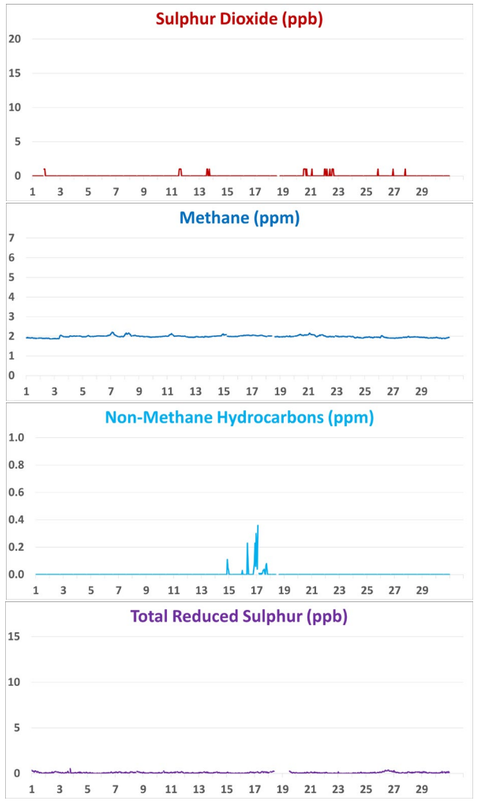
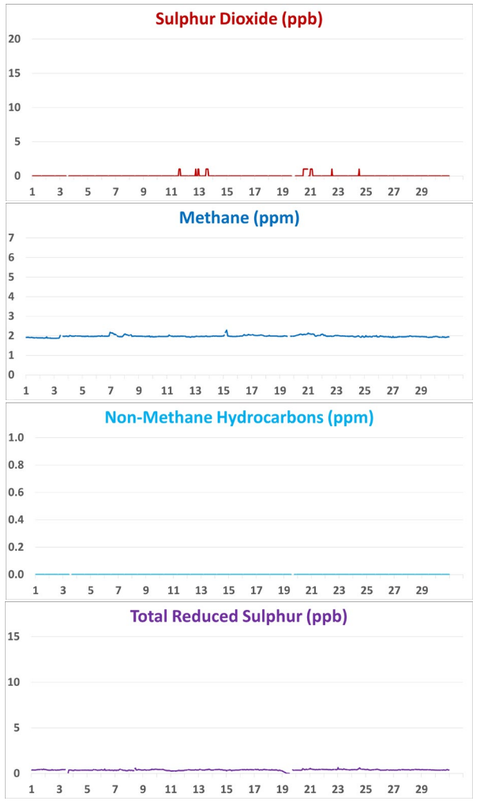
November 2020: Continuous Monitoring Program

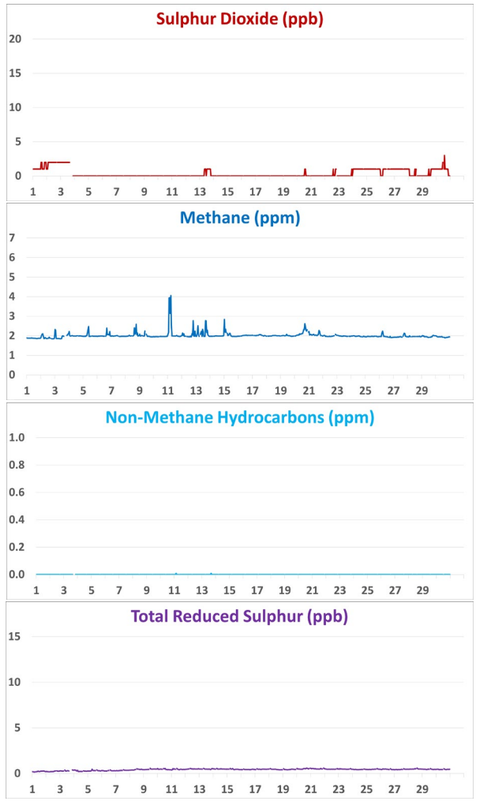
Station 986c



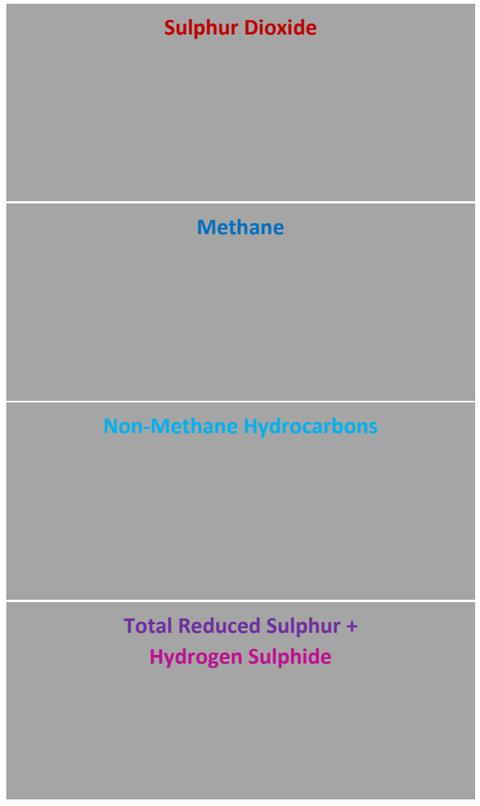
Station 842b



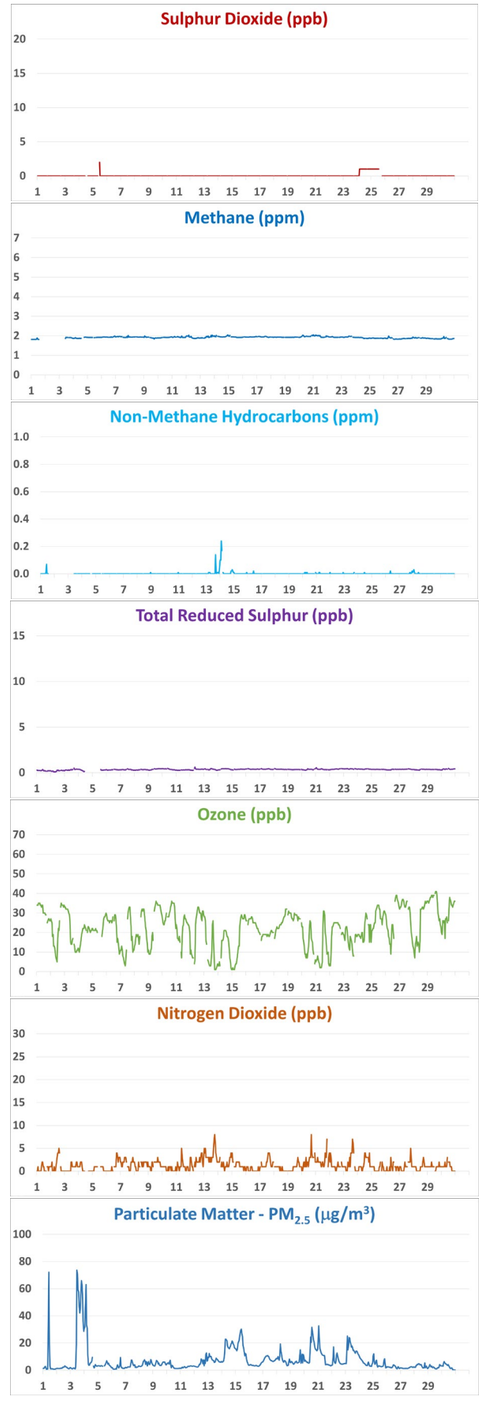
Reno Station



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 (AAAQOs) where applicable, except PM2.5. ***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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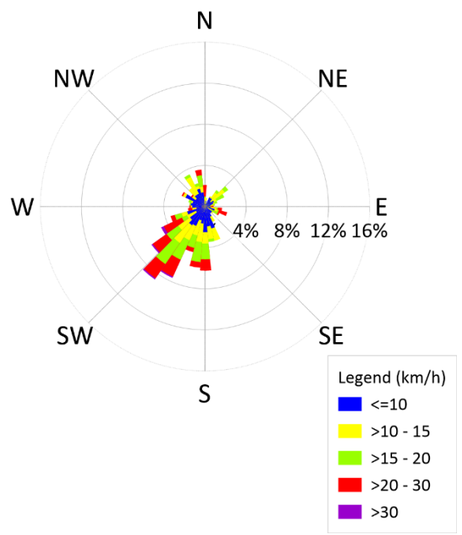
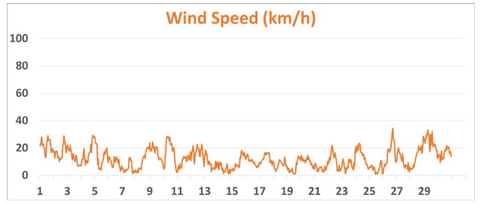
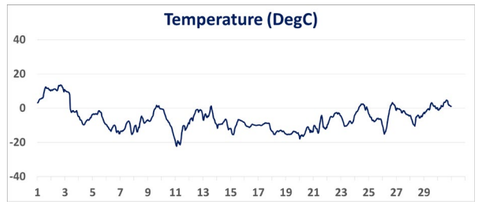
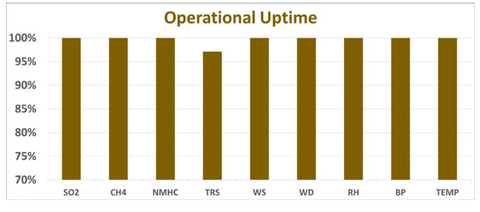
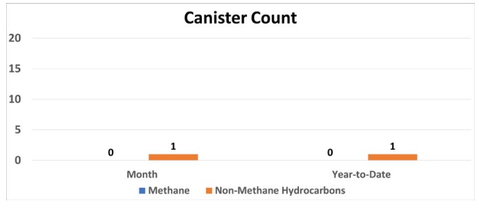
Station 986c



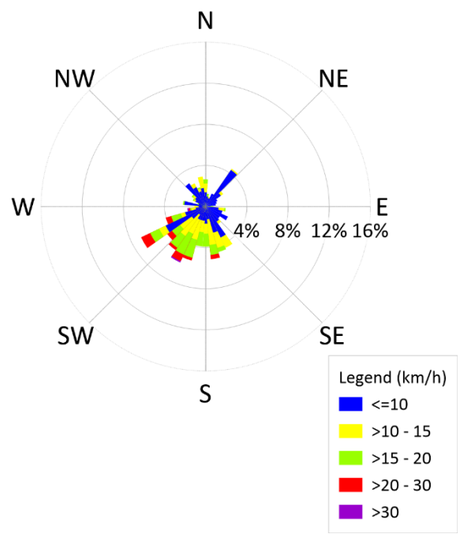


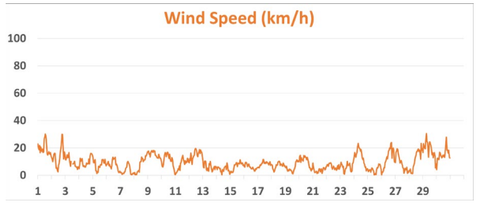


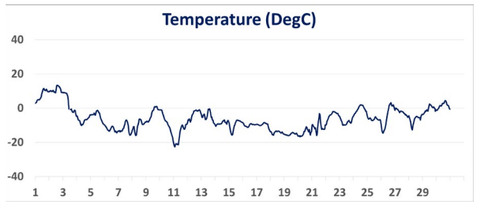


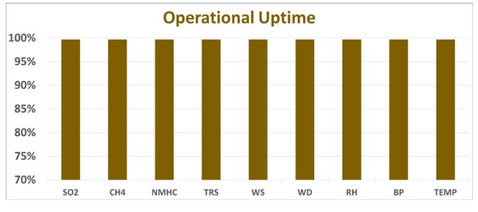


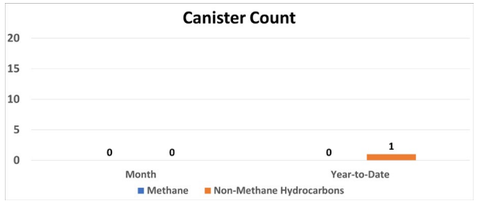
Station 842b



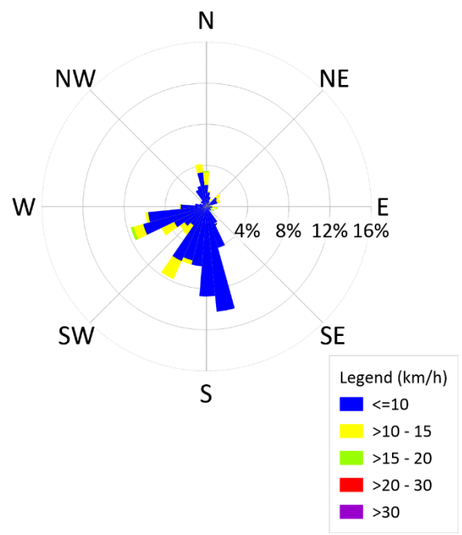


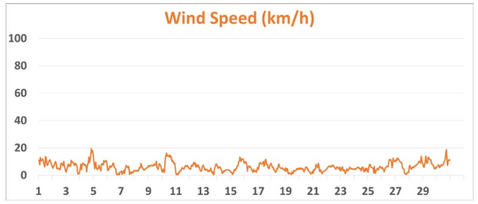


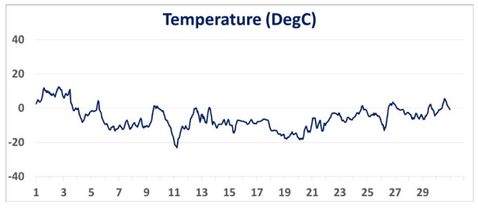


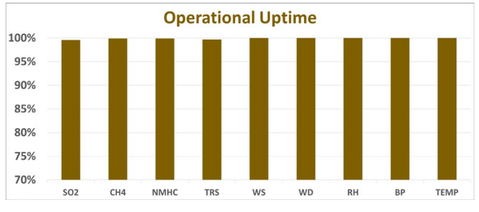


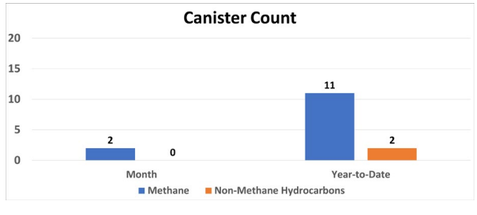
Reno Station











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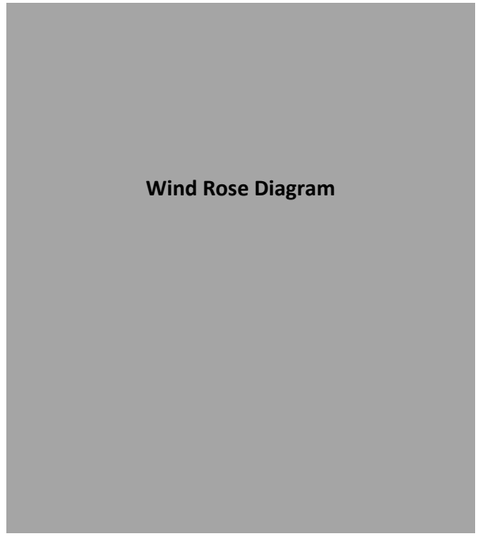

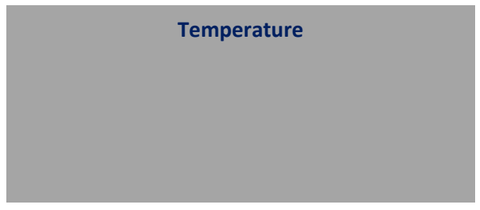

Targets, Guidelines, and Objectives

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

AQHI Station – Cadotte Lake