EARTHJUSTICE

September 12, 2018

Mary Nichols
Chair, California Air Resources Board
1001 I Street
Sacramento, CA 95814

Submitted electronically

Dear Chair Nichols:

The massive Aliso Canyon gas leak was the worst man-made greenhouse gas disaster in U.S. history, impacting the health and safety of thousands of nearby residents and releasing at least 109,000 metric tons of methane, a potent short-lived climate pollutant ("SLCP"), into the atmosphere. The Aliso disaster was a grim reminder that natural gas is neither clean, nor safe, nor reliable, and that aggressive action is critically needed to reduce the region's crippling reliance on this dirty fossil fuel. Unfortunately, the proposed Mitigation Agreement ("proposed Agreement")[1] CARB negotiated with Southern California Gas Company ("SoCalGas") fails to include measures that will reduce gas demand in the area served by the Aliso underground storage facility ("UGS") or anywhere else. Instead, the proposed Agreement's contemplated greenhouse gas ("GHG") mitigation focuses exclusively on financing the production of methane collected from far-away dairies pre-selected by SoCalGas.[2] The proposed Agreement contains no clear, immediate funding for measures (such as financial incentives for electric space and water heating) to facilitate the market transformation needed to electrify the building sector and lay the groundwork for deep decarbonization. Indeed, in ignoring the electrification of end-uses, the proposed Agreement perpetuates the false narrative peddled by SoCalGas that development of sources of biomethane, which at best can only displace a tiny fraction of overall gas demand, is sufficient to achieve California's ambitious climate goals. To rectify this

[1] The proposed Agreement was lodged with the Los Angeles Superior Court on August 8, 2018 as Appendix A to the proposed Consent Decree. We submit these comments pursuant to paragraph 18 of the proposed decree and to CARB's notice seeking public comment on the Agreement.

[2] The proposed Agreement redacts the names, locations, and "clusters" of the proposed dairy projects. CARB later disclosed this information on its website, seven days after the proposed Consent Decree was submitted to the Court. We note that many commenters may not have been aware that this later disclosure occurred because CARB's notice of public comment did not explain that it would release this information, nor did it provide the link to the relevant website.

deficiency, the proposed Agreement should be revised to dedicate immediate funding toward electrification of the building sector.[3]

Moreover, the Agreement does not ensure that the methane captured is fully and solely attributable to SoCalGas's Mitigation Contribution. Many of the selected projects appear to already receive considerable public financing. By awarding SoCalGas full mitigation credit for investments that may only constitute a percentage of the overall public contribution to the project's emission reductions, the proposed Agreement fails to hold SoCalGas fully accountable for the massive GHG emissions resulting from the Aliso disaster.

Furthermore, under the proposed Agreement, SoCalGas is able to discharge all of its obligations based purely on *projected* methane capture rather than *actual* methane captured over the life of the unproven dairy projects. This arrangement flies in the face of the Governor's Proclamation on the Aliso disaster, which requires CARB to "fully" mitigate the leak's emissions with SoCalGas fully footing the bill.[4] There cannot be "full" mitigation until *actual* mitigation is verified. Thus, SoCalGas must be liable for all mitigation costs until *actual* methane capture is achieved.

The proposed Agreement also confers undue authority on SoCalGas to select the projects and oversee the first stages of their construction and implementation, including estimates of the projected methane reductions that, under the proposed Agreement, will be used to determine whether the company has met its "Mitigation Obligation." As the very party that is responsible for this disaster and with a self-interest in rapidly discharging its mitigation obligations, SoCalGas should not have authority over the administration of the Mitigation Fund or the projects' methane capture projections. Instead, independent third-party verification should be required at every juncture, including project selection, emissions reductions estimates, monitoring, and verification. Finally, the Agreement should both clarify how methane leakage and the diminished value of methane reductions over time is taken into account and subject to public comment all determinations related to project selection, certification, and verification.

I. The Proposed Agreement Should Be Revised to Provide An Immediate Funding Source to Incentivize Local Building Electrification.

In focusing exclusively on one-to-one methane mitigation, the proposed Agreement misses a critical opportunity to address over-dependence on natural gas through investments in electric alternatives. A principle justification for the continued operation of the Aliso UGS

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[3] Earthjustice also shares the concerns expressed in Sierra Club California's August 20, 2018 comments on the proposed Agreement, which identify potential consequences of the Agreement's focus on dairies, including increased dairy impacts to air and water quality in already-polluted regions of the state.

[4] Proclamation of State of Emergency, https://www.gov.ca.gov/wp-content/uploads/2017/09/1.6.16_Aliso_Canyon_Emergency.pdf (directing CARB to develop a program to "fully mitigate the leak's emissions of methane" that is funded by SoCalGas).

facility is the gas it provides to meet winter demand for heat in the Los Angeles area.[5] This winter demand can be met by replacing natural gas appliances with high efficiency electric options, such as electric heat pumps for space and water heating. These forms of building electrification provide concurrent benefits: They decrease the region's dependence on gas and UGS, reduce chronic exposure to the harmful indoor air pollution associated with gas use,[6] and are a low-risk strategy for meeting California's increasingly aggressive GHG goals. A recent California Energy Commission ("CEC") analysis of pathways to decarbonization concluded that switching to high efficiency heat pumps in HVAC and water heating "achieves the largest reductions in total building energy demand" when compared to other potential strategies to achieve California's 2030 and 2050 climate goals.[7]

Achievement of widespread deployment of electric space and water heating will first require market transformation to reduce the capital cost of heat pumps.[8] This is where the proposed Agreement can and should play a role. In fact, CARB itself initially proposed such projects as part of its "Aliso Mitigation Program," envisioning an entire category of projects for "promoting sustainable and resilient energy infrastructure."[9] As CARB then properly observed, these projects have merit because electrification "could serve disadvantaged communities and communities directly impacted by the Aliso Canyon leak" and because "[t]hese projects also could produce *transformative benefits* either by auditioning new technologies and processes, or by placing emission-reducing innovations on more secure footing."[10] However, the final proposed Agreement inexplicably abandons these principles and the vision for producing "properly targeted emission-reduction projects" and "transformative benefits" that serve a wide range of communities and the state by "setting the stage" for additional emissions reductions. Its focus on dairies trades short-term potential gains for critically needed investment to build a

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[5] California Council on Science and Technology ("CCST"), Long-Term Viability of Underground Natural Gas Storage in California ("CCST Aliso Report"), (Jan. 18, 2018), p. 5, https://ccst.us/projects/natural_gas_storage/publications.php.

[6] Barboza, *Cooking with a Gas Stove? You Could be Breathing Polluted Air Study Says*, L.A. Times (Nov. 6, 2013) ("As many as 12 million Californians are exposed to levels of nitrogen dioxide above health standards as a result of cooking with gas burners.") (citing Logue et al., *Pollutant Exposures from Natural Gas Cooking Burners: A Simulation-Based Assessment for Southern California*, Environmental Health Perspectives (Nov. 5, 2013)).

[7] CEC, *Deep Decarbonization in a High Renewables Future Updated Results from the California PATHWAYS Model* ("CEC Decarbonization Report"), (June 2018), p. 32, https://www.ethree.com/wp-content/uploads/2018/06/Deep_Decarbonization_in_a_High_Renewables_Future_CEC-500-2018-012-1.pdf.

[8] CEC Decarbonization Report, pp. iii, 67.

[9] CARB, *Aliso Canyon Methane Leak Climate Impacts Mitigation Program*, ("CARB Aliso Mitigation Report) (March 31, 2016), p. 17, https://www.arb.ca.gov/research/aliso_canyon/arb_aliso_canyon_methane_leak_climate_impacts_mitigation_program.pdf.

[10] CARB Aliso Mitigation Report, p. 17 (emphasis added).

sustainable future. Simply waiting to reinvest Aliso funds in building electrification at a later, unspecified date is insufficient. The transformation to shift from gas to electric buildings must start now. As set forth in the CEC's deep decarbonization analysis, to decarbonize heating demand in buildings through heat pumps, the transition to electrification must start "by 2020 and achieve significant market share by 2030."[11]

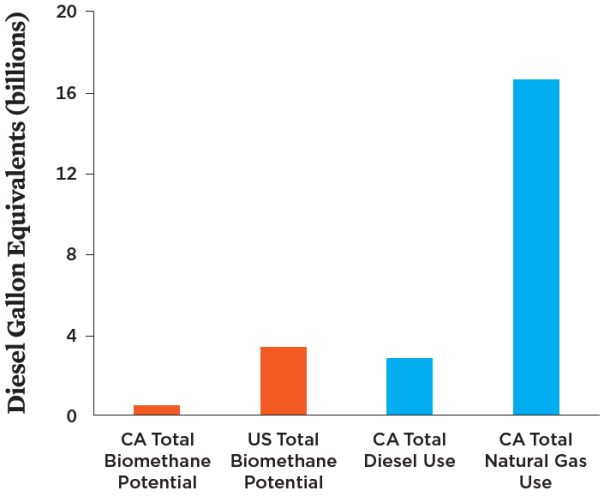
In only applying mitigation funds to biomethane capture and doing nothing to reduce reliance on methane in the first instance, the proposed Agreement also perpetuates the false narrative that action need not be taken today to jumpstart the electrification of buildings. Despite the obvious importance of electrification of end-uses (such as space and water heating) to achieve California's decarbonization objectives, SoCalGas has repeatedly and erroneously argued to agencies like the CEC that electrification would "impede" and "decelerate" achievement of California's climate goals on the grounds that CARB's 2017 Climate Change Scoping Plan primarily relies on cap-and-trade and SLCP reductions to meet 2030 GHG reduction requirements.[12] SoCalGas' assertions ignore the importance of starting market transformation today to achieve long-term reductions, and the reality that, as illustrated in the graph below, biomethane potential is extremely limited and therefore not a substitute for switching from gas to electric end-uses wherever possible.[13]

[11] CEC Decarbonization Report, p. 32.

[12] *See e.g.*, CEC Docket No. 17-IEPR-06, SoCalGas, *Comments on the IEPR Staff Workshop on 2030 Energy Efficiency Targets*, (June 30, 2017), p. 3; CEC Docket No. 17-IEPR-06, SoCalGas, *Comments on CEC Staff's Two Draft Papers on SB 350 Energy Efficiency Savings Doubling Targets*, (Aug. 3, 2017), p. 2, available at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=17-IEPR-06.

[13] Union of Concerned Scientists, *The Promises and Limits of Biomethane as a Transportation Fuel*, (2017), p. 2, https://www.ucsusa.org/sites/default/files/attach/2017/05/Promises-and-limits-of-Biomethane-factsheet.pdf.

FIGURE 1. Availability of Biomethane from Waste Compared with Diesel and Natural Gas Use in California



The amount of biomethane potentially available in California is much smaller than the amount of diesel and natural gas used in the state.

In failing to target building electrification, the proposed Agreement capitulates to SoCalGas' concerted efforts to keep California dependent on natural gas and its supporting infrastructure.

In revising the proposed Agreement, CARB can look to existing programs that facilitate market transformation and direct investment in building electrification. For example, the Sacramento Municipal Utility District ("SMUD") provides rebates of $2,500 for space heat pumps and $3,000 for water heat pumps as part of its Home Performance Program.[14] Homeowners who transition to all-electric heating in SMUD's service area typically save $100 to $300 a year on space heating, and $150 a year on water heating. [15] In total, SMUD's Home Performance Program offers rebates of up to $13,750 for the complete electrification of an existing home.[16] The SMUD program demonstrates that cost-effective electrification subsidies can both boost electrification and benefit customers. One option is for CARB to use mitigation funding to provide grants to local governments impacted by the Aliso leak that would like to implement a similar program.

Accordingly, we urge CARB to modify the proposed Agreement to dedicate immediate funding to building electrification, rebates for electric heating technologies, and programs promoting fuel-switching from natural gas to electric end-uses. In so doing, the Agreement

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[14] SMUD, *Gas to Electric Conversion*, https://www.smud.org/en/Rebates-and-Savings-Tips/Improve-Home-Efficiency/Gas-to-Electric-Conversion (as of Sept. 12, 2018).
[15] Electrification Cost-Effectiveness, and Current Programs at SMUD, Presentation by Owen Howlett at the June 14, 2018 IEPR Workshop on Achieving Zero Emission Buildings (CEC Docket #18-IEPR-09, TN #223760), available from list of public comments posted at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=18-IEPR-09.
[16] *Id*.

would foster adoption of this critical technology, hasten the state's achievements of its GHG goals, and send an important signal that the state is taking active measures to eliminate the region's and the state's dangerous dependence on natural gas and UGS. CARB can do so by requiring additional funding from SoCalGas, beyond the $26.5 million Mitigation Contribution or diverting some of these funds to electrification. If CARB is unwilling to take this approach, it should pull from the $7.6 million currently set aside for "Mitigation Reserves," and require SoCalGas to replenish the reserves if needed or, at the very least, allocate a portion of the interest payments from the project loans to fill any funding gaps.

II. The Proposed Agreement Must be Amended to Ensure SoCalGas is Only Credited for Its Incremental Role in Facilitating Methane Capture.

The proposed Agreement does not indicate how the methane captured by the pre-selected dairy projects is additional to capture that would have otherwise occurred in a business-as-usual scenario. Based on information from the California Department of Food and Agriculture's ("CDFA") Dairy Digester program, it appears many of the pre-selected dairy projects, *already* receive a considerable amount of public investments. For example, in 2017 and 2018, the CDFA program awarded a total of $105,144,525 to 58 dairy projects, and SoCalGas and CalBio are listed as "team members" for 30 of those projects.[17] The proposed Agreement proposes to loan even more monies to many of these same entities, with SoCalGas apparently receiving *all* the mitigation credit for the methane captured by these projects. Such crediting is fundamentally flawed because the methane that the already-funded projects capture is not solely attributable to SoCalGas's "Mitigation Contribution." With the scant amount of information available on the pre-selected projects, it is impossible to determine to what extent they are already receiving public funds. The proposed Agreement should accordingly be amended to indicate (1) the amount of public funding that each dairy project has already received and is expected to receive over the life of the project; and (2) the total amount of funding that each project would receive from the Mitigation Fund under the proposed Agreement. Based on these numbers, the Agreement should only credit SoCalGas with the percentage of methane capture that can be attributed to its contribution under the Agreement. As a simple example, if a dairy captures 5,000 tons of methane and SoCalGas' contribution under the Agreement is 10 million and other sources of public funding contribute 90 million, SoCalGas should only receive 10 percent, or 500 tons of methane mitigation credit. Without such an adjustment, the Mitigation Agreement grossly overstates SoCalGas' contribution in achieving methane reductions and fails to constitute full mitigation for the Aliso disaster.

[17] CDFW, 2017 Dairy Digester Research and Development Program Projects Selected for Award of Funds, https://www.cdfa.ca.gov/oefi/ddrdp/docs/2017_DDRDP_ProjectsAwarded.pdf; CDFW, 2018 Dairy Digester Research and Development Program Projects Selected for Award of Funds, https://www.cdfa.ca.gov/oefi/ddrdp/docs/2018_DDRDP_ProjectsAwarded.pdf. We calculated total number of projects and total funding based on these CDFW tables.

III. The Proposed Agreement Should be Amended to Require SoCalGas to Be Liable for Full, Actual Mitigation Until a Third-Party Verifies that 109,000 Metric Tons of Methane Have Been Captured.

The Proposed Agreement allows SoCalGas to fully discharge its "Mitigation Obligation" based solely on current estimates of future methane capture. Under this regime, it is possible—and even likely—that CARB could certify that SoCalGas has met its "Mitigation Obligation" in 2020, before even one ounce of methane is *actually* captured. The Agreement indicates that the pre-selected projects "are expected to achieve the Mitigation Obligation by mid-2020," and explains that this is so even though the projects cannot achieve *actual* capture of the entire 109,000 metric tons of methane until ten years after operation has commenced.[18]

In this way, the proposed Agreement provides no guarantee that SoCalGas will be liable for the cost of actual, full mitigation, as directed by the Governor's Proclamation. If the pre-selected projects do not actually capture the 109,000 metric tons, CARB appears to have no power under the proposed Agreement to require SoCalGas to cover the shortfall. While CARB can direct that the $7.6 million in reserves be used to fund additional projects, there is no assurance that this fixed amount will fill the gap. Indeed, given that dairy digester technology remains unproven,[19] there is a considerable risk that the initial methane capture projections are overstated and that more funding will be needed to reach actual mitigation. Under the proposed Agreement, the public, rather than SoCalGas assumes this downside risk. CARB must remedy this backwards approach. Consistent with the Governor's Proclamation, SoCalGas, as the party responsible for the Aliso disaster, must bear the full cost of actual mitigation and therefore remain liable for the cost of mitigation until actual mitigation has been verified. At the very least, the proposed Agreement should include a reopener clause that requires replenishment of the reserve fund by SoCalGas if there is a methane capture shortfall over the life of the projects.

IV. The Proposed Agreement Should Be Amended to Give All Administrative Authority to Independent Parties that are in No Way Subject to SoCalGas's Direction or Control.

The proposed Agreement improperly grants SoCalGas authority over the Mitigation Fund until it has discharged its Mitigation Obligation. Under this arrangement, SoCalGas will have the power to select projects, to oversee their progress in becoming operational, and to influence their methane capture projections. Indeed, it appears SoCalGas has already taken key first steps as the presumed Administrator by pre-selecting dairy projects. CARB states in its Responses to Frequently Asked Questions ("FAQs") about the Agreement that "SoCalGas selected [California Bioenergy] [("CalBio")] to build the projects" and that "SoCalGas will pay

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[18] Proposed Agreement, p. 2.

[19] Biomethane production from dairies has an unproven track record. Many digesters installed since 1989 have ceased operation "because of financial distress, high operational cost, and/or complexity of their operation." CalCAN, *Diversified Strategies for Reducing Methane Emissions from Dairy Operations*, (Oct. 2015), p. 4, http://calclimateag.org/wp-content/uploads/2015/11/Diversified-Strategies-for-Methane-in-Dairies-Oct.-2015.pdf.

$26.5 million to an account to be directed as loans to [CalBio] to build 12 dairy digester projects, three conditioning facilities, and pipelines to connect the digesters to the conditioning facilities and common carrier pipelines system."[20]

This arrangement is untenable. SoCalGas has an inherent self-interest in overstating the operational viability of the projects and their estimated project methane reductions because the proposed Agreement wrongly enables them to discharge their Mitigation Obligation based on projected rather than actual methane capture. What is more, SoCalGas has a troubling track record of withholding key information and acting against the public interest. For example, the California Council on Science and Technology ("CCST") team studying the health effects of the Aliso leak found that the company and other UGS operators failed to provide key information about the toxics in gas,[21] noting a "lack of [operator] motivation and effort" to provide the requested data on chemical composition.[22] In addition, the California Public Utilities Commission recently stripped SoCalGas of its "role in statewide code and standards advocacy" following the discovery of "internal emails among SoCalGas managers discussing the potential for the proposed standards to raise the cost of some gas furnaces and thereby encourage fuel switching away from natural gas" and which detailed "several situations in which SoCalGas appears to have frustrated the other IOUs' efforts to advance higher standards, including backing out of drafting a joint letter just one day before the response deadline to a 2017 DOE request for information (despite having decided a week earlier that they would not sign on)."[23] The proposed Agreement must be revised to take the fox out of the henhouse. SoCalGas should not have authority to pick and choose mitigation projects or oversee the Mitigation Fund at any stage.

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[20] CARB, Responses to Frequently Asked Questions, Aliso Canyon Litigation Mitigation Settlement ("CARB Responses to FAQs"), p. 2. CARB's responses to FAQs also states that "an estimated 6,617,492 MMBTu of biomethane will be produced by the projects during the ten year mitigation period," but it does not indicate the basis for this estimate or whether this estimate was merely provided by SoCalGas or actually verified by CARB.

[21] The team made formal requests to SoCalGas and other operators for information on the chemical composition of the stored gas at Aliso. Like other operators, SoCalGas, did not provide the team with information relevant to the multiple toxics at Aliso. CCST Aliso Report, p. 169; *see also* Appendix E to CCST Aliso Report https://ccst.us/publications/2018/Chapter%201/Chapter%201%20v2%20Appendix%201-E.pdf ("Overall, the responses [from gas plant operators to data requests from CCST] make clear that information on the levels of toxic air contaminants (other than sulfur compounds) will likely not be available without a mandate from the responsible regulatory agency or agencies.").

[22] CCST Aliso Report, p. 236.

[23] CPUC, D.18-05-41, *Decision Addressing Energy Efficiency Business Plans*, (June 5, 2018), pp. 141-44, http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M215/K706/215706139.PDF.

V. The Proposed Agreement Should Further Justify Key Methane Accounting Factors.

We remain concerned that the proposed Agreement has not explained how it accounts for methane leakage both within the mitigation projects and within the pipeline system. To the extent leakage is accounted for, it is not apparent on the face of the proposed Agreement, which relies on a complicated set of calculators and protocols for calculating the Mitigation Credits. The Agreement should disclose all relevant factors and the assumptions and calculations that it will use to measure actual methane captured, factoring in leakage at all relevant stages of the project lifecycle and pipeline transport.

In a related vein, the basis for the scaling in the Mitigation Discounting Table ("Table"), which appears as Exhibit 2 to the Agreement, remains unclear. According to the Table, projects that begin in 2023 receive the same level of emissions crediting as projects that begin in 2018. As we have noted in discussions with CARB, this failure to discount future methane capture ignores the significantly diminished value of emission reductions over time. We understand from our discussion and from CARB's "Responses to Frequently Asked Questions"[24] that the full crediting of reductions over the first five years is intended to stimulate project adoption before 2023 and that the jump in 2024 from 100% to 41% attempts to adjust to the appropriate level of discounting. While there may be some justification for this scale, we continue to believe that some level of discounting is necessary even before 2023, and that the basis for the proposed discounting should be explained in the Table. And in any event, the actual Agreement should explain the basis for the discounting numbers so that the public can scrutinize this otherwise obscure accounting rationale.

VI. The Proposed Agreement Should be Revised to Require More Transparency and Public Oversight.

To ensure the integrity and success of the mitigation process, the proposed Agreement should require the disclosure of important project information and provide for public comment on project selection, reporting and certification. As an initial matter, the basis for project selection should be disclosed, and the public should have the right to review the selection criteria and raise objections to any proposed projects. Such transparency and input is critical because members of the public are familiar with each dairies' local impacts and their track record in other ongoing biomethane programs. CARB should consider this information before the dairies are provided loans to develop digesters. The public should also have the right to object to any of the proposed "progress" reports that the dairies will submit during project implementation. Under the proposed Agreement, these reports are the only mechanism that the public has to track when *actual* mitigation is occurring. Given the complexity and importance of the mitigation calculations, the public should have full access to the data and the opportunity to object should any report appear to misstate or misconstrue methane capture or any other material fact.

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[24] CARB, Responses to FAQs, p. 4, https://www.arb.ca.gov/html/aliso-canyon/aliso-canyon-faqs.pdf?_ga=2.141204658.1233141470.1536614855-1059320692.1522165897.

Finally, any future mitigation certification decision should be subject to public comment with sufficient time for rigorous scrutiny. Because numerous factors are at play in any certification, including the effectiveness of the capture technology, leakage, and the projects' financial solvency, the proposed Agreement must build in sufficient time for CARB and the public to review project data. Accordingly, the proposed Agreement should be amended to give the public at least 30 days to review any proposed certification decision and CARB at least 60 days to consider public input and reach a final certification decision.

VII. CARB Should Submit All Public Comments on this Proposed Agreement to the Court and Request a Fairness Hearing on the Consent Decree.

Pursuant to the proposed Consent Decree, CARB will provide a summary of the public comments on the proposed Agreement to the Court. A summary, however, may not fully apprise the Court of the wide range of detailed concerns that the public has raised. CARB should therefore attach all of the public comments to the summary that it submits. In this way, the Court can directly reference the comments if it seeks clarification or further information on particular issues, and the commentators' concerns and proposals can stand on their own. Finally, to the extent the Court provides parties to the Consent Decree with an opportunity to request a fairness hearing on the proposed Consent Decree, where the public can directly voice concerns to the Court, we urge CARB to make such a request or consent to any similar request made by any other party.

Thank you for your consideration of these comments.

Sincerely,

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