



April 30, 2025

California Air Resources Board

Via Email: SB1137Implementation@arb.ca.gov

Re: Comments on the California Air Resources Board's SB 1137 Pre-Rulemaking Workshop Presentation

On March 31, 2025, Earthjustice submitted public comments to the Department of Conservation, Geologic Energy Management Division (CalGEM) on behalf of California Environmental Justice Alliance; Center on Race, Poverty, and the Environment; Central California Environmental Justice Network; Communities for a Better Environment; and Physicians for Social Responsibility – Los Angeles, concerning CalGEM's pre-rulemaking discussion draft health protection zone regulations to implement SB 1137.

We hereby request that the California Air Resources Board (CARB) incorporate those comments (appended hereto) and the related attachments to those comments (which we are providing contemporaneously via ShareFile and flash drive) into CARB's administrative record concerning the agency's development of performance standards for the emissions detection systems required within the leak detection and response plans that operators of oil and gas production wells and production facilities located within 3,200 feet of sensitive receptors must submit to CalGEM for approval under SB 1137.

We cannot overstate the importance of full and prompt implementation of all aspects of SB 1137, including those aspects under CARB's rulemaking purview, and for the agency to use its gap-filling authority to go beyond any minimum standards in SB 1137 as necessary to address the ongoing public health emergency in frontline communities exposed to contaminated air, water, and other impacts from the oil and gas industry. The Public Health Report produced by the Scientific Advisory Panel commissioned by CalGEM provides a basis for CARB to enact the strongest possible regulations supported by science, prioritizing leak *prevention* at oil and gas sites while mandating the use of the best available leak detection technology at *all* fields.

If you have any questions about these comments, please reach out to us directly at efisher@earthjustice.org and mghafar@earthjustice.org, or you may contact the signatories to the attached comments.

Sincerely,

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**CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE
CENTER ON RACE, POVERTY, AND THE ENVIRONMENT
CENTRAL CALIFORNIA ENVIRONMENTAL JUSTICE NETWORK
COMMUNITIES FOR A BETTER ENVIRONMENT
PHYSICIANS FOR SOCIAL RESPONSIBILITY – LOS ANGELES**

March 31, 2025

VIA ELECTRONIC MAIL

Department of Conservation
California Geologic Energy Management Division
ATTN: Health Protection Zone Regulations
715 P Street, MS 1907
Sacramento, CA 95814
Email: CalGEMRegulations@conservation.ca.gov

Re: Comments on SB 1137 Pre-Rulemaking Discussion Draft of Health Protection Zone Regulations

We, the undersigned environmental justice organizations, submit these comments regarding the California Geologic Energy Management Division's (CalGEM's) Senate Bill (SB) 1137 Pre-Rulemaking Discussion Draft Regulations (Pre-Rulemaking Regulations). Our organizations are part of a broad statewide coalition called Voices in Solidarity Against Oil in Neighborhoods (VISIÓN) that advocates for communities in Kern and Los Angeles counties and elsewhere that are directly and disproportionately affected by the oil and gas industry.

This letter builds on and incorporates herein our previous comment letters submitted in response to CalGEM's public health rulemaking, SB 1137 emergency rulemaking, and Request for Information regarding leak detection at oil and gas operations.¹ Those prior letters discussed measures related to oil and gas setbacks and engineering controls at well sites throughout the state.

The comments below (I) highlight the extent of the ongoing public health crisis caused by oil and gas development in California, particularly in frontline communities; (II) acknowledge CalGEM's positive steps to fully and permanently implement the protections in SB 1137; (III) urge the agency to strengthen the Pre-Rulemaking Regulations where CalGEM has appeared to narrow, limit, or weaken them instead; (IV) emphasize the need for additional critical measures that are missing in the Pre-Rulemaking Regulations; and (V) challenge any emphasis on polluters' compliance costs and preferred regulatory alternatives at the expense of public health.

¹ In particular, these comments build on and incorporate VISIÓN's comments in CalGEM's public health rulemaking, including scoping comments and comments on the Draft Public Health Regulations. We also build on and incorporate VISIÓN's comments in CalGEM's SB 1137 Emergency Rulemaking, VISIÓN's letter to Director Shabazian and Supervisor Ito concerning CalGEM's community engagement practices, and VISIÓN's comments in response to CalGEM's RFI on Leak Detection at Oil and Gas Operations.

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I. The Ongoing Public Health Crisis in Frontline Communities Underscores the Need for Strong Regulations to Protect People from Oil and Gas Development.

In the nearly three years since the California Legislature adopted SB 1137, the public health emergency in communities across the state has not abated and frontline residents have continued to face exposure to contaminated air, water, and other impacts from the oil and gas industry. This stark reality illustrates the urgent need for CalGEM to act now to adopt the most health-protective regulations implementing SB 1137 that are supported by science.

A. Scientific Evidence Conclusively Demonstrates that Proximity to Oil and Gas Wells Is Detrimental to Health and Safety.

A growing body of scientific evidence is clear that proximity to oil and gas wells causes numerous public health and safety harms. In fact, CalGEM’s own Scientific Advisory Panel came to the same conclusion just last year in its report, “Public Health Dimensions of Upstream Oil and Gas Development in California: Scientific Analysis and Synthesis to Inform Science-Policy Decision Making” (hereafter “Public Health Report”).² This peer reviewed Report finds that oil and gas wells emit toxic compounds that pollute air and water, and these contaminants cause respiratory issues and adverse birth outcomes for individuals near drilling activity.³ The Public Health Report ultimately concludes that CalGEM must implement a setback distance of “at least” 3,200 feet, and even builds the case for setbacks at larger distances where needed in especially vulnerable communities.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.

CalGEM must err on the side of public health in light of the scientifically proven, devastating impacts caused by the oil and gas industry, 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 Quality Standards (NAAQS) for years, and is not expected to meet some of the

² 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, 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>.

³ Public Health Report at 2-2, 3-17.

⁴ *Id.* at 2-2, ES-9.

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#:~:text=The%20EPA%2C%20which%20has%20approved,can%20travel%20deep%20into%20a>.

standards within even the next decade.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 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—provide another critical reason why CalGEM must adopt strong regulations implementing SB 1137. For example, 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.⁷ EPA’s super emitter program reports large leaks “of 100 kilograms per hour of methane or greater” from oil and gas facilities,⁸ with some of the leaks as large as 800 kilograms per hour,⁹ further highlighting the extent of the crisis facing frontline communities. In April 2024, residents and first responders in Bakersfield reported a leak from a nearby well site that caused symptoms including “fatigue, [a] bad headache . . . brain fog, trouble with concentration, and . . . nausea.”¹⁰ In February 2024, a pipeline burst in Bakersfield, releasing barrels of oil on a public street next to Buena Vista Elementary School.¹¹ 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.¹²

⁶ San Joaquin Valley Air Pollution Control District, *Ambient Air Quality Standards & Valley Attainment Status*, <https://www.valleyair.org/aqinfo/attainment.htm> (accessed Mar. 18, 2025); 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 U.S. EPA, *Methane Super Emitter Data Explorer*, <https://echo.epa.gov/trends/methane-super-emitter-program/data-explorer> (accessed Mar. 18, 2025).

⁸ U.S. EPA, *Methane Super Emitter Program*, <https://www.epa.gov/compliance/methane-super-emitter-program> (last updated Jan. 17, 2025).

⁹ U.S. EPA, *Methane Emissions Event Report*, <https://echo.epa.gov/trends/methane-super-emitter-program/emissions-event-report?id=2025011700010507541> (accessed Mar. 18, 2025).

¹⁰ See, e.g., Identifying Violations Affecting Neighborhoods (IVAN), *Local Reports*, Kern County (multiple reports on April 3 to 5, 2024), <https://kernreport.org/report/list>.

¹¹ 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>.

¹² 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/>.

These incidents are an ongoing reality and often impact entire communities. For example, the Nelson Court neighborhood in the City of Arvin was evacuated for more than eight months due to a gas pipeline leak that caused highly explosive levels of gas in their homes.¹³

The state's large number of idle and deserted wells are an additional significant source of pollution.¹⁴ By some estimates, two-thirds of California's 40,000 idle wells are leaking methane and volatile organic compounds (VOCs).¹⁵ Methane is a potent greenhouse gas¹⁶ known to cause difficulty breathing, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and asphyxiation.¹⁷ VOCs contribute to the formation of ozone, which inflames the lungs, constricts breathing, and can lead to death.¹⁸ 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 wells actually contribute to more than half of the district's stationary source VOC emissions.¹⁹

Inspections conducted by CalGEM and community watchdogs in recent years 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

¹³ 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.

¹⁴ See, e.g., Kyle Ferrar, *California Must Improve Its Management of Idle Wells*, FracTracker Alliance, May 2, 2024, <https://www.fractracker.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>.

¹⁵ CalGEM, *WellSTAR Data Dashboard*, https://www.conservation.ca.gov/calgem/Online_Data/Pages/WellSTAR-Data-Dashboard.aspx (accessed May 28, 2024); Eric D. Lebel et al., *Methane Emissions from Abandoned Oil and Gas Wells in California*, *Envtl. 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. EPA] agrees that if wells are leaking methane, they are likely to also leak VOCs.").

¹⁶ See U.S. EPA, *Importance of Methane*, <https://www.epa.gov/gmi/importance-methane> (last updated Nov. 1, 2023).

¹⁷ N.J. Dept. of Health, *Right to Know Hazardous Substance Fact Sheet* at 3 (2016), <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 May 31, 2024).

¹⁸ 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* at 2-20 to -24, Table 2-1 (Feb. 2013) (EPA-HQ-OAR-2008-0699-0405).

¹⁹ 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* at 3, 6 (Sept. 14, 2017), http://www.aqmd.gov/docs/default-source/fenceline_monitroing/project_2/fluxsense_project2_2015_final_report.pdf?sfvrsn=6.

areas, including some wells leaking methane at explosive levels.²⁰ Further highlighting the seriousness of the problem, CalGEM has also issued many Notices of Violation to a range of operators across the state in recent years, including several just this month, addressing leaks at poorly maintained sites and ordering the operators to complete remedial work or cease and desist activity entirely.²¹

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. 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. Key deadlines in the law were also pushed back in the recent legislative session. Frontline residents now will not see operators' sensitive receptor inventories and maps until July 2025, or operators' leak detection and response plans until July 2028, with the plans going into effect in July 2030.²²

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

II. CalGEM is Taking Steps in the Right Direction to Fully Implement the Public Health and Safety Protections in SB 1137.

We appreciate that CalGEM is moving expeditiously to build on the progress from its SB 1137 First Emergency Implementation Regulations (Emergency Regulations) and advance permanent regulations that will avoid any unnecessary regulatory gaps. We are also pleased that the Pre-Rulemaking Regulations generally move CalGEM closer to implementing the critical protections enshrined in SB 1137. Specifically, we support the following elements in the Pre-Rulemaking Regulations that reflect the language and intent of the law:

²⁰ See, e.g., 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.fractracker.org/2022/08/fractracker-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#:~:text=July%2019%2C%202022,all%20leaks%20are%20properly%20fixed.&text=All%20six%20wells%20previously%20found%20to%20be%20leaking%20methane%20are%20repaired.,-Post%2Drepair%20inspections>.

²¹ See, e.g., CalGEM, Order to Pay a Civil Penalty No. 1511, issued to Sentinel Peak Resources California LLC in Kern County (Mar. 11, 2025); Order to Pay a Civil Penalty No. 1505, issued to Petrogulf Corporation in Madera County (Mar. 3, 2025); Order to Pay a Civil Penalty No. 1484A, issued to Chevron U.S.A. Inc. in Kern, Fresno, and Monterey counties (Mar. 3, 2025).

²² 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.

- Carrying forward some of the positive elements from the Emergency Regulations, such as annual submission of a sensitive receptor inventory and map,²³ content and format specifications for sensitive receptor inventories,²⁴ and placing the burden on operators to demonstrate that a location is not within a health protection zone,²⁵
- Broader protection of parks,²⁶
- Measuring health protection zones using the property line as the measurement point for production facilities in all instances,²⁷
- Barring replacement of production facilities from outside health protection zones to within health protection zones,²⁸ and
- Specifying that replaced production facilities will be deemed out-of-service when the replacement facility is brought into service.²⁹

III. Many of the Pre-Rulemaking Regulations Unjustifiably Narrow, Limit, and Generally Weaken the Protections in SB 1137 in Favor of Industry, or Could Be Improved.

The discussion above regarding the Public Health Report illustrates the urgent need to strengthen and supplement the SB 1137 Emergency Regulations to ensure full protection of frontline communities. Instead, the Pre-Rulemaking Regulations alter the Emergency Regulations for the worse in a number of ways, or fail to remedy flaws in the Emergency Regulations that we previously flagged, including with regard to (A) water sampling and testing, (B) advanced notification, (C) new production facilities in health protection zones, (D) stratigraphic wells, (E) the definition of underground storage facilities and sensitive receptors, and (F) the ability for CalGEM to waive requirements or industry to argue that requirements do not apply.

A. Under the Text of SB 1137, CalGEM Must Empower Communities to Obtain Water Sampling and Testing Before *Any* Type of Work under a Notice of Intent in a Health Protection Zone.

The Pre-Rulemaking Regulations would improperly prevent community members from seeking water sampling and testing except where “planned work involves drilling through previously

²³ CalGEM, *SB 1137 First Emergency Implementation Regulations: Text of Proposed Regulations* (Dec. 19, 2022) (hereafter Emergency Regulations) § 1765.6, <https://www.conservation.ca.gov/calgem/Documents/SB%201137%20First%20Emergency%20Regulations%20-%20Text%2012-19-22-a11y.pdf>.

²⁴ *Id.* § 1765.7.

²⁵ *Id.* § 1765.9(d).

²⁶ CalGEM, Discussion Draft: Health Protection Zones for Oil and Gas Operations, SB 1137 Implementation Regulations, Text of Proposed Regulations (Mar. 3, 2025) (hereafter Pre-Rulemaking Regulations), § 1765.1(c)(2), <https://www.conservation.ca.gov/calgem/Documents/Discussion%20Draft%20SB%201137%20Health%20Protection%20Zone%20Regulations.pdf>

²⁷ *Id.* § 1765.2(c).

²⁸ *Id.* § 1765.5(c)(3)(D).

²⁹ *Id.* § 1765.5(c)(3)(E).

unexposed rock or formation.”³⁰ This limitation is inconsistent with both the text of SB 1137 and the purpose behind the law.

In particular, section 2 of SB 1137 (enacting section 3284(a) of the Public Resources Code) requires operators to offer to conduct water sampling “[b]efore commencing *any work that requires a notice of intention* . . . in the health protection zone . . .” (emphasis added). While the same sentence also refers to sampling “before and after drilling,” the combined directive must be interpreted liberally in favor of the health protection purposes of the law.³¹ At a minimum, notices of intent that would involve *any* type of drilling in the broadest sense—such as new drilling, redrilling, sidetracking, deepening, and repairing, altering, or otherwise reworking a well in a manner that requires the use of a drill or involves boring or driving a hole or using a piercing action—should trigger notification.³² A few examples of reworks from CalGEM’s website that involve drilling are the following: (1) “Mill out or remove casing or a cemented liner”; (2) “Reperforate existing perforations”; (3) “Perforate casing”; and (4) “Drill out any type of permanent plug or permanent bridge plug.”³³

The risk of aquifer contamination exists from the moment the formation is perforated until proper plugging and abandonment, and all types of activities for which a notice of intent (NOI) is required have the potential to cause or spread contamination, not just “drilling through previously unexposed rock or formation.” Any regulation containing this limitation would be ultra vires as inconsistent with the mandate of SB 1137 and, thus, outside the scope of CalGEM’s authority to promulgate.

Further, the sampling and testing requirement is important not just to determining whether specific activities by operators cause contamination, but in providing a currently missing data set regarding baseline levels of aquifer contamination near sensitive receptors.

³⁰ *Id.* §§ 1765.3(e), 1765.4(a).

³¹ The Public Resources Code mandates liberal construction of its statutes in favor of protecting public health, safety, and the environment. *See* Cal. Pub. Res. Code §§ 3013 (directing liberal construction of the Code “to meet its purposes”), 3011, 3106 (defining purposes of the Code as “protecting public health and safety and environmental quality” and “prevent[ing], as far as possible, damage to life, health, property, and natural resources,” and explaining CalGEM’s “mandate to minimize harm from oil and gas operation activities”).

³² *See, e.g.*, “Drill,” Merriam-Webster.com Dictionary (defining “drill” as “to bore or drive a hole in” or “to make by piercing action”), <https://www.merriam-webster.com/dictionary/drill#h6> (accessed Mar. 31, 2025); Cal. Code Civ. Proc. § 1203.51 (defining “drilling” as “drilling, digging, shooting, torpedoeing, perforating, fracturing, testing, logging, acidizing, cementing, completing or repairing”).

³³ Department of Conservation, *Frequently Asked Questions: What kind of well work requires a permit?*, <https://www.conservation.ca.gov/calgem/faqs#:~:text=Permitting%20Questions,-%E2%80%8B%E2%80%8B%E2%80%8B&text=A:%20Operators%20are%20required%20to,not%20have%20to%20be%20alter ed.&text=%E2%80%8BMill%20out%20or%20remove,annular%20spaces%20from%20the%20surface> (accessed Mar. 31, 2025).

B. Frontline Communities Are Entitled to Advance Notice of Work in Health Protection Zones to the Maximum Extent Possible.

CalGEM must notify communities of *all* NOI-related work within the health protection zone consistent with the text of SB 1137. The change in the Pre-Rulemaking Regulations to only trigger neighbor notification where “planned work involves drilling through previously unexposed rock or formation” is legally unsupportable and outside the scope of CalGEM’s rulemaking authority.

As with the water sampling requirement discussed above, the notification requirement in SB 1137 applies to “*any* work that requires a [NOI] . . .”³⁴ The law states that “the operator *shall* *contact* property owners and tenants within a 3,200-foot radius of the wellhead in writing with a record of delivery . . .”³⁵ While SB 1137 specifies the timeline for notification as “at least 30 days before commencing drilling,” this clause must be read together in context with the prior language in the same section requiring notice before “any work that requires a [NOI].” The word “drilling” must be interpreted liberally to have its broadest meaning, consistent with principles of statutory interpretation, the health and safety purposes behind SB 1137, and the environmental and health protection purposes of the Public Resources Code.³⁶ As discussed further above, interpreting the word “drilling” in SB 1137 as only referring to work involving “previously unexposed rock or formation” is overly restrictive and legal unsupportable.

Additionally, CalGEM should specify the format of neighbor notifications, require operators to document and submit proof of notification, and provide a procedure for handling non-responses, including at least two attempts to contact the owner or tenant.³⁷ Relatedly, CalGEM should delete language in section 1765.4.1, subdivision (a)(3)(D), of the Pre-Rulemaking Regulations requiring “necessary accommodations” by a property owner prior to water sampling. A tenant in possession of property has the ability and right to consent to sampling and provide necessary access without the property owner’s involvement.

Further requiring a writing with “a record of delivery” to seek baseline water testing as currently drafted in section 1765.4.1, subsection (a)(3)(C), of the Pre-Rulemaking Regulations could impose an economic burden to the extent it requires frontline community members to take time off from work during business hours to go to a post office or other mail delivery provider and pay for the cost of postage and delivery confirmation services like certified mail with return receipt. CalGEM should clarify that email is also an acceptable method of seeking baseline water testing and should require that oil and gas operators provide a follow-up email address in their initial notification to property owners and tenants.

³⁴ S.B. 1137, § 1, 2022 Leg., Reg. Sess. (Cal. 2022) (hereafter SB 1137) (enacting Cal. Pub. Res. Code § 3284(a)) (emphasis added).

³⁵ *Id.* (emphasis added).

³⁶ Cal. Pub. Res. Code §§ 3011, 3013, 3106.

³⁷ Tanja Srebotnjak, Comments on CalGEM’s Pre-Rulemaking Draft Public Health Regulations (Dec. 16, 2021) (hereafter Srebotnjak Report) at 8.

C. The Pre-Rulemaking Regulations Facilitate New Production Facilities in Health Protection Zones, Contrary to Legislative Intent.

We are disappointed to see the Pre-Rulemaking Regulations water down the provisions in the Emergency Regulations with regard to the repair and replacement of production facilities in health protection zones, including by (1) eliminating a broad definition of “production facility,” (2) expanding the circumstances under which operators may construct production facilities in health protection zones beyond the bounds of SB 1137’s narrow public health and safety exception, and (3) eliminating CalGEM’s oversight of production facilities in favor of self-policing by industry.

As a general rule, SB 1137 states that “[n]o new production facilities shall be constructed or operated in a health protection zone . . .”³⁸ Two relevant exceptions are for (A) production facilities “associated with” an NOI approved pursuant to a statutory exception, such as the exception allowing NOIs in health protection zones where necessary “[t]o prevent or respond to a threat to public health, safety, or the environment,” or (B) production facilities “determined by the division to be necessary to protect public health and safety.”³⁹ These exceptions must be interpreted narrowly to prevent them from swallowing the rule,⁴⁰ but the Pre-Rulemaking Regulations do the opposite.

1. The Pre-Rulemaking Regulations Should Not Eliminate the Broad List of What Constitutes a “Production Facility.”

Section 1765.5 of the Emergency Regulations interpreted “production facility” broadly, requiring operators to submit a New Production Facility Notice to CalGEM containing certain mandatory information “prior to new construction or operation of” tanks, pressure vessels, fired pressure vessels or boilers, compressors, water treatment equipment, gas treatment equipment, pipelines, pits or sumps, pumps, flares, production safety systems, and “[a]ny other equipment that would increase production capacity associated with the oil field.” Interpreting “production facility” to include all of these types of equipment is consistent with a preexisting definition of “production facility” in the Public Resources Code.⁴¹

The Pre-Rulemaking Regulations delete the laundry list of qualifying types of equipment that is present in the Emergency Regulations, giving the impression that CalGEM intends “production facility” to have some other meaning. As CalGEM’s regulations must be consistent with the

³⁸ SB 1137 § 2 (enacting Cal. Pub. Res. Code § 3281(b)).

³⁹ *Id.*

⁴⁰ *See, e.g., Rodriguez v. FCA US LLC*, 17 Cal. 5th 189, 199 (2024) (“[T]he general rule is that exceptions in a statute are to be narrowly construed.”); *City of Los Angeles v. PricewaterhouseCoopers, LLP*, 17 Cal. 5th 46, 64 (2024) (recognizing that statutes should be interpreted to promote rather than defeat their general purpose, and to “avoid an interpretation that would lead to absurd consequences” (citation omitted)).

⁴¹ *See* Cal. Pub. Res. Code § 3010 (defining “production facility” as “any equipment attendant to oil and gas production or injection operations including, but not limited to, tanks, flowlines, headers, gathering lines, wellheads, heater treaters, pumps, valves, compressors, injection equipment, and pipelines that are not under the jurisdiction of the State Fire Marshal pursuant to Section 51010 of the Government Code”).

Public Resources Code,⁴² CalGEM should add back in the list of equipment types that qualify as production facilities, or add an explicit cross-reference to the definition of “production facility” in section 3010 of the Public Resources Code.

2. *The Pre-Rulemaking Regulations Improperly Expand the Circumstances Under Which Operators May Construct or Operate Production Facilities in Health Protection Zones.*

The Emergency Regulations established a procedure under which *most* operators seeking to construct production facilities in health protection zones would need to (a) submit a New Production Facilities Notice to CalGEM proving that the facility satisfied a statutory exemption or exception (i.e., not actually in a health protection zone, associated with an NOI for work that independently satisfies a statutory exception, or “necessary to protect public health and safety”), and (b) wait until CalGEM confirmed the operators’ claims and approved the New Production Facilities Notice prior to construction or operation. The Emergency Regulations exempt only a limited category of production facilities from the Notice and preapproval requirement.

The Pre-Rulemaking Regulations allow a much broader category of production facilities in health protection zones, either on the implied premise that the facilities are not actually “new” construction, or by allowing industry to self-certify that the facilities are “necessary to protect public health and safety,” without adequate regulatory safeguards to verify those claims. In addition to being inconsistent with principles of statutory construction, broad exceptions and exemptions from SB 1137 “should be avoided,” as they “will likely diminish health protections for communities and other sensitive receptors.”⁴³

a. *Replacing, relocating, altering, or modifying existing production facilities would, or could, involve prohibited “new” construction in health protection zones.*

The text of SB 1137—including the general ban on “new” production facilities—must be liberally construed in favor of protecting public health and the environment.⁴⁴ As drafted, the Pre-Rulemaking Regulations would unduly perpetuate harmful pollution from oil and gas activities near communities—running counter to the intent behind SB 1137.

The Emergency Regulations deemed repairs or replacements (we objected to the inclusion of replacements) as falling outside the “new” facilities ban, in the following circumstances—

- (2) *Repairs or replacements* of existing production facilities *if all of the following is true* of the replacement production facility:
 - (A) The replacement production facility performs the same function as the production facility it replaced.

⁴² See Cal. Gov’t Code § 11342.2 (stating where a statute confers rulemaking authority on an agency that “no regulation adopted is valid or effective unless consistent and not in conflict with the statute and reasonably necessary to effectuate the purpose of the statute”).

⁴³ Public Health Report at ES-10.

⁴⁴ Cal. Pub. Res. Code §§ 3011, 3013, 3106.

- (B) The replacement production facility is in the same physical location and does not exceed the geographic footprint of the replaced facility.
- (C) The replacement production facility does not result in an increase in throughput capacity.
- (D) The operator collects and maintains detailed records, including photographs, demonstrating that the replacement production facility replaces an existing production facility, and makes those records available to the Division upon request.⁴⁵

The Pre-Rulemaking Regulations expand the category of exempted production facilities from only “[r]epairs or replacements” to also include “[a]lteration[s],” “modification[s],” and “relocations.” Likewise, the Pre-Rulemaking Regulations expand the circumstances under which such repairs, replacements, alterations, modifications, and relocations can take place without the need for oil and gas operators to provide any kind of documentation or seek pre-approval. The Pre-Rulemaking Regulations delete the limitation that a replacement production facility in a health protection zone must be in the “same physical location” and must “not exceed the geographic footprint of the replaced facility” in favor of nebulous language authorizing any of the listed categories of work as long as the production facility “will continue to be interconnected between the same components and well or wells and existing production facilities” and “will continue to be located within the same existing secondary containment,” if applicable.⁴⁶ The Pre-Rulemaking Regulations further omit a limitation from the Emergency Regulations that exempted production facilities may “not result in an increase in throughput capacity.”⁴⁷

While truly repairing an existing production facility in a health protection zone would be allowed under the text of SB 1137 as not amounting to a “new” facility, replacing or relocating a production facility would require construction of entirely “new” facilities, making such activities prohibited under the text of SB 1137. Moreover, the terms “alteration” and “modification” are ambiguous enough that they cannot be used as a categorical basis to exempt production facilities—in other words, altering or modifying an existing production facility could, in some circumstances, be so extensive as to equate to the construction of a “new” facility,⁴⁸ especially for alterations or modifications that are not in the same physical location of the original facility, exceed the original facility’s footprint, or increase throughput capacity.

Accordingly, CalGEM must eliminate the exemption for replacing and relocating production facilities in health protection zones entirely, and must require operators seeking to alter or modify production facilities to submit a New Production Facilities Notice demonstrating that the proposed work would not rise to the level of a “new” facility under a liberal reading of the term “new” or would otherwise be allowed as necessary to protect public health and safety.

⁴⁵ Emergency Regulations § 1765.5(c) (emphasis added).

⁴⁶ Compare Emergency Regulations § 1765.5(c)(2)(B) with Pre-Rulemaking Regulations § 1765.5(c)(3)(B)–(C).

⁴⁷ Compare Pre-Rulemaking Regulations § 1765.5(c)(3)(D) with Emergency Regulations § 1765.5(c)(2)(C).

⁴⁸ See “New,” Merriam-Webster.com Dictionary (defining “new” as “different from one of the same category that has existed previously”), <https://www.merriam-webster.com/dictionary/new> (accessed Mar. 31, 2025).

b. The construction of temporary production facilities associated with spills or leaks is not automatically “necessary” to protect public health and safety.

While the Emergency Regulations explicitly require the submission of a New Production Facility Notice “even if construction and operation of the new production facility is on a temporary basis,” the Pre-Rulemaking Regulations exempt “[t]emporary production facilities associated with oil spill or leak response and cleanup, plugging and abandonment operations, or production facility or facility decommissioning and removed within 60 days after completion of permitted work, or for a longer period if necessary and authorized by the Division.”⁴⁹ As previously stated, exceptions to statutory default rules, such as for production facilities “necessary to protect public health and safety,” must be narrowly construed to avoid swallowing the rule.⁵⁰ An operator claiming that constructing a temporary production facility is “necessary” for oil spill or leak response and cleanup does not automatically make such claims true.⁵¹

To prevent abuse of this exception, CalGEM should require the operator to submit a New Production Facility Notice even when the proposed facility relates to oil spill or leak response and cleanup, and should independently verify the truth or falsity of the operator’s claims before deeming the facility exempt.

c. SB 1137 preempts state or local laws requiring new production facilities in health protection zones, and we are unaware of any federal laws or regulations that would preempt SB 1137.

The Pre-Rulemaking Regulations contain a new exemption for “[n]ew or temporary production facilities required by federal, state, or local laws and regulations.”⁵² We learned from the public workshop held March 20, 2025 that CalGEM intended this exemption to address situations where federal, state, or local agencies might issue an order to operators instructing them to fix their production facilities or make improvements that could potentially be construed as “new” production facilities (such as vapor recovery on tanks) but which are necessary to address a risk to public health and safety. We appreciate the intent here but encourage CalGEM to add clarifying language making clear that the exemption is conditioned on the new production facilities being “necessary to protect public health and safety” to avoid any risk of abuse or misinterpretation.

As drafted, frontline community members have raised concerns that CalGEM may have in mind equipment used for carbon capture and storage (CCS), or that the wording could be interpreted as supporting claims that the federal government can disregard SB 1137 on federal lands in California.

⁴⁹ Compare Emergency Regulations § 1765.5(a) with Pre-Rulemaking Regulations § 1765.5(c)(4).

⁵⁰ *Rodriguez*, 17 Cal. 5th at 199.

⁵¹ See *Thurston Cnty. v. Cooper Point Ass’n*, 148 Wash. 2d 1, 12–13 (2002) (upholding a restrictive definition of “necessary to protect basic public health and safety and the environment” to avoid broadly doing “just what the [law] prohibits”).

⁵² Pre-Rulemaking Regulations § 1765.5(c)(5) (emphasis added).

First, the protections of SB 1137 also apply on federal land.⁵³ To the extent the reference to “required” production facilities is intended as a catch-all acknowledgment of the Constitution’s Supremacy Clause,⁵⁴ it is important to keep in mind that federal laws do not automatically preempt state laws. Instead, consideration of federal preemption “starts with the basic assumption that Congress did not intend to displace state law”⁵⁵ and that a “clear and manifest purpose of Congress” is required to supersede “the historic police powers of the States . . .”⁵⁶ Here, it seems highly unlikely that a federal law exists with a “clear and manifest” Congressional purpose to mandate creation of a production facility within 3,200 feet of a sensitive receptor and, thus, to preempt SB 1137’s general ban on “new” production facilities.⁵⁷

Second, despite the exemption in SB 1137 for underground gas storage wells, CCS has no business occurring in health protection zones in light of the dangers posed by large quantities of carbon dioxide and potential for mass casualties involving a range of injuries and even asphyxiation in the event of a containment breach.⁵⁸ Regardless, while cities and counties have authority to go beyond state minimum standards for the protection of human health and the environment,⁵⁹ they do not have authority to act in the other direction and weaken state-mandated public health and environmental protections. And to the extent preexisting state law would have required new production facilities in health protection zones, SB 1137 has superseded any statute in direct conflict.⁶⁰

Therefore, as drafted without the caveat making clear that the exemption is tied to production facilities necessary for public health and safety, the proposed exemption could allow conduct contrary to the general rule in SB 1137 against new production facilities in health protection zones, in excess of agency authority.

⁵³ See *California Coastal Comm’n v. Granite Rock Co.*, 480 U.S. 572, 580 (1987) (recognizing that the Constitution’s Property Clause “does not automatically conflict with all state regulation of federal land” and rejecting claim that federal law preempted application of the California Coastal Act to mining activity on federal land in California).

⁵⁴ U.S. Const. art. VI, cl. 2.

⁵⁵ *Maryland v. Louisiana*, 451 U.S. 725, 746 (1981).

⁵⁶ *Brown v. Mortensen*, 51 Cal. 4th 1052, 1060 (2011) (citations omitted).

⁵⁷ Cf. *id.* at 1059 (explaining that preemption must be express or must involve conflict, obstacle, or field preemption).

⁵⁸ See Paul Blackburn, *Is Your Goose Cooked? The Potential Health Impacts of CO₂ Pipeline Ruptures*, Pipeline Fighters Club, Sept. 25, 2024, <https://pipelinefighters.org/news/is-your-goose-cooked-the-potential-health-impacts-of-co2-pipeline-ruptures/>; P. Harper, *Assessment of the Major Hazard Potential of Carbon Dioxide*, Health & Safety Executive (June 2011) at 3, <https://www.hse.gov.uk/carboncapture/assets/docs/major-hazard-potentialcarbon dioxide.pdf>; U.S. EPA, App. B—Part I: *Acute Health Effects of Carbon Dioxide* (June 2015), <https://www.epa.gov/sites/default/files/2015-06/documents/co2appendixb.pdf>.

⁵⁹ See AB 3233 § 3 (enacting Cal. Pub. Res. Code § 3106.1(a), which specifies that local entities may “impose regulations, limits, or prohibitions on oil and gas operations or development that are more protective of public health, the climate, or the environment than those prescribed by a state law, regulation, or order”).

⁶⁰ See *Lopez v. Sony Elecs., Inc.*, 5 Cal. 5th 627, 634 (2018) (“If conflicting statutes cannot be reconciled, later enactments supersede earlier ones . . .”) (citation omitted).

3. **The Pre-Rulemaking Regulations Unreasonably Eliminate CalGEM's Oversight over Production Facilities in Health Protection Zones in Favor of Self-Policing by the Oil Industry.**

Where a New Production Facility Notice is required, the Emergency Regulations specify that “construction or operation of the new production facility shall not commence” until CalGEM’s verification that the production facility was not in a health protection zone or an exception applied. The Pre-Rulemaking Regulations eliminate the pre-approval requirement in all instances, even for production facilities in health protection zones that would *not* satisfy the bounds of the new exemptions discussed above. Instead, for facilities where a Notice would still be required, the Pre-Rulemaking Regulations allow the industry to self-regulate—permitting operators to certify to CalGEM that their proposals are in compliance with the law without looking behind those promises and verifying their truth or falsity. We have seen from the past that this approach is *not* protective of human health and the environment and can lead to disastrous results.⁶¹ CalGEM’s oversight is necessary and must be restored in the final regulations.

D. CalGEM Lacks Authority to Exempt Stratigraphic Wells from Any Portions of SB 1137.

In a conversation with CalGEM, the agency expressed its intention to exempt stratigraphic wells from all or part of SB 1137. Regardless of historic usage, it is our understanding that stratigraphic wells are currently used primarily to gather information about storage strata for CCS purposes.⁶² While we acknowledge that “underground gas storage wells and attendant production facilities” are exempt from SB 1137,⁶³ our frontline community members are nevertheless concerned that expanding this exemption to include stratigraphic wells could pave the way for expanded CCS activities in health protection zones,⁶⁴ which could put communities at significant risk of injury from exposure to large quantities of carbon dioxide in the event of a

⁶¹ See Letter from Kobi Naseck et al. to CalGEM re: Request for Information—Leak Detection at Oil and Gas Operations at 13–15 (May 31, 2024) (discussing the problems with industry self-reporting).

⁶² See Battelle Memorial Institute, *The 4 Types of CO₂ Injection Wells* (discussing the use of “preliminary sequestration stratigraphic test well[s] . . . to evaluate the suitability of a site for CO₂ sequestration”), <https://inside.battelle.org/blog-details/the-4-types-of-co2-injection-wells> (accessed Mar. 19, 2025); Cal. Air Res. Bd. (CARB), *Carbon Capture and Sequestration Protocol under the Low Carbon Fuel Standard* at 17 (Aug. 13, 2018) (defining “[s]tratigraphic test well” as “a hole drilled for the sole purpose of gaining structural or stratigraphic information to aid in subsurface exploration”) (emphasis added), https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf.

⁶³ SB 1137 § 2 (enacting Cal. Pub. Res. Code § 3281(d)).

⁶⁴ See U.S. EPA, *Geologic Sequestration of Carbon Dioxide: Underground Injection Control (UIC) Program Class VI Implementation Manual for UIC Program Directors* at 3-5 (Jan. 2018) (“The EPA recognizes that some owners or operators may elect to use existing, previously constructed infrastructure for [carbon storage]. Such infrastructure may include previously constructed . . . stratigraphic test wells . . .”), https://www.epa.gov/sites/default/files/2018-01/documents/implementation_manual_508_010318.pdf; CARB at 48 (explaining that required testing and logging activities for new CCS projects “may be undertaken during . . . drilling of a stratigraphic test well” and discussing the potential to “transition” a stratigraphic test well into a CO₂ injection well), https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf.

containment breach, especially to the extent that a new stratigraphic well in a health protection zone could be converted into a CCS storage well after completing its ostensible information gathering function.

The single reference to stratigraphic wells in the Pre-Rulemaking Regulations is unclear and takes the form of a sentence fragment tacked onto the end of a section. Section 1765.3(b) of the regulations discusses requirements for NOIs associated with wells with wellheads within a health protection zone, and subpart (3) of this section states that such an NOI must include a statement containing the legal basis for approving the NOI, as follows:

(3) A statement of the basis for approving the notice of intention under:

(A) Public Resources Code section 3281, subdivision (a); or

(B) Public Resources Code section 3281.5, as applicable. A stratigraphic well drilled for the purpose of gathering geologic information in connection with a development for nonfossil fuel production and injection and related uses.

As the above screenshot shows, the language about stratigraphic wells is incomplete, consisting of a noun clause without any verb. As section 3281.5 of the Public Resources Code provides that the restrictions applicable to health protection zones “do not apply in the context of development for nonfossil fuel production and injection and related uses,” it appears that CalGEM may have intended to state that stratigraphic wells drilled for the purpose of gathering geologic information will be treated as “development for nonfossil fuel production and injection and related uses” for purposes of section 3281.5.

If so, we dispute the characterization that stratigraphic wells which could be used for CCS purposes⁶⁵ are “development for nonfossil fuel production and injection and related uses.”⁶⁶ Instead, “[a] buildout of CCS projects threatens to extend the life of fossil fuels”: “CCS projects are energy intensive, and often powered by dirty energy, adding to the source’s overall carbon footprint,” and “[t]he vast majority of the captured carbon is currently used for enhanced oil recovery . . .”⁶⁷

Accordingly, the statutory exemption in SB 1137 for “development for nonfossil fuel production and injection and related uses” does not apply to stratigraphic wells. Only the Legislature has authority to grant exemptions from statutory terms.⁶⁸ Regulations attempting to create exemptions inconsistent with statutory terms are ultra vires.

⁶⁵ U.S. EPA, *Geologic Sequestration of Carbon Dioxide: Underground Injection Control (UIC) Program Class VI Implementation Manual for UIC Program Directors* at 3-5; CARB at 48.

⁶⁶ Cal. Pub. Res. Code § 3281.5.

⁶⁷ Earthjustice, *Carbon Capture: The Fossil Fuel Industry’s False Climate Solution* (Sept. 19, 2023), <https://earthjustice.org/article/carbon-capture-the-fossil-fuel-industrys-false-climate-solution#:~:text=A%20buildout%20of%20CCS%20projects,in%20the%20clean%20energy%20transition.>

⁶⁸ See *Carmel Valley Fire Prot. Dist. v. State*, 25 Cal. 4th 287, 300 (2001) (recognizing that “the rulemaking authority of an agency is circumscribed by the substantive provisions of the law governing the

Moreover, as discussed above, the notice and sampling requirements in SB 1137 apply broadly to “any work that requires a notice of intention . . . in the health protection zone,”⁶⁹ which would include stratigraphic wells. Indeed, such wells would even satisfy CalGEM’s attempt to read the notice and sampling requirements as applying only to new drilling (see above).

E. The Pre-Rulemaking Regulations Make Concerning Changes to Some Definitions and Fail to Address Previously Identified Flaws in Other Definitions.

The definition of underground gas storage facilities is overbroad and the definitions of “residence” and “building” are underbroad to fulfill the health protection mandates of SB 1137.

1. Definition of Underground Gas Storage Facilities

The proposed definition of underground gas storage facilities in section 1765.10(a) is overly broad and could exclude more wells or production facilities than intended by SB 1137. While SB 1137 states that its protections do not apply to “[u]nderground gas storage wells and attendant production facilities,”⁷⁰ the Pre-Rulemaking Regulations broaden this scope by making “[a]ll wells *associated with* an underground gas storage facility” exempt.⁷¹ As we previously commented, the wording could potentially allow an operator to claim that all of the oil production wells it operates are “associated with” one of its underground storage facilities, which would undermine the intent behind SB 1137. SB 1137 only exempts underground gas storage wells and production facilities, not additional wells “associated with” such storage.

Likewise, the Pre-Rulemaking Regulations would exempt “[a]ll elements of an underground gas storage project as defined in Section 1726.1, subdivision (a)(6),” which appears to go beyond just “attendant production facilities” as SB 1137 stipulates. The cited section of the Code of Regulations broadly defines “[u]nderground gas storage project” as “a project for the injection and withdrawal of natural gas into an underground reservoir for the purpose of storage . . . includ[ing] the reservoir used for storage, the confining strata, gas storage wells, observation wells, and any other wells approved for use in the project,” along with “the wellheads and, to the extent that they are subject to regulation by [CalGEM], attendant facilities, and other appurtenances.”⁷²

CalGEM must narrow the scope of wells and facilities that would qualify for the underground gas storage facilities exemption, as only the Legislature, not CalGEM, has authority to create additional exemptions.

agency” and “[r]egulations that alter or amend the statute or enlarge or impair its scope are void”) (citation omitted).

⁶⁹ SB 1137 § 2 (enacting Cal. Pub. Res. Code § 3284).

⁷⁰ *Id.* (enacting Cal. Pub. Res. Code § 3281(d)).

⁷¹ Pre-Rulemaking Regulations § 1765.10(a)(1)–(2).

⁷² Cal. Code Regs., tit. 14, § 1761.1(a)(6).

2. *Residences as Sensitive Receptors*

We recognize CalGEM’s intent in eliminating “building[s] or structure[s] in a location not authorized for residential use by local ordinance and zoning law” from the definition of “sensitive receptor”⁷³ is to avoid inadvertently encouraging the oil industry to enlist police to dismantle unhoused encampments. While our member organizations support this intent, it is unfortunate that some unhoused persons may feel like they have no other option but to camp within an unhealthy distance of oil and gas activities. We encourage CalGEM to research the prevalence of this phenomenon and to continue thinking about compassionate solutions in cooperation with other relevant state and local agencies.

We are also concerned with the potential for unintended consequences stemming from the wording change. There may be a perverse incentive for cities and counties to rezone property from residential to some other category in an attempt to cater to the oil industry. People who moved to areas zoned for residential at the time should continue to have the full protections of SB 1137 and the implementing regulations in perpetuity, even if the zoning category later changes. The regulations should clarify that residences grandfathered in as legal non-conforming uses remain sensitive receptors.

The regulations should also clarify that residences authorized by conditional or special use permit are protected. For example, in some areas mobile home parks may not automatically be deemed “residential,” but may require a special use permit or conditional use permit. Nevertheless, properly permitted mobile homes should be protected as residences. Similarly, many people live in recreational vehicles (RVs) in RV parks or campgrounds that should be treated as residences, even if a special use permit is required or the zoning goes by another name like “recreational.” Additionally, it is likely that many people have been permitted to live in non-residential zones through special use permits granted for a variety of fact-specific circumstances.

A final point on mobile homes and RVs—while these types of residences qualify as “living quarter[s]” for purposes of the sensitive receptor definition,⁷⁴ a later section of the Pre-Rulemaking Regulations could potentially be misconstrued to the contrary. Section 1765.9 states that operators seeking to prove a location is not in a health protection zone must provide a statement that, in relevant part, documents “[a]ll buildings, including all permanent, installed, rigid-walled structures” located within 3,200 feet of the location at issue.⁷⁵ As mobile homes and RVs could be viewed as non-permanent structures, CalGEM must clarify the regulations to ensure that people who live in these types of residences are protected.

F. CalGEM Should Be Wary of Language that Could Lead to Abuse and Misuse by Industry or Rogue Regulators, Especially Regarding Statutory Exceptions, and Should Add Additional Safeguards.

Objective, non-discretionary, and non-waivable standards are necessary to avoid the potential for abuse or misuse of statutory exemptions and other regulations by agency officials and industry.

⁷³ Pre-Rulemaking Regulations § 1765.1(c)(1).

⁷⁴ *Id.* § 1765.1(c)(1).

⁷⁵ *Id.* § 1765.9(a)(1)(A).

1. CalGEM Should Cabin Any Waiver Authority.

CalGEM should not give itself discretion to waive requirements designed to protect human health and the environment, especially with regard to community notification and water sampling and testing. Nevertheless, the Pre-Rulemaking Regulations do just that. Operators submitting NOIs for wells with wellheads within a health protection zone on the basis of a threat to “public health, safety, or the environment,” and operators seeking to invoke the public health, safety, and environment exception to construct new production facilities in a health protection zone, must normally submit certain documentation to prove that the exception applies, including (1) a description of the threat, (2) characterization of the magnitude of the risk, (3) discussion of the threat timeframe, (4) an assessment of how the proposed operations would reduce or eliminate the threat, (5) relevant data or engineering studies, (6) discussion of potential alternatives, and (7) anything else CalGEM requests.⁷⁶ Even so, the Pre-Rulemaking would allow CalGEM to waive “some or all” of these requirements “if [CalGEM] determines that it has information and documentation necessary to evaluate the threat and proposed operations.”⁷⁷

Additionally, the Pre-Rulemaking Regulations would allow CalGEM to waive neighbor notification and water sampling requirements “if the operator demonstrates that the delay in well work associated with the requirements of this section is likely to result in significant damage to life, health, or natural resources.”⁷⁸

While we understand that there could be circumstances where prompt action is truly “necessary” to protect public health, safety, or the environment, we are concerned that there is potential for these exceptions to be misused by industry, and for any waiver authority to be abused by rogue regulators. As discussed further below, we are advocating for CalGEM to include a set of guidelines for the types of NOIs and production facilities that would, or would not, be truly necessary under the intent of SB 1137, which would help to alleviate our concerns.

2. CalGEM Should Evaluate Sensitive Receptors Objectively.

As we previously commented, operators should not be able to argue that anything that meets the definition of a sensitive receptor somehow does not actually qualify as a sensitive receptor. Yet the Pre-Rulemaking Regulations carry forward the concept of a “potential sensitive receptor” from the Emergency Regulations by instructing operators “seeking to demonstrate that a location is not within a health protection zone” to identify all buildings, areas open to the public for outdoor recreation, and sites “that the Division has identified as a potential sensitive receptor” within 3,200 feet, and allowing operators to “explain why each of the features identified do not meet the definition of a ‘sensitive receptor’ . . .”⁷⁹ A feature either is, or is not, a sensitive receptor based on objective definitions in the regulations. It is important that CalGEM applies objective definitions and criteria uniformly when assessing operator claims that a feature within 3,200 feet of a wellhead is not a sensitive receptor, resolving any doubt in favor of the public.

⁷⁶ *Id.* §§ 1765.3(c)(1)–(7), 1765.5.1(1)–(7).

⁷⁷ *Id.* § 1765.3(d).

⁷⁸ *Id.* §§ 1765.3(e), 1765.4(c).

⁷⁹ *Id.* § 1765.9(a)(1)(C).

3. **The Regulations Should Include Additional Guidelines Designed to Limit the Misuse of Statutory Exceptions.**

As discussed above, SB 1137 enacted an exception from the prohibition on NOIs within health protection zones for “notices of intention necessary . . . [t]o prevent or respond to a threat to public health, safety, or the environment,”⁸⁰ and a similar exception for production facilities “necessary to protect public health and safety.”⁸¹ We are concerned about the potential for these exceptions to be misused by the oil industry and improperly expanded in scope without guidelines promulgated as part of the implementation regulations.

We appreciate the start that CalGEM has made in section 1765.3(c) regarding the type of information operators must provide in order to prove that the purpose of a proposed NOI “is to prevent or respond to a threat to public health, safety, or the environment,” including the following:

- (1) A description of the threat to public health, safety, or the environment,
- (2) A description and characterization of the magnitude of the risks and harms associated with the threat, including the likely populations or protected measures that may be affected,
- (3) Discussion of the timeline of the threat, including potential short- and long-term impacts of the threat,
- (4) An explanation of how the proposed operations will reduce or eliminate the threat,
- (5) Any data or engineering studies demonstrating the existence of the threat and the magnitude of potential harms, including any relevant well test results, pressure test results, mechanical integrity logs, cement bond logs, and any other relevant documentation,
- (6) Discussion of any potential alternative approaches to address the threat and reasons why the alternatives are less effective or not necessary to address the threat.⁸²

Even so, additional restrictions are necessary to protect against abuse of this exception. We encourage CalGEM to specify the following:

- SB 1137’s general prohibition on NOIs in health protection zones will be liberally construed in favor of protecting human health and the environment.⁸³
- In the interest of protecting public health, safety, and the environment, the health, safety, and environment exceptions will be narrowly construed against granting an exception.⁸⁴

⁸⁰ SB 1137 § 2 (enacting Cal. Pub. Res. Code § 3281(a)(1), (b)).

⁸¹ *Id.* (enacting Cal. Pub. Res. Code § 3281(b)).

⁸² Pre-Rulemaking Regulations § 1765.3(c)(1)–(7).

⁸³ Cal. Pub. Res. Code §§ 3011, 3013, 3106.

⁸⁴ *Rodriguez*, 17 Cal. 5th at 199; *PricewaterhouseCoopers*, 17 Cal. 5th at 64. A less restrictive definition would more broadly allow operators to do what SB 1137 otherwise prohibits and would thereby be inconsistent with legislative intent, along with dictionary definitions. *See Thurston Cnty.*, 148 Wash. 2d at 12–13 (rejecting less restrictive definition of “necessary to protect basic public health and safety and the environment” as “not sustainable,” as such “proposal does just what the [law] prohibits”).

- The operator shall have the burden of proof to demonstrate entitlement to an exception based on objective evidence, with doubts resolved in favor of denying the NOI.⁸⁵
- When an operator seeks to invoke the health, safety, and environment exception for an NOI, CalGEM will review the information provided by the operator pursuant to section 1765.3(c), and any other relevant information, and make a determination on a case-by-case basis based on the objective evidence.
- CalGEM will interpret “necessary” to mean only those actions *required* to protect public health, safety, or the environment, as opposed to actions merely considered “appropriate,” “reasonable,” or “suitable.”⁸⁶
- In determining whether an action is truly necessary—i.e., required—to protect public health, safety, and the environment, CalGEM will assess the benefit of allowing an exception against the additional harm to public health, safety, and the environment of allowing a rework or redrill to proceed (essentially adding years or even decades to the active life of a well) rather than sunsetting the well through proper plugging and abandonment.
- In determining whether an action is truly necessary, CalGEM will consider whether there is a substantial, ongoing threat or a mere hypothetical possibility of future harm.⁸⁷
- Where the primary purpose of an NOI is to prolong the active life of a well or production facility as opposed to addressing a truly emergency situation, CalGEM should deem the exemption inapplicable.

It is especially important that the public health, safety, and environment exceptions not apply to wells or production facilities that have reached the end of their active lives and cannot be put to further active use without being reworked. In such circumstances, *plugging and abandonment* should be deemed necessary to protect health, safety, and the environment, and *not* a notice of intent to rework. This is true even though wells and production facilities at the end of their active lives may have issues such as cracked casing that could create some degree of public health risk, or may have been constructed using materials and technologies that are no longer the best available. Even so, a rework NOI to repair casing would not be truly “necessary” in the case of a well no longer capable of actively producing, regardless of the cracked casing or construction materials, and the plugging and abandonment process would provide a superior avenue to address any health risks.

⁸⁵ This proposed regulation would be consistent with the regulations for when an operator seeks to demonstrate that a location is not within a health protection zone. See Pre-Rulemaking Regulations § 1765.9(d) (“If the Division finds that the location is within a Health Protection Zone or that the operator has not sufficiently demonstrated that the location is not within a Health Protection Zone, then the subject location is within a Health Protection Zone.”).

⁸⁶ See, e.g., *City of Port Huron v. Amoco Oil Co., Inc.* (1998) 229 Mich. App. 616, 625–30 (interpreting “actions necessary to protect the public health, safety, or welfare, or the environment, or the natural resources” to mean only *required* actions); *Thurston Cnty.*, 148 Wash. 2d at 12, 15 (upholding restrictive definition of “necessary” as meaning “indispensable,” “absolutely required,” or “needed to bring about a certain effect or result”).

⁸⁷ See *Thurston Cnty.*, 148 Wash. 2d at 11–12, 15 (upholding determination that proposed sewer line was not “necessary” as an exception to a ban on extending or expanding urban services to rural areas where there was no current threat but only the potential for future problems).

IV. Additional Measures Necessary to Implement SB 1137 and Fully Protect Public Health Are Missing from the Pre-Rulemaking Regulations.

Ideally, CalGEM's permanent regulations should also promulgate additional health protections included explicitly in SB 1137, proposed in its draft public health regulations, and recommended in its Scientific Advisory Panel's Public Health Report.

A. The Permanent Regulations Must Implement All the Requirements Enshrined in SB 1137.

The Pre-Rulemaking Regulations appear to leave out several key provisions in SB 1137 with no explanation. At this juncture of the rulemaking process where there will be fewer opportunities to address obvious gaps moving forward, CalGEM should move without further delay to bring the permanent regulations in line with the text of SB 1137.

For example, Section 3281(c) of SB 1137 requires oil and gas operators to obtain individual indemnity bonds "sufficient to pay the full cost of properly plugging and abandoning the operator's well or wells, and decommissioning any attendant production facilities" for NOIs approved in the health protection zone via court order. The Pre-Rulemaking Regulations do not include any provisions implementing this provision, however. To the extent the indemnity bond requirement is not self-executing, we encourage CalGEM to enact additional regulatory language ensuring full compliance with this requirement.

The purpose of a bond is to ensure that polluters—not taxpayers—pay the cost of plugging wells and decommissioning attendant facilities.⁸⁸ California's bond requirements, however, are notoriously ineffective at compelling operators to properly plug and abandon wells and decommission related facilities. As a result, the state has thousands of wells that are orphan and idle wells, with their ranks only set to grow.⁸⁹

CalGEM should determine the amount of the individual indemnity bond in accordance with, and to the maximum extent authorized in, section 3205.3 of the Public Resources Code. Section 3205.3, subdivision (a), gives CalGEM the authority to require additional financial assurance based on factors beyond well depth and count. CalGEM's reliance on well depth and count in setting bonding requirements severely undervalues decommissioning costs, which incentivizes operators to desert their wells thus generating shortfalls in available bond funds. Likewise, declining market conditions likely will fuel more well desertion and bond forfeiture in the absence of increased bond amounts. CalGEM should require even higher financial assurance for wells within Health Protection Zones, since these wells are more dangerous due to their

⁸⁸ California Council on Science & Technology (CCST), *Orphan Wells in California: An Initial Assessment of the State's Potential Liabilities to Plug and Decommission Orphan Oil and Gas Wells* at 32 (2020), <https://ccst.us/wp-content/uploads/CCST-Orphan-Wells-in-California-An-Initial-Assessment.pdf> (An operator must file a bond, "to cover . . . the eventual costs of plugging the well and/or environmental impacts caused by the well, in the event the operator at the time the well is terminated is unable or unwilling to do so.").

⁸⁹ CCST, *Report: Orphan Wells in California* (2020), <https://ccst.us/wp-content/uploads/CCST-Orphan-Wells-in-California-One-Pager.pdf>.

location in close proximity to sensitive locations.

In addition, sections 3282(b) (posting operator contact information), 3282(c) and (d) (nighttime noise and lighting limitations), 3282(e) (dust control measures), 3282(f) (suspension of production facilities for noncompliance with vapor venting rules), and 3282(g) (representative chemical analyses for produced water) of SB 1137 must all be incorporated into the permanent regulations.

B. The Permanent Regulations Should Implement and Strengthen Closely Related Requirements from CalGEM’s Draft Public Health Regulations.

SB 1137 and its implementing regulations overlap considerably with CalGEM’s work in the public health rulemaking it initiated in 2019. Indeed, the adoption of SB 1137 came on the heels of CalGEM’s progress in the public health rulemaking and its release of draft regulations proposing the same 3,200-foot setback and similar engineering controls later included in SB 1137. The Scientific Advisory Panel’s Public Health Report also came out of the public health rulemaking and is now being used by CalGEM to support the rulemaking package for SB 1137. The Report’s conclusions and recommendations further highlight that a full range of measures “is necessary to mitigate public-health risks associated with upstream oil and gas development in California.”⁹⁰

Agencies have “gap-filling authority” to promulgate regulations that “fill in the details of the statutes enacted by the Legislature,”⁹¹ as long as those regulations are consistent with the text of the statute and reasonably necessary to carry out the agency’s legislative purposes.⁹² Accordingly, “standards for administrative application of a statute need not be expressly set forth; they may be implied by a statutory purpose.”⁹³ Here, the statutory purpose of SB 1137 is to provide “[f]urther assistance . . . to frontline communities that have been most polluted by the fossil fuel industry by cleaning up pollution, remediating negative health impacts, and building resilient infrastructure to prepare for the unavoidable impacts of climate change.”⁹⁴ CalGEM has broad rulemaking authority “necessary to carry out the purposes of” the Public Resources Code in matters relating to oil and gas.⁹⁵ All of the recommendations in the Public Health report and public health rulemaking discussed herein are consistent with SB 1137’s purpose and CalGEM’s authority, and reasonably necessary to effectuate the protection of frontline communities contemplated by the Legislature.

Thus the agency should not disregard the significant investments put into the public health rulemaking to date, and should ensure that its SB 1137 permanent regulations build on and

⁹⁰ Public Health Report at ES-1.

⁹¹ *Morning Star Co. v. Bd. of Equalization*, 201 Cal. App. 4th 737, 747 (2011).

⁹² Cal. Gov’t Code § 11342.2.

⁹³ *Batt v. City & Cnty. of San Francisco*, 184 Cal. App. 4th 163, 171 (2010) (quotations omitted).

⁹⁴ SB 1137 § 1(e).

⁹⁵ Cal. Pub. Res. Code § 3013.

incorporate provisions from its draft public health regulations released in October 2021.⁹⁶ The draft public health regulations are similarly based in CalGEM's standalone rulemaking authority in the Public Resources Code,⁹⁷ further highlighting that the agency can act now to make the SB 1137 permanent regulations consistent with them.

Specifically, sections 1766.8 (non-emergency spill reporting), 1773.1, 1773.1.1, 1773.1.2 (containment requirements), 1773.2, 1773.4 (tank bottom leak detection and repair), 1773.5 (regulation of out-of-service production facilities), 1774.1 (pipeline inspection and testing), 1776.1 (pipeline cleanup and abatement), 1777 (maintenance and monitoring of production facilities, safety systems, and equipment), 1722.4 (cementing casing), 1722.6 (drilling fluid program), and 1723 (plugging and abandonment) of the draft public health regulations are all consistent with the spirit and intent of SB 1137 and reasonably necessary to remediate against negative health impacts but are missing from the Pre-Rulemaking Regulations.⁹⁸ CalGEM should enact these provisions as part of the SB 1137 permanent regulations.

CalGEM should not only *add* missing provisions, but it should also *strengthen* key aspects of the draft public health regulations that are consistent with SB 1137 and enact the stronger version now as part of the permanent regulations, in an effort to comprehensively address the multiple health hazards and risks associated with oil and gas development both at the local community level and statewide.

1. CalGEM and CARB Should Better Address Air Emissions.

Air emissions are the most well-documented threat to public health from oil and gas extraction, and the engineering control measures in SB 1137 and CalGEM's draft public health regulations include important protections for local and regional air quality until a complete phase-out of all neighborhood drilling and statewide fossil fuel production occurs. We urge CalGEM to strengthen these controls as part of the SB 1137 permanent regulations. We are also eager to see the following recommendations further reflected in the draft regulations soon to be released by the California Air Resources Board (CARB) related to the leak detection and response plan requirements in SB 1137.

⁹⁶ CalGEM, *Pre-Rulemaking Draft Public Health Regulations* (Oct. 21, 2021) (hereafter Draft Public Health Regulations), <https://www.conservation.ca.gov/calgem/Documents/public-health/PHRM%20Draft%20Rule.pdf>.

⁹⁷ See, e.g., *id.* at 3 (CalGEM citing sections 3013 and 3106 of the Public Resources Code as the source of its rulemaking authority for creation of a setback exclusion area in its Public Health Regulations, with additional reference to sections 3011, 3106, and 3270), <https://www.conservation.ca.gov/calgem/Documents/public-health/PHRM%20Draft%20Rule.pdf>.

⁹⁸ All of these citations are based on the text of CalGEM's Draft Public Health Regulations released in October 2021 and refer to sections of the Code of Regulations, title 14, that will be enacted once the regulations are enacted.

a. Tanks

CalGEM and CARB should consider the recent recommendations of Physicians, Scientists, and Engineers (PSE) for Healthy Energy in strengthening the regulations applicable to tanks.⁹⁹ Upstream liquid storage tanks have emerged as the single largest fugitive emissions source of both methane and VOCs—despite being underestimated in previous inventories—creating a need to reduce tank-related venting and leaks by means such as vapor recovery units.¹⁰⁰ Specific policy recommendations from the PSE report include (i) “inhibiting the usage of formaldehyde,” which increases toxic emissions associated with liquid storage tanks; (ii) targeting methanol, 2-propanol, and ethanol for further restrictions to reduce occupational inhalation exposures; (iii) “[i]dentify[ing] and implement[ing] vapor control measures aimed at reducing fugitive leaks from liquid storage tanks, especially from tank thief hatches” to reduce health-damaging air pollutants; and (iv) adding “retrofit and replacement requirements for thief hatches and dehydrators on condensate tanks and for produced water tanks, both new and existing.”¹⁰¹

CalGEM should also include measures that address so-called “small producers” of oil and gas and their exemptions from critical air quality permit and pollution control requirements relevant to tanks at the local level. For example, the San Joaquin Valley Air Pollution Control District currently does not require small producers to obtain construction or operation permits for their heavy oil tanks or meet VOC control requirements for such tanks.¹⁰² CalGEM should work with local agencies to address these regulatory gaps.

We further endorse the following tank-related proposals from Dr. Tanja Srebotnjak, who provided expert testimony on behalf of VISION on CalGEM’s draft public health regulations (Srebotnjak Report): specifying examples of authorized methods of secondary containment; requiring better recordkeeping to help with compliance monitoring; and mandating testing before leaking equipment may be returned to operational status.¹⁰³

b. Dust

As SB 1137 specifies minimum dust control measures, but states that the statutory list is not exhaustive,¹⁰⁴ CalGEM should include all feasible dust control measures to mitigate fine particulate matter (PM_{2.5}) and PM₁₀ emissions. For example, the Fugitive Dust Mitigation Measures Tables maintained by the South Coast Air Quality Management District separate out oil and gas production activity by phase (construction and demolition, materials handling, paved

⁹⁹ Drew R. Michanowicz et al, *Methane and Health-Damaging Air Pollutants from the Oil and Gas Sector: Bridging 10 Years of Scientific Understanding* at 7 (Oct. 6, 2021), https://www.psehealthyenergy.org/wp-content/uploads/2022/07/Full-Report_Bridging-10-Years-of-Scientific-Understanding.pdf.

¹⁰⁰ *Id.* at 6–7, 14.

¹⁰¹ *Id.* at 4-19, 4-22, 5-15.

¹⁰² San Joaquin Valley Air Pollution Control Dist. Rule 1020, § 3.45; Rule 2020, § 6.6.12; Rule 4623, § 4.3.

¹⁰³ Srebotnjak Report at 9–10.

¹⁰⁴ See SB 1137 § 2 (enacting Cal. Pub. Res. Code § 3282(e), stating that “[d]ust control measures to be employed within property boundaries shall include, but are not limited to, the following . . .”).

roads, unpaved roads, and storage piles) and source activity (i.e., conveyors, storage piles, mud/dirt trackout, demolition and debris removal, wind-related activity, etc.).¹⁰⁵ CalGEM should require appropriate mitigation measures to address each of these phases and sources. In particular, CalGEM should “add the mixing of drilling muds to the list of dust control measures because of the potential for drilling mud components and additives such as barite powder and calcium carbonate to escape into the air.”¹⁰⁶

A key measure that is missing is the lack of opacity monitoring, which precludes enforcement of the dust control measures. Further, CalGEM should require operators to use an on-site construction manager to ensure implementation of the proposed measures.

c. Venting and Flaring

The proposed requirement for a vapor venting prevention system in section 1766.1 of the draft public health regulations is designed to “ensure[] that no venting to atmosphere occurs,” which is important to the reduction of atmospheric methane and, thus, public health. PSE’s 2021 study showed that flaring and venting during oil production were “the highest contributors to sector emissions [of methane], accounting for 32% and 24%, respectively.”¹⁰⁷ Even so, section 1766.1 contains no explicit prohibition on vapor venting and no consequences for vapor venting such as suspension or shutdown of operations. CalGEM and CARB should prohibit vapor venting and require reporting whenever it occurs, suspension of operations until the source of the vapor is identified and any leak is repaired, and permanent shutdown of wells and production facilities that repeatedly violate such prohibitions. CalGEM and CARB should further specify the types of information operators must provide in connection with inspections.¹⁰⁸

Even though flaring also represents a major source of emissions, section 1766.1 of the draft public health regulations only addresses venting, with no reference to flaring. The inclusion of a regulation designed to “ensure[] that no venting to atmosphere occurs” reflects CalGEM’s implicit recognition of the public health need to eliminate venting as a source of emissions. A similar prohibition on flaring is a necessary corollary. The PSE study cited above shows that flaring is an even bigger source of methane emissions than venting, and flaring currently occurs at oil and gas wells in major oil-producing regions of the state like the San Joaquin Valley.¹⁰⁹ A prohibition on flaring would significantly reduce public health and safety risks in frontline communities and go a long way toward addressing the statewide impacts of flaring on air quality.

CalGEM and CARB should use their gap-filling authority to prohibit both venting and flaring and specify the consequences if operators violate this ban. Importantly, such regulations should apply to both new and existing wells and production facilities throughout the state, and should require implementation at the earliest feasible date.

¹⁰⁵ South Coast Air Quality Mgmt. Dist., *Fugitive Dust*, <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies/fugitive-dust> (accessed Mar. 20, 2025).

¹⁰⁶ Srebotnjak Report at 8.

¹⁰⁷ Michanowicz at 3-9.

¹⁰⁸ Srebotnjak Report at 7.

¹⁰⁹ San Joaquin Valley Air Pollution Control District Rule 4311, § 3.33.

d. Health-Damaging Air Pollutants of Concern (HDAPs)

CalGEM and CalGEM should adopt the Srebotnjak Report's recommendation that any leak detection system must require continuous monitoring for gases other than just methane and hydrogen sulfide. While methane and hydrogen sulfide are two HDAPs 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,"¹¹⁰ 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.¹¹¹ Other specific constituents include sulfur dioxide, formaldehyde, and ammonia.¹¹² CalGEM and CARB should include all of these constituents and categories of constituents in the list of required analytes.

Regarding hydrogen sulfide leak detection, CalGEM should lower the alarm trigger point included in its draft public health regulations from 5 parts per million (ppm) to 2 ppm, consistent with Occupational Safety and Health Administration (OSHA) data and the Srebotnjak Report.¹¹³ The SB 1137 permanent regulations should likewise ensure the limit for methane is low enough to avoid both the flammability and explosive hazards.¹¹⁴

CalGEM and CARB should also close the loophole in section 1766, subdivision (b)(2)(D), of the draft public health regulations regarding leak detection, which would give CalGEM blanket discretion to approve higher alarm trigger points for the detection target chemical constituents "[i]f the operator is able to demonstrate background levels of the target constituents in the area covered by the plan." The current wording could lead to claims that the trigger point should constantly be raised and lowered based on prevailing winds and seasonal shifts in air quality, which would not be a functional system. Moreover, 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.

Regardless of the degree of background methane, the SB 1137 permanent regulations should specify that the point at which ambient methane becomes a notifiable health hazard would stay the same based on the best available science. Any incremental addition from an oil and gas operator that pushes the measurable level over the science-based threshold should trigger the alarm and notification requirements to the same extent as if the operator had contributed 100 percent of those emissions. CalGEM and CARB should "ensure that permissible alarm set points are fixed with respect to best available public health information, regardless of background concentrations."¹¹⁵ In tandem with an audible alarm system that automatically alerts at the

¹¹⁰ Srebotnjak Report at 4.

¹¹¹ See generally Gonzalez; 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>.

¹¹² Michanowicz at 6.

¹¹³ Srebotnjak Report at 5–6.

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 5.

specified trigger level, CalGEM should further require operators to post permanent signage visible to community members warning of the danger of poison gas when the alarm sounds.

Regarding meaningful community engagement, CalGEM and CARB should include a community engagement process for leak detection and response plans, with particular focus on outreach to overburdened and underserved communities, and should require operators to update the plan “at least once every five years, or when substantial changes at the production site occur, whichever time period is shorter.”¹¹⁶

Finally, CalGEM and CARB should 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.¹¹⁷ 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.¹¹⁸

e. Power Generation

CalGEM should ban on-site fossil gas power generation as reasonably necessary to assist frontline communities “by cleaning up pollution, remediating negative health impacts, and building resilient infrastructure . . .”¹¹⁹ It has been the experience of our allies that drill sites in wealthier, White neighborhoods like West Los Angeles are typically powered by electric utility connections that help to minimize the amount of air pollution burdening residents. By contrast, our allies report examples where large oil companies in environmental justice communities like South Los Angeles have installed high-pressure gas lines to import gas to burn in generators (i.e., “microturbines”) to power drill sites, leading to a cumulative increase in emissions that compounds associated health and climate effects. Burning fossil fuels and generating increased air pollution—including greenhouse gas emissions—solely to extract more fossil fuels that will likewise pollute the environment is harmful to frontline communities and all Californians. Such a practice is nonsensical at a time when California faces catastrophic climate change and has recognized the need to achieve carbon neutrality by 2045.¹²⁰ CalGEM should prohibit the practice of on-site power generation within the 3,200-foot setback and wherever feasible alternatives exist at drill sites throughout the state.

f. Diesel Engines

For similar reasons, use of diesel engines should be phased out entirely under CalGEM’s gap-filling authority to protect frontline communities from pollution, rather than only during nighttime hours and only for powering pumping units as required in the draft public health

¹¹⁶ *Id.* at 6.

¹¹⁷ *Id.* at 8–9.

¹¹⁸ 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.

¹¹⁹ SB 1137 § 1(e).

¹²⁰ Governor’s Exec. Order B-55-18 (2018).

regulations. Oil production sites are riddled with equipment and infrastructure running on diesel. Yet diesel engines emit a serious mixture of pollutants, including very small carbon particles, or “soot” coated with numerous organic compounds, known as diesel particulate matter (DPM). DPM is responsible for a host of negative health effects that put our communities at risk, including cardiovascular and respiratory hospitalizations, cancer, and premature death.

As elaborated in our previous comments, moreover, allowing the use of diesel near neighborhoods composed of people of color and low-income residents is inconsistent with the State’s commitment to environmental justice: drill sites near whiter and wealthier communities, such as those in West Los Angeles, have already transitioned to fully electric workover rigs to reduce neighborhood pollution. Further, DPM contributes to regional air pollution in addition to concentrated local harms. CalGEM can, and should, immediately phase out the use of diesel engines at all oil production sites. As the State increasingly moves toward a clean energy future that leaves dirty fuels behind, CalGEM must do its part to clean up the sources of DPM within its regulatory oversight.

g. Heavy-Oil Wells

Existing regulations in California contain a major loophole that exempts heavy-oil wells from fugitive emissions monitoring.¹²¹ As the vast majority of the state’s oil and gas extraction sites process heavy oil, this exemption facilitates the creation of dangerous emergencies and inadequate agency response, enabling leaks to go unnoticed and unrepaired for lengthy periods of time. A prime example includes the leaking wells recently identified throughout Kern County, and specifically within the city limits of Bakersfield. CalGEM’s initial responses to complaints from community members was that nothing could be done to stop the leaks because the wells produced heavy oil.¹²²

The exemption for heavy-oil wells exists, in part, to save the oil industry money.¹²³ As discussed below, an industry cost-savings rationale is simply indefensible in the present context. Moreover, reducing fugitive emissions from oil wells would have untold cost savings due to improvements in public health and reductions in premature mortality.¹²⁴

¹²¹ Cal. Code Regs., tit. 17, § 95669(c)(2).

¹²² Cesar Aguirre & Kobi Naseck, *Community Leads Regulators to More Methane-Spewing Wells in Morningstar Neighborhood*, Central California Environmental Justice Network, May 24, 2022, <https://ccejn.org/2022/05/24/community-leads-regulators-to-more-methane-spewing-wells-in-morningstar-neighborhood/>.

¹²³ See 89 Fed. Reg. 36729, 36735 (May 3, 2024) (claiming “that monitoring for well sites producing heavy oils would not be sufficiently cost effective, as leaks associated with heavy oil production will generally emit less VOC”).

¹²⁴ See, e.g., Am. Lung Assn., *Zeroing in on Healthy Air* at 3, 12 (2022), <https://www.lung.org/getmedia/13248145-06f0-4e35-b79b-6dfacfd29a71/zeroing-in-on-healthy-air-report-2022.pdf> (estimating \$1.2 trillion in public health benefits across the U.S. by 2050 from an accelerated transition away from fossil fuels to zero-emissions transportation, including \$95.5 billion in benefits in the Los Angeles area alone). See also James Bono et al., *Recommendations to CalGEM for Assessing the Economic Value of Social Benefits from a 3,200’ Buffer Zone Between Oil & Gas Extraction Activities and Nearby Communities* at

Further, while the exemption for heavy-oil wells also has a supposed scientific basis, the assumption that heavy-oil wells do not typically emit as much gas as light-oil wells clearly does not hold up in California. The explosive levels of methane leaking from heavy oil wells in the Morningstar neighborhood shows that the flux and volume of leaking hydrocarbons needs to be considered and regulated for heavy-oil facilities.¹²⁵

Independent certified thermographers have captured hundreds of instances of heavy-oil wells and facilities leaking actionable levels of methane and VOCs.¹²⁶ Due to the limited sensitivity of optical gas imaging, it is very likely that tens of thousands more heavy-oil facilities are currently leaking. Heavy-oil wells and facilities should be required to abide by the same leak prevention and detection standards because optical gas imaging shows they can be major sources of uncontrolled emissions on par with light-oil wells and facilities.

h. Preventative Approaches in Use in Other States

CalGEM should conduct a careful environmental review of each application for a drilling permit under SB 1137 that considers the cumulative risk to frontline communities of leaks from new wells prior to making permitting decisions. To that end, examples of positive measures required in other jurisdictions should guide CalGEM and CARB's development of permanent regulations to curtail industry-wide emissions, beyond just wells, to reduce the air pollution baseline and help prevent some of the worst impacts that leaking wells are known to exacerbate.

For example, similar to the Central Valley and Los Angeles air basins, the Front Range of Colorado is a topographical hotspot for the generation and trapping of non-attainment levels of ozone due to atmospheric inversions. The main source of VOCs, the primary pollutants leading to the formation of ozone, in both geographies is the oil and gas extraction sector.¹²⁷ While California has done very little to address VOC emissions from the oil and gas industry sector-wide, Colorado legislators are moving forward with multiple bills to limit emissions of VOCs from the industry.¹²⁸ The bills include proposals to consider the impact of permit applications for

14–16 (Dec. 2021) (discussing a health benefit of between \$500 million and \$828 million annually due to a decline in premature mortality related to reduced exposure to PM_{2.5} with a 3,200-foot setback between sensitive receptors and oil and gas wells).

¹²⁵ Manola Secaira, *How Idle Wells Leaked Explosive Levels of Methane in Bakersfield*, CapRadio, June 21, 2022, <https://www.capradio.org/articles/2022/06/21/how-idle-oil-wells-leaked-explosive-levels-of-methane-in-bakersfield/>.

¹²⁶ Earthworks, Selection of Optical Gas Imaging Videos from the California Community Empowerment Project, <https://www.youtube.com/playlist?list=PL9BS7nDf-8tqlaUT8pc0Yr0Tpf10UFDMDK> (accessed Mar. 20, 2025); Kyle Ferrar, *FracTracker Finds Widespread Hydrocarbon Emissions From Active and Idle Oil And Gas Wells and Infrastructure in California*.

¹²⁷ Letter from Gov. Jared Polis to Colorado Oil and Gas Conservation Commission and Colorado Department of Public Health and Environment (Mar. 16, 2023), <https://drive.google.com/file/d/1OByLS0TEoJx2SGpqqM4FQlhcxFVIFLc3/view>; Colo. Air Quality Control Panel, *State Implementation Plan for the Denver Metro and North Front Range Ozone Nonattainment Area* (Dec. 2, 2022).

¹²⁸ Brandon Richard, *Colorado Lawmakers Introduce New Set of Air Quality Bills*, Denver 7 News, Feb. 22, 2024, <https://www.denver7.com/news/politics/colorado-lawmakers-introduce-new-set-of-air-quality-bills>.

new oil and gas wells on the areas of Colorado already in nonattainment for ozone.¹²⁹ CalGEM and CARB should be considering the impacts of the contribution of VOCs to ozone by new oil and gas permit applications in existing non-attainment areas as a way to prevent cumulative leaks that could lead to compounded public health harms.

Colorado also requires operators to vastly reduce nitrogen oxide emissions by 2025.¹³⁰ Operators will have to move away from diesel rigs to comply. Requiring the electrification of existing drilling rigs via upgrades and modifications, along with mobile transformer units on skids, is an immediate solution to reducing ozone precursors and reducing community exposures to diesel pollution. These electric retrofits are being done in other oil and gas basins, such as throughout Texas.¹³¹ This should be a top priority for CalGEM and CARB as it will have immediate impacts on decreasing ozone concentrations. In other words, electrification of rigs would help prevent some of the worst public health impacts from leaking wells by reducing the baseline cumulative pollution burden.

Along with continuous onsite monitoring, we also endorse placement of air quality sensors in all neighborhoods within 3,200 feet of oil and gas wells, for methane and VOC measurements. 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.¹³² 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.¹³³ CalGEM should be utilizing the same technology and partnering with research organizations who are able to track releases of VOCs.

2. CalGEM Should Better Address Water 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, in addition to soil and

¹²⁹ Bacon & Willford, House Bill 24-1330, <https://leg.colorado.gov/bills/hb24-1330>; Winter & Priola, Senate Bill 24-229, https://leg.colorado.gov/sites/default/files/documents/2024A/bills/2024a_229_01.pdf.

¹³⁰ Colo. Governor Jared Polis, *Improving Air Quality: Governor Polis Directs State Agencies to Take New & Comprehensive Steps to Help Build Upon Administration's Landmark Clean Air Efforts, Cut Pollution Including Ozone*, Mar. 16, 2023, <https://www.colorado.gov/governor/news/9751-improving-air-quality-governor-polis-directs-state-agencies-take-new-comprehensive-steps>; Colo. Dept. of Public Health & Environment, *Reducing Nitrogen Oxides from Oil and Gas Exploration and Production*, <https://cdphe.colorado.gov/reducing-nitrogen-oxides-from-oil-and-gas-exploration-and-production#:~:text=In%20March%202023%2C%20Governor%20Polis,reduction%20in%20NOx%20by%202025> (accessed Mar. 20, 2025).

¹³¹ WorldOil, *Rig Electrification Drives Down Emissions, Bolsters Efficiency While Improving Onshore Drilling Economics*, Oct. 2023, <https://worldoil.com/magazine/2023/october-2023/special-focus-advances-in-drilling/rig-electrification-drives-down-emissions-bolsters-efficiency-while-improving-onshore-drilling-economics/>.

¹³² 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 Mar. 20, 2025).

¹³³ See Boulder Atmosphere Innovation Research, *Current Air Monitoring Programs* (2020).

water contamination. It is therefore critical for CalGEM to require comprehensive leak prevention and detection standards that address these other pathways. The engineering controls related to water pollution in CalGEM's draft public health regulations provide a promising starting point, though they should be further strengthened in the SB 1137 permanent regulations.

For example, the list of analytes for water testing should include key per- and polyfluoroalkyl substances (PFAS), also known as forever chemicals for their persistence in the environment and bioaccumulation.¹³⁴ There is a known association between PFAS and drilling fluids.¹³⁵ While PFAS include a class of 10,000 compounds, CalGEM must require baseline testing, at a minimum, of perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). Both PFOS and PFOA are on the Prop 65 list due to developmental toxicity.¹³⁶ Likewise, CalEPA's Office of Environmental Health Hazard Assessment (OEHHA) recently set public health goals for PFOS and PFOA to inform drinking water standards.¹³⁷ Federal regulation has followed closely behind, with EPA's final rule taking effect in July 2024.¹³⁸

Importantly, CalGEM should add a metric by which community members and the public can determine whether oil and gas operators have contaminated their waters in violation of the law. CalGEM should further require suspension of oil and gas operations where sampling results are indicative of contamination, pending demonstration of repairs to the wells or production facilities at issue. To the extent CalGEM intends to use existing water quality standards codified in state and federal law as a benchmark for compliance, the agency should explicitly cross-reference such standards in the permanent regulations to avoid any confusion.

We also endorse the water-related recommendations in the Srebotnjak Report regarding CalGEM's draft public health regulations, which include requiring the collection of many samples rather than a single data point "to give a complete understanding of the composition of produced water," and prohibiting commencement of drilling until samples have been analyzed by the laboratory.¹³⁹

¹³⁴ Srebotnjak Report at 7.

¹³⁵ Hiroko Tabuchi, *E.P.A. Approved Toxic Chemicals for Fracking a Decade Ago, New Files Show*, NY Times, July 12, 2021, <https://www.nytimes.com/2021/07/12/climate/epa-pfas-fracking-forever-chemicals.html>.

¹³⁶ CalEPA, Office of Environmental Health Hazard Assessment, *Safe Drinking Water and Toxic Enforcement Act of 1986 Chemicals Known to the State to Cause Cancer or Reproductive Toxicity* at 18 (Mar. 19, 2021), <https://oehha.ca.gov/media/downloads/proposition-65/p65chemicalslistsingletable2021p.pdf>.

¹³⁷ CalEPA, Office of Environmental Health Hazard Assessment, *Public Health Goals: Perfluorooctanoic Acid and Perfluorooctane Sulfonic Acid in Drinking Water* (Mar. 2024), <https://oehha.ca.gov/media/downloads/air/public-health-goal-document/pfoapfosphgfinaldraft040524.pdf>.

¹³⁸ Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, 89 Fed. Reg. 39124 (May 8, 2024); PFAS National Primary Drinking Water Regulation, 89 Fed. Reg. 32532 (Apr. 26, 2024).

¹³⁹ Srebotnjak Report at 8–9.

3. **CalGEM Should Require the Use of Closed-Loop Systems to Mitigate Against Contamination.**

California has allowed the oil and gas industry to “store” wastewater in unlined pits since the 1900s, which risks infiltration to, and contamination of, groundwater sources that supply drinking water to millions of people.¹⁴⁰ Researchers recently identified “1,565 ponds in the Tulare Basin used exclusively for produced water disposal,” with 484 unlined ponds still in use, posing a threat to 4 million users in the San Joaquin Valley.¹⁴¹ California is the only state that allows this practice.¹⁴² CalGEM should ban the use of pits or ponds and require operators to implement closed loop drilling systems as soon as feasible, but no later than two years from the effective date of the regulations.

4. **CalGEM Should Specify a Minimum Resolution for Sensitive Receptor-Related Maps and Images.**

As we previously commented, images and maps must be sufficiently high resolution (at least 300dpi) to ensure that regulators and members of the public are able to zoom in and clearly view all features.¹⁴³

5. **CalGEM Should Apply Health and Safety Requirements at All Wells and Production Facilities Statewide.**

Upon adding and strengthening the measures discussed above, CalGEM should ensure that the health and safety controls in the SB 1137 permanent regulations are applied not just within the 3,200-foot setback but at all well sites statewide. Indeed, all of these controls address impacts that cause serious harms outside the health protection zone. CalGEM should not arbitrarily limit the protections afforded by the controls and use its gap-filling regulatory authority to implement the measures statewide, everywhere drilling remains outside the 3,200-foot setback.

As reiterated by CalGEM’s own Scientific Advisory Panel, oil and gas sites are associated with health-damaging concentrations of multiple criteria air pollutants and toxic air contaminants.¹⁴⁴

¹⁴⁰ Karen Graham, *Unlined Waste Disposal Pits Endanger Groundwater in San Joaquin Valley*, Digital Journal, Oct. 24, 2021, <https://www.digitaljournal.com/tech-science/unlined-waste-disposal-pits-endanger-groundwater-in-san-joaquin-valley/article>; Dominic DiGiulio et al., *Vulnerability of Groundwater Resources Underlying Unlined Produced Water Ponds in the Tulare Basin of the San Joaquin Valley, California*, Environ. Sci. Technol. 55, 21: 14782–14794 (2021), <https://doi.org/10.1021/acs.est.1c02056>.

¹⁴¹ Graham, *Unlined Waste Disposal Pits Endanger Groundwater in San Joaquin Valley*.

¹⁴² *Id.*

¹⁴³ See Pre-Rulemaking Regulations § 1765.8(b) (articulating standards for sensitive receptor maps but not specifying any minimum resolution for such images).

¹⁴⁴ Public Health Report at 3-1, 4-4 (“Air pollutant emissions from upstream [oil and gas development] include toxic air contaminants (TACs) (e.g., benzene, H₂S, hexane), criteria air pollutants (CAPs), sulfur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOCs) and reactive organic gases (ROG)” and the Panel “concludes with a high level of certainty that there is a causal relationship between close geographic proximity to [oil and gas development and adverse perinatal and respiratory outcomes.”).

The Panel thus recommended the agency to specify that all regulations concerning “emission controls and associated monitoring approaches that lead to rapid leak detection and repair for new and existing wells and ancillary infrastructure” apply to wells and production facilities in fields statewide.¹⁴⁵ Similarly, vapor venting prevention and gas sampling and analysis regulations must apply statewide. Leak prevention, detection, and response for dangerous chemicals present at oil and gas sites, like methane and hydrogen sulfide (H₂S), will create broader public health and climate benefits for residents across the state.

CalGEM’s current requirements for similar mitigation controls at wells and production facilities statewide illustrate why enhancements to these same measures in the SB 1137 permanent regulations should also apply statewide. The California Code of Regulations already contains preexisting requirements concerning secondary containment (section 1773.1); tank construction and leak detection (section 1773.2); tank thickness and minimum wall thickness (section 1773.4); out-of-service production facilities (section 1773.5); pipeline inspection and testing (section 1774.1); maintenance and monitoring of production facilities, safety systems, and equipment (section 1777); cementing of casings (section 1722.4); management of drilling fluids (section 1722.6); and plugging and abandonment of wells (section 1723). The application of such rules to all wells and production facilities reflects CalGEM’s prior conclusion that they are necessary to its mandate of “prevent[ing], as far as possible, damage to life [and] health”¹⁴⁶ Accordingly, any enhancements pursuant to this rulemaking should likewise apply statewide.

Moreover, for wells outside the 3,200-foot setback, CalGEM should provide that applications for new drilling and rework permits will be denied unless and until all of the required engineering controls have been installed and are being operated in compliance with the SB 1137 permanent regulations.

While frontline communities closest to wells are the most overburdened by the effects of oil and gas drilling, area-wide air quality in oil-producing regions in California like Los Angeles County and Kern County is also very poor. The American Lung Association recently concluded that residents in Los Angeles and Kern counties are subjected to many other sources of air pollution, and already experience the nation’s worst air quality for criteria air pollutants.¹⁴⁷ As the Public Health Report and other studies show, oil and gas development contributes to these harmful regional levels of ambient air pollution.¹⁴⁸ In fact, “[c]arbon emissions from the oil extraction process remained steady in California from 2000 to 2015, even as overall oil production fell by

¹⁴⁵ *Id.* at 3-96.

¹⁴⁶ Cal. Pub. Res. Code § 3106(a).

¹⁴⁷ Am. Lung Assn., *State of the Air* (2024), <https://www.lung.org/getmedia/dabac59e-963b-4e9b-bf0f-73615b07bfd8/State-of-the-Air-2024.pdf>.

¹⁴⁸ Public Health Report; Seth Shonkoff & Lee Ann Hill, *Human Health and Oil and Gas Development: A Review of the Peer-Reviewed Literature and Assessment of Applicability to the City of Los Angeles* at 16 (2019), https://clkrep.lacity.org/online/docs/2017/17-0447_misc_46_07-29-2019.0001.pdf (collecting studies); see also 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.).

30 percent over that same period,” which means that the “carbon intensity”—and, thus, the health impact—of production has *increased*.¹⁴⁹

State policy already reflects the need to address climate change’s “serious threat to the economic well-being, public health, natural resources, and the environment of California,” including “the exacerbation of air quality problems . . . and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.”¹⁵⁰ As part of its amended legislative mandate, CalGEM has an explicit obligation to address “reduction and mitigation of greenhouse gas emissions associated with the development of hydrocarbon and geothermal resources.”¹⁵¹ As the Scientific Advisory Panel stated: “setbacks do not reduce harms from upstream [oil and gas development] contributions to regional air pollutant levels, such as secondary particulate matter and ozone, or greenhouse gases, such as methane, which are nearly always co-mingled with health-damaging air pollutants.”¹⁵² The Ninth Circuit has further confirmed: “failure to change existing [fossil fuel] policy may hasten an environmental apocalypse” and the responsibility to take action rests with “the political branches of government”¹⁵³ including executive agencies like CalGEM.

6. CalGEM Should Ensure Transparency, Including Access to Data and Community Notification.

VISIÓN submitted a detailed letter on April 10, 2024 to the Department of Conservation and CalGEM regarding specific actions the agency must take to improve its community engagement practices. That letter and its recommendations are incorporated into these comments, and should guide any action by CalGEM going forward to implement strong data access and notification measures. Moreover, VISIÓN’s previous comments in CalGEM’s public health rulemaking and SB 1137 emergency rulemaking provide additional feedback on transparency, data access, reporting, and notification, and are incorporated into these comments.

a. Access to Data Via Transparent Online Portal

Frontline communities have a moral prerogative to know when and where oil and gas drilling is occurring near their homes, schools, and businesses, and to access records that provide information on drilling 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.

CalGEM should therefore ensure a transparent process for making *all* data associated with oil and gas drilling and development publicly available. This information includes but is not limited

¹⁴⁹ Kelly Trout et al., *The Sky’s Limit California: Why the Paris Climate Goals Demand that California Lead in a Managed Decline of Oil Extraction* at 17 (May 2018), https://oilchange.org/wp-content/uploads/2018/05/Skys_Limit_California_Oil_Production_R2-1.pdf (emphasis added).

¹⁵⁰ Assembly Bill No. 32, Global Warming Solutions Act of 2006, approved by Governor, Sept. 27, 2006 (adding Division 25.5 to the Health and Safety Code); Health & Saf. Code, § 38501(a).

¹⁵¹ Cal. Pub. Res. Code § 3011, added by Stats. 2019, ch. 771 (A.B.1057), § 9, eff. Jan. 1, 2020.

¹⁵² Public Health Report at 3-96 to 3-97.

¹⁵³ *Juliana v. United States*, 947 F.3d 1159, 1164–65 (9th Cir. 2020).

to details concerning fluid and emissions leaks from wells, tanks, pipelines, and other production facilities; contamination of water sources; the chemical composition of drilling fluids used near sensitive receptors; and enforcement data such as inspection reports, Notices of Violation, and penalty orders. Such regulations should also require data to be submitted to CalGEM, rather than only “upon request.”¹⁵⁴

CalGEM has a long history of responding to public records requests by broadly and vaguely directing the public to its website without first confirming whether such information is actually available on that website and without providing specific step-by-step instructions to enable requesters to locate the allegedly responsive records. At the same time, officials with CalGEM have agreed that it is easier to digitize and organize data prospectively rather than attempting to sift through unorganized records after the fact.

CalGEM should therefore create an online portal where staff promptly makes all data submitted by oil and gas operators under leak prevention and detection regulations—and related to the other operations discussed above—available for public access via a single website, whether through its WellSTAR application or at the very least a separate server the public can access and search. Required data should be submitted in electronic form with the records fully optimized to facilitate keyword searching via optical character recognition. Critically, in order to ensure the public is able to meaningfully engage with this information, the agency should ensure the data is organized and communicated clearly and provide resources and support for community members to review and understand the data. Simply uploading large volumes of data with no context or ability to easily review the information will not suffice.

Indeed, CalGEM’s current website does not provide simple or transparent access to data regarding drilling operations or even serious leaks and spills that impact communities. For example, its webpage for Notices of Violation provides a list of links to documents that can only be individually downloaded via separate email requests, and any leak, spill, or other accident data is buried within longer pdfs rather than highlighted in an easy-to-navigate format.¹⁵⁵ The website’s file request system is poorly designed overall, requiring requesters to know near exact names of the documents being sought. CalGEM must provide a database map of nested folders and files at the very least for the public to understand what data is available.

The WellSTAR system has functionally reduced access to oil and gas data in the state. Because the system does not allow data to be exported, grassroots groups must rely on experts like FracTracker Alliance to aggregate and understand even basic permit data. Yet even experts face challenges accessing data because the agency fails to publish exportable datasets showing permit notices, Notices of Violation data, or leak detection and response results.¹⁵⁶ FracTracker Alliance is currently conducting a systematic review of data transparency by oil and gas regulatory agencies across the major oil and gas producing states. Preliminary results show that California ranks near the bottom, below North Dakota, Texas, Ohio and other states.

¹⁵⁴ See Pre-Rulemaking Regulations §§ 1765.4.1(a)(13), 1765.5(c)(3)(F).

¹⁵⁵ Cal. Dept. of Conservation, *Orders Issued by the Geologic Energy Management Division*, https://www.conservation.ca.gov/calgem/Pages/Division_Orders.aspx (accessed Mar. 20, 2025).

¹⁵⁶ Cal. Dept. of Conservation, *WellSTAR Data Dashboard*, https://www.conservation.ca.gov/calgem/Online_Data/Pages/WellSTAR-Data-Dashboard.aspx (accessed Mar. 20, 2025).

b. Regular Reporting and Public Accessibility of Monitoring Data

Because self-policing by the oil and gas industry has failed for decades, CalGEM's SB 1137 permanent regulations should require periodic reporting of monitoring data, including submission of daily reports that are publicly available through the online portal discussed above.¹⁵⁷ CalGEM 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.

c. Chemical Disclosure Requirements

CalGEM should strengthen the Pre-Rulemaking Regulations to require full disclosure by privately owned companies of the toxicity, use, and disposal of all chemicals involved in oil and gas drilling, extraction, maintenance, odor control, and other uses, consistent with the leak detection and monitoring requirements of SB 1137. As reiterated in our previous comments, California's oil and gas disclosure law does not adequately protect public health. Although the hazards and risks posed by oil and gas development are widely known and well-documented, the full magnitude of harm has been difficult to assess due to the lack of transparency surrounding the frequency, amount, and types of chemical materials used during development and production processes. Therefore, CalGEM should strengthen its notice and disclosure regulations and improve its oversight of the disclosure reporting process to reinforce the efficacy of the 3,200-foot health protection zone and engineering controls.

d. Equitable and Transparent Notification Practices

Notification of community members "as soon as potential leaks and other hazards are detected" is "critically important."¹⁵⁸ CalGEM and CARB's leak detection and response standards should require notification no later than the first two-to-three hours after a leak cannot be stopped or within the first twelve hours 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.¹⁵⁹ CalGEM 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.

Likewise, CalGEM 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 currently arrive unannounced near frontline communities, loaded with thousands of gallons of acid, while workers covered head-to-toe in protective equipment operate

¹⁵⁷ For example, the Srebotnjak Report specifically addresses this issue in the context of pipelines. Srebotnjak Report at 10. CalGEM must also add a requirement for operators to keep records of each inspection and submit them periodically to CalGEM.

¹⁵⁸ Srebotnjak Report at 5.

¹⁵⁹ *Id.* at 6.

equipment.¹⁶⁰ Our allies have documented chemical burns on plants downwind of drill sites due to acidic fumes.

VISIÓN's April 10, 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 CalGEM should immediately adopt. The letter also addresses the important need for CalGEM to develop 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.

C. CalGEM's Permanent Regulations Should Incorporate Recommendations from its Scientific Advisory Panel's Public Health Report.

The Public Health Report prepared by CalGEM's Scientific Advisory Panel is the culmination of years of review and analysis by a diverse and qualified group of scientific experts working closely with the agency. It is a landmark document analyzing the best available peer-reviewed science and publicly available data on the harms to people near drilling activity, including research based in California. The Report will also serve as a critical pillar of support for the final SB 1137 rulemaking package proposed by CalGEM. The agency should not disregard the significant investments put into the Report and instead incorporate its recommendations and conclusions into the SB 1137 permanent regulations.

Although the Report includes numerous findings, we highlight here some of the most important recommendations that should guide CalGEM and its partner agencies' development of the SB 1137 permanent regulations:

- The scientific evidence establishes the case for setbacks *greater* than 3,200 feet to protect human health where communities have higher oil and gas well or infrastructure density, higher oil and gas production volumes, the presence of other environmental hazards and socioeconomic stressors, or where particularly vulnerable groups like children, pregnant people, the elderly, and those suffering from chronic illness are present. Many frontline communities throughout California fall within these categories and CalGEM should accordingly evaluate a larger health protection zone in those areas.
- Stronger methane leak detection and repair is necessary to reduce air and climate pollution. Although health protection zones are one of the most effective measures to reduce public health harms from drilling—second only to phasing out drilling entirely—additional controls are needed to address impacts to regional air pollution levels and greenhouse gas emissions. Engineering mitigation controls can further reduce or

¹⁶⁰ 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 a spill of 4,700 gallons of hydrochloric acid at a drilling pad).

eliminate these emissions and specific hazards at well sites, particularly via leak detection and response measures. In particular, stronger measures are needed to reduce the release of VOCs from oil and gas development, such as removing the exemptions for heavy oil development and smaller producers across California from emissions control and leak detection and repair requirements. Improved air quality monitoring and leak detection should also be more specifically tailored to the variety of extraction processes and equipment that produce VOCs.

- Oil and gas development produces significant amounts of contaminated water that must be better monitored and managed. The volume of produced water has been increasing in California for decades, and much of this water is disposed via dangerous unlined ponds that impact groundwater that is currently or could be used for drinking or agricultural irrigation in California. Stronger regulations must prohibit the disposal of this toxic sludge in unlined produced water ponds that are prone to contaminating freshwater, and also provide better access to information about where the oil and gas industry has been disposing of this mess.
- The oil and gas industry's use of chemicals must be better documented, reported, and restricted. The use of dangerous chemicals in oil and gas production is ubiquitous in California. However, publicly available data on these chemicals is lacking, even as many are associated with human health risks. Regulations must restrict chemicals with the greatest health risks and adopt consistent disclosure requirements across all oil and gas development in California. Communities should also be notified about chemical additives used in oil and gas development activities, not just a select few like fracking.
- Idle wells and legacy infrastructure pose ongoing health risks that require testing and cleanup. CalGEM has approximately 126,000 plugged and abandoned oil and gas wells in California on record. However, recent assessments found that the number of abandoned wells is under-reported by 17 percent or more. Additionally, there are an estimated 2,500 to 5,000 unplugged idle-deserted wells in the state, with no solvent operators. Due to the lack of information, CalGEM must develop a thorough inventory of these wells and infrastructure, sites with idle-deserted or abandoned infrastructure in areas slated for redevelopment should be required to undergo environmental testing, operators must be required to clean up contamination, and CalGEM should conduct additional studies to assess emissions from idle wells.

V. CalGEM Should Not Privilege Industry Cost-Savings Rationales and Preferred Regulatory Alternatives at the Expense of Public Health.

CalGEM's notice for the Pre-Rulemaking Regulations specifically requested "recommendations for potential alternatives to the requirements of the emergency regulations, as well as specific data regarding the cost to comply with proposed requirements. Suggestions about a regulatory requirement or alternative approach are most helpful if they are supported by discussion of the

associated costs and benefits.”¹⁶¹ However, CalGEM must move forward with regulations necessary to implement SB 1137 by protecting public health, regardless of compliance costs to industry.

It bears emphasis that the oil industry continues to rake in obscene profits¹⁶² 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.”¹⁶³ Such actions have resulted in California “spen[din]g 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.”¹⁶⁴ CalGEM must follow the “polluter pays” principle to ensure that the oil industry—which can well afford to do so—employs every possible technology to 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 climate.¹⁶⁵

VISIÓN’s previous comments regarding the Standardized Regulatory Impact Assessment for CalGEM’s 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. Historically, the agency’s 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. In its analysis for this rulemaking, CalGEM 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.

¹⁶¹ CalGEM, Notice of Availability of Discussion Draft Text and Notice of Public Comment Period, Pre-Rulemaking Public Comment Period on Health Protection Zones for Oil and Gas Operations – Discussion Draft (Mar. 3, 2025), <https://www.conservation.ca.gov/calgem/Documents/Health%20Protection%20Zones%20Discussion%20Draft%20Notice%20English.pdf>.

¹⁶² See Stanley Reed, *Oil Giants Pump Their Way to Bumper Profits*, NY Times, Feb. 2, 2024, <https://www.nytimes.com/2024/02/02/business/oil-gas-companies-profits.html> (noting that Exxon earned \$36 billion in 2023 and Chevron earned \$21.4 billion in 2023); Shaina Sadai, *Fossil Fuel Companies Make Billions in Profit as We Suffer Billions in Losses: 2024 Edition*, Union of Concerned Scientists, Apr. 17, 2024, <https://blog.ucsusa.org/shaina-sadai/fossil-fuel-companies-make-billions-in-profit-as-we-suffer-billions-in-losses-2024-edition/> (stating that “the combined profits of ExxonMobil, Chevron, Shell, and BP total[ed] over \$100 billion” in 2023).

¹⁶³ 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>.

¹⁶⁴ *Id.*

¹⁶⁵ 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.

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We appreciate CalGEM'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 Elizabeth Fisher (efisher@earthjustice.org) and Michelle Ghafar (mghafar@earthjustice.org) at Earthjustice, who helped prepare this submission.

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