

November 2020: Continuous Monitoring Program

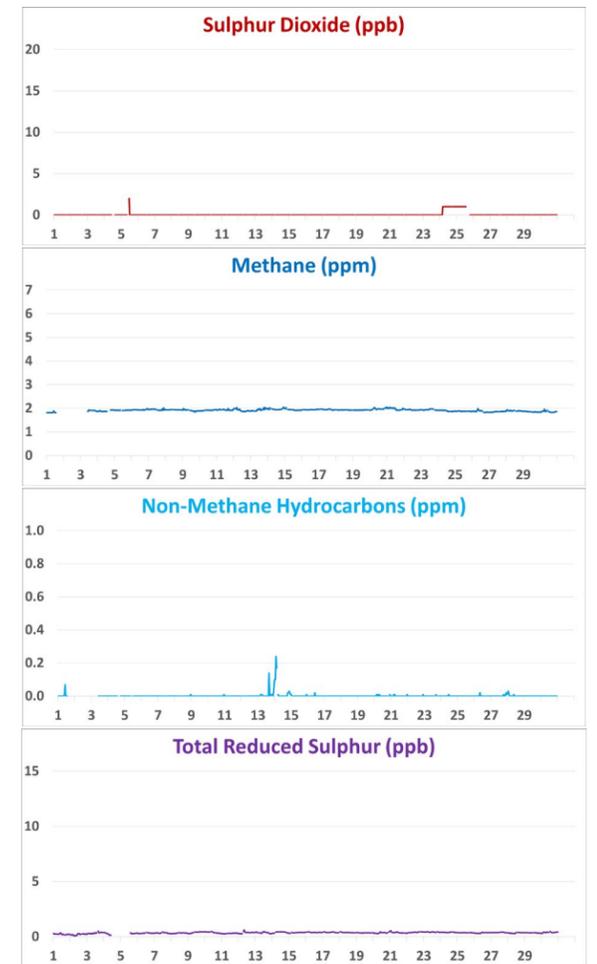
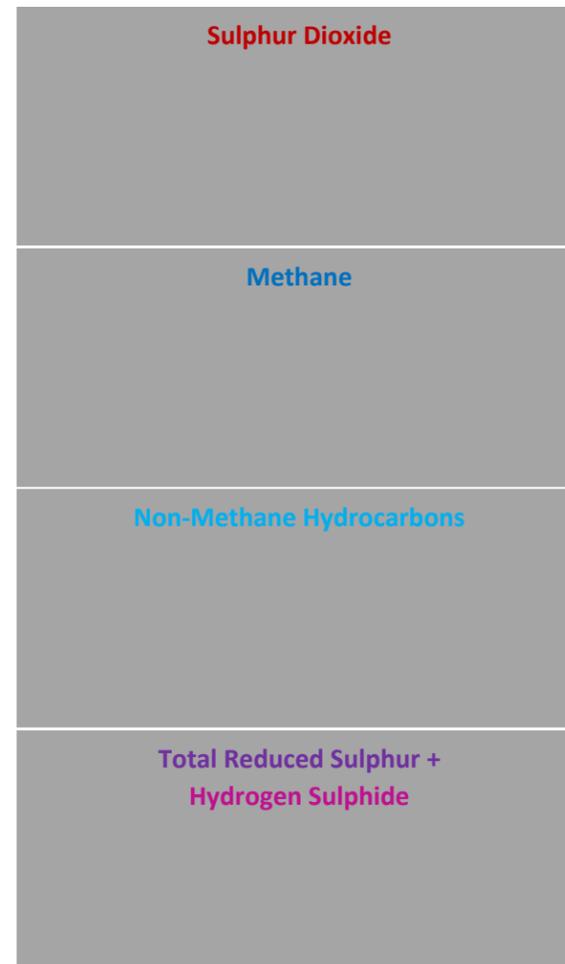
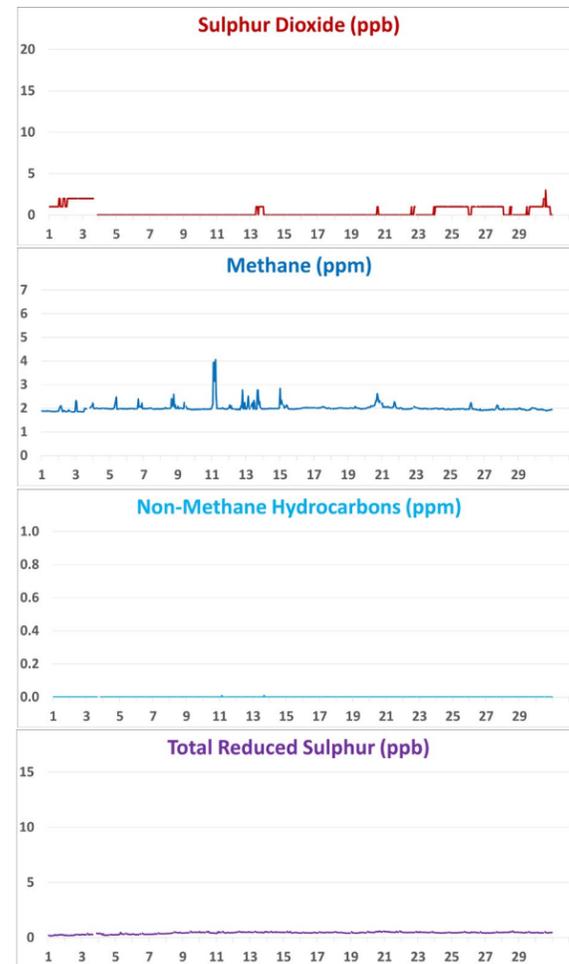
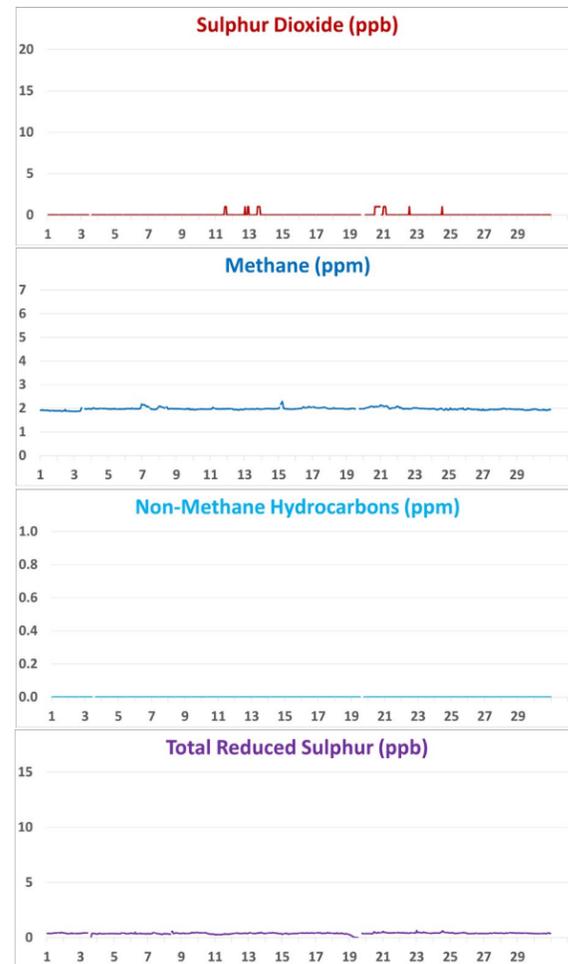
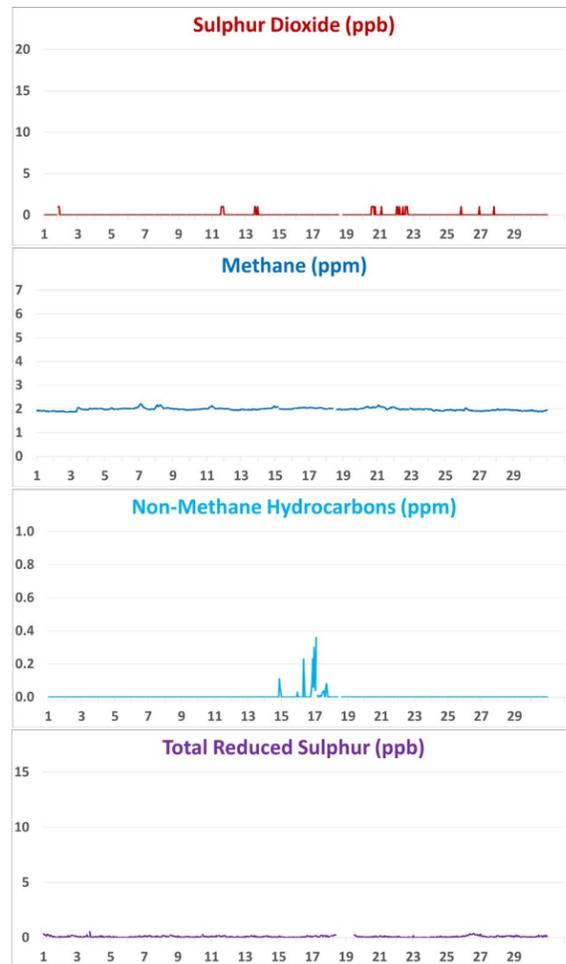
Station 986c

Station 842b

Reno Station

PRC Station (*coming soon*)

AQHI Station – Cadotte Lake



Field Operations Summary (detailed field operations notes can be found in the monthly technical reports on the PRAMP website)

986c Station:

- TRS: Following a successful as found points check on November 18, the analyzer failed the adjusted high point check due to slow response. Background values and Co-efficient values were restored to original values, and a shut down calibration was attempted. A successful as found high point check could not be obtained. The analyzer was put offline while scrubber material was renewed. Time was given to the analyzer to stabilize overnight. A successful post-repair calibration was completed on November 19. Twenty-one hours of downtime were recorded due to this maintenance activity.

842b Station:

- All parameters: Two hours of data were discarded due to a power outage event on November 3 at hour 11 and 12.

Reno Station:

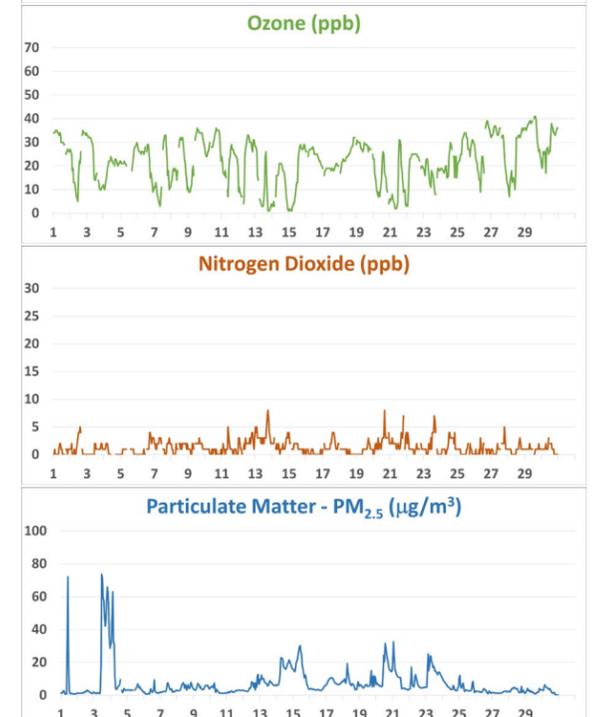
- Due to a datalogger error, no daily zero-span checks were completed between Oct 27 and November 1. The issue was corrected on November 2. *AEP reference #: 373328.*
- SO₂: The analyzer failed the daily span check on November 20 due to the permeation tube depletion. An additional zero-span check was completed on November 20 hour 6 to assess span response. Following a successful as found points check on November 26, the permeation tube was replaced. The new permeation tube was allowed to stabilize, and the expected span value was updated on November 28. Three hours of downtime were recorded due to additional quality checks.

AQHI – Cadotte Lake Station:

- Measured parameters were below Alberta Ambient Air Quality Objectives (AAQOs) where applicable, except PM_{2.5}. *AEP reference #: 373389.* Throughout the Peace River – Three Creeks region, brush piles are being burned due to land clearing activities and are creating wide-spread smoke. This smoke was the cause of the elevated particulate matter concentrations detected by PRAMP.
- TRS: As the Teledyne T100U TRS analyzer, s/n: 132, continued having firmware issues, the analyzer was removed from the site for repair following a shut-down calibration on November 4. The Thermo 43i-TLE TRS analyzer, s/n: 1152940011, was installed on November 4, and a successful installation calibration on November 5. Twenty-one hours of downtime was recorded due to this event.

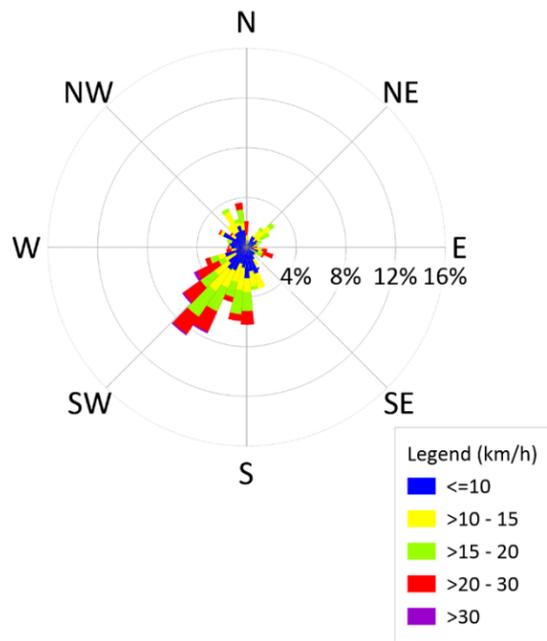
VOC Canister Sampling Program:

- In November, two methane-triggered events were recorded at the Reno station, and one NMHC-triggered event was recorded at the 986c station.
 - Reno – Nov 11, at 2:20, methane trigger concentration of 6.33 ppm.
 - Reno – Nov 13, at 16:55, methane trigger concentration of 7.79 ppm.
 - 986c – Nov 14, at 21:20, non-methane HC trigger concentration of 0.34 ppm.

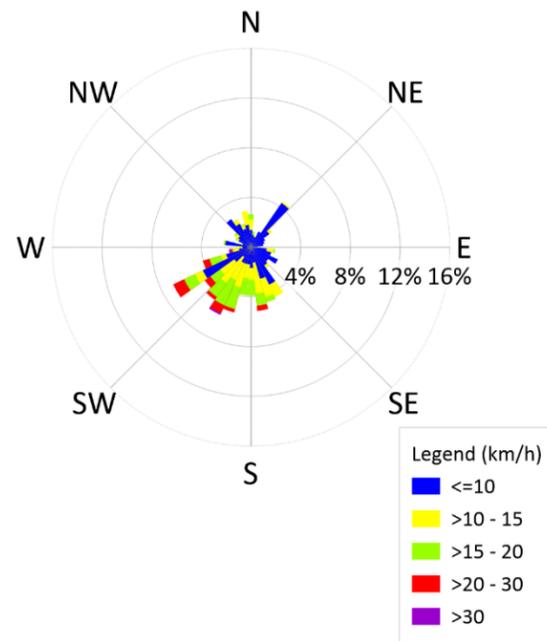


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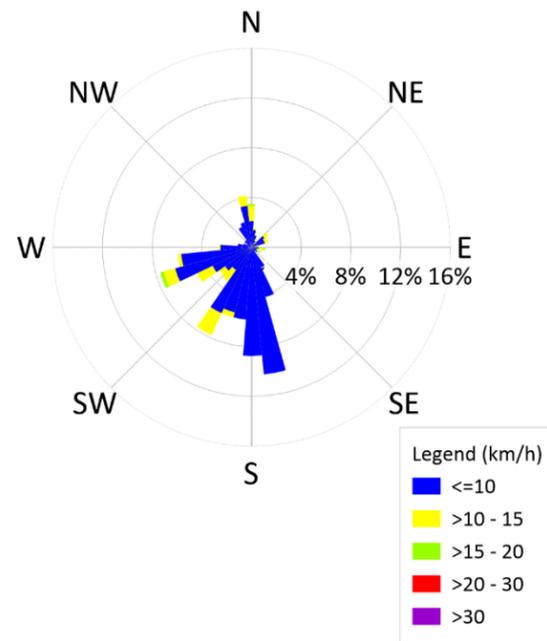
Station 986c



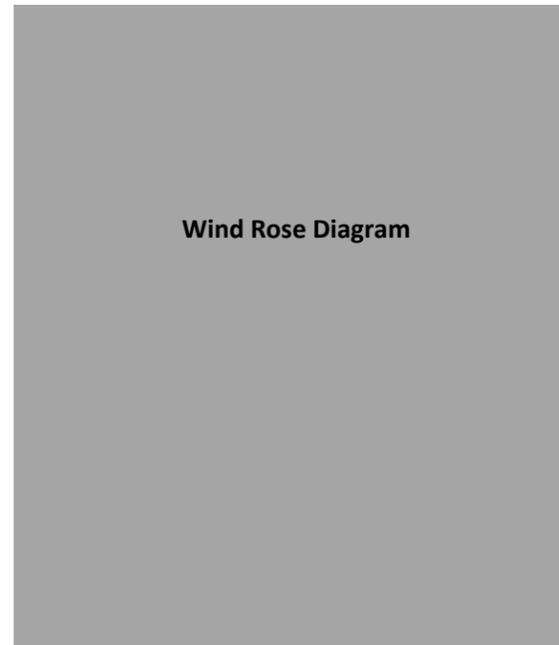
Station 842b



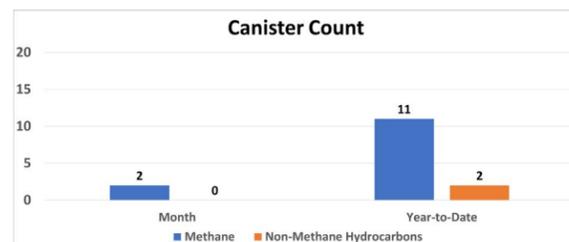
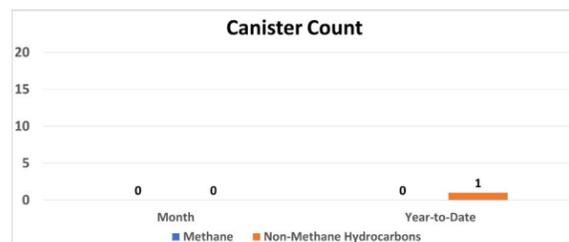
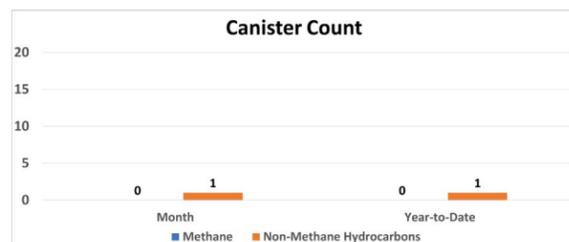
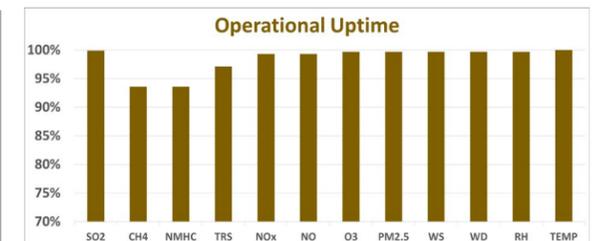
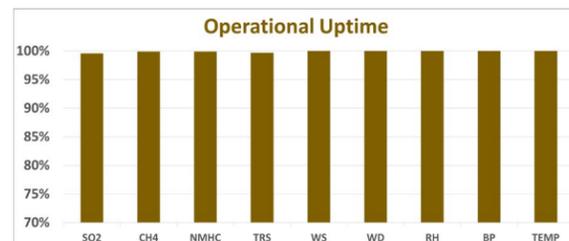
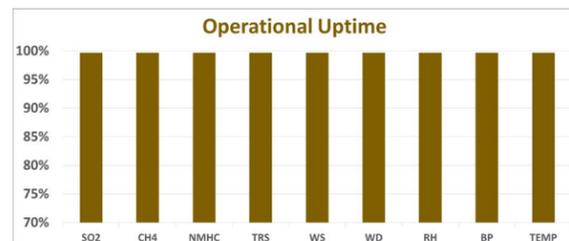
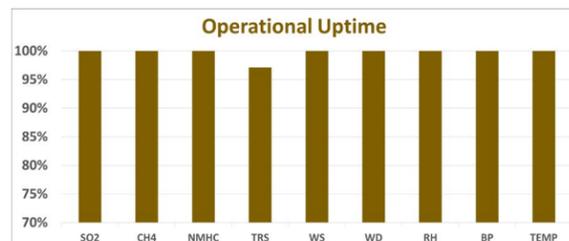
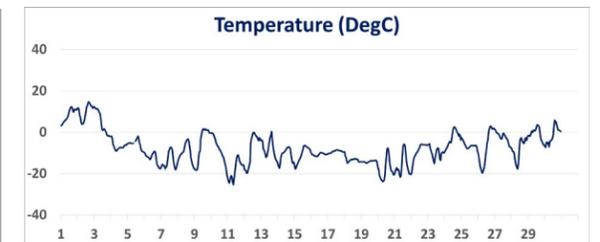
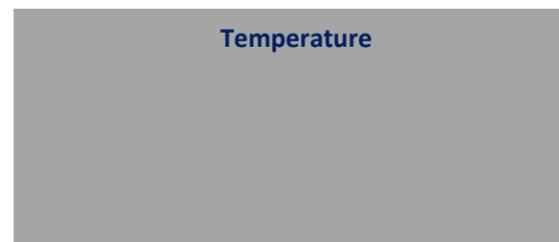
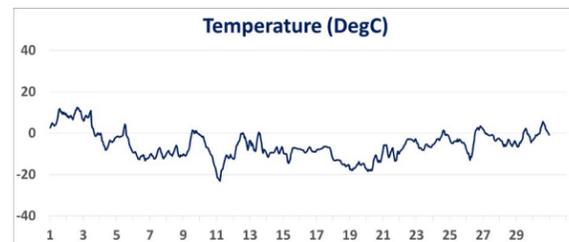
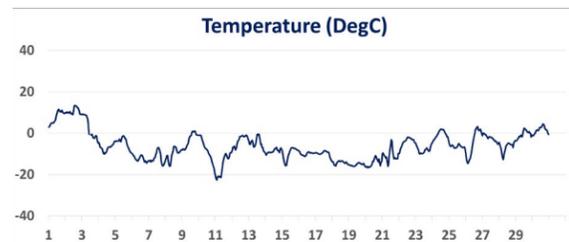
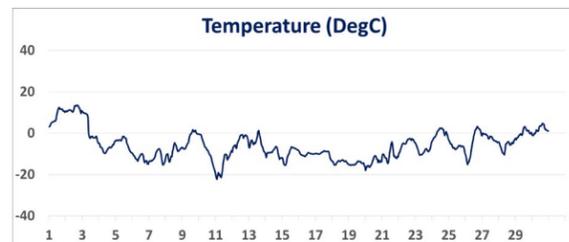
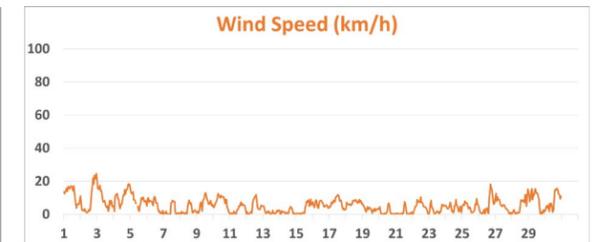
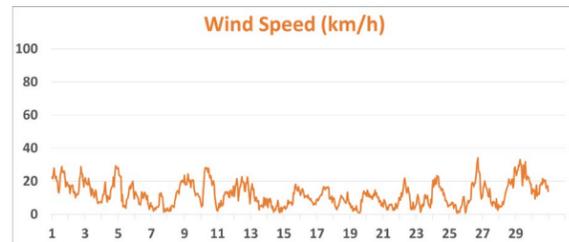
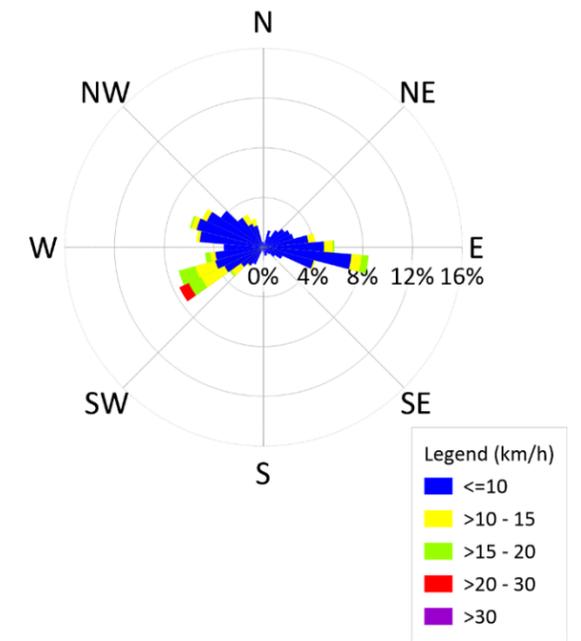
Reno Station



PRC Station (coming soon)



AQHI Station – Cadotte Lake

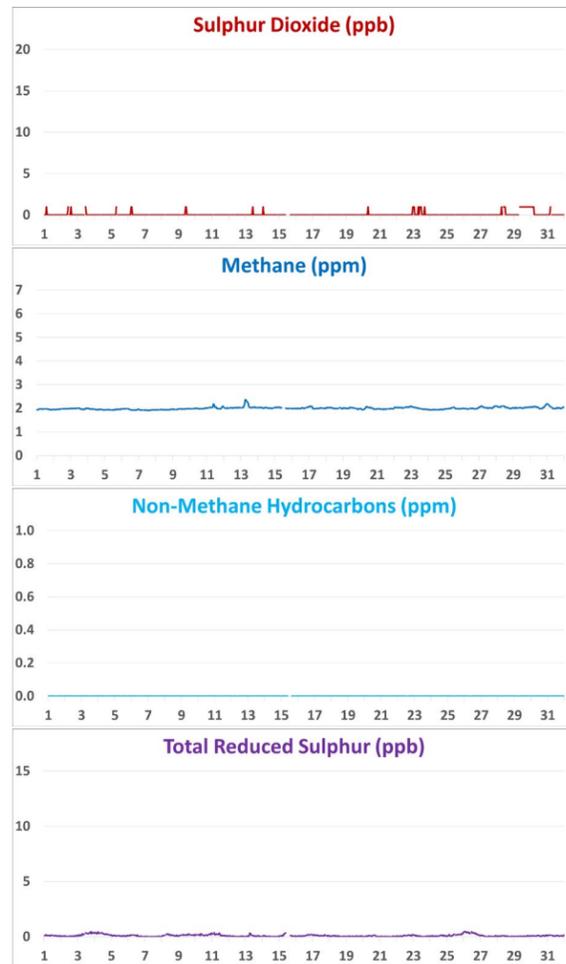


Targets, Guidelines, and Objectives
 Sulphur Dioxide 1h AAAQO = 172 ppb
 Ozone 1h AAAQO = 76 ppb
 Particulate Matter AAAQG = 80 µg/m³
 Nitrogen Dioxide AAAQO = 159 ppb
 Operational Uptime Requirement = 90%
 AQHI Risk Value = 1-3 Low, 4-6 Moderate, 7-9 High, 10+ Very High

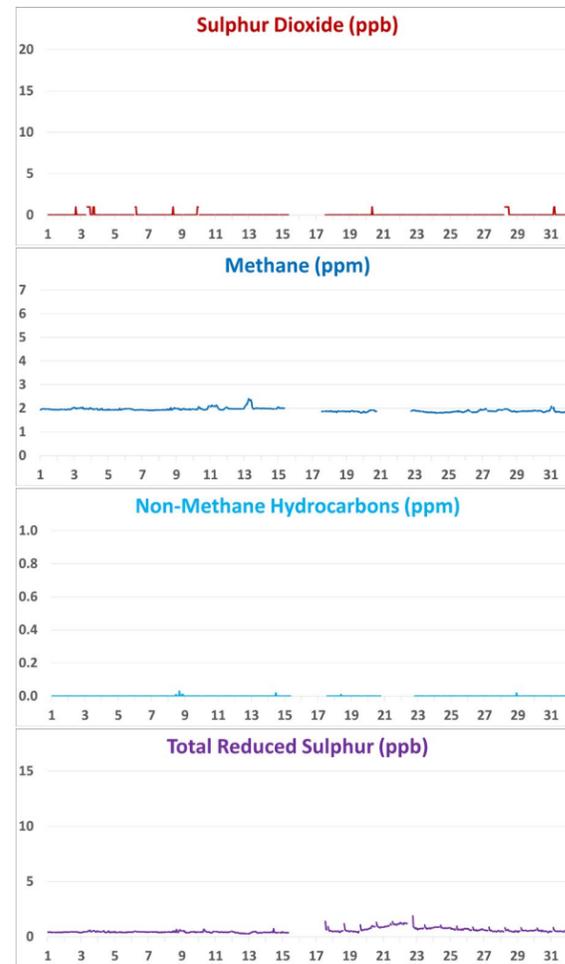


December 2020: Continuous Monitoring Program

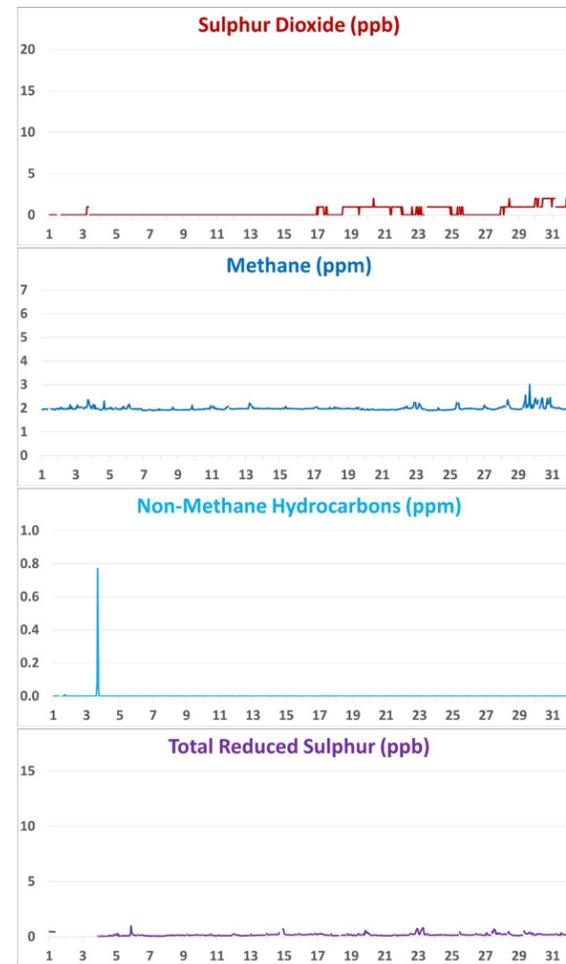
Station 986c



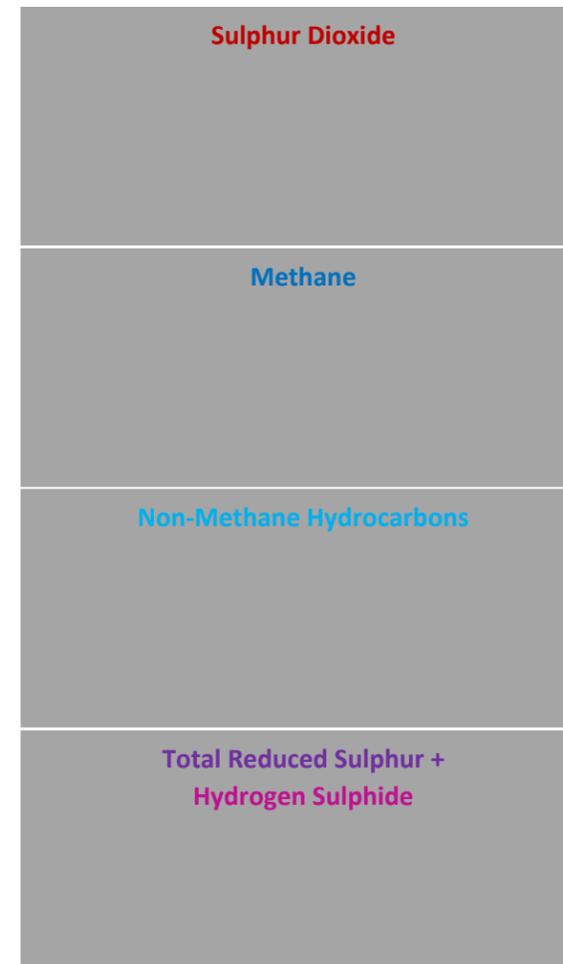
Station 842b



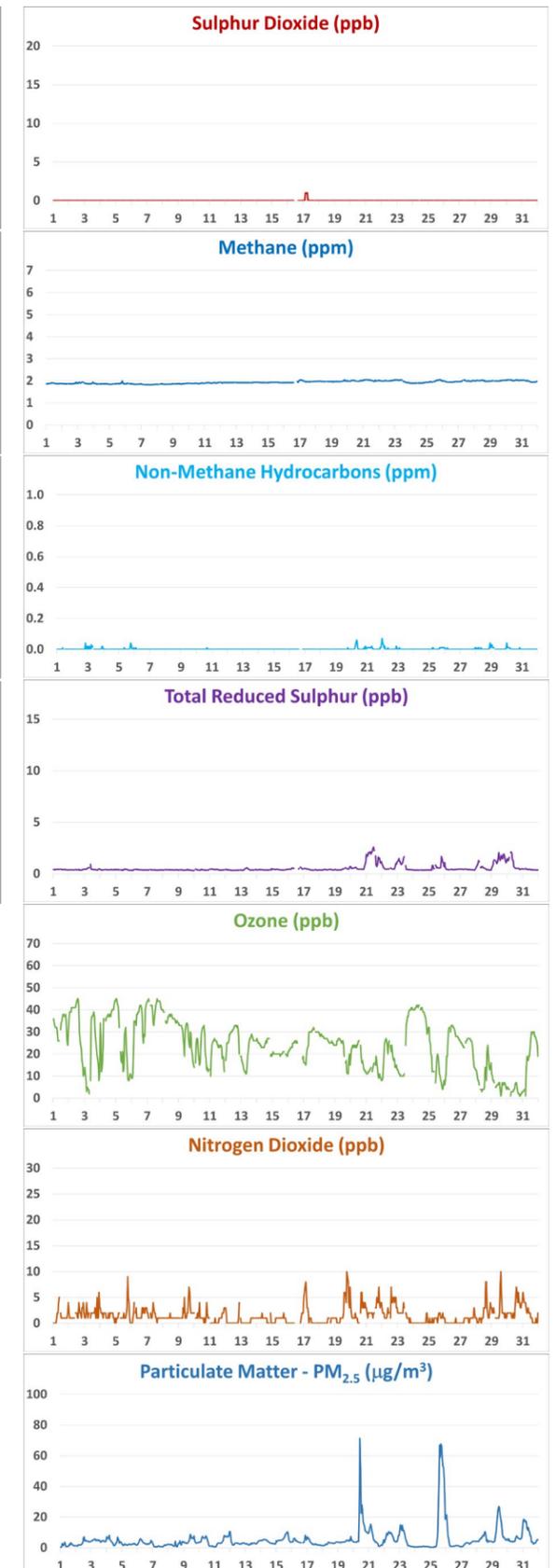
Reno Station



PRC Station (coming soon)



AQHI Station – Cadotte Lake



Field Operations Summary (detailed field operations notes can be found in the monthly technical reports on the PRAMP website)

986c Station

- **All parameters:** Hourly data collected on December 12 hour 8 is missing due to a data polling error. One hour of downtime was recorded as a result.

842b Station

- All parameters met the 90% operational uptime requirement, except THC/CH₄/NMHC (87.5%). **AEP reference #: 374751.**
- The contractor-supplied AQM trailer and all monitoring equipment were replaced with the PRAMP-owned trailer on December 15. All analyzers and sensors were offline 28 to 45 hours during the transition.
- **TRS:** The analyzer spanned outside the acceptable limits on December 20 due to permeation tube issues. Eight hours of downtime were recorded due to additional quality checks and maintenance.
- **THC/CH₄/NMHC:** Sporadic injection issues started on December 20 hour 19. Forty-eight hours of downtime were recorded due to the analyzer failure and additional quality checks and maintenance.

Reno Station

- **TRS:** The analyzer failed the low point calibration check on December 1. Based on the change in response between calibration attempts, it was presumed that the scrubber beads were reacting adversely to the very dry air which was produced by the zero-air generator. Forty-eight hour of data were discarded due to additional checks and maintenance.

AQHI – Cadotte Lake Station

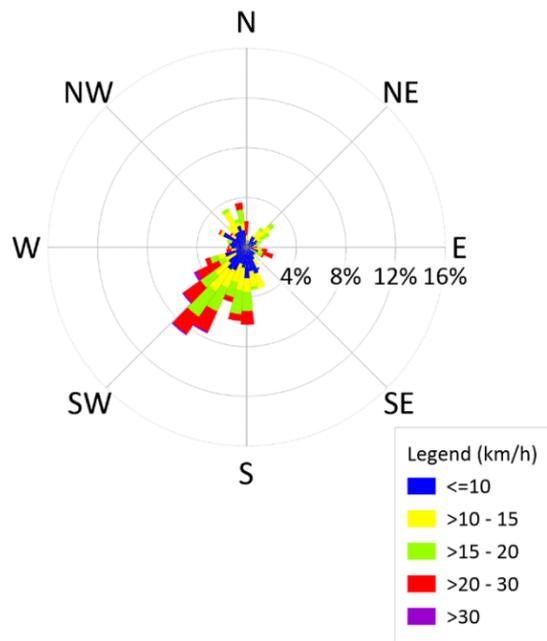
- **Ozone:** The channel was put offline while the glass manifold was cleaned on December 16 hour 15. One hour of downtime was recorded due to this event.
- **WS/WD:** Both WS and WD data appeared atypical, starting December 27 hour 19. Upon arrival on December 30, it was found that blade was unbalanced due to ice causing reduced sensitivity of the sensors. The blade was de-iced. The wind speed response was tested afterwards. The test results showed to be accurate and stable. Seventy-two hours of data collected between December 27 hour 19 and December 30 hour 19 were discarded due to this event.

VOCs Canister Sampling program

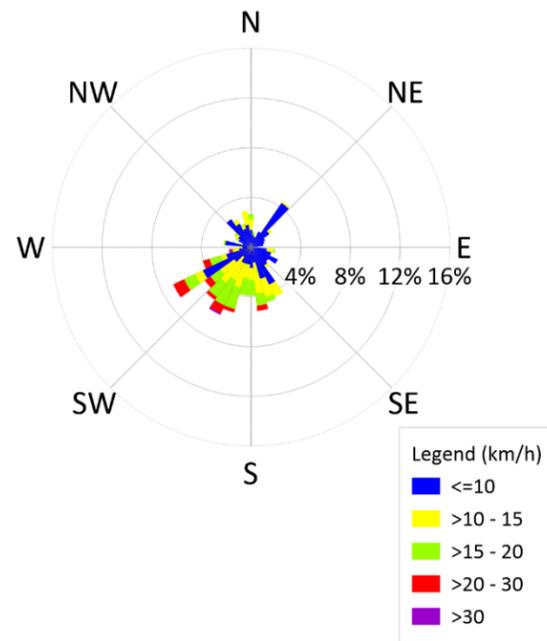
- One NMHC-triggered event was recorded at the Reno station on December 3 at 15:55, at concentration of 0.91ppm.

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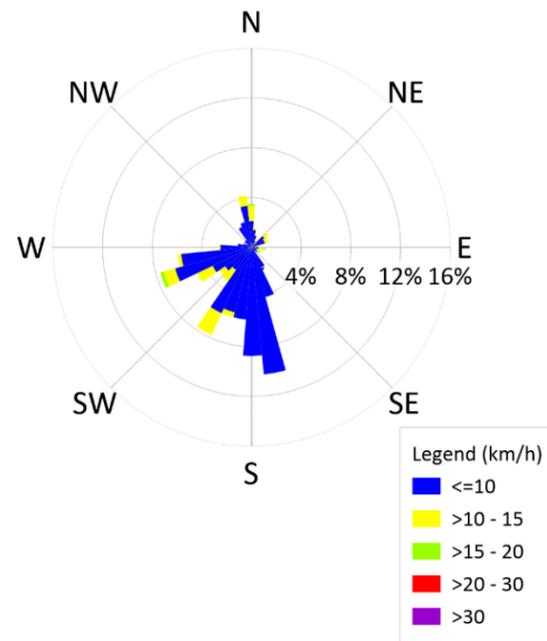
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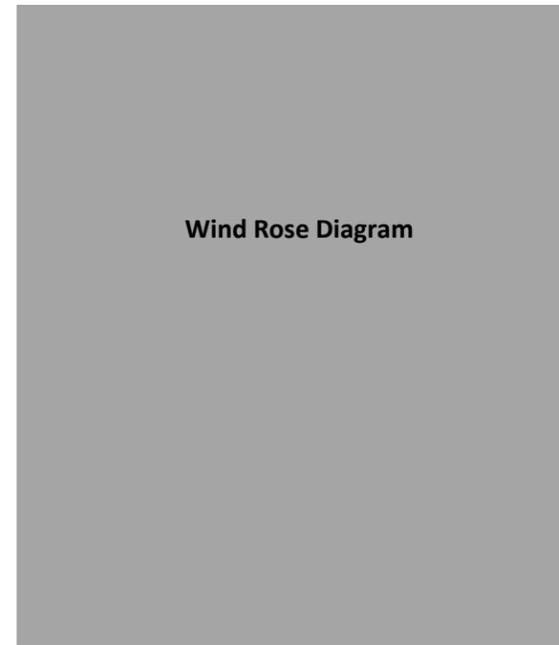
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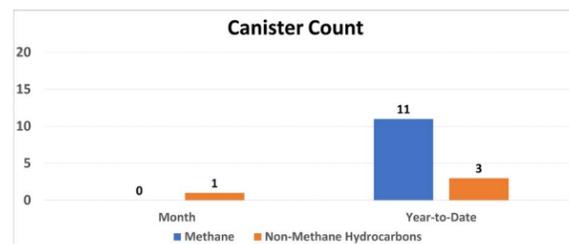
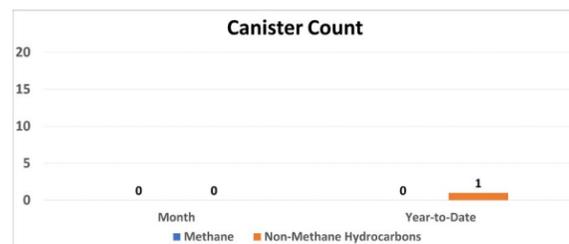
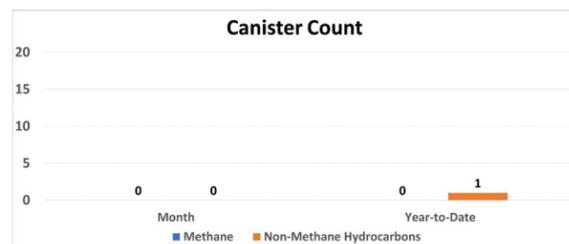
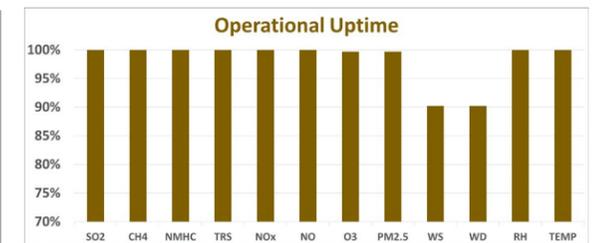
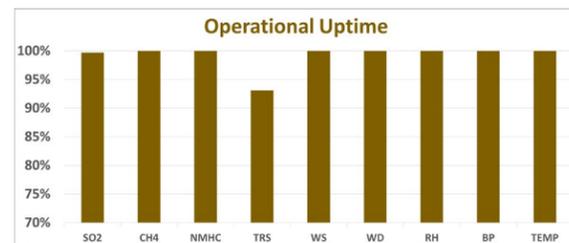
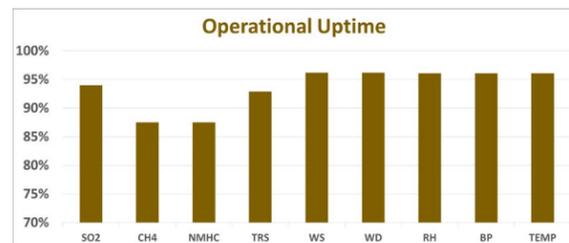
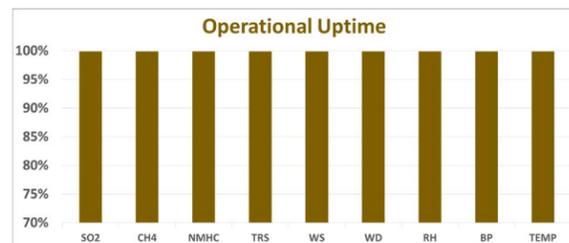
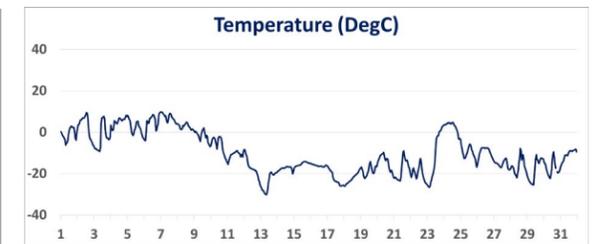
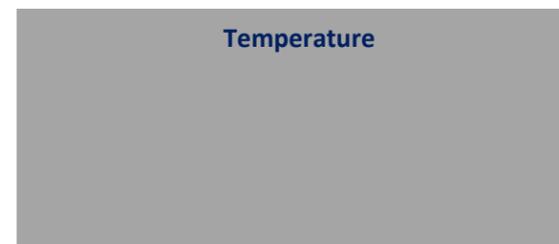
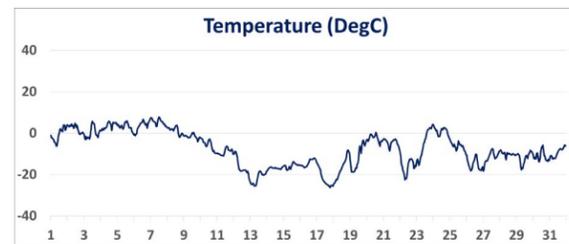
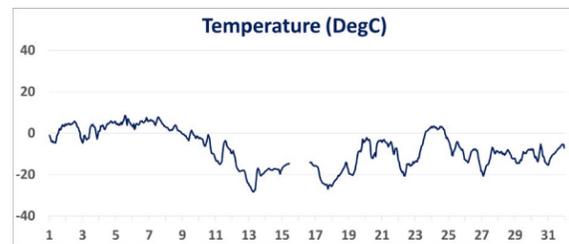
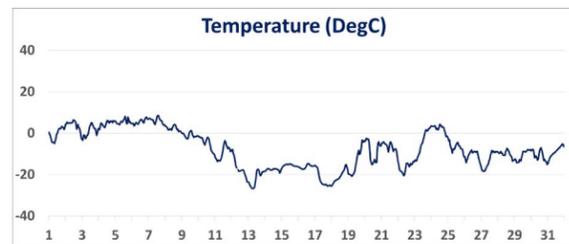
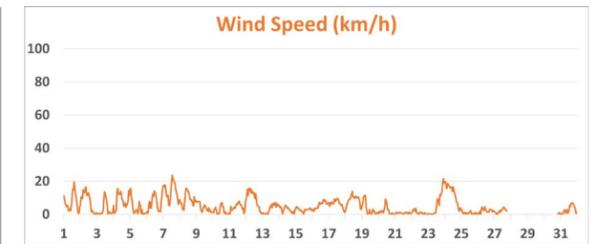
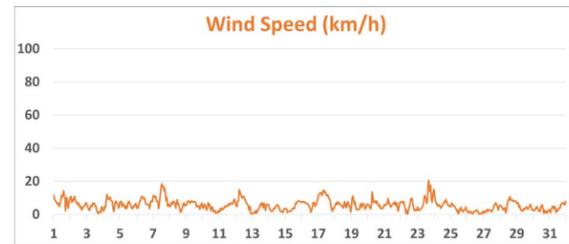
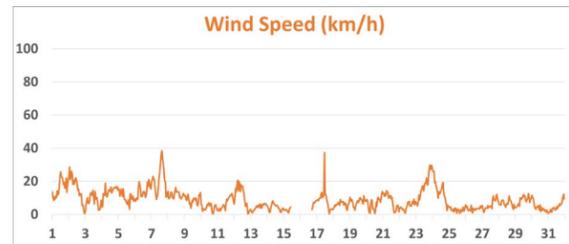
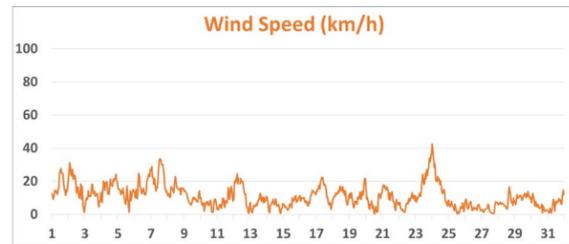
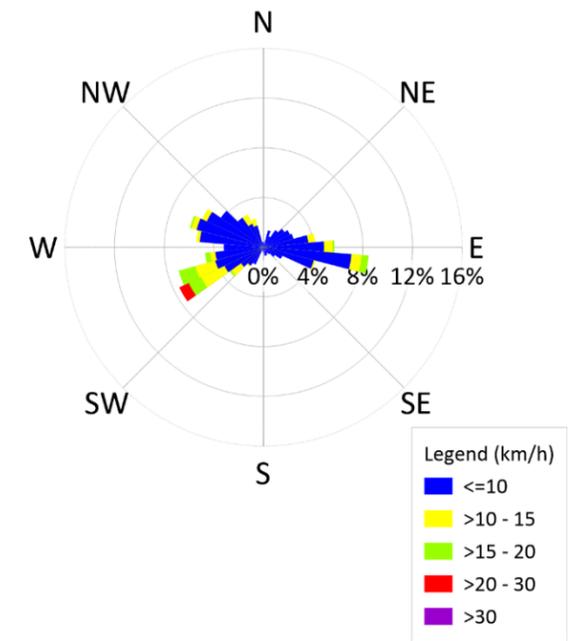
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