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Comments of the California Independent Petroleum Association
on the 2nd 15-day Amendment Package to the LCFS Proposed Regulation

Clerk to the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

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Submitted electronically at https://www.arb.ca.gov/lispub/comm/bcsubform.php?listname=lcfs18&comm_period=2

The California Independent Petroleum Association (CIPA) is pleased to submit these comments on the proposed LCFS amendments. CIPA has been an active stakeholder in this process and has commented previously on numerous issues, including Carbon Capture and Storage (CCS).¹ We have prepared final comments focused solely on CCS.

The mission of CIPA is to promote greater understanding and awareness of the unique nature of California's independent oil and natural gas producer and the marketplace in which our members operate; highlight the economic contributions made by California independents to local, state and national economies; foster the efficient utilization of California's petroleum resources; promote a balanced approach to resource development and environmental protection and improve business conditions for members of our industry.

We have partnered with CARB in the development of many regulations impacting our industry, including the Cap and Trade program (price on carbon), the oil and gas methane rule (part of the Short-Lived Climate Strategy), and the Low Carbon Fuel Standard or LCFS (providing incentives for innovative crude production methods). We did not oppose these policies and worked in earnest with CARB to make the regulations as fair as possible. As a result, California has the toughest regulations governing oil and gas production in the nation. In addition to increased emissions from product transport, any replaced production would not be subject to such stringent controls.

Industry can support fact-based regulations which are rooted on strong scientific data. We have been willing to work on strategies to address the reduction of GHG emissions. The following comments are submitted in that vein of thought.

¹<https://www.arb.ca.gov/lists/com-attach/83-lcfs18-UDYGaVE+VmQFb1AP.pdf>, and <https://www.arb.ca.gov/lists/com-attach/234-lcfs18-UTJSPVAhBDYGX1c7.pdf>

CIPA appreciates the efforts and time CARB and its consultants have put into the development of the proposed Carbon Capture and Sequestration (CCS) Program. These comments are aimed at reducing California's Carbon Intensity (CI) by applying set standards and engineering practices to ensure safe CCS. The benefit of a CCS program is that it removes CO₂ from the environment, making the CCS a process that truly reduces CO₂ and reducing California's CI. CIPA recognizes that a CCS site requires multiple steps with numerous California and Federal governmental agencies, and engagement with the citizens of California. With this level of oversight science and a set regulatory path must direct the sequestration process. Without a scientific and regulatory process to follow the funding to make a CCS project successful will be impossible. CIPA believes in removing CO₂ from the atmosphere and placing it into a sequestration process.

CIPA makes the following technical recommendations:

1. CCS Protocol Appendix B 1. Applicability.

“The Carbon Capture and Sequestration (CCS) Protocol applies to CCS projects that capture carbon dioxide (CO₂) and sequester it onshore at subsurface geologic sites that include reliable sealing layers, appropriate geology, and good spatial location, such as those found in an exempted aquifer, a saline formation, or depleted oil and or gas reservoirs. The CCS Protocol applies to both existing and new CCS projects and existing CCS CO₂ injection wells if the projects and associated wells, provided the projects can meet the requirements for permanence pursuant to section C of this protocol.”

2. In many places “AOR” has been replaced by “storage complex” or “surface projection of storage complex”. However, “AOR” is still used in the document, but is no longer defined.

Recommendations to Definitions:

Definition of Storage Complex:

“Storage Complex” means the three-dimensional subsurface volume that is characterized, modified by corrective actions, and monitored so sequestration under the Permanence Requirements (section C).

(A) “The storage complex includes the injection zone (in which the CO₂ is emplaced), a sequestration volume, which is expected to contain the CO₂, and overlying and possibly underlying geologic formations that are required to provide assurance of storage. The storage complex must include a multi layered confining system that retards vertical migration of CO₂. The storage complex must extend laterally over (1) the volume from which CO₂ (as a free or dissolved phase) could escape from storage in the subsurface if a permeable pathway exists, and (2) the area over which the plume may migrate.”

Add a definition for AOR: AOR is used within the document but is no longer defined.

“Area of review (AOR)” means the area encompassing the lateral extent and depth of the storage complex.

3. Site Characterization

2.1 Minimum Site Selection Criteria

(5) “Depending on the distance between the sequestration zone and basement rock, the Executive Officer may require the CCS Project Operator to identify and characterize additional dissipation interval(s) below the storage complex, or describe active reservoir pressure management procedures (e.g., brine extraction) or other techniques

to reduce seismic potential, to limit the extent of downward overpressure propagation and lower the potential for induced seismicity within formations beneath the injection zone.”

CIPA believes these comments would improve the oversight of a CCS project and provide safe CO₂ sequestration, while expanding the opportunities to identify and complete a sequestration project. That these changes provide flexibility in the CCS program to allow a successful CCS project to go forward, and providing California the ability to sequester CO₂ and reduce California’s overall CI.

We hope to keep the lines of communication open on these very important issues as CARB looks to move forward with its ambitious climate agenda. Please do not hesitate to reach out to CIPA should you have any questions or if you or your staff would like to discuss these issues further.

Sincerely,

/s/

Rock Zierman
Chief Executive Officer
California Independent Petroleum Association