



South Coast Air Quality Management District

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April 17, 2026

Anthy Alexiades
Short-Lived Climate Pollutant Policy Manager
California Air Resources Board

Comments on Revised Proposed Amendments to the Regulation on Methane Emissions from Municipal Solid Waste Landfills (LMR)

Dear Anthy Alexiades:

The South Coast Air Quality Management District (South Coast AQMD) appreciates the changes that have been made that address some of our comments as well as the opportunity to comment on the Revised Proposed Amendments (“15-Day Changes”) to the LMR. Attached with this letter are staff’s comments for the revised proposal.

While the “15-day changes” did incorporate changes in rule text, South Coast AQMD staff’s remaining priority concerns mostly focus on the underestimated resource impacts and fiscal analysis. South Coast AQMD’s comments and data are based on decades of experience in implementing landfill air quality regulations in densely populated areas. Additionally, South Coast AQMD staff are on the front lines for two on-going Subsurface Elevated Temperature Events at local landfills and have real-world experience with many of the issues that the LMR is intended to address and the resulting resource impacts. Implementation of air quality regulations includes significant engineering analyses, field investigations, and community engagement, which extends beyond the oversimplified administrative review of reports identified in the updated staff report.

South Coast AQMD staff appreciate CARB staff’s time and consideration of our attached comments, and we look forward to receiving written response to our various comment letters. If you have any questions or need additional information, please contact me at jaspell@aqmd.gov or (909) 396-2491.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Aspell', written over a white background.

Jason Aspell
Deputy Executive Officer
South Coast AQMD
Engineering & Permitting

JA: AIS

cc: Rajinder Sahota, Deputy Executive Officer, CARB
Matthew Harrison, Branch Chief, CARB
Jeff Lindberg, Branch Chief, CARB

Attachment - Comments

Resource Impacts

It is South Coast AQMD staff's understanding that previous resource impacts provided were not included in CARB's assessment. South Coast AQMD has the most landfills in the state and to not fully consider South Coast AQMD's estimates grossly underestimates the burden of implementing CARB's proposal for the entire state. If CARB staff felt that this estimate or the previous estimate was inadequate, we highly encourage CARB staff to engage with South Coast AQMD and any other air district attempting to collaborate with CARB to obtain accurate data to ensure the regulation can be properly implemented and enforced. South Coast AQMD staff is currently enforcing significant landfill issues impacting communities that this proposal is aimed at addressing and the estimates provided are from our experience handling these issues. Staff appreciates the additional opportunity to provide further cost and resource information and estimates related to the Proposed Amendments to the Regulation on Methane Emissions from Municipal Solid Waste Landfills (LMR) in addition to our January 9, 2026 email and the information below.

The proposed amendments to the LMR will require additional permitting and more complex and conflicting permitting issues to handle for all applicable landfills, as well as approvals that do not contemplate existing regulatory and permitting timelines. The proposed LMR will require additional training, review, evaluation, as well as information/submittal receipt, handling, and management. There are additional requirements and more stringent requirements (some of which will require real-time response involving satellite data), as well as monitoring, reporting, and recordkeeping, which greatly affects enforcement action resources, among various other aspects. Additionally, many of these landfill compliance issues are not resolved through one submittal and a single review and approval, but rather through on-going internal and external communications, a multitude of requests for information, assessments and verification, and inspections and field response.

South Coast AQMD staff is providing staffing estimates needed for implementing the LMR as well as providing existing examples of regulatory response for some discreet requirements that are proposed for the LMR.

Staffing Resource Estimates

Staff still does not have a clear understanding of which agency will implement the new proposals in the absence of an updated MOU. Our current estimates for implementation and enforcement of the LMR in our jurisdiction would require at least:

- Two additional Senior Office Assistants – Receiving, data entry, classifying, and records handling for incoming reports, notifications, and other compliance submittals
- Eight additional Air Quality Inspector IIs – Review compliance submittals (e.g. surface emission reports), conducting inspections/investigations and reporting, field response to affected community and facility, and issuing compliance notices to facility
- One additional Air Quality Inspector III – Conducts more complex and difficult inspections/investigations, coordination, etc. compared to AQ Inspector II
- One additional Supervising Air Quality Inspector – Coordinates, supervises, and participates in AQ Inspector duties; reviews reports, notices, investigations, requests and other documentation.
- One additional Program Supervisor – Supervises, plans, assigns, reviews, and evaluates staff work. Prepares documentation. Compiles and analyzes data from staff monitoring efforts. Tracks overall program requirements and compliance statistics.
- Four additional Air Quality Engineer IIs – Primary review of LMR submittals responsible for reviewing plans and gathering information. This step typically requires multiple rounds of evaluation and coordination with the facility.
- Four additional Senior Air Quality Engineers – First line review and responsible for the most complex engineering evaluations
- Two additional Supervising Air Quality Engineers – Final reviews of staff evaluations, providing direction in navigating regulatory complexity and coordination

Fully burdened Salary (FY26/27):	Per Position	Total for Positions
Senior Office Assistants	\$172,744	\$345,488
Air Quality Inspector II	\$227,907	\$1,823,256
Air Quality Inspector III	\$241,717	\$241,717
Supervising Air Quality Inspector	\$263,660	\$263,660
Program Supervisor	\$299,333	\$299,333
Air Quality Engineer II	\$261,414	\$1,045,656
Senior Air Quality Engineers	\$279,490	\$1,117,960
<u>Supervising Air Quality Engineer</u>	<u>\$299,333</u>	<u>\$598,666</u>
	Overall Total	\$5,735,736

The proposed amendments to the LMR are estimated to incur millions of dollars annually for staffing alone. Please note that CARB has not requested the fully burdened rate for South Coast AQMD staff, and South Coast AQMD staff did not provide it in previous comment. The fully burdened rates above should be included in the assumed average rate for engineering staff as well as enforcement and clerical staff. These estimates may change depending on the type of changes in any proposed MOU.

CARB's \$1.2 million dollar estimate results in an increase of about five Full Time Employees for the entire state, which means many of the 35 air districts are expected to incur the burden of this regulation without additional staffing. It is unclear what resource impact costs CARB will incur for its own efforts as part of this proposal since the focus of the fiscal analysis seems to be on air district impacts. The proposed LMR should also reflect CARB staffing and resource impacts as well to provide a clear understanding of how future LMR MOUs will be crafted considering CARB staff has indicated that they will be handling some of the implementation (e.g. remotely detected plumes and satellite data) and potentially CARB's own enforcement and support functions for air districts.

Regulatory Response Resources

While the "Changes to the Fiscal Analysis for Local Air Districts" indicate that the costs "are intended to represent population averages per landfill, not the hours per landfill that trigger any specific action or requirements," the estimated resource costs already vastly underrepresent the resources needed to respond to near real-time satellite imagery notifications just from this calendar year for landfills in South Coast AQMD's jurisdiction. In Table 5, "Surface Emission Monitoring and Remote Detected Plumes," the values only account for administrative functions, not actual response resources. Enforcement staff periodically conduct surface emission monitoring activities in response to satellite data notifications to verify compliance. This typically requires a team of 3 to 4 staff for 10 hours, plus an additional 10 hours for data analysis for one active landfill. South Coast AQMD staff typically conducts two of these events per year, accounting for 100 hours, which is an order of magnitude above what Table 5 estimates for the entire state for surface emission and plume response. South Coast AQMD staff performs these SEM field responses for approximately 13% of the active landfills in South Coast AQMD jurisdiction. 13% of 74 active landfills in the state is 10 landfills, or 1000 hours. Additionally, South Coast AQMD staff requests that CARB provide a full list of affected landfills, as previous LMR rulemaking has done, for transparency to ensure proper assessment and calculation of the resource impacts.

Furthermore, in Q1 2026, there have been 7 landfill notifications for remotely detected plumes in South Coast AQMD. At this rate, there will be 28 notifications per year. South Coast staff responded to one of these notifications with multiple staff to inspect the facility (non-SEM related activities) and that accounted for at least 20 hours total District staff time in Q1 2026. This time is above and beyond the administrative review of reports. Although CARB has verbally indicated they will be responsible for implementing this requirement, this is not yet reflected in an updated MOU, nor is it clear if CARB staff will be responsible for conducting inspections for persistent plumes, such as the events at Chiquita Canyon and El Sobrante. South Coast AQMD staff experience has shown that field response is necessary to ensure timely and proper response by the landfill facilities. To assume that this requirement is strictly an administrative function ignores the massive resources needed to address Subsurface Elevated Temperature (SET) events like the

situations at Chiquita Canyon Landfill and El Sobrante Landfill. The equivalent of one full section of a permitting team is dedicated to the SET events at these landfills. This includes one staff level engineer, one Senior Engineer, 1.5 Supervising Engineers, and about 0.25 Senior Manager. Mandatory reviews and approvals to identify and address these situations in the proposed LMR have been incorporated for our resource impacts estimates.

Additionally, South Coast AQMD staff strongly disagree with the 10% estimate for review and approval time based on current data, workflows, and practices for existing landfill sector approvals. Staff analyses currently show a bottleneck at the review level in the Waste Management team due to the current workload and data has been closely tracked and presented to the South Coast AQMD Permit Streamlining Task Force and the Governing Board. This specifically applies to the Waste Management team as compared to other engineering teams at South Coast AQMD due to the complexity of the operations and the regulations. These landfills are typically federal Title V sources which require additional review stages and incorporation in Title V permits. South Coast AQMD's current review time ranges from 80% to 200% of the estimated staff time. South Coast AQMD has added multiple staff permitting positions in the past three years in our Waste Management team to address this issue and is proposing an additional three positions next fiscal year to continue to address this deficit. An underestimate for CARB's LMR would be another setback for implementation of landfill regulations for local air districts if staffing is insufficient to handle the workload. The cost estimates requiring review and approval in Table 5 should be updated to reflect actual procedures and impacts.

As previously indicated, there are significant resource impacts for permit processing as well as permit processing impacts, especially driven by the federal Title V permitting process. Since many of the landfills are federal Title V sources, the Title V permitting requirements are likely triggered and typically plan approvals are included in the Title V permit. For Title V approvals, South Coast AQMD's process includes a staff level evaluation and multiple levels of review prior to submittal to U.S. EPA for their review. This may include a public noticing process, as well. Additionally, South Coast AQMD has increased rates of inspections for Title V sources, in addition to deviation reporting and compliance certifications. South Coast AQMD has already engaged U.S. EPA Region 9 regarding the proposed LMR, and we encourage CARB to do so as well, in addition to engaging with the air districts and to better understand the permitting and approval process and the resulting impacts.

Regulatory Procedures, Timelines, and Deadlines

Air districts have their own approval procedures and regulatory timelines under an existing regulatory structure (e.g., Health & Safety Code, South Coast AQMD rules and regulations). Approval requests for these new proposed requirements may require permit applications and/or compliance plan applications, as well as Title V Facility Permit revisions, as applicable. Title V facilities require additional U.S. EPA 45-day review for permit proposals. Some requests may require a 30-day public notice prior to approval. The proposed LMR imposes regulatory deadlines on CARB and/or delegated air districts to approve or disapprove various requests and plans. Based on South Coast AQMD staff's experience with current applications for landfills, staff may not be able to comply with the proposed timelines with current staffing and resource levels.

It is recommended that CARB work with air districts to understand the timeline challenges faced and add reasonable timelines and/or allowances for extension of timelines in the proposed LMR. It is rare for initial plan or permitting submittals to air districts to be complete, and even when proposed LMR requirements allow for requesting additional information to be submitted, the regulatory deadline imposed on CARB and/or delegated air districts in the regulatory language may not be sufficient. We recommend adding criteria-based extensions and approval process for proposed deadlines.

Previously submitted South Coast AQMD comment letters identified various proposed LMR requirements with infeasible and/or unclear implementation of deadlines, which remain unaddressed. The comments below are further renewed as there are specific timeline concerns.

- 95468(e) – “By July 1, 2027, any owner or operator with an alternative compliance option that was in effect on January 1, 2027 shall submit to the Executive Officer any approval documentation in their possession and all documents submitted as part of the original alternative compliance option request. If the owner or operator does not submit any documentation, the alternative compliance option becomes invalid as of January 1, 2028.”
 - It is unclear if prior alternative compliance option approvals that were in effect prior to the future LMR amendment date will be still in effect from future LMR amended date through to December 31, 2027, prior to the January 1, 2028 effective timeline in the rule provision.
 - 95468(d) indicates that “The Executive Officer *may* (emphasis added) review a previously approved alternative compliance option or conformance with the standard in section 95468(c)(2) or to determine if it provides alternatives to requirements in sections other than those referenced in section 95468(a) using the criteria in section 95468(b).” This appears to be an option of the Executive Officer, but the landfill owner or operator doesn’t appear to have a mechanism to request for previously approved alternative compliance options to be in effect at the start of the LMR amendment. It is not clear if this is CARB’s intent.
 - It is unclear in the second sentence of 95468(e), “If the owner or operator does not submit *any* (emphasis added) documents...”, whether the submittal of *any* documentation, even an incomplete submittal, would prevent the alternative compliance option from becoming invalid as of January 1, 2028.
- 95469(b)(1)(B) – “The Executive Officer shall send the notification to the email address supplied pursuant to section 95470(b) within seven business days of CARB receiving the remote monitoring data. The notification shall contain all of the following information...”
 - It is unclear if notification is provided beyond the seven business days whether it nullifies the subsequent requirements for the facility to act on the data, and if so, whether the burden falls on the air districts to conduct inspections in response to the notifications. We recommend that the seven-day requirement be included as a separate bullet for clarity.

Unclear Regulatory Structure

Modifications to Regulatory Language Needed to Clarify Implementation, Enforcement, and Approval Process. Interagency procedures to receive/provide access to information and submittals remain unknown. Interagency roles for implementing, enforcing, and approving provisions of the proposed LMR remain unclear. For example, there are implementation and enforcement concerns when there are not clear procedures or requirements to indicate next steps after a given deadline has passed or action has been taken. The proposed LMR does not appear to include language describing further action if a submittal is disapproved, so it is unclear what regulatory language would trigger the need for subsequent submittals that CARB staff had conveyed would be necessary (e.g. disapproval of the Control System Design Plan in 95464(a)(2)). The lack of clear language could be interpreted as a landfill owner or operator having satisfied the requirement from the submittal itself, even though it is not approved or may not be a complete submittal, rather than restarting the timeline. Further clarification is needed to aid implementation and enforcement.

Requirements with Sub-Requirements That Obfuscate Implementation

- 95463(b)(2)(B) – Requires “If the landfill gas heat input capacity is greater than or equal to 3.0 MMBtu/hr recovered that the owner or operator” demonstrate that “after four consecutive quarterly monitoring periods there is no measured concentration of methane of 200 parts per million by volume (ppmv) or greater using the instantaneous surface monitoring procedures specified in sections 95471(c)(1) and 95471(c)(2), including monitoring performed in response to a remotely detected emission plume pursuant to section 95469(b)(3) or during compliance inspections. Based on the monitoring results, the owner or operator shall do one of the following: ...”
 - The structure of this requirement’s phrasing is unclear to interpret, implement, and/or enforce, since the 95463(b)(2)(B) provision refers to demonstrating “*after* (emphasis included) four consecutive quarterly” with less than 200 ppmv of methane instantaneous surface monitoring (ISM) readings occur. Where 95463(b)(2)(B)1., 2., and 3. are sub-

requirements “based on the monitoring results,” but it is unclear which “monitoring results” the requirement is referring to, whether it refers to monitoring results conducted during the attempt to demonstrate the four consecutive quarters with less than 200 ppmv of methane ISM, or only “after four consecutive” quarters demonstrating less than 200 ppmv of methane ISM as a follow-up, etc. The language is not clear on which results are subject to 95463(b)(2)(B)1., 2., and 3 sub-requirements and, thus, it is unclear when the requirement threshold is triggered and when it is satisfied.

Semi-continuous Operation and Permanent Shutdown of the Gas Collection and Control System

Certain requirements and provisions for requesting and approving semi-continuous operation and permanent shutdown of the gas collection and control system at a closed MSW landfill are challenging for regulators to approve and enforce.

South Coast AQMD has concerns about some of requirements of subpart 95467, including 95467(a)(5) which requires that a “professional engineer has certified that there are no available modifications to any control device available onsite that would allow any control device to operate continuously at the methane flow rate and gas composition being collected,” and that “there is no adjacent facility with a continuously operating control device that will accept the landfill gas.”

- If a professional engineer may certify “that there are no available modifications to any control device available onsite” that would operate continuously, it doesn’t mean there are no other kinds of control devices that can be installed and satisfy the LMR. Additionally, if there is an adjacent facility, it does not mean that the facility’s control device will be sufficient or appropriate for the landfill’s control needs. While evaluating control equipment for regulatory compliance is a common scenario for air district permitting, this requirement puts the determination with a third party with a lack of consideration for potential conflicts of interest.
- Furthermore, regardless of whether a professional engineer certifies the information or not, a South Coast AQMD permit application would be required for engineering evaluation and permit approval. Air districts that are delegated this review and approval likely have other regulatory requirements to satisfy and determinations to be made that are not sufficiently addressed by a professional engineer certifying the information in the request.

The “15-day changes” revised 95467(c) by including “of receiving a complete request”. This additional phrasing leads to further obfuscation, as now the requirement reads, “The Executive Officer shall approve or disapprove a request for semi-continuous operation within 180 calendar days of receiving a complete request.” It is unclear if the intent is to allow disapproval of a request if it is complete. It is also unclear whether an Executive Officer is allowed to disapprove an incomplete request, since the disapproval is within 180 days of receiving a *complete request* [emphasis included]. It is recommended to clearly identify the criteria for when approval and when disapproval occurs and if that includes disapproval of incomplete requests. This same comment applies to the “15-day changes” of 95467(f) and 95467(f)(2)(B), which also included “of receiving a complete request” to the provision language.