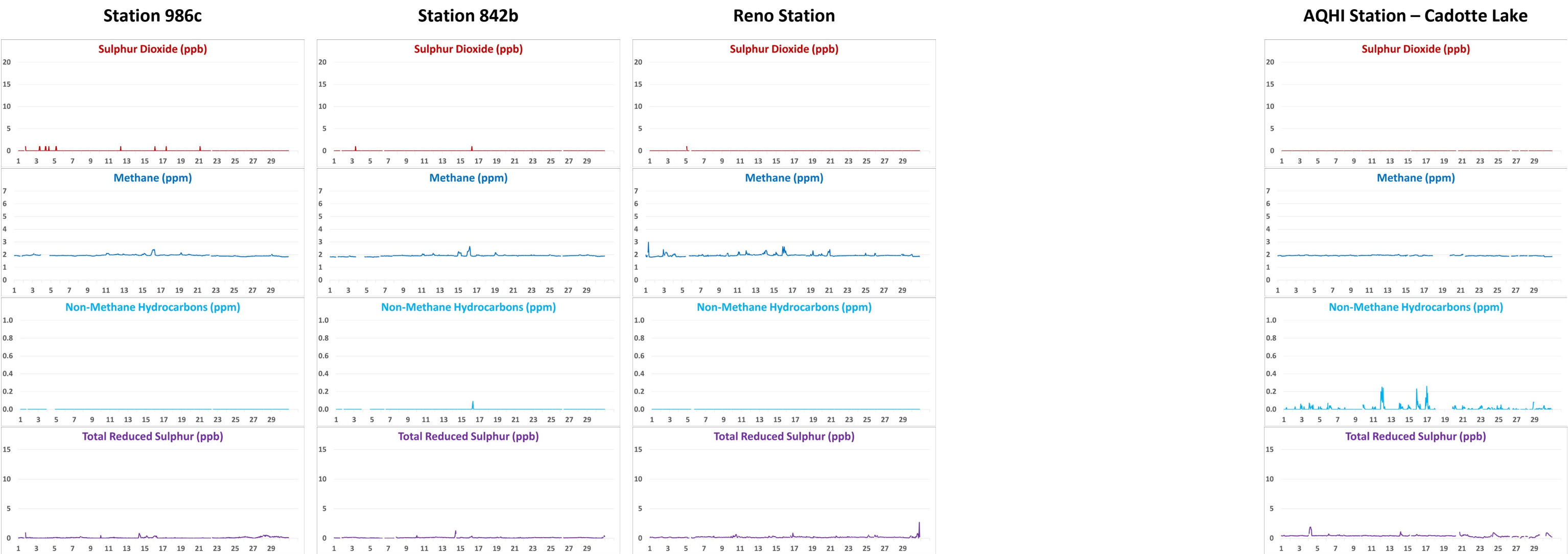


April 2021: Continuous Monitoring Program



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

986c Station

- THC/CH4/NMHC:** The analyzer failed due to the nitrogen gas (N₂) depletion on April 3. The N₂ gas cylinder was replaced on April 4. 23 hours of downtime were recorded due to this event.
- Precipitation:** 234 hours of data collected in April were invalidated due to a sensor malfunction, which was caused by low ambient temperature. The sensor operational uptime was 66.9%.

842b Station

- All parameters:** A power failure event occurred on April 1 between hour 16 and hour 18. Three hours of downtime were recorded due to this event. For the HC channels, data that were collected at hour 19 were also discarded as the analyzer was recovering from the power failure. A successful repeat zero-span check was completed on all gas channels at hour 20 to confirm the analyzer’s functionality. One hour of downtime was recorded due to the additional quality check.
- THC/CH4/NMHC:** The analyzer failed due to the N₂ gas depletion on April 3 hour 21. The N₂ gas cylinder was replaced on April 4 hour 17. There were 23 hours of downtime due to this event.

Reno Station

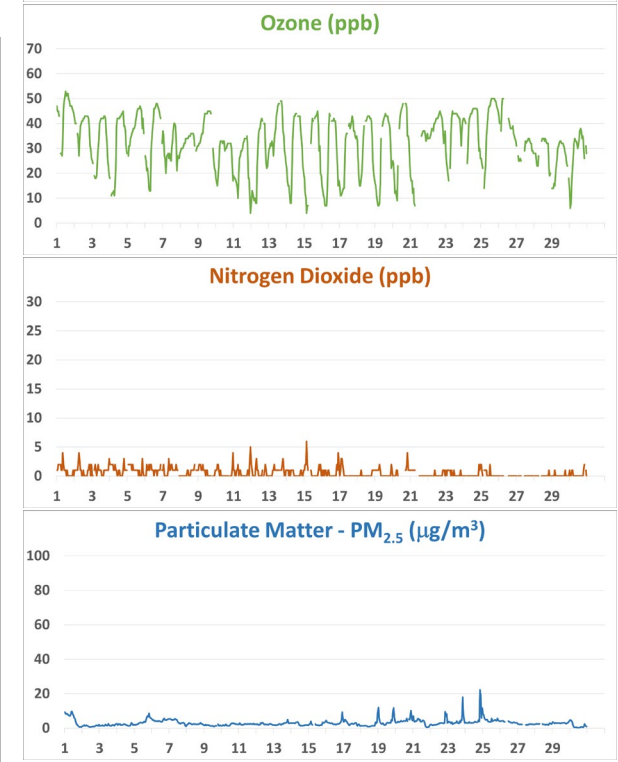
- Several hours of data were flagged “<Samp” (less than 75% valid minute data in an hour were collected.) between April 21 and April 29. The issue was likely due to memory problems caused by a Windows update, which occurred on April 20. Configuration changes were made on the datalogger on April 29 to resolve the problem. 1 to 23 hours of downtime were recorded due to this event.

AQHI – Cadotte Lake Station

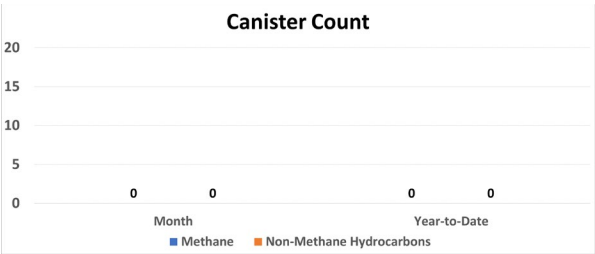
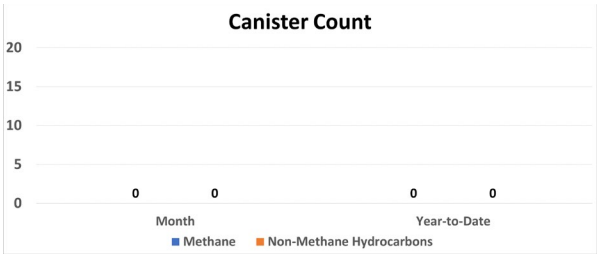
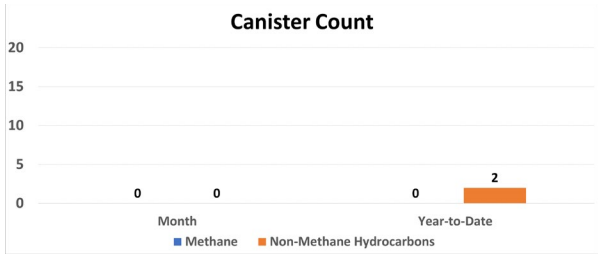
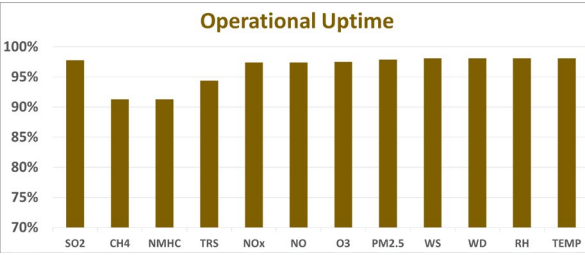
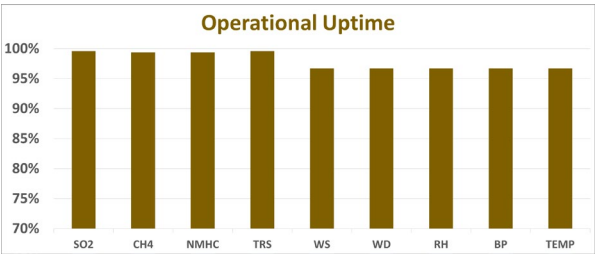
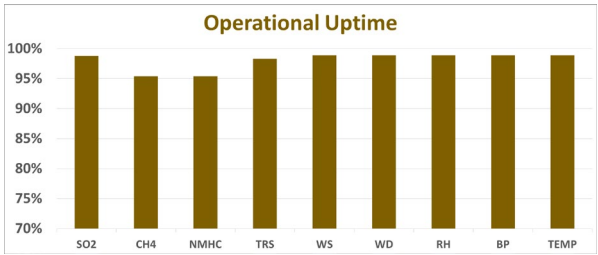
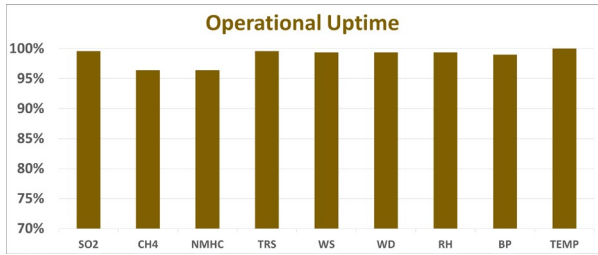
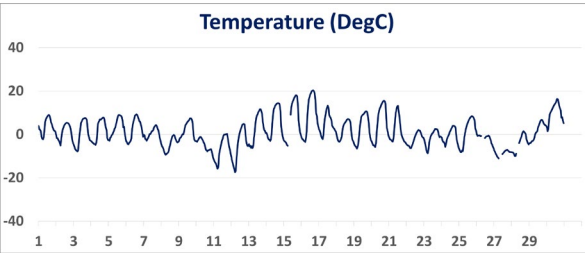
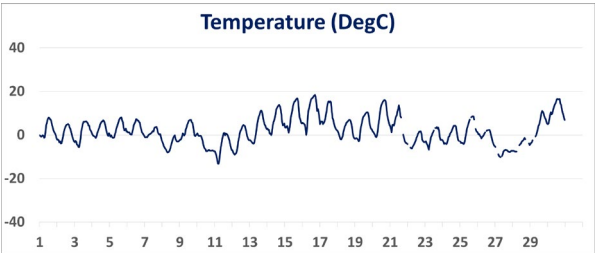
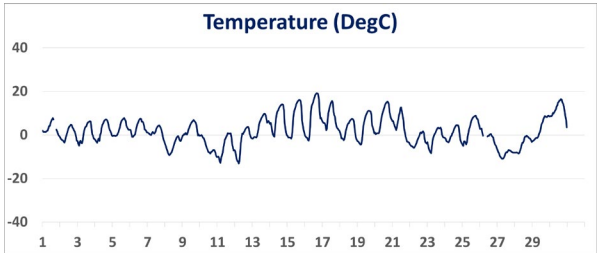
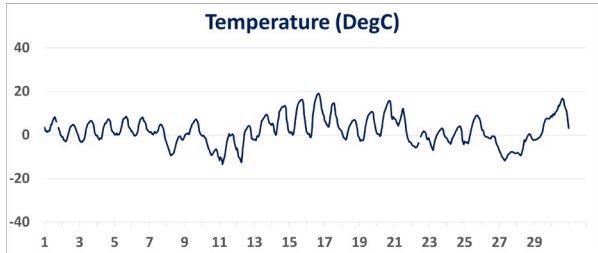
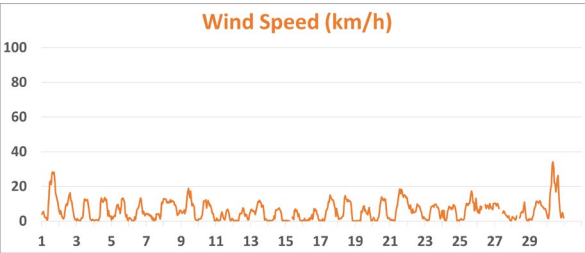
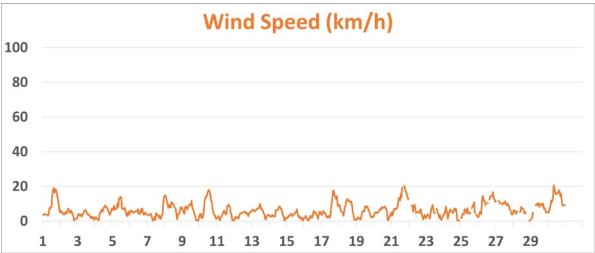
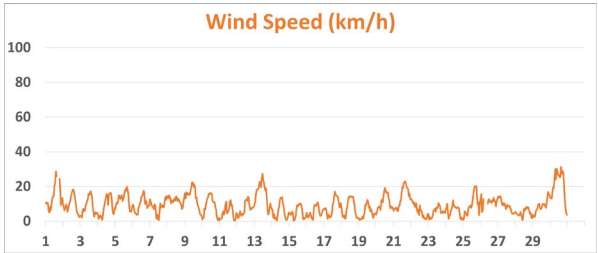
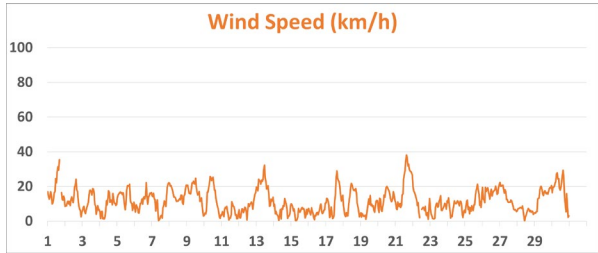
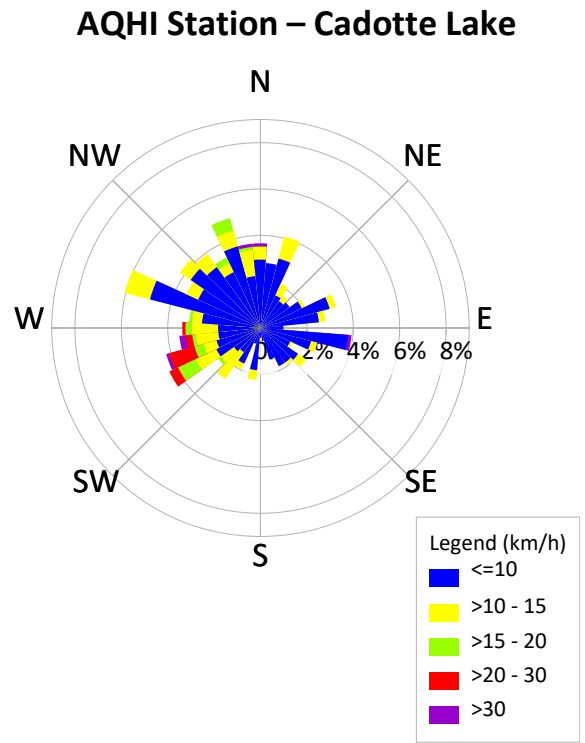
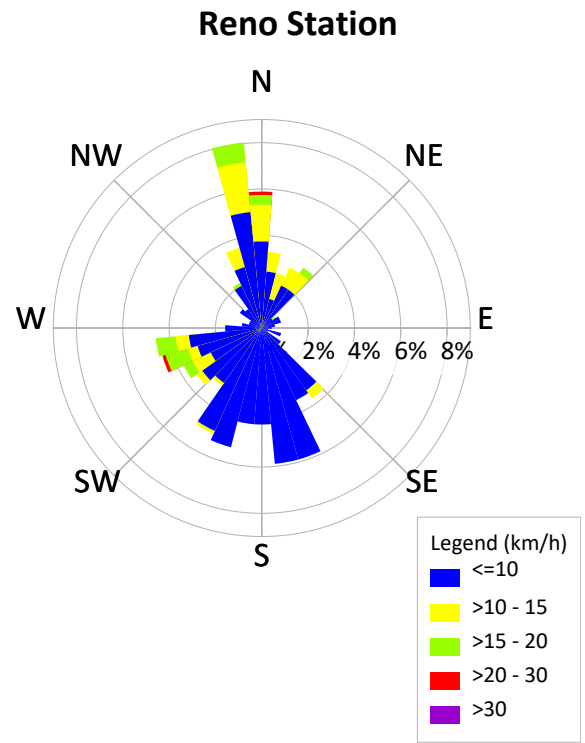
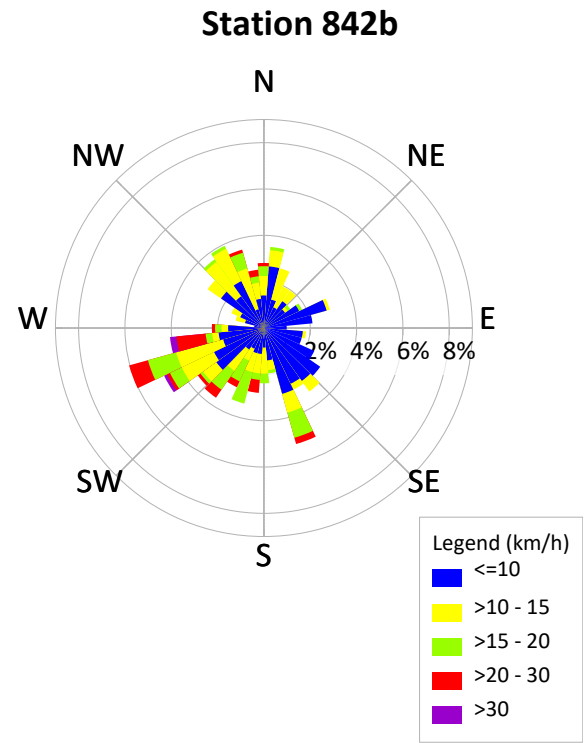
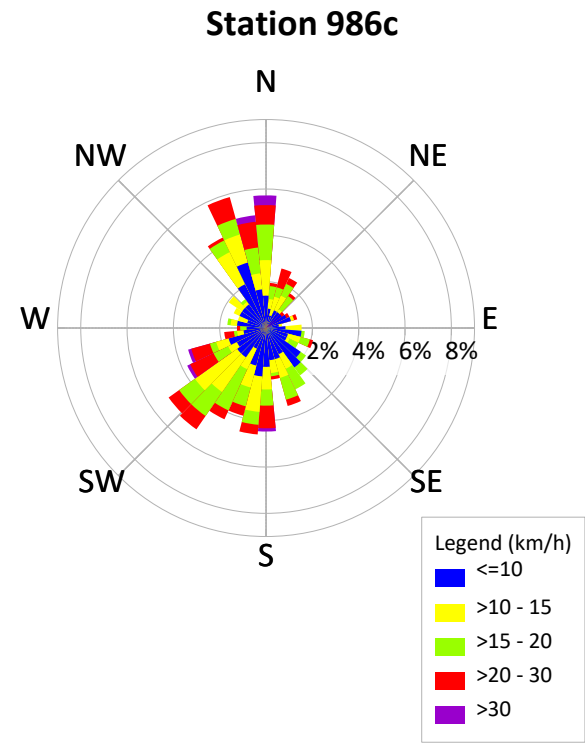
- Power outage events occurred on April 9, 15, 26, 27 and 28. There were 14 hours of downtime for all meteorological channels and fifteen hours of downtime for all gas parameters. Extended time were needed for TRS on April 15 hour 9 and for the HC channels on April 15 hour 9, April 26 hour 11 and April 28 hour 10 to recover from the power failures and follow-up.
- TRS:** No data were recorded on April 24 hour 7, April 27 hour 21 and 22, and April 29 hour 15 to April 30 hour 5. The analyzer was reset to correct the issue (firmware crash). 18 hours of downtime were recorded. The cause was likely due to unstable power supply to the analyzer. A UPS will be installed during the station visit in May to correct the issue.
- THC/CH4/NMHC:** The analyzer failed on April 17 hour 23. The faulty pressure transducer and the N₂ gas cylinder were replaced on April 19 hour 18 following a successful zero-span check. 20 of downtime were recorded.

VOCs Canister Sampling program

- No canisters were collected in April 2021. Note: Methane triggered canister collection was paused on February 1, 2021.



April 2021: Continuous Monitoring Program



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

