

August 31, 2026

VIA ELECTRONIC MAIL AND PUBLIC COMMENT DOCKET

California Air Resources Board
1001 I Street
Sacramento, CA 95814
sb1137implementation@arb.ca.gov

Re: Comments on Discussion Draft Performance Standards for Continuously Operating Emissions Detection Systems Required by Senate Bill 1137

We, the undersigned organizations, submit these comments regarding the California Air Resources Board's (CARB's) discussion draft performance standards for continuously operating emissions detection systems required to implement Senate Bill (SB) 1137 (Draft Regulations). Our organizations include members of a broad statewide coalition called Voices in Solidarity Against Oil in Neighborhoods (VISIÓN) that advocates for frontline environmental justice communities in Kern and Los Angeles counties and elsewhere that are directly and disproportionately affected by the oil and gas industry, along with partners and allies. We urge CARB to enact strong regulations that prioritize leak *prevention* at oil and gas sites while mandating the use of the best available leak detection technology in all fields across the state.

This letter builds on and incorporates herein previous comment letters and associated attachments submitted by VISIÓN et al. concerning leak detection and SB 1137, especially VISIÓN's April 30, 2025 letter to CARB in response to CARB's SB 1137 pre-rulemaking workshop presentation; VISIÓN's May 31, 2024 letter to the California Department of Conservation's Geologic Energy Management Division (CalGEM) in response to a request for information concerning leak detection at oil and gas operations; VISIÓN's September 13, 2024 letter to CARB in response to CARB's request for input on potential amendments to California's Oil and Gas Methane Regulation; and VISIÓN's April 10, 2024 letter to the Department of Conservation and CalGEM regarding CalGEM's community engagement practices.

As discussed further herein, CARB's Draft Regulations are a step in the right direction but would benefit from further clarification and refinement to ensure the protection of public health in frontline communities. In particular, CARB should (A) prioritize the best available science over economic concerns that operators might raise; (B) bolster monitoring and reporting requirements to address constituents beyond methane, varied potential exposure pathways, Assembly Bill (AB) 617 communities, the specific geospatial location of monitoring units, and additional recommendations from the blue-ribbon panel of scientific experts known as the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel; (C) shorten compliance timelines and employ tighter standards to ensure leaks are detected and reported to the public before health impacts can occur, including with regard to operational downtime, notification thresholds, and notification timelines; (D) employ measures to maximize transparency and accountability in operators' leak detection and response plans, including more frequent review and reporting, better access to data, and oversight over CalGEM; (E) close dangerous exemptions that endanger public health; and (F) heed lessons from the federal government and other state jurisdictions.

TABLE OF CONTENTS

I.	Frontline Communities Remain at Risk from Oil and Gas Development.	4
A.	The evidence is clear: oil and gas operations cause immense harm to nearby communities.	4
B.	Oil and gas leaks, spills, and other incidents continue to cause major health emergencies throughout the state.	5
II.	CARB’s Draft Regulations Are a Step in the Right Direction to Implement SB 1137 and Reduce Risk from Oil and Gas Operations.	8
III.	CARB’s Draft Regulations Still Leave Critical Gaps that Weaken the Protections in SB 1137.....	8
A.	CARB must prioritize the health and welfare of communities over self-serving economic concerns from industry.	8
B.	CARB must require comprehensive monitoring to protect public health.....	12
1.	Including all likely toxics and pollutants that threaten community health—not just methane—is crucial to avoiding public health emergencies.	12
2.	CARB should incorporate sampling recommendations from the California Scientific Advisory Panel’s Public Health Report.	14
3.	CARB should address all potential exposure pathways for air pollution.	15
4.	Protecting all communities, including communities selected and consistently nominated for the Community Air Protection Program under AB 617, will strengthen the regulations.	15
5.	CARB should require monitoring at source locations, the fenceline, and within frontline communities.	16
C.	CARB should shorten compliance timelines and employ tighter standards to ensure leaks are detected and reported to the public before health impacts occur.....	16
1.	CARB should set stricter limits on EDS operational downtime.	17
2.	Notification should occur at objective science-based thresholds regardless of an individual operator’s proportionate contribution.	17
3.	CARB should require public notification of leaks sooner than 48 hours after a leak is detected and strengthen the alarm response measures overall.....	17

D.	CARB should employ measures to maximize transparency and accountability.	19
1.	CARB should require more frequent reviews, updates, and interim LDRP reporting to protect communities.	19
2.	CARB must ensure access to data to facilitate public engagement and input.	20
3.	CARB must employ its air quality expertise by maintaining significant oversight over LDRPs.	22
E.	CARB should close dangerous exemptions that endanger public health.	23
F.	CARB should consider leak detection approaches used in other states and at the federal level.	24

I. Frontline Communities Remain at Risk from Oil and Gas Development.

In the nearly four years since California enacted SB 1137, the public health emergency in communities across the state has not abated and the oil and gas industry has continued polluting the air that frontline residents breathe. This stark reality illustrates the urgent need for CARB to act now, in implementing SB 1137, to adopt the most health-protective regulations supported by science.

A. The evidence is clear: oil and gas operations cause immense harm to nearby communities.

A growing body of scientific evidence makes clear that proximity to oil and gas operations causes numerous public health and safety harms. With regard to air pollution, the Scientific Advisory Panel convened by CalGEM, which shares responsibility with CARB for implementing SB 1137, confirmed in a recent Public Health Report that oil and gas wells emit toxic compounds that are associated with respiratory issues and adverse birth outcomes for individuals near drilling activity.¹

The Public Health Report noted that “95% of California’s active-producing wells are spatially clustered in three air basins,” such that “proximity to one well likely means proximity to many wells,”² and found that “the risk of adverse health outcomes . . . increases with higher oil and gas well density and hydrocarbon production volume.”³ The Report ultimately concluded that CalGEM must implement a setback distance of “at least” 3,200 feet, and even built the case for setbacks at larger distances in especially vulnerable communities with higher-density and higher-volume wells.⁴ The 3,200-foot setback requirement in SB 1137 is therefore the *minimum* protection and must be implemented alongside a suite of other measures included in the law to address the myriad negative impacts from drilling activity.

All regulations implementing SB 1137 must err on the side of protecting public health rather than promoting cost savings for the oil and gas industry in light of these scientifically proven, devastating impacts, particularly in communities like Kern County and Los Angeles County where residents experience the worst air quality in the nation.⁵ For example, the San Joaquin Valley air basin has been in nonattainment of the federal health-based National Ambient Air

¹ Cal. Dept. of Conservation, Public Health Dimensions of Upstream Oil and Gas Development in California: Scientific Analysis and Synthesis to Inform Science-Policy Decision Making (June 21, 2024) at 2-2, 3-17, https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report_20240621.pdf (Public Health Report); *see also* Earthjustice, California’s Roadmap to Protect Communities and Public Health from Oil and Gas Drilling (Dec. 19, 2024), <https://earthjustice.org/experts/michelle-ghafar/californias-roadmap-to-protect-communities-and-public-health-from-oil-gas-drilling>.

² Public Health Report at ES-7.

³ *Id.* at ES-10.

⁴ *Id.* at ES-9, 2-2.

⁵ *See, e.g.,* Cresencio Rodriguez-Delgado, California Has Some of the Worst Air Quality in the Country. The Problem is Rooted in the San Joaquin Valley, PBS News (June 16, 2022), <https://www.pbs.org/newshour/nation/california-has-some-of-the-worst-air-quality-in-the-country-the-problem-is-rooted-in-the-san-joaquin-valley>.

Quality Standards (NAAQS) for years, and is not expected to meet some of the standards even by 2032.⁶ Communities in the region have been unjustly overburdened for far too long with the impacts of living near active and long-idled oil and gas wells. Clear and strong regulations implementing SB 1137 will help alleviate this continued legacy of environmental racism and disproportionate pollution burdening frontline communities across the state.

B. Oil and gas leaks, spills, and other incidents continue to cause major health emergencies throughout the state.

Continuing examples of public health emergencies caused by oil and gas facilities—some as recent as the last few months—demonstrate why CARB must adopt strong regulations implementing SB 1137. For example, as recently as March this year, community air monitoring networks in the San Joaquin Valley captured a large leak from a Sequoia Exploration, Inc. tank near a residential apartment complex and homes in Arvin.⁷ Nearby residents reported throat and eye irritation and a noxious smell “so strong that it gave me a headache and made me nauseous.”⁸

In January 2025, the U.S. Environmental Protection Agency (EPA) reported seven different “super emitter” methane leaks at oil and gas sites across Kern County.⁹ EPA’s super emitter program reports large leaks “of 100 kilograms per hour of methane or greater” from oil and gas facilities,¹⁰ with some of the leaks as large as 800 kilograms per hour,¹¹ further highlighting the extent of the crisis facing frontline communities.

In April 2024, CARB published the results of a multi-year study of airborne methane plumes across the state, including in Kern County.¹² The study detected 32 oil and gas methane plumes in

⁶ San Joaquin Valley Air Pollution Control District, Ambient Air Quality Standards & Attainment Status, <https://www.valleyair.org/air-quality-information/ambient-air-quality-standards-valley-attainment-status/> (accessed Aug. 27, 2026); U.S. EPA, EPA Projects More than 99% of Counties Would Meet the Revised Fine Particle Pollution Standard (Feb. 7, 2024), <https://www.epa.gov/system/files/documents/2024-02/2024-pm-naaqs-final-2032-projections-map.pdf>.

⁷ Cal. Environmental J. Network, FLIR: Tank Leak Near Via De Comanche Apartments. Arvin, CA., YouTube (filmed Mar. 28, 2026 and Mar. 30, 2026 and posted June 10, 2026), <https://www.youtube.com/watch?v=euSG4ZrQLrA>.

⁸ Identifying Violations Affecting Neighborhoods (IVAN), List of Reports, Kern County, <https://kernreport.org/report/list> (multiple reports on Mar. 28, 2026). Residents and first responders in Bakersfield also reported a leak from a nearby well site in April 2024 that caused symptoms including “fatigue, [a] bad headache . . . brain fog, trouble with concentration, and . . . nausea.” *Id.* (multiple reports on Apr. 4 to 5, 2024).

⁹ U.S. EPA, Methane Super Emitter Data Explorer, <https://echo.epa.gov/trends/methane-super-emitter-program/data-explorer> (accessed Aug. 20, 2026).

¹⁰ U.S. EPA, Methane Super Emitter Program, <https://www.epa.gov/compliance/methane-super-emitter-program> (last updated Oct. 2, 2025).

¹¹ U.S. EPA, Methane Emissions Event Report (date of detection Jan. 10, 2025).

¹² CARB, Summary Report of the 2020, 2021, and 2023 Airborne Methane Plume Mapping Studies (Apr. 2024), https://ww2.arb.ca.gov/sites/default/files/2024-04/2020-2021-2023%20Airborne%20Summary%20Report_FINAL.pdf.

2020, 40 in 2021, and 75 in 2023, with operators unaware of the leaks until after being notified by CARB in 40 percent of these cases.¹³

Leaks from oil pipelines are also troublingly common. In January 2024, a pipeline ruptured at a drill site in the Wilmington neighborhood of Los Angeles and sprayed a massive geyser of oil onto the nearby street and cars.¹⁴ In February 2024, a pipeline burst in Bakersfield and leaked crude oil for days into a public street next to Buena Vista Elementary School.¹⁵ And in May 2026 an oil pipeline leak in Los Angeles released thousands of gallons of oil into a major street and nearby storm drains, traveling down the Los Angeles river and impacting residents and wildlife.¹⁶

These incidents are an ongoing reality and often impact entire communities. For example, the Nelson Court neighborhood in Arvin was evacuated for more than eight months due to a gas pipeline leak that caused highly explosive levels of gas in residents' homes.¹⁷

The state's large number of idle and deserted wells are an additional significant source of pollution.¹⁸ By some estimates, two-thirds of California's over 30,000 idle wells are leaking methane and volatile organic compounds (VOCs).¹⁹ Methane is a potent greenhouse gas²⁰ known to cause difficulty breathing, loss of consciousness, headache and dizziness, nausea and

¹³ *Id.* at 4, 17.

¹⁴ Liza Gross, Battle to Prioritize Public Health over Oil Company Profits Heats Up, Inside Climate News (May 3, 2024), <https://insideclimatenews.org/news/03052024/california-public-health-battle-idle-wells/>.

¹⁵ Dominique LaVigne, Pipe Burst Spills Oil in Front of Buena Vista Elementary School, KERO-TV (Feb. 8, 2024), <https://www.turnto23.com/news/in-your-neighborhood/bakersfield/pipe-burst-spills-oil-in-front-of-buenavista-elementary-school>.

¹⁶ Jocelyn Fiset, Health Officials Warn East L.A. Residents About Odor After 2,400 Gallons of Oil Spill, KTLA (May 22, 2026), <https://ktla.com/news/local-news/health-officials-odor-guidance-from-la-oil-spill/>.

¹⁷ Bedell & Cox, Pipeline Operator Fined Over Arvin Gas Leak, Bakersfield Californian (Feb. 19, 2016), https://www.bakersfield.com/news/pipeline-operator-fined-over-arvin-gas-leak/article_91c29fcc-2da9-5be3-9239-822ced6a0c26.html.

¹⁸ See, e.g., Kyle Ferrar, California Must Improve Its Management of Idle Wells, FracTracker Alliance (May 2, 2024), <https://www.fracktracker.org/2024/05/california-must-improve-management-of-idle-wells/>; Joe Fassler, How the Oil Industry Indefinitely Delays Cleaning Up Oil and Gas Wells in California, DeSmog (Feb. 6, 2024), <https://www.desmog.com/2024/02/06/wspa-cipa-oil-idle-wells-ab2729-california/>; Aaron Cantu, California Lets Companies Keep 'Dangerous' Oil Wells Unplugged Forever, Capital & Main (Oct. 23, 2023), <https://laist.com/news/climate-environment/california-lets-companies-keep-dangerous-oil-wellsunplugged-forever>.

¹⁹ CalGEM, WellSTAR Data Dashboard, https://www.conservation.ca.gov/calgem/Online_Data/Pages/WellSTAR-Data-Dashboard.aspx (accessed Aug. 20, 2026); Eric D. Lebel et al., Methane Emissions from Abandoned Oil and Gas Wells in California, *Env'tl. Science and Technology*, 54 (2020), <https://pubs.acs.org/doi/10.1021/acs.est.0c05279>; see 87 Fed. Reg. 59314, 59317 (Sept. 30, 2022) ("With respect to the commenters' concerns regarding leaking wells, the [U.S. Environmental Protection Agency (EPA)] agrees that if wells are leaking methane, they are likely to also leak VOCs.").

²⁰ See U.S. EPA, Importance of Methane, <https://www.epa.gov/gmi/importance-methane> (last updated Feb. 10, 2026).

vomiting, weakness, loss of coordination, and asphyxiation.²¹ VOCs contribute to the formation of ozone, which inflames the lungs, constricts breathing, and can lead to death.²² Countless other wells may be leaking without being monitored. For example, a 2015 air quality study from the South Coast Air Quality Management District demonstrated that VOC emissions from oil and gas wells are considerably underestimated, and that wells contribute to more than half of the district's stationary source VOC emissions.²³

Inspections conducted by CalGEM and community watchdogs further demonstrate wells in frontline communities pose a nuisance to nearby residents. These inspections exposed the “widespread” leaking of methane and other air pollutants from dozens of oil and gas wells and infrastructure in the Bakersfield, Arvin/Lamont, Los Angeles, and Ventura areas, including some wells leaking methane at explosive levels.²⁴ Further highlighting the seriousness of the problem, CalGEM has also issued many Notices of Violation and Enforcement Orders to a range of operators across the state in recent years, addressing leaks at poorly maintained sites and ordering the operators to complete remedial work or cease and desist activity entirely.²⁵

²¹ N.J. Dept. of Health, Right to Know Hazardous Substance Fact Sheet (2016) at 3, <https://www.nj.gov/health/eoh/rtkweb/documents/fs/1202.pdf>; U.S. Nat. Library of Medicine, Methane, <https://pubchem.ncbi.nlm.nih.gov/compound/Methane> (accessed Aug. 20, 2026).

²² U.S. EPA, National Ambient Air Quality Standards for Ozone, 80 Fed.Reg. 65292, 65308–09 (Oct. 26, 2015); U.S. EPA, Integrated Science Assessment for Ozone and Related Photochemical Oxidants (Feb. 2013) at 2-20 to 2-24, Table 2-1 (EPA-HQ-OAR-2008-0699-0405).

²³ FluxSense, Using Solar Occultation Flux and other Optical Remote Sensing Methods to Measure VOC Emissions From a Variety of Stationary Sources in the South Coast Air Basin (Sept. 14, 2017) at 3, 6, http://www.aqmd.gov/docs/default-source/fenceline_monitoring/project_2/fluxsense_project2_2015_final_report.pdf?sfvrsn=6.

²⁴ See, e.g., FracTracker Alliance, Toxic Emissions Filmed at Leaking Oil and Gas Infrastructure in California (Feb. 24, 2026), <https://storymaps.arcgis.com/stories/4a9661b47d164e8daba393b7a1ff36c4>; CARB, Methane Task Force Inspection Report for the South Los Angeles Community (Jan. 15, 2025), https://ww2.arb.ca.gov/sites/default/files/2025-03/MTF_South_Los_Angeles_Inspection_Report.pdf (revealing well leak measuring 209,000 parts per million of methane in Murphy oil field in South Los Angeles); John Cox, State Finds 27 Oil Wells Leaking Methane in Arvin-Lamont Area, Bakersfield Californian (June 1, 2023), https://www.bakersfield.com/news/state-finds-27-oil-wells-leaking-methane-in-arvin-lamont-area/article_52120332-00da-11ee-b466-83e7f8b280c5.html; Kyle Ferrar, FracTracker Finds Widespread Hydrocarbon Emissions from Active Idle Oil and Gas Wells and Infrastructure in California, FracTracker Alliance (Aug. 22, 2022), <https://www.fracktracker.org/2022/08/fracktracker-finds-widespread-hydrocarbon-emissions-from-active-idle-oil-and-gas-wells-and-infrastructure-in-california/>; CalGEM, Well Inspections and Repair Updates (last updated May 17, 2023), <https://www.conservation.ca.gov/well-inspections-repair-updates>.

²⁵ See, e.g., CalGEM, Enforcement Orders, https://www.conservation.ca.gov/calgem/Pages/Division_Orders.aspx (accessed Aug. 23, 2026); Order to Pay Civil Penalties No. 1669 re: Orange County (Aug. 12, 2026); Order to Plug and Abandon Wells, Decommission Attendant Facilities, and Restore Well Site No. 1663 re: Fresno County (July 30, 2026); Order to Pay a Civil Penalty and Perform Remedial Work No. 1661 re: Kern County (July 23, 2026); Order to Pay Civil Penalties No. 1659 re: Santa Barbara County (July 17, 2026); Order to Pay a Civil Penalty and Perform Remedial Work No. 1656 re: Los Angeles County (July 17, 2026); Order to Pay a Civil Penalty No. 1651 re: Fresno, Kern, and Kings counties (June 24, 2026); Order to Pay a Civil Penalty No. 1645 re: Wilmington oil field (June 18, 2026); Order to Pay a Civil Penalty No. 1642 re: Kern and Monterey counties (June 17, 2026); Order to Pay a Civil Penalty No.

In light of the important findings in the Public Health Report and the ongoing pollution caused by extraction activity, permanent leak prevention, detection, and response regulations implementing SB 1137 are more important than ever and must reflect community concerns and the best advice of health and safety experts.

II. CARB’s Draft Regulations Are a Step in the Right Direction to Implement SB 1137 and Reduce Risk from Oil and Gas Operations.

We appreciate that CARB is working to develop meaningful performance standards for continuously operating emissions detection systems (EDS) to implement SB 1137. We are glad to see that CARB generally intends to implement SB 1137’s requirements in a transparent manner. Specifically, we support the following elements of the draft performance standards:

- Requiring continuous onsite monitoring across oil and gas sites;
- Requiring that an independent third-party performs source testing and analysis, and that an independent third-party conducts audits of EDS data;
- Establishing a framework for EDS siting such that reference exposure level (REL) leaks are reliably detected within one hour, and the public is notified if the leak is not fixed in a timely manner; and
- Requiring annual reporting of EDS data.

III. CARB’s Draft Regulations Still Leave Critical Gaps that Weaken the Protections in SB 1137.

As discussed in the following sections, CARB must regulate based on public health, science, the polluter pays principle, and the precautionary principle rather than the oil industry’s economic concerns, and must clarify and strengthen the Draft Regulations’ monitoring provisions.

A. CARB must prioritize the health and welfare of communities over self-serving economic concerns from industry.

CARB should prioritize and require the best available technology wherever possible. CARB’s SB 1137 Public Workshop Notice specifically requests public input into “alternatives to the draft performance standards presented at [the] [public] workshop . . . that may yield the same or greater benefits than those associated with the proposed regulation or may achieve the goals at lower cost.”²⁶ However, CARB must move forward with regulations necessary to implement SB 1137 by protecting public health, regardless of compliance costs to industry.

1640 re: Kern County (June 10, 2026); Order to Pay a Civil Penalty No. 1511 re: Kern County (Mar. 11, 2025).

²⁶ CARB, Public Workshop for Senate Bill 1137 – Development of Performance Standards for Continuously Operating Emissions Detection Systems, <https://ww2.arb.ca.gov/events/public-workshop-senate-bill-1137-development-performance-standards-continuously-operating> (accessed Aug. 13, 2026).

It bears emphasis that the oil industry continues to rake in obscene profits²⁷ while under ongoing scrutiny for lying for years about the negative effects of drilling activities. The State has sued five of the world's largest oil companies for "engaging in a decades-long campaign of deception and creating statewide climate change-related harms in California" in order "to further their record-breaking profits at the expense of our environment."²⁸ Such actions have resulted in California "spen[ding] tens of billions of dollars to adapt to climate change and address the damages climate change has caused so far," and anticipating the "need to spend multiples of that in the years to come."²⁹ The oil companies have lost their preliminary efforts to dismiss the State's case.³⁰

The oil industry has a long history of using its resources "to block reforms, invest overwhelmingly in fossil fuel extraction, and support efforts to extend the life of fossil fuel investments," including by spending "billions to promote climate disinformation through branding and lobbying" and using trade groups to conceal their involvement.³¹ More recently, the industry "obstructed and delayed" a Congressional investigation into its "decades-long deception campaign."³²

CARB must therefore follow the "polluter pays" principle to ensure that the oil industry—which can well afford to do so—employs every possible technology to not just detect but also *prevent* harmful leaks and emissions at all of their drilling and production sites, as the absolute minimum step necessary to start triaging the damage these operators have already done to our health and

²⁷ See Cathy Bussewitz, Major Oil Companies Reap Massive Profits as U.S. and Iran Fighting Drives Energy Prices Higher, PBS (July 31, 2026), <https://www.pbs.org/newshour/economy/major-oil-companies-reap-massive-profits-as-u-s-and-iran-fighting-drives-energy-prices-higher> (noting that Exxon reported second quarter profits of \$14.53 billion, with Chevron reporting second quarter profits of \$12.07 billion); Jillian Ambrose & Damian Carrington, Revealed: Major Oil Firms Make \$93bn Profits Amid War and Climate Crisis, The Guardian (Aug. 4, 2026), <https://www.theguardian.com/business/ng-interactive/2026/aug/04/revealed-major-oil-firms-make-93bn-profits-amid-war-and-climate-crisis> (stating that eight of the top oil producers collectively made \$93 billion in profits over the second quarter of 2026).

²⁸ State of Cal., Dept. of Justice, Attorney General Bonta Announces Lawsuit Against Oil and Gas Companies for Misleading Public About Climate Change (Sept. 16, 2023), <https://oag.ca.gov/news/press-releases/attorney-general-bonta-announces-lawsuit-against-oil-and-gas-companies>.

²⁹ *Id.*

³⁰ Zraick & Kitajima Mulkey, Oil Companies Fight Climate Lawsuits by Citing Free Speech, NY Times (June 22, 2025), <https://www.nytimes.com/2025/06/22/climate/oil-industry-anti-slapp-climate-lawsuits.html>; Lieff, Cabraser, Heimann & Bernstein, California Attorney General Defeats Defendant Oil Companies' Motion to Dismiss Case in Statewide Climate Change Litigation (Oct. 16, 2024), <https://www.lieffcabraser.com/2024/10/california-ag-defeats-oil-companies-motion-to-dismiss-case-in-statewide-climate-change-litigation/>.

³¹ House Committee on Oversight & Reform, Fueling the Climate Crisis: Exposing Big Oil's Disinformation Campaign to Prevent Climate Action (Oct. 28, 2021), <https://oversight.house.gov/legislation/hearings/fueling-the-climate-crisis-exposing-big-oilsdisinformation-campaign-to>.

³² House Committee on Oversight & Accountability, Democrats and Senate Committee on the Budget, Denial, Disinformation, and Doublespeak: Big Oil's Evolving Efforts to Avoid Accountability for Climate Change (Apr. 2024) at Exec. Summary, https://www.budget.senate.gov/imo/media/doc/fossil_fuel_report1.pdf.

climate.³³ The agency cannot lose sight of the forest for the trees in its focus on leak detection, but must use its regulatory authority to enact strong leak prevention measures currently missing from the Draft Regulations.

VISIÓN's previous comments regarding the Standardized Regulatory Impact Assessment for CalGEM's oil and gas public health rulemaking discussed how adoption of a strong setback and other mitigation measures addressing the harms from oil and gas development will provide significant economic benefits for individuals and their families, for frontline communities, and all of California.³⁴ These comments should guide CARB's development of its SB 1137 implementing regulations now.

Historically, economic evaluations have focused narrowly on business interests and industry financial impacts, and neglected impacts associated with harms to public health, community safety, and costs to residents and the State. Agencies "cannot put a thumb on the scale by undervaluing the benefits and overvaluing the costs of more stringent standards."³⁵ Cost-benefit analyses can be "biased against regulations that benefit health, welfare, and safety" when "decision-makers give greater weight to effects that can be quantified" and "reject more stringent alternatives that achieve additional, non-monetized benefits that outweigh the additional costs."³⁶

In its analysis for this rulemaking, CARB should avoid undertaking a traditional, industry-oriented cost-benefit analysis and use instead the best available science and measurements of social costs and other impacts associated with oil and gas development, including how these impacts vary across different populations.

As CARB's mandates include adopting air quality standards "in consideration of the public health, safety, and welfare"; enacting rules "consistent with the state goal of providing a decent home and suitable living environment for every Californian"; and safeguarding efforts "to protect and enhance the ambient air quality of the state," in recognition of the public's "primary interest in the quality of the physical environment in which they live,"³⁷ it is the agency's duty to regulate with *these* goals in mind, rather than the goal of saving money for the fossil fuel

³³ Frank Ackerman, Critique of Cost-Benefit Analysis and Alternative Approaches to Decision-Making, Report to Friends of the Earth: England, Wales and Northern Ireland (2008), http://frankackerman.com/publications/costbenefit/Critique_Cost_Benefit_Analysis.pdf.

³⁴ VISIÓN, Letter to Department of Conservation, Public Comment Regarding the Standardized Regulatory Impact Assessment for CalGEM's Proposed Public Health Rulemaking (Mar. 29, 2021).

³⁵ *Center for Biological Diversity v. National Highway Traffic Safety Admin.*, 538 F.3d 1172, 1198 (9th Cir. 2008).

³⁶ Cal. Legislative Analyst's Office (LAO), Improving California's Regulatory Analysis (Feb. 2017) at 11–12 (based on a review by the California LAO of twenty-two different standard regulatory impact assessments from various state agencies), <https://lao.ca.gov/reports/2017/3542/Improving-CA-Regulatory-Analysis-020317.pdf>. For example, the LAO criticized the California Department of Resources Recycling and Recovery's impact assessment for the Compostable Materials regulation, because it "did not quantify the environmental benefits of any of the options it considered." *Id.* at 12–13.

³⁷ Health & Saf. Code, §§ 39000, 39001, 39002, 39601, 39606.

industry. To satisfy these mandates, CARB should employ “technology-forcing” standards³⁸ and must rely on “the best available scientific evidence”³⁹ in its final SB 1137 regulations.

For example, an existing leak detection regulation by CARB’s sister agency, CalGEM, concerning underground gas storage contains a standard based on a technology’s effectiveness in “provid[ing] for immediately reporting leaks,” while “tak[ing] into consideration detection limits, remote detection of difficult to access locations, response time, reproducibility, accuracy, data transfer capabilities, distance from source, background lighting conditions, geography, and meteorology”—but *not* costs.⁴⁰

Likewise, CARB must employ the precautionary principle in connection with all leak prevention and detection regulations, erring on the side of public health and safety to adopt the most protective approach supported by science.⁴¹ The body of peer-reviewed literature reviewed by the state’s Scientific Advisory Panel suggests that the harms posed by oil and gas development are likely far more severe than currently documented. CARB must therefore act now to protect communities rather than attempt to mitigate harms to human health and the environment after the fact.

Full scientific certainty may be impossible given the ongoing refusal of the oil and gas industry to operate transparently and historic failures to fully and properly monitor drilling activity or require proper public disclosure. For example, many chemicals commonly used in oil and gas operations are not disclosed to the public based on broad trade secret and confidentiality exemptions in disclosure mandates,⁴² obstructing the public from having full knowledge of the scope and harm from leaks and spills.

Key elements of an approach that employs the precautionary principle include taking protective actions despite scientific uncertainty; exploring alternatives to actions that risk harm; placing the burden of proof on proponents of a harmful activity rather than on victims; and ensuring the public is informed and has opportunities to engage.⁴³

³⁸ *Am. Coatings Assn. v. S. Coast Air Quality Mgmt. Dist.*, 54 Cal. 4th 446, 466, 278 P.3d 838, 851 (2012). *Cf. Whitman v. Am. Trucking Ass’n*s, 531 U.S. 457, 492 (2001) (Breyer, J., concurring) (noting that technology forcing requirements “are still paramount in today’s [Clean Air] Act”).

³⁹ Health & Saf. Code, § 39650(d) (“[I]dentification and regulation of toxic air contaminants should utilize the best available scientific evidence gathered from the public, private industry, the scientific community, and federal, state, and local agencies, and that the scientific research on which decisions related to health effects are based should be reviewed by a scientific review panel and members of the public.”).

⁴⁰ Cal. Code Regs., tit. 14, § 1726.7.

⁴¹ See Tanja Srebotnjak, Comments on the Department of Conservation Geologic Energy Management Division Public Health Rulemaking (Dec. 16, 2021) (Srebotnjak Report) at 14; *see also* Health & Saf. Code, § 39650(e) (“[W]hile absolute and undisputed scientific evidence may not be available to determine the exact nature and extent of risk from toxic air contaminants, it is necessary to take action to protect public health.”).

⁴² Pub. Resources Code, § 3160(j), (k).

⁴³ Frank Ackerman, Critique of Cost-Benefit Analysis and Alternative Approaches to Decision-Making, Report to Friends of the Earth: England, Wales and Northern Ireland.

In sum, we encourage CARB to take operator anecdotes submitted to this docket with a grain of salt and to promulgate robust leak prevention, detection, and response regulations based on objective scientific data; published, peer-reviewed research; the polluter pays principle; and the precautionary principle.

B. CARB must require comprehensive monitoring to protect public health.

CARB's final regulations should include constituents beyond just methane; incorporate sampling recommendations from the Public Health Report; address all potential exposure pathways, including soil and vapor intrusion; cross-reference data from AB 617-related programs; and require monitoring at source locations, the fenceline, and within frontline communities.

1. Including all likely toxics and pollutants that threaten community health—not just methane—is crucial to avoiding public health emergencies.

Air pollution from oil and gas production is especially problematic in areas already overburdened by poor air quality, and the dangers of oil and gas pollution are not lessened but rather exacerbated by higher ambient pollution. Accordingly, to ensure protection of public health, CARB should adopt the recommendations in multiple expert reports and studies that any leak detection system must require continuous monitoring for gases other than just methane.

Methane is not a comparable surrogate in all instances. While methane is a health-damaging air pollutant (HDAP) of concern associated with oil and gas production, “oil and gas production facilities are known to release a host of other hazardous and toxic air contaminants, including toxic PM_{2.5}, carbon monoxide, nitrous oxide, ozone, and VOCs such as aromatic (cyclic and polycyclic) hydrocarbons like benzene,”⁴⁴ which are known to be persistent and mobile in the environment and widely recognized as harmful to most living organisms through carcinogenic and mutagenic effects.⁴⁵ Other specific constituents include sulfur dioxide, formaldehyde, and ammonia, as well as hydrogen sulfide.⁴⁶ CARB should include all of these constituents and

⁴⁴ Srebotnjak Report at 4.

⁴⁵ See generally David Gonzalez et al., Upstream Oil and Gas Production and Ambient Air Pollution in California, *Science of the Total Environment*, 806: 150298 (2021), <https://doi.org/10.1016/j.scitotenv.2021.150298> (Using data from the U.S. EPA Air Quality System, Gonzalez et al. observed significantly higher concentrations of particulate matter at the most exposed air monitors in months with more drilling activity, compared to months with less drilling.); U.S. Dept. of Health & Human Services, Agency for Toxic Substances & Disease Registry, Toxicological Profile for Polycyclic Aromatic Hydrocarbons (Aug. 1995), <https://www.atsdr.cdc.gov/toxprofiles/tp69.pdf>.

⁴⁶ Drew Michanowicz et al., Methane and Health-Damaging Air Pollutants from the Oil and Gas Sector: Bridging 10 Years of Scientific Understanding (Oct. 6, 2021) at 6, https://www.psehealthyenergy.org/wp-content/uploads/2022/07/Full-Report_Bridging-10-Years-of-Scientific-Understanding.pdf.

categories of constituents in the list of required analytes, along with toluene, xylene, acrolein,⁴⁷ oxygen, ethylbenzene, 1,3-butadiene, 2,2,4-trimethylpentane, cumene, and n-Hexane.⁴⁸

Monitoring for a specific list of these and other constituents like acetaldehyde and naphthalene is consistent with existing guidelines and regulations like the San Joaquin air district's Rule 4460 guidelines⁴⁹ and the South Coast air district's Rule 1180 for fenceline monitoring at petroleum refineries,⁵⁰ and with best practices already in place at California facilities such as the Kern Energy Refinery. These programs further illustrate the economic feasibility of a multi-constituent monitoring approach.⁵¹

While the state Public Health Advisory Panel recognized that “[m]ethane may be a useful surrogate for [toxic air contaminants (TACs)] and other pollutants of concern . . . from infrastructure that contains gases with high methane/non-methane hydrocarbon ratios,” the Panel concluded that methane “is not appropriate as a surrogate when monitoring infrastructure containing gases with lower methane:nonmethane hydrocarbon ratios.”⁵² Accordingly, we endorse Recommendation 4.2 from the Public Health Report—for air quality monitoring and leak detection and response plans (LDRPs) to encompass TACs, ozone precursors, and other pollutants of concern beyond just methane.

In fact, heavy-oil and low-throughput equipment often has a lower methane:nonmethane ratio, meaning a methane-only sensor could show “no leak” while benzene or other toxics are still escaping. Moreover, results of CARB’s multi-year study of methane plumes showed that emissions were “highly intermittent” and required repeated measurements to detect them despite the large volume.⁵³

We are also concerned that the Draft Regulations call for site-specific, equipment-specific ratios for methane-to-TAC rather than a simple health-based notification standard, and that they also do not require testing to show that such ratios are consistent over time. Likewise, it does not appear

⁴⁷ See Diane Garcia-Gonzales et al., Hazardous Air Pollutants Associated with Upstream Oil and Natural Gas Development: A Critical Synthesis of Current Peer-Reviewed Literature, *Annu. Rev. Public Health* (2019), https://cityclerk.lacity.org/online/docs/2017/17-0447_misc_40_07-29-2019.pdf#:~:text=Used%20as%20a%20biocide%20addi,tobacco%20smoke%2C%20and%20cooking%20activities.

⁴⁸ See Gregg Macey et al., Air Concentrations of Volatile Compounds Near Oil and Gas Production: A Community-Based Exploratory Study, *Environ Health*. (Oct. 30, 2014), <https://pmc.ncbi.nlm.nih.gov/articles/PMC4216869/>.

⁴⁹ See San Joaquin Valley Air Pollution Control Dist., Rule 4460 Petroleum Refinery Fence-line Air Monitoring Plan Guidelines (2022) at 6, <https://www.valleyair.org/media/vy4jehuv/rule-4460-guidelines-final.pdf> (listing minimum constituents for monitoring and stating that operator “should also consider monitoring additional pollutants beyond the above list that are produced through the facility’s specific activities and processes”).

⁵⁰ South Coast Air Quality Management Dist., Rule 1180 Fenceline and Community Air Monitoring for Petroleum Refineries and Related Facilities (2024) at 21, <https://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1180.pdf>.

⁵¹ Kern Energy, Kern Fenceline Monitoring Plan for Rule 4460 (2024), <https://www.valleyair.org/media/nd3pncxt/kor-approved-plan.pdf>.

⁵² Public Health Report at ES-16 to ES-17.

⁵³ CARB, Summary Report of the 2020, 2021, and 2023 Airborne Methane Plume Mapping Studies at 6.

that CARB provided any analysis explaining the assumption that ratios calculated based on normal operating conditions are the same as those that occur during episodes of leaks and malfunctions. If there is the potential for these ratios to change considerably during leak events—not to mention during variable weather and wind conditions—then that is another reason why the proposed methodology appears inefficient and may lead to inaccurate results.

CARB must thus specify the gas sampling and analysis methodology in all leak prevention and detection regulations, including the number of samples required and their spatial extent, based on statistics and expert analysis. Because one sample might not be sufficient to characterize the field or geologic area's produced gas, for a properly representative gas analysis, determination of the sufficient number of gas samples that need to be taken with respect to time and spatial extent should be done with statistical and expert input, for example with EPA guidance on collection of ambient air samples.⁵⁴

2. CARB should incorporate sampling recommendations from the California Scientific Advisory Panel's Public Health Report.

We ask CARB to incorporate the following air quality sampling and monitoring-related recommendations from the Public Health Report into its final SB 1137 LDRP regulations:

- Recommendation 2.1, to “[r]equire regular sampling and reporting of the composition of gas releases from upstream oil and gas development, hydrocarbon storage, and associated infrastructure including, but not limited to, the gas in the production string of wells; gas pre- and post-glycol dehydration, gases and vapors in condensate tanks; gas in gas gathering lines and associated infrastructure; gas in gas-processing plants; and gas in idle, abandoned, and idle-deserted oil and gas wells”;⁵⁵
- Recommendation 6.2, for “[s]ites with idle-deserted or abandoned infrastructure that is sited in areas slated for redevelopment” to “undergo relevant environmental testing, including studies to assess methane and non-methane volatile organic compound flux”;⁵⁶ and
- Recommendation 6.3, for additional studies “to assess the composition of gas contained in and emitted from abandoned, idle, and idle-deserted wells” in aid of evaluating “health hazards, risks, and impacts of emissions,” with samples “collected directly from production string, bradenhead, or other wellhead features,” and special effort made “to locate and mitigate potential super-emitters to the atmosphere or wells where lack of zonal isolation is more likely to lead to migration of gas and fluids in the subsurface.”⁵⁷

These recommendations relate to SB 1137's mandate (1) for operators to develop plans for any “production facility or well with a wellhead in a health protection zone,” (2) for such LDRPs to

⁵⁴ U.S. EPA, Procedures for Collecting Ambient Air Samples (Mar. 30, 2016), https://www.epa.gov/system/files/documents/2022-06/Ambient%20Air%20Sampling%28SESDPROC-303-R5%29_0.pdf.

⁵⁵ Public Health Report at ES-11.

⁵⁶ *Id.* at ES-21.

⁵⁷ *Id.*

encompass “chemical constituents, such as methane and hydrogen sulfide, as well as potential toxics of highest concern in the region,” and (3) for CARB to “adopt regulations as necessary to implement and set performance standards by regulation for the emissions detection system.”⁵⁸

3. CARB should address all potential exposure pathways for air pollution.

Release of contaminants into the ambient air and regional airshed is just one pathway by which chemicals associated with oil and gas production enter the environment, with volatilization and vapor intrusion from soil and water contamination posing additional public health risks. For example, the Public Health Report found that “[a] total of 232 chemical additives . . . reportedly used in California oilfields are volatile and pose potential risks to air quality and human health,” including 176 additives with “slow to moderate atmospheric oxidation rates (half-lives >2 hours), indicating increased potential for longer-range atmospheric transport and subsequent inhalation exposure.”⁵⁹ It is therefore critical for CARB to require comprehensive leak prevention and detection standards that address these other pathways.

4. Protecting all communities, including communities selected and consistently nominated for the Community Air Protection Program under AB 617, will strengthen the regulations.

CARB established the Community Air Protection Program (CAPP) pursuant to AB 617 to reduce air pollution in overburdened communities. Starting in 2018, CARB has selected communities for community air monitoring plans (CAMPs) and/or Community Emission Reduction Programs (CERPs) from a list of consistently nominated communities. Selected and consistently nominated communities experience high cumulative pollution burdens and are especially vulnerable to exposure from leaks from oil and gas facilities.

To help identify communities with the greatest need for CAMPs and CERPs, CARB has developed the Study of Neighborhood Air near Petroleum Sources (SNAPS) program, which includes “limited-term, intensive air quality monitoring with a particular focus on production facilities” in communities located near oil and gas facilities.⁶⁰ SNAPS evaluated 56 candidate communities using metrics including CalEnviroScreen score,⁶¹ air pollution levels, and well

⁵⁸ SB 1137, § 2, 2021–2022 Leg., Reg. Sess. (Cal. 2022) (enacting Pub. Resources Code, § 3283(a)).

⁵⁹ Public Health Report at ES-13.

⁶⁰ CARB, Study of Neighborhood Air near Petroleum Sources, <https://ww2.arb.ca.gov/our-work/program/s/study-neighborhood-air-near-petroleum-sources/about> (accessed Aug. 25, 2026).

⁶¹ Notably, while CalEnviroScreen has been a reliable tool for identifying disadvantaged communities in the past, a number of groups on this letter have raised concerns with the accuracy of the CalEnviroScreen 5.0 tool, which appears to exclude all or part of known environmental justice communities, such as Shafter and Delano. Accordingly, until the Office of Environmental Health Hazard Assessment resolves these concerns, CARB should use CalEnviroScreen 4.0 instead of version 5.0. *See* Leadership Counsel for Justice & Accountability, Comments on CalEnviroScreen 5.0 Updates (Apr. 1, 2026), <https://oehha.ca.gov/system/files/dockets/21799/21882-leadership-counsel-justice-accountability/comment-letter-calenviroscreen-50-lcja.pdf>.

density, and selected communities in Kern County and Los Angeles counties for focused air monitoring specifically because of oil and gas impacts.

As there is substantial overlap between SB 1137 health protection zones and AB 617 communities, CARB should cross-reference data from AB 617-related programs like CAPP and SNAPS when developing its SB 1137 implementation regulations. Likewise, CARB should use its independent rulemaking authority to extend LDRP protections to all AB 617 communities, to the extent those communities would not already be protected by SB 1137.

5. CARB should require monitoring at source locations, the fenceline, and within frontline communities.

We endorse continuous onsite monitoring via placement of air quality sensors at source locations, at the fenceline, and throughout neighborhoods within 3,200 feet of oil and gas wells. Colorado has adopted such community monitoring systems. A nongovernmental organization called Boulder AIR, directed by atmospheric chemist and NOAA-INSTAAR scientist, Detlev Helmig, utilizes the most accurate, low sensitivity ambient air monitors technologically available to monitor oil field pollutants such as low concentration VOCs.⁶² The organization has multiple monitoring sites on Colorado's Front Range, allowing the researchers to track plumes of benzene and other risk drivers across a large geography.⁶³ CARB should be utilizing the same technology and partnering with research organizations who are able to track releases of VOCs.

The Draft Regulations do not clarify or provide requirements for the specific placement of monitors, especially in light of variable weather and wind conditions. CARB's final regulations must require that all monitors are well placed throughout source facilities, along the fenceline, and in frontline neighborhoods, and that operators must employ multiple monitors per site to ensure full coverage. CARB must also provide mechanisms for CARB follow up and enforcement should an operator fail to comply with these requirements.

C. CARB should shorten compliance timelines and employ tighter standards to ensure leaks are detected and reported to the public before health impacts occur.

The Draft Regulations must be strengthened with regard to limits on EDS operational downtime, requirements for notification of leaks at specific ambient thresholds regardless of the operator's proportionate contribution toward the exceedance, and requirements for community notification, including notification as soon as possible after a leak is detected.

⁶² See Boulder Atmosphere Innovation Research, What We Do (2020), <https://bouldair.com/>; Arctic Research Consortium of the U.S., Detlev Helmig, <https://www.arcus.org/researchers/38983/display> (accessed Aug. 25, 2026).

⁶³ See Boulder Atmosphere Innovation Research, Current Air Monitoring Programs (2020).

1. CARB should set stricter limits on EDS operational downtime.

As an initial matter, the 10 percent operational downtime referenced in the Draft Regulations is far too high—that is equivalent to 36 days per year when communities are exposed without monitoring. Air monitoring uptime should be at least 95 percent uptime with a goal of 98–99 percent instead of 90 percent. Since oil and gas leaks often occur as sporadic, intermittent releases, sensor uptime should be as close to 100 percent as possible to ensure potentially health-harming plumes are not missed.⁶⁴ For example, the City and County of Broomfield, Colorado’s oil and gas air monitoring program typically reports sensor uptime greater than 95 percent and often as high as 99 percent.⁶⁵ Sensor uptime determines whether a monitoring program can reliably detect pollution events. Any gaps in monitoring coverage create opportunities for health-harming plumes to travel to communities undetected. The Broomfield air monitoring program demonstrates that a sensor uptime of 95 to 99 percent is achievable and necessary to ensure confidence that the data reflects real-world conditions of exposure.

2. Notification should occur at objective science-based thresholds regardless of an individual operator’s proportionate contribution.

Regardless of the degree of background methane, CARB must specify that the point at which ambient methane becomes a notifiable health hazard would stay the same based on the best available science.⁶⁶ Any incremental addition from an oil and gas operator that pushes the measurable level over the science-based threshold must trigger the alarm and notification requirements to the same extent as if the operator had contributed 100 percent of those emissions. CARB must “ensure that permissible alarm set points are fixed with respect to best available public health information, regardless of background concentrations.”⁶⁷ In tandem with an audible alarm system that automatically alerts at the specified trigger level, CARB must further require operators to post permanent signage in languages relevant to the community and visible to community members warning of the danger of poison gas when the alarm sounds.

CARB’s final regulations must likewise ensure the limit for methane is low enough to avoid both flammability and explosive hazards.

3. CARB should require public notification of leaks sooner than 48 hours after a leak is detected and strengthen the alarm response measures overall.

The Draft Regulations are generally unclear as to the exact mechanisms for how communities will be alerted and protected should leaks occur, and must include much stronger standards for operators’ alarm response protocols overall.

⁶⁴ I-Ting Ku et al., Air Quality Impacts from the Development of Unconventional Oil and Gas Well Pads: Air Toxics and Other Volatile Organic Compounds, *Atmospheric Environment*, Vol. 317 (2024) 120187, <https://doi.org/10.1016/j.atmosenv.2023.120187>.

⁶⁵ Ajax Analytics & Colorado State University, Q2 2025 Quarterly Oil and Gas Air Quality Monitoring Report, prepared for City and County of Broomfield.

⁶⁶ Srebotnjak Report at 5.

⁶⁷ *Id.*

Because leaks are detrimental to the health and safety of nearby communities, particularly people within the setback distance, notification of community members “as soon as potential leaks and other hazards are detected” is “critically important.”⁶⁸ The text of SB 1137 states that LDRPs must “. . . include a communication plan for notification of local emergency responders and public health authorities, the division, and people in the community” if a leak is not stopped within 48 hours.⁶⁹ This does not preclude shorter notification timeframes. Any potential exposure to toxins can be extremely hazardous to health, especially to vulnerable, immunocompromised, or disabled populations.

LDRPs should therefore include publicly accessible plans for community notification no later than the first two-to-three hours after a leak cannot be stopped, or within the first twelve hours of initial leak detection if between 10:00pm and 7:00am, “depend[ing] on identification of the substances that are leaking and their toxicity to humans” especially at sensitive receptors with children, pregnant women, the elderly, and those with preexisting conditions.⁷⁰ Notification should occur regardless of weekends, holidays, and non-business hours. CARB should also require oil and gas operators to notify sensitive receptors within 3,200 feet of oil and gas drilling activities any time the “alarm trigger point” is reached for methane or hydrogen sulfide.

For community notification to be successful, it must be carried out through multiple accessible methods and in languages relevant to that community. This should include, at minimum, mailers, phone calls, text messages, and door hangers and the communications should be delivered in any relevant languages. The notification should identify the source of the leak, the operator responsible, the potential substances involved in the leak, the geographic area affected, and contact information for relevant agencies, first responders, and/or the operator for community members who may be experiencing health impacts, odors, or other concerns. The notification should also include recommended steps residents can take to protect themselves from potential harm. All people in the setback area should be notified if a leak cannot be stopped within 12 hours. This further ensures that this crucial public health information is readily accessible.

Leak notification via the operator’s website is not sufficient or supported by the text of SB 1137. The text of the bill states that the website should include “the number of leaks that occurred, the time needed to repair the leak, and a brief description of the leak, including the impact on air quality and community exposure,” and “[t]he number of times the surrounding community was notified after a leak persisted for 48 hours.”⁷¹ The statute clearly intends that the information available online is regarding past notifications and leaks, not current or ongoing leaks. Notification may also be on the website but must be distributed to the community through other methods. Likewise, the protocols for what toxins are being monitored, the leak thresholds for notification, and the plans for the response should be available to communities whose health would be affected if a leak occurs.

⁶⁸ *Id.*

⁶⁹ SB 1137 § 2 (enacting Pub. Resources Code, § 3283(b)).

⁷⁰ Srebotnjak Report at 6.

⁷¹ SB 1137 § 2 (enacting Pub. Resource Code, § 3286(a)(4)).

Promptly notifying the public in an effective but not panic-inducing manner can ensure the most vulnerable community members have the opportunity to prepare in advance for leaks that would impact their health.

Likewise, CARB should require public notification prior to every instance where operators use acid for maintenance or enhanced oil recovery, rather than the current system of annual aggregated chemical reporting, due to the risk of acute harm in the event of leaks or spills. Tanker trucks often arrive unannounced near frontline communities, loaded with thousands of gallons of acid, while workers covered head-to-toe in protective equipment operate equipment.⁷² Our allies have documented chemical burns on plants downwind of drill sites due to acidic fumes.

D. CARB should employ measures to maximize transparency and accountability.

Greater transparency by CARB will advance the goals of this rulemaking to protect public health and prioritize environmental justice communities. As discussed in VISION's previous comments, frontline communities have a moral prerogative to know when and where oil and gas activity may impact their health and safety, and to access records that provide information on this activity in their neighborhoods. Moreover, amidst growing concerns about worsening air quality problems and the devastating impacts of climate change, all California residents will significantly benefit from access to data on fossil fuel development in the state.

CARB must therefore strengthen the Draft Regulations to ensure transparent data access and accountability. Better access for the public will also provide the added benefit of expanding CARB's enforcement capabilities. Oil and gas operators will be providing CARB with significant operations data and other important records pursuant to the final regulations. Community members can help ensure the oil and gas industry's compliance with applicable requirements and hold CARB accountable for any failures in oversight.

1. CARB should require more frequent reviews, updates, and interim LDRP reporting to protect communities.

We are disappointed that CARB's Draft Regulations and technical documents are dated January 5, 2026, but the agency did not release them to the public for review until July 1, 2026. Community members who live in close proximity to oil and gas activity throughout the state—and who are disproportionately people of color who are already overburdened by high levels of pollution from existing wells every day—cannot afford any further delays in this rulemaking process and implementation of SB 1137.

⁷² John Schreiber, Residents Allege Oil Site Brought Acid, Toxic Chemicals to South L.A. Neighborhood (Apr. 23, 2015), <https://mynews1a.com/life/2015/04/23/residents-allege-oil-site-brought-acid-toxic-chemicals-to-south-l-a-neighborhood/>. See also State Impact Pennsylvania, Hydrochloric Acid's Role in the Fracking Process, NPR (July 6, 2012), <https://stateimpact.npr.org/pennsylvania/2012/07/06/hydrochloric-acids-role-in-the-fracking-process/> (documenting spill of 4,700 gallons of hydrochloric acid at drilling pad).

The industry-sponsored ballot referendum targeting SB 1137 already delayed relief by over a year by pushing the effective date of the law from January 2023 to June 2024, followed by further delays when the Legislature subsequently pushed back key deadlines in the law. Frontline residents now will not see operators' leak detection and response plans until July 2028, with the plans going into effect in July 2030—i.e., eight long years after SB 1137's passage.⁷³ As final compliance is not required until 2030, CARB should use its authority to require interim reporting from operators so frontline communities are not left in the dark for four more years with no visibility into industry's progress.

Likewise, while the Draft Regulations currently require operators to review and update their LDRPs "at least once every five (5) years from the date of its initial approval by CalGEM,"⁷⁴ CARB should require a review of LDRPs at least annually, with mandatory re-review triggered by: (a) any Notice of Violation at the site, (b) any change in well status (e.g., idle to active, ownership transfer), or (c) new peer-reviewed science on health-damaging air pollutants leading to updated cancer risk assessments by the Office of Environmental Health Hazard Assessment (OEHHHA) (i.e., adding new constituents to LDRPs).

2. CARB must ensure access to data to facilitate public engagement and input.

CARB must create a transparent process for making *all* air quality data within its purview associated with oil and gas drilling and development publicly available, not just data related to leak prevention and detection. This information includes but is not limited to details concerning enforcement data such as inspection reports, Notices of Violation, and penalty orders. Its final regulations must also require operators to submit data to CARB periodically, rather than only "upon request."⁷⁵

In particular, because self-policing by the oil and gas industry has failed for decades, CARB's SB 1137 final regulations should require periodic reporting of monitoring data, including submission of daily reports that are publicly available through an online portal. Data should be organized per site, rather than only per well, so that residents living near a multi-well pad, for example, are not forced to run multiple separate searches to understand their potential cumulative exposure. Rather, CARB should default to a site-level view that includes aggregate leak history, violations, and emissions data, among other information. CARB should also include objective standards and metrics that community members and the public can use to interpret the monitoring data and measure compliance.

Any failures to submit data should result in consequences that incentivize better reporting and data collection, including Notices of Violation with automatic penalties or the immediate pause of operations at the well site until the operator catches up and resumes submissions. Community members should also be clearly informed about options for how they can record or document

⁷³ CalGEM, Notice to Operators 2014-14 Regulatory Requirements for Operator Compliance with Senate Bill 1137 (Dec. 13, 2024), https://www.conservation.ca.gov/calgem/Documents/2024-14%20NTO%20SB1137_AB218_ADA.pdf.

⁷⁴ Cal. Code Regs., tit. 14, § 93503(d) (proposed).

⁷⁵ See *id.* § 93505(m)(8)(L) (proposed).

concerns or complaints about drill sites in their neighborhoods, who is responsible for reviewing and addressing that documentation, and how communities will be notified.

Each operator's proposed LDRP should be publicly available and accessible, with a summary or one-pager version available to help the public understand the key elements without needing to navigate potentially long and complicated plans. As the regulatory agency in charge, CARB must provide a dedicated online platform where community members can access all leak-related information including LDRPs. The platform should contain a searchable map where residents can enter their address and search—preemptively—any LDRPs for companies operating in and near their community. The platform must also contain emergency response information in an easy-to-read format available in both English and Spanish, and other languages relevant to communities within 3,200 feet of oil and gas wells. Bilingual information for accessing this site should be made available in all public libraries and community health clinics.

The draft LDRPs should additionally be made public with the opportunity to provide public comments and feedback. This can allow for particularized feedback that helps ensure LDRPs are successful, such as with notification methodology and language.

VISIÓN's April 2024 letter to the Department of Conservation and CalGEM provides a detailed list of community engagement best practices related to public health and safety emergencies, non-emergency onsite work, and long-term community education and engagement projects that CARB should immediately adopt.⁷⁶ The letter also addresses the important need for the development of linguistically appropriate materials, including translation and interpretation services for the significant number of monolingual Spanish speakers in frontline communities impacted by oil and gas production.

Wherever possible, CARB should move to standardize data submissions and increase program transparency. Data standardization is important to ensure that data is comparable across monitoring systems and communities. Standardized formats allow for streamlined use by researchers and community members, making the data more accessible and translatable for use in various types of health analyses and by communities. Additionally, program transparency is critical to ensure that data are made available for use to help identify and mitigate health-harming emissions. CalGEM's own Scientific Advisory Panel advised in its Public Health Report that “[e]ffective risk management of normal and off-normal conditions in upstream oil- and gas-development infrastructure requires timely, accurate, and publicly available data on the chemical composition of emissions from oil and gas infrastructure. The limitations in existing data hinder the ability of regulators, risk managers, and researchers to track emissions and assess pollutant dispersion, community exposures, and risks to human health associated with California's upstream oil and gas development.”⁷⁷

In all instances where tabular data is requested as a component of an LDRP, that data should be submitted in .csv or a similarly accessible format, and CARB should develop one or more accompanying spreadsheets for operator data submissions. Section 93504, subdivision (m)(11) of the Draft Regulations provides that an electronic version of the LDRP “shall be submitted in

⁷⁶ VISIÓN & STAND-LA, CalGEM's Community Engagement Practices (Apr. 10, 2024).

⁷⁷ Public Health Report at ES-11.

Portable Display Format (PDF) or other format acceptable to the Executive Officer.” This limits the digital accessibility of the quantitative data enclosed in plan submissions, and the open-ended alternative sets no floor on submission quality. Collecting quantitative data in spreadsheet format will not increase compliance burden—operators generate these values in spreadsheets before converting them to PDF—while substantially increasing data accessibility.

CARB should also standardize names for on-site equipment and operational activities reported wherever possible, and should consider the data harmonization recommendations developed for Colorado’s Regulation 7 monitoring program in specifying those standards. Colorado adopted continuous operator air monitoring under Regulation 7 without specifying submission format, time resolution, or data attributes, and the resulting variety of operator formats made the data expensive and complicated to use. Ajax Analytics was contracted to improve data harmonization and ultimately provided recommendations that translate directly to the LDRP context, including: a tiered equipment-type taxonomy and a tiered operational-activity taxonomy, each reported with in-service and removal dates and geographic coordinates; standardized parameter and unit pairings, with speciated compounds reported against a controlled name list; geographic coordinates as decimal degrees to five decimal places; and date-times conforming to RFC 3339 (YYYY-MM-DD HH:mm:ssZ) so that time zone and daylight saving assumptions are never required of the reviewing agency.⁷⁸ The recommendations highlight the reduced administrative burden under a more standardized submission format. California has the advantage of setting these requirements before the first LDRP is due in 2028.

Consistent with Recommendation 2.1 of CalGEM’s Public Health Report, the independent gas composition testing results should be standardized wherever possible, and made publicly available online in an accessible format such as .csv with metadata. The Scientific Advisory Panel recommended that gas composition data from active infrastructure be reported at regular intervals and made publicly available online in a digitally accessible format, giving .csv with metadata as an example.⁷⁹ Similarly, any continuous emissions monitors (CEMs) data collected and retained by operators should be stored within an accessible format such as .csv. Data that operators retain for a decade should not be retained in a form that hinders further analysis by CARB, CalGEM, researchers, or the communities inside the health protection zone.

3. CARB must employ its air quality expertise by maintaining significant oversight over LDRPs.

CARB has unique and important expertise that should be incorporated into draft plan review and enforcement. While SB 1137 directs operators to submit LDRP plans to CalGEM, it also specifies that CalGEM’s “review and approval” must be “in consultation with and with the concurrence of” CARB.⁸⁰ CARB must maintain a strong presence in the plan-review process and must ensure that CalGEM views its feedback on matters of air quality as dispositive if CARB

⁷⁸ Ajax Analytics, Reg 7 Harmonization Recommendations Report for the Colorado Energy and Carbon Management Commission and the CDPHE Air Pollution Control Division, https://docs.google.com/document/d/1YF2th8luOcfE6UiHIY3Dv_pmslbnMutpA0sT8z7_lmE/view?tab=t.0#heading=h.74o5qxd161dh (accessed Aug. 20, 2026).

⁷⁹ Public Health Report at ES-11.

⁸⁰ SB 1137 § 2 (enacting Pub. Resources Code, § 3283(a)).

deems an LDRP insufficient. Likewise, while CARB claims that it “does not have enforcement authority,” SB 1137 contemplates joint enforcement between CARB, CalGEM, local air districts, and the State Water Resources Control Board.⁸¹

E. CARB should close dangerous exemptions that endanger public health.

To ensure full protection of frontline communities, CARB should include language in its SB 1137 final regulations eliminating previous exemptions that allowed operators to evade pollution control requirements under the Clean Air Act. In particular, the Scientific Advisory Panel, which was comprised of more than a dozen illustrious members, unanimously recommended the removal of the pneumatic device exemption, “small producer” exemption for separators and condensate tank systems, and heavy oil exemption, and further cautioned against delaying regulatory action “to reduce exposure to [oil and gas development]-related hazards.”⁸²

The Panel recognized that methane is a “co-pollutant[.]” with non-methane VOCs (NMVOCs) such as n-hexane, benzene, ethylbenzene, toluene, and xylenes, and stated in Finding 4.4 that “[t]he closure of the exemptions from statewide zero-bleed/zero-emission standards for existing low-bleed pneumatic devices and vapor recovery requirements for low-throughput separators and condensate tank systems . . . would reduce NMVOC emissions by an estimated 15 tons per year (tpy) from 50 existing natural gas-powered pneumatic devices and 208 tpy from ~2,200 small throughput separator and tank systems.”⁸³

The Panel concluded that emissions from heavy oil, pneumatic devices, and low-throughput separators and condensate tank systems “may be meaningful [to] risk of NMVOC exposure in areas with concentrated exempt infrastructure or when this infrastructure exists in close proximity to human populations.”⁸⁴ Accordingly, the Panel made the following recommendation,⁸⁵ which we hereby endorse:

⁸¹ See SB 1137 § 2 (enacting Pub. Resource Code, § 3288, which explicitly provides for joint enforcement authority over emergency regulations “as necessary to implement, administer, and enforce” each agency’s mandates; Pub. Resources Code, § 3283(a)(1), which states that CARB “and the State Water Resources Control Board shall adopt regulations as necessary to *implement* and set performance standards by regulation for the emissions detection system” and cross-references section 3288 (emphasis added); Pub. Resources Code, § 3289(a), which states that “[n]o provision of this article is a limitation on the authority or jurisdiction of . . . the State Air Resources Board”; and Pub. Resources Code, § 3290, which states that CARB, “relevant local air districts,” and other agencies “shall enter into memoranda of understanding with the division to clearly delineate respective responsibilities for implementing and enforcing health protection zones”).

⁸² Public Health Report at ES-16, 3-95.

⁸³ *Id.* at ES-15.

⁸⁴ *Id.* at ES-15 to ES-16.

⁸⁵ *Id.* at ES-16.

Recommendation 4.1. Enforced vapor recovery and LDAR regulations provide tools to enhance detection and reductions of emissions of methane and NMVOCs, including toxic air contaminants and ozone precursors to the atmosphere. Deploy measures to reduce emissions of toxic air contaminants, and ozone precursors associated with new and existing upstream oil and gas development. These measures include, but are not limited to, the following LDAR and emission control measures:

- Require zero-bleed/zero-emission all pneumatic devices across upstream oil and gas development operations regardless of when they were installed. The Colorado Department of Public Health and the Environment's Air Quality Control Commission's updated *Regulation Number 7: Control of Ozone via Ozone Precursors and Control of Hydrocarbons via Oil and Gas Emissions (Emissions of Volatile Organic Compounds and Nitrogen Oxides)* includes requirements for the use of zero-bleed and zero-emission pneumatic control devices at oil and gas well sites, both for new and modified sources as well as for existing sources, retroactively. This Colorado rule provides precedent and guidance for updated rules in California.
- Remove the "small producer" exemptions for separators and condensate tank systems and require them to comply with the 95% vapor control standard, both at the local and regional district levels and within California's Oil and Gas Methane Regulation.
- Remove the heavy oil exemption (crude oil with API gravity <20) from California's Oil and Gas Methane Regulation Leak Detection & Repair (LDAR) requirements.

Additionally, the Panel's Public Health Report implicitly supports elimination of the wellhead-only exemption by recognizing that "certain infrastructure components, such as wellheads . . . have emission profiles with high methane/non-methane hydrocarbon (NMHC) ratios."⁸⁶

While public health interests justify the removal of these exemptions for all oil and gas activities across the state, compliance with the goals and directives in SB 1137 demands that CARB remove the exemptions, at a minimum, for wells and production facilities located in health protection zones.

F. CARB should consider leak detection approaches used in other states and at the federal level.

Colorado's Project Canary provides lessons for CARB concerning fenceline monitoring. The intention of Project Canary is to create a fenceline monitoring system for methane and VOCs.⁸⁷ However, a series of recent reports have revealed significant problems with the Project and highlight the risks of relying on industry-led, voluntary certification schemes and inadequate monitoring technologies, particularly for leak detection.⁸⁸

⁸⁶ *Id.* at ES-14 to ES-15.

⁸⁷ Project Canary, A Quantitative Overview to Continuous Monitoring of Methane Emissions (Sept. 24, 2021), <https://www.projectcanary.com/white-paper/a-quantitative-overview-to-continuous-monitoring-of-methane-emissions/>.

⁸⁸ Earthworks & Oil Change International, Certified Disaster: How Project Canary and Gas Certification Are Misleading Markets (Apr. 14, 2023), <https://earthworks.org/wp-content/uploads/2023/04/Certified-Disaster-FactSheet-Final-4-14-23-1.pdf> (Certified Disaster); Earthworks & Oil Change International, Certified Gaslighting: How Gas Certification Has Gained a Policy Foothold, Even As It Fails to Prove It

Specifically, these investigative reports provide the following key lessons to CARB as it adopts regulations implementing SB 1137:

- Widely used “certified” monitoring systems, often based on low-cost sensor technology, are frequently incapable of reliably detecting emissions.⁸⁹ Major concerns exist regarding Photoionization Detector (PID) technology in particular, which is meant for indoor air quality monitoring and is insufficient for outdoor fenceline applications. On-the-ground field investigations in Colorado confirmed that PID technology is insufficient and resulted in a “stark conclusion: there was little to no relationship between the pollution events we observed and recorded, and the pollution detected by monitors”⁹⁰ Colorado’s experience with Project Canary demonstrates that certification alone does not guarantee accurate and effective detection of complex pollutant mixtures. The adoption of a multi-monitor system using advanced technologies (like lasers and spectrometry) is essential to avoid the pitfalls associated with cheaper, less reliable technologies.
- Inadequate detection of key toxics is a significant flaw in using total VOCs or methane as a surrogate for TACs like benzene. In Colorado, monitoring systems often failed to speciate emissions, meaning they could not accurately detect or quantify the most hazardous constituents of a leak.⁹¹ This aligns with the statutory provisions of SB 1137 that allow for methane as a surrogate only when a site-specific ratio is established;⁹² however, surrogacy can obscure the detection of highly toxic, co-emitted compounds if not rigorously enforced. The Colorado findings strongly support the need for more sophisticated monitoring, such as speciated benzene monitors and long-path laser systems, to catch the full spectrum of emissions.
- Monitor siting and data verification standards are critical. Monitoring locations in Colorado were often poorly sited, leading to missed emissions.⁹³ This echoes stakeholder concerns regarding ideal placement of monitors, including the need to account for plume behavior and the height of emissions. Reports of operators reusing meteorological data from miles away highlight the need for robust reporting requirements, such as requiring site photos, GPS coordinates (latitude/longitude), and monitor IDs to ensure transparency and accountability. The Colorado experience shows that without strict oversight of sensor placement and data verification, monitoring networks can be rendered ineffective.
- A critical vulnerability demonstrated in Colorado’s system that must be proactively addressed by CARB is the failure of monitoring networks to maintain continuous, reliable data streams. The Colorado experience documented significant issues with monitors being frequently offline or failing to report data, rendering the monitoring

Can Accurately Detect Emissions (June 18, 2024), https://earthworks.org/wp-content/uploads/2024/06/certified_gaslighting_report_05.pdf (Certified Gaslighting).

⁸⁹ Earthworks & Oil Change International, Certified Disaster at 4, 16, 18–25; Earthworks & Oil Change International, Certified Gaslighting at 4–5, 10–12.

⁹⁰ Andrew Klooster, Improved Monitoring Data – Will It Lead to Meaningful Action?, Earthworks (Apr. 16, 2025), <https://earthworks.org/blog/improved-monitoring-data-will-it-lead-to-meaningful-action/>.

⁹¹ See, e.g., Earthworks & Oil Change International, Certified Disaster at 23.

⁹² SB 1137 § 2 (enacting Pub. Resources Code, § 3283(a)).

⁹³ See, e.g., Earthworks & Oil Change International, Certified Disaster at 25–26.

network ineffective and undermining its public health purpose.⁹⁴ Additionally, the use of data averaging was used to hide peak events, showing that data must be reported minute-by-minute.⁹⁵ This must be handled via rigorous standards and clear and expeditious enforcement in the case of non-compliance.

- Short-duration air sampling (e.g., 15 seconds to 1 minute) in particular more accurately captures oil-and-gas-related plumes that may impact health than slower responding instruments and longer sample timeframes. Multiple Colorado studies have found that oil and gas emissions often occur as sporadic, intermittent plumes that carry elevated concentrations of HAPs.⁹⁶ Fast measurements (seconds to minutes) better reveal plumes associated with transient emissions and acute exposure events than longer duration measurements. The City and County of Broomfield, Colorado funded a state-of-the-art air monitoring program for oil and gas wells, collecting HAPs data since 2018.⁹⁷ The program utilized a multi-method approach and collected HAPs data from both longer duration samples (e.g., weekly measurements) and quicker responding instruments (e.g., APIS photo-ionization detector sensors with auto-triggered VOC canister collection). From this data, it was found that 79 percent of detected plumes were less than 30 minutes in duration with many plumes occurring for just minutes.⁹⁸ While longer duration samples (e.g., weekly) can be useful to understand potential chronic non-cancer health risks, these samples do not provide data to assess acute non-cancer risks, which have been found to impact nearby communities.⁹⁹ Because previous research finds that plumes from oil and gas typically impact a monitoring site for just several minutes, they are easily missed by slower-responding instruments.¹⁰⁰

To prevent similar failures in California, CARB's performance standards must establish clear and enforceable requirements for data reporting and management of non-reporting monitors, including:

⁹⁴ See, e.g., Earthworks & Oil Change International, *Certified Gaslighting* at 4, 10–11.

⁹⁵ See, e.g., Earthworks & Oil Change International, *Certified Disaster* at 33; Earthworks & Oil Change International, *Certified Gaslighting* at 15, 19.

⁹⁶ I-Ting Ku et al., *Air Quality Impacts from the Development of Unconventional Oil and Gas Well Pads: Air Toxics and Other Volatile Organic Compounds, Atmospheric Environment*; Meagan L. Weisner et al., *Cumulative Human Health Risk Assessment of Regional Ozone and Volatile Organic Compounds from Unconventional Oil and Gas Sites in Colorado's Front Range, Environmental Health Perspectives* 133(5) (May 28, 2025), <https://pmc.ncbi.nlm.nih.gov/articles/PMC12120841/pdf/ehp16272.pdf>.

⁹⁷ Colorado State University, Dept. of Atmospheric Science, Collett Research Group, *Broomfield Oil and Gas Air Quality Monitoring*, <https://collett.atmos.colostate.edu/research-projects/broomfield-voc/> (accessed Aug. 20, 2026).

⁹⁸ I-Ting Ku et al., *Air Quality Impacts from the Development of Unconventional Oil and Gas Well Pads: Air Toxics and Other Volatile Organic Compounds, Atmospheric Environment*; Broomfield Air Quality Event Reports, <https://trello.com/b/YVUC58v/broomfield-air-quality-event-reports> (accessed Aug. 20, 2026).

⁹⁹ Meagan L. Weisner et al., *Cumulative Human Health Risk Assessment of Regional Ozone and Volatile Organic Compounds from Unconventional Oil and Gas Sites in Colorado's Front Range*.

¹⁰⁰ I-Ting Ku et al., *Air Quality Impacts from the Development of Unconventional Oil and Gas Well Pads: Air Toxics and Other Volatile Organic Compounds, Atmospheric Environment*.

- Strict data completeness standards mandating high data completeness thresholds. Colorado’s programs suffered from monitors that did not consistently collect data. CARB should require that systems achieve a data capture rate of at least 95 percent, with a goal of 98–99 percent, to ensure that the monitoring record is comprehensive and reliable.
- Requirements that all monitoring data must be subject to rigorous data quality review, including a formal review process. In Colorado, data validation practices were often lax, allowing unreliable measurements to persist in the public record. CARB should require operators to review data for quality and validity prior to public reporting, with clear protocols for flagging or invalidating data from malfunctioning monitors.
- Requirements that all monitoring data must be reported in publicly accessible and aggregated formats. To ensure transparency and allow for independent oversight, CARB should require that all data be published via downloadable CSV files on a publicly accessible dashboard, modeled after programs like EPA’s benzene fenceline monitoring program. Data should be linked to a facility using a common identifier, such as the API number or CalGEM ID.
- A clear system of escalating penalties that address the problem of chronically non-reporting monitors, including: (1) requirements for immediate operator notification and repair, (2) mandatory “make-up” monitoring including triggering leak detection and repair inspections to compensate for data loss, (3) financial penalties for noncompliance that progressively escalate to disincentivize repeated noncompliance, particularly if monitors are offline for extended periods or if the operator fails to provide adequate justification for the downtime, and (4) shutdown of wells and production facilities that commit repeat violations. Without such repercussions, the incentive to maintain operational monitors is diminished, and the public health protection goals of SB 1137 are compromised.

By incorporating these rigorous standards, CARB can ensure that the monitoring network for SB 1137 is not only technologically robust but also consistently reliable, transparent, and accountable, avoiding the failures documented in Colorado. Indeed, Colorado’s program serves as a cautionary tale, highlighting that a program designed without rigorous performance standards, strict data quality requirements, and direct measurement of toxics will fail to protect public health. The greatest concern is that inconsistent, low-quality monitoring data creates a false sense of assurance that air quality impacts have been curbed. These lessons should inform CARB’s performance standards to ensure the monitoring systems selected are genuinely fit for purpose and consistent with the requirements in SB 1137.

In addition to the lessons from Colorado, EPA’s benzene fenceline monitoring program for petroleum refineries provides a proven and effective model for community protection that can be adapted by CARB for the SB 1137 framework. This program requires refineries to monitor the concentration of benzene at the boundary of their facilities, ensuring that any off-site migration of this carcinogenic pollutant is detected and addressed.¹⁰¹

¹⁰¹ U.S. EPA, The Benzene Fenceline Monitoring Dashboard, https://awsedap.epa.gov/public/extensions/Fenceline_Monitoring/Fenceline_Monitoring.html?sheet=background (accessed Aug. 20, 2026).

CARB should consider and adapt the following key features and benefits of the EPA program for its LDRP regulations:

- EPA's program requires the placement of monitors to detect pollutants *before* they impact surrounding communities, consistent with the intent and requirements in SB 1137 to identify leaks before emissions reach sensitive receptors. EPA's approach ensures that monitoring is focused on the pathway between the facility and the community, a principle that should be integrated into CARB's siting requirements. The counts of required monitors should be sufficient to effectively monitor the full extent of a drilling site's fenceline, and monitors must be installed in the two-dimensional plane at an altitude sufficient to intercept elevated plumes. Additionally, monitors should be installed at all potential emissions sources to quickly identify sources of fugitive emissions.
- By focusing specifically on benzene, EPA's program mandates the direct measurement of a critical TAC rather than relying solely on proxies like total VOCs or methane. This has been effective in driving reductions in HAP emissions and provides a clear, enforceable standard.
- EPA's program features a publicly accessible monitoring dashboard that allows communities to view real-time and historical data, providing an effective model for CARB's implementation of SB 1137. All collected data should be reported in accessible and aggregated formats, provided to the public via downloadable CSV files, and linked to a common facility identifier (API number or CalGEM ID). This ensures data is not only collected but is available for public scrutiny and environmental modeling.
- EPA's program includes requirements for data quality and verification. Similarly, CARB must review monitoring data to assure accuracy.
- When a facility "is found to be in noncompliance with the regulation, EPA may initiate enforcement actions that could result in the assessment of penalties and appropriate injunctive relief, including the installation of emission control equipment."¹⁰² CARB must include similar enforcement measures for operators.

The core principles of EPA's fenceline monitoring program—direct measurement of toxic constituents, strict siting requirements, rigorous quality assurance, and transparent public data reporting—provides a strong model and foundation for CARB's performance standards under SB 1137. CARB's adoption of these principles in its work finalizing LDRP regulations will ensure California implements a robust and effective monitoring system that protects public health and serves as a model for regulatory excellence.

* * * * *

¹⁰² U.S. EPA, Enforcement Alert: Benzene Fenceline Monitoring at Petroleum Refineries (Sept. 2025), <https://www.epa.gov/enforcement/enforcement-alert-benzene-fenceline-monitoring-petroleum-refineries>.

We appreciate CARB's commitment to ensuring the timely implementation of SB 1137 via strong permanent regulations that will protect communities most impacted by oil and gas operations. If you have any questions about the foregoing comments, you may reach out to any of us directly or contact Michelle Ghafar (mghafar@earthjustice.org) and Elizabeth Fisher (efisher@earthjustice.org) at Earthjustice, who helped prepare this submission.

Respectfully submitted,

Voices in Solidarity Against Oil in Neighborhoods (VISIÓN)

Emma Silber
Climate Justice Program Coordinator
Physicians for Social Responsibility – Los Angeles

Cesar Aguirre
Associate Director, Air and Climate Justice Team
Central California Environmental Justice Network

Kayla Karimi
Staff Attorney
Center on Race, Poverty, and the Environment

Bahram Fazeli
Director of Research & Policy
Communities for a Better Environment

Kyle Ferrar
Western Program Director
FracTracker Alliance

Cooper Kass
Staff Attorney
Center for Biological Diversity

Mercedes Macias Aguilar
Senior Policy Strategist
Sierra Club California

Clair Brown
Professor, Co-founder
UC Berkeley, Climate and Society Center

Laura Solorio
Protect Monterey County

Haley Ehlers
Executive Director
Climate First: Replacing Oil & Gas (CFROG)

Shoshana Wechsler
Coordinator
Sunflower Alliance

Richard Parks
President
Redeemer Community Partnership

Valerie Ventre-Hutton
Legislative Analyst
350 Bay Area Action

Quinn Eide
Executive Director
Fossil Free California Votes

Woody Hastings
Phase Out Polluting Fuels Program Director
The Climate Center

Nicole Ghio
California Director
Food & Water Watch

Jasmine Vazin
Deputy Director, Beyond Dirty Fuels Campaign
Sierra Club