CANADA'S OIL & NATURAL GAS PRODUCERS

March 17, 2022

Andrew Morgan
Executive Director
Regulatory Affairs & Corporate Strategy
BC Oil and Gas Commission
PO Box 9331 Stn Prov Govt
Victoria, B.C. V8W 9N3
via email: Andrew.Morgan@BCOGC.ca

Dear Andrew:

Re: BC LDAR Reporting

The Canadian Association of Petroleum Producers (CAPP) appreciates the ongoing opportunity to provide comments and recommendations for increasing the efficiency of British Columbia's Drilling and Production Regulation (the regulation). This letter and attached table, build on our previous written and oral submissions and provides explicit recommendations for a streamlined leak detection and repair (LDAR) reporting obligation.

Efficiently identifying and repairing leaking equipment is an important component of the current regulation. It remains a priority for BC operators who are committed to improve emissions performance and whose primary business is the sale of natural gas. CAPP and its members strongly support the LDAR data management obligations as written in the regulation:

> Section 41.1(7)
>
> A permit holder who operates a facility or well must maintain a record of the surveys of the facility or well that are carried out to meet a requirement under this section that includes the following information for each survey:
>
> (a) The date of the survey and the method used;
> (b) Any leaks that are detected and, for each leak detected
> i. The rate of the leak, and
> ii. If the leak is repaired, the date or repair.

This requirement is highly consistent with the Federal Methane Regulation which also focuses on internal record keeping rather than reporting.[1] CAPP members recognize the value of reporting specific LDAR data. The province, the Oil and Gas Commission, and industry all benefit from ensuring that there is broad regulatory compliance and adequate public transparency. At the same time, we strongly believe that BC's reporting requirements go beyond what is necessary to achieve the province's reporting needs and do not represent efficient regulatory design.

Based on our experience, CAPP believes there are seven broad principles underlying the justification for industry reporting LDAR data:

1. To ensure that surveys are completed in accordance with prescribed timelines
2. To ensure that repairs are completed in accordance with prescribed timelines
3. To quantify total number of leaking components
4. To quantify total emissions
5. To identify the source of emissions
6. To assess regulatory compliance
7. To enable equivalency reporting
8. To trend emissions reduction performance over time

There is likely significant overlap among some of these principles, for example equivalency reporting should be broadly enabled if the other purposes are achieved. In addition, we anticipate that some principles can be met by the same data points. We strongly believe that the current data reporting requirements set out in the *Fugitive Emissions Management Guideline, 2019*, significantly exceed what should be required by the province and are resulting in significant inefficiencies for operators, service providers, and the Oil and Gas Commission.

In 2021, operators and service providers encountered numerous challenges associated with existing reporting requirements, many stemming directly from the volume of data requested by the Commission. BC's eSubmission portal struggled to accept the large data sets and was prone to crashing. The current structure of eSubmission is such that if one data point is found to be incorrect after submission, the entire dataset must be re-uploaded to make the correction. Similarly, operators who were missing any data were unable to upload their datasets due to its incompleteness. CAPP's members strive to comply with the Oil and Gas Commission's reporting obligations and to ensure data completeness, but the absence of some data should not preclude the submission of other data.

[1] Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) SOR/2018-66. Section 36(1)

The current system adds significant time to individual surveys and internal processes for quality assessment and quality control. It has also challenged the capacity of eSubmission, adding additional delays and work hours. Overall, operators do not have concerns with significant reporting obligations if the value proposition is clear, however, there is not clear justification for some LDAR reporting requirements.

In the attached table, we propose modifications to reporting requirements. The province's requirements were initially detailed in the *Fugitive Emissions Management Guideline, 2019.* It is CAPP's understanding that reporting requirements have since been modified a number of times through direct amendment to the eSubmission template. The attached table is based on the 2019 Guideline and is intended to serve two functions: (1) identify the eight data points we believe should be reported to achieve the aforementioned principles for LDAR reporting and (2) to explain our rationale for why other data currently requested is unnecessary to report. We do not believe that any reporting amendments since 2019 are unlikely to fundamentally change our overall assessment.

This proposal eliminates some data collection entirely and shifts some currently reported data to be retained by the operator for auditing as necessary. CAPP and its members support BC receiving reported data to ensure that surveys and repairs are completed, and to provide the province with a reasonable estimate of associated emissions.

Current leak detection quantification requirements in BC create a large database of associated emissions estimates. QOGI and "sniffers" are currently specified in BC guidance to quantify emissions, although neither is capable of accurately measuring all potential emissions sources. Various emissions are not well suited to be measured by these technologies, including: those that are outside the technologies' "measurement ranges" as well as those that are difficult to see or reach due to site configurations. Furthermore, QOGI, the primary tool for quantifying in BC, is only accurate to +/- 30% of measurement.[2] We believe this is important to note, as any reporting requirements should recognize the relative accuracy of emissions quantification. Data that could be used to refine emissions accuracy by a small degree (such as accounting for barometric pressure), have little relevancy when measurement technology has a relatively high margin of error.

Streamlining BC's leak detection and repair reporting requirements represents a high value opportunity to increase the efficiency of BC's methane management, without altering the quantity of emissions mitigated or data quality. Resources that are currently devoted to reporting, including data collection, quality control, and uploading large data sets can be reallocated by both operators and the Commission towards other tasks that improve methane mitigation.

[2] https://www.flir.ca/discover/instruments/gas-detection/top-10-questions-gas-leak-quantification-with-ogi-cameras/#:~:text=QOGI%20achieved%20%2B%2F%2D%2030%20percent,of%20backgrounds%20and%20environmental%20conditions.

We look forward to continuing to work with the Commission on the 2022 methane regulatory review. If you have any questions regarding this submission, please contact me at don.mccrimmon@capp.ca.

Sincerely,

Don McCrimmon
Manager, Air
Canadian Association of Petroleum Producers

/attachment

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Methane Leak Detection and Repair Reporting Recommendations

BC Current			Recommendation	Reason
Reporting Obligations *(Fugitive Emissions Mgmt Guideline v.1 July 2019)* **37 data points**	1	Commission facility/wellsite identifier	Keep, but modify	To simplify and reduce data records, report the site location. Relevant facility/wellsite identifiers are not reported but they can be determined (based on location) so that end users can assess regulatory compliance. This approach aligns with field survey work practices (i.e., they drive to and work at a location, not at an identifier) and mitigates challenges with multiple and dynamic site identifiers.
	2	Presence of pneumatics	Remove and move to records	LDAR is not intended to identify and quantify natural gas venting from pneumatic devices. Pneumatic device inventories are already maintained and reported via the GHG Reporting Regulation (i.e. WCI 362 (g)(3.4.5&6)). Move to records.
	3	Presence of storage tanks	Remove and move to records	Meant for research/auditing not reporting. Move to records.
	4	Are tanks controlled	Remove and move to records	
	5	Reporting Year	Keep	Assesses regulatory compliance, equivalency, and emission reduction performance.
	6	Number of days facility was pressurized	Keep, but make contingent on completing fewer than "normal" surveys.	Relevant only for operators to justify conducting fewer than annual or triannual surveys. For operators not seeking to complete fewer surveys due to fewer pressurized days (i.e. those doing 1 or 3 surveys per year), this data should not be necessary.
	7	Measurement device make	Remove	This information is stated in a company's FEMP and is available to the OGC upon request.
	8	Measurement device model	Remove	This information is stated in a company's FEMP and is available to the OGC upon request.
	9	Technician name	Remove	This information is stated in a company's FEMP and is available to the OGC upon request. Moreover, publishing worker names to the general public exposes the worker to safety and security risks.
	10	Leak survey date.	Keep	To ensure that surveys are completed.

	11	Ambient Temperature	Remove	Not required if leak rates are reported on a mass basis.
	12	Barometric Pressure	Remove	Not required if leak rates are reported on a mass basis.
	13	Wind speed	Remove	Not practical for survey technicians to accurately quantify.
	14	Precipitation	Remove	Not practical for survey technicians to accurately quantify.
	15	Internal or 3rd party	Remove	This information is stated in a company's FEMP and is available to the OGC upon request.
	16	Survey method	Remove	This information is stated in a company's FEMP and is available to the OGC upon request.
	17	Detection instrument make	Remove	This information is stated in a company's FEMP and is available to the OGC upon request. Moreover, maintaining a list of valid device manufacturers and models introduces a validation burden on the OGC and requires annual updates to the eSubmission template.
	18	Detection instrument model	Remove	This information is stated in a company's FEMP and is available to the OGC upon request. Moreover, maintaining a list of valid device manufacturers and models introduces a validation burden on the OGC and requires annual updates to the eSubmission template.
	19	Were leaks detected	Remove	This information is inherent to leak record and rate (can be combined with these fields).
	20	Did the leak contain H2S	Remove and move to records	Meant for research/auditing not reporting. Move to records.
	21	Was the leak in a building	Remove	Meant for research not reporting.
	22	Process block in which leak was detected	Remove and move to records	Determines source of emissions but not necessary for reporting.
	23	Leaking component type	Keep	Determines source of emissions.
	24	Leaking component service type	Remove	This field is important when deriving emission factors but without clear definitions and training, it's subject to inconsistent interpretation by field technicians. End-users should not draw conclusions (e,g, derive emission factors) from inconsistent data sources.
	25	Distance of detection camera from leak	Remove	OGC fugitive guidelines already specify OGI must be within 3 meters of leak. Reporting the precise

				distance does not add value for data end-users.
	26	Distance of quantification camera from leak	Remove	OGC fugitive guidelines already specify OGI must be within 3 meters of leak. Reporting the precise distance does not add value for data end-users.
	27	Leak rate	Keep but modify to report mass rate of total hydrocarbons (THC)	To quantify total leaks. Reporting THC mass rate resolves problems with currently undefined field (i.e. should operators report leaks as mass or volume rate? Wet or dry volume? Whole gas, hydrocarbon volume or methane volume? Volume at local or standard reference conditions?)
	28	Leak methane content	Keep	To quantify total emissions.
	29	Leak rate quantification method	Remove and move to records	Meant for research/auditing not reporting. Move to records.
	30	Reason for non-measurement of leak	Remove and move to records	Meant for research/auditing not reporting. Move to records.
	31	Date of repair	Keep	To ensure repairs are completed and assess regulatory compliance.
	32	Was repair on same day as detection	Remove	Can be determined based on leak survey date and date of repair.
	33	Leak repair confirmation method	Remove and move to records	OGC fugitive guidelines already specify approved confirmation methods. Reporting the method does not add value for data end-users. Move to records.
	34	Leak repair method	Remove	External research could be done to evaluate repair efficacy, but without clear definitions and training, it's subject to inconsistent interpretation by field technicians. End-users should not draw conclusions from inconsistent data sources.
	35	Basis for delay of leak repair	Remove and move to records	This field may be useful when evaluating repair efficacy but without clear definitions and training, it's subject to inconsistent interpretation by field technicians. End-users should not draw conclusions from inconsistent data sources.
	36	Is repair scheduled for next turnaround	Remove and move to records	OGC fugitive guidelines already specify repairs must be completed at next turnaround. Reporting a regulatory requirement des not add value for data end-users.
	37	Anticipated date of next turnaround	Remove	When facility shutdowns are required to complete repairs,

				relevant work orders are executed at the next planned outage (subject to various equipment runtime schedules), unplanned outage (subject to upstream, onsite and downstream variables), or full turnaround (every 3 to 5 years). Outage dates are dynamic and difficult to confirm. Because reported "turnaround" dates will be different than actual repair dates, this field provides little value to end users.
BC Current			**Recommendation**	**Reason**
Data "On File" Obligations *(DPR Section 7 and Fugitive Emissions Mgmt Guide v.1 July 2019)* **21 data points**	1	Date of survey	Remove	Already reported.
	2	Any leaks detected and for each leak: rate of leak	Remove	Already reported.
	3	Any leaks detected and for each leak: date of repair	Remove	Already reported.
	4	Measurement software version	Remove	Should be in a company's FEMP.
	5	Measurement calibration date	Keep	To assess emissions reduction performance/ regulatory compliance.
	6	Measurement margin of error	Keep	To assess emissions reduction performance/ regulatory compliance.
	7	Measurement calibration report	Keep	To assess emissions reduction performance/ regulatory compliance.
	8	Information on whether the technician's employer is site permit holder	Keep	For auditing purposes.
	9	Technician employer name	Remove	Should be in a company's FEMP.
	10	Employer's business address	Keep	For auditing purposes.
	11	Technician's training entity name	Keep	For auditing purposes.
	12	Training entity's address	Keep	For auditing purposes.
	13	Name of trainer	Remove	Should be in a company's FEMP.
	14	Job title of trainer	Remove	Should be in a company's FEMP.
	15	Training dates	Keep	For auditing purposes.
	16	Training hours received	Keep	For auditing purposes.
	17	Description of training received	Remove	Should be in a company's FEMP.
	18	Survey report	Keep	For auditing purposes.
	19	Photographs of leaks	Remove	Can be combined with another field.
	20	Videos of leaks	Remove	Can be combined with another field.
	21	Documentation verifying repair of leak.	Keep	For auditing purposes.