



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

Buffalo Viewpoint

LAST UPDATED: MARCH 27, 2024



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General Site Information

Revision Date: March 27, 2024

Station

Station ID	AMS 04
Station name	Buffalo View Point
Date station established	1979

Location

Station street address	NA
Legal land description	9-19-092-10 W4
Airshed Zone	Wood Buffalo Environmental Association
Latitude	56°59'46.17"N
Longitude	111°35'38.22"W
UTM East	471845.718
UTM North	6290060.627
Nearest community	Fort McKay
Community population	742
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	Synchrude Canada Ltd
Approval number	026-03-00
Contact Name	Nikola Stears
Address	Bag 4009, MD 4160, Fort McMurray, Alberta, T9H 3L1
Phone number	780-742-7281
Email address	nstears@suncor.com

Site Description

Land use by sector	0 – 90 degrees	Oil Sands Plant
	91 – 180 degrees	Forest
	181 – 270 degrees	Forest
	271 – 360 degrees	Oil Sands Plant
Site elevation (m) (above sea level)	365.799 m	
Angle of elevation to nearby buildings	Greatest angle	0
	Building direction	NA
Airflow restrictions	North	None
	East	None

	South	None
	West	None
Sample manifold	Type	All glass
	Inlet height above roof	1 metre
Wind Sensors	Type	Cup and vane
	Height above ground (m)	10 m
	Distance from station (m)	Attached to North end of Monitoring Shelter

Site Influences

Localized Sources (within 20 metres of station)

Type	Distance (m)	Description
None	n/a	n/a

Roadway Influences

Type	Traffic Volume	Distance (m)	Description
Dirt	Very Low	2m North	Access Road to AMS 4
Dirt	Medium	147m North	Road used to Access North American/Syncrude Site
Highway	High	758m East	Paved Highway used by the public

Major Point Sources

Facility Name	Source Type	Distance from site (km)	Compass Direction from site
Syncrude	Oilsands Plant	5.12	North
Suncor	Oilsands Plant	7.8	Southeast
Syncrude	Buffalo Farm	0.32	Northwest
Syncrude	Tailings Pond	0.8	Northeast

Station Equipment

Equipment Owner:

Analytical Equipment

Parameter	Make	Model	Serial Number	Date Instrument Installed	WBEA Data Start Date
SO ₂	Thermo Scientific	43i	JC1327200932	2017	January, 1999
H ₂ S	Thermo Scientific	43i-LTE	108841400	2023	January, 1999
NO _x /NO/NO ₂	Teledyne	T200	721	2017	August, 2017
THC/CH ₄ /NMHC	Thermo Scientific	55i	1426262594	2022	January, 1999
O ₃	Teledyne	T400	2961	2017	August, 2017
PM _{2.5}	Teledyne	T640	321	2019	August, 2017

Meteorological Equipment

Parameter	Make	Model	Serial Number	WMO Site Class	Date Sensor Installed	WBEA Data Start Date
AT/RH	Vaisala	HMP155	G4340043	3	2017	February, 1999
WS	Met One	010C-1	Y3176	4	2017	January, 1999
WD	Met One	020C-1	U11346	4	2017	January, 1999

Support Equipment

Name	Description	Make	Model	Serial Number
Datalogger	Datalogger	Campbell Scientific	CR3000	2635
Datalogger	Datalogger	Campbell Scientific	CR1000	10414
Gas Dilution Calibrator	Dynamic dilution calibrator	Teledyne/API	T700	3808
Zero air generator	Zero Air Generator	Teledyne/API	T701H	362
Shelter / Building	Air monitoring portable	National Trailer	8 x 16 trailer	NA
HVAC	Heating and air conditioning system. Wall mount unit	BARD	1 ton	
Tower	10m Tower	Aluma Tower Company	T-135	AT62235-10-R11
H ₂ S Converter	Thermal Oxidizer	Global Analyzer System	G150	2022-200

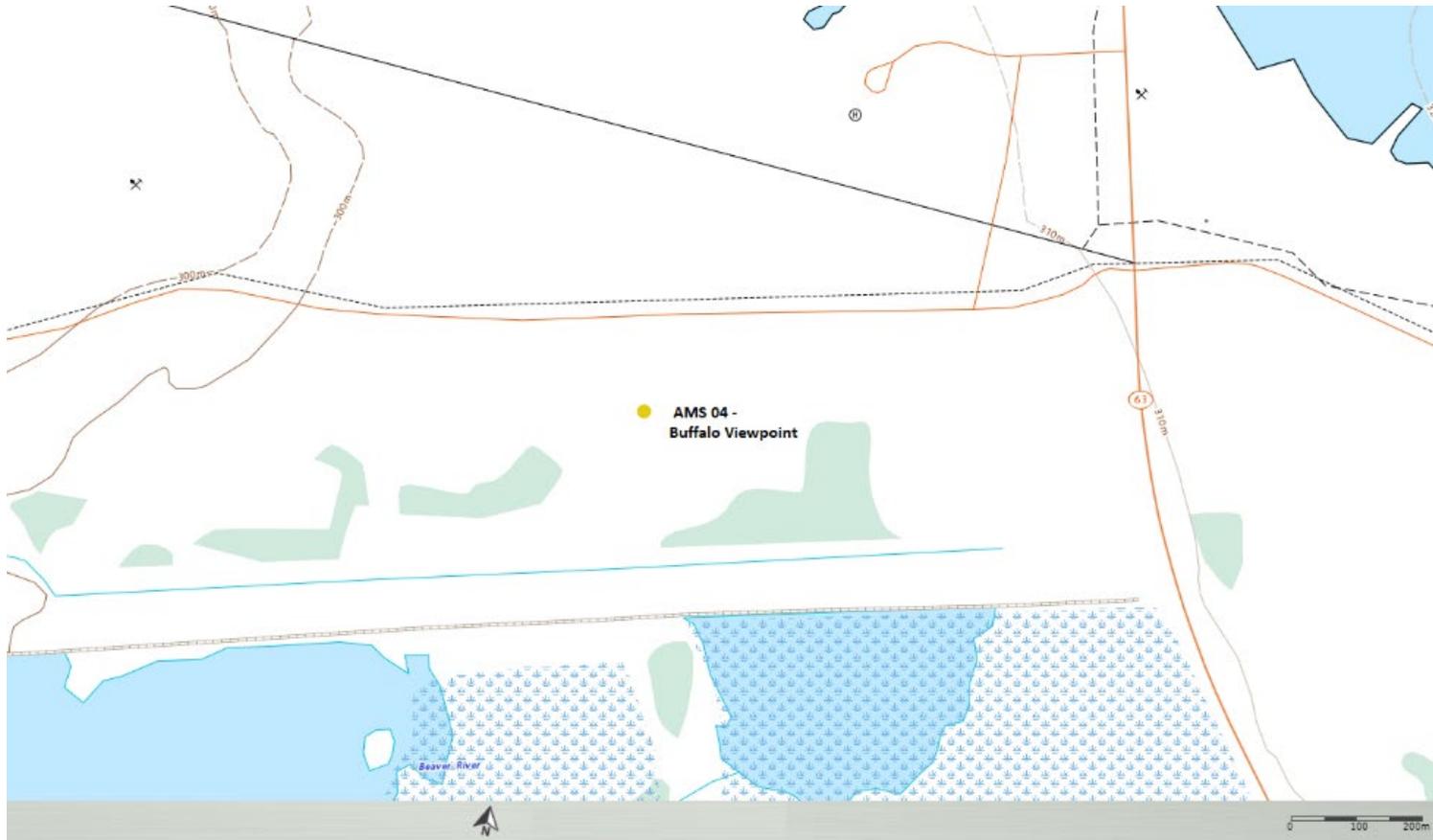


Figure 1 – Area topographic map showing AMS 04

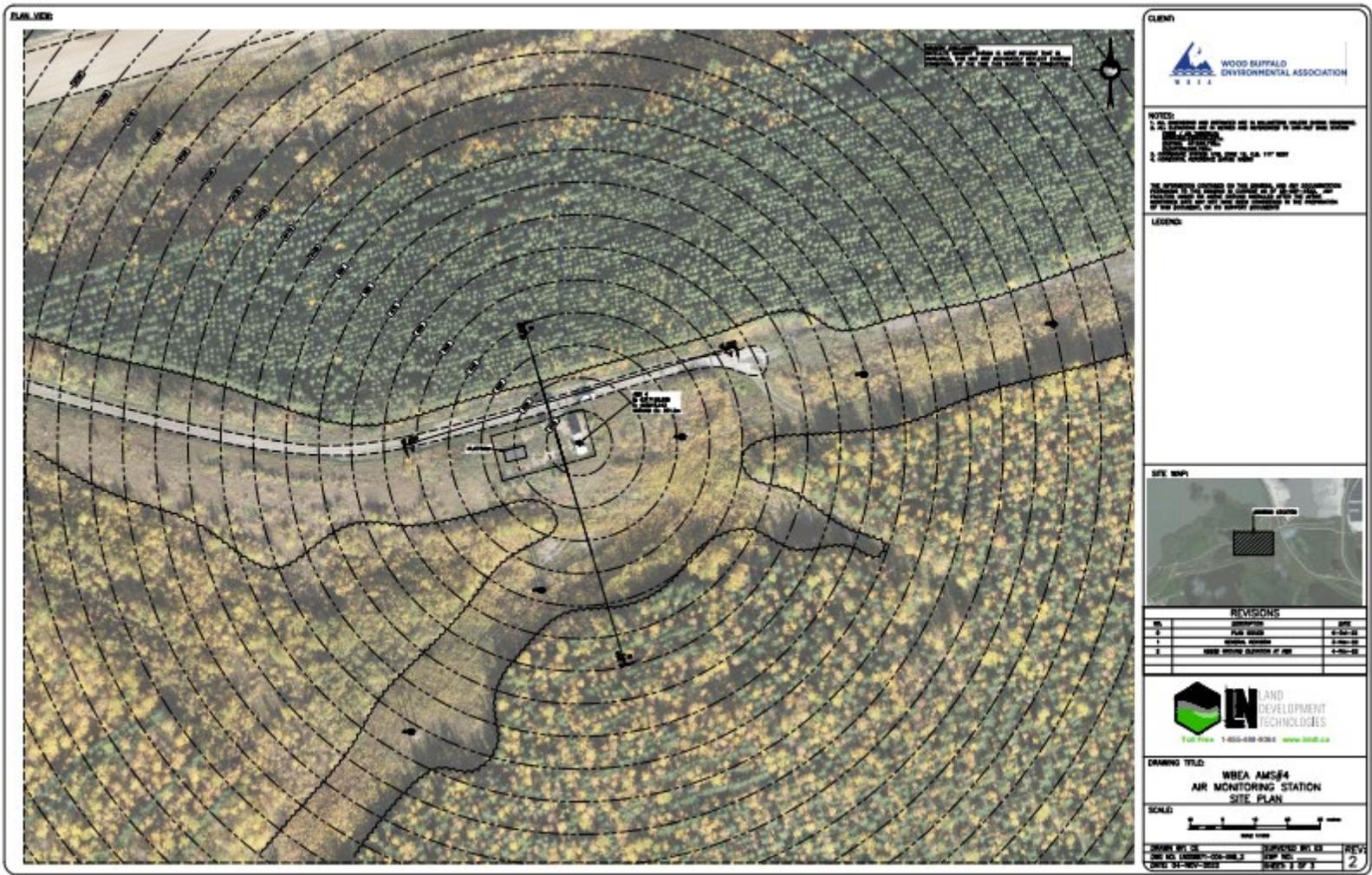


Figure 3 – Plan view image for AMS 04 site

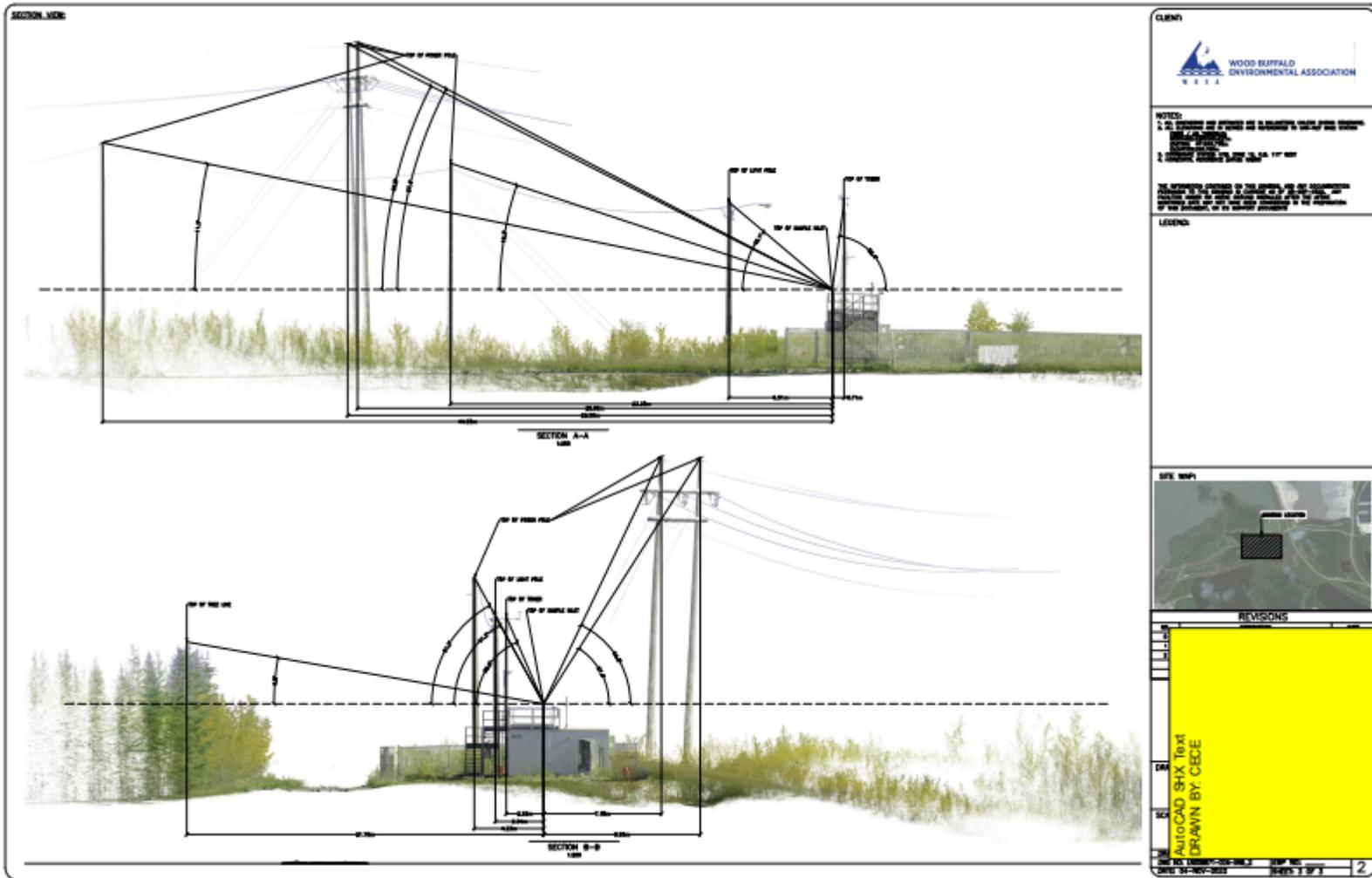


Figure 4 – Elevation view image for AMS 04 site

Site photos

The following photos show the environment surrounding the monitoring station.



Figure 5 – 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 instrument rack



Wood Buffalo Environmental Association
Wind Rose 2019 - 2024

Wind Speed (WS) - km/h
Buffalo Viewpoint

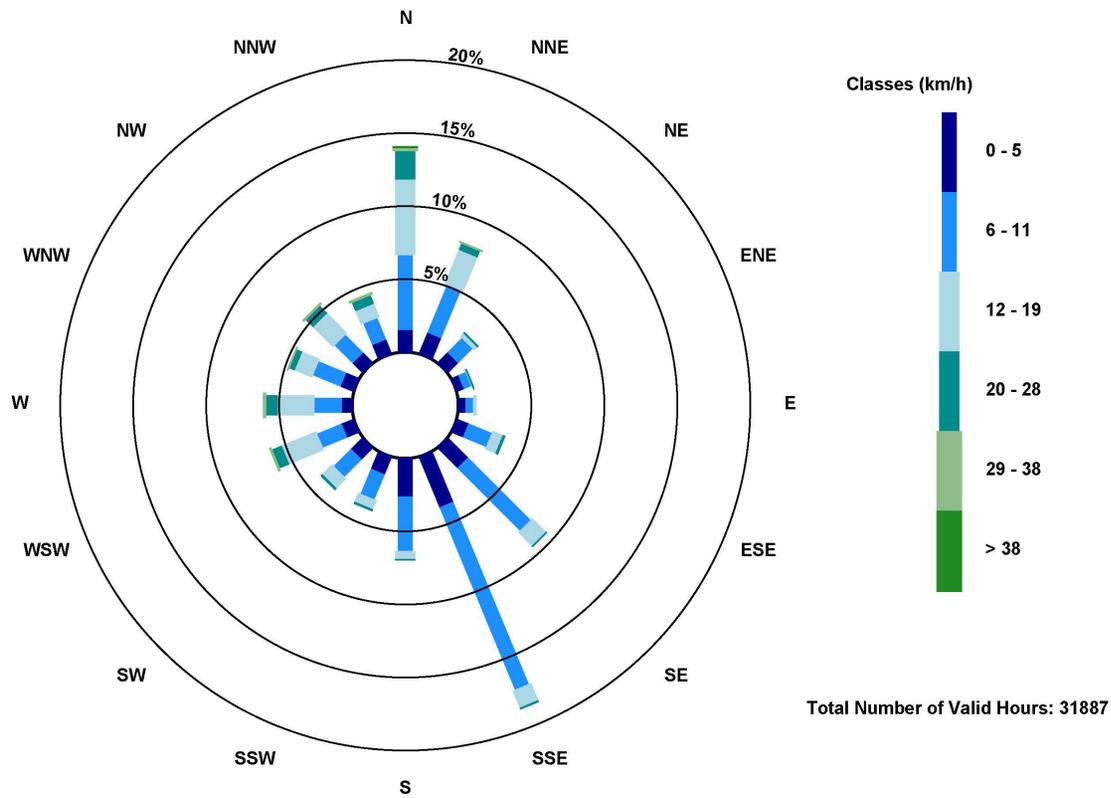


Figure 13 – Windrose (2019-2024)