1	1.003
Mid point	4959	40.7	400.1	398.3	1.005
Low point	4980	20.3	199.5	199.0	1.003
As left zero	5000	0.0	0.0	0.2	----
As left span	4919	81.4	800.1	801.2	0.999
				Average Correction Factor:	1.003

Notes: No adjustments done

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

SO_2 Calibration Summary

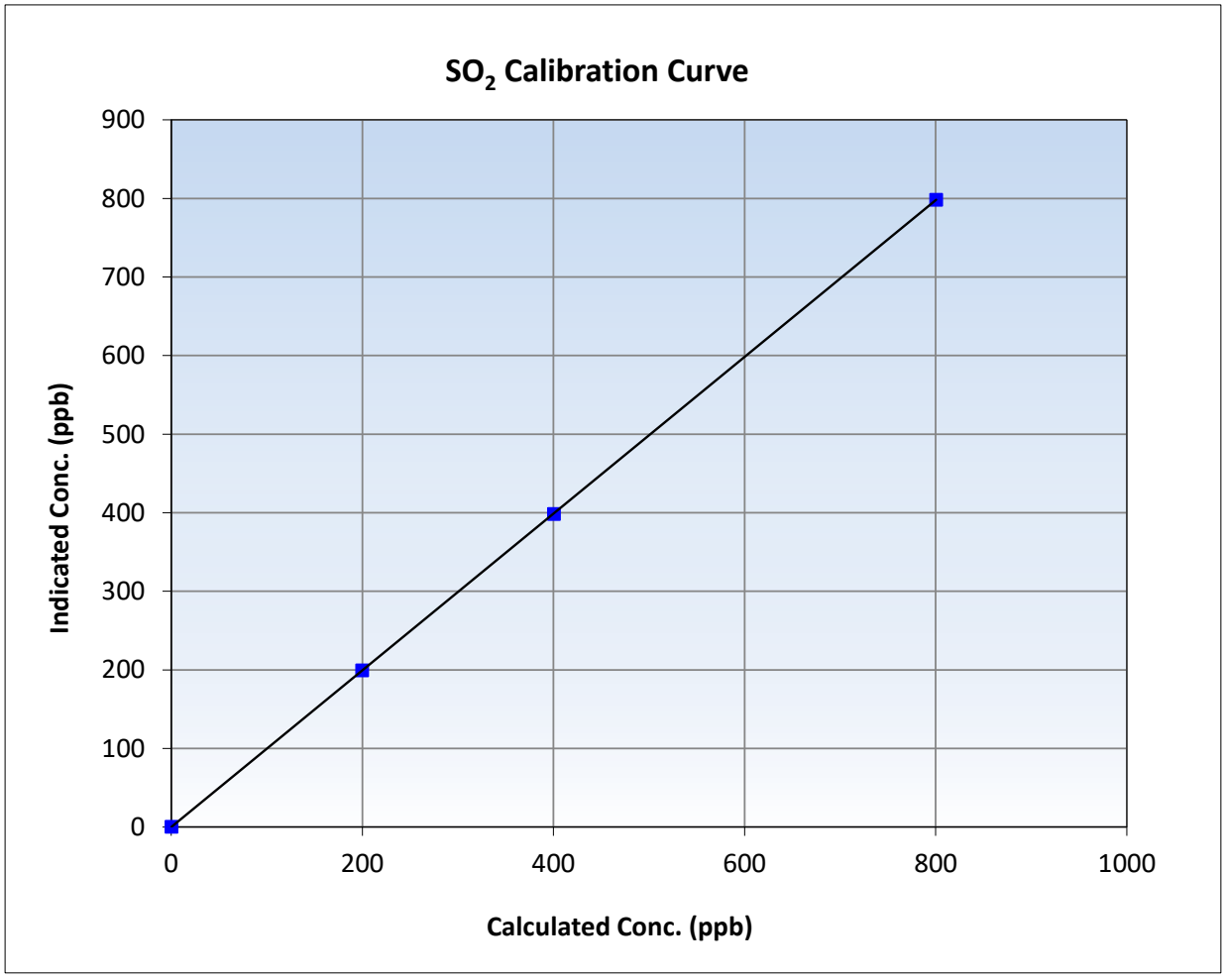
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 10, 2025
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	8:37	End Time (MST):	11:53
Analyzer make:	Thermo 43i	Analyzer serial #:	1501301450

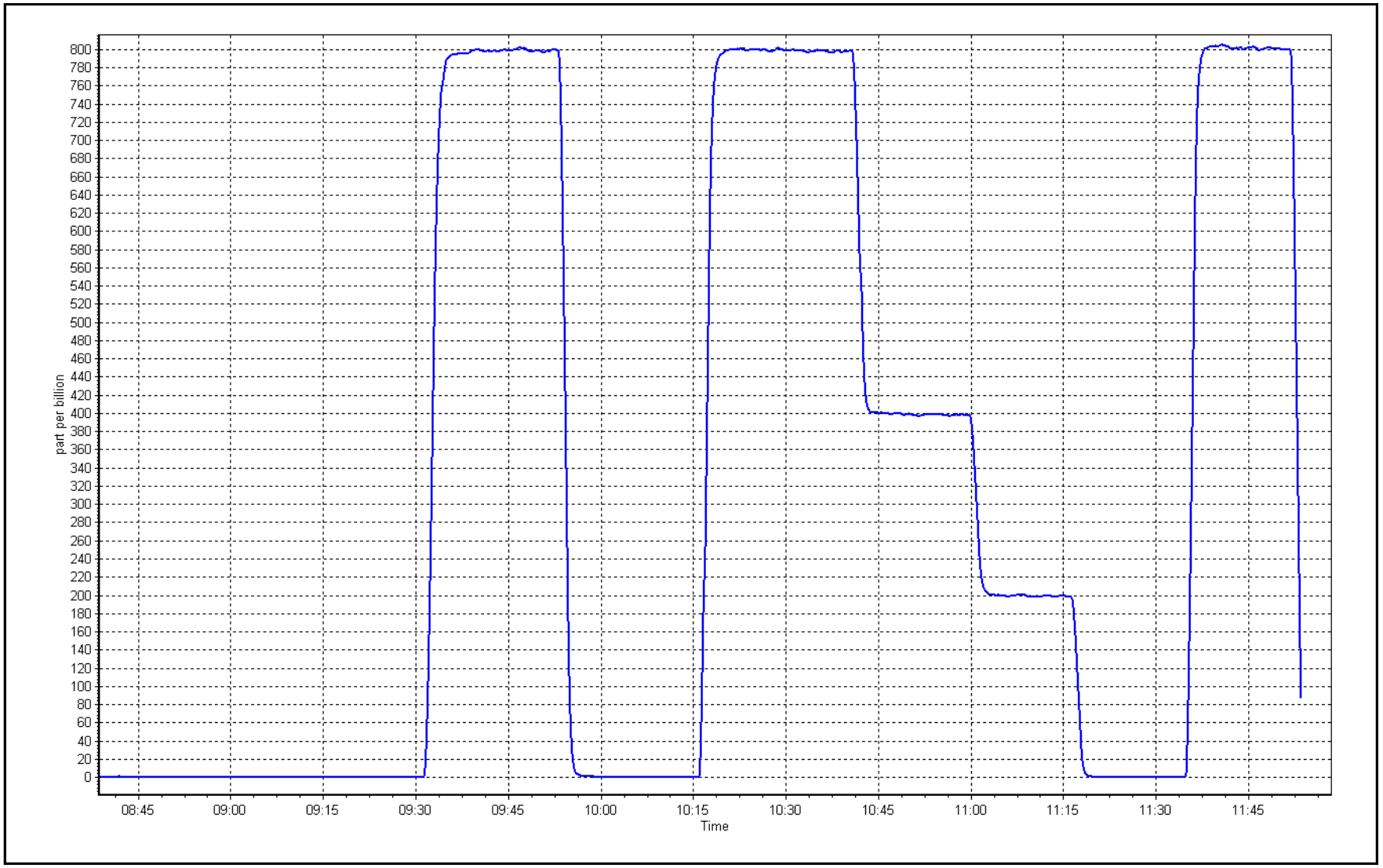
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
800.1	798.1	1.0025
400.1	398.3	1.0045
199.5	199.0	1.0027

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999998	*≥0.995*
Slope	0.997204	*0.90 - 1.10*
Intercept	-0.056655	*+/-30*



SO2 Calibration Plot Date: December 5, 2025 Location: MacKay River



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	MacKay River	Station number:	AMS 20
Calibration Date:	December 3, 2025	Last Cal Date:	November 6, 2025
Start time (MST):	8:26	End time (MST):	12:34
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.12	ppm	Cal Gas Exp Date:	January 3, 2026
Cal Gas Cylinder #:	CC515997			
Removed Cal Gas Conc:	5.12	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

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.006030	0.998597	Backgd or Offset:	3.77	3.77
Calibration intercept:	0.019450	0.079373	Coeff or Slope:	1.071	1.071

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4922	78.1	80.0	80.7	0.990
As found Mid point	4961	39.0	39.9	40.2	0.991
As found Low point	4980	19.5	20.0	20.0	0.994
New cylinder response					

Baseline Corr As found:	80.8	Prev response:	80.47	*% change:	0.4%
Baseline Corr 2nd AF pt:	40.3	AF Slope:	1.010602	AF Intercept:	-0.140453
Baseline Corr 3rd AF pt:	20.1	AF Correlation:	0.999999	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4922	78.1	80.0	79.9	1.001
Mid point	4961	39.0	39.9	40.0	0.998
Low point	4980	19.5	20.0	20.1	0.994
As left zero	5000	0.0	0.0	0.2	----
As left span	4922	78.1	80.0	79.3	1.008
SO2 Scrubber Check	4982	81.3	802.8	0.0	----
Date of last scrubber change:		25-May-23		Ave Corr Factor	0.998
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

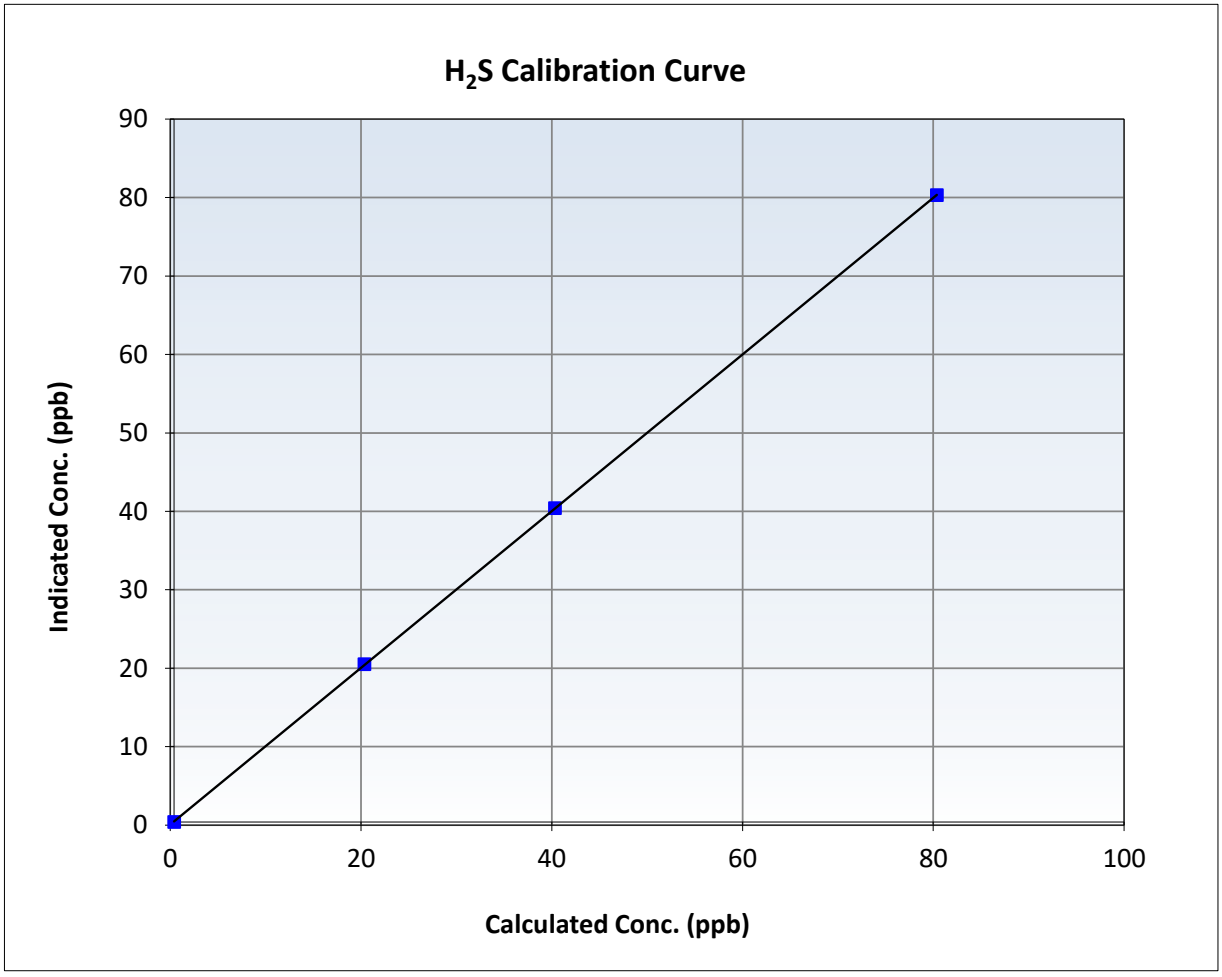
H_2S Calibration Summary

Station Information

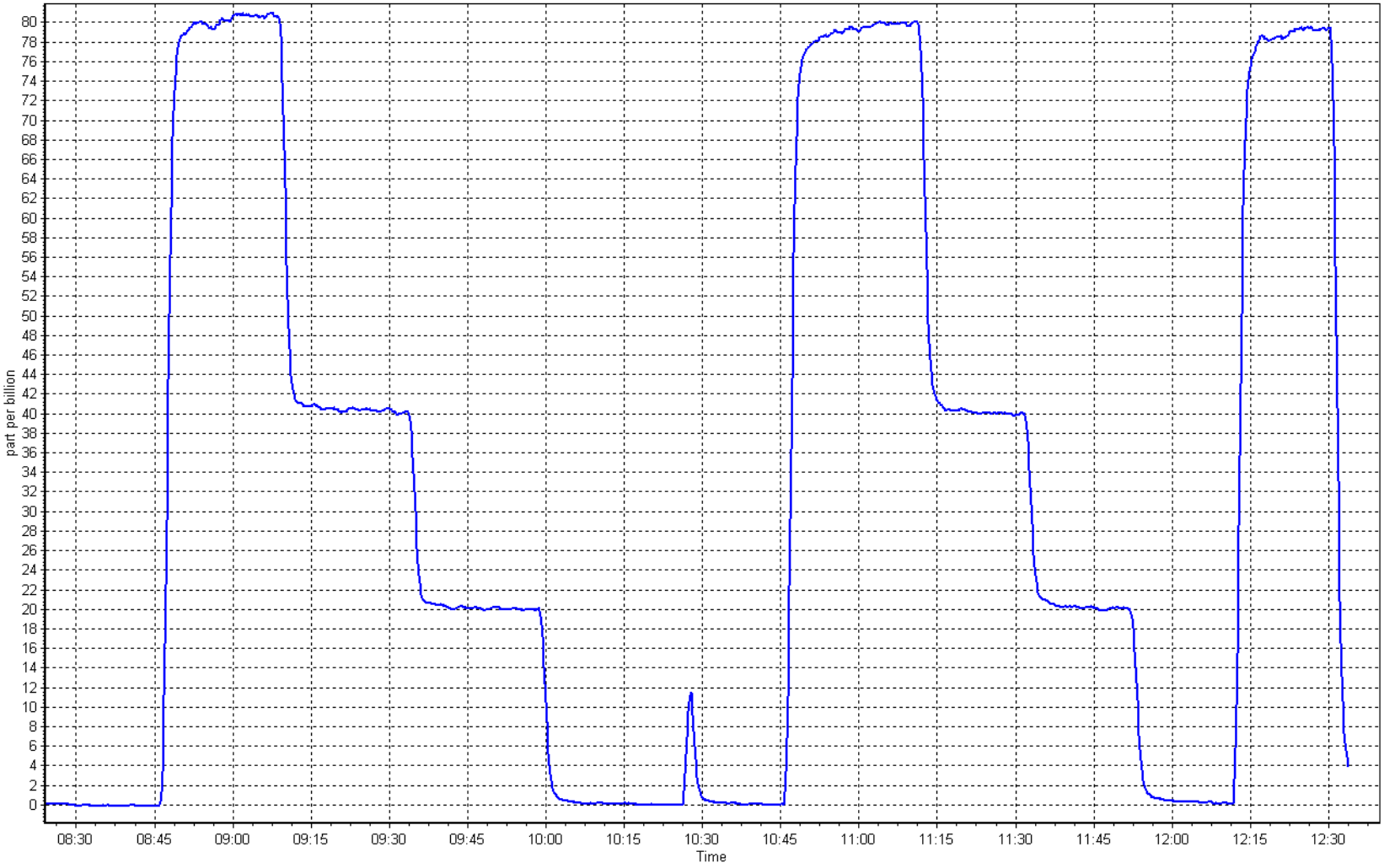
Calibration Date:	December 3, 2025	Previous Calibration:	November 6, 2025
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	8:26	End Time (MST):	12:34
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1236656117

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.0	----	Correlation Coefficient	0.999995	*≥0.995*
80.0	79.9	1.0009	Slope	0.998597	*0.90 - 1.10*
39.9	40.0	0.9984			
20.0	20.1	0.9935	Intercept	0.079373	*+/-3*



H_2S Calibration Plot Date: December 3, 2025 Location: MacKay River



Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name:	MacKay River	Station number:	AMS 20
Calibration Date:	December 5, 2025	Last Cal Date:	November 10, 2025
Start time (MST):	8:37	End time (MST):	11:53
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC409669		Cal Gas Expiry Date:	October 9, 2032	
CH4 Cal Gas Conc.	505.1	ppm	CH4 Equiv Conc.	1072.7	ppm
C3H8 Cal Gas Conc.	206.4	ppm			
Removed Gas Cert:			Removed Gas Expiry:		
Removed CH4 Conc.	505.1	ppm	CH4 Equiv Conc.	1072.7	ppm
Removed C3H8 Conc.	206.4	ppm	Diff between cyl:		
Calibrator Make/Model:	API T700		Serial Number:	5706	
ZAG Make/Model:	API 701		Serial Number:	4888	

Analyzer Information

Analyzer make:	Thermo 51i-LT		Analyzer serial #:	1501663727	
Analyzer Range:	0 - 20 ppm				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.994780	0.989831	Background:	2.990	2.850
Calibration intercept:	-0.067227	0.137572	Coefficient:	5.000	4.755

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.22	----
As found High point	4919	81.4	17.46	18.33	0.964
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	18.11	Previous response	17.30	*% change	4.4%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (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	0.15	----
High point	4919	81.4	17.46	17.44	1.002
Mid point	4959	40.7	8.73	8.75	0.998
Low point	4980	20.3	4.35	4.45	0.979
As left zero	5000	0.0	0.00	0.12	----
As left span	4919	81.4	17.46	17.61	0.992
				Average Correction Factor	0.993

Notes: Hydrogen cylinder changed. Span adjusted.

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

THC Calibration Summary

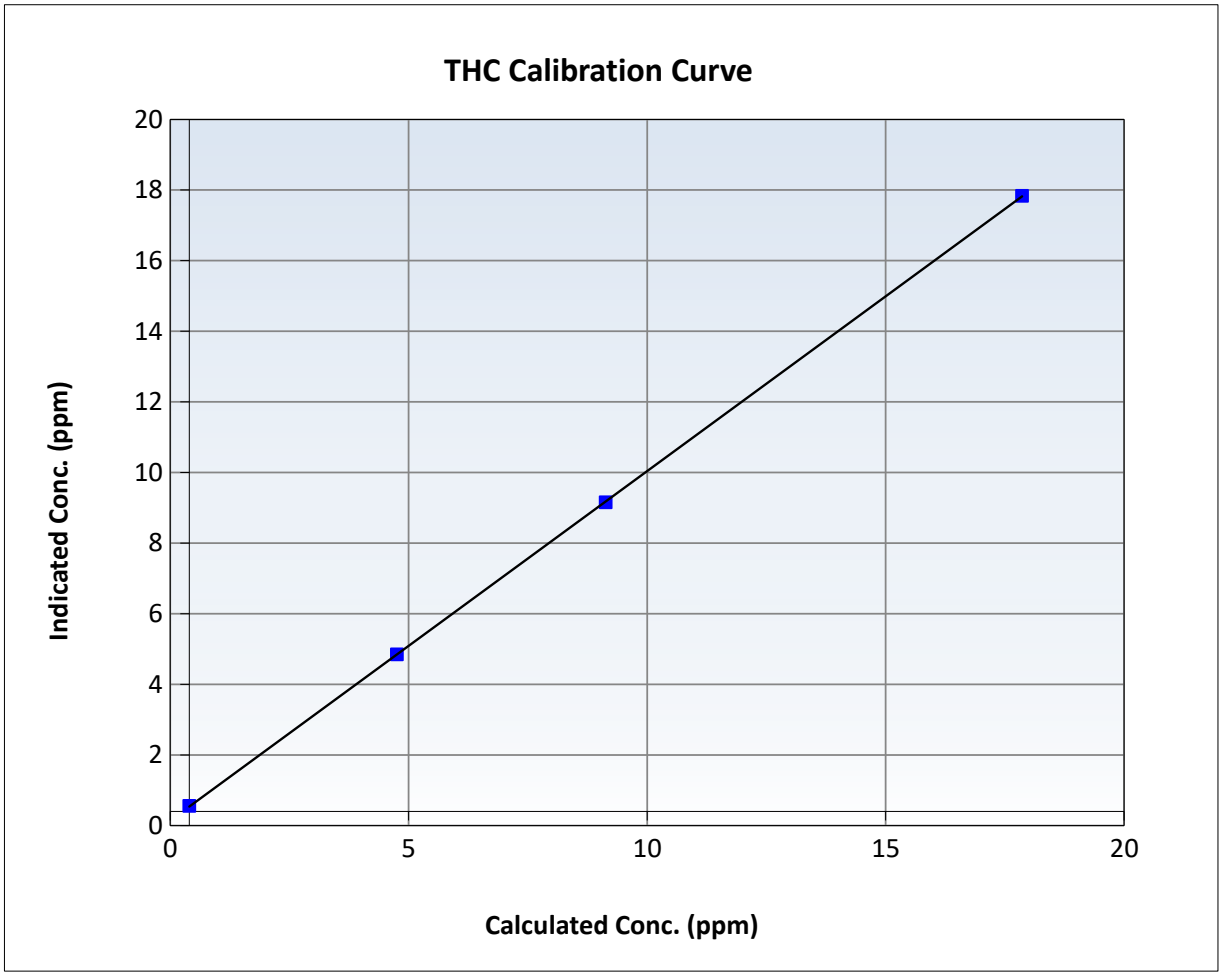
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 10, 2025
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	8:37	End Time (MST):	11:53
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1501663727

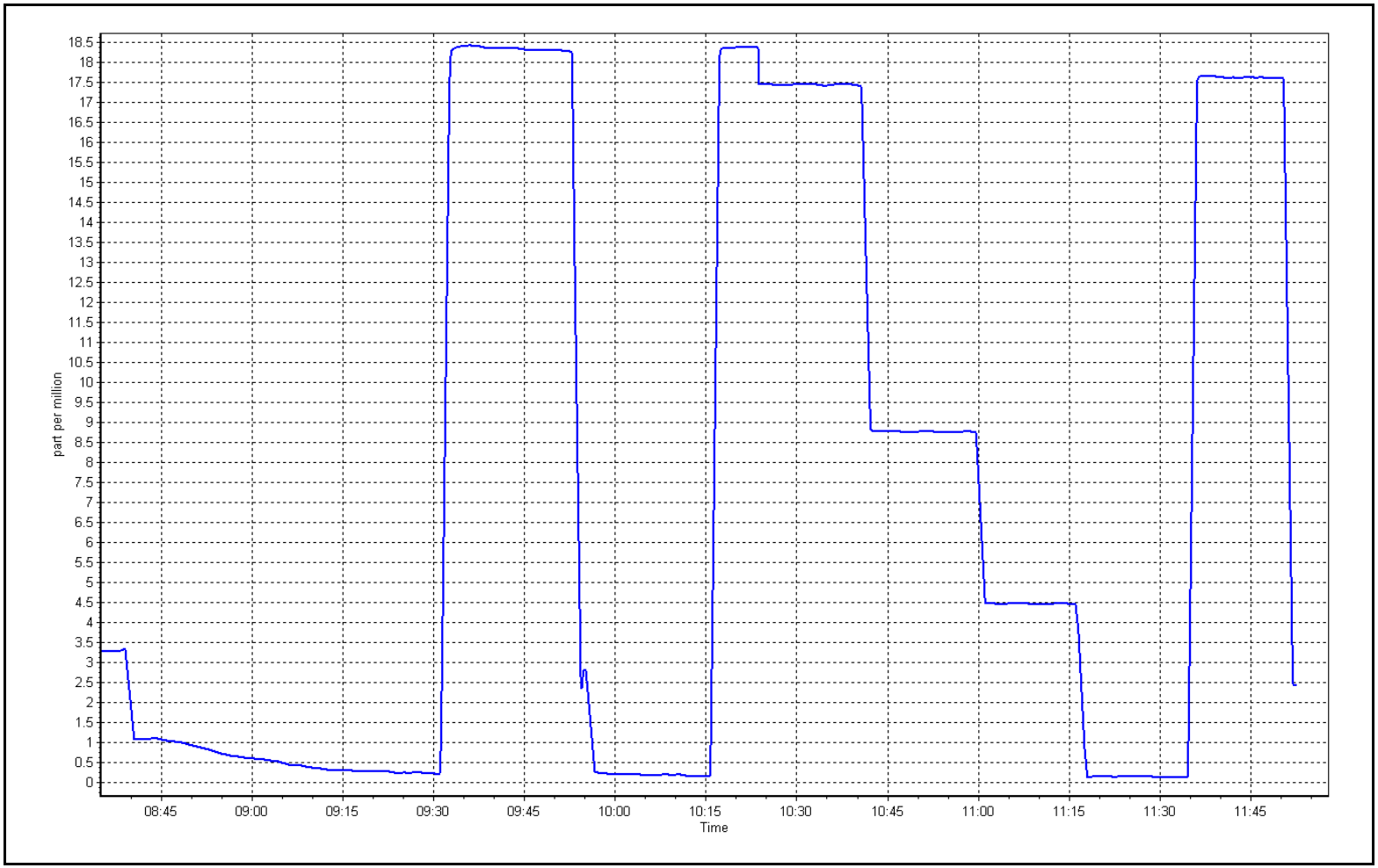
Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.15	----
17.46	17.44	1.0015
8.73	8.75	0.9976
4.35	4.45	0.9788

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999993	*≥0.995*
Slope	0.989831	*0.90 - 1.10*
Intercept	0.137572	*+/-1.5*



THC Calibration Plot Date: December 5, 2025 Location: MacKay River



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	MacKay River
Station number:	AMS 20
Calibration Date:	December 1, 2025
Last Cal Date:	November 7, 2025
Start time (MST):	7:50
End time (MST):	12:22
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0037393	Cal Gas Expiry Date:	July 22, 2032
NOX Cal Gas Conc:	62.00 ppm	NO Cal Gas Conc:	61.90 ppm
Removed Cylinder #:		Removed Gas Exp Date:	
Removed Gas NOX Conc:	62.00 ppm	Removed Gas NO Conc:	61.90 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	API T700	Serial Number:	5706
ZAG make/model:	API T701	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	----	----
AF High point	4935	64.6	801.1	799.8	1.3	799.4	791.0	8.3	1.0019	1.0110
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 799.7 ppb	NO = 798.6 ppb
Baseline Corr 1st pt	NO_X = 799.6 ppb	NO = 791.1 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 r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	NO_2 Int:

*Percent Change	NO_X = 0.0%
*Percent Change	NO = -0.9%

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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1505164379

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	Finish		Start	Finish
NO coeff or slope:	1.043	1.043	NO bkgnd or offset:	2.9	2.9
NOX coeff or slope:	1.000	1.000	NOX bkgnd or offset:	3.2	3.2
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	148.0	148.0

Calibration Statistics

	Start	Finish
NO_X Cal Slope:	0.997714	0.997529
NO_X Cal Offset:	0.433494	0.573225
NO Cal Slope:	0.997982	0.992121
NO Cal Offset:	0.353813	-0.744284
NO_2 Cal Slope:	1.005007	1.012288
NO_2 Cal Offset:	-0.185055	0.506278

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.0	0.2	-0.1	----	----
High point	4935	64.6	801.1	799.8	1.3	799.3	793.1	6.3	1.0023	1.0085
Mid point	4968	32.3	400.5	399.9	0.6	400.7	395.9	4.7	0.9995	1.0100
Low point	4984	16.2	200.9	200.5	0.3	201.3	197.0	4.2	0.9979	1.0180
As left zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	-0.1	----	----
As left span	4935	64.6	801.1	407.1	394.0	795.4	407.1	388.3	1.0072	1.0000
							Average Correction Factor		0.9999	1.0122

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	789.3	404.4	386.2	391.1	0.9875	101.3%
Mid GPT point	789.3	594.1	196.5	199.8	0.9834	101.7%
Low GPT point	789.3	689.8	100.8	103.1	0.9776	102.3%
				Average Correction Factor	0.9828	101.7%

Notes: No Maintenance or adjustments done.

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

NO_X Calibration Summary

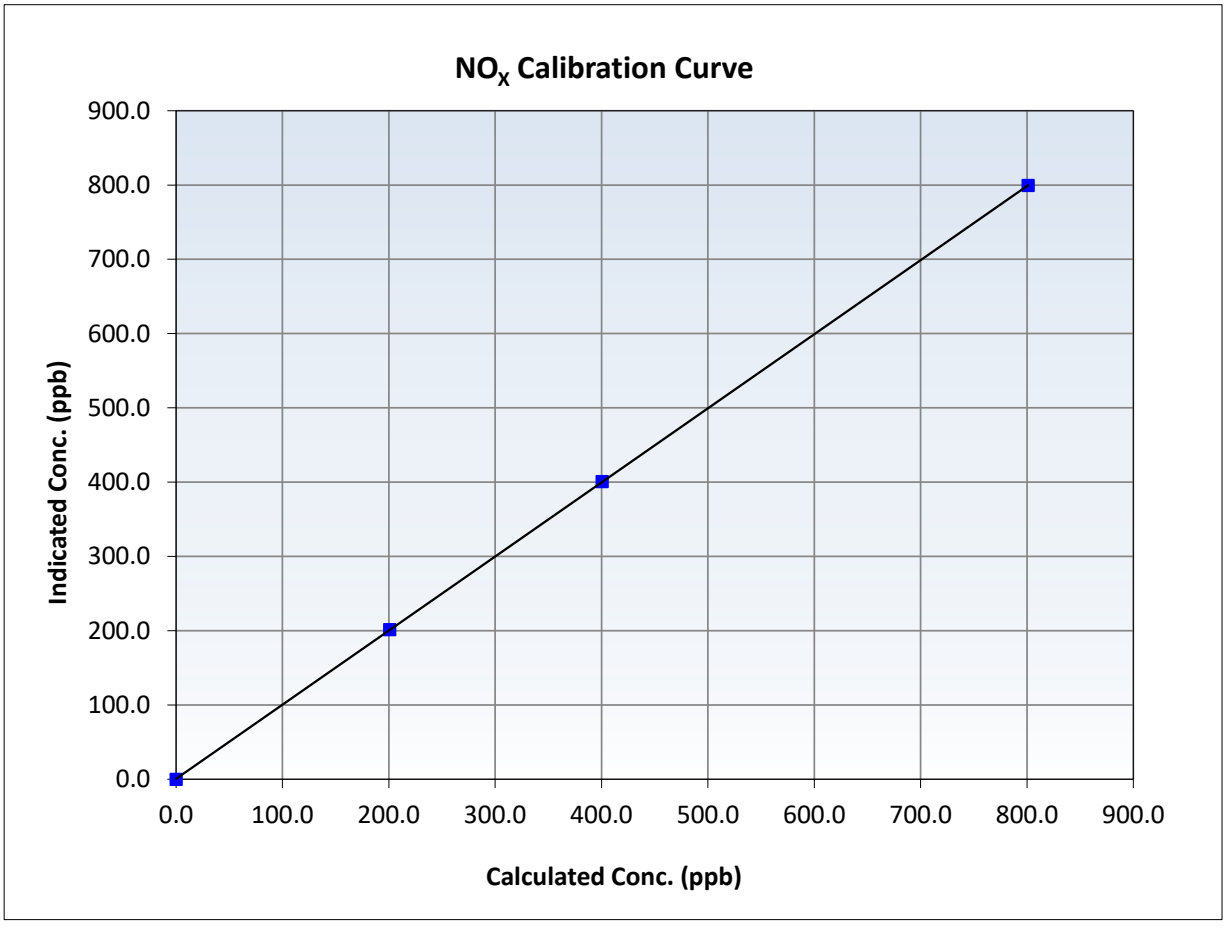
Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 7, 2025
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	7:50	End Time (MST):	12:22
Analyzer make:	Thermo 42i	6:50:00 AM	1505164379

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
801.1	799.3	1.0023
400.5	400.7	0.9995
200.9	201.3	0.9979

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999997	*≥0.995*
Slope	0.997529	*0.90 - 1.10*
Intercept	0.573225	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

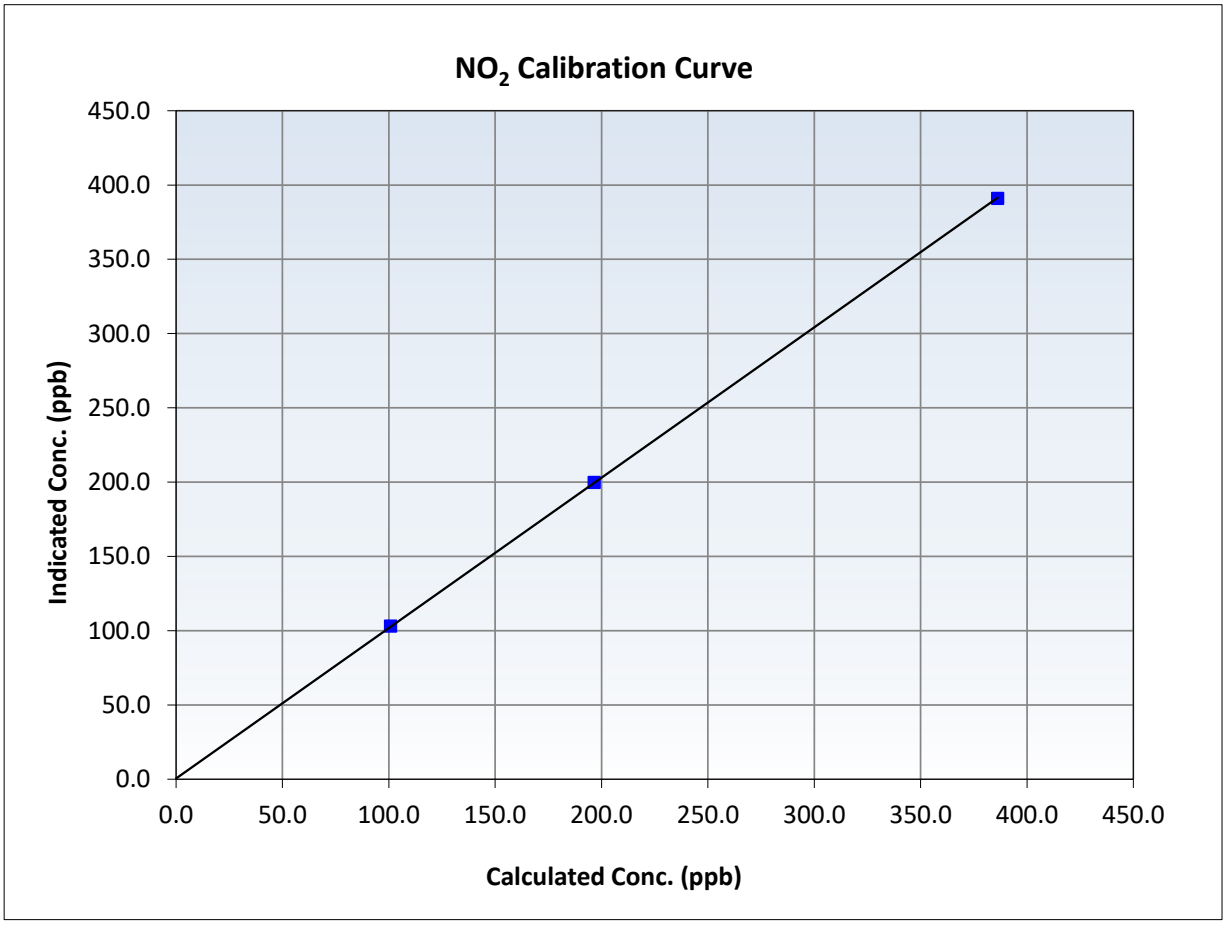
Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 7, 2025
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	7:50	End Time (MST):	12:22
Analyzer make:	Thermo 42i	6:50:00 AM	1505164379

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
386.2	391.1	0.9875
196.5	199.8	0.9834
100.8	103.1	0.9776

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999989	*≥0.995*
Slope	1.012288	*0.90 - 1.10*
Intercept	0.506278	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

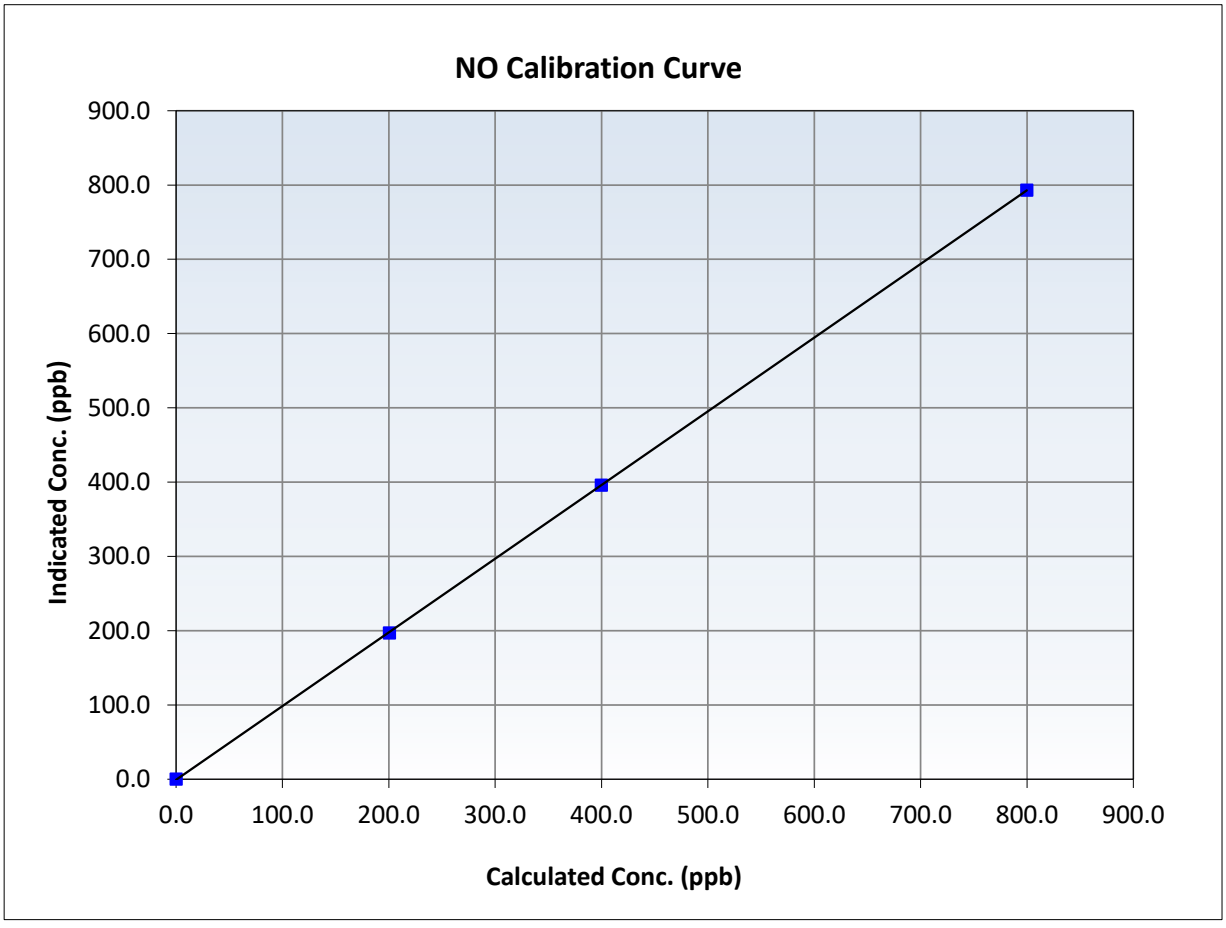
Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 7, 2025
Station Name:	MacKay River	Station Number:	AMS 20
Start Time (MST):	7:50	End Time (MST):	12:22
Analyzer make:	Thermo 42i	6:50:00 AM	1505164379

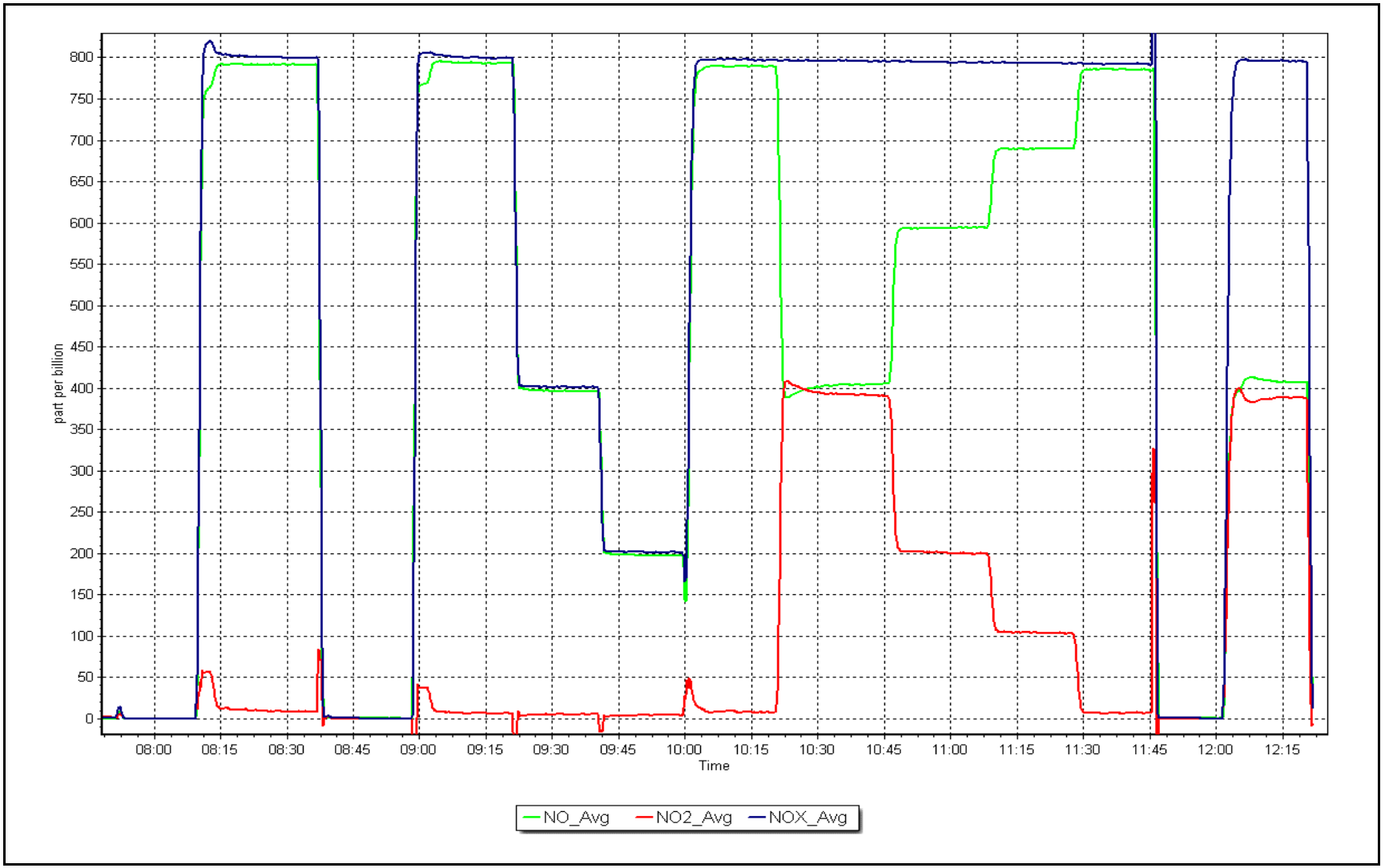
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
799.8	793.1	1.0085
399.9	395.9	1.0100
200.5	197.0	1.0180

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999993	*≥0.995*
Slope	0.992121	*0.90 - 1.10*
Intercept	-0.744284	*+/-20*



NO_X Calibration Plot Date: December 1, 2025 Location: MacKay River



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS21
CONKLIN
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Conklin	Station number:	AMS 21
Calibration Date:	December 3, 2025	Last Cal Date:	November 4, 2025
Start time (MST):	11:10	End time (MST):	14:01
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.34	ppm	Cal Gas Exp Date:	October 9, 2032
Cal Gas Cylinder #:	CC340840			
Removed Cal Gas Conc:	50.34	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Model:	Teledyne API T700P		Serial Number:	2656
Zero Air Gen Model:	Teledyne API T701H		Serial Number:	355

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1428701363	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.002589	0.998591	Backgd or Offset:	30.2	30.2
Calibration intercept:	2.316463	2.517352	Coeff or Slope:	0.905	0.905

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.3	----
As found High point	4921	79.5	800.3	800.1	1.001
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	799.8	Previous response	804.7	*% change	-0.6%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4921	79.5	800.3	801.0	0.999
Mid point	4960	39.8	400.7	402.5	0.996
Low point	4980	19.9	200.4	205.8	0.974
As left zero	5000	0.0	0.0	0.3	----
As left span	4921	79.5	800.3	800.4	1.000
				Average Correction Factor:	0.989

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

SO_2 Calibration Summary

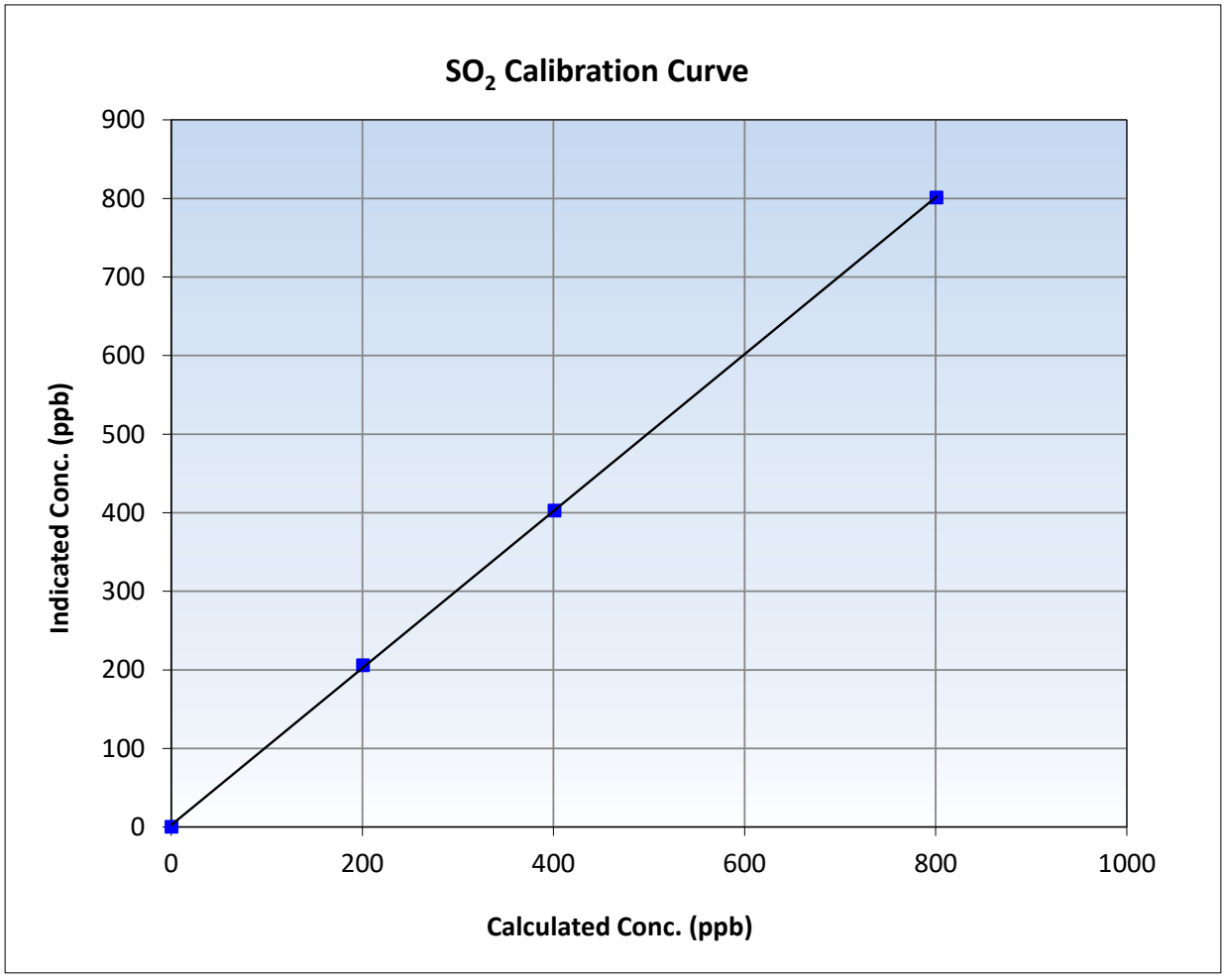
Station Information

Calibration Date:	December 3, 2025	Previous Calibration:	November 4, 2025
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	11:10	End Time (MST):	14:01
Analyzer make:	Thermo 43i	Analyzer serial #:	1428701363

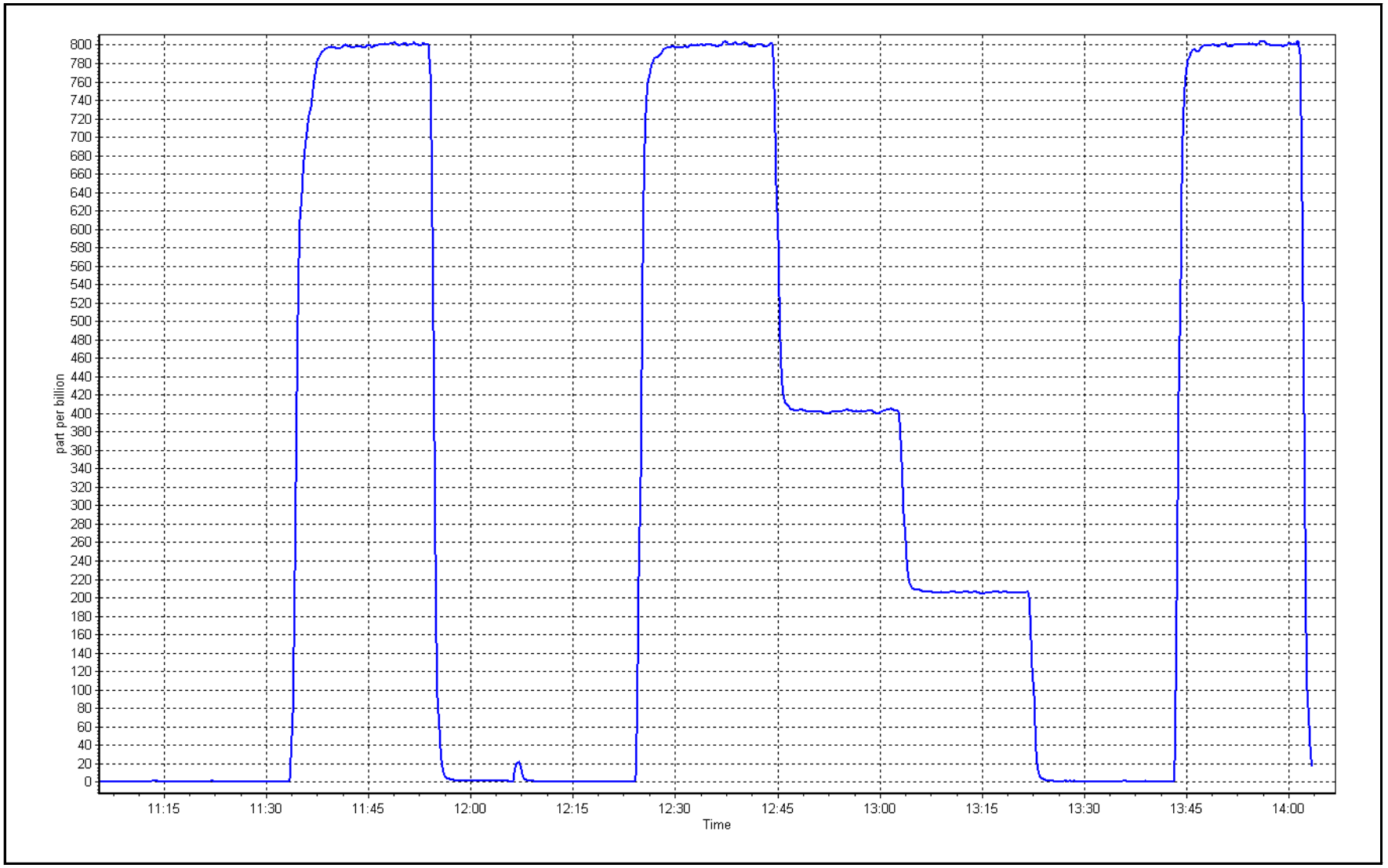
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
800.3	801.0	0.9992
400.7	402.5	0.9956
200.4	205.8	0.9736

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999954	*≥0.995*
Slope	0.998591	*0.90 - 1.10*
Intercept	2.517352	*+/-30*



SO2 Calibration Plot Date: December 3, 2025 Location: Conklin



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TRS Calibration Report

Station Information

Station Name:	Conklin	Station number:	AMS 21
Calibration Date:	December 8, 2025	Last Cal Date:	November 26, 2025
Start time (MST):	13:28	End time (MST):	17:12
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.14	ppm	Cal Gas Exp Date:	January 3, 2026
Cal Gas Cylinder #:	CC501204			
Removed Cal Gas Conc:	5.14	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	Teledyne T700P		Serial Number:	2656
ZAG Make/Model:	Teledyne T701H		Serial Number:	355

Analyzer Information

Analyzer make:	Thermo 43i-QTL		Analyzer serial #:	12228021058	
Converter make:	CD-Nova 101		Converter serial #:	565	
Analyzer Range	0 - 100 ppb		Converter Temp:	825	degC
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.005185	1.005753	Backgd or Offset:	3.3	3.4
Calibration intercept:	-0.041619	0.038377	Coeff or Slope:	1.494	1.542

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4922	78.4	80.6	78.4	1.028
As found Mid point	4961	39.2	40.3	39.3	1.025
As found Low point	4980	19.6	20.2	19.6	1.028
New cylinder response					

Baseline Corr As found:	78.4	Prev response:	80.97	*% change:	-3.3%
Baseline Corr 2nd AF pt:	39.3	AF Slope:	0.972993	AF Intercept:	0.018431
Baseline Corr 3rd AF pt:	19.6	AF Correlation:	0.999998	* = > +/-5% change initiates investigation	

TRS Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4922	78.4	80.6	81.1	0.994
Mid point	4961	39.2	40.3	40.5	0.995
Low point	4980	19.6	20.2	20.4	0.988
As left zero	5000	0.0	0.0	0.0	----
As left span	4922	78.4	80.6	81.4	0.990
SO2 Scrubber Check	4921	79.5	794.9	0.1	----

Date of last scrubber change:	August 6, 2025	Ave Corr Factor	0.992
Date of last converter efficiency test:	October 7, 2025		

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

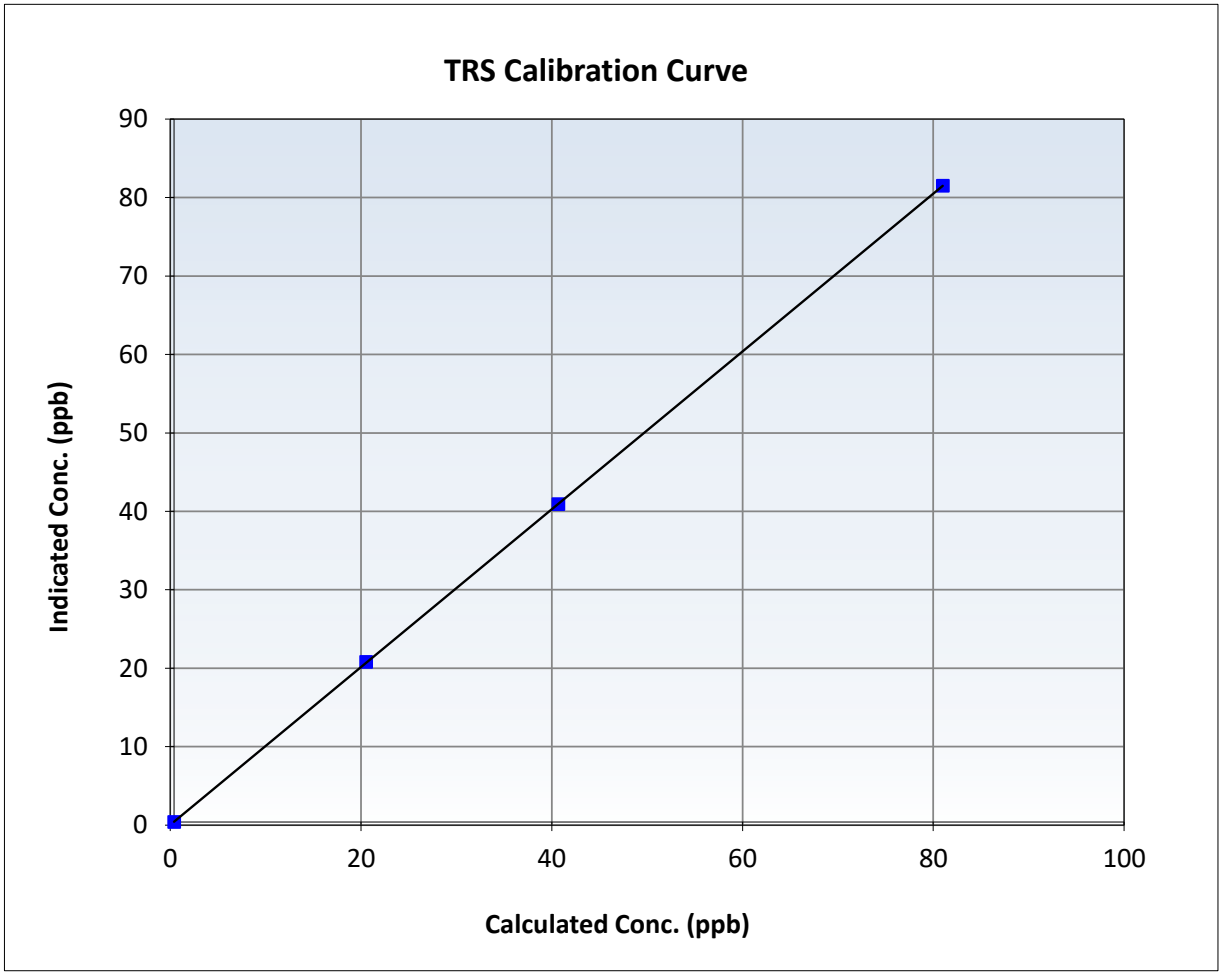
TRS Calibration Summary

Station Information

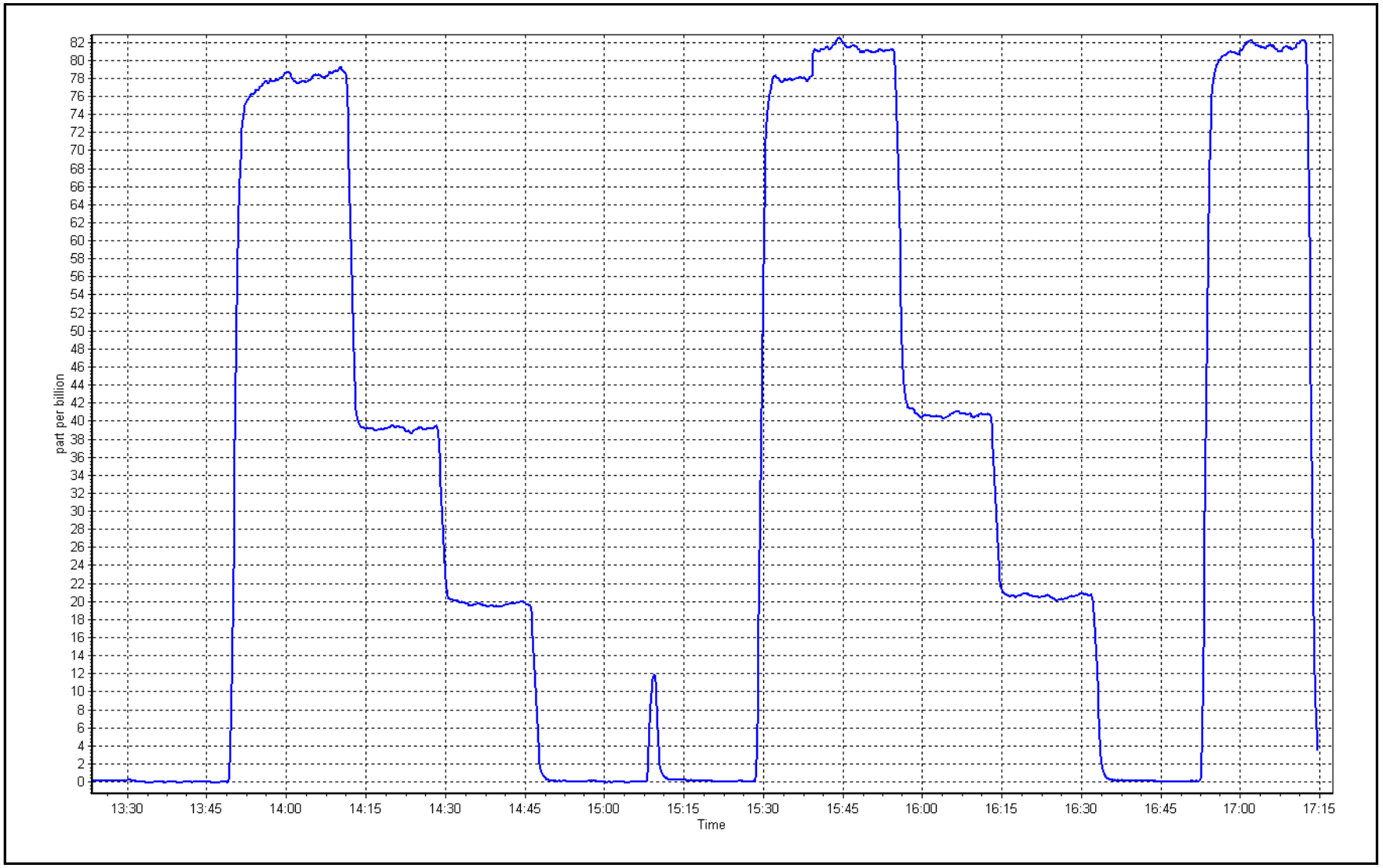
Calibration Date:	December 8, 2025	Previous Calibration:	November 26, 2025
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	13:28	End Time (MST):	17:12
Analyzer make:	Thermo 43i-QTL	Analyzer serial #:	12228021058

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.0	----	Correlation Coefficient	0.999996	*≥0.995*
80.6	81.1	0.9937	Slope	1.005753	*0.90 - 1.10*
40.3	40.5	0.9950			
20.2	20.4	0.9878	Intercept	0.038377	*+/-3*



TRS Calibration Plot Date: December 8, 2025 Location: Conklin



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Conklin	Station number:	AMS 21
Calibration Date:	December 3, 2025	Last Cal Date:	November 4, 2025
Start time (MST):	11:10	End time (MST):	14:01
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC340840	Cal Gas Expiry Date:	October 9, 2032
CH4 Cal Gas Conc.	503.8 ppm	CH4 Equiv Conc.	1067.6 ppm
C3H8 Cal Gas Conc.	205.0 ppm		
Removed Gas Cert:	NA	Removed Gas Expiry:	NA
Removed CH4 Conc.	503.8 ppm	CH4 Equiv Conc.	1067.6 ppm
Removed C3H8 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	Analyzer serial #:	1180320039
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	2.34E-04	2.34E-04	NMHC SP Ratio:	5.03E-05	5.03E-05
CH4 Retention time:	15.2	15.2	NMHC Peak Area:	178091	178091
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.5	16.97	16.97	1.000
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	16.97	Prev response	16.96	*% change	0.0%
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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.5	16.97	16.99	0.999
Mid point	4960	39.8	8.50	8.53	0.997
Low point	4980	19.9	4.25	4.35	0.976
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	16.97	16.97	1.000
				Average Correction Factor	0.991

Notes: Sample inlet filter and H2 was changed after as founds. No adjustment made.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.5	8.96	8.98	0.999
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.98	Prev response	8.97	*% 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	4921	79.5	8.96	8.95	1.002
Mid point	4960	39.8	4.49	4.51	0.994
Low point	4980	19.9	2.24	2.31	0.973
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.96	8.92	1.005
				Average Correction Factor	0.990

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.5	8.01	8.00	1.002
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.00	Prev response	8.00	*% 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	8.04	0.997
Mid point	4960	39.8	4.01	4.01	1.000
Low point	4980	19.9	2.01	2.05	0.979
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.5	8.01	8.05	0.995
				Average Correction Factor	0.992

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	0.997002	0.998956
THC Cal Offset:	0.041693	0.044680
CH4 Cal Slope:	0.996483	1.001391
CH4 Cal Offset:	0.014784	0.012575
NMHC Cal Slope:	0.997326	0.996422
NMHC Cal Offset:	0.026709	0.032505

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

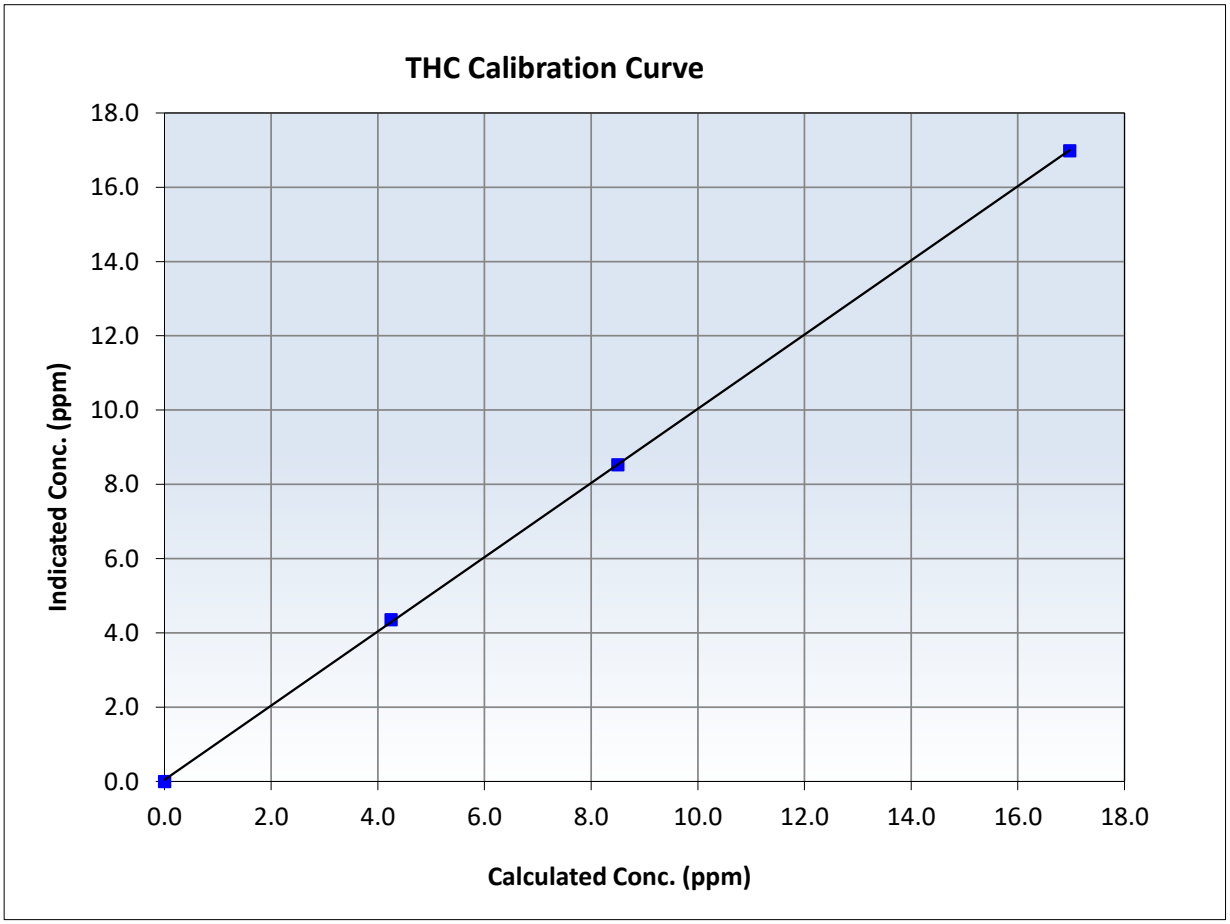
THC Calibration Summary

Station Information

Calibration Date:	December 3, 2025	Previous Calibration:	November 4, 2025
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	11:10	End Time (MST):	14:01
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999959	*≥0.995*
16.97	16.99	0.9991	Slope	0.998956	*0.90 - 1.10*
8.50	8.53	0.9967	Intercept	0.044680	*+/-0.5*
4.25	4.35	0.9759			



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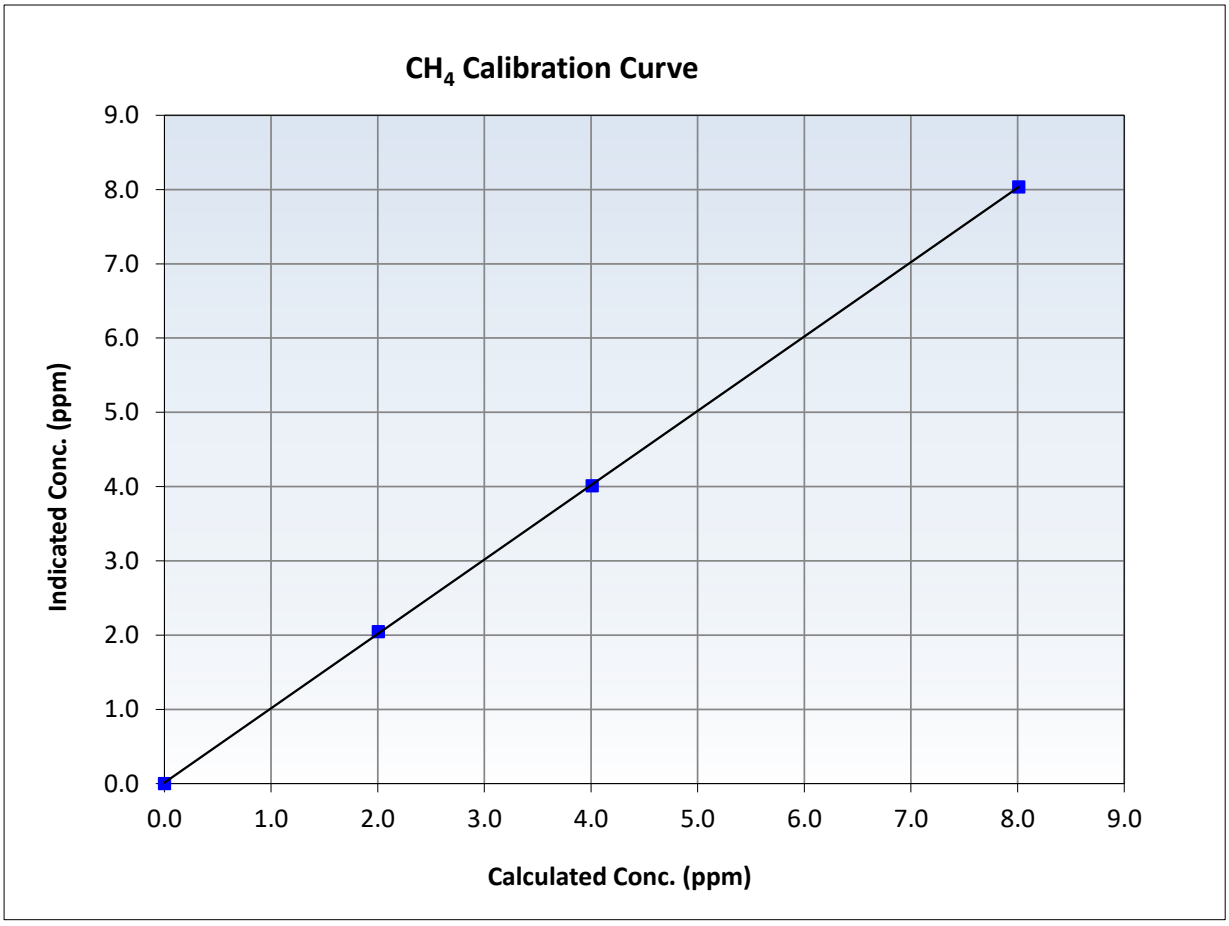
CH_4 Calibration Summary

Station Information

Calibration Date:	December 3, 2025	Previous Calibration:	November 4, 2025
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	11:10	End Time (MST):	14:01
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999964	≥0.995
8.01	8.04	0.9968	Slope	1.001391	0.90 - 1.10
4.01	4.01	0.9999			
2.01	2.05	0.9786	Intercept	0.012575	+/-0.5



Wood Buffalo Environmental Association

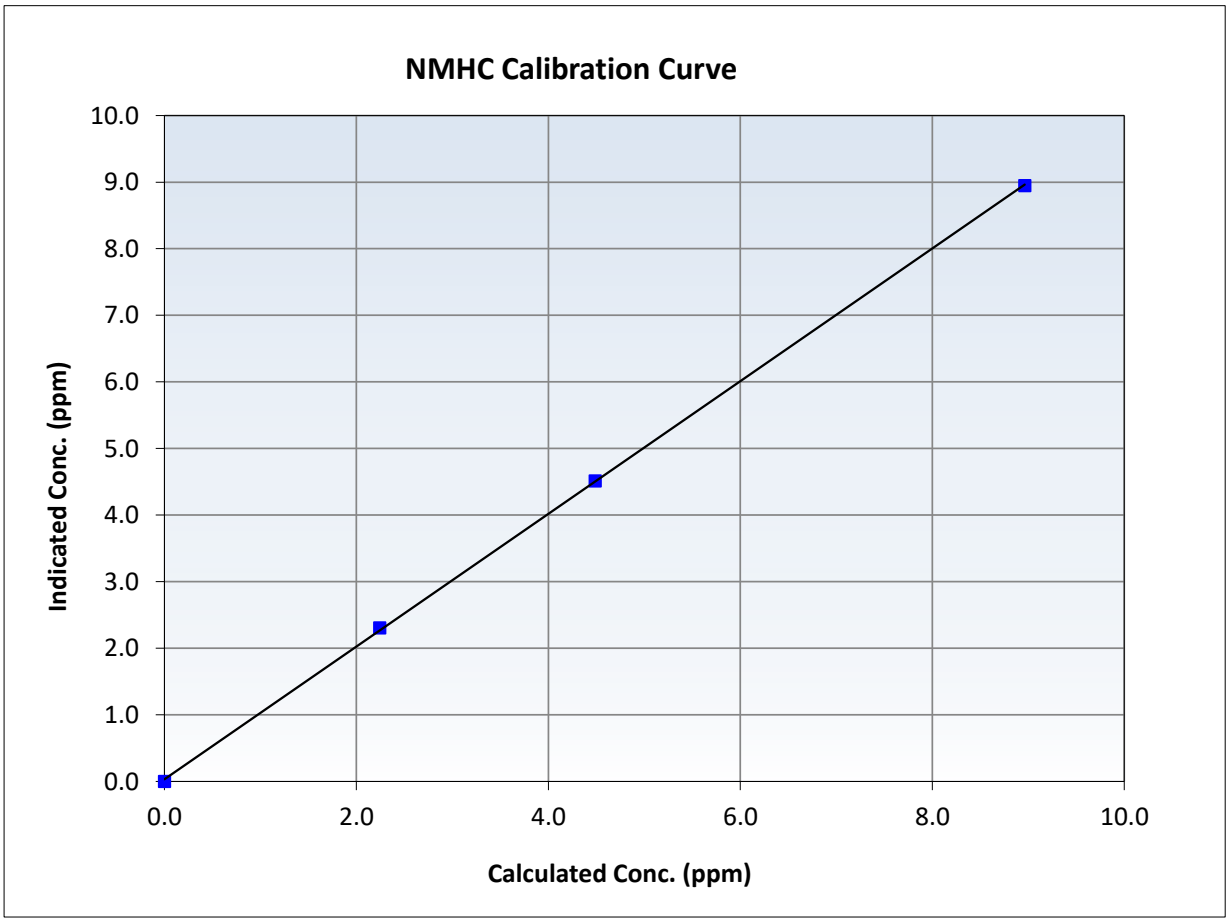
NMHC Calibration Summary

Station Information

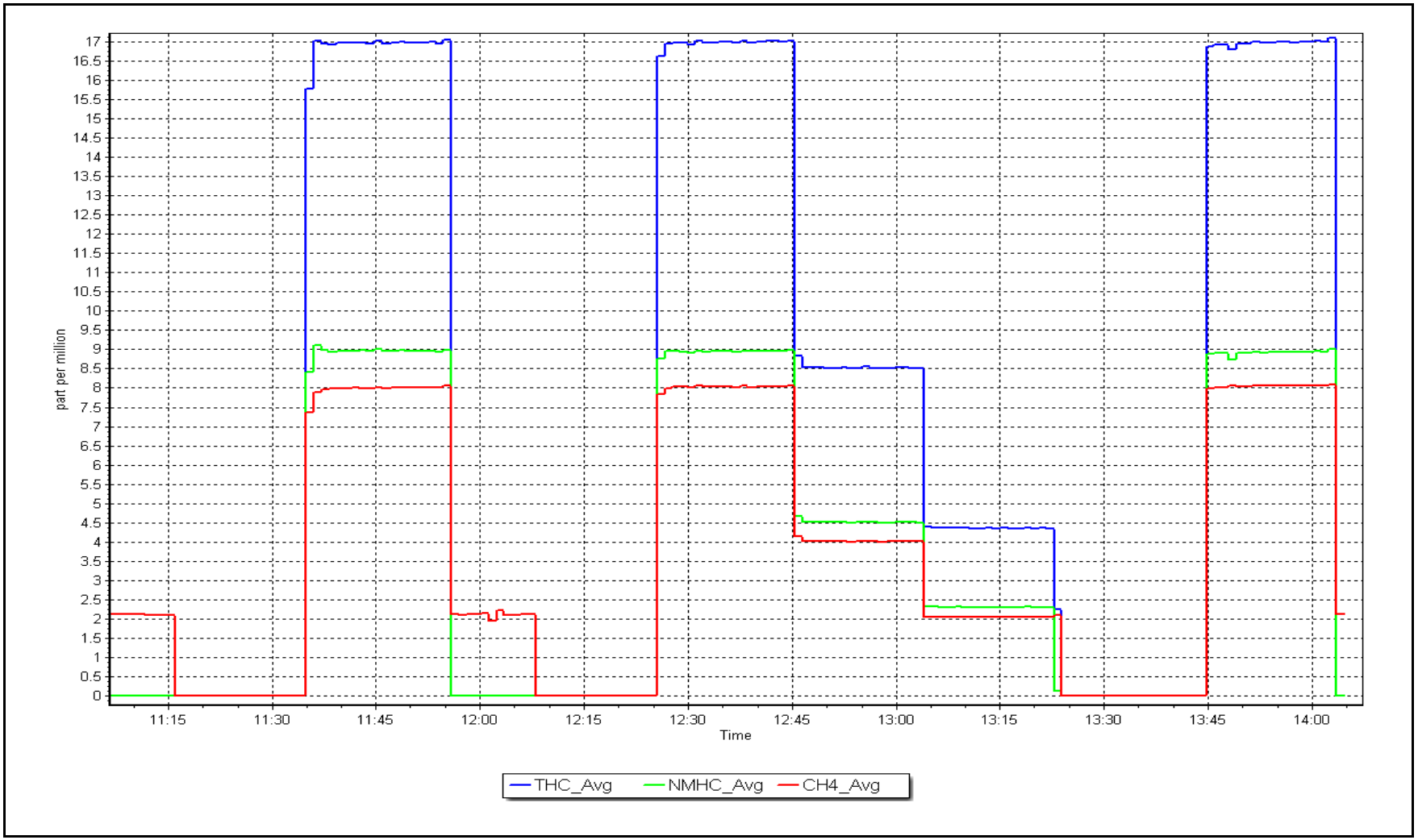
Calibration Date:	December 3, 2025	Previous Calibration:	November 4, 2025
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	11:10	End Time (MST):	14:01
Analyzer make:	Thermo 55i	Analyzer serial #:	1180320039

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999938	*≥0.995*
8.96	8.95	1.0015	Slope	0.996422	*0.90 - 1.10*
4.49	4.51	0.9942	Intercept	0.032505	*+/-0.5*
2.24	2.31	0.9734			



NMHC Calibration Plot Date: December 3, 2025 Location: Conklin



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Conklin
Station number:	AMS 21
Calibration Date:	December 9, 2025
Last Cal Date:	November 25, 2025
Start time (MST):	9:04
End time (MST):	13:01
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	SA18828	Cal Gas Expiry Date:	November 3, 2031
NOX Cal Gas Conc:	48.90 ppm	NO Cal Gas Conc:	48.80 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	48.90 ppm	Removed Gas NO Conc:	48.80 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700P	Serial Number:	2659
ZAG make/model:	Teledyne API T701	Serial Number:	953

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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.3	-0.4	0.1	----	----
AF High point	4918	82.0	802.0	800.3	1.6	813.4	808.9	4.4	0.9856	0.9889
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X =	803.9 ppb	NO =	802.1 ppb	* = > +/-5% change initiates investigation	*Percent Change	NO_X = 1.2%
Baseline Corr 1st pt	NO_X =	813.7 ppb	NO =	809.3 ppb	As Found Statistics	*Percent Change	NO = 0.9%
Baseline Corr 2nd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO_X r^2:	Nx Sl:	Nx Int:
Baseline Corr 3rd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO r^2:	NO Sl:	NO Int:
					As found NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1218153356

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	0.631	0.631	NO bkgnd or offset:	3.7	3.7
NOX coeff or slope:	0.994	0.994	NOX bkgnd or offset:	3.6	3.6
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	165.3	162.4

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	0.999101	1.012154
NO_X Cal Offset:	2.688082	2.908188
NO Cal Slope:	1.001134	1.011915
NO Cal Offset:	0.868050	1.968148
NO_2 Cal Slope:	0.996440	0.999128
NO_2 Cal Offset:	-0.836124	-0.594021

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.2	0.1	----	----
High point	4918	82.0	802.0	800.3	1.6	813.4	810.9	2.4	0.9859	0.9870
Mid point	4959	41.0	401.0	400.2	0.8	409.4	407.5	1.9	0.9794	0.9820
Low point	4980	20.5	200.5	200.1	0.4	209.4	206.9	2.5	0.9574	0.9669
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.2	0.1	----	----
As left span	4918	82.0	802.0	389.3	412.7	809.6	389.3	420.4	0.9906	1.0000
								Average Correction Factor	0.9742	0.9786

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.1	----	----
High GPT point	810.5	390.9	421.2	420.7	1.0013	99.9%
Mid GPT point	810.5	601.2	210.9	209.6	1.0064	99.4%
Low GPT point	810.5	705.7	106.4	105.2	1.0118	98.8%
				Average Correction Factor	1.0065	99.4%

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

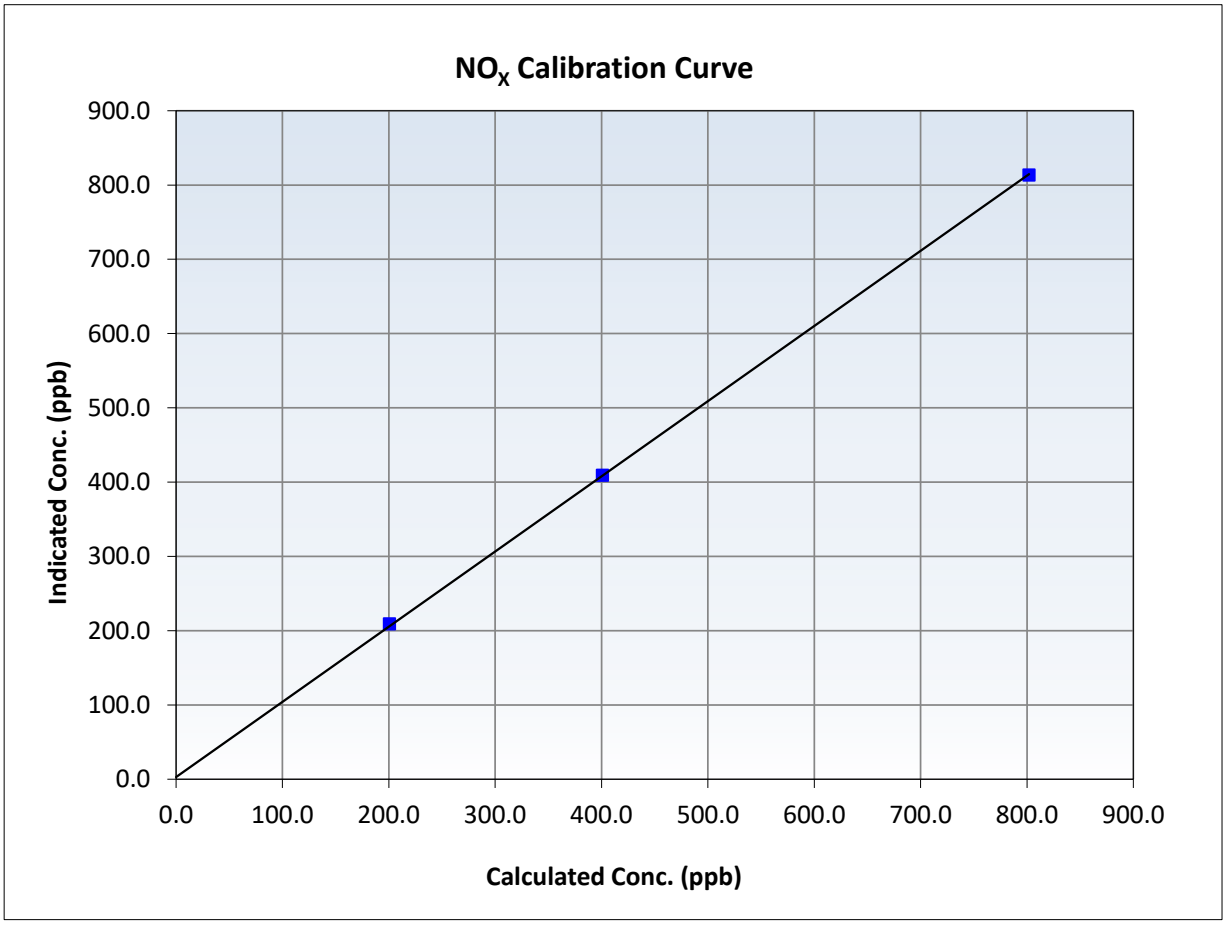
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 25, 2025
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	9:04	End Time (MST):	13:01
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153356

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
802.0	813.4	0.9859
401.0	409.4	0.9794
200.5	209.4	0.9574

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999934	*≥0.995*
Slope	1.012154	*0.90 - 1.10*
Intercept	2.908188	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

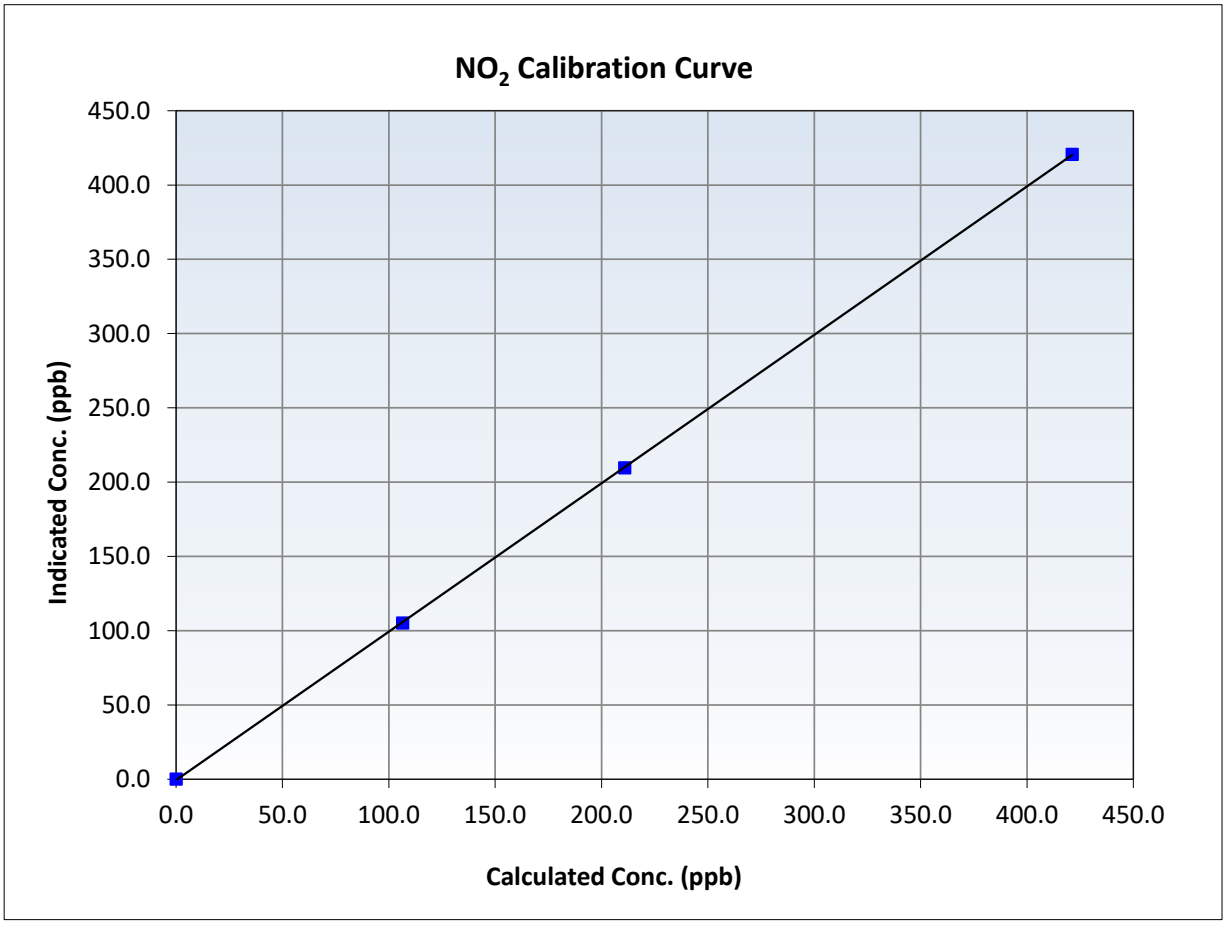
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 25, 2025
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	9:04	End Time (MST):	13:01
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153356

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
421.2	420.7	1.0013
210.9	209.6	1.0064
106.4	105.2	1.0118

Statistical Evaluation		Limits
Correlation Coefficient	0.999987	≥0.995
Slope	0.999128	0.90 - 1.10
Intercept	-0.594021	+/-20



Wood Buffalo Environmental Association

NO Calibration Summary

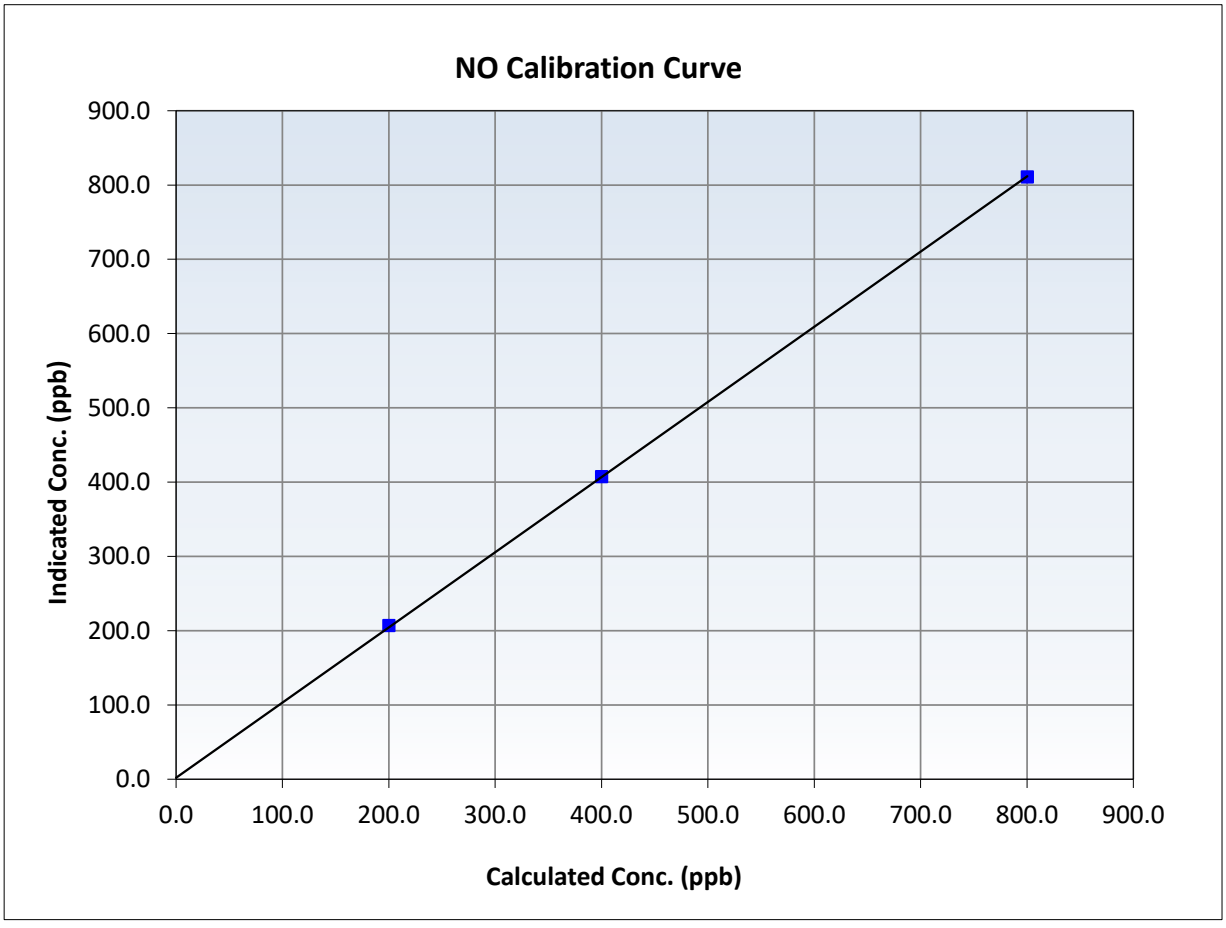
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 25, 2025
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	9:04	End Time (MST):	13:01
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153356

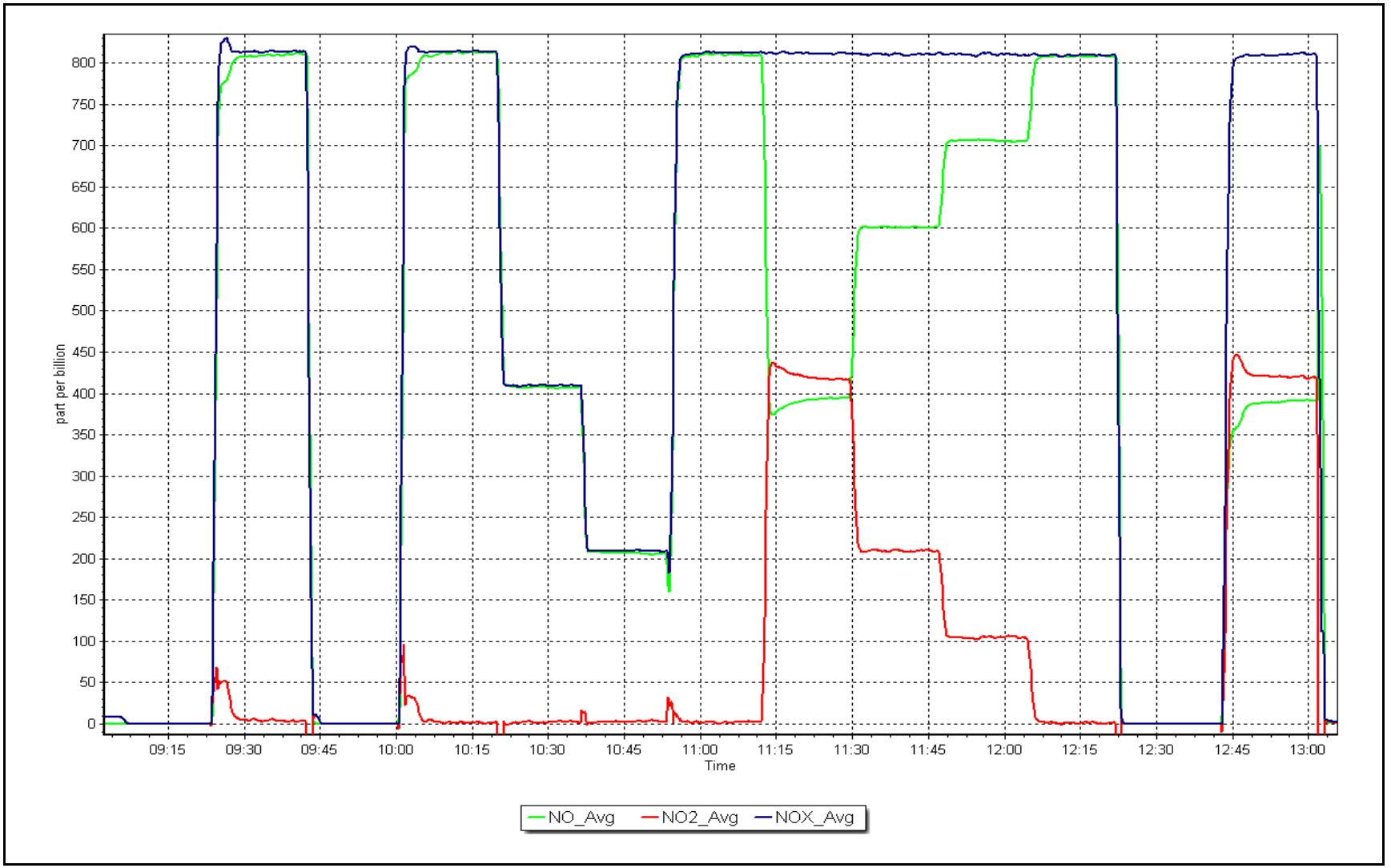
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
800.3	810.9	0.9870
400.2	407.5	0.9820
200.1	206.9	0.9669

Statistical Evaluation		Limits
Correlation Coefficient	0.999966	≥0.995
Slope	1.011915	0.90 - 1.10
Intercept	1.968148	+/-20



NO_X Calibration Plot Date: December 9, 2025 Location: Conklin



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Conklin	Station number:	AMS 21
Calibration Date:	December 8, 2025	Last Cal Date:	November 5, 2025
Start time (MST):	10:57	End time (MST):	13:25
Reason:	Routine		

Calibration Standards

O3 generation mode:	Photometer		
Calibrator Make/Model:	Teledyne API T700P	Serial Number:	2656
ZAG Make/Model:	Teledyne API T701H	Serial Number:	355

Analyzer Information

Analyzer make:	Thermo 49i	Analyzer serial #:	1300156233
Analyzer Range	0 - 500 ppb		

	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.007857	0.996057	Backgd or Offset:	-0.2	-0.2
Calibration intercept:	1.300000	1.040000	Coeff or Slope:	1.229	1.229

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	800.0	0.0	0.3	----
As found High point	5000	1195.9	400.0	398.7	1.004
As found Mid point					
As found Low point					
Baseline Corr As found:	398.4	Previous response	404.4	*% change	-1.5%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	800.0	0.0	0.4	----
High point	5000	1196.3	400.0	399.0	1.003
Mid point	5000	947.7	200.0	201.0	0.995
Low point	5000	812.8	100.0	101.0	0.990
As left zero	5000	800.0	0.0	0.5	----
As left span	5000	1192.7	400.0	402.4	0.994
				Average Correction Factor	0.996

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

O_3 Calibration Summary

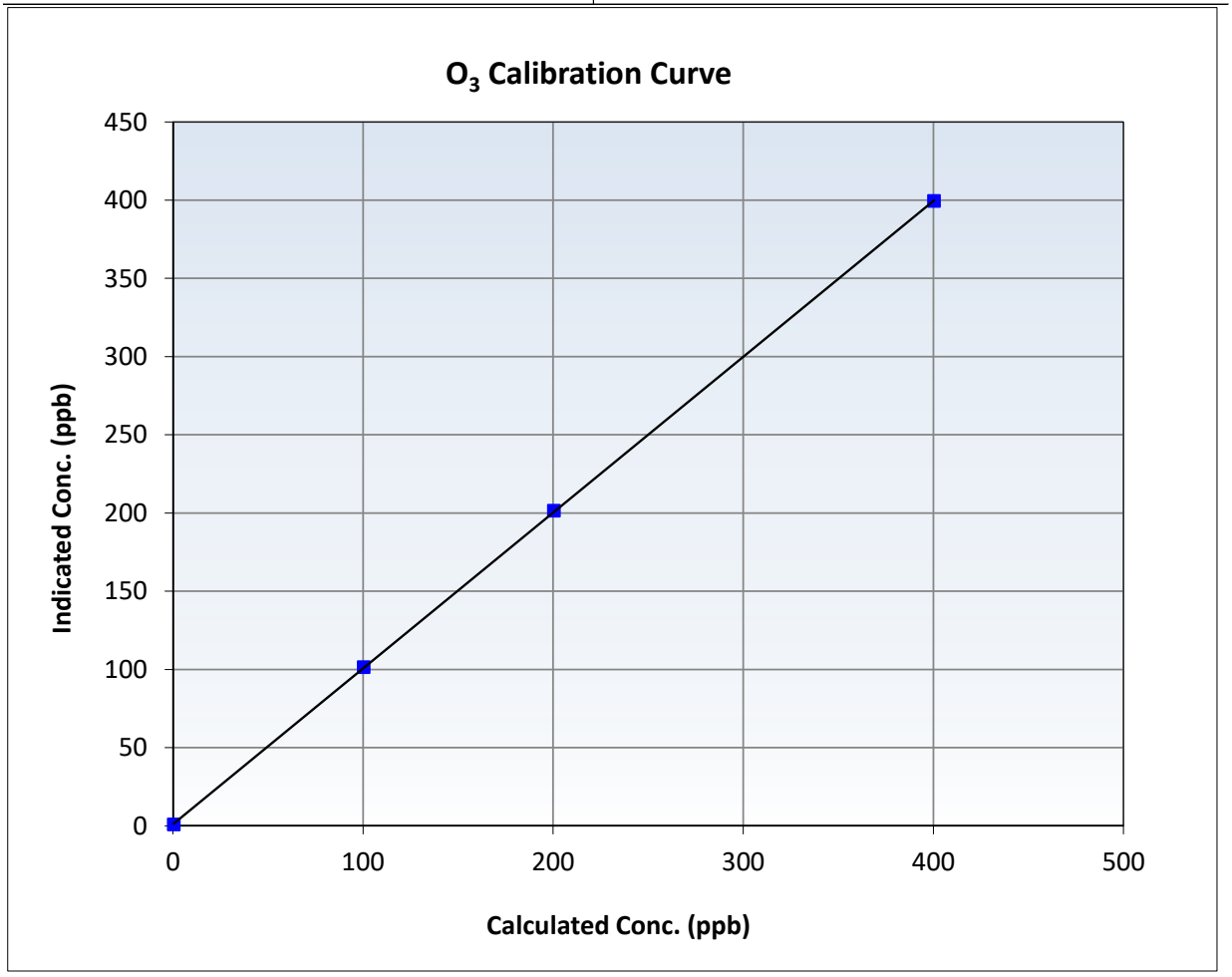
Station Information

Calibration Date:	December 8, 2025	Previous Calibration:	November 5, 2025
Station Name:	Conklin	Station Number:	AMS 21
Start Time (MST):	10:57	End Time (MST):	13:25
Analyzer make:	Thermo 49i	Analyzer serial #:	1300156233

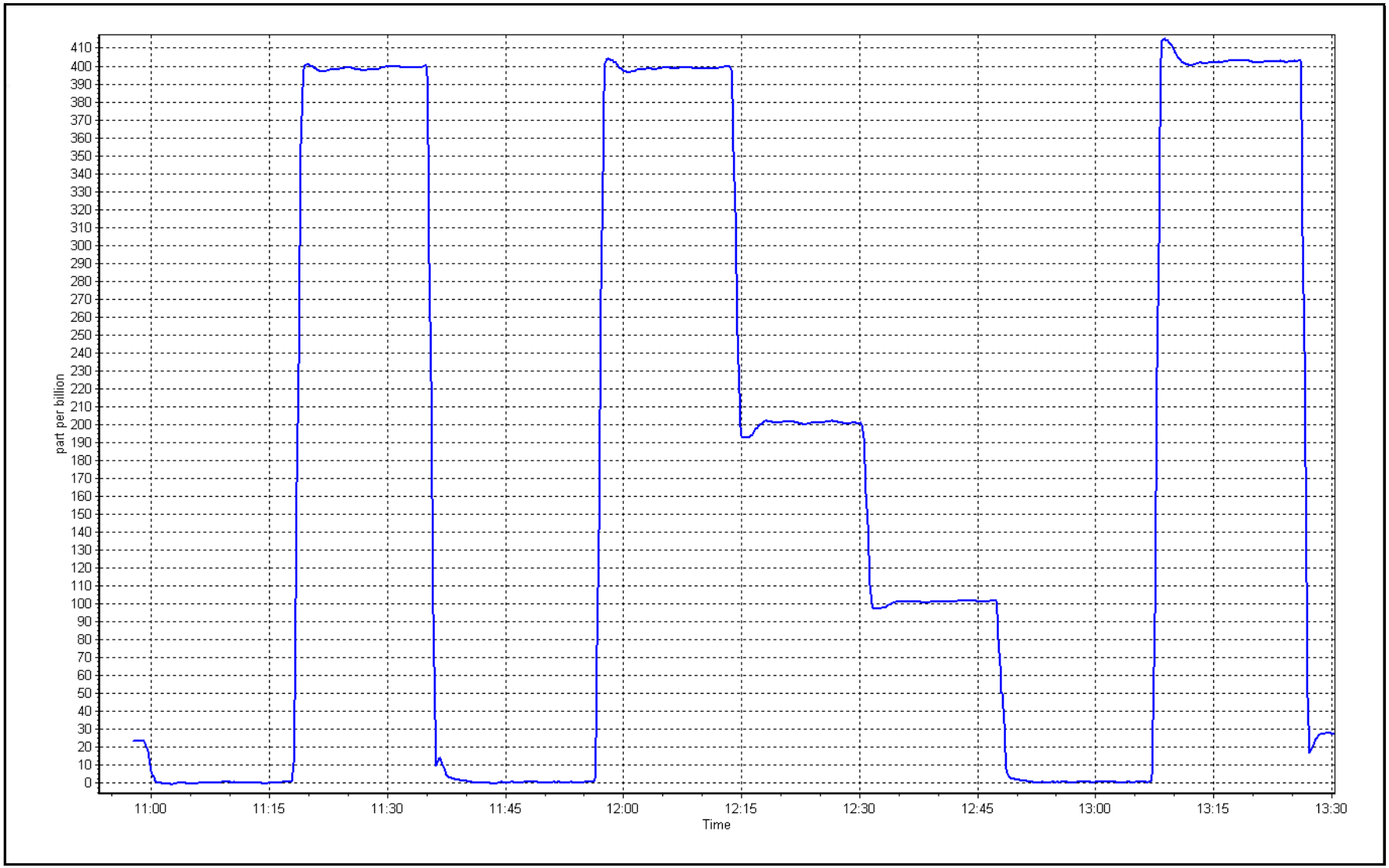
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.4	----
400.0	399.0	1.0025
200.0	201.0	0.9950
100.0	101.0	0.9901

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999985	*≥0.995*
Slope	0.996057	*0.90 - 1.10*
Intercept	1.040000	*+/- 5*



O_3 Calibration Plot Date: December 8, 2025 Location: Conklin



Wood Buffalo Environmental Association

T640 $PM_{2.5}$ CALIBRATION

Version-01-2024

Station Information

Station Name:	Conklin	Station number:	AMS 21
Calibration Date:	December 8, 2025	Last Cal Date:	November 26, 2025
Start time (MST):	12:13	End time (MST):	12:30
Analyzer Make:	API T640	S/N:	1266
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)	-14.00	-14.03	-14.00	☐	+/- 2 °C
P (mmHg)	702.40	704.37	702.40	☐	+/- 10 mmHg
Flow (LPM)	5.00	5.13	5.00	☐	+/- 0.25 LPM
PW% (pump)	43	-----	43	☐	>80%

Zero Verification — PM w/o HEPA: 4.00 — PM w/ HEPA: 0.00 — <0.2 ug/m3

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

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

Quarterly Calibration Test

SPAN DUST — Refractive Index: 10.90 — Expiry Date: July 16, 2026 — Lot No.: 100128-050-040

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

Date Optical Chamber Cleaned: November 26, 2025

Date Disposable Filter Changed: November 26, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: June 4, 2025

Date RH/T Sensor Cleaned: June 30, 2025

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

Calibration by: Jan Castro

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS22
JANVIER
DECEMBER 2025

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

January 30, 2025

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Janvier	Station number:	AMS 22
Calibration Date:	December 5, 2025	Last Cal Date:	November 7, 2025
Start time (MST):	12:45	End time (MST):	15:57
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.11	ppm	Cal Gas Exp Date:	January 18, 2029
Cal Gas Cylinder #:	CC281519			
Removed Cal Gas Conc:	50.11	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Model:	Teledyne API T700		Serial Number:	3806
Zero Air Gen Model:	Teledyne API T701		Serial Number:	691

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1152430006	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.997920	1.001993	Backgd or Offset:	26.7	26.8
Calibration intercept:	0.824696	0.824057	Coeff or Slope:	1.019	1.027

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.2	----
As found High point	4920	79.8	799.8	794.7	1.007
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	794.5	Previous response	798.9	*% change	-0.6%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.5	----
High point	4920	79.8	799.8	801.8	0.997
Mid point	4960	39.9	399.9	402.4	0.994
Low point	4980	20.0	200.4	201.5	0.995
As left zero	5000	0.0	0.0	0.5	----
As left span	4920	79.8	799.8	799.5	1.000
				Average Correction Factor:	0.995

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

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

SO_2 Calibration Summary

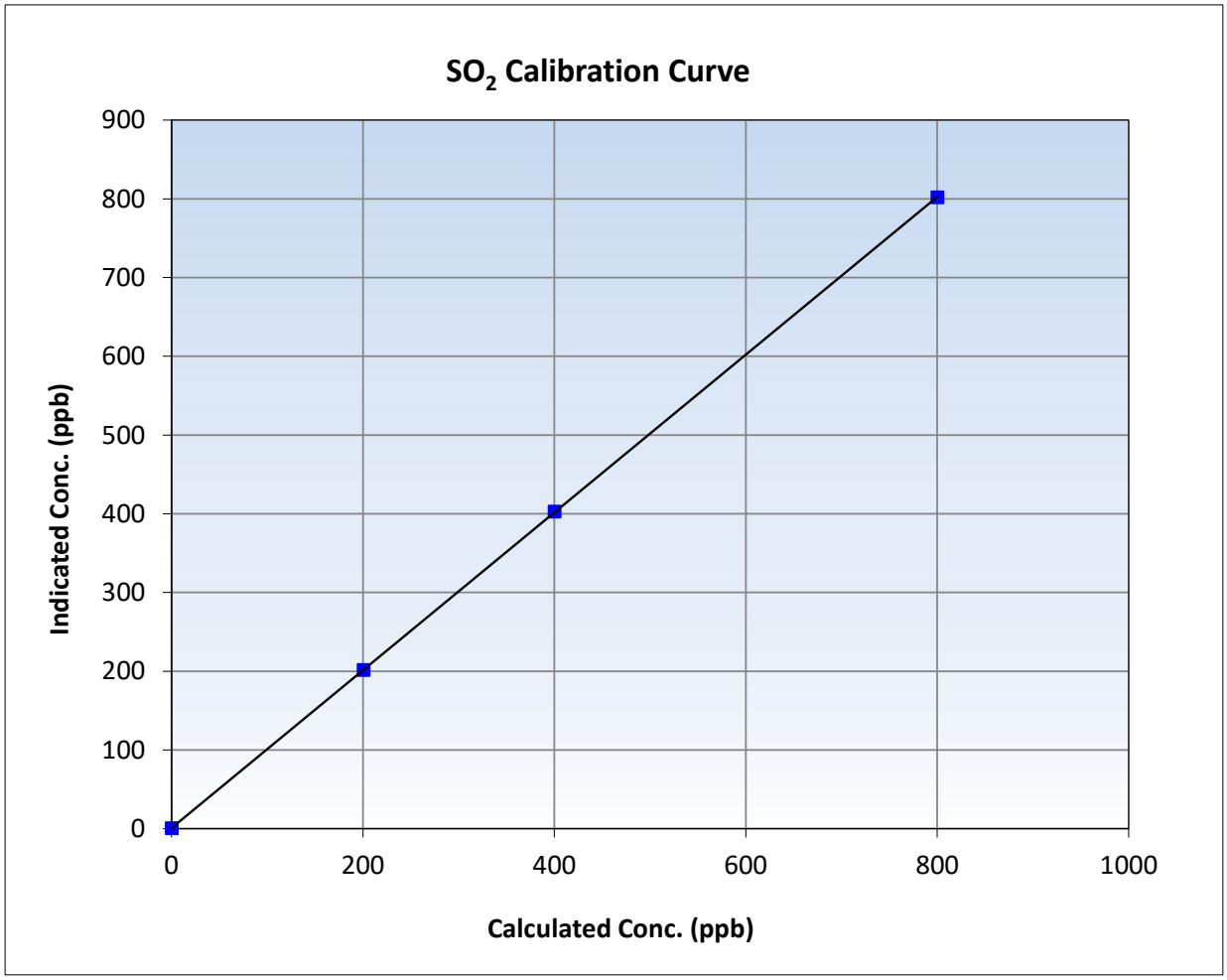
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 7, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:45	End Time (MST):	15:57
Analyzer make:	Thermo 43i	Analyzer serial #:	1152430006

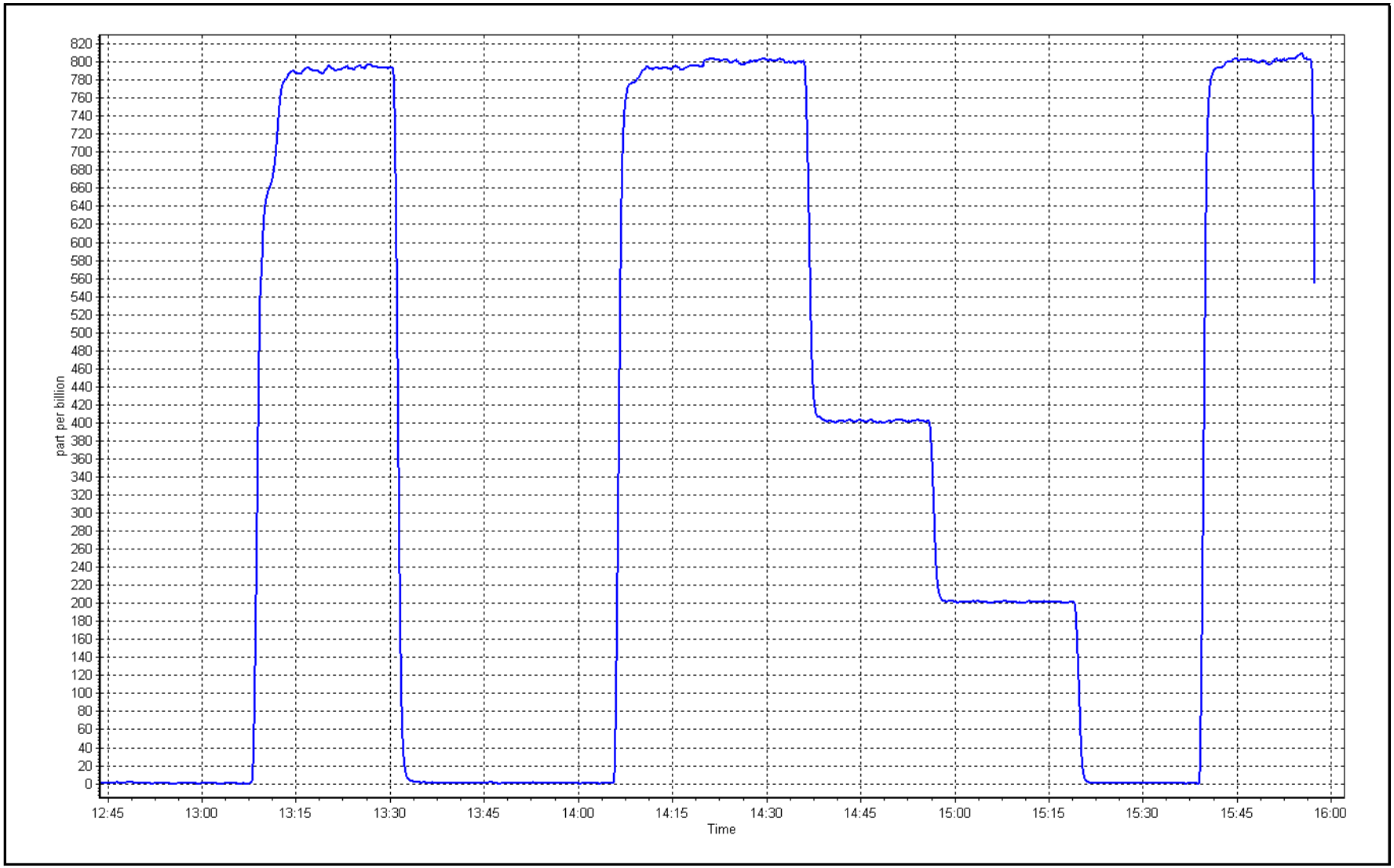
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.5	----
799.8	801.8	0.9975
399.9	402.4	0.9938
200.4	201.5	0.9947

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999997	*≥0.995*
Slope	1.001993	*0.90 - 1.10*
Intercept	0.824057	*+/-30*



SO2 Calibration Plot Date: December 5, 2025 Location: Janvier



Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Janvier	Station number:	AMS 22
Calibration Date:	December 17, 2025	Last Cal Date:	December 5, 2025
Start time (MST):	12:47	End time (MST):	16:47
Reason:	Cylinder Change		

Calibration Standards

Cal Gas Concentration:	49.82	ppm	Cal Gas Exp Date:	April 9, 2033
Cal Gas Cylinder #:	CC494522			
Removed Cal Gas Conc:	50.11	ppm	Rem Gas Exp Date:	January 18, 2029
Removed Gas Cyl #:	CC281519		Diff between cyl:	-0.7%
Calibrator Model:	Teledyne API T700		Serial Number:	3806
Zero Air Gen Model:	Teledyne API T701		Serial Number:	691

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1152430006	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.001993	1.002647	Backgd or Offset:	26.8	27.5
Calibration intercept:	0.824057	0.855249	Coeff or Slope:	1.027	1.049

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.3	----
As found High point	4920	79.8	799.8	791.5	1.011
As found Mid point					
As found Low point					
New cylinder response	4920	80.3	800.1	786.1	1.018
Baseline Corr As found:	791.2	Previous response	802.2	*% change	-1.4%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.6	----
High point	4920	80.3	800.1	802.9	0.996
Mid point	4960	40.2	400.5	402.6	0.995
Low point	4980	20.1	200.3	201.9	0.992
As left zero	5000	0.0	0.0	0.7	----
As left span	4920	80.3	800.1	803.7	0.995
				Average Correction Factor:	0.994

Notes: Changed the calibration gas cylinder after as founds. Adjusted the span.

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

SO_2 Calibration Summary

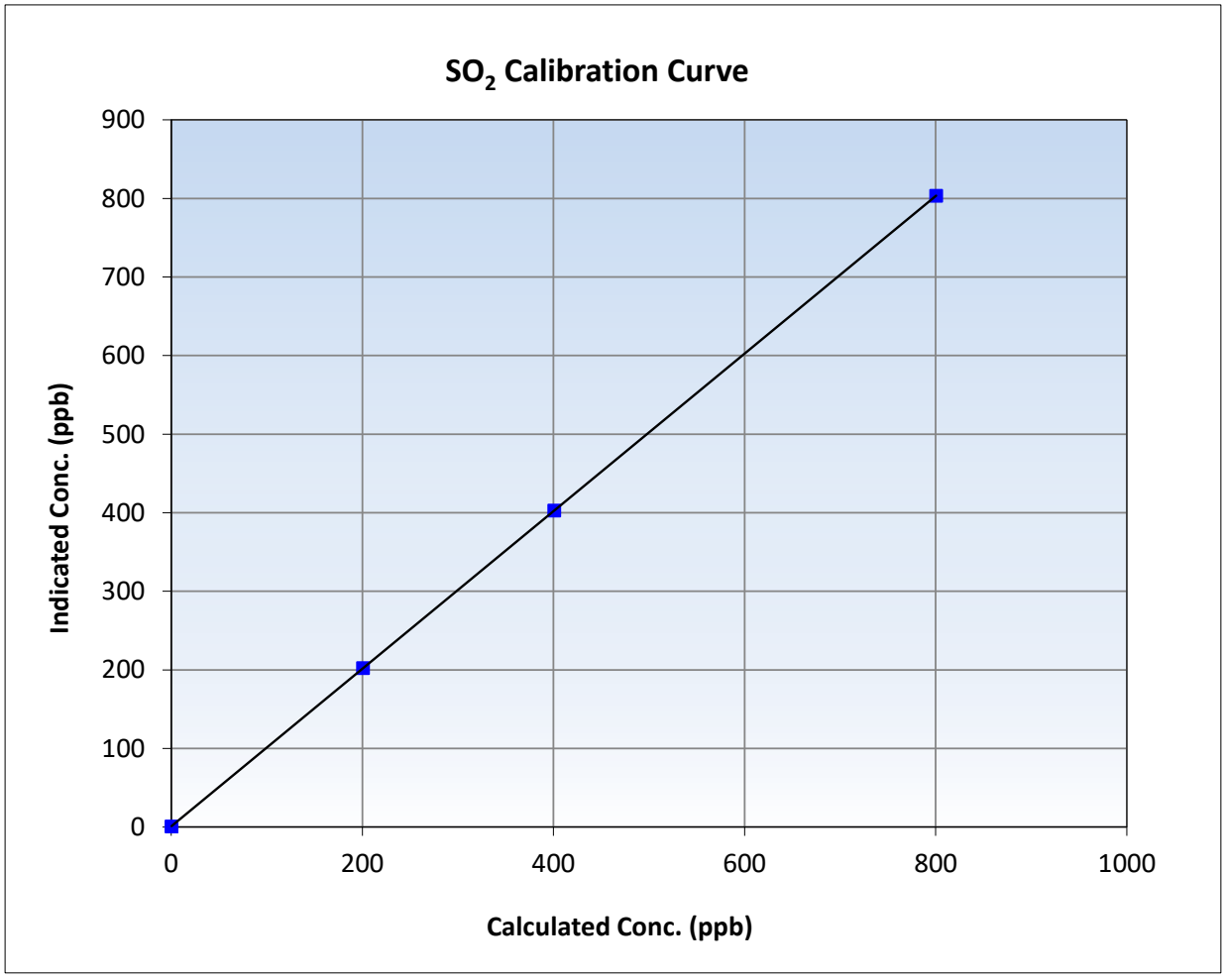
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	December 5, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:47	End Time (MST):	16:47
Analyzer make:	Thermo 43i	Analyzer serial #:	1152430006

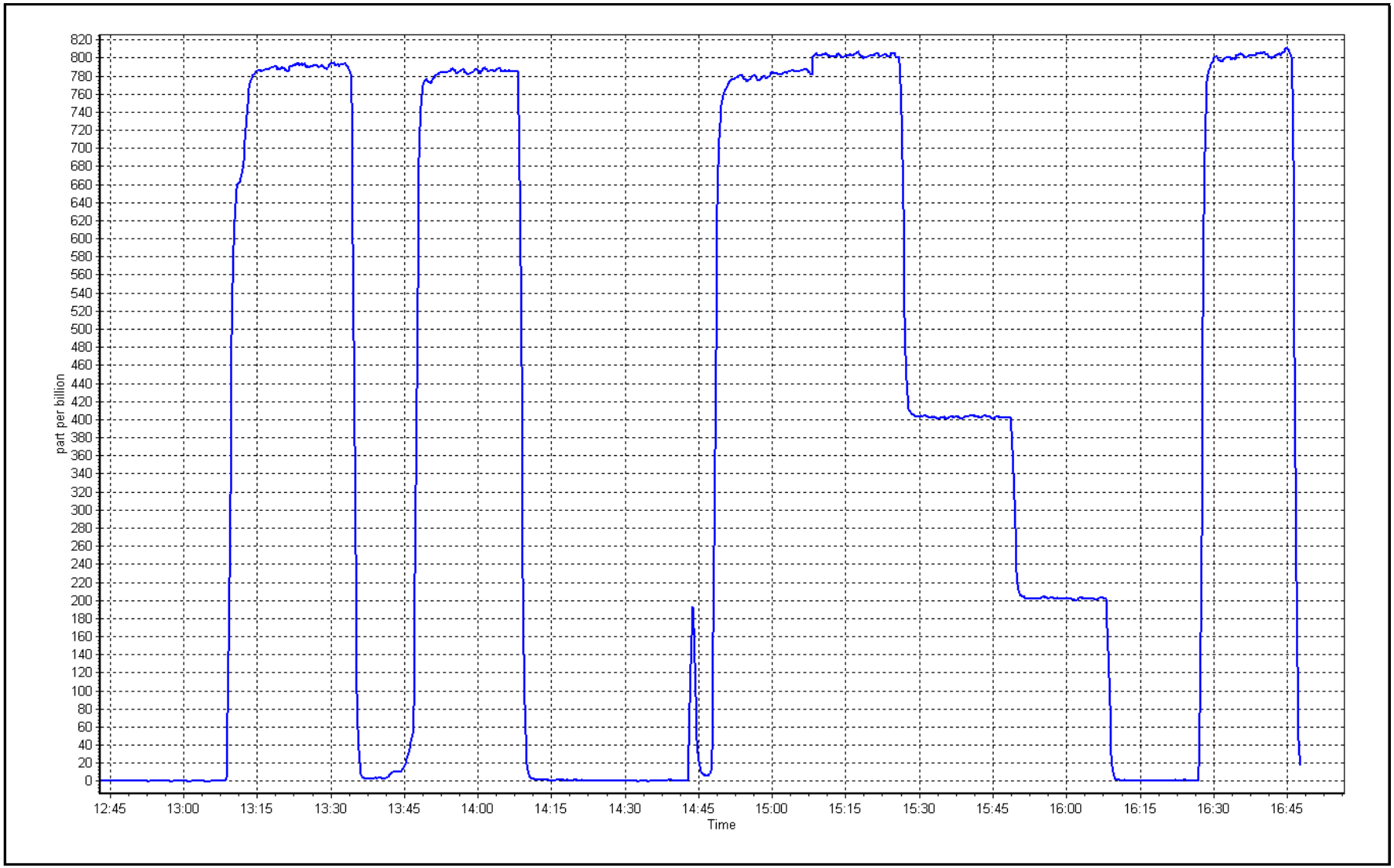
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.6	----
800.1	802.9	0.9965
400.5	402.6	0.9949
200.3	201.9	0.9919

Statistical Evaluation		*Limits*
Correlation Coefficient	1.000000	*≥0.995*
Slope	1.002647	*0.90 - 1.10*
Intercept	0.855249	*+/-30*



SO2 Calibration Plot Date: December 17, 2025 Location: Janvier



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Janvier	Station number:	AMS 22
Calibration Date:	December 5, 2025	Last Cal Date:	November 7, 2025
Start time (MST):	12:45	End time (MST):	15:57
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC281519		Cal Gas Expiry Date:	January 18, 2029	
CH4 Cal Gas Conc.	502.8	ppm	CH4 Equiv Conc.	1075.9	ppm
C3H8 Cal Gas Conc.	208.4	ppm			
Removed Gas Cert:	NA		Removed Gas Expiry:	NA	
Removed CH4 Conc.	502.8	ppm	CH4 Equiv Conc.	1075.9	ppm
Removed C3H8 Conc.	208.4	ppm	Diff between cyl (THC):		
Diff between cyl (CH_4):			Diff between cyl (NM):		
Calibrator Model:	Teledyne API 700		Serial Number:	3806	
Zero Air Gen model:	Teledyne API 701		Serial Number:	691	

Analyzer Information

Analyzer make:	Thermo 55i		Analyzer serial #:	1317958219	
THC Range:	0 - 20 ppm		NMHC/CH4 Range:	0 - 10 ppm	
	Start	***Finish***		***Start***	***Finish***
CH4 SP Ratio:	2.56E-04	2.50E-04	NMHC SP Ratio:	6.15E-05	5.95E-05
CH4 Retention time:	11.6	11.6	NMHC Peak Area:	148671	153723
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	17.17	17.43	0.985
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	17.43	Prev response	17.17	*% change	1.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	17.17	17.11	1.004
Mid point	4960	39.9	8.59	8.44	1.017
Low point	4980	20.0	4.30	4.22	1.020
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	17.17	17.16	1.001
				Average Correction Factor	1.014

Notes: Changed the inlet filter and N2 cylinder after as founds. Adjusted the span.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	9.15	9.31	0.982
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.31	Prev response	9.14	*% change	1.8%
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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	9.15	9.10	1.005
Mid point	4960	39.9	4.57	4.51	1.014
Low point	4980	20.0	2.29	2.26	1.014
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	9.15	9.13	1.002
				Average Correction Factor	1.011

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	8.03	8.12	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.12	Prev response	8.02	*% change	1.2%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	79.8	8.03	8.01	1.002
Mid point	4960	39.9	4.01	3.93	1.020
Low point	4980	20.0	2.01	1.96	1.027
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	79.8	8.03	8.03	0.999
				Average Correction Factor	1.016

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	1.001560	0.996986
THC Cal Offset:	-0.030598	-0.049977
CH4 Cal Slope:	1.002976	0.999230
CH4 Cal Offset:	-0.028360	-0.033953
NMHC Cal Slope:	0.999867	0.994993
NMHC Cal Offset:	-0.001436	-0.015424

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

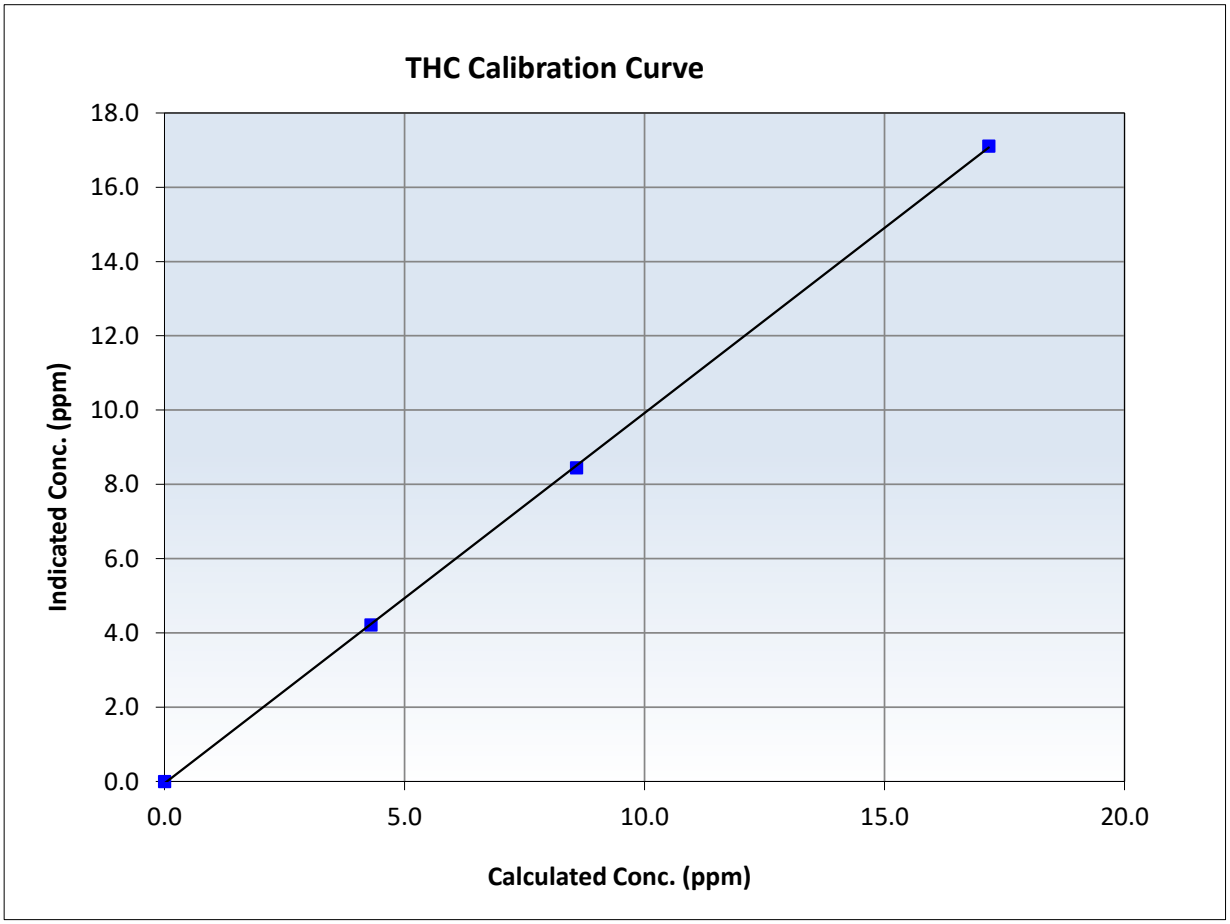
THC Calibration Summary

Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 7, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:45	End Time (MST):	15:57
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999945	≥0.995
17.17	17.11	1.0037	Slope	0.996986	0.90 - 1.10
8.59	8.44	1.0168			
4.30	4.22	1.0203	Intercept	-0.049977	+/-0.5



Wood Buffalo Environmental Association

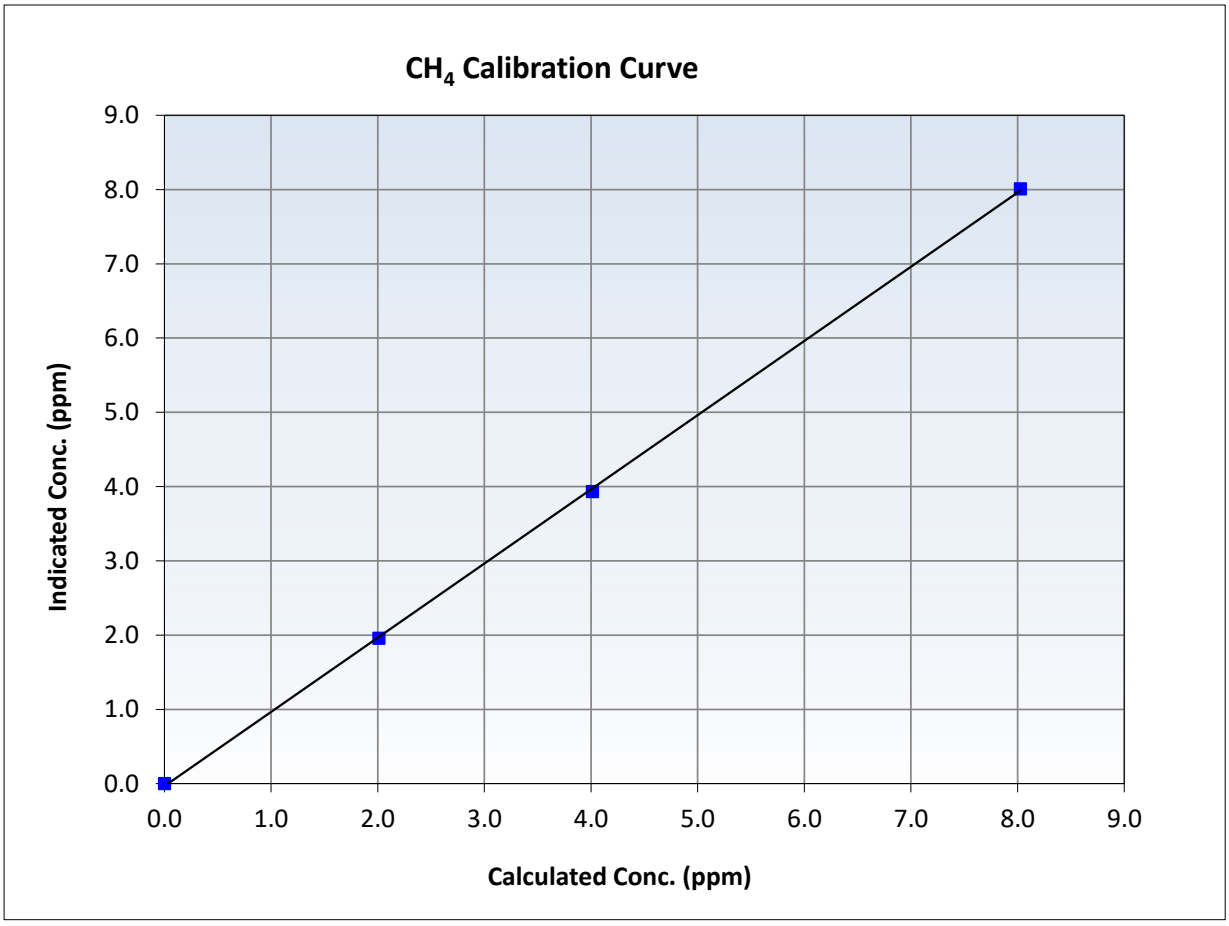
CH_4 Calibration Summary

Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 7, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:45	End Time (MST):	15:57
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999892	≥0.995
8.03	8.01	1.0019	Slope	0.999230	0.90 - 1.10
4.01	3.93	1.0199			
2.01	1.96	1.0272	Intercept	-0.033953	+/-0.5



Wood Buffalo Environmental Association

NMHC Calibration Summary

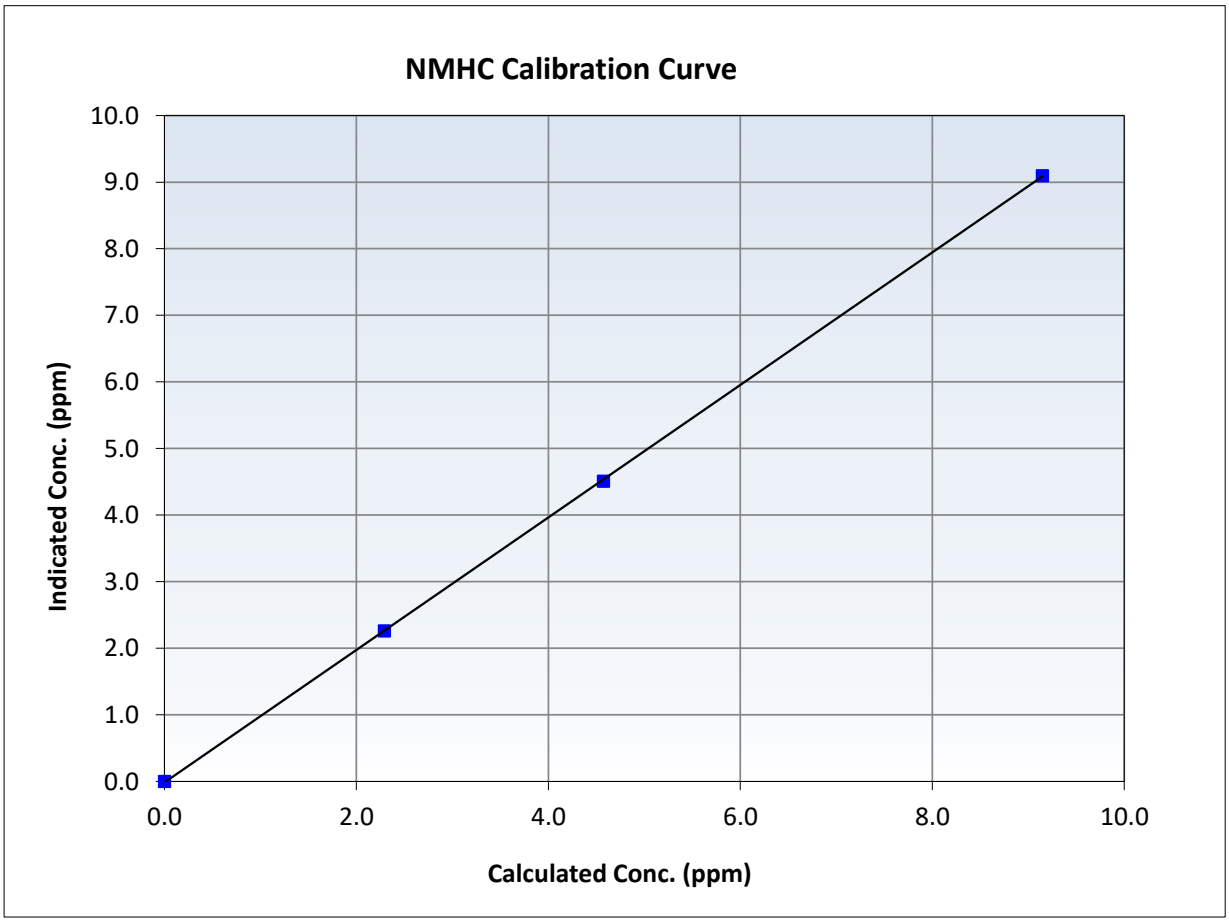
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 7, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:45	End Time (MST):	15:57
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

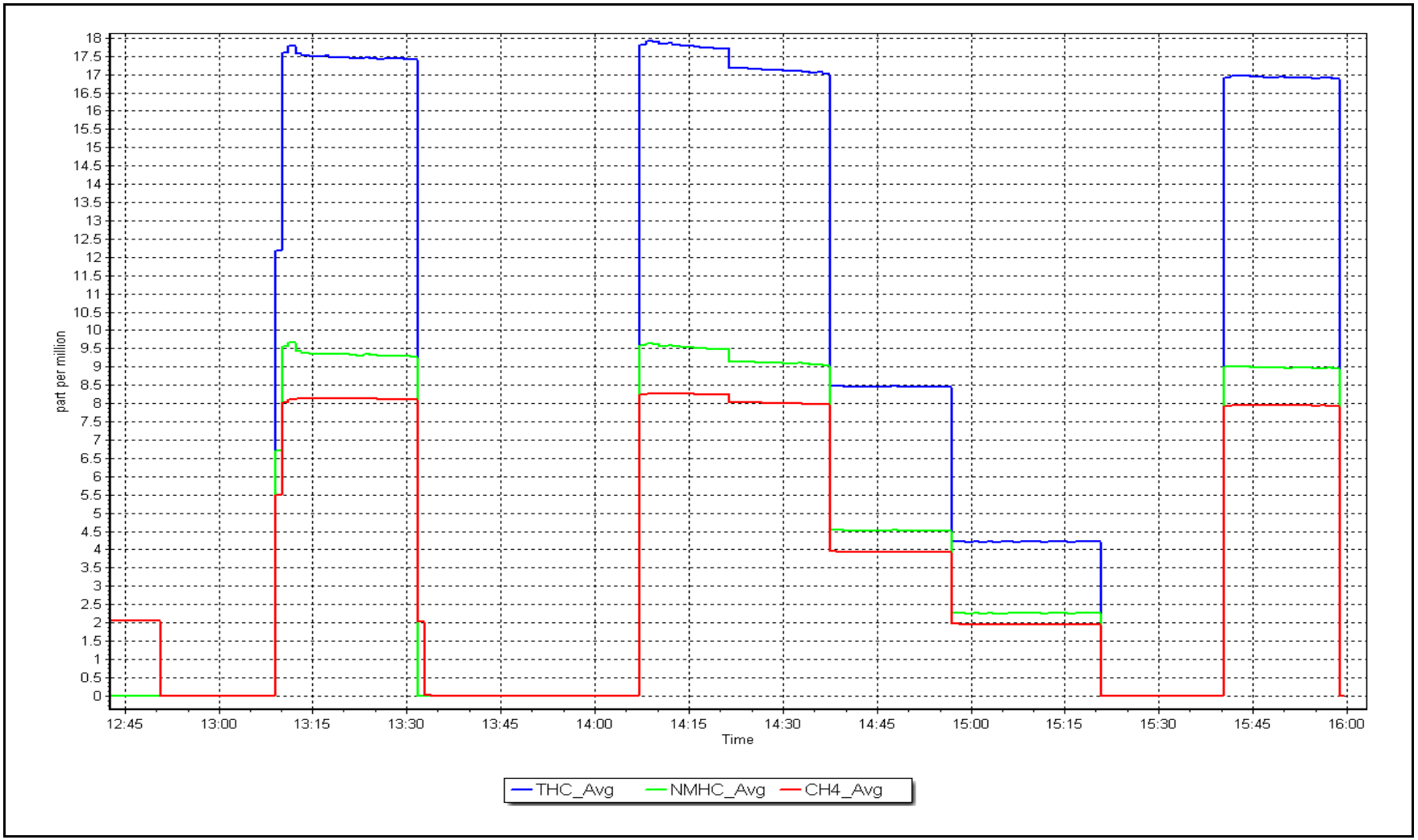
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.00	----
9.15	9.10	1.0053
4.57	4.51	1.0138
2.29	2.26	1.0139

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999978	*≥0.995*
Slope	0.994993	*0.90 - 1.10*
Intercept	-0.015424	*+/-0.5*



NMHC Calibration Plot Date: December 5, 2025 Location: Janvier



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Janvier	Station number:	AMS 22
Calibration Date:	December 17, 2025	Last Cal Date:	December 5, 2025
Start time (MST):	12:47	End time (MST):	16:47
Reason:	Cylinder Change .		

Calibration Standards

Gas Cert Reference:		CC494522	Cal Gas Expiry Date:	April 9, 2033	
CH4 Cal Gas Conc.	499.5	ppm	CH4 Equiv Conc.	1057.5	ppm
C3H8 Cal Gas Conc.	202.9	ppm			
Removed Gas Cert:		CC281519	Removed Gas Expiry:	January 18, 2029	
Removed CH4 Conc.	502.8	ppm	CH4 Equiv Conc.	1075.9	ppm
Removed C3H8 Conc.	208.4	ppm	Diff between cyl (THC):	1.5%	
Diff between cyl (CH_4):	0.2%		Diff between cyl (NM):	2.6%	
Calibrator Model:	Teledyne API 700		Serial Number:	3806	
Zero Air Gen model:	Teledyne API 701		Serial Number:	691	

Analyzer Information

Analyzer make:	Thermo 55i		Analyzer serial #:	1317958219	
THC Range:	0 - 20 ppm		NMHC/CH4 Range:	0 - 10 ppm	
	Start	***Finish***		***Start***	***Finish***
CH4 SP Ratio:	2.50E-04	2.53E-04	NMHC SP Ratio:	5.95E-05	5.98E-05
CH4 Retention time:	11.6	11.6	NMHC Peak Area:	153723	149911
Zero Chromatogram:	OFF	OFF	Flat Baseline:	OFF	OFF

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	17.17	16.87	1.018
As found Mid point					
As found Low point					
New cylinder response	4920	80.3	16.98	16.93	1.003
Baseline Corr AF:	16.87	Prev response	17.07	*% change	-1.2%
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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	80.3	16.98	16.96	1.001
Mid point	4960	40.2	8.50	8.42	1.010
Low point	4980	20.1	4.25	4.21	1.010
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	16.98	16.98	1.000
				Average Correction Factor	1.007

Notes: Changed the H2 and calibration gas cylinders after as founds. Adjusted the span.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	9.15	8.93	1.024
As found Mid point					
As found Low point					
New cylinder response	4920	80.3	8.96	8.97	0.999
Baseline Corr AF:	8.93	Prev response	9.09	*% change	-1.8%
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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	80.3	8.96	8.95	1.001
Mid point	4960	40.2	4.49	4.47	1.004
Low point	4980	20.1	2.24	2.24	1.000
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	8.96	8.96	1.000
				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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4920	79.8	8.03	7.94	1.010
As found Mid point					
As found Low point					
New cylinder response	4920	80.3	8.02	7.96	1.008
Baseline Corr AF:	7.94	Prev response	7.98	*% change	-0.5%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4920	80.3	8.02	8.01	1.001
Mid point	4960	40.2	4.02	3.95	1.018
Low point	4980	20.1	2.01	1.97	1.021
As left zero	5000	0.0	0.00	0.00	----
As left span	4920	80.3	8.02	8.02	1.000
				Average Correction Factor	1.013

Calibration Statistics

	Start	***Finish***
THC Cal Slope:	0.996986	0.998724
THC Cal Offset:	-0.049977	-0.028700
CH4 Cal Slope:	0.999230	0.999447
CH4 Cal Offset:	-0.033953	-0.028622
NMHC Cal Slope:	0.994993	0.998331
NMHC Cal Offset:	-0.015424	-0.001078

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

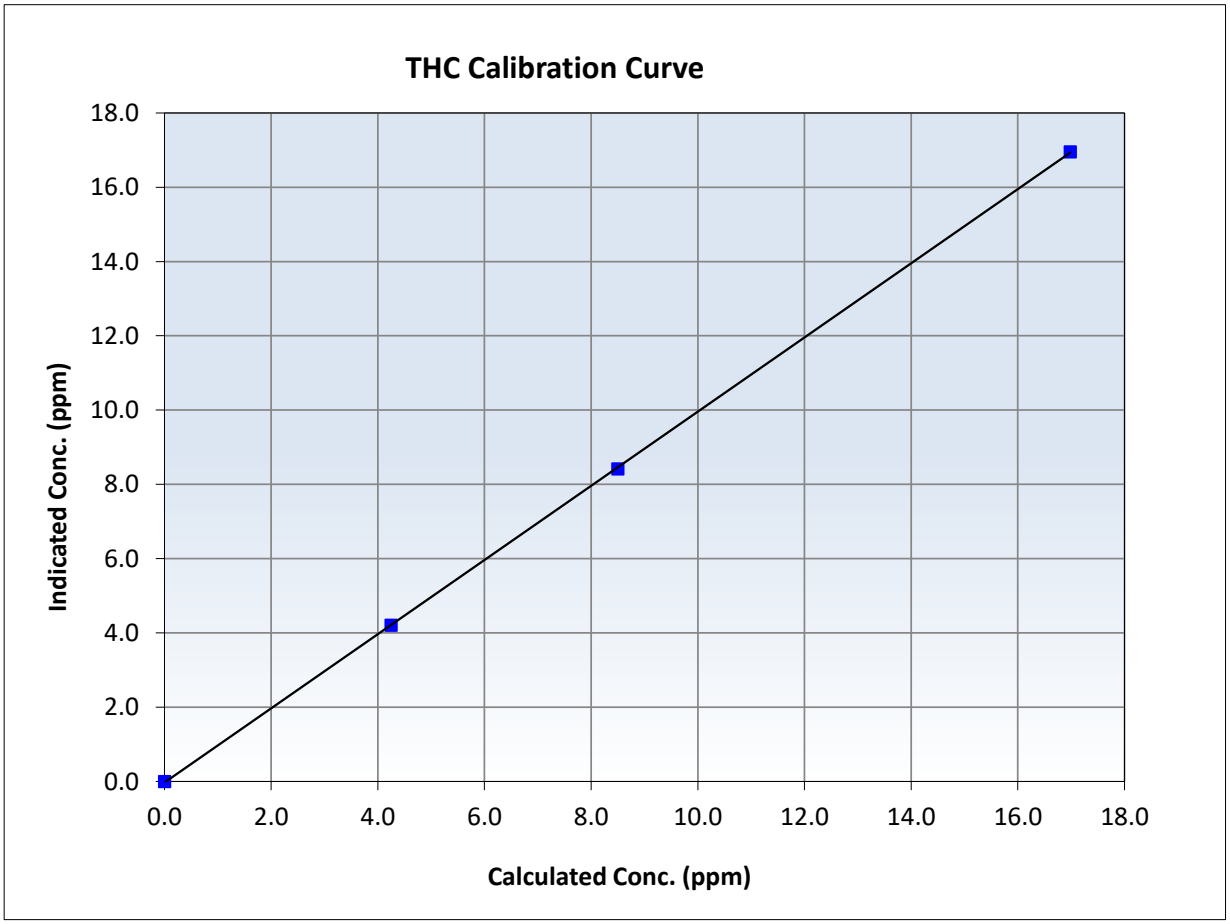
THC Calibration Summary

Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	December 5, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:47	End Time (MST):	16:47
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999976	*≥0.995*
16.98	16.96	1.0015	Slope	0.998724	*0.90 - 1.10*
8.50	8.42	1.0103	Intercept	-0.028700	*+/-0.5*
4.25	4.21	1.0097			



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CH_4 Calibration Summary

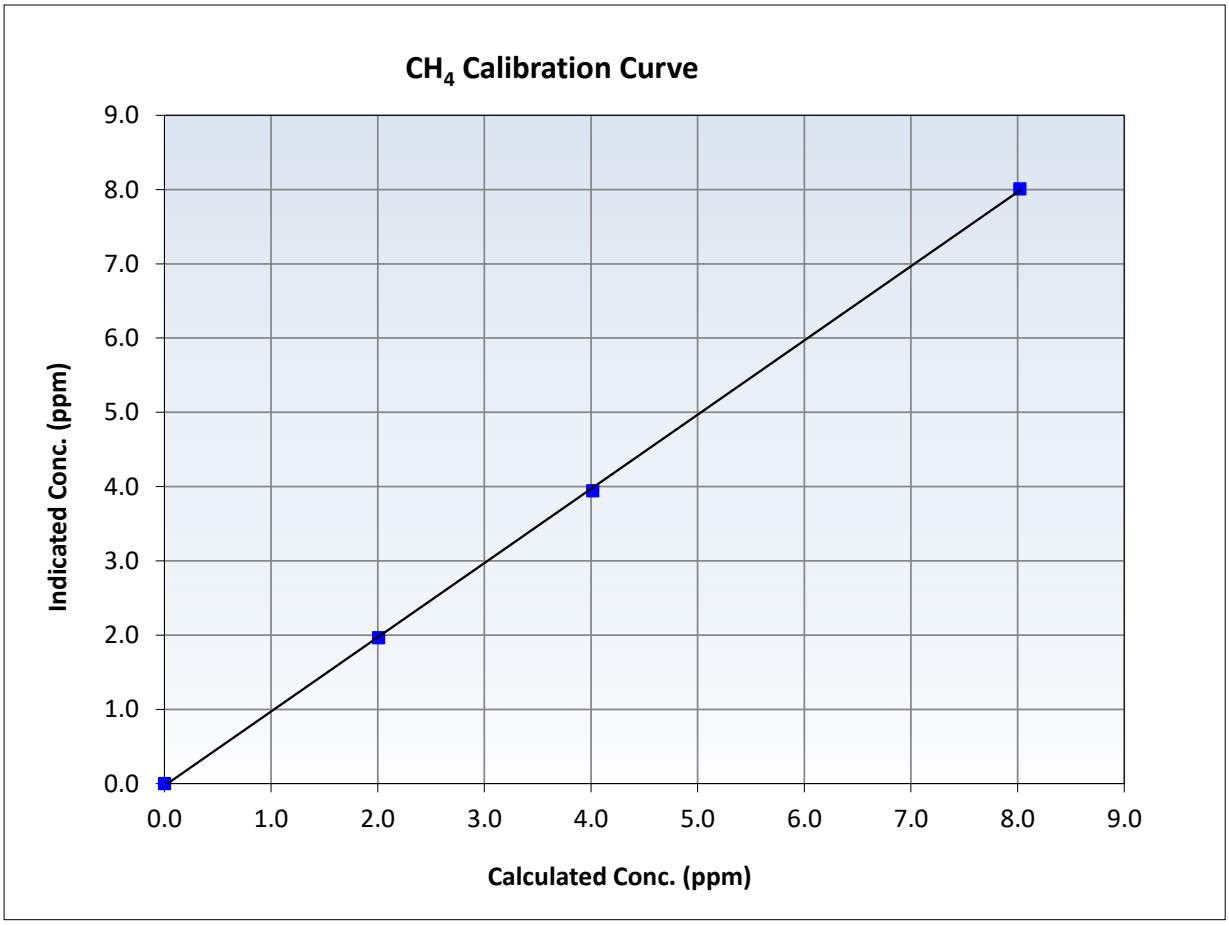
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	December 5, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:47	End Time (MST):	16:47
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.00	----
8.02	8.01	1.0013
4.02	3.95	1.0177
2.01	1.97	1.0213

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999915	*≥0.995*
Slope	0.999447	*0.90 - 1.10*
Intercept	-0.028622	*+/-0.5*



Wood Buffalo Environmental Association

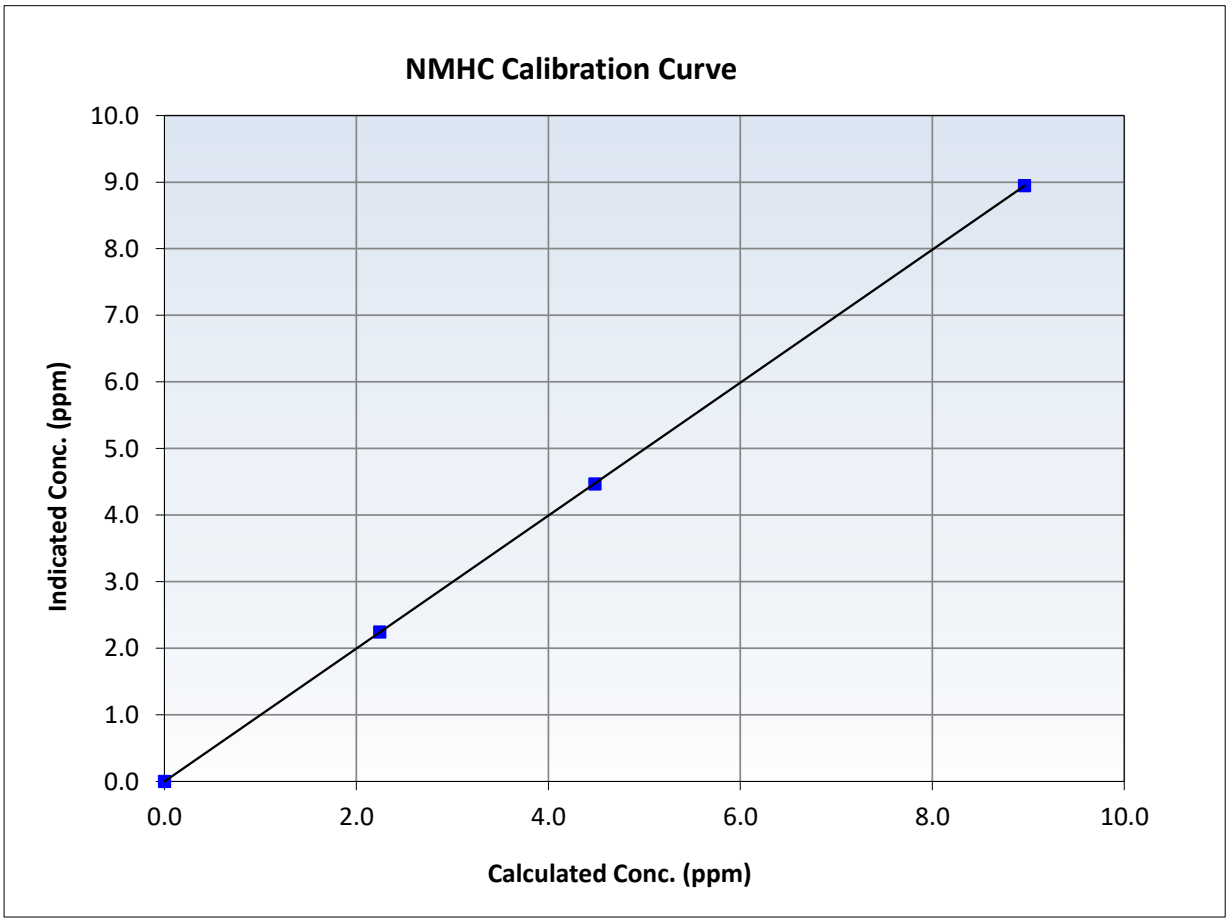
NMHC Calibration Summary

Station Information

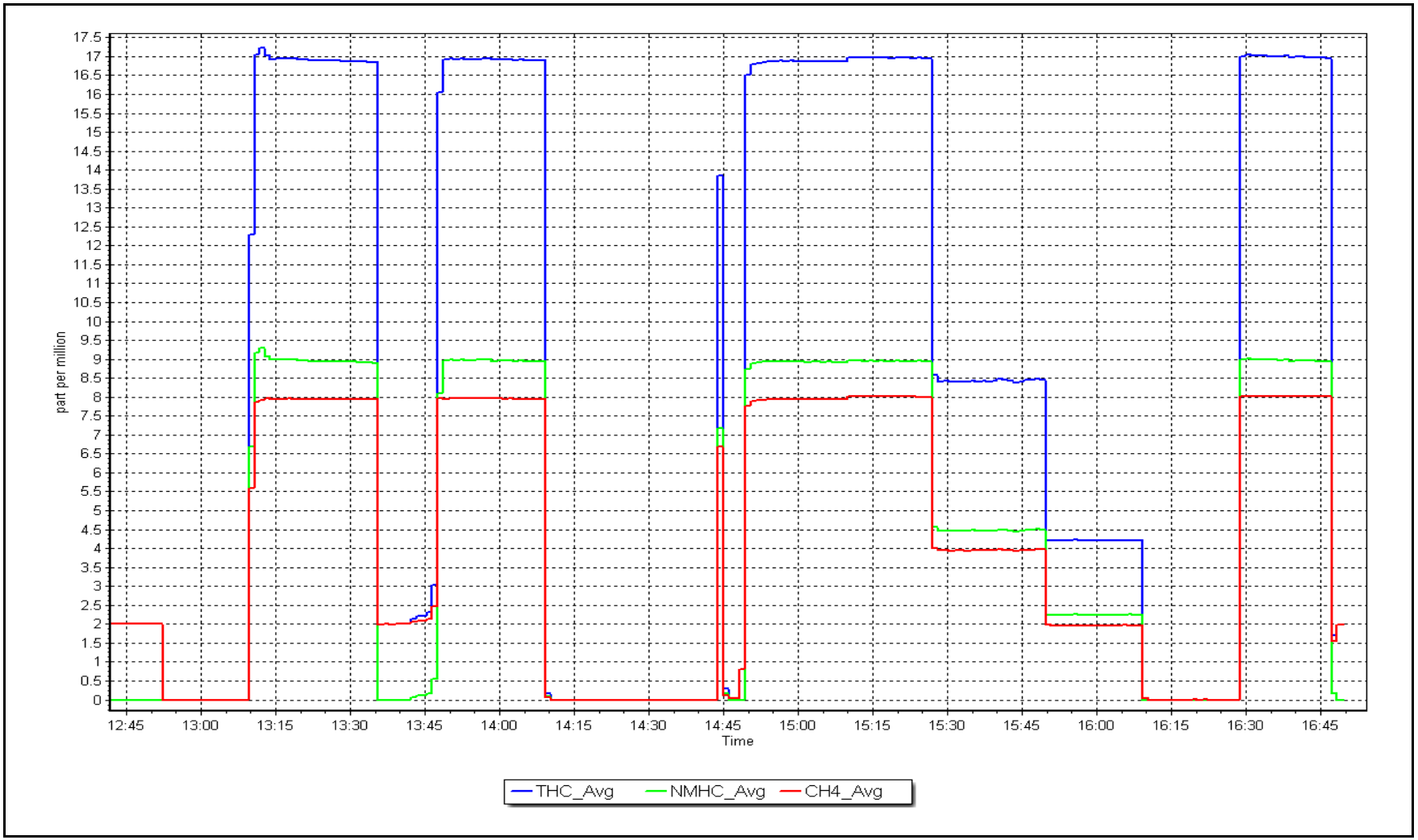
Calibration Date:	December 17, 2025	Previous Calibration:	December 5, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:47	End Time (MST):	16:47
Analyzer make:	Thermo 55i	Analyzer serial #:	1317958219

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999997	≥0.995
8.96	8.95	1.0014	Slope	0.998331	0.90 - 1.10
4.49	4.47	1.0040	Intercept	-0.001078	+/-0.5
2.24	2.24	1.0000			



NMHC Calibration Plot Date: December 17, 2025 Location: Janvier



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Janvier
Station number:	AMS 22
Calibration Date:	December 16, 2025
Last Cal Date:	November 18, 2025
Start time (MST):	12:28
End time (MST):	16:46
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0047765	Cal Gas Expiry Date:	March 11, 2031
NOX Cal Gas Conc:	48.90 ppm	NO Cal Gas Conc:	48.80 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	48.90 ppm	Removed Gas NO Conc:	48.80 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	3806
ZAG make/model:	Teledyne API T701	Serial Number:	691

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.3	-0.2	-0.1	----	----
AF High point	4918	82.0	802.0	800.3	1.6	808.1	801.8	6.4	0.9920	0.9979
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 804.1 ppb	NO = 800.2 ppb
Baseline Corr 1st pt	NO_X = 808.4 ppb	NO = 802.0 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 = 0.5%

*Percent Change NO = 0.2%

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1229254994

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	1.012	1.012	NO bkgnd or offset:	2.8	2.8
NOX coeff or slope:	0.997	0.997	NOX bkgnd or offset:	2.9	2.9
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	173.5	173.5

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	1.002746	1.005169
NO_X Cal Offset:	-0.095882	-0.095819
NO Cal Slope:	1.001974	1.004430
NO Cal Offset:	-1.656036	-1.415946
NO_2 Cal Slope:	1.001732	1.001236
NO_2 Cal Offset:	0.338633	0.021878

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	----	----
High point	4918	82.0	802.0	800.3	1.6	806.0	803.0	2.7	0.9950	0.9967
Mid point	4960	41.0	400.9	400.1	0.8	402.9	400.1	2.8	0.9950	0.9999
Low point	4980	20.5	200.5	200.1	0.4	201.4	198.0	3.4	0.9954	1.0104
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.0	0.1	----	----
As left span	4918	82.0	802.0	391.8	410.2	804.3	391.8	412.5	0.9971	1.0000
							Average Correction Factor		0.9951	1.0023

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.0	----	----
High GPT point	800.8	388.9	413.5	414.1	0.9986	100.1%
Mid GPT point	800.8	600.6	201.8	202.0	0.9992	100.1%
Low GPT point	800.8	695.8	106.6	106.9	0.9976	100.2%
				Average Correction Factor	0.9985	100.2%

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

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

NO_X Calibration Summary

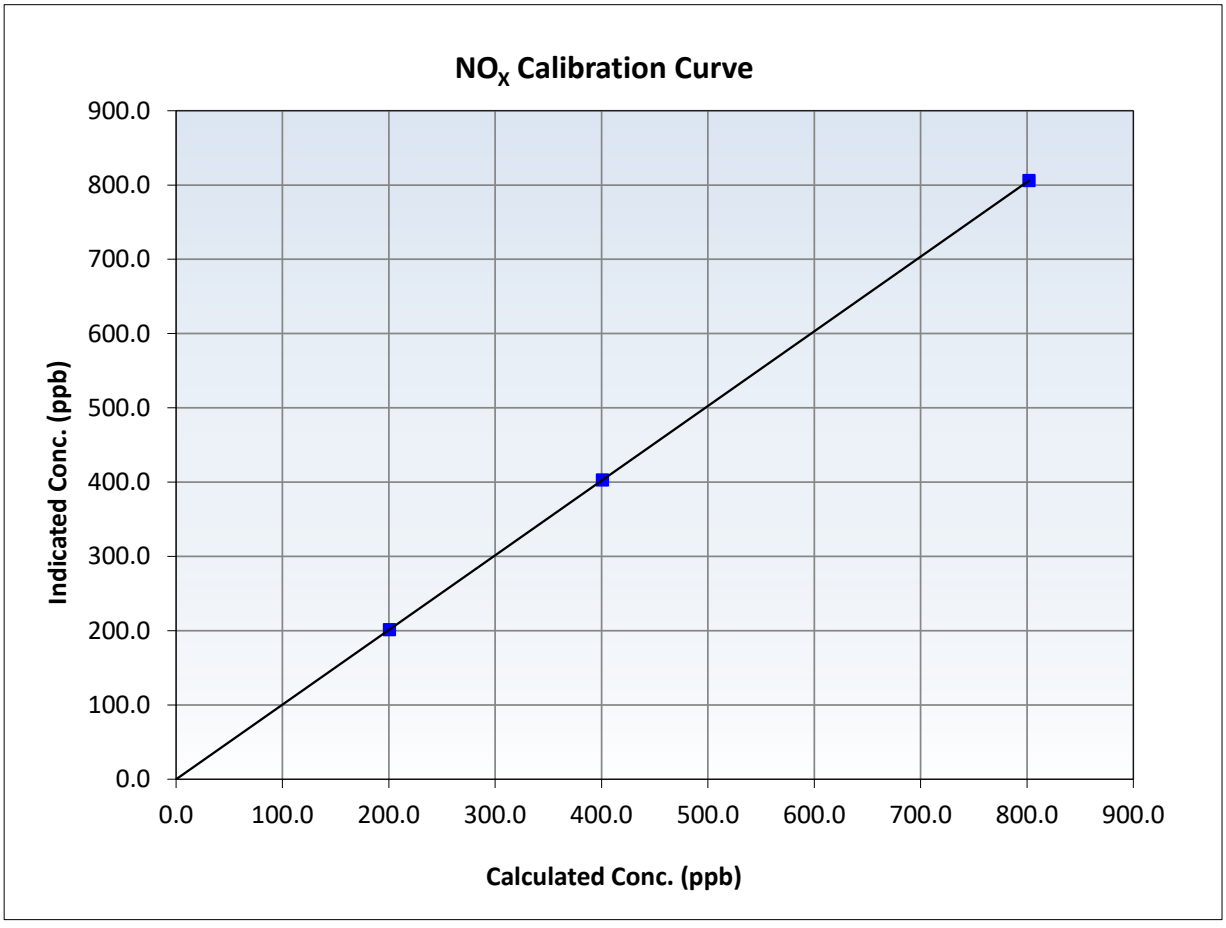
Station Information

Calibration Date:	December 16, 2025	Previous Calibration:	November 18, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:28	End Time (MST):	16:46
Analyzer make:	Thermo 42i	Analyzer serial #:	1229254994

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
802.0	806.0	0.9950
400.9	402.9	0.9950
200.5	201.4	0.9954

Statistical Evaluation		*Limits*
Correlation Coefficient	1.000000	*≥0.995*
Slope	1.005169	*0.90 - 1.10*
Intercept	-0.095819	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

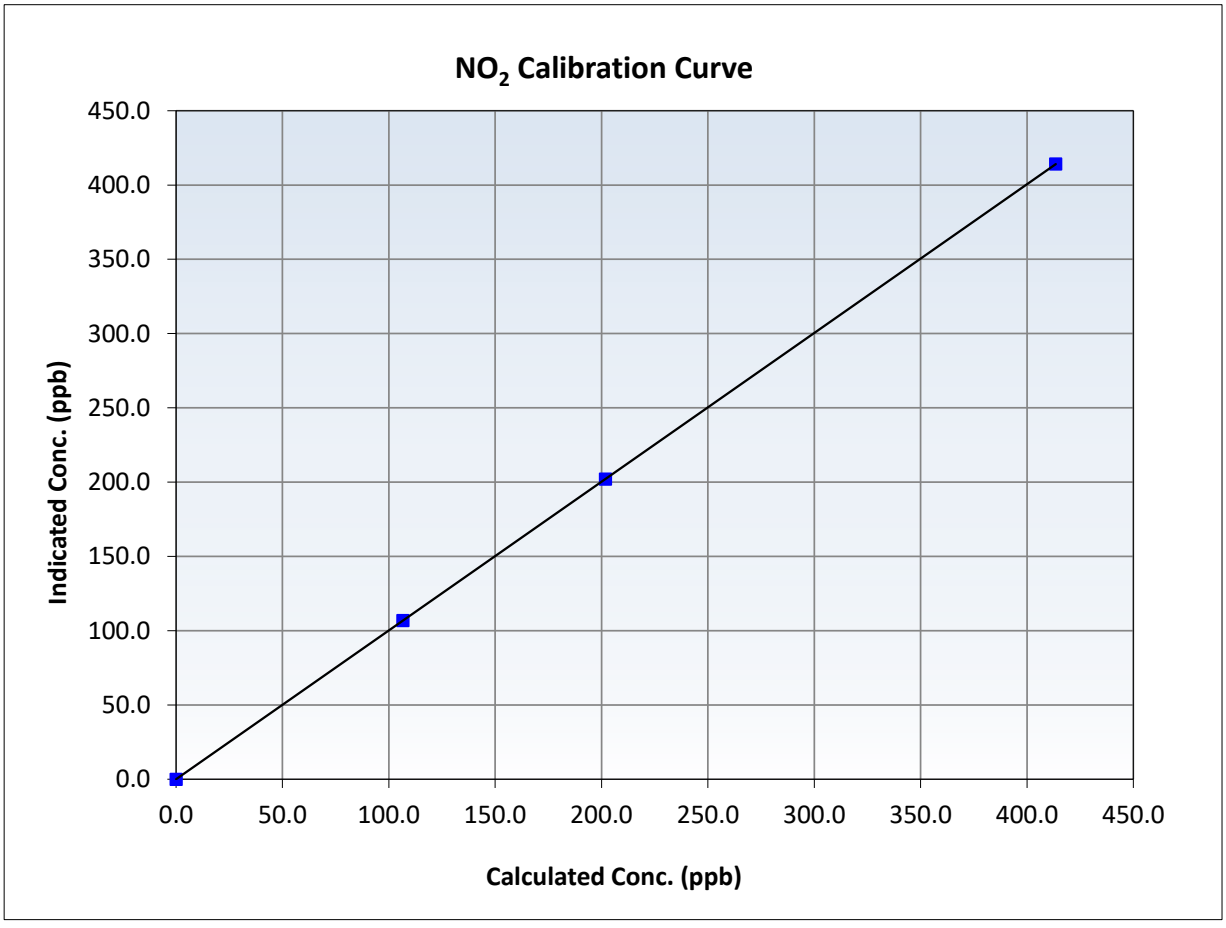
Station Information

Calibration Date:	December 16, 2025	Previous Calibration:	November 18, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:28	End Time (MST):	16:46
Analyzer make:	Thermo 42i	Analyzer serial #:	1229254994

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
413.5	414.1	0.9986
201.8	202.0	0.9992
106.6	106.9	0.9976

Statistical Evaluation		*Limits*
Correlation Coefficient	1.000000	*≥0.995*
Slope	1.001236	*0.90 - 1.10*
Intercept	0.021878	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

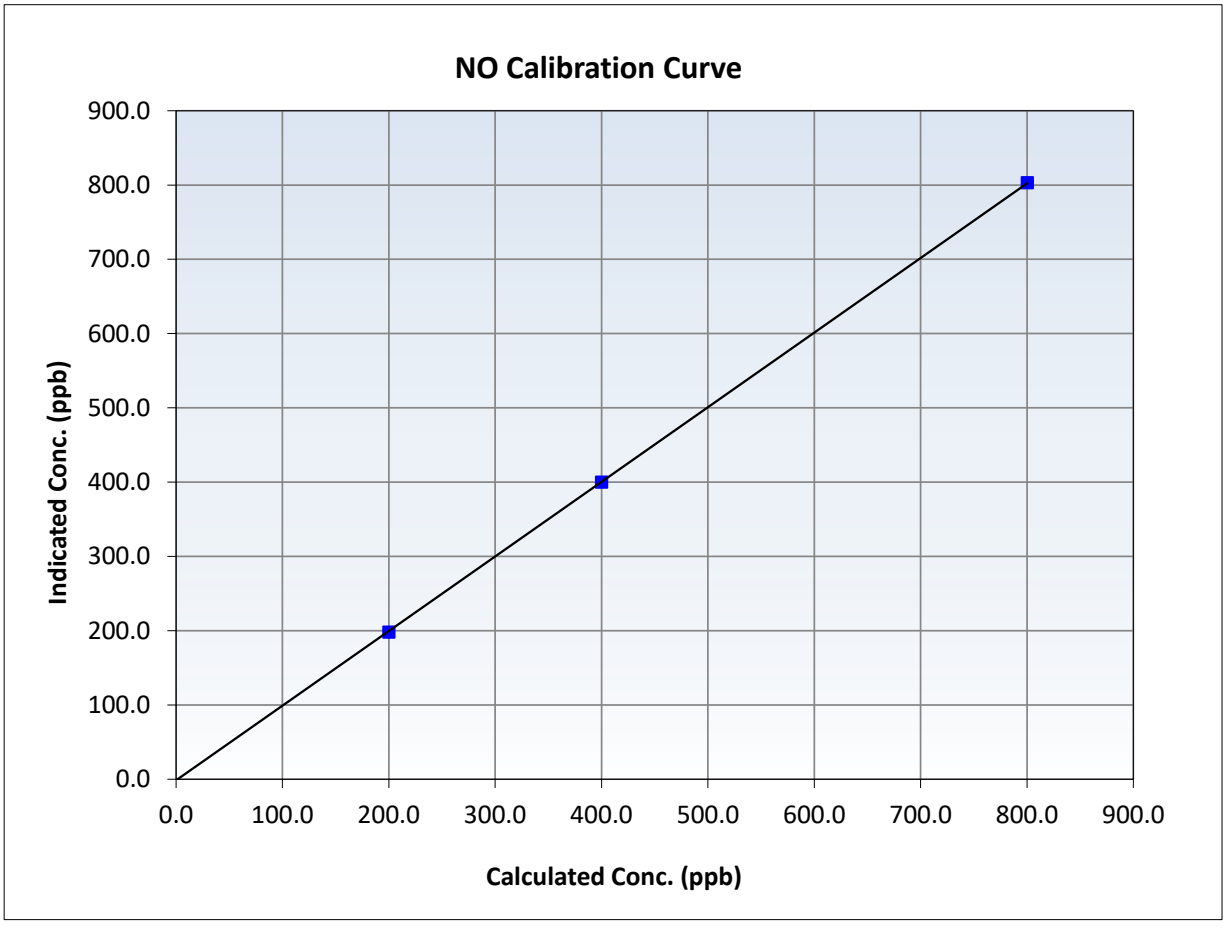
Station Information

Calibration Date:	December 16, 2025	Previous Calibration:	November 18, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	12:28	End Time (MST):	16:46
Analyzer make:	Thermo 42i	Analyzer serial #:	1229254994

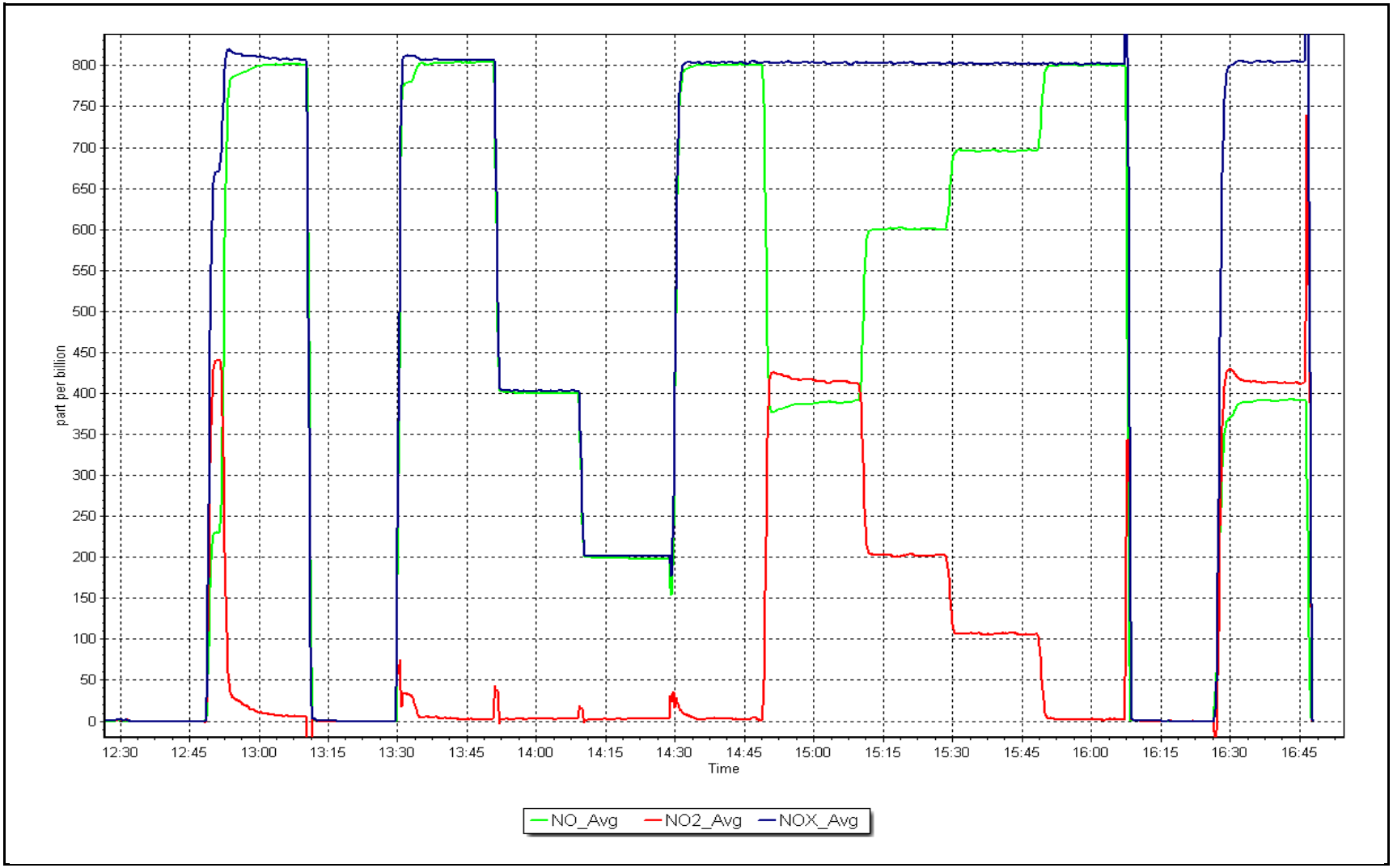
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
800.3	803.0	0.9967
400.1	400.1	0.9999
200.1	198.0	1.0104

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999987	*≥0.995*
Slope	1.004430	*0.90 - 1.10*
Intercept	-1.415946	*+/-20*



NO_X Calibration Plot Date: December 16, 2025 Location: Janvier



Wood Buffalo Environmental Association

O_3 Calibration Report

Station Information

Station Name:	Janvier	Station number:	AMS 22
Calibration Date:	December 22, 2025	Last Cal Date:	November 13, 2025
Start time (MST):	11:19	End time (MST):	14:12
Reason:	Routine		

Calibration Standards

O3 generation mode:	Photometer		
Calibrator Make/Model:	Teledyne API T700	Serial Number:	3806
ZAG Make/Model:	Teledyne API T701H	Serial Number:	691

Analyzer Information

Analyzer make:	Thermo 49i		Analyzer serial #:	1227254861	
Analyzer Range	0 - 500 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.999800	0.998829	Backgd or Offset:	-0.2	-0.2
Calibration intercept:	0.860000	0.680000	Coeff or Slope:	1.553	1.494

O_3 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) *Limit = 0.90-1.10*
As found zero	5000	800.0	0.0	0.1	----
As found High point	5000	926.2	400.0	415.7	0.962
As found Mid point					
As found Low point					
Baseline Corr As found:	415.6	Previous response	400.8	*% change	3.6%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

O_3 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) *Limit = 0.95-1.05*
Calibrator zero	5000	800.0	0.0	0.0	----
High point	5000	926.2	400.0	399.9	1.000
Mid point	5000	768.9	200.0	200.7	0.997
Low point	5000	666.4	100.0	101.3	0.987
As left zero	5000	800.0	0.0	0.2	----
As left span	5000	926.2	400.0	405.0	0.988
				Average Correction Factor	0.995

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

Calibration Performed By: Rene Chamberland

Wood Buffalo Environmental Association

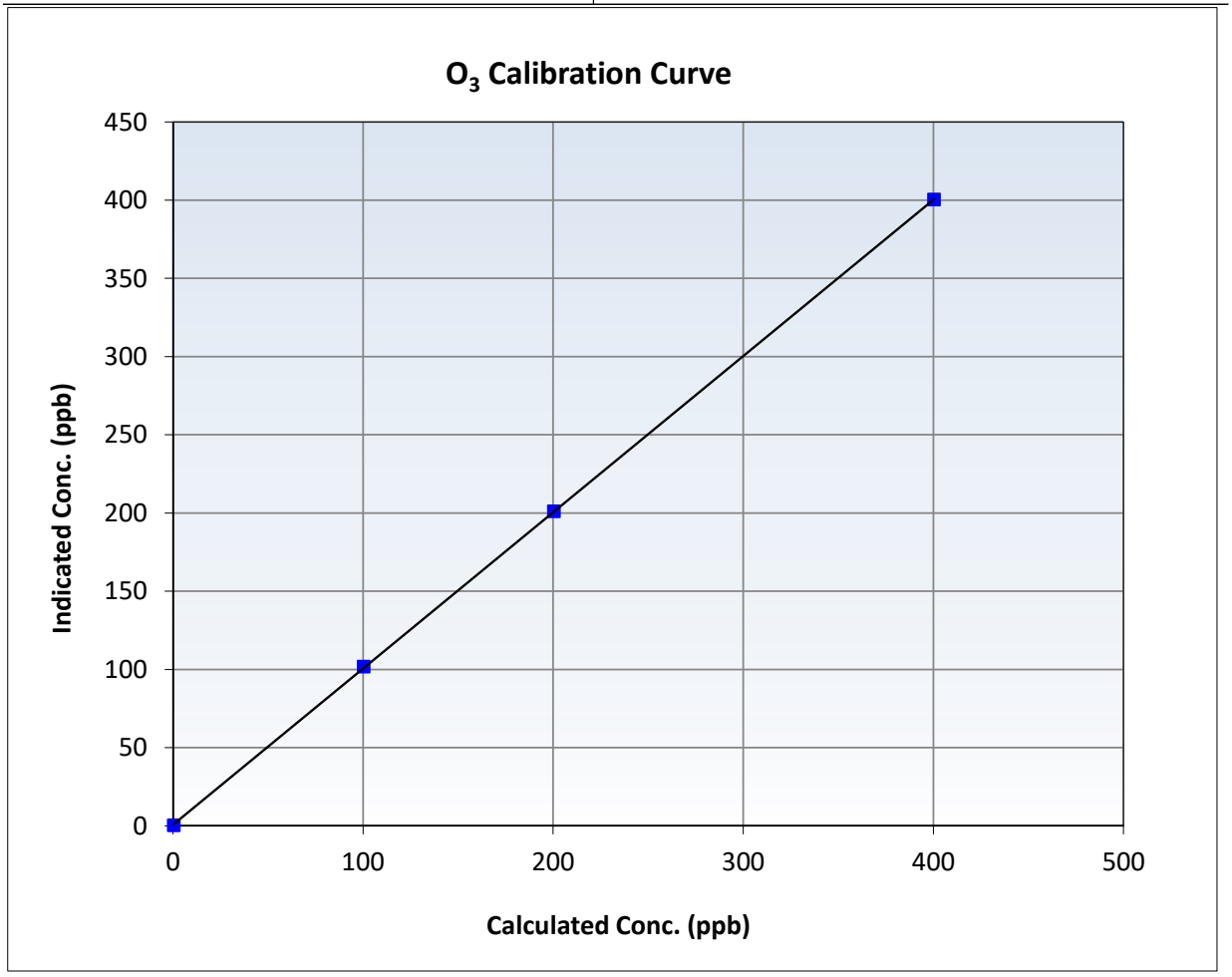
O_3 Calibration Summary

Station Information

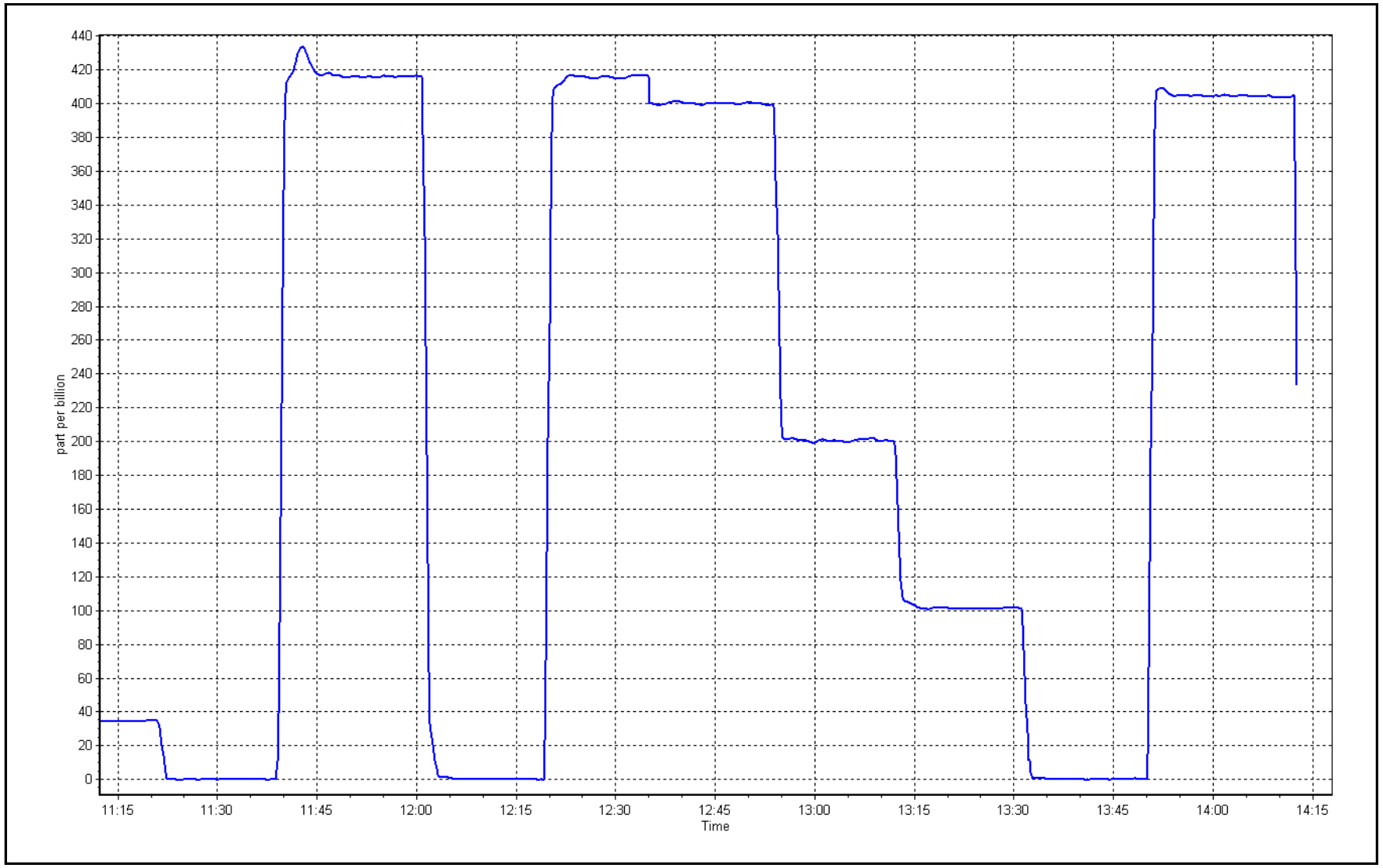
Calibration Date:	December 22, 2025	Previous Calibration:	November 13, 2025
Station Name:	Janvier	Station Number:	AMS 22
Start Time (MST):	11:19	End Time (MST):	14:12
Analyzer make:	Thermo 49i	Analyzer serial #:	1227254861

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	0.0	----	Correlation Coefficient	0.999987	≥0.995
400.0	399.9	1.0003	Slope	0.998829	0.90 - 1.10
200.0	200.7	0.9965			
100.0	101.3	0.9872	Intercept	0.680000	+/- 5



O_3 Calibration Plot Date: December 22, 2025 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:	December 22, 2025	Last Cal Date:	November 18, 2025
Start time (MST):	12:13	End time (MST):	14:12
Analyzer Make:	Teledyne API T640	S/N:	325
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)	-24.2	-25.37	-24.2	☐	+/- 2 °C
P (mmHg)	721.6	722.5	721.6	☐	+/- 10 mmHg
Flow (LPM)	5.03	4.976	5.03	☐	+/- 0.25 LPM
PW% (pump)	40	-----	40	☐	>80%
Zero Verification	PM w/o HEPA:	3.5	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: November 18, 2025

Date Disposable Filter Changed: November 18, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: May 28, 2025

Date RH/T Sensor Cleaned: November 18, 2025

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

Calibration by: Rene Chamberland

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS23
FORT HILLS
DECEMBER 2025

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

January 30, 2025

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Fort Hills	Station number:	AMS 23
Calibration Date:	December 17, 2025	Last Cal Date:	November 19, 2025
Start time (MST):	8:02	End time (MST):	10:41
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:	1222
Zero Air Gen Model:	API T701		Serial Number:	1117

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1160290012	
Analyzer Range:	0-1000ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.995831	0.988872	Backgd or Offset:	18.5	18.5
Calibration intercept:	-0.539973	0.018487	Coeff or Slope:	1.063	1.063

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.5	----
As found High point	4921	79.4	799.5	789.0	1.014
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	788.5	Previous response	795.6	*% change	-0.9%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.9	----
High point	4921	79.4	799.5	791.3	1.010
Mid point	4960	39.7	399.8	394.2	1.014
Low point	4980	19.8	199.4	196.8	1.013
As left zero	5000	0.0	0.0	1.0	----
As left span	4921	79.4	799.5	793.8	1.007
				Average Correction Factor:	1.013

Notes: No maintenance or adjustments done.

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

SO_2 Calibration Summary

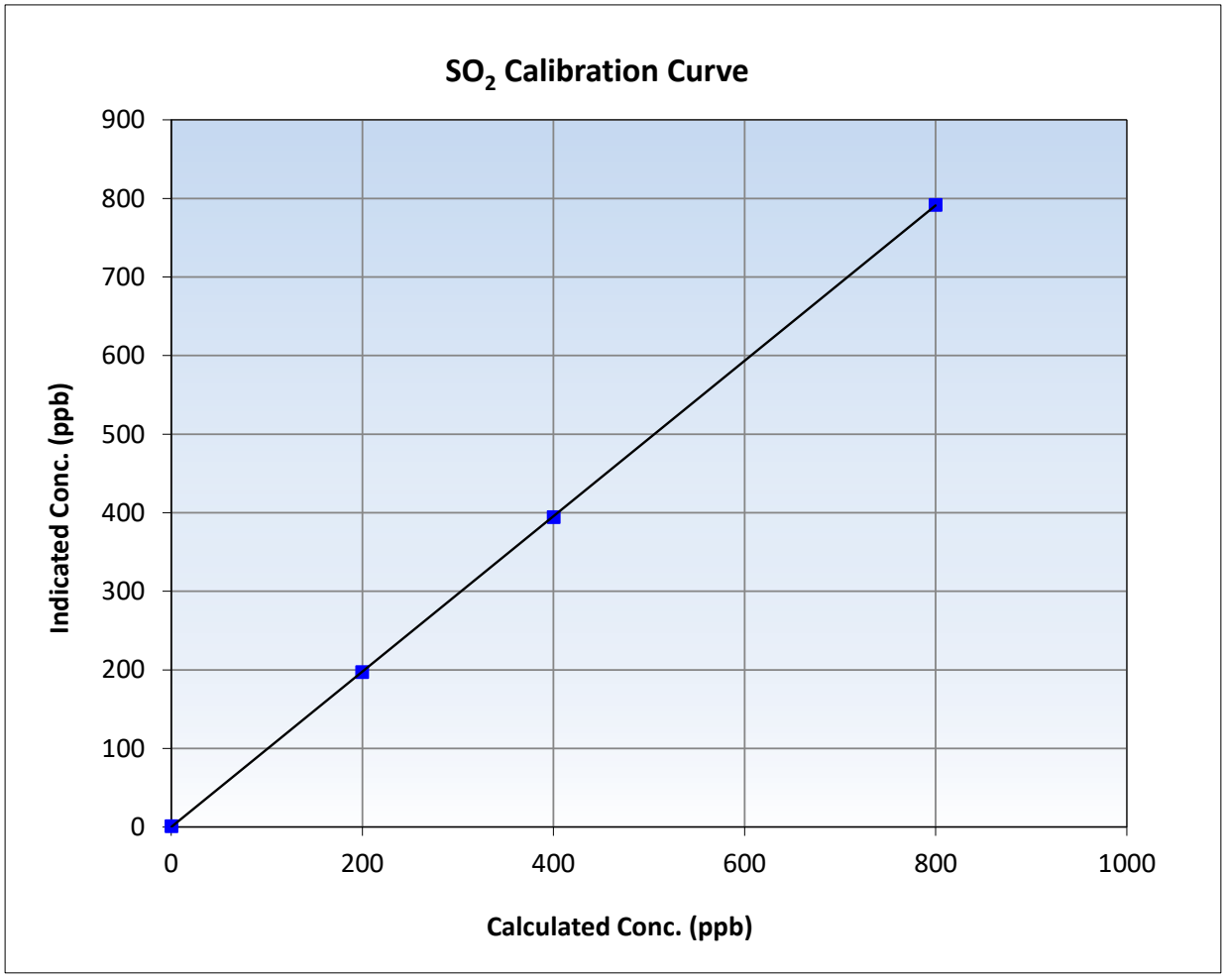
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 19, 2025
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	8:02	End Time (MST):	10:41
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290012

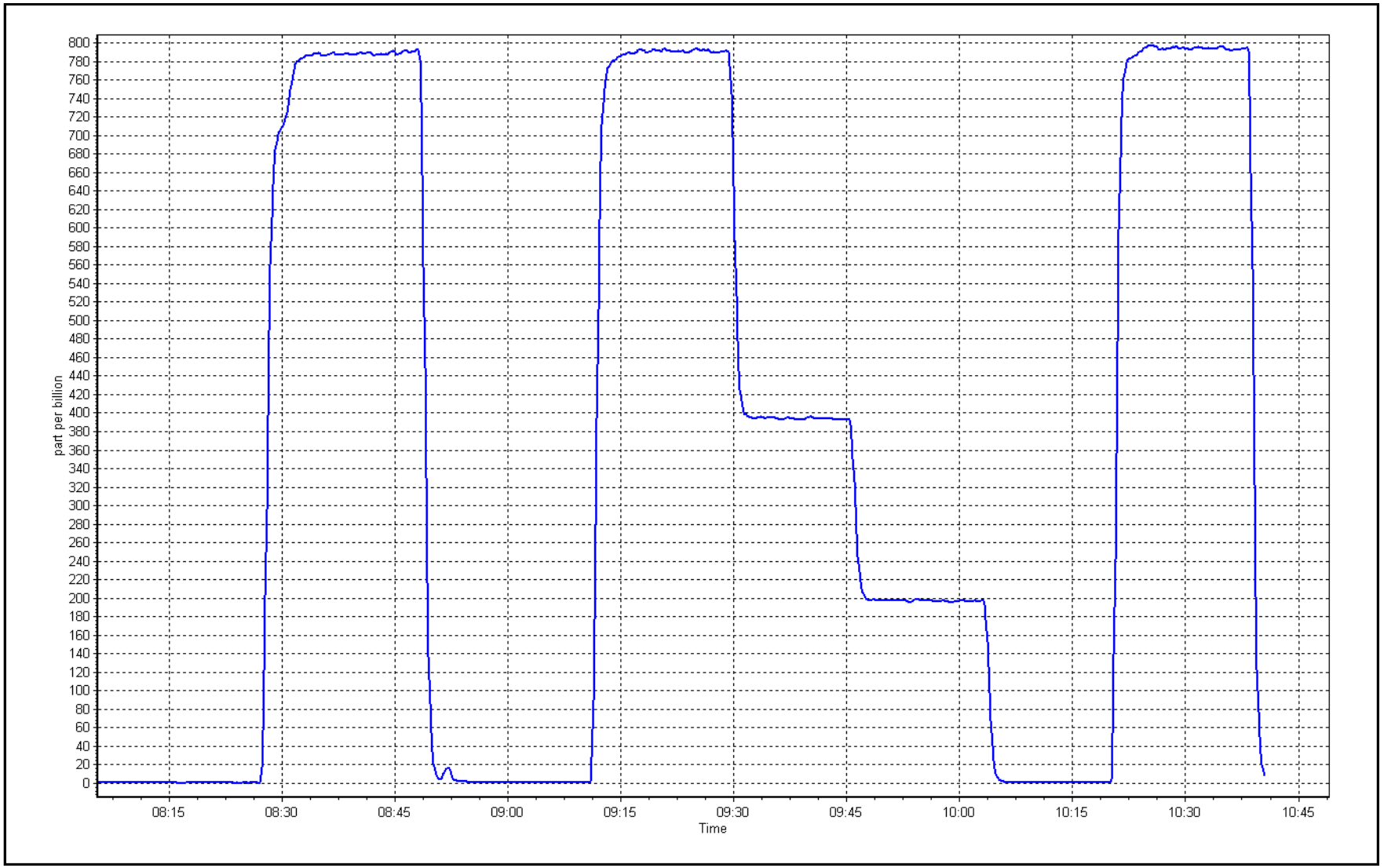
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.9	----
799.5	791.3	1.0104
399.8	394.2	1.0142
199.4	196.8	1.0132

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999992	*≥0.995*
Slope	0.988872	*0.90 - 1.10*
Intercept	0.018487	*+/-30*



SO2 Calibration Plot Date: December 17, 2025 Location: Fort Hills



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name:	Fort Hills	Station number:	AMS 23
Calibration Date:	December 16, 2025	Last Cal Date:	November 14, 2025
Start time (MST):	7:44	End time (MST):	11:34
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.84	ppm	Cal Gas Exp Date:	August 28, 2027
Cal Gas Cylinder #:	DT0021910			
Removed Cal Gas Conc:	4.84	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Make/Model:	API T700		Serial Number:	5762
ZAG Make/Model:	API T701		Serial Number:	1117

Analyzer Information

Analyzer make:	Thermo 43i TLE		Analyzer serial #:	1300156232	
Converter make:	CDN-101		Converter serial #:	594	
Analyzer Range	0 - 100 ppb		Converter Temp:	800	degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.998532	0.993668	Backgd or Offset:	1.92	1.92
Calibration intercept:	-0.018119	-0.097914	Coeff or Slope:	0.965	0.965

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4917	82.6	80.0	79.8	1.002
As found Mid point	4959	41.3	40.0	39.3	1.017
As found Low point	4979	20.7	20.0	19.6	1.022
New cylinder response					

Baseline Corr As found:	79.8	Prev response:	79.83	*% change:	0.0%
Baseline Corr 2nd AF pt:	39.3	AF Slope:	0.998814	AF Intercept:	-0.278014
Baseline Corr 3rd AF pt:	19.6	AF Correlation:	0.999925	* = > +/-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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4917	82.6	80.0	79.4	1.007
Mid point	4959	41.3	40.0	39.6	1.009
Low point	4979	20.7	20.0	19.7	1.017
As left zero	5000	0.0	0.0	0.0	----
As left span	4917	82.6	80.0	80.4	0.995
SO2 Scrubber Check	4920	80.3	803.0	0.1	----
Date of last scrubber change:				Ave Corr Factor	1.011
Date of last converter efficiency test:		March 13, 2024		110.3%	efficiency

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

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

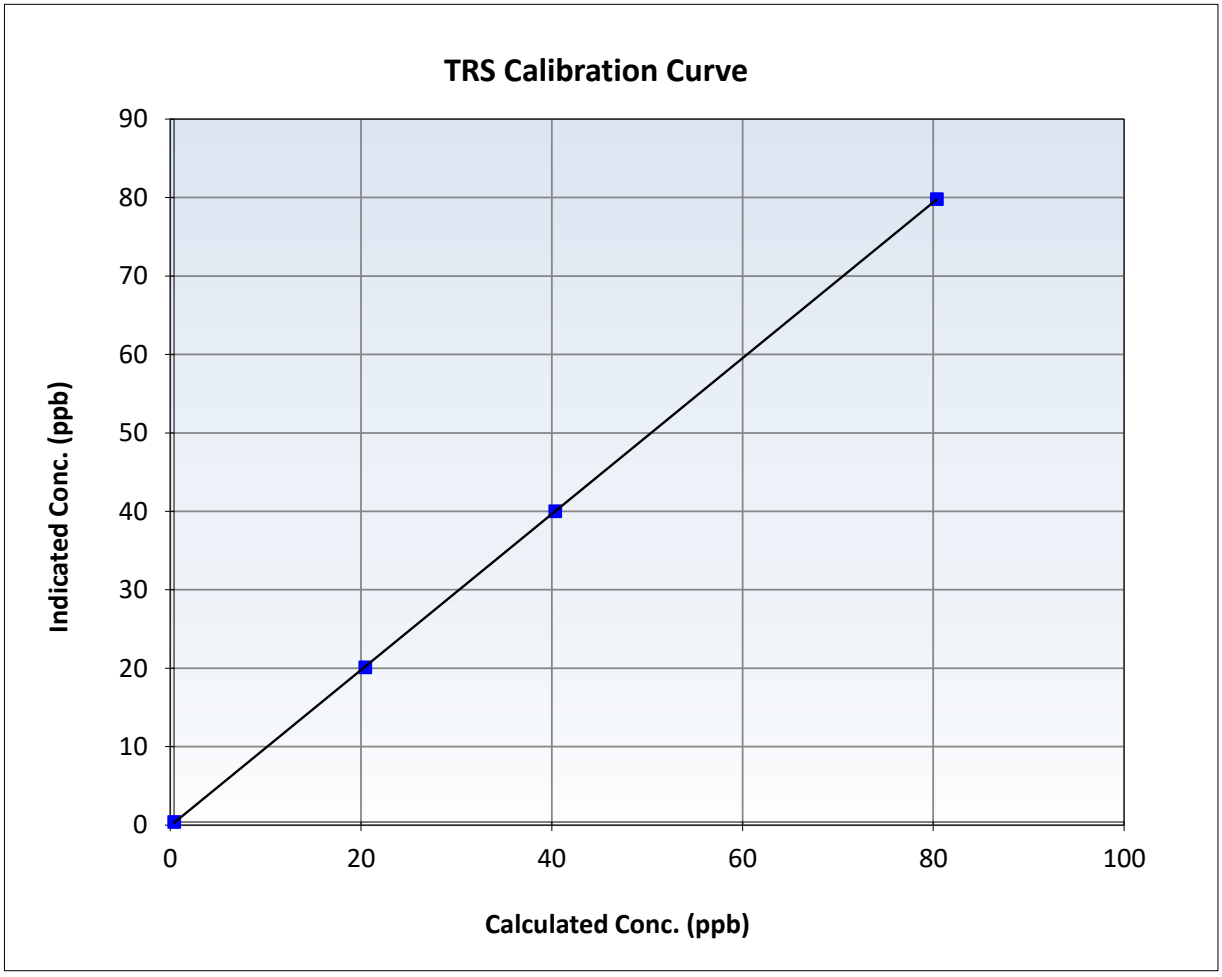
TRS Calibration Summary

Station Information

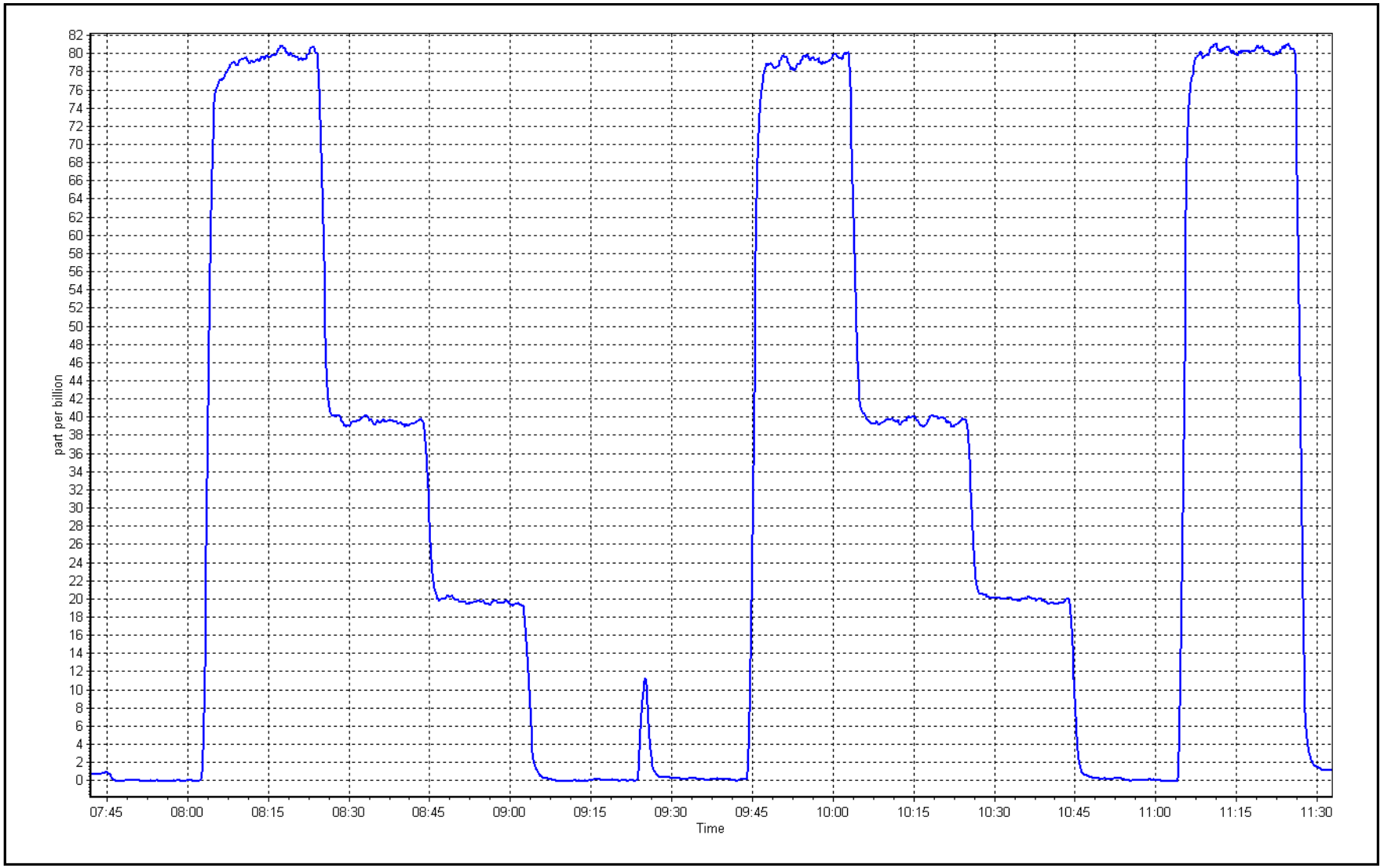
Calibration Date:	December 16, 2025	Previous Calibration:	November 14, 2025
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	7:44	End Time (MST):	11:34
Analyzer make:	Thermo 43i TLE	Analyzer serial #:	1300156232

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.0	----	Correlation Coefficient	0.999993	*≥0.995*
80.0	79.4	1.0071	Slope	0.993668	*0.90 - 1.10*
40.0	39.6	1.0095			
20.0	19.7	1.0172	Intercept	-0.097914	*+/-3*



TRS Calibration Plot Date: December 16, 2025 Location: Fort Hills



Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Fort Hills	Station number:	AMS 23
Calibration Date:	December 17, 2025	Last Cal Date:	November 19, 2025
Start time (MST):	8:02	End time (MST):	10:40
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC484463	Cal Gas Expiry Date:	October 9, 2032
CH4 Cal Gas Conc.	504.3 ppm	CH4 Equiv Conc.	1065.6 ppm
C3H8 Cal Gas Conc.	204.1 ppm		
Removed Gas Cert:		Removed Gas Expiry:	
Removed CH4 Conc.	504.3 ppm	CH4 Equiv Conc.	1065.6 ppm
Removed C3H8 Conc.	204.1 ppm	Diff between cyl (THC):	
Diff between cyl (CH_4):		Diff between cyl (NM):	
Calibrator Model:	API T700	Serial Number:	1222
Zero Air Gen model:	API T701	Serial Number:	1117

Analyzer Information

Analyzer make:	Thermo 55i	Analyzer serial #:	12227620777
THC Range:	0 - 20 ppm	NMHC/CH4 Range:	0 - 10 ppm

	Start	*Finish*		*Start*	*Finish*
CH4 SP Ratio:	3.62E-04	3.62E-04	NMHC SP Ratio:	5.72E-05	5.72E-05
CH4 Retention time:	15.0	15.0	NMHC Peak Area:	156181	156181
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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.4	16.92	17.12	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	17.12	Prev response	16.88	*% change	1.4%
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)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.4	16.92	17.00	0.995
Mid point	4960	39.7	8.46	8.34	1.015
Low point	4980	19.8	4.22	4.16	1.014
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	16.92	16.89	1.002
				Average Correction Factor	1.008

Notes: No maintenance or adjustments done.

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.4	8.91	9.05	0.985
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.05	Prev response	8.88	*% 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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.4	8.91	8.98	0.993
Mid point	4960	39.7	4.46	4.43	1.005
Low point	4980	19.8	2.22	2.23	0.996
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	8.91	8.93	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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4921	79.4	8.01	8.07	0.993
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.07	Prev response	8.00	*% change	0.9%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4921	79.4	8.01	8.02	0.998
Mid point	4960	39.7	4.00	3.90	1.026
Low point	4980	19.8	2.00	1.93	1.035
As left zero	5000	0.0	0.00	0.00	----
As left span	4921	79.4	8.01	7.97	1.005
				Average Correction Factor	1.020

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	1.000896	1.005109
THC Cal Offset:	-0.056377	-0.064560
CH4 Cal Slope:	1.004713	1.003301
CH4 Cal Offset:	-0.046789	-0.050593
NMHC Cal Slope:	0.997197	1.006965
NMHC Cal Offset:	-0.009788	-0.014367

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

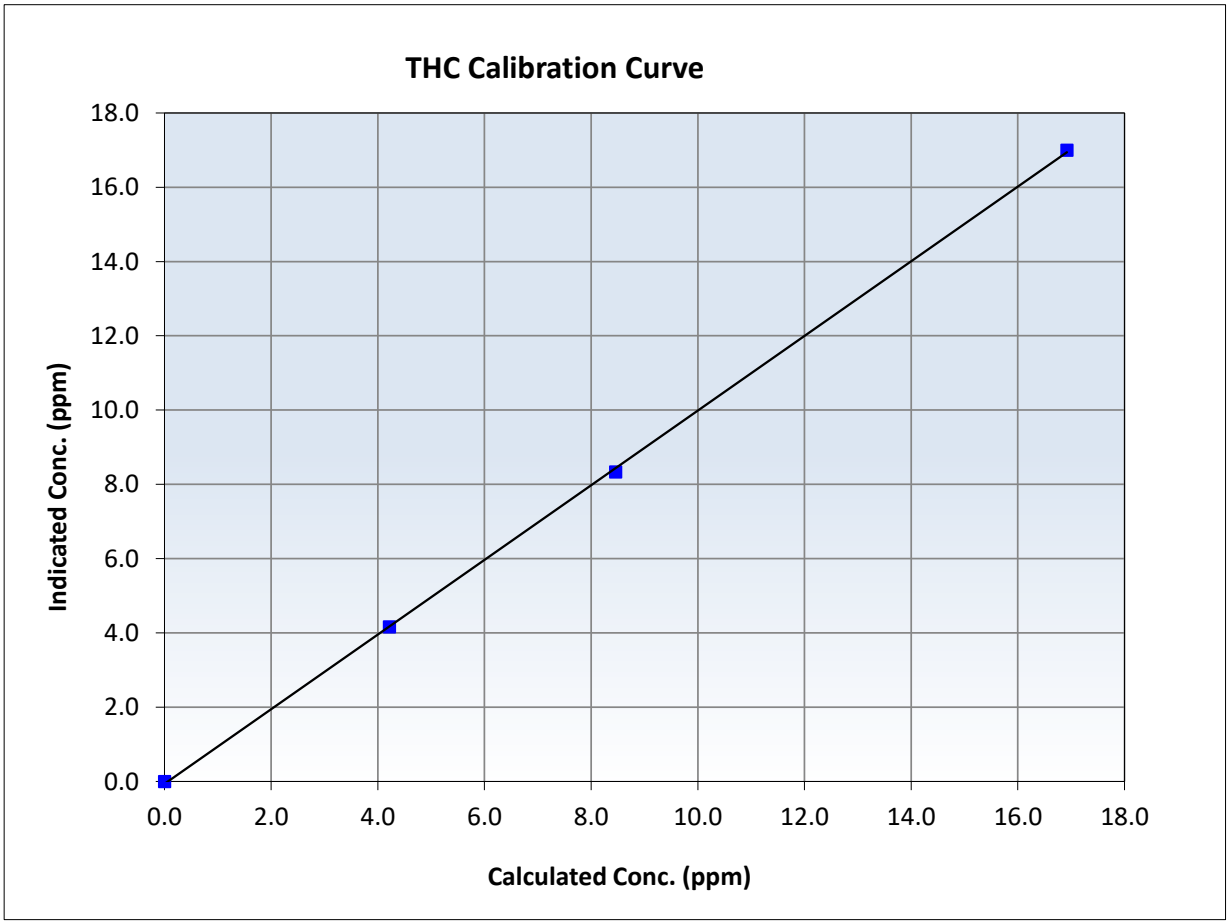
THC Calibration Summary

Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 19, 2025
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	8:02	End Time (MST):	10:40
Analyzer make:	Thermo 55i	Analyzer serial #:	12227620777

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999884	≥0.995
16.92	17.00	0.9954	Slope	1.005109	0.90 - 1.10
8.46	8.34	1.0150	Intercept	-0.064560	+/-0.5
4.22	4.16	1.0144			



Wood Buffalo Environmental Association

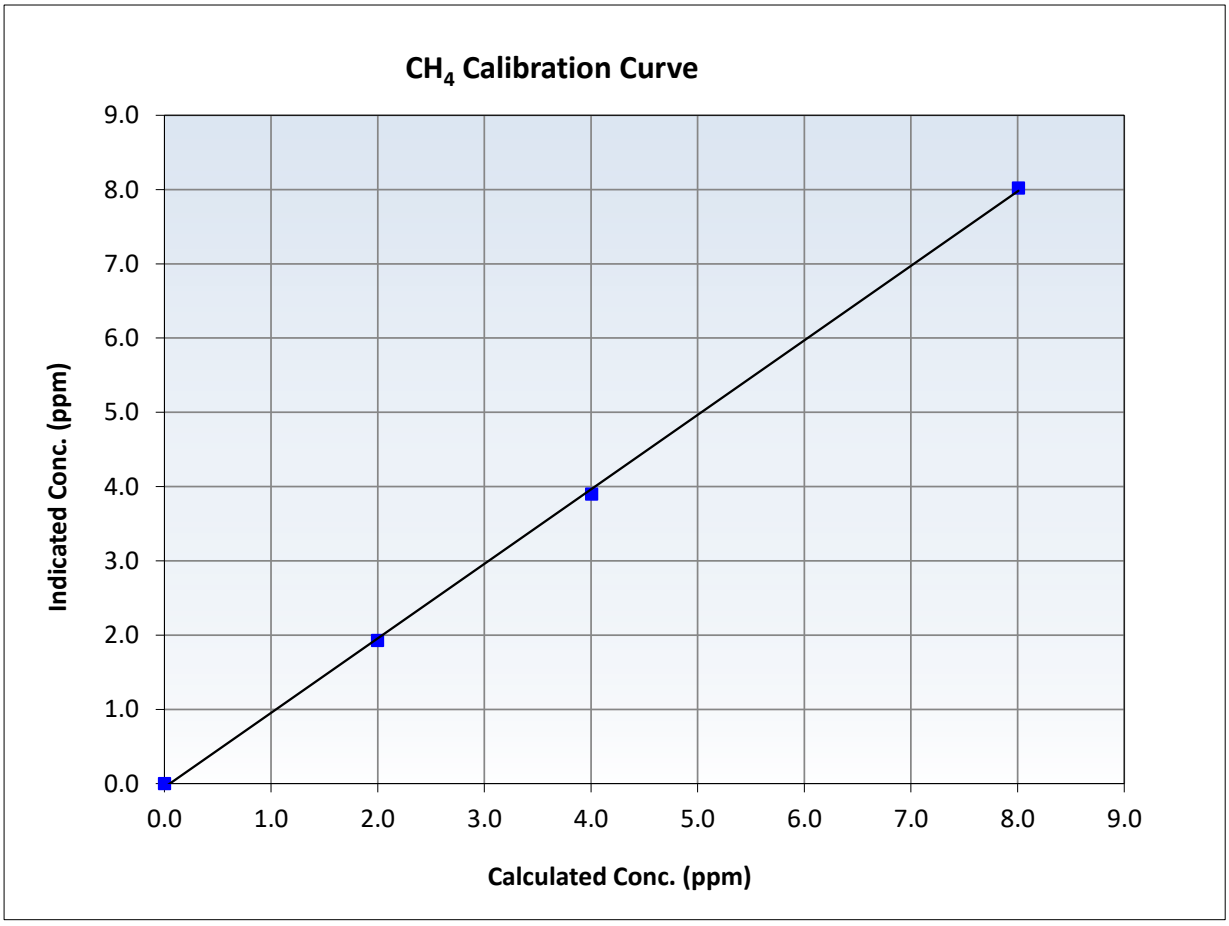
CH_4 Calibration Summary

Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 19, 2025
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	8:02	End Time (MST):	10:40
Analyzer make:	Thermo 55i	Analyzer serial #:	12227620777

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999749	≥0.995
8.01	8.02	0.9982	Slope	1.003301	0.90 - 1.10
4.00	3.90	1.0262	Intercept	-0.050593	+/-0.5
2.00	1.93	1.0353			



Wood Buffalo Environmental Association

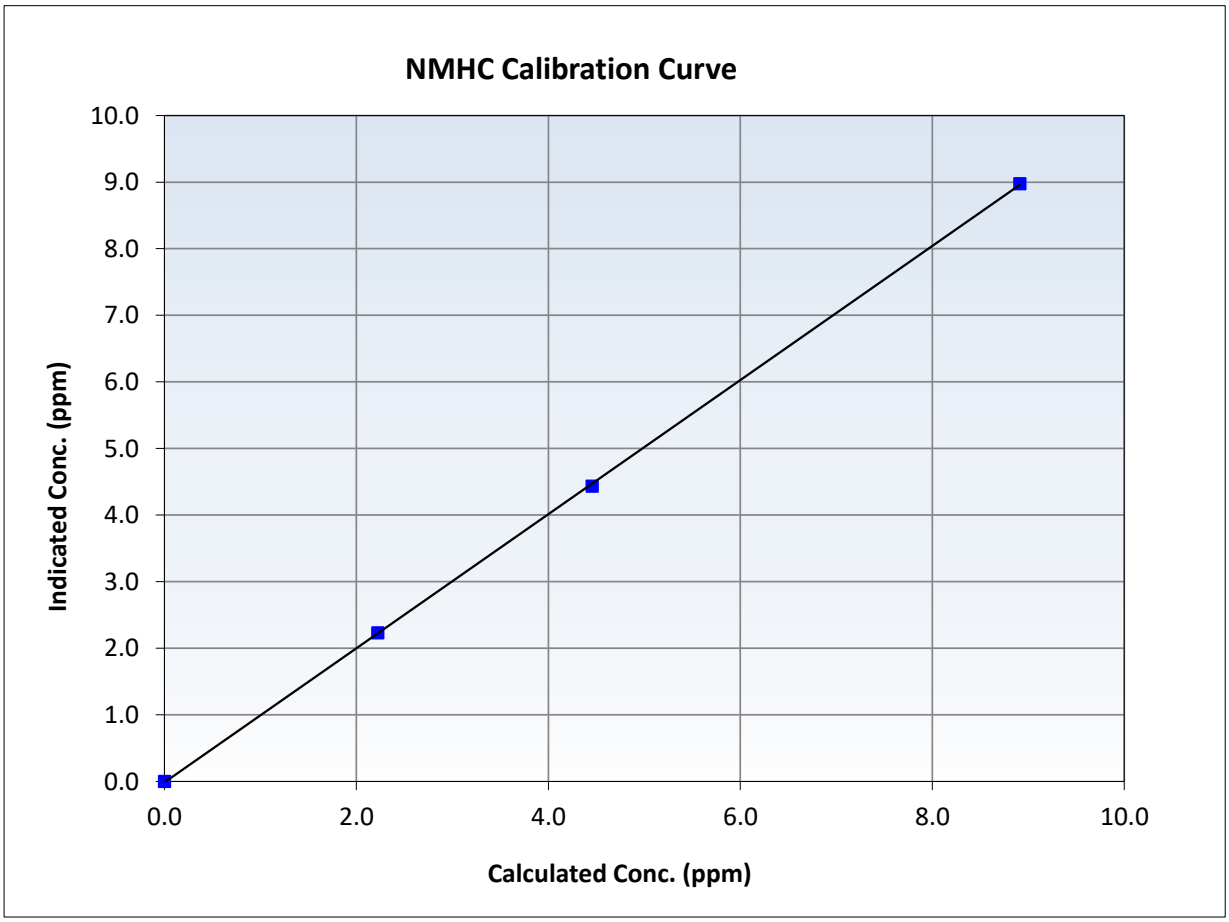
NMHC Calibration Summary

Station Information

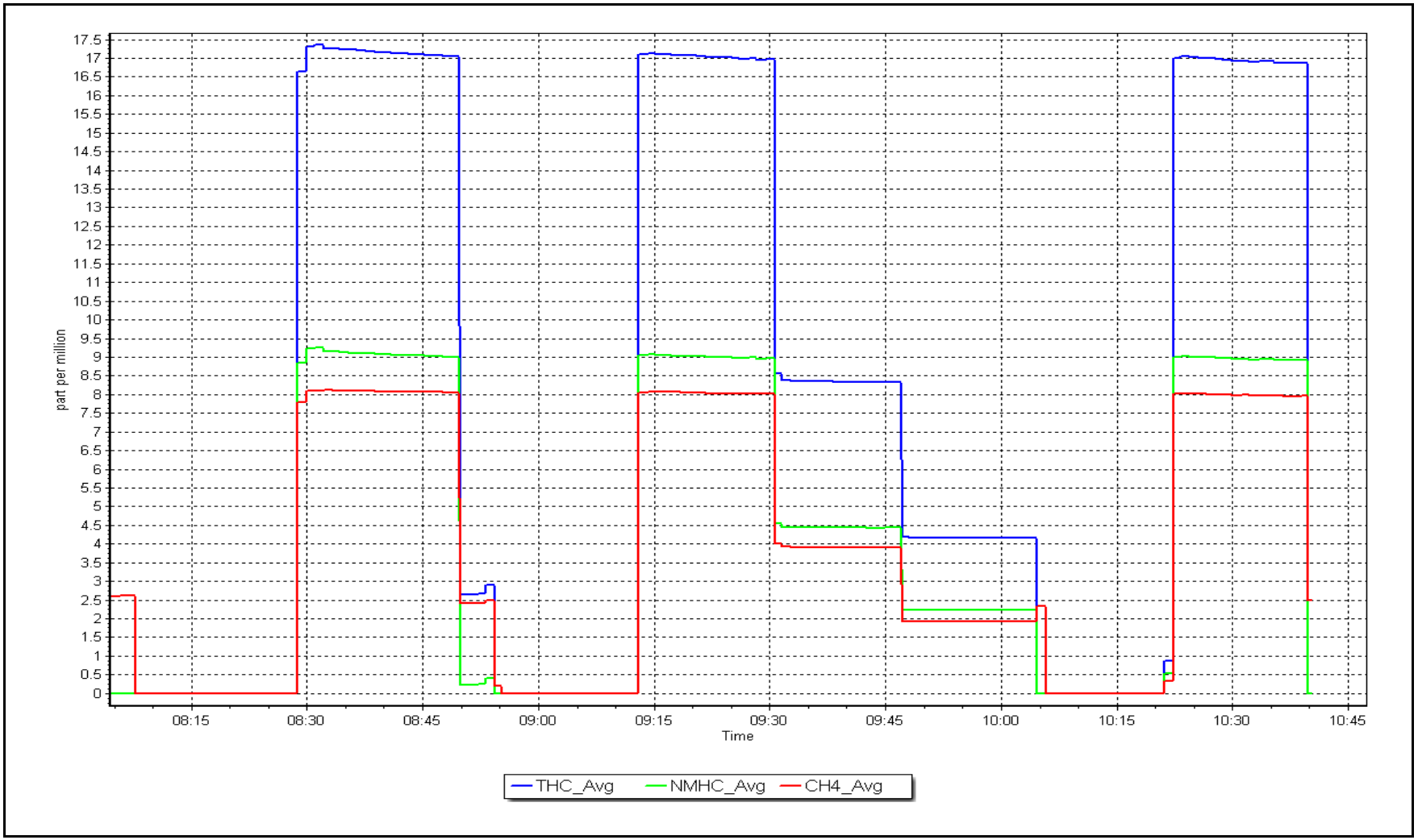
Calibration Date:	December 17, 2025	Previous Calibration:	November 19, 2025
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	8:02	End Time (MST):	10:40
Analyzer make:	Thermo 55i	Analyzer serial #:	12227620777

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999951	≥0.995
8.91	8.98	0.9927	Slope	1.006965	0.90 - 1.10
4.46	4.43	1.0051	Intercept	-0.014367	+/-0.5
2.22	2.23	0.9963			



NMHC Calibration Plot Date: December 17, 2025 Location: Fort Hills



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Fort Hills
Station number:	AMS 23
Calibration Date:	December 15, 2025
Last Cal Date:	November 20, 2025
Start time (MST):	7:55
End time (MST):	12:25
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	CC358149	Cal Gas Expiry Date:	January 5, 2032
NOX Cal Gas Conc:	60.30 ppm	NO Cal Gas Conc:	60.10 ppm
Removed Cylinder #:		Removed Gas Exp Date:	
Removed Gas NOX Conc:	60.30 ppm	Removed Gas NO Conc:	60.10 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	API T700	Serial Number:	1222
ZAG make/model:	API T701	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.3	0.0	-0.2	----	----
AF High point	4934	66.3	799.5	796.9	2.7	806.5	802.9	3.6	0.9910	0.9925
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 798.6 ppb	NO = 794.4 ppb
Baseline Corr 1st pt	NO_X = 806.8 ppb	NO = 802.9 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 = 1.0%

*Percent Change NO = 1.1%

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1152430007

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	0.960	0.960	NO bkgnd or offset:	2.8	2.8
NOX coeff or slope:	0.993	0.993	NOX bkgnd or offset:	3.1	3.1
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	145.6	145.6

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	0.998968	1.007430
NO_X Cal Offset:	-0.093276	-0.455065
NO Cal Slope:	0.998603	1.008930
NO Cal Offset:	-1.331243	-1.633884
NO_2 Cal Slope:	1.001135	1.002698
NO_2 Cal Offset:	-0.460255	-0.641139

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.1	0.0	-0.2	----	----
High point	4934	66.3	799.5	796.9	2.7	805.7	803.6	2.0	0.9923	0.9916
Mid point	4967	33.2	400.4	399.0	1.3	401.2	398.9	2.3	0.9979	1.0004
Low point	4983	16.6	200.2	199.5	0.7	201.9	198.9	3.0	0.9916	1.0033
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	0.1	-0.2	----	----
As left span	4934	66.3	799.5	402.0	397.5	802.1	402.0	400.1	0.9968	1.0000
								Average Correction Factor	0.9940	0.9984

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	-0.2	----	----
High GPT point	798.1	397.7	403.1	403.7	0.9984	100.2%
Mid GPT point	798.1	597.8	203.0	202.7	1.0012	99.9%
Low GPT point	798.1	699.3	101.5	100.6	1.0085	99.2%
				Average Correction Factor	1.0027	99.7%

Notes: No Maintenance or adjustments done.

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

NO_X Calibration Summary

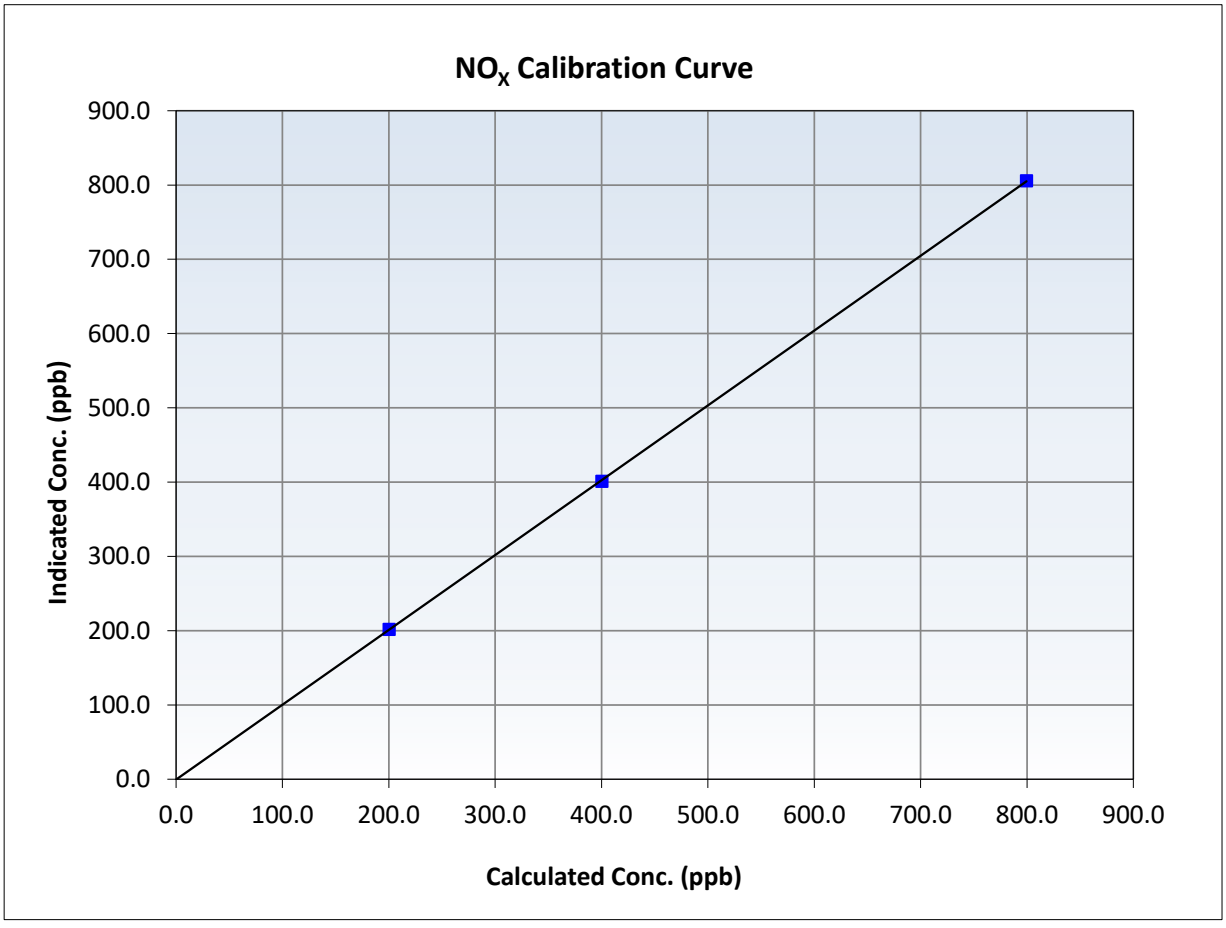
Station Information

Calibration Date:	December 15, 2025	Previous Calibration:	November 20, 2025
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	7:55	End Time (MST):	12:25
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
799.5	805.7	0.9923
400.4	401.2	0.9979
200.2	201.9	0.9916

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999989	*≥0.995*
Slope	1.007430	*0.90 - 1.10*
Intercept	-0.455065	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

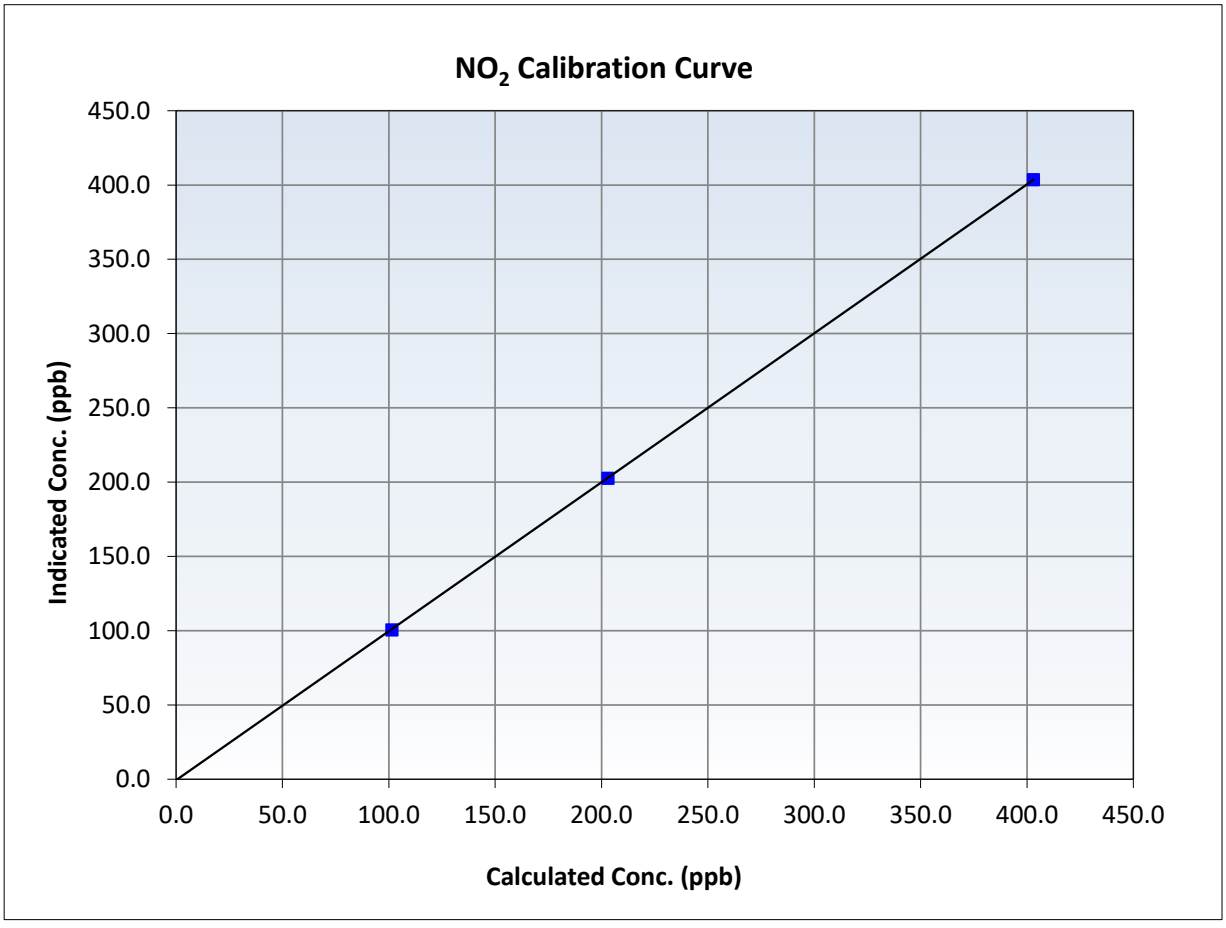
Station Information

Calibration Date:	December 15, 2025	Previous Calibration:	November 20, 2025
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	7:55	End Time (MST):	12:25
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
403.1	403.7	0.9984
203.0	202.7	1.0012
101.5	100.6	1.0085

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999994	*≥0.995*
Slope	1.002698	*0.90 - 1.10*
Intercept	-0.641139	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

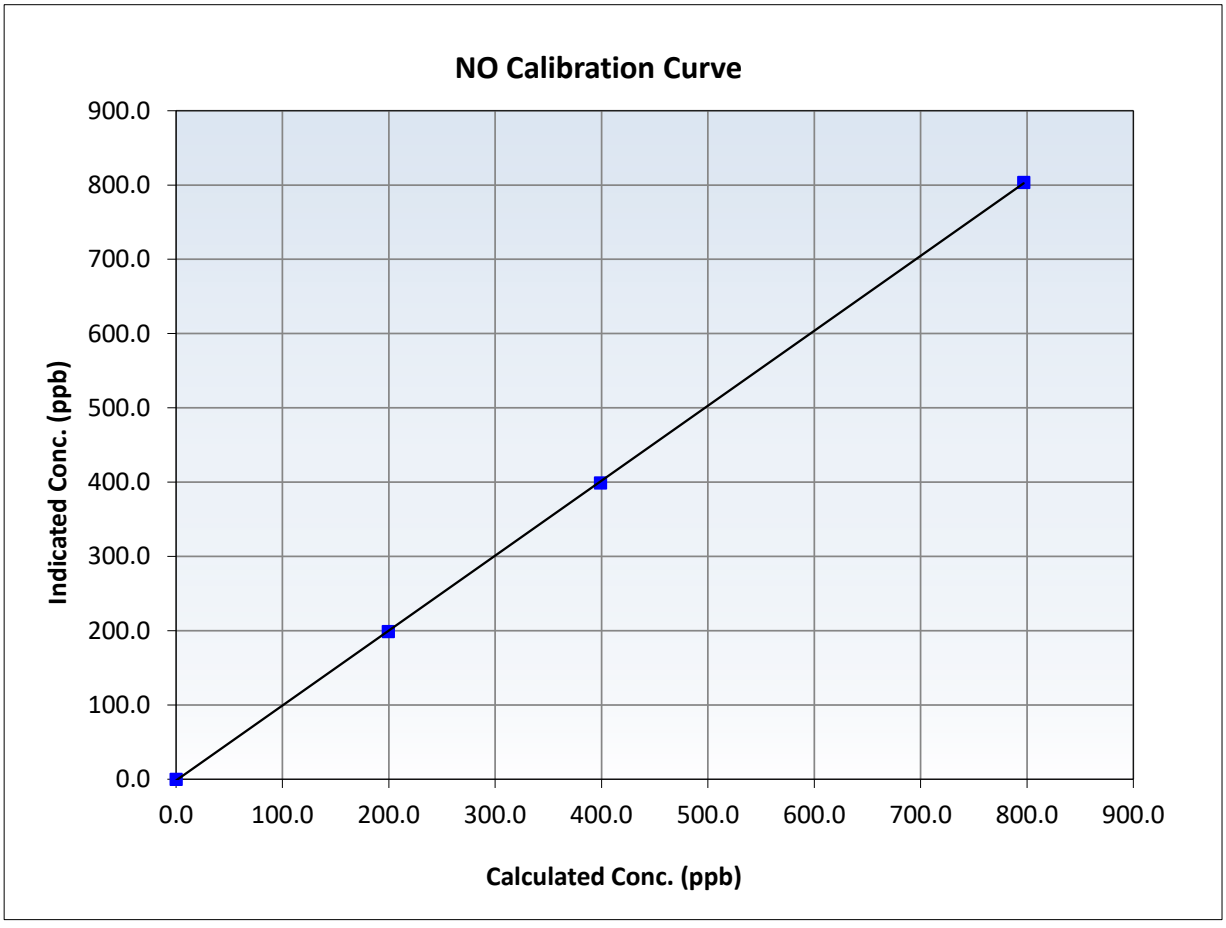
Station Information

Calibration Date:	December 15, 2025	Previous Calibration:	November 20, 2025
Station Name:	Fort Hills	Station Number:	AMS 23
Start Time (MST):	7:55	End Time (MST):	12:25
Analyzer make:	Thermo 42i	Analyzer serial #:	1152430007

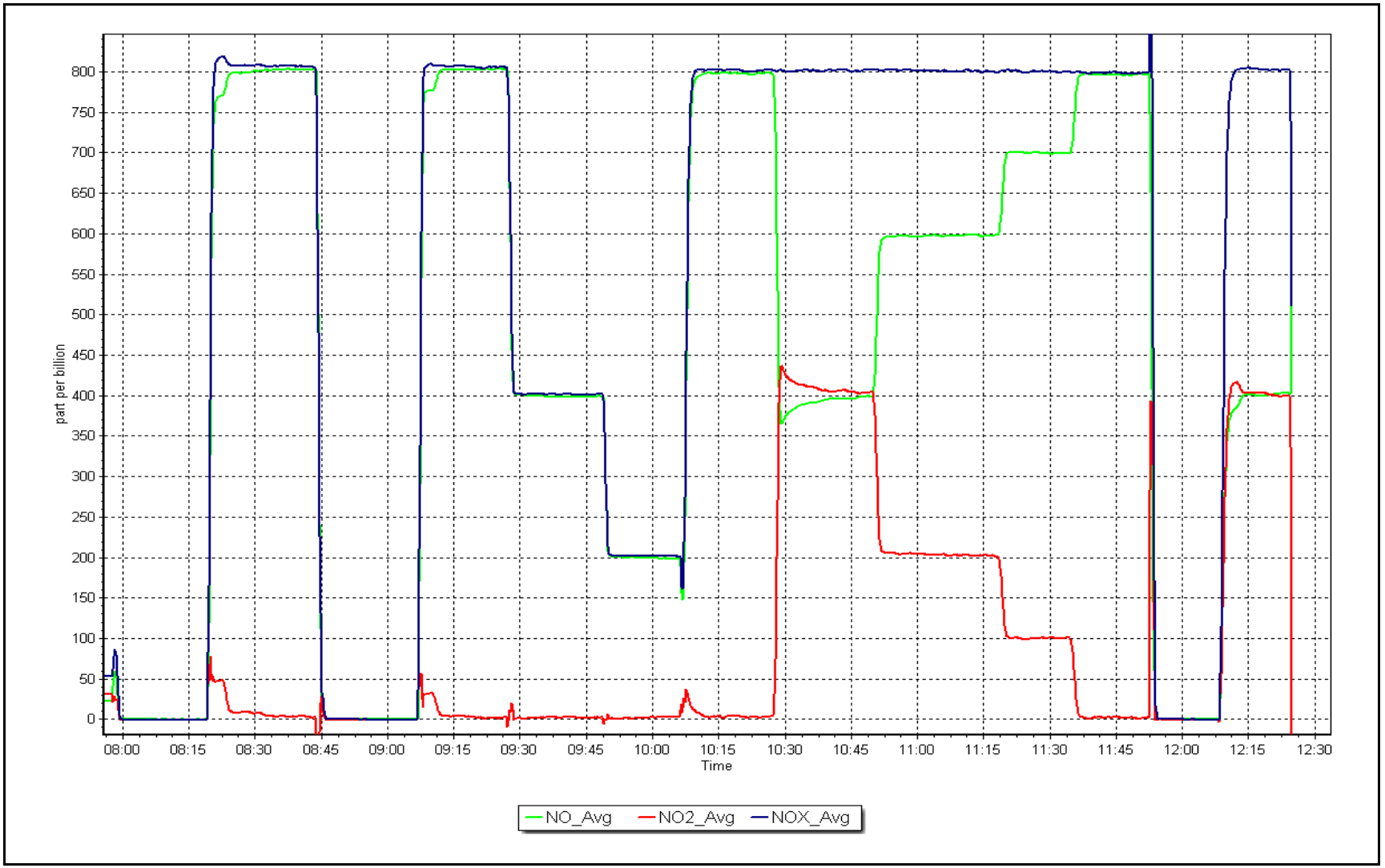
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
796.9	803.6	0.9916
399.0	398.9	1.0004
199.5	198.9	1.0033

Statistical Evaluation		Limits
Correlation Coefficient	0.999974	≥0.995
Slope	1.008930	0.90 - 1.10
Intercept	-1.633884	+/-20



NO_X Calibration Plot Date: December 15, 2025 Location: Fort Hills



Wood Buffalo Environmental Association

T640 $PM_{2.5}$ CALIBRATION

Version-01-2024

Station Information

Station Name:	Fort Hills	Station number:	AMS 23
Calibration Date:	December 17, 2025	Last Cal Date:	November 19, 2025
Start time (MST):	10:44	End time (MST):	11:42
Analyzer Make:	API T640	S/N:	320
Particulate Fraction:	PM2.5		
Flow Meter Make/Model:	Alicat FP-25BT	S/N:	388744
Temp/RH standard:	Alicat FP-25BT	S/N:	388744

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	*(Limits)*
T (°C)	-26.3	-27	-26.3	☐	+/- 2 °C
P (mmHg)	731.7	731.5	731.7	☐	+/- 10 mmHg
Flow (LPM)	5.00	5.1	5.00	☑	+/- 0.25 LPM
PW% (pump)	85	-----	38	☐	>80%
Zero Verification	PM w/o HEPA:	2.3	PM w/ HEPA:	0.0	<0.2 ug/m3

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

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

Quarterly Calibration Test

SPAN DUST — Refractive Index: 10.9 — Expiry Date: 16-Jul-26 — Lot No.: 100128-050-050

Parameter	As found	Post maintenance	As left	Adjusted	*(Limits)*
PMT Peak Test	10.1	10.5	10.5	☐	+/- 0.5

Date Optical Chamber Cleaned: December 17, 2025

Date Disposable Filter Changed: December 17, 2025

Post- maintenance Zero Verification: PM w/ HEPA: 0 <0.2 ug/m3

Annual Maintenance

Date Sample Tube Cleaned: December 17, 2025

Date RH/T Sensor Cleaned: December 17, 2025

Notes: Pump changed out after as founds. Leak Check, Flow and PMT checked before and after cleaning. Flow was adjusted. Flow was around 5.4L/min after pump change.

Calibration by: Melissa Lemay

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS25
WASKŌW OHCI PIMÂTISIWIN
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Waskow ohci Pimatisiwin	Station number:	AMS 25
Calibration Date:	December 12, 2025	Last Cal Date:	November 24, 2025
Start time (MST):	7:42	End time (MST):	10:32
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				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.999156	1.002699	Backgd or Offset:	11.6	11.7
Calibration intercept:	-0.592733	-0.632449	Coeff or Slope:	1.056	1.083

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.2	----
As found High point	4920	80.5	800.1	782.8	1.022
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	782.6	Previous response	798.8	*% change	-2.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4920	80.5	800.1	802.2	0.997
Mid point	4960	40.2	399.6	399.3	1.001
Low point	4980	20.1	199.8	198.8	1.005
As left zero	5000	0.0	0.0	0.5	----
As left span	4920	80.5	800.1	800.4	1.000
				Average Correction Factor:	1.001

Notes: No maintenance done. Span adjusted.

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

SO_2 Calibration Summary

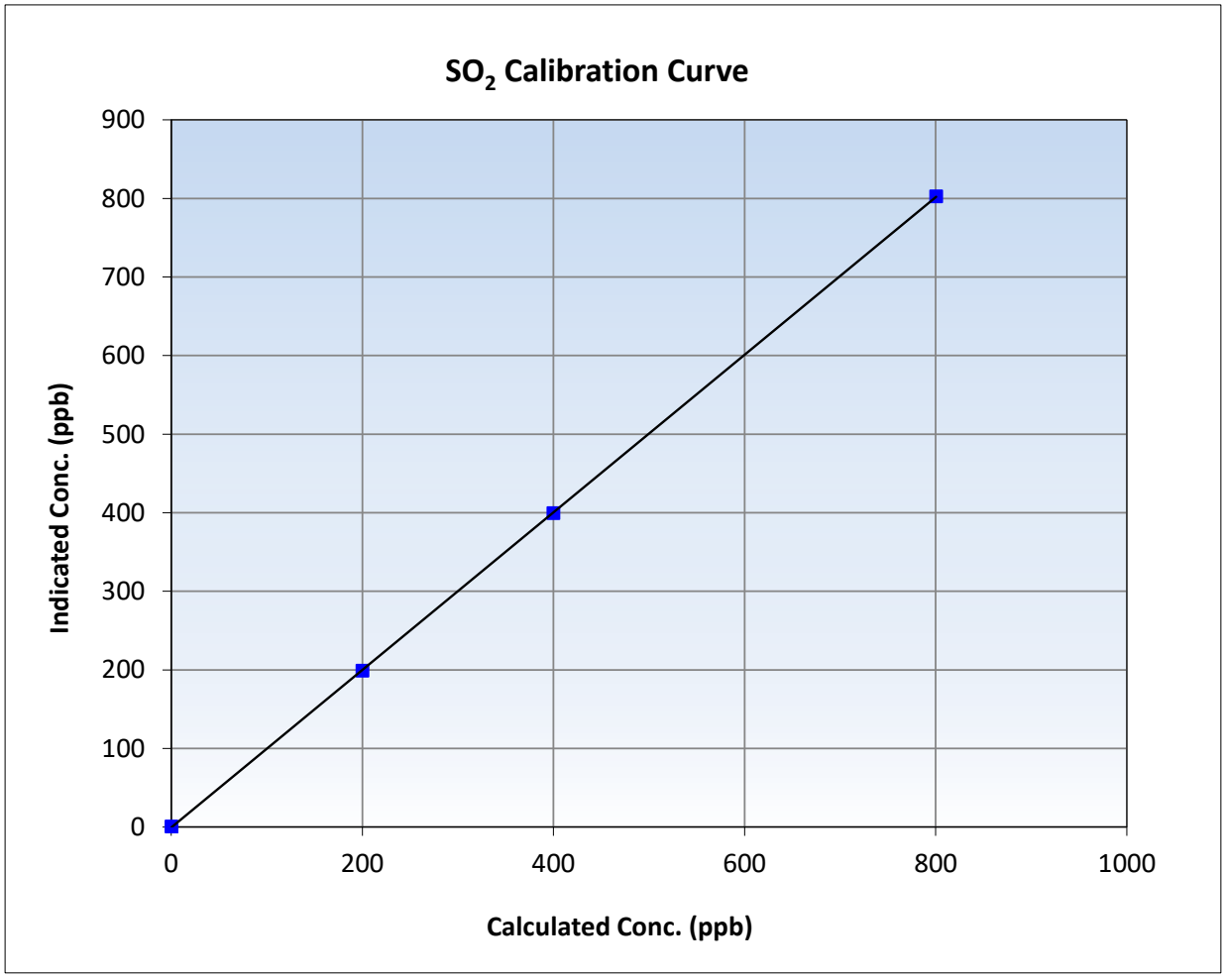
Station Information

Calibration Date:	December 12, 2025	Previous Calibration:	November 24, 2025
Station Name:	Waskow ohci Pimatisiwin	Station Number:	AMS 25
Start Time (MST):	7:42	End Time (MST):	10:32
Analyzer make:	Thermo 43i	Analyzer serial #:	1118148497

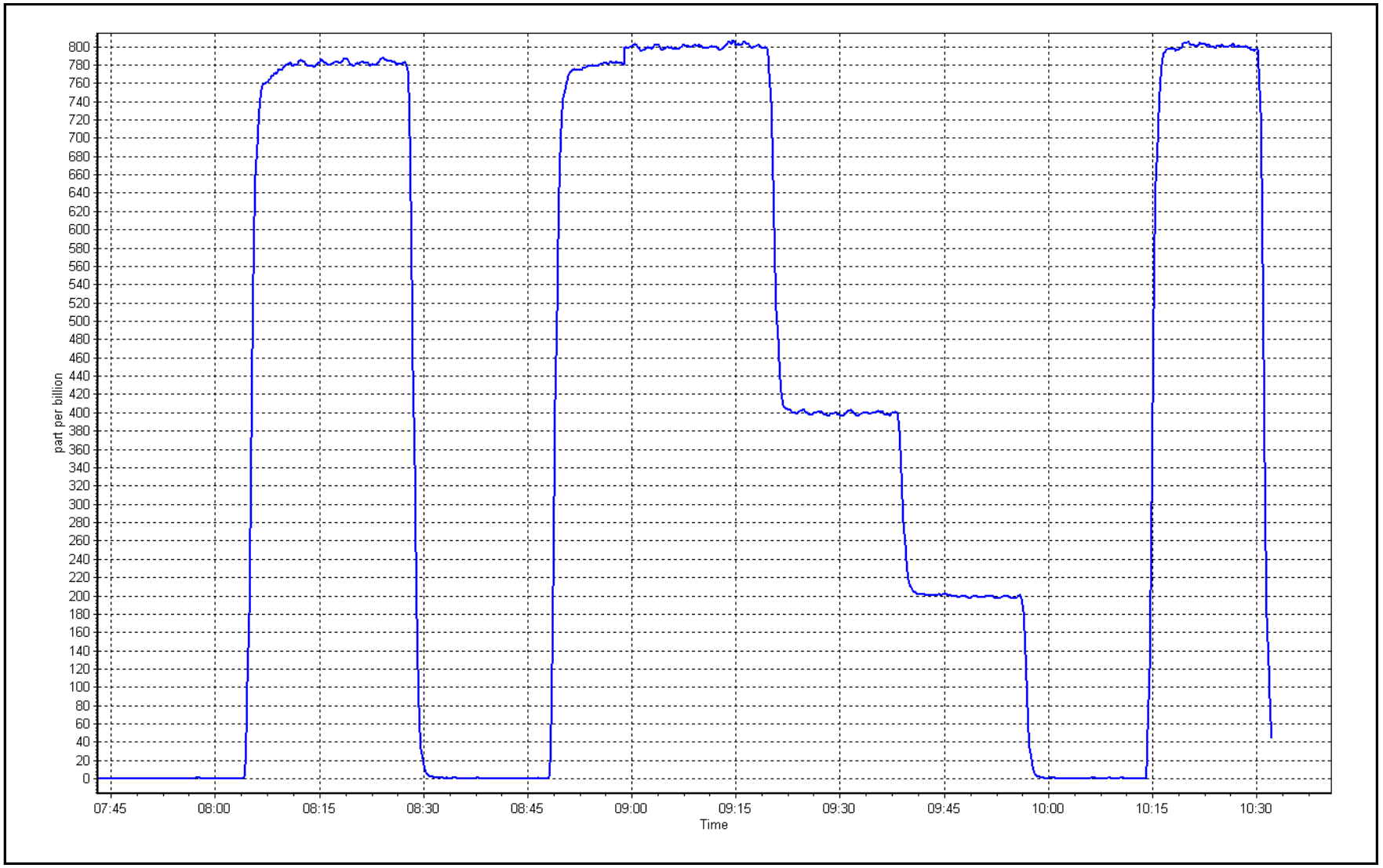
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.4	----
800.1	802.2	0.9974
399.6	399.3	1.0007
199.8	198.8	1.0050

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999992	*≥0.995*
Slope	1.002699	*0.90 - 1.10*
Intercept	-0.632449	*+/-30*



SO2 Calibration Plot Date: December 12, 2025 Location: Waskow ohci Pimatisiwin



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Waskow ohci Pimatisiwin	Station number:	AMS 25
Calibration Date:	December 11, 2025	Last Cal Date:	November 18, 2025
Start time (MST):	8:02	End time (MST):	12:30
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.97	ppm	Cal Gas Exp Date:	January 3, 2026
Cal Gas Cylinder #:	CC517099			
Removed Cal Gas Conc:	4.97	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Make/Model:	API T700		Serial Number:	747
ZAG Make/Model:	API T701		Serial Number:	261

Analyzer Information

Analyzer make:	Thermo 43i-LTE		Analyzer serial #:	1170050146
Converter make:	Global G-150		Converter serial #:	2024-287
Analyzer Range	0 - 100 ppb		Converter Temp:	325 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.004077	0.988802	Backgd or Offset:	3.66	3.78
Calibration intercept:	0.142303	0.402161	Coeff or Slope:	1.129	1.129

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.2	----
As found High point	4919	80.5	80.0	82.2	0.976
As found Mid point	4960	40.3	40.1	41.1	0.979
As found Low point	4980	20.1	20.0	20.6	0.979
New cylinder response					

Baseline Corr As found:	82.0	Prev response:	80.49	*% change:	1.8%
Baseline Corr 2nd AF pt:	40.9	AF Slope:	1.024781	AF Intercept:	0.142331
Baseline Corr 3rd AF pt:	20.4	AF Correlation:	0.999996	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4919	80.5	80.0	79.5	1.007
Mid point	4960	40.3	40.1	40.1	0.999
Low point	4980	20.1	20.0	20.1	0.994
As left zero	5000	0.0	0.0	0.2	----
As left span	4920	80.0	800.0	813.7	0.983
SO2 Scrubber Check	4920	80.0	800.0	-0.3	----
Date of last scrubber change:				Ave Corr Factor	1.000
Date of last converter efficiency test:		February 12, 2025		111.0%	efficiency

Notes: Sox scrubber checked after calibrator zero. Zero Adjusted.

Calibration Performed By: Melissa Lemay

Wood Buffalo Environmental Association

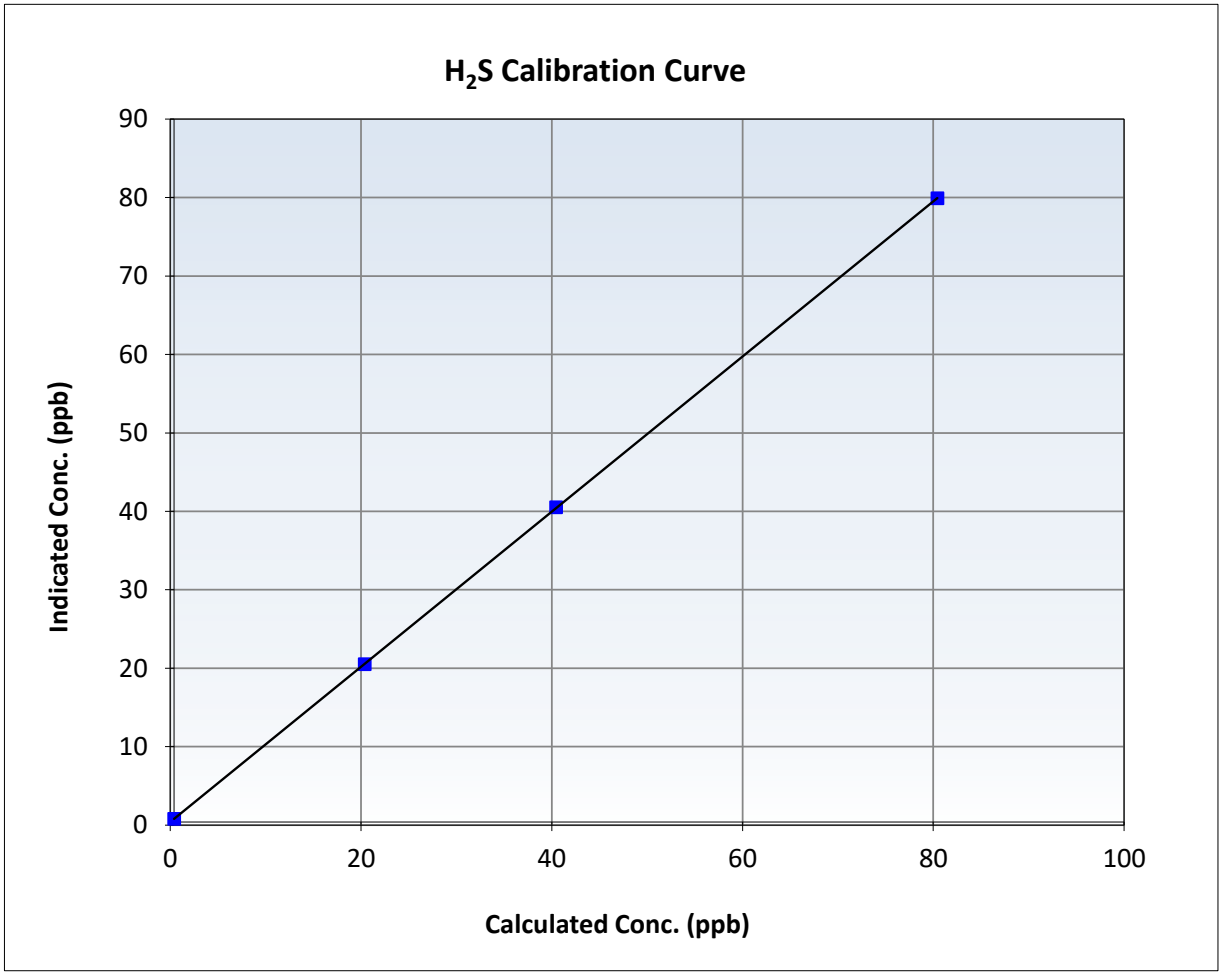
H_2S Calibration Summary

Station Information

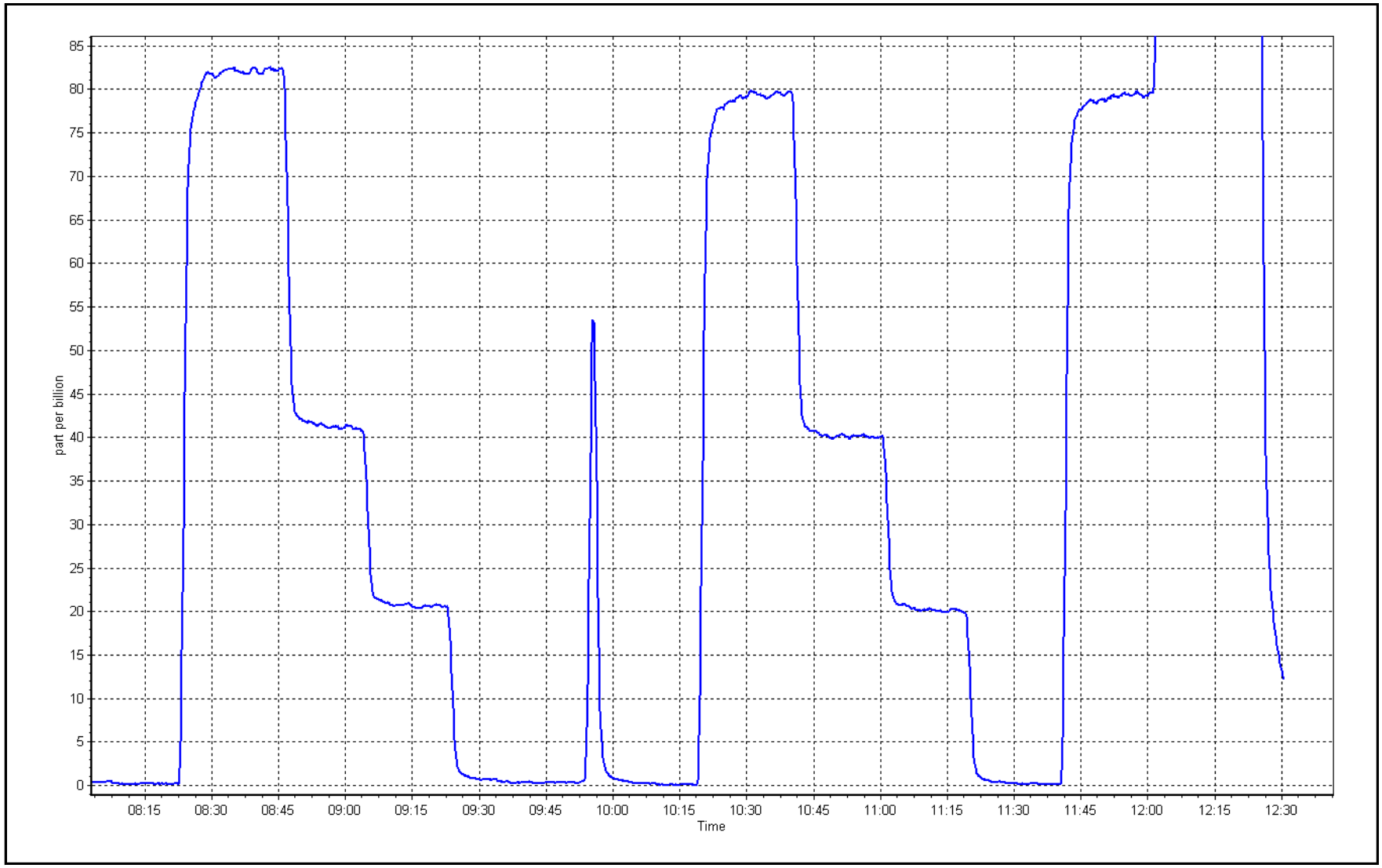
Calibration Date:	December 11, 2025	Previous Calibration:	November 18, 2025
Station Name:	Waskow ohci Pimatisiwin	Station Number:	AMS 25
Start Time (MST):	8:02	End Time (MST):	12:30
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1170050146

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.4	----	Correlation Coefficient	0.999996	*≥0.995*
80.0	79.5	1.0066	Slope	0.988802	*0.90 - 1.10*
40.1	40.1	0.9989			
20.0	20.1	0.9940	Intercept	0.402161	*+/-3*



H_2S Calibration Plot Date: December 11, 2025 Location: Waskow ohci Pimatisiwin



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS27
JACKFISH 2/3
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Jackfish 2/3	Station number:	AMS 27
Calibration Date:	December 8, 2025	Last Cal Date:	November 3, 2025
Start time (MST):	17:47	End time (MST):	20:46
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.58	ppm	Cal Gas Exp Date:	December 29, 2028
Cal Gas Cylinder #:	SG9133974BAL			
Removed Cal Gas Conc:	50.58	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Model:	API T700		Serial Number:	5252
Zero Air Gen Model:	API 701		Serial Number:	268

Analyzer Information

Analyzer make:	Thermo 43iQ-TL		Serial Number:	12124313138	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.002161	1.000374	Backgd or Offset:	9.8	10.1
Calibration intercept:	0.362717	1.162665	Coeff or Slope:	0.921	0.939

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.3	----
As found High point	4913	78.9	799.4	786.2	1.017
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	785.9	Previous response	801.5	*% change	-2.0%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.7	----
High point	4913	78.9	799.4	800.8	0.998
Mid point	4955	39.5	400.0	401.2	0.997
Low point	4971	19.7	199.7	201.6	0.990
As left zero	5000	0.0	0.0	0.6	----
As left span	4913	78.9	799.4	801.9	0.997
				Average Correction Factor:	0.995

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

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

SO_2 Calibration Summary

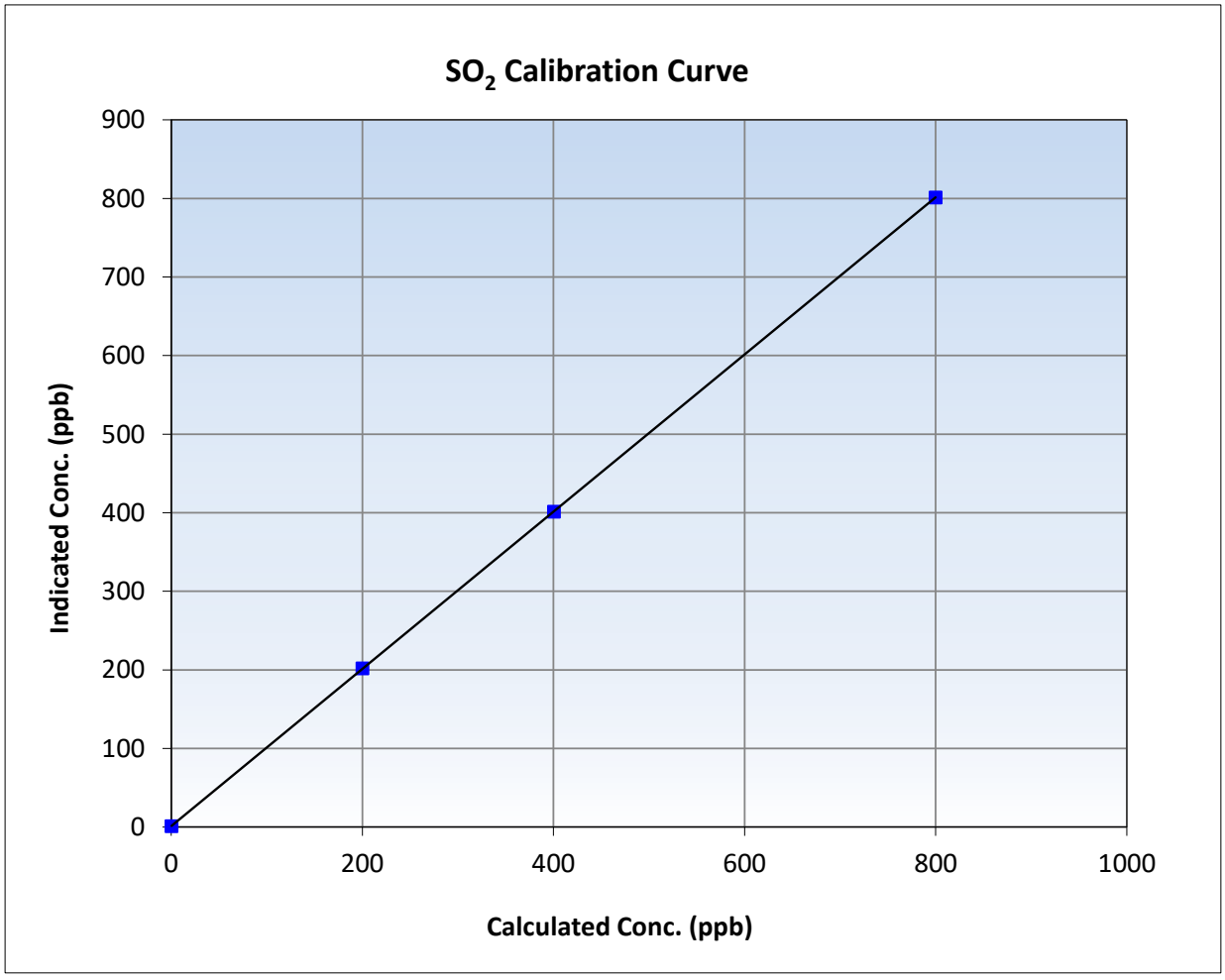
Station Information

Calibration Date:	December 8, 2025	Previous Calibration:	November 3, 2025
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	17:47	End Time (MST):	20:46
Analyzer make:	Thermo 43iQ-TL	Analyzer serial #:	12124313138

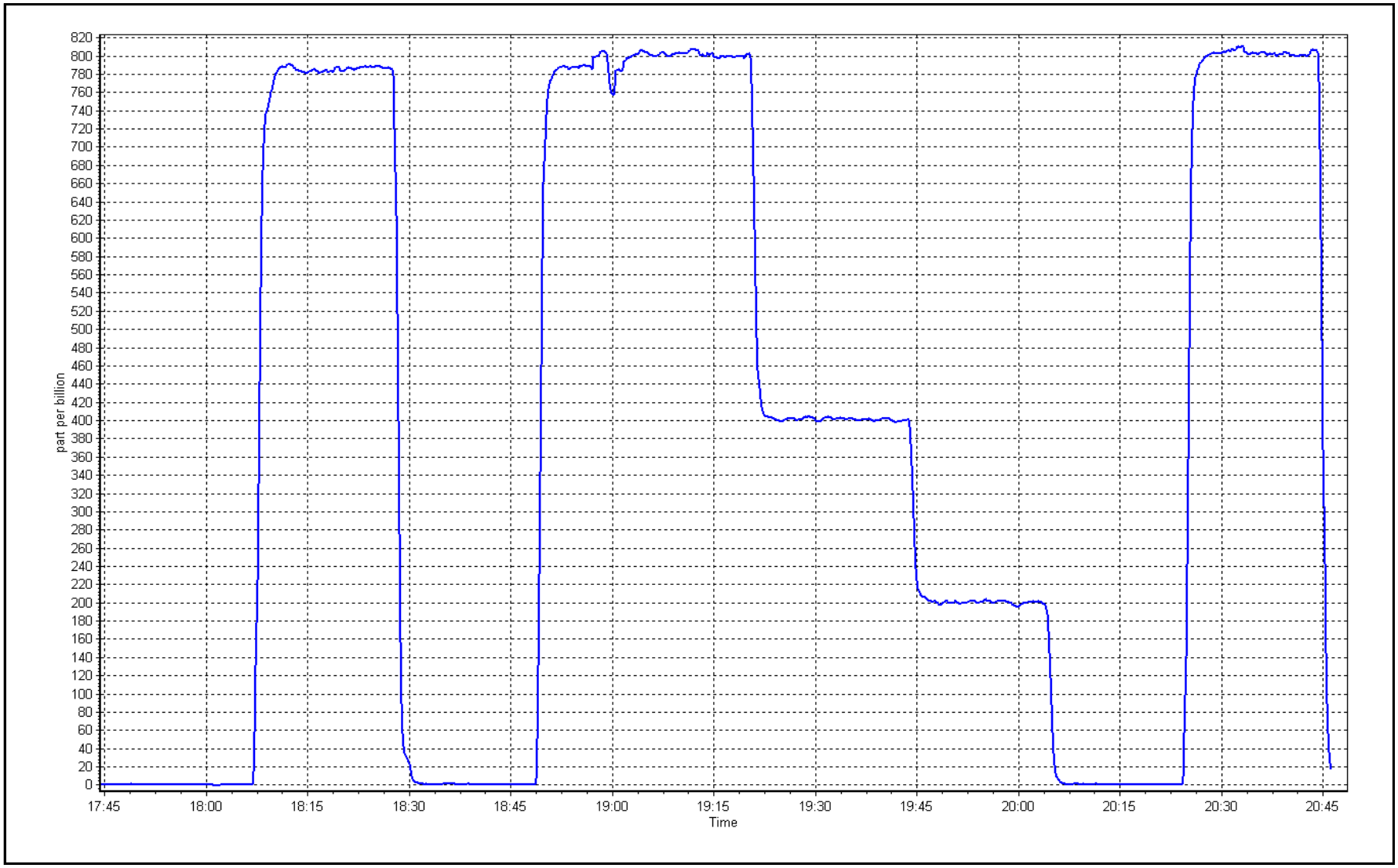
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.7	----
799.4	800.8	0.9983
400.0	401.2	0.9971
199.7	201.6	0.9904

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999998	*≥0.995*
Slope	1.000374	*0.90 - 1.10*
Intercept	1.162665	*+/-30*



SO2 Calibration Plot Date: December 8, 2025 Location: Jackfish 2/3



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Jackfish 2/3	Station number:	AMS 27
Calibration Date:	December 8, 2025	Last Cal Date:	November 18, 2025
Start time (MST):	13:25	End time (MST):	17:49
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.87	ppm	Cal Gas Exp Date:	September 5, 2027
Cal Gas Cylinder #:	CC523090			
Removed Cal Gas Conc:	4.87	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	Teledyne API T700		Serial Number:	5252
ZAG Make/Model:	Teledyne API T701H		Serial Number:	268

Analyzer Information

Analyzer make:	Thermo 43iQ		Analyzer serial #:	12228021055	
Converter make:	Global G150		Converter serial #:	2022-195	
Analyzer Range	0 - 100 ppb		Converter Temp:	325	degC
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.003521	0.999378	Backgd or Offset:	3.39	3.17
Calibration intercept:	-0.043977	-0.123977	Coeff or Slope:	1.071	1.071

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.3	----
As found High point	4911	82.0	80.0	78.7	1.012
As found Mid point	4950	41.0	40.0	39.4	1.008
As found Low point	4972	20.5	20.0	19.4	1.015
New cylinder response					

Baseline Corr As found:	79.0	Prev response:	80.22	*% change:	-1.5%
Baseline Corr 2nd AF pt:	39.7	AF Slope:	0.988234	AF Intercept:	-0.283981
Baseline Corr 3rd AF pt:	19.7	AF Correlation:	0.999991	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4911	82.0	80.0	79.9	1.001
Mid point	4950	41.0	40.0	39.7	1.008
Low point	4972	20.5	20.0	19.8	1.010
As left zero	5000	0.0	0.0	0.0	----
As left span	4911	82.0	80.0	80.4	0.995
SO2 Scrubber Check	4915	78.9	790.0	0.1	----

Date of last scrubber change:		18-Nov-25		Ave Corr Factor	1.006
Date of last converter efficiency test:		April 23, 2025		91.4%	efficiency

Notes: Changed sample inlet filter after as founds. Scrubber check passed. Adjusted zero only.

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

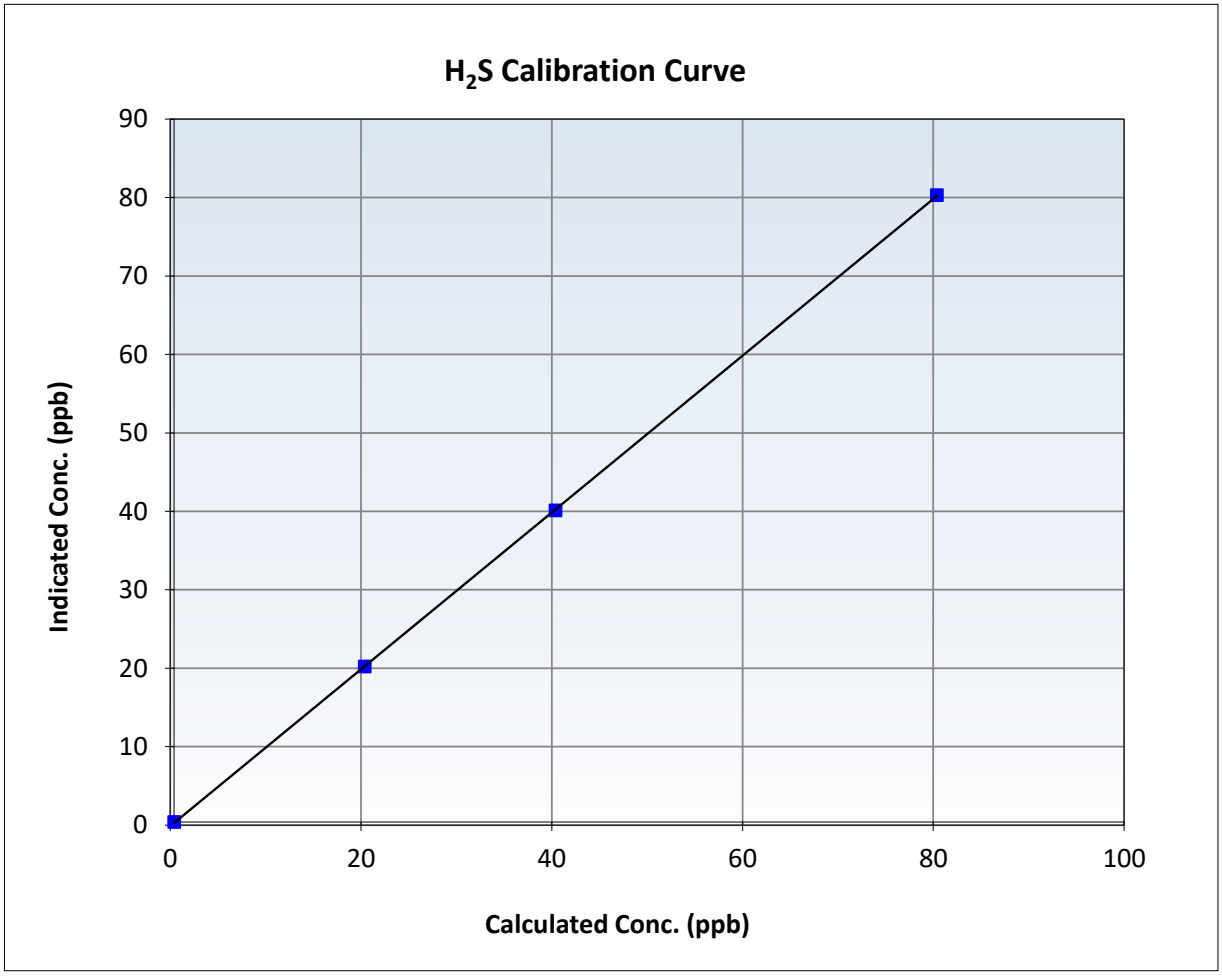
H_2S Calibration Summary

Station Information

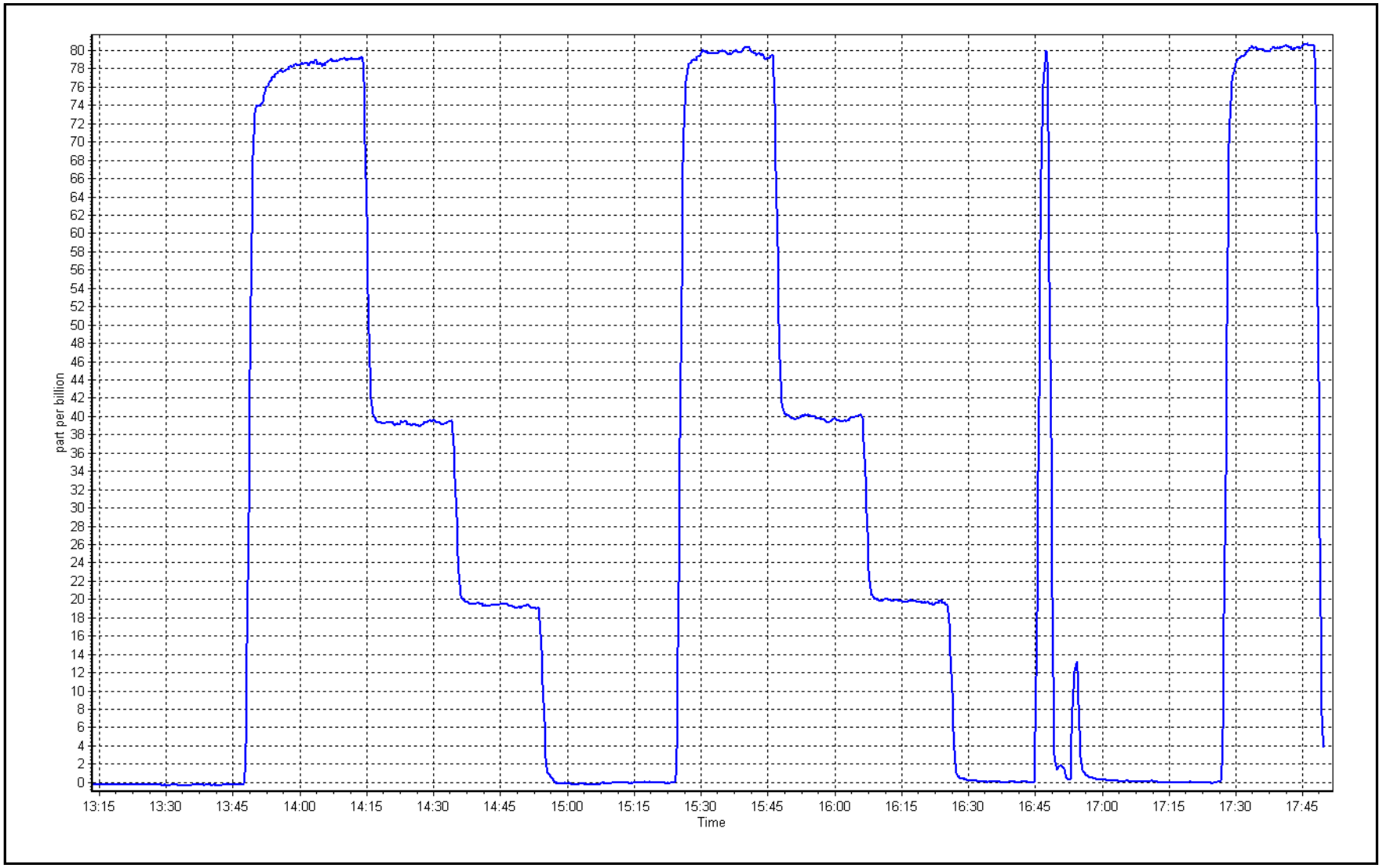
Calibration Date:	December 8, 2025	Previous Calibration:	November 18, 2025
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	13:25	End Time (MST):	17:49
Analyzer make:	Thermo 43iQ	Analyzer serial #:	12228021055

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.0	----	Correlation Coefficient	0.999985	*≥0.995*
80.0	79.9	1.0010	Slope	0.999378	*0.90 - 1.10*
40.0	39.7	1.0077			
20.0	19.8	1.0099	Intercept	-0.123977	*+/-3*



H_2S Calibration Plot Date: December 8, 2025 Location: Jackfish 2/3



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Jackfish 2/3
Station number:	AMS 27
Calibration Date:	December 9, 2025
Last Cal Date:	November 13, 2025
Start time (MST):	12:47
End time (MST):	17:33
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	CC757838	Cal Gas Expiry Date:	January 9, 2032
NOX Cal Gas Conc:	60.30 ppm	NO Cal Gas Conc:	60.20 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	60.30 ppm	Removed Gas NO Conc:	60.20 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	5252
ZAG make/model:	Teledyne API T701	Serial Number:	268

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	----	----
AF High point	4924	66.3	801.1	799.8	1.3	807.9	803.3	4.6	0.9916	0.9956
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 800.2 ppb	NO = 797.3 ppb
Baseline Corr 1st pt	NO_X = 807.9 ppb	NO = 803.3 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 = 1.0%

*Percent Change NO = 0.7%

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1218153357

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	1.513	1.513	NO bkgnd or offset:	6.1	6.0
NOX coeff or slope:	0.996	0.996	NOX bkgnd or offset:	6.1	6.1
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	176.4	179.4

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	0.998771	1.003551
NO_X Cal Offset:	0.050109	0.649072
NO Cal Slope:	0.998442	1.004173
NO Cal Offset:	-1.228850	-0.810268
NO_2 Cal Slope:	1.004627	1.000933
NO_2 Cal Offset:	1.152046	1.324314

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.5	0.1	0.3	----	----
High point	4924	66.3	801.1	799.8	1.3	804.6	802.8	1.7	0.9957	0.9963
Mid point	4958	33.2	401.1	400.4	0.7	403.1	400.8	2.3	0.9950	0.9991
Low point	4976	16.6	200.5	200.2	0.3	202.1	199.3	2.8	0.9920	1.0043
As left zero	5000	0.0	0.0	0.0	0.0	1.4	0.2	1.2	----	----
As left span	4924	66.3	801.1	372.8	428.3	803.9	372.8	431.1	0.9966	1.0000
								Average Correction Factor	0.9943	0.9999

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.3	----	----
High GPT point	798.6	374.3	425.6	426.7	0.9975	100.3%
Mid GPT point	798.6	576.1	223.8	226.1	0.9900	101.0%
Low GPT point	798.6	680.9	119.0	121.4	0.9805	102.0%
				Average Correction Factor	0.9893	101.1%

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

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

NO_X Calibration Summary

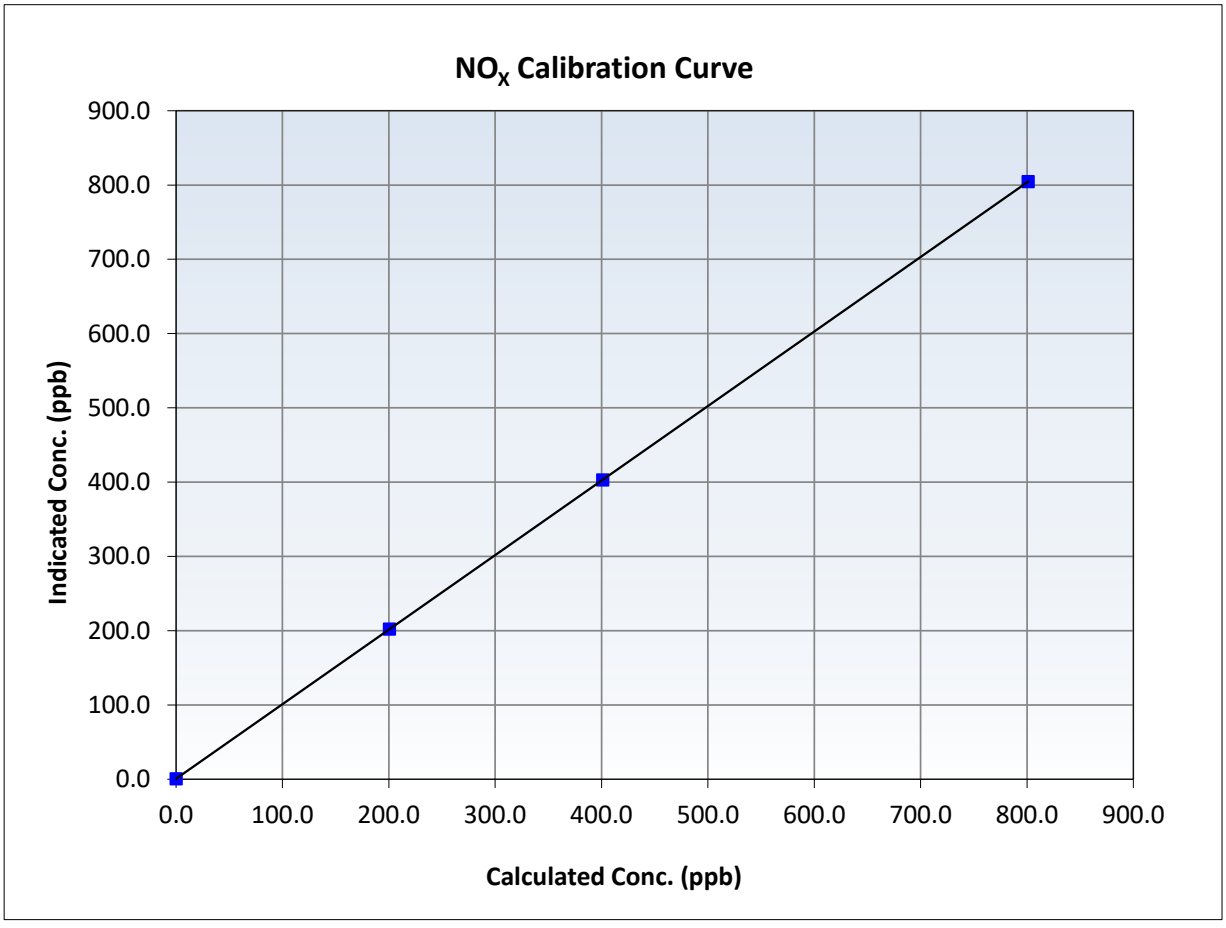
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 13, 2025
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	12:47	End Time (MST):	17:33
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153357

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.5	----
801.1	804.6	0.9957
401.1	403.1	0.9950
200.5	202.1	0.9920

Statistical Evaluation		*Limits*
Correlation Coefficient	1.000000	*≥0.995*
Slope	1.003551	*0.90 - 1.10*
Intercept	0.649072	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

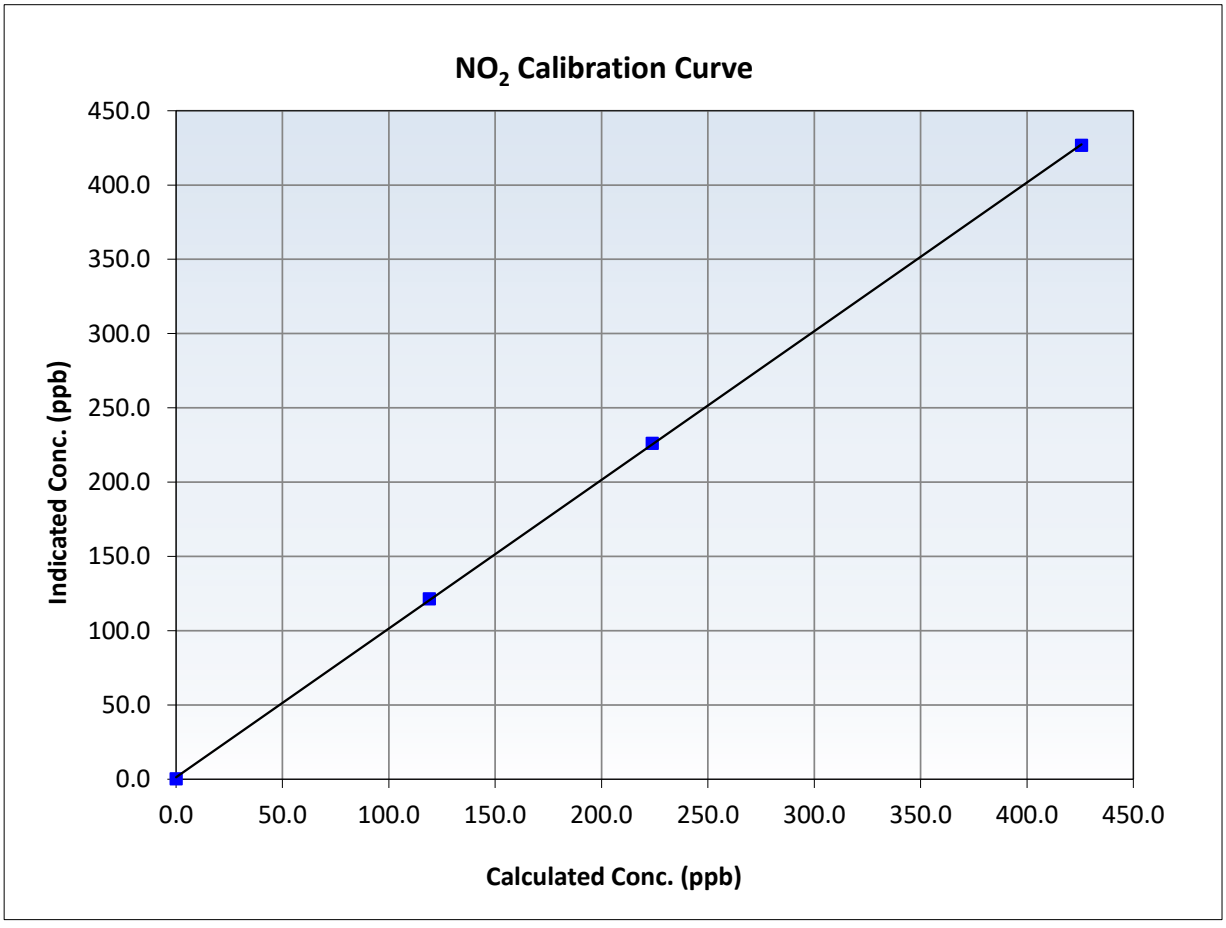
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 13, 2025
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	12:47	End Time (MST):	17:33
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153357

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.3	----
425.6	426.7	0.9975
223.8	226.1	0.9900
119.0	121.4	0.9805

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999970	*≥0.995*
Slope	1.000933	*0.90 - 1.10*
Intercept	1.324314	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

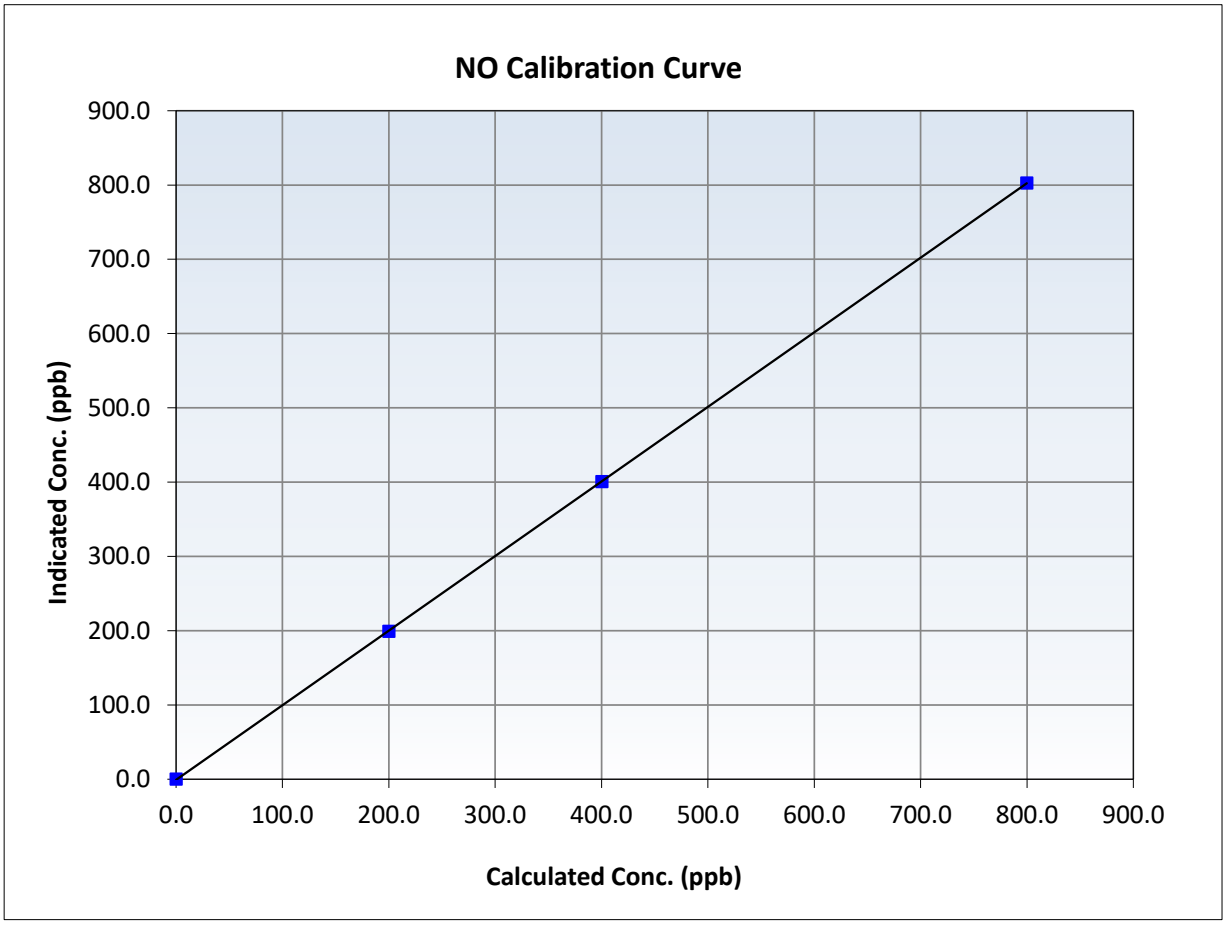
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 13, 2025
Station Name:	Jackfish 2/3	Station Number:	AMS 27
Start Time (MST):	12:47	End Time (MST):	17:33
Analyzer make:	Thermo 42i	Analyzer serial #:	1218153357

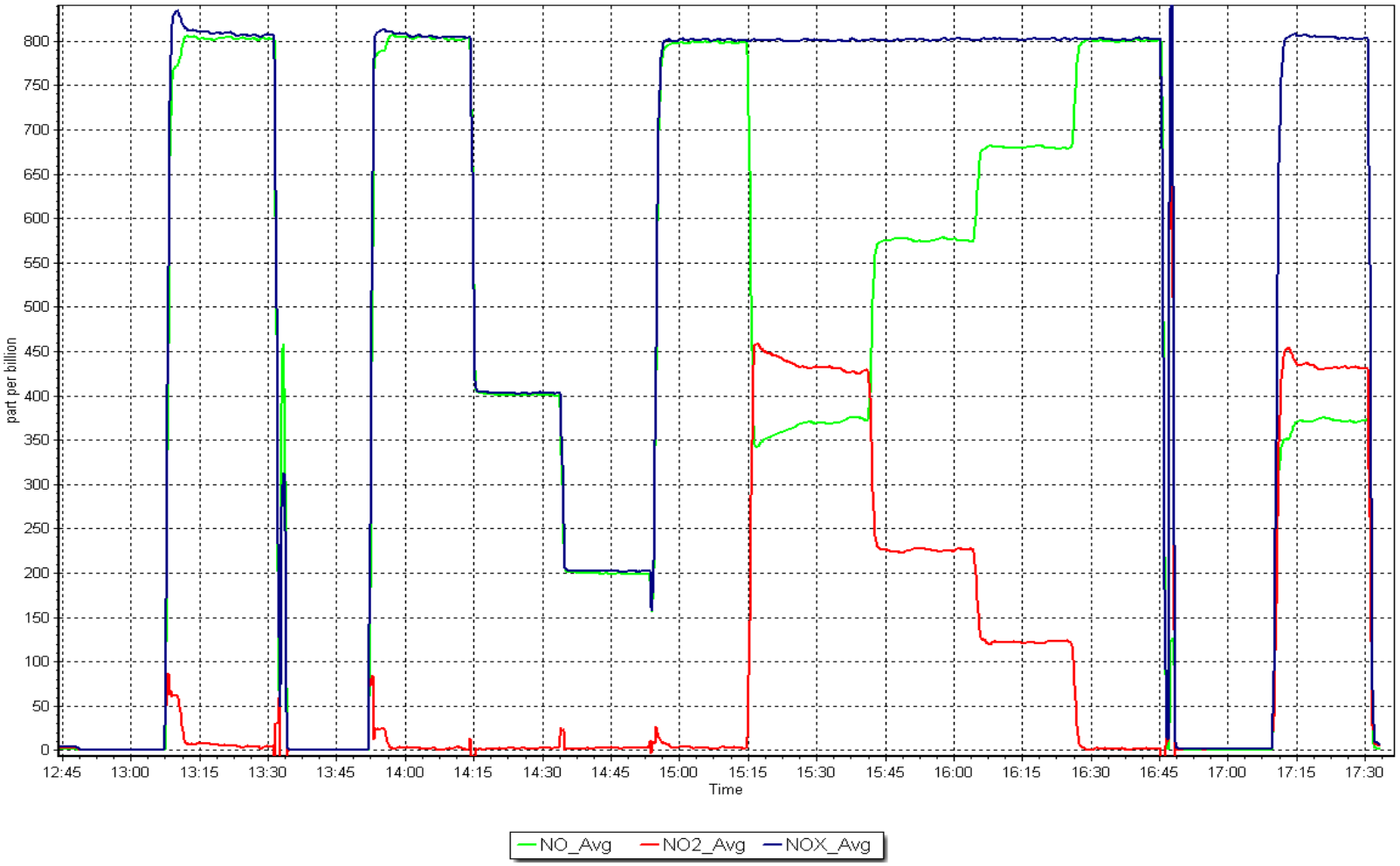
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
799.8	802.8	0.9963
400.4	400.8	0.9991
200.2	199.3	1.0043

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999994	*≥0.995*
Slope	1.004173	*0.90 - 1.10*
Intercept	-0.810268	*+/-20*



NO_X Calibration Plot Date: December 9, 2025 Location: Jackfish 2/3



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS29
SURMONT 2
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Surmont 2	Station number:	AMS 29
Calibration Date:	December 17, 2025	Last Cal Date:	November 3, 2025
Start time (MST):	11:04	End time (MST):	14:41
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:	135

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1170050150	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.001461	1.003988	Backgd or Offset:	14.5	14.7
Calibration intercept:	-1.461001	-2.020033	Coeff or Slope:	0.944	0.950

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.3	----
As found High point	4919.9	80.1	800.2	794.6	1.007
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	794.9	Previous response	799.9	*% change	-0.6%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4920	80.1	800.2	802.0	0.998
Mid point	4960	40.0	399.6	399.2	1.001
Low point	4980	20.0	199.8	196.0	1.019
As left zero	5000	0.0	0.0	0.1	----
As left span	4920	80.1	800.2	803.0	0.997
				Average Correction Factor:	1.006

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

SO_2 Calibration Summary

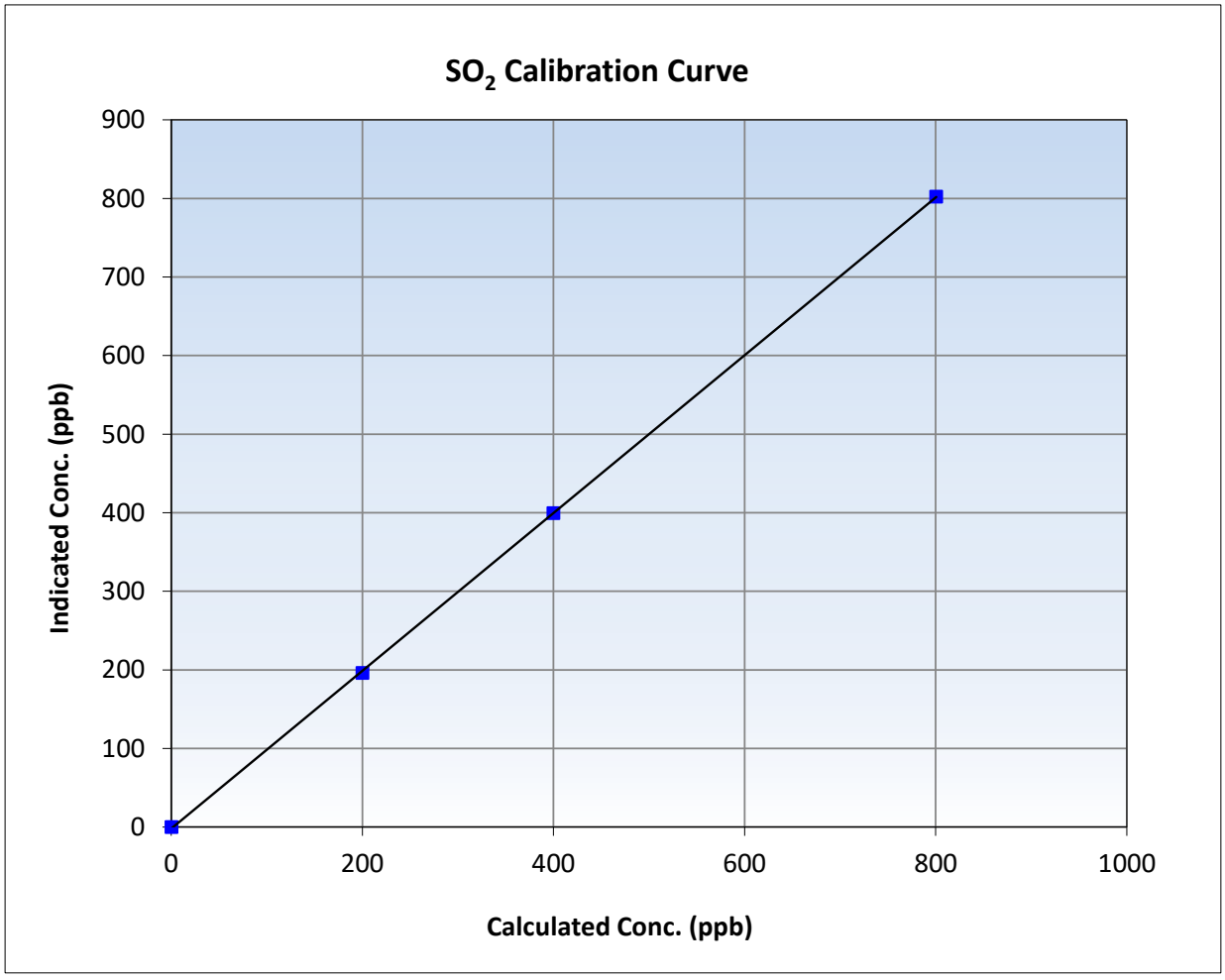
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 3, 2025
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	11:04	End Time (MST):	14:41
Analyzer make:	Thermo 43i	Analyzer serial #:	1170050150

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
800.2	802.0	0.9978
399.6	399.2	1.0010
199.8	196.0	1.0194

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999970	*≥0.995*
Slope	1.003988	*0.90 - 1.10*
Intercept	-2.020033	*+/-30*



SO2 Calibration Plot Date: December 17, 2025 Location: Surmont 2

Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name:	Surmont 2	Station number:	AMS 29
Calibration Date:	December 1, 2025	Last Cal Date:	November 4, 2025
Start time (MST):	11:17	End time (MST):	16:51
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:	135

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

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.976306	1.006740	Backgd or Offset:	0.82	0.85
Calibration intercept:	0.059532	0.019518	Coeff or Slope:	1.040	1.070

H2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4916	84.2	80.0	78.8	1.015
As found Mid point	4958	42.1	40.0	39.5	1.013
As found Low point	4979	21.1	20.0	19.6	1.020
New cylinder response					

Baseline Corr As found:	78.8	Prev response:	78.15	*% change:	0.8%
Baseline Corr 2nd AF pt:	39.5	AF Slope:	0.985736	AF Intercept:	-0.020473
Baseline Corr 3rd AF pt:	19.6	AF Correlation:	0.999994	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4916	84.2	80.0	80.6	0.992
Mid point	4958	42.1	40.0	40.2	0.995
Low point	4979	21.1	20.0	20.1	0.995
As left zero	5000	0.0	0.0	0.2	----
As left span	4916	84.2	80.0	79.8	1.002
SO2 Scrubber Check	4919	81.3	813.0	0.0	----

Date of last scrubber change:			Ave Corr Factor	0.994
Date of last converter efficiency test:	December 5, 2024		108.1%	efficiency

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

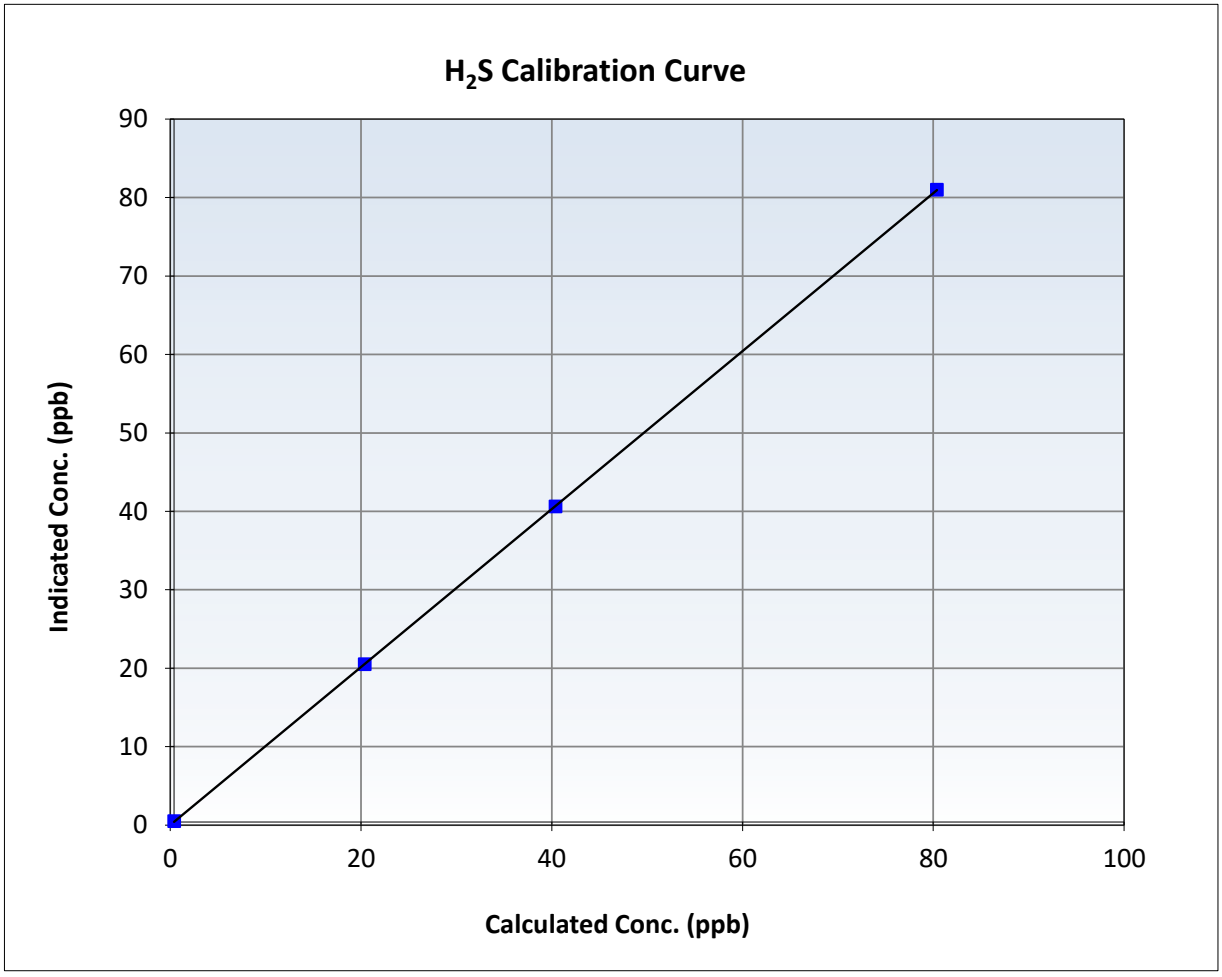
H2S Calibration Summary

Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 4, 2025
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	11:17	End Time (MST):	16:51
Analyzer make:	Thermo 43iQ-TLE	Analyzer serial #:	1200326170

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.1	----	Correlation Coefficient	0.999995	*≥0.995*
80.0	80.6	0.9924	Slope	1.006740	*0.90 - 1.10*
40.0	40.2	0.9949			
20.0	20.1	0.9949	Intercept	0.019518	*+/-3*



H2S Calibration Plot Date: December 1, 2025 Location: Surmont 2

Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name:	Surmont 2	Station number:	AMS 29
Calibration Date:	December 17, 2025	Last Cal Date:	November 3, 2025
Start time (MST):	11:04	End time (MST):	14:41
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC356229		Cal Gas Expiry Date:	October 9, 2032	
CH4 Cal Gas Conc.	503.7	ppm	CH4 Equiv Conc.	1066.9	ppm
C3H8 Cal Gas Conc.	204.8	ppm			
Removed Gas Cert:	NA		Removed Gas Expiry:	NA	
Removed CH4 Conc.	503.7	ppm	CH4 Equiv Conc.	1066.9	ppm
Removed C3H8 Conc.	204.8	ppm	Diff between cyl:		
Calibrator Make/Model:	Teledyne API T700		Serial Number:	5472	
ZAG Make/Model:	Teledyne API T701		Serial Number:	135	

Analyzer Information

Analyzer make: Thermo 51i-LT Analyzer serial #: 1170050149

Analyzer Range: 0 - 20 ppm

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.994853	1.001707	Background:	3.54	3.49
Calibration intercept:	0.015835	-0.019143	Coefficient:	4.117	4.156

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	-0.07	----
As found High point	4920	80.1	17.09	16.80	1.013
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.87	Previous response	17.02	*% 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	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.02	----
High point	4920	80.1	17.09	17.12	0.998
Mid point	4960	40.0	8.54	8.51	1.003
Low point	4980	20.0	4.27	4.22	1.010
As left zero	5000	0.0	0.00	0.05	----
As left span	4920	80.1	17.09	17.16	0.996
				Average Correction Factor	1.004

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

THC Calibration Summary

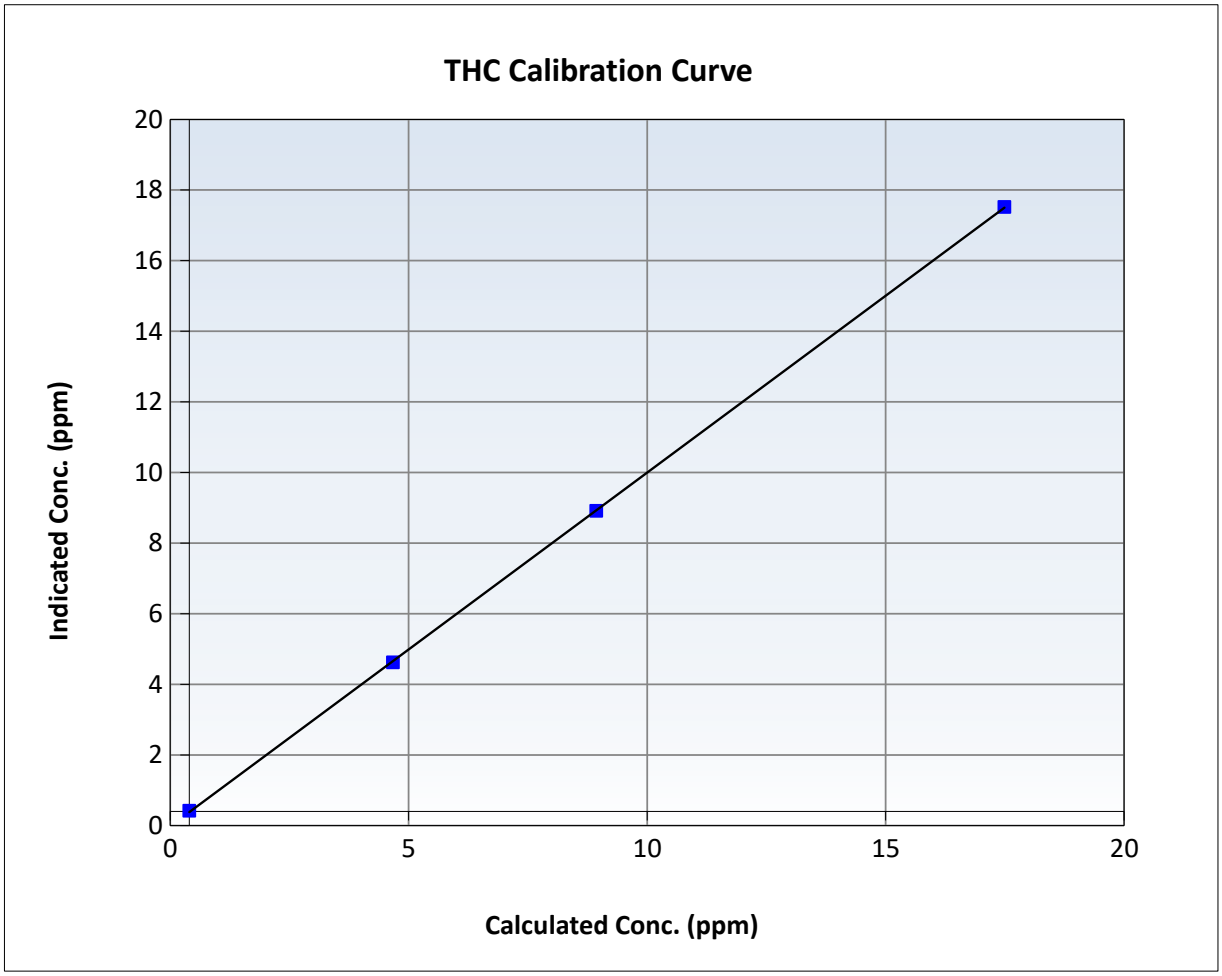
Station Information

Calibration Date:	December 17, 2025	Previous Calibration:	November 3, 2025
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	11:04	End Time (MST):	14:41
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1170050149

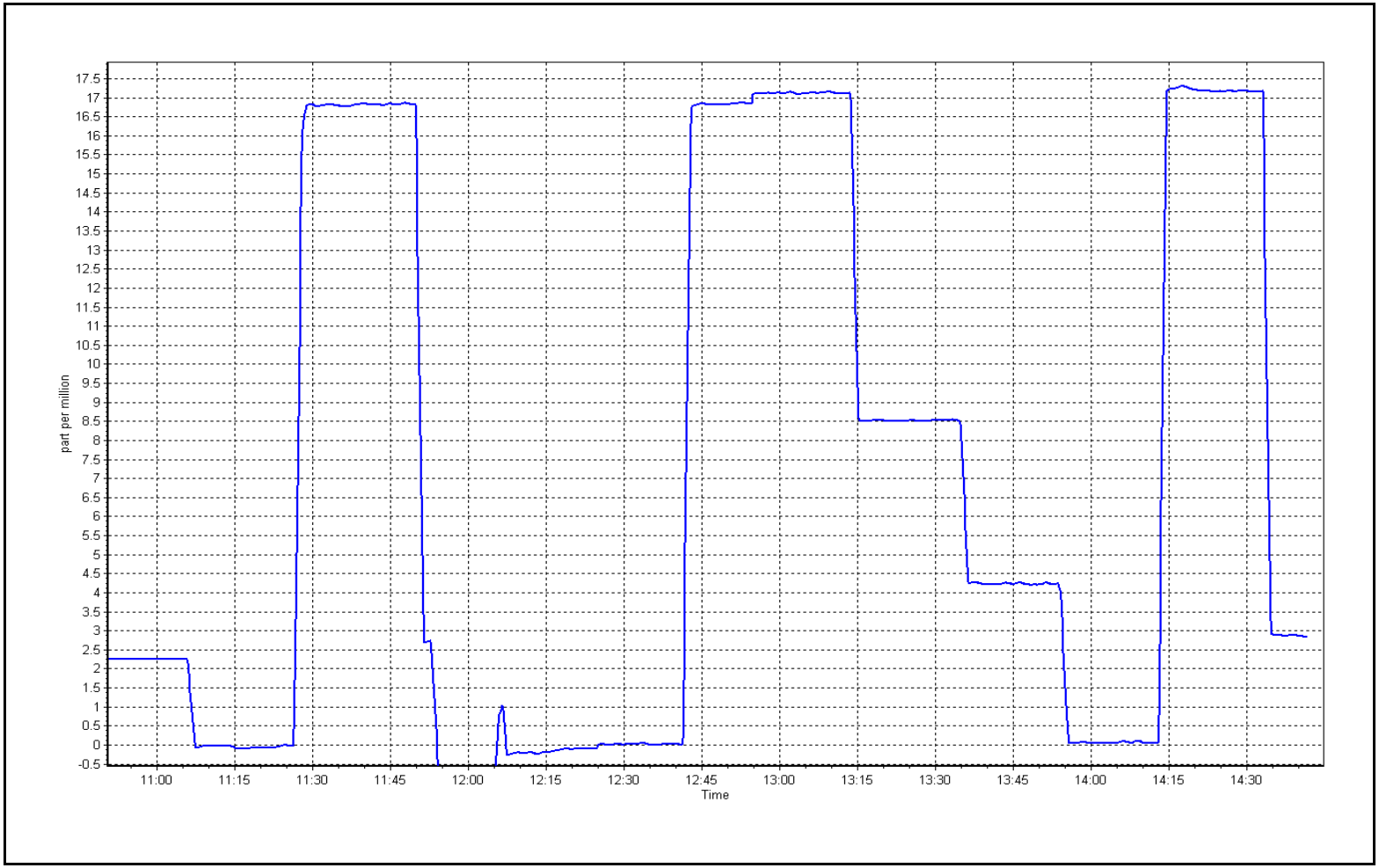
Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.02	----
17.09	17.12	0.9983
8.54	8.51	1.0030
4.27	4.22	1.0103

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999982	*≥0.995*
Slope	1.001707	*0.90 - 1.10*
Intercept	-0.019143	*+/-1.5*



THC Calibration Plot Date: December 17, 2025 Location: Surmont 2



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Surmont 2
Station number:	AMS 29
Calibration Date:	December 2, 2025
Last Cal Date:	November 7, 2025
Start time (MST):	10:41
End time (MST):	16:42
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	CC218007	Cal Gas Expiry Date:	January 9, 2032
NOX Cal Gas Conc:	60.20 ppm	NO Cal Gas Conc:	60.00 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	60.20 ppm	Removed Gas NO Conc:	60.00 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	5472
ZAG make/model:	Teledyne API T701	Serial Number:	135

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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0	0.0	0.0	0.0	-0.3	-0.2	-0.1	----	----
AF High point	4933	66.7	803.1	800.4	2.7	815.0	811.0	4.0	0.9851	0.9867
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 802.1 ppb	NO = 799.6 ppb
Baseline Corr 1st pt	NO_X = 815.3 ppb	NO = 811.2 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 = 1.6%

*Percent Change NO = 1.4%

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1170050148

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	Finish		Start	Finish
NO coeff or slope:	1.051	1.033	NO bkgnd or offset:	1.3	1.3
NOX coeff or slope:	0.991	0.995	NOX bkgnd or offset:	1.5	1.5
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	149.0	149.0

Calibration Statistics

	Start	Finish
NO_X Cal Slope:	0.999895	1.001517
NO_X Cal Offset:	-0.889026	-1.409038
NO Cal Slope:	1.001300	1.001644
NO Cal Offset:	-1.889053	-2.709539
NO_2 Cal Slope:	1.008426	1.039499
NO_2 Cal Offset:	0.022619	-1.542251

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	----	----
High point	4933	66.7	803.1	800.4	2.7	803.0	800.0	3.0	1.0001	1.0006
Mid point	4967	33.3	400.9	399.6	1.3	401.1	397.3	3.8	0.9995	1.0057
Low point	4983	16.7	201.1	200.4	0.7	197.7	194.7	3.0	1.0171	1.0293
As left zero	5000	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	----	----
As left span	4933	66.7	803.1	423.1	380.0	798.3	423.1	375.2	1.0060	1.0000
							Average Correction Factor		1.0056	1.0119

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	782.0	426.2	358.5	372.2	0.9631	103.8%
Mid GPT point	782.0	612.0	172.7	175.9	0.9816	101.9%
Low GPT point	782.0	693.9	90.8	92.3	0.9834	101.7%
				Average Correction Factor	0.9760	102.5%

Notes: Changed sample inlet filter after as founds. Adjusted span. Second high NO reference point used in GPT formulas.

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

NO_X Calibration Summary

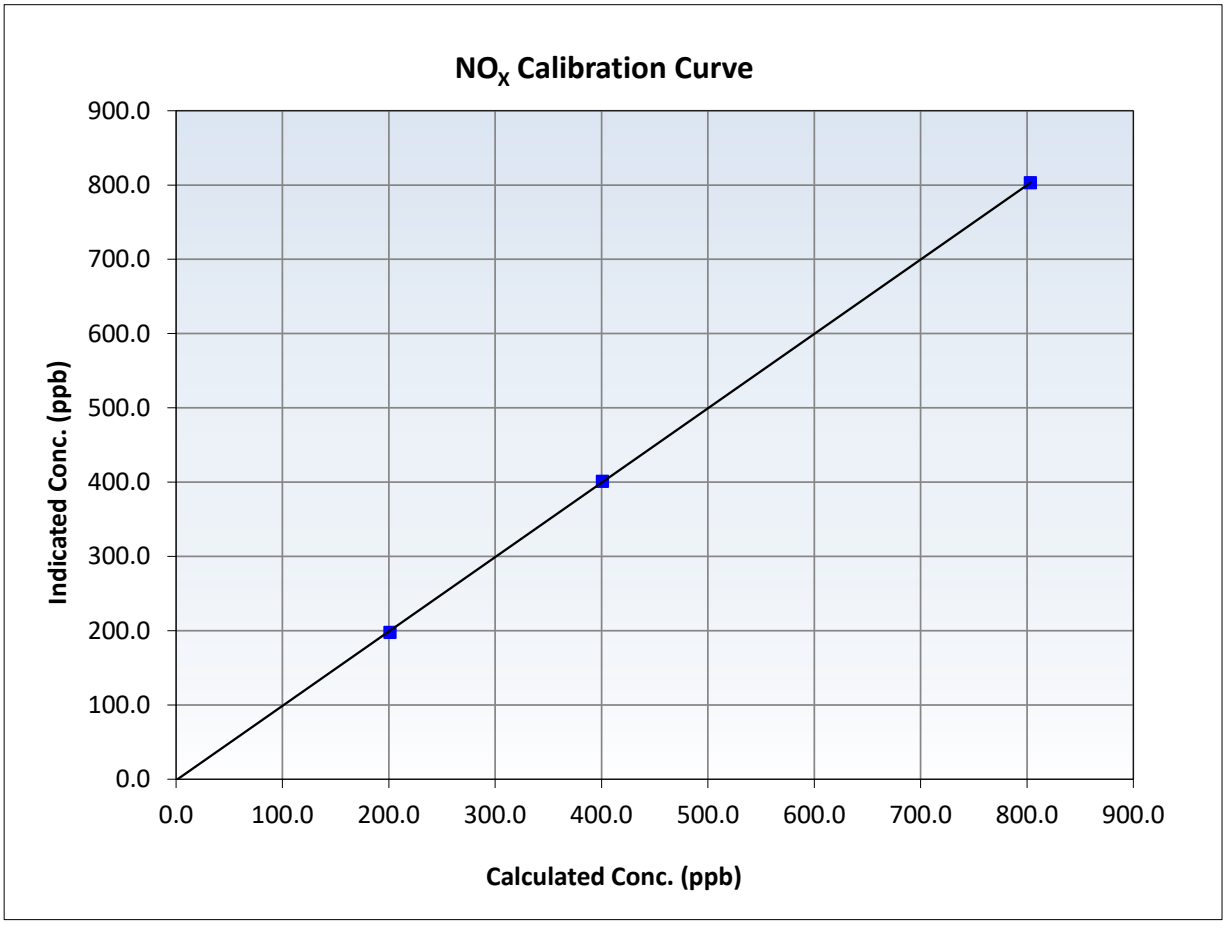
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 7, 2025
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	10:41	End Time (MST):	16:42
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
803.1	803.0	1.0001
400.9	401.1	0.9995
201.1	197.7	1.0171

Statistical Evaluation		Limits
Correlation Coefficient	0.999978	≥0.995
Slope	1.001517	0.90 - 1.10
Intercept	-1.409038	+/-20



Wood Buffalo Environmental Association

NO_2 Calibration Summary

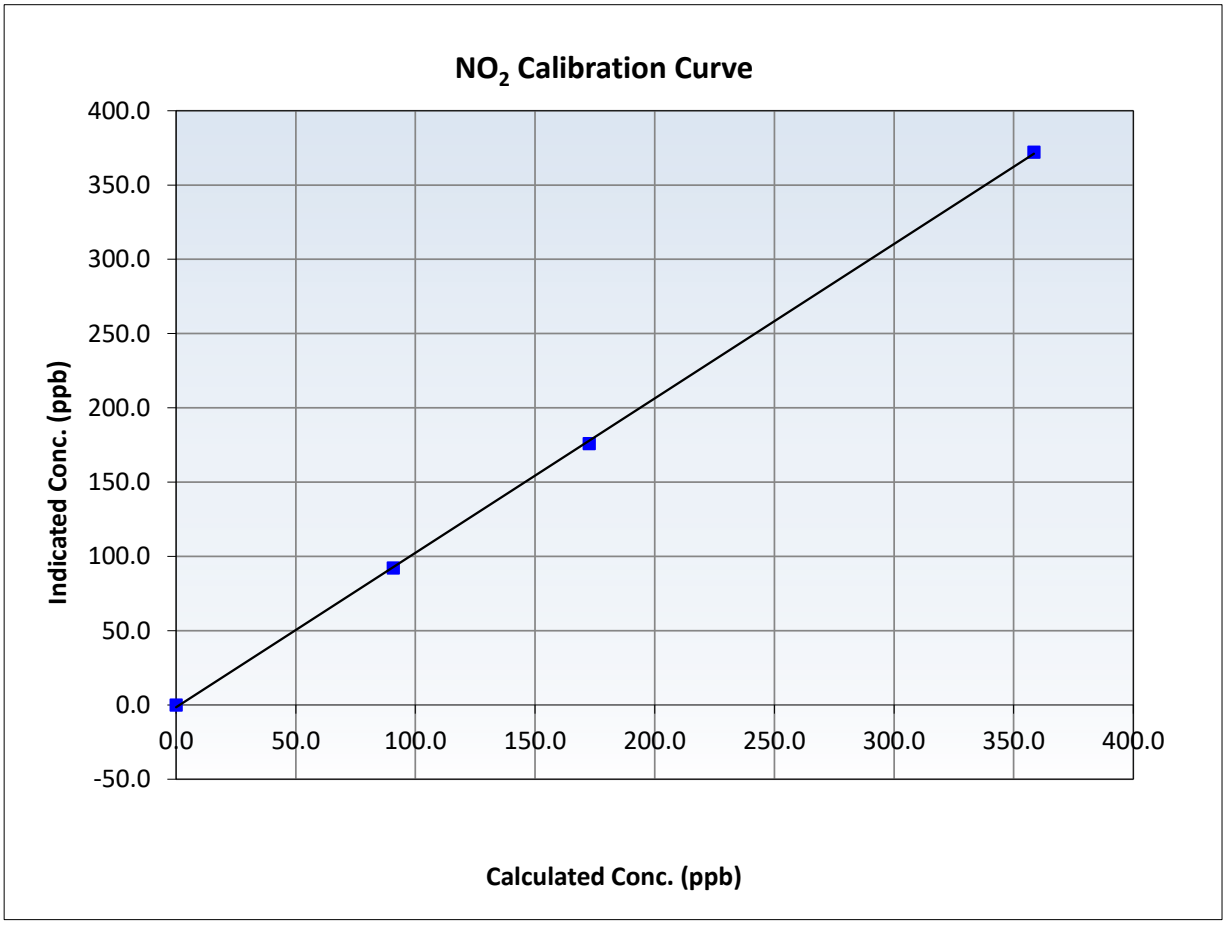
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 7, 2025
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	10:41	End Time (MST):	16:42
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
358.5	372.2	0.9631
172.7	175.9	0.9816
90.8	92.3	0.9834

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999897	*≥0.995*
Slope	1.039499	*0.90 - 1.10*
Intercept	-1.542251	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

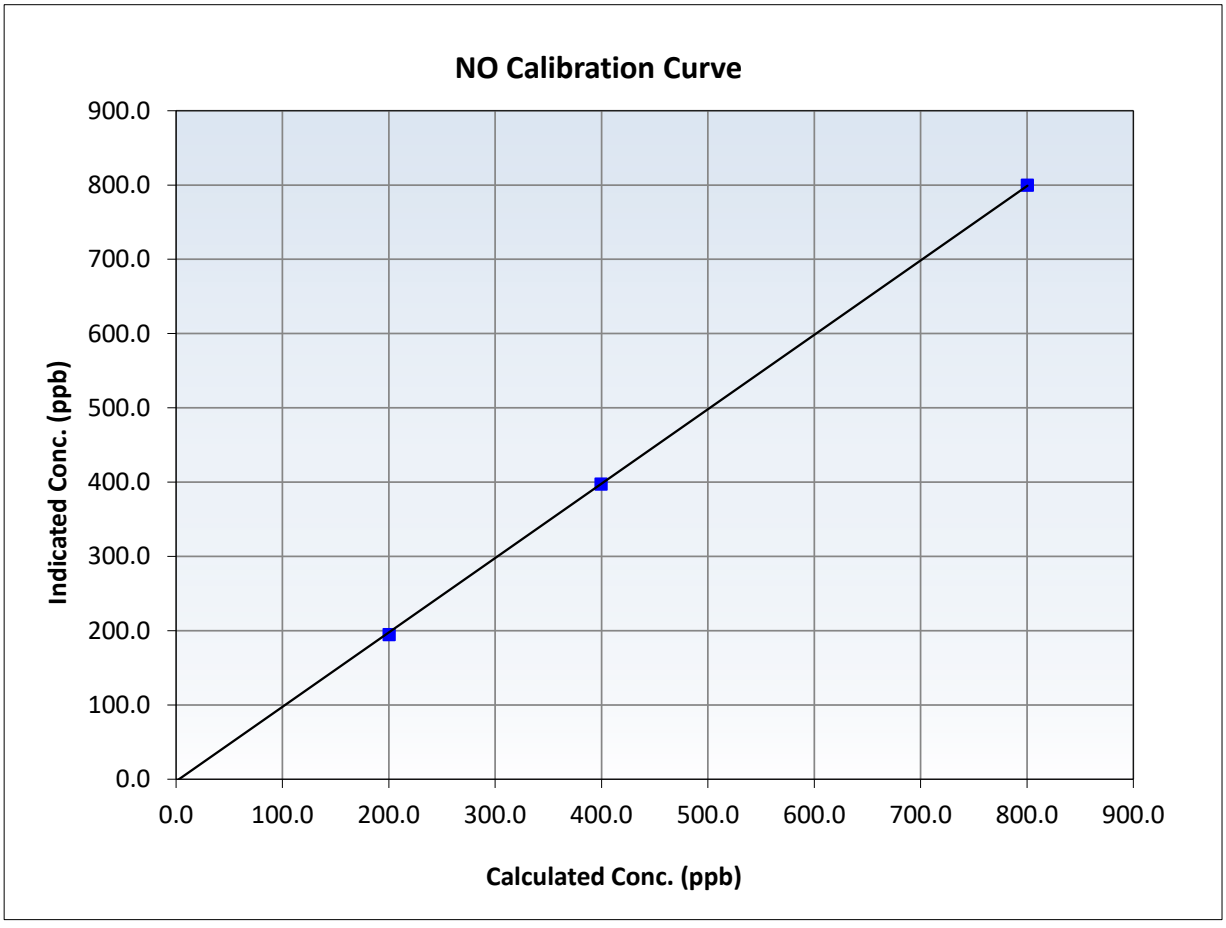
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 7, 2025
Station Name:	Surmont 2	Station Number:	AMS 29
Start Time (MST):	10:41	End Time (MST):	16:42
Analyzer make:	Thermo 42i	Analyzer serial #:	1170050148

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
800.4	800.0	1.0006
399.6	397.3	1.0057
200.4	194.7	1.0293

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999946	*≥0.995*
Slope	1.001644	*0.90 - 1.10*
Intercept	-2.709539	*+/-20*



NO_X Calibration Plot Date: December 2, 2025 Location: Surmont 2

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS30
ELLS RIVER
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Ells River	Station number:	AMS 30
Calibration Date:	December 5, 2025	Last Cal Date:	November 3, 2025
Start time (MST):	11:42	End time (MST):	14:29
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	48.75	ppm	Cal Gas Exp Date:	March 10, 2031
Cal Gas Cylinder #:	CC350110			
Removed Cal Gas Conc:	48.75	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Model:	API T700		Serial Number:	3061
Zero Air Gen Model:	API T701H		Serial Number:	358

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1008841397	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.994199	1.007541	Backgd or Offset:	10.6	10.8
Calibration intercept:	-2.172107	-1.415671	Coeff or Slope:	0.991	1.013

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.4	----
As found High point	4918	82.1	800.5	785.0	1.019
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	785.4	Previous response	793.6	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4918	82.1	800.5	806.0	0.993
Mid point	4959	41.0	399.8	400.1	0.999
Low point	4979	20.5	199.9	198.8	1.006
As left zero	5000	0.0	0.0	0.0	----
As left span	4918	82.1	800.5	809.0	0.989
				Average Correction Factor:	0.999

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

SO_2 Calibration Summary

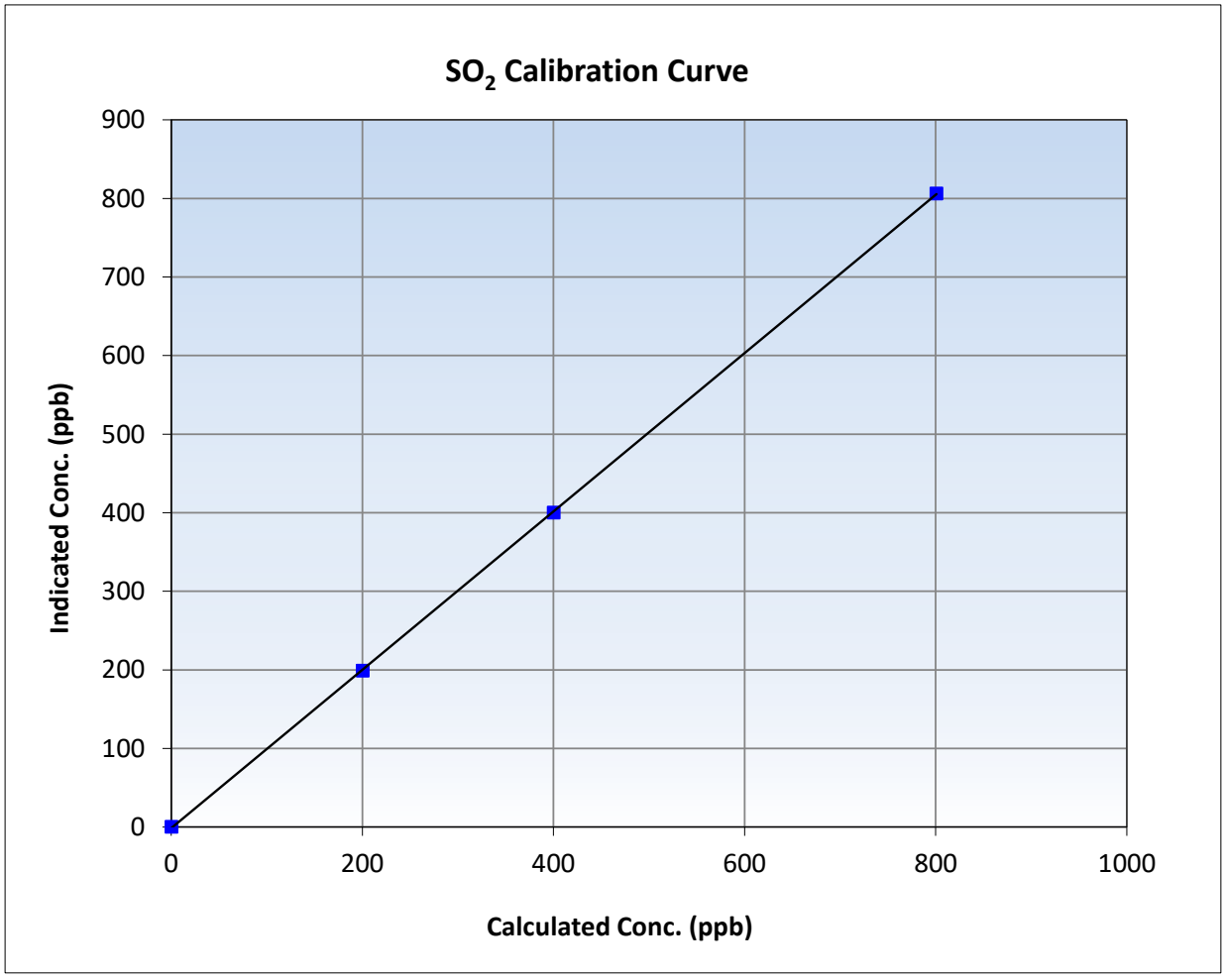
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 3, 2025
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	11:42	End Time (MST):	14:29
Analyzer make:	Thermo 43i	Analyzer serial #:	1008841397

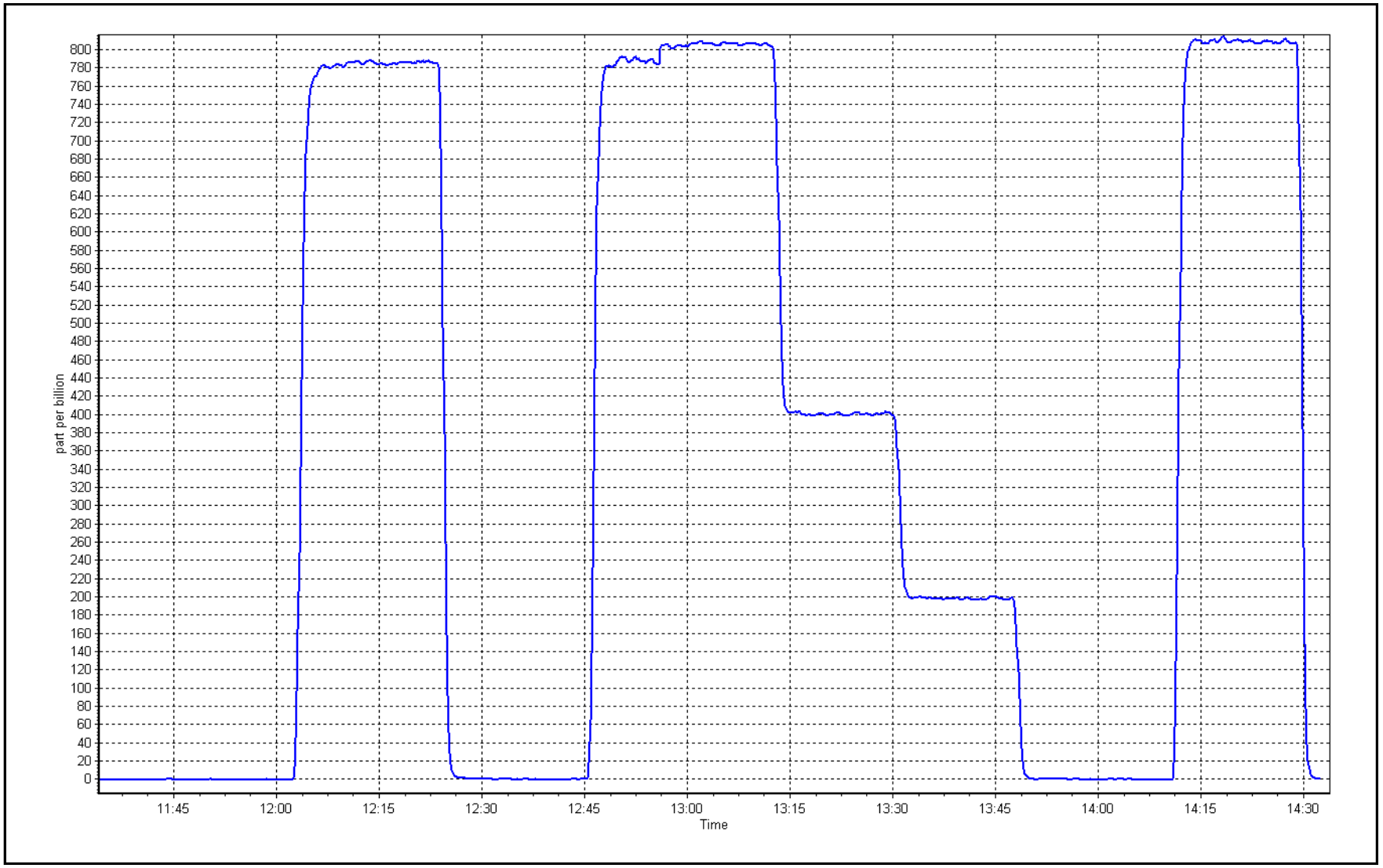
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
800.5	806.0	0.9931
399.8	400.1	0.9991
199.9	198.8	1.0055

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999983	*≥0.995*
Slope	1.007541	*0.90 - 1.10*
Intercept	-1.415671	*+/-30*



SO2 Calibration Plot Date: December 5, 2025 Location: Ells River



Wood Buffalo Environmental Association

TRS Calibration Report

Station Information

Station Name:	Ells River	Station number:	AMS 30
Calibration Date:	December 16, 2025	Last Cal Date:	November 17, 2025
Start time (MST):	10:30	End time (MST):	16:00
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.99	ppm	Cal Gas Exp Date:	November 15, 2026
Cal Gas Cylinder #:	CC505806			
Removed Cal Gas Conc:	4.99	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	API T700		Serial Number:	3061
ZAG Make/Model:	API 701H		Serial Number:	358

Analyzer Information

Analyzer make:	Thermo 43i-LTE		Analyzer serial #:	1170050152	
Converter make:	CDN- 101		Converter serial #:	632	
Analyzer Range	0 - 100 ppb		Converter Temp:	800	degC
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.016613	1.000905	Backgd or Offset:	4.1	3.99
Calibration intercept:	-0.560357	0.139488	Coeff or Slope:	1.256	1.286

TRS As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.3	----
As found High point	4920	80.2	80.0	77.6	1.027
As found Mid point	4960	40.1	40.0	38.6	1.029
As found Low point	4980	20.0	20.0	18.9	1.040
New cylinder response					
Baseline Corr As found:	77.9	Prev response:	80.81	*% change:	-3.7%
Baseline Corr 2nd AF pt:	38.9	AF Slope:	0.974210	AF Intercept:	-0.401093
Baseline Corr 3rd AF pt:	19.2	AF Correlation:	0.999990	* = > +/-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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4920	80.2	80.0	80.2	0.998
Mid point	4960	40.1	40.0	40.3	0.993
Low point	4980	20.0	20.0	20.1	0.993
As left zero	5000	0.0	0.0	0.3	----
As left span	4920	80.2	80.0	79.9	1.002
SO2 Scrubber Check	4918	82.0	820.0	0.0	----
Date of last scrubber change:		16-Dec-25		Ave Corr Factor	0.995
Date of last converter efficiency test:					

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

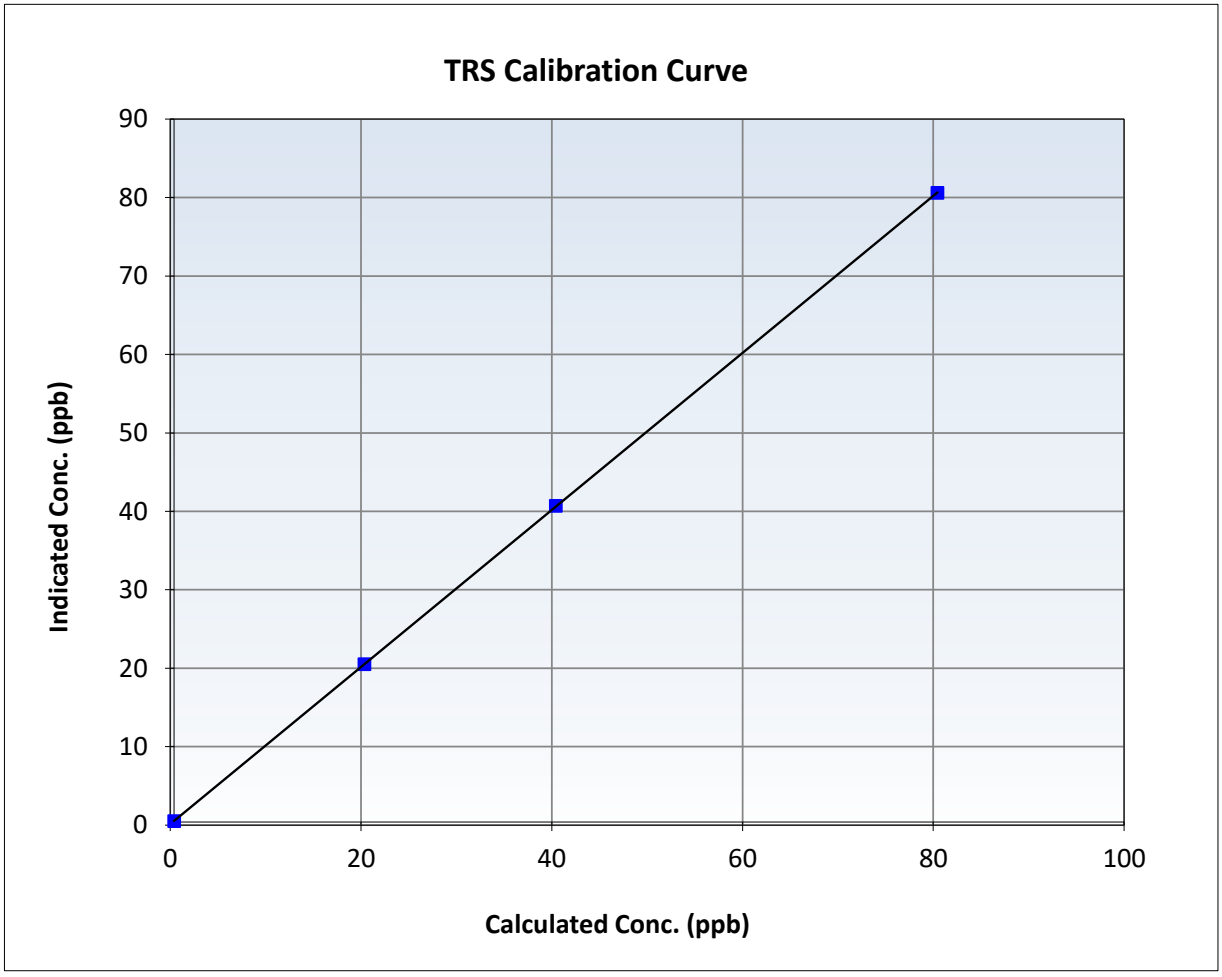
TRS Calibration Summary

Station Information

Calibration Date:	December 16, 2025	Previous Calibration:	November 17, 2025
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	10:30	End Time (MST):	16:00
Analyzer make:	Thermo 43i-LTE	Analyzer serial #:	1170050152

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*
80.0	80.2	0.9980	Slope	1.000905	*0.90 - 1.10*
40.0	40.3	0.9930			
20.0	20.1	0.9930	Intercept	0.139488	*+/-3*



TRS Calibration Plot Date: December 16, 2025 Location: Ells River

Wood Buffalo Environmental Association

THC / CH_4 / NMHC Calibration Report

Station Information

Station Name:	Ells River	Station number:	AMS 30
Calibration Date:	December 5, 2025	Last Cal Date:	November 3, 2025
Start time (MST):	11:42	End time (MST):	14:29
Reason:	Routine		

Calibration Standards

Gas Cert Reference:		CC350110	Cal Gas Expiry Date:	Monday, March 10, 2031	
CH4 Cal Gas Conc.	496.6	ppm	CH4 Equiv Conc.	1066.4	ppm
C3H8 Cal Gas Conc.	207.2	ppm			
Removed Gas Cert:		NA	Removed Gas Expiry:	NA	
Removed CH4 Conc.	496.6	ppm	CH4 Equiv Conc.	1066.4	ppm
Removed C3H8 Conc.	207.2	ppm	Diff between cyl (THC):		
Diff between cyl (CH_4):			Diff between cyl (NM):		
Calibrator Model:	API T700		Serial Number:	3061	
Zero Air Gen model:	API T701H		Serial Number:	358	

Analyzer Information

Analyzer make:	Thermo 55i		Analyzer serial #:	1152430011	
THC Range:	0 - 20 ppm		NMHC/CH4 Range:	0 - 10 ppm	
	Start	***Finish***		***Start***	***Finish***
CH4 SP Ratio:	3.15E-04	3.10E-04	NMHC SP Ratio:	5.95E-05	5.82E-05
CH4 Retention time:	17.6	17.4	NMHC Peak Area:	156872	160905
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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4918	82.1	17.51	17.76	0.986
As found Mid point					
As found Low point					
New cylinder response					

Baseline Corr AF:	17.76	Prev response	17.44	*% change	1.8%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/(Ic-AFzero)) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	17.51	17.52	0.999
Mid point	4959	41.0	8.74	8.72	1.003
Low point	4979	20.5	4.37	4.35	1.005
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	17.51	17.44	1.004
				Average Correction Factor	1.002

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

Wood Buffalo Environmental Association

THC / CH_4 / 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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4918	82.1	9.36	9.51	0.984
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	9.51	Prev response	9.33	*% change	2.2%
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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	9.36	9.36	1.000
Mid point	4959	41.0	4.67	4.68	0.999
Low point	4979	20.5	2.34	2.35	0.996
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	9.36	9.31	1.005
				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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.00	----
As found High point	4918	82.1	8.15	8.25	0.988
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr AF:	8.25	Prev response	8.11	*% change	1.7%
Baseline Corr 2nd AF:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

CH4 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.00	----
High point	4918	82.1	8.15	8.16	0.999
Mid point	4959	41.0	4.07	4.04	1.007
Low point	4979	20.5	2.04	2.01	1.016
As left zero	5000	0.0	0.00	0.00	----
As left span	4918	82.1	8.15	8.13	1.003
				Average Correction Factor	1.007

Calibration Statistics

	Start	*Finish*
THC Cal Slope:	0.999473	1.000824
THC Cal Offset:	-0.056026	-0.015587
CH4 Cal Slope:	0.999948	1.001539
CH4 Cal Offset:	-0.039119	-0.019336
NMHC Cal Slope:	0.999071	1.000031
NMHC Cal Offset:	-0.016707	0.003949

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

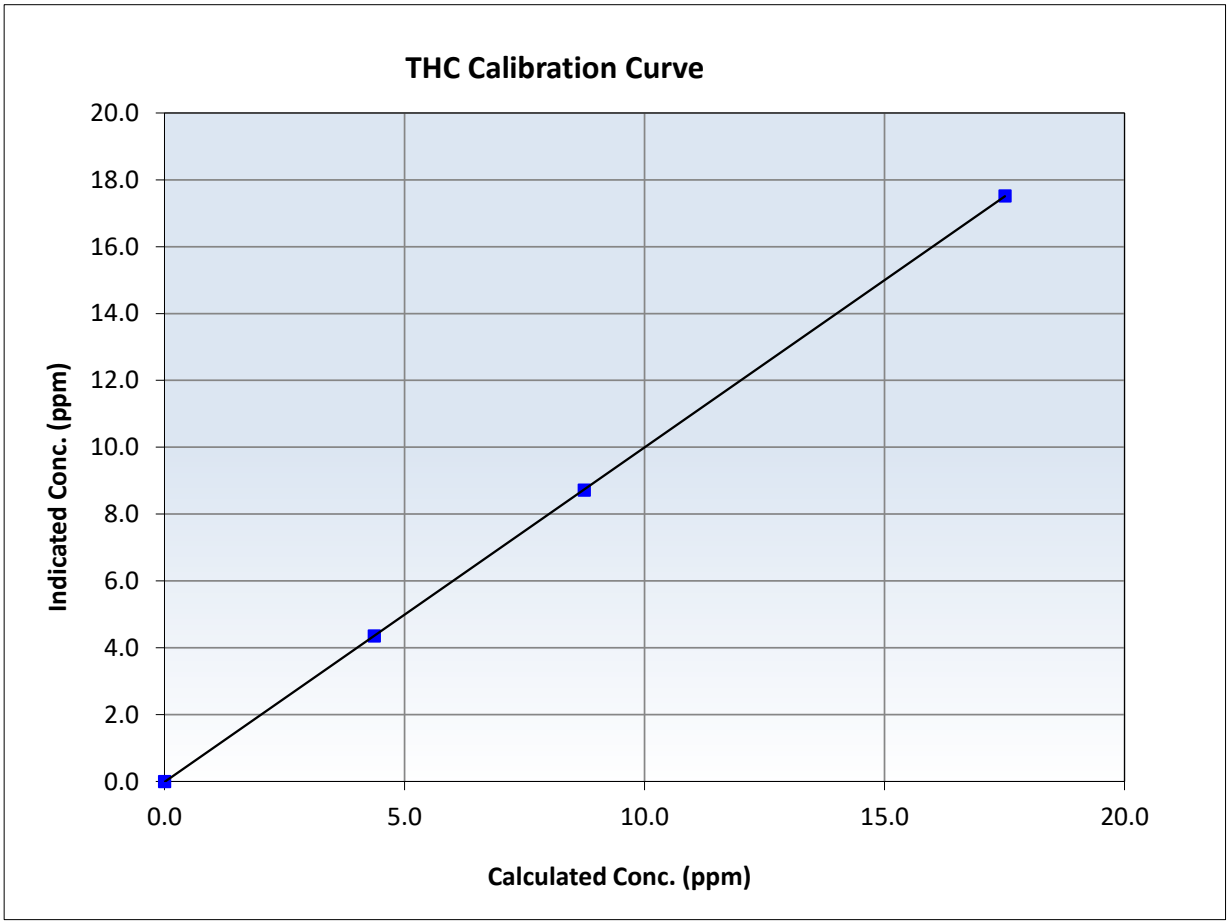
THC Calibration Summary

Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 3, 2025
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	11:42	End Time (MST):	14:29
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430011

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999995	≥0.995
17.51	17.52	0.9994	Slope	1.000824	0.90 - 1.10
8.74	8.72	1.0030	Intercept	-0.015587	+/-0.5
4.37	4.35	1.0048			



Wood Buffalo Environmental Association

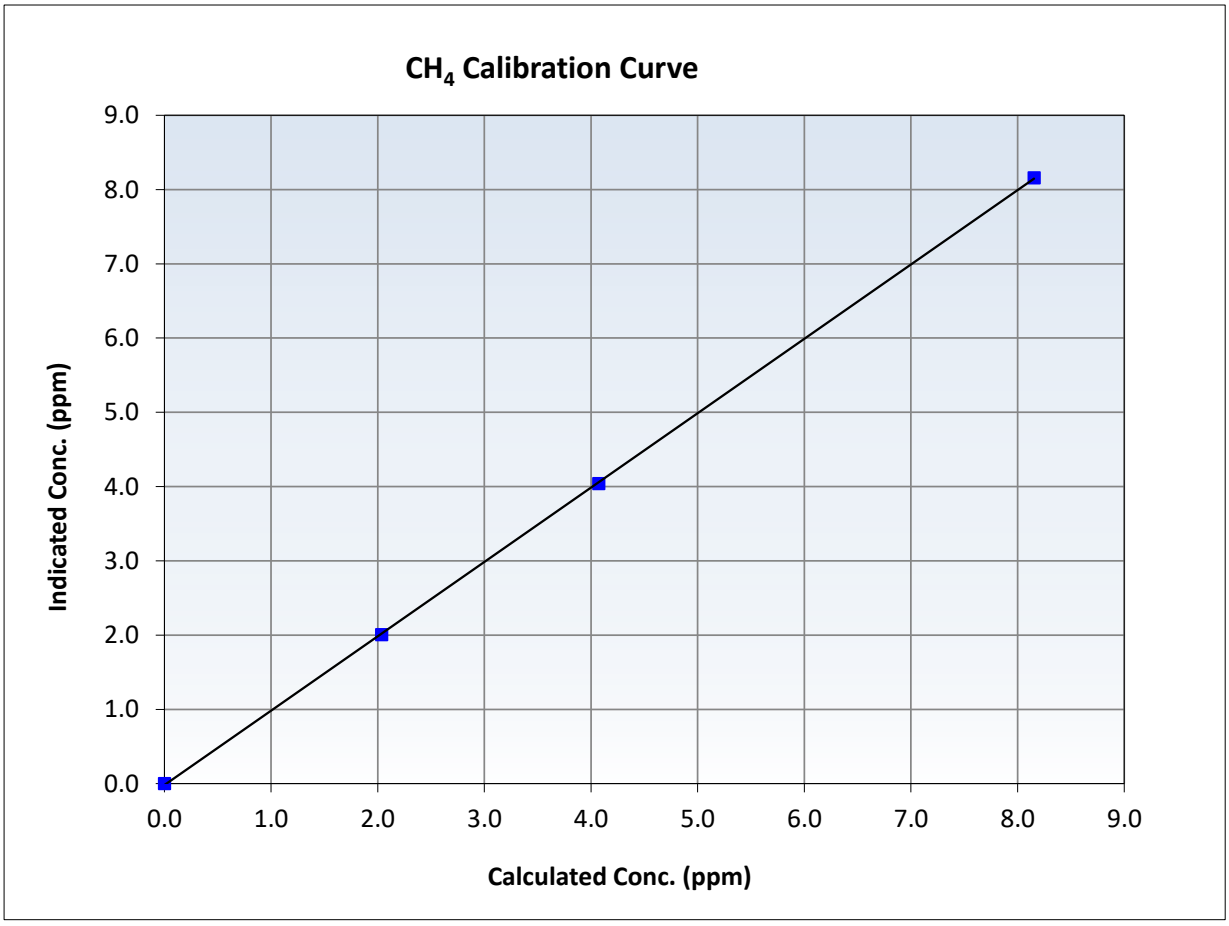
CH_4 Calibration Summary

Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 3, 2025
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	11:42	End Time (MST):	14:29
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430011

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.00	0.00	----	Correlation Coefficient	0.999973	≥0.995
8.15	8.16	0.9994	Slope	1.001539	0.90 - 1.10
4.07	4.04	1.0072	Intercept	-0.019336	+/-0.5
2.04	2.01	1.0156			



Wood Buffalo Environmental Association

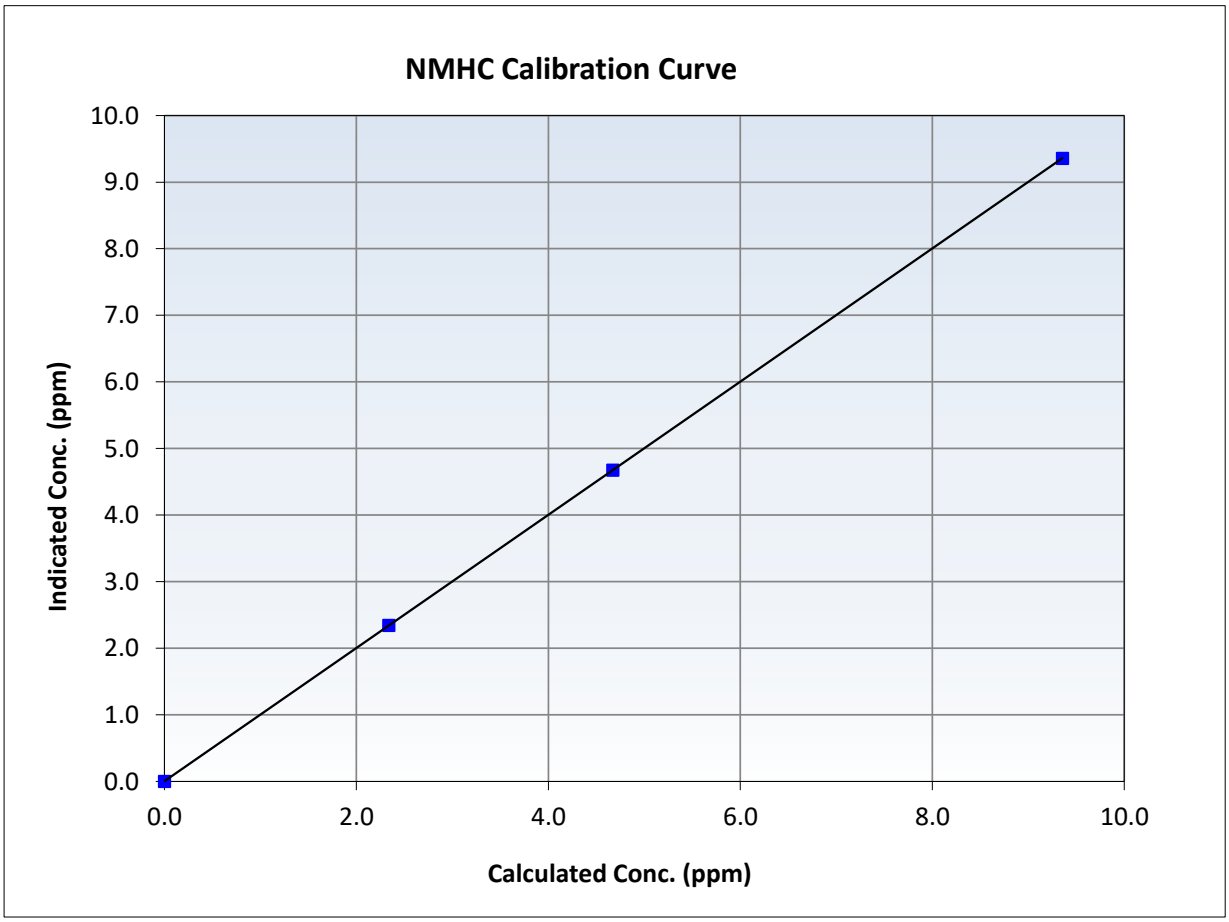
NMHC Calibration Summary

Station Information

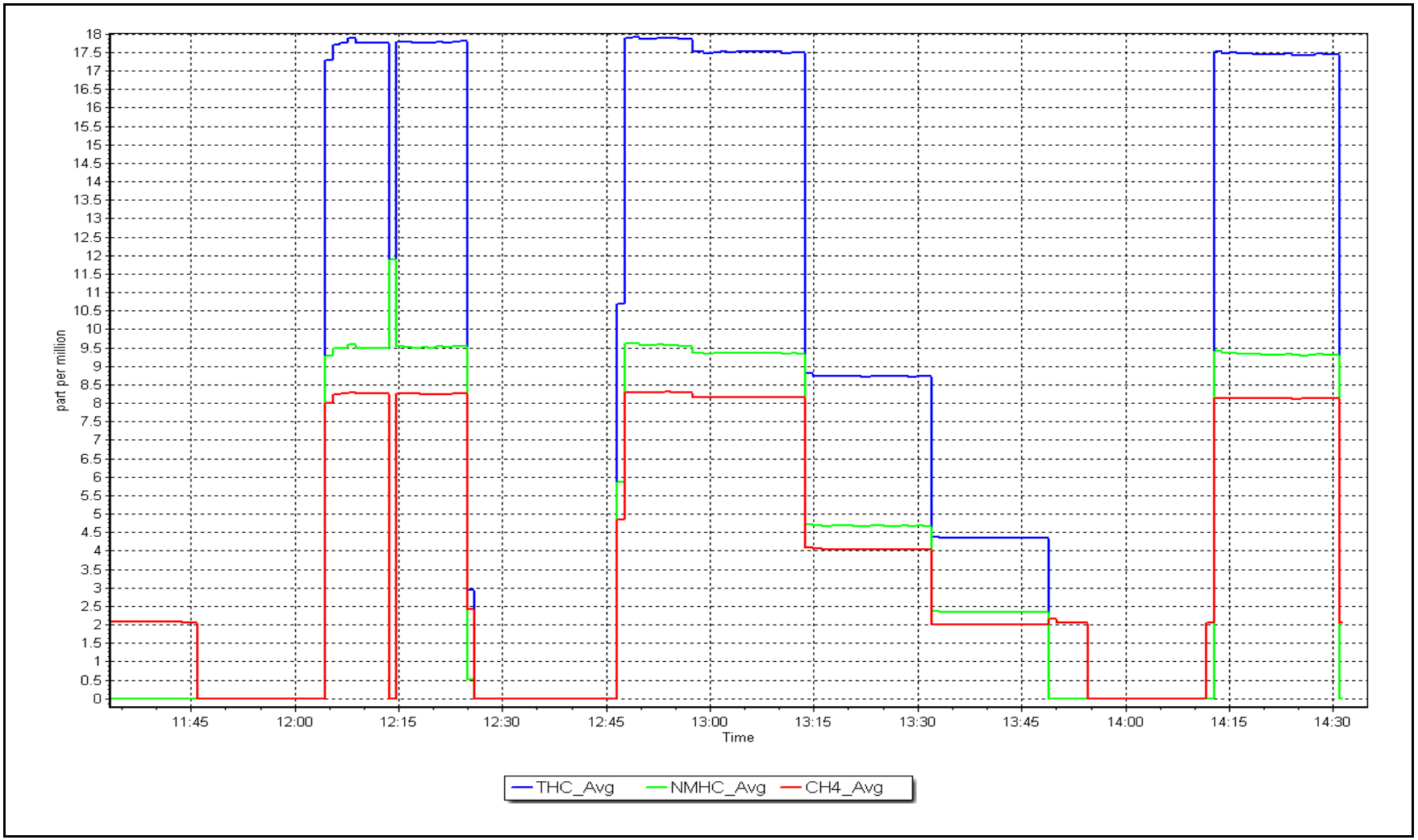
Calibration Date:	December 5, 2025	Previous Calibration:	November 3, 2025
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	11:42	End Time (MST):	14:29
Analyzer make:	Thermo 55i	Analyzer serial #:	1152430011

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.00	0.00	----	Correlation Coefficient	0.999999	*≥0.995*
9.36	9.36	0.9997	Slope	1.000031	*0.90 - 1.10*
4.67	4.68	0.9992	Intercept	0.003949	*+/-0.5*
2.34	2.35	0.9959			



NMHC Calibration Plot Date: December 5, 2025 Location: Ells River



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Ells River
Station number:	AMS 30
Calibration Date:	December 15, 2025
Last Cal Date:	November 14, 2025
Start time (MST):	10:36
End time (MST):	14:50
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0027487	Cal Gas Expiry Date:	January 9, 2032
NOX Cal Gas Conc:	59.30 ppm	NO Cal Gas Conc:	59.10 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	59.30 ppm	Removed Gas NO Conc:	59.10 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	API T700	Serial Number:	5707
ZAG make/model:	API T701H	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	----	----
AF High point	4932	67.7	803.0	800.3	2.7	751.7	747.0	4.8	1.0681	1.0712
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 802.1 ppb	NO = 798.6 ppb
Baseline Corr 1st pt	NO_X = 751.8 ppb	NO = 747.1 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 = -6.7%

*Percent Change NO = -6.9%

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 710321429

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	Finish		Start	Finish
NO coeff or slope:	1.375	1.469	NO bkgnd or offset:	16.1	17.1
NOX coeff or slope:	0.994	0.994	NOX bkgnd or offset:	16.3	17.3
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	200.5	205.3

Calibration Statistics

	Start	Finish
NO_X Cal Slope:	1.001740	0.997623
NO_X Cal Offset:	-2.258752	-0.138644
NO Cal Slope:	1.001748	0.998331
NO Cal Offset:	-3.100468	-0.879981
NO_2 Cal Slope:	0.999891	0.997254
NO_2 Cal Offset:	-0.713116	-0.580450

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.1	0.2	-0.1	----	----
High point	4932	67.7	803.0	800.3	2.7	801.0	798.7	2.3	1.0025	1.0020
Mid point	4966	33.8	400.9	399.5	1.4	399.8	397.1	2.7	1.0027	1.0061
Low point	4983	16.9	200.4	199.8	0.7	199.5	197.7	1.8	1.0047	1.0104
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	----	----
As left span	4932	67.7	803.0	395.1	407.9	800.0	395.1	404.9	1.0037	1.0000
							Average Correction Factor		1.0033	1.0062

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	-0.1	----	----
High GPT point	794.3	390.8	406.2	404.7	1.0037	99.6%
Mid GPT point	794.3	581.9	215.1	213.9	1.0056	99.4%
Low GPT point	794.3	688.9	108.1	106.6	1.0141	98.6%
				Average Correction Factor	1.0078	99.2%

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

NO_X Calibration Summary

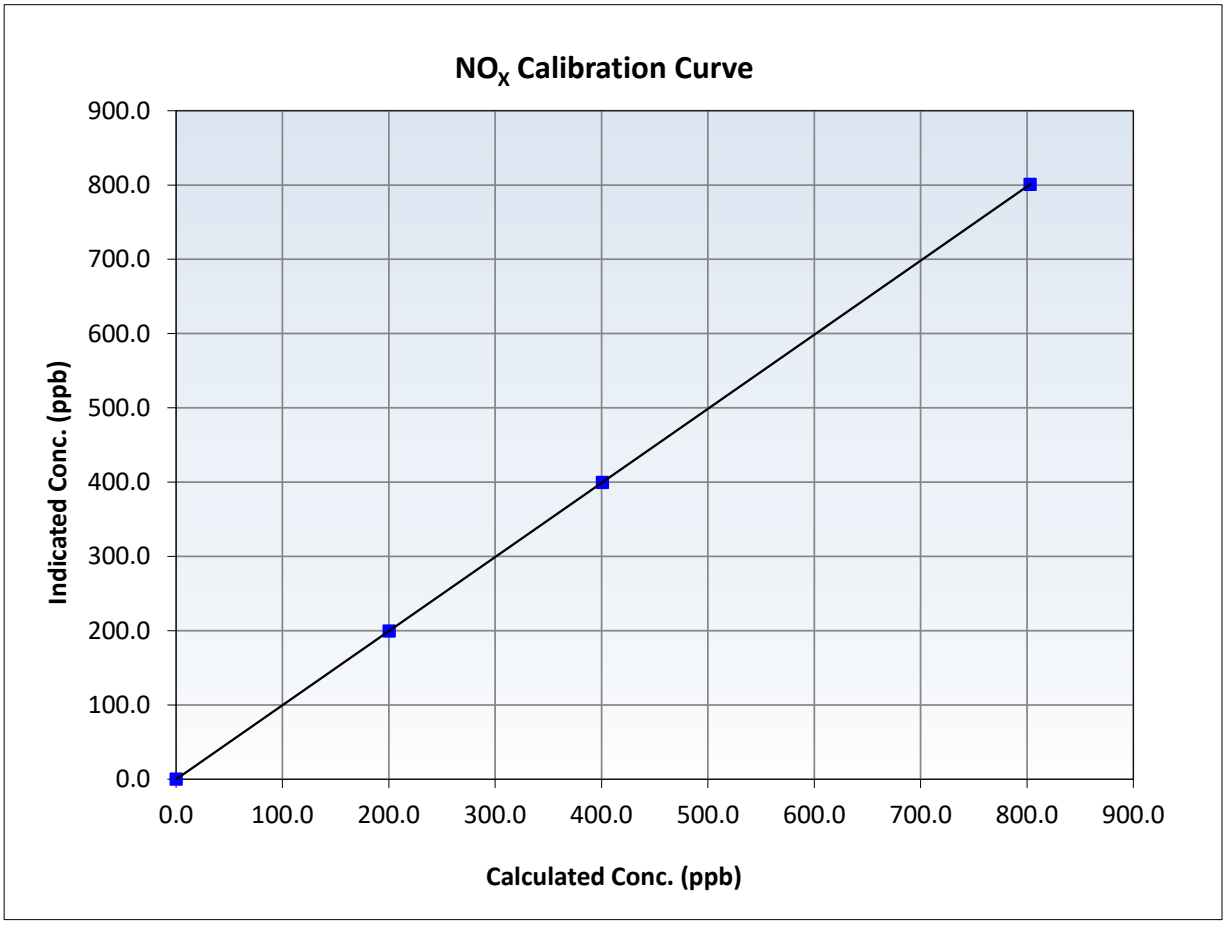
Station Information

Calibration Date:	December 15, 2025	Previous Calibration:	November 14, 2025
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	10:36	End Time (MST):	14:50
Analyzer make:	Thermo 42i	Analyzer serial #:	710321429

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
803.0	801.0	1.0025
400.9	399.8	1.0027
200.4	199.5	1.0047

Statistical Evaluation		*Limits*
Correlation Coefficient	1.000000	*≥0.995*
Slope	0.997623	*0.90 - 1.10*
Intercept	-0.138644	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

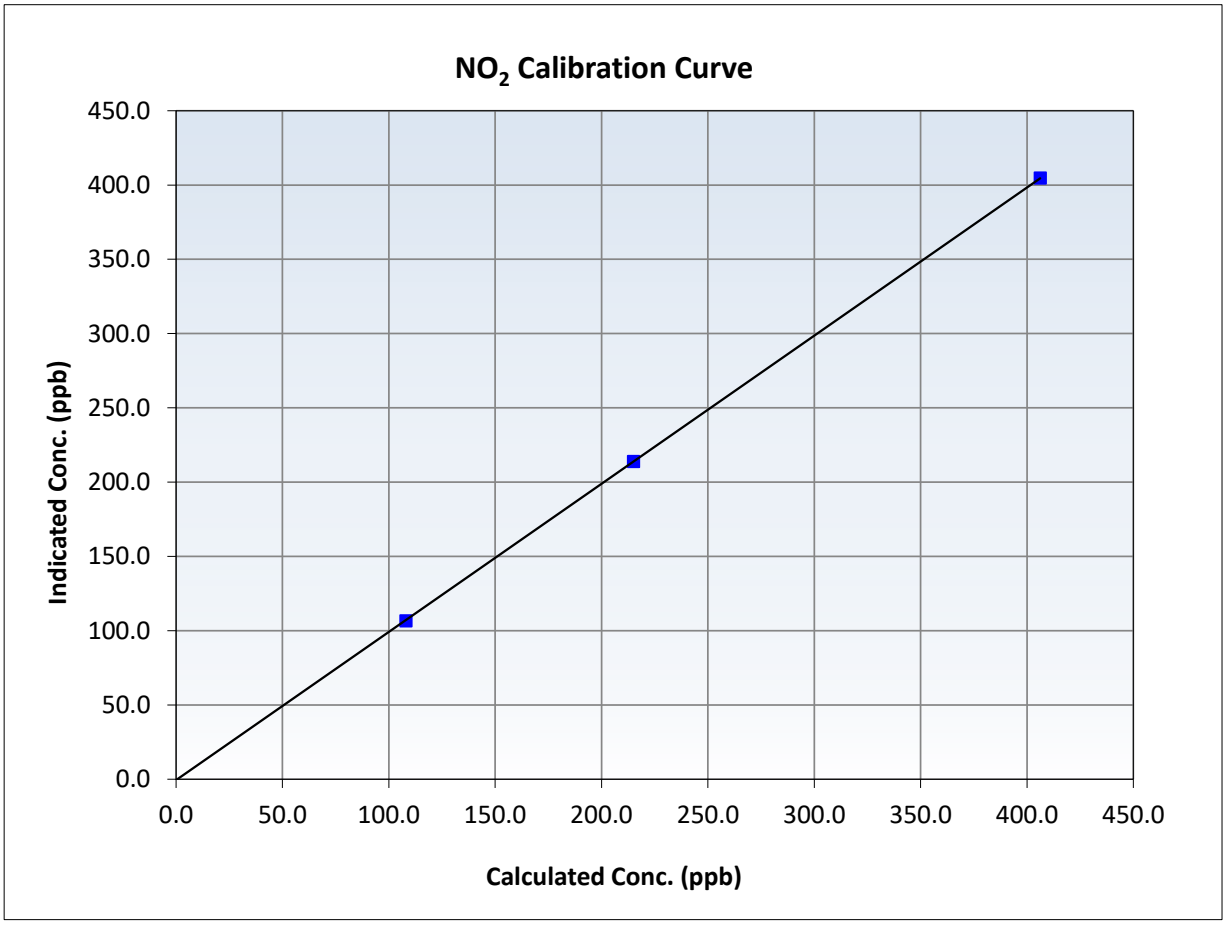
Station Information

Calibration Date:	December 15, 2025	Previous Calibration:	November 14, 2025
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	10:36	End Time (MST):	14:50
Analyzer make:	Thermo 42i	Analyzer serial #:	710321429

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
406.2	404.7	1.0037
215.1	213.9	1.0056
108.1	106.6	1.0141

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999993	*≥0.995*
Slope	0.997254	*0.90 - 1.10*
Intercept	-0.580450	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

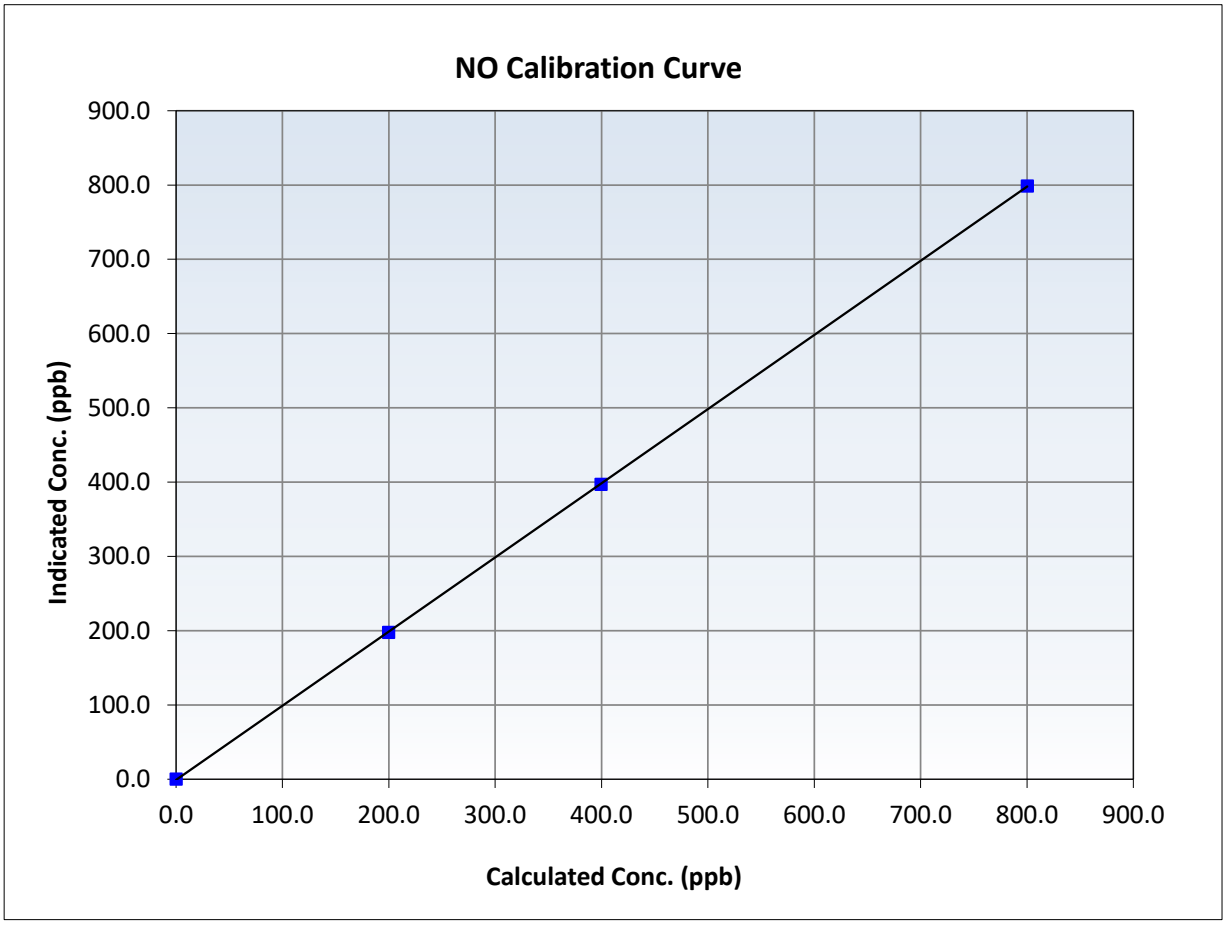
Station Information

Calibration Date:	December 15, 2025	Previous Calibration:	November 14, 2025
Station Name:	Ells River	Station Number:	AMS 30
Start Time (MST):	10:36	End Time (MST):	14:50
Analyzer make:	Thermo 42i	Analyzer serial #:	710321429

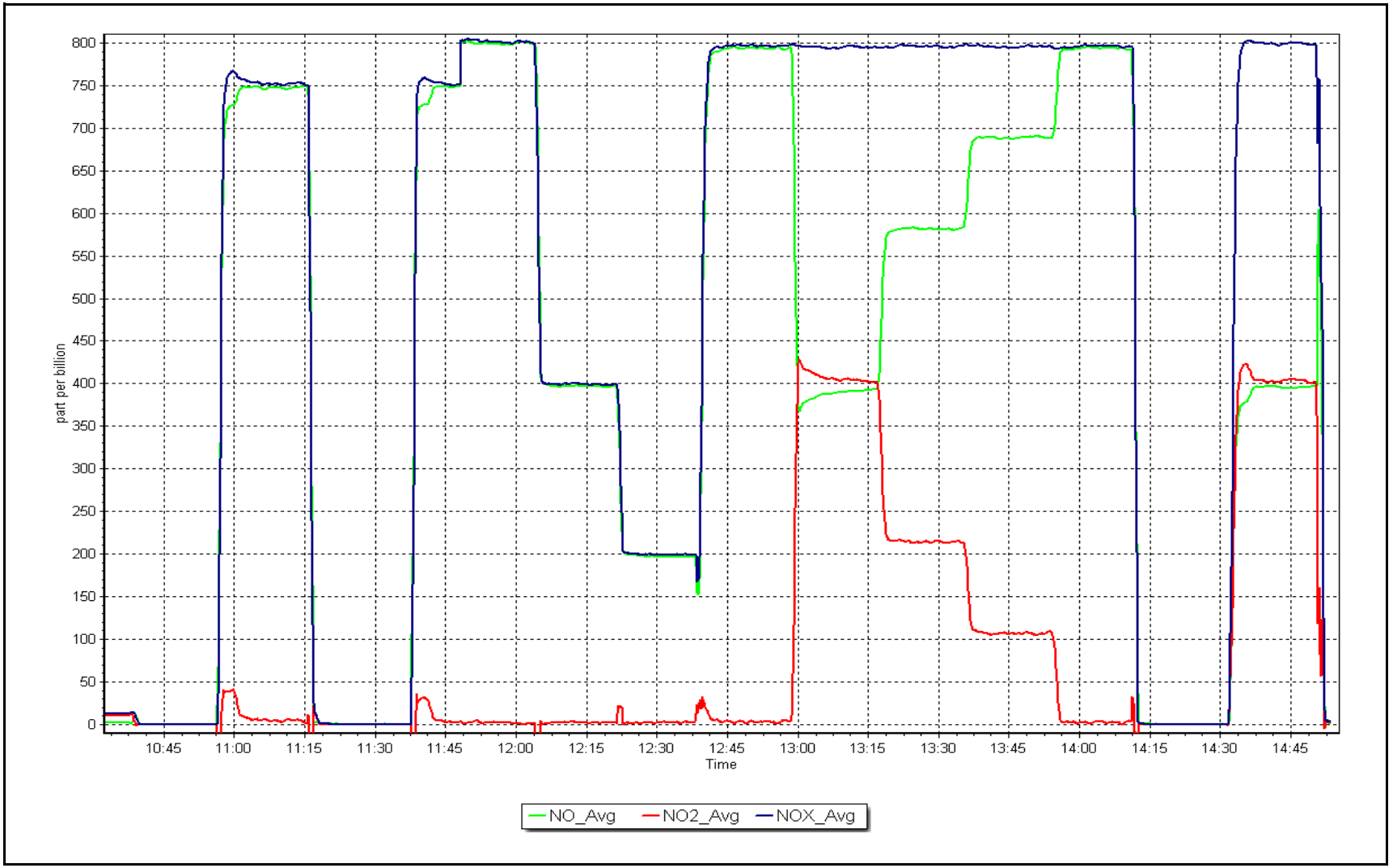
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
800.3	798.7	1.0020
399.5	397.1	1.0061
199.8	197.7	1.0104

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999991	*≥0.995*
Slope	0.998331	*0.90 - 1.10*
Intercept	-0.879981	*+/-20*



NO_X Calibration Plot Date: December 15, 2025 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:	December 15, 2025	Last Cal Date:	November 14, 2025
Start time (MST):	12:41	End time (MST):	13:26
Analyzer Make:	API T640	S/N:	875
Particulate Fraction:	PM2.5		
Flow Meter Make/Model:	Alicat FP-25BT	S/N:	388754
Temp/RH standard:	Alicat FP-25BT	S/N:	388754

Monthly Calibration Test

Parameter	As found	Measured	As left	Adjusted	*(Limits)*
T (^{o}C)	-18.10	-19.23	-18.10	☐	+/- 2 ^{o}C
P (mmHg)	717.50	718.45	717.50	☐	+/- 10 mmHg
Flow (LPM)	5.01	5.02	5.01	☐	+/- 0.25 LPM
PW% (pump)	37	-----	37	☐	>80%
Zero Verification	PM w/o HEPA:	4.60	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: January 30, 2027 — Lot No.: 100128-050-040

Parameter	As found	Post maintenance	As left	Adjusted	*(Limits)*
PMT Peak Test	9.00	10.60	10.60	☐	+/- 0.5

Date Optical Chamber Cleaned: December 15, 2025

Date Disposable Filter Changed: December 15, 2025

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

Annual Maintenance

Date Sample Tube Cleaned: June 18, 2025

Date RH/T Sensor Cleaned: June 18, 2025

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

Calibration by: Jan Castro

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS31
BLACKROD
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Blackrod	Station number:	AMS 31
Calibration Date:	December 10, 2025	Last Cal Date:	November 27, 2025
Start time (MST):	14:58	End time (MST):	17:48
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				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.000405	1.002022	Backgd or Offset:	40.4	43.4
Calibration intercept:	-0.041621	-0.682036	Coeff or Slope:	1.019	1.051

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.6	----
As found High point	4921	79.5	798.9	776.7	1.029
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	776.1	Previous response	799.2	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	-0.3	----
High point	4921	79.5	798.9	800.0	0.999
Mid point	4960	39.8	400.0	400.0	1.000
Low point	4980	19.9	200.0	199.3	1.004
As left zero	5000	0.0	0.0	-0.4	----
As left span	4921	79.5	798.9	800.4	0.998
				Average Correction Factor:	1.001

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

SO_2 Calibration Summary

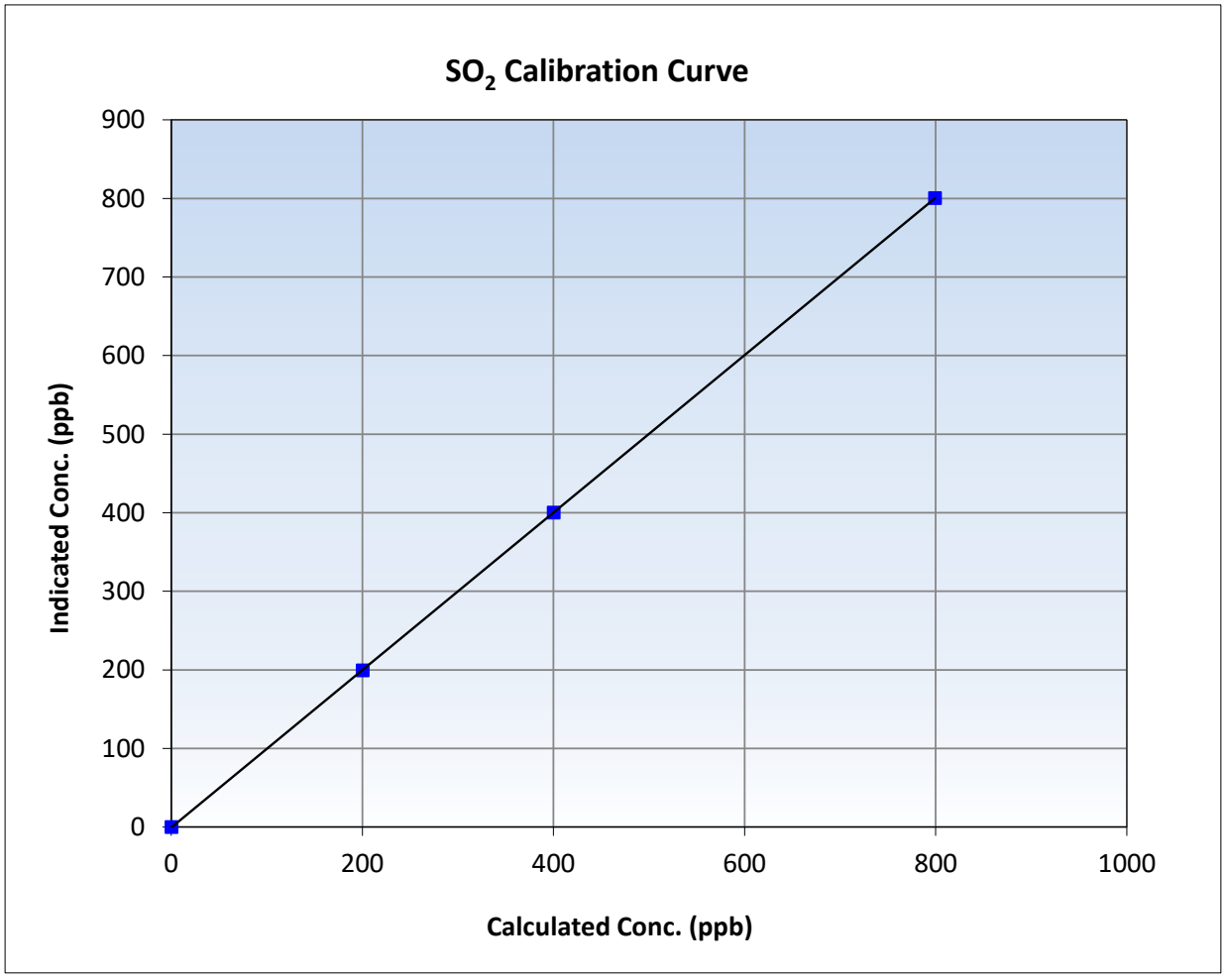
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 27, 2025
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	14:58	End Time (MST):	17:48
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290014

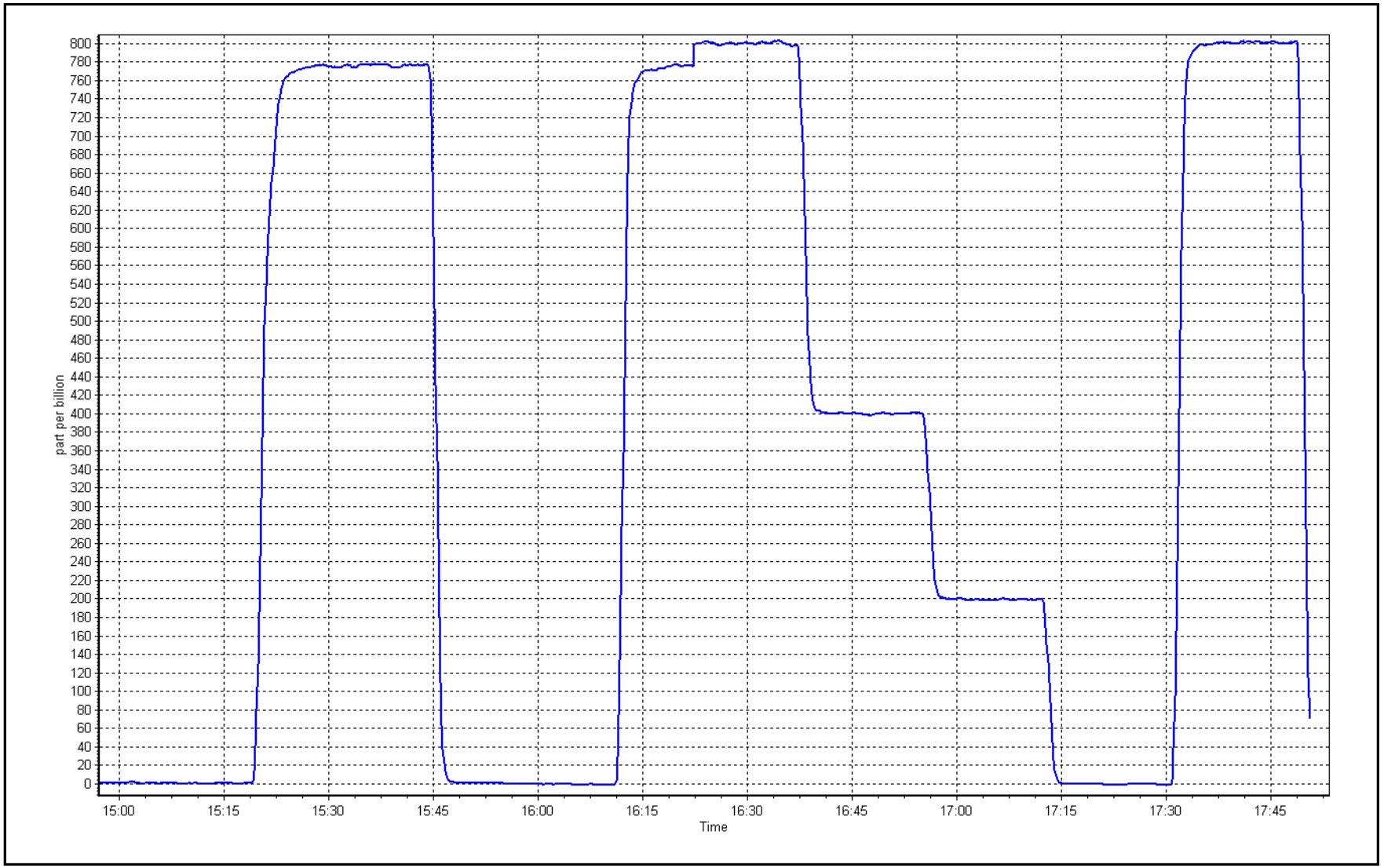
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.3	----
798.9	800.0	0.9986
400.0	400.0	1.0000
200.0	199.3	1.0035

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999999	*≥0.995*
Slope	1.002022	*0.90 - 1.10*
Intercept	-0.682036	*+/-30*



SO2 Calibration Plot Date: December 10, 2025 Location: Blackrod



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Blackrod	Station number:	AMS 31
Calibration Date:	December 11, 2025	Last Cal Date:	November 12, 2025
Start time (MST):	8:50	End time (MST):	12:54
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.42	ppm	Cal Gas Exp Date:	March 19, 2027
Cal Gas Cylinder #:	DT0016926			
Removed Cal Gas Conc:	5.42	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	Teledyne API T700		Serial Number:	1220
ZAG Make/Model:	Teledyne API N701H		Serial Number:	72

Analyzer Information

Analyzer make:	Thermo 43iQTL		Analyzer serial #:	12228021056	
Converter make:	Global		Converter serial #:	2023-266	
Analyzer Range	0 - 100 ppb		Converter Temp:	325	degC
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.006617	1.006763	Backgd or Offset:	2.54	3.26
Calibration intercept:	0.179606	-0.000488	Coeff or Slope:	0.944	0.959

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.4	----
As found High point	4926	73.8	80.0	80.7	0.996
As found Mid point	4963	36.9	40.0	40.8	0.990
As found Low point	4982	18.5	20.1	20.5	0.998
New cylinder response					
Baseline Corr As found:	80.3	Prev response:	80.71	*% change:	-0.5%
Baseline Corr 2nd AF pt:	40.4	AF Slope:	1.004191	AF Intercept:	0.439557
Baseline Corr 3rd AF pt:	20.1	AF Correlation:	0.999986	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	-0.1	----
High point	4926	73.8	80.0	80.4	0.995
Mid point	4963	36.9	40.0	40.6	0.985
Low point	4982	18.5	20.1	20.1	0.998
As left zero	5000	0.0	0.0	-0.1	----
As left span	4926	73.8	80.0	81.0	0.988
SO2 Scrubber Check	4921	79.5	794.9	-0.1	----
Date of last scrubber change:		27-Aug-25		Ave Corr Factor	0.993
Date of last converter efficiency test:		October 9, 2025			

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

H_2S Calibration Summary

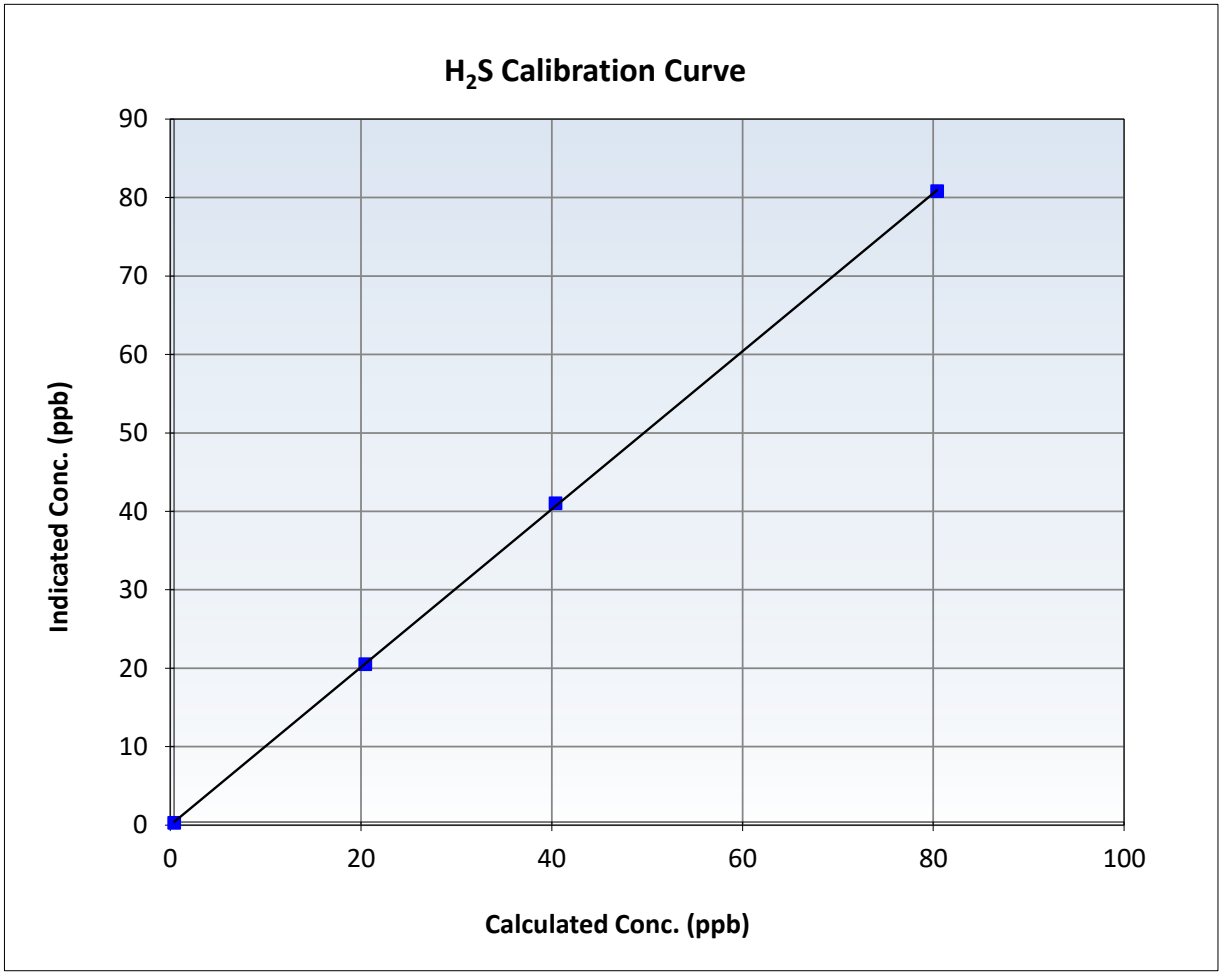
Station Information

Calibration Date:	December 11, 2025	Previous Calibration:	November 12, 2025
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	8:50	End Time (MST):	12:54
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12228021056

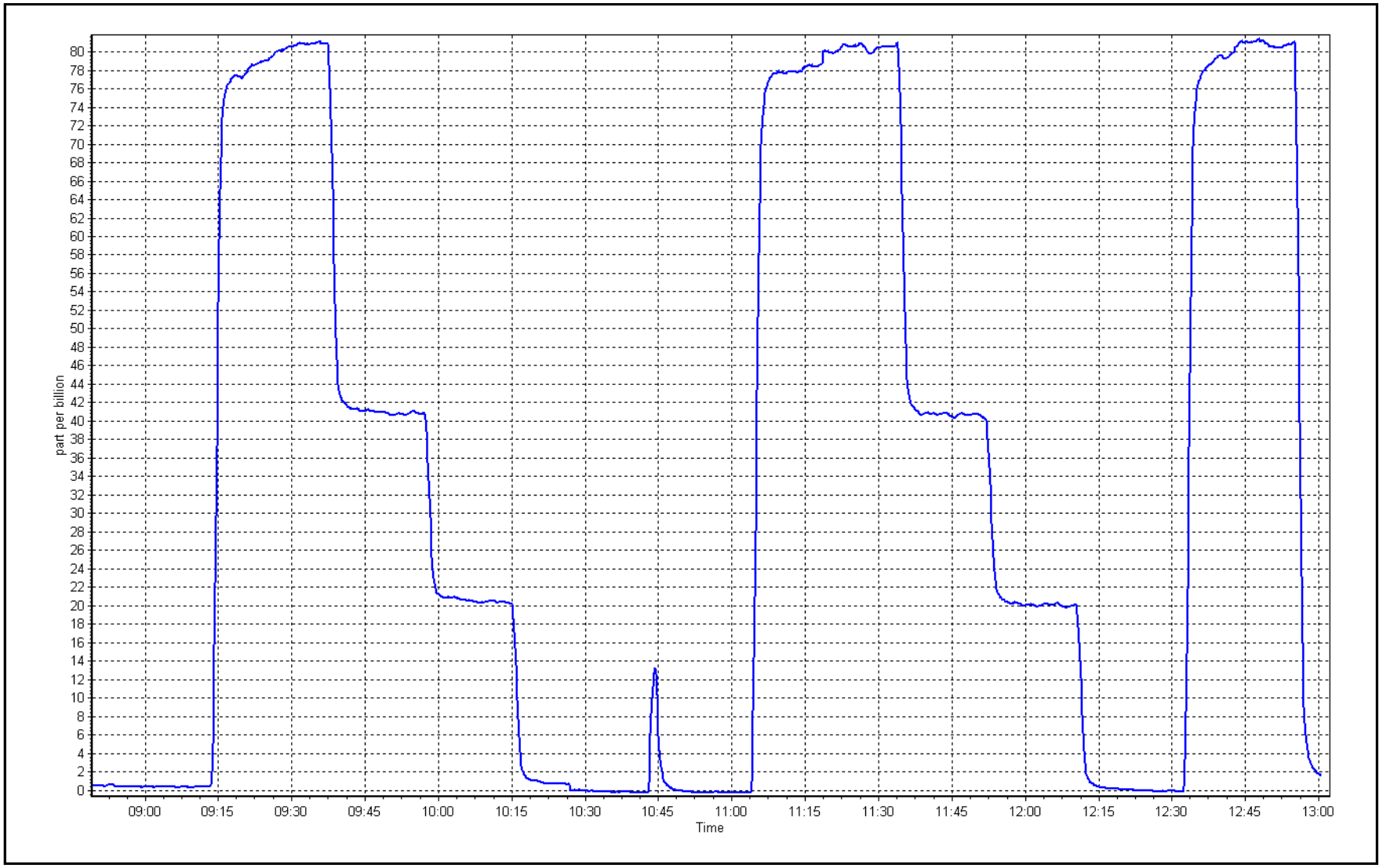
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
80.0	80.4	0.9951
40.0	40.6	0.9852
20.1	20.1	0.9976

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999959	*≥0.995*
Slope	1.006763	*0.90 - 1.10*
Intercept	-0.000488	*+/-3*



H_2S Calibration Plot Date: December 11, 2025 Location: Blackrod



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Blackrod
Station number:	AMS 31
Calibration Date:	December 10, 2025
Last Cal Date:	November 13, 2025
Start time (MST):	10:55
End time (MST):	14:58
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0035071	Cal Gas Expiry Date:	January 9, 2032
NOX Cal Gas Conc:	59.30 ppm	NO Cal Gas Conc:	59.10 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	59.30 ppm	Removed Gas NO Conc:	59.10 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	1220
ZAG make/model:	Teledyne API N701H	Serial Number:	72

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	----	----
AF High point	4932	67.7	803.0	800.3	2.7	829.5	826.2	3.3	0.9680	0.9685
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 802.8 ppb	NO = 800.4 ppb
Baseline Corr 1st pt	NO_X = 829.5 ppb	NO = 826.3 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 r^2:	*Percent Change	NO_X = 3.2%
As found	NO r^2:	*Percent Change	NO = 3.1%
As found	NO_2 r^2:	Nx Sl:	Nx Int:
		NO Sl:	NO Int:
		NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1173480006

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	0.967	0.936	NO bkgnd or offset:	2.3	2.2
NOX coeff or slope:	0.993	0.994	NOX bkgnd or offset:	2.3	2.2
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	145.3	145.9

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	1.000142	0.999502
NO_X Cal Offset:	-0.297959	0.001869
NO Cal Slope:	1.001672	1.002086
NO Cal Offset:	-1.199111	-1.118997
NO_2 Cal Slope:	0.998566	1.014841
NO_2 Cal Offset:	-1.057289	-0.464015

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
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	802.6	801.4	1.2	1.0005	0.9986
Mid point	4966	33.8	400.9	399.5	1.4	400.8	398.7	2.1	1.0002	1.0021
Low point	4983	16.9	200.4	199.8	0.7	200.0	197.8	2.1	1.0022	1.0099
As left zero	5000	0.0	0.0	0.0	0.0	0.3	0.1	0.1	----	----
As left span	4932	67.7	803.0	404.7	398.3	790.0	404.7	385.4	1.0164	1.0000
								Average Correction Factor	1.0010	1.0035

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.1	----	----
High GPT point	786.9	409.5	380.1	385.5	0.9860	101.4%
Mid GPT point	786.9	595.4	194.2	196.6	0.9878	101.2%
Low GPT point	786.9	688.0	101.6	101.9	0.9971	100.3%
				Average Correction Factor	0.9903	101.0%

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

NO_X Calibration Summary

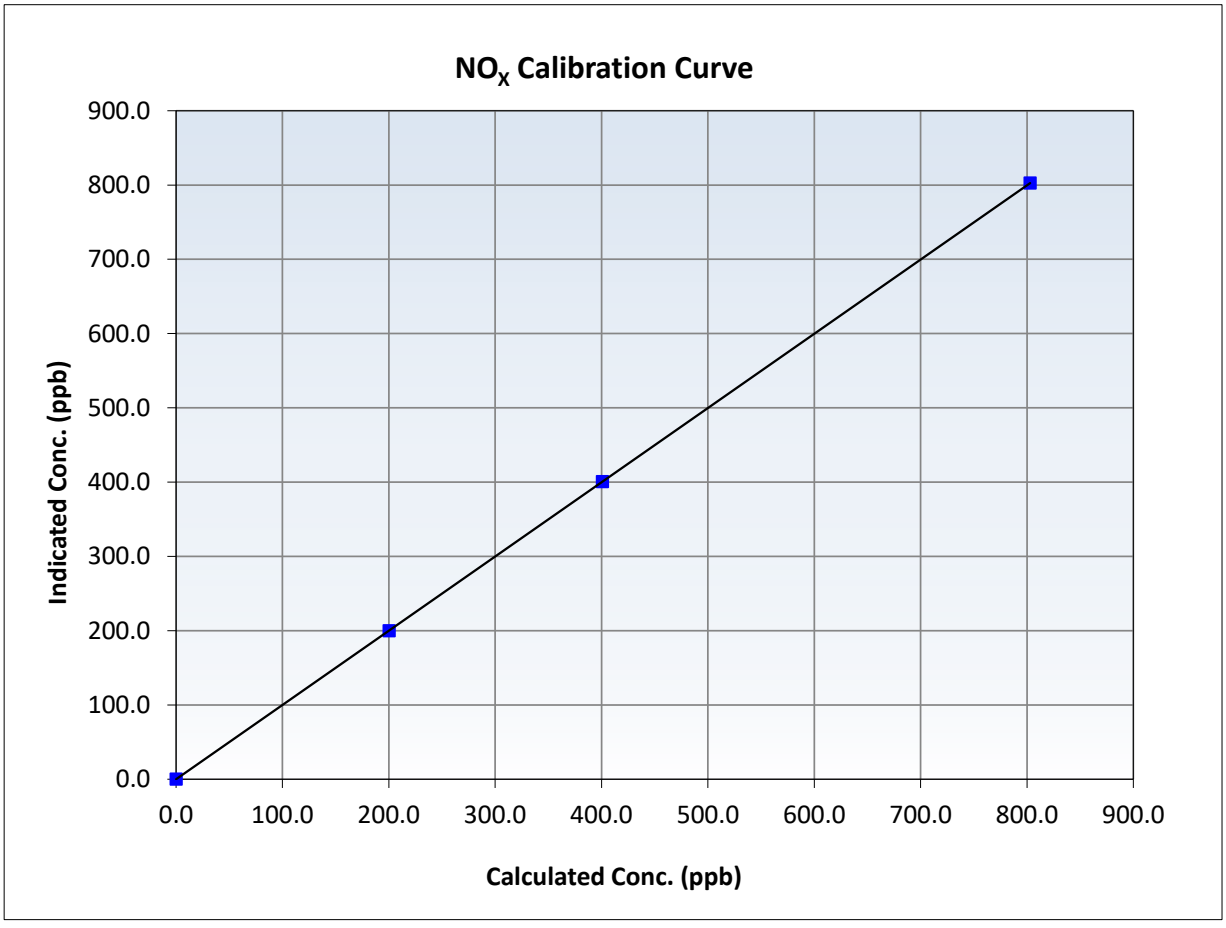
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 13, 2025
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	10:55	End Time (MST):	14:58
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
803.0	802.6	1.0005
400.9	400.8	1.0002
200.4	200.0	1.0022

Statistical Evaluation		Limits
Correlation Coefficient	1.000000	≥0.995
Slope	0.999502	0.90 - 1.10
Intercept	0.001869	+/-20



Wood Buffalo Environmental Association

NO_2 Calibration Summary

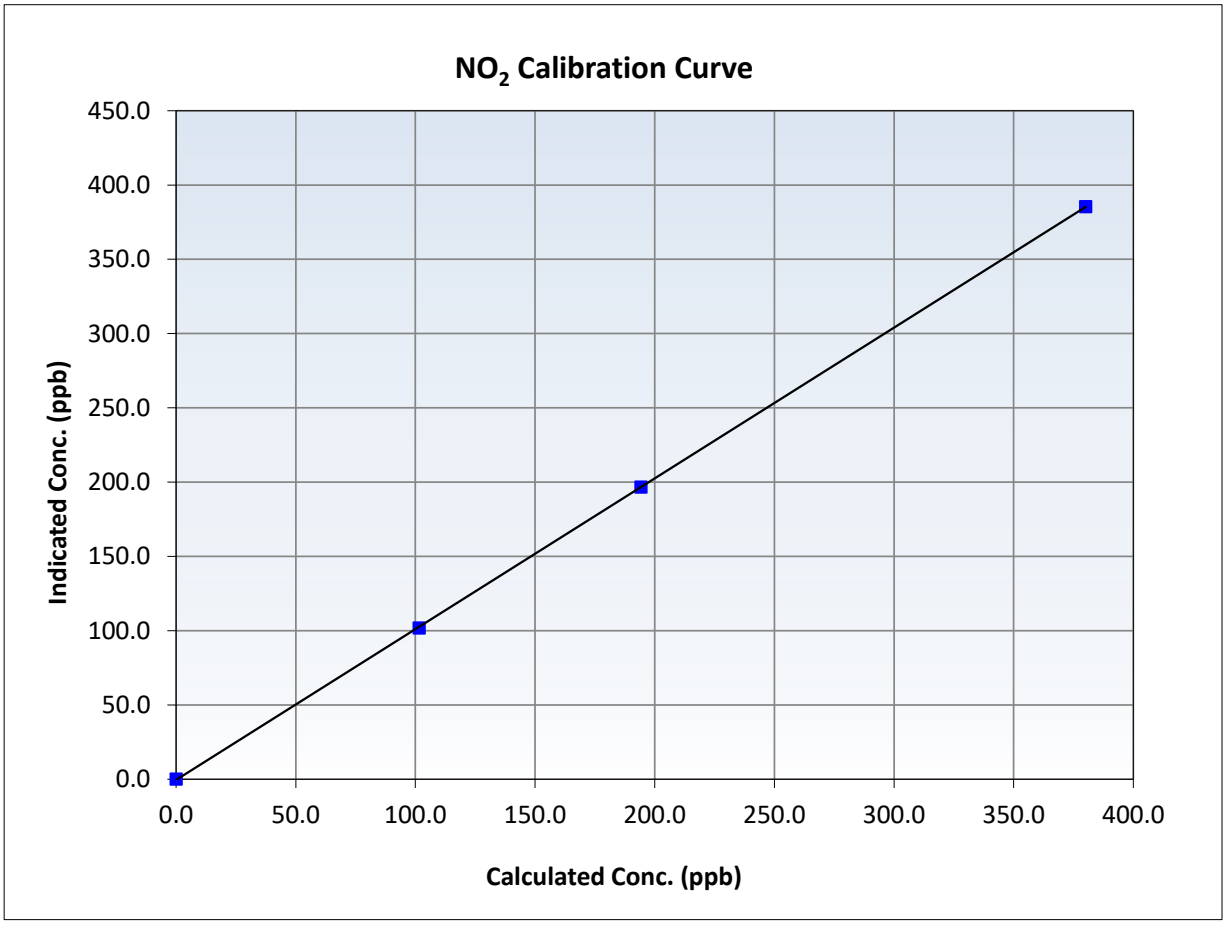
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 13, 2025
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	10:55	End Time (MST):	14:58
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
380.1	385.5	0.9860
194.2	196.6	0.9878
101.6	101.9	0.9971

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999988	*≥0.995*
Slope	1.014841	*0.90 - 1.10*
Intercept	-0.464015	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

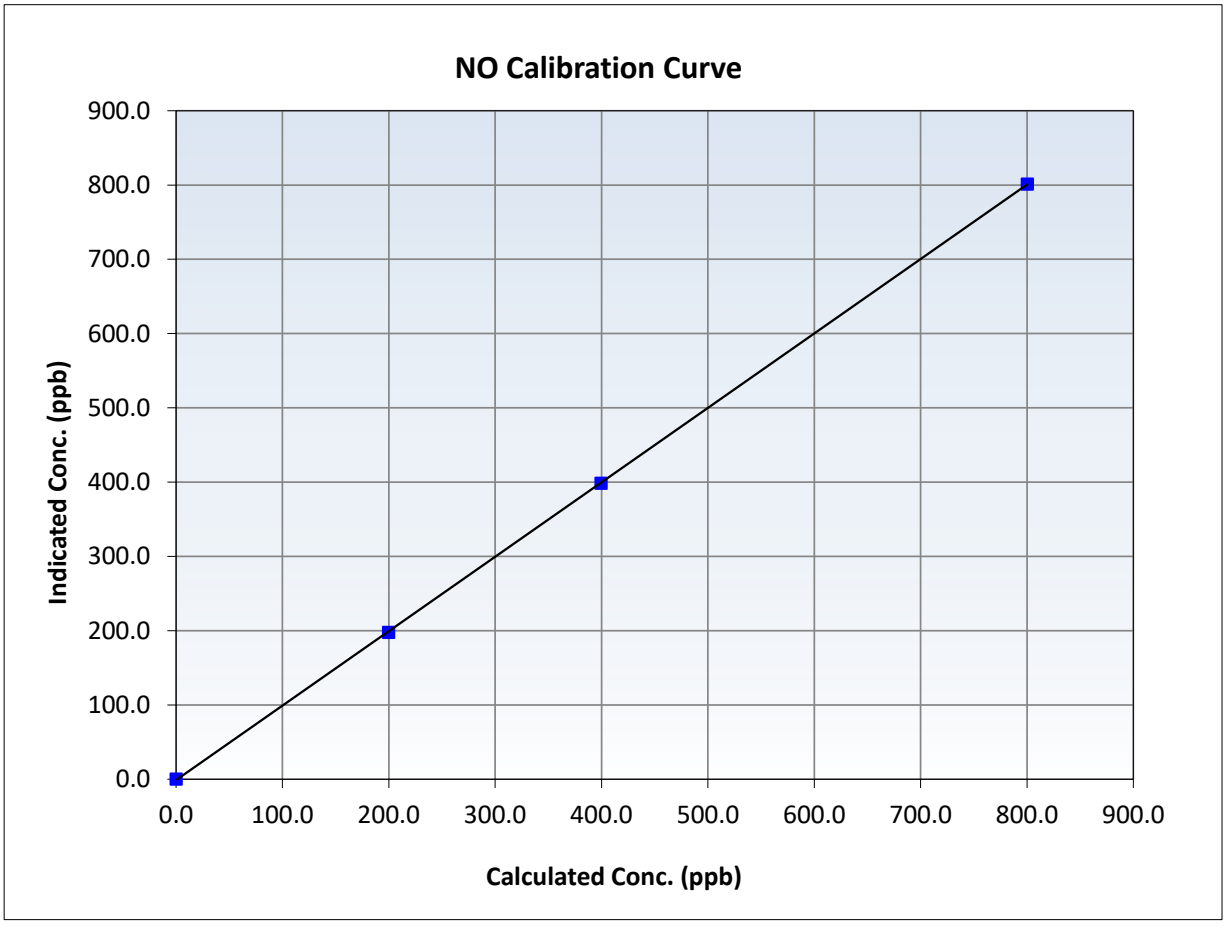
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 13, 2025
Station Name:	Blackrod	Station Number:	AMS 31
Start Time (MST):	10:55	End Time (MST):	14:58
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

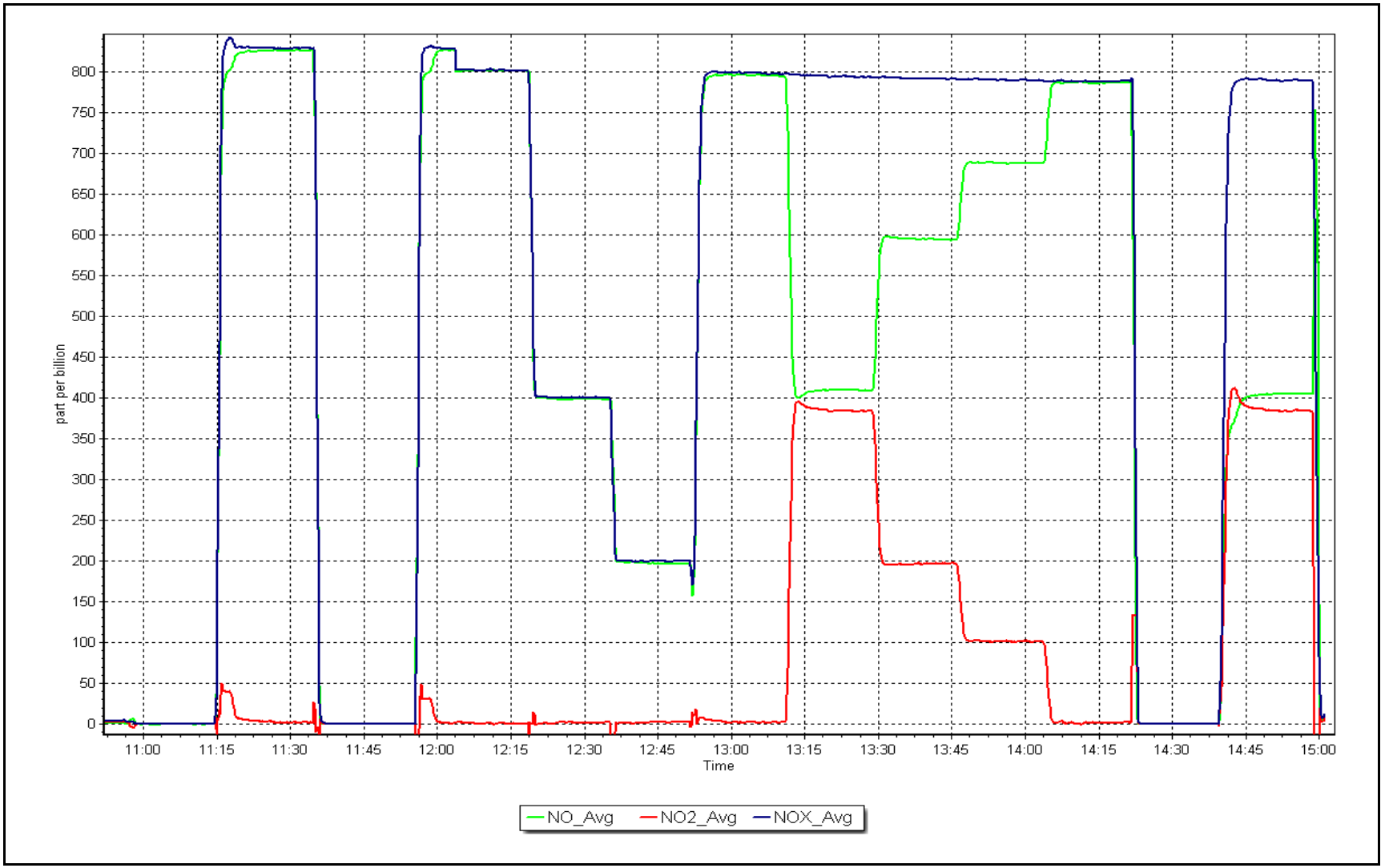
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
800.3	801.4	0.9986
399.5	398.7	1.0021
199.8	197.8	1.0099

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999989	*≥0.995*
Slope	1.002086	*0.90 - 1.10*
Intercept	-1.118997	*+/-20*



NO_X Calibration Plot Date: December 10, 2025 Location: Blackrod



CALS_500

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS33
MONDAY CREEK
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Monday Creek	Station number:	AMS 33
Calibration Date:	December 2, 2025	Last Cal Date:	November 6, 2025
Start time (MST):	9:18	End time (MST):	11:59
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				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.999672	1.002924	Backgd or Offset:	31.1	31.1
Calibration intercept:	0.861611	0.922443	Coeff or Slope:	0.983	0.990

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4921	79.1	800.8	791.2	1.012
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	791.1	Previous response	801.4	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4921	79.1	800.8	803.4	0.997
Mid point	4961	39.5	399.9	403.4	0.991
Low point	4980	19.8	200.5	201.7	0.994
As left zero	5000	0.0	0.0	0.2	----
As left span	4921	79.1	800.8	798.5	1.003
				Average Correction Factor:	0.994

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

SO_2 Calibration Summary

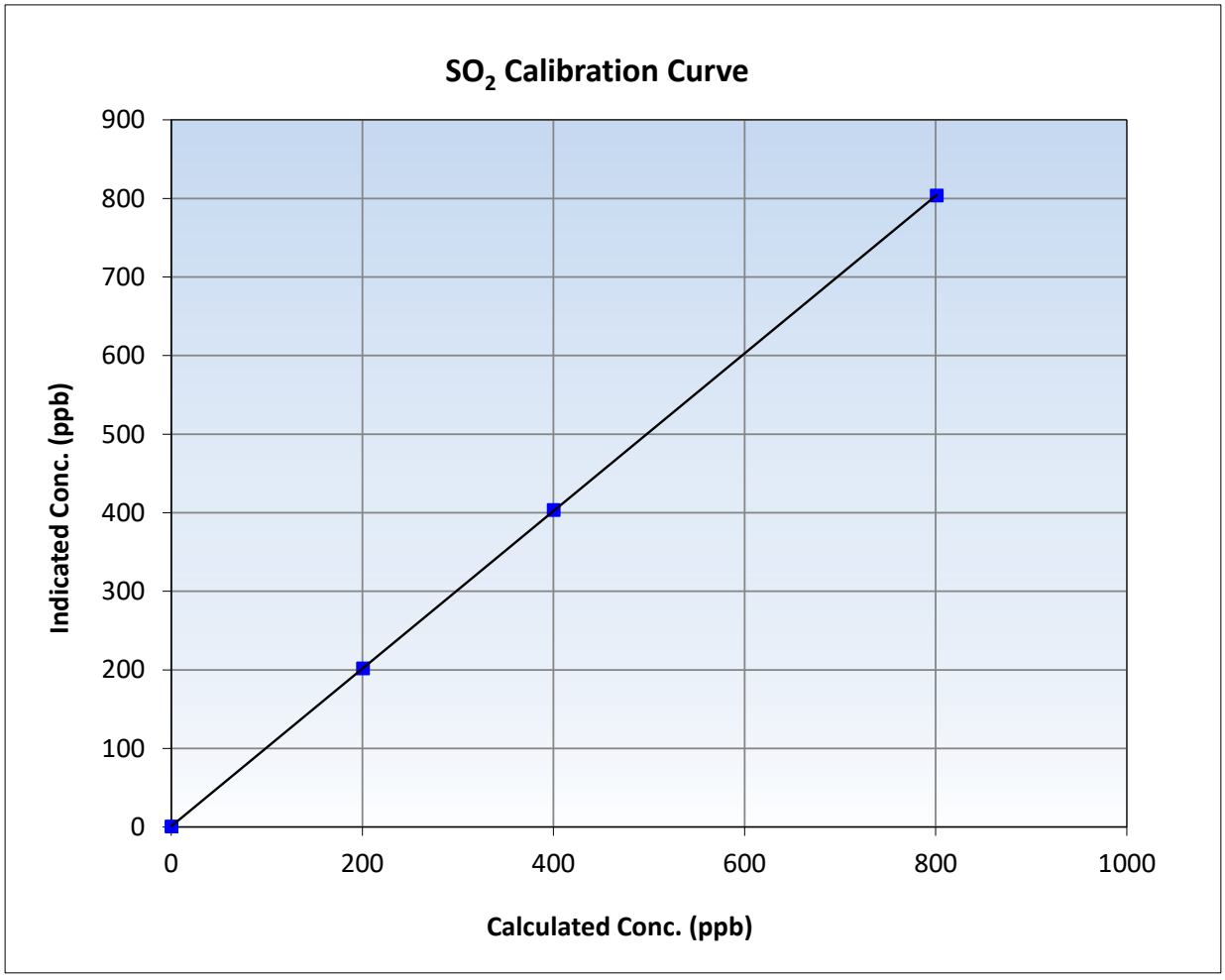
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 6, 2025
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	9:18	End Time (MST):	11:59
Analyzer make:	Thermo 43i	Analyzer serial #:	1152430005

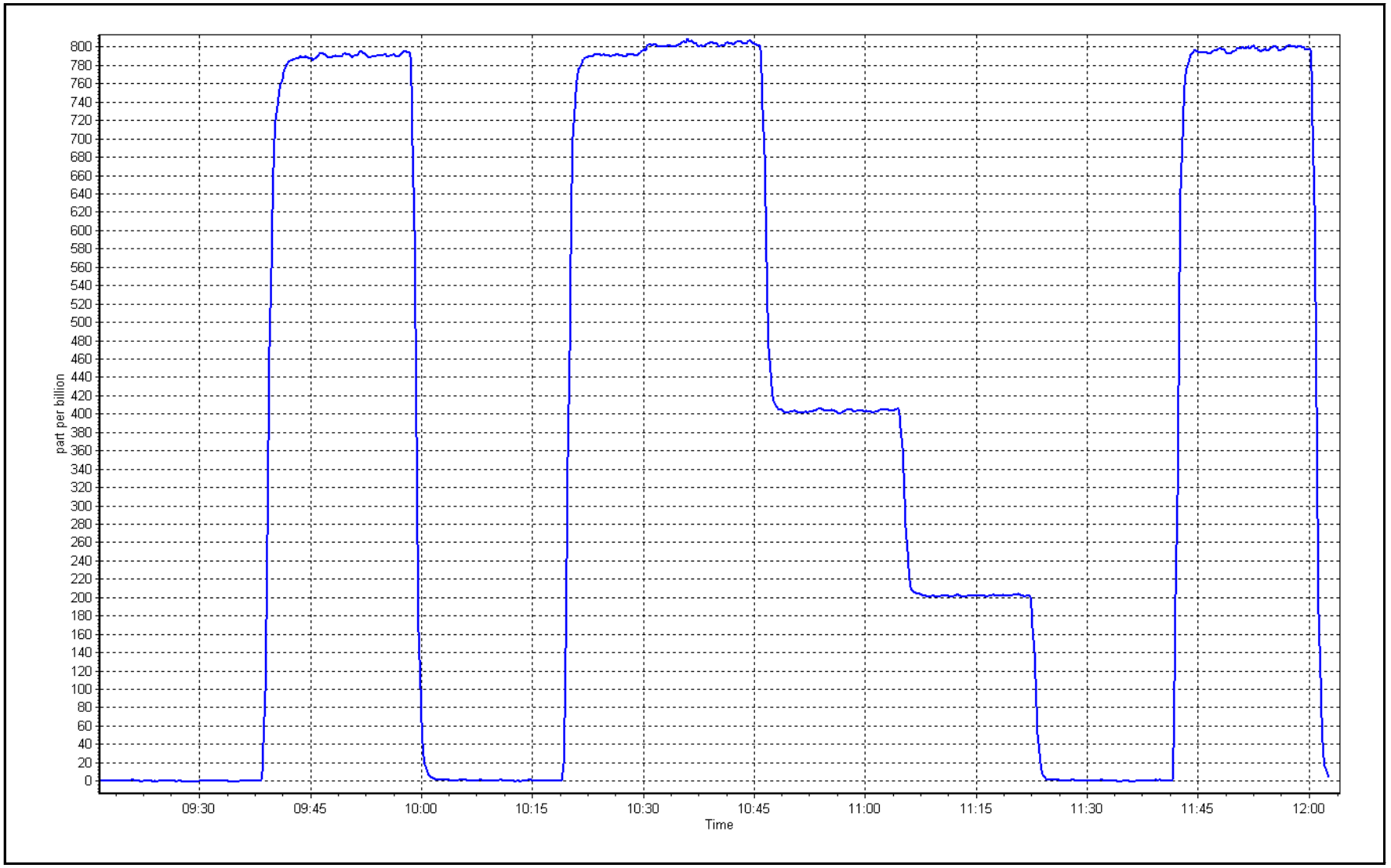
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.4	----
800.8	803.4	0.9968
399.9	403.4	0.9912
200.5	201.7	0.9939

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999992	*≥0.995*
Slope	1.002924	*0.90 - 1.10*
Intercept	0.922443	*+/-30*



SO2 Calibration Plot Date: December 2, 2025 Location: Monday Creek



Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name:	Monday Creek	Station number:	AMS 33
Calibration Date:	December 1, 2025	Last Cal Date:	November 20, 2025
Start time (MST):	11:49	End time (MST):	15:33
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.05	ppm	Cal Gas Exp Date:	November 15, 2026
Cal Gas Cylinder #:	DT0014831			
Removed Cal Gas Conc:	5.05	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	Teledyne API T700		Serial Number:	3253
ZAG Make/Model:	Teledyne T701H		Serial Number:	832

Analyzer Information

Analyzer make:	Thermo 43iQTL		Analyzer serial #:	12333331547
Converter make:	Global 150		Converter serial #:	2022-196
Analyzer Range	0 - 100 ppb		Converter Temp:	325 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	1.000426	1.004855	Backgd or Offset:	1.3	1.3
Calibration intercept:	0.238404	0.358389	Coeff or Slope:	1.082	1.100

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.2	----
As found High point	4921	79.2	80.0	80.6	0.995
As found Mid point	4960	39.6	40.0	40.7	0.988
As found Low point	4980	19.8	20.0	20.6	0.980
New cylinder response					

Baseline Corr As found:	80.4	Prev response:	80.26	*% change:	0.2%
Baseline Corr 2nd AF pt:	40.5	AF Slope:	1.004284	AF Intercept:	0.378384
Baseline Corr 3rd AF pt:	20.4	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) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4921	79.2	80.0	80.7	0.991
Mid point	4960	39.6	40.0	40.6	0.985
Low point	4980	19.8	20.0	20.5	0.976
As left zero	5000	0.0	0.0	0.3	----
As left span	4921	79.2	80.0	80.8	0.990
SO2 Scrubber Check	4921	79.1	791.0	0.0	----

Date of last scrubber change:	11-Apr-24	Ave Corr Factor	0.984
Date of last converter efficiency test:	October 22, 2025		

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

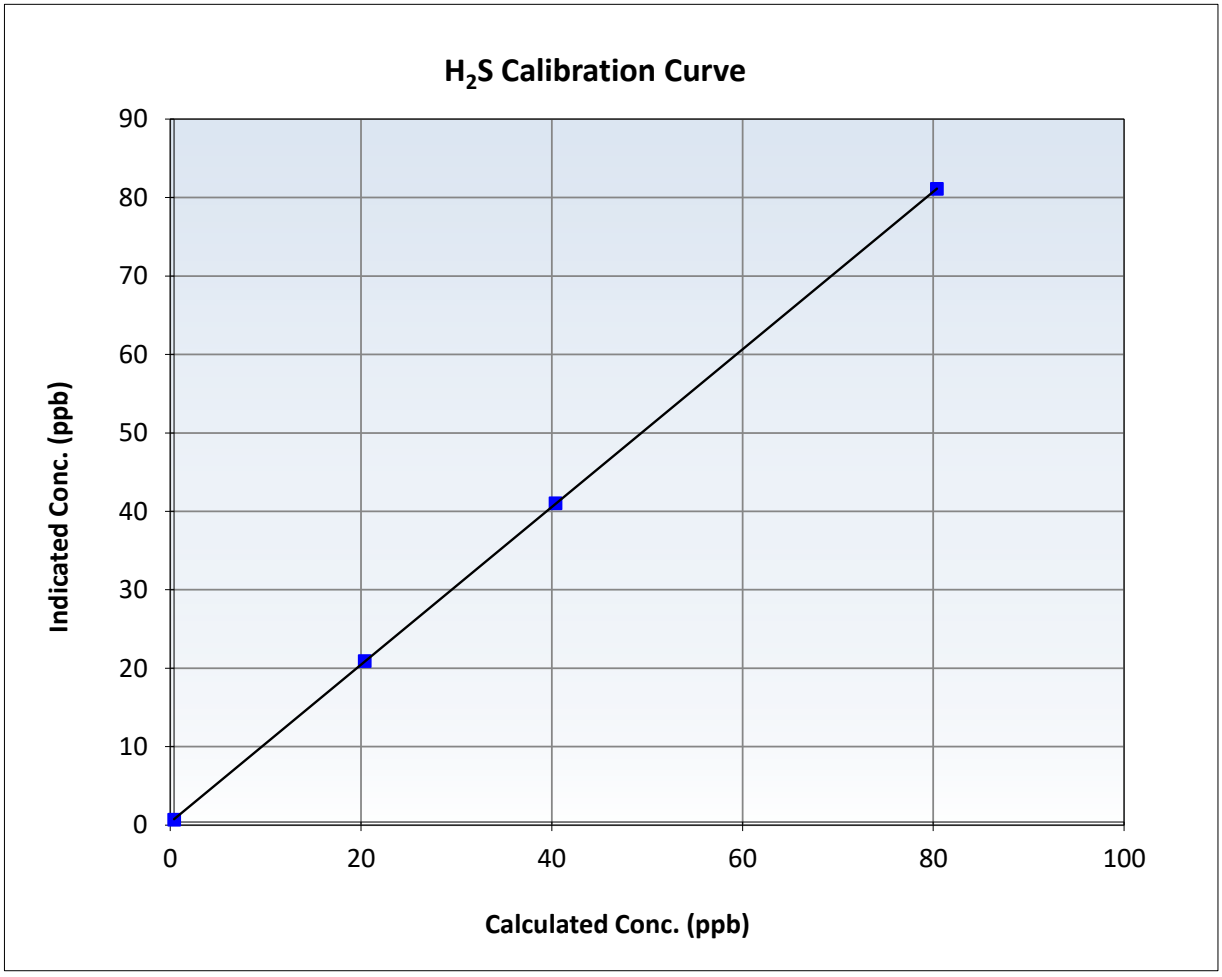
Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 20, 2025
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:49	End Time (MST):	15:33
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12333331547

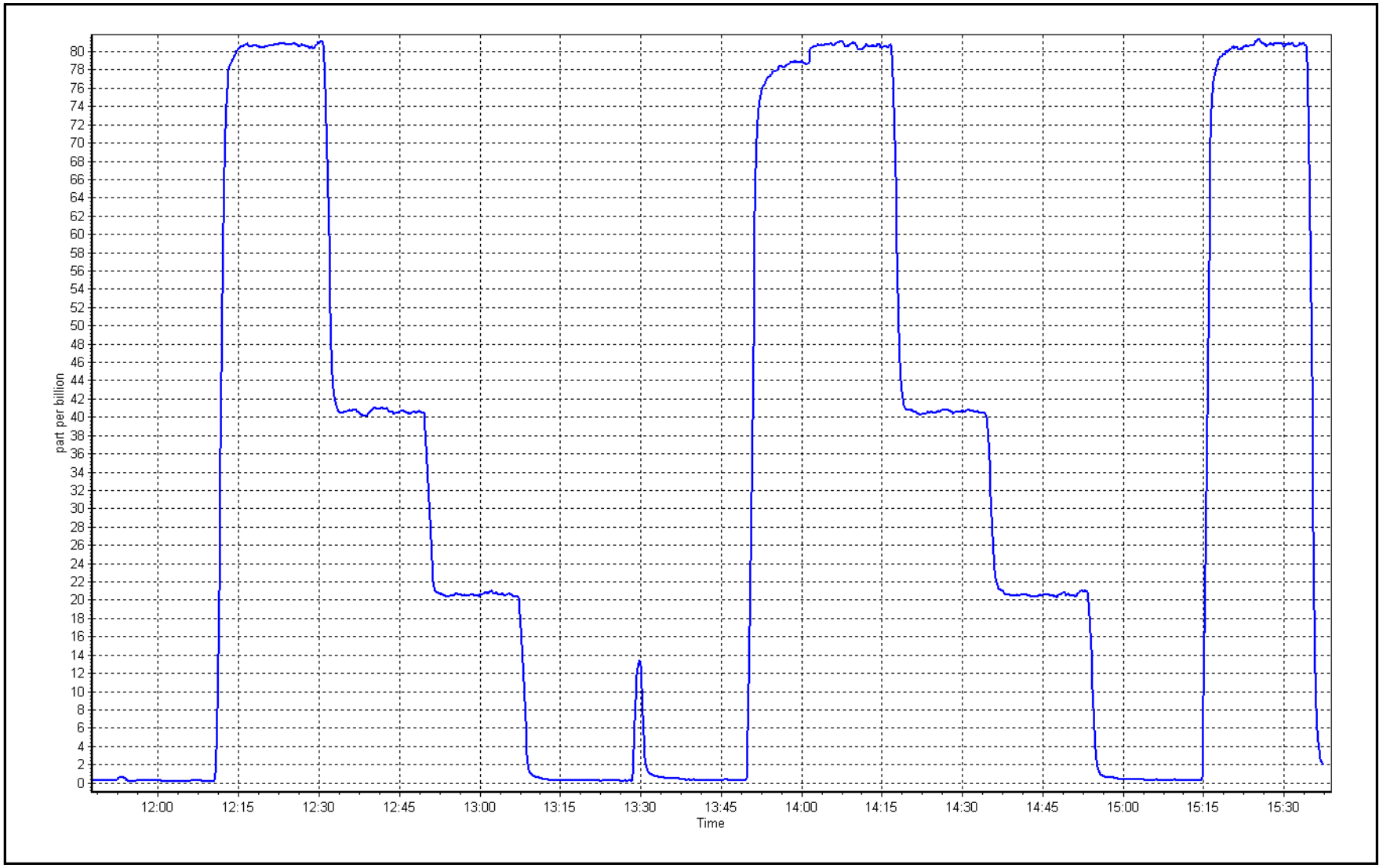
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.3	----
80.0	80.7	0.9912
40.0	40.6	0.9852
20.0	20.5	0.9756

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999997	*≥0.995*
Slope	1.004855	*0.90 - 1.10*
Intercept	0.358389	*+/-3*



H2S Calibration Plot Date: December 1, 2025 Location: Monday Creek



CALS_507

Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Monday Creek
Station number:	AMS 33
Calibration Date:	December 1, 2025
Last Cal Date:	November 6, 2025
Start time (MST):	11:49
End time (MST):	16:10
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	CC755290	Cal Gas Expiry Date:	March 11, 2031
NOX Cal Gas Conc:	48.90 ppm	NO Cal Gas Conc:	48.70 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	48.90 ppm	Removed Gas NO Conc:	48.70 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T750	Serial Number:	281
ZAG make/model:	Teledyne API 751H	Serial Number:	530

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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.1	-0.2	0.1	----	----
AF High point	4918	82.1	802.9	799.6	3.3	795.5	793.7	1.8	1.0092	1.0072
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 796.4 ppb	NO = 793.7 ppb
Baseline Corr 1st pt	NO_X = 795.6 ppb	NO = 793.9 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 r^2:	*Percent Change	NO_X = -0.1%
As found	NO r^2:	*Percent Change	NO = 0.0%
As found	NO_2 r^2:	Nx Sl:	Nx Int:
		NO Sl:	NO Int:
		NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42iQ

Serial Number: 12426335704

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	1.045	1.057	NO bkgnd or offset:	1.4	1.4
NOX coeff or slope:	0.998	1.001	NOX bkgnd or offset:	1.5	1.5
NO2 coeff or slope:	0.990	0.990	Reaction cell Press:	136.8	134.9

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	0.989581	0.996639
NO_X Cal Offset:	1.890234	1.710218
NO Cal Slope:	0.990857	0.996945
NO Cal Offset:	1.390612	1.210317
NO_2 Cal Slope:	0.991773	0.983668
NO_2 Cal Offset:	1.628365	1.471081

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	----	----
High point	4918	82.1	802.9	799.6	3.3	801.0	797.7	3.4	1.0024	1.0024
Mid point	4959	41.1	401.9	400.3	1.6	403.4	401.1	2.2	0.9964	0.9980
Low point	4979	20.5	200.5	199.7	0.8	203.1	201.5	1.7	0.9872	0.9910
As left zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.2	0.0	----	----
As left span	4918	82.1	802.9	399.9	403.0	787.5	399.9	387.6	1.0196	1.0000
							Average Correction Factor		0.9954	0.9972

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.1	----	----
High GPT point	796.4	408.8	390.9	385.1	1.0150	98.5%
Mid GPT point	796.4	608.0	191.7	191.3	1.0020	99.8%
Low GPT point	796.4	700.4	99.3	100.1	0.9918	100.8%
				Average Correction Factor	1.0030	99.7%

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

Calibration Performed By: Jan Castro

Wood Buffalo Environmental Association

NO_X Calibration Summary

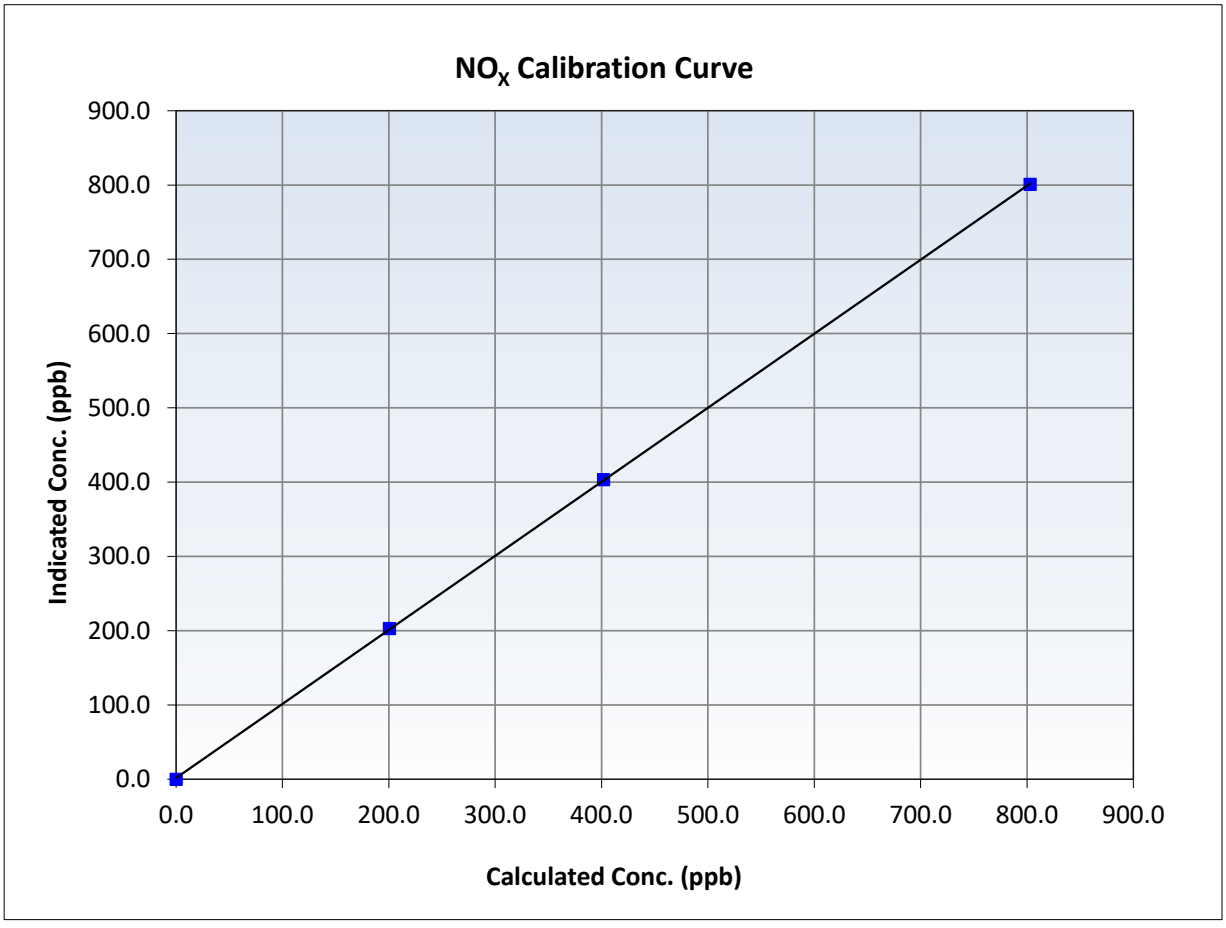
Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 6, 2025
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:49	End Time (MST):	16:10
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12426335704

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
802.9	801.0	1.0024
401.9	403.4	0.9964
200.5	203.1	0.9872

Statistical Evaluation		Limits
Correlation Coefficient	0.999979	≥0.995
Slope	0.996639	0.90 - 1.10
Intercept	1.710218	+/-20



Wood Buffalo Environmental Association

NO_2 Calibration Summary

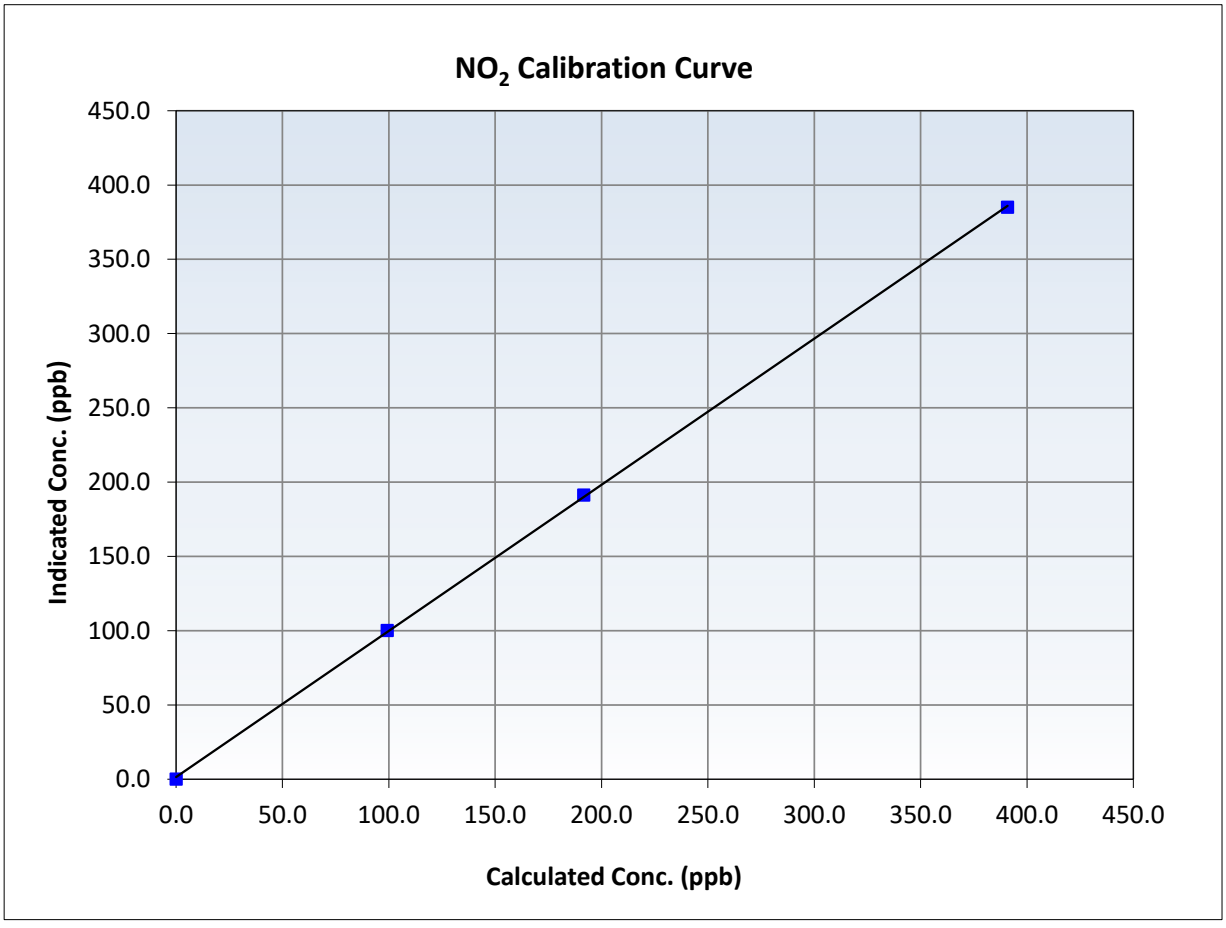
Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 6, 2025
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:49	End Time (MST):	16:10
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12426335704

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
390.9	385.1	1.0150
191.7	191.3	1.0020
99.3	100.1	0.9918

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999935	*≥0.995*
Slope	0.983668	*0.90 - 1.10*
Intercept	1.471081	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

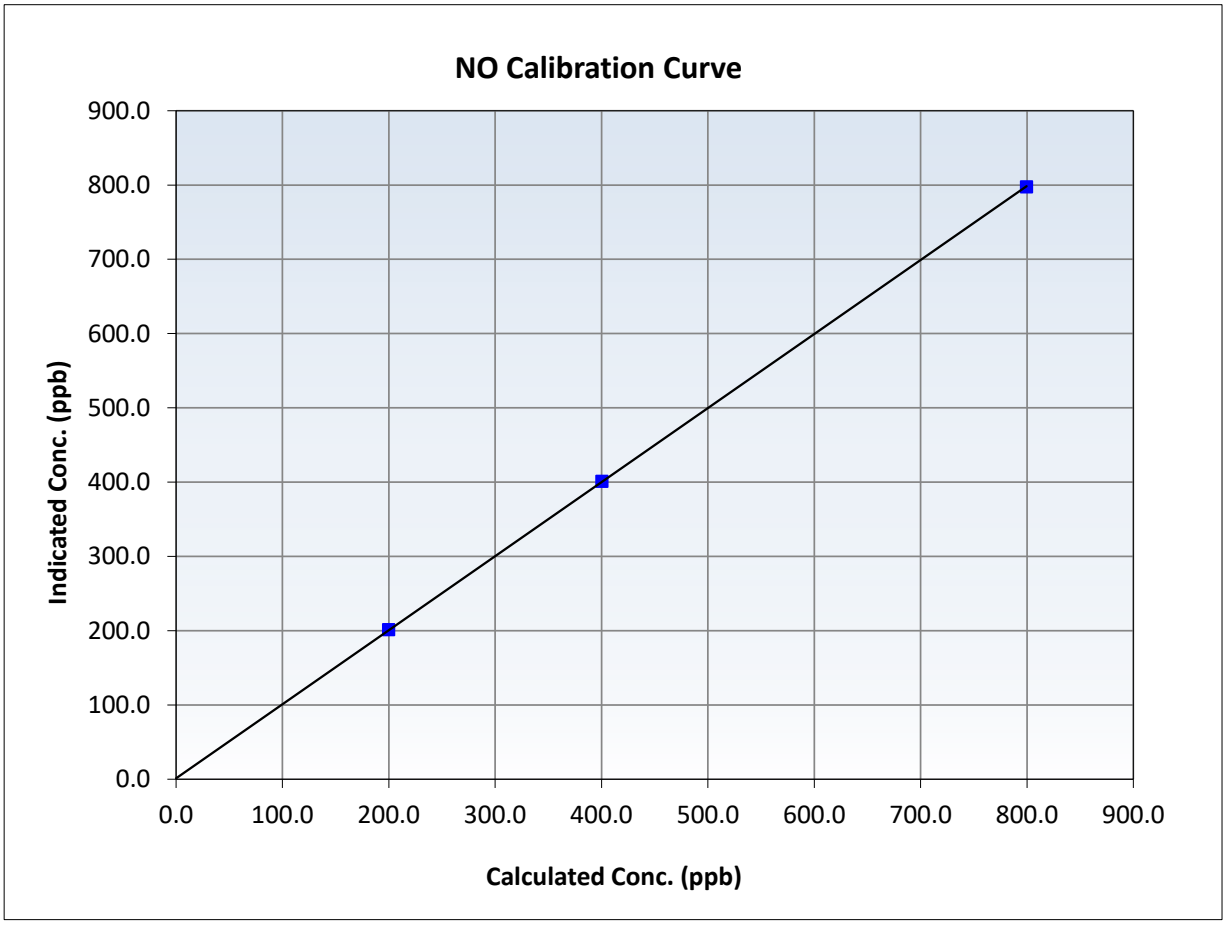
Station Information

Calibration Date:	December 1, 2025	Previous Calibration:	November 6, 2025
Station Name:	Monday Creek	Station Number:	AMS 33
Start Time (MST):	11:49	End Time (MST):	16:10
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12426335704

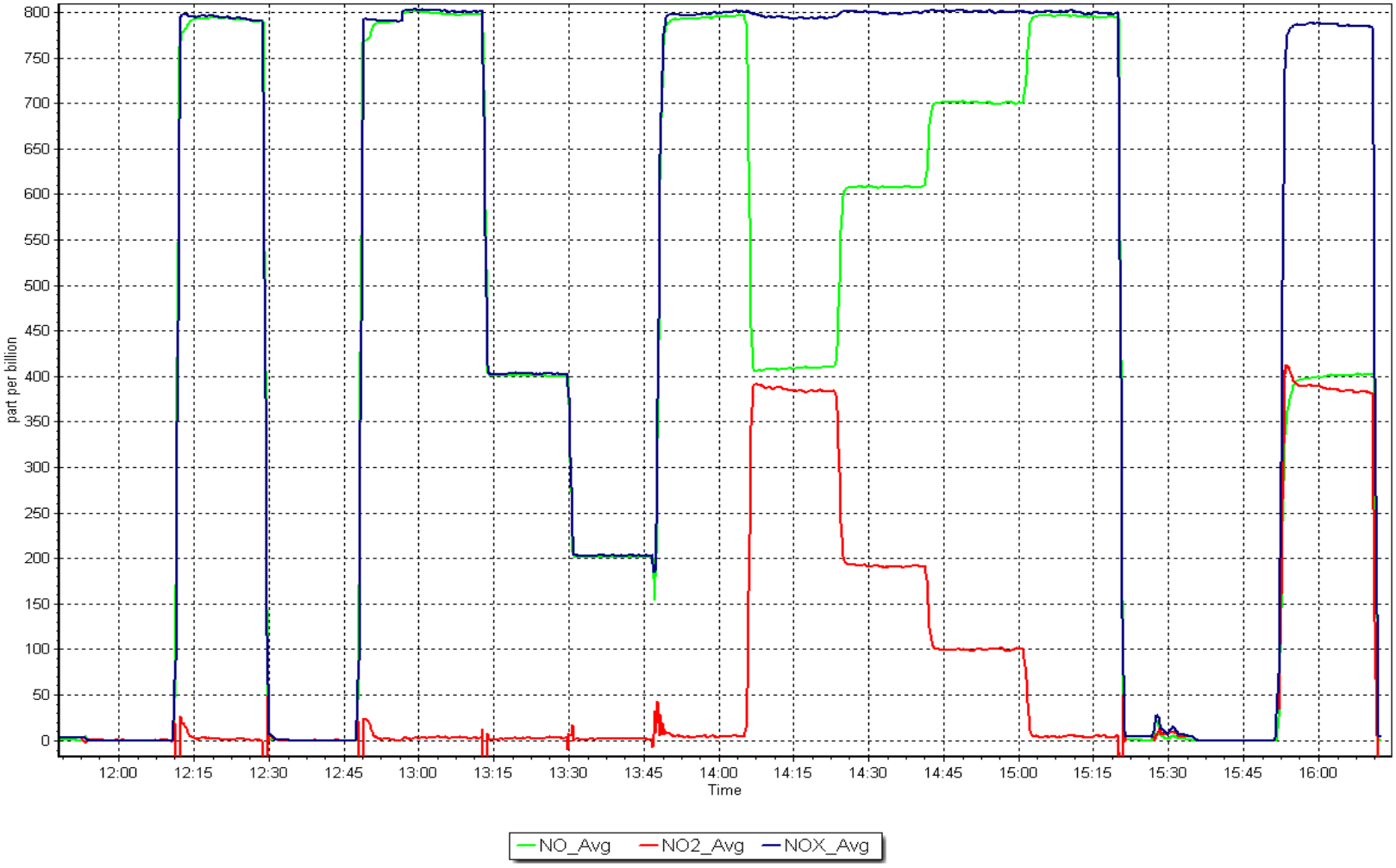
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.1	----
799.6	797.7	1.0024
400.3	401.1	0.9980
199.7	201.5	0.9910

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999988	*≥0.995*
Slope	0.996945	*0.90 - 1.10*
Intercept	1.210317	*+/-20*



NO_X Calibration Plot Date: December 1, 2025 Location: Monday Creek



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS501
LEISMER
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Leismer	Station number:	AMS 501
Calibration Date:	December 2, 2025	Last Cal Date:	November 7, 2025
Start time (MST):	14:58	End time (MST):	17:35
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.52	ppm	Cal Gas Exp Date:	December 29, 2028
Cal Gas Cylinder #:	CC274266			
Removed Cal Gas Conc:	50.52	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Model:	Teledyne API T700		Serial Number:	2659
Zero Air Gen Model:	Teledyne API T701		Serial Number:	4427

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	1160290011	
Analyzer Range:	0-1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.997145	0.993803	Backgd or Offset:	21.4	21.4
Calibration intercept:	0.444060	0.964102	Coeff or Slope:	0.994	0.994

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.2	----
As found High point	4921	79.2	800.2	794.5	1.007
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	794.3	Previous response	798.4	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.4	----
High point	4921	79.2	800.2	796.2	1.005
Mid point	4960	39.6	400.2	398.1	1.005
Low point	4980	19.8	200.1	200.9	0.996
As left zero	5000	0.0	0.0	0.5	----
As left span	4921	79.2	800.2	796.7	1.004
				Average Correction Factor:	1.002

Notes: No adjustment.

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

SO_2 Calibration Summary

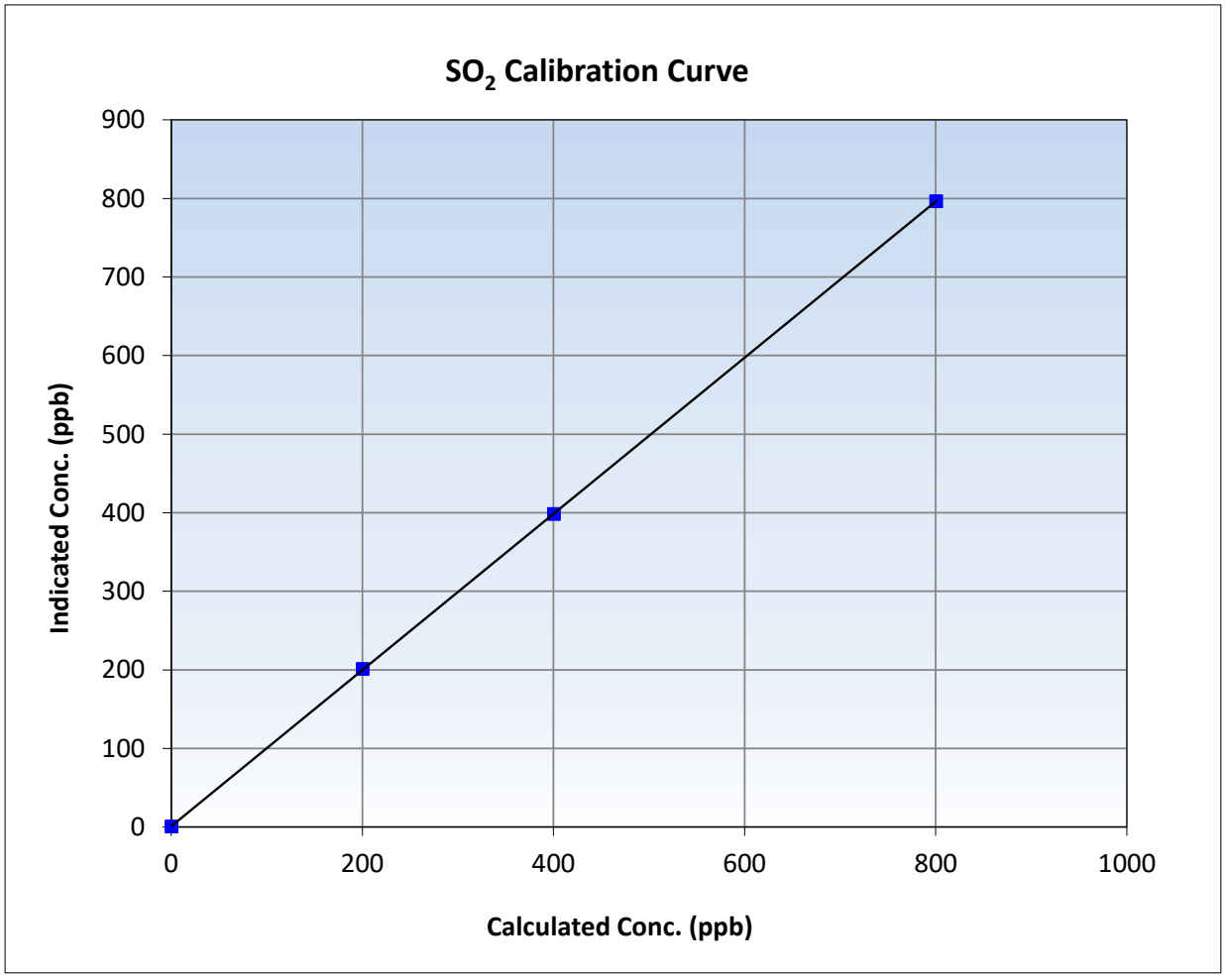
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 7, 2025
Station Name:	Leismer	Station Number:	AMS 501
Start Time (MST):	14:58	End Time (MST):	17:35
Analyzer make:	Thermo 43i	Analyzer serial #:	1160290011

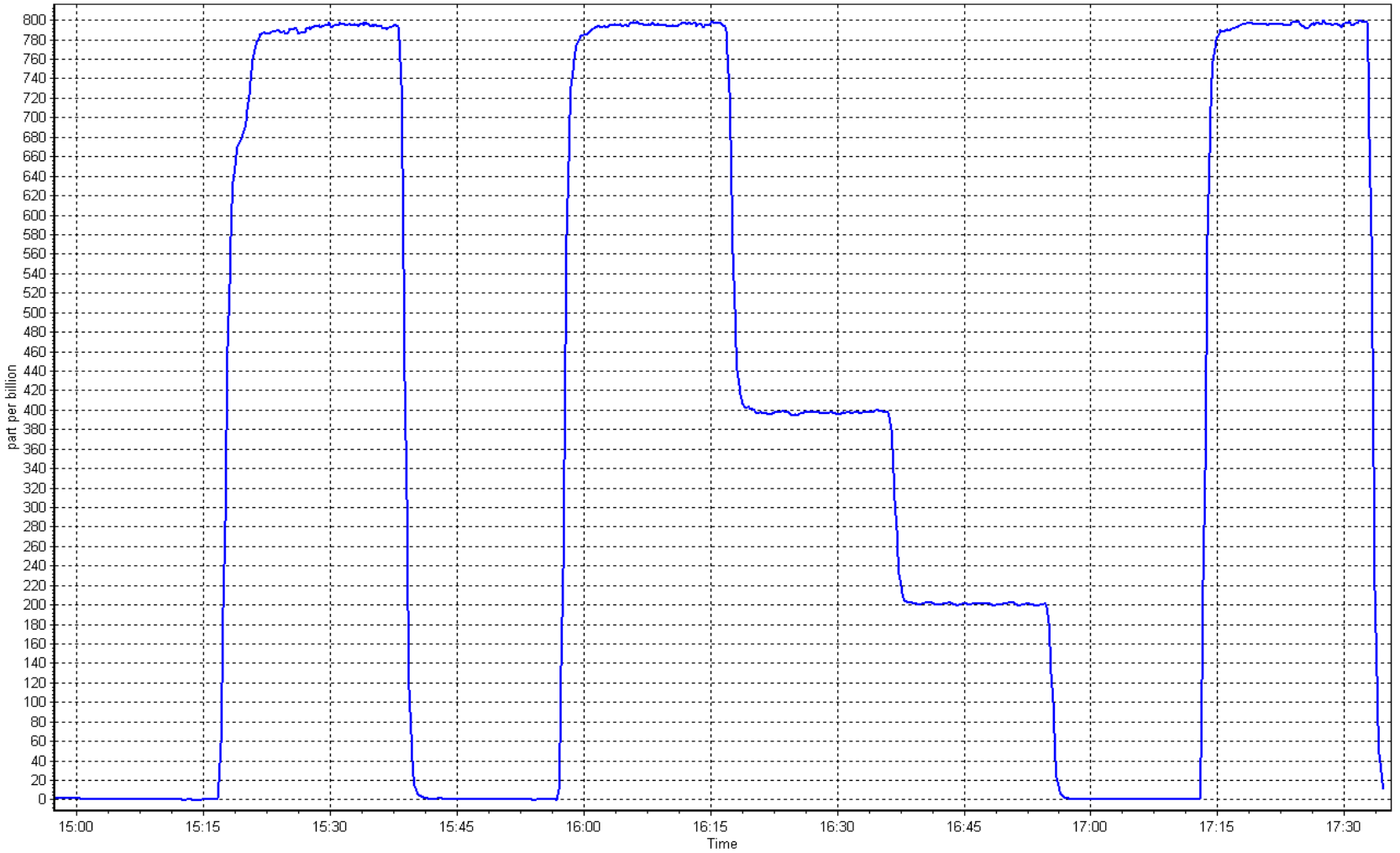
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.4	----
800.2	796.2	1.0050
400.2	398.1	1.0052
200.1	200.9	0.9959

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999995	*≥0.995*
Slope	0.993803	*0.90 - 1.10*
Intercept	0.964102	*+/-30*



SO2 Calibration Plot Date: December 2, 2025 Location: Leismer



Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name:	Leismer	Station number:	AMS 501
Calibration Date:	December 3, 2025	Last Cal Date:	November 20, 2025
Start time (MST):	8:21	End time (MST):	12:18
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	4.89	ppm	Cal Gas Exp Date:	September 5, 2027
Cal Gas Cylinder #:	CC737971			
Removed Cal Gas Conc:	4.89	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	Teledyne 750		Serial Number:	282
ZAG Make/Model:	Teledyne 751H		Serial Number:	321

Analyzer Information

Analyzer make:	Thermo 43i-TLE		Analyzer serial #:	1180540020
Converter make:	Global G150		Converter serial #:	2022-218
Analyzer Range	0 - 100 ppb		Converter Temp:	325.0 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.987880	0.997165	Backgd or Offset:	3.71	3.80
Calibration intercept:	-0.039505	0.160644	Coeff or Slope:	1.177	1.214

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	-0.1	----
As found High point	4918	81.8	80.0	76.9	1.039
As found Mid point	4959	40.9	40.0	38.4	1.039
As found Low point	4980	20.4	19.9	19.3	1.028
New cylinder response					

Baseline Corr As found:	77.0	Prev response:	78.99	*% change:	-2.6%
Baseline Corr 2nd AF pt:	38.5	AF Slope:	0.961602	AF Intercept:	-0.020046
Baseline Corr 3rd AF pt:	19.4	AF Correlation:	0.999992	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4918	81.8	80.0	79.9	1.001
Mid point	4959	40.9	40.0	40.1	0.998
Low point	4980	20.4	19.9	20.1	0.993
As left zero	5000	0.0	0.0	0.1	----
As left span	4918	81.8	80.0	80.3	0.996
SO2 Scrubber Check	4921	79.2	800.2	0.0	----
Date of last scrubber change:		20-Nov-25		Ave Corr Factor	0.997
Date of last converter efficiency test:					

Notes: Adjusted span only.

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

H2S Calibration Summary

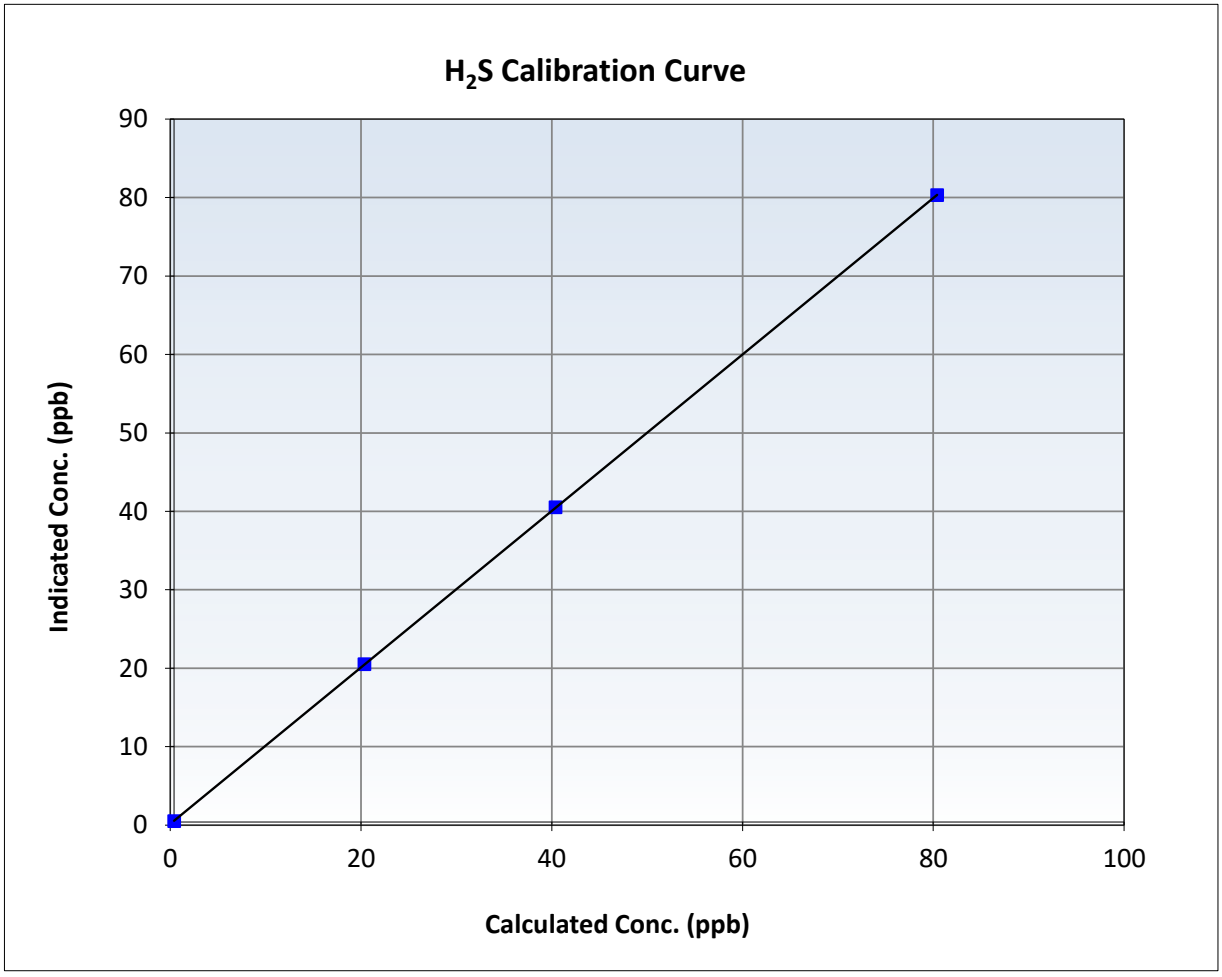
Station Information

Calibration Date:	December 3, 2025	Previous Calibration:	November 20, 2025
Station Name:	Leismer	Station Number:	AMS 501
Start Time (MST):	8:21	End Time (MST):	12:18
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1180540020

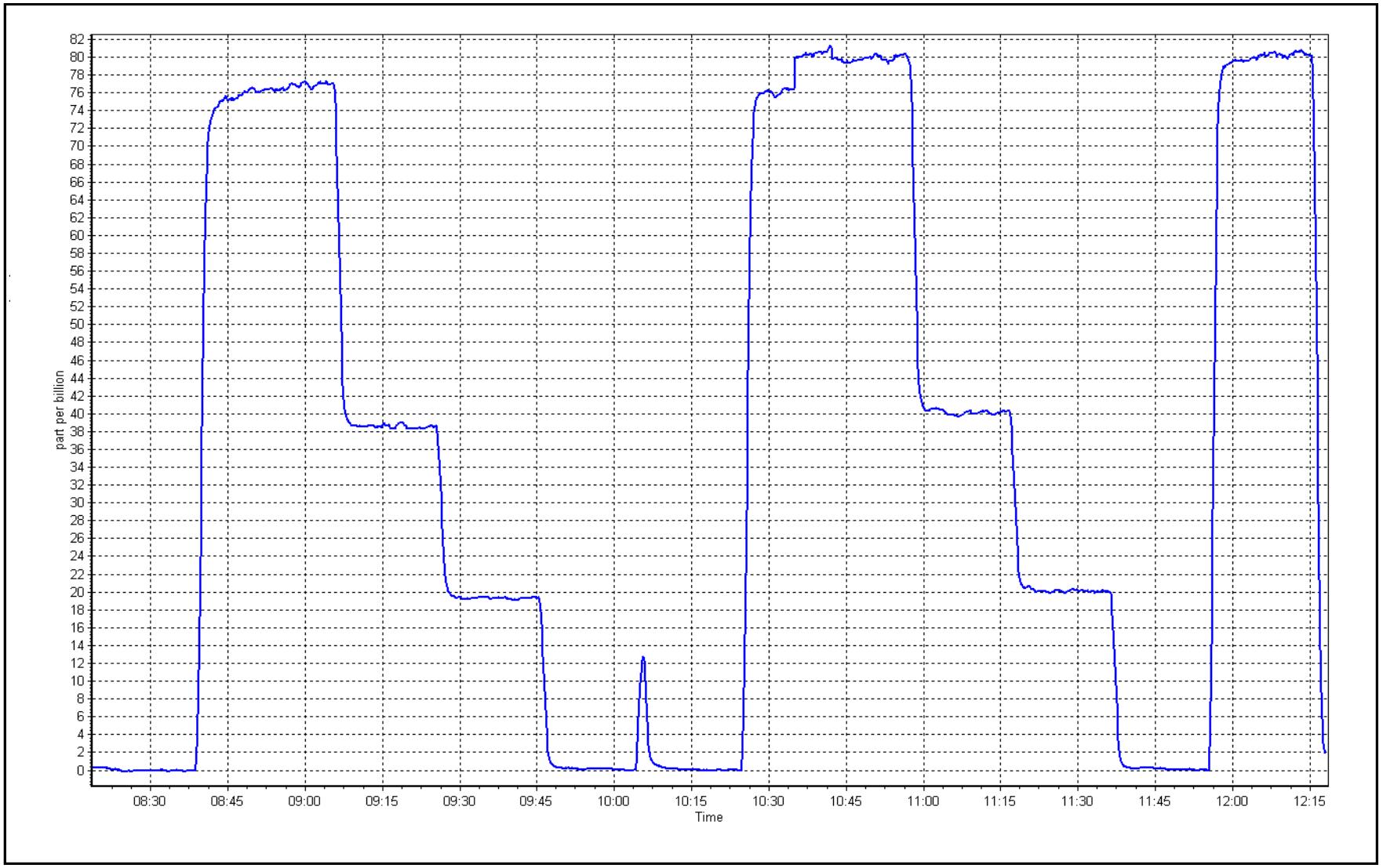
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
80.0	79.9	1.0013
40.0	40.1	0.9975
19.9	20.1	0.9925

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999997	*≥0.995*
Slope	0.997165	*0.90 - 1.10*
Intercept	0.160644	*+/-3*



H2S Calibration Plot Date: December 3, 2025 Location: Leismer



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Leismer
Station number:	AMS 501
Calibration Date:	December 2, 2025
Last Cal Date:	November 6, 2025
Start time (MST):	10:51
End time (MST):	15:01
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0022706	Cal Gas Expiry Date:	January 5, 2032
NOX Cal Gas Conc:	60.20 ppm	NO Cal Gas Conc:	60.10 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	60.20 ppm	Removed Gas NO Conc:	60.10 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	3252
ZAG make/model:	Teledyne API 701	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	0.3	0.2	0.1	----	----
AF High point	4933	66.6	801.9	800.6	1.3	800.2	794.7	5.6	1.0025	1.0077
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X =	800.5 ppb	NO =	797.2 ppb	* = > +/-5% change initiates investigation	*Percent Change	NO_X = -0.1%
Baseline Corr 1st pt	NO_X =	799.9 ppb	NO =	794.5 ppb	As Found Statistics	*Percent Change	NO = -0.3%
Baseline Corr 2nd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO_X r^2:	Nx Sl:	Nx Int:
Baseline Corr 3rd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO r^2:	NO Sl:	NO Int:
					As found NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42iQ Serial Number: 12400232071

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	***Finish***		***Start***	***Finish***
NO coeff or slope:	0.975	0.981	NO bkgnd or offset:	0.4	0.4
NOX coeff or slope:	0.991	0.991	NOX bkgnd or offset:	0.6	0.6
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	180.9	183.0

Calibration Statistics

	Start	***Finish***
NO_X Cal Slope:	0.996675	0.999851
NO_X Cal Offset:	1.211956	1.973091
NO Cal Slope:	0.995610	0.999077
NO Cal Offset:	0.090507	0.451548
NO_2 Cal Slope:	0.986982	0.993290
NO_2 Cal Offset:	1.590215	0.616781

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.5	0.4	0.1	----	----
High point	4933	66.6	801.9	800.6	1.3	803.2	800.4	2.8	0.9984	1.0002
Mid point	4967	33.3	400.9	400.2	0.7	403.1	400.0	3.1	0.9946	1.0006
Low point	4983	16.6	199.9	199.5	0.3	203.6	200.1	3.5	0.9817	0.9972
As left zero	5000	0.0	0.0	0.0	0.0	0.7	0.5	0.2	----	----
As left span	4933	66.6	801.9	375.6	426.3	795.3	375.6	419.7	1.0083	1.0000
							Average Correction Factor		0.9916	0.9994

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.1	----	----
High GPT point	798.4	374.0	425.7	423.2	1.0060	99.4%
Mid GPT point	798.4	573.4	226.3	225.7	1.0028	99.7%
Low GPT point	798.4	682.3	117.4	117.8	0.9969	100.3%
				Average Correction Factor	1.0019	99.8%

Notes: Adjusted span only.

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

NO_X Calibration Summary

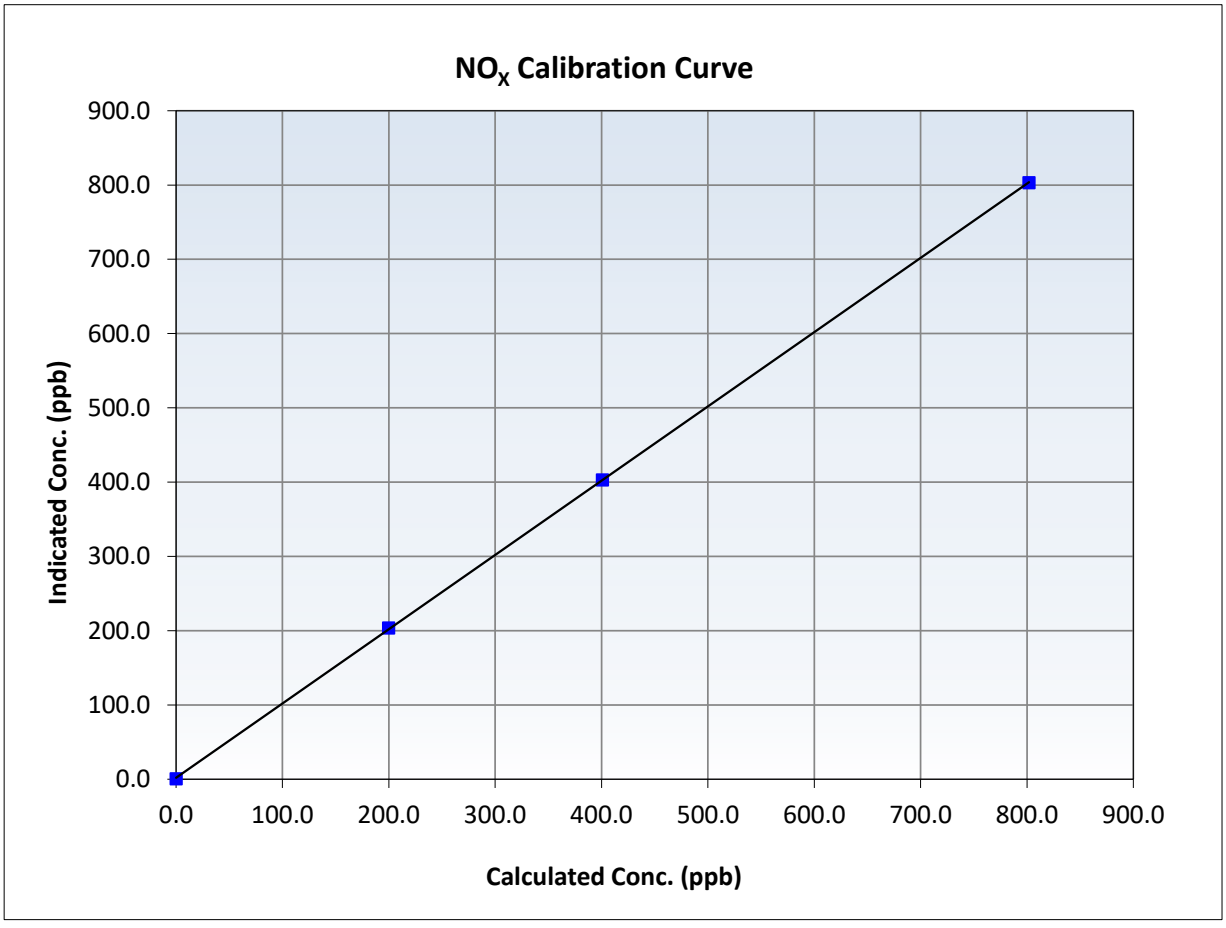
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 6, 2025
Station Name:	Leismer	Station Number:	AMS 501
Start Time (MST):	10:51	End Time (MST):	15:01
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.5	----
801.9	803.2	0.9984
400.9	403.1	0.9946
199.9	203.6	0.9817

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999984	*≥0.995*
Slope	0.999851	*0.90 - 1.10*
Intercept	1.973091	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

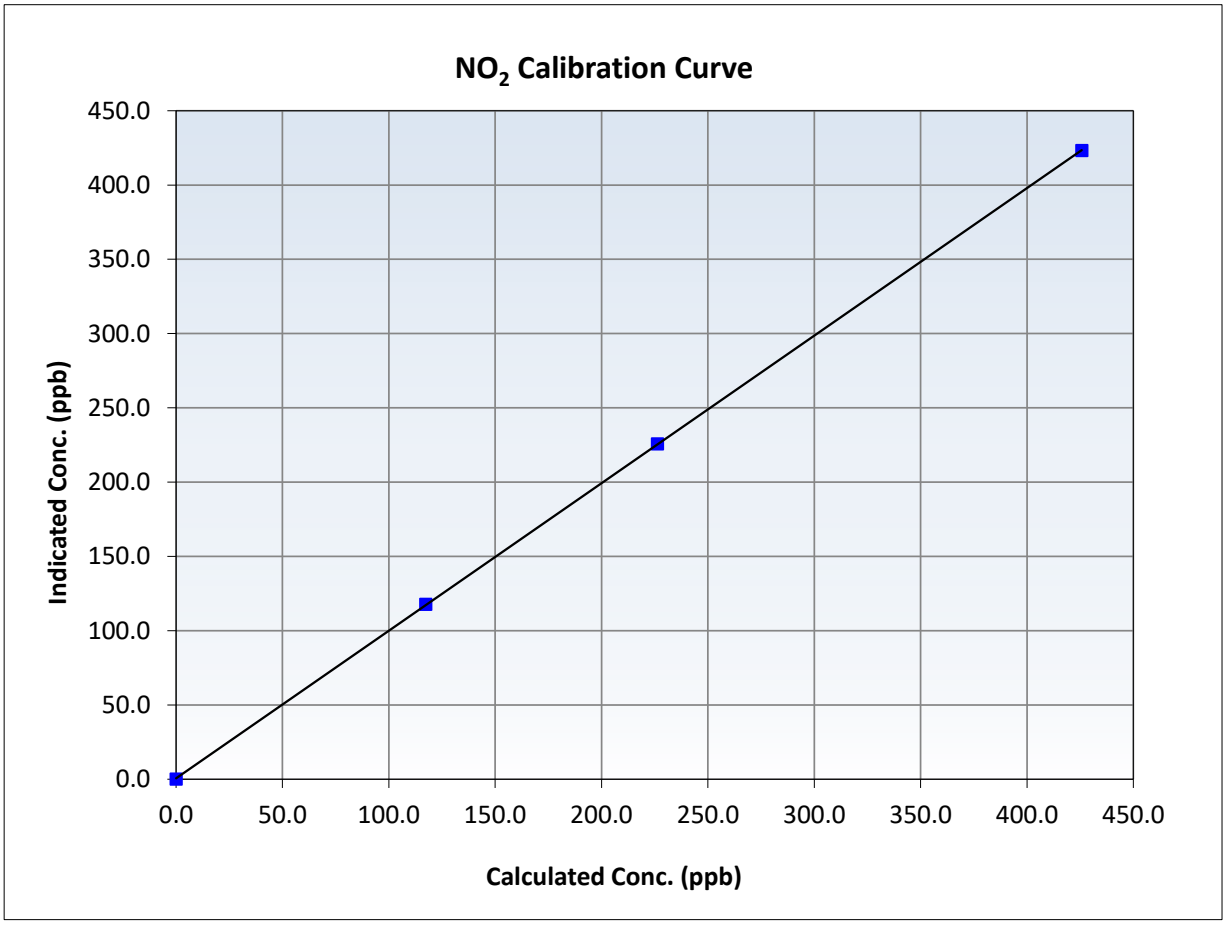
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 6, 2025
Station Name:	Leismer	Station Number:	AMS 501
Start Time (MST):	10:51	End Time (MST):	15:01
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
425.7	423.2	1.0060
226.3	225.7	1.0028
117.4	117.8	0.9969

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999993	*≥0.995*
Slope	0.993290	*0.90 - 1.10*
Intercept	0.616781	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

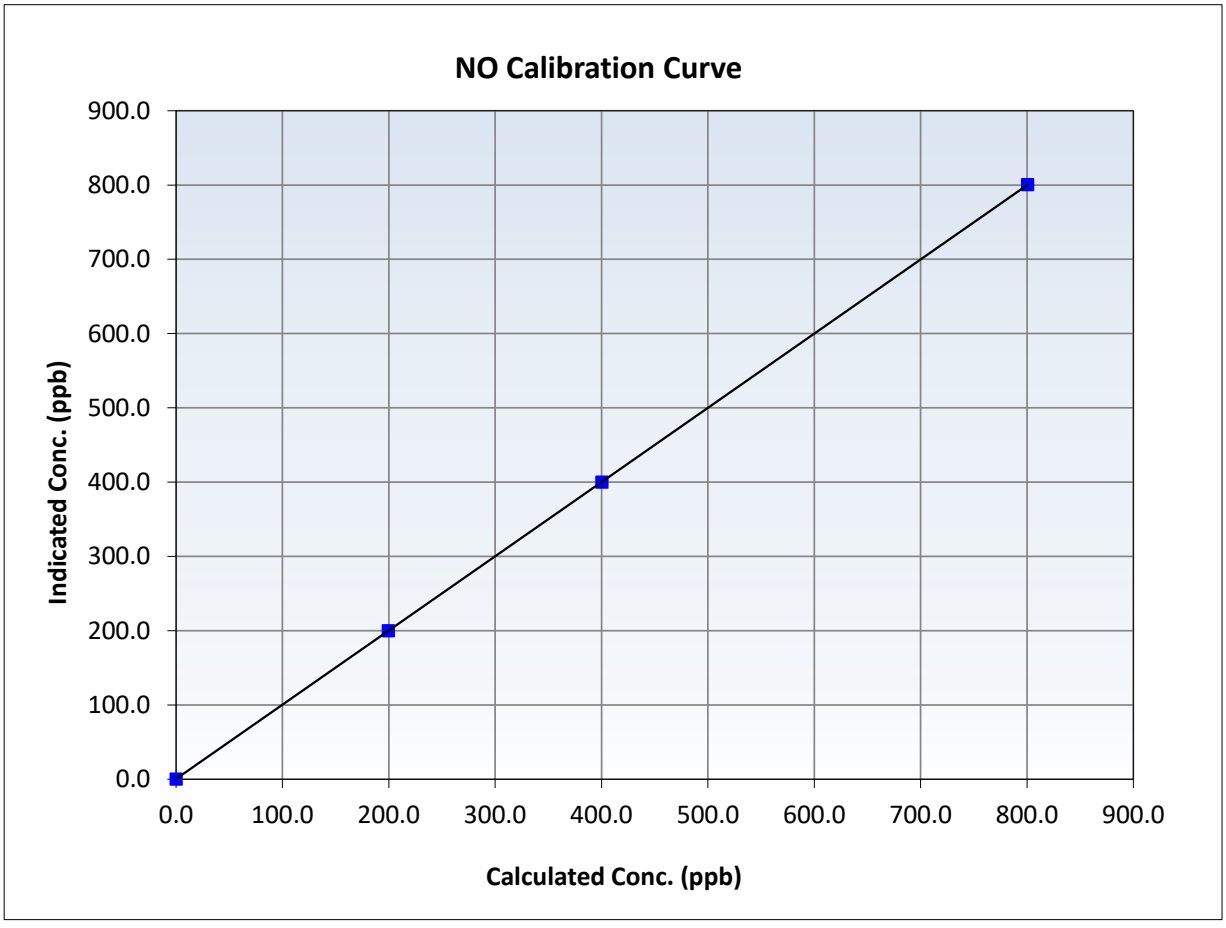
Station Information

Calibration Date:	December 2, 2025	Previous Calibration:	November 6, 2025
Station Name:	Leismer	Station Number:	AMS 501
Start Time (MST):	10:51	End Time (MST):	15:01
Analyzer make:	Thermo 42iQ	Analyzer serial #:	12400232071

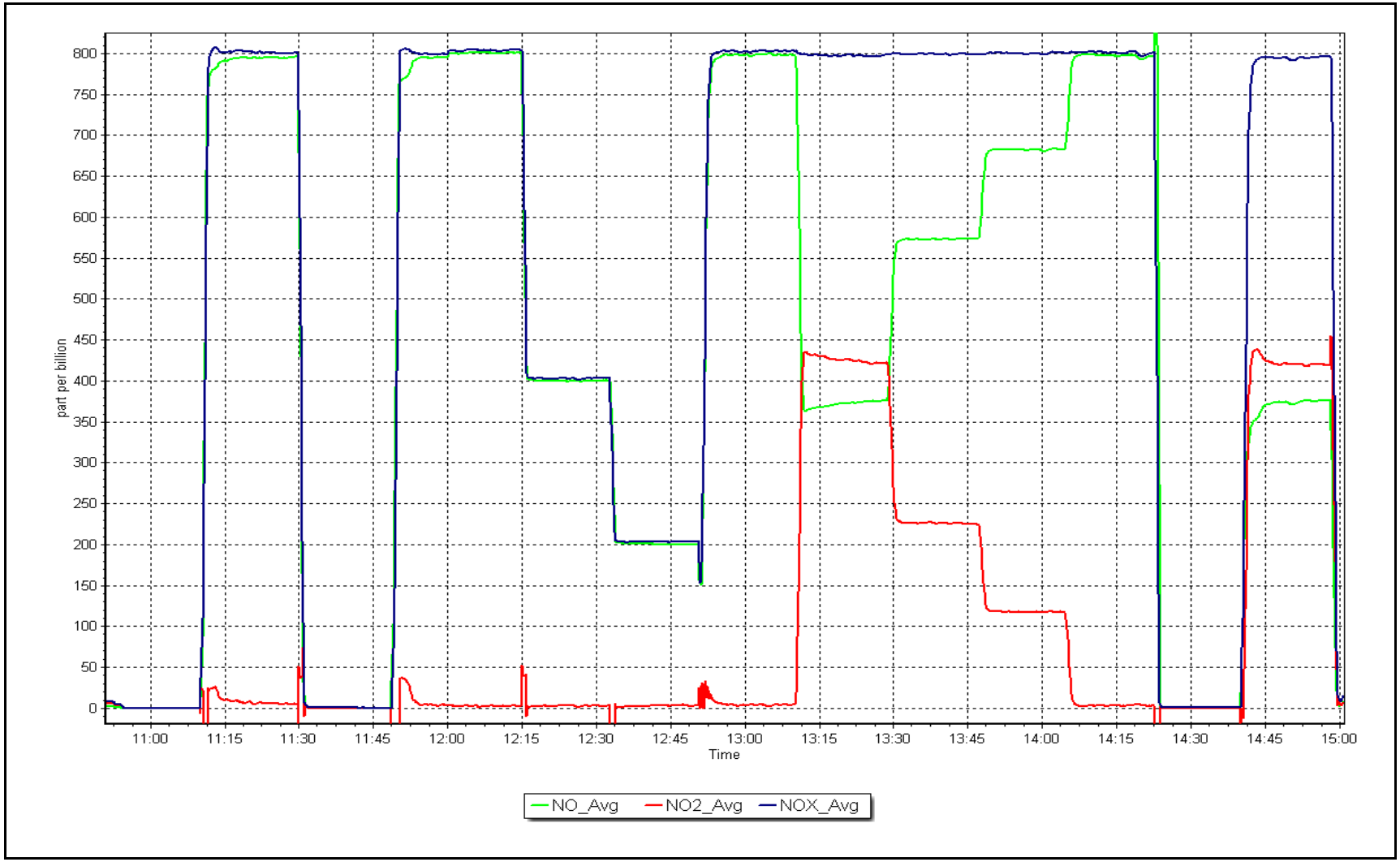
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.4	----
800.6	800.4	1.0002
400.2	400.0	1.0006
199.5	200.1	0.9972

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999999	*≥0.995*
Slope	0.999077	*0.90 - 1.10*
Intercept	0.451548	*+/-20*



NO_X Calibration Plot Date: December 2, 2025 Location: Leismer



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS505
SAWBONES BAY
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Sawbones Bay	Station number:	AMS 505
Calibration Date:	December 9, 2025	Last Cal Date:	November 27, 2025
Start time (MST):	14:15	End time (MST):	16:57
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:	5112
Zero Air Gen Model:	Teledyne API T701		Serial Number:	690

Analyzer Information

Analyzer make:	Thermo 43i		Serial Number:	710321323	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.003809	1.001591	Backgd or Offset:	21.7	21.7
Calibration intercept:	-0.415883	-0.215425	Coeff or Slope:	1.128	1.099

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4920	79.8	798.8	819.3	0.975
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	819.3	Previous response	801.5	*% change	2.2%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.5	----
High point	4920	79.8	798.8	800.3	0.998
Mid point	4960	39.9	399.4	399.3	1.000
Low point	4980	20.0	200.2	199.7	1.003
As left zero	5000	0.0	0.0	0.3	----
As left span	4920	79.8	798.8	802.0	0.996
				Average Correction Factor:	1.000

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

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

SO_2 Calibration Summary

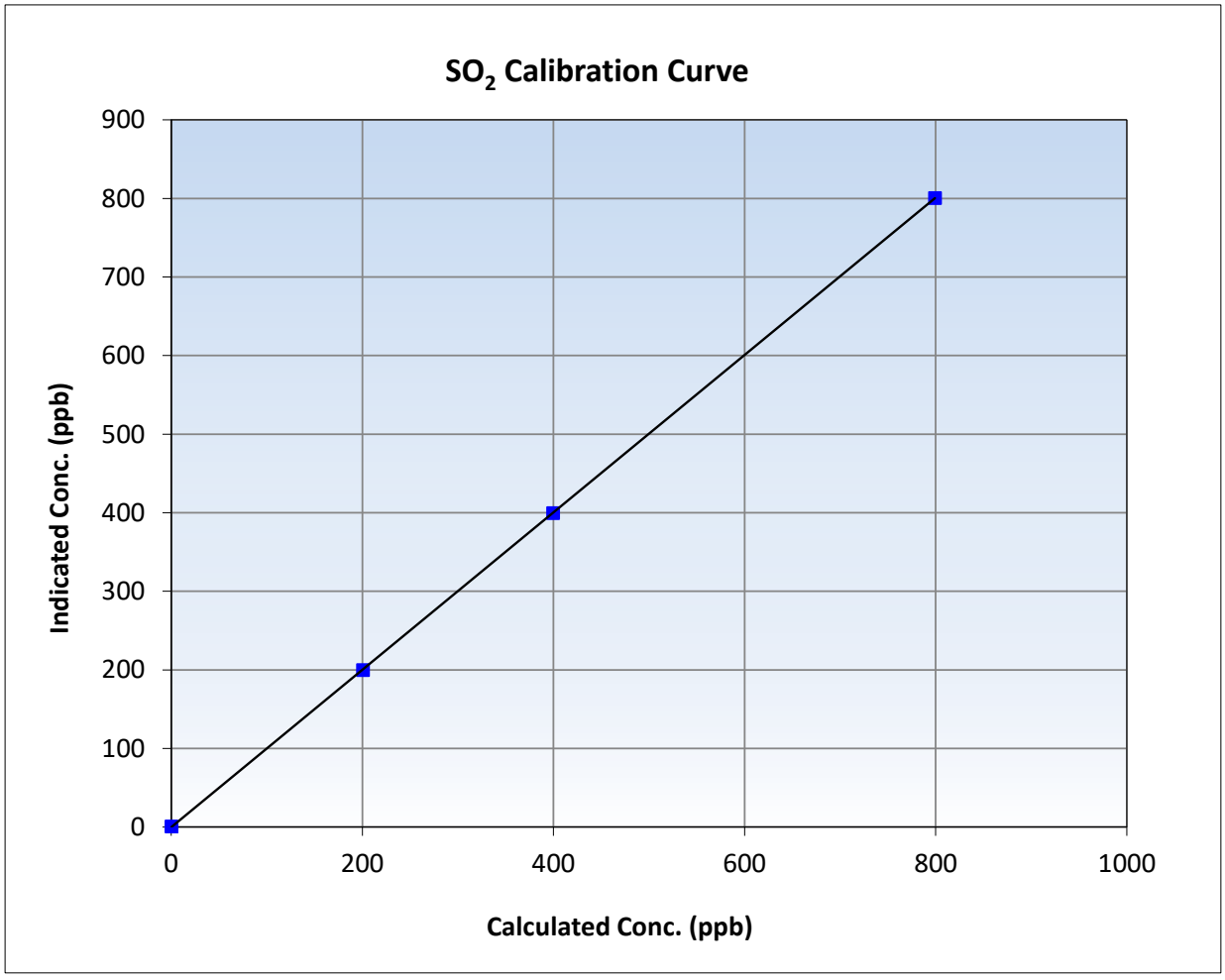
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 27, 2025
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	14:15	End Time (MST):	16:57
Analyzer make:	Thermo 43i	Analyzer serial #:	710321323

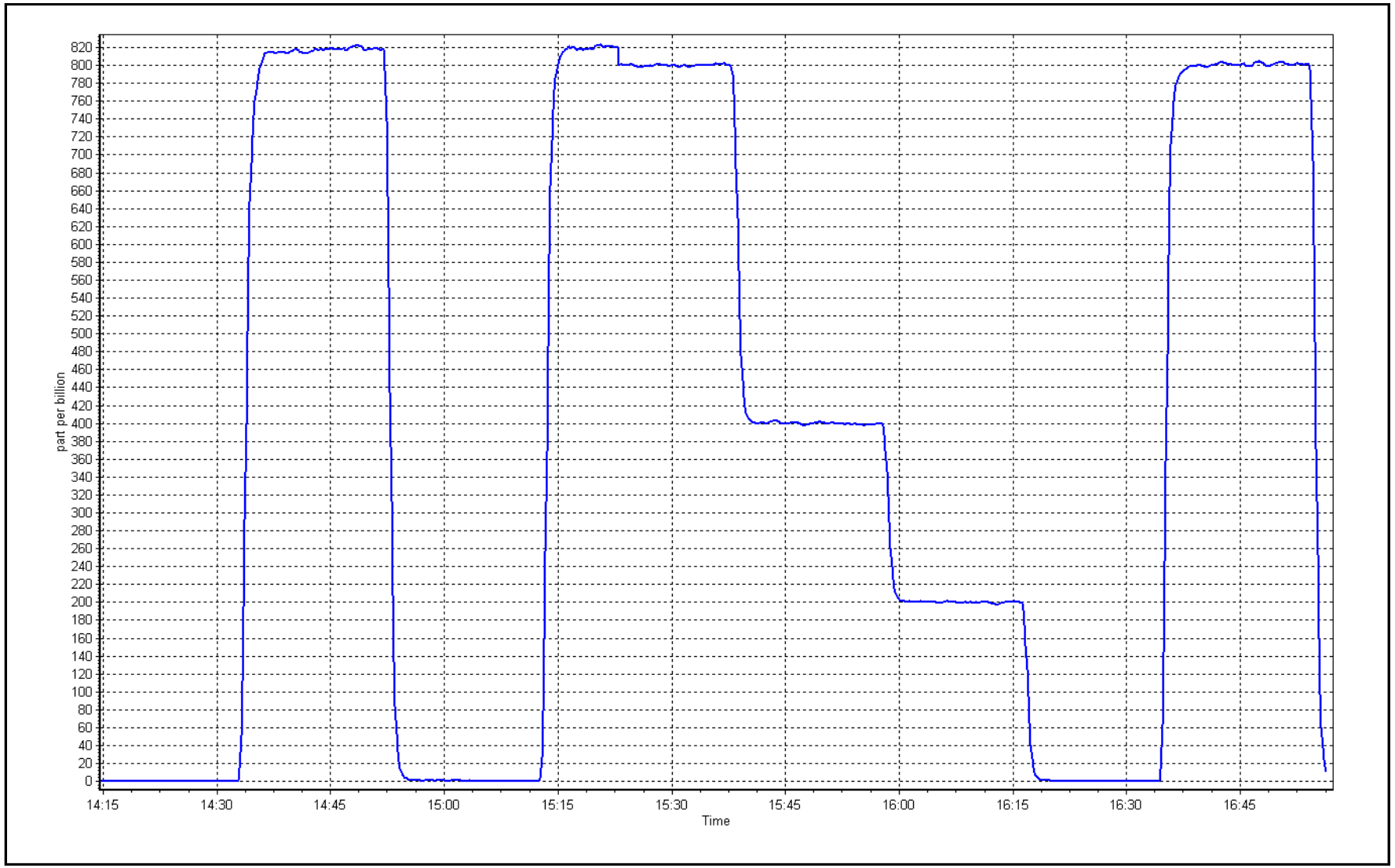
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.5	----
798.8	800.3	0.9982
399.4	399.3	1.0003
200.2	199.7	1.0025

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999996	*≥0.995*
Slope	1.001591	*0.90 - 1.10*
Intercept	-0.215425	*+/-30*



SO2 Calibration Plot Date: December 9, 2025 Location: Sawbones Bay



Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name:	Sawbones Bay	Station number:	AMS 505
Calibration Date:	December 9, 2025	Last Cal Date:	November 26, 2025
Start time (MST):	10:24	End time (MST):	14:20
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.26	ppm	Cal Gas Exp Date:	March 19, 2027
Cal Gas Cylinder #:	DT0034141			
Removed Cal Gas Conc:	5.26	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	NA		Diff between cyl:	
Calibrator Make/Model:	Teledyne API T750		Serial Number:	282
ZAG Make/Model:	Teledyne API T751H		Serial Number:	321

Analyzer Information

Analyzer make:	Thermo 43iQTL		Analyzer serial #:	12113311965
Converter make:	Global 150		Converter serial #:	2022-224
Analyzer Range	0 - 100 ppb		Converter Temp:	325 degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.991595	0.999171	Backgd or Offset:	0.920	0.920
Calibration intercept:	0.140000	0.300000	Coeff or Slope:	1.105	1.105

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4924	76.0	80.0	80.1	0.999
As found Mid point	4962	38.0	40.0	40.2	0.997
As found Low point	4981	19.0	20.0	20.3	0.990
New cylinder response					

Baseline Corr As found:	80.0	Prev response:	79.42	*% change:	0.7%
Baseline Corr 2nd AF pt:	40.1	AF Slope:	0.999886	AF Intercept:	0.200000
Baseline Corr 3rd AF pt:	20.2	AF Correlation:	0.999993	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.3	----
High point	4924	76.0	80.0	80.2	0.997
Mid point	4962	38.0	40.0	40.2	0.994
Low point	4981	19.0	20.0	20.3	0.985
As left zero	5000	0.0	0.0	0.3	----
As left span	4924	76.0	80.0	78.7	1.016
SO2 Scrubber Check	4922	77.8	778.0	-0.1	----
Date of last scrubber change:				Ave Corr Factor	0.992
Date of last converter efficiency test:					

Notes: Changed inlet filter after as founds. Scrubber test was done after calibrator zero. No adjustment made.

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

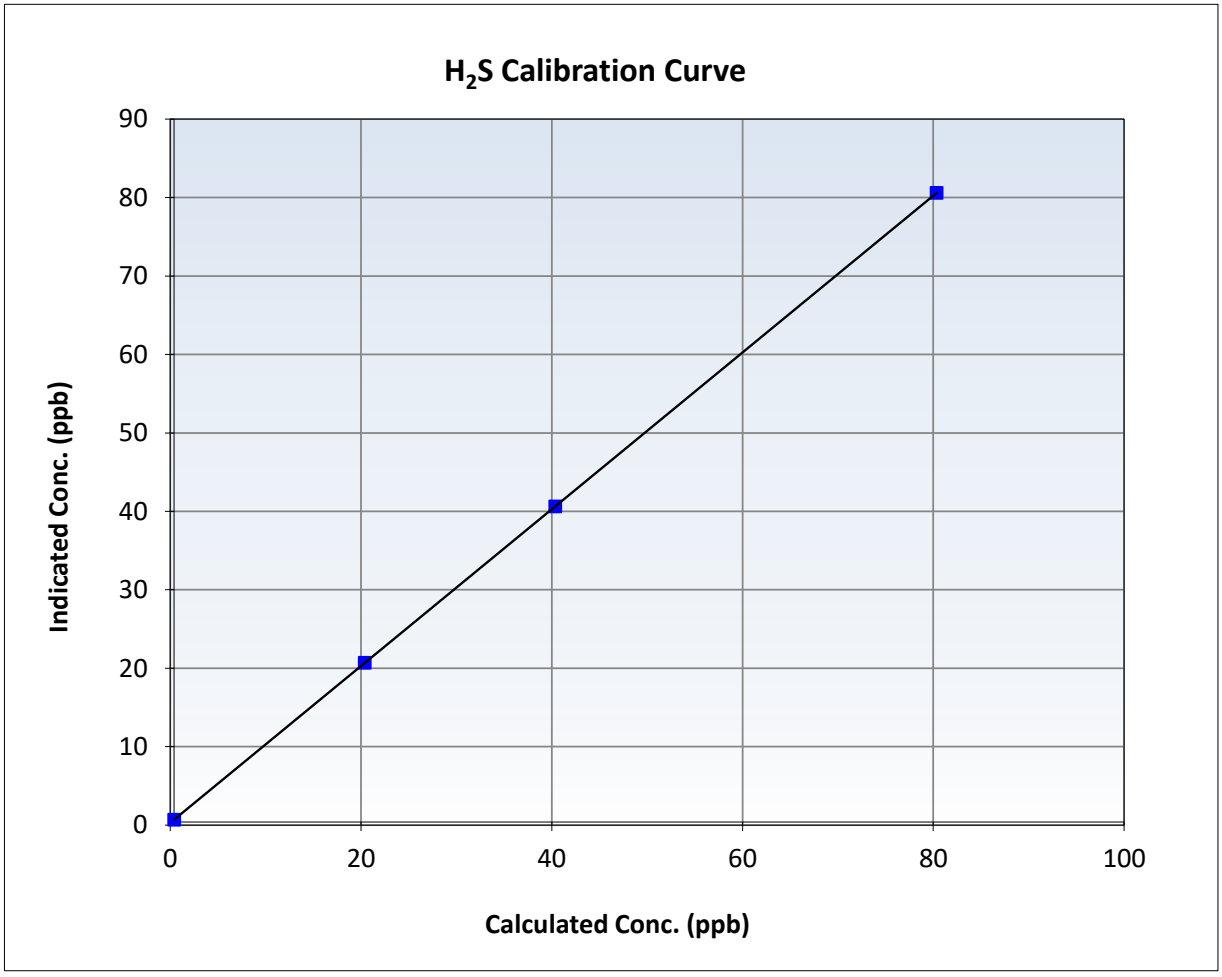
H2S Calibration Summary

Station Information

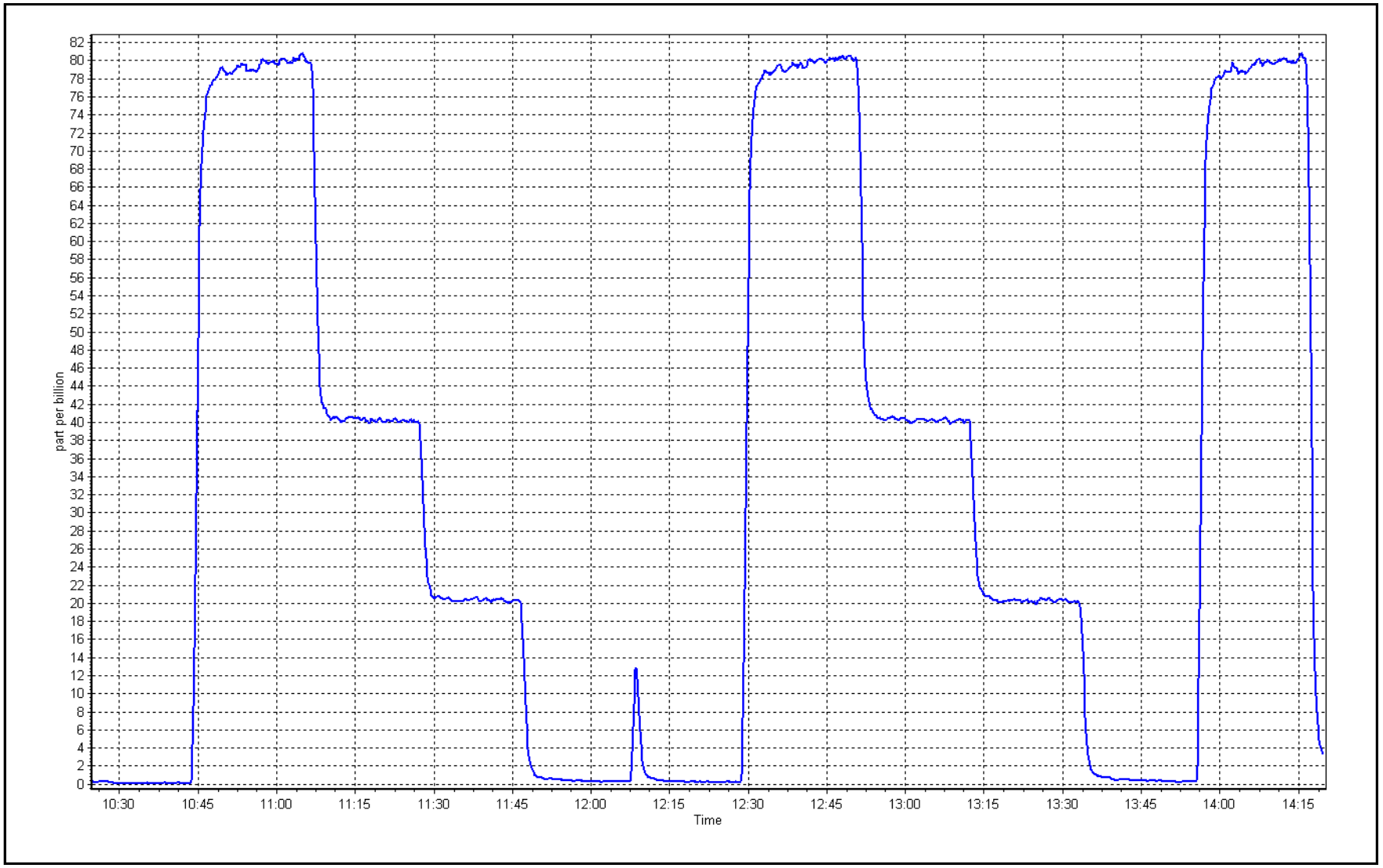
Calibration Date:	December 9, 2025	Previous Calibration:	November 26, 2025
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	10:24	End Time (MST):	14:20
Analyzer make:	Thermo 43iQTL	Analyzer serial #:	12113311965

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.3	----	Correlation Coefficient	0.999999	*≥0.995*
80.0	80.2	0.9969	Slope	0.999171	*0.90 - 1.10*
40.0	40.2	0.9944			
20.0	20.3	0.9846	Intercept	0.300000	*+/-3*



H2S Calibration Plot Date: December 9, 2025 Location: Sawbones Bay



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Sawbones Bay
Station number:	AMS 505
Calibration Date:	December 10, 2025
Last Cal Date:	November 25, 2025
Start time (MST):	9:00
End time (MST):	13:07
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0009786	Cal Gas Expiry Date:	January 5, 2032
NOX Cal Gas Conc:	60.10 ppm	NO Cal Gas Conc:	60.00 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	60.10 ppm	Removed Gas NO Conc:	60.00 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	API T700	Serial Number:	5112
ZAG make/model:	API T701H	Serial Number:	690

As Found Dilution Calibration Data

Set Point	Dilution flow rate (sccm)	Source gas flow rate (sccm)	Calculated NOx concentration (ppb) (Cc)	Calculated NO concentration (ppb) (Cc)	Calculated NO2 concentration (ppb) (Cc)	Indicated NOx concentration (ppb) (Ic)	Indicated NO concentration (ppb) (Ic)	Indicated NO2 concentration (ppb) (Ic)	Baseline Adjusted NOx Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.6	-0.4	-0.2	----	----
AF High point	4933	66.7	801.8	800.4	1.3	807.8	804.3	3.5	0.9918	0.9947
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 802.5 ppb	NO = 801.4 ppb
Baseline Corr 1st pt	NO_X = 808.4 ppb	NO = 804.7 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 = 0.7%

*Percent Change NO = 0.4%

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: API T200 Serial Number: 4259

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	Finish		Start	Finish
NO coeff or slope:	0.964	0.951	NO bkgnd or offset:	0.9	0.9
NOX coeff or slope:	0.962	0.950	NOX bkgnd or offset:	1.4	1.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	3.7	3.7

Calibration Statistics

	Start	Finish
NO_X Cal Slope:	1.002061	0.998280
NO_X Cal Offset:	-0.890158	-0.389367
NO Cal Slope:	1.003202	0.999803
NO Cal Offset:	-1.630038	-1.290066
NO_2 Cal Slope:	0.999814	0.995965
NO_2 Cal Offset:	0.456557	0.259781

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.4	-0.2	-0.2	----	----
High point	4933	66.7	801.8	800.4	1.3	799.6	799.4	0.2	1.0027	1.0013
Mid point	4967	33.3	400.2	399.6	0.7	400.4	398.1	2.3	0.9996	1.0037
Low point	4983	16.7	200.7	200.4	0.3	199.2	197.7	1.5	1.0078	1.0137
As left zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	----	----
As left span	4933	66.7	801.8	427.4	374.4	795.9	427.4	368.5	1.0074	1.0000
								Average Correction Factor	1.0034	1.0062

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	-0.2	----	----
High GPT point	796.8	422.1	376.0	374.2	1.0049	99.5%
Mid GPT point	796.8	596.8	201.3	201.9	0.9972	100.3%
Low GPT point	796.8	696.1	102.0	101.8	1.0023	99.8%
				Average Correction Factor	1.0015	99.9%

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

Calibration Performed By: Sean Bala

Wood Buffalo Environmental Association

NO_X Calibration Summary

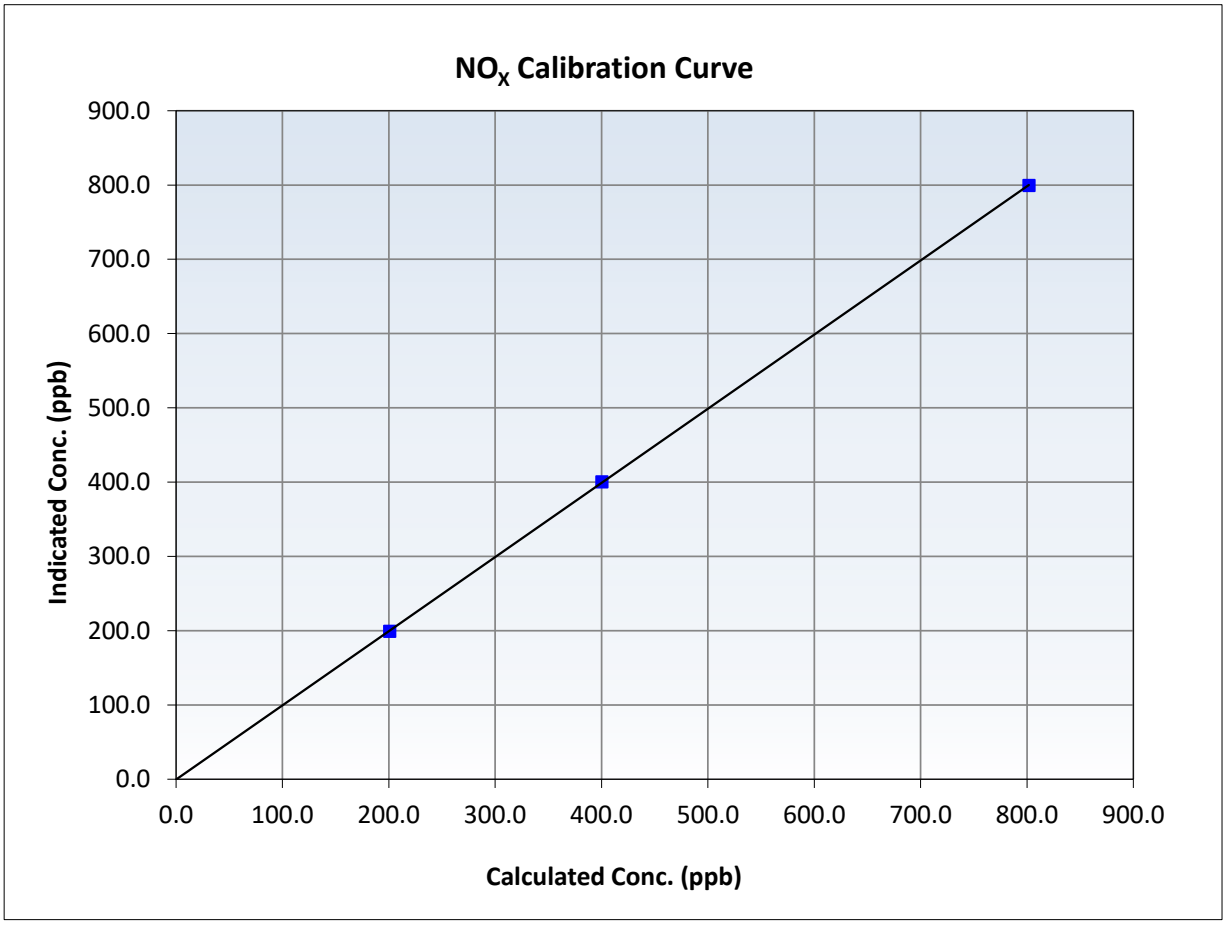
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 25, 2025
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	9:00	End Time (MST):	13:07
Analyzer make:	API T200	Analyzer serial #:	4259

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.4	----
801.8	799.6	1.0027
400.2	400.4	0.9996
200.7	199.2	1.0078

Statistical Evaluation		Limits
Correlation Coefficient	0.999993	≥0.995
Slope	0.998280	0.90 - 1.10
Intercept	-0.389367	+/-20



Wood Buffalo Environmental Association

NO_2 Calibration Summary

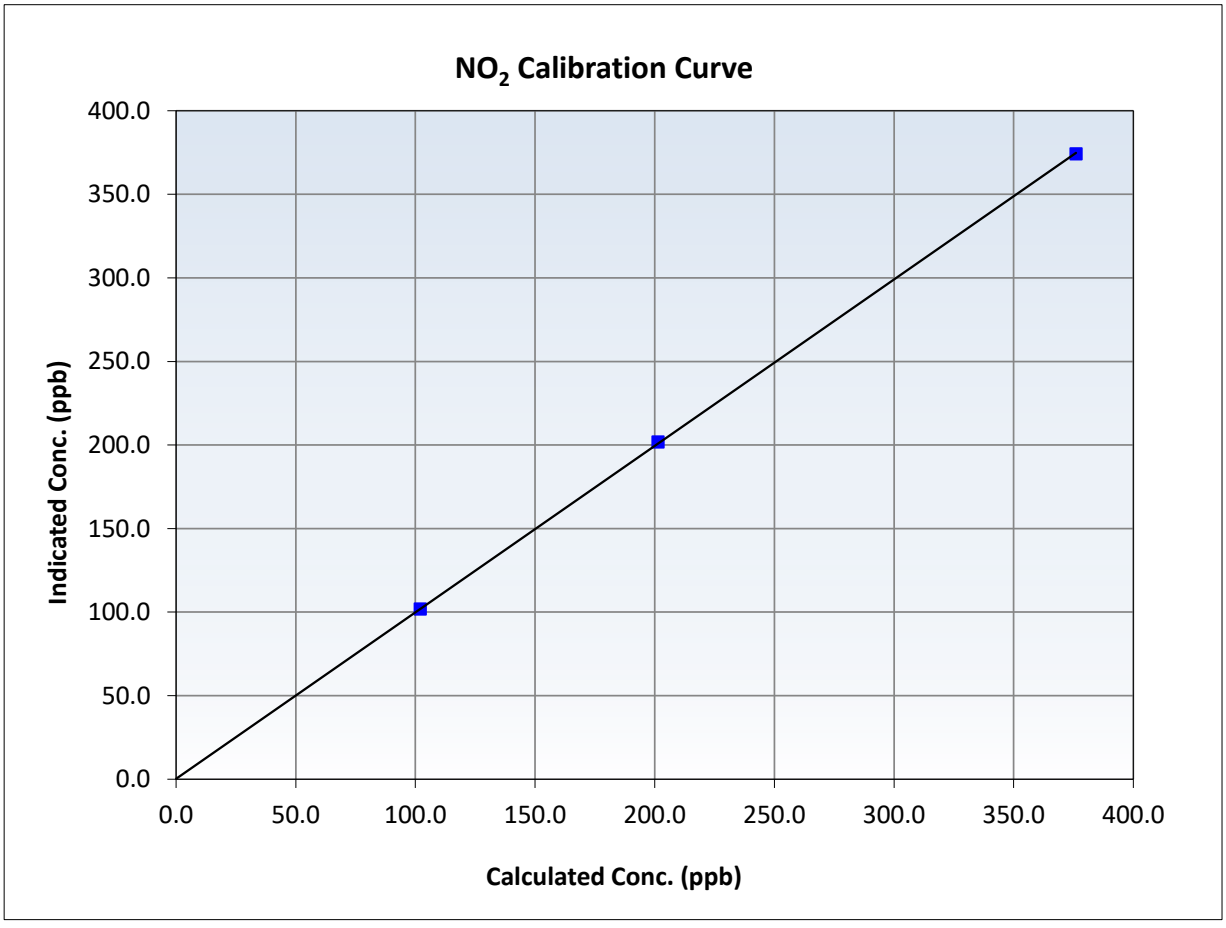
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 25, 2025
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	9:00	End Time (MST):	13:07
Analyzer make:	API T200	Analyzer serial #:	4259

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
376.0	374.2	1.0049
201.3	201.9	0.9972
102.0	101.8	1.0023

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999976	*≥0.995*
Slope	0.995965	*0.90 - 1.10*
Intercept	0.259781	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

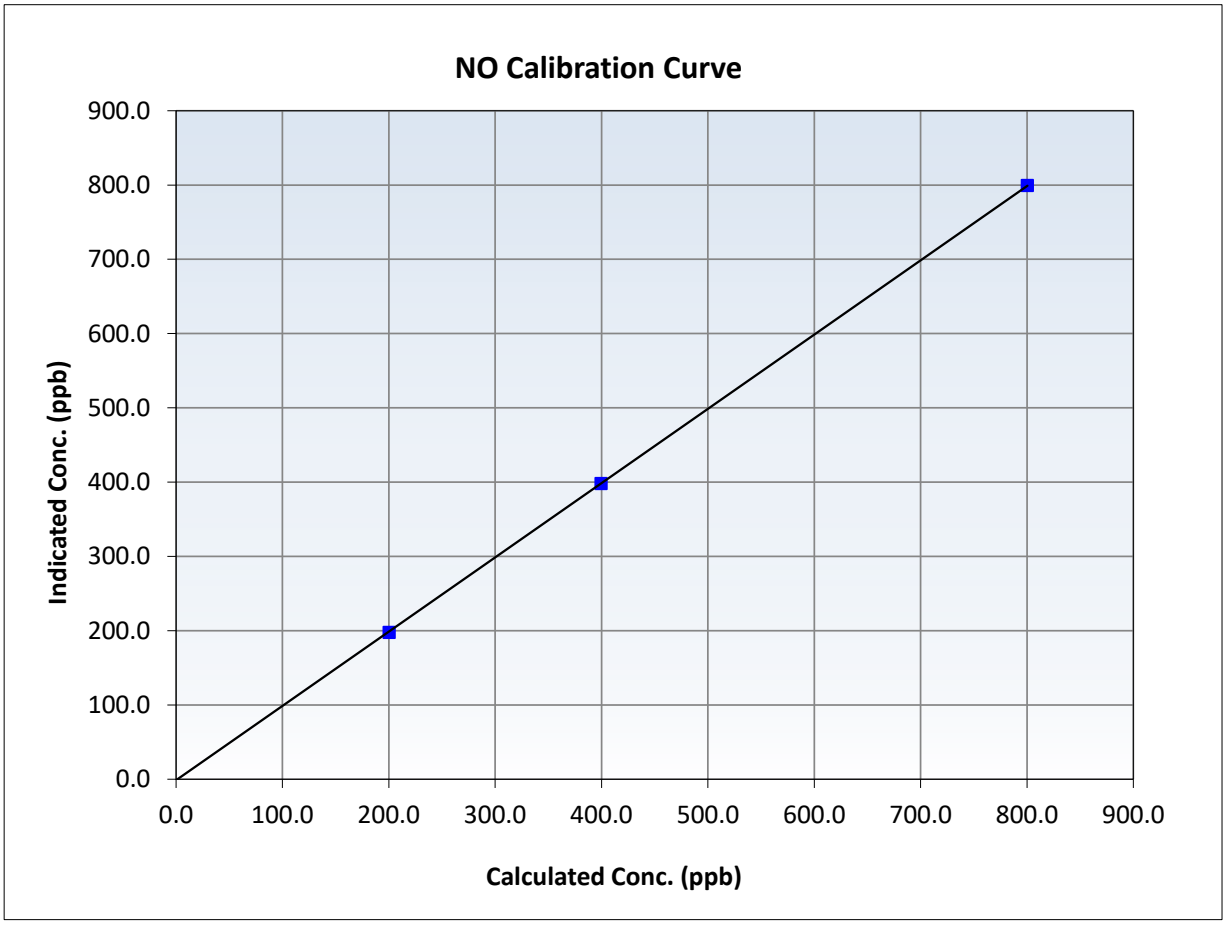
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 25, 2025
Station Name:	Sawbones Bay	Station Number:	AMS 505
Start Time (MST):	9:00	End Time (MST):	13:07
Analyzer make:	API T200	Analyzer serial #:	4259

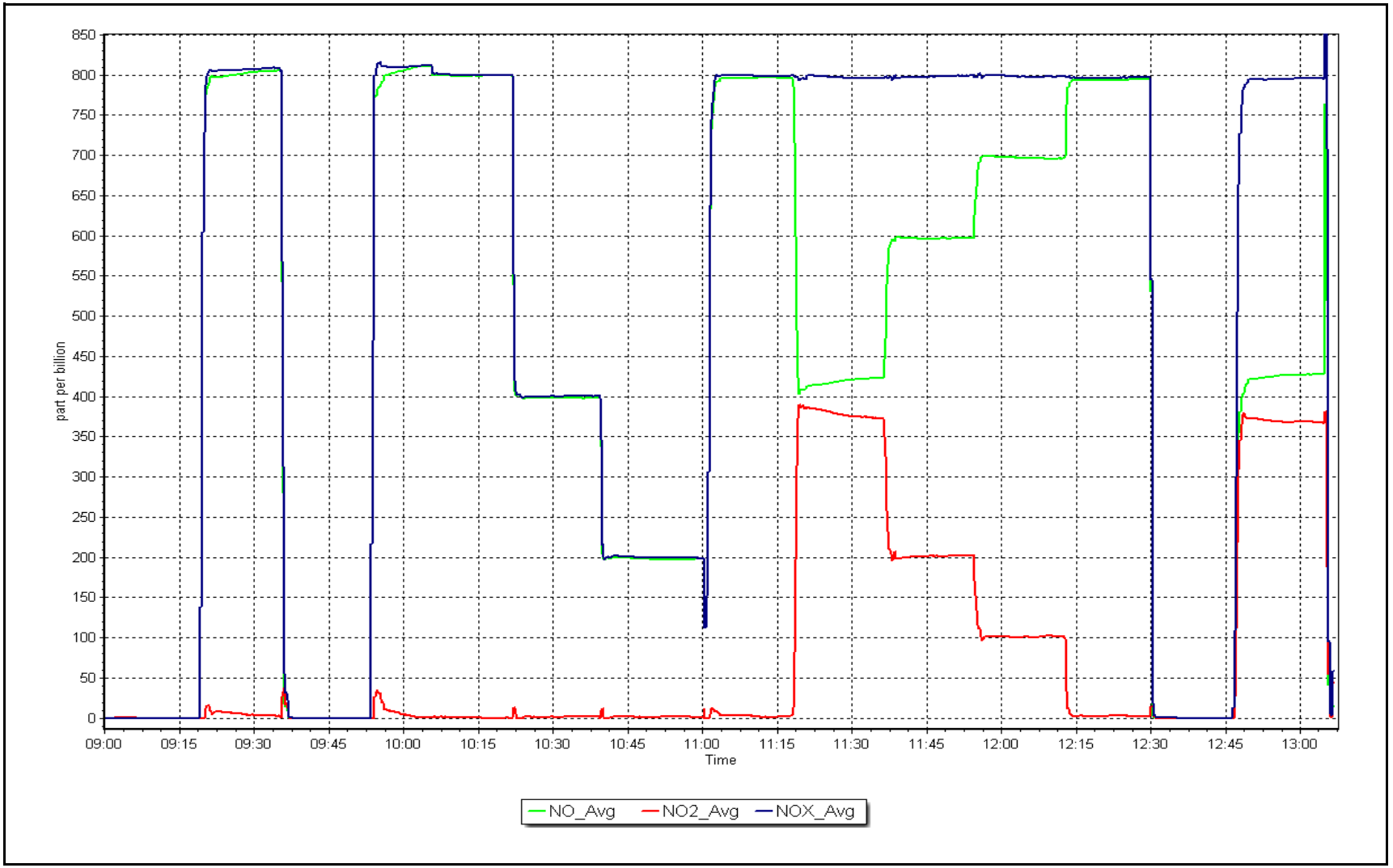
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
800.4	799.4	1.0013
399.6	398.1	1.0037
200.4	197.7	1.0137

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999991	*≥0.995*
Slope	0.999803	*0.90 - 1.10*
Intercept	-1.290066	*+/-20*



NO_X Calibration Plot Date: December 10, 2025 Location: Sawbones Bay



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS507
KIRBY SOUTH
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Kirby South	Station number:	AMS 507
Calibration Date:	December 5, 2025	Last Cal Date:	November 21, 2025
Start time (MST):	8:47	End time (MST):	13:04
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	50.74	ppm	Cal Gas Exp Date:	October 9, 2032
Cal Gas Cylinder #:	CC255918			
Removed Cal Gas Conc:	50.74	ppm	Rem Gas Exp Date:	
Removed Gas Cyl #:			Diff between cyl:	
Calibrator Model:	Teledyne API T700		Serial Number:	2445
Zero Air Gen Model:	Teledyne API T701H		Serial Number:	880

Analyzer Information

Analyzer make:	Thermo 43iQ		Serial Number:	1182340007	
Analyzer Range:	0 - 1000 ppb				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.001506	0.999962	Backgd or Offset:	30.1	30.1
Calibration intercept:	-0.232030	0.007945	Coeff or Slope:	1.112	1.118

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4921	78.8	799.7	792.7	1.009
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	792.6	Previous response	800.7	*% 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	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.0	----
High point	4921	78.8	799.7	800.0	1.000
Mid point	4961	39.4	399.8	398.8	1.003
Low point	4980	19.7	199.9	200.6	0.997
As left zero	5000	0.0	0.0	0.1	----
As left span	4921	78.8	799.7	800.0	1.000
				Average Correction Factor:	1.000

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

SO_2 Calibration Summary

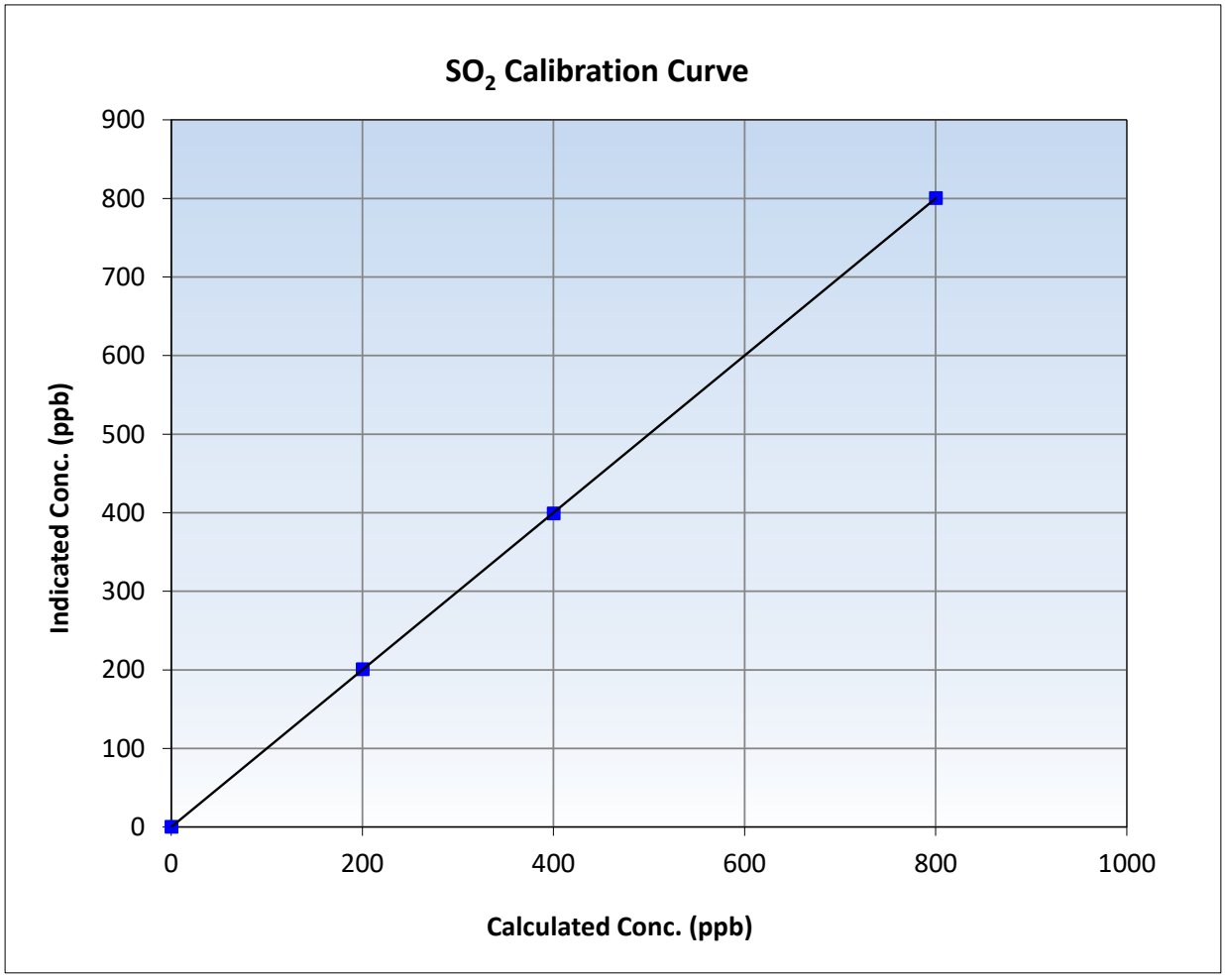
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 21, 2025
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	8:47	End Time (MST):	13:04
Analyzer make:	Thermo 43iQ	Analyzer serial #:	1182340007

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
799.7	800.0	0.9996
399.8	398.8	1.0025
199.9	200.6	0.9966

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999996	*≥0.995*
Slope	0.999962	*0.90 - 1.10*
Intercept	0.007945	*+/-30*



SO2 Calibration Plot Date: December 5, 2025 Location: Kirby South

Wood Buffalo Environmental Association

H2S Calibration Report

Station Information

Station Name:	Kirby South	Station number:	AMS 507
Calibration Date:	December 4, 2025	Last Cal Date:	November 20, 2025
Start time (MST):	12:22	End time (MST):	17:52
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.05	ppm	Cal Gas Exp Date:	November 15, 2026
Cal Gas Cylinder #:	DT0019762			
Removed Cal Gas Conc:	5.05	ppm	Rem Gas Exp Date:	NA
Removed Gas Cyl #:	n/a		Diff between cyl:	
Calibrator Make/Model:	Teledyne API T750		Serial Number:	281
ZAG Make/Model:	Teledyne API T751H		Serial Number:	321

Analyzer Information

Analyzer make:	Thermo 43i-TLE		Analyzer serial #:	1150840012	
Converter make:	Global		Converter serial #:	2022-197	
Analyzer Range	0 - 100 ppb		Converter Temp:	325	degC

	Start	*Finish*		*Start*	*Finish*
Calibration slope:	0.995957	1.009244	Backgd or Offset:	1.70	1.73
Calibration intercept:	0.120000	0.080000	Coeff or Slope:	1.052	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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.0	----
As found High point	4921	79.2	80.0	79.8	1.002
As found Mid point	4960	39.6	40.0	40.0	1.000
As found Low point	4980	19.8	20.0	19.8	1.010
New cylinder response					

Baseline Corr As found:	79.8	Prev response:	79.79	*% change:	0.0%
Baseline Corr 2nd AF pt:	40.0	AF Slope:	0.998386	AF Intercept:	-0.040000
Baseline Corr 3rd AF pt:	19.8	AF Correlation:	0.999991	* = > +/-5% change initiates investigation	

H2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
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	40.5	0.988
Low point	4980	19.8	20.0	20.2	0.990
As left zero	5000	0.0	0.0	0.2	----
As left span	4921	79.2	80.0	80.3	0.996
SO2 Scrubber Check	4919	80.0	800.2	0.0	----

Date of last scrubber change:	July 25, 2023	Ave Corr Factor	0.989	
Date of last converter efficiency test:	September 18, 2025	102.4%	efficiency	

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

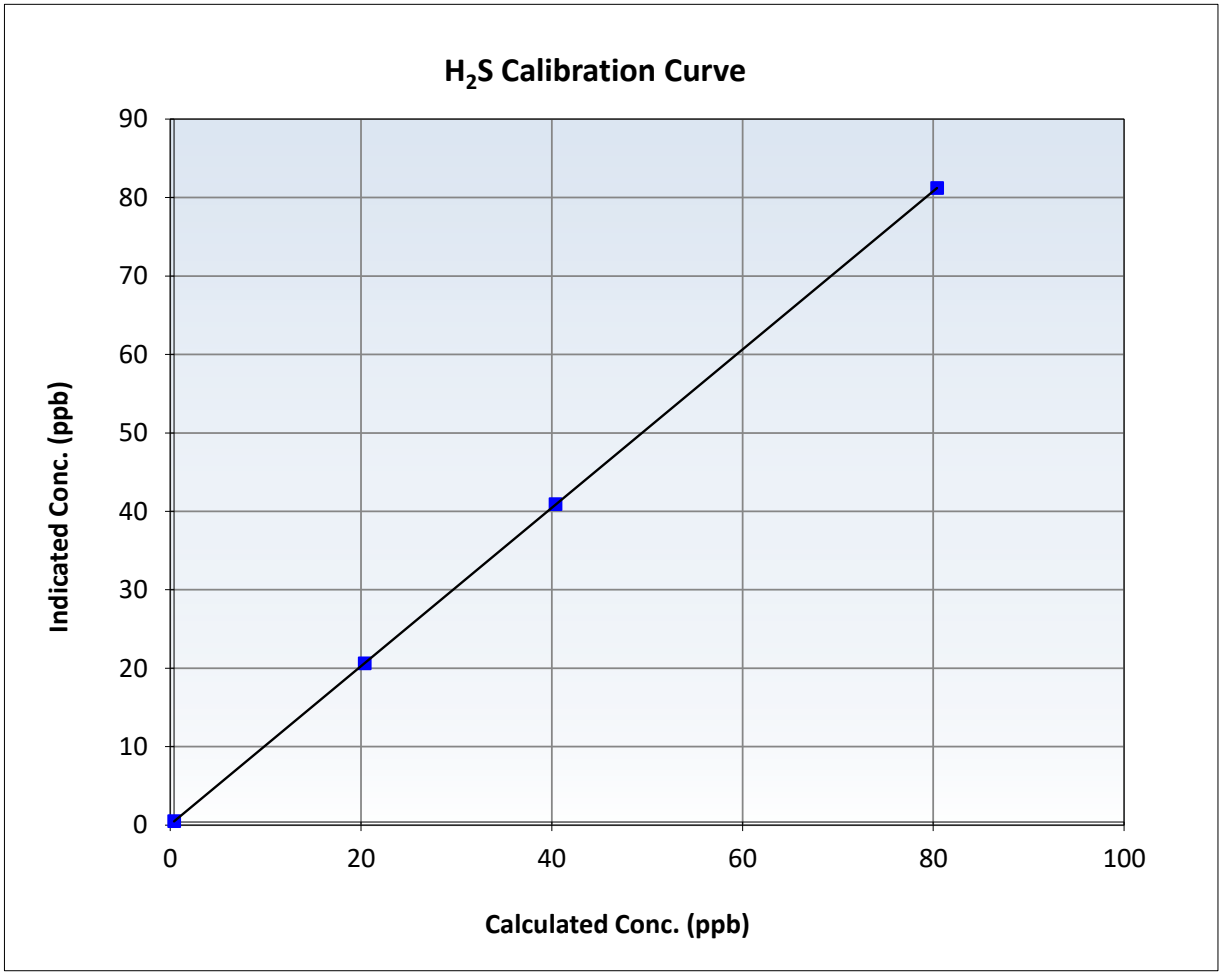
H2S Calibration Summary

Station Information

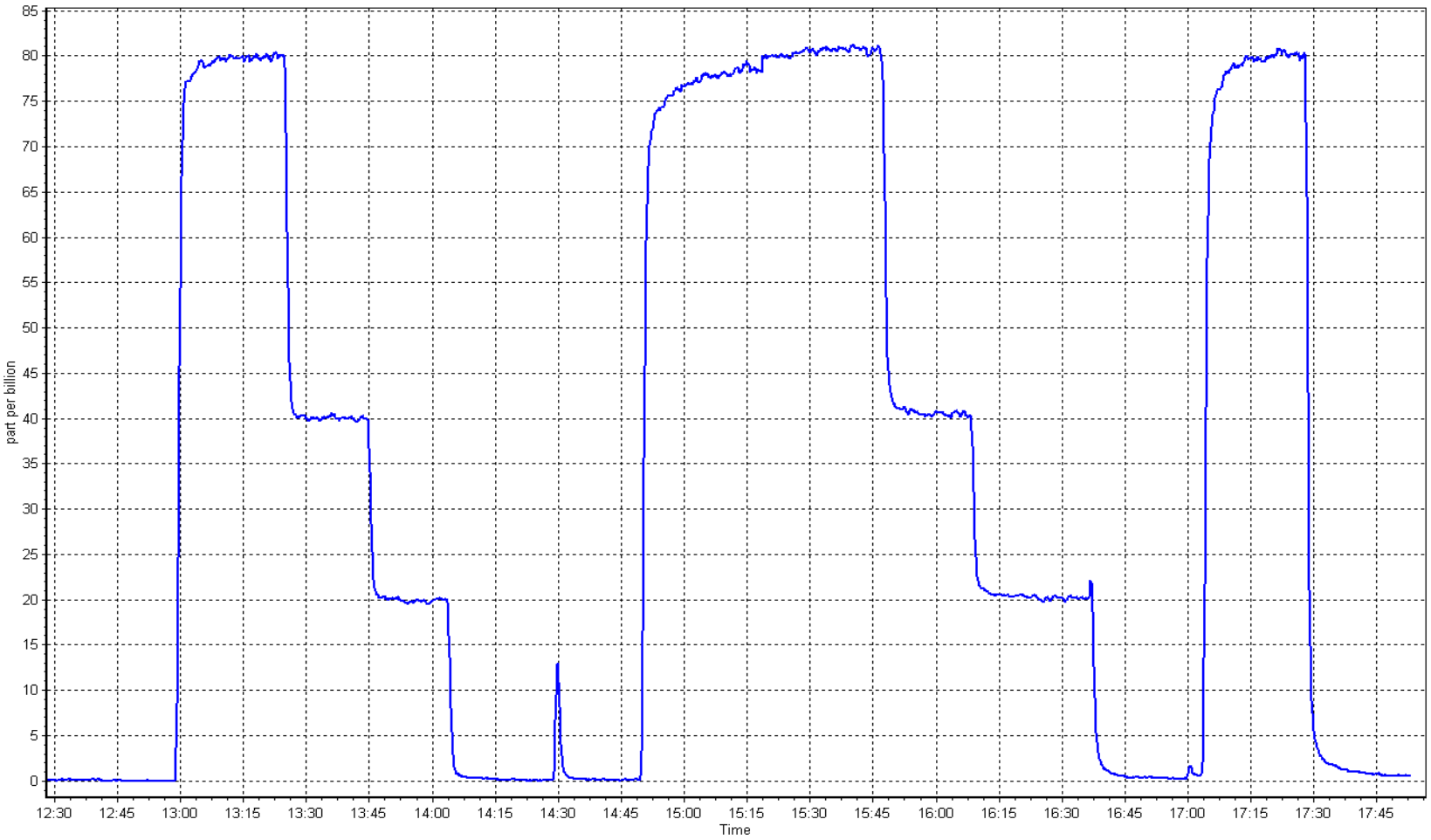
Calibration Date:	December 4, 2025	Previous Calibration:	November 20, 2025
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	12:22	End Time (MST):	17:52
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1150840012

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		*Limits*
0.0	0.1	----	Correlation Coefficient	0.999998	*≥0.995*
80.0	80.8	0.9900	Slope	1.009244	*0.90 - 1.10*
40.0	40.5	0.9876			
20.0	20.2	0.9900	Intercept	0.080000	*+/-3*



H2S Calibration Plot Date: December 4, 2025 Location: Kirby South



CALS_546

Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name:	Kirby South	Station number:	AMS 507
Calibration Date:	December 5, 2025	Last Cal Date:	November 21, 2025
Start time (MST):	8:47	End time (MST):	13:04
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC255918		Cal Gas Expiry Date:	October 9, 2032	
CH4 Cal Gas Conc.	506.4	ppm	CH4 Equiv Conc.	1070.2	ppm
C3H8 Cal Gas Conc.	205.0	ppm			
Removed Gas Cert:			Removed Gas Expiry:		
Removed CH4 Conc.	506.4	ppm	CH4 Equiv Conc.	1070.2	ppm
Removed C3H8 Conc.	205.0	ppm	Diff between cyl:		
Calibrator Make/Model:	Teledyne API T700		Serial Number:	2445	
ZAG Make/Model:	Teledyne API T701H		Serial Number:	880	

Analyzer Information

Analyzer make:	Thermo 51i-LT		Analyzer serial #:	1182340005	
Analyzer Range:	0 - 20 ppm				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	0.997911	0.995370	Background:	1.85	1.97
Calibration intercept:	-0.018831	0.025168	Coefficient:	3.489	3.418

THC As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	0.14	----
As found High point	4921	78.8	16.87	17.31	0.982
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	17.17	Previous response	16.81	*% change	2.1%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	0.05	
High point	4921	78.8	16.87	16.82	1.003
Mid point	4961	39.4	8.43	8.42	1.001
Low point	4980	19.7	4.22	4.19	1.006
As left zero	5000	0.0	0.00	0.02	----
As left span	4921	78.8	16.87	16.84	1.002
				Average Correction Factor	1.003

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

THC Calibration Summary

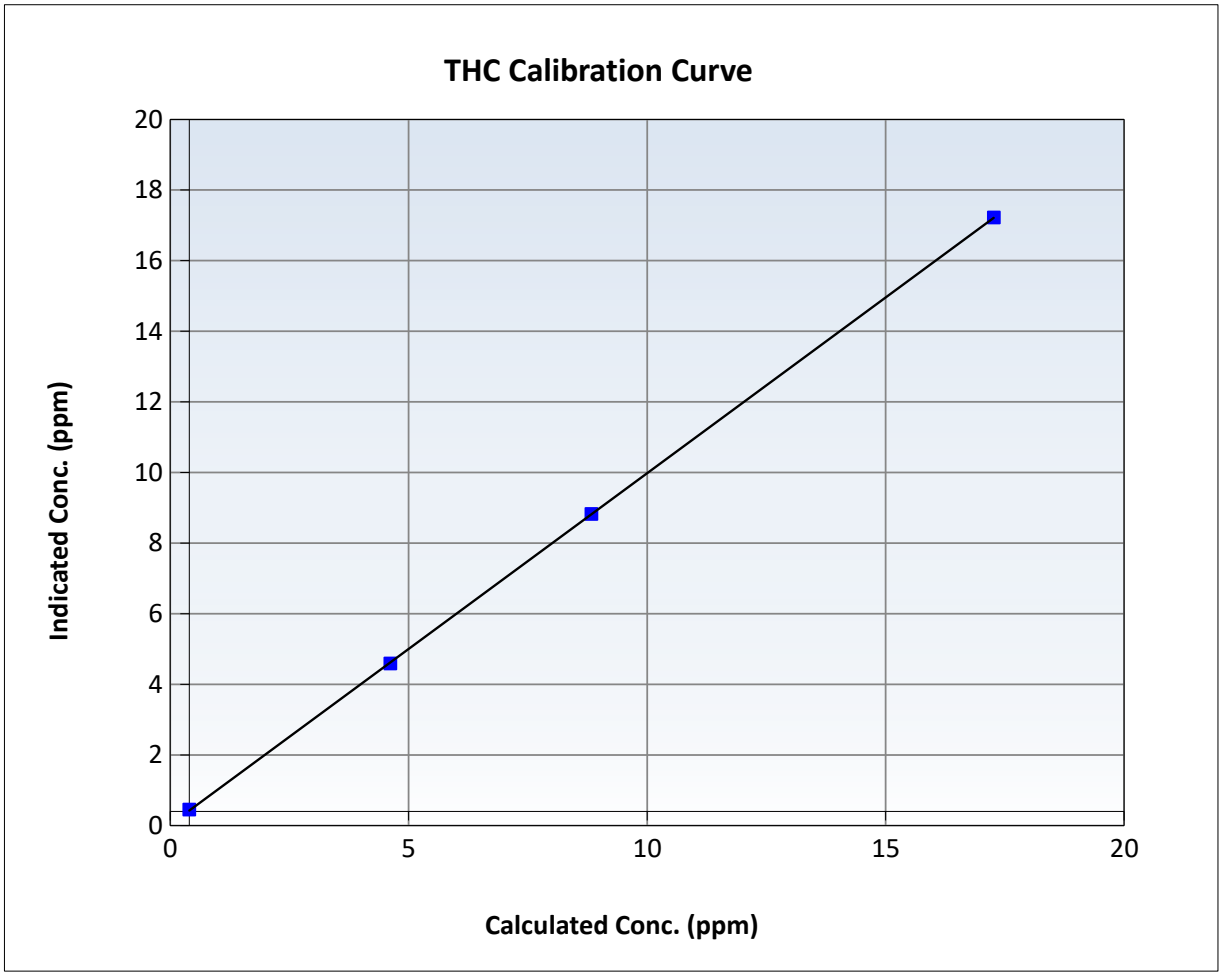
Station Information

Calibration Date:	December 5, 2025	Previous Calibration:	November 21, 2025
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	8:47	End Time (MST):	13:04
Analyzer make:	Thermo 51i-LT	Analyzer serial #:	1182340005

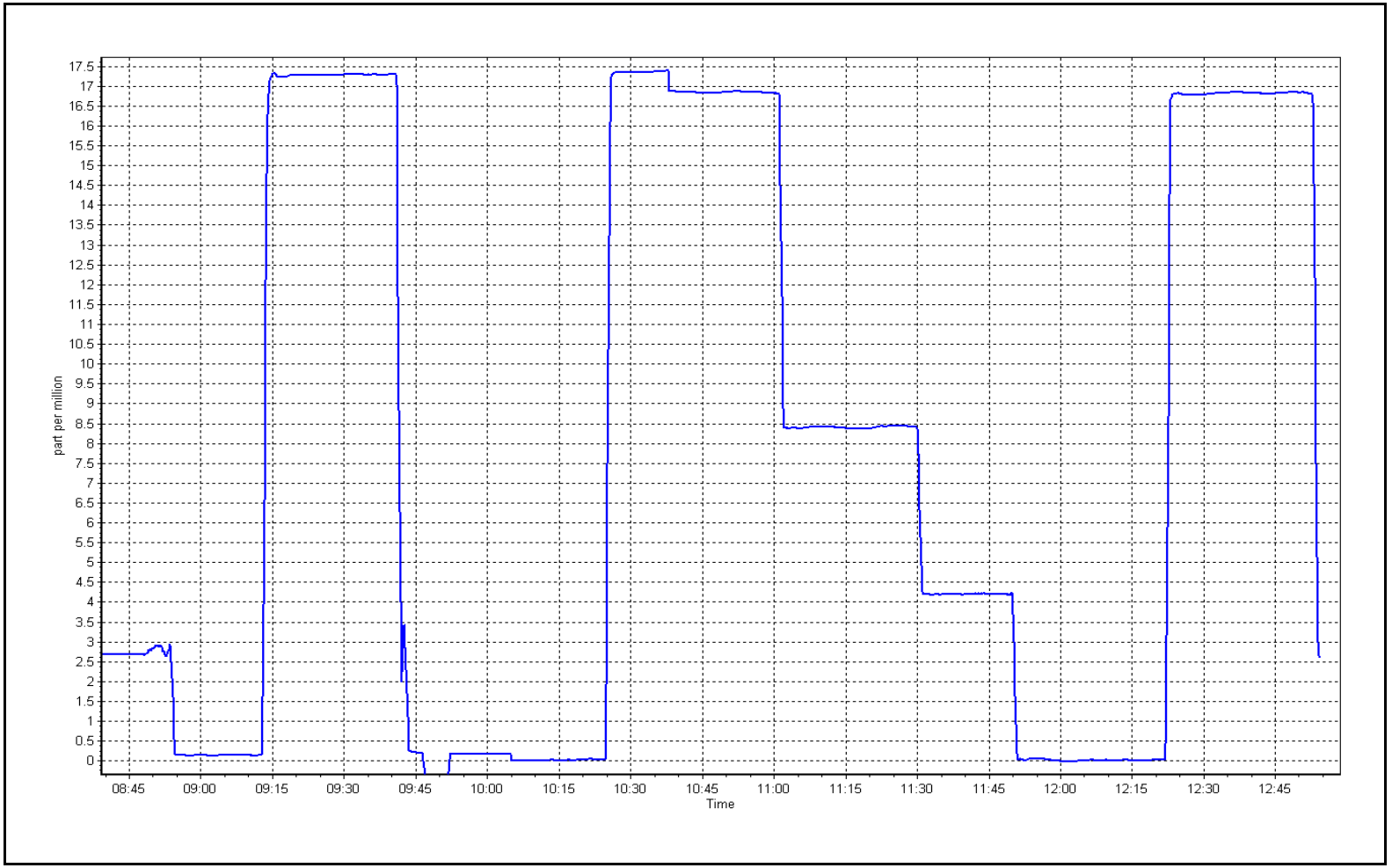
Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	0.05	----
16.87	16.82	1.0027
8.43	8.42	1.0014
4.22	4.19	1.0059

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999991	*≥0.995*
Slope	0.995370	*0.90 - 1.10*
Intercept	0.025168	*+/-1.5*



THC Calibration Plot Date: December 5, 2025 Location: Kirby South



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Kirby South
Station number:	AMS 507
Calibration Date:	December 4, 2025
Last Cal Date:	November 20, 2025
Start time (MST):	12:22
End time (MST):	17:55
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	DT0019572	Cal Gas Expiry Date:	January 5, 2032
NOX Cal Gas Conc:	60.00 ppm	NO Cal Gas Conc:	59.90 ppm
Removed Cylinder #:	NA	Removed Gas Exp Date:	NA
Removed Gas NOX Conc:	60.00 ppm	Removed Gas NO Conc:	59.90 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	2445
ZAG make/model:	Teledyne API T701H	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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	0.2	0.2	0.0	----	----
AF High point	4933	66.8	801.6	800.3	1.3	804.0	798.4	5.7	0.9973	1.0026
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X = 802.9 ppb	NO = 799.1 ppb
Baseline Corr 1st pt	NO_X = 803.8 ppb	NO = 798.2 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 = -0.1%

As Found Statistics

As found	NO_X r^2:	Nx Sl:	Nx Int:
As found	NO r^2:	NO Sl:	NO Int:
As found	NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Thermo 42i Serial Number: 1173480006

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	0.727	0.727	NO bkgnd or offset:	7.4	7.5
NOX coeff or slope:	0.996	0.996	NOX bkgnd or offset:	7.6	7.6
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	142.0	141.4

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	1.003352	1.001912
NO_X Cal Offset:	-1.433601	-0.753594
NO Cal Slope:	1.001885	0.999515
NO Cal Offset:	-2.733647	-1.353631
NO_2 Cal Slope:	0.973364	0.976101
NO_2 Cal Offset:	0.733853	1.710979

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	0.3	0.3	0.0	----	----
High point	4933	66.8	801.6	800.3	1.3	803.0	799.5	3.6	0.9983	1.0010
Mid point	4967	33.4	400.8	400.1	0.7	400.1	397.4	2.8	1.0017	1.0069
Low point	4983	16.7	200.4	200.1	0.3	199.1	197.2	1.9	1.0065	1.0145
As left zero	5000	0.0	0.0	0.0	0.0	0.3	0.2	0.1	----	----
As left span	4933	66.8	801.6	402.5	399.1	791.5	402.5	389.0	1.0128	1.0000
								Average Correction Factor	1.0022	1.0075

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.0	----	----
High GPT point	799.0	407.3	393.0	384.0	1.0235	97.7%
Mid GPT point	799.0	622.3	178.0	178.4	0.9980	100.2%
Low GPT point	799.0	708.1	92.2	91.9	1.0037	99.6%
				Average Correction Factor	1.0084	99.2%

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

Calibration Performed By: Braiden Boutilier

Wood Buffalo Environmental Association

NO_X Calibration Summary

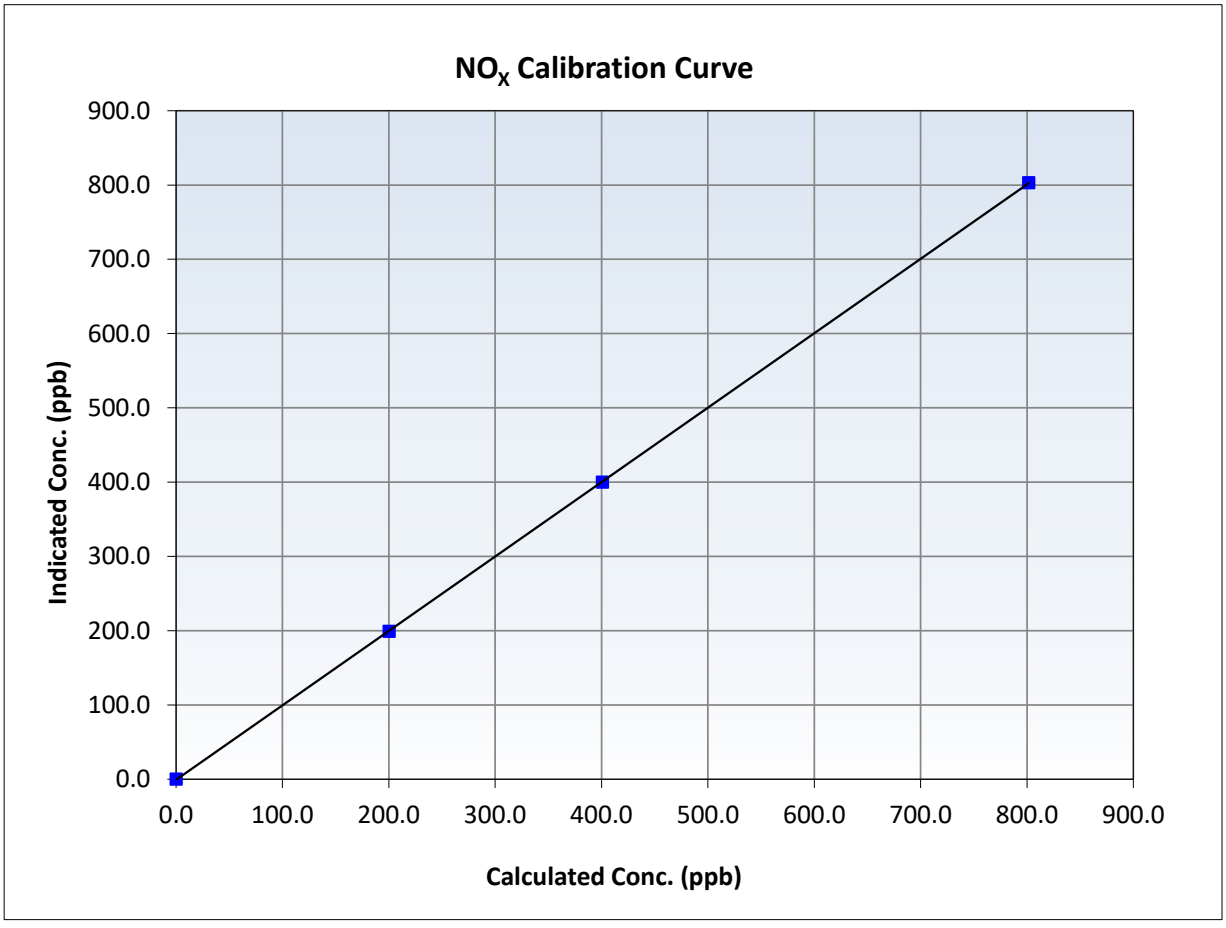
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 20, 2025
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	12:22	End Time (MST):	17:55
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.3	----
801.6	803.0	0.9983
400.8	400.1	1.0017
200.4	199.1	1.0065

Statistical Evaluation		Limits
Correlation Coefficient	0.999992	≥0.995
Slope	1.001912	0.90 - 1.10
Intercept	-0.753594	+/-20



Wood Buffalo Environmental Association

NO_2 Calibration Summary

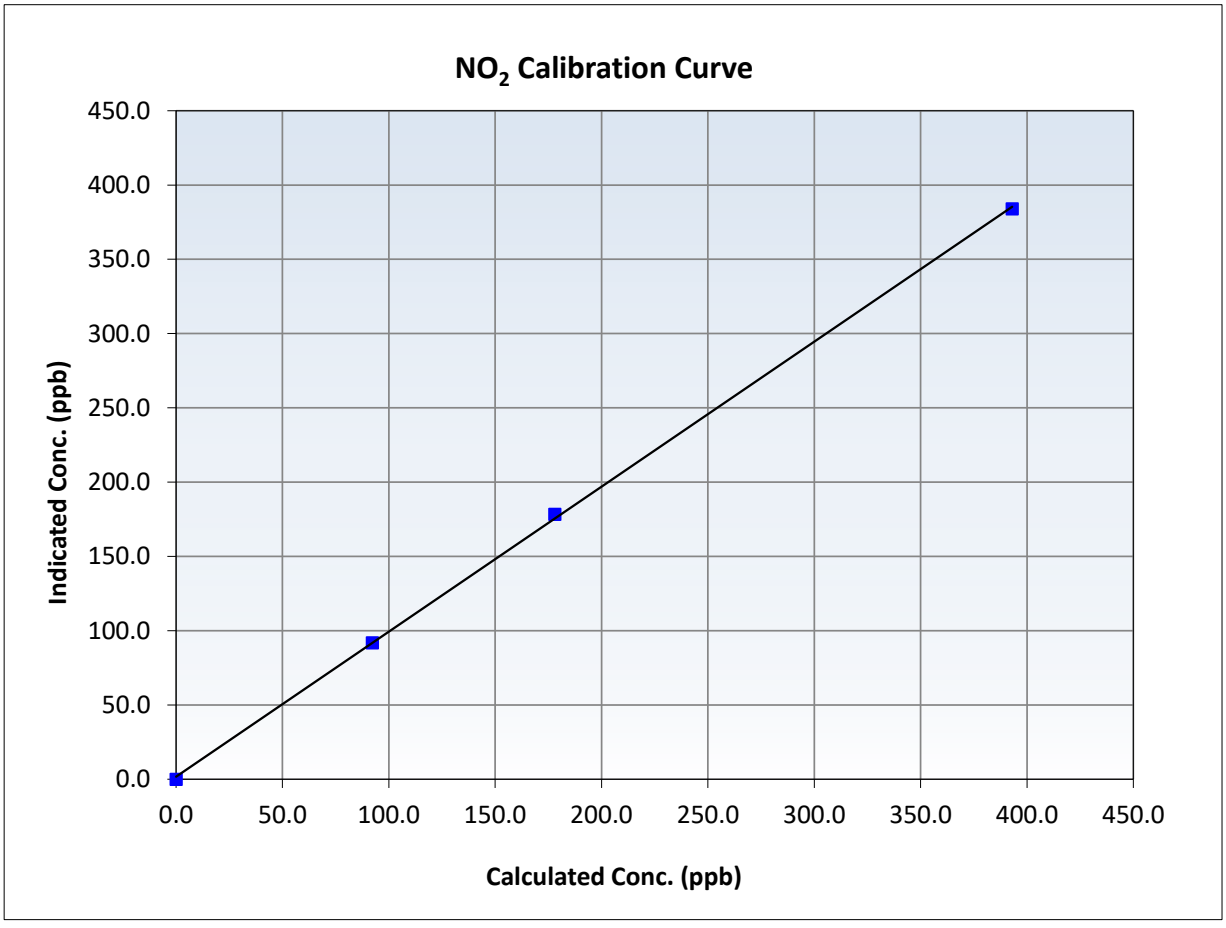
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 20, 2025
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	12:22	End Time (MST):	17:55
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
393.0	384.0	1.0235
178.0	178.4	0.9980
92.2	91.9	1.0037

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999836	*≥0.995*
Slope	0.976101	*0.90 - 1.10*
Intercept	1.710979	*+/-20*



Wood Buffalo Environmental Association

NO Calibration Summary

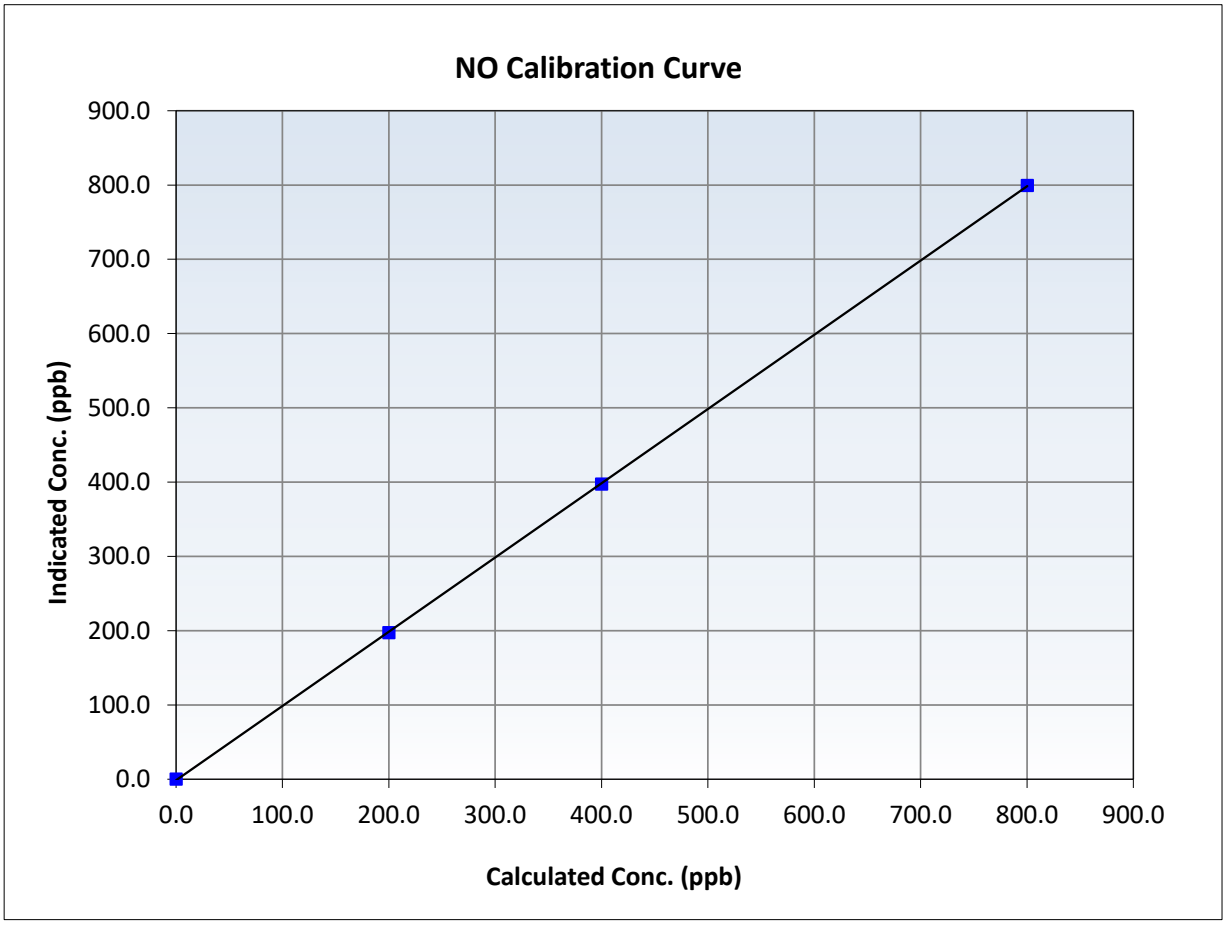
Station Information

Calibration Date:	December 4, 2025	Previous Calibration:	November 20, 2025
Station Name:	Kirby South	Station Number:	AMS 507
Start Time (MST):	12:22	End Time (MST):	17:55
Analyzer make:	Thermo 42i	Analyzer serial #:	1173480006

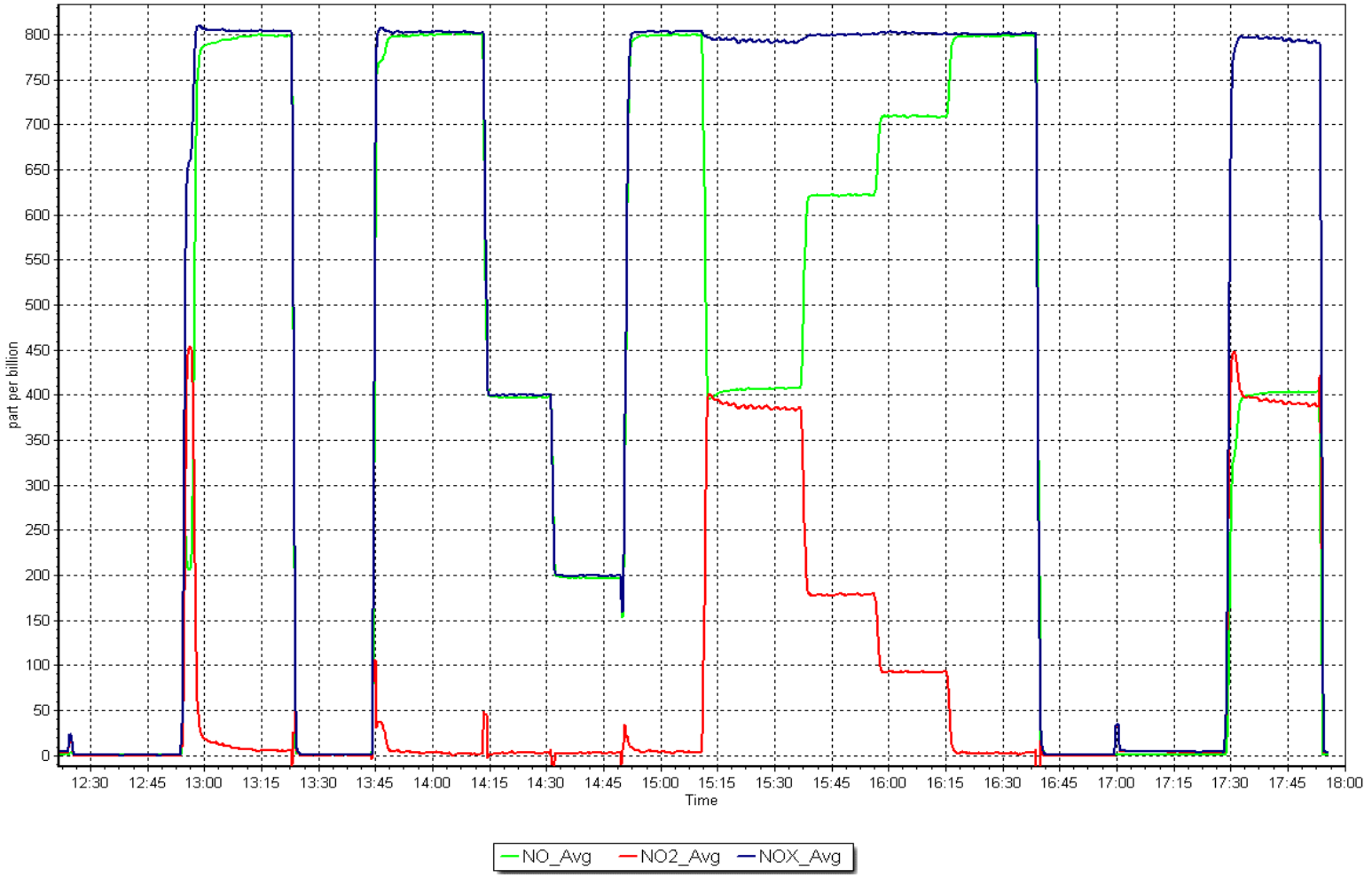
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.3	----
800.3	799.5	1.0010
400.1	397.4	1.0069
200.1	197.2	1.0145

Statistical Evaluation		Limits
Correlation Coefficient	0.999980	≥0.995
Slope	0.999515	0.90 - 1.10
Intercept	-1.353631	+/-20



NO_X Calibration Plot Date: December 4, 2025 Location: Kirby South



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
CALIBRATION REPORT

AMS511
BLACKGOLD
DECEMBER 2025

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

January 30, 2026

Wood Buffalo Environmental Association

SO_2 Calibration Report

Station Information

Station Name:	Blackgold	Station number:	AMS 511
Calibration Date:	December 9, 2025	Last Cal Date:	November 20, 2025
Start time (MST):	9:08	End time (MST):	11:59
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				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.003515	0.998985	Backgd or Offset:	15.2	15.4
Calibration intercept:	-1.320664	-0.760073	Coeff or Slope:	1.163	1.182

SO_2 As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.1	----
As found High point	4919	81.0	799.8	784.2	1.020
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	784.1	Previous response	801.3	*% change	-2.2%
Baseline Corr 2nd AF pt:	NA	AF Slope:		AF Intercept:	
Baseline Corr 3rd AF pt:	NA	AF Correlation:		* = > +/-5% change initiates investigation	

SO_2 Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.1	----
High point	4919	81.0	799.8	798.7	1.001
Mid point	4959	40.5	399.9	398.2	1.004
Low point	4980	20.3	200.4	198.7	1.009
As left zero	5000	0.0	0.0	0.2	----
As left span	4919	81.0	799.8	801.7	0.998
				Average Correction Factor:	1.005

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

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

SO_2 Calibration Summary

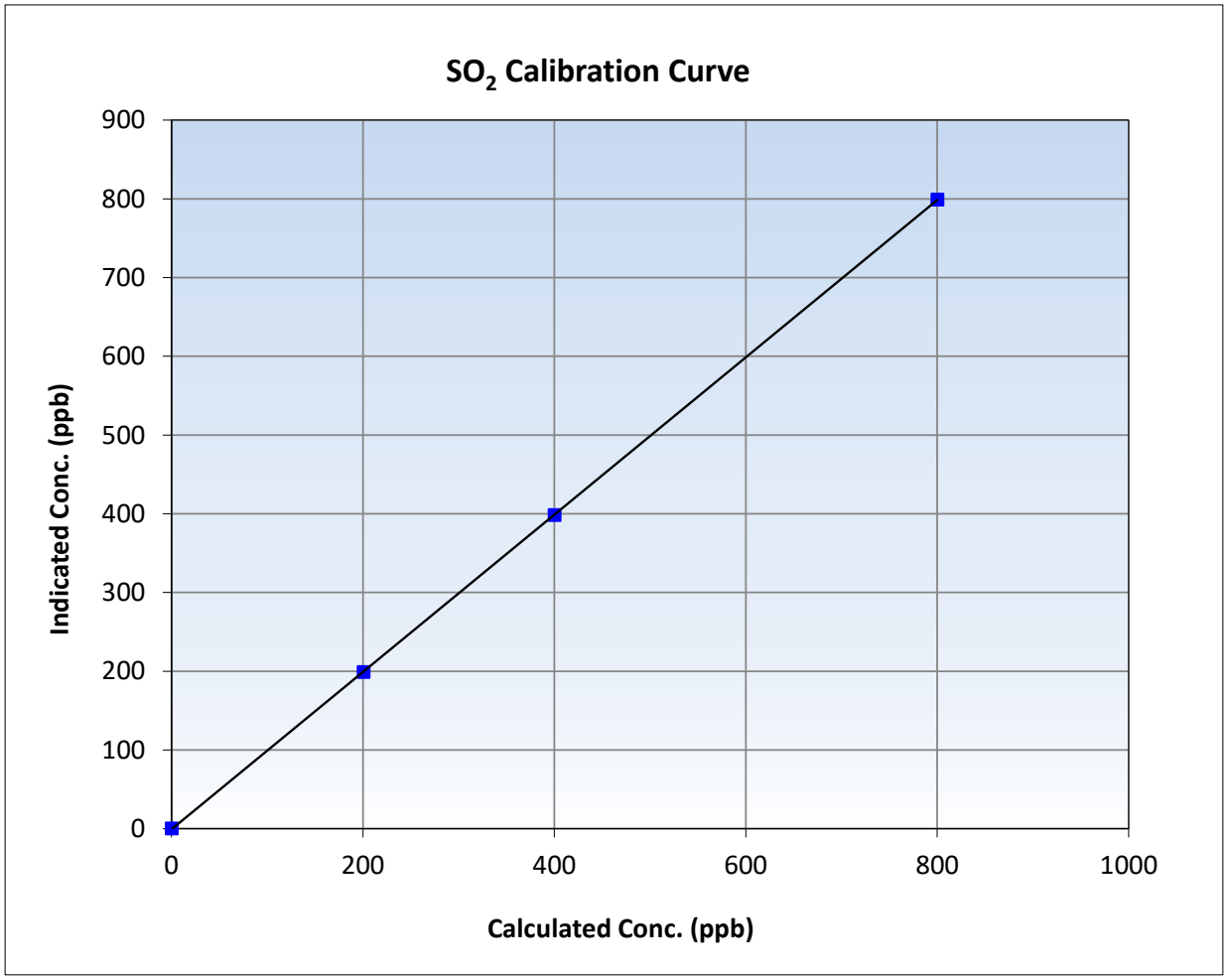
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 20, 2025
Station Name:	Blackgold	Station Number:	AMS 511
Start Time (MST):	9:08	End Time (MST):	11:59
Analyzer make:	Thermo 43i	Analyzer serial #:	1173410001

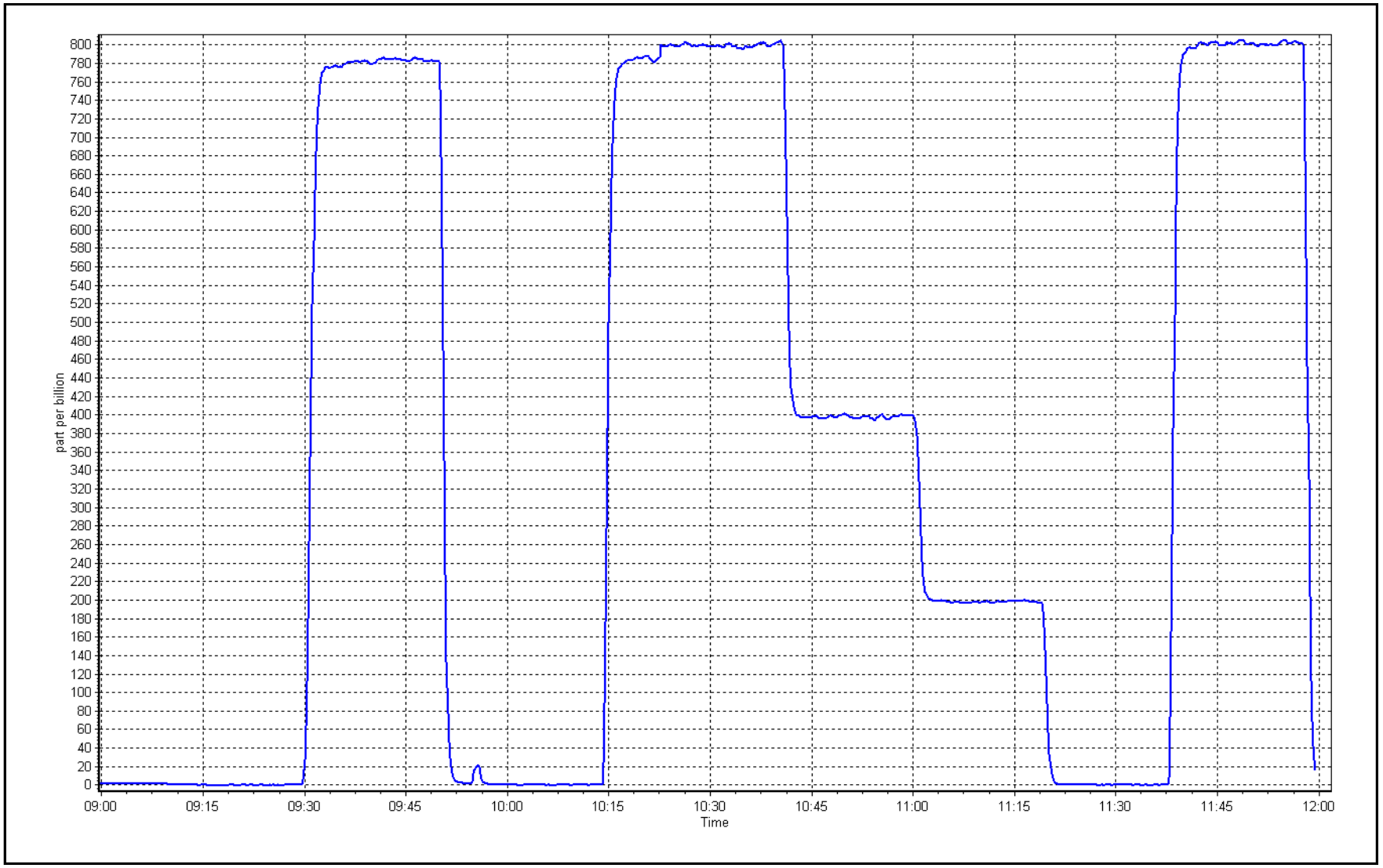
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.1	----
799.8	798.7	1.0014
399.9	398.2	1.0044
200.4	198.7	1.0087

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999995	*≥0.995*
Slope	0.998985	*0.90 - 1.10*
Intercept	-0.760073	*+/-30*



SO2 Calibration Plot Date: December 9, 2025 Location: Blackgold



Wood Buffalo Environmental Association

H_2S Calibration Report

Station Information

Station Name:	Blackgold	Station number:	AMS 511
Calibration Date:	December 10, 2025	Last Cal Date:	November 27, 2025
Start time (MST):	9:03	End time (MST):	14:27
Reason:	Routine		

Calibration Standards

Cal Gas Concentration:	5.139	ppm	Cal Gas Exp Date:	January 3, 2026
Cal Gas Cylinder #:	CC511397			
Removed Cal Gas Conc:	5.139	ppm	Rem Gas Exp Date:	N/A
Removed Gas Cyl #:	N/A		Diff between cyl:	
Calibrator Make/Model:	API T700		Serial Number:	2659
ZAG Make/Model:	API T701		Serial Number:	953

Analyzer Information

Analyzer make:	Thermo 43i-TLE		Analyzer serial #:	1336160090	
Converter make:	Global G150		Converter serial #:	2025-299	
Analyzer Range	0 - 100 ppb		Converter Temp:	325	degC
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.005349	1.006062	Backgd or Offset:	4.10	4.50
Calibration intercept:	0.140712	-0.059245	Coeff or Slope:	1.415	1.448

H_2S As Found Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Baseline Adjusted Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.0	0.3	----
As found High point	4922	77.8	80.0	78.9	1.017
As found Mid point	4961	38.9	40.0	39.6	1.017
As found Low point	4981	19.5	20.0	19.9	1.022
New cylinder response					

Baseline Corr As found:	78.6	Prev response:	80.53	*% change:	-2.5%
Baseline Corr 2nd AF pt:	39.3	AF Slope:	0.983337	AF Intercept:	0.261079
Baseline Corr 3rd AF pt:	19.6	AF Correlation:	0.999998	* = > +/-5% change initiates investigation	

H_2S Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.0	0.2	----
High point	4922	77.8	80.0	80.5	0.993
Mid point	4961	38.9	40.0	40.1	0.997
Low point	4981	19.5	20.0	19.8	1.012
As left zero	5000	0.0	0.0	0.4	----
As left span	4922	77.8	80.0	79.5	1.006
SO2 Scrubber Check	4919	81.0	810.0	-0.1	----
Date of last scrubber change:				Ave Corr Factor	1.001
Date of last converter efficiency test:					

Notes: Changed sample inlet filter after as founds. Ran scrubber check after calibrator zero and it passed. Adjusted zero and span.

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

H_2S Calibration Summary

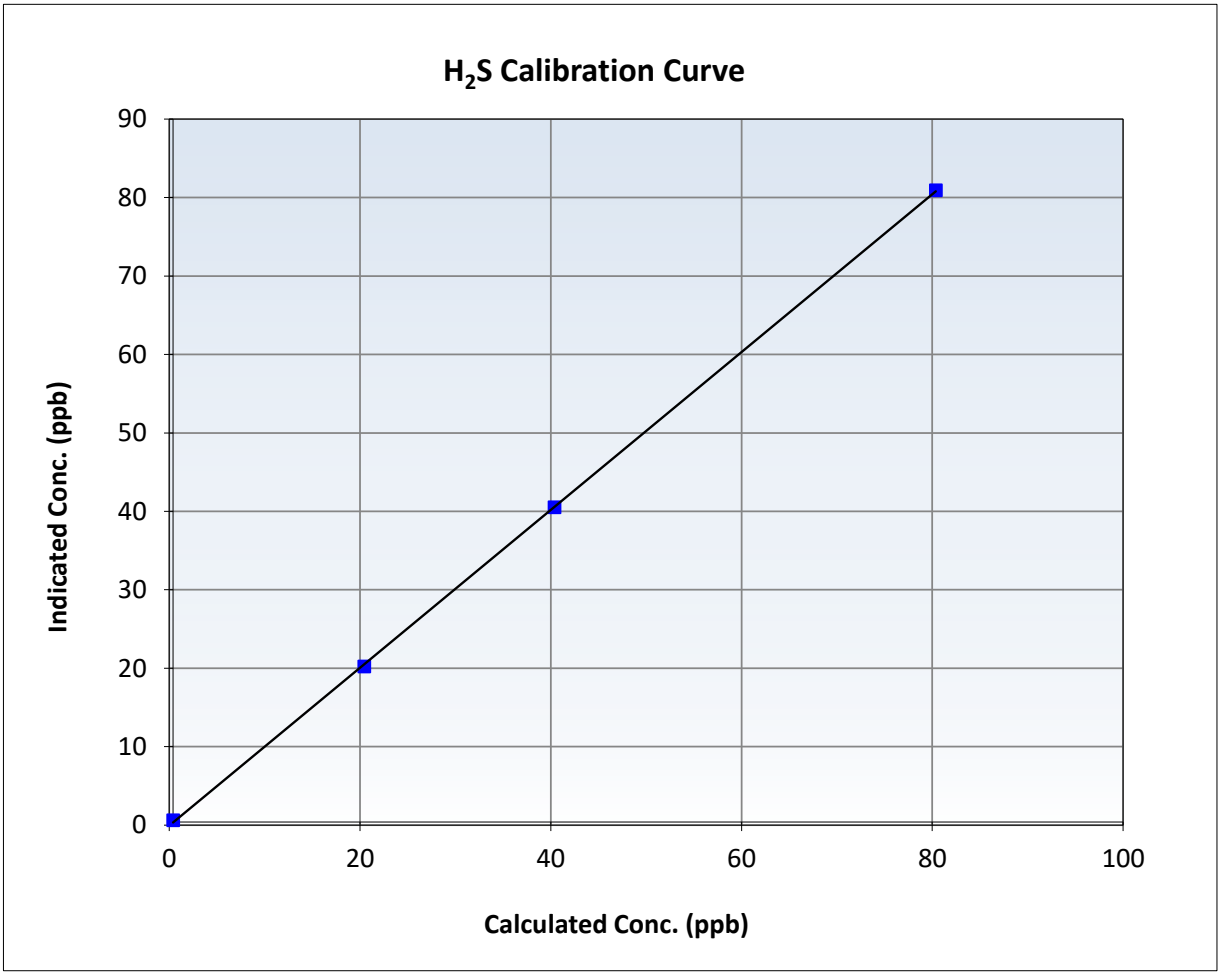
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 27, 2025
Station Name:	Blackgold	Station Number:	AMS 511
Start Time (MST):	9:03	End Time (MST):	14:27
Analyzer make:	Thermo 43i-TLE	Analyzer serial #:	1336160090

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.2	----
80.0	80.5	0.9934
40.0	40.1	0.9971
20.0	19.8	1.0121

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999951	*≥0.995*
Slope	1.006062	*0.90 - 1.10*
Intercept	-0.059245	*+/-3*



H_2S Calibration Plot Date: December 10, 2025 Location: Blackgold

Wood Buffalo Environmental Association

THC Calibration Report

Station Information

Station Name:	Blackgold	Station number:	AMS 511
Calibration Date:	December 9, 2025	Last Cal Date:	November 20, 2025
Start time (MST):	9:08	End time (MST):	11:59
Reason:	Routine		

Calibration Standards

Gas Cert Reference:	CC303094		Cal Gas Expiry Date:	January 5, 2029	
CH4 Cal Gas Conc.	499.2	ppm	CH4 Equiv Conc.	1056.6	ppm
C3H8 Cal Gas Conc.	202.7	ppm			
Removed Gas Cert:	N/A		Removed Gas Expiry:	N/A	
Removed CH4 Conc.	499.2	ppm	CH4 Equiv Conc.	1056.6	ppm
Removed C3H8 Conc.	202.7	ppm	Diff between cyl:		
Calibrator Make/Model:	Teledyne API T700		Serial Number:	2659	
ZAG Make/Model:	Teledyne API 701		Serial Number:	953	

Analyzer Information

Analyzer make:	Thermo 51i		Analyzer serial #:	12426335705	
Analyzer Range:	0 - 20 ppm				
	Start	***Finish***		***Start***	***Finish***
Calibration slope:	1.000796	1.004010	Background:	0.81	0.82
Calibration intercept:	-0.030085	-0.043909	Coefficient:	2.287	2.323

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)) *Limit = 0.90-1.10*
As found zero	5000	0.0	0.00	-0.05	----
As found High point	4919	81.0	17.12	16.84	1.014
As found Mid point					
As found Low point					
New cylinder response					
Baseline Corr As found:	16.88	Previous response	17.10	*% 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	

THC Calibration Data

Set Point	Dilution air flow rate (sccm)	Source gas flow rate (sccm)	Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Calibrator zero	5000	0.0	0.00	-0.03	----
High point	4919	81.0	17.12	17.15	0.998
Mid point	4959	40.5	8.56	8.53	1.003
Low point	4980	20.3	4.29	4.26	1.007
As left zero	5000	0.0	0.00	-0.05	----
As left span	4919	81.0	17.12	17.37	0.985
				Average Correction Factor	1.003

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

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

THC Calibration Summary

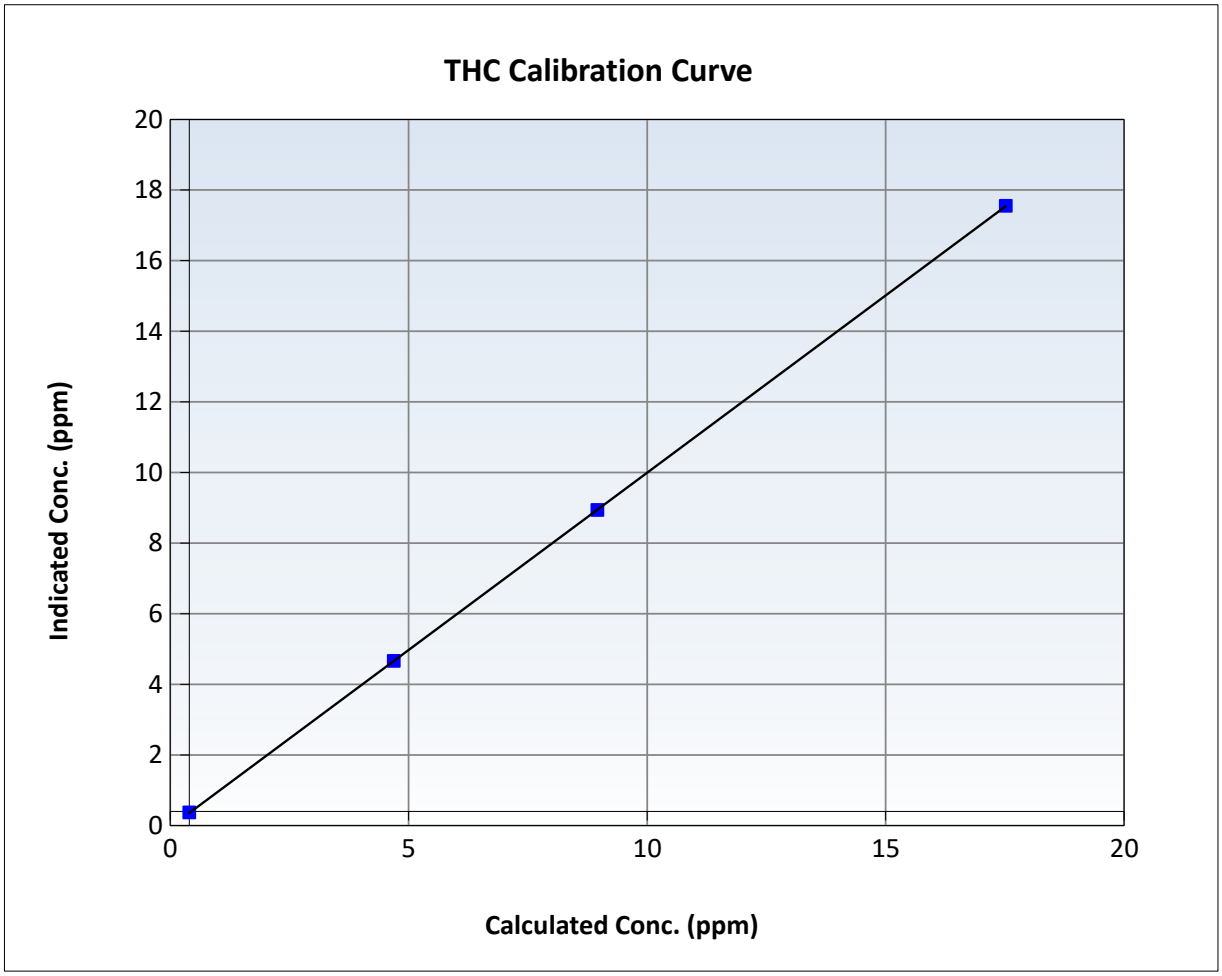
Station Information

Calibration Date:	December 9, 2025	Previous Calibration:	November 20, 2025
Station Name:	2025-09-29	Station Number:	AMS 511
Start Time (MST):	9:08	End Time (MST):	11:59
Analyzer make:	Thermo 51i	Analyzer serial #:	12426335705

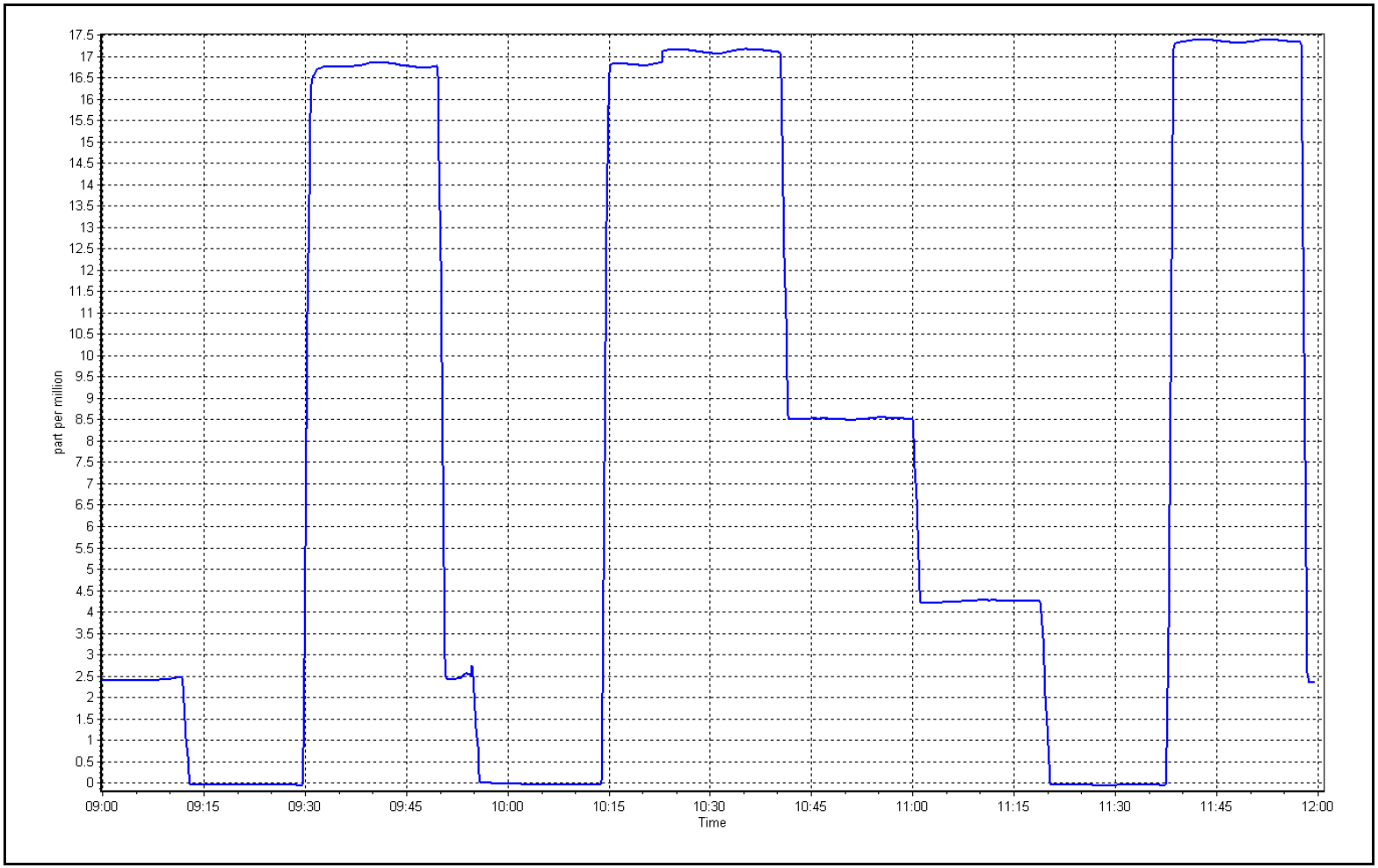
Calibration Data

Calculated Concentration (ppm) (Cc)	Indicated Concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0.00	-0.03	----
17.12	17.15	0.9980
8.56	8.53	1.0030
4.29	4.26	1.0072

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999997	*≥0.995*
Slope	1.004010	*0.90 - 1.10*
Intercept	-0.043909	*+/-1.5*



THC Calibration Plot Date: December 9, 2025 Location: Blackgold



Wood Buffalo Environmental Association

NO_X \ NO \ NO_2 Calibration Report

Station Information

Station Name:	Blackgold
Station number:	AMS 511
Calibration Date:	December 10, 2025
Last Cal Date:	November 19, 2025
Start time (MST):	14:24
End time (MST):	19:26
Reason:	Routine

Calibration Standards

NO Gas Cylinder #:	T0F8P52	Cal Gas Expiry Date:	August 16, 2026
NOX Cal Gas Conc:	47.43 ppm	NO Cal Gas Conc:	47.43 ppm
Removed Cylinder #:	N/A	Removed Gas Exp Date:	N/A
Removed Gas NOX Conc:	47.43 ppm	Removed Gas NO Conc:	47.43 ppm
NOX gas Diff:		NO gas Diff:	
Calibrator Model:	Teledyne API T700	Serial Number:	2659
ZAG make/model:	Teledyne API T701	Serial Number:	953

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)) *Limit = 0.90 - 1.10*	Baseline Adjusted NO Correction factor (Cc/(Ic-AFzero)) *Limit = 0.90 - 1.10*
As found zero	5000	0.0	0.0	0.0	0.0	-0.3	-0.2	-0.1	----	----
AF High point	4916	84.3	799.6	799.6	0.0	806.8	798.1	8.6	0.9907	1.0017
AF Mid point										
AF Low point										
New cyl resp										

Previous Response	NO_X =	799.8 ppb	NO =	799.6 ppb	* = > +/-5% change initiates investigation	*Percent Change	NO_X = 0.9%
Baseline Corr 1st pt	NO_X =	807.1 ppb	NO =	798.3 ppb	As Found Statistics	*Percent Change	NO = -0.2%
Baseline Corr 2nd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO_X r^2:	Nx Sl:	Nx Int:
Baseline Corr 3rd pt	NO_X =	NA ppb	NO =	NA ppb	As found NO r^2:	NO Sl:	NO Int:
					As found NO_2 r^2:	NO2 Sl:	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)) *Limit = 0.90 - 1.10*	Converter Efficiency *Limit = 96-104%*
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 \ NO_2 Calibration Report

Analyzer Information

Analyzer Make: Teledyne API T200 Serial Number: 7029

NOX Range (ppb): 0 - 1000 ppb

Instrument Settings

	Start	*Finish*		*Start*	*Finish*
NO coeff or slope:	1.087	1.087	NO bkgnd or offset:	0.2	0.2
NOX coeff or slope:	1.089	1.089	NOX bkgnd or offset:	0.4	0.4
NO2 coeff or slope:	1.000	1.000	Reaction cell Press:	4.8	4.7

Calibration Statistics

	Start	*Finish*
NO_X Cal Slope:	1.003235	1.013241
NO_X Cal Offset:	-2.378695	-1.781087
NO Cal Slope:	1.003049	1.009768
NO Cal Offset:	-2.438750	-1.740458
NO_2 Cal Slope:	1.001718	1.003452
NO_2 Cal Offset:	-0.187507	0.832629

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) *Limit = 0.95-1.05*	NO Correction factor (Cc/Ic) *Limit = 0.95-1.05*
Cal zero	5000	0.0	0.0	0.0	0.0	-0.2	-0.2	0.0	----	----
High point	4916	84.3	799.6	799.6	0.0	809.3	806.5	2.7	0.9880	0.9915
Mid point	4958	42.2	400.3	400.3	0.0	402.8	401.6	1.3	0.9938	0.9968
Low point	4979	21.1	200.2	200.2	0.0	199.6	198.9	0.7	1.0028	1.0063
As left zero	5000	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	----	----
As left span	4916	84.3	799.6	396.7	402.9	799.8	396.7	403.3	0.9998	1.0000
								Average Correction Factor	0.9949	0.9982

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) *Limit = 0.95-1.05*	Converter Efficiency *Limit = 96-104%*
Cal zero	----	----	0.0	0.0	----	----
High GPT point	803.2	400.8	402.4	404.1	0.9958	100.4%
Mid GPT point	803.2	597.3	205.9	208.1	0.9894	101.1%
Low GPT point	803.2	696.1	107.1	109.0	0.9826	101.8%
				Average Correction Factor	0.9893	101.1%

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

Calibration Performed By: Mohammed Kashif

Wood Buffalo Environmental Association

NO_X Calibration Summary

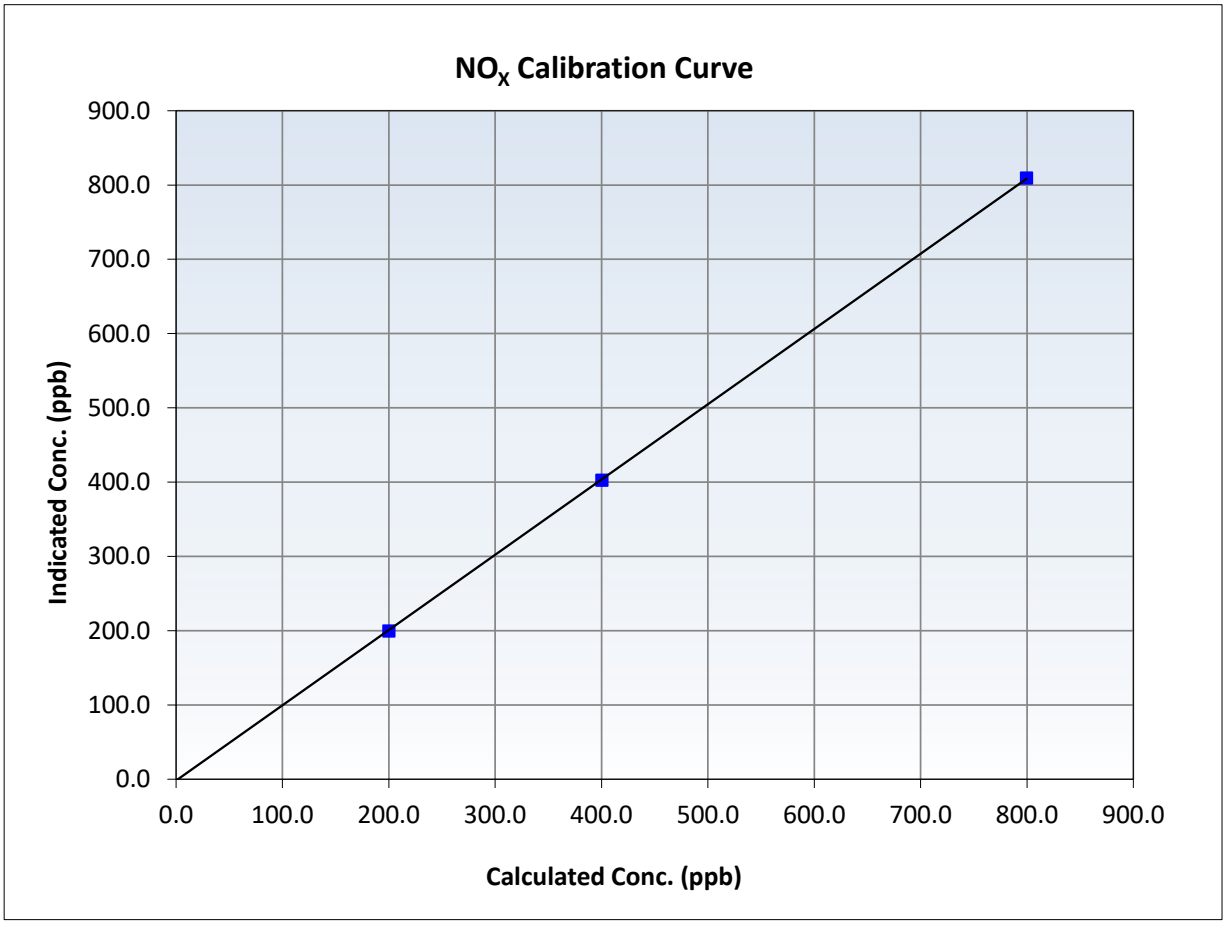
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 19, 2025
Station Name:	Blackgold	Station Number:	AMS 511
Start Time (MST):	14:24	End Time (MST):	19:26
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	-0.2	----
799.6	809.3	0.9880
400.3	402.8	0.9938
200.2	199.6	1.0028

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999982	*≥0.995*
Slope	1.013241	*0.90 - 1.10*
Intercept	-1.781087	*+/-20*



Wood Buffalo Environmental Association

NO_2 Calibration Summary

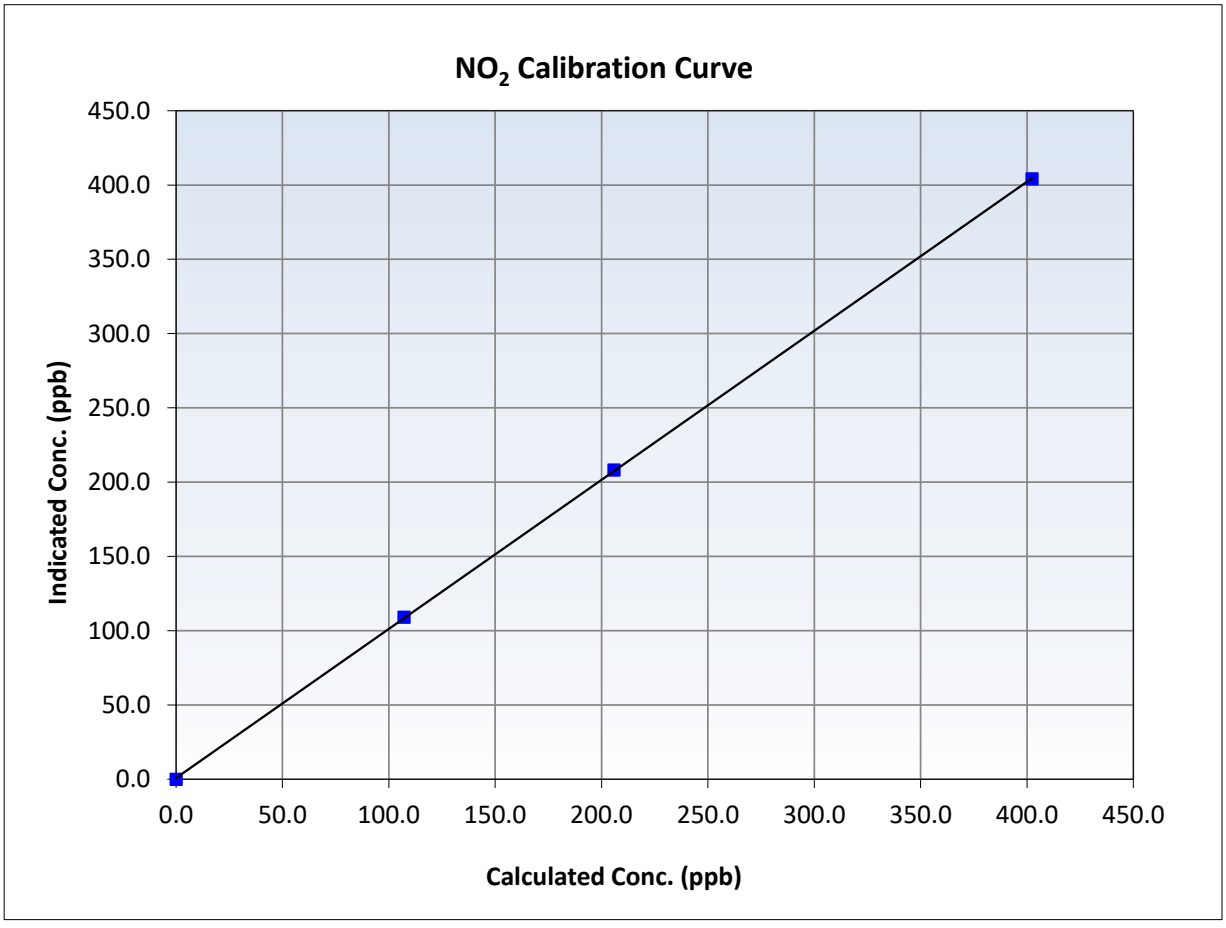
Station Information

Calibration Date:	December 10, 2025	Previous Calibration:	November 19, 2025
Station Name:	Blackgold	Station Number:	AMS 511
Start Time (MST):	14:24	End Time (MST):	19:26
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
0.0	0.0	----
402.4	404.1	0.9958
205.9	208.1	0.9894
107.1	109.0	0.9826

Statistical Evaluation		*Limits*
Correlation Coefficient	0.999979	*≥0.995*
Slope	1.003452	*0.90 - 1.10*
Intercept	0.832629	*+/-20*



Wood Buffalo Environmental Association

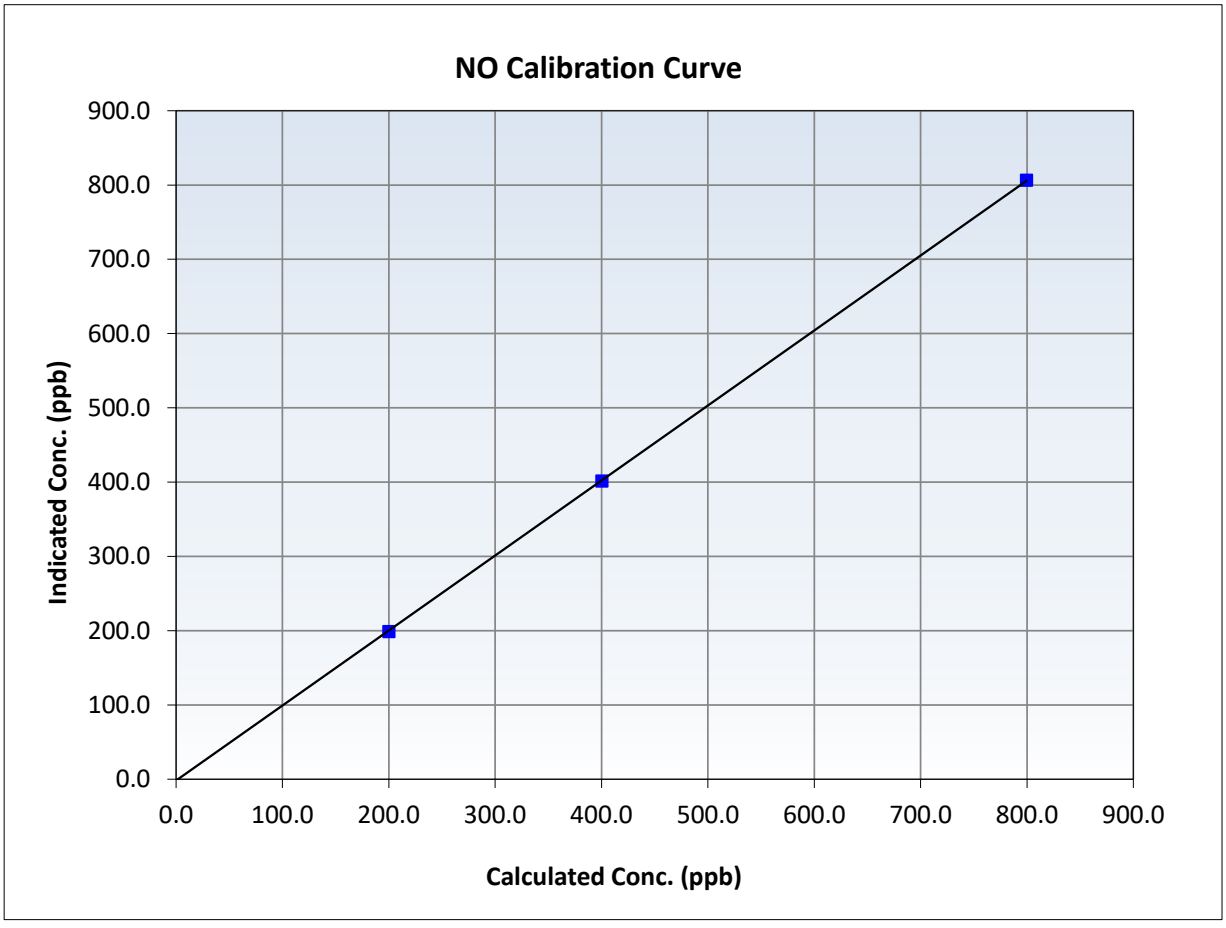
NO Calibration Summary

Station Information

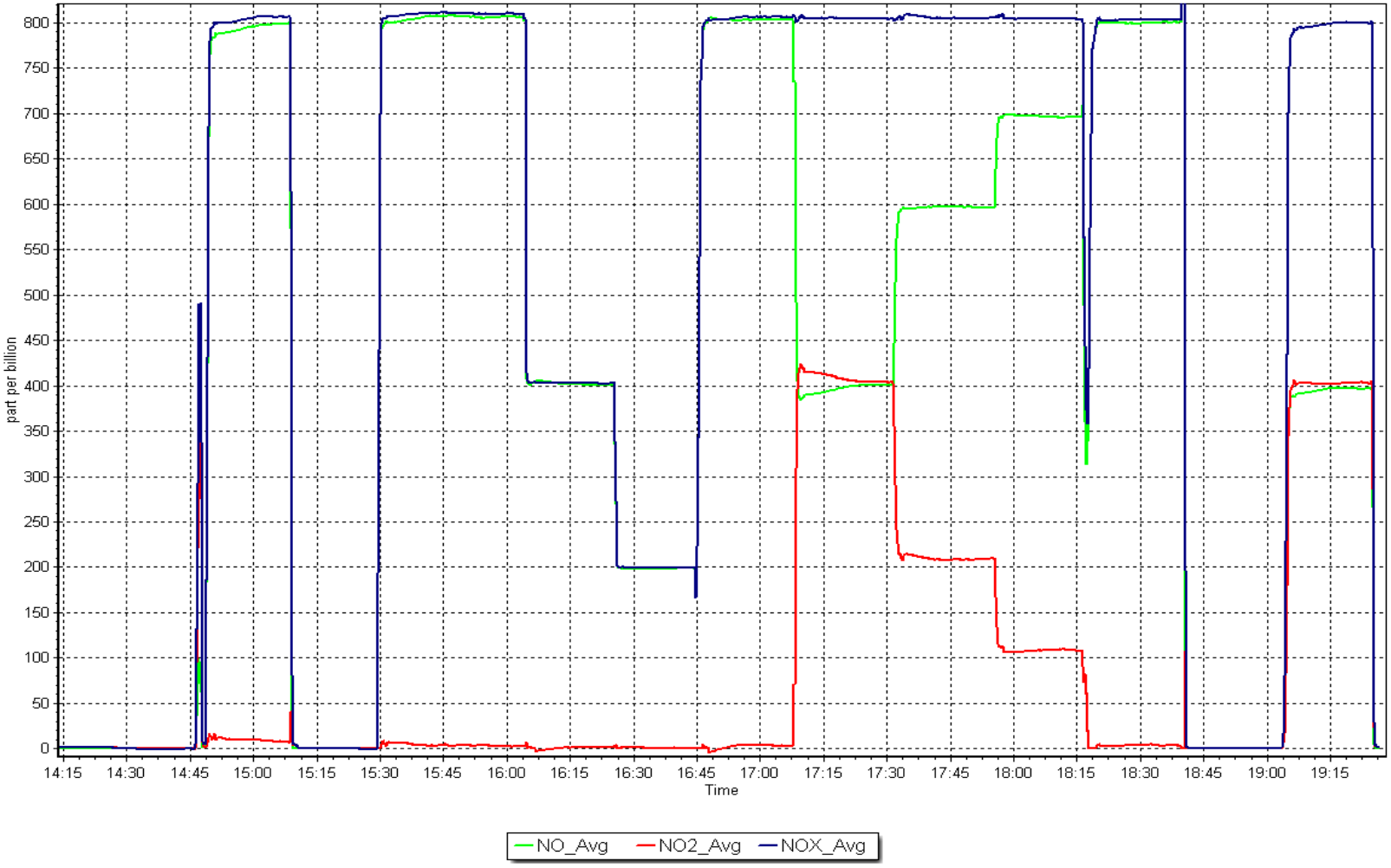
Calibration Date:	December 10, 2025	Previous Calibration:	November 19, 2025
Station Name:	Blackgold	Station Number:	AMS 511
Start Time (MST):	14:24	End Time (MST):	19:26
Analyzer make:	Teledyne API T200	Analyzer serial #:	7029

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation		Limits
0.0	-0.2	----	Correlation Coefficient	0.999983	≥0.995
799.6	806.5	0.9915	Slope	1.009768	0.90 - 1.10
400.3	401.6	0.9968			
200.2	198.9	1.0063	Intercept	-1.740458	+/-20



NO_X Calibration Plot Date: December 10, 2025 Location: Blackgold



End of Report