



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Ambient Air Quality Monitoring Program

Monthly Report

May 2023

June 30, 2023

Alberta Environment and Parks

11th Floor, Oxbridge Place
9820-106 Street
Edmonton Alberta T5K 2J6

Subject: **Peace Airshed Zone Association (PAZA)**
May 2023 Ambient Air Quality Monitoring Report

Please find enclosed the PAZA Ambient Air Quality Monitoring Network Report for the month of May 2023.

The representative of the Person Responsible for this monitoring program is:

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This report was prepared by Dr. Kevin McCullum, P.Eng., and reviewed by Mandeep Dhaliwal.

PAZA has retained the services of WSP Canada Inc. to conduct continuous ambient monitoring and Dr. Kevin McCullum, P.Eng. to provide data validation and reporting.

This report is submitted by PAZA on behalf of the industrial member companies to satisfy the requirements of the facility Operating Approvals listed in Table A

The monthly summary report includes the operational summaries and hourly continuous monitoring and monthly passive results. The Milner station is being reported under the PAZA Monthly report.

Continuous Monitoring:

Eight (8) Stations including Henry Pirker (Grande Prairie), Dunes, Smoky Heights, Beaverlodge, Valleyview, Donnelly, Poplar-Portable and Milner.
Detailed Summaries are included in the report.

Calibration and Data Submission:

Monthly report, hourly data and calibration reports for May 2023 were submitted to the ETS data system.

Table A. PAZA members with Facility Operating Approvals

Company	Facility	LSD	EPEA Approval No.
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	00262479-00-00
Alberta Power (2000) Ltd. (an ATCO company)	Sturgeon	SW-06-069-21-W5	00010283-02-02
ATCO Power Canada	Poplar Hill	11-19-073-08-W6	00067774-01-01
ATCO Power Canada	Valleyview	SW-06-069-21-W5	00147709-01-01
AltaGas Ltd.	Pouce Coupe	03-03-081-13-W6	00247673-00-00
	Ante Creek	02-26-068-25-W5	00266694-00-00
	Gordondale	02-26-068-25-W5	00287474-00-00
Apache Canada Ltd.	House Mountain	01-08-070-10-W5	00010137-02-02
Birchcliff Energy Ltd.	Pouce Coupe	03-22-078-12-W6	00252529-00-00
Canadian Natural Resources Limited	Bonanza	11-25-081-11-W6	00000029-01-00
	Progress/Gordondale	01-01-077-10-W6	00010036-02-00
	Gold Creek	13-26-067-05-W6	00010446-02-00
	Teepee Creek	SE-2-074-04-W6	00001635-02-00
	Sturgeon/Valleyview	02-02-069-22-W5	00001633-02-00
Canfor Forest Products	Grande Prairie	SW-23-071-06-W6	00152645-01-00
Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	00000212-01-00
Encana Corporation	Sexsmith	04-08-075-07-W6	00010002-01-00
Enerplus Resources	Pouce Coupe	SW-06-069-21-W5	00001464-02-03
Exshaw Oil Corporation	Spirit River	03-10-077-07-W6	00344521-00-00
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	00238762-00-00
Inception Exploration Ltd.	Gold Creek	03-26-069-05-W6	00335317-00-02
KANATA Energy Group Ltd.	Valhalla	13-21-076-09-W6	00017620-02-02
Long Run Exploration	Eaglesham	01-25-076-01-W6	00241532-00-00
	Kakut	14-12-075-03-W6	00248469-00-00
	Donnelly	06-01-077-21-W5	00000087-02-00
	Puskwaskau	03-26-074-01-W6	00017524-01-00
Longview Oil Corp.	Sunset House	06-22-070-20-W5	00138884-01-00
Milner Power Limited Partnership	H.R. Milner thermal electric power plant	SE-15-058-08-W6	00009814-03-03
NorthRiver Midstream Inc.	Fourth Creek	16-11-082-09-W6	00000263-01-00
	Gordondale	11-26-079-09-W6	00011495-01-01
	Pouce Coupe/Bonanza	03-23-080-13-W6	00070203-01-01
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00
	Pouce Coupe	16-07-078-11-W6	00000614-01-00
Petrus Resources	Rycroft	08-25-077-06-W6	00011351-02-00
	Spirit River	08-34-077-06-W6	00011096-02-00
Strathcona Resources Ltd.	Jayar Sour Gas Processing Plant	06-08-062-03 W6	03612040-00-00
Suncor Energy Inc.	Progress	07-22-078-09-W6	00011428-02-00
Tidewater Midstream and Infrastructure Ltd.	Pipestone Sour Gas Plant	NW-35-70-9 W6	00403309-00-00
Veresen Energy	Hythe Brainard	11-18-074-12-W6	00010910-02-00
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	00000113-02-00

Concentrations in excess of the Clean Air (Maximum Levels) Regulation:

- 784 PM_{2.5} 1hr readings above AAAQG and 77 PM_{2.5} 24hr readings above AAAQO
- 13 O₃ 1hr readings above AAAQO
- 12 H₂S 1hr readings and 2 H₂S 24hr readings above AAAQO

1-hr readings above the PM_{2.5} AAAQG (80 µg/m³) was recorded as:

Reference Number	Site	Date	From MST	To MST	Average (µg/m ³)	WS km/hr	WD degrees
412612	Beaverlodge	May 5, 2023	09:00	10:00	87.4	24.9	109
412612	Beaverlodge	May 5, 2023	10:00	11:00	127.7	29.8	106
412612	Beaverlodge	May 5, 2023	11:00	12:00	135.5	31.5	111
412612	Beaverlodge	May 5, 2023	12:00	13:00	347.8	30.2	117
412612	Beaverlodge	May 5, 2023	13:00	14:00	125.5	36.1	122
412612	Beaverlodge	May 5, 2023	16:00	17:00	110.5	39.9	119
412612	Beaverlodge	May 5, 2023	17:00	18:00	229.2	39.2	125
412612	Beaverlodge	May 5, 2023	18:00	19:00	111.5	36.5	123
412612	Beaverlodge	May 6, 2023	00:00	01:00	105.4	25.1	113
412612	Beaverlodge	May 6, 2023	01:00	02:00	95.4	24.5	106
412612	Beaverlodge	May 6, 2023	02:00	03:00	104.1	21.9	96
412612	Beaverlodge	May 6, 2023	03:00	04:00	113.2	23.4	94
412612	Beaverlodge	May 6, 2023	04:00	05:00	154.6	21.7	90
412612	Beaverlodge	May 6, 2023	05:00	06:00	138.3	22.3	87
412612	Beaverlodge	May 6, 2023	06:00	07:00	122.7	25.9	87
412612	Beaverlodge	May 6, 2023	07:00	08:00	155.5	26.7	93
412612	Beaverlodge	May 6, 2023	08:00	09:00	113.1	28.8	95
412612	Beaverlodge	May 6, 2023	09:00	10:00	129.7	34.2	100
412612	Beaverlodge	May 6, 2023	10:00	11:00	114.8	35.4	107
412612	Beaverlodge	May 6, 2023	18:00	19:00	102.8	35.3	106
412612	Beaverlodge	May 6, 2023	19:00	20:00	105.0	33.5	111
412612	Beaverlodge	May 6, 2023	20:00	21:00	117.6	31.0	109
412612	Beaverlodge	May 6, 2023	21:00	22:00	96.0	22.8	99
412612	Beaverlodge	May 7, 2023	09:00	10:00	122.6	25.2	115
412612	Beaverlodge	May 7, 2023	10:00	11:00	91.1	23.7	132
412828	Beaverlodge	May 14, 2023	19:00	20:00	85.4	11.9	91
412828	Beaverlodge	May 14, 2023	20:00	21:00	83.9	7.9	74
412828	Beaverlodge	May 14, 2023	22:00	23:00	116.1	8.7	77
412828	Beaverlodge	May 14, 2023	23:00	00:00	271.5	8.5	83
413246	Beaverlodge	May 15, 2023	00:00	01:00	322.1	5.3	88
413246	Beaverlodge	May 15, 2023	01:00	02:00	157.2	5.7	91
413246	Beaverlodge	May 15, 2023	02:00	03:00	115.2	4.8	101
413246	Beaverlodge	May 15, 2023	03:00	04:00	118.9	1.8	185
413246	Beaverlodge	May 15, 2023	04:00	05:00	122.3	4.0	260
413246	Beaverlodge	May 15, 2023	05:00	06:00	119.4	2.6	33
413246	Beaverlodge	May 15, 2023	06:00	07:00	117.4	3.4	40
413246	Beaverlodge	May 15, 2023	07:00	08:00	120.5	0.5	144
413246	Beaverlodge	May 15, 2023	08:00	09:00	113.4	2.0	210
413246	Beaverlodge	May 15, 2023	09:00	10:00	119.8	0.3	283
413246	Beaverlodge	May 15, 2023	10:00	11:00	124.0	1.2	15
413246	Beaverlodge	May 15, 2023	11:00	12:00	134.4	1.6	31
413246	Beaverlodge	May 15, 2023	12:00	13:00	154.5	1.1	355
413246	Beaverlodge	May 15, 2023	13:00	14:00	178.9	3.3	56
413246	Beaverlodge	May 15, 2023	14:00	15:00	108.7	3.9	116
413246	Beaverlodge	May 15, 2023	21:00	22:00	134.8	5.8	328
413246	Beaverlodge	May 15, 2023	22:00	23:00	297.1	27.0	356

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413246	Beaverlodge	May 15, 2023	23:00	00:00	197.9	21.3	357
413246	Beaverlodge	May 16, 2023	00:00	01:00	272.8	13.1	357
413246	Beaverlodge	May 16, 2023	01:00	02:00	328.8	7.9	330
413246	Beaverlodge	May 16, 2023	09:00	10:00	86.5	6.5	24
413246	Beaverlodge	May 16, 2023	10:00	11:00	96.6	calibration	calibration
413246	Beaverlodge	May 16, 2023	11:00	12:00	98.3	1.8	272
413246	Beaverlodge	May 16, 2023	16:00	17:00	81.3	16.3	221
413246	Beaverlodge	May 16, 2023	17:00	18:00	88.9	16.2	191
413246	Beaverlodge	May 16, 2023	21:00	22:00	84.5	5.2	95
413246	Beaverlodge	May 16, 2023	22:00	23:00	108.2	5.3	69
413246	Beaverlodge	May 16, 2023	23:00	00:00	119.9	6.2	60
413246	Beaverlodge	May 17, 2023	00:00	01:00	133.1	5.1	56
413246	Beaverlodge	May 17, 2023	01:00	02:00	140.8	3.3	76
413246	Beaverlodge	May 17, 2023	02:00	03:00	150.4	3.6	84
413246	Beaverlodge	May 17, 2023	03:00	04:00	166.9	3.6	111
413246	Beaverlodge	May 17, 2023	04:00	05:00	136.0	2.3	121
413246	Beaverlodge	May 17, 2023	05:00	06:00	135.7	3.9	59
413246	Beaverlodge	May 17, 2023	06:00	07:00	93.4	2.3	81
413246	Beaverlodge	May 17, 2023	07:00	08:00	105.0	1.1	160
413246	Beaverlodge	May 17, 2023	08:00	09:00	81.9	2.4	180
413246	Beaverlodge	May 17, 2023	11:00	12:00	111.2	6.7	125
413246	Beaverlodge	May 17, 2023	12:00	13:00	134.2	10.8	110
413246	Beaverlodge	May 17, 2023	13:00	14:00	119.6	10.5	80
413246	Beaverlodge	May 17, 2023	18:00	19:00	82.5	3.0	107
413246	Beaverlodge	May 17, 2023	22:00	23:00	88.3	7.0	80
413246	Beaverlodge	May 18, 2023	00:00	01:00	105.7	8.7	92
413246	Beaverlodge	May 18, 2023	01:00	02:00	211.5	7.6	82
413246	Beaverlodge	May 18, 2023	02:00	03:00	219.4	7.5	71
413246	Beaverlodge	May 18, 2023	03:00	04:00	170.6	8.0	66
413246	Beaverlodge	May 18, 2023	04:00	05:00	170.1	4.4	72
413246	Beaverlodge	May 18, 2023	05:00	06:00	197.3	2.7	171
413246	Beaverlodge	May 18, 2023	06:00	07:00	232.0	1.9	228
413246	Beaverlodge	May 18, 2023	07:00	08:00	302.2	2.9	200
413246	Beaverlodge	May 18, 2023	08:00	09:00	349.9	2.5	212
413246	Beaverlodge	May 18, 2023	09:00	10:00	333.4	1.6	185
413246	Beaverlodge	May 18, 2023	10:00	11:00	307.9	3.2	138
413246	Beaverlodge	May 18, 2023	11:00	12:00	286.1	6.4	107
413246	Beaverlodge	May 18, 2023	12:00	13:00	310.7	10.1	102
413246	Beaverlodge	May 18, 2023	13:00	14:00	217.7	15.0	98
413246	Beaverlodge	May 18, 2023	14:00	15:00	231.9	19.5	115
413246	Beaverlodge	May 18, 2023	15:00	16:00	260.8	18.1	114
413246	Beaverlodge	May 18, 2023	16:00	17:00	261.9	15.9	109
413246	Beaverlodge	May 18, 2023	17:00	18:00	169.5	14.2	106
413246	Beaverlodge	May 18, 2023	18:00	19:00	147.4	12.4	94
413246	Beaverlodge	May 18, 2023	19:00	20:00	154.2	12.6	87
413246	Beaverlodge	May 18, 2023	20:00	21:00	202.4	9.2	70
413246	Beaverlodge	May 18, 2023	21:00	22:00	297.5	9.0	71
413246	Beaverlodge	May 18, 2023	22:00	23:00	348.1	7.9	76
413246	Beaverlodge	May 18, 2023	23:00	00:00	355.2	4.1	93
413246	Beaverlodge	May 19, 2023	00:00	01:00	345.1	3.9	50
413246	Beaverlodge	May 19, 2023	01:00	02:00	354.0	0.9	185
413246	Beaverlodge	May 19, 2023	02:00	03:00	371.9	0.3	224
413246	Beaverlodge	May 19, 2023	03:00	04:00	391.1	3.3	4
413246	Beaverlodge	May 19, 2023	04:00	05:00	374.8	0.6	238

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413246	Beaverlodge	May 19, 2023	05:00	06:00	345.2	2.9	87
413246	Beaverlodge	May 19, 2023	06:00	07:00	290.5	2.8	118
413246	Beaverlodge	May 19, 2023	07:00	08:00	248.6	2.7	83
413246	Beaverlodge	May 19, 2023	08:00	09:00	120.3	7.2	199
413246	Beaverlodge	May 19, 2023	18:00	19:00	819.2	16.3	332
413246	Beaverlodge	May 19, 2023	19:00	20:00	993.0	14.3	330
413246	Beaverlodge	May 19, 2023	20:00	21:00	993.0	12.3	346
413246	Beaverlodge	May 19, 2023	21:00	22:00	883.1	10.6	332
413246	Beaverlodge	May 19, 2023	22:00	23:00	556.5	10.9	338
413246	Beaverlodge	May 19, 2023	23:00	00:00	352.0	7.2	325
413246	Beaverlodge	May 20, 2023	08:00	09:00	252.9	3.0	5
413246	Beaverlodge	May 20, 2023	09:00	10:00	231.6	5.3	306
413246	Beaverlodge	May 20, 2023	10:00	11:00	238.2	3.0	281
413246	Beaverlodge	May 20, 2023	11:00	12:00	289.1	2.6	191
413246	Beaverlodge	May 20, 2023	12:00	13:00	341.9	1.7	7
413246	Beaverlodge	May 20, 2023	13:00	14:00	273.3	3.3	7
413246	Beaverlodge	May 20, 2023	14:00	15:00	256.3	9.8	31
413246	Beaverlodge	May 20, 2023	15:00	16:00	235.6	9.8	87
413246	Beaverlodge	May 20, 2023	16:00	17:00	168.3	13.8	94
413246	Beaverlodge	May 20, 2023	17:00	18:00	125.5	15.4	94
413246	Beaverlodge	May 20, 2023	18:00	19:00	117.1	18.7	115
413246	Beaverlodge	May 20, 2023	19:00	20:00	133.1	15.8	117
413246	Beaverlodge	May 21, 2023	05:00	06:00	87.0	6.5	51
413603	Beaverlodge	May 22, 2023	14:00	15:00	108.4	6.3	355
414002	Beaverlodge	May 30, 2023	08:00	09:00	83.0	7.7	2
414002	Beaverlodge	May 30, 2023	09:00	10:00	292.6	4.1	38
414002	Beaverlodge	May 30, 2023	11:00	12:00	218.4	4.8	54
412613	Dunes	May 5, 2023	10:00	11:00	191.9	10.9	113
412613	Dunes	May 5, 2023	11:00	12:00	314.3	12.4	123
412613	Dunes	May 5, 2023	12:00	13:00	106.4	15.3	131
412613	Dunes	May 5, 2023	13:00	14:00	95.8	18.1	133
412613	Dunes	May 5, 2023	15:00	16:00	94.5	19.7	132
412613	Dunes	May 5, 2023	16:00	17:00	102.8	17.9	130
412613	Dunes	May 6, 2023	03:00	04:00	123.2	9.7	112
412613	Dunes	May 6, 2023	04:00	05:00	135.2	8.1	105
412613	Dunes	May 6, 2023	05:00	06:00	123.4	8.5	104
412613	Dunes	May 6, 2023	06:00	07:00	124.9	8.4	106
412613	Dunes	May 6, 2023	07:00	08:00	96.4	8.9	105
412613	Dunes	May 6, 2023	18:00	19:00	80.5	14.6	121
412613	Dunes	May 7, 2023	08:00	09:00	96.5	5.7	127
412829	Dunes	May 8, 2023	07:00	08:00	81.3	1.4	174
412829	Dunes	May 12, 2023	01:00	02:00	96.9	1.0	200
412829	Dunes	May 12, 2023	02:00	03:00	93.4	0.1	102
412829	Dunes	May 12, 2023	03:00	04:00	91.8	0.9	280
412829	Dunes	May 12, 2023	04:00	05:00	81.9	0.7	202
412829	Dunes	May 14, 2023	21:00	22:00	164.7	3.7	107
412829	Dunes	May 14, 2023	22:00	23:00	221.0	2.0	89
412829	Dunes	May 14, 2023	23:00	00:00	201.8	0.1	93
413248	Dunes	May 15, 2023	00:00	01:00	204.6	0.6	338
413248	Dunes	May 15, 2023	01:00	02:00	204.7	0.5	17
413248	Dunes	May 15, 2023	02:00	03:00	181.9	0.7	329
413248	Dunes	May 15, 2023	03:00	04:00	161.3	0.3	318
413248	Dunes	May 15, 2023	04:00	05:00	156.1	0.4	221
413248	Dunes	May 15, 2023	05:00	06:00	149.8	0.7	264

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413248	Dunes	May 15, 2023	06:00	07:00	150.4	0.0	301
413248	Dunes	May 15, 2023	07:00	08:00	162.6	1.4	210
413248	Dunes	May 15, 2023	08:00	09:00	181.8	1.7	167
413248	Dunes	May 15, 2023	09:00	10:00	173.4	2.9	169
413248	Dunes	May 15, 2023	10:00	11:00	155.1	2.3	169
413248	Dunes	May 15, 2023	11:00	12:00	136.9	3.5	178
413248	Dunes	May 15, 2023	12:00	13:00	82.9	2.7	185
413248	Dunes	May 15, 2023	22:00	23:00	110.3	4.5	14
413248	Dunes	May 15, 2023	23:00	00:00	324.4	14.8	36
413248	Dunes	May 16, 2023	00:00	01:00	306.3	9.5	21
413248	Dunes	May 16, 2023	01:00	02:00	377.7	4.7	339
413248	Dunes	May 16, 2023	02:00	03:00	329.2	3.0	331
413248	Dunes	May 16, 2023	03:00	04:00	223.9	3.1	6
413248	Dunes	May 16, 2023	04:00	05:00	190.6	1.1	326
413248	Dunes	May 16, 2023	05:00	06:00	173.4	0.6	274
413248	Dunes	May 16, 2023	06:00	07:00	198.1	0.8	286
413248	Dunes	May 16, 2023	07:00	08:00	158.1	0.3	326
413248	Dunes	May 16, 2023	08:00	09:00	127.4	1.2	316
413248	Dunes	May 16, 2023	11:00	12:00	108.2	3.5	327
413248	Dunes	May 16, 2023	12:00	13:00	205.3	4.3	319
413248	Dunes	May 16, 2023	13:00	14:00	128.2	3.3	289
413248	Dunes	May 16, 2023	14:00	15:00	83.5	1.2	269
413248	Dunes	May 16, 2023	15:00	16:00	114.0	4.3	213
413248	Dunes	May 16, 2023	16:00	17:00	99.1	2.4	169
413248	Dunes	May 16, 2023	17:00	18:00	120.2	3.7	161
413248	Dunes	May 16, 2023	18:00	19:00	143.9	4.1	172
413248	Dunes	May 16, 2023	19:00	20:00	144.9	4.1	175
413248	Dunes	May 16, 2023	20:00	21:00	147.5	2.2	187
413248	Dunes	May 16, 2023	21:00	22:00	156.6	0.4	176
413248	Dunes	May 16, 2023	22:00	23:00	165.6	0.4	305
413248	Dunes	May 16, 2023	23:00	00:00	161.2	0.4	334
413248	Dunes	May 17, 2023	00:00	01:00	159.4	0.4	256
413248	Dunes	May 17, 2023	01:00	02:00	163.7	0.2	287
413248	Dunes	May 17, 2023	02:00	03:00	158.3	0.6	355
413248	Dunes	May 17, 2023	03:00	04:00	155.7	0.4	274
413248	Dunes	May 17, 2023	04:00	05:00	160.3	0.4	222
413248	Dunes	May 17, 2023	05:00	06:00	157.4	0.7	337
413248	Dunes	May 17, 2023	06:00	07:00	148.0	0.4	228
413248	Dunes	May 17, 2023	07:00	08:00	154.2	2.7	213
413248	Dunes	May 17, 2023	08:00	09:00	166.4	1.6	173
413248	Dunes	May 17, 2023	09:00	10:00	207.6	2.2	180
413248	Dunes	May 17, 2023	10:00	11:00	191.5	0.7	34
413248	Dunes	May 17, 2023	11:00	12:00	157.8	3.4	110
413248	Dunes	May 17, 2023	12:00	13:00	132.0	4.5	157
413248	Dunes	May 17, 2023	21:00	22:00	111.9	1.5	88
413248	Dunes	May 17, 2023	22:00	23:00	88.8	0.2	294
413248	Dunes	May 17, 2023	23:00	00:00	89.7	0.4	274
413248	Dunes	May 18, 2023	00:00	01:00	87.7	0.6	339
413248	Dunes	May 18, 2023	01:00	02:00	88.5	0.7	342
413248	Dunes	May 18, 2023	02:00	03:00	93.8	1.1	336
413248	Dunes	May 18, 2023	03:00	04:00	100.3	0.8	0
413248	Dunes	May 18, 2023	04:00	05:00	131.0	0.3	287
413248	Dunes	May 18, 2023	05:00	06:00	167.8	0.4	6
413248	Dunes	May 18, 2023	06:00	07:00	183.1	1.0	30

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413248	Dunes	May 18, 2023	07:00	08:00	286.5	1.4	113
413248	Dunes	May 18, 2023	08:00	09:00	440.1	1.6	105
413248	Dunes	May 18, 2023	09:00	10:00	588.1	3.3	135
413248	Dunes	May 18, 2023	10:00	11:00	503.7	3.8	151
413248	Dunes	May 18, 2023	11:00	12:00	429.7	4.5	130
413248	Dunes	May 18, 2023	12:00	13:00	468.1	5.3	121
413248	Dunes	May 18, 2023	13:00	14:00	325.2	5.8	105
413248	Dunes	May 18, 2023	14:00	15:00	325.0	8.8	115
413248	Dunes	May 18, 2023	15:00	16:00	141.0	8.2	105
413248	Dunes	May 18, 2023	16:00	17:00	140.8	7.9	103
413248	Dunes	May 18, 2023	17:00	18:00	140.0	7.6	103
413248	Dunes	May 18, 2023	18:00	19:00	179.0	6.5	95
413248	Dunes	May 18, 2023	19:00	20:00	266.3	4.7	85
413248	Dunes	May 18, 2023	20:00	21:00	319.0	3.2	82
413248	Dunes	May 18, 2023	21:00	22:00	306.9	1.7	67
413248	Dunes	May 18, 2023	22:00	23:00	307.0	0.7	356
413248	Dunes	May 18, 2023	23:00	00:00	329.2	0.6	21
413248	Dunes	May 19, 2023	00:00	01:00	285.7	0.7	305
413248	Dunes	May 19, 2023	01:00	02:00	280.7	0.9	237
413248	Dunes	May 19, 2023	02:00	03:00	272.3	1.2	329
413248	Dunes	May 19, 2023	03:00	04:00	284.6	1.4	204
413248	Dunes	May 19, 2023	04:00	05:00	330.6	2.0	210
413248	Dunes	May 19, 2023	05:00	06:00	335.2	1.6	249
413248	Dunes	May 19, 2023	06:00	07:00	333.5	1.1	209
413248	Dunes	May 19, 2023	07:00	08:00	330.7	0.6	69
413248	Dunes	May 19, 2023	08:00	09:00	328.7	1.0	194
413248	Dunes	May 19, 2023	09:00	10:00	332.0	1.9	170
413248	Dunes	May 19, 2023	10:00	11:00	225.0	3.4	174
413248	Dunes	May 19, 2023	11:00	12:00	117.2	3.5	217
413248	Dunes	May 19, 2023	13:00	14:00	83.5	6.4	273
413248	Dunes	May 19, 2023	18:00	19:00	125.3	8.4	328
413248	Dunes	May 19, 2023	19:00	20:00	908.7	8.8	337
413248	Dunes	May 19, 2023	20:00	21:00	997.0	5.3	330
413248	Dunes	May 19, 2023	21:00	22:00	948.8	3.9	313
413248	Dunes	May 19, 2023	22:00	23:00	745.5	3.6	306
413248	Dunes	May 19, 2023	23:00	00:00	580.2	2.2	298
413248	Dunes	May 20, 2023	00:00	01:00	539.0	1.3	307
413248	Dunes	May 20, 2023	01:00	02:00	542.3	1.1	319
413248	Dunes	May 20, 2023	02:00	03:00	444.1	1.5	326
413248	Dunes	May 20, 2023	03:00	04:00	309.7	1.8	307
413248	Dunes	May 20, 2023	04:00	05:00	288.8	0.8	244
413248	Dunes	May 20, 2023	05:00	06:00	302.9	1.2	248
413248	Dunes	May 20, 2023	06:00	07:00	273.6	0.6	268
413248	Dunes	May 20, 2023	07:00	08:00	251.1	0.8	269
413248	Dunes	May 20, 2023	08:00	09:00	256.4	2.2	284
413248	Dunes	May 20, 2023	09:00	10:00	273.2	0.6	198
413248	Dunes	May 20, 2023	10:00	11:00	313.2	2.2	173
413248	Dunes	May 20, 2023	11:00	12:00	319.1	1.5	119
413248	Dunes	May 20, 2023	12:00	13:00	281.7	4.0	187
413248	Dunes	May 20, 2023	13:00	14:00	283.1	5.4	171
413248	Dunes	May 20, 2023	14:00	15:00	292.4	4.8	130
413248	Dunes	May 20, 2023	15:00	16:00	321.1	3.5	113
413248	Dunes	May 20, 2023	16:00	17:00	329.4	5.3	40
413248	Dunes	May 20, 2023	17:00	18:00	316.4	4.9	96

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413248	Dunes	May 20, 2023	18:00	19:00	326.2	5.7	98
413248	Dunes	May 20, 2023	19:00	20:00	201.6	4.6	104
413248	Dunes	May 20, 2023	20:00	21:00	219.4	2.3	303
413248	Dunes	May 20, 2023	23:00	00:00	95.0	4.4	149
413248	Dunes	May 21, 2023	00:00	01:00	162.6	3.9	162
413248	Dunes	May 21, 2023	01:00	02:00	222.4	0.1	283
413248	Dunes	May 21, 2023	02:00	03:00	175.4	2.2	278
413248	Dunes	May 21, 2023	03:00	04:00	141.8	0.9	317
413248	Dunes	May 21, 2023	04:00	05:00	107.3	0.7	317
413248	Dunes	May 21, 2023	05:00	06:00	92.4	0.9	352
413248	Dunes	May 21, 2023	12:00	13:00	87.0	3.1	146
413248	Dunes	May 21, 2023	13:00	14:00	209.4	2.7	109
413248	Dunes	May 21, 2023	14:00	15:00	307.8	3.8	136
413248	Dunes	May 21, 2023	15:00	16:00	341.9	3.7	197
413248	Dunes	May 21, 2023	16:00	17:00	123.3	5.6	260
412614	Henry Pirker	May 5, 2023	09:00	10:00	83.5	9.8	105
412614	Henry Pirker	May 5, 2023	10:00	11:00	212.9	12.7	101
412614	Henry Pirker	May 5, 2023	11:00	12:00	259.1	14.9	112
412614	Henry Pirker	May 5, 2023	12:00	13:00	92.3	21.7	115
412614	Henry Pirker	May 5, 2023	13:00	14:00	128.8	24.7	128
412614	Henry Pirker	May 5, 2023	14:00	15:00	116.4	22.5	123
412614	Henry Pirker	May 5, 2023	15:00	16:00	197.0	24.9	120
412614	Henry Pirker	May 5, 2023	16:00	17:00	194.8	23.2	118
412614	Henry Pirker	May 5, 2023	17:00	18:00	96.3	20.4	116
412614	Henry Pirker	May 5, 2023	20:00	21:00	85.2	12.9	104
412614	Henry Pirker	May 6, 2023	01:00	02:00	85.8	14.2	104
412614	Henry Pirker	May 6, 2023	02:00	03:00	123.3	13.9	108
412614	Henry Pirker	May 6, 2023	03:00	04:00	189.6	12.5	98
412614	Henry Pirker	May 6, 2023	04:00	05:00	200.8	9.8	88
412614	Henry Pirker	May 6, 2023	05:00	06:00	195.6	10.2	85
412614	Henry Pirker	May 6, 2023	06:00	07:00	189.7	11.7	89
412614	Henry Pirker	May 6, 2023	07:00	08:00	171.8	12.8	83
412614	Henry Pirker	May 6, 2023	08:00	09:00	115.7	13.3	95
412614	Henry Pirker	May 6, 2023	09:00	10:00	139.2	13.5	94
412614	Henry Pirker	May 6, 2023	17:00	18:00	192.4	20.0	94
412614	Henry Pirker	May 6, 2023	18:00	19:00	152.5	19.9	108
412614	Henry Pirker	May 6, 2023	19:00	20:00	120.8	16.6	102
412614	Henry Pirker	May 6, 2023	20:00	21:00	100.2	15.8	105
412614	Henry Pirker	May 6, 2023	21:00	22:00	128.6	14.8	105
412614	Henry Pirker	May 6, 2023	22:00	23:00	92.7	9.9	86
412614	Henry Pirker	May 7, 2023	08:00	09:00	109.4	10.3	112
412830	Henry Pirker	May 8, 2023	08:00	09:00	80.4	3.9	169
412830	Henry Pirker	May 8, 2023	20:00	21:00	83.0	2.0	344
412830	Henry Pirker	May 14, 2023	15:00	16:00	124.1	6.6	109
412830	Henry Pirker	May 14, 2023	16:00	17:00	93.2	6.4	93
412830	Henry Pirker	May 14, 2023	17:00	18:00	80.7	7.0	95
412830	Henry Pirker	May 14, 2023	20:00	21:00	81.7	5.4	90
412830	Henry Pirker	May 14, 2023	21:00	22:00	163.7	5.7	98
412830	Henry Pirker	May 14, 2023	22:00	23:00	297.0	5.8	79
412830	Henry Pirker	May 14, 2023	23:00	00:00	315.1	6.1	85
413249	Henry Pirker	May 15, 2023	00:00	01:00	263.8	6.5	82
413249	Henry Pirker	May 15, 2023	01:00	02:00	251.0	4.6	84
413249	Henry Pirker	May 15, 2023	02:00	03:00	292.1	3.5	68
413249	Henry Pirker	May 15, 2023	03:00	04:00	290.9	2.9	87

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413249	Henry Pirker	May 15, 2023	04:00	05:00	340.1	3.6	78
413249	Henry Pirker	May 15, 2023	05:00	06:00	338.1	0.7	245
413249	Henry Pirker	May 15, 2023	06:00	07:00	327.7	0.5	96
413249	Henry Pirker	May 15, 2023	07:00	08:00	396.6	2.9	101
413249	Henry Pirker	May 15, 2023	08:00	09:00	359.0	3.2	121
413249	Henry Pirker	May 15, 2023	09:00	10:00	259.4	2.7	149
413249	Henry Pirker	May 15, 2023	10:00	11:00	233.2	3.0	165
413249	Henry Pirker	May 15, 2023	11:00	12:00	198.2	3.4	185
413249	Henry Pirker	May 15, 2023	12:00	13:00	139.0	2.6	185
413249	Henry Pirker	May 15, 2023	13:00	14:00	110.8	2.7	219
413249	Henry Pirker	May 15, 2023	14:00	15:00	96.1	3.0	167
413249	Henry Pirker	May 15, 2023	15:00	16:00	101.7	2.1	157
413249	Henry Pirker	May 15, 2023	16:00	17:00	107.8	2.3	183
413249	Henry Pirker	May 15, 2023	17:00	18:00	104.9	2.8	13
413249	Henry Pirker	May 15, 2023	18:00	19:00	101.0	3.4	50
413249	Henry Pirker	May 15, 2023	19:00	20:00	108.6	5.6	123
413249	Henry Pirker	May 15, 2023	20:00	21:00	119.0	4.6	141
413249	Henry Pirker	May 15, 2023	21:00	22:00	111.9	2.9	119
413249	Henry Pirker	May 15, 2023	22:00	23:00	150.6	7.4	16
413249	Henry Pirker	May 15, 2023	23:00	00:00	395.1	10.9	25
413249	Henry Pirker	May 16, 2023	00:00	01:00	473.3	7.8	360
413249	Henry Pirker	May 16, 2023	01:00	02:00	550.9	7.5	316
413249	Henry Pirker	May 16, 2023	02:00	03:00	479.5	4.7	325
413249	Henry Pirker	May 16, 2023	03:00	04:00	326.2	3.7	353
413249	Henry Pirker	May 16, 2023	04:00	05:00	303.3	3.1	328
413249	Henry Pirker	May 16, 2023	05:00	06:00	267.2	2.3	320
413249	Henry Pirker	May 16, 2023	06:00	07:00	236.8	1.5	311
413249	Henry Pirker	May 16, 2023	07:00	08:00	194.0	2.5	329
413249	Henry Pirker	May 16, 2023	08:00	09:00	112.7	4.0	323
413249	Henry Pirker	May 16, 2023	09:00	10:00	103.1	3.5	357
413249	Henry Pirker	May 16, 2023	10:00	11:00	137.7	3.9	307
413249	Henry Pirker	May 16, 2023	11:00	12:00	268.1	7.0	302
413249	Henry Pirker	May 16, 2023	12:00	13:00	321.0	5.3	270
413249	Henry Pirker	May 16, 2023	13:00	14:00	171.1	2.5	254
413249	Henry Pirker	May 16, 2023	14:00	15:00	134.8	1.3	15
413249	Henry Pirker	May 16, 2023	15:00	16:00	166.2	6.9	24
413249	Henry Pirker	May 16, 2023	16:00	17:00	201.6	5.4	60
413249	Henry Pirker	May 16, 2023	17:00	18:00	227.4	4.4	99
413249	Henry Pirker	May 16, 2023	18:00	19:00	240.0	5.7	145
413249	Henry Pirker	May 16, 2023	19:00	20:00	239.4	7.3	172
413249	Henry Pirker	May 16, 2023	20:00	21:00	233.6	4.6	148
413249	Henry Pirker	May 16, 2023	21:00	22:00	239.3	3.8	153
413249	Henry Pirker	May 16, 2023	22:00	23:00	257.2	1.0	72
413249	Henry Pirker	May 16, 2023	23:00	00:00	273.5	1.5	64
413249	Henry Pirker	May 17, 2023	00:00	01:00	285.0	0.5	124
413249	Henry Pirker	May 17, 2023	01:00	02:00	284.4	0.2	261
413249	Henry Pirker	May 17, 2023	02:00	03:00	267.8	0.5	10
413249	Henry Pirker	May 17, 2023	03:00	04:00	194.1	1.4	91
413249	Henry Pirker	May 17, 2023	04:00	05:00	134.8	0.1	69
413249	Henry Pirker	May 17, 2023	05:00	06:00	150.3	1.1	58
413249	Henry Pirker	May 17, 2023	06:00	07:00	137.3	0.5	106
413249	Henry Pirker	May 17, 2023	07:00	08:00	95.3	3.0	149
413249	Henry Pirker	May 17, 2023	09:00	10:00	158.4	1.5	160
413249	Henry Pirker	May 17, 2023	10:00	11:00	236.1	0.5	12

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413249	Henry Pirker	May 17, 2023	11:00	12:00	176.3	4.5	87
413249	Henry Pirker	May 17, 2023	12:00	13:00	163.0	6.9	89
413249	Henry Pirker	May 17, 2023	13:00	14:00	136.4	7.2	94
413249	Henry Pirker	May 17, 2023	14:00	15:00	141.7	5.2	98
413249	Henry Pirker	May 17, 2023	15:00	16:00	126.3	4.1	60
413249	Henry Pirker	May 17, 2023	20:00	21:00	109.7	7.2	76
413249	Henry Pirker	May 17, 2023	21:00	22:00	112.6	5.6	79
413249	Henry Pirker	May 17, 2023	22:00	23:00	100.5	4.6	79
413249	Henry Pirker	May 17, 2023	23:00	00:00	148.9	4.5	87
413249	Henry Pirker	May 18, 2023	00:00	01:00	227.2	3.5	80
413249	Henry Pirker	May 18, 2023	01:00	02:00	286.2	3.4	93
413249	Henry Pirker	May 18, 2023	02:00	03:00	302.8	2.2	38
413249	Henry Pirker	May 18, 2023	03:00	04:00	325.5	2.8	66
413249	Henry Pirker	May 18, 2023	04:00	05:00	375.6	3.6	70
413249	Henry Pirker	May 18, 2023	05:00	06:00	358.6	5.7	72
413249	Henry Pirker	May 18, 2023	06:00	07:00	520.6	4.7	69
413249	Henry Pirker	May 18, 2023	07:00	08:00	707.9	6.2	89
413249	Henry Pirker	May 18, 2023	08:00	09:00	760.9	6.3	97
413249	Henry Pirker	May 18, 2023	09:00	10:00	671.1	6.0	107
413249	Henry Pirker	May 18, 2023	10:00	11:00	689.4	5.3	101
413249	Henry Pirker	May 18, 2023	11:00	12:00	689.2	5.6	95
413249	Henry Pirker	May 18, 2023	12:00	13:00	548.4	6.8	89
413249	Henry Pirker	May 18, 2023	13:00	14:00	455.7	8.7	94
413249	Henry Pirker	May 18, 2023	14:00	15:00	433.7	11.3	105
413249	Henry Pirker	May 18, 2023	15:00	16:00	242.5	11.8	91
413249	Henry Pirker	May 18, 2023	16:00	17:00	229.3	9.1	93
413249	Henry Pirker	May 18, 2023	17:00	18:00	297.3	10.6	84
413249	Henry Pirker	May 18, 2023	18:00	19:00	383.7	10.6	76
413249	Henry Pirker	May 18, 2023	19:00	20:00	501.4	8.7	79
413249	Henry Pirker	May 18, 2023	20:00	21:00	562.0	6.4	82
413249	Henry Pirker	May 18, 2023	21:00	22:00	544.7	3.5	61
413249	Henry Pirker	May 18, 2023	22:00	23:00	495.5	3.4	54
413249	Henry Pirker	May 18, 2023	23:00	00:00	413.7	2.4	49
413249	Henry Pirker	May 19, 2023	00:00	01:00	418.9	1.7	328
413249	Henry Pirker	May 19, 2023	01:00	02:00	478.3	1.2	278
413249	Henry Pirker	May 19, 2023	02:00	03:00	486.3	1.9	327
413249	Henry Pirker	May 19, 2023	03:00	04:00	470.6	2.4	314
413249	Henry Pirker	May 19, 2023	04:00	05:00	453.4	2.3	175
413249	Henry Pirker	May 19, 2023	05:00	06:00	457.3	2.4	217
413249	Henry Pirker	May 19, 2023	06:00	07:00	503.0	0.5	175
413249	Henry Pirker	May 19, 2023	07:00	08:00	448.2	0.7	89
413249	Henry Pirker	May 19, 2023	08:00	09:00	284.6	4.6	241
413249	Henry Pirker	May 19, 2023	09:00	10:00	192.8	1.7	202
413249	Henry Pirker	May 19, 2023	10:00	11:00	127.6	6.8	242
413249	Henry Pirker	May 19, 2023	16:00	17:00	83.9	21.9	302
413249	Henry Pirker	May 19, 2023	17:00	18:00	102.3	21.6	299
413249	Henry Pirker	May 19, 2023	18:00	19:00	326.3	17.8	301
413249	Henry Pirker	May 19, 2023	19:00	20:00	1140.3	15.7	316
413249	Henry Pirker	May 19, 2023	20:00	21:00	882.2	13.8	314
413249	Henry Pirker	May 19, 2023	21:00	22:00	702.7	11.8	310
413249	Henry Pirker	May 19, 2023	22:00	23:00	592.2	5.8	279
413249	Henry Pirker	May 19, 2023	23:00	00:00	495.2	5.8	278
413249	Henry Pirker	May 20, 2023	00:00	01:00	457.0	3.3	291
413249	Henry Pirker	May 20, 2023	01:00	02:00	411.2	3.4	296

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413249	Henry Pirker	May 20, 2023	02:00	03:00	380.5	3.3	316
413249	Henry Pirker	May 20, 2023	03:00	04:00	355.7	2.8	321
413249	Henry Pirker	May 20, 2023	04:00	05:00	349.9	2.8	290
413249	Henry Pirker	May 20, 2023	05:00	06:00	319.6	2.1	270
413249	Henry Pirker	May 20, 2023	06:00	07:00	335.3	1.8	222
413249	Henry Pirker	May 20, 2023	07:00	08:00	324.5	1.5	291
413249	Henry Pirker	May 20, 2023	08:00	09:00	311.5	1.9	284
413249	Henry Pirker	May 20, 2023	09:00	10:00	286.4	0.5	317
413249	Henry Pirker	May 20, 2023	10:00	11:00	289.7	1.3	184
413249	Henry Pirker	May 20, 2023	11:00	12:00	307.1	2.0	123
413249	Henry Pirker	May 20, 2023	12:00	13:00	321.8	2.4	102
413249	Henry Pirker	May 20, 2023	13:00	14:00	363.3	4.3	114
413249	Henry Pirker	May 20, 2023	14:00	15:00	338.4	4.3	104
413249	Henry Pirker	May 20, 2023	15:00	16:00	366.8	5.8	79
413249	Henry Pirker	May 20, 2023	16:00	17:00	361.0	6.2	86
413249	Henry Pirker	May 20, 2023	17:00	18:00	305.5	7.6	99
413249	Henry Pirker	May 20, 2023	18:00	19:00	324.6	9.0	98
413249	Henry Pirker	May 20, 2023	19:00	20:00	274.7	8.0	99
413249	Henry Pirker	May 20, 2023	20:00	21:00	371.7	1.9	239
413249	Henry Pirker	May 20, 2023	21:00	22:00	84.9	8.8	316
413249	Henry Pirker	May 21, 2023	00:00	01:00	194.8	4.0	135
413249	Henry Pirker	May 21, 2023	01:00	02:00	219.0	1.9	338
413249	Henry Pirker	May 21, 2023	02:00	03:00	151.1	3.2	289
413249	Henry Pirker	May 21, 2023	03:00	04:00	96.8	3.2	293
413249	Henry Pirker	May 21, 2023	10:00	11:00	115.9	2.4	175
413249	Henry Pirker	May 21, 2023	11:00	12:00	180.8	3.1	156
413249	Henry Pirker	May 21, 2023	12:00	13:00	261.6	3.9	147
413249	Henry Pirker	May 21, 2023	13:00	14:00	392.0	6.1	122
413249	Henry Pirker	May 21, 2023	14:00	15:00	447.1	6.4	98
413249	Henry Pirker	May 21, 2023	15:00	16:00	467.9	4.8	126
413249	Henry Pirker	May 21, 2023	16:00	17:00	200.9	10.5	237
413605	Henry Pirker	May 22, 2023	10:00	11:00	86.8	2.1	287
413605	Henry Pirker	May 22, 2023	11:00	12:00	100.8	1.7	331
413605	Henry Pirker	May 22, 2023	12:00	13:00	146.8	4.9	65
413605	Henry Pirker	May 22, 2023	13:00	14:00	179.8	5.2	52
413605	Henry Pirker	May 22, 2023	14:00	15:00	173.5	5.5	44
413605	Henry Pirker	May 22, 2023	15:00	16:00	180.7	5.8	40
413605	Henry Pirker	May 22, 2023	16:00	17:00	194.0	6.0	41
413605	Henry Pirker	May 22, 2023	17:00	18:00	164.3	5.9	41
413605	Henry Pirker	May 22, 2023	18:00	19:00	128.7	5.6	33
412455	Smoky Heights	May 3, 2023	20:00	21:00	107.2	17.7	268
412617	Smoky Heights	May 5, 2023	08:00	09:00	84.1	4.9	39
412617	Smoky Heights	May 5, 2023	09:00	10:00	313.1	12.0	107
412617	Smoky Heights	May 6, 2023	14:00	15:00	144.8	35.3	113
412617	Smoky Heights	May 7, 2023	06:00	07:00	86.1	6.4	15
412617	Smoky Heights	May 7, 2023	07:00	08:00	135.9	8.3	29
412617	Smoky Heights	May 7, 2023	08:00	09:00	91.9	9.3	51
412833	Smoky Heights	May 14, 2023	16:00	17:00	150.1	7.7	149
412833	Smoky Heights	May 14, 2023	17:00	18:00	155.3	8.1	110
412833	Smoky Heights	May 14, 2023	18:00	19:00	121.9	8.8	85
412833	Smoky Heights	May 14, 2023	19:00	20:00	151.6	7.6	69
412833	Smoky Heights	May 14, 2023	20:00	21:00	157.4	6.7	78
412833	Smoky Heights	May 14, 2023	21:00	22:00	143.6	7.5	99
412833	Smoky Heights	May 14, 2023	22:00	23:00	142.7	2.3	246

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
412833	Smoky Heights	May 14, 2023	23:00	00:00	140.0	1.6	307
413251	Smoky Heights	May 15, 2023	00:00	01:00	146.1	1.2	45
413251	Smoky Heights	May 15, 2023	01:00	02:00	221.3	2.6	125
413251	Smoky Heights	May 15, 2023	02:00	03:00	294.4	2.8	241
413251	Smoky Heights	May 15, 2023	03:00	04:00	345.8	3.6	240
413251	Smoky Heights	May 15, 2023	04:00	05:00	377.9	5.7	258
413251	Smoky Heights	May 15, 2023	05:00	06:00	403.6	5.4	257
413251	Smoky Heights	May 15, 2023	06:00	07:00	437.3	4.5	247
413251	Smoky Heights	May 15, 2023	07:00	08:00	485.2	7.4	234
413251	Smoky Heights	May 15, 2023	08:00	09:00	721.0	5.9	203
413251	Smoky Heights	May 15, 2023	09:00	10:00	789.7	7.6	198
413251	Smoky Heights	May 15, 2023	10:00	11:00	555.5	8.8	196
413251	Smoky Heights	May 15, 2023	11:00	12:00	291.9	8.5	182
413251	Smoky Heights	May 15, 2023	12:00	13:00	197.2	8.5	184
413251	Smoky Heights	May 15, 2023	22:00	23:00	239.0	18.1	13
413251	Smoky Heights	May 15, 2023	23:00	00:00	211.5	17.0	8
413251	Smoky Heights	May 16, 2023	00:00	01:00	294.0	17.9	5
413251	Smoky Heights	May 16, 2023	01:00	02:00	218.5	13.6	3
413251	Smoky Heights	May 16, 2023	02:00	03:00	173.7	11.6	355
413251	Smoky Heights	May 16, 2023	10:00	11:00	129.3	8.1	337
413251	Smoky Heights	May 16, 2023	11:00	12:00	188.3	7.7	327
413251	Smoky Heights	May 16, 2023	12:00	13:00	170.2	8.6	4
413251	Smoky Heights	May 16, 2023	13:00	14:00	216.0	7.9	340
413251	Smoky Heights	May 17, 2023	09:00	10:00	144.4	1.4	187
413251	Smoky Heights	May 17, 2023	10:00	11:00	166.4	2.6	81
413251	Smoky Heights	May 17, 2023	17:00	18:00	124.8	7.3	71
413251	Smoky Heights	May 17, 2023	18:00	19:00	117.4	7.9	79
413251	Smoky Heights	May 17, 2023	21:00	22:00	83.9	1.3	221
413251	Smoky Heights	May 17, 2023	22:00	23:00	92.7	0.8	138
413251	Smoky Heights	May 17, 2023	23:00	00:00	135.9	1.8	340
413251	Smoky Heights	May 18, 2023	00:00	01:00	158.8	4.7	6
413251	Smoky Heights	May 18, 2023	01:00	02:00	186.3	3.3	355
413251	Smoky Heights	May 18, 2023	02:00	03:00	150.8	2.2	221
413251	Smoky Heights	May 18, 2023	03:00	04:00	138.9	2.9	7
413251	Smoky Heights	May 18, 2023	04:00	05:00	147.1	4.7	27
413251	Smoky Heights	May 18, 2023	05:00	06:00	165.4	4.2	360
413251	Smoky Heights	May 18, 2023	06:00	07:00	279.9	1.2	120
413251	Smoky Heights	May 18, 2023	07:00	08:00	411.1	2.2	198
413251	Smoky Heights	May 18, 2023	08:00	09:00	413.4	2.8	10
413251	Smoky Heights	May 18, 2023	09:00	10:00	398.2	2.6	39
413251	Smoky Heights	May 18, 2023	10:00	11:00	321.2	3.2	85
413251	Smoky Heights	May 18, 2023	11:00	12:00	293.6	5.1	48
413251	Smoky Heights	May 18, 2023	12:00	13:00	210.6	5.7	86
413251	Smoky Heights	May 18, 2023	13:00	14:00	146.5	11.3	111
413251	Smoky Heights	May 18, 2023	14:00	15:00	132.8	19.3	124
413251	Smoky Heights	May 18, 2023	15:00	16:00	114.8	16.3	115
413251	Smoky Heights	May 18, 2023	16:00	17:00	145.8	17.9	125
413251	Smoky Heights	May 18, 2023	17:00	18:00	181.6	18.0	120
413251	Smoky Heights	May 18, 2023	18:00	19:00	281.4	12.4	108
413251	Smoky Heights	May 18, 2023	19:00	20:00	375.6	9.5	104
413251	Smoky Heights	May 18, 2023	20:00	21:00	457.2	7.4	86
413251	Smoky Heights	May 18, 2023	21:00	22:00	459.2	5.5	73
413251	Smoky Heights	May 18, 2023	22:00	23:00	320.3	5.3	23
413251	Smoky Heights	May 18, 2023	23:00	00:00	291.6	2.2	68

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413251	Smoky Heights	May 19, 2023	00:00	01:00	345.3	0.4	268
413251	Smoky Heights	May 19, 2023	01:00	02:00	353.8	5.0	231
413251	Smoky Heights	May 19, 2023	02:00	03:00	344.3	5.8	226
413251	Smoky Heights	May 19, 2023	03:00	04:00	348.1	7.2	239
413251	Smoky Heights	May 19, 2023	04:00	05:00	352.1	7.7	203
413251	Smoky Heights	May 19, 2023	05:00	06:00	360.3	7.1	234
413251	Smoky Heights	May 19, 2023	06:00	07:00	352.9	9.8	234
413251	Smoky Heights	May 19, 2023	07:00	08:00	340.1	10.1	214
413251	Smoky Heights	May 19, 2023	08:00	09:00	329.6	9.0	186
413251	Smoky Heights	May 19, 2023	09:00	10:00	310.2	9.1	182
413251	Smoky Heights	May 19, 2023	10:00	11:00	167.7	17.1	223
413251	Smoky Heights	May 19, 2023	11:00	12:00	89.1	20.8	232
413251	Smoky Heights	May 19, 2023	13:00	14:00	91.0	16.9	250
413251	Smoky Heights	May 19, 2023	17:00	18:00	180.0	19.8	312
413251	Smoky Heights	May 19, 2023	18:00	19:00	494.7	13.9	312
413251	Smoky Heights	May 19, 2023	19:00	20:00	990.0	16.5	311
413251	Smoky Heights	May 19, 2023	20:00	21:00	986.5	12.2	306
413251	Smoky Heights	May 19, 2023	21:00	22:00	845.4	3.6	316
413251	Smoky Heights	May 19, 2023	22:00	23:00	699.3	3.5	0
413251	Smoky Heights	May 19, 2023	23:00	00:00	551.4	13.0	343
413251	Smoky Heights	May 20, 2023	00:00	01:00	412.1	8.9	338
413251	Smoky Heights	May 20, 2023	01:00	02:00	294.9	7.6	334
413251	Smoky Heights	May 20, 2023	02:00	03:00	251.9	2.9	315
413251	Smoky Heights	May 20, 2023	03:00	04:00	273.3	2.8	252
413251	Smoky Heights	May 20, 2023	04:00	05:00	253.0	3.0	236
413251	Smoky Heights	May 20, 2023	05:00	06:00	242.1	2.8	254
413251	Smoky Heights	May 20, 2023	06:00	07:00	237.1	3.3	251
413251	Smoky Heights	May 20, 2023	07:00	08:00	246.3	2.7	265
413251	Smoky Heights	May 20, 2023	08:00	09:00	254.3	1.6	58
413251	Smoky Heights	May 20, 2023	09:00	10:00	292.5	2.9	129
413251	Smoky Heights	May 20, 2023	10:00	11:00	290.1	2.5	177
413251	Smoky Heights	May 20, 2023	11:00	12:00	275.1	5.5	127
413251	Smoky Heights	May 20, 2023	12:00	13:00	266.2	4.6	112
413251	Smoky Heights	May 20, 2023	13:00	14:00	267.1	4.9	77
413251	Smoky Heights	May 20, 2023	14:00	15:00	266.0	2.3	72
413251	Smoky Heights	May 20, 2023	15:00	16:00	271.1	6.1	81
413251	Smoky Heights	May 20, 2023	16:00	17:00	283.4	5.2	56
413251	Smoky Heights	May 20, 2023	17:00	18:00	338.7	8.8	54
413251	Smoky Heights	May 20, 2023	18:00	19:00	342.0	8.8	51
413251	Smoky Heights	May 20, 2023	19:00	20:00	306.0	7.4	32
413251	Smoky Heights	May 20, 2023	20:00	21:00	314.3	6.1	21
413251	Smoky Heights	May 20, 2023	21:00	22:00	334.2	7.6	292
413251	Smoky Heights	May 20, 2023	22:00	23:00	334.9	6.3	41
413251	Smoky Heights	May 20, 2023	23:00	00:00	454.0	4.3	114
413251	Smoky Heights	May 21, 2023	00:00	01:00	445.6	3.7	219
413251	Smoky Heights	May 21, 2023	01:00	02:00	424.5	6.5	245
413251	Smoky Heights	May 21, 2023	02:00	03:00	384.9	1.4	196
413251	Smoky Heights	May 21, 2023	03:00	04:00	332.0	4.0	290
413251	Smoky Heights	May 21, 2023	04:00	05:00	295.6	10.1	258
413251	Smoky Heights	May 21, 2023	05:00	06:00	259.4	13.3	253
413251	Smoky Heights	May 21, 2023	06:00	07:00	193.7	9.9	250
413251	Smoky Heights	May 21, 2023	07:00	08:00	184.2	4.7	157
413251	Smoky Heights	May 21, 2023	08:00	09:00	197.9	3.3	177
413251	Smoky Heights	May 21, 2023	09:00	10:00	236.6	6.2	178

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413251	Smoky Heights	May 21, 2023	10:00	11:00	283.4	7.2	177
413251	Smoky Heights	May 21, 2023	11:00	12:00	447.5	6.9	169
413251	Smoky Heights	May 21, 2023	12:00	13:00	491.5	6.0	143
413251	Smoky Heights	May 21, 2023	13:00	14:00	505.9	8.4	134
413251	Smoky Heights	May 21, 2023	14:00	15:00	477.6	7.5	112
413251	Smoky Heights	May 21, 2023	15:00	16:00	459.7	5.1	79
413251	Smoky Heights	May 21, 2023	17:00	18:00	177.6	19.3	250
413607	Smoky Heights	May 22, 2023	09:00	10:00	85.7	8.0	12
413607	Smoky Heights	May 22, 2023	10:00	11:00	85.7	12.7	26
413607	Smoky Heights	May 22, 2023	11:00	12:00	105.0	12.4	28
413607	Smoky Heights	May 22, 2023	12:00	13:00	155.5	11.7	28
413607	Smoky Heights	May 22, 2023	13:00	14:00	185.2	13.5	28
413607	Smoky Heights	May 22, 2023	14:00	15:00	183.7	11.9	30
413607	Smoky Heights	May 22, 2023	15:00	16:00	169.5	12.0	31
413607	Smoky Heights	May 22, 2023	16:00	17:00	151.6	10.1	23
413607	Smoky Heights	May 22, 2023	17:00	18:00	122.8	12.8	30
412616	Poplar	May 5, 2023	11:00	12:00	175.9	34.1	121
412616	Poplar	May 5, 2023	14:00	15:00	82.0	43.0	133
412616	Poplar	May 5, 2023	16:00	17:00	123.1	43.4	130
412616	Poplar	May 5, 2023	17:00	18:00	126.3	45.1	126
412616	Poplar	May 6, 2023	07:00	08:00	85.0	27.5	97
412616	Poplar	May 6, 2023	08:00	09:00	103.3	30.8	99
412616	Poplar	May 6, 2023	17:00	18:00	146.3	44.7	106
412616	Poplar	May 6, 2023	18:00	19:00	102.6	42.2	110
412616	Poplar	May 6, 2023	19:00	20:00	90.3	37.3	111
412616	Poplar	May 7, 2023	09:00	10:00	87.8	21.3	135
413250	Poplar	May 15, 2023	00:00	01:00	109.5	1.5	100
413250	Poplar	May 15, 2023	01:00	02:00	120.4	2.1	266
413250	Poplar	May 15, 2023	02:00	03:00	136.2	2.3	324
413250	Poplar	May 15, 2023	03:00	04:00	134.1	0.6	272
413250	Poplar	May 15, 2023	04:00	05:00	137.4	2.1	278
413250	Poplar	May 15, 2023	05:00	06:00	162.9	3.4	290
413250	Poplar	May 15, 2023	06:00	07:00	156.4	2.3	289
413250	Poplar	May 15, 2023	07:00	08:00	160.8	2.3	260
413250	Poplar	May 15, 2023	08:00	09:00	146.3	0.2	129
413250	Poplar	May 15, 2023	09:00	10:00	262.7	6.0	110
413250	Poplar	May 15, 2023	10:00	11:00	228.1	3.9	120
413250	Poplar	May 15, 2023	11:00	12:00	205.6	1.5	276
413250	Poplar	May 15, 2023	12:00	13:00	168.1	2.1	342
413250	Poplar	May 15, 2023	13:00	14:00	172.0	1.7	284
413250	Poplar	May 15, 2023	14:00	15:00	107.2	1.0	154
413250	Poplar	May 15, 2023	22:00	23:00	150.3	34.4	20
413250	Poplar	May 15, 2023	23:00	00:00	226.6	23.4	21
413250	Poplar	May 16, 2023	00:00	01:00	356.7	19.6	9
413250	Poplar	May 16, 2023	01:00	02:00	329.9	12.2	350
413250	Poplar	May 16, 2023	02:00	03:00	202.9	10.1	326
413250	Poplar	May 16, 2023	03:00	04:00	110.1	9.7	359
413250	Poplar	May 16, 2023	04:00	05:00	96.5	6.8	339
413250	Poplar	May 16, 2023	09:00	10:00	92.0	7.4	349
413250	Poplar	May 16, 2023	10:00	11:00	93.1	6.3	303
413250	Poplar	May 16, 2023	15:00	16:00	93.6	4.8	4
413250	Poplar	May 16, 2023	16:00	17:00	91.8	8.6	62
413250	Poplar	May 16, 2023	22:00	23:00	86.4	1.2	137
413250	Poplar	May 16, 2023	23:00	00:00	89.5	2.6	114

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413250	Poplar	May 17, 2023	00:00	01:00	105.1	4.1	320
413250	Poplar	May 17, 2023	01:00	02:00	83.9	1.4	309
413250	Poplar	May 17, 2023	02:00	03:00	85.8	3.4	264
413250	Poplar	May 17, 2023	03:00	04:00	92.6	0.5	326
413250	Poplar	May 17, 2023	06:00	07:00	89.4	2.7	274
413250	Poplar	May 17, 2023	07:00	08:00	112.1	1.9	317
413250	Poplar	May 17, 2023	13:00	14:00	80.2	14.3	132
413250	Poplar	May 17, 2023	23:00	00:00	80.5	3.9	97
413250	Poplar	May 18, 2023	02:00	03:00	111.9	5.8	75
413250	Poplar	May 18, 2023	03:00	04:00	87.2	3.9	267
413250	Poplar	May 18, 2023	04:00	05:00	99.8	0.4	233
413250	Poplar	May 18, 2023	05:00	06:00	101.0	3.2	258
413250	Poplar	May 18, 2023	06:00	07:00	106.9	3.0	251
413250	Poplar	May 18, 2023	07:00	08:00	184.4	1.1	304
413250	Poplar	May 18, 2023	08:00	09:00	197.3	2.9	121
413250	Poplar	May 18, 2023	09:00	10:00	426.4	13.9	108
413250	Poplar	May 18, 2023	10:00	11:00	392.6	14.4	100
413250	Poplar	May 18, 2023	11:00	12:00	314.6	12.9	108
413250	Poplar	May 18, 2023	12:00	13:00	299.1	14.5	114
413250	Poplar	May 18, 2023	13:00	14:00	211.5	17.9	125
413250	Poplar	May 18, 2023	14:00	15:00	179.6	22.6	126
413250	Poplar	May 18, 2023	15:00	16:00	168.9	23.3	130
413250	Poplar	May 18, 2023	16:00	17:00	114.9	20.4	125
413250	Poplar	May 18, 2023	17:00	18:00	90.0	19.5	119
413250	Poplar	May 18, 2023	18:00	19:00	152.0	20.2	114
413250	Poplar	May 18, 2023	19:00	20:00	239.0	21.4	109
413250	Poplar	May 18, 2023	20:00	21:00	268.3	16.1	104
413250	Poplar	May 18, 2023	21:00	22:00	309.3	15.1	99
413250	Poplar	May 18, 2023	22:00	23:00	319.8	6.6	99
413250	Poplar	May 18, 2023	23:00	00:00	296.2	2.3	137
413250	Poplar	May 19, 2023	00:00	01:00	320.1	1.5	302
413250	Poplar	May 19, 2023	01:00	02:00	276.9	1.4	296
413250	Poplar	May 19, 2023	02:00	03:00	296.9	4.1	307
413250	Poplar	May 19, 2023	03:00	04:00	266.2	7.9	341
413250	Poplar	May 19, 2023	04:00	05:00	273.5	11.3	342
413250	Poplar	May 19, 2023	05:00	06:00	291.5	2.7	236
413250	Poplar	May 19, 2023	06:00	07:00	276.5	5.6	331
413250	Poplar	May 19, 2023	07:00	08:00	173.2	5.2	318
413250	Poplar	May 19, 2023	08:00	09:00	215.3	2.8	155
413250	Poplar	May 19, 2023	09:00	10:00	89.4	9.9	251
413250	Poplar	May 19, 2023	17:00	18:00	88.4	27.3	306
413250	Poplar	May 19, 2023	18:00	19:00	447.9	22.4	325
413250	Poplar	May 19, 2023	19:00	20:00	448.7	18.1	332
413250	Poplar	May 19, 2023	20:00	21:00	448.4	16.2	317
413250	Poplar	May 19, 2023	21:00	22:00	377.0	14.1	316
413250	Poplar	May 19, 2023	22:00	23:00	272.4	12.7	307
413250	Poplar	May 19, 2023	23:00	00:00	256.1	11.0	289
413250	Poplar	May 20, 2023	00:00	01:00	226.3	11.6	291
413250	Poplar	May 20, 2023	01:00	02:00	204.4	12.4	314
413250	Poplar	May 20, 2023	02:00	03:00	155.7	8.3	309
413250	Poplar	May 20, 2023	03:00	04:00	163.0	8.1	285
413250	Poplar	May 20, 2023	04:00	05:00	146.7	9.0	288
413250	Poplar	May 20, 2023	05:00	06:00	153.2	8.3	293
413250	Poplar	May 20, 2023	06:00	07:00	156.0	8.9	312

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413250	Poplar	May 20, 2023	07:00	08:00	158.6	9.1	298
413250	Poplar	May 20, 2023	08:00	09:00	168.4	8.9	294
413250	Poplar	May 20, 2023	09:00	10:00	155.3	5.8	298
413250	Poplar	May 20, 2023	10:00	11:00	158.6	3.1	300
413250	Poplar	May 20, 2023	11:00	12:00	245.3	1.6	129
413250	Poplar	May 20, 2023	12:00	13:00	238.8	2.2	112
413250	Poplar	May 20, 2023	13:00	14:00	191.9	3.1	86
413250	Poplar	May 20, 2023	14:00	15:00	178.8	9.7	112
413250	Poplar	May 20, 2023	15:00	16:00	157.0	11.5	116
413250	Poplar	May 20, 2023	16:00	17:00	97.3	12.2	108
413250	Poplar	May 20, 2023	17:00	18:00	145.5	16.9	132
413250	Poplar	May 20, 2023	18:00	19:00	108.6	18.5	121
413250	Poplar	May 20, 2023	19:00	20:00	142.8	19.5	123
413250	Poplar	May 20, 2023	20:00	21:00	145.8	16.4	201
413250	Poplar	May 21, 2023	15:00	16:00	292.0	14.8	148
413606	Poplar	May 22, 2023	16:00	17:00	167.3	22.1	64
413606	Poplar	May 22, 2023	17:00	18:00	115.7	16.4	51
413606	Poplar	May 24, 2023	16:00	17:00	174.4	12.3	310
413606	Poplar	May 25, 2023	15:00	16:00	119.6	4.7	69
412615	Milner	May 5, 2023	17:00	18:00	132.5	11.6	79
412615	Milner	May 5, 2023	18:00	19:00	161.1	12.4	84
412615	Milner	May 5, 2023	19:00	20:00	148.4	16.2	74
412615	Milner	May 5, 2023	20:00	21:00	124.9	15.7	69
412615	Milner	May 5, 2023	21:00	22:00	81.5	7.3	44
412615	Milner	May 6, 2023	01:00	02:00	98.7	8.1	34
412615	Milner	May 6, 2023	02:00	03:00	104.3	9.4	43
412615	Milner	May 6, 2023	03:00	04:00	111.8	8.4	54
412615	Milner	May 6, 2023	04:00	05:00	119.2	7.5	65
412615	Milner	May 6, 2023	05:00	06:00	135.4	4.9	49
412615	Milner	May 6, 2023	06:00	07:00	111.0	1.0	276
412615	Milner	May 6, 2023	08:00	09:00	148.0	3.4	63
412615	Milner	May 6, 2023	09:00	10:00	188.2	4.4	69
412615	Milner	May 6, 2023	10:00	11:00	138.7	6.9	54
412615	Milner	May 6, 2023	11:00	12:00	105.2	8.9	92
412615	Milner	May 6, 2023	12:00	13:00	80.9	9.9	89
412615	Milner	May 6, 2023	14:00	15:00	124.5	13.6	76
412615	Milner	May 6, 2023	15:00	16:00	88.4	10.2	74
412615	Milner	May 6, 2023	16:00	17:00	89.4	11.2	76
412615	Milner	May 6, 2023	17:00	18:00	178.6	9.3	87
412615	Milner	May 6, 2023	18:00	19:00	252.2	8.6	81
412615	Milner	May 6, 2023	19:00	20:00	218.7	10.5	71
412615	Milner	May 6, 2023	20:00	21:00	236.0	12.2	63
412615	Milner	May 6, 2023	21:00	22:00	175.3	6.0	37
412615	Milner	May 6, 2023	22:00	23:00	86.4	3.9	41
413068	Milner	May 10, 2023	08:00	09:00	98.4	2.7	246
413068	Milner	May 12, 2023	02:00	03:00	172.9	3.2	281
413068	Milner	May 14, 2023	18:00	19:00	85.5	4.3	71
413510	Milner	May 16, 2023	01:00	02:00	101.0	1.4	56
413510	Milner	May 16, 2023	02:00	03:00	212.3	1.4	70
413510	Milner	May 16, 2023	03:00	04:00	192.3	0.5	42
413510	Milner	May 16, 2023	04:00	05:00	126.2	0.4	41
413510	Milner	May 16, 2023	05:00	06:00	113.3	1.4	47
413510	Milner	May 16, 2023	06:00	07:00	141.8	0.5	29
413510	Milner	May 16, 2023	07:00	08:00	166.9	0.8	49

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413510	Milner	May 16, 2023	08:00	09:00	149.9	3.5	65
413510	Milner	May 16, 2023	09:00	10:00	127.4	1.7	86
413510	Milner	May 16, 2023	10:00	11:00	88.2	2.6	100
413510	Milner	May 17, 2023	02:00	03:00	139.9	0.0	319
413510	Milner	May 17, 2023	03:00	04:00	128.7	0.1	340
413510	Milner	May 17, 2023	04:00	05:00	97.3	0.0	315
413510	Milner	May 17, 2023	05:00	06:00	88.0	0.0	272
413510	Milner	May 17, 2023	06:00	07:00	83.6	0.0	266
413510	Milner	May 17, 2023	07:00	08:00	91.6	0.1	231
413510	Milner	May 17, 2023	10:00	11:00	84.2	1.7	196
413510	Milner	May 17, 2023	11:00	12:00	98.9	1.1	183
413510	Milner	May 17, 2023	18:00	19:00	89.9	7.5	63
413510	Milner	May 17, 2023	19:00	20:00	123.4	6.0	55
413510	Milner	May 17, 2023	20:00	21:00	100.0	2.7	44
413510	Milner	May 17, 2023	21:00	22:00	108.5	0.9	26
413510	Milner	May 17, 2023	22:00	23:00	113.2	0.8	15
413510	Milner	May 17, 2023	23:00	00:00	126.9	0.0	1
413510	Milner	May 18, 2023	00:00	01:00	192.8	2.0	54
413510	Milner	May 18, 2023	01:00	02:00	179.3	0.4	353
413510	Milner	May 18, 2023	02:00	03:00	187.2	0.1	349
413510	Milner	May 18, 2023	03:00	04:00	184.6	0.1	31
413510	Milner	May 18, 2023	04:00	05:00	173.5	0.5	268
413510	Milner	May 18, 2023	05:00	06:00	169.7	1.1	280
413510	Milner	May 18, 2023	06:00	07:00	166.9	2.0	272
413510	Milner	May 18, 2023	07:00	08:00	161.9	0.2	229
413510	Milner	May 18, 2023	08:00	09:00	160.5	0.1	218
413510	Milner	May 18, 2023	09:00	10:00	172.5	1.2	229
413510	Milner	May 18, 2023	10:00	11:00	170.4	3.6	223
413510	Milner	May 18, 2023	11:00	12:00	163.7	1.4	198
413510	Milner	May 18, 2023	12:00	13:00	152.3	1.0	149
413510	Milner	May 18, 2023	13:00	14:00	152.1	2.8	119
413510	Milner	May 18, 2023	14:00	15:00	154.1	3.6	101
413510	Milner	May 18, 2023	15:00	16:00	141.8	3.1	78
413510	Milner	May 18, 2023	16:00	17:00	124.3	4.2	64
413510	Milner	May 18, 2023	17:00	18:00	90.5	1.4	195
413510	Milner	May 21, 2023	14:00	15:00	80.3	3.3	343

24-hr readings above the daily PM_{2.5} AAAQO (29 $\mu\text{g}/\text{m}^3$) as:

Reference Number	Site	Date	Day average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
412612	Beaverlodge	May 5, 2023	76.0	24.2	110
412612	Beaverlodge	May 6, 2023	88.2	29.4	101
412612	Beaverlodge	May 7, 2023	31.8	16.8	103
412828	Beaverlodge	May 9, 2023	30.0	6.1	346
412828	Beaverlodge	May 10, 2023	35.7	7.0	98
412828	Beaverlodge	May 14, 2023	61.5	7.7	84
413246	Beaverlodge	May 15, 2023	128.8	6.0	26
413246	Beaverlodge	May 16, 2023	77.8	9.1	266
413246	Beaverlodge	May 17, 2023	96.1	5.6	93
413246	Beaverlodge	May 18, 2023	253.4	8.4	98
413246	Beaverlodge	May 19, 2023	330.8	11.2	292
413603	Beaverlodge	May 22, 2023	32.7	10.9	10
414002	Beaverlodge	May 30, 2023	31.6	5.7	316

Reference Number	Site	Date	Day average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
412613	Dunes	May 5, 2023	54.9	9.4	124
412613	Dunes	May 6, 2023	58.8	11.3	113
412613	Dunes	May 7, 2023	30.2	5.0	92
412829	Dunes	May 8, 2023	37.8	3.3	293
412829	Dunes	May 9, 2023	39.0	2.5	326
412829	Dunes	May 10, 2023	34.7	3.5	137
412829	Dunes	May 12, 2023	35.2	2.6	118
412829	Dunes	May 14, 2023	60.3	2.9	126
413248	Dunes	May 15, 2023	132.7	2.8	84
413248	Dunes	May 16, 2023	159.8	2.3	291
413248	Dunes	May 17, 2023	116.2	2.5	81
413248	Dunes	May 18, 2023	272.7	3.4	104
413248	Dunes	May 19, 2023	348.9	4.0	292
413248	Dunes	May 20, 2023	271.8	3.0	125
413248	Dunes	May 21, 2023	92.6	2.8	220
412614	Henry Pirker	May 5, 2023	79.8	13.0	111
412614	Henry Pirker	May 6, 2023	107.0	15.1	97
412614	Henry Pirker	May 7, 2023	40.0	8.0	87
412830	Henry Pirker	May 8, 2023	42.2	5.1	278
412830	Henry Pirker	May 9, 2023	61.0	3.5	293
412830	Henry Pirker	May 10, 2023	49.4	5.2	121
412830	Henry Pirker	May 11, 2023	31.3	4.4	210
412830	Henry Pirker	May 13, 2023	31.4	2.7	155
412830	Henry Pirker	May 14, 2023	79.2	4.7	92
413249	Henry Pirker	May 15, 2023	225.3	3.7	88
413249	Henry Pirker	May 16, 2023	248.7	3.9	337
413249	Henry Pirker	May 17, 2023	143.3	3.5	82
413249	Henry Pirker	May 18, 2023	467.3	6.1	85
413249	Henry Pirker	May 19, 2023	377.8	8.9	284
413249	Henry Pirker	May 20, 2023	294.7	4.0	95
413249	Henry Pirker	May 21, 2023	126.5	5.1	243
413605	Henry Pirker	May 22, 2023	76.1	5.2	16
412617	Smoky Heights	May 7, 2023	36.0	9.5	92
412833	Smoky Heights	May 8, 2023	35.2	6.1	245
412833	Smoky Heights	May 9, 2023	45.5	4.2	60
412833	Smoky Heights	May 10, 2023	33.1	7.0	162
412833	Smoky Heights	May 14, 2023	69.7	5.0	95
413251	Smoky Heights	May 15, 2023	267.6	7.4	216
413251	Smoky Heights	May 16, 2023	77.6	6.7	337
413251	Smoky Heights	May 17, 2023	70.3	4.8	46
413251	Smoky Heights	May 18, 2023	265.4	6.9	99
413251	Smoky Heights	May 19, 2023	368.6	11.9	263
413251	Smoky Heights	May 20, 2023	297.2	4.7	47
413251	Smoky Heights	May 21, 2023	241.1	10.2	225
413607	Smoky Heights	May 22, 2023	69.7	11.4	18
412616	Poplar	May 5, 2023	45.0	21.8	122
412616	Poplar	May 6, 2023	52.0	30.9	106
412832	Poplar	May 9, 2023	35.2	7.4	291
412832	Poplar	May 10, 2023	30.7	11.0	74
412832	Poplar	May 14, 2023	34.3	11.2	116
413250	Poplar	May 15, 2023	141.4	5.8	22
413250	Poplar	May 16, 2023	88.2	7.5	3
413250	Poplar	May 17, 2023	68.2	7.9	120
413250	Poplar	May 18, 2023	210.5	11.1	115

Reference Number	Site	Date	Day average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
413250	Poplar	May 19, 2023	204.5	14.6	299
413250	Poplar	May 20, 2023	163.6	9.2	120
412615	Milner	May 5, 2023	41.8	6.8	70
412615	Milner	May 6, 2023	125.4	7.8	68
413068	Milner	May 14, 2023	32.0	3.2	273
413510	Milner	May 16, 2023	85.8	3.5	61
413510	Milner	May 17, 2023	92.8	2.3	67
413510	Milner	May 18, 2023	123.9	3.0	238

1-hr readings above the O₃ AAAQO (76 ppb) was recorded as:

Reference Number	Site	Date	From MST	To MST	Average (ppb)	WS km/hr	WD degrees
413246	Beaverlodge	May 20, 2023	15:00	16:00	78.2	9.8	87
413246	Beaverlodge	May 20, 2023	16:00	17:00	80.7	13.8	94
412614	Henry Pirker	May 5, 2023	15:00	16:00	78.4	24.9	120
413249	Henry Pirker	May 15, 2023	17:00	18:00	83.9	2.8	13
413249	Henry Pirker	May 15, 2023	18:00	19:00	86.8	3.4	50
413249	Henry Pirker	May 15, 2023	19:00	20:00	82.4	5.6	123
413250	Poplar	May 15, 2023	16:00	17:00	80.8	1.4	76
413250	Poplar	May 15, 2023	17:00	18:00	81.7	6.5	38
413250	Poplar	May 15, 2023	18:00	19:00	78.3	5.4	36
413250	Poplar	May 20, 2023	12:00	13:00	79.1	2.2	112
413250	Poplar	May 20, 2023	13:00	14:00	89.0	3.1	86
413250	Poplar	May 20, 2023	14:00	15:00	82.2	9.7	112
413250	Poplar	May 20, 2023	15:00	16:00	82.2	11.5	116

1-hr readings above the H₂S AAAQO (10 ppb) was recorded as:

Reference Number	Site	Date	From MST	To MST	Average (ppb)	WS km/hr	WD degrees
412377	Valleyview	May 2, 2023	04:00	05:00	11.9	1.2	349
412377	Valleyview	May 2, 2023	06:00	07:00	10.5	2.4	263
412377	Valleyview	May 2, 2023	09:00	10:00	15.0	3.7	221
413020	Valleyview	May 13, 2023	10:00	11:00	15.3	3.2	164
413485	Valleyview	May 21, 2023	01:00	02:00	19.0	1.4	154
413485	Valleyview	May 21, 2023	02:00	03:00	93.1	2.9	324
413505	Valleyview	May 22, 2023	04:00	05:00	17.2	0.7	15
413505	Valleyview	May 22, 2023	12:00	13:00	79.9	2.9	345
413505	Valleyview	May 22, 2023	13:00	14:00	99.0	4.8	350
413505	Valleyview	May 22, 2023	14:00	15:00	100.1	2.3	10
413505	Valleyview	May 22, 2023	15:00	16:00	100.1	4.5	2
413505	Valleyview	May 22, 2023	16:00	17:00	22.3	4.7	29

24-hr readings above the daily H₂S AAAQO (3 ppb) as:

Reference Number	Site	Date	Day average (ppb)	WS km/hr	WD degrees
413485	Valleyview	May 21, 2023	5.7	2.8	272
413505	Valleyview	May 22, 2023	18.5	3.9	358

Operational times less than 90 percent:

Poplar CH4/NMHC are not in operation.

Smoky Heights TRS was <90% (89%) due to DAS failure and equipment issues (415500)

Poplar PM2.5 was <90% (81%) due to negative drifting and maintenance (415501)

Milner PM2.5 was <90% (87%) due to DAS failure, negative drifting and maintenance (415502)

All other instruments were in operation >90% during the month.

Air Incidents

Wildfires resulted in elevated particulate and ozone throughout the month.

Deviations from Authorized Monitoring Methods

None were reported.

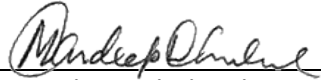
Passive Monitoring

- 53 Stations throughout the PAZA zone
 - Passive sample analyses were performed by Bureau Veritas Laboratories
- The following notes were recorded:
 - At Duvernay site 2 and 3, Plant was in a shut down and wouldn't allow access to this area
- There were 17 duplicates sampled in the month of May.
- Eight SO₂ duplicates located at Spirit River, Pinto Creek, Jean Cote, Sunset House, Duvernay 4, Kakwa 2, Milner Wanyandie, Jayar2 14-8; RPD ranging from 0% to 67% (one fail, Milner Wanyandie, 0.1 and 0.2)
- One O₃ duplicate located at Bay Tree; RPD 11% (no fails)
- Seven NO₂ duplicates at Forth Creek, Hythe, Fitzsimmons, McLennan, Kakwa 3, Milner Powerline, Jayar1 Plant; RPD ranging from 2% to 50% (no fails)
- Four H₂S duplicates, Girouxville 3, Duvernay 4, Kakwa 4, Jayar4 7-8 or 8-8 Pad; RPD 9% to 141% (one fail, Girouxville 3, 0.18 and 1.05)
- There were no exceedances of the AAAQOs for all monitored parameters at any of the passive monitoring stations during this month.

Dustfall Monitoring

- Five Stations collected Total Dustfall and Fixed Dustfall
- There was one duplicate sampled collected for each in the month of May.
 - RPD ranged from 0% to 41%
- Total dustfall ranged from 34.5 to 87.4 mg/100cm²/30day.
- There were no readings above the AAAQG during the month.

I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization, and reporting requirements.

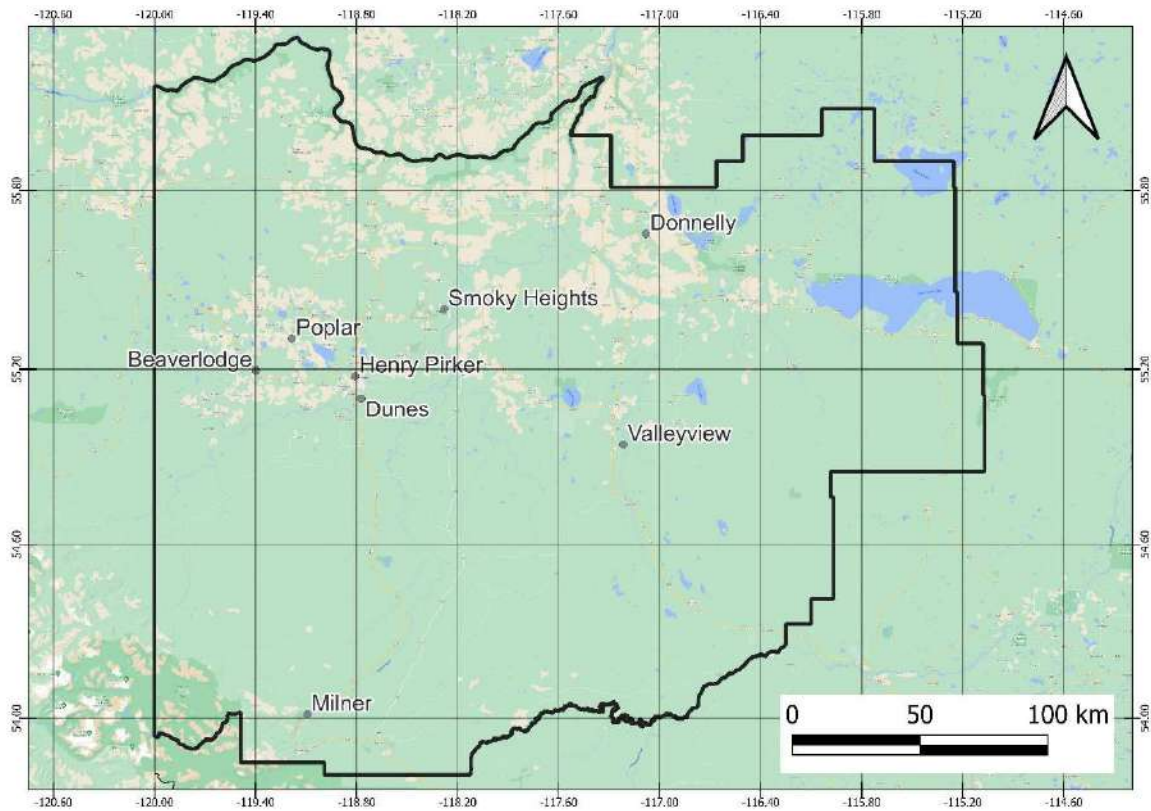


Mandeep Dhaliwal, B.Sc., P.Chem.
Program Manager

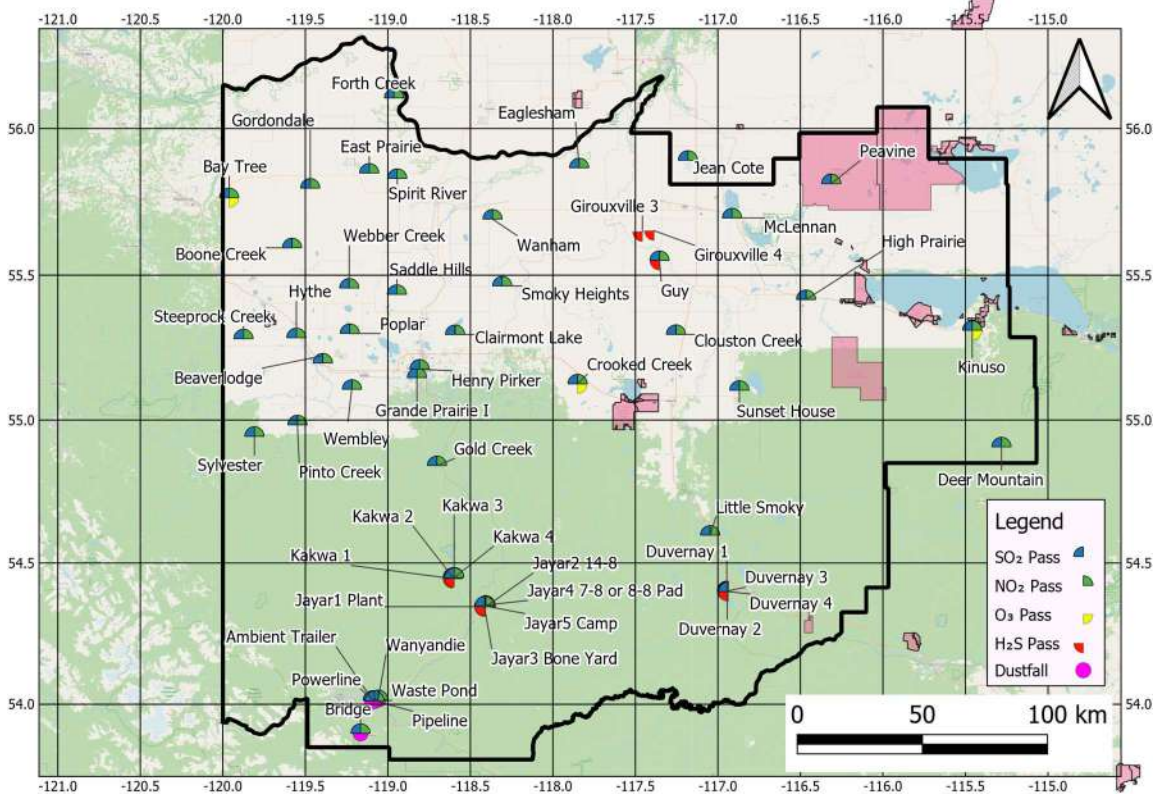
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PAZA Continuous Monitoring Station Locations



PAZA Passive Monitoring Station Locations



1 May Monthly Station Summaries

The following summaries are for the equipment and data results from the continuous ambient monitoring network

1.1 Beaverlodge Air Monitoring Station

PAZA - May 2023 Beaverlodge Station Report

Parameter	May			Operational	Max	1-hour		24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid			Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	
NO (ppb)	0.3	0.0	95.2%	100.0%	8.3	-	May-21 06:00	1.2	-	May-21	-	-	-	-	May 01, 2023
NO ₂ (ppb)	4.1	0.4	95.2%	100.0%	21.2	159	May-15 07:00	10.7	-	May-15	0	-	-	-	May 01, 2023
NO _x (ppb)	4.4	0.5	95.2%	100.0%	27.0	-	May-15 08:00	11.8	-	May-15	-	-	-	-	May 01, 2023
O ₃ (ppb)	36.1	2.0	95.3%	100.0%	80.7	76	May-20 16:00	48.5	-	May-05	2	-	-	-	May 01, 2023
PM _{2.5} (µg/m ³)	51.0	0.6	98.4%	98.8%	993.0	80	May-19 19:00	330.8	29	May-19	127	-	14	-	May 02, 2023
SO ₂ (ppb)	0.7	0.0	95.3%	100.0%	7.8	172	May-15 15:00	2.1	48	May-05	0	-	0	0	May 02, 2023
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	15.4	4.5	99.9%	100.0%	29.5	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
RH (%)	48.7	8.5	99.9%	100.0%	99.4										
WS (km/hr)	10.3	0.2	99.9%	100.0%	39.9										
WD (deg)	46	0.7	99.9%	100.0%	359.7	<div style="border: 1px solid black; padding: 5px;"> Average Wind Direction 46 NE </div>									

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42i	No Operational issues noted
O ₃	Thermo	49iQ	No Operational issues noted; 2hrs above AAAQO due to wildfires
PM _{2.5}	Sharp	5030	data flatlined (8hrs); maintenance (1hr); 127hrs above AAAQG + 13 days above AAAQO due to wildfires
SO ₂	Thermo	43i-TLE	No Operational issues noted
Met Equip	MetOne	50.5	No Operational issues noted

1.2 Dunes Air Monitoring Station

PAZA - May 2023 Dunes Station Report

Parameter	May			Operational	Max	1-hour		24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid			Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	
PM _{2.5} (µg/m ³)	61.9	0.0	98.5%	98.8%	997.0	80	May-19 20:00	348.9	29	May-19	150	-	15	-	May-31-2023
SO ₂ (ppb)	0.6	0.0	95.4%	100.0%	9.2	172	May-12 11:00	1.4	48	May-27	0	-	0	0	May-31-2023
TRS (ppb)	0.3	0.0	95.3%	100.0%	2.6	-	May-18 10:00	0.8	-	May-18	-	-	-	-	May-31-2023
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	15.0	1.8	100.0%	100.0%	30.7	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
RH (%)	52.8	8.0	100.0%	100.0%	99.9										
WS (km/hr)	3.9	0.0	100.0%	100.0%	19.7										
WD (deg)	156	0.3	100.0%	100.0%	359.6	<div style="border: 1px solid black; padding: 5px;"> Average Wind Direction 156 SSE </div>									

Update Summary:

Parameter	Make	Model	Equipment summary
PM _{2.5}	Thermo	TEOM AB	May 1 DAS failure (8hrs); 150 hrs above AAAQG + 15 days above AAAQO due to wildfires
SO ₂	TECO	43i	No Operational issues noted during the month
TRS	TECO	43C	No Operational issues noted during the month
Met Equip	Gil/RMYoung	MetPak/RMY86004	No Operational issues noted during the month

1.3 Grande Prairie - Henry Pirker Air Monitoring Station

PAZA - May 2023 Henry Pirker Station Report

Parameter	May			Operational	Max	1-hour		8-hour / 24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid			Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	
NO (ppb)	2.7	0.0	95.2%	100.0%	51.3	-	May-21 07:00	10.1	-	May-21	-	-	-	-	May 03, 2023
NO ₂ (ppb)	8.6	0.9	95.2%	100.0%	37.4	159	May-17 00:00	13.6	-	May-09	0	-	-	-	May 03, 2023
NO _x (ppb)	11.4	1.0	95.2%	100.0%	77.1	-	May-21 07:00	23.2	-	May-21	-	-	-	-	May 03, 2023
O ₃ (ppb)	33.6	0.4	95.3%	100.0%	86.8	76	May-15 18:00	49.0	-	May-15	4	-	-	-	May 03, 2023
PM _{2.5} (µg/m ³)	86.3	3.3	99.9%	100.0%	1140.3	80	May-19 19:00	467.3	29	May-18	187	-	17	-	May 09, 2023
SO ₂ (ppb)	0.4	0.0	95.4%	100.0%	6.5	172	May-27 11:00	1.0	48	May-19	0	-	0	0	May 03, 2023
H ₂ S (ppb)	0.2	0.0	95.3%	100.0%	2.5	10	May-09 06:00	0.5	3	May-09	0	-	0	-	May 09, 2023
CH ₄ (ppm)	2.0	1.8	95.2%	100.0%	2.5	-	May-10 02:00	2.1	-	May-19	-	-	-	-	May 04, 2023
THC (ppm)	2.0	1.8	95.2%	100.0%	3.0	-	May-19 19:00	2.2	-	May-19	-	-	-	-	May 04, 2023
NMHC (ppm)	0.0	0.0	95.2%	100.0%	0.5	-	May-19 19:00	0.1	-	May-19	-	-	-	-	May 04, 2023
CO (ppm)	0.5	0.1	95.2%	100.0%	7.3	13	May-19 19:00	2.1	5	May-18	0	0	-	-	May 04, 2023
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	16.3	3.3	100.0%	100.0%	30.7	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
RH (%)	48.6	6.5	100.0%	100.0%	88.8										
SR (W/m ²)	189.4	0.0	100.0%	100.0%	736.8										
WS (km/hr)	6.5	0.0	100.0%	100.0%	28.4										
WD (deg)	240	2.2	100.0%	100.0%	359.6	<div style="border: 1px solid black; padding: 2px;"> Average Wind Direction 240 WSW </div>									

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42IQ	No Operational issues noted
O ₃	TECO	49I	No Operational issues noted; 4 hrs above AAAQO due to wildfires
PM _{2.5}	API	T640	No Operational issues noted; 187 hrs above AAAQG + 17 days above AAAQO due to wildfires
SO ₂	TEI	43I-TLE	No Operational issues noted
H ₂ S	TEI	450i	No Operational issues noted
THC/CH ₄ /NMHC	TEI	55i	No Operational issues noted
CO	TEI	48I-TLE	No Operational issues noted
Met Equip	MetOne	50.5	No Operational issues noted

1.4 Smoky Heights Air Monitoring Station

PAZA - May 2023 Smoky Heights Station Report

Parameter	May			Operational	Max	1-hour		24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid			Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	
PM _{2.5} (µg/m ³)	71.1	1.9	94.6%	95.0%	990.0	80	May-19 19:00	368.6	29	May-19	138	-	13	-	May 08, 2023
SO ₂ (ppb)	0.2	0.0	90.9%	95.2%	4.9	172	May-02 08:00	0.8	48	May-18	0	-	0	0	May 08, 2023
TRS (ppb)	0.2	0.0	85.1%	89.4%	2.3	-	May-22 04:00	0.7	-	May-15	-	-	-	-	May 08, 2023
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	15.1	0.6	95.2%	95.2%	30.8	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
WS (km/hr)	9.3	0.4	95.2%	95.2%	38.4										
WD (deg)	234	0.4	95.2%	95.2%	359.9	<div style="border: 1px solid black; padding: 2px;"> Average Wind Direction 234 WNW </div>									

Update Summary:

Parameter	Make	Model	Equipment summary
PM _{2.5}	Sharp	5030	DAS failure (36hrs); 138 hrs above AAAQG + 13 days above AAAQO due to wildfires
SO ₂	TECO	43i	DAS failure (36hrs)
TRS	TEI	43I APSAA	DAS failure (36hrs); 11hrs maint; 32hrs removed due to failed spans and removal calibration, <90%
Met Equip	MetOne	50.5	DAS failure (36hrs)

1.5 Valleyview Air Monitoring Station

PAZA - May 2023 Valleyview Station Report

Parameter	May			Operational	Max	1-hour			24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid			Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d		
SO ₂ (ppb)	0.2	0.0	94.9%	100.0%	2.2	172	May-18 16:00	0.7	48	May-18	0	-	0	0	May 25, 2023	
H ₂ S (ppb)	1.1	0.0	95.2%	100.0%	100.1	10	May-22 15:00	18.5	3	May-22	12	-	2	-	May 25, 2023	
	Average	Minimum	Valid	Operational	Maximum											
Temp (°C)	15.4	0.7	100.0%	100.0%	31.7	<div style="border: 1px solid black; padding: 5px;"> <p>Note: Valid hours must be greater than 75%</p> <p>Operational hours must be greater than 90%</p> </div>										
RH (%)	60.4	12.5	100.0%	100.0%	100.2											
WS (km/hr)	3.7	0.1	100.0%	100.0%	16.0											
WD (deg)	58	0.2	100.0%	100.0%	359.9											
	Average Wind Direction															58

Update Summary:

Parameter	Make	Model	Equipment summary
SO ₂	TEI	43i-APSCB	No Operational issues noted during the month
H ₂ S	TEI	450i-APHA / 43C	Several high spikes recorded during month with 12 hrs and 2 days above the AAAQO
Met Equip	RMYoung	RMY86004	No Operational issues noted during the month

1.6 Donnelly Air Monitoring Station

PAZA - May 2023 Donnelly Station Report

Parameter	May			Operational	Max	1-hour			24-hour			Exceedance				Calibration Date	
	Average	Minimum	Valid			Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d			
SO ₂ (ppb)	0.2	0.0	93.7%	98.4%	1.2	172	May-21 19:00	0.5	48	May-17	0	-	0	0	May 18, 2023		
H ₂ S (ppb)	0.3	0.0	95.2%	100.0%	3.8	10	May-17 08:00	1.0	3	May-17	0	-	0	-	May 18, 2023		
	Average	Minimum	Valid	Operational	Maximum												
Temp (°C)	15.8	3.8	100.0%	100.0%	31.0	<div style="border: 1px solid black; padding: 5px;"> <p>Note: Valid hours must be greater than 75%</p> <p>Operational hours must be greater than 90%</p> </div>											
WS (km/hr)	9.0	0.2	100.0%	100.0%	32.4												
WD (deg)	156	0.7	100.0%	100.0%	358.9												
	Average Wind Direction															156	SSE

Update Summary:

Parameter	Make	Model	Equipment summary
SO ₂	Teco	43i	Sample pump failed, not able to perform removal cal, data removed to last good span (12hrs)
H ₂ S	Thermo	45C	No Operational issues noted during the month
Met Equip	RMYoung	5103	No Operational issues noted during the month

1.7 Poplar Air Monitoring Station

PAZA - May 2023 Poplar Station Report

Parameter	May			Operational	Max	1-hour			24-hour			Exceedance				Calibration Date	
	Average	Minimum	Valid			Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d			
NO (ppb)	2.8	0.0	95.0%	100.0%	67.9	-	May-21 02:00	14.8	-	May-21	-	-	-	-	May 10, 2023		
NO ₂ (ppb)	8.0	0.4	95.0%	100.0%	27.5	159	May-21 01:00	15.0	-	May-15	0	-	-	-	May 10, 2023		
NO _x (ppb)	10.9	0.5	95.0%	100.0%	91.0	-	May-21 02:00	26.7	-	May-21	-	-	-	-	May 10, 2023		
O ₃ (ppb)	32.9	0.0	95.2%	99.7%	89.0	76	May-20 13:00	54.3	-	May-29	7	-	-	-	May 10, 2023		
PM _{2.5} (µg/m ³)	50.8	0.0	80.9%	81.2%	448.7	80	May-19 19:00	210.5	29	May-18	111	-	11	-	May 11, 2023		
SO ₂ (ppb)	0.9	0.0	95.3%	100.0%	17.2	172	May-01 10:00	2.3	48	May-26	0	-	0	0	May 10, 2023		
TRS (ppb)	0.3	0.0	95.2%	100.0%	8.3	-	May-10 09:00	0.9	-	May-21	-	-	-	-	May 11, 2023		
CH ₄ (ppm)	removed Dec 12, 2022																
THC (ppm)	2.2	1.8	95.3%	100.0%	4.0	-	May-17 07:00	2.6	-	May-19	-	-	-	-	May 11, 2023		
NMHC (ppm)	removed Dec 12, 2022																
	Average	Minimum	Valid	Operational	Maximum												
Temp (°C)	14.3	1.3	100.0%	100.0%	29.8	<div style="border: 1px solid black; padding: 5px;"> <p>Note: Valid hours must be greater than 75%</p> <p>Operational hours must be greater than 90%</p> </div>											
WS (km/hr)	12.3	0.2	100.0%	100.0%	45.1												
WD (deg)	304	2.4	100.0%	100.0%	359.8												
	Average Wind Direction															304	NW

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	TEI	42i	No operational issues noted
O ₃	TEI	49i	May 30 zero failed to run (1hr); excessive negative drift (1hr); 7hrs above AAAQO due to wildfires
PM _{2.5}	Thermo	TEOM AB	Maint. (3hrs); negative drift <-3µg/m ³ (137hrs); 111hrs above AAAQO + 11 days above AAAQO; <90%
SO ₂	TEI	43i	No operational issues noted
TRS	TEI	43i	No operational issues noted
THC	TEI	55i / 511i-LT	CH ₄ , NMHC not in service; No operational issues noted
Met Equip	MetOne	50.5	No operational issues noted

1.8 Milner Air Monitoring Station

PAZA - May 2023 Milner Station Report

Parameter	May				1-hour			24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	
NO (ppb)	0.4	0.0	91.5%	96.4%	14.7	-	May-27 09:00	1.3	-	May-27	-	-	-	-	May 11, 2023
NO ₂ (ppb)	1.3	0.0	91.5%	96.4%	12.6	159	May-18 09:00	3.3	-	May-06	0	-	-	-	May 11, 2023
NO _x (ppb)	1.6	0.0	91.5%	96.4%	22.2	-	May-27 09:00	3.4	-	May-07	-	-	-	-	May 11, 2023
PM _{2.5} (µg/m ³)	28.6	0.0	87.0%	87.1%	252.2	80	May-06 18:00	125.4	29	May-06	71	-	7	-	May 11, 2023
	Average	Minimum	Valid	Operational	Maximum										
WS (km/hr)	4.1	0.0	96.9%	96.9%	23.0										
WD (deg)	242	0.6	96.9%	96.9%	358.5										
<p>Note: Valid hours must be greater than 75% Operational hours must be greater than 90%</p> <p>Average Wind Direction 242 WSW</p>															

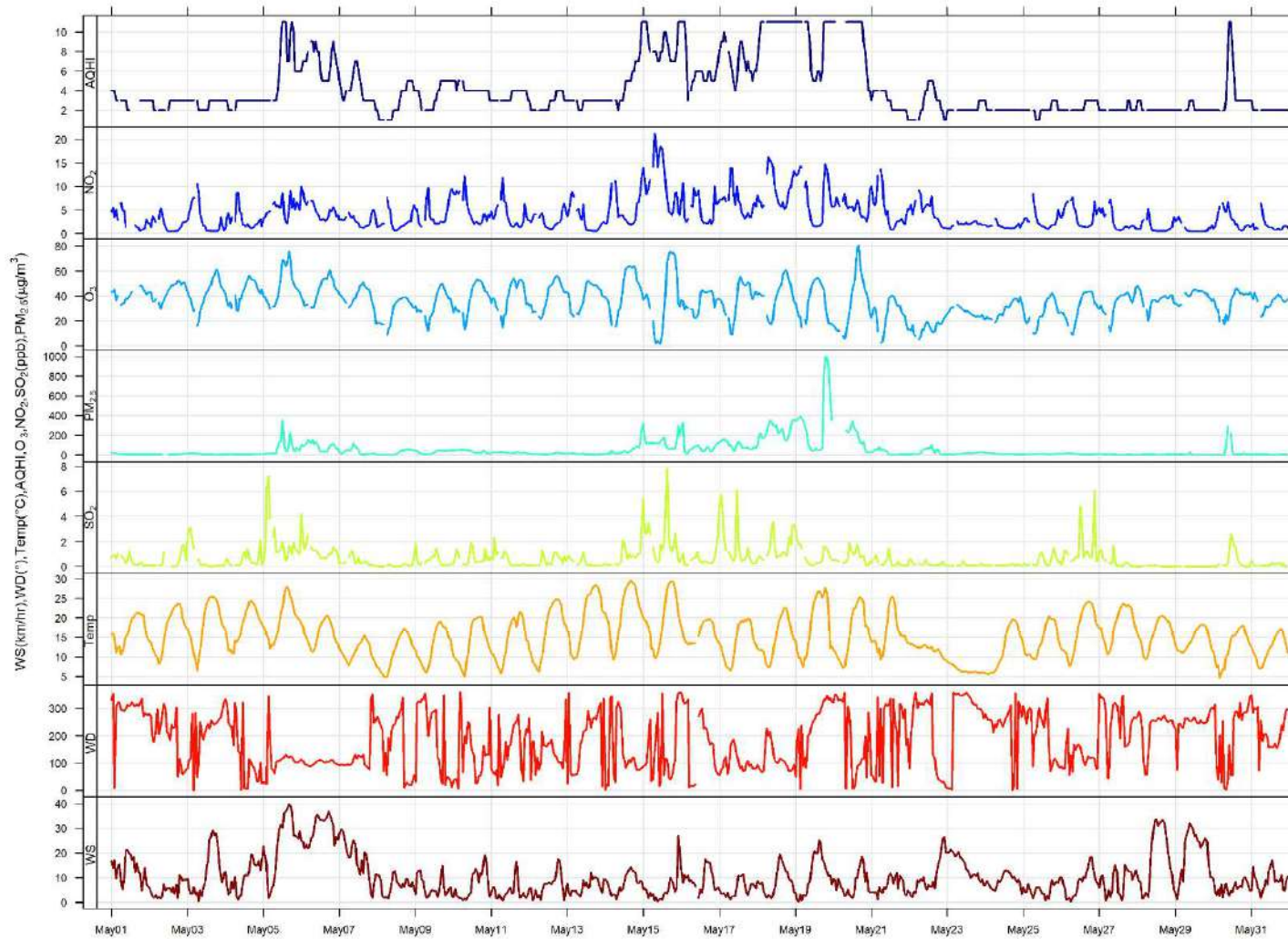
Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42i	DAS failure May 9,20,21 (27hrs)
PM _{2.5}	TEOM	AB	DAS failure May 9,20,21 (27hrs); 71hrs above AAAQG + 6 days above AAAQO; excessive negative drift (67hrs); <90%
Met Equip	MetOne	50.5	DAS failure Apr 27-28 (17hrs)

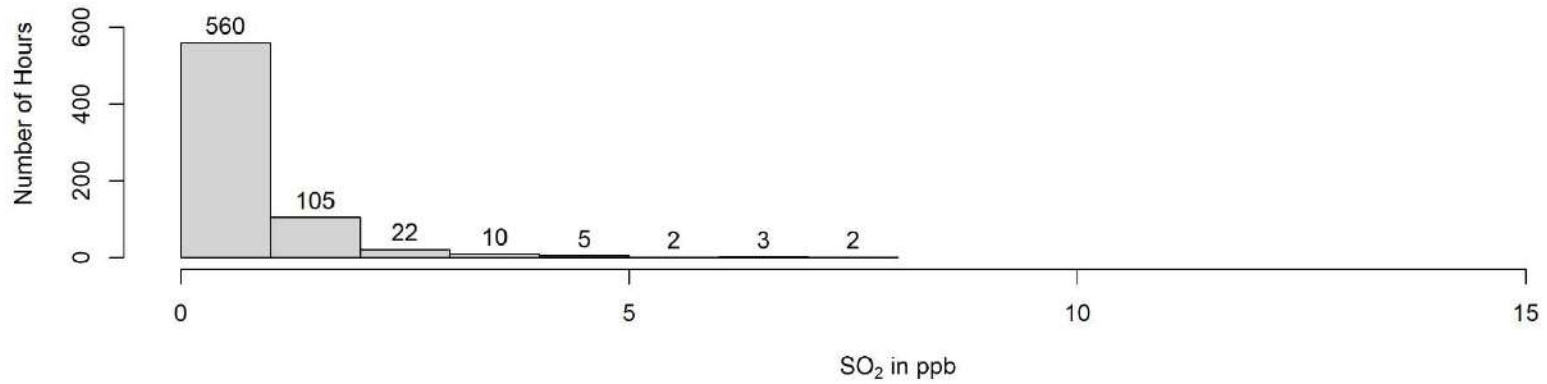
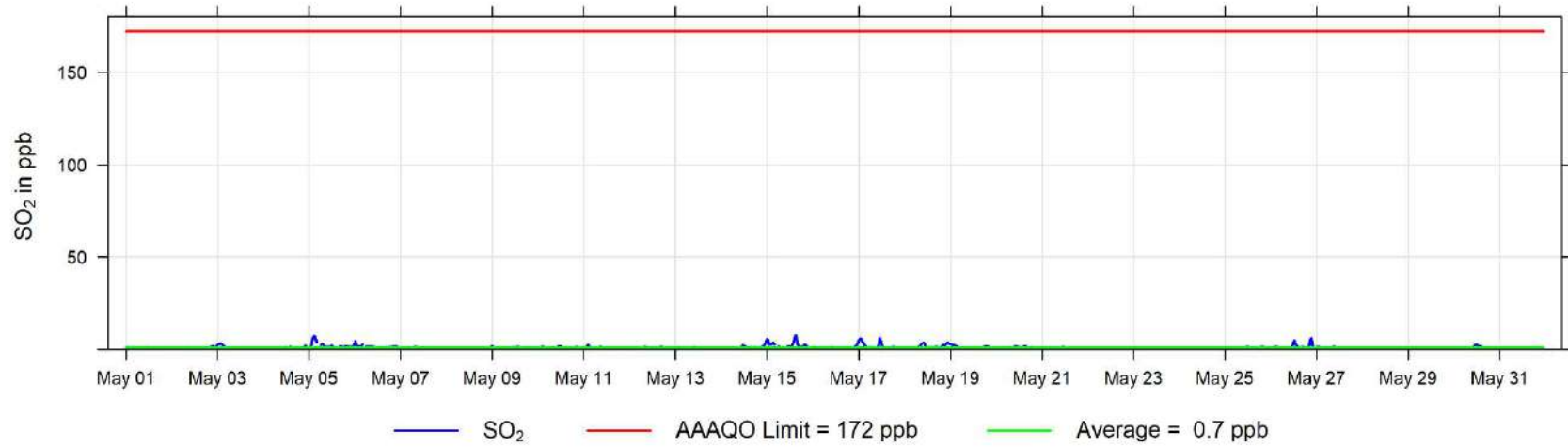
2 Beaverlodge Charts

The following pages include the charts and histograms for Beaverlodge Station

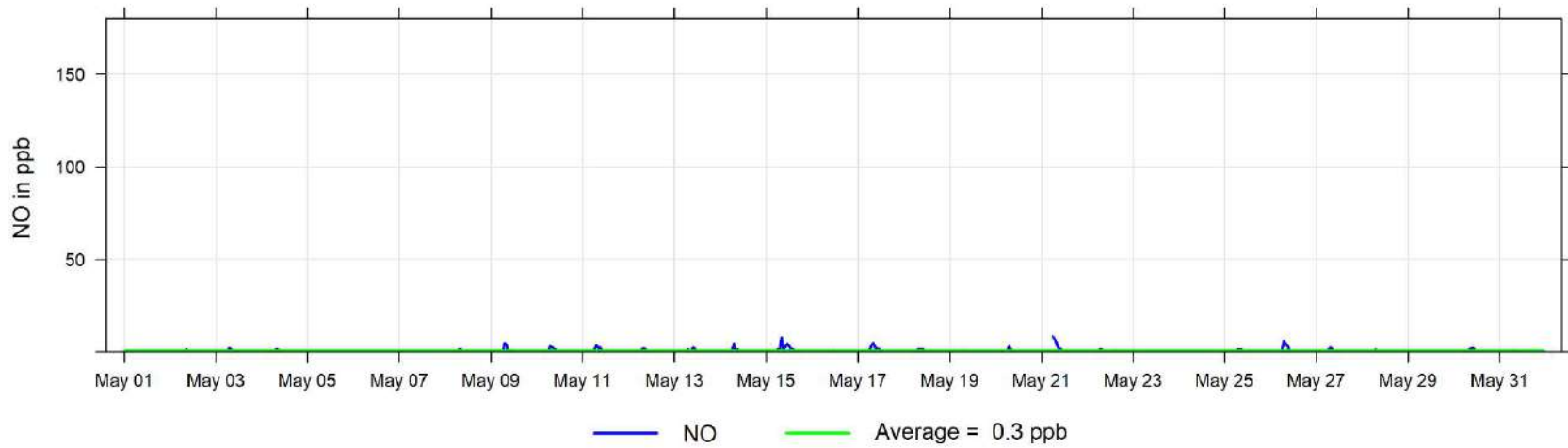
May 2023 Concentration Readings at Beaverlodge Station



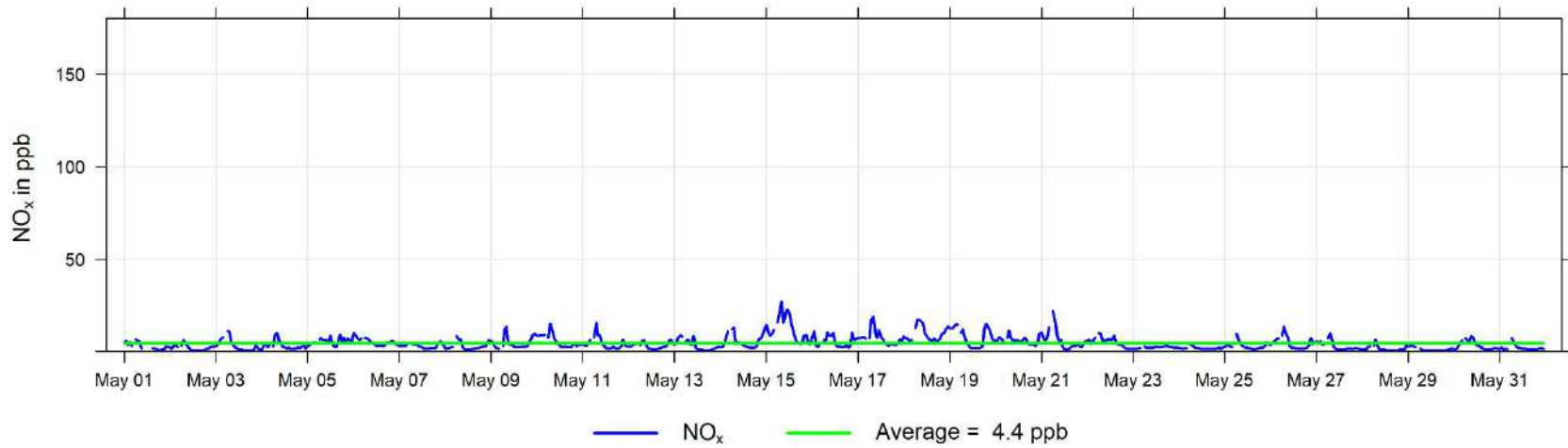
May 2023 Hourly Concentration Readings of SO₂ (in ppb) at Beaverlodge



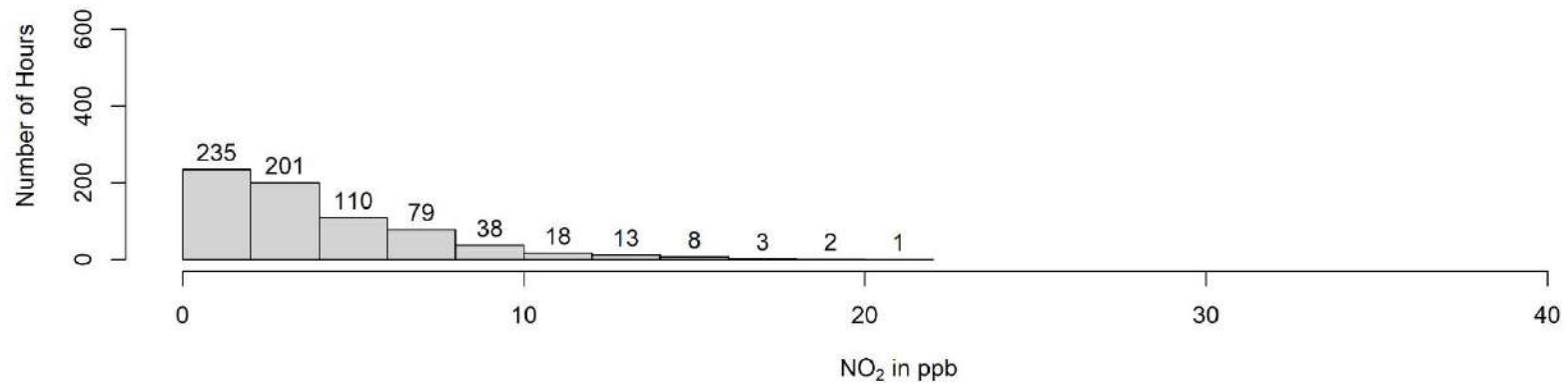
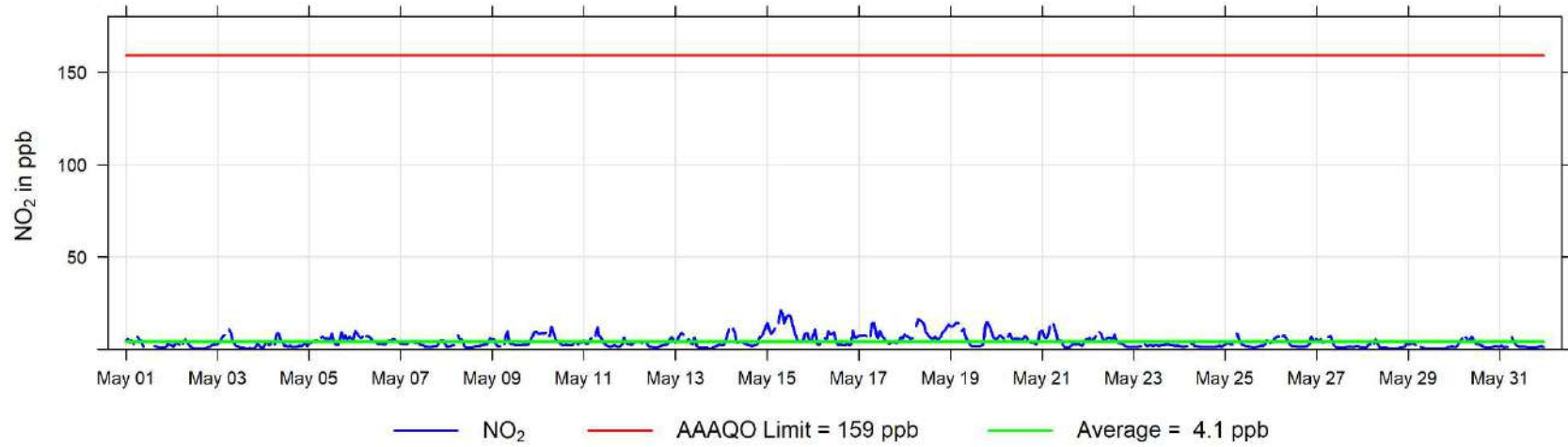
May 2023 Hourly Concentration Readings of NO (in ppb) at Beaverlodge



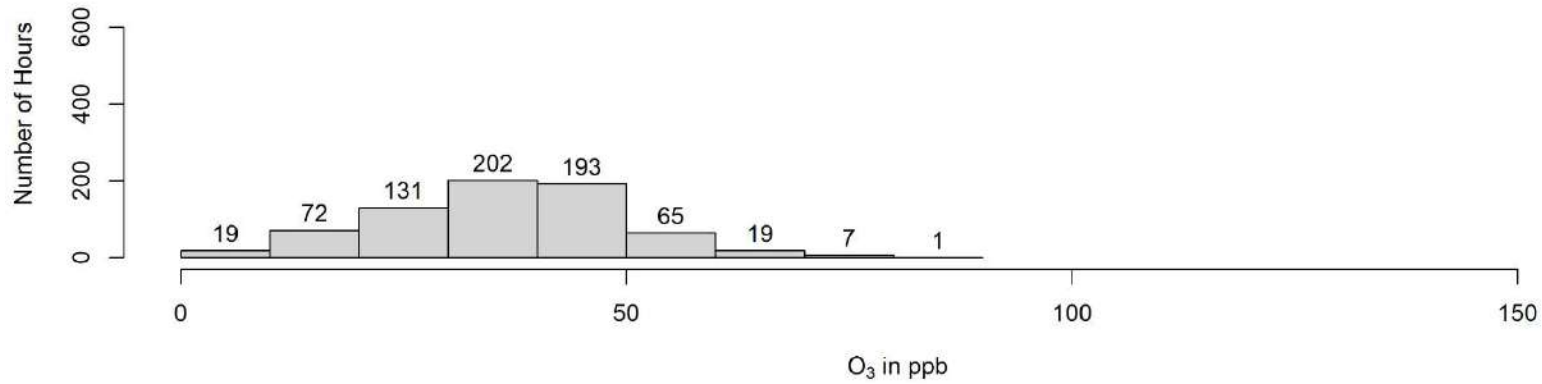
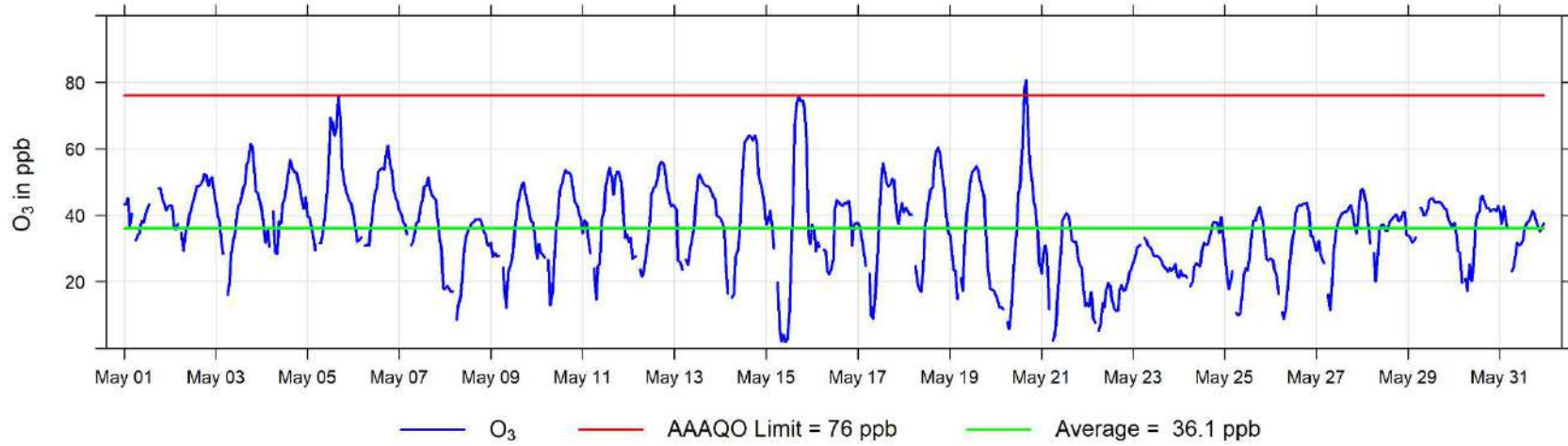
May 2023 Hourly Concentration Readings of NO_x (in ppb) at Beaverlodge



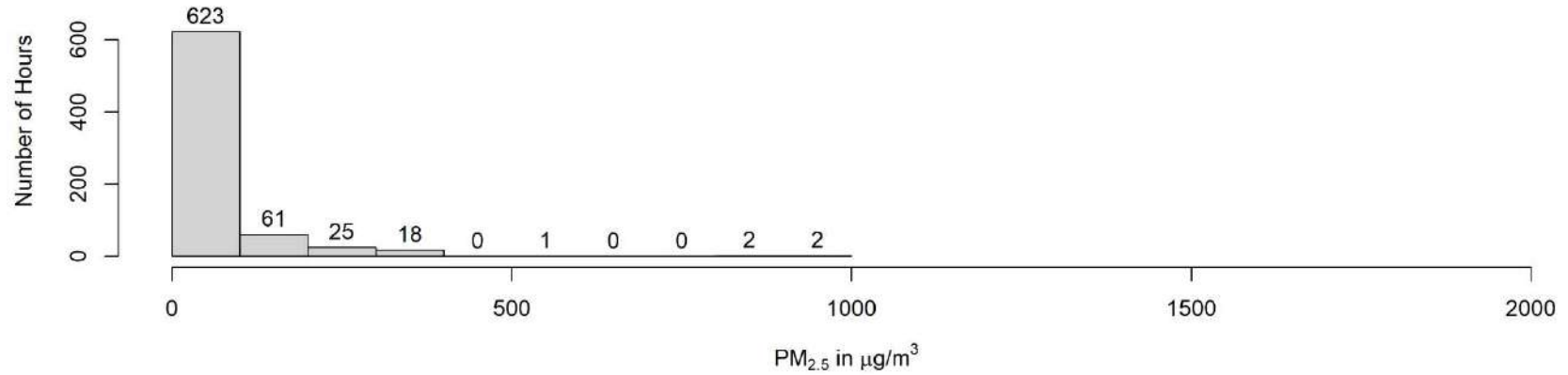
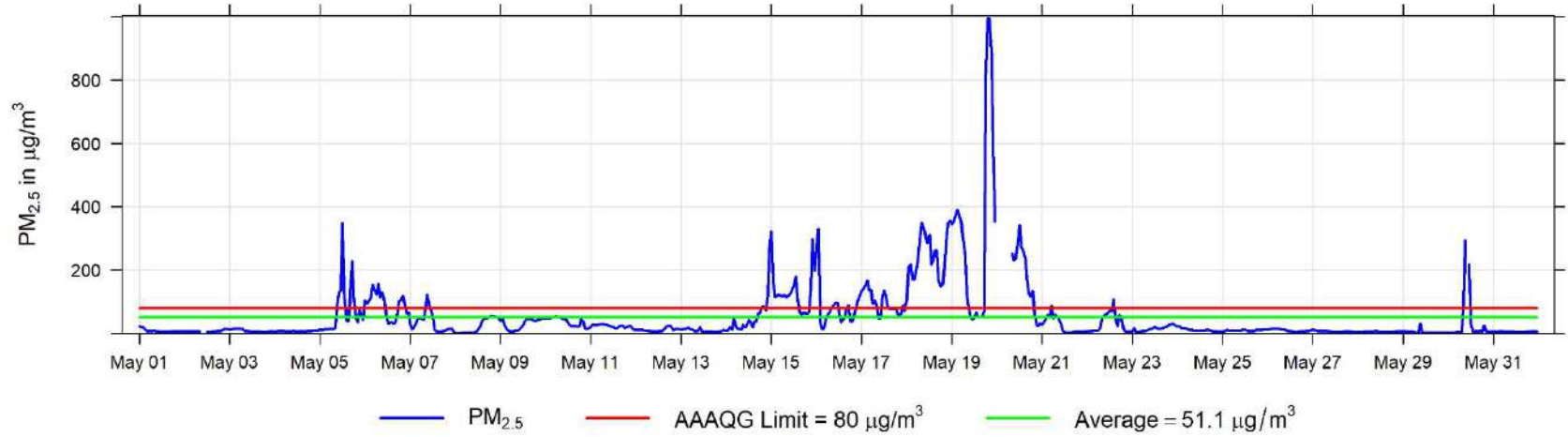
May 2023 Hourly Concentration Readings of NO₂ (in ppb) at Beaverlodge



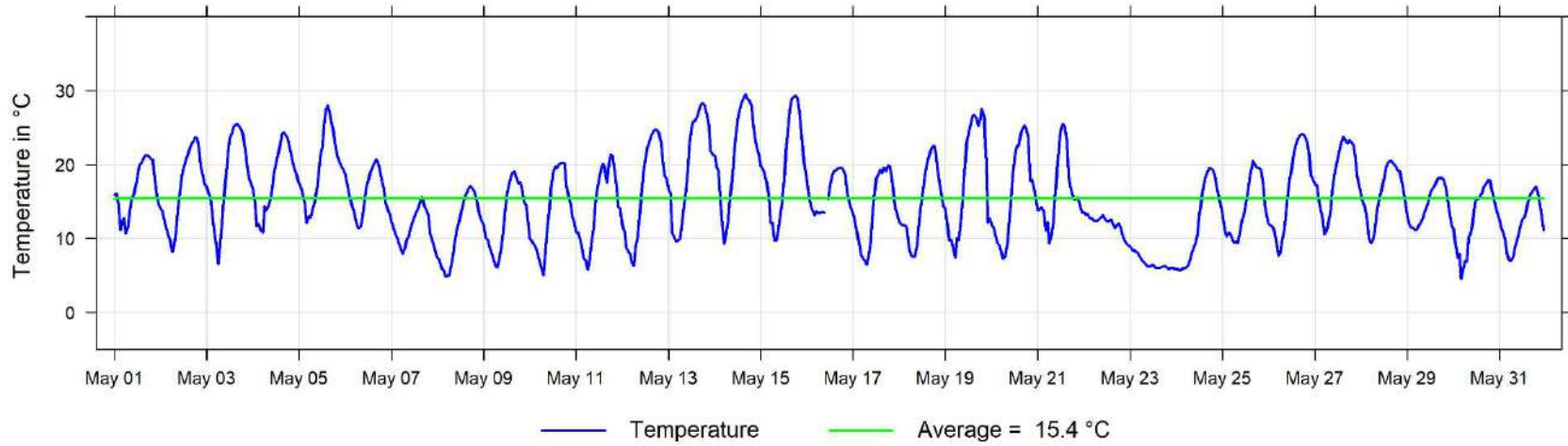
May 2023 Hourly Concentration Readings of O₃ (in ppb) at Beaverlodge



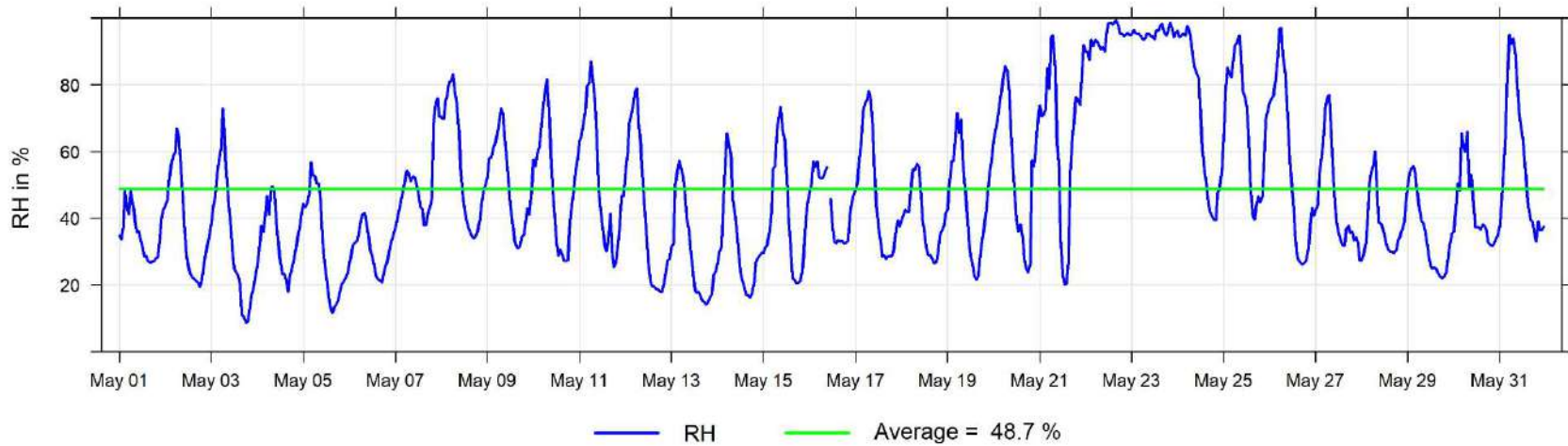
May 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Beaverlodge



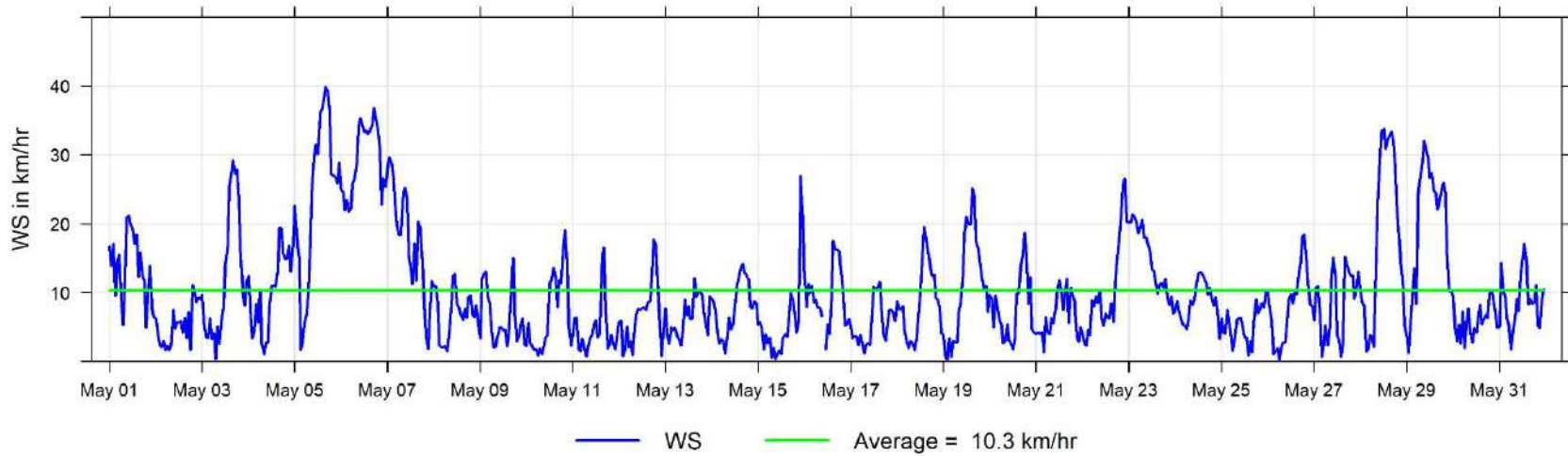
May 2023 Hourly Temperature Readings (in °C) at Beaverlodge



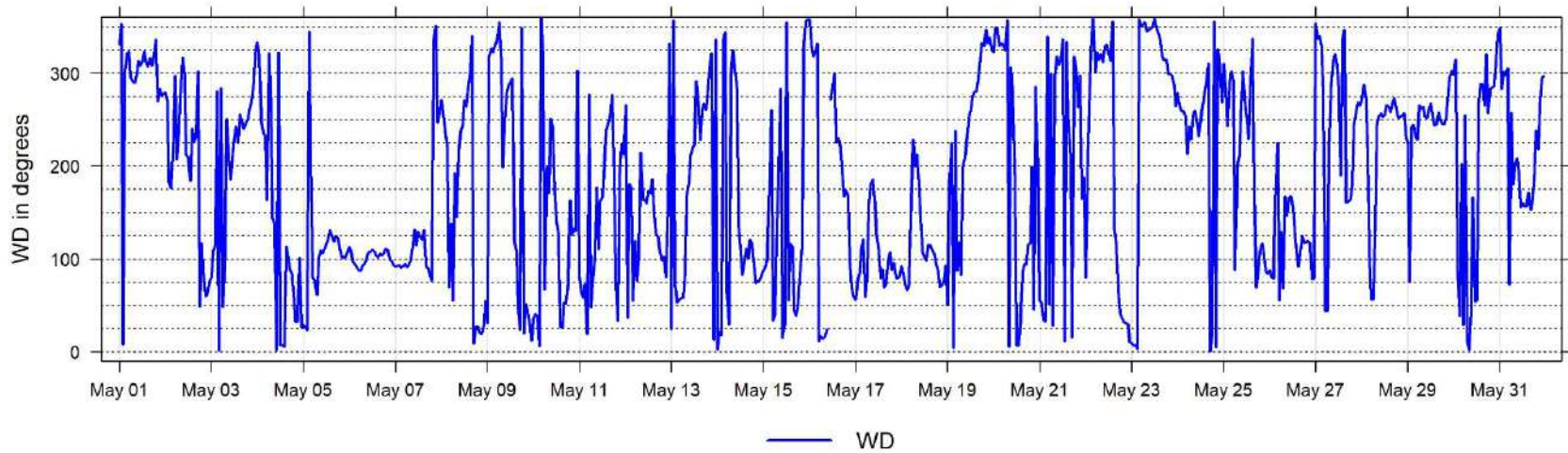
May 2023 Hourly Readings of Relative Humidity (in %) at Beaverlodge



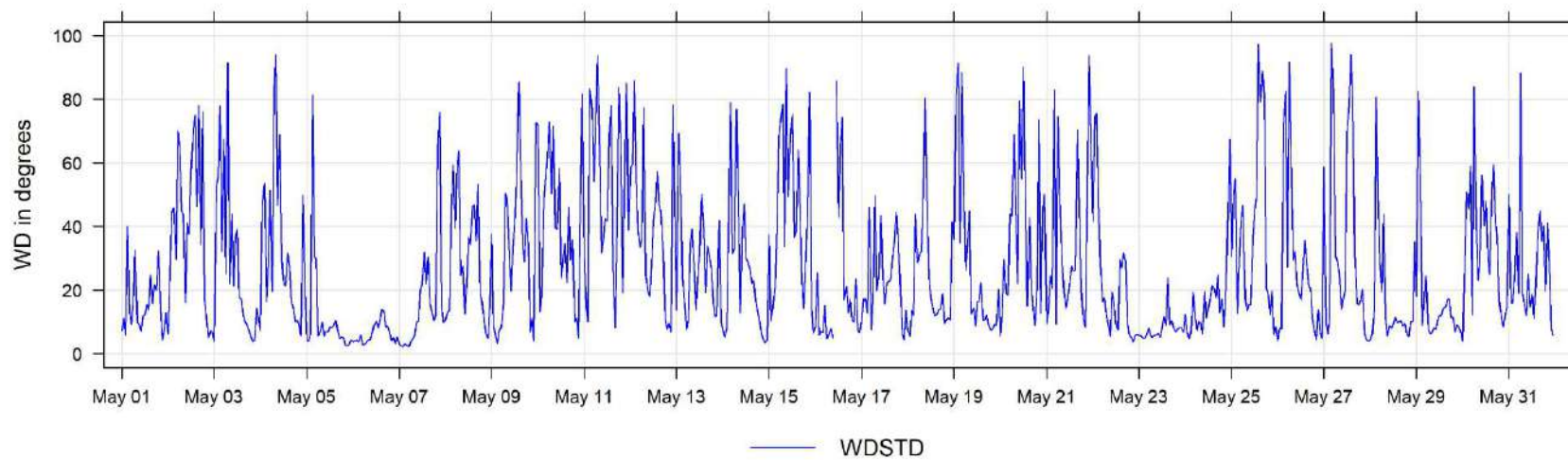
May 2023 Hourly Readings of Wind Speed (in km/hr) at Beaverlodge

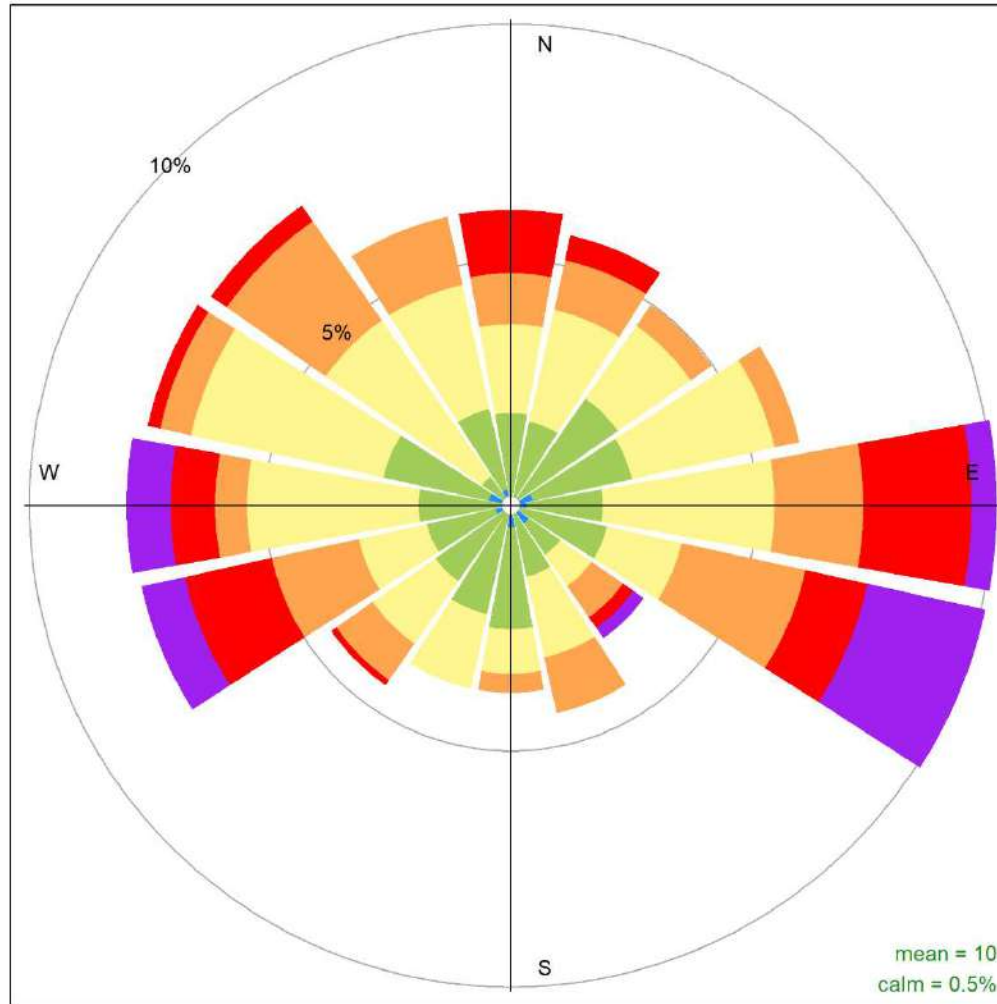


May 2023 Hourly Readings of Wind Direction (in degrees) at Beaverlodge



May 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Beaverlodge

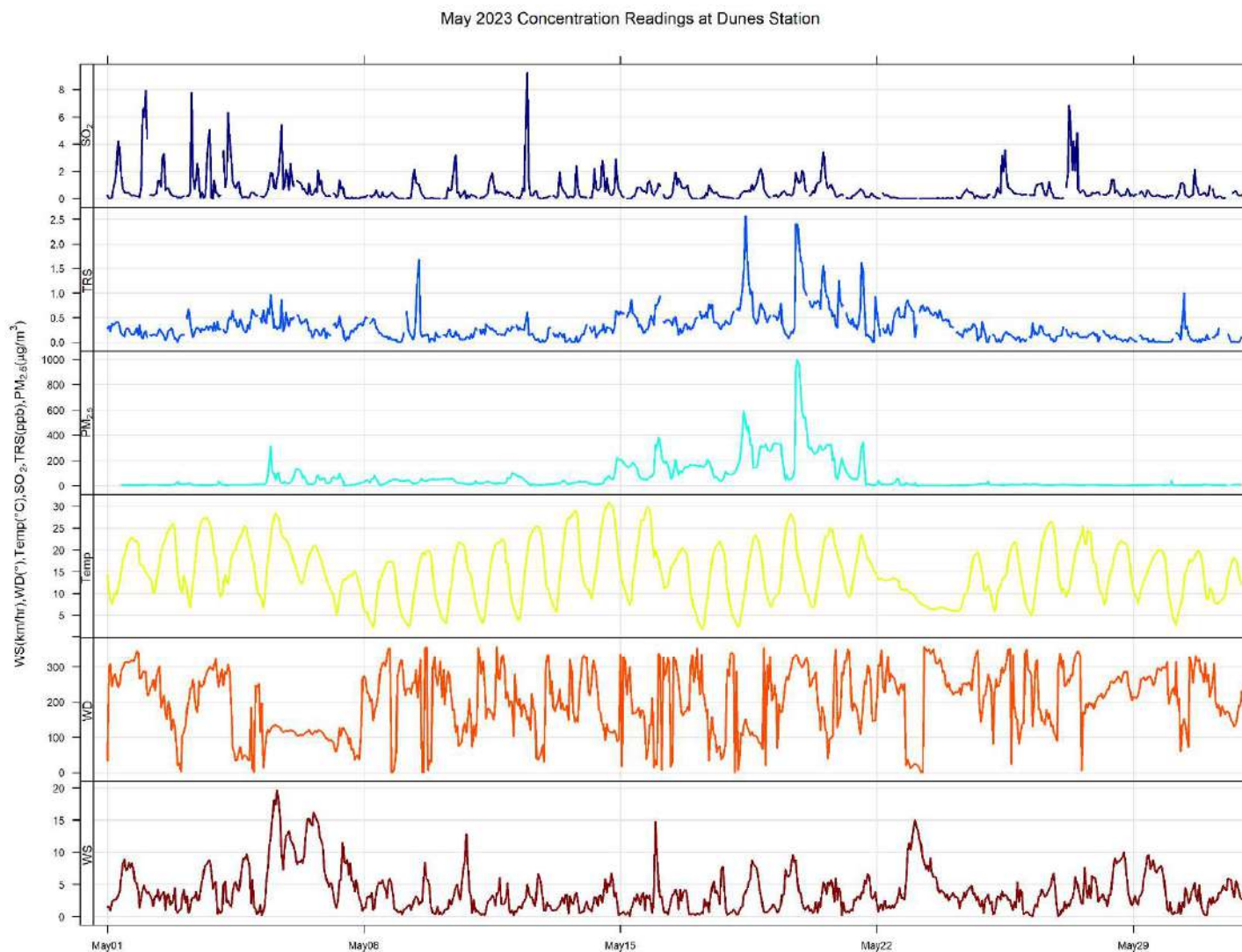




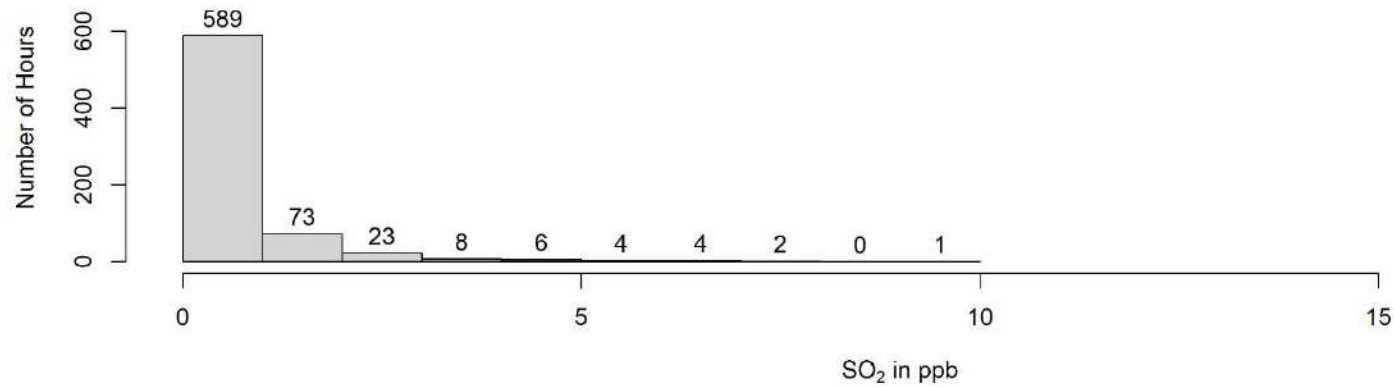
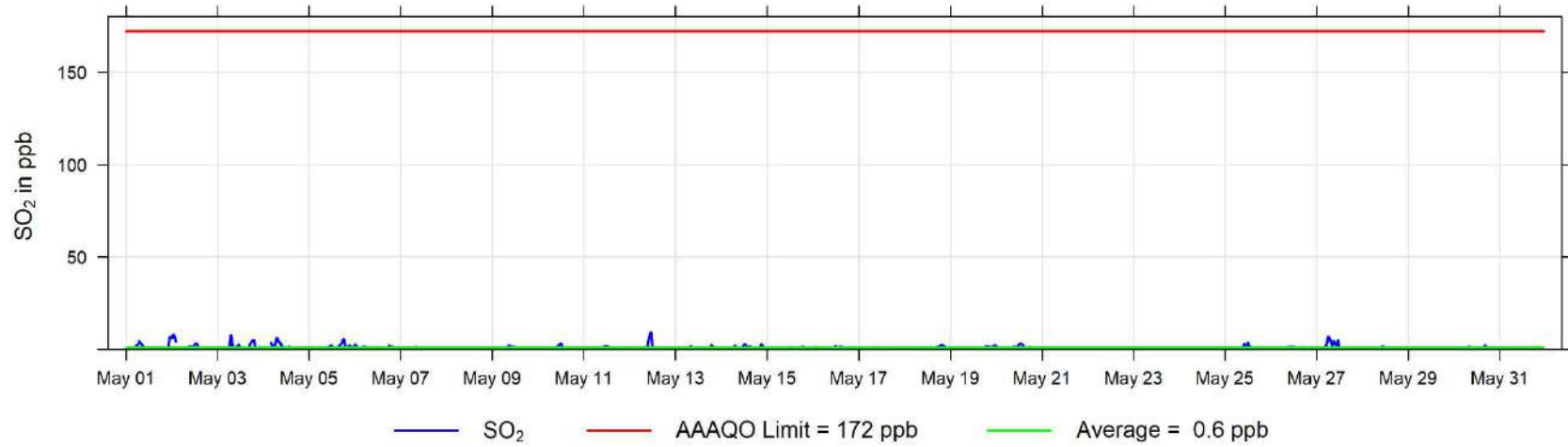
Beaverlodge May 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

3 Dunes Charts

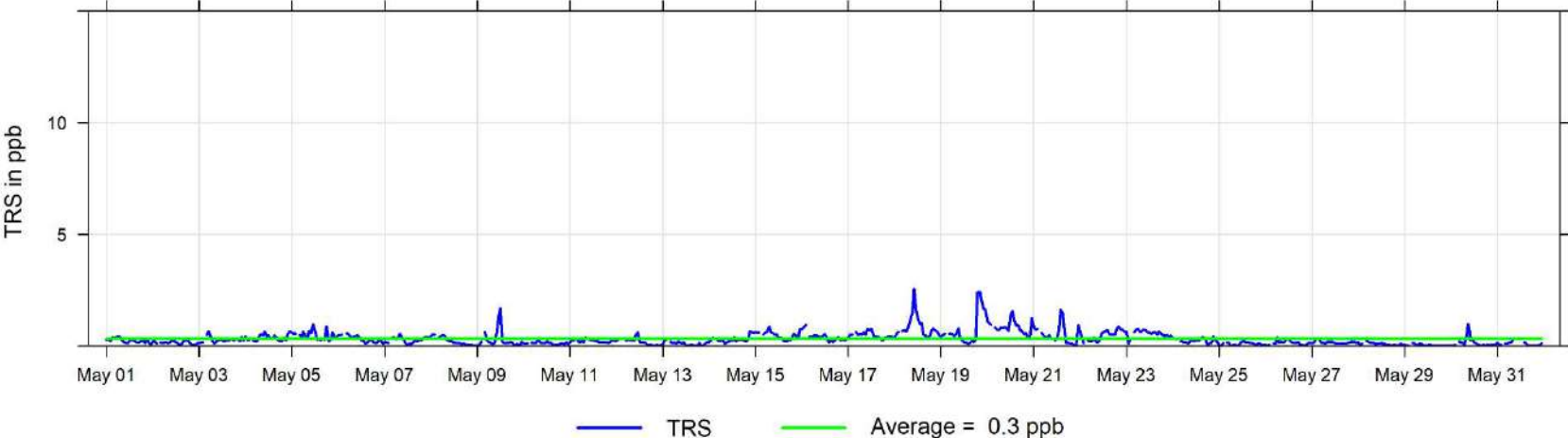
The following pages include the charts and histograms for Dunes Station



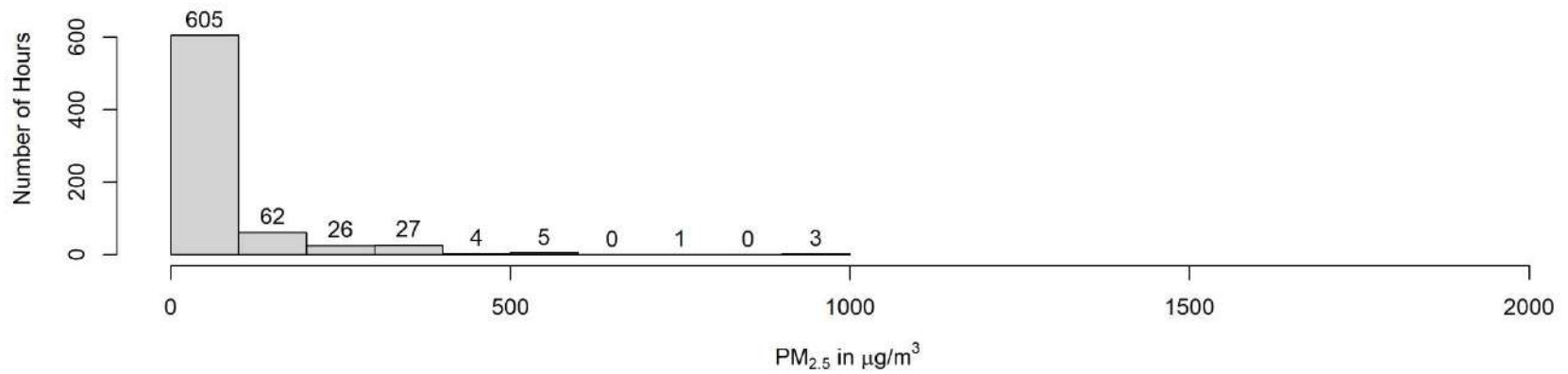
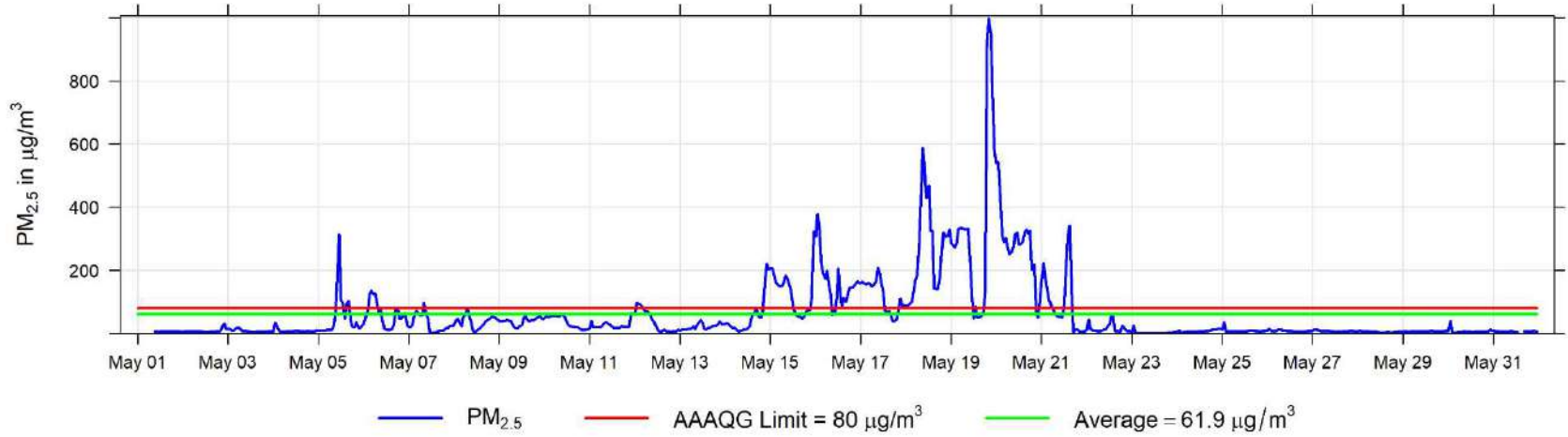
May 2023 Hourly Concentration Readings of SO₂ (in ppb) at Dunes



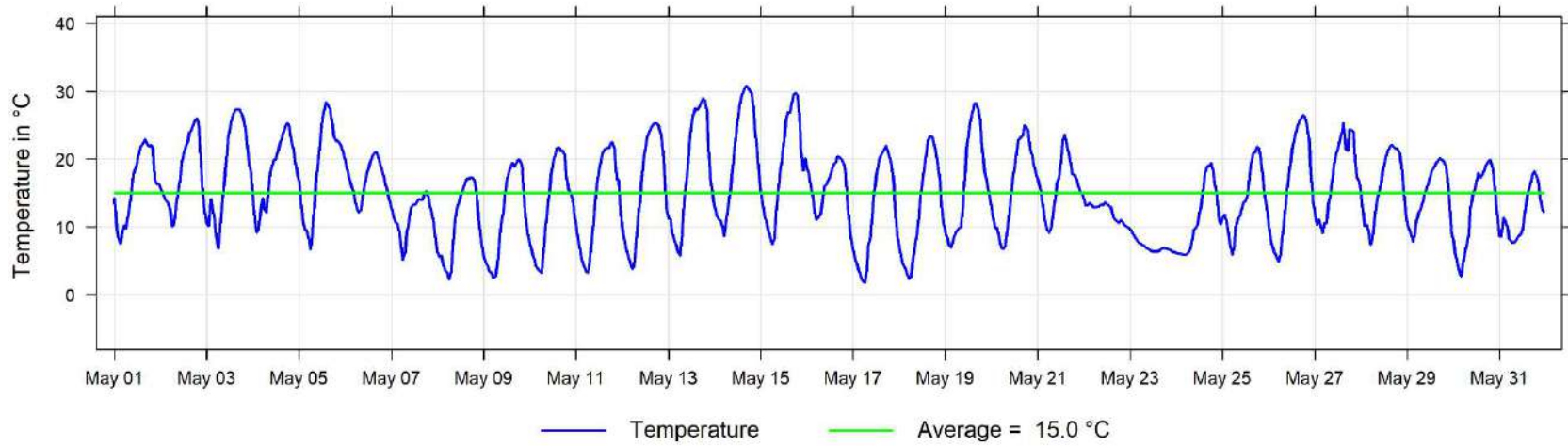
May 2023 Hourly Concentration Readings of TRS (in ppb) at Dunes



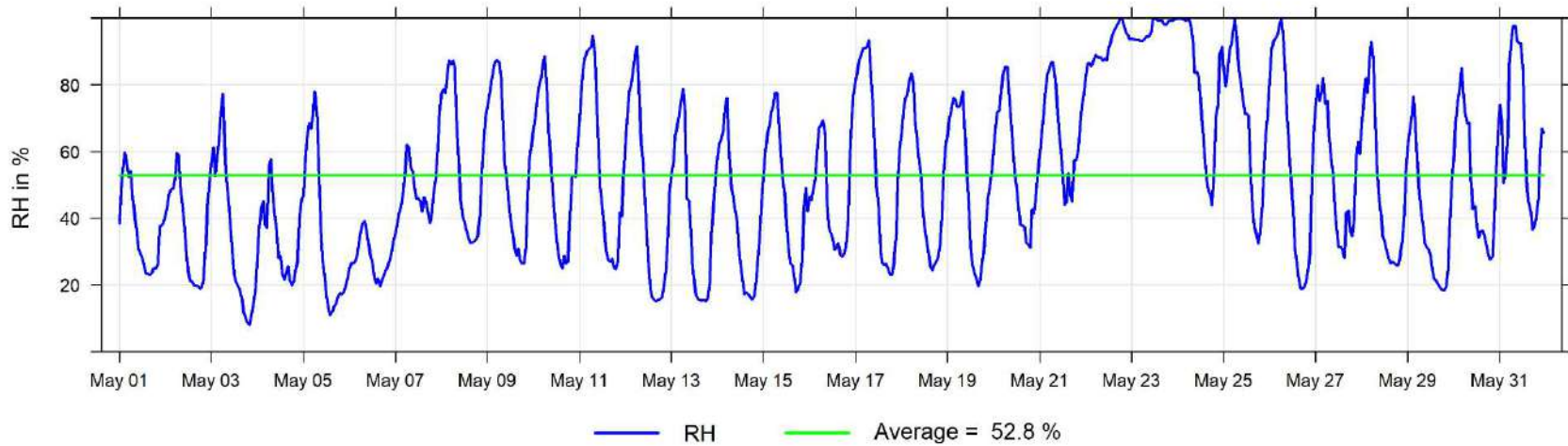
May 2023 Hourly Concentration Readings of PM_{2.5} in µg/m³ at Dunes



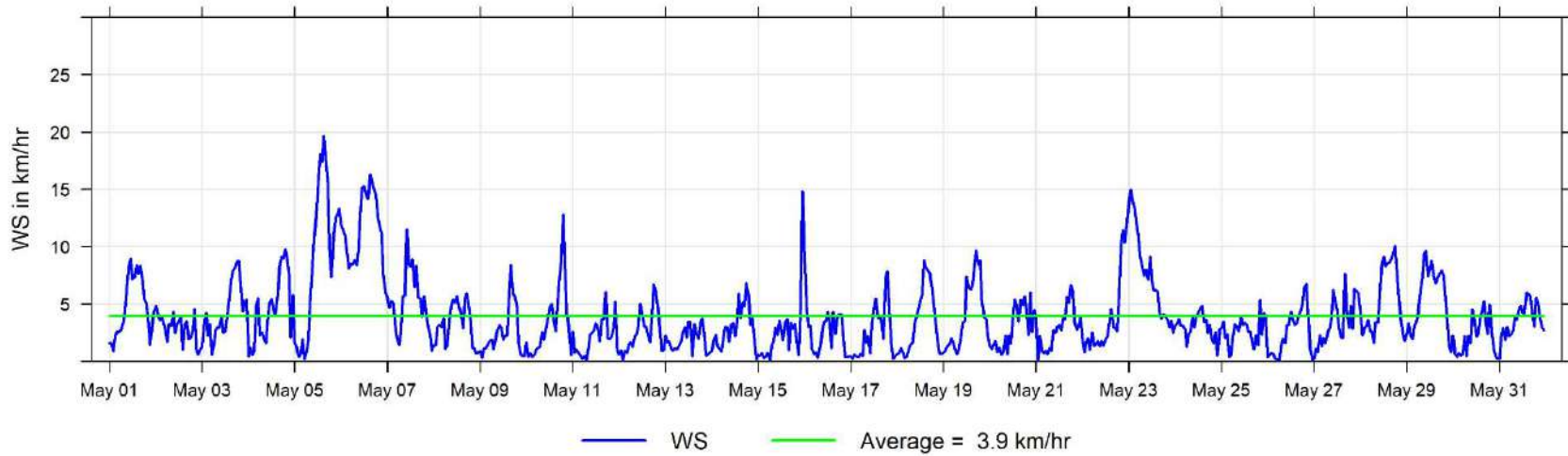
May 2023 Hourly Temperature Readings (in °C) at Dunes



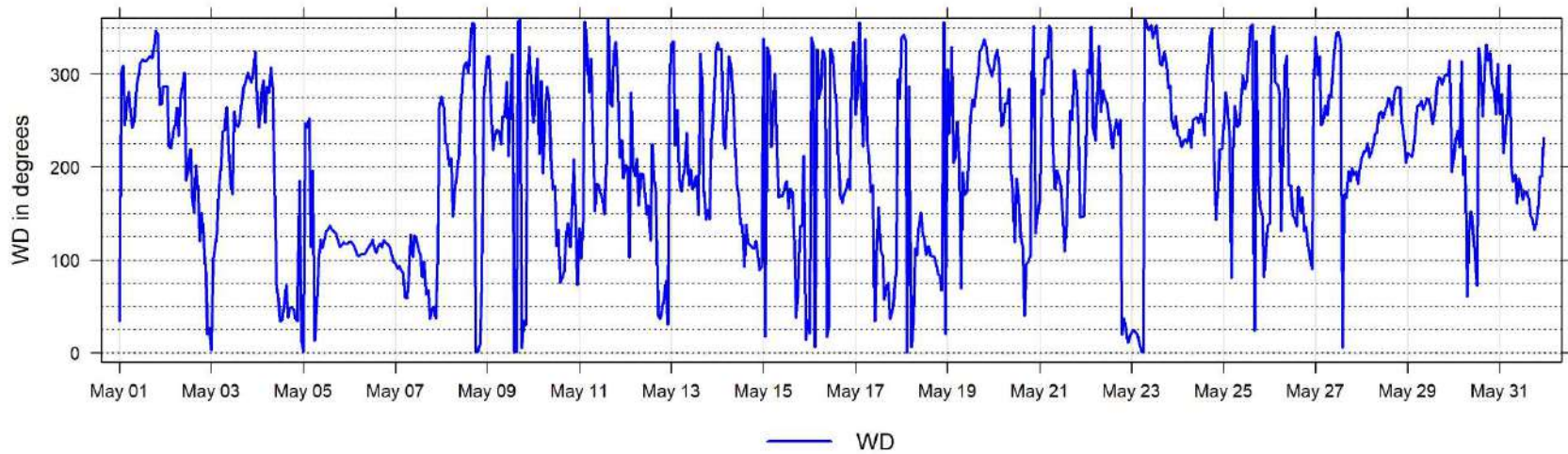
May 2023 Hourly Readings of Relative Humidity (in %) at Dunes



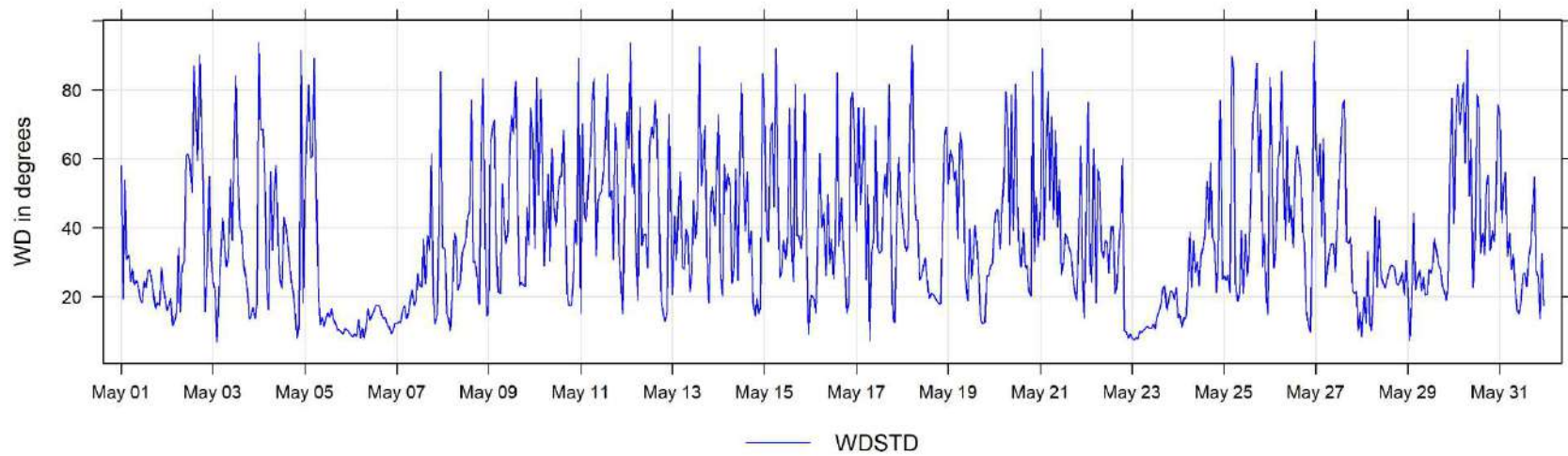
May 2023 Hourly Readings of Wind Speed (in km/hr) at Dunes

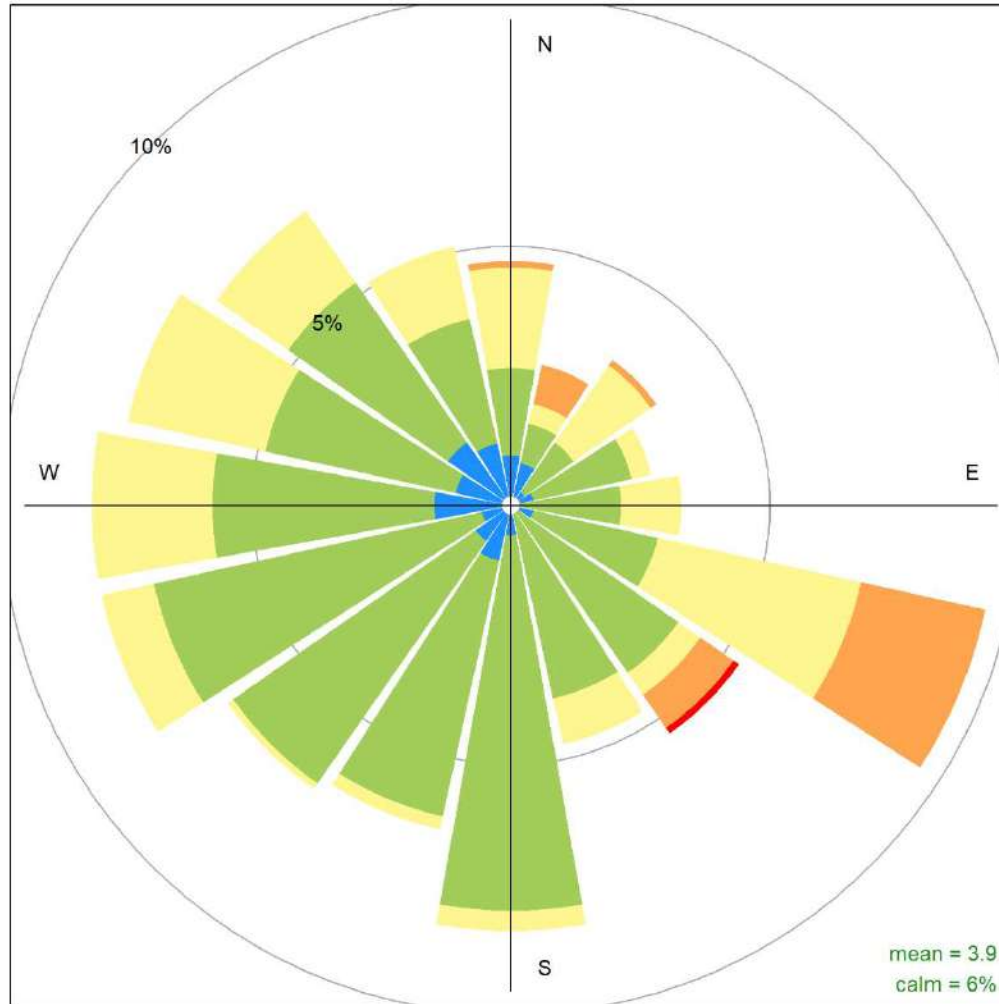


May 2023 Hourly Readings of Wind Direction (in degrees) at Dunes



May 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Dunes



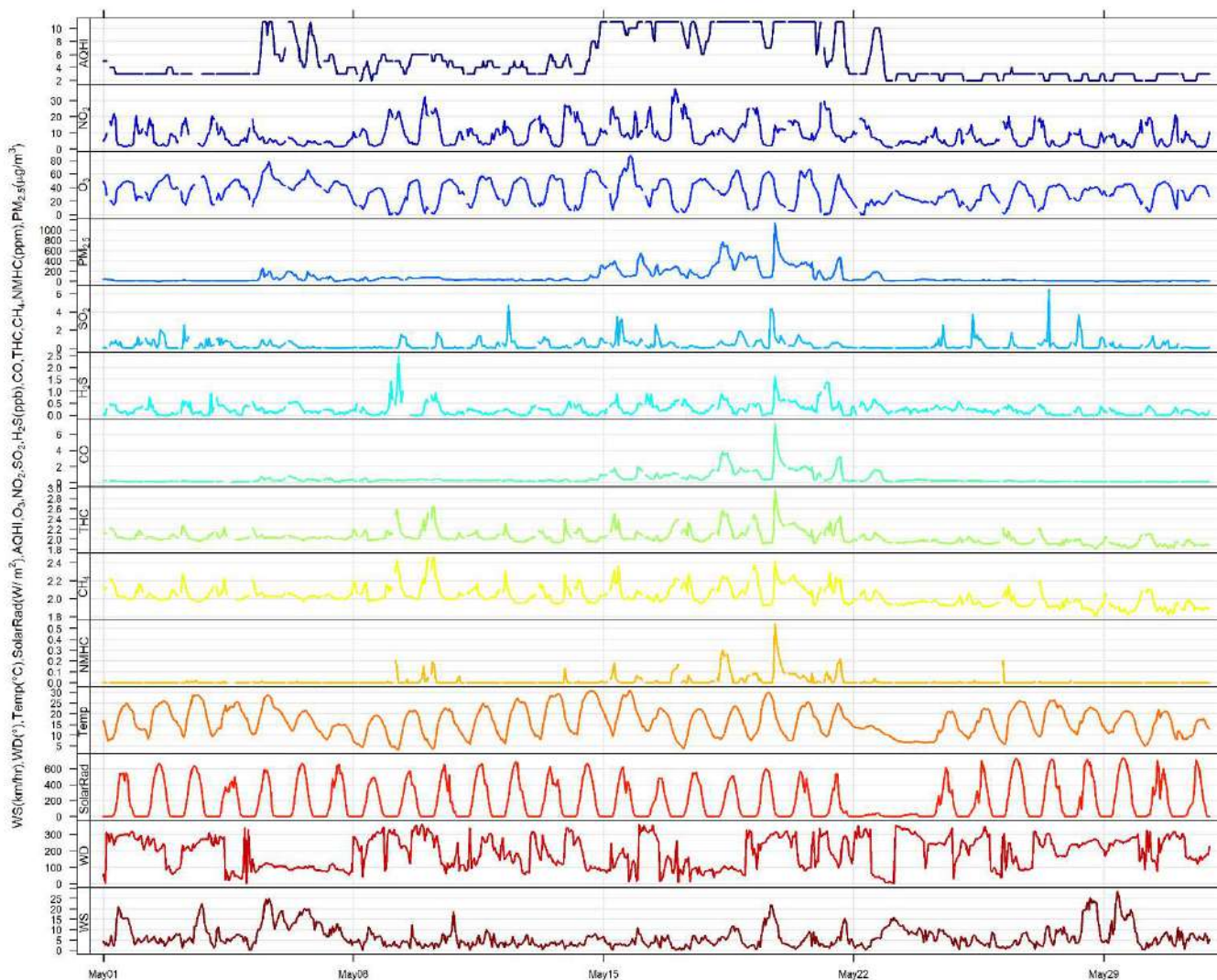


Dunes May 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

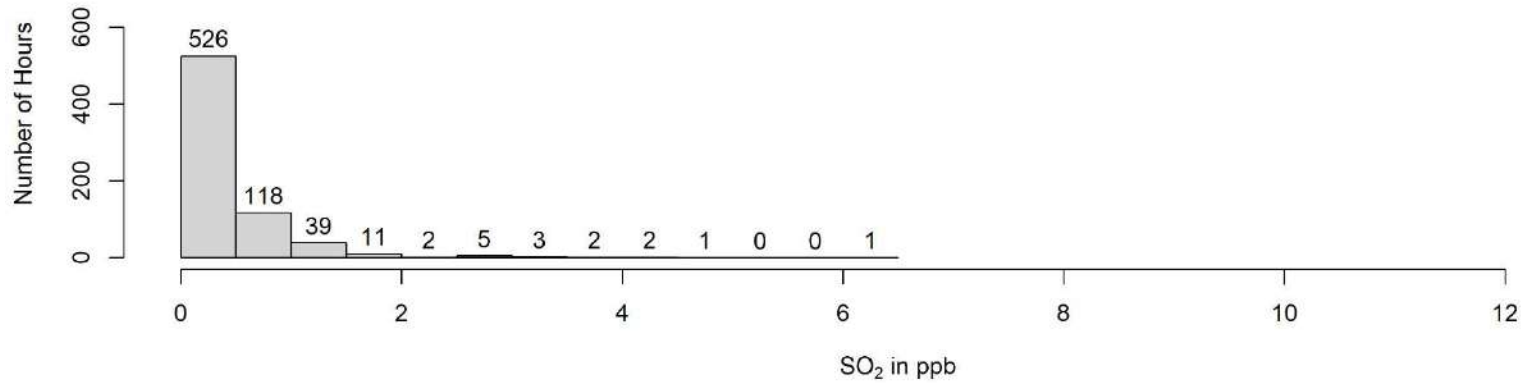
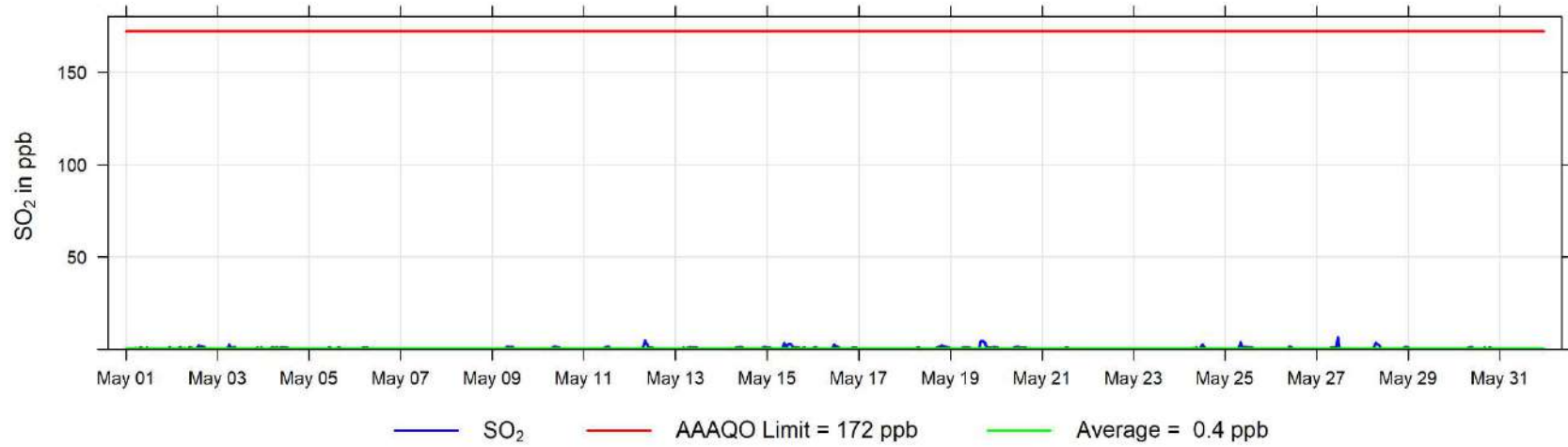
4 Grande Prairie - Henry Pirker Charts

The following pages include the charts and histograms for Henry Pirker Station in Grande Prairie

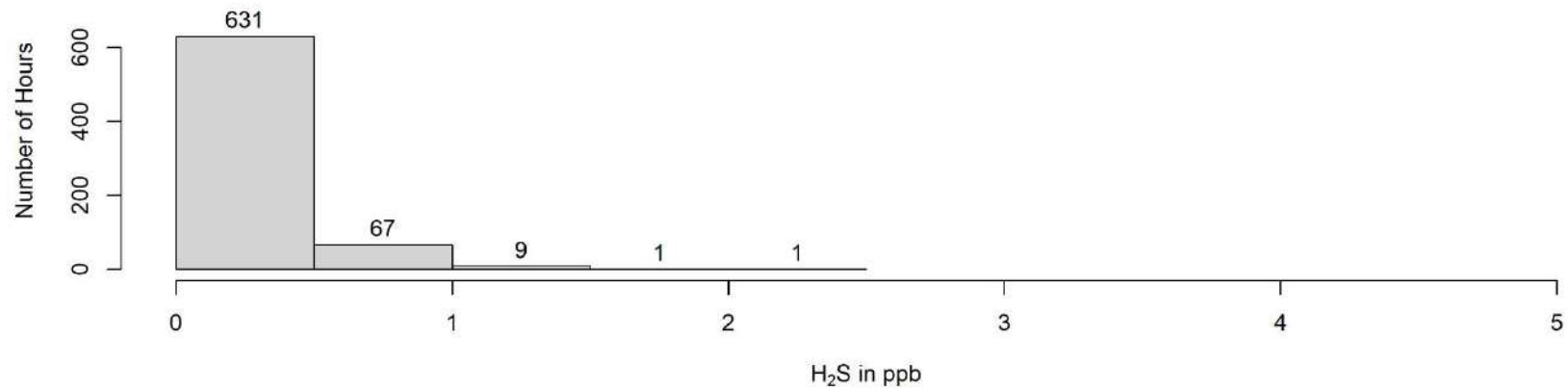
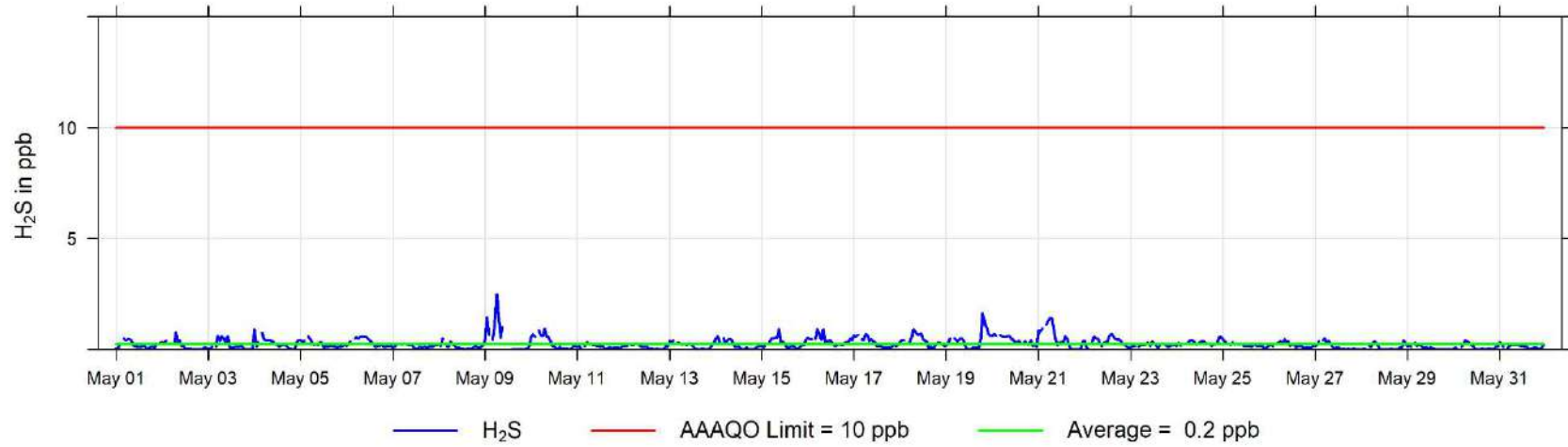
May 2023 Concentration Readings at Henry Pirker Station



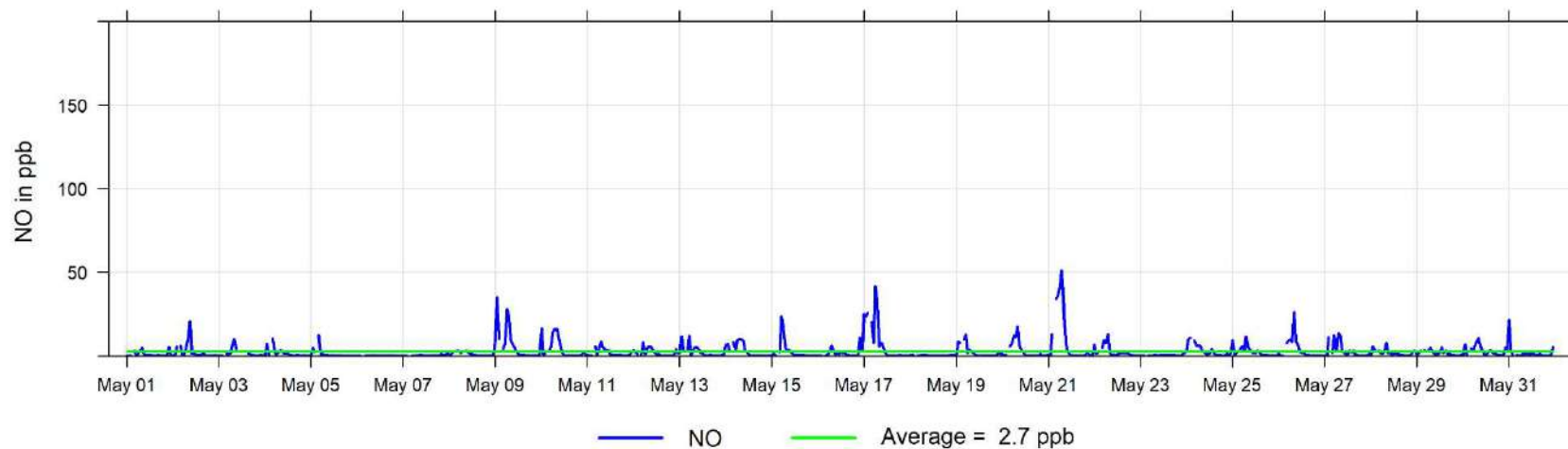
May 2023 Hourly Concentration Readings of SO₂ (in ppb) at Henry Pirker



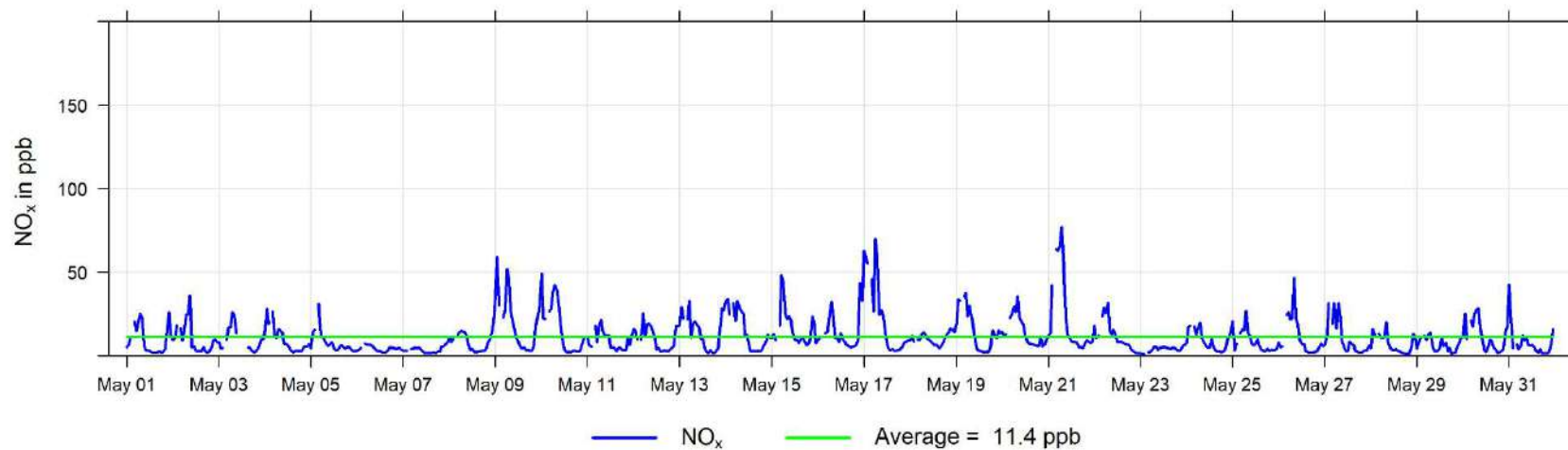
May 2023 Hourly Concentration Readings of H₂S (in ppb) at Henry Pirker



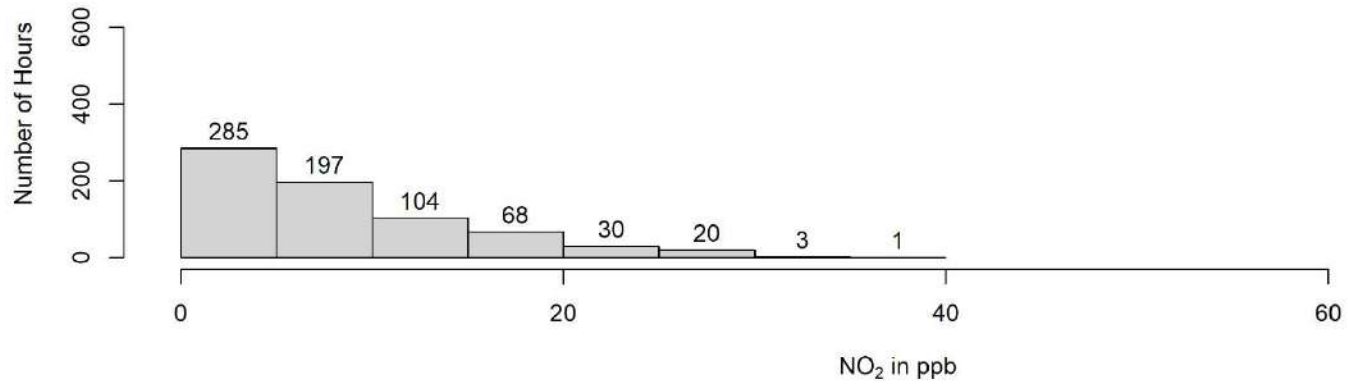
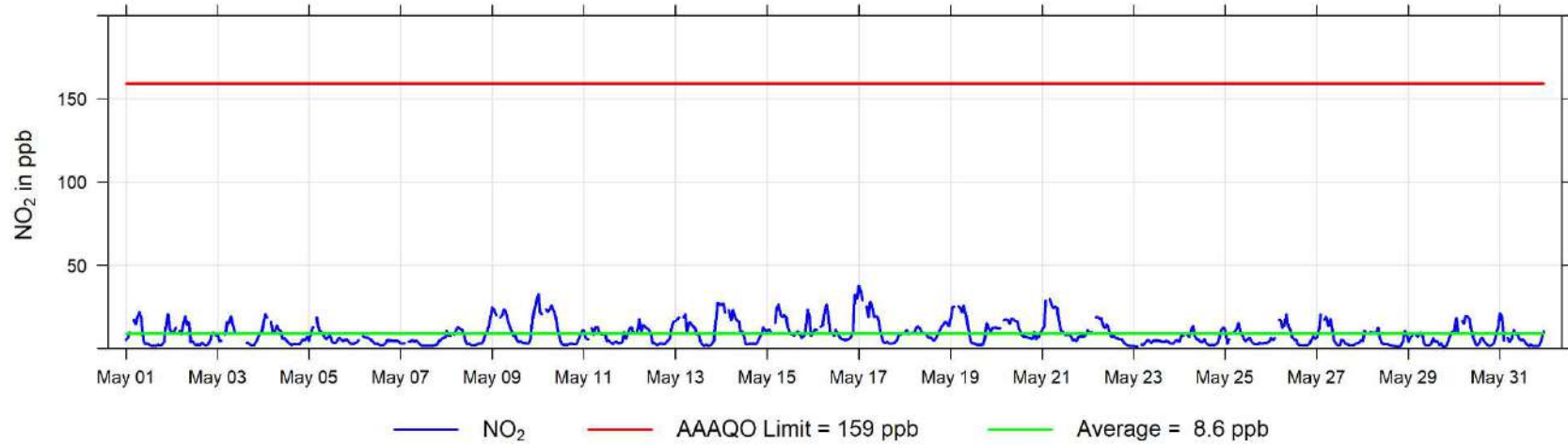
May 2023 Hourly Concentration Readings of NO (in ppb) at Henry Pirker



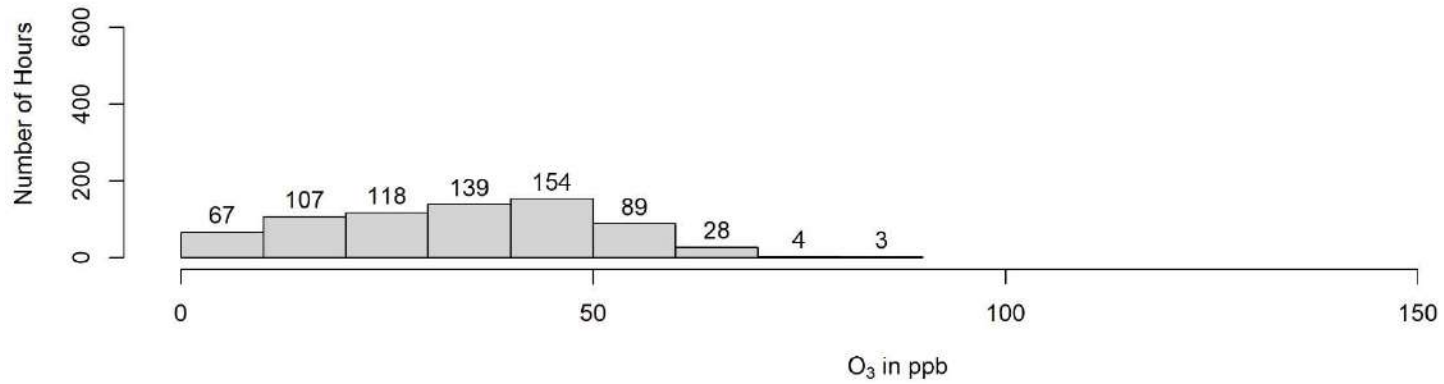
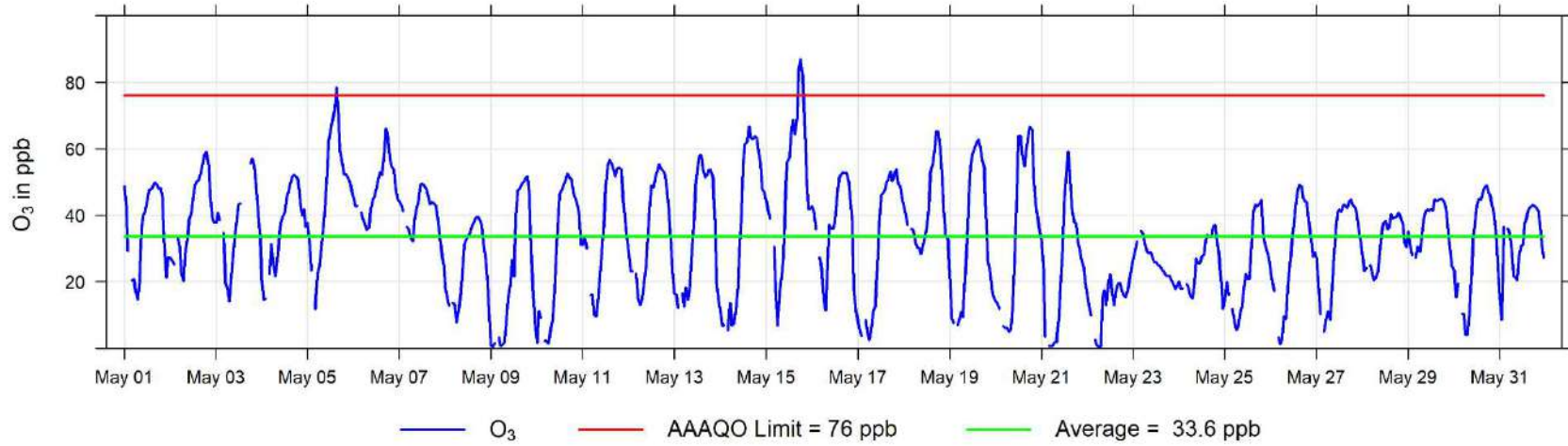
May 2023 Hourly Concentration Readings of NO_x (in ppb) at Henry Pirker



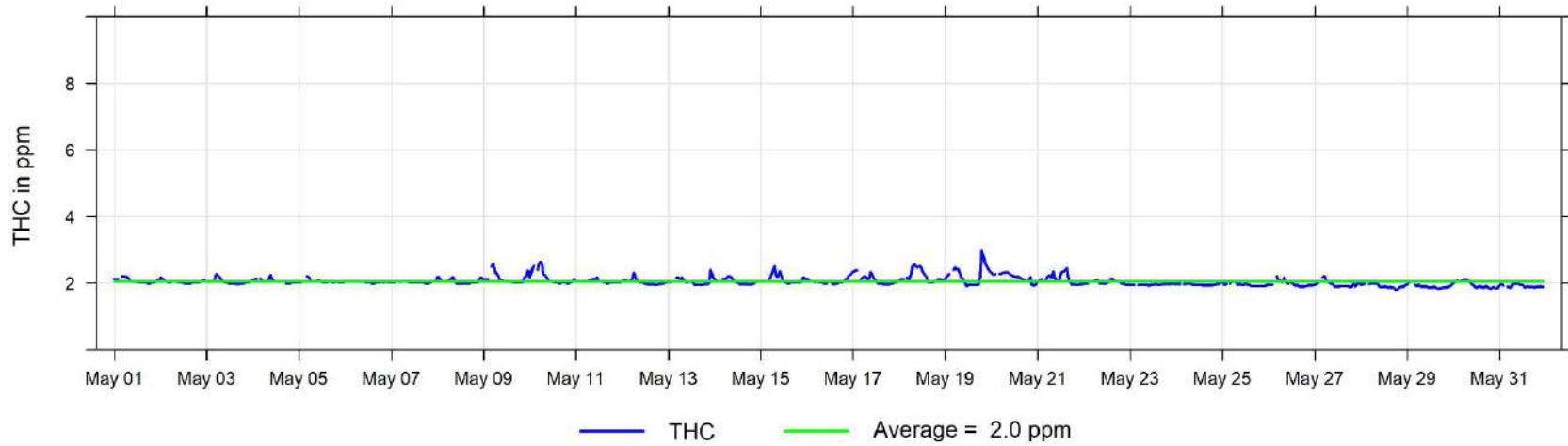
May 2023 Hourly Concentration Readings of NO₂ (in ppb) at Henry Pirker



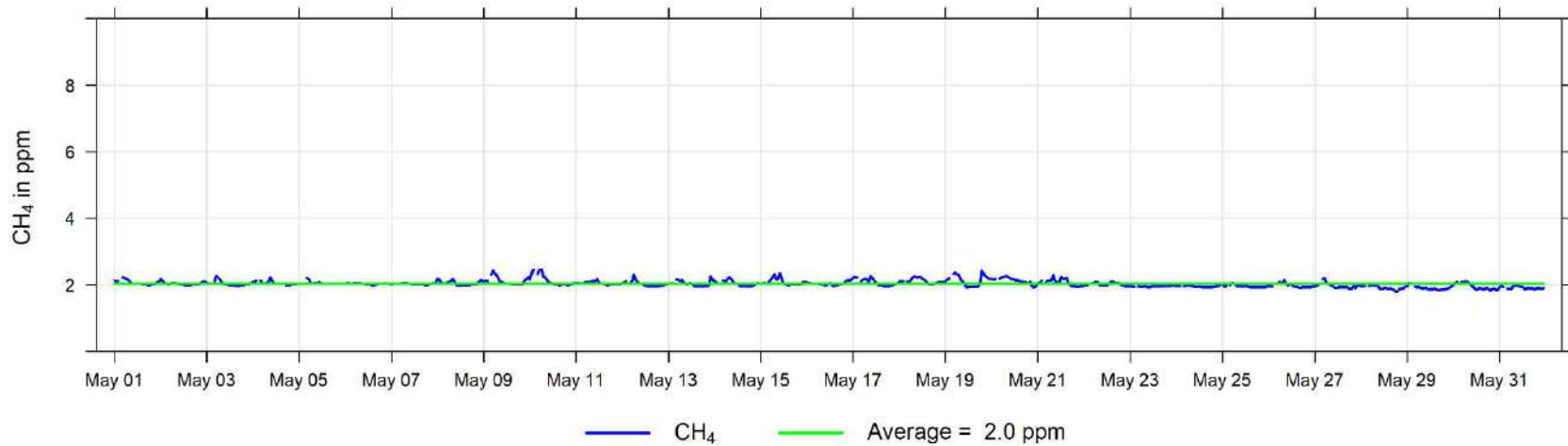
May 2023 Hourly Concentration Readings of O₃ (in ppb) at Henry Pirker



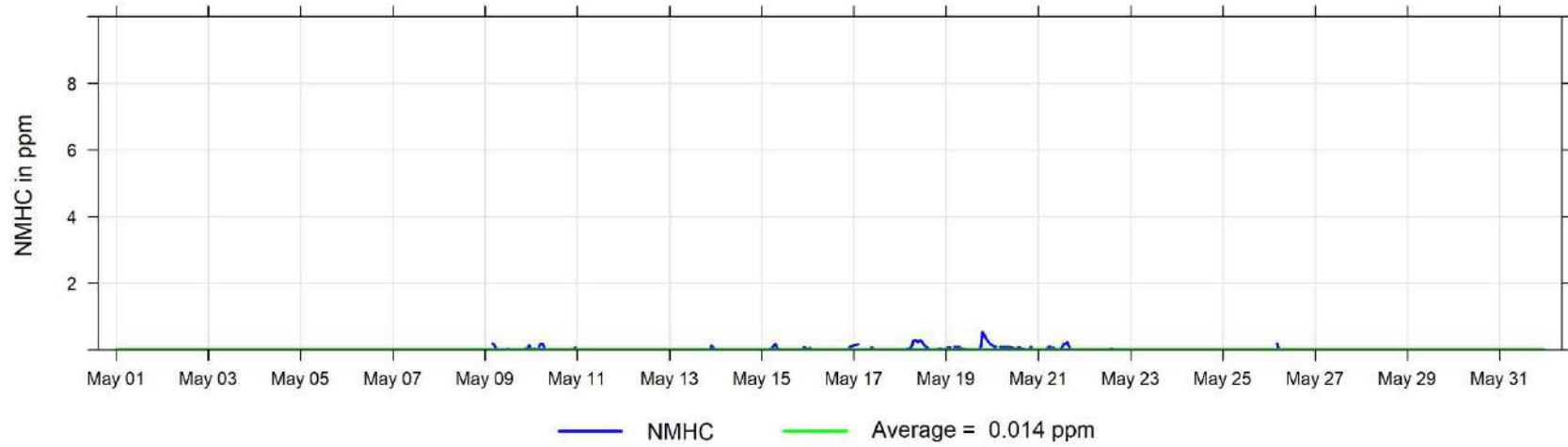
May 2023 Hourly Concentration Readings of THC (in ppm) at Henry Pirker



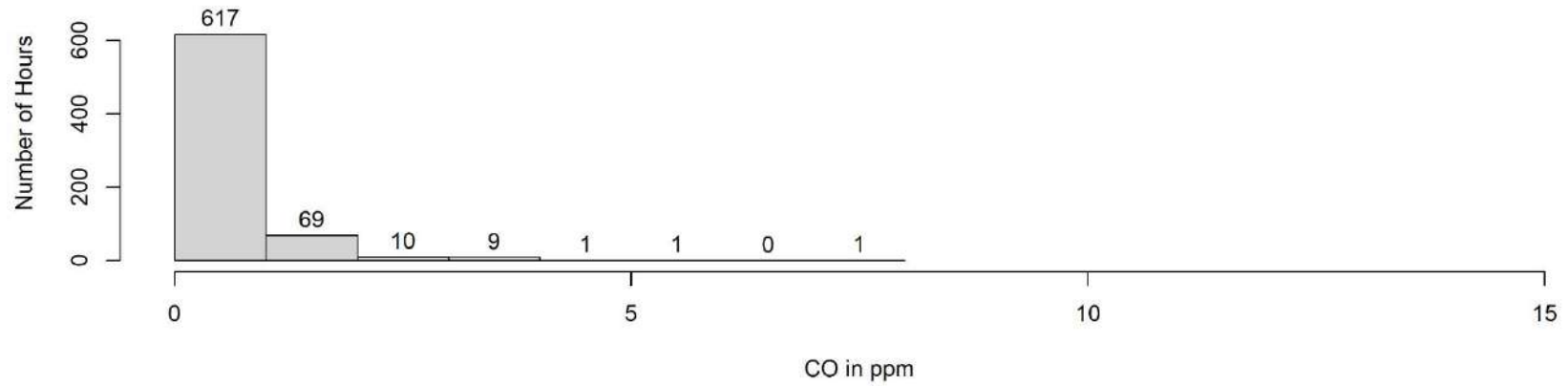
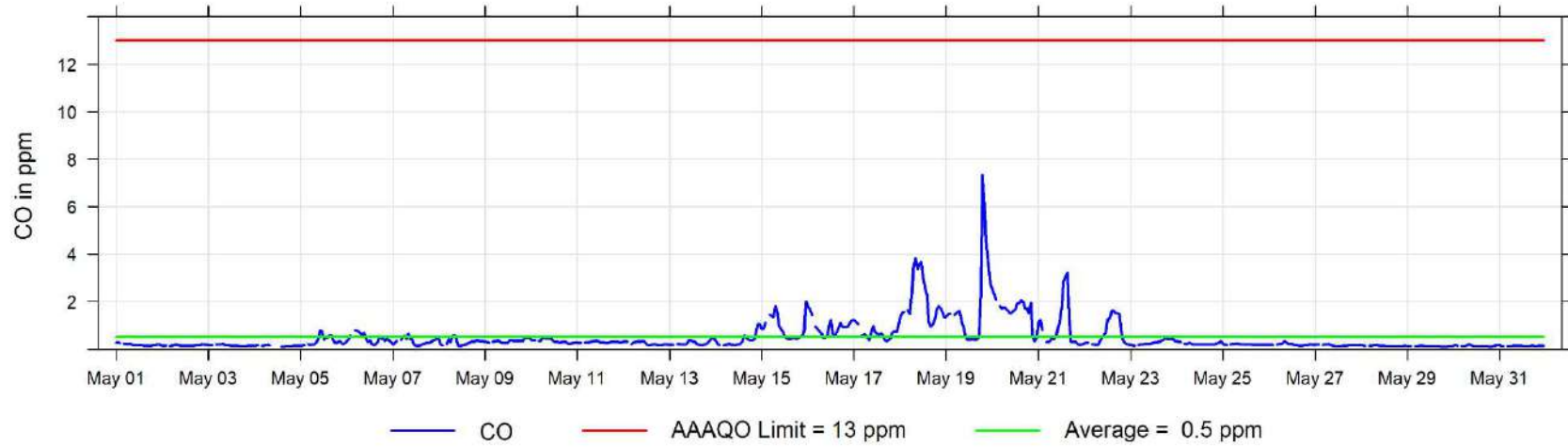
May 2023 Hourly Concentration Readings of CH₄ (in ppm) at Henry Pirker



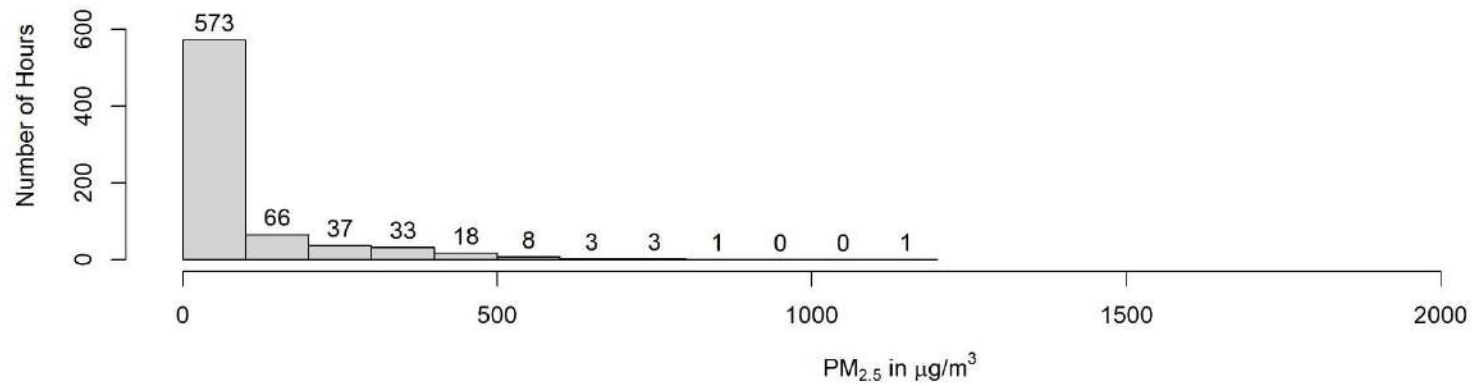
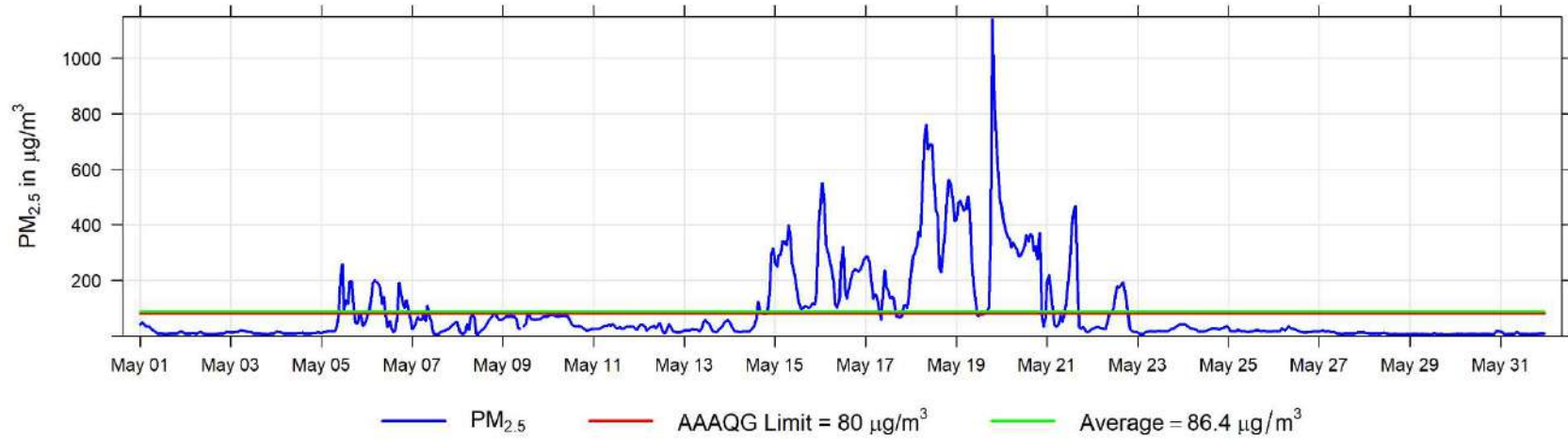
May 2023 Hourly Concentration Readings of NMHC (in ppm) at Henry Pirker



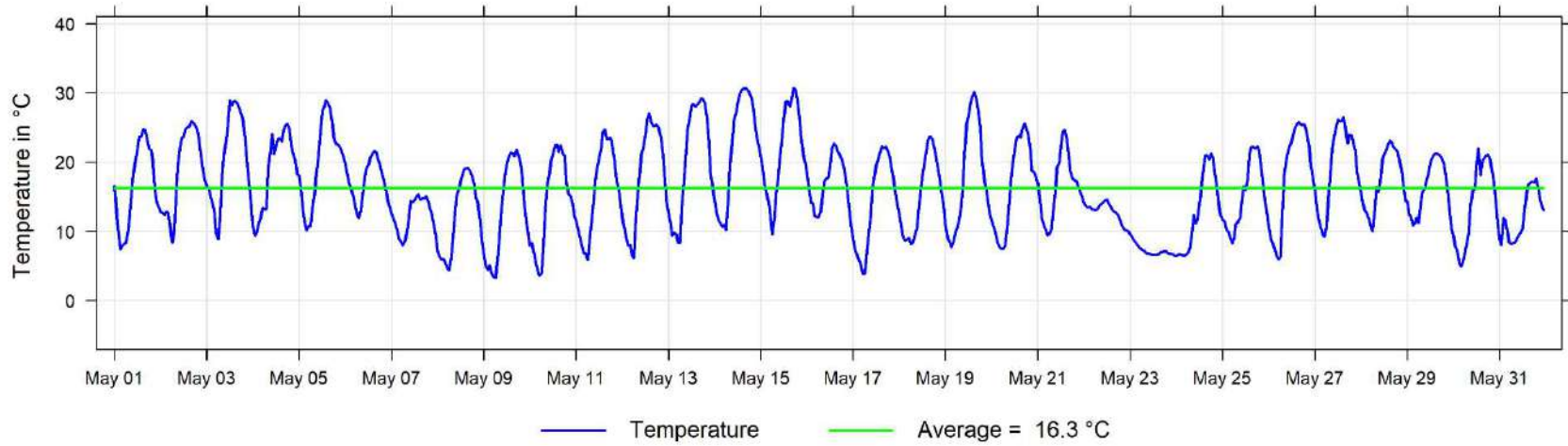
May 2023 Hourly Concentration Readings of CO (in ppm) at Henry Pirker



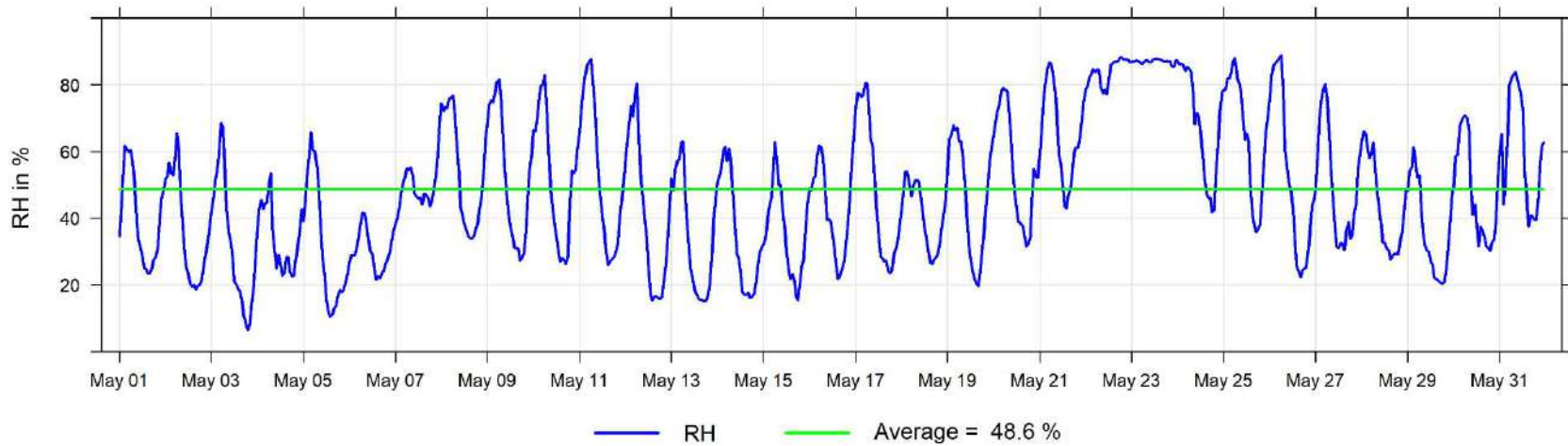
May 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Henry Pirker



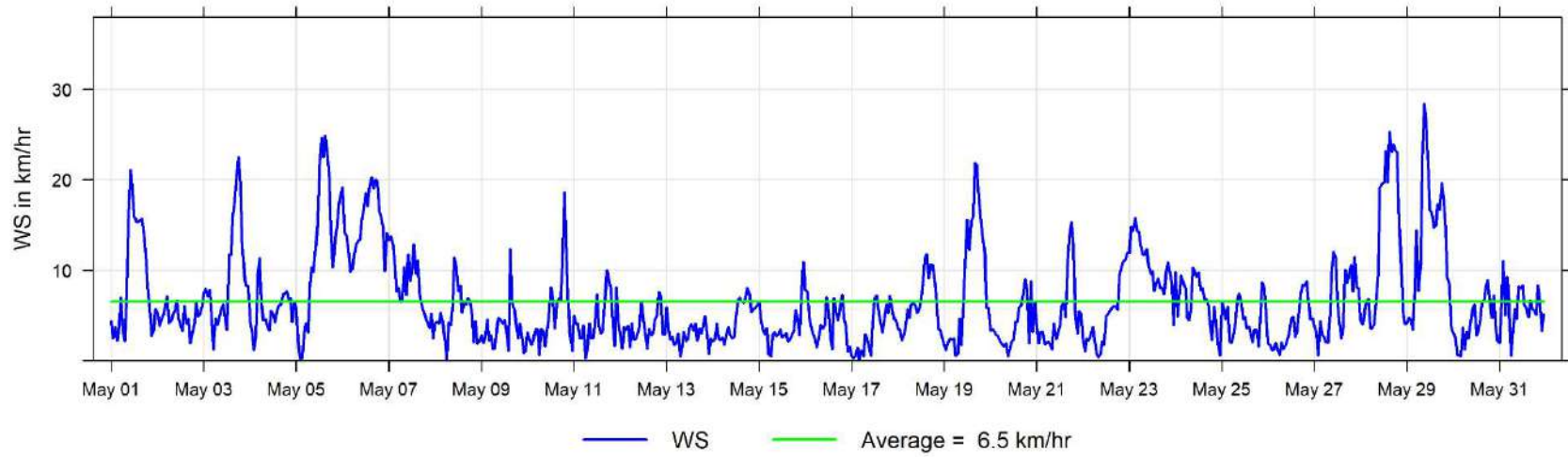
May 2023 Hourly Temperature Readings (in °C) at Henry Pirker



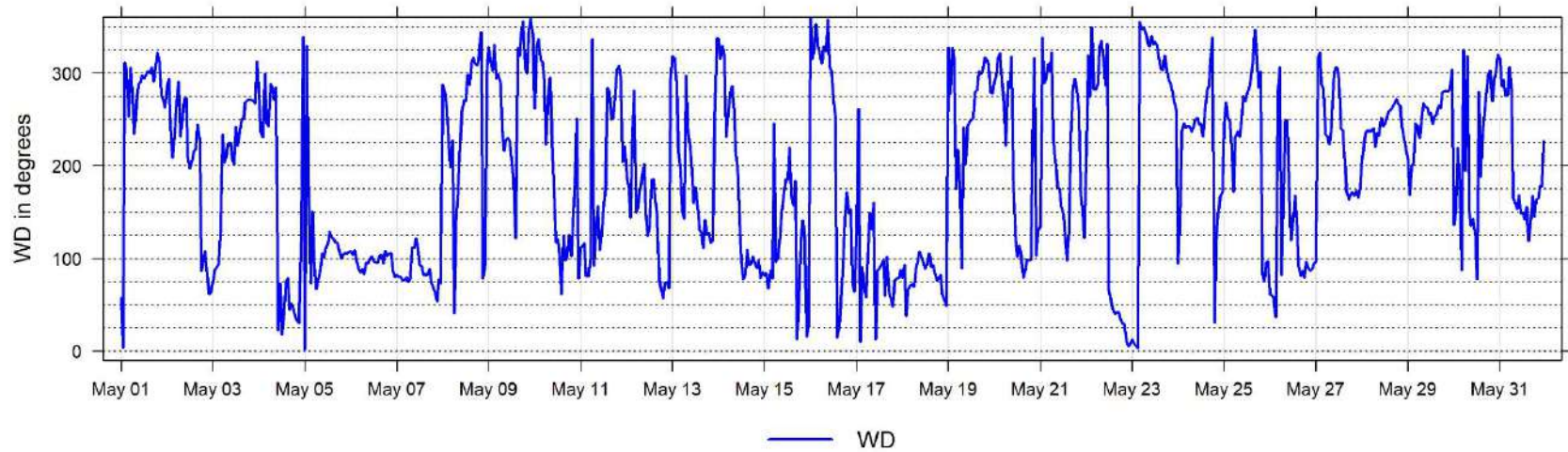
May 2023 Hourly Readings of Relative Humidity (in %) at Henry Pirker



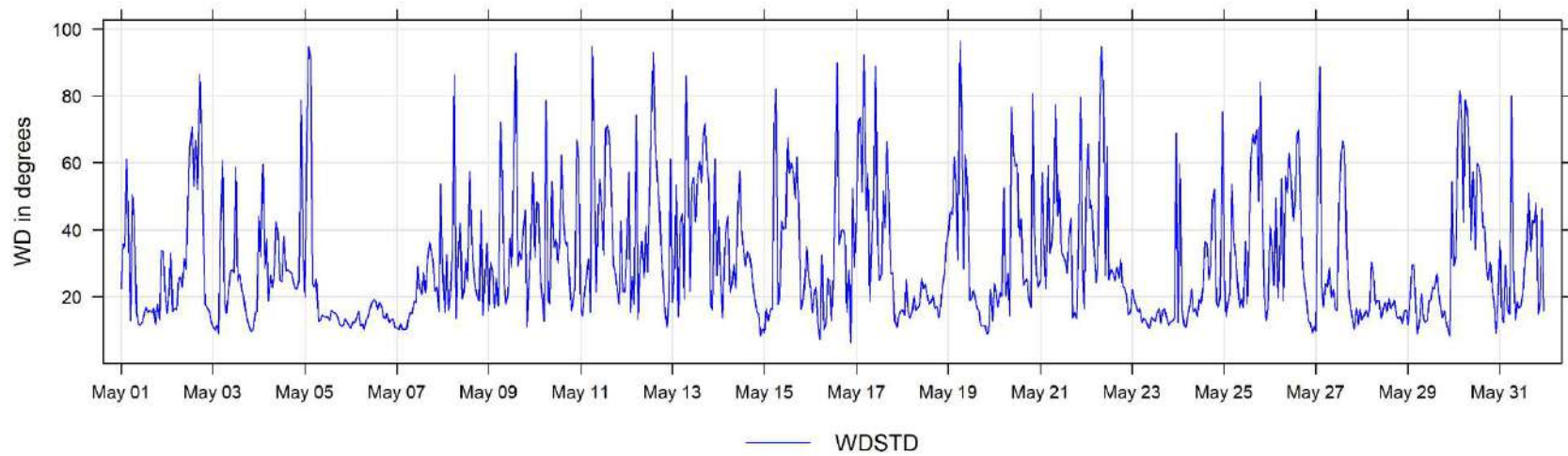
May 2023 Hourly Readings of Wind Speed (in km/hr) at Henry Pirker

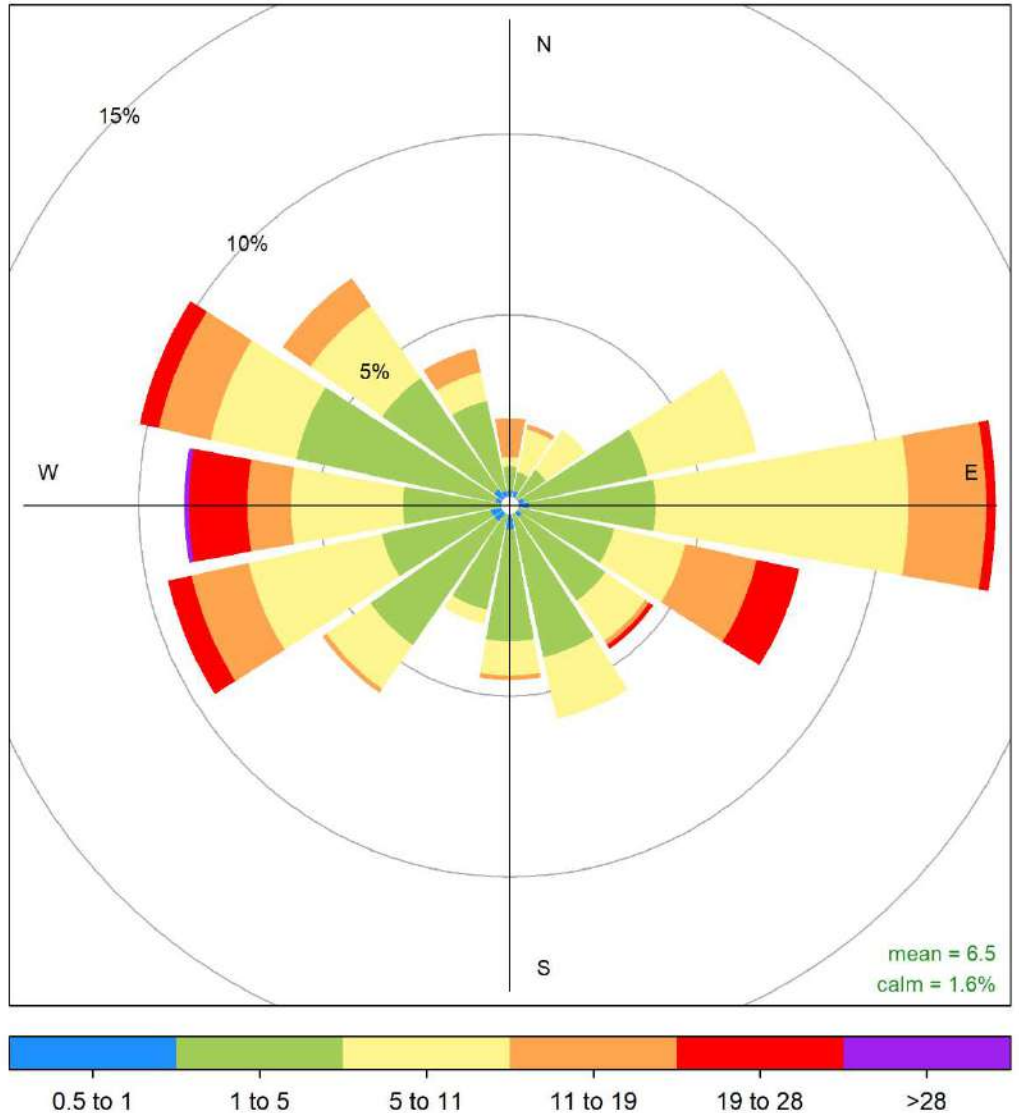


May 2023 Hourly Readings of Wind Direction (in degrees) at Henry Pirker



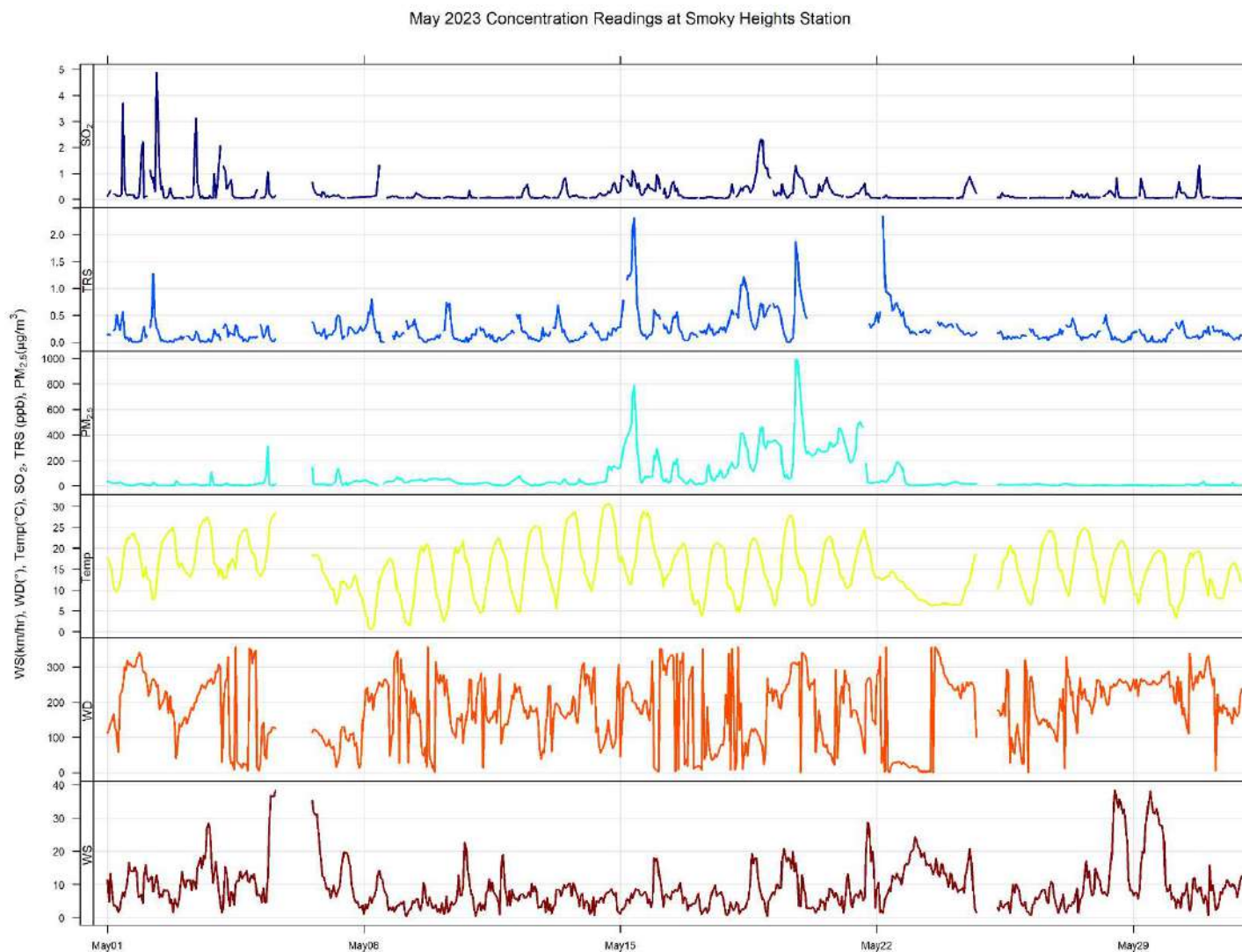
May 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Henry Pirker



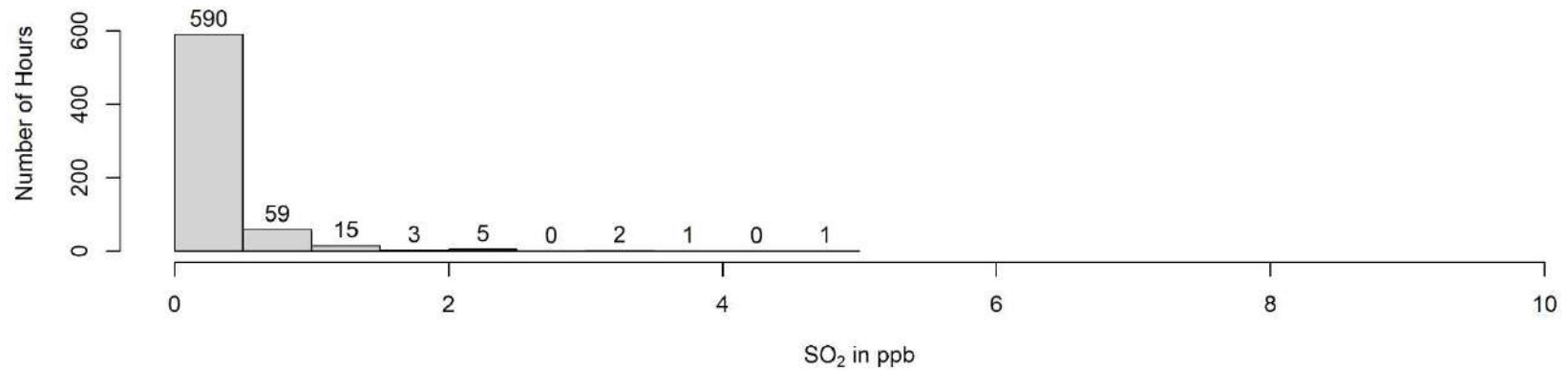
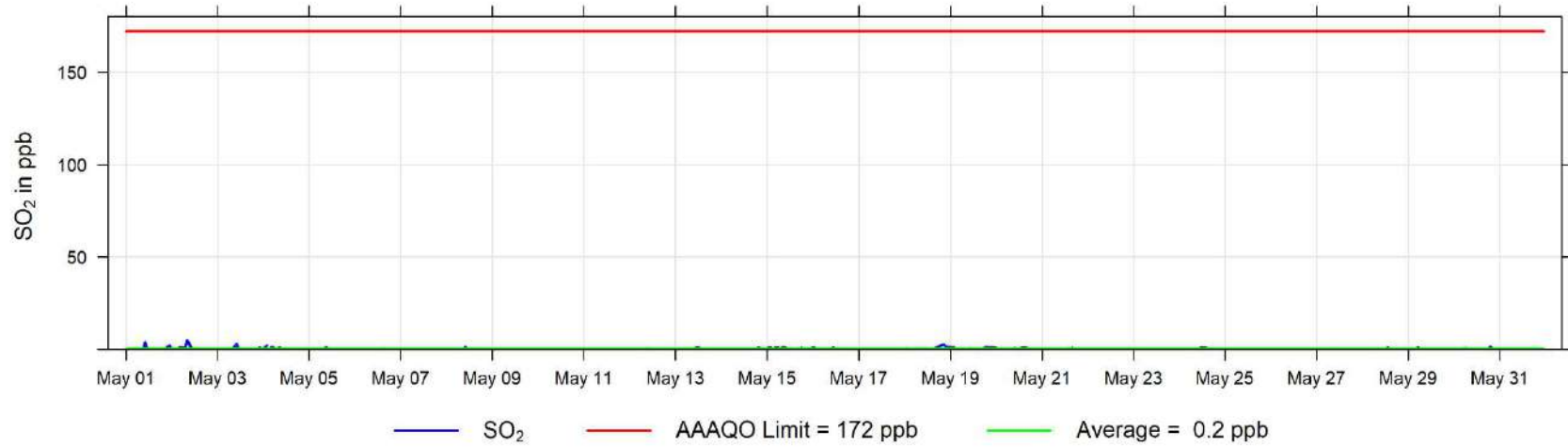


5 Smoky Heights Charts

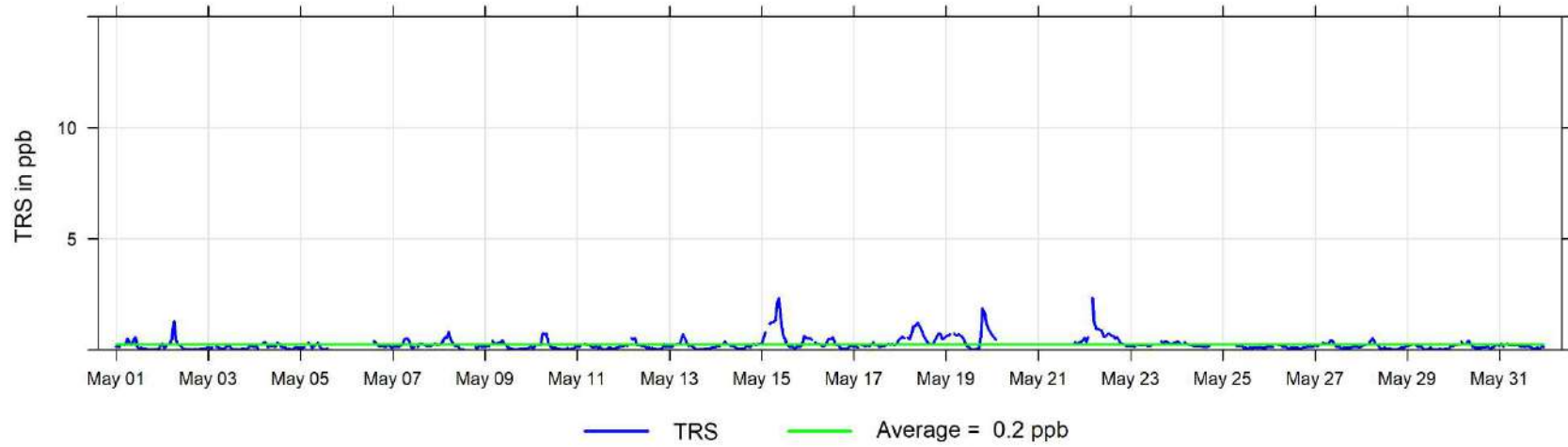
The following pages include the charts and histograms for Smoky Heights Station



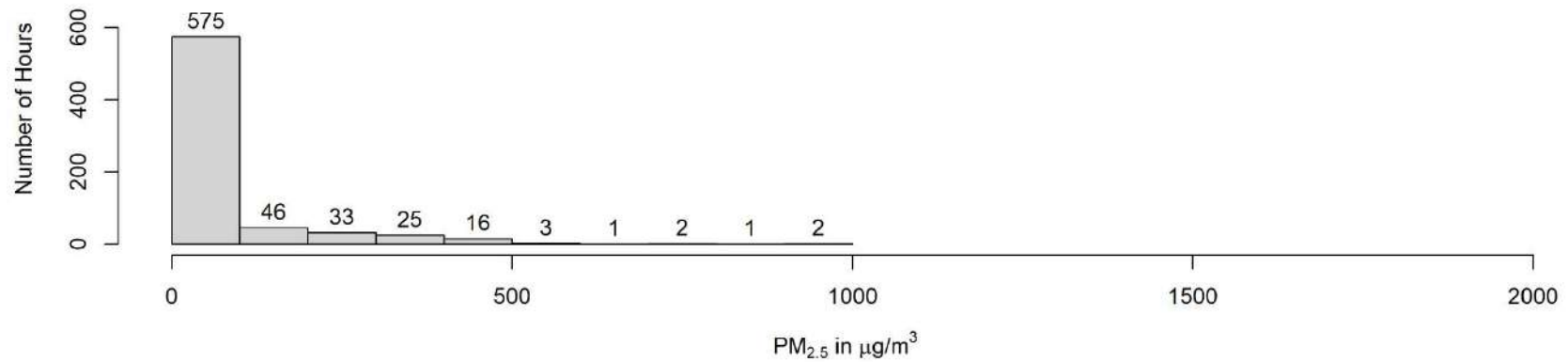
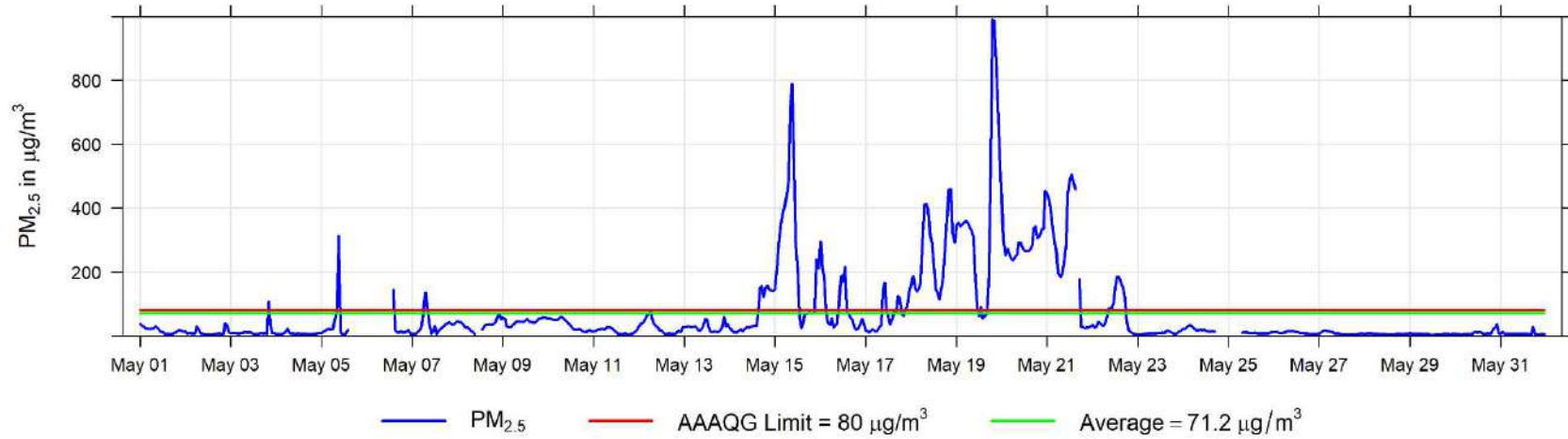
May 2023 Hourly Concentration Readings of SO₂ (in ppb) at Smoky Heights



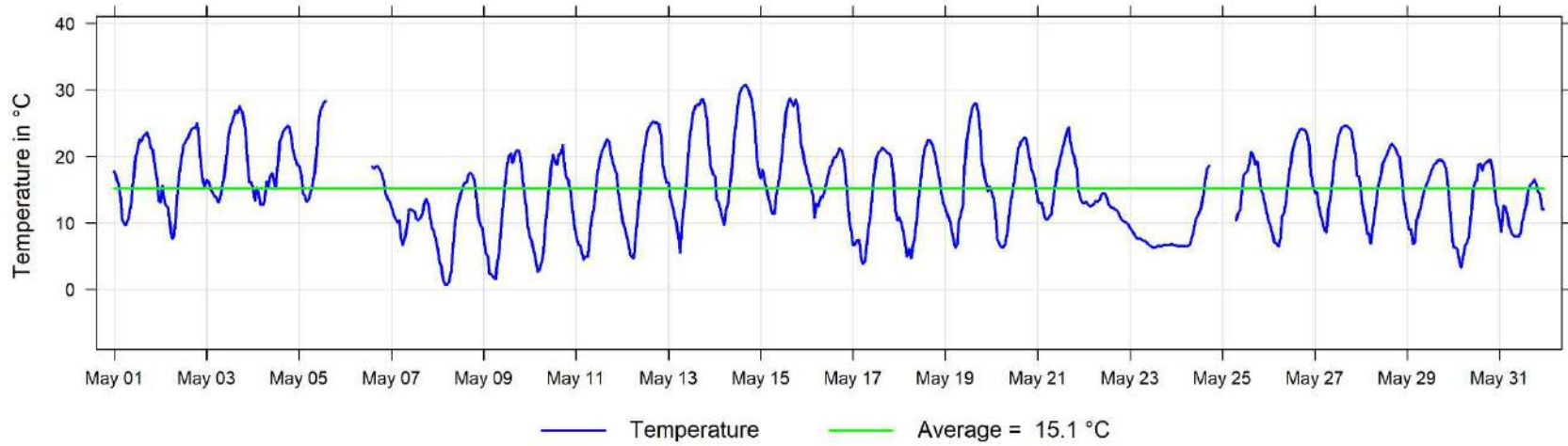
May 2023 Hourly Concentration Readings of TRS (in ppb) at Smoky Heights



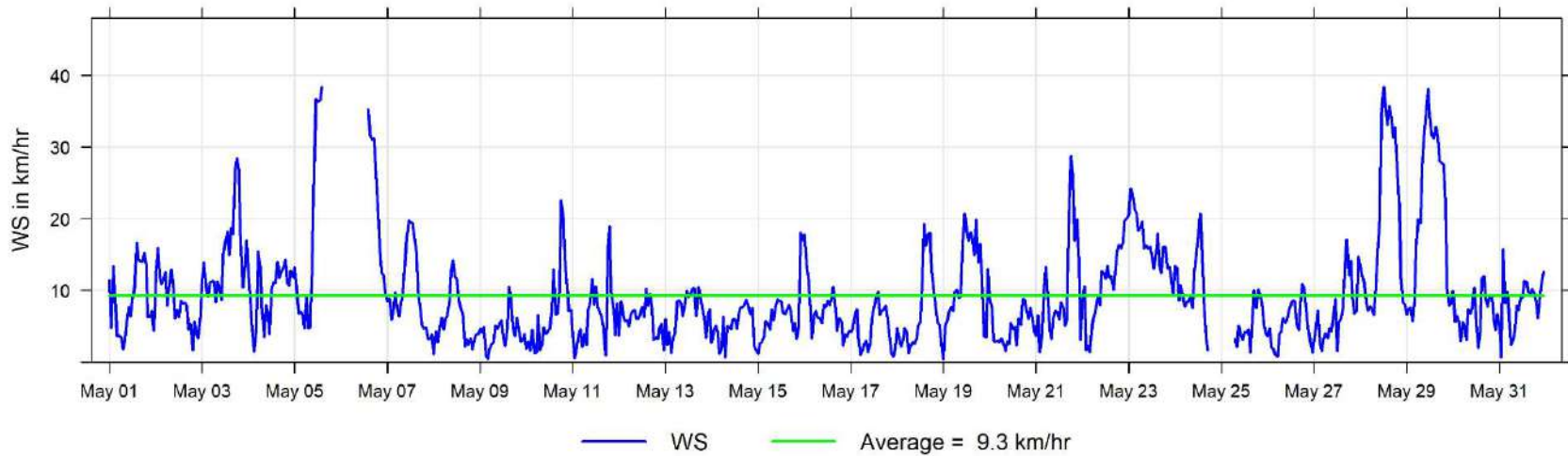
May 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Smoky Heights



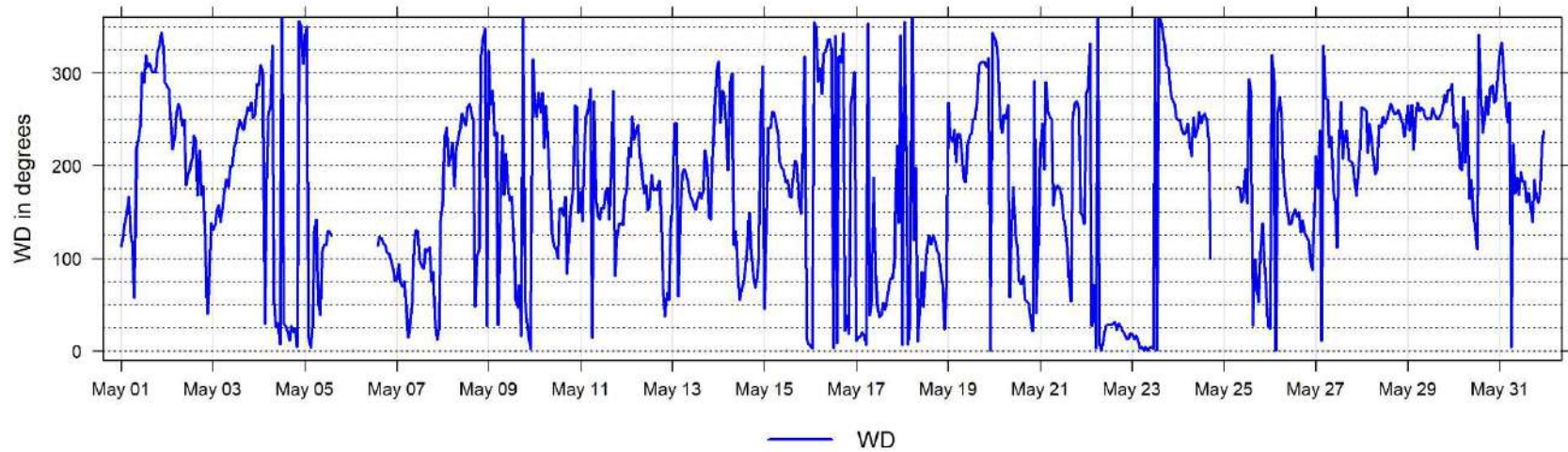
May 2023 Hourly Temperature Readings (in °C) at Smoky Heights



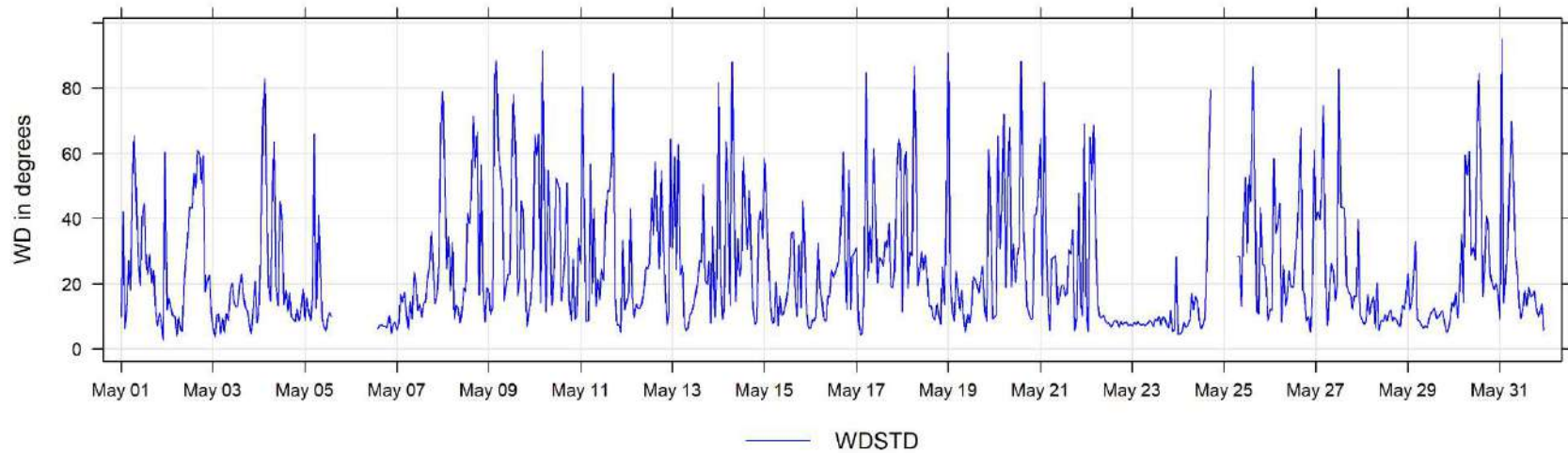
May 2023 Hourly Readings of Wind Speed (in km/hr) at Smoky Heights

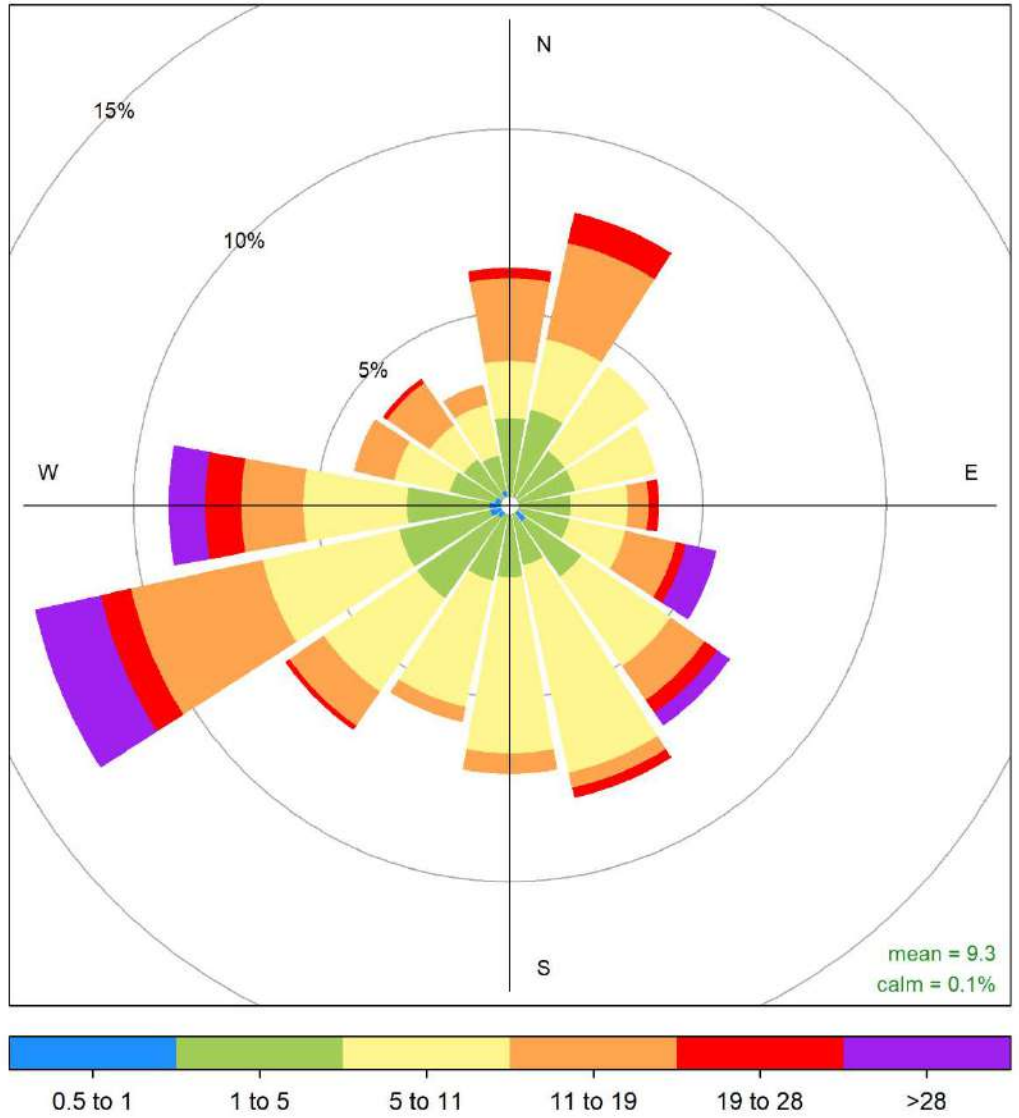


May 2023 Hourly Readings of Wind Direction (in degrees) at Smoky Heights



May 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Smoky Heights

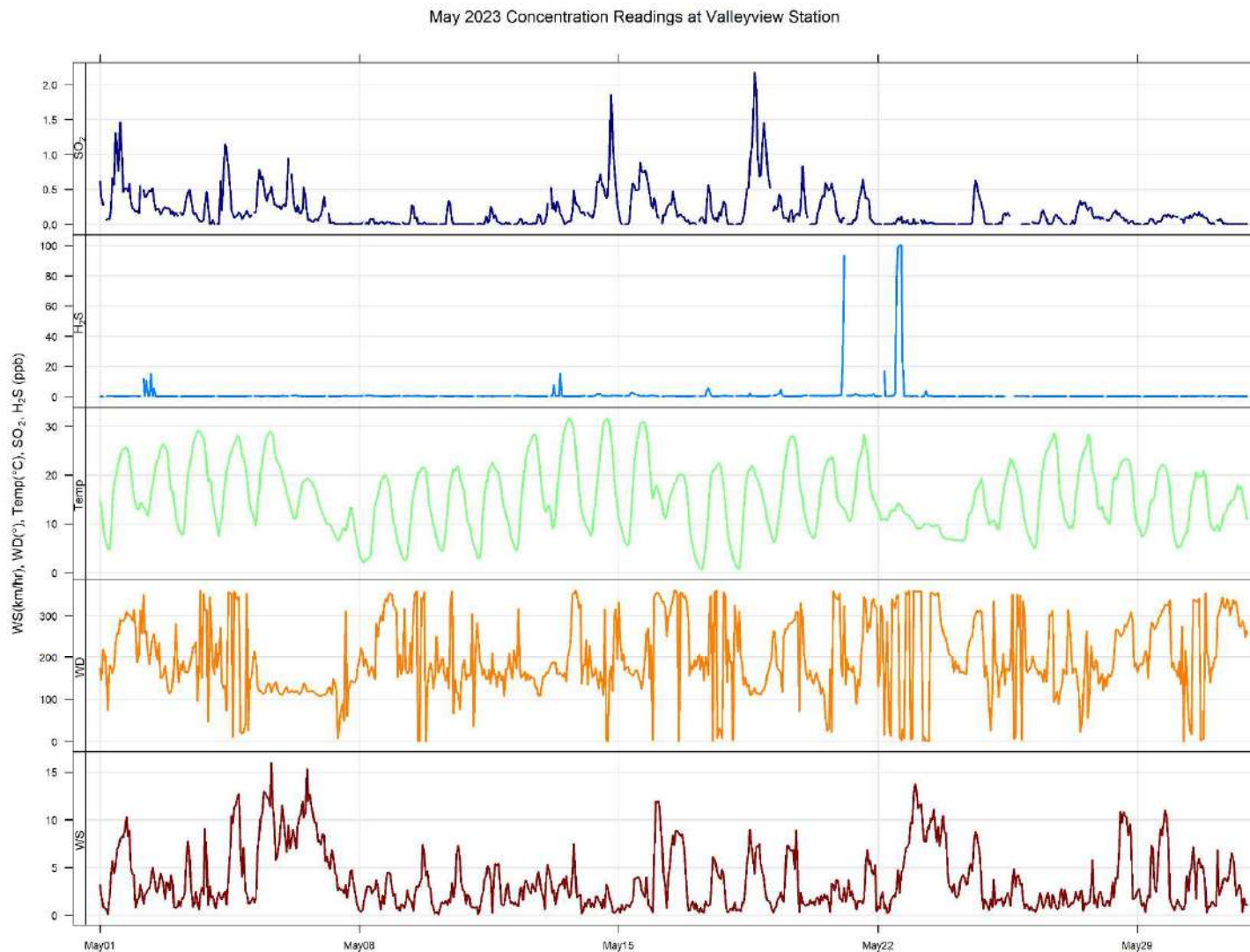




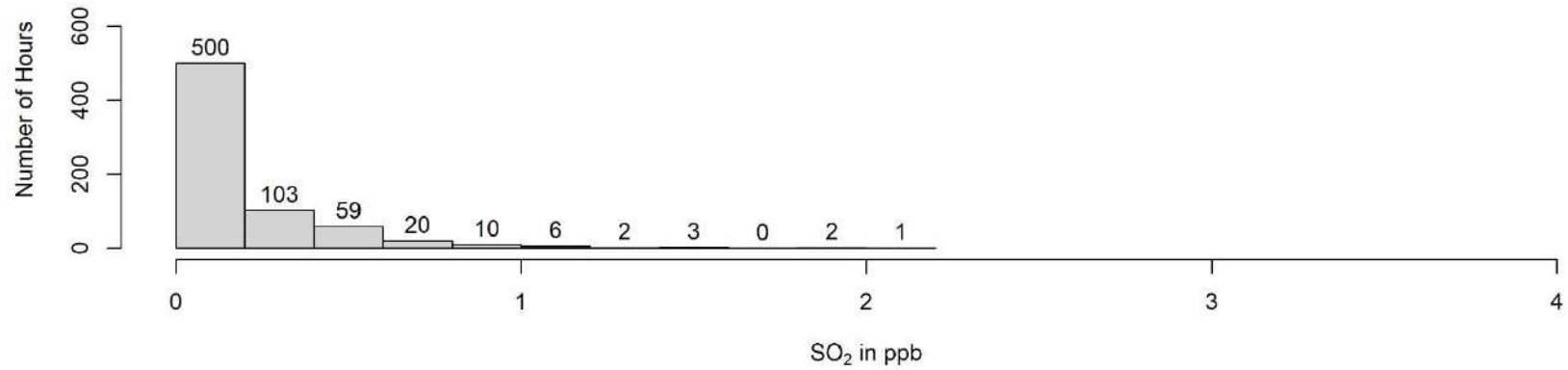
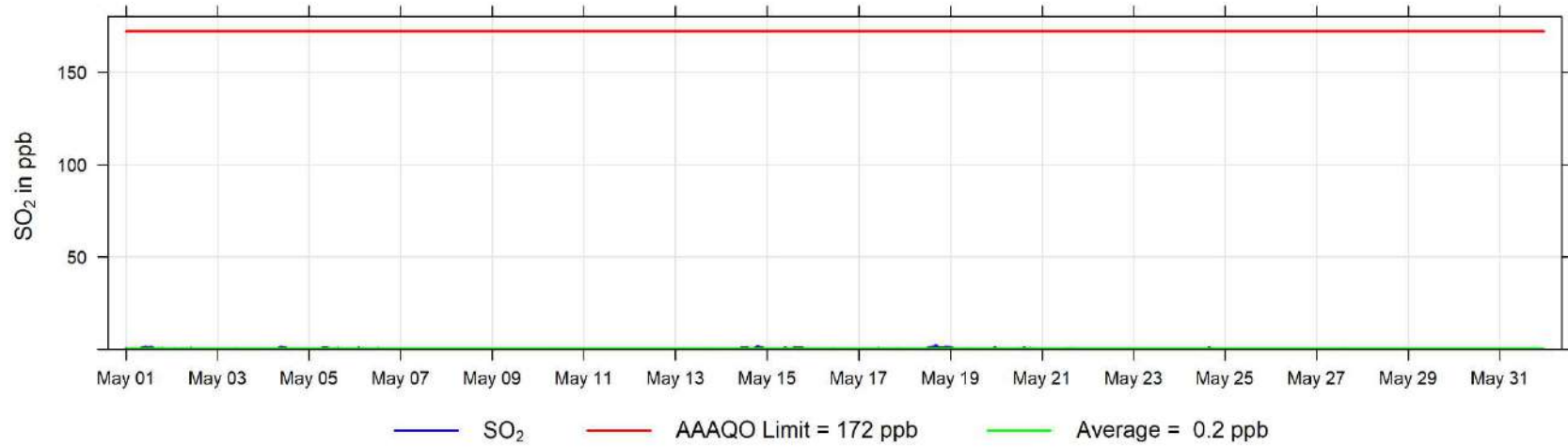
Smoky Heights May 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

6 Valleyview Charts

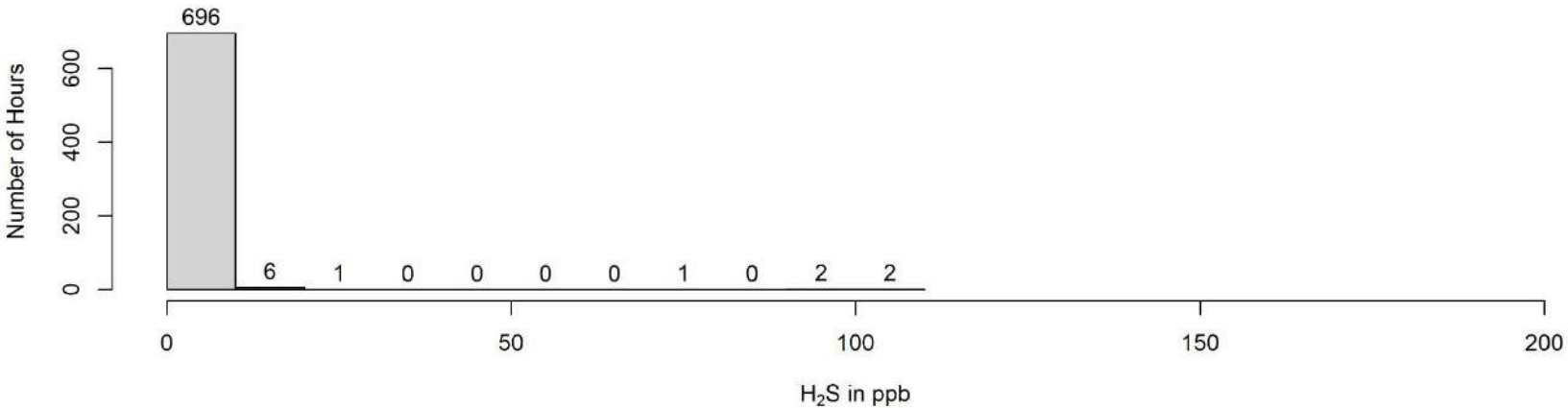
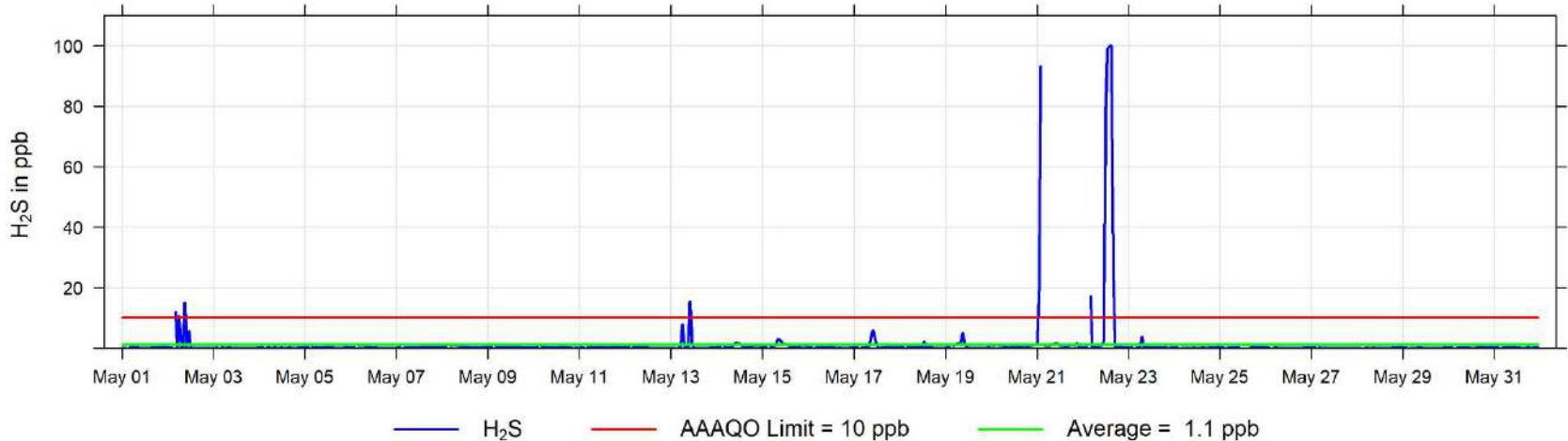
The following pages include the charts and histograms for Valleyview Station



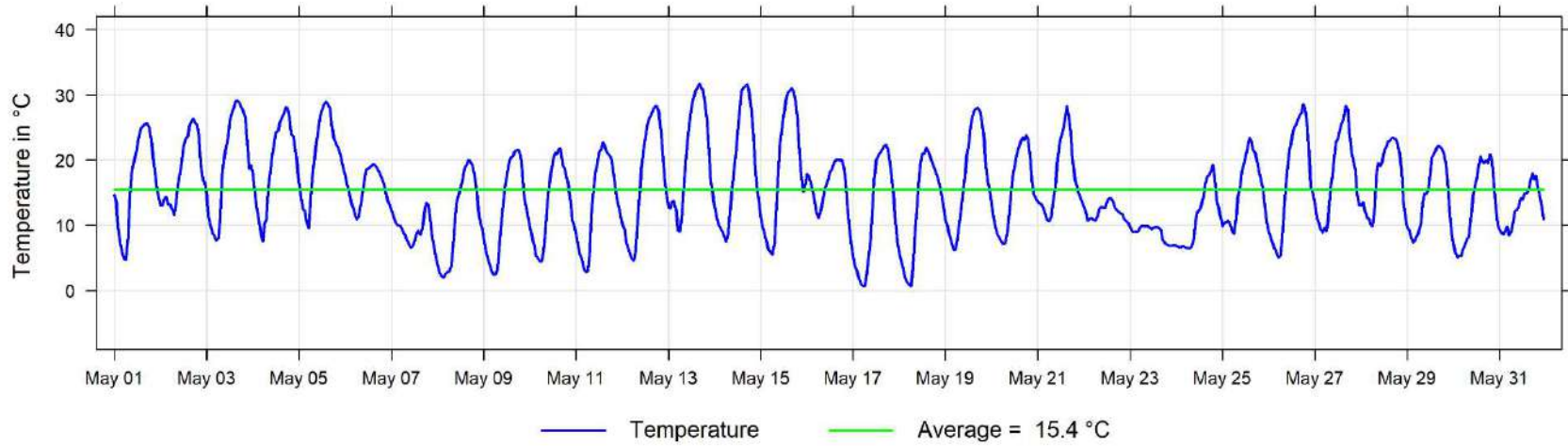
May 2023 Hourly Concentration Readings of SO₂ (in ppb) at Valleyview



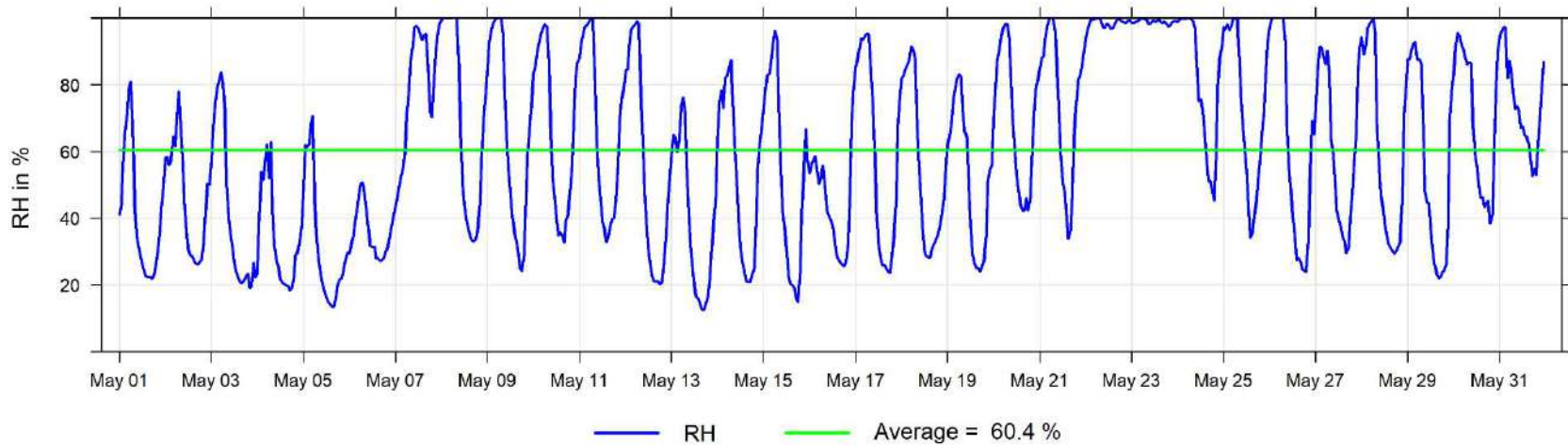
May 2023 Hourly Concentration Readings of H₂S (in ppb) at Valleyview



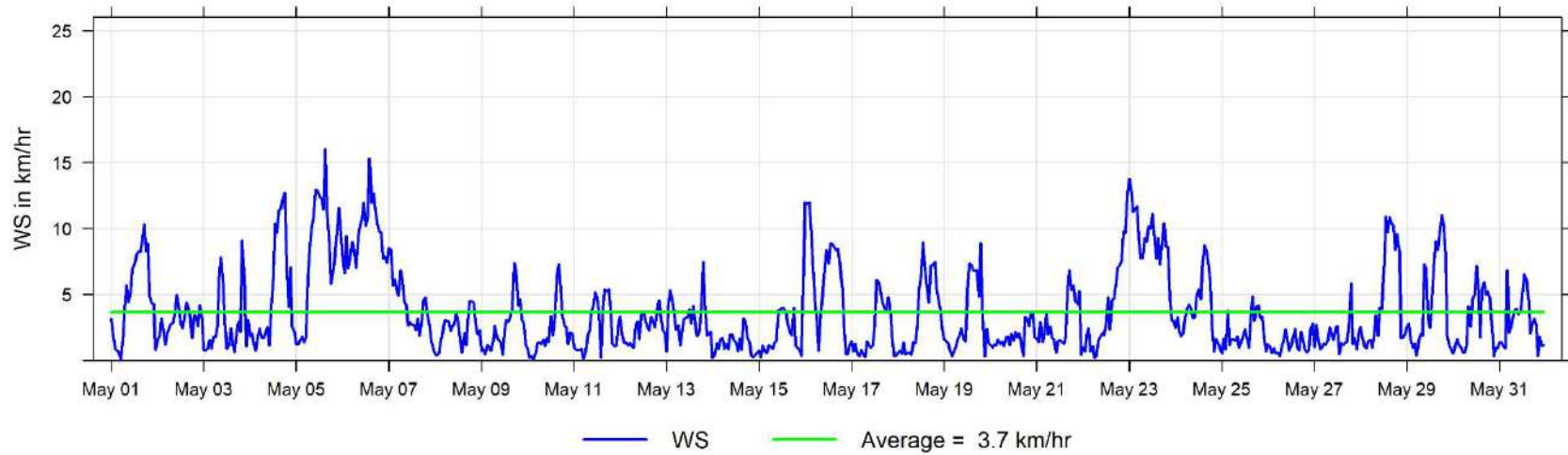
May 2023 Hourly Temperature Readings (in °C) at Valleyview



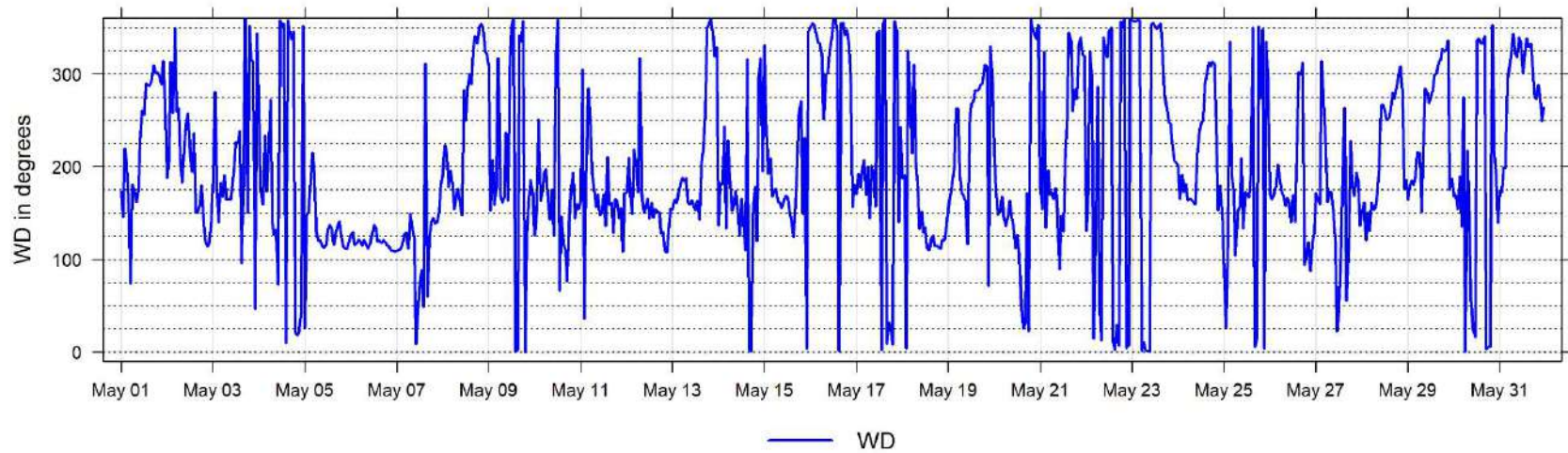
May 2023 Hourly Readings of Relative Humidity (in %) at Valleyview



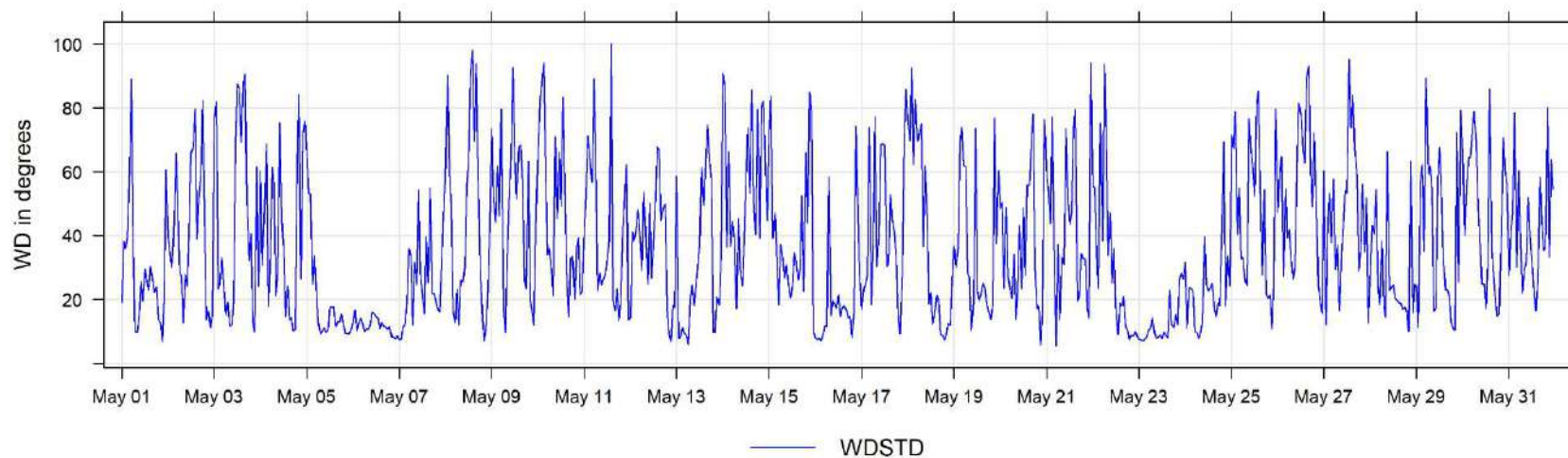
May 2023 Hourly Readings of Wind Speed (in km/hr) at Valleyview

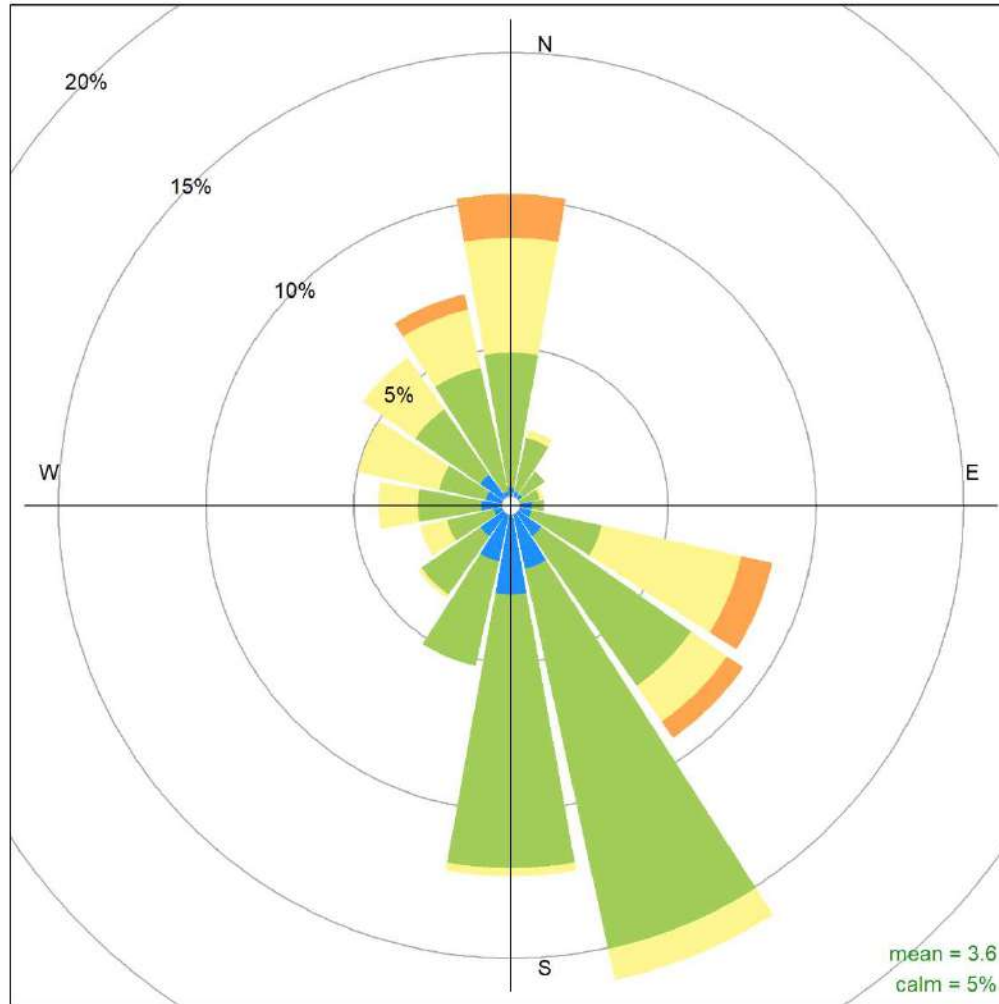


May 2023 Hourly Readings of Wind Direction (in degrees) at Valleyview



May 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Valleyview

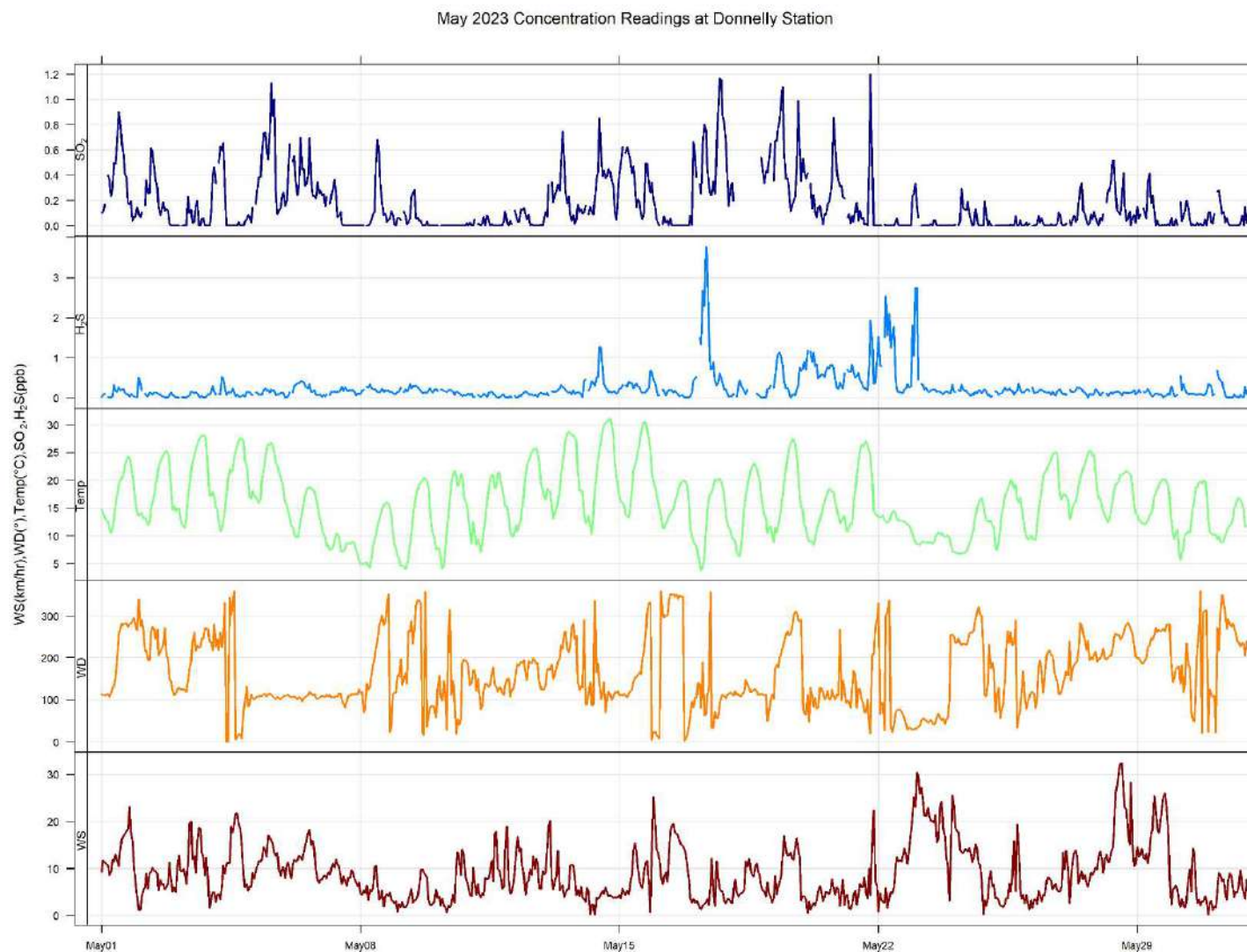




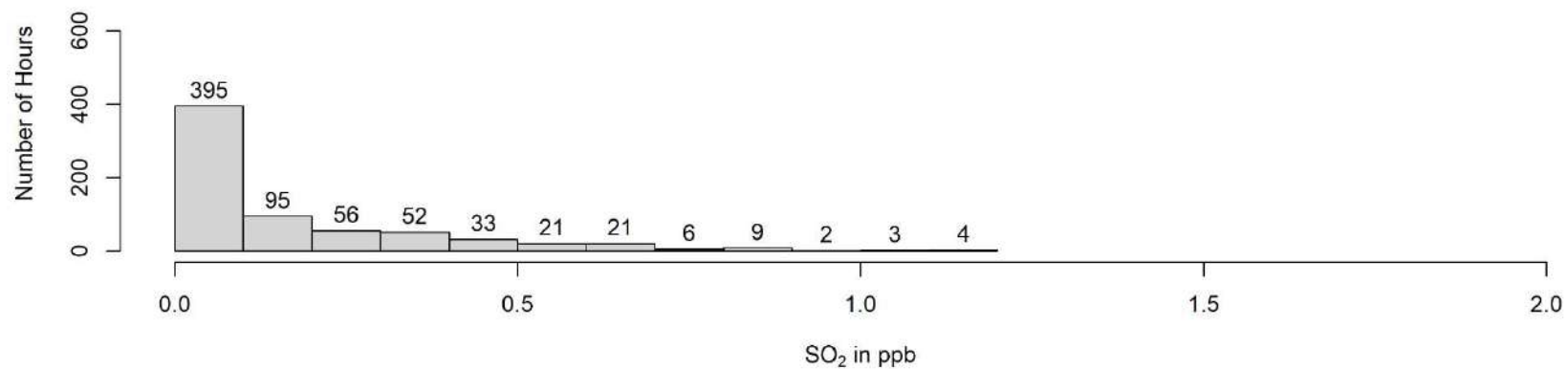
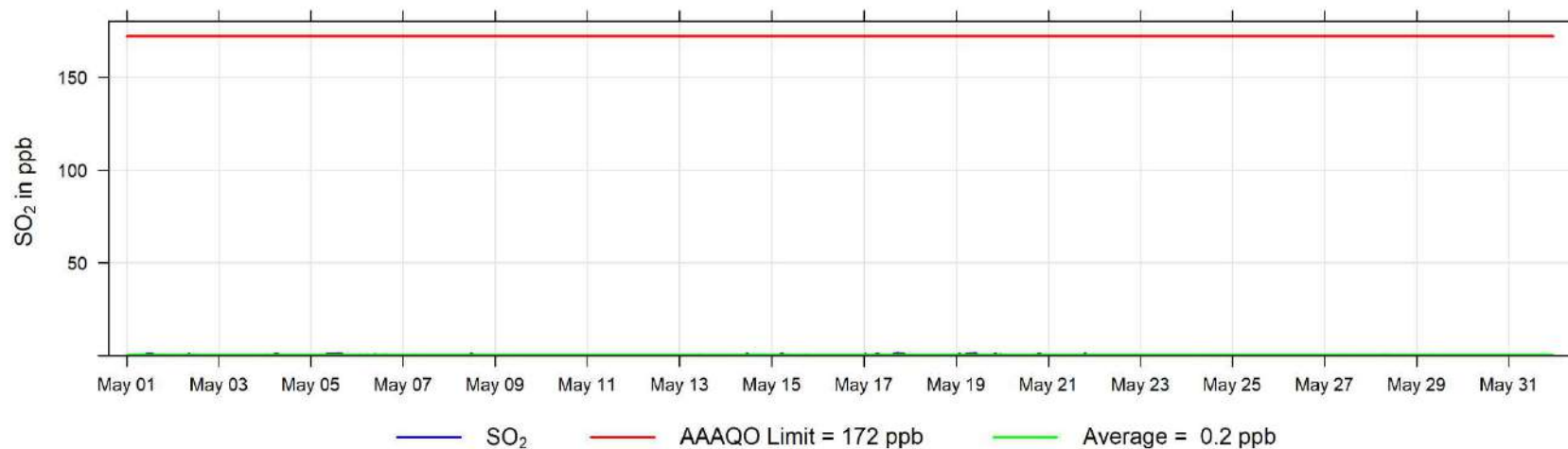
Valleyview May 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

7 Donnelly Charts

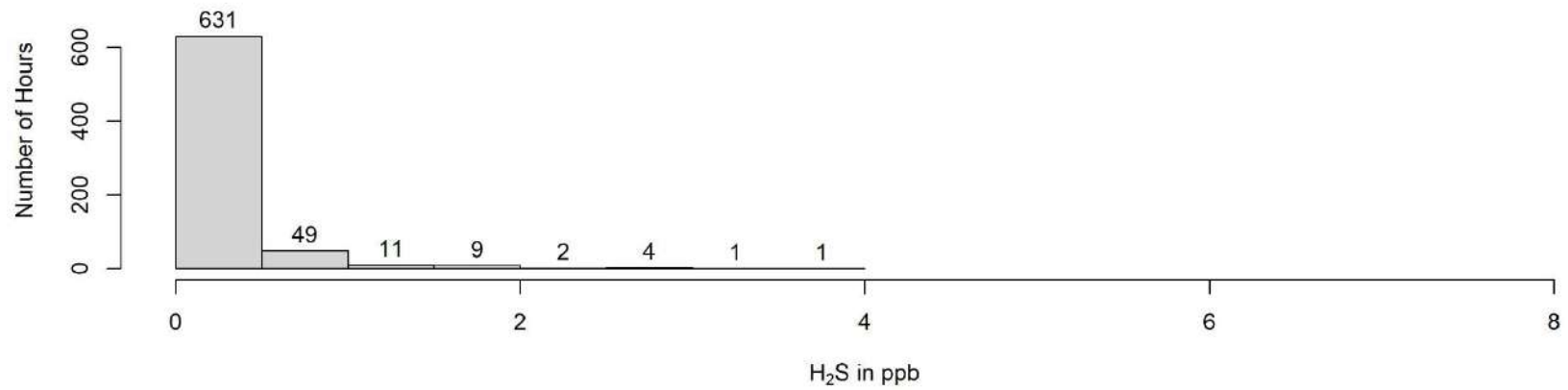
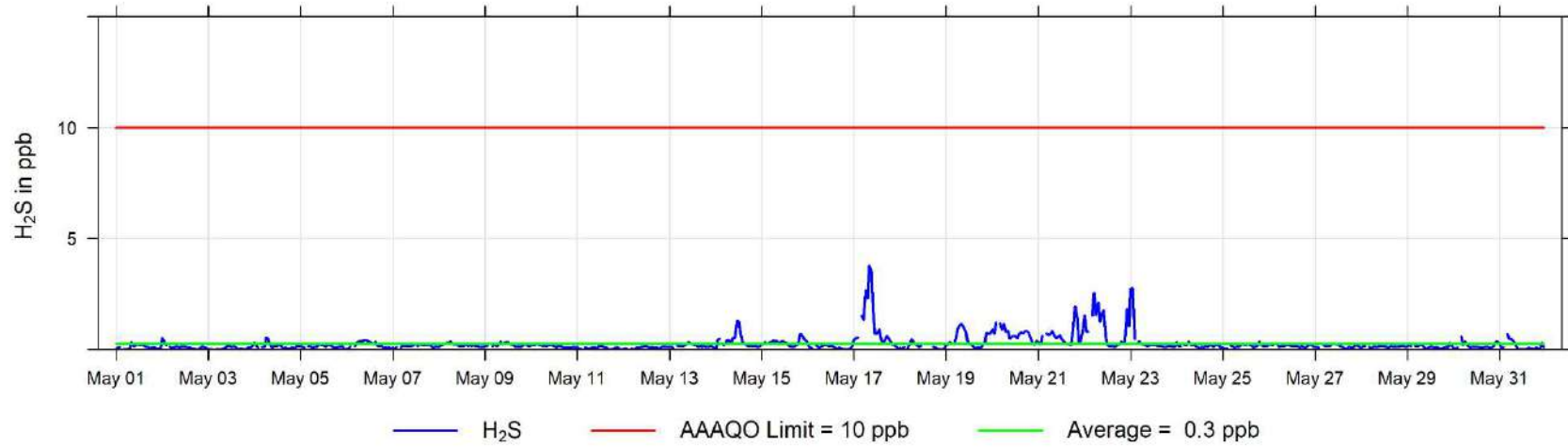
The following pages include the charts and histograms for Donnelly Station



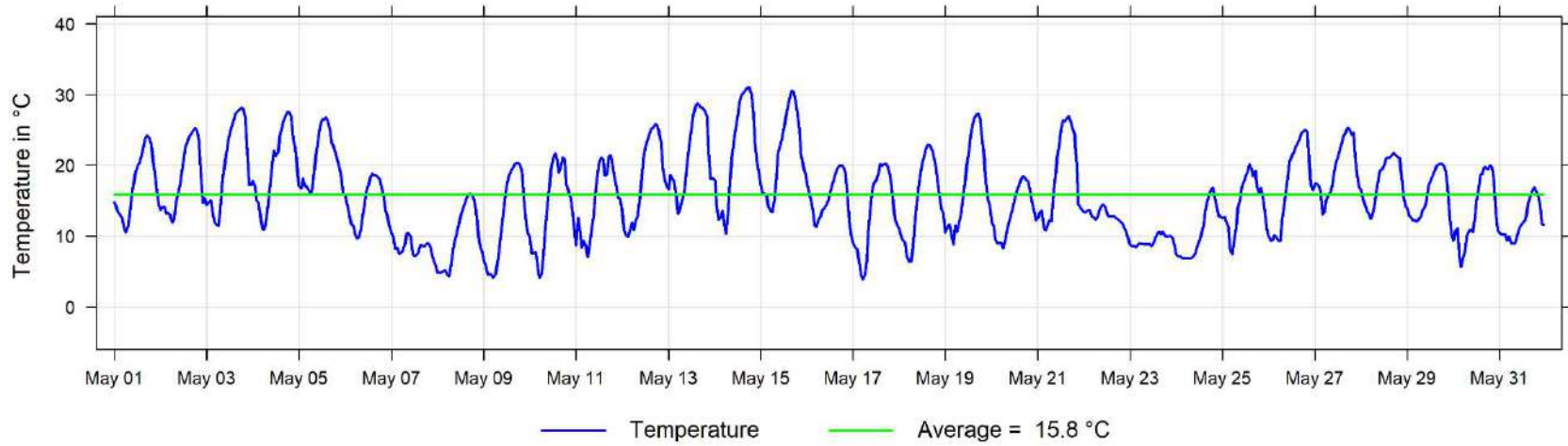
May 2023 Hourly Concentration Readings of SO₂ (in ppb) at Donnelly



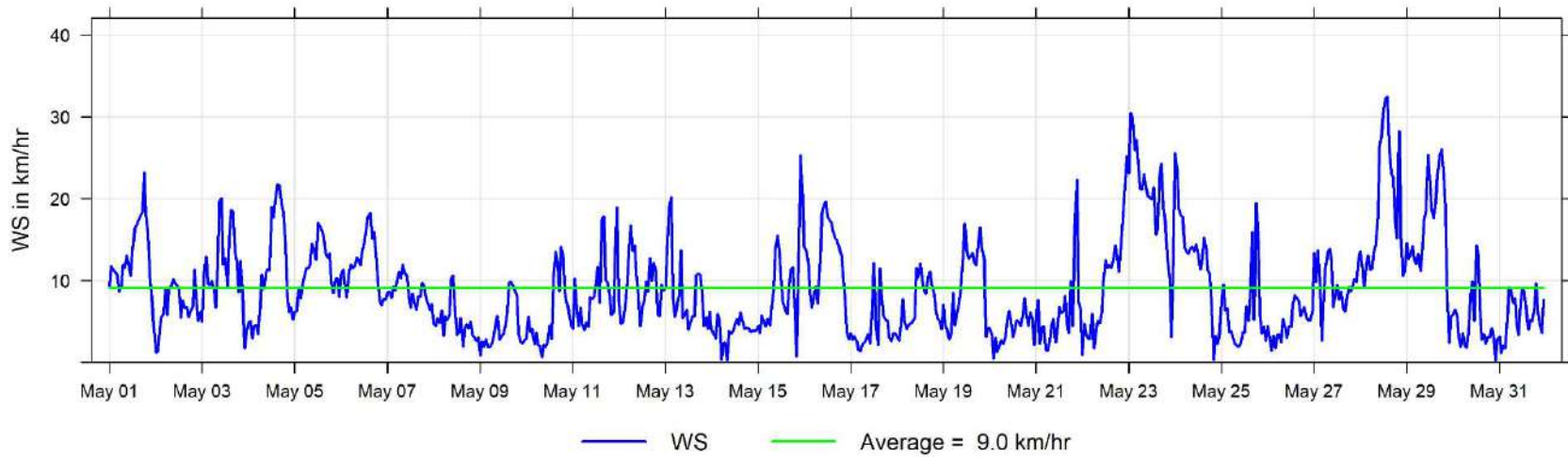
May 2023 Hourly Concentration Readings of H₂S (in ppb) at Donnelly



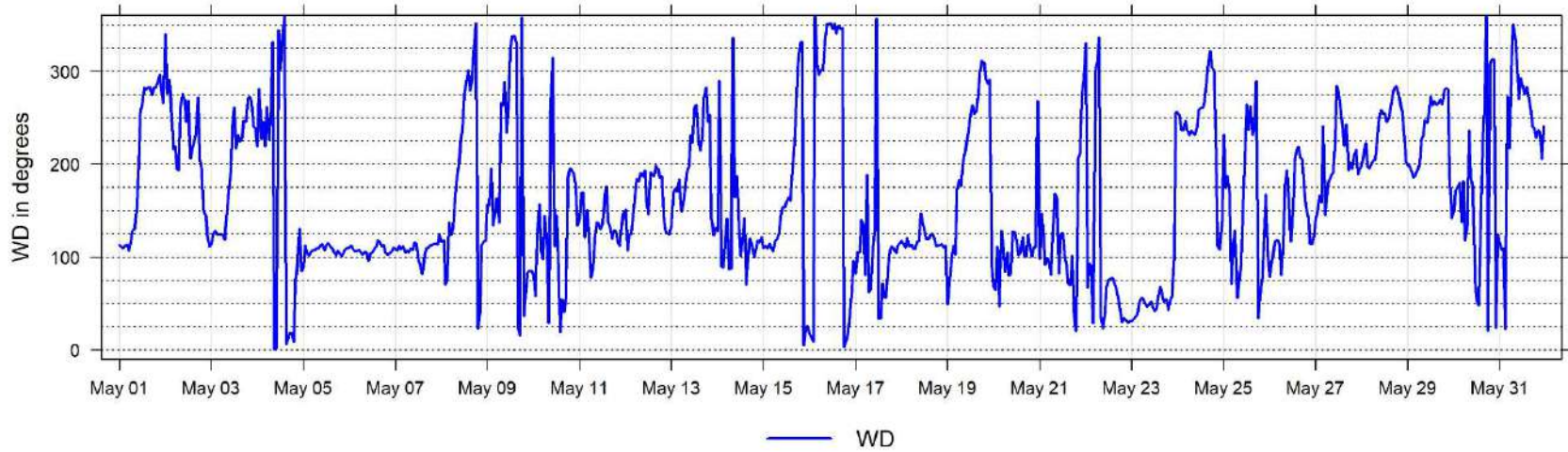
May 2023 Hourly Temperature Readings (in °C) at Donnelly



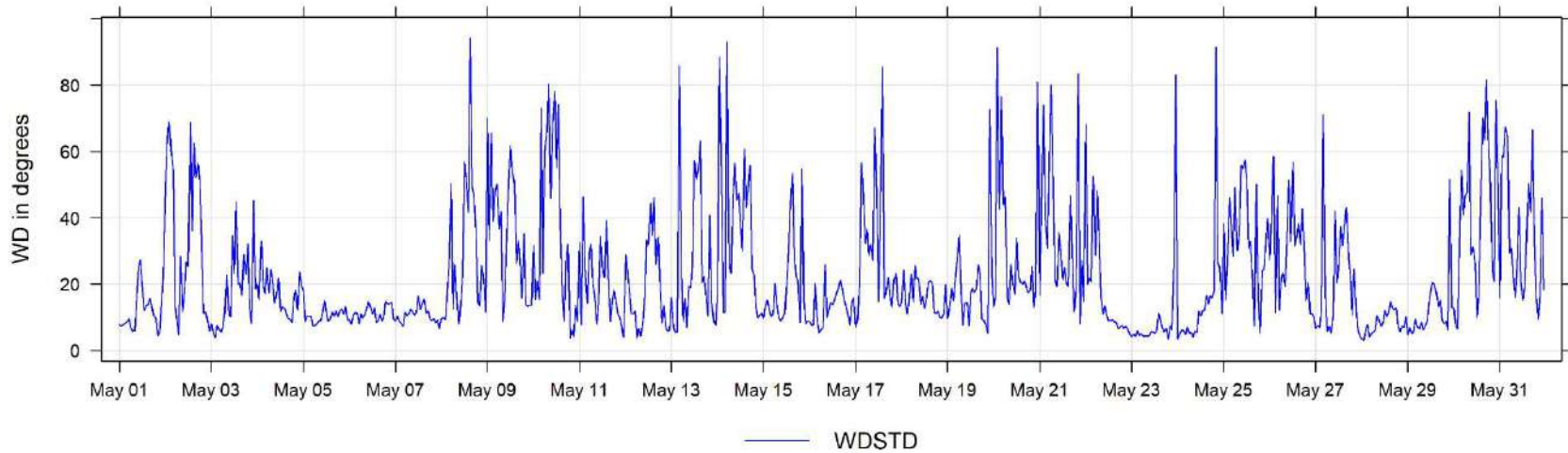
May 2023 Hourly Readings of Wind Speed (in km/hr) at Donnelly

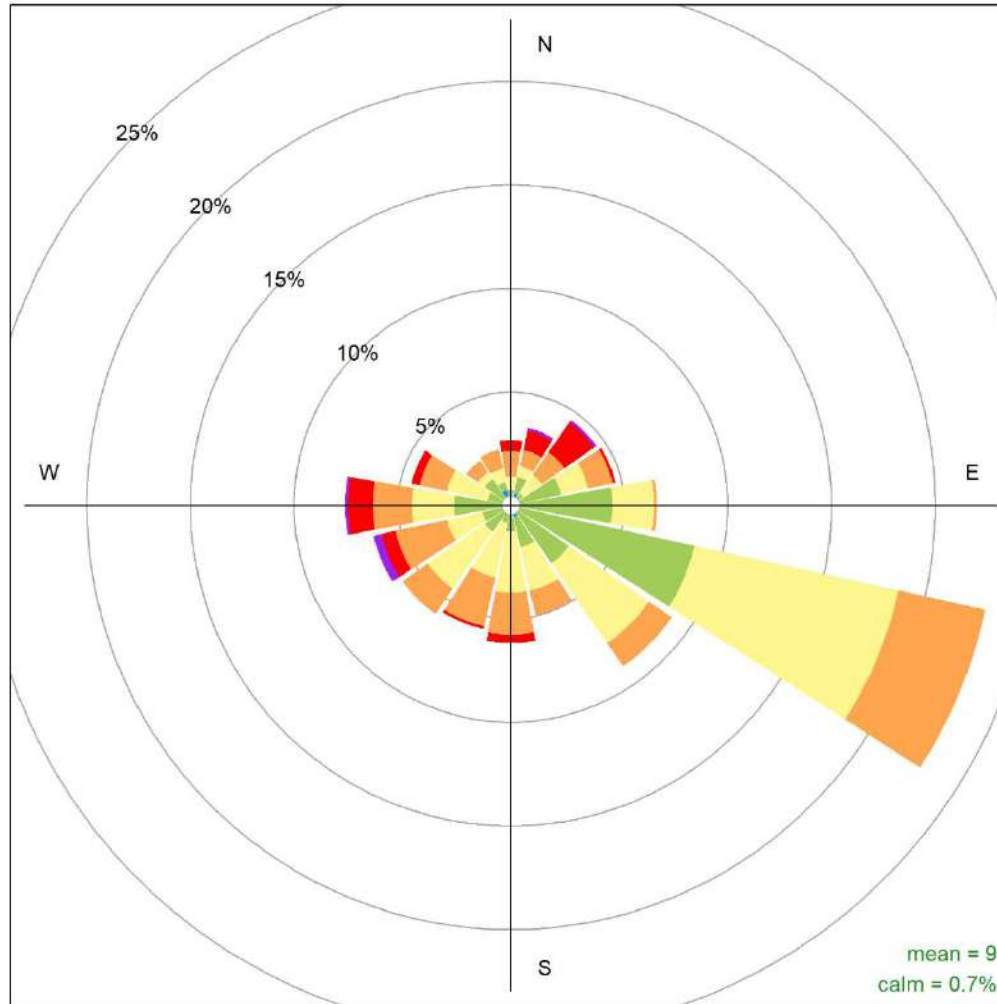


May 2023 Hourly Readings of Wind Direction (in degrees) at Donnelly



May 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Donnelly

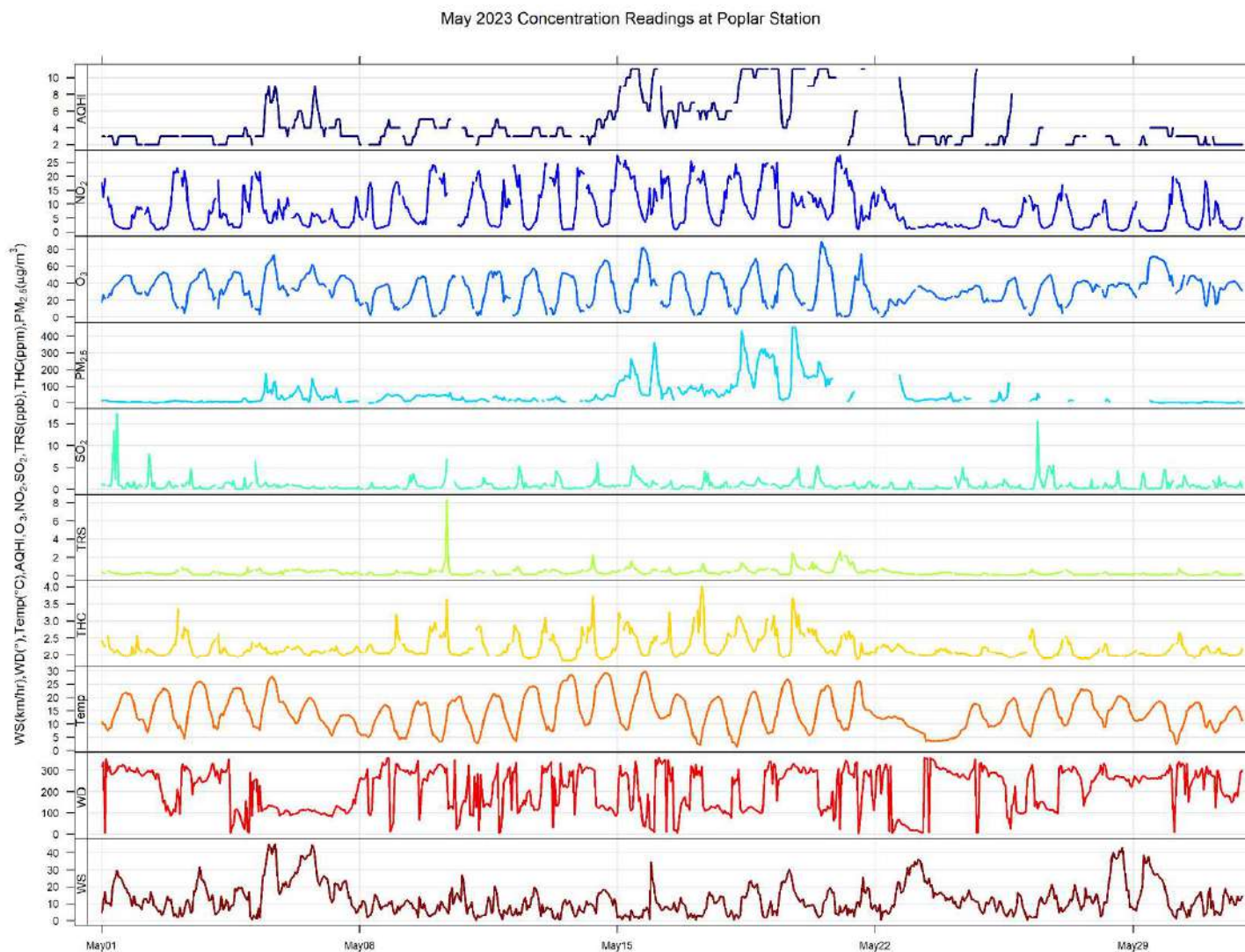




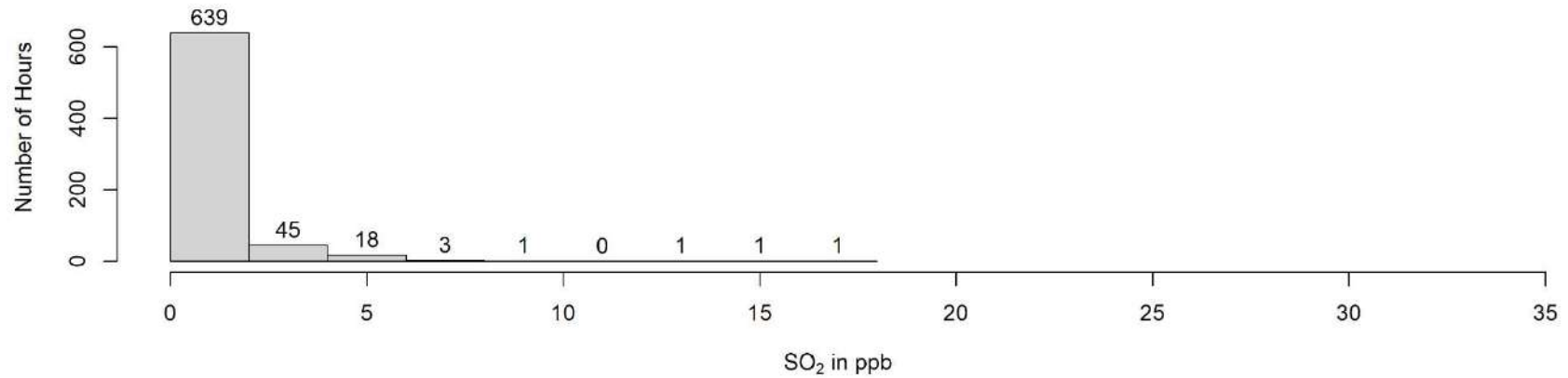
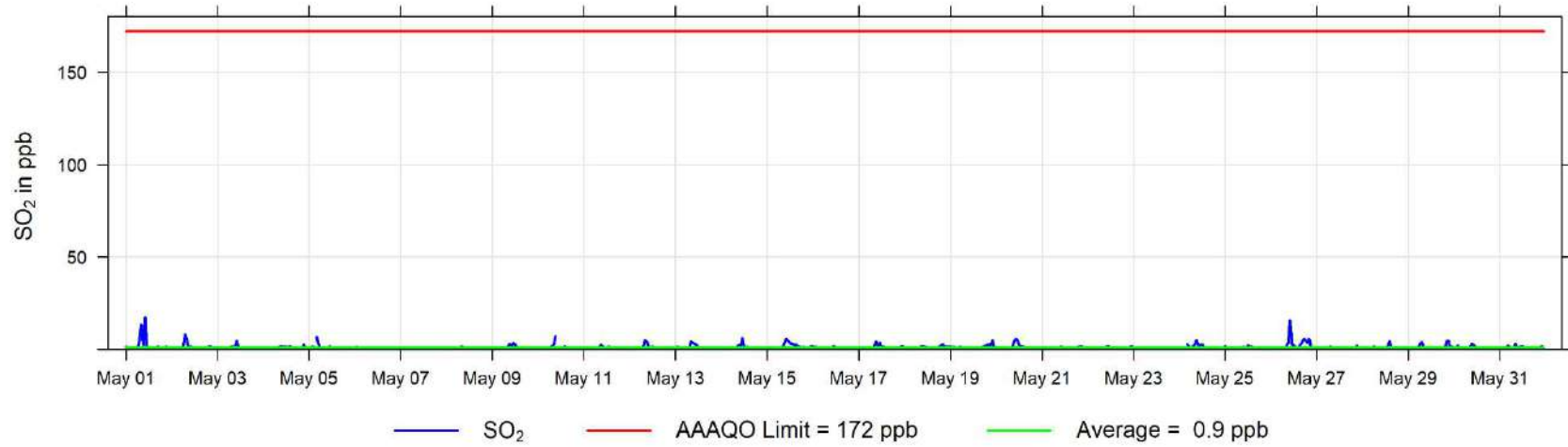
Donnelly May 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

8 Poplar (Portable) Charts

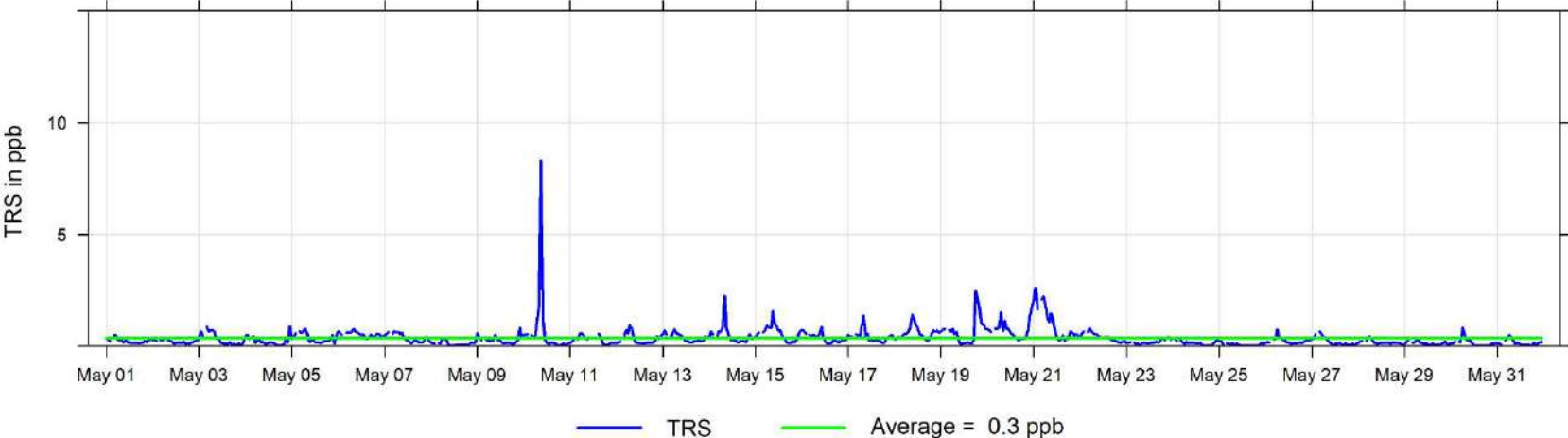
The following pages include the charts and histograms for Poplar Portable Station



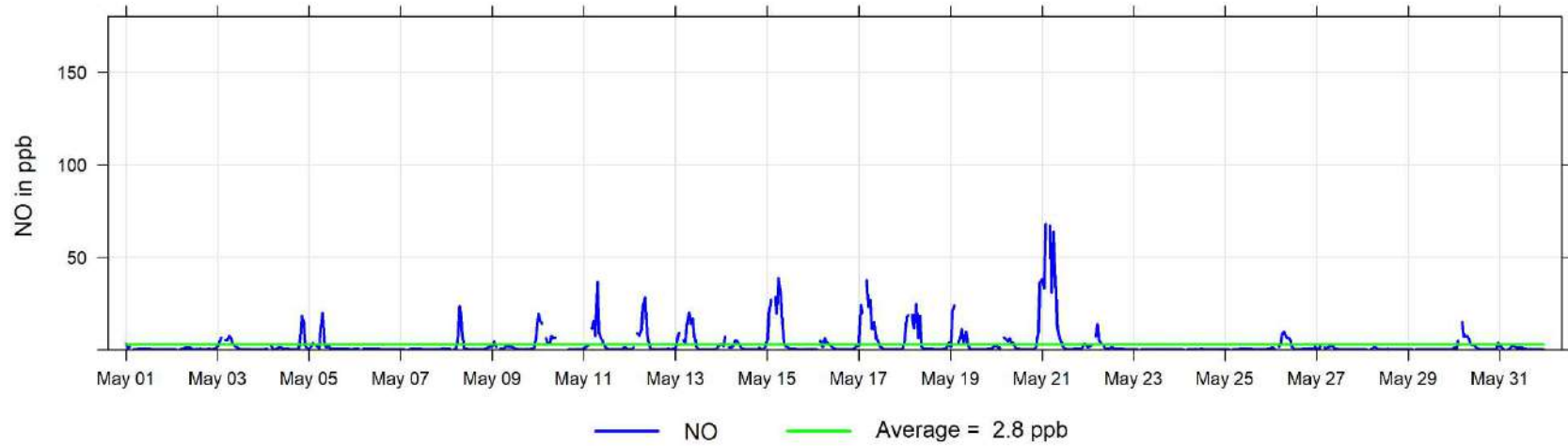
May 2023 Hourly Concentration Readings of SO₂ (in ppb) at Poplar



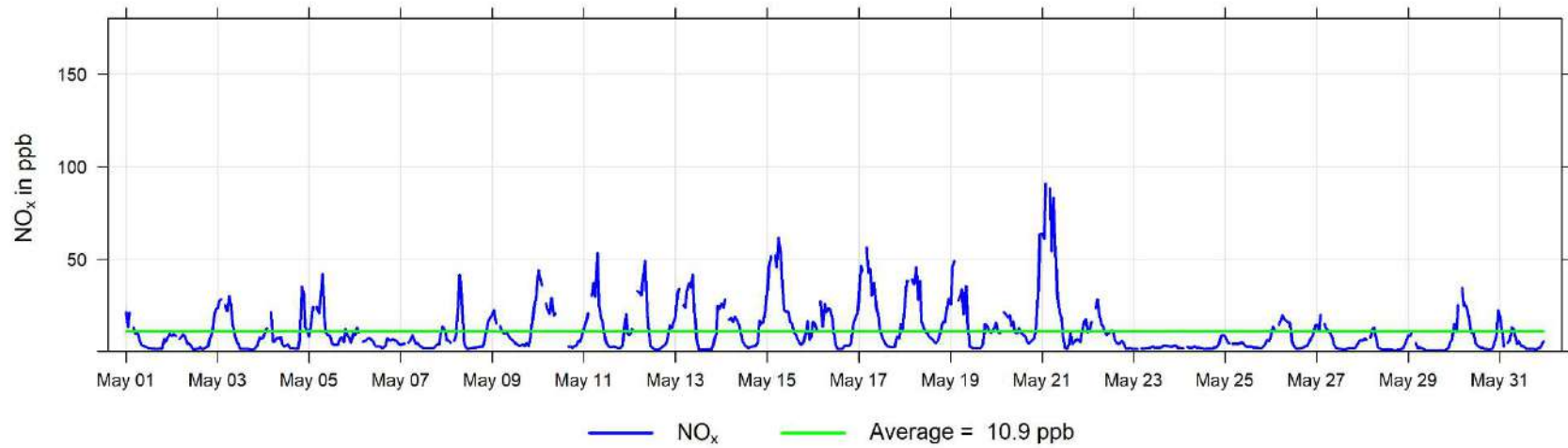
May 2023 Hourly Concentration Readings of TRS (in ppb) at Poplar



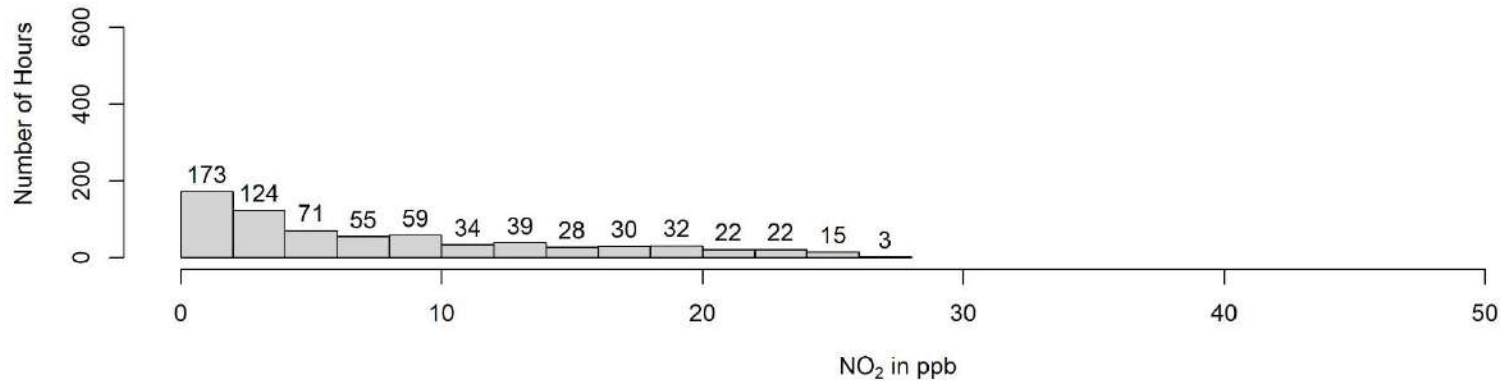
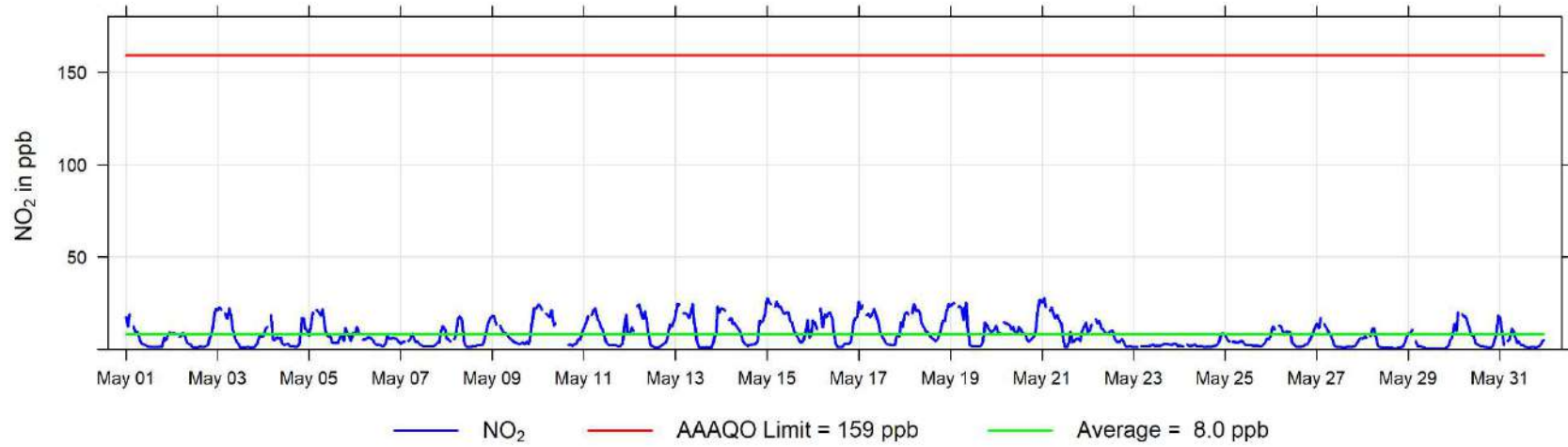
May 2023 Hourly Concentration Readings of NO (in ppb) at Poplar



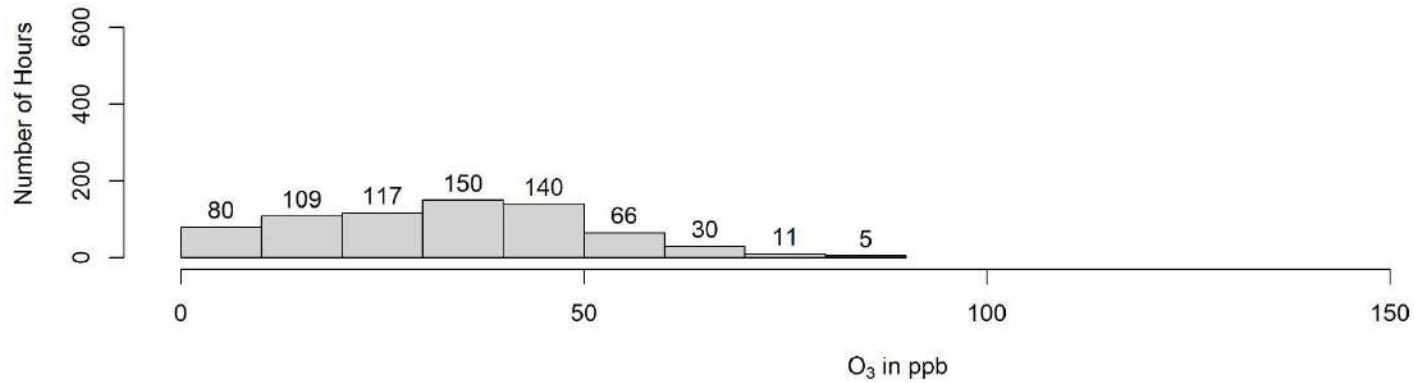
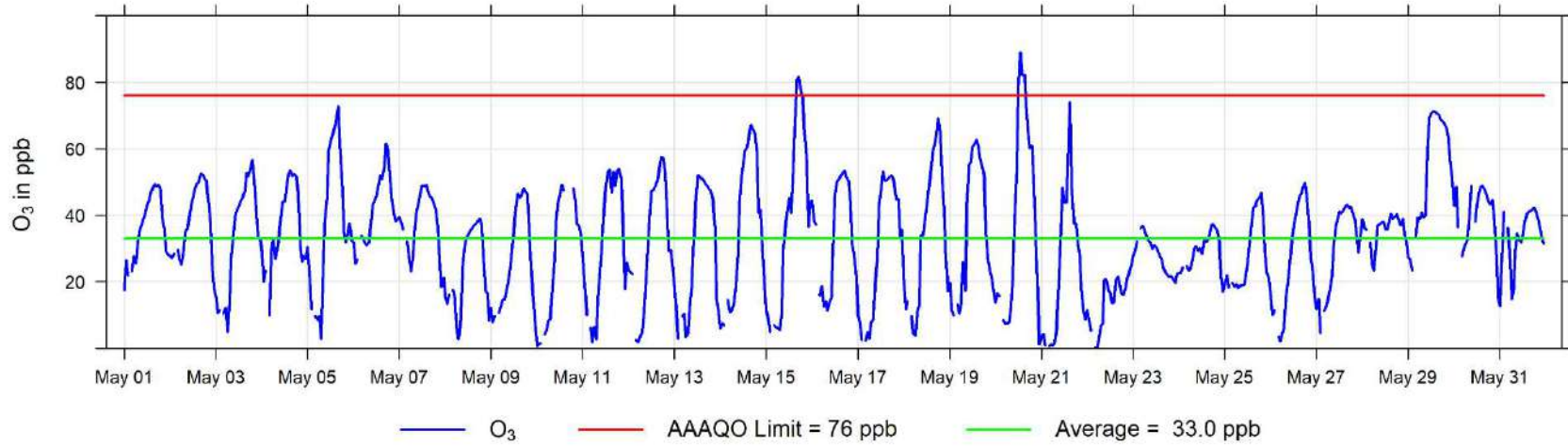
May 2023 Hourly Concentration Readings of NO_x (in ppb) at Poplar



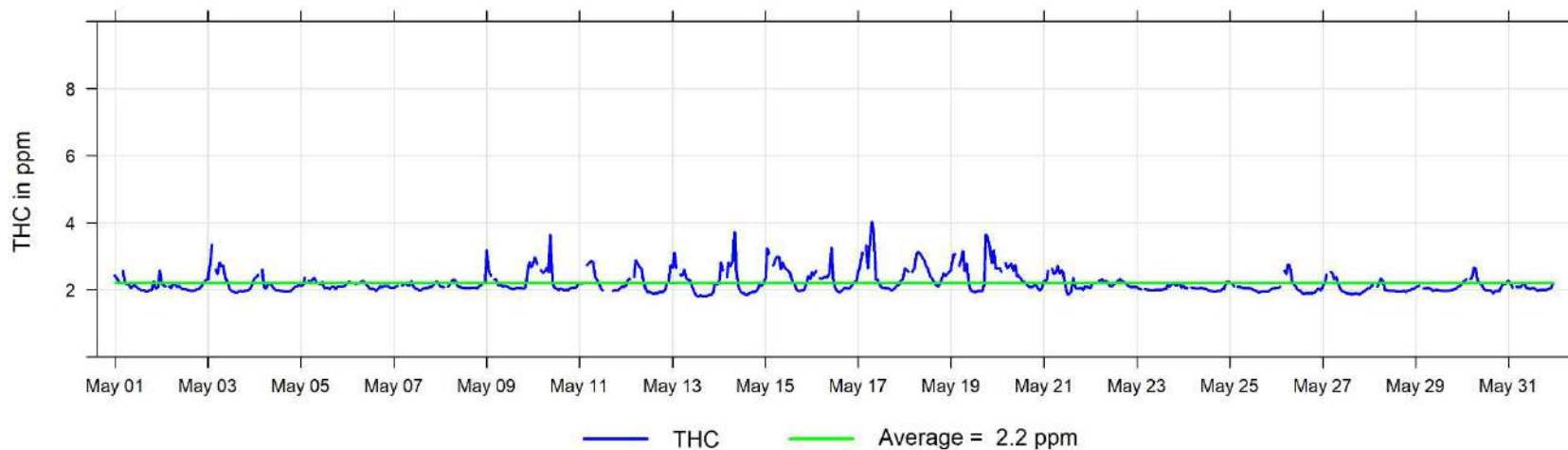
May 2023 Hourly Concentration Readings of NO₂ (in ppb) at Poplar



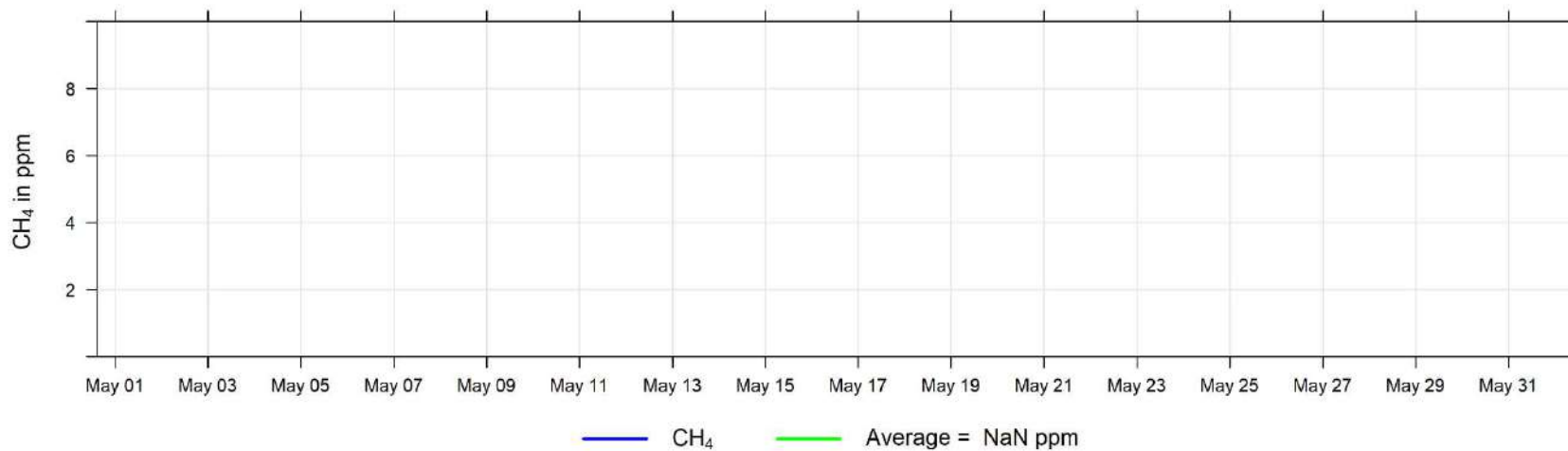
May 2023 Hourly Concentration Readings of O₃ (in ppb) at Poplar



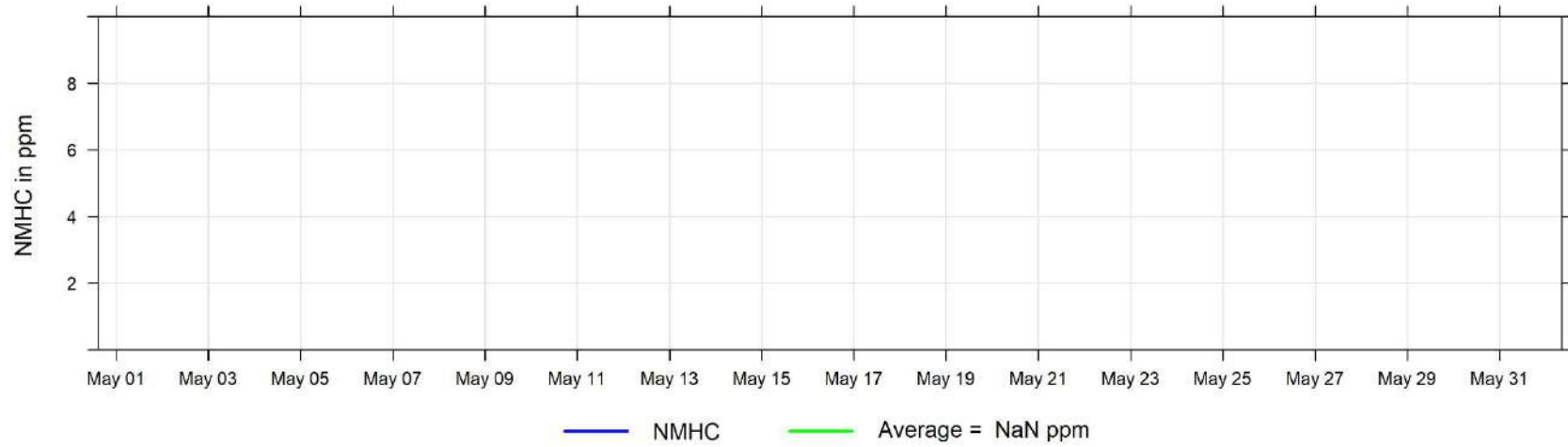
May 2023 Hourly Concentration Readings of THC (in ppm) at Poplar



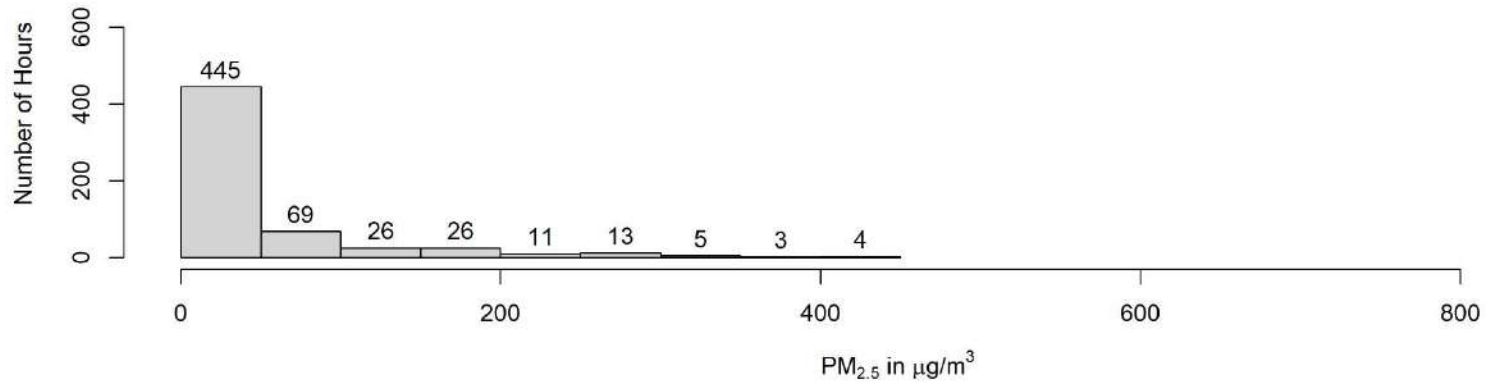
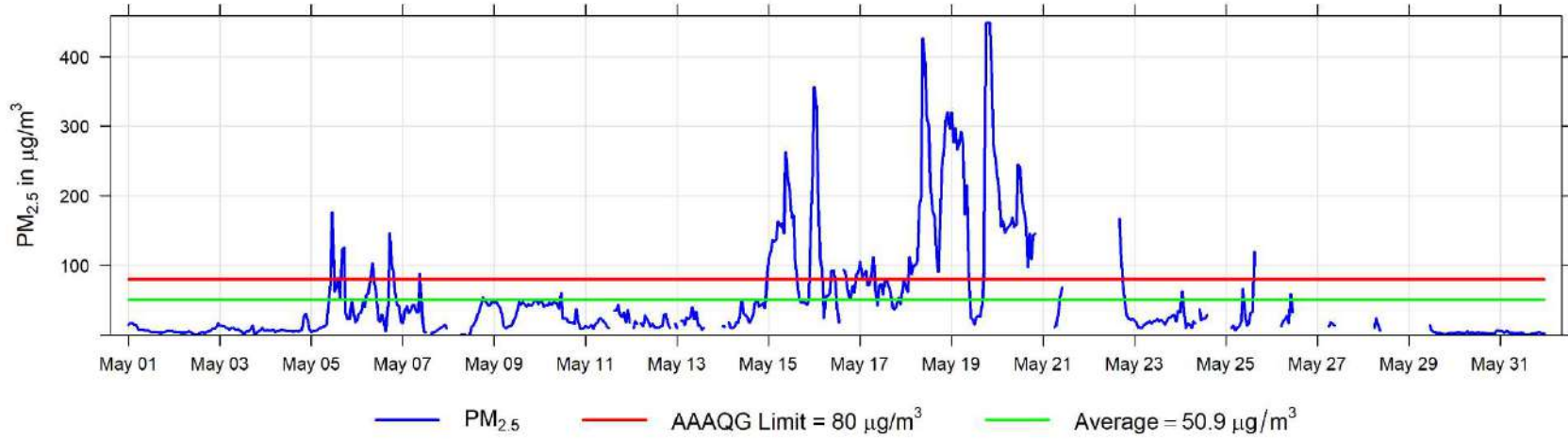
May 2023 Hourly Concentration Readings of CH₄ (in ppm) at Poplar



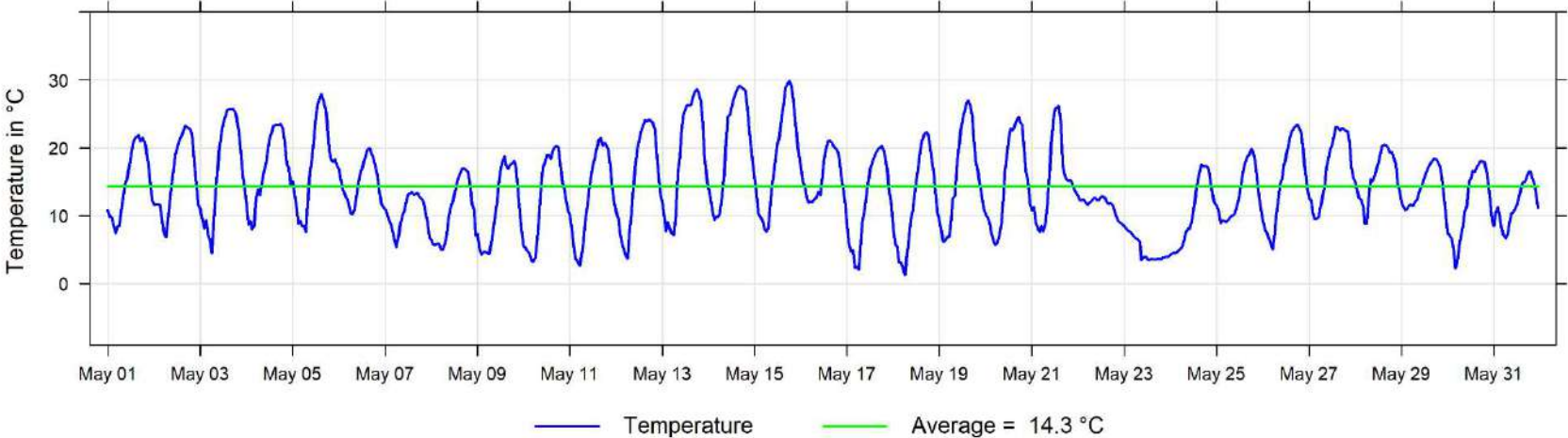
May 2023 Hourly Concentration Readings of NMHC (in ppm) at Poplar



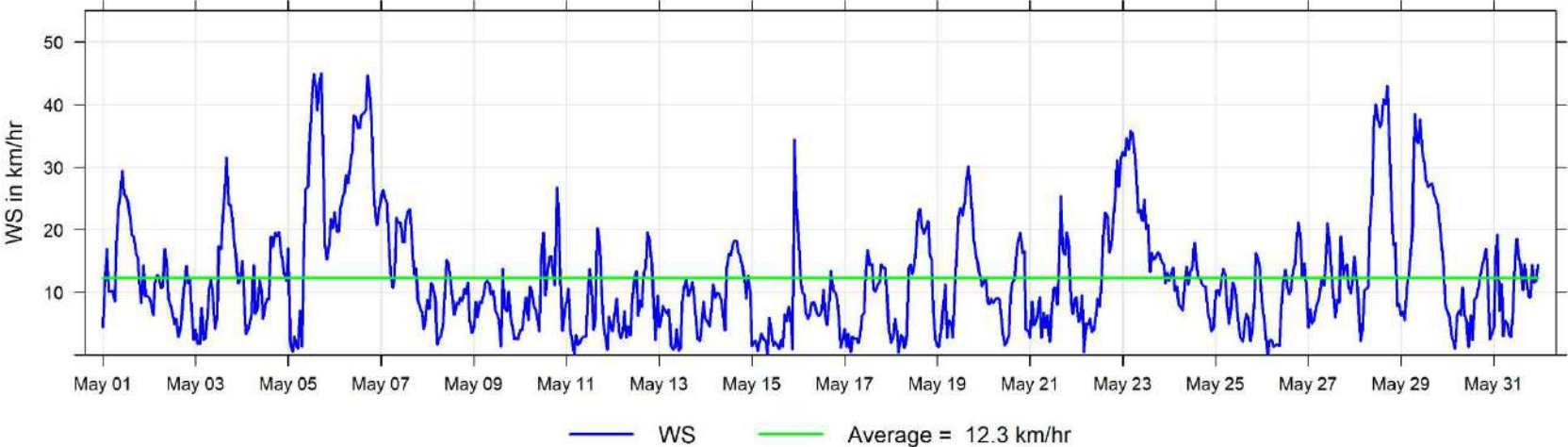
May 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Poplar



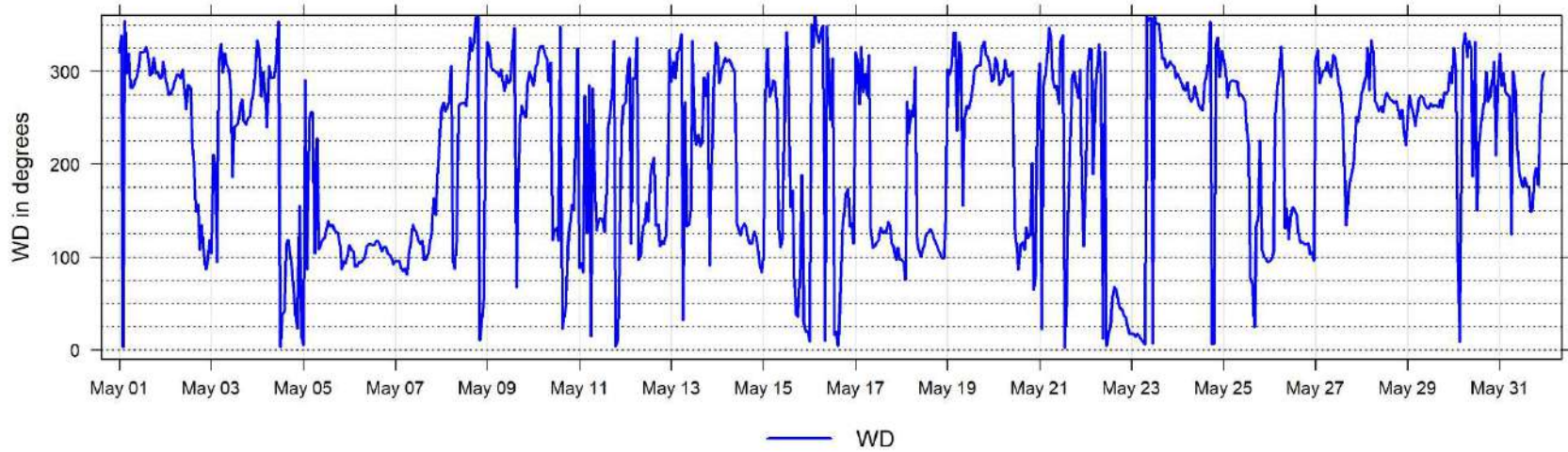
May 2023 Hourly Temperature Readings (in °C) at Poplar



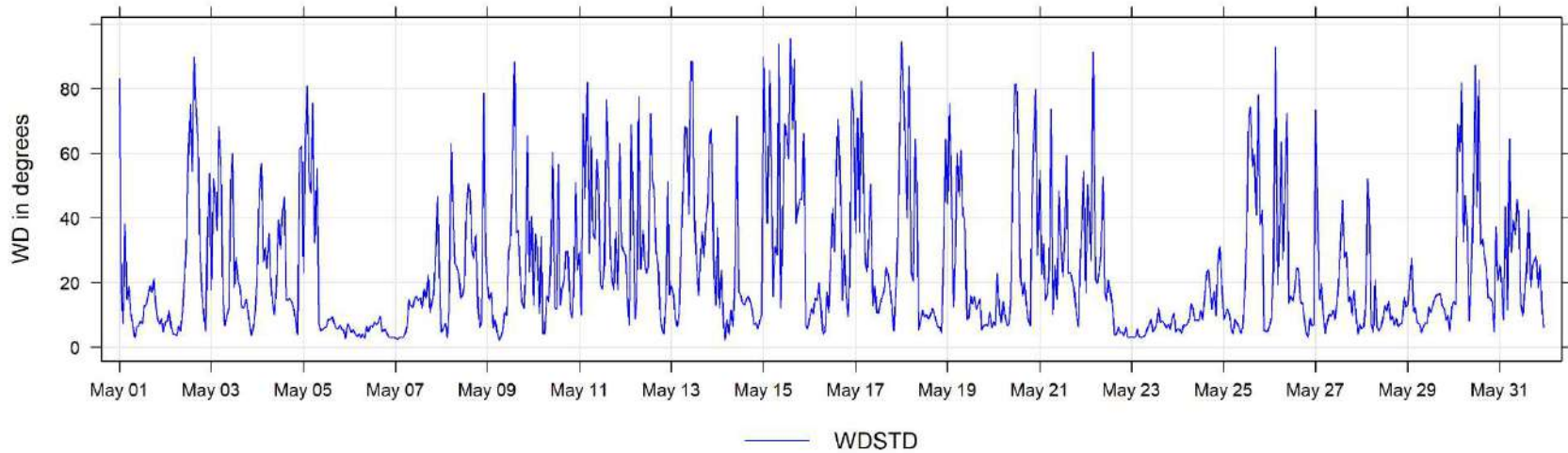
May 2023 Hourly Readings of Wind Speed (in km/hr) at Poplar

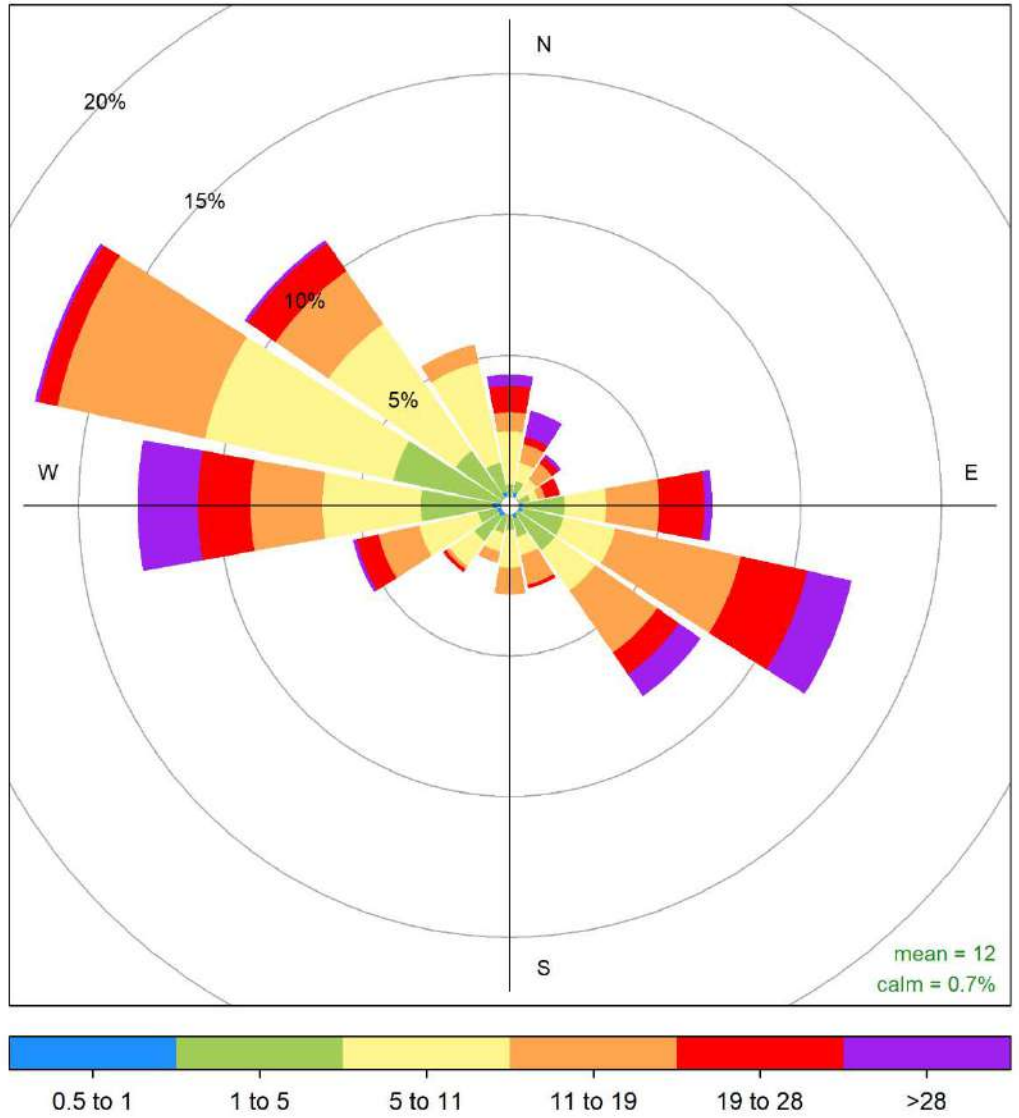


May 2023 Hourly Readings of Wind Direction (in degrees) at Poplar



May 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Poplar

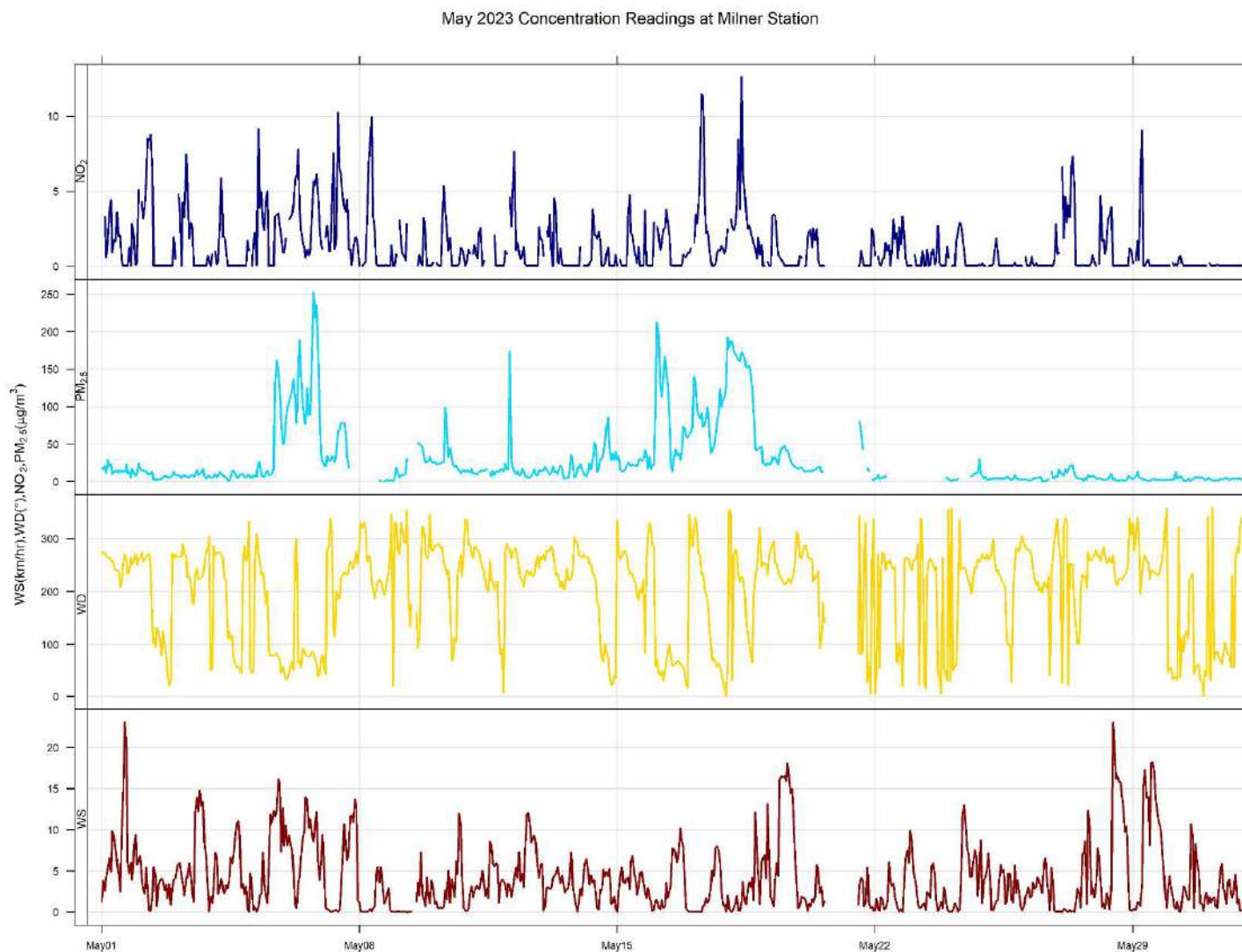




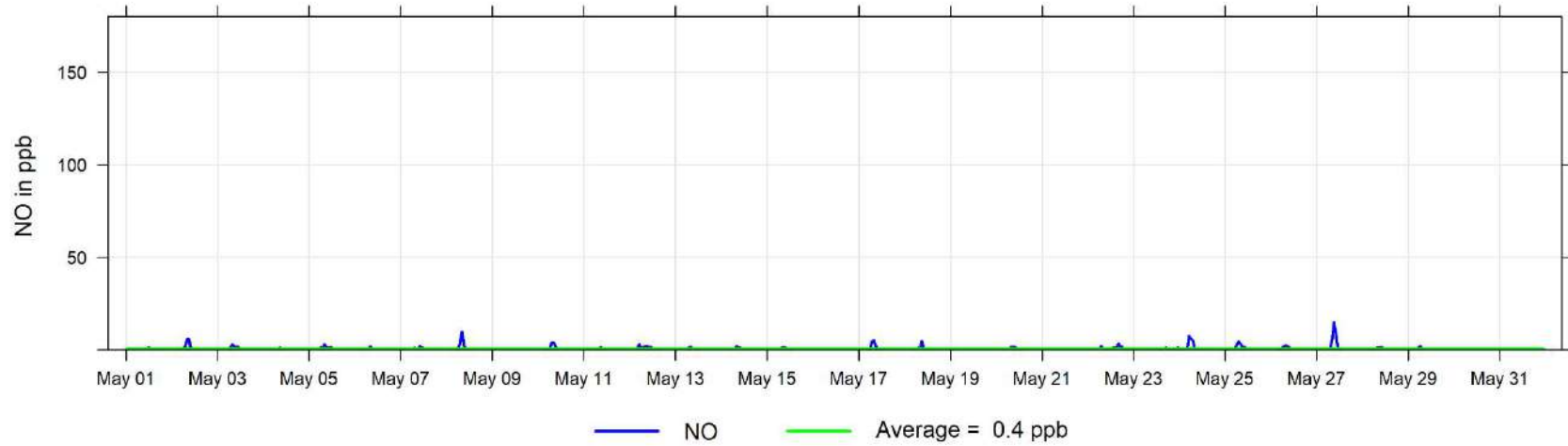
Poplar May 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

9 Milner Charts

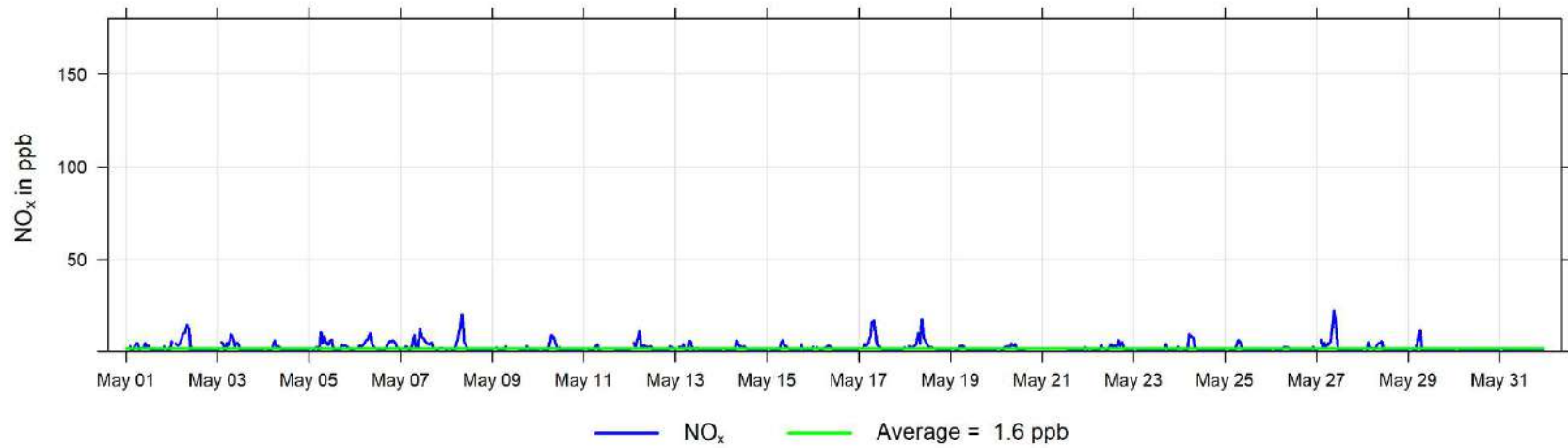
The following pages include the charts and histograms for Milner Station



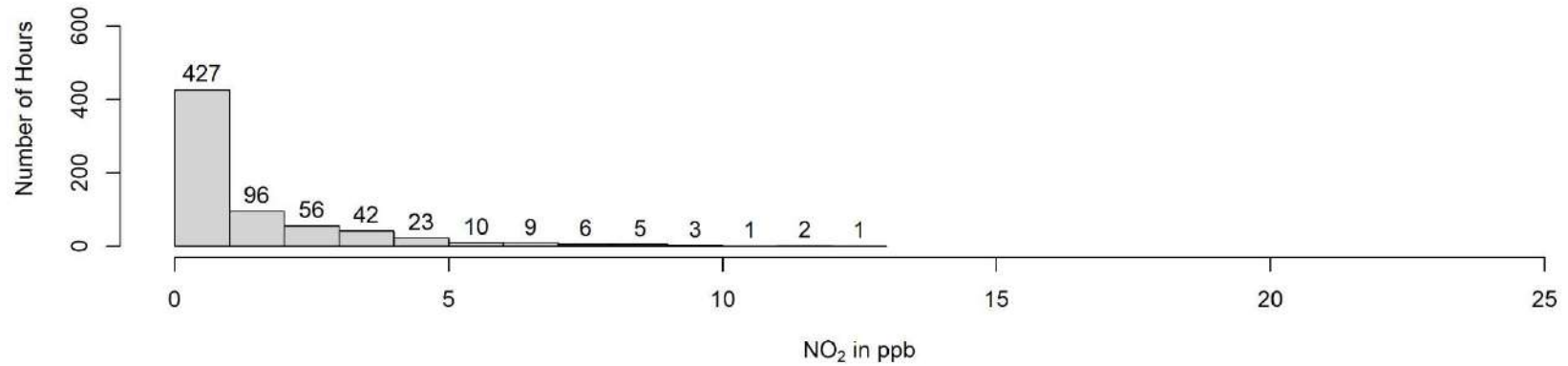
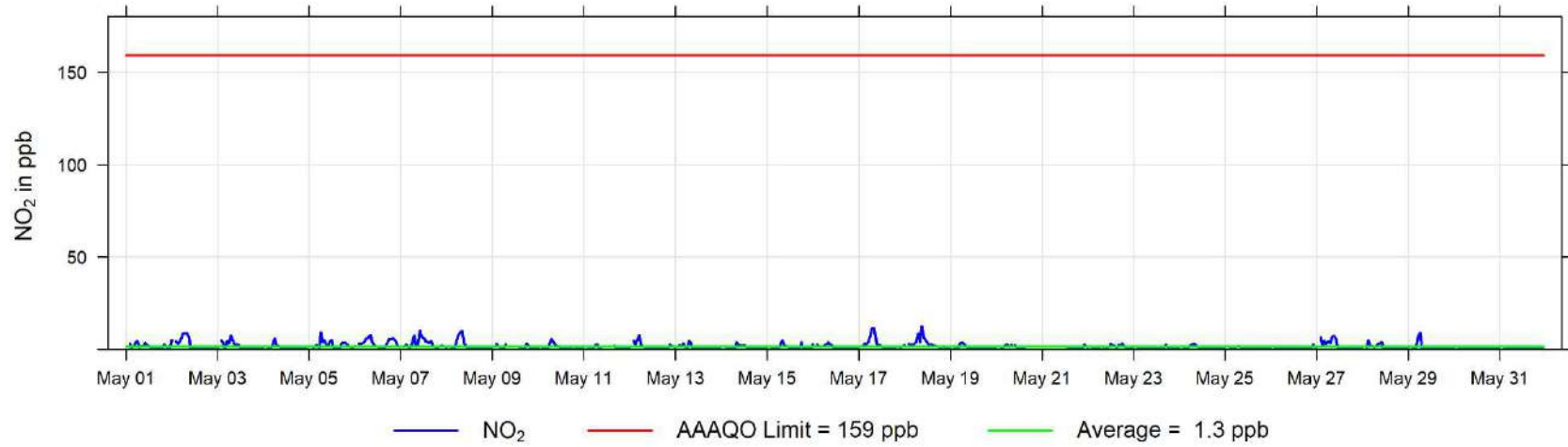
May 2023 Hourly Concentration Readings of NO (in ppb) at Milner



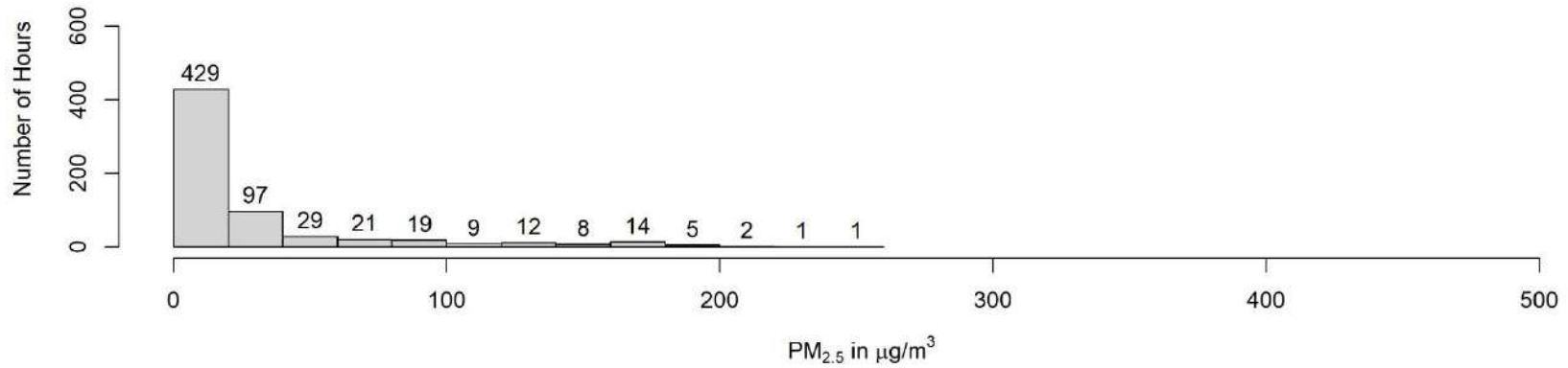
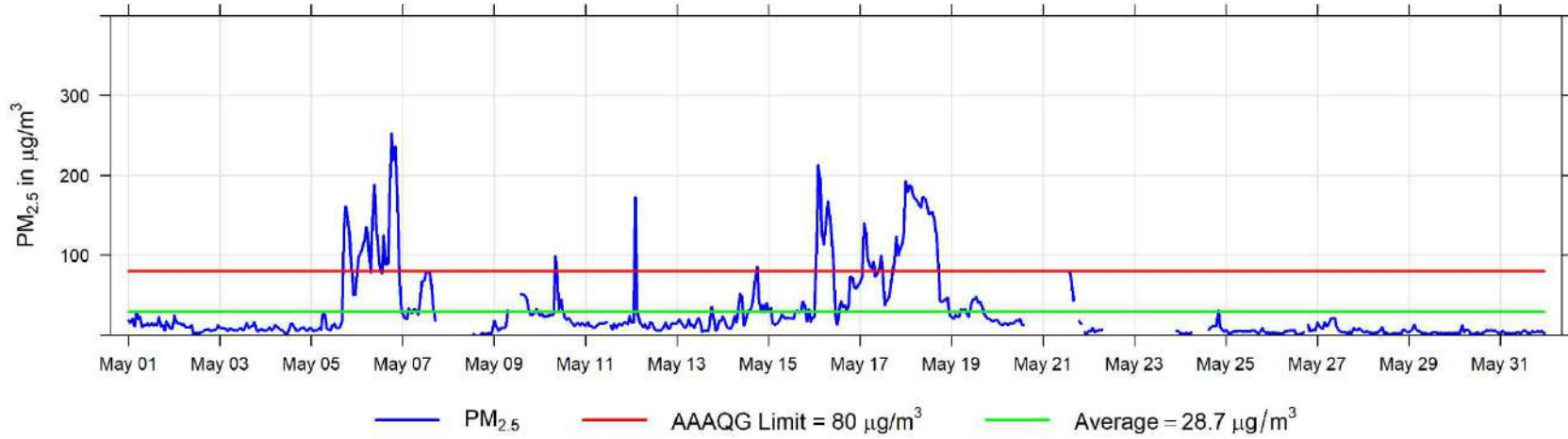
May 2023 Hourly Concentration Readings of NO_x (in ppb) at Milner



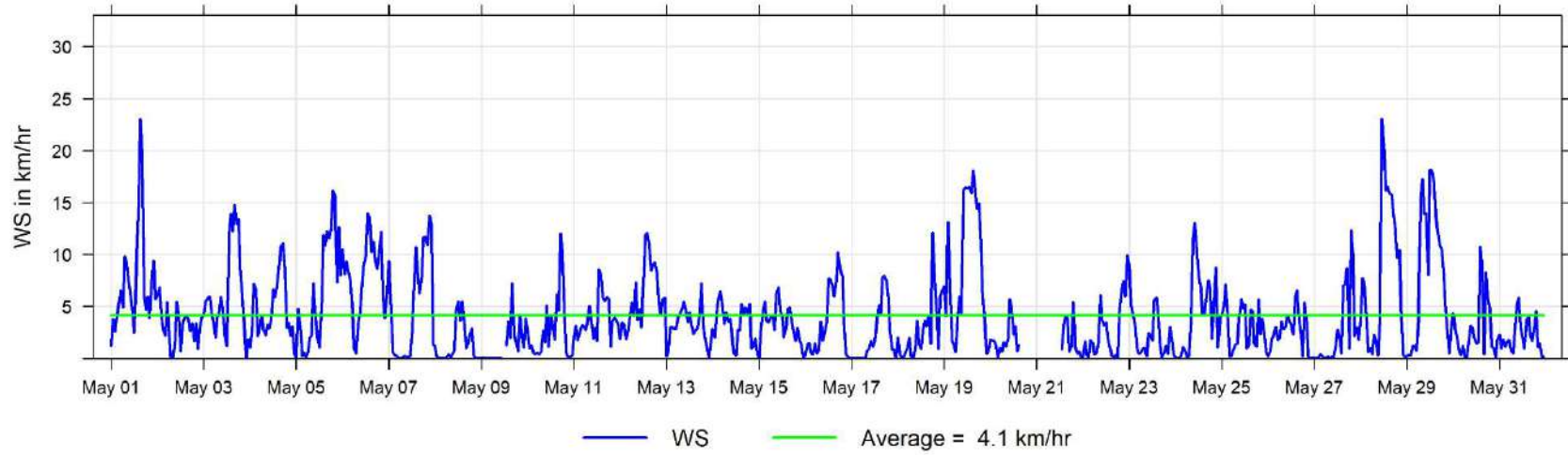
May 2023 Hourly Concentration Readings of NO₂ (in ppb) at Milner



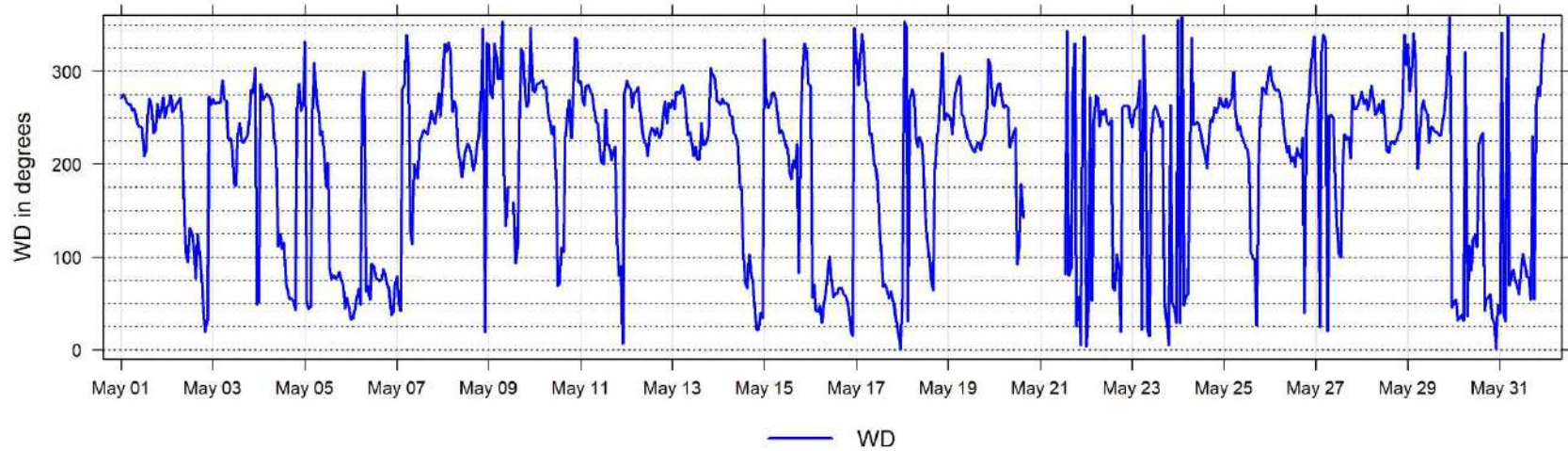
May 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Milner

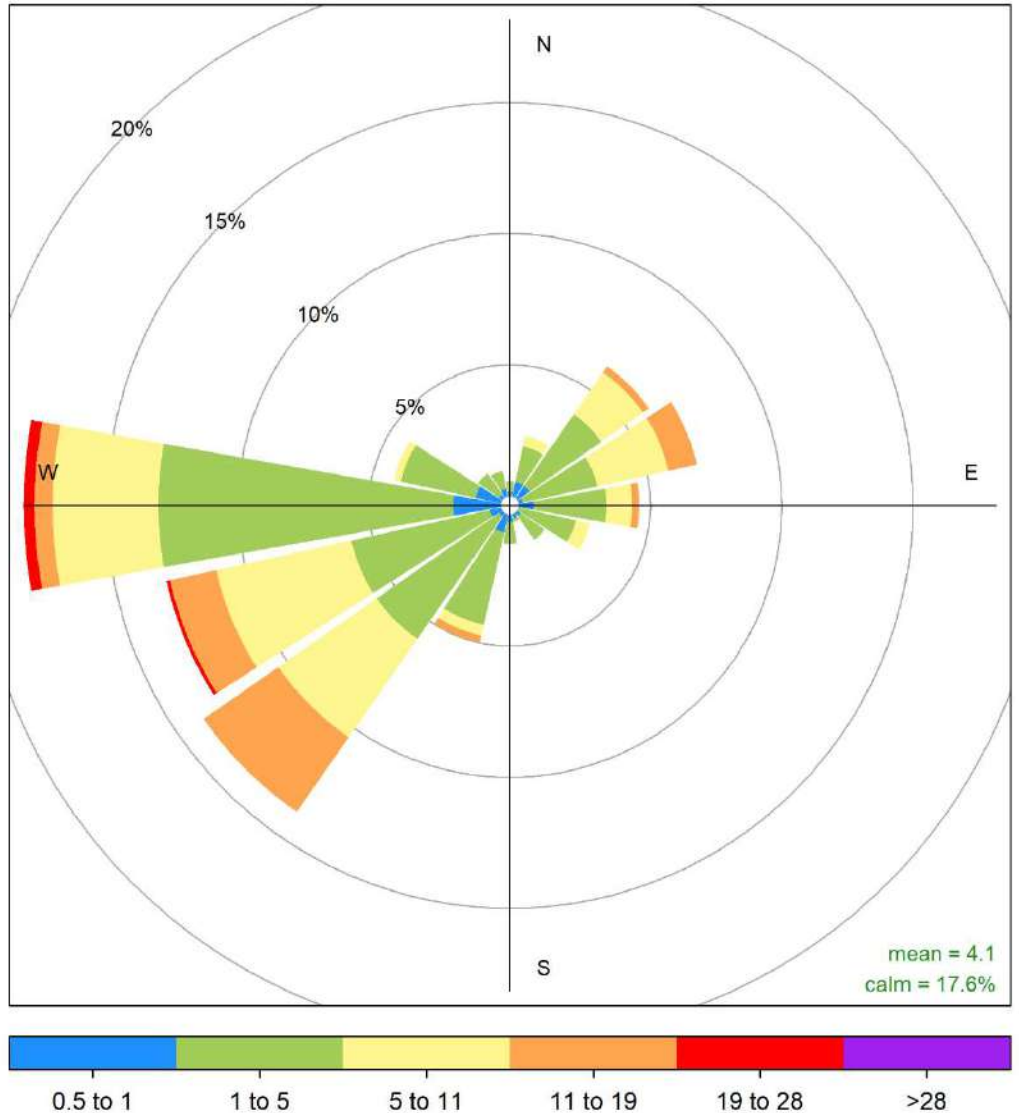


May 2023 Hourly Readings of Wind Speed (in km/hr) at Milner



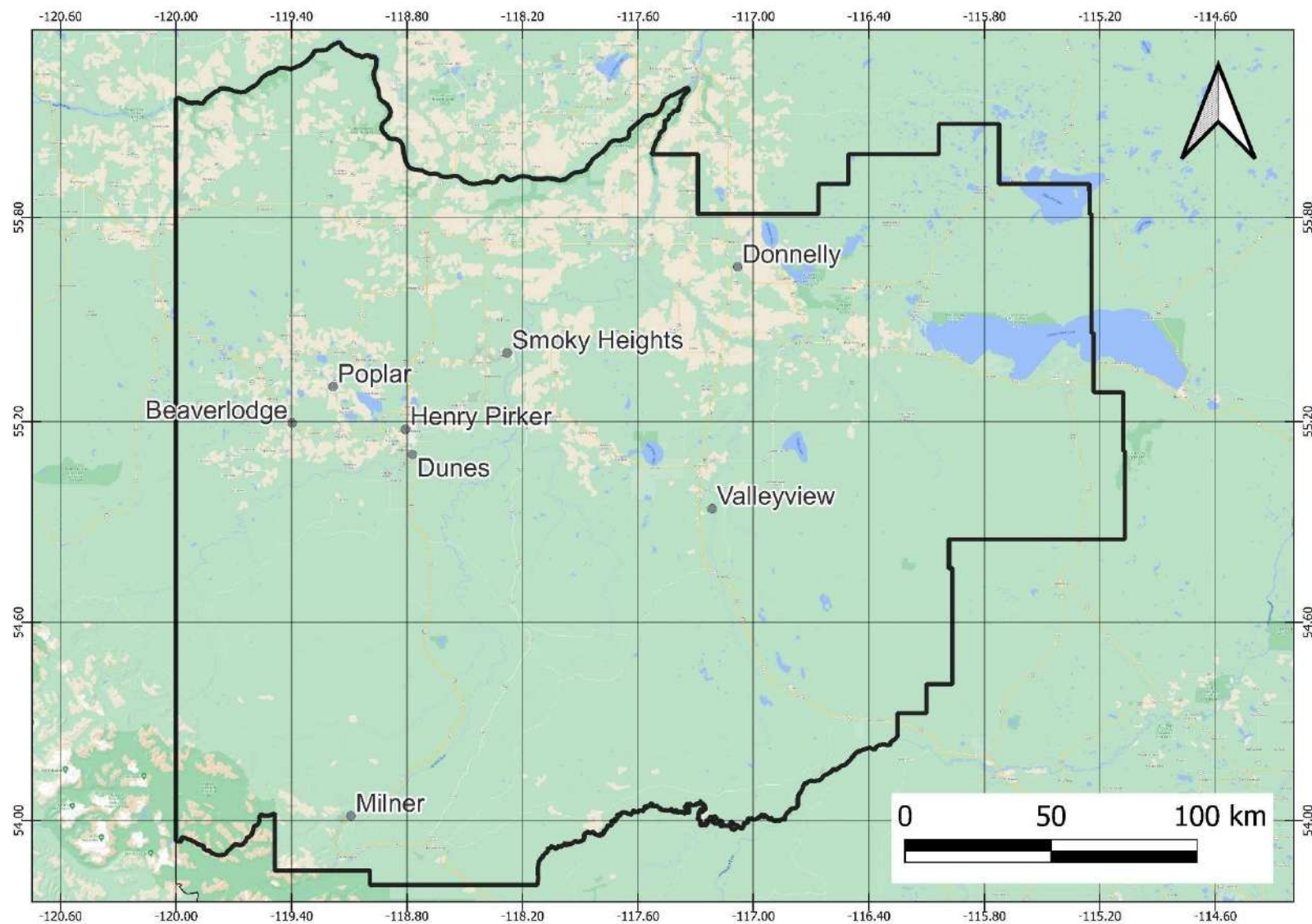
May 2023 Hourly Readings of Wind Direction (in degrees) at Milner



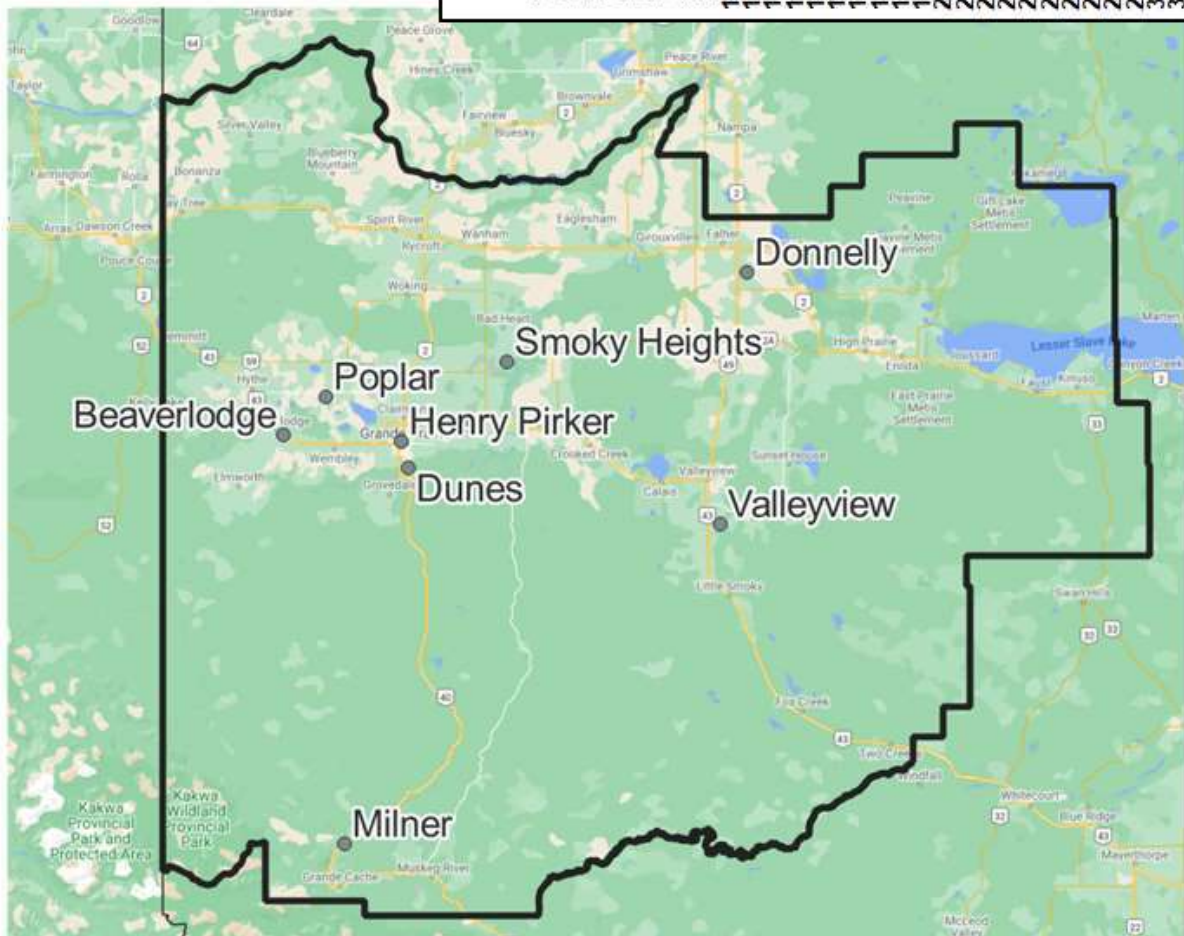
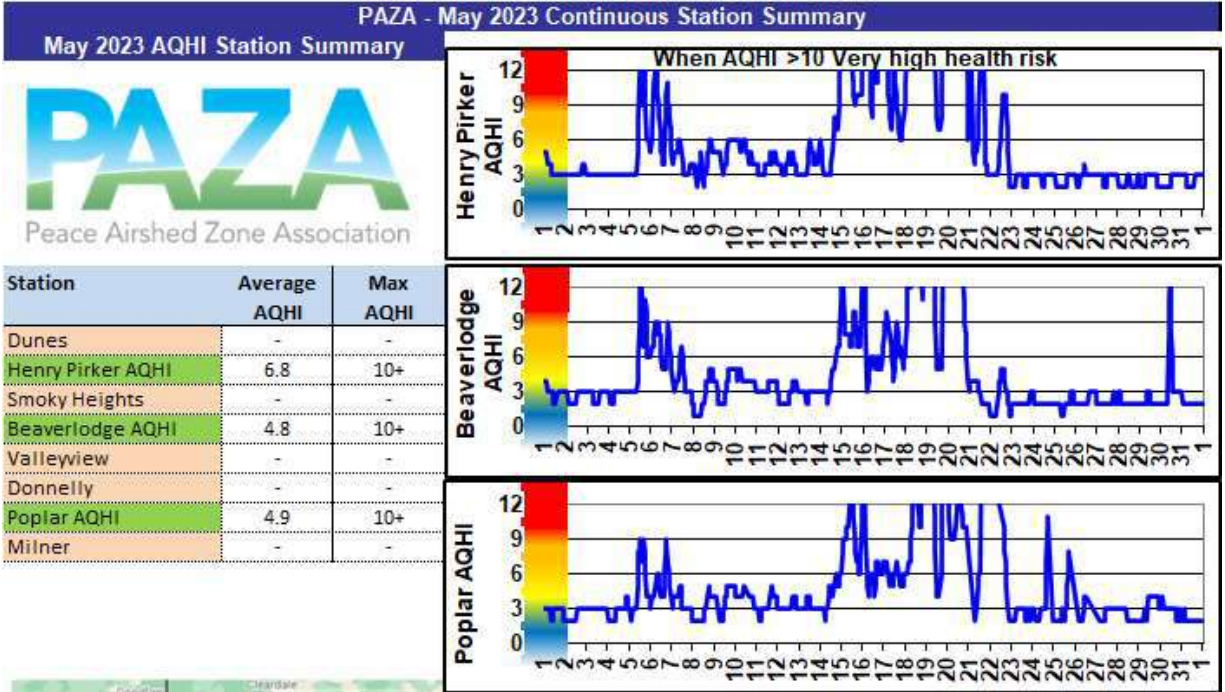


Milner May 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

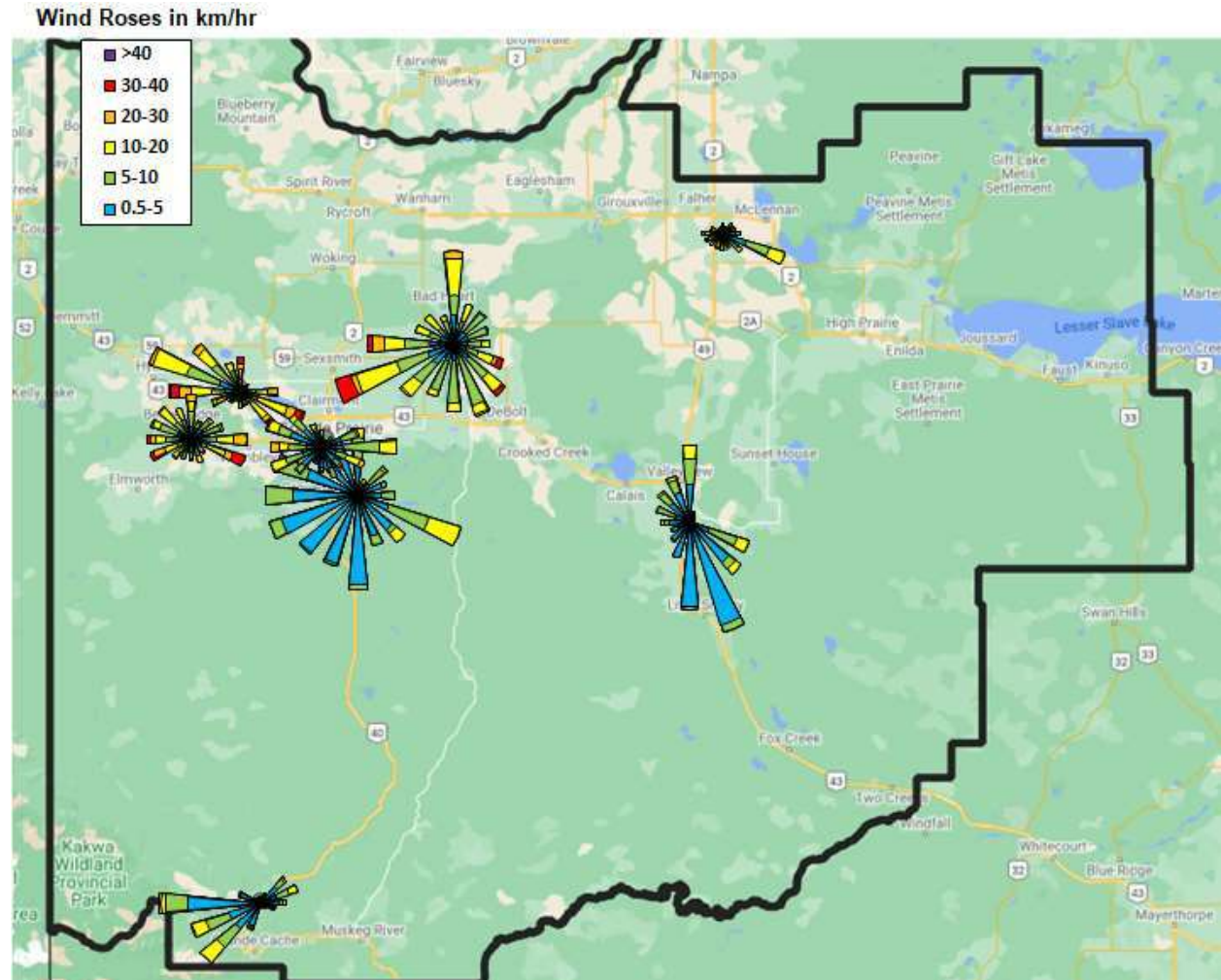
10 Concentration Summaries and Roses for PAZA



10.1 Air Quality Health Index (AQHI) Plots



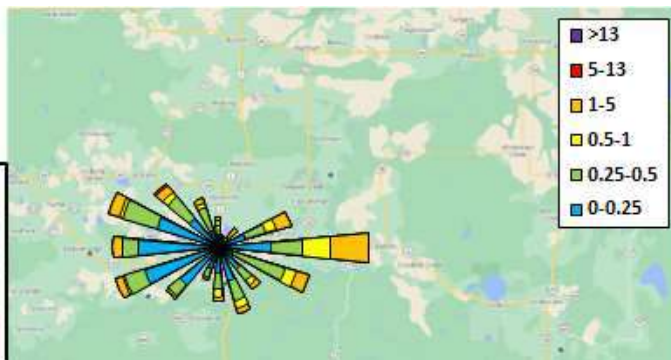
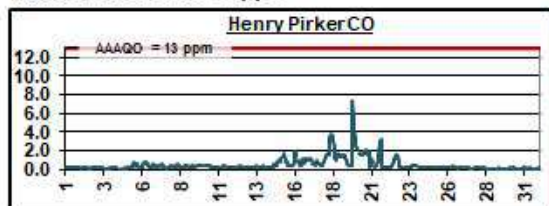
10.2 Wind Roses



10.3 Carbon Monoxide (CO) Plots

May 2023 CO Station Summary		
Station	Avg (ppm)	Max (ppm)
Henry Pirker CO	0.50	7.34

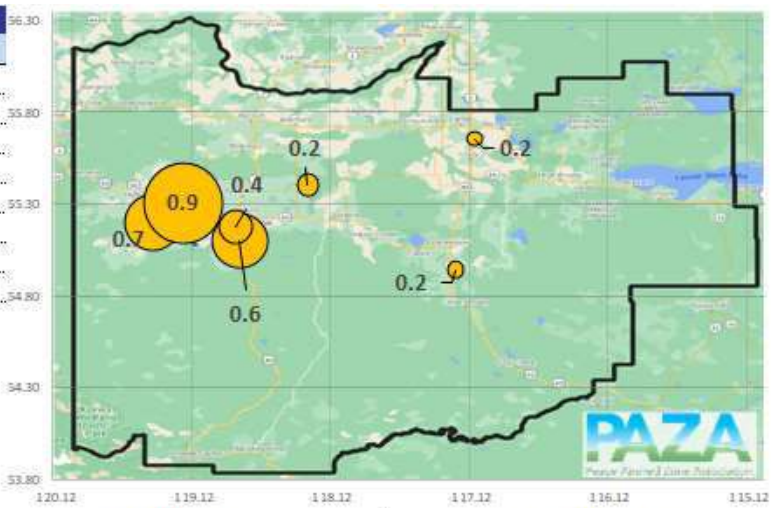
Carbon Monoxide in ppm



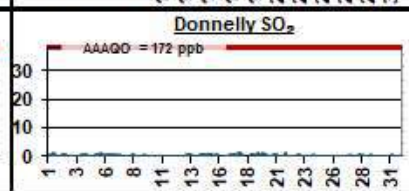
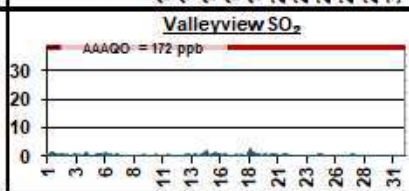
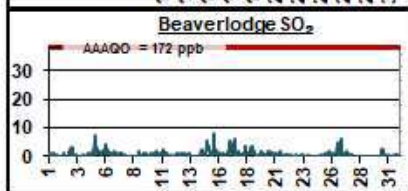
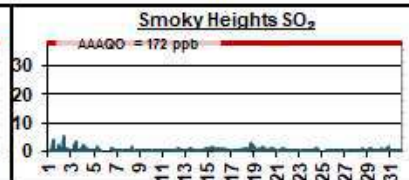
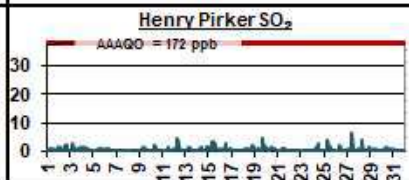
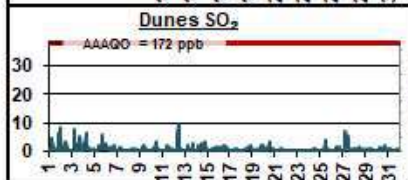
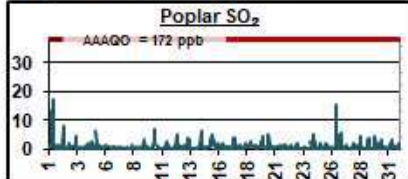
10.4 Sulphur Dioxide (SO₂) Plots

May 2023 SO₂ Station Summary

Station	Avg (ppb)	Max (ppb)
Dunes SO ₂	0.6	9.2
Henry Pirkler SO ₂	0.4	6.5
Smoky Heights SO ₂	0.2	4.9
Beaverlodge SO ₂	0.7	7.8
Valleyview SO ₂	0.2	2.2
Donnelly SO ₂	0.2	1.2
Poplar SO ₂	0.9	17.2
Milner SO ₂	-	-



Sulphur Dioxide in ppb

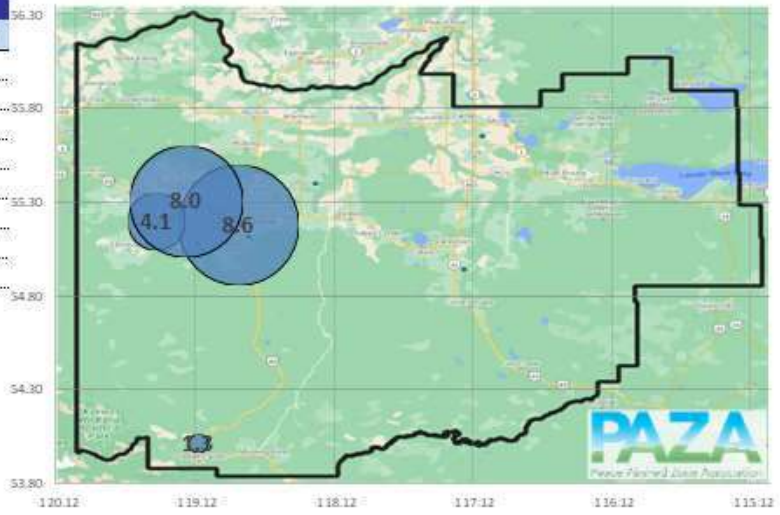


SO₂ Roses in ppb

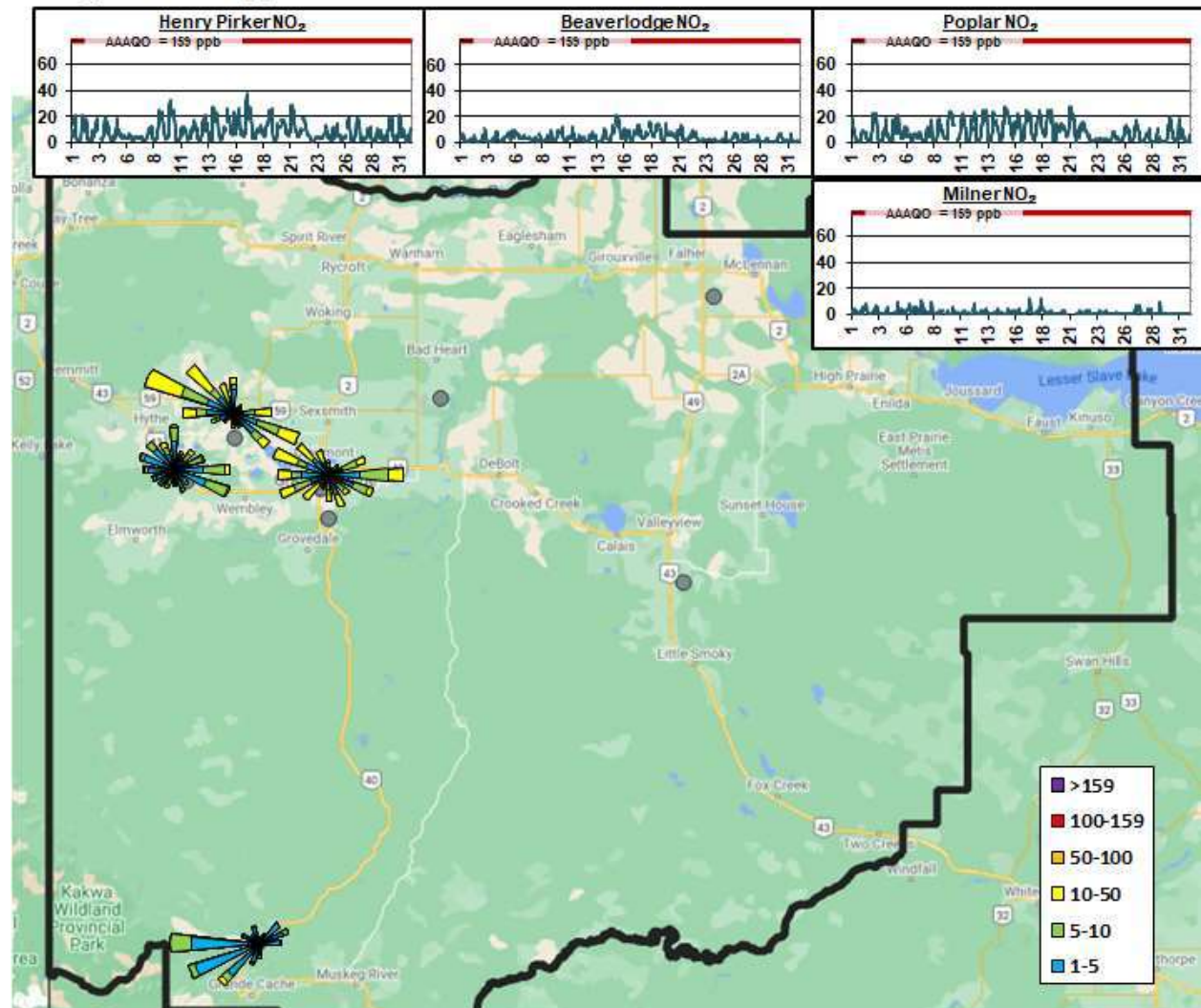


10.5 Nitrogen Dioxide (NO₂) Plots

May 2023 NO ₂ Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes NO ₂	-	-
Henry Pirker NO ₂	8.6	37.4
Smoky Heights NO ₂	-	-
Beaverlodge NO ₂	4.1	21.2
Valleyview NO ₂	-	-
Donnelly NO ₂	-	-
Poplar NO ₂	8.0	27.5
Milner NO ₂	1.3	12.6

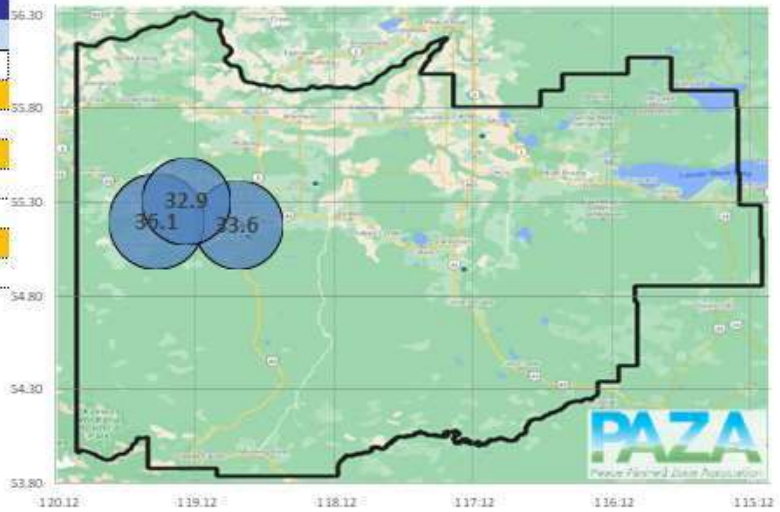


Nitrogen Dioxide in ppb

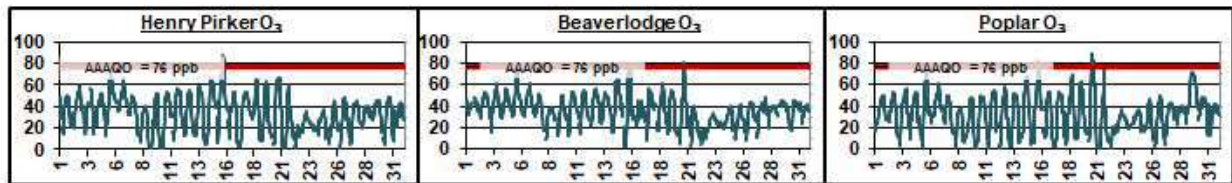


10.6 Ozone (O₃) Plots

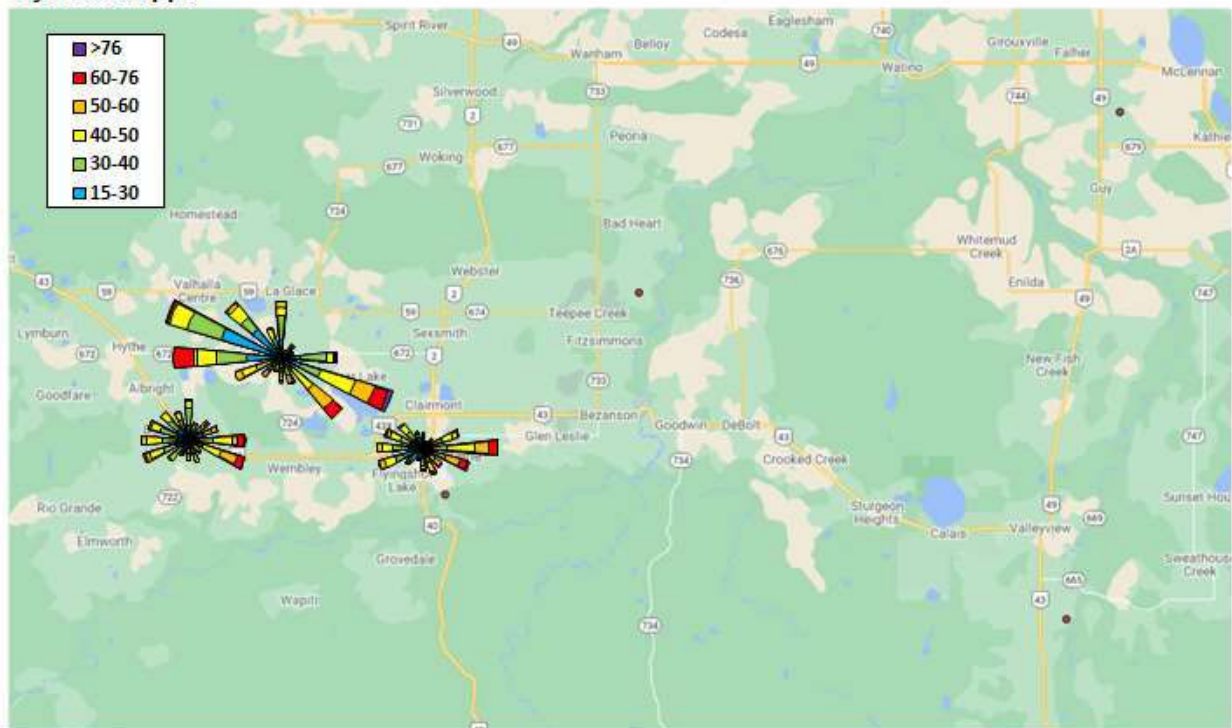
May 2023 O ₃ Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes O ₂	-	-
Henry Pirker O ₂	33.6	86.8
Smoky Heights O ₂	-	-
Beaverlodge O ₂	36.1	80.7
Valleyview O ₂	-	-
Donnelly O ₂	-	-
Poplar O ₂	32.9	89.0
Milner O ₂	-	-



Ozone in ppb

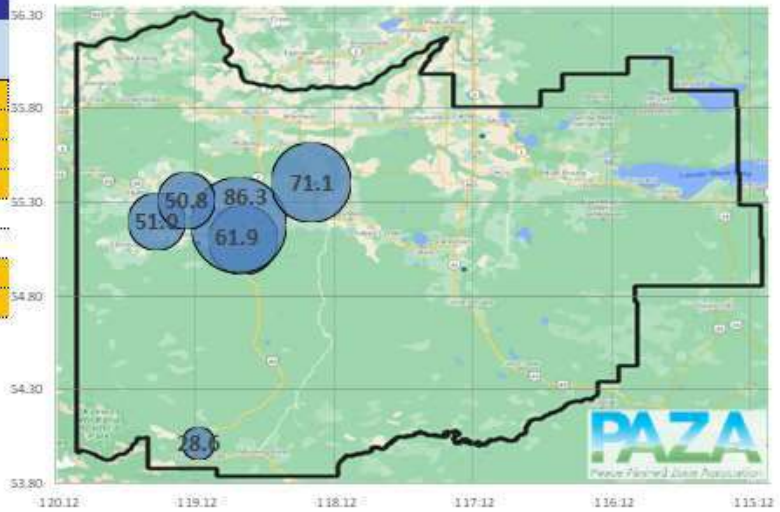


O₃ Roses in ppb

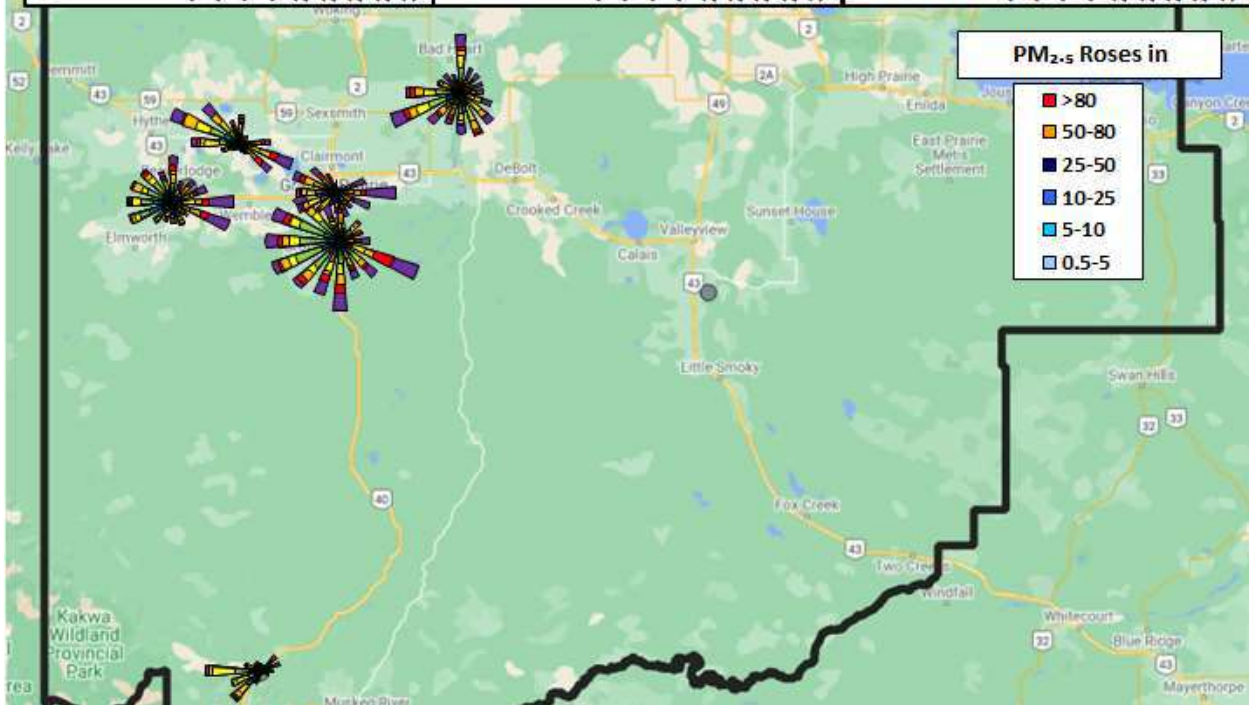
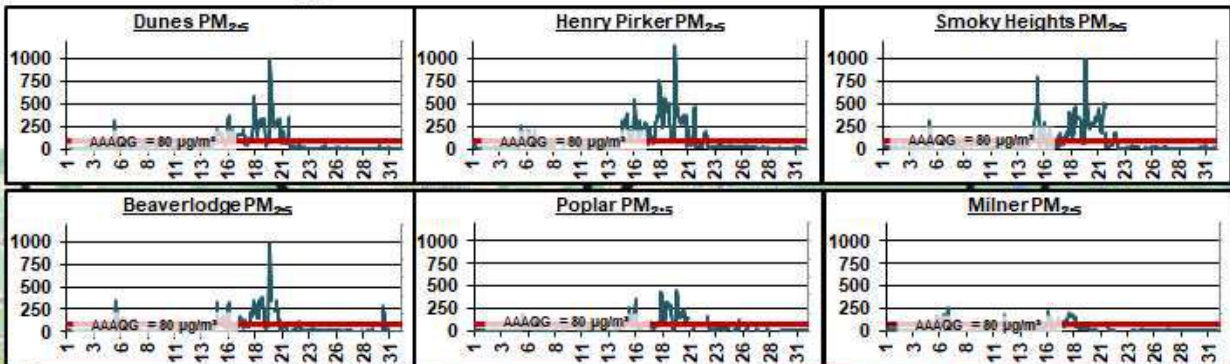


10.7 Fine Particulate Matter (PM_{2.5}) Plots

May 2023 PM _{2.5} Station Summary		
Station	Avg µg/m ³	Max µg/m ³
Dunes PM _{2.5}	61.9	997.0
Henry Pirker PM _{2.5}	86.3	1140.3
Smoky Heights PM _{2.5}	71.1	990.0
Beaverlodge PM _{2.5}	51.0	993.0
Valleyview PM _{2.5}	-	-
Donnelly PM _{2.5}	-	-
Poplar PM _{2.5}	50.8	448.7
Milner PM _{2.5}	28.6	252.2

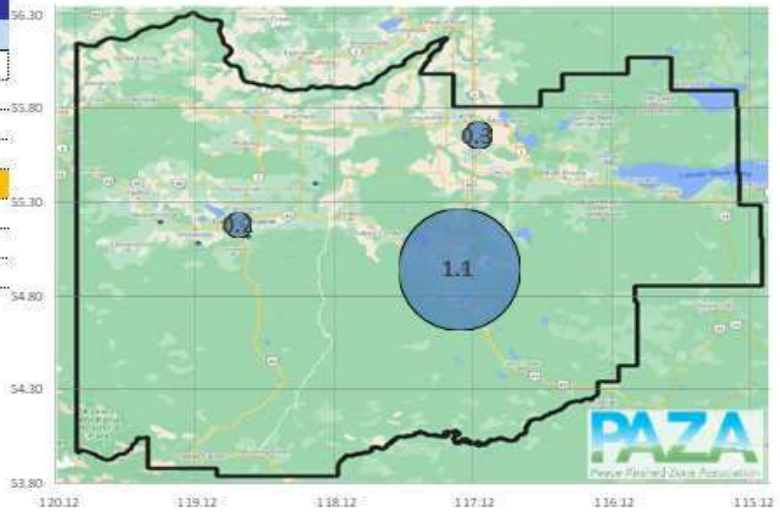


Fine Particulate Matter in µg/m³

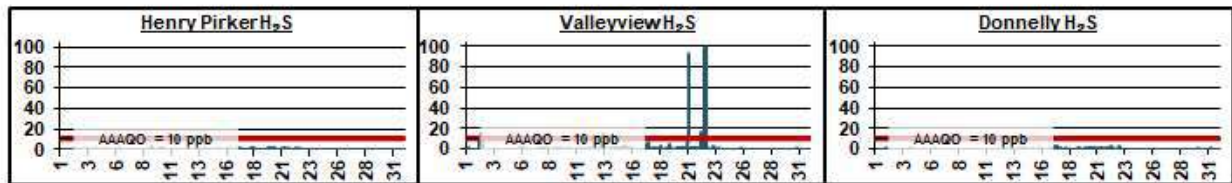


10.8 Hydrogen Sulphide (H₂S) Plots

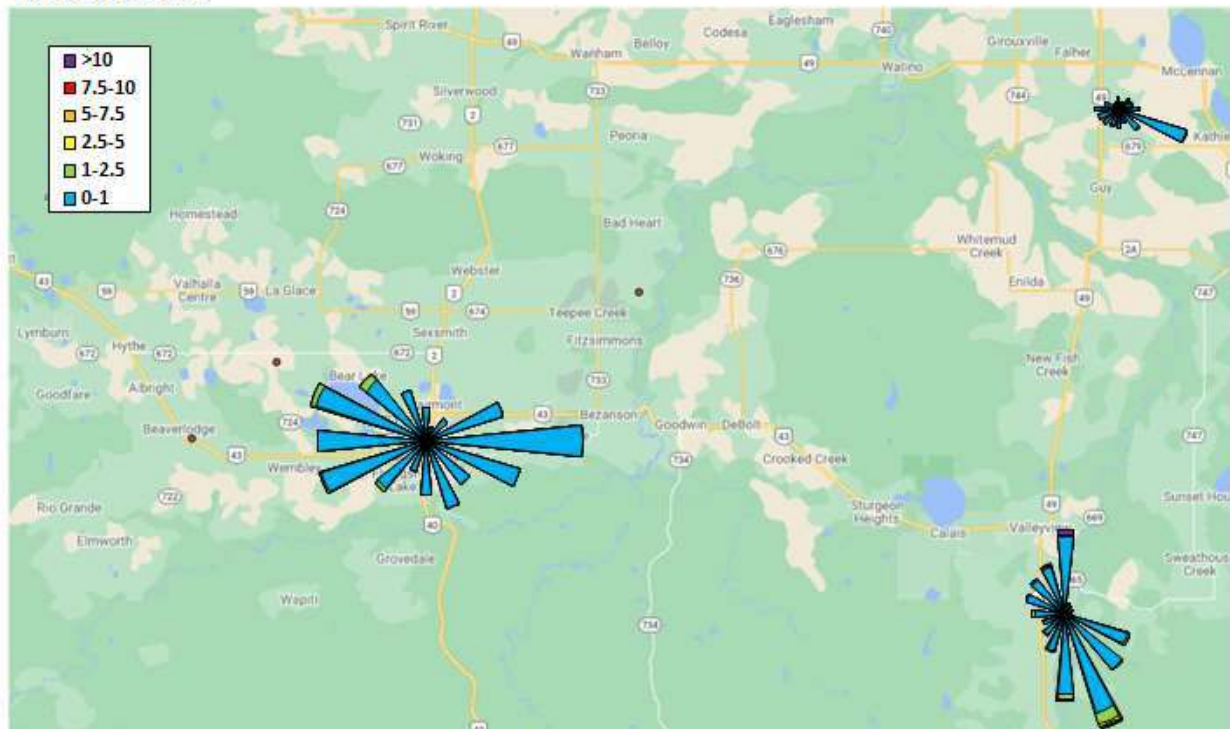
May 2023 H ₂ S Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes H ₂ S	-	-
Henry Pirker H ₂ S	0.2	2.5
Smoky Heights H ₂ S	-	-
Beaverlodge H ₂ S	-	-
Valleyview H ₂ S	1.1	100.1
Donnelly H ₂ S	0.3	3.8
Poplar H ₂ S	-	-
Milner H ₂ S	-	-



Hydrogen Sulphide in ppb

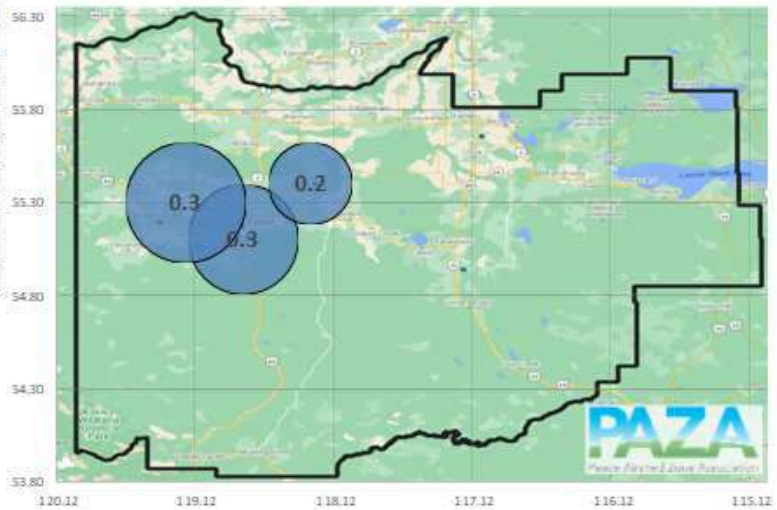


H₂S Roses in ppb

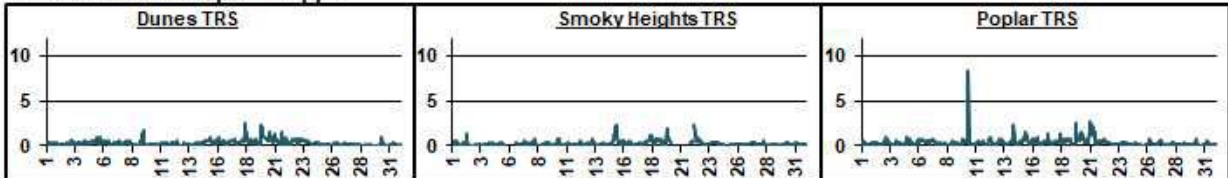


10.9 Total Reduced Sulphur (TRS) Plots

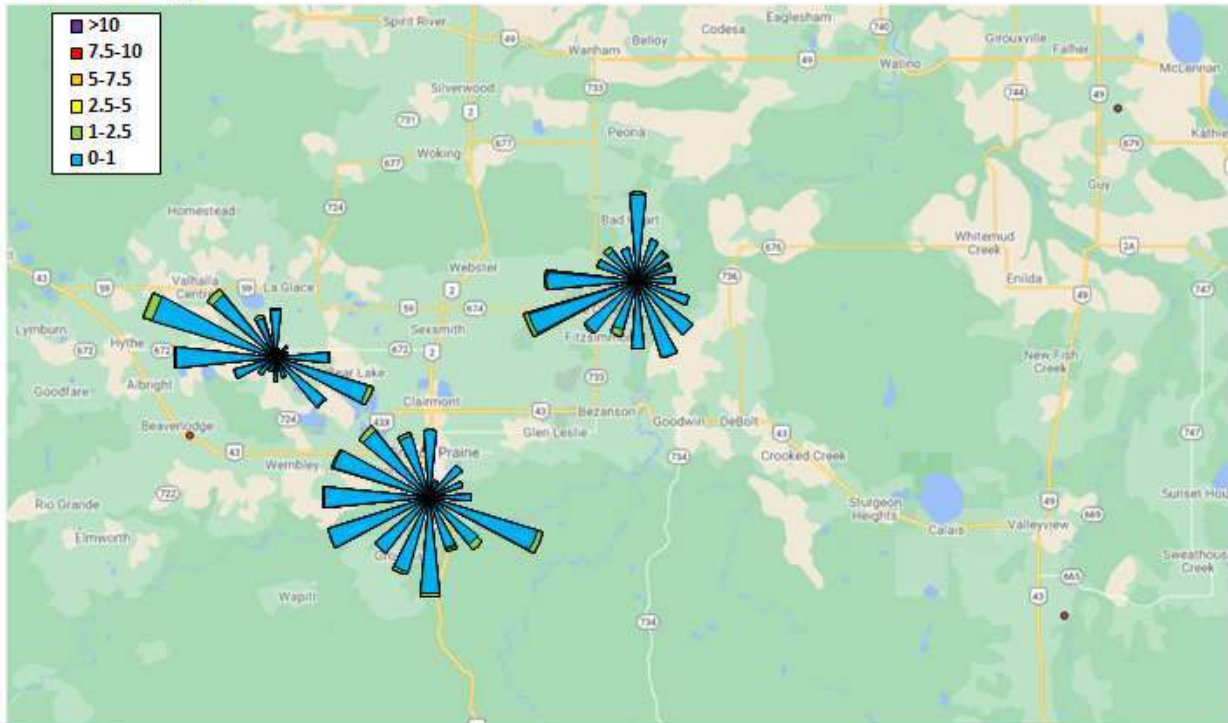
May 2023 TRS Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes TRS	0.3	2.6
Henry Pirker TRS	-	-
Smoky Heights TRS	0.2	2.3
Beaverlodge TRS	-	-
Valleyview TRS	-	-
Donnelly TRS	-	-
Poplar TRS	0.3	8.3
Milner TRS	-	-



Total Reduced Sulphur in ppb



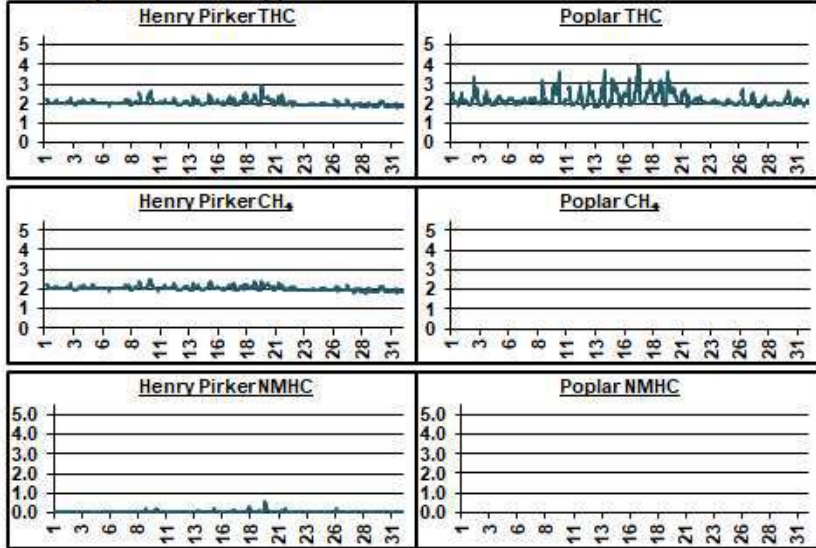
TRS Roses in ppb



10.10 Total Hydrocarbon (THC) Plots

May 2023 THC Station Summary						
Station	Total Hydrocarbons		Methane		Non-Methane HCs	
	Avg (ppm)	Max (ppm)	Avg (ppm)	Max (ppm)	Avg (ppm)	Max (ppm)
Dunes THC	-	-	-	-	-	-
Henry Pirker THC	2.0	3.0	2.0	2.5	0.0	0.5
Smoky Heights THC	-	-	-	-	-	-
Beaverlodge THC	-	-	-	-	-	-
Valleyview THC	-	-	-	-	-	-
Donnelly THC	-	-	-	-	-	-
Poplar THC	2.2	4.0	-	-	-	-

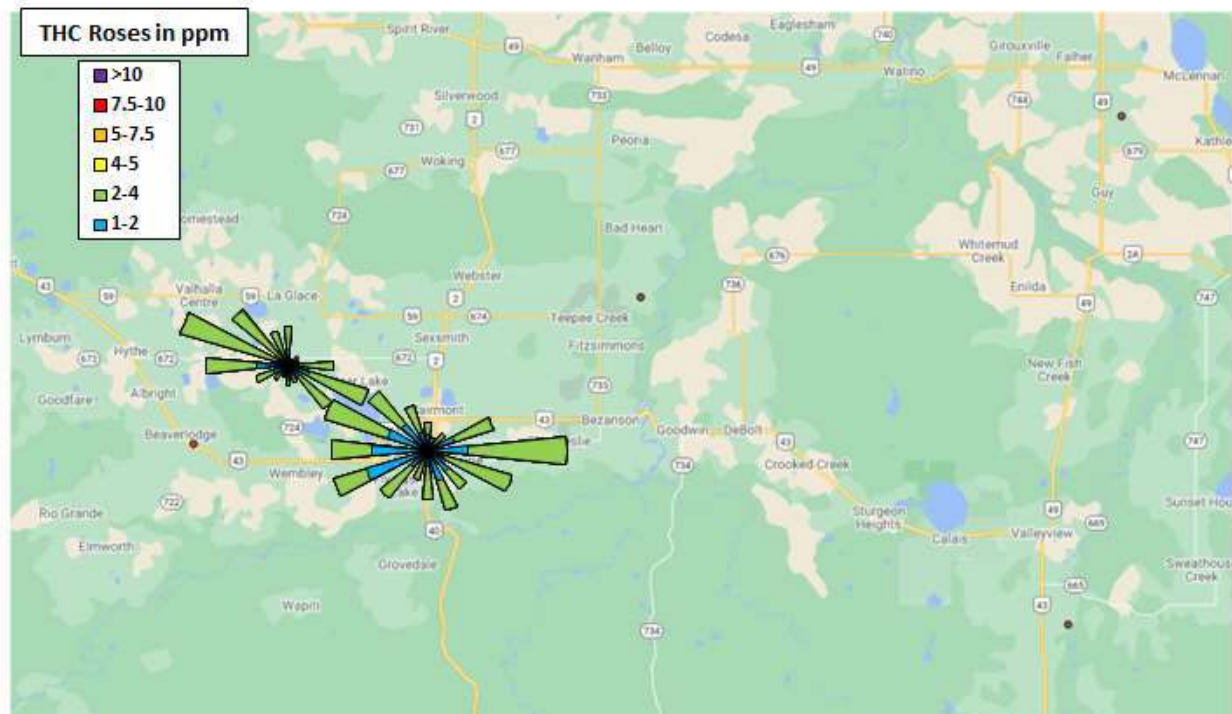
Total Hydrocarbons in ppm



Total Hydrocarbons (THC)

Methane (CH₄)

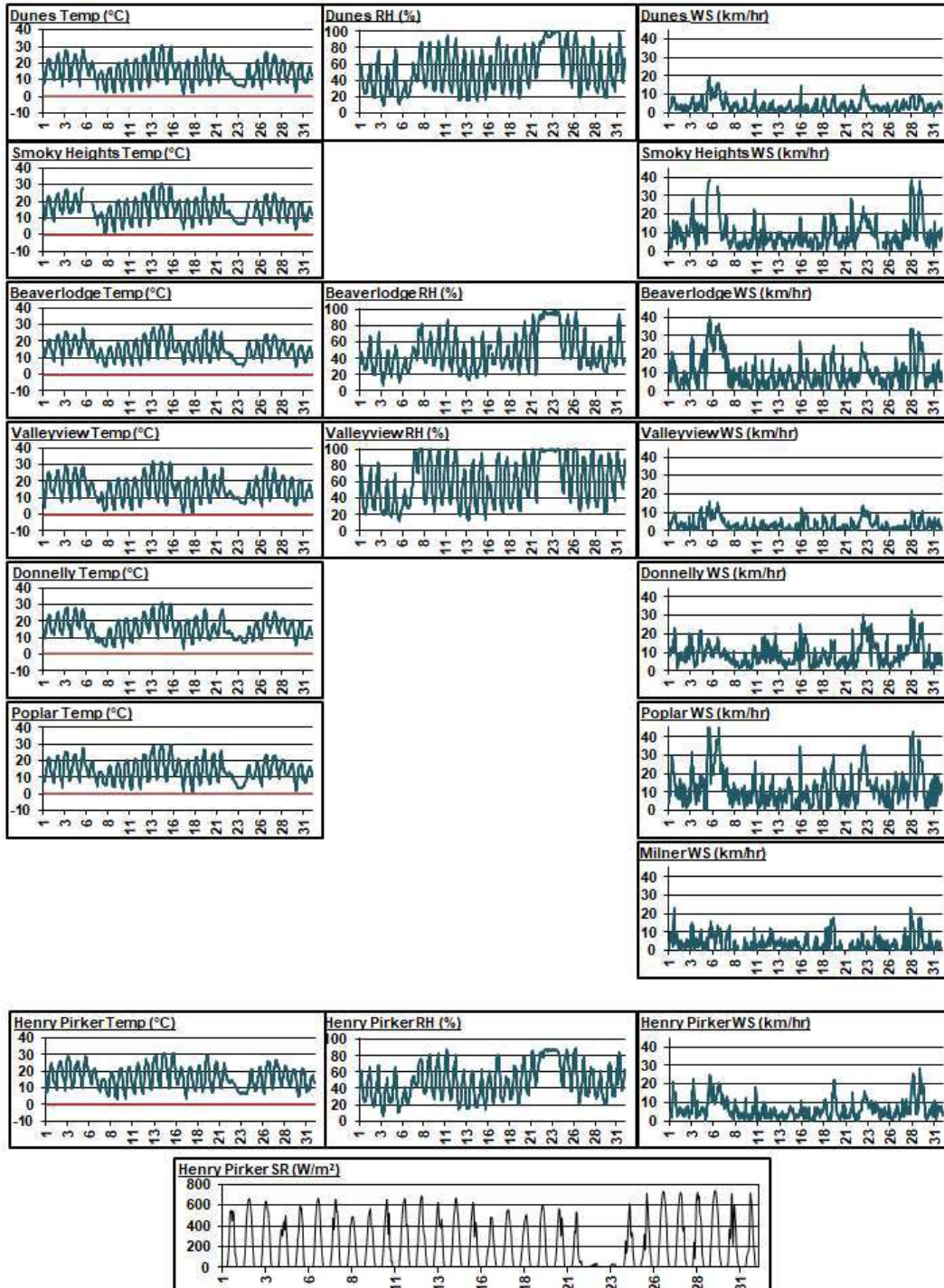
Non-Methane Hydrocarbons (NMHC)



10.11 Meteorology Summary

May 2023 Meteorological Summary						
Station	Temp (°C)	RH (%)	SR (W/m ²)	WS (km/hr)	WD (deg)	WD
Dunes	15.0	52.8	-	3.9	156	SSE
Henry Pirker	16.3	48.6	189.4	6.5	240	WSW
Smoky Heights	15.1	-	-	9.3	234	SW
Beaverlodge	15.4	48.7	-	10.3	46	NE
Valleyview	15.4	60.4	-	3.7	58	ENE
Donnelly	15.8	-	-	9.0	156	SSE
Poplar	14.3	-	-	12.3	304	NW
Milner	-	-	-	4.1	242	WSW

Temp (°C) Outside Temperature
 RH (%) Relative Humidity
 SR (W/m²) Solar Radiation
 WS (km/hr) Wind Speed
 WD (deg) Wind Direction
 WD Wind Direction



11 Passive Monitoring Data

Peace Airshed Zone Association - PAZA Passive Stations for May 2023

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
Duplicates						
2a	Bay Tree		30.1			13-16-078-13 W6M
2b	Bay Tree		33.8			
3a	Forth Creek			1.3		04-13-082-07 W6M
3b	Forth Creek			1.4		
9a	Spirit River	0.5				08-12-079-07 W6M
9b	Spirit River	0.3				
12a	Hythe			2.4		14-36-072-11 W6M
12b	Hythe			2.2		
25a	Pinto Creek	0.2				04-24-069-11 W6M
25b	Pinto Creek	0.3				
30a	Fitzsimmons			0.8		15-36-072-03 W6M
30b	Fitzsimmons			0.9		
35a	Jean Cote	0.3				12-35-079-21 W5M
35b	Jean Cote	0.3				
40a	McLennan			2.5		03-29-077-19 W5M
40b	McLennan			2.6		
42a	Sunset House	0.2				05-32-070-19 W5M
42b	Sunset House	0.3				
G3a	Girouxville 3				1.05	14-02-077-23 W5M
G3b	Girouxville 3				0.18	
D4a	Duvernay 4	0.4			0.26	
D4b	Duvernay 4	0.4			0.24	
K1a	Kakwa 2	4.4				08-13-063-05 W6M
K1b	Kakwa 2	3.4				
K2a	Kakwa 3			1.7		12-18-063-04 W6M
K2b	Kakwa 3			1.7		
K4a	Kakwa 4				0.15	06-18-063-04 W6M
K4b	Kakwa 4				0.11	
M7a	Milner Wanyandie	0.1				11-13-058-08 W6M
M7b	Milner Wanyandie	0.2				
M10a	Milner Powerline			1.5		06-14-058-08 W6M
M10b	Milner Powerline			0.9		
J1a	Jayar1 Plant			1.4		06-08-062-03 W6M
J1b	Jayar1 Plant			1.1		
J2a	Jayar2 14-8	0.5				07-08-062-03 W6M
J2b	Jayar2 14-8	0.5				
J4a	Jayar4 7-8 or 8-8 Pad				0.2	10-08-062-03 W6M
J4b	Jayar4 7-8 or 8-8 Pad				0.2	

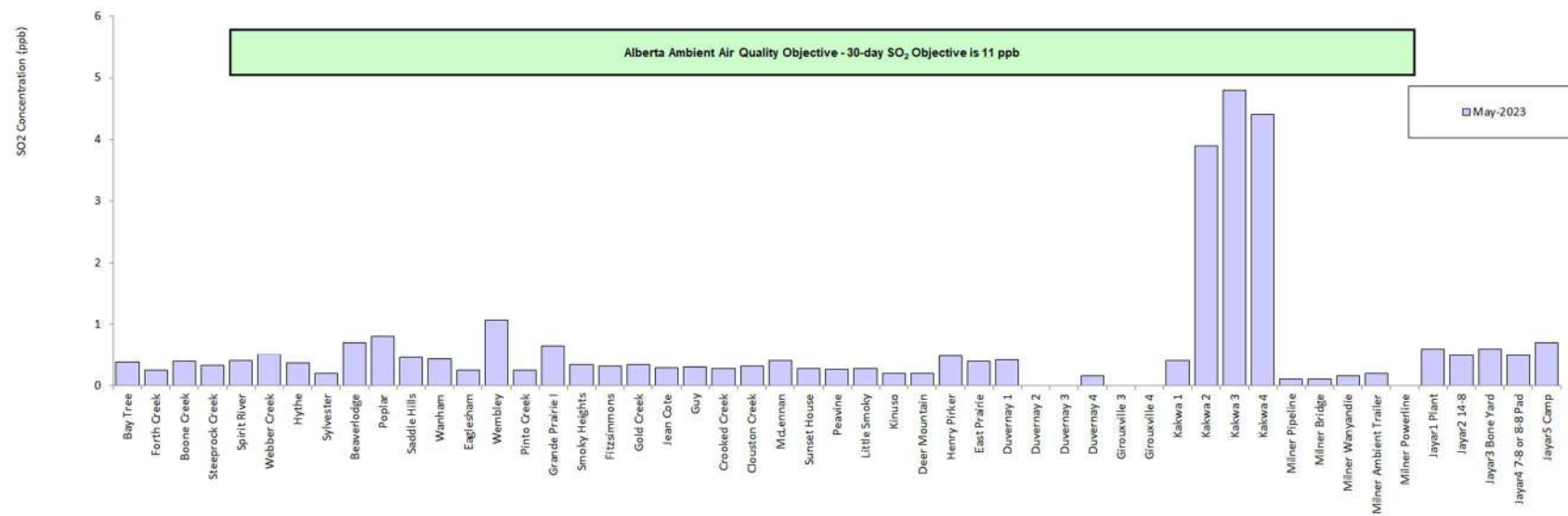
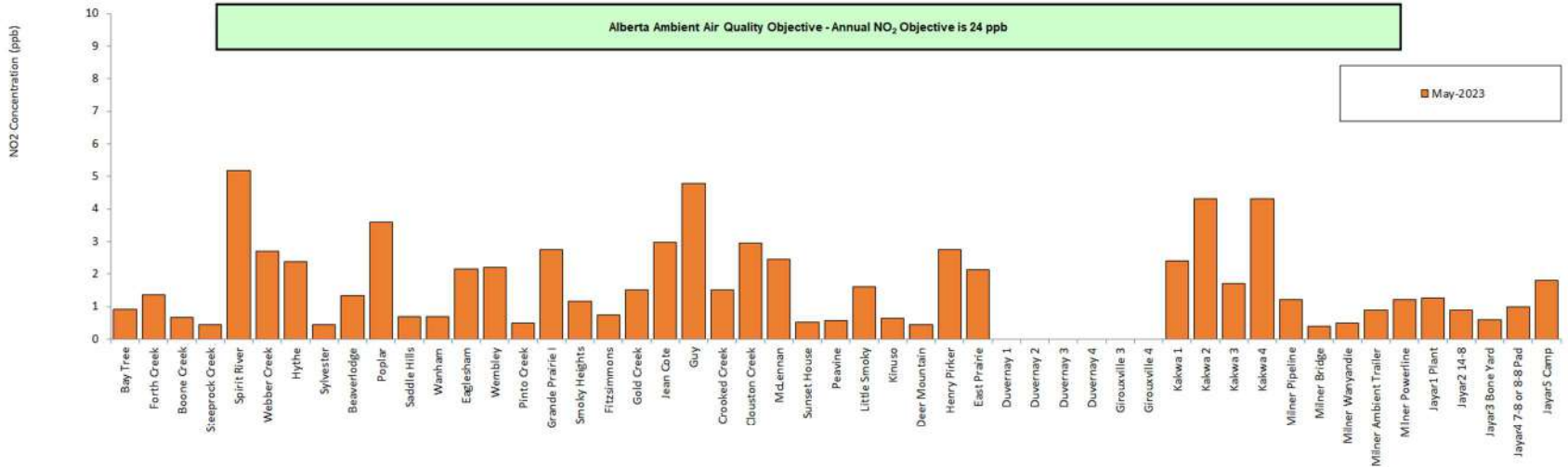
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
2	Bay Tree	0.4	32.0	0.9	-	13-16-078-13 W6M
3	Forth Creek	0.2	-	1.4	-	04-13-082-07 W6M
5	Boone Creek	0.4	-	0.7	-	01-23-076-11 W6M
7	Steepprock Creek	0.3	-	0.5	-	09-35-072-13 W6M
9	Spirit River	0.4	-	5.2	-	08-12-079-07 W6M
11	Webber Creek	0.5	-	2.7	-	09-36-074-09 W6M
12	Hythe	0.4	-	2.4	-	14-36-072-11 W6M
14	Sylvester	0.2	-	0.5	-	08-06-069-12 W6M
16	Beaverlodge	0.7	-	1.3	-	15-36-071-10 W6M
17	Poplar	0.8	-	3.6	-	13-06-073-08 W6M
18	Saddle Hills	0.5	-	0.7	-	04-25-074-07 W6M
19	Wanham	0.4	-	0.7	-	16-22-077-03 W6M
21	Eaglesham	0.2	-	2.2	-	16-21-079-25 W5M
24	Wembley	1.1	-	2.2	-	12-31-070-08 W6M
25	Pinto Creek	0.2	-	0.5	-	04-24-069-11 W6M
27	Grande Prairie I	0.6	-	2.8	-	08-15-071-06 W6M
29	Smoky Heights	0.3	-	1.2	-	04-06-075-02 W6M
30	Fitzsimmons	0.3	-	0.8	-	15-36-072-03 W6M
32	Gold Creek	0.3	-	1.5	-	06-33-067-05 W6M
35	Jean Cote	0.3	-	3.0	-	12-35-079-21 W5M
36	Guy	0.3	-	4.8	0.3	03-04-076-22 W5M
37	Crooked Creek	0.3	27.3	1.5	-	16-01-071-26 W5M
39	Clouston Creek	0.3	-	3.0	-	12-01-073-22 W5M
40	McLennan	0.4	-	2.5	-	03-29-077-19 W5M
42	Sunset House	0.3	-	0.5	-	05-32-070-19 W5M
44	Peavine	0.3	-	0.6	-	03-05-079-15 W5M
46	Little Smoky	0.3	-	1.6	-	12-01-065-21 W5M
47	Kinuso	0.2	34.6	0.6	-	12-10-073-10 W5M
48	Deer Mountain	0.2	-	0.4	-	15-22-068-09 W5M
49	Henry Pirker	0.5	-	2.8	-	17-26-071-06 W6M
50	East Prairie	0.4	-	2.1	-	11-13-079-08 W6M
D1	Duvernay 1	0.4	-	-	0.19	04-33-062-20 W5M
D2	Duvernay 2	-	-	-	-	04-33-062-20 W5M
D3	Duvernay 3	-	-	-	-	04-33-062-20 W5M
D4	Duvernay 4	0.2	-	-	0.25	04-33-062-20 W5M
G3	Girouxville 3	-	-	-	0.62	14-02-077-23 W5M
G4	Girouxville 4	-	-	-	0.69	04-08-077-22 W5M
K1	Kakwa 1	0.4	-	2.4	0.13	01-13-063-05 W6M
K2	Kakwa 2	3.9	-	4.3	0.15	08-13-063-05 W6M
K3	Kakwa 3	4.8	-	1.7	0.14	12-18-063-04 W6M
K4	Kakwa 4	4.4	-	4.3	0.13	06-18-063-04 W6M
M1	Milner Pipeline	0.1	-	1.2	-	12-14-058-08 W6M
M2	Milner Bridge	0.1	-	0.4	-	08-06-057-08 W6M
M3	Milner Wanyandie	0.2	-	0.5	-	11-13-058-08 W6M
M4	Milner Ambient Trailer	0.2	-	0.9	-	09-15-058-08 W6M
M5	Milner Powerline	<0.1	-	1.2	-	06-14-058-08 W6M
J1	Jayar1 Plant	0.6	-	1.3	0.14	06-08-062-03 W6M
J2	Jayar2 14-8	0.5	-	0.9	0.15	07-08-062-03 W6M
J3	Jayar3 Bone Yard	0.6	-	0.6	0.08	14-08-062-03 W6M
J4	Jayar4 7-8 or 8-8 Pad	0.5	-	1.0	0.17	10-08-062-03 W6M
J5	Jayar5 Camp	0.7	-	1.8	0.14	11-08-062-03 W6M

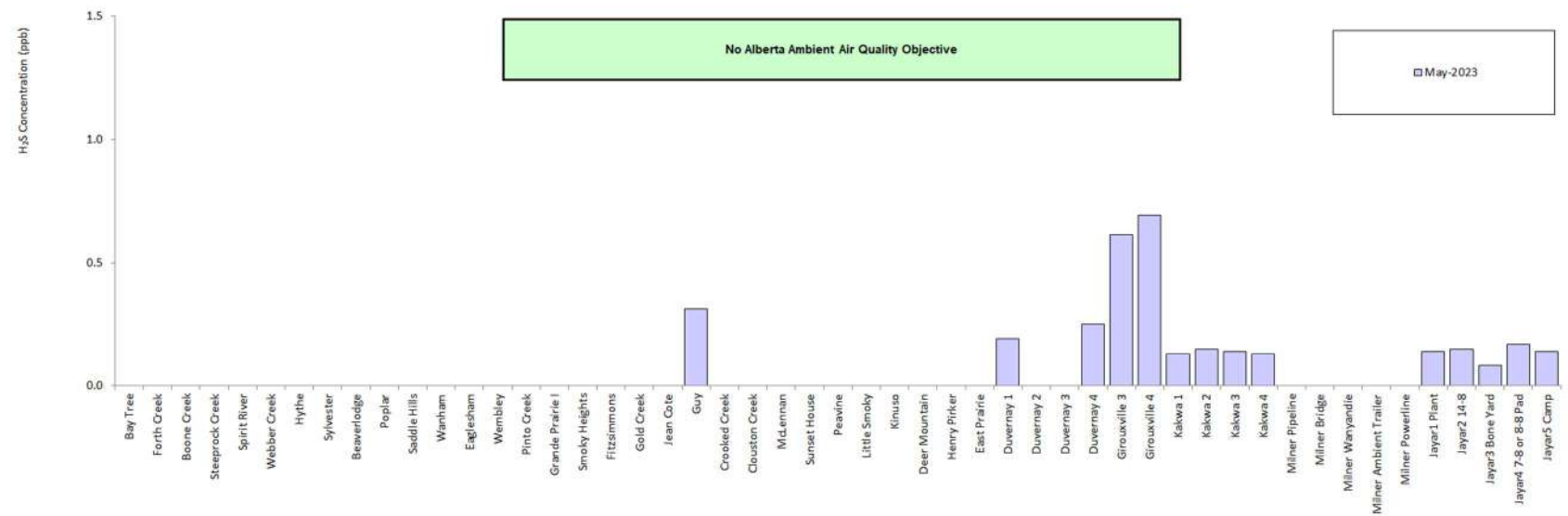
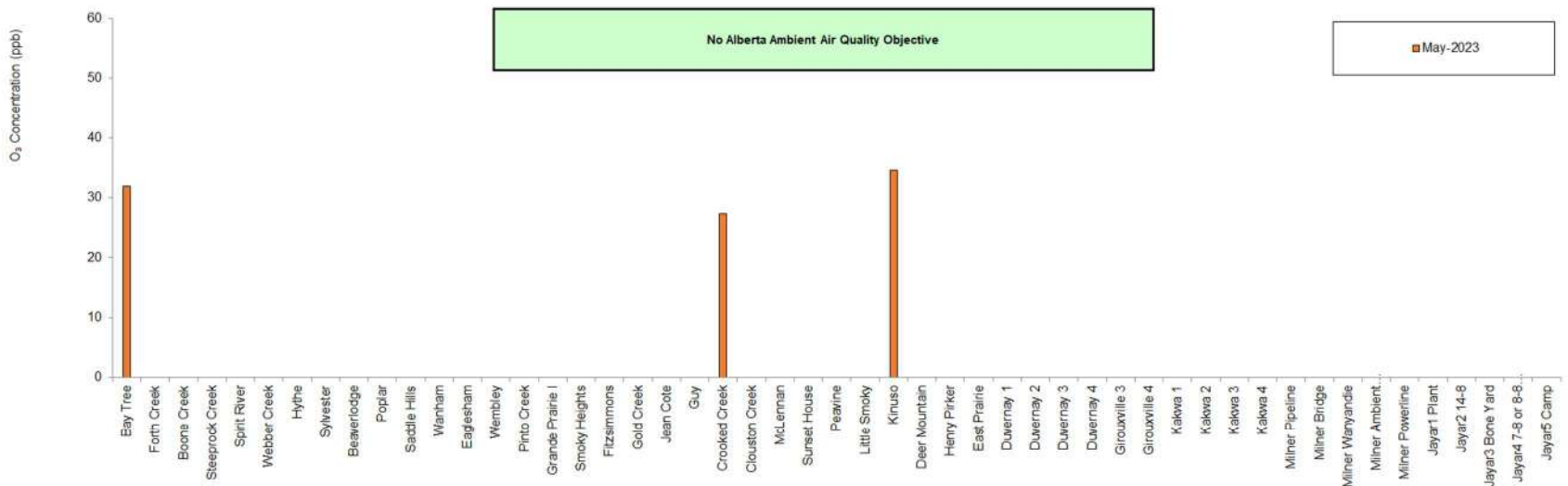
Passive Summary for May 2023

Stats	Sulphur Dioxide SO ₂ ppb	Ozone O ₃ ppb	Nitrogen Dioxide NO ₂ ppb	Hydrogen Sulphide H ₂ S ppb
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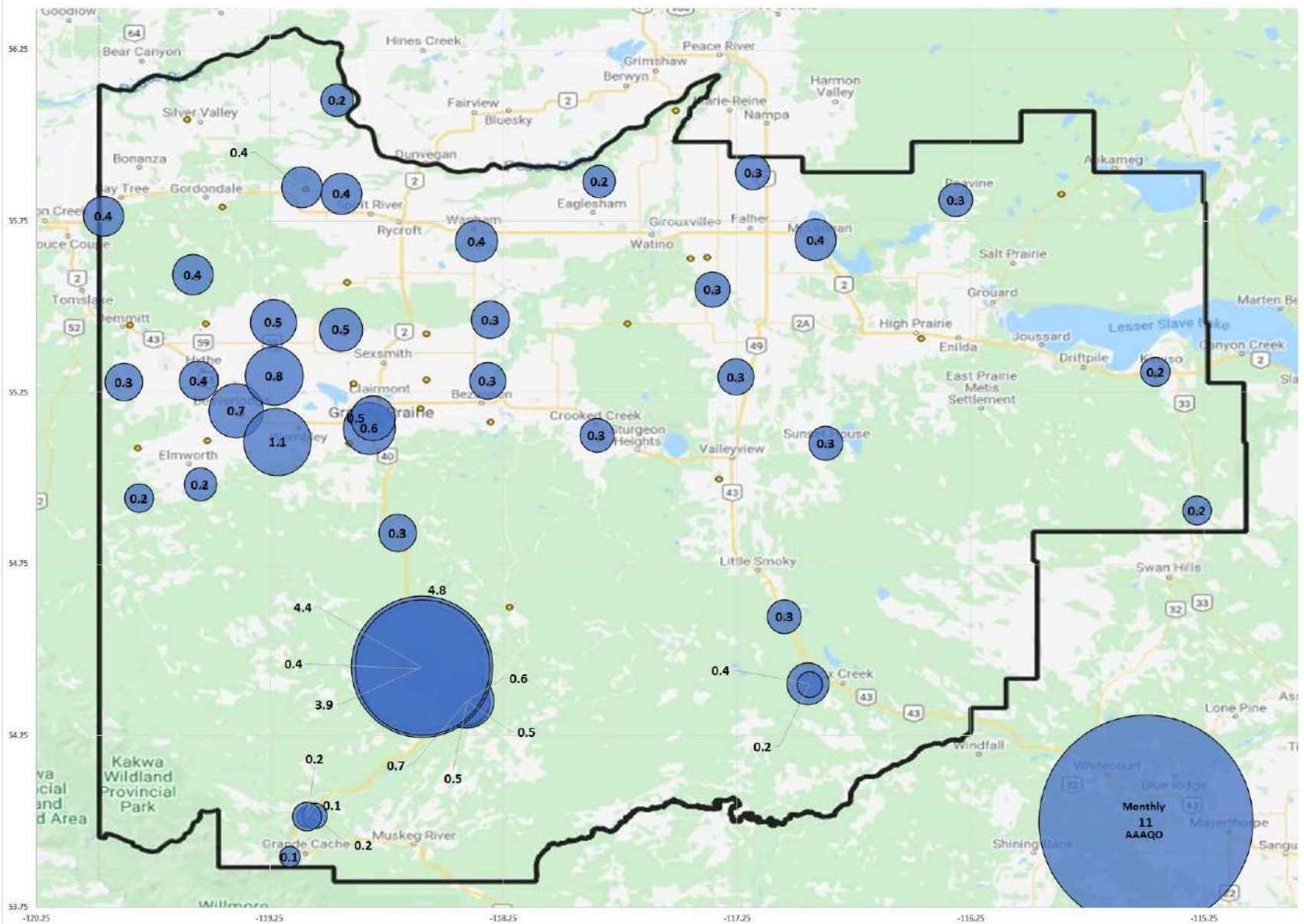
Passive Summary for May 2023 (PAZA)				
Mean	0.6	31.3	1.7	0.2
Standard Deviation	1.0	3.7	1.3	0.2
Minimum	0.1	27.3	0.4	0.1
	Milner Pipeline (#M1)	Crooked Creek (#37)	Milner Bridge (#M2)	Jayar3 Bone Yard (#J3)
Maximum	4.8	34.6	5.2	0.7
	Kakwa 3 (#K3)	Kinuso (#47)	Spirit River (#9)	Girouxville 4 (#G4)

Continuous and Passive Monitoring Comparison				
PAZA Beaverlodge Station	0.7	36.1	4.1	-
Beaverlodge Passive (#16)	0.7	-	1.3	-
PAZA Henry Pirker Station				
Henry Pirker Station	0.4	33.6	8.6	0.2
Henry Pirker passive (#49)	0.5	-	2.8	-
Milner Station				
Milner Station	-	-	1.3	-
Milner passive (M4)	0.2	-	0.9	-

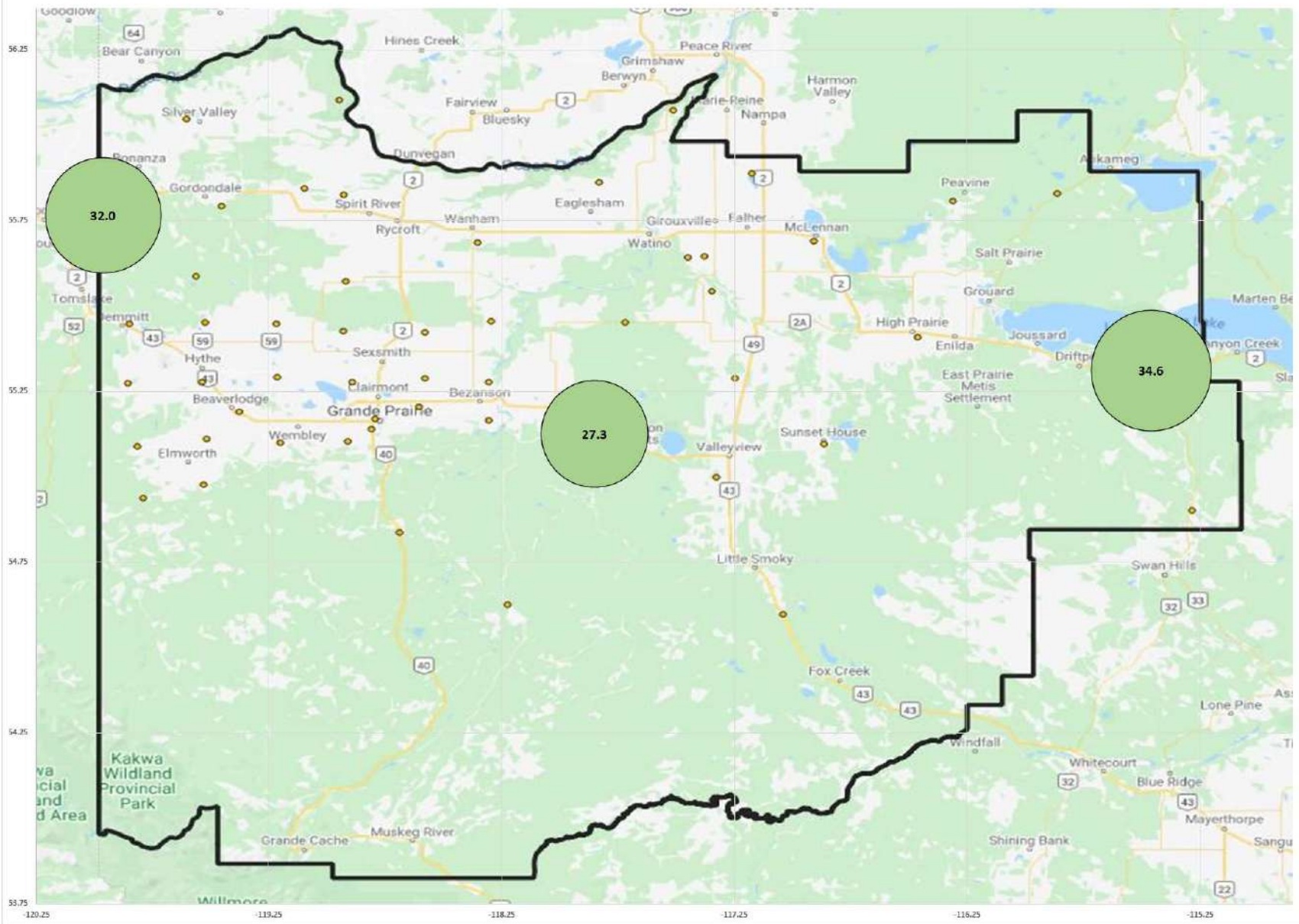




SO₂ Monthly Average (units in ppb)



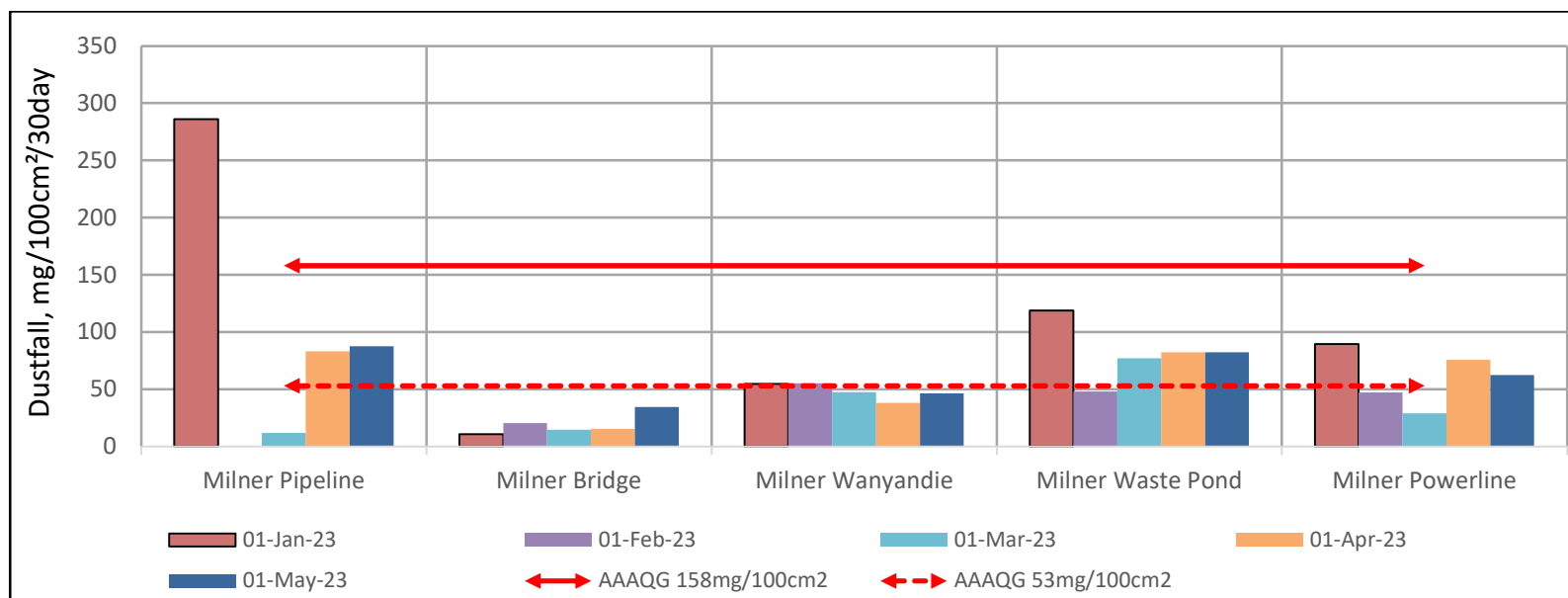
O₃ Monthly Average (units in ppb)



12 Dustfall Monitoring Data

Milner Dustfall Samples May 2023

Exposure Month	Year	Sample	Total Dustfall (30 day) mg/100cm ² /30day	Fixed Dustfall (30 day) mg/100cm ² /30day	Exposure days	Field Notes
May	2023	Milner Pipeline	87.4	43.3	30	
May	2023	Milner Bridge	34.5	19.8	30	
May	2023	Milner Wanyandie	46.3	27.9	30	
May	2023	Milner Waste Pond	82.3	27.9	30	
May	2023	Milner Powerline	62.4	17.6	30	
May	2023	Milner Powerline Dup	41.1	17.6	30	RPD= 41% / 0%



End of Report



Peace Airshed Zone Association

Ambient Air Monitoring Report

May 2023