



## **Peace River Area Monitoring Program**

# **JULY 2023**

## **Monthly Ambient Air Quality Monitoring Report**

### **PRAMP-202307**

#### **Operation and Maintenance:**

Bureau Veritas Canada

#### **Data Validation and Report:**

Peace River Area Monitoring Program

August 17, 2023

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## LIST OF ACRONYMS

AAAQOs	Alberta Ambient Air Quality Objectives
AEP	Alberta Environment and Parks
AMD	Air Monitoring Directive
AT	Ambient Temperature
BP	Barometric Pressure
CH <sub>4</sub>	Methane
EPEA	Environmental Protection and Enhancement Act
H <sub>2</sub> S	Hydrogen Sulphide
kph	kilometers per hour
mb	millibar
mm	millimeter
NMHC	Non-Methane Hydrocarbons
ppb	parts per billion
ppm	parts per million
PRAMP	Peace River Area Monitoring Program
RH	Relative Humidity
SO <sub>2</sub>	Sulphur Dioxide
ST	Station Temperature
THC	Total Hydrocarbons
TRS	Total Reduced Sulphur
VWD	Vector Wind Direction
VWS	Vector Wind Speed
WD	Wind Direction
WS	Wind Speed
°C	Degrees Celsius



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August 17, 2023

**RE: PRAMP – July 2023 Monthly Ambient Air Quality Monitoring Report**

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Enclosed is the July 2023 Monthly Ambient Air Quality Monitoring Report for the continuous ambient air quality monitoring stations of the Peace River Area Monitoring Program (PRAMP) regional air quality monitoring network.

The representative of the Person Responsible for this monitoring program is

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This report has been prepared, review and submitted by Michael Bisaga & Lily Lin of the PRAMP Airshed. This report is also submitted on behalf of the industrial member companies to satisfy the requirements of the facility operating approvals.

PRAMP Airshed has retained the services of Bureau Veritas Canada to conduct continuous ambient monitoring on its behalf.

## NETWORK STATION SUMMARY

### Listing of Continuous Monitoring Stations

The PRAMP continuous ambient air quality monitoring network stations are:

- 986-C Station
- 842-B Station
- Reno-B Station
- AQHI Grimshaw
- Peace River Complex (PRC) Station

Station ID	Station Name	Latitude	Longitude
1562	986-C	56.36980	-116.92500
1561	842-B	56.27406	-116.98129
1563	Reno-B	55.890868	-117.137080
1689	AQHI-Grimshaw	56.18657	-117.604994
1698	PRC	56.38257	-116.769283

### Listing of Intermittent Monitoring Stations

- VOC Canister Sampling Station
  - 986-C Station
  - 842-B Station
  - Reno-B Station

### Listing of PRAMP member with EPEA Facility Operating Approval

Company	Facility	Approval No.
Canadian Natural Upgrading Limited	Peace River Complex	1642-03-00

### Calibration and Data Submission

Hourly data and calibration reports for July 2023 were submitted to Alberta's Ambient Air Data Warehouse through ETS for the 986-C station, 842-B station, Reno-B station, PRC station and AQHI-Grimshaw station.

## Monitoring Notes during the Month of July 2023

### 986-C Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- **THC/CH4/NMHC:** The Thermo 55i, s/n: 1433563261, failed the shut-down calibration due to frequent injection issues on July 5. The analyzer was removed, and the Thermo 55i, s/n: 1022143392, was installed. One-minute data were reviewed and discarded if data quality was affected by injection issues. Two hours of data collected on July 1 were invalidated as a result.
- **SO2:** The expected zero value was entered incorrectly on July 7. The error was corrected on July 15. As a result, the value was not used for the baseline correction between July 7 and 15.

### 842-B Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- No major operational issues were recorded this month.

### Reno-B Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- **THC/CH4/NMHC:** After a shut-down calibration on July 18, BV's Thermo 55i analyzer, s/n: 1505664392, was removed, and PRAMP's Thermo 55i analyzer, s/n: 12101910497, was installed. The analyzer was allowed time to stabilize overnight. A successful installation calibration was completed on July 19. Twenty hours of downtime were recorded due to this event.

### PRC Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- No major operational issues were recorded this month.

### AQHI – Grimshaw Station

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement, except NOx/NO/NO2 (89.9%) and O3 (58.5% in July and 24.7% in June). **AQHI reference #: 417906 and 417907**, respectively.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and /or Alberta Ambient Air Quality Guidelines (AAAGs) where applicable, except PM2.5. One hundred sixty-three 1-hour PM2.5 exceedances and thirteen 24-hour PM2.5 exceedances were recorded this month. Both nearby and distant wildfires contributed to intense local wildfire smoke conditions and numerous PM2.5 exceedances measured by PRAMP.

Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
02-Jul	6	PM2.5	1-Hour	88	16.2	300° (WNW)	415805
02-Jul	7	PM2.5	1-Hour	103	15.8	295° (WNW)	415805
02-Jul	-	PM2.5	24-Hour	40	13.7	296° (WNW)	415805
07-Jul	2	PM2.5	1-Hour	85	5.1	7° (N)	416910
07-Jul	3	PM2.5	1-Hour	99	5.4	14° (NNE)	416910
07-Jul	4	PM2.5	1-Hour	107	5.3	14° (NNE)	416910
07-Jul	5	PM2.5	1-Hour	100	4.2	10° (N)	416910
07-Jul	6	PM2.5	1-Hour	84	2.6	354° (N)	416910
07-Jul	-	PM2.5	24-Hour	58	4.1	61° (ENE)	416910
09-Jul	12	PM2.5	1-Hour	85	10.4	189° (S)	416910
09-Jul	13	PM2.5	1-Hour	107	11.7	202° (SSW)	416910
09-Jul	14	PM2.5	1-Hour	118	9.6	218° (SW)	416910
09-Jul	15	PM2.5	1-Hour	115	9.0	245° (WSW)	416910
09-Jul	16	PM2.5	1-Hour	107	6.8	250° (WSW)	416910
09-Jul	17	PM2.5	1-Hour	106	4.8	246° (WSW)	416910
09-Jul	18	PM2.5	1-Hour	101	3.1	194° (SSW)	416910
09-Jul	19	PM2.5	1-Hour	100	3.4	107° (ESE)	416910
09-Jul	20	PM2.5	1-Hour	99	4.6	73° (ENE)	416910
09-Jul	21	PM2.5	1-Hour	96	5.2	50° (NE)	416910
09-Jul	22	PM2.5	1-Hour	107	6.5	42° (NE)	416910
09-Jul	23	PM2.5	1-Hour	113	6.9	45° (NE)	416910
09-Jul	-	PM2.5	24-Hour	72	5.3	211° (SSW)	416910
10-Jul	0	PM2.5	1-Hour	149	8.3	50° (NE)	416553
10-Jul	1	PM2.5	1-Hour	158	8.6	55° (NE)	416553
10-Jul	2	PM2.5	1-Hour	174	7.4	63° (ENE)	416553
10-Jul	3	PM2.5	1-Hour	164	6.2	68° (ENE)	416553
10-Jul	4	PM2.5	1-Hour	162	8.1	68° (ENE)	416553
10-Jul	5	PM2.5	1-Hour	202	4.9	49° (NE)	416553
10-Jul	6	PM2.5	1-Hour	192	8.9	44° (NE)	416553
10-Jul	7	PM2.5	1-Hour	87	10.4	47° (NE)	416553
10-Jul	8	PM2.5	1-Hour	102	9.5	41° (NE)	416553
10-Jul	9	PM2.5	1-Hour	92	5.0	61° (ENE)	416553
10-Jul	10	PM2.5	1-Hour	89	3.2	83° (E)	416553
10-Jul	11	PM2.5	1-Hour	93	2.8	126° (SE)	416553
10-Jul	12	PM2.5	1-Hour	94	2.7	82° (E)	416553
10-Jul	13	PM2.5	1-Hour	83	3.6	57° (ENE)	416553
11-Jul	-	PM2.5	24-Hour	42	6.8	167° (SSE)	416553
12-Jul	-	PM2.5	24-Hour	47	4.1	319° (NW)	416553
13-Jul	5	PM2.5	1-Hour	111	7.9	339° (NNW)	416553



Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
13-Jul	6	PM2.5	1-Hour	121	8.1	346° (NNW)	416553
13-Jul	7	PM2.5	1-Hour	141	9.8	2° (N)	416553
13-Jul	8	PM2.5	1-Hour	164	11.6	4° (N)	416553
13-Jul	9	PM2.5	1-Hour	181	9.4	3° (N)	416553
13-Jul	10	PM2.5	1-Hour	253	7.0	4° (N)	416553
13-Jul	11	PM2.5	1-Hour	353	8.1	12° (NNE)	416553
13-Jul	12	PM2.5	1-Hour	270	8.5	17° (NNE)	416553
13-Jul	13	PM2.5	1-Hour	154	7.1	14° (NNE)	416553
13-Jul	14	PM2.5	1-Hour	136	7.6	0° (N)	416553
13-Jul	15	PM2.5	1-Hour	146	7.9	342° (NNW)	416553
13-Jul	16	PM2.5	1-Hour	117	8.9	3° (N)	416553
13-Jul	17	PM2.5	1-Hour	110	8.0	4° (N)	416553
13-Jul	18	PM2.5	1-Hour	111	6.0	7° (N)	416553
13-Jul	19	PM2.5	1-Hour	99	3.5	343° (NNW)	416553
13-Jul	20	PM2.5	1-Hour	104	4.5	274° (W)	416553
13-Jul	21	PM2.5	1-Hour	126	7.6	271° (W)	416553
13-Jul	22	PM2.5	1-Hour	116	7.5	293° (WNW)	416553
13-Jul	23	PM2.5	1-Hour	100	8.1	305° (WNW)	416553
13-Jul	-	PM2.5	24-Hour	133	7.0	345° (NNW)	416553
14-Jul	0	PM2.5	1-Hour	109	8.1	322° (NW)	416553
14-Jul	1	PM2.5	1-Hour	123	7.3	327° (NW)	416553
14-Jul	2	PM2.5	1-Hour	142	7.7	341° (NNW)	416553
14-Jul	3	PM2.5	1-Hour	164	7.4	342° (NNW)	416553
14-Jul	4	PM2.5	1-Hour	192	6.1	355° (N)	416553
14-Jul	5	PM2.5	1-Hour	204	6.7	346° (NNW)	416553
14-Jul	6	PM2.5	1-Hour	235	5.7	346° (NNW)	416553
14-Jul	7	PM2.5	1-Hour	278	5.7	1° (N)	416553
14-Jul	8	PM2.5	1-Hour	297	4.7	8° (N)	416553
14-Jul	9	PM2.5	1-Hour	304	3.1	5° (N)	416553
14-Jul	10	PM2.5	1-Hour	306	3.1	325° (NW)	416553
14-Jul	11	PM2.5	1-Hour	318	3.6	296° (WNW)	416553
14-Jul	12	PM2.5	1-Hour	272	5.1	288° (WNW)	416553
14-Jul	13	PM2.5	1-Hour	290	5.1	248° (WSW)	416553
14-Jul	14	PM2.5	1-Hour	357	5.7	235° (SW)	416553
14-Jul	15	PM2.5	1-Hour	333	7.3	210° (SSW)	416553
14-Jul	16	PM2.5	1-Hour	202	9.2	193° (S)	416553
14-Jul	17	PM2.5	1-Hour	165	10.3	193° (S)	416553
14-Jul	18	PM2.5	1-Hour	147	9.3	199° (SSW)	416553
14-Jul	19	PM2.5	1-Hour	141	6.6	196° (SSW)	416553

Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
14-Jul	20	PM2.5	1-Hour	115	5.3	203° (SSW)	416553
14-Jul	21	PM2.5	1-Hour	102	4.1	234° (SW)	416553
14-Jul	22	PM2.5	1-Hour	104	0.1	184° (S)	416553
14-Jul	23	PM2.5	1-Hour	104	0.3	130° (SE)	416553
14-Jul	-	PM2.5	24-Hour	209	5.7	285° (WNW)	416553
15-Jul	0	PM2.5	1-Hour	107	3.2	248° (WSW)	416553
15-Jul	1	PM2.5	1-Hour	101	3.2	259° (WSW)	416553
15-Jul	2	PM2.5	1-Hour	102	0.5	281° (W)	416553
15-Jul	3	PM2.5	1-Hour	105	2.9	329° (NNW)	416553
15-Jul	4	PM2.5	1-Hour	106	3.6	354° (N)	416553
15-Jul	5	PM2.5	1-Hour	112	0.2	52° (NE)	416553
15-Jul	6	PM2.5	1-Hour	114	1.5	340° (NNW)	416553
15-Jul	7	PM2.5	1-Hour	137	2.3	10° (N)	416553
15-Jul	8	PM2.5	1-Hour	139	1.9	74° (ENE)	416553
15-Jul	9	PM2.5	1-Hour	139	3.2	86° (E)	416553
15-Jul	10	PM2.5	1-Hour	134	3.5	120° (ESE)	416553
15-Jul	11	PM2.5	1-Hour	115	3.9	90° (E)	416553
15-Jul	12	PM2.5	1-Hour	124	5.6	134° (SE)	416553
15-Jul	13	PM2.5	1-Hour	127	7.0	133° (SE)	416553
15-Jul	14	PM2.5	1-Hour	125	7.7	160° (SSE)	416553
15-Jul	15	PM2.5	1-Hour	132	6.3	176° (S)	416553
15-Jul	16	PM2.5	1-Hour	140	5.8	194° (SSW)	416553
15-Jul	17	PM2.5	1-Hour	142	4.5	191° (S)	416553
15-Jul	18	PM2.5	1-Hour	133	5.4	177° (S)	416553
15-Jul	19	PM2.5	1-Hour	120	6.0	199° (SSW)	416553
15-Jul	20	PM2.5	1-Hour	134	4.3	218° (SW)	416553
15-Jul	21	PM2.5	1-Hour	128	7.0	226° (SW)	416553
15-Jul	22	PM2.5	1-Hour	130	9.1	298° (WNW)	416553
15-Jul	23	PM2.5	1-Hour	136	1.6	67° (ENE)	416553
15-Jul	-	PM2.5	24-Hour	124	4.2	169° (SSE)	416553
16-Jul	0	PM2.5	1-Hour	132	1.1	236° (SW)	416958
16-Jul	1	PM2.5	1-Hour	124	2.5	295° (WNW)	416958
16-Jul	2	PM2.5	1-Hour	120	3.5	294° (WNW)	416958
16-Jul	3	PM2.5	1-Hour	118	0.6	54° (NE)	416958
16-Jul	4	PM2.5	1-Hour	118	1.7	117° (ESE)	416958
16-Jul	5	PM2.5	1-Hour	117	2.6	225° (SW)	416958
16-Jul	6	PM2.5	1-Hour	114	2.4	127° (SE)	416958
16-Jul	7	PM2.5	1-Hour	106	6.7	142° (SE)	416958
16-Jul	8	PM2.5	1-Hour	92	9.0	155° (SSE)	416958

Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
16-Jul	9	PM2.5	1-Hour	88	9.1	160° (SSE)	416958
16-Jul	10	PM2.5	1-Hour	87	11.9	153° (SSE)	416958
16-Jul	11	PM2.5	1-Hour	82	12.8	156° (SSE)	416958
16-Jul	12	PM2.5	1-Hour	81	13.5	147° (SE)	416958
16-Jul	13	PM2.5	1-Hour	82	9.9	154° (SSE)	416958
16-Jul	14	PM2.5	1-Hour	85	9.1	164° (SSE)	416958
16-Jul	15	PM2.5	1-Hour	91	9.8	148° (SE)	416958
16-Jul	16	PM2.5	1-Hour	94	9.6	137° (SE)	416958
16-Jul	17	PM2.5	1-Hour	100	10.3	134° (SE)	416958
16-Jul	18	PM2.5	1-Hour	99	8.1	135° (SE)	416958
16-Jul	19	PM2.5	1-Hour	98	5.0	143° (SE)	416958
16-Jul	20	PM2.5	1-Hour	92	2.0	114° (ESE)	416958
16-Jul	21	PM2.5	1-Hour	95	1.9	57° (ENE)	416958
16-Jul	22	PM2.5	1-Hour	99	3.3	51° (NE)	416958
16-Jul	23	PM2.5	1-Hour	96	6.1	59° (ENE)	416958
16-Jul	-	PM2.5	24-Hour	100	6.4	139° (SE)	416958
17-Jul	0	PM2.5	1-Hour	92	6.9	217° (SW)	416958
17-Jul	-	PM2.5	24-Hour	44	7.9	213° (SSW)	416958
19-Jul	-	PM2.5	24-Hour	42	6.6	289° (WNW)	416958
20-Jul	4	PM2.5	1-Hour	90	5.4	334° (NNW)	416958
20-Jul	5	PM2.5	1-Hour	104	5.7	326° (NW)	416958
20-Jul	6	PM2.5	1-Hour	104	3.0	24° (NNE)	416958
20-Jul	7	PM2.5	1-Hour	104	1.3	150° (SSE)	416958
20-Jul	8	PM2.5	1-Hour	102	1.7	173° (S)	416958
20-Jul	9	PM2.5	1-Hour	112	1.4	337° (NNW)	416958
20-Jul	10	PM2.5	1-Hour	113	3.5	332° (NNW)	416958
20-Jul	11	PM2.5	1-Hour	100	4.4	287° (WNW)	416958
20-Jul	12	PM2.5	1-Hour	96	3.8	311° (NW)	416958
20-Jul	13	PM2.5	1-Hour	90	2.5	282° (W)	416958
20-Jul	14	PM2.5	1-Hour	88	6.8	283° (W)	416958
20-Jul	15	PM2.5	1-Hour	96	7.2	289° (WNW)	416958
20-Jul	16	PM2.5	1-Hour	99	5.0	298° (WNW)	416958
20-Jul	17	PM2.5	1-Hour	98	3.8	277° (W)	416958
20-Jul	18	PM2.5	1-Hour	96	6.2	242° (WSW)	416958
20-Jul	19	PM2.5	1-Hour	93	8.7	189° (S)	416958
20-Jul	20	PM2.5	1-Hour	93	4.3	198° (SSW)	416958
20-Jul	21	PM2.5	1-Hour	96	1.6	287° (WNW)	416958
20-Jul	22	PM2.5	1-Hour	92	3.5	309° (NW)	416958
20-Jul	23	PM2.5	1-Hour	88	4.1	329° (NNW)	416958

Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
20-Jul	-	PM2.5	24-Hour	93	4.2	301° (WNW)	416958
21-Jul	0	PM2.5	1-Hour	90	3.7	329° (NNW)	416958
21-Jul	1	PM2.5	1-Hour	92	3.8	339° (NNW)	416958
21-Jul	2	PM2.5	1-Hour	93	5.0	348° (NNW)	416958
21-Jul	3	PM2.5	1-Hour	93	2.5	349° (NNW)	416958
21-Jul	4	PM2.5	1-Hour	92	2.9	350° (N)	416958
21-Jul	5	PM2.5	1-Hour	88	3.4	346° (NNW)	416958
21-Jul	6	PM2.5	1-Hour	91	3.2	356° (N)	416958
21-Jul	7	PM2.5	1-Hour	93	3.4	17° (NNE)	416958
21-Jul	8	PM2.5	1-Hour	94	3.3	73° (ENE)	416958
21-Jul	9	PM2.5	1-Hour	93	2.6	86° (E)	416958
21-Jul	10	PM2.5	1-Hour	94	4.0	88° (E)	416958
21-Jul	11	PM2.5	1-Hour	86	3.7	97° (E)	416958
21-Jul	12	PM2.5	1-Hour	85	4.3	87° (E)	416958
21-Jul	13	PM2.5	1-Hour	89	2.9	65° (ENE)	416958
21-Jul	14	PM2.5	1-Hour	85	4.3	83° (E)	416958
21-Jul	20	PM2.5	1-Hour	82	3.4	33° (NNE)	416958
21-Jul	21	PM2.5	1-Hour	86	5.3	40° (NE)	416958
21-Jul	22	PM2.5	1-Hour	81	6.2	136° (SE)	416958
21-Jul	-	PM2.5	24-Hour	86	4.0	48° (NE)	416958

- NOx/NO/NO2:** The analyzer failed both the daily zero-span check and the as-found points check on July 11. Maintenance/troubleshooting commenced which included cleaning the sample valve. The post repair calibration was successfully completed afterwards. In the absence of a clear point of failure, data were discarded back to the last valid calibration, which was July 10. Thirty-five hours of downtime were recorded. The analyzer was put offline on July 12 for 5 hours to check the zero-span system. With other events which led to an additional 30 hours of downtime, including the station HVAC failure and power outages, the 90% uptime requirement could not be met.
- O3:** PRAMP's Teledyne T400 analyzer, s/n: 824, failed the shut-down calibration on July 12 due to unstable/noisy readings. The analyzer also had a warning for lamp signal displayed on the screen. The analyzer was removed, and BV's Teledyne API 400A analyzer, s/n: 445, was installed and calibrated. In the absence of a clear point of failure, data were discarded back to the last valid multi-point calibration check, which was June 8. Two hundred seventy-two hours of data collected in July and five hundred forty-two hours of data collected in June were discarded.
- AQHI values:** Due to the O3 instrument issue, which was identified on July 12, data were discarded back to June 8. As O3 is one of the parameters used to calculate the AQHI value, the AQHI values during this period were affected. However, considering ambient air and wildfires conditions around the Peace River region this season, PM2.5 was predominant parameter driving the AQHI values. As a result, AQHI values were not discarded and were kept for *reference use*.

## VOCs Canister Sampling Program

- The canister sampling program collects a 1-hour sample of air when the continuously measured non-methane hydrocarbon (NMHC) concentration reaches a specified trigger point. The current trigger point is 0.3 ppm for non-methane hydrocarbons. The trigger point is based on real-time monitoring data that are averaged over a 5-minute period.
- The canister sample collection systems are in place at Station 986-C, 842-B, and the Reno-B Station; a canister sample collection system is not part of the suite of instruments currently deployed at both the PRC station and the AQHI-Grimshaw station.
- Sample analysis and analytical results were prepared and provided by InnoTech Alberta.
- The canister sampling program was temporarily paused between July 8 and July 31 due to wildfire smoke. Starting in early July, intense wildfire smoke in the region caused NMHC concentrations to spike, resulting in PRAMP's canister systems being automatically activated to collect samples. The objective of the PRAMP canister program is to provide data and information about ambient hydrocarbon concentrations from local industrial sources. Collecting samples triggered by wildfire smoke is not within the intended scope of this component of the regional monitoring program. Therefore, the canister sampling program was paused pending dissipation of wildfire smoke and an improvement in air quality conditions.
- Four canister events were recorded this month. The canister system at the Reno-B station was deactivated on July 8, but it was activated automatically after a power outage on July 10. Due to wildfires that caused the NMHC concentrations to become elevated, the canister system was triggered and sample was collected on July 11.

Station	Parameter	Date	Time	Concentration (ppm)
842-B	Non-methane HC	07-Jul	03:25	0.30
Reno-B	Non-methane HC	07-Jul	04:20	0.43
986-C	Non-methane HC	07-Jul	06:45	0.32
Reno-B	Non-methane HC	11-Jul	04:15	0.33

## Revisions to Alberta's Ambient Air Quality Data Warehouse

No revisions to historical data previously submitted to the Alberta's Ambient Air Quality Data Warehouse were made this month.

## Deviations from Authorized Monitoring Methods

No deviations from authorized monitoring methods were recorded this month.

## Disclaimer

Baseline corrections were performed on the 1-minute data. 5-minute and hourly data were calculated based on the post-baseline correction 1-minute data set. Data verification/validation were then performed on the 5-minute and hourly data. Hourly data that are included in this report are the post-validation hourly data set.

Equipment calibration / maintenance records were provided by Bureau Veritas.

## Certification

This report was prepared and submitted by Lily Lin in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).



Lily Lin, Technical Program Manager, PRAMP Airshed

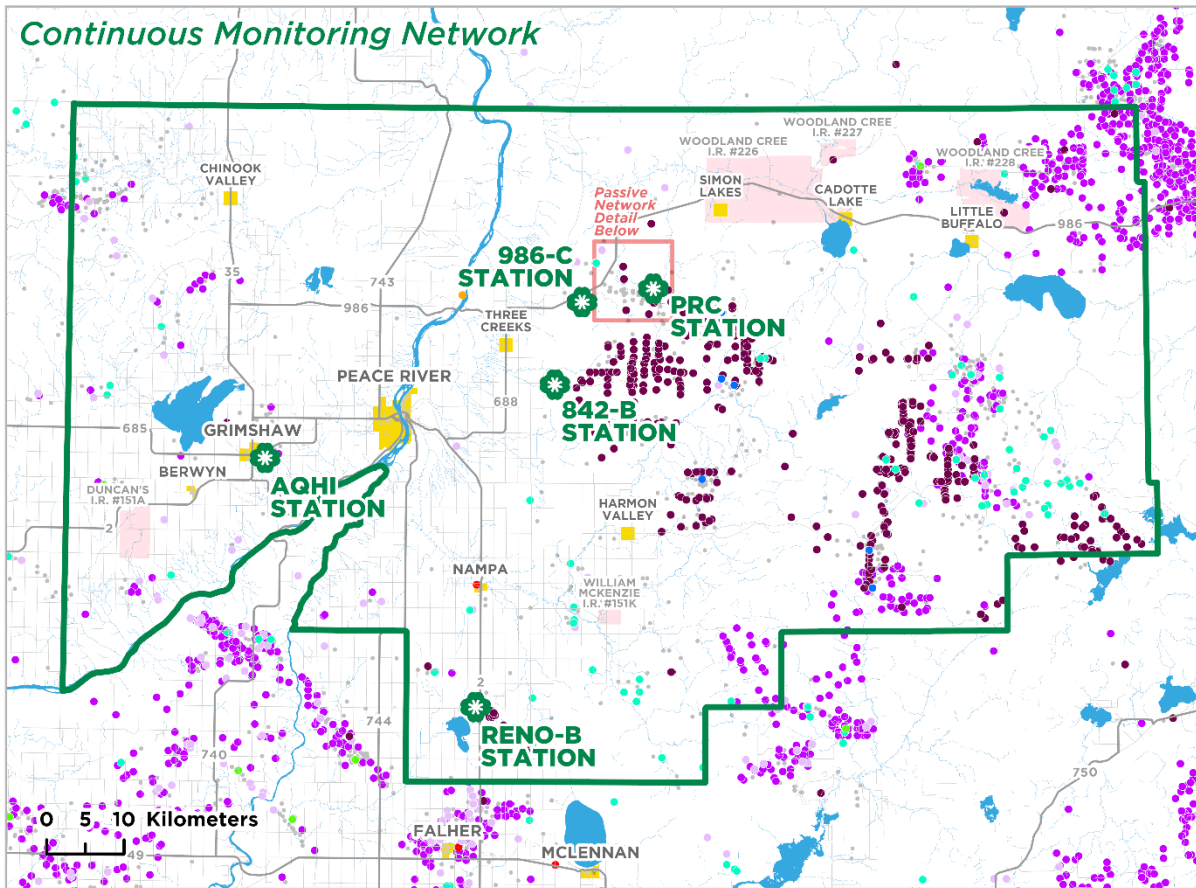
This report was reviewed by Michael Bisaga in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

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. I also certify that at the time of this report's submission, all air data have been electronically uploaded to Alberta's Ambient Air Quality Data Warehouse as required by the AMD. Uploading of VOC data from the canister sampling program was not required at the time of completing this report.



Michael Bisaga, Technical Program Manager, PRAMP Airshed

# Map of PRAMP Continuous Monitoring Network

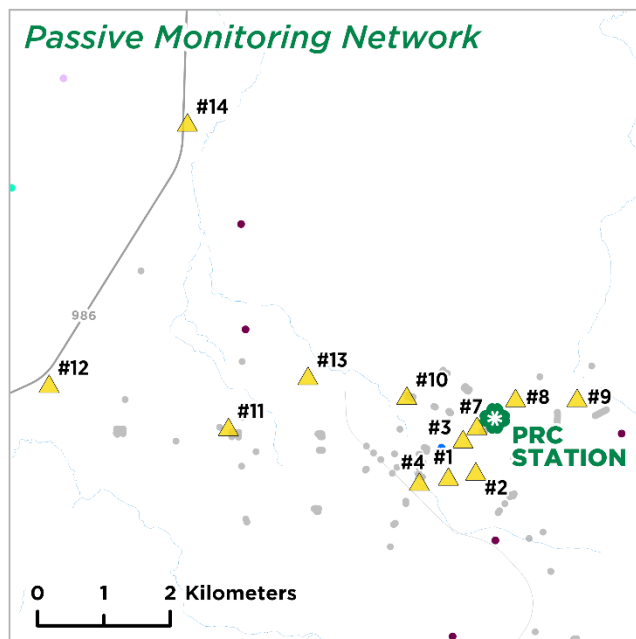


## Legend

- PRAMP Boundary
- Populated Place
- First Nation
- ✳ Continuous Monitoring Station
- ▲ Passive Monitoring Station

## Industrial Facilities

- In-Situ Oil Sands
- Heavy Oil/Bitumen Well or Battery
- Conventional Oil Well or Battery
- Natural Gas Well or Battery
- Gas Plant or Gas Processing
- Compressor Station or Pipeline
- Agricultural Storage and Transfer
- Pulp and Paper
- Well (Not Associated with Batteries)



Service Layer Credit: Esri, CGIAR, USGS, Esri, USGS



# CONTINUOUS NETWORK EQUIPMENT AND MONITORING RESULTS SUMMARY

## Equipment Operation Summary

Parameter	Equipment Operational Summary
<b>SO2</b>  Thermo 43iQTL #1193585646	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 5.</li> <li>• The expected zero value was entered incorrectly on July 7. The error was corrected on July 15. As a result, the value was not used for the baseline correction between July 7 and 15.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26. A zero-span check was initiated after power was restored on July 24 hour 21 and July 26 hour 20.</li> </ul>
<b>TRS</b>  Thermo 43iQTL #1191833341  TRS convertor CD Nova CDN-101 #552 (BV-supplied)	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 5.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26. A zero-span check was initiated after power was restored on July 24 hour 21 and July 26 hour 20.</li> </ul>
<b>THC/CH4/NMHC</b>  Thermo 55i #1433563261 #1022143392	<ul style="list-style-type: none"> <li>• BV's Thermo 55i analyzer, s/n: 1433563261, failed the shut-down calibration due to frequent injection issues on July 5. The analyzer was removed, and another BV's Thermo 55i analyzer, s/n: 1022143392, was installed. One-minute data were reviewed and discarded if data quality was affected by injection issues. Two hours of data collected on July 1 were invalidated as a result.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26. Hourly data collected on July 24 hour 17 and July 26 hour 17 were discarded as the analyzer was recovering from the power outages. A zero-span check was initiated after power was restored on July 24 hour 21 and July 26 hour 20.</li> </ul>
<b>RH</b>  Rotronic HC2-S3 #20626912	<ul style="list-style-type: none"> <li>• The RH probe was checked on July 5. The probe passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> <li>• Due to datalogger polling issues, three hours of downtime were recorded as the hourly data completeness requirement did not meet.</li> </ul>
<b>BP</b>  MetOne 092 #Y23358	<ul style="list-style-type: none"> <li>• The BP sensor was checked on July 5. The sensor passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> <li>• Due to datalogger polling issues, three hours of downtime were recorded as the hourly data completeness requirement did not meet.</li> </ul>

Parameter	Equipment Operational Summary
<b>AT</b>  Rotronic HC2-S3 #20626912	<ul style="list-style-type: none"> <li>• The AT probe was checked on July 5. The probe passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> <li>• Due to datalogger polling issues, three hours of downtime were recorded as the hourly data completeness requirement did not meet.</li> </ul>
<b>ST</b>  COMET #18961918	<ul style="list-style-type: none"> <li>• No operational issues were identified this month.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> </ul>
<b>Precipitation</b>  RM Young 52202 #TB 16325	<ul style="list-style-type: none"> <li>• The precipitation gauge was checked on July 5. The unit passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> </ul>
<b>WS/ WD</b>  RM Young 05305AQ #180340	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The annual wind system calibration was completed on August 5, 2022.</li> <li>• The anemometer sensors were check on July 5. The wind system passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> <li>• Due to datalogger polling issues, three hours of downtime were recorded as the hourly data completeness requirement did not meet.</li> </ul>

**Monitored Data Summary for 986-C Station**

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	1	Jul 1 at hr 6	10.6	SSW	0.1	Jul 7	98.1	93.1
TRS (ppb)	-	-	-	-	-	-	0.68	0.17	7.35	Jul 13 at hr 0	1	SSE	1.45	Jul 13	98.1	93.1
THC (ppm)	-	-	-	-	-	-	2.08	1.90	2.81	Jul 7 at hr 6	5	E	2.22	Jul 21	96.9	92.2
CH4 (ppm)	-	-	-	-	-	-	2.07	1.90	2.65	Jul 7 at hr 6	5	E	2.22	Jul 21	96.9	92.2
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.16	Jul 7 at hr 6	5	E	0.01	Jul 7	96.9	92.2
RH (%)	-	-	-	-	-	-	71.5	25	100	Jul 3 at hr 5	10	NNW	98.3	Jul 25	97.7	97.7
BP (millibar)	-	-	-	-	-	-	943	933	953	Jul 28 at hr 4	8	ESE	952	Jul 28	97.7	97.7
Ext. Temp. (°C)	-	-	-	-	-	-	17.5	4.4	30.5	Jul 9 at hr 15	3.3	SW	22.9	Jul 9	97.7	97.7
Stn. Temp. (°C)	-	-	-	-	-	-	23.1	22.3	24.3	Jul 4 at hr 22	11.9	S	23.6	Jul 5	98.1	98.1
Precipitation (mm)*	-	-	-	-	-	-	37.1	0.0	7.3	Jul 24 at hr 22	6.1	N	12.6	Jul 25	98.1	98.1
WSV (km/hr)	-	-	-	-	-	-	1.9	0.3	24.4	Jul 22 at hr 23	24.4	WSW	13.2	Jul 10	97.7	97.7
WDV (sector)	-	-	-	-	-	-	185 (S)	-	-	-	-	-	-	-	97.7	97.7

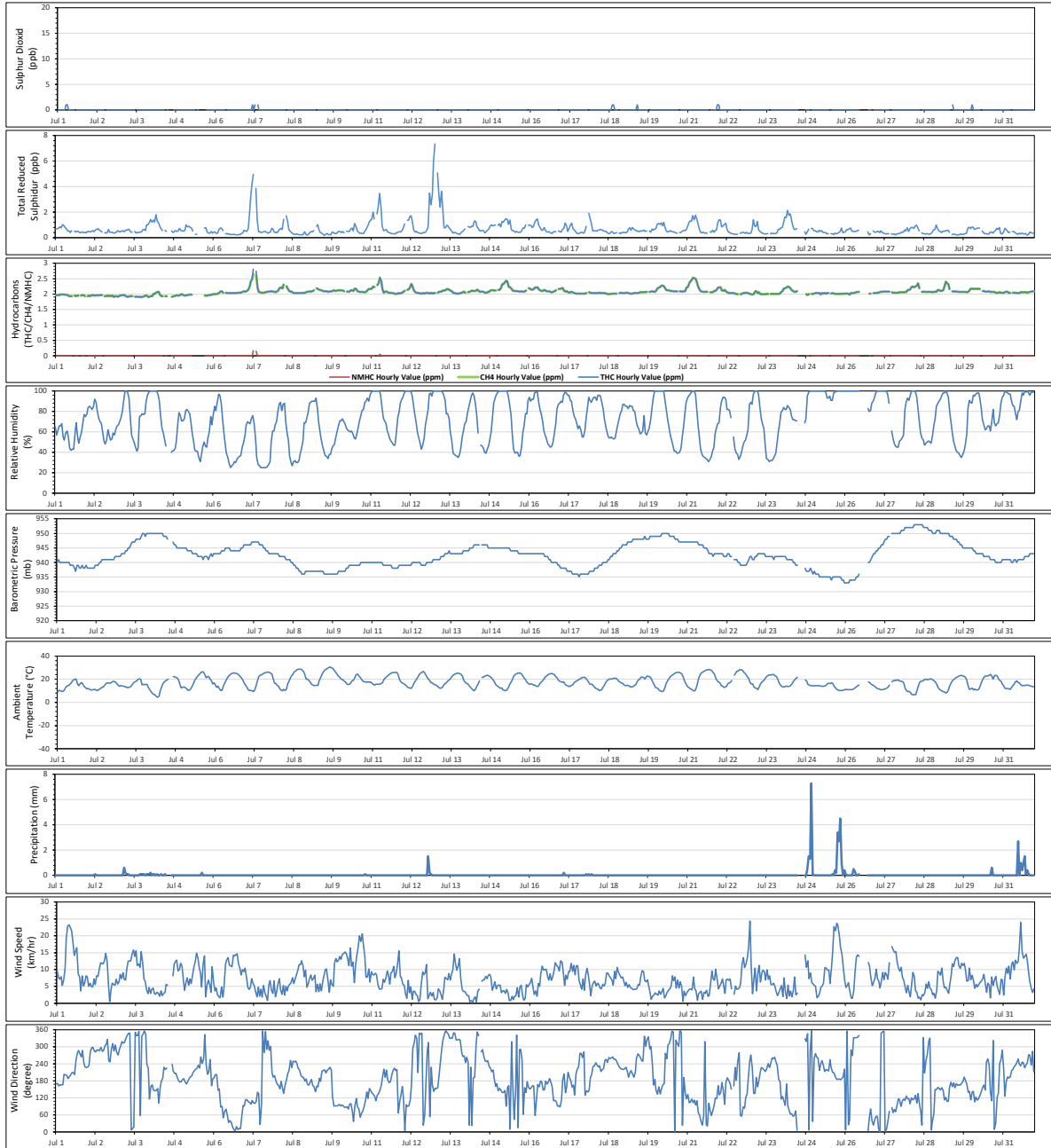
1- Date/ Time given is the first minimum and maximum value that was recorded

\* Data represents the total (sum) for the indicated time frame

**Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances**

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of July 2023 - 986-C Station



## 842-B Station

### Equipment Operation Summary

Parameter	Equipment Operational Summary
<b>SO2</b>  Thermo 43iQTL #1200736629	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 13.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>TRS</b>  Thermo 43iQTL #1200736630  TRS Convertor CD Nova CDN-101 #583	<ul style="list-style-type: none"> <li>• Following a successful shut-down calibration on July 13, scheduled maintenance was performed. A successful post-repair calibration was completed afterwards. Two hours of downtime were recorded due to this event.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>THC/CH4/NMHC</b>  Thermo 55i #1314057759  H2 Generator HG300 #190567058	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 13.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>RH</b>  Rotronic HC2-S3 #20370767	<ul style="list-style-type: none"> <li>• The RH probe was checked on July 13. The probe passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>BP</b>  MetOne 092 #Y23362	<ul style="list-style-type: none"> <li>• The BP sensor was checked on July 13. The sensor passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>AT</b>  Rotronic HC2-S3 #20370767	<ul style="list-style-type: none"> <li>• The AT probe was checked on July 13. The probe passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>ST</b>  COMET #20790297	<ul style="list-style-type: none"> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>

Parameter	Equipment Operational Summary
<p><b>Precipitation</b></p> <p>RM Young 52202 #TB 15878</p>	<ul style="list-style-type: none"> <li>• The precipitation gauge was checked on July 13. The sensor passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<p><b>WS/ WD</b></p> <p>RM Young 05305AQ #174802</p>	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The annual wind system calibration was completed on August 3, 2022.</li> <li>• The anemometer sensors were check on July 13. Both the wind speed sensor and wind direction sensor passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>

**Monitored Data Summary for 842-B Station**

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	2	Jul 2 at hr 19	4.3	WNW	0.2	Jul 2	97.7	92.7
TRS (ppb)	-	-	-	-	-	-	0.71	0.22	4.83	Jul 7 at hr 6	6.3	ENE	1.82	Jul 7	97.4	92.3
THC (ppm)	-	-	-	-	-	-	2.05	1.88	2.93	Jul 7 at hr 7	3.8	ENE	2.26	Jul 7	97.7	92.4
CH4 (ppm)	-	-	-	-	-	-	2.03	1.88	2.62	Jul 21 at hr 5	3.1	ENE	2.17	Jul 21	97.7	92.4
NMHC (ppm)	-	-	-	-	-	-	0.01	0.00	0.41	Jul 7 at hr 7	3.8	ENE	0.11	Jul 7	97.7	92.4
RH (%)	-	-	-	-	-	-	73.8	26	100	Jul 3 at hr 5	6.5	NNW	98.3	Jul 25	97.7	97.7
BP (millibar)	-	-	-	-	-	-	942	932	952	Jul 28 at hr 6	1.3	E	951	Jul 28	97.7	97.7
Ext. Temp. (°C)	-	-	-	-	-	-	18.3	5.1	30.1	Jul 9 at hr 15	6.8	SW	23.2	Jul 9	97.7	97.7
Stn. Temp. (°C)	-	-	-	-	-	-	22.5	21.3	24.0	Jul 13 at hr 4	1.8	WSW	23.0	Jul 24	97.7	97.7
Precipitation (mm)*	-	-	-	-	-	-	39.2	0.0	6.1	Jul 24 at hr 21	10.1	WNW	12.2	Jul 24	97.7	97.7
WSV (km/hr)	-	-	-	-	-	-	2.0	0.1	21.4	Jul 31 at hr 13	21.4	WSW	10.2	Jul 31	97.7	97.7
WDV (sector)	-	-	-	-	-	-	223 (SW)	-	-	-	-	-	-	-	97.7	97.7

1- Date/ Time given is the first minimum and maximum value that was recorded

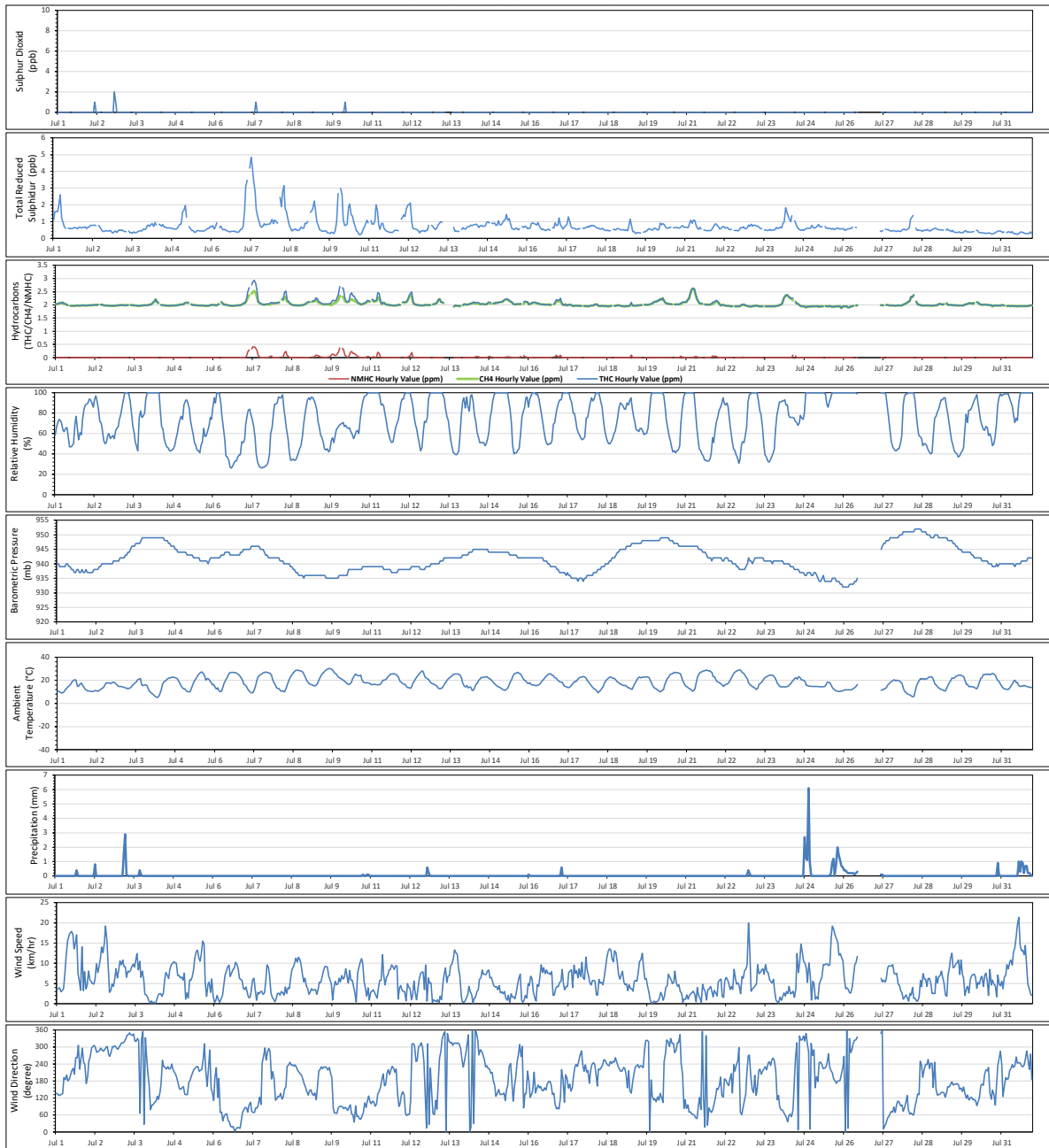
\* Data represents the total (sum) for the indicated time frame

**Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances**

The measured ambient air quality was within the AAAQOs for all monitored parameters.



Timeseries Chart of Hourly Average for the month of Jul 2023 - 842-B Station



## Reno-B Station

### Equipment Operation Summary

Parameter	Equipment Operational Summary
<p><b>SO2</b></p> <p>Thermo 43iQTL #12101910505</p>	<ul style="list-style-type: none"> <li>• Due to datalogger polling issues, ten hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• A successful monthly calibration was performed on July 18.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month. A zero-span check was completed after power was restored to confirm the analyzer's functionality. The check results met the check requirements.</li> </ul>
<p><b>TRS</b></p> <p>Thermo 43iQTL #12101910504</p> <p><b>TRS Convertor</b> CD Nova CDN-101 #590</p>	<ul style="list-style-type: none"> <li>• Due to datalogger polling issues, ten hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• A successful monthly calibration was performed on July 18.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month. A zero-span check was completed after power was restored to confirm the analyzer's functionality. The check results met the check requirements.</li> <li>• The TRS convertor failed after the power was restored on July 31. The issue was addressed on August 1. Seven hours of downtime were recorded this month due to this event.</li> </ul>
<p><b>THC/CH4/NMHC</b></p> <p>Thermo 55i #1505664392 #12101910497</p> <p>H2 Generator HG300 #210467069</p>	<ul style="list-style-type: none"> <li>• Due to datalogger polling issues, ten hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• Hourly data collected on July 10 hour 19 was discarded as data quality was affected by a small power outage.</li> <li>• After a shut-down calibration on July 18, BV's Thermo 55i analyzer, s/n: 1505664392, was removed, and PRAMP's Thermo 55i analyzer, s/n: 12101910497, was installed. The analyzer was allowed time to stabilize overnight. A successful installation calibration was completed on July 19. Twenty hours of downtime were recorded due to this event.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month. A zero-span check was completed after power was restored to confirm the analyzer's functionality. The check results met the check requirements.</li> </ul>

Parameter	Equipment Operational Summary
<b>RH</b>  Rotronic HC2-S3 #20467597	<ul style="list-style-type: none"> <li>• Due to datalogger errors, sixteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• The RH probe was checked on July 18. The probe passed the check requirements.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>BP</b>  MetOne 092 #A17940	<ul style="list-style-type: none"> <li>• Due to datalogger errors, sixteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• The BP sensor was checked on July 18. The sensor passed the check requirements.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>AT</b>  Rotronic HC2-S3 #20467597	<ul style="list-style-type: none"> <li>• Due to datalogger errors, sixteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• The AT probe was checked on July 18. The probe passed the check requirements.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>ST</b>  COMET #NA	<ul style="list-style-type: none"> <li>• Due to datalogger errors, ten hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>Precipitation</b>  RM Young 52202 #TB 15877	<ul style="list-style-type: none"> <li>• Due to datalogger errors, thirteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• The precipitation gauge was checked and tested on July 18. The unit passed the check requirements.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>

Parameter	Equipment Operational Summary
<p><b>WS/ WD</b></p> <p>RM Young 05305AQ #174795</p>	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The annual wind system calibration was completed on November 23, 2022.</li> <li>• The anemometer sensors were check on July 18. The wind sensors passed the check requirements.</li> <li>• Due to datalogger errors, sixteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>

**Monitored Data Summary for Reno-B Station**

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	6	Jul 7 at hr 7	7.5	E	0.7	Jul 7	96.0	90.8
TRS (ppb)	-	-	-	-	-	-	0.73	0.08	15.20	Jul 7 at hr 7	7.5	E	1.87	Jul 7	95.0	90.0
THC (ppm)	-	-	-	-	-	-	2.00	1.88	4.56	Jul 7 at hr 7	7.5	E	2.23	Jul 7	93.1	88.0
CH4 (ppm)	-	-	-	-	-	-	2.00	1.88	3.15	Jul 7 at hr 7	7.5	E	2.16	Jul 21	93.1	88.0
NMHC (ppm)	-	-	-	-	-	-	0.01	0.00	1.41	Jul 7 at hr 7	7.5	E	0.11	Jul 7	93.1	88.0
RH (%)	-	-	-	-	-	-	75.4	25	100	Jul 3 at hr 6	11.5	NW	98.2	Jul 25	95.2	95.2
BP (millibar)	-	-	-	-	-	-	941	932	951	Jul 28 at hr 1	7.8	E	950	Jul 28	95.2	95.2
Ext. Temp. (°C)	-	-	-	-	-	-	17.2	7.7	28.5	Jul 9 at hr 15	10.2	WSW	22.2	Jul 9	95.2	95.2
Stn. Temp. (°C)	-	-	-	-	-	-	23.3	21.8	24.7	Jul 18 at hr 3	6.5	SW	23.7	Jul 14	96.0	96.0
Precipitation (mm)*	-	-	-	-	-	-	78.9	0.0	7.9	Jul 25 at hr 22	13.3	S	35.6	Jul 25	95.6	95.6
WSV (km/hr)	-	-	-	-	-	-	2.9	0.2	28.2	Jul 2 at hr 10	28.2	W	15.1	Jul 2	95.2	95.2
WDV (sector)	-	-	-	-	-	-	215 (SSW)	-	-	-	-	-	-	-	95.2	95.2

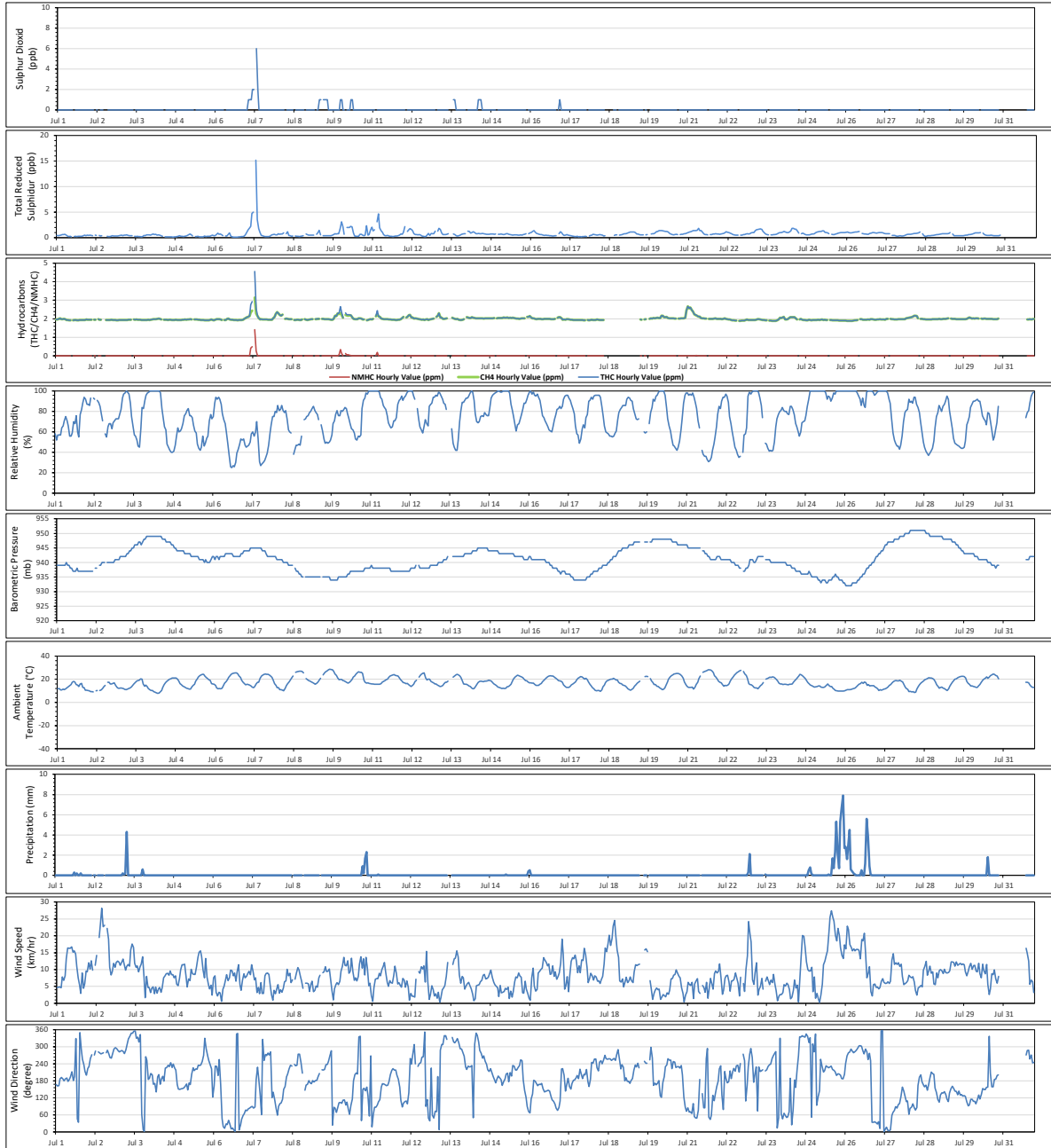
1- Date/ Time given is the first minimum and maximum value that was recorded

\* Data represents the total (sum) for the indicated time frame

**Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances**

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Jul 2023 - Reno-B Station



Equipment Operation Summary

Parameter	Equipment Operational Summary
<p><b>SO2</b></p> <p>Thermo 43i #1034746225</p>	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 6.</li> <li>• No operational issues were identified.</li> <li>• July 10 's scheduled zero-span check (hour 3) was interrupted due to power issues. A successful repeat zero-span check was completed on July 10 hour 7. One hour of downtime was recorded due to this event.</li> </ul>
<p><b>H2S</b></p> <p>Thermo 450i #1308857354</p>	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 6.</li> <li>• No operational issues were identified.</li> <li>• July 10 's scheduled zero-span check (hour 3) was interrupted due to power issues. A successful repeat zero-span check was completed on July 10 hour 7. One hour of downtime was recorded due to this event.</li> </ul>
<p><b>TRS</b></p> <p>Thermo 450i #1034746224</p> <p>TRS Convertor CD Nova CDN-101 #506</p>	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 6.</li> <li>• No operational issues were identified.</li> <li>• July 10 's scheduled zero-span check (hour 3) was interrupted due to power issues. A successful repeat zero-span check was completed on July 10 hour 7. One hour of downtime was recorded due to this event.</li> </ul>
<p><b>THC/CH4/NMHC</b></p> <p>Thermo 55i #1034745845</p> <p>H2 Generator HG300 #211067076</p>	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 6.</li> <li>• No operational issues were identified.</li> <li>• July 10 's scheduled zero-span check (hour 3) was interrupted due to power issues. A successful repeat zero-span check was completed on July 10 hour 7. One hour of downtime was recorded due to this event.</li> </ul>
<p><b>RH</b></p> <p>Rotronic HC2-S3 #20558318</p>	<ul style="list-style-type: none"> <li>• The RH sensor was checked on July 6. The sensor passed the check requirements.</li> <li>• No operational issues were identified.</li> </ul>
<p><b>BP</b></p> <p>MetOne 092 #B19577</p>	<ul style="list-style-type: none"> <li>• The BP sensor was checked on July 6. The sensor passed the check requirements.</li> <li>• No operational issues were identified.</li> </ul>
<p><b>AT</b></p> <p>Rotronic HC2-S3 #20558318</p>	<ul style="list-style-type: none"> <li>• The AT sensor was checked on July 6. The sensor passed the check requirements.</li> <li>• No operational issues were identified.</li> </ul>

Parameter	Equipment Operational Summary
<b>ST</b>  Canadian Natural #NA	<ul style="list-style-type: none"> <li>• No operational issues were identified.</li> </ul>
<b>WS/ WD</b>  RM Young 05305VK #129612	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The annual wind system calibration was completed on August 17, 2022.</li> <li>• The anemometer sensors were checked on July 6. The sensors passed the check requirements.</li> <li>• No operational issues were identified.</li> </ul>



**Monitored Data Summary for Peace River Complex (PRC) Station**

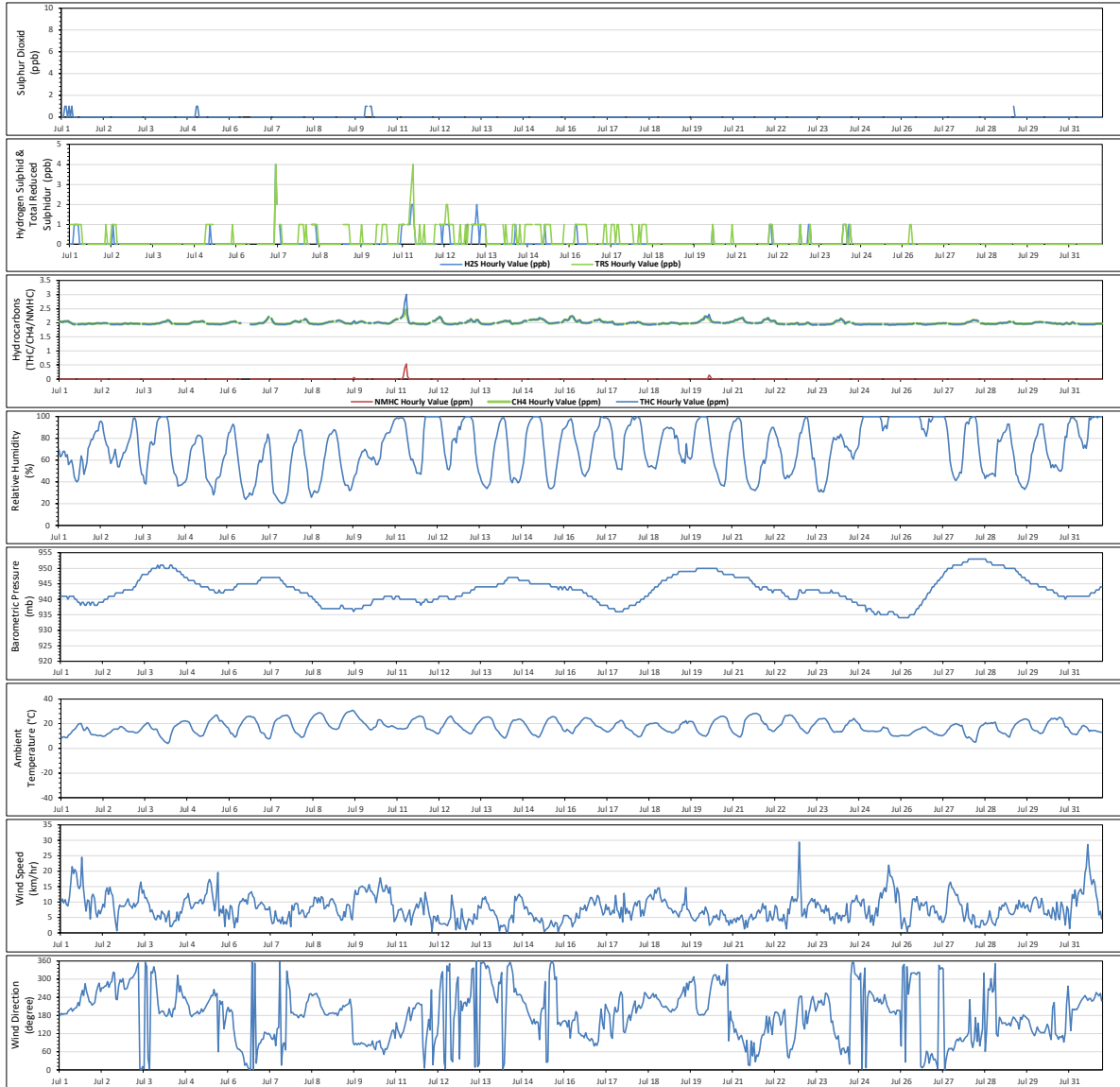
Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	1	Jul 1 at hr 2	9.7	S	0.2	Jul 10	99.9	94.9
H2S (ppb)	10	3	-	0	0	-	0.1	0	4	Jul 7 at hr 4	7.4	ESE	0.0	Jul 1	99.9	94.9
TRS (ppb)	-	-	-	-	-	-	0.2	0	4	Jul 7 at hr 4	7.4	ESE	0.7	Jul 11	99.9	94.9
THC (ppm)	-	-	-	-	-	-	2.00	1.92	3.01	Jul 11 at hr 7	4.9	SSE	2.11	Jul 11	99.9	94.7
CH4 (ppm)	-	-	-	-	-	-	2.00	1.92	2.47	Jul 11 at hr 7	4.9	SSE	2.07	Jul 16	99.9	94.7
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.54	Jul 11 at hr 7	4.9	SSE	0.05	Jul 11	99.9	94.7
RH (%)	-	-	-	-	-	-	70.6	20	100	Jul 4 at hr 1	6.4	SSW	98.0	Jul 25	100.0	100.0
BP (millibar)	-	-	-	-	-	-	943	934	953	Jul 28 at hr 0	5	ESE	952	Jul 28	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	17.4	3.8	30.7	Jul 9 at hr 16	4.2	SSW	23.4	Jul 9	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	22.9	21.6	25.4	Jul 3 at hr 12	11.3	N	23.4	Jul 20	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	2.4	0.2	29.4	Jul 22 at hr 23	29.4	SW	13.3	Jul 1	100.0	100.0
WDV (sector)	-	-	-	-	-	-	196 (SSW)	-	-	-	-	-	-	-	100.0	100.0

1- Date/ Time given is the first minimum and maximum value that was recorded

**Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances**

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Jul 2023 - Peace River Complex (PRC) Station



Equipment Operation Summary

Parameter	Equipment Operational Summary
<p><b>SO2</b></p> <p>Teledyne T100 #722</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. A successful zero-span check was completed to confirm the analyzer’s functionality. Fourteen hours of downtime were recorded due to this event.</li> <li>• A successful monthly calibration was performed on July 11.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> <li>• The analyzer spanned low on July 26. Additional zero-span check was initiated on July 26 hour 21 to investigate the drift. It was concluded that the drift was due to depleted permeation tube. The issue was corrected in August. Data quality was not affected by this issue.</li> </ul>
<p><b>TRS</b></p> <p>Teledyne T100U #132</p> <p>TRS Convertor CD Nova CDN-101 #576</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. A successful zero-span check was completed to confirm the analyzer’s functionality. Fourteen hours of downtime were recorded due to this event.</li> <li>• A successful monthly calibration was performed on July 11.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> <li>• Due to COMMS issue with analyzer, data collected on July 31 hour 14 to hour 23 were lost. The issue was corrected on August 1. Ten hours of downtime were recorded this month.</li> </ul>

Parameter	Equipment Operational Summary
<p><b>NOx/NO/NO2</b></p> <p>Teledyne T200 #837</p>	<ul style="list-style-type: none"> <li>• The analyzer failed both the daily zero-span check and the as-found points check on July 11. Maintenance/troubleshooting commenced which included cleaning the sample valve. The post repair calibration was successfully completed afterwards. In the absence of a clear point of failure, data were discarded back to the last valid calibration, which was July 10. Thirty-five hours of downtime were recorded.</li> <li>• The analyzer was put offline on July 12 between hour 8 and hour 12 to check the zero-span system. Five hours of downtime were recorded.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• The analyzer spanned high between July 23 and 25, including the July 24's repeat zero-span check. The cause was likely a carryover from the high station temperature event on July 21-22. The check results went back to the acceptable range on July 25. As the issue was from the zero-span system, data quality was not affected. Data collected between July 23 and 25 were considered valid. One hour of downtime was recorded due to additional quality check on July 24.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<p><b>O3</b></p> <p>Teledyne T400 #824</p> <p>API 400A #445</p>	<ul style="list-style-type: none"> <li>• A shut-down calibration was attempted on PRAMP's Teledyne T400 analyzer, s/n: 824, on July 12 in order to perform analyzer swap. However, the analyzer failed the calibration due to unstable/noisy readings. The analyzer also had a warning for lamp signal displayed on the screen. The analyzer was removed, and BV's Teledyne API 400A analyzer, s/n: 445, was installed and calibrated. In the absence of a clear point of failure, data were discarded back to the last valid multi-point calibration check, which was June 8. Two hundred seventy-two hours of data collected in July and five hundred forty-two hours of data collected in June were discarded.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>

Parameter	Equipment Operational Summary
<p><b>THC/CH4/NMHC</b></p> <p>Thermo 55i #1191032505</p> <p>H2 Generator AMA HG300 #190567059</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. A successful zero-span check was completed to confirm the analyzer’s functionality. Fourteen hours of downtime were recorded due to this event.</li> <li>• A successful monthly calibration was performed on July 11.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24. Hourly data collected on July 24 hour 22 was invalidated as the analyzer was recovering from the power failure.</li> </ul>
<p><b>PM2.5</b></p> <p>Teledyne T640 #3189</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• A successful annual audit/maintenance was completed on July 12.</li> <li>• Hourly data collected on July 22 hour 22 and hour 23 were discarded as data quality was affected by a small power outage.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<p><b>RH</b></p> <p>Vaisala HMP155 #N2910506</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• The RH probe was checked on July 11. The Probe passed the check requirements.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<p><b>BP</b></p> <p>MetOne 092 #A2397</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• The BP sensor was checked on July 1. The sensor passed the check requirements.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>

Parameter	Equipment Operational Summary
<b>AT</b>  Vaisala HMP155 #N2910506	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• The AT prober was checked on July 11. The probe passed the check requirements.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<b>ST</b>  COMET #NA	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<b>WS/ WD</b>  RM Young 05305AQ #174801	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The last annual wind system calibration was completed on July 12, 2022.</li> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• The anemometer sensors were check on July 11. Both the wind speed sensor and wind direction sensor passed the check requirements.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>

**Monitored Data Summary for AQHI - Grimshaw Station**

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.2	0	2	Jul 21 at hr 8	3.3	ENE	1.0	Jul 30	93.4	88.3
TRS (ppb)	-	-	-	-	-	-	0.29	0.00	2.74	Jul 16 at hr 4	1.7	ESE	0.82	Jul 24	92.2	87.3
NOx (ppb)	-	-	-	-	-	-	3.5	0	24	Jul 21 at hr 6	3.2	N	6.0	Jul 24	89.9	85.2
NO (ppb)	-	-	-	-	-	-	0.8	0	7	Jul 14 at hr 14	5.7	SW	1.7	Jul 8	89.9	85.2
NO2 (ppb)	159	-	-	0	-	-	2.7	0	19	Jul 21 at hr 6	3.2	N	5.5	Jul 24	89.9	85.2
O3 (ppb)	76	-	-	0	-	-	NA	2.9	60.6	Jul 21 at hr 15	4.1	E	36.0	Jul 17	58.5	55.5
THC (ppm)	-	-	-	-	-	-	2.03	1.89	2.88	Jul 20 at hr 1	3.3	NW	2.19	Jul 20	93.4	88.7
CH4 (ppm)	-	-	-	-	-	-	2.01	1.89	2.72	Jul 20 at hr 1	3.3	NW	2.15	Jul 20	93.4	88.7
NMHC (ppm)	-	-	-	-	-	-	0.02	0.00	0.26	Jul 20 at hr 9	1.4	NNW	0.04	Jul 20	93.4	88.7
PM2.5 (µg/m3)	80	29	-	163	13	-	45.7	2	357	Jul 14 at hr 14	5.7	SW	208.5	Jul 14	97.6	97.4
RH (%)	-	-	-	-	-	-	66.1	23	100	Jul 25 at hr 4	1.7	W	94.5	Jul 25	97.8	97.9
BP (millibar)	-	-	-	-	-	-	943	934	953	Jul 27 at hr 23	2.8	NNW	952	Jul 28	97.8	97.9
Ext. Temp. (°C)	-	-	-	-	-	-	18.4	9.4	29.5	Jul 9 at hr 17	4.8	WSW	23.6	Jul 9	97.8	97.9
Stn. Temp. (°C)	-	-	-	-	-	-	23.4	21.0	43.8	Jul 22 at hr 19	10.7	S	36.7	Jul 22	97.8	97.9
WSV (km/hr)	-	-	-	-	-	-	7.2	0.1	26.5	Jul 22 at hr 22	26.5	SSW	13.7	Jul 2	97.8	97.9
WDV (sector)	-	-	-	-	-	-	274 (W)	-	-	-	-	-	-	-	97.8	97.9

1- Date/ Time given is the first minimum and maximum value that was recorded

**Alberta Ambient Air Quality Objectives (AAAOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances**

The following exceedances of AAAQO and AAAQG were observed at the AQHI - Grimshaw Station.

Date	Time (MST)	Parameter	Average Period	AAAOs / AAAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 2	6	PM2.5	1-Hour	80 µg/m3	88 µg/m3	16.2 km/hr	300° (WNW)	415805
Jul 2	7	PM2.5	1-Hour	80 µg/m3	103 µg/m3	15.8 km/hr	295° (WNW)	415805
Jul 2	-	PM2.5	24-Hour	29 µg/m3	40 µg/m3	13.7 km/hr	296° (WNW)	415805
Jul 7	2	PM2.5	1-Hour	80 µg/m3	85 µg/m3	5.1 km/hr	7° (N)	416910
Jul 7	3	PM2.5	1-Hour	80 µg/m3	99 µg/m3	5.4 km/hr	14° (NNE)	416910
Jul 7	4	PM2.5	1-Hour	80 µg/m3	107 µg/m3	5.3 km/hr	14° (NNE)	416910
Jul 7	5	PM2.5	1-Hour	80 µg/m3	100 µg/m3	4.2 km/hr	10° (N)	416910
Jul 7	6	PM2.5	1-Hour	80 µg/m3	84 µg/m3	2.6 km/hr	354° (N)	416910
Jul 7	-	PM2.5	24-Hour	29 µg/m3	58 µg/m3	4.1 km/hr	61° (ENE)	416910
Jul 9	12	PM2.5	1-Hour	80 µg/m3	85 µg/m3	10.4 km/hr	189° (S)	416910
Jul 9	13	PM2.5	1-Hour	80 µg/m3	107 µg/m3	11.7 km/hr	202° (SSW)	416910
Jul 9	14	PM2.5	1-Hour	80 µg/m3	118 µg/m3	9.6 km/hr	218° (SW)	416910
Jul 9	15	PM2.5	1-Hour	80 µg/m3	115 µg/m3	9.0 km/hr	245° (WSW)	416910
Jul 9	16	PM2.5	1-Hour	80 µg/m3	107 µg/m3	6.8 km/hr	250° (WSW)	416910
Jul 9	17	PM2.5	1-Hour	80 µg/m3	106 µg/m3	4.8 km/hr	246° (WSW)	416910
Jul 9	18	PM2.5	1-Hour	80 µg/m3	101 µg/m3	3.1 km/hr	194° (SSW)	416910
Jul 9	19	PM2.5	1-Hour	80 µg/m3	100 µg/m3	3.4 km/hr	107° (ESE)	416910
Jul 9	20	PM2.5	1-Hour	80 µg/m3	99 µg/m3	4.6 km/hr	73° (ENE)	416910
Jul 9	21	PM2.5	1-Hour	80 µg/m3	96 µg/m3	5.2 km/hr	50° (NE)	416910
Jul 9	22	PM2.5	1-Hour	80 µg/m3	107 µg/m3	6.5 km/hr	42° (NE)	416910
Jul 9	23	PM2.5	1-Hour	80 µg/m3	113 µg/m3	6.9 km/hr	45° (NE)	416910
Jul 9	-	PM2.5	24-Hour	29 µg/m3	72 µg/m3	5.3 km/hr	211° (SSW)	416910
Jul 10	0	PM2.5	1-Hour	80 µg/m3	149 µg/m3	8.3 km/hr	50° (NE)	416553
Jul 10	1	PM2.5	1-Hour	80 µg/m3	158 µg/m3	8.6 km/hr	55° (NE)	416553
Jul 10	2	PM2.5	1-Hour	80 µg/m3	174 µg/m3	7.4 km/hr	63° (ENE)	416553
Jul 10	3	PM2.5	1-Hour	80 µg/m3	164 µg/m3	6.2 km/hr	68° (ENE)	416553
Jul 10	4	PM2.5	1-Hour	80 µg/m3	162 µg/m3	8.1 km/hr	68° (ENE)	416553
Jul 10	5	PM2.5	1-Hour	80 µg/m3	202 µg/m3	4.9 km/hr	49° (NE)	416553
Jul 10	6	PM2.5	1-Hour	80 µg/m3	192 µg/m3	8.9 km/hr	44° (NE)	416553
Jul 10	7	PM2.5	1-Hour	80 µg/m3	87 µg/m3	10.4 km/hr	47° (NE)	416553
Jul 10	8	PM2.5	1-Hour	80 µg/m3	102 µg/m3	9.5 km/hr	41° (NE)	416553
Jul 10	9	PM2.5	1-Hour	80 µg/m3	92 µg/m3	5.0 km/hr	61° (ENE)	416553
Jul 10	10	PM2.5	1-Hour	80 µg/m3	89 µg/m3	3.2 km/hr	83° (E)	416553
Jul 10	11	PM2.5	1-Hour	80 µg/m3	93 µg/m3	2.8 km/hr	126° (SE)	416553
Jul 10	12	PM2.5	1-Hour	80 µg/m3	94 µg/m3	2.7 km/hr	82° (E)	416553
Jul 10	13	PM2.5	1-Hour	80 µg/m3	83 µg/m3	3.6 km/hr	57° (ENE)	416553



Date	Time (MST)	Parameter	Average Period	AAAOs / AAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 11	-	PM2.5	24-Hour	29 µg/m3	42 µg/m3	6.8 km/hr	167° (SSE)	416553
Jul 12	-	PM2.5	24-Hour	29 µg/m3	47 µg/m3	4.1 km/hr	319° (NW)	416553
Jul 13	5	PM2.5	1-Hour	80 µg/m3	111 µg/m3	7.9 km/hr	339° (NNW)	416553
Jul 13	6	PM2.5	1-Hour	80 µg/m3	121 µg/m3	8.1 km/hr	346° (NNW)	416553
Jul 13	7	PM2.5	1-Hour	80 µg/m3	141 µg/m3	9.8 km/hr	2° (N)	416553
Jul 13	8	PM2.5	1-Hour	80 µg/m3	164 µg/m3	11.6 km/hr	4° (N)	416553
Jul 13	9	PM2.5	1-Hour	80 µg/m3	181 µg/m3	9.4 km/hr	3° (N)	416553
Jul 13	10	PM2.5	1-Hour	80 µg/m3	253 µg/m3	7.0 km/hr	4° (N)	416553
Jul 13	11	PM2.5	1-Hour	80 µg/m3	353 µg/m3	8.1 km/hr	12° (NNE)	416553
Jul 13	12	PM2.5	1-Hour	80 µg/m3	270 µg/m3	8.5 km/hr	17° (NNE)	416553
Jul 13	13	PM2.5	1-Hour	80 µg/m3	154 µg/m3	7.1 km/hr	14° (NNE)	416553
Jul 13	14	PM2.5	1-Hour	80 µg/m3	136 µg/m3	7.6 km/hr	0° (N)	416553
Jul 13	15	PM2.5	1-Hour	80 µg/m3	146 µg/m3	7.9 km/hr	342° (NNW)	416553
Jul 13	16	PM2.5	1-Hour	80 µg/m3	117 µg/m3	8.9 km/hr	3° (N)	416553
Jul 13	17	PM2.5	1-Hour	80 µg/m3	110 µg/m3	8.0 km/hr	4° (N)	416553
Jul 13	18	PM2.5	1-Hour	80 µg/m3	111 µg/m3	6.0 km/hr	7° (N)	416553
Jul 13	19	PM2.5	1-Hour	80 µg/m3	99 µg/m3	3.5 km/hr	343° (NNW)	416553
Jul 13	20	PM2.5	1-Hour	80 µg/m3	104 µg/m3	4.5 km/hr	274° (W)	416553
Jul 13	21	PM2.5	1-Hour	80 µg/m3	126 µg/m3	7.6 km/hr	271° (W)	416553
Jul 13	22	PM2.5	1-Hour	80 µg/m3	116 µg/m3	7.5 km/hr	293° (WNW)	416553
Jul 13	23	PM2.5	1-Hour	80 µg/m3	100 µg/m3	8.1 km/hr	305° (WNW)	416553
Jul 13	-	PM2.5	24-Hour	29 µg/m3	133 µg/m3	7.0 km/hr	345° (NNW)	416553
Jul 14	0	PM2.5	1-Hour	80 µg/m3	109 µg/m3	8.1 km/hr	322° (NW)	416553
Jul 14	1	PM2.5	1-Hour	80 µg/m3	123 µg/m3	7.3 km/hr	327° (NW)	416553
Jul 14	2	PM2.5	1-Hour	80 µg/m3	142 µg/m3	7.7 km/hr	341° (NNW)	416553
Jul 14	3	PM2.5	1-Hour	80 µg/m3	164 µg/m3	7.4 km/hr	342° (NNW)	416553
Jul 14	4	PM2.5	1-Hour	80 µg/m3	192 µg/m3	6.1 km/hr	355° (N)	416553
Jul 14	5	PM2.5	1-Hour	80 µg/m3	204 µg/m3	6.7 km/hr	346° (NNW)	416553
Jul 14	6	PM2.5	1-Hour	80 µg/m3	235 µg/m3	5.7 km/hr	346° (NNW)	416553
Jul 14	7	PM2.5	1-Hour	80 µg/m3	278 µg/m3	5.7 km/hr	1° (N)	416553
Jul 14	8	PM2.5	1-Hour	80 µg/m3	297 µg/m3	4.7 km/hr	8° (N)	416553
Jul 14	9	PM2.5	1-Hour	80 µg/m3	304 µg/m3	3.1 km/hr	5° (N)	416553
Jul 14	10	PM2.5	1-Hour	80 µg/m3	306 µg/m3	3.1 km/hr	325° (NW)	416553
Jul 14	11	PM2.5	1-Hour	80 µg/m3	318 µg/m3	3.6 km/hr	296° (WNW)	416553
Jul 14	12	PM2.5	1-Hour	80 µg/m3	272 µg/m3	5.1 km/hr	288° (WNW)	416553
Jul 14	13	PM2.5	1-Hour	80 µg/m3	290 µg/m3	5.1 km/hr	248° (WSW)	416553
Jul 14	14	PM2.5	1-Hour	80 µg/m3	357 µg/m3	5.7 km/hr	235° (SW)	416553
Jul 14	15	PM2.5	1-Hour	80 µg/m3	333 µg/m3	7.3 km/hr	210° (SSW)	416553
Jul 14	16	PM2.5	1-Hour	80 µg/m3	202 µg/m3	9.2 km/hr	193° (S)	416553

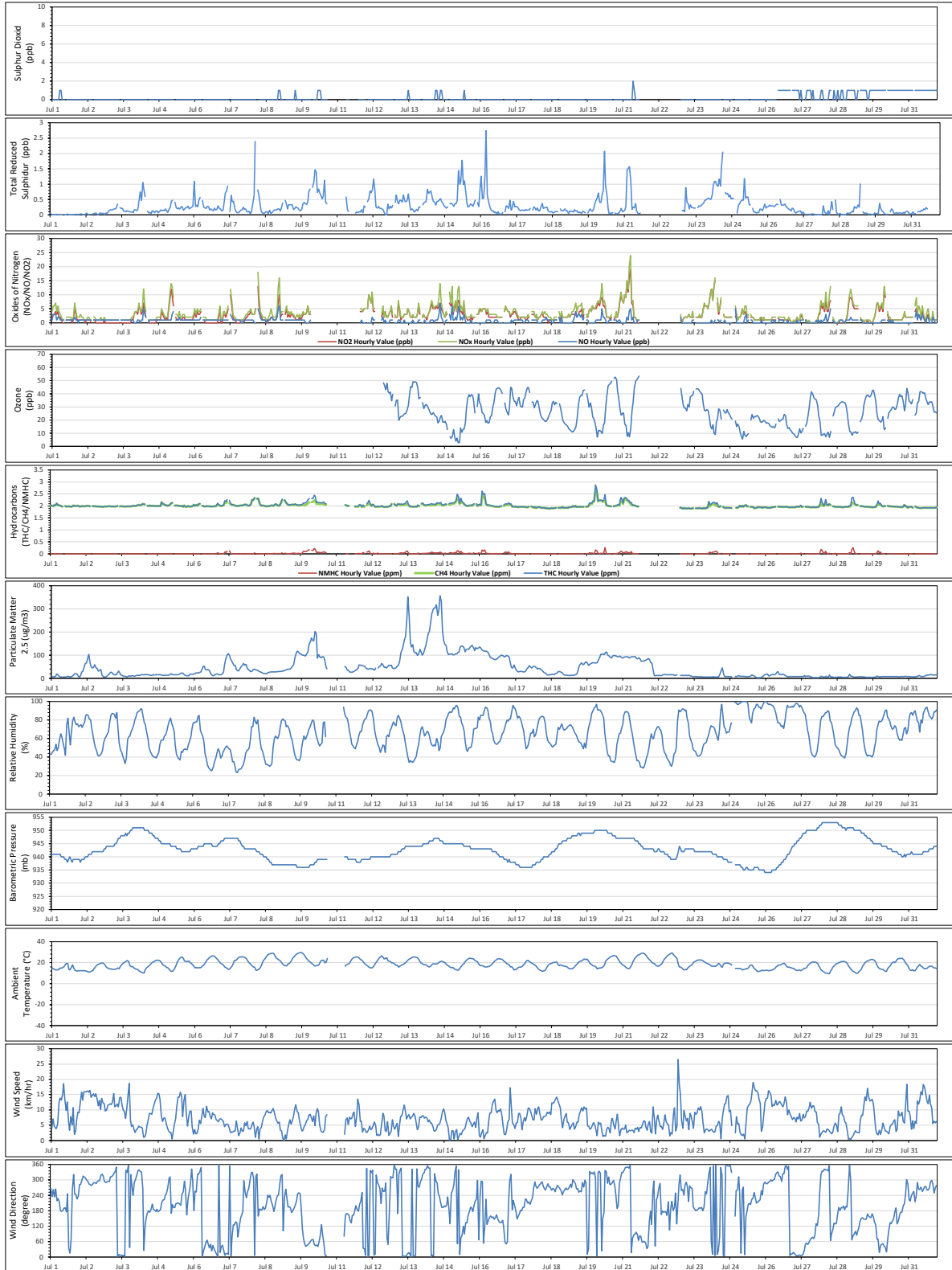
Date	Time (MST)	Parameter	Average Period	AAAOs / AAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 14	17	PM2.5	1-Hour	80 µg/m3	165 µg/m3	10.3 km/hr	193° (S)	416553
Jul 14	18	PM2.5	1-Hour	80 µg/m3	147 µg/m3	9.3 km/hr	199° (SSW)	416553
Jul 14	19	PM2.5	1-Hour	80 µg/m3	141 µg/m3	6.6 km/hr	196° (SSW)	416553
Jul 14	20	PM2.5	1-Hour	80 µg/m3	115 µg/m3	5.3 km/hr	203° (SSW)	416553
Jul 14	21	PM2.5	1-Hour	80 µg/m3	102 µg/m3	4.1 km/hr	234° (SW)	416553
Jul 14	22	PM2.5	1-Hour	80 µg/m3	104 µg/m3	0.1 km/hr	184° (S)	416553
Jul 14	23	PM2.5	1-Hour	80 µg/m3	104 µg/m3	0.3 km/hr	130° (SE)	416553
Jul 14	-	PM2.5	24-Hour	29 µg/m3	209 µg/m3	5.7 km/hr	285° (WNW)	416553
Jul 15	0	PM2.5	1-Hour	80 µg/m3	107 µg/m3	3.2 km/hr	248° (WSW)	416553
Jul 15	1	PM2.5	1-Hour	80 µg/m3	101 µg/m3	3.2 km/hr	259° (WSW)	416553
Jul 15	2	PM2.5	1-Hour	80 µg/m3	102 µg/m3	0.5 km/hr	281° (W)	416553
Jul 15	3	PM2.5	1-Hour	80 µg/m3	105 µg/m3	2.9 km/hr	329° (NNW)	416553
Jul 15	4	PM2.5	1-Hour	80 µg/m3	106 µg/m3	3.6 km/hr	354° (N)	416553
Jul 15	5	PM2.5	1-Hour	80 µg/m3	112 µg/m3	0.2 km/hr	52° (NE)	416553
Jul 15	6	PM2.5	1-Hour	80 µg/m3	114 µg/m3	1.5 km/hr	340° (NNW)	416553
Jul 15	7	PM2.5	1-Hour	80 µg/m3	137 µg/m3	2.3 km/hr	10° (N)	416553
Jul 15	8	PM2.5	1-Hour	80 µg/m3	139 µg/m3	1.9 km/hr	74° (ENE)	416553
Jul 15	9	PM2.5	1-Hour	80 µg/m3	139 µg/m3	3.2 km/hr	86° (E)	416553
Jul 15	10	PM2.5	1-Hour	80 µg/m3	134 µg/m3	3.5 km/hr	120° (ESE)	416553
Jul 15	11	PM2.5	1-Hour	80 µg/m3	115 µg/m3	3.9 km/hr	90° (E)	416553
Jul 15	12	PM2.5	1-Hour	80 µg/m3	124 µg/m3	5.6 km/hr	134° (SE)	416553
Jul 15	13	PM2.5	1-Hour	80 µg/m3	127 µg/m3	7.0 km/hr	133° (SE)	416553
Jul 15	14	PM2.5	1-Hour	80 µg/m3	125 µg/m3	7.7 km/hr	160° (SSE)	416553
Jul 15	15	PM2.5	1-Hour	80 µg/m3	132 µg/m3	6.3 km/hr	176° (S)	416553
Jul 15	16	PM2.5	1-Hour	80 µg/m3	140 µg/m3	5.8 km/hr	194° (SSW)	416553
Jul 15	17	PM2.5	1-Hour	80 µg/m3	142 µg/m3	4.5 km/hr	191° (S)	416553
Jul 15	18	PM2.5	1-Hour	80 µg/m3	133 µg/m3	5.4 km/hr	177° (S)	416553
Jul 15	19	PM2.5	1-Hour	80 µg/m3	120 µg/m3	6.0 km/hr	199° (SSW)	416553
Jul 15	20	PM2.5	1-Hour	80 µg/m3	134 µg/m3	4.3 km/hr	218° (SW)	416553
Jul 15	21	PM2.5	1-Hour	80 µg/m3	128 µg/m3	7.0 km/hr	226° (SW)	416553
Jul 15	22	PM2.5	1-Hour	80 µg/m3	130 µg/m3	9.1 km/hr	298° (WNW)	416553
Jul 15	23	PM2.5	1-Hour	80 µg/m3	136 µg/m3	1.6 km/hr	67° (ENE)	416553
Jul 15	-	PM2.5	24-Hour	29 µg/m3	124 µg/m3	4.2 km/hr	169° (SSE)	416553
Jul 16	0	PM2.5	1-Hour	80 µg/m3	132 µg/m3	1.1 km/hr	236° (SW)	416958
Jul 16	1	PM2.5	1-Hour	80 µg/m3	124 µg/m3	2.5 km/hr	295° (WNW)	416958
Jul 16	2	PM2.5	1-Hour	80 µg/m3	120 µg/m3	3.5 km/hr	294° (WNW)	416958
Jul 16	3	PM2.5	1-Hour	80 µg/m3	118 µg/m3	0.6 km/hr	54° (NE)	416958
Jul 16	4	PM2.5	1-Hour	80 µg/m3	118 µg/m3	1.7 km/hr	117° (ESE)	416958
Jul 16	5	PM2.5	1-Hour	80 µg/m3	117 µg/m3	2.6 km/hr	225° (SW)	416958

Date	Time (MST)	Parameter	Average Period	AAAOs / AAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 16	6	PM2.5	1-Hour	80 µg/m3	114 µg/m3	2.4 km/hr	127° (SE)	416958
Jul 16	7	PM2.5	1-Hour	80 µg/m3	106 µg/m3	6.7 km/hr	142° (SE)	416958
Jul 16	8	PM2.5	1-Hour	80 µg/m3	92 µg/m3	9.0 km/hr	155° (SSE)	416958
Jul 16	9	PM2.5	1-Hour	80 µg/m3	88 µg/m3	9.1 km/hr	160° (SSE)	416958
Jul 16	10	PM2.5	1-Hour	80 µg/m3	87 µg/m3	11.9 km/hr	153° (SSE)	416958
Jul 16	11	PM2.5	1-Hour	80 µg/m3	82 µg/m3	12.8 km/hr	156° (SSE)	416958
Jul 16	12	PM2.5	1-Hour	80 µg/m3	81 µg/m3	13.5 km/hr	147° (SE)	416958
Jul 16	13	PM2.5	1-Hour	80 µg/m3	82 µg/m3	9.9 km/hr	154° (SSE)	416958
Jul 16	14	PM2.5	1-Hour	80 µg/m3	85 µg/m3	9.1 km/hr	164° (SSE)	416958
Jul 16	15	PM2.5	1-Hour	80 µg/m3	91 µg/m3	9.8 km/hr	148° (SE)	416958
Jul 16	16	PM2.5	1-Hour	80 µg/m3	94 µg/m3	9.6 km/hr	137° (SE)	416958
Jul 16	17	PM2.5	1-Hour	80 µg/m3	100 µg/m3	10.3 km/hr	134° (SE)	416958
Jul 16	18	PM2.5	1-Hour	80 µg/m3	99 µg/m3	8.1 km/hr	135° (SE)	416958
Jul 16	19	PM2.5	1-Hour	80 µg/m3	98 µg/m3	5.0 km/hr	143° (SE)	416958
Jul 16	20	PM2.5	1-Hour	80 µg/m3	92 µg/m3	2.0 km/hr	114° (ESE)	416958
Jul 16	21	PM2.5	1-Hour	80 µg/m3	95 µg/m3	1.9 km/hr	57° (ENE)	416958
Jul 16	22	PM2.5	1-Hour	80 µg/m3	99 µg/m3	3.3 km/hr	51° (NE)	416958
Jul 16	23	PM2.5	1-Hour	80 µg/m3	96 µg/m3	6.1 km/hr	59° (ENE)	416958
Jul 16	-	PM2.5	24-Hour	29 µg/m3	100 µg/m3	6.4 km/hr	139° (SE)	416958
Jul 17	0	PM2.5	1-Hour	80 µg/m3	92 µg/m3	6.9 km/hr	217° (SW)	416958
Jul 17	-	PM2.5	24-Hour	29 µg/m3	44 µg/m3	7.9 km/hr	213° (SSW)	416958
Jul 19	-	PM2.5	24-Hour	29 µg/m3	42 µg/m3	6.6 km/hr	289° (WNW)	416958
Jul 20	4	PM2.5	1-Hour	80 µg/m3	90 µg/m3	5.4 km/hr	334° (NNW)	416958
Jul 20	5	PM2.5	1-Hour	80 µg/m3	104 µg/m3	5.7 km/hr	326° (NW)	416958
Jul 20	6	PM2.5	1-Hour	80 µg/m3	104 µg/m3	3.0 km/hr	24° (NNE)	416958
Jul 20	7	PM2.5	1-Hour	80 µg/m3	104 µg/m3	1.3 km/hr	150° (SSE)	416958
Jul 20	8	PM2.5	1-Hour	80 µg/m3	102 µg/m3	1.7 km/hr	173° (S)	416958
Jul 20	9	PM2.5	1-Hour	80 µg/m3	112 µg/m3	1.4 km/hr	337° (NNW)	416958
Jul 20	10	PM2.5	1-Hour	80 µg/m3	113 µg/m3	3.5 km/hr	332° (NNW)	416958
Jul 20	11	PM2.5	1-Hour	80 µg/m3	100 µg/m3	4.4 km/hr	287° (WNW)	416958
Jul 20	12	PM2.5	1-Hour	80 µg/m3	96 µg/m3	3.8 km/hr	311° (NW)	416958
Jul 20	13	PM2.5	1-Hour	80 µg/m3	90 µg/m3	2.5 km/hr	282° (W)	416958
Jul 20	14	PM2.5	1-Hour	80 µg/m3	88 µg/m3	6.8 km/hr	283° (W)	416958
Jul 20	15	PM2.5	1-Hour	80 µg/m3	96 µg/m3	7.2 km/hr	289° (WNW)	416958
Jul 20	16	PM2.5	1-Hour	80 µg/m3	99 µg/m3	5.0 km/hr	298° (WNW)	416958
Jul 20	17	PM2.5	1-Hour	80 µg/m3	98 µg/m3	3.8 km/hr	277° (W)	416958
Jul 20	18	PM2.5	1-Hour	80 µg/m3	96 µg/m3	6.2 km/hr	242° (WSW)	416958
Jul 20	19	PM2.5	1-Hour	80 µg/m3	93 µg/m3	8.7 km/hr	189° (S)	416958
Jul 20	20	PM2.5	1-Hour	80 µg/m3	93 µg/m3	4.3 km/hr	198° (SSW)	416958

Date	Time (MST)	Parameter	Average Period	AAAOs / AAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 20	21	PM2.5	1-Hour	80 µg/m3	96 µg/m3	1.6 km/hr	287° (WNW)	416958
Jul 20	22	PM2.5	1-Hour	80 µg/m3	92 µg/m3	3.5 km/hr	309° (NW)	416958
Jul 20	23	PM2.5	1-Hour	80 µg/m3	88 µg/m3	4.1 km/hr	329° (NNW)	416958
Jul 20	-	PM2.5	24-Hour	29 µg/m3	93 µg/m3	4.2 km/hr	301° (WNW)	416958
Jul 21	0	PM2.5	1-Hour	80 µg/m3	90 µg/m3	3.7 km/hr	329° (NNW)	416958
Jul 21	1	PM2.5	1-Hour	80 µg/m3	92 µg/m3	3.8 km/hr	339° (NNW)	416958
Jul 21	2	PM2.5	1-Hour	80 µg/m3	93 µg/m3	5.0 km/hr	348° (NNW)	416958
Jul 21	3	PM2.5	1-Hour	80 µg/m3	93 µg/m3	2.5 km/hr	349° (NNW)	416958
Jul 21	4	PM2.5	1-Hour	80 µg/m3	92 µg/m3	2.9 km/hr	350° (N)	416958
Jul 21	5	PM2.5	1-Hour	80 µg/m3	88 µg/m3	3.4 km/hr	346° (NNW)	416958
Jul 21	6	PM2.5	1-Hour	80 µg/m3	91 µg/m3	3.2 km/hr	356° (N)	416958
Jul 21	7	PM2.5	1-Hour	80 µg/m3	93 µg/m3	3.4 km/hr	17° (NNE)	416958
Jul 21	8	PM2.5	1-Hour	80 µg/m3	94 µg/m3	3.3 km/hr	73° (ENE)	416958
Jul 21	9	PM2.5	1-Hour	80 µg/m3	93 µg/m3	2.6 km/hr	86° (E)	416958
Jul 21	10	PM2.5	1-Hour	80 µg/m3	94 µg/m3	4.0 km/hr	88° (E)	416958
Jul 21	11	PM2.5	1-Hour	80 µg/m3	86 µg/m3	3.7 km/hr	97° (E)	416958
Jul 21	12	PM2.5	1-Hour	80 µg/m3	85 µg/m3	4.3 km/hr	87° (E)	416958
Jul 21	13	PM2.5	1-Hour	80 µg/m3	89 µg/m3	2.9 km/hr	65° (ENE)	416958
Jul 21	14	PM2.5	1-Hour	80 µg/m3	85 µg/m3	4.3 km/hr	83° (E)	416958
Jul 21	20	PM2.5	1-Hour	80 µg/m3	82 µg/m3	3.4 km/hr	33° (NNE)	416958
Jul 21	21	PM2.5	1-Hour	80 µg/m3	86 µg/m3	5.3 km/hr	40° (NE)	416958
Jul 21	22	PM2.5	1-Hour	80 µg/m3	81 µg/m3	6.2 km/hr	136° (SE)	416958
Jul 21	-	PM2.5	24-Hour	29 µg/m3	86 µg/m3	4.0 km/hr	48° (NE)	416958

The source of the exceedances of the PM2.5 objective and guideline were due to wildfires.

Timeseries Chart of Hourly Average for the month of Jul 2023 - AQHI - Grimshaw Station



## TABLES, CHARTS AND WIND ROSES

## 986-C STATION

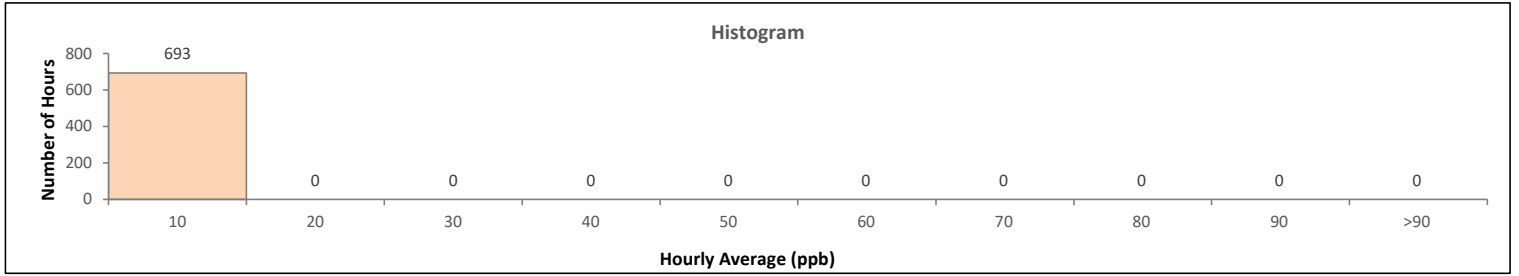
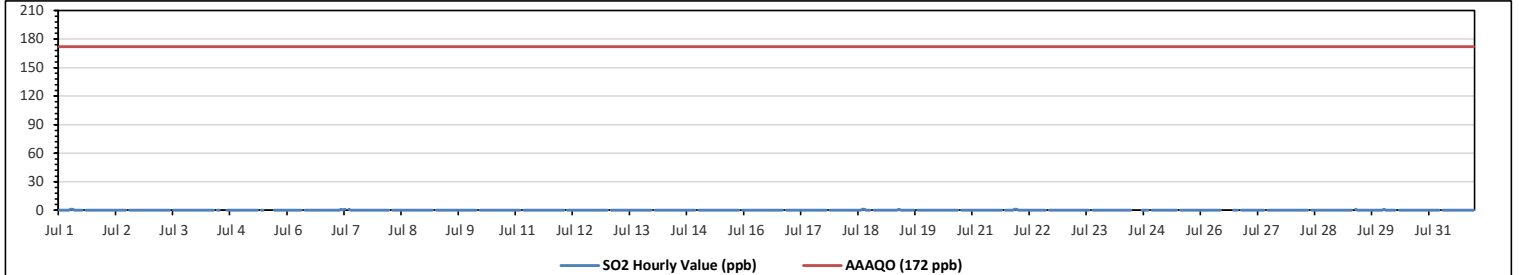
**Peace River Area Monitoring Program**

**986-C Station - July 2023**

**Summary of Hourly Averages**

**SULPHUR DIOXIDE (SO<sub>2</sub>) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																														
Number of 1-Hour Exceedances:					0					Number of 24-Hour Exceedances:					0					30-Day Exceedance:					0					
Maximum Hourly Value:										1 ppb on Jul 1 at hr 6					Hours in Service:										744					
Maximum Daily Value:										0.1 ppb on Jul 7					Hours of Data:										693					
Minimum Hourly Value:										0 ppb on Jul 1 at hr 0					Hours of Missing Data:										14					
Minimum Daily Value:										0.0 ppb on Jul 2					Hours of Calibration:										37					
Monthly Average:										0.0 ppb					Operational Uptime:										98.1					
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23						
Jul 1	0	0	0	0	0	0	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	
Jul 2	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 3	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 4	0	0	0	0	0	0	0	0	0	0	0	S	0	0	P	P	P	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 5	0	0	0	0	0	0	0	0	0	0	0	S	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	
Jul 6	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 7	0	0	0	0	1	0	1	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	
Jul 8	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 9	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 10	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 11	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 12	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 13	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 14	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0.0	
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	1	0	0.1
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	0	0	0	0	0	0	0	0	S	0.0	
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	P	0	0	0	0	0	S	0	0	0	0.0
Jul 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jul 31	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Diurnal Maximum	1	0	0	0	1	0	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	



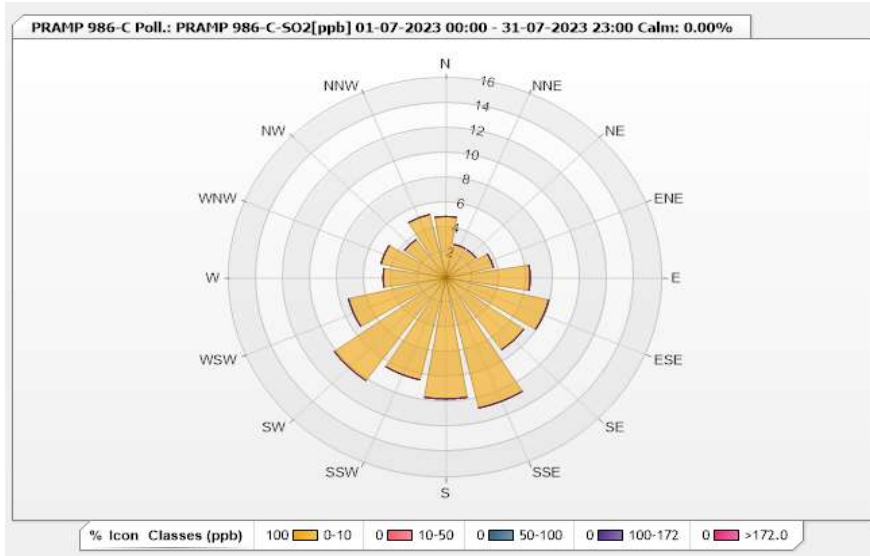


Station: PRAMP 986-C Poll.: PRAMP 986-C-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.88%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	4.92	0	0	0	0	4.92
NNE	2.75	0	0	0	0	2.75
NE	2.75	0	0	0	0	2.75
ENE	3.62	0	0	0	0	3.62
E	6.22	0	0	0	0	6.22
ESE	7.81	0	0	0	0	7.81
SE	7.09	0	0	0	0	7.09
SSE	10.71	0	0	0	0	10.71
S	9.7	0	0	0	0	9.7
SSW	8.39	0	0	0	0	8.39
SW	10.13	0	0	0	0	10.13
WSW	7.38	0	0	0	0	7.38
W	4.63	0	0	0	0	4.63
WNW	4.92	0	0	0	0	4.92
NW	3.76	0	0	0	0	3.76
NNW	5.21	0	0	0	0	5.21
Summary	100	0	0	0	0	100



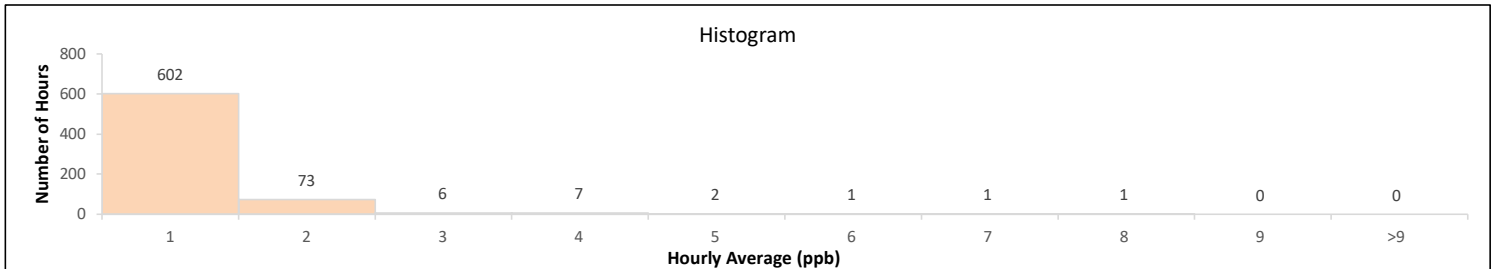
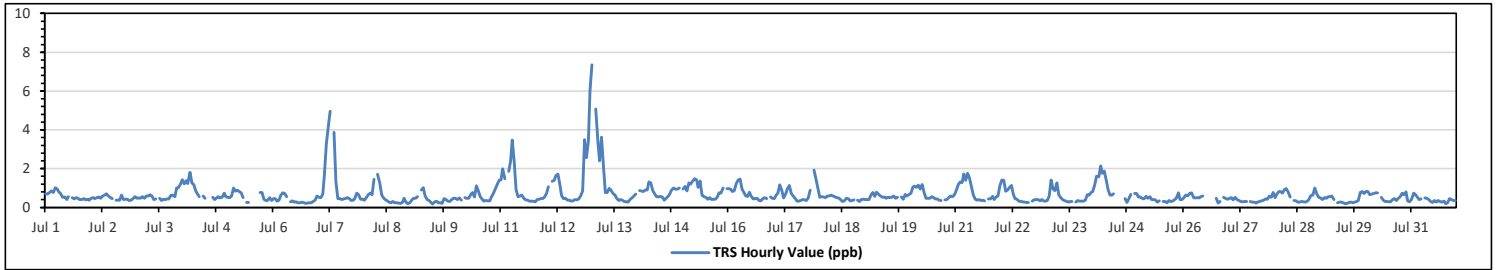
**Peace River Area Monitoring Program**  
**986-C Station - July 2023**  
**Summary of Hourly Averages**  
**TOTAL REDUCED SULPHUR (TRS) in ppb**

Maximum Hourly Value:	7.35 ppb	on Jul 13 at hr 0	Hours in Service:	744
Maximum Daily Value:	1.45 ppb	on Jul 13	Hours of Data:	693
Minimum Hourly Value:	0.17 ppb	on Jul 9 at hr 12	Hours of Missing Data:	14
Minimum Daily Value:	0.38 ppb	on Jul 6	Hours of Calibration:	37
Monthly Average:	0.68 ppb		Operational Uptime:	98.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	0.7	0.69	0.76	0.85	0.78	1.02	0.95	0.8	0.7	0.52	0.53	0.41	0.55	S	0.51	0.44	0.51	0.48	0.4	0.41	0.45	0.39	0.43	0.37	0.37	1.02	0.59	
Jul 2	0.48	0.5	0.45	0.5	0.54	0.47	0.6	0.63	0.7	0.58	0.52	0.45	S	0.38	0.38	0.37	0.64	0.42	0.43	0.43	0.36	0.37	0.45	0.56	0.36	0.70	0.49	
Jul 3	0.47	0.49	0.48	0.55	0.47	0.59	0.58	0.66	0.59	0.42	0.44	S	0.48	0.35	0.43	0.4	0.44	0.44	0.62	0.64	0.55	0.99	1.02	1.2	0.35	1.20	0.58	
Jul 4	1.42	1.21	1.38	1.23	1.81	1.26	1.17	0.86	0.7	0.56	S	0.58	0.48	P	P	P	0.4	0.44	0.44	0.62	0.64	0.55	0.99	1.02	1.2	0.35	1.20	0.58
Jul 5	0.52	0.51	0.58	1	0.84	0.88	0.82	0.75	0.51	S	0.26	0.26	C	C	C	C	C	0.76	0.78	0.43	0.36	0.35	0.5	0.36	0.26	1.00	0.58	
Jul 6	0.45	0.45	0.33	0.38	0.64	0.75	0.73	0.55	S	0.29	0.34	0.27	0.29	0.25	0.25	0.27	0.24	0.21	0.22	0.25	0.24	0.3	0.38	0.58	0.21	0.75	0.38	
Jul 7	0.52	0.5	0.69	1.68	3.25	4.13	4.97	S	3.87	1.31	0.45	0.46	0.4	0.44	0.46	0.5	0.45	0.36	0.37	0.45	0.74	0.65	0.43	0.43	0.36	4.97	1.20	
Jul 8	0.37	0.51	0.66	0.74	0.65	1.44	S	1.71	1.26	0.65	0.51	0.41	0.34	0.27	0.25	0.31	0.23	0.23	0.22	0.21	0.26	0.47	0.27	0.19	1.71	0.53		
Jul 9	0.26	0.41	0.48	0.47	0.55	S	0.9	1.02	0.58	0.4	0.35	0.26	0.17	0.27	0.33	0.24	0.25	0.21	0.45	0.41	0.33	0.31	0.42	0.48	0.17	1.02	0.42	
Jul 10	0.48	0.41	0.49	0.37	S	0.51	0.48	0.48	0.66	0.76	0.53	1.11	0.86	0.56	0.43	0.33	0.36	0.34	0.34	0.54	0.71	0.95	1.19	1.39	0.33	1.39	0.62	
Jul 11	1.43	1.99	1.47	S	1.86	2.4	3.47	2.39	0.92	0.56	0.58	0.64	0.47	0.39	0.37	0.32	0.32	0.32	0.29	0.4	0.43	0.46	0.45	0.54	0.29	3.47	0.98	
Jul 12	0.72	1.06	S	1.35	1.39	1.67	1.7	1.17	0.62	0.45	0.48	0.38	0.38	0.33	0.34	0.41	0.39	0.44	0.61	0.85	3.49	2.57	3.43	6.01	0.33	6.01	1.31	
Jul 13	7.35	S	5.07	3.32	2.4	3.63	2.14	0.77	0.77	0.98	0.91	0.72	0.63	0.46	0.36	0.42	0.38	0.31	0.29	0.27	0.42	0.49	0.58	0.68	0.27	7.35	1.45	
Jul 14	S	0.87	0.85	0.81	0.91	0.89	1.31	1.27	0.87	0.7	0.55	0.53	0.57	0.54	0.38	0.48	0.57	0.69	0.89	1	0.93	0.95	0.99	S	0.38	1.31	0.80	
Jul 15	0.96	1.08	0.85	1.26	1.2	1.36	1.49	1.42	1.03	1.37	0.64	0.55	0.52	0.43	0.5	0.42	0.43	0.43	0.54	0.75	0.74	0.99	S	0.97	0.42	1.49	0.87	
Jul 16	0.97	0.96	0.81	0.87	1.23	1.41	1.46	0.96	0.78	0.59	0.57	0.79	0.57	0.44	0.45	0.47	0.35	0.34	0.45	0.5	0.46	S	0.53	0.47	0.34	1.46	0.71	
Jul 17	0.45	0.64	0.74	1.16	0.89	0.49	0.73	0.97	1.12	0.71	0.6	0.47	0.33	0.32	0.35	0.42	0.39	0.36	0.49	0.88	S	1.92	1.49	1.01	0.32	1.92	0.74	
Jul 18	0.52	0.56	0.53	0.51	0.6	0.6	0.64	0.6	0.53	0.51	0.49	0.41	0.3	0.34	0.47	0.46	0.34	0.35	0.39	S	0.38	0.3	0.4	0.43	0.30	0.64	0.46	
Jul 19	0.41	0.41	0.42	0.64	0.77	0.57	0.79	0.69	0.59	0.52	0.53	0.47	0.52	0.51	0.52	0.6	0.48	0.52	S	0.53	0.43	0.67	0.59	0.66	0.41	0.79	0.56	
Jul 20	0.74	1.05	1.1	1.04	1.15	0.94	1.19	0.78	0.48	0.47	0.48	0.55	0.5	0.44	0.44	0.38	0.35	S	0.39	0.42	0.5	0.58	0.56	0.65	0.35	1.19	0.66	
Jul 21	0.86	1.18	1.32	1.28	1.73	1.4	1.76	1.51	1.07	0.64	0.43	0.37	0.42	0.35	0.37	0.34	S	0.44	0.44	0.57	0.42	0.54	0.6	1.13	0.34	1.76	0.83	
Jul 22	1.41	1.39	0.84	0.91	1.03	1.12	0.67	0.45	0.43	0.33	0.31	0.29	0.27	0.26	0.26	S	0.33	0.39	0.42	0.41	0.34	0.42	0.34	0.33	0.26	1.41	0.56	
Jul 23	0.35	0.59	1.41	0.94	0.87	1.26	0.65	0.5	0.4	0.35	0.32	0.28	0.31	0.31	S	0.28	0.35	0.33	0.32	0.33	0.37	0.66	0.63	0.77	0.28	1.41	0.55	
Jul 24	0.81	1.15	1.62	1.58	2.13	1.76	1.87	1.43	0.92	0.64	0.64	0.7	P	P	P	P	P	0.46	0.26	0.46	0.67	S	0.72	0.72	0.26	2.13	1.03	
Jul 25	0.54	0.53	0.47	0.44	0.57	0.48	0.55	0.42	0.41	0.39	0.28	0.34	S	0.31	0.31	0.25	0.35	0.31	0.33	0.39	0.48	0.75	0.41	0.42	0.25	0.75	0.42	
Jul 26	0.5	0.63	0.61	0.71	0.75	0.51	0.49	0.5	0.49	0.55	0.58	P	P	P	P	P	P	0.47	0.22	0.3	S	0.52	0.45	0.43	0.22	0.75	NA	
Jul 27	0.47	0.51	0.39	0.52	0.41	0.36	0.31	0.29	0.31	0.3	S	0.3	0.27	0.28	0.22	0.29	0.3	0.34	0.38	0.44	0.43	0.6	0.52	0.78	0.22	0.78	0.39	
Jul 28	0.5	0.7	0.81	0.81	0.74	0.92	0.97	0.79	0.53	S	0.35	0.34	0.28	0.28	0.3	0.29	0.27	0.32	0.43	0.62	0.64	1	0.7	0.52	0.27	1.00	0.57	
Jul 29	0.49	0.41	0.51	0.48	0.56	0.56	0.58	0.42	S	0.24	0.28	0.27	0.25	0.2	0.21	0.26	0.28	0.23	0.28	0.31	0.36	0.76	0.82	0.71	0.20	0.82	0.41	
Jul 30	0.83	0.82	0.65	0.68	0.73	0.75	0.75	S	0.52	0.37	0.31	0.31	0.29	0.29	0.42	0.45	0.36	0.47	0.56	0.74	0.65	0.8	0.34	0.29	0.29	0.83	0.54	
Jul 31	0.41	0.74	0.65	0.53	0.41	0.44	S	0.49	0.47	0.41	0.3	0.26	0.36	0.28	0.35	0.3	0.28	0.33	0.19	0.25	0.45	0.4	0.35	0.35	0.19	0.74	0.39	
Diurnal Maximum	7.35	1.99	5.07	3.32	3.25	4.13	4.97	2.39	3.87	1.37	0.91	1.11	0.86	0.56	0.52	0.60	0.64	0.76	0.89	1.00	3.49	2.57	3.43	6.01				
Diurnal Average	0.88	0.77	0.91	0.92	1.06	1.15	1.20	0.87	0.79	0.57	0.47	0.45	0.42	0.36	0.37	0.37	0.38	0.39	0.42	0.49	0.59	0.71	0.69	0.80				

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

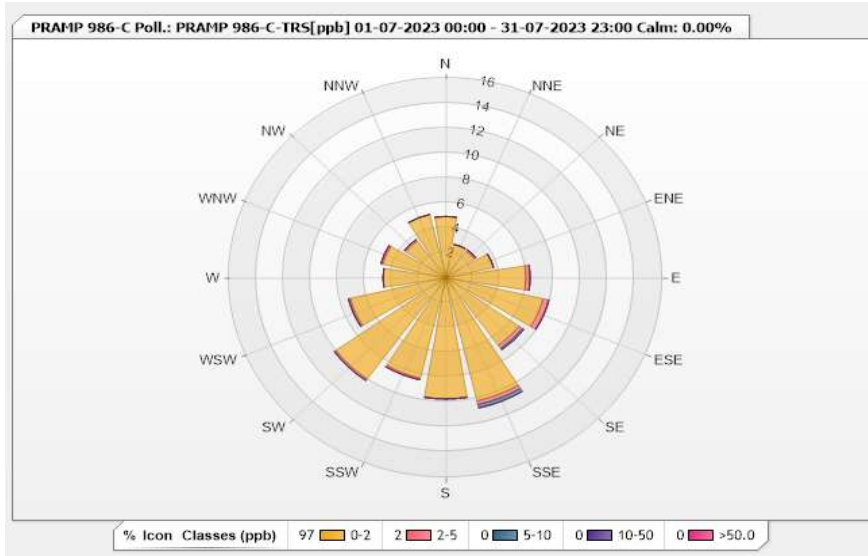


Station: PRAMP 986-C Poll.: PRAMP 986-C-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.88%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	4.92	0	0	0	0	4.92
NNE	2.75	0	0	0	0	2.75
NE	2.6	0.14	0	0	0	2.74
ENE	3.62	0	0	0	0	3.62
E	5.93	0.29	0	0	0	6.22
ESE	7.38	0.43	0	0	0	7.81
SE	6.66	0.29	0.14	0	0	7.09
SSE	10.13	0.29	0.29	0	0	10.71
S	9.7	0	0	0	0	9.7
SSW	8.25	0.14	0	0	0	8.39
SW	9.99	0.14	0	0	0	10.13
WSW	7.24	0.14	0	0	0	7.38
W	4.63	0	0	0	0	4.63
WNW	4.78	0.14	0	0	0	4.92
NW	3.62	0.14	0	0	0	3.76
NNW	5.21	0	0	0	0	5.21
Summary	97.41	2.14	0.43	0	0	100



Peace River Area Monitoring Program

986-C Station - July 2023

Summary of Hourly Averages

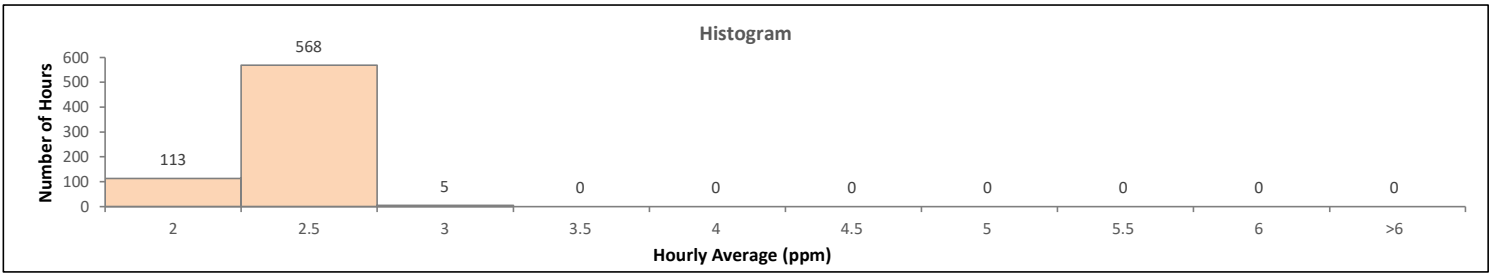
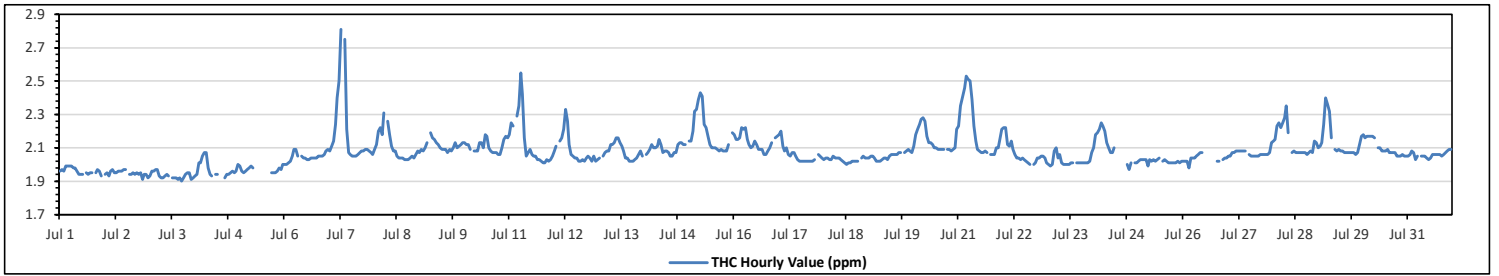
TOTAL HYDROCARBONS (THC) in ppm

Maximum Hourly Value:	2.81 ppm	on Jul 7 at hr 6	Hours in Service:	744
Maximum Daily Value:	2.22 ppm	on Jul 21	Hours of Data:	686
Minimum Hourly Value:	1.90 ppm	on Jul 3 at hr 17	Hours of Missing Data:	23
Minimum Daily Value:	1.93 ppm	on Jul 3	Hours of Calibration:	35
Monthly Average:	2.08 ppm		Operational Uptime:	96.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	1.96	1.97	1.96	1.99	1.99	1.99	1.99	1.98	1.98	1.96	1.94	1.94	1.94	S	1.95	1.94	1.95	1.95	X	1.95	1.97	1.96	1.93	X	1.93	1.99	1.96	
Jul 2	1.94	1.95	1.93	1.96	1.97	1.95	1.95	1.96	1.96	1.96	1.97	1.97	S	1.94	1.94	1.95	1.94	1.95	1.94	1.95	1.91	1.94	1.94	1.92	1.91	1.97	1.95	
Jul 3	1.93	1.96	1.96	1.97	1.97	1.93	1.92	1.92	1.93	1.94	1.93	S	1.92	1.92	1.91	1.92	1.90	1.92	1.94	1.95	1.95	1.91	1.92	1.90	1.97	1.93		
Jul 4	1.93	1.94	2.01	2.01	2.05	2.07	2.07	1.98	1.94	1.93	S	1.94	1.94	P	P	P	1.92	1.94	1.95	1.96	1.95	1.96	2.00	1.92	2.07	1.97		
Jul 5	1.99	1.96	1.95	1.96	1.97	1.98	1.99	1.98	NRM	NRM	NRM	NRM	NRM	C	C	C	C	1.95	1.95	1.95	1.96	1.98	1.97	2.00	1.95	2.00	NA	
Jul 6	2.00	2.00	2.01	2.02	2.05	2.09	2.09	2.05	S	2.05	2.04	2.04	2.03	2.03	2.04	2.04	2.04	2.04	2.05	2.05	2.05	2.06	2.08	2.09	2.00	2.09	2.05	
Jul 7	2.08	2.11	2.14	2.24	2.40	2.50	2.81	S	2.75	2.21	2.07	2.06	2.05	2.05	2.05	2.06	2.07	2.08	2.08	2.09	2.09	2.08	2.07	2.06	2.05	2.81	2.18	
Jul 8	2.09	2.12	2.20	2.22	2.18	2.31	S	2.26	2.18	2.11	2.08	2.08	2.05	2.04	2.04	2.04	2.03	2.03	2.03	2.04	2.05	2.04	2.06	2.08	2.03	2.31	2.10	
Jul 9	2.07	2.09	2.08	2.10	2.13	S	2.19	2.16	2.15	2.13	2.12	2.10	2.09	2.09	2.09	2.07	2.09	2.08	2.10	2.13	2.10	2.11	2.12	2.13	2.07	2.19	2.11	
Jul 10	2.13	2.12	2.12	2.09	S	2.08	2.08	2.08	2.13	2.13	2.10	2.18	2.17	2.10	2.08	2.07	2.07	2.07	2.06	2.06	2.10	2.15	2.17	2.16	2.06	2.18	2.11	
Jul 11	2.18	2.25	2.23	S	2.29	2.35	2.55	2.42	2.16	2.05	2.07	2.09	2.06	2.05	2.05	2.03	2.03	2.02	2.01	2.01	2.03	2.02	2.03	2.05	2.01	2.55	2.13	
Jul 12	2.08	2.11	S	2.14	2.16	2.21	2.33	2.26	2.12	2.06	2.05	2.04	2.04	2.02	2.02	2.03	2.02	2.04	2.05	2.04	2.02	2.05	2.02	2.03	2.02	2.33	2.08	
Jul 13	2.04	S	2.05	2.07	2.08	2.08	2.12	2.12	2.13	2.16	2.16	2.13	2.11	2.08	2.04	2.04	2.02	2.02	2.02	2.03	2.04	2.06	2.08	2.05	2.02	2.16	2.08	
Jul 14	S	2.06	2.07	2.09	2.12	2.10	2.10	2.11	2.15	2.12	2.07	2.08	2.08	2.07	2.05	2.05	2.07	2.07	2.12	2.13	2.13	2.12	2.12	S	2.05	2.15	2.09	
Jul 15	2.14	2.14	2.20	2.32	2.33	2.39	2.43	2.41	2.24	2.22	2.17	2.12	2.10	2.10	2.10	2.09	2.08	2.09	2.08	2.08	2.08	2.12	S	2.19	2.08	2.43	2.18	
Jul 16	2.18	2.15	2.15	2.16	2.22	2.21	2.22	2.15	2.12	2.10	2.11	2.14	2.12	2.09	2.09	2.09	2.06	2.06	2.08	2.10	2.13	S	2.16	2.17	2.06	2.22	2.13	
Jul 17	2.18	2.20	2.11	2.08	2.10	2.06	2.05	2.07	2.07	2.05	2.03	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	S	2.06	2.05	2.04	2.02	2.20	2.06	
Jul 18	2.03	2.04	2.04	2.03	2.03	2.05	2.04	2.04	2.04	2.03	2.02	2.01	2.00	2.01	2.02	2.02	2.02	2.02	2.02	2.02	S	2.04	2.05	2.04	2.04	2.00	2.05	2.03
Jul 19	2.04	2.05	2.05	2.04	2.02	2.02	2.02	2.03	2.04	2.04	2.03	2.05	2.06	2.06	2.06	2.06	2.07	2.07	S	2.07	2.08	2.09	2.08	2.07	2.02	2.09	2.05	
Jul 20	2.11	2.18	2.21	2.24	2.27	2.28	2.26	2.17	2.13	2.13	2.12	2.10	2.10	2.09	2.09	2.09	2.09	S	2.09	2.09	2.08	2.09	2.10	2.21	2.08	2.28	2.14	
Jul 21	2.23	2.35	2.41	2.46	2.53	2.51	2.50	2.39	2.23	2.14	2.09	2.08	2.07	2.07	2.08	2.07	S	2.06	2.06	2.10	2.10	2.15	2.21	2.06	2.53	2.22	2.14	
Jul 22	2.22	2.22	2.12	2.11	2.14	2.09	2.06	2.04	2.04	2.03	2.04	2.03	2.02	2.01	2.00	S	2.00	2.01	2.04	2.04	2.05	2.05	2.04	2.01	2.00	2.22	2.06	
Jul 23	2.00	1.99	2.00	2.08	2.10	2.04	2.06	2.01	2.00	2.00	2.00	2.00	2.01	2.01	S	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.07	1.99	2.10	2.02	
Jul 24	2.10	2.18	2.19	2.21	2.25	2.23	2.20	2.13	2.10	2.07	2.07	2.10	P	P	P	P	P	X	2.00	1.97	2.01	S	2.01	2.01	1.97	2.25	NA	
Jul 25	2.02	2.03	2.03	2.03	1.99	2.03	2.02	2.03	2.02	2.03	2.04	S	S	2.02	2.03	2.02	2.01	2.01	2.01	2.01	2.01	2.02	2.01	2.02	1.99	2.04	2.02	
Jul 26	2.02	2.02	2.02	1.98	2.04	2.04	2.04	2.05	2.06	2.07	2.07	P	P	P	P	P	X	2.02	2.02	S	2.03	2.04	2.04	1.98	2.07	NA		
Jul 27	2.05	2.05	2.07	2.07	2.08	2.08	2.08	2.08	2.08	S	2.06	2.06	2.05	2.05	2.05	2.05	2.06	2.06	2.06	2.06	2.06	2.06	2.07	2.13	2.05	2.13	2.07	
Jul 28	2.14	2.15	2.23	2.25	2.22	2.25	2.28	2.35	2.19	S	2.07	2.08	2.07	2.07	2.07	2.07	2.07	2.07	2.06	2.07	2.08	2.07	2.14	2.13	2.06	2.35	2.14	
Jul 29	2.10	2.11	2.13	2.24	2.40	2.36	2.32	2.16	S	2.09	2.08	2.09	2.08	2.08	2.07	2.07	2.07	2.07	2.07	2.07	2.06	2.07	2.12	2.17	2.06	2.40	2.13	
Jul 30	2.18	2.16	2.17	2.17	2.17	2.17	2.16	S	2.10	2.10	2.08	2.08	2.08	2.09	2.07	2.07	2.07	2.07	2.05	2.05	2.05	2.06	2.05	2.05	2.05	2.05	2.18	2.10
Jul 31	2.05	2.06	2.08	2.07	2.03	2.05	S	2.05	2.05	2.05	2.04	2.03	2.04	2.06	2.06	2.06	2.06	2.06	2.05	2.06	2.07	2.08	2.09	2.09	2.03	2.09	2.06	
Diurnal Maximum	2.23	2.35	2.41	2.46	2.53	2.51	2.81	2.42	2.75	2.22	2.17	2.18	2.17	2.10	2.10	2.09	2.09	2.09	2.12	2.13	2.13	2.15	2.17	2.21	2.08	2.43	2.18	
Diurnal Average	2.07	2.09	2.10	2.11	2.14	2.15	2.17	2.12	2.11	2.07	2.06	2.06	2.05	2.05	2.04	2.04	2.03	2.03	2.03	2.04	2.05	2.05	2.07	2.07	2.05	2.05	2.07	

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	In/Valid Data (Equipment Malfunction /Recovery)	NRM	Unit/Maint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

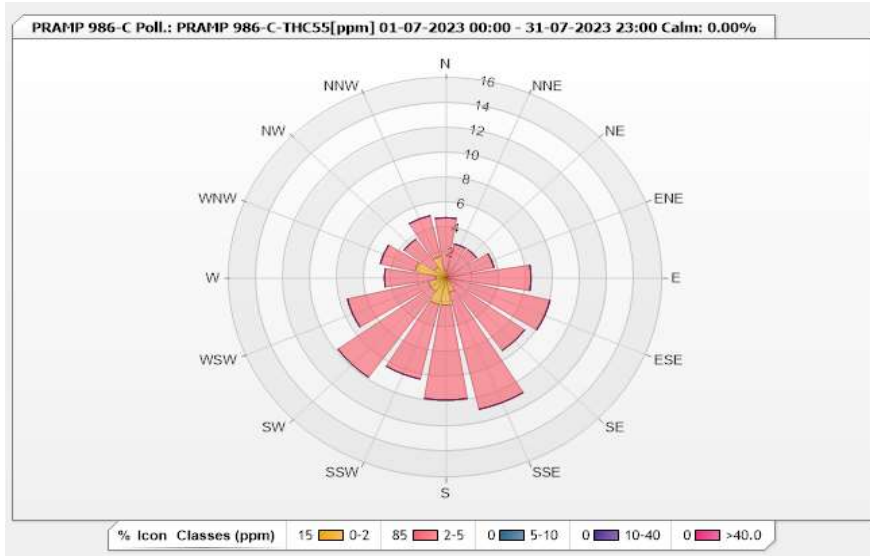


Station: PRAMP 986-C Poll.: PRAMP 986-C-THC55[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 91.94%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0.58	4.24	0	0	0	4.82
NNE	0.15	2.63	0	0	0	2.78
NE	0.15	2.63	0	0	0	2.78
ENE	0.15	3.51	0	0	0	3.66
E	0	6.29	0	0	0	6.29
ESE	0.15	7.75	0	0	0	7.9
SE	0.15	7.02	0	0	0	7.17
SSE	1.17	9.65	0	0	0	10.82
S	2.19	7.6	0	0	0	9.79
SSW	2.19	6.14	0	0	0	8.33
SW	1.32	8.48	0	0	0	9.8
WSW	1.32	6.14	0	0	0	7.46
W	0.73	3.8	0	0	0	4.53
WNW	2.34	2.63	0	0	0	4.97
NW	1.02	2.78	0	0	0	3.8
NNW	1.75	3.36	0	0	0	5.11
Summary	15.36	84.65	0	0	0	100



Peace River Area Monitoring Program

986-C Station - July 2023  
Summary of Hourly Averages

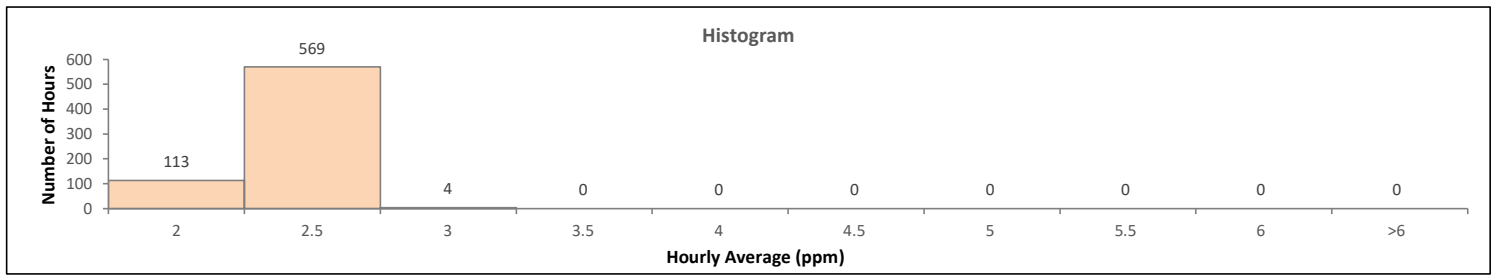
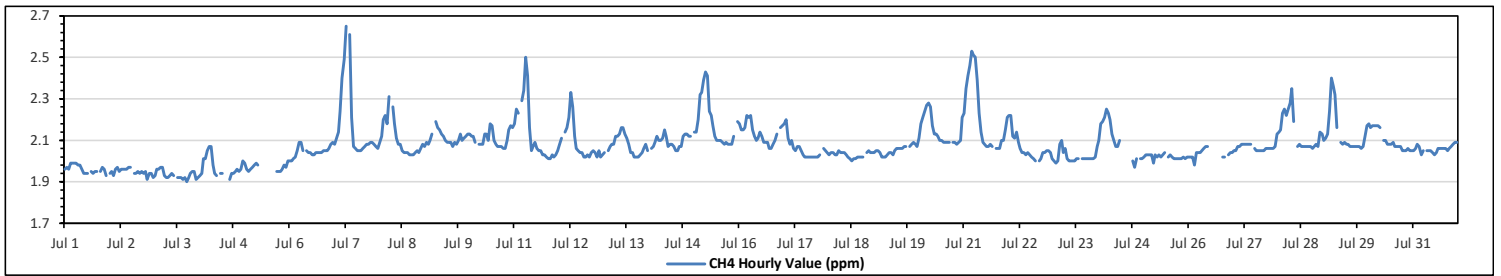
METHANE (CH4) in ppm

Maximum Hourly Value:	2.65 ppm	on Jul 7 at hr 6	Hours in Service:	744
Maximum Daily Value:	2.22 ppm	on Jul 21	Hours of Data:	686
Minimum Hourly Value:	1.90 ppm	on Jul 3 at hr 17	Hours of Missing Data:	23
Minimum Daily Value:	1.93 ppm	on Jul 3	Hours of Calibration:	35
Monthly Average:	2.07 ppm		Operational Uptime:	96.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	1.96	1.97	1.96	1.99	1.99	1.99	1.99	1.98	1.98	1.96	1.94	1.94	1.94	S	1.95	1.94	1.95	1.95	X	1.95	1.97	1.96	1.93	X	1.93	1.99	1.96	
Jul 2	1.94	1.95	1.93	1.96	1.97	1.95	1.96	1.96	1.96	1.96	1.97	1.97	S	1.94	1.94	1.95	1.94	1.95	1.94	1.95	1.91	1.94	1.94	1.92	1.91	1.97	1.95	
Jul 3	1.93	1.96	1.96	1.97	1.97	1.93	1.92	1.92	1.93	1.94	1.93	S	1.92	1.92	1.91	1.92	1.90	1.92	1.90	1.92	1.94	1.95	1.95	1.91	1.92	1.90	1.97	
Jul 4	1.93	1.94	2.01	2.01	2.05	2.07	2.07	1.98	1.94	1.93	S	1.94	1.94	P	P	P	1.91	1.94	1.94	1.95	1.96	1.95	1.96	2.00	1.91	2.07	1.97	
Jul 5	1.99	1.96	1.95	1.96	1.97	1.98	1.99	1.98	NRM	NRM	NRM	NRM	NRM	C	C	C	C	1.95	1.95	1.95	1.96	1.98	1.97	2.00	1.95	2.00	NA	
Jul 6	2.00	2.00	2.01	2.02	2.05	2.09	2.09	2.05	S	2.05	2.04	2.04	2.03	2.03	2.04	2.04	2.04	2.04	2.04	2.05	2.05	2.05	2.06	2.08	2.09	2.00	2.05	2.05
Jul 7	2.08	2.11	2.14	2.24	2.40	2.49	2.65	S	2.61	2.21	2.07	2.06	2.05	2.05	2.05	2.06	2.07	2.08	2.08	2.09	2.09	2.08	2.07	2.06	2.05	2.65	2.17	
Jul 8	2.09	2.12	2.20	2.22	2.18	2.31	S	2.26	2.18	2.11	2.08	2.08	2.05	2.04	2.04	2.04	2.03	2.03	2.03	2.04	2.05	2.04	2.06	2.08	2.03	2.31	2.10	
Jul 9	2.07	2.09	2.08	2.10	2.13	S	2.19	2.16	2.15	2.13	2.12	2.10	2.09	2.09	2.09	2.07	2.09	2.08	2.10	2.13	2.10	2.11	2.12	2.13	2.07	2.19	2.11	
Jul 10	2.13	2.12	2.12	2.09	S	2.08	2.08	2.08	2.13	2.13	2.10	2.18	2.17	2.10	2.08	2.07	2.07	2.07	2.06	2.06	2.10	2.15	2.17	2.16	2.06	2.18	2.11	
Jul 11	2.18	2.25	2.23	S	2.29	2.34	2.50	2.41	2.16	2.05	2.07	2.09	2.06	2.05	2.05	2.03	2.03	2.02	2.01	2.01	2.03	2.02	2.03	2.05	2.01	2.50	2.13	
Jul 12	2.08	2.11	S	2.14	2.16	2.21	2.33	2.26	2.12	2.06	2.05	2.04	2.04	2.02	2.02	2.03	2.02	2.04	2.05	2.04	2.02	2.05	2.02	2.03	2.02	2.33	2.08	
Jul 13	2.04	S	2.05	2.07	2.08	2.08	2.12	2.12	2.13	2.16	2.16	2.13	2.11	2.08	2.04	2.04	2.02	2.02	2.02	2.03	2.04	2.06	2.08	2.05	2.02	2.16	2.08	
Jul 14	S	2.06	2.07	2.09	2.12	2.10	2.10	2.11	2.15	2.12	2.07	2.08	2.08	2.07	2.05	2.05	2.07	2.07	2.12	2.13	2.13	2.12	2.12	S	2.05	2.15	2.09	
Jul 15	2.14	2.14	2.20	2.32	2.33	2.39	2.43	2.41	2.24	2.22	2.17	2.12	2.10	2.10	2.10	2.09	2.08	2.09	2.08	2.08	2.08	2.08	2.12	S	2.19	2.08	2.43	2.18
Jul 16	2.18	2.15	2.15	2.16	2.22	2.21	2.22	2.15	2.12	2.10	2.11	2.14	2.12	2.09	2.09	2.09	2.06	2.06	2.08	2.10	2.13	S	2.16	2.17	2.06	2.22	2.13	
Jul 17	2.18	2.20	2.11	2.08	2.10	2.06	2.05	2.07	2.07	2.05	2.03	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.03	S	2.06	2.05	2.04	2.02	2.20	2.06
Jul 18	2.03	2.04	2.04	2.03	2.03	2.05	2.04	2.04	2.04	2.03	2.02	2.01	2.00	2.01	2.02	2.02	2.02	2.02	2.02	2.02	S	2.04	2.05	2.04	2.04	2.00	2.05	2.03
Jul 19	2.04	2.05	2.05	2.04	2.02	2.02	2.02	2.03	2.04	2.04	2.03	2.05	2.06	2.06	2.06	2.06	2.07	2.07	S	2.07	2.08	2.09	2.08	2.07	2.02	2.09	2.05	
Jul 20	2.11	2.18	2.21	2.24	2.27	2.28	2.26	2.17	2.13	2.13	2.12	2.10	2.10	2.09	2.09	2.09	2.09	S	2.09	2.09	2.08	2.09	2.10	2.21	2.08	2.28	2.14	
Jul 21	2.23	2.35	2.41	2.46	2.53	2.51	2.50	2.39	2.23	2.14	2.09	2.08	2.07	2.07	2.08	2.07	S	2.06	2.06	2.10	2.10	2.15	2.21	2.06	2.53	2.22	2.14	
Jul 22	2.22	2.22	2.12	2.11	2.14	2.09	2.06	2.04	2.04	2.03	2.04	2.03	2.02	2.01	2.00	S	2.00	2.01	2.04	2.04	2.05	2.05	2.04	2.01	2.00	2.22	2.06	
Jul 23	2.00	1.99	2.00	2.08	2.10	2.04	2.06	2.01	2.00	2.00	2.00	2.00	2.01	2.01	S	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.07	1.99	2.10	2.02	
Jul 24	2.10	2.18	2.19	2.21	2.25	2.23	2.20	2.13	2.10	2.07	2.07	2.10	P	P	P	P	P	X	2.00	1.97	2.01	S	2.01	2.01	1.97	2.25	NA	
Jul 25	2.02	2.03	2.03	2.03	1.99	2.03	2.02	2.03	2.02	2.03	2.04	S	2.02	2.03	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.02	2.01	2.02	1.99	2.04	2.02
Jul 26	2.02	2.02	2.02	1.98	2.04	2.04	2.04	2.05	2.06	2.07	2.07	P	P	P	P	P	X	2.02	2.02	S	2.03	2.04	2.04	1.98	2.07	NA	2.02	
Jul 27	2.05	2.05	2.07	2.07	2.08	2.08	2.08	2.08	2.08	S	2.06	2.05	2.05	2.05	2.05	2.05	2.06	2.06	2.06	2.06	2.06	2.06	2.07	2.13	2.05	2.13	2.07	
Jul 28	2.14	2.15	2.23	2.25	2.22	2.25	2.28	2.35	2.19	S	2.07	2.08	2.07	2.07	2.07	2.07	2.07	2.07	2.06	2.07	2.08	2.07	2.14	2.13	2.06	2.35	2.14	
Jul 29	2.10	2.11	2.13	2.24	2.40	2.36	2.32	2.16	S	2.09	2.08	2.09	2.08	2.08	2.07	2.07	2.07	2.07	2.07	2.07	2.06	2.07	2.12	2.17	2.06	2.40	2.13	
Jul 30	2.18	2.16	2.17	2.17	2.17	2.17	2.16	S	2.10	2.10	2.08	2.08	2.08	2.09	2.07	2.07	2.07	2.07	2.05	2.05	2.05	2.06	2.05	2.05	2.05	2.05	2.18	2.10
Jul 31	2.05	2.06	2.08	2.07	2.03	2.05	S	2.05	2.05	2.05	2.04	2.03	2.04	2.06	2.06	2.06	2.06	2.06	2.05	2.06	2.07	2.08	2.09	2.09	2.03	2.09	2.06	
Diurnal Maximum	2.23	2.35	2.41	2.46	2.53	2.51	2.65	2.41	2.61	2.22	2.17	2.18	2.17	2.10	2.10	2.09	2.09	2.09	2.12	2.13	2.13	2.15	2.17	2.21	2.02	2.21	2.21	
Diurnal Average	2.07	2.09	2.10	2.11	2.14	2.15	2.16	2.12	2.11	2.07	2.06	2.06	2.05	2.05	2.04	2.04	2.03	2.03	2.03	2.04	2.05	2.05	2.05	2.07	2.03	2.09	2.06	

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error            **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Equipment Malfunction /Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

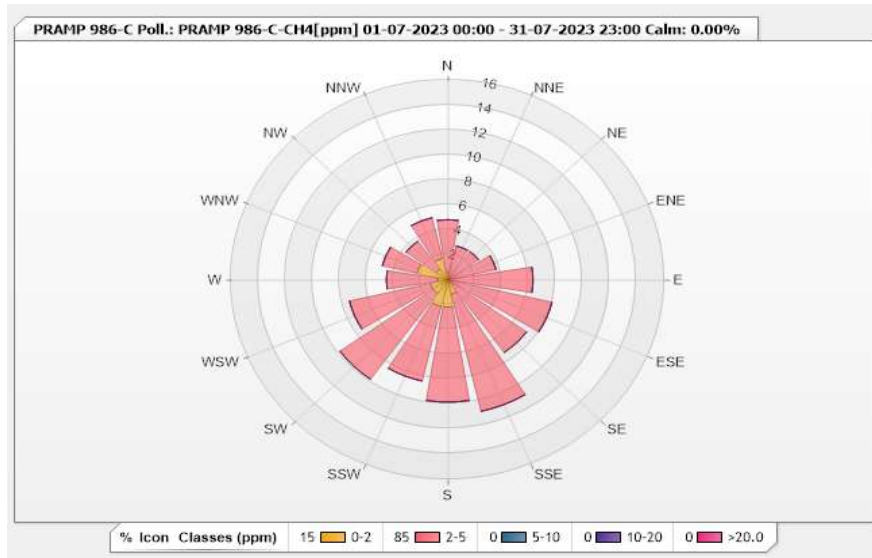


Station: PRAMP 986-C Poll.: PRAMP 986-C-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 91.94%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0.58	4.24	0	0	0	4.82
NNE	0.15	2.63	0	0	0	2.78
NE	0.15	2.63	0	0	0	2.78
ENE	0.15	3.51	0	0	0	3.66
E	0	6.29	0	0	0	6.29
ESE	0.15	7.75	0	0	0	7.9
SE	0.15	7.02	0	0	0	7.17
SSE	1.17	9.65	0	0	0	10.82
S	2.19	7.6	0	0	0	9.79
SSW	2.19	6.14	0	0	0	8.33
SW	1.32	8.48	0	0	0	9.8
WSW	1.32	6.14	0	0	0	7.46
W	0.73	3.8	0	0	0	4.53
WNW	2.34	2.63	0	0	0	4.97
NW	1.02	2.78	0	0	0	3.8
NNW	1.75	3.36	0	0	0	5.11
Summary	15.36	84.65	0	0	0	100



Peace River Area Monitoring Program

986-C Station - July 2023

Summary of Hourly Averages

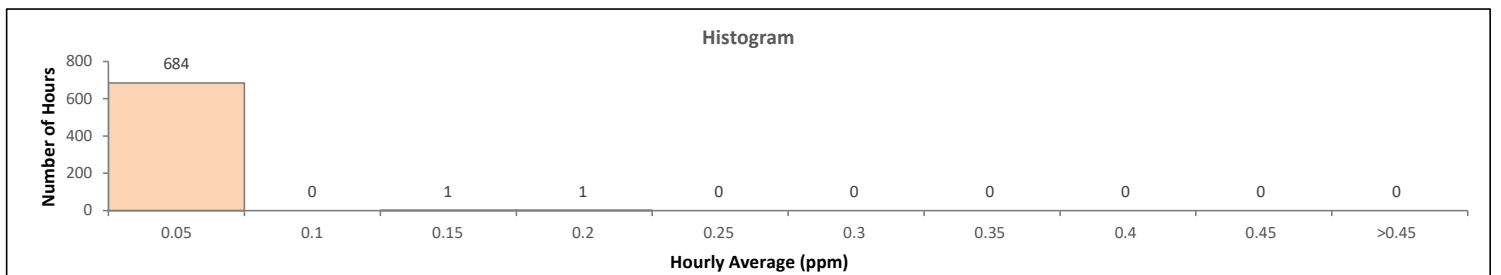
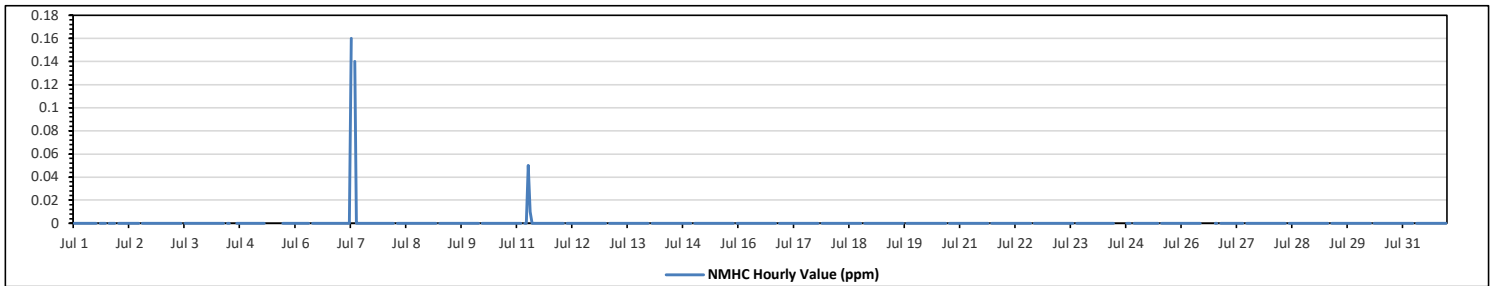
NON-METHANE HYDROCARBONS (NMHC) in ppm

Maximum Hourly Value:	0.16 ppm	on Jul 7 at hr 6	Hours in Service:	744
Maximum Daily Value:	0.01 ppm	on Jul 7	Hours of Data:	686
Minimum Hourly Value:	0.00 ppm	on Jul 1 at hr 0	Hours of Missing Data:	23
Minimum Daily Value:	0.00 ppm	on Jul 1	Hours of Calibration:	35
Monthly Average:	0.00 ppm		Operational Uptime:	96.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	X	0.00	0.00	0.00	0.00	X	0.00	0.00	0.00
Jul 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	P	P	P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NRM	NRM	NRM	NRM	NRM	C	C	C	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 7	0.00	0.00	0.00	0.00	0.00	0.00	0.16	S	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 8	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 9	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 10	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 11	0.00	0.00	0.00	S	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
Jul 12	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 13	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 14	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00
Jul 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00
Jul 16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00
Jul 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00
Jul 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	P	P	P	P	P	X	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00
Jul 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	P	P	P	P	P	X	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00
Jul 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 31	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Average	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



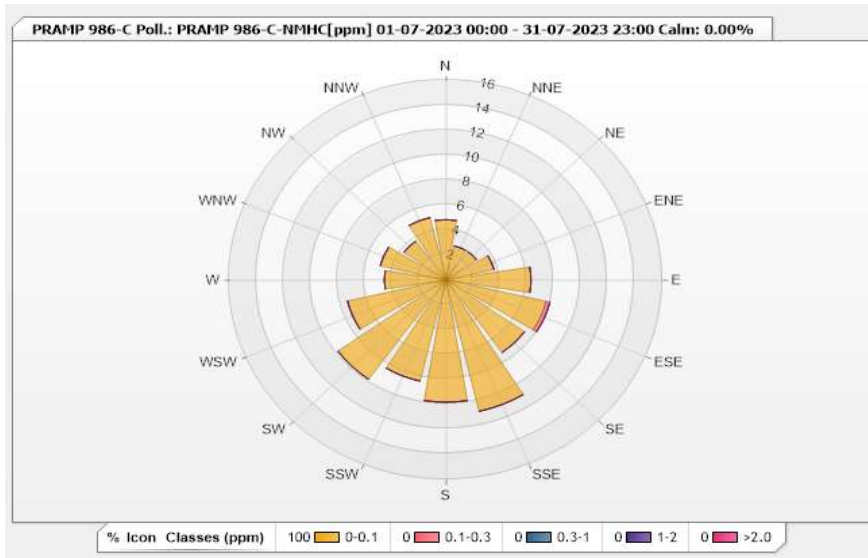


Station: PRAMP 986-C Poll.: PRAMP 986-C-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 91.94%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	4.82	0	0	0	0	4.82
NNE	2.78	0	0	0	0	2.78
NE	2.78	0	0	0	0	2.78
ENE	3.65	0	0	0	0	3.65
E	6.29	0	0	0	0	6.29
ESE	7.6	0.29	0	0	0	7.89
SE	7.16	0	0	0	0	7.16
SSE	10.82	0	0	0	0	10.82
S	9.8	0	0	0	0	9.8
SSW	8.33	0	0	0	0	8.33
SW	9.8	0	0	0	0	9.8
WSW	7.46	0	0	0	0	7.46
W	4.53	0	0	0	0	4.53
WNW	4.97	0	0	0	0	4.97
NW	3.8	0	0	0	0	3.8
NNW	5.12	0	0	0	0	5.12
Summary	100	0.29	0	0	0	100



**Peace River Area Monitoring Program**

**986-C Station - July 2023**

**Summary of Hourly Averages**

**RELATIVE HUMIDITY (RH) in %**

Maximum Hourly Value:	100 %	on Jul 3 at hr 5	Hours in Service:	744
Maximum Daily Value:	98.3 %	on Jul 25	Hours of Data:	727
Minimum Hourly Value:	25 %	on Jul 6 at hr 13	Hours of Missing Data:	17
Minimum Daily Value:	47.5 %	on Jul 7	Hours of Calibration:	0
Monthly Average:	71.5 %		Operational Uptime:	97.7

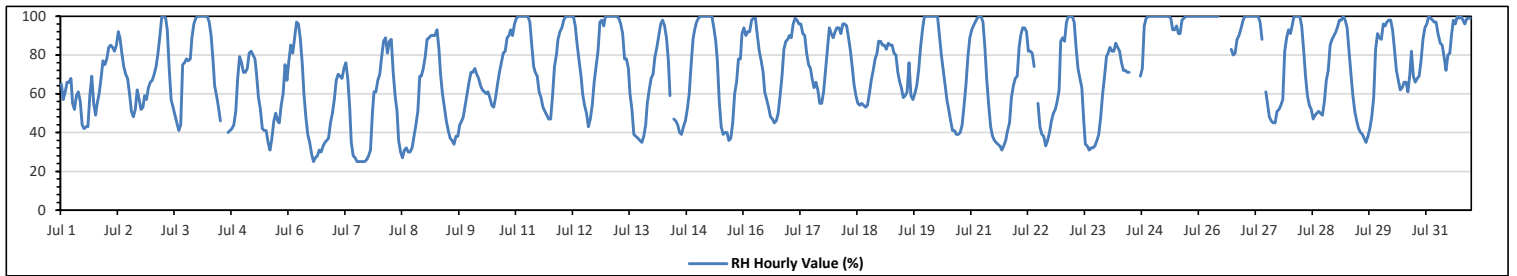
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	65	57	61	66	66	68	55	52	59	61	56	44	42	43	43	59	69	55	49	55	60	68	77	75	42	77	58.5
Jul 2	78	84	85	84	82	85	92	89	81	74	70	68	60	51	48	52	62	57	52	53	59	57	63	66	48	92	68.8
Jul 3	67	70	74	81	90	100	100	99	93	73	57	53	49	45	41	44	75	76	78	77	78	89	96	99	41	100	75.2
Jul 4	100	100	100	100	100	100	97	90	77	64	59	53	46	P	P	P	40	41	42	44	51	68	79	76	40	100	72.7
Jul 5	71	71	73	81	82	80	78	70	58	52	42	41	41	35	31	37	46	50	46	45	54	60	75	67	31	82	57.8
Jul 6	77	85	81	89	97	96	88	75	60	48	39	35	29	25	27	28	31	30	33	35	36	37	45	50	25	97	53.2
Jul 7	57	67	70	69	68	73	76	68	53	35	28	27	25	25	25	25	25	26	28	31	50	61	61	67	25	76	47.5
Jul 8	70	79	87	89	81	87	88	71	59	51	36	30	27	31	32	30	30	32	38	44	51	69	69	73	27	89	56.4
Jul 9	79	88	89	90	90	90	93	83	70	60	53	46	41	37	36	34	38	38	44	46	48	54	60	66	34	93	61.4
Jul 10	71	71	73	70	68	64	62	61	60	61	58	54	53	58	65	71	76	81	82	89	90	93	90	96	53	96	71.5
Jul 11	99	100	100	100	100	100	100	97	85	74	71	69	61	58	53	51	49	47	47	59	74	80	88	92	47	100	77.3
Jul 12	94	98	100	100	100	100	100	95	85	77	69	60	54	50	43	47	54	66	74	82	97	98	95	100	43	100	80.8
Jul 13	100	100	100	100	100	100	99	96	91	78	78	73	60	52	39	38	37	36	35	38	44	55	62	68	35	100	70.0
Jul 14	70	79	84	90	96	98	95	89	77	59	K	47	46	44	40	39	43	46	52	60	75	88	93	97	39	98	69.9
Jul 15	99	100	100	100	100	100	100	100	94	87	77	56	43	39	40	40	36	37	45	60	66	78	78	91	36	100	73.6
Jul 16	94	90	92	92	98	99	99	90	82	77	71	61	57	53	48	47	45	46	50	59	69	83	87	88	45	99	74.0
Jul 17	90	89	96	99	98	96	96	91	90	81	75	73	68	63	66	62	55	55	61	72	83	94	91	89	55	99	80.5
Jul 18	92	94	94	91	96	96	95	89	82	73	65	59	55	54	55	54	53	54	60	67	72	78	81	87	53	96	74.8
Jul 19	87	85	85	83	86	85	85	81	80	71	66	63	58	59	61	76	59	57	60	64	72	84	93	100	57	100	75.0
Jul 20	100	100	100	100	100	100	100	90	80	72	64	56	52	46	41	41	39	39	40	44	54	65	79	89	39	100	70.5
Jul 21	93	95	97	99	100	100	97	84	67	54	43	38	36	35	34	33	31	33	36	41	45	58	64	68	31	100	61.7
Jul 22	69	84	90	94	94	92	82	82	81	74	K	55	43	39	38	33	36	40	46	50	52	56	62	87	33	94	64.3
Jul 23	89	87	97	100	100	100	97	84	73	68	63	46	34	33	31	32	32	33	36	39	48	60	69	79	31	100	63.8
Jul 24	81	84	82	82	86	84	82	76	72	72	71	71	P	P	P	P	P	69	73	95	99	100	100	100	69	100	83.1
Jul 25	100	100	100	100	100	100	100	100	100	99	93	93	95	91	91	98	99	100	100	100	100	100	100	100	91	100	98.3
Jul 26	100	100	100	100	100	100	100	100	100	100	100	100	100	P	P	P	P	P	83	80	81	88	90	94	80	100	95.2
Jul 27	100	100	100	100	100	100	100	100	97	88	K	61	54	48	46	45	45	51	52	54	57	82	89	93	45	100	76.6
Jul 28	91	95	100	100	100	100	95	83	69	59	54	52	47	49	50	51	50	49	56	67	72	85	88	90	47	100	73.0
Jul 29	92	95	98	98	100	98	94	82	70	59	51	46	42	40	39	37	35	38	42	48	58	83	91	89	35	100	67.7
Jul 30	88	96	95	97	98	98	93	83	72	67	62	63	66	66	61	70	82	69	66	68	69	77	88	94	61	98	78.7
Jul 31	96	100	99	98	97	97	91	86	85	79	72	80	81	90	98	96	100	99	100	98	96	99	99	99	72	100	93.1
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	100	93	95	91	98	98	100	100	100	100	100	100	100	100	100	100	100
Diurnal Average	85.8	88.5	90.4	91.7	92.7	93.1	91.3	85.0	77.5	69.3	62.3	55.8	50.5	48.5	47.2	48.9	50.8	52.7	54.9	60.2	66.7	75.8	80.8	84.9			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



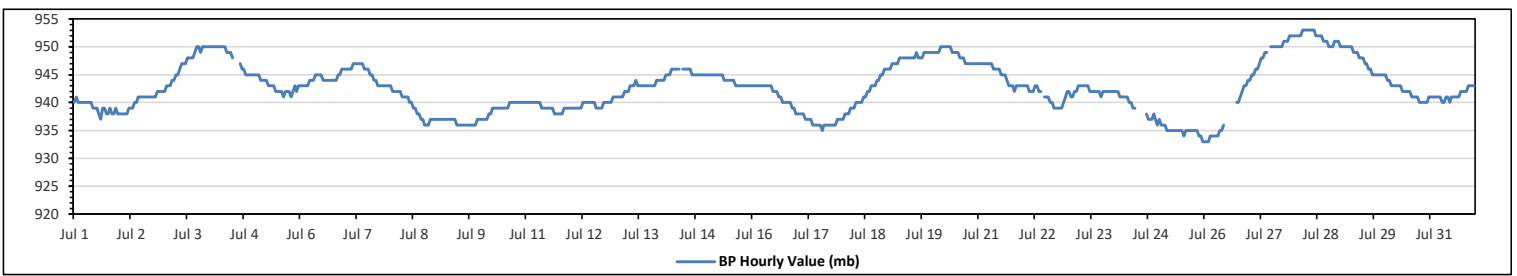
**Peace River Area Monitoring Program**  
**986-C Station - July 2023**  
**Summary of Hourly Averages**  
**BAROMETRIC PRESSURE (BP) in millibar**

Maximum Hourly Value:	953	mb	on Jul 28 at hr 4	Hours in Service:	744
Maximum Daily Value:	952	mb	on Jul 28	Hours of Data:	727
Minimum Hourly Value:	933	mb	on Jul 25 at hr 23	Hours of Missing Data:	17
Minimum Daily Value:	935	mb	on Jul 25	Hours of Calibration:	0
Monthly Average:	943	mb		Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	940	941	940	940	940	940	940	940	940	940	939	939	939	938	937	939	939	938	938	939	938	938	939	938	937	941	939	
Jul 2	938	938	938	938	938	939	939	939	940	940	941	941	941	941	941	941	941	941	941	941	942	942	942	942	942	938	942	940
Jul 3	942	943	943	943	944	944	945	945	946	947	947	947	948	948	948	948	949	950	950	949	950	950	950	950	942	950	947	
Jul 4	950	950	950	950	950	950	950	950	950	949	949	949	948	P	P	P	947	946	946	945	945	945	945	945	945	945	950	948
Jul 5	945	945	945	944	944	944	944	943	943	943	943	942	942	942	941	942	942	942	942	941	942	942	942	942	941	945	943	
Jul 6	943	943	943	943	943	944	944	944	945	945	945	945	944	944	944	944	944	944	944	944	944	944	945	945	946	946	944	
Jul 7	946	946	946	946	947	947	947	947	947	947	946	946	946	945	945	944	944	943	943	943	943	943	943	943	943	943	945	
Jul 8	943	942	942	942	942	942	941	941	941	941	940	940	939	939	938	938	937	937	936	936	936	936	936	937	937	936	939	
Jul 9	937	937	937	937	937	937	937	937	937	937	936	936	936	936	936	936	936	936	936	936	936	936	936	937	937	936	937	
Jul 10	937	937	937	937	938	938	939	939	939	939	939	939	939	939	939	939	940	940	940	940	940	940	940	940	940	937	940	
Jul 11	940	940	940	940	940	940	940	940	939	939	939	939	939	939	938	938	938	938	938	938	939	939	939	939	938	940	939	
Jul 12	939	939	939	939	939	939	940	940	940	940	940	940	939	939	939	939	939	939	940	940	940	940	940	941	941	939	941	
Jul 13	941	941	941	941	942	942	942	943	943	943	944	943	943	943	943	943	943	943	943	943	943	943	943	944	944	941	943	
Jul 14	944	944	945	945	945	946	946	946	946	K	946	946	946	946	946	945	945	945	945	945	945	945	945	945	944	946	945	
Jul 15	945	945	945	945	945	945	945	945	945	944	944	944	944	944	944	943	943	943	943	943	943	943	943	943	943	943	944	
Jul 16	943	943	943	943	943	943	943	943	943	943	943	942	942	942	941	941	940	940	940	940	940	939	939	938	938	938	942	
Jul 17	938	938	938	938	937	937	937	936	936	936	936	936	935	936	936	936	936	936	936	936	936	936	937	937	937	935	937	
Jul 18	937	938	938	938	939	939	939	940	940	940	940	941	941	942	942	943	943	943	944	944	944	945	945	946	946	937	941	
Jul 19	946	946	947	947	947	947	948	948	948	948	948	948	948	948	948	949	948	948	948	949	949	949	949	949	949	946	949	
Jul 20	949	949	949	949	950	950	950	950	950	950	949	949	949	949	948	948	948	947	947	947	947	947	947	947	947	947	949	
Jul 21	947	947	947	947	947	947	947	946	946	946	946	945	945	945	944	943	943	943	942	942	942	943	943	943	942	947	945	
Jul 22	943	943	943	942	942	942	943	943	942	942	K	941	941	941	940	940	939	939	939	939	939	940	941	942	939	943	941	
Jul 23	942	941	941	942	942	943	943	943	943	943	942	942	942	942	942	942	941	942	942	942	942	942	942	942	942	941	942	
Jul 24	942	942	942	941	941	941	941	940	940	939	939	939	P	P	P	P	P	938	937	937	937	938	937	936	936	942	939	
Jul 25	937	936	936	936	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	934	934	933	933	937	935	
Jul 26	933	933	933	934	934	934	934	934	935	935	935	P	P	P	P	P	P	940	940	941	942	943	943	944	933	944	937	
Jul 27	944	945	945	946	946	947	948	948	949	949	K	950	950	950	950	950	950	950	951	951	951	951	951	951	944	952	949	
Jul 28	952	952	952	952	953	953	953	953	953	953	953	952	952	952	952	951	951	951	950	950	950	951	951	951	950	953	952	
Jul 29	950	950	950	950	950	950	949	949	949	949	948	948	948	947	947	946	946	945	945	945	945	945	945	945	945	945	948	
Jul 30	945	944	944	943	943	943	943	943	942	942	942	942	942	941	941	941	941	940	940	940	940	940	940	940	940	940	942	
Jul 31	941	941	941	941	941	940	940	941	941	940	940	941	941	941	941	941	942	942	942	942	942	943	943	943	940	943	941	
Diurnal Maximum	952	952	952	952	953	953	953	953	953	953	952	952	952	952	951	951	951	951	951	951	951	951	952	952	952	952	952	
Diurnal Average	943	943	943	943	943	943	943	943	943	943	943	943	943	942	942	942	942	942	942	942	942	943	943	943	943	943	943	

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



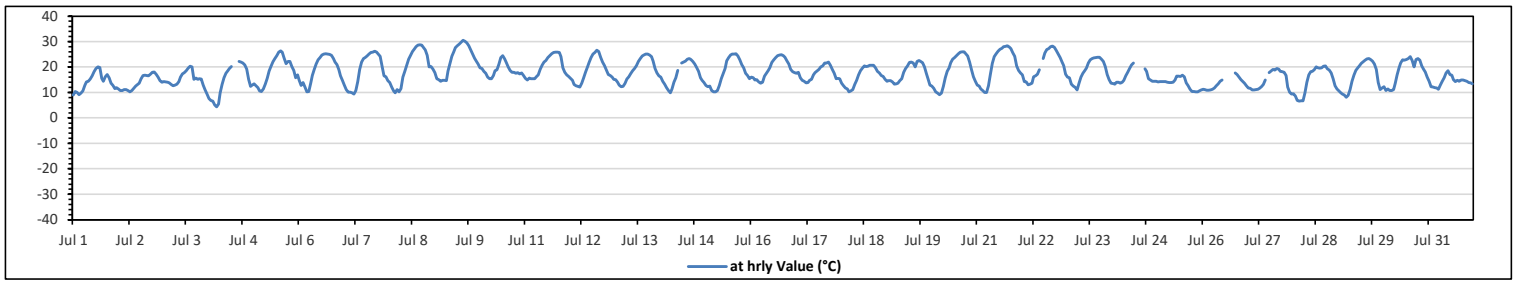
**Peace River Area Monitoring Program**  
**986-C Station - July 2023**  
**Summary of Hourly Averages**  
**AMBIENT TEMPERATURE (AT) in Degree Celsius**

Maximum Hourly Value:	30.5 °C	on Jul 9 at hr 15	Hours in Service:	744
Maximum Daily Value:	22.9 °C	on Jul 9	Hours of Data:	727
Minimum Hourly Value:	4.4 °C	on Jul 4 at hr 4	Hours of Missing Data:	17
Minimum Daily Value:	13.4 °C	on Jul 26	Hours of Calibration:	0
Monthly Average:	17.5 °C		Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	9	10.5	10	9.2	9.8	10.6	12.8	14.2	14.4	15.3	16.6	18.2	19.4	20	19.9	15.6	14.4	16.1	17.1	15.8	13.7	12.8	11.6	11.9	9.0	20.0	14.1
Jul 2	11.4	10.8	10.8	11.1	11.2	10.8	10.3	10.7	11.7	12.5	13.2	13.6	15.4	16.7	16.8	16.7	16.6	17.2	18	18.1	17.2	16	14.6	14	10.3	18.1	14.0
Jul 3	14.3	14.2	14	13.8	13.2	12.7	13	13.3	14.3	16	17.3	17.8	18.6	19.6	20.3	20.1	15.2	15.7	15.2	15.5	15.3	13	11	9.4	9.4	20.3	15.1
Jul 4	7.7	6.8	6.6	5.1	4.4	5.4	9.9	13.2	15.9	17.6	18.6	19.4	20.2	P	P	P	22.2	22	21.6	20.8	19.2	15.2	12.4	13	4.4	22.2	14.2
Jul 5	13.4	12.7	11.9	10.6	10.5	11.4	13.3	15.6	18.5	20.3	22.1	23.3	24.5	25.9	26.4	25.9	23.5	21.3	22.2	22.2	20.2	18.7	15.9	16.9	10.5	26.4	18.6
Jul 6	14.7	12.8	13.9	12.1	10.3	10.5	13.6	16.7	19	21.2	22.8	23.7	24.7	25.2	25.3	25.2	25	24.6	23.4	22	21	18.9	16.6	14.7	10.3	25.3	19.1
Jul 7	13	11.1	10.2	10.1	9.9	9.3	10.8	14.3	19.1	22	23.4	23.7	24.4	25.1	25.7	25.9	26.2	25.9	25.1	24.2	20.3	16.6	16.2	14.6	9.3	26.2	18.6
Jul 8	13.9	12.1	10.6	9.9	11.2	10.3	11.5	16	18.4	20.7	23.1	24.6	26.1	27.1	28	28.6	28.7	28.6	27.8	26.7	24.6	20	20.2	19.2	9.9	28.7	20.3
Jul 9	17.8	15.5	15.1	14.5	14.8	14.7	14.6	18.5	21.3	24.2	26	27.6	28.4	29	29.7	30.5	30.1	29.5	28.4	26.7	25.1	23.5	22.2	21.2	14.5	30.5	22.9
Jul 10	19.8	19.5	18.4	17.6	16	15.4	15.5	16.7	18.6	18.9	21.1	23.7	24.5	23.2	21.8	20	18.7	17.9	17.9	17.5	17.8	17.3	17.7	16.7	15.4	24.5	18.8
Jul 11	15.6	14.9	15.7	15.5	15.5	15.5	16.2	16.9	19	20.7	21.9	22.6	23.8	24.5	25.3	25.7	25.8	25.9	25.7	24.1	19.7	18	16.9	16.3	14.9	25.9	20.1
Jul 12	15.6	14.7	13.2	12.6	12.4	12.1	13.6	15.9	18.1	20	21.8	23.8	25.2	25.7	26.6	26.1	23.9	21.9	20.6	18.8	17.1	16.7	16	15.2	12.1	26.6	18.7
Jul 13	15	14	12.9	12.2	12.4	13.5	15.3	16.1	17.4	18.6	19.4	20.6	22.2	23.4	24.3	24.8	25.1	25.1	24.8	24.1	22.4	19.4	17.7	16.5	12.2	25.1	19.1
Jul 14	16	14.4	13.3	11.9	10.7	9.9	11.4	14.1	15.9	18.7	K	21.5	21.9	22.4	23.1	23.4	23	22.2	21.2	19.9	18.4	15.8	14.8	13.9	9.9	23.4	17.3
Jul 15	12.8	12.2	12.5	10.8	10.3	10.3	10.8	12.8	15.4	17.4	19.5	22.5	23.8	24.7	25.2	25.2	25.3	24.4	22.8	21	19.8	17.5	16.7	15.5	10.3	25.3	17.9
Jul 16	16	15.9	14.9	15	14.2	13.6	14.1	16.4	17.6	18.7	19.9	21.8	22.8	23.7	24.5	24.8	24.9	24.5	23.9	22.5	21.2	19	18.2	17.8	13.6	24.9	19.4
Jul 17	17.5	17.9	15.8	14.7	14.4	13.8	13.9	14.7	15.2	16.9	17.8	18.5	19.1	20.1	20.4	21.5	21.6	21.9	20.7	19	17.6	15.5	15.6	15.4	13.8	21.9	17.5
Jul 18	13.7	12.6	11.8	11.4	10.3	10.6	11.1	13.2	14.8	16.9	18.6	19.6	20.4	20.2	20.3	20.7	20.7	20.7	19.8	18.4	17.7	16.7	16.3	15.2	10.3	20.7	16.3
Jul 19	14.5	14.6	14.6	14.2	13.3	13.4	13.7	14.6	15.4	18	19.4	20.4	21.8	21.9	21.5	20.1	22.3	22.6	22.2	21.7	20.1	17.4	15.4	12.9	12.9	22.6	17.8
Jul 20	12.5	11.7	10.3	9.8	9.2	9.8	12.4	15.9	18.3	19.7	21.7	23.1	23.8	24.5	25.3	25.8	26	26	25.3	24.4	21.9	18.9	16.2	14.4	9.2	26.0	18.6
Jul 21	13	12.5	11.4	10.7	10	10	12.6	17.2	21.4	24	25.3	26.2	27	27.4	28	28.1	28.4	27.9	27.3	25.6	24.2	20.5	18.7	17.7	10.0	28.4	20.6
Jul 22	16.9	14.3	14.2	13.1	13.3	13.7	16.1	16.6	17.2	18.9	K	23.4	25.5	26.8	27.2	28	28.2	27.8	26.5	25.2	23.8	22	20.6	17.2	13.1	28.2	20.7
Jul 23	16	15.8	13.3	12.5	12	11	13.7	16	17.6	18.5	19.6	21.6	22.8	23.4	23.6	23.7	23.9	23.9	23.1	22.2	20.2	17.1	15.1	13.6	11.0	23.9	18.3
Jul 24	13.5	13.3	14	14	13.6	14	14.8	16.5	18	19.5	20.9	21.6	P	P	P	P	P	19.3	18.4	15.5	14.9	14.5	14.4	14.4	13.3	21.6	16.1
Jul 25	14.2	14.3	14.3	14.3	14.3	14	13.9	13.9	14.1	14.9	16.4	16.4	16.3	16.8	16.2	13.8	12.7	11.3	10.5	10.4	10.3	10.3	10.6	11	10.3	16.8	13.6
Jul 26	11.3	11.1	10.9	10.9	11	11.3	11.8	12.6	13.4	14.4	14.9	P	P	P	P	P	P	17.7	17.1	16	15.1	14.4	13.7	12.7	10.9	17.7	13.4
Jul 27	11.8	11.7	11	11	11.1	11.3	11.7	12.2	13.2	14.9	K	17.8	18.5	19.1	18.8	19.4	19.2	18.4	18.2	17.9	16.7	12.1	10.2	9.4	9.4	19.4	14.6
Jul 28	9.5	8.7	6.9	6.6	6.7	6.7	9.9	14	16.9	18.2	18.4	18.9	20.1	19.8	19.6	19.8	20.3	20.4	19.3	18.8	17.7	15.5	12.6	11.4	6.6	20.4	14.9
Jul 29	10.6	9.9	9.3	9.1	8.1	8.9	11.2	14.5	16.8	18.7	19.8	20.5	21.4	22.1	22.7	23.2	23.3	22.9	22.4	21.2	19	13.9	11.2	11.8	8.1	23.3	16.4
Jul 30	12.2	10.7	11.4	10.7	10.7	11.2	13.5	16.9	19.8	21.5	22.8	22.7	22.9	23.4	24.1	22.6	20.1	23	23.4	22.7	20.4	19.1	18.1	16	10.7	24.1	18.3
Jul 31	14.4	12.3	12.1	11.9	11.8	11.3	13	14.4	15.8	17.7	18.6	17.1	16.8	15.1	14.3	14.8	14.5	14.9	14.9	14.6	14.4	13.9	13.8	13.4	11.3	18.6	14.4
Diurnal Maximum	19.8	19.5	18.4	17.6	16.0	15.5	16.2	18.5	21.4	24.2	26.0	27.6	28.4	29.0	29.7	30.5	30.1	29.5	28.4	26.7	25.1	23.5	22.2	21.2			
Diurnal Average	13.8	13.0	12.4	11.8	11.5	11.5	12.9	15.0	16.9	18.6	20.0	21.2	22.1	22.7	23.0	22.9	22.4	22.0	21.4	20.4	18.9	16.8	15.5	14.6			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**

**986-C Station - July 2023**

**Summary of Hourly Averages**

**STATION TEMPERATURE (ST) in Degree Celsius**

Maximum Hourly Value:	24.3	°C	on Jul 4 at hr 22	Hours in Service:	744
Maximum Daily Value:	23.6	°C	on Jul 5	Hours of Data:	730
Minimum Hourly Value:	22.3	°C	on Jul 6 at hr 2	Hours of Missing Data:	14
Minimum Daily Value:	22.8	°C	on Jul 6	Hours of Calibration:	0
Monthly Average:	23.1	°C		Operational Uptime:	98.1

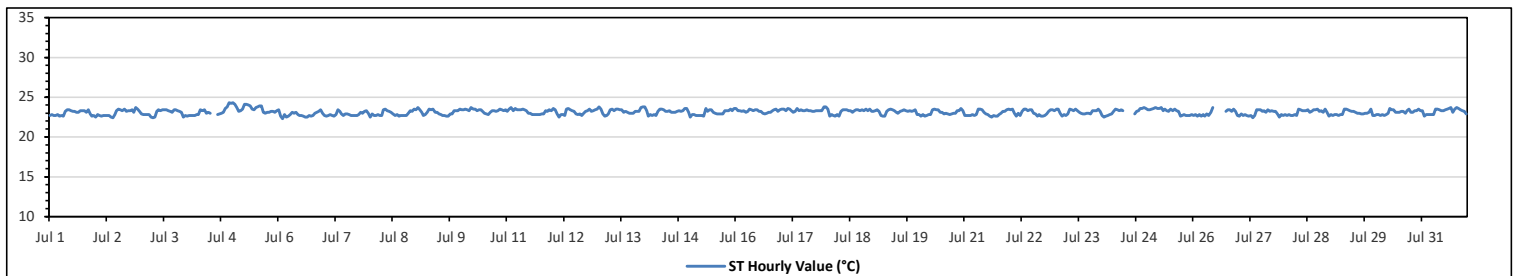
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	22.7	22.8	22.7	22.7	22.8	22.6	22.7	22.6	23.2	23.4	23.4	23.3	23.2	23.2	23.1	23.1	23.3	23.3	23.3	23.1	23.4	22.9	22.6	22.7	22.6	23.4	23.0	
Jul 2	22.5	22.8	22.7	22.6	22.7	22.7	22.7	22.7	22.5	22.4	22.8	23.3	23.5	23.4	23.3	23.5	23.2	23.3	23.3	23.4	23.1	23.7	23.5	23.2	22.4	23.7	23.0	
Jul 3	22.9	22.8	22.8	22.8	22.8	22.5	22.4	22.5	23.2	23.4	23.3	23.4	23.4	23.4	23.3	23.2	23.1	23.4	23.4	23.3	23.2	23.1	22.5	22.7	22.4	23.4	23.0	
Jul 4	22.6	22.7	22.7	22.7	22.7	22.8	22.8	23.4	23.3	23.4	23.0	23.1	23.0	P	P	P	22.8	22.9	23.0	23.1	23.6	23.8	24.3	24.2	22.6	24.3	23.1	
Jul 5	24.3	24.1	23.7	23.2	23.3	23.5	24.1	24.1	24.0	23.9	23.5	23.4	23.7	23.8	23.9	23.9	23.1	23.0	23.1	23.1	23.2	23.2	23.1	23.3	23.0	24.3	23.6	
Jul 6	23.4	22.6	22.3	22.8	22.5	22.6	22.8	23.1	23.0	23.1	22.8	22.7	22.7	22.6	22.5	22.5	22.7	22.6	22.7	23.0	23.1	23.2	23.4	23.0	22.3	23.4	22.8	
Jul 7	22.7	22.6	22.7	22.8	22.7	22.6	22.8	23.4	23.2	22.9	22.7	22.9	22.9	22.8	22.7	22.7	22.7	22.7	22.8	23.1	23.0	23.2	23.3	23.0	22.6	23.4	22.9	
Jul 8	22.5	22.9	22.7	22.7	22.8	22.7	22.7	23.4	23.5	23.3	23.2	23.1	22.9	22.7	22.8	22.6	22.7	22.7	22.7	22.7	23.0	23.3	23.2	23.5	22.5	23.5	22.9	
Jul 9	23.4	23.7	23.4	23.1	22.7	22.8	23.1	23.5	23.4	23.5	23.1	23.1	22.9	22.8	22.7	22.7	22.6	22.6	22.9	22.9	23.3	23.3	23.3	23.5	22.6	23.7	23.1	
Jul 10	23.4	23.4	23.5	23.4	23.3	23.7	23.5	23.5	23.3	23.4	23.4	23.2	23.0	22.9	22.8	23.1	23.3	23.3	23.2	23.3	23.5	23.4	23.3	23.4	22.8	23.7	23.3	
Jul 11	23.2	23.5	23.7	23.3	23.6	23.4	23.4	23.4	23.5	23.4	23.3	23.0	23.0	22.8	22.8	22.8	22.8	22.8	22.9	22.9	23.3	23.2	23.4	23.3	22.8	23.7	23.2	
Jul 12	23.6	23.4	22.9	22.5	22.8	22.8	22.7	23.5	23.6	23.4	23.3	23.2	22.9	22.8	22.9	22.7	23.0	23.2	23.3	23.5	23.2	23.3	23.4	23.5	22.5	23.6	23.1	
Jul 13	23.8	23.5	22.9	22.6	22.7	22.9	23.4	23.5	23.3	23.5	23.5	23.4	23.4	23.1	23.2	23.1	23.0	23.0	23.0	23.2	23.2	23.2	23.7	23.8	22.6	23.8	23.2	
Jul 14	23.8	23.3	22.6	22.8	22.7	22.8	22.7	23.2	23.5	23.5	23.4	23.2	23.2	23.3	23.1	23.1	23.1	23.2	23.3	23.2	23.3	23.6	23.6	23.1	22.6	23.8	23.2	
Jul 15	22.5	22.8	22.8	22.7	22.7	22.7	22.7	22.6	23.6	23.2	23.4	23.4	23.1	23.0	22.9	22.9	22.9	22.9	23.3	23.3	23.3	23.5	23.3	23.6	22.5	23.6	23.0	
Jul 16	23.6	23.3	23.3	23.2	23.3	23.1	23.2	23.5	23.4	23.3	23.4	23.4	23.2	23.2	23.0	22.9	23.0	23.1	23.1	23.3	23.4	23.5	23.2	23.4	22.9	23.6	23.3	
Jul 17	23.5	23.5	23.3	23.6	23.5	23.3	23.1	23.2	23.6	23.3	23.4	23.3	23.3	23.4	23.3	23.3	23.2	23.2	23.3	23.3	23.3	23.3	23.8	23.8	23.1	23.8	23.4	
Jul 18	23.5	22.6	22.8	22.7	22.6	22.8	22.6	23.2	23.4	23.4	23.4	23.3	23.3	23.1	23.3	23.4	23.4	23.3	23.4	23.3	23.4	23.5	23.3	23.5	23.2	22.6	23.5	23.2
Jul 19	23.2	23.3	23.4	23.2	22.7	22.6	22.6	23.2	23.4	23.5	23.4	23.3	23.1	23.0	23.2	23.3	23.4	23.3	23.2	23.3	23.2	23.3	23.4	22.8	22.6	23.5	23.2	
Jul 20	22.8	22.6	22.8	22.6	22.7	22.8	22.8	23.4	23.5	23.4	23.4	23.1	23.1	22.9	23.0	22.9	22.8	22.9	23.0	23.0	23.3	23.3	23.6	23.3	22.6	23.6	23.0	
Jul 21	22.7	22.7	22.7	22.7	22.8	22.7	22.8	23.5	23.5	23.4	23.1	22.9	22.8	22.6	22.5	22.7	22.6	22.6	22.8	23.0	23.2	23.2	23.4	23.5	22.5	23.5	22.9	
Jul 22	23.4	23.5	23.0	22.6	23.0	22.7	23.2	23.5	23.5	23.3	23.4	23.4	23.0	22.9	22.6	22.8	22.6	22.6	22.7	22.9	23.2	23.4	23.4	23.3	22.6	23.5	23.1	
Jul 23	23.5	23.5	23.0	22.6	22.8	22.7	22.9	23.5	23.4	23.3	23.5	23.3	23.1	23.0	22.9	22.9	23.0	23.0	22.9	23.3	23.3	23.3	23.5	23.2	22.6	23.5	23.1	
Jul 24	22.7	22.5	22.6	22.7	22.8	22.9	23.2	23.5	23.4	23.3	23.4	23.3	P	P	P	P	P	22.9	23.2	23.3	23.6	23.6	23.7	22.5	23.7	23.2		
Jul 25	23.4	23.4	23.5	23.6	23.7	23.6	23.6	23.7	23.3	23.5	23.3	23.2	23.5	23.3	23.5	23.3	23.2	22.6	22.7	22.8	22.7	22.7	22.7	22.8	22.6	23.7	23.2	
Jul 26	22.7	22.8	22.6	22.8	22.6	22.8	22.6	22.9	22.7	23.1	23.7	P	P	P	P	P	P	23.2	23.4	23.4	23.2	23.5	23.2	22.7	22.6	23.7	23.0	
Jul 27	22.6	22.9	22.7	22.8	22.7	22.6	22.7	22.4	22.7	23.4	23.4	23.4	23.2	23.3	23.1	23.4	23.2	23.3	23.2	23.2	22.9	22.5	22.8	22.7	22.4	23.4	23.0	
Jul 28	22.8	22.7	22.8	22.7	22.7	22.8	22.7	23.5	23.4	23.3	23.3	23.3	23.4	23.1	23.2	23.4	23.4	23.5	23.2	23.3	23.1	23.5	23.1	22.6	22.6	23.5	23.1	
Jul 29	22.8	22.7	22.8	22.8	22.7	22.8	22.8	23.5	23.5	23.4	23.3	23.2	23.2	23.1	23.0	23.0	22.9	23.0	23.0	23.1	23.1	23.5	22.7	22.7	22.7	23.5	23.0	
Jul 30	22.8	22.8	22.7	22.8	22.7	22.8	23.0	23.6	23.4	23.4	23.1	23.1	23.1	23.2	23.2	23.0	23.3	23.5	23.1	23.1	23.3	23.3	23.5	23.3	22.7	23.6	23.1	
Jul 31	23.3	22.6	22.8	22.8	22.8	22.8	22.8	23.5	23.5	23.4	23.3	23.3	23.4	23.5	23.6	23.7	23.1	23.5	23.7	23.6	23.4	23.3	23.2	22.9	22.6	23.7	23.2	
Diurnal Maximum	24.3	24.1	23.7	23.6	23.7	23.7	24.1	24.1	24.0	23.9	23.7	23.4	23.7	23.8	23.9	23.9	23.4	23.5	23.7	23.6	23.6	23.8	24.3	24.2				
Diurnal Average	23.1	23.0	22.9	22.9	22.9	22.9	23.3	23.3	23.3	23.3	23.3	23.2	23.2	23.1	23.1	23.1	23.0	23.0	23.1	23.2	23.2	23.3	23.3	23.2				

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>ND</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**

**986-C Station - July 2023  
Summary of Hourly Averages**

**PRECIPITATION in mm**

Maximum Hourly Value:	7.3 mm	on Jul 24 at hr 22	Hours in Service:	744
Maximum Daily Value:	12.6 mm	on Jul 25	Hours of Data:	730
Minimum Hourly Value:	0.0 mm	on Jul 1 at hr 0	Hours of Missing Data:	14
Minimum Daily Value:	0.0 mm	on Jul 1	Hours of Calibration:	0
Monthly Total:	37.1 mm		Operational Uptime:	98.1

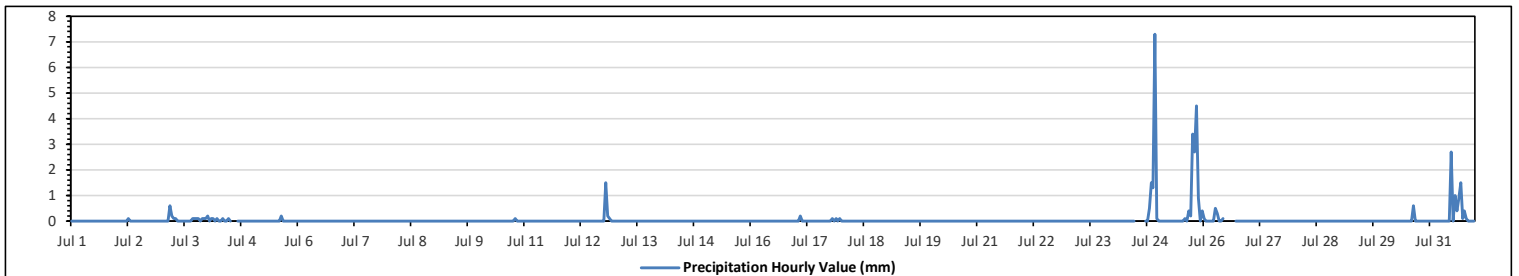
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Total		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 2	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1	
Jul 3	0	0	0	0	0.6	0.2	0.1	0.1	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.0	0.6	1.7	
Jul 4	0.2	0	0.1	0.1	0	0.1	0	0	0.1	0	0	0.1	0	P	P	P	0.2	0	0	0	0	0	0	0	0.0	0.2	0.7	
Jul 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.2	
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1	
Jul 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	1.5	1.8	
Jul 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 17	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.5	
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	0	0	0.5	1.5	1.3	7.3	0.1	7.3	10.7	
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.4	0.2	3.4	2.7	4.5	0.9	0	0.4	0.0	4.5	12.6
Jul 26	0.1	0	0	0	0	0	0.5	0.3	0	0	0	0.1	P	P	P	P	P	P	0	0	0	0	0	0	0.0	0.5	1.0	
Jul 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0.0	0.6	0.6	
Jul 31	0	0	0	0	0	0	0	0	0	0	0	2.7	0	1	0.4	0.9	1.5	0.1	0.4	0.1	0	0	0	0	0.0	2.7	7.1	
Diurnal Maximum	0.2	0.0	0.2	0.1	0.6	0.2	0.5	0.3	0.1	0.0	0.1	2.7	0.0	1.0	0.4	0.9	1.5	0.2	3.4	2.7	4.5	1.3	7.3	0.4				
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.2	0.0				

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



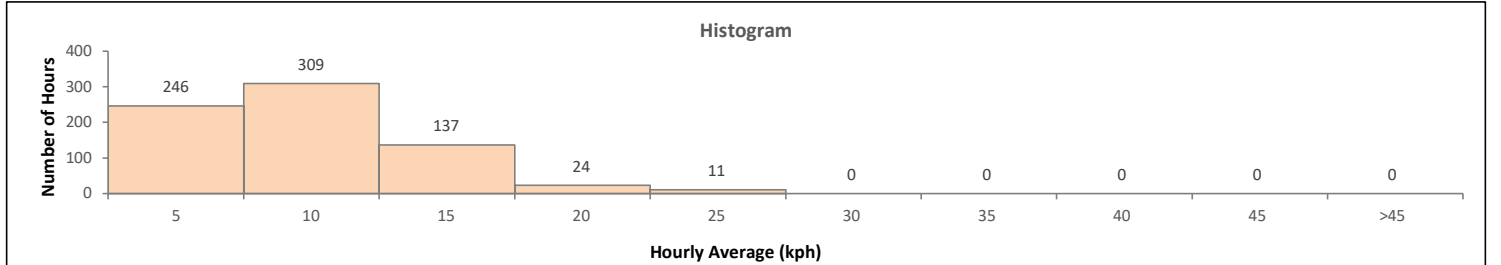
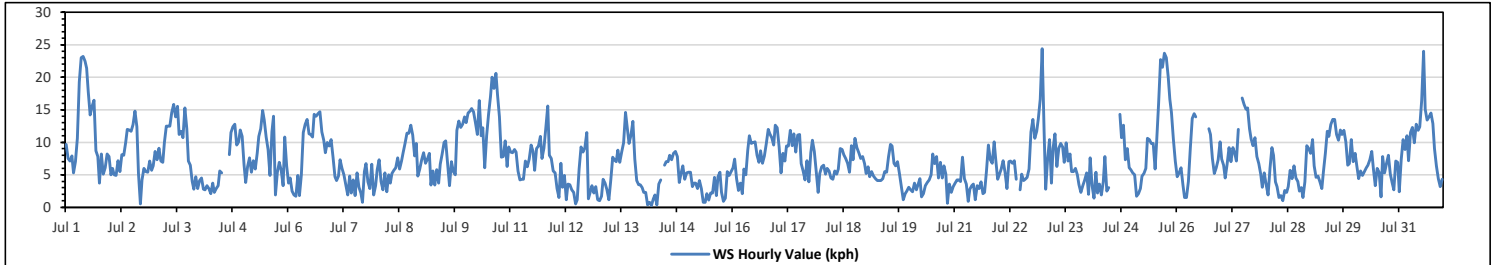
**Peace River Area Monitoring Program**  
**986-C Station - July 2023**  
**Summary of Hourly Averages**  
**VECTOR WIND SPEED (VWS) in km/hr**

Maximum Hourly Value:	24.4 kph	on Jul 22 at hr 23	Hours in Service:	744
Maximum Daily Value:	13.2 kph	on Jul 10	Hours of Data:	727
Minimum Hourly Value:	0.3 kph	on Jul 14 at hr 4	Hours of Missing Data:	17
Minimum Daily Value:	3.2 kph	on Jul 15	Hours of Calibration:	0
Monthly Average:	1.9 kph		Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	9.7	7.5	7.1	7.9	5.3	7.0	10.6	19.3	23.0	23.2	22.5	21.4	17.8	14.2	15.5	16.5	8.7	7.8	3.7	8.2	5.1	6.1	8.2	7.8	3.7	23.2	11.8
Jul 2	5.0	6.0	5.0	4.9	7.2	5.5	8.1	8.0	10.0	12.0	11.9	11.7	12.7	14.8	12.4	5.2	0.5	4.2	6.0	5.5	5.4	7.1	5.7	6.4	0.5	14.8	7.6
Jul 3	8.6	7.3	9.1	7.1	6.9	10.0	12.5	12.5	14.6	15.8	13.9	15.5	11.2	11.7	10.7	15.3	12.1	7.1	6.5	4.0	2.8	4.7	2.9	2.8	15.8	9.8	
Jul 4	4.1	4.5	2.8	2.7	3.3	2.9	2.1	3.7	2.3	2.9	3.3	5.6	5.3	P	P	P	8.1	11.5	12.4	12.8	9.6	10.1	11.9	10.9	2.1	12.8	6.3
Jul 5	6.5	3.8	6.3	7.6	5.4	7.2	5.9	8.3	10.9	12.1	14.9	13.4	10.8	8.9	4.9	11.6	14.0	1.9	5.4	6.9	5.7	3.3	10.8	6.4	1.9	14.9	8.0
Jul 6	3.7	4.5	2.5	1.9	1.7	4.9	1.8	5.0	11.5	12.8	13.5	11.3	11.2	10.8	14.3	14.0	14.4	14.7	11.6	10.3	8.4	10.0	9.4	10.4	1.7	14.7	8.9
Jul 7	7.7	4.7	4.1	4.8	7.3	6.0	5.0	3.4	1.9	4.8	2.2	4.2	1.8	5.3	3.1	2.2	0.8	5.5	6.7	3.9	2.9	6.6	1.9	3.3	0.8	7.7	4.2
Jul 8	5.8	7.3	4.0	2.7	5.3	2.4	5.0	3.7	5.2	5.7	6.1	7.6	5.9	7.1	8.4	9.8	11.4	11.4	12.6	11.1	7.9	9.8	4.8	5.9	2.4	12.6	7.0
Jul 9	7.3	8.4	6.8	7.4	8.3	3.4	5.6	3.4	5.8	3.7	6.6	8.2	10.0	10.2	6.7	3.3	7.0	5.5	5.0	11.8	13.3	12.3	12.8	13.9	3.3	13.9	7.8
Jul 10	13.0	14.5	14.8	15.2	14.7	13.0	11.2	16.4	11.0	12.2	6.1	11.0	14.3	17.0	20.0	18.3	20.6	17.3	13.9	7.7	7.8	10.2	6.3	9.3	6.1	20.6	13.2
Jul 11	8.5	8.4	8.9	8.5	5.6	4.2	4.3	4.3	7.1	6.2	7.4	9.6	8.6	5.7	9.0	9.4	10.9	7.5	9.1	12.2	15.6	8.0	7.5	5.6	4.2	15.6	8.0
Jul 12	5.3	2.9	1.5	6.8	3.1	4.9	1.2	3.6	3.5	2.7	2.3	0.5	1.2	5.9	9.3	8.5	9.2	11.5	1.3	2.4	3.3	2.2	3.2	1.2	0.5	11.5	4.1
Jul 13	1.0	1.7	4.3	3.7	2.7	1.2	4.2	7.7	7.3	7.0	8.8	6.9	8.5	9.9	14.6	12.0	9.8	11.1	13.2	7.4	4.1	3.5	3.5	3.0	1.0	14.6	6.5
Jul 14	2.3	2.3	0.4	0.8	0.3	1.3	1.9	0.4	3.6	4.2	K	6.5	7.0	7.0	8.0	7.3	8.3	8.6	7.8	3.8	5.1	6.4	4.3	5.3	0.3	8.6	4.5
Jul 15	5.4	5.4	3.2	3.7	3.7	2.9	4.1	2.9	0.8	0.8	2.1	1.1	2.2	2.2	4.6	1.8	4.7	5.4	2.3	0.9	1.4	5.5	4.9	5.5	0.8	5.5	3.2
Jul 16	6.1	7.4	4.4	2.6	3.7	2.1	5.9	5.0	8.8	11.0	9.8	10.0	10.1	8.0	6.9	8.7	6.8	7.9	9.8	12.0	11.3	10.7	9.6	12.6	2.1	12.6	8.0
Jul 17	12.2	9.3	5.3	8.3	7.1	9.4	9.4	11.8	9.5	11.3	8.5	11.1	11.2	6.7	5.6	4.2	7.2	3.9	8.4	10.3	8.6	5.5	2.3	5.2	2.3	12.2	8.0
Jul 18	6.2	6.5	5.1	6.0	5.6	4.5	4.3	5.6	5.1	5.9	9.0	8.9	8.1	7.5	6.8	5.4	9.5	7.3	10.6	9.2	8.4	7.5	7.8	6.7	4.3	10.6	7.0
Jul 19	5.2	6.2	4.7	5.5	4.8	4.4	4.1	4.1	4.1	4.4	5.5	5.4	7.8	9.7	9.4	6.8	6.4	7.0	5.2	3.2	1.2	2.1	2.5	3.1	1.2	9.7	5.1
Jul 20	2.7	2.4	3.7	2.7	3.5	4.4	1.6	2.1	3.3	3.8	4.2	5.0	8.2	6.7	7.8	4.5	6.9	4.5	6.4	5.1	0.6	3.6	2.3	3.2	0.6	8.2	4.1
Jul 21	3.7	4.2	4.2	4.0	7.7	4.4	3.6	0.9	2.8	3.3	3.6	1.2	3.3	2.9	3.9	2.1	2.3	5.6	9.6	7.3	6.8	10.1	7.3	4.3	0.9	10.1	4.5
Jul 22	5.0	5.9	7.2	5.4	2.9	7.0	7.1	6.8	7.2	4.3	K	2.7	5.1	4.1	4.3	4.6	5.9	11.6	13.5	10.6	11.7	13.6	16.6	24.4	2.7	24.4	8.2
Jul 23	11.8	2.8	7.4	10.4	3.7	9.0	11.3	6.3	9.1	9.8	9.3	6.9	9.9	7.1	8.2	5.5	5.5	6.0	5.0	3.5	2.3	3.3	4.2	5.3	2.3	11.8	6.8
Jul 24	2.0	7.6	3.3	1.4	5.4	2.2	3.6	1.9	3.9	7.8	2.5	3.0	P	P	P	P	P	14.3	10.7	12.6	7.3	9.0	6.1	5.8	1.4	14.3	5.8
Jul 25	5.3	5.0	1.7	2.1	2.9	4.8	5.2	6.0	10.6	10.4	9.8	9.8	5.9	10.3	16.1	22.7	21.5	23.7	23.0	20.0	16.6	14.6	10.5	7.1	1.7	23.7	11.1
Jul 26	4.7	5.3	6.1	3.4	1.5	1.5	4.0	9.1	13.7	14.4	13.9	P	P	P	P	P	P	12.1	11.2	7.5	5.2	6.1	7.3	10.1	1.5	14.4	7.6
Jul 27	7.4	6.5	4.5	6.6	9.2	7.0	9.2	8.3	7.1	12.0	K	16.8	15.8	15.1	15.3	12.1	10.5	9.5	10.7	7.8	6.7	5.1	3.1	5.3	3.1	16.8	9.2
Jul 28	3.5	1.9	6.0	9.2	8.0	3.9	3.2	1.5	1.8	1.0	2.6	2.3	3.2	5.7	4.4	6.4	4.5	4.0	2.5	3.0	1.5	3.9	9.5	9.0	1.0	9.5	4.3
Jul 29	8.3	10.4	6.4	4.6	4.8	3.9	2.9	5.5	8.3	11.7	10.9	12.7	13.5	13.5	11.2	10.3	11.9	11.2	11.8	10.1	6.5	6.7	10.4	7.0	2.9	13.5	8.9
Jul 30	8.3	6.5	4.4	5.6	4.9	5.5	6.1	6.5	7.3	8.6	6.0	3.3	6.0	5.4	1.6	7.8	5.3	6.7	8.0	5.1	3.7	2.7	7.1	6.9	1.6	8.6	5.8
Jul 31	2.4	7.3	10.4	8.9	11.0	7.2	11.5	12.3	9.9	12.8	11.8	12.4	16.4	24.0	15.1	13.4	13.9	14.5	12.9	9.0	6.4	4.4	3.2	4.3	2.4	24.0	10.6
Diurnal Maximum	13.0	14.5	14.8	15.2	14.7	13.0	12.5	19.3	23.0	23.2	22.5	21.4	17.8	14.0	20.0	22.7	21.5	23.7	23.0	20.0	16.6	14.6	16.6	24.4			
Diurnal Average	6.1	5.9	5.3	5.6	5.4	5.1	5.7	6.3	7.4	8.3	8.2	8.1	8.9	9.2	9.3	8.8	9.0	9.2	8.9	8.0	6.6	6.9	6.8	7.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

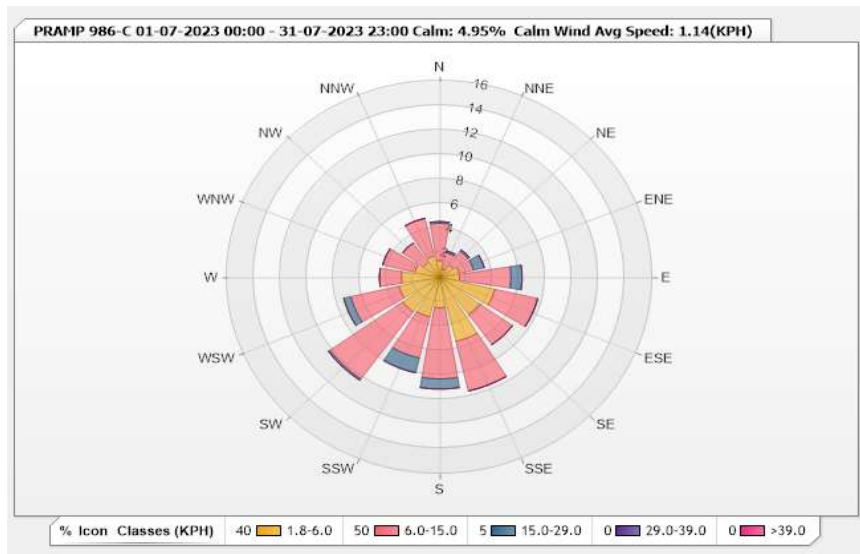


Station: PRAMP 986-C Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 4.95%      Valid Data: 97.72%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.38	3.03	0.14	0	0	4.55
NNE	0.69	1.38	0.14	0	0	2.21
NE	1.24	1.38	0.14	0	0	2.76
ENE	1.51	1.1	0.83	0	0	3.44
E	1.51	3.85	0.83	0	0	6.19
ESE	4.26	3.3	0	0	0	7.56
SE	3.71	3.03	0	0	0	6.74
SSE	5.36	4.13	0	0	0	9.49
S	2.48	5.78	0.83	0	0	9.09
SSW	3.3	3.44	1.24	0	0	7.98
SW	3.44	6.74	0.14	0	0	10.32
WSW	3.16	3.71	0.55	0	0	7.42
W	2.89	1.65	0	0	0	4.54
WNW	1.93	2.48	0	0	0	4.41
NW	1.51	1.93	0	0	0	3.44
NNW	1.79	3.16	0	0	0	4.95
Summary	40.16	50.09	4.84	0	0	95.09





Peace River Area Monitoring Program

986-C Station - July 2023

Summary of Hourly Averages

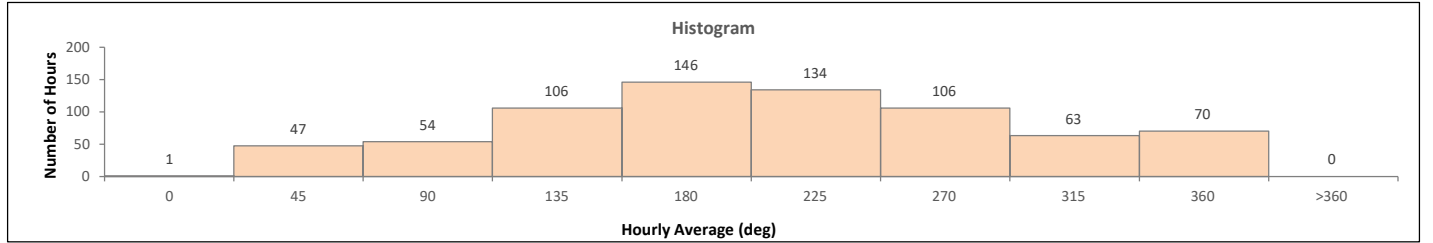
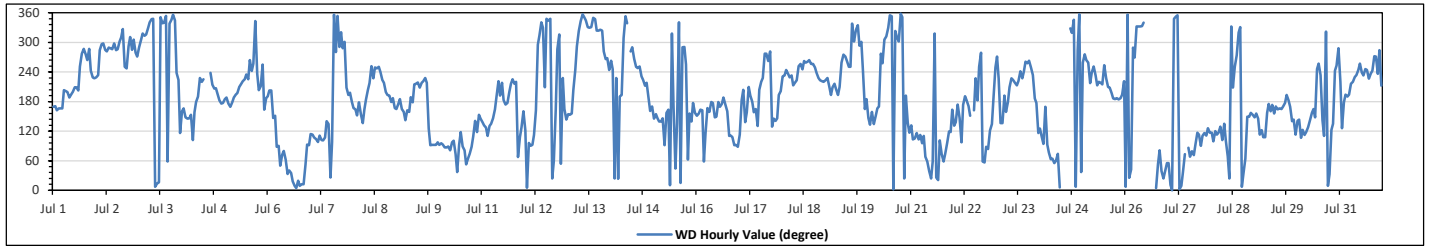
WIND DIRECTION (VWD) in sector

Monthly Average:	185 (S)	degree	Hours in Service:	744
			Hours of Data:	727
			Hours of Missing Data:	17
			Hours of Calibration:	0
			Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant	
Jul 1	SSE	S	SSE	SSE	SSE	SSE	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	SSW	W	WNW	W	W	WNW	WSW	SW	SW	208	SSW		
Jul 2	SW	SW	WNW	WNW	WNW	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	NW	NW	WSW	WSW	WNW	NW	WNW	NW	W	W	289	WNW	
Jul 3	WNW	WNW	NW	NW	NW	NNW	NNW	NNW	N	NNE	NNE	N	NNW	NNW	N	ENE	NNW	NNW	N	NNW	SW	SW	ESE	347	NNW		
Jul 4	SSE	SSE	SE	SE	SE	SSE	E	SSE	S	SW	SW	SW	P	P	P	SW	SSW	SSW	SSW	S	S	S	S	192	S		
Jul 5	S	S	S	SSE	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	W	WSW	WSW	NNW	SW	SSW	SSW	WSW	SSE	S	213	SSW	
Jul 6	S	SSW	SSW	SE	SSE	E	E	ENE	E	ENE	ENE	NE	NE	NNE	N	NNE	N	NNE	N	NNE	NNE	NE	E	E	42	NE	
Jul 7	ESE	ESE	ESE	ESE	E	ESE	E	E	ESE	SE	SE	NNE	E	N	W	N	WNW	NW	WNW	WNW	SSW	S	SSW	S	112	ESE	
Jul 8	SSE	SSE	SSE	S	SSE	SE	SSE	S	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	S	S	S	S	SSE	204	SSW	
Jul 9	SSE	S	S	SSE	SSE	SE	SSE	SSE	S	S	SSW	SW	SW	SSW	SW	SW	SW	SW	SE	E	E	E	E	E	158	SSE	
Jul 10	E	E	E	E	E	E	E	E	ENE	NE	E	ESE	E	E	NE	ENE	E	ESE	ESE	ESE	ESE	SSE	SE	SE	90	E	
Jul 11	SE	SE	SE	ESE	SE	SE	SE	SSE	S	SW	S	SW	S	S	S	SSW	SW	SW	SW	SW	ENE	ESE	SE	SSE	168	SSE	
Jul 12	ESE	N	E	E	ESE	SSE	WNW	NW	NNW	NNW	SSW	NNW	NNW	NNW	NNE	ENE	SSE	WNW	NW	NE	SW	SSE	SE	48	NE		
Jul 13	SSE	SSE	SSE	SSW	WSW	WNW	NNW	N	N	NNW	NNW	NNW	NNW	NNW	N	NNW	NW	NW	NW	W	W	W	W	WSW	328	NNW	
Jul 14	W	WSW	NNE	SW	NNE	S	S	NW	N	NNW	K	W	WNW	W	WSW	WSW	WSW	SW	SW	SSW	SW	S	SSE	SSE	242	WSW	
Jul 15	SE	SSE	SE	SE	SE	SE	E	SSE	SSE	N	NW	SSE	NE	SE	NNW	NNE	WNW	WNW	WSW	ENE	SSE	SE	S	SSE	150	SSE	
Jul 16	SSE	SSE	SSE	SSE	ENE	ESE	SSE	SSE	S	SE	SSE	S	SSE	S	S	S	SSE	ESE	ESE	ESE	E	E	E	E	142	SE	
Jul 17	ESE	S	SSW	SE	SSE	SSW	S	SSE	SSE	SE	SSW	SW	SW	W	W	W	W	SE	SE	SE	SE	SE	S	SSW	178	S	
Jul 18	SW	SW	WSW	SW	SW	SW	SSW	SW	SW	WSW	WSW	WSW	W	WSW	W	W	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	241	WSW
Jul 19	SW	SW	SSW	S	SSW	SW	SSW	S	SSW	WSW	W	W	WSW	WSW	NNW	NNW	NW	NNW	WNW	WNW	WSW	SSE	S	251	WSW		
Jul 20	SE	SE	SSE	SE	SSE	SSE	SSE	W	WSW	NW	NW	NNW	N	N	N	NW	NW	WNW	N	NNE	S	SE	ESE	333	NNW		
Jul 21	SE	ESE	ESE	ESE	ESE	ESE	E	ESE	ENE	ENE	NE	NNE	ENE	NW	NNE	NNE	E	ENE	ENE	ENE	ESE	ESE	ESE	89	E		
Jul 22	SE	SE	S	SE	E	S	S	S	S	SSE	K	SSE	SW	S	WSW	W	ENE	NE	E	E	ESE	SE	S	WSW	157	SSE	
Jul 23	W	SW	SE	SE	S	SSE	S	SSW	SW	SW	SSW	SW	WSW	SW	WSW	W	WSW	W	WSW	W	WSW	SW	S	ESE	212	SSW	
Jul 24	SE	ESE	E	SSE	E	ENE	ENE	ENE	ENE	N	P	P	P	P	P	P	NNW	NW	NNW	N	WNW	N	NE	14	NNE		
Jul 25	WSW	W	W	WSW	SW	WSW	WSW	SW	SSW	SW	SW	SSW	WSW	SW	SSW	SSW	S	S	S	S	S	S	SSW	SW	206	SSW	
Jul 26	N	N	NNE	NE	WNW	W	NNW	NNW	NNW	NNW	P	P	P	P	P	P	N	NE	E	NE	NNE	NE	NE	7	N		
Jul 27	NE	NNE	N	NNW	N	N	N	NE	ENE	K	E	ENE	ENE	ENE	E	ESE	ESE	E	ESE	ESE	ESE	ESE	ESE	ESE	69	ENE	
Jul 28	ESE	E	ESE	ESE	ESE	SE	E	SE	E	ENE	NNE	NNW	SSW	WSW	W	NW	NNW	N	NE	ENE	SSE	SSE	SSE	123	ESE		
Jul 29	SE	SSE	SE	ESE	ESE	ESE	ESE	SSE	S	SSE	S	SSE	SSE	SSE	SSE	SSE	S	S	S	SSE	SE	SE	ESE	160	SSE		
Jul 30	SE	SE	ESE	ESE	ESE	ESE	SE	SSE	SSE	SE	WSW	WSW	SW	SE	ESE	NW	N	NNE	ESE	SE	WSW	WNW	WSW	146	SE		
Jul 31	SW	SE	S	SSW	S	SSW	SW	SW	SW	WSW	WSW	WSW	SW	WSW	WSW	SW	SW	WSW	W	W	SW	WNW	SSW	230	SW		

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Machine Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**

**986-C Station - July 2023**

**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector**

WIND SPEED			
Maximum Hourly Value:	24.4	kph	on Jul 22 at hr 23
Maximum Daily Value:	13.2	kph	on Jul 10
Minimum Hourly Value:	0.3	kph	on Jul 14 at hr 4
Minimum Daily Value:	3.2	kph	on Jul 15
Monthly Average:	1.9	kph	

Hours in Service:	744
Hours of Data:	727
Hours of Missing Data:	17
Hours of Calibration:	0
Operational Uptime:	97.7

WIND DIRECTION	
Monthly Average:	185 degree (S)

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	9.7	7.5	7.1	7.9	5.3	7.0	10.6	19.3	23.0	23.2	22.5	21.4	17.8	14.2	15.5	16.5	8.7	7.8	3.7	8.2	5.1	6.1	8.2	7.8	3.7	23.2	11.8	
Jul 2	5.0	6.0	5.0	4.9	7.2	5.5	8.1	8.0	10.0	12.0	11.9	11.7	12.7	14.8	12.4	5.2	0.5	4.2	6.0	5.5	5.4	7.1	5.7	6.4	0.5	14.8	7.6	
Jul 3	8.6	7.3	9.1	7.1	6.9	10.0	12.5	12.5	14.6	15.8	13.9	15.5	11.2	11.7	10.7	15.3	12.1	7.1	6.5	4.0	2.8	4.7	2.9	2.8	15.8	9.8		
Jul 4	4.1	4.5	2.8	2.7	3.3	2.9	2.1	3.7	2.3	2.9	3.3	5.6	5.3	P	P	P	8.1	11.5	12.4	12.8	9.6	10.1	11.9	10.9	2.1	12.8	6.3	
Jul 5	6.5	3.8	6.3	7.6	5.4	7.2	5.9	8.3	10.9	12.1	14.9	13.4	10.8	8.9	4.9	11.6	14.0	1.9	5.4	6.9	5.7	3.3	10.8	6.4	1.9	14.9	8.0	
Jul 6	3.7	4.5	2.5	1.9	1.7	4.9	1.8	5.0	11.5	12.8	13.5	11.3	11.2	10.8	14.3	14.0	14.4	14.7	11.6	10.3	8.4	10.0	9.4	10.4	1.7	14.7	8.9	
Jul 7	7.7	4.7	4.1	4.8	7.3	6.0	5.0	3.4	1.9	4.8	2.2	4.2	1.8	5.3	3.1	2.2	0.8	5.5	6.7	3.9	2.9	6.6	1.9	3.3	0.8	7.7	4.2	
Jul 8	5.8	7.3	4.0	2.7	5.3	2.4	5.0	3.7	5.2	5.7	6.1	7.6	5.9	7.1	8.4	9.8	11.4	11.4	12.6	11.1	7.9	9.8	4.8	5.9	2.4	12.6	7.0	
Jul 9	7.3	8.4	6.8	7.4	8.3	3.4	5.6	3.4	5.8	3.7	6.6	8.2	10.0	10.2	6.7	3.3	7.0	5.5	5.0	11.8	13.3	12.3	12.8	13.9	3.3	13.9	7.8	
Jul 10	13.0	14.5	14.8	15.2	14.7	13.0	11.2	16.4	11.0	12.2	6.1	11.0	14.3	17.0	20.0	18.3	20.6	17.3	13.9	7.7	7.8	10.2	6.3	9.3	6.1	20.6	13.2	
Jul 11	8.5	8.4	8.9	8.5	5.6	4.2	4.3	4.3	7.1	6.2	7.4	9.6	8.6	5.7	9.0	9.4	10.9	7.5	9.1	12.2	15.6	8.0	7.5	5.6	4.2	15.6	8.0	
Jul 12	5.3	2.9	1.5	6.8	3.1	4.9	1.2	3.6	3.5	2.7	2.3	0.5	1.2	5.9	9.3	8.5	9.2	11.5	1.3	2.4	3.3	2.2	3.2	1.2	0.5	11.5	4.1	
Jul 13	1.0	1.7	4.3	3.7	2.7	1.2	4.2	7.7	7.3	7.0	8.8	6.9	8.5	9.9	14.6	12.0	9.8	11.1	13.2	7.4	4.1	3.5	3.5	3.0	1.0	14.6	6.5	
Jul 14	2.3	2.3	0.4	0.8	0.3	1.3	1.9	0.4	3.6	4.2	K	6.5	7.0	7.0	8.0	7.3	8.3	8.6	7.8	3.8	5.1	6.4	4.3	5.3	0.3	8.6	4.5	
Jul 15	5.4	5.4	3.2	3.7	3.7	2.9	4.1	2.9	0.8	0.8	2.1	1.1	2.2	2.2	4.6	1.8	4.7	5.4	2.3	0.9	1.4	5.5	4.9	5.5	0.8	5.5	3.2	
Jul 16	6.1	7.4	4.4	2.6	3.7	2.1	5.9	5.0	8.8	11.0	9.8	10.0	10.1	8.0	6.9	8.7	6.8	7.9	9.8	12.0	11.3	10.7	9.6	12.6	2.1	12.6	8.0	
Jul 17	12.2	9.3	5.3	8.3	7.1	9.4	11.8	9.5	11.3	8.5	11.1	11.2	6.7	5.6	4.2	7.2	3.9	8.4	10.3	8.6	5.5	2.3	5.2	2.3	12.2	8.0		
Jul 18	6.2	6.5	5.1	6.0	5.6	4.5	4.3	5.6	5.1	5.9	9.0	8.9	8.1	7.5	6.8	5.4	9.5	7.3	10.6	9.2	8.4	7.5	7.8	6.7	4.3	10.6	7.0	
Jul 19	5.2	6.2	4.7	5.5	4.8	4.4	4.1	4.1	4.4	5.5	5.4	7.8	9.7	9.4	6.8	6.4	7.0	5.2	3.2	1.2	2.1	2.5	3.1	1.2	9.7	5.1		
Jul 20	2.7	2.4	3.7	2.7	3.5	4.4	1.6	2.1	3.3	3.8	4.2	5.0	8.2	6.7	7.8	4.5	6.9	4.5	6.4	5.1	0.6	3.6	2.3	3.2	0.6	8.2	4.1	
Jul 21	3.7	4.2	4.2	4.0	7.7	4.4	3.6	0.9	2.8	3.3	3.6	1.2	3.3	2.9	3.9	2.1	2.3	5.6	9.6	7.3	6.8	10.1	7.3	4.3	0.9	10.1	4.5	
Jul 22	5.0	5.9	7.2	5.4	2.9	7.0	7.1	6.8	7.2	4.3	K	2.7	5.1	4.1	4.3	4.6	5.9	11.6	13.5	10.6	11.7	13.6	16.6	24.4	2.7	24.4	8.2	
Jul 23	11.8	2.8	7.4	10.4	3.7	9.0	11.3	6.3	9.1	9.8	9.3	6.9	9.9	7.1	8.2	5.5	5.5	6.0	5.0	3.5	2.3	3.3	4.2	5.3	2.3	11.8	6.8	
Jul 24	2.0	7.6	3.3	1.4	5.4	2.2	3.6	1.9	3.9	7.8	2.5	3.0	P	P	P	P	14.3	10.7	12.6	7.3	9.0	6.1	5.8	1.4	14.3	5.8		
Jul 25	5.3	5.0	1.7	2.1	2.9	4.8	5.2	6.0	10.6	10.4	9.8	9.8	5.9	10.3	16.1	22.7	21.5	23.7	23.0	20.0	16.6	14.6	10.5	7.1	1.7	23.7	11.1	
Jul 26	4.7	5.3	6.1	3.4	1.5	1.5	4.0	9.1	13.7	14.4	13.9	P	P	P	P	P	P	12.1	11.2	7.5	5.2	6.1	7.3	10.1	1.5	14.4	7.6	
Jul 27	7.4	6.5	4.5	6.6	9.2	7.0	9.2	8.3	7.1	12.0	K	16.8	15.8	15.1	15.3	12.1	10.5	9.5	10.7	7.8	6.7	5.1	3.1	5.3	3.1	16.8	9.2	
Jul 28	3.5	1.9	6.0	9.2	8.0	3.9	3.2	1.5	1.8	1.0	2.6	2.3	3.2	5.7	4.4	6.4	4.5	4.0	2.5	3.0	1.5	3.9	9.5	9.0	1.0	9.5	4.3	
Jul 29	8.3	10.4	6.4	4.6	4.8	3.9	2.9	5.5	8.3	11.7	10.9	12.7	13.5	13.5	11.2	10.3	11.9	11.2	11.8	10.1	6.5	6.7	10.4	7.0	2.9	13.5	8.9	
Jul 30	8.3	6.5	4.4	5.6	4.9	5.5	6.1	6.5	7.3	8.6	6.0	3.3	6.0	5.4	1.6	7.8	5.3	6.7	8.0	5.1	3.7	7.1	6.9	1.6	8.6	5.8		
Jul 31	2.4	7.3	10.4	8.9	11.0	7.2	11.5	12.3	9.9	12.8	11.8	12.4	16.4	24.0	15.1	13.4	13.9	14.5	12.9	9.0	6.4	4.4	3.2	4.3	2.4	24.0	10.6	
Aug 1	SW	SE	S	SSW	S	SSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

842-B STATION

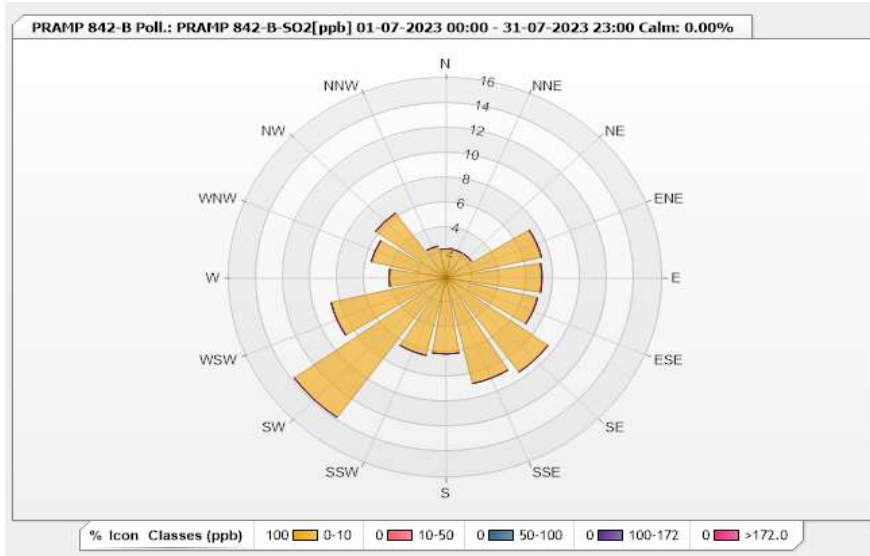


Station: PRAMP 842-B Poll.: PRAMP 842-B-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.74%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	2.32	0	0	0	0	2.32
NNE	2.32	0	0	0	0	2.32
NE	2.32	0	0	0	0	2.32
ENE	7.25	0	0	0	0	7.25
E	7.1	0	0	0	0	7.1
ESE	6.96	0	0	0	0	6.96
SE	9.28	0	0	0	0	9.28
SSE	8.7	0	0	0	0	8.7
S	6.09	0	0	0	0	6.09
SSW	6.38	0	0	0	0	6.38
SW	13.77	0	0	0	0	13.77
WSW	8.7	0	0	0	0	8.7
W	4.2	0	0	0	0	4.2
WNW	5.65	0	0	0	0	5.65
NW	6.38	0	0	0	0	6.38
NNW	2.61	0	0	0	0	2.61
Summary	100	0	0	0	0	100



# Peace River Area Monitoring Program

## 842-B Station - July 2023

### Summary of Hourly Averages

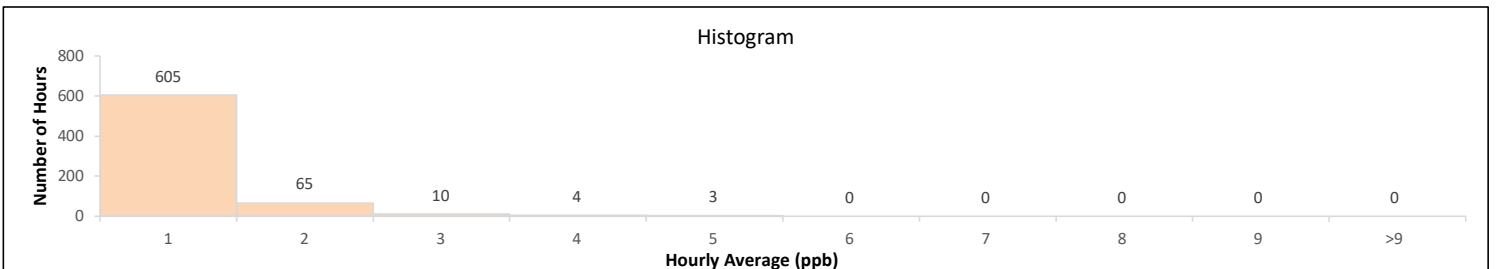
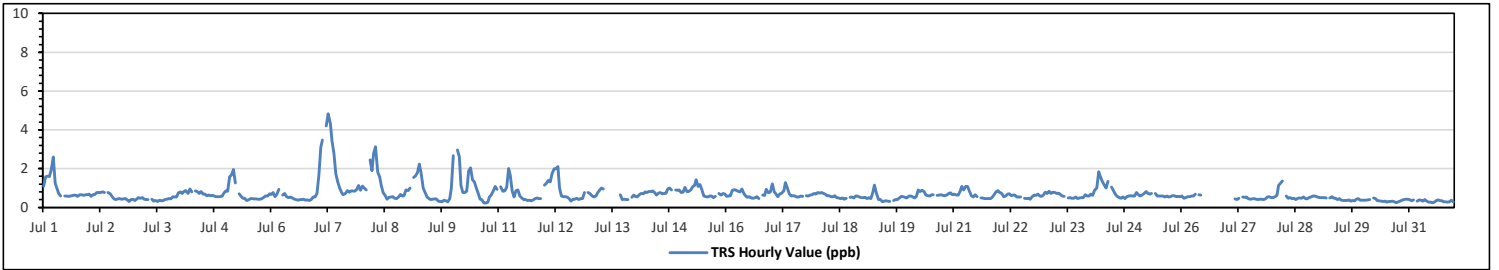
#### TOTAL REDUCED SULPHUR (TRS) in ppb

Maximum Hourly Value:	4.83	ppb	on Jul 7 at hr 6	Hours in Service:	744
Maximum Daily Value:	1.82	ppb	on Jul 7	Hours of Data:	687
Minimum Hourly Value:	0.22	ppb	on Jul 10 at hr 17	Hours of Missing Data:	19
Minimum Daily Value:	0.33	ppb	on Jul 31	Hours of Calibration:	38
Monthly Average:	0.71	ppb		Operational Uptime:	97.4

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	1.1	1.58	1.61	1.59	1.97	2.61	1.24	1.01	0.71	0.59	S	0.6	0.6	0.57	0.59	0.61	0.64	0.62	0.57	0.65	0.65	0.62	0.66	0.66	0.57	2.61	0.96	
Jul 2	0.69	0.57	0.66	0.67	0.78	0.77	0.78	0.8	0.76	S	0.78	0.7	0.55	0.44	0.4	0.44	0.45	0.43	0.44	0.46	0.39	0.31	0.41	0.43	0.31	0.80	0.57	
Jul 3	0.35	0.43	0.5	0.47	0.5	0.43	0.4	0.41	S	0.43	0.33	0.35	0.3	0.38	0.34	0.36	0.4	0.43	0.45	0.44	0.55	0.54	0.54	0.75	0.30	0.75	0.44	
Jul 4	0.8	0.72	0.84	0.87	0.71	0.94	0.8	S	0.85	0.81	0.72	0.82	0.68	0.68	0.61	0.63	0.61	0.62	0.59	0.56	0.55	0.56	0.58	0.74	0.55	0.94	0.71	
Jul 5	0.85	0.84	1.57	1.68	1.96	1.26	S	0.7	0.57	0.48	0.47	0.35	0.39	0.45	0.46	0.44	0.44	0.43	0.43	0.46	0.52	0.58	0.59	0.7	0.35	1.96	0.72	
Jul 6	0.67	0.76	0.56	0.68	0.93	S	0.64	0.73	0.55	0.5	0.54	0.49	0.44	0.41	0.38	0.42	0.42	0.43	0.38	0.39	0.35	0.41	0.53	0.54	0.35	0.93	0.53	
Jul 7	0.73	1.66	3.09	3.47	S	4.2	4.83	4.31	3.42	2.8	1.73	1.3	1.01	0.76	0.65	0.73	0.87	0.79	0.85	0.85	0.84	0.92	1.13	0.88	0.65	4.83	1.82	
Jul 8	1.1	1.01	0.89	S	2.45	1.9	2.78	3.14	1.81	1.57	1.13	0.75	0.62	0.43	0.52	0.53	0.55	0.48	0.46	0.53	0.67	0.6	0.61	0.9	0.43	3.14	1.11	
Jul 9	0.87	1.01	S	1.55	1.63	1.79	2.23	1.7	0.99	0.78	0.54	0.46	0.42	0.43	0.44	0.44	0.33	0.31	0.29	0.37	0.34	0.29	0.46	1.01	0.29	2.23	0.81	
Jul 10	2.67	S	2.97	2.61	1.14	0.77	0.77	0.84	1.87	2.04	1.42	1.31	1	0.72	0.43	0.4	0.23	0.22	0.28	0.53	0.65	0.86	1.09	0.93	0.22	2.97	1.12	
Jul 11	S	1.06	0.84	0.85	1.05	2	1.65	0.85	0.54	0.87	0.89	0.6	0.49	0.42	0.41	0.36	0.37	0.34	0.39	0.46	0.49	0.46	0.45	S	0.34	2.00	0.72	
Jul 12	1.15	1.25	1.4	1.3	1.75	1.99	1.99	2.11	0.99	0.6	0.56	0.55	0.52	0.45	0.32	0.43	0.43	0.47	0.4	0.46	0.46	0.77	S	0.78	0.32	2.11	0.92	
Jul 13	0.73	0.61	0.53	0.59	0.75	0.88	0.99	0.96	C	C	NRM	NRM	C	C	C	C	C	0.66	0.42	0.43	0.4	0.42	S	0.52	0.64	0.40	0.99	NA
Jul 14	0.56	0.55	0.66	0.71	0.7	0.8	0.76	0.81	0.82	0.85	0.78	0.64	0.74	0.77	0.7	0.72	0.74	0.94	0.99	0.91	S	0.91	0.88	0.91	0.55	0.99	0.78	
Jul 15	0.77	0.79	1.04	0.81	0.81	0.91	1.06	1.12	1.42	1.08	1.18	0.91	0.6	0.56	0.53	0.59	0.6	0.5	0.57	S	0.71	0.64	0.72	0.69	0.50	1.42	0.81	
Jul 16	0.57	0.6	0.61	0.88	0.92	0.88	0.84	0.8	0.94	0.71	0.6	0.52	0.56	0.49	0.47	0.5	0.55	0.46	S	0.64	0.62	0.93	0.75	0.8	0.46	0.94	0.68	
Jul 17	1.22	0.8	0.7	0.55	0.68	0.74	0.85	1.28	1	0.7	0.6	0.61	0.59	0.54	0.54	0.58	0.57	S	0.61	0.59	0.64	0.66	0.72	0.68	0.54	1.28	0.72	
Jul 18	0.77	0.74	0.78	0.73	0.68	0.61	0.61	0.55	0.55	0.61	0.51	0.49	0.45	0.49	0.43	0.48	S	0.52	0.54	0.49	0.58	0.59	0.54	0.51	0.43	0.78	0.58	
Jul 19	0.51	0.52	0.46	0.5	0.45	0.78	1.15	0.75	0.41	0.41	0.29	0.33	0.34	0.33	0.31	S	0.36	0.4	0.4	0.49	0.57	0.55	0.52	0.49	0.29	1.15	0.49	
Jul 20	0.58	0.6	0.55	0.49	0.56	0.91	0.81	0.88	0.81	0.63	0.61	0.6	0.65	0.66	S	0.62	0.63	0.66	0.62	0.61	0.64	0.73	0.75	0.66	0.49	0.91	0.66	
Jul 21	0.68	0.63	0.63	0.84	1.08	0.9	1.08	1.09	0.83	0.61	0.54	0.65	0.55	S	0.49	0.49	0.45	0.45	0.46	0.45	0.52	0.66	0.8	0.87	0.45	1.09	0.68	
Jul 22	0.78	0.72	0.56	0.58	0.69	0.7	0.61	0.63	0.64	0.54	0.53	0.54	S	0.48	0.46	0.47	0.43	0.53	0.64	0.62	0.69	0.59	0.57	0.63	0.43	0.78	0.59	
Jul 23	0.79	0.72	0.84	0.73	0.79	0.77	0.73	0.74	0.66	0.58	0.57	S	0.49	0.5	0.48	0.48	0.54	0.46	0.49	0.5	0.51	0.65	0.58	0.6	0.46	0.84	0.62	
Jul 24	0.68	0.62	0.88	0.99	1.83	1.59	1.34	1.16	0.99	1.35	S	1.05	0.83	0.65	0.56	0.51	0.47	0.53	0.46	0.55	0.58	0.61	0.59	0.6	0.46	1.83	0.84	
Jul 25	0.78	0.66	0.6	0.63	0.73	0.82	0.71	0.68	0.71	S	0.71	0.6	0.6	0.59	0.58	0.54	0.59	0.53	0.55	0.61	0.61	0.56	0.57	0.55	0.53	0.82	0.63	
Jul 26	0.58	0.48	0.51	0.56	0.56	0.58	0.58	0.68	S	0.66	0.63	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0.48	0.68	NA
Jul 27	P	P	P	P	0.44	0.41	0.48	S	0.54	0.52	0.53	0.45	0.43	0.44	0.46	0.43	0.41	0.43	0.43	0.41	0.44	0.53	0.56	0.51	0.41	0.56	0.47	
Jul 28	0.51	0.55	0.62	1.13	1.25	1.36	S	0.6	0.47	0.51	0.46	0.47	0.42	0.48	0.49	0.48	0.54	0.45	0.44	0.51	0.54	0.58	0.6	0.55	0.42	1.36	0.61	
Jul 29	0.52	0.5	0.5	0.51	0.49	S	0.49	0.55	0.47	0.48	0.41	0.46	0.37	0.36	0.36	0.36	0.39	0.33	0.35	0.34	0.43	0.45	0.37	0.38	0.33	0.55	0.43	
Jul 30	0.37	0.37	0.39	0.4	S	0.49	0.45	0.36	0.34	0.33	0.31	0.32	0.28	0.3	0.31	0.32	0.29	0.25	0.29	0.32	0.37	0.42	0.43	0.43	0.25	0.49	0.35	
Jul 31	0.4	0.34	0.39	S	0.33	0.39	0.38	0.33	0.4	0.32	0.27	0.28	0.24	0.27	0.34	0.39	0.36	0.34	0.29	0.29	0.28	0.29	0.38	0.29	0.24	0.40	0.33	
Diurnal Maximum	2.67	1.66	3.09	3.47	2.45	4.20	4.83	4.31	3.42	2.80	1.73	1.31	1.01	0.77	0.70	0.73	0.87	0.94	0.99	0.91	0.84	0.93	1.13	1.01				
Diurnal Average	0.79	0.75	0.90	0.98	0.99	1.14	1.10	1.05	0.90	0.80	0.67	0.61	0.54	0.50	0.47	0.49	0.49	0.47	0.49	0.51	0.54	0.60	0.62	0.66				
C	Monthly Calibration				S				Daily Zero-Span Check				Q				Quality Assurance											
K	Collection Error				ND				No Data (Machine Not in Service)				Y				Routine Maintenance											
X	Invalid Data (Equipment Malfunction /Recovery)				NRM				UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)				P				Power Failure											

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

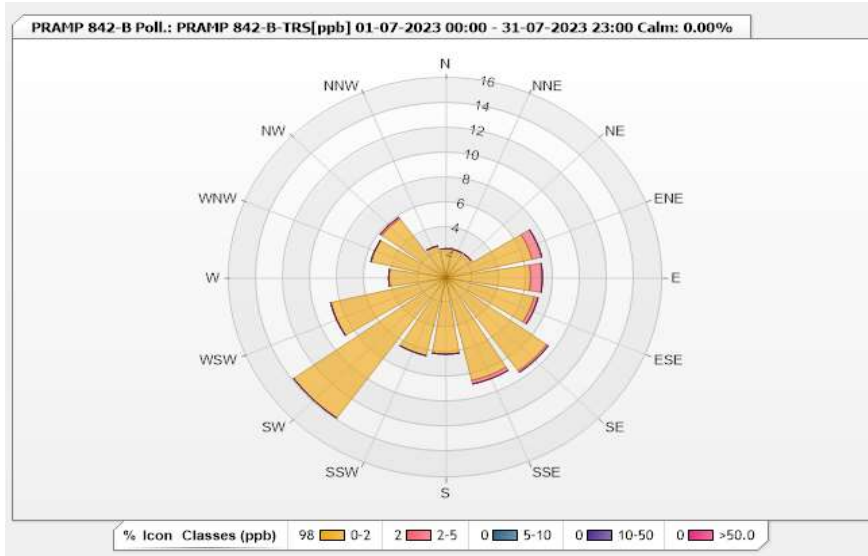


Station: PRAMP 842-B Poll.: PRAMP 842-B-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.34%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	2.33	0	0	0	0	2.33
NNE	2.33	0	0	0	0	2.33
NE	2.33	0	0	0	0	2.33
ENE	6.55	0.73	0	0	0	7.28
E	6.26	0.87	0	0	0	7.13
ESE	6.7	0.29	0	0	0	6.99
SE	9.17	0.15	0	0	0	9.32
SSE	8.44	0.29	0	0	0	8.73
S	6.11	0	0	0	0	6.11
SSW	6.4	0	0	0	0	6.4
SW	13.83	0	0	0	0	13.83
WSW	8.73	0	0	0	0	8.73
W	4.22	0	0	0	0	4.22
WNW	5.68	0	0	0	0	5.68
NW	5.82	0.15	0	0	0	5.97
NNW	2.62	0	0	0	0	2.62
Summary	97.52	2.48	0	0	0	100



**Peace River Area Monitoring Program**

**842-B Station - July 2023**

**Summary of Hourly Averages**

**TOTAL HYDROCARBONS (THC) in ppm**

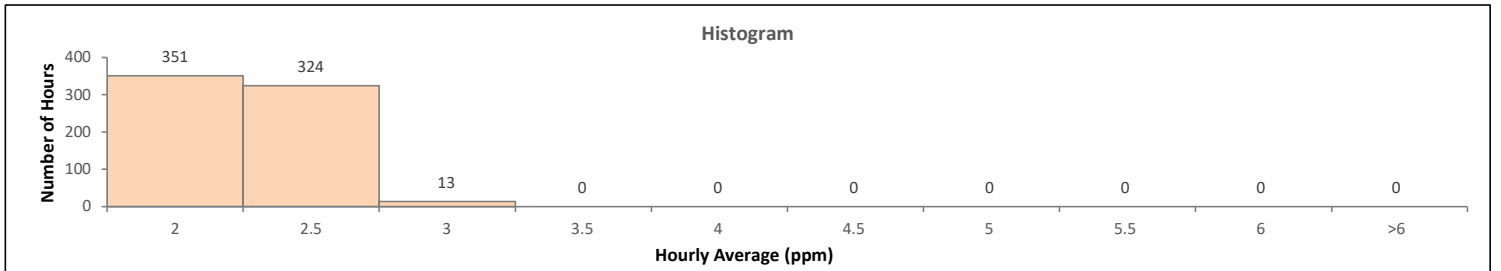
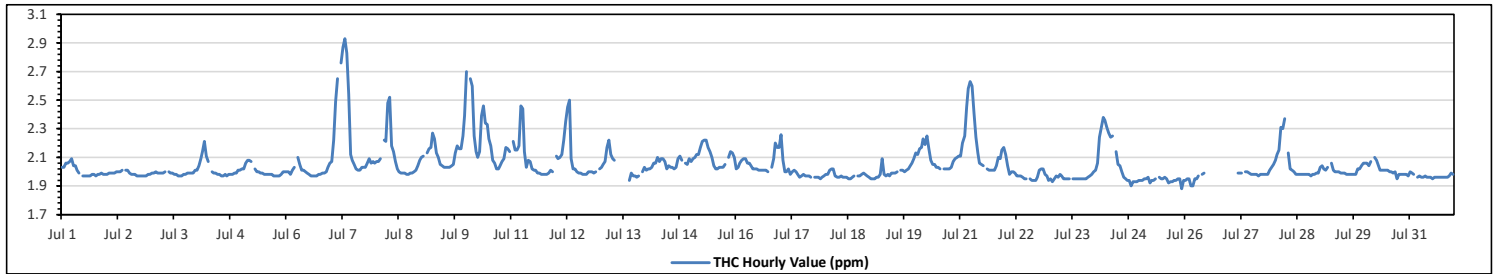
Maximum Hourly Value:	2.93 ppm	on Jul 7 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.26 ppm	on Jul 7	Hours of Data:	688
Minimum Hourly Value:	1.88 ppm	on Jul 25 at hr 22	Hours of Missing Data:	17
Minimum Daily Value:	1.94 ppm	on Jul 25	Hours of Calibration:	39
Monthly Average:	2.05 ppm		Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	2.03	2.03	2.06	2.06	2.07	2.09	2.04	2.04	2.01	1.99	S	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.97	1.98	1.98	1.99	1.98	1.98	1.97	2.09	2.00	
Jul 2	1.98	1.99	1.99	1.99	1.99	2.00	2.00	2.00	2.01	S	2.01	2.01	1.99	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.97	2.01	1.99	
Jul 3	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.00	S	2.00	1.99	1.99	1.98	1.98	1.98	1.97	1.97	1.97	1.98	1.98	1.99	1.99	1.99	1.99	2.01	1.97	1.99	
Jul 4	2.01	2.04	2.09	2.14	2.21	2.11	2.07	S	2.00	1.99	1.99	1.98	1.98	1.97	1.97	1.98	1.97	1.98	1.98	1.98	1.99	1.99	2.01	2.01	1.97	2.21	2.02	
Jul 5	2.02	2.02	2.06	2.08	2.08	2.07	S	2.02	2.00	2.00	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.98	2.00	2.00	1.97	2.08	2.00	
Jul 6	2.00	2.00	1.98	2.01	2.03	S	2.10	2.05	2.01	2.01	2.00	1.99	1.98	1.97	1.97	1.97	1.97	1.98	1.98	1.99	1.99	2.00	2.03	2.06	1.97	2.10	2.00	
Jul 7	2.07	2.22	2.49	2.65	S	2.76	2.87	2.93	2.83	2.54	2.12	2.08	2.05	2.02	2.01	2.01	2.03	2.03	2.06	2.09	2.06	2.07	2.06	2.01	2.93	2.26		
Jul 8	2.07	2.07	2.09	S	2.22	2.21	2.48	2.52	2.18	2.14	2.07	2.02	2.00	1.99	1.99	1.99	1.98	1.98	1.99	1.99	2.00	2.01	2.04	2.08	1.98	2.52	2.09	
Jul 9	2.10	2.11	S	2.13	2.16	2.17	2.27	2.23	2.13	2.10	2.05	2.04	2.03	2.03	2.03	2.04	2.05	2.13	2.18	2.16	2.16	2.25	2.39	2.03	2.39	2.13		
Jul 10	2.70	S	2.65	2.60	2.25	2.14	2.10	2.14	2.39	2.46	2.34	2.33	2.23	2.18	2.08	2.06	2.02	2.02	2.04	2.07	2.09	2.17	2.16	2.14	2.02	2.70	2.23	
Jul 11	S	2.21	2.15	2.15	2.18	2.46	2.44	2.14	2.03	2.08	2.07	2.02	2.01	2.01	1.99	1.99	1.98	1.98	1.98	1.99	2.01	2.00	S	2.02	1.98	2.46	2.08	
Jul 12	2.11	2.09	2.10	2.12	2.22	2.35	2.45	2.50	2.09	2.02	2.02	2.00	1.99	1.99	1.98	1.98	1.98	2.00	2.00	2.00	1.99	2.00	S	2.02	1.98	2.50	2.09	
Jul 13	2.03	2.05	2.07	2.17	2.22	2.12	2.09	2.08	C	C	C	C	C	C	C	1.94	1.99	1.97	1.97	1.96	1.97	S	2.00	2.03	1.94	2.22	NA	
Jul 14	2.01	2.02	2.02	2.03	2.06	2.10	2.07	2.09	2.09	2.07	2.02	2.04	2.03	2.03	2.02	2.03	2.09	2.11	2.08	S	2.06	2.05	2.09	2.01	2.11	2.11	2.06	
Jul 15	2.07	2.09	2.10	2.12	2.12	2.17	2.21	2.22	2.22	2.17	2.14	2.10	2.04	2.02	2.02	2.03	2.03	2.03	2.05	S	2.10	2.14	2.13	2.10	2.02	2.22	2.11	
Jul 16	2.02	2.03	2.06	2.08	2.09	2.09	2.06	2.04	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.00	S	2.03	2.09	2.20	2.17	2.17	2.00	2.20	2.06	
Jul 17	2.26	2.08	2.00	2.00	2.02	1.98	2.00	2.01	2.00	1.98	1.96	1.97	1.98	1.97	1.97	1.97	1.96	S	1.96	1.96	1.96	1.95	1.96	1.97	1.95	2.26	1.99	
Jul 18	1.98	1.98	2.01	2.02	2.02	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.95	1.95	1.96	1.97	S	1.97	1.97	1.97	1.98	1.99	1.98	1.97	1.96	1.95	2.02	1.97
Jul 19	1.95	1.95	1.95	1.96	1.96	1.98	2.09	1.98	1.97	1.98	1.97	1.99	1.99	1.99	2.00	S	2.01	2.01	2.00	2.01	2.02	2.04	2.06	2.09	1.95	2.09	2.00	
Jul 20	2.13	2.12	2.16	2.17	2.23	2.19	2.25	2.16	2.08	2.05	2.05	2.03	2.03	2.02	S	2.02	2.02	2.02	2.03	2.07	2.09	2.10	2.11	2.02	2.25	2.09		
Jul 21	2.11	2.20	2.25	2.45	2.58	2.63	2.60	2.41	2.24	2.13	2.06	2.05	2.04	S	2.02	2.01	2.01	2.01	2.04	2.10	2.09	2.15	2.17	2.01	2.63	2.19		
Jul 22	2.12	2.04	1.98	2.00	2.00	1.99	1.97	1.97	1.97	1.96	1.95	1.95	S	1.95	1.94	1.94	1.94	1.96	2.01	2.02	2.02	1.98	1.97	1.94	1.94	2.12	1.98	
Jul 23	1.95	1.93	1.95	1.97	1.96	1.98	1.97	1.95	1.95	1.95	S	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.97	1.98	2.00	1.93	2.00	1.96		
Jul 24	2.01	2.06	2.24	2.31	2.38	2.36	2.31	2.27	2.24	2.25	S	2.14	2.05	2.04	2.00	1.96	1.95	1.94	1.94	1.90	1.93	1.93	1.93	1.94	1.90	2.38	2.09	
Jul 25	1.94	1.94	1.95	1.95	1.96	1.92	1.94	1.94	1.95	S	1.96	1.95	1.95	1.96	1.95	1.92	1.93	1.93	1.94	1.94	1.95	1.95	1.88	1.94	1.88	1.96	1.94	
Jul 26	1.94	1.95	1.95	1.90	1.90	1.95	1.95	1.97	S	1.98	1.99	P	P	P	P	P	P	P	P	P	P	P	P	P	1.90	1.99	NA	
Jul 27	P	P	P	P	1.99	1.99	1.99	S	2.00	2.00	1.99	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	2.01	2.03	2.05	1.97	2.05	1.99	
Jul 28	2.08	2.12	2.15	2.31	2.30	2.37	S	2.13	2.02	2.01	2.00	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.99	1.99	1.97	2.37	2.05	
Jul 29	2.03	2.04	2.02	2.01	2.03	S	2.06	2.01	2.00	2.00	2.00	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.98	2.02	2.02	2.04	2.06	1.98	2.06	2.01		
Jul 30	2.06	2.06	2.04	2.07	S	2.10	2.08	2.04	2.01	2.01	2.01	2.01	2.01	2.00	1.99	2.00	1.95	1.98	1.98	1.98	1.98	1.98	1.97	1.95	2.10	2.01		
Jul 31	2.00	1.99	1.98	S	1.96	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.99	1.98	1.95	2.00	1.97	
Diurnal Maximum	2.70	2.22	2.65	2.65	2.58	2.76	2.87	2.93	2.83	2.54	2.34	2.33	2.23	2.18	2.08	2.06	2.04	2.09	2.13	2.18	2.16	2.20	2.25	2.39				
Diurnal Average	2.06	2.05	2.09	2.12	2.11	2.14	2.15	2.13	2.09	2.07	2.02	2.02	2.02	2.00	1.99	1.98	1.99	1.99	1.99	2.00	2.01	2.02	2.03	2.04				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



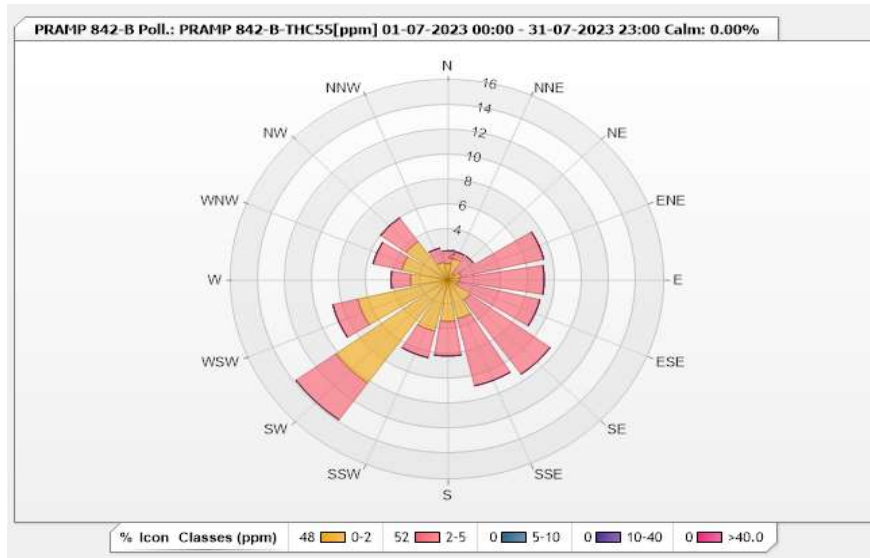


Station: PRAMP 842-B Poll.: PRAMP 842-B-THC55[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.47%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	1.31	1.02	0	0	0	2.33
NNE	1.74	0.58	0	0	0	2.32
NE	0.58	1.74	0	0	0	2.32
ENE	1.02	6.25	0	0	0	7.27
E	0.87	6.25	0	0	0	7.12
ESE	0.73	6.25	0	0	0	6.98
SE	2.03	7.27	0	0	0	9.3
SSE	3.2	5.52	0	0	0	8.72
S	3.34	2.76	0	0	0	6.1
SSW	4.22	2.18	0	0	0	6.4
SW	10.17	3.63	0	0	0	13.8
WSW	6.83	1.89	0	0	0	8.72
W	2.76	1.45	0	0	0	4.21
WNW	3.49	2.18	0	0	0	5.67
NW	3.78	2.33	0	0	0	6.11
NNW	1.45	1.16	0	0	0	2.61
Summary	47.52	52.46	0	0	0	100



Peace River Area Monitoring Program

842-B Station - July 2023  
Summary of Hourly Averages

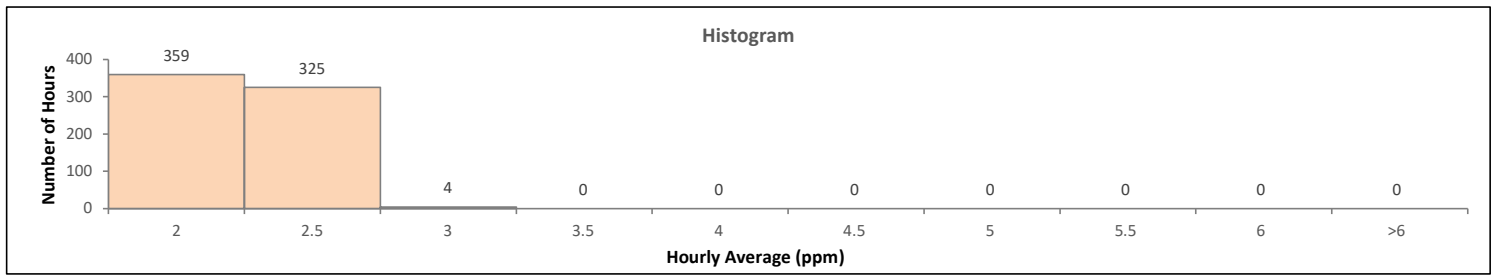
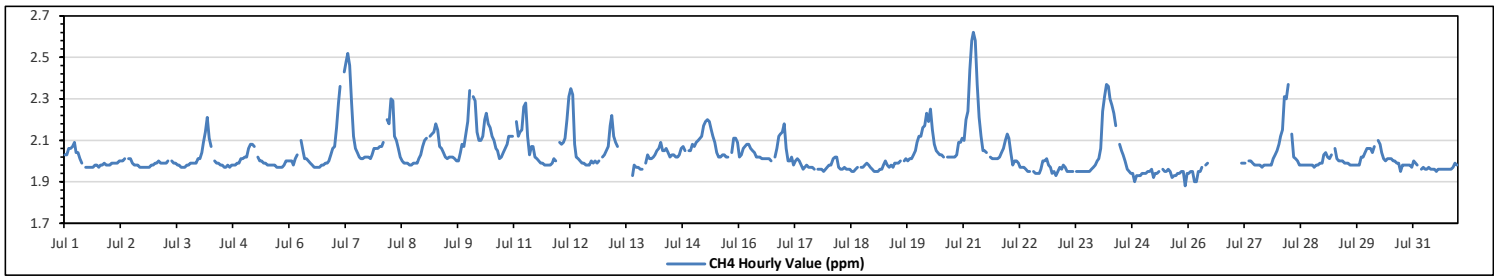
METHANE (CH4) in ppm

Maximum Hourly Value:	2.62 ppm	on Jul 21 at hr 5	Hours in Service:	744
Maximum Daily Value:	2.17 ppm	on Jul 21	Hours of Data:	688
Minimum Hourly Value:	1.88 ppm	on Jul 25 at hr 22	Hours of Missing Data:	17
Minimum Daily Value:	1.94 ppm	on Jul 25	Hours of Calibration:	39
Monthly Average:	2.03 ppm		Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	2.03	2.03	2.06	2.06	2.07	2.09	2.04	2.04	2.01	1.99	S	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.97	1.98	1.98	1.99	1.98	1.98	1.97	2.09	2.00	
Jul 2	1.98	1.99	1.99	1.99	1.99	2.00	2.00	2.00	2.01	S	2.01	2.01	1.99	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.97	2.01	1.99	
Jul 3	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.00	S	2.00	1.99	1.99	1.98	1.98	1.98	1.97	1.97	1.97	1.98	1.98	1.99	1.99	1.99	1.99	2.01	1.97	2.01	
Jul 4	2.01	2.04	2.09	2.14	2.21	2.11	2.07	S	2.00	1.99	1.99	1.98	1.98	1.97	1.97	1.98	1.97	1.98	1.98	1.98	1.99	1.99	2.01	2.01	1.97	2.21	2.02	
Jul 5	2.02	2.02	2.06	2.08	2.08	2.07	S	2.02	2.00	2.00	1.99	1.99	1.98	1.98	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.98	2.00	2.00	1.97	2.08	2.00	
Jul 6	2.00	2.00	1.98	2.01	2.03	S	2.10	2.05	2.01	2.01	2.00	1.99	1.98	1.97	1.97	1.97	1.97	1.98	1.98	1.99	1.99	2.00	2.03	2.06	1.97	2.10	2.00	
Jul 7	2.07	2.16	2.28	2.36	S	2.43	2.48	2.52	2.46	2.28	2.12	2.06	2.04	2.02	2.01	2.01	2.02	2.02	2.02	2.01	2.03	2.06	2.06	2.06	2.01	2.52	2.16	
Jul 8	2.07	2.07	2.09	S	2.20	2.18	2.30	2.29	2.12	2.10	2.06	2.02	2.00	1.99	1.99	1.99	1.98	1.98	1.99	1.99	1.99	2.01	2.03	2.07	1.98	2.30	2.07	
Jul 9	2.10	2.11	S	2.12	2.13	2.14	2.18	2.15	2.07	2.06	2.04	2.02	2.01	2.02	2.02	2.02	2.01	2.00	2.00	2.04	2.08	2.07	2.13	2.19	2.00	2.19	2.07	
Jul 10	2.34	S	2.31	2.29	2.14	2.10	2.10	2.12	2.20	2.23	2.18	2.16	2.12	2.10	2.06	2.05	2.01	2.02	2.04	2.06	2.08	2.12	2.12	2.12	2.01	2.34	2.13	
Jul 11	S	2.19	2.12	2.14	2.15	2.26	2.28	2.12	2.03	2.07	2.07	2.02	2.01	2.00	1.99	1.98	1.98	1.98	1.98	1.99	2.01	2.00	S	2.08	1.98	2.28	2.06	
Jul 12	2.09	2.08	2.09	2.11	2.20	2.31	2.35	2.32	2.08	2.02	2.01	2.00	1.99	1.99	1.98	1.98	1.98	2.00	1.99	2.00	1.99	2.00	S	2.02	1.98	2.35	2.07	
Jul 13	2.03	2.05	2.07	2.17	2.22	2.12	2.09	2.07	C	C	C	C	C	C	C	1.93	1.98	1.97	1.97	1.96	1.96	S	1.99	2.03	1.93	2.22	NA	
Jul 14	2.01	2.01	2.02	2.03	2.05	2.06	2.09	2.05	2.05	2.06	2.04	2.02	2.03	2.03	2.02	2.02	2.02	2.03	2.06	2.07	2.05	S	2.05	2.05	2.08	2.01	2.09	2.04
Jul 15	2.07	2.09	2.10	2.11	2.12	2.17	2.19	2.20	2.19	2.15	2.12	2.09	2.04	2.02	2.02	2.03	2.03	2.02	2.02	S	2.04	2.11	2.11	2.09	2.02	2.20	2.09	
Jul 16	2.02	2.03	2.06	2.07	2.08	2.08	2.06	2.05	2.04	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.00	S	2.02	2.06	2.12	2.13	2.14	2.00	2.14	2.05
Jul 17	2.18	2.06	2.00	2.00	2.02	1.98	2.00	2.01	2.00	1.98	1.96	1.97	1.98	1.97	1.97	1.96	S	1.96	1.96	1.96	1.95	1.96	1.95	1.96	1.97	1.95	2.18	1.99
Jul 18	1.98	1.98	2.01	2.02	2.02	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.95	1.95	1.96	1.97	S	1.97	1.97	1.98	1.99	1.98	1.97	1.96	1.95	2.02	1.97	
Jul 19	1.95	1.95	1.95	1.96	1.96	1.98	2.00	1.98	1.97	1.98	1.97	1.99	1.99	1.99	2.00	S	2.00	2.01	2.00	2.01	2.01	2.03	2.05	2.09	1.95	2.09	1.99	
Jul 20	2.12	2.12	2.16	2.17	2.23	2.19	2.25	2.15	2.08	2.05	2.04	2.03	2.03	2.02	S	2.02	2.02	2.02	2.02	2.02	2.02	2.03	2.09	2.09	2.11	2.02	2.25	2.09
Jul 21	2.10	2.20	2.24	2.44	2.58	2.62	2.58	2.37	2.21	2.12	2.05	2.05	2.04	S	2.02	2.01	2.01	2.01	2.01	2.01	2.02	2.04	2.06	2.10	2.13	2.01	2.62	2.17
Jul 22	2.11	2.04	1.98	2.00	2.00	1.99	1.97	1.97	1.97	1.96	1.95	1.95	1.95	S	1.95	1.94	1.94	1.94	1.96	2.00	2.00	2.01	1.98	1.97	1.94	1.94	2.11	1.98
Jul 23	1.95	1.93	1.95	1.97	1.96	1.98	1.97	1.95	1.95	1.95	1.95	S	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.97	1.98	2.00	1.93	2.00	1.96	
Jul 24	2.01	2.06	2.24	2.31	2.37	2.36	2.30	2.27	2.23	2.17	S	2.08	2.05	2.03	2.00	1.96	1.95	1.94	1.94	1.90	1.93	1.93	1.93	1.94	1.90	2.37	2.08	
Jul 25	1.94	1.94	1.95	1.95	1.96	1.92	1.94	1.94	1.95	S	1.96	1.95	1.95	1.96	1.95	1.92	1.93	1.93	1.94	1.94	1.95	1.95	1.88	1.94	1.88	1.96	1.94	
Jul 26	1.94	1.95	1.95	1.90	1.90	1.95	1.95	1.97	S	1.98	1.99	P	P	P	P	P	P	P	P	P	P	P	P	P	1.90	1.99	NA	
Jul 27	P	P	P	P	1.99	1.99	1.99	S	2.00	2.00	1.99	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.98	2.01	2.03	2.05	1.97	2.05	1.99	
Jul 28	2.08	2.12	2.15	2.31	2.30	2.37	S	2.13	2.02	2.01	2.00	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.97	1.98	1.98	1.99	1.99	1.97	2.37	2.05	
Jul 29	2.03	2.04	2.02	2.01	2.03	S	2.06	2.01	2.00	2.00	2.00	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.98	2.02	2.02	2.04	2.06	1.98	2.06	2.01	1.98	
Jul 30	2.06	2.06	2.04	2.07	S	2.10	2.08	2.04	2.01	2.00	2.01	2.01	2.01	2.00	2.00	1.99	1.99	1.95	1.98	1.98	1.98	1.98	1.97	1.95	2.10	2.01	1.98	
Jul 31	2.00	1.99	1.98	S	1.96	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.99	1.98	1.95	2.00	1.97
Diurnal Maximum	2.34	2.20	2.31	2.44	2.58	2.62	2.58	2.52	2.46	2.28	2.18	2.16	2.12	2.10	2.06	2.05	2.03	2.06	2.07	2.06	2.08	2.12	2.13	2.19	2.02	2.13	2.19	
Diurnal Average	2.04	2.04	2.07	2.10	2.12	2.11	2.09	2.06	2.04	2.02	2.01	2.00	1.99	1.99	1.98	1.98	1.98	1.98	1.99	1.99	2.00	2.01	2.02	2.03	2.02	2.03	2.03	

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

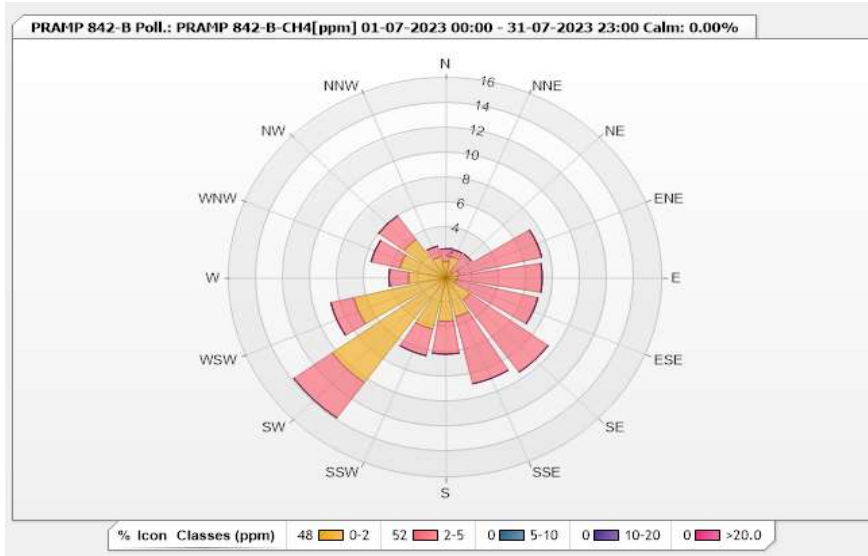


Station: PRAMP 842-B Poll.: PRAMP 842-B-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.47%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	1.31	1.02	0	0	0	2.33
NNE	1.74	0.58	0	0	0	2.32
NE	0.58	1.74	0	0	0	2.32
ENE	1.02	6.25	0	0	0	7.27
E	0.87	6.25	0	0	0	7.12
ESE	0.73	6.25	0	0	0	6.98
SE	2.18	7.12	0	0	0	9.3
SSE	3.2	5.52	0	0	0	8.72
S	3.49	2.62	0	0	0	6.11
SSW	4.22	2.18	0	0	0	6.4
SW	10.32	3.49	0	0	0	13.81
WSW	6.98	1.74	0	0	0	8.72
W	2.76	1.45	0	0	0	4.21
WNW	3.49	2.18	0	0	0	5.67
NW	3.78	2.33	0	0	0	6.11
NNW	1.74	0.87	0	0	0	2.61
Summary	48.41	51.59	0	0	0	100



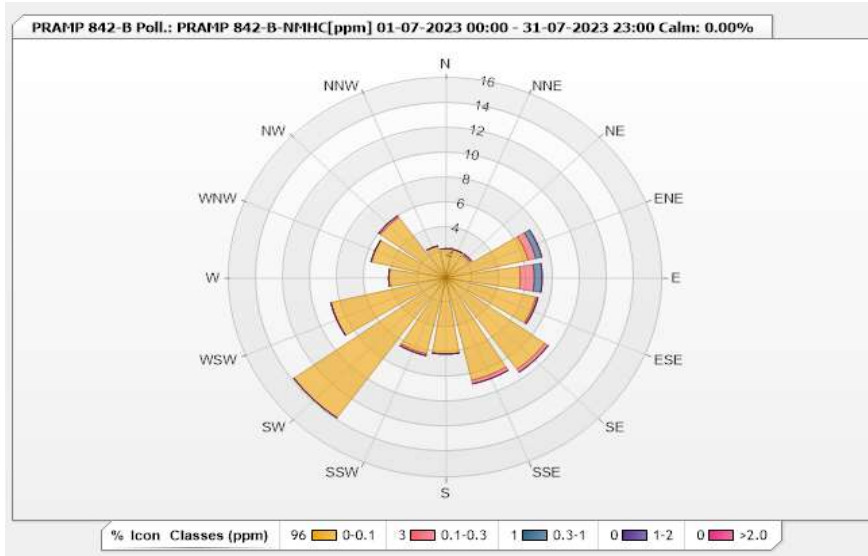


Station: PRAMP 842-B Poll.: PRAMP 842-B-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.47%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	2.33	0	0	0	0	2.33
NNE	2.33	0	0	0	0	2.33
NE	2.18	0.15	0	0	0	2.33
ENE	6.25	0.58	0.44	0	0	7.27
E	5.52	1.02	0.58	0	0	7.12
ESE	6.83	0.15	0	0	0	6.98
SE	9.01	0.29	0	0	0	9.3
SSE	8.43	0.29	0	0	0	8.72
S	6.1	0	0	0	0	6.1
SSW	6.25	0.15	0	0	0	6.4
SW	13.81	0	0	0	0	13.81
WSW	8.72	0	0	0	0	8.72
W	4.22	0	0	0	0	4.22
WNW	5.67	0	0	0	0	5.67
NW	5.96	0.15	0	0	0	6.11
NNW	2.62	0	0	0	0	2.62
Summary	96.23	2.78	1.02	0	0	100



**Peace River Area Monitoring Program**

**842-B Station - July 2023  
Summary of Hourly Averages**

**RELATIVE HUMIDITY (RH) in %**

Maximum Hourly Value:	100	%	on Jul 3 at hr 5	Hours in Service:	744
Maximum Daily Value:	98.3	%	on Jul 25	Hours of Data:	727
Minimum Hourly Value:	26	%	on Jul 6 at hr 14	Hours of Missing Data:	17
Minimum Daily Value:	53.1	%	on Jul 7	Hours of Calibration:	0
Monthly Average:	73.8	%		Operational Uptime:	97.7

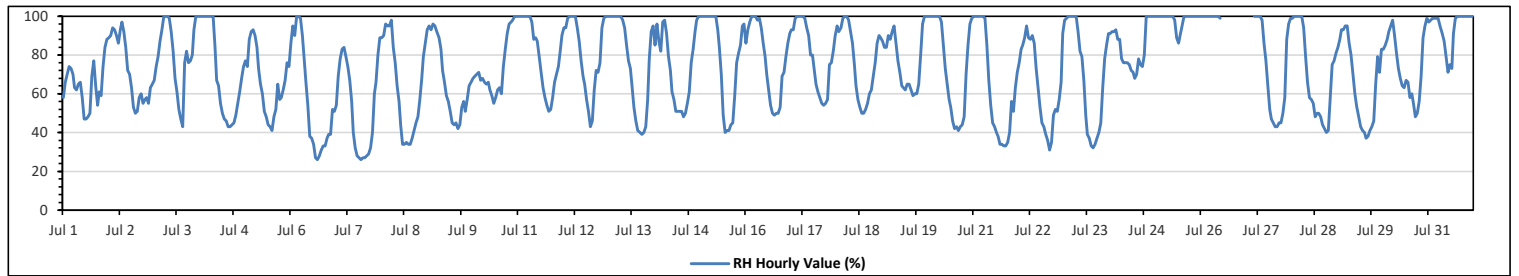
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	58	66	70	74	73	70	63	62	65	66	58	47	47	48	50	69	77	64	54	61	59	74	84	88	47	88	64.5
Jul 2	89	90	94	93	90	86	93	97	92	84	72	70	63	53	50	51	58	60	55	57	58	55	63	65	50	97	72.4
Jul 3	67	74	79	87	93	100	100	100	99	92	82	68	61	52	47	43	76	82	76	77	80	93	100	100	43	100	80.3
Jul 4	100	100	100	100	100	100	100	100	84	67	64	55	50	47	46	43	43	44	45	49	55	61	68	74	43	100	70.6
Jul 5	77	74	88	92	93	90	84	73	65	60	51	48	44	43	41	48	52	65	57	58	62	67	76	74	41	93	65.9
Jul 6	86	95	90	100	100	99	90	77	66	54	38	37	34	27	26	28	31	33	33	37	39	39	52	51	26	100	56.8
Jul 7	54	69	78	83	84	79	74	67	56	40	32	28	27	26	27	27	28	29	32	40	60	66	80	89	26	89	53.1
Jul 8	89	90	96	95	95	98	84	76	64	56	44	34	34	35	34	34	37	41	45	48	57	68	79	86	34	98	63.3
Jul 9	93	95	93	96	95	92	89	83	72	66	59	56	51	45	44	45	42	44	53	56	51	57	64	66	42	96	67.0
Jul 10	68	69	70	71	67	68	66	65	66	62	59	55	58	62	63	60	74	83	91	96	97	98	100	100	55	100	73.7
Jul 11	100	100	100	100	100	100	100	97	88	89	87	79	71	63	58	54	51	52	58	66	70	74	81	90	51	100	80.3
Jul 12	94	94	99	100	100	100	100	94	87	77	69	65	57	51	43	46	62	72	71	76	94	99	100	100	43	100	81.3
Jul 13	100	100	100	100	100	100	100	98	94	85	77	73	64	53	46	41	40	39	40	43	57	78	92	95	39	100	75.6
Jul 14	85	96	87	82	97	98	91	79	72	61	57	51	51	51	48	50	55	61	76	83	92	98	100	48	100	73.8	
Jul 15	100	100	100	100	100	100	100	100	93	84	70	49	40	41	41	44	45	59	76	81	85	95	96	40	100	79.1	
Jul 16	86	93	97	100	100	100	98	99	94	86	79	70	62	54	50	49	50	50	53	69	71	79	86	91	49	100	77.8
Jul 17	93	93	99	100	100	100	100	99	94	90	80	80	73	65	61	58	55	54	55	57	75	76	82	90	54	100	80.4
Jul 18	95	92	94	99	100	100	98	92	86	75	64	57	53	50	50	52	55	60	62	69	76	86	90	89	50	100	76.8
Jul 19	87	84	84	90	88	92	95	86	77	71	64	63	62	65	65	62	59	60	60	65	80	96	100	100	59	100	77.3
Jul 20	100	100	100	100	100	100	100	97	85	73	65	57	53	46	42	43	41	43	44	48	70	85	96	99	41	100	74.5
Jul 21	100	100	100	100	100	100	99	85	67	54	45	43	40	38	34	33	33	35	40	56	51	63	71	33	100	63.4	
Jul 22	76	83	85	89	95	89	88	90	86	73	63	53	45	43	39	36	31	35	49	52	51	57	66	91	31	95	65.2
Jul 23	98	99	100	100	100	100	92	82	79	67	49	39	37	33	32	34	37	40	45	63	78	85	91	32	100	70.0	
Jul 24	91	92	92	93	88	88	78	76	76	76	75	72	71	68	70	78	75	74	80	100	100	100	100	68	100	83.9	
Jul 25	100	100	100	100	100	100	100	100	100	100	98	89	86	91	95	100	100	100	100	100	100	100	100	86	100	98.3	
Jul 26	100	100	100	100	100	100	100	100	100	100	99	P	P	P	P	P	P	P	P	P	P	P	P	P	99	100	NA
Jul 27	P	P	P	P	100	100	100	100	98	86	77	64	52	47	45	43	43	45	45	50	58	88	96	99	43	100	71.8
Jul 28	99	100	100	100	100	100	94	79	66	58	57	55	48	50	50	48	44	42	40	41	58	75	77	81	40	100	69.3
Jul 29	84	88	93	93	95	95	86	80	70	60	53	48	43	41	40	37	38	41	43	46	65	79	71	83	37	95	65.5
Jul 30	83	85	88	92	95	98	90	81	73	68	64	63	67	66	58	60	55	48	50	56	69	89	95	99	48	99	74.7
Jul 31	97	98	99	99	99	99	95	91	87	79	71	75	73	91	99	100	100	100	100	100	100	100	100	71	100	93.8	
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	99	89	86	91	99	100	100	100	100	100	100	100	100	100	100	100	100
Diurnal Average	88.3	90.6	92.5	94.3	95.1	94.9	92.1	87.6	81.0	73.5	66.3	59.1	54.3	51.6	49.9	50.3	52.6	54.3	56.2	61.8	69.8	78.2	84.6	88.6			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.





**Peace River Area Monitoring Program**

**842-B Station - July 2023**

**Summary of Hourly Averages**

**AMBIENT TEMPERATURE (AT) in Degree Celsius**

Maximum Hourly Value:	30.1 °C	on Jul 9 at hr 15	Hours in Service:	744
Maximum Daily Value:	23.2 °C	on Jul 9	Hours of Data:	727
Minimum Hourly Value:	5.1 °C	on Jul 4 at hr 4	Hours of Missing Data:	17
Minimum Daily Value:	13.9 °C	on Jul 25	Hours of Calibration:	0
Monthly Average:	18.3 °C		Operational Uptime:	97.7

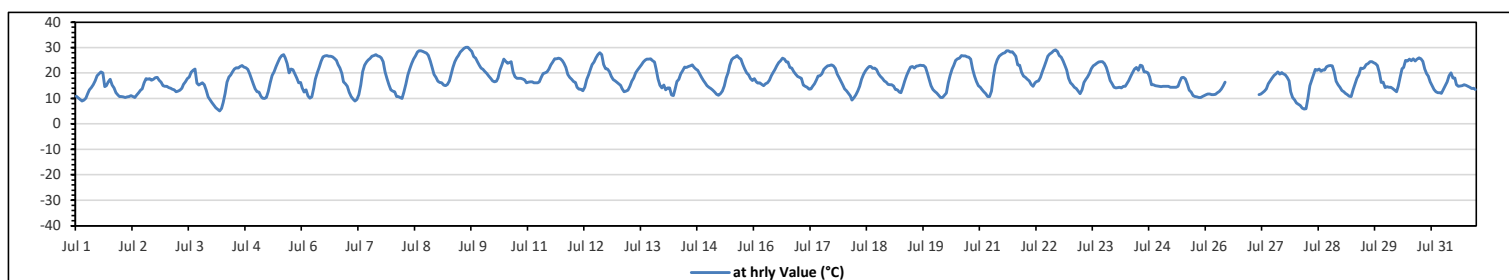
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	10.9	10.3	9.6	9.1	9.4	10.1	12	13.4	14.3	15.4	16.9	18.9	19.7	20.5	20.1	14.6	15	16.6	17.6	15.3	14.2	12.3	11.4	10.8	9.1	20.5	14.1
Jul 2	10.8	10.6	10.4	10.6	10.8	11.2	10.8	10.5	11.4	12.3	13.3	13.8	16.1	17.8	17.6	17.8	17.2	17.5	18.2	18.3	17.2	16.4	15	14.7	10.4	18.3	14.2
Jul 3	14.8	14.3	14.1	13.7	13.4	12.7	13	13.3	14.1	15.6	16.6	17.8	18.5	20.3	21.1	21.6	16	15.3	15.8	16.1	15.5	13.3	10.6	9.5	9.5	21.6	15.3
Jul 4	8.4	7.4	6.4	5.7	5.1	6.1	8.4	11.9	16.4	18.5	19.3	20.5	21.6	22.1	22	22.6	22.9	22.4	22.1	21.4	19.8	17.6	15.5	13.8	5.1	22.9	15.7
Jul 5	12.7	12.5	10.9	10.1	10	10.4	12.8	16.1	19	20.5	22.5	24.2	25.8	26.8	27.3	26	23.7	20.1	21.5	21.3	19.7	18.1	16.1	16.3	10.0	27.3	18.5
Jul 6	14.2	12.5	13.4	11	10.1	10.6	14	17.6	20	22.3	24.6	26.4	26.7	26.8	26.6	26.6	26.4	25.7	25	23.4	22	19.9	16.6	15.8	10.1	26.8	19.9
Jul 7	14.8	12.4	10.7	9.8	9.1	9.6	11.6	15.3	20.6	23.1	24.4	25.2	25.7	26.6	26.9	27.3	26.7	26.5	26	24.5	20.5	17.8	15.5	13.4	9.1	27.3	19.3
Jul 8	13	12.6	10.7	10.7	10.5	10	12.6	15.7	19.2	21.5	23.7	25.4	26.7	28.2	28.7	28.8	28.5	28.1	27.9	27	24.9	22.2	19.5	18.4	10.0	28.8	20.6
Jul 9	16.8	16.3	16.2	15.3	15.1	15.6	17	19.3	22.2	24.5	26	26.9	28.2	29.1	29.7	30.1	30.1	29.3	28.5	26.5	25.8	24.4	22.9	22	15.1	30.1	23.2
Jul 10	21.4	20.6	19.9	18.8	17.9	16.9	16.5	16.8	18.1	21.2	23.2	25.4	24.6	23.9	24	24.5	20.5	18.6	17.9	17.9	17.9	17.7	17.3	16.2	16.2	25.4	19.9
Jul 11	16.4	16.5	16.6	16.2	16.1	16.1	16.5	18.3	19.9	20	20.5	21.6	23.2	24.3	25.6	25.6	25.8	25.6	24.9	23.9	22.2	19.4	18.4	17.5	16.1	25.8	20.5
Jul 12	16.7	16.3	14.4	13.6	13.6	13.1	14.4	17.4	19.3	21.6	23.3	24.4	26	27.2	28	27.3	23.3	21.7	21.5	20.6	18.7	17.4	17	16.4	13.1	28.0	19.7
Jul 13	15.9	15.2	13.8	12.7	13	13.3	14.7	16.8	18.1	20.1	21.2	22.3	23.2	24.3	25.2	25.4	25.5	25.6	24.9	24.4	21.6	17.7	15.2	14.2	12.7	25.6	19.3
Jul 14	15.3	13.4	14.2	14.2	11.4	11.2	13.5	16.7	17.5	19.8	21	22.4	22.3	22.6	22.8	23.2	22.4	21.6	21.1	19.7	18.4	17.1	16.1	15.1	11.2	23.2	18.0
Jul 15	14.4	13.9	13.3	12.5	11.7	11.3	11.9	12.9	14.9	18.1	20.2	23.1	25.3	26	26.3	26.8	26	25.4	23.4	21.5	20.1	19.3	17.8	17.1	11.3	26.8	18.9
Jul 16	17.8	16.5	16	16.1	15.6	15.1	15.8	16.1	17.2	18.9	20	21.3	22.8	24	24.9	25.8	25.4	24.4	24.3	22.3	22	20.6	19.6	18.7	15.1	25.8	20.1
Jul 17	18.4	18	15.3	14.8	14.5	13.7	13.8	14.7	15.8	17.3	18.8	18.9	19.8	21.4	22.2	22.8	23	23.2	22.8	21.8	19.6	18.2	16.9	15.4	13.7	23.2	18.4
Jul 18	13.8	13.1	12	11	9.4	10.3	11.4	13	14.8	17.6	19.5	20.8	21.8	22.6	22.6	21.8	21.9	21.3	19.8	18.7	17.9	16.9	16.4	15.6	9.4	22.6	16.8
Jul 19	15.4	15.5	14.9	13.5	13.4	12.5	12.3	14.5	16.9	19.1	20.8	22.4	22.6	22	22.7	22.8	23.1	23	22.9	22.3	19.9	17.2	15.1	13.5	12.3	23.1	18.3
Jul 20	12.8	12.1	11.3	10.4	10.4	11.3	12.1	16.2	19.2	21.6	22.9	25	25.6	25.8	26.8	26.7	26.7	26.4	26.2	25.4	21.5	18.8	16.7	15	10.4	26.8	19.5
Jul 21	14.4	13.4	12.6	11.9	10.7	10.7	13	18.6	23	25.3	26.6	27.3	27.8	28	28.7	28.8	28.2	28.3	27.6	26.6	23.2	23.1	20.3	18.8	10.7	28.8	21.5
Jul 22	18.3	17.6	16.9	15.6	14.7	16.1	16.7	16.9	18.4	20.6	22.6	24.8	26.6	27.5	28	28.7	29.2	28.5	26.9	26.2	24.7	22.8	21.2	17.9	14.7	29.2	22.0
Jul 23	16.1	15.4	14.4	13.9	12.9	11.9	13.4	16.3	17.5	18.5	19.9	21.7	22.8	23.3	23.9	24.4	24.5	24.5	23.7	22.3	19.7	17.1	15.8	14.5	11.9	24.5	18.7
Jul 24	14.2	14.3	14.4	14.2	14.8	14.8	15.8	17.1	18.7	20.2	21.6	22.3	21.1	23.1	22.8	20.5	20.4	20.1	18.6	15.5	15.4	15	14.9	14.7	14.2	23.1	17.7
Jul 25	14.6	14.8	14.8	14.8	14.7	14.5	14.4	14.4	14.5	14.8	16.5	18.2	18.4	17.7	15.7	13.3	12.5	11.2	10.7	10.6	10.4	10.5	10.8	11.1	10.4	18.4	13.9
Jul 26	11.6	11.8	11.8	11.6	11.6	11.7	12.3	12.8	13.7	14.9	16.4	P	P	P	P	P	P	P	P	P	P	P	P	P	11.6	16.4	NA
Jul 27	P	P	P	P	11.5	11.8	12.3	13	13.8	15.9	16.9	18.1	19.1	19.7	20.5	19.6	20.2	19.8	19.3	18.4	17	12.6	10.5	9.5	9.5	20.5	16.0
Jul 28	8.3	7.8	7.2	6.3	5.9	6	10.1	15.1	17.3	19.6	21.4	21.1	21.5	20.7	21.2	21.2	22.5	22.8	23	22.8	20.4	16.8	15.5	14.5	5.9	23.0	16.2
Jul 29	13.2	12.7	12	11.6	10.9	10.7	13.4	15.7	18	19.3	22	21.7	22.1	23.4	23.7	24.5	24.5	24.1	23.7	23	20.2	16.3	16.4	14.3	10.7	24.5	18.2
Jul 30	14.6	14.5	14.4	13.9	13.3	12.6	14.8	18.3	21.7	22.3	25	24.8	25.4	24.9	25.6	24.8	25.5	26	25.6	24.6	21.6	19.8	18.8	16.6	12.6	26.0	20.4
Jul 31	15	13.5	12.6	12.2	12.2	12	13.5	15	16.6	18.9	20	18.1	18.1	15.4	14.7	14.9	15	15.5	15.2	14.7	14.5	13.9	14.1	13.5	12.0	20.0	15.0
Diurnal Maximum	21.4	20.6	19.9	18.8	17.9	16.9	17.0	19.3	23.0	25.3	26.6	27.3	28.2	29.1	29.7	30.1	30.1	29.3	28.5	27.0	25.8	24.4	22.9	22.0			
Diurnal Average	14.5	13.9	13.2	12.5	12.1	12.1	13.4	15.5	17.5	19.3	20.9	22.2	23.0	23.5	23.9	23.6	23.1	22.6	22.2	21.2	19.6	17.7	16.3	15.2			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.





**Peace River Area Monitoring Program**  
**842-B Station - July 2023**  
**Summary of Hourly Averages**  
**STATION TEMPERATURE (ST) in Degree Celsius**

Maximum Hourly Value:	24.0 °C	on Jul 13 at hr 4	Hours in Service:	744
Maximum Daily Value:	23.0 °C	on Jul 24	Hours of Data:	727
Minimum Hourly Value:	21.3 °C	on Jul 2 at hr 4	Hours of Missing Data:	17
Minimum Daily Value:	22.1 °C	on Jul 4	Hours of Calibration:	0
Monthly Average:	22.5 °C		Operational Uptime:	97.7

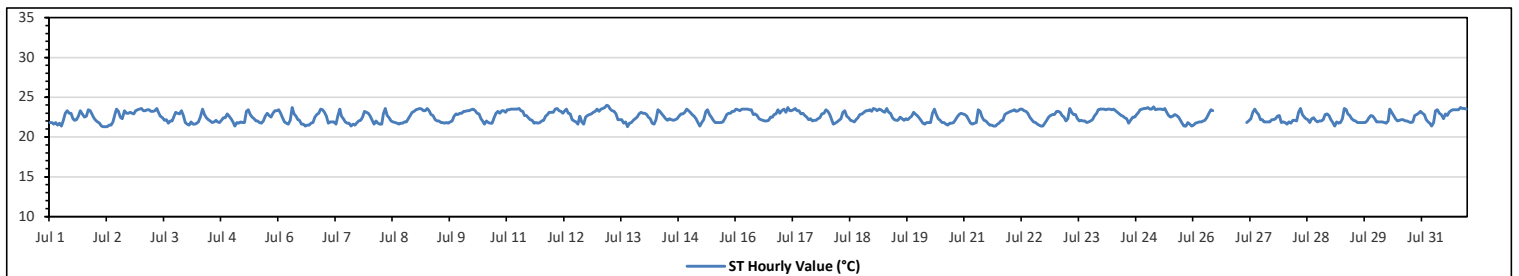
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	21.8	21.8	21.6	21.8	21.5	21.7	21.4	22.1	23.0	23.3	23.0	23.0	22.3	22.1	22.2	22.6	23.3	22.9	22.5	22.6	23.4	23.3	22.9	22.4	21.4	23.4	22.4
Jul 2	22.1	21.9	21.7	21.4	21.3	21.3	21.3	21.5	21.5	21.9	22.8	23.5	23.2	22.5	22.3	23.3	23.0	23.0	23.1	23.0	22.9	23.3	23.4	23.5	21.3	23.5	22.4
Jul 3	23.6	23.3	23.3	23.4	23.4	23.2	23.2	23.3	23.6	23.1	22.6	22.4	22.1	22.2	21.7	22.0	22.0	22.6	23.1	23.0	22.9	23.3	22.7	21.8	21.7	23.6	22.8
Jul 4	21.6	21.5	21.9	21.6	21.6	21.7	21.9	22.5	23.5	22.8	22.4	22.2	22.0	21.8	21.9	22.1	21.9	21.8	22.1	22.4	22.4	22.9	22.6	22.3	21.5	23.5	22.1
Jul 5	21.9	21.4	21.8	21.7	21.9	21.8	21.8	23.2	23.4	22.8	22.5	22.3	22.0	22.0	21.8	21.7	22.0	22.6	23.0	22.7	22.5	23.0	23.3	23.3	21.4	23.4	22.4
Jul 6	23.4	23.0	22.4	21.9	21.7	21.6	22.1	23.7	23.9	22.6	22.2	22.1	21.6	21.6	21.4	21.5	21.5	21.7	21.8	22.5	22.8	23.0	23.5	23.4	21.4	23.7	22.3
Jul 7	23.1	22.6	21.7	21.9	21.9	21.9	21.6	22.7	23.5	22.6	22.3	21.9	21.7	21.7	21.4	21.6	21.5	21.8	22.0	22.1	22.5	23.2	23.1	23.0	21.4	23.5	22.2
Jul 8	22.6	22.1	21.6	22.0	21.7	21.6	21.6	22.9	23.6	22.7	22.4	22.0	21.9	21.8	21.7	21.6	21.7	21.7	21.9	21.9	22.3	22.7	23.1	23.2	21.6	23.6	22.2
Jul 9	23.4	23.5	23.6	23.5	23.3	23.3	23.6	23.3	22.8	22.7	22.2	22.0	22.0	21.8	21.8	21.7	21.8	21.7	21.9	22.0	22.6	22.9	22.8	23.0	21.7	23.6	22.6
Jul 10	23.0	23.2	23.2	23.3	23.3	23.4	23.5	23.3	23.0	22.9	22.3	22.0	21.6	22.0	21.8	21.7	21.7	22.4	23.0	23.2	23.0	23.3	23.3	23.1	21.6	23.5	22.8
Jul 11	23.4	23.4	23.5	23.5	23.5	23.5	23.6	23.3	23.2	22.7	22.7	22.4	22.2	22.1	21.7	21.8	21.7	21.8	22.0	22.1	22.6	22.8	23.1	23.1	21.7	23.6	22.7
Jul 12	23.1	23.5	23.6	23.3	23.2	23.0	23.3	23.5	23.0	22.9	22.2	22.0	21.9	21.6	22.6	21.9	21.6	22.5	22.7	22.8	22.9	23.1	23.2	23.5	21.6	23.6	22.8
Jul 13	23.2	23.5	23.6	23.7	24.0	23.9	23.5	23.3	23.2	22.9	22.2	22.2	22.2	21.7	21.9	21.3	21.7	21.8	22.1	22.3	22.5	22.9	23.1	23.0	21.3	24.0	22.7
Jul 14	23.0	22.8	22.5	22.3	21.7	21.6	22.2	23.4	23.2	22.9	22.6	22.3	22.1	22.3	22.2	22.1	22.2	22.3	22.6	22.9	22.9	23.1	23.5	23.3	21.6	23.5	22.6
Jul 15	23.1	22.8	22.6	22.3	21.8	21.4	21.8	22.2	23.2	23.4	22.8	22.5	22.1	21.8	21.8	21.8	21.8	21.9	22.3	22.8	23.0	23.0	23.2	23.2	21.4	23.4	22.4
Jul 16	23.5	23.4	23.3	23.5	23.5	23.5	23.5	23.4	23.4	22.8	22.9	22.7	22.3	22.2	22.1	22.0	22.0	22.1	22.5	22.5	22.8	22.9	23.4	23.0	22.0	23.5	22.9
Jul 17	23.3	23.5	23.1	23.7	23.3	23.3	23.4	23.6	23.3	23.3	22.9	23.0	22.7	22.5	22.2	22.3	22.0	22.1	22.1	22.3	22.4	22.9	23.0	23.4	22.0	23.7	22.9
Jul 18	23.2	22.8	22.2	21.6	21.7	21.9	22.1	22.3	23.1	23.3	22.6	22.4	22.1	22.0	21.9	22.2	22.4	22.8	22.9	23.1	23.3	23.3	23.4	23.2	21.6	23.4	22.6
Jul 19	23.6	23.5	23.3	23.5	23.4	23.2	23.1	23.6	23.1	23.0	22.4	22.2	22.1	22.1	22.5	22.3	22.1	22.3	22.2	22.4	22.6	23.1	22.9	22.7	22.1	23.6	22.8
Jul 20	22.4	22.1	21.7	21.6	21.8	21.8	21.8	23.0	23.5	22.8	22.3	22.1	21.8	21.8	21.6	21.5	21.7	21.7	21.8	22.2	22.5	22.8	23.0	22.9	21.5	23.5	22.2
Jul 21	22.8	22.6	22.2	21.7	21.6	21.7	21.8	23.4	23.2	22.5	22.1	22.0	21.7	21.5	21.5	21.4	21.4	21.6	21.7	22.0	22.1	22.8	23.0	23.1	21.4	23.4	22.1
Jul 22	23.2	23.3	23.4	23.2	23.3	23.5	23.5	23.3	23.2	23.0	22.5	22.2	21.9	21.8	21.6	21.5	21.4	21.4	21.7	22.1	22.5	22.7	22.8	22.8	21.4	23.5	22.6
Jul 23	23.2	23.2	23.1	22.7	22.5	22.0	22.3	23.6	23.1	22.8	22.8	22.3	22.0	22.1	22.0	22.0	21.8	21.9	22.0	22.2	22.7	23.0	23.4	23.5	21.8	23.6	22.6
Jul 24	23.5	23.5	23.4	23.5	23.5	23.4	23.5	23.3	23.1	22.9	22.7	22.6	22.4	22.3	21.7	22.1	22.5	22.5	22.8	23.1	23.4	23.5	23.6	23.6	21.7	23.6	23.0
Jul 25	23.7	23.5	23.5	23.8	23.4	23.5	23.5	23.5	23.4	23.6	23.1	22.7	22.5	22.6	22.8	22.7	22.5	22.1	21.7	21.4	21.4	21.8	21.6	21.4	21.4	23.8	22.7
Jul 26	21.5	21.7	21.8	21.9	21.9	22.0	22.1	22.4	22.9	23.4	23.3														21.5	23.4	NA
Jul 27	P	P	P	P							P	P	P	P	P	P	P	P	P	P	P	P	P		21.8	23.5	22.3
Jul 28	21.8	21.6	21.9	21.7	22.1	22.1	22.0	23.1	23.6	22.8	22.5	22.3	22.2	21.8	22.3	22.4	22.1	21.9	22.0	22.0	22.2	22.8	22.9	22.7	21.6	23.6	22.3
Jul 29	22.2	21.8	21.4	21.9	21.7	21.8	22.3	23.6	23.4	22.9	22.7	22.3	22.1	22.0	21.8	21.8	21.8	21.8	22.0	22.4	22.7	22.6	22.3	21.4	23.6	22.2	
Jul 30	21.9	21.9	21.9	21.9	21.8	21.7	22.0	23.5	23.1	22.7	22.3	22.0	22.1	22.2	22.2	22.0	22.0	21.9	21.8	21.9	22.7	22.8	23.0	23.2	21.7	23.5	22.3
Jul 31	23.0	22.8	22.2	21.9	21.7	21.4	21.8	23.3	23.4	23.0	22.8	22.3	22.9	22.7	23.1	23.3	23.4	23.4	23.4	23.4	22.1	22.3	22.4	22.7	23.0	23.0	22.9
Diurnal Maximum	23.7	23.5	23.6	23.8	24.0	23.9	23.6	23.7	23.6	23.6	23.3	23.5	23.2	22.7	23.1	23.3	23.4	23.4	23.4	23.4	23.7	23.6	23.6	23.6			
Diurnal Average	22.8	22.7	22.6	22.5	22.4	22.4	22.5	23.1	23.2	22.9	22.6	22.3	22.1	22.0	22.0	22.0	22.0	22.1	22.3	22.4	22.7	23.0	23.0	22.9			

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>ND</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Peace River Area Monitoring Program

842-B Station - July 2023  
Summary of Hourly Averages

PRECIPITATION in mm

Maximum Hourly Value:	6.1 mm	on Jul 24 at hr 21	Hours in Service:	744
Maximum Daily Value:	12.2 mm	on Jul 24	Hours of Data:	727
Minimum Hourly Value:	0.0 mm	on Jul 1 at hr 0	Hours of Missing Data:	17
Minimum Daily Value:	0.0 mm	on Jul 4	Hours of Calibration:	0
Monthly Total:	39.2 mm		Operational Uptime:	97.7

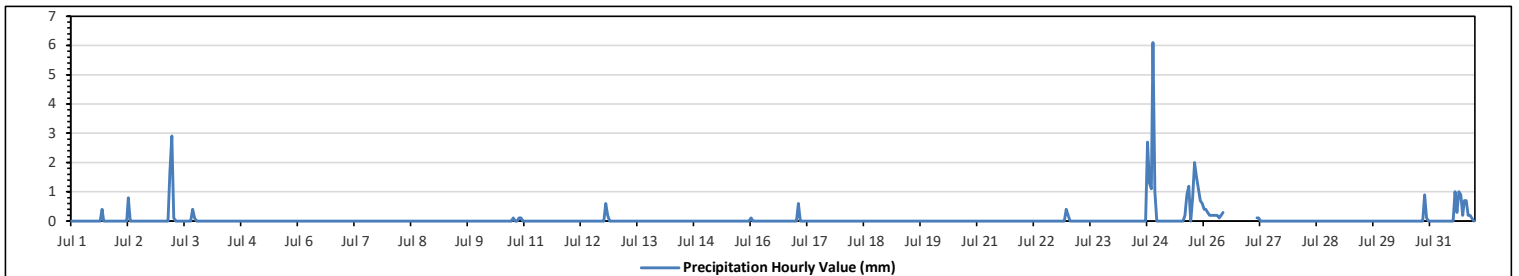
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0.0	0.4	0.4
Jul 2	0	0	0	0	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.8	0.8
Jul 3	0	0	0	0	1.7	2.9	0.1	0	0	0	0	0	0	0	0	0.4	0.1	0	0	0	0	0	0	0.0	2.9	5.2	
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0.1	0.0	0.0	0.3	
Jul 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0.2	0	0	0.0	0.6	0.8	
Jul 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 16	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1	
Jul 17	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.6	0.6	
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.0	0.4	0.4	
Jul 23	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.2	
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.7	1.3	1.1	6.1	1	0	0.0	6.1	12.2	
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9	1.2	0	0.8	2	1.5	1.1	0.7	0.6	0.0	2.0	9.0
Jul 26	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	P	P	P	P	P	P	P	P	P	P	P	P	0.1	0.4	NA	
Jul 27	P	P	P	P	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.2	
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0.1	0.0	0.9	1.0	
Jul 31	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1	0.9	0.2	0.7	0.7	0.2	0.2	0.1	0	0.0	1.0	5.3	
Diurnal Maximum	0.4	0.6	0.3	0.2	1.7	2.9	0.8	0.2	0.1	0.2	0.3	0.0	0.0	1.0	0.3	1.0	1.2	0.2	2.7	2.0	1.5	6.1	1.0	0.6			
Diurnal Average	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.3	0.1	0.0			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**

**842-B Station - July 2023**

**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr**

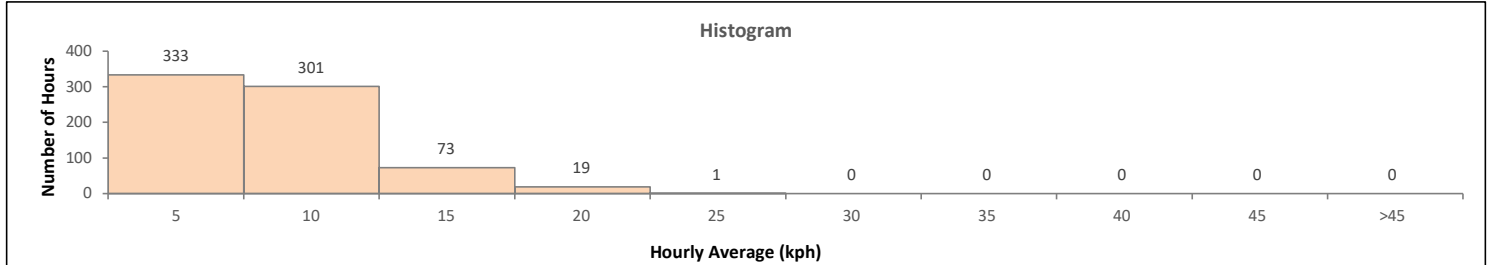
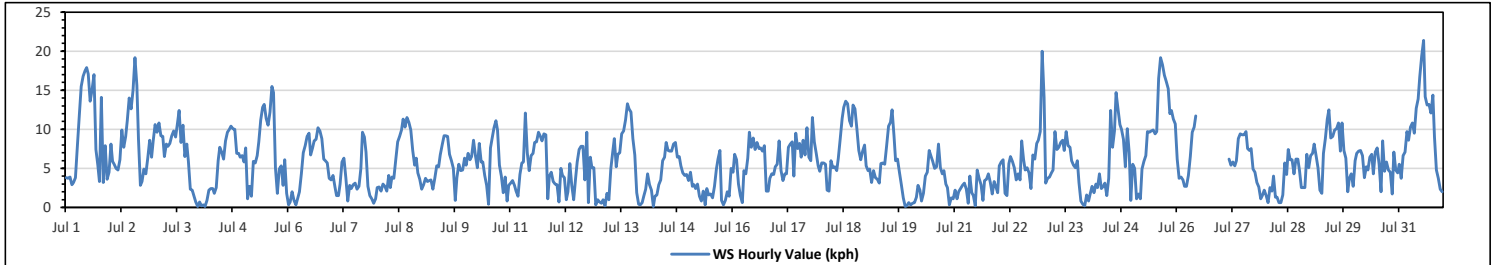
Maximum Hourly Value:	21.4 kph	on Jul 31 at hr 13	Hours in Service:	744
Maximum Daily Value:	10.2 kph	on Jul 31	Hours of Data:	727
Minimum Hourly Value:	0.1 kph	on Jul 3 at hr 23	Hours of Missing Data:	17
Minimum Daily Value:	2.5 kph	on Jul 21	Hours of Calibration:	0
Monthly Average:	2.0 kph		Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	3.8	3.7	3.9	2.9	3.2	3.8	7.8	11.7	15.5	16.8	17.5	17.9	17.1	13.6	15.1	17.0	7.4	5.4	3.3	14.1	3.2	7.9	3.6	4.5	2.9	17.9	9.2
Jul 2	8.1	5.9	5.5	5.0	4.8	6.1	9.9	7.7	9.1	11.1	14.0	12.6	15.0	19.2	15.6	8.7	2.8	3.3	4.9	4.3	6.3	8.6	6.4	8.5	2.8	19.2	8.5
Jul 3	10.6	9.6	10.8	9.2	9.1	6.5	8.1	7.8	8.2	9.2	9.8	9.0	10.8	12.4	8.3	10.5	6.5	8.1	5.9	2.3	2.2	1.5	0.7	0.1	0.1	12.4	7.4
Jul 4	0.7	0.2	0.3	0.1	0.9	2.2	2.4	2.4	1.8	2.5	6.0	7.7	7.1	6.2	8.5	9.6	10.0	10.4	10.1	10.0	6.9	6.9	6.4	6.6	0.1	10.4	5.2
Jul 5	5.8	7.6	1.1	2.7	1.4	5.9	5.7	6.6	8.4	11.2	12.8	13.2	11.4	10.5	12.2	15.5	14.7	5.1	1.8	4.9	5.3	2.8	6.1	1.8	1.1	15.5	7.3
Jul 6	0.3	0.7	2.0	0.9	0.3	1.2	2.0	4.3	7.0	7.9	9.1	9.5	6.7	7.6	8.5	8.7	10.2	9.8	8.8	6.2	6.0	5.7	3.7	3.5	0.3	10.2	5.4
Jul 7	4.1	2.6	1.5	1.5	3.0	5.8	6.3	3.8	0.8	2.8	2.4	2.9	3.1	2.3	2.7	5.0	9.6	9.0	7.1	2.7	1.5	1.1	0.5	1.1	0.5	9.6	3.5
Jul 8	2.5	2.6	2.1	3.0	2.7	2.1	4.1	2.5	3.9	3.7	6.1	8.4	9.1	9.9	11.3	10.3	11.5	10.9	9.9	7.3	5.4	6.3	4.4	3.6	2.1	11.5	6.0
Jul 9	2.3	2.9	3.7	3.3	3.4	3.5	2.3	3.7	5.3	5.2	6.7	8.0	9.2	9.2	9.1	6.8	6.0	5.0	0.9	3.8	5.5	4.7	4.8	6.3	0.9	9.2	5.1
Jul 10	5.4	6.9	6.1	6.5	8.6	6.6	5.1	8.2	5.8	5.8	4.1	2.8	0.4	7.6	8.8	10.2	11.1	9.9	5.4	4.0	1.9	3.9	0.8	2.8	0.4	11.1	5.8
Jul 11	3.1	3.4	2.8	2.1	1.4	4.2	5.7	5.8	12.1	7.0	4.7	6.6	6.9	8.3	8.4	9.6	9.1	8.5	9.4	9.3	1.1	4.0	4.5	3.3	1.1	12.1	5.9
Jul 12	3.0	2.9	0.7	5.0	4.1	3.8	1.0	2.0	5.6	2.8	1.0	3.7	5.8	7.4	7.8	7.8	3.5	9.6	0.6	6.4	5.1	5.1	0.3	1.0	0.3	9.6	4.0
Jul 13	0.7	0.5	1.0	0.2	1.8	1.0	4.9	7.1	8.8	5.2	6.8	7.0	9.4	9.8	11.2	13.3	12.6	12.2	8.8	6.7	1.9	0.4	0.3	0.6	0.2	13.3	5.5
Jul 14	1.4	2.3	4.3	2.9	2.2	0.1	1.4	1.6	2.9	3.5	6.0	6.4	8.3	7.3	7.2	7.2	8.1	8.3	6.4	6.5	5.3	4.4	4.1	4.2	0.1	8.3	4.7
Jul 15	3.4	4.5	2.7	2.9	2.4	3.0	1.4	0.8	2.1	0.3	2.4	1.6	1.7	1.2	2.7	4.9	6.2	7.3	0.9	0.3	0.9	2.0	1.4	5.0	0.3	7.3	2.6
Jul 16	4.5	6.8	6.1	3.0	1.5	0.6	4.7	4.3	6.3	9.6	7.7	8.9	7.4	8.3	7.5	7.6	7.2	7.9	2.1	2.1	3.7	4.3	4.2	5.2	0.6	9.6	5.5
Jul 17	5.5	8.5	4.7	3.4	4.3	4.3	7.7	8.1	8.4	4.0	9.5	7.5	8.2	6.4	8.6	6.7	10.2	6.4	6.0	11.5	8.4	6.9	5.3	4.6	3.4	11.5	6.9
Jul 18	5.7	5.7	5.5	2.2	2.1	6.0	5.1	5.2	4.7	6.3	8.8	11.4	12.8	13.6	13.3	13.1	10.4	13.1	12.6	10.1	7.3	6.1	7.2	8.0	2.1	13.6	8.1
Jul 19	5.3	4.7	4.9	3.2	4.7	3.8	3.6	3.1	5.6	5.7	5.5	7.9	10.4	10.9	12.5	9.2	6.0	6.2	4.5	2.9	1.2	0.1	0.2	0.6	0.1	12.5	5.1
Jul 20	0.3	0.5	0.6	1.3	2.8	2.2	0.8	1.8	4.0	4.5	7.3	6.5	5.9	5.0	5.2	8.1	5.1	4.3	4.7	3.0	2.5	0.3	1.2	1.1	0.3	8.1	3.3
Jul 21	2.2	1.1	2.0	2.4	2.8	3.1	2.3	0.5	4.0	1.9	1.5	0.2	4.8	3.7	2.9	0.9	3.4	3.6	4.3	3.2	1.7	3.3	2.7	1.9	0.2	4.8	2.5
Jul 22	5.3	5.8	6.1	1.8	1.5	5.6	6.5	5.9	5.1	3.5	4.3	3.5	8.5	6.1	4.8	5.1	4.4	2.4	6.7	6.2	8.2	8.6	9.7	20.0	1.5	20.0	6.1
Jul 23	14.1	3.1	3.7	3.9	4.4	4.8	9.7	7.4	7.7	8.3	8.6	7.3	9.7	7.9	7.7	6.0	5.4	5.1	6.0	3.2	0.8	0.4	0.2	1.6	0.2	14.1	5.7
Jul 24	0.8	1.7	2.7	1.9	3.0	2.5	4.3	2.4	2.7	3.1	1.5	3.7	12.4	7.7	9.8	14.7	12.6	10.6	10.0	8.7	5.2	10.1	7.0	0.9	0.8	14.7	5.8
Jul 25	5.5	5.0	1.1	1.7	1.1	4.9	5.9	6.6	9.7	9.6	9.8	9.9	9.4	9.7	16.5	19.2	18.3	16.9	16.1	15.2	12.0	12.4	11.3	10.7	1.1	19.2	9.9
Jul 26	6.2	3.7	3.9	3.5	2.7	2.7	4.1	6.5	9.6	10.3	11.7	P	P	P	P	P	P	P	P	P	P	P	P	P	2.7	11.7	NA
Jul 27	P	P	P	P	6.2	5.4	5.8	5.3	6.0	8.8	9.4	9.3	9.3	9.7	7.5	7.3	7.5	4.9	4.5	3.2	2.6	1.1	1.5	2.2	1.1	9.7	5.9
Jul 28	1.5	0.6	2.5	2.1	4.0	1.3	1.3	0.6	0.6	1.6	5.7	4.2	7.4	6.1	6.1	4.3	6.2	6.2	4.8	2.5	2.5	2.5	6.8	5.1	0.6	7.4	3.6
Jul 29	6.6	6.9	8.1	6.6	5.1	2.2	1.8	6.9	8.8	11.3	12.5	8.9	9.1	9.9	10.1	10.8	7.2	10.8	7.3	6.3	2.0	3.7	4.3	2.7	1.8	12.5	7.1
Jul 30	6.0	6.9	7.2	7.3	6.6	3.8	5.2	4.8	6.4	6.8	4.3	7.1	7.6	5.5	2.0	8.5	4.6	5.8	4.8	4.5	1.7	7.1	4.8	4.4	1.7	8.5	5.6
Jul 31	5.5	3.7	6.6	7.1	9.7	8.6	10.3	10.8	9.5	12.7	13.9	16.7	19.4	21.4	14.2	13.1	13.2	12.1	14.4	9.0	4.8	3.7	2.3	2.0	2.0	21.4	10.2
Diurnal Maximum	14.1	9.6	10.8	9.2	9.7	8.6	10.3	11.7	15.5	16.8	17.5	17.9	19.4	21.4	16.5	19.2	18.3	16.9	16.1	15.2	12.0	12.4	11.3	20.0			
Diurnal Average	4.3	4.0	3.8	3.3	3.6	3.8	4.7	5.0	6.3	6.5	7.5	7.7	8.8	8.8	8.9	9.3	8.4	8.0	6.4	6.0	4.1	4.5	3.9	4.1			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction/Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

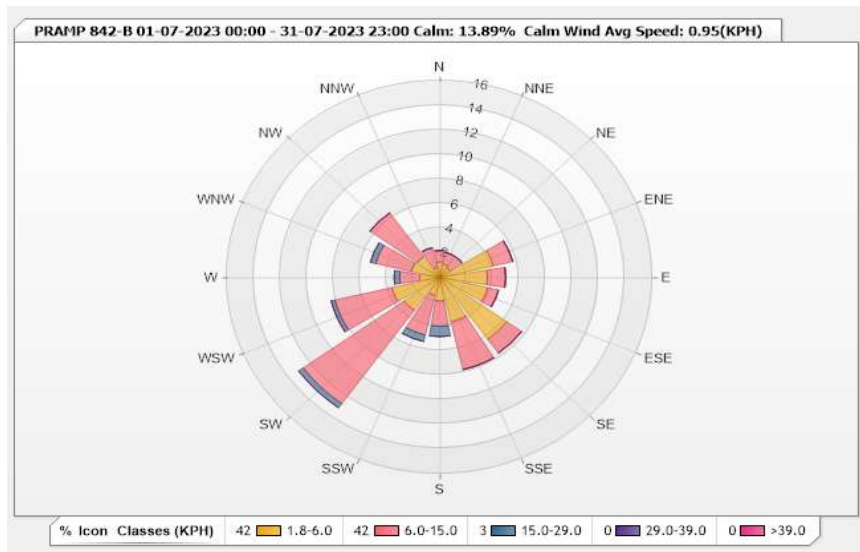


Station: PRAMP 842-B Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 13.89%      Valid Data: 97.72%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.24	0.96	0	0	0	2.2
NNE	1.1	0.96	0	0	0	2.06
NE	0.96	1.1	0	0	0	2.06
ENE	4.13	1.51	0	0	0	5.64
E	3.58	1.38	0	0	0	4.96
ESE	3.71	0.83	0	0	0	4.54
SE	6.19	1.38	0	0	0	7.57
SSE	3.71	3.99	0	0	0	7.7
S	1.93	2.06	0.83	0	0	4.82
SSW	1.51	3.3	0.55	0	0	5.36
SW	3.3	9.35	0.41	0	0	13.06
WSW	3.71	4.4	0.28	0	0	8.39
W	1.51	1.51	0.41	0	0	3.43
WNW	2.2	2.75	0.41	0	0	5.36
NW	2.06	4.4	0	0	0	6.46
NNW	0.83	1.65	0	0	0	2.48
Summary	41.67	41.53	2.89	0	0	86.09



Peace River Area Monitoring Program

842-B Station - July 2023

Summary of Hourly Averages

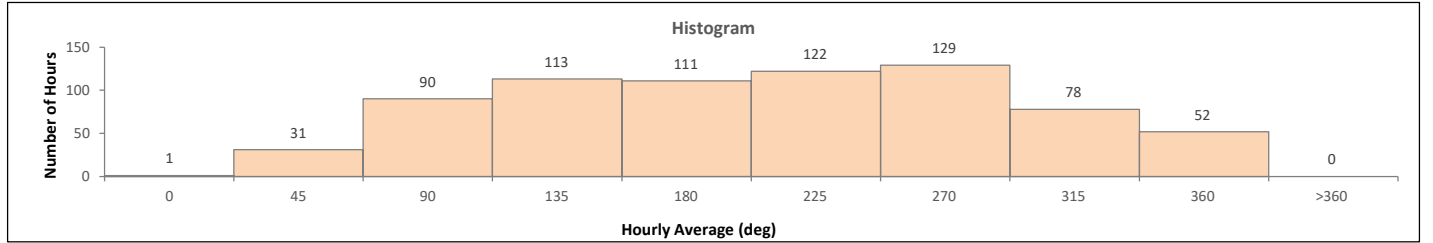
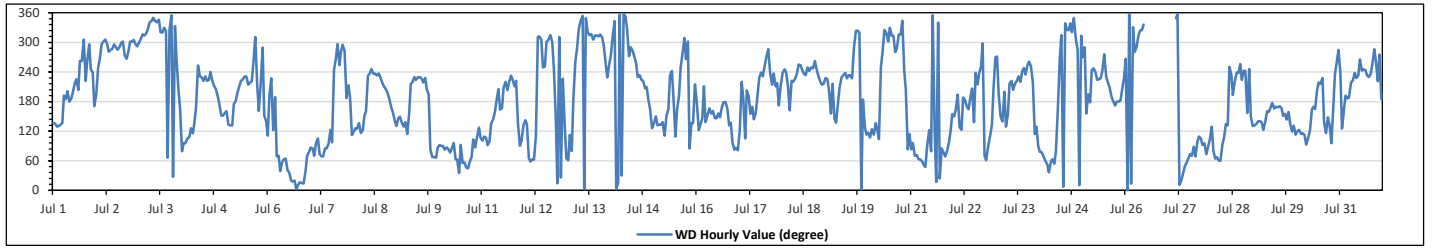
WIND DIRECTION (VWD) in sector

Monthly Average:	223 (SW) degree	Hours in Service:	744
		Hours of Data:	727
		Hours of Missing Data:	17
		Hours of Calibration:	0
		Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant	
Jul 1	SE	SE	SE	SE	SE	SE	S	S	SSW	S	S	SSW	SW	SW	SSW	W	W	NW	SW	W	WNW	WSW	WSW	S	209	SSW	
Jul 2	SSW	WSW	W	WNW	WNW	NW	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	W	W	WNW	WNW	WNW	WNW	WNW	WNW	289	WNW	
Jul 3	WNW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	330	NNW	
Jul 4	ENE	E	E	ESE	ESE	SE	ESE	SE	SSE	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SSW	SSW	S	S	SSE	206	SSW	
Jul 5	SSE	SSE	SE	SE	SE	S	S	SSW	SSW	SW	SW	SW	SW	SSW	SW	SW	WSW	NW	SSW	SSE	SW	WNW	SSE	SE	212	SSW	
Jul 6	ESE	S	SW	ESE	S	ENE	ENE	NE	ENE	ENE	NE	ENE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NE	ENE	ENE	33	NNE	
Jul 7	E	E	ENE	E	ESE	ENE	ENE	ENE	E	E	E	ESE	E	WSW	W	WNW	WSW	W	WNW	W	S	SSW	S	ESE	34	NE	
Jul 8	ESE	SE	SE	SE	ESE	ESE	SSE	SSE	SW	SW	WSW	SW	SW	SW	SW	SW	SSW	SSW	SSW	S	SSE	SSE	SE	206	SSW		
Jul 9	SE	SE	SSE	SE	SE	SE	ESE	SSE	SW	SW	SW	SW	SW	SW	SW	SW	SSW	S	E	ENE	ENE	ENE	E	188	S		
Jul 10	E	E	E	E	E	E	ENE	E	ENE	ENE	NE	E	NE	NE	NE	NE	ENE	ENE	ESE	E	ESE	ESE	E	73	ENE		
Jul 11	E	ESE	ESE	E	E	SE	SSE	S	SSW	SSE	SSE	SSW	SW	SSW	SW	SW	SW	SSW	SW	SE	E	E	SE	186	S		
Jul 12	SE	SE	ENE	ENE	ENE	ENE	ESE	NW	NW	WNW	WSW	WSW	WNW	WNW	NW	WNW	WSW	SSE	NNE	NW	NNE	SW	SE	ENE	313	NW	
Jul 13	ENE	ESE	E	S	WSW	WNW	NW	NNW	N	NNW	NW	NW	NW	NW	NW	NW	NW	NW	NW	WNW	WSW	WSW	WSW	254	WSW		
Jul 14	W	NW	NNW	N	NNE	N	NNE	N	NW	W	WNW	WNW	W	WSW	SW	SW	SW	SSW	SSW	S	SSE	SE	SSE	SE	254	WSW	
Jul 15	SE	SSE	SE	SE	SE	SE	ESE	SSE	SW	WSW	S	ESE	SSE	S	WSW	W	NW	W	WNW	E	SE	SE	SSW	187	S		
Jul 16	S	ESE	SE	SE	SSW	SE	SSE	SSE	SSE	SSE	SE	SE	SSE	SE	SSE	S	S	SSE	SE	SE	E	E	E	148	SE		
Jul 17	ESE	SW	S	ESE	SSW	S	SSE	SSE	SE	SSE	SSW	SW	WSW	SW	WSW	W	WNW	SW	SSW	SW	SSW	SW	S	SSW	210	SSW	
Jul 18	SW	WSW	WSW	SSW	SSE	SW	SW	SW	SW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	WSW	W	WSW	SW	SW	SSW	SW	239	WSW	
Jul 19	SW	SW	SSW	SSE	SW	SE	SE	S	SSW	SW	SW	SW	SW	SW	SW	SW	SW	NW	NW	N	S	SE	ESE	231	SW		
Jul 20	ESE	ESE	ESE	ESE	SE	ESE	ESE	WSW	W	NW	NW	WNW	NNW	NW	NW	W	WNW	NW	NW	NNW	WSW	SSW	E	ESE	306	NW	
Jul 21	E	E	ENE	ENE	ENE	ENE	ENE	NE	NE	E	ESE	ENE	N	ESE	NNE	NNE	E	ENE	ENE	E	E	ESE	E	ESE	70	ENE	
Jul 22	SSE	SSE	SSW	SE	ESE	S	S	S	SSE	S	SSW	SE	SW	SSW	SW	WSW	WNW	ENE	ENE	E	ESE	SE	SSW	W	189	S	
Jul 23	W	SSW	SSE	SE	SSW	SE	SSE	SW	SSW	SW	SW	SW	SW	WSW	WSW	SW	WSW	WSW	W	WSW	SW	ESE	SE	E	220	SW	
Jul 24	ENE	ENE	ENE	ENE	NE	NE	ENE	ENE	NE	ENE	SSE	W	NW	N	NNW	NW	NNW	NW	NNW	NW	NNW	NW	NW	NW	341	NNW	
Jul 25	W	WNW	SSE	SSW	S	WSW	WSW	WSW	SW	SW	WSW	W	SW	SW	SSW	S	S	S	S	S	S	S	S	SSW	SW	210	SSW
Jul 26	W	N	N	NNE	NNW	W	WNW	NW	NW	NW	NNW	P	P	P	P	P	P	P	P	P	P	P	P	P	NA	NA	
Jul 27	P	P	P	P	NNW	N	NNE	NNE	NNE	NE	NE	ENE	ENE	ENE	E	ENE	E	ESE	ESE	E	ENE	E	ESE	E	62	ENE	
Jul 28	SE	E	ENE	ENE	ENE	ENE	E	ESE	SE	SE	WSW	SW	S	SW	WSW	SW	WSW	WSW	WSW	WSW	SSE	WSW	SSE	SE	206	SSW	
Jul 29	SE	SE	SE	SE	SE	ESE	SE	SSE	SSE	SSE	S	SSE	SSE	SSE	SSE	SSE	SSE	SE	SSE	SE	SSE	SE	ESE	SE	155	SSE	
Jul 30	ESE	ESE	ESE	ESE	ESE	E	ESE	ESE	SSE	SSE	SSW	SW	SW	SW	SE	ESE	SE	SE	E	SSE	SW	WSW	WNW	152	SSE		
Jul 31	SW	SE	SSE	S	S	S	SW	SW	SW	SW	W	WSW	WSW	WSW	SW	SW	SW	WSW	WNW	WSW	SW	W	S	234	SW		

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	Invalid Data (Machine Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "\*" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "\*" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**

**842-B Station - July 2023**

**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector**

<b>WIND SPEED</b>					
Maximum Hourly Value:	21.4	kph	on Jul 31 at hr 13	Hours in Service:	744
Maximum Daily Value:	10.2	kph	on Jul 31	Hours of Data:	727
Minimum Hourly Value:	0.1	kph	on Jul 3 at hr 23	Hours of Missing Data:	17
Minimum Daily Value:	2.5	kph	on Jul 21	Hours of Calibration:	0
Monthly Average:	2.0	kph		Operational Uptime:	97.7

<b>WIND DIRECTION</b>	
Monthly Average:	223 degree (SW)

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	3.8	3.7	3.9	2.9	3.2	3.8	7.8	11.7	15.5	16.8	17.5	17.9	17.1	13.6	15.1	17.0	7.4	5.4	3.3	14.1	3.2	7.9	3.6	4.5	2.9	17.9	9.2	
Jul 2	8.1	5.9	5.5	5.0	4.8	6.1	9.9	7.7	9.1	11.1	14.0	12.6	15.0	19.2	15.6	8.7	2.8	3.3	4.9	4.3	6.3	8.6	6.4	8.5	2.8	19.2	8.5	
Jul 3	10.6	9.6	10.8	9.2	9.1	6.5	8.1	7.8	8.2	9.2	9.8	9.0	10.8	12.4	8.3	10.5	6.5	8.1	5.9	2.3	2.2	1.5	0.7	0.1	0.1	12.4	7.4	
Jul 4	0.7	0.2	0.3	0.1	0.9	2.2	2.4	2.4	1.8	2.5	6.0	7.7	7.1	6.2	8.5	9.6	10.0	10.4	10.1	10.0	6.9	6.9	6.4	6.6	0.1	10.4	5.2	
Jul 5	5.8	7.6	1.1	2.7	1.4	5.9	5.7	6.6	8.4	11.2	12.8	13.2	11.4	10.5	12.2	15.5	14.7	5.1	1.8	4.9	5.3	2.8	6.1	1.8	1.1	15.5	7.3	
Jul 6	0.3	0.7	2.0	0.9	0.3	1.2	2.0	4.3	7.0	7.9	9.1	9.5	6.7	7.6	8.5	8.7	10.2	9.8	8.8	6.2	6.0	5.7	3.7	3.5	0.3	10.2	5.4	
Jul 7	4.1	2.6	1.5	1.5	3.0	5.8	6.3	3.8	0.8	2.8	2.4	2.9	3.1	2.3	2.7	5.0	9.6	9.0	7.1	2.7	1.5	1.1	0.5	1.1	0.5	9.6	3.5	
Jul 8	2.5	2.6	2.1	3.0	2.7	2.1	4.1	2.5	3.9	3.7	6.1	8.4	9.1	9.9	11.3	10.3	11.5	10.9	9.9	7.3	5.4	6.3	4.4	3.6	2.1	11.5	6.0	
Jul 9	2.3	2.9	3.7	3.3	3.4	3.5	2.3	3.7	5.3	5.2	6.7	8.0	9.2	9.2	9.1	6.8	6.0	5.0	0.9	3.8	5.5	4.7	4.8	6.3	0.9	9.2	5.1	
Jul 10	5.4	6.9	6.1	6.5	8.6	6.6	5.1	8.2	5.8	5.8	4.1	2.8	0.4	7.6	8.8	10.2	11.1	9.9	5.4	4.0	1.9	3.9	0.8	2.8	0.4	11.1	5.8	
Jul 11	3.1	3.4	2.8	2.1	1.4	4.2	5.7	5.8	12.1	7.0	4.7	6.6	6.9	8.3	8.4	9.6	9.1	8.5	9.4	9.3	1.1	4.0	4.5	3.3	1.1	12.1	5.9	
Jul 12	3.0	2.9	0.7	5.0	4.1	3.8	1.0	2.0	5.6	2.8	1.0	3.7	5.8	7.4	7.8	7.8	3.5	9.6	0.6	6.4	5.1	5.1	0.3	1.0	0.3	9.6	4.0	
Jul 13	0.7	0.5	1.0	0.2	1.8	1.0	4.9	7.1	8.8	5.2	6.8	7.0	9.4	9.8	11.2	13.3	12.6	12.2	8.8	6.7	1.9	0.4	0.3	0.6	0.2	13.3	5.5	
Jul 14	1.4	2.3	4.3	2.9	2.2	0.1	1.4	1.6	2.9	3.5	6.0	6.4	8.3	7.3	7.2	7.2	8.1	8.3	6.4	6.5	5.3	4.4	4.1	4.2	0.1	8.3	4.7	
Jul 15	3.4	4.5	2.7	2.9	2.4	3.0	1.4	0.8	2.1	0.3	2.4	1.6	1.7	1.2	2.7	4.9	6.2	7.3	0.9	0.3	0.9	2.0	1.4	5.0	0.3	7.3	2.6	
Jul 16	4.5	6.8	6.1	3.0	1.5	0.6	4.7	4.3	6.3	9.6	7.7	8.9	7.4	8.3	7.5	7.6	7.2	7.9	2.1	2.1	3.7	4.3	4.2	5.2	0.6	9.6	5.5	
Jul 17	5.5	8.5	4.7	3.4	4.3	4.3	7.7	8.1	8.4	4.0	9.5	7.5	8.2	6.4	8.6	6.7	10.2	6.4	6.0	11.5	8.4	6.9	5.3	4.6	3.4	11.5	6.9	
Jul 18	5.7	5.7	5.5	2.2	2.1	6.0	5.1	5.2	4.7	6.3	8.8	11.4	12.8	13.6	13.3	11.1	10.4	13.1	12.6	10.1	7.3	6.1	7.2	8.0	2.1	13.6	8.1	
Jul 19	5.3	4.7	4.9	3.2	4.7	3.8	3.6	3.1	5.6	5.7	5.5	7.9	10.4	10.9	12.5	9.2	6.0	6.2	4.5	2.9	1.2	0.1	0.2	0.6	0.1	12.5	5.1	
Jul 20	0.3	0.5	0.6	1.3	2.8	2.2	0.8	1.8	4.0	4.5	7.3	6.5	5.9	5.0	5.2	8.1	5.1	4.3	4.7	3.0	2.5	0.3	1.2	1.1	0.3	8.1	3.3	
Jul 21	2.2	1.1	2.0	2.4	2.8	3.1	2.3	0.5	4.0	1.9	1.5	0.2	4.8	3.7	2.9	0.9	3.4	3.6	4.3	3.2	1.7	3.3	2.7	1.9	0.2	4.8	2.5	
Jul 22	5.3	5.8	6.1	1.8	1.5	5.6	6.5	5.9	5.1	3.5	4.3	3.5	8.5	6.1	4.8	5.1	4.4	2.4	6.7	6.2	8.2	8.6	9.7	20.0	1.5	20.0	6.1	
Jul 23	14.1	3.1	3.7	3.9	4.4	4.8	9.7	7.4	7.7	8.3	8.6	7.3	9.7	7.9	7.7	6.0	5.4	5.1	6.0	3.2	0.8	0.4	0.2	1.6	0.2	14.1	5.7	
Jul 24	0.8	1.7	2.7	1.9	3.0	2.5	4.3	2.4	2.7	3.1	1.5	3.7	12.4	7.7	9.8	14.7	12.6	10.6	10.0	8.7	5.2	10.1	7.0	0.9	0.8	14.7	5.8	
Jul 25	5.5	5.0	1.1	1.7	1.1	4.9	5.9	6.6	9.7	9.6	9.8	9.9	9.4	9.7	16.5	19.2	18.3	16.9	16.1	15.2	12.0	12.4	11.3	10.7	1.1	19.2	9.9	
Jul 26	6.2	3.7	3.9	3.5	2.7	2.7	4.1	6.5	9.6	10.3	11.7	P	P	P	P	P	P	P	P	P	P	P	P	P	2.7	11.7	NA	
Jul 27	P	P	P	P	P	6.2	5.4	5.8	5.3	6.0	8.8	9.4	9.3	9.3	9.7	7.5	7.3	7.5	4.9	4.5	3.2	2.6	1.1	1.5	2.2	1.1	9.7	5.9
Jul 28	1.5	0.6	2.5	2.1	4.0	1.3	1.3	0.6	0.6	1.6	5.7	4.2	7.4	6.1	6.1	4.3	6.2	6.2	4.8	2.5	2.5	2.5	6.8	5.1	0.6	7.4	3.6	
Jul 29	6.6	6.9	8.1	6.6	5.1	2.2	1.8	6.9	8.8	11.3	12.5	8.9	9.1	9.9	10.1	10.8	7.2	10.8	7.3	6.3	2.0	3.7	4.3	2.7	1.8	12.5	7.1	
Jul 30	6.0	6.9	7.2	7.3	6.6	3.8	5.2	4.8	6.4	6.8	4.3	7.1	7.6	5.5	2.0	8.5	4.6	5.8	4.8	4.5	1.7	7.1	4.8	4.4	1.7	8.5	5.6	
Jul 31	5.5	3.7	6.6	7.1	9.7	8.6	10.3	10.8	9.5	12.7	13.9	16.7	19.4	21.4	14.2	13.1	13.2	12.1	14.4	9.0	4.8	3.7	2.3	2.0	2.0	21.4	10.2	
SW	SE	SSE	S	S	S	SW	SW	SW	SW	SW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## RENO -B STATION

**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

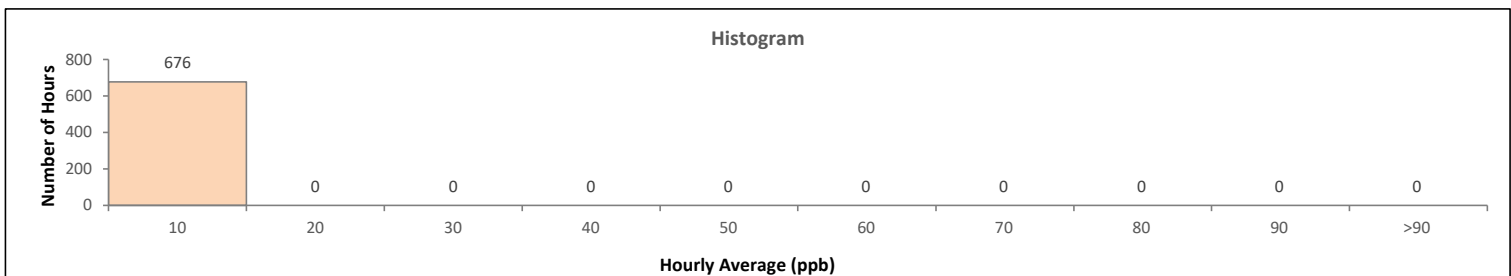
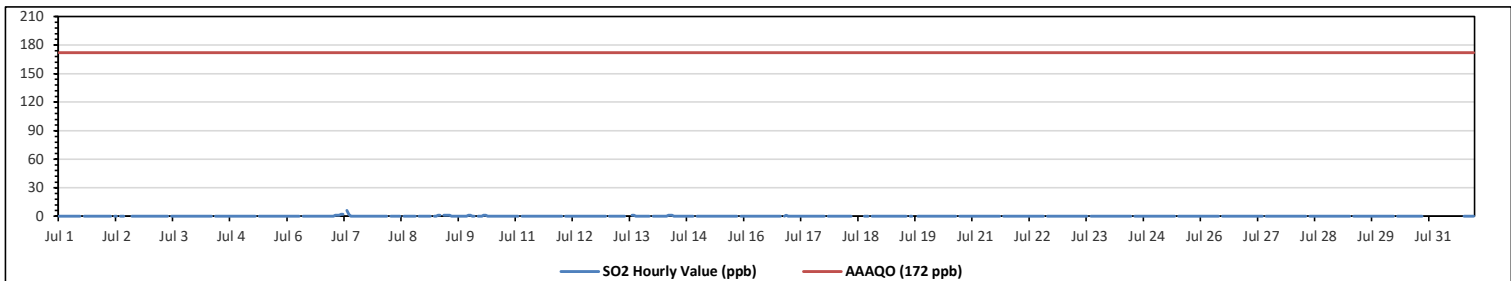
**Summary of Hourly Averages**

**SULPHUR DIOXIDE (SO<sub>2</sub>) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																												
Number of 1-Hour Exceedances: 0					Number of 24-Hour Exceedances: 0					30-Day Exceedence: 0																		
Maximum Hourly Value: 6 ppb on Jul 7 at hr 7					Hours in Service: 744																							
Maximum Daily Value: 0.7 ppb on Jul 7					Hours of Data: 676																							
Minimum Hourly Value: 0 ppb on Jul 1 at hr 0					Hours of Missing Data: 30																							
Minimum Daily Value: 0.0 ppb on Jul 1					Hours of Calibration: 38																							
Monthly Average: 0.0 ppb					Operational Uptime: 96.0																							
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 2	0	0	0	0	K	0	0	K	0	0	0	S	0	K	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 3	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 4	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 5	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 6	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 7	0	1	1	1	2	2	S	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0.7
Jul 8	0	0	0	0	0	S	0	0	0	0	0	0	K	0	0	0	0	0	0	0	0	K	0	0	0	0	0	0.0
Jul 9	0	0	0	0	S	0	0	1	1	K	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0.3
Jul 10	1	0	0	S	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1
Jul 11	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 12	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 13	S	0	0	0	0	0	0	0	0	0	K	0	K	1	1	0	0	0	0	0	0	0	0	0	S	0	1	0.1
Jul 14	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0
Jul 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	0	0	1	0.0
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0
Jul 18	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	S	0	0	0	0	0	0	0	NA
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	K	0	0	S	K	0	0	0	0	0	0	0	0.0
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 25	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 26	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 27	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 28	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 29	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 30	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	0.0
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	S	0	0	0	0	0	0	0	0	0	NA
Diurnal Maximum	1	1	1	1	2	2	0	6	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1			
Diurnal Average	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error            **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** Invalid Data (Equipment Malfunction/Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



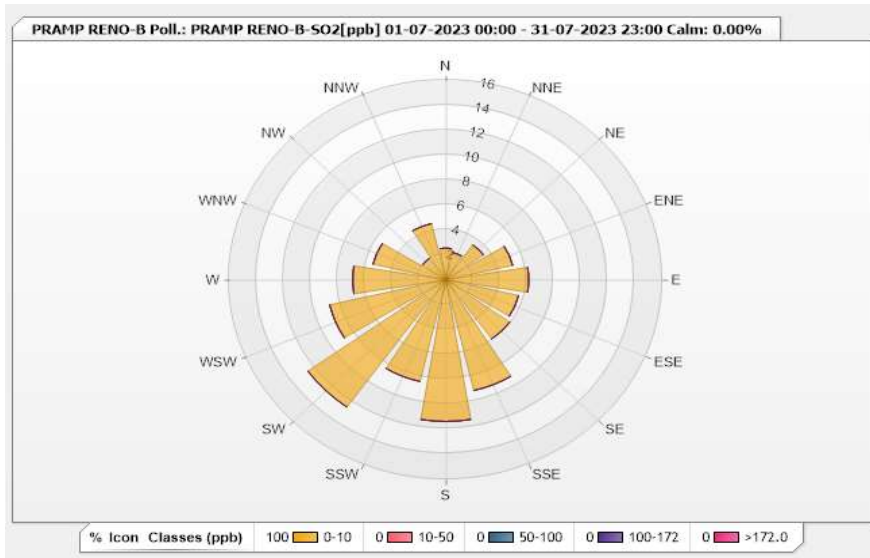


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 90.05%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	2.54	0	0	0	0	2.54
NNE	2.24	0	0	0	0	2.24
NE	3.43	0	0	0	0	3.43
ENE	5.07	0	0	0	0	5.07
E	6.12	0	0	0	0	6.12
ESE	5.52	0	0	0	0	5.52
SE	5.82	0	0	0	0	5.82
SSE	9.1	0	0	0	0	9.1
S	11.34	0	0	0	0	11.34
SSW	8.36	0	0	0	0	8.36
SW	12.54	0	0	0	0	12.54
WSW	8.81	0	0	0	0	8.81
W	6.87	0	0	0	0	6.87
WNW	5.52	0	0	0	0	5.52
NW	2.09	0	0	0	0	2.09
NNW	4.63	0	0	0	0	4.63
Summary	100	0	0	0	0	100



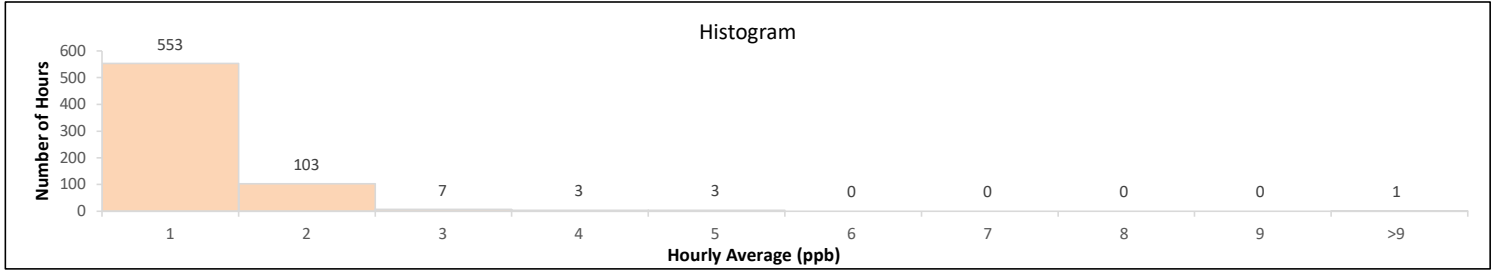
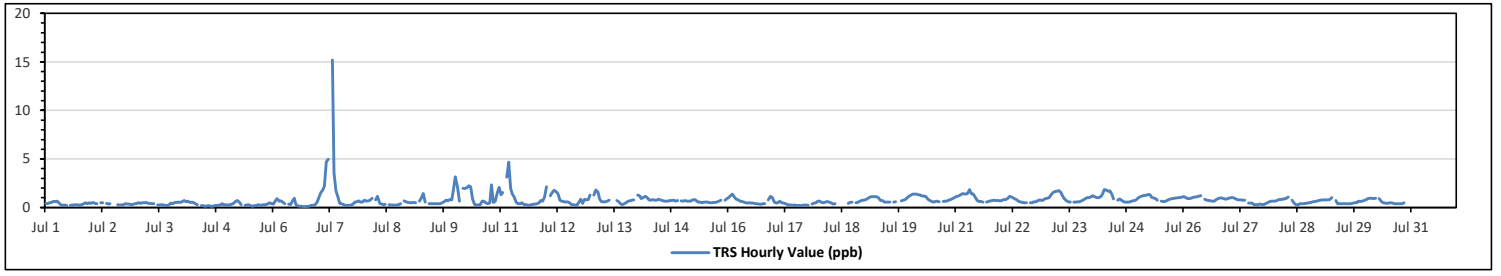
**Peace River Area Monitoring Program**  
**Reno-B Station - July 2023**  
**Summary of Hourly Averages**  
**TOTAL REDUCED SULPHUR (TRS) in ppb**

Maximum Hourly Value:	15.20	ppb	on Jul 7 at hr 7	Hours in Service:	744
Maximum Daily Value:	1.87	ppb	on Jul 7	Hours of Data:	670
Minimum Hourly Value:	0.08	ppb	on Jul 6 at hr 16	Hours of Missing Data:	37
Minimum Daily Value:	0.32	ppb	on Jul 5	Hours of Calibration:	37
Monthly Average:	0.73	ppb		Operational Uptime:	95.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Jul 1	0.43	0.36	0.46	0.51	0.6	0.62	0.65	0.48	0.3	0.2	0.25	0.19	S	0.22	0.26	0.24	0.29	0.25	0.25	0.29	0.4	0.49	0.37	0.49	0.19	0.65	0.37		
Jul 2	0.43	0.51	0.43	0.37	K	0.48	0.46	K	0.43	0.34	0.36	S	0.34	K	0.27	0.24	0.24	0.28	0.37	0.34	0.34	0.3	0.33	0.4	0.24	0.51	0.36		
Jul 3	0.42	0.47	0.41	0.48	0.47	0.52	0.42	0.41	0.4	0.39	S	0.26	0.24	0.28	0.24	0.23	0.17	0.24	0.44	0.39	0.52	0.52	0.54	0.51	0.17	0.54	0.39		
Jul 4	0.6	0.7	0.58	0.65	0.51	0.56	0.5	0.35	0.29	S	0.17	0.18	0.13	0.15	0.18	0.14	0.12	0.18	0.17	0.21	0.26	0.39	0.25	0.28	0.12	0.70	0.33		
Jul 5	0.22	0.29	0.33	0.42	0.6	0.7	0.55	0.3	S	0.22	0.24	0.28	0.17	0.14	0.17	0.19	0.31	0.23	0.25	0.27	0.28	0.35	0.47	0.37	0.14	0.70	0.32		
Jul 6	0.35	0.63	0.9	0.64	0.69	0.56	0.37	S	0.34	0.3	0.66	0.94	0.28	0.15	0.11	0.1	0.08	0.08	0.14	0.13	0.2	0.23	0.28	0.52	0.08	0.94	0.38		
Jul 7	1.04	1.53	1.8	2.21	4.71	4.98	S	15.2	3.56	1.75	1.09	0.43	0.36	0.27	0.23	0.22	0.21	0.24	0.34	0.55	0.59	0.68	0.56	0.54	0.21	15.20	1.87		
Jul 8	0.74	0.65	0.69	0.73	0.95	S	0.78	1.14	0.42	0.35	0.29	0.32	K	0.3	0.26	0.26	0.22	0.26	0.3	0.4	K	0.69	0.58	0.51	0.22	1.14	0.52		
Jul 9	0.49	0.48	0.51	0.5	S	0.64	0.98	1.43	0.54	K	0.38	0.4	0.36	0.36	0.38	0.37	0.39	0.48	0.58	0.75	0.69	0.81	0.78	1.76	0.36	1.76	0.64		
Jul 10	3.13	2.11	0.66	S	1.97	1.97	1.98	2.22	2.12	0.88	0.33	0.26	0.25	0.28	0.67	0.65	0.49	0.38	0.48	2.33	0.51	0.63	1.48	2.08	0.25	3.13	1.21		
Jul 11	1.31	1.53	S	3.11	4.67	1.95	1.4	1.07	0.57	0.39	0.38	0.46	0.32	0.27	0.26	0.23	0.27	0.32	0.34	0.37	0.5	0.72	0.67	1.07	0.23	4.67	0.96		
Jul 12	2.14	S	1.21	1.56	1.77	1.62	1.41	0.75	0.63	0.6	0.53	0.59	0.47	0.32	0.29	0.24	0.23	0.52	0.85	0.42	0.85	0.79	0.8	1.29	0.23	2.14	0.86		
Jul 13	S	1.26	1.81	1.57	0.87	0.59	0.59	0.66	0.76	K	0.63	K	0.72	0.58	0.4	0.31	0.38	0.49	0.67	0.69	0.76	0.77	S	0.31	1.81	0.76	0.31	1.81	0.76
Jul 14	1.28	1.22	0.9	1.03	1.14	1.01	0.77	0.76	0.82	0.76	0.75	0.85	0.79	0.7	0.66	0.67	0.67	0.71	0.72	0.73	0.65	0.71	S	0.68	0.65	1.28	0.83		
Jul 15	0.66	0.7	0.66	0.63	0.64	0.78	0.8	0.68	0.57	0.56	0.5	0.53	0.54	0.53	0.5	0.5	0.52	0.51	0.58	0.64	0.74	S	0.76	0.91	0.50	0.91	0.63		
Jul 16	1.02	1.21	1.39	1.08	0.85	0.77	0.65	0.61	0.57	0.5	0.44	0.47	0.45	0.44	0.37	0.37	0.34	0.33	0.37	0.39	S	0.77	1.14	1	0.33	1.39	0.68		
Jul 17	0.57	0.45	0.5	0.63	0.48	0.45	0.36	0.31	0.26	0.24	0.22	0.25	0.17	0.2	0.18	0.2	0.24	0.26	0.23	S	0.34	0.44	0.49	0.66	0.17	0.66	0.35		
Jul 18	0.63	0.52	0.47	0.56	0.62	0.54	0.48	0.34	0.38	C	C	C	C	C	C	0.42	0.52	0.55	S	0.5	0.52	0.62	0.71	0.74	0.34	0.74	NA		
Jul 19	0.77	0.88	1.01	1.09	1.12	1.12	1.1	1	0.71	0.72	0.57	0.56	0.56	0.55	K	0.55	0.58	S	K	0.69	0.75	0.81	0.95	1.13	0.55	1.13	0.82		
Jul 20	1.25	1.35	1.38	1.35	1.31	1.27	1.2	1.19	1.09	0.85	0.71	0.62	0.55	0.62	0.64	0.58	S	0.61	0.64	0.67	0.74	0.81	0.89	0.99	0.55	1.38	0.93		
Jul 21	1.09	1.16	1.26	1.4	1.41	1.36	1.43	1.83	1.41	1.36	1.04	0.71	0.62	0.6	0.56	S	0.57	0.61	0.69	0.72	0.75	0.71	0.71	0.68	0.56	1.83	0.99		
Jul 22	0.72	0.8	0.82	0.92	1.13	1.07	0.98	0.88	0.77	0.62	0.54	0.51	0.5	0.48	S	0.48	0.48	0.58	0.59	0.72	0.78	0.7	0.79	0.93	0.48	1.13	0.73		
Jul 23	0.96	1.02	1.32	1.55	1.62	1.66	1.74	1.57	1.2	0.93	0.7	0.58	0.55	S	0.56	0.55	0.58	0.59	0.68	0.79	0.93	1.01	0.99	1.09	0.55	1.74	1.01		
Jul 24	1.22	1.1	1.02	1.01	1.1	1.33	1.84	1.8	1.68	1.69	1.34	0.87	S	0.75	0.88	0.75	0.6	0.55	0.55	0.56	0.62	0.69	0.7	0.8	0.55	1.84	1.02		
Jul 25	1.01	1.11	1.16	1.23	1.24	1.33	1.32	1.04	0.98	0.91	0.74	S	0.66	0.62	0.61	0.72	0.8	0.88	0.93	0.96	0.97	1	1	1.07	0.61	1.33	0.97		
Jul 26	1.11	1.01	0.93	0.93	0.98	1.05	1.08	1.1	1.17	1.21	S	0.85	0.74	0.72	0.69	0.65	0.67	0.83	0.9	0.97	0.98	0.91	0.86	0.92	0.65	1.21	0.92		
Jul 27	0.98	0.99	1	0.91	0.83	0.77	0.77	0.75	0.74	S	0.44	0.44	0.44	0.3	0.29	0.3	0.35	0.33	0.31	0.38	0.48	0.59	0.64	0.67	0.29	1.00	0.60		
Jul 28	0.67	0.7	0.81	0.82	0.85	0.87	0.95	1.08	S	0.76	0.44	0.27	0.26	0.36	0.38	0.38	0.43	0.44	0.49	0.52	0.58	0.6	0.66	0.71	0.26	1.08	0.61		
Jul 29	0.76	0.77	0.78	0.77	0.77	0.83	0.99	S	0.72	0.39	0.39	0.39	0.39	0.39	0.37	0.38	0.39	0.45	0.47	0.5	0.63	0.61	0.64	0.72	0.37	0.99	0.59		
Jul 30	0.83	0.91	0.94	0.94	0.93	0.96	S	0.9	0.62	0.5	0.45	0.43	0.44	0.5	0.45	0.39	0.36	0.36	0.37	0.4	0.5	P	P	P	0.36	0.96	0.61		
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	X	X	X	X	X	X	X	-	-	-		
Diurnal Maximum	3.13	2.11	1.81	3.11	4.71	4.98	1.98	15.20	3.56	1.75	1.34	0.94	0.79	0.75	0.88	0.75	0.80	0.88	0.93	2.33	0.98	1.01	1.48	2.08					
Diurnal Average	0.93	0.91	0.90	1.02	1.24	1.12	0.95	1.47	0.86	0.70	0.54	0.49	0.42	0.42	0.41	0.39	0.39	0.43	0.48	0.60	0.60	0.66	0.71	0.84					

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error      **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Equipment Malfunction /Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

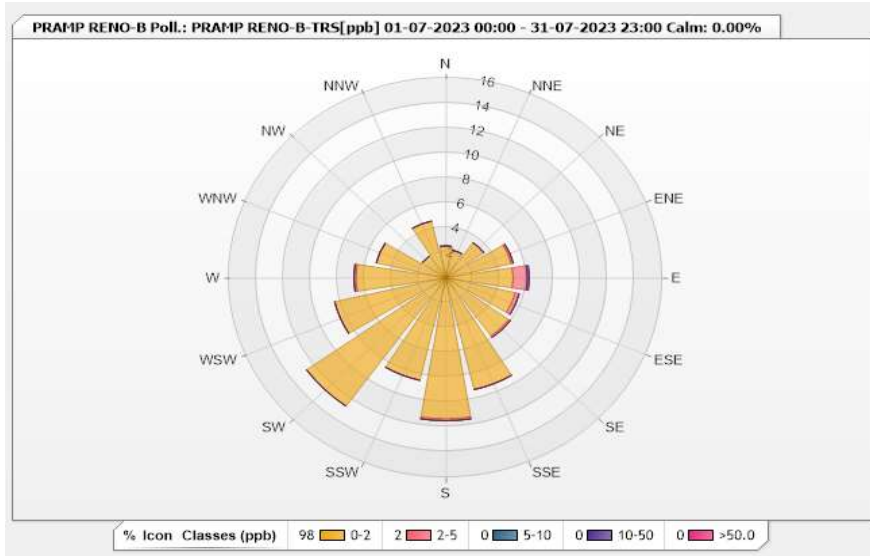


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 89.25%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	2.56	0	0	0	0	2.56
NNE	2.26	0	0	0	0	2.26
NE	3.46	0	0	0	0	3.46
ENE	4.97	0.15	0	0	0	5.12
E	4.97	1.05	0	0.15	0	6.17
ESE	5.27	0.3	0	0	0	5.57
SE	5.72	0.15	0	0	0	5.87
SSE	9.19	0	0	0	0	9.19
S	11.3	0.15	0	0	0	11.45
SSW	8.43	0	0	0	0	8.43
SW	12.65	0	0	0	0	12.65
WSW	8.43	0	0	0	0	8.43
W	6.63	0.15	0	0	0	6.78
WNW	5.27	0	0	0	0	5.27
NW	2.11	0	0	0	0	2.11
NNW	4.67	0	0	0	0	4.67
Summary	97.89	1.95	0	0.15	0	100



Peace River Area Monitoring Program

Reno-B Station - July 2023

Summary of Hourly Averages

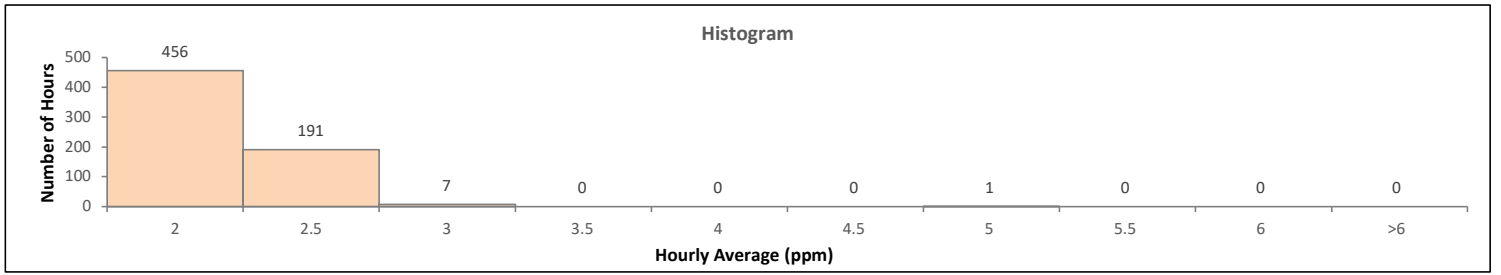
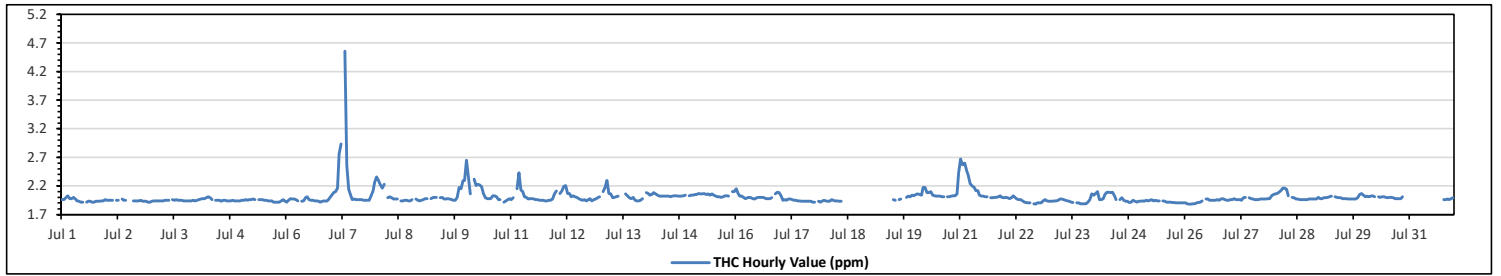
TOTAL HYDROCARBONS (THC) in ppm

Maximum Hourly Value:	4.56 ppm	on Jul 7 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.23 ppm	on Jul 7	Hours of Data:	655
Minimum Hourly Value:	1.88 ppm	on Jul 22 at hr 16	Hours of Missing Data:	51
Minimum Daily Value:	1.93 ppm	on Jul 25	Hours of Calibration:	38
Monthly Average:	2.00 ppm		Operational Uptime:	93.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	1.96	1.96	1.99	2.03	1.98	1.98	2.00	1.97	1.94	1.93	1.92	1.92	S	1.92	1.93	1.93	1.92	1.92	1.93	1.93	1.93	1.94	1.94	1.96	1.92	2.03	1.95	
Jul 2	1.95	1.95	1.95	1.95	K	1.95	1.95	K	1.97	1.95	1.95	S	1.95	K	1.94	1.94	1.94	1.94	1.95	1.93	1.93	1.93	1.92	1.92	1.92	1.97	1.94	
Jul 3	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	S	1.96	1.95	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.93	1.96	1.94	
Jul 4	1.95	1.96	1.97	1.98	1.98	1.99	2.01	1.99	1.96	S	1.95	1.95	1.95	1.93	1.95	1.95	1.94	1.94	1.94	1.95	1.94	1.94	1.94	1.94	1.93	2.01	1.96	
Jul 5	1.95	1.95	1.96	1.95	1.96	1.96	1.97	1.96	S	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.94	1.92	1.92	1.92	1.92	1.94	1.96	1.94	1.92	1.97	1.95	
Jul 6	1.92	1.95	1.98	1.97	1.97	1.96	1.94	S	1.93	1.94	1.99	2.01	1.96	1.95	1.95	1.94	1.94	1.93	1.92	1.93	1.94	1.93	1.95	1.99	1.92	2.01	1.95	
Jul 7	2.04	2.08	2.10	2.16	2.76	2.93	S	4.56	2.56	2.14	2.04	2.01	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	2.03	2.11	2.26	1.95	4.56	2.23	
Jul 8	2.36	2.30	2.22	2.16	2.23	S	1.99	2.01	1.99	1.97	1.97	1.97	K	1.94	1.94	1.95	1.95	1.94	1.94	1.96	K	1.97	1.95	1.94	1.94	2.36	2.03	
Jul 9	1.95	1.96	1.98	1.98	S	1.98	1.99	2.00	2.00	K	1.99	2.00	1.97	1.97	1.98	1.97	1.96	1.95	1.95	2.00	2.17	2.15	2.29	2.30	1.95	2.30	2.02	
Jul 10	2.65	2.36	2.06	S	2.32	2.21	2.23	2.22	2.19	2.07	1.99	1.98	1.98	1.98	2.03	2.03	2.01	1.96	1.96	X	1.92	1.94	1.96	1.98	1.92	2.65	2.09	
Jul 11	1.96	1.99	S	2.15	2.43	2.13	2.10	2.01	2.00	1.97	1.98	1.98	1.97	1.96	1.95	1.95	1.94	1.94	1.94	1.95	1.95	1.97	2.06	1.94	2.43	2.01	2.01	
Jul 12	2.11	S	2.07	2.11	2.19	2.21	2.07	2.07	2.01	2.03	2.01	2.00	1.98	1.96	1.95	1.96	1.94	1.96	1.98	1.94	1.96	1.97	1.99	2.01	1.94	2.21	2.02	
Jul 13	S	2.10	2.17	2.30	2.07	2.06	1.99	2.00	2.01	2.02	K	2.03	K	2.06	2.03	1.99	1.98	2.00	1.95	1.94	1.94	1.95	1.98	S	1.94	2.30	2.03	
Jul 14	2.08	2.07	2.04	2.05	2.08	2.06	2.04	2.02	2.02	2.02	2.02	2.02	2.02	2.01	2.02	2.03	2.03	2.02	2.02	2.02	2.03	2.04	S	2.03	2.01	2.08	2.03	
Jul 15	2.04	2.04	2.05	2.05	2.07	2.06	2.06	2.07	2.05	2.06	2.04	2.06	2.04	2.02	2.01	2.01	2.00	2.01	2.03	2.03	2.02	S	2.10	2.10	2.00	2.10	2.04	
Jul 16	2.15	2.07	2.02	2.02	2.00	1.98	1.99	2.00	1.99	1.98	1.97	1.99	2.00	2.00	2.00	1.99	1.98	1.98	1.98	1.98	1.99	S	2.06	2.09	2.08	1.97	2.15	2.01
Jul 17	2.03	1.95	1.96	1.95	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	S	1.93	1.92	1.93	1.95	1.92	2.03	1.94	
Jul 18	1.94	1.93	1.93	1.96	1.95	1.94	1.94	1.93	1.93	C	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	1.92	1.96	NA	
Jul 19	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	1.96	1.95	K	1.96	1.97	S	K	2.00	2.02	2.01	2.04	2.03	1.95	2.04	NA
Jul 20	2.05	2.06	2.05	2.04	2.17	2.17	2.08	2.08	2.10	2.04	2.03	2.02	2.02	2.02	2.01	2.01	S	2.01	2.01	2.02	2.03	2.03	2.06	2.43	2.01	2.43	2.07	
Jul 21	2.67	2.57	2.60	2.47	2.39	2.24	2.20	2.18	2.12	2.12	2.04	2.02	2.02	2.01	2.01	S	1.99	1.99	2.00	2.00	2.01	2.03	2.00	1.99	1.99	2.67	2.16	
Jul 22	2.00	1.99	1.98	1.99	2.03	2.00	1.97	1.96	1.96	1.94	1.92	1.91	1.90	S	1.89	1.88	1.90	1.90	1.90	1.94	1.96	1.94	1.93	1.88	2.03	1.94	1.94	
Jul 23	1.93	1.93	1.94	1.94	1.95	1.97	1.97	1.96	1.95	1.94	1.93	1.92	1.91	S	1.90	1.90	1.89	1.89	1.89	1.89	1.92	1.96	2.06	2.04	1.89	2.06	1.94	
Jul 24	2.07	2.10	1.96	1.96	1.98	2.05	2.09	2.09	2.08	2.09	2.03	1.96	S	1.96	1.99	1.95	1.93	1.93	1.91	1.92	1.95	1.93	1.92	1.93	1.91	2.10	1.99	
Jul 25	1.93	1.94	1.93	1.95	1.94	1.95	1.96	1.94	1.95	1.94	1.94	S	1.94	1.93	1.92	1.92	1.92	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.96	1.93	
Jul 26	1.90	1.89	1.88	1.88	1.89	1.89	1.90	1.91	1.92	1.94	S	1.97	1.97	1.95	1.95	1.95	1.95	1.96	1.95	1.97	1.98	1.96	1.95	1.95	1.88	1.98	1.93	
Jul 27	1.96	1.96	1.98	1.96	1.96	1.96	1.95	1.99	2.00	S	1.99	1.98	1.97	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.98	1.98	2.03	2.05	1.95	2.05	1.98	
Jul 28	2.06	2.07	2.09	2.12	2.16	2.16	2.14	2.03	S	2.00	1.99	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	2.00	1.96	2.16	2.02	
Jul 29	1.98	1.98	1.99	1.99	2.00	2.01	2.02	S	2.01	2.00	1.99	1.99	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.99	2.05	2.07	2.04	1.97	2.07	2.00
Jul 30	2.01	2.02	2.01	2.02	2.03	2.01	S	2.01	2.00	2.01	2.01	2.00	1.99	2.00	2.00	1.99	1.98	1.98	1.98	1.98	2.01	P	P	P	1.98	2.03	2.00	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	S	1.96	1.96	1.97	1.96	1.98	1.99	1.96	1.99	NA
Diurnal Maximum	2.67	2.57	2.60	2.47	2.76	2.93	2.23	4.56	2.56	2.14	2.04	2.06	2.04	2.06	2.03	2.03	2.03	2.02	2.03	2.03	2.17	2.15	2.29	2.43				
Diurnal Average	2.05	2.04	2.03	2.04	2.09	2.06	2.02	2.11	2.02	2.00	1.98	1.98	1.97	1.97	1.96	1.95	1.95	1.95	1.95	1.96	1.97	1.98	2.00	2.02				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

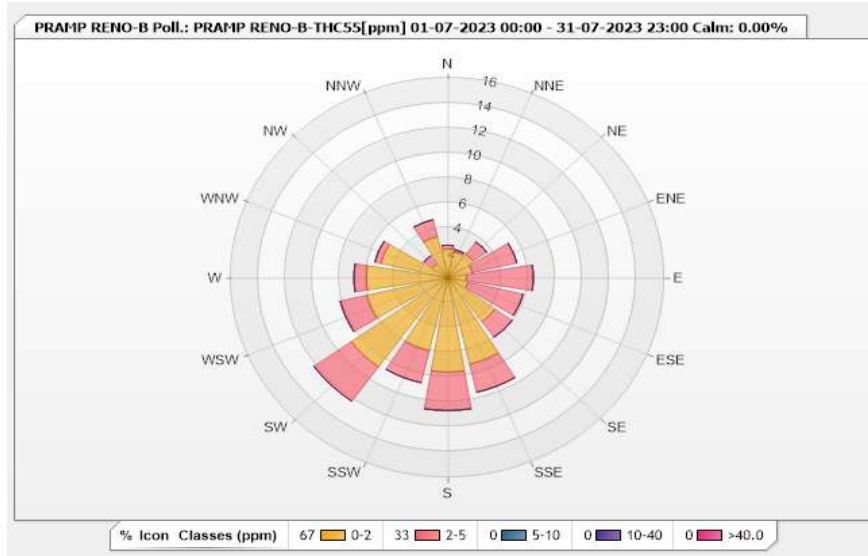


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-THC55[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 87.23%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	2.31	0.31	0	0	0	2.62
NNE	2.16	0.15	0	0	0	2.31
NE	2.31	1.23	0	0	0	3.54
ENE	1.85	3.39	0	0	0	5.24
E	1.39	4.93	0	0	0	6.32
ESE	1.54	4.16	0	0	0	5.7
SE	4.31	1.54	0	0	0	5.85
SSE	7.09	2.31	0	0	0	9.4
S	7.55	3.08	0	0	0	10.63
SSW	6.01	2.62	0	0	0	8.63
SW	8.78	3.39	0	0	0	12.17
WSW	6.16	2	0	0	0	8.16
W	6.01	0.92	0	0	0	6.93
WNW	5.08	0.46	0	0	0	5.54
NW	1.39	0.77	0	0	0	2.16
NNW	3.39	1.39	0	0	0	4.78
Summary	67.33	32.65	0	0	0	100



Peace River Area Monitoring Program

Reno-B Station - July 2023  
Summary of Hourly Averages

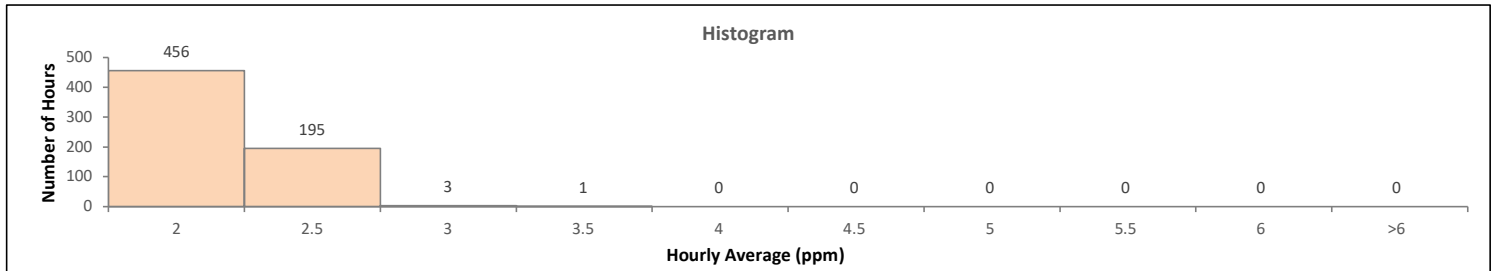
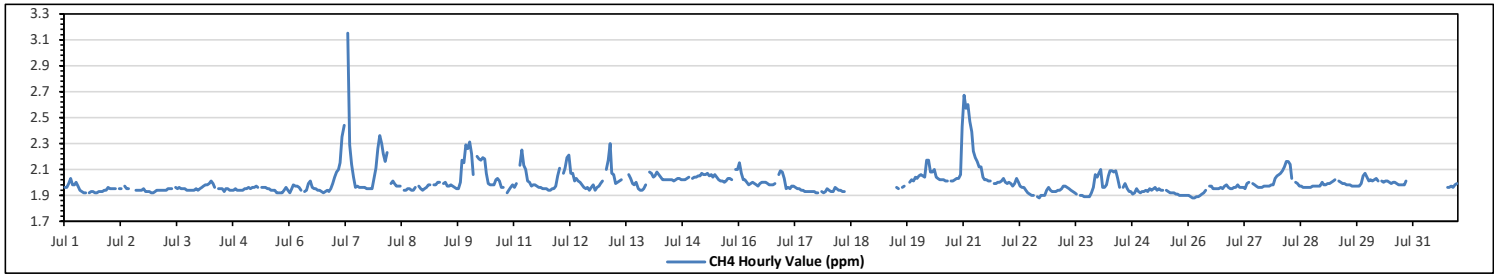
METHANE (CH4) in ppm

Maximum Hourly Value:	3.15 ppm	on Jul 7 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.16 ppm	on Jul 21	Hours of Data:	655
Minimum Hourly Value:	1.88 ppm	on Jul 22 at hr 16	Hours of Missing Data:	51
Minimum Daily Value:	1.93 ppm	on Jul 25	Hours of Calibration:	38
Monthly Average:	2.00 ppm		Operational Uptime:	93.1

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
Jul 1	1.96	1.96	1.99	2.03	1.98	1.98	2.00	1.97	1.94	1.93	1.92	1.92	S	1.92	1.93	1.93	1.92	1.92	1.93	1.93	1.93	1.94	1.94	1.96	1.92	2.03	1.95	
Jul 2	1.95	1.95	1.95	1.95	K	1.95	1.95	K	1.97	1.95	1.95	S	1.95	K	1.94	1.94	1.94	1.94	1.95	1.93	1.93	1.93	1.92	1.92	1.92	1.97	1.94	
Jul 3	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	S	1.96	1.95	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.93	1.96	1.94	
Jul 4	1.95	1.96	1.97	1.98	1.98	1.99	2.01	1.99	1.96	S	1.95	1.95	1.95	1.93	1.95	1.95	1.94	1.94	1.94	1.95	1.94	1.94	1.94	1.94	1.93	2.01	1.96	
Jul 5	1.95	1.95	1.96	1.95	1.96	1.96	1.97	1.96	S	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.94	1.92	1.92	1.92	1.92	1.94	1.96	1.94	1.92	1.97	1.95	
Jul 6	1.92	1.95	1.98	1.97	1.97	1.96	1.94	S	1.93	1.94	1.99	2.01	1.96	1.95	1.95	1.94	1.94	1.93	1.92	1.93	1.94	1.93	1.95	1.99	1.92	2.01	1.95	
Jul 7	2.04	2.08	2.10	2.15	2.35	2.44	S	3.15	2.29	2.14	2.04	1.96	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	2.03	2.11	2.26	1.95	3.15	2.12	
Jul 8	2.36	2.30	2.22	2.16	2.23	S	1.99	2.01	1.99	1.97	1.97	1.97	K	1.94	1.94	1.95	1.95	1.94	1.94	1.96	K	1.97	1.95	1.94	1.94	2.36	2.03	
Jul 9	1.95	1.96	1.98	1.98	S	1.98	1.98	2.00	2.00	K	1.99	2.00	1.97	1.97	1.98	1.97	1.96	1.95	1.95	2.00	2.17	2.15	2.29	2.26	1.95	2.29	2.02	
Jul 10	2.31	2.22	2.06	S	2.20	2.18	2.17	2.19	2.18	2.07	1.99	1.98	1.98	1.98	2.02	2.03	2.01	1.96	1.96	X	1.92	1.94	1.96	1.98	1.92	2.31	2.06	
Jul 11	1.96	1.99	S	2.13	2.25	2.13	2.10	2.01	2.00	1.97	1.98	1.98	1.97	1.96	1.95	1.95	1.94	1.94	1.95	1.95	1.95	1.97	2.05	1.94	2.25	2.00		
Jul 12	2.11	S	2.07	2.11	2.19	2.21	2.07	2.07	2.01	2.03	2.01	2.00	1.98	1.96	1.95	1.96	1.94	1.96	1.98	1.94	1.96	1.97	1.99	2.01	1.94	2.21	2.02	
Jul 13	S	2.10	2.17	2.30	2.07	2.06	1.99	2.00	2.01	2.02	K	2.03	K	2.06	2.03	1.99	1.98	2.00	1.95	1.94	1.94	1.95	1.98	S	2.03	1.94	2.30	2.03
Jul 14	2.08	2.07	2.04	2.05	2.08	2.06	2.04	2.02	2.02	2.02	2.02	2.02	2.02	2.01	2.02	2.03	2.03	2.02	2.02	2.02	2.03	2.04	S	2.03	2.01	2.08	2.03	
Jul 15	2.04	2.04	2.05	2.05	2.07	2.06	2.06	2.07	2.05	2.06	2.04	2.06	2.04	2.02	2.01	2.01	2.00	2.01	2.03	2.03	2.02	S	2.10	2.10	2.00	2.10	2.04	
Jul 16	2.15	2.07	2.02	2.02	2.00	1.98	1.99	2.00	1.99	1.98	1.97	1.99	2.00	2.00	2.00	1.99	1.98	1.98	1.98	1.98	1.99	S	2.06	2.09	2.08	1.97	2.15	2.01
Jul 17	2.03	1.95	1.96	1.95	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	S	1.93	1.92	1.93	1.95	1.92	2.03	1.94	
Jul 18	1.94	1.93	1.93	1.96	1.95	1.94	1.94	1.93	1.93	C	C	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	1.93	1.96	NA
Jul 19	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	1.96	1.95	K	1.96	1.97	S	K	2.00	2.02	2.01	2.04	2.03	1.95	2.04	NA
Jul 20	2.05	2.06	2.05	2.04	2.17	2.17	2.08	2.08	2.10	2.04	2.03	2.02	2.02	2.02	2.01	2.01	S	S	2.01	2.01	2.02	2.03	2.03	2.06	2.43	2.01	2.43	2.07
Jul 21	2.67	2.57	2.60	2.47	2.39	2.24	2.19	2.16	2.12	2.12	2.04	2.02	2.02	2.01	2.01	S	1.99	1.99	2.00	2.00	2.01	2.03	2.00	1.99	1.99	2.67	2.16	
Jul 22	2.00	1.99	1.97	1.99	2.03	2.00	1.97	1.96	1.96	1.94	1.92	1.91	1.90	1.90	S	1.89	1.88	1.90	1.90	1.90	1.94	1.96	1.94	1.93	1.88	2.03	1.94	
Jul 23	1.93	1.93	1.94	1.94	1.95	1.97	1.97	1.96	1.95	1.94	1.93	1.92	1.91	S	1.90	1.90	1.89	1.89	1.89	1.89	1.92	1.96	2.06	2.06	1.89	2.06	1.94	
Jul 24	2.07	2.10	1.96	1.96	1.98	2.05	2.09	2.09	2.08	2.09	2.03	1.96	S	1.96	1.99	1.95	1.93	1.93	1.91	1.92	1.95	1.93	1.92	1.93	1.91	2.10	1.99	
Jul 25	1.93	1.94	1.93	1.95	1.94	1.95	1.96	1.94	1.95	1.94	1.94	S	1.94	1.93	1.92	1.92	1.92	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.96	1.93	
Jul 26	1.90	1.89	1.88	1.88	1.89	1.89	1.90	1.91	1.92	1.94	S	1.97	1.97	1.95	1.95	1.95	1.95	1.96	1.95	1.97	1.98	1.96	1.95	1.95	1.88	1.98	1.93	
Jul 27	1.96	1.96	1.98	1.96	1.96	1.96	1.95	1.99	2.00	S	1.99	1.98	1.97	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.98	1.98	2.03	2.05	1.95	2.05	1.98
Jul 28	2.06	2.07	2.09	2.12	2.16	2.16	2.14	2.03	S	2.00	1.99	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	2.00	1.96	2.16	2.02	
Jul 29	1.98	1.98	1.99	1.99	2.00	2.01	2.02	S	2.01	2.00	1.99	1.99	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.99	2.05	2.07	2.04	1.97	2.07	2.00
Jul 30	2.01	2.02	2.01	2.02	2.03	2.01	S	2.01	2.00	2.01	2.01	2.00	1.99	2.00	1.99	1.98	1.98	1.98	1.98	1.98	2.01	P	P	P	1.98	2.03	2.00	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	S	1.96	1.96	1.97	1.96	1.98	1.99	1.96	1.99	NA
Diurnal Maximum	2.67	2.57	2.60	2.47	2.39	2.44	2.19	3.15	2.29	2.14	2.04	2.06	2.04	2.06	2.03	2.03	2.03	2.02	2.03	2.03	2.17	2.15	2.29	2.43				
Diurnal Average	2.04	2.03	2.03	2.04	2.06	2.04	2.01	2.05	2.01	2.00	1.98	1.98	1.97	1.97	1.97	1.96	1.95	1.95	1.95	1.96	1.97	1.98	2.00	2.02				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

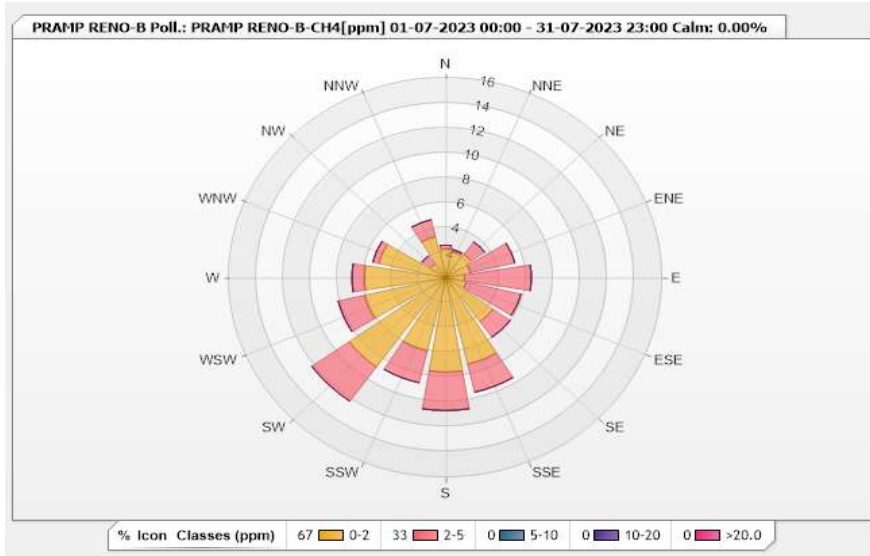


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 87.23%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	2.31	0.31	0	0	0	2.62
NNE	2.16	0.15	0	0	0	2.31
NE	2.31	1.23	0	0	0	3.54
ENE	1.85	3.39	0	0	0	5.24
E	1.39	4.93	0	0	0	6.32
ESE	1.54	4.16	0	0	0	5.7
SE	4.31	1.54	0	0	0	5.85
SSE	7.09	2.31	0	0	0	9.4
S	7.55	3.08	0	0	0	10.63
SSW	6.01	2.62	0	0	0	8.63
SW	8.78	3.39	0	0	0	12.17
WSW	6.16	2	0	0	0	8.16
W	6.01	0.92	0	0	0	6.93
WNW	5.08	0.46	0	0	0	5.54
NW	1.39	0.77	0	0	0	2.16
NNW	3.39	1.39	0	0	0	4.78
Summary	67.33	32.65	0	0	0	100





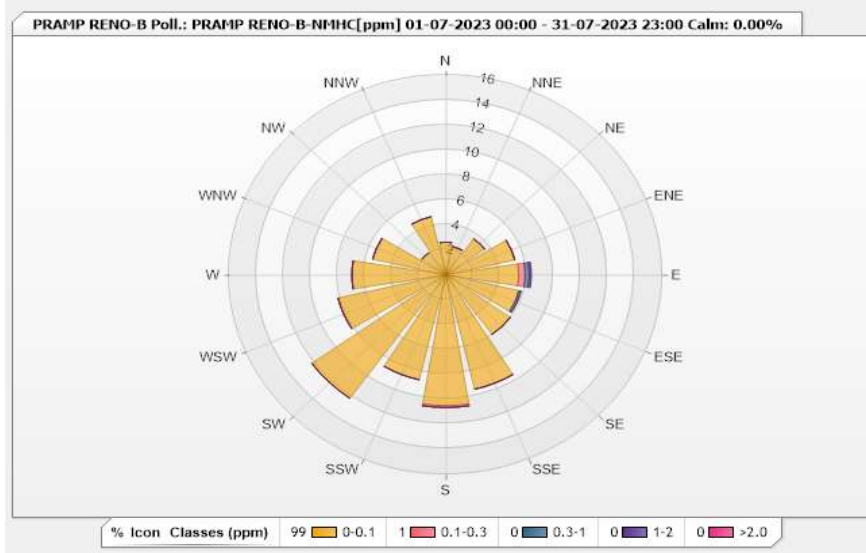


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 87.23%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	2.62	0	0	0	0	2.62
NNE	2.31	0	0	0	0	2.31
NE	3.54	0	0	0	0	3.54
ENE	5.24	0	0	0	0	5.24
E	5.39	0.46	0.31	0.15	0	6.31
ESE	5.55	0	0.15	0	0	5.7
SE	5.86	0	0	0	0	5.86
SSE	9.4	0	0	0	0	9.4
S	10.48	0.15	0	0	0	10.63
SSW	8.63	0	0	0	0	8.63
SW	12.17	0	0	0	0	12.17
WSW	8.17	0	0	0	0	8.17
W	6.93	0	0	0	0	6.93
WNW	5.55	0	0	0	0	5.55
NW	2.16	0	0	0	0	2.16
NNW	4.78	0	0	0	0	4.78
Summary	98.78	0.61	0.46	0.15	0	100



**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

**Summary of Hourly Averages**

**RELATIVE HUMIDITY (RH) in %**

Maximum Hourly Value:	100	%	on Jul 3 at hr 6	Hours in Service:	744
Maximum Daily Value:	98.2	%	on Jul 25	Hours of Data:	708
Minimum Hourly Value:	25	%	on Jul 6 at hr 14	Hours of Missing Data:	36
Minimum Daily Value:	50.8	%	on Jul 7	Hours of Calibration:	0
Monthly Average:	75.4	%		Operational Uptime:	95.2

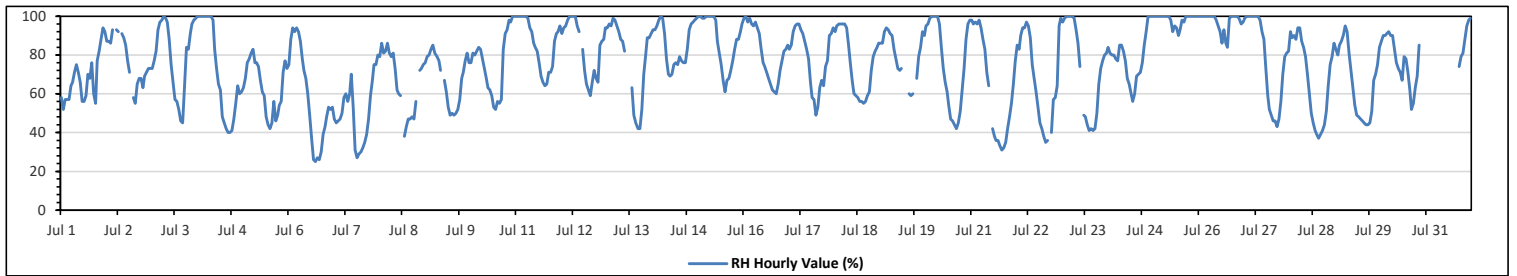
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	58	52	57	57	57	64	66	71	75	71	66	56	56	59	70	68	76	60	55	77	82	88	94	92	52	94	67.8
Jul 2	87	87	86	93	K	93	92	K	91	89	85	77	71	K	58	55	65	68	68	63	69	71	73	73	55	93	76.9
Jul 3	73	77	82	93	97	98	100	99	97	88	75	66	57	56	52	46	45	64	84	83	91	96	98	99	45	100	79.8
Jul 4	100	100	100	100	100	100	100	100	98	83	73	65	62	48	45	42	40	40	41	47	55	64	60	61	40	100	71.8
Jul 5	63	68	76	78	81	83	76	76	74	67	61	59	48	44	42	45	56	46	49	54	56	71	77	73	42	83	63.5
Jul 6	75	88	94	92	94	92	87	78	72	68	60	49	37	26	25	27	26	30	39	43	48	53	52	53	25	94	58.7
Jul 7	47	45	46	47	50	58	60	56	60	70	53	31	27	29	30	32	35	39	47	59	67	75	75	80	27	80	50.8
Jul 8	79	86	81	82	86	81	79	81	73	62	60	59	K	38	43	47	47	48	47	56	K	72	73	75	38	86	66.1
Jul 9	76	79	80	83	85	81	79	77	72	K	67	61	53	49	50	49	50	52	57	68	71	77	81	76	49	85	68.4
Jul 10	76	81	80	82	84	83	78	73	68	63	62	59	53	52	56	55	57	83	91	93	98	97	100	100	52	100	76.0
Jul 11	100	100	100	100	100	100	99	94	92	86	84	82	76	69	66	64	65	71	71	74	87	91	92	95	64	100	85.8
Jul 12	91	94	95	98	100	100	100	100	95	92	K	83	72	65	62	59	66	72	68	66	85	87	88	94	59	100	84.0
Jul 13	94	96	95	99	98	95	92	88	87	82	K	K	K	63	49	45	42	42	52	70	80	89	89	91	42	99	78.0
Jul 14	93	93	95	98	100	99	91	78	70	69	70	75	76	75	79	77	76	76	83	93	96	97	98	99	69	100	85.7
Jul 15	100	100	99	99	100	100	100	100	100	98	87	81	75	67	61	67	68	72	77	83	88	88	92	96	61	100	87.4
Jul 16	99	100	97	99	96	95	97	94	91	83	76	74	71	68	65	62	61	60	65	72	77	82	83	85	60	100	81.3
Jul 17	83	85	92	95	96	96	93	91	87	83	78	66	58	57	49	53	63	67	64	74	77	90	91	94	49	96	78.4
Jul 18	92	95	96	96	96	96	94	85	75	66	60	59	58	56	56	55	56	59	61	72	79	82	84	86	55	96	75.6
Jul 19	86	86	92	94	93	91	90	83	78	73	72	73	K	64	K	60	59	60	K	68	79	84	92	90	59	94	79.4
Jul 20	95	96	99	100	100	100	100	96	84	73	66	61	54	47	46	44	42	45	51	62	73	88	96	98	42	100	75.7
Jul 21	98	96	97	96	98	94	88	83	71	64	K	42	38	36	36	33	31	32	35	42	48	55	65	77	31	98	63.3
Jul 22	85	83	90	94	94	97	95	89	75	68	61	53	45	42	38	35	36	K	40	57	58	64	95	99	35	99	69.3
Jul 23	97	99	100	100	100	100	99	93	86	74	K	49	48	44	41	42	41	42	50	65	73	77	80	81	41	100	73.1
Jul 24	84	81	80	80	78	77	85	85	82	77	68	65	60	56	60	69	70	71	76	85	92	100	100	100	56	100	78.4
Jul 25	100	100	100	100	100	100	100	100	100	98	92	95	94	90	93	98	97	100	100	100	100	100	100	100	90	100	98.2
Jul 26	100	100	100	100	100	100	100	100	100	98	95	92	86	93	86	84	99	100	100	100	100	99	96	97	84	100	96.9
Jul 27	99	100	100	100	100	100	100	100	98	92	88	73	59	52	49	46	46	43	47	56	70	79	81	82	43	100	77.5
Jul 28	92	89	90	88	94	94	87	84	79	70	60	50	45	41	39	37	39	41	44	51	64	75	79	86	37	94	67.4
Jul 29	83	80	85	87	90	95	92	81	72	63	54	49	48	47	46	45	44	44	45	51	67	70	75	84	44	95	66.5
Jul 30	87	90	90	91	92	90	83	76	73	71	67	79	78	71	62	52	55	63	69	85	P	P	P	52	92	76.9	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	74	79	81	88	95	98	99	74	99	NA
Diurnal Maximum	100	100	100	100	100	100	100	100	98	95	95	94	93	93	98	99	100	100	100	100	100	100	100	100			
Diurnal Average	86.4	87.5	89.1	90.7	91.7	90.3	86.8	82.6	77.3	70.9	64.5	59.5	55.6	53.9	53.4	55.0	58.5	61.6	68.8	76.8	81.9	85.2	87.2				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.





**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

**Summary of Hourly Averages**

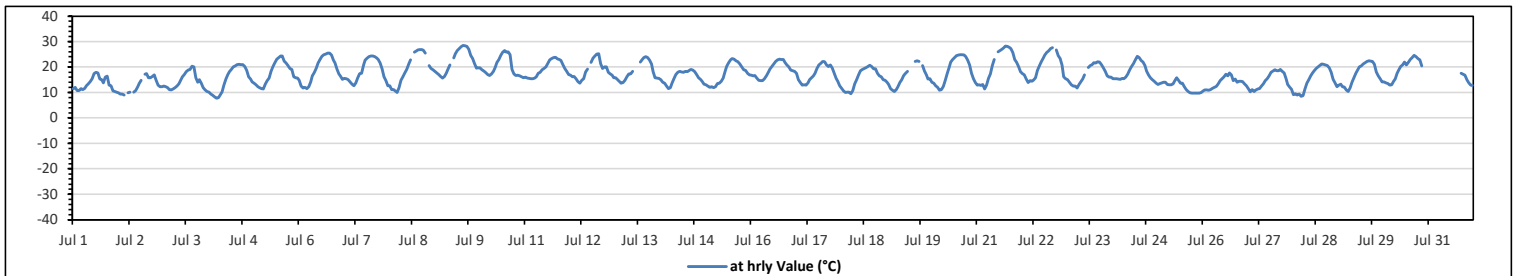
**AMBIENT TEMPERATURE (AT) in Degree Celsius**

Maximum Hourly Value:	28.5 °C	on Jul 9 at hr 15	Hours in Service:	744
Maximum Daily Value:	22.2 °C	on Jul 9	Hours of Data:	708
Minimum Hourly Value:	7.7 °C	on Jul 4 at hr 4	Hours of Missing Data:	36
Minimum Daily Value:	12.4 °C	on Jul 25	Hours of Calibration:	0
Monthly Average:	17.2 °C		Operational Uptime:	95.2

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23					
Jul 1	11.6	12	10.7	10.7	11.5	11.1	11.7	12.7	13.4	14.3	15.4	17.4	18	17.7	15.3	15	13.8	16	16.4	13	12.7	10.6	10.5	10.2	10.2	18.0	13.4					
Jul 2	9.9	9.3	9.3	9.1	K	9.9	10.1	K	10.2	10.8	12.1	13.5	14.8	K	17.2	17.4	15.9	15.8	16.3	16.9	14.8	12.9	12.2	12.3	9.1	17.4	12.9					
Jul 3	12.5	12.2	11.9	11.2	11	11.4	11.9	12.5	13.4	14.6	16.1	17.1	18.2	18.8	19	20.3	20.1	15.8	14	15	13.7	11.9	11	10.4	10.4	20.3	14.3					
Jul 4	10.2	9.4	8.9	8.2	7.7	8	9.1	10.3	13.1	15.3	17.1	18.2	19	20	20.4	21	21.1	21	21	20.2	18.7	16.2	15.3	14.2	7.7	21.1	15.2					
Jul 5	13.7	13.1	12.3	11.9	11.5	11.4	13.3	14.6	15.7	18.4	20.2	21.7	23.1	23.7	24.3	24.3	22.4	21.6	20.6	19.5	19	16.2	15.8	15.7	11.4	24.3	17.7					
Jul 6	14.8	12.5	11.8	12	11.6	12.3	14.2	16.6	17.8	19.5	21.5	23	24.2	24.9	25.2	25.4	25.4	24.8	22.7	21.5	19.2	17.3	16.4	15.2	11.6	25.4	18.7					
Jul 7	15.6	15.4	15	14.2	13.3	12.6	13.8	15.8	17.4	17.5	20.7	22.7	23.5	24.1	24.4	24.3	24.1	23.6	22.9	21.5	19.3	16.2	14.6	12.7	12.6	24.4	18.6					
Jul 8	12.7	11.1	11.1	10.6	10	11.9	14.7	16.2	17.7	19.1	21.1	22.8	K	25.9	26.3	26.7	26.9	26.9	26.6	25.5	K	20.6	19.5	18.9	10.0	26.9	19.2					
Jul 9	18.4	17.7	17.1	16.3	15.7	16.3	17.7	19.2	20.8	K	23.6	25.3	26.5	27.3	28	28.5	28.4	28.1	27	24.6	23.3	21.3	19.6	19.7	15.7	28.5	22.2					
Jul 10	19.7	18.9	18.5	17.8	17.1	16.7	17.3	18.3	19.7	21.8	22.9	24.6	25.8	26.5	25.9	26	24.9	19	17.3	16.7	16.8	16.5	16.1	15.9	15.9	26.5	20.0					
Jul 11	16	15.7	15.6	15.5	15.5	15.5	16.2	17.6	18	18.9	19.5	20.1	21.4	22.8	23.3	23.8	23.9	23.2	23	22.6	21	19.5	18.4	17.1	15.5	23.9	19.3					
Jul 12	16.8	16.2	16.3	15.4	14.3	13.7	14.7	15.5	18.1	19.2	K	21.8	23.5	24.4	25.1	25.3	21.3	19.4	20	20.1	18	17.3	16.8	15.9	13.7	25.3	18.7					
Jul 13	15.8	15	14.4	13.7	13.9	14.7	16.2	17.3	17.3	18.4	K	K	K	K	21.9	22.9	23.8	24.1	23.7	22.7	21.2	18.2	15.9	15.7	13.7	24.1	18.2					
Jul 14	15	14.1	13.7	12.5	11.6	11.9	13.7	15.5	17.1	18	18.3	18.1	17.9	18.4	18.2	18.7	19	18.8	18.2	17.1	15.8	15.2	14.4	13.3	11.6	19.0	16.0					
Jul 15	13.1	12.5	12	12.2	11.9	12.3	13.5	13.7	14.4	15.7	18.3	20.3	21.7	22.8	23.4	23.1	22.5	22.1	21.2	20.1	18.9	18.7	17.6	16.9	11.9	23.4	17.5					
Jul 16	16.8	16.6	16.7	15.7	14.8	14.6	14.6	15.5	16.5	17.9	19.2	20.2	21.2	22.2	22.8	23.1	22.9	22.9	21.8	20.9	20	18.8	18.6	18.3	14.6	23.1	18.9					
Jul 17	17.5	15.1	13.9	13	13.1	13	13.8	15.1	15.8	16.6	17.6	19.5	20.8	21.4	22.3	22.1	20.9	20.2	20.8	19.6	17.6	15.6	14.5	12.6	12.6	22.3	17.2					
Jul 18	11.7	10.6	10	10.2	10.1	9.5	10.8	13.4	15	17	18.6	19.1	19.5	19.9	20.2	20.7	20.2	19.3	19.3	17.5	16.5	16.1	15	14.7	9.5	20.7	15.6					
Jul 19	14.1	13.2	11.6	10.9	10.5	11.2	12.2	13.9	15.1	16.7	17.5	18.4	K	20.9	K	22.3	22.5	22.2	K	20.6	18.5	17	15.3	15.4	10.5	22.5	16.2					
Jul 20	14	13.6	12.7	12	10.9	11.2	12.4	14.7	17.4	19.9	21.9	23	23.7	24.5	24.7	24.9	24.9	24.7	24	22.7	20.8	17.6	15.4	13.9	10.9	24.9	18.6					
Jul 21	12.9	13.1	12.8	13.2	11.4	13	15.6	17.3	20.6	22.9	K	26	26.5	27	27.5	28.2	28.1	27.8	27.2	25.7	23	21.8	20.2	18.2	11.4	28.2	20.9					
Jul 22	17.4	16.9	15.3	13.9	14.6	14.4	14.9	15.9	18.7	20.5	22.1	23.5	24.8	25.7	26.4	27.2	27.6	K	26.7	24.5	23.3	20.7	16.2	15.4	13.9	27.6	20.3					
Jul 23	15.1	14.1	13.1	12.5	12.5	11.8	13.2	14.3	15.4	17	K	19.9	20.6	21	21.7	21.6	22.1	21.9	21	19.8	18.4	16.6	16	16	11.8	22.1	17.2					
Jul 24	15.4	15.5	15.5	15.3	15.2	15.6	15.5	16	17.2	18.8	20.2	21.3	22.8	24.2	23.7	22.6	21.9	20.6	18.5	17	15.9	15	14.4	13.7	13.7	24.2	18.0					
Jul 25	13.2	13.5	13.8	14.1	14.1	13.2	13.1	13.1	13.4	14.7	15.9	14.8	13.6	13.6	12.3	11.2	10.4	9.9	9.8	9.8	9.8	9.8	9.8	10	9.8	15.9	12.4					
Jul 26	10.6	11	11	10.9	11.2	11.7	12	12.4	13.4	14.6	15.5	16.1	17.2	16.5	17.7	17	14.6	15.3	14.1	14.4	14.5	14.3	13.4	12.6	10.6	17.7	13.8					
Jul 27	11.6	10.3	11.1	10.5	11	11.4	11.6	12.5	13.4	14.6	15.4	16.6	17.9	18.5	18.9	18.6	18.6	19.1	18.4	17.7	15.5	13.2	12.1	11.3	10.3	19.1	14.6					
Jul 28	9.2	9.5	9	9.4	8.5	8.8	11.4	13.6	15.1	16.6	17.6	18.6	19.5	20.1	20.6	21.2	21.1	20.9	20.6	19.8	17.9	15.2	13.8	12.2	8.5	21.2	15.4					
Jul 29	13	13.3	12.3	12.1	11	10.4	11.8	14	15.9	17.5	18.9	20	20.4	21.2	21.7	22.2	22.5	22.4	22.2	21.1	18.1	16.5	15.5	14.2	10.4	22.5	17.0					
Jul 30	14.2	13.8	13.5	13	13.1	14.5	15.3	17.5	19.1	20.2	20.8	22	20.8	21.8	23	23.7	24.6	24.1	23.3	22.8	20.4	K	K	K	13.0	24.6	19.1					
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	12.8	17.5	NA					
Diurnal Maximum	19.7	18.9	18.5	17.8	17.1	16.7	17.7	19.2	20.8	22.9	23.6	26.0	26.5	27.3	28.0	28.5	28.4	28.1	27.2	25.7	23.3	21.8	20.2	19.7								
Diurnal Average	14.1	13.5	13.0	12.6	12.4	12.5	13.5	15.0	16.2	17.5	18.8	20.2	21.0	22.0	22.2	22.3	21.9	21.0	20.5	19.6	17.8	16.3	15.2	14.5								
C	Monthly Calibration																							S	Daily Zero-Span Check		Q	Quality Assurance				
K	Collection Error																							ND	No Data (Machine Not in Service)		Y	Routine Maintenance		P	Power Failure	
X	Invalid Data (Equipment Malfunction /Recovery)																							NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)							

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**  
**Reno-B Station - July 2023**  
**Summary of Hourly Averages**  
**STATION TEMPERATURE (ST) in Degree Celsius**

Maximum Hourly Value:	24.7	°C	on Jul 18 at hr 3	Hours in Service:	744
Maximum Daily Value:	23.7	°C	on Jul 14	Hours of Data:	714
Minimum Hourly Value:	21.8	°C	on Jul 3 at hr 16	Hours of Missing Data:	30
Minimum Daily Value:	22.8	°C	on Jul 4	Hours of Calibration:	0
Monthly Average:	23.3	°C		Operational Uptime:	96.0

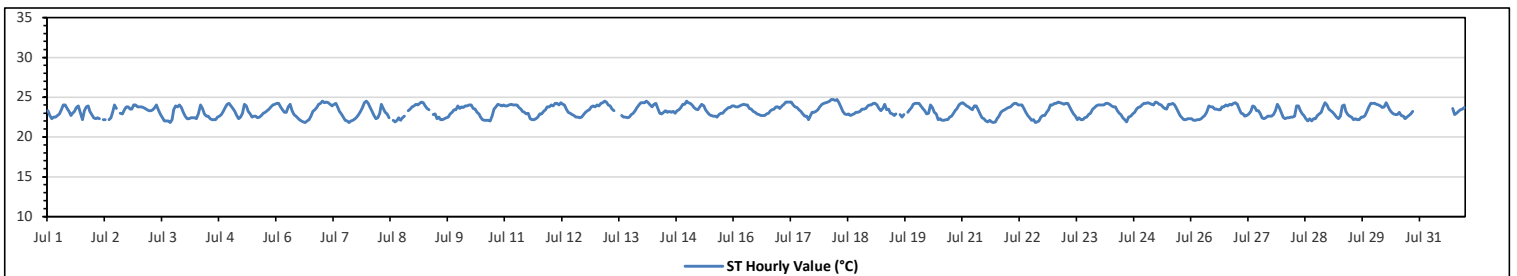
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	23.3	22.7	22.3	22.5	22.5	22.7	22.9	23.4	24.0	24.0	23.6	23.2	22.7	23.0	23.2	23.7	23.9	23.1	22.2	23.3	23.8	23.9	23.2	22.8	22.2	24.0	23.2	
Jul 2	22.4	22.3	22.4	22.3	K	22.2	22.2	22.2	22.2	22.4	23.2	24.0	23.6	K	23.0	22.9	23.4	23.8	23.8	23.5	23.5	24.0	24.0	23.8	22.2	24.0	23.1	
Jul 3	23.8	23.8	23.7	23.6	23.4	23.3	23.3	23.4	23.7	24.0	23.4	22.8	22.4	22.0	22.0	22.0	21.8	22.2	23.4	23.9	23.8	24.0	23.7	23.1	21.8	24.0	23.2	
Jul 4	22.6	22.3	22.3	22.4	22.4	22.4	22.3	22.9	24.0	23.6	22.9	22.6	22.6	22.3	22.2	22.2	22.2	22.5	22.6	22.8	23.2	23.7	24.1	24.2	22.2	24.2	22.8	
Jul 5	23.9	23.6	23.2	22.7	22.3	22.5	23.0	24.1	23.9	23.2	22.9	22.5	22.6	22.6	22.4	22.5	22.7	23.0	23.1	23.3	23.5	23.8	24.0	24.1	22.3	24.1	23.1	
Jul 6	24.2	24.2	23.8	23.4	23.1	23.1	23.8	24.1	23.3	22.8	22.6	22.4	22.2	22.0	21.9	21.8	22.0	22.2	22.6	23.2	23.4	23.7	24.1	24.2	21.8	24.2	23.1	
Jul 7	24.5	24.3	24.4	24.2	24.1	23.9	24.1	24.2	23.7	23.2	22.9	22.5	22.1	22.0	21.8	22.0	22.1	22.3	22.5	22.8	23.2	23.7	24.3	24.5	21.8	24.5	23.3	
Jul 8	24.2	23.7	23.2	22.7	22.3	22.4	23.0	24.1	23.6	23.1	22.9	22.4	K	22.1	21.9	22.1	22.4	22.1	22.4	22.6	K	23.3	23.5	23.8	21.9	24.2	22.9	
Jul 9	23.9	24.1	24.0	24.2	24.4	24.3	23.9	23.6	23.4	K	22.8	22.9	22.3	22.5	22.2	22.2	22.3	22.4	22.5	22.9	23.1	23.4	23.4	23.9	22.2	24.4	23.2	
Jul 10	23.6	23.8	23.7	23.9	23.9	24.0	24.0	23.6	23.5	23.1	22.9	22.5	22.2	22.1	22.1	22.1	22.0	22.6	23.5	23.8	24.1	24.0	23.9	24.0	22.0	24.1	23.3	
Jul 11	23.9	23.9	24.0	24.1	24.0	24.0	24.0	23.7	23.5	23.2	23.1	22.9	23.0	22.3	22.2	22.2	22.3	22.5	22.9	22.9	23.2	23.4	23.8	23.8	22.2	24.1	23.3	
Jul 12	24.0	23.9	24.2	24.2	24.0	24.3	24.1	24.0	23.5	23.1	23.0	22.8	22.7	22.5	22.5	22.4	22.5	22.8	23.1	23.3	23.4	23.8	23.9	23.8	22.4	24.3	23.4	
Jul 13	24.0	23.9	24.2	24.3	24.5	24.4	24.0	23.9	23.5	23.3	K	22.8	K	22.7	22.5	22.5	22.4	22.5	22.8	23.0	23.3	23.7	24.0	24.3	22.4	24.5	23.5	
Jul 14	24.3	24.3	24.5	24.3	24.0	23.8	24.1	24.2	23.6	23.0	22.9	23.1	23.3	23.1	23.2	23.1	23.2	23.0	23.3	23.4	23.7	24.1	24.1	24.5	22.9	24.5	23.7	
Jul 15	24.3	24.2	24.0	23.7	23.5	23.4	23.8	24.1	23.9	23.4	23.1	22.8	22.7	22.6	22.6	22.5	22.8	23.0	23.0	23.3	23.5	23.7	23.7	23.9	22.5	24.3	23.4	
Jul 16	23.9	23.8	23.8	23.9	24.0	24.1	24.0	24.0	23.6	23.5	23.2	23.1	22.9	22.8	22.7	22.7	22.7	22.9	23.0	23.3	23.4	23.5	23.8	23.8	22.7	24.1	23.4	
Jul 17	23.6	23.9	24.1	24.4	24.4	24.4	24.4	24.0	23.8	23.7	23.4	23.2	22.9	22.6	22.6	22.2	22.7	23.1	23.1	23.2	23.4	23.8	24.1	24.2	22.2	24.4	23.6	
Jul 18	24.3	24.4	24.5	24.7	24.7	24.6	24.7	24.3	23.8	23.2	22.9	22.8	22.9	22.7	22.8	22.9	23.1	23.1	23.2	23.5	23.5	23.6	23.9	24.0	22.7	24.7	23.7	
Jul 19	24.0	24.2	24.2	24.0	23.6	23.3	23.6	24.1	23.4	23.5	23.0	22.9	22.7	22.9	K	22.8	22.8	22.5	22.8	K	23.1	23.4	23.7	24.1	24.2	22.5	24.2	23.5
Jul 20	24.2	24.2	23.9	23.6	23.3	22.9	23.0	24.0	23.7	23.1	22.9	22.2	22.3	22.1	22.1	22.2	22.2	22.5	22.6	23.0	23.3	23.6	24.0	24.2	22.1	24.2	23.1	
Jul 21	24.3	24.1	23.9	23.8	23.6	23.4	23.9	23.9	23.4	22.9	22.4	22.3	22.0	21.9	22.1	21.9	21.8	21.9	22.3	22.6	23.1	23.3	23.4	23.6	21.8	24.3	23.0	
Jul 22	23.7	23.8	24.0	24.2	24.2	24.0	24.0	24.0	23.6	23.1	22.7	22.4	22.1	22.2	21.8	21.9	22.0	22.5	22.7	22.7	23.1	23.4	24.0	24.0	21.8	24.2	23.2	
Jul 23	24.2	24.2	24.4	24.3	24.2	24.1	24.2	24.2	23.8	23.3	22.9	22.6	22.2	22.4	22.2	22.2	22.4	22.5	22.8	23.0	23.5	23.7	23.9	24.0	22.2	24.4	23.4	
Jul 24	24.0	24.0	24.0	24.2	24.2	24.1	23.9	23.8	23.8	23.3	23.0	22.8	22.4	22.2	21.9	22.5	22.6	22.9	23.1	23.5	23.7	23.8	24.0	24.2	21.9	24.2	23.4	
Jul 25	24.2	24.3	24.2	24.1	24.0	24.4	24.3	24.1	24.0	23.8	23.6	23.5	24.1	24.1	24.2	24.0	23.6	23.1	22.7	22.4	22.2	22.2	22.3	22.3	22.2	24.4	23.6	
Jul 26	22.3	22.1	22.1	22.2	22.2	22.3	22.5	22.7	23.1	23.9	23.8	23.8	23.5	23.5	23.4	23.4	23.8	23.8	24.0	23.9	24.1	24.0	24.2	24.3	22.1	24.3	23.3	
Jul 27	24.1	23.5	23.0	22.9	22.6	22.7	22.9	23.2	23.9	23.8	23.3	23.3	22.9	22.4	22.3	22.4	22.6	22.6	22.6	22.8	23.3	24.1	23.7	23.1	22.3	24.1	23.1	
Jul 28	22.5	22.3	22.4	22.4	22.5	22.5	22.6	23.9	23.9	23.3	22.9	22.7	22.3	22.0	22.3	22.0	22.3	22.3	22.7	22.9	23.1	23.8	24.3	24.0	22.0	24.3	22.8	
Jul 29	23.5	23.3	23.1	22.8	22.5	22.3	22.6	23.9	24.0	23.2	22.8	22.6	22.5	22.2	22.3	22.2	22.2	22.5	22.7	23.2	23.8	24.2	24.2	24.2	22.2	24.2	23.0	
Jul 30	24.2	24.1	24.0	23.9	23.7	23.8	24.3	23.9	23.4	23.1	22.9	22.8	22.8	23.1	22.7	22.6	22.3	22.5	22.7	22.9	23.2	P	P	P	22.3	24.3	23.3	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	23.6	22.8	23.0	23.2	23.4	23.5	23.7	22.8	23.7	NA
Diurnal Maximum	24.5	24.4	24.5	24.7	24.7	24.6	24.7	24.3	24.0	24.0	23.8	24.0	24.1	24.1	24.2	24.0	23.9	23.8	24.0	23.9	24.1	24.1	24.3	24.5				
Diurnal Average	23.8	23.7	23.7	23.6	23.5	23.5	23.6	23.8	23.6	23.3	23.0	22.8	22.7	22.5	22.5	22.5	22.6	22.7	22.9	23.1	23.4	23.7	23.8	23.9				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

**Summary of Hourly Averages**

**PRECIPITATION in mm**

Maximum Hourly Value:	7.9 mm	on Jul 25 at hr 22	Hours in Service:	744
Maximum Daily Value:	35.6 mm	on Jul 25	Hours of Data:	711
Minimum Hourly Value:	0.0 mm	on Jul 1 at hr 0	Hours of Missing Data:	33
Minimum Daily Value:	0.0 mm	on Jul 2	Hours of Calibration:	0
Monthly Total:	78.9 mm		Operational Uptime:	95.6

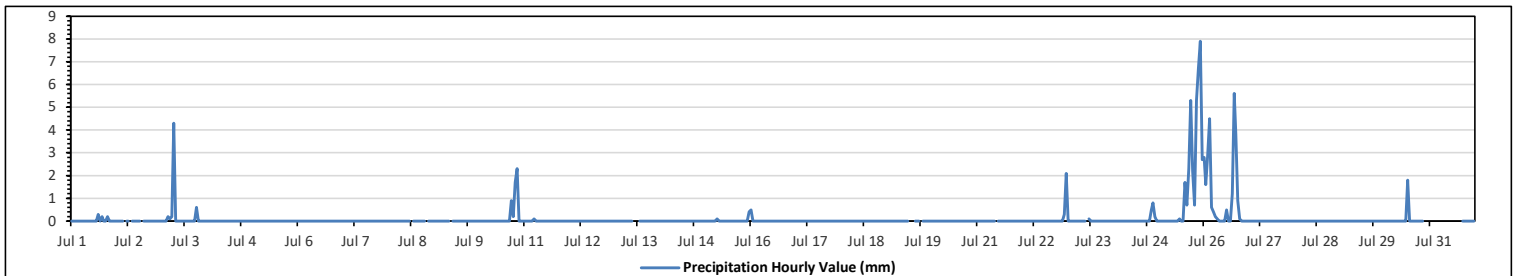
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0.2	0	0	0.2	0	0	0	0	0.0	0.3	0.7
Jul 2	0	0	0	0	K	0	0	K	0	0	0	0	0	K	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 3	0	0	0	0.2	0.1	0.2	4.3	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0	0	0.0	4.3	5.4
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	K	0	0	0	0	0	0	0	K	0	0	0.0	0.0	0.0
Jul 9	0	0	0	0	0	0	0	0	0	0	K	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0.2	1.7	2.3	0	0	0	0.0	2.3	5.1
Jul 11	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
Jul 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 13	0	0	0	0	0	0	0	0	0	0	K	0	K	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 15	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.0	0.4	0.5
Jul 16	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.5	0.5
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 21	0	0	0	0	0	0	0	0	0	0	0	K	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.1	0.0	2.1	2.4
Jul 23	0	0	0	0	0	0	0	0	0	0	0	K	0.1	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.8	0.2	0.0	0.8	1.5
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	1.7	0.7	2.3	5.3	2.2	0.7	5.3	6.7	7.9	2.7
Jul 26	2.8	1.6	2.9	4.5	0.6	0.4	0.2	0.1	0	0	0	0	0.5	0	0	1.2	5.6	3.8	0.9	0.1	0	0	0	0	0.0	5.6	25.2
Jul 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0.0	1.8	1.8
Diurnal Maximum	2.8	1.6	2.9	4.5	0.6	0.4	4.3	0.1	0.0	0.0	0.0	0.1	1.8	0.0	1.7	1.2	5.6	3.8	2.2	1.7	5.3	6.7	7.9	2.7			
Diurnal Average	0.1	0.1	0.1	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.3	0.1	0.1	0.3	0.3	0.3	0.2			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)		P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Peace River Area Monitoring Program

Reno-B Station - July 2023

Summary of Hourly Averages

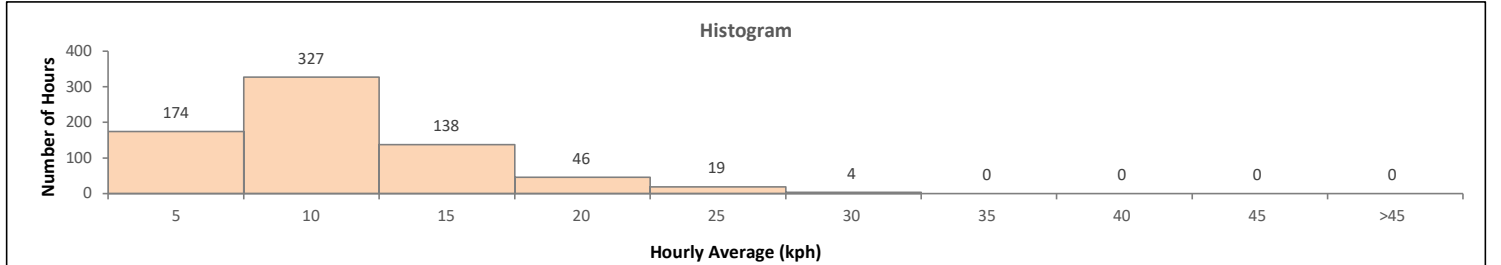
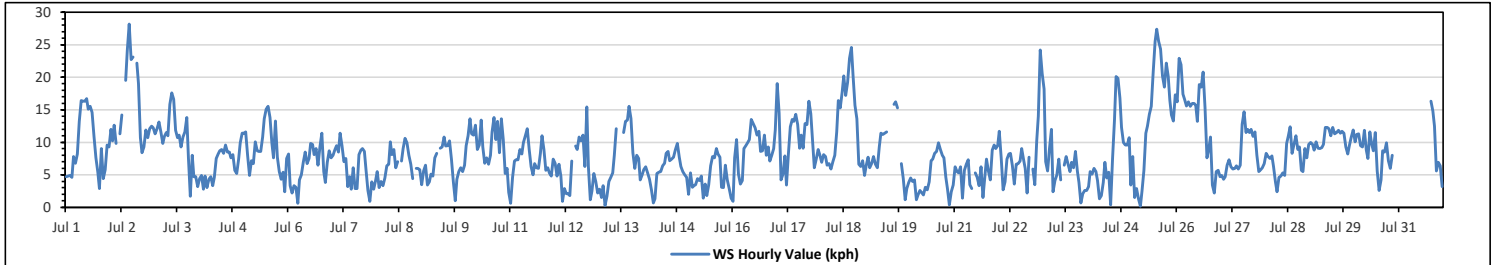
VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	28.2 kph	on Jul 2 at hr 10	Hours in Service:	744
Maximum Daily Value:	15.1 kph	on Jul 2	Hours of Data:	708
Minimum Hourly Value:	0.2 kph	on Jul 25 at hr 4	Hours of Missing Data:	36
Minimum Daily Value:	4.5 kph	on Jul 15	Hours of Calibration:	0
Monthly Average:	2.9 kph		Operational Uptime:	95.2

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Jul 1	4.7	4.8	4.9	4.6	7.8	6.8	8.2	13.2	16.4	16.3	16.7	15.1	15.5	14.6	10.9	7.6	5.4	2.9	9.0	4.4	5.8	9.6	9.3	2.9	16.7	9.6			
Jul 2	12.0	10.2	12.6	9.8	K	11.3	14.2	K	19.5	24.1	28.2	22.7	23.1	K	22.2	19.0	10.7	8.4	9.3	11.9	10.7	12.1	12.5	12.2	8.4	28.2	15.1		
Jul 3	11.3	12.1	13.1	11.6	9.8	10.9	11.5	11.0	15.8	17.6	16.6	11.8	10.7	11.1	9.3	10.8	11.6	13.8	7.7	1.7	8.0	4.7	4.7	3.2	1.7	17.6	10.4		
Jul 4	4.4	4.9	2.8	4.8	3.0	4.3	4.7	3.3	4.6	7.5	8.2	8.7	8.9	8.3	9.6	8.5	7.6	8.1	5.7	5.2	7.4	9.9	11.4	2.8	11.4	6.7			
Jul 5	11.4	11.6	8.0	4.9	7.2	6.7	10.1	8.7	8.6	8.6	10.8	13.6	15.1	15.5	13.8	9.8	7.6	13.3	7.7	5.5	4.3	5.4	2.4	7.5	2.4	15.5	9.1		
Jul 6	8.2	3.3	2.2	3.3	3.1	0.6	4.2	5.0	6.9	8.5	6.7	7.5	9.8	9.7	8.1	9.0	6.5	9.3	11.4	5.5	3.8	6.9	8.7	7.6	0.6	11.4	6.5		
Jul 7	8.0	8.9	9.5	8.5	11.4	9.5	7.0	7.5	3.2	4.7	2.8	6.1	2.9	2.9	8.1	8.8	9.0	8.6	5.8	2.6	0.9	3.9	2.8	4.1	0.9	11.4	6.1		
Jul 8	5.5	3.0	4.0	3.3	4.5	6.4	6.6	10.1	8.1	8.9	6.1	7.0	K	7.1	9.0	10.6	9.9	8.0	6.6	4.4	K	6.0	6.0	5.8	3.0	10.6	6.7		
Jul 9	3.5	5.6	6.5	3.4	3.9	5.1	4.8	7.6	8.3	K	9.1	9.3	10.8	9.4	9.5	10.2	7.4	3.9	1.0	4.3	5.5	6.1	5.5	6.5	1.0	10.8	6.4		
Jul 10	9.5	11.0	13.6	11.3	11.1	12.6	8.9	9.6	13.4	9.3	6.8	7.6	6.6	8.0	11.6	13.8	10.4	13.2	8.4	13.6	10.4	5.2	6.0	2.3	2.3	13.8	9.8		
Jul 11	0.6	4.6	7.1	7.3	7.3	8.9	8.2	10.0	11.0	12.1	8.9	6.2	5.0	6.7	6.1	6.0	8.3	11.0	8.9	5.7	6.1	5.3	4.8	7.4	0.6	12.1	7.2		
Jul 12	6.8	4.8	6.6	4.8	0.9	2.9	2.1	2.1	1.8	7.1	K	9.4	8.9	10.8	10.2	11.1	6.3	15.4	6.2	1.2	2.5	5.2	4.0	2.2	0.9	15.4	5.8		
Jul 13	2.8	1.5	3.3	0.3	1.7	4.0	4.6	5.3	8.0	12.1	K	K	K	11.5	13.2	13.4	15.5	13.7	8.4	6.0	8.0	7.5	4.2	5.0	0.3	15.5	7.1		
Jul 14	5.8	6.2	5.3	4.3	2.7	0.7	1.3	5.2	5.4	5.5	6.4	6.8	8.3	8.6	7.2	7.4	7.7	8.9	9.8	7.7	6.3	5.5	5.0	4.6	0.7	9.8	5.9		
Jul 15	2.0	5.3	3.1	3.3	3.5	4.4	4.1	4.8	1.4	3.6	1.8	3.5	6.4	7.8	7.6	9.0	8.2	7.7	3.1	3.0	6.5	4.2	2.9	1.4	1.4	9.0	4.5		
Jul 16	0.9	7.6	10.4	5.1	3.6	4.1	9.0	9.5	10.0	10.4	13.5	12.9	12.2	11.1	11.7	8.6	8.7	11.1	8.0	9.3	7.1	8.0	9.0	11.9	0.9	13.5	8.9		
Jul 17	19.0	14.5	4.2	5.1	7.9	3.4	8.2	12.4	13.5	13.2	14.3	12.7	9.1	11.1	9.1	12.9	12.7	16.3	14.4	10.6	6.1	7.4	8.9	8.1	3.4	19.0	10.6		
Jul 18	6.9	8.1	7.8	6.5	6.7	5.9	7.0	8.0	11.6	16.4	15.3	17.7	20.2	17.2	19.2	22.9	24.6	20.3	15.7	13.6	6.6	6.3	7.2	4.9	4.9	24.6	12.4		
Jul 19	6.4	7.7	6.1	6.7	7.8	6.6	6.1	9.3	11.4	11.2	11.4	11.6	K	13.3	K	15.8	16.2	15.3	K	6.7	4.4	1.2	2.9	3.8	1.2	16.2	8.7		
Jul 20	4.5	4.0	4.2	1.2	1.9	2.6	2.3	1.9	3.1	2.7	3.9	7.2	7.4	8.3	8.6	9.9	8.9	8.0	7.6	4.6	2.9	0.4	2.4	3.4	0.4	9.9	4.7		
Jul 21	6.2	5.5	5.3	6.2	1.4	5.7	6.6	7.3	3.5	2.9	K	5.3	4.6	3.3	6.2	1.5	4.2	7.4	5.6	4.2	8.8	9.6	9.0	9.5	1.4	9.6	5.6		
Jul 22	11.7	7.6	2.7	3.9	7.4	8.2	8.3	6.4	3.6	6.6	6.7	7.1	9.0	7.3	6.0	2.2	7.7	K	5.9	3.5	10.2	14.0	24.2	20.6	2.2	24.2	8.3		
Jul 23	18.2	7.0	5.6	9.1	12.0	2.4	4.1	5.0	7.4	4.2	K	6.5	7.8	6.6	5.5	6.9	6.1	8.6	5.6	3.8	0.7	2.1	2.6	2.6	0.7	18.2	6.1		
Jul 24	3.2	5.5	5.1	6.0	5.5	4.1	1.3	1.8	3.8	6.9	4.5	5.4	0.4	7.5	13.4	20.1	19.8	16.8	12.3	10.0	9.6	9.6	10.7	3.4	0.4	20.1	7.8		
Jul 25	7.8	1.5	2.9	1.3	0.2	2.5	5.7	11.4	12.5	14.3	15.5	20.8	25.5	27.4	25.5	24.3	20.2	18.5	22.2	20.1	16.5	14.2	13.3	17.3	0.2	27.4	14.2		
Jul 26	16.2	22.9	21.9	17.4	16.6	15.6	16.2	15.5	16.0	16.0	15.7	13.2	18.9	18.5	20.8	15.3	7.6	9.0	10.8	3.4	2.2	5.5	5.7	4.7	2.2	22.9	13.6		
Jul 27	4.9	4.3	4.7	6.5	7.3	6.2	5.9	6.0	6.4	5.9	6.5	12.8	14.7	11.5	12.0	11.5	12.0	10.9	11.6	8.0	5.5	5.8	6.1	6.7	4.3	14.7	8.1		
Jul 28	8.3	7.8	7.5	7.9	6.3	3.9	2.4	4.6	4.8	5.3	4.9	9.8	10.9	12.4	8.3	9.7	11.0	8.9	9.3	5.7	5.5	9.0	7.6	9.7	2.4	12.4	7.6		
Jul 29	10.0	9.7	8.8	10.1	9.1	9.0	9.2	9.7	12.3	12.3	12.1	11.0	12.3	11.3	11.5	11.8	11.4	11.7	11.4	9.3	8.2	8.5	10.8	11.9	8.2	12.3	10.6		
Jul 30	10.1	11.2	11.3	9.5	9.3	11.8	8.8	7.5	11.6	9.7	8.7	11.5	5.6	2.6	4.2	8.7	8.5	9.9	7.2	6.0	8.0	K	P	P	P	2.6	11.8	8.7	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	16.3	14.8	12.5	5.6	6.9	6.4	3.2	3.2	16.3	NA
Diurnal Maximum	19.0	22.9	21.9	17.4	16.6	15.6	16.2	15.5	16.0	16.0	15.7	13.2	18.9	18.5	20.8	15.3	7.6	9.0	10.8	3.4	2.2	5.5	5.7	4.7	2.2	22.9	13.6		
Diurnal Average	7.7	7.4	7.0	6.3	6.2	6.2	6.7	7.6	8.8	9.8	10.1	10.4	10.7	10.4	11.1	11.3	10.5	11.2	8.9	7.1	6.4	6.7	7.2	7.1					

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	In/Valid Data (Equipment Malfunction/Recovery)	NRM	Unit/Maint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

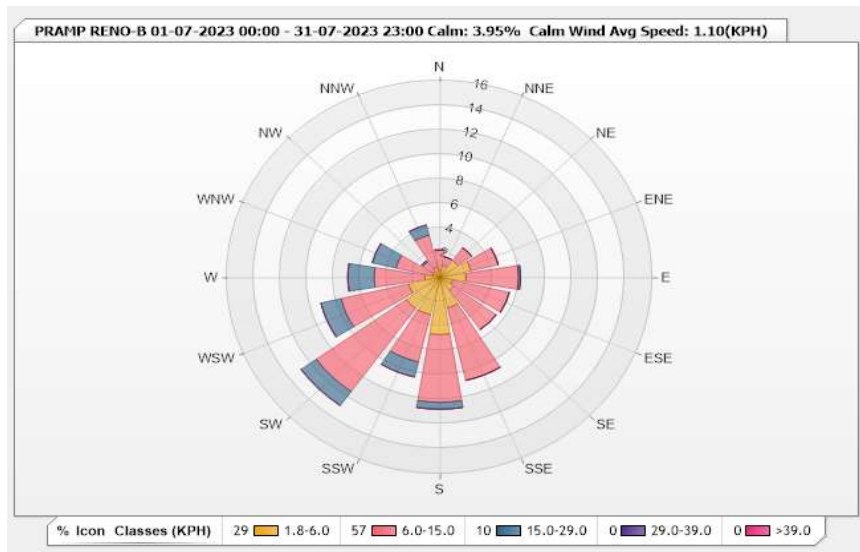


Station: PRAMP RENO-B Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 3.95%      Valid Data: 95.16%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	0.56	1.69	0	0	0	2.25
NNE	0.99	0.71	0	0	0	1.7
NE	1.69	1.27	0	0	0	2.96
ENE	2.4	2.12	0	0	0	4.52
E	1.98	3.95	0.14	0	0	6.07
ESE	0.99	4.38	0	0	0	5.37
SE	1.27	3.95	0	0	0	5.22
SSE	2.54	6.07	0	0	0	8.61
S	4.66	5.51	0.56	0	0	10.73
SSW	3.11	3.95	1.27	0	0	8.33
SW	3.11	8.33	1.41	0	0	12.85
WSW	2.4	5.23	1.55	0	0	9.18
W	1.13	3.81	1.98	0	0	6.92
WNW	0.56	2.82	1.84	0	0	5.22
NW	0.56	0.99	0.14	0	0	1.69
NNW	0.85	2.68	0.85	0	0	4.38
Summary	28.8	57.46	9.74	0	0	96





Peace River Area Monitoring Program

Reno-B Station - July 2023

Summary of Hourly Averages

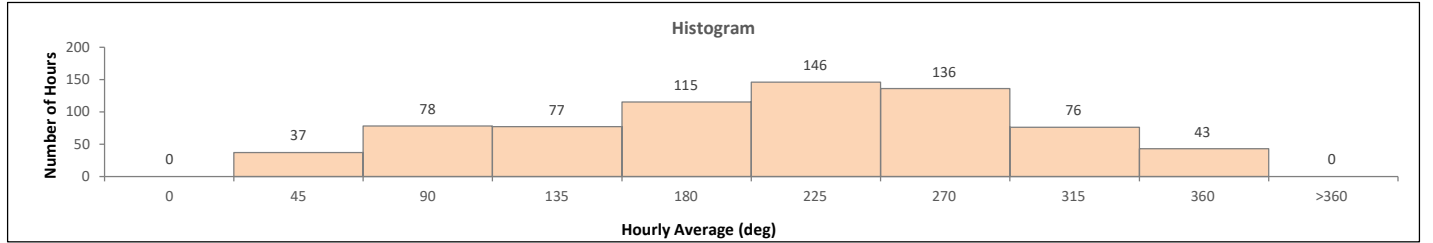
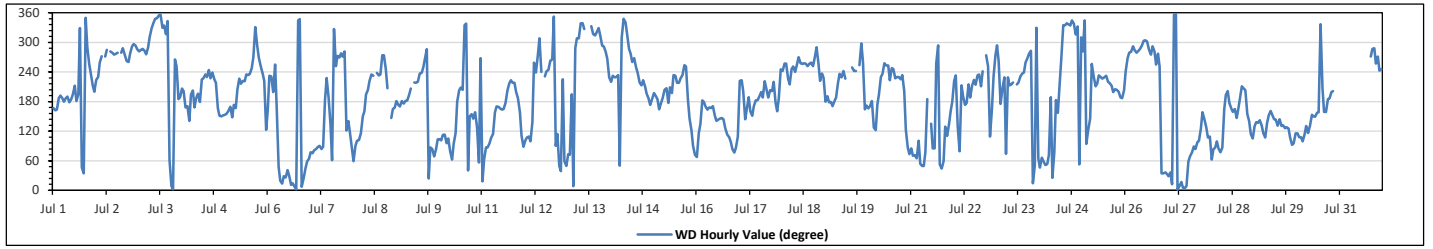
WIND DIRECTION (VWD) in sector

Monthly Average:	215 (SSW) degree	Hours in Service:	744
		Hours of Data:	708
		Hours of Missing Data:	36
		Hours of Calibration:	0
		Operational Uptime:	95.2

Day	Hourly Period Starting at (MST)																							Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Jul 1	SSE	SSE	SSE	S	S	S	S	S	S	S	SSW	SSW	S	SSW	NNW	NE	NE	N	WNW	WSW	SW	SSW	SSW	196	SSW	
Jul 2	SW	SW	WSW	W	K	W	WNW	K	W	W	W	W	K	W	WNW	W	W	WSW	W	WNW	WNW	WNW	WNW	276	W	
Jul 3	W	WNW	WNW	W	W	WNW	NW	NNW	NNW	NNW	N	N	NNW	NNW	NW	NNW	ENE	N	N	W	WSW	S	S	322	NW	
Jul 4	SSW	SSW	SSE	S	SE	SSW	SSW	SSE	S	SSW	S	SSW	SW	WSW	SW	WSW	SW	WSW	SW	SSE	SSE	SSE	SSE	200	SSW	
Jul 5	SSE	SSE	SSE	SSE	SE	S	SSE	SSW	SW	SW	SW	SW	SW	SW	WSW	W	NNW	WNW	W	WSW	SW	SW	ESE	216	SW	
Jul 6	SSE	SW	SW	SSW	WSW	SSE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	NNW	NNW	N	NNE	NE	ENE	ENE	21	NNE	
Jul 7	ENE	ENE	E	E	E	E	E	S	SW	S	SE	ENE	NW	WSW	W	W	W	W	W	ESE	SE	ESE	E	99	E	
Jul 8	ENE	E	E	E	ESE	SSE	SSE	SSW	SSW	SW	SW	SW	K	SW	SW	W	W	WSW	SSW	K	SE	SSE	SSE	206	SSW	
Jul 9	S	S	SSE	S	S	S	S	SSW	SSW	K	SW	SW	SW	SW	WSW	W	WNW	NNE	E	ENE	E	ESE	E	201	SSW	
Jul 10	ESE	E	ESE	ESE	E	ESE	ENE	E	ESE	S	SSW	SSW	SSW	NNW	NNW	NE	SSE	SE	SE	SE	NE	W	113	ESE		
Jul 11	NNE	ENE	E	E	E	ESE	ESE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSW	SW	SW	SW	SW	SSW	S	SSE	ESE	E	159	SSE
Jul 12	E	ESE	ESE	E	SE	WSW	WSW	W	NW	WSW	K	SW	WSW	WSW	W	W	N	E	ESE	NE	NE	SW	ENE	NE	212	SSW
Jul 13	ENE	ENE	SSW	N	WNW	NW	NW	NNW	NNW	NW	K	K	K	NNW	NW	NW	NW	NNW	NW	WNW	WNW	W	W	SW	314	NW
Jul 14	SW	SW	SW	SW	SW	NE	NW	NNW	NNW	NW	WNW	W	WSW	W	WSW	SW	SW	SSW	SSW	SSW	S	S	S	239	WSW	
Jul 15	SSW	S	S	SSE	S	S	SSW	SSW	S	SSW	SSW	SW	SW	SW	SW	SW	WSW	WSW	SW	S	SE	ESE	E	ENE	205	SSW
Jul 16	ENE	ESE	SE	S	S	SSE	SSE	SSE	SSE	S	SSE	SE	SE	SE	SE	SE	ESE	ESE	E	ENE	E	ENE	E	ESE	135	SE
Jul 17	SW	SW	SSW	SE	SSE	S	SSE	SSE	S	S	S	SSW	S	SW	SSW	S	SSW	SSW	SW	S	SSE	S	WSW	193	S	
Jul 18	WSW	WSW	WSW	SW	SSW	WSW	WSW	WSW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	WNW	WSW	SW	SW	SW	255	WSW
Jul 19	S	S	S	S	S	S	S	SW	SW	SW	SW	SW	K	WSW	K	WSW	WSW	WSW	K	WSW	WNW	W	SSE	S	223	SW
Jul 20	SSE	S	S	SE	ESE	S	SSW	SW	SW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SSW	ESE	E	ENE	E	ENE	222	SW
Jul 21	E	ENE	ENE	ENE	E	NE	NE	ENE	S	K	SE	E	E	WSW	WNW	NE	NE	ENE	SE	ESE	SE	SSE	S	94	E	
Jul 22	SW	SW	SE	ENE	SSW	S	S	SSW	S	SSW	SSW	SSW	SW	SW	SSW	WSW	K	W	WSW	ESE	SSE	SW	W	215	SSW	
Jul 23	WNW	W	S	SSW	SW	ENE	SW	SSW	SW	K	SSW	SSW	SW	SW	SW	SW	WSW	W	W	W	NNE	NE	NNW	ENE	243	WSW
Jul 24	NE	ENE	ENE	NE	NE	ENE	S	NNE	ENE	S	SSE	SW	W	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	NE	NW	352	N
Jul 25	W	NNW	E	ESE	SE	WSW	SW	SSW	SW	SW	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SSW	S	S	SSW	215	SSW	
Jul 26	WSW	W	W	W	WNW	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	W	WNW	W	WSW	W	WSW	NE	NE	NE	NNE	285	WNW	
Jul 27	NNE	NE	NNE	N	N	N	NNE	N	N	N	ENE	ENE	ENE	E	E	E	E	SE	SSE	SE	SE	ESE	ESE	68	ENE	
Jul 28	ENE	E	E	E	E	ENE	E	SSE	S	SSW	S	SSE	SSE	SE	SSE	S	SSW	SSW	SSW	SSE	SE	ESE	ESE	148	SE	
Jul 29	SE	SE	SE	SE	SE	ESE	ESE	SSE	SSE	SSE	SSE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	E	ESE	131	SE	
Jul 30	ESE	ESE	ESE	E	ESE	SE	ESE	SE	SSE	SSE	SSE	SSE	SSE	SE	SE	S	S	SSW	SSW	SSW	SSW	SSW	SSW	144	SE	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	NA	NA	

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error      **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Machine Malfunction/Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector**

<b>WIND SPEED</b>				
Maximum Hourly Value:	28.2 kph	on Jul 2 at hr 10	Hours in Service:	744
Maximum Daily Value:	15.1 kph	on Jul 2	Hours of Data:	708
Minimum Hourly Value:	0.2 kph	on Jul 25 at hr 4	Hours of Missing Data:	36
Minimum Daily Value:	4.5 kph	on Jul 15	Hours of Calibration:	0
Monthly Average:	2.9 kph		Operational Uptime:	95.2

<b>WIND DIRECTION</b>	
Monthly Average:	215 degree (SSW)

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
Jul 1	4.7 SSE	4.8 SSE	4.9 SSE	4.6 S	7.8 S	6.8 S	8.2 S	13.2 S	16.4 S	16.3 S	16.7 SSW	15.1 SSW	15.5 SSW	14.6 SSW	10.9 NNW	7.6 NE	5.4 NE	2.9 N	9.0 WNW	4.4 WSW	5.8 WSW	9.6 WSW	9.3 WSW	2.9	16.7	9.6
Jul 2	12.0 SW	10.2 SW	12.6 WSW	9.8 W	K	11.3 W	14.2 WNW	K	19.5 W	24.1 W	28.2 W	22.7 W	23.1 W	K	22.2 WNW	19.0 W	8.4 WSW	9.3 W	11.9 WNW	10.7 WNW	12.1 WNW	12.5 WNW	12.2 WNW	8.4	28.2	15.1
Jul 3	11.3 W	12.1 WNW	13.1 WNW	11.6 W	9.8 W	10.9 WNW	11.5 WNW	11.0 WNW	15.8 WNW	17.6 WNW	16.6 WNW	11.8 WNW	10.7 WNW	11.1 WNW	9.3 WNW	10.8 WNW	11.6 WNW	13.8 WNW	7.7 WNW	1.7 WNW	8.0 WNW	4.7 WNW	3.2 WNW	1.7	17.6	10.4
Jul 4	4.4 SSW	4.9 SSW	2.8 SSW	4.8 S	3.0 S	4.3 S	4.7 S	3.3 S	4.6 S	7.5 S	8.2 S	8.7 S	8.9 S	8.3 S	9.6 S	8.5 S	8.5 S	7.6 S	8.1 S	5.7 S	5.2 S	7.4 S	9.9 S	2.8	11.4	6.7
Jul 5	11.4 SSW	11.6 SSW	8.0 SSW	4.9 S	7.2 S	6.7 S	10.1 S	8.7 S	8.6 S	10.8 S	13.6 S	15.1 S	15.5 S	13.8 S	9.8 S	7.6 S	13.3 S	7.7 S	5.5 S	4.3 S	5.4 S	2.4 S	7.5 S	2.4	15.5	9.1
Jul 6	8.2 SSW	3.3 SSW	2.2 SSW	3.3 S	3.1 S	0.6 S	4.2 S	5.0 S	6.9 S	8.5 S	6.7 S	7.5 S	9.8 S	9.7 S	8.1 S	9.0 S	6.5 S	9.3 S	11.4 S	5.5 S	3.8 S	6.9 S	8.7 S	0.6	11.4	6.5
Jul 7	8.0 SSW	8.9 SSW	9.5 SSW	8.5 SSW	11.4 SSW	9.5 SSW	7.0 SSW	7.5 SSW	3.2 SSW	4.7 SSW	2.8 SSW	6.1 SSW	2.9 SSW	2.9 SSW	8.1 SSW	8.8 SSW	9.0 SSW	8.6 SSW	5.8 SSW	2.6 SSW	0.9 SSW	3.9 SSW	2.8 SSW	0.9	11.4	6.1
Jul 8	5.5 SSW	3.0 SSW	4.0 SSW	3.3 SSW	4.5 SSW	6.4 SSW	6.6 SSW	10.1 SSW	8.1 SSW	8.9 SSW	6.1 SSW	7.0 SSW	K	7.1 SSW	9.0 SSW	10.6 SSW	9.9 SSW	8.0 SSW	6.6 SSW	4.4 SSW	K	6.0 SSW	6.0 SSW	3.0	10.6	6.7
Jul 9	3.5 SSW	5.6 SSW	6.5 SSW	3.4 SSW	3.9 SSW	5.1 SSW	4.8 SSW	7.6 SSW	8.3 SSW	K	9.1 SSW	9.3 SSW	10.8 SSW	9.4 SSW	9.5 SSW	10.2 SSW	7.4 SSW	3.9 SSW	1.0 SSW	4.3 SSW	5.5 SSW	6.1 SSW	5.5 SSW	1.0	10.8	6.4
Jul 10	9.5 SSW	11.0 SSW	13.6 SSW	11.3 SSW	11.1 SSW	12.6 SSW	8.9 SSW	9.6 SSW	13.4 SSW	9.3 SSW	6.8 SSW	7.6 SSW	6.6 SSW	8.0 SSW	11.6 SSW	13.8 SSW	10.4 SSW	13.2 SSW	8.4 SSW	13.6 SSW	10.4 SSW	5.2 SSW	6.0 SSW	2.3	13.8	9.8
Jul 11	0.6 SSW	4.6 SSW	7.1 SSW	7.3 SSW	8.9 SSW	8.2 SSW	10.0 SSW	11.0 SSW	12.1 SSW	8.9 SSW	6.2 SSW	5.0 SSW	6.7 SSW	6.1 SSW	6.0 SSW	8.3 SSW	11.0 SSW	8.9 SSW	5.7 SSW	6.1 SSW	5.3 SSW	4.8 SSW	7.4 SSW	0.6	12.1	7.2
Jul 12	6.8 SSW	4.8 SSW	6.6 SSW	4.8 SSW	0.9 SSW	2.9 SSW	2.1 SSW	2.1 SSW	1.8 SSW	7.1 SSW	K	9.4 SSW	8.9 SSW	10.8 SSW	10.2 SSW	11.1 SSW	6.3 SSW	15.4 SSW	6.2 SSW	1.2 SSW	2.5 SSW	5.2 SSW	4.0 SSW	0.9	15.4	5.8
Jul 13	2.8 SSW	1.5 SSW	3.3 SSW	0.3 SSW	1.7 SSW	4.0 SSW	4.6 SSW	5.3 SSW	8.0 SSW	12.1 SSW	K	K	K	K	11.5 SSW	13.2 SSW	13.4 SSW	15.5 SSW	13.7 SSW	8.4 SSW	6.0 SSW	8.0 SSW	7.5 SSW	0.3	15.5	7.1
Jul 14	5.8 SSW	6.2 SSW	5.3 SSW	4.3 SSW	2.7 SSW	0.7 SSW	1.3 SSW	5.2 SSW	5.4 SSW	5.5 SSW	6.4 SSW	6.8 SSW	8.3 SSW	8.6 SSW	7.2 SSW	7.4 SSW	7.7 SSW	8.9 SSW	9.8 SSW	7.7 SSW	6.3 SSW	5.5 SSW	4.6 SSW	0.7	9.8	5.9
Jul 15	2.0 SSW	5.3 SSW	3.1 SSW	3.3 SSW	3.5 SSW	4.4 SSW	4.1 SSW	4.8 SSW	1.4 SSW	3.6 SSW	1.8 SSW	3.5 SSW	6.4 SSW	7.8 SSW	7.6 SSW	9.0 SSW	8.2 SSW	7.7 SSW	3.1 SSW	3.0 SSW	6.5 SSW	4.2 SSW	2.9 SSW	1.4	9.0	4.5
Jul 16	0.9 SSW	7.6 SSW	10.4 SSW	5.1 SSW	3.6 SSW	4.1 SSW	9.0 SSW	10.5 SSW	10.4 SSW	13.5 SSW	12.9 SSW	12.2 SSW	11.1 SSW	11.7 SSW	8.6 SSW	8.7 SSW	11.1 SSW	8.0 SSW	9.3 SSW	7.1 SSW	8.0 SSW	9.0 SSW	11.9 SSW	0.9	13.5	8.9
Jul 17	19.0 SSW	14.5 SSW	4.2 SSW	5.1 SSW	7.9 SSW	3.4 SSW	8.2 SSW	12.4 SSW	13.5 SSW	13.2 SSW	14.3 SSW	12.7 SSW	9.1 SSW	11.1 SSW	9.1 SSW	12.9 SSW	12.7 SSW	16.3 SSW	14.4 SSW	10.6 SSW	6.1 SSW	7.4 SSW	8.9 SSW	3.4	19.0	10.6
Jul 18	6.9 SSW	8.1 SSW	7.8 SSW	6.5 SSW	6.7 SSW	5.9 SSW	7.0 SSW	8.0 SSW	11.6 SSW	16.4 SSW	15.3 SSW	17.7 SSW	20.2 SSW	17.2 SSW	19.2 SSW	22.9 SSW	24.6 SSW	20.3 SSW	15.7 SSW	13.6 SSW	6.6 SSW	7.2 SSW	4.9 SSW	4.9	24.6	12.4
Jul 19	6.4 SSW	7.7 SSW	6.1 SSW	6.7 SSW	7.8 SSW	6.6 SSW	6.1 SSW	9.3 SSW	11.4 SSW	11.2 SSW	11.4 SSW	11.6 SSW	K	13.3 SSW	K	15.8 SSW	16.2 SSW	15.3 SSW	K	6.7 SSW	4.4 SSW	1.2 SSW	2.9 SSW	1.2	16.2	8.7
Jul 20	4.5 SSW	4.0 SSW	4.2 SSW	1.2 SSW	1.9 SSW	2.6 SSW	2.3 SSW	1.9 SSW	3.1 SSW	2.7 SSW	3.9 SSW	7.2 SSW	7.4 SSW	8.3 SSW	8.6 SSW	9.9 SSW	8.9 SSW	8.0 SSW	7.6 SSW	4.6 SSW	2.9 SSW	0.4 SSW	2.4 SSW	0.4	9.9	4.7
Jul 21	6.2 SSW	5.5 SSW	5.3 SSW	6.2 SSW	1.4 SSW	5.7 SSW	6.6 SSW	7.3 SSW	3.5 SSW	2.9 SSW	K	5.3 SSW	4.6 SSW	3.3 SSW	6.2 SSW	1.5 SSW	4.2 SSW	7.4 SSW	5.6 SSW	4.2 SSW	8.8 SSW	9.6 SSW	9.5 SSW	1.4	9.6	5.6
Jul 22	11.7 SSW	7.6 SSW	2.7 SSW	3.9 SSW	7.4 SSW	8.2 SSW	8.3 SSW	6.4 SSW	3.6 SSW	6.6 SSW	6.7 SSW	7.1 SSW	9.0 SSW	7.3 SSW	6.0 SSW	2.2 SSW	7.7 SSW	K	5.9 SSW	3.5 SSW	10.2 SSW	14.0 SSW	24.2 SSW	2.2	24.2	8.3
Jul 23	18.2 SSW	7.0 SSW	5.6 SSW	9.1 SSW	12.0 SSW	2.4 SSW	4.1 SSW	5.0 SSW	7.4 SSW	4.2 SSW	K	6.5 SSW	7.8 SSW	6.6 SSW	5.5 SSW	6.9 SSW	6.1 SSW	8.6 SSW	5.6 SSW	3.8 SSW	0.7 SSW	2.1 SSW	2.6 SSW	0.7	18.2	6.1
Jul 24	3.2 SSW	5.5 SSW	5.1 SSW	6.0 SSW	5.5 SSW	4.1 SSW	1.3 SSW	1.8 SSW	3.8 SSW	6.9 SSW	4.5 SSW	5.4 SSW	0.4 SSW	7.5 SSW	13.4 SSW	20.1 SSW	19.8 SSW	16.8 SSW	12.3 SSW	10.0 SSW	9.6 SSW	9.6 SSW	10.7 SSW	0.4	20.1	7.8
Jul 25	7.8 SSW	1.5 SSW	2.9 SSW	1.3 SSW	0.2 SSW	2.5 SSW	5.7 SSW	11.4 SSW	14.3 SSW	15.5 SSW	20.8 SSW	25.5 SSW	27.4 SSW	25.5 SSW	24.3 SSW	20.2 SSW	18.5 SSW	22.2 SSW	20.1 SSW	16.5 SSW	14.2 SSW	13.3 SSW	17.3 SSW	0.2	27.4	14.2
Jul 26	16.2 SSW	22.9 SSW	21.9 SSW	17.4 SSW	16.6 SSW	15.6 SSW	16.2 SSW	15.5 SSW	16.0 SSW	16.0 SSW	15.7 SSW	13.2 SSW	18.9 SSW	18.5 SSW	20.8 SSW	15.3 SSW	7.6 SSW	9.0 SSW	10.8 SSW	3.4 SSW	2.2 SSW	5.5 SSW	5.7 SSW	2.2	22.9	13.6
Jul 27	4.9 SSW	4.3 SSW	4.7 SSW	6.5 SSW	7.3 SSW	6.2 SSW	5.9 SSW	6.0 SSW	6.4 SSW	5.9 SSW	6.5 SSW	12.8 SSW	14.7 SSW	11.5 SSW	12.0 SSW	11.5 SSW	12.0 SSW	10.9 SSW	11.6 SSW	8.0 SSW	5.5 SSW	5.8 SSW	6.1 SSW	4.3	14.7	8.1
Jul 28	8.3 SSW	7.8 SSW	7.5 SSW	7.9 SSW	6.3 SSW	3.9 SSW	2.4 SSW	4.6 SSW	4.8 SSW	5.3 SSW	4.9 SSW	9.8 SSW	10.9 SSW	12.4 SSW	8.3 SSW	9.7 SSW	11.0 SSW	8.9 SSW	9.3 SSW	5.7 SSW	5.5 SSW	9.0 SSW	7.6 SSW	2.4	12.4	7.6
Jul 29	10.0 SSW	9.7 SSW	8.8 SSW	10.1 SSW	9.1 SSW	9.0 SSW	9.2 SSW	9.7 SSW	12.3 SSW	12.3 SSW	12.1 SSW	11.0 SSW	12.3 SSW	11.3 SSW	11.5 SSW	11.8 SSW	11.4 SSW	11.7 SSW	11.4 SSW	9.3 SSW	8.2 SSW	9.5 SSW	10.8 SSW	8.2	12.3	10.6
Jul 30	10.1 SSW	11.2 SSW	11.3 SSW	9.5 SSW	9.3 SSW	11.8 SSW	8.8 SSW	7.5 SSW	11.6 SSW	9.7 SSW	8.7 SSW	11.5 SSW	5.6 SSW	2.6 SSW	4.2 SSW	8.7 SSW	8.5 SSW	9.9 SSW	7.2 SSW	6.0 SSW	8.0 SSW	6.9 SSW	6.4 SSW	2.6	11.8	8.7
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	3.2	16.3	NA

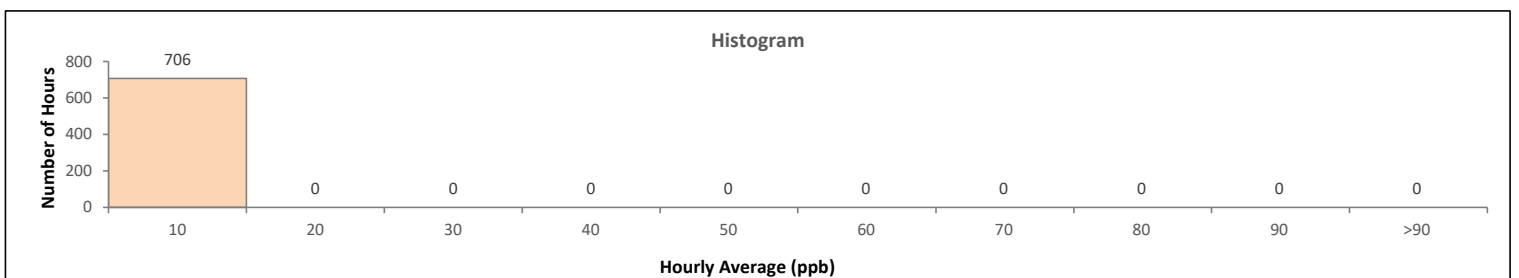
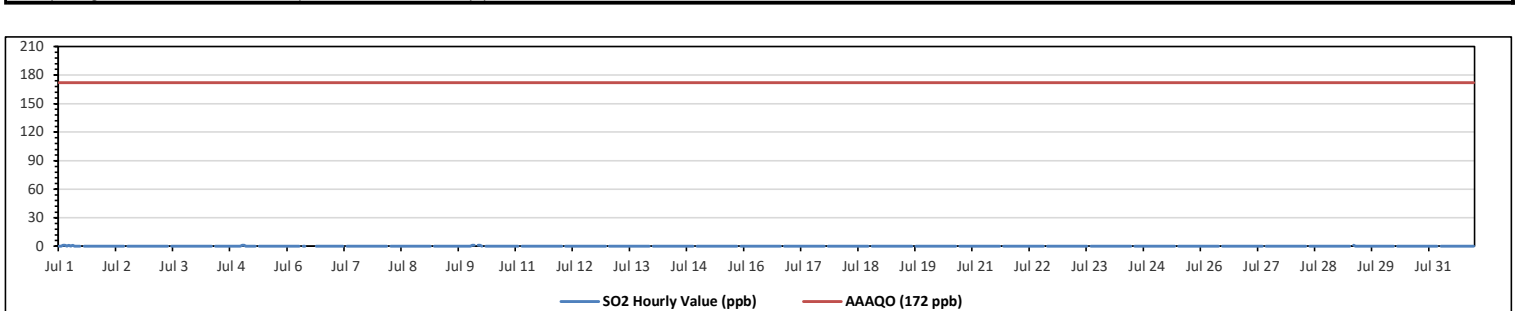
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint(Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

PRC STATION

**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**SULPHUR DIOXIDE (SO<sub>2</sub>) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																																	
Number of 1-Hour Exceedances:						0						Number of 24-Hour Exceedances:						0						30-Day Exceedance:					0				
Maximum Hourly Value:		1 ppb on Jul 1 at hr 2			Hours in Service:		744																										
Maximum Daily Value:		0.2 ppb on Jul 10			Hours of Data:		706																										
Minimum Hourly Value:		0 ppb on Jul 1 at hr 0			Hours of Missing Data:		1																										
Minimum Daily Value:		0.0 ppb on Jul 2			Hours of Calibration:		37																										
Monthly Average:		0.0 ppb			Operational Uptime:		99.9																										
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23						
Jul 1	0	0	1	1	0	1	0	1	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 2	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 3	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 4	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 5	1	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 6	0	0	0	0	0	0	0	S	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0						
Jul 7	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 8	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 9	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 10	0	1	1	S	1	1	0	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 11	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 12	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 13	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0						
Jul 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	S	0	0	0						
Jul 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	S	0	0	0	0	0	0	0						
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0						
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 26	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 27	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 28	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 29	0	0	0	0	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 30	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Jul 31	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Diurnal Maximum	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Diurnal Average	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

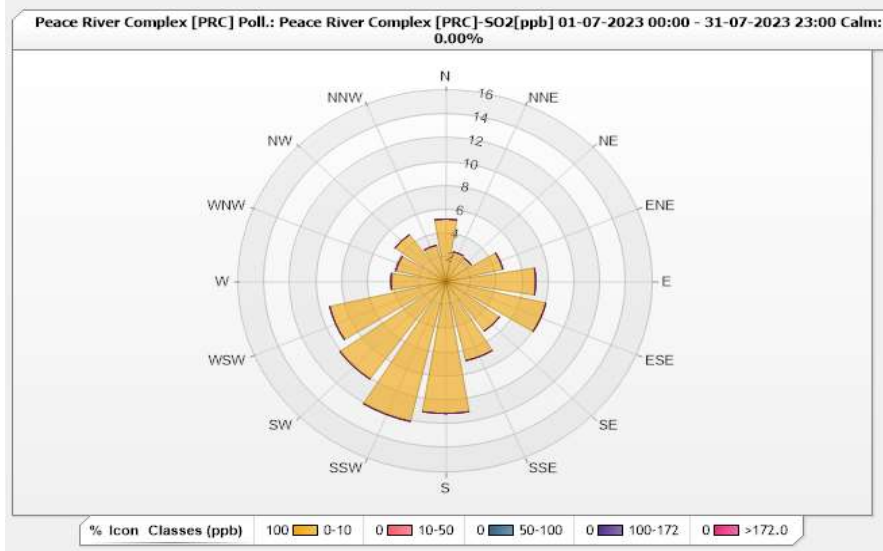


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.89%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	5.24	0	0	0	0	5.24
NNE	2.55	0	0	0	0	2.55
NE	2.41	0	0	0	0	2.41
ENE	4.53	0	0	0	0	4.53
E	6.94	0	0	0	0	6.94
ESE	7.93	0	0	0	0	7.93
SE	5.1	0	0	0	0	5.1
SSE	6.8	0	0	0	0	6.8
S	11.05	0	0	0	0	11.05
SSW	12.04	0	0	0	0	12.04
SW	10.06	0	0	0	0	10.06
WSW	9.21	0	0	0	0	9.21
W	4.25	0	0	0	0	4.25
WNW	3.97	0	0	0	0	3.97
NW	4.82	0	0	0	0	4.82
NNW	3.12	0	0	0	0	3.12
Summary	100	0	0	0	0	100

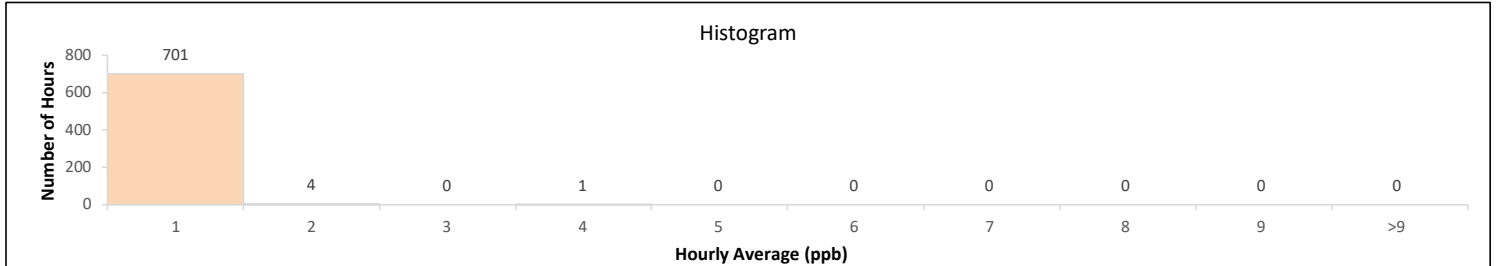
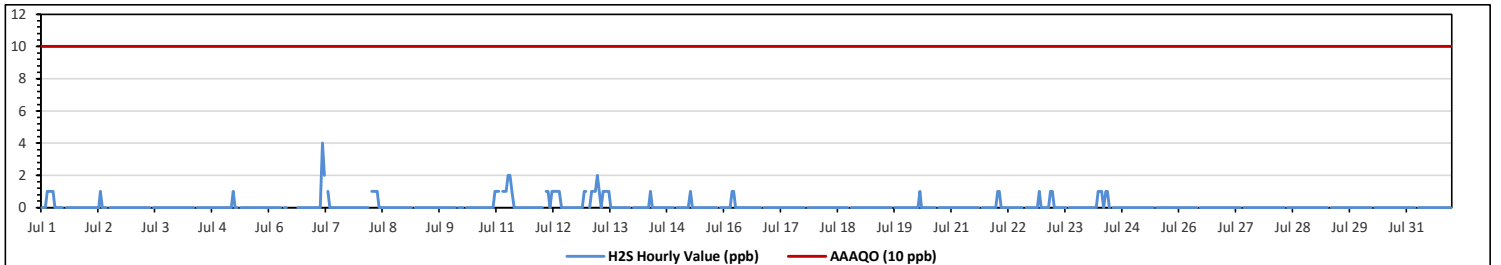


**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**HYDROGEN SULPHIDE (H<sub>2</sub>S) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb																													
Number of 1-Hour Exceedances:										0					Number of 24-Hour Exceedances:										0				
Maximum Hourly Value:	4	ppb	on Jul 7 at hr 4										Hours in Service:	744															
Maximum Daily Value:	0.0	ppb	on Jul 1										Hours of Data:	706															
Minimum Hourly Value:	0	ppb	on Jul 1 at hr 0										Hours of Missing Data:	1															
Minimum Daily Value:	0.0	ppb	on Jul 1										Hours of Calibration:	37															
Monthly Average:	0.1	ppb											Operational Uptime:	99.9															
Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Minimum	Daily Maximum	Daily Average		
Jul 1	0	0	0	1	1	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0		
Jul 2	0	0	0	0	0	0	0	1	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0		
Jul 3	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 4	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 5	0	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0		
Jul 6	0	0	0	0	0	0	0	S	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 7	0	0	0	0	4	2	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.0		
Jul 8	0	0	0	0	0	S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0		
Jul 9	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 10	0	0	0	S	0	0	0	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.0		
Jul 11	1	1	S	1	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.0		
Jul 12	0	S	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.0		
Jul 13	S	0	1	1	1	2	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	2	0.0		
Jul 14	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.0		
Jul 15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	0.0		
Jul 16	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	0.0		
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0		
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0		
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0		
Jul 20	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	0.0		
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 22	1	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0	0	1	0.0		
Jul 23	0	0	0	0	1	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0		
Jul 24	0	0	0	0	0	1	1	1	1	1	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0		
Jul 25	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 26	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 27	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 28	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 29	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 30	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 31	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Dial Maximum	1	1	1	1	4	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1					
Dial Average	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.3	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1					

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error      **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Equipment Malfunction /Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

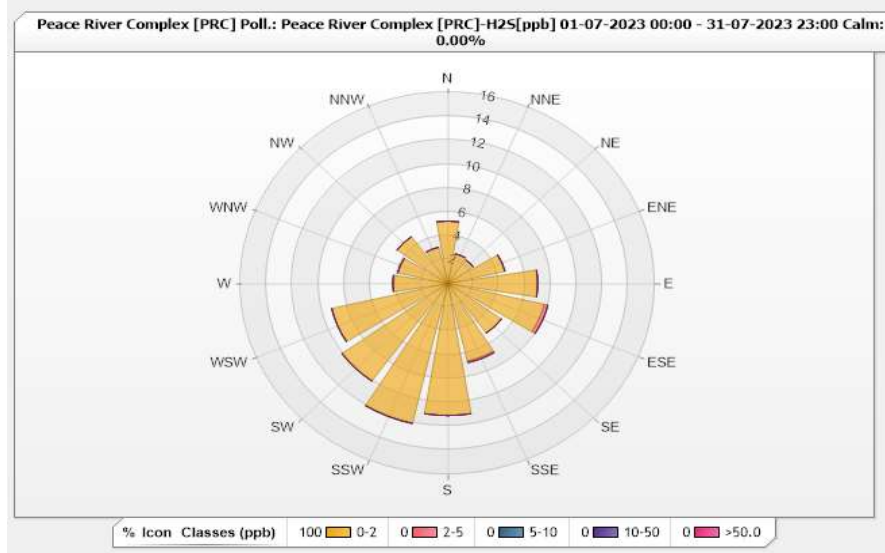


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-H2S[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.89%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	5.24	0	0	0	0	5.24
NNE	2.55	0	0	0	0	2.55
NE	2.41	0	0	0	0	2.41
ENE	4.53	0	0	0	0	4.53
E	6.94	0	0	0	0	6.94
ESE	7.65	0.28	0	0	0	7.93
SE	5.1	0	0	0	0	5.1
SSE	6.66	0.14	0	0	0	6.8
S	11.05	0	0	0	0	11.05
SSW	12.04	0	0	0	0	12.04
SW	10.06	0	0	0	0	10.06
WSW	9.21	0	0	0	0	9.21
W	4.25	0	0	0	0	4.25
WNW	3.97	0	0	0	0	3.97
NW	4.82	0	0	0	0	4.82
NNW	3.12	0	0	0	0	3.12
Summary	100	0.42	0	0	0	100



**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**TOTAL REDUCED SULPHUR (TRS) in ppb**

Maximum Hourly Value:	4	ppb	on Jul 7 at hr 4	Hours in Service:	744
Maximum Daily Value:	0.7	ppb	on Jul 11	Hours of Data:	706
Minimum Hourly Value:	0	ppb	on Jul 1 at hr 9	Hours of Missing Data:	1
Minimum Daily Value:	0.0	ppb	on Jul 3	Hours of Calibration:	37
Monthly Average:	0.2	ppb		Operational Uptime:	99.9

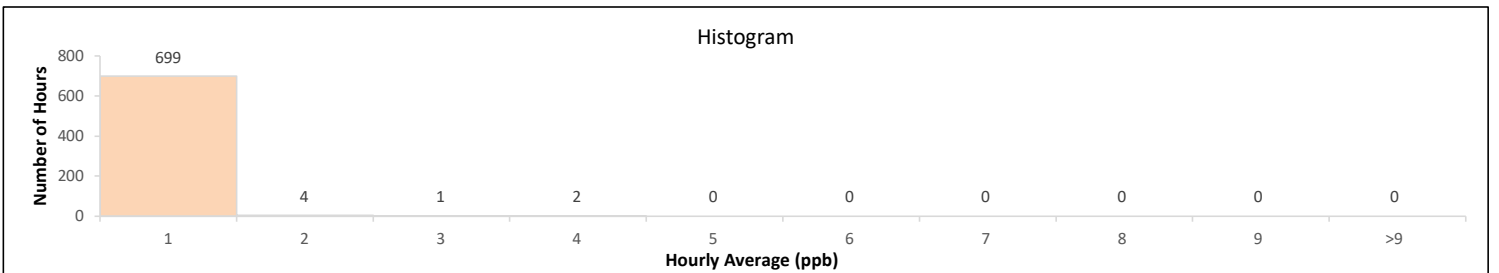
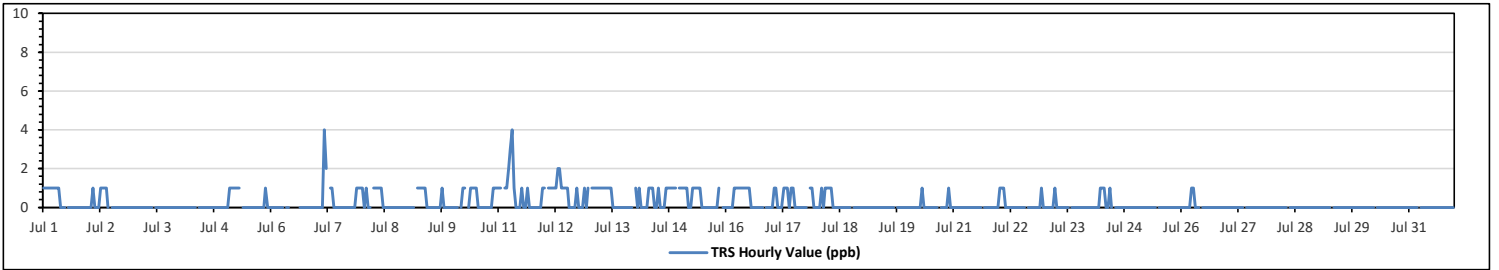
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	1	1	1	1	1	1	1	1	1	0	0	0	S												0	1	0.4	
Jul 2	0	0	1	0	0	0	1	1	1	1	0	0	S													0	1	0.2
Jul 3	0	0	0	0	0	0	0	0	0	0	0	S														0	0	0.0
Jul 4	0	0	0	0	0	0	0	0	0	S																0	0	0.0
Jul 5	0	0	1	1	1	1	1	1	S																	1	0	0.3
Jul 6	0	0	0	0	0	0	0	S																		0	0	0.0
Jul 7	0	0	0	0	4	2	S																			4	1	0.5
Jul 8	1	0	1	0	0	S																				1	1	0.3
Jul 9	0	0	0	0	S																					1	1	0.3
Jul 10	0	0	0	S																						1	1	0.4
Jul 11	1	1	S		1	2	3	4																		4	1	0.7
Jul 12	1	S		1	1	1	1	1	2	2	1	1	1	1	0	0	0	0	1	0	0	0	0	1	0	1	0	0.7
Jul 13	S	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	0.5
Jul 14	1	0	1	0	0	0	0	1	1	1	0	0	1	0	0	0	1	1	1	1	1	1	1	S	1	0	1	0.6
Jul 15	1	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4
Jul 16	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.4
Jul 17	0	1	1	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4
Jul 18	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	S						0	1	0.2
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S						0	0	0.0
Jul 20	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	S									1	0	0.1
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S									0	0	0.0	
Jul 22	1	1	1	0	0	0	0	0	0	0	0	0	0	0	S										0	1	0.2	
Jul 23	0	0	0	0	0	1	0	0	0	0	0	0	S												0	0	1	0.0
Jul 24	0	0	0	0	0	1	1	1	0	1	0	S													0	0	1	0.2
Jul 25	0	0	0	0	0	0	0	0	0	0	S														0	0	0	0.0
Jul 26	0	0	0	0	0	1	1	0	0	S															0	0	1	0.1
Jul 27	0	0	0	0	0	0	0	0	0	S															0	0	0	0.0
Jul 28	0	0	0	0	0	0	S																		0	0	0	0.0
Jul 29	0	0	0	0	0	0	S																		0	0	0	0.0
Jul 30	0	0	0	0	0	S																			0	0	0	0.0
Jul 31	0	0	0	0	0	S																			0	0	0	0.0
Diurnal Maximum	1	1	1	1	4	2	3	4	2	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Diurnal Average	0.2	0.2	0.4	0.2	0.4	0.5	0.6	0.7	0.4	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.2			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



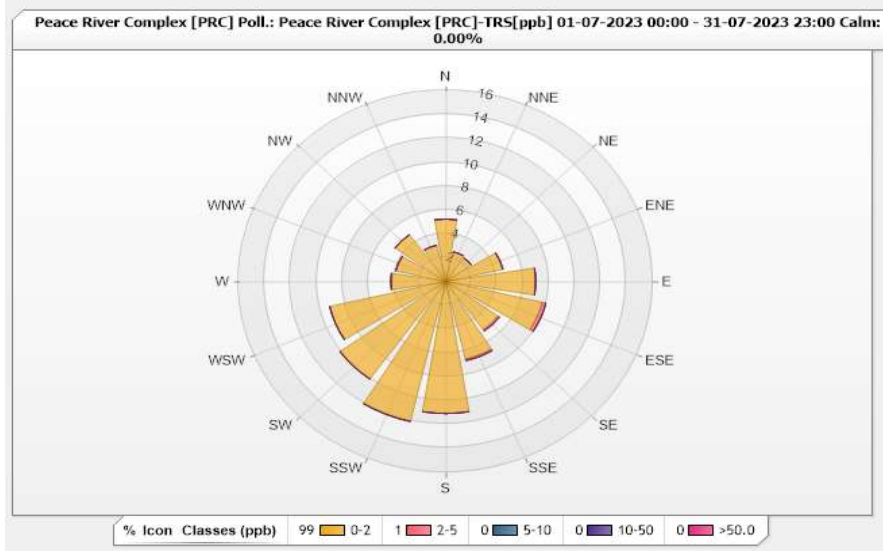


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.89%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	5.24	0	0	0	0	5.24
NNE	2.55	0	0	0	0	2.55
NE	2.41	0	0	0	0	2.41
ENE	4.53	0	0	0	0	4.53
E	6.94	0	0	0	0	6.94
ESE	7.65	0.28	0	0	0	7.93
SE	4.96	0.14	0	0	0	5.1
SSE	6.66	0.14	0	0	0	6.8
S	11.05	0	0	0	0	11.05
SSW	12.04	0	0	0	0	12.04
SW	10.06	0	0	0	0	10.06
WSW	9.21	0	0	0	0	9.21
W	4.25	0	0	0	0	4.25
WNW	3.97	0	0	0	0	3.97
NW	4.82	0	0	0	0	4.82
NNW	3.12	0	0	0	0	3.12
Summary	99.46	0.56	0	0	0	100



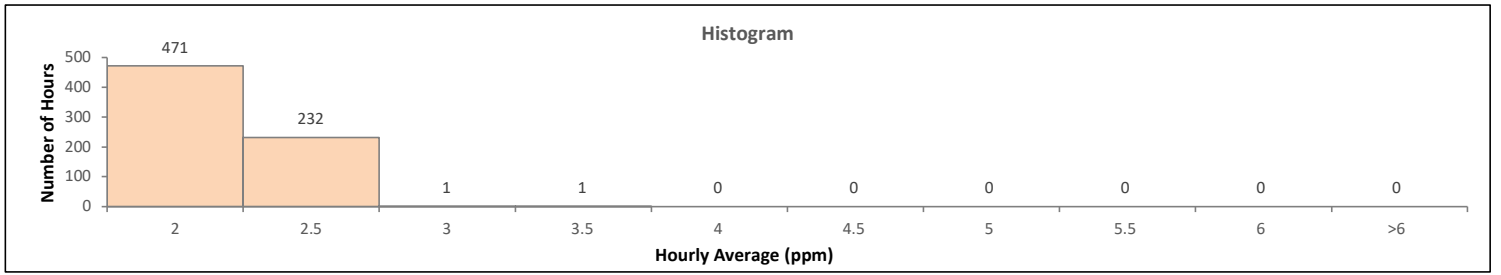
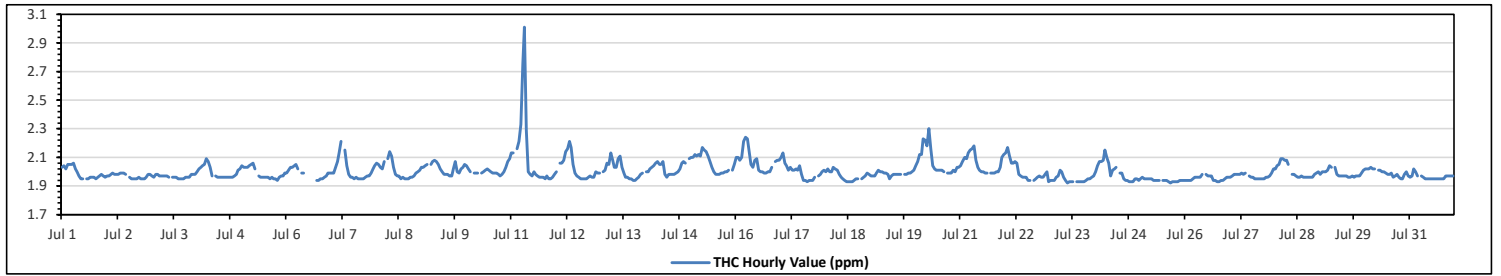
**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**TOTAL HYDROCARBONS (THC) in ppm**

Maximum Hourly Value:	3.01 ppm	on Jul 11 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.11 ppm	on Jul 11	Hours of Data:	705
Minimum Hourly Value:	1.92 ppm	on Jul 23 at hr 9	Hours of Missing Data:	1
Minimum Daily Value:	1.94 ppm	on Jul 25	Hours of Calibration:	38
Monthly Average:	2.00 ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Jul 1	2.03	2.04	2.02	2.05	2.05	2.05	2.06	2.02	2.00	1.97	1.95	1.95	S	1.95	1.95	1.96	1.96	1.96	1.95	1.96	1.97	1.98	1.97	1.96	1.95	2.06	1.99		
Jul 2	1.97	1.97	1.98	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.98	S	1.96	1.95	1.95	1.95	1.95	1.96	1.95	1.95	1.96	1.98	1.98	1.98	1.95	1.99	1.97		
Jul 3	1.97	1.96	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.96	S	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.98	1.98	1.98	1.95	1.98	1.97		
Jul 4	2.00	2.02	2.03	2.04	2.05	2.09	2.07	2.03	1.97	S	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.98	2.01	2.02	1.96	2.09	2.00			
Jul 5	2.04	2.03	2.03	2.03	2.04	2.05	2.06	2.02	S	1.97	1.96	1.96	1.96	1.96	1.96	1.95	1.96	1.95	1.95	1.94	1.96	1.97	1.97	1.99	1.94	2.06	1.99		
Jul 6	1.99	2.01	2.03	2.03	2.04	2.05	2.02	S	1.99	1.99	C	C	C	C	C	C	1.94	1.94	1.95	1.95	1.96	1.97	1.99	1.99	1.94	2.05	NA		
Jul 7	1.99	1.99	2.03	2.07	2.13	2.21	S	2.15	2.04	1.98	1.96	1.96	1.95	1.96	1.95	1.95	1.95	1.95	1.96	1.97	1.97	1.99	2.02	2.04	1.95	2.21	2.01		
Jul 8	2.06	2.05	2.03	2.02	2.07	S	2.09	2.14	2.11	2.03	1.98	1.97	1.97	1.95	1.96	1.95	1.95	1.95	1.96	1.96	1.97	1.99	2.00	2.01	1.95	2.14	2.01		
Jul 9	2.03	2.03	2.04	2.05	S	2.05	2.07	2.08	1.97	S	2.02	2.00	1.98	1.98	1.98	1.97	1.97	2.02	2.07	2.00	1.99	2.02	2.03	2.05	1.97	2.08	2.02		
Jul 10	2.04	2.02	2.00	S	1.99	1.99	1.99	NRM	1.99	2.00	2.01	2.02	2.01	2.00	1.99	1.99	1.99	1.98	1.97	1.98	2.00	2.03	2.07	2.09	1.97	2.09	2.01		
Jul 11	2.13	2.13	S	2.16	2.21	2.33	2.75	3.01	2.29	2.00	1.98	1.97	2.00	1.98	1.97	1.96	1.96	1.96	1.95	1.97	1.95	1.96	1.98	1.95	3.01	2.11	2.11		
Jul 12	2.00	S	2.06	2.06	2.08	2.14	2.16	2.21	2.17	2.05	1.99	1.97	1.96	1.95	1.95	1.95	1.95	1.96	1.97	1.96	1.96	2.00	1.99	1.99	1.95	2.21	2.02		
Jul 13	S	2.00	2.01	2.06	2.05	2.13	2.08	2.03	2.03	2.09	2.11	2.03	1.99	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.96	1.98	1.99	S	1.94	2.13	2.01		
Jul 14	2.00	2.00	2.02	2.03	2.04	2.06	2.07	2.05	2.07	1.98	1.98	1.96	1.98	1.98	1.98	1.98	1.99	2.00	2.02	2.06	2.07	2.06	S	2.09	1.96	2.09	2.02		
Jul 15	2.10	2.10	2.12	2.11	2.12	2.23	2.22	2.18	2.30	2.16	2.04	2.02	2.01	2.01	2.01	2.00	S	1.99	1.99	1.99	2.01	2.00	2.03	S	2.01	2.05	1.98		
Jul 16	2.10	2.10	2.08	2.10	2.21	2.24	2.23	2.13	2.05	2.03	2.08	2.09	2.01	2.00	2.00	1.99	1.99	2.00	2.00	2.03	S	2.07	2.08	2.08	1.99	2.24	2.07		
Jul 17	2.10	2.13	2.06	2.04	2.01	2.03	2.01	2.01	2.02	2.01	2.04	1.98	1.94	1.94	1.93	1.94	1.94	1.94	1.96	S	1.97	1.98	2.00	2.01	1.93	2.13	2.00		
Jul 18	2.00	2.02	2.00	2.00	2.03	2.02	2.01	1.98	1.96	1.95	1.94	1.93	1.93	1.93	1.93	1.94	1.95	S	S	1.95	1.96	1.97	1.99	1.98	1.93	2.03	1.97		
Jul 19	1.97	1.97	1.97	1.99	2.01	2.00	2.00	1.99	1.99	1.98	1.95	1.97	1.98	1.98	1.98	1.98	1.98	S	1.98	1.98	1.99	1.99	2.00	2.01	1.95	2.01	1.98		
Jul 20	2.04	2.07	2.12	2.12	2.23	2.22	2.18	2.30	2.16	2.04	2.02	2.01	2.01	2.01	2.01	2.00	S	1.99	1.99	1.99	2.01	2.00	2.03	2.03	1.99	2.30	2.07		
Jul 21	2.04	2.07	2.10	2.09	2.13	2.15	2.16	2.18	2.08	2.03	2.01	2.00	2.00	1.99	1.99	S	1.99	1.99	2.00	2.00	2.00	2.03	2.10	2.12	1.99	2.18	2.05		
Jul 22	2.13	2.17	2.11	2.06	2.06	2.07	2.06	1.98	1.97	1.96	1.96	1.96	1.94	1.94	S	1.94	1.95	1.96	1.97	1.96	1.96	1.98	2.00	1.93	1.93	2.17	2.00		
Jul 23	1.94	1.94	1.94	1.96	1.97	2.01	2.00	1.96	1.94	1.92	1.93	1.93	S	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.95	1.96	1.97	1.92	2.01	1.95	1.95		
Jul 24	2.00	2.04	2.07	2.07	2.08	2.15	2.10	2.06	1.97	2.01	2.02	2.03	S	1.99	1.99	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.95	1.95	1.94	1.93	2.15	2.00	
Jul 25	1.95	1.96	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	S	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.92	1.96	1.94		
Jul 26	1.94	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.96	1.98	S	1.98	1.97	1.97	1.97	1.97	1.94	1.94	1.93	1.93	1.94	1.94	1.95	1.96	1.96	1.93	1.98	1.95
Jul 27	1.96	1.97	1.98	1.98	1.98	1.98	1.99	1.98	1.99	S	1.97	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.97	1.99	2.02	1.95	2.02	1.97		
Jul 28	2.02	2.04	2.05	2.09	2.09	2.08	2.08	2.05	S	1.98	1.98	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.98	1.99	2.00	1.96	2.09	2.00		
Jul 29	1.98	2.00	2.00	2.00	2.01	2.04	2.03	S	2.03	1.98	1.97	1.97	1.97	1.97	1.97	1.96	1.96	1.97	1.96	1.97	1.97	1.97	1.99	2.01	1.96	2.04	1.99		
Jul 30	2.02	2.02	2.02	2.03	2.02	2.02	S	2.01	2.01	2.00	2.00	1.99	1.98	1.98	1.99	1.96	1.97	1.98	1.96	1.95	1.95	1.98	2.00	1.97	1.95	2.03	1.99		
Jul 31	1.96	1.97	2.02	2.00	1.97	S	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.97	1.97	1.97	1.97	1.95	2.02	1.96		
Diurnal Maximum	2.13	2.17	2.12	2.16	2.23	2.33	2.75	3.01	2.29	2.11	2.11	2.09	2.01	2.01	2.01	2.00	1.99	2.02	2.07	2.06	2.07	2.07	2.10	2.12					
Diurnal Average	2.02	2.03	2.03	2.04	2.05	2.07	2.08	2.03	2.00	1.99	1.98	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.98	2.00	2.01					

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

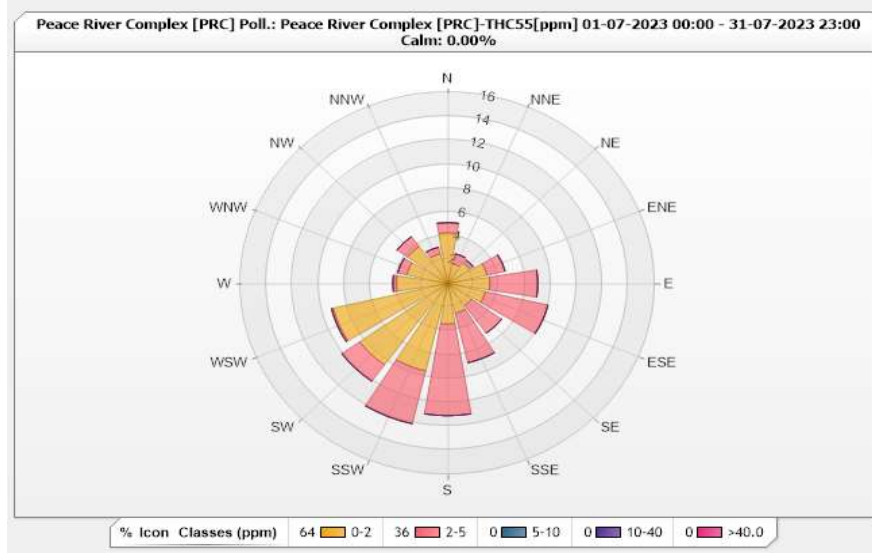


**Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-THC55[ppm] Monthly: 07-2023**

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.76%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	4.26	0.85	0	0	0	5.11
NNE	1.7	0.85	0	0	0	2.55
NE	2.13	0.28	0	0	0	2.41
ENE	3.12	1.42	0	0	0	4.54
E	3.26	3.69	0	0	0	6.95
ESE	2.98	4.96	0	0	0	7.94
SE	2.27	2.84	0	0	0	5.11
SSE	2.55	4.26	0	0	0	6.81
S	3.4	7.66	0	0	0	11.06
SSW	7.52	4.54	0	0	0	12.06
SW	8.37	1.7	0	0	0	10.07
WSW	9.08	0.14	0	0	0	9.22
W	3.97	0.28	0	0	0	4.25
WNW	3.26	0.71	0	0	0	3.97
NW	3.83	0.99	0	0	0	4.82
NNW	2.55	0.57	0	0	0	3.12
Summary	64.25	35.74	0	0	0	100



**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**

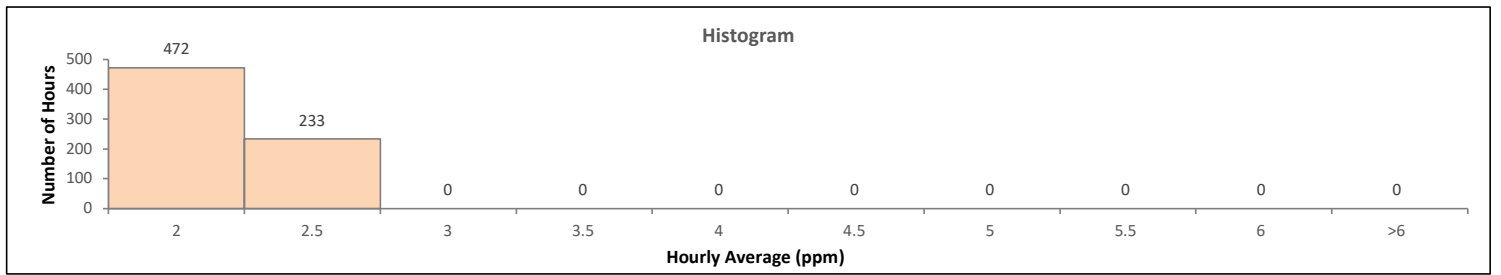
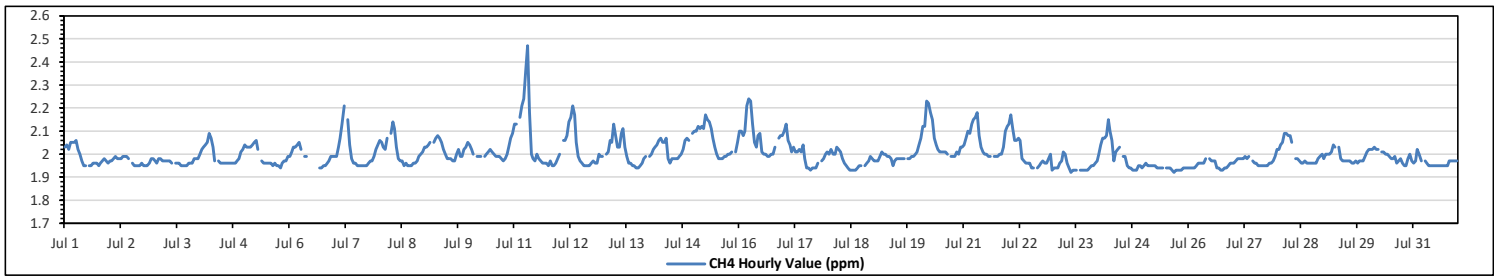
**METHANE (CH4) in ppm**

Maximum Hourly Value:	2.47 ppm	on Jul 11 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.07 ppm	on Jul 16	Hours of Data:	705
Minimum Hourly Value:	1.92 ppm	on Jul 23 at hr 9	Hours of Missing Data:	1
Minimum Daily Value:	1.94 ppm	on Jul 25	Hours of Calibration:	38
Monthly Average:	2.00 ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Jul 1	2.03	2.04	2.02	2.05	2.05	2.05	2.06	2.02	2.00	1.97	1.95	1.95	S	1.95	1.95	1.96	1.96	1.96	1.95	1.96	1.97	1.98	1.97	1.96	1.95	2.06	1.99		
Jul 2	1.97	1.97	1.98	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.98	S	1.96	1.95	1.95	1.95	1.95	1.96	1.95	1.95	1.96	1.98	1.98	1.98	1.95	1.99	1.97		
Jul 3	1.97	1.96	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.96	S	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.98	1.98	1.98	1.95	1.98	1.97		
Jul 4	2.00	2.02	2.03	2.04	2.05	2.09	2.07	2.03	1.97	S	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.98	2.01	2.02	1.96	2.09	2.00		
Jul 5	2.04	2.03	2.03	2.03	2.04	2.05	2.06	2.02	S	1.97	1.96	1.96	1.96	1.96	1.96	1.95	1.96	1.95	1.95	1.94	1.96	1.97	1.97	1.99	1.94	2.06	1.99		
Jul 6	1.99	2.01	2.03	2.03	2.04	2.05	2.02	S	1.99	1.99	C	C	C	C	C	C	1.94	1.94	1.95	1.95	1.96	1.97	1.99	1.99	1.94	2.05	NA		
Jul 7	1.99	1.99	2.03	2.07	2.13	2.21	S	2.15	2.04	1.98	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.97	1.97	1.99	2.02	2.04	1.95	2.21	2.01		
Jul 8	2.06	2.05	2.03	2.02	2.07	S	2.09	2.14	2.11	2.03	1.98	1.97	1.97	1.95	1.96	1.95	1.95	1.95	1.96	1.96	1.97	1.99	2.00	2.01	1.95	2.14	2.01		
Jul 9	2.03	2.03	2.04	2.05	S	2.05	2.07	2.08	1.97	S	2.02	2.00	1.98	1.98	1.98	1.97	1.97	2.00	2.02	1.99	1.99	2.02	2.03	2.05	1.97	2.08	2.02		
Jul 10	2.04	2.02	2.00	S	1.99	1.99	1.99	NRM	1.99	2.00	2.01	2.02	2.01	2.00	1.99	1.99	1.99	1.98	1.97	1.98	2.00	2.03	2.07	2.09	1.97	2.09	2.01		
Jul 11	2.13	2.13	S	2.16	2.21	2.24	2.36	2.47	2.18	2.00	1.98	1.97	2.00	1.98	1.97	1.96	1.96	1.96	1.95	1.97	1.95	1.96	1.98	1.95	2.47	2.06			
Jul 12	2.00	S	2.06	2.06	2.08	2.14	2.16	2.21	2.17	2.05	1.99	1.97	1.96	1.95	1.95	1.95	1.95	1.96	1.97	1.96	1.96	2.00	1.99	1.99	1.95	2.21	2.02		
Jul 13	S	2.00	2.01	2.06	2.05	2.13	2.08	2.03	2.03	2.09	2.11	2.03	1.99	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.96	1.98	1.99	S	1.94	2.13	2.01		
Jul 14	1.99	2.00	2.02	2.03	2.04	2.06	2.07	2.05	2.05	2.07	1.98	1.96	1.98	1.98	1.98	1.98	1.99	2.00	2.02	2.06	2.07	2.06	S	2.09	1.96	2.09	2.02		
Jul 15	2.10	2.10	2.12	2.11	2.12	2.11	2.17	2.15	2.14	2.11	2.07	2.03	2.00	1.98	1.98	1.98	1.99	1.99	2.00	2.00	2.01	S	2.01	2.05	1.98	2.17	2.06		
Jul 16	2.10	2.10	2.08	2.10	2.21	2.24	2.23	2.13	2.05	2.03	2.08	2.09	2.01	2.00	2.00	1.99	1.99	2.00	2.00	2.03	S	2.07	2.08	2.08	1.99	2.24	2.07		
Jul 17	2.10	2.13	2.06	2.04	2.01	2.03	2.01	2.01	2.02	2.01	2.04	1.98	1.94	1.94	1.93	1.94	1.94	1.94	1.96	S	1.97	1.98	2.00	2.01	1.93	2.13	2.00		
Jul 18	2.00	2.02	2.00	2.00	2.03	2.02	2.01	1.98	1.96	1.95	1.94	1.93	1.93	1.93	1.93	1.94	1.94	1.95	1.95	S	1.95	1.96	1.97	1.99	1.98	2.03	1.97		
Jul 19	1.97	1.97	1.97	1.99	2.01	2.00	2.00	1.99	1.99	1.98	1.95	1.97	1.98	1.98	1.98	1.98	1.98	1.98	S	1.98	1.98	1.99	1.99	2.00	2.01	1.95	2.01	1.98	
Jul 20	2.04	2.07	2.12	2.12	2.23	2.22	2.18	2.15	2.07	2.04	2.02	2.01	2.01	2.01	2.01	2.00	S	1.99	1.99	1.99	2.01	2.00	2.03	2.03	1.99	2.23	2.06		
Jul 21	2.04	2.07	2.10	2.09	2.13	2.15	2.16	2.18	2.08	2.03	2.01	2.00	2.00	1.99	1.99	S	1.99	1.99	2.00	2.00	2.00	2.00	2.10	2.12	1.99	2.18	2.05		
Jul 22	2.13	2.17	2.11	2.06	2.06	2.07	2.06	1.98	1.97	1.96	1.96	1.96	1.94	1.94	S	1.94	1.95	1.96	1.97	1.96	1.96	1.98	2.00	1.93	1.93	2.17	2.00		
Jul 23	1.94	1.94	1.94	1.96	1.97	2.01	2.00	1.96	1.94	1.92	1.93	1.93	1.93	S	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.95	1.96	1.97	1.92	2.01	1.95		
Jul 24	2.00	2.04	2.07	2.07	2.08	2.15	2.10	2.06	1.97	2.01	2.02	2.03	S	1.99	1.99	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.95	1.95	1.94	1.93	2.15	2.00	
Jul 25	1.95	1.96	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	S	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.92	1.96	1.94		
Jul 26	1.94	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.96	1.98	S	1.98	1.97	1.97	1.97	1.94	1.94	1.93	1.93	1.94	1.94	1.94	1.95	1.96	1.96	1.93	1.98	1.95
Jul 27	1.96	1.97	1.98	1.98	1.98	1.98	1.99	1.98	1.99	S	1.97	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.97	1.99	2.02	1.95	2.02	1.97		
Jul 28	2.02	2.04	2.05	2.09	2.09	2.08	2.08	2.05	S	1.98	1.98	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.98	1.99	2.00	1.96	2.09	2.00		
Jul 29	1.98	2.00	2.00	2.00	2.01	2.04	2.03	S	2.03	1.98	1.97	1.97	1.97	1.97	1.96	1.96	1.97	1.96	1.97	1.96	1.97	1.97	1.99	2.01	1.96	2.04	1.99		
Jul 30	2.02	2.02	2.02	2.03	2.02	2.02	S	2.01	2.00	2.00	1.99	1.98	1.98	1.99	1.96	1.97	1.98	1.96	1.95	1.95	1.98	2.00	1.97	1.95	2.03	1.99	1.99		
Jul 31	1.96	1.97	2.02	2.00	1.97	S	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.97	1.97	1.97	1.97	1.95	2.02	1.96		
Diurnal Maximum	2.13	2.17	2.12	2.16	2.23	2.24	2.36	2.47	2.18	2.11	2.11	2.09	2.01	2.01	2.01	2.00	1.99	2.00	2.02	2.06	2.07	2.07	2.10	2.12	1.94	2.24	2.12		
Diurnal Average	2.02	2.03	2.03	2.04	2.05	2.07	2.06	2.06	2.02	2.00	1.99	1.98	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.98	2.00	2.01	1.95	2.02	1.96		

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

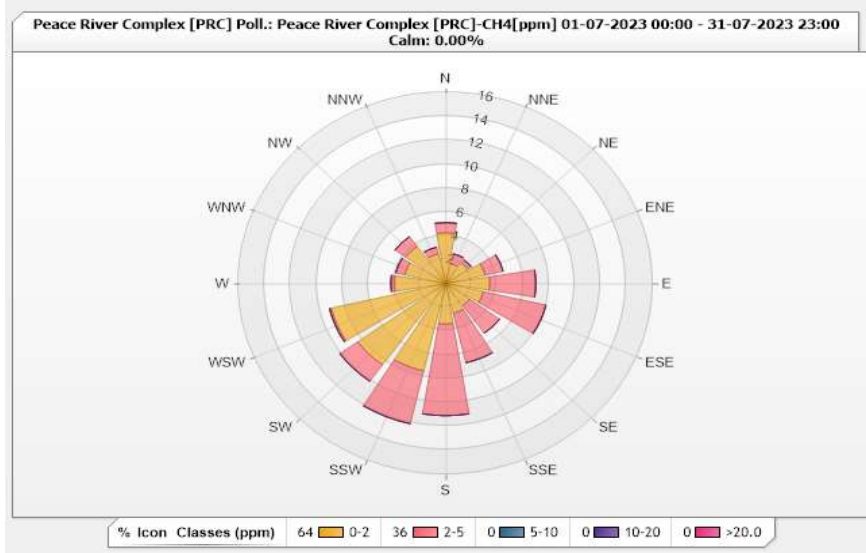


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.76%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	4.26	0.85	0	0	0	5.11
NNE	1.7	0.85	0	0	0	2.55
NE	2.13	0.28	0	0	0	2.41
ENE	3.12	1.42	0	0	0	4.54
E	3.4	3.55	0	0	0	6.95
ESE	2.98	4.96	0	0	0	7.94
SE	2.27	2.84	0	0	0	5.11
SSE	2.55	4.26	0	0	0	6.81
S	3.4	7.66	0	0	0	11.06
SSW	7.52	4.54	0	0	0	12.06
SW	8.37	1.7	0	0	0	10.07
WSW	9.08	0.14	0	0	0	9.22
W	3.97	0.28	0	0	0	4.25
WNW	3.26	0.71	0	0	0	3.97
NW	3.83	0.99	0	0	0	4.82
NNW	2.55	0.57	0	0	0	3.12
Summary	64.39	35.6	0	0	0	100



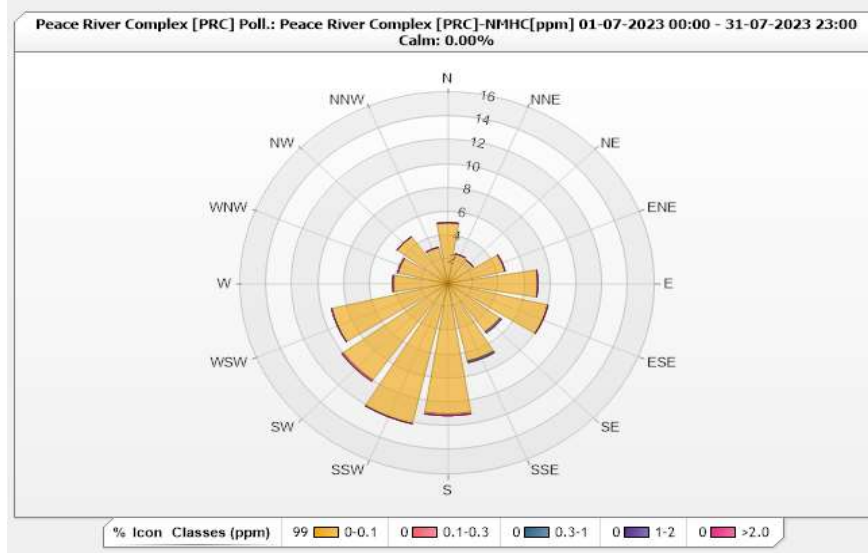


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.76%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	5.11	0	0	0	0	5.11
NNE	2.55	0	0	0	0	2.55
NE	2.41	0	0	0	0	2.41
ENE	4.54	0	0	0	0	4.54
E	6.95	0	0	0	0	6.95
ESE	7.94	0	0	0	0	7.94
SE	4.96	0	0.14	0	0	5.1
SSE	6.67	0	0.14	0	0	6.81
S	10.92	0.14	0	0	0	11.06
SSW	12.06	0	0	0	0	12.06
SW	9.93	0.14	0	0	0	10.07
WSW	9.22	0	0	0	0	9.22
W	4.26	0	0	0	0	4.26
WNW	3.97	0	0	0	0	3.97
NW	4.82	0	0	0	0	4.82
NNW	3.12	0	0	0	0	3.12
Summary	99.43	0.28	0.28	0	0	100



**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**RELATIVE HUMIDITY (RH) in %**

Maximum Hourly Value:	100 %	on Jul 4 at hr 1	Hours in Service:	744
Maximum Daily Value:	98.0 %	on Jul 25	Hours of Data:	744
Minimum Hourly Value:	20 %	on Jul 7 at hr 15	Hours of Missing Data:	0
Minimum Daily Value:	46.1 %	on Jul 7	Hours of Calibration:	0
Monthly Average:	70.6 %		Operational Uptime:	100.0

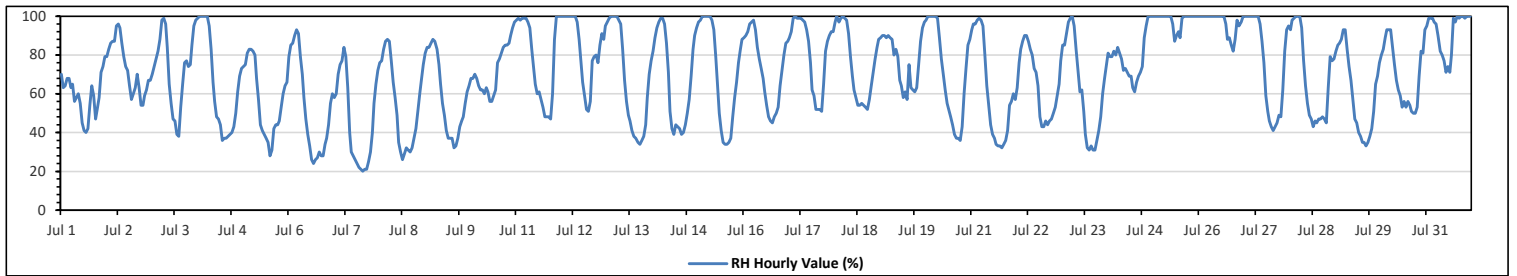
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	70	63	64	68	68	63	65	56	58	60	55	45	41	40	42	54	64	59	47	52	58	71	74	79	40	79	59.0	
Jul 2	79	83	86	87	87	95	96	94	86	79	74	72	64	57	60	63	70	63	54	59	62	67	67	67	54	96	73.3	
Jul 3	70	74	78	82	88	98	99	96	84	65	55	47	46	39	38	53	65	76	77	74	75	85	95	98	38	99	73.2	
Jul 4	99	100	100	100	100	100	95	83	66	56	48	47	44	36	37	37	38	39	40	43	50	61	69	73	36	100	65.0	
Jul 5	74	75	81	83	83	82	80	68	57	44	41	39	37	35	28	31	42	44	44	46	53	60	64	66	28	83	56.5	
Jul 6	79	85	86	90	93	91	79	70	58	47	39	33	26	24	26	27	30	28	28	34	37	44	55	60	24	93	52.9	
Jul 7	58	60	70	75	77	84	79	63	40	30	28	26	24	22	21	20	21	21	25	30	40	55	65	72	20	84	46.1	
Jul 8	76	77	83	87	88	87	77	66	58	49	35	30	26	29	32	31	30	32	37	42	51	60	67	75	26	88	55.2	
Jul 9	81	84	84	86	88	87	83	75	65	55	49	41	37	37	37	32	33	37	43	46	48	55	61	64	32	88	58.7	
Jul 10	68	68	70	68	64	62	62	60	63	61	56	56	59	62	76	78	81	84	85	85	86	90	94	97	56	97	72.3	
Jul 11	98	99	98	99	99	99	97	94	83	73	65	60	61	57	53	48	48	48	47	60	88	100	100	100	47	100	78.1	
Jul 12	100	100	100	100	100	100	100	100	97	88	76	66	59	52	51	56	77	79	80	76	85	91	88	95	51	100	84.0	
Jul 13	97	99	100	100	100	100	98	96	83	67	56	49	46	41	38	37	35	34	36	38	44	58	70	77	34	100	66.6	
Jul 14	82	89	94	97	99	99	96	86	71	51	42	39	44	43	42	39	40	44	50	57	69	83	90	94	39	99	68.3	
Jul 15	97	98	100	100	100	100	100	98	93	79	66	50	41	35	34	34	35	37	48	58	66	76	83	88	34	100	71.5	
Jul 16	89	90	92	96	97	98	93	84	78	73	68	61	54	48	46	45	48	50	53	64	72	80	86	87	45	98	73.0	
Jul 17	89	92	99	100	99	99	99	98	97	93	87	76	62	59	52	52	52	51	65	82	87	90	92	92	51	100	81.8	
Jul 18	97	100	97	99	100	99	98	91	79	69	62	58	54	54	55	54	53	52	57	64	71	78	84	88	52	100	75.5	
Jul 19	89	90	90	89	90	89	88	80	83	79	67	64	58	61	57	75	63	62	61	63	75	87	94	97	57	97	77.1	
Jul 20	98	100	100	100	100	100	99	89	78	70	62	55	52	48	44	39	37	37	36	43	60	73	85	88	36	100	70.5	
Jul 21	93	96	96	98	99	98	95	80	64	54	44	39	37	34	33	33	32	34	36	41	54	56	60	57	32	99	61.0	
Jul 22	63	76	83	87	90	90	87	83	80	73	71	64	48	43	43	46	44	46	47	50	53	59	65	77	43	90	65.3	
Jul 23	85	85	91	97	99	100	95	83	72	61	62	51	39	32	31	33	31	31	36	41	48	60	68	75	31	100	62.8	
Jul 24	81	79	79	82	80	84	81	78	72	73	71	69	69	63	61	66	69	71	74	89	95	100	100	100	61	100	78.6	
Jul 25	100	100	100	100	100	100	100	100	100	100	100	96	87	90	92	89	99	100	100	100	100	100	100	100	87	100	98.0	
Jul 26	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	96	88	89	85	82	88	98	95	97	82	100	96.6	
Jul 27	100	100	100	100	100	100	100	100	100	96	87	76	59	51	46	43	41	43	45	49	48	62	82	93	95	41	100	75.7
Jul 28	93	98	99	100	100	100	94	77	64	55	49	47	43	46	45	47	47	48	47	45	63	79	77	78	43	100	68.4	
Jul 29	82	85	86	88	93	93	83	74	67	57	47	45	40	38	35	33	35	38	42	51	65	69	76	33	93	60.7		
Jul 30	80	83	89	93	93	93	84	75	67	62	59	53	56	53	56	54	51	50	50	53	69	82	81	93	50	93	70.0	
Jul 31	95	99	99	99	97	96	90	82	80	77	71	74	71	80	99	97	100	99	100	100	99	100	100	100	71	100	91.8	
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	100	100	100	100	100	100	100	100	100	100	100	
Diurnal Average	85.9	88.0	90.1	91.9	92.6	93.1	90.1	83.2	75.5	67.3	60.5	54.9	50.9	48.6	48.4	49.8	51.6	52.3	53.9	58.3	66.6	75.4	80.4	84.1				

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



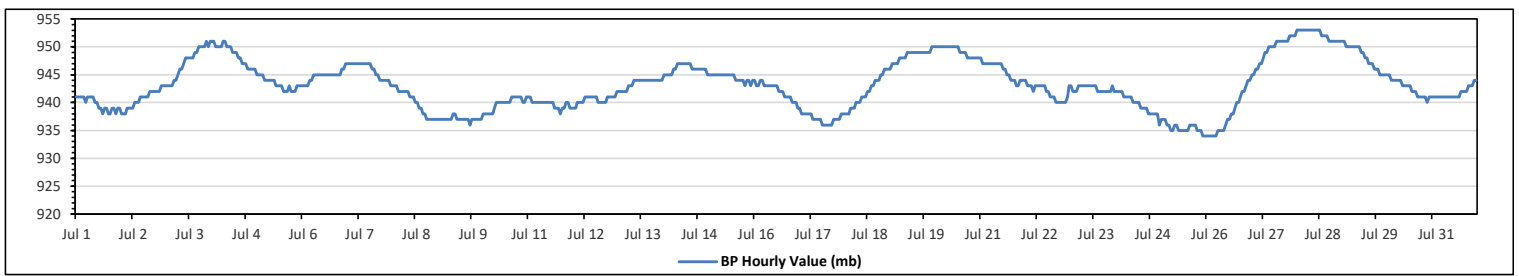


**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**BAROMETRIC PRESSURE (BP) in millibar**

Maximum Hourly Value:	953	mb	on Jul 28 at hr 0	Hours in Service:	744
Maximum Daily Value:	952	mb	on Jul 28	Hours of Data:	744
Minimum Hourly Value:	934	mb	on Jul 25 at hr 22	Hours of Missing Data:	0
Minimum Daily Value:	936	mb	on Jul 25	Hours of Calibration:	0
Monthly Average:	943	mb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
Jul 1	941	941	941	941	941	940	941	941	941	941	940	940	939	939	938	939	939	938	938	939	939	938	939	939	938	941	941	940
Jul 2	938	938	938	939	939	939	939	940	940	940	941	941	941	941	941	942	942	942	942	942	942	942	943	943	943	943	943	941
Jul 3	943	943	943	943	944	944	945	946	946	947	948	948	948	948	948	949	949	950	950	950	950	951	950	951	950	947	947	947
Jul 4	951	951	950	950	950	950	951	951	950	950	950	949	949	949	948	948	947	947	947	946	946	946	946	946	946	946	946	949
Jul 5	945	945	945	945	944	944	944	944	944	944	943	943	943	943	942	942	943	942	942	942	942	943	943	943	943	943	943	943
Jul 6	943	943	943	943	944	944	945	945	945	945	945	945	945	945	945	945	945	945	945	945	945	946	946	946	947	947	947	945
Jul 7	947	947	947	947	947	947	947	947	947	947	947	947	946	946	946	945	944	944	944	944	944	944	944	944	944	944	944	946
Jul 8	943	943	943	942	942	942	942	942	942	941	941	941	940	940	939	939	938	938	937	937	937	937	937	937	937	937	940	940
Jul 9	937	937	937	937	937	937	937	937	938	938	937	937	937	937	937	937	937	936	937	937	937	937	937	937	937	937	937	937
Jul 10	938	938	938	938	938	938	939	940	940	940	940	940	940	940	940	941	941	941	941	941	941	941	941	940	940	941	941	940
Jul 11	941	941	940	940	940	940	940	940	940	940	940	940	940	939	939	939	938	939	939	940	940	940	939	939	941	941	941	940
Jul 12	939	939	940	940	940	940	941	941	941	941	941	941	941	940	940	940	940	941	941	941	941	941	941	941	941	942	942	941
Jul 13	942	942	942	942	942	943	943	943	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	943
Jul 14	945	945	945	945	945	946	946	947	947	947	947	947	947	947	947	946	946	946	946	946	946	946	946	946	946	945	945	946
Jul 15	945	945	945	945	945	945	945	945	945	945	945	945	945	945	944	944	944	944	944	943	944	944	943	944	944	944	944	945
Jul 16	944	943	943	944	944	943	943	943	943	943	943	943	943	942	942	942	941	941	941	941	940	940	940	940	939	944	942	942
Jul 17	939	938	938	938	938	938	938	937	937	937	937	936	936	936	936	936	936	937	937	937	937	937	937	938	938	938	937	937
Jul 18	938	938	938	939	939	939	940	940	940	941	941	941	942	942	943	943	944	944	944	944	945	945	946	946	946	946	946	942
Jul 19	946	947	947	947	947	948	948	948	948	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	950	948	948
Jul 20	950	950	950	950	950	950	950	950	950	950	950	950	950	949	949	949	949	948	948	948	948	948	948	948	948	948	948	949
Jul 21	948	947	947	947	947	947	947	947	947	947	947	946	946	945	945	944	944	944	944	943	943	943	944	944	944	944	944	946
Jul 22	944	943	943	943	942	943	943	943	943	943	943	942	942	941	941	941	940	940	940	940	940	940	941	941	941	941	942	942
Jul 23	943	942	942	942	943	943	943	943	943	943	943	943	943	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
Jul 24	942	942	942	942	941	941	941	941	941	940	940	939	939	939	939	939	938	938	938	938	938	938	938	938	938	936	942	940
Jul 25	937	937	937	936	936	935	935	936	936	935	935	935	935	935	935	936	936	936	936	935	935	935	935	934	934	934	937	936
Jul 26	934	934	934	934	934	934	935	935	935	935	936	937	937	938	938	939	940	940	941	942	942	942	942	944	944	944	944	938
Jul 27	945	945	946	946	947	947	948	949	949	950	950	950	951	951	951	951	951	951	951	952	952	952	952	952	952	952	949	949
Jul 28	953	953	953	953	953	953	953	953	953	953	953	953	953	952	952	952	951	951	951	951	951	951	951	951	951	951	952	952
Jul 29	951	951	950	950	950	950	950	950	950	949	949	948	948	947	947	946	946	946	946	945	945	945	945	945	945	945	945	948
Jul 30	945	945	944	944	944	944	944	944	943	943	943	943	943	942	942	941	941	941	941	941	941	941	941	941	941	941	941	943
Jul 31	941	941	941	941	941	941	941	941	941	941	941	941	941	941	941	942	942	942	942	943	943	943	943	944	944	944	944	942
Diurnal Maximum	953	953	953	953	953	953	953	953	953	953	953	953	953	952	952	952	952	951	951	951	951	952	952	952	952	952	952	952
Diurnal Average	943	943	943	943	943	943	944	944	944	944	944	943	943	943	943	943	943	943	943	943	943	943	943	943	943	943	943	943

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



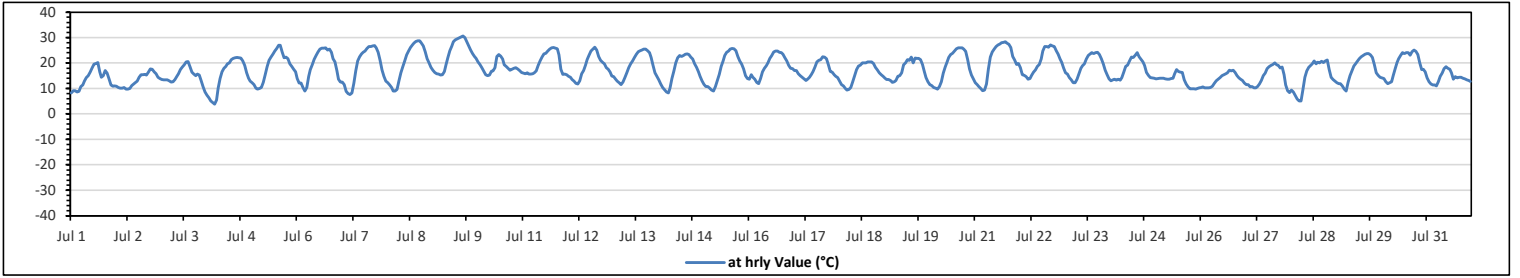
**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**AMBIENT TEMPERATURE (AT) in Degree Celsius**

Maximum Hourly Value:	30.7	°C	on Jul 9 at hr 16	Hours in Service:	744
Maximum Daily Value:	23.4	°C	on Jul 9	Hours of Data:	744
Minimum Hourly Value:	3.8	°C	on Jul 4 at hr 4	Hours of Missing Data:	0
Minimum Daily Value:	13.2	°C	on Jul 25	Hours of Calibration:	0
Monthly Average:	17.4	°C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Jul 1	8.2	9.2	9.2	8.6	8.9	10.7	11.4	13	14.3	15.1	16.4	18.1	19.6	19.9	20.2	16.6	14.4	15.1	17.1	16	13.8	11.4	10.9	11	8.2	20.2	13.7
Jul 2	10.9	10.5	10.1	10.2	10.5	9.7	9.7	10	11.1	11.8	12.4	12.9	14.5	15.4	15.5	15.6	15.3	16.4	17.7	17.6	16.6	15.8	14.4	13.9	9.7	17.7	13.3
Jul 3	13.5	13.4	13.4	13.4	13.1	12.5	12.7	13.5	14.7	15.9	17.4	18.5	19.3	20.5	20.6	18.6	16.4	15.7	15.1	15.7	15.3	13.1	10.6	8.7	8.7	20.6	15.1
Jul 4	7.4	6.4	5.2	4.5	3.8	5.5	10.2	13.9	16.5	18	18.7	19.8	20	21.3	21.8	22.1	22.2	22.1	21.9	20.9	19	16.1	14.1	12.9	3.8	22.2	15.2
Jul 5	12.3	11.5	10.1	9.8	10	10.4	12.4	15.5	18.6	21.1	22.4	23.5	24.7	25.7	27	27	24.3	22.1	22.4	21.7	19.8	18.7	17.5	16.6	9.8	27.0	18.5
Jul 6	13.9	12.1	12.1	10.4	9.1	10.5	14.7	17.4	19.3	21.4	23	24.3	25.4	25.8	25.9	26	25.2	25.5	24.2	21.7	20.4	17.1	13.6	12.5	9.1	26.0	18.8
Jul 7	12.5	11.5	8.9	8	7.7	8.2	12	16.9	20.9	22.5	23.6	24.2	24.8	25.7	26.5	26.5	26.7	26.8	26	24.2	21.1	17.3	14.8	12.9	7.7	26.8	18.8
Jul 8	12.3	11.4	10.5	9.1	9	9.6	13.1	16.1	18.6	20.9	23.2	24.8	26.1	27.1	27.9	28.5	28.8	28.7	27.9	26.7	24.5	21.7	20.1	18.3	9.0	28.8	20.2
Jul 9	17.2	16.3	15.9	15.7	15.3	15.5	16.7	19.3	22.3	24.9	26.6	28.4	29.2	29.5	29.9	30.3	30.7	30	28.3	26.7	25.2	23.8	22.6	21.8	15.3	30.7	23.4
Jul 10	20.4	19.5	18.2	16.8	15.4	15	15.3	16.8	17	18.2	22.6	23.3	22.7	21.5	19.3	18.7	17.9	17.2	17.5	17.9	18.2	17.7	17.1	16.3	15.0	23.3	18.4
Jul 11	16	15.8	16.1	15.7	15.7	15.8	16.1	16.9	19	20.8	22.4	23.6	23.9	24.7	25.4	26	26.1	25.8	25.6	23.2	17.5	15.6	15.7	15.4	15.4	26.1	20.0
Jul 12	14.8	14.5	13.5	12.9	12	11.8	13.1	15.8	17.1	19.2	21.3	23.1	24.7	25.5	26.2	25.2	22.6	21.1	20.3	19.7	18.2	17.5	16.4	14.9	11.8	26.2	18.4
Jul 13	14.6	13.6	12.9	12.3	11.6	12.5	14.3	16.2	18.2	19.7	20.8	22.2	23.5	24.5	24.9	25.2	25.5	25.5	24.9	24.1	22.2	19	16.2	14.8	11.6	25.5	19.1
Jul 14	13.4	11.8	10.5	9.5	8.6	8.3	10.2	13.9	16.8	20	22.1	23	22.6	23	23.5	23.6	23.4	22.4	21.5	19.7	18.3	16.5	14.7	13.1	8.3	23.6	17.1
Jul 15	11.7	10.8	10.8	10.1	9.3	9	10.7	13.2	15.6	18.7	20.8	22.9	24.2	24.8	25.5	25.7	25.6	24.9	22.6	20.8	19.6	17.7	15.1	13.9	9.0	25.7	17.7
Jul 16	13.7	15.4	14.5	13.6	12.4	11.9	13.9	16.6	17.9	18.9	20	21.8	23	24.3	24.7	24.8	24.2	24	23.5	22.1	20.8	19.1	18	17.8	11.9	24.8	19.0
Jul 17	17.1	17.1	15.9	15	14.5	13.8	13.2	13.6	14.4	15.6	16.7	18.5	20.4	21.1	21.3	22.5	22.4	21.7	19.3	16.7	16.4	15.4	14.7	14.3	13.2	22.5	17.2
Jul 18	12.9	11.5	11	10	9.3	9.6	10.4	12.6	15	17.4	18.8	19.2	20	20	20	20.4	20.5	20.5	19.9	18.4	17.3	16.1	15.5	14.8	9.3	20.5	15.9
Jul 19	14.1	13.5	13.5	13.2	12.4	12.7	13.2	14.8	15	16.2	19.3	20.1	21.3	21.1	22.4	20	21.9	21.8	21.8	21.3	19.4	16.6	14.3	12.7	12.4	22.4	17.2
Jul 20	11.6	11.1	10.4	10.1	9.8	10.7	12.7	16	18.5	20.4	22.2	23.4	23.9	24.7	25.6	26	26	26	25.5	24.6	21.4	17.7	15.3	13.8	9.8	26.0	18.6
Jul 21	12.3	11.5	10.8	10	9.2	9.4	11.8	17.7	22.4	24.3	25.4	26.5	27.1	27.5	28	28.1	28.3	27.8	27.4	26.1	22.6	21.2	19.5	19.9	9.2	28.3	20.6
Jul 22	18.2	15.4	15.2	14.6	13.6	13.9	15.2	16.4	17.3	18.7	19.4	21.5	24.8	26.5	26.5	26.3	27.1	26.7	26.5	24.9	23.5	21.6	20.3	18.1	13.6	27.1	20.5
Jul 23	16.1	15.7	14.3	13.4	12.3	12.2	13.7	15.8	17.9	18.9	19.8	21.5	22.9	23.6	24	23.8	24.1	24.2	23.4	21.7	19.7	17.2	15.4	13.8	12.2	24.2	18.6
Jul 24	13.1	13.4	13.7	13.3	13.6	13.3	14.3	16.4	18.7	19.2	20.8	22.4	22.3	23.1	24.1	22.5	21.4	20.4	19	16.3	15.2	14.3	14.2	14.1	13.1	24.1	17.5
Jul 25	13.8	13.9	14	14	14	13.8	13.6	13.7	13.9	14.1	15.8	17.4	16.7	16.4	16.3	13.4	11.8	10.6	9.9	9.9	9.9	9.8	10	10.3	9.8	17.4	13.2
Jul 26	10.5	10.6	10.3	10.3	10.3	10.5	10.9	12	13.1	13.6	14.3	15	15.4	15.8	16.1	17.2	16.9	17.2	16.3	15.1	14.2	13.7	13.2	12.1	10.3	17.2	13.5
Jul 27	11.5	11.6	10.6	10.7	10.3	10.3	10.8	11.8	13.2	15	16	17.8	18.6	19.1	19.5	20.1	19.3	19	18.1	18.5	15.4	11.4	9.2	8.4	8.4	20.1	14.4
Jul 28	9.3	8.6	7.3	5.9	5.1	5.1	9.6	14.4	16.9	18.4	18.9	19.7	20.8	19.7	20.3	20.1	20.7	20.2	20.8	21.2	17.4	14.5	13.5	13	5.1	21.2	15.1
Jul 29	12.3	11.9	11.9	11	9.8	9.1	12.4	15.1	16.9	18.8	19.9	20.7	21.7	22.5	22.9	23.5	23.7	23.2	22.2	19.4	16.2	15.2	14.4	9.1	23.7	17.4	
Jul 30	14.2	13.9	12.6	11.9	12.2	12.7	15	17.7	20.2	21.7	22.9	24.1	23.7	24.1	24.1	23.1	24.5	25.2	24.6	23.3	20.1	17.4	17.5	16.5	11.9	25.2	19.3
Jul 31	14.2	12.6	11.8	11.4	11.4	11	12.7	14.8	16	17.8	18.6	17.9	17.5	16.1	13.7	14.6	14.2	14.4	14.5	14.1	13.8	13.4	13.2	12.8	11.0	18.6	14.3
Diurnal Maximum	20.4	19.5	18.2	16.8	15.7	15.8	16.7	19.3	22.4	24.9	26.6	28.4	29.2	29.5	29.9	30.3	30.7	30.0	28.3	26.7	25.2	23.8	22.6	21.8			
Diurnal Average	13.4	12.8	12.1	11.5	11.0	11.1	12.8	15.1	17.0	18.6	20.1	21.3	22.1	22.6	22.9	22.6	22.3	22.0	21.5	20.4	18.6	16.6	15.3	14.3			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance		
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	P	Power Failure
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)				

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

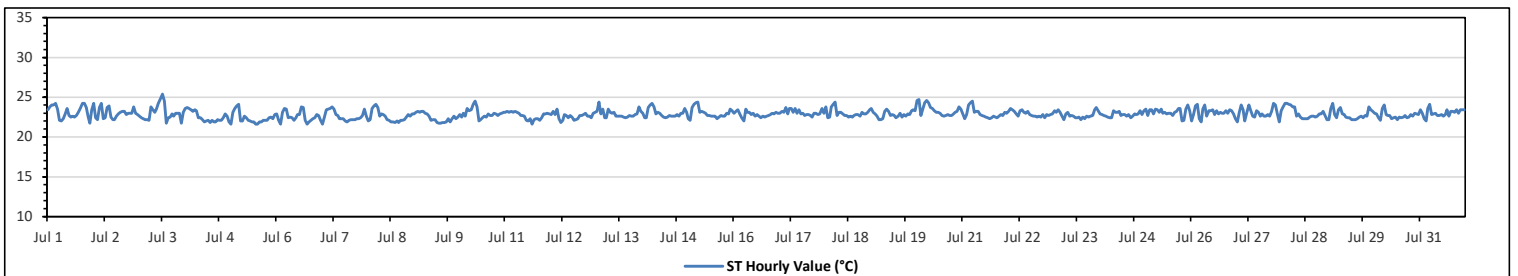


**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**STATION TEMPERATURE (ST) in Degree Celsius**

Maximum Hourly Value:	25.4	°C	on Jul 3 at hr 12											Hours in Service:	744												
Maximum Daily Value:	23.4	°C	on Jul 20											Hours of Data:	744												
Minimum Hourly Value:	21.6	°C	on Jul 5 at hr 0											Hours of Missing Data:	0												
Minimum Daily Value:	22.4	°C	on Jul 5											Hours of Calibration:	0												
Monthly Average:	22.9	°C												Operational Uptime:	100.0												
Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Jul 1	23.4	23.8	24.0	24.0	24.2	23.5	22.1	22.0	22.3	22.9	23.6	22.7	22.5	22.6	22.5	22.7	23.1	23.6	24.2	24.2	23.7	22.5	21.7	23.4	21.7	24.2	23.1
Jul 2	24.2	22.4	22.2	23.7	24.2	22.3	22.4	23.7	23.9	22.5	22.2	22.2	22.6	22.9	23.1	23.2	23.2	22.8	23.0	23.0	23.0	23.8	23.0	22.8	22.2	24.2	23.0
Jul 3	22.6	22.4	22.3	22.2	22.2	22.1	23.8	23.4	23.1	23.5	24.2	24.8	25.4	24.5	21.7	22.4	22.5	22.9	22.6	23.0	23.0	23.0	21.7	23.1	21.7	25.4	23.0
Jul 4	23.6	23.7	23.6	23.4	23.2	23.4	23.3	22.4	22.4	22.2	21.9	22.0	22.1	21.8	22.1	21.9	21.9	22.2	22.1	22.1	22.4	22.9	22.6	21.9	21.8	23.7	22.5
Jul 5	21.6	23.1	23.6	23.9	24.1	22.0	22.0	22.6	22.4	22.1	22.0	21.9	21.9	21.6	21.6	21.9	21.9	22.1	22.1	22.1	22.4	22.5	22.3	22.8	21.6	24.1	22.4
Jul 6	22.9	22.1	21.6	23.1	23.6	23.5	22.4	22.5	22.4	22.1	22.4	22.8	22.8	23.8	23.7	22.1	21.6	21.9	22.1	22.3	22.4	22.8	22.7	22.1	21.6	23.8	22.6
Jul 7	21.6	22.5	23.4	23.5	23.6	23.8	23.5	22.8	22.7	22.3	22.3	22.3	22.0	21.9	22.1	22.2	22.2	22.2	22.3	22.3	22.4	22.7	23.5	22.6	21.6	23.8	22.6
Jul 8	22.0	22.2	23.6	23.9	24.1	23.7	22.6	22.9	22.8	22.6	22.2	22.1	21.9	21.9	21.8	22.0	21.8	22.1	22.1	22.2	22.5	22.8	22.6	22.9	21.8	24.1	22.6
Jul 9	22.9	23.1	23.2	23.1	23.2	23.2	23.0	22.9	22.6	22.1	22.2	22.2	21.8	21.7	21.7	21.8	21.8	21.9	22.3	21.9	22.3	22.6	22.3	22.5	21.7	23.2	22.4
Jul 10	22.8	22.5	23.0	22.6	23.6	23.3	23.4	24.1	24.5	23.8	22.0	22.2	22.4	22.6	22.5	22.9	22.7	22.7	23.0	22.9	22.7	22.9	23.0	23.1	22.0	24.5	23.0
Jul 11	23.1	23.2	23.1	23.2	23.1	23.2	23.1	23.0	22.7	22.7	22.6	22.1	22.0	22.3	21.6	22.2	22.3	22.3	22.1	22.4	22.9	22.9	23.0	22.9	21.6	23.2	22.7
Jul 12	22.8	23.2	22.8	23.5	22.3	21.8	22.1	22.8	22.7	22.4	22.7	22.5	22.1	22.2	22.3	22.7	22.7	22.8	23.0	22.6	22.6	22.4	23.0	23.1	21.8	23.5	22.6
Jul 13	23.2	24.4	22.9	23.5	22.4	22.4	23.5	23.1	23.0	23.1	22.6	22.6	22.6	22.6	22.5	22.4	22.5	22.7	22.6	22.6	22.8	22.9	23.8	23.2	22.4	24.4	22.9
Jul 14	23.0	22.4	22.4	23.7	24.0	24.2	23.8	22.9	23.1	23.0	22.7	22.5	22.4	22.5	22.7	22.6	22.6	22.6	22.8	22.6	23.0	23.0	23.6	23.1	22.4	24.2	23.0
Jul 15	22.3	22.1	23.7	24.1	24.3	24.4	23.1	23.2	23.1	23.0	22.7	22.7	22.6	22.6	22.6	22.3	22.5	22.7	22.6	22.6	23.0	22.9	23.5	23.3	22.1	24.4	23.0
Jul 16	23.0	23.2	23.4	22.9	22.4	22.0	23.5	23.1	23.1	22.8	23.0	22.6	22.8	22.6	22.4	22.6	22.5	22.6	22.7	22.8	23.0	22.9	23.1	23.0	22.0	23.5	22.8
Jul 17	23.0	23.2	23.1	23.7	22.9	23.6	23.1	23.6	23.0	23.4	22.9	23.0	22.7	22.8	22.8	22.7	22.5	22.5	23.0	23.0	22.8	22.9	23.6	23.0	22.5	23.7	23.1
Jul 18	23.8	22.4	22.5	23.8	24.1	24.4	22.7	23.1	23.1	22.9	22.7	22.7	22.5	22.6	22.5	22.7	22.8	22.8	22.6	23.1	22.9	22.9	23.1	23.4	22.4	24.4	23.0
Jul 19	23.6	23.1	22.9	22.6	22.2	22.2	22.3	23.2	23.5	23.2	22.7	22.8	22.7	22.4	22.6	23.0	22.5	22.8	22.6	22.9	22.8	23.3	23.4	23.3	22.2	23.6	22.9
Jul 20	24.6	24.7	22.7	23.5	24.3	24.6	24.3	23.7	23.6	23.3	23.1	23.1	23.0	22.7	22.6	22.7	22.8	22.7	22.7	22.9	23.1	23.2	23.8	23.5	22.6	24.7	23.4
Jul 21	22.9	22.3	22.8	24.0	24.3	24.5	23.1	23.2	23.2	22.8	22.7	22.6	22.5	22.4	22.3	22.4	22.6	22.5	22.4	22.6	22.8	22.7	23.1	23.0	22.3	24.5	22.9
Jul 22	23.2	23.6	23.4	23.2	22.9	22.6	23.3	23.4	23.1	23.0	23.2	22.8	22.7	22.6	22.6	22.5	22.6	22.5	22.8	22.4	22.8	22.7	22.8	22.9	22.4	23.6	22.9
Jul 23	23.3	23.1	23.4	23.1	22.6	22.2	22.9	23.1	22.6	22.7	22.6	22.4	22.4	22.5	22.2	22.5	22.3	22.6	22.5	22.6	22.7	23.4	23.7	23.3	22.2	23.7	22.8
Jul 24	22.9	22.8	22.7	22.6	22.5	22.4	22.4	23.3	23.1	23.1	23.2	22.7	22.8	22.8	22.6	22.8	22.4	22.6	22.9	22.8	22.9	23.3	22.8	23.3	22.4	23.3	22.8
Jul 25	23.5	22.7	23.4	23.4	22.9	23.5	23.4	23.1	23.5	23.0	23.1	22.9	23.0	23.0	22.7	23.1	23.2	23.6	23.6	22.0	22.1	23.5	24.0	23.3	22.0	24.0	23.1
Jul 26	22.0	22.8	23.9	24.1	22.3	21.9	23.5	24.0	22.6	23.3	23.3	23.4	22.8	23.3	22.9	23.1	23.0	23.0	23.3	23.0	23.4	23.3	22.9	22.3	21.9	24.1	23.1
Jul 27	21.9	23.1	24.0	23.4	22.0	23.0	24.0	23.3	22.6	22.5	23.3	23.1	22.6	22.9	22.6	22.6	22.8	22.6	23.2	24.2	24.0	22.9	21.9	23.3	21.9	24.2	23.0
Jul 28	23.8	24.2	24.2	24.1	24.0	23.8	23.8	22.6	22.9	22.5	22.3	22.3	22.3	22.3	22.5	22.6	22.6	22.5	22.6	22.9	22.9	23.2	22.7	22.2	22.2	24.2	23.0
Jul 29	22.2	23.6	24.2	22.8	22.4	23.4	23.7	22.9	22.8	22.5	22.4	22.4	22.2	22.2	22.2	22.3	22.5	22.6	22.4	22.7	22.6	23.8	23.4	23.2	22.2	24.2	22.8
Jul 30	23.0	22.9	22.4	22.1	23.6	24.0	22.8	22.7	22.7	22.3	22.4	22.5	22.2	22.5	22.4	22.5	22.7	22.4	22.5	22.8	22.6	23.0	22.9	22.8	22.1	24.0	22.7
Jul 31	23.4	23.0	22.3	22.0	23.6	24.1	22.8	22.9	23.0	22.7	22.7	22.8	22.6	22.8	23.4	22.6	23.2	23.2	23.1	23.4	23.0	23.4	23.4	23.4	22.0	24.1	23.0
Diurnal Maximum	24.6	24.7	24.2	24.1	24.3	24.6	24.3	24.1	24.5	23.8	24.2	24.8	25.4	24.5	23.7	23.2	23.2	23.6	24.2	24.2	24.0	23.8	24.0	23.5			
Diurnal Average	23.0	23.0	23.1	23.3	23.3	23.2	23.1	23.1	23.0	22.8	22.7	22.6	22.6	22.6	22.4	22.5	22.5	22.6	22.7	22.7	22.8	23.0	23.0	23.0			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**VECTOR WIND SPEED (VWS) in km/hr**

Maximum Hourly Value:	29.4 kph	on Jul 22 at hr 23	Hours in Service:	744
Maximum Daily Value:	13.3 kph	on Jul 1	Hours of Data:	744
Minimum Hourly Value:	0.2 kph	on Jul 14 at hr 7	Hours of Missing Data:	0
Minimum Daily Value:	3.2 kph	on Jul 15	Hours of Calibration:	0
Monthly Average:	2.4 kph		Operational Uptime:	100.0

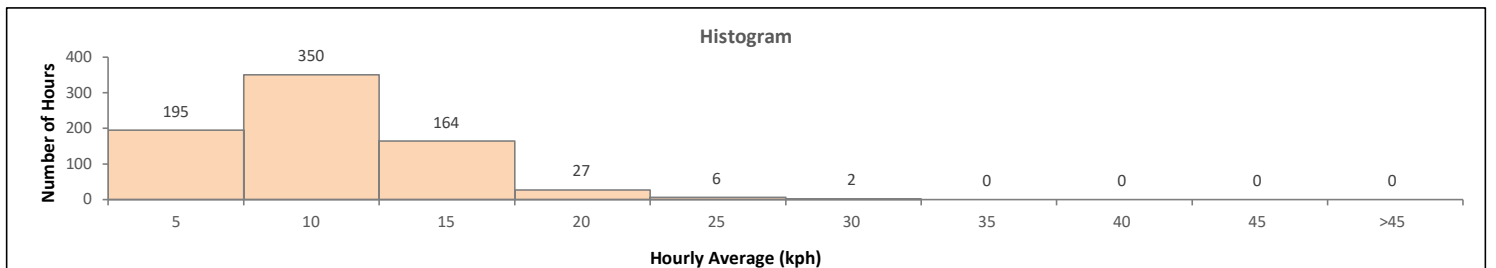
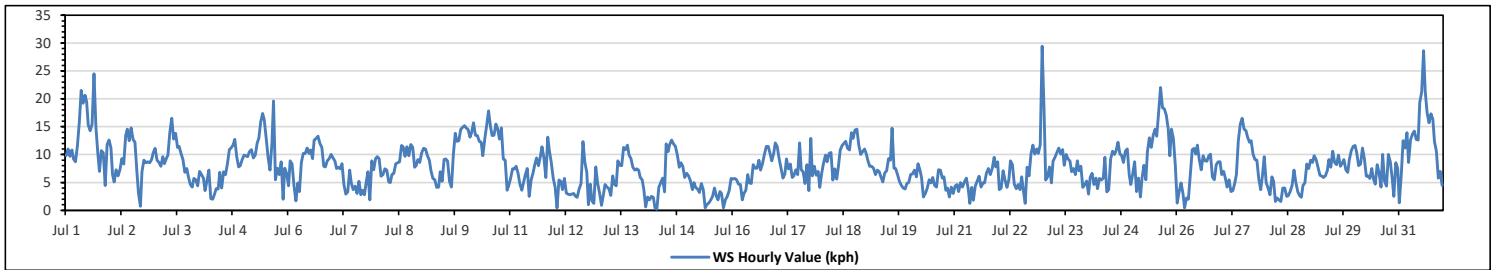
  

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Jul 1	9.8	11.0	9.7	10.8	9.2	8.7	11.5	15.7	21.5	19.2	20.6	19.5	15.3	14.3	15.4	24.5	14.9	10.2	7.0	10.7	10.3	4.5	11.8	12.6	4.5	24.5	13.3
Jul 2	11.2	6.4	5.1	7.3	6.2	7.3	9.3	8.3	13.4	14.6	12.5	14.8	12.7	12.2	7.0	3.1	0.7	7.0	9.0	8.5	8.7	8.5	9.1	10.3	0.7	14.8	8.9
Jul 3	11.1	9.0	8.6	7.9	9.6	8.4	9.3	9.9	14.0	16.5	12.8	13.8	11.3	11.5	10.2	9.1	6.8	7.5	6.0	4.6	4.2	5.7	5.5	4.4	4.2	16.5	9.1
Jul 4	7.0	6.4	5.8	3.5	5.3	7.2	2.1	2.0	2.8	3.9	3.8	6.8	4.0	6.9	6.4	8.4	10.9	11.2	11.6	12.7	9.6	7.8	8.0	9.1	2.0	12.7	6.8
Jul 5	9.9	9.8	9.6	10.5	10.9	9.4	9.9	12.1	12.9	15.9	17.4	16.2	13.0	9.5	7.2	11.9	19.6	5.5	7.6	6.4	8.7	2.0	7.6	6.6	2.0	19.6	10.4
Jul 6	4.4	8.9	8.3	4.4	1.7	4.9	3.4	8.6	10.2	10.2	11.2	10.2	10.8	9.3	12.6	12.9	13.3	12.0	11.3	7.9	7.8	8.9	9.3	10.0	1.7	13.3	8.9
Jul 7	9.4	8.8	7.5	7.7	7.4	8.4	4.6	2.9	3.3	7.2	4.9	3.7	4.3	3.0	5.2	2.8	3.6	2.8	4.8	6.9	1.9	8.9	7.3	9.3	1.9	9.4	5.7
Jul 8	9.6	9.3	6.1	6.4	7.4	7.2	5.1	5.0	6.4	6.6	8.4	8.5	8.7	11.6	11.4	9.7	11.4	9.8	11.8	11.3	7.7	8.1	9.1	8.6	5.0	11.8	8.6
Jul 9	10.3	11.1	11.0	9.8	9.0	7.1	5.7	5.5	4.1	4.2	6.9	5.2	9.1	9.2	8.8	5.2	4.2	10.0	13.8	12.4	12.5	14.5	14.9	15.2	4.1	15.2	9.2
Jul 10	14.8	14.5	13.1	13.9	15.7	13.5	13.4	12.4	12.2	9.8	12.7	15.2	17.8	15.0	13.4	13.5	15.5	14.7	12.8	14.8	9.2	9.0	3.6	4.5	3.6	17.8	12.7
Jul 11	5.8	7.4	7.4	7.9	6.7	4.7	3.6	4.9	6.4	7.5	2.5	5.4	6.7	8.1	9.4	8.0	9.7	11.4	9.4	5.9	13.1	10.7	8.6	5.8	2.5	13.1	7.4
Jul 12	4.2	0.4	5.4	5.2	3.7	5.7	3.1	2.9	2.8	2.9	3.0	2.5	2.3	3.8	4.8	12.3	8.6	6.8	1.0	4.7	1.7	1.2	7.8	4.8	0.4	12.3	4.2
Jul 13	3.1	0.9	2.5	4.6	4.2	3.9	2.7	6.2	4.7	4.4	8.9	8.1	8.0	11.3	10.9	11.7	9.9	9.3	7.7	7.2	7.4	7.2	5.9	5.5	0.9	11.7	6.5
Jul 14	3.8	0.6	2.4	1.9	2.5	2.3	0.4	0.2	4.1	5.0	5.8	3.3	11.9	10.5	11.8	12.6	11.9	11.5	9.9	7.7	8.5	7.9	5.9	6.6	0.2	12.6	6.2
Jul 15	6.2	5.3	3.7	5.0	4.1	3.8	3.2	4.8	3.7	0.4	1.0	1.3	1.8	2.5	4.0	2.5	1.9	3.4	3.0	0.4	1.9	2.5	3.5	5.7	0.4	6.2	3.2
Jul 16	5.6	5.7	5.5	4.7	4.6	1.9	3.0	3.6	6.4	4.9	4.8	8.2	7.6	7.6	9.0	7.2	8.4	10.0	11.5	10.4	8.9	10.2	12.1	1.9	12.1	7.2	
Jul 17	11.5	9.3	7.6	5.8	6.5	9.2	7.4	8.3	5.9	6.2	7.3	6.4	12.1	7.3	6.9	4.8	8.2	3.5	12.9	6.2	7.9	6.3	7.0	4.1	3.5	12.9	7.4
Jul 18	6.6	8.5	9.9	8.7	10.2	10.4	5.4	7.4	5.6	7.7	10.8	11.6	12.0	12.4	11.1	10.8	13.9	12.9	14.4	14.6	11.7	10.0	10.5	11.0	5.4	14.6	10.3
Jul 19	10.2	8.8	7.9	7.9	7.6	6.4	7.2	6.9	6.0	5.1	6.7	7.1	9.3	9.0	14.7	7.6	7.5	6.4	5.2	4.5	4.0	3.8	4.8	5.0	3.8	14.7	7.1
Jul 20	6.4	6.5	7.2	6.0	8.4	7.3	5.9	2.4	3.0	4.0	5.5	4.9	5.9	4.5	4.2	7.3	7.2	5.8	6.0	3.6	4.0	2.4	4.2	3.0	2.4	8.4	5.2
Jul 21	4.3	4.6	3.4	5.0	4.2	5.1	5.8	3.8	1.2	4.1	1.8	4.3	5.3	6.1	4.2	4.9	4.9	6.7	7.5	6.4	7.5	9.5	7.8	8.7	1.2	9.5	5.3
Jul 22	3.7	4.0	7.1	5.4	4.1	5.5	8.9	8.2	4.7	3.9	4.6	3.7	6.0	3.3	1.2	7.7	6.2	10.1	11.7	10.1	11.0	10.2	11.8	29.4	1.2	29.4	7.6
Jul 23	17.8	5.4	6.0	7.8	4.9	8.8	9.5	10.4	11.2	10.1	10.9	8.1	10.0	9.2	8.8	6.9	7.5	6.4	8.9	7.1	7.9	4.1	4.6	5.3	4.1	17.8	8.2
Jul 24	2.9	5.9	6.6	4.6	5.8	3.9	5.7	5.4	5.8	9.5	3.3	3.7	9.2	10.6	10.0	10.7	12.2	10.1	9.9	8.6	10.6	11.0	6.4	4.6	2.9	12.2	7.4
Jul 25	6.5	8.7	3.4	5.8	2.4	5.7	8.1	5.5	10.5	13.0	11.3	13.5	14.6	13.3	17.6	22.0	18.4	18.2	17.0	14.6	9.8	14.6	12.9	8.2	2.4	22.0	11.5
Jul 26	1.3	3.3	4.9	3.0	0.4	2.2	2.0	6.4	10.9	11.1	10.1	11.7	9.1	7.3	9.8	8.9	8.8	9.8	10.1	6.0	5.5	8.2	8.7	8.7	0.4	11.7	7.0
Jul 27	6.4	7.0	5.9	4.2	5.5	3.4	3.5	4.9	6.4	12.5	15.4	16.5	14.6	14.3	13.1	12.2	12.5	10.1	9.1	9.0	5.6	3.7	6.0	9.6	3.4	16.5	8.8
Jul 28	5.0	4.0	2.8	6.0	5.3	1.6	2.2	1.9	1.6	4.0	4.0	2.5	2.6	3.4	4.5	7.2	4.9	3.3	2.7	2.3	4.5	4.9	8.3	7.5	1.6	8.3	4.0
Jul 29	9.0	8.6	9.8	9.1	7.7	6.3	6.1	5.9	6.2	7.1	9.1	7.7	10.6	8.6	8.2	9.9	7.9	8.4	9.1	7.3	6.8	9.1	10.7	11.5	5.9	11.5	8.4
Jul 30	11.6	10.3	8.0	8.3	11.2	9.2	6.1	6.2	5.7	7.5	5.7	4.7	8.2	6.7	4.2	10.0	5.2	4.3	10.0	8.7	5.6	2.5	8.5	7.6	2.5	11.6	7.3
Jul 31	1.4	6.2	12.5	11.2	13.9	8.6	12.6	13.6	14.2	12.7	12.6	19.4	21.2	28.6	21.4	17.5	15.7	17.3	16.3	12.3	10.6	5.8	7.0	4.5	1.4	28.6	13.2
Diurnal Maximum	17.8	14.5	13.1	13.9	15.7	13.5	13.4	15.7	15.7	19.2	20.6	19.5	21.2	28.6	21.4	24.5	19.6	18.2	17.0	14.8	13.1	14.6	14.9	29.4			
Diurnal Average	7.4	7.0	6.9	6.8	6.7	6.4	6.0	6.5	7.3	8.1	8.3	8.7	9.5	9.4	9.3	9.8	9.4	8.9	9.3	8.2	7.6	7.2	8.0	8.4			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

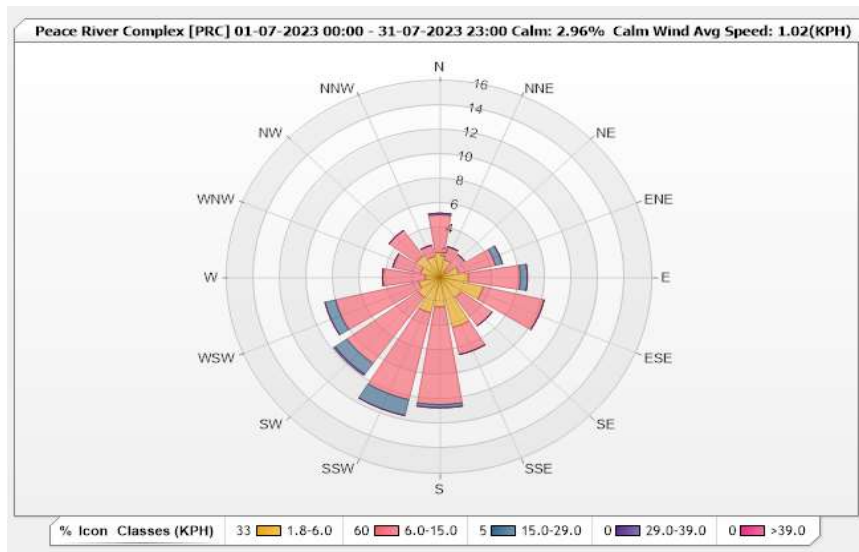


Station: Peace River Complex [PRC] Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 2.96% Valid Data: 100.00%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	2.02	3.09	0.13	0	0	5.24
NNE	1.48	1.08	0	0	0	2.56
NE	0.54	1.75	0	0	0	2.29
ENE	1.48	2.82	0.54	0	0	4.84
E	2.15	3.9	0.54	0	0	6.59
ESE	3.36	4.7	0	0	0	8.06
SE	2.02	2.82	0	0	0	4.84
SSE	4.17	2.28	0	0	0	6.45
S	2.42	7.93	0.27	0	0	10.62
SSW	2.96	7.26	1.34	0	0	11.56
SW	2.02	6.59	1.08	0.13	0	9.82
WSW	1.61	6.45	0.81	0	0	8.87
W	1.08	3.23	0	0	0	4.31
WNW	1.48	2.15	0	0	0	3.63
NW	2.15	2.55	0	0	0	4.7
NNW	1.75	0.94	0	0	0	2.69
Summary	32.69	59.54	4.71	0.13	0	97.07



**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector**

<b>WIND SPEED</b>					
Maximum Hourly Value:	29.4	kph	on Jul 22 at hr 23	Hours in Service:	744
Maximum Daily Value:	13.3	kph	on Jul 1	Hours of Data:	744
Minimum Hourly Value:	0.2	kph	on Jul 14 at hr 7	Hours of Missing Data:	0
Minimum Daily Value:	3.2	kph	on Jul 15	Hours of Calibration:	0
Monthly Average:	2.4	kph		Operational Uptime:	100.0

<b>WIND DIRECTION</b>	
Monthly Average:	196 degree (SSW)

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	9.8	11.0	9.7	10.8	9.2	8.7	11.5	15.7	21.5	19.2	20.6	19.5	15.3	14.3	15.4	24.5	14.9	10.2	7.0	10.7	10.3	4.5	11.8	12.6	4.5	24.5	13.3
Jul 2	11.2	6.4	5.1	7.3	6.2	7.3	9.3	8.3	13.4	14.6	12.5	14.8	12.7	12.2	7.0	3.1	0.7	7.0	9.0	8.5	8.7	8.5	9.1	10.3	0.7	14.8	8.9
Jul 3	11.1	9.0	8.6	7.9	9.6	8.4	9.3	9.9	14.0	16.5	12.8	13.8	11.3	11.5	10.2	9.1	6.8	7.5	6.0	4.6	4.2	5.7	5.5	4.4	4.2	16.5	9.1
Jul 4	7.0	6.4	5.8	3.5	5.3	7.2	2.1	2.0	2.8	3.9	3.8	6.8	4.0	6.9	6.4	8.4	10.9	11.2	11.6	12.7	9.6	7.8	8.0	9.1	2.0	12.7	6.8
Jul 5	9.9	9.8	9.6	10.5	10.9	9.4	9.9	12.1	12.9	15.9	17.4	16.2	13.0	9.5	7.2	11.9	19.6	5.5	7.6	6.4	8.7	2.0	7.6	6.6	2.0	19.6	10.4
Jul 6	4.4	8.9	8.3	4.4	1.7	4.9	3.4	8.6	10.2	10.2	11.2	10.2	10.8	9.3	12.6	12.9	13.3	12.0	11.3	7.9	7.8	8.9	9.3	10.0	1.7	13.3	8.9
Jul 7	9.4	8.8	7.5	7.7	7.4	8.4	4.6	2.9	3.3	7.2	4.9	3.7	4.3	3.0	5.2	2.8	3.6	2.8	4.8	6.9	1.9	8.9	7.3	9.3	1.9	9.4	5.7
Jul 8	9.6	9.3	6.1	6.4	7.4	7.2	5.1	5.0	6.4	6.6	8.4	8.5	8.7	11.6	11.4	9.7	11.4	9.8	11.8	11.3	7.7	8.1	9.1	8.6	5.0	11.8	8.6
Jul 9	10.3	11.1	11.0	9.8	9.0	7.1	5.7	5.5	4.1	4.2	6.9	5.2	9.1	9.2	8.8	5.2	4.2	10.0	13.8	12.4	14.2	12.5	14.5	14.9	4.1	15.2	9.2
Jul 10	14.8	14.5	13.1	13.9	15.7	13.5	13.4	12.4	12.2	9.8	12.7	15.2	17.8	15.0	13.4	13.5	15.5	14.7	12.8	14.8	9.2	9.0	3.6	4.5	3.6	17.8	12.7
Jul 11	5.8	7.4	7.4	7.9	6.7	4.7	3.6	4.9	6.4	7.5	2.5	5.4	6.7	8.1	9.4	8.0	9.7	11.4	9.4	5.9	13.1	10.7	8.6	5.8	2.5	13.1	7.4
Jul 12	4.2	0.4	5.4	5.2	3.7	5.7	3.1	2.9	2.8	2.9	3.0	2.5	2.3	3.8	4.8	12.3	8.6	6.8	1.0	4.7	1.7	1.2	7.8	4.8	0.4	12.3	4.2
Jul 13	3.1	0.9	2.5	4.6	4.2	3.9	2.7	6.2	4.7	4.4	8.9	8.1	8.0	11.3	10.9	11.7	9.9	9.3	7.7	7.2	7.4	7.2	5.9	5.5	0.9	11.7	6.5
Jul 14	3.8	0.6	2.4	1.9	2.5	2.3	0.4	0.2	4.1	5.0	5.8	3.3	11.9	10.5	11.8	12.6	11.9	11.5	9.9	7.7	8.5	7.9	5.9	6.6	0.2	12.6	6.2
Jul 15	6.2	5.3	3.7	5.0	4.1	3.8	3.2	4.8	3.7	0.4	1.0	1.3	1.8	2.5	4.0	2.5	1.9	3.4	3.0	0.4	1.9	2.5	3.5	5.7	0.4	6.2	3.2
Jul 16	5.6	5.7	5.5	4.7	4.6	1.9	3.0	3.6	6.4	4.9	4.8	8.2	7.6	7.6	9.0	7.2	8.4	10.0	11.5	11.5	10.4	8.9	10.2	12.1	1.9	12.1	7.2
Jul 17	11.5	9.3	7.6	5.8	6.5	9.2	7.4	8.3	5.9	6.2	7.3	6.4	12.1	7.3	6.9	4.8	8.2	3.5	12.9	6.2	7.9	6.3	7.0	4.1	3.5	12.9	7.4
Jul 18	6.6	8.5	9.9	8.7	10.2	10.4	5.4	7.4	5.6	7.7	10.8	11.6	12.0	12.4	11.1	10.8	13.9	12.9	14.4	14.6	11.7	10.0	10.5	11.0	5.4	14.6	10.3
Jul 19	10.2	8.8	7.9	7.9	7.6	6.4	7.2	6.9	6.0	5.1	6.7	7.1	9.3	9.0	14.7	7.6	7.5	6.4	5.2	4.5	4.0	3.8	4.8	5.0	3.8	14.7	7.1
Jul 20	6.4	6.5	7.2	6.0	8.4	7.3	5.9	2.4	3.0	4.0	5.5	4.9	5.9	4.5	4.2	7.3	7.2	5.8	6.0	3.6	4.0	2.4	4.2	3.0	2.4	8.4	5.2
Jul 21	4.3	4.6	3.4	5.0	4.2	5.1	3.8	3.8	1.2	4.1	1.8	4.3	5.3	6.1	4.2	4.9	4.9	6.7	7.5	6.4	7.5	9.5	7.8	8.7	1.2	9.5	5.3
Jul 22	3.7	4.0	7.1	5.4	4.1	5.5	8.9	8.2	4.7	3.9	4.6	3.7	6.0	3.3	1.2	7.7	6.2	10.1	11.7	10.1	11.0	10.2	11.8	29.4	1.2	29.4	7.6
Jul 23	17.8	5.4	6.0	7.8	4.9	8.8	9.5	10.4	11.2	10.1	10.9	8.1	10.0	9.2	8.8	6.9	7.5	6.4	8.9	7.1	7.9	4.1	4.6	5.3	4.1	17.8	8.2
Jul 24	2.9	5.9	6.6	4.6	5.8	3.9	5.7	5.4	5.8	9.5	3.3	3.7	9.2	10.6	10.0	10.7	12.2	10.1	9.9	8.6	10.6	11.0	6.4	4.6	2.9	12.2	7.4
Jul 25	6.5	8.7	3.4	5.8	2.4	5.7	8.1	5.5	10.5	13.0	11.3	13.5	14.6	13.3	17.6	22.0	18.4	18.2	17.0	14.6	9.8	14.6	12.9	8.2	2.4	22.0	11.5
Jul 26	1.3	3.3	4.9	3.0	0.4	2.2	2.0	6.4	10.9	11.1	10.1	11.7	9.1	7.3	9.8	8.9	8.8	9.8	10.1	6.0	5.5	8.2	8.7	8.7	0.4	11.7	7.0
Jul 27	6.4	7.0	5.9	4.2	5.5	3.4	3.5	4.9	6.4	12.5	15.4	16.5	14.6	14.3	13.1	12.2	12.5	10.1	9.1	9.0	5.6	3.7	6.0	9.6	3.4	16.5	8.8
Jul 28	5.0	4.0	2.8	6.0	5.3	1.6	2.2	1.9	1.6	4.0	4.0	2.5	2.6	3.4	4.5	7.2	4.9	3.3	2.7	2.3	4.5	4.9	8.3	7.5	1.6	8.3	4.0
Jul 29	9.0	8.6	9.8	9.1	7.7	6.3	6.1	5.9	6.2	7.1	9.1	7.7	10.6	8.6	8.2	9.9	7.9	8.4	9.1	7.3	6.8	9.1	10.7	11.5	5.9	11.5	8.4
Jul 30	11.6	10.3	8.0	8.3	11.2	9.2	6.1	6.2	5.7	7.5	5.7	4.7	8.2	6.7	4.2	10.0	5.2	4.3	10.0	8.7	5.6	2.5	8.5	7.6	2.5	11.6	7.3
Jul 31	1.4	6.2	12.5	11.2	13.9	8.6	12.6	13.6	14.2	12.7	12.6	19.4	21.2	28.6	21.4	17.5	15.7	17.3	16.3	12.3	10.6	5.8	7.0	4.5	1.4	28.6	13.2

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance	
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance	
X	In/Valid Data (Equipment Malfunction /Recovery)	NRM	Unit/Maint(Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)		P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**

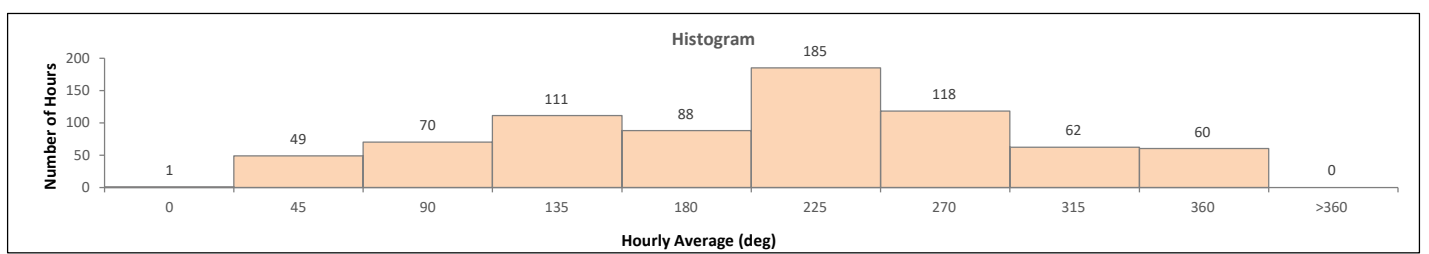
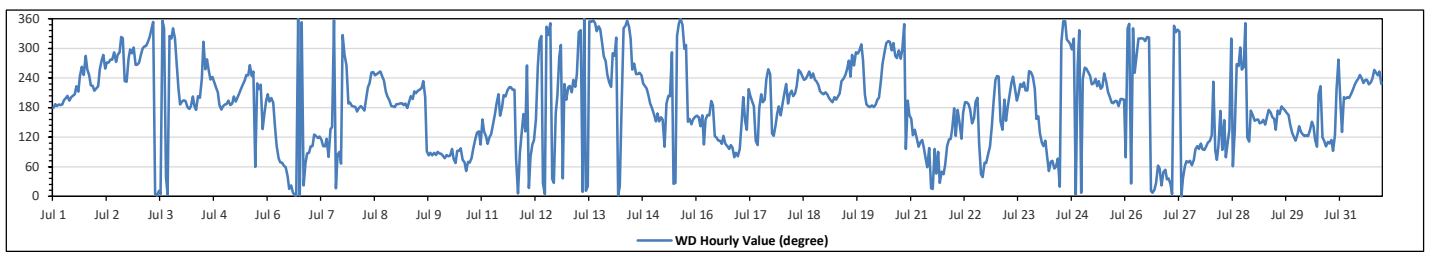
**WIND DIRECTION (VWD) in sector**

Monthly Average:	196 (SSW) degree	Hours in Service:	744
		Hours of Data:	744
		Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant	
Jul 1	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	W	WSW	WNW	WSW	WSW	SW	SW	SSW	213	SSW		
Jul 2	SW	SW	WSW	W	WNW	WSW	W	W	W	WNW	W	WNW	WNW	NW	NW	SW	SW	W	WNW	WNW	WNW	W	W	276	W		
Jul 3	W	WNW	WNW	WNW	WNW	NW	NW	NNW	N	N	N	NNE	N	N	NNW	NE	N	NW	NW	NNW	NW	W	SW	S	334	NNW	
Jul 4	S	SSW	S	S	S	S	SSW	S	S	SSW	S	S	SSW	WSW	NW	WSW	W	WSW	WSW	SW	SW	SSW	S	S	215	SSW	
Jul 5	S	S	SSW	S	S	SSW	S	SSW	SSW	SW	SW	SW	WSW	WSW	W	WSW	WSW	ENE	SW	SW	SW	SE	SSE	SSW	216	SW	
Jul 6	SSW	S	SSW	S	SE	E	ENE	ENE	ENE	ENE	ENE	NNE	NNE	N	N	N	N	N	N	NNE	ENE	E	E	40	NE		
Jul 7	E	E	SE	ESE	ESE	ESE	ESE	E	E	ESE	E	SE	SE	N	NNE	E	E	ENE	NW	WNW	W	S	S	S	121	ESE	
Jul 8	S	S	S	S	S	S	S	S	SSW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SSW	SSW	SSW	S	S	S	213	SSW	
Jul 9	S	S	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	E	E	E	E	E	E	E	E	154	SSE	
Jul 10	E	E	E	ENE	E	E	E	E	ENE	ENE	E	E	ENE	ENE	NE	ENE	ENE	ENE	ENE	ESE	SE	SE	ESE	E	84	E	
Jul 11	SSE	SE	ESE	ESE	ESE	SE	SE	SSE	S	SSW	SSE	S	SSW	SSW	SSW	SSW	SW	SW	SW	SW	ENE	N	E	SE	SSE	167	SSE
Jul 12	SE	W	NNE	E	ESE	ESE	SSE	W	NW	NW	NNE	N	NNW	NW	N	NE	NNE	SSE	SSW	W	NW	NE	SW	SSW	28	NNE	
Jul 13	SW	SW	SSW	SW	SW	WSW	NNW	NNW	N	N	NNE	NNE	N	N	N	N	NNW	NNW	NNW	WNW	W	WSW	SW	228	NNW		
Jul 14	SW	WNW	WNW	NW	N	NNE	S	NNW	NNW	N	NNW	NW	WSW	W	WSW	WSW	WSW	WSW	SW	SW	SSW	S	S	249	WSW		
Jul 15	SSE	SSE	SSE	SSE	SSE	SSE	E	S	SSW	SSW	WNW	NNE	NNE	NW	N	N	NNW	WNW	NW	SSE	SSE	SE	SSE	163	SSE		
Jul 16	SSE	SSE	SE	SSE	ESE	SSE	SSE	SSE	S	S	ESE	ESE	ESE	ESE	ESE	ESE	E	E	ESE	E	ENE	E	E	116	ESE		
Jul 17	E	SSE	SSW	SSE	SE	SW	SSW	S	S	ESE	ESE	S	SSW	S	SSW	SW	WSW	WSW	SE	ESE	SE	SSE	S	SSE	171	S	
Jul 18	S	SSW	SW	S	SSW	SSW	SSW	SSW	SW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	WSW	SW	SW	SSW	SSW	SSW	SSW	228	SW	
Jul 19	SSW	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	SW	SW	WSW	WSW	W	WSW	WNW	W	WNW	WNW	WNW	NW	W	SSW	S	234	SW	
Jul 20	S	S	S	S	S	SSW	SSW	SW	W	WNW	NW	NW	WNW	NW	WNW	W	WNW	W	WNW	NNW	E	SSW	SSE	247	WSW		
Jul 21	SSE	ESE	SE	ESE	E	ESE	ESE	E	E	ENE	E	NNE	NNE	E	NE	E	NNE	NE	ENE	E	ESE	ESE	SE	91	E		
Jul 22	S	ESE	S	SE	ESE	SSE	S	S	S	SE	SSE	S	SSW	ESE	NE	NE	ENE	ENE	E	E	SE	S	SW	154	SSE		
Jul 23	WSW	WSW	SSE	SE	SSW	SSE	S	SSW	SW	WSW	SW	SSW	SSW	SW	SW	SSW	SSW	WSW	WSW	WSW	SSW	SSW	SSW	SSW	214	SSW	
Jul 24	SE	ESE	E	ESE	ENE	NE	ENE	ENE	NE	ENE	NNE	NW	N	N	NW	NW	NW	WNW	NW	N	W	NNW	N	357	N		
Jul 25	SW	W	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	WSW	SW	SSW	SSW	S	S	S	S	S	S	SSW	SSW	SSW	213	SSW	
Jul 26	ENE	NNW	N	NNE	NNW	WSW	WNW	NW	NW	NW	NW	NW	NW	NNE	N	NNE	NNE	ENE	NE	NNE	NE	NE	NE	NE	359	N	
Jul 27	NE	NNE	N	NNW	NNW	NNW	NNW	N	NE	ENE	ENE	ENE	ENE	ENE	E	E	E	ESE	E	E	E	ESE	ESE	ESE	70	ENE	
Jul 28	ESE	SW	E	ENE	ESE	S	E	SSE	ENE	ESE	SE	NW	ENE	SE	W	WNW	WSW	W	N	ESE	ESE	S	SSE	147	SE		
Jul 29	SSE	SSE	SSE	SE	SSE	SSE	SE	SSE	S	SSE	SSE	SSE	SE	S	SSE	S	S	SSE	SSE	SE	SE	ESE	ESE	155	SSE		
Jul 30	SE	SE	SE	SE	ESE	ESE	ESE	SE	SSE	SE	ESE	E	SSW	SW	ESE	ESE	E	ESE	ESE	E	ESE	SW	W	133	SE		
Jul 31	S	SE	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	WSW	WSW	WSW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	229	SW	

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> Invalid Data (Machine Malfunction/Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "\*" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "\*" if minimum data completeness criteria of 75% of days per month is not met.



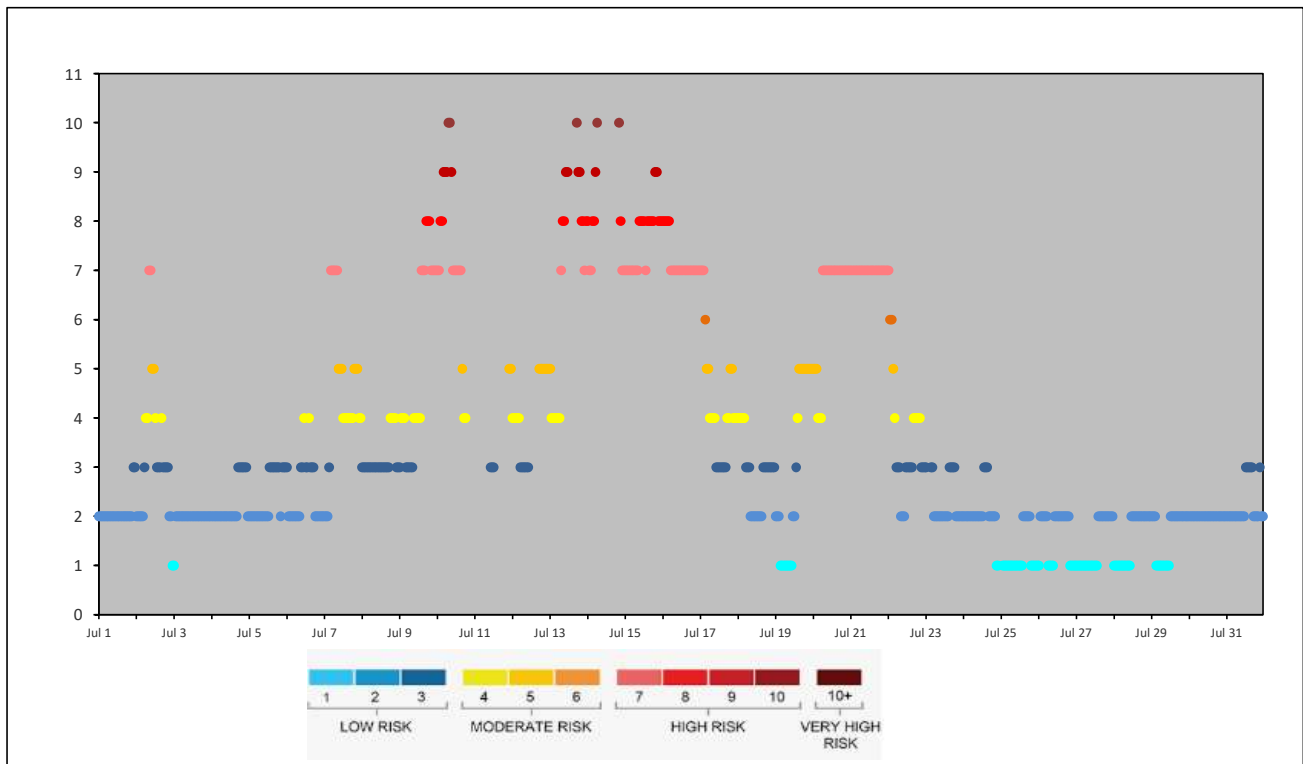
## AQHI GRIMSHAW STATION



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**  
**AQHI - Grimshaw Station - July 2023**

**AIR QUALITY HEALTH INDEX**

Day	Hourly Period Starting at (MST)																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Jul 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3
Jul 2	2	2	2	2	2	3	4	4	7	7	5	5	4	3	3	3	4	3	3	3	3	2	2	1	
Jul 3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Jul 4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2
Jul 5	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	2	3	3	3
Jul 6	3	2	2	2	2	2	2	2	2	3	3	4	3	3	4	3	3	3	2	2	2	2	2	2	2
Jul 7	2	2	2	3	7	7	7	7	7	5	5	5	4	4	4	4	4	4	4	4	5	5	5	4	4
Jul 8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3	3
Jul 9	3	4	4	4	3	3	3	3	3	4	4	4	4	4	7	7	7	8	8	8	7	7	7	7	7
Jul 10	7	7	8	8	9	9	9	10	10	9	7	7	7	7	7	7	5	4	4						
Jul 11											3	3	3										5	5	5
Jul 12	4	4	4	4	4	3	3	3	3	3	3								5	5	5	5	5	5	5
Jul 13	5	4	4	4	4	4	4	7	8	8	9	9	10+	10+	10+	10+	10+	10+	10	9	9	8	8	7	8
Jul 14	8	7	7	8	8	9	10	10+	10+	10+	10+	10+	10+	10+	10+	10+	10+	10+	10	9	9	8	8	7	7
Jul 15	7	7	7	7	7	7	7	7	7	8	8	8	8	7	8	8	8	8	8	8	9	9	8	8	8
Jul 16	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Jul 17	7	7	7	6	5	5	4	4	4	4	3	3	3	3	3	3	3	3	4	4	5	5	4	4	4
Jul 18	4	4	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
Jul 19	2	2	2	1	1	1	1	1	1	1	1	2	2	3	4	5	5	5	5	5	5	5	5	5	5
Jul 20	5	5	5	4	4	4	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Jul 21	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Jul 22	7	6	6	5	4	3	3	3	2	2	2	2	3	3	3	3	3	4	4	4	4	4	3	3	3
Jul 23	3					3	3	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2	2	2	2
Jul 24	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	1	1	1
Jul 25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1
Jul 26	1	2	2	2	2	2	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1
Jul 27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Jul 28	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Jul 29	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Jul 30	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Jul 31	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	3	2	2



Notes:  
 Due to the O3 instrument issue, which was identified on July 12, data were discarded back to June 8. As O3 is one of the parameters that are used to calculate the AQHI value, the AQHI values during this period were affected. However, considering ambient air and wildfires conditions around the Peace River region this season, PM2.5 was predominant parameter to drive the AQHI values. As a result, AQHI values were kept for reference use.

Peace River Area Monitoring Program

AQHI - Grimshaw Station - July 2023

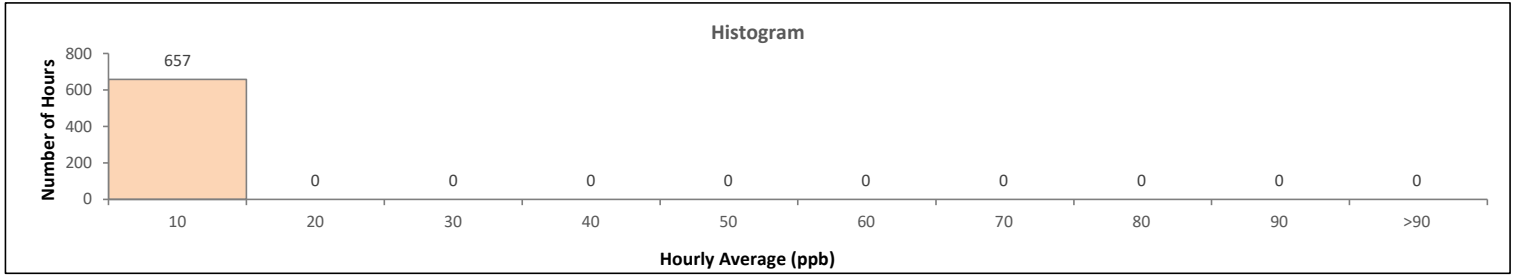
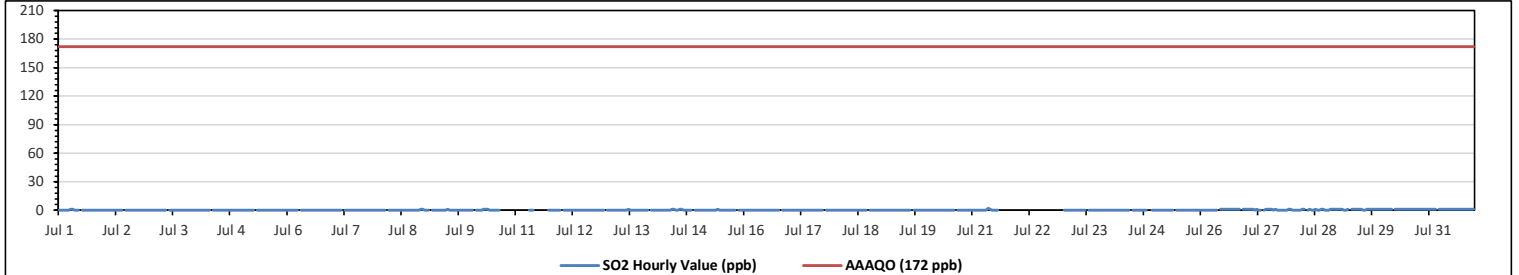
Summary of Hourly Averages

SULPHUR DIOXIDE (SO<sub>2</sub>) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																												
Number of 1-Hour Exceedances: 0					Number of 24-Hour Exceedances: 0					30-Day Exceedence: 0																		
Maximum Hourly Value: 2 ppb on Jul 21 at hr 8					Hours in Service: 744																							
Maximum Daily Value: 1.0 ppb on Jul 30					Hours of Data: 657																							
Minimum Hourly Value: 0 ppb on Jul 1 at hr 0					Hours of Missing Data: 49																							
Minimum Daily Value: 0.0 ppb on Jul 2					Hours of Calibration: 38																							
Monthly Average: 0.2 ppb					Operational Uptime: 93.4																							
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
Jul 1	0	0	0	0	0	0	1	1	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
Jul 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 3	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 4	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 5	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 6	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 7	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 8	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.1
Jul 9	0	0	0	S	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 10	0	0	S	0	0	0	0	1	1	1	0	0	0	0	0	0	0	K	K	K	K	K	K	K	K	0	1	0.0
Jul 11	K	K	K	K	K	K	S	0	0	0	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	NA
Jul 12	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0
Jul 13	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.0
Jul 14	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	S	0	0	0	1	0.2
Jul 15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	0.0
Jul 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	S	0	0	0	0	0	0	0	0.0
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 21	0	0	0	0	0	0	0	0	2	1	0	0	0	0	S	0	X	X	X	X	X	X	X	X	X	0	2	NA
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	P	P	0	0	0	0	0.0
Jul 25	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 26	0	0	0	0	0	0	0	0	0	0	S	1	1	1	1	1	1	1	1	1	1	1	NRM	1	1	0	1	0.6
Jul 27	1	1	1	1	1	1	1	1	S	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	0	1	0.5
Jul 28	0	0	0	0	0	1	1	S	0	1	0	0	1	0	0	1	1	1	0	0	0	1	1	1	1	0	1	0.4
Jul 29	1	1	1	1	0	1	S	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	0.8
Jul 30	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
Jul 31	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
Diurnal Maximum	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Diurnal Average	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3			

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error      **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Equipment Malfunction /Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

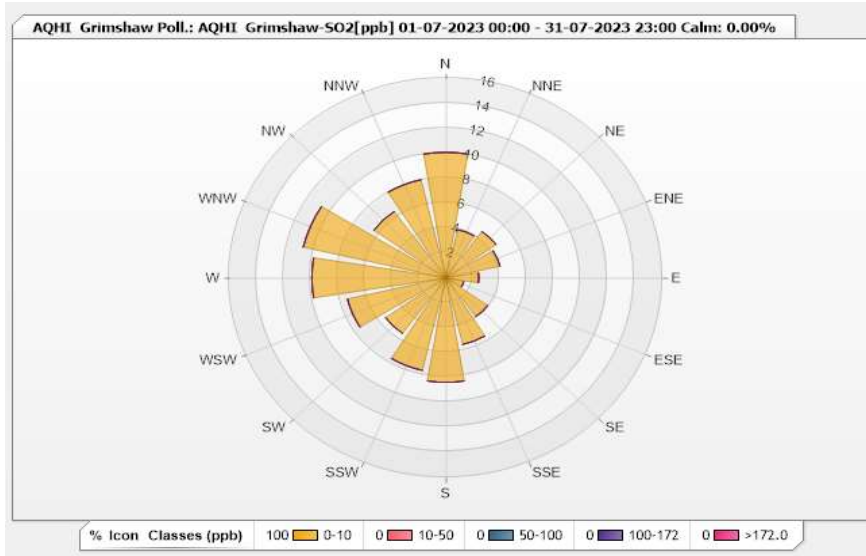


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 88.31%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	10.05	0	0	0	0	10.05
NNE	3.96	0	0	0	0	3.96
NE	4.57	0	0	0	0	4.57
ENE	4.11	0	0	0	0	4.11
E	2.44	0	0	0	0	2.44
ESE	1.37	0	0	0	0	1.37
SE	3.81	0	0	0	0	3.81
SSE	5.48	0	0	0	0	5.48
S	8.37	0	0	0	0	8.37
SSW	7.61	0	0	0	0	7.61
SW	5.48	0	0	0	0	5.48
WSW	7.46	0	0	0	0	7.46
W	9.89	0	0	0	0	9.89
WNW	10.81	0	0	0	0	10.81
NW	6.54	0	0	0	0	6.54
NNW	8.07	0	0	0	0	8.07
Summary	100	0	0	0	0	100



Peace River Area Monitoring Program

AQHI - Grimshaw Station - July 2023

Summary of Hourly Averages

TOTAL REDUCED SULPHUR (TRS) in ppb

Maximum Hourly Value:	2.74	ppb	on Jul 16 at hr 4	Hours in Service:	744
Maximum Daily Value:	0.82	ppb	on Jul 24	Hours of Data:	650
Minimum Hourly Value:	0.00	ppb	on Jul 1 at hr 1	Hours of Missing Data:	58
Minimum Daily Value:	0.01	ppb	on Jul 1	Hours of Calibration:	36
Monthly Average:	0.29	ppb		Operational Uptime:	92.2

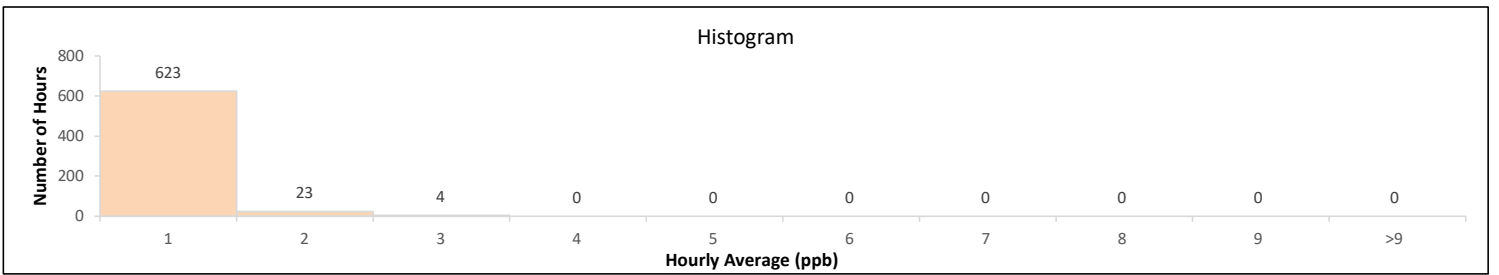
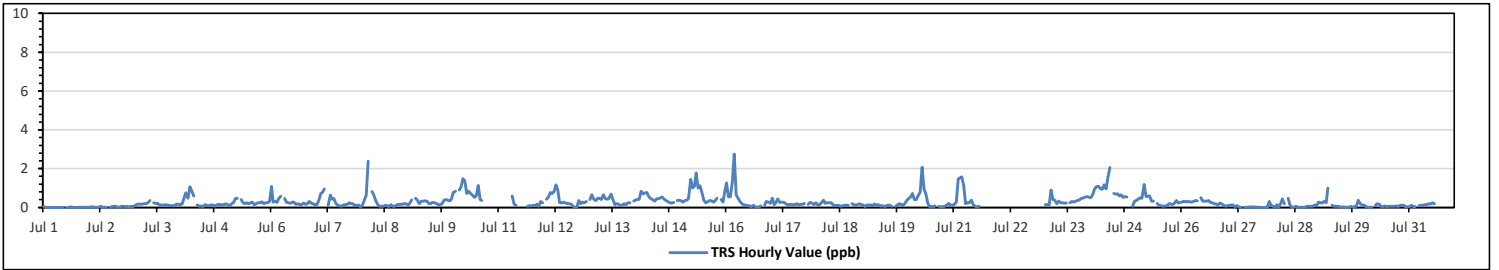
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	0.06	0	0	0	0.02	0	0	0	0	0	0	S	0	0	0.03	0.01	0	0	0.01	0.01	0.01	0.02	0.02	0.01	0.00	0.06	0.01	
Jul 2	0.02	0.03	0.03	0.01	0.01	0.01	0.06	0.02	0.01	0.02	S	0.02	0.04	0.05	0.06	0.01	0.01	0.06	0.05	0.04	0.05	0.01	0.06	0.04	0.01	0.06	0.03	
Jul 3	0.09	0.14	0.17	0.16	0.17	0.2	0.2	0.23	0.35	S	0.24	0.21	0.21	0.13	0.12	0.1	0.14	0.12	0.11	0.09	0.09	0.08	0.17	0.16	0.08	0.35	0.16	
Jul 4	0.14	0.19	0.51	0.75	0.47	1.06	0.84	0.6	S	0.12	0.07	0.08	0.04	0.14	0.1	0.08	0.13	0.13	0.07	0.11	0.16	0.14	0.15	0.14	0.04	1.06	0.27	
Jul 5	0.19	0.14	0.08	0.18	0.25	0.45	0.48	S	0.41	0.24	0.2	0.23	0.19	0.25	0.27	0.15	0.19	0.24	0.24	0.29	0.19	0.23	0.25	0.3	0.08	0.48	0.25	
Jul 6	1.09	0.27	0.32	0.26	0.47	0.57	S	0.46	0.26	0.23	0.21	0.28	0.27	0.16	0.2	0.15	0.14	0.22	0.16	0.18	0.3	0.22	0.2	0.13	0.13	1.09	0.29	
Jul 7	0.15	0.38	0.71	0.78	0.94	S	0.11	0.64	0.43	0.45	0.21	0.1	0.08	0.07	0.12	0.15	0.16	0.25	0.18	0.2	0.11	0.09	0.12	0.03	0.03	0.94	0.28	
Jul 8	0.11	0.37	0.64	2.39	S	0.81	0.67	0.37	0.14	0.06	0.05	0.06	0.1	0.09	0.04	0.15	0.05	0.07	0.12	0.16	0.16	0.16	0.19	0.19	0.04	2.39	0.31	
Jul 9	0.13	0.23	0.39	S	0.47	0.37	0.2	0.33	0.33	0.34	0.33	0.18	0.2	0.26	0.24	0.21	0.15	0.14	0.19	0.37	0.4	0.37	0.34	0.43	0.13	0.47	0.29	
Jul 10	0.77	0.84	S	0.9	1.05	1.47	1.38	0.73	0.84	0.72	0.63	0.52	0.61	1.13	0.42	0.36	K	K	K	K	K	K	K	K	0.36	1.47	NA	
Jul 11	K	K	K	K	K	K	S	0.58	0.17	0.11	C	C	C	C	C	0.06	0.09	0.08	0.1	0.09	0.17	0.07	0.3	0.25	0.06	0.58	NA	
Jul 12	S	0.43	0.52	0.78	0.72	0.82	1.17	0.87	0.26	0.22	0.28	0.22	0.21	0.2	0.17	0.08	0	0.01	0.35	0.19	0.28	0.23	0.31	S	0.00	1.17	0.38	
Jul 13	0.41	0.65	0.43	0.36	0.48	0.47	0.41	0.65	0.45	0.43	0.46	0.68	0.41	0.15	0.2	0.17	0.09	0.13	0.18	0.14	0.25	0.25	S	0.33	0.09	0.68	0.36	
Jul 14	0.39	0.42	0.43	0.83	0.7	0.75	0.77	0.56	0.45	0.41	0.32	0.44	0.45	0.49	0.53	0.43	0.36	0.3	0.25	0.22	0.26	S	0.36	0.38	0.22	0.83	0.46	
Jul 15	0.34	0.28	0.36	0.37	0.46	1.44	1	1.1	1.78	0.99	1.11	0.77	0.37	0.25	0.29	0.35	0.34	0.28	0.36	0.48	S	0.4	0.27	0.87	0.25	1.78	0.62	
Jul 16	1.26	0.53	0.55	1.29	2.74	0.66	0.47	0.3	0.19	0.13	0.13	0.08	0.09	0.03	0.1	0.04	0.02	0.03	0.08	S	0.1	0.3	0.27	0.21	0.02	2.74	0.42	
Jul 17	0.48	0.15	0.23	0.44	0.26	0.28	0.26	0.21	0.15	0.14	0.16	0.15	0.14	0.18	0.15	0.16	0.16	0.21	S	0.16	0.26	0.22	0.15	0.23	0.14	0.48	0.21	
Jul 18	0.13	0.14	0.26	0.38	0.21	0.24	0.24	0.25	0.13	0.1	0.09	0.11	0.07	0.08	0.11	0.11	0.1	S	0.19	0.14	0.13	0.15	0.2	0.14	0.07	0.38	0.16	
Jul 19	0.13	0.04	0.13	0.12	0.12	0.09	0.17	0.12	0.14	0.07	0.09	0.07	0.05	0.12	0.1	0.07	S	0.06	0.13	0.2	0.14	0.12	0.19	0.35	0.04	0.35	0.12	
Jul 20	0.47	0.56	0.71	0.41	0.4	0.62	0.79	2.07	0.94	0.68	0.21	0.03	0.06	0.04	0.08	S	0.06	0.02	0.04	0.06	0.12	0.21	0.1	0.12	0.02	2.07	0.38	
Jul 21	0.15	0.27	1.47	1.53	1.57	1.13	0.18	0.25	0.23	0.37	0.12	0.05	0.03	0.06	S	0.04	X	X	X	X	X	X	X	X	0.03	1.57	NA	
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 23	0.14	0.15	0.1	0.89	0.4	0.38	0.2	0.33	0.24	0.24	0.22	0.22	S	0.24	0.3	0.28	0.32	0.35	0.39	0.48	0.49	0.53	0.55	0.52	0.10	0.89	0.35	
Jul 24	0.5	0.65	0.96	1.09	1.09	0.97	0.93	1.17	0.94	1.57	2.05	S	0.73	0.68	0.7	0.59	0.65	0.52	0.55	0.53	P	P	0.06	0.32	0.06	2.05	0.82	
Jul 25	0.36	0.44	0.49	0.48	1.18	0.55	0.58	0.58	0.33	0.33	S	0.21	0.09	0.09	0.06	0.08	0.08	0.19	0.18	0.14	0.21	0.35	0.22	0.26	0.06	1.18	0.33	
Jul 26	0.27	0.32	0.29	0.3	0.29	0.27	0.31	0.35	0.34	S	0.5	0.32	0.32	0.32	0.35	0.26	0.23	0.2	0.17	0.13	0.22	0.19	0.11	0.06	0.06	0.50	0.27	
Jul 27	0.09	0.1	0.13	0.13	0.04	0.09	0.03	0.02	S	0.48	0.1	0.02	0.01	0.03	0.03	0.03	0.01	0.01	0	0	0.01	0.02	0.3	0.09	0.00	0.30	0.05	
Jul 28	0.06	0.02	0.14	0.01	0.17	0.44	0.18	S	0.48	0.1	0.02	0.02	0.05	0.01	0.01	0.01	0.01	0.01	0.06	0.05	0.05	0.07	0.12	0.09	0.01	0.48	0.09	
Jul 29	0.27	0.23	0.22	0.33	0.25	1.01	S	0.1	0.05	0.06	0.05	0.04	0.01	0.03	0.02	0.01	0.01	0.07	0.02	0.04	0.05	0.38	0.19	0.13	0.01	1.01	0.16	
Jul 30	0.1	0.04	0.02	0.02	0.02	S	0.1	0.2	0.16	0.04	0.04	0.08	0.04	0.04	0.06	0.07	0.05	0.05	0.08	0.04	0.11	0.1	0.03	0.03	0.02	0.20	0.07	
Jul 31	0.04	0.1	0.03	0.04	S	0.09	0.11	0.1	0.15	0.14	0.19	0.17	0.24	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.03	0.24	NA	
Diurnal Maximum	1.26	0.84	1.47	2.39	2.74	1.47	1.38	2.07	1.78	1.57	2.05	0.77	0.73	1.13	0.70	0.59	0.65	0.52	0.55	0.53	0.49	0.53	0.55	0.87				
Diurnal Average	0.30	0.28	0.37	0.54	0.55	0.57	0.44	0.47	0.37	0.30	0.30	0.20	0.18	0.19	0.18	0.15	0.14	0.15	0.16	0.18	0.17	0.20	0.20	0.22				

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>ND</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

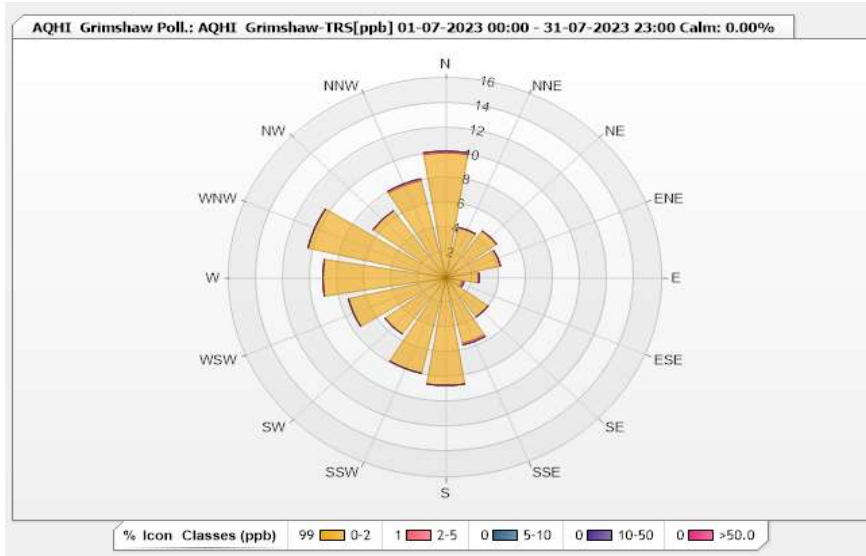


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 87.37%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	10	0.15	0	0	0	10.15
NNE	4.15	0	0	0	0	4.15
NE	4.62	0	0	0	0	4.62
ENE	4.15	0	0	0	0	4.15
E	2.46	0	0	0	0	2.46
ESE	1.23	0.15	0	0	0	1.38
SE	3.85	0	0	0	0	3.85
SSE	5.38	0.15	0	0	0	5.53
S	8.62	0	0	0	0	8.62
SSW	7.85	0	0	0	0	7.85
SW	5.54	0	0	0	0	5.54
WSW	7.38	0	0	0	0	7.38
W	9.08	0	0	0	0	9.08
WNW	10.46	0	0	0	0	10.46
NW	6.62	0	0	0	0	6.62
NNW	8	0.15	0	0	0	8.15
Summary	99.39	0.6	0	0	0	100



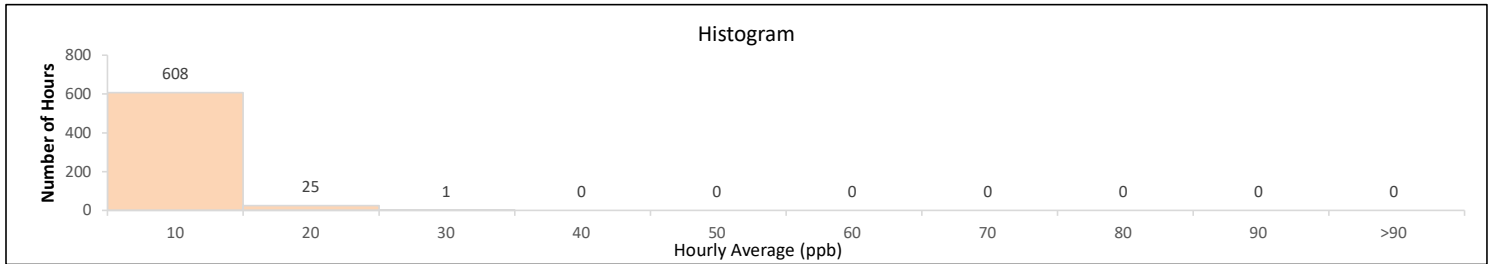
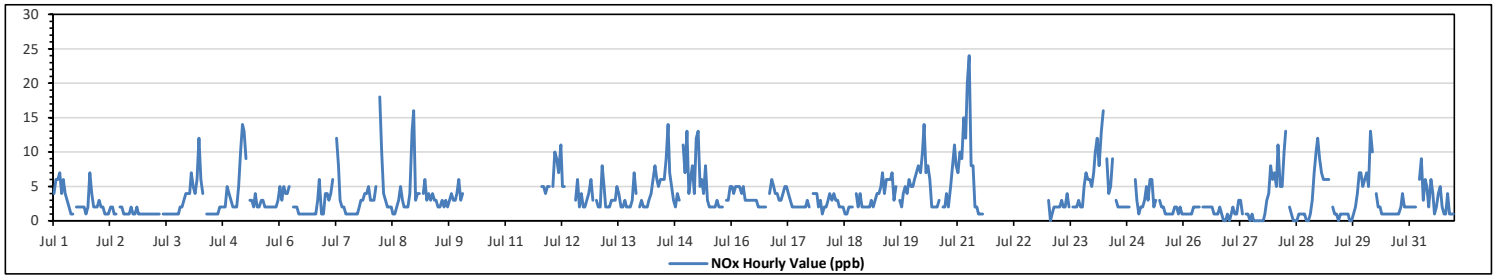
**Peace River Area Monitoring Program**  
**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**  
**OXIDES OF NITROGEN (NOx) in ppb**

Maximum Hourly Value:	24	ppb	on Jul 21 at hr 6	Hours in Service:	744
Maximum Daily Value:	6.0	ppb	on Jul 24	Hours of Data:	634
Minimum Hourly Value:	0	ppb	on Jul 23 at hr 1	Hours of Missing Data:	75
Minimum Daily Value:	1.4	ppb	on Jul 26	Hours of Calibration:	35
Monthly Average:	3.5	ppb		Operational Uptime:	89.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	4	6	6	7	4	6	4	3	2	1	1	S	2	2	2	2	2	1	2	7	4	2	2	2	1	7	3.2	
Jul 2	3	2	2	1	1	1	2	2	1	1	S	2	2	1	1	1	1	2	1	2	1	2	1	1	1	3	1.4	
Jul 3	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	2	2	3	4	4	1	4	1.4	
Jul 4	4	7	5	4	6	12	6	4	S	1	1	1	1	1	1	1	2	2	2	2	5	4	3	2	1	12	3.3	
Jul 5	2	2	5	10	14	13	9	S	3	3	2	4	2	2	3	3	2	2	2	2	2	2	2	3	2	14	4.1	
Jul 6	5	3	5	4	4	5	S	2	2	2	1	1	1	1	1	1	1	1	1	1	3	6	1	1	6	2.3		
Jul 7	4	4	3	4	6	5	S	12	8	3	2	2	1	1	1	1	1	1	1	2	3	3	4	4	5	12	3.3	
Jul 8	3	3	3	5	5	18	10	4	3	2	2	2	1	1	2	3	5	3	2	2	2	4	13	16	1	18	4.7	
Jul 9	3	4	4	S	4	6	3	4	3	4	3	2	2	2	3	2	3	2	3	4	3	3	4	6	2	6	3.4	
Jul 10	3	4	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	4	NA
Jul 11	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	5	5	4	5	5	4	5	NA
Jul 12	S	5	10	9	7	11	5	5	NRM	NRM	NRM	NRM	NRM	3	6	2	4	2	2	3	4	6	3	S	2	11	NA	
Jul 13	3	2	2	8	5	2	2	2	3	3	3	5	4	2	2	3	2	2	2	3	7	4	S	2	2	8	3.2	
Jul 14	3	2	2	2	3	4	6	8	6	5	6	6	6	9	14	7	5	3	2	4	3	S	11	7	2	14	5.4	
Jul 15	13	4	6	8	4	12	13	5	6	4	8	3	2	2	2	2	3	2	2	2	S	3	3	5	2	13	5.0	
Jul 16	5	4	5	5	5	4	5	3	3	3	3	3	3	3	2	2	2	2	2	S	4	6	5	4	2	6	3.6	
Jul 17	4	3	3	4	5	5	4	3	2	2	2	2	2	2	2	2	3	2	S	4	4	4	2	3	2	5	3.0	
Jul 18	1	2	2	3	4	3	4	3	3	2	2	2	1	1	2	2	2	S	4	2	4	4	2	2	2	1	4	2.4
Jul 19	2	2	3	2	3	4	4	5	7	4	6	6	6	7	3	5	S	3	2	4	5	4	6	5	2	7	4.3	
Jul 20	5	6	7	8	7	10	14	7	8	6	2	2	2	2	3	S	2	2	4	2	5	8	11	8	2	14	5.7	
Jul 21	7	10	9	15	12	20	24	8	8	2	2	1	1	1	S	1	X	X	X	X	X	X	X	X	1	24	NA	
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 23	3	0	1	2	2	2	2	3	2	2	4	2	S	2	2	3	2	2	5	7	6	6	5	0	7	2.9		
Jul 24	7	10	12	8	13	16	NRM	9	4	5	9	S	3	2	2	2	2	2	2	2	P	P	6	3	2	16	6.0	
Jul 25	1	2	2	3	5	3	6	6	2	3	S	3	2	2	1	1	1	1	1	2	2	1	2	1	6	2.3		
Jul 26	1	1	1	1	1	2	2	2	2	S	2	2	2	2	2	2	1	1	1	1	2	1	0	0	1	0	2	1.4
Jul 27	0	1	2	1	1	3	3	1	S	1	0	0	1	0	0	0	0	0	0	1	3	4	8	6	0	8	1.6	
Jul 28	7	5	11	5	5	10	13	S	2	1	0	0	0	1	1	1	1	0	0	1	3	7	10	12	0	13	4.2	
Jul 29	9	7	6	6	6	6	S	2	1	1	0	1	1	1	1	1	0	0	1	2	4	7	7	5	0	9	3.3	
Jul 30	6	7	5	13	10	S	4	2	2	1	1	1	1	1	1	1	1	1	1	2	4	2	2	2	1	13	3.1	
Jul 31	2	2	2	2	S	6	9	3	6	5	2	6	4	1	2	4	5	2	1	1	4	1	1	1	1	9	3.1	
Diurnal Maximum	13	10	12	15	14	20	24	9	8	6	9	6	6	9	14	7	5	3	4	7	7	8	13	16				
Diurnal Average	4.0	3.8	4.5	5.2	5.3	7.1	6.7	4.0	3.4	2.6	2.6	2.4	2.1	2.0	2.3	2.0	2.1	1.6	1.7	2.6	3.7	3.8	4.6	4.3				

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error      **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Equipment Malfunction/Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

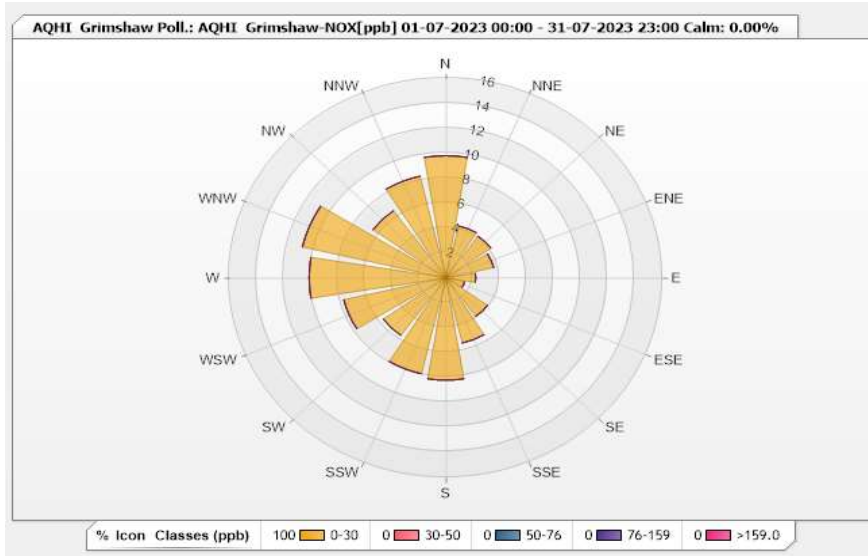


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-NOX[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 85.22%      Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	9.78	0	0	0	0	9.78
NNE	4.26	0	0	0	0	4.26
NE	4.1	0	0	0	0	4.1
ENE	3.63	0	0	0	0	3.63
E	2.21	0	0	0	0	2.21
ESE	1.42	0	0	0	0	1.42
SE	3.79	0	0	0	0	3.79
SSE	5.36	0	0	0	0	5.36
S	8.2	0	0	0	0	8.2
SSW	7.89	0	0	0	0	7.89
SW	5.68	0	0	0	0	5.68
WSW	7.73	0	0	0	0	7.73
W	10.09	0	0	0	0	10.09
WNW	10.88	0	0	0	0	10.88
NW	6.62	0	0	0	0	6.62
NNW	8.36	0	0	0	0	8.36
Summary	100	0	0	0	0	100



Peace River Area Monitoring Program

AQHI - Grimshaw Station - July 2023

Summary of Hourly Averages

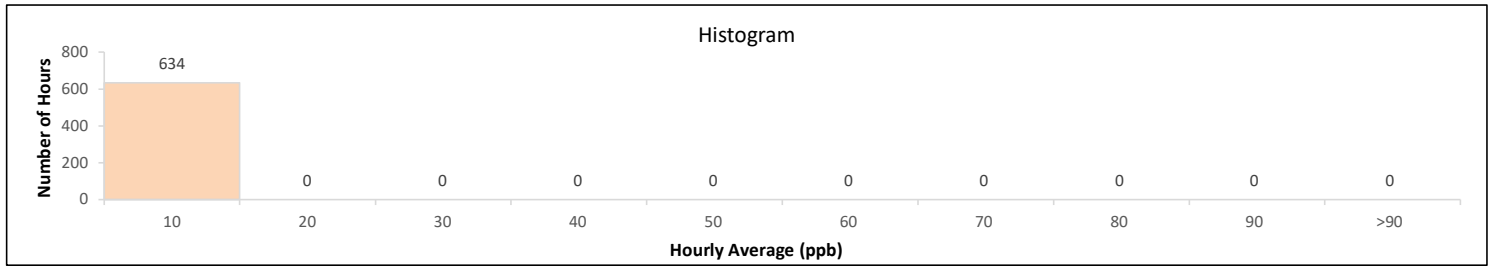
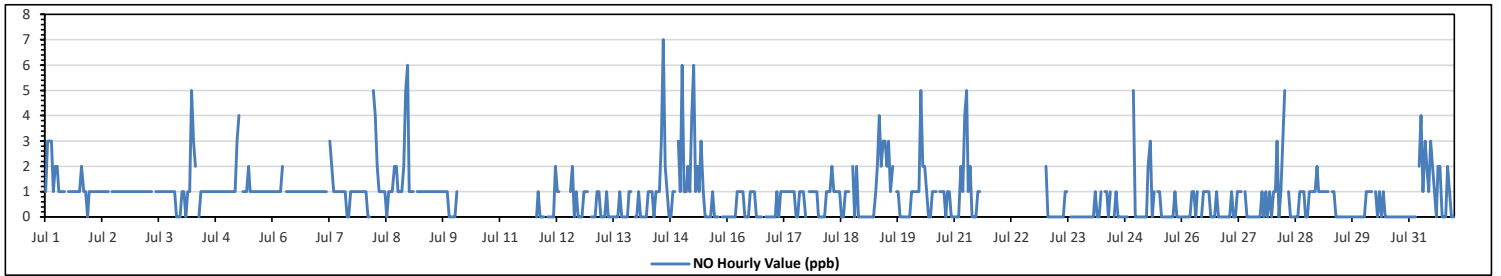
NITRIC OXIDE (NO) in ppb

Maximum Hourly Value:	7	ppb	on Jul 14 at hr 14	Hours in Service:	744
Maximum Daily Value:	1.7	ppb	on Jul 8	Hours of Data:	634
Minimum Hourly Value:	0	ppb	on Jul 1 at hr 22	Hours of Missing Data:	75
Minimum Daily Value:	0.2	ppb	on Jul 23	Hours of Calibration:	35
Monthly Average:	0.8	ppb		Operational Uptime:	89.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Jul 1	1	3	3	3	1	2	2	1	1	1	1	S	1	1	1	1	1	1	2	1	1	0	1	0	3	1.3			
Jul 2	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0			
Jul 3	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0.9			
Jul 4	1	1	0	1	1	5	3	2	S	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1.2			
Jul 5	1	1	1	1	1	3	4	S	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	4	1.3			
Jul 6	1	1	1	1	1	2	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0				
Jul 7	1	1	1	1	1	S	3	2	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	3	1.0			
Jul 8	1	1	0	0	S	5	4	2	1	1	1	1	0	1	1	2	2	2	1	1	2	5	6	6	1.7				
Jul 9	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.9				
Jul 10	0	1	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	NA			
Jul 11	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	0	1	0	0	0	1	NA			
Jul 12	S	0	0	0	0	2	1	1	NRM	NRM	NRM	NRM	NRM	1	2	0	1	0	0	0	1	1	1	S	2	NA			
Jul 13	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	1	S	0	0.3				
Jul 14	0	1	0	0	0	0	1	1	1	0	1	1	1	3	7	2	1	0	0	0	1	1	S	3	1	1.1			
Jul 15	6	1	1	2	1	4	6	1	2	1	3	1	0	0	0	0	1	0	0	0	0	S	0	0	6	1.3			
Jul 16	0	0	0	0	0	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	S	0	0	0	0	0.3			
Jul 17	0	0	1	0	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	S	1	1	1	1	1	0.7			
Jul 18	0	0	0	0	1	1	1	2	1	1	1	1	0	0	1	1	1	S	2	0	2	0	0	0	0	2	0.7		
Jul 19	0	0	0	0	0	0	1	2	4	2	3	3	2	3	1	2	S	1	1	0	0	0	0	0	0	4	1.1		
Jul 20	0	1	1	1	1	1	5	2	2	1	0	0	1	1	1	S	1	1	0	0	0	0	0	0	0	5	1.0		
Jul 21	0	0	0	2	1	4	5	1	2	0	0	0	1	1	S	0	X	X	X	X	X	X	X	X	X	5	NA		
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 23	2	0	0	0	0	0	0	0	0	0	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2		
Jul 24	0	0	1	0	0	1	NRM	1	1	0	1	S	0	1	0	0	0	0	0	0	0	P	P	5	0	5	0.6		
Jul 25	0	0	0	0	0	0	2	3	0	1	S	1	1	0	0	0	0	0	0	0	0	1	0	0	0	3	0.4		
Jul 26	0	0	0	0	0	1	1	0	1	S	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	1	0.3	
Jul 27	0	0	1	0	0	1	1	S	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0.3		
Jul 28	1	1	3	0	1	3	S	1	0	0	0	0	0	0	1	1	1	0	0	1	1	1	1	2	0	5	1.0		
Jul 29	1	1	1	1	1	1	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3		
Jul 30	0	1	1	1	1	S	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3		
Jul 31	0	0	0	0	S	2	4	1	3	2	1	3	2	1	0	2	2	0	0	0	2	1	0	0	0	4	1.1		
Diurnal Maximum	6	3	3	3	1	5	6	3	4	2	3	3	2	3	7	2	2	2	2	2	2	2	5	6					
Diurnal Average	0.7	0.6	0.7	0.6	0.7	1.7	2.2	1.2	1.2	0.7	0.8	0.9	0.7	0.8	0.9	0.7	0.7	0.5	0.6	0.5	0.8	0.5	0.8	0.6					

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



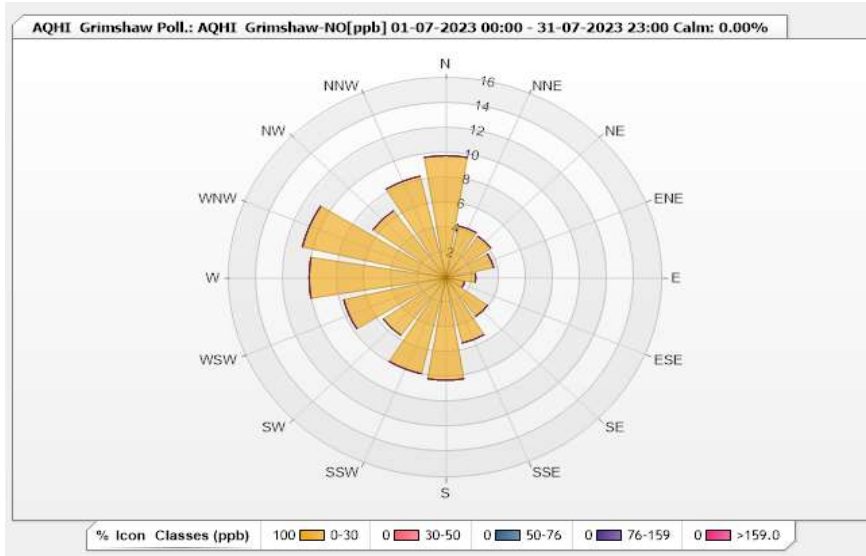


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-NO[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 85.22%      Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	9.78	0	0	0	0	9.78
NNE	4.26	0	0	0	0	4.26
NE	4.1	0	0	0	0	4.1
ENE	3.63	0	0	0	0	3.63
E	2.21	0	0	0	0	2.21
ESE	1.42	0	0	0	0	1.42
SE	3.79	0	0	0	0	3.79
SSE	5.36	0	0	0	0	5.36
S	8.2	0	0	0	0	8.2
SSW	7.89	0	0	0	0	7.89
SW	5.68	0	0	0	0	5.68
WSW	7.73	0	0	0	0	7.73
W	10.09	0	0	0	0	10.09
WNW	10.88	0	0	0	0	10.88
NW	6.62	0	0	0	0	6.62
NNW	8.36	0	0	0	0	8.36
Summary	100	0	0	0	0	100

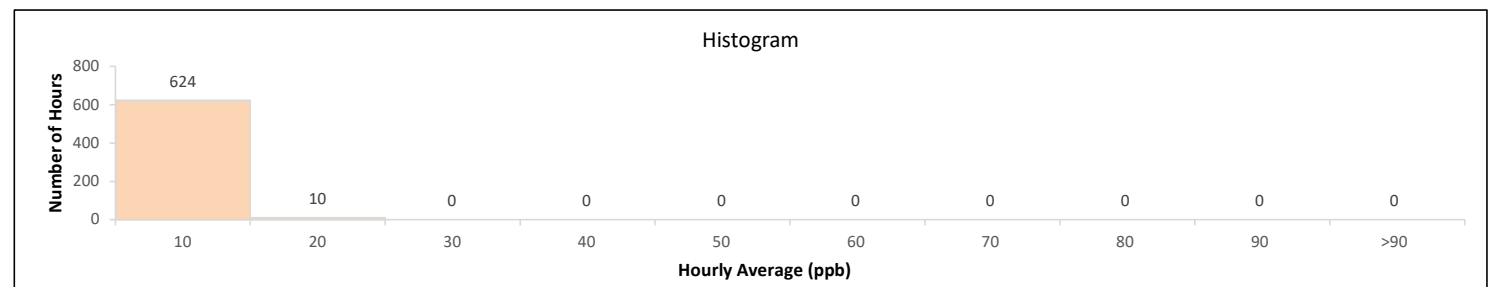
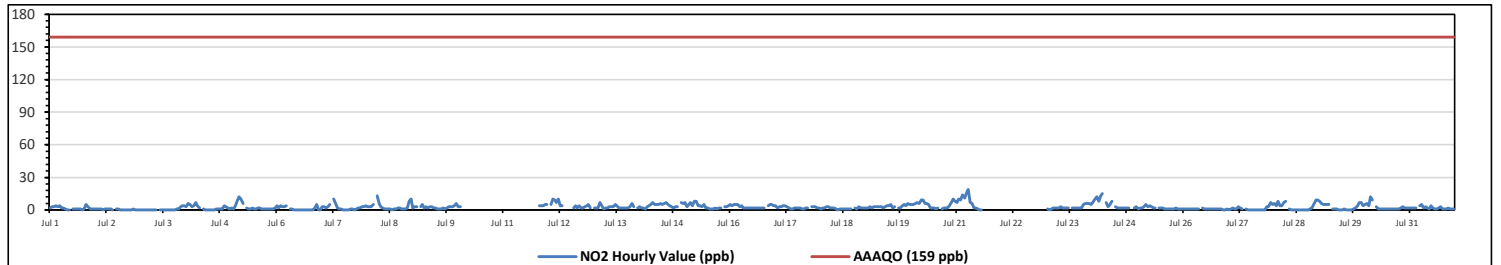


**Peace River Area Monitoring Program**  
**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**  
**NITROGEN DIOXIDE (NO<sub>2</sub>) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb																															
Number of 1-Hour Exceedances: 0																															
Maximum Hourly Value: 19 ppb on Jul 21 at hr 6												Hours in Service: 744																			
Maximum Daily Value: 5.5 ppb on Jul 24												Hours of Data: 634																			
Minimum Hourly Value: 0 ppb on Jul 1 at hr 9												Hours of Missing Data: 75																			
Minimum Daily Value: 0.5 ppb on Jul 2												Hours of Calibration: 35																			
Monthly Average: 2.7 ppb												Operational Uptime: 89.9																			
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23				
Jul 1	2	3	3	4	3	4	2	2	1	0	0	S	1	1	1	1	0	1	5	3	1	1	1	0	0	5	1.8				
Jul 2	1	1	1	1	0	1	1	1	1	0	S	1	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0.5				
Jul 3	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	1	3	4	4	4	4	0.6				
Jul 4	3	6	5	3	4	7	4	2	S	1	0	0	0	0	0	0	1	1	1	1	4	3	2	1	0	7	2.1				
Jul 5	2	1	4	8	12	10	6	S	2	1	1	2	1	1	2	2	1	1	1	1	1	1	1	2	1	12	2.8				
Jul 6	4	2	4	3	3	4	S	1	1	0	0	0	0	0	0	0	0	0	0	0	2	5	0	0	0	5	1.3				
Jul 7	3	3	2	3	5	S	10	6	2	1	1	0	0	0	0	1	1	0	1	2	2	3	3	4	6	10	2.3				
Jul 8	3	3	3	5	S	13	6	3	2	1	1	1	1	1	0	1	1	2	2	1	1	2	8	10	10	13	3.1				
Jul 9	2	3	3	S	3	5	2	3	2	3	3	2	2	1	1	1	2	1	2	3	3	3	4	6	1	6	2.6				
Jul 10	3	3	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	3	NA			
Jul 11	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	C	C	C	C	4	4	5	5	4	5	NA
Jul 12	S	5	10	9	7	10	4	4	NRM	NRM	NRM	NRM	NRM	2	4	2	4	2	2	3	4	5	2	S	2	10	NA	NA	NA		
Jul 13	2	2	2	7	4	1	2	2	3	3	3	5	4	2	2	2	2	2	2	3	6	3	S	2	1	7	2.9	7	4.3		
Jul 14	3	2	2	1	3	4	5	7	5	5	5	6	5	6	7	5	4	3	2	3	3	S	7	6	1	7	4.3	7	4.3		
Jul 15	7	3	5	7	4	8	8	4	4	3	5	2	2	1	1	1	2	1	2	2	2	S	3	3	4	1	8	3.6	4	3.6	
Jul 16	5	4	5	5	5	3	4	2	2	2	2	2	2	2	2	2	2	2	2	2	S	4	5	5	4	2	5	3.2	5	3.2	
Jul 17	4	2	3	3	4	4	3	2	1	1	2	2	2	2	1	1	2	2	S	3	3	3	2	2	2	1	4	2.3	4	2.3	
Jul 18	1	2	2	3	3	2	2	2	1	0	1	1	1	1	1	1	1	S	2	1	3	2	2	2	2	0	3	1.6	3	1.6	
Jul 19	2	2	3	2	3	3	3	3	3	3	2	3	4	4	5	2	3	S	2	2	4	5	4	6	5	2	6	3.3	6	3.3	
Jul 20	5	5	6	7	6	9	9	6	6	5	2	2	2	1	2	S	1	2	2	2	4	7	10	8	1	10	4.7	10	4.7		
Jul 21	7	10	9	14	11	16	19	7	6	2	2	1	0	0	S	1	X	X	X	X	X	X	X	X	X	0	19	NA	NA	NA	
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	
Jul 23	1	0	1	2	2	2	2	3	2	2	2	2	S	2	2	2	2	2	2	2	5	6	6	6	5	0	6	2.7	6	2.7	
Jul 24	7	10	12	8	13	15	NRM	7	3	5	8	S	3	2	2	2	2	2	2	2	P	P	2	3	2	15	5.5	15	5.5		
Jul 25	1	2	2	3	5	3	4	3	2	2	S	2	2	2	1	1	1	1	1	1	1	2	1	1	1	1	5	1.9	5	1.9	
Jul 26	1	1	1	1	1	1	1	1	1	S	2	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	2	1.0	2	1.0	
Jul 27	0	1	2	1	1	3	2	1	S	1	0	0	0	0	0	0	0	0	0	0	3	3	7	5	0	7	1.3	7	1.3		
Jul 28	6	4	8	4	4	7	8	S	1	0	0	0	0	0	0	0	0	0	0	1	2	6	9	9	0	9	3.0	9	3.0		
Jul 29	8	6	5	5	5	S	1	1	1	0	0	0	0	1	0	0	0	0	0	1	2	4	7	7	4	0	8	2.7	8	2.7	
Jul 30	5	6	4	12	9	S	3	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	1	12	2.7	12	2.7		
Jul 31	2	2	2	2	S	4	5	2	3	2	1	4	2	1	1	2	3	1	1	1	2	1	1	1	1	1	5	2.0	5	2.0	
Diurnal Maximum	8	10	12	14	13	16	19	7	6	5	8	6	5	6	7	5	4	3	2	5	6	7	10	10	10	10	10	10	10	10	
Diurnal Average	3.2	3.2	3.9	4.6	4.6	5.5	4.6	2.9	2.2	1.8	1.6	1.4	1.3	1.3	1.2	1.4	1.1	1.2	2.0	3.0	3.2	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error      **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Equipment Malfunction /Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

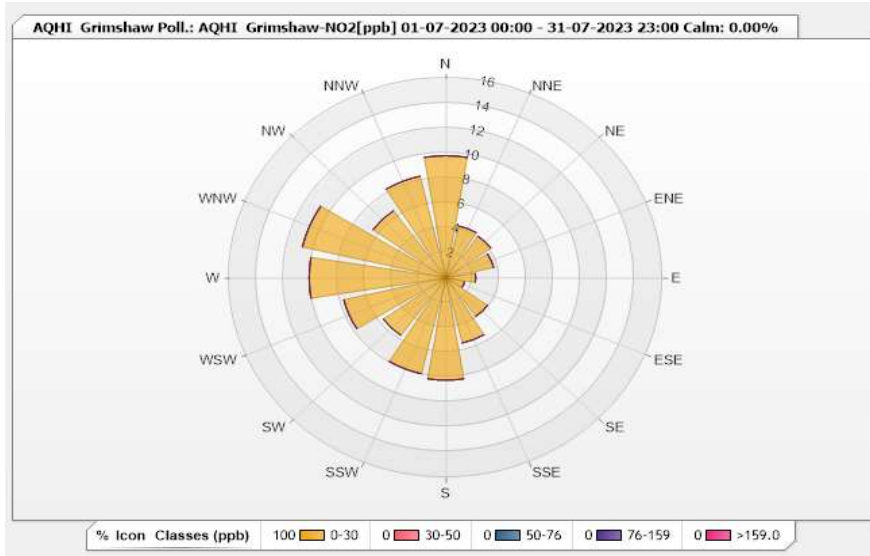


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-NO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 85.22%      Calm Avg: 0.00 [ppm]

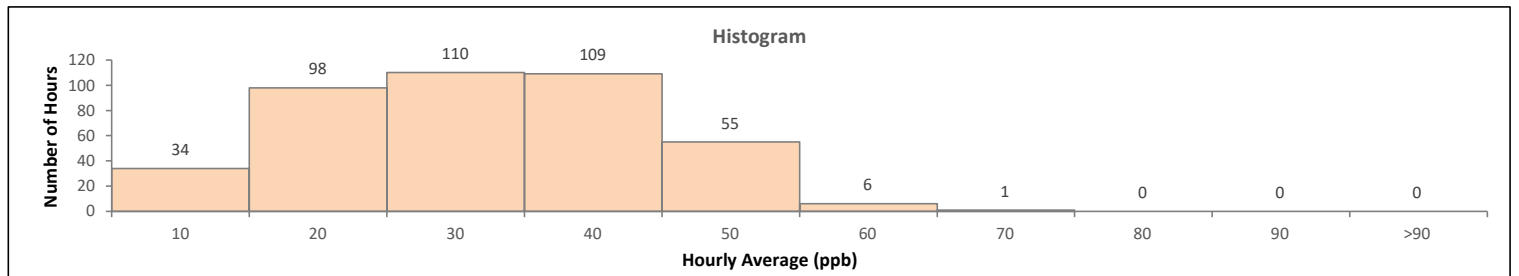
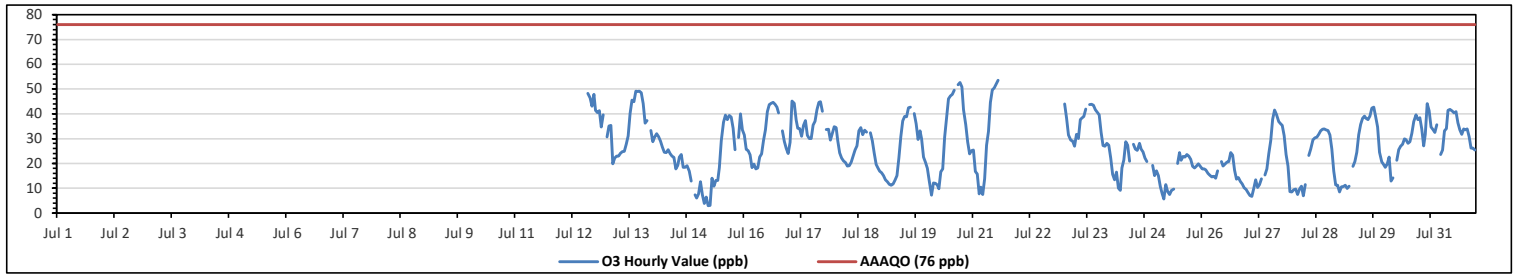
Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	9.78	0	0	0	0	9.78
NNE	4.26	0	0	0	0	4.26
NE	4.1	0	0	0	0	4.1
ENE	3.63	0	0	0	0	3.63
E	2.21	0	0	0	0	2.21
ESE	1.42	0	0	0	0	1.42
SE	3.79	0	0	0	0	3.79
SSE	5.36	0	0	0	0	5.36
S	8.2	0	0	0	0	8.2
SSW	7.89	0	0	0	0	7.89
SW	5.68	0	0	0	0	5.68
WSW	7.73	0	0	0	0	7.73
W	10.09	0	0	0	0	10.09
WNW	10.88	0	0	0	0	10.88
NW	6.62	0	0	0	0	6.62
NNW	8.36	0	0	0	0	8.36
Summary	100	0	0	0	0	100



**Peace River Area Monitoring Program**  
**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**  
**OZONE (O<sub>3</sub>) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb																												
Number of 1-Hour Exceedances: 0																												
Maximum Hourly Value: 60.6 ppb on Jul 21 at hr 15															Hours in Service: 744													
Maximum Daily Value: 36.0 ppb on Jul 17															Hours of Data: 413													
Minimum Hourly Value: 2.9 ppb on Jul 15 at hr 5															Hours of Missing Data: 309													
Minimum Daily Value: 16.4 ppb on Jul 25															Hours of Calibration: 22													
Monthly Average: NA ppb															Operational Uptime: 58.5													
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 12	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	C	C	C	48.3	46.5	43.1	47.9	41.4	40.5	41.3	34.6	39.6	S	34.6	48.3	NA
Jul 13	30.7	35	35.3	19.8	22.1	22.9	22.9	24.1	24.8	24.9	27.7	31.1	40.1	45.5	44.9	49.2	49	49.2	48.5	44.1	36.3	37.2	S	33.3	19.8	49.2	34.7	
Jul 14	28.8	30.7	32	30.8	29	26.6	24.5	24.4	25.6	24	23	22.4	17.8	19.2	22.5	23.6	18.4	18.4	19.1	16.9	12.9	S	7.3	6.1	6.1	32.0	21.9	
Jul 15	7.7	12.7	7.3	3.9	6.4	2.9	3	14	10.9	13.1	18.3	29.2	36.6	39.5	37.7	39.3	38.7	34.2	25.5	S	30.4	40	33.5	2.9	4.0	20.1	21.6	
Jul 16	31.5	25.7	25.1	23.5	18.3	19.7	17.7	18.1	22.6	23.8	29.3	33.5	40.8	43.7	44.3	44.7	43.9	42.7	40.4	S	33.1	28.9	26	23.9	17.7	44.7	30.5	
Jul 17	28.5	45.1	44.3	37.5	34.2	34.1	30.9	35.3	37.2	31.4	30.1	35.5	37	41.6	44.6	44.9	41	S	33.7	33.8	29.4	32.2	34.8	28.5	45.1	36.0		
Jul 18	34.4	29.2	24.2	22.1	21	20.3	19	19.1	20.5	23	25.4	27.1	33.2	34.4	31.6	33.4	32.6	S	32.3	29.2	24.1	19.6	18	16.9	16.9	34.4	25.7	
Jul 19	16.3	15.1	13.3	12.6	11.6	11.1	11.7	13.2	15.1	22.1	30.7	37.1	38.9	38.8	42.5	42.8	S	40.2	36	29.7	33.1	30	22.5	20.5	11.1	42.8	25.4	
Jul 20	18	12.9	7.2	12.1	12	11.3	9.8	16.6	17.7	30.5	38.4	46	47.2	47.8	49.5	S	51.7	52.6	50.9	41.7	35.6	28.6	23.8	25.1	7.2	52.6	29.9	
Jul 21	25.4	16.8	15.7	7.7	10.5	7.4	13.8	27.3	32.8	44.6	49.6	50.5	52	53.5	S	60.6	X	X	X	X	X	X	X	X	7.4	60.6	NA	
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 23	44	38.4	31.5	29.4	29	27	31.8	30.1	37.7	38.4	38.9	41.9	S	43.7	43.9	43.5	41.7	40.7	39.6	32.4	27.2	27	28	27.3	27.0	44.0	35.4	
Jul 24	22.2	15.5	13.4	16.5	10	9.1	18.2	21.4	28.7	27.4	20.9	S	27.7	25.8	25.3	28.1	25.8	24.6	22.2	20.8	P	P	19.3	15.1	9.1	28.7	20.9	
Jul 25	17.1	15.1	10.7	7.7	5.6	11.5	8.6	7.5	9.1	9.7	S	20	24.3	21.3	22.8	22.6	23.6	23	21.6	18.8	18.2	19	19.8	18.8	5.6	24.3	16.4	
Jul 26	17.7	17.8	17.4	15.9	15.2	14.6	14.9	14.1	17.1	S	20.8	19	19.7	20.5	20.8	24.3	23.4	17.3	13.6	14.3	12.8	11.7	10.2	9.5	9.5	24.3	16.6	
Jul 27	8.2	7	6.7	9.9	13.4	10.3	11.4	13.7	S	15.3	17.8	24	29.1	37.8	41.5	39.7	36.9	36	35.3	31.2	23.6	19	8.6	8.5	6.7	41.5	21.1	
Jul 28	9.4	9.6	7.4	9.6	10.8	6.9	11.5	S	23.2	25.8	29.6	30.2	30.6	31.7	33.2	33.8	33.9	33.5	31.5	25.8	16.9	11.3	11.1	6.9	33.9	21.8		
Jul 29	8.5	10.6	10.7	11.2	9.9	10.9	S	18.8	20.8	24.5	31.6	35.7	38.2	39.1	38.2	37.6	39	42.3	42.8	38.8	34.7	24.5	20.6	19.7	8.5	42.8	26.5	
Jul 30	18.4	19.7	22.5	12.9	14.2	S	21.3	25.5	26.9	27.8	30	29.6	28.1	28.7	32.1	36.9	39.6	37.7	38.5	33.9	27.1	31.7	44.1	41.2	12.9	44.1	29.1	
Jul 31	34.6	33.7	32.4	35.6	S	23.7	25.4	33.1	34.1	41.4	41.8	41.1	40.4	40.8	36.4	33.6	31.8	33.9	33.6	33.9	30.8	26.1	26.2	25.4	23.7	41.8	33.5	
Diurnal Maximum	44.0	45.1	44.3	37.5	34.2	34.1	31.8	35.3	37.7	44.6	49.6	50.5	52.0	53.5	49.5	60.6	51.7	52.6	50.9	44.1	41.3	37.2	44.1	41.2				
Diurnal Average	22.3	21.7	19.8	17.7	16.1	15.9	17.4	21.0	23.8	26.3	29.3	31.6	33.7	35.9	36.6	38.0	36.4	36.5	34.3	30.4	28.2	25.9	23.4	21.8				
C	Monthly Calibration										S	Daily Zero-Span Check										Q	Quality Assurance					
K	Collection Error										ND	No Data (Machine Not in Service)										Y	Routine Maintenance					
X	Invalid Data (Equipment Malfunction/Recovery)										NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)										P	Power Failure					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

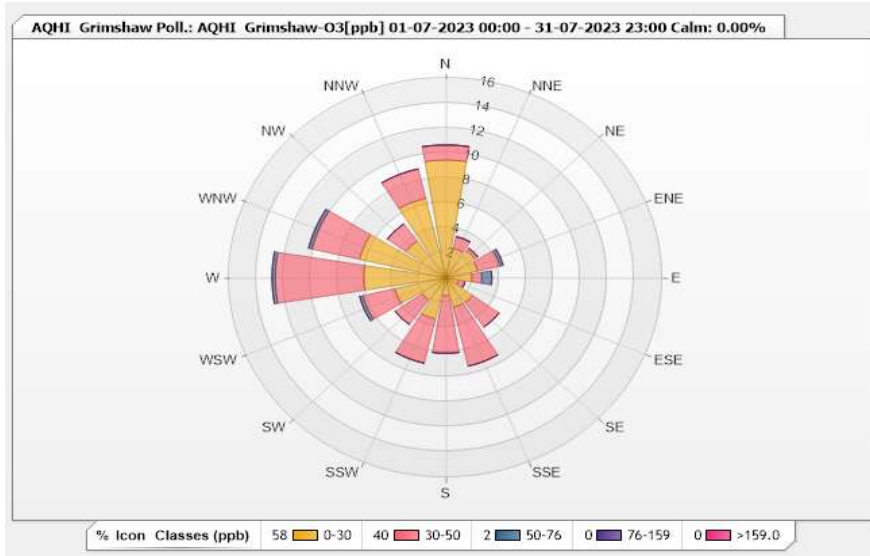


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-O3[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 55.51%      Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	9.44	1.21	0	0	0	10.65
NNE	2.42	0.97	0	0	0	3.39
NE	2.66	0.24	0	0	0	2.9
ENE	2.42	1.69	0.24	0	0	4.35
E	1.94	0.73	0.73	0	0	3.4
ESE	0.97	0.48	0	0	0	1.45
SE	2.42	2.42	0	0	0	4.84
SSE	2.42	4.84	0	0	0	7.26
S	1.45	4.6	0	0	0	6.05
SSW	3.39	3.63	0	0	0	7.02
SW	2.18	2.42	0	0	0	4.6
WSW	3.87	2.42	0.24	0	0	6.53
W	6.05	6.54	0.24	0	0	12.83
WNW	6.54	3.63	0.24	0	0	10.41
NW	3.63	1.69	0	0	0	5.32
NNW	6.54	2.42	0	0	0	8.96
Summary	58.34	39.93	1.69	0	0	100



**Peace River Area Monitoring Program**

**AQHI - Grimshaw Station - July 2023**

**Summary of Hourly Averages**

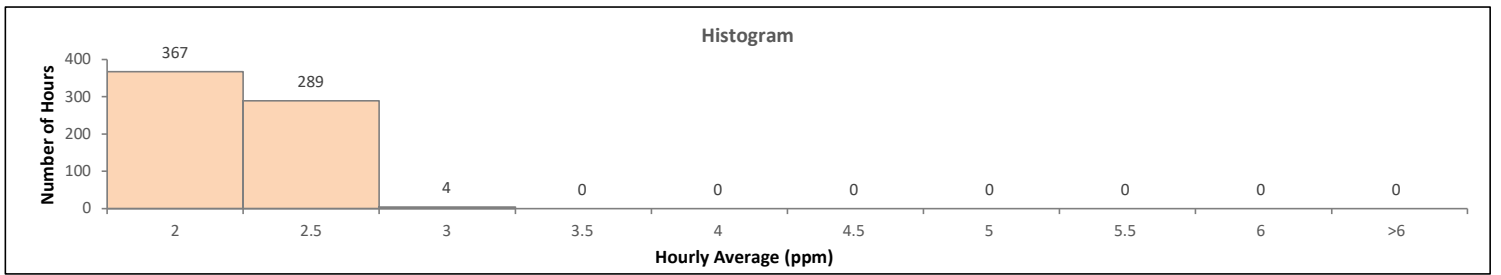
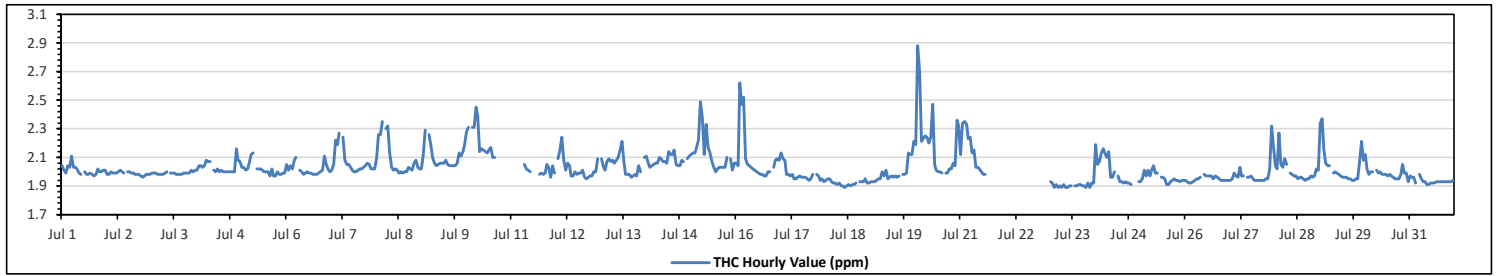
**TOTAL HYDROCARBONS (THC) in ppm**

Maximum Hourly Value:	2.88 ppm	on Jul 20 at hr 1	Hours in Service:	744
Maximum Daily Value:	2.19 ppm	on Jul 20	Hours of Data:	660
Minimum Hourly Value:	1.89 ppm	on Jul 18 at hr 10	Hours of Missing Data:	49
Minimum Daily Value:	1.90 ppm	on Jul 23	Hours of Calibration:	35
Monthly Average:	2.03 ppm		Operational Uptime:	93.4

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
Jul 1	2.04	2.01	1.99	2.04	2.03	2.11	2.03	2.03	2.02	1.99	1.98	S	2.00	1.98	1.98	1.99	1.98	1.97	1.98	2.02	2.00	2.00	2.01	2.01	1.97	2.11	2.01	
Jul 2	1.98	1.98	2.00	1.99	1.99	1.99	2.00	2.01	2.00	1.99	S	2.00	2.00	1.99	1.99	1.98	1.98	1.98	1.97	1.96	1.97	1.98	1.98	1.98	1.96	2.01	1.99	
Jul 3	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.99	2.00	S	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.99	1.99	1.99	1.99	2.01	2.00	2.01	1.98	2.01	1.99	
Jul 4	2.01	2.04	2.04	2.03	2.04	2.08	2.07	2.07	S	2.01	2.00	2.02	2.00	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.16	2.08	2.07	2.00	2.16	2.03	
Jul 5	2.03	2.03	2.01	2.02	2.06	2.12	2.13	S	2.02	2.02	2.01	2.00	2.00	2.00	2.00	1.97	2.02	1.97	1.97	2.00	1.98	1.98	1.99	1.99	1.97	2.13	2.01	
Jul 6	2.05	2.01	2.04	2.02	2.08	2.10	S	2.01	2.00	1.98	1.99	2.00	1.99	1.99	1.98	1.98	1.98	1.99	2.00	2.01	2.11	2.05	2.02	2.00	1.98	2.11	2.02	
Jul 7	2.01	2.05	2.22	2.19	2.27	S	2.24	2.08	2.05	2.08	2.05	2.03	2.01	2.00	2.00	2.01	2.02	2.02	2.03	2.04	2.06	2.05	2.02	2.02	2.00	2.27	2.06	
Jul 8	2.09	2.26	2.26	2.35	S	2.30	2.32	2.13	2.03	2.01	2.02	2.01	1.99	2.00	1.99	2.00	2.00	2.03	2.02	2.01	2.06	2.08	2.03	2.02	1.99	2.35	2.09	
Jul 9	2.02	2.12	2.29	S	2.26	2.18	2.10	2.06	2.04	2.05	2.06	2.06	2.06	2.08	2.05	2.04	2.04	2.04	2.04	2.06	2.13	2.11	2.14	2.19	2.02	2.29	2.10	
Jul 10	2.28	2.31	S	2.31	2.31	2.45	2.39	2.14	2.16	2.15	2.14	2.13	2.15	2.17	2.10	2.10	K	K	K	K	K	K	K	K	2.10	2.45	NA	
Jul 11	K	K	K	K	K	K	S	2.05	2.02	2.01	2.00	C	C	C	C	1.98	1.99	1.98	1.99	2.05	2.03	1.96	2.04	1.99	1.96	2.05	NA	
Jul 12	S	2.09	2.15	2.24	2.08	2.01	2.06	2.04	1.97	1.97	2.00	1.98	1.99	1.99	2.01	1.96	1.95	1.96	1.97	1.97	2.00	2.00	2.09	S	1.95	2.24	2.02	
Jul 13	2.09	2.04	2.01	2.07	2.09	2.07	2.08	2.06	2.08	2.10	2.15	2.21	2.07	1.98	1.98	1.98	1.96	1.97	1.98	1.97	2.04	2.00	S	2.10	1.96	2.21	2.05	
Jul 14	2.11	2.06	2.03	2.04	2.05	2.06	2.06	2.10	2.09	2.07	2.07	2.06	2.14	2.12	2.12	2.15	2.05	2.04	2.04	2.08	2.07	S	2.09	2.11	2.03	2.15	2.08	
Jul 15	2.12	2.13	2.13	2.17	2.22	2.49	2.38	2.12	2.33	2.17	2.13	2.07	2.03	2.00	2.02	2.03	2.03	2.03	2.03	2.10	S	2.09	2.01	2.06	2.00	2.49	2.13	
Jul 16	2.06	2.04	2.62	2.47	2.52	2.09	2.05	2.04	2.03	2.02	2.01	2.00	1.99	1.98	1.98	1.97	1.97	2.00	2.00	S	2.03	2.08	2.09	2.08	1.97	2.62	2.09	
Jul 17	2.13	2.09	2.08	1.98	1.98	1.92	1.98	1.95	1.95	1.96	1.97	1.96	1.96	1.96	1.95	1.94	1.95	1.98	S	1.98	1.97	1.94	1.95	1.93	1.93	2.13	1.98	
Jul 18	1.94	1.95	1.95	1.93	1.98	1.92	1.92	1.91	1.92	1.90	1.89	1.90	1.91	1.90	1.91	1.91	1.92	S	S	1.93	1.93	1.93	1.95	1.92	1.92	1.89	1.95	1.92
Jul 19	1.93	1.93	1.93	1.94	1.95	1.95	2.00	1.97	2.01	1.95	1.96	1.97	1.96	1.97	1.96	1.97	S	S	1.98	1.98	1.99	2.13	2.12	2.21	1.93	2.21	1.99	
Jul 20	2.19	2.88	2.70	2.21	2.23	2.25	2.24	2.20	2.24	2.47	2.05	2.01	2.00	2.00	1.99	S	S	1.99	1.99	2.02	2.02	2.06	2.04	2.36	2.32	1.99	2.88	2.19
Jul 21	2.12	2.34	2.35	2.33	2.23	2.24	2.13	2.15	2.03	2.03	2.02	2.00	1.98	1.98	S	1.96	X	X	X	X	X	X	X	X	1.96	2.35	NA	
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 23	1.93	1.92	1.89	1.91	1.89	1.90	1.89	1.91	1.89	1.89	1.90	1.90	S	1.90	1.90	1.91	1.91	1.90	1.89	1.92	1.89	1.92	1.92	1.92	1.89	1.93	1.90	
Jul 24	2.19	2.05	2.07	2.13	2.16	2.13	2.10	2.14	1.96	1.96	2.00	S	1.97	1.93	1.93	1.92	1.93	1.92	1.92	1.91	P	P	X	1.93	1.91	2.19	2.01	
Jul 25	1.93	1.95	2.01	1.97	2.01	1.97	2.01	2.04	1.99	1.99	S	1.96	1.96	1.95	1.91	1.91	1.93	1.94	1.95	1.94	1.94	1.93	1.94	1.94	1.91	2.04	1.96	
Jul 26	1.94	1.93	1.92	1.92	1.93	1.94	1.95	1.95	1.96	S	1.98	1.97	1.97	1.97	1.97	1.95	1.97	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.92	1.98	1.95	
Jul 27	1.94	1.95	1.99	1.97	1.96	2.03	1.97	1.97	S	1.96	1.96	1.97	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	2.02	2.32	2.17	1.94	2.32	1.99	
Jul 28	2.04	2.02	2.27	2.05	2.03	2.09	2.05	S	1.99	1.98	1.97	1.97	1.95	1.96	1.96	1.95	1.94	1.95	1.95	1.97	1.96	1.97	2.02	2.01	1.94	2.27	2.00	
Jul 29	2.34	2.37	2.16	2.06	2.04	2.04	S	1.99	2.00	1.99	1.98	1.97	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.95	2.07	2.21	2.08	1.94	2.37	2.04	
Jul 30	2.12	2.02	1.98	2.00	2.00	S	2.01	1.99	2.00	1.98	1.98	1.98	1.97	1.98	1.97	1.96	1.95	1.95	1.95	1.98	2.05	1.99	1.99	1.93	1.93	2.12	1.99	
Jul 31	1.97	1.96	1.96	1.92	S	1.98	1.95	1.93	1.93	1.91	1.91	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.91	1.98	1.93	
Diurnal Maximum	2.34	2.88	2.70	2.47	2.52	2.49	2.39	2.20	2.33	2.47	2.15	2.21	2.15	2.17	2.12	2.15	2.05	2.04	2.04	2.10	2.13	2.16	2.36	2.32	1.89	1.93	1.90	
Diurnal Average	2.06	2.09	2.11	2.08	2.09	2.09	2.08	2.04	2.02	2.02	2.01	2.00	2.00	1.99	1.98	1.98	1.97	1.98	1.98	1.99	2.01	2.01	2.05	2.03	1.99	2.03	2.03	

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

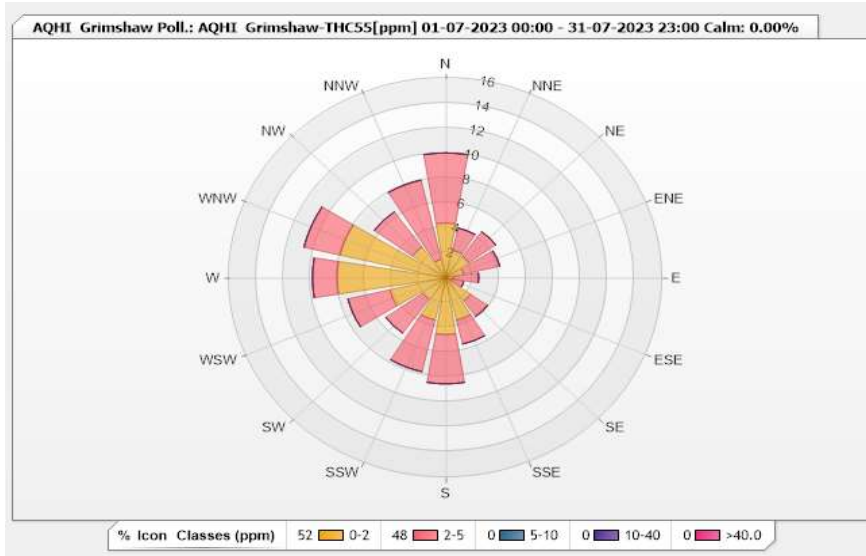


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-THC55[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 88.71%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	4.39	5.61	0	0	0	10
NNE	2.27	1.82	0	0	0	4.09
NE	2.12	2.42	0	0	0	4.54
ENE	1.36	2.73	0	0	0	4.09
E	0.61	1.82	0	0	0	2.43
ESE	0.45	0.91	0	0	0	1.36
SE	2.27	1.52	0	0	0	3.79
SSE	3.48	1.97	0	0	0	5.45
S	4.55	3.94	0	0	0	8.49
SSW	3.48	4.24	0	0	0	7.72
SW	2.12	3.33	0	0	0	5.45
WSW	4.24	3.18	0	0	0	7.42
W	8.03	1.82	0	0	0	9.85
WNW	8.03	2.73	0	0	0	10.76
NW	3.03	3.48	0	0	0	6.51
NNW	1.52	6.52	0	0	0	8.04
Summary	51.95	48.04	0	0	0	100



**Peace River Area Monitoring Program**

**AQHI - Grimshaw Station - July 2023**

**Summary of Hourly Averages**

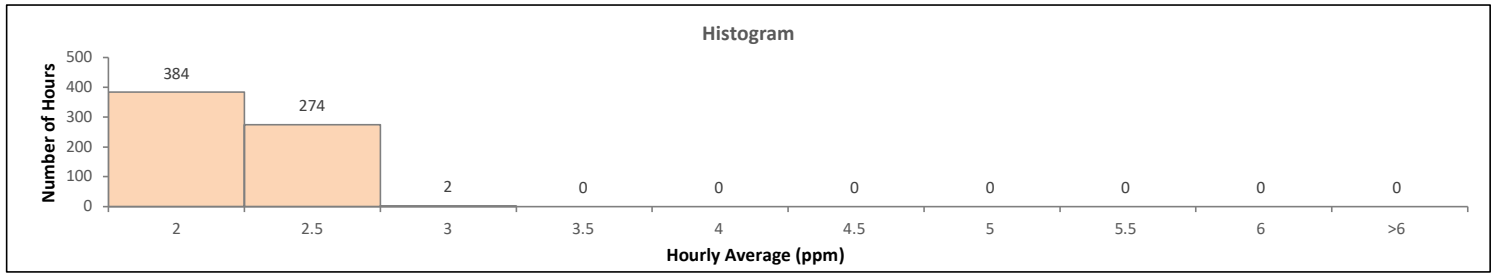
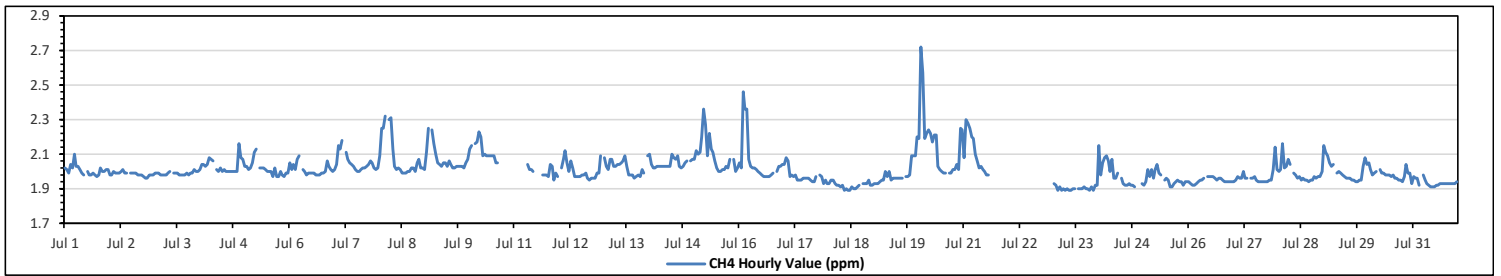
**METHANE (CH4) in ppm**

Maximum Hourly Value:	2.72	ppm	on Jul 20 at hr 1	Hours in Service:	744
Maximum Daily Value:	2.15	ppm	on Jul 20	Hours of Data:	660
Minimum Hourly Value:	1.89	ppm	on Jul 18 at hr 8	Hours of Missing Data:	49
Minimum Daily Value:	1.90	ppm	on Jul 23	Hours of Calibration:	35
Monthly Average:	2.01	ppm		Operational Uptime:	93.4

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	2.02	2.01	1.99	2.04	2.02	2.10	2.03	2.03	2.01	1.99	1.98	S	2.00	1.98	1.98	1.99	1.98	1.97	1.98	2.02	2.00	2.00	2.01	2.01	1.97	2.10	2.01	
Jul 2	1.98	1.98	2.00	1.99	1.99	1.99	2.00	2.01	1.99	1.99	S	1.99	1.99	1.99	1.99	1.98	1.98	1.98	1.97	1.96	1.96	1.98	1.98	1.98	1.96	2.01	1.98	
Jul 3	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.99	2.00	S	1.99	1.99	1.99	1.98	1.98	1.98	1.98	1.99	1.98	1.99	1.99	2.01	2.00	2.00	1.98	2.01	1.99	
Jul 4	2.01	2.04	2.04	2.03	2.04	2.08	2.07	2.06	S	2.01	2.00	2.02	2.00	2.01	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.16	2.08	2.07	2.00	2.16	2.03	
Jul 5	2.03	2.03	2.01	2.02	2.05	2.11	2.13	S	2.02	2.02	2.01	2.00	2.00	2.00	2.00	1.97	2.02	1.97	1.97	2.00	1.98	1.97	1.99	1.99	1.97	2.13	2.01	
Jul 6	2.05	2.01	2.04	2.01	2.07	2.09	S	2.01	2.00	1.98	1.99	1.99	1.99	1.99	1.98	1.98	1.98	1.99	1.99	2.00	2.06	2.03	2.01	2.00	1.98	2.09	2.01	
Jul 7	2.01	2.04	2.15	2.13	2.18	S	2.11	2.07	2.05	2.04	2.03	2.01	2.00	2.00	2.01	2.02	2.02	2.03	2.04	2.06	2.05	2.02	2.01	2.02	2.00	2.18	2.05	
Jul 8	2.09	2.25	2.25	2.32	S	2.30	2.31	2.13	2.03	2.01	2.02	2.01	1.99	1.99	1.99	2.00	2.00	2.02	2.02	2.00	2.05	2.07	2.02	2.02	1.99	2.32	2.08	
Jul 9	2.01	2.11	2.25	S	2.24	2.16	2.10	2.05	2.04	2.03	2.05	2.05	2.03	2.06	2.04	2.02	2.02	2.03	2.03	2.03	2.03	2.02	2.05	2.02	2.01	2.25	2.07	
Jul 10	2.13	2.15	S	2.16	2.17	2.23	2.20	2.09	2.10	2.09	2.09	2.09	2.09	2.09	2.05	2.05	K	K	K	K	K	K	K	K	2.05	2.23	NA	
Jul 11	K	K	K	K	K	K	S	2.04	2.01	2.01	2.00	C	C	C	C	1.98	1.98	1.98	1.97	2.04	2.03	1.95	1.99	1.97	1.95	2.04	NA	
Jul 12	S	2.02	2.07	2.12	2.05	2.00	2.06	2.02	1.97	1.97	1.97	1.97	1.98	1.98	1.99	1.96	1.95	1.96	1.96	1.96	1.99	1.99	2.09	S	1.95	2.12	2.00	
Jul 13	2.08	2.03	2.01	2.07	2.07	2.03	2.03	2.04	2.04	2.05	2.06	2.09	2.03	1.98	1.98	1.98	1.96	1.97	1.98	1.97	2.01	1.99	S	2.09	1.96	2.09	2.02	
Jul 14	2.10	2.04	2.02	2.02	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.10	2.08	2.07	2.09	2.03	2.02	2.03	2.05	2.06	S	2.06	2.07	2.02	2.10	2.05	
Jul 15	2.07	2.12	2.10	2.11	2.20	2.36	2.27	2.09	2.22	2.13	2.11	2.06	2.02	2.00	2.00	2.01	2.01	2.03	2.02	2.07	S	2.07	2.00	2.02	2.00	2.36	2.09	
Jul 16	2.05	2.02	2.46	2.36	2.36	2.07	2.03	2.02	2.01	2.00	1.99	1.99	1.98	1.97	1.97	1.97	1.98	1.99	S	2.00	2.03	2.03	2.04	1.97	2.46	2.06		
Jul 17	2.04	2.08	2.06	1.97	1.98	1.97	1.98	1.95	1.95	1.96	1.96	1.96	1.96	1.95	1.94	1.94	1.97	S	1.98	1.97	1.93	1.95	1.93	1.93	2.08	1.97		
Jul 18	1.93	1.95	1.95	1.93	1.92	1.91	1.92	1.89	1.90	1.89	1.89	1.91	1.90	1.91	1.90	1.91	1.92	S	1.93	1.93	1.93	1.95	1.92	1.92	1.89	1.95	1.92	
Jul 19	1.93	1.93	1.93	1.94	1.95	2.00	1.97	2.00	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.96	S	1.97	1.97	1.98	2.09	2.09	2.09	1.93	2.20	1.99		
Jul 20	2.19	2.72	2.57	2.19	2.22	2.24	2.22	2.17	2.21	2.21	2.03	2.01	2.00	1.99	1.99	S	1.99	1.99	2.01	2.01	2.04	2.01	2.25	2.24	1.99	2.72	2.15	
Jul 21	2.08	2.30	2.28	2.25	2.20	2.19	2.10	2.06	2.02	2.03	2.01	2.00	1.98	1.98	S	1.96	X	X	X	X	X	X	X	X	1.96	2.30	NA	
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 23	1.93	1.92	1.89	1.91	1.89	1.90	1.89	1.90	1.89	1.89	1.90	1.90	1.90	1.90	1.91	1.90	1.90	1.89	1.91	1.90	1.89	1.91	1.89	1.92	1.92	1.89	1.93	1.90
Jul 24	2.15	1.98	2.05	2.08	2.09	2.06	2.00	2.07	1.96	1.96	1.99	S	1.96	1.93	1.92	1.92	1.93	1.92	1.92	1.91	P	P	X	1.93	1.91	2.15	1.99	
Jul 25	1.92	1.94	2.01	1.97	2.01	1.96	2.01	2.04	1.99	1.98	S	1.95	1.96	1.95	1.91	1.91	1.93	1.94	1.95	1.94	1.94	1.92	1.94	1.94	1.91	2.04	1.96	
Jul 26	1.94	1.93	1.92	1.92	1.93	1.94	1.95	1.95	1.96	S	1.97	1.97	1.97	1.97	1.96	1.95	1.96	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.92	1.97	1.95	
Jul 27	1.94	1.95	1.97	1.96	1.96	2.00	1.96	1.96	S	1.96	1.96	1.97	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	2.01	2.14	2.01	1.94	2.14	1.97	
Jul 28	2.00	2.01	2.16	2.02	2.03	2.07	2.04	S	1.99	1.98	1.96	1.97	1.95	1.96	1.95	1.95	1.94	1.95	1.95	1.97	1.96	1.97	1.97	2.00	1.94	2.16	1.99	
Jul 29	2.15	2.11	2.09	2.05	2.03	2.04	S	1.99	2.00	1.99	1.98	1.97	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.95	2.03	2.08	2.04	1.94	2.15	2.00	
Jul 30	2.05	2.01	1.98	1.99	2.00	S	2.01	1.99	1.99	1.98	1.98	1.98	1.97	1.97	1.98	1.96	1.95	1.95	1.94	1.97	2.04	1.99	1.99	1.93	1.93	2.05	1.98	
Jul 31	1.97	1.96	1.96	1.92	S	1.98	1.95	1.93	1.92	1.91	1.91	1.91	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.91	1.98	1.93	
Diurnal Maximum	2.19	2.72	2.57	2.36	2.36	2.31	2.17	2.22	2.21	2.11	2.09	2.10	2.09	2.07	2.09	2.03	2.03	2.04	2.07	2.09	2.16	2.25	2.24	1.89	1.93	1.90		
Diurnal Average	2.03	2.06	2.08	2.05	2.06	2.05	2.02	2.01	2.00	1.99	1.99	1.99	1.99	1.98	1.97	1.97	1.97	1.97	1.97	1.98	1.99	2.00	2.02	2.01	1.99	2.01		

C Monthly Calibration      S Daily Zero-Span Check      Q Quality Assurance  
 K Collection Error      ND No Data (Machine Not in Service)      Y Routine Maintenance  
 X InValid Data (Equipment Malfunction /Recovery)      NRM UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      P Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



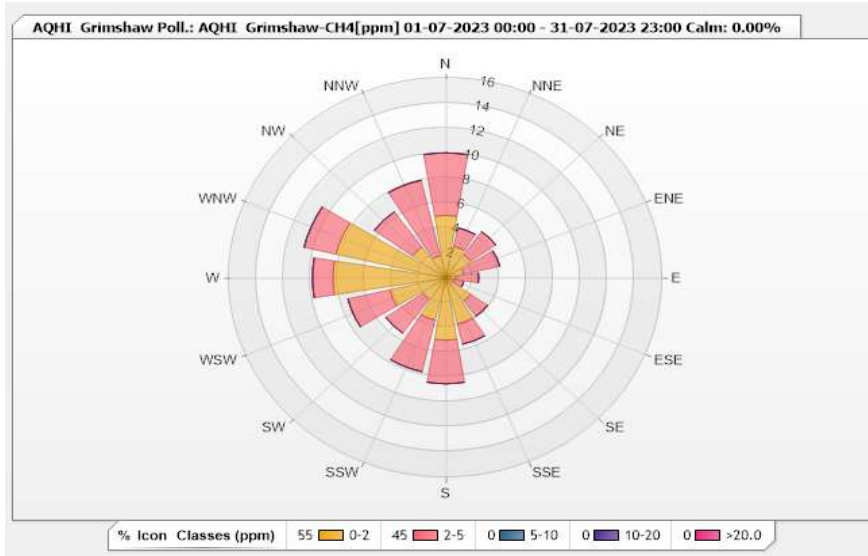


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 88.71%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	5	5	0	0	0	10
NNE	2.58	1.52	0	0	0	4.1
NE	2.27	2.27	0	0	0	4.54
ENE	1.36	2.73	0	0	0	4.09
E	0.76	1.67	0	0	0	2.43
ESE	0.61	0.76	0	0	0	1.37
SE	2.27	1.52	0	0	0	3.79
SSE	3.79	1.67	0	0	0	5.46
S	5	3.48	0	0	0	8.48
SSW	3.48	4.24	0	0	0	7.72
SW	2.12	3.33	0	0	0	5.45
WSW	4.24	3.18	0	0	0	7.42
W	8.33	1.52	0	0	0	9.85
WNW	8.33	2.42	0	0	0	10.75
NW	3.03	3.48	0	0	0	6.51
NNW	1.82	6.21	0	0	0	8.03
Summary	54.99	45	0	0	0	100



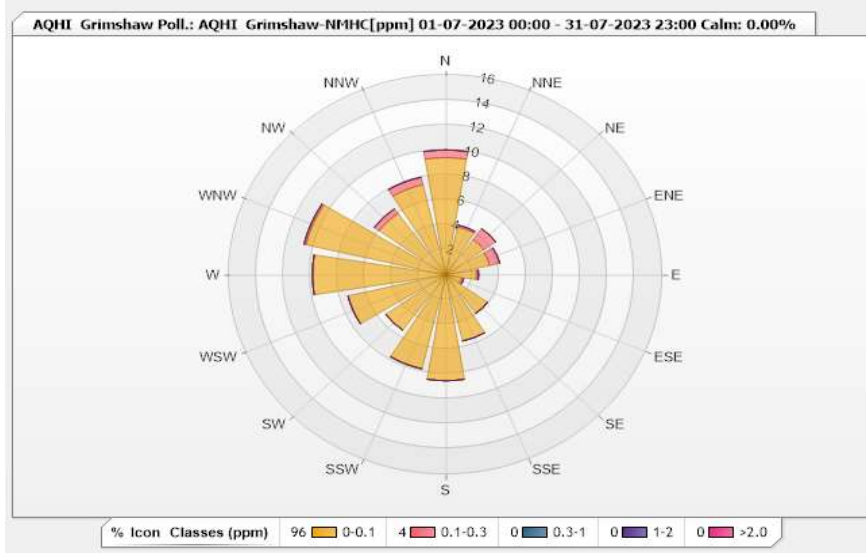


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 88.71%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	9.39	0.61	0	0	0	10
NNE	3.94	0.15	0	0	0	4.09
NE	3.48	1.06	0	0	0	4.54
ENE	3.33	0.76	0	0	0	4.09
E	2.27	0.15	0	0	0	2.42
ESE	1.21	0.15	0	0	0	1.36
SE	3.79	0	0	0	0	3.79
SSE	5.45	0	0	0	0	5.45
S	8.48	0	0	0	0	8.48
SSW	7.73	0	0	0	0	7.73
SW	5.45	0	0	0	0	5.45
WSW	7.42	0	0	0	0	7.42
W	9.85	0	0	0	0	9.85
WNW	10.61	0.15	0	0	0	10.76
NW	6.06	0.45	0	0	0	6.51
NNW	7.42	0.61	0	0	0	8.03
Summary	95.88	4.09	0	0	0	100



Peace River Area Monitoring Program

AQHI - Grimshaw Station - July 2023

Summary of Hourly Averages

PARTICULATE MATTER 2.5 (PM<sub>2.5</sub>) in µg/m<sup>3</sup>

Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m <sup>3</sup> , Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m <sup>3</sup>			
Number of 1-Hour Exceedances:	163	Number of 24-Hour Exceedances:	13
Maximum Hourly Value:	357 µg/m <sup>3</sup> on Jul 14 at hr 14	Hours in Service:	744
Maximum Daily Value:	208.5 µg/m <sup>3</sup> on Jul 14	Hours of Data:	725
Minimum Hourly Value:	2 µg/m <sup>3</sup> on Jul 25 at hr 17	Hours of Missing Data:	18
Minimum Daily Value:	5 µg/m <sup>3</sup> on Jul 29	Hours of Calibration:	1
Monthly Average:	45.7 µg/m <sup>3</sup>	Operational Uptime:	97.6

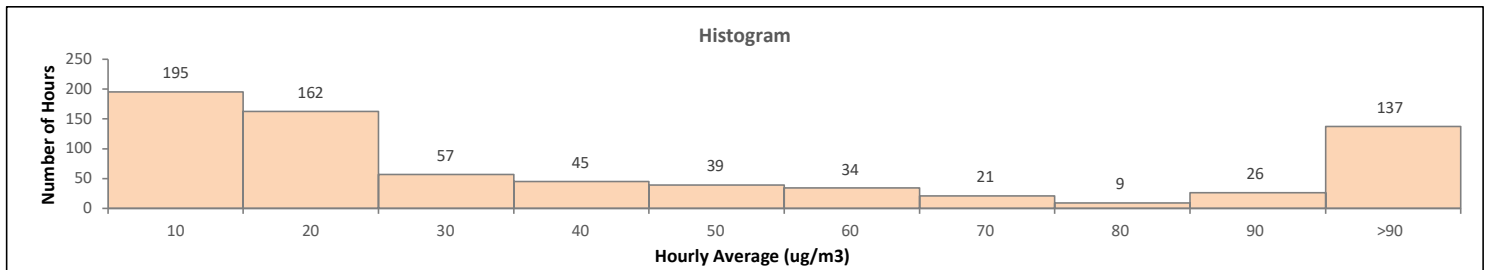
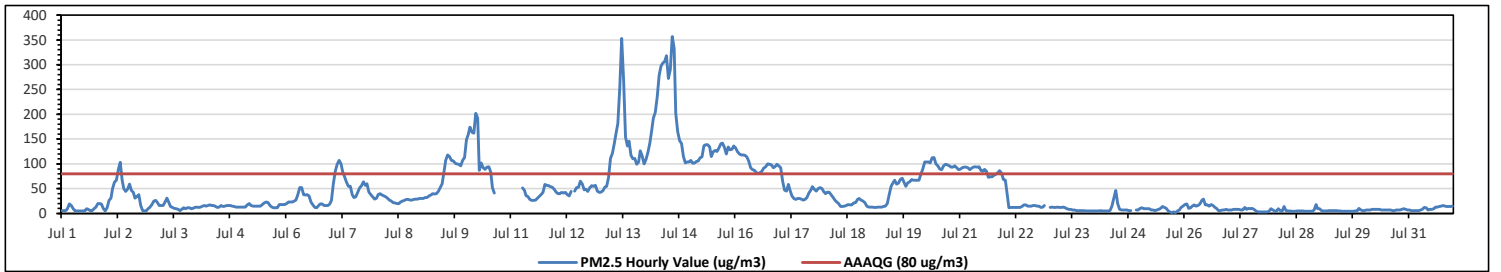
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	6	6	6	9	19	16	9	5	5	5	5	5	9	8	6	6	9	13	20	20	19	10	5	5	20	9.4		
Jul 2	11	26	31	50	63	67	88	103	67	50	44	49	59	46	42	31	34	38	16	6	5	5	9	13	5	103	39.7	
Jul 3	18	25	26	21	16	16	16	23	31	22	14	12	10	9	8	6	8	11	9	11	9	10	12	6	31	14.8		
Jul 4	13	12	13	15	16	15	16	17	16	16	14	12	13	16	14	15	16	16	16	15	14	13	13	13	12	17	14.5	
Jul 5	13	13	13	17	20	16	15	15	15	15	18	21	23	22	16	13	11	11	11	18	18	18	18	18	11	23	16.0	
Jul 6	20	23	23	23	25	27	38	52	52	38	37	38	35	23	17	12	11	16	19	19	16	16	16	19	11	52	25.6	
Jul 7	26	60	85	99	107	100	84	74	63	55	55	38	32	33	42	51	56	64	57	60	43	38	33	29	26	107	57.7	
Jul 8	31	38	40	37	35	33	30	27	25	22	21	20	20	23	25	26	28	28	27	27	28	29	29	30	20	40	28.3	
Jul 9	30	30	32	32	35	37	40	39	40	44	52	60	85	107	118	115	107	106	101	100	99	96	107	113	30	118	71.9	
Jul 10	149	158	174	164	162	202	192	87	102	92	89	93	94	83	52	41	K	K	K	K	K	K	K	K	41	202	NA	
Jul 11	K	K	K	K	K	K	51	47	36	34	28	26	26	27	31	34	38	42	58	57	56	54	53	49	26	58	41.5	
Jul 12	43	40	40	42	41	42	38	35	44	C	45	52	53	65	59	48	49	44	51	56	55	57	45	42	35	65	47.2	
Jul 13	43	46	53	55	73	111	121	141	164	181	253	353	270	154	136	146	117	110	111	99	104	126	116	100	43	353	132.6	
Jul 14	109	123	142	164	192	204	235	278	297	304	306	318	272	290	357	333	202	165	147	141	115	102	104	104	102	357	208.5	
Jul 15	107	101	102	105	106	112	114	137	139	139	134	115	124	127	125	132	140	142	133	120	134	128	130	136	101	142	124.3	
Jul 16	132	124	120	118	118	117	114	106	92	88	87	82	81	82	85	91	94	100	99	98	92	95	99	96	81	132	100.4	
Jul 17	92	65	47	45	58	47	35	30	28	30	30	29	27	28	32	41	47	54	49	45	50	52	50	44	27	92	44.0	
Jul 18	40	43	42	37	32	26	23	20	14	14	15	16	18	17	17	21	22	28	30	27	25	22	15	13	13	43	24.0	
Jul 19	13	13	12	12	13	13	13	14	15	20	38	55	62	67	59	61	69	71	62	55	62	64	68	67	12	71	41.6	
Jul 20	67	67	67	79	90	104	104	104	102	112	113	100	96	90	88	96	99	98	96	93	93	96	92	88	67	113	93.1	
Jul 21	90	92	93	93	92	88	91	93	94	93	94	86	85	89	85	73	74	74	77	79	82	86	81	68	68	94	85.5	
Jul 22	67	37	11	12	12	12	12	12	12	14	17	15	15	15	15	16	15	15	12	13	16	X	X	11	67	17.4		
Jul 23	12	13	12	12	13	12	12	13	11	9	8	8	7	7	6	6	6	6	6	5	5	5	5	5	5	5	13	8.5
Jul 24	5	5	5	6	5	5	5	5	6	15	31	46	20	8	7	7	7	6	6	P	P	7	7	5	46	10.0		
Jul 25	10	11	9	9	9	9	7	7	6	7	8	10	14	12	10	5	3	2	3	2	5	7	12	15	2	15	8.0	
Jul 26	18	19	10	11	15	17	15	16	19	26	29	17	17	15	18	16	12	10	6	6	7	7	8	7	6	29	14.2	
Jul 27	7	7	8	8	8	8	7	7	12	8	10	9	10	8	5	3	3	3	3	3	3	4	9	7	3	12	6.7	
Jul 28	5	4	9	5	4	14	6	5	5	4	4	4	5	5	5	5	4	4	4	4	4	4	7	18	9	4	18	6.0
Jul 29	9	6	5	5	5	6	6	6	6	6	5	5	4	4	4	4	4	4	5	5	10	7	6	4	10	5.5		
Jul 30	6	7	7	7	8	8	8	8	8	7	7	7	7	7	7	6	6	7	7	7	8	9	8	7	6	9	7.3	
Jul 31	7	6	6	6	6	6	7	8	12	11	7	8	8	9	13	13	14	15	16	15	14	14	14	15	6	16	10.4	
Diurnal Maximum	149	158	174	164	192	204	235	278	297	304	306	353	272	290	357	333	202	165	147	141	134	128	130	136				
Diurnal Average	40.0	40.7	41.4	43.3	46.6	49.7	50.1	49.5	49.6	49.4	52.1	55.1	51.5	48.3	48.8	47.6	43.5	43.3	41.7	40.1	40.9	41.5	40.9	39.2				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

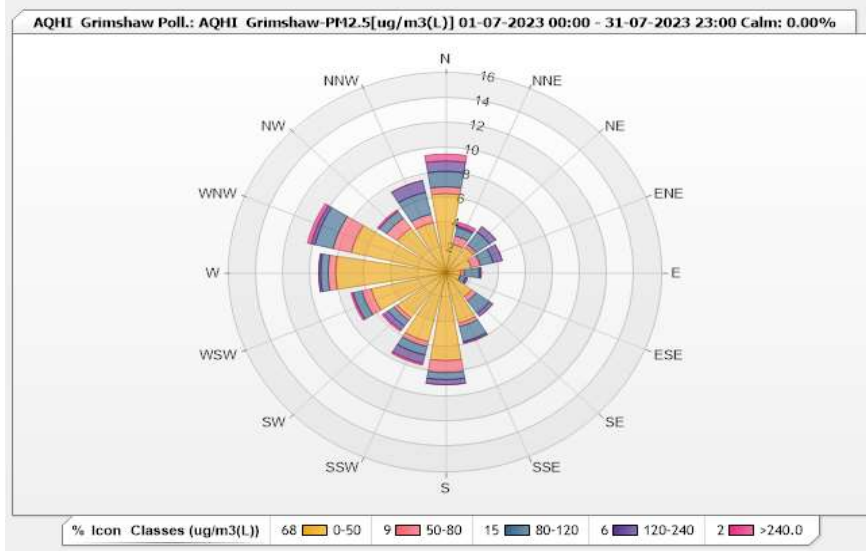


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-PM2.5[ug/m3(L)] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 97.45%      Calm Avg: 0.00 [ppm]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	6.34	0.55	1.24	0.83	0.55	9.51
NNE	2.34	0.69	0.69	0.14	0.28	4.14
NE	2.48	0.28	1.24	0.55	0	4.55
ENE	1.93	0.69	0.97	0.69	0	4.28
E	1.1	0.28	1.1	0.14	0	2.62
ESE	1.1	0	0.41	0.14	0	1.65
SE	2.34	0.41	1.24	0.28	0	4.27
SSE	4.14	0.28	1.24	0.14	0	5.8
S	7.03	0.97	0.55	0.41	0	8.96
SSW	5.66	0.41	0.69	0.69	0.14	7.59
SW	4.41	0.28	0.55	0.41	0.14	5.79
WSW	5.66	0.69	0.69	0	0.14	7.18
W	8.14	0.55	0.55	0.14	0	9.38
WNW	7.17	1.38	1.38	0.28	0.28	10.49
NW	4.41	0.97	0.69	0	0.14	6.21
NNW	4.14	0.69	1.79	0.97	0	7.59
Summary	68.39	9.12	15.02	5.81	1.67	100



Peace River Area Monitoring Program

AQHI - Grimshaw Station - July 2023

Summary of Hourly Averages

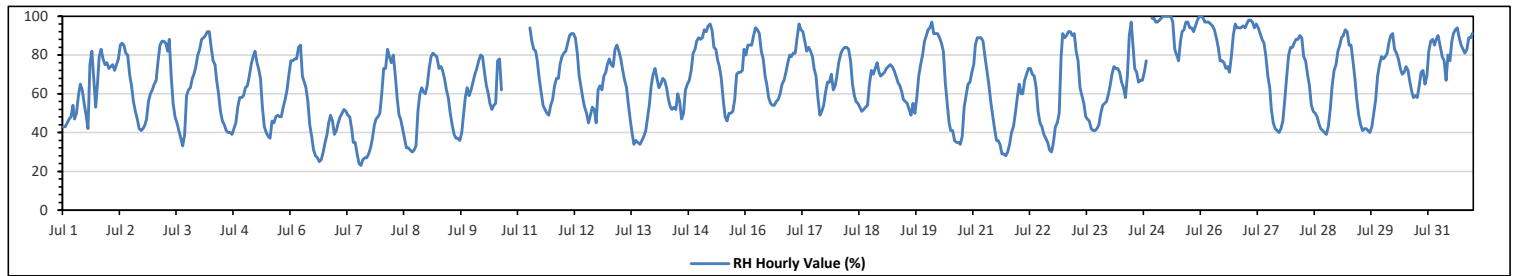
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100	%	on Jul 25 at hr 4	Hours in Service:	744
Maximum Daily Value:	94.5	%	on Jul 25	Hours of Data:	728
Minimum Hourly Value:	23	%	on Jul 7 at hr 13	Hours of Missing Data:	16
Minimum Daily Value:	39.1	%	on Jul 7	Hours of Calibration:	0
Monthly Average:	66.1	%		Operational Uptime:	97.8

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																																																																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23																																																																				
Jul 1	43	43	45	47	48	54	47	50	59	65	62	55	49	42	75	82	68	53	66	79	83	78	75	76	42	83	60.2																																																																				
Jul 2	73	74	75	72	75	78	85	86	85	81	80	70	64	56	51	47	42	41	42	44	47	56	60	62	41	86	64.4																																																																				
Jul 3	65	67	77	85	87	87	86	82	88	69	55	48	45	41	37	33	39	59	62	63	68	70	74	80	33	88	65.3																																																																				
Jul 4	83	88	89	90	92	92	84	77	75	67	60	51	46	44	41	40	40	39	42	45	53	58	58	59	39	92	63.0																																																																				
Jul 5	63	64	69	75	79	82	76	73	68	53	43	40	38	37	46	45	48	49	48	48	53	57	62	70	37	82	57.8																																																																				
Jul 6	77	77	78	78	84	85	69	66	63	56	44	38	31	28	27	25	26	30	35	39	45	49	46	39	25	85	51.5																																																																				
Jul 7	41	45	48	50	52	51	49	48	42	35	35	29	24	23	26	27	27	29	32	37	44	47	48	50	23	52	39.1																																																																				
Jul 8	60	73	73	83	79	76	80	70	58	49	47	42	37	32	32	31	30	31	33	51	60	63	61	60	30	83	54.6																																																																				
Jul 9	64	73	79	81	80	79	73	74	72	68	62	58	50	44	39	37	37	36	40	50	58	63	59	62	36	81	59.9																																																																				
Jul 10	66	70	73	77	80	79	71	64	60	55	52	54	55	77	78	62	K	K	K	K	K	K	K	K	52	80	NA																																																																				
Jul 11	K	K	K	K	K	K	K	84	87	83	82	77	68	61	54	52	50	49	54	57	64	68	68	75	79	49	94	67.9																																																																			
Jul 12	81	82	86	90	91	91	89	81	69	63	57	53	50	45	49	53	52	45	62	64	62	69	71	75	45	91	67.9																																																																				
Jul 13	78	75	74	83	85	82	78	72	67	63	54	46	40	34	36	35	34	36	38	41	48	54	64	70	34	85	57.8																																																																				
Jul 14	73	68	63	65	68	67	63	57	53	52	53	52	60	56	47	50	62	65	67	72	81	83	87	89	47	89	64.7																																																																				
Jul 15	88	89	93	92	95	96	93	84	83	77	74	68	57	48	46	50	50	51	57	70	71	71	72	83	46	96	73.3																																																																				
Jul 16	80	85	85	85	90	94	93	91	82	78	69	65	58	55	54	54	56	57	60	65	67	71	76	80	54	94	72.9																																																																				
Jul 17	79	81	81	89	96	93	92	87	82	84	82	79	73	69	58	49	51	54	61	66	66	70	62	64	49	96	73.7																																																																				
Jul 18	70	76	81	83	84	84	83	77	65	59	56	55	53	51	52	53	54	65	72	70	73	76	71	69	51	84	68.0																																																																				
Jul 19	70	71	73	74	75	74	72	69	66	64	61	57	56	55	52	49	55	50	58	69	75	80	87	90	49	90	66.8																																																																				
Jul 20	93	94	97	91	91	91	89	86	82	66	55	45	41	41	36	35	35	34	38	53	59	65	66	71	34	97	64.8																																																																				
Jul 21	75	85	89	89	89	87	79	72	65	56	49	42	36	36	34	29	29	28	30	34	40	43	50	58	28	89	55.2																																																																				
Jul 22	65	60	60	67	70	73	73	70	69	63	51	45	43	39	37	35	31	30	35	43	45	50	79	91	30	91	55.2																																																																				
Jul 23	89	90	92	92	90	91	82	77	63	59	55	48	47	46	42	41	41	42	44	50	54	55	56	60	41	92	62.8																																																																				
Jul 24	64	70	74	73	73	71	66	63	58	69	90	97	84	73	71	66	67	71	77	P	P	99	99	58	99	58	99	74.6																																																																			
Jul 25	97	97	98	99	100	100	100	100	100	97	83	80	77	87	92	93	97	97	94	94	92	95	98	100	77	100	94.5																																																																				
Jul 26	100	99	97	97	97	96	95	93	89	84	77	77	76	73	74	71	79	90	96	94	94	94	95	94	71	100	88.8																																																																				
Jul 27	96	98	98	97	94	96	94	91	88	86	79	69	63	52	45	42	41	40	42	46	57	69	80	84	40	98	72.8																																																																				
Jul 28	84	86	88	88	90	89	79	77	70	64	54	51	50	48	45	42	41	40	39	43	52	64	72	75	39	90	63.8																																																																				
Jul 29	82	85	89	90	93	92	85	85	77	68	57	49	44	41	42	42	41	40	43	50	57	69	75	79	40	93	66.6																																																																				
Jul 30	78	79	81	86	90	91	83	81	78	73	70	71	74	72	66	61	58	59	58	64	71	72	65	69	58	91	72.9																																																																				
Jul 31	82	87	88	85	88	90	85	79	77	67	80	77	87	91	93	94	89	85	83	81	83	89	89	91	67	94	85.0																																																																				
Diurnal Maximum	100	99	98	99	100	100	100	100	100	97	90	97	87	91	93	94	97	97	96	94	94	95	99	100																																																																							
Diurnal Average	75.3	77.7	79.8	81.8	83.5	83.7	80.2	76.4	72.1	66.8	62.0	57.4	53.8	51.3	50.8	49.1	49.0	49.9	53.5	58.9	63.0	67.2	71.1	74.3																																																																							
C	Monthly Calibration																							S	Daily Zero-Span Check																							Q	Quality Assurance																																														
K	Collection Error																							ND	No Data (Machine Not in Service)																							Y	Routine Maintenance																							P	Power Failure																						
X	Invalid Data (Equipment Malfunction /Recovery)																							NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																																																																						

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**  
**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**  
**BAROMETRIC PRESSURE (BP) in millibar**

Maximum Hourly Value:	953	mb	on Jul 27 at hr 23	Hours in Service:	744
Maximum Daily Value:	952	mb	on Jul 28	Hours of Data:	728
Minimum Hourly Value:	934	mb	on Jul 25 at hr 23	Hours of Missing Data:	16
Minimum Daily Value:	936	mb	on Jul 25	Hours of Calibration:	0
Monthly Average:	943	mb		Operational Uptime:	97.8

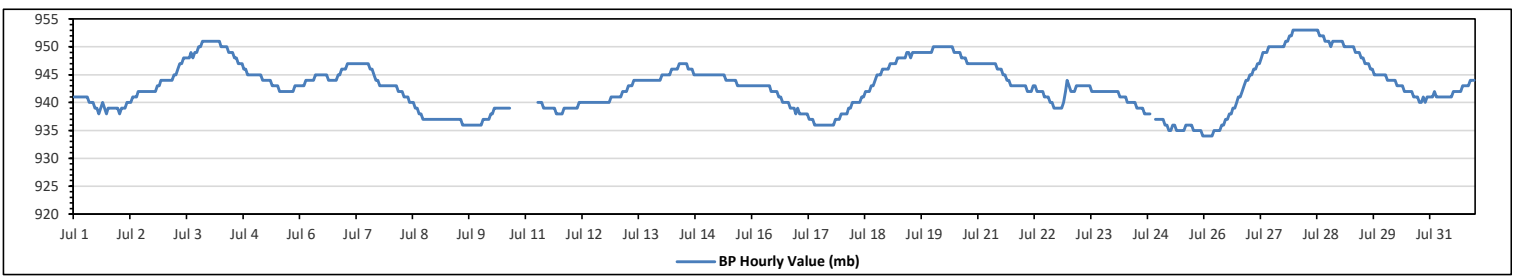
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	941	941	941	941	941	941	941	941	940	940	940	939	939	938	939	940	939	938	939	939	939	939	939	939	938	941	940
Jul 2	938	939	939	939	940	940	940	941	941	941	942	942	942	942	942	942	942	942	942	942	943	943	944	944	938	944	941
Jul 3	944	944	944	944	944	945	945	946	947	947	948	948	948	948	949	948	949	949	950	950	951	951	951	951	944	951	948
Jul 4	951	951	951	951	951	951	950	950	950	950	949	949	949	948	948	947	947	947	946	946	945	945	945	945	945	951	948
Jul 5	945	945	945	945	944	944	944	944	944	943	943	943	943	942	942	942	942	942	942	942	942	943	943	943	942	945	943
Jul 6	943	943	943	944	944	944	944	944	945	945	945	945	945	945	945	944	944	944	944	944	945	945	946	946	943	946	944
Jul 7	946	947	947	947	947	947	947	947	947	947	947	947	946	946	945	944	944	944	943	943	943	943	943	943	943	947	946
Jul 8	943	943	943	943	942	942	942	941	941	941	940	940	939	939	938	938	937	937	937	937	937	937	937	937	937	943	940
Jul 9	937	937	937	937	937	937	937	937	937	937	937	937	937	937	936	936	936	936	936	936	936	936	936	936	936	937	937
Jul 10	936	937	937	937	937	938	938	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	939	936	939	NA
Jul 11	K	K	K	K	K	K	940	940	940	939	939	939	939	939	939	939	938	938	938	938	939	939	939	939	938	940	939
Jul 12	939	939	939	939	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	941	941	941	941	939	941	940
Jul 13	941	941	941	942	942	942	943	943	943	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	941	944	943
Jul 14	945	945	945	945	946	946	946	946	946	947	947	947	947	946	946	946	945	945	945	945	945	945	945	945	945	947	946
Jul 15	945	945	945	945	945	945	945	945	945	944	944	944	944	944	944	943	943	943	943	943	943	943	943	943	943	945	944
Jul 16	943	943	943	943	943	943	943	943	943	943	942	942	942	942	941	941	940	940	940	940	939	939	939	938	938	943	937
Jul 17	939	938	938	938	938	938	937	937	937	936	936	936	936	936	936	936	936	936	936	936	936	937	937	937	936	939	937
Jul 18	938	938	938	939	939	940	940	940	940	941	941	942	942	942	942	943	943	944	945	945	945	946	946	946	938	946	942
Jul 19	946	947	947	947	947	948	948	948	948	948	949	949	948	949	949	949	949	949	949	949	949	949	949	949	946	949	948
Jul 20	950	950	950	950	950	950	950	950	950	950	949	949	949	949	948	948	948	947	947	947	947	947	947	947	947	950	949
Jul 21	947	947	947	947	947	947	947	947	947	946	946	946	945	945	944	944	943	943	943	943	943	943	943	943	943	947	945
Jul 22	943	943	942	942	942	943	943	942	942	942	942	941	941	941	940	940	939	939	939	939	939	940	942	944	939	944	941
Jul 23	943	942	942	942	943	943	943	943	943	943	943	942	942	942	942	942	942	942	942	942	942	942	942	942	942	943	942
Jul 24	942	942	942	941	941	941	941	940	940	940	940	939	939	939	939	938	938	938	938	938	P	P	937	937	937	942	940
Jul 25	937	937	937	936	936	935	935	936	936	935	935	935	935	935	936	936	936	936	935	935	935	935	934	934	937	936	936
Jul 26	934	934	934	934	934	935	935	935	935	936	936	937	937	938	938	939	939	940	941	941	942	943	944	944	934	944	938
Jul 27	945	945	946	946	947	947	948	949	949	949	950	950	950	950	950	950	950	950	951	951	952	952	952	952	945	953	949
Jul 28	953	953	953	953	953	953	953	953	953	953	953	953	953	952	952	952	951	951	951	950	951	951	951	951	950	953	952
Jul 29	951	951	950	950	950	950	950	949	949	949	948	948	947	947	947	946	946	945	945	945	945	945	945	945	945	951	948
Jul 30	945	944	944	944	944	944	943	943	943	943	942	942	942	942	941	941	941	940	940	941	940	941	941	940	940	945	942
Jul 31	941	941	942	941	941	941	941	941	941	941	941	941	942	942	942	942	942	943	943	943	943	944	944	944	941	944	942
Diurnal Maximum	953	953	953	953	953	953	953	953	953	953	953	953	953	952	952	952	951	951	951	951	951	952	952	953	941	944	942
Diurnal Average	943	943	943	943	943	943	943	943	943	943	943	943	943	943	943	943	943	943	942	942	943	943	943	943	941	944	942

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>ND</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**  
**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**  
**AMBIENT TEMPERATURE (AT) in Degree Celsius**

Maximum Hourly Value:	29.5 °C	on Jul 9 at hr 17	Hours in Service:	744
Maximum Daily Value:	23.6 °C	on Jul 9	Hours of Data:	728
Minimum Hourly Value:	9.4 °C	on Jul 28 at hr 4	Hours of Missing Data:	16
Minimum Daily Value:	13.9 °C	on Jul 25	Hours of Calibration:	0
Monthly Average:	18.4 °C		Operational Uptime:	97.8

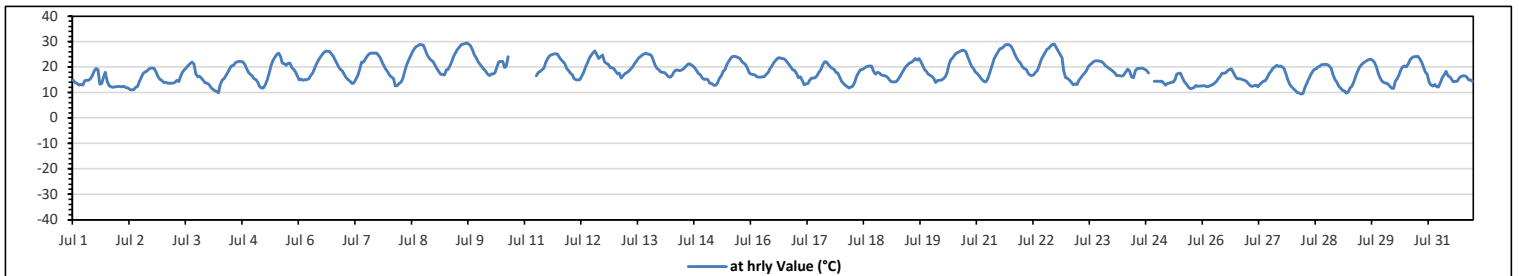
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	14.8	13.9	13.5	13	13.2	13	14.6	14.7	14.8	15.3	16.5	18.3	19.4	19	13.3	13.5	15.8	17.9	14.4	12.7	12.3	12	12.3	12.3	12.0	19.4	14.6
Jul 2	12.4	12.3	12.2	12.4	11.9	11.8	11.1	11	11.2	12	12.4	14.2	15.8	17.4	18.1	18.3	19.1	19.6	19.6	19.4	18	16.1	15.2	14.6	11.0	19.6	14.8
Jul 3	13.9	14.1	13.7	13.7	13.6	13.6	14.1	14.8	14.3	16.1	17.9	18.9	19.7	20.6	21.3	22	21.2	17.3	16.2	16.4	15.7	14.7	13.8	13.7	13.6	22.0	16.3
Jul 4	13.2	12	11.3	10.7	10.5	9.9	13.1	14.8	15.5	16.7	17.9	19.2	20.4	20.6	21.6	22.1	22.3	22.3	22	21.1	19.3	17.8	17.1	16.5	9.9	22.3	17.0
Jul 5	15.4	15.1	13.9	12.4	11.8	11.8	13.1	14.9	17.5	20.6	22.6	23.9	25	25.4	24	21.6	21.3	20.7	21.4	21.5	19.9	19	17.9	16.3	11.8	25.4	18.6
Jul 6	14.9	15.3	14.8	15.1	15.1	15.4	16.7	17.4	19	21	22.5	23.7	24.7	25.7	26.2	26.3	26.1	25.2	24	22.8	21.4	19.9	19.1	18.5	14.8	26.3	20.5
Jul 7	17.1	15.9	15.1	14.5	13.5	13.8	15.2	16.7	19	21.9	21.9	23	24.2	25.2	25.4	25.4	25.5	25.4	24.7	23.8	22	20.4	19	18.1	13.5	25.5	20.3
Jul 8	16.7	16	15.5	12.7	12.6	13.5	14.1	15.6	18.5	21	22.7	24.3	26	27.3	28	28.4	28.9	28.8	28.6	26.7	24.7	23.6	22.7	22.2	12.6	28.9	21.6
Jul 9	20.9	19.4	18.3	17.2	17.1	17	18.9	19.1	20.4	22.2	24.3	25.4	26.8	27.8	28.7	29.1	29.3	29.5	29.1	28.2	26.6	24.6	23.5	22.1	17.0	29.5	23.6
Jul 10	21.1	20.1	19.2	18.3	17.2	16.7	17.3	17.3	17.8	20.1	22.1	22.2	22.2	19.9	20.3	24	K	K	K	K	K	K	K	K	16.7	24.0	NA
Jul 11	K	K	K	K	K	K	16.6	17.8	18.3	18.9	19.8	21.9	23.5	24.5	24.9	25.2	25.3	25.1	23.9	22.9	22.2	21.3	19.5	18.6	16.6	25.3	21.7
Jul 12	17.6	16.9	15.5	15.1	14.9	15.1	16.4	18	20.1	21.7	23.4	24.6	25.6	26.4	24.9	23.4	24	24.8	22.1	21.4	21.1	19.9	19.8	19.4	14.9	26.4	20.5
Jul 13	18.3	17.3	17.7	15.7	16.6	17.4	17.8	18.5	19.2	20	21.3	22.4	23.5	24.1	24.8	25.1	25.4	25.1	25	24.5	22.8	20.9	19.5	18.9	15.7	25.4	20.9
Jul 14	18.1	18	17.8	17.1	16.1	16	16.7	18.1	18.8	18.8	18.6	18.8	19.3	20	21	21.3	21	20.5	19.8	18.6	17.4	16.9	15.9	15.2	15.2	21.3	18.3
Jul 15	15.3	15.1	13.7	13.5	13	12.8	13.6	15.6	16.6	18.3	19.1	20.9	22.2	23.3	24.1	24.2	24	23.8	23.5	22.3	21.5	21	19.4	17.6	12.8	24.2	18.9
Jul 16	17.2	17.1	16.9	16.1	16	16.1	16.3	17.2	17.9	19.3	20.3	21.7	22.6	23.5	23.7	23.4	23.4	23	22.1	21.1	20	18.9	18.7	16.0	23.7	19.5	
Jul 17	17.6	15.9	16.2	14.7	13.1	13.4	13.5	14.8	15.7	15.9	16.6	18	18.9	20.9	22.1	21.9	21	20.1	19.4	19	17.8	17.7	16	13.1	22.1	17.3	
Jul 18	14.5	13.5	12.8	12.3	11.8	12.1	12.5	14.1	16.4	17.8	18.9	19.1	19.6	20.1	20.3	20.5	20.3	18.4	17.2	17.9	17.7	16.9	16.7	16.6	11.8	20.5	16.6
Jul 19	16.2	15.5	14.5	14.2	14.2	14.3	15.1	16.2	17.5	18.8	20.1	20.8	21.5	21.8	22.5	23.4	22.7	23.4	22.4	20.7	19	18.3	17.3	16.8	14.2	23.4	18.6
Jul 20	16.3	15.6	13.9	14.7	14.8	14.9	15.4	16.2	17.9	21.2	22.8	23.6	24.8	25.4	25.9	26.3	26.6	26.5	26.1	24	22.3	20.3	19.4	18.1	13.9	26.6	20.5
Jul 21	17.4	16.5	15.7	14.7	14.2	14.4	16.2	18.6	21	23.3	24.8	26	27.2	27.4	28	28.8	28.9	28.8	28.2	27	25.1	23.6	22.4	21.5	14.2	28.9	22.5
Jul 22	20	19.4	19.1	17.5	16.8	16.7	17	17.9	18.7	20.7	23	24.3	25.5	26.8	27.4	28.2	28.9	29	27.7	26.2	25	23.6	18.6	15.9	15.9	29.0	22.2
Jul 23	15.6	14.9	14	13.1	13.4	13.2	14.9	15.9	17	17.6	18.6	20.2	21	21.6	22.2	22.5	22.5	22.4	22.2	21.5	20.6	20	19.4	18.9	13.1	22.5	18.5
Jul 24	18.4	17.7	16.7	16.7	16.5	16.4	16.9	18.1	19.2	18.5	16.1	15.8	18.6	19.4	19.5	19.6	19.5	19	18.7	17.7	P	P	14.5	14.4	14.4	19.6	17.6
Jul 25	14.5	14.5	14.5	13.8	13	13.5	13.7	14.1	14.1	15.1	17.2	17.6	17.6	15.8	14.3	13.4	12.3	11.6	11.7	11.9	12.8	12.4	12.5	12.5	11.6	17.6	13.9
Jul 26	12.6	12.7	12.3	12.4	12.8	13.1	13.6	14.3	15.5	16.3	17.5	17.6	17.8	18.7	19	19.3	18	16.4	15.5	15.5	15.3	15	14.7	14.4	12.3	19.3	15.4
Jul 27	13.5	12.6	12.4	12.6	12.9	12.3	13.1	13.8	14.4	14.6	15.8	17.4	18.4	19.6	20	20.7	20.2	20.5	20.1	19.3	17.2	15.2	13.3	12.2	12.2	20.7	15.9
Jul 28	11.5	10.7	10	9.7	9.4	9.6	12	13.7	15.5	17	18.1	19	19.3	20	20.3	21	21	21.1	21	20.5	19.4	17	15.1	14	9.4	21.1	16.1
Jul 29	12.4	11.7	10.9	10.6	9.8	10.2	11.8	12.5	14.3	16.5	18.5	19.9	20.8	21.6	22.1	22.6	23	23.1	22.7	21.8	20.2	17.6	15.7	14.4	9.8	23.1	16.9
Jul 30	13.9	13.6	13.4	12.5	11.7	11.7	14.3	15.5	16.9	18.7	20	20.5	20.1	21.3	22.9	23.7	24	24.1	24.2	23.2	21.8	19.9	18.1	17.2	11.7	24.2	18.5
Jul 31	14.1	13	12.5	13.2	12.3	12.1	13.8	15.9	17	18.3	16.5	16.2	15	14.2	14.5	14.5	15.7	16.3	16.6	16.5	16	14.9	14.9	14.5	12.1	18.3	14.9
Diurnal Maximum	21.1	20.1	19.2	18.3	17.2	17.4	18.9	19.1	21.0	23.3	24.8	26.0	27.2	27.8	28.7	29.1	29.3	29.5	29.1	28.2	26.6	24.6	23.5	22.2			
Diurnal Average	15.8	15.2	14.6	14.0	13.7	13.7	14.8	15.9	17.1	18.5	19.6	20.5	21.5	22.0	22.3	22.6	22.6	22.4	21.7	20.9	19.9	18.6	17.5	16.7			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> Invalid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.





**Peace River Area Monitoring Program**  
**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**  
**STATION TEMPERATURE (ST) in Degree Celsius**

Maximum Hourly Value:	43.8 °C	on Jul 22 at hr 19	Hours in Service:	744
Maximum Daily Value:	36.7 °C	on Jul 22	Hours of Data:	728
Minimum Hourly Value:	21.0 °C	on Jul 23 at hr 11	Hours of Missing Data:	16
Minimum Daily Value:	21.5 °C	on Jul 28	Hours of Calibration:	0
Monthly Average:	23.4 °C		Operational Uptime:	97.8

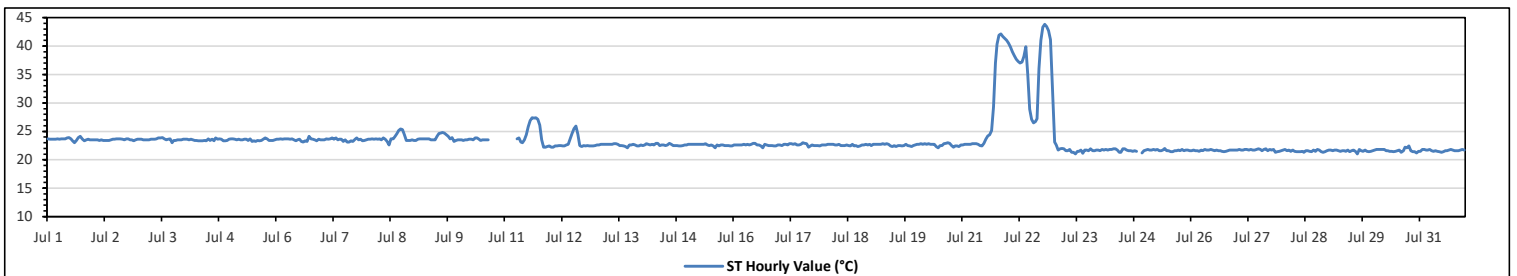
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	23.7	23.6	23.6	23.6	23.6	23.7	23.6	23.7	23.7	23.7	23.8	23.9	23.7	23.3	23.0	23.4	23.9	24.1	23.6	23.3	23.5	23.6	23.5	23.5	23.0	24.1	23.6	
Jul 2	23.5	23.5	23.5	23.4	23.5	23.4	23.4	23.4	23.4	23.5	23.6	23.6	23.7	23.7	23.7	23.6	23.5	23.7	23.7	23.5	23.5	23.3	23.5	23.6	23.3	23.7	23.5	
Jul 3	23.6	23.6	23.5	23.5	23.5	23.5	23.6	23.6	23.6	23.7	23.8	23.8	23.9	23.7	23.5	23.6	23.7	23.0	23.4	23.4	23.5	23.5	23.5	23.6	23.0	23.9	23.6	
Jul 4	23.6	23.6	23.5	23.6	23.5	23.4	23.4	23.3	23.3	23.4	23.4	23.3	23.7	23.4	23.6	23.3	23.8	23.6	23.7	23.6	23.3	23.3	23.4	23.4	23.6	23.3	23.8	23.5
Jul 5	23.7	23.7	23.6	23.5	23.6	23.5	23.5	23.6	23.6	23.4	23.7	23.2	23.3	23.2	23.4	23.3	23.4	23.6	23.8	23.7	23.4	23.4	23.4	23.5	23.2	23.8	23.5	
Jul 6	23.6	23.6	23.7	23.6	23.7	23.7	23.7	23.6	23.7	23.5	23.3	23.5	23.6	23.2	23.1	23.3	23.2	24.1	23.7	23.6	23.5	23.3	23.6	23.5	23.1	24.1	23.5	
Jul 7	23.5	23.5	23.7	23.6	23.7	23.8	23.6	23.8	23.5	23.6	23.6	23.2	23.5	23.1	23.1	23.3	23.2	23.6	23.8	23.5	23.6	23.3	23.4	23.5	23.1	23.8	23.5	
Jul 8	23.6	23.6	23.7	23.6	23.7	23.6	23.7	23.5	23.8	23.6	23.2	22.6	23.7	23.7	24.1	24.6	25.1	25.4	25.3	24.4	23.4	23.4	23.4	23.5	22.6	25.4	23.8	
Jul 9	23.4	23.4	23.6	23.7	23.7	23.7	23.7	23.7	23.7	23.5	23.5	23.5	24.1	24.6	24.7	24.8	24.7	24.4	24.1	23.7	23.9	23.2	23.4	23.5	23.2	24.8	23.8	
Jul 10	23.5	23.5	23.4	23.5	23.5	23.6	23.6	23.5	23.8	23.8	23.6	23.4	23.5	23.5	23.5	23.5	K	K	K	K	K	K	K	K	23.4	23.8	NA	
Jul 11	K	K	K	K	K	K	23.7	23.8	23.1	23.0	23.5	24.4	25.8	26.9	27.4	27.3	27.4	27.1	26.1	23.5	22.2	22.2	22.3	22.4	22.2	27.4	24.6	
Jul 12	22.2	22.2	22.4	22.4	22.5	22.5	22.4	22.4	22.6	22.7	23.7	24.6	25.5	25.9	24.5	22.5	22.3	22.5	22.4	22.5	22.4	22.4	22.4	22.4	22.2	25.9	22.9	
Jul 13	22.6	22.6	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.8	22.8	22.7	22.5	22.5	22.4	22.3	22.1	22.6	22.6	22.7	22.6	22.4	22.4	22.6	22.1	22.8	22.6	
Jul 14	22.5	22.6	22.8	22.7	22.6	22.7	22.6	22.9	22.9	22.5	22.6	22.6	22.5	22.6	22.9	22.7	22.5	22.5	22.4	22.4	22.5	22.6	22.6	22.6	22.4	22.9	22.6	
Jul 15	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.8	22.6	22.5	22.6	22.4	22.1	22.6	22.4	22.6	22.6	22.5	22.5	22.5	22.4	22.4	22.1	22.8	22.6	
Jul 16	22.6	22.6	22.6	22.6	22.6	22.7	22.6	22.7	22.6	22.7	22.9	22.9	22.6	22.6	22.4	22.1	22.7	22.6	22.5	22.5	22.5	22.4	22.4	22.6	22.1	22.9	22.6	
Jul 17	22.6	22.5	22.7	22.7	22.6	22.8	22.8	22.7	22.8	22.6	22.6	22.7	23.0	22.9	22.8	22.2	22.4	22.6	22.5	22.5	22.5	22.4	22.6	22.6	22.2	23.0	22.6	
Jul 18	22.6	22.7	22.7	22.7	22.7	22.6	22.6	22.7	22.5	22.5	22.5	22.6	22.5	22.4	22.7	22.4	22.5	22.3	22.4	22.6	22.6	22.7	22.6	22.7	22.3	22.7	22.6	
Jul 19	22.5	22.7	22.7	22.7	22.7	22.7	22.8	22.7	22.8	22.7	22.4	22.3	22.5	22.3	22.5	22.5	22.4	22.5	22.7	22.5	22.4	22.3	22.5	22.6	22.3	22.8	22.6	
Jul 20	22.7	22.7	22.8	22.7	22.8	22.7	22.8	22.7	22.7	22.7	22.3	22.1	22.5	22.5	22.8	22.9	23.0	22.9	22.5	22.2	22.4	22.4	22.3	22.6	22.1	23.0	22.6	
Jul 21	22.6	22.7	22.7	22.7	22.7	22.8	22.8	22.8	22.7	22.5	22.4	22.9	23.6	24.2	24.4	25.1	29.3	37.0	40.3	41.9	42.1	41.7	41.3	41.0	22.4	42.1	28.5	
Jul 22	40.5	39.8	39.0	38.3	37.7	37.3	37.0	37.2	38.2	39.9	35.0	28.9	27.1	26.5	26.7	27.2	36.0	41.0	43.3	43.8	43.4	42.7	41.1	32.8	26.5	43.8	36.7	
Jul 23	23.1	22.6	21.7	21.9	22.0	21.9	21.6	21.6	21.8	21.3	21.3	21.0	21.5	21.5	21.7	21.1	21.7	21.7	21.6	21.9	21.6	21.6	21.7	21.7	21.0	23.1	21.7	
Jul 24	21.6	21.8	21.7	21.8	21.7	21.8	21.8	21.9	21.9	21.7	21.3	21.3	21.9	21.9	21.7	21.6	21.6	21.5	21.6	21.5	P	P	21.2	21.6	21.2	21.9	21.7	
Jul 25	21.7	21.8	21.7	21.7	21.8	21.7	21.8	21.6	21.6	21.7	22.0	21.6	21.6	21.4	21.4	21.6	21.6	21.7	21.6	21.8	21.6	21.7	21.7	21.6	21.4	22.0	21.7	
Jul 26	21.6	21.7	21.6	21.6	21.5	21.7	21.6	21.8	21.7	21.7	21.8	21.7	21.6	21.7	21.6	21.6	21.5	21.4	21.5	21.6	21.7	21.7	21.7	21.7	21.4	21.8	21.6	
Jul 27	21.7	21.8	21.7	21.7	21.8	21.8	21.7	21.8	21.7	21.7	21.8	21.9	21.8	21.6	21.8	21.9	21.6	21.8	21.7	21.8	21.3	21.4	21.5	21.6	21.3	21.9	21.7	
Jul 28	21.7	21.8	21.6	21.7	21.5	21.7	21.5	21.4	21.4	21.4	21.5	21.3	21.6	21.6	21.5	21.4	21.7	21.5	21.8	21.7	21.4	21.3	21.4	21.6	21.3	21.8	21.5	
Jul 29	21.7	21.7	21.6	21.7	21.7	21.6	21.5	21.6	21.6	21.5	21.7	21.4	21.6	21.7	21.5	21.0	21.8	21.6	21.5	21.7	21.5	21.4	21.5	21.6	21.0	21.8	21.6	
Jul 30	21.7	21.8	21.8	21.8	21.8	21.8	21.6	21.6	21.5	21.5	21.4	21.5	21.6	21.7	21.3	21.6	22.2	22.1	22.4	21.6	21.4	21.4	21.2	21.5	21.2	22.4	21.7	
Jul 31	21.5	21.8	21.8	21.7	21.7	21.8	21.6	21.5	21.6	21.5	21.4	21.3	21.4	21.6	21.6	21.7	21.8	21.7	21.6	21.6	21.6	21.7	21.8	21.7	21.3	21.8	21.6	
Diurnal Maximum	40.5	39.8	39.0	38.3	37.7	37.3	37.0	37.2	38.2	39.9	35.0	28.9	27.1	26.9	27.4	27.3	36.0	41.0	43.3	43.8	43.4	42.7	41.3	41.0	22.4	42.1	28.5	
Diurnal Average	23.3	23.3	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.1	22.8	23.0	23.0	23.0	23.0	23.5	24.0	24.1	24.0	23.9	23.8	23.7	23.5				

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>ND</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



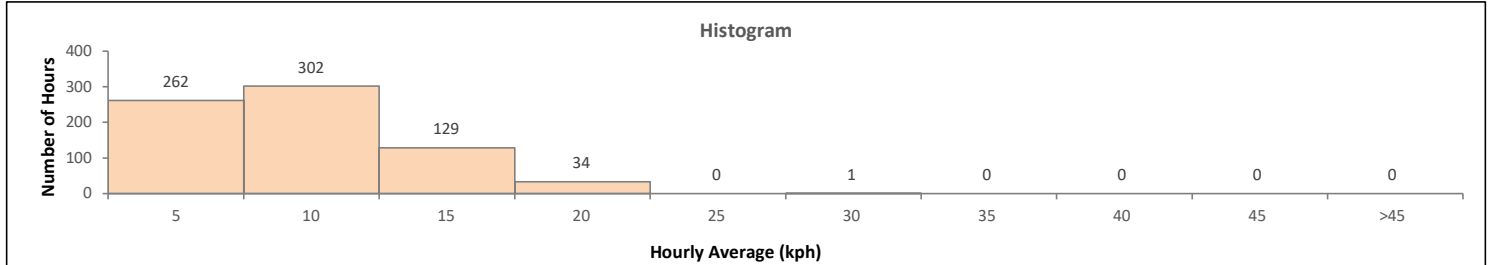
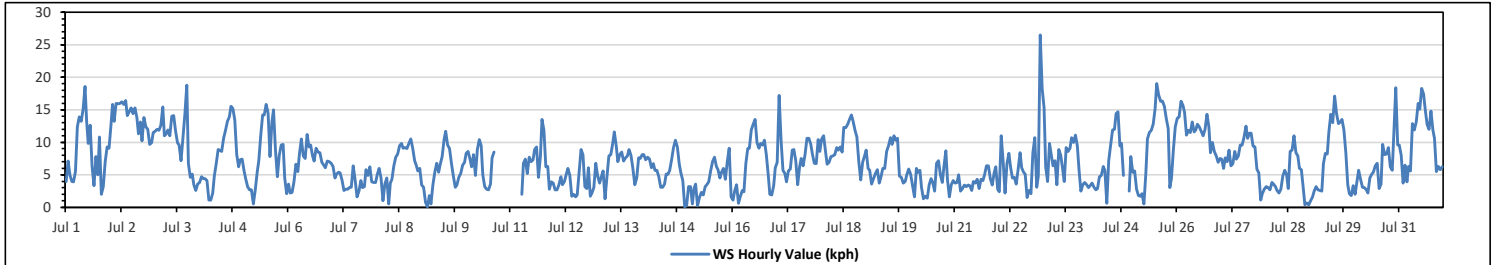
**Peace River Area Monitoring Program**  
**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**  
**VECTOR WIND SPEED (VWS) in km/hr**

Maximum Hourly Value:	26.5 kph	on Jul 22 at hr 22	Hours in Service:	744
Maximum Daily Value:	13.7 kph	on Jul 2	Hours of Data:	728
Minimum Hourly Value:	0.1 kph	on Jul 9 at hr 3	Hours of Missing Data:	16
Minimum Daily Value:	4.0 kph	on Jul 21	Hours of Calibration:	0
Monthly Average:	7.2 kph		Operational Uptime:	97.8

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	4.0	7.1	4.9	4.0	3.9	5.5	12.4	13.9	13.2	15.1	18.6	13.2	9.8	12.6	6.3	3.3	7.8	5.0	10.8	2.0	3.2	7.0	9.3	9.1	2.0	18.6	8.4
Jul 2	12.6	15.8	13.2	16.0	15.9	16.0	16.2	15.8	16.4	14.1	14.7	15.3	14.4	15.3	13.8	11.3	13.1	10.2	13.8	12.4	12.0	9.7	9.9	11.5	9.7	16.4	13.7
Jul 3	11.7	12.0	11.8	12.6	15.4	11.0	11.3	11.9	11.0	14.0	14.1	11.7	9.9	9.6	7.2	10.7	14.3	18.8	6.7	4.6	5.1	3.5	2.6	3.6	2.6	18.8	10.2
Jul 4	3.8	4.7	4.4	4.4	4.1	1.1	1.1	2.2	4.8	6.7	8.9	8.8	8.6	10.6	11.8	13.2	13.9	15.5	15.2	13.4	8.1	6.2	7.3	7.4	1.1	15.5	7.8
Jul 5	5.6	4.4	3.2	2.7	2.7	0.5	2.7	5.4	7.2	11.0	14.2	14.2	15.8	14.5	7.8	13.1	15.0	8.9	4.7	8.0	9.6	9.7	4.5	2.1	0.5	15.8	7.8
Jul 6	3.6	2.2	2.3	4.0	6.6	5.5	8.2	10.5	7.9	7.5	11.2	9.3	9.6	7.9	7.1	9.1	8.5	8.4	6.9	6.5	6.1	7.1	7.0	6.8	2.2	11.2	7.1
Jul 7	6.3	4.5	5.1	5.4	5.3	4.2	2.6	2.8	2.8	3.1	3.1	6.4	4.2	1.6	2.5	4.1	3.0	3.2	5.8	4.9	6.2	3.9	3.8	3.8	1.6	6.4	4.1
Jul 8	5.0	6.0	4.5	1.0	3.6	4.5	0.5	3.7	4.3	6.4	7.7	8.2	9.5	9.8	9.1	9.2	9.0	9.8	10.5	9.1	7.2	6.5	5.6	6.0	0.5	10.5	6.5
Jul 9	3.4	3.1	0.8	0.1	1.8	0.5	3.4	5.4	6.8	5.4	6.6	7.8	10.4	11.7	9.6	9.0	6.8	4.8	3.1	3.4	4.6	5.2	6.5	6.9	0.1	11.7	5.3
Jul 10	8.3	8.6	7.4	6.2	8.1	4.9	8.9	10.4	9.5	5.0	3.2	2.8	2.7	3.6	7.6	8.5	K	K	K	K	K	K	K	K	2.7	10.4	NA
Jul 11	K	K	K	K	K	K	2.0	6.8	7.4	5.2	7.7	7.0	7.3	8.9	9.3	4.6	7.8	13.5	11.8	6.2	6.3	2.8	3.9	3.7	2.0	13.5	6.8
Jul 12	2.7	2.7	3.5	4.7	3.5	4.0	5.1	6.0	4.9	1.7	2.0	1.6	1.9	5.4	8.9	8.1	3.2	2.9	6.1	1.7	2.2	3.0	6.8	4.8	1.6	8.9	4.1
Jul 13	3.7	4.8	5.6	1.3	4.7	7.9	8.1	9.8	11.6	9.4	7.0	8.1	8.5	7.1	7.6	7.9	8.9	8.0	6.0	3.5	4.5	7.6	7.5	8.1	1.3	11.6	7.0
Jul 14	8.1	7.3	7.7	7.4	6.1	6.7	5.7	5.7	4.7	3.1	3.1	3.6	5.1	5.1	5.7	7.3	9.2	10.3	9.3	6.6	5.3	4.1	0.1	0.3	0.1	10.3	5.7
Jul 15	3.2	3.2	0.5	2.9	3.6	0.2	1.5	2.3	1.9	3.2	3.5	3.9	5.6	7.0	7.7	6.3	5.8	4.5	5.4	6.0	4.3	7.0	9.1	1.6	0.2	9.1	4.2
Jul 16	1.1	2.5	3.5	0.6	1.7	2.6	2.4	6.7	9.0	9.1	11.9	12.8	13.5	9.9	9.1	9.8	9.6	10.3	8.1	5.0	2.0	1.9	3.3	6.1	0.6	13.5	6.4
Jul 17	6.9	17.2	10.4	5.7	5.2	3.9	5.6	5.9	8.8	8.9	7.2	3.5	6.2	7.5	6.4	8.1	10.6	10.6	9.7	8.2	6.8	6.7	10.4	8.6	3.5	17.2	7.9
Jul 18	10.5	11.0	8.6	6.6	6.9	7.8	7.9	8.1	9.2	8.8	9.3	8.5	12.3	12.2	12.7	13.5	14.2	13.3	11.9	10.8	7.0	4.2	6.9	7.9	4.2	14.2	9.6
Jul 19	8.8	6.0	5.7	3.6	4.4	5.2	5.8	3.7	4.6	6.0	6.0	8.6	9.5	10.7	9.7	11.0	10.3	10.6	4.8	4.6	3.7	4.0	5.0	5.9	3.6	11.0	6.6
Jul 20	5.1	3.3	1.6	6.0	5.4	5.7	3.0	1.3	1.7	1.4	3.5	4.4	3.8	2.5	6.8	7.2	5.0	3.8	6.2	8.7	4.3	1.6	3.5	4.1	1.3	8.7	4.2
Jul 21	3.7	3.8	5.0	2.5	2.9	3.4	3.2	3.4	3.3	2.6	4.0	3.7	4.3	2.9	4.3	4.1	5.0	6.4	6.4	4.4	3.4	5.3	6.2	2.8	2.5	6.4	4.0
Jul 22	2.4	11.0	7.1	2.2	6.7	8.3	6.3	4.5	4.6	3.6	5.9	8.4	6.1	5.4	5.1	1.5	2.6	2.1	8.4	10.7	3.1	4.8	26.5	18.3	1.5	26.5	6.9
Jul 23	15.3	6.2	4.0	9.8	7.9	6.4	7.2	3.5	8.9	8.0	5.9	4.0	9.2	8.6	9.1	10.7	10.0	11.1	9.4	5.9	2.5	3.5	3.8	3.5	2.5	15.3	7.3
Jul 24	3.0	3.3	3.7	3.1	2.7	2.9	4.7	4.9	6.3	5.7	0.6	7.2	9.6	11.9	12.0	14.4	14.7	9.4	9.8	4.9	P	P	2.5	7.8	0.6	14.7	6.6
Jul 25	5.4	5.6	2.8	1.8	1.7	2.1	0.5	5.2	10.5	11.5	11.8	12.8	15.2	19.0	17.3	16.3	16.3	15.5	13.6	12.1	3.0	4.4	8.8	12.4	0.5	19.0	9.4
Jul 26	13.7	13.9	16.3	15.7	14.6	11.1	11.8	11.5	13.1	11.6	11.9	12.8	12.4	11.7	11.0	12.0	14.3	12.4	8.4	10.0	8.6	7.9	6.9	7.5	6.9	16.3	11.7
Jul 27	7.4	6.0	7.6	7.0	8.8	6.4	6.7	8.6	7.4	7.9	9.6	9.6	10.8	12.5	10.6	11.4	11.4	9.4	9.3	5.9	5.3	1.1	2.1	2.8	1.1	12.5	7.7
Jul 28	3.2	3.0	2.7	3.8	3.6	3.2	2.6	2.2	2.8	4.8	5.7	5.0	2.9	8.6	8.8	11.0	8.4	7.9	6.0	5.8	3.4	0.4	0.7	0.4	0.4	11.0	4.5
Jul 29	1.0	1.6	2.5	3.2	2.7	2.6	2.5	6.7	8.3	8.2	11.6	14.3	13.0	17.1	14.4	12.9	13.1	13.5	11.9	8.4	3.5	2.1	1.8	3.3	1.0	17.1	7.5
Jul 30	2.0	3.7	5.7	4.3	3.1	3.0	2.7	2.2	4.5	5.1	5.4	6.4	6.8	2.9	3.6	9.7	8.1	8.2	9.2	6.2	5.7	11.3	18.4	9.6	2.0	18.4	6.2
Jul 31	9.6	8.0	3.7	6.5	3.9	6.3	5.6	12.9	11.9	13.1	16.0	15.1	18.3	17.4	15.1	12.7	12.0	14.8	11.9	10.6	5.5	6.3	5.8	6.2	3.7	18.3	10.4
Diurnal Maximum	15.3	17.2	16.3	16.0	15.9	16.0	16.2	15.8	16.4	15.1	18.6	15.3	18.3	19.0	17.3	16.3	16.3	18.8	15.2	13.4	12.0	11.3	26.5	18.3			
Diurnal Average	6.0	6.4	5.5	5.2	5.6	5.1	5.4	6.6	7.4	7.3	8.1	8.4	8.9	9.4	9.0	9.4	9.7	9.4	8.7	7.0	5.3	5.1	6.6	6.1			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

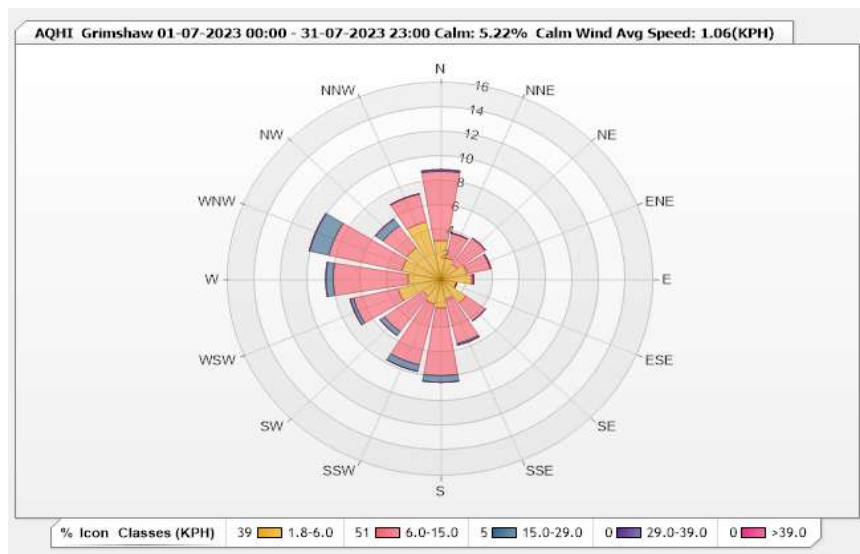


Station: AQHI Grimshaw Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 5.22%      Valid Data: 97.85%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	3.16	5.63	0.14	0	0	8.93
NNE	1.79	2.06	0	0	0	3.85
NE	1.51	2.61	0	0	0	4.12
ENE	2.06	1.79	0	0	0	3.85
E	2.34	0.14	0	0	0	2.48
ESE	1.24	0	0	0	0	1.24
SE	2.34	1.79	0	0	0	4.13
SSE	1.65	3.71	0.14	0	0	5.5
S	2.34	5.49	0.55	0	0	8.38
SSW	2.06	5.08	0.55	0	0	7.69
SW	1.65	3.57	0.41	0	0	5.63
WSW	3.3	3.43	0.27	0	0	7
W	2.47	5.63	0.55	0	0	8.65
WNW	3.02	5.63	1.51	0	0	10.16
NW	3.16	2.2	0.69	0	0	6.05
NNW	4.81	2.34	0	0	0	7.15
Summary	38.9	51.1	4.81	0	0	94.81



Peace River Area Monitoring Program

AQHI - Grimshaw Station - July 2023

Summary of Hourly Averages

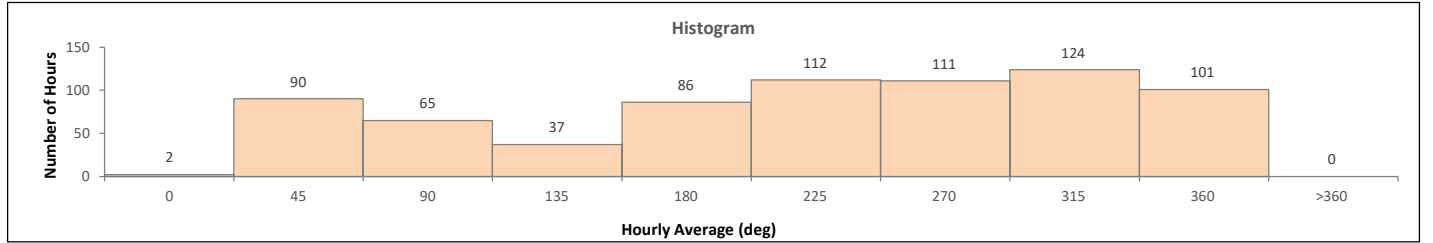
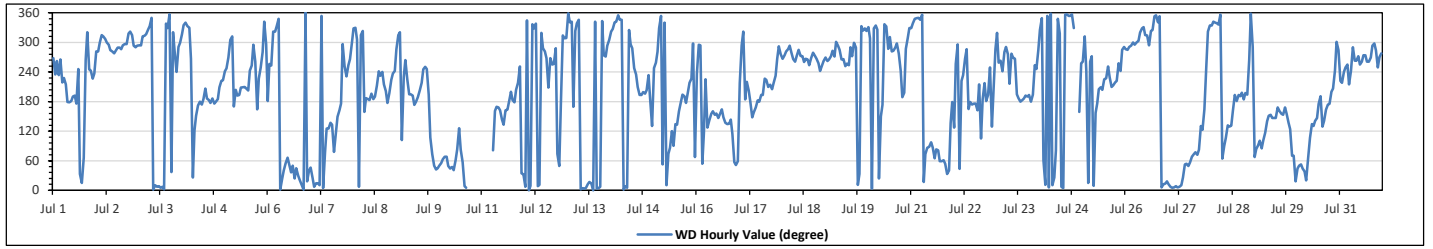
WIND DIRECTION (VWD) in sector

Monthly Average:	274 (W)	degree	Hours in Service:	744
			Hours of Data:	728
			Hours of Missing Data:	16
			Hours of Calibration:	0
			Operational Uptime:	97.8

Day	Hourly Period Starting at (MST)																							Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Jul 1	W	SW	W	SW	W	SW	SW	SSW	S	S	S	S	S	WSW	NNE	NNE	ENE	W	NW	WSW	WSW	SW	SW	230	SW	
Jul 2	W	W	WNW	NW	NW	NW	WNW	WNW	WNW	W	W	WNW	WNW	WNW	WNW	WNW	WNW	NW	NW	NW	WNW	WNW	WNW	296	WNW	
Jul 3	WNW	WNW	NW	NW	NW	NW	NNW	N	N	N	N	N	N	N	NNW	NNW	N	NE	NW	W	WSW	WNW	WNW	332	NNW	
Jul 4	NW	NNW	NNW	NNW	NNW	W	NNE	ESE	SSE	S	S	S	SSW	S	S	S	S	S	S	S	SSW	SW	SW	201	SSW	
Jul 5	WSW	WSW	W	WNW	NW	SSE	SSW	S	S	SSW	SSW	SSW	SSW	SSW	WSW	WSW	WNW	W	SSE	SW	WSW	W	NNW	239	WSW	
Jul 6	S	WSW	WSW	NW	NW	NNW	NNW	N	NNE	NE	NE	ENE	NE	NE	NNE	NE	NNE	NNE	N	N	NNE	NE	NE	15	NNE	
Jul 7	NE	NNE	N	NNE	NNE	N	N	N	ENE	SE	SE	SE	SE	ENE	ESE	SSE	S	WNW	WSW	SW	WSW	W	WNW	61	ENE	
Jul 8	NNW	NNW	NW	N	NW	NW	SSE	S	S	SSW	S	S	SSW	WSW	WSW	WSW	SSW	S	SSW	SW	SSW	SW	SSW	225	SW	
Jul 9	WNW	NW	NW	E	SW	W	SW	SSW	SSW	S	S	S	SSW	SW	WSW	WSW	WSW	SSW	ESE	ENE	NE	NE	NE	211	SSW	
Jul 10	NE	NE	ENE	ENE	ENE	NE	NE	ENE	E	SE	E	ENE	N	N	N	N	K	K	K	K	K	K	K	NA	NA	
Jul 11	K	K	K	K	K	K	E	SSE	SSE	SSE	SSE	SE	SE	SSE	SSE	S	SSW	S	S	SSW	SW	WSW	NE	NNE	167	SSE
Jul 12	N	NNW	N	N	NNW	NNW	NNW	N	NNE	NW	WNW	W	W	SSW	W	WSW	WSW	WNW	ENE	NE	S	NW	NW	319	NW	
Jul 13	N	NNW	NNW	SSE	NW	NNW	NNW	N	N	N	NNE	NNE	NNE	N	NNW	N	N	NNW	W	W	WNW	WNW	WNW	345	NNW	
Jul 14	NW	NW	NNW	NNW	N	NNW	NNW	N	N	N	NW	WNW	WNW	WSW	SW	SSW	S	S	SSW	SSW	SSW	SW	S	SE	285	WNW
Jul 15	WSW	WSW	W	NNW	N	NE	NNW	N	ENE	E	ESE	E	SE	SSE	S	SSW	S	S	SSW	SW	SW	WNW	SE	ENE	169	SSE
Jul 16	SW	WNW	WNW	NE	ESE	SW	SE	SE	SSE	SSE	SSE	SSE	SE	SSE	SE	SE	SE	SE	SE	ESE	ENE	NE	ENE	139	SE	
Jul 17	SW	WNW	NW	S	SW	SSW	S	SE	SSE	SSE	S	S	S	SW	SW	SSW	SSW	SSW	SW	SW	W	WNW	W	213	SSW	
Jul 18	W	W	W	WNW	WNW	W	W	W	W	WNW	W	W	WSW	W	W	WSW	W	W	W	W	WSW	WSW	W	269	W	
Jul 19	W	W	W	W	W	W	WNW	WNW	W	W	WSW	WSW	WSW	WNW	W	WNW	WNW	NNE	NNE	NNW	NW	NNW	NW	289	WNW	
Jul 20	NNW	NW	N	NNW	NNW	NW	NNE	SSE	S	NNW	NNW	WNW	NW	W	WNW	WNW	W	WSW	S	SSW	WNW	NW	NNW	301	WNW	
Jul 21	NNW	NNW	NNW	NNW	N	NNW	N	NNE	ENE	E	E	E	ENE	E	ENE	ENE	ENE	ENE	NE	NNE	NE	SE	S	48	NE	
Jul 22	SE	WSW	WNW	NE	SW	SW	W	WNW	SSE	S	S	S	SSE	SSW	ESE	S	SW	S	S	WSW	SE	SSW	WNW	201	SSW	
Jul 23	NW	WSW	W	WSW	W	WNW	W	SW	W	W	WSW	S	S	S	S	S	S	S	S	S	SSW	WSW	WSW	234	SW	
Jul 24	NW	NNW	ENE	NNE	N	N	N	N	NNE	E	NNW	NW	N	N	N	N	N	N	N	N	N	N	SSW	359	N	
Jul 25	W	NW	WSW	NNE	W	W	N	SSE	S	SSW	SSW	SSW	SW	WSW	SW	SSW	SSW	SW	SW	WSW	WSW	WNW	WNW	240	WSW	
Jul 26	WNW	WNW	WNW	WNW	WNW	WNW	WNW	NW	NNW	NNW	NW	NW	WNW	NW	NW	N	N	NNW	N	N	NNE	NNE	NNE	324	NW	
Jul 27	NNE	N	N	N	N	N	N	NNE	NE	NE	NE	NE	ENE	ENE	ENE	ENE	ENE	E	SE	ESE	SSE	WSW	NW	NNW	38	NE
Jul 28	NNW	NNW	NNW	NNW	NNW	N	ENE	E	ESE	SE	SE	SE	SSE	S	S	S	S	SSW	S	SSW	SSW	W	N	WNW	180	S
Jul 29	ENE	E	E	E	E	E	ESE	SE	SSE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SE	ESE	ENE	ENE	NNE	124	ESE	
Jul 30	NE	NE	NE	NE	NE	NNE	ENE	ESE	SE	SE	SE	S	S	SE	SE	SE	SSE	S	S	SSW	SSW	WSW	WNW	133	SE	
Jul 31	SW	SW	WSW	WSW	WSW	SSW	WSW	WNW	W	W	WSW	W	W	W	W	W	W	W	W	WNW	WNW	WNW	WSW	W	261	W

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	Invalid Data (Machine Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**

**AQHI - Grimshaw Station - July 2023**

**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector**

<b>WIND SPEED</b>			
Maximum Hourly Value:	26.5 kph	on Jul 22 at hr 22	Hours in Service: 744
Maximum Daily Value:	13.7 kph	on Jul 2	Hours of Data: 728
Minimum Hourly Value:	0.1 kph	on Jul 9 at hr 3	Hours of Missing Data: 16
Minimum Daily Value:	4.0 kph	on Jul 21	Hours of Calibration: 0
Monthly Average:	7.2 kph		Operational Uptime: 97.8

<b>WIND DIRECTION</b>	
Monthly Average:	274 degree (W)

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	4.0	7.1	4.9	4.0	3.9	5.5	12.4	13.9	13.2	15.1	18.6	13.2	9.8	12.6	6.3	3.3	7.8	5.0	10.8	2.0	3.2	7.0	9.3	9.1	2.0	18.6	8.4
Jul 2	12.6	15.8	13.2	16.0	15.9	16.0	16.2	15.8	16.4	14.1	14.7	15.3	14.4	15.3	13.8	11.3	13.1	10.2	13.8	12.4	12.0	9.7	9.9	11.5	9.7	16.4	13.7
Jul 3	11.7	12.0	11.8	12.6	15.4	11.0	11.3	11.9	11.0	14.0	14.1	11.7	9.9	9.6	7.2	10.7	14.3	18.8	6.7	4.6	5.1	3.5	2.6	3.6	2.6	18.8	10.2
Jul 4	3.8	4.7	4.4	4.4	4.1	1.1	2.2	4.8	6.7	8.9	8.8	8.6	10.6	11.8	13.2	13.9	15.5	15.2	13.4	8.1	6.2	7.3	7.4	7.4	1.1	15.5	7.8
Jul 5	5.6	4.4	3.2	2.7	2.7	0.5	2.7	5.4	7.2	11.0	14.2	14.2	15.8	14.5	7.8	13.1	15.0	8.9	4.7	8.0	9.6	9.7	4.5	2.1	0.5	15.8	7.8
Jul 6	3.6	2.2	2.3	4.0	6.6	5.5	8.2	10.5	7.9	7.5	11.2	9.3	9.6	7.9	7.1	9.1	8.5	8.4	6.9	6.5	6.1	7.1	7.0	6.8	2.2	11.2	7.1
Jul 7	6.3	4.5	5.1	5.4	5.3	4.2	2.6	2.8	2.8	3.1	3.1	6.4	4.2	1.6	2.5	4.1	3.0	3.2	5.8	4.9	6.2	3.9	3.8	3.8	1.6	6.4	4.1
Jul 8	5.0	6.0	4.5	1.0	3.6	4.5	0.5	3.7	4.3	6.4	7.7	8.2	9.5	9.8	9.1	9.2	9.0	9.8	10.5	9.1	7.2	6.5	5.6	6.0	0.5	10.5	6.5
Jul 9	3.4	3.1	0.8	0.1	1.8	0.5	3.4	5.4	6.8	5.4	6.6	7.8	10.4	11.7	9.6	9.0	6.8	4.8	3.1	3.4	4.6	5.2	6.5	6.9	0.1	11.7	5.3
Jul 10	8.3	8.6	7.4	6.2	8.1	4.9	8.9	10.4	9.5	5.0	3.2	2.8	2.7	3.6	7.6	8.5	K	K	K	K	K	K	K	K	2.7	10.4	NA
Jul 11	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	2.0	13.5	6.8
Jul 12	2.7	2.7	3.5	4.7	3.5	4.0	5.1	6.0	4.9	1.7	2.0	1.6	1.9	5.4	8.9	8.1	3.2	2.9	6.1	1.7	2.2	3.0	6.8	4.8	1.6	8.9	4.1
Jul 13	3.7	4.8	5.6	1.3	4.7	7.9	8.1	9.8	11.6	9.4	7.0	8.1	8.5	7.1	7.6	7.9	8.9	8.0	6.0	3.5	4.5	7.6	7.5	8.1	1.3	11.6	7.0
Jul 14	8.1	7.3	7.7	7.4	6.1	6.7	5.7	4.7	3.1	3.1	3.6	5.1	5.1	5.7	7.3	9.2	10.3	9.3	6.6	5.3	4.1	0.1	0.3	0.3	0.1	10.3	5.7
Jul 15	3.2	3.2	0.5	2.9	3.6	0.2	1.5	2.3	1.9	3.2	3.5	3.9	5.6	7.0	7.7	6.3	5.8	4.5	5.4	6.0	4.3	7.0	9.1	1.6	0.2	9.1	4.2
Jul 16	1.1	2.5	3.5	0.6	1.7	2.6	2.4	6.7	9.0	9.1	11.9	12.8	13.5	9.9	9.1	9.8	9.6	10.3	8.1	5.0	2.0	1.9	3.3	6.1	0.6	13.5	6.4
Jul 17	6.9	17.2	10.4	5.7	5.2	3.9	5.6	5.9	8.8	8.9	7.2	3.5	6.2	7.5	6.4	8.1	10.6	10.6	9.7	8.2	6.8	6.7	10.4	8.6	3.5	17.2	7.9
Jul 18	10.5	11.0	8.6	6.6	6.9	7.8	7.9	8.1	9.2	8.8	9.3	8.5	12.3	12.2	12.7	13.5	14.2	13.3	11.9	10.8	7.0	4.2	6.9	7.9	4.2	14.2	9.6
Jul 19	8.8	6.0	5.7	3.6	4.4	5.2	5.8	3.7	4.6	6.0	6.0	8.6	9.5	10.7	9.7	11.0	10.3	10.6	4.8	4.6	3.7	4.0	5.0	5.9	3.6	11.0	6.6
Jul 20	5.1	3.3	1.6	6.0	5.4	5.7	3.0	1.3	1.7	1.4	3.5	4.4	3.8	2.5	6.8	7.2	5.0	3.8	6.2	8.7	4.3	1.6	3.5	4.1	1.3	8.7	4.2
Jul 21	3.7	3.8	5.0	2.5	2.9	3.4	3.2	3.4	3.3	2.6	4.0	3.7	4.3	2.9	4.3	4.1	5.0	6.4	6.4	4.4	3.4	5.3	6.2	2.8	2.5	6.4	4.0
Jul 22	2.4	11.0	7.1	2.2	6.7	8.3	6.3	4.5	4.6	3.6	5.9	8.4	6.1	5.4	5.1	1.5	2.6	2.1	8.4	10.7	3.1	4.8	26.5	18.3	1.5	26.5	6.9
Jul 23	15.3	6.2	4.0	9.8	7.9	6.4	7.2	3.5	8.9	8.0	5.9	4.0	9.2	8.6	9.1	10.7	10.0	11.1	9.4	5.9	2.5	3.5	3.8	3.5	2.5	15.3	7.3
Jul 24	3.0	3.3	3.7	3.1	2.7	2.9	4.7	4.9	6.3	5.7	0.6	7.2	9.6	11.9	12.0	14.4	14.7	9.4	9.8	4.9	P	P	2.5	7.8	0.6	14.7	6.6
Jul 25	5.4	5.6	2.8	1.8	1.7	2.1	0.5	5.2	10.5	11.5	11.8	12.8	15.2	19.0	17.3	16.3	16.3	15.5	13.6	12.1	3.0	4.4	8.8	12.4	0.5	19.0	9.4
Jul 26	13.7	13.9	16.3	15.7	14.6	11.1	11.8	11.5	13.1	11.6	11.9	12.8	12.4	11.7	11.0	12.0	14.3	12.4	8.4	10.0	8.6	7.9	6.9	7.5	6.9	16.3	11.7
Jul 27	7.4	6.0	7.6	7.0	8.8	6.4	6.7	8.6	7.4	7.9	9.6	9.6	10.8	12.5	10.6	11.4	11.4	9.4	9.3	5.9	5.3	1.1	2.1	2.8	1.1	12.5	7.7
Jul 28	3.2	3.0	2.7	3.8	3.6	3.2	2.6	2.2	2.8	4.8	5.7	5.0	2.9	8.6	8.8	11.0	8.4	7.9	6.0	5.8	3.4	0.4	0.7	0.4	0.4	11.0	4.5
Jul 29	1.0	1.6	2.5	3.2	2.7	2.6	2.5	6.7	8.3	8.2	11.6	14.3	13.0	17.1	14.4	12.9	13.1	13.5	11.9	8.4	3.5	2.1	1.8	3.3	1.0	17.1	7.5
Jul 30	2.0	3.7	5.7	4.3	3.1	3.0	2.7	2.2	4.5	5.1	5.4	6.4	6.8	2.9	3.6	9.7	8.1	8.2	9.2	6.2	5.7	11.3	18.4	9.6	2.0	18.4	6.2
Jul 31	9.6	8.0	3.7	6.5	3.9	6.3	5.6	12.9	11.9	13.1	16.0	15.1	18.3	17.4	15.1	12.7	12.0	14.8	11.9	10.6	5.5	6.3	5.8	6.2	3.7	18.3	10.4

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint(Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## END OF REPORT

This page, 158 of 158, ends the July 2023 Monthly Ambient Air Quality Monitoring Report.



## **Peace River Area Monitoring Program**

# **JULY 2023**

## **Ambient Air Monitoring Calibration Report**

### **- 842-B STATION-**

### **CAL-PRAMP-202307-01561**

**Operation and Maintenance:**

Bureau Veritas Canada

**Data Validation and Report:**

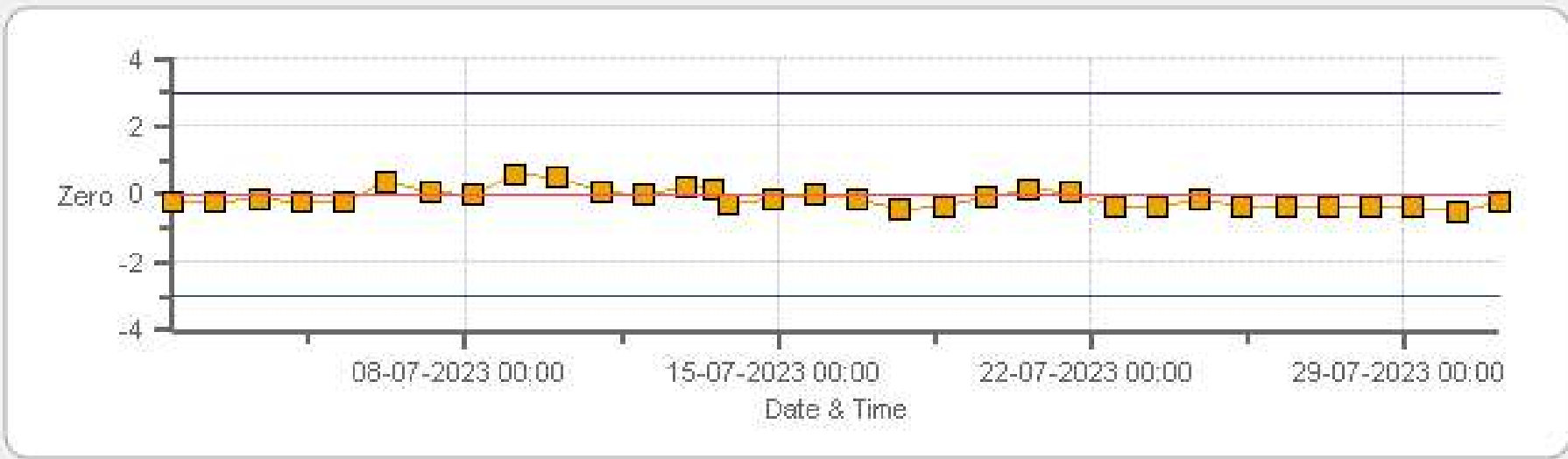
Bureau Veritas Canada

August 3, 2023

# DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

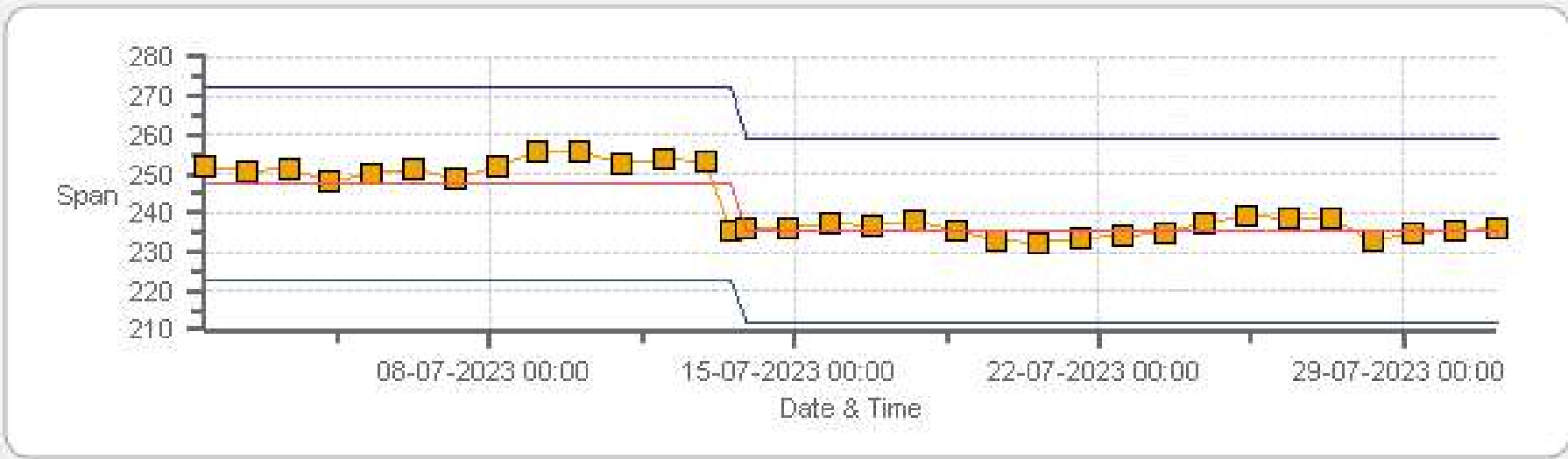


SO2[ppb] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Zero



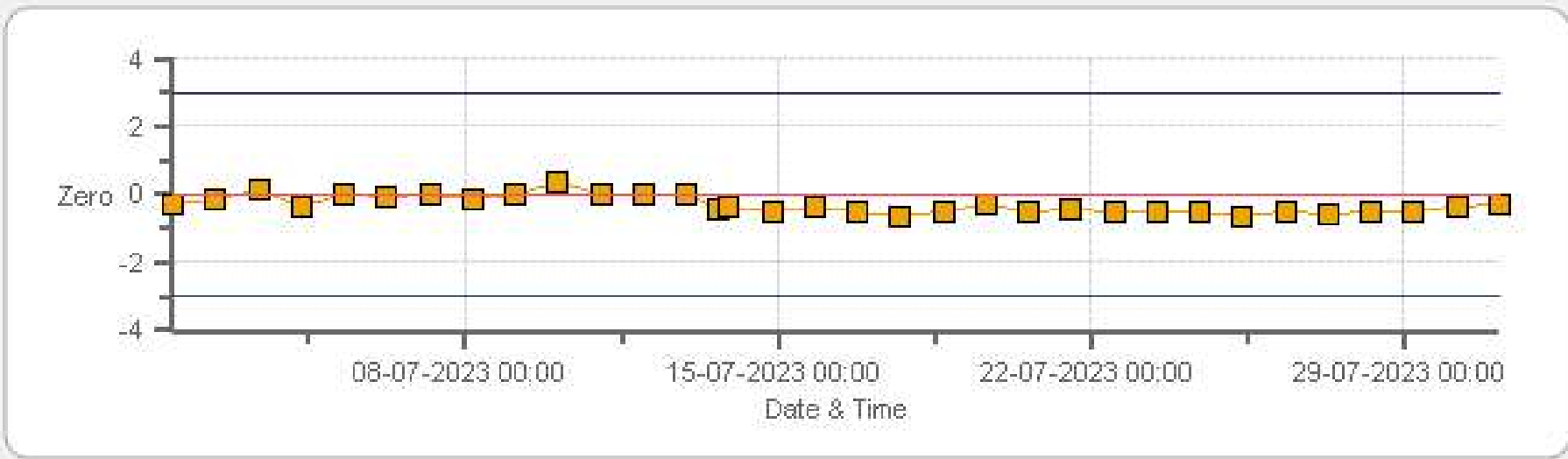
Zero Zero Ref Zero Low Zero High

SO2[ppb] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Span



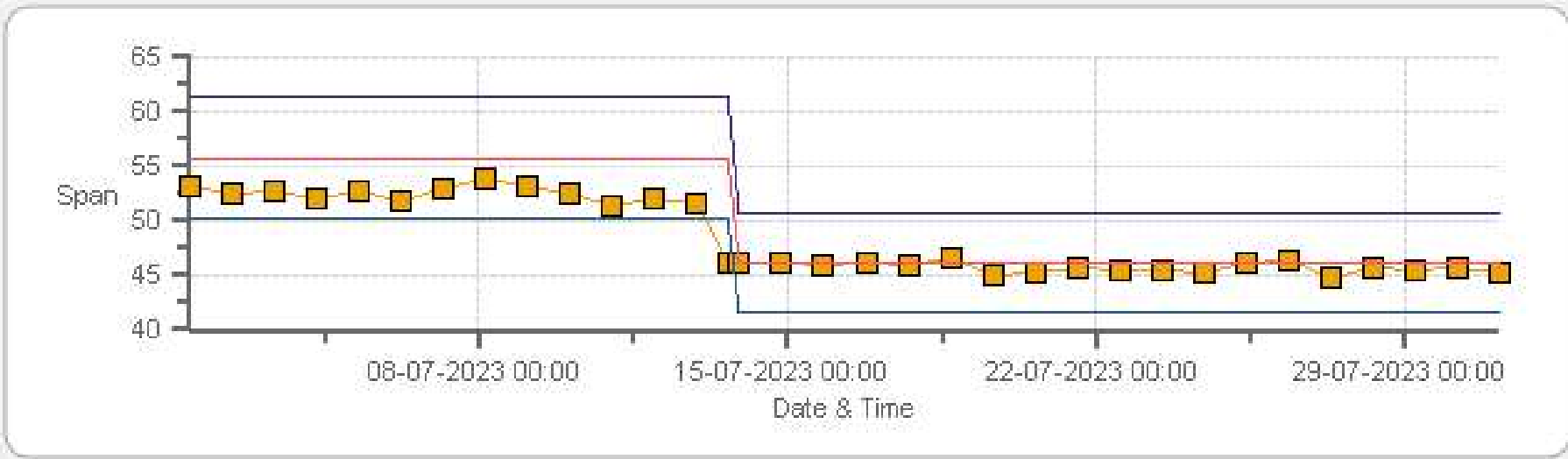
Span SpanRef Span Low Span High

TRS[ppb] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Zero



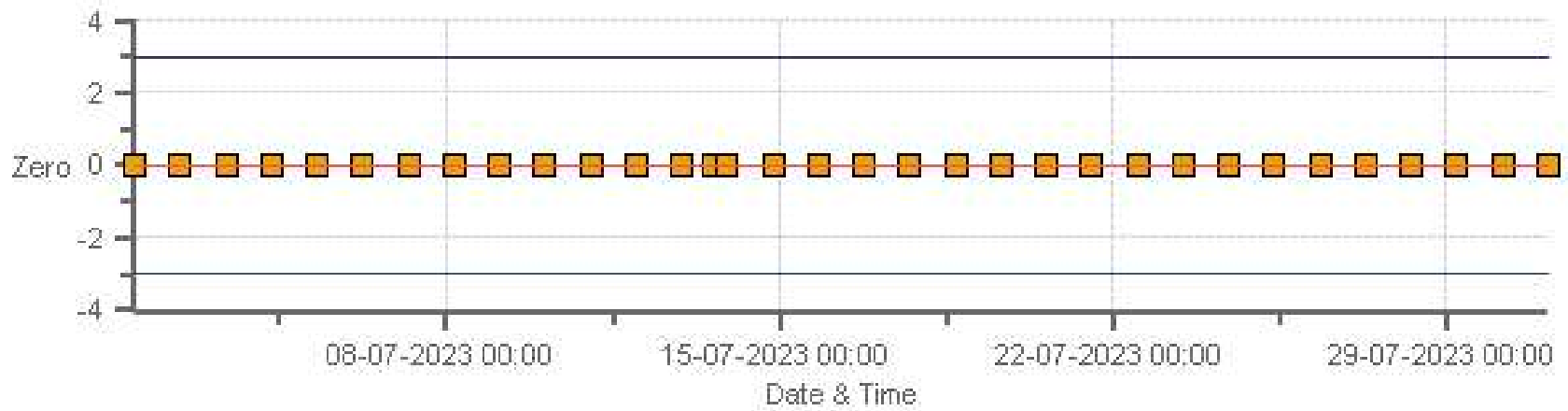
Zero Zero Ref Zero Low Zero High

TRS[ppb] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Span



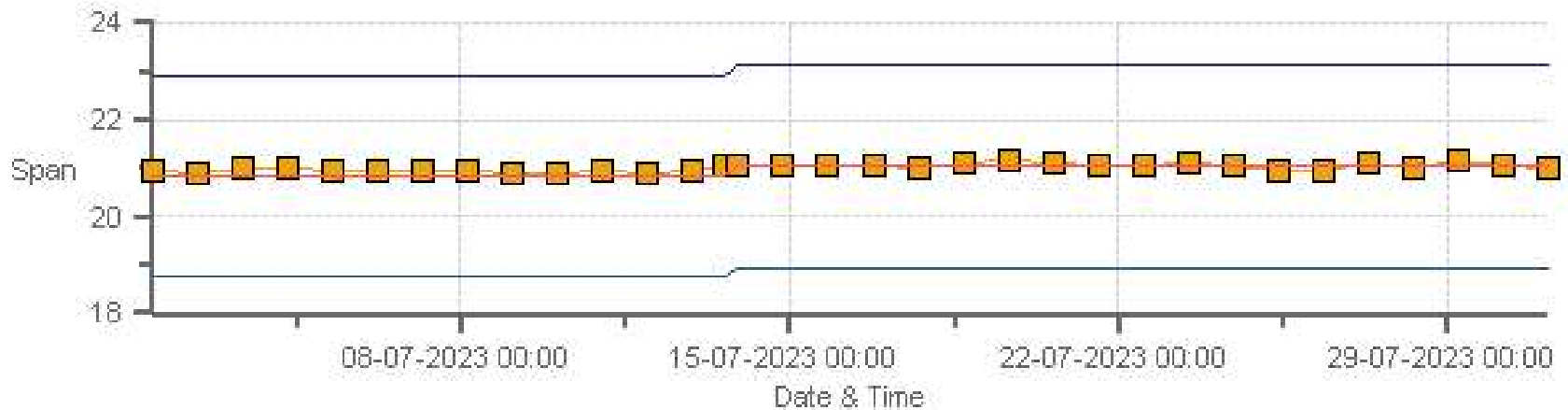
Span SpanRef Span Low Span High

THC55[ppm] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Zero



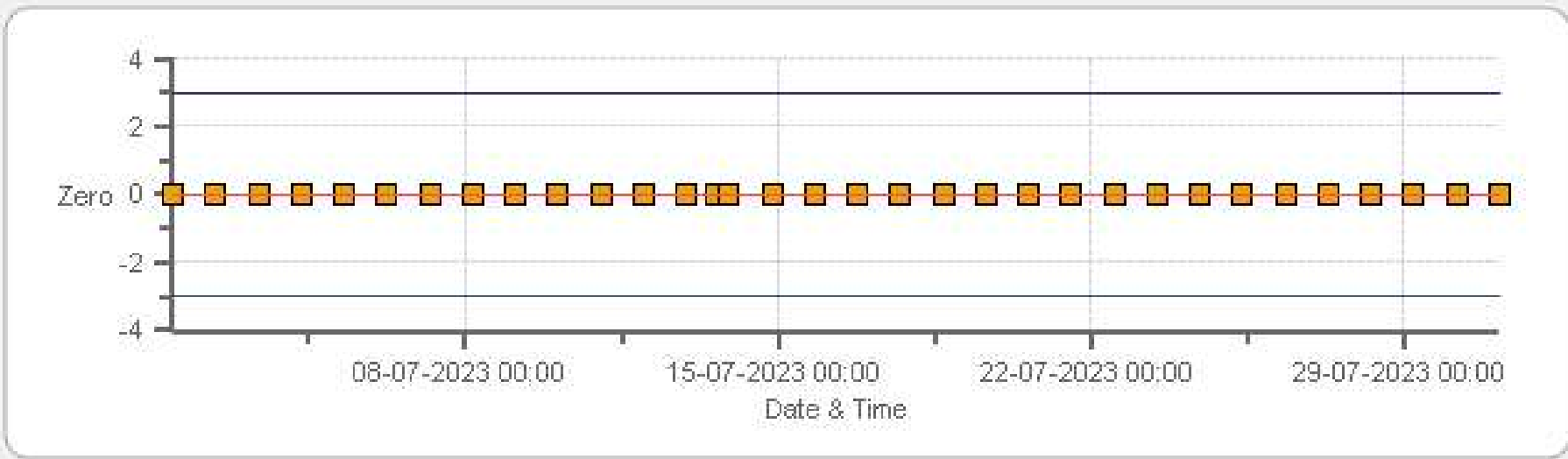
Zero Zero Ref Zero Low Zero High

THC55[ppm] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Span



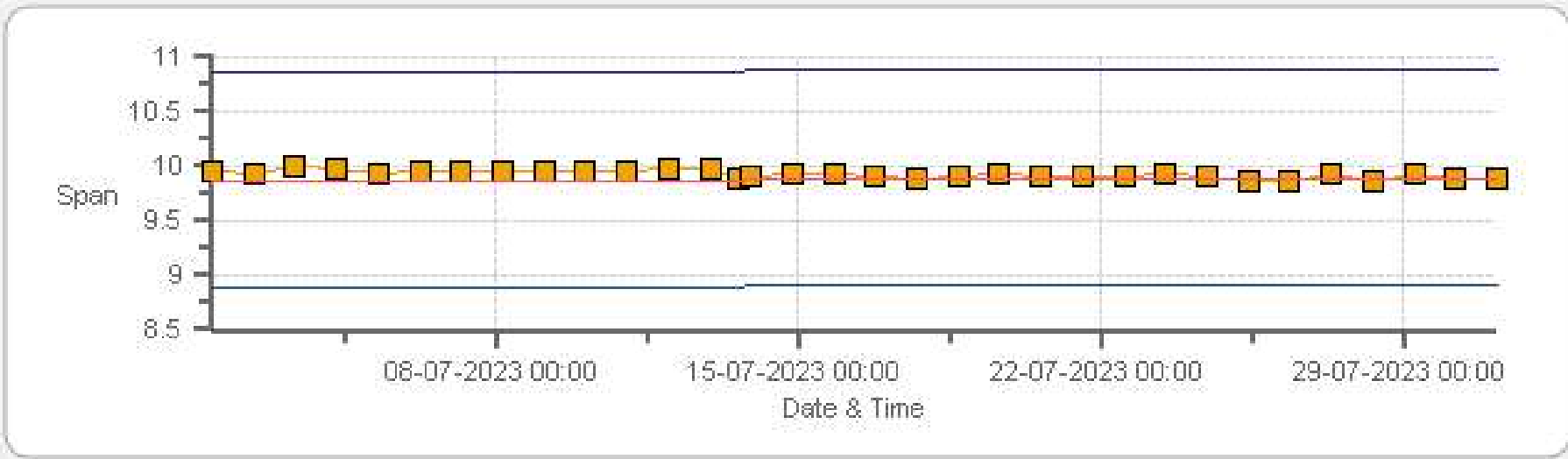
Span Span Ref Span Low Span High

CH4[ppm] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Zero



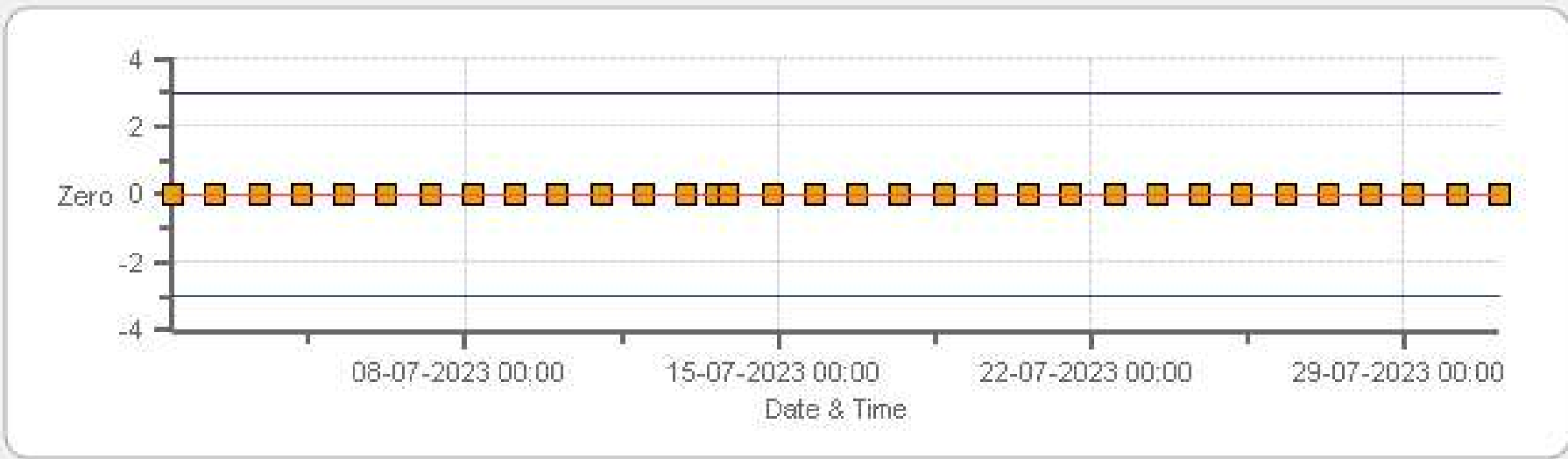
Zero Zero Ref Zero Low Zero High

CH4[ppm] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Span



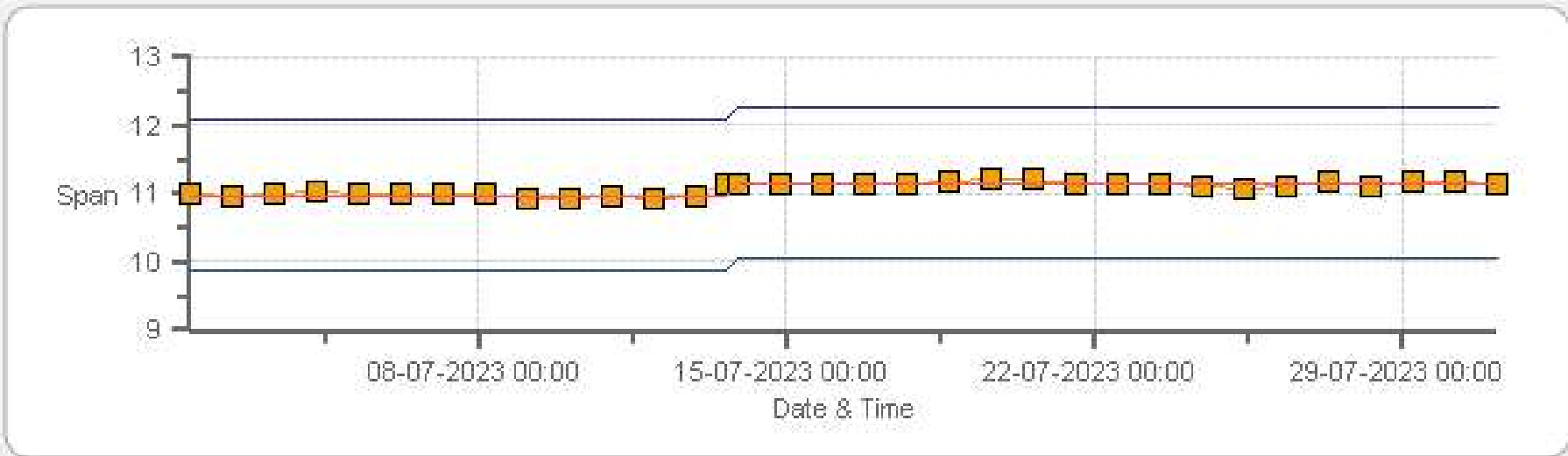
Span Span Ref Span Low Span High

NMHC[ppm] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Zero



Zero Zero Ref Zero Low Zero High

NMHC[ppm] Calibration: PRAMP 842-B Monthly: 07-2023 Type: SpanAndZero - Span



Span Span Ref Span Low Span High

# MULTI-POINT CALIBRATION RECORDS

# SO2 Analyzer Calibration by Dilution



DATE:	13-Jul-2023	PREVIOUS CALIBRATION DATE:	01-Jun-2023
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.003
CLIENT:	PRAMP	TEMPERATURE (°C):	24.1
LOCATION:	842b	BAROMETRIC (mBar):	943
PURPOSE:	Routine	START TIME (MST):	08:31
PERFORMED BY:	Limin Li	END TIME (MST):	12:52

## ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	500 ppb
SERIAL #	1200736629	FLOW (mL/min)	424
INITIAL		FINAL	
BKG/OFFSET	8.8	BKG/OFFSET	8.5
COEF/SLOPE	1.148	COEF/SLOPE	1.076
Expected (reference) Value	247.6	Expected (reference) Value	235.2

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17200415	ID:	81
MFC CALIBRATION DATE:	20-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL126764	HIGH ID	n/a
CONC (ppm):	50.30	EXPIRY DATE	n/a
CYLINDER (psi):	1400	LOW ID	n/a
EXPIRY DATE	27-Oct-2030	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	390	190	95
RANGE	300 - 400	150 - 200	50 - 100

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

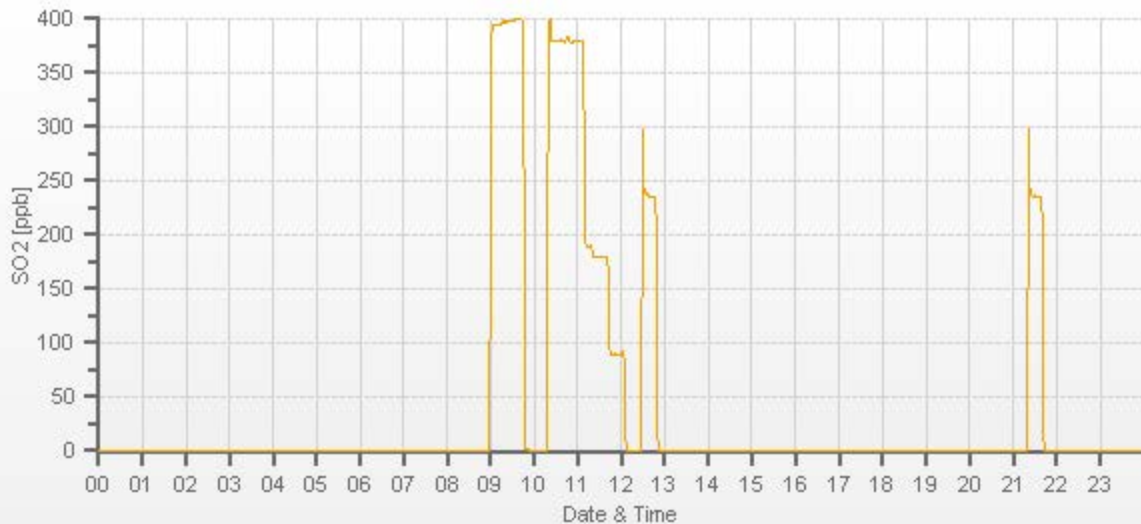
FLOW RATES			CONCENTRATION (ppb)			CORRECTION FACTOR	
(mL/min)			ACTUAL	INDICATED		Initial	Final
DILUENT	GAS	TOTAL		Initial	Final		
6000	<del>        </del>	6000	0.00	-0.2	0	<del>        </del>	<del>        </del>
5955	45.30	6000	379.77	400.4	379.8	0.948	1.000
5979	21.50	6000	180.24	n/a	179.7	n/a	1.003
5989	10.70	6000	89.70	n/a	89.8	n/a	0.999

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.0%

## COMMENTS:

Sample filter changed.





# TRS Analyzer Calibration by Dilution



DATE:	13-Jul-2023	PREVIOUS CALIBRATION DATE:	02-Jun-2023
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	PRAMP	TEMPERATURE (°C):	23.6
LOCATION:	842b	BAROMETRIC (mBar):	943
PURPOSE:	Removal/Shut-down	START TIME (MST):	08:23
PERFORMED BY:	Limin Li	END TIME (MST):	10:24

## ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	100 ppb
SERIAL #	1200736630	FLOW (mL/min)	372
INITIAL		FINAL	
BKG/OFFSET	16.1	BKG/OFFSET	n/a
COEF/SLOPE	1.071	COEF/SLOPE	n/a
Expected (reference) Value	55.71	Expected (reference) Value	n/a

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	042531101	ID:	81
MFC CALIBRATION DATE:	23-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0002272	HIGH ID	n/a
CONC (ppm):	10.20	EXPIRY DATE	n/a
CYLINDER (psi):	900	LOW ID	n/a
EXPIRY DATE	14-Sep-2024	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	08:51	SO2 Conc (ppb)	385
END TIME:	09:10	Analyzer Response (ppb)	0.0

## CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
7500	<del>7500</del>	7500	0.00	-0.19	n/a	<del>0.920</del>	<del>n/a</del>
7443	57.40	7500	78.06	84.65	n/a	0.920	n/a
7472	27.90	7500	37.94	41.42	n/a	0.912	n/a
7486	14.00	7500	19.04	20.7	n/a	0.911	n/a

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.086	0.0%

## COMMENTS:

TRS Converter CDNOVA CDN #583.
--------------------------------

# TRS Analyzer Calibration by Dilution



DATE:	13-Jul-2023	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	22.1
LOCATION:	842b	BAROMETRIC (mBar):	943
PURPOSE:	Install/Post-Repair	START TIME (MST):	12:17
PERFORMED BY:	Limin Li	END TIME (MST):	15:24

## ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	100 ppb
SERIAL #	1200736630	FLOW (mL/min)	375
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	14.4
COEF/SLOPE	n/a	COEF/SLOPE	0.939
Expected (reference) Value	n/a	Expected (reference) Value	46.13

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	042531101	ID:	81
MFC CALIBRATION DATE:	23-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0002272	HIGH ID	n/a
CONC (ppm):	10.20	EXPIRY DATE	n/a
CYLINDER (psi):	900	LOW ID	n/a
EXPIRY DATE	14-Sep-2024	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

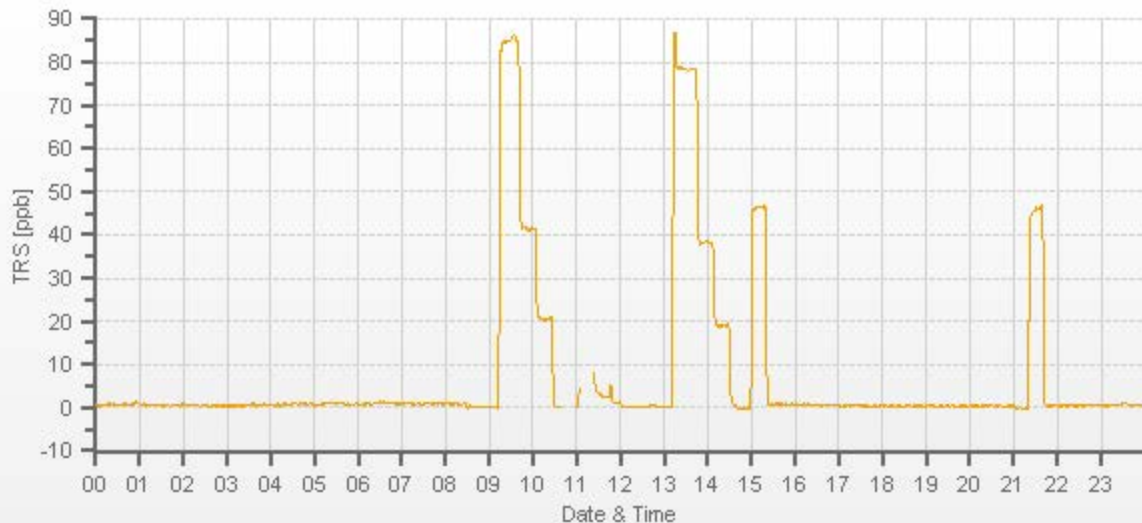
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
7500	<del>7500</del>	7500	0.00	n/a	0	<del>n/a</del>	<del>n/a</del>
7443	57.40	7500	78.06	n/a	78.08	n/a	1.000
7472	27.90	7500	37.94	n/a	37.97	n/a	0.999
7486	14.00	7500	19.04	n/a	18.94	n/a	1.005

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	0.0%

## COMMENTS:

TRS Converter CDNOVA CDN #583. Sample filter changed.
---



# Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	13-Jul-2023	PREVIOUS CALIBRATION DATE:	01-Jun-2023	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	24.1		Thermo 55i	1314057759	1275
LOCATION:	842b	BAROMETRIC (mBar):	943	PARAMETER:	CH4	NMHC	THC
PURPOSE:	Routine	START TIME (MST):	08:34	RANGE (ppm):	20	20	40
PERFORMED BY:	Limin Li	END TIME (MST):	14:41	PREVIOUS CF:	1.002	1.000	1.001

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	EnviroNics	MAKE:	API	CYLINDER ID:	LL68768	HIGH ID:	n/a
MODEL:	6100	MODEL:	T701	CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub> (ppm):	897.0   301.0	HIGH EXPIRY:	n/a
ID:	5212	ID:	81	CYLINDER (psi):	1950	LOW ID:	n/a
MFC CALIBRATION DATE:	21-Mar-2023	OXIDIZER ID:	Internal	EXPIRY DATE	08-Nov-2029	LOW EXPIRY:	n/a

## CALIBRATION PARAMETERS:

POINT (CH <sub>4</sub> /NMHC)	HIGH	MID	LOW	CH <sub>4</sub> EQUIVILANCE	
TARGET	14	7	3.5	C <sub>3</sub> H <sub>8</sub> as CH <sub>4</sub>	827.8
RANGE	12 - 16	6 - 8	2 - 4	THC as CH <sub>4</sub>	1724.8

## EXPECTED (REFERENCE) VALUE:

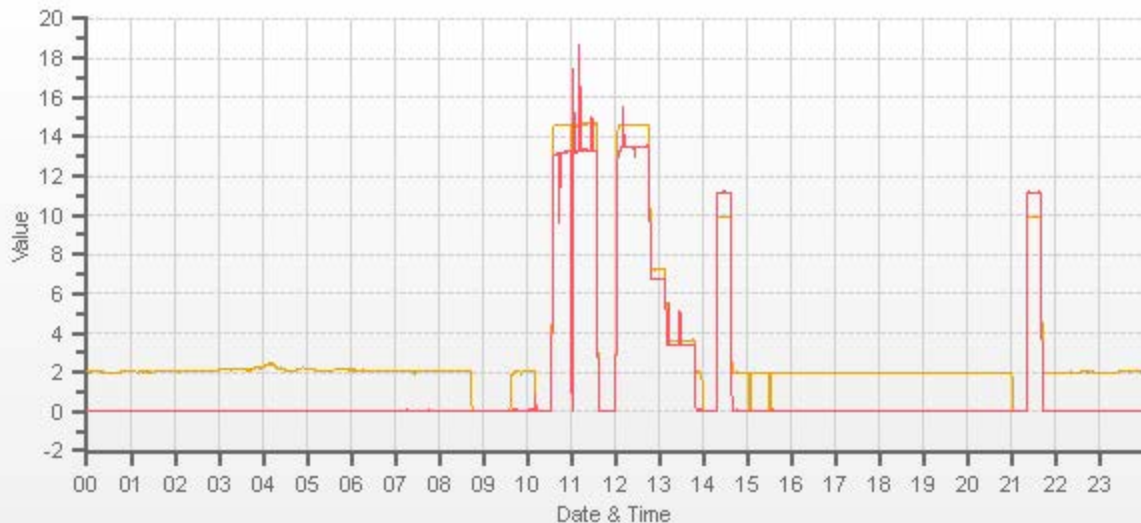
INITIAL	CH <sub>4</sub>	NMHC	THC	FINAL	CH <sub>4</sub>	NMHC	THC
	9.87	10.98	20.84		9.89	11.16	21.04

## CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC
3500	<del>X</del>	3500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>
3443	56.82	3500	14.56	13.44	28.00	14.67	13.33	28.00	14.59	13.49	28.08	0.993	1.008	1.000	0.998	0.996	0.997
3472	28.41	3500	7.28	6.72	14.00	n/a	n/a	n/a	7.29	6.75	14.04	n/a	n/a	n/a	0.999	0.995	0.997
3486	14.20	3500	3.64	3.36	7.00	n/a	n/a	n/a	3.64	3.39	7.03	n/a	n/a	n/a	1.000	0.991	0.995

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT	Comments: H2 = AMA HG300 #190567058 BV analyzer. Sample filter changed. Increase zero air pressure to 55psi.  Use Zero Chrom? No
CH <sub>4</sub>	1.000	1.002	0.0%	
NMHC	1.000	1.003	0.0%	
THC	1.000	1.003	0.0%	



CAL-PRAMP-202307-01561

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CH4 [ppm] NMHC [ppm]

# Meteorological System Checklist



Date:	July 13, 2023
Technician:	Limin Li
Station:	PRAMP 842b

Unit:	Make:	Model:	Serial #:
Precipitation Sampler:	RM Young	52202	TB 15878
Temperature Sensor:	Rotronic	HC2A-S3	20370767
Barometric Pressure Sensor:	MetOne	92	Y23362
Relative Humidity Sensor:	Rotronic	HC2A-S3	20370767
Anemometer:	RM Young	05305AQ	174802

### PRECIPITATION SENSOR CHECK

Checklist:	Reply:	Comments:
Previous check date:	June 1, 2023	
Is the sensor Level?	yes	
Is the heater operating properly?	yes	
Are the bucket drain holes clean?	yes	test time: 11:44 - 11:50
Is the screen on the housing? (screen should be on between July and September)	yes	Install the screen.
Is the housing clean?	yes	
Is the area around the housing clean and free from obstacles?	yes	

### TIP TEST - Slowly pour water until 10 tips are heard. (10 tips = 1 mm)

# of Tips	Data Logger Response (mm):	Manual Specification = +/- 0.1 mm
10	1.0	0.00

### AMBIENT TEMPERATURE SENSOR CHECK

Previous check date:	June 1, 2023
Parameter:	Temperature @ 2 metres
Reference Thermometer ID:	F.S. 170286131 expires May 18, 2024
Reference Temperature (°C):	22.6
Station - Ambient Temperature (°C):	22.3
Temperature Difference (°C):	0.3

### BAROMETRIC PRESSURE SENSOR CHECK

Previous check date:	June 1, 2023		
Reference Barometer ID:	Brunton 05490 Expires Feb 27, 2024		
Reference Pressure - Units/Reading:	millibar		943.3
Station Pressure - Units/Reading:	millibar		942.5
Pressure Tolerance +/- 15% of error:	802 - 1085		0.08%

### RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Previous check date:	June 1, 2023		
Reference Hygrometer ID:	F.S. 170286131 expires May 18, 2024		
Reference Hygrometer % RH- Reading:	54.00		
Station Hygrometer % RH- Reading:	66.80		
RH Tolerance +/- 15% of difference:	45.90 - 62.10		-23.7%

### ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Previous check date:	June 1, 2023	Previous check date:	June 1, 2023
Wind Speed Observed (kph):	5~15	Wind Direction Observed:	N
Wind speed on Data Logger (kph):	9	Wind Direction on Data Logger:	N
		Wind Direction Pass/Fail?:	Pass

Comments

Install screen.



# Meteorological Sensor Audit/Calibration

## Location Information

Company:	PRAMP	Performed By:	Limin Li
Audit Location:	842b	Reviewed By:	Chris Wesson
Audit Date:	August 3, 2022	Start/End Time (mst):	16:30/17:58
Calibration Purpose:	routine annual	Weather Conditions:	Mainly sunny

## Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	RM Young	Velocity Voltage Output Range:	n/a
Sensor Model:	05305AQ	Velocity Unit Output Range:	0-200
Serial #:	174802	Direction Voltage Output Range:	n/a
Previous Cal/Audit Date:	July 4, 2022	Direction Unit Output Range:	0-360

## Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA03309 expires June 07, 2023

## Wind Speed Audit Data **\*\*+/- 2% of the average correction factor is the limit\*\***

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.0	0.0	-
1000	18.4	18.3	18.3	1.007
2000	36.9	36.7	36.7	1.004
3000	55.3	55.1	55.1	1.003
4000	73.7	73.6	73.6	1.002
5000	92.2	92.0	92.0	1.002
6000	110.6	110.5	110.5	1.001
7000	129.0	128.9	128.9	1.001
8000	147.4	147.3	147.3	1.001
9000	165.9	165.8	165.8	1.000
10000	184.3	184.2	184.2	1.001
The audit meets AMD requirements.			Average Correction Factor=	1.002

## Wind Direction Audit Data **\*\*+/- 3° of the absolute average degrees difference for all points is the limit\*\***

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	1	355	1.0	0.0	0.5
30	330	29	334	1.0	-4.0	2.5
60	300	58	305	2.0	-5.0	3.5
90	270	88	275	2.0	-5.0	3.5
120	240	119	244	1.0	-4.0	2.5
150	210	149	212	1.0	-2.0	1.5
180	180	180	180	0.0	0.0	0.0
210	150	211	150	-1.0	0.0	0.5
240	120	243	119	-3.0	1.0	2.0
270	90	275	88	-5.0	2.0	3.5
300	60	305	59	-5.0	1.0	3.0
330	30	333	30	-3.0	0.0	1.5
355	0	355	1	0.0	1.0	0.5
The audit meets AMD requirements.				Average Absolute Degrees Difference=		1.9

## Comments:

Physical inspection completed. No issues.

**END OF REPORT**





## **Peace River Area Monitoring Program**

# **JULY 2023**

## **Ambient Air Monitoring Calibration Report**

### **- 986-C STATION-**

### **CAL-PRAMP-202307-01562**

**Operation and Maintenance:**

Bureau Veritas Canada

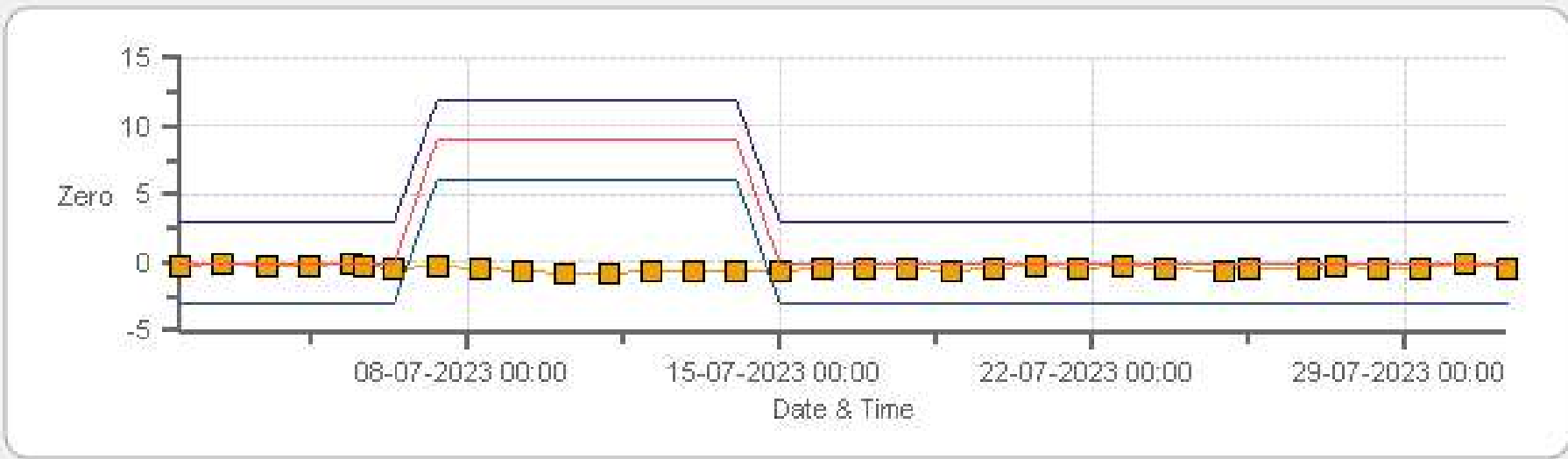
**Data Validation and Report:**

Bureau Veritas Canada

August 3, 2023

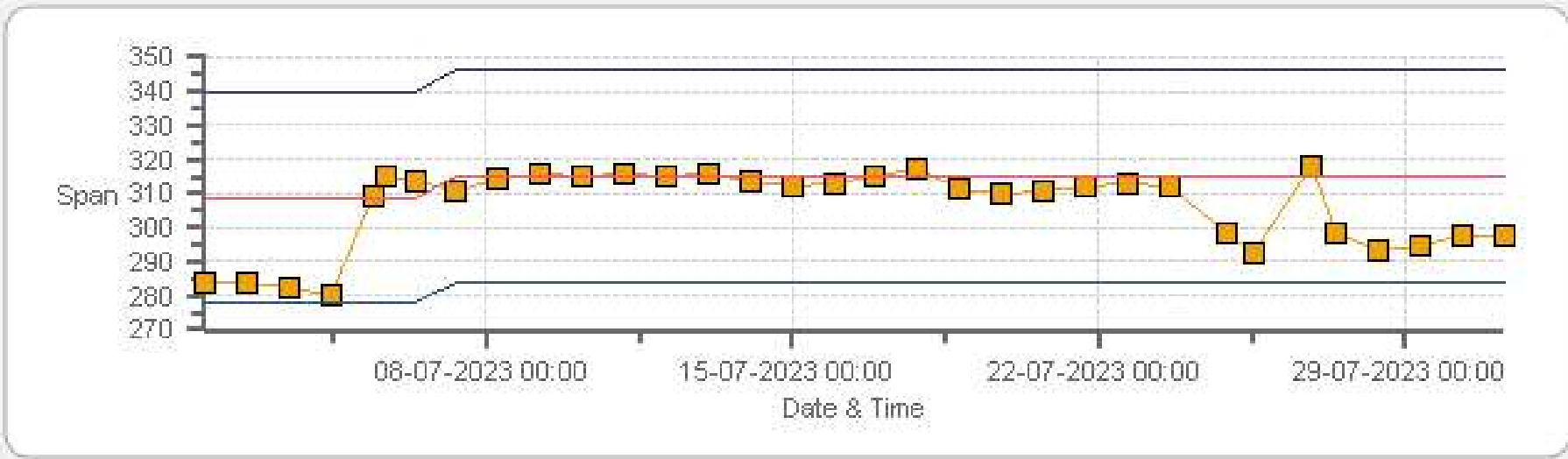
# DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero - Zero



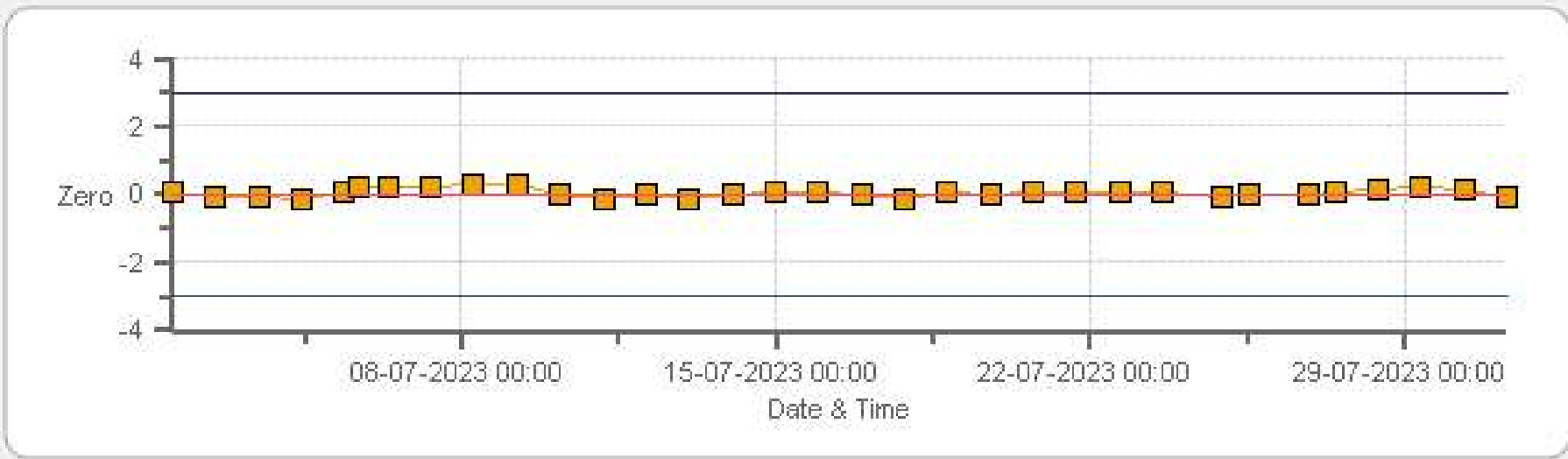
Zero Zero Ref Zero Low Zero High

SO2[ppb] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero - Span



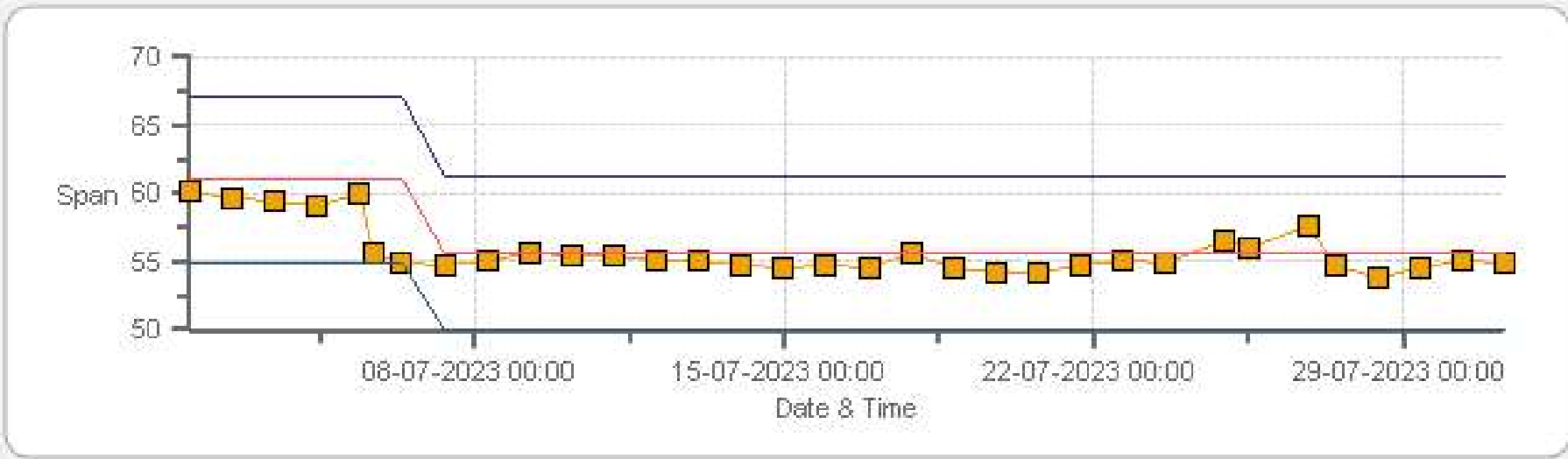
Span Span Ref Span Low Span High

TRS[ppb] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero - Zero



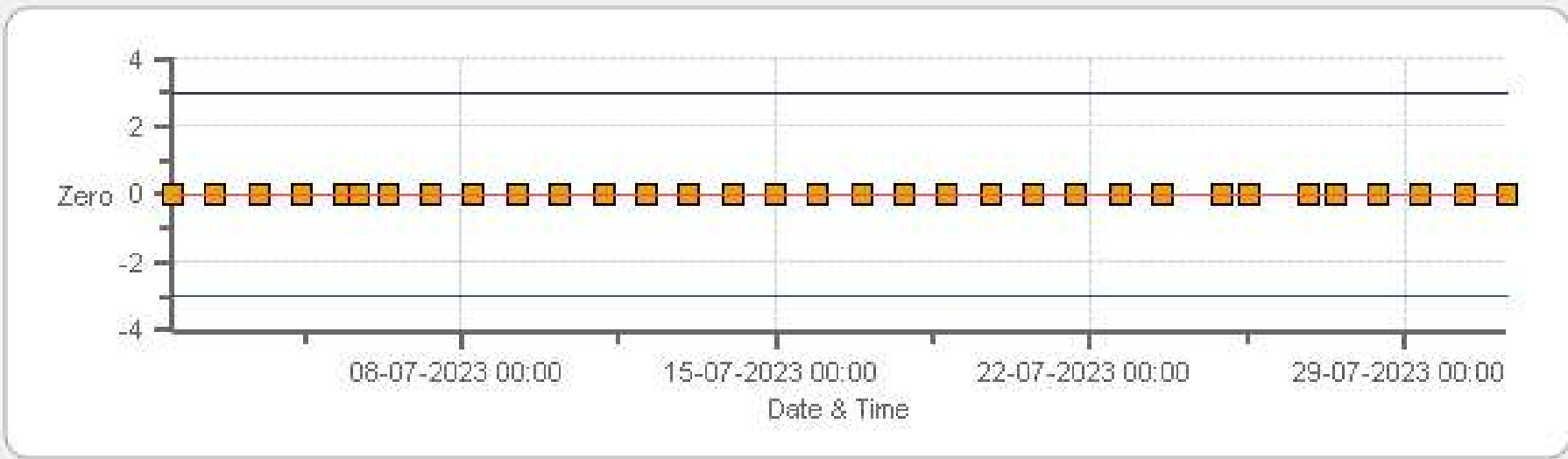
Zero Zero Ref Zero Low Zero High

TRS[ppb] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero - Span



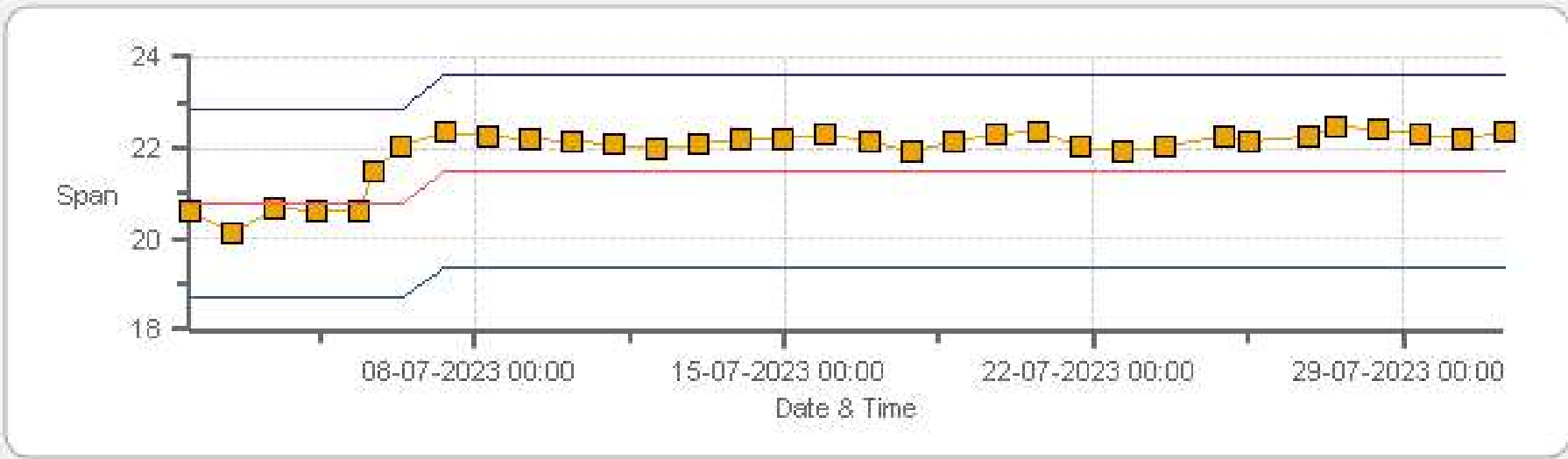
Span Span Ref Span Low Span High

THC55[ppm] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero - Zero



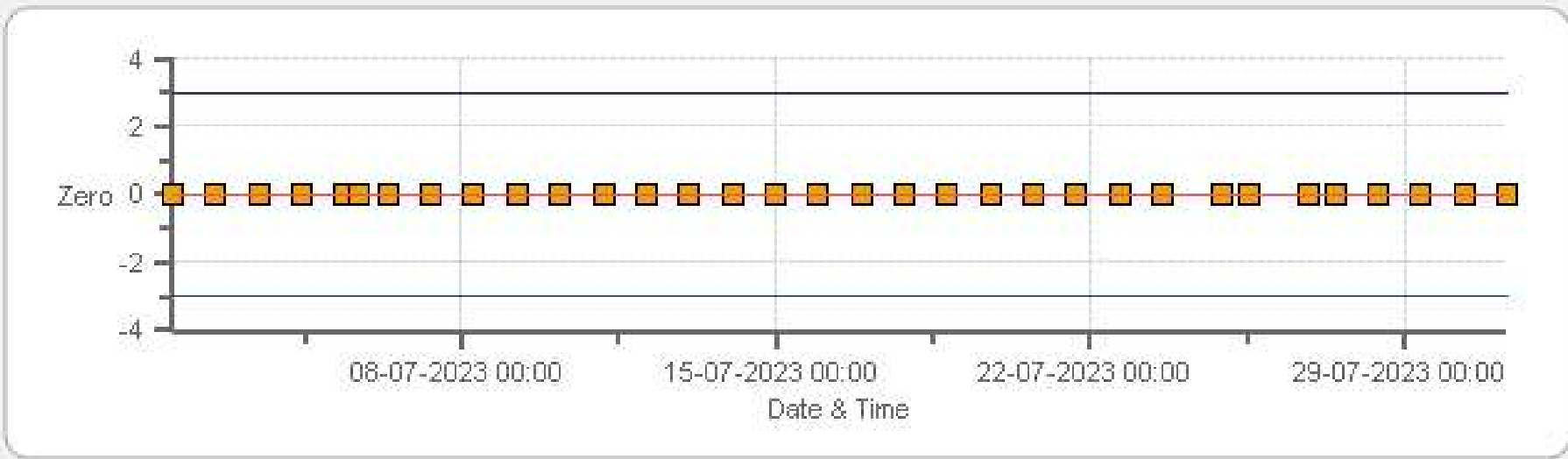
Zero Zero Ref Zero Low Zero High

THC55[ppm] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero - Span



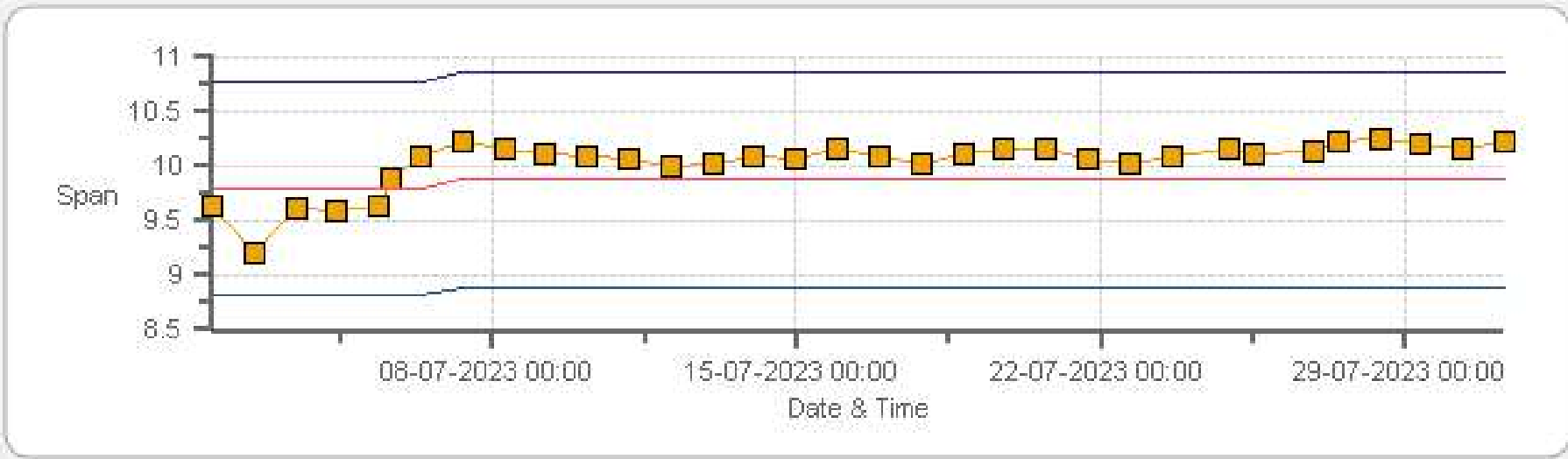
Span Span Ref Span Low Span High

CH4[ppm] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero -Zero



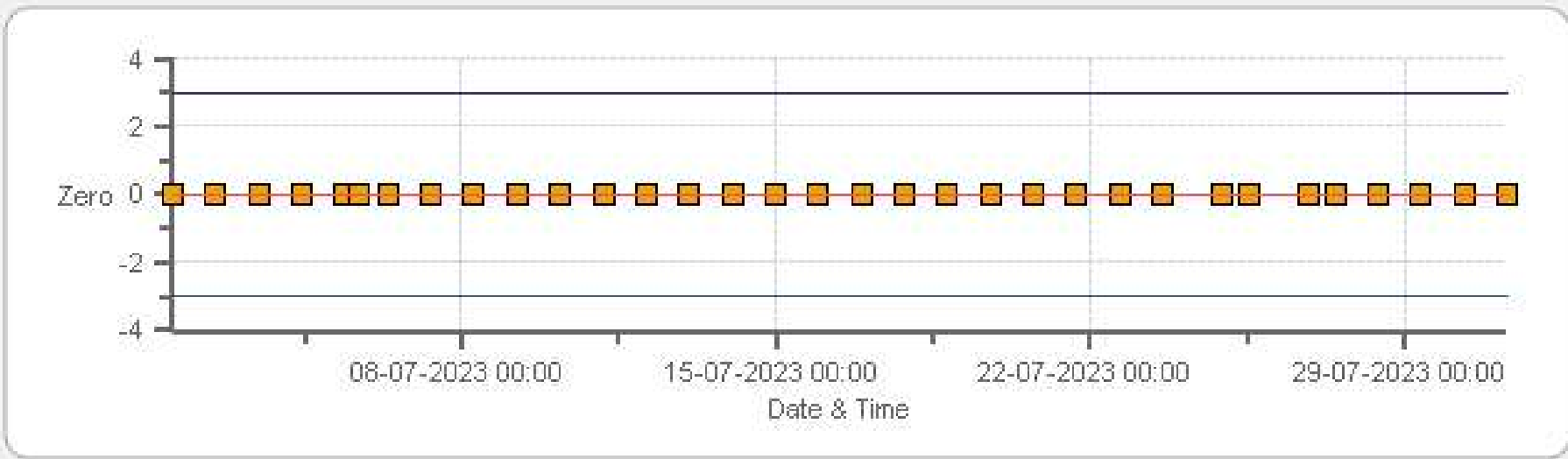
Zero Zero Ref Zero Low Zero High

CH4[ppm] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero -Span



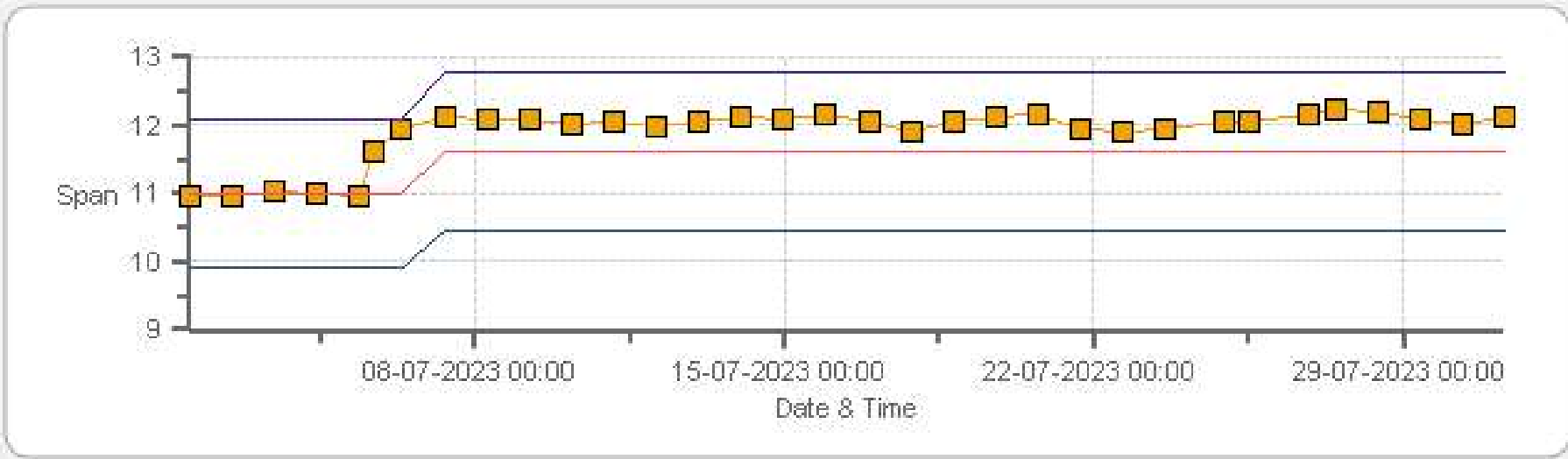
Span Span Ref Span Low Span High

NMHC[ppm] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero - Zero



Zero Zero Ref Zero Low Zero High

NMHC[ppm] Calibration: PRAMP 986-C Monthly: 07-2023 Type: SpanAndZero - Span



Span Span Ref Span Low Span High

# MULTI-POINT CALIBRATION RECORDS



# SO2 Analyzer Calibration by Dilution



DATE:	05-Jul-2023	PREVIOUS CALIBRATION DATE:	09-Jun-2023
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	PRAMP	TEMPERATURE (°C):	22.4
LOCATION:	986c	BAROMETRIC (mBar):	936
PURPOSE:	Routine	START TIME (MST):	11:51
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	16:48

## ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	500 ppb
SERIAL #	1193585646	FLOW (mL/min)	428
INITIAL		FINAL	
BKG/OFFSET	16.6	BKG/OFFSET	17.2
COEF/SLOPE	1.026	COEF/SLOPE	1.044
Expected (reference) Value	308.9	Expected (reference) Value	315.1

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	701
ID:	58100720	ID:	5004
MFC CALIBRATION DATE:	15-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL109693	HIGH ID	n/a
CONC (ppm):	25.00	EXPIRY DATE	n/a
CYLINDER (psi):	2000	LOW ID	n/a
EXPIRY DATE	02-Nov-2025	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	390	190	95
RANGE	300 - 400	150 - 200	50 - 100

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

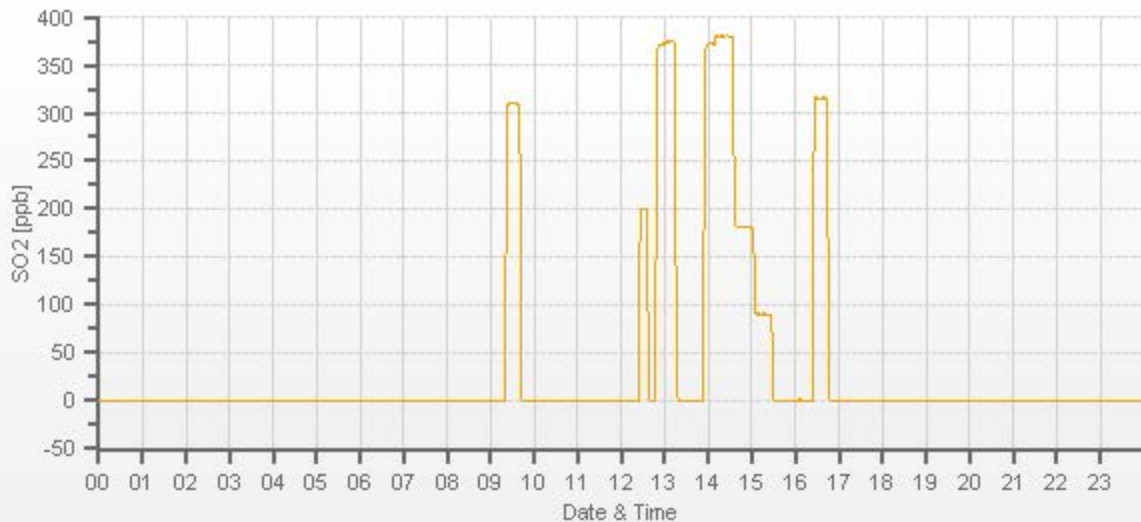
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4000	<del>        </del>	4000	0.00	0.1	0	<del>        </del>	<del>        </del>
3941	60.80	4002	379.81	373.7	379.6	1.017	1.001
3974	28.80	4003	179.87	n/a	180.9	n/a	0.994
3986	14.40	4000	90.00	n/a	90	n/a	1.000

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.000	0.1%

## COMMENTS:

Sample filter changed. 12:24-12:36- User error Restarted AF High
---



# TRS Analyzer Calibration by Dilution



DATE:	05-Jul-2023	PREVIOUS CALIBRATION DATE:	09-Jun-2023
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	0.996
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5
LOCATION:	986C	BAROMETRIC (mBar):	936
PURPOSE:	Routine	START TIME (MST):	11:51
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	16:48

## ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	100 ppb
SERIAL #	1191833341	FLOW (mL/min)	422
INITIAL		FINAL	
BKG/OFFSET	15.2	BKG/OFFSET	13.9
COEF/SLOPE	0.969	COEF/SLOPE	0.896
Expected (reference) Value	61	Expected (reference) Value	55.62

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	SABIO	MAKE:	Teledyne
MODEL:	2010	MODEL:	701
ID:	58100720	ID:	5004
MFC CALIBRATION DATE:	15-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0002519	HIGH ID	n/a
CONC (ppm):	9.41	EXPIRY DATE	n/a
CYLINDER (psi):	600	LOW ID	n/a
EXPIRY DATE	10-Nov-2023	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

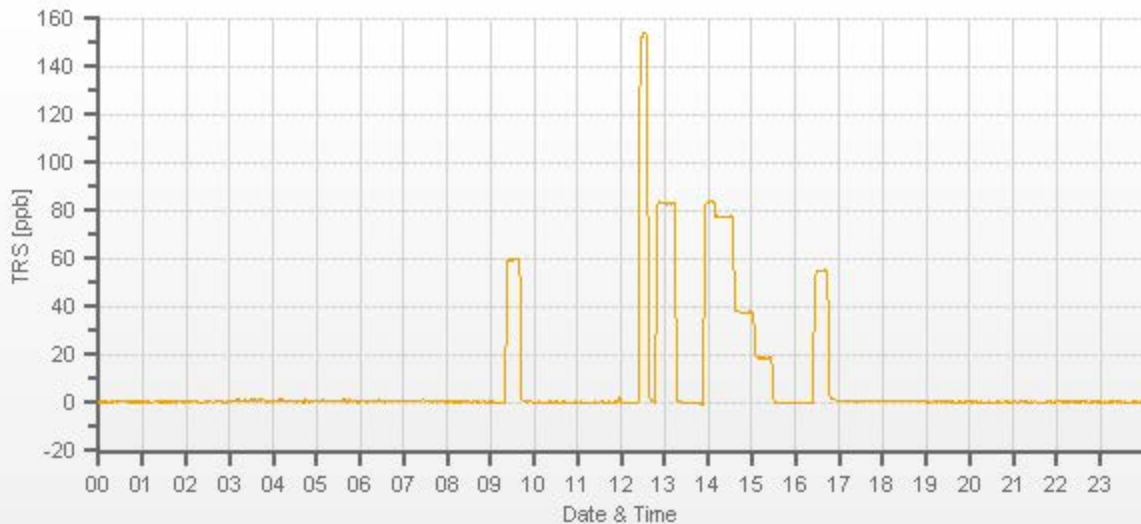
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4000	<del>33.10</del>	4000	0.00	0.1	0	<del>0.934</del>	<del>1.001</del>
3969	33.10	4002	77.83	83.4	77.76	0.934	1.001
3987	16.20	4003	38.08	n/a	37.77	n/a	1.008
3992	8.10	4000	19.06	n/a	18.9	n/a	1.008

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.999	-0.1%

## COMMENTS:

TRS Converter BV's CDNOVA CDN #552 Sample filter changed. 12:24-12:36- User error. Restarted AF High
--



# Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	05-Jul-2023	PREVIOUS CALIBRATION DATE:	08-Jun-2023	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5		Thermo 55i	1433563261	1108
LOCATION:	986C	BAROMETRIC (mBar):	931	PARAMETER:	CH4	NMHC	THC
PURPOSE	Removal/Shut-down	START TIME (MST):	08:11	RANGE (ppm):	20	20	40
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	11:10	PREVIOUS CF:	1.001	0.999	1.000

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL68768	HIGH ID:	n/a
MODEL:	2010	MODEL:	701	CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub> (ppm):	897.0   301.0	HIGH EXPIRY:	n/a
ID:	26801218	ID:	5004	CYLINDER (psi):	1900	LOW ID:	n/a
MFC CALIBRATION DATE:	09-Mar-2023	OXIDIZER ID:	111	EXPIRY DATE	11-Aug-2029	LOW EXPIRY:	n/a

## CALIBRATION PARAMETERS:

POINT (CH <sub>4</sub> /NMHC)	HIGH	MID	LOW	CH <sub>4</sub> EQUIVILANCE	
TARGET	14	7	3.5	C <sub>3</sub> H <sub>8</sub> as CH <sub>4</sub>	827.8
RANGE	12 - 16	6 - 8	2 - 4	THC as CH <sub>4</sub>	1724.8

## EXPECTED (REFERENCE) VALUE:

INITIAL	CH <sub>4</sub>	NMHC	THC	FINAL	CH <sub>4</sub>	NMHC	THC
	9.79	10.99	20.79		n/a	n/a	n/a

## CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC
3098	<del>3098</del>	3098	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a	n/a	<del>1.000</del>	<del>1.000</del>	<del>1.000</del>	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>
3049	50.30	3099	14.56	13.44	27.99	13.55	13.40	26.98	n/a	n/a	n/a	1.074	1.003	1.038	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
CH <sub>4</sub>	1.000	0.931	0.0%
NMHC	1.000	0.997	0.0%
THC	1.000	0.964	0.0%

## Comments:

09:00-09:45 - daily ZS  
Unable to get 15 mins stability. Calibration fails at high point.

Use Zero Chrom? **No**

# Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	05-Jul-2023	PREVIOUS CALIBRATION DATE:	n/a	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	22.5		Thermo 55i	1022143392	1121
LOCATION:	986C	BAROMETRIC (mBar):	934	PARAMETER:	CH4	NMHC	THC
PURPOSE	Install/Post-Repair	START TIME (MST):	13:30	RANGE (ppm):	20	20	40
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	16:49	PREVIOUS CF:	N/A	N/A	N/A

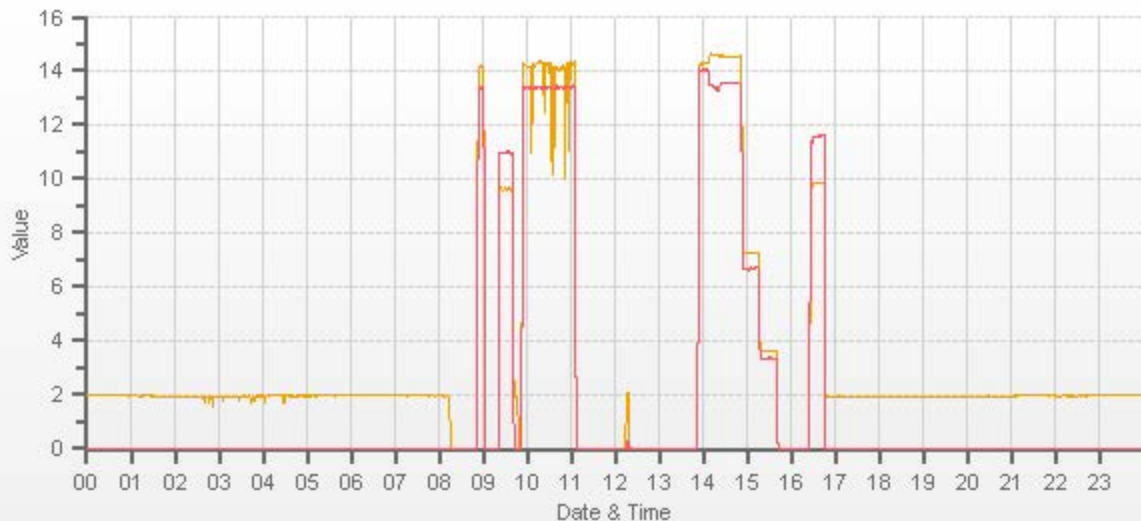
CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	SABIO	MAKE:	Teledyne	CYLINDER ID:	LL68768	HIGH ID:	n/a
MODEL:	2010	MODEL:	701	CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub> (ppm):	897.0   301.0	HIGH EXPIRY:	n/a
ID:	26801218	ID:	5004	CYLINDER (psi):	1900	LOW ID:	n/a
MFC CALIBRATION DATE:	09-Mar-2023	OXIDIZER ID:	111	EXPIRY DATE	11-Aug-2029	LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:							
POINT (CH <sub>4</sub> /NMHC)	HIGH	MID	LOW	CH <sub>4</sub> EQUIVILANCE			
TARGET	14	7	3.5	C <sub>3</sub> H <sub>8</sub> as CH <sub>4</sub>		827.8	
RANGE	12 - 16	6 - 8	2 - 4	THC as CH <sub>4</sub>		1724.8	

EXPECTED (REFERENCE) VALUE:							
INITIAL	CH <sub>4</sub>	NMHC	THC	FINAL	CH <sub>4</sub>	NMHC	THC
	N/A	N/A	N/A		N/A	9.88	11.61

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC
3097	<del>X</del>	3097	0.00	0.00	0.00	n/a	n/a	n/a	0.00	0.00	0.00	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>
3047	50.30	3097	14.57	13.44	28.01	n/a	n/a	n/a	14.55	13.54	28.09	n/a	n/a	n/a	1.001	0.993	0.997
3075	25.20	3100	7.29	6.73	14.02	n/a	n/a	n/a	7.27	6.69	13.96	n/a	n/a	n/a	1.003	1.006	1.004
3086	12.60	3099	3.65	3.37	7.01	n/a	n/a	n/a	3.66	3.37	7.02	n/a	n/a	n/a	0.996	0.999	0.999

LINEAR REGRESSION ANALYSIS:				Comments:			
	CORRELATION	SLOPE	INTERCEPT	Sample filter changed BV analyzer  Use Zero Chrom? Yes			
CH <sub>4</sub>	1.000	0.998	0.0%				
NMHC	1.000	1.007	-0.1%				
THC	1.000	1.003	-0.1%				



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CH4 [ppm] NMHC [ppm]

# Meteorological System Checklist



Date:	July 5, 2023		
Technician:	Kevin Sebastian		
Station:	PRAMP 986c		
<b>Unit:</b>	<b>Make:</b>	<b>Model:</b>	<b>Serial #:</b>
Precipitation Sampler:	RM Young	52202	TB 16325
Temperature Sensor:	Rotronic	HC2-S3	20626912
Barometric Pressure Sensor:	MetOne	092	Y23358
Relative Humidity Sensor:	Rotronic	HC2-S3	20626912
Anemometer:	RM Young	05305AQ	180340

### PRECIPITATION SENSOR CHECK

Checklist:	Reply:	Comments:
Previous check date:	June 9, 2023	
Is the sensor Level?	yes	
Is the heater operating properly?	yes	
Are the bucket drain holes clean?	yes	Tested: 15:27 - 15:32
Is the screen on the housing? (screen should be on between July and September)	yes	
Is the housing clean?	yes	
Is the area around the housing clean and free from obstacles?	yes	

### TIP TEST - Slowly pour water until 10 tips are heard. (10 tips = 1 mm)

# of Tips	Data Logger Response (mm):	Manual Specification = +/- 0.1 mm
10	1.0	0.00

### AMBIENT TEMPERATURE SENSOR CHECK

Previous check date:	June 9, 2023	
Parameter:	Temperature @ 2 metres	
Reference Thermometer ID:	F.S. 160459244 expires June 6, 2023	
Reference Temperature (°C):	22.6	
Station - Ambient Temperature (°C):	23.1	
Temperature Difference (°C):	-0.5	

### BAROMETRIC PRESSURE SENSOR CHECK

Previous check date:	June 9, 2023	
Reference Barometer ID:	Brunton 05535 Expires Feb 27, 2024	
Reference Pressure - Units/Reading:	millibar	944
Station Pressure - Units/Reading:	millibar	933
Pressure Tolerance +/- 15% of error:	802 - 1086	1.17%

### RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Previous check date:	June 9, 2023	
Reference Hygrometer ID:	F.S. 160459244 expires June 6, 2023	
Reference Hygrometer % RH- Reading:	47.80	
Station Hygrometer % RH- Reading:	44.00	
RH Tolerance +/- 15% of difference:	40.63 - 54.97	7.9%

### ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Previous check date:	June 9, 2023	Previous check date:	June 9, 2023
Wind Speed Observed (kph):	5~10	Wind Direction Observed:	W
Wind speed on Data Logger (kph):	8.1	Wind Direction on Data Logger:	W
		Wind Direction Pass/Fail?:	Pass

Comments

No issues





# Meteorological Sensor Audit/Calibration

## Location Information

Company:	PRAMP	Performed By:	Limin Li
Audit Location:	986C	Reviewed By:	Chris Wesson
Audit Date:	August 5, 2022	Start/End Time (mst):	09:37/10:32
Calibration Purpose:	routine annual	Weather Conditions:	A few clouds

## Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	RM Young	Velocity Voltage Output Range:	n/a
Sensor Model:	05305AQ	Velocity Unit Output Range:	0-180
Serial #:	180340	Direction Voltage Output Range:	n/a
Previous Cal/Audit Date:	July 3, 2021	Direction Unit Output Range:	0-360

## Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA03309 expires June 07, 2023

## Wind Speed Audit Data **\*\*+/- 2% of the average correction factor is the limit\*\***

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.0	0.0	-
1000	18.4	18.3	18.3	1.007
2000	36.9	36.7	36.7	1.004
3000	55.3	55.1	55.1	1.003
4000	73.7	73.6	73.6	1.002
5000	92.2	92.0	92.0	1.002
6000	110.6	110.5	110.5	1.001
7000	129.0	128.9	128.9	1.001
8000	147.4	147.3	147.3	1.001
9000	165.9	165.8	165.8	1.000
10000	184.3	184.2	184.2	1.001
The audit meets AMD requirements.			Average Correction Factor=	1.002

## Wind Direction Audit Data **\*\*+/- 3° of the absolute average degrees difference for all points is the limit\*\***

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	2	354	2.0	1.0	1.5
30	330	32	333	-2.0	-3.0	2.5
60	300	61	303	-1.0	-3.0	2.0
90	270	90	273	0.0	-3.0	1.5
120	240	120	242	0.0	-2.0	1.0
150	210	150	210	0.0	0.0	0.0
180	180	180	179	0.0	1.0	0.5
210	150	210	149	0.0	1.0	0.5
240	120	242	120	-2.0	0.0	1.0
270	90	273	90	-3.0	0.0	1.5
300	60	303	61	-3.0	-1.0	2.0
330	30	332	32	-2.0	-2.0	2.0
355	0	354	2	1.0	2.0	1.5
The audit meets AMD requirements.				Average Absolute Degrees Difference=		1.3

## Comments:

Magnetic declination = 15Deg(E)

**END OF REPORT**



## Peace River Area Monitoring Program

# JULY 2023

## Ambient Air Monitoring Calibration Report

### - RENO-B STATION-

### CAL-PRAMP-202307-01563

**Operation and Maintenance:**

Bureau Veritas Canada

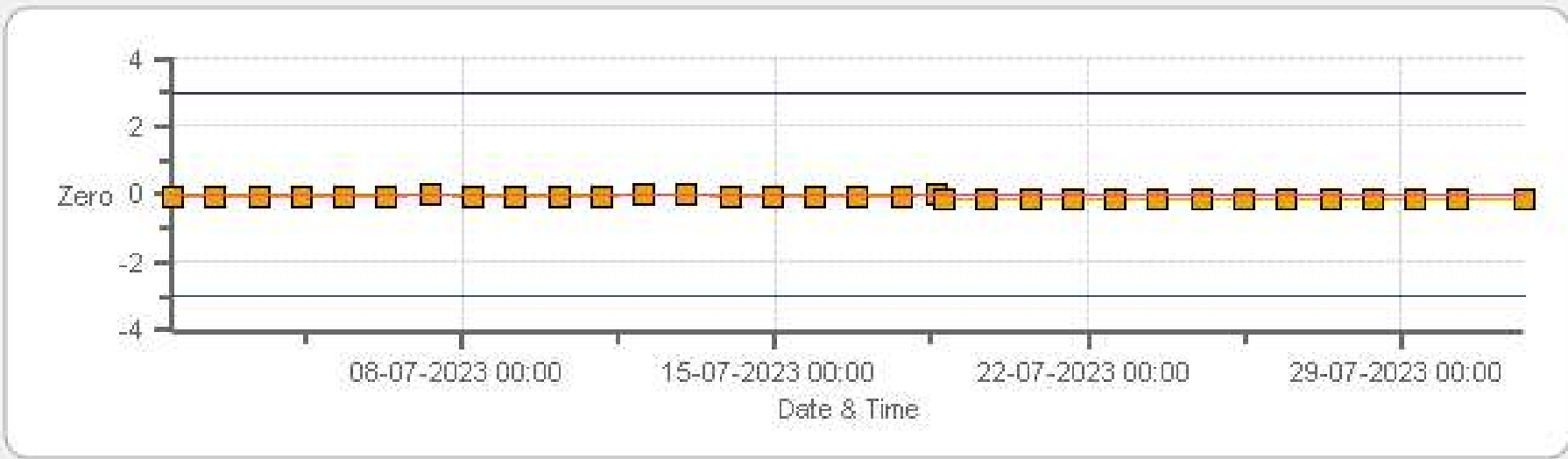
**Data Validation and Report:**

Bureau Veritas Canada

August 3, 2023

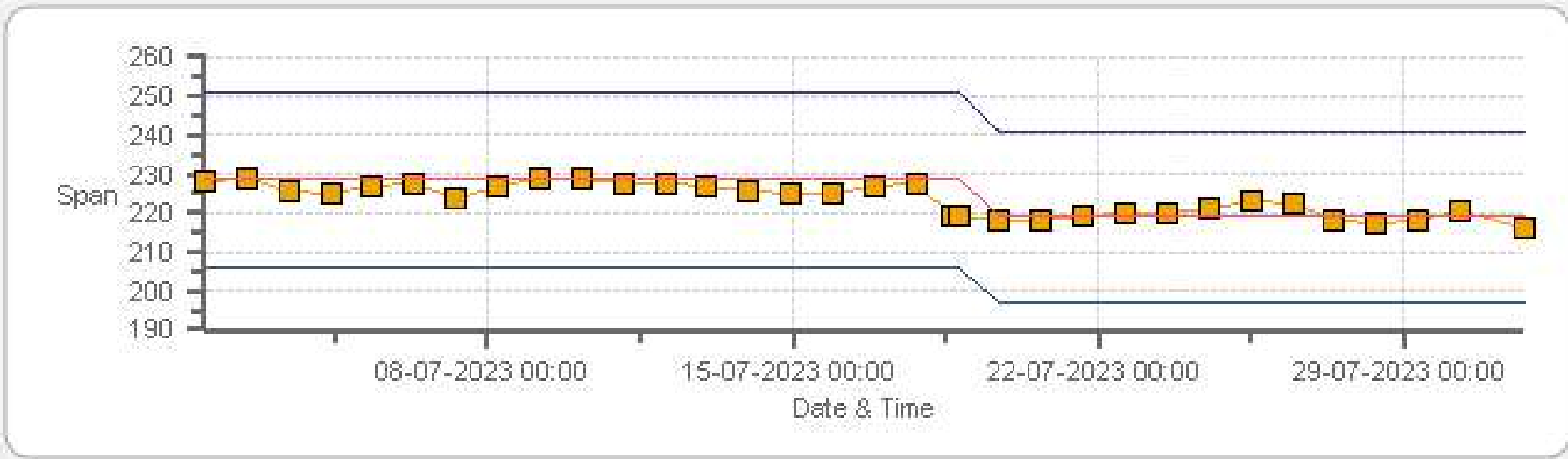
# DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Zero



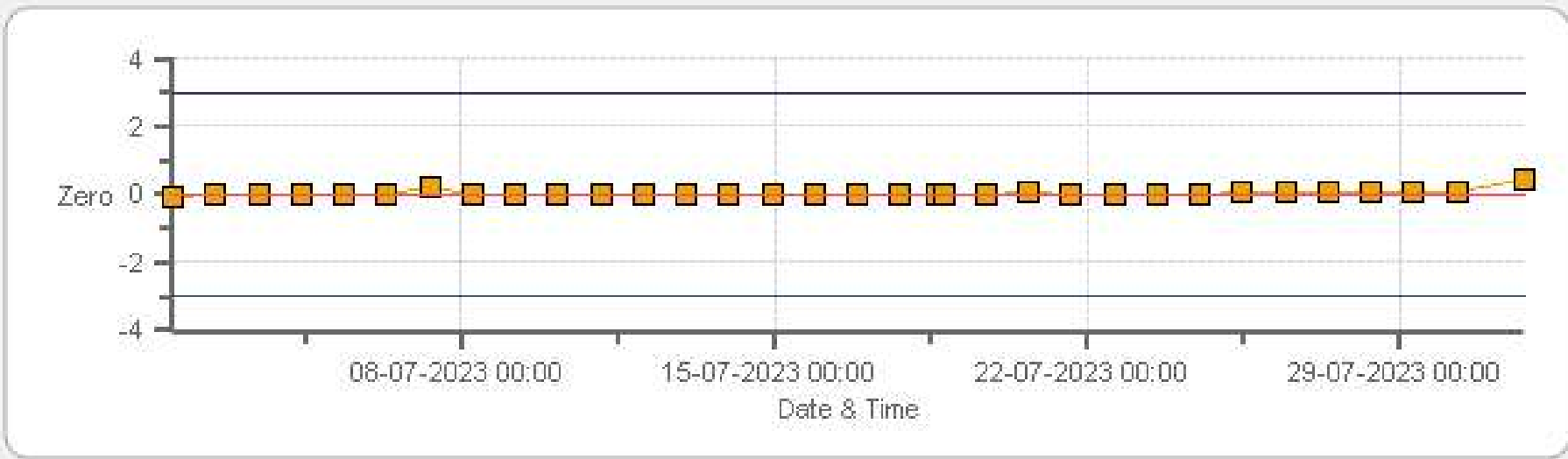
Zero Zero Ref Zero Low Zero High

SO2[ppb] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Span



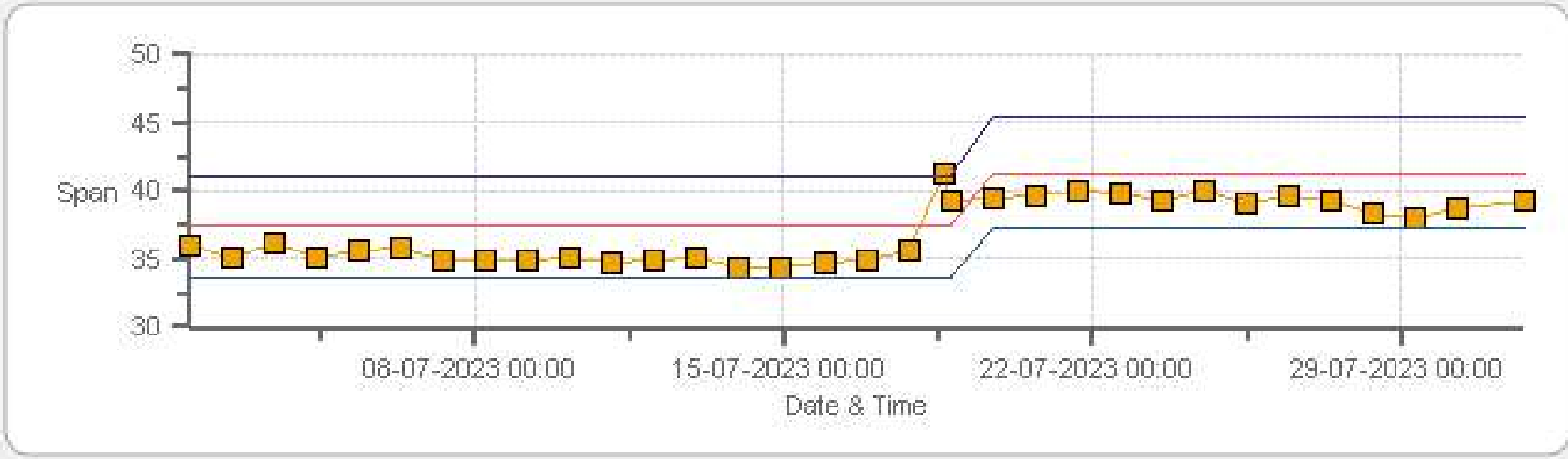
Span Span Ref Span Low Span High

TRS[ppb] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Zero



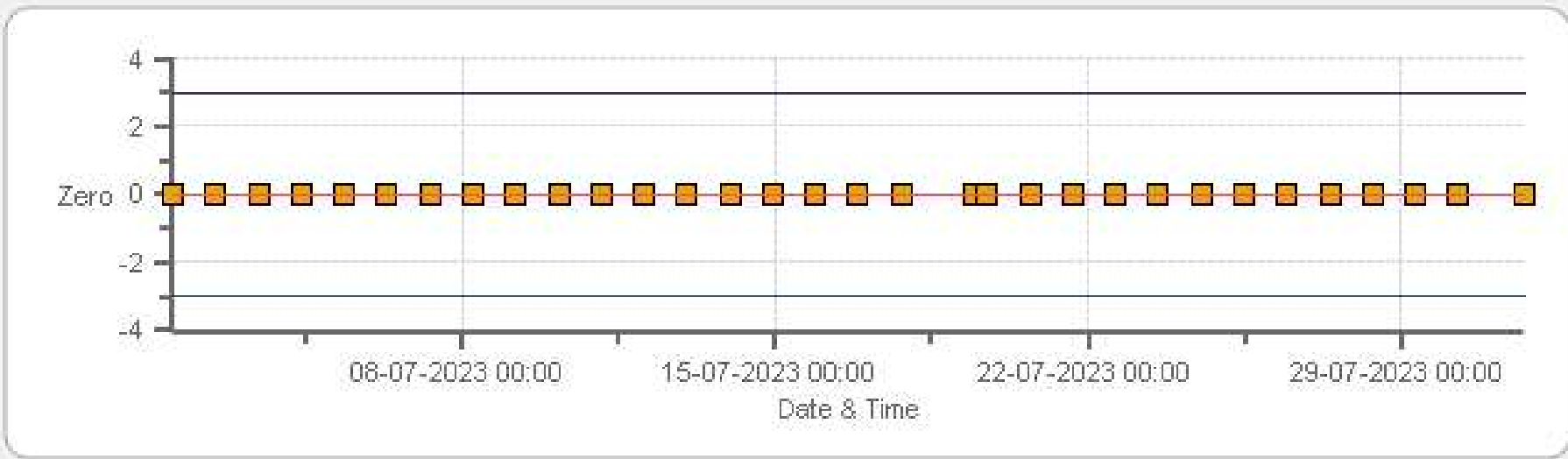
Zero Zero Ref Zero Low Zero High

TRS[ppb] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Span



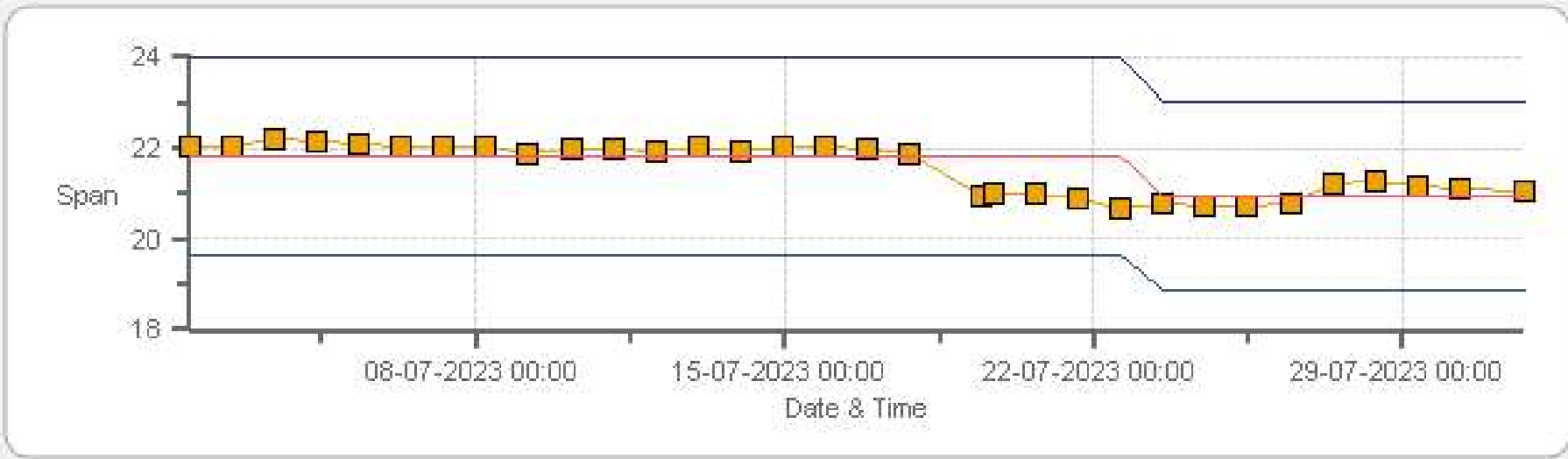
Span SpanRef Span Low Span High

THC55[ppm] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Zero



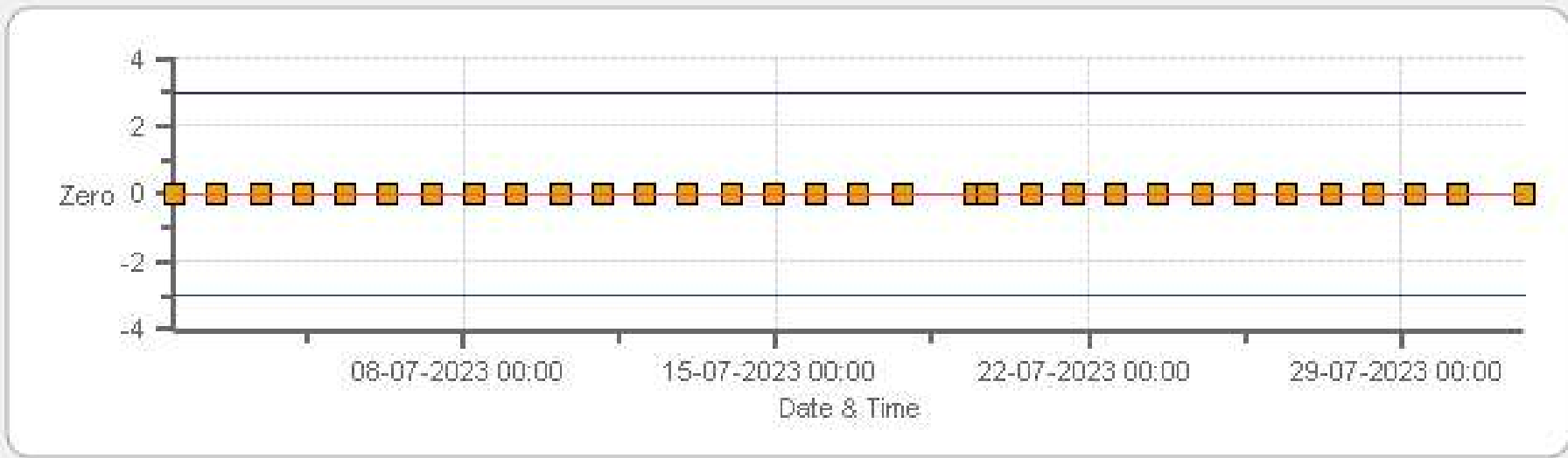
Zero Zero Ref Zero Low Zero High

THC55[ppm] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Span



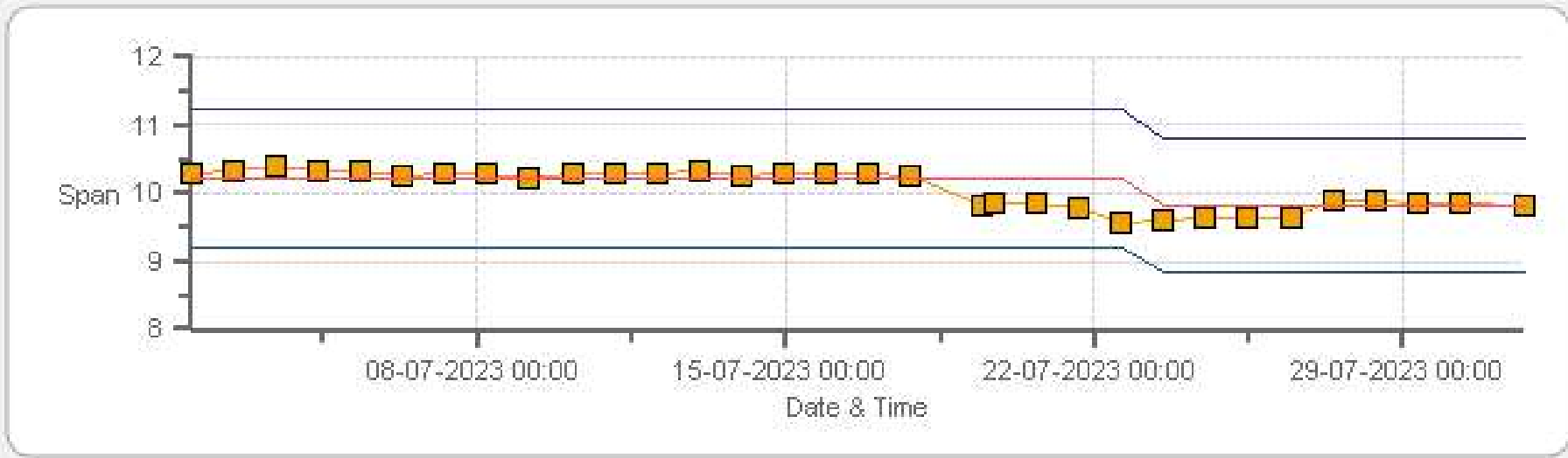
Span Span Ref Span Low Span High

CH4[ppm] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Zero



Zero Zero Ref Zero Low Zero High

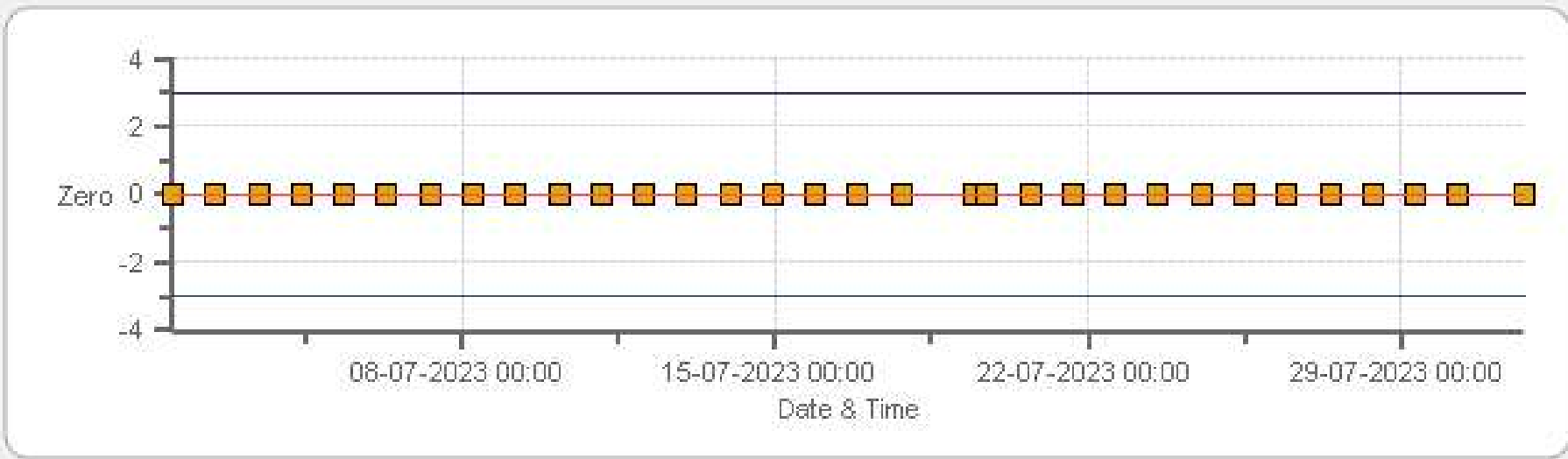
CH4[ppm] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Span



Span Span Ref Span Low Span High

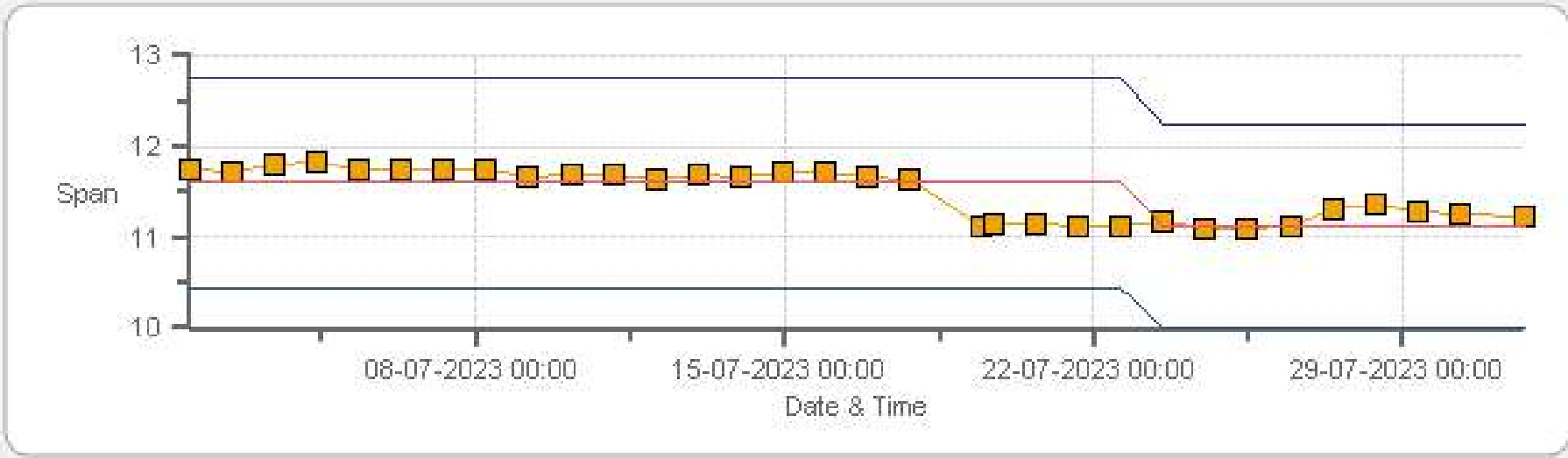


NMHC[ppm] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Zero



Zero Zero Ref Zero Low Zero High

NMHC[ppm] Calibration: PRAMP RENO-B Monthly: 07-2023 Type: SpanAndZero - Span



Span Span Ref Span Low Span High

# MULTI-POINT CALIBRATION RECORDS

# SO2 Analyzer Calibration by Dilution



DATE:	18-Jul-2023	PREVIOUS CALIBRATION DATE:	22-Jun-2023
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.004
CLIENT:	PRAMP	TEMPERATURE (°C):	21.4
LOCATION:	Reno-B	BAROMETRIC (mBar):	938
PURPOSE:	Routine	START TIME (MST):	09:12
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	15:00

## ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	500 ppb
SERIAL #	12101910505	FLOW (mL/min)	437
INITIAL		FINAL	
BKG/OFFSET	1.14	BKG/OFFSET	1.18
COEF/SLOPE	0.944	COEF/SLOPE	0.923
Expected (reference) Value	228.5	Expected (reference) Value	219

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	M701
ID:	58100720	ID:	5004
MFC CALIBRATION DATE:	15-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL109693	HIGH ID	n/a
CONC (ppm):	25.00	EXPIRY DATE	n/a
CYLINDER (psi):	1900	LOW ID	n/a
EXPIRY DATE	02-Nov-2025	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	390	190	95
RANGE	300 - 400	150 - 200	50 - 100

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

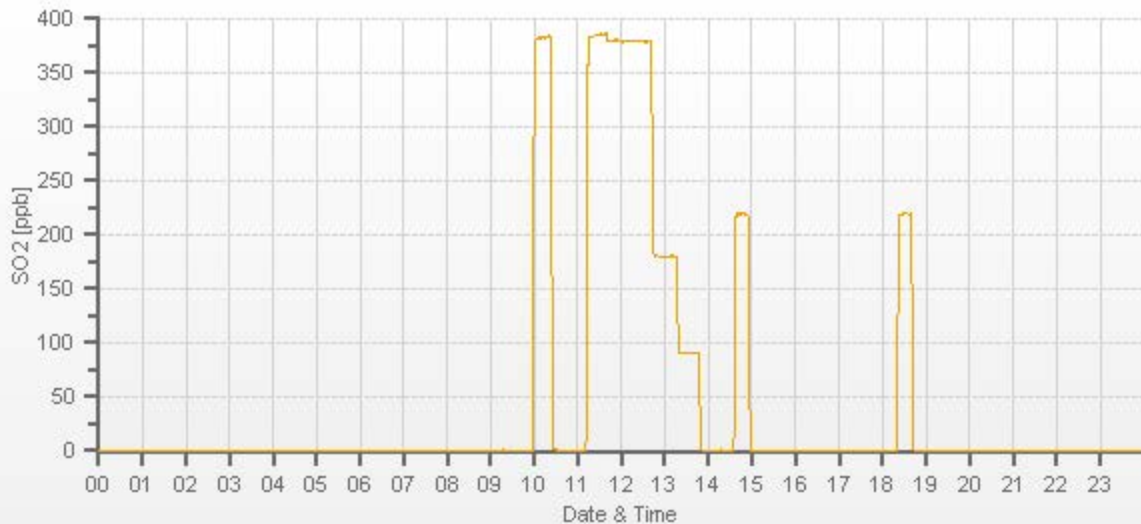
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4002	<del>        </del>	4002	0.00	-0.1	0	<del>        </del>	<del>        </del>
3941	60.80	4002	379.81	383.2	378.5	0.991	1.003
3973	28.80	4002	179.91	n/a	180.2	n/a	0.998
3988	14.40	4002	89.96	n/a	89.9	n/a	1.001

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.997	0.1%

## COMMENTS:

Sample filter changed
-----------------------



# TRS Analyzer Calibration by Dilution



DATE:	18-Jul-2023	PREVIOUS CALIBRATION DATE:	22-Jun-2023
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	PRAMP	TEMPERATURE (°C):	21.4
LOCATION:	Reno-B	BAROMETRIC (mBar):	938
PURPOSE:	Routine	START TIME (MST):	09:12
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	15:00

## ANALYZER:

MAKE/MODEL	Thermo 43iQTL	RANGE	100 ppb
SERIAL #	12101910504	FLOW (mL/min)	397
INITIAL		FINAL	
BKG/OFFSET	0.91	BKG/OFFSET	1.03
COEF/SLOPE	0.862	COEF/SLOPE	0.958
Expected (reference) Value	37.4	Expected (reference) Value	41.35

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	M701
ID:	58100720	ID:	5004
MFC CALIBRATION DATE:	15-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0002519	HIGH ID	n/a
CONC (ppm):	9.41	EXPIRY DATE	n/a
CYLINDER (psi):	1500	LOW ID	n/a
EXPIRY DATE	10-Nov-2023	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

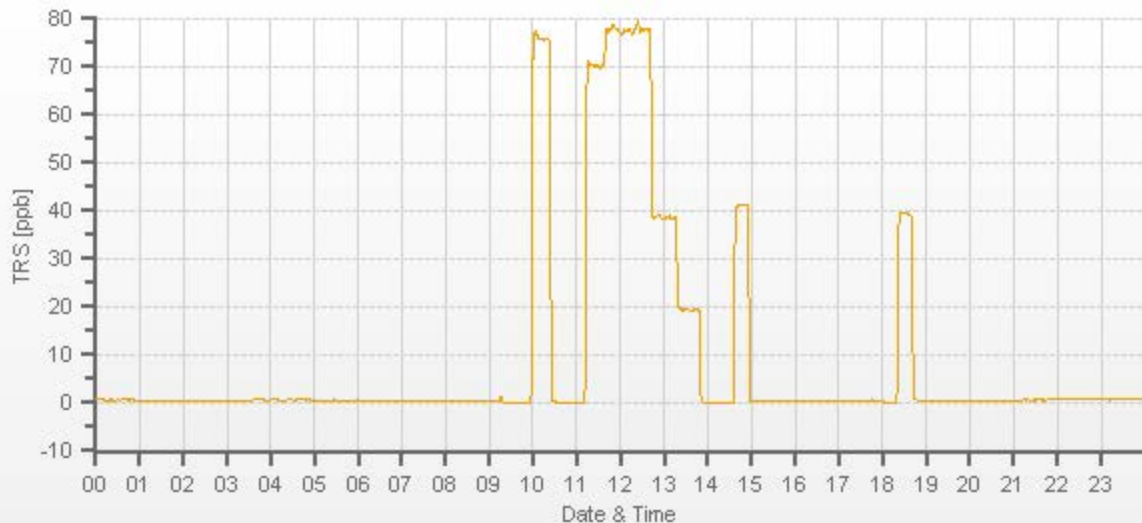
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4002	<del>33.10</del>	4002	0.00	-0.02	0	<del>1.027</del>	<del>1.002</del>
3969	33.10	4002	77.83	75.78	77.7	1.027	1.002
3986	16.20	4002	38.09	n/a	38.73	n/a	0.984
3994	8.10	4002	19.05	n/a	19.2	n/a	0.992

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.998	0.2%

## COMMENTS:

TRS Converter CDNOVA CDN-101 #590. Sample Filter Changed
---



# Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	18-Jul-2023	PREVIOUS CALIBRATION DATE:	22-Jun-2023	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	21.4		Thermo 55i	1505664392	1121
LOCATION:	Reno-B	BAROMETRIC (mBar):	938	PARAMETER:	CH4	NMHC	THC
PURPOSE	Removal/Shut-down	START TIME (MST):	09:12	RANGE (ppm):	20	20	40
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	11:52	PREVIOUS CF:	1.004	1.003	1.003

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Teledyne	CYLINDER ID:	LL68768	HIGH ID:	n/a
MODEL:	2010	MODEL:	M701	CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub> (ppm):	897.0   301.0	HIGH EXPIRY:	n/a
ID:	26801218	ID:	5004	CYLINDER (psi):	1900	LOW ID:	n/a
MFC CALIBRATION DATE:	09-Mar-2023	OXIDIZER ID:	Internal	EXPIRY DATE	11-Aug-2029	LOW EXPIRY:	n/a

## CALIBRATION PARAMETERS:

POINT (CH <sub>4</sub> /NMHC)	HIGH	MID	LOW	CH <sub>4</sub> EQUIVILANCE	
TARGET	14	7	3.5	C <sub>3</sub> H <sub>8</sub> as CH <sub>4</sub>	827.8
RANGE	12 - 16	6 - 8	2 - 4	THC as CH <sub>4</sub>	1724.8

## EXPECTED (REFERENCE) VALUE:

INITIAL	CH <sub>4</sub>	NMHC	THC	FINAL	CH <sub>4</sub>	NMHC	THC
	10.22	11.60	21.81		n/a	n/a	n/a

## CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC
3098	<del>50.30</del>	3098	0.00	0.00	0.00	0.01	0.00	0.01	n/a	n/a	n/a	<del>1.004</del>	<del>1.004</del>	<del>1.004</del>	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>
3050	50.30	3100	14.55	13.43	27.99	14.50	13.38	27.88	n/a	n/a	n/a	1.004	1.004	1.004	n/a	n/a	n/a
3075	25.10	3100	7.26	6.70	13.96	7.26	6.69	13.95	n/a	n/a	n/a	1.000	1.002	1.001	n/a	n/a	n/a
3087	12.60	3100	3.65	3.36	7.01	3.63	3.40	7.03	n/a	n/a	n/a	1.004	0.990	0.997	n/a	n/a	n/a

## LINEAR REGRESSION ANALYSIS:

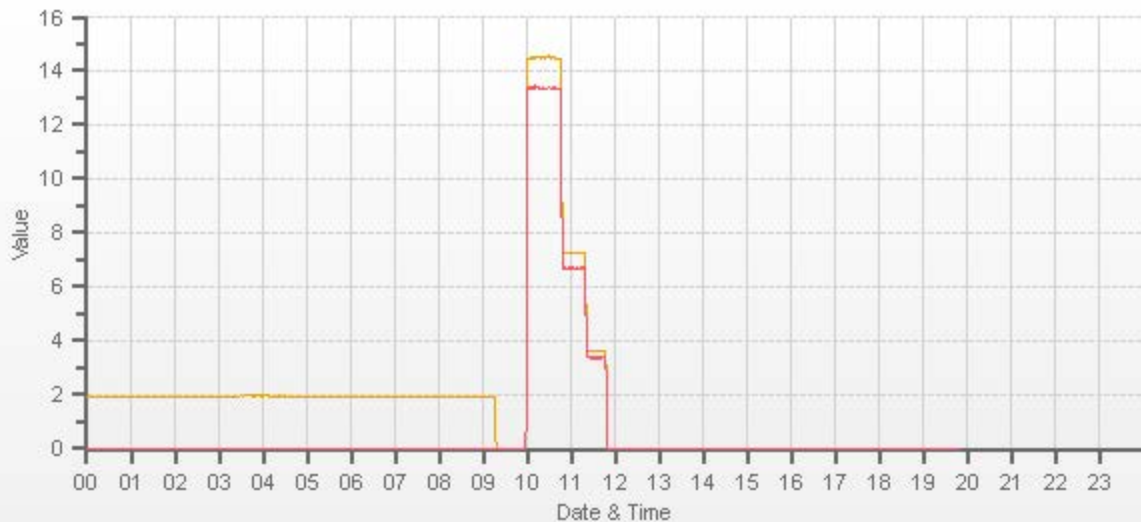
	CORRELATION	SLOPE	INTERCEPT
CH <sub>4</sub>	1.000	0.996	0.1%
NMHC	1.000	0.995	0.1%
THC	1.000	0.996	0.1%

## Comments:

Sample filter changed

Use Zero Chrom?

Yes



CAL-PRAMP-202307-01563



# Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	19-Jul-2023	PREVIOUS CALIBRATION DATE:	n/a	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	24.4		Thermo 55i	12101910497	1095
LOCATION:	Reno-B	BAROMETRIC (mBar):	941	PARAMETER:	CH4	NMHC	THC
PURPOSE	Install/Post-Repair	START TIME (MST):	08:11	RANGE (ppm):	20	20	40
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	11:15	PREVIOUS CF:	n/a	n/a	n/a

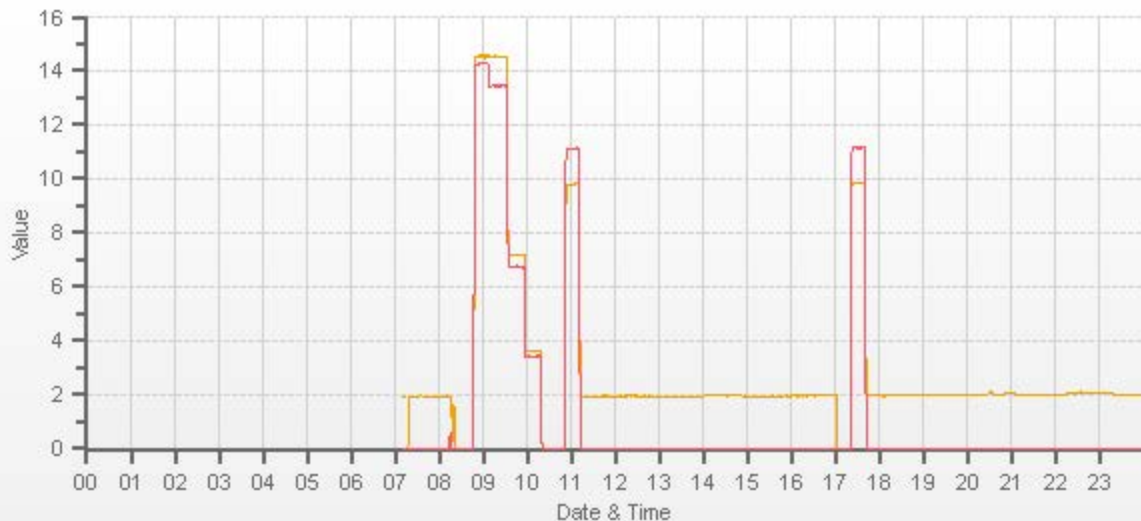
CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Teledyne	CYLINDER ID:	LL68768	HIGH ID:	n/a
MODEL:	2010	MODEL:	M701	CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub> (ppm):	897.0   301.0	HIGH EXPIRY:	n/a
ID:	26801218	ID:	5004	CYLINDER (psi):	1900	LOW ID:	n/a
MFC CALIBRATION DATE:	09-Mar-2023	OXIDIZER ID:	Internal	EXPIRY DATE	11-Aug-2029	LOW EXPIRY:	n/a

CALIBRATION PARAMETERS:							
POINT (CH <sub>4</sub> /NMHC)	HIGH	MID	LOW	CH <sub>4</sub> EQUIVILANCE			
TARGET	14	7	3.5	C <sub>3</sub> H <sub>8</sub> as CH <sub>4</sub>		827.8	
RANGE	12 - 16	6 - 8	2 - 4	THC as CH <sub>4</sub>		1724.8	

EXPECTED (REFERENCE) VALUE:							
INITIAL	CH <sub>4</sub>	NMHC	THC	FINAL	CH <sub>4</sub>	NMHC	THC
	n/a	n/a	n/a		n/a	9.83	11.12

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC
3098	<del>50.30</del>	3098	0.00	0.00	0.00	n/a	n/a	n/a	0.00	0.00	0.00	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>
3050	50.30	3100	14.55	13.43	27.99	n/a	n/a	n/a	14.54	13.45	27.98	n/a	n/a	n/a	1.001	0.999	1.000
3075	25.20	3100	7.29	6.73	14.02	n/a	n/a	n/a	7.21	6.75	13.97	n/a	n/a	n/a	1.011	0.997	1.004
3087	12.60	3100	3.65	3.36	7.01	n/a	n/a	n/a	3.60	3.41	7.01	n/a	n/a	n/a	1.013	0.987	1.000

LINEAR REGRESSION ANALYSIS:				Comments:			
	CORRELATION	SLOPE	INTERCEPT	Sample filter changed			
CH <sub>4</sub>	1.000	0.999	-0.2%				
NMHC	1.000	1.000	0.1%				
THC	1.000	1.000	0.0%	Use Zero Chrom?		No	



CAL-PRAMP-202307-01563

Page 16 of 19  
CH4 [ppm] NMHC [ppm]

# Meteorological System Checklist



Date:	July 18, 2023
Technician:	Kevin Sebastian
Station:	PRAMP Reno

Unit:	Make:	Model:	Serial #:
Precipitation Sampler:	RM Young	52202	TB 15877
Temperature Sensor:	Rotronic	HC2-S3	20467597
Barometric Pressure Sensor:	MetOne	92	A17940
Relative Humidity Sensor:	Rotronic	HC2-S3	20467597
Anemometer:	RM Young	05305AQ	174795

### PRECIPITATION SENSOR CHECK

Checklist:	Reply:	Comments:
Previous check date:	June 22, 2023	
Is the sensor Level?	yes	
Is the heater operating properly?	yes	
Are the bucket drain holes clean?	yes	Audit: 14:01- 14:13
Is the screen on the housing? (screen should be on between July and September)	yes	
Is the housing clean?	yes	
Is the area around the housing clean and free from obstacles?	yes	

#### TIP TEST - Slowly pour water until 10 tip are heard. (10 tips = 1 mm)

# of Tips	Data Logger Response (mm):	Manual Specification = +/- 0.1 mm
10	1.00	0.00

### AMBIENT TEMPERATURE SENSOR CHECK

Previous check date:	June 22, 2023
Parameter:	Temperature @ 2 metres
Reference Thermometer ID:	FS 170286131 expires May 18, 2024
Reference Temperature (°C):	22.3
Station - Ambient Temperature (°C):	21.1
Temperature Difference (°C):	1.2

### BAROMETRIC PRESSURE SENSOR CHECK

Previous check date:	June 22, 2023
Reference Barometer ID:	Brunton #05490 Expiry - February 27 2024
Reference Pressure - Units/Reading:	millibar 939.7
Station Pressure - Units/Reading:	millibar 940
Pressure Tolerance +/- 15% of error:	799 - 1081 -0.03%

### RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Previous check date:	June 22, 2023
Reference Hygrometer ID:	FS 170286131 expires May 18, 2024
Reference Hygrometer % RH- Reading:	50.30
Station Hygrometer % RH- Reading:	57.10
RH Tolerance +/- 15% of difference:	42.76 - 57.85 -13.5%

### ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Previous check date:	June 22, 2023	Previous check date:	June 22, 2023
Wind Speed Observed (kph):	10~20	Wind Direction Observed:	SW
Wind speed on Data Logger (kph):	12	Wind Direction on Data Logger:	SW
		Wind Direction Pass/Fail?:	Pass

Comments



# Meteorological Sensor Audit/Calibration

## Location Information

Company:	PRAMP	Performed By:	Chris Wesson
Audit Location:	Reno-B	Reviewed By:	Limin Li
Audit Date:	November 23, 2022	Start/End Time (mst):	15:40 / 16:44
Calibration Purpose:	installation	Weather Conditions:	Mainly cloudy with clear breaks

## Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	RM Young	Velocity Voltage Output Range:	n/a
Sensor Model:	05305AQ	Velocity Unit Output Range:	0-200
Serial #:	174795	Direction Voltage Output Range:	n/a
Previous Cal/Audit Date:	n/a	Direction Unit Output Range:	0-360

## Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# R9133 expires Oct 18, 2024

## Wind Speed Audit Data **\*\*+/- 2% of the average correction factor is the limit\*\***

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.0	0.0	-
1000	18.4	18.3	18.3	1.007
2000	36.9	36.7	36.7	1.004
3000	55.3	55.1	55.1	1.003
4000	73.7	73.6	73.6	1.002
5000	92.2	92.0	92.0	1.002
6000	110.6	110.5	110.5	1.001
7000	129.0	128.9	128.9	1.001
8000	147.4	147.3	147.3	1.001
9000	165.9	165.8	165.8	1.000
10000	184.3	184.2	184.2	1.001
The audit meets AMD requirements.			Average Correction Factor=	1.002

## Wind Direction Audit Data **\*\*+/- 3° of the absolute average degrees difference for all points is the limit\*\***

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	0	353	0.0	2.0	1.0
30	330	28	327	2.0	3.0	2.5
60	300	58	298	2.0	2.0	2.0
90	270	89	271	1.0	-1.0	1.0
120	240	119	238	1.0	2.0	1.5
150	210	149	208	1.0	2.0	1.5
180	180	179	178	1.0	2.0	1.5
210	150	208	149	2.0	1.0	1.5
240	120	237	119	3.0	1.0	2.0
270	90	267	89	3.0	1.0	2.0
300	60	297	58	3.0	2.0	2.5
330	30	329	28	1.0	2.0	1.5
355	0	353	0	2.0	0.0	1.0
The audit meets AMD requirements.				Average Absolute Degrees Difference=		1.7

## Comments:

Declination = 15 deg East  
Output via RMY 32400 serial interface

**END OF REPORT**



## **Peace River Area Monitoring Program**

# **JULY 2023**

## **Ambient Air Monitoring Calibration Report**

### **- AQHI - GRIMSHAW STATION-**

### **CAL-PRAMP-202307-01689**

**Operation and Maintenance:**

Bureau Veritas Canada

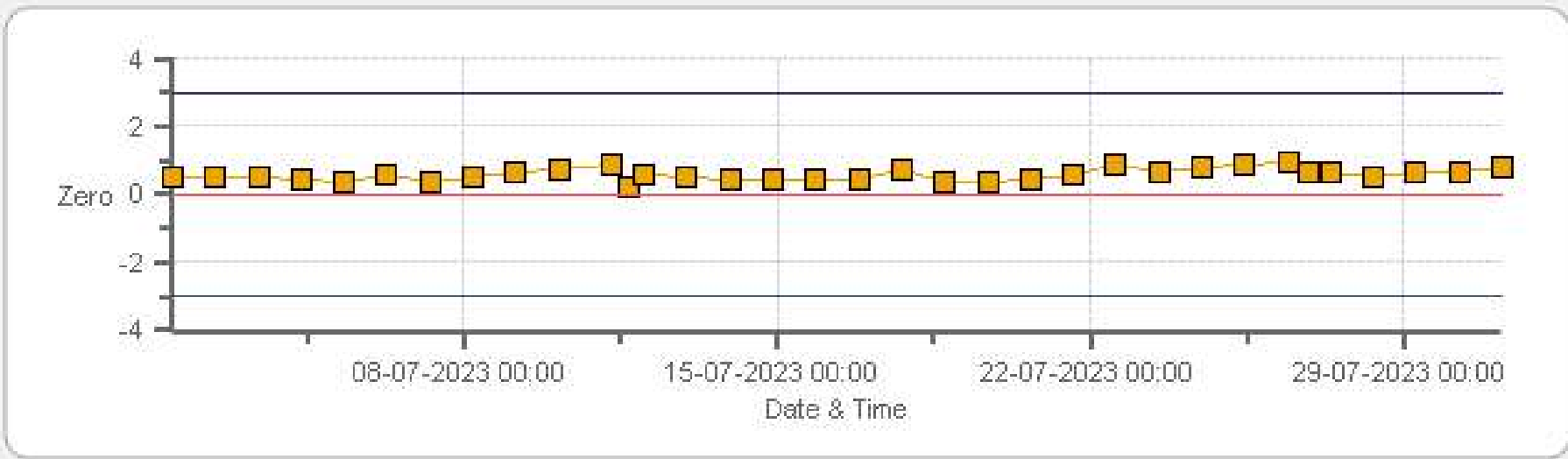
**Data Validation and Report:**

Bureau Veritas Canada

August 3, 2023

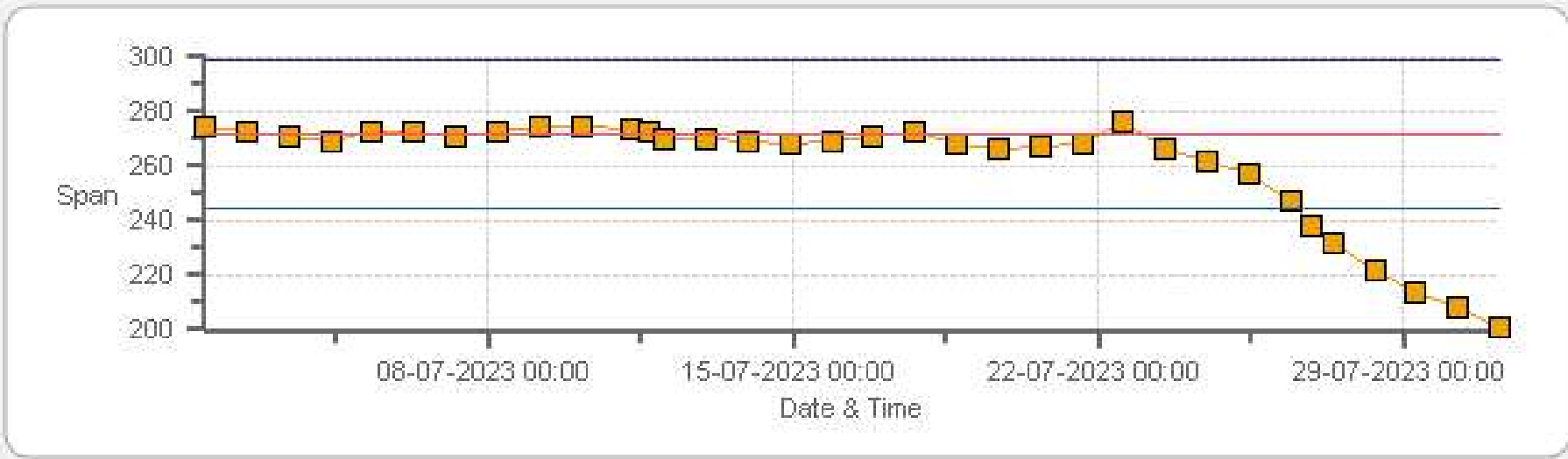
# DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Zero



Zero Zero Ref Zero Low Zero High

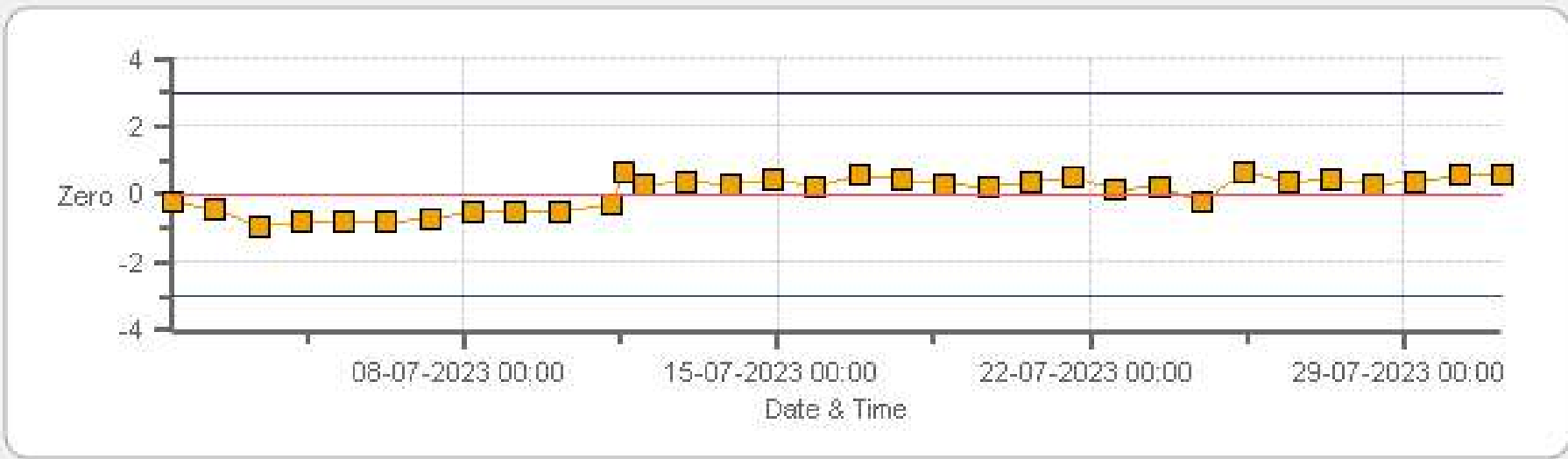
SO2[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Span



Span Span Ref Span Low Span High

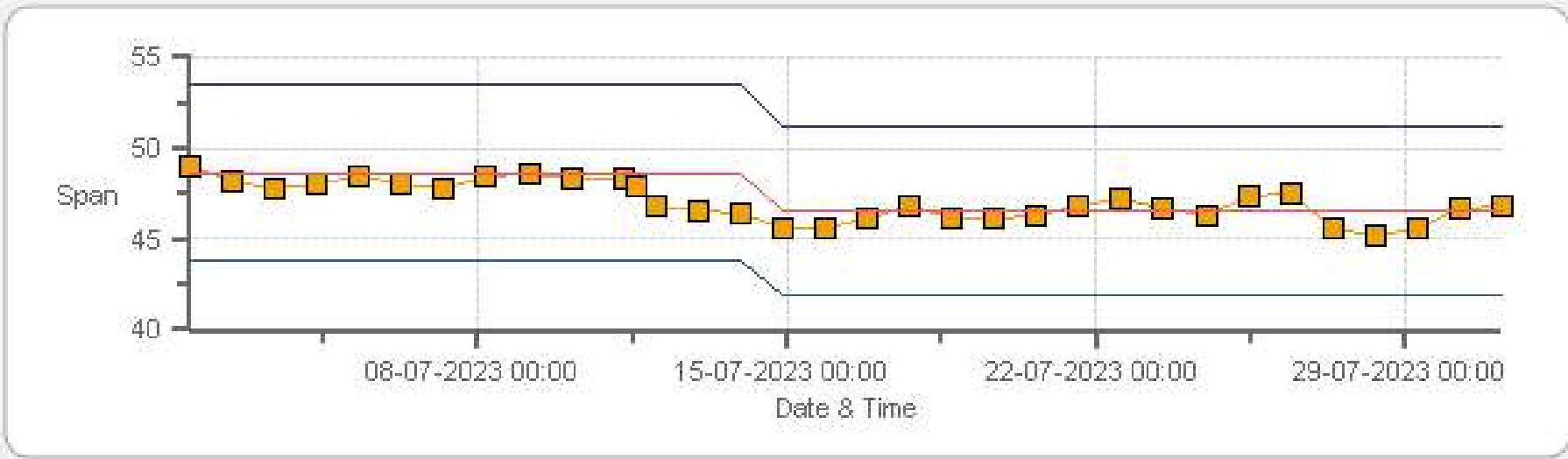


TRS[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Zero



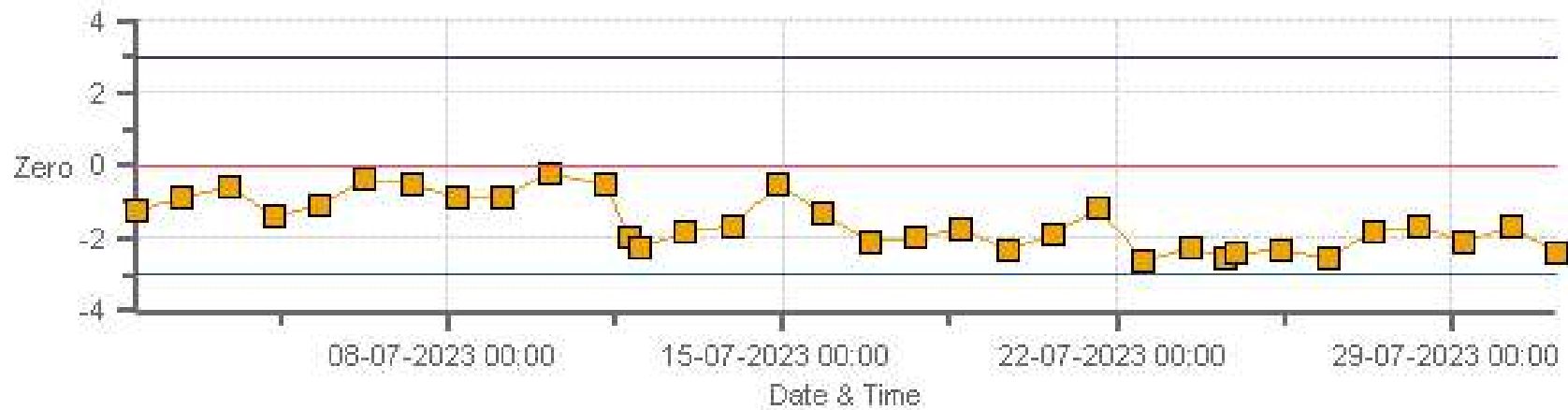
Zero Zero Ref Zero Low Zero High

TRS[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Span



Span SpanRef Span Low Span High

NOX[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Zero



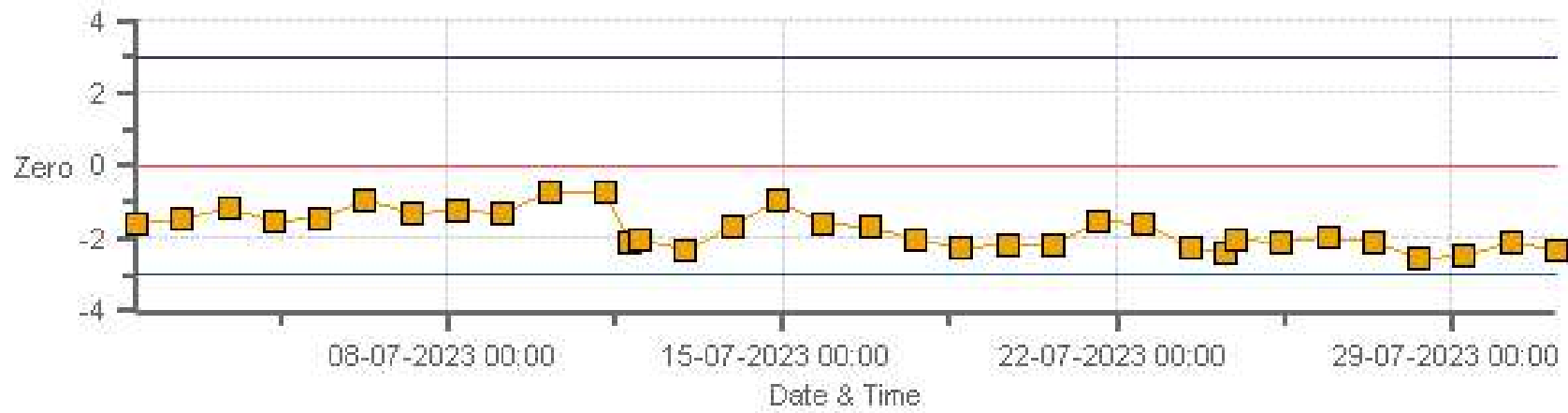
Zero Zero Ref Zero Low Zero High

NOX[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Span



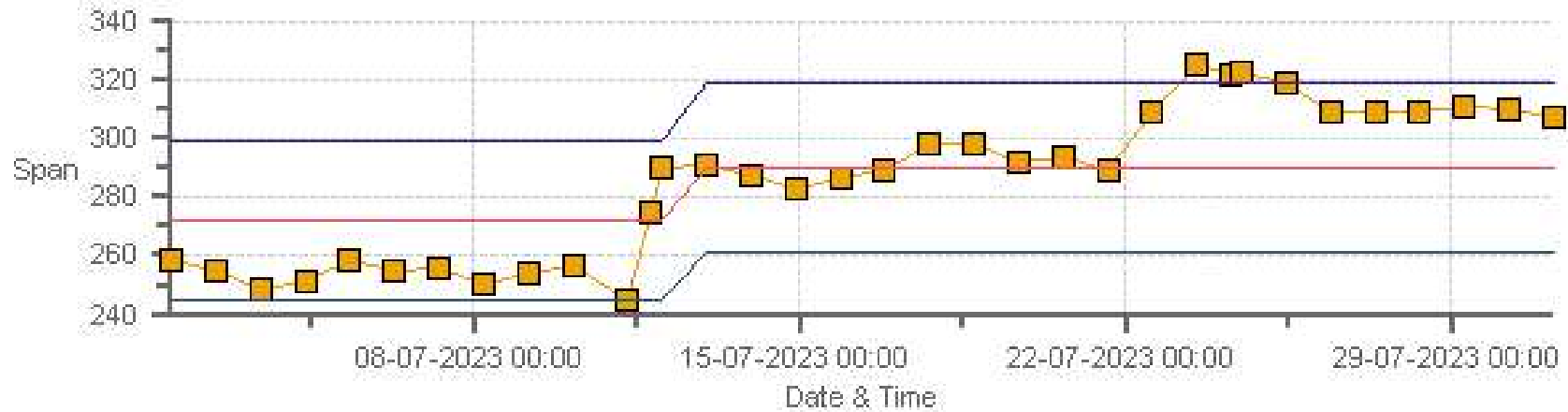
Span Span Ref Span Low Span High

NO2[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Zero



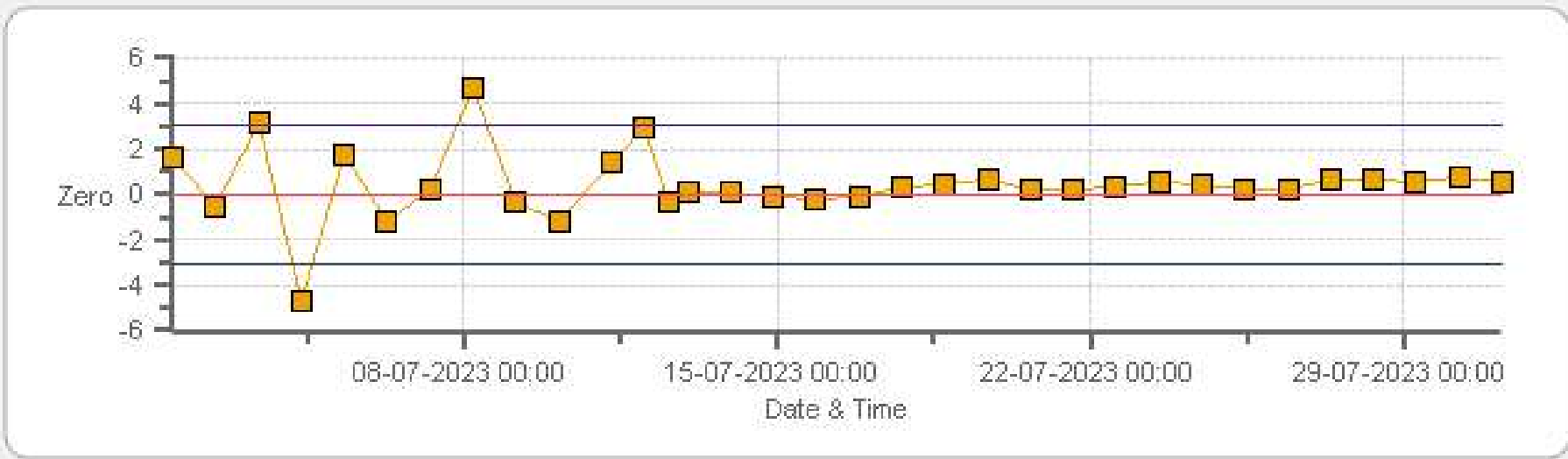
Zero Zero Ref Zero Low Zero High

NO2[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Span



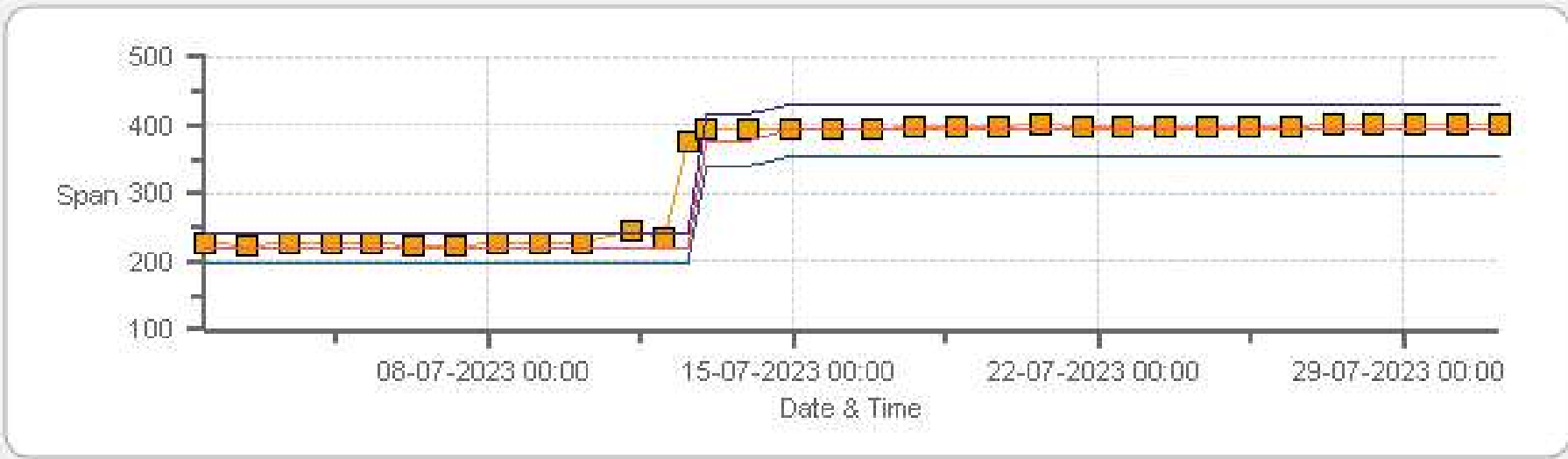
Span Span Ref Span Low Span High

O3[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Zero



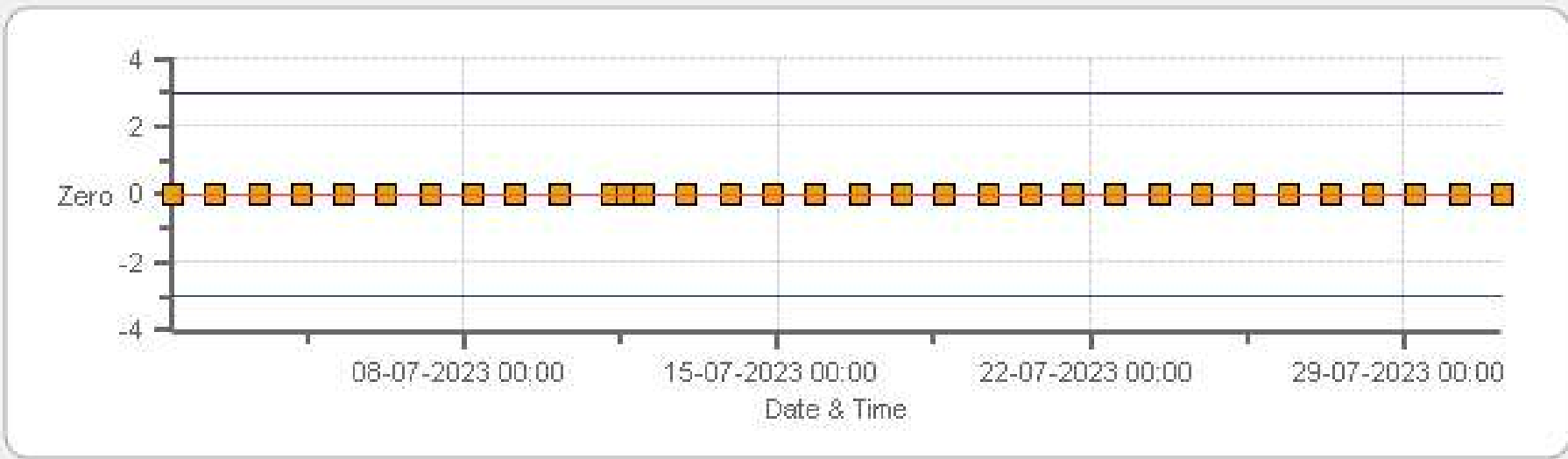
Zero Zero Ref Zero Low Zero High

O3[ppb] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Span



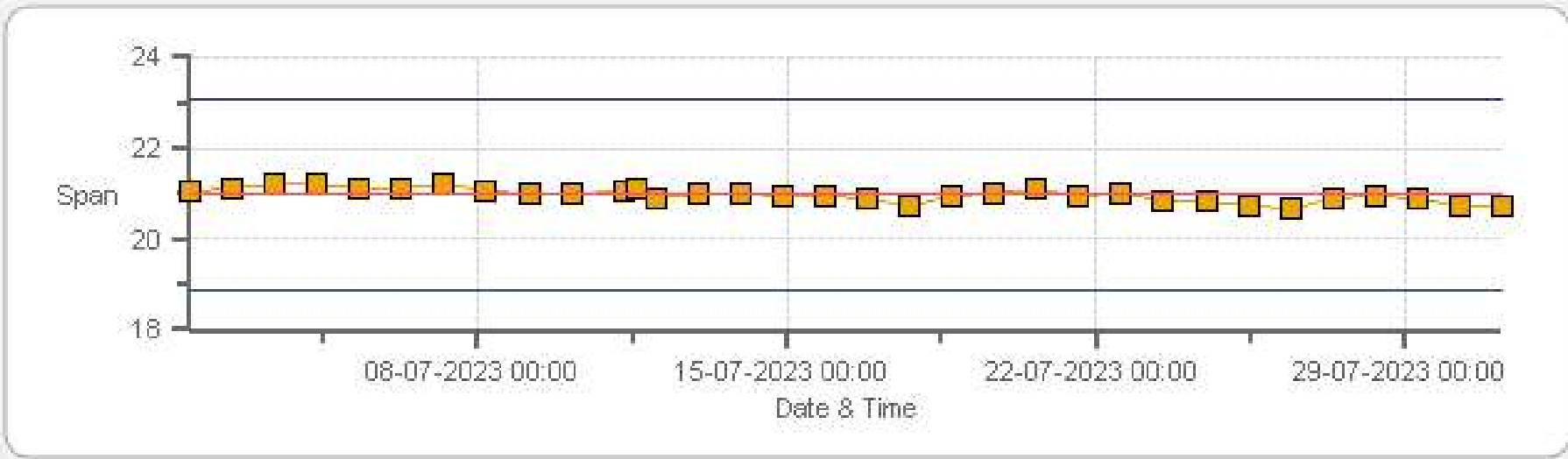
Span Span Ref Span Low Span High

THC55[ppm] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Zero



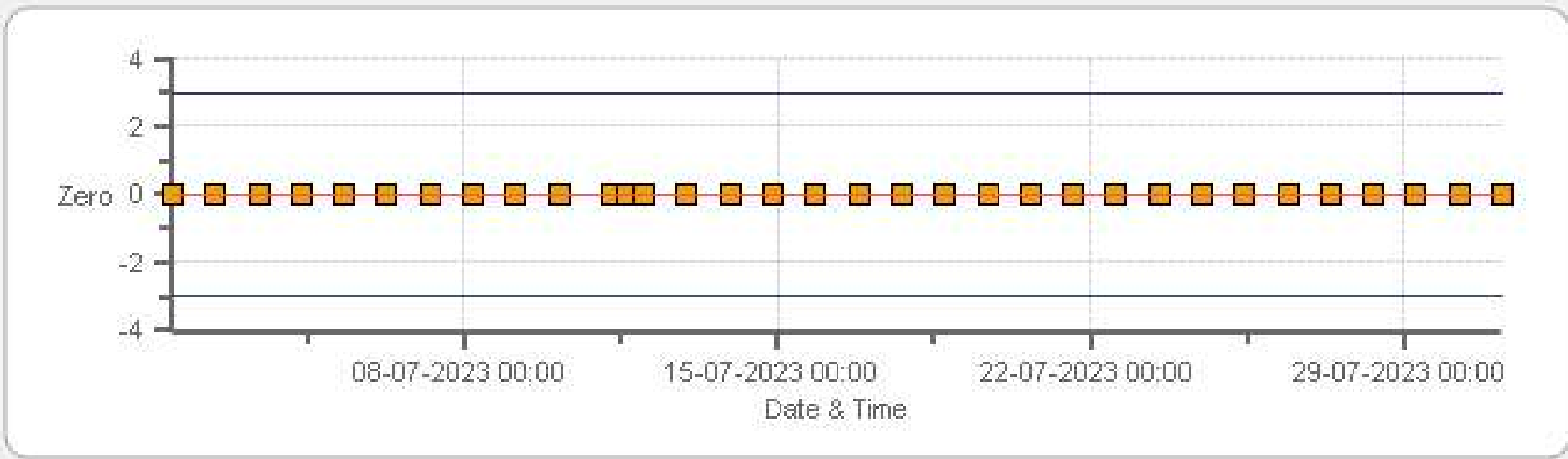
Zero Zero Ref Zero Low Zero High

THC55[ppm] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Span



Span Span Ref Span Low Span High

CH4[ppm] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Zero



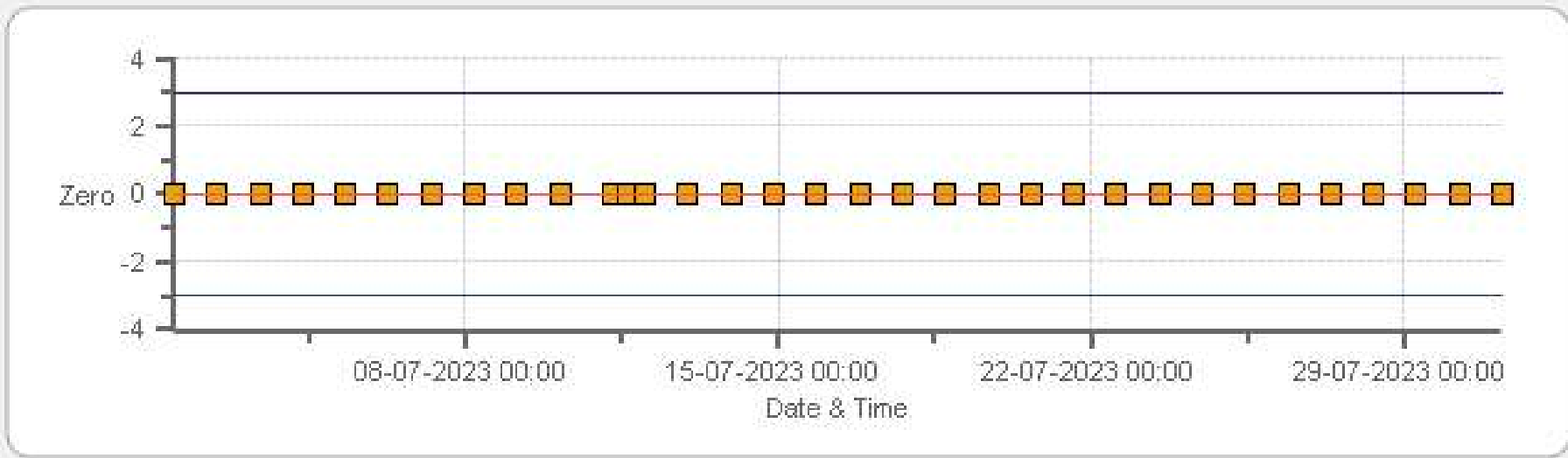
Zero Zero Ref Zero Low Zero High

CH4[ppm] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Span



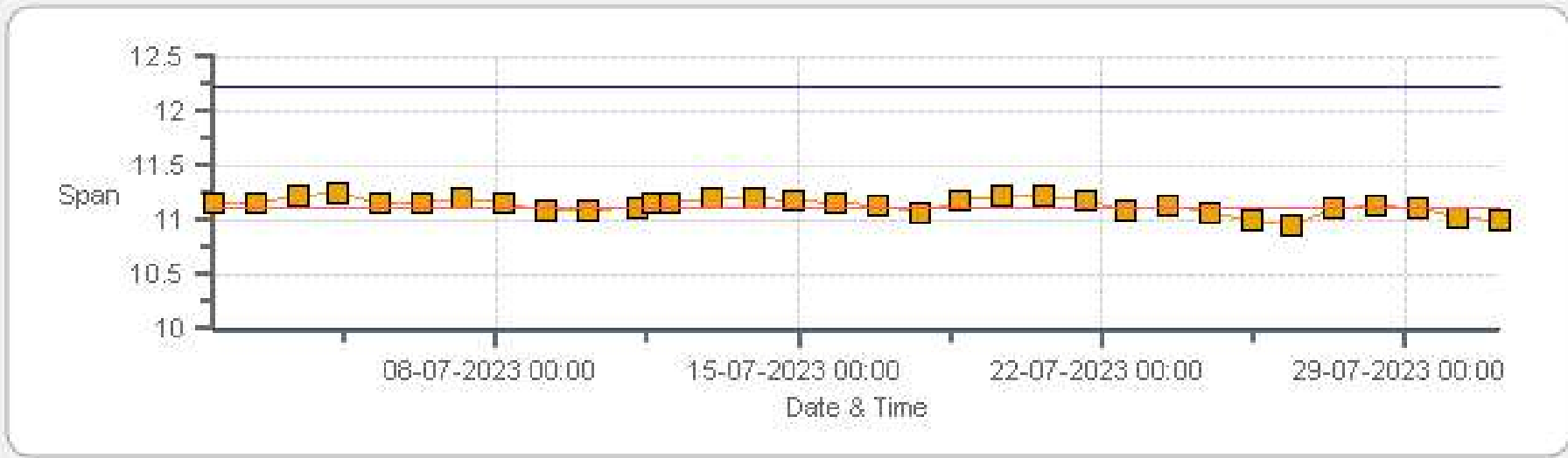
Span SpanRef Span Low Span High

NMHC[ppm] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Zero



Zero Zero Ref Zero Low Zero High

NMHC[ppm] Calibration: AQHI Grimshaw Monthly: 07-2023 Type: SpanAndZero - Span



Span Span Ref Span Low Span High

# MULTI-POINT CALIBRATION RECORDS



# SO2 Analyzer Calibration by Dilution



DATE:	11-Jul-2023	PREVIOUS CALIBRATION DATE:	06-Jun-2023
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	0.999
CLIENT:	PRAMP	TEMPERATURE (°C):	22.2
LOCATION:	Grimshaw	BAROMETRIC (mBar):	940
PURPOSE:	Routine	START TIME (MST):	09:54
PERFORMED BY:	Limin Li	END TIME (MST):	16:36

## ANALYZER:

MAKE/MODEL	Teledyne T100	RANGE	500 ppb
SERIAL #	722	FLOW (mL/min)	505
INITIAL		FINAL	
BKG/OFFSET	29.8	BKG/OFFSET	30.2
COEF/SLOPE	0.93	COEF/SLOPE	0.923
Expected (reference) Value	271.6	Expected (reference) Value	271.6

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17200415	ID:	81
MFC CALIBRATION DATE:	20-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL126764	HIGH ID	n/a
CONC (ppm):	50.30	EXPIRY DATE	n/a
CYLINDER (psi):	1400	LOW ID	n/a
EXPIRY DATE	27-Oct-2030	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	390	190	95
RANGE	300 - 400	150 - 200	50 - 100

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

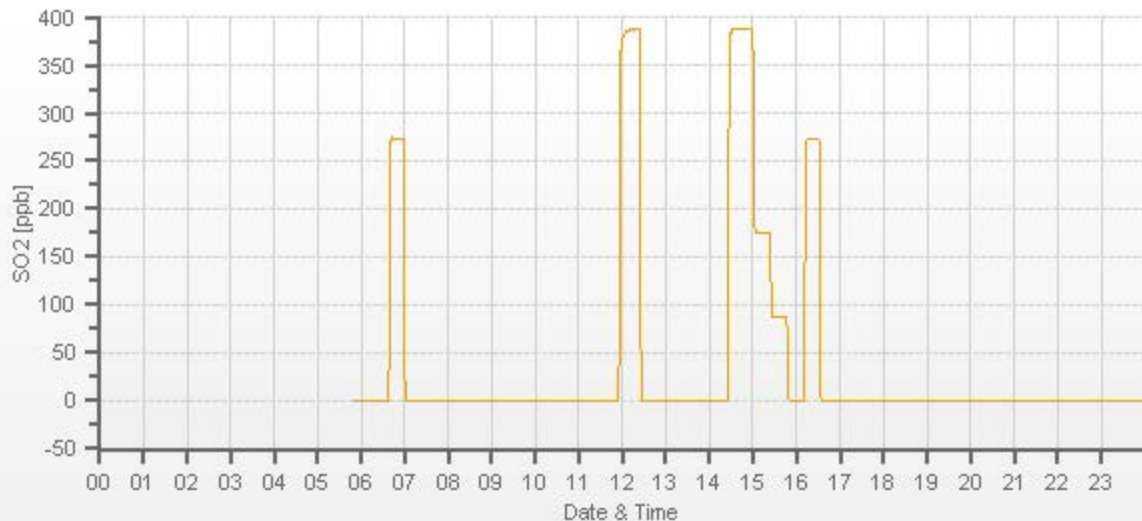
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
6000	<del>        </del>	6000	0.00	0.5	0	<del>        </del>	<del>        </del>
5954	46.20	6000	387.31	388.6	387.3	0.998	1.000
5979	21.20	6000	177.73	n/a	176	n/a	1.010
5989	10.60	6000	88.86	n/a	87.6	n/a	1.014

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.2%

## COMMENTS:

Sample filter changed.
------------------------



# TRS Analyzer Calibration by Dilution



DATE:	11-Jul-2023	PREVIOUS CALIBRATION DATE:	07-Jun-2023
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	1.000
CLIENT:	PRAMP	TEMPERATURE (°C):	22.2
LOCATION:	Grimshaw	BAROMETRIC (mBar):	940
PURPOSE:	Routine	START TIME (MST):	09:54
PERFORMED BY:	Limin Li	END TIME (MST):	14:27

## ANALYZER:

MAKE/MODEL	Teledyne T100U	RANGE	100 ppb
SERIAL #	132	FLOW (mL/min)	537
INITIAL		FINAL	
BKG/OFFSET	41.4	BKG/OFFSET	39.7
COEF/SLOPE	1.1	COEF/SLOPE	1.04
Expected (reference) Value	48.63	Expected (reference) Value	48.6

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	042531101	ID:	81
MFC CALIBRATION DATE:	23-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0002272	HIGH ID	n/a
CONC (ppm):	10.20	EXPIRY DATE	n/a
CYLINDER (psi):	850	LOW ID	n/a
EXPIRY DATE	14-Sep-2024	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	10:36	SO2 Conc (ppb)	385
END TIME:	10:58	Analyzer Response (ppb)	0.2

## CALIBRATION:

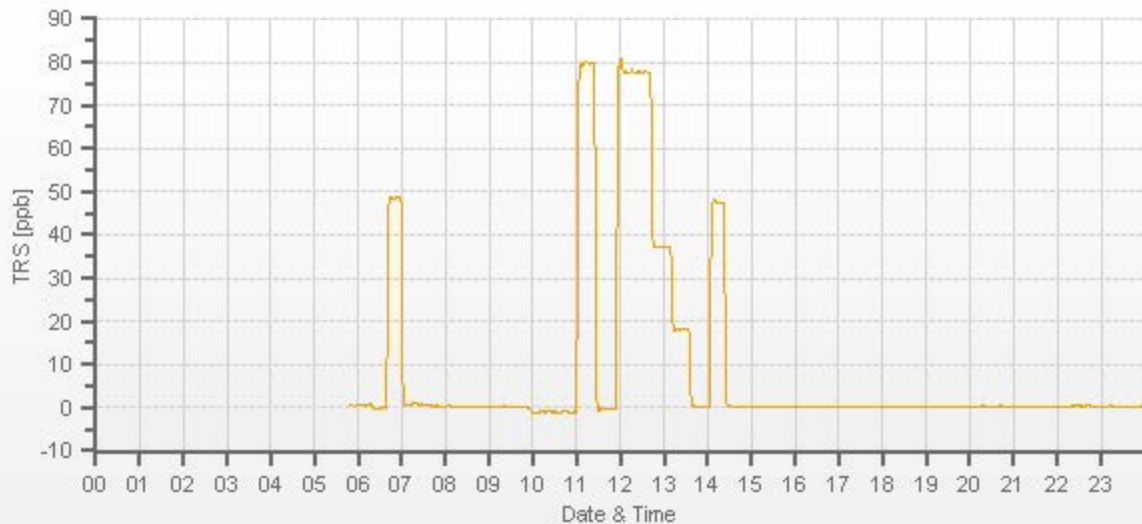
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
7500	<del>7500</del>	7500	0.00	-0.97	0.01	<del>0.964</del>	<del>1.000</del>
7443	57.40	7500	78.06	80.02	78.07	0.964	1.000
7472	27.90	7500	37.94	n/a	37.74	n/a	1.006
7486	14.00	7500	19.04	n/a	18.86	n/a	1.010

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	-0.1%

## COMMENTS:

Converter, CDNova CDN-101 #576.
---------------------------------



# NOx Calibration by Dilution/Gas-Phase Titration



CALIBRATION:				ANALYZER:			
DATE:	11-Jul-2023	PREVIOUS CALIBRATION DATE:	07-Jun-2023	MAKE/MODEL:	Teledyne T200	PREVIOUS CF.	
CLIENT:	PRAMP	TEMPERATURE (°C):	27.3	SERIAL #:	837	NOx	n/a
LOCATION:	Grimshaw	BAROMETRIC (mBar):	939	FLOW (mL/min)	441	NO	n/a
PURPOSE:	Install/Post-Repair	START TIME (MST):	13:51	RANGE (ppb)	500	NO2	n/a
PERFORMED BY:	Limin Li	END TIME (MST):	19:06	GPT FOR O3?		Yes	

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Teledyne	CYLINDER ID:	LL126764	HIGH ID:	n/a
MODEL:	2010	MODEL:	T701	NO/NOx (PPM):	50.9   51.4	HIGH EXPIRY:	n/a
ID:	17200415	ID:	81	CYLINDER (psi):	1400	LOW ID:	n/a
MFC CALIBRATION DATE:	20-Mar-2023	OXIDIZER ID:	n/a	EXPIRY DATE	27-Oct-2030	LOW EXPIRY:	n/a

CALIBRATION SETTINGS:							
INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
BKG/OFFSET:	n/a	n/a	n/a	BKG/OFFSET:	3.4	-1.4	n/a
SLOPE/COEF/CE:	n/a	n/a	n/a	SLOPE/COEF/CE:	1.132	1.125	1

EXPECTED (REFERENCE) VALUE:							
INITIAL	NOx	NO	NO2	FINAL	NOx	NO	NO2
	n/a	n/a	n/a		293.2	3.2	290.0

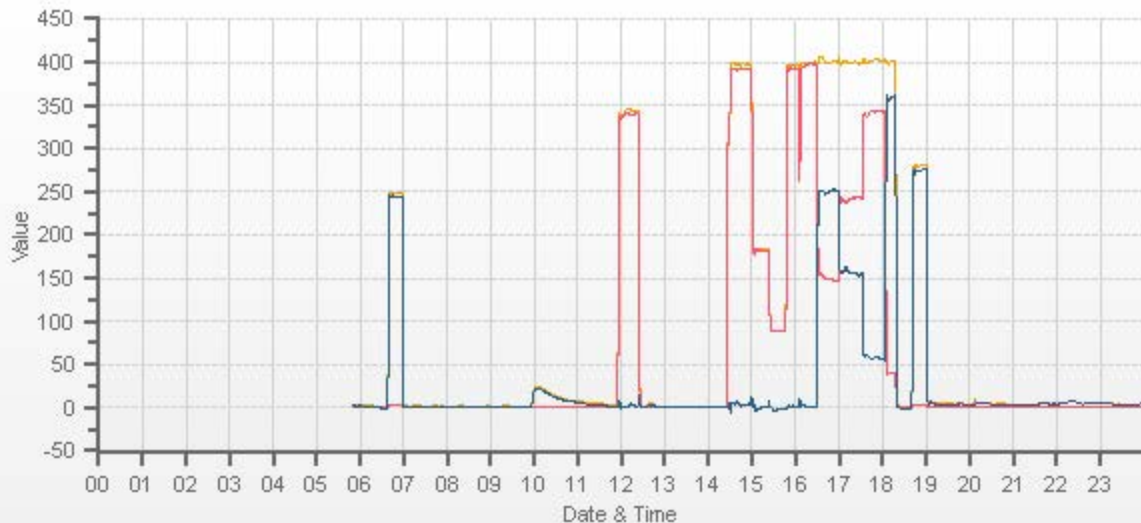
CALIBRATION PARAMETERS:							
POINT	NO TARGET (PPB)		NO2 TARGET (PPB)		NO2 RANGE		O3 POINT
HIGH	395		250		240-275		n/a
MID	180		154		150-157		Mid
LOW	90		54		50-58		Low
EXTRA 1	n/a		340		300-370		High

FLOW RATE			CONCENTRATION (ppb)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2	NO	NOx	NO2
6000	<del>6000</del>	6000	0.0	0.0	0.0	n/a	n/a	n/a	0.0	0.0	0.0	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>	<del>1.000</del>	<del>1.000</del>	<del>n/a</del>
5954	46.20	6000	391.9	395.8	3.9	n/a	n/a	n/a	392.0	395.7	3.6	n/a	n/a	<del>n/a</del>	1.000	1.000	<del>n/a</del>
5979	21.20	6000	179.8	181.6	1.8	n/a	n/a	n/a	180.8	182.5	1.7	n/a	n/a	<del>n/a</del>	0.995	0.995	<del>n/a</del>
5989	10.60	6000	89.9	90.8	0.9	n/a	n/a	n/a	89.8	87.9	-1.9	n/a	n/a	<del>n/a</del>	1.001	1.033	<del>n/a</del>

GPT CALIBRATION:											
Point	CALIBRATOR			INDICATED (ppb)			NO DROP / O3 Conc (ppb)	NO2 GAIN (ppb)	NO2 Corr. FACTOR	CONV. EFFICIENCY	
	GAS	TOTAL	O3 SETPOINT	NO	NOx	NO2					
REFERENCE	38.50	5000	0	397.1	397.8	0.7	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>	
AS-FOUND HIGH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
ADJUSTED HIGH	38.50	5000	235	147.0	398.0	250.9	250.1	250.2	1.000	100.04%	
MID	38.50	5000	145	241.9	397.0	155.2	155.2	154.5	1.005	99.55%	
LOW	38.50	5000	50	343.6	399.1	55.5	53.5	54.8	0.976	102.43%	
NO2 adjustment not required.									AVERAGE:	100.99%	

LINEAR REGRESSION ANALYSIS:				COMMENTS:
	CORRELATION	SLOPE	INTERCEPT	
NO	1.000	1.000	0.03%	
NOx	1.000	1.003	-0.19%	
NO2	1.000	0.980	0.47%	

Post-repair after sample valve cleaned.  
 16:06pm change flow rate from 6 LPM to 5 LPM.  
 Extra O3 = O3:330PPB, NO:39.6, NOX:399.5, NO2:359.8.



CAL-PRAMP-202307-041689

# Ozone Calibration by Direct GPT



DATE:	12-Jul-2023	PREVIOUS CALIBRATION DATE:	08-Jun-2023
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	1.002
CLIENT:	PRAMP	TEMPERATURE (°C):	22.0
LOCATION:	Grimshaw	BAROMETRIC (mBar):	941
PURPOSE:	Removal/Shut-down	START TIME (MST):	08:04
PERFORMED BY:	Limin Li	END TIME (MST):	09:41

## ANALYZER:

MAKE/MODEL	Teledyne T400	RANGE	500 ppb
SERIAL #	824	FLOW (mL/min)	755
INITIAL		FINAL	
BKG/OFFSET	-1.9	BKG/OFFSET	n/a
COEF/SLOPE	0.98	COEF/SLOPE	n/a
Expected (reference) Value	220.7	Expected (reference) Value	n/a

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17200415	ID:	81
MFC CALIBRATION DATE:	20-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION METHOD:		Direct GPT	
GPT DATE:	11-Jul-2023	GPT END TIME:	18:30

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
RANGE	300 - 400	150 - 200	50 - 100

## CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
5000	<del>XXXXXX</del>	5000	0.0	0.6	n/a	<del>XXXXXX</del>	<del>XXXXXX</del>
5000	<del>XXXXXX</del>	5000	357.5	335.7	n/a	1.067	n/a
5000	<del>XXXXXX</del>	5000	155.2	149.1	n/a	1.045	n/a
5000	<del>XXXXXX</del>	5000	53.5	55.4	n/a	0.976	n/a

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.932	0.6%

## COMMENTS:

Unstable, zero change between from -26ppb to +18ppb. High point drift between 324ppb to 348ppb.

# Ozone Calibration by Direct GPT



DATE:	12-Jul-2023	PREVIOUS CALIBRATION DATE:	n/a
PARAMETER:	O3	PREVIOUS CORRECTION FACTOR:	n/a
CLIENT:	PRAMP	TEMPERATURE (°C):	23.0
LOCATION:	Grimshaw	BAROMETRIC (mBar):	941
PURPOSE:	Install/Post-Repair	START TIME (MST):	10:41
PERFORMED BY:	Limin Li	END TIME (MST):	13:36

## ANALYZER:

MAKE/MODEL	API 400A	RANGE	500 ppb
SERIAL #	445	FLOW (mL/min)	755
INITIAL		FINAL	
BKG/OFFSET	n/a	BKG/OFFSET	-3.2
COEF/SLOPE	n/a	COEF/SLOPE	0.988
Expected (reference) Value	n/a	Expected (reference) Value	377.9

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	T701
ID:	17200415	ID:	81
MFC CALIBRATION DATE:	20-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION METHOD:		Direct GPT	
GPT DATE:	11-Jul-2023	GPT END TIME:	18:30

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
RANGE	300 - 400	150 - 200	50 - 100

## CALIBRATION:

FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
5000	<del>XXXXXXXXXX</del>	5000	0.0	n/a	0.0	<del>XXXXXX</del>	<del>XXXXXX</del>
5000	<del>XXXXXXXXXX</del>	5000	357.5	n/a	357.5	n/a	1.000
5000	<del>XXXXXXXXXX</del>	5000	155.2	n/a	156.3	n/a	0.993
5000	<del>XXXXXXXXXX</del>	5000	53.5	n/a	54.8	n/a	0.976

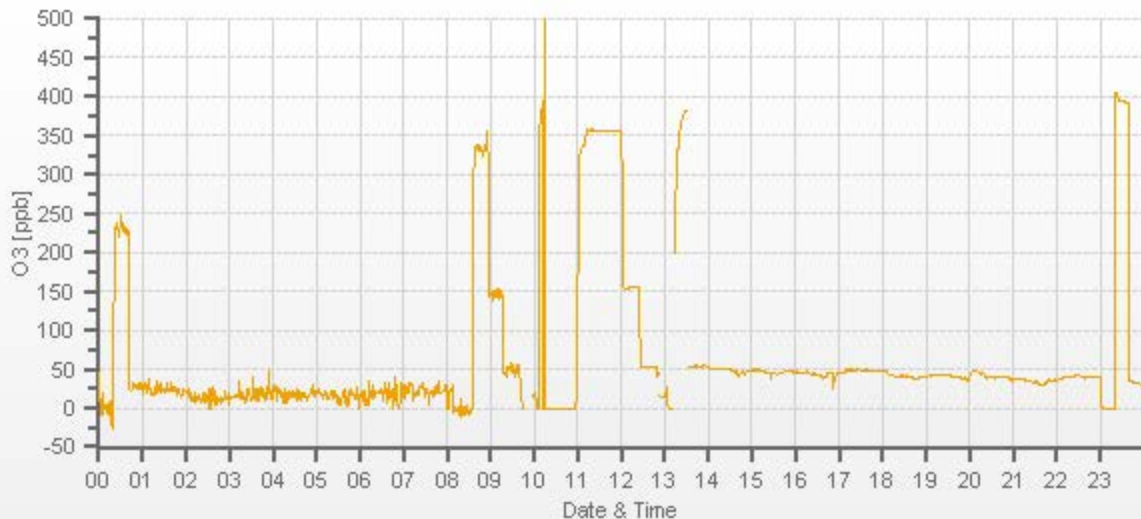
## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.999	0.2%

## COMMENTS:

n/a





# Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	11-Jul-2023	PREVIOUS CALIBRATION DATE:	06-Jun-2023	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	23.6		Thermo 55i	1191032505	1091
LOCATION:	Grimshaw	BAROMETRIC (mBar):	940	PARAMETER:	CH4	NMHC	THC
PURPOSE	Routine	START TIME (MST):	11:01	RANGE (ppm):	20	20	40
PERFORMED BY:	Limin Li	END TIME (MST):	14:34	PREVIOUS CF:	1.000	0.998	0.999

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	EnviroNics	MAKE:	API	CYLINDER ID:	LL68768	HIGH ID:	n/a
MODEL:	6100	MODEL:	T701	CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub> (ppm):	897.0   301.0	HIGH EXPIRY:	n/a
ID:	5212	ID:	81	CYLINDER (psi):	1950	LOW ID:	n/a
MFC CALIBRATION DATE:	21-Mar-2023	OXIDIZER ID:	Internal	EXPIRY DATE	08-Nov-2029	LOW EXPIRY:	n/a

## CALIBRATION PARAMETERS:

POINT (CH <sub>4</sub> /NMHC)	HIGH	MID	LOW	CH <sub>4</sub> EQUIVILANCE	
TARGET	14	7	3.5	C <sub>3</sub> H <sub>8</sub> as CH <sub>4</sub>	827.8
RANGE	12 - 16	6 - 8	2 - 4	THC as CH <sub>4</sub>	1724.8

## EXPECTED (REFERENCE) VALUE:

INITIAL	CH <sub>4</sub>	NMHC	THC	FINAL	CH <sub>4</sub>	NMHC	THC
	9.86	11.12	20.98		9.86	11.12	20.98

## CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC
3500	<del>56.82</del>	3500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<del>0.994</del>	<del>1.005</del>	<del>0.999</del>	<del>0.996</del>	<del>0.998</del>	<del>0.997</del>
3443	56.82	3500	14.56	13.44	28.00	14.65	13.37	28.02	14.62	13.46	28.08	0.994	1.005	0.999	0.996	0.998	0.997
3472	28.41	3500	7.28	6.72	14.00	n/a	n/a	n/a	7.34	6.78	14.12	n/a	n/a	n/a	0.992	0.991	0.992
3486	14.20	3500	3.64	3.36	7.00	n/a	n/a	n/a	3.68	3.44	7.12	n/a	n/a	n/a	0.989	0.976	0.983

## LINEAR REGRESSION ANALYSIS:

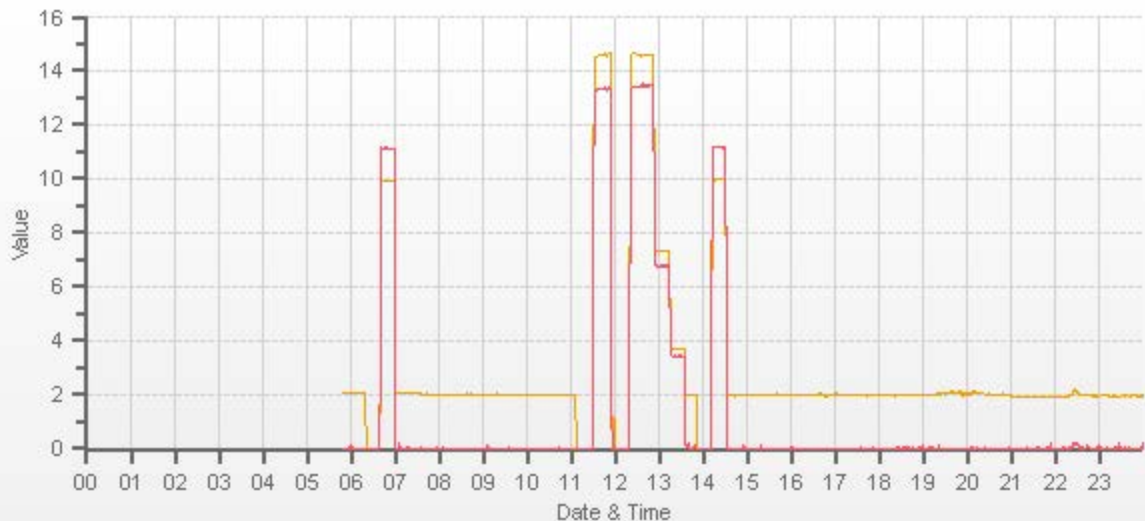
	CORRELATION	SLOPE	INTERCEPT
CH <sub>4</sub>	1.000	1.004	0.1%
NMHC	1.000	1.000	0.2%
THC	1.000	1.002	0.1%

## Comments:

H2 = AMA HG300 #190567059

Use Zero Chrom?

No





# Teledyne T640 Audit/Calibration

<b>Date/Previous Audit Date:</b>	July 12, 2023	June 7, 2023	<b>Weather Conditions:</b>	Mix of sun and clouds
<b>Company:</b>	PRAMP		<b>Start Time (mst):</b>	9:08
<b>Station:</b>	Grimshaw		<b>End Time (mst):</b>	9:55
<b>Parameter:</b>	PM 2.5		<b>Performed By/Reviewer:</b>	Limin Li      Chris Wesson

<b>Instrument Data:</b>				
<b>Make/Model:</b>	Teledyne T640		<b>Serial Number:</b>	318
<b>Owner:</b>	PRAMP		<b>Alarms (detail in comments):</b>	No

<b>Reference Standards/I.D./Expiry Date:</b>				
<b>Flow Standard:</b> DeltaCal DC1 S/N201588 / Nov 21, 2023		<b>Temperature:</b> DeltaCal DC1 S/N201588 / Nov 21, 2023		
<b>Digital Manometer:</b> DeltaCal DC1 S/N201588 / Nov 21, 2023		<b>Pressure:</b> DeltaCal DC1 S/N201588 / Nov 21, 2023		

<b>DIAGNOSTICS:</b>					
Ambient Pressure (mmHg)	707.4	Ambient Temp (°C)	22.1	ASC Heater Duty (%)	86.7
Box Temp (°C)	29.2	Current PMT HV (V)	1545	LED Temp (°C)	39.06
P3 Value	47	PMT Setting (V)	1546	Pump PWM (%)	36
Sample Flow (L/min)	4.98	Sample RH (%RH)	35.0	Sample Temp (°C)	32.7

Item:	As-found		As-left		Tolerance
	Reference	T640x	Reference	T640x	
Zero Test (Leak Check)	PM10	0.0	0	0.0	0.0 to 0.2
	PM2.5	0.0	0	0.0	
Ambient Pressure (mmHg)	707.5	707.4	n/a	n/a	+/- 10 mm Hg
Ambient Temperature (°C)	22.20	23.3	n/a		+/- 2°C
Sample Flow (L/min)	4.80	5	4.99	5.04	+/-5% of T640x (e.g., 4.75 – 5.25 lpm)

<b>Additional Monthly Maintenance :</b>	<b>Completed</b>
Inlet cleaned?	Yes
Sample tubing inspected (inner and outer)?	Yes

**Comments:**

No issues

# Meteorological System Checklist



Date:	July 11, 2023
Technician:	Limin Li
Station:	PRAMP Grimshaw

Unit:	Make:	Model:	Serial #:
Temperature Sensor:	Vaisala	HMP155	N2910506
Barometric Pressure Sensor:	MetOne	92	A2397
Relative Humidity Sensor:	Vaisala	HMP155	N2910506
Anemometer:	RM Young	05305AQ	174801

### AMBIENT TEMPERATURE SENSOR CHECK

Previous check date:	June 7, 2023
Parameter:	Temperature @ 2 metres
Reference Thermometer ID:	F.S. 170286131 expires May 18, 2024
Reference Temperature (°C):	25.2
Station - Ambient Temperature (°C):	25.2
Temperature Difference (°C):	0.0

### BAROMETRIC PRESSURE SENSOR CHECK

Previous check date:	June 7, 2023		
Reference Barometer ID:	Brunton 05535 Expires Feb 27, 2024		
Reference Pressure - Units/Reading:	millibar		939.7
Station Pressure - Units/Reading:	millibar		939.4
Pressure Tolerance +/- 15% of error:	799 - 1081		0.03%

### RELATIVE HUMIDITY (HYGROMETER) SENSOR CHECK

Previous check date:	June 7, 2023		
Reference Hygrometer ID:	F.S. 170286131 expires May 18, 2024		
Reference Hygrometer % RH- Reading:	45.00		
Station Hygrometer % RH- Reading:	51.00		
RH Tolerance +/- 15% of difference:	38.25 - 51.75		-13.3%

### ANEMOMETER - WIND SPEED & WIND DIRECTION SENSOR CHECK

WIND SPEED		WIND DIRECTION	
Previous check date:	June 7, 2023	Previous check date:	June 7, 2023
Wind Speed Observed (kph):	0~5	Wind Direction Observed:	SW
Wind speed on Data Logger (kph):	3.9	Wind Direction on Data Logger:	SW
		Wind Direction Pass/Fail?:	Pass

Comments

No issues



# Meteorological Sensor Audit/Calibration

## Location Information

**Company:** Bureau Veritas **Performed By:** Ferdinand Roy  
**Audit Location:** Grimshaw **Reviewed By:** Chris Wesson  
**Audit Date:** July 12, 2022 **Start/End Time (mst):** 13:57 / 16:52  
**Calibration Purpose:** routine annual **Weather Conditions:** Cloudy/Overcast

## Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	RM Young	Velocity Voltage Output Range:	n/a
Sensor Model:	05305AQ	Velocity Unit Output Range:	0-200
Serial #:	174801	Direction Voltage Output Range:	n/a
Previous Cal/Audit Date:	n/a	Direction Unit Output Range:	0-360

## Wind Calibrator Information

**Calibrator I.D. and Expiry Date:** RM Young 18801 id# CA01648 expires August 6, 2022

## Wind Speed Audit Data **\*\*+/- 2% of the average correction factor is the limit\*\***

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.0	0.0	-
1000	18.4	18.3	18.3	1.007
2000	36.9	36.7	36.7	1.004
3000	55.3	55.1	55.1	1.003
4000	73.7	73.6	73.6	1.002
5000	92.2	92.0	92.0	1.002
6000	110.6	110.5	110.5	1.001
7000	129.0	128.9	128.9	1.001
8000	147.4	147.3	147.3	1.001
9000	165.9	165.8	165.8	1.000
10000	184.3	184.2	184.2	1.001
The audit meets AMD requirements.			Average Correction Factor=	1.002

## Wind Direction Audit Data **\*\*+/- 3° of the absolute average degrees difference for all points is the limit\*\***

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	0	354	0.2	0.8	0.5
30	330	27	331	3.3	-0.6	2.0
60	300	56	300	3.8	-0.3	2.1
90	270	87	268	2.8	1.9	2.3
120	240	117	236	3.3	4.0	3.7
150	210	147	204	2.6	5.6	4.1
180	180	177	175	3.3	4.6	4.0
210	150	207	145	3.1	4.8	4.0
240	120	238	115	2.4	5.0	3.7
270	90	270	85	0.3	5.1	2.7
300	60	300	57	-0.3	3.1	1.7
330	30	330	26	-0.3	3.6	2.0
355	0	354	0	0.8	0.1	0.5
The audit meets AMD requirements.				Average Absolute Degrees Difference=		2.5

## Comments:

Output via RMY32400 serial interface

**END OF REPORT**



## Peace River Area Monitoring Program

# JULY 2023

## Ambient Air Monitoring Calibration Report

### - PEACE RIVER COMPLEX (PRC) STATION-

### CAL-PRAMP-202307-01698

**Operation and Maintenance:**

Bureau Veritas Canada

**Data Validation and Report:**

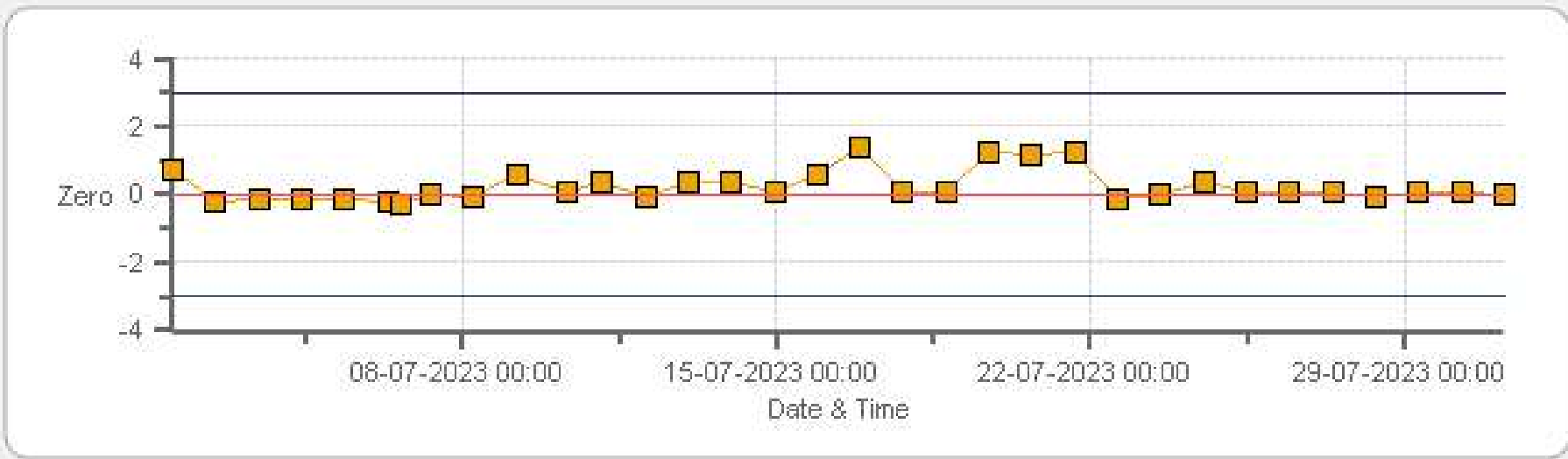
Bureau Veritas Canada

August 3, 2023



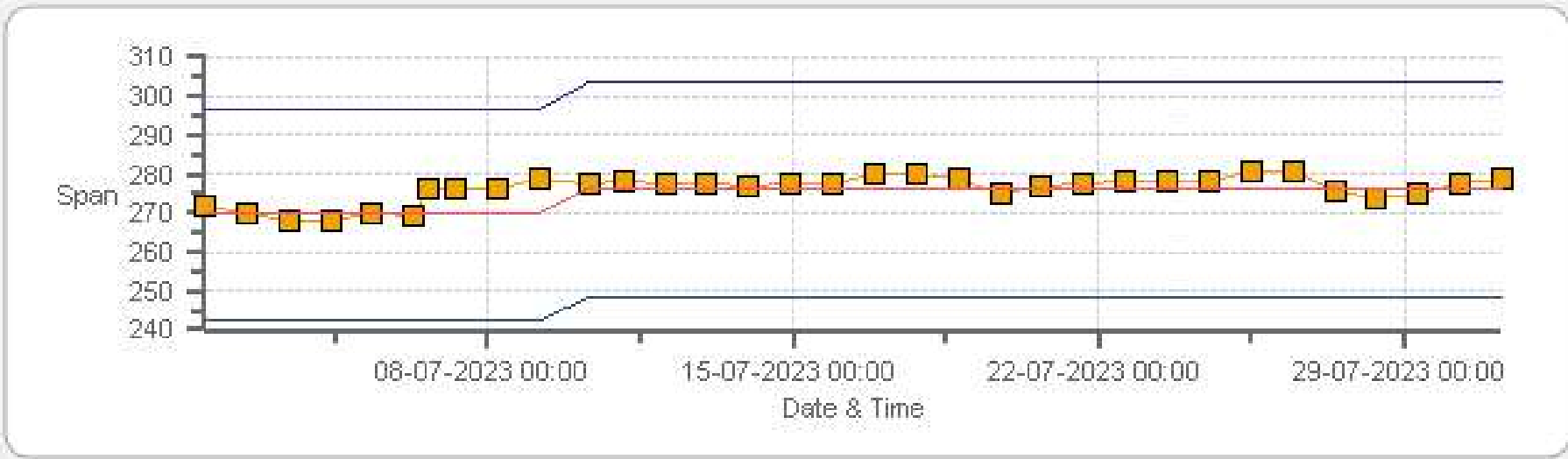
# DAILY INTERNAL ZERO-SPAN CALIBRATION RECORDS

SO2[ppb] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Zero



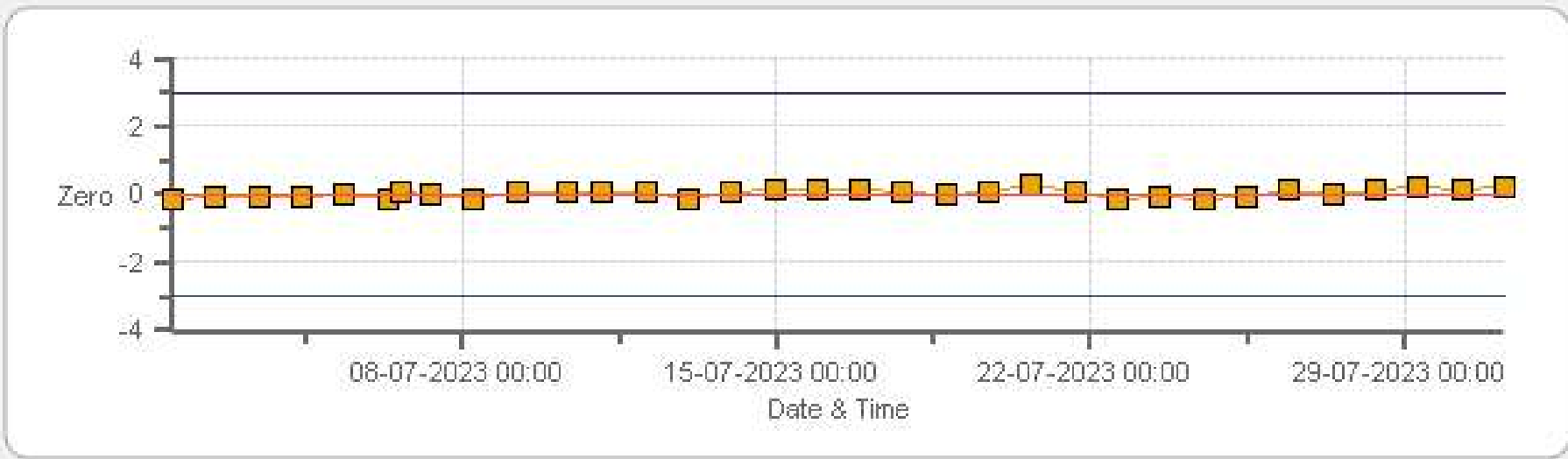
Zero Zero Ref Zero Low Zero High

SO2[ppb] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Span



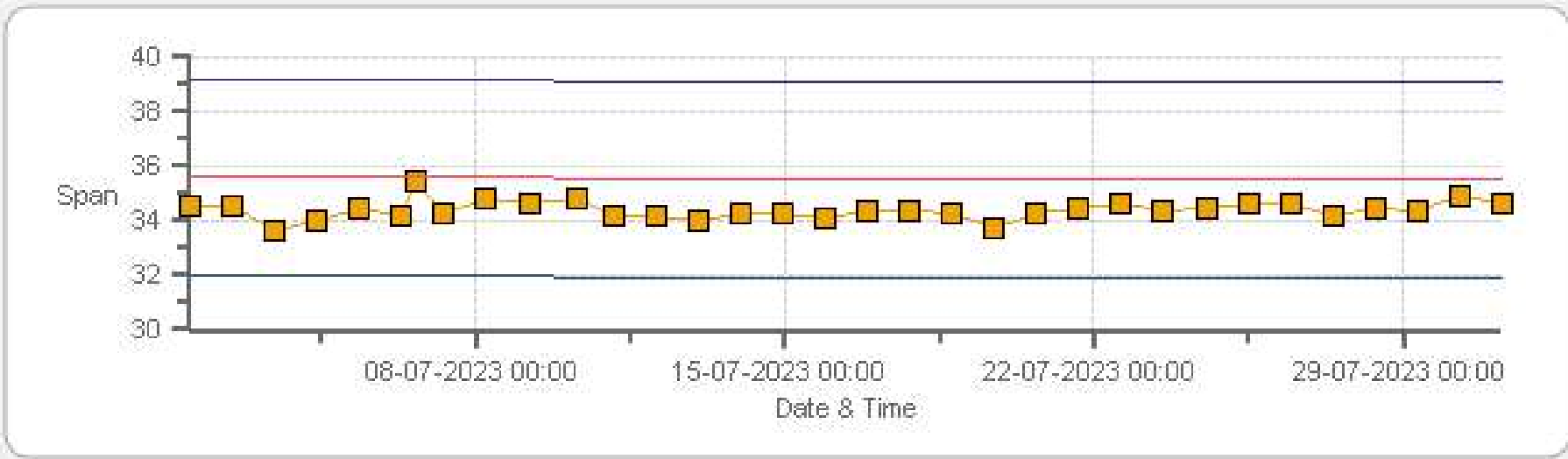
Span SpanRef Span Low Span High

H2S[ppb] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Zero



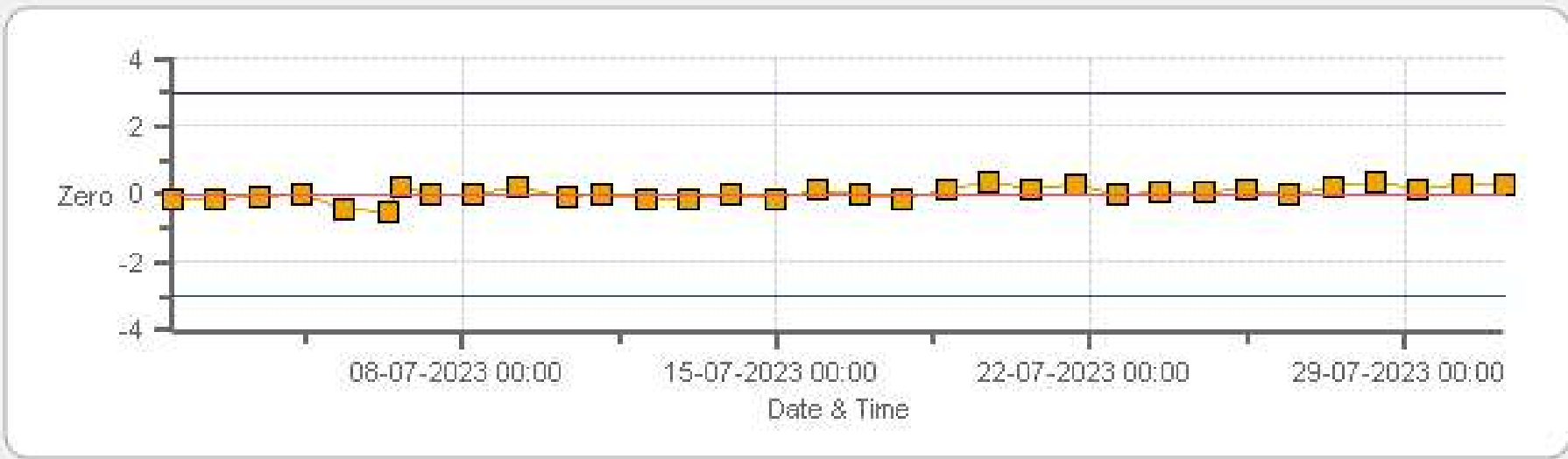
Zero Zero Ref Zero Low Zero High

H2S[ppb] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Span



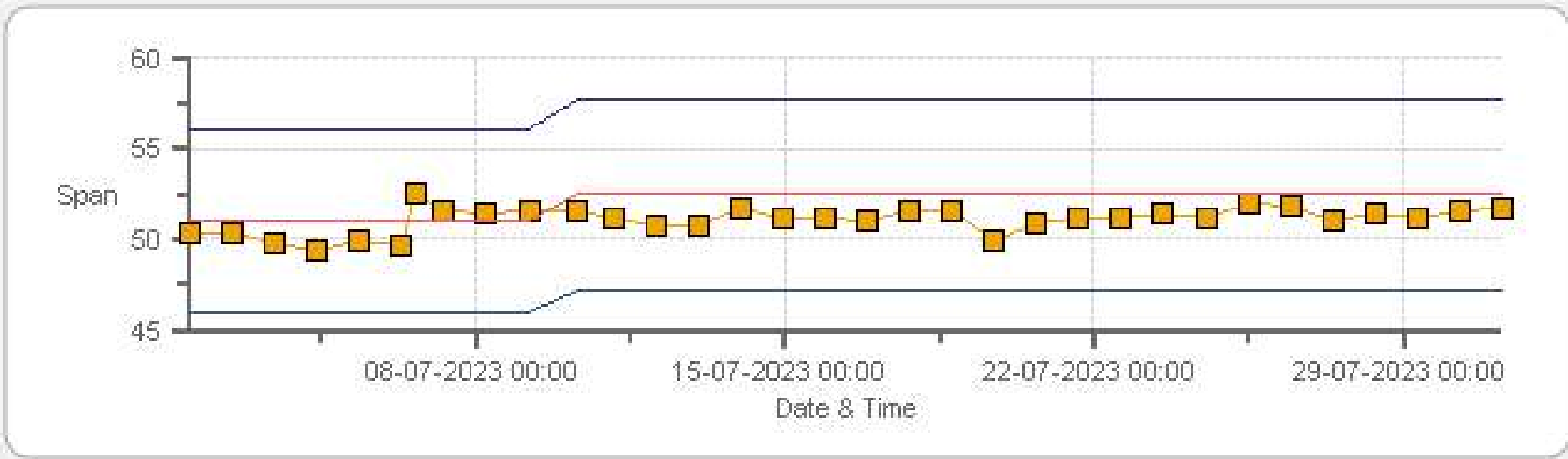
Span SpanRef Span Low Span High

TRS[ppb] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Zero



Zero Zero Ref Zero Low Zero High

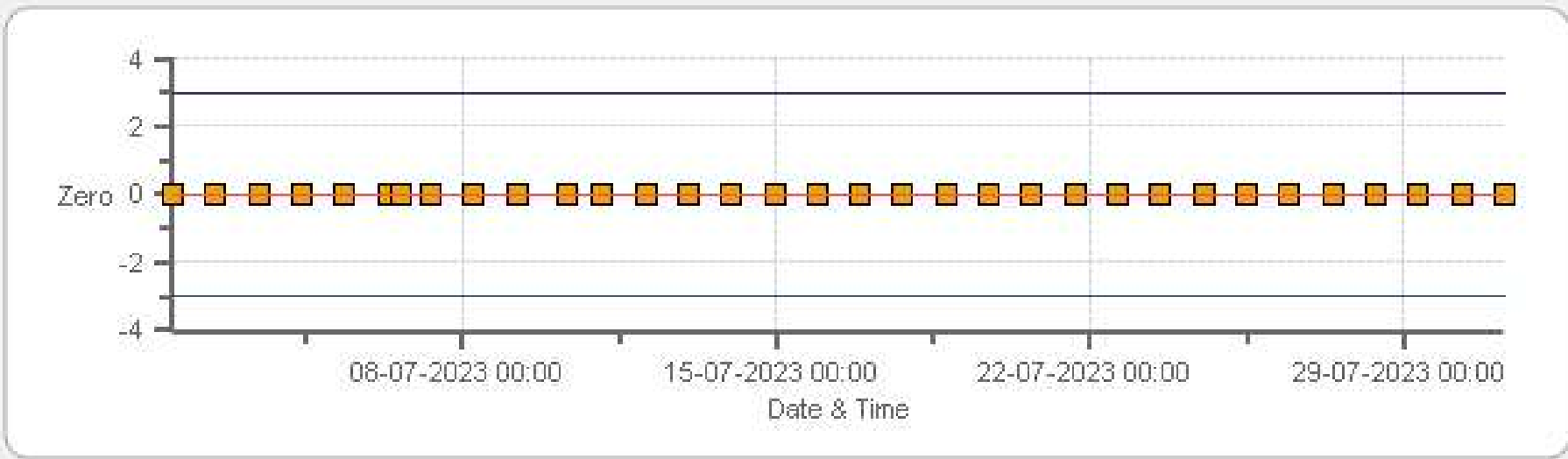
TRS[ppb] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Span



Span SpanRef Span Low Span High

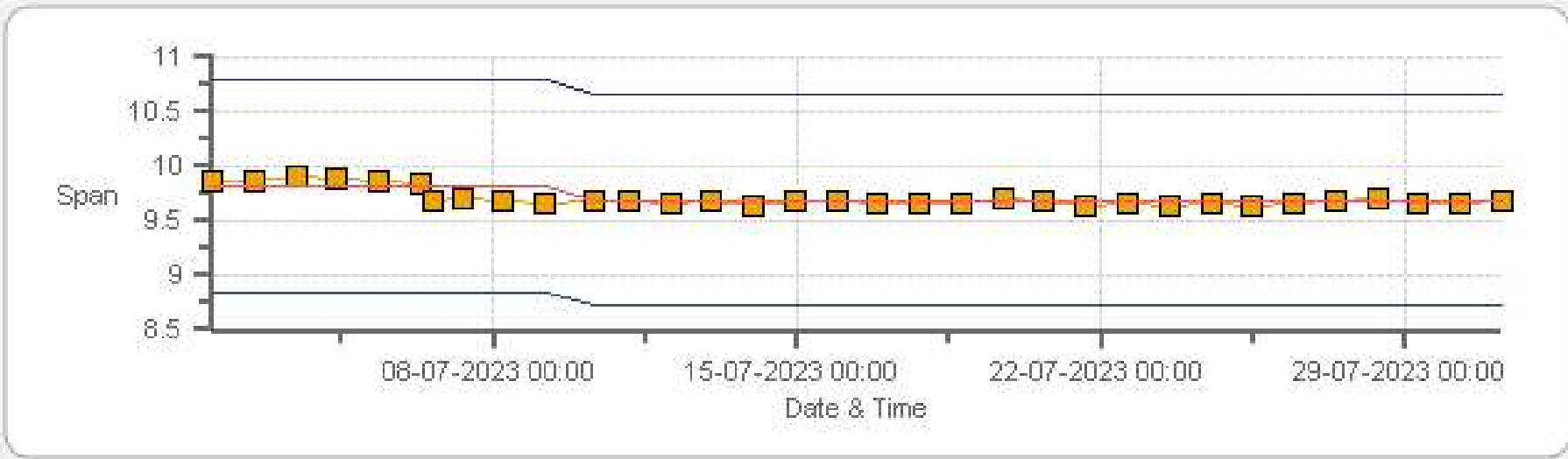


CH4[ppm] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Zero



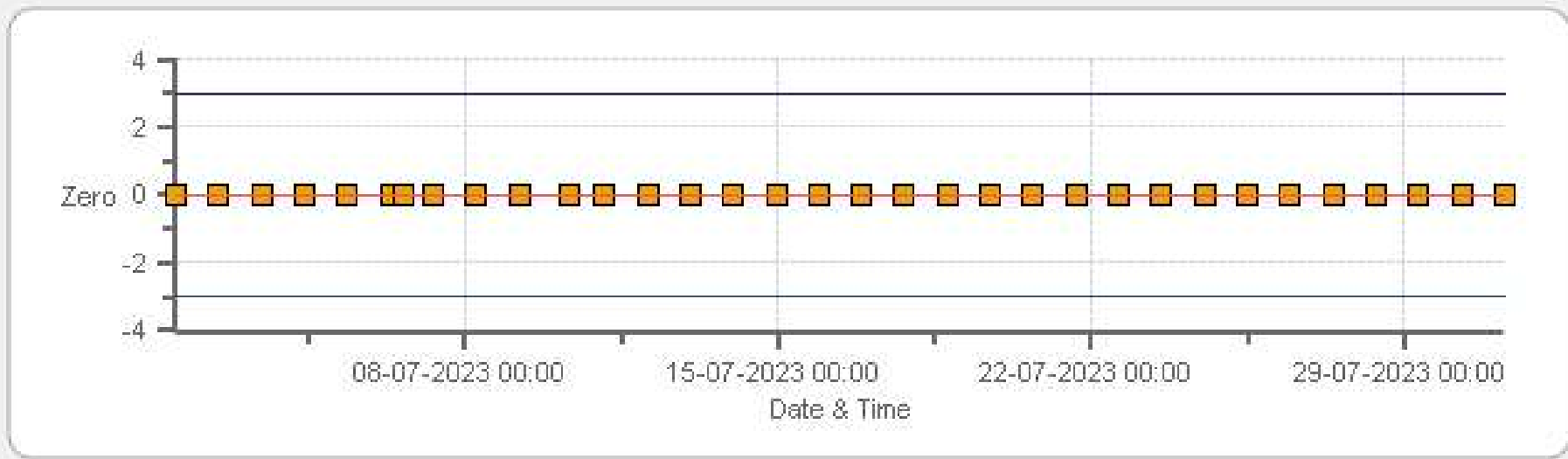
Zero Zero Ref Zero Low Zero High

CH4[ppm] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Span



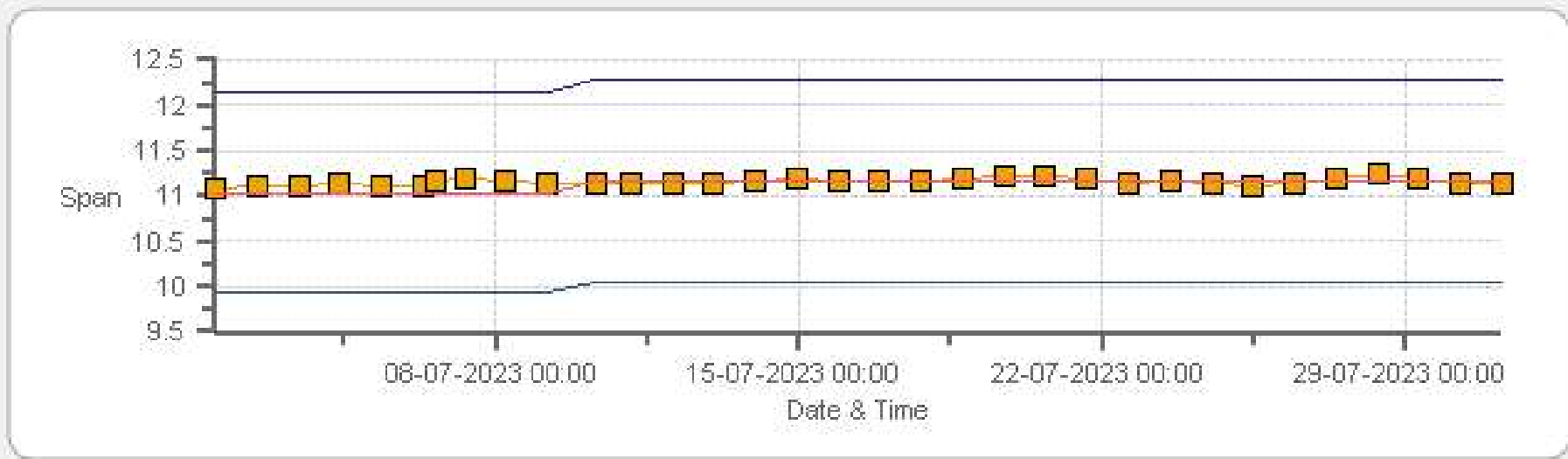
Span Span Ref Span Low Span High

NMHC[ppm] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Zero



Zero Zero Ref Zero Low Zero High

NMHC[ppm] Calibration: Peace River Complex [PRC] Monthly: 07-2023 Type: SpanAndZero - Span



Span Span Ref Span Low Span High

# MULTI-POINT CALIBRATION RECORDS



# SO2 Analyzer Calibration by Dilution



DATE:	06-Jul-2023	PREVIOUS CALIBRATION DATE:	21-Jun-2023
PARAMETER:	SO2	PREVIOUS CORRECTION FACTOR:	1.005
CLIENT:	PRAMP	TEMPERATURE (°C):	23.4
LOCATION:	Peace River Compliance	BAROMETRIC (mBar):	929
PURPOSE:	Routine	START TIME (MST):	10:08
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	14:56

## ANALYZER:

MAKE/MODEL	Thermo 43i	RANGE	500 ppb
SERIAL #	1034746225	FLOW (mL/min)	441
INITIAL		FINAL	
BKG/OFFSET	20	BKG/OFFSET	20.4
COEF/SLOPE	1.133	COEF/SLOPE	1.162
Expected (reference) Value	269.6	Expected (reference) Value	276.1

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	M701
ID:	58100720	ID:	5004
MFC CALIBRATION DATE:	15-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	LL109693	HIGH ID	n/a
CONC (ppm):	25.00	EXPIRY DATE	n/a
CYLINDER (psi):	2000	LOW ID	n/a
EXPIRY DATE	02-Nov-2025	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	390	190	95
RANGE	300 - 400	150 - 200	50 - 100

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

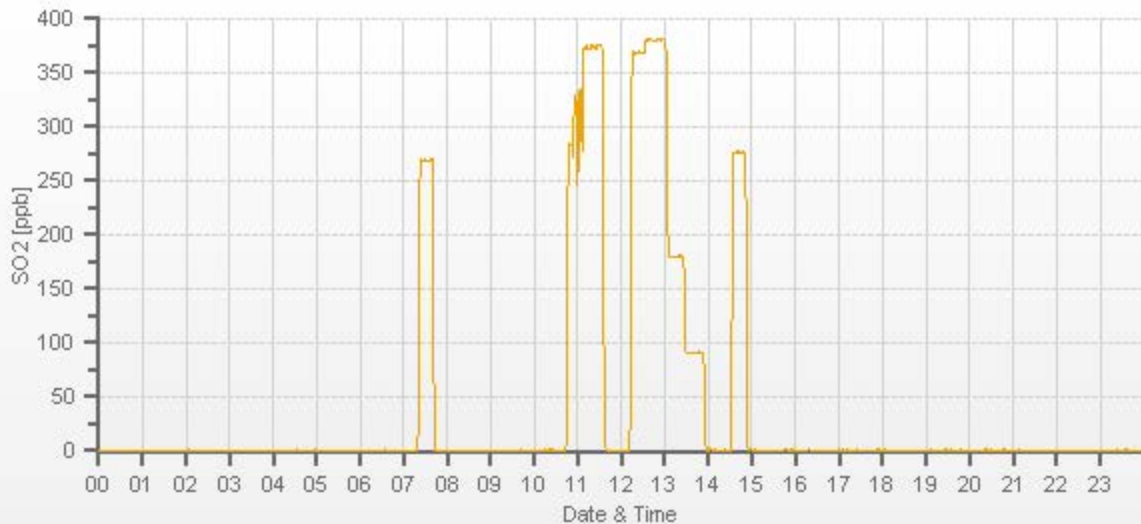
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4002	<del>60.80</del>	4002	0.00	1.5	0	<del>1.019</del>	<del>0.998</del>
3941	60.80	4002	379.81	374.2	380.6	1.019	0.998
3973	28.70	4002	179.29	n/a	180	n/a	0.996
3988	14.30	4002	89.33	n/a	90.7	n/a	0.985

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.001	0.1%

## COMMENTS:

Sample filter changed.
------------------------



# H2S Analyzer Calibration by Dilution



DATE:	06-Jul-2023	PREVIOUS CALIBRATION DATE:	21-Jun-2023
PARAMETER:	H2S	PREVIOUS CORRECTION FACTOR:	0.995
CLIENT:	PRAMP	TEMPERATURE (°C):	23.4
LOCATION:	Peace River Compliance	BAROMETRIC (mBar):	929
PURPOSE:	Routine	START TIME (MST):	10:07
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	14:55

## ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	1308857354	FLOW (mL/min)	955
INITIAL		FINAL	
BKG/OFFSET	14.4	BKG/OFFSET	14.4
COEF/SLOPE	1.018	COEF/SLOPE	1.024
Expected (reference) Value	35.6	Expected (reference) Value	35.5

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	M701
ID:	58100720	ID:	4568
MFC CALIBRATION DATE:	15-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0002519	HIGH ID	n/a
CONC (ppm):	9.41	EXPIRY DATE	n/a
CYLINDER (psi):	800	LOW ID	n/a
EXPIRY DATE	10-Nov-2023	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

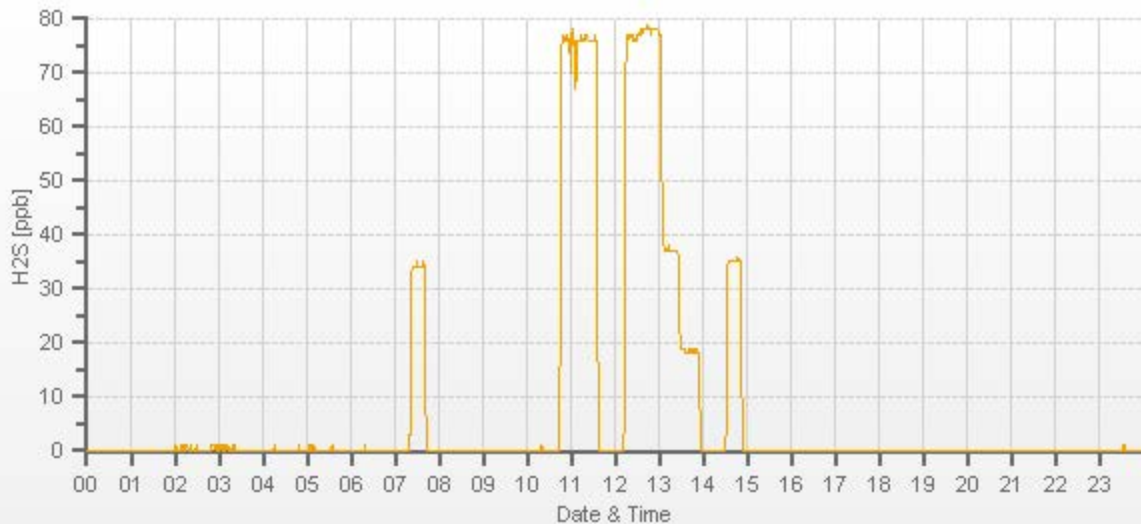
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4002	<del>33.10</del>	4002	0.00	0.6	0	<del>1.032</del>	<del>1.002</del>
3969	33.10	4002	77.83	76	77.7	1.032	1.002
3986	16.20	4002	38.09	n/a	37.3	n/a	1.021
3994	8.10	4002	19.05	n/a	18.7	n/a	1.018

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	0.999	-0.3%

## COMMENTS:

10:48-11:06 Flushed regulator. AF high restarts.



# TRS Analyzer Calibration by Dilution



DATE:	06-Jul-2023	PREVIOUS CALIBRATION DATE:	21-Jun-2023
PARAMETER:	TRS	PREVIOUS CORRECTION FACTOR:	0.991
CLIENT:	PRAMP	TEMPERATURE (°C):	23.4
LOCATION:	Peace River Compliance	BAROMETRIC (mBar):	929
PURPOSE:	Routine	START TIME (MST):	10:07
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	14:55

## ANALYZER:

MAKE/MODEL	Thermo 450i	RANGE	100 ppb
SERIAL #	1034746224	FLOW (mL/min)	725
INITIAL		FINAL	
BKG/OFFSET	25	BKG/OFFSET	25.4
COEF/SLOPE	0.999	COEF/SLOPE	1.019
Expected (reference) Value	51.01	Expected (reference) Value	52.45

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:	
MAKE:	Sabio	MAKE:	Teledyne
MODEL:	2010	MODEL:	M701
ID:	58100720	ID:	5004
MFC CALIBRATION DATE:	15-Mar-2023	OXIDIZER ID:	n/a
CALIBRATION GAS:		FLOWMETERS (if applicable):	
CYLINDER ID:	EY0002519	HIGH ID	n/a
CONC (ppm):	9.41	EXPIRY DATE	n/a
CYLINDER (psi):	800	LOW ID	n/a
EXPIRY DATE	10-Nov-2023	EXPIRY DATE	n/a

## CALIBRATION PARAMETERS:

POINT	HIGH	MID	LOW
TARGET	78	38	19
RANGE	60 - 80	30 - 40	10 - 20

## SCRUBBER CHECK (15 MINS; TRS/H2S ONLY):

START TIME:	n/a	SO2 Conc (ppb)	n/a
END TIME:	n/a	Analyzer Response (ppb)	n/a

## CALIBRATION:

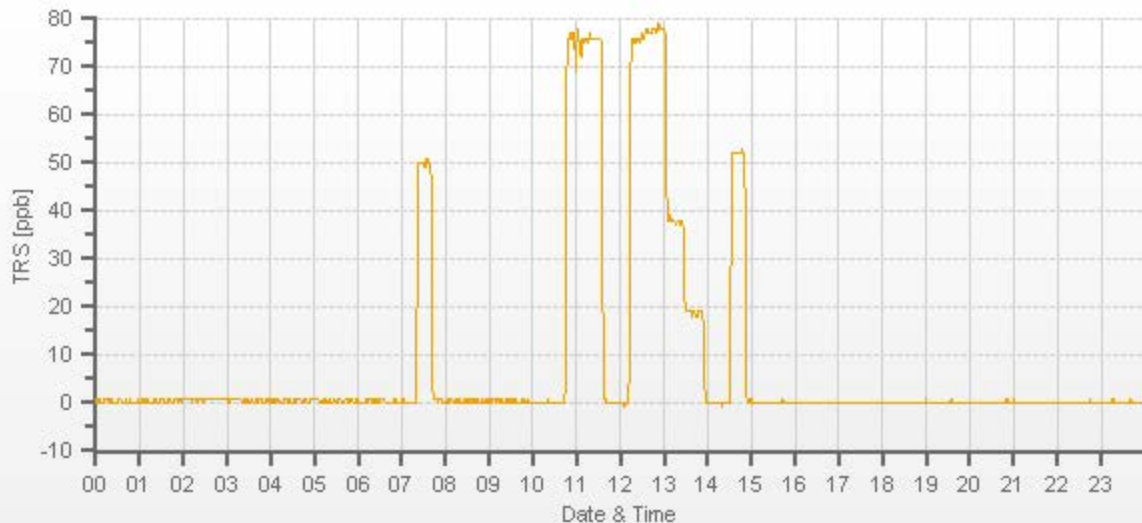
FLOW RATES (mL/min)			CONCENTRATION (ppb)			CORRECTION FACTOR	
DILUENT	GAS	TOTAL	ACTUAL	INDICATED		Initial	Final
				Initial	Final		
4002	<del>33.10</del>	4002	0.00	0.2	0	<del>1.028</del>	<del>0.997</del>
3969	33.10	4002	77.83	75.9	78.06	1.028	0.997
3986	16.20	4002	38.09	n/a	37.75	n/a	1.009
3994	8.10	4002	19.05	n/a	18.71	n/a	1.018

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT
VALUE	1.000	1.004	-0.3%

## COMMENTS:

TRS Converter CDNOVA CDN-101 #506. 10:48-11:06 Flushed regulator. AF high restarts.
--



# Methane/Non-Methane Analyzer Calibration by Dilution



CALIBRATION:				ANALYZER:			
DATE:	06-Jul-2023	PREVIOUS CALIBRATION DATE:	21-Jun-2023	VALUE	MAKE/MODEL	SERIAL	FLOW (mL/min)
CLIENT:	PRAMP	TEMPERATURE (°C):	23.4		Thermo 55i	1034745845	1148
LOCATION:	Peace River Compliance	BAROMETRIC (mBar):	929	PARAMETER:	CH4	NMHC	THC
PURPOSE	Routine	START TIME (MST):	10:08	RANGE (ppm):	20	20	40
PERFORMED BY:	Kevin Sebastian	END TIME (MST):	15:18	PREVIOUS CF:	0.999	0.996	0.998

## CALIBRATION SYSTEM:

CALIBRATOR:		ZERO AIR:		CALIBRATION GAS:		FLOWMETERS (if applicable):	
MAKE:	Sabio	MAKE:	Teledyne	CYLINDER ID:	LL68768	HIGH ID:	n/a
MODEL:	2010	MODEL:	M701	CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub> (ppm):	897.0   301.0	HIGH EXPIRY:	n/a
ID:	26801218	ID:	916	CYLINDER (psi):	1900	LOW ID:	n/a
MFC CALIBRATION DATE:	09-Mar-2023	OXIDIZER ID:	Internal	EXPIRY DATE	22-Dec-2028	LOW EXPIRY:	n/a

## CALIBRATION PARAMETERS:

POINT (CH <sub>4</sub> /NMHC)	HIGH	MID	LOW	CH <sub>4</sub> EQUIVILANCE	
TARGET	14	7	3.5	C <sub>3</sub> H <sub>8</sub> as CH <sub>4</sub>	827.8
RANGE	12 - 16	6 - 8	2 - 4	THC as CH <sub>4</sub>	1724.8

## EXPECTED (REFERENCE) VALUE:

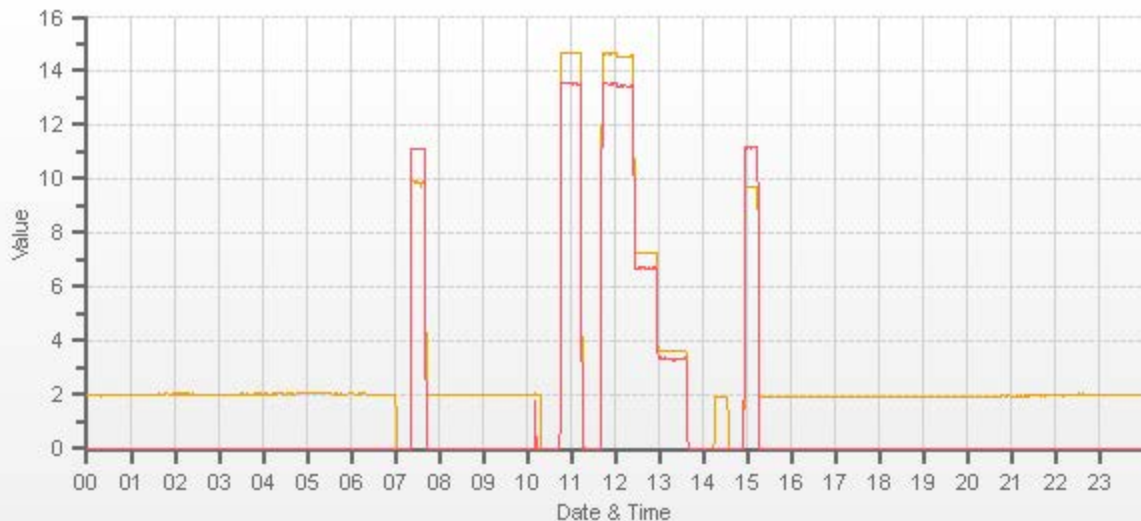
INITIAL	CH <sub>4</sub>	NMHC	THC	FINAL	CH <sub>4</sub>	NMHC	THC
	9.82	11.04	20.86		9.69	11.17	20.86

## CALIBRATION:

FLOW RATE			CONCENTRATION (PPM)									CORRECTION FACTOR (CF.)					
(mL/min)			CALCULATED			INITIAL INDICATED			FINAL INDICATED			INITIAL			FINAL		
DILUENT	GAS	TOTAL	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC	CH <sub>4</sub>	NMHC	THC
3098	<del>50.30</del>	3098	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<del>0.994</del>	<del>0.993</del>	<del>0.993</del>	<del>1.002</del>	<del>1.001</del>	<del>1.001</del>
3050	50.30	3100	14.55	13.43	27.99	14.64	13.53	28.17	14.53	13.42	27.96	0.994	0.993	0.993	1.002	1.001	1.001
3074	25.20	3099	7.29	6.73	14.03	n/a	n/a	n/a	7.25	6.69	13.95	n/a	n/a	n/a	1.006	1.006	1.005
3086	12.60	3099	3.65	3.37	7.01	n/a	n/a	n/a	3.64	3.34	6.97	n/a	n/a	n/a	1.002	1.008	1.006

## LINEAR REGRESSION ANALYSIS:

	CORRELATION	SLOPE	INTERCEPT	Comments:
CH <sub>4</sub>	1.000	0.998	0.0%	Filter Change - No Issues
NMHC	1.000	0.999	-0.1%	
THC	1.000	0.999	-0.1%	
				Use Zero Chrom? <b>No</b>



CAL-PRAMP-202307-01698





# Meteorological Sensor Audit/Calibration

## Location Information

Company:	PRAMP	Performed By:	Ferdinand Roy
Audit Location:	Peace River Compliance	Reviewed By:	Chris Wesson
Audit Date:	August 17, 2022	Start/End Time (mst):	8:15/9:20
Calibration Purpose:	routine annual	Weather Conditions:	Mainly clear

## Wind Sensor Information

Sensor ID Data:		Sensor Outputs:	
Sensor Make:	RM Young	Velocity Voltage Output Range:	0-1
Sensor Model:	05305VK	Velocity Unit Output Range:	0-200
Serial #:	129612	Direction Voltage Output Range:	0-1
Previous Cal/Audit Date:	June 16, 2021	Direction Unit Output Range:	0-360

## Wind Calibrator Information

Calibrator I.D. and Expiry Date: RM Young 18802 id# CA03309 expires June 7, 2023

## Wind Speed Audit Data **\*\*+/- 2% of the average correction factor is the limit\*\***

RPM	Wind Speed Generated kph	Clockwise Wind Speed kph	Counter Clockwise Wind Speed kph	Correction Factor
0	0	0.1	0.1	-
1000	18.4	18.5	18.5	0.996
2000	36.9	36.9	37.0	0.998
3000	55.3	55.4	55.4	0.998
4000	73.7	73.9	73.9	0.998
5000	92.2	92.4	92.4	0.997
6000	110.6	110.9	110.9	0.997
7000	129.0	129.5	129.5	0.996
8000	147.4	148.0	148.0	0.996
9000	165.9	166.6	166.6	0.996
10000	184.3	185.1	185.2	0.995
The audit meets AMD requirements.			Average Correction Factor=	0.997

## Wind Direction Audit Data **\*\*+/- 3° of the absolute average degrees difference for all points is the limit\*\***

Generated Wind Direction 0-360 (Up)	Generated Wind Direction 360-0 (Down)	Indicated Wind Direction 0-360 (Up)	Indicated Wind Direction 360-0 (Down)	Degrees Difference 0-360 (Up)	Degrees Difference 360-0 (Down)	Average Absolute Degrees Difference
0	355	1	354	1.0	1.0	1.0
30	330	29	329	1.0	1.0	1.0
60	300	59	300	1.0	0.0	0.5
90	270	89	271	1.0	-1.0	1.0
120	240	119	241	1.0	-1.0	1.0
150	210	151	212	-1.0	-2.0	1.5
180	180	181	181	-1.0	-1.0	1.0
210	150	211	151	-1.0	-1.0	1.0
240	120	241	120	-1.0	0.0	0.5
270	90	271	89	-1.0	1.0	1.0
300	60	300	59	0.0	1.0	0.5
330	30	329	29	1.0	1.0	1.0
355	0	354	1	1.0	1.0	1.0
The audit meets AMD requirements.				Average Absolute Degrees Difference=		0.9

## Comments:

Physical inspection completed - no issues.

**END OF REPORT**

<b>Parameter</b>	<b>Method &amp; Procedure</b>
<b>SULPHUR DIOXIDE (SO<sub>2</sub>)</b>	<b>Bureau Veritas EMS SOP-00209: Ambient Sulphur Monitoring</b>
<b>HYDROGEN SULPHIDE (H<sub>2</sub>S)</b>	<b>Bureau Veritas EMS SOP-00209: Ambient Sulphur Monitoring</b>
<b>TOTAL HYDROCARBONS (THC), METHANE (CH<sub>4</sub>), NON-METHANE(NMHC)</b>	<b>Bureau Veritas EMS SOP-00001: Methane, Non-Methane Hydrocarbon Analyzer Monitoring</b>
<b>OXIDES OF NITROGEN (NO<sub>x</sub>), NITRIC OXIDE (NO) &amp; NITROGEN DIOXIDE (NO<sub>2</sub>)</b>	<b>Bureau Veritas EMS SOP-00213: Ambient NO/NO<sub>2</sub>/NO<sub>x</sub> Monitoring</b>
<b>OZONE (O<sub>3</sub>)</b>	<b>Bureau Veritas EMS SOP-00212: Ambient O<sub>3</sub> Monitoring</b>
<b>PARTICULATE MATTER &lt; 2.5 MICRONS (PM<sub>2.5</sub>)</b>	<b>Bureau Veritas EMS SOP-00010: Thermo Model 5030 SHARP Monitor &amp; EMS SOP-00015: Teledyne API PM Monitor Model T640</b>
<b>WIND SPEED (WS) &amp; WIND DIRECTION (WD)</b>	<b>Bureau Veritas EMS SOP-00013: RM Young Wind Monitor Calibration</b>
<b>RELATIVE HUMIDITY (RH)</b>	<b>Operation Manual</b>
<b>BAROMETRIC PRESSURE (BP)</b>	<b>Operation Manual</b>
<b>AMBIENT TEMPERATURE (AmbTPX)</b>	<b>Operation Manual</b>
<b>STATION TEMPERATURE (StnTPX)</b>	<b>Operation Manual</b>
<b>PRECIPITATION</b>	<b>Bureau Veritas EMS SOP-00242: Precipitation Collector Installation / Maintenance</b>



## Peace River Area Monitoring Program

# JULY 2023

## Monthly Ambient Air Quality Monitoring Report

### PRAMP-202307

#### **Operation and Maintenance:**

Bureau Veritas Canada

#### **Data Validation and Report:**

Peace River Area Monitoring Program

August 17, 2023

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## LIST OF ACRONYMS

AAAQOs	Alberta Ambient Air Quality Objectives
AEP	Alberta Environment and Parks
AMD	Air Monitoring Directive
AT	Ambient Temperature
BP	Barometric Pressure
CH <sub>4</sub>	Methane
EPEA	Environmental Protection and Enhancement Act
H <sub>2</sub> S	Hydrogen Sulphide
kph	kilometers per hour
mb	millibar
mm	millimeter
NMHC	Non-Methane Hydrocarbons
ppb	parts per billion
ppm	parts per million
PRAMP	Peace River Area Monitoring Program
RH	Relative Humidity
SO <sub>2</sub>	Sulphur Dioxide
ST	Station Temperature
THC	Total Hydrocarbons
TRS	Total Reduced Sulphur
VWD	Vector Wind Direction
VWS	Vector Wind Speed
WD	Wind Direction
WS	Wind Speed
°C	Degrees Celsius



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August 17, 2023

**RE: PRAMP – July 2023 Monthly Ambient Air Quality Monitoring Report**

Enclosed is the July 2023 Monthly Ambient Air Quality Monitoring Report for the continuous ambient air quality monitoring stations of the Peace River Area Monitoring Program (PRAMP) regional air quality monitoring network.

The representative of the Person Responsible for this monitoring program is

PRAMP Airshed  
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This report has been prepared, review and submitted by Michael Bisaga & Lily Lin of the PRAMP Airshed. This report is also submitted on behalf of the industrial member companies to satisfy the requirements of the facility operating approvals.

PRAMP Airshed has retained the services of Bureau Veritas Canada to conduct continuous ambient monitoring on its behalf.



## NETWORK STATION SUMMARY

### Listing of Continuous Monitoring Stations

The PRAMP continuous ambient air quality monitoring network stations are:

- 986-C Station
- 842-B Station
- Reno-B Station
- AQHI Grimshaw
- Peace River Complex (PRC) Station

Station ID	Station Name	Latitude	Longitude
1562	986-C	56.36980	-116.92500
1561	842-B	56.27406	-116.98129
1563	Reno-B	55.890868	-117.137080
1689	AQHI-Grimshaw	56.18657	-117.604994
1698	PRC	56.38257	-116.769283

### Listing of Intermittent Monitoring Stations

- VOC Canister Sampling Station
  - 986-C Station
  - 842-B Station
  - Reno-B Station

### Listing of PRAMP member with EPEA Facility Operating Approval

Company	Facility	Approval No.
Canadian Natural Upgrading Limited	Peace River Complex	1642-03-00

### Calibration and Data Submission

Hourly data and calibration reports for July 2023 were submitted to Alberta's Ambient Air Data Warehouse through ETS for the 986-C station, 842-B station, Reno-B station, PRC station and AQHI-Grimshaw station.

## Monitoring Notes during the Month of July 2023

### 986-C Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- **THC/CH4/NMHC:** The Thermo 55i, s/n: 1433563261, failed the shut-down calibration due to frequent injection issues on July 5. The analyzer was removed, and the Thermo 55i, s/n: 1022143392, was installed. One-minute data were reviewed and discarded if data quality was affected by injection issues. Two hours of data collected on July 1 were invalidated as a result.
- **SO2:** The expected zero value was entered incorrectly on July 7. The error was corrected on July 15. As a result, the value was not used for the baseline correction between July 7 and 15.

### 842-B Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- No major operational issues were recorded this month.

### Reno-B Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- **THC/CH4/NMHC:** After a shut-down calibration on July 18, BV's Thermo 55i analyzer, s/n: 1505664392, was removed, and PRAMP's Thermo 55i analyzer, s/n: 12101910497, was installed. The analyzer was allowed time to stabilize overnight. A successful installation calibration was completed on July 19. Twenty hours of downtime were recorded due to this event.

### PRC Station

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) where applicable.
- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- No major operational issues were recorded this month.

### AQHI – Grimshaw Station

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement, except NOx/NO/NO2 (89.9%) and O3 (58.5% in July and 24.7% in June). **AQHI reference #: 417906 and 417907**, respectively.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and /or Alberta Ambient Air Quality Guidelines (AAAGs) where applicable, except PM2.5. One hundred sixty-three 1-hour PM2.5 exceedances and thirteen 24-hour PM2.5 exceedances were recorded this month. Both nearby and distant wildfires contributed to intense local wildfire smoke conditions and numerous PM2.5 exceedances measured by PRAMP.

Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
02-Jul	6	PM2.5	1-Hour	88	16.2	300° (WNW)	415805
02-Jul	7	PM2.5	1-Hour	103	15.8	295° (WNW)	415805
02-Jul	-	PM2.5	24-Hour	40	13.7	296° (WNW)	415805
07-Jul	2	PM2.5	1-Hour	85	5.1	7° (N)	416910
07-Jul	3	PM2.5	1-Hour	99	5.4	14° (NNE)	416910
07-Jul	4	PM2.5	1-Hour	107	5.3	14° (NNE)	416910
07-Jul	5	PM2.5	1-Hour	100	4.2	10° (N)	416910
07-Jul	6	PM2.5	1-Hour	84	2.6	354° (N)	416910
07-Jul	-	PM2.5	24-Hour	58	4.1	61° (ENE)	416910
09-Jul	12	PM2.5	1-Hour	85	10.4	189° (S)	416910
09-Jul	13	PM2.5	1-Hour	107	11.7	202° (SSW)	416910
09-Jul	14	PM2.5	1-Hour	118	9.6	218° (SW)	416910
09-Jul	15	PM2.5	1-Hour	115	9.0	245° (WSW)	416910
09-Jul	16	PM2.5	1-Hour	107	6.8	250° (WSW)	416910
09-Jul	17	PM2.5	1-Hour	106	4.8	246° (WSW)	416910
09-Jul	18	PM2.5	1-Hour	101	3.1	194° (SSW)	416910
09-Jul	19	PM2.5	1-Hour	100	3.4	107° (ESE)	416910
09-Jul	20	PM2.5	1-Hour	99	4.6	73° (ENE)	416910
09-Jul	21	PM2.5	1-Hour	96	5.2	50° (NE)	416910
09-Jul	22	PM2.5	1-Hour	107	6.5	42° (NE)	416910
09-Jul	23	PM2.5	1-Hour	113	6.9	45° (NE)	416910
09-Jul	-	PM2.5	24-Hour	72	5.3	211° (SSW)	416910
10-Jul	0	PM2.5	1-Hour	149	8.3	50° (NE)	416553
10-Jul	1	PM2.5	1-Hour	158	8.6	55° (NE)	416553
10-Jul	2	PM2.5	1-Hour	174	7.4	63° (ENE)	416553
10-Jul	3	PM2.5	1-Hour	164	6.2	68° (ENE)	416553
10-Jul	4	PM2.5	1-Hour	162	8.1	68° (ENE)	416553
10-Jul	5	PM2.5	1-Hour	202	4.9	49° (NE)	416553
10-Jul	6	PM2.5	1-Hour	192	8.9	44° (NE)	416553
10-Jul	7	PM2.5	1-Hour	87	10.4	47° (NE)	416553
10-Jul	8	PM2.5	1-Hour	102	9.5	41° (NE)	416553
10-Jul	9	PM2.5	1-Hour	92	5.0	61° (ENE)	416553
10-Jul	10	PM2.5	1-Hour	89	3.2	83° (E)	416553
10-Jul	11	PM2.5	1-Hour	93	2.8	126° (SE)	416553
10-Jul	12	PM2.5	1-Hour	94	2.7	82° (E)	416553
10-Jul	13	PM2.5	1-Hour	83	3.6	57° (ENE)	416553
11-Jul	-	PM2.5	24-Hour	42	6.8	167° (SSE)	416553
12-Jul	-	PM2.5	24-Hour	47	4.1	319° (NW)	416553
13-Jul	5	PM2.5	1-Hour	111	7.9	339° (NNW)	416553

Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
13-Jul	6	PM2.5	1-Hour	121	8.1	346° (NNW)	416553
13-Jul	7	PM2.5	1-Hour	141	9.8	2° (N)	416553
13-Jul	8	PM2.5	1-Hour	164	11.6	4° (N)	416553
13-Jul	9	PM2.5	1-Hour	181	9.4	3° (N)	416553
13-Jul	10	PM2.5	1-Hour	253	7.0	4° (N)	416553
13-Jul	11	PM2.5	1-Hour	353	8.1	12° (NNE)	416553
13-Jul	12	PM2.5	1-Hour	270	8.5	17° (NNE)	416553
13-Jul	13	PM2.5	1-Hour	154	7.1	14° (NNE)	416553
13-Jul	14	PM2.5	1-Hour	136	7.6	0° (N)	416553
13-Jul	15	PM2.5	1-Hour	146	7.9	342° (NNW)	416553
13-Jul	16	PM2.5	1-Hour	117	8.9	3° (N)	416553
13-Jul	17	PM2.5	1-Hour	110	8.0	4° (N)	416553
13-Jul	18	PM2.5	1-Hour	111	6.0	7° (N)	416553
13-Jul	19	PM2.5	1-Hour	99	3.5	343° (NNW)	416553
13-Jul	20	PM2.5	1-Hour	104	4.5	274° (W)	416553
13-Jul	21	PM2.5	1-Hour	126	7.6	271° (W)	416553
13-Jul	22	PM2.5	1-Hour	116	7.5	293° (WNW)	416553
13-Jul	23	PM2.5	1-Hour	100	8.1	305° (WNW)	416553
13-Jul	-	PM2.5	24-Hour	133	7.0	345° (NNW)	416553
14-Jul	0	PM2.5	1-Hour	109	8.1	322° (NW)	416553
14-Jul	1	PM2.5	1-Hour	123	7.3	327° (NW)	416553
14-Jul	2	PM2.5	1-Hour	142	7.7	341° (NNW)	416553
14-Jul	3	PM2.5	1-Hour	164	7.4	342° (NNW)	416553
14-Jul	4	PM2.5	1-Hour	192	6.1	355° (N)	416553
14-Jul	5	PM2.5	1-Hour	204	6.7	346° (NNW)	416553
14-Jul	6	PM2.5	1-Hour	235	5.7	346° (NNW)	416553
14-Jul	7	PM2.5	1-Hour	278	5.7	1° (N)	416553
14-Jul	8	PM2.5	1-Hour	297	4.7	8° (N)	416553
14-Jul	9	PM2.5	1-Hour	304	3.1	5° (N)	416553
14-Jul	10	PM2.5	1-Hour	306	3.1	325° (NW)	416553
14-Jul	11	PM2.5	1-Hour	318	3.6	296° (WNW)	416553
14-Jul	12	PM2.5	1-Hour	272	5.1	288° (WNW)	416553
14-Jul	13	PM2.5	1-Hour	290	5.1	248° (WSW)	416553
14-Jul	14	PM2.5	1-Hour	357	5.7	235° (SW)	416553
14-Jul	15	PM2.5	1-Hour	333	7.3	210° (SSW)	416553
14-Jul	16	PM2.5	1-Hour	202	9.2	193° (S)	416553
14-Jul	17	PM2.5	1-Hour	165	10.3	193° (S)	416553
14-Jul	18	PM2.5	1-Hour	147	9.3	199° (SSW)	416553
14-Jul	19	PM2.5	1-Hour	141	6.6	196° (SSW)	416553

Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
14-Jul	20	PM2.5	1-Hour	115	5.3	203° (SSW)	416553
14-Jul	21	PM2.5	1-Hour	102	4.1	234° (SW)	416553
14-Jul	22	PM2.5	1-Hour	104	0.1	184° (S)	416553
14-Jul	23	PM2.5	1-Hour	104	0.3	130° (SE)	416553
14-Jul	-	PM2.5	24-Hour	209	5.7	285° (WNW)	416553
15-Jul	0	PM2.5	1-Hour	107	3.2	248° (WSW)	416553
15-Jul	1	PM2.5	1-Hour	101	3.2	259° (WSW)	416553
15-Jul	2	PM2.5	1-Hour	102	0.5	281° (W)	416553
15-Jul	3	PM2.5	1-Hour	105	2.9	329° (NNW)	416553
15-Jul	4	PM2.5	1-Hour	106	3.6	354° (N)	416553
15-Jul	5	PM2.5	1-Hour	112	0.2	52° (NE)	416553
15-Jul	6	PM2.5	1-Hour	114	1.5	340° (NNW)	416553
15-Jul	7	PM2.5	1-Hour	137	2.3	10° (N)	416553
15-Jul	8	PM2.5	1-Hour	139	1.9	74° (ENE)	416553
15-Jul	9	PM2.5	1-Hour	139	3.2	86° (E)	416553
15-Jul	10	PM2.5	1-Hour	134	3.5	120° (ESE)	416553
15-Jul	11	PM2.5	1-Hour	115	3.9	90° (E)	416553
15-Jul	12	PM2.5	1-Hour	124	5.6	134° (SE)	416553
15-Jul	13	PM2.5	1-Hour	127	7.0	133° (SE)	416553
15-Jul	14	PM2.5	1-Hour	125	7.7	160° (SSE)	416553
15-Jul	15	PM2.5	1-Hour	132	6.3	176° (S)	416553
15-Jul	16	PM2.5	1-Hour	140	5.8	194° (SSW)	416553
15-Jul	17	PM2.5	1-Hour	142	4.5	191° (S)	416553
15-Jul	18	PM2.5	1-Hour	133	5.4	177° (S)	416553
15-Jul	19	PM2.5	1-Hour	120	6.0	199° (SSW)	416553
15-Jul	20	PM2.5	1-Hour	134	4.3	218° (SW)	416553
15-Jul	21	PM2.5	1-Hour	128	7.0	226° (SW)	416553
15-Jul	22	PM2.5	1-Hour	130	9.1	298° (WNW)	416553
15-Jul	23	PM2.5	1-Hour	136	1.6	67° (ENE)	416553
15-Jul	-	PM2.5	24-Hour	124	4.2	169° (SSE)	416553
16-Jul	0	PM2.5	1-Hour	132	1.1	236° (SW)	416958
16-Jul	1	PM2.5	1-Hour	124	2.5	295° (WNW)	416958
16-Jul	2	PM2.5	1-Hour	120	3.5	294° (WNW)	416958
16-Jul	3	PM2.5	1-Hour	118	0.6	54° (NE)	416958
16-Jul	4	PM2.5	1-Hour	118	1.7	117° (ESE)	416958
16-Jul	5	PM2.5	1-Hour	117	2.6	225° (SW)	416958
16-Jul	6	PM2.5	1-Hour	114	2.4	127° (SE)	416958
16-Jul	7	PM2.5	1-Hour	106	6.7	142° (SE)	416958
16-Jul	8	PM2.5	1-Hour	92	9.0	155° (SSE)	416958

Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
16-Jul	9	PM2.5	1-Hour	88	9.1	160° (SSE)	416958
16-Jul	10	PM2.5	1-Hour	87	11.9	153° (SSE)	416958
16-Jul	11	PM2.5	1-Hour	82	12.8	156° (SSE)	416958
16-Jul	12	PM2.5	1-Hour	81	13.5	147° (SE)	416958
16-Jul	13	PM2.5	1-Hour	82	9.9	154° (SSE)	416958
16-Jul	14	PM2.5	1-Hour	85	9.1	164° (SSE)	416958
16-Jul	15	PM2.5	1-Hour	91	9.8	148° (SE)	416958
16-Jul	16	PM2.5	1-Hour	94	9.6	137° (SE)	416958
16-Jul	17	PM2.5	1-Hour	100	10.3	134° (SE)	416958
16-Jul	18	PM2.5	1-Hour	99	8.1	135° (SE)	416958
16-Jul	19	PM2.5	1-Hour	98	5.0	143° (SE)	416958
16-Jul	20	PM2.5	1-Hour	92	2.0	114° (ESE)	416958
16-Jul	21	PM2.5	1-Hour	95	1.9	57° (ENE)	416958
16-Jul	22	PM2.5	1-Hour	99	3.3	51° (NE)	416958
16-Jul	23	PM2.5	1-Hour	96	6.1	59° (ENE)	416958
16-Jul	-	PM2.5	24-Hour	100	6.4	139° (SE)	416958
17-Jul	0	PM2.5	1-Hour	92	6.9	217° (SW)	416958
17-Jul	-	PM2.5	24-Hour	44	7.9	213° (SSW)	416958
19-Jul	-	PM2.5	24-Hour	42	6.6	289° (WNW)	416958
20-Jul	4	PM2.5	1-Hour	90	5.4	334° (NNW)	416958
20-Jul	5	PM2.5	1-Hour	104	5.7	326° (NW)	416958
20-Jul	6	PM2.5	1-Hour	104	3.0	24° (NNE)	416958
20-Jul	7	PM2.5	1-Hour	104	1.3	150° (SSE)	416958
20-Jul	8	PM2.5	1-Hour	102	1.7	173° (S)	416958
20-Jul	9	PM2.5	1-Hour	112	1.4	337° (NNW)	416958
20-Jul	10	PM2.5	1-Hour	113	3.5	332° (NNW)	416958
20-Jul	11	PM2.5	1-Hour	100	4.4	287° (WNW)	416958
20-Jul	12	PM2.5	1-Hour	96	3.8	311° (NW)	416958
20-Jul	13	PM2.5	1-Hour	90	2.5	282° (W)	416958
20-Jul	14	PM2.5	1-Hour	88	6.8	283° (W)	416958
20-Jul	15	PM2.5	1-Hour	96	7.2	289° (WNW)	416958
20-Jul	16	PM2.5	1-Hour	99	5.0	298° (WNW)	416958
20-Jul	17	PM2.5	1-Hour	98	3.8	277° (W)	416958
20-Jul	18	PM2.5	1-Hour	96	6.2	242° (WSW)	416958
20-Jul	19	PM2.5	1-Hour	93	8.7	189° (S)	416958
20-Jul	20	PM2.5	1-Hour	93	4.3	198° (SSW)	416958
20-Jul	21	PM2.5	1-Hour	96	1.6	287° (WNW)	416958
20-Jul	22	PM2.5	1-Hour	92	3.5	309° (NW)	416958
20-Jul	23	PM2.5	1-Hour	88	4.1	329° (NNW)	416958

Date	Time (MST)	Parameter	Average Period	Concentration (µg/m3)	Wind speed (km/hr)	Wind Direction	Reference #
20-Jul	-	PM2.5	24-Hour	93	4.2	301° (WNW)	416958
21-Jul	0	PM2.5	1-Hour	90	3.7	329° (NNW)	416958
21-Jul	1	PM2.5	1-Hour	92	3.8	339° (NNW)	416958
21-Jul	2	PM2.5	1-Hour	93	5.0	348° (NNW)	416958
21-Jul	3	PM2.5	1-Hour	93	2.5	349° (NNW)	416958
21-Jul	4	PM2.5	1-Hour	92	2.9	350° (N)	416958
21-Jul	5	PM2.5	1-Hour	88	3.4	346° (NNW)	416958
21-Jul	6	PM2.5	1-Hour	91	3.2	356° (N)	416958
21-Jul	7	PM2.5	1-Hour	93	3.4	17° (NNE)	416958
21-Jul	8	PM2.5	1-Hour	94	3.3	73° (ENE)	416958
21-Jul	9	PM2.5	1-Hour	93	2.6	86° (E)	416958
21-Jul	10	PM2.5	1-Hour	94	4.0	88° (E)	416958
21-Jul	11	PM2.5	1-Hour	86	3.7	97° (E)	416958
21-Jul	12	PM2.5	1-Hour	85	4.3	87° (E)	416958
21-Jul	13	PM2.5	1-Hour	89	2.9	65° (ENE)	416958
21-Jul	14	PM2.5	1-Hour	85	4.3	83° (E)	416958
21-Jul	20	PM2.5	1-Hour	82	3.4	33° (NNE)	416958
21-Jul	21	PM2.5	1-Hour	86	5.3	40° (NE)	416958
21-Jul	22	PM2.5	1-Hour	81	6.2	136° (SE)	416958
21-Jul	-	PM2.5	24-Hour	86	4.0	48° (NE)	416958

- NOx/NO/NO2:** The analyzer failed both the daily zero-span check and the as-found points check on July 11. Maintenance/troubleshooting commenced which included cleaning the sample valve. The post repair calibration was successfully completed afterwards. In the absence of a clear point of failure, data were discarded back to the last valid calibration, which was July 10. Thirty-five hours of downtime were recorded. The analyzer was put offline on July 12 for 5 hours to check the zero-span system. With other events which led to an additional 30 hours of downtime, including the station HVAC failure and power outages, the 90% uptime requirement could not be met.
- O3:** PRAMP's Teledyne T400 analyzer, s/n: 824, failed the shut-down calibration on July 12 due to unstable/noisy readings. The analyzer also had a warning for lamp signal displayed on the screen. The analyzer was removed, and BV's Teledyne API 400A analyzer, s/n: 445, was installed and calibrated. In the absence of a clear point of failure, data were discarded back to the last valid multi-point calibration check, which was June 8. Two hundred seventy-two hours of data collected in July and five hundred forty-two hours of data collected in June were discarded.
- AQHI values:** Due to the O3 instrument issue, which was identified on July 12, data were discarded back to June 8. As O3 is one of the parameters used to calculate the AQHI value, the AQHI values during this period were affected. However, considering ambient air and wildfires conditions around the Peace River region this season, PM2.5 was predominant parameter driving the AQHI values. As a result, AQHI values were not discarded and were kept for *reference use*.

## VOCs Canister Sampling Program

- The canister sampling program collects a 1-hour sample of air when the continuously measured non-methane hydrocarbon (NMHC) concentration reaches a specified trigger point. The current trigger point is 0.3 ppm for non-methane hydrocarbons. The trigger point is based on real-time monitoring data that are averaged over a 5-minute period.
- The canister sample collection systems are in place at Station 986-C, 842-B, and the Reno-B Station; a canister sample collection system is not part of the suite of instruments currently deployed at both the PRC station and the AQHI-Grimshaw station.
- Sample analysis and analytical results were prepared and provided by InnoTech Alberta.
- The canister sampling program was temporarily paused between July 8 and July 31 due to wildfire smoke. Starting in early July, intense wildfire smoke in the region caused NMHC concentrations to spike, resulting in PRAMP's canister systems being automatically activated to collect samples. The objective of the PRAMP canister program is to provide data and information about ambient hydrocarbon concentrations from local industrial sources. Collecting samples triggered by wildfire smoke is not within the intended scope of this component of the regional monitoring program. Therefore, the canister sampling program was paused pending dissipation of wildfire smoke and an improvement in air quality conditions.
- Four canister events were recorded this month. The canister system at the Reno-B station was deactivated on July 8, but it was activated automatically after a power outage on July 10. Due to wildfires that caused the NMHC concentrations to become elevated, the canister system was triggered and sample was collected on July 11.

Station	Parameter	Date	Time	Concentration (ppm)
842-B	Non-methane HC	07-Jul	03:25	0.30
Reno-B	Non-methane HC	07-Jul	04:20	0.43
986-C	Non-methane HC	07-Jul	06:45	0.32
Reno-B	Non-methane HC	11-Jul	04:15	0.33



## Revisions to Alberta's Ambient Air Quality Data Warehouse

No revisions to historical data previously submitted to the Alberta's Ambient Air Quality Data Warehouse were made this month.

## Deviations from Authorized Monitoring Methods

No deviations from authorized monitoring methods were recorded this month.

## Disclaimer

Baseline corrections were performed on the 1-minute data. 5-minute and hourly data were calculated based on the post-baseline correction 1-minute data set. Data verification/validation were then performed on the 5-minute and hourly data. Hourly data that are included in this report are the post-validation hourly data set.

Equipment calibration / maintenance records were provided by Bureau Veritas.

## Certification

This report was prepared and submitted by Lily Lin in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).



Lily Lin, Technical Program Manager, PRAMP Airshed

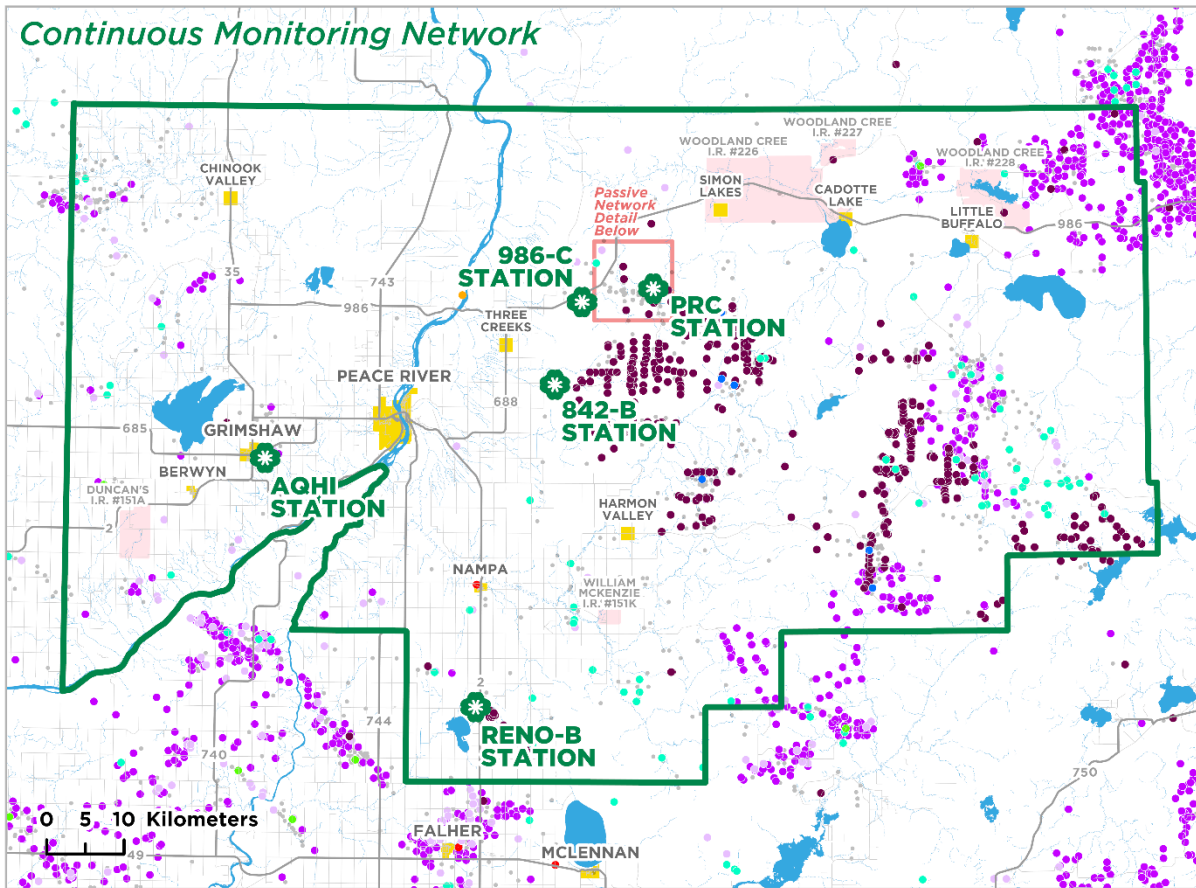
This report was reviewed by Michael Bisaga in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

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. I also certify that at the time of this report's submission, all air data have been electronically uploaded to Alberta's Ambient Air Quality Data Warehouse as required by the AMD. Uploading of VOC data from the canister sampling program was not required at the time of completing this report.



Michael Bisaga, Technical Program Manager, PRAMP Airshed

# Map of PRAMP Continuous Monitoring Network

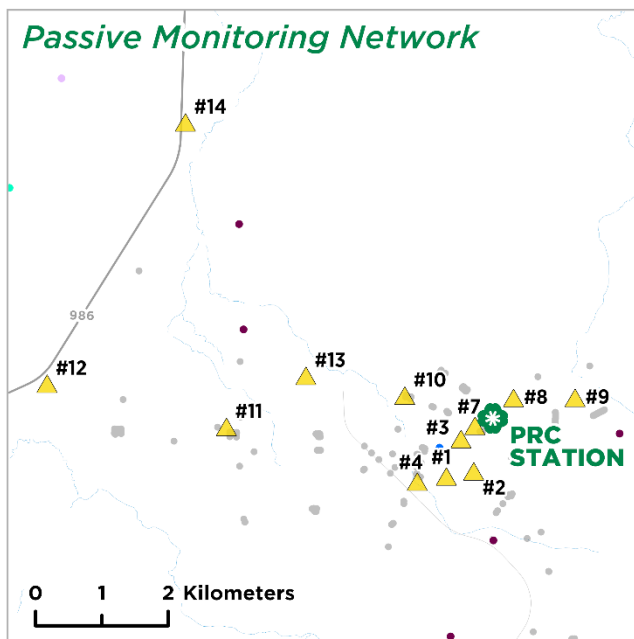


## Legend

- PRAMP Boundary
- Populated Place
- First Nation
- Continuous Monitoring Station
- Passive Monitoring Station

## Industrial Facilities

- In-Situ Oil Sands
- Heavy Oil/Bitumen Well or Battery
- Conventional Oil Well or Battery
- Natural Gas Well or Battery
- Gas Plant or Gas Processing
- Compressor Station or Pipeline
- Agricultural Storage and Transfer
- Pulp and Paper
- Well (Not Associated with Batteries)



Service Layer Credit: Esri, CGIAR, USGS, Esri, USGS

# CONTINUOUS NETWORK EQUIPMENT AND MONITORING RESULTS SUMMARY

## Equipment Operation Summary

Parameter	Equipment Operational Summary
<b>SO2</b>  Thermo 43iQTL #1193585646	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 5.</li> <li>• The expected zero value was entered incorrectly on July 7. The error was corrected on July 15. As a result, the value was not used for the baseline correction between July 7 and 15.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26. A zero-span check was initiated after power was restored on July 24 hour 21 and July 26 hour 20.</li> </ul>
<b>TRS</b>  Thermo 43iQTL #1191833341  TRS convertor CD Nova CDN-101 #552 (BV-supplied)	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 5.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26. A zero-span check was initiated after power was restored on July 24 hour 21 and July 26 hour 20.</li> </ul>
<b>THC/CH4/NMHC</b>  Thermo 55i #1433563261 #1022143392	<ul style="list-style-type: none"> <li>• BV's Thermo 55i analyzer, s/n: 1433563261, failed the shut-down calibration due to frequent injection issues on July 5. The analyzer was removed, and another BV's Thermo 55i analyzer, s/n: 1022143392, was installed. One-minute data were reviewed and discarded if data quality was affected by injection issues. Two hours of data collected on July 1 were invalidated as a result.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26. Hourly data collected on July 24 hour 17 and July 26 hour 17 were discarded as the analyzer was recovering from the power outages. A zero-span check was initiated after power was restored on July 24 hour 21 and July 26 hour 20.</li> </ul>
<b>RH</b>  Rotronic HC2-S3 #20626912	<ul style="list-style-type: none"> <li>• The RH probe was checked on July 5. The probe passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> <li>• Due to datalogger polling issues, three hours of downtime were recorded as the hourly data completeness requirement did not meet.</li> </ul>
<b>BP</b>  MetOne 092 #Y23358	<ul style="list-style-type: none"> <li>• The BP sensor was checked on July 5. The sensor passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> <li>• Due to datalogger polling issues, three hours of downtime were recorded as the hourly data completeness requirement did not meet.</li> </ul>

Parameter	Equipment Operational Summary
<b>AT</b> Rotronic HC2-S3 #20626912	<ul style="list-style-type: none"> <li>• The AT probe was checked on July 5. The probe passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> <li>• Due to datalogger polling issues, three hours of downtime were recorded as the hourly data completeness requirement did not meet.</li> </ul>
<b>ST</b> COMET #18961918	<ul style="list-style-type: none"> <li>• No operational issues were identified this month.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> </ul>
<b>Precipitation</b> RM Young 52202 #TB 16325	<ul style="list-style-type: none"> <li>• The precipitation gauge was checked on July 5. The unit passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> </ul>
<b>WS/ WD</b> RM Young 05305AQ #180340	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The annual wind system calibration was completed on August 5, 2022.</li> <li>• The anemometer sensors were check on July 5. The wind system passed the check requirements.</li> <li>• Fourteen hours of downtime were recorded due to power outages on July 4, July 24 and July 26.</li> <li>• Due to datalogger polling issues, three hours of downtime were recorded as the hourly data completeness requirement did not meet.</li> </ul>

**Monitored Data Summary for 986-C Station**

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	1	Jul 1 at hr 6	10.6	SSW	0.1	Jul 7	98.1	93.1
TRS (ppb)	-	-	-	-	-	-	0.68	0.17	7.35	Jul 13 at hr 0	1	SSE	1.45	Jul 13	98.1	93.1
THC (ppm)	-	-	-	-	-	-	2.08	1.90	2.81	Jul 7 at hr 6	5	E	2.22	Jul 21	96.9	92.2
CH4 (ppm)	-	-	-	-	-	-	2.07	1.90	2.65	Jul 7 at hr 6	5	E	2.22	Jul 21	96.9	92.2
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.16	Jul 7 at hr 6	5	E	0.01	Jul 7	96.9	92.2
RH (%)	-	-	-	-	-	-	71.5	25	100	Jul 3 at hr 5	10	NNW	98.3	Jul 25	97.7	97.7
BP (millibar)	-	-	-	-	-	-	943	933	953	Jul 28 at hr 4	8	ESE	952	Jul 28	97.7	97.7
Ext. Temp. (°C)	-	-	-	-	-	-	17.5	4.4	30.5	Jul 9 at hr 15	3.3	SW	22.9	Jul 9	97.7	97.7
Stn. Temp. (°C)	-	-	-	-	-	-	23.1	22.3	24.3	Jul 4 at hr 22	11.9	S	23.6	Jul 5	98.1	98.1
Precipitation (mm)*	-	-	-	-	-	-	37.1	0.0	7.3	Jul 24 at hr 22	6.1	N	12.6	Jul 25	98.1	98.1
WSV (km/hr)	-	-	-	-	-	-	1.9	0.3	24.4	Jul 22 at hr 23	24.4	WSW	13.2	Jul 10	97.7	97.7
WDV (sector)	-	-	-	-	-	-	185 (S)	-	-	-	-	-	-	-	97.7	97.7

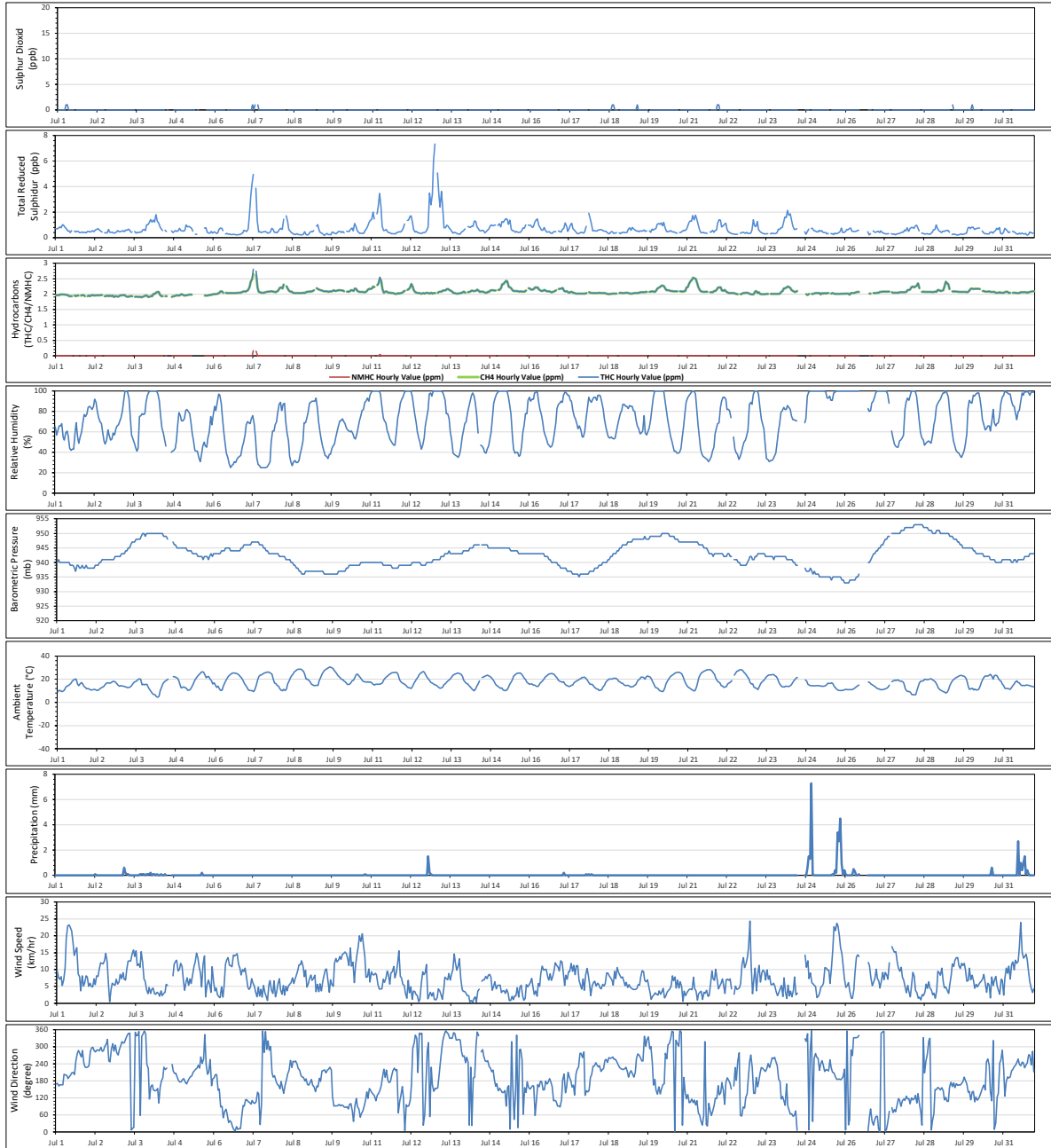
1- Date/ Time given is the first minimum and maximum value that was recorded

\* Data represents the total (sum) for the indicated time frame

**Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances**

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of July 2023 - 986-C Station





## 842-B Station

### Equipment Operation Summary

Parameter	Equipment Operational Summary
<b>SO2</b>  Thermo 43iQTL #1200736629	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 13.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>TRS</b>  Thermo 43iQTL #1200736630  TRS Convertor CD Nova CDN-101 #583	<ul style="list-style-type: none"> <li>• Following a successful shut-down calibration on July 13, scheduled maintenance was performed. A successful post-repair calibration was completed afterwards. Two hours of downtime were recorded due to this event.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>THC/CH4/NMHC</b>  Thermo 55i #1314057759  H2 Generator HG300 #190567058	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 13.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>RH</b>  Rotronic HC2-S3 #20370767	<ul style="list-style-type: none"> <li>• The RH probe was checked on July 13. The probe passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>BP</b>  MetOne 092 #Y23362	<ul style="list-style-type: none"> <li>• The BP sensor was checked on July 13. The sensor passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>AT</b>  Rotronic HC2-S3 #20370767	<ul style="list-style-type: none"> <li>• The AT probe was checked on July 13. The probe passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>ST</b>  COMET #20790297	<ul style="list-style-type: none"> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>

Parameter	Equipment Operational Summary
<p><b>Precipitation</b></p> <p>RM Young 52202 #TB 15878</p>	<ul style="list-style-type: none"> <li>• The precipitation gauge was checked on July 13. The sensor passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>
<p><b>WS/ WD</b></p> <p>RM Young 05305AQ #174802</p>	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The annual wind system calibration was completed on August 3, 2022.</li> <li>• The anemometer sensors were check on July 13. Both the wind speed sensor and wind direction sensor passed the check requirements.</li> <li>• Seventeen hours of downtime were recorded due to a power outage this month.</li> </ul>

**Monitored Data Summary for 842-B Station**

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	2	Jul 2 at hr 19	4.3	WNW	0.2	Jul 2	97.7	92.7
TRS (ppb)	-	-	-	-	-	-	0.71	0.22	4.83	Jul 7 at hr 6	6.3	ENE	1.82	Jul 7	97.4	92.3
THC (ppm)	-	-	-	-	-	-	2.05	1.88	2.93	Jul 7 at hr 7	3.8	ENE	2.26	Jul 7	97.7	92.4
CH4 (ppm)	-	-	-	-	-	-	2.03	1.88	2.62	Jul 21 at hr 5	3.1	ENE	2.17	Jul 21	97.7	92.4
NMHC (ppm)	-	-	-	-	-	-	0.01	0.00	0.41	Jul 7 at hr 7	3.8	ENE	0.11	Jul 7	97.7	92.4
RH (%)	-	-	-	-	-	-	73.8	26	100	Jul 3 at hr 5	6.5	NNW	98.3	Jul 25	97.7	97.7
BP (millibar)	-	-	-	-	-	-	942	932	952	Jul 28 at hr 6	1.3	E	951	Jul 28	97.7	97.7
Ext. Temp. (°C)	-	-	-	-	-	-	18.3	5.1	30.1	Jul 9 at hr 15	6.8	SW	23.2	Jul 9	97.7	97.7
Stn. Temp. (°C)	-	-	-	-	-	-	22.5	21.3	24.0	Jul 13 at hr 4	1.8	WSW	23.0	Jul 24	97.7	97.7
Precipitation (mm)*	-	-	-	-	-	-	39.2	0.0	6.1	Jul 24 at hr 21	10.1	WNW	12.2	Jul 24	97.7	97.7
WSV (km/hr)	-	-	-	-	-	-	2.0	0.1	21.4	Jul 31 at hr 13	21.4	WSW	10.2	Jul 31	97.7	97.7
WDV (sector)	-	-	-	-	-	-	223 (SW)	-	-	-	-	-	-	-	97.7	97.7

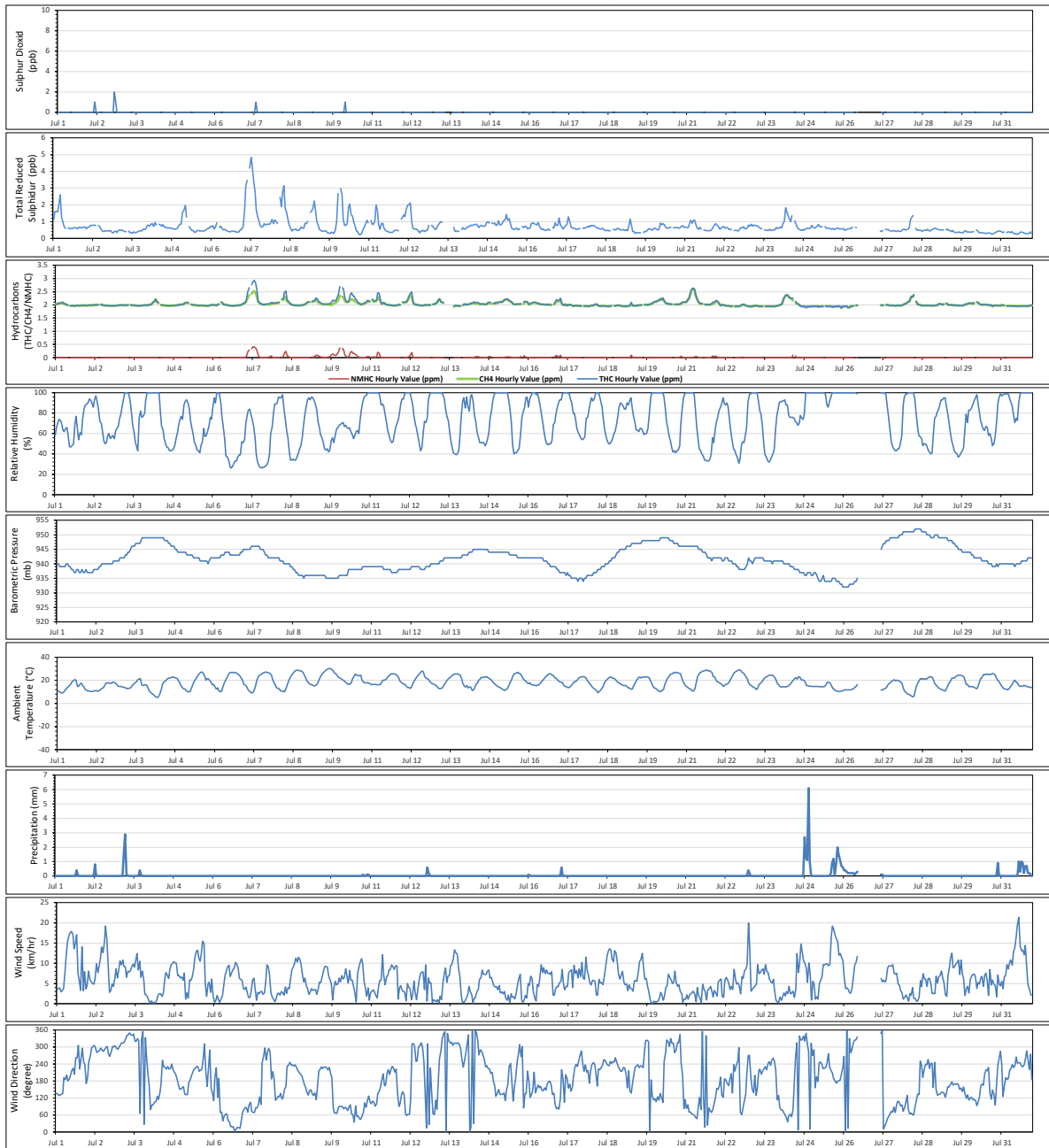
1- Date/ Time given is the first minimum and maximum value that was recorded

\* Data represents the total (sum) for the indicated time frame

**Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances**

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Jul 2023 - 842-B Station



## Reno-B Station

### Equipment Operation Summary

Parameter	Equipment Operational Summary
<p><b>SO2</b></p> <p>Thermo 43iQTL #12101910505</p>	<ul style="list-style-type: none"> <li>• Due to datalogger polling issues, ten hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• A successful monthly calibration was performed on July 18.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month. A zero-span check was completed after power was restored to confirm the analyzer's functionality. The check results met the check requirements.</li> </ul>
<p><b>TRS</b></p> <p>Thermo 43iQTL #12101910504</p> <p><b>TRS Convertor</b> CD Nova CDN-101 #590</p>	<ul style="list-style-type: none"> <li>• Due to datalogger polling issues, ten hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• A successful monthly calibration was performed on July 18.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month. A zero-span check was completed after power was restored to confirm the analyzer's functionality. The check results met the check requirements.</li> <li>• The TRS convertor failed after the power was restored on July 31. The issue was addressed on August 1. Seven hours of downtime were recorded this month due to this event.</li> </ul>
<p><b>THC/CH4/NMHC</b></p> <p>Thermo 55i #1505664392 #12101910497</p> <p>H2 Generator HG300 #210467069</p>	<ul style="list-style-type: none"> <li>• Due to datalogger polling issues, ten hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• Hourly data collected on July 10 hour 19 was discarded as data quality was affected by a small power outage.</li> <li>• After a shut-down calibration on July 18, BV's Thermo 55i analyzer, s/n: 1505664392, was removed, and PRAMP's Thermo 55i analyzer, s/n: 12101910497, was installed. The analyzer was allowed time to stabilize overnight. A successful installation calibration was completed on July 19. Twenty hours of downtime were recorded due to this event.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month. A zero-span check was completed after power was restored to confirm the analyzer's functionality. The check results met the check requirements.</li> </ul>

Parameter	Equipment Operational Summary
<b>RH</b>  Rotronic HC2-S3 #20467597	<ul style="list-style-type: none"> <li>• Due to datalogger errors, sixteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• The RH probe was checked on July 18. The probe passed the check requirements.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>BP</b>  MetOne 092 #A17940	<ul style="list-style-type: none"> <li>• Due to datalogger errors, sixteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• The BP sensor was checked on July 18. The sensor passed the check requirements.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>AT</b>  Rotronic HC2-S3 #20467597	<ul style="list-style-type: none"> <li>• Due to datalogger errors, sixteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• The AT probe was checked on July 18. The probe passed the check requirements.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>ST</b>  COMET #NA	<ul style="list-style-type: none"> <li>• Due to datalogger errors, ten hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>
<b>Precipitation</b>  RM Young 52202 #TB 15877	<ul style="list-style-type: none"> <li>• Due to datalogger errors, thirteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• The precipitation gauge was checked and tested on July 18. The unit passed the check requirements.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>

Parameter	Equipment Operational Summary
<p><b>WS/ WD</b></p> <p>RM Young 05305AQ #174795</p>	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The annual wind system calibration was completed on November 23, 2022.</li> <li>• The anemometer sensors were check on July 18. The wind sensors passed the check requirements.</li> <li>• Due to datalogger errors, sixteen hours of downtime were recorded this month as hourly data completeness requirement did not meet. Configuration changes were made on the datalogger and station UPS to hopefully correct the polling issues on July 31.</li> <li>• Twenty hours of downtime were recorded due to a power outage this month.</li> </ul>

**Monitored Data Summary for Reno-B Station**

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	6	Jul 7 at hr 7	7.5	E	0.7	Jul 7	96.0	90.8
TRS (ppb)	-	-	-	-	-	-	0.73	0.08	15.20	Jul 7 at hr 7	7.5	E	1.87	Jul 7	95.0	90.0
THC (ppm)	-	-	-	-	-	-	2.00	1.88	4.56	Jul 7 at hr 7	7.5	E	2.23	Jul 7	93.1	88.0
CH4 (ppm)	-	-	-	-	-	-	2.00	1.88	3.15	Jul 7 at hr 7	7.5	E	2.16	Jul 21	93.1	88.0
NMHC (ppm)	-	-	-	-	-	-	0.01	0.00	1.41	Jul 7 at hr 7	7.5	E	0.11	Jul 7	93.1	88.0
RH (%)	-	-	-	-	-	-	75.4	25	100	Jul 3 at hr 6	11.5	NW	98.2	Jul 25	95.2	95.2
BP (millibar)	-	-	-	-	-	-	941	932	951	Jul 28 at hr 1	7.8	E	950	Jul 28	95.2	95.2
Ext. Temp. (°C)	-	-	-	-	-	-	17.2	7.7	28.5	Jul 9 at hr 15	10.2	WSW	22.2	Jul 9	95.2	95.2
Stn. Temp. (°C)	-	-	-	-	-	-	23.3	21.8	24.7	Jul 18 at hr 3	6.5	SW	23.7	Jul 14	96.0	96.0
Precipitation (mm)*	-	-	-	-	-	-	78.9	0.0	7.9	Jul 25 at hr 22	13.3	S	35.6	Jul 25	95.6	95.6
WSV (km/hr)	-	-	-	-	-	-	2.9	0.2	28.2	Jul 2 at hr 10	28.2	W	15.1	Jul 2	95.2	95.2
WDV (sector)	-	-	-	-	-	-	215 (SSW)	-	-	-	-	-	-	-	95.2	95.2

1- Date/ Time given is the first minimum and maximum value that was recorded

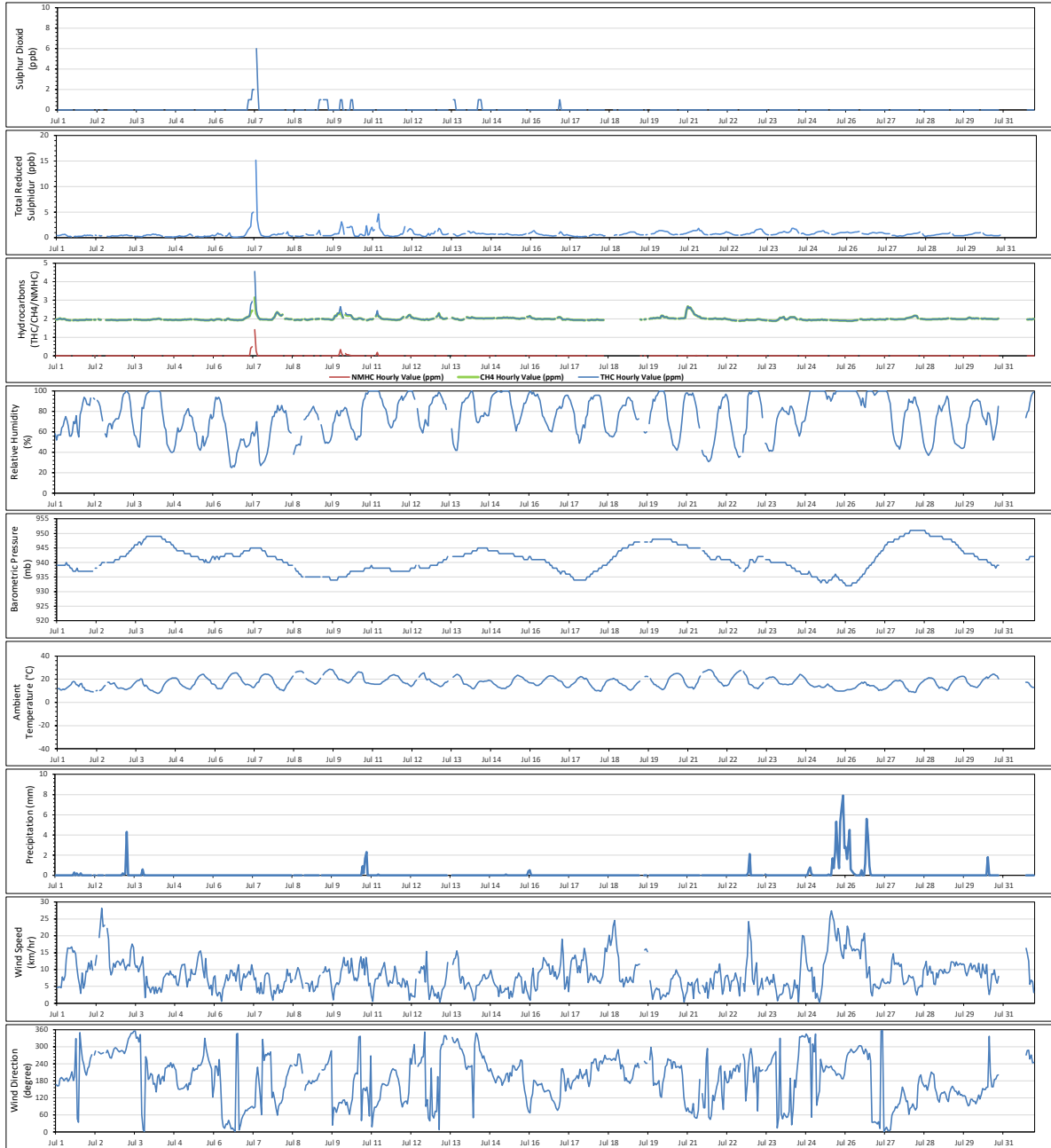
\* Data represents the total (sum) for the indicated time frame

**Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances**

The measured ambient air quality was within the AAAQOs for all monitored parameters.



Timeseries Chart of Hourly Average for the month of Jul 2023 - Reno-B Station



Equipment Operation Summary

Parameter	Equipment Operational Summary
<b>SO2</b>  Thermo 43i #1034746225	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 6.</li> <li>• No operational issues were identified.</li> <li>• July 10 's scheduled zero-span check (hour 3) was interrupted due to power issues. A successful repeat zero-span check was completed on July 10 hour 7. One hour of downtime was recorded due to this event.</li> </ul>
<b>H2S</b>  Thermo 450i #1308857354	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 6.</li> <li>• No operational issues were identified.</li> <li>• July 10 's scheduled zero-span check (hour 3) was interrupted due to power issues. A successful repeat zero-span check was completed on July 10 hour 7. One hour of downtime was recorded due to this event.</li> </ul>
<b>TRS</b>  Thermo 450i #1034746224  TRS Convertor CD Nova CDN-101 #506	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 6.</li> <li>• No operational issues were identified.</li> <li>• July 10 's scheduled zero-span check (hour 3) was interrupted due to power issues. A successful repeat zero-span check was completed on July 10 hour 7. One hour of downtime was recorded due to this event.</li> </ul>
<b>THC/CH4/NMHC</b>  Thermo 55i #1034745845  H2 Generator HG300 #211067076	<ul style="list-style-type: none"> <li>• A successful monthly calibration was performed on July 6.</li> <li>• No operational issues were identified.</li> <li>• July 10 's scheduled zero-span check (hour 3) was interrupted due to power issues. A successful repeat zero-span check was completed on July 10 hour 7. One hour of downtime was recorded due to this event.</li> </ul>
<b>RH</b>  Rotronic HC2-S3 #20558318	<ul style="list-style-type: none"> <li>• The RH sensor was checked on July 6. The sensor passed the check requirements.</li> <li>• No operational issues were identified.</li> </ul>
<b>BP</b>  MetOne 092 #B19577	<ul style="list-style-type: none"> <li>• The BP sensor was checked on July 6. The sensor passed the check requirements.</li> <li>• No operational issues were identified.</li> </ul>
<b>AT</b>  Rotronic HC2-S3 #20558318	<ul style="list-style-type: none"> <li>• The AT sensor was checked on July 6. The sensor passed the check requirements.</li> <li>• No operational issues were identified.</li> </ul>

Parameter	Equipment Operational Summary
<b>ST</b>  Canadian Natural #NA	<ul style="list-style-type: none"> <li>• No operational issues were identified.</li> </ul>
<b>WS/ WD</b>  RM Young 05305VK #129612	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The annual wind system calibration was completed on August 17, 2022.</li> <li>• The anemometer sensors were checked on July 6. The sensors passed the check requirements.</li> <li>• No operational issues were identified.</li> </ul>

**Monitored Data Summary for Peace River Complex (PRC) Station**

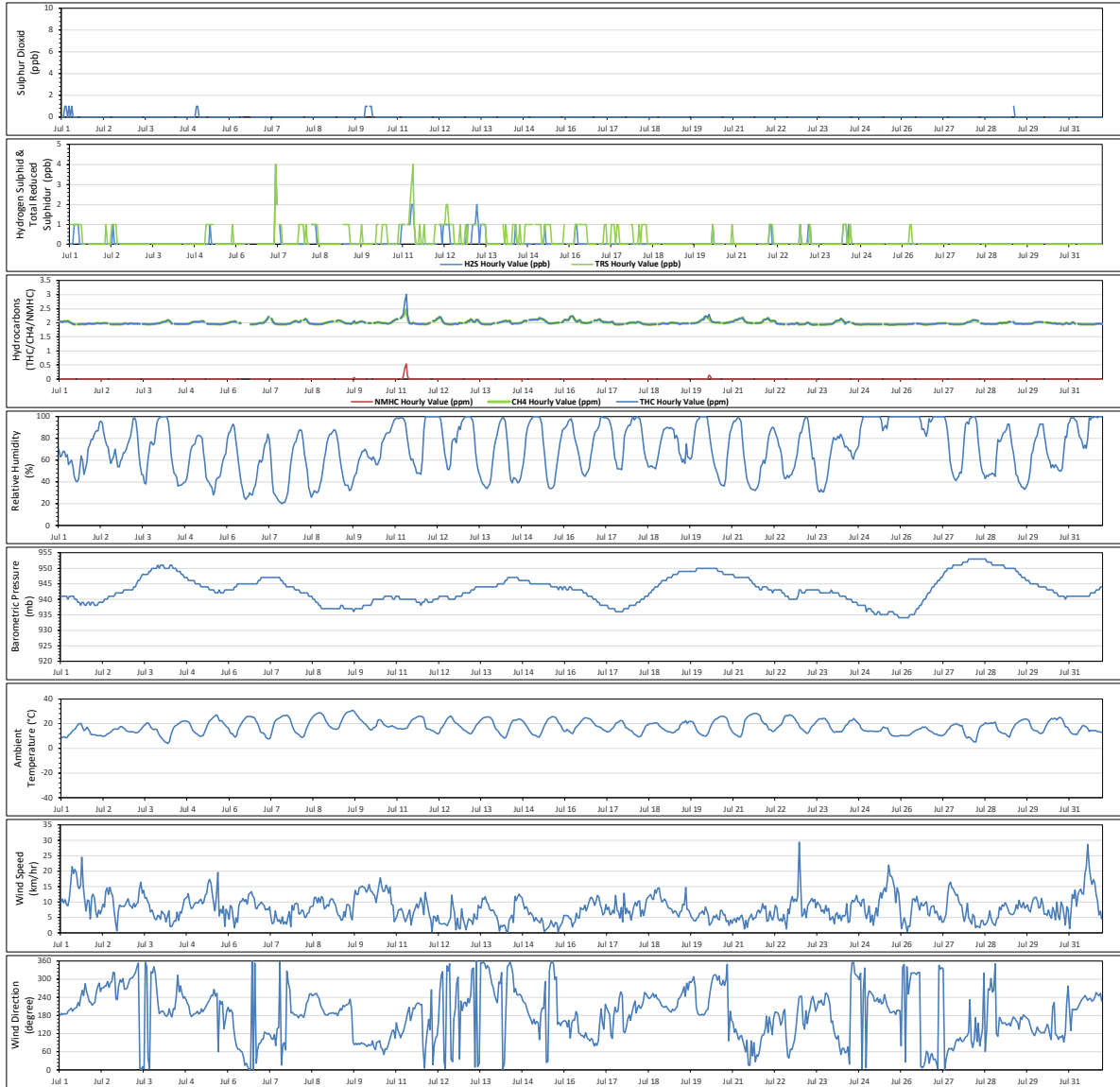
Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	1	Jul 1 at hr 2	9.7	S	0.2	Jul 10	99.9	94.9
H2S (ppb)	10	3	-	0	0	-	0.1	0	4	Jul 7 at hr 4	7.4	ESE	0.0	Jul 1	99.9	94.9
TRS (ppb)	-	-	-	-	-	-	0.2	0	4	Jul 7 at hr 4	7.4	ESE	0.7	Jul 11	99.9	94.9
THC (ppm)	-	-	-	-	-	-	2.00	1.92	3.01	Jul 11 at hr 7	4.9	SSE	2.11	Jul 11	99.9	94.7
CH4 (ppm)	-	-	-	-	-	-	2.00	1.92	2.47	Jul 11 at hr 7	4.9	SSE	2.07	Jul 16	99.9	94.7
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.54	Jul 11 at hr 7	4.9	SSE	0.05	Jul 11	99.9	94.7
RH (%)	-	-	-	-	-	-	70.6	20	100	Jul 4 at hr 1	6.4	SSW	98.0	Jul 25	100.0	100.0
BP (millibar)	-	-	-	-	-	-	943	934	953	Jul 28 at hr 0	5	ESE	952	Jul 28	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	17.4	3.8	30.7	Jul 9 at hr 16	4.2	SSW	23.4	Jul 9	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	22.9	21.6	25.4	Jul 3 at hr 12	11.3	N	23.4	Jul 20	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	2.4	0.2	29.4	Jul 22 at hr 23	29.4	SW	13.3	Jul 1	100.0	100.0
WDV (sector)	-	-	-	-	-	-	196 (SSW)	-	-	-	-	-	-	-	100.0	100.0

1- Date/ Time given is the first minimum and maximum value that was recorded

**Alberta Ambient Air Quality Objectives (AAAQOs) Exceedances**

The measured ambient air quality was within the AAAQOs for all monitored parameters.

Timeseries Chart of Hourly Average for the month of Jul 2023 - Peace River Complex (PRC) Station



Equipment Operation Summary

Parameter	Equipment Operational Summary
<p><b>SO2</b></p> <p>Teledyne T100 #722</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. A successful zero-span check was completed to confirm the analyzer’s functionality. Fourteen hours of downtime were recorded due to this event.</li> <li>• A successful monthly calibration was performed on July 11.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> <li>• The analyzer spanned low on July 26. Additional zero-span check was initiated on July 26 hour 21 to investigate the drift. It was concluded that the drift was due to depleted permeation tube. The issue was corrected in August. Data quality was not affected by this issue.</li> </ul>
<p><b>TRS</b></p> <p>Teledyne T100U #132</p> <p>TRS Convertor CD Nova CDN-101 #576</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. A successful zero-span check was completed to confirm the analyzer’s functionality. Fourteen hours of downtime were recorded due to this event.</li> <li>• A successful monthly calibration was performed on July 11.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> <li>• Due to COMMS issue with analyzer, data collected on July 31 hour 14 to hour 23 were lost. The issue was corrected on August 1. Ten hours of downtime were recorded this month.</li> </ul>

Parameter	Equipment Operational Summary
<p><b>NOx/NO/NO2</b></p> <p>Teledyne T200 #837</p>	<ul style="list-style-type: none"> <li>• The analyzer failed both the daily zero-span check and the as-found points check on July 11. Maintenance/troubleshooting commenced which included cleaning the sample valve. The post repair calibration was successfully completed afterwards. In the absence of a clear point of failure, data were discarded back to the last valid calibration, which was July 10. Thirty-five hours of downtime were recorded.</li> <li>• The analyzer was put offline on July 12 between hour 8 and hour 12 to check the zero-span system. Five hours of downtime were recorded.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• The analyzer spanned high between July 23 and 25, including the July 24's repeat zero-span check. The cause was likely a carryover from the high station temperature event on July 21-22. The check results went back to the acceptable range on July 25. As the issue was from the zero-span system, data quality was not affected. Data collected between July 23 and 25 were considered valid. One hour of downtime was recorded due to additional quality check on July 24.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<p><b>O3</b></p> <p>Teledyne T400 #824</p> <p>API 400A #445</p>	<ul style="list-style-type: none"> <li>• A shut-down calibration was attempted on PRAMP's Teledyne T400 analyzer, s/n: 824, on July 12 in order to perform analyzer swap. However, the analyzer failed the calibration due to unstable/noisy readings. The analyzer also had a warning for lamp signal displayed on the screen. The analyzer was removed, and BV's Teledyne API 400A analyzer, s/n: 445, was installed and calibrated. In the absence of a clear point of failure, data were discarded back to the last valid multi-point calibration check, which was June 8. Two hundred seventy-two hours of data collected in July and five hundred forty-two hours of data collected in June were discarded.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>

Parameter	Equipment Operational Summary
<p><b>THC/CH4/NMHC</b></p> <p>Thermo 55i #1191032505</p> <p>H2 Generator AMA HG300 #190567059</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. A successful zero-span check was completed to confirm the analyzer’s functionality. Fourteen hours of downtime were recorded due to this event.</li> <li>• A successful monthly calibration was performed on July 11.</li> <li>• The station HVAC failed on July 21, resulted in excessive station temperatures. The thermostat was adjusted on July 21, but the effect was minimum. The HVAC unit was reset after a small power outage on July 22. Data collected in the station temperatures that were above the acceptable operational temperature range (&gt;30 degree Celsius) were discarded. Thirty-two hours of data were invalidated as a result.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24. Hourly data collected on July 24 hour 22 was invalidated as the analyzer was recovering from the power failure.</li> </ul>
<p><b>PM2.5</b></p> <p>Teledyne T640 #3189</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• A successful annual audit/maintenance was completed on July 12.</li> <li>• Hourly data collected on July 22 hour 22 and hour 23 were discarded as data quality was affected by a small power outage.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<p><b>RH</b></p> <p>Vaisala HMP155 #N2910506</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• The RH probe was checked on July 11. The Probe passed the check requirements.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<p><b>BP</b></p> <p>MetOne 092 #A2397</p>	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• The BP sensor was checked on July 1. The sensor passed the check requirements.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>



Parameter	Equipment Operational Summary
<b>AT</b>  Vaisala HMP155 #N2910506	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• The AT prober was checked on July 11. The probe passed the check requirements.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<b>ST</b>  COMET #NA	<ul style="list-style-type: none"> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>
<b>WS/ WD</b>  RM Young 05305AQ #174801	<ul style="list-style-type: none"> <li>• Wind direction data contained in this report represents where the wind is coming from.</li> <li>• The last annual wind system calibration was completed on July 12, 2022.</li> <li>• Due to failure of the Envidas poll manager, no data were collected between July 10 hour 16 and July 11 hour 5. The program was restarted remotely. Fourteen hours of downtime were recorded due to this event.</li> <li>• The anemometer sensors were check on July 11. Both the wind speed sensor and wind direction sensor passed the check requirements.</li> <li>• Two hours of downtime were recorded due to a power outage on July 24.</li> </ul>

**Monitored Data Summary for AQHI - Grimshaw Station**

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.2	0	2	Jul 21 at hr 8	3.3	ENE	1.0	Jul 30	93.4	88.3
TRS (ppb)	-	-	-	-	-	-	0.29	0.00	2.74	Jul 16 at hr 4	1.7	ESE	0.82	Jul 24	92.2	87.3
NOx (ppb)	-	-	-	-	-	-	3.5	0	24	Jul 21 at hr 6	3.2	N	6.0	Jul 24	89.9	85.2
NO (ppb)	-	-	-	-	-	-	0.8	0	7	Jul 14 at hr 14	5.7	SW	1.7	Jul 8	89.9	85.2
NO2 (ppb)	159	-	-	0	-	-	2.7	0	19	Jul 21 at hr 6	3.2	N	5.5	Jul 24	89.9	85.2
O3 (ppb)	76	-	-	0	-	-	NA	2.9	60.6	Jul 21 at hr 15	4.1	E	36.0	Jul 17	58.5	55.5
THC (ppm)	-	-	-	-	-	-	2.03	1.89	2.88	Jul 20 at hr 1	3.3	NW	2.19	Jul 20	93.4	88.7
CH4 (ppm)	-	-	-	-	-	-	2.01	1.89	2.72	Jul 20 at hr 1	3.3	NW	2.15	Jul 20	93.4	88.7
NMHC (ppm)	-	-	-	-	-	-	0.02	0.00	0.26	Jul 20 at hr 9	1.4	NNW	0.04	Jul 20	93.4	88.7
PM2.5 (µg/m3)	80	29	-	163	13	-	45.7	2	357	Jul 14 at hr 14	5.7	SW	208.5	Jul 14	97.6	97.4
RH (%)	-	-	-	-	-	-	66.1	23	100	Jul 25 at hr 4	1.7	W	94.5	Jul 25	97.8	97.9
BP (millibar)	-	-	-	-	-	-	943	934	953	Jul 27 at hr 23	2.8	NNW	952	Jul 28	97.8	97.9
Ext. Temp. (°C)	-	-	-	-	-	-	18.4	9.4	29.5	Jul 9 at hr 17	4.8	WSW	23.6	Jul 9	97.8	97.9
Stn. Temp. (°C)	-	-	-	-	-	-	23.4	21.0	43.8	Jul 22 at hr 19	10.7	S	36.7	Jul 22	97.8	97.9
WSV (km/hr)	-	-	-	-	-	-	7.2	0.1	26.5	Jul 22 at hr 22	26.5	SSW	13.7	Jul 2	97.8	97.9
WDV (sector)	-	-	-	-	-	-	274 (W)	-	-	-	-	-	-	-	97.8	97.9

1- Date/ Time given is the first minimum and maximum value that was recorded

**Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances**

The following exceedances of AAAQO and AAAQG were observed at the AQHI - Grimshaw Station.

Date	Time (MST)	Parameter	Average Period	AAAQOs / AAAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 2	6	PM2.5	1-Hour	80 µg/m3	88 µg/m3	16.2 km/hr	300° (WNW)	415805
Jul 2	7	PM2.5	1-Hour	80 µg/m3	103 µg/m3	15.8 km/hr	295° (WNW)	415805
Jul 2	-	PM2.5	24-Hour	29 µg/m3	40 µg/m3	13.7 km/hr	296° (WNW)	415805
Jul 7	2	PM2.5	1-Hour	80 µg/m3	85 µg/m3	5.1 km/hr	7° (N)	416910
Jul 7	3	PM2.5	1-Hour	80 µg/m3	99 µg/m3	5.4 km/hr	14° (NNE)	416910
Jul 7	4	PM2.5	1-Hour	80 µg/m3	107 µg/m3	5.3 km/hr	14° (NNE)	416910
Jul 7	5	PM2.5	1-Hour	80 µg/m3	100 µg/m3	4.2 km/hr	10° (N)	416910
Jul 7	6	PM2.5	1-Hour	80 µg/m3	84 µg/m3	2.6 km/hr	354° (N)	416910
Jul 7	-	PM2.5	24-Hour	29 µg/m3	58 µg/m3	4.1 km/hr	61° (ENE)	416910
Jul 9	12	PM2.5	1-Hour	80 µg/m3	85 µg/m3	10.4 km/hr	189° (S)	416910
Jul 9	13	PM2.5	1-Hour	80 µg/m3	107 µg/m3	11.7 km/hr	202° (SSW)	416910
Jul 9	14	PM2.5	1-Hour	80 µg/m3	118 µg/m3	9.6 km/hr	218° (SW)	416910
Jul 9	15	PM2.5	1-Hour	80 µg/m3	115 µg/m3	9.0 km/hr	245° (WSW)	416910
Jul 9	16	PM2.5	1-Hour	80 µg/m3	107 µg/m3	6.8 km/hr	250° (WSW)	416910
Jul 9	17	PM2.5	1-Hour	80 µg/m3	106 µg/m3	4.8 km/hr	246° (WSW)	416910
Jul 9	18	PM2.5	1-Hour	80 µg/m3	101 µg/m3	3.1 km/hr	194° (SSW)	416910
Jul 9	19	PM2.5	1-Hour	80 µg/m3	100 µg/m3	3.4 km/hr	107° (ESE)	416910
Jul 9	20	PM2.5	1-Hour	80 µg/m3	99 µg/m3	4.6 km/hr	73° (ENE)	416910
Jul 9	21	PM2.5	1-Hour	80 µg/m3	96 µg/m3	5.2 km/hr	50° (NE)	416910
Jul 9	22	PM2.5	1-Hour	80 µg/m3	107 µg/m3	6.5 km/hr	42° (NE)	416910
Jul 9	23	PM2.5	1-Hour	80 µg/m3	113 µg/m3	6.9 km/hr	45° (NE)	416910
Jul 9	-	PM2.5	24-Hour	29 µg/m3	72 µg/m3	5.3 km/hr	211° (SSW)	416910
Jul 10	0	PM2.5	1-Hour	80 µg/m3	149 µg/m3	8.3 km/hr	50° (NE)	416553
Jul 10	1	PM2.5	1-Hour	80 µg/m3	158 µg/m3	8.6 km/hr	55° (NE)	416553
Jul 10	2	PM2.5	1-Hour	80 µg/m3	174 µg/m3	7.4 km/hr	63° (ENE)	416553
Jul 10	3	PM2.5	1-Hour	80 µg/m3	164 µg/m3	6.2 km/hr	68° (ENE)	416553
Jul 10	4	PM2.5	1-Hour	80 µg/m3	162 µg/m3	8.1 km/hr	68° (ENE)	416553
Jul 10	5	PM2.5	1-Hour	80 µg/m3	202 µg/m3	4.9 km/hr	49° (NE)	416553
Jul 10	6	PM2.5	1-Hour	80 µg/m3	192 µg/m3	8.9 km/hr	44° (NE)	416553
Jul 10	7	PM2.5	1-Hour	80 µg/m3	87 µg/m3	10.4 km/hr	47° (NE)	416553
Jul 10	8	PM2.5	1-Hour	80 µg/m3	102 µg/m3	9.5 km/hr	41° (NE)	416553
Jul 10	9	PM2.5	1-Hour	80 µg/m3	92 µg/m3	5.0 km/hr	61° (ENE)	416553
Jul 10	10	PM2.5	1-Hour	80 µg/m3	89 µg/m3	3.2 km/hr	83° (E)	416553
Jul 10	11	PM2.5	1-Hour	80 µg/m3	93 µg/m3	2.8 km/hr	126° (SE)	416553
Jul 10	12	PM2.5	1-Hour	80 µg/m3	94 µg/m3	2.7 km/hr	82° (E)	416553
Jul 10	13	PM2.5	1-Hour	80 µg/m3	83 µg/m3	3.6 km/hr	57° (ENE)	416553

Date	Time (MST)	Parameter	Average Period	AAAOs / AAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 11	-	PM2.5	24-Hour	29 µg/m3	42 µg/m3	6.8 km/hr	167° (SSE)	416553
Jul 12	-	PM2.5	24-Hour	29 µg/m3	47 µg/m3	4.1 km/hr	319° (NW)	416553
Jul 13	5	PM2.5	1-Hour	80 µg/m3	111 µg/m3	7.9 km/hr	339° (NNW)	416553
Jul 13	6	PM2.5	1-Hour	80 µg/m3	121 µg/m3	8.1 km/hr	346° (NNW)	416553
Jul 13	7	PM2.5	1-Hour	80 µg/m3	141 µg/m3	9.8 km/hr	2° (N)	416553
Jul 13	8	PM2.5	1-Hour	80 µg/m3	164 µg/m3	11.6 km/hr	4° (N)	416553
Jul 13	9	PM2.5	1-Hour	80 µg/m3	181 µg/m3	9.4 km/hr	3° (N)	416553
Jul 13	10	PM2.5	1-Hour	80 µg/m3	253 µg/m3	7.0 km/hr	4° (N)	416553
Jul 13	11	PM2.5	1-Hour	80 µg/m3	353 µg/m3	8.1 km/hr	12° (NNE)	416553
Jul 13	12	PM2.5	1-Hour	80 µg/m3	270 µg/m3	8.5 km/hr	17° (NNE)	416553
Jul 13	13	PM2.5	1-Hour	80 µg/m3	154 µg/m3	7.1 km/hr	14° (NNE)	416553
Jul 13	14	PM2.5	1-Hour	80 µg/m3	136 µg/m3	7.6 km/hr	0° (N)	416553
Jul 13	15	PM2.5	1-Hour	80 µg/m3	146 µg/m3	7.9 km/hr	342° (NNW)	416553
Jul 13	16	PM2.5	1-Hour	80 µg/m3	117 µg/m3	8.9 km/hr	3° (N)	416553
Jul 13	17	PM2.5	1-Hour	80 µg/m3	110 µg/m3	8.0 km/hr	4° (N)	416553
Jul 13	18	PM2.5	1-Hour	80 µg/m3	111 µg/m3	6.0 km/hr	7° (N)	416553
Jul 13	19	PM2.5	1-Hour	80 µg/m3	99 µg/m3	3.5 km/hr	343° (NNW)	416553
Jul 13	20	PM2.5	1-Hour	80 µg/m3	104 µg/m3	4.5 km/hr	274° (W)	416553
Jul 13	21	PM2.5	1-Hour	80 µg/m3	126 µg/m3	7.6 km/hr	271° (W)	416553
Jul 13	22	PM2.5	1-Hour	80 µg/m3	116 µg/m3	7.5 km/hr	293° (WNW)	416553
Jul 13	23	PM2.5	1-Hour	80 µg/m3	100 µg/m3	8.1 km/hr	305° (WNW)	416553
Jul 13	-	PM2.5	24-Hour	29 µg/m3	133 µg/m3	7.0 km/hr	345° (NNW)	416553
Jul 14	0	PM2.5	1-Hour	80 µg/m3	109 µg/m3	8.1 km/hr	322° (NW)	416553
Jul 14	1	PM2.5	1-Hour	80 µg/m3	123 µg/m3	7.3 km/hr	327° (NW)	416553
Jul 14	2	PM2.5	1-Hour	80 µg/m3	142 µg/m3	7.7 km/hr	341° (NNW)	416553
Jul 14	3	PM2.5	1-Hour	80 µg/m3	164 µg/m3	7.4 km/hr	342° (NNW)	416553
Jul 14	4	PM2.5	1-Hour	80 µg/m3	192 µg/m3	6.1 km/hr	355° (N)	416553
Jul 14	5	PM2.5	1-Hour	80 µg/m3	204 µg/m3	6.7 km/hr	346° (NNW)	416553
Jul 14	6	PM2.5	1-Hour	80 µg/m3	235 µg/m3	5.7 km/hr	346° (NNW)	416553
Jul 14	7	PM2.5	1-Hour	80 µg/m3	278 µg/m3	5.7 km/hr	1° (N)	416553
Jul 14	8	PM2.5	1-Hour	80 µg/m3	297 µg/m3	4.7 km/hr	8° (N)	416553
Jul 14	9	PM2.5	1-Hour	80 µg/m3	304 µg/m3	3.1 km/hr	5° (N)	416553
Jul 14	10	PM2.5	1-Hour	80 µg/m3	306 µg/m3	3.1 km/hr	325° (NW)	416553
Jul 14	11	PM2.5	1-Hour	80 µg/m3	318 µg/m3	3.6 km/hr	296° (WNW)	416553
Jul 14	12	PM2.5	1-Hour	80 µg/m3	272 µg/m3	5.1 km/hr	288° (WNW)	416553
Jul 14	13	PM2.5	1-Hour	80 µg/m3	290 µg/m3	5.1 km/hr	248° (WSW)	416553
Jul 14	14	PM2.5	1-Hour	80 µg/m3	357 µg/m3	5.7 km/hr	235° (SW)	416553
Jul 14	15	PM2.5	1-Hour	80 µg/m3	333 µg/m3	7.3 km/hr	210° (SSW)	416553
Jul 14	16	PM2.5	1-Hour	80 µg/m3	202 µg/m3	9.2 km/hr	193° (S)	416553

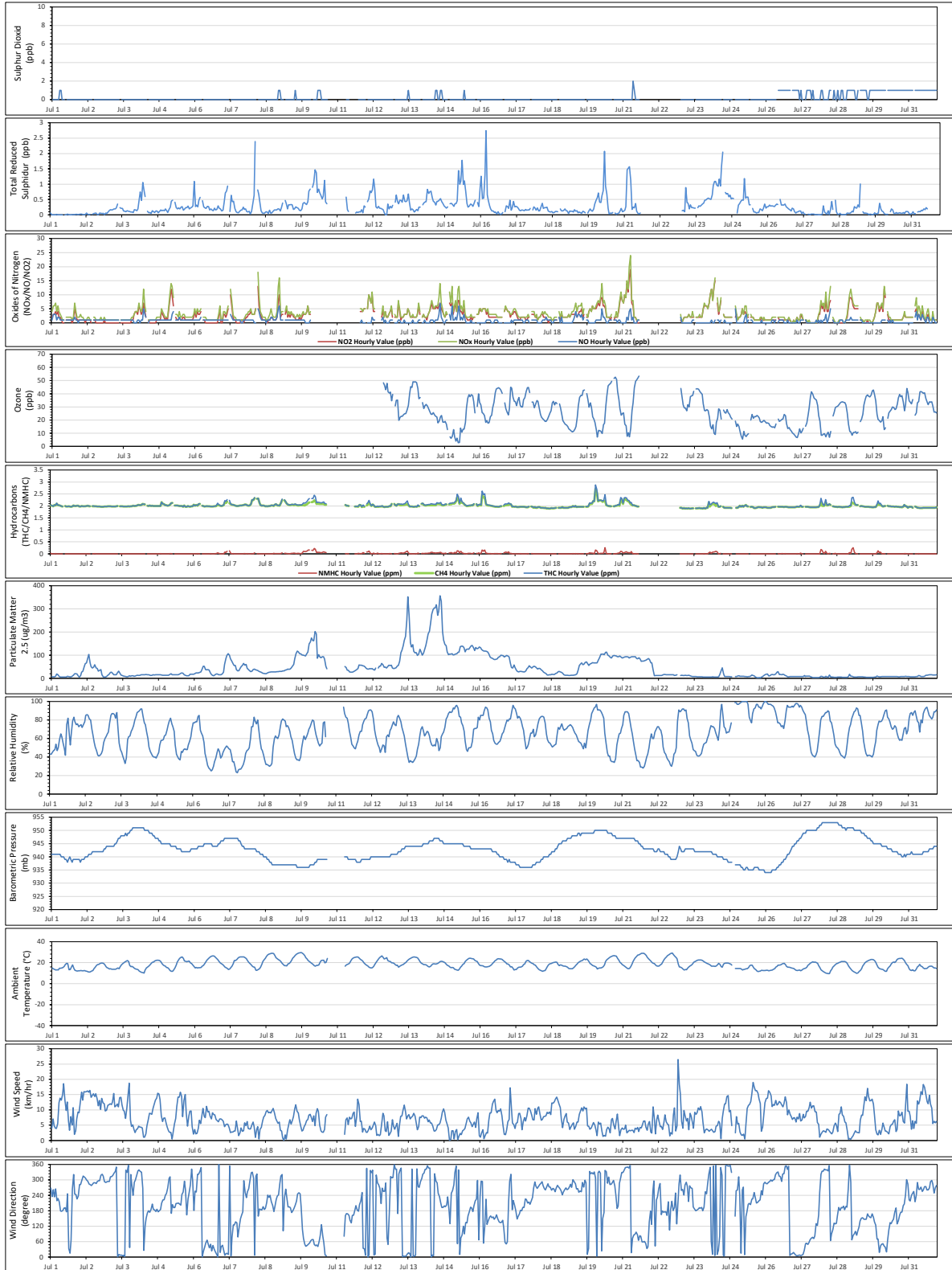
Date	Time (MST)	Parameter	Average Period	AAAOs / AAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 14	17	PM2.5	1-Hour	80 µg/m3	165 µg/m3	10.3 km/hr	193° (S)	416553
Jul 14	18	PM2.5	1-Hour	80 µg/m3	147 µg/m3	9.3 km/hr	199° (SSW)	416553
Jul 14	19	PM2.5	1-Hour	80 µg/m3	141 µg/m3	6.6 km/hr	196° (SSW)	416553
Jul 14	20	PM2.5	1-Hour	80 µg/m3	115 µg/m3	5.3 km/hr	203° (SSW)	416553
Jul 14	21	PM2.5	1-Hour	80 µg/m3	102 µg/m3	4.1 km/hr	234° (SW)	416553
Jul 14	22	PM2.5	1-Hour	80 µg/m3	104 µg/m3	0.1 km/hr	184° (S)	416553
Jul 14	23	PM2.5	1-Hour	80 µg/m3	104 µg/m3	0.3 km/hr	130° (SE)	416553
Jul 14	-	PM2.5	24-Hour	29 µg/m3	209 µg/m3	5.7 km/hr	285° (WNW)	416553
Jul 15	0	PM2.5	1-Hour	80 µg/m3	107 µg/m3	3.2 km/hr	248° (WSW)	416553
Jul 15	1	PM2.5	1-Hour	80 µg/m3	101 µg/m3	3.2 km/hr	259° (WSW)	416553
Jul 15	2	PM2.5	1-Hour	80 µg/m3	102 µg/m3	0.5 km/hr	281° (W)	416553
Jul 15	3	PM2.5	1-Hour	80 µg/m3	105 µg/m3	2.9 km/hr	329° (NNW)	416553
Jul 15	4	PM2.5	1-Hour	80 µg/m3	106 µg/m3	3.6 km/hr	354° (N)	416553
Jul 15	5	PM2.5	1-Hour	80 µg/m3	112 µg/m3	0.2 km/hr	52° (NE)	416553
Jul 15	6	PM2.5	1-Hour	80 µg/m3	114 µg/m3	1.5 km/hr	340° (NNW)	416553
Jul 15	7	PM2.5	1-Hour	80 µg/m3	137 µg/m3	2.3 km/hr	10° (N)	416553
Jul 15	8	PM2.5	1-Hour	80 µg/m3	139 µg/m3	1.9 km/hr	74° (ENE)	416553
Jul 15	9	PM2.5	1-Hour	80 µg/m3	139 µg/m3	3.2 km/hr	86° (E)	416553
Jul 15	10	PM2.5	1-Hour	80 µg/m3	134 µg/m3	3.5 km/hr	120° (ESE)	416553
Jul 15	11	PM2.5	1-Hour	80 µg/m3	115 µg/m3	3.9 km/hr	90° (E)	416553
Jul 15	12	PM2.5	1-Hour	80 µg/m3	124 µg/m3	5.6 km/hr	134° (SE)	416553
Jul 15	13	PM2.5	1-Hour	80 µg/m3	127 µg/m3	7.0 km/hr	133° (SE)	416553
Jul 15	14	PM2.5	1-Hour	80 µg/m3	125 µg/m3	7.7 km/hr	160° (SSE)	416553
Jul 15	15	PM2.5	1-Hour	80 µg/m3	132 µg/m3	6.3 km/hr	176° (S)	416553
Jul 15	16	PM2.5	1-Hour	80 µg/m3	140 µg/m3	5.8 km/hr	194° (SSW)	416553
Jul 15	17	PM2.5	1-Hour	80 µg/m3	142 µg/m3	4.5 km/hr	191° (S)	416553
Jul 15	18	PM2.5	1-Hour	80 µg/m3	133 µg/m3	5.4 km/hr	177° (S)	416553
Jul 15	19	PM2.5	1-Hour	80 µg/m3	120 µg/m3	6.0 km/hr	199° (SSW)	416553
Jul 15	20	PM2.5	1-Hour	80 µg/m3	134 µg/m3	4.3 km/hr	218° (SW)	416553
Jul 15	21	PM2.5	1-Hour	80 µg/m3	128 µg/m3	7.0 km/hr	226° (SW)	416553
Jul 15	22	PM2.5	1-Hour	80 µg/m3	130 µg/m3	9.1 km/hr	298° (WNW)	416553
Jul 15	23	PM2.5	1-Hour	80 µg/m3	136 µg/m3	1.6 km/hr	67° (ENE)	416553
Jul 15	-	PM2.5	24-Hour	29 µg/m3	124 µg/m3	4.2 km/hr	169° (SSE)	416553
Jul 16	0	PM2.5	1-Hour	80 µg/m3	132 µg/m3	1.1 km/hr	236° (SW)	416958
Jul 16	1	PM2.5	1-Hour	80 µg/m3	124 µg/m3	2.5 km/hr	295° (WNW)	416958
Jul 16	2	PM2.5	1-Hour	80 µg/m3	120 µg/m3	3.5 km/hr	294° (WNW)	416958
Jul 16	3	PM2.5	1-Hour	80 µg/m3	118 µg/m3	0.6 km/hr	54° (NE)	416958
Jul 16	4	PM2.5	1-Hour	80 µg/m3	118 µg/m3	1.7 km/hr	117° (ESE)	416958
Jul 16	5	PM2.5	1-Hour	80 µg/m3	117 µg/m3	2.6 km/hr	225° (SW)	416958

Date	Time (MST)	Parameter	Average Period	AAAOs / AAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 16	6	PM2.5	1-Hour	80 µg/m3	114 µg/m3	2.4 km/hr	127° (SE)	416958
Jul 16	7	PM2.5	1-Hour	80 µg/m3	106 µg/m3	6.7 km/hr	142° (SE)	416958
Jul 16	8	PM2.5	1-Hour	80 µg/m3	92 µg/m3	9.0 km/hr	155° (SSE)	416958
Jul 16	9	PM2.5	1-Hour	80 µg/m3	88 µg/m3	9.1 km/hr	160° (SSE)	416958
Jul 16	10	PM2.5	1-Hour	80 µg/m3	87 µg/m3	11.9 km/hr	153° (SSE)	416958
Jul 16	11	PM2.5	1-Hour	80 µg/m3	82 µg/m3	12.8 km/hr	156° (SSE)	416958
Jul 16	12	PM2.5	1-Hour	80 µg/m3	81 µg/m3	13.5 km/hr	147° (SE)	416958
Jul 16	13	PM2.5	1-Hour	80 µg/m3	82 µg/m3	9.9 km/hr	154° (SSE)	416958
Jul 16	14	PM2.5	1-Hour	80 µg/m3	85 µg/m3	9.1 km/hr	164° (SSE)	416958
Jul 16	15	PM2.5	1-Hour	80 µg/m3	91 µg/m3	9.8 km/hr	148° (SE)	416958
Jul 16	16	PM2.5	1-Hour	80 µg/m3	94 µg/m3	9.6 km/hr	137° (SE)	416958
Jul 16	17	PM2.5	1-Hour	80 µg/m3	100 µg/m3	10.3 km/hr	134° (SE)	416958
Jul 16	18	PM2.5	1-Hour	80 µg/m3	99 µg/m3	8.1 km/hr	135° (SE)	416958
Jul 16	19	PM2.5	1-Hour	80 µg/m3	98 µg/m3	5.0 km/hr	143° (SE)	416958
Jul 16	20	PM2.5	1-Hour	80 µg/m3	92 µg/m3	2.0 km/hr	114° (ESE)	416958
Jul 16	21	PM2.5	1-Hour	80 µg/m3	95 µg/m3	1.9 km/hr	57° (ENE)	416958
Jul 16	22	PM2.5	1-Hour	80 µg/m3	99 µg/m3	3.3 km/hr	51° (NE)	416958
Jul 16	23	PM2.5	1-Hour	80 µg/m3	96 µg/m3	6.1 km/hr	59° (ENE)	416958
Jul 16	-	PM2.5	24-Hour	29 µg/m3	100 µg/m3	6.4 km/hr	139° (SE)	416958
Jul 17	0	PM2.5	1-Hour	80 µg/m3	92 µg/m3	6.9 km/hr	217° (SW)	416958
Jul 17	-	PM2.5	24-Hour	29 µg/m3	44 µg/m3	7.9 km/hr	213° (SSW)	416958
Jul 19	-	PM2.5	24-Hour	29 µg/m3	42 µg/m3	6.6 km/hr	289° (WNW)	416958
Jul 20	4	PM2.5	1-Hour	80 µg/m3	90 µg/m3	5.4 km/hr	334° (NNW)	416958
Jul 20	5	PM2.5	1-Hour	80 µg/m3	104 µg/m3	5.7 km/hr	326° (NW)	416958
Jul 20	6	PM2.5	1-Hour	80 µg/m3	104 µg/m3	3.0 km/hr	24° (NNE)	416958
Jul 20	7	PM2.5	1-Hour	80 µg/m3	104 µg/m3	1.3 km/hr	150° (SSE)	416958
Jul 20	8	PM2.5	1-Hour	80 µg/m3	102 µg/m3	1.7 km/hr	173° (S)	416958
Jul 20	9	PM2.5	1-Hour	80 µg/m3	112 µg/m3	1.4 km/hr	337° (NNW)	416958
Jul 20	10	PM2.5	1-Hour	80 µg/m3	113 µg/m3	3.5 km/hr	332° (NNW)	416958
Jul 20	11	PM2.5	1-Hour	80 µg/m3	100 µg/m3	4.4 km/hr	287° (WNW)	416958
Jul 20	12	PM2.5	1-Hour	80 µg/m3	96 µg/m3	3.8 km/hr	311° (NW)	416958
Jul 20	13	PM2.5	1-Hour	80 µg/m3	90 µg/m3	2.5 km/hr	282° (W)	416958
Jul 20	14	PM2.5	1-Hour	80 µg/m3	88 µg/m3	6.8 km/hr	283° (W)	416958
Jul 20	15	PM2.5	1-Hour	80 µg/m3	96 µg/m3	7.2 km/hr	289° (WNW)	416958
Jul 20	16	PM2.5	1-Hour	80 µg/m3	99 µg/m3	5.0 km/hr	298° (WNW)	416958
Jul 20	17	PM2.5	1-Hour	80 µg/m3	98 µg/m3	3.8 km/hr	277° (W)	416958
Jul 20	18	PM2.5	1-Hour	80 µg/m3	96 µg/m3	6.2 km/hr	242° (WSW)	416958
Jul 20	19	PM2.5	1-Hour	80 µg/m3	93 µg/m3	8.7 km/hr	189° (S)	416958
Jul 20	20	PM2.5	1-Hour	80 µg/m3	93 µg/m3	4.3 km/hr	198° (SSW)	416958

Date	Time (MST)	Parameter	Average Period	AAAOs / AAQGs	Concentration	Wind speed	Wind Direction	Reference #
Jul 20	21	PM2.5	1-Hour	80 µg/m3	96 µg/m3	1.6 km/hr	287° (WNW)	416958
Jul 20	22	PM2.5	1-Hour	80 µg/m3	92 µg/m3	3.5 km/hr	309° (NW)	416958
Jul 20	23	PM2.5	1-Hour	80 µg/m3	88 µg/m3	4.1 km/hr	329° (NNW)	416958
Jul 20	-	PM2.5	24-Hour	29 µg/m3	93 µg/m3	4.2 km/hr	301° (WNW)	416958
Jul 21	0	PM2.5	1-Hour	80 µg/m3	90 µg/m3	3.7 km/hr	329° (NNW)	416958
Jul 21	1	PM2.5	1-Hour	80 µg/m3	92 µg/m3	3.8 km/hr	339° (NNW)	416958
Jul 21	2	PM2.5	1-Hour	80 µg/m3	93 µg/m3	5.0 km/hr	348° (NNW)	416958
Jul 21	3	PM2.5	1-Hour	80 µg/m3	93 µg/m3	2.5 km/hr	349° (NNW)	416958
Jul 21	4	PM2.5	1-Hour	80 µg/m3	92 µg/m3	2.9 km/hr	350° (N)	416958
Jul 21	5	PM2.5	1-Hour	80 µg/m3	88 µg/m3	3.4 km/hr	346° (NNW)	416958
Jul 21	6	PM2.5	1-Hour	80 µg/m3	91 µg/m3	3.2 km/hr	356° (N)	416958
Jul 21	7	PM2.5	1-Hour	80 µg/m3	93 µg/m3	3.4 km/hr	17° (NNE)	416958
Jul 21	8	PM2.5	1-Hour	80 µg/m3	94 µg/m3	3.3 km/hr	73° (ENE)	416958
Jul 21	9	PM2.5	1-Hour	80 µg/m3	93 µg/m3	2.6 km/hr	86° (E)	416958
Jul 21	10	PM2.5	1-Hour	80 µg/m3	94 µg/m3	4.0 km/hr	88° (E)	416958
Jul 21	11	PM2.5	1-Hour	80 µg/m3	86 µg/m3	3.7 km/hr	97° (E)	416958
Jul 21	12	PM2.5	1-Hour	80 µg/m3	85 µg/m3	4.3 km/hr	87° (E)	416958
Jul 21	13	PM2.5	1-Hour	80 µg/m3	89 µg/m3	2.9 km/hr	65° (ENE)	416958
Jul 21	14	PM2.5	1-Hour	80 µg/m3	85 µg/m3	4.3 km/hr	83° (E)	416958
Jul 21	20	PM2.5	1-Hour	80 µg/m3	82 µg/m3	3.4 km/hr	33° (NNE)	416958
Jul 21	21	PM2.5	1-Hour	80 µg/m3	86 µg/m3	5.3 km/hr	40° (NE)	416958
Jul 21	22	PM2.5	1-Hour	80 µg/m3	81 µg/m3	6.2 km/hr	136° (SE)	416958
Jul 21	-	PM2.5	24-Hour	29 µg/m3	86 µg/m3	4.0 km/hr	48° (NE)	416958

The source of the exceedances of the PM2.5 objective and guideline were due to wildfires.

Timeseries Chart of Hourly Average for the month of Jul 2023 - AQHI - Grimshaw Station





## TABLES, CHARTS AND WIND ROSES

## 986-C STATION

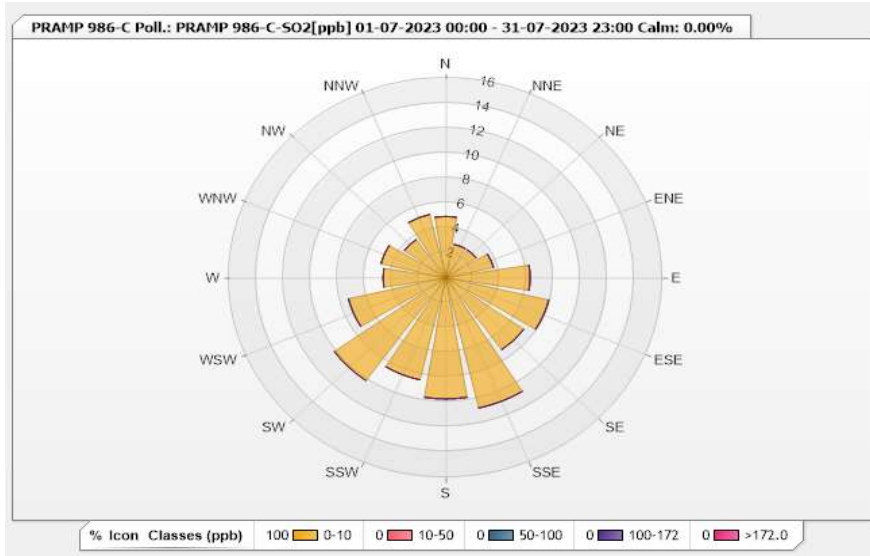


Station: PRAMP 986-C Poll.: PRAMP 986-C-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.88%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	4.92	0	0	0	0	4.92
NNE	2.75	0	0	0	0	2.75
NE	2.75	0	0	0	0	2.75
ENE	3.62	0	0	0	0	3.62
E	6.22	0	0	0	0	6.22
ESE	7.81	0	0	0	0	7.81
SE	7.09	0	0	0	0	7.09
SSE	10.71	0	0	0	0	10.71
S	9.7	0	0	0	0	9.7
SSW	8.39	0	0	0	0	8.39
SW	10.13	0	0	0	0	10.13
WSW	7.38	0	0	0	0	7.38
W	4.63	0	0	0	0	4.63
WNW	4.92	0	0	0	0	4.92
NW	3.76	0	0	0	0	3.76
NNW	5.21	0	0	0	0	5.21
Summary	100	0	0	0	0	100



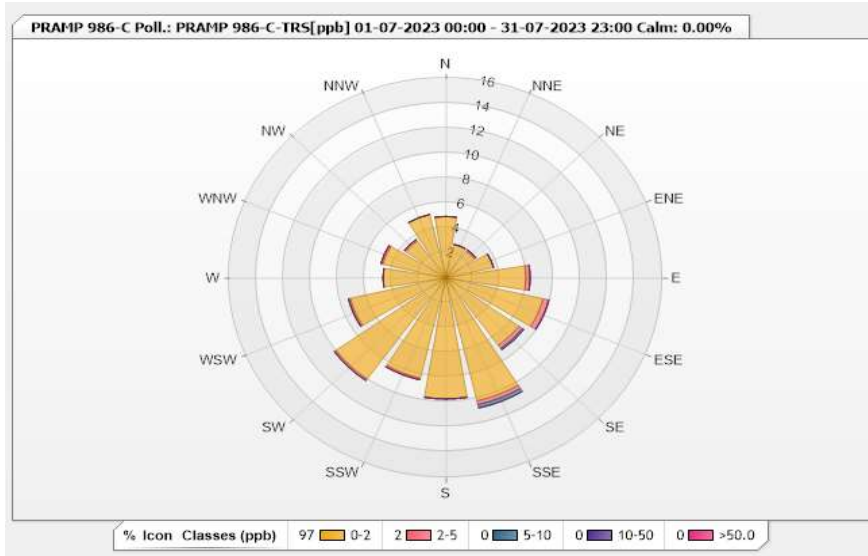


Station: PRAMP 986-C Poll.: PRAMP 986-C-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.88%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	4.92	0	0	0	0	4.92
NNE	2.75	0	0	0	0	2.75
NE	2.6	0.14	0	0	0	2.74
ENE	3.62	0	0	0	0	3.62
E	5.93	0.29	0	0	0	6.22
ESE	7.38	0.43	0	0	0	7.81
SE	6.66	0.29	0.14	0	0	7.09
SSE	10.13	0.29	0.29	0	0	10.71
S	9.7	0	0	0	0	9.7
SSW	8.25	0.14	0	0	0	8.39
SW	9.99	0.14	0	0	0	10.13
WSW	7.24	0.14	0	0	0	7.38
W	4.63	0	0	0	0	4.63
WNW	4.78	0.14	0	0	0	4.92
NW	3.62	0.14	0	0	0	3.76
NNW	5.21	0	0	0	0	5.21
Summary	97.41	2.14	0.43	0	0	100



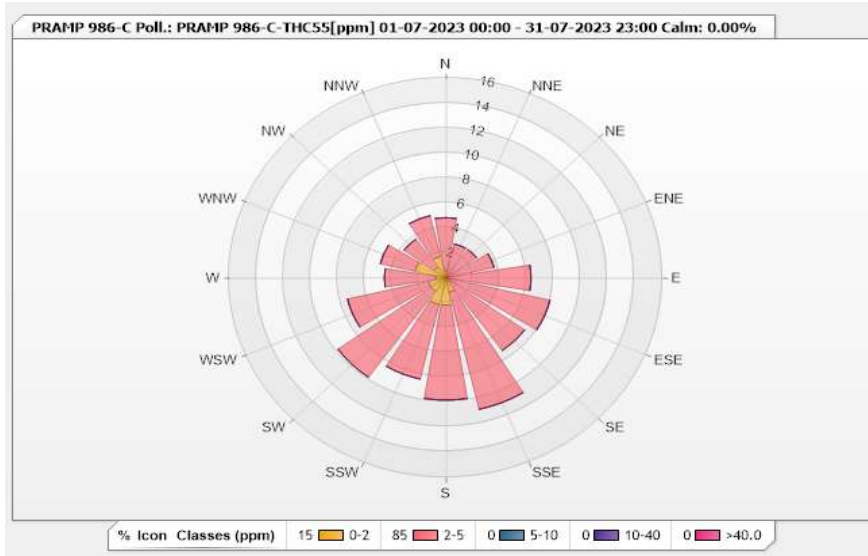


Station: PRAMP 986-C Poll.: PRAMP 986-C-THC55[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 91.94%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	0.58	4.24	0	0	0	4.82
NNE	0.15	2.63	0	0	0	2.78
NE	0.15	2.63	0	0	0	2.78
ENE	0.15	3.51	0	0	0	3.66
E	0	6.29	0	0	0	6.29
ESE	0.15	7.75	0	0	0	7.9
SE	0.15	7.02	0	0	0	7.17
SSE	1.17	9.65	0	0	0	10.82
S	2.19	7.6	0	0	0	9.79
SSW	2.19	6.14	0	0	0	8.33
SW	1.32	8.48	0	0	0	9.8
WSW	1.32	6.14	0	0	0	7.46
W	0.73	3.8	0	0	0	4.53
WNW	2.34	2.63	0	0	0	4.97
NW	1.02	2.78	0	0	0	3.8
NNW	1.75	3.36	0	0	0	5.11
Summary	15.36	84.65	0	0	0	100





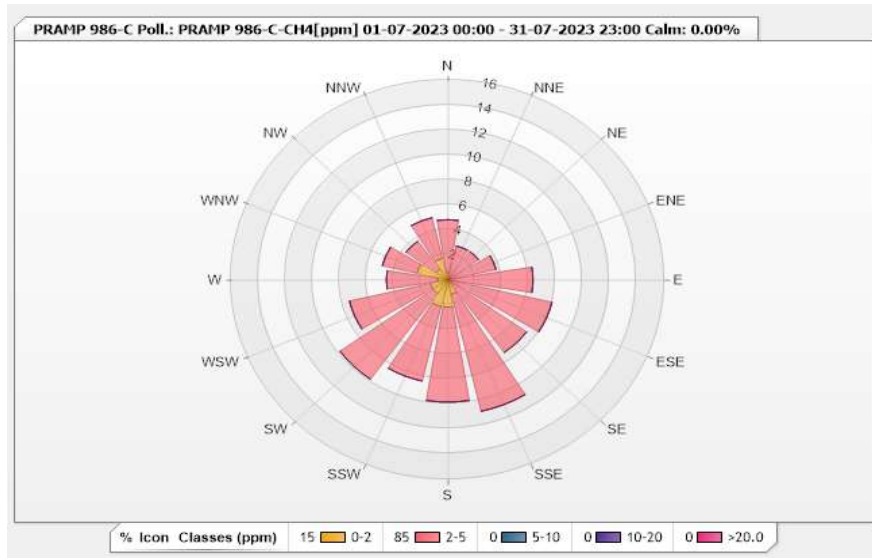


Station: PRAMP 986-C Poll.: PRAMP 986-C-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 91.94%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	0.58	4.24	0	0	0	4.82
NNE	0.15	2.63	0	0	0	2.78
NE	0.15	2.63	0	0	0	2.78
ENE	0.15	3.51	0	0	0	3.66
E	0	6.29	0	0	0	6.29
ESE	0.15	7.75	0	0	0	7.9
SE	0.15	7.02	0	0	0	7.17
SSE	1.17	9.65	0	0	0	10.82
S	2.19	7.6	0	0	0	9.79
SSW	2.19	6.14	0	0	0	8.33
SW	1.32	8.48	0	0	0	9.8
WSW	1.32	6.14	0	0	0	7.46
W	0.73	3.8	0	0	0	4.53
WNW	2.34	2.63	0	0	0	4.97
NW	1.02	2.78	0	0	0	3.8
NNW	1.75	3.36	0	0	0	5.11
Summary	15.36	84.65	0	0	0	100



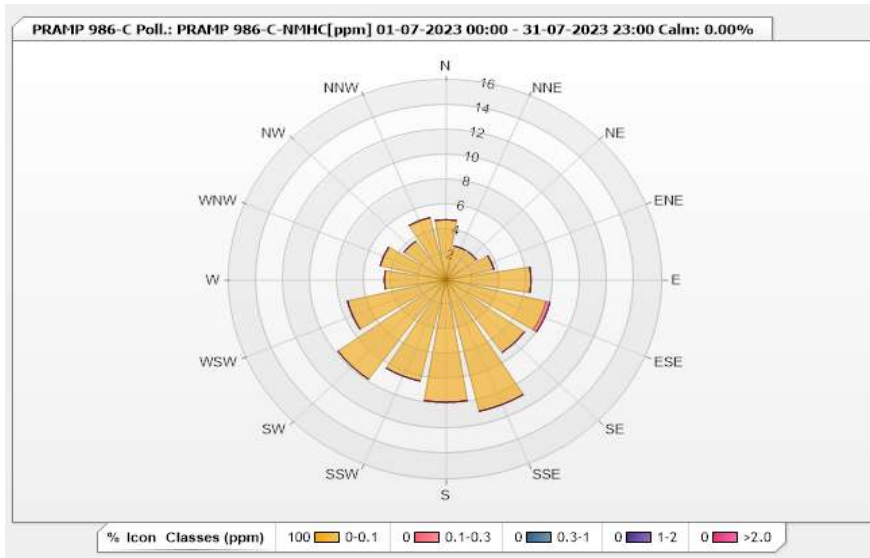


Station: PRAMP 986-C Poll.: PRAMP 986-C-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 91.94%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	4.82	0	0	0	0	4.82
NNE	2.78	0	0	0	0	2.78
NE	2.78	0	0	0	0	2.78
ENE	3.65	0	0	0	0	3.65
E	6.29	0	0	0	0	6.29
ESE	7.6	0.29	0	0	0	7.89
SE	7.16	0	0	0	0	7.16
SSE	10.82	0	0	0	0	10.82
S	9.8	0	0	0	0	9.8
SSW	8.33	0	0	0	0	8.33
SW	9.8	0	0	0	0	9.8
WSW	7.46	0	0	0	0	7.46
W	4.53	0	0	0	0	4.53
WNW	4.97	0	0	0	0	4.97
NW	3.8	0	0	0	0	3.8
NNW	5.12	0	0	0	0	5.12
Summary	100	0.29	0	0	0	100



**Peace River Area Monitoring Program**

**986-C Station - July 2023**

**Summary of Hourly Averages**

**RELATIVE HUMIDITY (RH) in %**

Maximum Hourly Value:	100 %	on Jul 3 at hr 5	Hours in Service:	744
Maximum Daily Value:	98.3 %	on Jul 25	Hours of Data:	727
Minimum Hourly Value:	25 %	on Jul 6 at hr 13	Hours of Missing Data:	17
Minimum Daily Value:	47.5 %	on Jul 7	Hours of Calibration:	0
Monthly Average:	71.5 %		Operational Uptime:	97.7

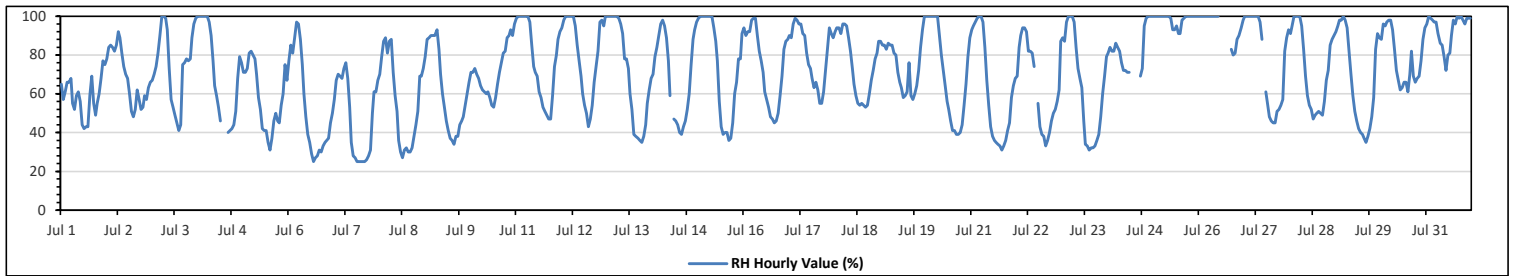
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	65	57	61	66	66	68	55	52	59	61	56	44	42	43	43	59	69	55	49	55	60	68	77	75	42	77	58.5
Jul 2	78	84	85	84	82	85	92	89	81	74	70	68	60	51	48	52	62	57	52	53	59	57	63	66	48	92	68.8
Jul 3	67	70	74	81	90	100	100	99	93	73	57	53	49	45	41	44	75	76	78	77	78	89	96	99	41	100	75.2
Jul 4	100	100	100	100	100	100	97	90	77	64	59	53	46	P	P	P	40	41	42	44	51	68	79	76	40	100	72.7
Jul 5	71	71	73	81	82	80	78	70	58	52	42	41	41	35	31	37	46	50	46	45	54	60	75	67	31	82	57.8
Jul 6	77	85	81	89	97	96	88	75	60	48	39	35	29	25	27	28	31	30	33	35	36	37	45	50	25	97	53.2
Jul 7	57	67	70	69	68	73	76	68	53	35	28	27	25	25	25	25	25	26	28	31	50	61	61	67	25	76	47.5
Jul 8	70	79	87	89	81	87	88	71	59	51	36	30	27	31	32	30	30	32	38	44	51	69	69	73	27	89	56.4
Jul 9	79	88	89	90	90	90	93	83	70	60	53	46	41	37	36	34	38	38	44	46	48	54	60	66	34	93	61.4
Jul 10	71	71	73	70	68	64	62	61	60	61	58	54	53	58	65	71	76	81	82	89	90	93	90	96	53	96	71.5
Jul 11	99	100	100	100	100	100	100	97	85	74	71	69	61	58	53	51	49	47	47	59	74	80	88	92	47	100	77.3
Jul 12	94	98	100	100	100	100	100	95	85	77	69	60	54	50	43	47	54	66	74	82	97	98	95	100	43	100	80.8
Jul 13	100	100	100	100	100	100	99	96	91	78	78	73	60	52	39	38	37	36	35	38	44	55	62	68	35	100	70.0
Jul 14	70	79	84	90	96	98	95	89	77	59	K	47	46	44	40	39	43	46	52	60	75	88	93	97	39	98	69.9
Jul 15	99	100	100	100	100	100	100	100	94	87	77	56	43	39	40	40	36	37	45	60	66	78	78	91	36	100	73.6
Jul 16	94	90	92	92	98	99	99	90	82	77	71	61	57	53	48	47	45	46	50	59	69	83	87	88	45	99	74.0
Jul 17	90	89	96	99	98	96	96	91	90	81	75	73	68	63	66	62	55	55	61	72	83	94	91	89	55	99	80.5
Jul 18	92	94	94	91	96	96	95	89	82	73	65	59	55	54	55	54	53	54	60	67	72	78	81	87	53	96	74.8
Jul 19	87	85	85	83	86	85	85	81	80	71	66	63	58	59	61	76	59	57	60	64	72	84	93	100	57	100	75.0
Jul 20	100	100	100	100	100	100	100	90	80	72	64	56	52	46	41	41	39	39	40	44	54	65	79	89	39	100	70.5
Jul 21	93	95	97	99	100	100	97	84	67	54	43	38	36	35	34	33	31	33	36	41	45	58	64	68	31	100	61.7
Jul 22	69	84	90	94	94	92	82	82	81	74	K	55	43	39	38	33	36	40	46	50	52	56	62	87	33	94	64.3
Jul 23	89	87	97	100	100	100	97	84	73	68	63	46	34	33	31	32	32	33	36	39	48	60	69	79	31	100	63.8
Jul 24	81	84	82	82	86	84	82	76	72	72	71	71	P	P	P	P	P	69	73	95	99	100	100	100	69	100	83.1
Jul 25	100	100	100	100	100	100	100	100	100	99	93	93	95	91	91	98	99	100	100	100	100	100	100	100	91	100	98.3
Jul 26	100	100	100	100	100	100	100	100	100	100	100	100	100	P	P	P	P	P	83	80	81	88	90	94	80	100	95.2
Jul 27	100	100	100	100	100	100	100	100	97	88	K	61	54	48	46	45	45	51	52	54	57	82	89	93	45	100	76.6
Jul 28	91	95	100	100	100	100	95	83	69	59	54	52	47	49	50	51	50	49	56	67	72	85	88	90	47	100	73.0
Jul 29	92	95	98	98	100	98	94	82	70	59	51	46	42	40	39	37	35	38	42	48	58	83	91	89	35	100	67.7
Jul 30	88	96	95	97	98	98	93	83	72	67	62	63	66	66	61	70	82	69	66	68	69	77	88	94	61	98	78.7
Jul 31	96	100	99	98	97	97	91	86	85	79	72	80	81	90	98	96	100	99	100	98	96	99	99	99	72	100	93.1
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	100	93	95	91	98	98	100	100	100	100	100	100	100	100	100	100	100
Diurnal Average	85.8	88.5	90.4	91.7	92.7	93.1	91.3	85.0	77.5	69.3	62.3	55.8	50.5	48.5	47.2	48.9	50.8	52.7	54.9	60.2	66.7	75.8	80.8	84.9			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.











**Peace River Area Monitoring Program**

**986-C Station - July 2023  
Summary of Hourly Averages**

**PRECIPITATION in mm**

Maximum Hourly Value:	7.3 mm on Jul 24 at hr 22	Hours in Service:	744
Maximum Daily Value:	12.6 mm on Jul 25	Hours of Data:	730
Minimum Hourly Value:	0.0 mm on Jul 1 at hr 0	Hours of Missing Data:	14
Minimum Daily Value:	0.0 mm on Jul 1	Hours of Calibration:	0
Monthly Total:	37.1 mm	Operational Uptime:	98.1

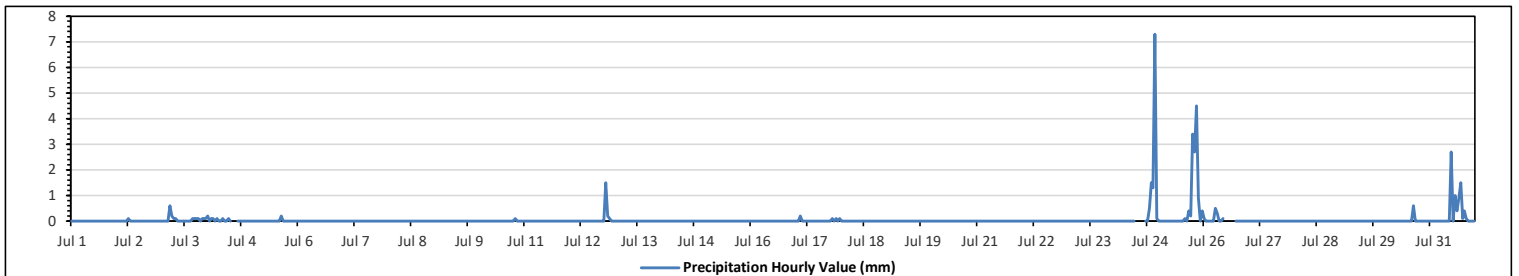
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Total		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 2	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1	
Jul 3	0	0	0	0	0.6	0.2	0.1	0.1	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.0	0.6	1.7	
Jul 4	0.2	0	0.1	0.1	0	0.1	0	0	0.1	0	0	0.1	0	P	P	P	0.2	0	0	0	0	0	0	0	0.0	0.2	0.7	
Jul 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.2	
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1	
Jul 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	1.5	1.8	
Jul 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 17	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.5	
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	P	P	P	0	0	0.5	1.5	1.3	7.3	0.1	7.3	10.7	
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.4	0.2	3.4	2.7	4.5	0.9	0	0.4	0.0	4.5	12.6
Jul 26	0.1	0	0	0	0	0	0.5	0.3	0	0	0	0.1	P	P	P	P	P	P	0	0	0	0	0	0	0.0	0.5	1.0	
Jul 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0.0	0.6	0.6	
Jul 31	0	0	0	0	0	0	0	0	0	0	0	2.7	0	1	0.4	0.9	1.5	0.1	0.4	0.1	0	0	0	0	0.0	2.7	7.1	
Diurnal Maximum	0.2	0.0	0.2	0.1	0.6	0.2	0.5	0.3	0.1	0.0	0.1	2.7	0.0	1.0	0.4	0.9	1.5	0.2	3.4	2.7	4.5	1.3	7.3	0.4				
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.2	0.0				

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**  
**986-C Station - July 2023**  
**Summary of Hourly Averages**  
**VECTOR WIND SPEED (VWS) in km/hr**

Maximum Hourly Value:	24.4 kph	on Jul 22 at hr 23	Hours in Service:	744
Maximum Daily Value:	13.2 kph	on Jul 10	Hours of Data:	727
Minimum Hourly Value:	0.3 kph	on Jul 14 at hr 4	Hours of Missing Data:	17
Minimum Daily Value:	3.2 kph	on Jul 15	Hours of Calibration:	0
Monthly Average:	1.9 kph		Operational Uptime:	97.7

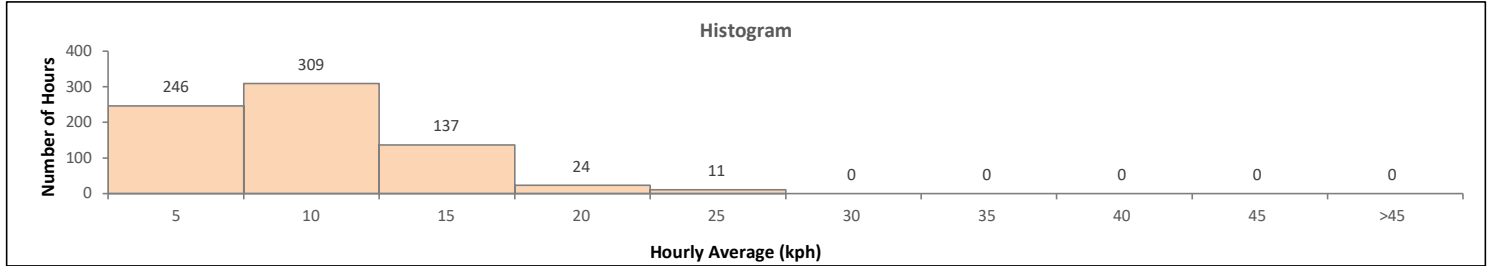
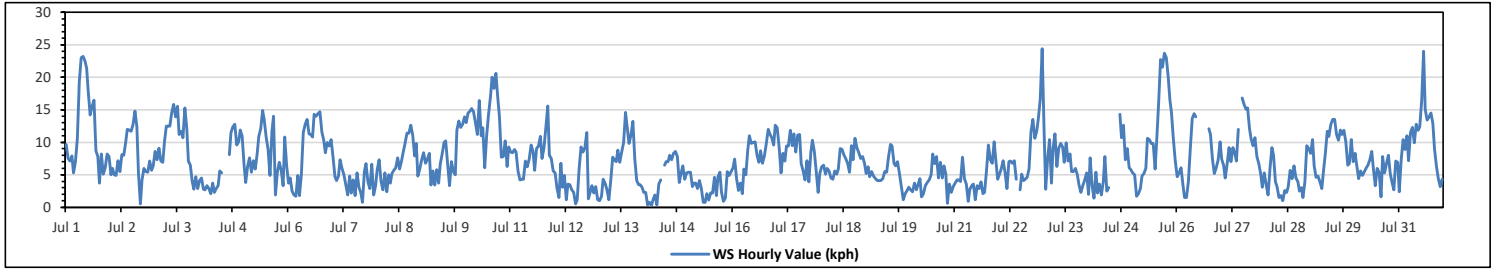
  

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Jul 1	9.7	7.5	7.1	7.9	5.3	7.0	10.6	19.3	23.0	23.2	22.5	21.4	17.8	14.2	15.5	16.5	8.7	7.8	3.7	8.2	5.1	6.1	8.2	7.8	3.7	23.2	11.8
Jul 2	5.0	6.0	5.0	4.9	7.2	5.5	8.1	8.0	10.0	12.0	11.9	11.7	12.7	14.8	12.4	5.2	0.5	4.2	6.0	5.5	5.4	7.1	5.7	6.4	0.5	14.8	7.6
Jul 3	8.6	7.3	9.1	7.1	6.9	10.0	12.5	12.5	14.6	15.8	13.9	15.5	11.2	11.7	10.7	15.3	12.1	7.1	6.5	4.0	2.8	4.7	2.9	2.8	2.8	15.8	9.8
Jul 4	4.1	4.5	2.8	2.7	3.3	2.9	2.1	3.7	2.3	2.9	3.3	5.6	5.3	P	P	P	8.1	11.5	12.4	12.8	9.6	10.1	11.9	10.9	2.1	12.8	6.3
Jul 5	6.5	3.8	6.3	7.6	5.4	7.2	5.9	8.3	10.9	12.1	14.9	13.4	10.8	8.9	4.9	11.6	14.0	1.9	5.4	6.9	5.7	3.3	10.8	6.4	1.9	14.9	8.0
Jul 6	3.7	4.5	2.5	1.9	1.7	4.9	1.8	5.0	11.5	12.8	13.5	11.3	11.2	10.8	14.3	14.0	14.4	14.7	11.6	10.3	8.4	10.0	9.4	10.4	1.7	14.7	8.9
Jul 7	7.7	4.7	4.1	4.8	7.3	6.0	5.0	3.4	1.9	4.8	2.2	4.2	1.8	5.3	3.1	2.2	0.8	5.5	6.7	3.9	2.9	6.6	1.9	3.3	0.8	7.7	4.2
Jul 8	5.8	7.3	4.0	2.7	5.3	2.4	5.0	3.7	5.2	5.7	6.1	7.6	5.9	7.1	8.4	9.8	11.4	11.4	12.6	11.1	7.9	9.8	4.8	5.9	2.4	12.6	7.0
Jul 9	7.3	8.4	6.8	7.4	8.3	3.4	5.6	3.4	5.8	3.7	6.6	8.2	10.0	10.2	6.7	3.3	7.0	5.5	5.0	11.8	13.3	12.3	12.8	13.9	3.3	13.9	7.8
Jul 10	13.0	14.5	14.8	15.2	14.7	13.0	11.2	16.4	11.0	12.2	6.1	11.0	14.3	17.0	20.0	18.3	20.6	17.3	13.9	7.7	7.8	10.2	6.3	9.3	6.1	20.6	13.2
Jul 11	8.5	8.4	8.9	8.5	5.6	4.2	4.3	4.3	7.1	6.2	7.4	9.6	8.6	5.7	9.0	9.4	10.9	7.5	9.1	12.2	15.6	8.0	7.5	5.6	4.2	15.6	8.0
Jul 12	5.3	2.9	1.5	6.8	3.1	4.9	1.2	3.6	3.5	2.7	2.3	0.5	1.2	5.9	9.3	8.5	9.2	11.5	1.3	2.4	3.3	2.2	3.2	1.2	0.5	11.5	4.1
Jul 13	1.0	1.7	4.3	3.7	2.7	1.2	4.2	7.7	7.3	7.0	8.8	6.9	8.5	9.9	14.6	12.0	9.8	11.1	13.2	7.4	4.1	3.5	3.5	3.0	1.0	14.6	6.5
Jul 14	2.3	2.3	0.4	0.8	0.3	1.3	1.9	0.4	3.6	4.2	K	6.5	7.0	7.0	8.0	7.3	8.3	8.6	7.8	3.8	5.1	6.4	4.3	5.3	0.3	8.6	4.5
Jul 15	5.4	5.4	3.2	3.7	3.7	2.9	4.1	2.9	0.8	0.8	2.1	1.1	2.2	2.2	4.6	1.8	4.7	5.4	2.3	0.9	1.4	5.5	4.9	5.5	0.8	5.5	3.2
Jul 16	6.1	7.4	4.4	2.6	3.7	2.1	5.9	5.0	8.8	11.0	9.8	10.0	10.1	8.0	6.9	8.7	6.8	7.9	9.8	12.0	11.3	10.7	9.6	12.6	2.1	12.6	8.0
Jul 17	12.2	9.3	5.3	8.3	7.1	9.4	9.4	11.8	9.5	11.3	8.5	11.1	11.2	6.7	5.6	4.2	7.2	3.9	8.4	10.3	8.6	5.5	2.3	5.2	2.3	12.2	8.0
Jul 18	6.2	6.5	5.1	6.0	5.6	4.5	4.3	5.6	5.1	5.9	9.0	8.9	8.1	7.5	6.8	5.4	9.5	7.3	10.6	9.2	8.4	7.5	7.8	6.7	4.3	10.6	7.0
Jul 19	5.2	6.2	4.7	5.5	4.8	4.4	4.1	4.1	4.1	4.4	5.5	5.4	7.8	9.7	9.4	6.8	6.4	7.0	5.2	3.2	1.2	2.1	2.5	3.1	1.2	9.7	5.1
Jul 20	2.7	2.4	3.7	2.7	3.5	4.4	1.6	2.1	3.3	3.8	4.2	5.0	8.2	6.7	7.8	4.5	6.9	4.5	6.4	5.1	0.6	3.6	2.3	3.2	0.6	8.2	4.1
Jul 21	3.7	4.2	4.2	4.0	7.7	4.4	3.6	0.9	2.8	3.3	3.6	1.2	3.3	2.9	3.9	2.1	2.3	5.6	9.6	7.3	6.8	10.1	7.3	4.3	0.9	10.1	4.5
Jul 22	5.0	5.9	7.2	5.4	2.9	7.0	7.1	6.8	7.2	4.3	K	2.7	5.1	4.1	4.3	4.6	5.9	11.6	13.5	10.6	11.7	13.6	16.6	24.4	2.7	24.4	8.2
Jul 23	11.8	2.8	7.4	10.4	3.7	9.0	11.3	6.3	9.1	9.8	9.3	6.9	9.9	7.1	8.2	5.5	5.5	6.0	5.0	3.5	2.3	3.3	4.2	5.3	2.3	11.8	6.8
Jul 24	2.0	7.6	3.3	1.4	5.4	2.2	3.6	1.9	3.9	7.8	2.5	3.0	P	P	P	P	P	14.3	10.7	12.6	7.3	9.0	6.1	5.8	1.4	14.3	5.8
Jul 25	5.3	5.0	1.7	2.1	2.9	4.8	5.2	6.0	10.6	10.4	9.8	9.8	5.9	10.3	16.1	22.7	21.5	23.7	23.0	20.0	16.6	14.6	10.5	7.1	1.7	23.7	11.1
Jul 26	4.7	5.3	6.1	3.4	1.5	1.5	4.0	9.1	13.7	14.4	13.9	P	P	P	P	P	P	12.1	11.2	7.5	5.2	6.1	7.3	10.1	1.5	14.4	7.6
Jul 27	7.4	6.5	4.5	6.6	9.2	7.0	9.2	8.3	7.1	12.0	K	16.8	15.8	15.1	15.3	12.1	10.5	9.5	10.7	7.8	6.7	5.1	3.1	5.3	3.1	16.8	9.2
Jul 28	3.5	1.9	6.0	9.2	8.0	3.9	3.2	1.5	1.8	1.0	2.6	2.3	3.2	5.7	4.4	6.4	4.5	4.0	2.5	3.0	1.5	3.9	9.5	9.0	1.0	9.5	4.3
Jul 29	8.3	10.4	6.4	4.6	4.8	3.9	2.9	5.5	8.3	11.7	10.9	12.7	13.5	13.5	11.2	10.3	11.9	11.2	11.8	10.1	6.5	6.7	10.4	7.0	2.9	13.5	8.9
Jul 30	8.3	6.5	4.4	5.6	4.9	5.5	6.1	6.5	7.3	8.6	6.0	3.3	6.0	5.4	1.6	7.8	5.3	6.7	8.0	5.1	3.7	2.7	7.1	6.9	1.6	8.6	5.8
Jul 31	2.4	7.3	10.4	8.9	11.0	7.2	11.5	12.3	9.9	12.8	11.8	12.4	16.4	24.0	15.1	13.4	13.9	14.5	12.9	9.0	6.4	4.4	3.2	4.3	2.4	24.0	10.6
Diurnal Maximum	13.0	14.5	14.8	15.2	14.7	13.0	12.5	19.3	23.0	23.2	22.5	21.4	17.8	14.2	15.5	16.5	8.7	7.8	3.7	8.2	5.1	6.1	8.2	7.8			
Diurnal Average	6.1	5.9	5.3	5.6	5.4	5.1	5.7	6.3	7.4	8.3	8.2	8.1	8.9	9.2	9.3	8.8	9.0	9.2	8.9	8.0	6.6	6.9	6.8	7.0			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

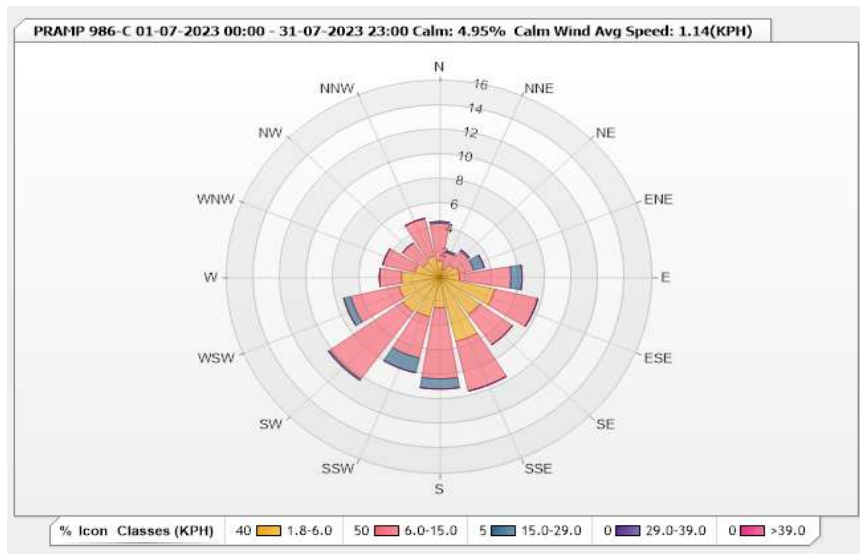


Station: PRAMP 986-C Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 4.95%      Valid Data: 97.72%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.38	3.03	0.14	0	0	4.55
NNE	0.69	1.38	0.14	0	0	2.21
NE	1.24	1.38	0.14	0	0	2.76
ENE	1.51	1.1	0.83	0	0	3.44
E	1.51	3.85	0.83	0	0	6.19
ESE	4.26	3.3	0	0	0	7.56
SE	3.71	3.03	0	0	0	6.74
SSE	5.36	4.13	0	0	0	9.49
S	2.48	5.78	0.83	0	0	9.09
SSW	3.3	3.44	1.24	0	0	7.98
SW	3.44	6.74	0.14	0	0	10.32
WSW	3.16	3.71	0.55	0	0	7.42
W	2.89	1.65	0	0	0	4.54
WNW	1.93	2.48	0	0	0	4.41
NW	1.51	1.93	0	0	0	3.44
NNW	1.79	3.16	0	0	0	4.95
Summary	40.16	50.09	4.84	0	0	95.09



Peace River Area Monitoring Program

986-C Station - July 2023

Summary of Hourly Averages

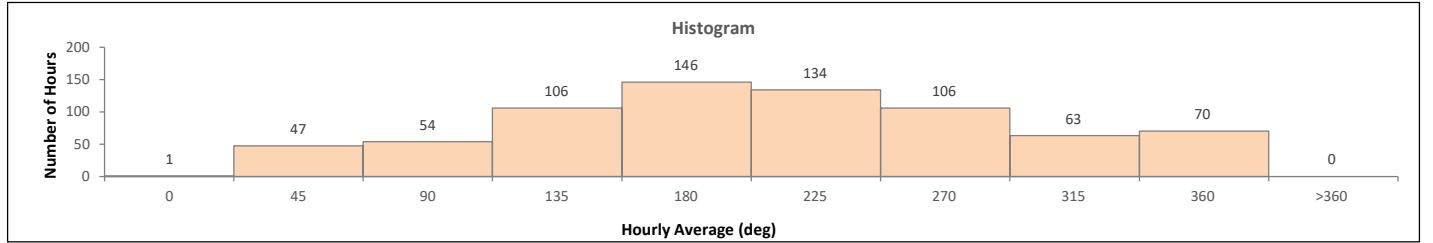
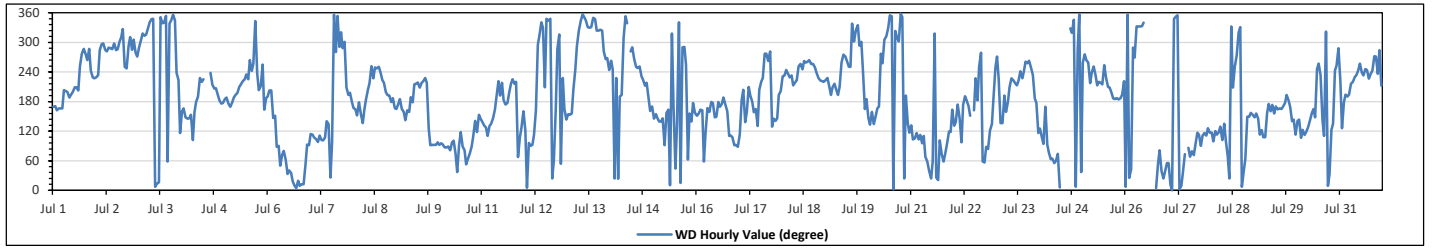
WIND DIRECTION (VWD) in sector

Monthly Average:	185 (S)	degree	Hours in Service:	744
			Hours of Data:	727
			Hours of Missing Data:	17
			Hours of Calibration:	0
			Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant	
Jul 1	SSE	S	SSE	SSE	SSE	SSE	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	SSW	W	WNW	W	W	WNW	WSW	SW	SW	208	SSW		
Jul 2	SW	SW	WNW	WNW	WNW	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	NW	NW	WSW	WSW	WNW	NW	WNW	NW	W	W	289	WNW	
Jul 3	WNW	WNW	NW	NW	NW	NNW	NNW	NNW	N	NNE	NNE	N	NNW	NNW	N	ENE	NNW	NNW	N	NNW	SW	SW	ESE	347	NNW		
Jul 4	SSE	SSE	SE	SE	SE	SSE	E	SSE	S	SW	SW	SW	P	P	P	SW	SSW	SSW	SSW	S	S	S	S	192	S		
Jul 5	S	S	S	SSE	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	W	WSW	WSW	NNW	SW	SSW	SSW	WSW	SSE	S	213	SSW	
Jul 6	S	SSW	SSW	SE	SSE	E	E	NE	ENE	E	ENE	NE	NE	NNE	N	NNE	N	NNE	N	NNE	NNE	NE	E	E	42	NE	
Jul 7	ESE	ESE	ESE	ESE	E	ESE	E	E	ESE	SE	SE	NNE	E	N	W	N	WNW	NW	WNW	WNW	SSW	S	SSW	S	112	ESE	
Jul 8	SSE	SSE	SSE	S	SSE	SE	SSE	S	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	S	S	S	S	SSE	204	SSW	
Jul 9	SSE	S	S	SSE	SSE	SE	SSE	SSE	S	S	SSW	SW	SW	SSW	SW	SW	SW	SW	SE	E	E	E	E	E	158	SSE	
Jul 10	E	E	E	E	E	E	E	E	ENE	NE	E	ESE	E	E	NE	ENE	E	ESE	ESE	ESE	ESE	SSE	SE	SE	90	E	
Jul 11	SE	SE	SE	ESE	SE	SE	SE	SSE	S	SW	S	SW	S	S	S	SSW	SW	SW	SW	SW	ENE	ESE	SE	SSE	168	SSE	
Jul 12	ESE	N	E	E	ESE	SSE	WNW	NW	NNW	NNW	SSW	NNW	NNW	NNW	NNE	ENE	SSE	WNW	NW	NE	SW	SSE	SE	48	NE		
Jul 13	SSE	SSE	SSE	SSW	WSW	WNW	NNW	N	N	NNW	NNW	NNW	NNW	NNW	N	NNW	NW	NW	NW	W	W	W	W	WSW	328	NNW	
Jul 14	W	WSW	NNE	SW	NNE	S	S	NW	N	NNW	K	W	WNW	W	WSW	WSW	WSW	SW	SW	SSW	SW	S	SSE	SSE	242	WSW	
Jul 15	SE	SSE	SE	SE	SE	SE	E	SSE	SSE	N	NW	SSE	NE	SE	NNW	NNE	WNW	WNW	WSW	ENE	SSE	SE	S	SSE	150	SSE	
Jul 16	SSE	SSE	SSE	SSE	ENE	ESE	SSE	SSE	S	SE	SSE	S	SSE	S	S	S	SSE	ESE	ESE	ESE	E	E	E	E	142	SE	
Jul 17	ESE	S	SSW	SE	SSE	SSW	S	SSE	SSE	SE	SSW	SW	SW	W	W	W	W	SE	SE	SE	SE	SE	S	SSW	178	S	
Jul 18	SW	SW	WSW	SW	SW	SW	SSW	SW	SW	WSW	WSW	WSW	W	WSW	W	W	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	241	WSW
Jul 19	SW	SW	SSW	S	SSW	SW	SSW	S	SSW	WSW	W	W	W	WSW	WSW	NNW	NNW	NW	NNW	WNW	WNW	WSW	SSE	S	251	WSW	
Jul 20	SE	SE	SSE	SE	SSE	SSE	SSE	W	WSW	NW	NW	NNW	N	N	N	NW	NW	WNW	N	N	NNE	S	SE	ESE	333	NNW	
Jul 21	SE	ESE	ESE	ESE	ESE	ESE	E	ESE	ENE	ENE	NE	NNE	ENE	NW	NNE	NNE	E	ENE	ENE	ENE	ESE	ESE	ESE	ESE	89	E	
Jul 22	SE	SE	S	SE	E	S	S	S	S	SSE	K	SSE	SW	S	WSW	W	ENE	NE	E	E	ESE	SE	S	WSW	157	SSE	
Jul 23	W	SW	SE	SE	S	SSE	S	SSW	SW	SW	SSW	SW	WSW	SW	WSW	W	WSW	W	WSW	W	WSW	SW	S	ESE	212	SSW	
Jul 24	SE	ESE	E	SSE	E	ENE	ENE	ENE	ENE	N	P	P	P	P	P	P	NNW	NW	NNW	N	WNW	N	NE	14	NNE		
Jul 25	WSW	W	W	WSW	SW	WSW	WSW	SW	SSW	SW	SW	SSW	WSW	SW	SSW	SSW	SSW	S	S	S	S	S	SSW	SW	206	SSW	
Jul 26	N	N	NNE	NE	WNW	W	NNW	NNW	NNW	NNW	P	P	P	P	P	P	N	NE	E	NE	NNE	NE	NE	7	N		
Jul 27	NE	NNE	N	NNW	N	N	N	NE	ENE	K	E	ENE	ENE	ENE	E	ESE	ESE	E	ESE	ESE	ESE	ESE	ESE	ESE	69	ENE	
Jul 28	ESE	E	ESE	ESE	ESE	SE	E	SE	E	ENE	NNE	NNW	SSW	WSW	W	NW	NNW	N	NE	ENE	SSE	SSE	SSE	SSE	123	ESE	
Jul 29	SE	SSE	SE	ESE	ESE	ESE	ESE	SSE	S	SSE	S	SSE	SSE	SSE	SSE	SSE	S	S	S	SSE	SE	SE	ESE	160	SSE		
Jul 30	SE	SE	ESE	ESE	ESE	ESE	SE	SSE	SSE	SE	WSW	WSW	SW	SE	ESE	NW	N	NNE	ESE	SE	WSW	WNW	WSW	146	SE		
Jul 31	SW	SE	S	SSW	S	SSW	SW	SW	SW	WSW	WSW	WSW	SW	WSW	WSW	SW	SW	WSW	W	W	SW	WNW	SSW	230	SW		

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Machine Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Peace River Area Monitoring Program

986-C Station - July 2023

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

<b>WIND SPEED</b>					
Maximum Hourly Value:	24.4	kph	on Jul 22 at hr 23	Hours in Service:	744
Maximum Daily Value:	13.2	kph	on Jul 10	Hours of Data:	727
Minimum Hourly Value:	0.3	kph	on Jul 14 at hr 4	Hours of Missing Data:	17
Minimum Daily Value:	3.2	kph	on Jul 15	Hours of Calibration:	0
Monthly Average:	1.9	kph		Operational Uptime:	97.7
<b>WIND DIRECTION</b>					
Monthly Average:	185 degree (S)				

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	9.7	7.5	7.1	7.9	5.3	7.0	10.6	19.3	23.0	23.2	22.5	21.4	17.8	14.2	15.5	16.5	8.7	7.8	3.7	8.2	5.1	6.1	8.2	7.8	3.7	23.2	11.8
Jul 2	5.0	6.0	5.0	4.9	7.2	5.5	8.1	8.0	10.0	12.0	11.9	11.7	12.7	14.8	12.4	5.2	0.5	4.2	6.0	5.5	5.4	7.1	5.7	6.4	0.5	14.8	7.6
Jul 3	8.6	7.3	9.1	7.1	6.9	10.0	12.5	12.5	14.6	15.8	13.9	15.5	11.2	11.7	10.7	15.3	12.1	7.1	6.5	4.0	2.8	4.7	2.9	2.8	15.8	9.8	
Jul 4	4.1	4.5	2.8	2.7	3.3	2.9	2.1	3.7	2.3	2.9	3.3	5.6	5.3	P	P	P	8.1	11.5	12.4	12.8	9.6	10.1	11.9	10.9	2.1	12.8	6.3
Jul 5	6.5	3.8	6.3	7.6	5.4	7.2	5.9	8.3	10.9	12.1	14.9	13.4	10.8	8.9	4.9	11.6	14.0	1.9	5.4	6.9	5.7	3.3	10.8	6.4	1.9	14.9	8.0
Jul 6	3.7	4.5	2.5	1.9	1.7	4.9	1.8	5.0	11.5	12.8	13.5	11.3	11.2	10.8	14.3	14.0	14.4	14.7	11.6	10.3	8.4	10.0	9.4	10.4	1.7	14.7	8.9
Jul 7	7.7	4.7	4.1	4.8	7.3	6.0	5.0	3.4	1.9	4.8	2.2	4.2	1.8	5.3	3.1	2.2	0.8	5.5	6.7	3.9	2.9	6.6	1.9	3.3	0.8	7.7	4.2
Jul 8	5.8	7.3	4.0	2.7	5.3	2.4	5.0	3.7	5.2	5.7	6.1	7.6	5.9	7.1	8.4	9.8	11.4	11.4	12.6	11.1	7.9	9.8	4.8	5.9	2.4	12.6	7.0
Jul 9	7.3	8.4	6.8	7.4	8.3	3.4	5.6	3.4	5.8	3.7	6.6	8.2	10.0	10.2	6.7	3.3	7.0	5.5	5.0	11.8	13.3	12.3	12.8	13.9	3.3	13.9	7.8
Jul 10	13.0	14.5	14.8	15.2	14.7	13.0	11.2	16.4	11.0	12.2	6.1	11.0	14.3	17.0	20.0	18.3	20.6	17.3	13.9	7.7	7.8	10.2	6.3	9.3	6.1	20.6	13.2
Jul 11	8.5	8.4	8.9	8.5	5.6	4.2	4.3	4.3	7.1	6.2	7.4	9.6	8.6	5.7	9.0	9.4	10.9	7.5	9.1	12.2	15.6	8.0	7.5	5.6	4.2	15.6	8.0
Jul 12	5.3	2.9	1.5	6.8	3.1	4.9	1.2	3.6	3.5	2.7	2.3	0.5	1.2	5.9	9.3	8.5	9.2	11.5	1.3	2.4	3.3	2.2	3.2	1.2	0.5	11.5	4.1
Jul 13	1.0	1.7	4.3	3.7	2.7	1.2	4.2	7.7	7.3	7.0	8.8	6.9	8.5	9.9	14.6	12.0	9.8	11.1	13.2	7.4	4.1	3.5	3.5	3.0	1.0	14.6	6.5
Jul 14	2.3	2.3	0.4	0.8	0.3	1.3	1.9	0.4	3.6	4.2	K	6.5	7.0	7.0	8.0	7.3	8.3	8.6	7.8	3.8	5.1	6.4	4.3	5.3	0.3	8.6	4.5
Jul 15	5.4	5.4	3.2	3.7	3.7	2.9	4.1	2.9	0.8	0.8	2.1	1.1	2.2	2.2	4.6	1.8	4.7	5.4	2.3	0.9	1.4	5.5	4.9	5.5	0.8	5.5	3.2
Jul 16	6.1	7.4	4.4	2.6	3.7	2.1	5.9	5.0	8.8	11.0	9.8	10.0	10.1	8.0	6.9	8.7	6.8	7.9	9.8	12.0	11.3	10.7	9.6	12.6	2.1	12.6	8.0
Jul 17	12.2	9.3	5.3	8.3	7.1	9.4	11.8	9.5	11.3	8.5	11.1	11.2	6.7	5.6	4.2	7.2	3.9	8.4	10.3	8.6	5.5	2.3	5.2	2.3	12.2	8.0	
Jul 18	6.2	6.5	5.1	6.0	5.6	4.5	4.3	5.6	5.1	5.9	9.0	8.9	8.1	7.5	6.8	5.4	9.5	7.3	10.6	9.2	8.4	7.5	7.8	6.7	4.3	10.6	7.0
Jul 19	5.2	6.2	4.7	5.5	4.8	4.4	4.1	4.1	4.4	5.5	5.4	7.8	9.7	9.4	6.8	6.4	7.0	5.2	3.2	1.2	2.1	2.5	3.1	1.2	9.7	5.1	
Jul 20	2.7	2.4	3.7	2.7	3.5	4.4	1.6	2.1	3.3	3.8	4.2	5.0	8.2	6.7	7.8	4.5	6.9	4.5	6.4	5.1	0.6	3.6	2.3	3.2	0.6	8.2	4.1
Jul 21	3.7	4.2	4.2	4.0	7.7	4.4	3.6	0.9	2.8	3.3	3.6	1.2	3.3	2.9	3.9	2.1	2.3	5.6	9.6	7.3	6.8	10.1	7.3	4.3	0.9	10.1	4.5
Jul 22	5.0	5.9	7.2	5.4	2.9	7.0	7.1	6.8	7.2	4.3	K	2.7	5.1	4.1	4.3	4.6	5.9	11.6	13.5	10.6	11.7	13.6	16.6	24.4	2.7	24.4	8.2
Jul 23	11.8	2.8	7.4	10.4	3.7	9.0	11.3	6.3	9.1	9.8	9.3	6.9	9.9	7.1	8.2	5.5	5.5	6.0	5.0	3.5	2.3	3.3	4.2	5.3	2.3	11.8	6.8
Jul 24	2.0	7.6	3.3	1.4	5.4	2.2	3.6	1.9	3.9	7.8	2.5	3.0	P	P	P	P	P	14.3	10.7	12.6	7.3	9.0	6.1	5.8	1.4	14.3	5.8
Jul 25	5.3	5.0	1.7	2.1	2.9	4.8	5.2	6.0	10.6	10.4	9.8	9.8	5.9	10.3	16.1	22.7	21.5	23.7	23.0	20.0	16.6	14.6	10.5	7.1	1.7	23.7	11.1
Jul 26	4.7	5.3	6.1	3.4	1.5	1.5	4.0	9.1	13.7	14.4	13.9	P	P	P	P	P	P	12.1	11.2	7.5	5.2	6.1	7.3	10.1	1.5	14.4	7.6
Jul 27	7.4	6.5	4.5	6.6	9.2	7.0	9.2	8.3	7.1	12.0	K	16.8	15.8	15.1	15.3	12.1	10.5	9.5	10.7	7.8	6.7	5.1	3.1	5.3	3.1	16.8	9.2
Jul 28	3.5	1.9	6.0	9.2	8.0	3.9	3.2	1.5	1.8	1.0	2.6	2.3	3.2	5.7	4.4	6.4	4.5	4.0	2.5	3.0	1.5	3.9	9.5	9.0	1.0	9.5	4.3
Jul 29	8.3	10.4	6.4	4.6	4.8	3.9	2.9	5.5	8.3	11.7	10.9	12.7	13.5	13.5	11.2	10.3	11.9	11.2	11.8	10.1	6.5	6.7	10.4	7.0	2.9	13.5	8.9
Jul 30	8.3	6.5	4.4	5.6	4.9	5.5	6.1	6.5	7.3	8.6	6.0	3.3	6.0	5.4	1.6	7.8	5.3	6.7	8.0	5.1	3.7	7.1	6.9	1.6	8.6	5.8	
Jul 31	2.4	7.3	10.4	8.9	11.0	7.2	11.5	12.3	9.9	12.8	11.8	12.4	16.4	24.0	15.1	13.4	13.9	14.5	12.9	9.0	6.4	4.4	3.2	4.3	2.4	24.0	10.6

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

842-B STATION

**Peace River Area Monitoring Program**

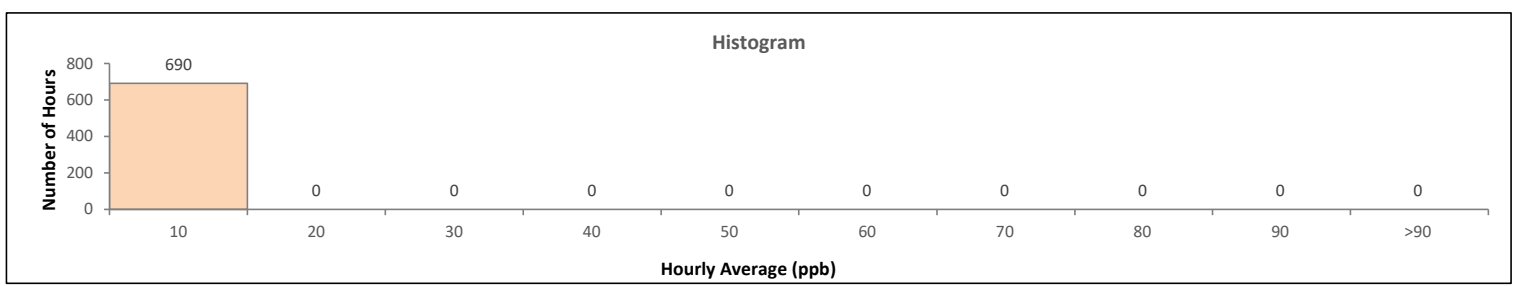
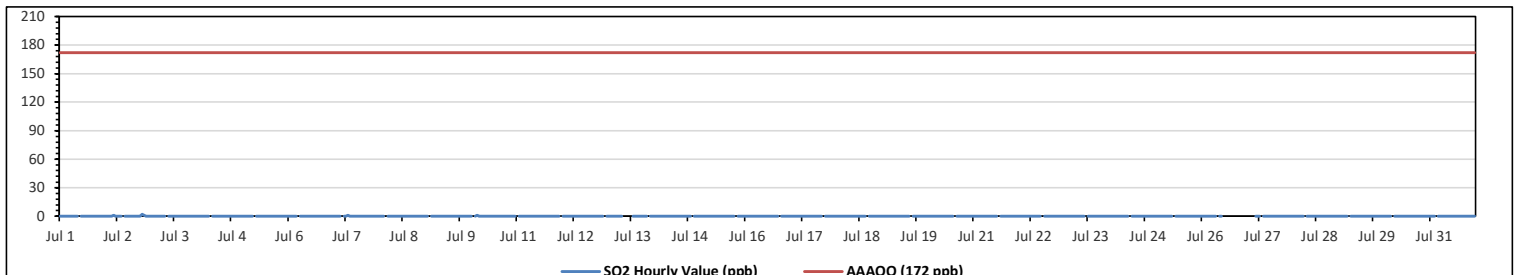
**842-B Station - July 2023**

**Summary of Hourly Averages**

**SULPHUR DIOXIDE (SO<sub>2</sub>) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																																					
Number of 1-Hour Exceedances: 0		Number of 24-Hour Exceedances: 0		30-Day Exceedence: 0																																	
Maximum Hourly Value: 2 ppb on Jul 2 at hr 19		Hours in Service: 744																																			
Maximum Daily Value: 0.2 ppb on Jul 2		Hours of Data: 690																																			
Minimum Hourly Value: 0 ppb on Jul 1 at hr 0		Hours of Missing Data: 17																																			
Minimum Daily Value: 0.0 ppb on Jul 1		Hours of Calibration: 37																																			
Monthly Average: 0.0 ppb		Operational Uptime: 97.7																																			
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average											
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23										
Jul 1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Jul 2	0	0	0	0	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Jul 3	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Jul 4	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Jul 5	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Jul 6	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Jul 7	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jul 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jul 11	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jul 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Jul 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 27	P	P	P	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diurnal Maximum	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
C	Monthly Calibration									S	Daily Zero-Span Check									Q	Quality Assurance																
K	Collection Error									ND	No Data (Machine Not in Service)									Y	Routine Maintenance																
X	Invalid Data (Equipment Malfunction /Recovery)									NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)									P	Power Failure																

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

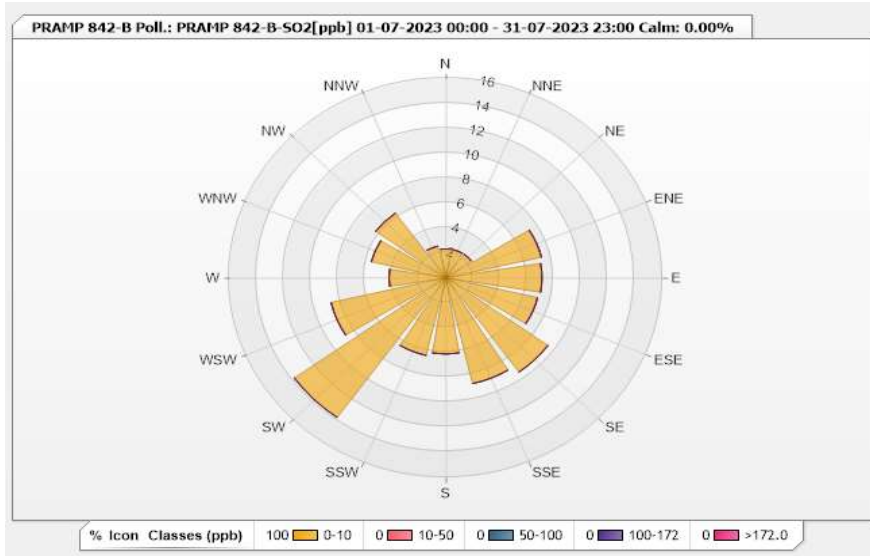


Station: PRAMP 842-B Poll.: PRAMP 842-B-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.74%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	2.32	0	0	0	0	2.32
NNE	2.32	0	0	0	0	2.32
NE	2.32	0	0	0	0	2.32
ENE	7.25	0	0	0	0	7.25
E	7.1	0	0	0	0	7.1
ESE	6.96	0	0	0	0	6.96
SE	9.28	0	0	0	0	9.28
SSE	8.7	0	0	0	0	8.7
S	6.09	0	0	0	0	6.09
SSW	6.38	0	0	0	0	6.38
SW	13.77	0	0	0	0	13.77
WSW	8.7	0	0	0	0	8.7
W	4.2	0	0	0	0	4.2
WNW	5.65	0	0	0	0	5.65
NW	6.38	0	0	0	0	6.38
NNW	2.61	0	0	0	0	2.61
Summary	100	0	0	0	0	100





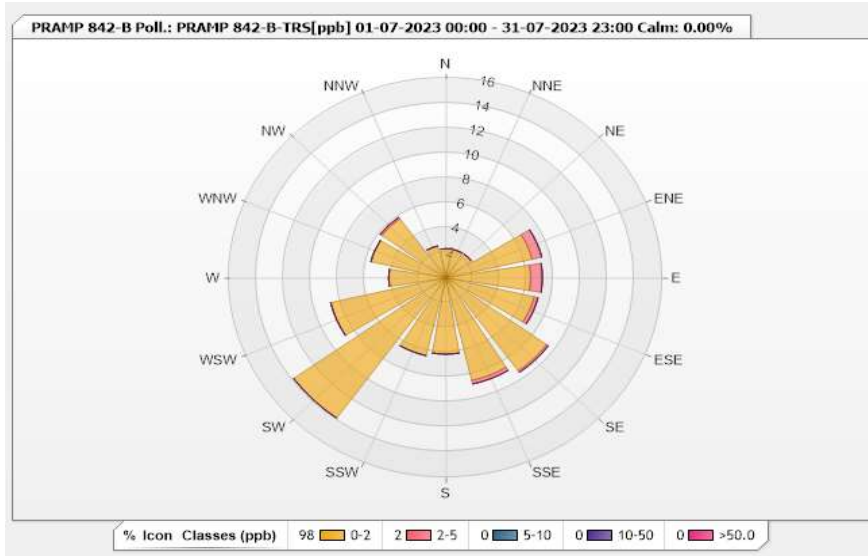


Station: PRAMP 842-B Poll.: PRAMP 842-B-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.34%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	2.33	0	0	0	0	2.33
NNE	2.33	0	0	0	0	2.33
NE	2.33	0	0	0	0	2.33
ENE	6.55	0.73	0	0	0	7.28
E	6.26	0.87	0	0	0	7.13
ESE	6.7	0.29	0	0	0	6.99
SE	9.17	0.15	0	0	0	9.32
SSE	8.44	0.29	0	0	0	8.73
S	6.11	0	0	0	0	6.11
SSW	6.4	0	0	0	0	6.4
SW	13.83	0	0	0	0	13.83
WSW	8.73	0	0	0	0	8.73
W	4.22	0	0	0	0	4.22
WNW	5.68	0	0	0	0	5.68
NW	5.82	0.15	0	0	0	5.97
NNW	2.62	0	0	0	0	2.62
Summary	97.52	2.48	0	0	0	100



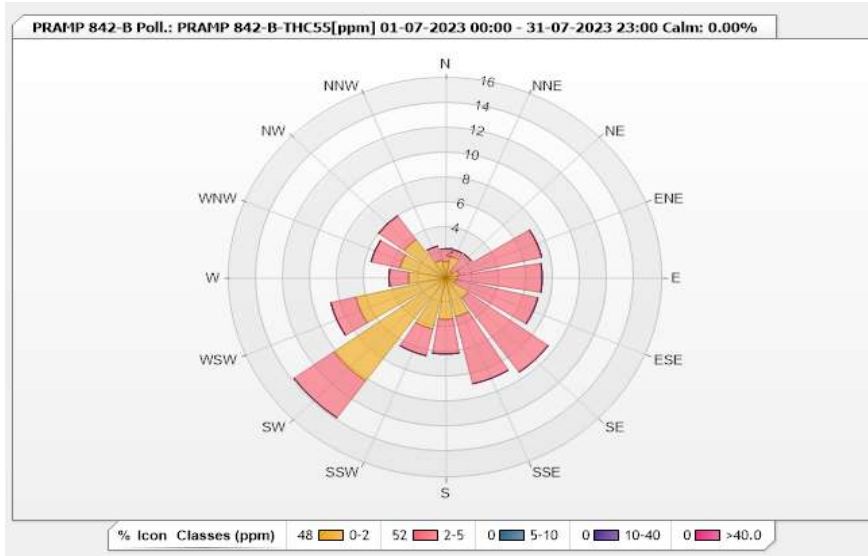


Station: PRAMP 842-B Poll.: PRAMP 842-B-THC55[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.47%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	1.31	1.02	0	0	0	2.33
NNE	1.74	0.58	0	0	0	2.32
NE	0.58	1.74	0	0	0	2.32
ENE	1.02	6.25	0	0	0	7.27
E	0.87	6.25	0	0	0	7.12
ESE	0.73	6.25	0	0	0	6.98
SE	2.03	7.27	0	0	0	9.3
SSE	3.2	5.52	0	0	0	8.72
S	3.34	2.76	0	0	0	6.1
SSW	4.22	2.18	0	0	0	6.4
SW	10.17	3.63	0	0	0	13.8
WSW	6.83	1.89	0	0	0	8.72
W	2.76	1.45	0	0	0	4.21
WNW	3.49	2.18	0	0	0	5.67
NW	3.78	2.33	0	0	0	6.11
NNW	1.45	1.16	0	0	0	2.61
Summary	47.52	52.46	0	0	0	100



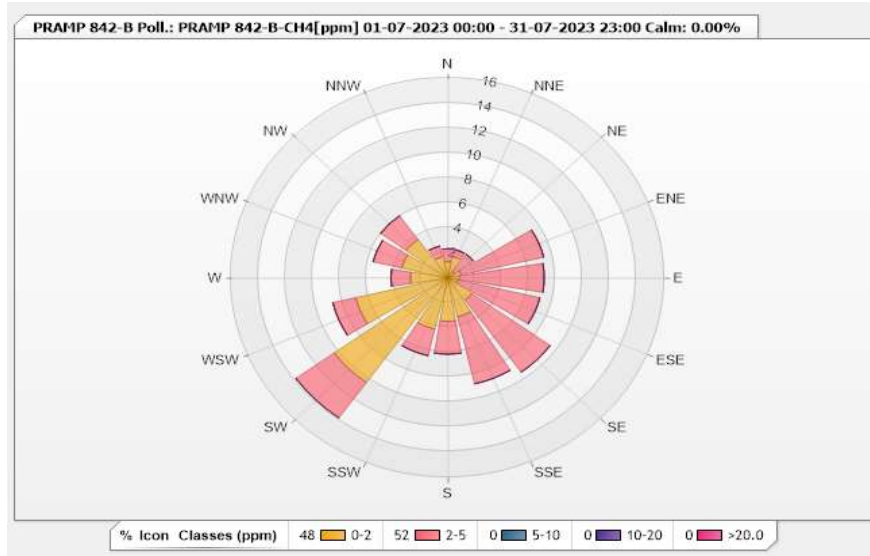


Station: PRAMP 842-B Poll.: PRAMP 842-B-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.47%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	1.31	1.02	0	0	0	2.33
NNE	1.74	0.58	0	0	0	2.32
NE	0.58	1.74	0	0	0	2.32
ENE	1.02	6.25	0	0	0	7.27
E	0.87	6.25	0	0	0	7.12
ESE	0.73	6.25	0	0	0	6.98
SE	2.18	7.12	0	0	0	9.3
SSE	3.2	5.52	0	0	0	8.72
S	3.49	2.62	0	0	0	6.11
SSW	4.22	2.18	0	0	0	6.4
SW	10.32	3.49	0	0	0	13.81
WSW	6.98	1.74	0	0	0	8.72
W	2.76	1.45	0	0	0	4.21
WNW	3.49	2.18	0	0	0	5.67
NW	3.78	2.33	0	0	0	6.11
NNW	1.74	0.87	0	0	0	2.61
Summary	48.41	51.59	0	0	0	100



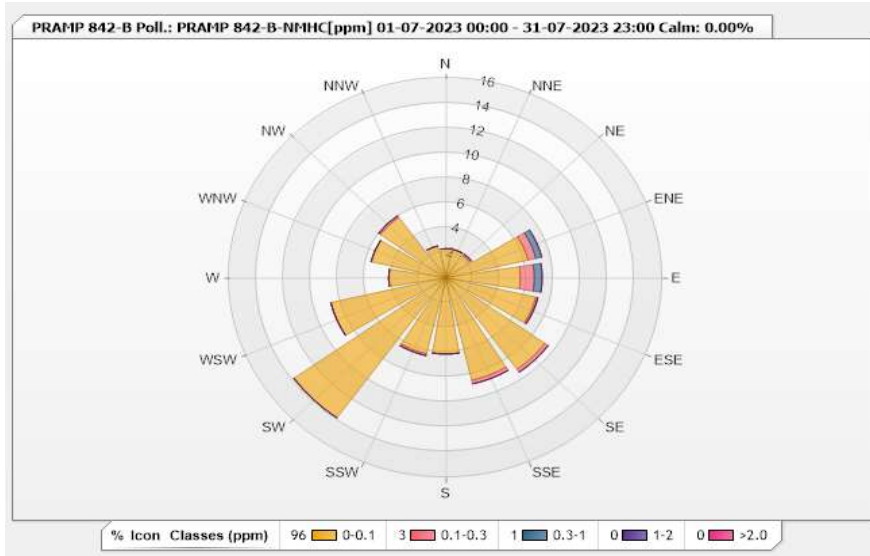


Station: PRAMP 842-B Poll.: PRAMP 842-B-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 92.47%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	2.33	0	0	0	0	2.33
NNE	2.33	0	0	0	0	2.33
NE	2.18	0.15	0	0	0	2.33
ENE	6.25	0.58	0.44	0	0	7.27
E	5.52	1.02	0.58	0	0	7.12
ESE	6.83	0.15	0	0	0	6.98
SE	9.01	0.29	0	0	0	9.3
SSE	8.43	0.29	0	0	0	8.72
S	6.1	0	0	0	0	6.1
SSW	6.25	0.15	0	0	0	6.4
SW	13.81	0	0	0	0	13.81
WSW	8.72	0	0	0	0	8.72
W	4.22	0	0	0	0	4.22
WNW	5.67	0	0	0	0	5.67
NW	5.96	0.15	0	0	0	6.11
NNW	2.62	0	0	0	0	2.62
Summary	96.23	2.78	1.02	0	0	100





**Peace River Area Monitoring Program**

**842-B Station - July 2023**

**Summary of Hourly Averages**

**RELATIVE HUMIDITY (RH) in %**

Maximum Hourly Value:	100	%	on Jul 3 at hr 5	Hours in Service:	744
Maximum Daily Value:	98.3	%	on Jul 25	Hours of Data:	727
Minimum Hourly Value:	26	%	on Jul 6 at hr 14	Hours of Missing Data:	17
Minimum Daily Value:	53.1	%	on Jul 7	Hours of Calibration:	0
Monthly Average:	73.8	%		Operational Uptime:	97.7

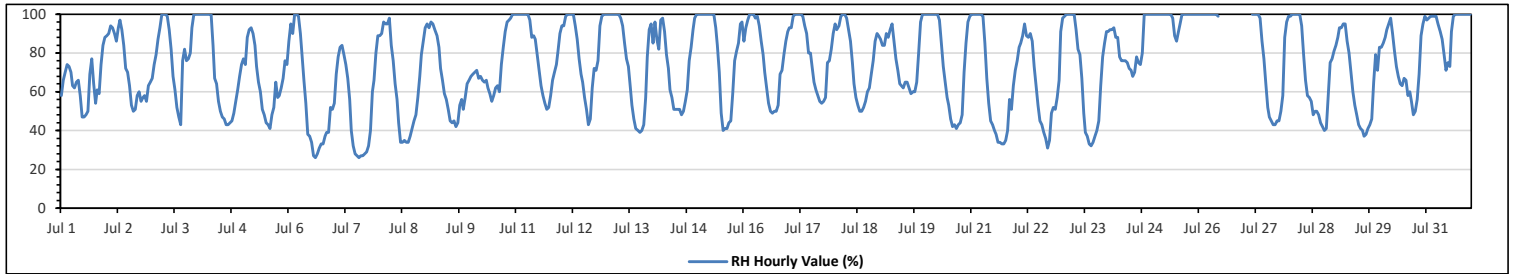
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	58	66	70	74	73	70	63	62	65	66	58	47	47	48	50	69	77	64	54	61	59	74	84	88	47	88	64.5
Jul 2	89	90	94	93	90	86	93	97	92	84	72	70	63	53	50	51	58	60	55	57	58	55	63	65	50	97	72.4
Jul 3	67	74	79	87	93	100	100	100	99	92	82	68	61	52	47	43	76	82	76	77	80	93	100	100	43	100	80.3
Jul 4	100	100	100	100	100	100	100	100	84	67	64	55	50	47	46	43	43	44	45	49	55	61	68	74	43	100	70.6
Jul 5	77	74	88	92	93	90	84	73	65	60	51	48	44	43	41	48	52	65	57	58	62	67	76	74	41	93	65.9
Jul 6	86	95	90	100	100	99	90	77	66	54	38	37	34	27	26	28	31	33	33	37	39	39	52	51	26	100	56.8
Jul 7	54	69	78	83	84	79	74	67	56	40	32	28	27	26	27	27	28	29	32	40	60	66	80	89	26	89	53.1
Jul 8	89	90	96	95	95	98	84	76	64	56	44	34	34	35	34	34	37	41	45	48	57	68	79	86	34	98	63.3
Jul 9	93	95	93	96	95	92	89	83	72	66	59	56	51	45	44	45	42	44	53	56	51	57	64	66	42	96	67.0
Jul 10	68	69	70	71	67	68	66	65	66	62	59	55	58	62	63	60	74	83	91	96	97	98	100	100	55	100	73.7
Jul 11	100	100	100	100	100	100	100	97	88	89	87	79	71	63	58	54	51	52	58	66	70	74	81	90	51	100	80.3
Jul 12	94	94	99	100	100	100	100	94	87	77	69	65	57	51	43	46	62	72	71	76	94	99	100	100	43	100	81.3
Jul 13	100	100	100	100	100	100	100	98	94	85	77	73	64	53	46	41	40	39	40	43	57	78	92	95	39	100	75.6
Jul 14	85	96	87	82	97	98	91	79	72	61	57	51	51	51	48	50	55	61	76	83	92	98	100	48	100	73.8	
Jul 15	100	100	100	100	100	100	100	100	93	84	70	49	40	41	41	44	45	59	76	81	85	95	96	40	100	79.1	
Jul 16	86	93	97	100	100	100	98	99	94	86	79	70	62	54	50	49	50	50	53	69	71	79	86	91	49	100	77.8
Jul 17	93	93	99	100	100	100	100	99	94	90	80	80	73	65	61	58	55	54	55	57	75	76	82	90	54	100	80.4
Jul 18	95	92	94	99	100	100	98	92	86	75	64	57	53	50	50	52	55	60	62	69	76	86	90	89	50	100	76.8
Jul 19	87	84	84	90	88	92	95	86	77	71	64	63	62	65	65	62	59	60	60	65	80	96	100	100	59	100	77.3
Jul 20	100	100	100	100	100	100	100	97	85	73	65	57	53	46	42	43	41	43	44	48	70	85	96	99	41	100	74.5
Jul 21	100	100	100	100	100	100	99	85	67	54	45	43	40	38	34	33	33	35	40	56	51	63	71	33	100	63.4	
Jul 22	76	83	85	89	95	89	88	90	86	73	63	53	45	43	39	36	31	35	49	52	51	57	66	91	31	95	65.2
Jul 23	98	99	100	100	100	100	92	82	79	67	49	39	37	33	32	34	37	40	45	63	78	85	91	32	100	70.0	
Jul 24	91	92	92	93	88	88	78	76	76	76	75	72	71	68	70	78	75	74	80	100	100	100	100	68	100	83.9	
Jul 25	100	100	100	100	100	100	100	100	100	100	98	89	86	91	95	100	100	100	100	100	100	100	100	86	100	98.3	
Jul 26	100	100	100	100	100	100	100	100	100	100	99																
Jul 27	P	P	P	P	100	100	100	100	98	86	77	64	52	47	45	43	43	45	45	50	58	88	96	99	43	100	71.8
Jul 28	99	100	100	100	100	100	94	79	66	58	57	55	48	50	50	48	44	42	40	41	58	75	77	81	40	100	69.3
Jul 29	84	88	93	93	95	95	86	80	70	60	53	48	43	41	40	37	38	41	43	46	65	79	71	83	37	95	65.5
Jul 30	83	85	88	92	95	98	90	81	73	68	64	63	67	66	58	60	55	48	50	56	69	89	95	99	48	99	74.7
Jul 31	97	98	99	99	99	99	95	91	87	79	71	75	73	91	99	100	100	100	100	100	100	100	100	71	100	93.8	
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	99	89	86	91	99	100	100	100	100	100	100	100	100	100			
Diurnal Average	88.3	90.6	92.5	94.3	95.1	94.9	92.1	87.6	81.0	73.5	66.3	59.1	54.3	51.6	49.9	50.3	52.6	54.3	56.2	61.8	69.8	78.2	84.6	88.6			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.









### Peace River Area Monitoring Program

### 842-B Station - July 2023

### Summary of Hourly Averages

### PRECIPITATION in mm

Maximum Hourly Value:	6.1 mm on Jul 24 at hr 21	Hours in Service:	744
Maximum Daily Value:	12.2 mm on Jul 24	Hours of Data:	727
Minimum Hourly Value:	0.0 mm on Jul 1 at hr 0	Hours of Missing Data:	17
Minimum Daily Value:	0.0 mm on Jul 4	Hours of Calibration:	0
Monthly Total:	39.2 mm	Operational Uptime:	97.7

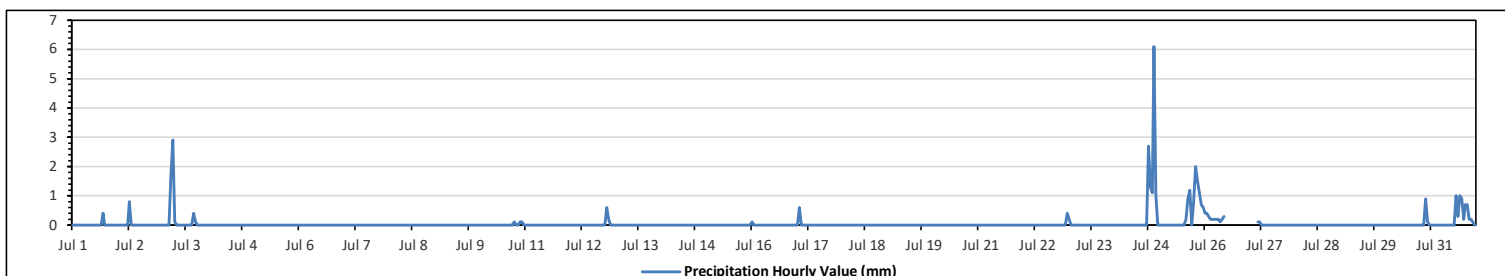
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Total		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0.0	0.4	0.4
Jul 2	0	0	0	0	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.8	0.8
Jul 3	0	0	0	0	1.7	2.9	0.1	0	0	0	0	0	0	0	0	0	0.4	0.1	0	0	0	0	0	0	0	0.0	2.9	5.2
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.3
Jul 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0.2	0	0	0.0	0.6	0.8
Jul 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 16	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
Jul 17	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.6	0.6
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.0	0.4	0.4
Jul 23	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.2
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.7	1.3	1.1	6.1	1	0	0.0	6.1	12.2	
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9	1.2	0	0.8	2	1.5	1.1	0.7	0.6	0.0	2.0	9.0	
Jul 26	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	P	P	P	P	P	P	P	P	P	P	P	P	P	0.1	0.4	NA	
Jul 27	P	P	P	P	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.2	
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0.1	0.0	0.9	1.0
Jul 31	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1	0.9	0.2	0.7	0.7	0.2	0.2	0.1	0	0	0.0	1.0	5.3	
Diurnal Maximum	0.4	0.6	0.3	0.2	1.7	2.9	0.8	0.2	0.1	0.2	0.3	0.0	0.0	1.0	0.3	1.0	1.2	0.2	2.7	2.0	1.5	6.1	1.0	0.6	0.0	6.1	12.2	
Diurnal Average	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.3	0.1	0.0	0.0	1.0	5.3	

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



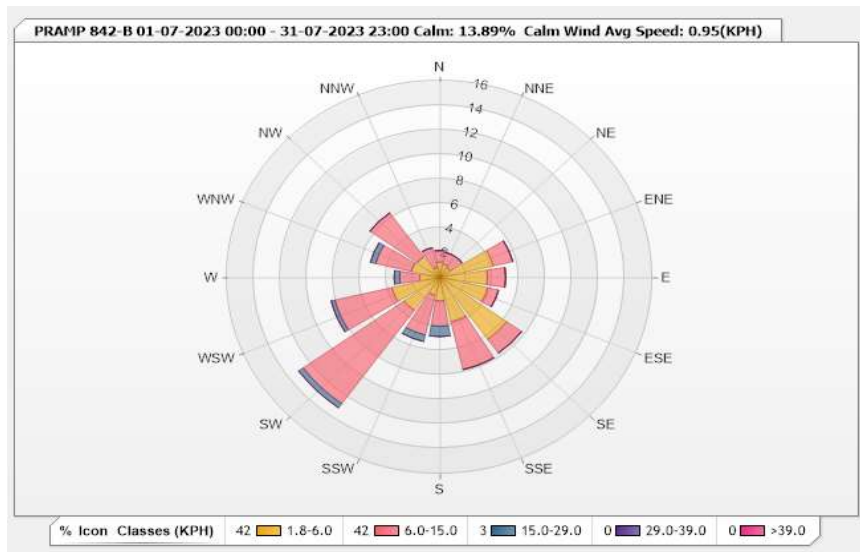


Station: PRAMP 842-B Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 13.89%      Valid Data: 97.72%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.24	0.96	0	0	0	2.2
NNE	1.1	0.96	0	0	0	2.06
NE	0.96	1.1	0	0	0	2.06
ENE	4.13	1.51	0	0	0	5.64
E	3.58	1.38	0	0	0	4.96
ESE	3.71	0.83	0	0	0	4.54
SE	6.19	1.38	0	0	0	7.57
SSE	3.71	3.99	0	0	0	7.7
S	1.93	2.06	0.83	0	0	4.82
SSW	1.51	3.3	0.55	0	0	5.36
SW	3.3	9.35	0.41	0	0	13.06
WSW	3.71	4.4	0.28	0	0	8.39
W	1.51	1.51	0.41	0	0	3.43
WNW	2.2	2.75	0.41	0	0	5.36
NW	2.06	4.4	0	0	0	6.46
NNW	0.83	1.65	0	0	0	2.48
Summary	41.67	41.53	2.89	0	0	86.09



Peace River Area Monitoring Program

842-B Station - July 2023

Summary of Hourly Averages

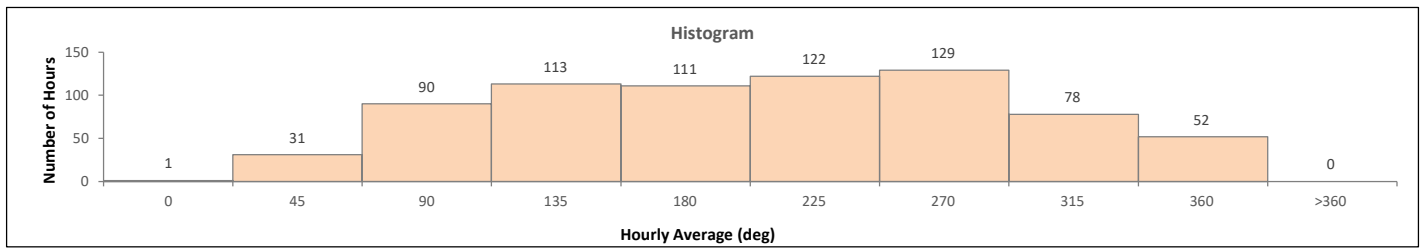
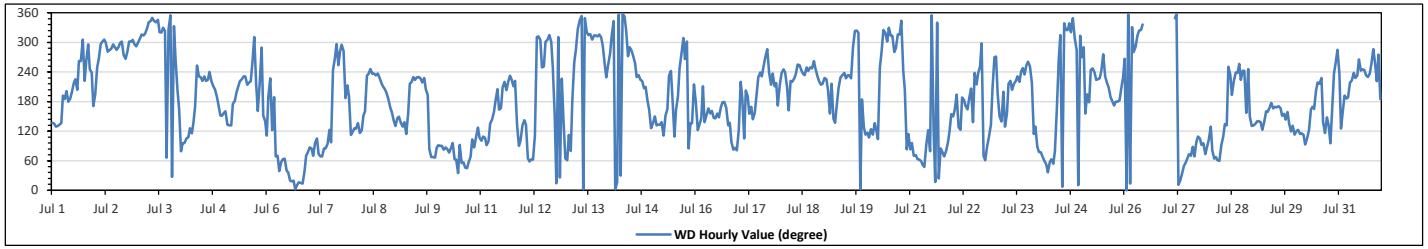
WIND DIRECTION (VWD) in sector

Monthly Average:	223 (SW) degree	Hours in Service:	744
		Hours of Data:	727
		Hours of Missing Data:	17
		Hours of Calibration:	0
		Operational Uptime:	97.7

Day	Hourly Period Starting at (MST)																							Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant	
Jul 1	SE	SE	SE	SE	SE	S	S	SSW	S	S	SSW	SW	SW	SSW	W	W	NW	SW	W	WNW	WSW	WSW	S	209	SSW		
Jul 2	SSW	WSW	W	WNW	WNW	NW	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	W	W	WNW	WNW	WNW	WNW	WNW	289	WNW		
Jul 3	WNW	NW	NW	NW	NW	NNW	NNW	NNW	N	NNW	NNW	NNW	NW	NW	NNW	NW	ENE	NW	N	NNE	NNW	W	SSW	SSE	330	NNW	
Jul 4	ENE	E	E	ESE	ESE	SE	ESE	SE	SSE	WSW	SW	SW	SW	SW	SW	SW	WSW	SW	SSW	SSW	S	S	SSE	SSE	206	SSW	
Jul 5	SSE	SSE	SE	SE	SE	S	S	SSW	SSW	SW	SW	SW	SW	SSW	SW	SW	WSW	NW	SSW	SSE	SW	WNW	SSE	SE	212	SSW	
Jul 6	ESE	S	SW	ESE	S	ENE	ENE	NE	ENE	ENE	NE	NNE	NNE	NNE	N	NNE	NNE	NNE	NNE	NNE	NE	ENE	ENE	ENE	33	NNE	
Jul 7	E	E	ENE	E	ESE	ENE	ENE	ENE	E	E	E	ESE	E	WSW	W	WNW	WSW	W	WNW	W	S	SSW	S	ESE	34	NE	
Jul 8	ESE	SE	SE	SE	ESE	ESE	SSE	SSE	SW	WSW	SW	SW	SW	SW	SW	SW	SSW	SSW	SSW	S	SSE	SSE	SE	ESE	206	SSW	
Jul 9	SE	SE	SSE	SE	SE	SE	ESE	SSE	SW	SW	SW	SW	SW	SW	SW	SW	SSW	S	E	ENE	ENE	ENE	E	188	S		
Jul 10	E	E	E	E	E	ENE	E	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	ESE	E	ESE	ESE	ESE	73	ENE		
Jul 11	E	ESE	ESE	E	E	SE	SSE	S	SSW	SSE	SSE	SSW	SW	SSW	SW	SW	SW	SSW	SW	SE	E	E	SE	186	S		
Jul 12	SE	SE	ENE	ENE	ENE	ENE	ESE	NW	NW	WNW	WSW	WSW	WNW	WNW	NW	WNW	WSW	SSE	NNE	NW	NNE	SW	SE	ENE	313	NW	
Jul 13	ENE	ESE	E	S	WSW	WNW	NW	NNW	N	NNW	NW	NW	NW	NW	NW	NW	NW	NW	NW	WNW	WSW	WSW	SW	WSW	321	NW	
Jul 14	W	NW	NNW	N	NNE	N	NNE	N	NW	W	WNW	WNW	W	WSW	SW	SW	SW	SW	SSW	SSW	S	SSE	SE	SSE	254	WSW	
Jul 15	SE	SSE	SE	SE	SE	ESE	SSE	SSE	SW	WSW	S	ESE	SSE	S	WSW	W	NW	W	WNW	E	SE	SE	SSW	187	S		
Jul 16	S	ESE	SE	SE	SSW	SE	SSE	SSE	SSE	SE	SE	SSE	SE	SSE	S	S	SSE	SE	SE	E	E	E	E	148	SE		
Jul 17	ESE	SW	S	ESE	SSW	S	SSE	SSE	SE	SSE	SSW	SW	WSW	SW	WSW	W	WNW	SW	SSW	SW	SSW	S	SSW	210	SSW		
Jul 18	SW	WSW	WSW	SSW	SSE	SW	SW	SW	SW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	WSW	W	WSW	SW	SW	SSW	239	WSW		
Jul 19	SW	SW	SSW	SSE	SW	SE	SE	S	SSW	SW	SW	SW	SW	SW	SW	NW	NW	NW	NW	N	S	SE	ESE	231	SW		
Jul 20	ESE	ESE	ESE	ESE	SE	ESE	ESE	WSW	W	NW	NW	WNW	NNW	NW	NW	W	WNW	NW	NW	NNW	WSW	SSW	E	ESE	306	NW	
Jul 21	E	E	ENE	ENE	ENE	ENE	NE	NE	E	ESE	ENE	N	ESE	NNE	NNE	E	ENE	ENE	E	E	ESE	E	ESE	70	ENE		
Jul 22	SSE	SSE	SSW	SE	ESE	S	S	S	SSE	S	SSW	SE	SW	SSW	SW	WSW	WNW	ENE	ENE	E	ESE	SE	SSW	W	189	S	
Jul 23	W	SSW	SSE	SE	SSW	SE	SSE	SW	SSW	SW	SW	SW	SW	WSW	WSW	SW	WSW	SW	WSW	W	WSW	SW	ESE	SE	E	220	SW
Jul 24	ENE	ENE	ENE	NE	NE	ENE	ENE	NE	ENE	SSE	W	NW	N	NNW	NW	NW	NNW	NW	NNW	NW	NNW	NW	NW	NW	341	NNW	
Jul 25	W	WNW	SSE	SSW	S	WSW	WSW	WSW	SW	SW	WSW	W	SW	SW	SSW	S	S	S	S	S	S	S	SSW	SW	210	SSW	
Jul 26	W	N	N	NNE	NNW	W	WNW	NW	NW	NW	NNW	P	P	P	P	P	P	P	P	P	P	P	P	P	NA	NA	
Jul 27	P	P	P	P	NNW	N	NNE	NNE	NE	NE	ENE	ENE	ENE	E	ENE	E	ESE	ESE	E	ENE	E	ENE	E	ESE	62	ENE	
Jul 28	SE	E	ENE	ENE	ENE	ENE	E	ESE	SE	SE	WSW	SW	S	SW	WSW	SW	WSW	SW	WSW	SSW	SSW	SSE	SE	ESE	206	SSW	
Jul 29	SE	SE	SE	SE	SE	ESE	SE	SSE	SSE	S	SSE	SSE	SSE	S	SSE	SSE	SSE	SE	SSE	SE	SSE	SE	SE	ESE	155	SSE	
Jul 30	ESE	ESE	ESE	ESE	ESE	E	ESE	ESE	SSE	SSE	SSW	SW	SW	SW	SW	SE	ESE	SE	E	SSE	SW	WSW	WNW	152	SSE		
Jul 31	SW	SE	SSE	S	S	S	SW	SW	SW	SW	W	WSW	WSW	WSW	SW	SW	SW	WSW	WNW	WSW	SW	W	S	234	SW		

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Machine Malfunction/Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "—" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "—" if minimum data completeness criteria of 75% of days per month is not met.





**Peace River Area Monitoring Program**

**842-B Station - July 2023  
Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector**

<b>WIND SPEED</b>		
Maximum Hourly Value:	21.4 kph	on Jul 31 at hr 13
Maximum Daily Value:	10.2 kph	on Jul 31
Minimum Hourly Value:	0.1 kph	on Jul 3 at hr 23
Minimum Daily Value:	2.5 kph	on Jul 21
Monthly Average:	2.0 kph	
Hours in Service:	744	
Hours of Data:	727	
Hours of Missing Data:	17	
Hours of Calibration:	0	
Operational Uptime:	97.7	

<b>WIND DIRECTION</b>		
Monthly Average:	223 degree (SW)	

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	3.8	3.7	3.9	2.9	3.2	3.8	7.8	11.7	15.5	16.8	17.5	17.9	17.1	13.6	15.1	17.0	7.4	5.4	3.3	14.1	3.2	7.9	3.6	4.5	2.9	17.9	9.2	
Jul 2	8.1	5.9	5.5	5.0	4.8	6.1	9.9	7.7	9.1	11.1	14.0	12.6	15.0	19.2	15.6	8.7	2.8	3.3	4.9	4.3	6.3	8.6	6.4	8.5	2.8	19.2	8.5	
Jul 3	10.6	9.6	10.8	9.2	9.1	6.5	8.1	7.8	8.2	9.2	9.8	9.0	10.8	12.4	8.3	10.5	6.5	8.1	5.9	2.3	2.2	1.5	0.7	0.1	0.1	12.4	7.4	
Jul 4	0.7	0.2	0.3	0.1	0.9	2.2	2.4	2.4	1.8	2.5	6.0	7.7	7.1	6.2	8.5	9.6	10.0	10.4	10.1	10.0	6.9	6.9	6.4	6.6	0.1	10.4	5.2	
Jul 5	5.8	7.6	1.1	2.7	1.4	5.9	5.7	6.6	8.4	11.2	12.8	13.2	11.4	10.5	12.2	15.5	14.7	5.1	1.8	4.9	5.3	2.8	6.1	1.8	1.1	15.5	7.3	
Jul 6	0.3	0.7	2.0	0.9	0.3	1.2	2.0	4.3	7.0	7.9	9.1	9.5	6.7	7.6	8.5	8.7	10.2	9.8	8.8	6.2	6.0	5.7	3.7	3.5	0.3	10.2	5.4	
Jul 7	4.1	2.6	1.5	1.5	3.0	5.8	6.3	3.8	0.8	2.8	2.4	2.9	3.1	2.3	2.7	5.0	9.6	9.0	7.1	2.7	1.5	1.1	0.5	1.1	0.5	9.6	3.5	
Jul 8	2.5	2.6	2.1	3.0	2.7	2.1	4.1	2.5	3.9	3.7	6.1	8.4	9.1	9.9	11.3	10.3	11.5	10.9	9.9	7.3	5.4	6.3	4.4	3.6	2.1	11.5	6.0	
Jul 9	2.3	2.9	3.7	3.3	3.4	3.5	2.3	3.7	5.3	5.2	6.7	8.0	9.2	9.2	9.1	6.8	6.0	5.0	0.9	3.8	5.5	4.7	4.8	6.3	0.9	9.2	5.1	
Jul 10	5.4	6.9	6.1	6.5	8.6	6.6	5.1	8.2	5.8	5.8	4.1	2.8	0.4	7.6	8.8	10.2	11.1	9.9	5.4	4.0	1.9	3.9	0.8	2.8	0.4	11.1	5.8	
Jul 11	3.1	3.4	2.8	2.1	1.4	4.2	5.7	5.8	12.1	7.0	4.7	6.6	6.9	8.3	8.4	9.6	9.1	8.5	9.4	9.3	1.1	4.0	4.5	3.3	1.1	12.1	5.9	
Jul 12	3.0	2.9	0.7	5.0	4.1	3.8	1.0	2.0	5.6	2.8	1.0	3.7	5.8	7.4	7.8	7.8	3.5	9.6	0.6	6.4	5.1	5.1	0.3	1.0	0.3	9.6	4.0	
Jul 13	0.7	0.5	1.0	0.2	1.8	1.0	4.9	7.1	8.8	5.2	6.8	7.0	9.4	9.8	11.2	13.3	12.6	12.2	8.8	6.7	1.9	0.4	0.3	0.6	0.2	13.3	5.5	
Jul 14	1.4	2.3	4.3	2.9	2.2	0.1	1.4	1.6	2.9	3.5	6.0	6.4	8.3	7.3	7.2	7.2	8.1	8.3	6.4	6.5	5.3	4.4	4.1	4.2	0.1	8.3	4.7	
Jul 15	3.4	4.5	2.7	2.9	2.4	3.0	1.4	0.8	2.1	0.3	2.4	1.6	1.7	1.2	2.7	4.9	6.2	7.3	0.9	0.3	0.9	2.0	1.4	5.0	0.3	7.3	2.6	
Jul 16	4.5	6.8	6.1	3.0	1.5	0.6	4.7	4.3	6.3	9.6	7.7	8.9	7.4	8.3	7.5	7.6	7.2	7.9	2.1	2.1	3.7	4.3	4.2	5.2	0.6	9.6	5.5	
Jul 17	5.5	8.5	4.7	3.4	4.3	4.3	7.7	8.1	8.4	4.0	9.5	7.5	8.2	6.4	8.6	6.7	10.2	6.4	6.0	11.5	8.4	6.9	5.3	4.6	3.4	11.5	6.9	
Jul 18	5.7	5.7	5.5	2.2	2.1	6.0	5.1	5.2	4.7	6.3	8.8	11.4	12.8	13.6	13.3	11.1	10.4	13.1	12.6	10.1	7.3	6.1	7.2	8.0	2.1	13.6	8.1	
Jul 19	5.3	4.7	4.9	3.2	4.7	3.8	3.6	3.1	5.6	5.7	5.5	7.9	10.4	10.9	12.5	9.2	6.0	6.2	4.5	2.9	1.2	0.1	0.2	0.6	0.1	12.5	5.1	
Jul 20	0.3	0.5	0.6	1.3	2.8	2.2	0.8	1.8	4.0	4.5	7.3	6.5	5.9	5.0	5.2	8.1	5.1	4.3	4.7	3.0	2.5	0.3	1.2	1.1	0.3	8.1	3.3	
Jul 21	2.2	1.1	2.0	2.4	2.8	3.1	2.3	0.5	4.0	1.9	1.5	0.2	4.8	3.7	2.9	0.9	3.4	3.6	4.3	3.2	1.7	3.3	2.7	1.9	0.2	4.8	2.5	
Jul 22	5.3	5.8	6.1	1.8	1.5	5.6	6.5	5.9	5.1	3.5	4.3	3.5	8.5	6.1	4.8	5.1	4.4	2.4	6.7	6.2	8.2	8.6	9.7	20.0	1.5	20.0	6.1	
Jul 23	14.1	3.1	3.7	3.9	4.4	4.8	9.7	7.4	7.7	8.3	8.6	7.3	9.7	7.9	7.7	6.0	5.4	5.1	6.0	3.2	0.8	0.4	0.2	1.6	0.2	14.1	5.7	
Jul 24	0.8	1.7	2.7	1.9	3.0	2.5	4.3	2.4	2.7	3.1	1.5	3.7	12.4	7.7	9.8	14.7	12.6	10.6	10.0	8.7	5.2	10.1	7.0	0.9	0.8	14.7	5.8	
Jul 25	5.5	5.0	1.1	1.7	1.1	4.9	5.9	6.6	9.7	9.6	9.8	9.9	9.4	9.7	16.5	19.2	18.3	16.9	16.1	15.2	12.0	12.4	11.3	10.7	1.1	19.2	9.9	
Jul 26	6.2	3.7	3.9	3.5	2.7	2.7	4.1	6.5	9.6	10.3	11.7														2.7	11.7	NA	
Jul 27	P	P	P	P	P	6.2	5.4	5.8	5.3	6.0	8.8	9.4	9.3	9.3	9.7	7.5	7.3	7.5	4.9	4.5	3.2	2.6	1.1	1.5	2.2	1.1	9.7	5.9
Jul 28	1.5	0.6	2.5	2.1	4.0	1.3	1.3	0.6	0.6	1.6	5.7	4.2	7.4	6.1	6.1	4.3	6.2	6.2	4.8	2.5	2.5	2.5	6.8	5.1	0.6	7.4	3.6	
Jul 29	6.6	6.9	8.1	6.6	5.1	2.2	1.8	6.9	8.8	11.3	12.5	8.9	9.1	9.9	10.1	10.8	7.2	10.8	7.3	6.3	2.0	3.7	4.3	2.7	1.8	12.5	7.1	
Jul 30	6.0	6.9	7.2	7.3	6.6	3.8	5.2	4.8	6.4	6.8	4.3	7.1	7.6	5.5	2.0	8.5	4.6	5.8	4.8	4.5	1.7	7.1	4.8	4.4	1.7	8.5	5.6	
Jul 31	5.5	3.7	6.6	7.1	9.7	8.6	10.3	10.8	9.5	12.7	13.9	16.7	19.4	21.4	14.2	13.1	13.2	12.1	14.4	9.0	4.8	3.7	2.3	2.0	2.0	21.4	10.2	
SW	SE	SSE	S	S	S	SW	SW	SW	SW	SW	W	WSW	WSW	WSW	SW	SW	SW	WSW	WSW	WSW	WSW	SW	W	S				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	Invalid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

## RENO -B STATION

**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

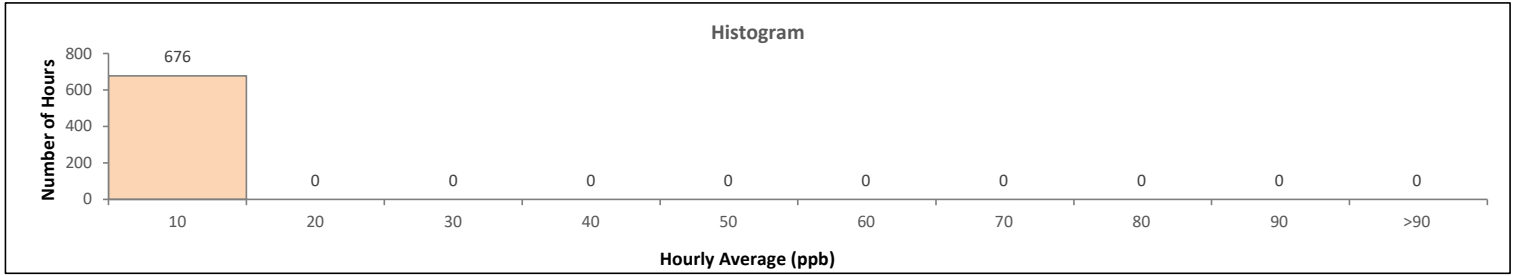
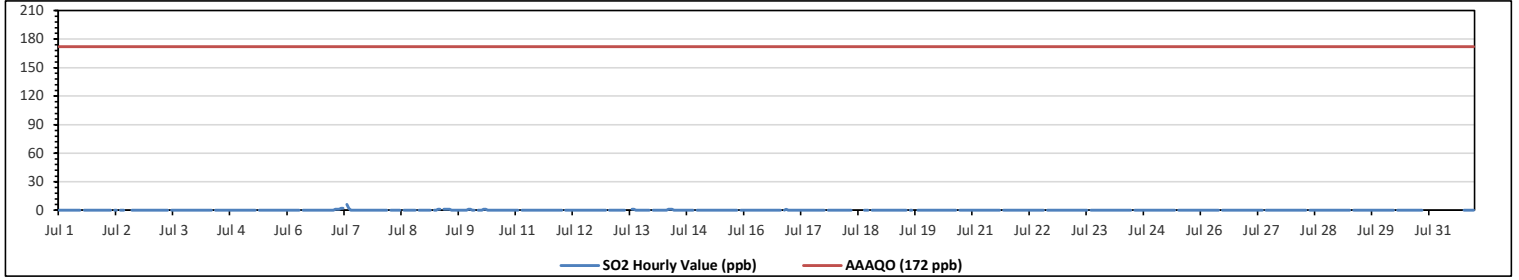
**Summary of Hourly Averages**

**SULPHUR DIOXIDE (SO<sub>2</sub>) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																																			
Number of 1-Hour Exceedances:						0						Number of 24-Hour Exceedances:						0						30-Day Exceedence:						0					
Maximum Hourly Value:						6 ppb on Jul 7 at hr 7						Hours in Service:						744																	
Maximum Daily Value:						0.7 ppb on Jul 7						Hours of Data:						676																	
Minimum Hourly Value:						0 ppb on Jul 1 at hr 0						Hours of Missing Data:						30																	
Minimum Daily Value:						0.0 ppb on Jul 1						Hours of Calibration:						38																	
Monthly Average:						0.0 ppb						Operational Uptime:						96.0																	
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average									
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23											
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 2	0	0	0	0	K	0	0	K	0	0	0	S	0	K	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 3	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 4	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 5	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 6	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 7	0	1	1	1	2	2	S	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0.7								
Jul 8	0	0	0	0	0	S	0	0	0	0	0	0	0	K	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 9	0	0	0	0	S	0	0	1	1	K	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0.3								
Jul 10	1	0	0	S	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1								
Jul 11	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 12	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 13	S	0	0	0	0	0	0	0	0	0	0	0	K	0	K	1	1	0	0	0	0	0	0	S	0	1	0.1								
Jul 14	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1								
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0								
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0								
Jul 18	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	S	0	0	0	0	0	0	NA								
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	K	0	0	0	0	0	0	0.0								
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0								
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0								
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 26	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 28	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 29	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 30	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0								
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	S	0	0	0	0	0	0	NA								
Diurnal Maximum	1	1	1	1	2	2	0	6	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1										
Diurnal Average	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0											

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error      **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Equipment Malfunction /Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

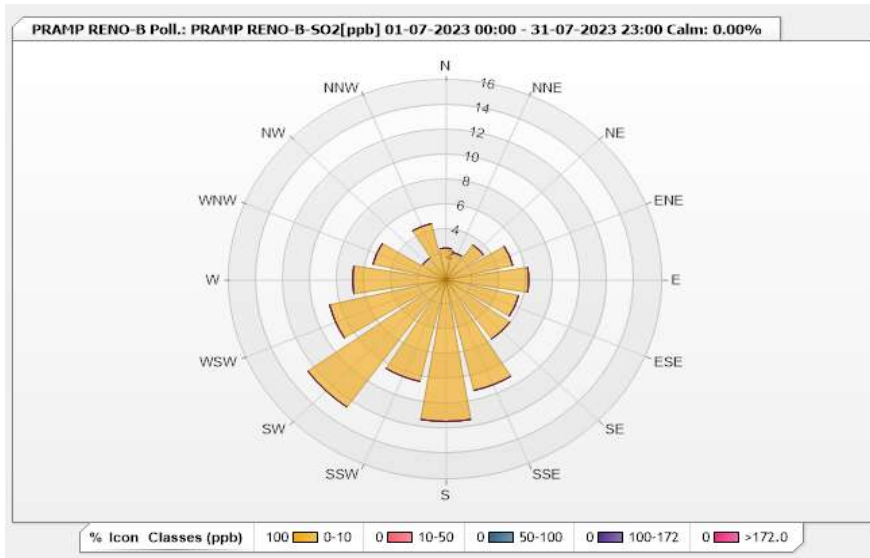


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 90.05%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	2.54	0	0	0	0	2.54
NNE	2.24	0	0	0	0	2.24
NE	3.43	0	0	0	0	3.43
ENE	5.07	0	0	0	0	5.07
E	6.12	0	0	0	0	6.12
ESE	5.52	0	0	0	0	5.52
SE	5.82	0	0	0	0	5.82
SSE	9.1	0	0	0	0	9.1
S	11.34	0	0	0	0	11.34
SSW	8.36	0	0	0	0	8.36
SW	12.54	0	0	0	0	12.54
WSW	8.81	0	0	0	0	8.81
W	6.87	0	0	0	0	6.87
WNW	5.52	0	0	0	0	5.52
NW	2.09	0	0	0	0	2.09
NNW	4.63	0	0	0	0	4.63
Summary	100	0	0	0	0	100



**Peace River Area Monitoring Program**  
**Reno-B Station - July 2023**  
**Summary of Hourly Averages**  
**TOTAL REDUCED SULPHUR (TRS) in ppb**

Maximum Hourly Value:	15.20	ppb	on Jul 7 at hr 7	Hours in Service:	744
Maximum Daily Value:	1.87	ppb	on Jul 7	Hours of Data:	670
Minimum Hourly Value:	0.08	ppb	on Jul 6 at hr 16	Hours of Missing Data:	37
Minimum Daily Value:	0.32	ppb	on Jul 5	Hours of Calibration:	37
Monthly Average:	0.73	ppb		Operational Uptime:	95.0

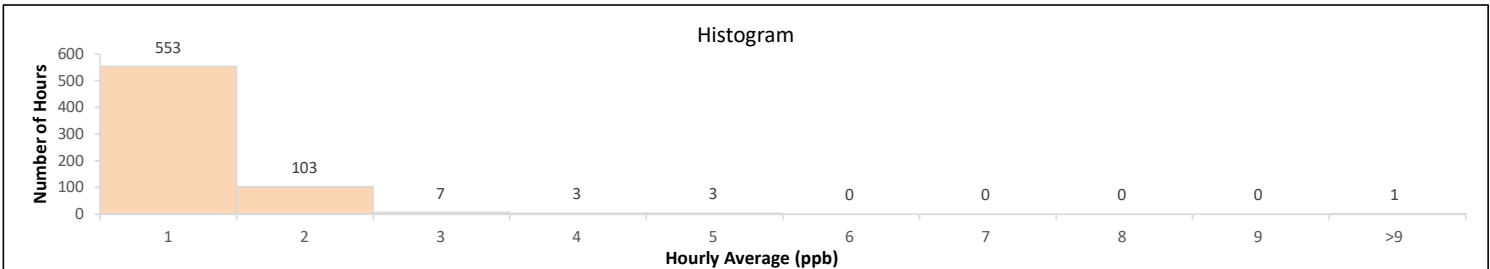
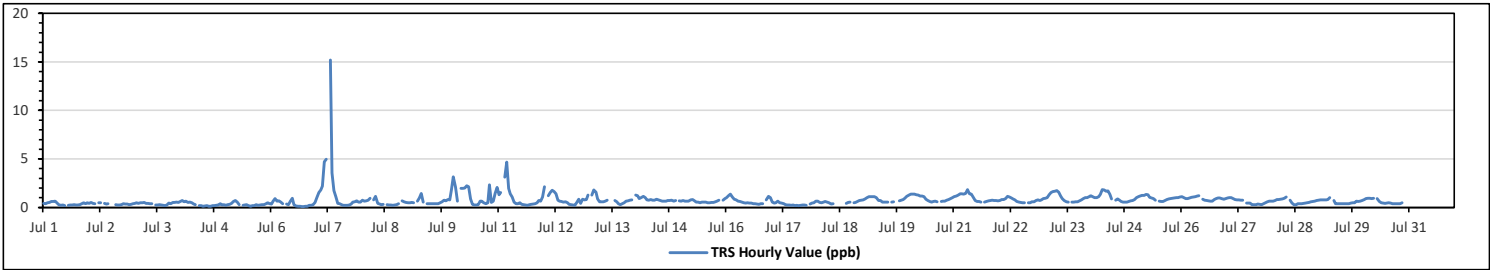
  

Day	Hourly Period Starting at (MS1)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	0.43	0.36	0.46	0.51	0.6	0.62	0.65	0.48	0.3	0.2	0.25	0.19	S	0.22	0.26	0.24	0.29	0.25	0.25	0.29	0.4	0.49	0.37	0.49	0.19	0.65	0.37	
Jul 2	0.43	0.51	0.43	0.37	K	0.48	0.46	K	0.43	0.34	0.36	S	0.34	K	0.27	0.24	0.24	0.28	0.37	0.34	0.34	0.3	0.33	0.4	0.24	0.51	0.36	
Jul 3	0.42	0.47	0.41	0.48	0.47	0.52	0.42	0.41	0.4	S	0.39	S	0.26	0.24	0.28	0.24	0.23	0.17	0.24	0.44	0.39	0.52	0.52	0.54	0.51	0.17	0.54	0.39
Jul 4	0.6	0.7	0.58	0.65	0.51	0.56	0.5	0.35	0.29	S	0.17	0.18	0.13	0.15	0.18	0.14	0.12	0.18	0.17	0.21	0.26	0.39	0.25	0.28	0.12	0.70	0.33	
Jul 5	0.22	0.29	0.33	0.42	0.6	0.7	0.55	0.3	S	0.22	0.24	0.28	0.17	0.14	0.17	0.19	0.31	0.23	0.25	0.27	0.28	0.35	0.47	0.37	0.14	0.70	0.32	
Jul 6	0.35	0.63	0.9	0.64	0.69	0.56	0.37	S	0.34	0.3	0.66	0.94	0.28	0.15	0.11	0.1	0.08	0.08	0.14	0.13	0.2	0.23	0.28	0.52	0.08	0.94	0.38	
Jul 7	1.04	1.53	1.8	2.21	4.71	4.98	S	15.2	3.56	1.75	1.09	0.43	0.36	0.27	0.23	0.22	0.21	0.24	0.34	0.55	0.59	0.68	0.56	0.54	0.21	15.20	1.87	
Jul 8	0.74	0.65	0.69	0.73	0.95	S	0.78	1.14	0.42	0.35	0.29	0.32	K	0.3	0.26	0.26	0.22	0.26	0.3	0.4	K	0.69	0.58	0.51	0.22	1.14	0.52	
Jul 9	0.49	0.48	0.51	0.5	S	0.64	0.98	1.43	0.54	K	0.38	0.4	0.36	0.36	0.38	0.37	0.39	0.48	0.58	0.75	0.69	0.81	0.78	1.76	0.36	1.76	0.64	
Jul 10	3.13	2.11	0.66	S	1.97	1.97	1.98	2.22	2.12	0.88	0.33	0.26	0.25	0.28	0.67	0.65	0.49	0.38	0.48	2.33	0.51	0.63	1.48	2.08	0.25	3.13	1.21	
Jul 11	1.31	1.53	S	3.11	4.67	1.95	1.4	1.07	0.57	0.39	0.38	0.46	0.32	0.27	0.26	0.23	0.27	0.32	0.34	0.37	0.5	0.72	0.67	1.07	0.23	4.67	0.96	
Jul 12	2.14	S	1.21	1.56	1.77	1.62	1.41	0.75	0.63	0.6	0.53	0.59	0.47	0.32	0.29	0.24	0.23	0.52	0.85	0.42	0.85	0.79	0.8	1.29	0.23	2.14	0.86	
Jul 13	S	1.26	1.81	1.57	0.87	0.59	0.59	0.66	0.76	K	0.63	K	0.72	0.58	0.4	0.31	0.38	0.49	0.67	0.69	0.76	0.77	S	0.31	1.81	0.76	0.61	
Jul 14	1.28	1.22	0.9	1.03	1.14	1.01	0.77	0.76	0.82	0.76	0.75	0.85	0.79	0.7	0.66	0.67	0.67	0.71	0.72	0.73	0.65	0.71	S	0.68	0.65	1.28	0.83	
Jul 15	0.66	0.7	0.66	0.63	0.64	0.78	0.8	0.68	0.57	0.56	0.5	0.53	0.54	0.53	0.5	0.5	0.52	0.51	0.58	0.64	0.74	S	0.76	0.91	0.50	0.91	0.63	
Jul 16	1.02	1.21	1.39	1.08	0.85	0.77	0.65	0.61	0.57	0.5	0.44	0.47	0.45	0.44	0.37	0.37	0.34	0.33	0.37	0.39	S	0.77	1.14	1	0.33	1.39	0.68	
Jul 17	0.57	0.45	0.5	0.63	0.48	0.45	0.36	0.31	0.26	0.24	0.22	0.25	0.17	0.2	0.18	0.2	0.24	0.26	0.23	S	0.34	0.44	0.49	0.66	0.17	0.66	0.35	
Jul 18	0.63	0.52	0.47	0.56	0.62	0.54	0.48	0.34	0.38	C	C	C	C	C	C	0.42	0.52	0.55	S	0.5	0.52	0.62	0.71	0.74	0.34	0.74	NA	
Jul 19	0.77	0.88	1.01	1.09	1.12	1.12	1.1	1	0.71	0.72	0.57	0.56	0.56	0.55	K	0.55	0.58	S	K	0.69	0.75	0.81	0.95	1.13	0.55	1.13	0.82	
Jul 20	1.25	1.35	1.38	1.35	1.31	1.27	1.2	1.19	1.09	0.85	0.71	0.62	0.55	0.62	0.64	0.58	S	0.61	0.64	0.67	0.74	0.81	0.89	0.99	0.55	1.38	0.93	
Jul 21	1.09	1.16	1.26	1.4	1.41	1.36	1.43	1.83	1.41	1.36	1.04	0.71	0.62	0.6	0.56	S	0.57	0.61	0.69	0.72	0.75	0.71	0.71	0.68	0.56	1.83	0.99	
Jul 22	0.72	0.8	0.82	0.92	1.13	1.07	0.98	0.88	0.77	0.62	0.54	0.51	0.5	0.48	S	0.48	0.48	0.58	0.59	0.72	0.78	0.7	0.79	0.93	0.48	1.13	0.73	
Jul 23	0.96	1.02	1.32	1.55	1.62	1.66	1.74	1.57	1.2	0.93	0.7	0.58	0.55	S	0.56	0.55	0.58	0.59	0.68	0.79	0.93	1.01	0.99	1.09	0.55	1.74	1.01	
Jul 24	1.22	1.1	1.02	1.01	1.1	1.33	1.84	1.8	1.68	1.69	1.34	0.87	S	0.75	0.88	0.75	0.6	0.55	0.55	0.56	0.62	0.69	0.7	0.8	0.55	1.84	1.02	
Jul 25	1.01	1.11	1.16	1.23	1.24	1.33	1.32	1.04	0.98	0.91	0.74	S	0.66	0.62	0.61	0.72	0.8	0.88	0.93	0.96	0.97	1	1	1.07	0.61	1.33	0.97	
Jul 26	1.11	1.01	0.93	0.93	0.98	1.05	1.08	1.1	1.17	1.21	S	0.85	0.74	0.72	0.69	0.65	0.67	0.83	0.9	0.97	0.98	0.91	0.86	0.92	0.65	1.21	0.92	
Jul 27	0.98	0.99	1	0.91	0.83	0.77	0.77	0.75	0.74	S	0.44	0.44	0.44	0.3	0.29	0.3	0.35	0.33	0.31	0.38	0.48	0.59	0.64	0.67	0.29	1.00	0.60	
Jul 28	0.67	0.7	0.81	0.82	0.85	0.87	0.95	1.08	S	0.76	0.44	0.27	0.26	0.36	0.38	0.38	0.43	0.44	0.49	0.52	0.58	0.6	0.66	0.71	0.26	1.08	0.61	
Jul 29	0.76	0.77	0.78	0.77	0.77	0.83	0.99	S	0.72	0.39	0.39	0.39	0.39	0.39	0.37	0.38	0.39	0.45	0.47	0.5	0.63	0.61	0.64	0.72	0.37	0.99	0.59	
Jul 30	0.83	0.91	0.94	0.94	0.93	0.96	S	0.9	0.62	0.5	0.45	0.43	0.44	0.5	0.45	0.39	0.36	0.36	0.37	0.4	0.5	P	P	P	0.36	0.96	0.61	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	X	X	X	X	X	X	X	-	-	-	
Diurnal Maximum	3.13	2.11	1.81	3.11	4.71	4.98	1.98	15.20	3.56	1.75	1.34	0.94	0.79	0.75	0.88	0.75	0.80	0.88	0.93	2.33	0.98	1.01	1.48	2.08				
Diurnal Average	0.93	0.91	0.90	1.02	1.24	1.12	0.95	1.47	0.86	0.70	0.54	0.49	0.42	0.42	0.41	0.39	0.39	0.43	0.48	0.60	0.60	0.66	0.71	0.84				

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

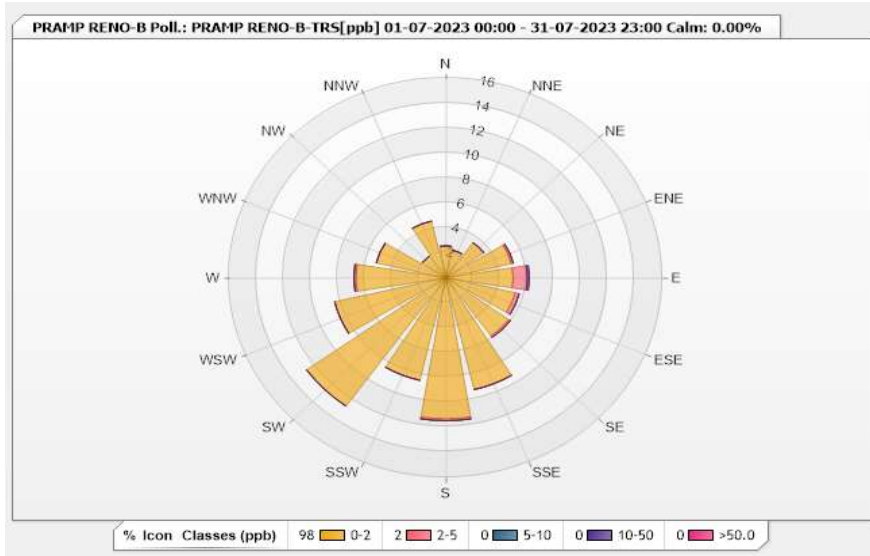


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 89.25%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	2.56	0	0	0	0	2.56
NNE	2.26	0	0	0	0	2.26
NE	3.46	0	0	0	0	3.46
ENE	4.97	0.15	0	0	0	5.12
E	4.97	1.05	0	0.15	0	6.17
ESE	5.27	0.3	0	0	0	5.57
SE	5.72	0.15	0	0	0	5.87
SSE	9.19	0	0	0	0	9.19
S	11.3	0.15	0	0	0	11.45
SSW	8.43	0	0	0	0	8.43
SW	12.65	0	0	0	0	12.65
WSW	8.43	0	0	0	0	8.43
W	6.63	0.15	0	0	0	6.78
WNW	5.27	0	0	0	0	5.27
NW	2.11	0	0	0	0	2.11
NNW	4.67	0	0	0	0	4.67
Summary	97.89	1.95	0	0.15	0	100



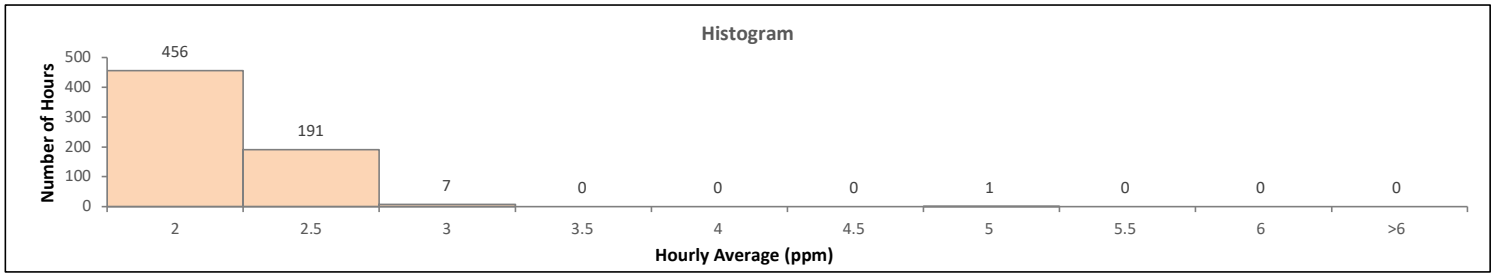
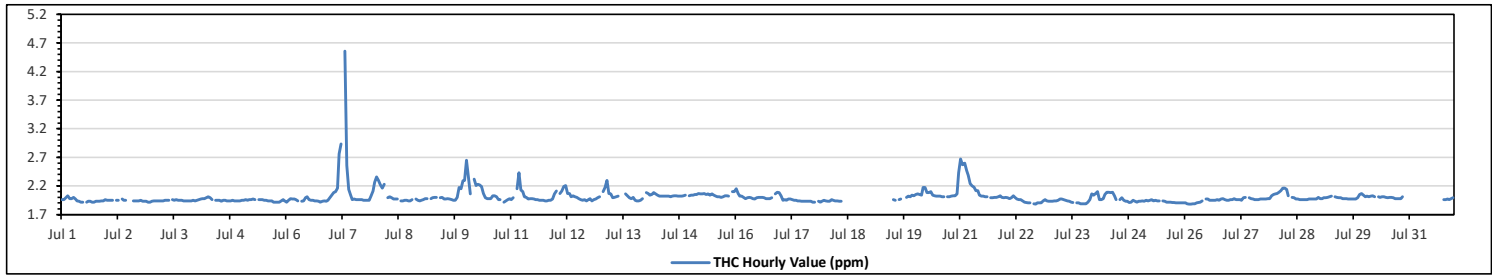
**Peace River Area Monitoring Program**  
**Reno-B Station - July 2023**  
**Summary of Hourly Averages**  
**TOTAL HYDROCARBONS (THC) in ppm**

Maximum Hourly Value:	4.56 ppm	on Jul 7 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.23 ppm	on Jul 7	Hours of Data:	655
Minimum Hourly Value:	1.88 ppm	on Jul 22 at hr 16	Hours of Missing Data:	51
Minimum Daily Value:	1.93 ppm	on Jul 25	Hours of Calibration:	38
Monthly Average:	2.00 ppm		Operational Uptime:	93.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	1.96	1.96	1.99	2.03	1.98	1.98	2.00	1.97	1.94	1.93	1.92	1.92	S	1.92	1.93	1.93	1.92	1.92	1.93	1.93	1.93	1.94	1.94	1.96	1.92	2.03	1.95	
Jul 2	1.95	1.95	1.95	1.95	K	1.95	1.95	K	1.97	1.95	1.95	S	1.95	K	1.94	1.94	1.94	1.94	1.95	1.93	1.93	1.93	1.92	1.92	1.92	1.97	1.94	
Jul 3	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	S	1.96	1.95	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.93	1.96	1.94	
Jul 4	1.95	1.96	1.97	1.98	1.98	1.99	2.01	1.99	1.96	S	1.95	1.95	1.95	1.93	1.95	1.95	1.94	1.94	1.94	1.95	1.94	1.94	1.94	1.94	1.93	2.01	1.96	
Jul 5	1.95	1.95	1.96	1.95	1.96	1.96	1.97	1.96	S	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.94	1.92	1.92	1.92	1.92	1.94	1.96	1.94	1.92	1.97	1.95	
Jul 6	1.92	1.95	1.98	1.97	1.97	1.96	1.94	S	1.93	1.94	1.99	2.01	1.96	1.95	1.95	1.94	1.94	1.93	1.92	1.93	1.94	1.93	1.95	1.99	1.92	2.01	1.95	
Jul 7	2.04	2.08	2.10	2.16	2.76	2.93	S	4.56	2.56	2.14	2.04	2.06	1.97	1.97	1.96	1.96	1.96	1.95	1.95	1.95	1.95	2.03	2.11	2.26	1.95	4.56	2.23	
Jul 8	2.36	2.30	2.22	2.16	2.23	S	1.99	2.01	1.99	1.97	1.97	1.97	K	1.94	1.94	1.95	1.95	1.94	1.94	1.96	K	1.97	1.95	1.94	1.94	2.36	2.03	
Jul 9	1.95	1.96	1.98	1.98	S	1.98	1.99	2.00	2.00	K	1.99	2.00	1.97	1.97	1.98	1.97	1.96	1.95	1.95	2.00	2.17	2.15	2.29	2.30	1.95	2.30	2.02	
Jul 10	2.65	2.36	2.06	S	2.32	2.21	2.23	2.22	2.19	2.07	1.99	1.98	1.98	1.98	2.03	2.03	2.01	1.96	1.96	X	1.92	1.94	1.96	1.98	1.92	2.65	2.09	
Jul 11	1.96	1.99	S	2.15	2.43	2.13	2.10	2.01	2.00	1.97	1.98	1.98	1.97	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.95	1.97	2.06	1.94	2.43	2.01	2.01	
Jul 12	2.11	S	2.07	2.11	2.19	2.21	2.07	2.07	2.01	2.03	2.01	2.00	1.98	1.96	1.95	1.96	1.94	1.96	1.98	1.94	1.96	1.97	1.99	2.01	1.94	2.21	2.02	
Jul 13	S	2.10	2.17	2.30	2.07	2.06	1.99	2.00	2.01	2.02	K	2.03	K	2.06	2.03	1.99	1.98	2.00	1.95	1.94	1.94	1.95	1.98	S	1.94	2.30	2.03	
Jul 14	2.08	2.07	2.04	2.05	2.08	2.06	2.04	2.02	2.02	2.02	2.02	2.02	2.02	2.01	2.02	2.03	2.03	2.02	2.02	2.02	2.04	2.04	S	2.03	2.01	2.08	2.03	
Jul 15	2.04	2.04	2.05	2.05	2.07	2.06	2.06	2.07	2.05	2.06	2.04	2.06	2.04	2.02	2.01	2.01	2.00	2.01	2.03	2.03	2.02	S	2.10	2.10	2.00	2.10	2.04	
Jul 16	2.15	2.07	2.02	2.02	2.00	1.98	1.99	2.00	1.99	1.98	1.97	1.99	2.00	2.00	2.00	1.99	1.98	1.98	1.98	1.98	1.99	S	2.06	2.09	2.08	1.97	2.15	2.01
Jul 17	2.03	1.95	1.96	1.95	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	S	1.93	1.92	1.93	1.95	1.92	2.03	1.94	
Jul 18	1.94	1.93	1.93	1.96	1.95	1.94	1.94	1.93	1.93	C	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	1.92	1.96	NA
Jul 19	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	1.96	1.95	K	1.96	1.97	S	K	2.00	2.02	2.01	2.04	2.03	1.95	2.04	NA
Jul 20	2.05	2.06	2.05	2.04	2.17	2.17	2.08	2.08	2.10	2.04	2.03	2.02	2.02	2.02	2.01	2.01	S	2.01	2.01	2.02	2.03	2.03	2.06	2.43	2.01	2.43	2.07	
Jul 21	2.67	2.57	2.60	2.47	2.39	2.24	2.20	2.18	2.12	2.12	2.04	2.02	2.02	2.01	2.01	S	1.99	1.99	2.00	2.00	2.01	2.03	2.00	1.99	1.99	2.67	2.16	
Jul 22	2.00	1.99	1.98	1.99	2.03	2.00	1.97	1.96	1.96	1.94	1.92	1.91	1.90	S	1.89	1.88	1.90	1.90	1.90	1.94	1.96	1.94	1.93	1.88	2.03	1.94	1.94	
Jul 23	1.93	1.93	1.94	1.94	1.95	1.97	1.97	1.96	1.95	1.94	1.93	1.92	1.91	S	1.90	1.90	1.89	1.89	1.89	1.89	1.92	1.96	2.06	2.04	1.89	2.06	1.94	
Jul 24	2.07	2.10	1.96	1.96	1.98	2.05	2.09	2.09	2.08	2.09	2.03	1.96	S	1.96	1.99	1.95	1.93	1.93	1.91	1.92	1.95	1.93	1.92	1.93	1.91	2.10	1.99	
Jul 25	1.93	1.94	1.93	1.95	1.94	1.95	1.96	1.94	1.95	1.94	1.94	S	1.94	1.93	1.92	1.92	1.92	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.96	1.93	
Jul 26	1.90	1.89	1.88	1.88	1.89	1.89	1.90	1.91	1.92	1.94	S	1.97	1.97	1.95	1.95	1.95	1.95	1.96	1.95	1.97	1.98	1.96	1.95	1.95	1.88	1.98	1.93	
Jul 27	1.96	1.96	1.98	1.96	1.96	1.96	1.95	1.99	2.00	S	1.99	1.98	1.97	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.98	1.98	2.03	2.05	1.95	2.05	1.98	
Jul 28	2.06	2.07	2.09	2.12	2.16	2.16	2.14	2.03	S	2.00	1.99	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	2.00	1.96	2.16	2.02	
Jul 29	1.98	1.98	1.99	1.99	2.00	2.01	2.02	S	2.01	2.00	1.99	1.99	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.99	2.05	2.07	2.04	1.97	2.07	2.00	
Jul 30	2.01	2.02	2.01	2.02	2.03	2.01	S	2.01	2.00	2.01	2.01	2.00	1.99	2.00	1.99	1.98	1.98	1.98	1.98	1.98	2.01	P	P	P	1.98	2.03	2.00	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	S	1.96	1.96	1.97	1.96	1.98	1.99	1.96	1.99	NA
Diurnal Maximum	2.67	2.57	2.60	2.47	2.76	2.93	2.23	4.56	2.56	2.14	2.04	2.06	2.04	2.06	2.03	2.03	2.03	2.02	2.03	2.03	2.17	2.15	2.29	2.43				
Diurnal Average	2.05	2.04	2.03	2.04	2.09	2.06	2.02	2.11	2.02	2.00	1.98	1.98	1.97	1.97	1.96	1.95	1.95	1.95	1.95	1.96	1.97	1.98	2.00	2.02				

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error            **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Equipment Malfunction/Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

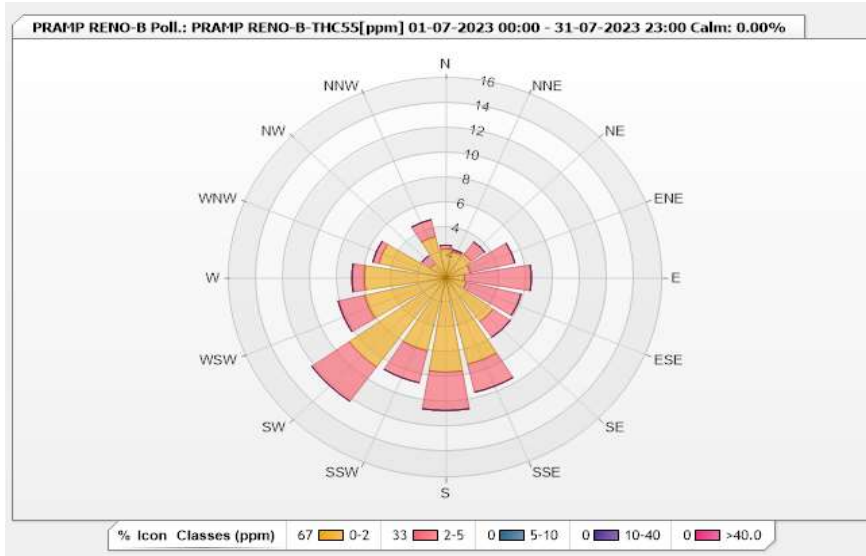


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-THC55[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 87.23%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	2.31	0.31	0	0	0	2.62
NNE	2.16	0.15	0	0	0	2.31
NE	2.31	1.23	0	0	0	3.54
ENE	1.85	3.39	0	0	0	5.24
E	1.39	4.93	0	0	0	6.32
ESE	1.54	4.16	0	0	0	5.7
SE	4.31	1.54	0	0	0	5.85
SSE	7.09	2.31	0	0	0	9.4
S	7.55	3.08	0	0	0	10.63
SSW	6.01	2.62	0	0	0	8.63
SW	8.78	3.39	0	0	0	12.17
WSW	6.16	2	0	0	0	8.16
W	6.01	0.92	0	0	0	6.93
WNW	5.08	0.46	0	0	0	5.54
NW	1.39	0.77	0	0	0	2.16
NNW	3.39	1.39	0	0	0	4.78
Summary	67.33	32.65	0	0	0	100





Peace River Area Monitoring Program

Reno-B Station - July 2023

Summary of Hourly Averages

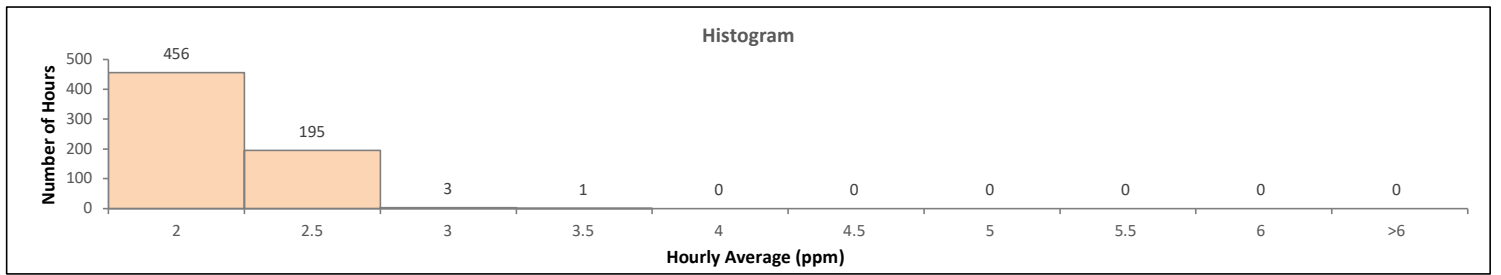
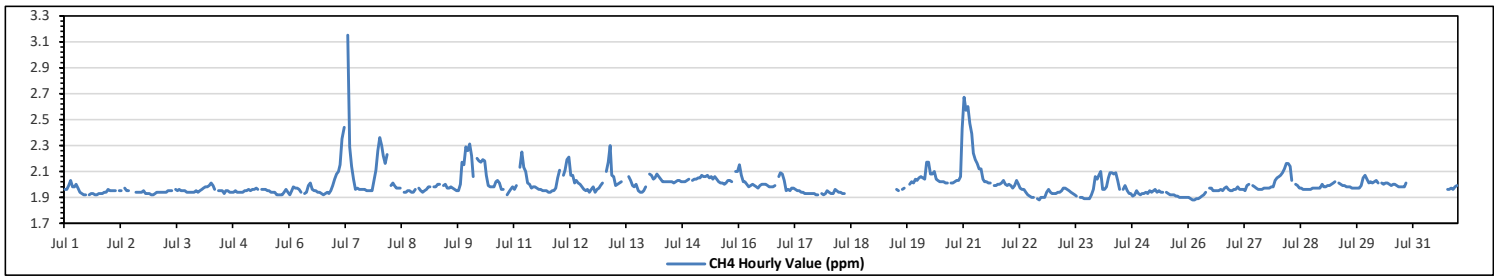
METHANE (CH4) in ppm

Maximum Hourly Value:	3.15 ppm	on Jul 7 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.16 ppm	on Jul 21	Hours of Data:	655
Minimum Hourly Value:	1.88 ppm	on Jul 22 at hr 16	Hours of Missing Data:	51
Minimum Daily Value:	1.93 ppm	on Jul 25	Hours of Calibration:	38
Monthly Average:	2.00 ppm		Operational Uptime:	93.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	1.96	1.96	1.99	2.03	1.98	1.98	2.00	1.97	1.94	1.93	1.92	1.92	S	1.92	1.93	1.93	1.92	1.92	1.93	1.93	1.93	1.94	1.94	1.96	1.92	2.03	1.95	
Jul 2	1.95	1.95	1.95	1.95	K	1.95	1.95	K	1.97	1.95	1.95	S	1.95	K	1.94	1.94	1.94	1.94	1.95	1.93	1.93	1.93	1.92	1.92	1.92	1.97	1.94	
Jul 3	1.93	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.95	S	1.96	1.95	1.96	1.95	1.95	1.95	1.94	1.94	1.94	1.94	1.94	1.95	1.94	1.93	1.96	1.94	
Jul 4	1.95	1.96	1.97	1.98	1.98	1.99	2.01	1.99	1.96	S	1.95	1.95	1.95	1.93	1.95	1.95	1.94	1.94	1.94	1.95	1.94	1.94	1.94	1.94	1.93	2.01	1.96	
Jul 5	1.95	1.95	1.96	1.95	1.96	1.96	1.97	1.96	S	1.96	1.96	1.96	1.95	1.95	1.94	1.94	1.94	1.92	1.92	1.92	1.92	1.94	1.96	1.94	1.92	1.97	1.95	
Jul 6	1.92	1.95	1.98	1.97	1.97	1.96	1.94	S	1.93	1.94	1.99	2.01	1.96	1.95	1.95	1.94	1.94	1.93	1.92	1.93	1.94	1.93	1.95	1.99	1.92	2.01	1.95	
Jul 7	2.04	2.08	2.10	2.15	2.35	2.44	S	3.15	2.29	2.14	2.04	1.96	1.97	1.96	1.96	1.96	1.96	1.95	1.95	1.95	1.95	2.03	2.11	2.26	1.95	3.15	2.12	
Jul 8	2.36	2.30	2.22	2.16	2.23	S	1.99	2.01	1.99	1.97	1.97	1.97	K	1.94	1.94	1.95	1.95	1.94	1.94	1.96	K	1.97	1.95	1.94	1.94	2.36	2.03	
Jul 9	1.95	1.96	1.98	1.98	S	1.98	1.98	2.00	2.00	K	1.99	2.00	1.97	1.97	1.98	1.97	1.96	1.95	1.95	2.00	2.17	2.15	2.29	2.26	1.95	2.29	2.02	
Jul 10	2.31	2.22	2.06	S	2.20	2.18	2.17	2.19	2.18	2.07	1.99	1.98	1.98	1.98	2.02	2.03	2.01	1.96	1.96	X	1.92	1.94	1.96	1.98	1.92	2.31	2.06	
Jul 11	1.96	1.99	S	2.13	2.25	2.13	2.10	2.01	2.00	1.97	1.98	1.98	1.97	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.95	1.97	2.05	1.94	2.25	2.00		
Jul 12	2.11	S	2.07	2.11	2.19	2.21	2.07	2.07	2.01	2.03	2.01	2.00	1.98	1.96	1.95	1.96	1.94	1.96	1.98	1.94	1.96	1.97	1.99	2.01	1.94	2.21	2.02	
Jul 13	S	2.10	2.17	2.30	2.07	2.06	1.99	2.00	2.01	2.02	K	2.03	K	2.06	2.03	1.99	1.98	2.00	1.95	1.94	1.94	1.95	1.98	S	2.03	1.94	2.30	2.03
Jul 14	2.08	2.07	2.04	2.05	2.08	2.06	2.04	2.02	2.02	2.02	2.02	2.02	2.02	2.01	2.02	2.03	2.03	2.02	2.02	2.02	2.03	2.04	S	2.03	2.01	2.08	2.03	
Jul 15	2.04	2.04	2.05	2.05	2.07	2.06	2.06	2.07	2.05	2.06	2.04	2.06	2.04	2.02	2.01	2.01	2.00	2.01	2.03	2.03	2.02	S	2.10	2.10	2.00	2.10	2.04	
Jul 16	2.15	2.07	2.02	2.02	2.00	1.98	1.99	2.00	1.99	1.98	1.97	1.99	2.00	2.00	2.00	1.99	1.98	1.98	1.98	1.98	1.99	S	2.06	2.09	2.08	1.97	2.15	2.01
Jul 17	2.03	1.95	1.96	1.95	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.93	1.93	1.92	1.92	S	1.93	1.92	1.93	1.95	1.92	2.03	1.94	
Jul 18	1.94	1.93	1.93	1.96	1.95	1.94	1.94	1.93	1.93	C	C	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	1.92	1.96	NA
Jul 19	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	1.96	1.95	K	1.96	1.97	S	K	2.00	2.02	2.01	2.04	2.03	1.95	2.04	NA
Jul 20	2.05	2.06	2.05	2.04	2.17	2.17	2.08	2.08	2.10	2.04	2.03	2.02	2.02	2.02	2.01	2.01	S	S	2.01	2.01	2.02	2.03	2.03	2.06	2.43	2.01	2.43	2.07
Jul 21	2.67	2.57	2.60	2.47	2.39	2.24	2.19	2.16	2.12	2.12	2.04	2.02	2.02	2.01	2.01	S	1.99	1.99	2.00	2.00	2.01	2.03	2.03	2.00	1.99	1.99	2.67	2.16
Jul 22	2.00	1.99	1.97	1.99	2.03	2.00	1.97	1.96	1.96	1.94	1.92	1.91	1.90	1.90	S	1.89	1.88	1.90	1.90	1.90	1.94	1.96	1.94	1.93	1.88	2.03	1.94	
Jul 23	1.93	1.93	1.94	1.94	1.95	1.97	1.97	1.96	1.95	1.94	1.93	1.92	1.91	S	1.90	1.90	1.89	1.89	1.89	1.89	1.92	1.96	2.06	2.04	1.89	2.06	1.94	
Jul 24	2.07	2.10	1.96	1.96	1.98	2.05	2.09	2.09	2.08	2.09	2.03	1.96	S	1.96	1.99	1.95	1.93	1.93	1.91	1.92	1.95	1.93	1.92	1.93	1.91	2.10	1.99	
Jul 25	1.93	1.94	1.93	1.95	1.94	1.95	1.96	1.94	1.95	1.94	1.94	1.94	S	1.94	1.93	1.92	1.92	1.92	1.91	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.96	1.93
Jul 26	1.90	1.89	1.88	1.88	1.89	1.89	1.90	1.91	1.92	1.94	S	1.97	1.97	1.95	1.95	1.95	1.95	1.96	1.95	1.97	1.98	1.96	1.95	1.95	1.88	1.98	1.93	
Jul 27	1.96	1.96	1.98	1.96	1.96	1.96	1.95	1.99	2.00	S	1.99	1.98	1.97	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.98	1.98	2.03	2.05	1.95	2.05	1.98
Jul 28	2.06	2.07	2.09	2.12	2.16	2.16	2.14	2.03	S	2.00	1.99	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.97	1.97	2.00	1.96	2.16	2.02
Jul 29	1.98	1.98	1.99	1.99	2.00	2.01	2.02	S	2.01	2.00	1.99	1.99	1.98	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.97	1.99	2.05	2.07	2.04	1.97	2.07	2.00
Jul 30	2.01	2.02	2.01	2.02	2.03	2.01	S	2.01	2.00	2.01	2.00	1.99	2.00	1.99	2.00	1.99	1.98	1.98	1.98	1.98	2.01	P	P	P	1.98	2.03	2.00	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	S	1.96	1.96	1.97	1.96	1.98	1.99	1.96	1.99	NA
Diurnal Maximum	2.67	2.57	2.60	2.47	2.39	2.44	2.19	3.15	2.29	2.14	2.04	2.06	2.04	2.06	2.03	2.03	2.03	2.02	2.03	2.03	2.17	2.15	2.29	2.43				
Diurnal Average	2.04	2.03	2.03	2.04	2.06	2.04	2.01	2.05	2.01	2.00	1.98	1.98	1.97	1.97	1.96	1.95	1.95	1.95	1.95	1.96	1.97	1.98	2.00	2.02				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

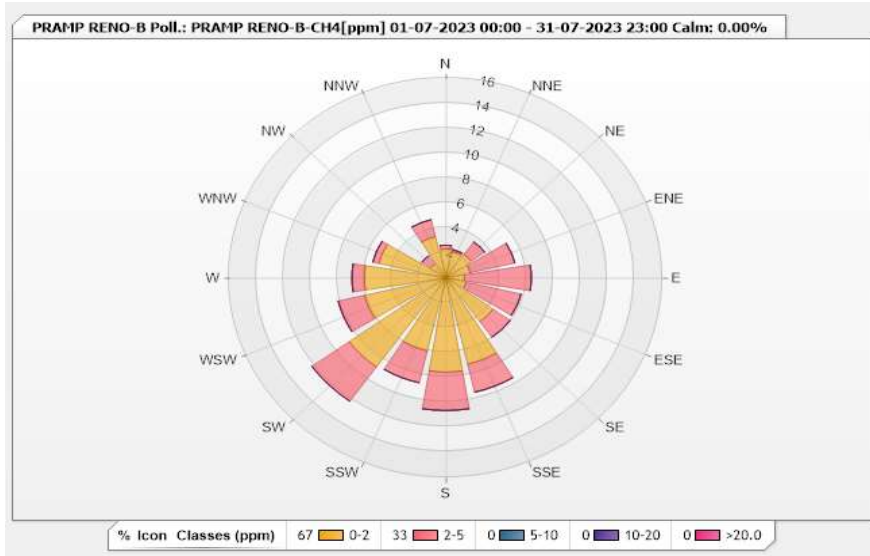


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 87.23%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	2.31	0.31	0	0	0	2.62
NNE	2.16	0.15	0	0	0	2.31
NE	2.31	1.23	0	0	0	3.54
ENE	1.85	3.39	0	0	0	5.24
E	1.39	4.93	0	0	0	6.32
ESE	1.54	4.16	0	0	0	5.7
SE	4.31	1.54	0	0	0	5.85
SSE	7.09	2.31	0	0	0	9.4
S	7.55	3.08	0	0	0	10.63
SSW	6.01	2.62	0	0	0	8.63
SW	8.78	3.39	0	0	0	12.17
WSW	6.16	2	0	0	0	8.16
W	6.01	0.92	0	0	0	6.93
WNW	5.08	0.46	0	0	0	5.54
NW	1.39	0.77	0	0	0	2.16
NNW	3.39	1.39	0	0	0	4.78
Summary	67.33	32.65	0	0	0	100



**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

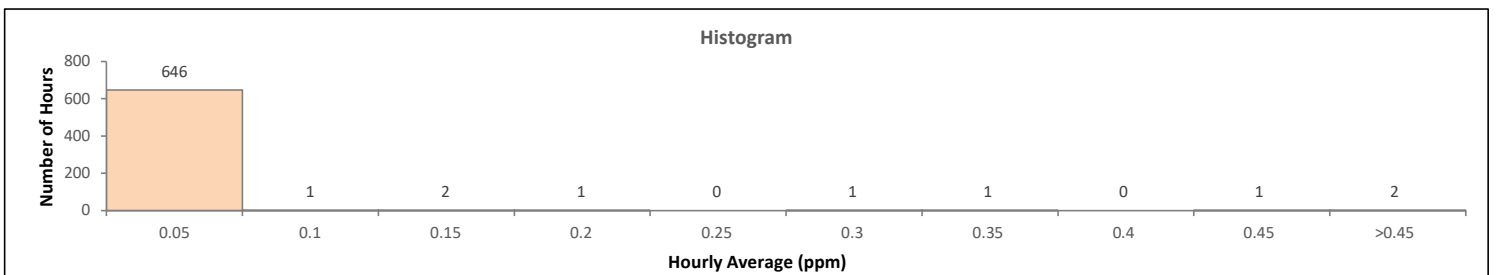
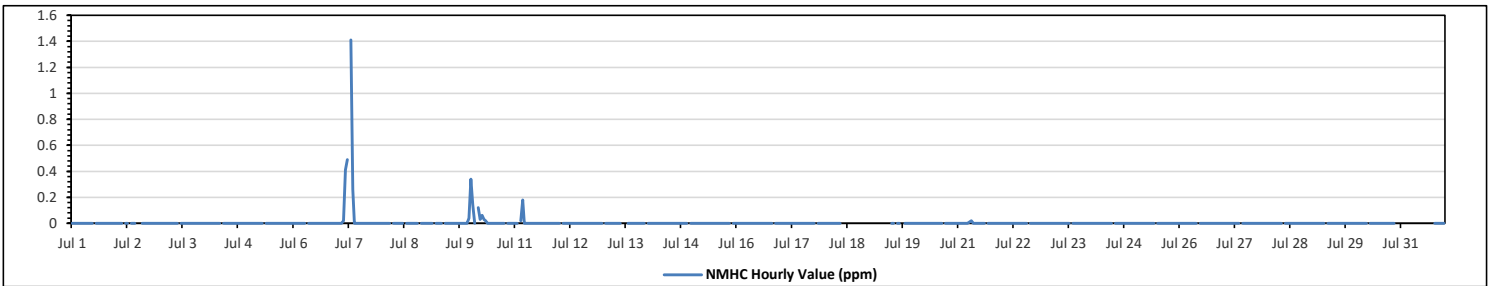
**Summary of Hourly Averages**

**NON-METHANE HYDROCARBONS (NMHC) in ppm**

Maximum Hourly Value:	1.41 ppm	on Jul 7 at hr 7	Hours in Service:	744
Maximum Daily Value:	0.11 ppm	on Jul 7	Hours of Data:	655
Minimum Hourly Value:	0.00 ppm	on Jul 1 at hr 0	Hours of Missing Data:	51
Minimum Daily Value:	0.00 ppm	on Jul 1	Hours of Calibration:	38
Monthly Average:	0.01 ppm		Operational Uptime:	93.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23							
Jul 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 2	0.00	0.00	0.00	0.00	K	0.00	0.00	K	0.00	0.00	0.00	S	0.00	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 7	0.00	0.00	0.00	0.02	0.41	0.49	S	1.41	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 8	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 9	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.04			
Jul 10	0.34	0.14	0.00	S	0.12	0.03	0.06	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	X	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.03				
Jul 11	0.00	0.00	S	0.02	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.01				
Jul 12	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 13	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	K	0.00	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00			
Jul 14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00			
Jul 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00			
Jul 16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00			
Jul 17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00		
Jul 18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	C	C	C	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	0.00	0.00	
Jul 19	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	C	C	C	C	0.00	0.00	K	0.00	0.00	0.00	S	K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 21	0.34	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jul 30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	P	P	P	0.00	0.00	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Maximum	0.34	0.14	0.00	0.02	0.41	0.49	0.06	1.41	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	
Diurnal Average	0.01	0.01	0.00	0.00	0.03	0.02	0.00	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

C Monthly Calibration  
 K Collection Error  
 X InValid Data (Equipment Malfunction /Recovery)  
 S Daily Zero-Span Check  
 ND No Data (Machine Not in Service)  
 NRM UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)  
 Q Quality Assurance  
 Y Routine Maintenance  
 P Power Failure

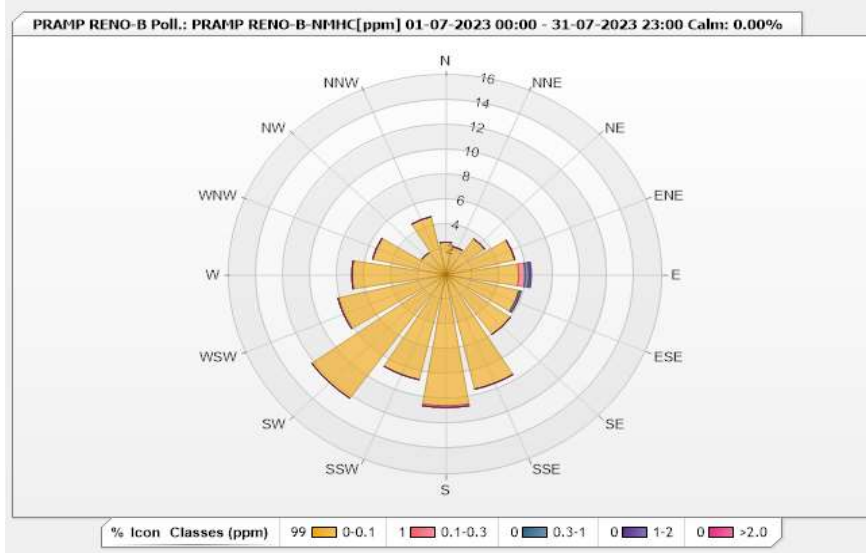


Station: PRAMP RENO-B Poll.: PRAMP RENO-B-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 87.23%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	2.62	0	0	0	0	2.62
NNE	2.31	0	0	0	0	2.31
NE	3.54	0	0	0	0	3.54
ENE	5.24	0	0	0	0	5.24
E	5.39	0.46	0.31	0.15	0	6.31
ESE	5.55	0	0.15	0	0	5.7
SE	5.86	0	0	0	0	5.86
SSE	9.4	0	0	0	0	9.4
S	10.48	0.15	0	0	0	10.63
SSW	8.63	0	0	0	0	8.63
SW	12.17	0	0	0	0	12.17
WSW	8.17	0	0	0	0	8.17
W	6.93	0	0	0	0	6.93
WNW	5.55	0	0	0	0	5.55
NW	2.16	0	0	0	0	2.16
NNW	4.78	0	0	0	0	4.78
Summary	98.78	0.61	0.46	0.15	0	100



**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

**Summary of Hourly Averages**

**RELATIVE HUMIDITY (RH) in %**

Maximum Hourly Value:	100 %	on Jul 3 at hr 6	Hours in Service:	744
Maximum Daily Value:	98.2 %	on Jul 25	Hours of Data:	708
Minimum Hourly Value:	25 %	on Jul 6 at hr 14	Hours of Missing Data:	36
Minimum Daily Value:	50.8 %	on Jul 7	Hours of Calibration:	0
Monthly Average:	75.4 %		Operational Uptime:	95.2

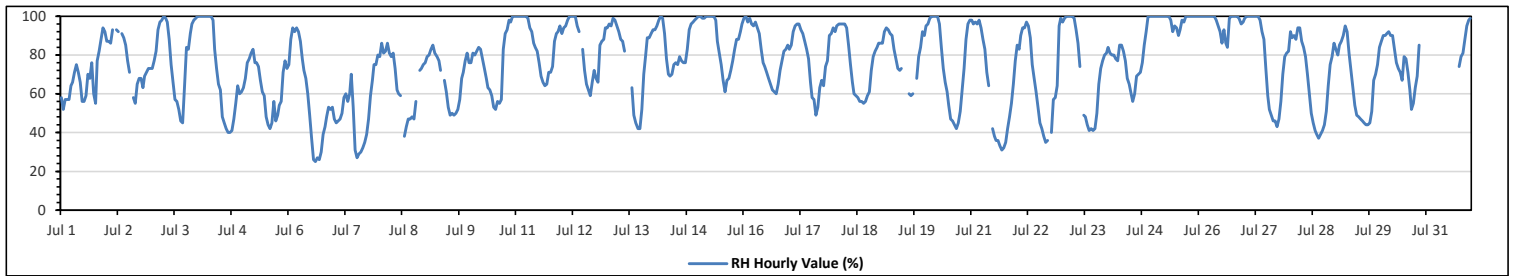
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	58	52	57	57	57	64	66	71	75	71	66	56	56	59	70	68	76	60	55	77	82	88	94	92	52	94	67.8
Jul 2	87	87	86	93	K	93	92	K	91	89	85	77	71	K	58	55	65	68	68	63	69	71	73	73	55	93	76.9
Jul 3	73	77	82	93	97	98	100	99	97	88	75	66	57	56	52	46	45	64	84	83	91	96	98	99	45	100	79.8
Jul 4	100	100	100	100	100	100	100	100	98	83	73	65	62	48	45	42	40	40	41	47	55	64	60	61	40	100	71.8
Jul 5	63	68	76	78	81	83	76	76	74	67	61	59	48	44	42	45	56	46	49	54	56	71	77	73	42	83	63.5
Jul 6	75	88	94	92	94	92	87	78	72	68	60	49	37	26	25	27	26	30	39	43	48	53	52	53	25	94	58.7
Jul 7	47	45	46	47	50	58	60	56	60	70	53	31	27	29	30	32	35	39	47	59	67	75	75	80	27	80	50.8
Jul 8	79	86	81	82	86	81	79	81	73	62	60	59	K	38	43	47	47	48	47	56	K	72	73	75	38	86	66.1
Jul 9	76	79	80	83	85	81	79	77	72	K	67	61	53	49	50	49	50	52	57	68	71	77	81	76	49	85	68.4
Jul 10	76	81	80	82	84	83	78	73	68	63	62	59	53	52	56	55	57	83	91	93	98	97	100	100	52	100	76.0
Jul 11	100	100	100	100	100	100	99	94	92	86	84	82	76	69	66	64	65	71	71	74	87	91	92	95	64	100	85.8
Jul 12	91	94	95	98	100	100	100	100	95	92	K	83	72	65	62	59	66	72	68	66	85	87	88	94	59	100	84.0
Jul 13	94	96	95	99	98	95	92	88	87	82	K	K	K	63	49	45	42	42	52	70	80	89	89	91	42	99	78.0
Jul 14	93	93	95	98	100	99	91	78	70	69	70	75	76	75	79	77	76	76	83	93	96	97	98	99	69	100	85.7
Jul 15	100	100	99	99	100	100	100	100	100	98	87	81	75	67	61	67	68	72	77	83	88	88	92	96	61	100	87.4
Jul 16	99	100	97	99	96	95	97	94	91	83	76	74	71	68	65	62	61	60	65	72	77	82	83	85	60	100	81.3
Jul 17	83	85	92	95	96	96	93	91	87	83	78	66	58	57	49	53	63	67	64	74	77	90	91	94	49	96	78.4
Jul 18	92	95	96	96	96	94	85	75	66	60	59	58	56	56	55	56	59	61	72	79	82	84	86	55	96	75.6	
Jul 19	86	86	92	94	93	91	90	83	78	73	72	73	K	64	K	60	59	60	K	68	79	84	92	90	59	94	79.4
Jul 20	95	96	99	100	100	100	100	96	84	73	66	61	54	47	46	44	42	45	51	62	73	88	96	98	42	100	75.7
Jul 21	98	96	97	96	98	94	88	83	71	64	K	42	38	36	36	33	31	32	35	42	48	55	65	77	31	98	63.3
Jul 22	85	83	90	94	94	97	95	89	75	68	61	53	45	42	38	35	36	K	40	57	58	64	95	99	35	99	69.3
Jul 23	97	99	100	100	100	100	99	93	86	74	K	49	48	44	41	42	41	42	50	65	73	77	80	81	41	100	73.1
Jul 24	84	81	80	80	78	77	85	85	82	77	68	65	60	56	60	69	70	71	76	85	92	100	100	100	56	100	78.4
Jul 25	100	100	100	100	100	100	100	100	100	98	92	95	94	90	93	98	97	100	100	100	100	100	100	100	90	100	98.2
Jul 26	100	100	100	100	100	100	100	100	100	98	95	92	86	93	86	84	99	100	100	100	100	99	96	97	84	100	96.9
Jul 27	99	100	100	100	100	100	100	100	98	92	88	73	59	52	49	46	46	43	47	56	70	79	81	82	43	100	77.5
Jul 28	92	89	90	88	94	94	87	84	79	70	60	50	45	41	39	37	39	41	44	51	64	75	79	86	37	94	67.4
Jul 29	83	80	85	87	90	95	92	81	72	63	54	49	48	47	46	45	44	44	45	51	67	70	75	84	44	95	66.5
Jul 30	87	90	90	91	92	90	83	76	73	71	67	79	78	71	62	52	55	63	69	85	P	P	P	52	92	76.9	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	74	79	81	88	95	98	99	74	99	NA
Diurnal Maximum	100	100	100	100	100	100	100	100	98	95	95	94	93	93	98	99	100	100	100	100	100	100	100	100			
Diurnal Average	86.4	87.5	89.1	90.7	91.7	90.3	86.8	82.6	77.3	70.9	64.5	59.5	55.6	53.9	53.4	55.0	58.5	61.6	68.8	76.8	81.9	85.2	87.2				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.





**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

**Summary of Hourly Averages**

**AMBIENT TEMPERATURE (AT) in Degree Celsius**

Maximum Hourly Value:	28.5 °C	on Jul 9 at hr 15	Hours in Service:	744
Maximum Daily Value:	22.2 °C	on Jul 9	Hours of Data:	708
Minimum Hourly Value:	7.7 °C	on Jul 4 at hr 4	Hours of Missing Data:	36
Minimum Daily Value:	12.4 °C	on Jul 25	Hours of Calibration:	0
Monthly Average:	17.2 °C		Operational Uptime:	95.2

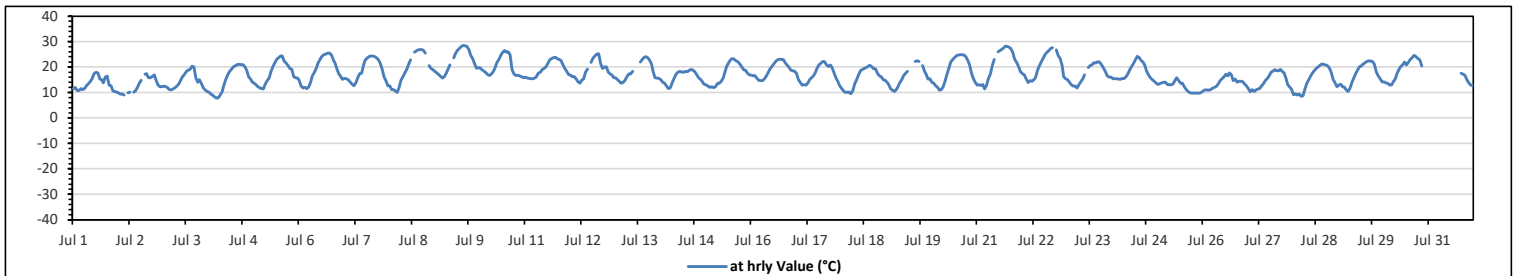
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	11.6	12	10.7	10.7	11.5	11.1	11.7	12.7	13.4	14.3	15.4	17.4	18	17.7	15.3	15	13.8	16	16.4	13	12.7	10.6	10.5	10.2	10.2	18.0	13.4
Jul 2	9.9	9.3	9.3	9.1	K	9.9	10.1	K	10.2	10.8	12.1	13.5	14.8	K	17.2	17.4	15.9	15.8	16.3	16.9	14.8	12.9	12.2	12.3	9.1	17.4	12.9
Jul 3	12.5	12.2	11.9	11.2	11	11.4	11.9	12.5	13.4	14.6	16.1	17.1	18.2	18.8	19	20.3	20.1	15.8	14	15	13.7	11.9	11	10.4	10.4	20.3	14.3
Jul 4	10.2	9.4	8.9	8.2	7.7	8	9.1	10.3	13.1	15.3	17.1	18.2	19	20	20.4	21	21.1	21	21	20.2	18.7	16.2	15.3	14.2	7.7	21.1	15.2
Jul 5	13.7	13.1	12.3	11.9	11.5	11.4	13.3	14.6	15.7	18.4	20.2	21.7	23.1	23.7	24.3	24.3	22.4	21.6	20.6	19.5	19	16.2	15.8	15.7	11.4	24.3	17.7
Jul 6	14.8	12.5	11.8	12	11.6	12.3	14.2	16.6	17.8	19.5	21.5	23	24.2	24.9	25.2	25.4	25.4	24.8	22.7	21.5	19.2	17.3	16.4	15.2	11.6	25.4	18.7
Jul 7	15.6	15.4	15	14.2	13.3	12.6	13.8	15.8	17.4	17.5	20.7	22.7	23.5	24.1	24.4	24.3	24.1	23.6	22.9	21.5	19.3	16.2	14.6	12.7	12.6	24.4	18.6
Jul 8	12.7	11.1	11.1	10.6	10	11.9	14.7	16.2	17.7	19.1	21.1	22.8	K	25.9	26.3	26.7	26.9	26.9	26.6	25.5	K	20.6	19.5	18.9	10.0	26.9	19.2
Jul 9	18.4	17.7	17.1	16.3	15.7	16.3	17.7	19.2	20.8	K	23.6	25.3	26.5	27.3	28	28.5	28.4	28.1	27	24.6	23.3	21.3	19.6	19.7	15.7	28.5	22.2
Jul 10	19.7	18.9	18.5	17.8	17.1	16.7	17.3	18.3	19.7	21.8	22.9	24.6	25.8	26.5	25.9	26	24.9	19	17.3	16.7	16.8	16.5	16.1	15.9	15.9	26.5	20.0
Jul 11	16	15.7	15.6	15.5	15.5	15.5	16.2	17.6	18	18.9	19.5	20.1	21.4	22.8	23.3	23.8	23.9	23.2	23	22.6	21	19.5	18.4	17.1	15.5	23.9	19.3
Jul 12	16.8	16.2	16.3	15.4	14.3	13.7	14.7	15.5	18.1	19.2	K	21.8	23.5	24.4	25.1	25.3	21.3	19.4	20	20.1	18	17.3	16.8	15.9	13.7	25.3	18.7
Jul 13	15.8	15	14.4	13.7	13.9	14.7	16.2	17.3	17.3	18.4	K	K	K	K	21.9	22.9	23.8	24.1	23.7	22.7	21.2	18.2	15.9	15.7	13.7	24.1	18.2
Jul 14	15	14.1	13.7	12.5	11.6	11.9	13.7	15.5	17.1	18	18.3	18.1	17.9	18.4	18.2	18.7	19	18.8	18.2	17.1	15.8	15.2	14.4	13.3	11.6	19.0	16.0
Jul 15	13.1	12.5	12	12.2	11.9	12.3	13.5	13.7	14.4	15.7	18.3	20.3	21.7	22.8	23.4	23.1	22.5	22.1	21.2	20.1	18.9	18.7	17.6	16.9	11.9	23.4	17.5
Jul 16	16.8	16.6	16.7	15.7	14.8	14.6	14.6	15.5	16.5	17.9	19.2	20.2	21.2	22.2	22.8	23.1	22.9	22.9	21.8	20.9	20	18.8	18.6	18.3	14.6	23.1	18.9
Jul 17	17.5	15.1	13.9	13	13.1	13	13.8	15.1	15.8	16.6	17.6	19.5	20.8	21.4	22.3	22.1	20.9	20.2	20.8	19.6	17.6	15.6	14.5	12.6	12.6	22.3	17.2
Jul 18	11.7	10.6	10	10.2	10.1	9.5	10.8	13.4	15	17	18.6	19.1	19.5	19.9	20.2	20.7	20.2	19.3	19.3	17.5	16.5	16.1	15	14.7	9.5	20.7	15.6
Jul 19	14.1	13.2	11.6	10.9	10.5	11.2	12.2	13.9	15.1	16.7	17.5	18.4	K	20.9	K	22.3	22.5	22.2	K	20.6	18.5	17	15.3	15.4	10.5	22.5	16.2
Jul 20	14	13.6	12.7	12	10.9	11.2	12.4	14.7	17.4	19.9	21.9	23	23.7	24.5	24.7	24.9	24.9	24.7	24	22.7	20.8	17.6	15.4	13.9	10.9	24.9	18.6
Jul 21	12.9	13.1	12.8	13.2	11.4	13	15.6	17.3	20.6	22.9	K	26	26.5	27	27.5	28.2	28.1	27.8	27.2	25.7	23	21.8	20.2	18.2	11.4	28.2	20.9
Jul 22	17.4	16.9	15.3	13.9	14.6	14.4	14.9	15.9	18.7	20.5	22.1	23.5	24.8	25.7	26.4	27.2	27.6	K	26.7	24.5	23.3	20.7	16.2	15.4	13.9	27.6	20.3
Jul 23	15.1	14.1	13.1	12.5	12.5	11.8	13.2	14.3	15.4	17	K	19.9	20.6	21	21.7	21.6	22.1	21.9	21	19.8	18.4	16.6	16	16	11.8	22.1	17.2
Jul 24	15.4	15.5	15.5	15.3	15.2	15.6	15.5	16	17.2	18.8	20.2	21.3	22.8	24.2	23.7	22.6	21.9	20.6	18.5	17	15.9	15	14.4	13.7	13.7	24.2	18.0
Jul 25	13.2	13.5	13.8	14.1	14.1	13.2	13.1	13.1	13.4	14.7	15.9	14.8	13.6	13.6	12.3	11.2	10.4	9.9	9.8	9.8	9.8	9.8	9.8	10	9.8	15.9	12.4
Jul 26	10.6	11	11	10.9	11.2	11.7	12	12.4	13.4	14.6	15.5	16.1	17.2	16.5	17.7	17	14.6	15.3	14.1	14.4	14.5	14.3	13.4	12.6	10.6	17.7	13.8
Jul 27	11.6	10.3	11.1	10.5	11	11.4	11.6	12.5	13.4	14.6	15.4	16.6	17.9	18.5	18.9	18.6	18.6	19.1	18.4	17.7	15.5	13.2	12.1	11.3	10.3	19.1	14.6
Jul 28	9.2	9.5	9	9.4	8.5	8.8	11.4	13.6	15.1	16.6	17.6	18.6	19.5	20.1	20.6	21.2	21.1	20.9	20.6	19.8	17.9	15.2	13.8	12.2	8.5	21.2	15.4
Jul 29	13	13.3	12.3	12.1	11	10.4	11.8	14	15.9	17.5	18.9	20	20.4	21.2	21.7	22.2	22.5	22.4	22.2	21.1	18.1	16.5	15.5	14.2	10.4	22.5	17.0
Jul 30	14.2	13.8	13.5	13	13.1	14.5	15.3	17.5	19.1	20.2	20.8	22	20.8	21.8	23	23.7	24.6	24.1	23.3	22.8	20.4	K	K	K	13.0	24.6	19.1
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	12.8	17.5	NA
Diurnal Maximum	19.7	18.9	18.5	17.8	17.1	16.7	17.7	19.2	20.8	22.9	23.6	26.0	26.5	27.3	28.0	28.5	28.4	28.1	27.2	25.7	23.3	21.8	20.2	19.7			
Diurnal Average	14.1	13.5	13.0	12.6	12.4	12.5	13.5	15.0	16.2	17.5	18.8	20.2	21.0	22.0	22.2	22.3	21.9	21.0	20.5	19.6	17.8	16.3	15.2	14.5			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**  
**Reno-B Station - July 2023**  
**Summary of Hourly Averages**  
**STATION TEMPERATURE (ST) in Degree Celsius**

Maximum Hourly Value:	24.7 °C	on Jul 18 at hr 3	Hours in Service:	744
Maximum Daily Value:	23.7 °C	on Jul 14	Hours of Data:	714
Minimum Hourly Value:	21.8 °C	on Jul 3 at hr 16	Hours of Missing Data:	30
Minimum Daily Value:	22.8 °C	on Jul 4	Hours of Calibration:	0
Monthly Average:	23.3 °C		Operational Uptime:	96.0

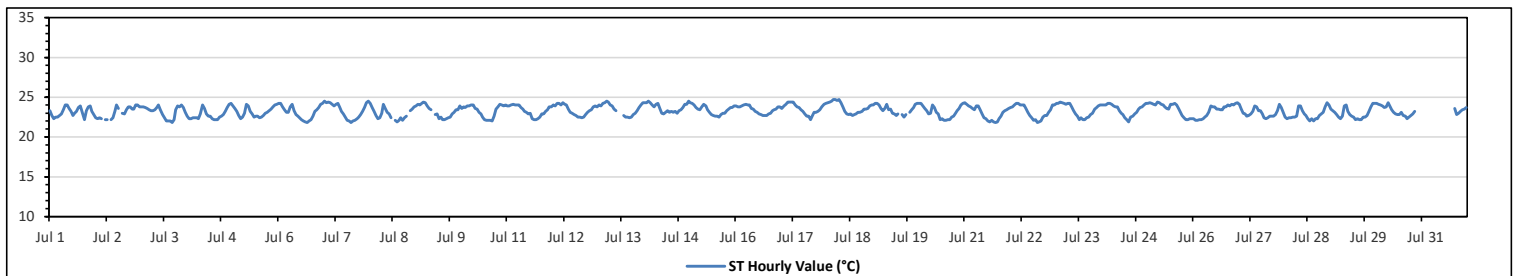
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	23.3	22.7	22.3	22.5	22.5	22.7	22.9	23.4	24.0	24.0	23.6	23.2	22.7	23.0	23.2	23.7	23.9	23.1	22.2	23.3	23.8	23.9	23.2	22.8	22.2	24.0	23.2	
Jul 2	22.4	22.3	22.4	22.3	K	22.2	22.2	22.2	22.2	22.4	23.2	24.0	23.6	K	23.0	22.9	23.4	23.8	23.8	23.5	23.5	24.0	24.0	23.8	22.2	24.0	23.1	
Jul 3	23.8	23.8	23.7	23.6	23.4	23.3	23.3	23.4	23.7	24.0	23.4	22.8	22.4	22.0	22.0	22.0	21.8	22.2	23.4	23.9	23.8	24.0	23.7	23.1	21.8	24.0	23.2	
Jul 4	22.6	22.3	22.3	22.4	22.4	22.4	22.3	22.9	24.0	23.6	22.9	22.6	22.6	22.3	22.2	22.2	22.2	22.5	22.6	22.8	23.2	23.7	24.1	24.2	22.2	24.2	22.8	
Jul 5	23.9	23.6	23.2	22.7	22.3	22.5	23.0	24.1	23.9	23.2	22.9	22.5	22.6	22.6	22.4	22.5	22.7	23.0	23.1	23.3	23.5	23.8	24.0	24.1	22.3	24.1	23.1	
Jul 6	24.2	24.2	23.8	23.4	23.1	23.1	23.8	24.1	23.3	22.8	22.6	22.4	22.2	22.0	21.9	21.8	22.0	22.2	22.6	23.2	23.4	23.7	24.1	24.2	21.8	24.2	23.1	
Jul 7	24.5	24.3	24.4	24.2	24.1	23.9	24.1	24.2	23.7	23.2	22.9	22.5	22.1	22.0	21.8	22.0	22.1	22.3	22.5	22.8	23.2	23.7	24.3	24.5	21.8	24.5	23.3	
Jul 8	24.2	23.7	23.2	22.7	22.3	22.4	23.0	24.1	23.6	23.1	22.9	22.4	K	22.1	21.9	22.1	22.4	22.1	22.4	22.6	K	23.3	23.5	23.8	21.9	24.2	22.9	
Jul 9	23.9	24.1	24.0	24.2	24.4	24.3	23.9	23.6	23.4	K	22.8	22.9	22.3	22.5	22.2	22.2	22.3	22.4	22.5	22.9	23.1	23.4	23.4	23.9	22.2	24.4	23.2	
Jul 10	23.6	23.8	23.7	23.9	23.9	24.0	24.0	23.6	23.5	23.1	22.9	22.5	22.2	22.1	22.1	22.1	22.0	22.6	23.5	23.8	24.1	24.0	23.9	24.0	22.0	24.1	23.3	
Jul 11	23.9	23.9	24.0	24.1	24.0	24.0	24.0	23.7	23.5	23.2	23.1	22.9	23.0	22.3	22.2	22.2	22.3	22.5	22.9	22.9	23.2	23.4	23.8	23.8	22.2	24.1	23.3	
Jul 12	24.0	23.9	24.2	24.2	24.0	24.3	24.1	24.0	23.5	23.1	23.0	22.8	22.7	22.5	22.5	22.4	22.5	22.8	23.1	23.3	23.4	23.8	23.9	23.8	22.4	24.3	23.4	
Jul 13	24.0	23.9	24.2	24.3	24.5	24.4	24.0	23.9	23.5	23.3	K	22.8	K	22.7	22.5	22.5	22.4	22.5	22.8	23.0	23.3	23.7	24.0	24.3	22.4	24.5	23.5	
Jul 14	24.3	24.3	24.5	24.3	24.0	23.8	24.1	24.2	23.6	23.0	22.9	23.1	23.3	23.1	23.2	23.1	23.2	23.0	23.3	23.4	23.7	24.1	24.1	24.5	22.9	24.5	23.7	
Jul 15	24.3	24.2	24.0	23.7	23.5	23.4	23.8	24.1	23.9	23.4	23.1	22.8	22.7	22.6	22.6	22.5	22.8	23.0	23.0	23.3	23.5	23.7	23.7	23.9	22.5	24.3	23.4	
Jul 16	23.9	23.8	23.8	23.9	24.0	24.1	24.0	24.0	23.6	23.5	23.2	23.1	22.9	22.8	22.7	22.7	22.7	22.9	23.0	23.3	23.4	23.5	23.8	23.8	22.7	24.1	23.4	
Jul 17	23.6	23.9	24.1	24.4	24.4	24.4	24.4	24.0	23.8	23.7	23.4	23.2	22.9	22.6	22.6	22.2	22.7	23.1	23.1	23.2	23.4	23.8	24.1	24.2	22.2	24.4	23.6	
Jul 18	24.3	24.4	24.5	24.7	24.7	24.6	24.7	24.3	23.8	23.2	22.9	22.8	22.9	22.7	22.8	22.9	23.1	23.1	23.2	23.5	23.5	23.6	23.9	24.0	22.7	24.7	23.7	
Jul 19	24.0	24.2	24.2	24.0	23.6	23.3	23.6	24.1	23.4	23.5	23.0	22.9	22.7	22.9	K	22.8	22.8	23.5	22.8	K	23.1	23.4	23.7	24.1	24.2	22.5	24.2	23.5
Jul 20	24.2	24.2	23.9	23.6	23.3	22.9	23.0	24.0	23.7	23.1	22.9	22.2	22.3	22.1	22.1	22.2	22.2	22.5	22.6	23.0	23.3	23.6	24.0	24.2	22.1	24.2	23.1	
Jul 21	24.3	24.1	23.9	23.8	23.6	23.4	23.9	23.9	23.4	22.9	22.4	22.3	22.0	21.9	22.1	21.9	21.8	21.9	22.3	22.6	23.1	23.3	23.4	23.6	21.8	24.3	23.0	
Jul 22	23.7	23.8	24.0	24.2	24.2	24.0	24.0	24.0	23.6	23.1	22.7	22.4	22.1	22.2	21.8	21.9	22.0	22.5	22.7	22.7	23.1	23.4	24.0	24.0	21.8	24.2	23.2	
Jul 23	24.2	24.2	24.4	24.3	24.2	24.1	24.2	24.2	23.8	23.3	22.9	22.6	22.2	22.4	22.2	22.2	22.4	22.5	22.8	23.0	23.5	23.7	23.9	24.0	22.2	24.4	23.4	
Jul 24	24.0	24.0	24.0	24.2	24.2	24.1	23.9	23.8	23.8	23.3	23.0	22.8	22.4	22.2	21.9	22.5	22.6	22.9	23.1	23.5	23.7	23.8	24.0	24.2	21.9	24.2	23.4	
Jul 25	24.2	24.3	24.2	24.1	24.0	24.4	24.3	24.1	24.0	23.8	23.6	23.5	24.1	24.1	24.2	24.0	23.6	23.1	22.7	22.4	22.2	22.2	22.3	22.3	22.2	24.4	23.6	
Jul 26	22.3	22.1	22.1	22.2	22.2	22.3	22.5	22.7	23.1	23.9	23.8	23.8	23.5	23.5	23.4	23.4	23.8	23.8	24.0	23.9	24.1	24.0	24.2	24.3	22.1	24.3	23.3	
Jul 27	24.1	23.5	23.0	22.9	22.6	22.7	22.9	23.2	23.9	23.8	23.3	23.3	22.9	22.4	22.3	22.4	22.6	22.6	22.6	22.8	23.3	24.1	23.7	23.1	22.3	24.1	23.1	
Jul 28	22.5	22.3	22.4	22.4	22.5	22.5	22.6	23.9	23.9	23.3	22.9	22.7	22.3	22.0	22.3	22.0	22.3	22.3	22.7	22.9	23.1	23.8	24.3	24.0	22.0	24.3	22.8	
Jul 29	23.5	23.3	23.1	22.8	22.5	22.3	22.6	23.9	24.0	23.2	22.8	22.6	22.5	22.2	22.3	22.2	22.2	22.5	22.7	23.2	23.8	24.2	24.2	24.2	22.2	24.2	23.0	
Jul 30	24.2	24.1	24.0	23.9	23.7	23.8	24.3	23.9	23.4	23.1	22.9	22.8	22.8	23.1	22.7	22.6	22.3	23.5	22.7	22.9	23.2	P	P	P	22.3	24.3	23.3	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	23.6	22.8	23.0	23.2	23.4	23.5	23.7	22.8	23.7	NA
Diurnal Maximum	24.5	24.4	24.5	24.7	24.7	24.6	24.7	24.3	24.0	24.0	23.8	24.0	24.1	24.1	24.2	24.0	23.9	23.8	24.0	23.9	24.1	24.1	24.3	24.5				
Diurnal Average	23.8	23.7	23.7	23.6	23.5	23.5	23.6	23.8	23.6	23.3	23.0	22.8	22.7	22.5	22.5	22.5	22.6	22.7	22.9	23.1	23.4	23.7	23.8	23.9				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.





**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

**Summary of Hourly Averages**

**PRECIPITATION in mm**

Maximum Hourly Value:	7.9 mm on Jul 25 at hr 22	Hours in Service:	744
Maximum Daily Value:	35.6 mm on Jul 25	Hours of Data:	711
Minimum Hourly Value:	0.0 mm on Jul 1 at hr 0	Hours of Missing Data:	33
Minimum Daily Value:	0.0 mm on Jul 2	Hours of Calibration:	0
Monthly Total:	78.9 mm	Operational Uptime:	95.6

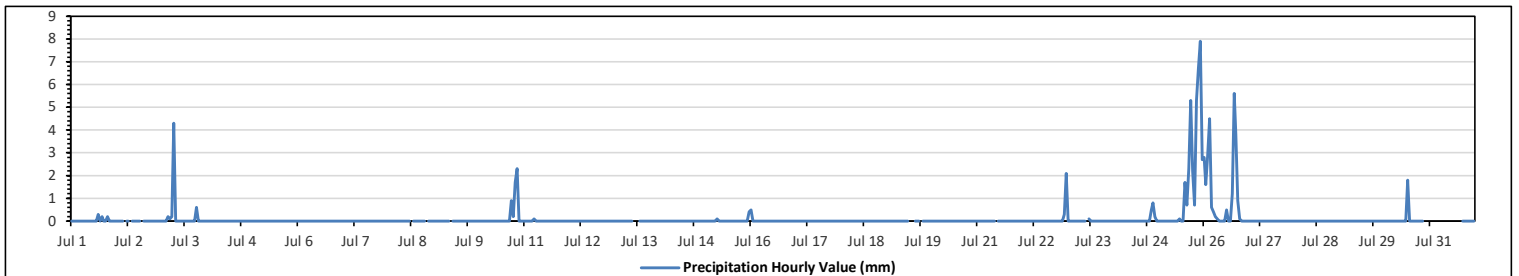
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Total		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0.2	0	0	0.2	0	0	0	0	0.0	0.3	0.7	
Jul 2	0	0	0	0	K	0	0	K	0	0	0	0	0	K	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 3	0	0	0	0.2	0.1	0.2	4.3	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0	0	0.0	4.3	5.4	
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	K	0	0	0	0	0	0	0	K	0	0	0.0	0.0	0.0	
Jul 9	0	0	0	0	0	0	0	0	0	0	K	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0.2	1.7	2.3	0	0	0	0.0	2.3	5.1	
Jul 11	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1	
Jul 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 13	0	0	0	0	0	0	0	0	0	0	K	0	K	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 15	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.0	0.4	0.5	
Jul 16	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.5	0.5	
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	K	0	K	0	0	0	K	0	0	0	0	0.0	0.0	0.0	
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 21	0	0	0	0	0	0	0	0	0	0	K	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.1	0.0	2.1	2.4	
Jul 23	0	0	0	0	0	0	0	0	0	0	K	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1	
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.8	0.2	0	0.0	0.8	1.5	
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	1.7	0.7	2.3	5.3	2.2	0.7	5.3	6.7	7.9	2.7	0.0	7.9	35.6
Jul 26	2.8	1.6	2.9	4.5	0.6	0.4	0.2	0.1	0	0	0	0	0.5	0	0	1.2	5.6	3.8	0.9	0.1	0	0	0	0	0.0	5.6	25.2	
Jul 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0.0	1.8	1.8	
Diurnal Maximum	2.8	1.6	2.9	4.5	0.6	0.4	4.3	0.1	0.0	0.0	0.0	0.1	1.8	0.0	1.7	1.2	5.6	5.3	2.2	1.7	5.3	6.7	7.9	2.7				
Diurnal Average	0.1	0.1	0.1	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.3	0.1	0.1	0.3	0.3	0.3	0.2				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



Peace River Area Monitoring Program

Reno-B Station - July 2023

Summary of Hourly Averages

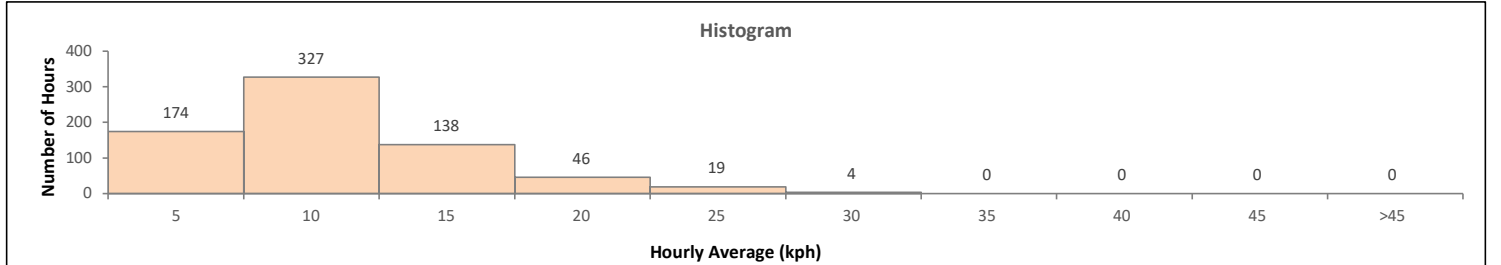
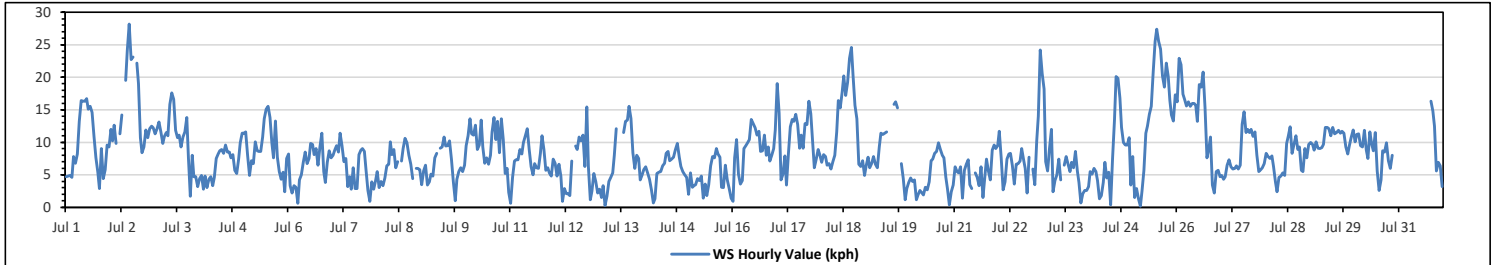
VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	28.2 kph	on Jul 2 at hr 10	Hours in Service:	744
Maximum Daily Value:	15.1 kph	on Jul 2	Hours of Data:	708
Minimum Hourly Value:	0.2 kph	on Jul 25 at hr 4	Hours of Missing Data:	36
Minimum Daily Value:	4.5 kph	on Jul 15	Hours of Calibration:	0
Monthly Average:	2.9 kph		Operational Uptime:	95.2

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	4.7	4.8	4.9	4.6	7.8	6.8	8.2	13.2	16.4	16.3	16.7	15.1	15.5	14.6	10.9	7.6	5.4	2.9	9.0	4.4	5.8	9.6	9.3	2.9	16.7	9.6		
Jul 2	12.0	10.2	12.6	9.8	K	11.3	14.2	K	19.5	24.1	28.2	22.7	23.1	K	22.2	19.0	10.7	8.4	9.3	11.9	10.7	12.1	12.5	12.2	8.4	28.2	15.1	
Jul 3	11.3	12.1	13.1	11.6	9.8	10.9	11.5	11.0	15.8	17.6	16.6	11.8	10.7	11.1	9.3	10.8	11.6	13.8	7.7	1.7	8.0	4.7	4.7	3.2	1.7	17.6	10.4	
Jul 4	4.4	4.9	2.8	4.8	3.0	4.3	4.7	3.3	4.6	7.5	8.2	8.7	8.9	8.3	9.6	8.5	7.6	8.1	5.7	5.2	7.4	9.9	11.4	2.8	11.4	6.7		
Jul 5	11.4	11.6	8.0	4.9	7.2	6.7	10.1	8.7	8.6	8.6	10.8	13.6	15.1	15.5	13.8	9.8	7.6	13.3	7.7	5.5	4.3	5.4	2.4	7.5	2.4	15.5	9.1	
Jul 6	8.2	3.3	2.2	3.3	3.1	0.6	4.2	5.0	6.9	8.5	6.7	7.5	9.8	9.7	8.1	9.0	6.5	9.3	11.4	5.5	3.8	6.9	8.7	7.6	0.6	11.4	6.5	
Jul 7	8.0	8.9	9.5	8.5	11.4	9.5	7.0	7.5	3.2	4.7	2.8	6.1	2.9	2.9	8.1	8.8	9.0	8.6	5.8	2.6	0.9	3.9	2.8	4.1	0.9	11.4	6.1	
Jul 8	5.5	3.0	4.0	3.3	4.5	6.4	6.6	10.1	8.1	8.9	6.1	7.0	K	7.1	9.0	10.6	9.9	8.0	6.6	4.4	K	6.0	6.0	5.8	3.0	10.6	6.7	
Jul 9	3.5	5.6	6.5	3.4	3.9	5.1	4.8	7.6	8.3	K	9.1	9.3	10.8	9.4	9.5	10.2	7.4	3.9	1.0	4.3	5.5	6.1	5.5	6.5	1.0	10.8	6.4	
Jul 10	9.5	11.0	13.6	11.3	11.1	12.6	8.9	9.6	13.4	9.3	6.8	7.6	6.6	8.0	11.6	13.8	10.4	13.2	8.4	13.6	10.4	5.2	6.0	2.3	2.3	13.8	9.8	
Jul 11	0.6	4.6	7.1	7.3	7.3	8.9	8.2	10.0	11.0	12.1	8.9	6.2	5.0	6.7	6.1	6.0	8.3	11.0	8.9	5.7	6.1	5.3	4.8	7.4	0.6	12.1	7.2	
Jul 12	6.8	4.8	6.6	4.8	0.9	2.9	2.1	2.1	1.8	7.1	K	9.4	8.9	10.8	10.2	11.1	6.3	15.4	6.2	1.2	2.5	5.2	4.0	2.2	0.9	15.4	5.8	
Jul 13	2.8	1.5	3.3	0.3	1.7	4.0	4.6	5.3	8.0	12.1	K	K	K	11.5	13.2	13.4	15.5	13.7	8.4	6.0	8.0	7.5	4.2	5.0	0.3	15.5	7.1	
Jul 14	5.8	6.2	5.3	4.3	2.7	0.7	1.3	5.2	5.4	5.5	6.4	6.8	8.3	8.6	7.2	7.4	7.7	8.9	9.8	7.7	6.3	5.5	5.0	4.6	0.7	9.8	5.9	
Jul 15	2.0	5.3	3.1	3.3	3.5	4.4	4.1	4.8	1.4	3.6	1.8	3.5	6.4	7.8	7.6	9.0	8.2	7.7	3.1	3.0	6.5	4.2	2.9	1.4	1.4	9.0	4.5	
Jul 16	0.9	7.6	10.4	5.1	3.6	4.1	9.0	9.5	10.0	10.4	13.5	12.9	12.2	11.1	11.7	8.6	8.7	11.1	8.0	9.3	7.1	8.0	9.0	11.9	0.9	13.5	8.9	
Jul 17	19.0	14.5	4.2	5.1	7.9	3.4	8.2	12.4	13.5	13.2	14.3	12.7	9.1	11.1	9.1	12.9	12.7	16.3	14.4	10.6	6.1	7.4	8.9	8.1	3.4	19.0	10.6	
Jul 18	6.9	8.1	7.8	6.5	6.7	5.9	7.0	8.0	11.6	16.4	15.3	17.7	20.2	17.2	19.2	22.9	24.6	20.3	15.7	13.6	6.6	6.3	7.2	4.9	4.9	24.6	12.4	
Jul 19	6.4	7.7	6.1	6.7	7.8	6.6	6.1	9.3	11.4	11.2	11.4	11.6	K	13.3	K	15.8	16.2	15.3	K	6.7	4.4	1.2	2.9	3.8	1.2	16.2	8.7	
Jul 20	4.5	4.0	4.2	1.2	1.9	2.6	2.3	1.9	3.1	2.7	3.9	7.2	7.4	8.3	8.6	9.9	8.9	8.0	7.6	4.6	2.9	0.4	2.4	3.4	0.4	9.9	4.7	
Jul 21	6.2	5.5	5.3	6.2	1.4	5.7	6.6	7.3	3.5	2.9	K	5.3	4.6	3.3	6.2	1.5	4.2	7.4	5.6	4.2	8.8	9.6	9.0	9.5	1.4	9.6	5.6	
Jul 22	11.7	7.6	2.7	3.9	7.4	8.2	8.3	6.4	3.6	6.6	6.7	7.1	9.0	7.3	6.0	2.2	7.7	K	5.9	3.5	10.2	14.0	24.2	20.6	2.2	24.2	8.3	
Jul 23	18.2	7.0	5.6	9.1	12.0	2.4	4.1	5.0	7.4	4.2	K	6.5	7.8	6.6	5.5	6.9	6.1	8.6	5.6	3.8	0.7	2.1	2.6	2.6	0.7	18.2	6.1	
Jul 24	3.2	5.5	5.1	6.0	5.5	4.1	1.3	1.8	3.8	6.9	4.5	5.4	0.4	7.5	13.4	20.1	19.8	16.8	12.3	10.0	9.6	9.6	10.7	3.4	0.4	20.1	7.8	
Jul 25	7.8	1.5	2.9	1.3	0.2	2.5	5.7	11.4	12.5	14.3	15.5	20.8	25.5	27.4	25.5	24.3	20.2	18.5	22.2	20.1	16.5	14.2	13.3	17.3	0.2	27.4	14.2	
Jul 26	16.2	22.9	21.9	17.4	16.6	15.6	16.2	15.5	16.0	16.0	15.7	13.2	18.9	18.5	20.8	15.3	7.6	9.0	10.8	3.4	2.2	5.5	5.7	4.7	2.2	22.9	13.6	
Jul 27	4.9	4.3	4.7	6.5	7.3	6.2	5.9	6.0	6.4	5.9	6.5	12.8	14.7	11.5	12.0	11.5	12.0	10.9	11.6	8.0	5.5	5.8	6.1	6.7	4.3	14.7	8.1	
Jul 28	8.3	7.8	7.5	7.9	6.3	3.9	2.4	4.6	4.8	5.3	4.9	9.8	10.9	12.4	8.3	9.7	11.0	8.9	9.3	5.7	5.5	9.0	7.6	9.7	2.4	12.4	7.6	
Jul 29	10.0	9.7	8.8	10.1	9.1	9.0	9.2	9.7	12.3	12.3	12.1	11.0	12.3	11.3	11.5	11.8	11.4	11.7	11.4	9.3	8.2	8.5	10.8	11.9	8.2	12.3	10.6	
Jul 30	10.1	11.2	11.3	9.5	9.3	11.8	8.8	7.5	11.6	9.7	8.7	11.5	5.6	2.6	4.2	8.7	8.5	9.9	7.2	6.0	8.0	K	P	P	P	2.6	11.8	8.7
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	16.3	14.8	12.5	5.6	6.9	6.4	3.2	3.2	16.3	NA
Diurnal Maximum	19.0	22.9	21.9	17.4	16.6	15.6	16.2	15.5	16.0	16.0	15.7	13.2	18.9	18.5	20.8	15.3	7.6	9.0	10.8	3.4	2.2	5.5	5.7	4.7	2.2	22.9	13.6	
Diurnal Average	7.7	7.4	7.0	6.3	6.2	6.2	6.7	7.6	8.8	9.8	10.1	10.4	10.7	10.4	11.1	11.3	10.5	11.2	8.9	7.1	6.4	6.7	7.2	7.1				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	In/Valid Data (Equipment Malfunction/Recovery)	NRM	Unit/Maint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

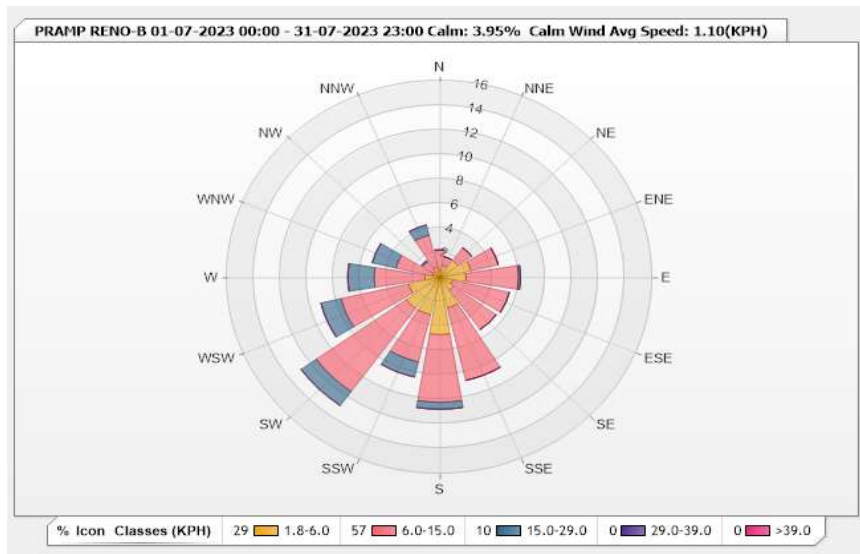


Station: PRAMP RENO-B Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 3.95%      Valid Data: 95.16%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	0.56	1.69	0	0	0	2.25
NNE	0.99	0.71	0	0	0	1.7
NE	1.69	1.27	0	0	0	2.96
ENE	2.4	2.12	0	0	0	4.52
E	1.98	3.95	0.14	0	0	6.07
ESE	0.99	4.38	0	0	0	5.37
SE	1.27	3.95	0	0	0	5.22
SSE	2.54	6.07	0	0	0	8.61
S	4.66	5.51	0.56	0	0	10.73
SSW	3.11	3.95	1.27	0	0	8.33
SW	3.11	8.33	1.41	0	0	12.85
WSW	2.4	5.23	1.55	0	0	9.18
W	1.13	3.81	1.98	0	0	6.92
WNW	0.56	2.82	1.84	0	0	5.22
NW	0.56	0.99	0.14	0	0	1.69
NNW	0.85	2.68	0.85	0	0	4.38
Summary	28.8	57.46	9.74	0	0	96



Peace River Area Monitoring Program

Reno-B Station - July 2023

Summary of Hourly Averages

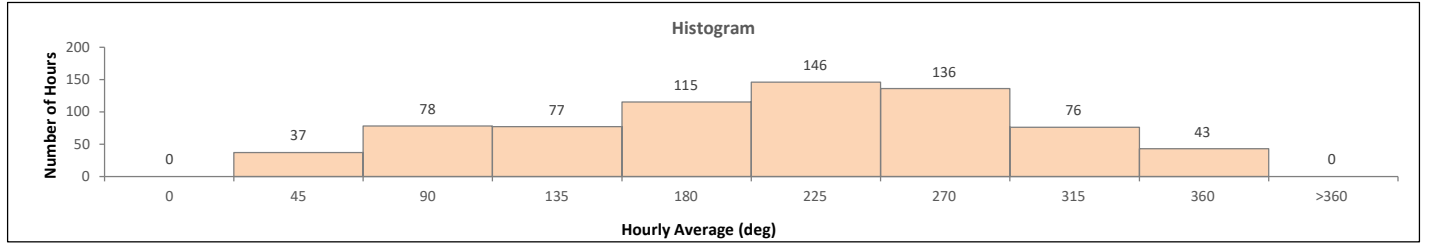
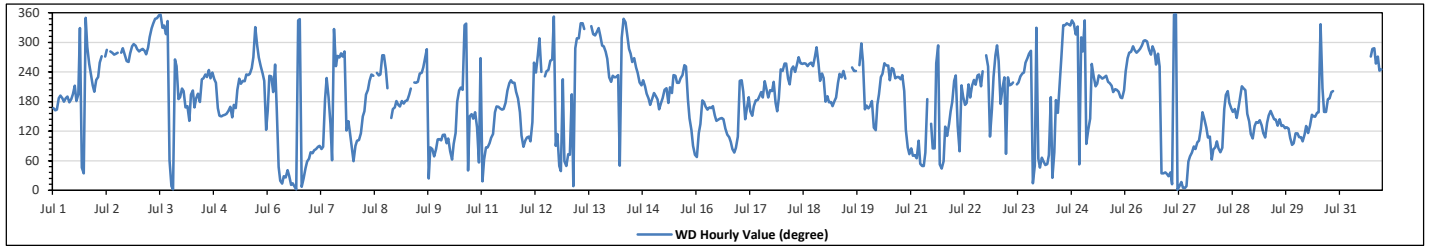
WIND DIRECTION (VWD) in sector

Monthly Average:	215 (SSW) degree	Hours in Service:	744
		Hours of Data:	708
		Hours of Missing Data:	36
		Hours of Calibration:	0
		Operational Uptime:	95.2

Day	Hourly Period Starting at (MST)																							Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Jul 1	SSE	SSE	SSE	S	S	S	S	S	S	S	SSW	SSW	S	SSW	NNW	NE	NE	N	WNW	WSW	SW	SSW	SSW	196	SSW	
Jul 2	SW	SW	WSW	W	K	W	WNW	K	W	W	W	W	K	W	WNW	W	W	WSW	W	WNW	WNW	WNW	WNW	276	W	
Jul 3	W	WNW	WNW	W	W	WNW	NW	NNW	NNW	NNW	N	N	NNW	NNW	NW	NNW	ENE	N	N	W	WSW	S	S	322	NW	
Jul 4	SSW	SSW	SSE	S	SE	SSW	SSW	SSE	S	SSW	S	SSW	SW	WSW	SW	WSW	SW	WSW	SW	SSE	SSE	SSE	SSE	200	SSW	
Jul 5	SSE	SSE	SSE	SSE	SE	S	SSE	SSW	SW	SW	SW	SW	SW	SW	WSW	W	NNW	WNW	W	WSW	SW	SW	ESE	216	SW	
Jul 6	SSE	SW	SW	SSW	WSW	SSE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	NNW	NNW	N	NNE	NE	ENE	ENE	21	NNE	
Jul 7	ENE	ENE	E	E	E	E	E	S	SW	S	SE	ENE	NW	WSW	W	W	W	W	W	ESE	SE	ESE	E	99	E	
Jul 8	ENE	E	E	E	ESE	SSE	SSE	SSW	SSW	SW	SW	SW	K	SW	SW	W	W	WSW	SSW	K	SE	SSE	SSE	206	SSW	
Jul 9	S	S	SSE	S	S	S	S	SSW	SSW	K	SW	SW	SW	SW	WSW	W	WNW	NNE	E	ENE	E	ESE	E	201	SSW	
Jul 10	ESE	E	ESE	ESE	E	ESE	ENE	E	ESE	S	SSW	SSW	SSW	NNW	NNW	NE	SSE	SE	SE	SE	NE	W	113	ESE		
Jul 11	NNE	ENE	E	E	E	ESE	ESE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSW	SW	SW	SW	SW	SSW	S	SSE	ESE	E	159	SSE
Jul 12	E	ESE	ESE	E	SE	WSW	WSW	W	NW	WSW	K	SW	WSW	WSW	W	W	N	E	ESE	NE	NE	SW	ENE	NE	212	SSW
Jul 13	ENE	ENE	SSW	N	WNW	NW	NW	NNW	NNW	NW	K	K	K	NNW	NW	NW	NNW	NW	WNW	WNW	W	W	SW	314	NW	
Jul 14	SW	SW	SW	SW	NE	NW	NNW	NNW	NW	WNW	W	WSW	W	WSW	SW	SW	SSW	SSW	SSW	S	S	S	S	239	WSW	
Jul 15	SSW	S	S	SSE	S	S	SSW	SSW	S	SSW	SSW	SW	SW	SW	WSW	WSW	SW	SW	WSW	WSW	S	SE	ESE	E	205	SSW
Jul 16	ENE	ESE	SE	S	S	SSE	SSE	SSE	SSE	S	SSE	SE	SE	SE	SE	SE	ESE	ESE	E	ENE	E	ENE	E	135	SE	
Jul 17	SW	SW	SSW	SE	SSE	SSE	SSE	S	S	S	S	SSW	S	SW	SSW	S	SSW	SSW	SW	S	SSE	S	WSW	193	S	
Jul 18	WSW	WSW	WSW	SW	SSW	WSW	WSW	WSW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	WNW	WSW	SW	SW	255	WSW	
Jul 19	S	S	S	S	S	S	S	SW	SW	WSW	SW	WSW	K	WSW	K	WSW	WSW	WSW	K	WSW	WNW	W	SSE	S	223	SW
Jul 20	SSE	S	S	SE	ESE	S	SSW	SW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SSW	ESE	E	ENE	E	222	SW	
Jul 21	E	ENE	ENE	ENE	E	NE	NE	ENE	S	K	SE	E	E	WSW	WNW	NE	NE	ENE	SE	ESE	SE	SSE	S	94	E	
Jul 22	SW	SW	SE	ENE	SSW	S	S	SSW	S	SSW	SSW	SSW	SW	SW	SSW	WSW	K	W	WSW	ESE	SSE	SW	W	215	SSW	
Jul 23	WNW	W	S	SSW	SW	ENE	SW	SSW	SW	K	SSW	SSW	SW	SW	SW	WSW	W	W	W	NNE	NE	NNW	ENE	243	WSW	
Jul 24	NE	ENE	ENE	NE	NE	ENE	S	NNE	ENE	S	SSE	SW	W	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	NE	NW	352	N
Jul 25	W	NNW	E	ESE	SE	WSW	SW	SSW	SW	SW	SW	SW	SW	SW	SSW	SSW	SSW	SSW	SSW	S	S	SSW	S	215	SSW	
Jul 26	WSW	W	W	W	WNW	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	W	WNW	W	WSW	W	WSW	NE	NE	NE	NNE	285	WNW	
Jul 27	NNE	NE	NNE	N	N	N	NNE	N	N	N	ENE	ENE	ENE	E	E	E	E	SE	SSE	SE	SE	ESE	ESE	68	ENE	
Jul 28	ENE	E	E	E	E	ENE	E	SSE	S	SSW	S	SSE	SSE	SE	SSE	S	SSW	SSW	SSW	SSE	SE	ESE	ESE	148	SE	
Jul 29	SE	SE	SE	SE	SE	ESE	ESE	SSE	SSE	SSE	SSE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	E	131	SE	
Jul 30	ESE	ESE	ESE	E	ESE	SE	ESE	SE	SSE	SSE	SSE	SSE	SSE	SE	SE	S	S	SSW	SSW	SSW	SSW	W	WSW	144	SE	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	NA	NA	

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error      **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Machine Malfunction/Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Peace River Area Monitoring Program**

**Reno-B Station - July 2023**

**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector**

WIND SPEED					
Maximum Hourly Value:	28.2	kph	on Jul 2 at hr 10	Hours in Service:	744
Maximum Daily Value:	15.1	kph	on Jul 2	Hours of Data:	708
Minimum Hourly Value:	0.2	kph	on Jul 25 at hr 4	Hours of Missing Data:	36
Minimum Daily Value:	4.5	kph	on Jul 15	Hours of Calibration:	0
Monthly Average:	2.9	kph		Operational Uptime:	95.2

WIND DIRECTION	
Monthly Average:	215 degree (SSW)

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	4.7	4.8	4.9	4.6	7.8	6.8	8.2	13.2	16.4	16.3	16.7	15.1	15.5	14.6	10.9	7.6	5.4	2.9	9.0	4.4	5.8	9.6	9.3	2.9	16.7	9.6		
Jul 2	12.0	10.2	12.6	9.8	K	11.3	14.2	K	19.5	24.1	28.2	22.7	23.1	K	22.2	19.0	10.7	8.4	9.3	11.9	10.7	12.1	12.5	12.2	8.4	28.2	15.1	
Jul 3	11.3	12.1	13.1	11.6	9.8	10.9	11.5	11.0	15.8	17.6	16.6	11.8	10.7	11.1	9.3	10.8	11.6	13.8	7.7	1.7	8.0	4.7	4.7	3.2	1.7	17.6	10.4	
Jul 4	4.4	4.9	2.8	4.8	3.0	4.3	4.7	3.3	4.6	7.5	8.2	8.7	8.9	8.3	9.6	8.5	8.5	7.6	8.1	5.7	5.2	7.4	9.9	11.4	2.8	11.4	6.7	
Jul 5	11.4	11.6	8.0	4.9	7.2	6.7	10.1	8.7	8.6	8.6	10.8	13.6	15.1	15.5	13.8	9.8	7.6	13.3	7.7	5.5	4.3	5.4	2.4	7.5	2.4	15.5	9.1	
Jul 6	8.2	3.3	2.2	3.3	3.1	0.6	4.2	5.0	6.9	8.5	6.7	7.5	9.8	9.7	8.1	9.0	6.5	9.3	11.4	5.5	3.8	6.9	8.7	7.6	0.6	11.4	6.5	
Jul 7	8.0	8.9	9.5	8.5	11.4	9.5	7.0	7.5	3.2	4.7	2.8	6.1	2.9	2.9	8.1	8.8	9.0	8.6	5.8	2.6	0.9	3.9	2.8	4.1	0.9	11.4	6.1	
Jul 8	5.5	3.0	4.0	3.3	4.5	6.4	6.6	10.1	8.1	8.9	6.1	7.0	K	7.1	9.0	10.6	9.9	8.0	6.6	4.4	K	6.0	6.0	5.8	3.0	10.6	6.7	
Jul 9	3.5	5.6	6.5	3.4	3.9	5.1	4.8	7.6	8.3	K	9.1	9.3	10.8	9.4	9.5	10.2	7.4	3.9	1.0	4.3	5.5	6.1	5.5	6.5	1.0	10.8	6.4	
Jul 10	9.5	11.0	13.6	11.3	11.1	12.6	8.9	9.6	13.4	9.3	6.8	7.6	6.6	8.0	11.6	13.8	10.4	13.2	8.4	13.6	10.4	5.2	6.0	2.3	2.3	13.8	9.8	
Jul 11	0.6	4.6	7.1	7.3	7.3	8.9	8.2	10.0	11.0	12.1	8.9	6.2	5.0	6.7	6.1	6.0	8.3	11.0	8.9	5.7	6.1	5.3	4.8	7.4	0.6	12.1	7.2	
Jul 12	6.8	4.8	6.6	4.8	0.9	2.9	2.1	2.1	1.8	7.1	K	9.4	8.9	10.8	10.2	11.1	6.3	15.4	6.2	1.2	2.5	5.2	4.0	2.2	0.9	15.4	5.8	
Jul 13	2.8	1.5	3.3	0.3	1.7	4.0	4.6	5.3	8.0	12.1	K	K	K	K	11.5	13.2	13.4	15.5	13.7	8.4	6.0	8.0	7.5	4.2	5.0	0.3	15.5	7.1
Jul 14	5.8	6.2	5.3	4.3	2.7	0.7	1.3	5.2	5.4	5.5	6.4	6.8	8.3	8.6	7.2	7.4	7.7	8.9	9.8	7.7	6.3	5.5	5.0	4.6	0.7	9.8	5.9	
Jul 15	2.0	5.3	3.1	3.3	3.5	4.4	4.1	4.8	1.4	3.6	1.8	3.5	6.4	7.8	7.6	9.0	8.2	7.7	3.1	3.0	6.5	4.2	2.9	1.4	1.4	9.0	4.5	
Jul 16	0.9	7.6	10.4	5.1	3.6	4.1	9.0	9.5	10.0	10.4	13.5	12.9	12.2	11.1	11.7	8.6	8.7	11.1	8.0	9.3	7.1	8.0	9.0	11.9	0.9	13.5	8.9	
Jul 17	19.0	14.5	4.2	5.1	7.9	3.4	8.2	12.4	13.5	13.2	14.3	12.7	9.1	11.1	9.1	12.9	12.7	16.3	14.4	10.6	6.1	7.4	8.9	8.1	3.4	19.0	10.6	
Jul 18	6.9	8.1	7.8	6.5	6.7	5.9	7.0	8.0	11.6	16.4	15.3	17.7	20.2	17.2	19.2	22.9	24.6	20.3	15.7	13.6	6.6	6.3	7.2	4.9	4.9	24.6	12.4	
Jul 19	6.4	7.7	6.1	6.7	7.8	6.6	6.1	9.3	11.4	11.2	11.4	11.6	K	13.3	K	15.8	16.2	15.3	K	6.7	4.4	1.2	2.9	3.8	1.2	16.2	8.7	
Jul 20	4.5	4.0	4.2	1.2	1.9	2.6	2.3	1.9	3.1	2.7	3.9	7.2	7.4	8.3	8.6	9.9	8.9	8.0	7.6	4.6	2.9	0.4	2.4	3.4	0.4	9.9	4.7	
Jul 21	6.2	5.5	5.3	6.2	1.4	5.7	6.6	7.3	3.5	2.9	K	5.3	4.6	3.3	6.2	1.5	4.2	7.4	5.6	4.2	8.8	9.6	9.0	9.5	1.4	9.6	5.6	
Jul 22	11.7	7.6	2.7	3.9	7.4	8.2	8.3	6.4	3.6	6.6	6.7	7.1	9.0	7.3	6.0	2.2	7.7	K	5.9	3.5	10.2	14.0	24.2	20.6	2.2	24.2	8.3	
Jul 23	18.2	7.0	5.6	9.1	12.0	2.4	4.1	5.0	7.4	4.2	K	6.5	7.8	6.6	5.5	6.9	6.1	8.6	5.6	3.8	0.7	2.1	2.6	2.6	0.7	18.2	6.1	
Jul 24	3.2	5.5	5.1	6.0	5.5	4.1	1.3	1.8	3.8	6.9	4.5	5.4	0.4	7.5	13.4	20.1	19.8	16.8	12.3	10.0	9.6	9.6	10.7	3.4	0.4	20.1	7.8	
Jul 25	7.8	1.5	2.9	1.3	0.2	2.5	5.7	11.4	12.5	14.3	15.5	20.8	25.5	27.4	25.5	24.3	20.2	18.5	22.2	20.1	16.5	14.2	13.3	17.3	0.2	27.4	14.2	
Jul 26	16.2	22.9	21.9	17.4	16.6	15.6	16.2	15.5	16.0	16.0	15.7	13.2	18.9	18.5	20.8	15.3	7.6	9.0	10.8	3.4	2.2	5.5	5.7	4.7	2.2	22.9	13.6	
Jul 27	4.9	4.3	4.7	6.5	7.3	6.2	5.9	6.0	6.4	5.9	6.5	12.8	14.7	11.5	12.0	11.5	12.0	10.9	11.6	8.0	5.5	5.8	6.1	6.7	4.3	14.7	8.1	
Jul 28	8.3	7.8	7.5	7.9	6.3	3.9	2.4	4.6	4.8	5.3	4.9	9.8	10.9	12.4	8.3	9.7	11.0	8.9	9.3	5.7	5.5	9.0	7.6	9.7	2.4	12.4	7.6	
Jul 29	10.0	9.7	8.8	10.1	9.1	9.0	9.2	9.7	12.3	12.3	12.1	11.0	12.3	11.3	11.5	11.8	11.4	11.7	11.4	9.3	8.2	9.5	10.8	11.9	8.2	12.3	10.6	
Jul 30	10.1	11.2	11.3	9.5	9.3	11.8	8.8	7.5	11.6	9.7	8.7	11.5	5.6	2.6	4.2	8.7	8.5	9.9	7.2	6.0	8.0	K	K	K	2.6	11.8	8.7	
Jul 31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	16.3	14.8	12.5	5.6	6.9	6.4	3.2	3.2	16.3	NA	

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint(Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

PRC STATION

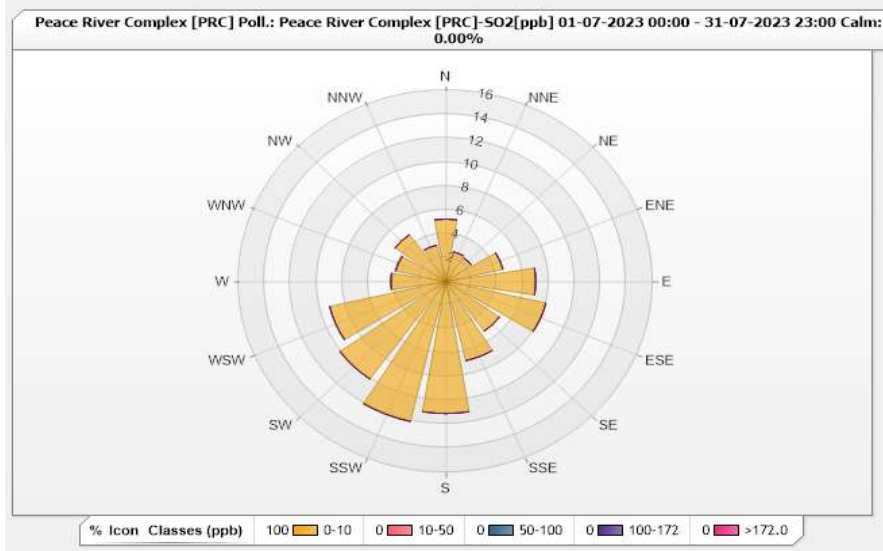


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.89%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	5.24	0	0	0	0	5.24
NNE	2.55	0	0	0	0	2.55
NE	2.41	0	0	0	0	2.41
ENE	4.53	0	0	0	0	4.53
E	6.94	0	0	0	0	6.94
ESE	7.93	0	0	0	0	7.93
SE	5.1	0	0	0	0	5.1
SSE	6.8	0	0	0	0	6.8
S	11.05	0	0	0	0	11.05
SSW	12.04	0	0	0	0	12.04
SW	10.06	0	0	0	0	10.06
WSW	9.21	0	0	0	0	9.21
W	4.25	0	0	0	0	4.25
WNW	3.97	0	0	0	0	3.97
NW	4.82	0	0	0	0	4.82
NNW	3.12	0	0	0	0	3.12
Summary	100	0	0	0	0	100

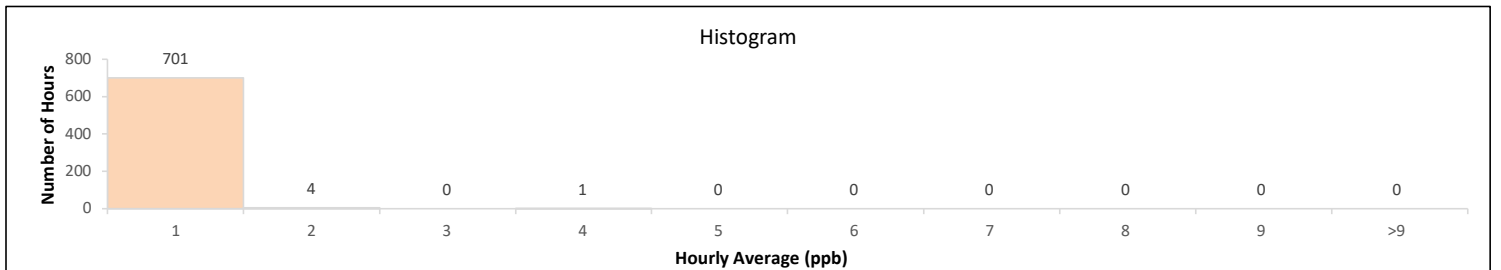
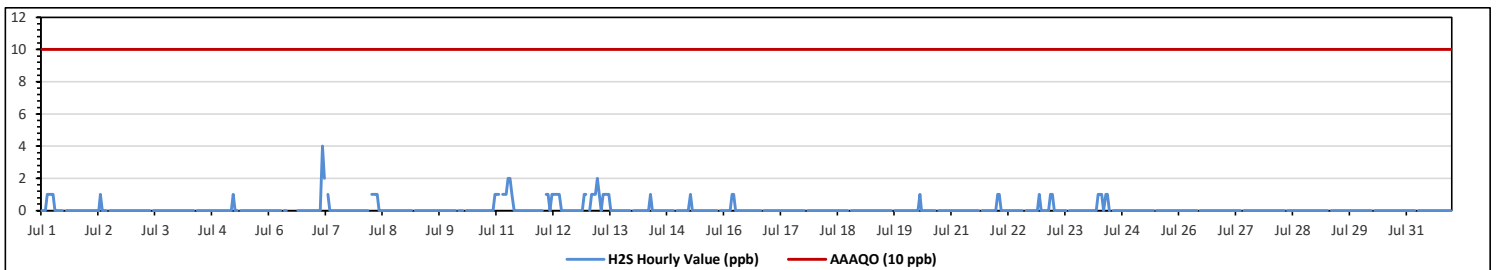




**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**HYDROGEN SULPHIDE (H<sub>2</sub>S) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb																											
Number of 1-Hour Exceedances:												0															
Number of 24-Hour Exceedances:												0															
Maximum Hourly Value:	4	ppb	on Jul 7 at hr 4																		Hours in Service:	744					
Maximum Daily Value:	0.0	ppb	on Jul 1																		Hours of Data:	706					
Minimum Hourly Value:	0	ppb	on Jul 1 at hr 0																		Hours of Missing Data:	1					
Minimum Daily Value:	0.0	ppb	on Jul 1																		Hours of Calibration:	37					
Monthly Average:	0.1	ppb																			Operational Uptime:	99.9					
Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Jul 1	0	0	0	1	1	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jul 2	0	0	0	0	0	0	0	1	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jul 3	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 4	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 5	0	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jul 6	0	0	0	0	0	0	0	S	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 7	0	0	0	0	4	2	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.0
Jul 8	0	0	0	0	0	S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jul 9	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 10	0	0	0	S	0	0	0	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.0
Jul 11	1	1	S	1	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.0
Jul 12	0	S	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.0
Jul 13	S	0	1	1	1	2	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	2	0.0
Jul 14	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	1	0.0
Jul 15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	0.0
Jul 16	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	0.0
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Jul 20	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	0.0
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0
Jul 22	1	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0	0	1	0.0
Jul 23	0	0	0	0	1	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jul 24	0	0	0	0	0	1	1	1	1	0	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jul 25	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 26	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 27	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 28	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 29	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 30	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 31	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Dial Maximum	1	1	1	1	4	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1			
Dial Average	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.3	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1			
<b>C</b>	Monthly Calibration												<b>S</b>	Daily Zero-Span Check						<b>Q</b>	Quality Assurance						
<b>K</b>	Collection Error												<b>ND</b>	No Data (Machine Not in Service)						<b>Y</b>	Routine Maintenance						
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)												<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)						<b>P</b>	Power Failure						

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

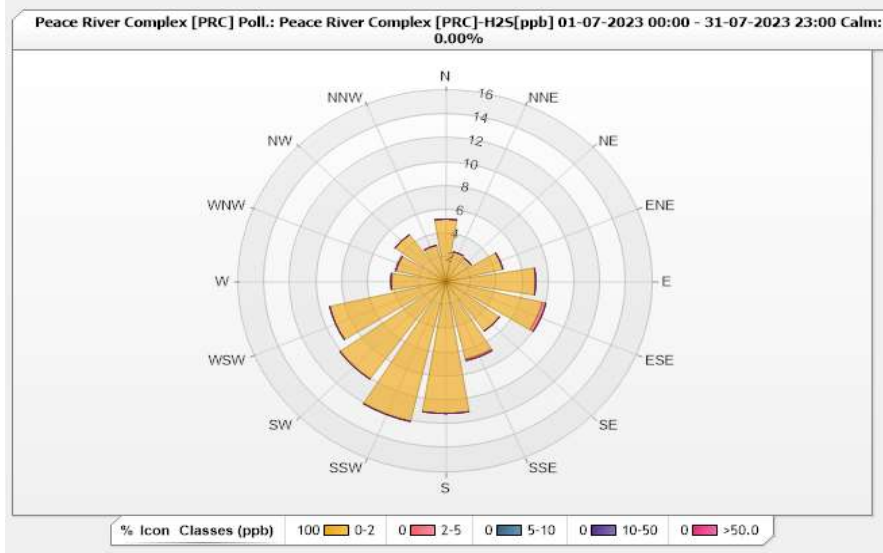


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-H2S[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.89%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	5.24	0	0	0	0	5.24
NNE	2.55	0	0	0	0	2.55
NE	2.41	0	0	0	0	2.41
ENE	4.53	0	0	0	0	4.53
E	6.94	0	0	0	0	6.94
ESE	7.65	0.28	0	0	0	7.93
SE	5.1	0	0	0	0	5.1
SSE	6.66	0.14	0	0	0	6.8
S	11.05	0	0	0	0	11.05
SSW	12.04	0	0	0	0	12.04
SW	10.06	0	0	0	0	10.06
WSW	9.21	0	0	0	0	9.21
W	4.25	0	0	0	0	4.25
WNW	3.97	0	0	0	0	3.97
NW	4.82	0	0	0	0	4.82
NNW	3.12	0	0	0	0	3.12
Summary	100	0.42	0	0	0	100



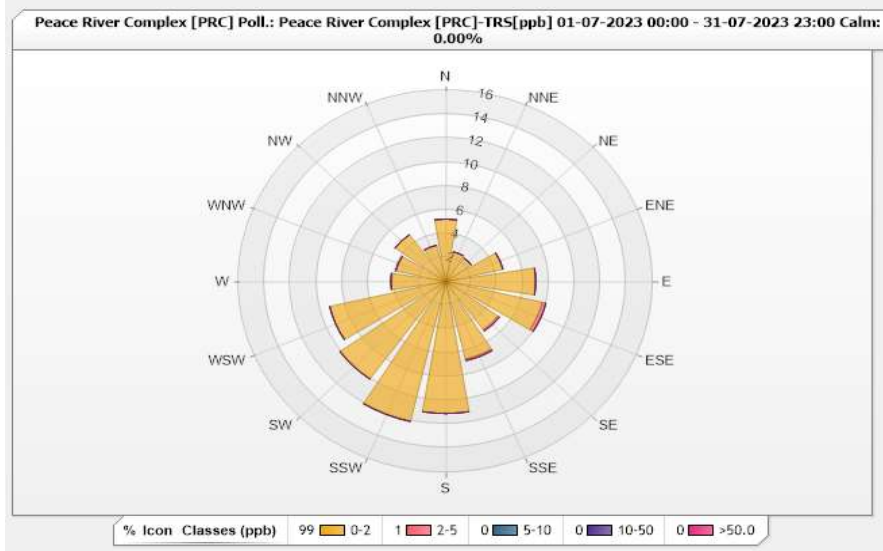


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.89%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	5.24	0	0	0	0	5.24
NNE	2.55	0	0	0	0	2.55
NE	2.41	0	0	0	0	2.41
ENE	4.53	0	0	0	0	4.53
E	6.94	0	0	0	0	6.94
ESE	7.65	0.28	0	0	0	7.93
SE	4.96	0.14	0	0	0	5.1
SSE	6.66	0.14	0	0	0	6.8
S	11.05	0	0	0	0	11.05
SSW	12.04	0	0	0	0	12.04
SW	10.06	0	0	0	0	10.06
WSW	9.21	0	0	0	0	9.21
W	4.25	0	0	0	0	4.25
WNW	3.97	0	0	0	0	3.97
NW	4.82	0	0	0	0	4.82
NNW	3.12	0	0	0	0	3.12
Summary	99.46	0.56	0	0	0	100



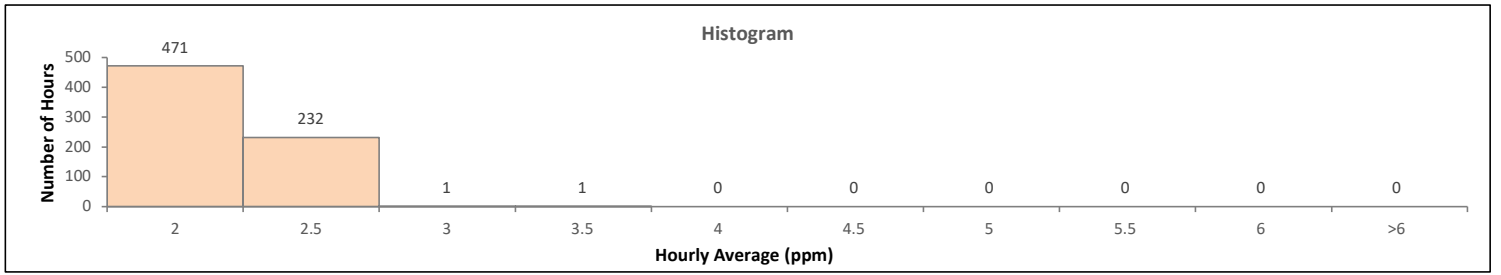
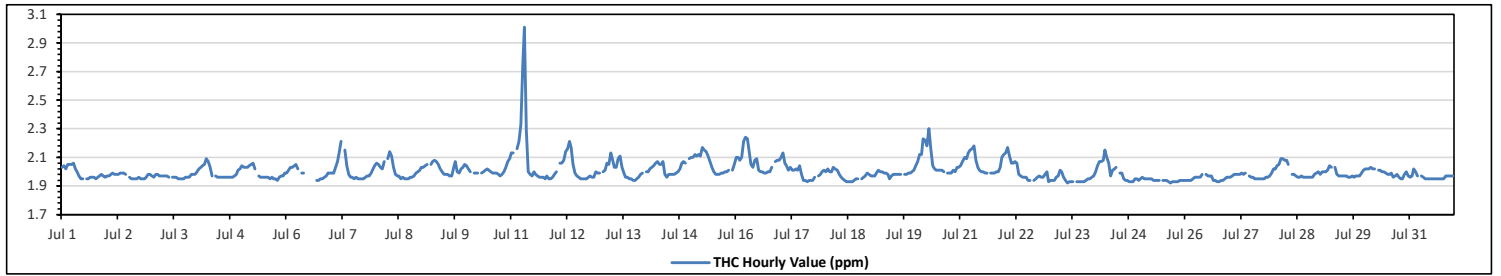
**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**TOTAL HYDROCARBONS (THC) in ppm**

Maximum Hourly Value:	3.01 ppm	on Jul 11 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.11 ppm	on Jul 11	Hours of Data:	705
Minimum Hourly Value:	1.92 ppm	on Jul 23 at hr 9	Hours of Missing Data:	1
Minimum Daily Value:	1.94 ppm	on Jul 25	Hours of Calibration:	38
Monthly Average:	2.00 ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
Jul 1	2.03	2.04	2.02	2.05	2.05	2.05	2.06	2.02	2.00	1.97	1.95	1.95	S	1.95	1.95	1.96	1.96	1.96	1.95	1.96	1.97	1.98	1.97	1.96	1.95	2.06	1.99	
Jul 2	1.97	1.97	1.98	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.98	S	1.96	1.95	1.95	1.95	1.95	1.96	1.95	1.95	1.96	1.98	1.98	1.98	1.95	1.99	1.97	
Jul 3	1.97	1.96	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.96	S	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.98	1.98	1.98	1.95	1.98	1.97	
Jul 4	2.00	2.02	2.03	2.04	2.05	2.09	2.07	2.03	1.97	S	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.98	2.01	2.02	1.96	2.09	2.00	
Jul 5	2.04	2.03	2.03	2.03	2.04	2.05	2.06	2.02	S	1.97	1.96	1.96	1.96	1.96	1.96	1.95	1.96	1.95	1.95	1.94	1.96	1.97	1.97	1.99	1.94	2.06	1.99	
Jul 6	1.99	2.01	2.03	2.03	2.04	2.05	2.02	S	1.99	1.99	C	C	C	C	C	C	1.94	1.94	1.95	1.95	1.96	1.97	1.99	1.99	1.94	2.05	NA	
Jul 7	1.99	1.99	2.03	2.07	2.13	2.21	S	2.15	2.04	1.98	1.96	1.96	1.95	1.96	1.95	1.95	1.95	1.95	1.96	1.97	1.97	1.99	2.02	2.04	1.95	2.21	2.01	
Jul 8	2.06	2.05	2.03	2.02	2.07	S	2.09	2.14	2.11	2.03	1.98	1.97	1.97	1.95	1.96	1.95	1.95	1.95	1.96	1.96	1.97	1.99	2.00	2.01	1.95	2.14	2.01	
Jul 9	2.03	2.03	2.04	2.05	S	2.05	2.07	2.08	1.97	S	2.02	2.00	1.98	1.98	1.98	1.97	1.97	2.02	2.07	2.00	1.99	2.02	2.03	2.05	1.97	2.08	2.02	
Jul 10	2.04	2.02	2.00	S	1.99	1.99	1.99	NRM	1.99	2.00	2.01	2.02	2.01	2.00	1.99	1.99	1.99	1.98	1.97	1.98	2.00	2.03	2.07	2.09	1.97	2.09	2.01	
Jul 11	2.13	2.13	S	2.16	2.21	2.33	2.75	3.01	2.29	2.00	1.98	1.97	2.00	1.98	1.97	1.96	1.96	1.95	1.95	1.97	1.95	1.96	1.98	1.95	3.01	2.11		
Jul 12	2.00	S	2.06	2.06	2.08	2.14	2.16	2.21	2.17	2.05	1.99	1.97	1.96	1.95	1.95	1.95	1.95	1.96	1.97	1.96	1.96	2.00	1.99	1.99	1.95	2.21	2.02	
Jul 13	S	2.00	2.01	2.06	2.05	2.13	2.08	2.03	2.03	2.09	2.11	2.03	1.99	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.96	1.98	1.99	S	1.94	2.13	2.01	
Jul 14	2.00	2.00	2.02	2.03	2.04	2.06	2.07	2.05	2.07	1.98	1.98	1.96	1.98	1.98	1.98	1.98	1.99	2.00	2.02	2.06	2.07	2.06	S	2.09	1.96	2.09	2.02	
Jul 15	2.10	2.10	2.12	2.11	2.12	2.11	2.17	2.15	2.14	2.11	2.07	2.03	2.00	1.98	1.98	1.98	1.99	1.99	2.00	2.00	2.01	S	2.01	2.05	1.98	2.17	2.06	
Jul 16	2.10	2.10	2.08	2.10	2.21	2.24	2.23	2.13	2.05	2.03	2.08	2.09	2.01	2.00	2.00	1.99	1.99	2.00	2.00	2.03	S	2.07	2.08	2.08	1.99	2.24	2.07	
Jul 17	2.10	2.13	2.06	2.04	2.01	2.03	2.01	2.01	2.02	2.01	2.04	1.98	1.94	1.94	1.93	1.94	1.94	1.94	1.96	S	1.97	1.98	2.00	2.01	1.93	2.13	2.00	
Jul 18	2.00	2.02	2.00	2.00	2.03	2.02	2.01	1.98	1.96	1.95	1.94	1.93	1.93	1.93	1.94	1.94	1.95	S	S	1.95	1.96	1.97	1.99	1.98	1.93	2.03	1.97	
Jul 19	1.97	1.97	1.97	1.99	2.01	2.00	2.00	1.99	1.99	1.98	1.95	1.97	1.98	1.98	1.98	1.98	1.98	S	1.98	1.98	1.99	1.99	2.00	2.01	1.95	2.01	1.98	
Jul 20	2.04	2.07	2.12	2.12	2.23	2.22	2.18	2.30	2.16	2.04	2.02	2.01	2.01	2.01	2.01	2.00	S	1.99	1.99	1.99	2.01	2.00	2.03	2.03	1.99	2.30	2.07	
Jul 21	2.04	2.07	2.10	2.09	2.13	2.15	2.16	2.18	2.08	2.03	2.01	2.00	2.00	1.99	1.99	S	1.99	1.99	2.00	2.00	2.00	2.03	2.10	2.12	1.99	2.18	2.05	
Jul 22	2.13	2.17	2.11	2.06	2.06	2.07	2.06	1.98	1.97	1.96	1.96	1.96	1.94	1.94	S	1.94	1.95	1.96	1.97	1.96	1.96	1.96	2.00	1.93	1.93	2.17	2.00	
Jul 23	1.94	1.94	1.94	1.96	1.97	2.01	2.00	1.96	1.94	1.92	1.93	1.93	S	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.95	1.96	1.97	1.92	2.01	1.95	1.95	
Jul 24	2.00	2.04	2.07	2.07	2.08	2.15	2.10	2.06	1.97	2.01	2.02	2.03	S	1.99	1.99	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.95	1.95	1.94	1.93	2.15	2.00
Jul 25	1.95	1.96	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	S	1.94	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.94	1.94	1.94	1.92	1.96	1.94	
Jul 26	1.94	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.96	1.98	S	1.98	1.97	1.97	1.97	1.94	1.94	1.93	1.93	1.94	1.94	1.95	1.96	1.96	1.93	1.98	1.95
Jul 27	1.96	1.97	1.98	1.98	1.98	1.98	1.99	1.98	1.99	S	1.97	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.97	1.99	2.02	1.95	2.02	1.97	
Jul 28	2.02	2.04	2.05	2.09	2.09	2.08	2.08	2.05	S	1.98	1.98	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.98	1.99	2.00	1.96	2.09	2.00	
Jul 29	1.98	2.00	2.00	2.00	2.01	2.04	2.03	S	2.03	1.98	1.97	1.97	1.97	1.97	1.96	1.96	1.97	1.96	1.97	1.96	1.97	1.97	1.99	2.01	1.96	2.04	1.99	
Jul 30	2.02	2.02	2.02	2.03	2.02	S	2.01	2.01	2.00	2.00	1.99	1.98	1.98	1.99	1.96	1.97	1.98	1.96	1.95	1.95	1.95	1.98	2.00	1.97	1.95	2.03	1.99	
Jul 31	1.96	1.97	2.02	2.00	1.97	S	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.97	1.97	1.97	1.97	1.95	2.02	1.96	
Diurnal Maximum	2.13	2.17	2.12	2.16	2.23	2.33	2.75	3.01	2.29	2.11	2.11	2.09	2.01	2.01	2.01	2.00	1.99	2.02	2.07	2.06	2.07	2.07	2.10	2.12				
Diurnal Average	2.02	2.03	2.03	2.04	2.05	2.07	2.08	2.03	2.00	1.99	1.98	1.97	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.98	2.00	2.01				

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

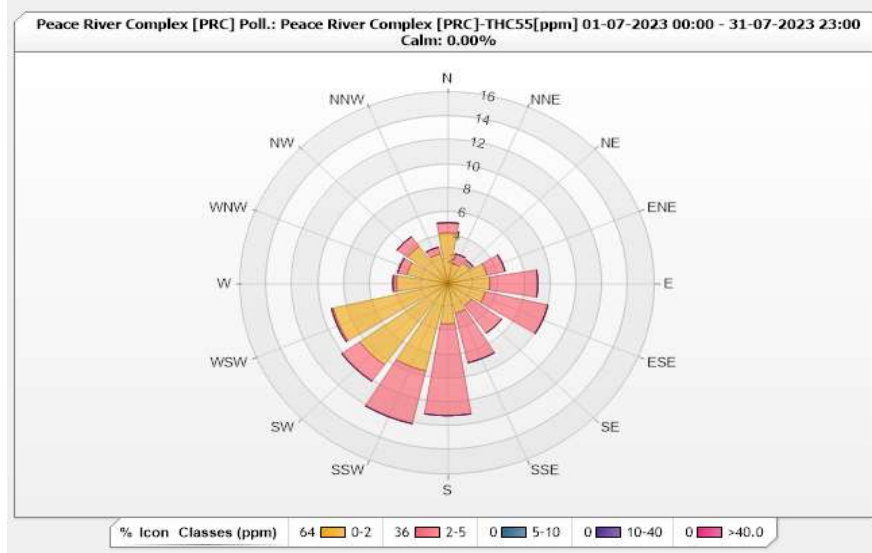


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-THC55[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.76%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	4.26	0.85	0	0	0	5.11
NNE	1.7	0.85	0	0	0	2.55
NE	2.13	0.28	0	0	0	2.41
ENE	3.12	1.42	0	0	0	4.54
E	3.26	3.69	0	0	0	6.95
ESE	2.98	4.96	0	0	0	7.94
SE	2.27	2.84	0	0	0	5.11
SSE	2.55	4.26	0	0	0	6.81
S	3.4	7.66	0	0	0	11.06
SSW	7.52	4.54	0	0	0	12.06
SW	8.37	1.7	0	0	0	10.07
WSW	9.08	0.14	0	0	0	9.22
W	3.97	0.28	0	0	0	4.25
WNW	3.26	0.71	0	0	0	3.97
NW	3.83	0.99	0	0	0	4.82
NNW	2.55	0.57	0	0	0	3.12
Summary	64.25	35.74	0	0	0	100



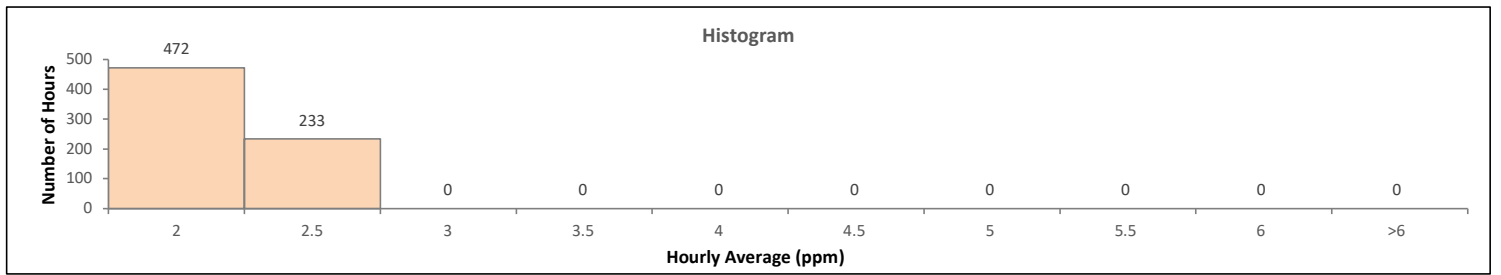
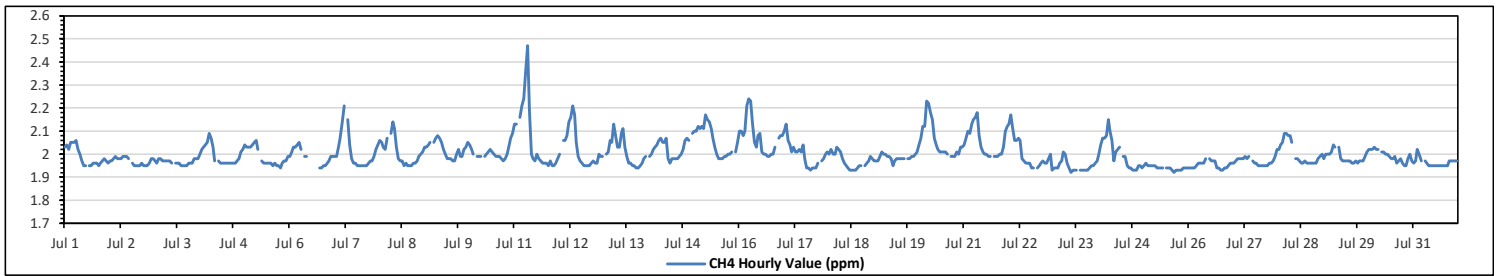
**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**METHANE (CH4) in ppm**

Maximum Hourly Value:	2.47 ppm	on Jul 11 at hr 7	Hours in Service:	744
Maximum Daily Value:	2.07 ppm	on Jul 16	Hours of Data:	705
Minimum Hourly Value:	1.92 ppm	on Jul 23 at hr 9	Hours of Missing Data:	1
Minimum Daily Value:	1.94 ppm	on Jul 25	Hours of Calibration:	38
Monthly Average:	2.00 ppm		Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Jul 1	2.03	2.04	2.02	2.05	2.05	2.05	2.06	2.02	2.00	1.97	1.95	1.95	S	1.95	1.95	1.96	1.96	1.96	1.95	1.96	1.97	1.98	1.97	1.96	1.95	2.06	1.99		
Jul 2	1.97	1.97	1.98	1.99	1.98	1.98	1.98	1.99	1.99	1.99	1.98	S	1.96	1.95	1.95	1.95	1.95	1.96	1.95	1.95	1.95	1.96	1.98	1.98	1.98	1.99	1.97		
Jul 3	1.97	1.96	1.98	1.98	1.97	1.97	1.97	1.97	1.97	1.96	S	1.96	1.96	1.96	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.98	1.98	1.98	1.95	1.98	1.97		
Jul 4	2.00	2.02	2.03	2.04	2.05	2.09	2.07	2.03	1.97	S	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.98	2.01	2.02	1.96	2.09	2.00		
Jul 5	2.04	2.03	2.03	2.03	2.04	2.05	2.06	2.02	S	1.97	1.96	1.96	1.96	1.96	1.96	1.95	1.96	1.95	1.95	1.94	1.96	1.97	1.97	1.99	1.94	2.06	1.99		
Jul 6	1.99	2.01	2.03	2.03	2.04	2.05	2.02	S	1.99	1.99	C	C	C	C	C	C	1.94	1.94	1.95	1.95	1.96	1.97	1.99	1.99	1.94	2.05	NA		
Jul 7	1.99	1.99	2.03	2.07	2.13	2.21	S	2.15	2.04	1.98	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.97	1.97	1.99	2.02	2.04	1.95	2.21	2.01		
Jul 8	2.06	2.05	2.03	2.02	2.07	S	2.09	2.14	2.11	2.03	1.98	1.97	1.97	1.95	1.96	1.95	1.95	1.95	1.96	1.96	1.97	1.99	2.00	2.01	1.95	2.14	2.01		
Jul 9	2.03	2.03	2.04	2.05	S	2.05	2.07	2.08	1.97	S	2.02	2.00	1.98	1.98	1.98	1.97	1.97	2.00	2.02	1.99	1.99	2.02	2.03	2.05	1.97	2.08	2.02		
Jul 10	2.04	2.02	2.00	S	1.99	1.99	1.99	NRM	1.99	2.00	2.01	2.02	2.01	2.00	1.99	1.99	1.99	1.98	1.97	1.98	2.00	2.03	2.07	2.09	1.97	2.09	2.01		
Jul 11	2.13	2.13	S	2.16	2.21	2.24	2.36	2.47	2.18	2.00	1.98	1.97	2.00	1.98	1.97	1.96	1.96	1.96	1.95	1.97	1.95	1.96	1.98	1.95	2.47	2.06	1.98		
Jul 12	2.00	S	2.06	2.06	2.08	2.14	2.16	2.21	2.17	2.05	1.99	1.97	1.96	1.95	1.95	1.95	1.95	1.96	1.97	1.96	1.96	2.00	1.99	1.99	1.95	2.21	2.02		
Jul 13	S	2.00	2.01	2.06	2.05	2.13	2.08	2.03	2.03	2.09	2.11	2.03	1.99	1.96	1.96	1.95	1.95	1.94	1.94	1.95	1.96	1.98	1.99	S	1.94	2.13	2.01		
Jul 14	1.99	2.00	2.02	2.03	2.04	2.06	2.07	2.05	2.05	2.07	1.98	1.96	1.98	1.98	1.98	1.98	1.99	2.00	2.02	2.06	2.07	2.06	S	2.09	1.96	2.09	2.02		
Jul 15	2.10	2.10	2.12	2.11	2.12	2.11	2.17	2.15	2.14	2.11	2.07	2.03	2.00	1.98	1.98	1.98	1.99	1.99	2.00	2.00	2.01	S	2.01	2.05	1.98	2.17	2.06		
Jul 16	2.10	2.10	2.08	2.10	2.21	2.24	2.23	2.13	2.05	2.03	2.08	2.09	2.01	2.00	2.00	1.99	1.99	2.00	2.00	2.03	S	2.07	2.08	2.08	1.99	2.24	2.07		
Jul 17	2.10	2.13	2.06	2.04	2.01	2.03	2.01	2.01	2.02	2.01	2.04	1.98	1.94	1.94	1.93	1.94	1.94	1.94	1.96	S	1.97	1.98	2.00	2.01	1.93	2.13	2.00		
Jul 18	2.00	2.02	2.00	2.00	2.03	2.02	2.01	1.98	1.96	1.95	1.94	1.93	1.93	1.93	1.93	1.94	1.94	1.95	S	S	1.95	1.96	1.97	1.99	1.98	2.03	1.97		
Jul 19	1.97	1.97	1.97	1.99	2.01	2.00	2.00	1.99	1.99	1.98	1.95	1.97	1.98	1.98	1.98	1.98	1.98	1.98	S	1.98	1.98	1.99	1.99	2.00	2.01	1.95	2.01	1.98	
Jul 20	2.04	2.07	2.12	2.12	2.23	2.22	2.18	2.15	2.07	2.04	2.02	2.01	2.01	2.01	2.01	2.00	S	1.99	1.99	1.99	2.01	2.00	2.03	2.03	1.99	2.23	2.06		
Jul 21	2.04	2.07	2.10	2.09	2.13	2.15	2.16	2.18	2.08	2.03	2.01	2.00	2.00	1.99	1.99	S	1.99	1.99	2.00	2.00	2.00	2.00	2.10	2.12	1.99	2.18	2.05		
Jul 22	2.13	2.17	2.11	2.06	2.06	2.07	2.06	1.98	1.97	1.96	1.96	1.96	1.94	1.94	S	1.94	1.95	1.96	1.97	1.96	1.96	1.98	2.00	1.93	1.93	2.17	2.00		
Jul 23	1.94	1.94	1.94	1.96	1.97	2.01	2.00	1.96	1.94	1.92	1.93	1.93	S	1.93	1.93	1.93	1.93	1.93	1.93	1.94	1.95	1.95	1.96	1.97	1.92	2.01	1.95		
Jul 24	2.00	2.04	2.07	2.07	2.08	2.15	2.10	2.06	1.97	2.01	2.02	2.03	S	1.99	1.99	1.95	1.94	1.94	1.93	1.93	1.93	1.93	1.95	1.95	1.94	1.93	2.15	2.00	
Jul 25	1.95	1.96	1.95	1.95	1.95	1.95	1.95	1.94	1.94	1.94	1.94	S	1.94	1.94	1.94	1.93	1.92	1.93	1.93	1.93	1.93	1.94	1.94	1.94	1.92	1.96	1.94		
Jul 26	1.94	1.94	1.94	1.94	1.95	1.96	1.96	1.96	1.96	1.96	1.98	S	1.98	1.97	1.97	1.97	1.94	1.94	1.93	1.93	1.94	1.94	1.94	1.95	1.96	1.96	1.93	1.98	1.95
Jul 27	1.96	1.97	1.98	1.98	1.98	1.98	1.99	1.98	1.99	S	1.97	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.97	1.99	2.02	1.95	2.02	1.97		
Jul 28	2.02	2.04	2.05	2.09	2.09	2.08	2.08	2.05	S	1.98	1.98	1.97	1.96	1.96	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.98	1.99	2.00	1.96	2.09	2.00		
Jul 29	1.98	2.00	2.00	2.00	2.01	2.04	2.03	S	2.03	1.98	1.97	1.97	1.97	1.97	1.96	1.96	1.97	1.96	1.97	1.96	1.97	1.97	1.99	2.01	1.96	2.04	1.99		
Jul 30	2.02	2.02	2.02	2.03	2.02	S	2.01	2.01	2.00	2.00	1.99	1.98	1.98	1.99	1.96	1.97	1.98	1.96	1.95	1.95	1.98	2.00	1.97	1.95	2.03	1.99	1.99		
Jul 31	1.96	1.97	2.02	2.00	1.97	S	1.97	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.97	1.97	1.97	1.97	1.95	2.02	1.96		
Diurnal Maximum	2.13	2.17	2.12	2.16	2.23	2.24	2.36	2.47	2.18	2.11	2.11	2.09	2.01	2.01	2.01	2.00	1.99	2.00	2.02	2.06	2.07	2.07	2.10	2.12	1.94	2.24	2.12		
Diurnal Average	2.02	2.03	2.03	2.04	2.05	2.07	2.06	2.06	2.02	2.00	1.99	1.98	1.97	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.97	1.98	2.00	2.01	1.95	2.02	1.96		

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

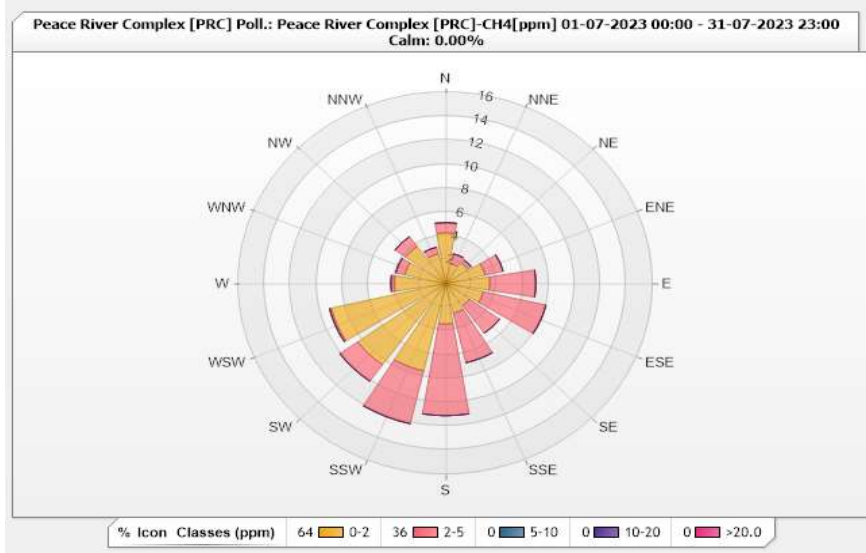


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.76%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	4.26	0.85	0	0	0	5.11
NNE	1.7	0.85	0	0	0	2.55
NE	2.13	0.28	0	0	0	2.41
ENE	3.12	1.42	0	0	0	4.54
E	3.4	3.55	0	0	0	6.95
ESE	2.98	4.96	0	0	0	7.94
SE	2.27	2.84	0	0	0	5.11
SSE	2.55	4.26	0	0	0	6.81
S	3.4	7.66	0	0	0	11.06
SSW	7.52	4.54	0	0	0	12.06
SW	8.37	1.7	0	0	0	10.07
WSW	9.08	0.14	0	0	0	9.22
W	3.97	0.28	0	0	0	4.25
WNW	3.26	0.71	0	0	0	3.97
NW	3.83	0.99	0	0	0	4.82
NNW	2.55	0.57	0	0	0	3.12
Summary	64.39	35.6	0	0	0	100





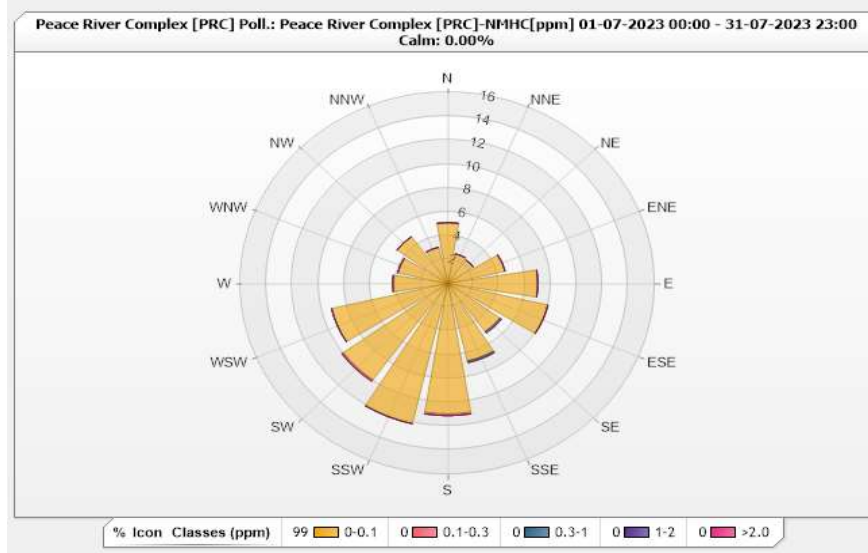


Station: Peace River Complex [PRC] Poll.: Peace River Complex [PRC]-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 94.76%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	5.11	0	0	0	0	5.11
NNE	2.55	0	0	0	0	2.55
NE	2.41	0	0	0	0	2.41
ENE	4.54	0	0	0	0	4.54
E	6.95	0	0	0	0	6.95
ESE	7.94	0	0	0	0	7.94
SE	4.96	0	0.14	0	0	5.1
SSE	6.67	0	0.14	0	0	6.81
S	10.92	0.14	0	0	0	11.06
SSW	12.06	0	0	0	0	12.06
SW	9.93	0.14	0	0	0	10.07
WSW	9.22	0	0	0	0	9.22
W	4.26	0	0	0	0	4.26
WNW	3.97	0	0	0	0	3.97
NW	4.82	0	0	0	0	4.82
NNW	3.12	0	0	0	0	3.12
Summary	99.43	0.28	0.28	0	0	100



**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**RELATIVE HUMIDITY (RH) in %**

Maximum Hourly Value:	100 %	on Jul 4 at hr 1	Hours in Service:	744
Maximum Daily Value:	98.0 %	on Jul 25	Hours of Data:	744
Minimum Hourly Value:	20 %	on Jul 7 at hr 15	Hours of Missing Data:	0
Minimum Daily Value:	46.1 %	on Jul 7	Hours of Calibration:	0
Monthly Average:	70.6 %		Operational Uptime:	100.0

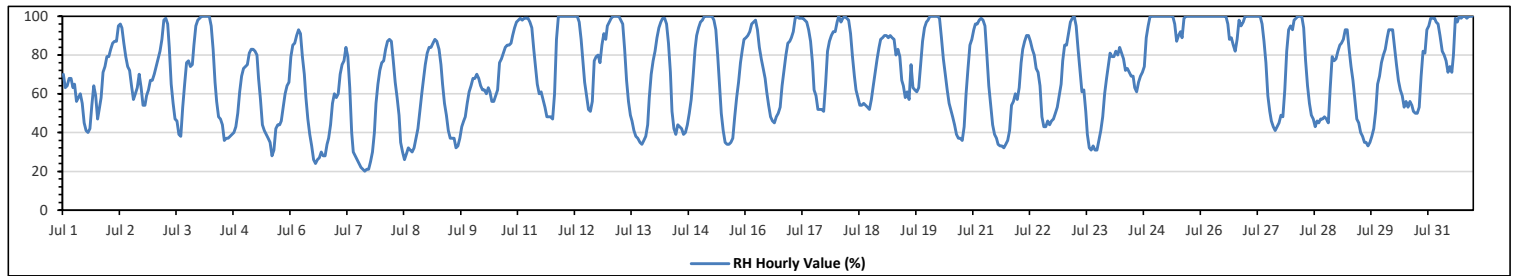
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	70	63	64	68	68	63	65	56	58	60	55	45	41	40	42	54	64	59	47	52	58	71	74	79	40	79	59.0	
Jul 2	79	83	86	87	87	95	96	94	86	79	74	72	64	57	60	63	70	63	54	59	62	67	67	67	54	96	73.3	
Jul 3	70	74	78	82	88	98	99	96	84	65	55	47	46	39	38	53	65	76	77	74	75	85	95	98	38	99	73.2	
Jul 4	99	100	100	100	100	100	95	83	66	56	48	47	44	36	37	37	38	39	40	43	50	61	69	73	36	100	65.0	
Jul 5	74	75	81	83	83	82	80	68	57	44	41	39	37	35	28	31	42	44	44	46	53	60	64	66	28	83	56.5	
Jul 6	79	85	86	90	93	91	79	70	58	47	39	33	26	24	26	27	30	28	28	34	37	44	55	60	24	93	52.9	
Jul 7	58	60	70	75	77	84	79	63	40	30	28	26	24	22	21	20	21	25	30	40	55	65	72	20	84	46.1		
Jul 8	76	77	83	87	88	87	77	66	58	49	35	30	26	29	32	31	30	32	37	42	51	60	67	75	26	88	55.2	
Jul 9	81	84	84	86	88	87	83	75	65	55	49	41	37	37	37	32	33	37	43	46	48	55	61	64	32	88	58.7	
Jul 10	68	68	70	68	64	62	62	60	63	61	56	56	59	62	76	78	81	84	85	85	86	90	94	97	56	97	72.3	
Jul 11	98	99	98	99	99	99	97	94	83	73	65	60	61	57	53	48	48	48	47	60	88	100	100	100	47	100	78.1	
Jul 12	100	100	100	100	100	100	100	100	97	88	76	66	59	52	51	56	77	79	80	76	85	91	88	95	51	100	84.0	
Jul 13	97	99	100	100	100	100	98	96	83	67	56	49	46	41	38	37	35	34	36	38	44	58	70	77	34	100	66.6	
Jul 14	82	89	94	97	99	99	96	86	71	51	42	39	44	43	42	39	40	44	50	57	69	83	90	94	39	99	68.3	
Jul 15	97	98	100	100	100	100	100	98	93	79	66	50	41	35	34	34	35	37	48	58	66	76	83	88	34	100	71.5	
Jul 16	89	90	92	96	97	98	93	84	78	73	68	61	54	48	46	45	48	50	53	64	72	80	86	87	45	98	73.0	
Jul 17	89	92	99	100	99	99	99	98	97	93	87	76	62	59	52	52	52	51	65	82	87	90	92	92	51	100	81.8	
Jul 18	97	100	97	99	100	99	98	91	79	69	62	58	54	54	55	54	53	52	57	64	71	78	84	88	52	100	75.5	
Jul 19	89	90	90	89	90	89	88	80	83	79	67	64	58	61	57	75	63	62	61	63	75	87	94	97	57	97	77.1	
Jul 20	98	100	100	100	100	100	99	89	78	70	62	55	52	48	44	39	37	37	36	43	60	73	85	88	36	100	70.5	
Jul 21	93	96	96	98	99	98	95	80	64	54	44	39	37	34	33	32	34	36	41	54	56	60	57	32	99	61.0		
Jul 22	63	76	83	87	90	90	87	83	80	73	71	64	48	43	43	46	44	46	47	50	53	59	65	77	43	90	65.3	
Jul 23	85	85	91	97	99	100	95	83	72	61	62	51	39	32	31	33	31	31	36	41	48	60	68	75	31	100	62.8	
Jul 24	81	79	79	82	80	84	81	78	72	73	71	69	69	63	61	66	69	71	74	89	95	100	100	100	61	100	78.6	
Jul 25	100	100	100	100	100	100	100	100	100	100	96	87	90	92	89	99	100	100	100	100	100	100	100	100	87	100	98.0	
Jul 26	100	100	100	100	100	100	100	100	100	100	100	100	100	100	96	88	89	85	82	88	98	95	97	100	82	100	96.6	
Jul 27	100	100	100	100	100	100	100	100	100	96	87	76	59	51	46	43	41	43	45	49	48	62	82	93	95	41	100	75.7
Jul 28	93	98	99	100	100	100	94	77	64	55	49	47	43	46	45	47	47	48	47	45	63	79	77	78	43	100	68.4	
Jul 29	82	85	86	88	93	93	83	74	67	57	47	45	40	38	35	33	35	38	42	51	65	69	76	33	93	60.7		
Jul 30	80	83	89	93	93	93	84	75	67	62	59	53	56	53	56	54	51	50	50	53	69	82	81	93	50	93	70.0	
Jul 31	95	99	99	99	97	96	90	82	80	77	71	74	71	80	99	97	100	99	100	100	99	100	100	100	71	100	91.8	
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	100	100	100	100	100	100	100	100	100	100	100	
Diurnal Average	85.9	88.0	90.1	91.9	92.6	93.1	90.1	83.2	75.5	67.3	60.5	54.9	50.9	48.6	48.4	49.8	51.6	52.3	53.9	58.3	66.6	75.4	80.4	84.1				

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



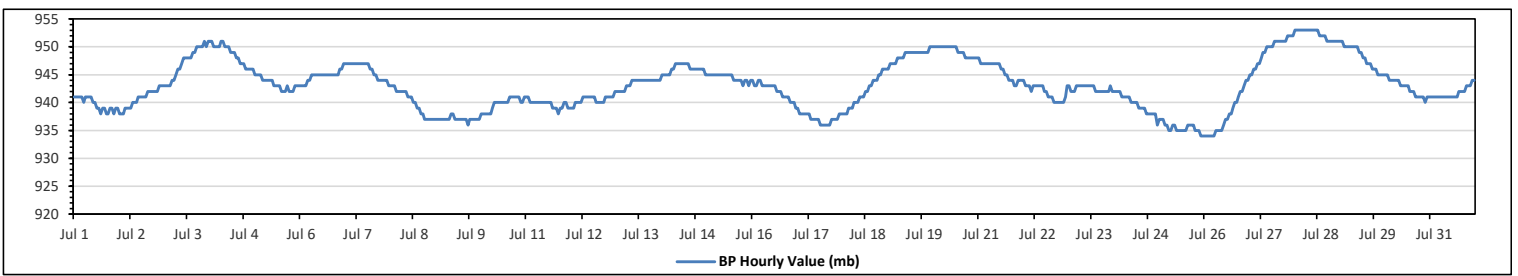
**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**  
**BAROMETRIC PRESSURE (BP) in millibar**

Maximum Hourly Value:	953	mb	on Jul 28 at hr 0	Hours in Service:	744
Maximum Daily Value:	952	mb	on Jul 28	Hours of Data:	744
Minimum Hourly Value:	934	mb	on Jul 25 at hr 22	Hours of Missing Data:	0
Minimum Daily Value:	936	mb	on Jul 25	Hours of Calibration:	0
Monthly Average:	943	mb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Jul 1	941	941	941	941	941	940	941	941	941	941	940	940	939	939	938	939	939	938	938	939	939	938	939	939	938	941	940	940	
Jul 2	938	938	938	939	939	939	939	940	940	940	941	941	941	941	941	942	942	942	942	942	942	943	943	943	938	943	941	941	
Jul 3	943	943	943	943	944	944	945	946	946	947	948	948	948	948	948	949	949	950	950	950	950	951	950	951	943	951	947	947	
Jul 4	951	951	950	950	950	950	951	951	950	950	950	949	949	949	948	948	947	947	947	946	946	946	946	946	946	946	951	949	949
Jul 5	945	945	945	945	944	944	944	944	944	944	943	943	943	943	942	942	943	942	942	942	942	943	943	943	942	945	943	943	
Jul 6	943	943	943	943	944	944	945	945	945	945	945	945	945	945	945	945	945	945	945	945	945	945	946	946	947	943	947	945	
Jul 7	947	947	947	947	947	947	947	947	947	947	947	947	947	946	946	945	945	944	944	944	944	944	944	944	943	947	946	946	
Jul 8	943	943	943	942	942	942	942	942	942	941	941	941	940	940	939	939	938	938	937	937	937	937	937	937	937	943	940	940	
Jul 9	937	937	937	937	937	937	937	937	938	938	937	937	937	937	937	937	937	936	937	937	937	937	937	937	936	938	937	937	
Jul 10	938	938	938	938	938	938	939	940	940	940	940	940	940	940	940	941	941	941	941	941	941	941	940	940	941	938	941	940	
Jul 11	941	941	940	940	940	940	940	940	940	940	940	940	940	940	939	939	939	938	939	939	940	940	939	939	938	941	940	940	
Jul 12	939	939	940	940	940	940	941	941	941	941	941	941	941	940	940	940	940	941	941	941	941	941	941	941	941	939	942	941	
Jul 13	942	942	942	942	942	943	943	943	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	942	944	943	943	
Jul 14	945	945	945	945	945	946	946	947	947	947	947	947	947	947	947	946	946	946	946	946	946	946	946	946	945	947	946	946	
Jul 15	945	945	945	945	945	945	945	945	945	945	945	945	945	945	944	944	944	944	944	943	944	944	943	944	943	945	945	945	
Jul 16	944	943	943	944	944	943	943	943	943	943	943	943	943	942	942	942	941	941	941	941	941	940	940	939	939	944	942	942	
Jul 17	939	938	938	938	938	938	938	937	937	937	937	937	936	936	936	936	936	936	937	937	937	937	937	937	936	939	937	937	
Jul 18	938	938	938	939	939	939	940	940	940	941	941	941	942	942	943	943	944	944	944	944	945	945	946	946	946	938	946	942	
Jul 19	946	947	947	947	947	948	948	948	948	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	946	950	948	948	
Jul 20	950	950	950	950	950	950	950	950	950	950	950	950	950	949	949	949	949	948	948	948	948	948	948	948	948	948	948	949	
Jul 21	948	947	947	947	947	947	947	947	947	947	947	947	946	946	945	945	944	944	944	943	943	943	944	944	943	948	946	946	
Jul 22	944	943	943	943	942	943	943	943	943	943	943	942	942	941	941	941	940	940	940	940	940	940	940	941	943	940	944	942	
Jul 23	943	942	942	942	943	943	943	943	943	943	943	943	943	943	942	942	942	942	942	942	942	942	942	942	942	942	943	943	
Jul 24	942	942	942	942	941	941	941	941	941	940	940	939	939	939	939	939	938	938	938	938	938	938	938	938	936	942	940	940	
Jul 25	937	937	937	936	936	935	935	936	936	935	935	935	935	935	935	936	936	936	936	936	935	935	935	934	934	934	937	936	
Jul 26	934	934	934	934	934	934	935	935	935	935	936	937	937	938	938	939	940	940	941	942	942	942	942	944	944	934	944	938	
Jul 27	945	945	946	946	947	947	948	949	949	950	950	950	950	951	951	951	951	951	951	951	952	952	952	952	945	952	949	949	
Jul 28	953	953	953	953	953	953	953	953	953	953	953	953	953	952	952	952	952	951	951	951	951	951	951	951	951	951	953	952	
Jul 29	951	951	950	950	950	950	950	950	950	949	949	948	948	947	947	947	946	946	946	945	945	945	945	945	945	945	951	948	
Jul 30	945	945	944	944	944	944	944	944	943	943	943	943	943	942	942	942	941	941	941	941	941	941	941	940	941	940	945	943	
Jul 31	941	941	941	941	941	941	941	941	941	941	941	941	941	941	941	942	942	942	942	943	943	943	944	944	941	944	942	942	
Diurnal Maximum	953	953	953	953	953	953	953	953	953	953	953	953	953	952	952	952	952	951	951	951	951	952	952	952	952	941	944	942	
Diurnal Average	943	943	943	943	943	943	943	944	944	944	944	943	943	943	943	943	943	943	943	943	943	943	943	943	943	941	944	942	

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>ND</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per days is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.







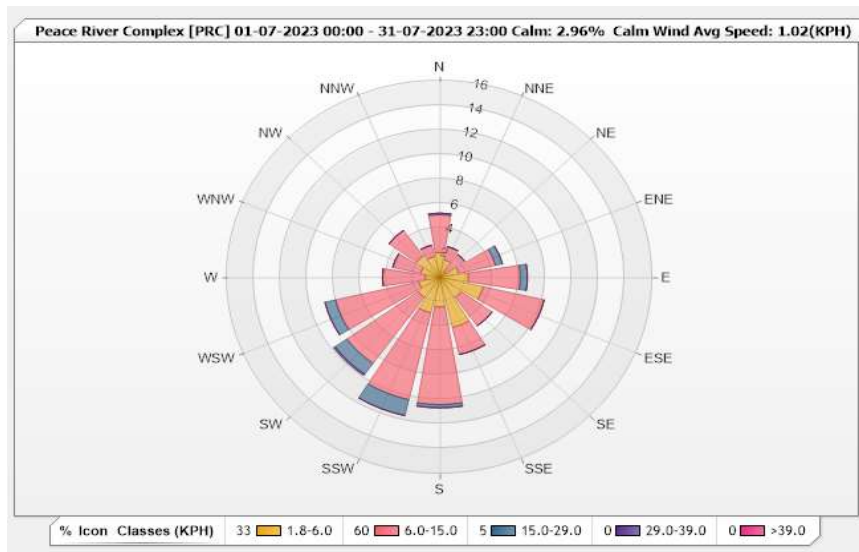


Station: Peace River Complex [PRC] Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 2.96% Valid Data: 100.00%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	2.02	3.09	0.13	0	0	5.24
NNE	1.48	1.08	0	0	0	2.56
NE	0.54	1.75	0	0	0	2.29
ENE	1.48	2.82	0.54	0	0	4.84
E	2.15	3.9	0.54	0	0	6.59
ESE	3.36	4.7	0	0	0	8.06
SE	2.02	2.82	0	0	0	4.84
SSE	4.17	2.28	0	0	0	6.45
S	2.42	7.93	0.27	0	0	10.62
SSW	2.96	7.26	1.34	0	0	11.56
SW	2.02	6.59	1.08	0.13	0	9.82
WSW	1.61	6.45	0.81	0	0	8.87
W	1.08	3.23	0	0	0	4.31
WNW	1.48	2.15	0	0	0	3.63
NW	2.15	2.55	0	0	0	4.7
NNW	1.75	0.94	0	0	0	2.69
Summary	32.69	59.54	4.71	0.13	0	97.07





**Peace River Area Monitoring Program**  
**Peace River Complex (PRC) Station - July 2023**  
**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector**

<b>WIND SPEED</b>				
Maximum Hourly Value:	29.4	kph on Jul 22 at hr 23	Hours in Service:	744
Maximum Daily Value:	13.3	kph on Jul 1	Hours of Data:	744
Minimum Hourly Value:	0.2	kph on Jul 14 at hr 7	Hours of Missing Data:	0
Minimum Daily Value:	3.2	kph on Jul 15	Hours of Calibration:	0
Monthly Average:	2.4	kph	Operational Uptime:	100.0
<b>WIND DIRECTION</b>				
Monthly Average:	196 degree (SSW)			

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	9.8	11.0	9.7	10.8	9.2	8.7	11.5	15.7	21.5	19.2	20.6	19.5	15.3	14.3	15.4	24.5	14.9	10.2	7.0	10.7	10.3	4.5	11.8	12.6	4.5	24.5	13.3
Jul 2	11.2	6.4	5.1	7.3	6.2	7.3	9.3	8.3	13.4	14.6	12.5	14.8	12.7	12.2	7.0	3.1	0.7	7.0	9.0	8.5	8.7	8.5	9.1	10.3	0.7	14.8	8.9
Jul 3	11.1	9.0	8.6	7.9	9.6	8.4	9.3	9.9	14.0	16.5	12.8	13.8	11.3	11.5	10.2	9.1	6.8	7.5	6.0	4.6	4.2	5.7	5.5	4.4	4.2	16.5	9.1
Jul 4	7.0	6.4	5.8	3.5	5.3	7.2	2.1	2.0	2.8	3.9	3.8	6.8	4.0	6.9	6.4	8.4	10.9	11.2	11.6	12.7	9.6	7.8	8.0	9.1	2.0	12.7	6.8
Jul 5	9.9	9.8	9.6	10.5	10.9	9.4	9.9	12.1	12.9	15.9	17.4	16.2	13.0	9.5	7.2	11.9	19.6	5.5	7.6	6.4	8.7	2.0	7.6	6.6	2.0	19.6	10.4
Jul 6	4.4	8.9	8.3	4.4	1.7	4.9	3.4	8.6	10.2	10.2	11.2	10.2	10.8	9.3	12.6	12.9	13.3	12.0	11.3	7.9	7.8	8.9	9.3	10.0	1.7	13.3	8.9
Jul 7	9.4	8.8	7.5	7.7	7.4	8.4	4.6	2.9	3.3	7.2	4.9	3.7	4.3	3.0	5.2	2.8	3.6	2.8	4.8	6.9	1.9	8.9	7.3	9.3	1.9	9.4	5.7
Jul 8	9.6	9.3	6.1	6.4	7.4	7.2	5.1	5.0	6.4	6.6	8.4	8.5	8.7	11.6	11.4	9.7	11.4	9.8	11.8	11.3	7.7	8.1	9.1	8.6	5.0	11.8	8.6
Jul 9	10.3	11.1	11.0	9.8	9.0	7.1	5.7	5.5	4.1	4.2	6.9	5.2	9.1	9.2	8.8	5.2	4.2	10.0	13.8	12.4	12.5	14.5	14.9	15.2	4.1	15.2	9.2
Jul 10	14.8	14.5	13.1	13.9	15.7	13.5	13.4	12.4	12.2	9.8	12.7	15.2	17.8	15.0	13.4	13.5	15.5	14.7	12.8	14.8	9.2	9.0	3.6	4.5	3.6	17.8	12.7
Jul 11	5.8	7.4	7.4	7.9	6.7	4.7	3.6	4.9	6.4	7.5	2.5	5.4	6.7	8.1	9.4	8.0	9.7	11.4	9.4	5.9	13.1	10.7	8.6	5.8	2.5	13.1	7.4
Jul 12	4.2	0.4	5.4	5.2	3.7	5.7	3.1	2.9	2.8	2.9	3.0	2.5	2.3	3.8	4.8	12.3	8.6	6.8	1.0	4.7	1.7	1.2	7.8	4.8	0.4	12.3	4.2
Jul 13	3.1	0.9	2.5	4.6	4.2	3.9	2.7	6.2	4.7	4.4	8.9	8.1	8.0	11.3	10.9	11.7	9.9	9.3	7.7	7.2	7.4	7.2	5.9	5.5	0.9	11.7	6.5
Jul 14	3.8	0.6	2.4	1.9	2.5	2.3	0.4	0.2	4.1	5.0	5.8	3.3	11.9	10.5	11.8	12.6	11.9	11.5	9.9	7.7	8.5	7.9	5.9	6.6	0.2	12.6	6.2
Jul 15	6.2	5.3	3.7	5.0	4.1	3.8	3.2	4.8	3.7	0.4	1.0	1.3	1.8	2.5	4.0	2.5	1.9	3.4	3.0	0.4	1.9	2.5	3.5	5.7	0.4	6.2	3.2
Jul 16	5.6	5.7	5.5	4.7	4.6	1.9	3.0	3.6	6.4	4.9	4.8	8.2	7.6	7.6	9.0	7.2	8.4	10.0	11.5	11.5	10.4	8.9	10.2	12.1	1.9	12.1	7.2
Jul 17	11.5	9.3	7.6	5.8	6.5	9.2	7.4	8.3	5.9	6.2	7.3	6.4	12.1	7.3	6.9	4.8	8.2	3.5	12.9	6.2	7.9	6.3	7.0	4.1	3.5	12.9	7.4
Jul 18	6.6	8.5	9.9	8.7	10.2	10.4	5.4	7.4	5.6	7.7	10.8	11.6	12.0	12.4	11.1	10.8	13.9	12.9	14.4	14.6	11.7	10.0	10.5	11.0	5.4	14.6	10.3
Jul 19	10.2	8.8	7.9	7.9	7.6	6.4	7.2	6.9	6.0	5.1	6.7	7.1	9.3	9.0	14.7	7.6	7.5	6.4	5.2	4.5	4.0	3.8	4.8	5.0	3.8	14.7	7.1
Jul 20	6.4	6.5	7.2	6.0	8.4	7.3	5.9	2.4	3.0	4.0	5.5	4.9	5.9	4.5	4.2	7.3	7.2	5.8	6.0	3.6	4.0	2.4	4.2	3.0	2.4	8.4	5.2
Jul 21	4.3	4.6	3.4	5.0	4.2	5.1	3.8	1.2	4.1	1.8	4.3	5.3	6.1	4.2	4.9	4.9	6.7	7.5	6.4	7.5	9.5	7.8	8.7	1.2	9.5	5.3	
Jul 22	3.7	4.0	7.1	5.4	4.1	5.5	8.9	8.2	4.7	3.9	4.6	3.7	6.0	3.3	1.2	7.7	6.2	10.1	11.7	10.1	11.0	10.2	11.8	29.4	1.2	29.4	7.6
Jul 23	17.8	5.4	6.0	7.8	4.9	8.8	9.5	10.4	11.2	10.1	10.9	8.1	10.0	9.2	8.8	6.9	7.5	6.4	8.9	7.1	7.9	4.1	4.6	5.3	4.1	17.8	8.2
Jul 24	2.9	5.9	6.6	4.6	5.8	3.9	5.7	5.4	5.8	9.5	3.3	3.7	9.2	10.6	10.0	10.7	12.2	10.1	9.9	8.6	10.6	11.0	6.4	4.6	2.9	12.2	7.4
Jul 25	6.5	8.7	3.4	5.8	2.4	5.7	8.1	5.5	10.5	13.0	11.3	13.5	14.6	13.3	17.6	22.0	18.4	18.2	17.0	14.6	9.8	14.6	12.9	8.2	2.4	22.0	11.5
Jul 26	1.3	3.3	4.9	3.0	0.4	2.2	2.0	6.4	10.9	11.1	10.1	11.7	9.1	7.3	9.8	8.9	8.8	9.8	10.1	6.0	5.5	8.2	8.7	8.7	0.4	11.7	7.0
Jul 27	6.4	7.0	5.9	4.2	5.5	3.4	3.5	4.9	6.4	12.5	15.4	16.5	14.6	13.1	13.1	12.2	12.5	10.1	9.1	9.0	5.6	3.7	6.0	9.6	3.4	16.5	8.8
Jul 28	5.0	4.0	2.8	6.0	5.3	1.6	2.2	1.9	1.6	4.0	4.0	2.5	2.6	3.4	4.5	7.2	4.9	3.3	2.7	2.3	4.5	4.9	8.3	7.5	1.6	8.3	4.0
Jul 29	9.0	8.6	9.8	9.1	7.7	6.3	6.1	5.9	6.2	7.1	9.1	7.7	10.6	8.6	8.2	9.9	7.9	8.4	9.1	7.3	6.8	9.1	10.7	11.5	5.9	11.5	8.4
Jul 30	11.6	10.3	8.0	8.3	11.2	9.2	6.1	6.2	5.7	7.5	5.7	4.7	8.2	6.7	4.2	10.0	5.2	4.3	10.0	8.7	5.6	2.5	8.5	7.6	2.5	11.6	7.3
Jul 31	1.4	6.2	12.5	11.2	13.9	8.6	12.6	13.6	14.2	12.7	12.6	19.4	21.2	28.6	21.4	17.5	15.7	17.3	16.3	12.3	10.6	5.8	7.0	4.5	1.4	28.6	13.2

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>ND</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	In/Valid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	Unit/Maint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.					
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.					

**Peace River Area Monitoring Program  
Peace River Complex (PRC) Station - July 2023  
Summary of Hourly Averages**

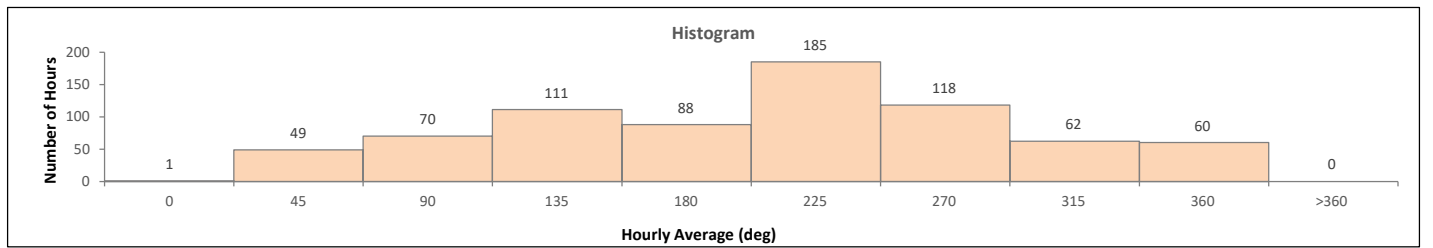
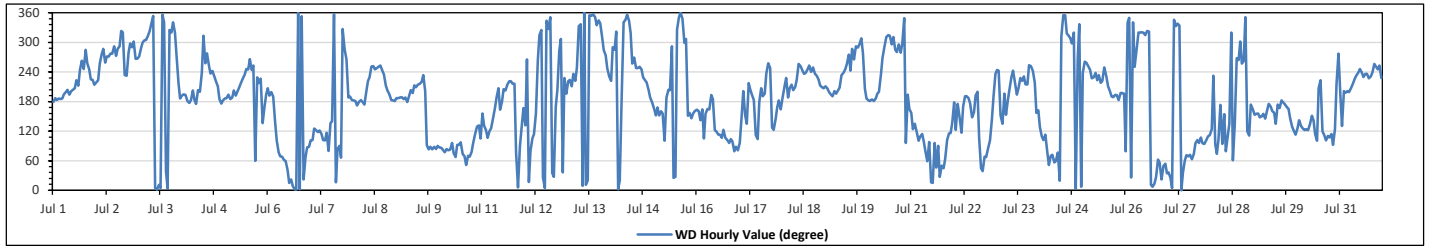
**WIND DIRECTION (VWD) in sector**

Monthly Average:	196 (SSW) degree	Hours in Service:	744
		Hours of Data:	744
		Hours of Missing Data:	0
		Hours of Calibration:	0
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant	
Jul 1	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	W	WSW	WNW	WSW	WSW	SW	SW	SSW	213	SSW		
Jul 2	SW	SW	WSW	W	WNW	WSW	W	W	W	WNW	W	WNW	WNW	NW	NW	SW	SW	W	WNW	WNW	WNW	W	W	276	W		
Jul 3	W	WNW	WNW	WNW	WNW	NW	NW	NNW	N	N	N	NNE	N	N	NNW	NE	N	NW	NW	NNW	NW	W	SW	S	334	NNW	
Jul 4	S	SSW	S	S	S	S	S	S	S	SSW	S	S	SSW	WSW	NW	WSW	W	WSW	WSW	SW	SW	SSW	S	S	215	SSW	
Jul 5	S	S	SSW	S	S	S	SSW	S	SSW	SSW	SW	SW	WSW	WSW	W	WSW	WSW	ENE	SW	SW	SW	SE	SSE	SSW	216	SW	
Jul 6	SSW	S	SSW	S	SE	E	ENE	ENE	ENE	ENE	ENE	NNE	NNE	N	N	N	N	N	N	NNE	ENE	E	E	40	NE		
Jul 7	E	E	SE	ESE	ESE	ESE	ESE	E	E	ESE	E	SE	SE	N	NNE	E	E	ENE	NW	WNW	W	S	S	S	121	ESE	
Jul 8	S	S	S	S	S	S	S	S	S	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SSW	SSW	SSW	S	S	S	213	SSW	
Jul 9	S	S	S	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SSW	E	E	E	E	E	E	154	SSE	
Jul 10	E	E	E	ENE	E	E	E	E	ENE	ENE	E	E	ENE	ENE	NE	ENE	ENE	ENE	ENE	E	ESE	SE	SE	ESE	84	E	
Jul 11	SSE	SE	ESE	ESE	ESE	SE	SE	SSE	S	SSW	SSE	S	SSW	SSW	SSW	SW	SW	SW	SW	SW	ENE	N	E	SE	SSE	167	SSE
Jul 12	SE	W	NNE	E	ESE	ESE	SSE	W	NW	NW	NNE	N	NNW	NW	N	NE	NNE	SSE	SSW	W	NW	NE	SW	SSW	28	NNE	
Jul 13	SW	SW	SSW	SW	SW	WSW	NNW	NNW	N	N	NNE	NNE	N	N	N	N	NNW	NNW	NNW	NNW	W	WSW	SW	SSW	328	NNW	
Jul 14	SW	WNW	WNW	NW	N	NNE	S	NNW	NNW	N	NNW	NW	WSW	W	WSW	WSW	WSW	WSW	SW	SW	SSW	S	S	249	WSW		
Jul 15	SSE	SSE	SSE	SSE	SSE	SSE	E	S	SSW	SSW	WNW	NNE	NNE	NW	N	N	NNW	WNW	NW	SSE	SSE	SE	SSE	SSE	163	SSE	
Jul 16	SSE	SSE	SE	SSE	ESE	SSE	SSE	SSE	S	S	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E	E	ESE	E	ENE	E	E	116	ESE	
Jul 17	E	SSE	SSW	SSE	SE	SW	SSW	S	S	ESE	ESE	S	SSW	S	SSW	SW	WSW	WSW	SE	ESE	SE	SSE	S	SSE	171	S	
Jul 18	S	SSW	SW	S	SSW	SSW	SSW	SSW	SW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	WSW	SW	SW	SSW	SSW	SSW	SSW	228	SW	
Jul 19	SSW	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	SSW	SSW	WSW	WSW	W	WSW	WNW	W	WNW	WNW	WNW	NW	W	SSW	S	234	SW	
Jul 20	S	S	S	S	S	S	SSW	SSW	SW	W	WNW	NW	NW	NW	WNW	NW	WNW	W	WNW	W	WNW	NNW	E	SSW	SSE	247	WSW
Jul 21	SSE	ESE	SE	ESE	E	ESE	ESE	E	E	ENE	E	NNE	NNE	E	NE	E	NNE	NE	ENE	E	ESE	ESE	SE	91	E		
Jul 22	S	ESE	S	SE	ESE	SSE	S	S	S	S	SE	SSE	S	SSW	ESE	NE	NE	ENE	ENE	E	E	SE	S	SW	154	SSE	
Jul 23	WSW	WSW	SSE	SE	SSW	SSE	S	SSW	SW	WSW	WSW	SSW	SSW	SW	SW	SSW	SSW	WSW	WSW	WSW	WSW	SSW	SSE	SSE	214	SSW	
Jul 24	SE	ESE	E	ESE	ENE	NE	ENE	ENE	ENE	ENE	NNE	NW	N	N	NW	NW	NW	NW	WNW	NW	N	W	NNW	N	357	N	
Jul 25	SW	W	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	WSW	SW	SSW	SSW	S	S	S	S	S	S	S	SSW	SSW	213	SSW	
Jul 26	ENE	NNW	N	NNE	NNW	WSW	WNW	NW	NW	NW	NW	NW	NW	NW	NNE	N	NNE	NNE	ENE	NE	NNE	NE	NE	NE	359	N	
Jul 27	NE	NNE	N	NNW	NNW	NNW	NNW	N	NE	ENE	ENE	ENE	ENE	ENE	E	E	E	E	ESE	E	E	E	ESE	ESE	70	ENE	
Jul 28	ESE	SW	E	ENE	ESE	S	E	SSE	ESE	SE	NW	ENE	SE	W	WNW	WSW	W	N	ESE	ESE	S	SSE	S	SSE	147	SE	
Jul 29	SSE	SSE	SSE	SE	SSE	SSE	SE	SSE	S	SSE	SSE	SSE	SE	S	SSE	S	S	S	SSE	SSE	SE	SE	ESE	ESE	155	SSE	
Jul 30	SE	SE	SE	SE	ESE	ESE	SE	SSE	SE	ESE	E	SSW	SW	ESE	ESE	E	ESE	ESE	ESE	E	ESE	SW	W	133	SE		
Jul 31	S	SE	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	229	SW	

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>ND</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> Invalid Data (Machine Malfunction/Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "\*" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "\*" if minimum data completeness criteria of 75% of days per month is not met.

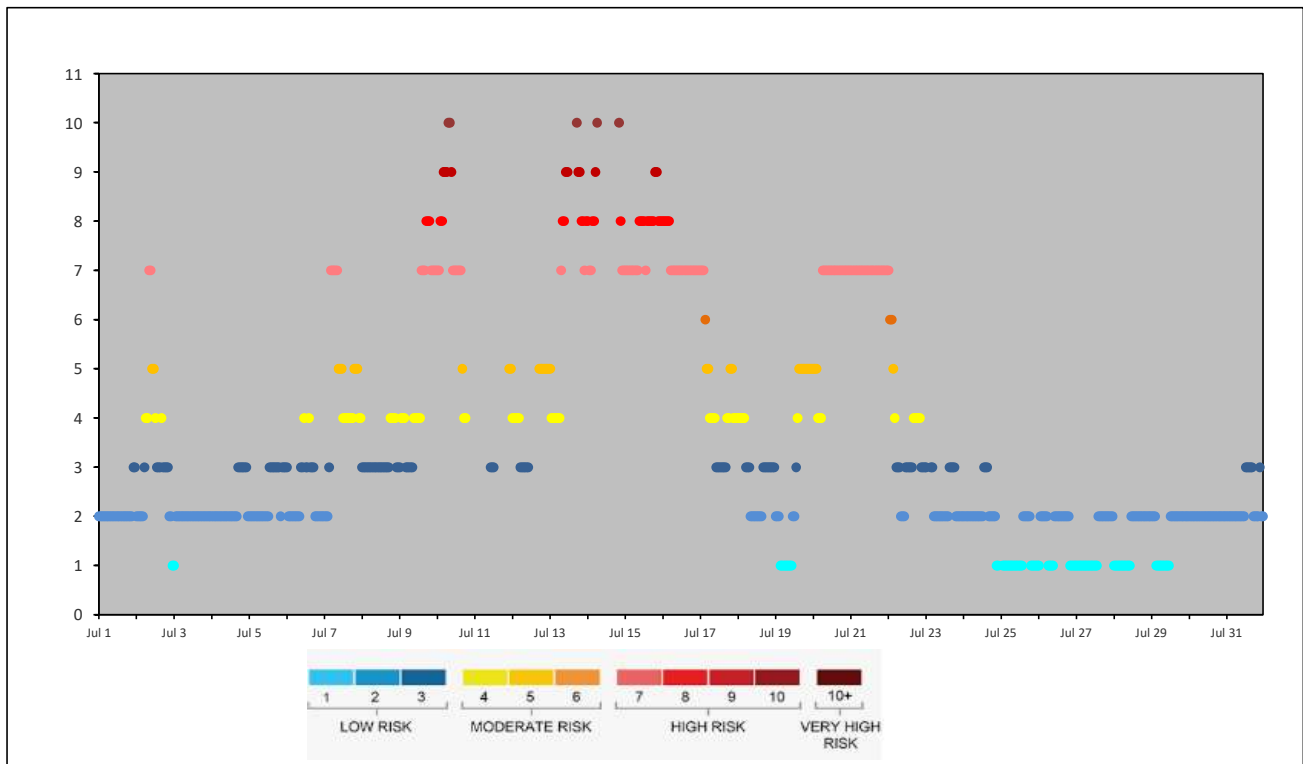


## AQHI GRIMSHAW STATION

**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**  
**AQHI - Grimshaw Station - July 2023**

**AIR QUALITY HEALTH INDEX**

Day	Hourly Period Starting at (MST)																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Jul 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3
Jul 2	2	2	2	2	2	3	4	4	7	7	5	5	4	3	3	3	4	3	3	3	3	2	2	1	
Jul 3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Jul 4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Jul 5	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	2	3	3	3
Jul 6	3	2	2	2	2	2	2	2	2	3	3	4	3	3	4	3	3	3	3	2	2	2	2	2	2
Jul 7	2	2	2	3	7	7	7	7	7	5	5	5	4	4	4	4	4	4	4	4	5	5	5	4	4
Jul 8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3	3
Jul 9	3	4	4	4	3	3	3	3	3	4	4	4	4	4	4	7	7	7	8	8	8	7	7	7	7
Jul 10	7	7	8	8	9	9	9	10	10	9	7	7	7	7	7	7	5	4	4						
Jul 11											3	3	3										5	5	5
Jul 12	4	4	4	4	4	3	3	3	3	3	3								5	5	5	5	5	5	5
Jul 13	5	4	4	4	4	4	4	7	8	8	9	9	10+	10+	10+	10+	10+	10+	10	9	9	8	8	7	8
Jul 14	8	7	7	8	8	9	10	10+	10+	10+	10+	10+	10+	10+	10+	10+	10+	10+	10	9	9	8	8	7	7
Jul 15	7	7	7	7	7	7	7	7	7	8	8	8	8	7	8	8	8	8	8	8	9	9	8	8	8
Jul 16	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Jul 17	7	7	7	6	5	5	4	4	4	4	3	3	3	3	3	3	3	3	4	4	5	5	4	4	4
Jul 18	4	4	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3
Jul 19	2	2	2	1	1	1	1	1	1	1	1	2	2	3	4	5	5	5	5	5	5	5	5	5	5
Jul 20	5	5	5	4	4	4	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Jul 21	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Jul 22	7	6	6	5	4	3	3	3	2	2	2	2	3	3	3	3	3	4	4	4	4	4	3	3	3
Jul 23	3					3	3	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2
Jul 24	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	1	1	1
Jul 25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1
Jul 26	1	2	2	2	2	2	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1
Jul 27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Jul 28	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Jul 29	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Jul 30	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Jul 31	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	3	2	2



Notes:  
 Due to the O3 instrument issue, which was identified on July 12, data were discarded back to June 8. As O3 is one of the parameters that are used to calculate the AQHI value, the AQHI values during this period were affected. However, considering ambient air and wildfires conditions around the Peace River region this season, PM<sub>2.5</sub> was predominant parameter to drive the AQHI values. As a result AQHI values were kept for reference use.

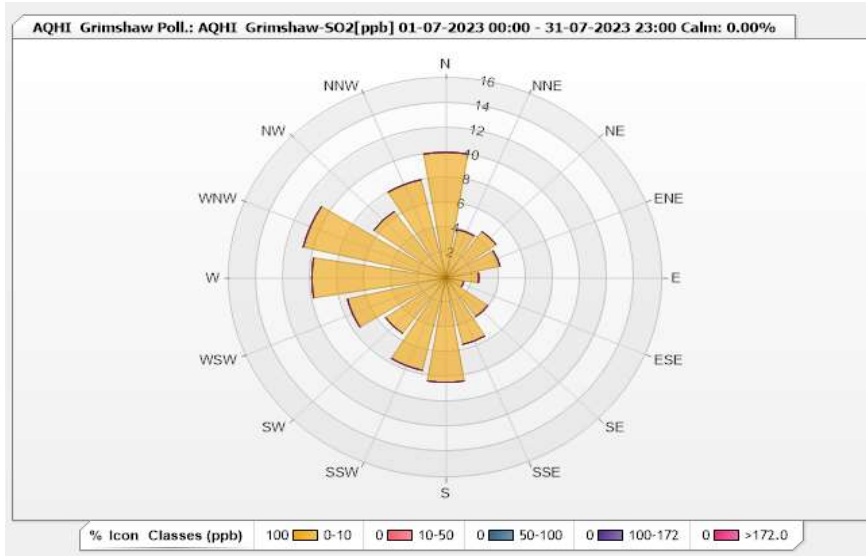


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-SO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 88.31%      Calm Avg: 0.00 [ppm]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	10.05	0	0	0	0	10.05
NNE	3.96	0	0	0	0	3.96
NE	4.57	0	0	0	0	4.57
ENE	4.11	0	0	0	0	4.11
E	2.44	0	0	0	0	2.44
ESE	1.37	0	0	0	0	1.37
SE	3.81	0	0	0	0	3.81
SSE	5.48	0	0	0	0	5.48
S	8.37	0	0	0	0	8.37
SSW	7.61	0	0	0	0	7.61
SW	5.48	0	0	0	0	5.48
WSW	7.46	0	0	0	0	7.46
W	9.89	0	0	0	0	9.89
WNW	10.81	0	0	0	0	10.81
NW	6.54	0	0	0	0	6.54
NNW	8.07	0	0	0	0	8.07
Summary	100	0	0	0	0	100



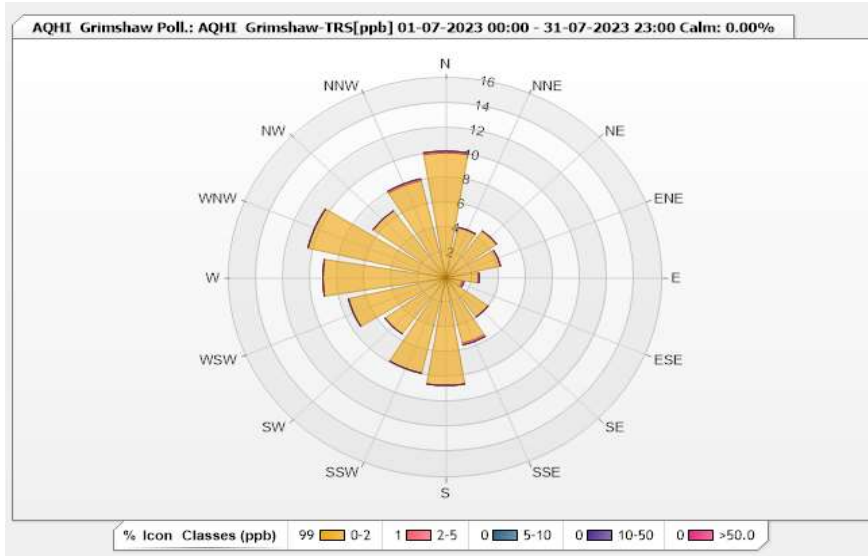


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-TRS[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 87.37%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	10	0.15	0	0	0	10.15
NNE	4.15	0	0	0	0	4.15
NE	4.62	0	0	0	0	4.62
ENE	4.15	0	0	0	0	4.15
E	2.46	0	0	0	0	2.46
ESE	1.23	0.15	0	0	0	1.38
SE	3.85	0	0	0	0	3.85
SSE	5.38	0.15	0	0	0	5.53
S	8.62	0	0	0	0	8.62
SSW	7.85	0	0	0	0	7.85
SW	5.54	0	0	0	0	5.54
WSW	7.38	0	0	0	0	7.38
W	9.08	0	0	0	0	9.08
WNW	10.46	0	0	0	0	10.46
NW	6.62	0	0	0	0	6.62
NNW	8	0.15	0	0	0	8.15
Summary	99.39	0.6	0	0	0	100





**Peace River Area Monitoring Program**  
**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**  
**OXIDES OF NITROGEN (NOx) in ppb**

Maximum Hourly Value:	24	ppb	on Jul 21 at hr 6	Hours in Service:	744
Maximum Daily Value:	6.0	ppb	on Jul 24	Hours of Data:	634
Minimum Hourly Value:	0	ppb	on Jul 23 at hr 1	Hours of Missing Data:	75
Minimum Daily Value:	1.4	ppb	on Jul 26	Hours of Calibration:	35
Monthly Average:	3.5	ppb		Operational Uptime:	89.9

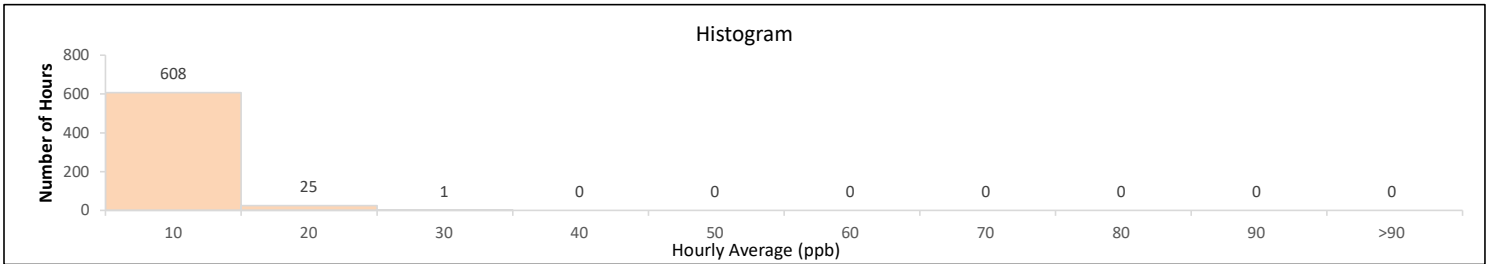
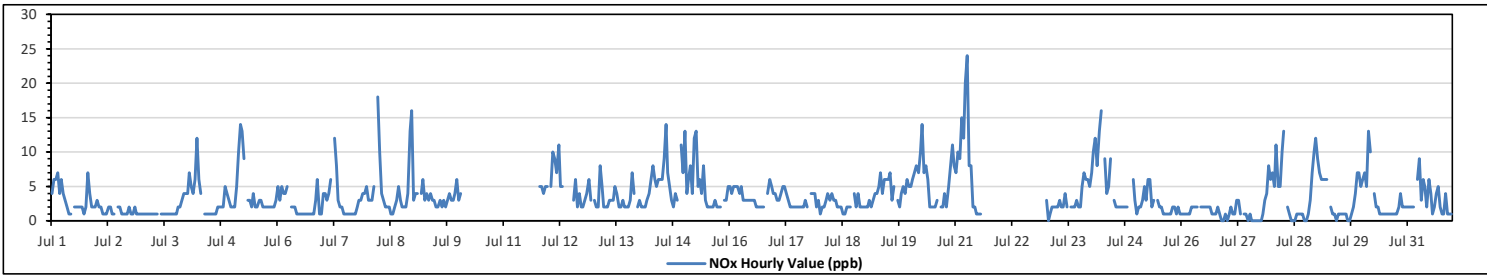
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	4	6	6	7	4	6	4	3	2	1	1	S	2	2	2	2	2	1	2	7	4	2	2	2	1	7	3.2	
Jul 2	3	2	2	1	1	1	2	2	1	1	S	2	2	1	1	1	1	2	1	2	1	2	1	1	1	1	3.1	
Jul 3	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	2	2	3	4	4	1	4	1.4	
Jul 4	4	7	5	4	6	12	6	4	S	1	1	1	1	1	1	1	2	2	2	2	5	4	3	2	1	12	3.3	
Jul 5	2	2	5	10	14	13	9	S	3	3	2	4	2	2	3	3	2	2	2	2	2	2	2	3	2	14	4.1	
Jul 6	5	3	5	4	4	5	S	2	2	2	1	1	1	1	1	1	1	1	1	1	3	6	1	1	1	6	2.3	
Jul 7	4	4	3	4	6	5	S	12	8	3	2	2	1	1	1	1	1	1	1	2	3	3	4	4	5	12	3.3	
Jul 8	3	3	3	5	5	18	10	4	3	2	2	2	1	1	2	3	5	3	2	2	2	4	13	16	1	18	4.7	
Jul 9	3	4	4	S	4	6	3	4	3	4	3	2	2	2	3	2	3	2	3	4	3	3	4	6	2	6	3.4	
Jul 10	3	4	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	4	NA
Jul 11	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	5	5	4	5	5	4	5	NA
Jul 12	S	5	10	9	7	11	5	5	NRM	NRM	NRM	NRM	NRM	3	6	2	4	2	2	3	4	6	3	S	2	11	NA	
Jul 13	3	2	2	8	5	2	2	2	3	3	3	5	4	2	2	3	2	2	2	2	3	7	4	S	2	8	3.2	
Jul 14	3	2	2	2	3	4	6	8	6	5	6	6	6	9	14	7	5	3	2	4	3	S	11	7	2	14	5.4	
Jul 15	13	4	6	8	4	12	13	5	6	4	8	3	2	2	2	2	3	2	2	2	S	3	3	5	2	13	5.0	
Jul 16	5	4	5	5	5	4	5	3	3	3	3	3	3	3	2	2	2	2	2	S	4	6	5	4	2	6	3.6	
Jul 17	4	3	3	4	5	5	4	3	2	2	2	2	2	2	2	2	3	2	S	4	4	4	2	3	2	5	3.0	
Jul 18	1	2	2	3	4	3	4	3	3	2	2	2	1	1	2	2	2	S	4	2	4	4	2	2	2	4	2.4	
Jul 19	2	2	3	2	3	4	4	5	7	4	6	6	6	7	3	5	S	3	2	4	5	4	6	5	2	7	4.3	
Jul 20	5	6	7	8	7	10	14	7	8	6	2	2	2	2	3	S	2	2	4	2	5	8	11	8	2	14	5.7	
Jul 21	7	10	9	15	12	20	24	8	8	2	2	1	1	1	S	1	X	X	X	X	X	X	X	X	1	24	NA	
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 23	3	0	1	2	2	2	2	3	2	2	4	2	S	2	2	3	2	2	5	7	6	6	5	0	7	2.9		
Jul 24	7	10	12	8	13	16	NRM	9	4	5	9	S	3	2	2	2	2	2	2	2	P	P	6	3	2	16	6.0	
Jul 25	1	2	2	3	5	3	6	6	2	3	S	3	2	2	1	1	1	1	1	2	2	1	2	1	1	6	2.3	
Jul 26	1	1	1	1	1	2	2	2	2	S	2	2	2	2	2	2	1	1	1	1	2	1	0	0	1	0	2	1.4
Jul 27	0	1	2	1	1	3	3	1	S	1	0	0	1	0	0	0	0	0	0	1	3	4	8	6	0	8	1.6	
Jul 28	7	5	11	5	5	10	13	S	2	1	0	0	0	1	1	1	1	0	0	1	3	7	10	12	0	13	4.2	
Jul 29	9	7	6	6	6	6	S	2	1	1	0	1	1	1	1	1	0	0	1	2	4	7	7	5	0	9	3.3	
Jul 30	6	7	5	13	10	S	4	2	2	1	1	1	1	1	1	1	1	1	1	2	4	2	2	2	1	13	3.1	
Jul 31	2	2	2	2	S	6	9	3	6	5	2	6	4	1	2	4	5	2	1	1	4	1	1	1	1	9	3.1	
Diurnal Maximum	13	10	12	15	14	20	24	9	8	6	9	6	6	9	14	7	5	3	4	7	7	8	13	16				
Diurnal Average	4.0	3.8	4.5	5.2	5.3	7.1	6.7	4.0	3.4	2.6	2.6	2.4	2.1	2.0	2.3	2.0	2.1	1.6	1.7	2.6	3.7	3.8	4.6	4.3				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

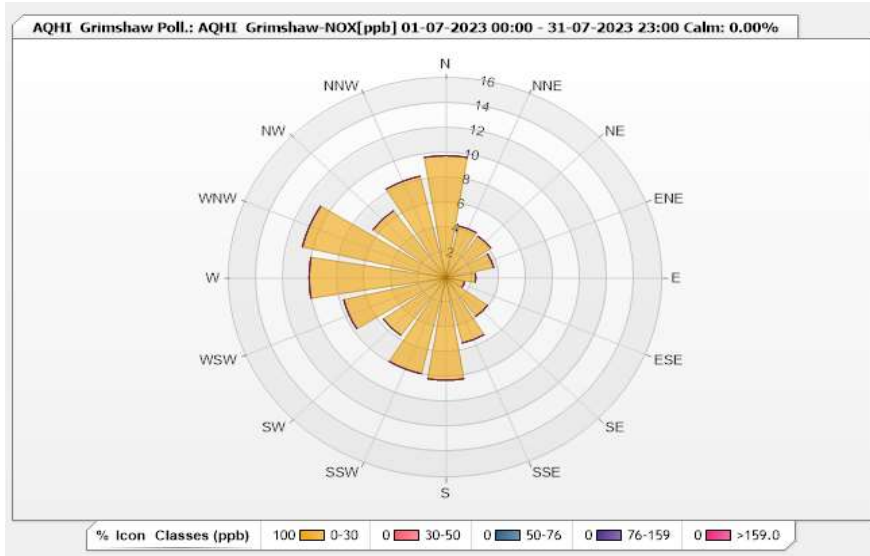


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-NOX[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 85.22%      Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	9.78	0	0	0	0	9.78
NNE	4.26	0	0	0	0	4.26
NE	4.1	0	0	0	0	4.1
ENE	3.63	0	0	0	0	3.63
E	2.21	0	0	0	0	2.21
ESE	1.42	0	0	0	0	1.42
SE	3.79	0	0	0	0	3.79
SSE	5.36	0	0	0	0	5.36
S	8.2	0	0	0	0	8.2
SSW	7.89	0	0	0	0	7.89
SW	5.68	0	0	0	0	5.68
WSW	7.73	0	0	0	0	7.73
W	10.09	0	0	0	0	10.09
WNW	10.88	0	0	0	0	10.88
NW	6.62	0	0	0	0	6.62
NNW	8.36	0	0	0	0	8.36
Summary	100	0	0	0	0	100



**Peace River Area Monitoring Program**

**AQHI - Grimshaw Station - July 2023**

**Summary of Hourly Averages**

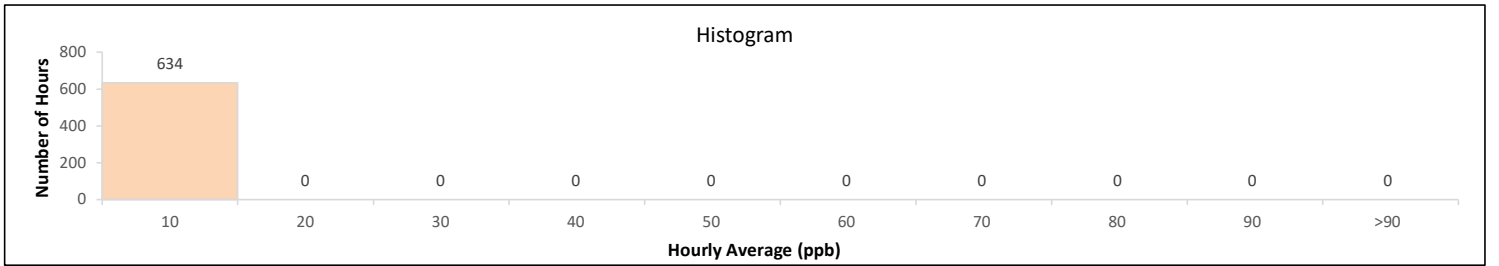
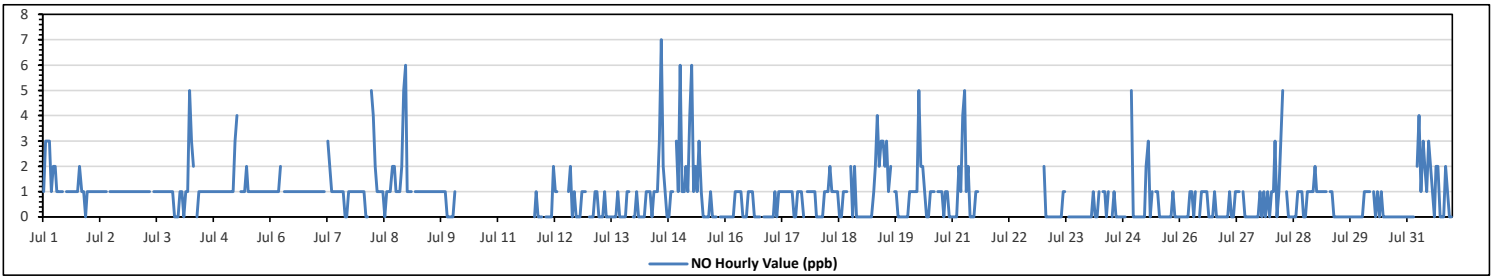
**NITRIC OXIDE (NO) in ppb**

Maximum Hourly Value:	7 ppb	on Jul 14 at hr 14	Hours in Service:	744
Maximum Daily Value:	1.7 ppb	on Jul 8	Hours of Data:	634
Minimum Hourly Value:	0 ppb	on Jul 1 at hr 22	Hours of Missing Data:	75
Minimum Daily Value:	0.2 ppb	on Jul 23	Hours of Calibration:	35
Monthly Average:	0.8 ppb		Operational Uptime:	89.9

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23					
Jul 1	1	3	3	3	1	2	2	1	1	1	1	S	1	1	1	1	1	1	1	2	1	1	0	1	0	3	1.3		
Jul 2	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0		
Jul 3	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0.9		
Jul 4	1	1	0	1	1	5	3	2	S	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1.2		
Jul 5	1	1	1	1	1	3	4	S	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1.3		
Jul 6	1	1	1	1	1	2	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0		
Jul 7	1	1	1	1	1	S	3	2	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	3	1.0		
Jul 8	1	1	0	0	S	5	4	2	1	1	1	1	0	1	1	2	2	2	1	1	1	2	5	6	0	6	1.7		
Jul 9	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0.9		
Jul 10	0	1	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	NA		
Jul 11	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	0	1	0	0	0	1	NA		
Jul 12	S	0	0	0	0	2	1	1	NRM	NRM	NRM	NRM	NRM	1	2	0	1	0	0	0	1	1	1	1	S	0	2	NA	
Jul 13	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	1	S	0	0	1	0.3		
Jul 14	0	1	0	0	0	0	1	1	1	0	1	1	1	3	7	2	1	0	0	0	1	1	S	3	1	0	7	1.1	
Jul 15	6	1	1	2	1	4	6	1	2	1	3	1	0	0	0	0	1	0	0	0	0	S	0	0	0	6	1.3		
Jul 16	0	0	0	0	0	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	S	0	0	0	0	0	1	0.3	
Jul 17	0	0	1	0	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	S	1	1	1	1	1	0	1	0.7	
Jul 18	0	0	0	0	1	1	1	2	1	1	1	1	0	0	1	1	1	S	2	0	0	2	0	0	0	0	2	0.7	
Jul 19	0	0	0	0	0	0	1	2	4	2	3	3	2	3	1	2	S	1	1	0	0	0	0	0	0	0	4	1.1	
Jul 20	0	1	1	1	1	1	5	2	2	1	0	0	1	1	1	S	1	1	0	0	0	0	0	0	0	0	5	1.0	
Jul 21	0	0	0	2	1	4	5	1	2	0	0	0	1	1	S	0	X	X	X	X	X	X	X	X	X	0	5	NA	
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 23	2	0	0	0	0	0	0	0	0	0	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	
Jul 24	0	0	1	0	0	1	NRM	1	1	0	1	S	0	1	0	0	0	0	0	0	0	P	P	5	0	0	5	0.6	
Jul 25	0	0	0	0	0	0	2	3	0	1	S	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0.4	
Jul 26	0	0	0	0	0	1	1	0	1	S	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0.3	
Jul 27	0	0	1	0	0	1	1	S	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	0.3	
Jul 28	1	1	3	0	1	3	S	1	0	0	0	0	0	0	1	1	1	0	0	1	1	1	1	2	0	5	1.0		
Jul 29	1	1	1	1	1	1	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	
Jul 30	0	1	1	1	1	S	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	
Jul 31	0	0	0	0	S	2	4	1	3	2	1	3	2	1	0	2	2	0	0	0	2	1	0	0	0	4	1.1		
Diurnal Maximum	6	3	3	3	1	5	6	3	4	2	3	3	2	3	7	2	2	2	2	2	2	2	2	5	6				
Diurnal Average	0.7	0.6	0.7	0.6	0.7	1.7	2.2	1.2	1.2	0.7	0.8	0.9	0.7	0.8	0.9	0.7	0.7	0.5	0.6	0.5	0.8	0.5	0.8	0.6					

C Monthly Calibration      S Daily Zero-Span Check      Q Quality Assurance  
K Collection Error      ND No Data (Machine Not in Service)      Y Routine Maintenance  
X InValid Data (Equipment Malfunction /Recovery)      NRM UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      P Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

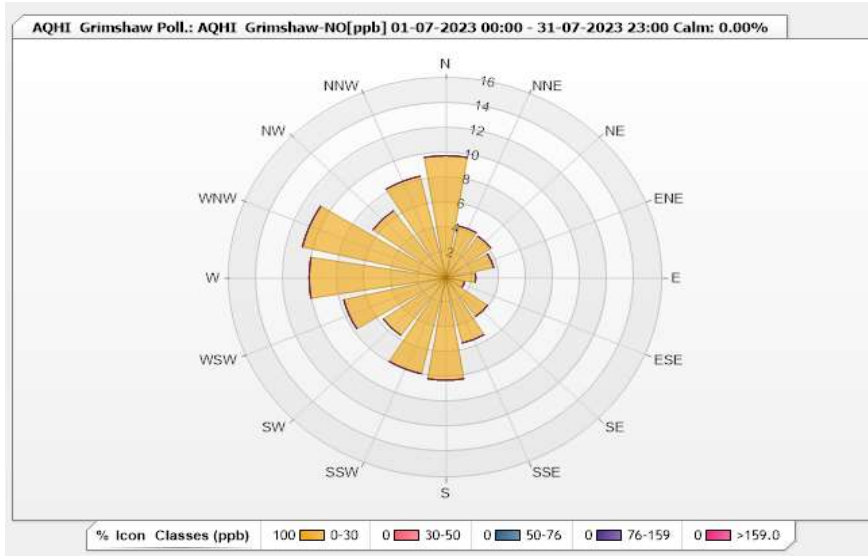


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-NO[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 85.22%      Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	9.78	0	0	0	0	9.78
NNE	4.26	0	0	0	0	4.26
NE	4.1	0	0	0	0	4.1
ENE	3.63	0	0	0	0	3.63
E	2.21	0	0	0	0	2.21
ESE	1.42	0	0	0	0	1.42
SE	3.79	0	0	0	0	3.79
SSE	5.36	0	0	0	0	5.36
S	8.2	0	0	0	0	8.2
SSW	7.89	0	0	0	0	7.89
SW	5.68	0	0	0	0	5.68
WSW	7.73	0	0	0	0	7.73
W	10.09	0	0	0	0	10.09
WNW	10.88	0	0	0	0	10.88
NW	6.62	0	0	0	0	6.62
NNW	8.36	0	0	0	0	8.36
Summary	100	0	0	0	0	100

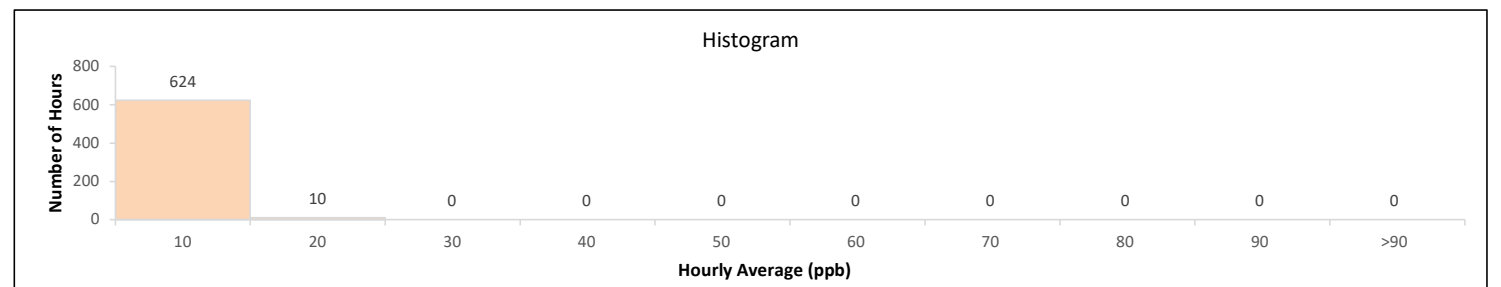
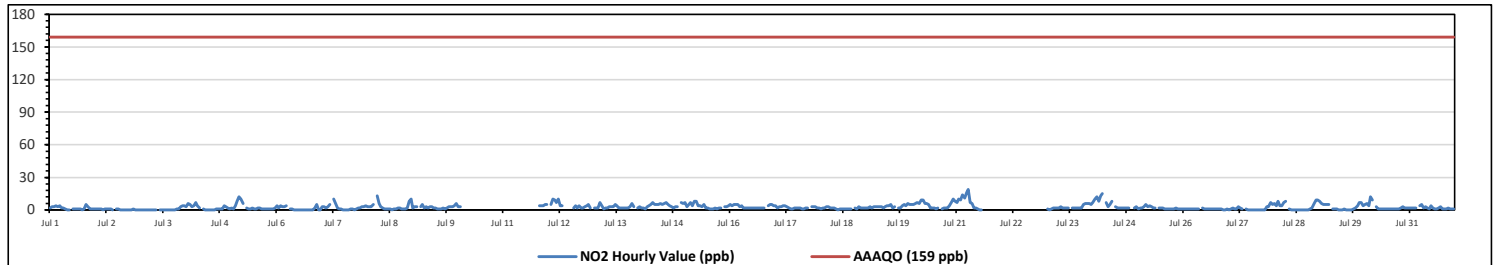


**Peace River Area Monitoring Program**  
**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**  
**NITROGEN DIOXIDE (NO<sub>2</sub>) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb																															
Number of 1-Hour Exceedances: 0																															
Maximum Hourly Value: 19 ppb on Jul 21 at hr 6												Hours in Service: 744																			
Maximum Daily Value: 5.5 ppb on Jul 24												Hours of Data: 634																			
Minimum Hourly Value: 0 ppb on Jul 1 at hr 9												Hours of Missing Data: 75																			
Minimum Daily Value: 0.5 ppb on Jul 2												Hours of Calibration: 35																			
Monthly Average: 2.7 ppb												Operational Uptime: 89.9																			
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23				
Jul 1	2	3	3	4	3	4	2	2	1	0	0	S	1	1	1	1	0	1	5	3	1	1	1	0	0	5	1.8				
Jul 2	1	1	1	1	0	1	1	1	1	0	S	1	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0.5				
Jul 3	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	1	3	4	4	4	4	0.6				
Jul 4	3	6	5	3	4	7	4	2	S	1	0	0	0	0	0	0	1	1	1	1	4	3	2	1	0	7	2.1				
Jul 5	2	1	4	8	12	10	6	S	2	1	1	2	1	1	2	2	1	1	1	1	1	1	1	2	1	12	2.8				
Jul 6	4	2	4	3	3	4	S	1	1	0	0	0	0	0	0	0	0	0	0	2	5	0	0	0	0	5	1.3				
Jul 7	3	3	2	3	5	S	10	6	2	1	1	0	0	0	0	1	1	0	1	2	2	3	3	4	6	10	2.3				
Jul 8	3	3	3	5	S	13	6	3	2	1	1	1	1	1	0	1	1	2	2	1	1	2	8	10	0	13	3.1				
Jul 9	2	3	3	S	3	5	2	3	2	3	3	2	2	1	1	1	2	1	2	3	3	3	4	6	1	6	2.6				
Jul 10	3	3	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	3	NA			
Jul 11	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	C	C	C	C	C	C	C	C	C	4	4	5	5	4	5	NA
Jul 12	S	5	10	9	7	10	4	4	NRM	NRM	NRM	NRM	NRM	2	4	2	4	2	2	3	4	5	2	S	2	10	NA	NA			
Jul 13	2	2	2	7	4	1	2	2	3	3	3	5	4	2	2	2	2	2	2	3	6	3	S	7	6	1	7	2.9			
Jul 14	3	2	2	1	3	4	5	7	5	5	5	6	5	6	7	5	4	3	2	3	3	S	7	6	1	7	4.3				
Jul 15	7	3	5	7	4	8	8	4	4	3	5	2	2	1	1	1	2	1	2	2	2	S	3	3	4	1	8	3.6			
Jul 16	5	4	5	5	5	3	4	2	2	2	2	2	2	2	2	2	2	2	2	2	S	4	5	5	4	2	5	3.2			
Jul 17	4	2	3	3	4	4	3	2	1	1	2	2	2	2	1	1	2	2	S	3	3	3	2	2	1	4	2.3				
Jul 18	1	2	2	3	3	2	2	2	1	0	1	1	1	1	1	1	1	S	2	1	3	2	2	2	2	0	3	1.6			
Jul 19	2	2	3	2	3	3	3	3	3	2	3	4	4	5	2	3	S	2	2	4	5	4	6	5	2	2	6	3.3			
Jul 20	5	5	6	7	6	9	9	6	6	5	2	2	2	1	2	S	1	2	2	2	4	7	10	8	1	10	4.7				
Jul 21	7	10	9	14	11	16	19	7	6	2	2	1	0	0	S	1	X	X	X	X	X	X	X	X	X	0	19	NA			
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-		
Jul 23	1	0	1	2	2	2	2	3	2	2	2	2	S	2	2	2	2	2	2	2	5	6	6	6	5	0	6	2.7			
Jul 24	7	10	12	8	13	15	NRM	7	3	5	8	S	3	2	2	2	2	2	2	2	P	P	2	3	2	15	5.5				
Jul 25	1	2	2	3	5	3	4	3	2	2	S	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	5	1.9			
Jul 26	1	1	1	1	1	1	1	1	1	S	2	1	1	1	1	1	1	1	1	1	1	0	0	1	0	2	1.0				
Jul 27	0	1	2	1	1	3	2	1	S	1	0	0	0	0	0	0	0	0	0	0	3	3	7	5	0	7	1.3				
Jul 28	6	4	8	4	4	7	8	S	1	0	0	0	0	0	0	0	0	0	0	1	2	6	9	9	0	9	3.0				
Jul 29	8	6	5	5	5	5	S	1	1	1	0	0	0	0	1	0	0	0	0	1	2	4	7	7	4	0	8	2.7			
Jul 30	5	6	4	12	9	S	3	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	1	12	2.7				
Jul 31	2	2	2	2	S	4	5	2	3	2	1	4	2	1	1	2	3	1	1	1	2	1	1	1	1	1	5	2.0			
Dlurnal Maximum	8	10	12	14	13	16	19	7	6	5	8	6	5	6	7	5	4	3	2	5	6	7	10	10	10						
Diurnal Average	3.2	3.2	3.9	4.6	4.6	5.5	4.6	2.9	2.2	1.8	1.6	1.4	1.3	1.3	1.2	1.4	1.1	1.2	2.0	3.0	3.2	3.7	3.6	3.6							

**C** Monthly Calibration      **S** Daily Zero-Span Check      **Q** Quality Assurance  
**K** Collection Error      **ND** No Data (Machine Not in Service)      **Y** Routine Maintenance  
**X** InValid Data (Equipment Malfunction /Recovery)      **NRM** UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)      **P** Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

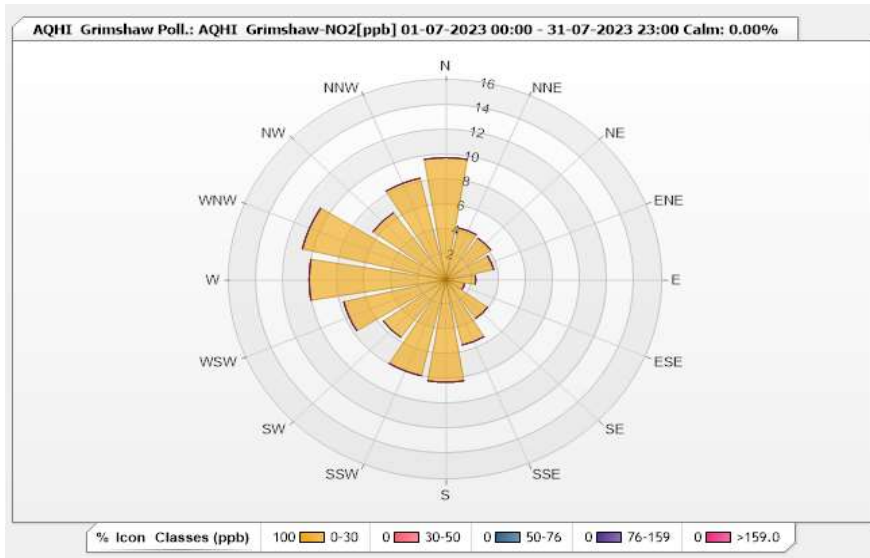


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-NO2[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 85.22%      Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	9.78	0	0	0	0	9.78
NNE	4.26	0	0	0	0	4.26
NE	4.1	0	0	0	0	4.1
ENE	3.63	0	0	0	0	3.63
E	2.21	0	0	0	0	2.21
ESE	1.42	0	0	0	0	1.42
SE	3.79	0	0	0	0	3.79
SSE	5.36	0	0	0	0	5.36
S	8.2	0	0	0	0	8.2
SSW	7.89	0	0	0	0	7.89
SW	5.68	0	0	0	0	5.68
WSW	7.73	0	0	0	0	7.73
W	10.09	0	0	0	0	10.09
WNW	10.88	0	0	0	0	10.88
NW	6.62	0	0	0	0	6.62
NNW	8.36	0	0	0	0	8.36
Summary	100	0	0	0	0	100



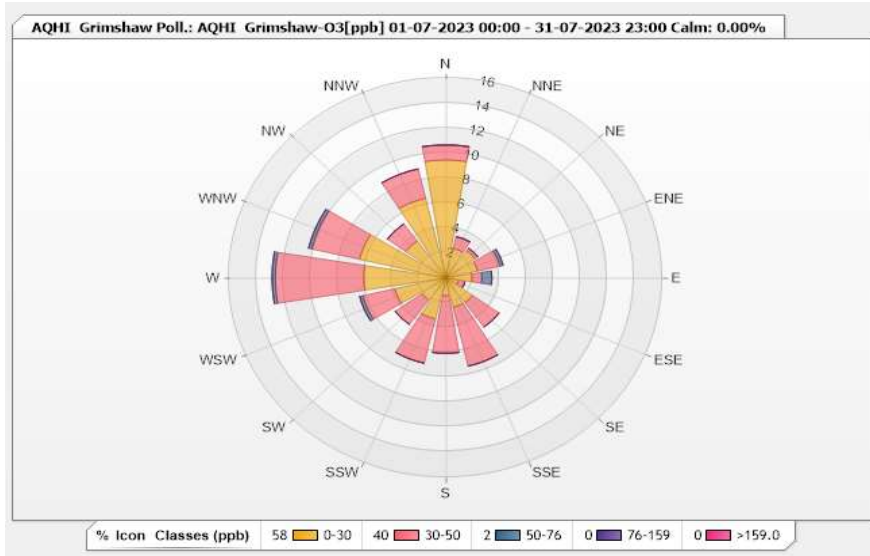


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-O3[ppb] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 55.51%      Calm Avg: 0.00 [ppm]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	9.44	1.21	0	0	0	10.65
NNE	2.42	0.97	0	0	0	3.39
NE	2.66	0.24	0	0	0	2.9
ENE	2.42	1.69	0.24	0	0	4.35
E	1.94	0.73	0.73	0	0	3.4
ESE	0.97	0.48	0	0	0	1.45
SE	2.42	2.42	0	0	0	4.84
SSE	2.42	4.84	0	0	0	7.26
S	1.45	4.6	0	0	0	6.05
SSW	3.39	3.63	0	0	0	7.02
SW	2.18	2.42	0	0	0	4.6
WSW	3.87	2.42	0.24	0	0	6.53
W	6.05	6.54	0.24	0	0	12.83
WNW	6.54	3.63	0.24	0	0	10.41
NW	3.63	1.69	0	0	0	5.32
NNW	6.54	2.42	0	0	0	8.96
Summary	58.34	39.93	1.69	0	0	100





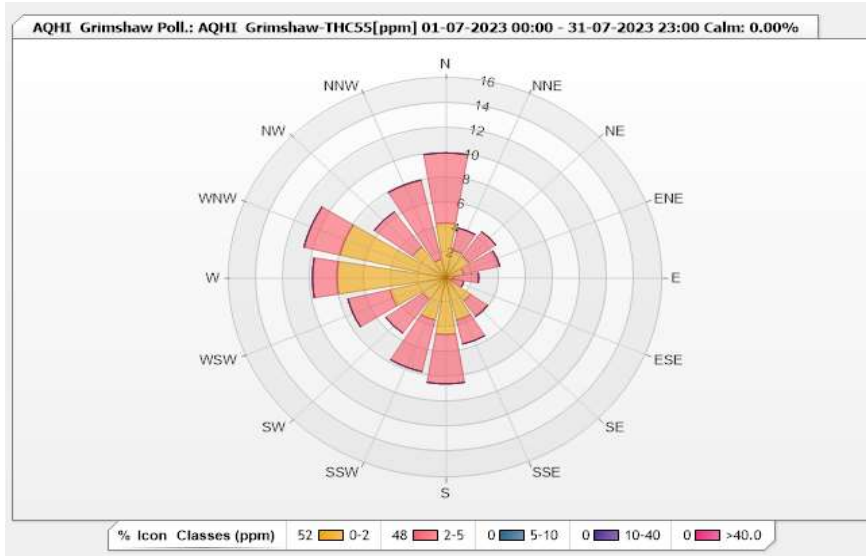


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-THC55[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 88.71%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	4.39	5.61	0	0	0	10
NNE	2.27	1.82	0	0	0	4.09
NE	2.12	2.42	0	0	0	4.54
ENE	1.36	2.73	0	0	0	4.09
E	0.61	1.82	0	0	0	2.43
ESE	0.45	0.91	0	0	0	1.36
SE	2.27	1.52	0	0	0	3.79
SSE	3.48	1.97	0	0	0	5.45
S	4.55	3.94	0	0	0	8.49
SSW	3.48	4.24	0	0	0	7.72
SW	2.12	3.33	0	0	0	5.45
WSW	4.24	3.18	0	0	0	7.42
W	8.03	1.82	0	0	0	9.85
WNW	8.03	2.73	0	0	0	10.76
NW	3.03	3.48	0	0	0	6.51
NNW	1.52	6.52	0	0	0	8.04
Summary	51.95	48.04	0	0	0	100



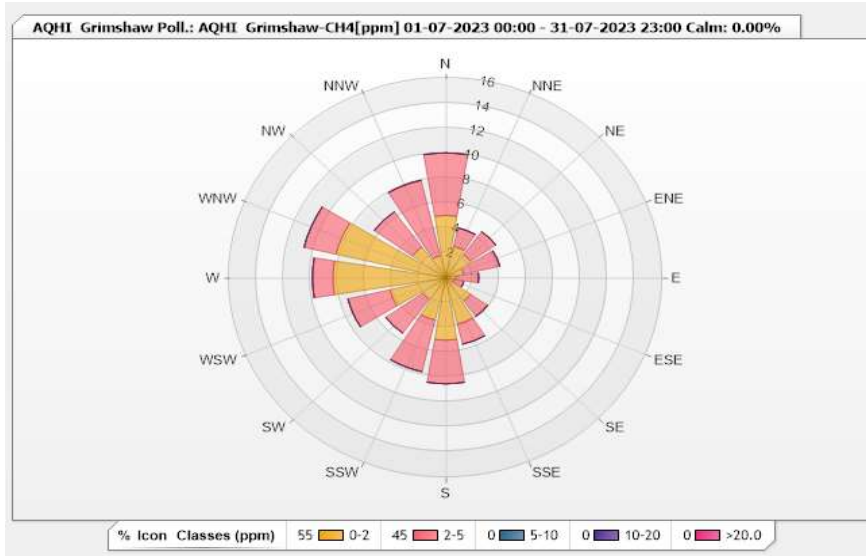


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-CH4[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 88.71%      Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	5	5	0	0	0	10
NNE	2.58	1.52	0	0	0	4.1
NE	2.27	2.27	0	0	0	4.54
ENE	1.36	2.73	0	0	0	4.09
E	0.76	1.67	0	0	0	2.43
ESE	0.61	0.76	0	0	0	1.37
SE	2.27	1.52	0	0	0	3.79
SSE	3.79	1.67	0	0	0	5.46
S	5	3.48	0	0	0	8.48
SSW	3.48	4.24	0	0	0	7.72
SW	2.12	3.33	0	0	0	5.45
WSW	4.24	3.18	0	0	0	7.42
W	8.33	1.52	0	0	0	9.85
WNW	8.33	2.42	0	0	0	10.75
NW	3.03	3.48	0	0	0	6.51
NNW	1.82	6.21	0	0	0	8.03
Summary	54.99	45	0	0	0	100



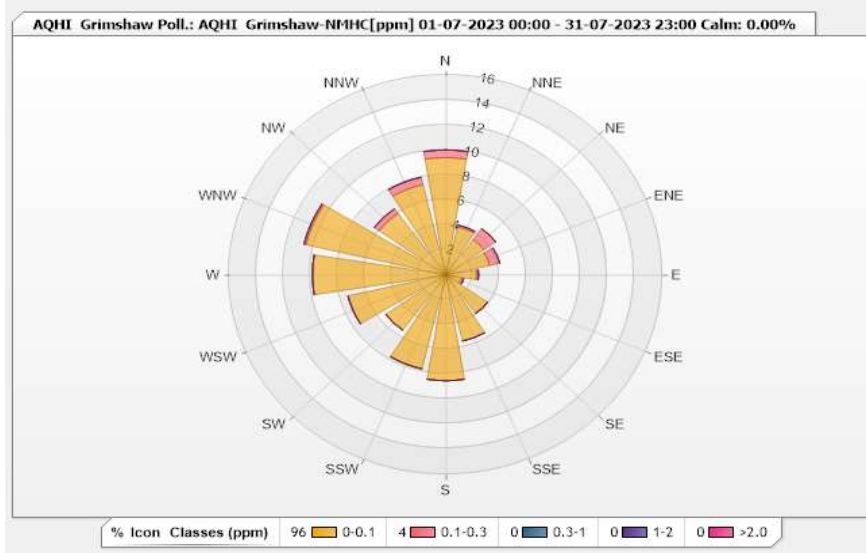


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-NMHC[ppm] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 88.71%      Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	9.39	0.61	0	0	0	10
NNE	3.94	0.15	0	0	0	4.09
NE	3.48	1.06	0	0	0	4.54
ENE	3.33	0.76	0	0	0	4.09
E	2.27	0.15	0	0	0	2.42
ESE	1.21	0.15	0	0	0	1.36
SE	3.79	0	0	0	0	3.79
SSE	5.45	0	0	0	0	5.45
S	8.48	0	0	0	0	8.48
SSW	7.73	0	0	0	0	7.73
SW	5.45	0	0	0	0	5.45
WSW	7.42	0	0	0	0	7.42
W	9.85	0	0	0	0	9.85
WNW	10.61	0.15	0	0	0	10.76
NW	6.06	0.45	0	0	0	6.51
NNW	7.42	0.61	0	0	0	8.03
Summary	95.88	4.09	0	0	0	100



**Peace River Area Monitoring Program**

**AQHI - Grimshaw Station - July 2023**  
**Summary of Hourly Averages**

**PARTICULATE MATTER 2.5 (PM<sub>2.5</sub>) in µg/m<sup>3</sup>**

Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m <sup>3</sup> , Alberta Ambient Air Quality Objective (AAAQO): 24-Hour 29 µg/m <sup>3</sup>	
Number of 1-Hour Exceedances:	<b>163</b>
Number of 24-Hour Exceedances:	<b>13</b>
Maximum Hourly Value:	357 µg/m <sup>3</sup> on Jul 14 at hr 14
Maximum Daily Value:	208.5 µg/m <sup>3</sup> on Jul 14
Minimum Hourly Value:	2 µg/m <sup>3</sup> on Jul 25 at hr 17
Minimum Daily Value:	5 µg/m <sup>3</sup> on Jul 29
Monthly Average:	45.7 µg/m <sup>3</sup>
Hours in Service:	744
Hours of Data:	725
Hours of Missing Data:	18
Hours of Calibration:	1
Operational Uptime:	97.6

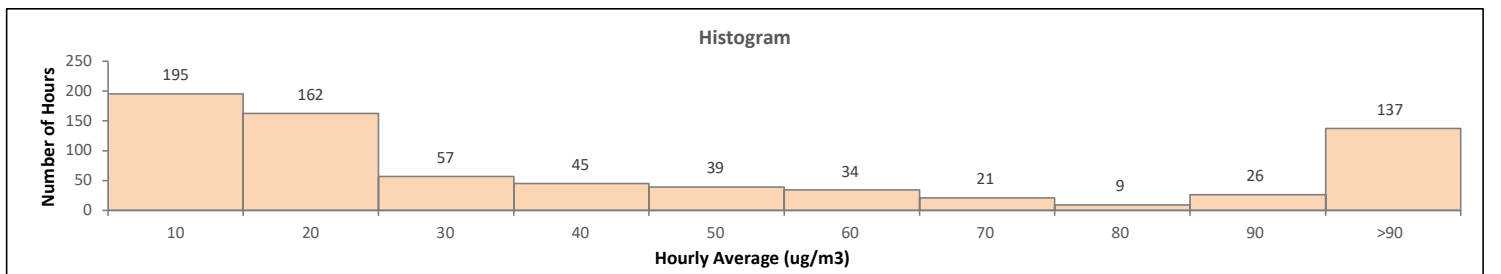
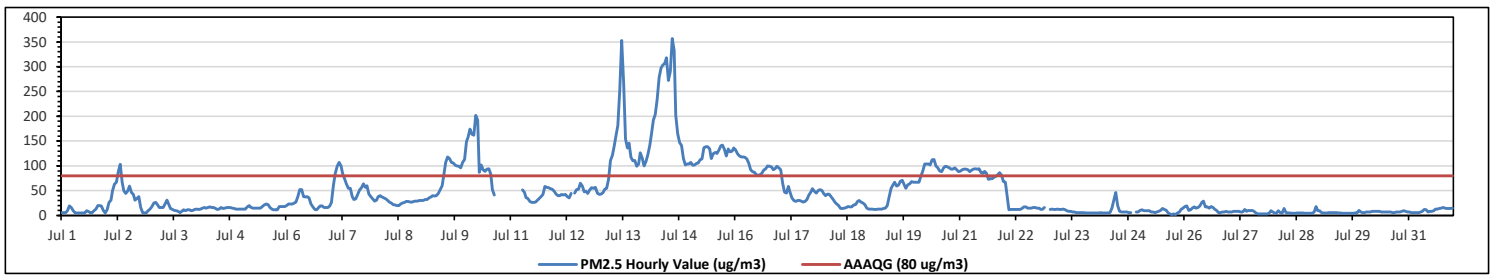
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	6	6	6	9	19	16	9	5	5	5	5	9	8	6	6	9	13	20	20	19	10	5	5	20	9.4			
Jul 2	11	26	31	50	63	67	88	103	67	50	44	49	59	46	42	31	34	38	16	6	5	5	9	13	5	103	39.7	
Jul 3	18	25	26	21	16	16	16	23	31	22	14	12	10	9	8	6	8	11	9	11	9	10	12	6	31	14.8		
Jul 4	13	12	13	15	16	15	16	17	16	16	14	12	13	16	14	15	16	16	16	15	14	13	13	13	12	17	14.5	
Jul 5	13	13	13	17	20	16	15	15	15	15	18	21	23	22	16	13	11	11	11	18	18	18	18	18	11	23	16.0	
Jul 6	20	23	23	23	25	27	38	52	38	37	38	35	23	17	12	11	16	19	19	16	16	16	19	11	52	25.6		
Jul 7	26	60	85	99	107	100	84	74	63	55	55	38	32	33	42	51	56	64	57	60	43	38	33	29	26	107	57.7	
Jul 8	31	38	40	37	35	33	30	27	25	22	21	20	20	23	25	26	28	28	27	27	28	29	29	30	20	40	28.3	
Jul 9	30	30	32	32	35	37	40	39	40	44	52	60	85	107	118	115	107	106	101	100	99	96	107	113	30	118	71.9	
Jul 10	149	158	174	164	162	202	192	87	102	92	89	93	94	83	52	41	K	K	K	K	K	K	K	K	41	202	NA	
Jul 11	K	K	K	K	K	K	51	47	36	34	28	26	26	27	31	34	38	42	58	57	56	54	53	49	26	58	41.5	
Jul 12	43	40	40	42	41	42	38	35	44	C	45	52	53	65	59	48	49	44	51	56	55	57	45	42	35	65	47.2	
Jul 13	43	46	53	55	73	111	121	141	164	181	253	353	270	154	136	146	117	110	111	99	104	126	116	100	43	353	132.6	
Jul 14	109	123	142	164	192	204	235	278	297	304	306	318	272	290	357	333	202	165	147	141	115	102	104	104	102	357	208.5	
Jul 15	107	101	102	105	106	112	114	137	139	139	134	115	124	127	125	132	140	142	133	120	134	128	130	136	101	142	124.3	
Jul 16	132	124	120	118	118	117	114	106	92	88	87	82	81	82	85	91	94	100	99	98	92	95	99	96	81	132	100.4	
Jul 17	92	65	47	45	58	47	35	30	28	30	30	29	27	28	32	41	47	54	49	45	50	52	50	44	27	92	44.0	
Jul 18	40	43	42	37	32	26	23	20	14	14	15	16	18	17	17	21	22	28	30	27	25	22	15	13	13	43	24.0	
Jul 19	13	13	12	12	13	13	13	14	15	20	38	55	62	67	59	61	69	71	62	55	62	64	68	67	12	71	41.6	
Jul 20	67	67	67	79	90	104	104	104	102	112	113	100	96	90	88	96	99	98	96	93	93	96	92	88	67	113	93.1	
Jul 21	90	92	93	93	92	88	91	93	94	93	94	86	85	89	85	73	74	74	77	79	82	86	81	68	68	94	85.5	
Jul 22	67	37	11	12	12	12	12	12	12	14	17	15	15	15	16	16	15	15	12	13	16	X	X	11	67	17.4		
Jul 23	12	13	12	12	13	12	12	13	11	9	8	8	7	7	6	6	6	6	6	6	5	5	5	5	5	5	13	8.5
Jul 24	5	5	5	6	5	5	5	5	6	15	31	46	20	8	7	7	7	6	6	P	P	7	7	5	46	10.0		
Jul 25	10	11	9	9	9	9	7	7	6	7	8	10	14	12	10	5	3	2	3	2	5	7	12	15	2	15	8.0	
Jul 26	18	19	10	11	15	17	15	16	19	26	29	17	17	15	18	16	12	10	6	6	7	7	8	7	6	29	14.2	
Jul 27	7	7	8	8	8	8	8	7	7	12	8	10	9	10	8	5	3	3	3	3	3	4	9	7	3	12	6.7	
Jul 28	5	4	9	5	4	14	6	5	5	4	4	5	5	5	5	4	4	4	4	4	4	7	18	9	4	18	6.0	
Jul 29	9	6	5	5	5	6	6	6	6	6	5	4	4	4	4	4	4	4	5	5	10	7	6	4	10	5.5		
Jul 30	6	7	7	7	8	8	8	8	8	7	7	7	7	7	7	6	6	7	7	7	8	9	8	7	6	9	7.3	
Jul 31	7	6	6	6	6	6	7	8	12	11	7	8	8	9	13	13	14	15	16	15	14	14	14	15	6	16	10.4	
Diurnal Maximum	149	158	174	164	192	204	235	278	297	304	306	353	272	290	357	333	202	165	147	141	134	128	130	136				
Diurnal Average	40.0	40.7	41.4	43.3	46.6	49.7	50.1	49.5	49.6	49.4	52.1	55.1	51.5	48.3	48.8	47.6	43.5	43.3	41.7	40.1	40.9	41.5	40.9	39.2				

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

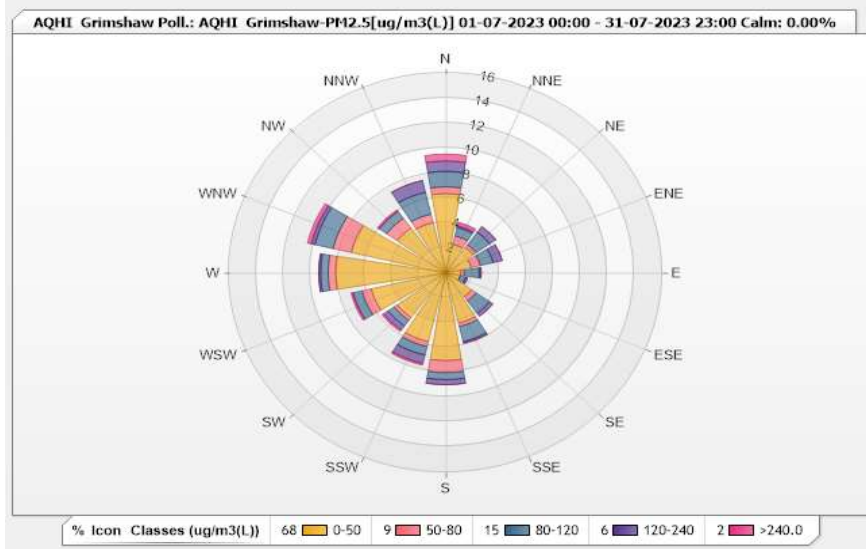


Station: AQHI Grimshaw Poll.: AQHI Grimshaw-PM2.5[ug/m3(L)] Monthly: 07-2023

Type: Pollution Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm: 0.00%      Valid Data: 97.45%      Calm Avg: 0.00 [ppm]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	6.34	0.55	1.24	0.83	0.55	9.51
NNE	2.34	0.69	0.69	0.14	0.28	4.14
NE	2.48	0.28	1.24	0.55	0	4.55
ENE	1.93	0.69	0.97	0.69	0	4.28
E	1.1	0.28	1.1	0.14	0	2.62
ESE	1.1	0	0.41	0.14	0	1.65
SE	2.34	0.41	1.24	0.28	0	4.27
SSE	4.14	0.28	1.24	0.14	0	5.8
S	7.03	0.97	0.55	0.41	0	8.96
SSW	5.66	0.41	0.69	0.69	0.14	7.59
SW	4.41	0.28	0.55	0.41	0.14	5.79
WSW	5.66	0.69	0.69	0	0.14	7.18
W	8.14	0.55	0.55	0.14	0	9.38
WNW	7.17	1.38	1.38	0.28	0.28	10.49
NW	4.41	0.97	0.69	0	0.14	6.21
NNW	4.14	0.69	1.79	0.97	0	7.59
Summary	68.39	9.12	15.02	5.81	1.67	100





Peace River Area Monitoring Program

AQHI - Grimshaw Station - July 2023

Summary of Hourly Averages

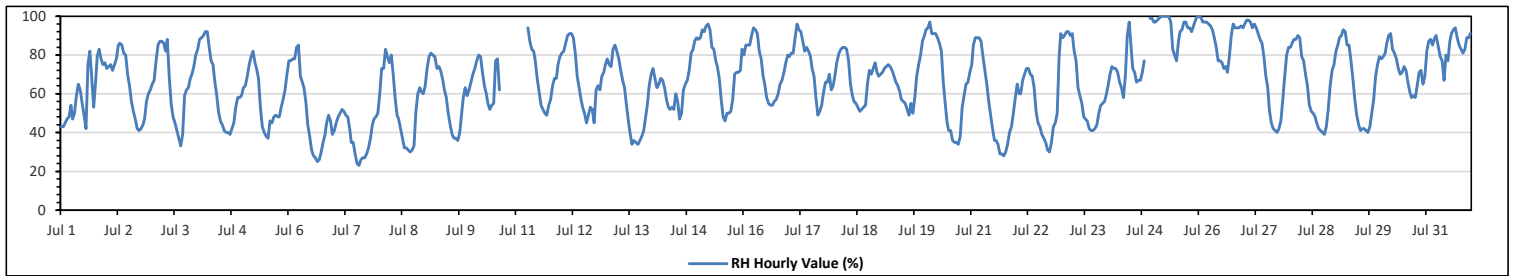
RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100	%	on Jul 25 at hr 4	Hours in Service:	744
Maximum Daily Value:	94.5	%	on Jul 25	Hours of Data:	728
Minimum Hourly Value:	23	%	on Jul 7 at hr 13	Hours of Missing Data:	16
Minimum Daily Value:	39.1	%	on Jul 7	Hours of Calibration:	0
Monthly Average:	66.1	%		Operational Uptime:	97.8

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																																																																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23																																																																				
Jul 1	43	43	45	47	48	54	47	50	59	65	62	55	49	42	75	82	68	53	66	79	83	78	75	76	42	83	60.2																																																																				
Jul 2	73	74	75	72	75	78	85	86	85	81	80	70	64	56	51	47	42	41	42	44	47	56	60	62	41	86	64.4																																																																				
Jul 3	65	67	77	85	87	87	86	82	88	69	55	48	45	41	37	33	39	59	62	63	68	70	74	80	33	88	65.3																																																																				
Jul 4	83	88	89	90	92	92	84	77	75	67	60	51	46	44	41	40	40	39	42	45	53	58	58	59	39	92	63.0																																																																				
Jul 5	63	64	69	75	79	82	76	73	68	53	43	40	38	37	46	45	48	49	48	48	53	57	62	70	37	82	57.8																																																																				
Jul 6	77	77	78	78	84	85	69	66	63	56	44	38	31	28	27	25	26	30	35	39	45	49	46	39	25	85	51.5																																																																				
Jul 7	41	45	48	50	52	51	49	48	42	35	35	29	24	23	26	27	27	29	32	37	44	47	48	50	23	52	39.1																																																																				
Jul 8	60	73	73	83	79	76	80	70	58	49	47	42	37	32	32	31	30	31	33	51	60	63	61	60	30	83	54.6																																																																				
Jul 9	64	73	79	81	80	79	73	74	72	68	62	58	50	44	39	37	37	36	40	50	58	63	59	62	36	81	59.9																																																																				
Jul 10	66	70	73	77	80	79	71	64	60	55	52	54	55	77	78	62	K	K	K	K	K	K	K	K	52	80	NA																																																																				
Jul 11	K	K	K	K	K	K	K	84	87	83	82	77	68	61	54	52	50	49	54	57	64	68	68	75	79	49	94	67.9																																																																			
Jul 12	81	82	86	90	91	91	89	81	69	63	57	53	50	45	49	53	52	45	62	64	62	69	71	75	45	91	67.9																																																																				
Jul 13	78	75	74	83	85	82	78	72	67	63	54	46	40	34	36	35	34	36	38	41	48	54	64	70	34	85	57.8																																																																				
Jul 14	73	68	63	65	68	67	63	57	53	52	53	52	60	56	47	50	62	65	67	72	81	83	87	89	47	89	64.7																																																																				
Jul 15	88	89	93	92	95	96	93	84	83	77	74	68	57	48	46	50	50	51	57	70	71	71	72	83	46	96	73.3																																																																				
Jul 16	80	85	85	85	90	94	93	91	82	78	69	65	58	55	54	54	56	57	60	65	67	71	76	80	54	94	72.9																																																																				
Jul 17	79	81	81	89	96	93	92	87	82	84	82	79	73	69	58	49	51	54	61	66	66	70	62	64	49	96	73.7																																																																				
Jul 18	70	76	81	83	84	84	83	77	65	59	56	55	53	51	52	53	54	65	72	70	73	76	71	69	51	84	68.0																																																																				
Jul 19	70	71	73	74	75	74	72	69	66	64	61	57	56	55	52	49	55	50	58	69	75	80	87	90	49	90	66.8																																																																				
Jul 20	93	94	97	91	91	91	89	86	82	66	55	45	41	41	36	35	35	34	38	53	59	65	66	71	34	97	64.8																																																																				
Jul 21	75	85	89	89	89	87	79	72	65	56	49	42	36	36	34	29	29	28	30	34	40	43	50	58	28	89	55.2																																																																				
Jul 22	65	60	60	67	70	73	73	70	69	63	51	45	43	39	37	35	31	30	35	43	45	50	79	91	30	91	55.2																																																																				
Jul 23	89	90	92	92	90	91	82	77	63	59	55	48	47	46	42	41	41	42	44	50	54	55	56	60	41	92	62.8																																																																				
Jul 24	64	70	74	73	73	71	66	63	58	69	90	97	84	73	71	66	67	71	77	P	P	99	99	58	99	58	99	74.6																																																																			
Jul 25	97	97	98	99	100	100	100	100	100	97	83	80	77	87	92	93	97	97	94	94	92	95	98	100	77	100	94.5																																																																				
Jul 26	100	99	97	97	97	96	95	93	89	84	77	77	76	73	74	71	79	90	96	94	94	94	95	94	71	100	88.8																																																																				
Jul 27	96	98	98	97	94	96	94	91	88	86	79	69	63	52	45	42	41	40	42	46	57	69	80	84	40	98	72.8																																																																				
Jul 28	84	86	88	88	90	89	79	77	70	64	54	51	50	48	45	42	41	40	39	43	52	64	72	75	39	90	63.8																																																																				
Jul 29	82	85	89	90	93	92	85	85	77	68	57	49	44	41	42	42	41	40	43	50	57	69	75	79	40	93	66.6																																																																				
Jul 30	78	79	81	86	90	91	83	81	78	73	70	71	74	72	66	61	58	59	58	64	71	72	65	69	58	91	72.9																																																																				
Jul 31	82	87	88	85	88	90	85	79	77	67	80	77	87	91	93	94	89	85	83	81	83	89	89	91	67	94	85.0																																																																				
Diurnal Maximum	100	99	98	99	100	100	100	100	100	97	90	97	87	91	93	94	97	97	96	94	94	95	99	100																																																																							
Diurnal Average	75.3	77.7	79.8	81.8	83.5	83.7	80.2	76.4	72.1	66.8	62.0	57.4	53.8	51.3	50.8	49.1	49.0	49.9	53.5	58.9	63.0	67.2	71.1	74.3																																																																							
C	Monthly Calibration																							S	Daily Zero-Span Check																							Q	Quality Assurance																																														
K	Collection Error																							ND	No Data (Machine Not in Service)																							Y	Routine Maintenance																							P	Power Failure																						
X	Invalid Data (Equipment Malfunction /Recovery)																							NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																																																																						

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.









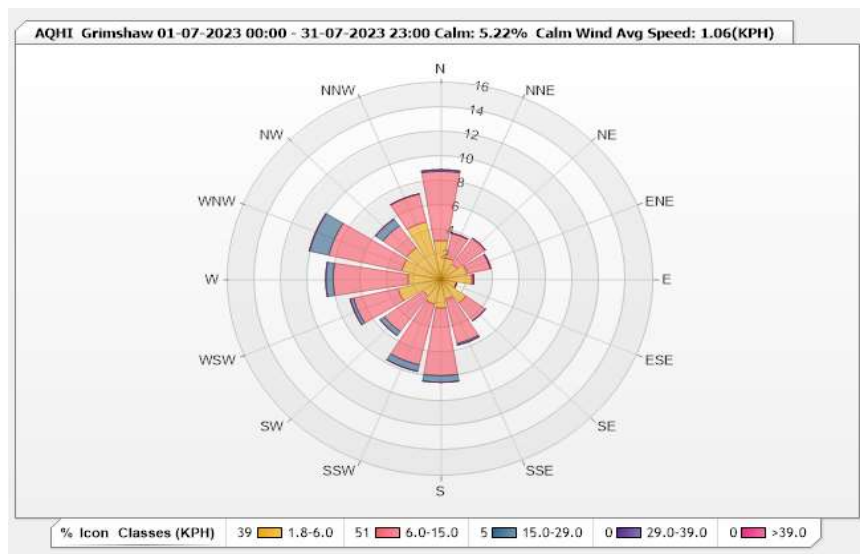


Station: AQHI Grimshaw Monitor: WDS [KPH] Monthly: 07-2023

Type: Wind Rose  
 Direction: Blowing From (Wind Frequency)  
 Time Base: 1 - Hour

Calm (WS<1.8kph): 5.22%      Valid Data: 97.85%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	3.16	5.63	0.14	0	0	8.93
NNE	1.79	2.06	0	0	0	3.85
NE	1.51	2.61	0	0	0	4.12
ENE	2.06	1.79	0	0	0	3.85
E	2.34	0.14	0	0	0	2.48
ESE	1.24	0	0	0	0	1.24
SE	2.34	1.79	0	0	0	4.13
SSE	1.65	3.71	0.14	0	0	5.5
S	2.34	5.49	0.55	0	0	8.38
SSW	2.06	5.08	0.55	0	0	7.69
SW	1.65	3.57	0.41	0	0	5.63
WSW	3.3	3.43	0.27	0	0	7
W	2.47	5.63	0.55	0	0	8.65
WNW	3.02	5.63	1.51	0	0	10.16
NW	3.16	2.2	0.69	0	0	6.05
NNW	4.81	2.34	0	0	0	7.15
Summary	38.9	51.1	4.81	0	0	94.81



Peace River Area Monitoring Program

AQHI - Grimshaw Station - July 2023

Summary of Hourly Averages

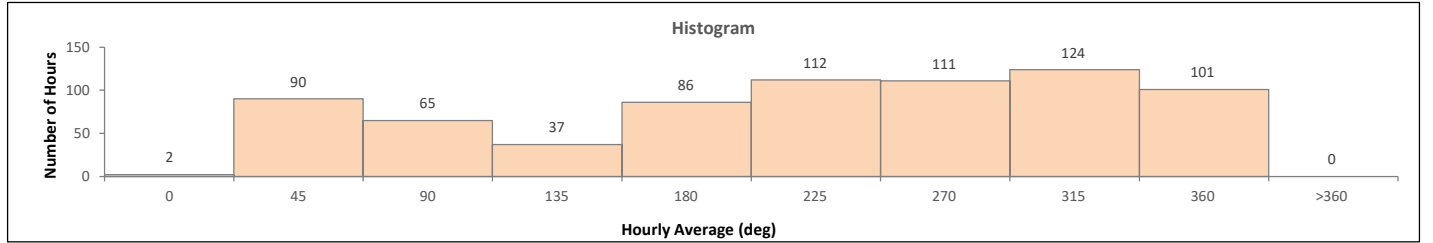
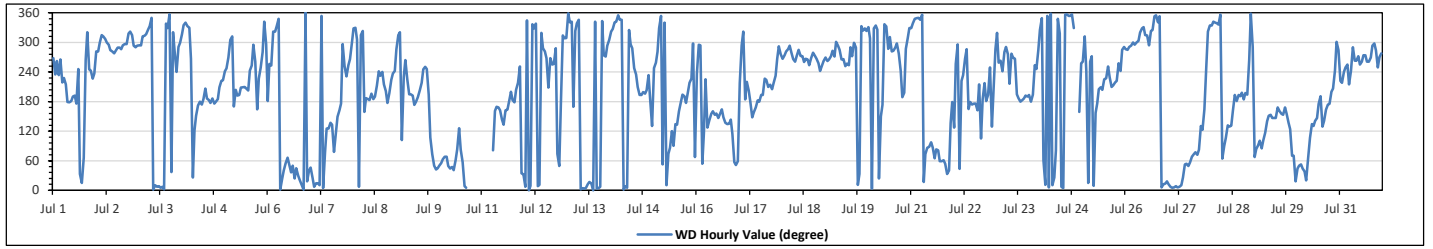
WIND DIRECTION (VWD) in sector

Monthly Average:	274 (W)	degree	Hours in Service:	744
			Hours of Data:	728
			Hours of Missing Data:	16
			Hours of Calibration:	0
			Operational Uptime:	97.8

Day	Hourly Period Starting at (MST)																							Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant
Jul 1	W	SW	W	SW	W	SW	SW	SSW	S	S	S	S	S	WSW	NNE	NNE	ENE	W	NW	WSW	WSW	SW	SW	230	SW	
Jul 2	W	W	WNW	NW	NW	NW	WNW	WNW	WNW	W	W	WNW	WNW	WNW	WNW	WNW	WNW	NW	NW	NW	WNW	WNW	WNW	296	WNW	
Jul 3	WNW	WNW	NW	NW	NW	NW	NNW	N	N	N	N	N	N	N	NNW	NNW	N	NE	NW	W	WSW	WNW	WNW	332	NNW	
Jul 4	NW	NNW	NNW	NNW	NNW	W	NNE	ESE	SSE	S	S	S	SSW	S	S	S	S	S	S	S	SSW	SW	SW	201	SSW	
Jul 5	WSW	WSW	W	WNW	NW	SSE	SSW	S	S	SSW	SSW	SSW	SSW	SSW	WSW	WSW	WNW	W	SSE	SW	WSW	W	NNW	239	WSW	
Jul 6	S	WSW	WSW	NW	NW	NNW	NNW	N	NNE	NE	NE	ENE	NE	NE	NNE	NE	NNE	NNE	N	N	NNE	NE	NE	15	NNE	
Jul 7	NE	NNE	N	NNE	NNE	N	N	N	ENE	SE	SE	SE	SE	ENE	ESE	SSE	S	WNW	WSW	SW	WSW	W	WNW	61	ENE	
Jul 8	NNW	NNW	NW	N	NW	NW	SSE	S	S	SSW	S	S	SSW	WSW	WSW	WSW	SSW	S	SSW	SW	SSW	SW	SSW	225	SW	
Jul 9	WNW	NW	NW	E	SW	W	SW	SSW	SSW	S	S	S	SSW	SW	WSW	WSW	WSW	SSW	ESE	ENE	NE	NE	NE	211	SSW	
Jul 10	NE	NE	ENE	ENE	ENE	NE	NE	ENE	E	SE	E	ENE	N	N	N	N	K	K	K	K	K	K	K	NA	NA	
Jul 11	K	K	K	K	K	K	E	SSE	SSE	SSE	SSE	SE	SE	SSE	SSE	S	SSW	S	S	SSW	SW	WSW	NE	NNE	167	SSE
Jul 12	N	NNW	N	N	NNW	NNW	NNW	N	NNE	NW	WNW	W	W	SSW	W	WSW	WSW	WNW	ENE	NE	S	NW	NW	319	NW	
Jul 13	N	NNW	NNW	SSE	NW	NNW	NNW	N	N	N	NNE	NNE	NNE	N	NNW	N	N	NNW	W	W	WNW	WNW	WNW	345	NNW	
Jul 14	NW	NW	NNW	NNW	N	NNW	NNW	N	N	N	NW	WNW	WNW	WSW	SW	SSW	S	S	SSW	SSW	SSW	SW	S	SE	285	WNW
Jul 15	WSW	WSW	W	NNW	N	NE	NNW	N	ENE	E	ESE	E	SE	SSE	S	SSW	S	S	SSW	SW	SW	WNW	SE	ENE	169	SSE
Jul 16	SW	WNW	WNW	NE	ESE	SW	SE	SE	SSE	SSE	SSE	SSE	SE	SSE	SE	SE	SE	SE	SE	ESE	ENE	NE	ENE	139	SE	
Jul 17	SW	WNW	NW	S	SW	SSW	S	SE	SSE	SSE	S	S	S	SW	SW	SSW	SSW	SSW	SW	SW	W	WNW	W	213	SSW	
Jul 18	W	W	W	WNW	WNW	W	W	W	W	WNW	W	W	WSW	W	W	WSW	W	W	W	W	WSW	WSW	W	269	W	
Jul 19	W	W	W	W	W	W	WNW	WNW	W	W	WSW	WSW	WSW	WNW	W	WNW	WNW	NNE	NNE	NNW	NW	NNW	NW	289	WNW	
Jul 20	NNW	NW	N	NNW	NNW	NW	NNE	SSE	S	NNW	NNW	WNW	NW	W	WNW	WNW	W	WSW	S	SSW	WNW	NW	NNW	301	WNW	
Jul 21	NNW	NNW	NNW	NNW	N	NNW	N	NNE	ENE	E	E	E	ENE	E	ENE	ENE	ENE	ENE	NE	NNE	NE	SE	S	48	NE	
Jul 22	SE	WSW	WNW	NE	SW	SW	W	WNW	SSE	S	S	S	SSE	SSW	ESE	S	SW	S	S	WSW	SE	SSW	WNW	201	SSW	
Jul 23	NW	WSW	W	WSW	W	WNW	W	SW	W	W	W	SSW	S	S	S	S	S	S	S	S	SSW	WSW	WSW	234	SW	
Jul 24	NW	NNW	ENE	NNE	N	N	N	N	NNE	E	NNW	NW	N	N	N	N	N	N	N	N	N	N	SSW	359	N	
Jul 25	W	NW	WSW	NNE	W	W	N	SSE	S	SSW	SSW	SSW	SW	WSW	SW	SSW	SSW	SW	SW	WSW	WSW	WNW	WNW	240	WSW	
Jul 26	WNW	WNW	WNW	WNW	WNW	WNW	WNW	NW	NNW	NNW	NW	NW	WNW	NW	NW	N	N	NNW	N	N	NNE	NNE	NNE	324	NW	
Jul 27	NNE	N	N	N	N	N	N	NNE	NE	NE	NE	NE	ENE	ENE	ENE	ENE	ENE	E	SE	ESE	SSE	WSW	NW	NNW	38	NE
Jul 28	NNW	NNW	NNW	NNW	NNW	N	ENE	E	ESE	SE	SE	SE	SSE	S	S	S	S	SSW	S	SSW	SSW	W	N	WNW	180	S
Jul 29	ENE	E	E	E	E	E	ESE	SE	SSE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SE	ESE	ENE	ENE	NNE	124	ESE	
Jul 30	NE	NE	NE	NE	NE	NNE	ENE	ESE	SE	SE	SE	S	S	SE	SE	SE	SSE	S	S	SSW	SSW	WSW	WNW	133	SE	
Jul 31	SW	SW	WSW	WSW	WSW	SSW	WSW	WNW	W	W	W	WSW	W	W	W	W	W	W	W	WNW	WNW	WNW	WSW	W	261	W

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	ND	No Data (Machine Not in Service)	Y	Routine Maintenance
X	Invalid Data (Machine Malfunction/Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.







## END OF REPORT

This page, 158 of 158, ends the July 2023 Monthly Ambient Air Quality Monitoring Report.



## **Peace River Area Monitoring Program**

# **JULY 2023**

## **Ambient Air Monitoring**

## **Certified Laboratory Analysis Report**

### **LAB-PRAMP-202307**

**Operation and Maintenance:**

Bureau Veritas Canada

**Data Validation and Report:**

Peace River Area Monitoring Program

August 3, 2023

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## NMHC Canister Analytical Results



Highway 16A & 75 Street  
 PO Bag 4000  
 Vegreville, AB, T9C 1T4  
 Environmental Analytical Services  
 Phone: (780) 632-8403 Fax: (780) 632-8620

**EAS CANISTER**  
**Sample ID:** 23070100-001 **Priority:** Normal



**Customer ID:** PRAMP  
**Cust Samp ID:** PRAMP\_Reno-2023-07-07

Date Received- Lab Use Only  
**RECEIVED**  
**JUL 10 2023**

<b>Client Contact Details:</b> Contact: <u>Karla Ressor, Michael Bisaga/ Lily Lin</u> Company: <u>PRAMP Airshed</u> PO#: <input type="checkbox"/> 842b Station <input type="checkbox"/> 986c Station <input checked="" type="checkbox"/> Reno Station Address: <input type="checkbox"/> 842b (Lat. 56.27406N, Long. 116.98129W) <input type="checkbox"/> 986c (Lat. 56.36988N, Long. 116.925636W) <input checked="" type="checkbox"/> Reno (Lat. 55.86936N, Long. 117.05739W) Telephone: <u>403-8072995, 780-2667068/587-2252248</u> Email: <u>karla@prampairshed.ca, pramptech@prampairshed.ca</u>	<b>RUSH (Surcharge)</b> <input type="checkbox"/> Invoice Instructions: Send to: officemanager@prampairshed.ca, karla@prampairshed.ca, pramptech@prampairshed.ca    Attention: PRAMP Office Manager Any correspondence related to canister analysis, send the information to karla@prampairshed.ca and pramptech@prampairshed.ca <hr/> InnoTech Contact: <u>Graham Knox</u> Phone: 780-632-8403 Cell: 780-632-1519 Email: <u>Graham.Knox@innotechalberta.ca</u>
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Sample ID (PRAMP_station_yyyymmdd) <small>(Find Sample ID from BV's email)</small>	Canister ID <small>(Find canister ID from canister tag)</small>	Sample Description	Date/Time Canister Triggered <small>(Find Date/Time from BV's email)</small>		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP_842b- _____	32256	<input type="checkbox"/> Methane Trigger	2023-07-07	0425	* C1C4 Air, VOC Full, RSC Air
PRAMP_986c- _____		<input checked="" type="checkbox"/> NMHC Trigger			* Unknowns to be reported
PRAMP_Reno- <u>2023-07-07</u>		<input type="checkbox"/> Methane Blank			* Carbon Isotopic Analysis (if sample is collected from Methane trigger)
		<input type="checkbox"/> NMHC Blank			
		<input type="checkbox"/> Expired Canister – No further analysis is required.			

**Sample Collection:**  
 Collected By JM (Name) of PRAMP (Company) on 2023-07-07 1300 (Date/Time) (MST).



Highway 16A & 75 Street  
 PO Bag 4000  
 Vegreville, AB, T9C 1T4  
 Environmental Analytical Services  
 Phone: (780) 632-8403 Fax: (780) 632-8620

**Sample ID:** 23070100-002 **Priority:** Normal



**Customer ID:** PRAMP  
**Cust Samp ID:** PRAMP\_Reno-2023-07-07-Blank

Date Received- Lab Use Only

RECEIVED

JUL 10 2023

<p><b>Client Contact Details:</b></p> <p>Contact: <u>Karla Ressor, Michael Bisaga/ Lily Lin</u></p> <p>Company: <u>PRAMP Airshed</u></p> <p>PO#: <input type="checkbox"/> 842b Station    <input type="checkbox"/> 986c Station    <input checked="" type="checkbox"/> Reno Station</p> <p>Address: <input type="checkbox"/> 842b (Lat. 56.27406N, Long. 116.98129W)</p> <p style="margin-left: 20px;"><input type="checkbox"/> 986c (Lat. 56.36988N, Long. 116.925636W)</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Reno (Lat. 55.86936N, Long. 117.05739W)</p> <p>Telephone: <u>403-8072995, 780-2667068/587-2252248</u></p> <p>Email: <u>karla@prampairshed.ca, pramptech@prampairshed.ca</u></p>	<p><b>RUSH (Surcharge)</b> <input type="checkbox"/></p> <p>Invoice Instructions:</p> <p>Send to: officemanager@prampairshed.ca, karla@prampairshed.ca,        pramptech@prampairshed.ca    Attention: PRAMP Office Manager</p> <p>Any correspondence related to canister analysis, send the information to        karla@prampairshed.ca and pramptech@prampairshed.ca</p> <hr/> <p>InnoTech Contact: <u>Graham Knox</u>    Phone: 780-632-8403 Cell: 780-632-1519        Email: <u>Graham.Knox@innotechalberta.ca</u></p>
--	---

Sample ID (PRAMP_station_yyyymmdd) <small>(Find Sample ID from BV's email)</small>	Canister ID <small>(Find canister ID from canister tag)</small>	Sample Description	Date/Time Canister Triggered <small>(Find Date/Time from BV's email)</small>		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP_842b- _____	28944	<input type="checkbox"/> Methane Trigger	2023-07-07	0425	* C1C4 Air, VOC Full, RSC Air
PRAMP_986c- _____		<input type="checkbox"/> NMHC Trigger			* Unknowns to be reported
PRAMP_Reno- <u>2023-07-07</u>		<input type="checkbox"/> Methane Blank <input checked="" type="checkbox"/> NMHC Blank <input type="checkbox"/> Expired Canister – No further analysis is required.			* Carbon Isotopic Analysis (if sample is collected from Methane trigger)

**Sample Collection:**

Collected By JM (Name) of PRAMP (Company) on 2023-07-07 1300 (Date/Time) (MST).



Highway 16A & 75 Street  
 PO Bag 4000  
 Vegreville, AB, T9C 1T4  
 Environmental Analytical Services  
 Phone: (780) 632-8403 Fax: (780) 632-8620

EAS CANISTER  
 RECEIPT OF CUSTODY FORM

Sample ID: 23070100-003 Priority: Normal



Customer ID: PRAMP  
 Cust Samp ID: PRAMP\_986c-2023-07-07

Date Received- Lab Use Only  
**RECEIVED**  
**JUL 10 2023**

**Client Contact Details:**  
 Contact: Karla Ressor, Michael Bisaga/ Lily Lin  
 Company: PRAMP Airshed  
 PO#:  842b Station  986c Station  Reno Station  
 Address:  842b (Lat. 56.27406N, Long. 116.98129W)  
 986c (Lat. 56.36988N, Long. 116.925636W)  
 Reno (Lat. 55.86936N, Long. 117.05739W)  
 Telephone: 403-8072995, 780-2667068/587-2252248  
 Email: karla@prampairshed.ca, pramptech@prampairshed.ca

**RUSH (Surcharge)**   
 Invoice Instructions:  
 Send to: officemanager@prampairshed.ca, karla@prampairshed.ca,  
 pramptech@prampairshed.ca Attention: PRAMP Office Manager  
 Any correspondence related to canister analysis, send the information to  
 karla@prampairshed.ca and pramptech@prampairshed.ca  
 InnoTech Contact: Graham Knox Phone: 780-632-8403 Cell: 780-632-1519  
 Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_station_yyyymmdd) (Find Sample ID from BV's email)	Canister ID (Find canister ID from canister tag)	Sample Description	Date/Time Canister Triggered (Find Date/Time from BV's email)		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP_842b- _____	32230	<input type="checkbox"/> Methane Trigger	2023-07-07	0650	* C1C4 Air, VOC Full, RSC Air * Unknowns to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)
PRAMP_986c- <u>2023-07-07</u>		<input checked="" type="checkbox"/> NMHC Trigger			
PRAMP_Reno- _____		<input type="checkbox"/> Methane Blank <input type="checkbox"/> NMHC Blank <input type="checkbox"/> Expired Canister – No further analysis is required.			

**Sample Collection:**  
 Collected By JM (Name) of PRAMP (Company) on 2023-07-07 1155 (Date/Time) (MST).



Highway 16A & 75 Street  
 PO Bag 4000  
 Vegreville, AB, T9C 1T4  
 Environmental Analytical Services  
 Phone: (780) 632-8403 Fax: (780) 632-8620

**EAS CANISTER**

Sample ID: 23070100-004 Priority: Normal



Customer ID: PRAMP  
 Cust Samp ID: PRAMP\_986c-2023-07-07-Blank

Date Received- Lab Use Only

**RECEIVED**  
**JUL 10 2023**

**Client Contact Details:**

Contact: Karla Ressor, Michael Bisaga/ Lily Lin  
 Company: PRAMP Airshed  
 PO#:  842b Station  986c Station  Reno Station  
 Address:  842b (Lat. 56.27406N, Long. 116.98129W)  
 986c (Lat. 56.36988N, Long. 116.925636W)  
 Reno (Lat. 55.86936N, Long. 117.05739W)  
 Telephone: 403-8072995, 780-2667068/587-2252248  
 Email: karla@prampairshed.ca, pramptech@prampairshed.ca

**RUSH (Surcharge)**

Invoice Instructions:

Send to: officemanager@prampairshed.ca, karla@prampairshed.ca,  
 pramptech@prampairshed.ca Attention: PRAMP Office Manager  
 Any correspondence related to canister analysis, send the information to  
 karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-632-8403 Cell: 780-632-1519  
 Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_station_yyyymmdd) (Find Sample ID from BV's email)	Canister ID (Find canister ID from canister tag)	Sample Description	Date/Time Canister Triggered (Find Date/Time from BV's email)		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP_842b- _____	29021	<input type="checkbox"/> Methane Trigger	2023-07-07	0650	* C1C4 Air, VOC Full, RSC Air * Unknowns to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)
PRAMP_986c- <u>2023-07-07</u>		<input type="checkbox"/> NMHC Trigger			
PRAMP_Reno- _____		<input checked="" type="checkbox"/> NMHC Blank <input type="checkbox"/> Expired Canister – No further analysis is required.			


**Sample Collection:**


Collected By JM (Name) of PRAMP (Company) on 2023-07-07 1155 (Date/Time) (MST).







Customer ID: PRAMP  
Cust Samp ID: PRAMP\_Reno-2023-07-07

 <p>Canister ID: <u>32256</u> This cleaned canister meets or exceeds TO-15 Method Specifications</p> <p>Proofed by: <u>ISRQ4</u> on: <u>MAR 31 2023</u> Evacuated: <u>MAY 02 2023</u> Recertified: _____ <small>(Use within: 3 months from evacuation or recertification date)</small> Laboratory Contact Number: 780-632-8403</p>	Sample ID: <u>Reno. NMHC. Sample. 2023.07.07 1300</u>	
	Sampled By: _____	
	Starting Vacuum: <u>-27.1</u> "Hg	End Vacuum: <u>-2</u> "Hg/psig <i>JWP</i>

 <p>Canister ID: <u>28944</u> This cleaned canister meets or exceeds TO-15 Method Specifications</p> <p>Proofed by: <u>ISRQ4</u> on: <u>MAR 08 2023</u> Evacuated: <u>APR 26 2023</u> Recertified: _____ <small>(Use within: 3 months from evacuation or recertification date)</small> Laboratory Contact Number: 780-632-8403</p>	Sample ID: <u>Reno. NMHC. Blank. 2023.07.07 130</u>	
	Sampled By: <u>JM</u>	
	Starting Vacuum: <u>-27.1</u> "Hg	End Vacuum: <u>27</u> "Hg/psig <i>JWP</i>

 <p>Canister ID: <u>32230</u> This cleaned canister meets or exceeds TO-15 Method Specifications</p> <p>Proofed by: <u>ISRQ4</u> on: <u>FEB 07 2023</u> Evacuated: <u>MAY 02 2023</u> Recertified: _____ <small>(Use within: 3 months from evacuation or recertification date)</small> Laboratory Contact Number: 780-632-8403</p>	Sample ID: <u>986C. NMHC. Sample. 2023.07.07 1155</u>	
	Sampled By: <u>JM</u>	
	Starting Vacuum: <u>-27.1</u> "Hg	End Pressure: <u>0</u> "Hg/psig <i>JWP</i>

 <p>Canister ID: <u>29021</u> This cleaned canister meets or exceeds TO-15 Method Specifications</p> <p>Proofed by: <u>ISRQ4</u> on: <u>APR 17 2023</u> Evacuated: <u>MAY 02 2023</u> Recertified: _____ <small>(Use within: 3 months from evacuation or recertification date)</small> Laboratory Contact Number: 780-632-8403</p>	Sample ID: <u>986C. NMHC. Blank 2023.07.07 1155</u>	
	Sampled By: <u>JM</u>	
	Starting Vacuum: <u>-27.1</u> "Hg	End Vacuum: <u>-27</u> "Hg/psig <i>JWP</i>

<p><b>RESULTS:</b> Karla Reesor                      403 807 2995 Peace River Area Monitoring Program Committee</p> <p><b>INVOICE:</b> Office Manager</p>	<p style="text-align: center;"><b>CLIENT SAMPLE ID</b> PRAMP_986c-2023-07-07</p> <p><b>MATRIX:</b> Ambient Air</p> <p><b>CANISTER ID:</b> 32230</p> <p><b>PRIORITY:</b> Normal</p> <p><b>DESCRIPTION:</b> NMHC Trigger</p> <p><b>DATE SAMPLED:</b> 07-Jul-23      6:50      <b>DATE RECEIVED:</b> 10-Jul-23</p> <p><b>REPORT CREATED:</b> 17-Jul-23      <b>REPORT NUMBER:</b> 23070100</p> <p style="text-align: right;"><b>VERSION:</b>                      <b>Version 01</b></p>
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Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-003	1-Butene	K, T, U	< 0.14	ppmv	0.14	NA-025	10-Jul-23
23070100-003	Acetylene	K, T, U	< 0.11	ppmv	0.11	NA-025	10-Jul-23
23070100-003	n-Butane	K, T, U	< 0.3	ppmv	0.3	NA-025	10-Jul-23
23070100-003	cis-2-Butene	K, T, U	< 0.06	ppmv	0.06	NA-025	10-Jul-23
23070100-003	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-003	Ethylacetylene	K, T, U	< 0.09	ppmv	0.09	NA-025	10-Jul-23
23070100-003	Ethylene	K, T, U	< 0.10	ppmv	0.10	NA-025	10-Jul-23
23070100-003	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-003	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-003	Methane		3.0	ppmv	0.1	NA-025	10-Jul-23
23070100-003	n-Propane	K, T, U	< 0.10	ppmv	0.10	NA-025	10-Jul-23
23070100-003	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-003	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-003	trans-2-Butene	K, T, U	< 0.13	ppmv	0.13	NA-025	10-Jul-23
23070100-003	2,5-Dimethylthiophene	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-003	2-Ethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-003	2-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_986c-2023-07-07	32230	Ambient Air	07-Jul-23 6:50
<b>DESCRIPTION:</b>	NMHC Trigger		
<b>REPORT NUMBER:</b>	<b>REPORT CREATED:</b>	<b>VERSION:</b>	<b>Version 01</b>
23070100	17-Jul-23		

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-003	3-Methylthiophene	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-003	Butyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-003	Carbon disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-003	Carbonyl sulphide		2.7	ppbv	0.4	NA-024	10-Jul-23
23070100-003	Dimethyl disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-003	Dimethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-003	Ethyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-003	Ethyl sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-003	Hydrogen sulphide		3.4	ppbv	0.1	NA-024	10-Jul-23
23070100-003	Isobutyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-003	Isopropyl mercaptan	K, T, U	< 0.1	ppbv	0.1	NA-024	10-Jul-23
23070100-003	Methyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-003	Pentyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	10-Jul-23
23070100-003	Propyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	10-Jul-23
23070100-003	tert-Butyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-003	Thiophene/sec-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-003	1,1,1-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	1,1,2,2-Tetrachloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	1,1,2-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	1,1-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	1,1-Dichloroethylene	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	1,2,3-Trimethylbenzene		0.22	ppbv	0.07	AC-058	12-Jul-23
23070100-003	1,2,4-Trichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	12-Jul-23
23070100-003	1,2,4-Trimethylbenzene	I	0.13	ppbv	0.04	AC-058	12-Jul-23
23070100-003	1,2-Dibromoethane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_986c-2023-07-07	32230	Ambient Air	07-Jul-23 6:50
<b>DESCRIPTION:</b>	NMHC Trigger		
<b>REPORT NUMBER:</b>	<b>REPORT CREATED:</b>	<b>VERSION:</b>	<b>Version 01</b>
23070100	17-Jul-23		

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-003	1,2-Dichlorobenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	1,2-Dichloroethane	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	1,2-Dichloropropane	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	1,3,5-Trimethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	1,3-Butadiene		0.80	ppbv	0.04	AC-058	12-Jul-23
23070100-003	1,3-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	12-Jul-23
23070100-003	1,4-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	12-Jul-23
23070100-003	1,4-Dioxane	K, T, U	< 0.7	ppbv	0.7	AC-058	12-Jul-23
23070100-003	1-Butene/Isobutylene		4.19	ppbv	0.09	AC-058	12-Jul-23
23070100-003	1-Hexene/2-Methyl-1-pentene		0.57	ppbv	0.10	AC-058	12-Jul-23
23070100-003	1-Pentene		0.76	ppbv	0.04	AC-058	12-Jul-23
23070100-003	2,2,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	2,2-Dimethylbutane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	2,3,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	2,3-Dimethylbutane	K, T, U	< 0.13	ppbv	0.13	AC-058	12-Jul-23
23070100-003	2,3-Dimethylpentane	I	0.05	ppbv	0.03	AC-058	12-Jul-23
23070100-003	2,4-Dimethylpentane	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	2-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	2-Methylhexane	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	2-Methylpentane		0.21	ppbv	0.03	AC-058	12-Jul-23
23070100-003	3-Methylheptane	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	3-Methylhexane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	3-Methylpentane	I	0.04	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Acetone		18.8	ppbv	0.6	AC-058	12-Jul-23
23070100-003	Acrolein		2.6	ppbv	0.4	AC-058	12-Jul-23

Report certified by: Andrea Conner, Admin Assistant

On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: July 17, 2023

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_986c-2023-07-07	32230	Ambient Air	07-Jul-23 6:50
<b>DESCRIPTION:</b>	NMHC Trigger		
<b>REPORT NUMBER:</b>	<b>REPORT CREATED:</b>	<b>VERSION:</b>	<b>Version 01</b>
23070100	17-Jul-23		

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-003	Benzene		9.24	ppbv	0.04	AC-058	12-Jul-23
23070100-003	Benzyl chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	12-Jul-23
23070100-003	Bromodichloromethane	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	Bromoform	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Bromomethane	I	0.04	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Carbon disulfide		0.15	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Carbon tetrachloride	I	0.08	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Chlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Chloroethane	I	0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Chloroform	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Chloromethane		0.88	ppbv	0.06	AC-058	12-Jul-23
23070100-003	cis-1,2-Dichloroethene	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	cis-1,3-Dichloropropene	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	cis-2-Butene		0.39	ppbv	0.04	AC-058	12-Jul-23
23070100-003	cis-2-Pentene	I	0.09	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Cyclohexane	K, T, U	< 0.06	ppbv	0.06	AC-058	12-Jul-23
23070100-003	Cyclopentane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Dibromochloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Ethanol		1.8	ppbv	0.7	AC-058	12-Jul-23
23070100-003	Ethyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	12-Jul-23
23070100-003	Ethylbenzene		0.46	ppbv	0.04	AC-058	12-Jul-23
23070100-003	Freon-11		0.18	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Freon-113	I	0.04	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Freon-114	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	Freon-12		0.44	ppbv	0.04	AC-058	12-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_986c-2023-07-07	32230	Ambient Air	07-Jul-23 6:50
<b>DESCRIPTION:</b>	NMHC Trigger		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-003	Hexachloro-1,3-butadiene	K, T, U	< 0.4	ppbv	0.4	AC-058	12-Jul-23
23070100-003	Isobutane		0.87	ppbv	0.04	AC-058	12-Jul-23
23070100-003	Isopentane		0.95	ppbv	0.06	AC-058	12-Jul-23
23070100-003	Isoprene		1.98	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Isopropyl alcohol	K, T, U	< 0.4	ppbv	0.4	AC-058	12-Jul-23
23070100-003	Isopropylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	12-Jul-23
23070100-003	m,p-Xylene		0.79	ppbv	0.06	AC-058	12-Jul-23
23070100-003	m-Diethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	12-Jul-23
23070100-003	m-Ethyltoluene		0.15	ppbv	0.04	AC-058	12-Jul-23
23070100-003	Methyl butyl ketone	K, T, U	< 0.6	ppbv	0.6	AC-058	12-Jul-23
23070100-003	Methyl ethyl ketone		2.9	ppbv	0.4	AC-058	12-Jul-23
23070100-003	Methyl isobutyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	12-Jul-23
23070100-003	Methyl methacrylate	K, T, U	< 0.11	ppbv	0.11	AC-058	12-Jul-23
23070100-003	Methyl tert butyl ether	K, T, U	< 0.04	ppbv	0.04	AC-058	12-Jul-23
23070100-003	Methylcyclohexane	I	0.04	ppbv	0.03	AC-058	12-Jul-23
23070100-003	Methylcyclopentane	K, T, U	< 0.07	ppbv	0.07	AC-058	12-Jul-23
23070100-003	Methylene chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	12-Jul-23
23070100-003	n-Butane		2.40	ppbv	0.03	AC-058	12-Jul-23
23070100-003	n-Decane		0.20	ppbv	0.09	AC-058	12-Jul-23
23070100-003	n-Dodecane	I	0.6	ppbv	0.4	AC-058	12-Jul-23
23070100-003	n-Heptane		0.41	ppbv	0.06	AC-058	12-Jul-23
23070100-003	n-Hexane		0.56	ppbv	0.04	AC-058	12-Jul-23
23070100-003	n-Octane		0.29	ppbv	0.03	AC-058	12-Jul-23
23070100-003	n-Pentane		0.99	ppbv	0.06	AC-058	12-Jul-23
23070100-003	n-Propylbenzene	I	0.14	ppbv	0.09	AC-058	12-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_986c-2023-07-07	32230	Ambient Air	07-Jul-23 6:50
<b>DESCRIPTION:</b>	NMHC Trigger		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result Units	RDL	Method	Analysis Date
23070100-003	n-Undecane	K, T, U	< 0.7 ppbv	0.7	AC-058	12-Jul-23
23070100-003	Naphthalene	K, T, U	< 0.4 ppbv	0.4	AC-058	12-Jul-23
23070100-003	n-Nonane		0.19 ppbv	0.06	AC-058	12-Jul-23
23070100-003	o-Ethyltoluene	I	0.12 ppbv	0.03	AC-058	12-Jul-23
23070100-003	o-Xylene		0.38 ppbv	0.04	AC-058	12-Jul-23
23070100-003	p-Diethylbenzene	I	0.08 ppbv	0.03	AC-058	12-Jul-23
23070100-003	p-Ethyltoluene	K, T, U	< 0.06 ppbv	0.06	AC-058	12-Jul-23
23070100-003	Styrene		0.38 ppbv	0.06	AC-058	12-Jul-23
23070100-003	Tetrachloroethylene	K, T, U	< 0.03 ppbv	0.03	AC-058	12-Jul-23
23070100-003	Tetrahydrofuran	K, T, U	< 0.4 ppbv	0.4	AC-058	12-Jul-23
23070100-003	Toluene		4.76 ppbv	0.04	AC-058	12-Jul-23
23070100-003	trans-1,2-Dichloroethylene	K, T, U	< 0.09 ppbv	0.09	AC-058	12-Jul-23
23070100-003	trans-1,3-Dichloropropylene	K, T, U	< 0.03 ppbv	0.03	AC-058	12-Jul-23
23070100-003	trans-2-Butene		0.43 ppbv	0.04	AC-058	12-Jul-23
23070100-003	trans-2-Pentene		0.15 ppbv	0.03	AC-058	12-Jul-23
23070100-003	Trichloroethylene	K, T, U	< 0.03 ppbv	0.03	AC-058	12-Jul-23
23070100-003	Vinyl acetate	K, T, U	< 0.4 ppbv	0.4	AC-058	12-Jul-23
23070100-003	Vinyl chloride	K, T, U	< 0.03 ppbv	0.03	AC-058	12-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_986c-2023-07-07-Blank	29021	Ambient Air	07-Jul-23 6:50
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-004	1-Butene	K, T, U	< 0.10	ppmv	0.10	NA-025	10-Jul-23
23070100-004	Acetylene	K, T, U	< 0.08	ppmv	0.08	NA-025	10-Jul-23
23070100-004	n-Butane	K, T, U	< 0.2	ppmv	0.2	NA-025	10-Jul-23
23070100-004	cis-2-Butene	K, T, U	< 0.04	ppmv	0.04	NA-025	10-Jul-23
23070100-004	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-004	Ethylacetylene	K, T, U	< 0.06	ppmv	0.06	NA-025	10-Jul-23
23070100-004	Ethylene	K, T, U	< 0.07	ppmv	0.07	NA-025	10-Jul-23
23070100-004	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-004	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-004	Methane	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-004	n-Propane	K, T, U	< 0.07	ppmv	0.07	NA-025	10-Jul-23
23070100-004	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-004	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-004	trans-2-Butene	K, T, U	< 0.09	ppmv	0.09	NA-025	10-Jul-23
23070100-004	2,5-Dimethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-004	2-Ethylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-004	2-Methylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-004	3-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-004	Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-004	Carbon disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-004	Carbonyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-004	Dimethyl disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-004	Dimethyl sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-004	Ethyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-004	Ethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

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<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_986c-2023-07-07-Blank	29021	Ambient Air	07-Jul-23 6:50
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-004	Hydrogen sulphide	K, T, U	< 0.1	ppbv	0.1	NA-024	10-Jul-23
23070100-004	Isobutyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-004	Isopropyl mercaptan	K, T, U	< 0.1	ppbv	0.1	NA-024	10-Jul-23
23070100-004	Methyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-004	Pentyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-004	Propyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-004	tert-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-004	Thiophene/sec-Butyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-004	1,1,1-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	1,1,2,2-Tetrachloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	1,1,2-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	1,1-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	1,1-Dichloroethylene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	1,2,3-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-004	1,2,4-Trichlorobenzene	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	1,2,4-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	1,2-Dibromoethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	1,2-Dichlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	1,2-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	1,2-Dichloropropane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	1,3,5-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	1,3-Butadiene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	1,3-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	11-Jul-23
23070100-004	1,4-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	11-Jul-23
23070100-004	1,4-Dioxane	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

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On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_986c-2023-07-07-Blank	29021	Ambient Air	07-Jul-23 6:50
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-004	1-Butene/Isobutylene	K, T, U	< 0.06	ppbv	0.06	AC-058	11-Jul-23
23070100-004	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.07	ppbv	0.07	AC-058	11-Jul-23
23070100-004	1-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	2,2,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	2,2-Dimethylbutane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	2,3,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	2,3-Dimethylbutane	K, T, U	< 0.09	ppbv	0.09	AC-058	11-Jul-23
23070100-004	2,3-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	2,4-Dimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	2-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	2-Methylhexane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	2-Methylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	3-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	3-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	3-Methylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Acetone	K, T, U	< 0.4	ppbv	0.4	AC-058	11-Jul-23
23070100-004	Acrolein	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	Benzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	Benzyl chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	Bromodichloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	Bromoform	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Bromomethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Carbon disulfide	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Carbon tetrachloride	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Chlorobenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

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On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_986c-2023-07-07-Blank	29021	Ambient Air	07-Jul-23	6:50
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-004	Chloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Chloroform	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Chloromethane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-004	cis-1,2-Dichloroethene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	cis-1,3-Dichloropropene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	cis-2-Butene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	cis-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Cyclohexane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-004	Cyclopentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Dibromochloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Ethanol	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-004	Ethyl acetate	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	Ethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	Freon-11	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Freon-113	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Freon-114	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	Freon-12	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	Hexachloro-1,3-butadiene	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	Isobutane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	Isopentane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-004	Isoprene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Isopropyl alcohol	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	Isopropylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-004	m,p-Xylene	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-004	m-Diethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

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On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_986c-2023-07-07-Blank	29021	Ambient Air	07-Jul-23	6:50
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-004	m-Ethyltoluene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	Methyl butyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	11-Jul-23
23070100-004	Methyl ethyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	Methyl isobutyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	Methyl methacrylate	K, T, U	< 0.08	ppbv	0.08	AC-058	11-Jul-23
23070100-004	Methyl tert butyl ether	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	Methylcyclohexane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	Methylcyclopentane	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-004	Methylene chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	n-Butane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	n-Decane	K, T, U	< 0.06	ppbv	0.06	AC-058	11-Jul-23
23070100-004	n-Dodecane	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	n-Heptane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-004	n-Hexane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	n-Octane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	n-Pentane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-004	n-Propylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	11-Jul-23
23070100-004	n-Undecane	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-004	Naphthalene	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-004	n-Nonane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-004	o-Ethyltoluene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	o-Xylene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-004	p-Diethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-004	p-Ethyltoluene	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-004	Styrene	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

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On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

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<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_986c-2023-07-07-Blank	29021	Ambient Air	07-Jul-23 6:50
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result Units	RDL	Method	Analysis Date
23070100-004	Tetrachloroethylene	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23
23070100-004	Tetrahydrofuran	K, T, U	< 0.3 ppbv	0.3	AC-058	11-Jul-23
23070100-004	Toluene	K, T, U	< 0.03 ppbv	0.03	AC-058	11-Jul-23
23070100-004	trans-1,2-Dichloroethylene	K, T, U	< 0.06 ppbv	0.06	AC-058	11-Jul-23
23070100-004	trans-1,3-Dichloropropylene	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23
23070100-004	trans-2-Butene	K, T, U	< 0.03 ppbv	0.03	AC-058	11-Jul-23
23070100-004	trans-2-Pentene	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23
23070100-004	Trichloroethylene	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23
23070100-004	Vinyl acetate	K, T, U	< 0.3 ppbv	0.3	AC-058	11-Jul-23
23070100-004	Vinyl chloride	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-07	32256	Ambient Air	07-Jul-23	4:25
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-001	1-Butene	K, T, U	< 0.15	ppmv	0.15	NA-025	10-Jul-23
23070100-001	Acetylene	K, T, U	< 0.12	ppmv	0.12	NA-025	10-Jul-23
23070100-001	n-Butane	K, T, U	< 0.3	ppmv	0.3	NA-025	10-Jul-23
23070100-001	cis-2-Butene	K, T, U	< 0.06	ppmv	0.06	NA-025	10-Jul-23
23070100-001	Ethane	K, T, U	< 0.2	ppmv	0.2	NA-025	10-Jul-23
23070100-001	Ethylacetylene	K, T, U	< 0.09	ppmv	0.09	NA-025	10-Jul-23
23070100-001	Ethylene	K, T, U	< 0.11	ppmv	0.11	NA-025	10-Jul-23
23070100-001	Isobutane	K, T, U	< 0.2	ppmv	0.2	NA-025	10-Jul-23
23070100-001	Isobutylene	K, T, U	< 0.2	ppmv	0.2	NA-025	10-Jul-23
23070100-001	Methane		3.2	ppmv	0.2	NA-025	10-Jul-23
23070100-001	n-Propane	K, T, U	< 0.11	ppmv	0.11	NA-025	10-Jul-23
23070100-001	Propylene	K, T, U	< 0.2	ppmv	0.2	NA-025	10-Jul-23
23070100-001	Propyne	K, T, U	< 0.2	ppmv	0.2	NA-025	10-Jul-23
23070100-001	trans-2-Butene	K, T, U	< 0.14	ppmv	0.14	NA-025	10-Jul-23
23070100-001	2,5-Dimethylthiophene	K, T, U	< 0.5	ppbv	0.5	NA-024	10-Jul-23
23070100-001	2-Ethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-001	2-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-001	3-Methylthiophene	K, T, U	< 0.5	ppbv	0.5	NA-024	10-Jul-23
23070100-001	Butyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	10-Jul-23
23070100-001	Carbon disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-001	Carbonyl sulphide		2.9	ppbv	0.5	NA-024	10-Jul-23
23070100-001	Dimethyl disulphide		2.3	ppbv	0.3	NA-024	10-Jul-23
23070100-001	Dimethyl sulphide		2.3	ppbv	0.3	NA-024	10-Jul-23
23070100-001	Ethyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	10-Jul-23
23070100-001	Ethyl sulphide	K, T, U	< 0.5	ppbv	0.5	NA-024	10-Jul-23

Report certified by: Andrea Conner, Admin Assistant

On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: July 17, 2023

Inquiries: (780) 632 8403

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InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-07	32256	Ambient Air	07-Jul-23	4:25
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-001	Hydrogen sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-001	Isobutyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	10-Jul-23
23070100-001	Isopropyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-001	Methyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-001	Pentyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	10-Jul-23
23070100-001	Propyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	10-Jul-23
23070100-001	tert-Butyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	10-Jul-23
23070100-001	Thiophene/sec-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-001	1,1,1-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	1,1,2,2-Tetrachloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	1,1,2-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	1,1-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	1,1-Dichloroethylene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	1,2,3-Trimethylbenzene		0.56	ppbv	0.08	AC-058	11-Jul-23
23070100-001	1,2,4-Trichlorobenzene	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-001	1,2,4-Trimethylbenzene		0.58	ppbv	0.05	AC-058	11-Jul-23
23070100-001	1,2-Dibromoethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	1,2-Dichlorobenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	1,2-Dichloroethane	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	1,2-Dichloropropane	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	1,3,5-Trimethylbenzene	I	0.13	ppbv	0.05	AC-058	11-Jul-23
23070100-001	1,3-Butadiene		0.85	ppbv	0.05	AC-058	11-Jul-23
23070100-001	1,3-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	11-Jul-23
23070100-001	1,4-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	11-Jul-23
23070100-001	1,4-Dioxane	K, T, U	< 0.8	ppbv	0.8	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

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On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-07	32256	Ambient Air	07-Jul-23	4:25
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-001	1-Butene/Isobutylene		4.71	ppbv	0.09	AC-058	11-Jul-23
23070100-001	1-Hexene/2-Methyl-1-pentene		0.51	ppbv	0.11	AC-058	11-Jul-23
23070100-001	1-Pentene		0.70	ppbv	0.05	AC-058	11-Jul-23
23070100-001	2,2,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	2,2-Dimethylbutane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	2,3,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	2,3-Dimethylbutane	K, T, U	< 0.14	ppbv	0.14	AC-058	11-Jul-23
23070100-001	2,3-Dimethylpentane	I	0.06	ppbv	0.03	AC-058	11-Jul-23
23070100-001	2,4-Dimethylpentane	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	2-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	2-Methylhexane	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	2-Methylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	3-Methylheptane	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	3-Methylhexane	I	0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	3-Methylpentane	I	0.05	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Acetone		18.2	ppbv	0.6	AC-058	11-Jul-23
23070100-001	Acrolein		2.8	ppbv	0.5	AC-058	11-Jul-23
23070100-001	Benzene		7.95	ppbv	0.05	AC-058	11-Jul-23
23070100-001	Benzyl chloride	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-001	Bromodichloromethane	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	Bromoform	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Bromomethane	I	0.04	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Carbon disulfide	I	0.07	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Carbon tetrachloride	I	0.14	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Chlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: July 17, 2023

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<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-07	32256	Ambient Air	07-Jul-23	4:25
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-001	Chloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Chloroform	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Chloromethane		0.89	ppbv	0.06	AC-058	11-Jul-23
23070100-001	cis-1,2-Dichloroethene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	cis-1,3-Dichloropropene	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	cis-2-Butene		0.46	ppbv	0.05	AC-058	11-Jul-23
23070100-001	cis-2-Pentene	I	0.11	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Cyclohexane	K, T, U	< 0.06	ppbv	0.06	AC-058	11-Jul-23
23070100-001	Cyclopentane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Dibromochloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Ethanol		2.1	ppbv	0.8	AC-058	11-Jul-23
23070100-001	Ethyl acetate	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-001	Ethylbenzene		0.47	ppbv	0.05	AC-058	11-Jul-23
23070100-001	Freon-11		0.27	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Freon-113	I	0.07	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Freon-114	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	Freon-12		0.49	ppbv	0.05	AC-058	11-Jul-23
23070100-001	Hexachloro-1,3-butadiene	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-001	Isobutane		0.72	ppbv	0.05	AC-058	11-Jul-23
23070100-001	Isopentane		0.92	ppbv	0.06	AC-058	11-Jul-23
23070100-001	Isoprene		1.76	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Isopropyl alcohol	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-001	Isopropylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	11-Jul-23
23070100-001	m,p-Xylene		0.93	ppbv	0.06	AC-058	11-Jul-23
23070100-001	m-Diethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

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On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

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<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-07	32256	Ambient Air	07-Jul-23	4:25
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-001	m-Ethyltoluene		0.23	ppbv	0.05	AC-058	11-Jul-23
23070100-001	Methyl butyl ketone	K, T, U	< 0.6	ppbv	0.6	AC-058	11-Jul-23
23070100-001	Methyl ethyl ketone		2.9	ppbv	0.5	AC-058	11-Jul-23
23070100-001	Methyl isobutyl ketone	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-001	Methyl methacrylate	K, T, U	< 0.12	ppbv	0.12	AC-058	11-Jul-23
23070100-001	Methyl tert butyl ether	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-001	Methylcyclohexane	I	0.06	ppbv	0.03	AC-058	11-Jul-23
23070100-001	Methylcyclopentane	K, T, U	< 0.08	ppbv	0.08	AC-058	11-Jul-23
23070100-001	Methylene chloride	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-001	n-Butane		2.14	ppbv	0.03	AC-058	11-Jul-23
23070100-001	n-Decane	I	0.15	ppbv	0.09	AC-058	11-Jul-23
23070100-001	n-Dodecane	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-001	n-Heptane		0.35	ppbv	0.06	AC-058	11-Jul-23
23070100-001	n-Hexane		0.50	ppbv	0.05	AC-058	11-Jul-23
23070100-001	n-Octane		0.24	ppbv	0.03	AC-058	11-Jul-23
23070100-001	n-Pentane		0.87	ppbv	0.06	AC-058	11-Jul-23
23070100-001	n-Propylbenzene	I	0.14	ppbv	0.09	AC-058	11-Jul-23
23070100-001	n-Undecane	K, T, U	< 0.8	ppbv	0.8	AC-058	11-Jul-23
23070100-001	Naphthalene	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-001	n-Nonane		0.17	ppbv	0.06	AC-058	11-Jul-23
23070100-001	o-Ethyltoluene		0.28	ppbv	0.03	AC-058	11-Jul-23
23070100-001	o-Xylene		0.48	ppbv	0.05	AC-058	11-Jul-23
23070100-001	p-Diethylbenzene	I	0.15	ppbv	0.03	AC-058	11-Jul-23
23070100-001	p-Ethyltoluene	K, T, U	< 0.06	ppbv	0.06	AC-058	11-Jul-23
23070100-001	Styrene		0.46	ppbv	0.06	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

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On behalf of: Adam Malcolm, Manager, Chemical Testing

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<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_Reno-2023-07-07	32256	Ambient Air	07-Jul-23 4:25
<b>DESCRIPTION:</b>	NMHC Trigger		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result Units	RDL	Method	Analysis Date
23070100-001	Tetrachloroethylene	K, T, U	< 0.03 ppbv	0.03	AC-058	11-Jul-23
23070100-001	Tetrahydrofuran	K, T, U	< 0.5 ppbv	0.5	AC-058	11-Jul-23
23070100-001	Toluene		4.40 ppbv	0.05	AC-058	11-Jul-23
23070100-001	trans-1,2-Dichloroethylene	K, T, U	< 0.09 ppbv	0.09	AC-058	11-Jul-23
23070100-001	trans-1,3-Dichloropropylene	K, T, U	< 0.03 ppbv	0.03	AC-058	11-Jul-23
23070100-001	trans-2-Butene		0.54 ppbv	0.05	AC-058	11-Jul-23
23070100-001	trans-2-Pentene		0.18 ppbv	0.03	AC-058	11-Jul-23
23070100-001	Trichloroethylene	K, T, U	< 0.03 ppbv	0.03	AC-058	11-Jul-23
23070100-001	Vinyl acetate	K, T, U	< 0.5 ppbv	0.5	AC-058	11-Jul-23
23070100-001	Vinyl chloride	K, T, U	< 0.03 ppbv	0.03	AC-058	11-Jul-23

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-07-Blank	28944	Ambient Air	07-Jul-23	4:25
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-002	1-Butene	K, T, U	< 0.10	ppmv	0.10	NA-025	10-Jul-23
23070100-002	Acetylene	K, T, U	< 0.08	ppmv	0.08	NA-025	10-Jul-23
23070100-002	n-Butane	K, T, U	< 0.2	ppmv	0.2	NA-025	10-Jul-23
23070100-002	cis-2-Butene	K, T, U	< 0.04	ppmv	0.04	NA-025	10-Jul-23
23070100-002	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-002	Ethylacetylene	K, T, U	< 0.06	ppmv	0.06	NA-025	10-Jul-23
23070100-002	Ethylene	K, T, U	< 0.07	ppmv	0.07	NA-025	10-Jul-23
23070100-002	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-002	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-002	Methane	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-002	n-Propane	K, T, U	< 0.07	ppmv	0.07	NA-025	10-Jul-23
23070100-002	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-002	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	10-Jul-23
23070100-002	trans-2-Butene	K, T, U	< 0.09	ppmv	0.09	NA-025	10-Jul-23
23070100-002	2,5-Dimethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-002	2-Ethylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-002	2-Methylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-002	3-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-002	Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-002	Carbon disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-002	Carbonyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-002	Dimethyl disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-002	Dimethyl sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-002	Ethyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-002	Ethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

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<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-07-Blank	28944	Ambient Air	07-Jul-23	4:25
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-002	Hydrogen sulphide	K, T, U	< 0.1	ppbv	0.1	NA-024	10-Jul-23
23070100-002	Isobutyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-002	Isopropyl mercaptan	K, T, U	< 0.1	ppbv	0.1	NA-024	10-Jul-23
23070100-002	Methyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-002	Pentyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-002	Propyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	10-Jul-23
23070100-002	tert-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	10-Jul-23
23070100-002	Thiophene/sec-Butyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	10-Jul-23
23070100-002	1,1,1-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	1,1,2,2-Tetrachloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	1,1,2-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	1,1-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	1,1-Dichloroethylene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	1,2,3-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-002	1,2,4-Trichlorobenzene	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	1,2,4-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	1,2-Dibromoethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	1,2-Dichlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	1,2-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	1,2-Dichloropropane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	1,3,5-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	1,3-Butadiene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	1,3-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	11-Jul-23
23070100-002	1,4-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	11-Jul-23
23070100-002	1,4-Dioxane	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_Reno-2023-07-07-Blank	28944	Ambient Air	07-Jul-23 4:25
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-002	1-Butene/Isobutylene	K, T, U	< 0.06	ppbv	0.06	AC-058	11-Jul-23
23070100-002	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.07	ppbv	0.07	AC-058	11-Jul-23
23070100-002	1-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	2,2,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	2,2-Dimethylbutane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	2,3,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	2,3-Dimethylbutane	K, T, U	< 0.09	ppbv	0.09	AC-058	11-Jul-23
23070100-002	2,3-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	2,4-Dimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	2-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	2-Methylhexane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	2-Methylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	3-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	3-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	3-Methylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Acetone	K, T, U	< 0.4	ppbv	0.4	AC-058	11-Jul-23
23070100-002	Acrolein	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	Benzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	Benzyl chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	Bromodichloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	Bromoform	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Bromomethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Carbon disulfide	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Carbon tetrachloride	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Chlorobenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-07-Blank	28944	Ambient Air	07-Jul-23	4:25
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-002	Chloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Chloroform	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Chloromethane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-002	cis-1,2-Dichloroethene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	cis-1,3-Dichloropropene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	cis-2-Butene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	cis-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Cyclohexane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-002	Cyclopentane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Dibromochloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Ethanol	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-002	Ethyl acetate	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	Ethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	Freon-11	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Freon-113	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Freon-114	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	Freon-12	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	Hexachloro-1,3-butadiene	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	Isobutane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	Isopentane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-002	Isoprene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Isopropyl alcohol	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	Isopropylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-002	m,p-Xylene	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-002	m-Diethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_Reno-2023-07-07-Blank	28944	Ambient Air	07-Jul-23 4:25
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070100-002	m-Ethyltoluene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	Methyl butyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	11-Jul-23
23070100-002	Methyl ethyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	Methyl isobutyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	Methyl methacrylate	K, T, U	< 0.08	ppbv	0.08	AC-058	11-Jul-23
23070100-002	Methyl tert butyl ether	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	Methylcyclohexane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	Methylcyclopentane	K, T, U	< 0.05	ppbv	0.05	AC-058	11-Jul-23
23070100-002	Methylene chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	n-Butane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	n-Decane	K, T, U	< 0.06	ppbv	0.06	AC-058	11-Jul-23
23070100-002	n-Dodecane	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	n-Heptane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-002	n-Hexane	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	n-Octane	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	n-Pentane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-002	n-Propylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	11-Jul-23
23070100-002	n-Undecane	K, T, U	< 0.5	ppbv	0.5	AC-058	11-Jul-23
23070100-002	Naphthalene	K, T, U	< 0.3	ppbv	0.3	AC-058	11-Jul-23
23070100-002	n-Nonane	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-002	o-Ethyltoluene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	o-Xylene	K, T, U	< 0.03	ppbv	0.03	AC-058	11-Jul-23
23070100-002	p-Diethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	11-Jul-23
23070100-002	p-Ethyltoluene	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23
23070100-002	Styrene	K, T, U	< 0.04	ppbv	0.04	AC-058	11-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: July 17, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca



<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_Reno-2023-07-07-Blank	28944	Ambient Air	07-Jul-23 4:25
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070100	<b>REPORT CREATED:</b>	17-Jul-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result Units	RDL	Method	Analysis Date
23070100-002	Tetrachloroethylene	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23
23070100-002	Tetrahydrofuran	K, T, U	< 0.3 ppbv	0.3	AC-058	11-Jul-23
23070100-002	Toluene	K, T, U	< 0.03 ppbv	0.03	AC-058	11-Jul-23
23070100-002	trans-1,2-Dichloroethylene	K, T, U	< 0.06 ppbv	0.06	AC-058	11-Jul-23
23070100-002	trans-1,3-Dichloropropylene	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23
23070100-002	trans-2-Butene	K, T, U	< 0.03 ppbv	0.03	AC-058	11-Jul-23
23070100-002	trans-2-Pentene	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23
23070100-002	Trichloroethylene	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23
23070100-002	Vinyl acetate	K, T, U	< 0.3 ppbv	0.3	AC-058	11-Jul-23
23070100-002	Vinyl chloride	K, T, U	< 0.02 ppbv	0.02	AC-058	11-Jul-23



PO Bag 4000  
Vegreville, Alberta  
Canada T9C 1T4  
(780) 632-8211

## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### Revision History

Order ID	Ver	Date	Reason
23070100	01	17-Jul-23	Report created

**Methods**

<b>Method</b>	<b>Description</b>
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-024	Analysis for Reduced Sulfur Compounds in Air Samples
NA-025	Determination of Light Hydrocarbons (C1C4) in Ambient Air by Gas Chromatography Flame Ionization Detector

**List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation**

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air

## Qualifiers

### Data Qualifier Translation

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B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank



PO Bag 4000  
Vegreville, Alberta  
Canada T9C 1T4  
(780) 632-8211

## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

Page 28 of 30

### Order Comments

23070100

Send results to [pramptech@prampairshed.ca](mailto:pramptech@prampairshed.ca)



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Vegreville, Alberta  
Canada T9C 1T4  
(780) 632-8211

## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### Sample Comments

## **Result Comments**

*Note:*

- 1. Results relate only to items tested and apply to the sample as received.*
- 2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.*



Highway 16A & 75 Street  
 PO Bag 4000  
 Vegreville, AB, T9C 1T4  
 Environmental Analytical Services  
 Phone: (780) 632-8403 Fax: (780) 632-8620

EAS CANISTER

Sample ID: 23070165-001 Priority: Normal



Customer ID: PRAMP  
 Cust Samp ID: PRAMP\_842b-2023-07-12



Client Contact Details:

Contact: Karla Ressor, Michael Bisaga/ Lily Lin  
 Company: PRAMP Airshed  
 PO#:  842b Station  986c Station  Reno Station  
 Address:  842b (Lat. 56.27406N, Long. 116.98129W)  
 986c (Lat. 56.36988N, Long. 116.925636W)  
 Reno (Lat. 55.86936N, Long. 117.05739W)  
 Telephone: 403-8072995, 780-2667068/587-2252248  
 Email: karla@prampairshed.ca, pramptech@prampairshed.ca

RUSH (Surcharge)

Invoice Instructions:

Send to: officemanager@prampairshed.ca, karla@prampairshed.ca,  
 pramptech@prampairshed.ca Attention: PRAMP Office Manager  
 Any correspondence related to canister analysis, send the information to  
 karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-632-8403 Cell: 780-632-1519  
 Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_station_yyyymmdd) (Find Sample ID from BV's email)	Canister ID (Find canister ID from canister tag)	Sample Description	Date/Time Canister Triggered (Find Date/Time from BV's email)		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP_842b- <u>2023-07-12</u>	<u>28905</u>	<input checked="" type="checkbox"/> Methane Trigger <input checked="" type="checkbox"/> NMHC Trigger <input type="checkbox"/> Methane Blank <input type="checkbox"/> NMHC Blank <input type="checkbox"/> Expired Canister – No further analysis is required.	<u>2023-07-07</u>	<u>0355</u>	* C1C4 Air, VOC Full, RSC Air * Unknowns to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)
PRAMP_986c- _____					
PRAMP_Reno- _____					

Sample Collection:

Collected By JM (Name) of PRAMP (Company) on 2023-07-12 1038 (Date/Time) (MST).





Highway 16A & 75 Street  
 PO Bag 4000  
 Vegreville, AB, T9C 1T4  
 Environmental Analytical Services  
 Phone: (780) 632-8403 Fax: (780) 632-8620

PRAMP CANISTER

Sample ID: 23070165-002 Priority: Normal



Customer ID: PRAMP  
 Cust Samp ID: PRAMP\_842b-2023-07-12 Blank

Date Received- Lab Use Only



**Client Contact Details:**

Contact: Karla Ressor, Michael Bisaga/ Lily Lin  
 Company: PRAMP Airshed  
 PO#:  842b Station  986c Station  Reno Station  
 Address:  842b (Lat. 56.27406N, Long. 116.98129W)  
 986c (Lat. 56.36988N, Long. 116.925636W)  
 Reno (Lat. 55.86936N, Long. 117.05739W)  
 Telephone: 403-8072995, 780-2667068/587-2252248  
 Email: karla@prampairshed.ca, pramptech@prampairshed.ca

RUSH (Surcharge)

Invoice Instructions:

Send to: officemanager@prampairshed.ca, karla@prampairshed.ca,  
 pramptech@prampairshed.ca Attention: PRAMP Office Manager  
 Any correspondence related to canister analysis, send the information to  
 karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-632-8403 Cell: 780-632-1519

Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP station_yyyymmdd) (Find Sample ID from BV's email)	Canister ID (Find canister ID from canister tag)	Sample Description	Date/Time Canister Triggered (Find Date/Time from BV's email)		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP_842b- <u>2023-07-12</u>	<u>28955</u>	<input type="checkbox"/> Methane Trigger <input type="checkbox"/> NMHC Trigger <input checked="" type="checkbox"/> Methane Blank <input checked="" type="checkbox"/> NMHC Blank <input type="checkbox"/> Expired Canister – No further analysis is required.	<u>2023-07-07</u>	<u>0355</u>	* C1C4 Air, VOC Full, RSC Air * Unknowns to be reported * Carbon Isotopic Analysis (if sample is collected from Methane trigger)
PRAMP_986c- _____					
PRAMP_Reno- _____					

**Sample Collection:**

Collected By JM (Name) of PRAMP (Company) on 2023-07-05 1038 (Date/Time) (MST).



Canister ID: 28905

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: 1504 on: MAR 08 2023

Evacuated: MAY 17 2023 Recertified: \_\_\_\_\_

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: 842B-NMHC-Sample 2023-07-12

Sampled By: JM

Starting Vacuum:

-27.1 "Hg

End Vacuum: KG

-2 "Hg/psig



Canister ID: 28955

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: 1504 on: MAR 08 2023

Evacuated: MAY 17 2023 Recertified: \_\_\_\_\_

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: 842B-NMHC-Blank-2023-07-12

Sampled By: JM

Starting Vacuum:

-27.1 "Hg

End Vacuum:

-27 "Hg/psig

Sample ID: 23070165-001 Priority: Normal



Customer ID: PRAMP

Cust Samp ID: PRAMP\_842b-2023-07-12

<p><b>RESULTS:</b> Karla Reesor                      403 807 2995 Peace River Area Monitoring Program Committee</p> <p><b>INVOICE:</b> Office Manager</p>	<p style="text-align: center;"><b>CLIENT SAMPLE ID</b> PRAMP_842b-2023-07-12</p> <p><b>MATRIX:</b> Ambient Air</p> <p><b>CANISTER ID:</b> 28905</p> <p><b>PRIORITY:</b> Normal</p> <p><b>DESCRIPTION:</b> NMHC Trigger</p> <p><b>DATE SAMPLED:</b> 07-Jul-23              3:55              <b>DATE RECEIVED:</b> 13-Jul-23</p> <p><b>REPORT CREATED:</b> 08-Aug-23              <b>REPORT NUMBER:</b> 23070165</p> <p style="text-align: right;"><b>VERSION:</b>                      <b>Version 01</b></p>
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Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-001	1-Butene	K, T, U	< 0.14	ppmv	0.14	NA-025	17-Jul-23
23070165-001	Acetylene	K, T, U	< 0.12	ppmv	0.12	NA-025	17-Jul-23
23070165-001	n-Butane	K, T, U	< 0.3	ppmv	0.3	NA-025	17-Jul-23
23070165-001	cis-2-Butene	K, T, U	< 0.06	ppmv	0.06	NA-025	17-Jul-23
23070165-001	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-001	Ethylacetylene	K, T, U	< 0.09	ppmv	0.09	NA-025	17-Jul-23
23070165-001	Ethylene	K, T, U	< 0.10	ppmv	0.10	NA-025	17-Jul-23
23070165-001	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-001	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-001	Methane		2.6	ppmv	0.1	NA-025	17-Jul-23
23070165-001	n-Propane	K, T, U	< 0.10	ppmv	0.10	NA-025	17-Jul-23
23070165-001	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-001	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-001	trans-2-Butene	K, T, U	< 0.13	ppmv	0.13	NA-025	17-Jul-23
23070165-001	2,5-Dimethylthiophene	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-001	2-Ethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-001	2-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_842b-2023-07-12	28905	Ambient Air	07-Jul-23	3:55
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-001	3-Methylthiophene	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-001	Butyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-001	Carbon disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-001	Carbonyl sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-001	Dimethyl disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-001	Dimethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-001	Ethyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-001	Ethyl sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-001	Hydrogen sulphide	K, T, U	< 0.1	ppbv	0.1	NA-024	14-Jul-23
23070165-001	Isobutyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-001	Isopropyl mercaptan	K, T, U	< 0.1	ppbv	0.1	NA-024	14-Jul-23
23070165-001	Methyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-001	Pentyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	14-Jul-23
23070165-001	Propyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	14-Jul-23
23070165-001	tert-Butyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-001	Thiophene/sec-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-001	1,1,1-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	1,1,2,2-Tetrachloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	1,1,2-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	1,1-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	1,1-Dichloroethylene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	1,2,3-Trimethylbenzene		0.35	ppbv	0.07	AC-058	18-Jul-23
23070165-001	1,2,4-Trichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	1,2,4-Trimethylbenzene	I	0.20	ppbv	0.04	AC-058	18-Jul-23
23070165-001	1,2-Dibromoethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 8, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_842b-2023-07-12	28905	Ambient Air	07-Jul-23	3:55
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-001	1,2-Dichlorobenzene	I	0.05	ppbv	0.04	AC-058	18-Jul-23
23070165-001	1,2-Dichloroethane	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-001	1,2-Dichloropropane	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-001	1,3,5-Trimethylbenzene	I	0.07	ppbv	0.04	AC-058	18-Jul-23
23070165-001	1,3-Butadiene		0.55	ppbv	0.04	AC-058	18-Jul-23
23070165-001	1,3-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Jul-23
23070165-001	1,4-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Jul-23
23070165-001	1,4-Dioxane	K, T, U	< 0.7	ppbv	0.7	AC-058	18-Jul-23
23070165-001	1-Butene/Isobutylene		3.88	ppbv	0.09	AC-058	18-Jul-23
23070165-001	1-Hexene/2-Methyl-1-pentene		0.34	ppbv	0.10	AC-058	18-Jul-23
23070165-001	1-Pentene		0.34	ppbv	0.04	AC-058	18-Jul-23
23070165-001	2,2,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	2,2-Dimethylbutane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	2,3,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	2,3-Dimethylbutane	K, T, U	< 0.13	ppbv	0.13	AC-058	18-Jul-23
23070165-001	2,3-Dimethylpentane	I	0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	2,4-Dimethylpentane	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-001	2-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	2-Methylhexane	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-001	2-Methylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	3-Methylheptane	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-001	3-Methylhexane	I	0.04	ppbv	0.03	AC-058	18-Jul-23
23070165-001	3-Methylpentane	I	0.04	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Acetone		15.3	ppbv	0.6	AC-058	18-Jul-23
23070165-001	Acrolein		2.4	ppbv	0.4	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 8, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_842b-2023-07-12	28905	Ambient Air	07-Jul-23	3:55
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-001	Benzene		4.41	ppbv	0.04	AC-058	18-Jul-23
23070165-001	Benzyl chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	Bromodichloromethane	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-001	Bromoform	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Bromomethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Carbon disulfide	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Carbon tetrachloride	I	0.08	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Chlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Chloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Chloroform	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Chloromethane		1.05	ppbv	0.06	AC-058	18-Jul-23
23070165-001	cis-1,2-Dichloroethene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	cis-1,3-Dichloropropene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-001	cis-2-Butene		0.28	ppbv	0.04	AC-058	18-Jul-23
23070165-001	cis-2-Pentene	I	0.07	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Cyclohexane	I	0.06	ppbv	0.06	AC-058	18-Jul-23
23070165-001	Cyclopentane		0.18	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Dibromochloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Ethanol		3.0	ppbv	0.7	AC-058	18-Jul-23
23070165-001	Ethyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	Ethylbenzene	I	0.20	ppbv	0.04	AC-058	18-Jul-23
23070165-001	Freon-11		0.24	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Freon-113	I	0.06	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Freon-114	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-001	Freon-12		0.51	ppbv	0.04	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: August 8, 2023

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_842b-2023-07-12	28905	Ambient Air	07-Jul-23	3:55
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-001	Hexachloro-1,3-butadiene	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	Isobutane		0.75	ppbv	0.04	AC-058	18-Jul-23
23070165-001	Isopentane		0.76	ppbv	0.06	AC-058	18-Jul-23
23070165-001	Isoprene		2.09	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Isopropyl alcohol	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	Isopropylbenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Jul-23
23070165-001	m,p-Xylene	I	0.29	ppbv	0.06	AC-058	18-Jul-23
23070165-001	m-Diethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	m-Ethyltoluene		0.21	ppbv	0.04	AC-058	18-Jul-23
23070165-001	Methyl butyl ketone	K, T, U	< 0.6	ppbv	0.6	AC-058	18-Jul-23
23070165-001	Methyl ethyl ketone		1.6	ppbv	0.4	AC-058	18-Jul-23
23070165-001	Methyl isobutyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	Methyl methacrylate	I	0.14	ppbv	0.12	AC-058	18-Jul-23
23070165-001	Methyl tert butyl ether	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-001	Methylcyclohexane	I	0.04	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Methylcyclopentane	K, T, U	< 0.07	ppbv	0.07	AC-058	18-Jul-23
23070165-001	Methylene chloride	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	n-Butane		2.21	ppbv	0.03	AC-058	18-Jul-23
23070165-001	n-Decane		0.17	ppbv	0.09	AC-058	18-Jul-23
23070165-001	n-Dodecane	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	n-Heptane	I	0.16	ppbv	0.06	AC-058	18-Jul-23
23070165-001	n-Hexane	I	0.27	ppbv	0.04	AC-058	18-Jul-23
23070165-001	n-Octane	I	0.14	ppbv	0.03	AC-058	18-Jul-23
23070165-001	n-Pentane		0.68	ppbv	0.06	AC-058	18-Jul-23
23070165-001	n-Propylbenzene		0.15	ppbv	0.09	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 8, 2023

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On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_842b-2023-07-12	28905	Ambient Air	07-Jul-23	3:55
<b>DESCRIPTION:</b>	NMHC Trigger			
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-001	n-Undecane	K, T, U	< 0.7	ppbv	0.7	AC-058	18-Jul-23
23070165-001	Naphthalene	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	n-Nonane	I	0.10	ppbv	0.06	AC-058	18-Jul-23
23070165-001	o-Ethyltoluene	I	0.12	ppbv	0.03	AC-058	18-Jul-23
23070165-001	o-Xylene	I	0.18	ppbv	0.04	AC-058	18-Jul-23
23070165-001	p-Diethylbenzene		0.17	ppbv	0.03	AC-058	18-Jul-23
23070165-001	p-Ethyltoluene	I	0.07	ppbv	0.06	AC-058	18-Jul-23
23070165-001	Styrene	I	0.22	ppbv	0.06	AC-058	18-Jul-23
23070165-001	Tetrachloroethylene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Tetrahydrofuran	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	Toluene		1.93	ppbv	0.04	AC-058	18-Jul-23
23070165-001	trans-1,2-Dichloroethylene		2.18	ppbv	0.09	AC-058	18-Jul-23
23070165-001	trans-1,3-Dichloropropylene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	trans-2-Butene		0.30	ppbv	0.04	AC-058	18-Jul-23
23070165-001	trans-2-Pentene	I	0.08	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Trichloroethylene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-001	Vinyl acetate	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-001	Vinyl chloride	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 8, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca



<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_842b-2023-07-12 Blank	28955	Ambient Air	07-Jul-23 3:55
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-002	1-Butene	K, T, U	< 0.10	ppmv	0.10	NA-025	17-Jul-23
23070165-002	Acetylene	K, T, U	< 0.08	ppmv	0.08	NA-025	17-Jul-23
23070165-002	n-Butane	K, T, U	< 0.2	ppmv	0.2	NA-025	17-Jul-23
23070165-002	cis-2-Butene	K, T, U	< 0.04	ppmv	0.04	NA-025	17-Jul-23
23070165-002	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-002	Ethylacetylene	K, T, U	< 0.06	ppmv	0.06	NA-025	17-Jul-23
23070165-002	Ethylene	K, T, U	< 0.07	ppmv	0.07	NA-025	17-Jul-23
23070165-002	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-002	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-002	Methane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-002	n-Propane	K, T, U	< 0.07	ppmv	0.07	NA-025	17-Jul-23
23070165-002	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-002	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070165-002	trans-2-Butene	K, T, U	< 0.09	ppmv	0.09	NA-025	17-Jul-23
23070165-002	2,5-Dimethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-002	2-Ethylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070165-002	2-Methylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070165-002	3-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-002	Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-002	Carbon disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070165-002	Carbonyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-002	Dimethyl disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070165-002	Dimethyl sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070165-002	Ethyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-002	Ethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 8, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_842b-2023-07-12 Blank	28955	Ambient Air	07-Jul-23 3:55
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-002	Hydrogen sulphide	K, T, U	< 0.1	ppbv	0.1	NA-024	14-Jul-23
23070165-002	Isobutyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-002	Isopropyl mercaptan	K, T, U	< 0.1	ppbv	0.1	NA-024	14-Jul-23
23070165-002	Methyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070165-002	Pentyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-002	Propyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070165-002	tert-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070165-002	Thiophene/sec-Butyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070165-002	1,1,1-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	1,1,2,2-Tetrachloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	1,1,2-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	1,1-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	1,1-Dichloroethylene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	1,2,3-Trimethylbenzene	I	0.08	ppbv	0.05	AC-058	18-Jul-23
23070165-002	1,2,4-Trichlorobenzene	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	1,2,4-Trimethylbenzene	I	0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	1,2-Dibromoethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	1,2-Dichlorobenzene	I	0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	1,2-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	1,2-Dichloropropane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	1,3,5-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	1,3-Butadiene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	1,3-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-002	1,4-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-002	1,4-Dioxane	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: August 8, 2023

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_842b-2023-07-12 Blank	28955	Ambient Air	07-Jul-23 3:55
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-002	1-Butene/Isobutylene	K, T, U	< 0.06	ppbv	0.06	AC-058	18-Jul-23
23070165-002	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.07	ppbv	0.07	AC-058	18-Jul-23
23070165-002	1-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	2,2,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	2,2-Dimethylbutane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	2,3,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	2,3-Dimethylbutane	K, T, U	< 0.09	ppbv	0.09	AC-058	18-Jul-23
23070165-002	2,3-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	2,4-Dimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	2-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	2-Methylhexane	I	0.05	ppbv	0.03	AC-058	18-Jul-23
23070165-002	2-Methylpentane	I	0.04	ppbv	0.02	AC-058	18-Jul-23
23070165-002	3-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	3-Methylhexane	I	0.06	ppbv	0.02	AC-058	18-Jul-23
23070165-002	3-Methylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Acetone	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-002	Acrolein	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	Benzene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	Benzyl chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	Bromodichloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	Bromoform	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Bromomethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Carbon disulfide	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Carbon tetrachloride	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Chlorobenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 8, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_842b-2023-07-12 Blank	28955	Ambient Air	07-Jul-23	3:55
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-002	Chloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Chloroform	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Chloromethane	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-002	cis-1,2-Dichloroethene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	cis-1,3-Dichloropropene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	cis-2-Butene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	cis-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Cyclohexane	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-002	Cyclopentane	I	0.08	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Dibromochloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Ethanol	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070165-002	Ethyl acetate	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	Ethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	Freon-11	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Freon-113	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Freon-114	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	Freon-12	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	Hexachloro-1,3-butadiene	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	Isobutane	I	0.07	ppbv	0.03	AC-058	18-Jul-23
23070165-002	Isopentane	I	0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-002	Isoprene	I	0.05	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Isopropyl alcohol	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	Isopropylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-002	m,p-Xylene	I	0.07	ppbv	0.04	AC-058	18-Jul-23
23070165-002	m-Diethylbenzene	I	0.08	ppbv	0.02	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 8, 2023

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On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_842b-2023-07-12 Blank	28955	Ambient Air	07-Jul-23	3:55
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070165-002	m-Ethyltoluene	I	0.08	ppbv	0.03	AC-058	18-Jul-23
23070165-002	Methyl butyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	18-Jul-23
23070165-002	Methyl ethyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	Methyl isobutyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	Methyl methacrylate	K, T, U	< 0.08	ppbv	0.08	AC-058	18-Jul-23
23070165-002	Methyl tert butyl ether	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	Methylcyclohexane	I	0.06	ppbv	0.02	AC-058	18-Jul-23
23070165-002	Methylcyclopentane	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070165-002	Methylene chloride		2.5	ppbv	0.3	AC-058	18-Jul-23
23070165-002	n-Butane	I	0.06	ppbv	0.02	AC-058	18-Jul-23
23070165-002	n-Decane	I	0.07	ppbv	0.06	AC-058	18-Jul-23
23070165-002	n-Dodecane	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	n-Heptane	I	0.07	ppbv	0.04	AC-058	18-Jul-23
23070165-002	n-Hexane	I	0.05	ppbv	0.03	AC-058	18-Jul-23
23070165-002	n-Octane	I	0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	n-Pentane	I	0.05	ppbv	0.04	AC-058	18-Jul-23
23070165-002	n-Propylbenzene	I	0.06	ppbv	0.06	AC-058	18-Jul-23
23070165-002	n-Undecane	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070165-002	Naphthalene	K, T, U	< 0.3	ppbv	0.3	AC-058	18-Jul-23
23070165-002	n-Nonane	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-002	o-Ethyltoluene	I	0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	o-Xylene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070165-002	p-Diethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	18-Jul-23
23070165-002	p-Ethyltoluene	K, T, U	< 0.04	ppbv	0.04	AC-058	18-Jul-23
23070165-002	Styrene	I	0.07	ppbv	0.04	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 8, 2023

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# ENVIRONMENTAL ANALYTICAL SERVICES

## TEST REPORT

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_842b-2023-07-12 Blank	28955	Ambient Air	07-Jul-23 3:55
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070165	<b>REPORT CREATED:</b>	08-Aug-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result Units	RDL	Method	Analysis Date
23070165-002	Tetrachloroethylene	K, T, U	< 0.02 ppbv	0.02	AC-058	18-Jul-23
23070165-002	Tetrahydrofuran	K, T, U	< 0.3 ppbv	0.3	AC-058	18-Jul-23
23070165-002	Toluene		0.83 ppbv	0.03	AC-058	18-Jul-23
23070165-002	trans-1,2-Dichloroethylene	K, T, U	< 0.06 ppbv	0.06	AC-058	18-Jul-23
23070165-002	trans-1,3-Dichloropropylene	K, T, U	< 0.02 ppbv	0.02	AC-058	18-Jul-23
23070165-002	trans-2-Butene	K, T, U	< 0.03 ppbv	0.03	AC-058	18-Jul-23
23070165-002	trans-2-Pentene	K, T, U	< 0.02 ppbv	0.02	AC-058	18-Jul-23
23070165-002	Trichloroethylene	K, T, U	< 0.02 ppbv	0.02	AC-058	18-Jul-23
23070165-002	Vinyl acetate	K, T, U	< 0.3 ppbv	0.3	AC-058	18-Jul-23
23070165-002	Vinyl chloride	K, T, U	< 0.02 ppbv	0.02	AC-058	18-Jul-23

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## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### Revision History

Order ID	Ver	Date	Reason
23070165	01	08-Aug-23	Report created

**Methods**

<b>Method</b>	<b>Description</b>
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-024	Analysis for Reduced Sulfur Compounds in Air Samples
NA-025	Determination of Light Hydrocarbons (C1C4) in Ambient Air by Gas Chromatography Flame Ionization Detector

**List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation**

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air



## Qualifiers

### Data Qualifier Translation

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B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank



PO Bag 4000  
Vegreville, Alberta  
Canada T9C 1T4  
(780) 632-8211

## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

Page 16 of 18

### Order Comments

23070165

Send results to [pramptech@prampairshed.ca](mailto:pramptech@prampairshed.ca)



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Canada T9C 1T4  
(780) 632-8211

## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

Page 17 of 18

### Sample Comments



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## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

Page 18 of 18

### **Result Comments**

*Note:*

- 1. Results relate only to items tested and apply to the sample as received.*
- 2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.*



Highway 16A & 75 Street  
 PO Bag 4000  
 Vegreville, AB, T9C 1T4  
 Environmental Analytical Services  
 Phone: (780) 632-8403 Fax: (780) 632-8620

**EAS CANISTER**

Sample ID: 23070164-001 Priority: Normal



Customer ID: PRAMP  
 Cust Samp ID: PRAMP\_Reno-B-2023-07-12

Date Received- Lab Use Only  
**RECEIVED**  
**JUL 13 2023**

**Client Contact Details:**

Contact: Karla Ressor, Michael Bisaga/ Lily Lin

Company: PRAMP Airshed

PO#:  842-B Station  986-C Station  Reno-B Station

Address:  842-B (Lat. 56.27406N, Long. 116.98129W)  
 986-C (Lat. 56.36988N, Long. 116.925636W)  
 Reno-B (Lat. 55.890868 N, Long. -117.137080 W)

Telephone: 403-8072995, 780-2667068/587-2252248

Email: karla@prampairshed.ca, pramptech@prampairshed.ca

**RUSH (Surcharge)**

Invoice Instructions:  
 Send to: officemanager@prampairshed.ca, karla@prampairshed.ca,  
 pramptech@prampairshed.ca Attention: PRAMP Office Manager  
 Any correspondence related to canister analysis, send the information to  
 karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-6328403 Cell: 780-6321519  
 Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_station_yyyymmdd) <small>(Find Sample ID from BV's email)</small>	Canister ID (Find canister ID from canister tag)	Sample Description	Date/Time Canister Triggered <small>(Find Date/Time from BV's email)</small>		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP_842-B- _____		<input checked="" type="checkbox"/> NMHC Trigger			* AIR C1C4, AIR VOC, AIR RSC
PRAMP_986-C- _____		<input type="checkbox"/> NMHC Blank			* Unknown to be reported
PRAMP_Reno-B- <u>2023-07-12</u>	<u>28907</u>	<input type="checkbox"/> Expired Canister – No further analysis is required <input type="checkbox"/> Not Valid Sample – No further analysis is required.	<u>2023-07-11</u>	<u>0420</u>	* Carbon Isotopic Analysis (if sample is collected from Methane trigger)

**Sample Collection:**

Collect By JM (Name) of PRAMP (Company) on 2023-07-12 1255 (Date/Time) (MST).



Highway 16A & 75 Street  
 PO Bag 4000  
 Vegreville, AB, T9C 1T4  
 Environmental Analytical Services  
 Phone: (780) 632-8403 Fax: (780) 632-8620

Sample ID: 23070164-002 Priority: Normal



Customer ID: PRAMP  
 Cust Samp ID: PRAMP\_Reno-2023-07-12 Blank

Date Received- Lab Use Only



**Client Contact Details:**

Contact: Karla Ressor, Michael Bisaga/ Lily Lin  
 Company: PRAMP Airshed  
 PO#:  842b Station  986c Station  Reno Station  
 Address:  842b (Lat. 56.27406N, Long. 116.98129W)  
 986c (Lat. 56.36988N, Long. 116.925636W)  
 Reno (Lat. 55.86936N, Long. 117.05739W)  
 Telephone: 403-8072995, 780-2667068/587-2252248  
 Email: karla@prampairshed.ca, pramptech@prampairshed.ca

**RUSH (Surcharge)**

Invoice Instructions:  
 Send to: officemanager@prampairshed.ca, karla@prampairshed.ca,  
 pramptech@prampairshed.ca Attention: PRAMP Office Manager  
 Any correspondence related to canister analysis, send the information to  
 karla@prampairshed.ca and pramptech@prampairshed.ca

InnoTech Contact: Graham Knox Phone: 780-632-8403 Cell: 780-632-1519  
 Email: Graham.Knox@innotechalberta.ca

Sample ID (PRAMP_station_yyyymmdd) (Find Sample ID from BV's email)	Canister ID (Find canister ID from canister tag)	Sample Description	Date/Time Canister Triggered (Find Date/Time from BV's email)		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP_842b- _____  PRAMP_986c- _____  PRAMP_Reno- <u>2023-07-12</u>	   <u>32258</u>	<input type="checkbox"/> Methane Trigger <input type="checkbox"/> NMHC Trigger <input type="checkbox"/> Methane Blank <input checked="" type="checkbox"/> NMHC Blank <input type="checkbox"/> Expired Canister – No further analysis is required.	   <u>2023-07-11</u>	   <u>0420</u>	* C1C4 Air, VOC Full, RSC Air  * Unknowns to be reported  * Carbon Isotopic Analysis (if sample is collected from Methane trigger)

**Sample Collection:**

Collected By JM (Name) of PRAMP (Company) on 2023-07-12 1255 (Date/Time) (MST).



Canister ID: 28907

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: ISQ4 on: MAR 24 2023

Evacuated: MAY 17 2023 Recertified: \_\_\_\_\_

(Use within: 3 months from evacuation or recertification date)  
Laboratory Contact Number: 780-632-8403

Sample ID: Reno NMHC Sample 2023-07-12

Sampled By: JM

Starting Vacuum: -27.1 "Hg

End Pressure: K6  
-5 "Hg/ psig



Canister ID: 32258

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: ISQ4 on: MAR 24 2023

Evacuated: MAY 17 2023 Recertified: \_\_\_\_\_

(Use within: 3 months from evacuation or recertification date)  
Laboratory Contact Number: 780-632-8403

Sample ID: Reno-NMHC-Blank-2023-07-12

Sampled By: JM

Starting Vacuum: -27.1 "Hg

End Vacuum: -27 "Hg/ psig

Sample ID: 23070164-001 Priority: Normal



Customer ID: PRAMP  
Cust Samp ID: PRAMP\_Reno-B-2023-07-12

<p><b>RESULTS:</b> Karla Reesor                      403 807 2995 Peace River Area Monitoring Program Committee</p> <p><b>INVOICE:</b> Office Manager</p>	<p style="text-align: center;"><b>CLIENT SAMPLE ID</b> PRAMP_Reno-2023-07-12 Blank</p> <p><b>MATRIX:</b> Ambient Air</p> <p><b>CANISTER ID:</b> 32258 <b>PRIORITY:</b> Normal <b>DESCRIPTION:</b> NMHC Blank</p> <p><b>DATE SAMPLED:</b> 11-Jul-23      4:20      <b>DATE RECEIVED:</b> 13-Jul-23 <b>REPORT CREATED:</b> 04-Aug-23      <b>REPORT NUMBER:</b> 23070164</p> <p style="text-align: right;"><b>VERSION:</b>                      <b>Version 01</b></p>
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Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-002	1-Butene	K, T, U	< 0.10	ppmv	0.10	NA-025	17-Jul-23
23070164-002	Acetylene	K, T, U	< 0.08	ppmv	0.08	NA-025	17-Jul-23
23070164-002	n-Butane	K, T, U	< 0.2	ppmv	0.2	NA-025	17-Jul-23
23070164-002	cis-2-Butene	K, T, U	< 0.04	ppmv	0.04	NA-025	17-Jul-23
23070164-002	Ethane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070164-002	Ethylacetylene	K, T, U	< 0.06	ppmv	0.06	NA-025	17-Jul-23
23070164-002	Ethylene	K, T, U	< 0.07	ppmv	0.07	NA-025	17-Jul-23
23070164-002	Isobutane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070164-002	Isobutylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070164-002	Methane	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070164-002	n-Propane	K, T, U	< 0.07	ppmv	0.07	NA-025	17-Jul-23
23070164-002	Propylene	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070164-002	Propyne	K, T, U	< 0.1	ppmv	0.1	NA-025	17-Jul-23
23070164-002	trans-2-Butene	K, T, U	< 0.09	ppmv	0.09	NA-025	17-Jul-23
23070164-002	2,5-Dimethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-002	2-Ethylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070164-002	2-Methylthiophene	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23



<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-12 Blank	32258	Ambient Air	11-Jul-23	4:20
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070164	<b>REPORT CREATED:</b>	04-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-002	3-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-002	Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-002	Carbon disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070164-002	Carbonyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-002	Dimethyl disulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070164-002	Dimethyl sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070164-002	Ethyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-002	Ethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-002	Hydrogen sulphide	K, T, U	< 0.1	ppbv	0.1	NA-024	14-Jul-23
23070164-002	Isobutyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-002	Isopropyl mercaptan	K, T, U	< 0.1	ppbv	0.1	NA-024	14-Jul-23
23070164-002	Methyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070164-002	Pentyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070164-002	Propyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	14-Jul-23
23070164-002	tert-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-002	Thiophene/sec-Butyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070164-002	1,1,1-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	1,1,2,2-Tetrachloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	1,1,2-Trichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	1,1-Dichloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	1,1-Dichloroethylene	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	1,2,3-Trimethylbenzene	I	0.08	ppbv	0.05	AC-058	17-Jul-23
23070164-002	1,2,4-Trichlorobenzene	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23
23070164-002	1,2,4-Trimethylbenzene	I	0.04	ppbv	0.03	AC-058	17-Jul-23
23070164-002	1,2-Dibromoethane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 4, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-12 Blank	32258	Ambient Air	11-Jul-23	4:20
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070164	<b>REPORT CREATED:</b>	04-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-002	1,2-Dichlorobenzene	I	0.04	ppbv	0.03	AC-058	17-Jul-23
23070164-002	1,2-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	1,2-Dichloropropane	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	1,3,5-Trimethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	1,3-Butadiene	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	1,3-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	17-Jul-23
23070164-002	1,4-Dichlorobenzene	K, T, U	< 0.4	ppbv	0.4	AC-058	17-Jul-23
23070164-002	1,4-Dioxane	K, T, U	< 0.5	ppbv	0.5	AC-058	17-Jul-23
23070164-002	1-Butene/Isobutylene	K, T, U	< 0.06	ppbv	0.06	AC-058	17-Jul-23
23070164-002	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.07	ppbv	0.07	AC-058	17-Jul-23
23070164-002	1-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	2,2,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	2,2-Dimethylbutane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	2,3,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	2,3-Dimethylbutane	K, T, U	< 0.09	ppbv	0.09	AC-058	17-Jul-23
23070164-002	2,3-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	2,4-Dimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	2-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	2-Methylhexane	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	2-Methylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	3-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	3-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	3-Methylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Acetone	K, T, U	< 0.4	ppbv	0.4	AC-058	17-Jul-23
23070164-002	Acrolein	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 4, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_Reno-2023-07-12 Blank	32258	Ambient Air	11-Jul-23 4:20
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070164	<b>REPORT CREATED:</b>	04-Aug-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-002	Benzene	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	Benzyl chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23
23070164-002	Bromodichloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	Bromoform	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Bromomethane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Carbon disulfide	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Carbon tetrachloride	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Chlorobenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Chloroethane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Chloroform	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Chloromethane	K, T, U	< 0.04	ppbv	0.04	AC-058	17-Jul-23
23070164-002	cis-1,2-Dichloroethene	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	cis-1,3-Dichloropropene	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	cis-2-Butene	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	cis-2-Pentene	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Cyclohexane	K, T, U	< 0.04	ppbv	0.04	AC-058	17-Jul-23
23070164-002	Cyclopentane	I	0.05	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Dibromochloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Ethanol	K, T, U	< 0.5	ppbv	0.5	AC-058	17-Jul-23
23070164-002	Ethyl acetate	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23
23070164-002	Ethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	Freon-11	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Freon-113	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Freon-114	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	Freon-12	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 4, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
PRAMP_Reno-2023-07-12 Blank	32258	Ambient Air	11-Jul-23	4:20
<b>DESCRIPTION:</b>	NMHC Blank			
<b>REPORT NUMBER:</b>	23070164	<b>REPORT CREATED:</b>	04-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-002	Hexachloro-1,3-butadiene	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23
23070164-002	Isobutane	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	Isopentane	K, T, U	< 0.04	ppbv	0.04	AC-058	17-Jul-23
23070164-002	Isoprene	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Isopropyl alcohol	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23
23070164-002	Isopropylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	17-Jul-23
23070164-002	m,p-Xylene	I	0.07	ppbv	0.04	AC-058	17-Jul-23
23070164-002	m-Diethylbenzene	I	0.08	ppbv	0.02	AC-058	17-Jul-23
23070164-002	m-Ethyltoluene	I	0.08	ppbv	0.03	AC-058	17-Jul-23
23070164-002	Methyl butyl ketone	K, T, U	< 0.4	ppbv	0.4	AC-058	17-Jul-23
23070164-002	Methyl ethyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23
23070164-002	Methyl isobutyl ketone	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23
23070164-002	Methyl methacrylate	K, T, U	< 0.08	ppbv	0.08	AC-058	17-Jul-23
23070164-002	Methyl tert butyl ether	K, T, U	< 0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	Methylcyclohexane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	Methylcyclopentane	K, T, U	< 0.05	ppbv	0.05	AC-058	17-Jul-23
23070164-002	Methylene chloride	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23
23070164-002	n-Butane	K, T, U	< 0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	n-Decane	I	0.07	ppbv	0.06	AC-058	17-Jul-23
23070164-002	n-Dodecane	K, T, U	< 0.3	ppbv	0.3	AC-058	17-Jul-23
23070164-002	n-Heptane	K, T, U	< 0.04	ppbv	0.04	AC-058	17-Jul-23
23070164-002	n-Hexane	I	0.03	ppbv	0.03	AC-058	17-Jul-23
23070164-002	n-Octane	I	0.02	ppbv	0.02	AC-058	17-Jul-23
23070164-002	n-Pentane	K, T, U	< 0.04	ppbv	0.04	AC-058	17-Jul-23
23070164-002	n-Propylbenzene	I	0.06	ppbv	0.06	AC-058	17-Jul-23

Report certified by: Andrea Conner, Admin Assistant

On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: August 4, 2023

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_Reno-2023-07-12 Blank	32258	Ambient Air	11-Jul-23 4:20
<b>DESCRIPTION:</b>	NMHC Blank		
<b>REPORT NUMBER:</b>	23070164	<b>REPORT CREATED:</b>	04-Aug-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result Units	RDL	Method	Analysis Date
23070164-002	n-Undecane	K, T, U	< 0.5 ppbv	0.5	AC-058	17-Jul-23
23070164-002	Naphthalene	K, T, U	< 0.3 ppbv	0.3	AC-058	17-Jul-23
23070164-002	n-Nonane	K, T, U	< 0.04 ppbv	0.04	AC-058	17-Jul-23
23070164-002	o-Ethyltoluene	I	0.03 ppbv	0.02	AC-058	17-Jul-23
23070164-002	o-Xylene	I	0.03 ppbv	0.03	AC-058	17-Jul-23
23070164-002	p-Diethylbenzene	K, T, U	< 0.02 ppbv	0.02	AC-058	17-Jul-23
23070164-002	p-Ethyltoluene	K, T, U	< 0.04 ppbv	0.04	AC-058	17-Jul-23
23070164-002	Styrene	I	0.07 ppbv	0.04	AC-058	17-Jul-23
23070164-002	Tetrachloroethylene	K, T, U	< 0.02 ppbv	0.02	AC-058	17-Jul-23
23070164-002	Tetrahydrofuran	K, T, U	< 0.3 ppbv	0.3	AC-058	17-Jul-23
23070164-002	Toluene	K, T, U	< 0.03 ppbv	0.03	AC-058	17-Jul-23
23070164-002	trans-1,2-Dichloroethylene	K, T, U	< 0.06 ppbv	0.06	AC-058	17-Jul-23
23070164-002	trans-1,3-Dichloropropylene	K, T, U	< 0.02 ppbv	0.02	AC-058	17-Jul-23
23070164-002	trans-2-Butene	K, T, U	< 0.03 ppbv	0.03	AC-058	17-Jul-23
23070164-002	trans-2-Pentene	K, T, U	< 0.02 ppbv	0.02	AC-058	17-Jul-23
23070164-002	Trichloroethylene	K, T, U	< 0.02 ppbv	0.02	AC-058	17-Jul-23
23070164-002	Vinyl acetate	K, T, U	< 0.3 ppbv	0.3	AC-058	17-Jul-23
23070164-002	Vinyl chloride	K, T, U	< 0.02 ppbv	0.02	AC-058	17-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 4, 2023

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at <https://directory.cala.ca/> LAB-PRAMP-202307

On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>
PRAMP_Reno-B-2023-07-12	28907	Ambient Air	11-Jul-23 4:20
<b>DESCRIPTION:</b>	NMHC Trigger		
<b>REPORT NUMBER:</b>	23070164	<b>REPORT CREATED:</b>	04-Aug-23
			<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-001	1-Butene	K, T, U	< 0.16	ppmv	0.16	NA-025	17-Jul-23
23070164-001	Acetylene	K, T, U	< 0.13	ppmv	0.13	NA-025	17-Jul-23
23070164-001	n-Butane	K, T, U	< 0.3	ppmv	0.3	NA-025	17-Jul-23
23070164-001	cis-2-Butene	K, T, U	< 0.07	ppmv	0.07	NA-025	17-Jul-23
23070164-001	Ethane	K, T, U	< 0.2	ppmv	0.2	NA-025	17-Jul-23
23070164-001	Ethylacetylene	K, T, U	< 0.10	ppmv	0.10	NA-025	17-Jul-23
23070164-001	Ethylene	K, T, U	< 0.11	ppmv	0.11	NA-025	17-Jul-23
23070164-001	Isobutane	K, T, U	< 0.2	ppmv	0.2	NA-025	17-Jul-23
23070164-001	Isobutylene	K, T, U	< 0.2	ppmv	0.2	NA-025	17-Jul-23
23070164-001	Methane		3.3	ppmv	0.2	NA-025	17-Jul-23
23070164-001	n-Propane	K, T, U	< 0.11	ppmv	0.11	NA-025	17-Jul-23
23070164-001	Propylene	K, T, U	< 0.2	ppmv	0.2	NA-025	17-Jul-23
23070164-001	Propyne	K, T, U	< 0.2	ppmv	0.2	NA-025	17-Jul-23
23070164-001	trans-2-Butene	K, T, U	< 0.15	ppmv	0.15	NA-025	17-Jul-23
23070164-001	2,5-Dimethylthiophene	K, T, U	< 0.5	ppbv	0.5	NA-024	14-Jul-23
23070164-001	2-Ethylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-001	2-Methylthiophene	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-001	3-Methylthiophene	K, T, U	< 0.5	ppbv	0.5	NA-024	14-Jul-23
23070164-001	Butyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	14-Jul-23
23070164-001	Carbon disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-001	Carbonyl sulphide	K, T, U	< 0.5	ppbv	0.5	NA-024	14-Jul-23
23070164-001	Dimethyl disulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-001	Dimethyl sulphide	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-001	Ethyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	14-Jul-23
23070164-001	Ethyl sulphide	K, T, U	< 0.5	ppbv	0.5	NA-024	14-Jul-23

Report certified by: Andrea Conner, Admin Assistant

Date: August 4, 2023

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On behalf of: Adam Malcolm, Manager, Chemical Testing

Inquiries: (780) 632 8403

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<b>REPORT NUMBER:</b>	23070164	<b>REPORT CREATED:</b>	04-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-001	Hydrogen sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070164-001	Isobutyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	14-Jul-23
23070164-001	Isopropyl mercaptan	K, T, U	< 0.2	ppbv	0.2	NA-024	14-Jul-23
23070164-001	Methyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-001	Pentyl mercaptan	K, T, U	< 0.7	ppbv	0.7	NA-024	14-Jul-23
23070164-001	Propyl mercaptan	K, T, U	< 0.7	ppbv	0.7	NA-024	14-Jul-23
23070164-001	tert-Butyl mercaptan	K, T, U	< 0.5	ppbv	0.5	NA-024	14-Jul-23
23070164-001	Thiophene/sec-Butyl mercaptan	K, T, U	< 0.3	ppbv	0.3	NA-024	14-Jul-23
23070164-001	1,1,1-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	1,1,2,2-Tetrachloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	1,1,2-Trichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	1,1-Dichloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	1,1-Dichloroethylene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	1,2,3-Trimethylbenzene		0.29	ppbv	0.08	AC-058	18-Jul-23
23070164-001	1,2,4-Trichlorobenzene	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070164-001	1,2,4-Trimethylbenzene	I	0.18	ppbv	0.05	AC-058	18-Jul-23
23070164-001	1,2-Dibromoethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	1,2-Dichlorobenzene	I	0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	1,2-Dichloroethane	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	1,2-Dichloropropane	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	1,3,5-Trimethylbenzene	I	0.07	ppbv	0.05	AC-058	18-Jul-23
23070164-001	1,3-Butadiene		0.35	ppbv	0.05	AC-058	18-Jul-23
23070164-001	1,3-Dichlorobenzene	K, T, U	< 0.7	ppbv	0.7	AC-058	18-Jul-23
23070164-001	1,4-Dichlorobenzene	K, T, U	< 0.7	ppbv	0.7	AC-058	18-Jul-23
23070164-001	1,4-Dioxane	K, T, U	< 0.8	ppbv	0.8	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: August 4, 2023

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<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
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<b>REPORT NUMBER:</b>	23070164	<b>REPORT CREATED:</b>	04-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-001	1-Butene/Isobutylene		2.80	ppbv	0.10	AC-058	18-Jul-23
23070164-001	1-Hexene/2-Methyl-1-pentene	I	0.25	ppbv	0.11	AC-058	18-Jul-23
23070164-001	1-Pentene		0.38	ppbv	0.05	AC-058	18-Jul-23
23070164-001	2,2,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	2,2-Dimethylbutane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	2,3,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	2,3-Dimethylbutane	K, T, U	< 0.15	ppbv	0.15	AC-058	18-Jul-23
23070164-001	2,3-Dimethylpentane	I	0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	2,4-Dimethylpentane	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	2-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	2-Methylhexane	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	2-Methylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	3-Methylheptane	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	3-Methylhexane	I	0.05	ppbv	0.03	AC-058	18-Jul-23
23070164-001	3-Methylpentane	I	0.04	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Acetone		11.9	ppbv	0.7	AC-058	18-Jul-23
23070164-001	Acrolein	I	0.8	ppbv	0.5	AC-058	18-Jul-23
23070164-001	Benzene		3.89	ppbv	0.05	AC-058	18-Jul-23
23070164-001	Benzyl chloride	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070164-001	Bromodichloromethane	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	Bromoform	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Bromomethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Carbon disulfide	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Carbon tetrachloride	I	0.06	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Chlorobenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23

Report certified by: Andrea Conner, Admin Assistant

On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: August 4, 2023

Inquiries: (780) 632 8403

E-mail: EAS.Results@innotechalberta.ca

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<b>REPORT NUMBER:</b>	23070164	<b>REPORT CREATED:</b>	04-Aug-23	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-001	Chloroethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Chloroform	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Chloromethane		0.81	ppbv	0.07	AC-058	18-Jul-23
23070164-001	cis-1,2-Dichloroethene	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	cis-1,3-Dichloropropene	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	cis-2-Butene		0.31	ppbv	0.05	AC-058	18-Jul-23
23070164-001	cis-2-Pentene	I	0.05	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Cyclohexane	I	0.07	ppbv	0.07	AC-058	18-Jul-23
23070164-001	Cyclopentane		1.40	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Dibromochloromethane	K, T, U	< 0.03	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Ethanol		10.2	ppbv	0.8	AC-058	18-Jul-23
23070164-001	Ethyl acetate	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070164-001	Ethylbenzene	I	0.17	ppbv	0.05	AC-058	18-Jul-23
23070164-001	Freon-11		0.19	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Freon-113	I	0.04	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Freon-114	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	Freon-12		0.49	ppbv	0.05	AC-058	18-Jul-23
23070164-001	Hexachloro-1,3-butadiene	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070164-001	Isobutane		0.60	ppbv	0.05	AC-058	18-Jul-23
23070164-001	Isopentane		0.76	ppbv	0.07	AC-058	18-Jul-23
23070164-001	Isoprene		1.08	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Isopropyl alcohol	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070164-001	Isopropylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	18-Jul-23
23070164-001	m,p-Xylene	I	0.26	ppbv	0.07	AC-058	18-Jul-23
23070164-001	m-Diethylbenzene	I	0.14	ppbv	0.03	AC-058	18-Jul-23

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Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23070164-001	m-Ethyltoluene		0.19	ppbv	0.05	AC-058	18-Jul-23
23070164-001	Methyl butyl ketone	K, T, U	< 0.7	ppbv	0.7	AC-058	18-Jul-23
23070164-001	Methyl ethyl ketone		1.1	ppbv	0.5	AC-058	18-Jul-23
23070164-001	Methyl isobutyl ketone	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070164-001	Methyl methacrylate	I	0.13	ppbv	0.13	AC-058	18-Jul-23
23070164-001	Methyl tert butyl ether	K, T, U	< 0.05	ppbv	0.05	AC-058	18-Jul-23
23070164-001	Methylcyclohexane	I	0.05	ppbv	0.03	AC-058	18-Jul-23
23070164-001	Methylcyclopentane	K, T, U	< 0.08	ppbv	0.08	AC-058	18-Jul-23
23070164-001	Methylene chloride	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070164-001	n-Butane		1.70	ppbv	0.03	AC-058	18-Jul-23
23070164-001	n-Decane	I	0.16	ppbv	0.10	AC-058	18-Jul-23
23070164-001	n-Dodecane	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070164-001	n-Heptane	I	0.12	ppbv	0.07	AC-058	18-Jul-23
23070164-001	n-Hexane	I	0.21	ppbv	0.05	AC-058	18-Jul-23
23070164-001	n-Octane	I	0.10	ppbv	0.03	AC-058	18-Jul-23
23070164-001	n-Pentane		0.53	ppbv	0.07	AC-058	18-Jul-23
23070164-001	n-Propylbenzene	I	0.14	ppbv	0.10	AC-058	18-Jul-23
23070164-001	n-Undecane	K, T, U	< 0.8	ppbv	0.8	AC-058	18-Jul-23
23070164-001	Naphthalene	K, T, U	< 0.5	ppbv	0.5	AC-058	18-Jul-23
23070164-001	n-Nonane	I	0.08	ppbv	0.07	AC-058	18-Jul-23
23070164-001	o-Ethyltoluene	I	0.11	ppbv	0.03	AC-058	18-Jul-23
23070164-001	o-Xylene	I	0.15	ppbv	0.05	AC-058	18-Jul-23
23070164-001	p-Diethylbenzene		0.16	ppbv	0.03	AC-058	18-Jul-23
23070164-001	p-Ethyltoluene	I	0.07	ppbv	0.07	AC-058	18-Jul-23
23070164-001	Styrene	I	0.22	ppbv	0.07	AC-058	18-Jul-23

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On behalf of: Adam Malcolm, Manager, Chemical Testing

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Lab ID	Parameter	Qualifier	Result Units	RDL	Method	Analysis Date
23070164-001	Tetrachloroethylene	K, T, U	< 0.03 ppbv	0.03	AC-058	18-Jul-23
23070164-001	Tetrahydrofuran	K, T, U	< 0.5 ppbv	0.5	AC-058	18-Jul-23
23070164-001	Toluene		1.48 ppbv	0.05	AC-058	18-Jul-23
23070164-001	trans-1,2-Dichloroethylene	K, T, U	< 0.10 ppbv	0.10	AC-058	18-Jul-23
23070164-001	trans-1,3-Dichloropropylene	K, T, U	< 0.03 ppbv	0.03	AC-058	18-Jul-23
23070164-001	trans-2-Butene		0.38 ppbv	0.05	AC-058	18-Jul-23
23070164-001	trans-2-Pentene	I	0.08 ppbv	0.03	AC-058	18-Jul-23
23070164-001	Trichloroethylene	K, T, U	< 0.03 ppbv	0.03	AC-058	18-Jul-23
23070164-001	Vinyl acetate	K, T, U	< 0.5 ppbv	0.5	AC-058	18-Jul-23
23070164-001	Vinyl chloride	K, T, U	< 0.03 ppbv	0.03	AC-058	18-Jul-23



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## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### Revision History

Order ID	Ver	Date	Reason
23070164	01	04-Aug-23	Report created

**Methods**

<b>Method</b>	<b>Description</b>
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-024	Analysis for Reduced Sulfur Compounds in Air Samples
NA-025	Determination of Light Hydrocarbons (C1C4) in Ambient Air by Gas Chromatography Flame Ionization Detector

**List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation**

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air

## Qualifiers

### Data Qualifier Translation

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B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank



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## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### Order Comments

23070164

Send results to [pramptech@prampairshed.ca](mailto:pramptech@prampairshed.ca)



PO Bag 4000  
Vegreville, Alberta  
Canada T9C 1T4  
(780) 632-8211

## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### Sample Comments





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## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### **Result Comments**

*Note:*

- 1. Results relate only to items tested and apply to the sample as received.*
- 2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.*

## Passive Sampling Analytical Results



6744 - 50 St. Edmonton AB Canada T6B 3M9

Ph (780) 378-8500, Toll free (800) 386-7247, Fax (780) 378-8699

Bureau Veritas Job Number:

# PASSIVE AIR CHAIN OF CUSTODY

Page \_\_\_ of \_\_\_

**Invoice To**

Company Name \_\_\_\_\_

Contact Name \_\_\_\_\_

Address \_\_\_\_\_

City/Postal Code \_\_\_\_\_

Phone/Fax# \_\_\_\_\_

**Report To**

Name & Email Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Service Requested**

RUSH  
(Please contact for TAT)

REGULAR

Company Name

**Peace River**

Project Name/LSD

**Peace River**

## ANALYTICAL INFORMATION

### Analysis Required

Sample ID or Location (LSD)	Sample Start Date (DD/MM/YY)	Time (24 hrs) (HH:MM)	Sample End Date (DD/MM/YY)	Time (HH:MM)	Volume (m3) PM/TSP Only	SO2	H2S	NO2	O3	NH3	PM2.5	PM10	TSP	Dustfall									
1	30/06/23	8:30 Am	01/08/23	9:45am		X	X																
2	↓	↓	↓	↓		X	X																
3						X	X																
4						X	X																
7						X	X																
8						X	X																
9						X	X																
10						X	X																
11						X	X																
12						X	X																
13						X	X																
14						X	X																
Blank							11:30 Am		12:00		X	X											
Blank											X	X											

Notes/Comments: Client 12521 / Scenario 18009

\_\_\_\_\_

\_\_\_\_\_

Sampled By Bo Guerin Phone/Email 6181880 Received By Bo Guerin Date/Time Aug. 1-23 Project # CNRL PRC

Date Shipped Aug. 1. 23 Signature [Signature] PO# \_\_\_\_\_

MS 23-0803  
OTISD  
1452 1445



Your Project #: 2023/06/30-2023/08/01  
Site Location: PEACE RIVER COMPLEX

**Attention: Michael and Lily**

Peace River Area Monitoring Program Committee  
Three Creeks  
Suite 91, 305 –  
4625 Varsity Drive NW  
Calgary, AB  
CANADA T3A0Z9

**Report Date: 2023/08/15**  
Report #: R3380447  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C359408**

**Received: 2023/08/03, 07:30**

Sample Matrix: Air  
# Samples Received: 12

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
H2S Passive Analysis	12	2023/08/10	2023/08/14	PTC SOP-00150	Passive H2S in ATM
SO2 Passive Analysis	12	2023/08/04	2023/08/14	PTC SOP-00149	Passive SO2 in ATM

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Results relate only to the items tested.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Belma Elefante  
Customer Service Associate  
15 Aug 2023 09:16:40

Please direct all questions regarding this Certificate of Analysis to:  
Customer Service Passives,  
Email: PassiveAir@bureauveritas.com  
Phone# (780) 378-8500

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Branko Banjac, General Manager responsible for Alberta Petroleum laboratory operations.



BUREAU  
VERITAS

Bureau Veritas Job #: C359408  
Report Date: 2023/08/15

Peace River Area Monitoring Program Committee  
Client Project #: 2023/06/30-2023/08/01  
Site Location: PEACE RIVER COMPLEX  
Sampler Initials: BG

### RESULTS OF CHEMICAL ANALYSES OF AIR

Bureau Veritas ID		BWA405	BWA406	BWA407	BWA408	BWA409	BWA410	BWA411		
Sampling Date		2023/06/30 08:30	2023/06/30 08:30	2023/06/30 08:30	2023/06/30 08:30	2023/06/30 08:30	2023/06/30 08:30	2023/06/30 08:30		
	<b>UNITS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Passive Monitoring</b>										
Calculated H2S	ppb	0.31	0.38	0.47	1.01	0.43	0.48	0.31	0.02	B065667
Calculated SO2	ppb	0.2	0.3	0.4	0.4	0.2	0.3	0.2	0.1	B059538
RDL = Reportable Detection Limit										

Bureau Veritas ID		BWA412	BWA413	BWA414	BWA415	BWA416		
Sampling Date		2023/06/30 08:30	2023/06/30 08:30	2023/06/30 08:30	2023/06/30 08:30	2023/06/30 11:30		
	<b>UNITS</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Passive Monitoring</b>								
Calculated H2S	ppb	0.80	0.85	0.41	1.10	0.74	0.02	B065667
Calculated SO2	ppb	0.3	0.3	0.3	0.4	0.4	0.1	B059538
RDL = Reportable Detection Limit								



**BUREAU  
VERITAS**

Bureau Veritas Job #: C359408  
Report Date: 2023/08/15

Peace River Area Monitoring Program Committee  
Client Project #: 2023/06/30-2023/08/01  
Site Location: PEACE RIVER COMPLEX  
Sampler Initials: BG

### GENERAL COMMENTS

Results relate only to the items tested.



BUREAU  
VERITAS

Bureau Veritas Job #: C359408  
Report Date: 2023/08/15

Peace River Area Monitoring Program Committee  
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Sampler Initials: BG

### QUALITY ASSURANCE REPORT

QA/QC									
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits	
B059538	OZ	Spiked Blank	Calculated SO2			100	%	90 - 110	
B059538	OZ	Method Blank	Calculated SO2		<0.1		ppb		
B065667	YYA	Spiked Blank	Calculated H2S			100	%	90 - 110	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



BUREAU  
VERITAS

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Sampler Initials: BG

### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

---

Yang Liu, Laboratory Supervisor

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End of Report