



Wood Buffalo Environmental Association
**Ambient Air Monitoring Station
Site Documentation**

Bertha Ganter – Fort McKay

LAST UPDATED: MARCH 27, 2024



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General Site Information

Revision Date: March 27, 2024

Station

Station ID	AMS 01
Station name	Fort McKay – Bertha Ganter
Date station established	October 1997

Location

Station street address	NA
Legal land description	13-25-094-11 W4
Airshed Zone	Wood Buffalo Environmental Association
Latitude	57°11'21.94"North
Longitude	111°38'26.10"West
UTM East	461284
UTM North	6338654
Nearest community	Fort McKay
Community population	757
Census Year	2021

Owner/Operator/Approval Holder

Operating Agency	Wood Buffalo Environmental Association
Address of Operating Agency	Unit 3-805 Memorial Drive, Fort McMurray, Alberta T9K 0K4
Name of Approval Holder	NA
Approval number	NA
Contact Name	Wood Buffalo Environmental Association
Address	Unit 3 – 805 Memorial Drive, Fort McMurray, AB
Phone number	780-799-4420
Email address	info@wbea.org

Site Description

Land use by sector	0 – 90 degrees	Forest and Residential
	91 – 180 degrees	Residential and Water services
	181 – 270 degrees	Forest and Residential
	271 – 360 degrees	Forest and Residential
Site elevation (m) (above sea level)	270m	
Angle of elevation to nearby buildings	Greatest angle	N/A
	Building direction	None
Airflow restrictions	North	No
	East	No



	South	No
	West	No
Distance to nearest trees (m)	North	0m
	East	10m
	West	20m
	South	0m
Sample manifold	Type	All glass
	Inlet height above roof	1 meter
Wind Sensors	Type	Cup and vane
	Height above ground (m)	10 m
	Distance from station (m)	Attached to north side of the station

Site Influences

Localized Sources (within 20 metres of station)

Type	Distance (m)	Description
Snow dump	100	Occasionally heavy truck and graders parked in the area.

Roadway Influences

Type	Traffic Volume	Distance (m)	Description
Gravel road	Low	50	Access road
Gravel road	Medium	200	Access road – Range road 110A

Major Point Sources

Facility Name	Source Type	Distance from site (km)	Compass direction from site
CNRL Albion Sands	Oil Sands Plant	10	North East
Syncrude Canada Ltd.	Oil Sands Plant	10	South East



Station Equipment

Equipment Owner: WBEA

Analytical Equipment

Parameter	Make	Model	Serial Number	Date Instrument Installed	WBEA Data Start Date
Continuous					
SO ₂	Thermo Environmental	43i	JC1501301448	2015	January, 1999
H ₂ S	Thermo Environmental	43iqTL	1200326167	2021	April, 2021
TRS	Thermo Environmental	43i-TLE	1218153461	2012	January, 2021
NO _x /NO/NO ₂	Thermo Environmental	42i	1218153357	2012	January, 2021
O ₃	Teledyne/API	T400	1107	2017	January, 2021
NH ₃	Teledyne/API	T201	475	2023	May, 2006
THC/CH ₄ /NMHC	Thermo Environmental	55i	1180320040	2022	January, 2021
CO	Teledyne/API	T300	3520	2019	April, 2019
CO ₂	Teledyne/API	T360	442	2022	April, 2019
PM _{2.5}	Teledyne/API	T640	324	2018	January, 1999
Time-Integrated					
PM _{2.5} EC/OC	Thermo Environmental	2000i	2000i 20222 1205	2018	-
PM _{2.5} A	Thermo Environmental	2000i	2000i 20390 1308	2021	-
PM ₁₀ A	Thermo Environmental	2000i	2000i 20457 1405	2018	-
PM ₁₀ B	Thermo Environmental	2000i	2000i 20484 1408	2018	-
PM _{2.5} B	Thermo Environmental	2000i	2000i 20487 1408	2018	-
PAH	Tisch	TE-1000	1001056	2015	-
PC	Yankee Environmental	TPC-3000	164	2018	-
PC	N-CON	ADS 00-120	60141	2018	-
VOC	Tisch	TE123	1028	2018	-
Triggered VOC	Global Analyzer Systems	G23MTS	2021-100	2022	-
Triggered RSC	Global Analyzer Systems	-	-	2022	-



Meteorological Equipment

Parameter	Make	Model	Serial Number	WMO Site Class	Date Sensor Installed	WBEA Data Start Date
WS	Met One	010C-1	P10041	Class 3	2015	January, 1999
WD	Met One	020C-1	R14655	Class 3	2022	January, 1999
AT/RH	Vaisala	HMP155	NA	Class 3	2015	January, 1999
AT/RH	Vaisala	HMP155	N0810526	Class 3	2022	January, 1999
GR	Eppley Radiometer	8-48	38279	NA	2015	January, 1999
PC	OTT	Pluvio 2	363525	Class 3	2019	January, 1999
LW	Campbells Scientific	LWS-L50	22121-30	NA	2023	February, 1999

Support Equipment

Name	Description	Make	Model	Serial Number
Datalogger	Datalogger	Campbell Scientific	CR3000	9036
Gas Dilution Calibrator	Dynamic dilution calibrator	Teledyne/API	T700	3565
Zero air generator	Zero Air Generator	Teledyne/API	701	4890
Shelter / Building	Air monitoring portable	ITB	10 x 20 skid	IBT-16-17048
HVAC	Heating and air conditioning system. Wall mount unit	BARD	2 ton	NA
Deck	Deck for sampling equipment	10 x 20	NA	NA
Deck	Deck for sampling equipment	15 x 30	NA	NA
Datalogger	Logger for Pluvio	Campbell Scientific	CR310	5016
Datalogger	Logger for camera and AE33	Campbell Scientific	CR1000	23051
N2 generator	N2 generator for the CO/CO2	Peak Scientific	NG5000A	722090034
NH3 Converter	External converter for the NH3 analyzer	Teledyne/API	T501	501
Thermal Oxidizer	TRS converter	CD Nova	CDN-101	470
H2S Converter	External converter for the H2S analyzer	Global Analyzer Systems	G150	2022-221
10m Tower	10m Tower	Aluma	T135	NA



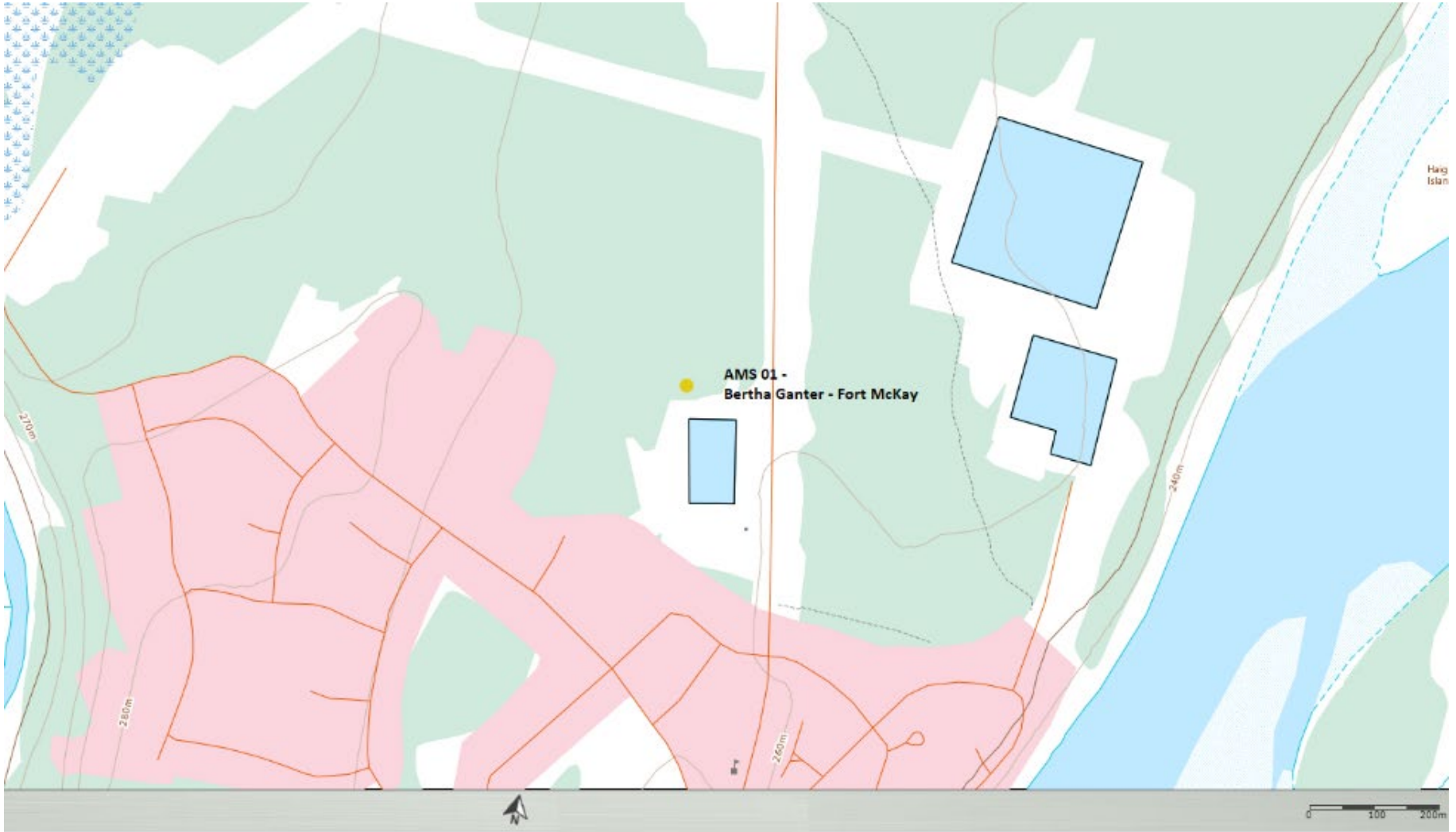


Figure 1 – Area Topographic map showing AMS 01



Figure 2 – Aerial photo showing AMS 01

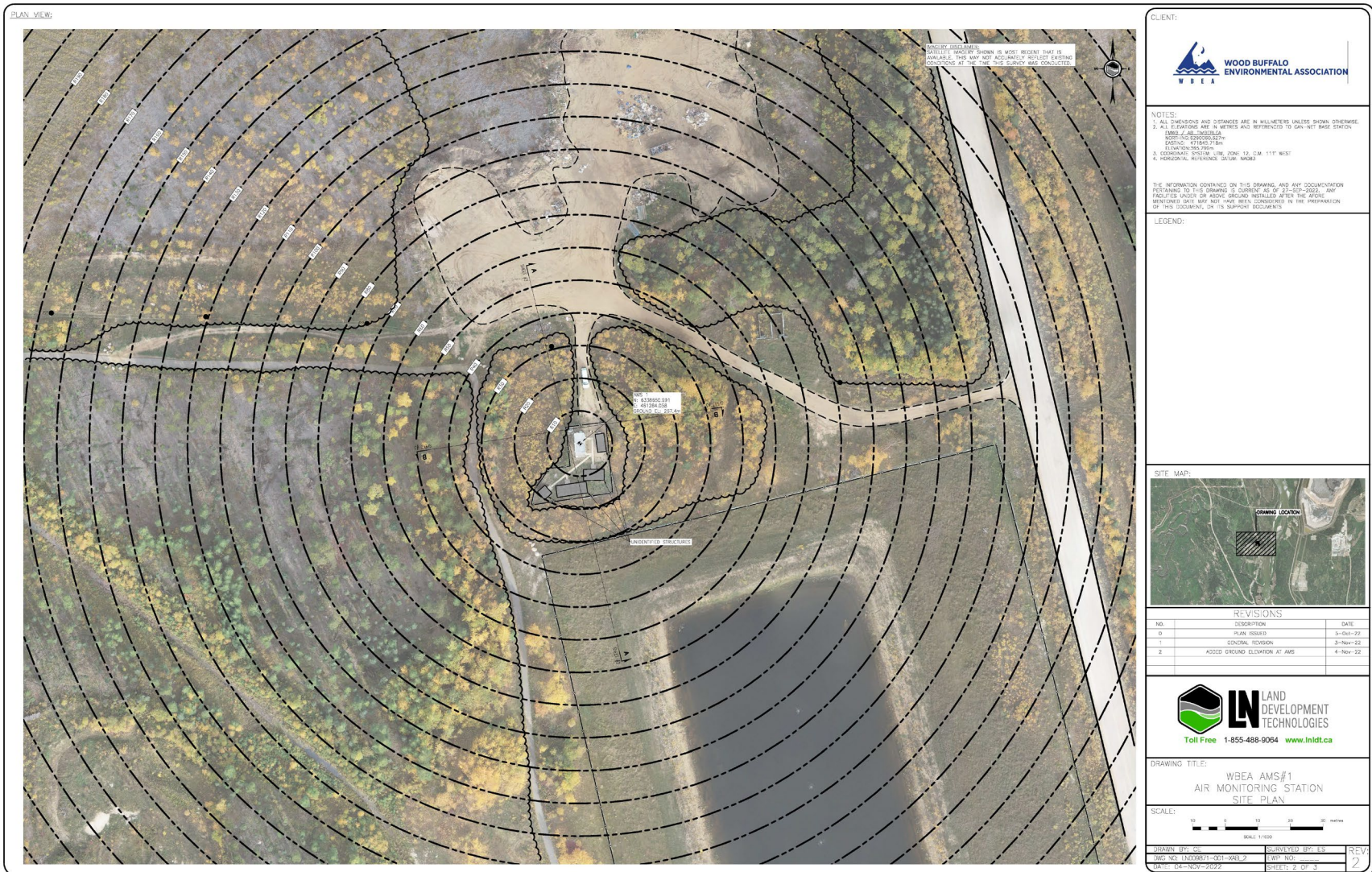


Figure 3 – Plan view sketch for AMS 01 site

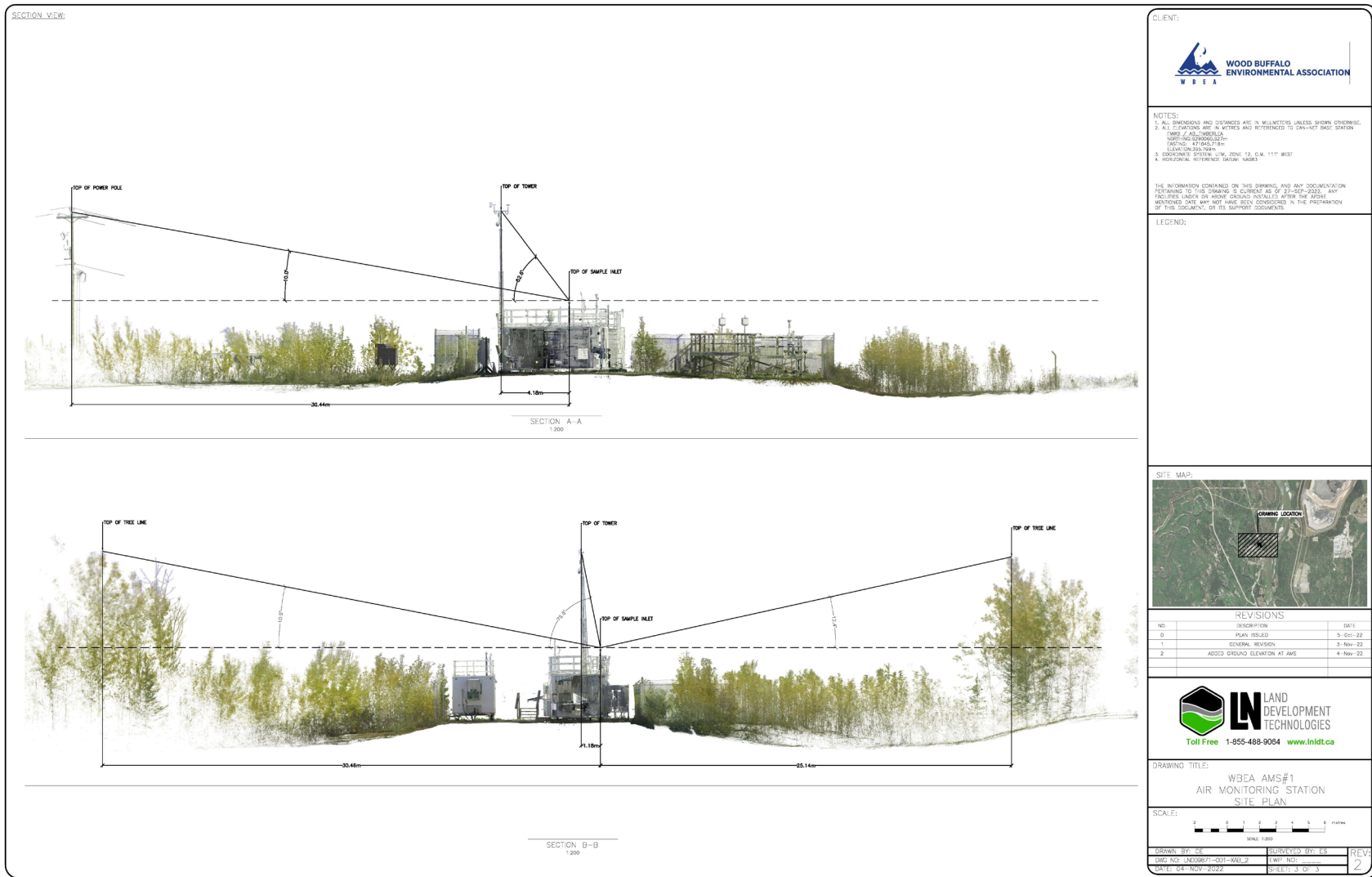


Figure 4 – Elevation view image for AMS 01 site

Site photos

The following photos show the environment surrounding the monitoring station.



Figure 5.0 – Environment looking North



Figure 6 – Environment looking East



Figure 7 – Environment looking South



Figure 8 – Environment looking West



Figure 9 – Meteorological Tower

Station Photos

The following photos show the monitoring station and instrumentation.

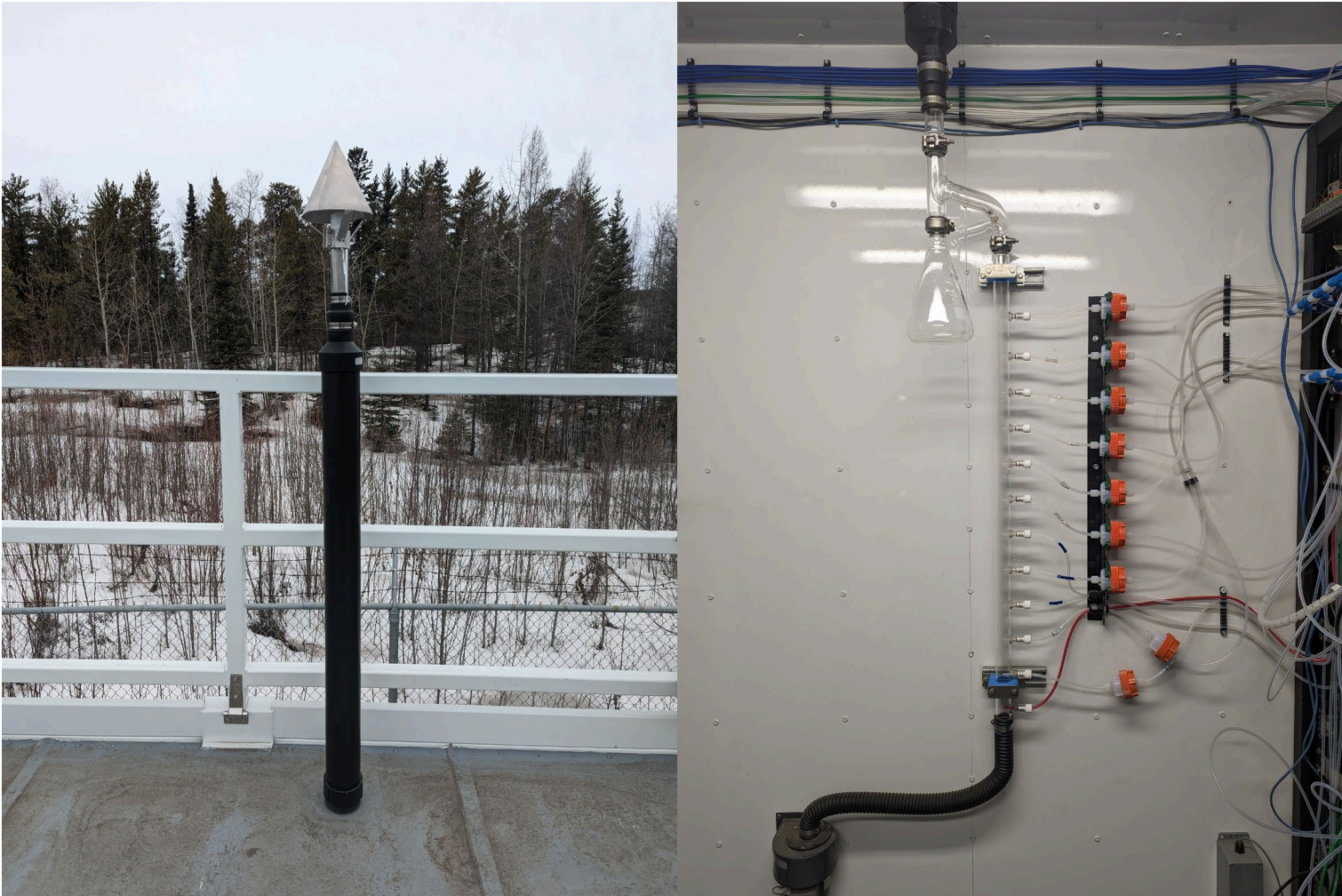


Figure 10 – Photo showing the inlet and sample manifold



Figure 11 – Curb shot of the monitoring station



Figure 12 –Photo of the front and the back of the instrument rack



Figure 13 –Photo of the front and the back of the instrument rack



Wood Buffalo Environmental Association
Wind Rose 2019 - 2024

Wind Speed (WS) - km/h
Fort McKay - Bertha Ganter

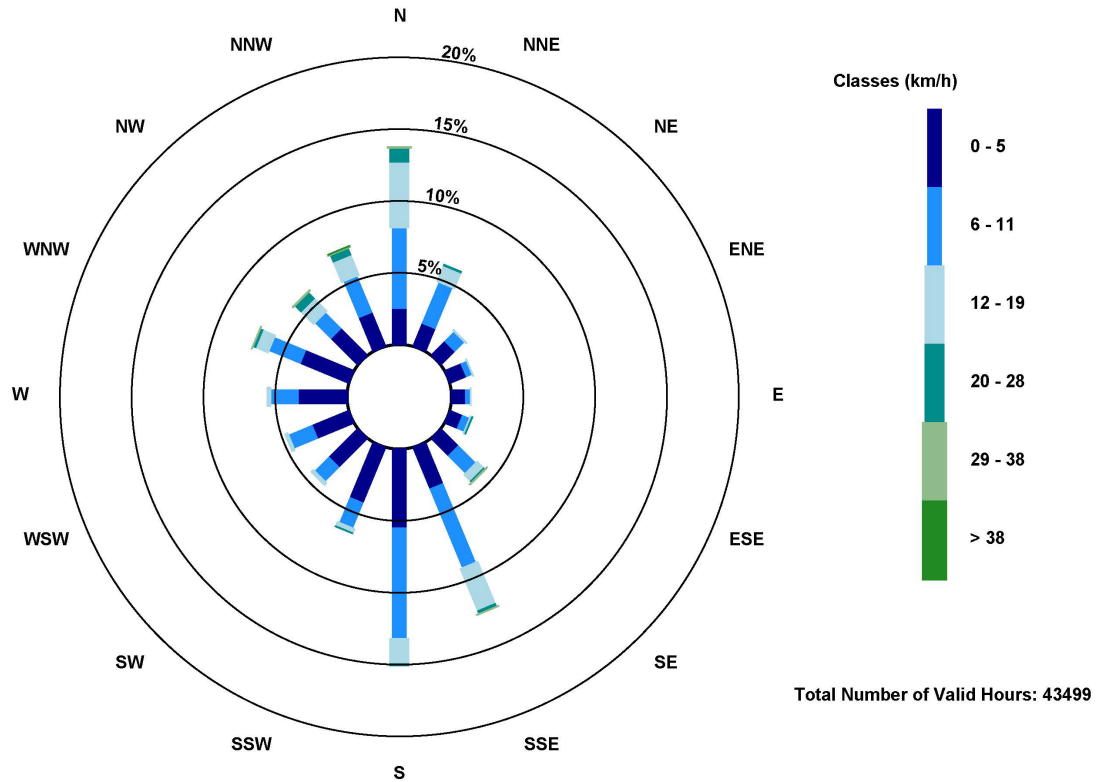


Figure 14 – Windrose (Five Year)