Goals and Results 2016-2021

PRAMP Annual General Meeting September 29, 2021





Assist in verifying that air quality is improving, and odours are being minimized as a result of operational and regulatory improvement

Quality-assured and quality-controlled data from the 4 air monitoring stations and the decline in odour complaints indicates that this goal is being achieved.



---Oil produced 2500 900 All heavy oil and bitumen operators are expected to Timelines to eliminate routine eliminate routine venting and venting and prevent nonroutine 800 prevent nonroutine venting of venting of casing and tank-top gas casing and tank-top gas by September 30, 2018 2000 Shell Canada Energy August 15, 2014 700 Baytex Energy Ltd. August 15, 2014 600 3 Koch Oil Sands Operating ULC October 1, 2014 Vented $(10^3 \, \text{m}^3)$ Produced (103 m3) 500 1000 Penn West Petroleum Ltd. 300 October 1, 2016 Prosper Petroleum Ltd. Oil and Gas Inc. September 30, 2018 ö 200 500 6 0.0 gas venting reported for Q4, 2018 5 8 8 8 5 8 8 8 2014 2015 2016 2017 2018 2019

Calendar Quarters

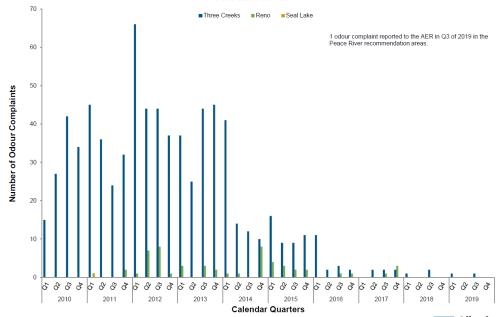
Figure 2 – Vented Gas and Oil Production Reported to Petrinex from Oil and Bitumen Batteries in the Peace River Area

Vented gas is reported by operators to Petrinex. Data provided includes all oil and bitumen batteries. Venting requirements identified above apply to heavy oil and bitumen operations. Units of 10³ m³ are 1000 cubic metres.

Data extracted from Petrinex in March 2020. Chart published in April 2020. See disclaimer provided on outcome page



Figure 15 – Odour Complaints Reported to the AER from the Three Creeks, Reno, and Seal Lake Areas



Data extracted from AER internal systems in March 2020. Chart published in April 2020. See disclaimer provided on outcome page

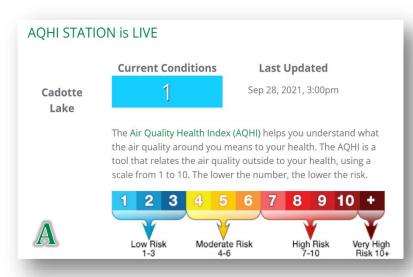




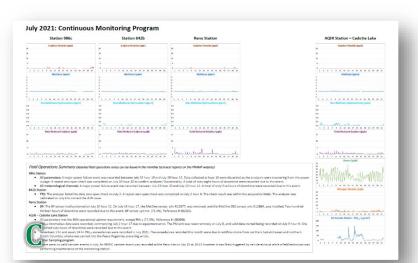
Operate transparently and give residents and stakeholders timely access to data and information in a manner that is readily understood.

Daily reports and website information meet residents and stakeholders needs for timely and credible data.









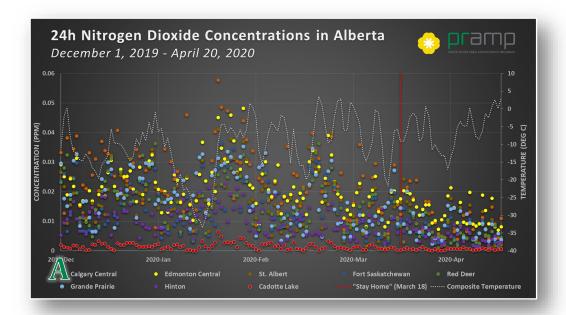


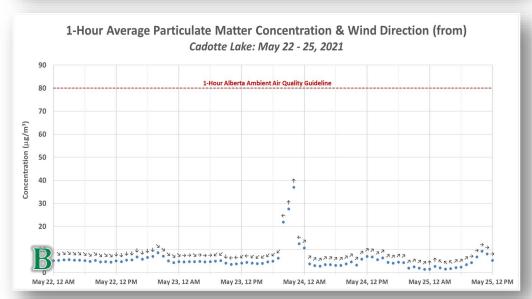


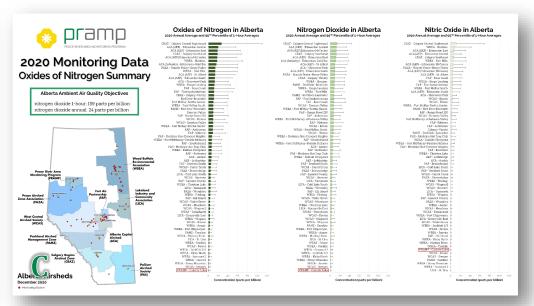






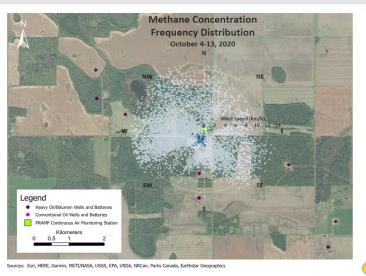














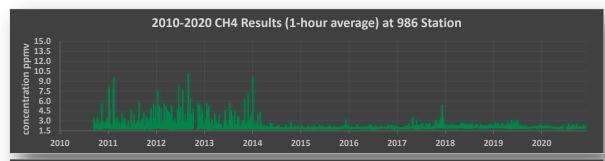


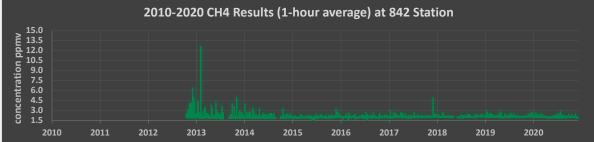


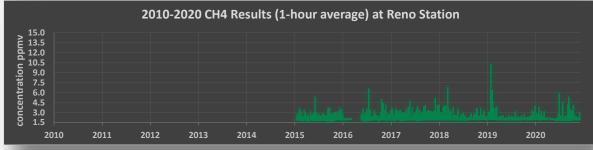
Demonstrate that operators have effective control mechanisms.

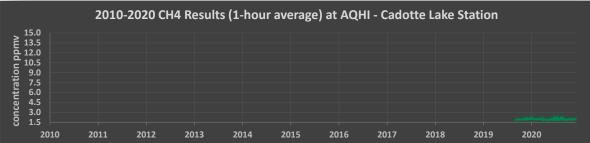
- The air quality monitoring results indicate effective controls have been implemented by operators in the area.
- Air quality indicators have improved significantly between 2010 and 2021 and have been relatively stable from mid-2014 onwards. This timeframe coincides with Directive 84 requirements for industry to reduce venting and transition to conservation.

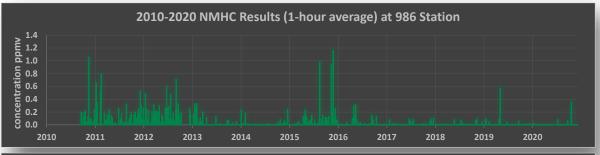


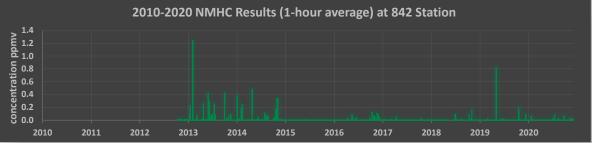


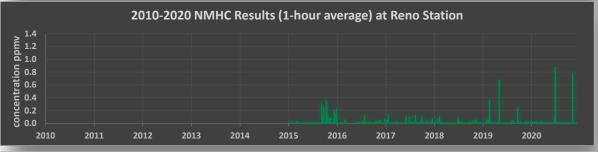


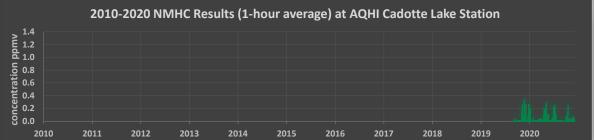














Verify that air quality is at acceptable levels and that emissions residents are exposed to are below toxic thresholds.

- Alberta Health continues to assess data from canister samples against health exposure thresholds.
- Canister data is valuable for people in the Peace River area and in other parts of the province where similar emissions may be present.



Comparision of volatile organic compound concentrations from air sample canister results with health and odour guidelines from multiple agencies

X denotes when a compounds measured or 1/2 the detection limit concentration in air exceeds the guideline

P denotes when a compounds measured or 1/2 the detection limit concentration in air passes (is less than) the guideline

MD denotes missing data from lab analysis, NA denotes guideline not avaliable

Bolded letters indicate measurement exceeds the reported method detection level

| NMHC Sample triggered on Nov 14, 2020 at | | | | | | | | | | | | | |
|---|--------------------------------------|--------|----------|-------|---|---------|---------|---------------------------------------|----------|------------|------------------|---------|----------|
| 21:20 at 986 | Health Guidelines | | | | | | | | | | Odour Guidelines | | |
| Canister ID 20110156-001 135 Compounds analyzed for with 45 greater than Method Detection Limit in bold. Cell shaded red if measured value exceeds | Acute (<14days) Intermediate/Chronic | | | | | | | | | Short-term | | | |
| | g | ONAAQO | TCEQ ESL | ATSDR | Health Canada Noncarcinogenic & Carcinogenic | AB AAQO | ON AAQO | USA Noncarcinogenic & Carcinogenic | TCEQ ESL | ATSDR | AB AAQO | ON AAQO | TCEQ ESL |
| 1-Butene | NA | Х | Р | NA | NA | NA | NA | NA | P | NA | NA | NA | Р |
| Acetylene | NA | NA | P | NA | NA | NA | NA | NA | P | NA | NA | P | NA |
| cis-2-Butene | NA | NA | P | NA | NA | NA | NA | NA | Р | NA | NA | NA | Р |
| Ethane | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | N/ |
| Ethylacetylene | NA | NA | P | NA | NA | NA | NA | NA | Р | NA | NA | NA | N/ |
| Ethylene | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | N/ |
| Isobutane | NA | NA | P | NA | NA | NA | NA | NA | P | NA | NA | NA | N/ |
| Isobutylene | NA | NA | P | NA | NA | NA | NA | NA | P | NA | NA | NA | Р |
| Methane | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | N/ |
| n-Butane | NA | NA | P | NA | NA | NA | NA | NA | P | NA | NA | NA | N.A |
| n-Propane | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | N/ |
| Propylene | NA | NA | NA | NA | NA | NA | NA | Р | NA | NA | NA | NA | NA |
| Propyne | NA | NA | Р | NA | NA | NA | NA | NA | Р | NA | NA | NA | N/ |
| trans-2-Butene | NA | NA | P | NA | NA | NA | NA | NA | Р | NA | NA | NA | P |
| 2,5-Dimethylthiophene | NA | NA | P | NA | NA | NA | NA | NA | P | NA | NA | NA | N/ |
| 2-Ethylthiophene | NA | NA | NA | NA | NA | NA | NA | NA | P | NA | NA | NA | NA |
| 2-Methylthiophene | NA | NA | NA | NA | NA | NA | NA | NA | Р | NA | NA | NA | Р |
| 3-Methylthiophene | NA | NA | NA | NA | NA | NΑ | NA | NA | Р | NA | NA | NA | N/ |
| Butyl mercaptan | NA | NA | NA | NA | NA | NΑ | NA | NA | P | NA | NA | NA | P |
| Carbon disulphide | NA | NA | Р | NA | NA | NA | NA | P | P | P | Р | P | N/ |
| Carbonyl sulphide | | NA | | NA | NA | | NA | | | NA | NA | | P |
| Dimethyl disulphide | | NA | | | NA | | | | | | | | |
| | | | | | | | | | | | | | |
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Maintain its status as an independent Not-for-Profit Organization and Airshed that is focused on continuous improvement and responsible growth.

The strategic planning initiative is an indication that PRAMP is focused on continuous improvement and responsible growth.



PRAMP Goals 2021-2023

- 1. Evidence-driven verification that air quality in the Peace River area is at acceptable levels and that emissions are being minimized
- 2. Residents and stakeholders have timely access to air quality data and information in a manner that is readily understood
- 3. Educators, community groups and citizens can access resources to increase understanding of and promote healthy air quality
- 4. Recognized as an independent not-for-profit organization and Airshed that is focused on continuous improvement and responsible leadership in air quality monitoring





Thank you to PRAMP Directors, Members, Supporters and Staff

