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Mr. Quinn Langfitt
Project Lead, Oil & Gas Regulation
California Air Resources Board
1001 I Street – P.O. Box 2815
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Subject: Comments on CARB’s Second public workshop to discuss potential changes to the Oil and Gas Methane Regulation – draft regulatory text

Dear Mr. Langfitt:

Southern California Gas Company (SoCalGas) appreciates the opportunity to comment on the January 20, 2023, California Air Resources Board’s (CARB) second public workshop to discuss potential changes to the Oil and Gas Methane Regulation and draft regulatory text. SoCalGas is committed to methane reductions as demonstrated in our annual fugitive emissions report to the California Public Utilities Commission (CPUC), which showed that we significantly exceeded the state’s 2025 goal for reducing fugitive methane emissions. The report documented that in 2021 SoCalGas reduced fugitive methane emissions by 37% – surpassing the state’s goal of a 20% reduction by 2025 and nearing the state’s goal of a 40% reduction by 2030.¹ The Oil and Gas Methane Regulation has been an important program for reducing methane emissions. While SoCalGas appreciates that CARB is looking at ways to modify and improve the program, we are concerned that some of the updates proposed at the workshop and in the draft regulatory text may be premature, costly, and could have significant impacts on facility safety, security, and operations.

As such, SoCalGas’s comments highlight the following: (1) Adding §95669.1 *Inspection and Repair of Remotely Detected Leaks* is premature; (2) Proposed changes to §95669(d)(1) and §95669(h)(1) should be cost effective and align with EPA recommendations; (3) Provisions within §95669(o)(1)(A) and §95669(o)(1)(B) should align with regulatory objectives; (4) CARB should clarify proposed additions to §95668(h); and (5) CARB should clarify proposed new language within §95670.1(a) and §95670.1(a)(1).

¹ See <https://newsroom.socalgas.com/press-release/socalgas-surpasses-californias-2025-methane-emissions-reduction-goals-nears-2030-goal>

(1) Adding §95669.1 *Inspection and Repair of Remotely Detected Leaks* is Premature

At the first workshop regarding this regulatory update, CARB indicated that most changes would be administrative or minor. However, the proposed addition of new section §95669.1 to the regulation is neither administrative nor minor. Other provisions of the regulation received input from stakeholders and experts and have undergone years of careful analysis and implementation. Unfortunately, current CARB timelines will not afford this same opportunity for the proposed Inspection and Repair of Remotely Detected Leaks requirements before submittal to the CARB Board in the second quarter of 2023.² Stakeholders should be given the opportunity and time to analyze, discuss, and provide meaningful input to the proposed draft text.

SoCalGas continues to demonstrate its commitment to reducing emissions and supports innovative technologies;³ however, the two “demonstration satellites”⁴ to be deployed by the State in 2023 through the Carbon Mapper partnership have not been sufficiently demonstrated to provide credible and actionable evidence needed for an enforceable regulation. Therefore, the provisions of §95669.1 *Inspection and Repair of Remotely Detected Leaks* should not be included in this phase of the regulation amendments but may merit further discussion in a later regulatory update after CARB has worked with stakeholders to address several outstanding questions. SoCalGas respectfully requests staff reconsider this addition to the regulation and address the issues below.

The following terms in §95669.1 need to be defined, modified, or deleted:

§95669.1(a) “a methane or hydrocarbon emission identified at their facility”

How will the data be used to determine what is considered a methane emission? More critically, how can the data distinguish between anthropogenic methane emissions versus naturally occurring methane emissions, i.e., emissions from organisms and other life forms? This should be clearly established before this technology is considered for use as a methane emissions detection technology for enforcement purposes. Also, this regulation is a greenhouse gas rule to reduce methane emissions and not a volatile organic compound rule; therefore, the term “hydrocarbon” should be removed from this section.

§95669.1(a) “a satellite or other remote monitoring technology (e.g., a plane)”

What are the standards for “a satellite?” Satellites used to detect methane leaks for regulatory purposes should have established standards. What certified technology will be used by the satellite to detect “leaks?” What unit of measurement is utilized? Are calculations performed to quantify a “leak?” How many measurements will the satellite take prior to a facility being notified? Per Carbon Mapper, “frequent measurements over large areas can help separate persistent activity (including leaks) from more intermittent

² See CARB Staff Presentation on: Potential Changes to the Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities (Oil and Gas Methane Regulation held, September 20, 2022).

³ See <https://newsroom.socalgas.com/press-release/socalgas-and-captura-begin-testing-innovative-direct-ocean-carbon-removal-technology>

⁴ See <https://ww2.arb.ca.gov/our-work/programs/california-satellite-partnership>

activity (including periodic planned maintenance events and a mix of normal and anomalous venting).⁵”

The inclusion of “remote monitoring technology” is vague and should be excluded or updated to “manned aerial monitoring technology (excluding drones).” Drones and other remote monitoring technology pose security and safety risks to both personnel and physical facilities. For instance, drones could accidentally hit equipment or powerlines or collide with dry vegetation igniting a fire. CARB should also clarify what certified technology may be used.

§95669.1(a) “*the owner or operator shall inspect the facility for leaking or venting components and equipment*”

The regulation defines “Vent or venting” as “*the intentional or automatic release of natural gas into the atmosphere from components, equipment, or activities described in this subarticle*”⁶. This regulation has already established requirements to limit venting of components and equipment, and such activity is also monitored, recorded, and reported per Assembly Bill 32 Mandatory Reporting of Greenhouse Gas Emissions regulation. It is likely that any venting activity detected by remote technology will have concluded prior to notification. Operators should not be required to inspect and confirm venting components again due to remote aerial detection. Such regulatory requirements should not be developed until aerial monitoring equipment can, at a minimum, differentiate between a leaking and a venting component.

§95669.1(a)(1) “If no emission source is identified...”

The term “emission source” should be defined. The regulation defines “emissions” as “*the discharge of natural gas into the atmosphere,*”⁷ yet there is no test method nor instrument associated with what constitutes discharge of natural gas (versus a leak of methane) into the atmosphere. CARB should utilize existing definitions in the regulation such as “Leak or fugitive leak,” rather than introduce new, ambiguous terms.

Similarly, Appendix A, Table A8 presents other new terms and confusion by introducing “types” of emissions including “unintentional below leak threshold, venting-routine, venting-construction/maintenance, or none.” A leak is defined per the regulation as an “*unintentional release of emissions at a rate greater than or equal to the leak thresholds specified in this subarticle,*”⁸ so something detected below the specified leak threshold is, by definition, not a leak. Also, what constitutes an intentional versus an unintentional leak? What is the distinction between and the definitions for routine venting and venting during construction or maintenance? How would one classify venting that happens during an emergency? What does “none” mean especially in terms of the instrument detection limit of that used for USEPA Method 21?

⁵ See <https://carbonmapper.org/our-mission/faq/>

⁶ See https://ww2.arb.ca.gov/sites/default/files/2023-01/DRAFT_OG%20Reg%20Order_Proposed_1-13-23.pdf

⁷ *Ibid.*

⁸ *Ibid.*

The response timelines proposed per §95669.1(a) are unrealistic and impractical

Carbon Mapper states that its web portal will be updated data within 90 days of an observation⁹. What is the expected lag time between an observation and CARB notification? The proposal that operators “inspect the facility for leaking or venting components” within 3 days of CARB’s notification for an area spanning “a 100-meter radius” is not only impractical but illogical. Thousands of components could be within the defined radius. As a practical example, at facilities spanning hundreds of acres, it can take over a week to do quarterly LDAR inspections using outside contractors that must be scheduled in advance. As such, the 3-day time period proposed in the draft regulation is unlikely to be achieved given the amount of time it takes to schedule and secure inspectors, then implement an inspection. Also, the draft regulation’s proposal to require a second round of inspections, when no leaks were detected after the first round, is unnecessary and would double costs.

Facilities should not be required to identify leaks below the minimum leak threshold

*§95669.1(3)(A) If the leak concentration is **below** the minimum leak threshold specified in section 95669, the owner or operator shall report to CARB the information specified in Appendix A, Table A8 within 3 calendar days of conducting the leak concentration measurement.*

Remote sensing technology such as Carbon Mapper, is designed to detect high methane emission point sources¹⁰ and predict a methane detection limit depending on observing mode, wind speed and surface brightness.¹¹ If the purpose of utilizing this technology is to find and reduce large emission sources, then why would concentrations below the minimum leak threshold trigger action? It is impractical to have operators look for concentrations below what is defined as a leak in the regulation, especially if operators must devote scarce resources to finding and repairing actual leaks as soon as practicable.

Overall, given that standards for aerial methane monitoring technology and data have not been established to be reproduceable or even accurate, the proposed addition of this section into the regulation is premature. While remote sensing technology, in principle, is capable of collecting methane emission data, in practice “the ultimate impact depends on the degree of completeness (or what fraction of emissions can be identified and quantified) which is a function of detection limit, spatial coverage and sample frequency.”¹² Once this technology is mature and data can be evaluated, CARB should work with stakeholders to understand the data and how it can best be utilized to reduce methane emissions. Working with stakeholders to understand the facilities and processes will help eliminate the need for operators to determine if a “detection” is a leak or vented equipment. Unfortunately, as proposed these provisions would disrupt facility operations and increase costs as operators would be required to pinpoint all sources of “expected emissions” based on nascent data.

⁹ See <https://carbonmapper.org/data/>

¹⁰ See <https://carbonmapper.org/our-mission/faq/>

¹¹ See <https://carbonmapper.org/our-mission/technology/>

¹² See <https://carbonmapper.org/our-mission/science/>

(2) Proposed Changes to §95669(d)(1) and §95669(h)(1) Should be Cost Effective and Align with EPA Recommendations

The proposed regulatory text includes the addition of new Subsection (d)(1) and proposed changes to Subsection (h)(1) of Section 95669. §95669(d)(1) would require operators to develop facility-specific leak detection and repair (LDAR) plans by April 1, 2024, and appears to be in response to EPA's Technical Support Document (TSD). The TSD recommends that CARB add a requirement to maintain a list of identification numbers for all the equipment subject to leak regulation and a requirement to maintain a list of equipment that is designated as "unsafe to monitor." Instead of requiring LDAR plans, CARB should add these two requirements to the regulation, as is recommended by the TSD¹³. Developing LDAR plans will require extensive resources to implement and maintain and is not cost effective or necessary to comply with EPA's noted deficiencies or the Control Techniques Guidelines (CTG).

The CTG does not recommend such plans for transmission and storage facilities. Rather, the CTG recommends LDAR plans in relation to fugitive emissions for natural gas processing facilities and boosting stations only. Under the current regulation, storage facilities must implement a remote monitoring plan and conduct LDAR surveys. As such, facilities already operate robust LDAR programs, which include a database of all components subject to the Regulation. Given this, there is no need for storage facilities to develop facility specific LDAR plans. Also, since this update would require significant additional resources, it should not be approved by CARB prior to conducting a cost effectiveness analysis. Instead, we suggest the following update:

(d)(1) By April 1, 2024, owners or operators shall maintain the following:

- (A) A list of identification numbers for all the equipment subject to leak detection and repair.*
- (B) A list of equipment that is designated as "unsafe to monitor."*

In addition, the update to §95669(h)(1), which would require facilities to repair minor leaks within 5 calendar days, is not cost effective or necessary to comply with EPA's noted deficiency. The EPA disapproval does not require leaks be repaired within 5 calendar days; instead the TSD recommends the following fix: "*add in language that requires an attempt of repair be done in the first 5 calendar days of the leak detection.*"¹⁴ Facilities have limited personnel and requiring the repair of minor leaks on an expedited timeline will be disruptive to operations and is not required by the CTG or the TSD. Given this the following update is suggested:

*(1) **An attempt at repair shall be made within 5 calendar days for** leaks with measured total hydrocarbon concentrations greater than or equal to 1,000 ppmv but not greater than 9,999 ppmv and shall be successfully repaired or removed from service within 14 calendar days of the initial leak detection using US EPA Reference Method 21.*

¹³ US EPA's [Technical Support Document](#), pg. 13.

¹⁴ *Ibid.*

(3) Provisions within §95669(o)(1)(A) and §95669(o)(1)(B) Should Align with Regulatory Objectives

SoCalGas has aggressively implemented LDAR procedures and practices in good faith to reduce emissions in support of the regulation’s intent to reduce methane emissions by limiting intentional and unintentional emissions from equipment and operations.¹⁵ While enforcement provisions are an essential element of an effective regulatory program, for enforcement provisions to achieve regulatory objectives in a cost-effective manner and incent the desired behavior, it is critical that these provisions consider regulated entities’ compliance efforts. As such, CARB should reconsider the provisions in §95699(o)(1)(A) & (B) that penalize facilities for leaks that could not have been prevented.

An operator, who has an otherwise very effective LDAR program, should not be penalized for detecting and repairing one 50,000 ppmv leak. While the LDAR program has reduced the number of overall leaks, statistically, it is difficult to have zero leaks that are 50,000 ppmv or greater, due to the vast number of system components. Unfortunately, providing unrealistic regulatory mandates does nothing to improve the programs emissions reduction effort, or repair timelines and has led to superfluous agency inspections and punitive damages. Having noted that there is no environmental benefit, or an impactful repair process improvement associated with the issuance of a violation predicated purely on the presence of a local agency, we suggest the following changes to §95699(o)(1)(A) & (B).

Table 2 of §95699(o)(1)(A):

Table 2 – Allowable Number of Leaks Per Inspection Event

<u>Leak Threshold</u>	<u>200 or Less Components Inspected</u>	<u>More than 200 Components Inspected</u>
<u>1,000-9,999 ppmv</u>	<u>5</u>	<u>2% of total inspected</u>
<u>10,000-49,999 ppmv</u>	<u>2</u>	<u>1% of total inspected</u>
<u>50,000 ppmv or greater</u>	<u>1</u>	<u>0.5% of total inspected</u>

§95699(o)(1)(B) Any leak that exceeds 50,000 ppmv at the time of a CARB Executive Officer inspection shall be repaired within the timeframes specified in this subarticle.

¹⁵ See [Oil and Natural Gas Production, Processing, and Storage | California Air Resources Board](#)

(4) CARB should Clarify Proposed Additions to §95668(h)

The proposed additions to §95668(h) in the draft text are not required per the EPA's TSD. In fact, the EPA did not identify any rule deficiencies in this section of the Rule¹⁶, therefore these changes should be reconsidered with stakeholder feedback before being included in this update to the regulation. We would like to understand the reason for these additions, as they will significantly impact operations. SoCalGas respectfully requests that staff consider the following:

§95668(h)(1) and 95668(h)(4):

The term "quality assurance" was added to these subsections, but no definition of the term was added. SoCalGas would appreciate CARB clarifying what quality assurance procedure CARB is looking for. What is required to make a plan's "quality assurance" procedures acceptable?

§95668(h)(4)(A)(10) If the monitoring system is taken offline for any reason, the facility owner or operator shall notify the CARB Executive Officer prior to or within 24 hours of the system being taken offline, including justification for the system being taken offline. The facility owner or operator shall also notify the CARB Executive Officer when the system is online again.

Please identify the appropriate method of communication for changes to the offline/online status of the ambient monitoring system.

§95668(h)(4)(B)(2)(g) If the monitoring system is taken offline for any reason, the facility owner or operator shall notify the CARB Executive Officer prior to or within 24 hours of the system being taken offline, including justification for the system being taken offline. The facility owner or operator shall also notify the CARB Executive Officer when the system is online again.

As an alternative, SoCalGas recommends that CARB require storage facilities to maintain logs or records to note when monitors are taken offline and returned to service. There are a variety of reasons why a continuous well monitoring system or individual methane monitoring device may be taken offline temporarily. These include power interruptions or blackouts, as well as replacement and maintenance activities that are part of SoCalGas's Storage Integrity Management Program. This program requires systematic mobilization of well workover rigs, including removal of the wellheads to conduct various downhole activities, such as repairs or component installations. During these times, well monitors are required to be disconnected and taken offline and the well is inoperable. Since storage fields have several wells onsite that could require workover or maintenance concurrently or at different times, it is not feasible to notify CARB every time a monitor is "offline for any reason" without it being a considerable and unnecessary regulatory burden.

¹⁶ US EPA's [Technical Support Document](#) Pg. 13

(5) CARB should Clarify New Language within §95670.1(a) and §95670.1(a)(1)

SoCalGas would appreciate an update to §95670.1(a) which currently states the following:

§95670.1(a) The CARB Executive Officer shall approve or not approve the delay of repair request based on whether the information submitted substantiates one of the acceptable justifications in section 95670.1(a)(4) and whether the estimated date by which repairs will be completed is as soon as practicable based on the best engineering judgement of the CARB Executive Officer.

As written, this section provides insufficiently bounded director's discretion to determine if a repair estimate provided by a facility as required by the regulation is acceptable. Facilities covered under this regulation have varying processes, procedures and personnel making it unrealistic for one unfamiliar with operations to determine how fast a facility can make repairs. Thus, the following section could be modified as below:

§95670.1(a) The CARB Executive Officer shall approve or not approve the delay of repair request based on whether the information submitted substantiates one of the acceptable justifications in section 95670.1(a)(4) ~~and whether the estimated date by which repairs will be completed is as soon as practicable based on the best engineering judgement of the CARB Executive Officer.~~

SoCalGas would appreciate clarification of §95670.1(a)(1) which currently states the following:

§95670.1(a)(1) The CARB Executive Officer shall grant or deny a delay of repair request within 5 calendar days after receiving the request.

Given the required repair time limits in Table 1, what happens if the delay is denied 5 days after the request? Depending on the leak concentration, the equipment will either be past due if required to be repaired within 2 days or due the day of. Given the tight repair schedule, it is counterintuitive to require a facility to wait 5 days for a response to a request for delay of repair.

Conclusion

SoCalGas appreciates CARB staff considering our feedback on the Oil and Gas Methane Regulation and draft regulatory text. We look forward to working with CARB on this important topic.

Sincerely,

/s/ Darrell Johnson

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