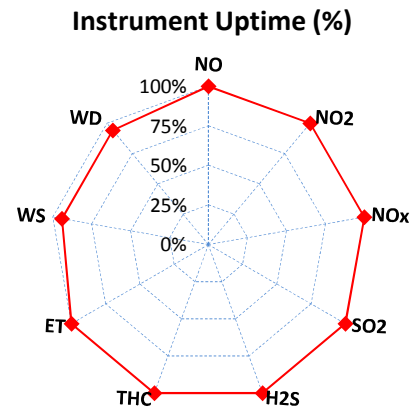
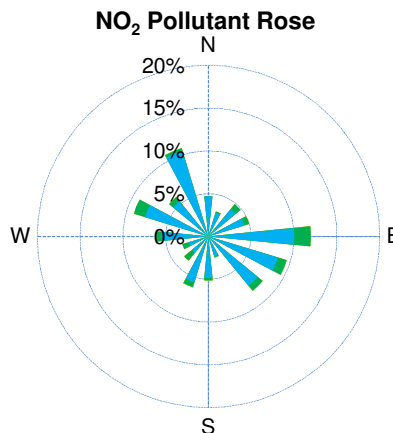
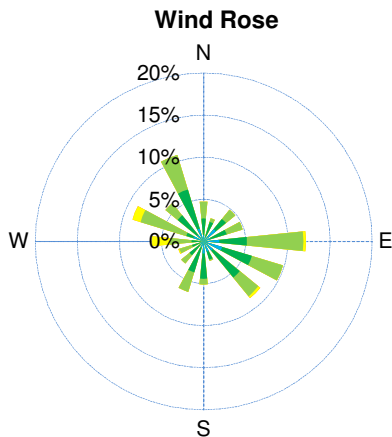
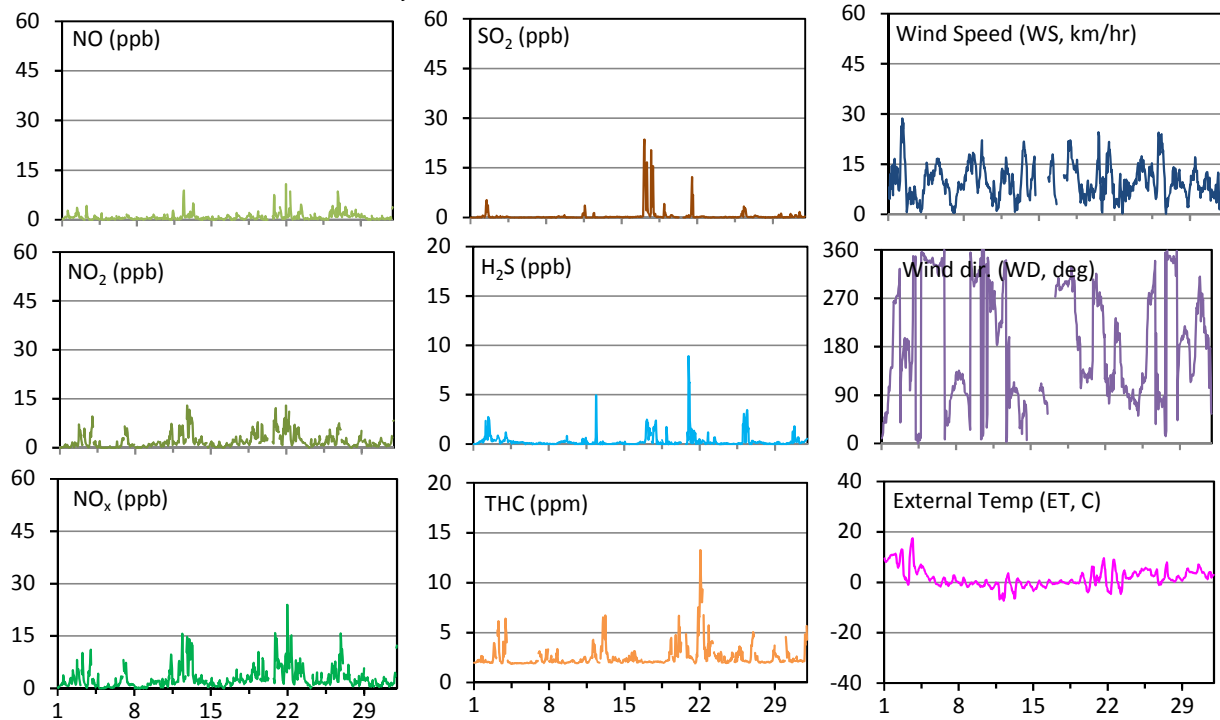


Husky Energy East Station - October 2016 Summary Report

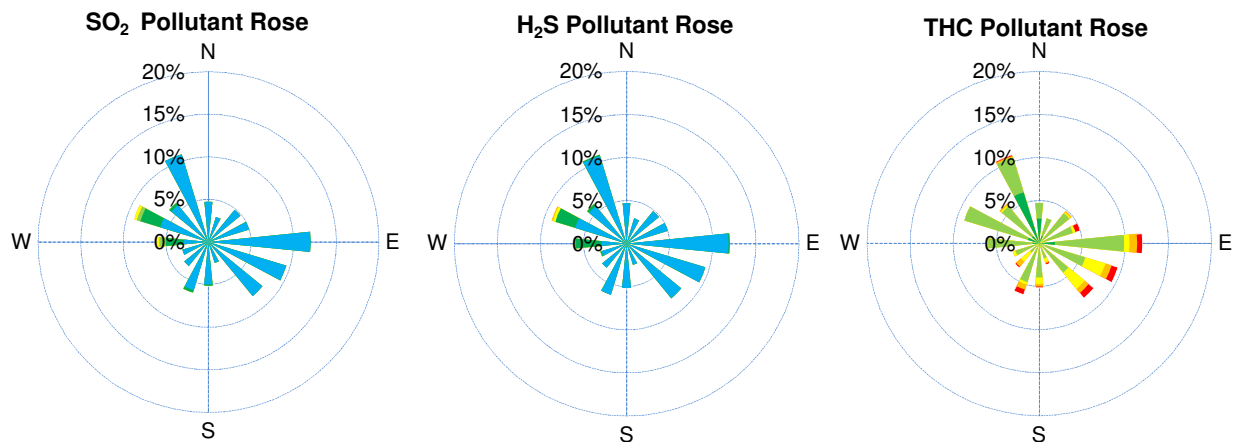
Pollutants		Month Records		24-Hour Records				1-Hour Records			
Name	Conc. Unit	Avg. Conc.	Uptime	Maximum		SAAQS Standards	Exceed Days	Maximum		SAAQS Standards	Exceed Hours
				Conc.	Time			Conc.	Time		
NO	ppb	0.8	100.0%	2.5	Oct-26	-	-	10.8	Oct-22 00:00	-	-
NO ₂	ppb	2.0	100.0%	5.4	Oct-21	106	0	13.0	Oct-22 00:00	159	0
NO _x	ppb	2.8	100.0%	7.1	Oct-21	-	-	24.0	Oct-22 00:00	-	-
SO ₂	ppb	0.5	100.0%	7.7	Oct-17	48	0	23.6	Oct-17 03:00	172	0
H ₂ S	ppb	0.3	100.0%	1.4	Oct-17	3.6	0	8.9	Oct-21 00:00	11.0	0
THC	ppm	2.6	100.0%	5.4	Oct-22	-	-	13.3	Oct-22 02:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



Parameters	Unit	Color Code for Wind Spd & Pollutant Conc. Class					
Wind Speed	km/hr	1 ≤ WS < 5	5 ≤ WS < 10	10 ≤ WS < 20	20 ≤ WS < 30	30 ≤ WS < 40	WS ≥ 40
SO ₂	ppb	0 ≤ C < 1	1 ≤ C < 5	5 ≤ C < 10	10 ≤ C < 57	57 ≤ C < 172	C ≥ 172
NO ₂	ppb	0 ≤ C < 5	5 ≤ C < 15	15 ≤ C < 30	30 ≤ C < 100	100 ≤ C < 212	C ≥ 212
H ₂ S	ppb	0 ≤ C < 1	1 ≤ C < 3.6	3.6 ≤ C < 5	5 ≤ C < 8	8 ≤ C < 11	C ≥ 11
THC	ppm	0 ≤ C < 1	1 ≤ C < 2	2 ≤ C < 3	3 ≤ C < 4	4 ≤ C < 5	C ≥ 5

Husky Energy East Station - October 2016 Summary Report



Monthly Update

*Air monitoring data has been slope, intercept, and baseline corrected. Data may change after validation process.

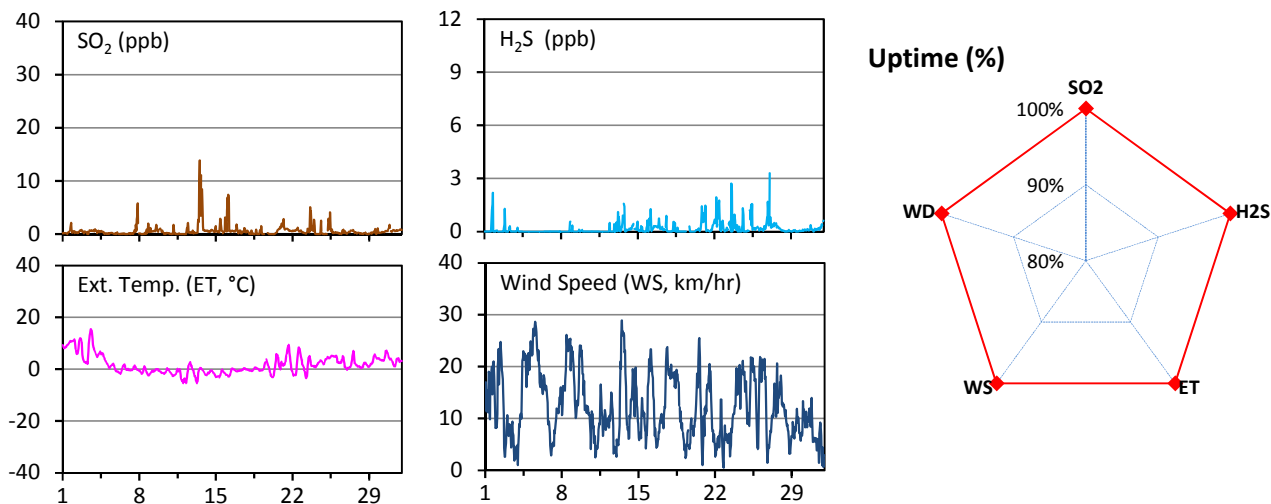
*All compliance parameters were within the Saskatchewan Ambient Air Quality Standards.

*All compliance parameters are above 90% operational. The wind instrument recorded an uptime of 94.1% due to malfunctioning, attributed to wet snow freezing up the instrument on October 14-16.

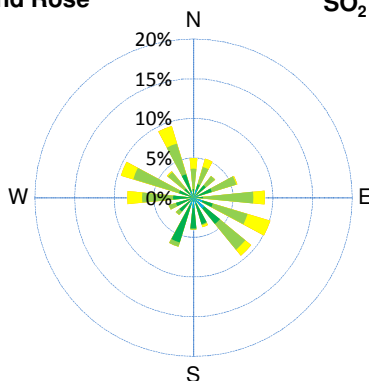
Husky Energy West Station - October 2016 Summary Report

Pollutants		Month Records		24-Hour Records				1-Hour Records			
Name	Conc. Unit	Avg. Conc.	Uptime	Maximum		AAAQO / SAAQS	Exceed Days	Maximum		AAAQO / SAAQS	Exceed Hours
				Conc.	Time			Conc.	Time		
SO ₂	ppb	0.6	100.0%	2.6	Sep-15	48 / 48	0 / 0	13.9	Oct-13 13:00	172 / 172	0 / 0
H ₂ S	ppb	0.2	100.0%	0.5	Oct-22	3 / 3.6	0 / 0	3.0	Oct-27 02:00	10 / 11.0	0 / 0

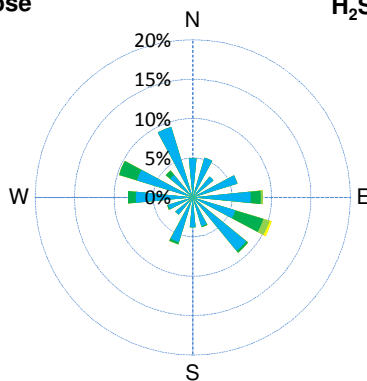
AAAQO: Alberta Ambient Air Quality Objectives; SAAQS: Saskatchewan Ambient Air Quality Standards.



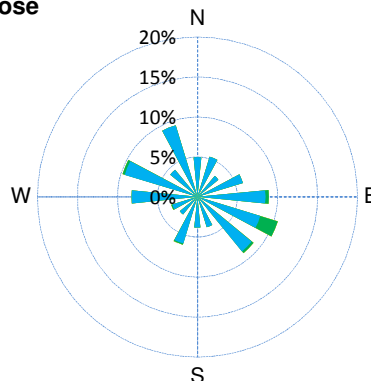
Wind Rose



SO₂ Rose



H₂S Rose



Parameters	Unit	Color Code for Wind Spd & Pollutant Conc. Class					
Wind Speed	km/hr	1 ≤ WS < 5	5 ≤ WS < 10	10 ≤ WS < 20	20 ≤ WS < 30	30 ≤ WS < 40	WS ≥ 40
SO ₂	ppb	0 ≤ C < 1	1 ≤ C < 5	5 ≤ C < 10	10 ≤ C < 57	57 ≤ C < 172	C ≥ 172
H ₂ S	ppb	0 ≤ C < 1	1 ≤ C < 3.6	3.6 ≤ C < 5	5 ≤ C < 8	8 ≤ C < 11	C ≥ 11

Monthly Update

*Air monitoring data has been slope, intercept, and baseline corrected. Data may change after validation process.

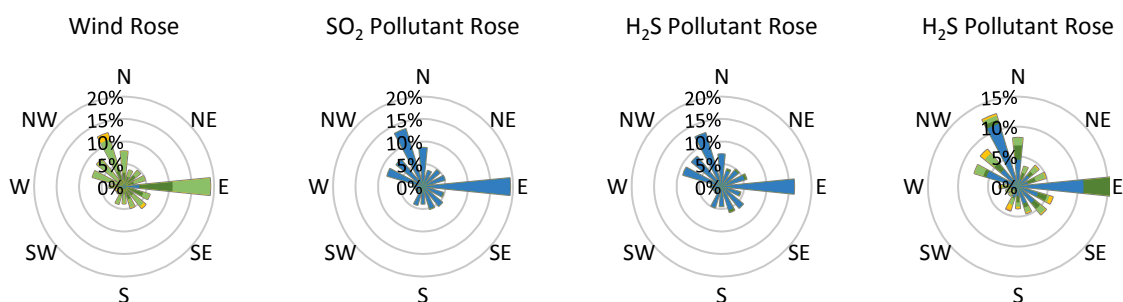
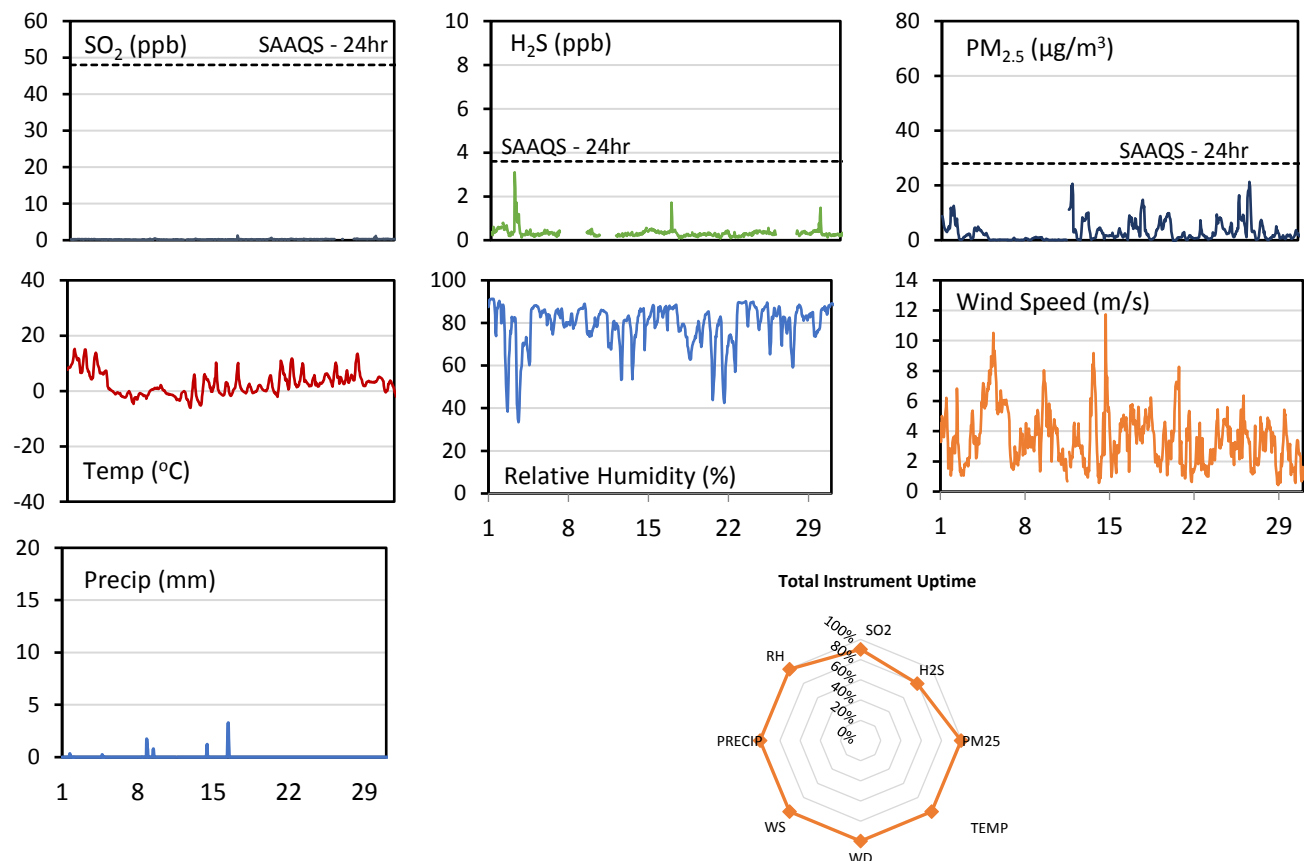
*All compliance parameters were within the Alberta Ambient Air Quality Objectives and the Saskatchewan Ambient Air Quality Standards

*All compliance parameters are above 90% operational. There are no operational issues to report.

WYAMZ Kindersley Station - October 2016 Summary Report

Pollutants		Month Records		24-Hour Records				1-Hour Records			
Name	Conc. Unit	Avg. Conc.	Total Uptime	Maximum		SAAQS Standard	Exceed Days	Maximum		SAAQS Standard	Exceed Hours
				Conc.	Time			Conc.	Time		
SO ₂	ppb	0.2	90%	0.4	Oct-29	48	0	1.3	Oct-16 12:00	172	0
H ₂ S	ppb	0.3	79%	0.8	Oct-03	3.6	0	3.1	Oct-03 01:00	11	0
PM _{2.5}	µg/m ³	2.8	99%	10.3	Oct-26	28	0	21.3	Oct-26 22:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class					
Wind Speed	m/s	0.3 ≤ WS < 1.4	1.4 ≤ WS < 3.1	3.1 ≤ WS < 7.8	7.8 ≤ WS < 10.8	10.8 ≤ WS < 13.6	WS ≥ 13.6
SO ₂	ppb	0 ≤ C < 1	1 ≤ C < 5	5 ≤ C < 10	10 ≤ C < 57	57 ≤ C < 172	C ≥ 172
H ₂ S	ppb	0 ≤ C < 1	1 ≤ C < 3.6	3.6 ≤ C < 5	5 ≤ C < 8	8 ≤ C < 10.8	C ≥ 10.8
PM _{2.5}	µg/m ³	0 ≤ C < 2	2 ≤ C < 4	4 ≤ C < 10	10 ≤ C < 20	20 ≤ C < 30	C ≥ 30

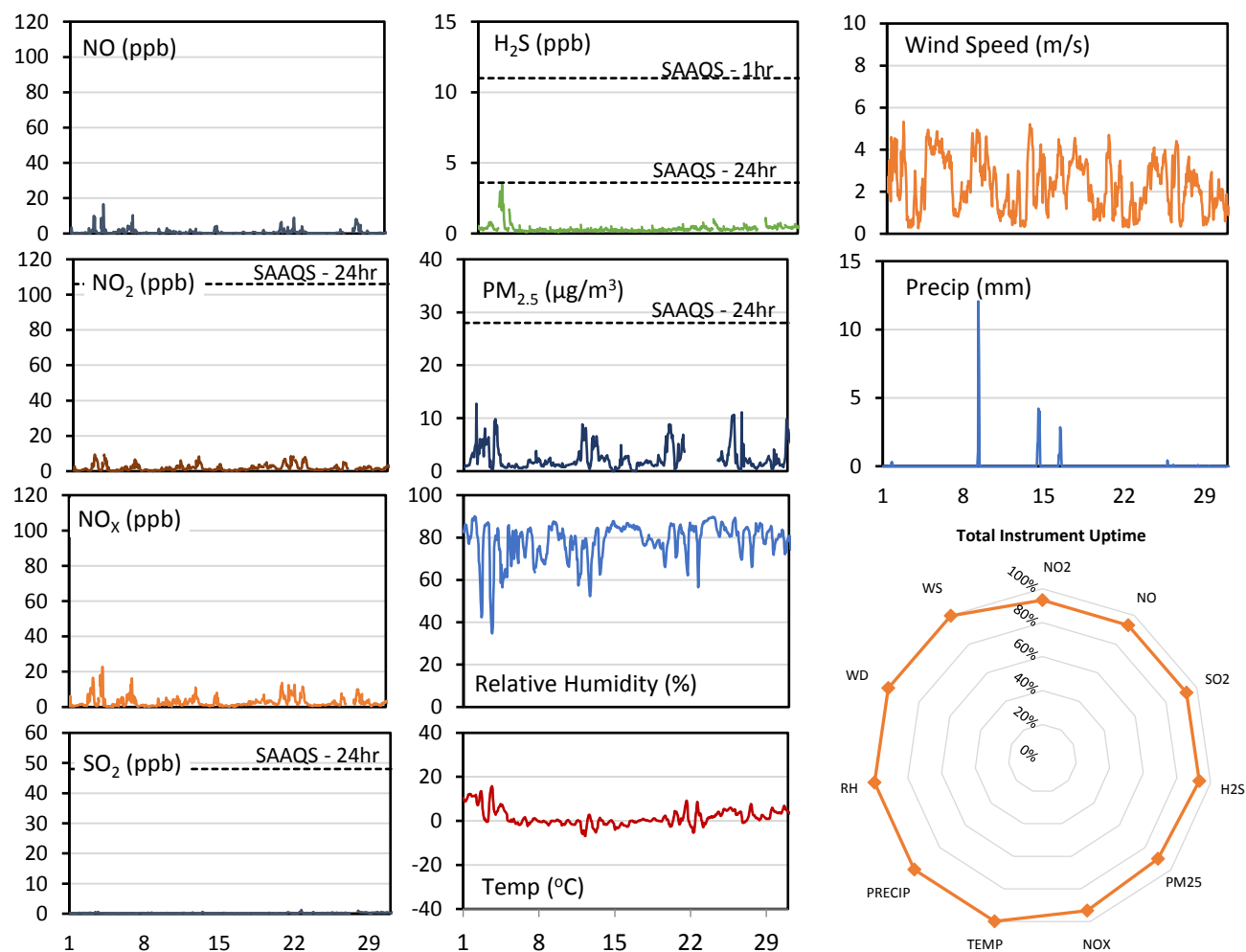
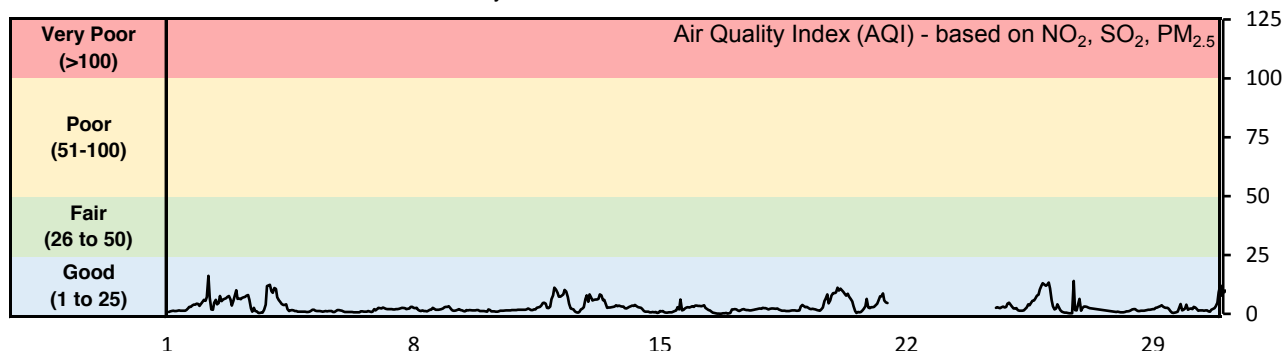
Monthly Update

- Achieved >99% of scheduled uptime for all parameters except SO₂ (94%) and H₂S (83%)
- Downtime of 4% results from routine daily Internal Zeroes and Spans

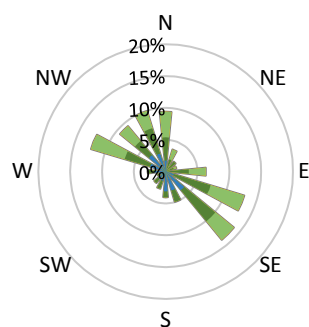
WYAMZ Maidstone Station - October 2016 Summary Report

Pollutants		Month Records		24-Hour Records				1-Hour Records			
Name	Conc. Unit	Avg. Conc.	Total Uptime	Maximum		SAAQS Standard	Exceed Days	Maximum		SAAQS Standard	Exceed Hours
				Conc.	Time			Conc.	Time		
NO	ppb	0.8	93%	3.3	Oct-28	-	-	16.6	Oct-04 04:00	-	-
NO ₂	ppb	1.9	93%	4.4	Oct-21	106	0	9.5	Oct-03 01:00	159	0
NO _x	ppb	2.7	93%	6.4	Oct-03	-	-	22.8	Oct-04 04:00	-	-
SO ₂	ppb	0.2	93%	0.5	Oct-28	48	0	1.3	Oct-22 16:00	172	0
H ₂ S	ppb	0.4	93%	1.4	Oct-03	3.6	0	3.5	Oct-03 06:00	11	0
PM _{2.5}	µg/m ³	2.5	90%	6.9	Oct-31	28	0	15.6	Oct-31 20:00	-	-

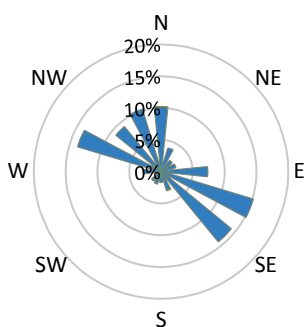
SAAQS: Saskatchewan Ambient Air Quality Standards



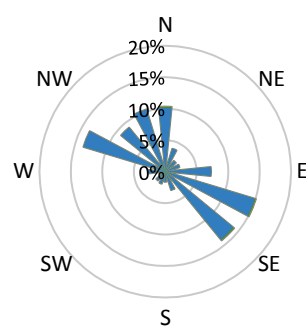
Wind Rose



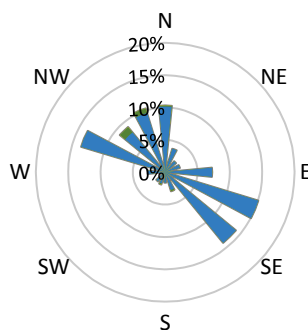
SO₂ Pollutant Rose



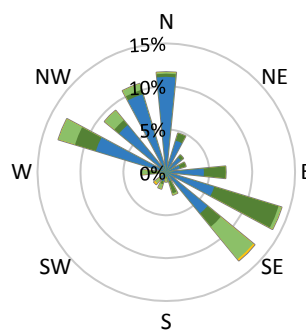
H₂S Pollutant Rose



NO₂ Pollutant Rose



PM_{2.5} Pollutant Rose



Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class					
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$
SO ₂	ppb	$0 \leq C < 1$	$1 \leq C < 5$	$5 \leq C < 10$	$10 \leq C < 57$	$57 \leq C < 172$	$C \geq 172$
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$
H ₂ S	ppb	$0 \leq C < 1$	$1 \leq C < 3.6$	$3.6 \leq C < 5$	$5 \leq C < 8$	$8 \leq C < 10.8$	$C \geq 10.8$
PM _{2.5}	$\mu\text{g}/\text{m}^3$	$0 \leq C < 2$	$2 \leq C < 4$	$4 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 30$	$C \geq 30$

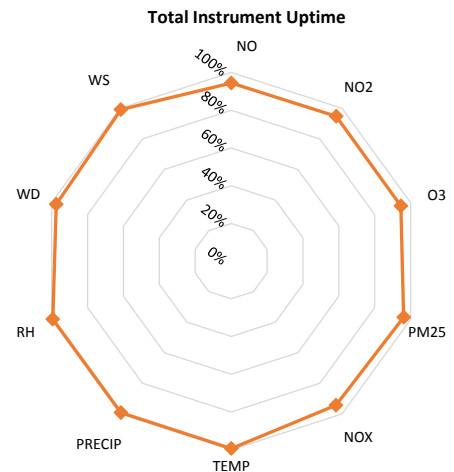
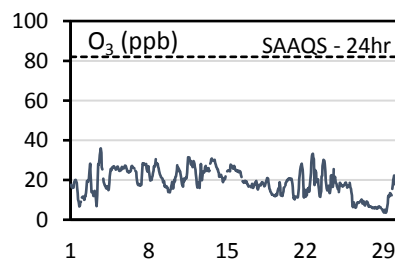
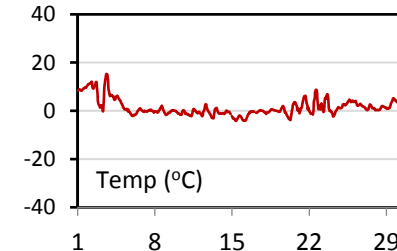
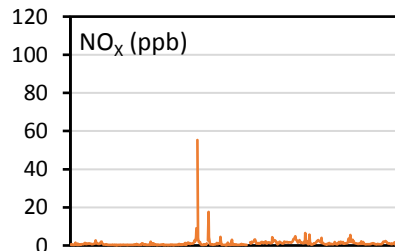
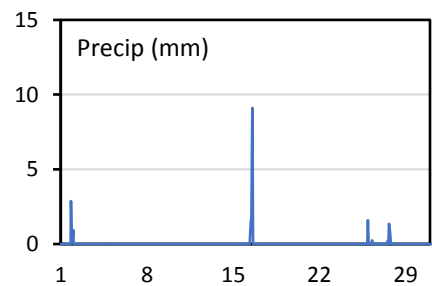
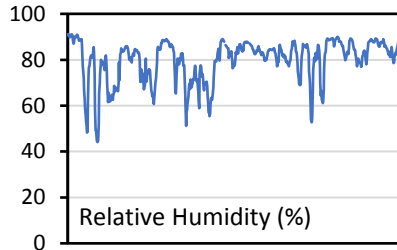
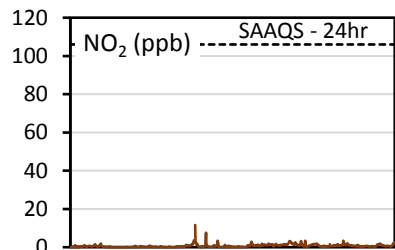
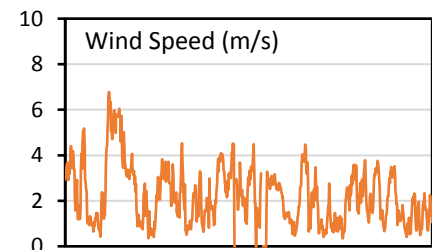
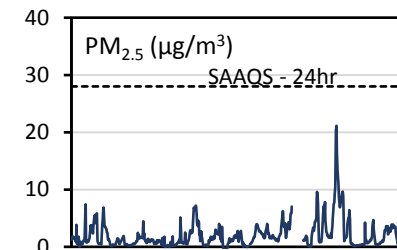
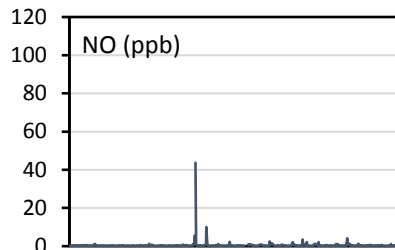
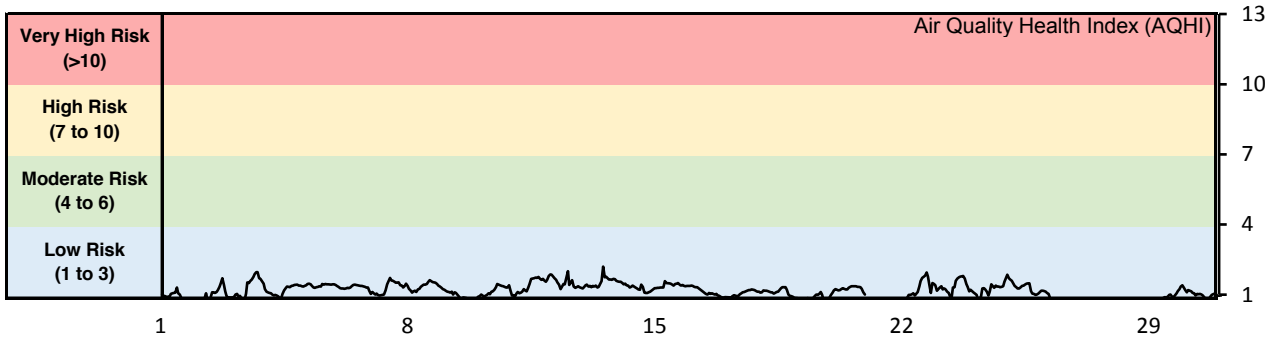
Monthly Update

- Achieved >97% of scheduled uptime for all parameters except PM_{2.5} (90%)
- Downtime of 4% results from routine daily Internal Zeroes and Spans
- All compliance parameters are above 90% data validity

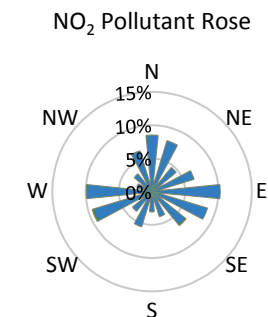
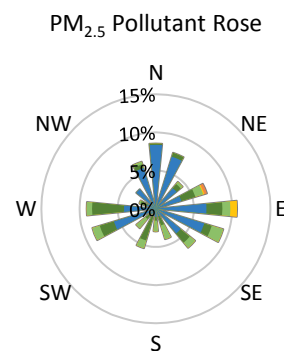
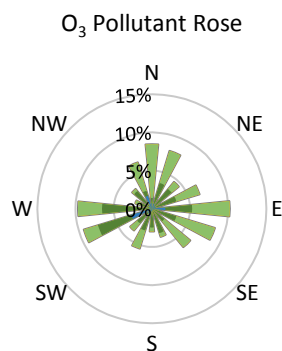
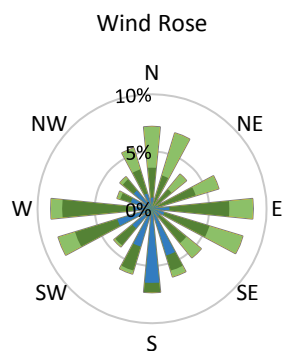
WYAMZ Meadow Lake Station - October 2016 Summary Report

Pollutants		Month Records		24-Hour Records				1-Hour Records			
Name	Conc. Unit	Avg. Conc.	Total Uptime	Maximum		SAAQS Standard	Exceed Days	Maximum		SAAQS Standard	Exceed Hours
				Conc.	Time			Conc.	Time		
NO	ppb	0.4	94%	2.5	Oct-12	-	-	43.7	Oct-12 13:00	-	-
NO ₂	ppb	0.7	95%	2.0	Oct-21	106	0	11.6	Oct-12 13:00	159	0
NO _x	ppb	1.2	94%	4.4	Oct-12	-	-	55.3	Oct-12 13:00	-	-
O ₃	ppb	18.8	95%	27.6	Oct-13	-	-	36.0	Oct-03 17:00	82	0
PM _{2.5}	µg/m ³	2.2	96%	7.6	Oct-25	28	0	21.1	Oct-25 00:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



WYAMZ Meadow Lake Station - October 2016 Summary Report



Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class					
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$
O ₃	ppb	$0 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 40$	$40 \leq C < 60$	$60 \leq C < 82$	$C \geq 82$
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$
PM _{2.5}	$\mu\text{g}/\text{m}^3$	$0 \leq C < 2$	$2 \leq C < 4$	$4 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 30$	$C \geq 30$

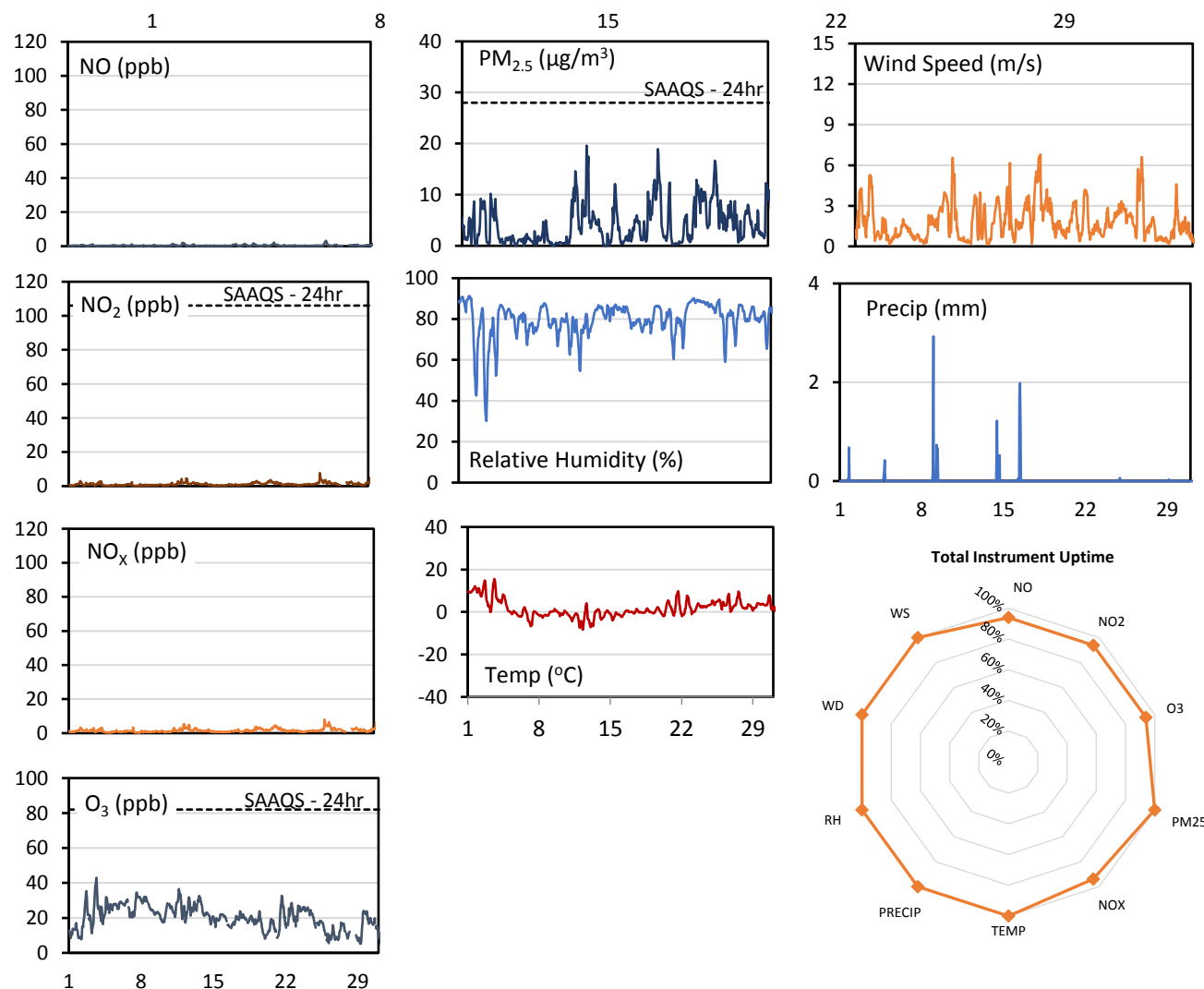
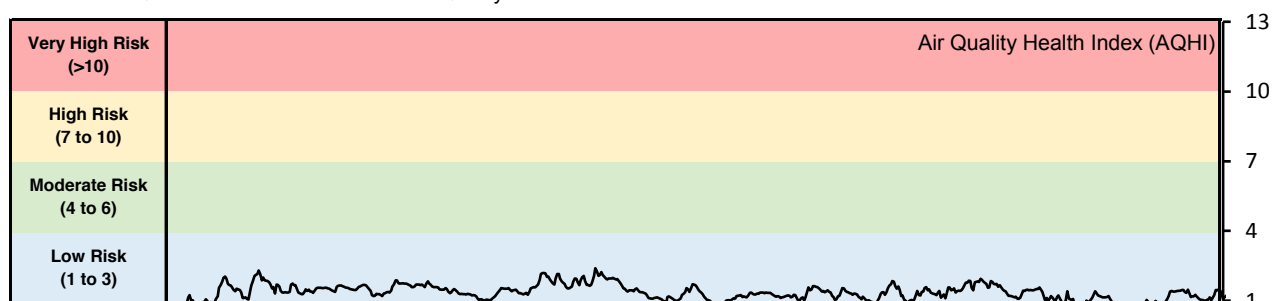
Monthly Update

- Achieved >98% of scheduled uptime for all parameters except wind direction (97%)
- Downtime of 4% results from routine daily Internal Zeroes and Spans

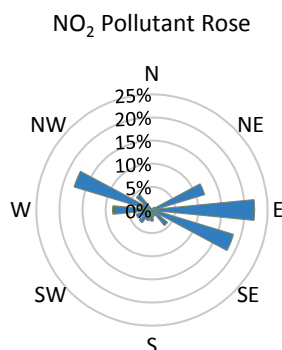
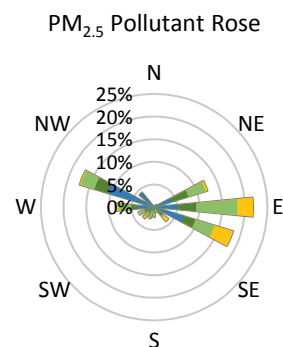
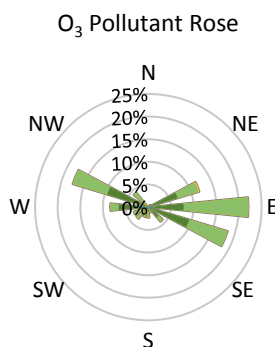
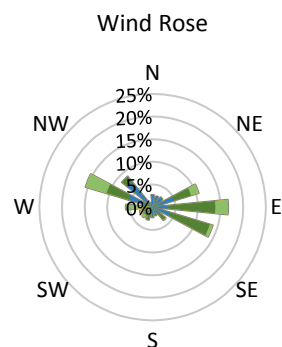
WYAMZ Unity Station - October 2016 Summary Report

Pollutants		Month Records		24-Hour Records				1-Hour Records			
Name	Conc. Unit	Avg. Conc.	Total Uptime	Maximum		SAAQS Standard	Exceed Days	Maximum		SAAQS Standard	Exceed Hours
				Conc.	Time			Conc.	Time		
NO	ppb	0.4	94%	1.1	Oct-26	-	-	3.2	Oct-26 14:00	-	-
NO ₂	ppb	1.2	94%	3.0	Oct-26	106	0	7.7	Oct-26 04:00	159	0
NO _x	ppb	1.6	94%	4.0	Oct-26	-	-	8.0	Oct-26 04:00	-	-
O ₃	ppb	20.3	94%	29.0	Oct-08	-	-	43.0	Oct-03 16:00	82	0
PM _{2.5}	µg/m ³	4.3	100%	10.0	Oct-31	28	0	19.6	Oct-13 05:00	-	-

SAAQS: Saskatchewan Ambient Air Quality Standards



WYAMZ Unity Station - October 2016 Summary Report



Parameters	Unit	Color Code for Wind Speed and Pollution Concentration Class						
Wind Speed	m/s	$0.3 \leq WS < 1.4$	$1.4 \leq WS < 3.1$	$3.1 \leq WS < 7.8$	$7.8 \leq WS < 10.8$	$10.8 \leq WS < 13.6$	$WS \geq 13.6$	
O ₃	ppb	$0 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 40$	$40 \leq C < 60$	$60 \leq C < 82$	$C \geq 82$	
NO ₂	ppb	$0 \leq C < 5$	$5 \leq C < 15$	$15 \leq C < 30$	$30 \leq C < 100$	$100 \leq C < 212$	$C \geq 212$	
PM _{2.5}	$\mu\text{g}/\text{m}^3$	$0 \leq C < 2$	$2 \leq C < 4$	$4 \leq C < 10$	$10 \leq C < 20$	$20 \leq C < 30$	$C \geq 30$	

Monthly Update

- Achieved >98% of scheduled uptime for all parameters
- Downtime of 4% results from routine daily Internal Zeroes and Spans