

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

Leismer

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LAST UPDATED: MARCH 28, 2024



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## General Site Information

Revision Date: March 28, 2024

### Station

Station ID	AMS 501
Station name	Leismer
Date station established	June 2013

### Location

Station street address	Located at the main gate of the Athabasca Oil Corporation SAGD plant.
Legal land description	4-01-079-10 W4
Airshed Zone	Wood Buffalo Environmental Association
Latitude	55.81294255
Longitude	-111.44054535
UTM East	472392
UTM North	6185349
Nearest community	Conklin
Community population	154
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	Athabasca Oil Corporation
Approval number	289664-01-00; 241311-01-00
Contact Name	Peter Millman
Address	NA
Phone number	587-233-1382
Email address	pmillman@atha.com

### Site Description

Land use by sector	0 – 90 degrees	Gate/Main Road
	91 – 180 degrees	Road/Trees
	181 – 270 degrees	Trees
	271 – 360 degrees	Trees/laydown yard
Site elevation (m) (above sea level)	668 m	
Angle of elevation to nearby buildings	Greatest angle	0
	Building direction	NA
Airflow restrictions	North	None



	East	None
	South	None
	West	None
Distance to nearest trees (m)	North	150
	East	150
	West	35
	South	35
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)	0 m

### Site Influences

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

Type	Distance (m)	Description
SAGD operations	100 m	Athabasca Oil SAGD operations

#### Roadway Influences

Type	Traffic Volume	Distance (m)	Description
Roadway	Medium	15 m	Main road access into SAGD plant

#### Major Point Sources

Facility Name	Source Type	Distance from site (km)	Compass direction from site
Atha Oil corp.	SAGD	100 m	West



## Station Equipment

Equipment Owner: WBEA

### Analytical Equipment

Parameter	Make	Model	Serial Number	Date Instrument Installed	WBEA Data Start Date
SO <sub>2</sub>	Thermo Scientific	43i	1160290011	2018	July, 2014
H <sub>2</sub> S	Thermo Scientific	43i-TLE	1180540020	2023	July, 2014
NO/NO <sub>x</sub> /NO <sub>2</sub>	Thermo Scientific	42i	1218153356	2018	July, 2014

### Meteorological Equipment

Parameter	Make	Model	Serial Number	WMO Site Class	Date Sensor Installed	WBEA Data Start Date
AT/RH	Vaisala	HMP155	N2910504	Class 3	2021	July, 2014
WS	Met One	010C-1	Y8362	Class 4	2023	July, 2014
WD	Met One	020C-1	R14654	Class 4	2023	July, 2014

### Support Equipment

Name	Description	Make	Model	Serial Number
Datalogger	Datalogger	Campbell Scientific	CR3000	9035
Gas Dilution Calibrator	Dynamic dilution calibrator	Teledyne/API	T700	2659
Zero air generator	Zero Air Generator	Teledyne/API	701	4427
Shelter / Building	Air monitoring portable	ITB	8 x 16 trailer	ITB1315940
HVAC	Heating and air conditioning system. Wall mount unit	BARD	1 ton	NA





Figure 1 – Area Topographic map showing AMS 501



Figure 2– Aerial photo showing AMS 501



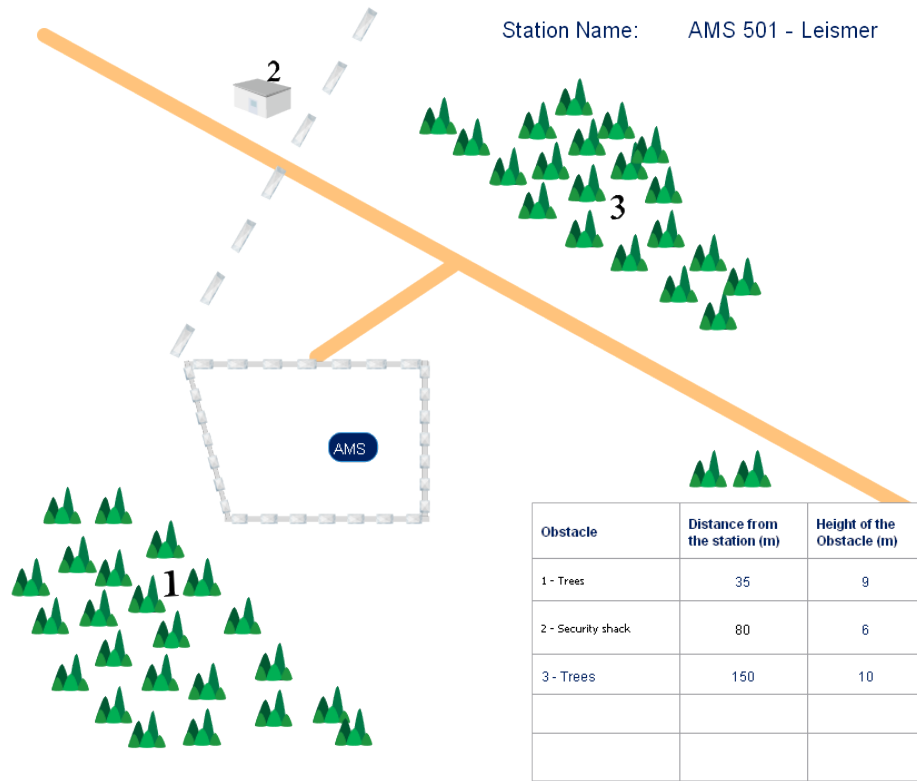
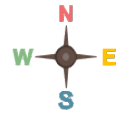


Figure 3 – Plan view sketch for AMS 501 - Leismer

Site photos

The following photos show the environment surrounding the monitoring station.



Figure 4 – Environment looking North



Figure 5 – Environment looking East



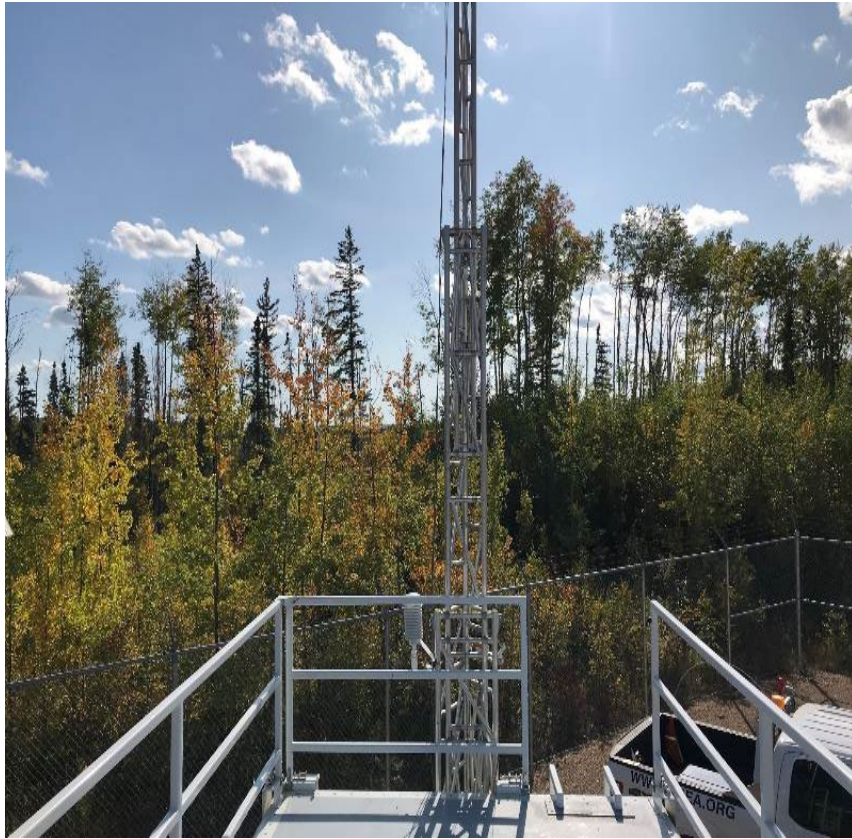


Figure 6 – Environment looking South



Figure 7 – Environment looking West



Figure 8 – Meteorological Tower



## Station Photos

The following photos show the monitoring station and instrumentation.



Figure 9 – Photo showing the inlet and sample manifold



Figure 10 – Curb shot of the monitoring station



Figure 11 –Photo of the front and the back of instrument rack



Wood Buffalo Environmental Association  
Wind Rose 2019 - 2024

Wind Speed (WS) - km/h  
Leismer

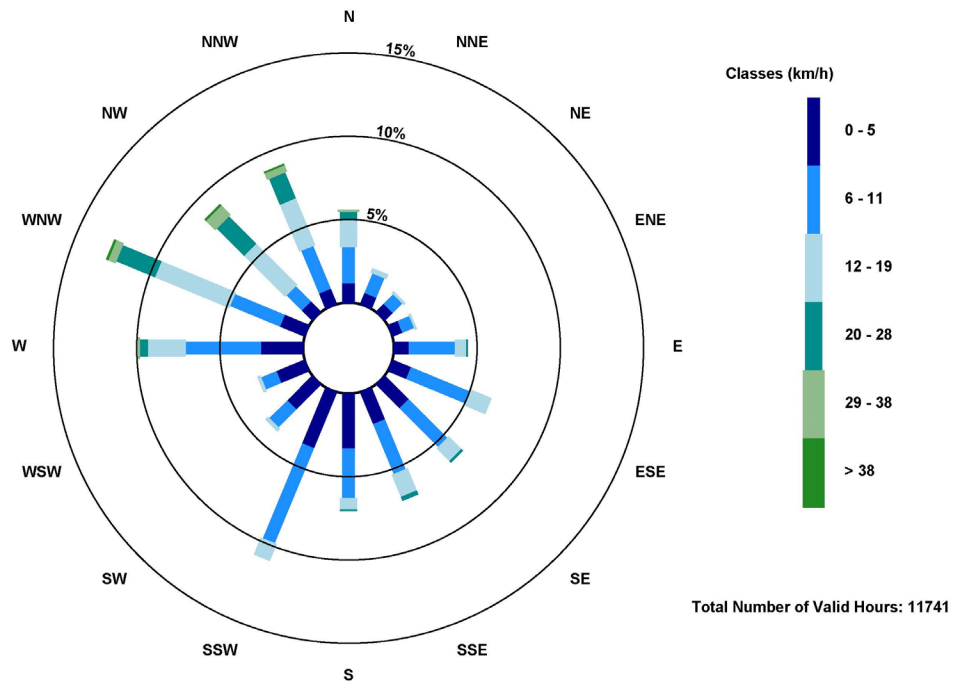


Figure 12 – Windrose (2019-2024)