



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

## Lower Camp

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LAST UPDATED: MARCH 27, 2024



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## General Site Information

### Station

Station ID	AMS 11
Station name	Lower Camp
Date station established	1975

### Location

Station street address	Located by the Athabasca River Valley at about 115 meters south of the Syncrude pump house
Legal land description	11-35-092-10 W4
Airshed Zone	Wood Buffalo Environmental Association
Latitude	57.0267916667
Longitude	-111.500819444
UTM East	469597.806
UTM North	6320474.662
Nearest community	Fort McMurray
Community population	75186
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	Syncrude Canada Ltd.
Approval number	026-03-00
Contact Name	Nikola Stears
Address	Base Plant Rd, Wood Buffalo, AB
Phone number	780-742-7281
Email address	nstears@suncor.com

### Site Description

Land use by sector	0 – 90 degrees	Syncrude open mining operations
	91 – 180 degrees	Athabasca River
	181 – 270 degrees	Athabasca River
	271 – 360 degrees	Syncrude open mining operations
Site elevation (m) (above sea level)	238 metres	
Angle of elevation to nearby buildings	Greatest angle	0
	Building direction	North
Airflow restrictions	North	Pump House
	East	None

	South	None
	West	None
Distance to nearest trees (m)	North	42
	East	12
	West	12
	South	NA
Sample manifold	Type	All glass
	Inlet height above roof	1 meter
Wind Sensors	Type	Cup and vane
	Height above ground (m)	10
	Distance from station (m)	attached

## Site Influences

### Localized Sources (within 20 metres of station)

Type	Distance (m)	Description
Laydown	79.21	Equipment Laydown
Water Pond	136.8	Reservoir
Athabasca River	33.8	River
Pumping Station	114	Syncrude Water Pump Station

### Roadway Influences

Type	Traffic Volume	Distance (m)	Description
Gravel road	Low	20	Road access to lay down and pumping station

### Major Point Sources

Facility Name	Source Type	Production Capacity	Distance from site (km)	Compass direction from site
Suncor Energy	Oil refinery	330,000 bbl/day	2	South
Syncrude	Oil refinery/open mining	225,000 bbl/day	3	West
Suncor Energy	Open mining operations	NA	4	East

## Station Equipment

Equipment Owner: Syncrude

### Analytical Equipment

Parameter	Make	Model	Serial Number	Date Instrument Installed	WBEA Data Start Date
SO <sub>2</sub>	Thermo Scientific	43i	100841398	2015	January, 1999
H <sub>2</sub> S	Thermo Scientific	450iq	CM20080003	2015	January, 1999
THC/CH <sub>4</sub> /NMHC	Thermo Scientific	55i	1505164381	2019	January, 1999

### Meteorological Equipment

Parameter	Make	Model	Serial Number	WMO Site Class	Date Sensor Installed	WBEA Data Start Date
AT/RH	Vaisala	HMP155	G0840085	4	2022	January, 2000
WS	Met One	010C-1	N11710	4	2017	January, 1999
WD	Met One	020C-1	N12035	4	2022	January, 1999
BP	Vaisala	CS106	T2210938	4	2022	December, 2021

### Support Equipment

Name	Description	Make	Model	Serial Number
Datalogger	Datalogger	Campbell Scientific	CR3000	2403
Gas Dilution Calibrator	Dynamic dilution calibrator	Teledyne/API	T700	3807
Zero air generator	Zero Air Generator	Teledyne/API	701	196
Shelter / Building	Air monitoring portable	ITB	8 x 16 trailer	11447



Figure 1 – Area topographic map showing AMS 11.

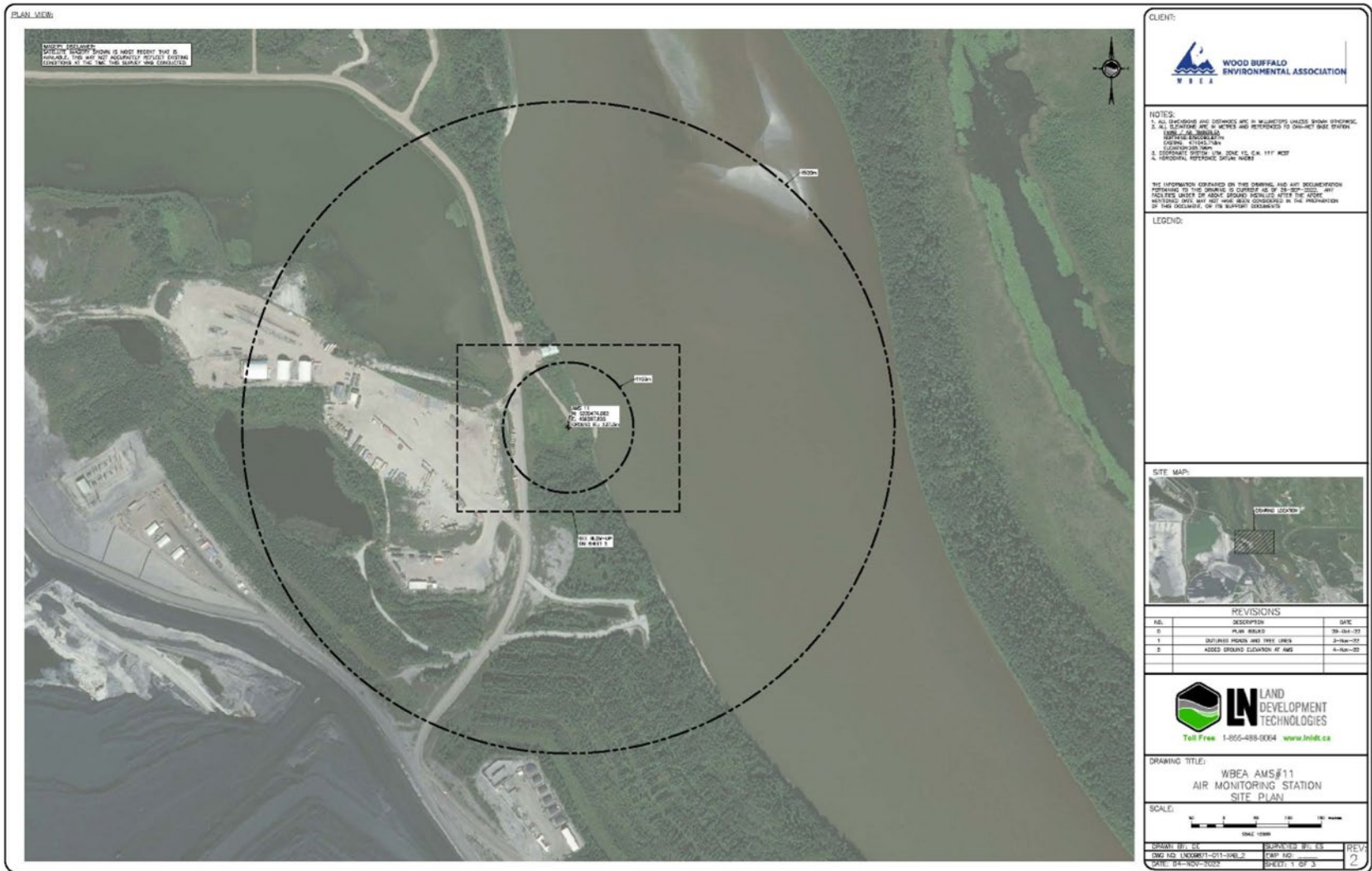


Figure 2 – Aerial image showing AMS 11.



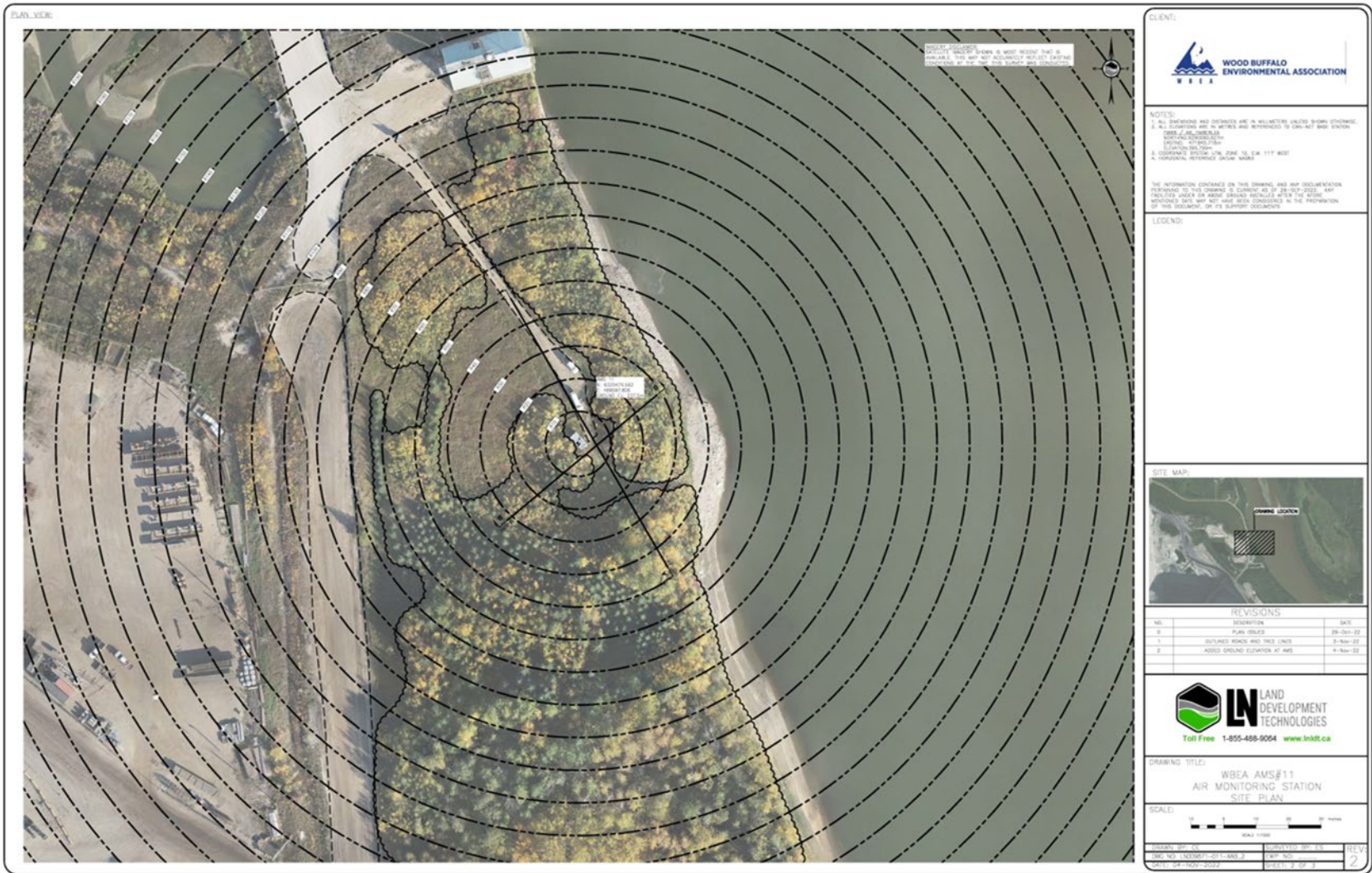


Figure 3 – Plan view image for AMS 11 site.

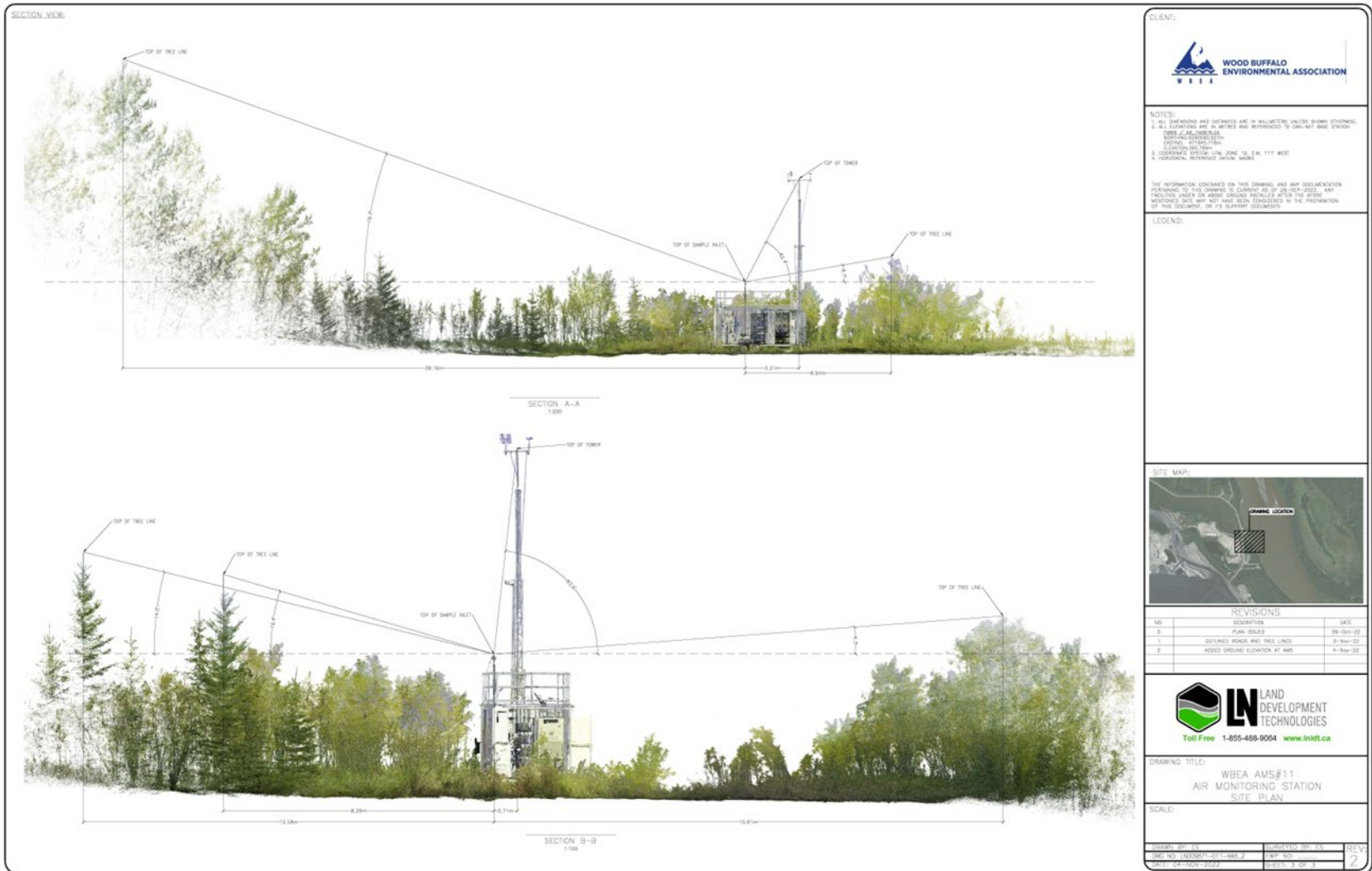


Figure 4 – Elevation view image for AMS 11 site.

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.

This photo is currently not available  
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  
Lower Camp

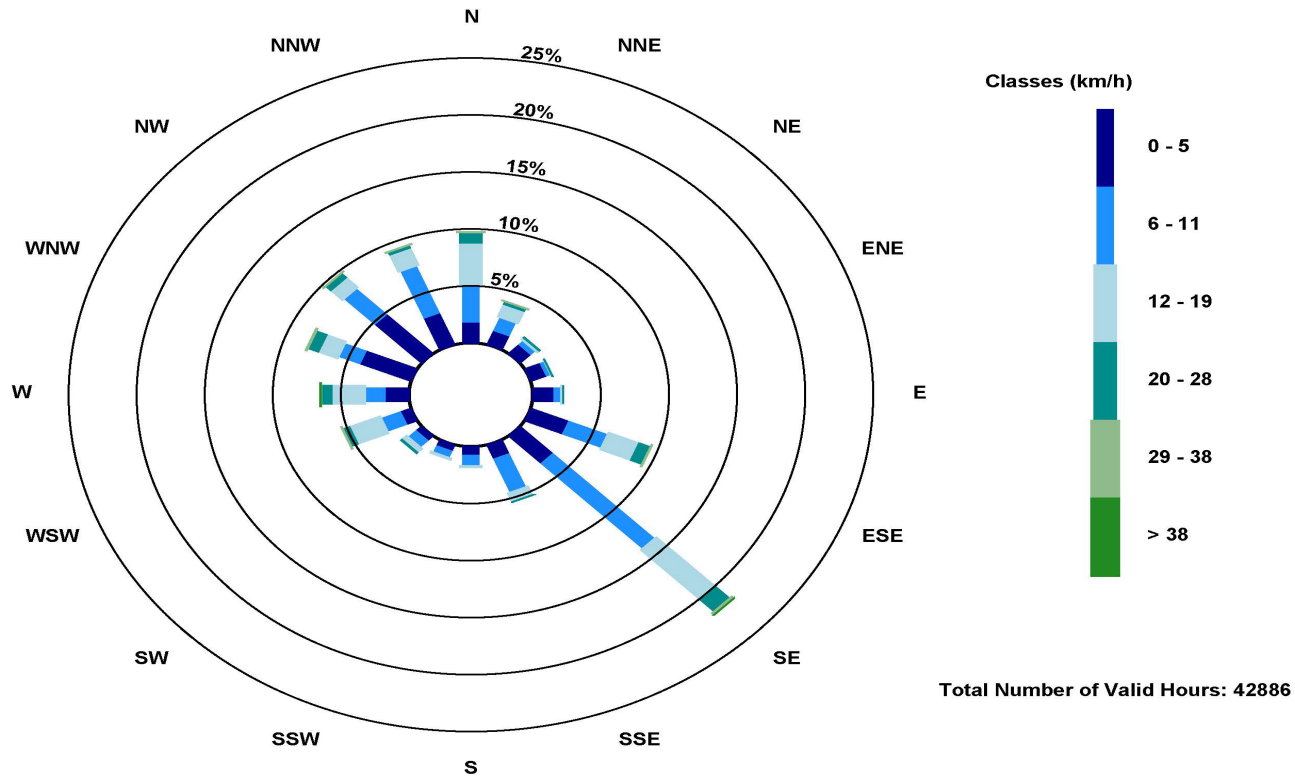


Figure 13 – Windrose (five year)