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November 17, 2023
VIA Electronic Filing

Chair Liane Randolph
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Proposed Amendments to the Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities

Dear Chair Randolph,

Project Canary appreciates the opportunity to provide additional public comments regarding potential changes to the Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities. Project Canary supports California's continued efforts to decarbonize the energy system and its commitment to address methane and short-lived pollutants. Project Canary provided comments in support of the state's initial amendments to Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 10 Climate Change, Article 4, Subarticle 13, Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities in February of 2023, in support of inclusion of alternative technologies in specification standards and inspection and repair of remotely detected leaks as well as alternative LDAR methods, technologies, and programs for operators to meet their compliance obligations. Those recommendations remain applicable in identifying, mitigating, and reporting emissions.

Project Canary supports CARB's continual improvement of the Oil and Gas Methane Regulations Subarticle 13. In the 15-day notice posted November 2, 2023 CARB continue to refine and improve the regulation. We continue to advocate for the inclusion and recognition of the use of direct measurement and continuous monitoring technology in monitoring plans and for Leak Detection and Repair (LDAR) requirements. We believe consideration should also be given to ensure that new and emerging technologies can be utilized by operators to meet the variety of existing and pending air quality regulations at the state and federal level.

There is movement underway in the industry with respect to the dramatic advancements in leak detection, monitoring, and measurement technology that are now available as well as evolving voluntary and regulatory standards. The final regulation should recognize the industry is at a turning point and allow for flexibility in the use of direct measurement and continuous monitoring technology in monitoring plans and for Leak Detection and Repair (LDAR) requirements. By ensuring new and emerging technologies can be utilized by operators to meet the variety of existing and pending air quality regulations at the state and federal level, we can avoid the need to quickly revisit regulations.

About Project Canary

Project Canary, based in Denver, Colorado, is a mission-driven B Corporation and a climate technology company that offers an enterprise emissions data platform to help companies identify, measure, understand, and act to reduce emissions across the energy value chain. Project Canary solutions help energy companies collect, manage, operationalize, and benefit from real-time environmental data so that they can mitigate impacts now.

Proposed Modifications to Regulations

Research and recent studies have shown that a comprehensive approach, inclusive of a variety of technologies, is a more accurate method of reporting actual emissions from the oil and gas industry.[1] Additionally, the landscape of state and federal oil and gas regulations is shifting towards rulemakings with empirical data and measurement at its core. The objectives of recent, related federal rulemakings—including the Environmental Protection Agency's Supplemental Rule regarding air emissions in the oil and gas sector, the imposition of a charge on avoidably lost gas in the Inflation Reduction Act (IRA), the climate disclosure requirement proposals from the Securities and Exchange Commission and the Department of Defense —would all be advanced by measurement and continuous monitoring technology. Operators using these technologies could efficiently and cost-effectively provide consistent and accurate data under multiple regulatory regimes, including at the state level. CARB and other agencies can move towards requiring the use of more precise measurement technology, and at minimum to allow the data collected by operators who are already using continuous monitoring to qualify under these Draft Regulations.

Enabling the use of alternative Leak Detection and Repair methods and technologies, such as advanced methane detection and monitoring technologies will enable operators to take advantage of tools and technology available for maximum impact.

[1] Reconciling divergent estimates of oil and gas methane emissions" Zavala-Araiza, et.al. 2015, https://www.pnas.org/doi/epdf/10.1073/pnas.1522126112

We believe that the regulations should allow for advanced technologies to be utilized. As operators propose leak detection and repair programs, site-level measurement and continuous monitoring should be identified as an allowable alternative to OGI. Older detection methods such as periodic OGI provide a snapshot from a specific time frame and must be deployed at the exact moment a leak forms to capture the full extent of the release. In contrast, continuous monitoring detects intermittent leaks quickly, allowing the operator to quickly identify and mitigate the leak. Continuous monitoring technologies are widely available, cost-effective methods to prevent and avoid emissions, and capturing potential lost revenue for operators. This technology is currently state of the art and is being increasingly adopted by energy producers. Given the ability of site-level continuous monitoring to accurately identify lost gas and help operators avoid emissions, it should be an allowable option for operators to maintain compliance and included in record keeping forms.

We recommend that an LDAR program, with continuous monitoring technology be an option to fulfill an operator's annual inspection obligation, as well as provide support and follow-up for reconciliation of remotely detected leaks. Continuous monitoring involves far more frequent observations and much more accurate leak detection than traditional annual inspection methods. Operators using continuous monitoring technology are alerted to leaks in real-time and some systems can pinpoint specific areas of releases. Requiring operators that already use such technology to conduct an additional annual inspection for compliance purposes or for reconciliation of remotely detected leaks with OGI or US EPA Method 21 would be duplicative. By allowing the annual inspection compliance and remote leak reconciliation to be satisfied through continuous monitoring technology, CARB achieves two objectives: (1) alleviating operator compliance burdens and (2) promoting superior gas conservation in alignment with CARB's mission. EPA has already acknowledged this in its current proposed Supplemental Proposed Methane Rule by also recognizing that an operator using a continuous monitoring approach can use that method in lieu of OGI (and other) requirements.[2]

For the same reasons, operators should be able to use continuous monitoring technology to determine if a leak repair is effective. Continuous monitoring allows operators to quickly verify if leaks are correctly repaired. For example, Project Canary's continuous monitoring software includes rapid leak verification by confirming that levels have fallen back below a given threshold for a set period. This eliminates the need for operators to expend more labor in determining if a repair is effective. Thus, such technology should be recognized as an adequate system to assess leak repairs.

[2] Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review; [EPA–HQ–OAR–2021–0317; FRL–8510–04– OAR], section 60.5398b(d) an owner or operator that meets the requirements for using a valid alternative test method may use that method "in lieu of the requirements for fugitive emissions components at affected facilities."

As CARB attempts to reconcile remotely detected leaks using satellites and fly-over devices, with ground-based leak detection at the site level, the use of site-level measurement and continuous monitoring represent the best, and most ideal, solution. The current Draft Regulations identify OGI or US EPA Method 21 as the tools an operator can use to inspect a facility for leaking or venting components and equipment. As explained above, the use of, continuous monitoring can be an alternative to OGI, and we recommend that operators have the option to use additional technologies to confirm the location of an emission source, or alternatively, verify that the leak was not part of the operator's facility.

Conclusion

CARB can take advantage of technological advances that are rapidly occurring in this sector to set a higher standard when it comes to the operation and monitoring of oil and gas facilities in the state of California. Project Canary appreciates that this process is ongoing, and the encourages CARB to recognize the opportunity for use of advancing and available technology and allow those tools for annual and quarterly inspection obligations, as appropriate, as well as for reconciliation of remotely detected leaks.

Project Canary appreciates the opportunity to provide these comments and looks forward to further participation in this process. Should you have questions about any of the material or concepts included herein, please feel free to contact me directly (michelle.applegate@projectcanary.com).

Sincerely,

Michelle Moorman Applegate
Project Canary
Sr. Director of Public Policy