

**State of California
Air Resources Board
Board Item Summary**

**Item # 23-6-2: Public Hearing to Consider Proposed
Amendments to the Greenhouse Gas Emission
Standards for Crude Oil and Natural Gas Facilities**

Staff Recommendation:

Staff recommends that the California Air Resources Board (CARB or Board) approve for adoption the proposed amendments to the Greenhouse Gas Emissions Standards for Crude Oil and Natural Gas Facilities (the Oil and Gas Methane Regulation or the Regulation).

Discussion:

The Oil and Gas Methane Regulation reduces methane emissions from California’s oil and natural gas sector including from oil and natural gas production, natural gas gathering and boosting, natural gas processing, natural gas transmission compressor stations, and natural gas underground storage. Provisions in the Regulation include equipment replacement, installation of vapor controls, periodic leak detection and repair, additional monitoring at natural gas underground storage facilities, and emission measurements. The Regulation builds upon local air district rules targeted at volatile organic compounds (VOC) to achieve additional emission reductions from sources primarily emitting methane. The Board adopted the Regulation in 2017 and requirements were phased in between 2018 and 2020.

In 2018, CARB submitted the Regulation into California’s State Implementation Plan (SIP) to demonstrate attainment of VOC control requirements specified in the U.S. Environmental Protection Agency’s (U.S. EPA) 2016 Control Techniques Guidelines for the Oil and Natural Gas Industry (CTG). In October 2022, U.S. EPA finalized a *limited approval, limited disapproval* of the Regulation in the SIP and specified a list of deficiencies that CARB must correct to achieve full approval. These deficiencies must be addressed by April 30, 2024, to avoid sanctions that U.S. EPA is required to implement under the Clean Air Act. The proposed amendments address these deficiencies.

CARB also expects to begin obtaining satellite data capable of detecting large methane emission plumes in the coming years. Two satellites are planned for launch in 2024 through a consortium in which CARB is a partner. The proposed amendments would leverage satellite data to require owners or operators of oil and gas facilities to investigate and repair the sources of emissions plumes reported to them by CARB based on satellite data.

The proposed amendments responding to the SIP decision and availability of satellite data, along with additional changes based on implementation experience, were developed in an

open public process. This included two public (virtual) workshops and numerous individual meetings with industry stakeholders, environmental groups, local air districts, and U.S. EPA. Stakeholders were also invited to provide written comments following the public workshops.

Summary and Impacts:

The proposed amendments to address SIP deficiencies include (1) requirements to better assure emission reductions from vapor collection and control systems; (2) requirements to assure proper operation of controlled separator and tank systems; (3) a requirement for owners or operators to develop leak detection and repair plans; (4) reduced CARB Executive Officer discretion through strengthened approval processes, justification, and required documentation; (5) more thorough specification of when equipment and components covered by air district rules can follow those rules instead of the Oil and Gas Methane Regulation; (6) removal of some exemptions that U.S. EPA identified as conflicting with the CTG's requirements; and (7) other miscellaneous changes such as wording changes at U.S. EPA's request to better clarify testing standards. The proposed requirements for owner or operator response to satellite emission plume detections include an on-the-ground investigation near the detection location (unless documented activity-based venting was occurring), repair of unintentional emission sources, and reporting at various points along the process to inform CARB of what was found and when repairs occurred. Proposed changes in response to implementation experience are primarily related to clarity, consistency, and compliance verification.

The proposed amendments are expected to achieve methane emission reductions due to repairs of emission sources investigated due to the remote sensing provision. Studies have shown that a large fraction of emissions tend to come from a small number of large emission sources, like those that could be detected by satellites. The changes that respond to the SIP decision are necessary to achieve SIP approval and will also help ensure that the originally intended benefits of the Regulation are achieved through increased inspections, testing, design analysis, planning, recordkeeping, and reporting.

Staff estimate that the proposed amendments would result in \$6.6 million of additional costs over a five-year period beginning in 2024, not including cost savings from preventing the release of natural gas as those cost savings are unquantified. However, the costs of the proposed amendments are expected to be extremely small compared to the output of the affected industries. The proposed amendments are therefore not expected to directly result in job creation or business expansion or elimination. Staff determined that no subsequent or supplemental environmental analysis to the March 10, 2017, final Environmental Analysis prepared for the Regulation for Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities is required for the proposed amendments.