

August 17, 2026

Walter Ham
Chief, Monitoring and Laboratory Division
California Air Resources Board

Re: Matrix Oil Corp Comments on Draft SB 1137 Emissions Monitoring Regulations

Dear Mr. Ham:

Matrix Oil Corp ("Matrix") appreciates the opportunity to provide comments regarding the California Air Resources Board's ("CARB") development of regulations implementing the emissions monitoring requirements associated with SB 1137. After reviewing the proposed framework, Matrix has significant concerns regarding the feasibility, cost, scientific reliability, regulatory duplication, and potential unintended consequences of continuous fenceline monitoring as currently contemplated.

Matrix respectfully requests that CARB address the following issues before finalizing the regulations.

CARB Has Underestimated the Cost of Compliance

Matrix is concerned that the projected costs associated with the proposed program do not reflect the full financial burden operators will incur. Compliance costs extend well beyond purchasing monitoring equipment.

- installation and supporting infrastructure;
- maintenance, calibration, and replacement equipment;
- telecommunications systems and alternatives for locations without reliable cellular or internet service;
- meteorological monitoring;
- five-year data management and storage;
- third-party audits, consultants, and technical specialists;
- regulatory reporting, recordkeeping, and employee training;
- investigation of alarms and false-positive readings; and
- additional regulatory and CalGEM administrative costs ultimately borne by the regulated community.

CARB should conduct a more comprehensive economic analysis before finalizing the regulations.

Disproportionate Impact on Small Operators

These costs will not affect all operators equally. Large operators may be capable of spreading monitoring, information technology, consulting, and compliance costs across hundreds or thousands of wells. Small operators do not have that economy of scale.

For a small California operator, the cost of installing and maintaining continuous monitoring infrastructure could become disproportionate to both the facility's production and its actual emissions. CARB should specifically evaluate the economic consequences of operators shutting down because

compliance costs make continued operation uneconomic, thus potentially following back on taxpayers for abandonment of orphaned facilities.

Recognition of Existing Local Air District Requirements

The proposed regulations should include exemptions or alternative compliance pathways for operators already subject to stringent local air district requirements.

Operators within the South Coast Air Quality Management District “SCAQMD” jurisdiction are already subject to extensive leak detection, repair, recordkeeping, and emissions requirements. Requiring a second monitoring program that measures ambient concentrations at a property boundary will impose substantial additional cost without necessarily providing better information about whether a particular component is leaking.

CARB should recognize compliance with stringent local air district programs and establish appropriate exemptions, equivalency determinations, or alternative compliance mechanisms where existing requirements achieve the same or greater emissions-control objective.

SCAQMD Rule 1173 establishes enhanced leak detection and repair requirements requiring all operators to monitor all components using Optical Gas Imaging (“OGI”), maintain valves, fittings, and other applicable components. These requirements are significant because they focus on the actual source and are much more accurate than fence line monitoring. Direct component monitoring can identify the valve, fitting, pump, compressor, connector, or other component responsible for an emission and allow corrective action to be directed to that equipment.

Rule 1173 also expressly defines “background” as the ambient concentration of total organic compounds in the air at least one meter upwind of the component being inspected, determined according to the applicable test method.

This concept is directly relevant to CARB’s proposed fenceline program. An ambient concentration detected at a property boundary should not automatically be attributed to the operator without accounting for background conditions and determining whether the regulated facility is actually the source.

For facilities already subject to Rule 1173, CARB should evaluate the incremental environmental benefit of requiring continuous fenceline monitoring in addition to direct component-level inspection.

Source Attribution and Background Methane

One of Matrix’s primary technical concerns is the inability of fenceline monitoring to reliably determine the source of detected methane. Oil and gas facilities throughout the Los Angeles Basin operate in environments containing numerous natural and anthropogenic methane sources. Wind direction, atmospheric conditions, terrain, neighboring land uses, and natural geological conditions can transport methane across property boundaries.

Without reliable source attribution, continuous monitoring could generate repeated false alarms and unnecessary investigations while providing little meaningful information regarding actual facility emissions. The source-attribution problem is particularly significant for facilities located near landfills, farms, livestock operations, and other substantial methane sources.

For example, portions of the Sansinena Oil Field are immediately adjacent to farms and naturally occurring oil seeps. An oil and gas operator should not be required to respond as though it caused an

false alarm when the detected methane originated from adjacent farms or naturally occurring seeps. If a reliable baseline cannot be established because of substantial surrounding methane sources, CARB should allow an alternative compliance program based upon direct Leak Detection and Repair (“LDAR”) inspections.

CalGEM attempted a similar program “Drone Program” only to be discontinued due to a high false positive rate. Please reference the attached CIPA white paper.

Proposed Carb Air Monitoring in Regulatory conflict with SCAQMD Rule 1173

CARB’s proposed SB 1137 air-modeling and continuous monitoring framework presents potential legal and regulatory challenges for facilities already subject to South Coast AQMD Rule 1173 because the two regulatory programs approach emissions from fundamentally different perspectives.

SCAQMD Rule 1173 requires operators to have no leaks, therefore asking operators to model leaks is in direct regulatory conflict with SCAQMD rule 1173. This creates a regulatory inconsistency if an operator must model hypothetical emissions showing a facility is out of compliance. CARB should therefore exempt facilities under SCAQMD rule 1173 jurisdiction or an alternative compliance pathway for facilities demonstrating compliance with Rule 1173.

Repair Requirements and Neighbor Notification

Similarly, CARB should coordinate its notification provisions with existing local air district repair requirements. The purpose of leak detection is ultimately to identify and correct an actual emission source.

Where an operator identifies a leak through an existing SCAQMD-required inspection and is required to be a prompt repair. Rule 1173 gives the operator one day to repair a leak, making CARB’s proposed neighbor notification not applicable for any operator under SCAQMD jurisdiction. CARB should prioritize inconsistent procedural requirements.

Public notification based solely on an unverified fenceline reading may also mislead nearby residents creating issues of public safety.

CalGEM Plan Approval and the One-Year Deadline

The proposed approval process creates legal and practical concerns if an operator’s ability to continue operating depends upon CalGEM approving a monitoring plan within a specified period. Operators cannot control agency review timelines.

An operator that submits a complete monitoring plan in time should be permitted to continue operating while the application remains under agency review. Requiring shutdown solely because an agency has not completed its review creates significant due-process and takings-related litigation risk.

The Proposed Regulation is Vague where it Should be Specific and Specific where it should be Vague

The proposed regulations should provide substantially greater specificity in the placement of required sensors as well as exemptions. It is the intention to keep it vague, but leaving these determinations unresolved creates uncertainty for operators and may lead to inconsistent requirements between facilities.

The proposed regulation is overly specific on sensor downtime, maintenance, calibration, air monitoring requirements, data storage and third-party audits which significantly increases the cost of the program for small operators. Matrix encourages CARB to eliminate the requirements not dictated by statute.

CARB Should Establish Uniform Thresholds

CARB, not individual operators, should establish scientifically supported regulatory thresholds for monitoring and notification based on scientifically proven health risks. Requiring each operator to establish its own threshold could produce inconsistent standards across California and create uncertainty regarding compliance.

If facility-specific modeling and historical data demonstrate that a regulatory threshold cannot reasonably be reached by emissions from that facility, CARB should establish a process allowing the operator to request an exemption or alternative monitoring program.

Available Technology Must Actually Satisfy the Regulation

CARB should ensure that technologies identified as potential compliance methods are technically capable of satisfying the requirements contained in statute.

OGI and FLIR technologies can be highly effective tools for locating emissions during LDAR inspections, but they do not necessarily provide the same continuous quantitative concentration data contemplated by a fenceline monitoring requirement as sensors. Before mandating continuous monitoring, CARB should consider exemptions to fenceline monitoring if an OGI inspection program is in place. OGI and FLIR technologies are far superior in detecting leaks to fenceline monitoring.

Natural Oil and Gas Seepage Must Be Accounted For

The Los Angeles Basin contains extensive oil- and gas-bearing formations, faults, fractures, and naturally occurring hydrocarbon seeps. Natural oil and gas seepage predates modern petroleum development and represents an important component of regional background methane.

Any fenceline monitoring regulation applicable to the Los Angeles Basin should contain a scientifically defensible mechanism for differentiating naturally occurring methane from emissions attributable to regulated production equipment.

Local Government Approval of New Sensitive Receptors Near Oil and Gas Operations

Matrix would also like to highlight the apparent inconsistency between the assumptions underlying SB 1137 and California's continuing approval of new residential development in historically oil-producing communities. Cities in the Los Angeles Basin have recently approved substantial new residential developments through CEQA categorical or statutory exemptions without requiring preparation of a new project-specific Environmental Impact Report. In several instances, the local agency expressly determined that the project would not result in a significant air-quality or environmental impact.

To the extent any of these developments are located within the 3,200-foot Health Protection Zone surrounding existing oil and gas operations, the regulatory contrast warrants careful consideration by CARB. Local governments are permitting the creation of entirely new sensitive receptors near pre-

existing oil and gas operations while state regulations simultaneously impose extraordinary monitoring requirements upon those existing operations based substantially upon their proximity to those same receptors. Matrix respectfully requests that CARB explain how these regulatory outcomes are reconciled.

Recommended Rule 1173 Exemption or Alternative Compliance Pathway

Matrix respectfully recommends that CARB include an express provision allowing an operator to obtain an exemption, equivalency determination, or alternative compliance pathway where the operator demonstrates one or more of the following:

- the facility is subject to SCAQMD Rule 1173 or another local air district program providing equivalent or more stringent leak detection requirements;
- the operator remains in compliance with applicable local air district monitoring and repair requirements;
- direct component-level monitoring provides a more reliable method of identifying facility emissions than fenceline monitoring;
- surrounding natural or anthropogenic methane sources interfere with reliable fenceline source attribution;
- historical monitoring, modeling, LDAR inspections, or other scientifically valid information demonstrate that continuous fenceline monitoring would provide little additional emissions-reduction benefit;
- the operator timely submitted a complete monitoring plan concluding thresholds will be achieved; or
- site-specific conditions make continuous fenceline monitoring technologically infeasible or incapable of producing reliable source-specific information.

Recommended Regulatory Framework

Matrix respectfully recommends that CARB revise the proposed regulations to include below in the final framework:

- recognizes compliance with stringent local air district requirements, such as SCAQMD Rule 1173;
- provides exemptions or alternative compliance pathways where existing requirements are equal to or more stringent than the CARB program;
- establishes CARB-defined monitoring and notification thresholds to align with local air districts.
- establishes clear standards governing the number and placement of sensors;
- Eliminate the limitations for equipment maintenance, calibration, communications outages, downtime; third party audits, and data storage:
- accounts for natural methane seepage and substantial neighboring methane sources;
- provides alternative compliance where reliable baseline monitoring cannot reasonably be established;
- requires source verification before neighborhood notification except in an independently verified emergency;
- allows continued operation when a timely submitted monitoring plan remains pending before CalGEM;
- establishes practical requirements for facilities without reliable cellular or internet service;
- independently validates monitoring technology under actual California field conditions; and
- conducts a complete economic analysis addressing the disproportionate impact of the regulations on small operators.

Conclusion

Matrix Oil Corp supports reasonable regulations that meaningfully identify, locate, and reduce actual oil and gas emissions. Matrix also understands that CARB is operating within the requirements and limitations established by SB 1137 and that certain elements of the monitoring program may be required by statute. However, where the statute provides CARB discretion, CARB should exercise that discretion to minimize unnecessary regulatory burdens rather than create additional requirements that the statute itself does not mandate. CARB should determine whether that requirement is truly necessary and whether its environmental benefit justifies its economic impact before including it in the final rule.

This is particularly important because continuous fenceline monitoring is, in significant respects, subpar to existing source-level emission-detection and emission-reduction programs already applicable to operators in the South Coast Air Basin. A fundamental problem with CARB's proposed fenceline monitoring framework is the difficulty, and in some location's practical impossibility, of establishing reliable baseline methane concentration in urban and agricultural areas. This is especially relevant to oil and gas facilities in the Los Angeles Basin, where regulated facilities exist within complex urban environments containing numerous potential natural and anthropogenic methane sources.

This limitation goes directly to the usefulness of fenceline monitoring as an enforcement, notification, or emission-reduction tool. Where baseline conditions fluctuate because of multiple surrounding methane sources, CARB risks establishing a regulatory program that generates false alarms, unnecessary investigations, unnecessary public notifications, and substantial compliance costs without any benefit.

If a scientifically defensible baseline cannot be established at a particular facility, continuous fenceline monitoring should not be required at that facility. CARB should instead provide an alternative compliance pathway based on direct source-level monitoring, LDAR, OGI inspections, or other methods capable of identifying emissions actually attributable to the regulated operation. CARB should therefore demonstrate the incremental emission-reduction and public-health benefit of continuous fenceline monitoring over existing source-level programs before layering additional requirements onto operators already subject to stringent local air district regulation.

The economic consequences of these proposed rules and regulations are substantial and foreseeable. The cumulative cost of CARB's proposed requirements has the potential to force small and independent operators out of business. Large operators may be capable of spreading the costs of monitoring equipment, telecommunications infrastructure, consultants, third-party audits, data storage, calibration, maintenance, reporting, and regulatory personnel across hundreds or thousands of wells. Small operators do not have that economy of scale.

Driving small operators out of business also risks eliminating California jobs, reducing state and local revenues and concentrating California's remaining oil and gas production among fewer and larger companies. Financial distress among small operators will also increase the risk that abandonment obligations ultimately become a burden on the State and California taxpayers.

Matrix therefore strongly urges CARB to revise the proposed regulations to remove requirements not necessary to satisfy the statute; recognize existing local air district requirements; provide exemptions and alternative compliance mechanisms for facilities subject to Rule 1173 or equivalent programs; provide alternative compliance where reliable baseline monitoring cannot be established; account for



facility size and production; require scientifically defensible source attribution; and ensure that compliance costs are proportionate to demonstrated environmental benefit.

Without these changes, CARB risks transforming a statutory emissions-monitoring requirement into a far broader and more expensive regulatory program than necessary—one that duplicates and, in important respects, is subpar to existing source-level emission-reduction programs, relies upon baseline measurements that may not be reliably established in complex urban environments, and imposes costs capable of driving California's small operators out of business. CARB has discretion in how it implements the statute, and it should use that discretion to eliminate unnecessary requirements and provide meaningful alternative compliance pathways rather than imposing substantial costs for monitoring that may provide little or no additional emission-reduction benefit.

Thank you for your consideration of Matrix Oil Corp's comments.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jonathan Gregory", written over a horizontal line.

Jonathan Gregory

Chief Executive Officer

Matrix Oil Corp/RMX Resources, LLC

Attachment:

CIPA White Paper- CalGEM Uncrewed Aerial Surveillance (Drone) Program, June 2021 through November 2024
Results from CIPA Member Survey Data

**CalGEM Uncrewed Aerial Surveillance (Drone) Program, June
2021 through November 2024 – Results from CIPA Member
Survey Data**



Executive Summary

CalGEM began the Uncrewed Aerial Surveillance (Drone) program in June 2021. Since that time approximately 250 Drone flights have occurred over several oil and gas facilities in the CalGEM Southern District region, primarily in Los Angeles and Orange counties.

The California Independent Petroleum Association (CIPA) solicited data from its members in the fall of 2024 to determine the accuracy of CalGEM's Drone surveys. Data evaluated from CIPA member companies indicates that the surveys present false positive data approximately 98% of the time, rendering the Drone survey data unreliable and resulting in an ineffective, costly program that appears to miss the mark of the CalGEM Drone program stated mission.

Findings

CalGEM began Drone flights in mid-2021 as a means "to detect and mitigate fugitive methane emissions arising from oil, natural gas and geothermal operations to protect public health, safety and the environment"¹ in the LA Basin. CIPA collected data from six of its member operators in the LA Basin accounting for 86 drone surveys conducted between October 2021 through October 2024 across the basin.

Information reviewed for the 86 flights showed that CalGEM issued six "no action" letters and 80 "3357 Informational Request" letters. With each "3357 letter" issued by CalGEM, a heat map generated from drone data was included indicating background methane readings and areas of CalGEM concern where methane readings were above background, usually greater than 80 ppm (parts per million meter). Per the orders in the 3357 letter, operators are required to investigate the potential sources of methane emissions and provide a written report of such investigations.

Data from the heat maps indicated that approximately 1,700 "hot spots" were depicted in the heat maps provided with the 3357 letters causing the operators to investigate the alleged methane emissions above background. Subsequent operator investigations found only 22 actual methane leaks above 80 ppm background. This data indicates that CalGEM drones were presenting false positive readings 98% of the time.

Pergam Falcon Laser methane detectors utilized by CalGEM are attached to a drone that flies over the leases. Conversations with a technical representative from Pergam indicate

¹ Excerpt from CalGEM Uncrewed Aerial Surveillance Program Mission statement.

that readings are most accurate when flown at 30 – 40 feet (9 – 12 meters) over points of interest, with accuracy diminishing rapidly with greater heights over the targets. Per published literature from Pergam, the maximum detection distance is 25 meters (82 feet) above the points of interest.² A review of the 3357 letters that were sent to operators indicates that drone flights were conducted at a height of 20 – 30 meters (66 – 98 feet) above the leases. These heights could significantly impact the accuracy and validity of the reported data, possibly resulting in a high percentage of false positives.

The heat maps provided by CalGEM in the 3357 letters provide information with respect to wind speed and direction at the time of the drone flights. Wind speed and direction has the potential to provide false positives when the data is reported. While the flights are confined to the actual oilfield lease boundaries, methane from offsite sources is not accounted for that could be introduced by wind. CalGEM has indicated that it is the responsibility of the operators to identify potential offsite sources of methane. Many flights were conducted adjacent to visible offsite sources such as roads/highways, corrals, or landfills, yet these offsite sources were not considered by CalGEM. By utilizing wind speed and direction data and observing offsite sources, CalGEM could be providing much more accurate and useful 3357 letters or even “no action letters”.

Conclusion

CalGEM drone flights have resulted in mostly false data. Operators in CalGEM’s Southern District have spent tens-of-thousands of dollars and many, many personnel-hours in answering these 3357 letters that are providing false information nearly 100% of the time.

Recommendation

A solution for CalGEM to accomplish its objective in protecting the public from health and environmental concerns would be to focus inspections with a “boots on the ground” approach. Accurate readings are consistently obtained by utilizing a handheld detector. In answering the 3357 letters, operators utilize a type of handheld detector, either by company personnel or a third party, in doing their investigations. This approach would have detected the very few leaks that actually existed.

Agencies in California that regulate air emissions, issue permits and ensure compliance utilize US EPA Method 21 as the standard in determining volatile organic compound leaks. Devices generally accepted by Method 21 are catalytic oxidation, flame ionization, infrared absorption, and photoionization detectors.³ CalGEM should adopt Method 21.

² From Pergam Technical Services brochure,
https://drive.google.com/file/d/1_UvpX_86As9ZWaoepSXvQIacj27P8VU1/view?usp=sharing

³ US EPA Method 21, https://www.epa.gov/sites/default/files/2017-08/documents/method_21.pdf

All California oil producers have a goal to produce oil in a compliant, environmentally safe fashion. With CalGEM utilizing proven and efficient technologies such as Method 21 this goal will become more of a reality and result in better protection of the public.