# Jeffrey Mills

See Attached Letter.

**L AND D LANDFILL LIMITED PARTNERSHIP**
**P.O. BOX 255009**
**SACRAMENTO, CALIFORNIA 95865-5009**
**916-737-8640**

November 10, 2025
Electronic Submission

Clerk's Office
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: Comments on Proposed Amendments to the Regulation on Methane Emissions from Municipal Solid Waste (MSW) Landfills
L and D Landfill
Sacramento, California

To Whom it May Concern,

This letter provides our comments on the "Proposed Amendments to the Regulation on Methane Emissions from Municipal Solid Waste (MSW) Landfills," also known as the California Landfill Methane Rule (LMR). This regulation is contained within 17 Code of California Regulations (CCR), Subarticle 6.

L and D Landfill (L and D) is a solid waste organization that operates a Class III limited Construction and Demolition landfill that is subject to the LMR. L and D recognizes the need to update the LMR to incorporate proven new technologies, as well as the desire by the California Air Resources Board (CARB) for enhanced predictive monitoring and data capture. While L and D is supportive of these goals, they need to be achieved in a manner that allows us to safely and efficiently manage the changes without undo economic and operational hardships. L and D is a small, privately held facility which is approaching the end of its site life. Many of the proposed changes will pose significant challenges to achieve under end of life site closure and post closure economic limitations.

L and D has conducted a detailed review of the proposed regulatory changes as well as CARB's basis for those changes, and this letter provides our comments. The comments have been organized into categories of "General" and "Specific", to better differentiate between comments that are relevant to the overall rule and comments that address specific rule elements. Comments are provided in line with specific sections of the proposed rule and are intended to highlight the issue while suggesting a general approach to addressing the respective item.

## General Comments

### Review Period:

Forty-five (45) days is not sufficient time to review and comment on this draft rule. The proposed changes and additions are significant and will have a massive effect, both

financially and operationally, on landfills in the state. Further, many of the proposed amendments have not been thoroughly detailed by CARB as part of previous rulemaking efforts, so there are new issues that must be better vetted. Also, it appears that certain revisions draw from the draft Colorado LMR; however, that rule will not be final until December 2025, and it is undergoing modifications that may change some of the requirements upon which CARB has relied. Therefore, we request that the public comment period be extended through January 31, 2026. Additionally, CARB should conduct at least one additional workshop to thoroughly review the proposed amendments and the rationale behind them, now that specific rule language is available.

**CEQA:**
It is unclear whether the rulemaking meets the criteria for the California Environmental Quality Act (CEQA) exemption that CARB has noted. The proposed rule will have major impacts on how landfills design, build, operate, and monitor their LFG systems, cover, disposal operations, and other landfill infrastructure. Those changes will in turn have environmental impacts that have not been previously vetted under CEQA. Further, CARB has not adequately addressed other alternatives that could have been used to achieve the same goals. Therefore, the rulemaking should go through its own full CEQA process.

**Financial Impact:**
CARB has severely underestimated the financial impact these amendments will have on landfills in the state as well as the corresponding impact this will have on rate payers for solid waste services. Appendix B of CARB's "Initial Statement of Reasons" (ISOR) requires significant revision to address these inadequacies. Further, CARB staff should work with actual landfill owner/operators in the state to better understand these costs, so that they reflect real-world conditions and realities.

**Deadline for Implementation:**
The deadline for implementation of any new or modified requirements should not be linked to the rule promulgation date. Rather, it should be linked to the date CARB approves new or updated Memoranda of Understanding (MOUs) with each specific district. As the districts will generally be responsible for rule implementation and enforcement, there must be updated MOUs issued before landfills are required to comply because of the major changes to this rule.

**Air Toxics:**
The basis for the LMR is the reduction of landfill methane as a greenhouse gas (GHG). As such, this rule is not the proper venue for the inclusion of federal air toxics requirements from the landfill National Emissions Standard for Hazardous Air Pollutants (NESHAPs). If CARB wants to impose federal air toxics requirements in a California rule, it should go through its own air toxics rulemaking. Therefore, we request that any proposed amendments, which reference or otherwise incorporate rule requirements from the landfill NESHAPs under 40 Code of Federal Regulations (CFR), Part 63, Subpart AAAA, should be removed from this rulemaking and subject to a separate air toxics rulemaking, if so desired by CARB.

## Specific Comments

**Annual Report:**
The annual report required under Section 95470(b)(3) will be much more extensive under the revised rule because of all of the additional monitoring, recordkeeping, testing, and documentation required. As such, landfills will need more time to compile, review, assess, and report on the information required in the annual report. We request an extension of the deadline from March 15 to April 30 for report submittal. Since CARB will also be getting quarterly reports under the rule (Section 95470(b)(4)), this deadline extension is reasonable.

**Early Gas Collection:**
Section 95464(a)(5) of the draft rule requires early installation of horizontal or caisson wells at certain landfills accepting 200,000 tons per year of refuse. While we recognize the intent of enhancing timelines and gas collection system installation within active areas of landfills, there are practical limitations to some of the timeframes and activities proposed in this section. Installation of gas control infrastructure in the working area of a landfill while waste is being placed presents specific challenges.

First, the provision should say refuse "disposed" not just "accepted," as landfills can accept waste that is not later disposed in the landfill. Second, there are other options for early collection, and the rule should allow any other options, such as collecting from the leachate collection and control system (LCRS), installing collection layers in bottom liners, using shallow verticals, etc. The rule should not limit the options an operator can use for early collection. Additionally, CARB provides no scientific basis and/or cost effectiveness analysis to justify the 200,000-ton threshold; the value seems completely arbitrary.

Finally, the draft provision requires operation of these collection devices after 15 feet of waste is placed. Again, this is an arbitrary threshold dictated by CARB, which may not be appropriate for many sites. Fifteen (15) feet may not be enough waste to prevent the well from "short-circuiting" with ambient air and causing compliance issues with other provisions in the rule. We believe the rule should allow discretion to the design engineer and LFG system operator as to when the best time is to operate these collectors based not just on the presence of positive pressure but that there are sustainable gas quality and no air intrusion when under vacuum.

Concerns over employee and contractor safety, efficient traffic control and collateral impacts associated with oxygen intrusion into the gas collection system are primary when addressing the issue of gas collection in areas where waste is actively being placed. A potential means of approaching this issue is to set timelines for installation of sufficient gas control components relative to the commencement of waste placement but not have the regulation dictate the specific design choice. The specific design option employed should be at the discretion of the professional engineer, not dictated by CARB. These could include caisson wells or horizontal collectors during cell construction or as waste is placed but would also allow for installation of vertical wells once filling in a given area is

completed. The latter approach would avoid the safety and oxygen intrusion issues associated with placement of horizontal collectors as well as difficulties associated with placement of caisson wells in geometric cell configurations that do not lend themselves to that application.

This approach (i.e., time bound vs. pre-determined infrastructure criteria) is aligned with the pending Colorado LMR and allows more flexibility in design and construction. Specific timelines can be discussed but should allow for design, approval and pre-construction activities to take place.

**Conversion from Celsius to Fahrenheit:**
In multiple places in the rule, CARB continues to make an error in converting 28° Celsius to Fahrenheit. Since the temperature requirement is based on a change or drop in temperature of 28° C (not an absolute 28° C), then this equates to 82° F not 50° F. This was a mistake in the original federal LFG rules that the U.S. Environmental Protection Agency (EPA) later corrected, but CARB has not. This mathematical error should be corrected.

**Radius of Influence:**
The rule references the concept of "radius of influence" (ROI) for LFG extraction wells. There is no accepted testing procedure or calculation method for the determination of ROI. Further, there is large uncertainty in such calculations, such that the concept of ROI should not be used in a regulation. Rather than require an ROI assessment for permanent well decommissioning, CARB should instead base the allowance for well decommissioning on the subsequent SEM conducted in the area of the removed well, which is a much better determinant as to whether a well in location was necessary. Other references to ROI should be removed from the rule as well.

**SEM Requirements for Inactive Landfill or Areas:**
CARB has provided no quantitative basis that the surface emissions monitoring (SEM) requirements for inactive landfills or inactive landfill areas should be made more stringent (Section 95469(a)(1) and (2)). In the proposed rule, CARB has added a requirement that the inactive landfills/areas must have final cover, changed the monitoring allowance from annual to every three quarters, and taken away the ability to remediate an exceedance in the first 10 days, which would not cause the landfill to lose its annual or 100-foot spacing options.

The type of cover in an inactive landfill/area should not matter as long as the landfill/area meets the SEM requirements for obtaining the reduced monitoring options. The 10-day allowance was negotiated in the original LMR rulemaking because it was felt to be unreasonable that a large landfill or landfill area, possibly hundreds of acres, should lose its reduced monitoring option because of one exceedance in one location during one event, especially when that exceedance could be easily remedied in 10 days. We recommend that there should be no changes made to the inactive landfill/area SEM requirements, as CARB has not provided an adequate basis to justify this change.

**Cover Integrity Requirements:**
The draft rule requires a Cover Integrity Assessment be performed under various circumstances, including under the semi-continuous operation provisions (Section 95467(a)); recurring SEM exceedances (Section 95469(a)(4)); wellhead temperatures over 131° F or 145° F (Section 95469(e)(3) and (4)); wellhead oxygen over 5% (Section 95469(e)(5)); and under the Wellhead Parameter Trend Analysis requirements (Section 95469(e)(7)). Collectively, there are numerous instances which commonly occur at landfills, where a Cover Integrity Assessment would be triggered. As such, this requirement will affect many landfills in the state, multiple times throughout the year. Specific proposed requirements of a Cover Integrity Assessment are summarized in Section 95471(k).

This is an extremely onerous requirement that will have massive operational and financial impacts on the landfill industry and would be practically unworkable for many landfills. To begin with, we believe that CARB is overstepping its authority by including cover requirements from 14 CCR and 27 CCR (or beyond 14/27 CCR) that are under CalRecycle's and local enforcement agency's (LEA's) jurisdiction. Regulated facilities do not need CARB and the local air district, in addition to Cal Recycle, the LEA, the Regional Water Quality Control Board (RWQCB) enforcing landfill cover requirements.
Additionally, the cover requirements are arbitrary and capricious, and CARB has not adequately addressed the operational, financial, other environmental impacts in the ISOR or in the CEQA documentation. CARB has provided no scientific evidence that the very prescriptive cover requirements being imposed will actually reduce surface emissions and/or improve wellhead gas composition.

More specifically, the references related to measuring thickness of cover, grain size and fines content in subsection (k) are not specific to any particular location and could be interpreted as covering an undetermined expansive area of the landfill. On their own, they are impractical to assess even within a limited spatial extent. Additionally, subsection (k)(1)(D) goes into extensive detail relative to compaction and maximum particle size requirements, etc.

Many landfills simply do not have the available cover materials to meet the prescriptive requirements to, for example, double the amount of soil cover or replace daily cover with intermediate cover. Further, requiring landfills to replace daily cover with intermediate cover is unworkable. Daily cover, by its nature, is designed to be added each working day as a landfill disposes waste in the specific area. Intermediate cover is placed in areas where landfill filling has ceased for an extended period, and is designed not to be disturbed, certainly not by additional daily filling operations. Similarly, final covers are designed to never be disturbed by landfill operations, and they are not appropriate for use as intermediate covers.

CARB has not investigated the impact that additional cover thickness/low permeability layers will have on leachate, including the potential to exacerbate leachate seeps and leachate accumulation in the waste mass by creating low permeability layers within where

the leachate cannot move vertically as designed. CARB has also not investigated the impact that additional cover thickness/low permeability layers will have on LFG collection, including impeding vertical movement of gas, reducing the influence of gas wells, allowing gas to accumulate in low permeability pockets within the waste, and other issues. There has been research on this topic at California landfills, which resulted in recommendations not to increase the thickness of or create low permeability daily cover layers within the waste mass as these actually reduce gas recovery.
The intent of the cover integrity assessment is to identify areas that may be deficient and augment them so the occurrence that led to the assessment is mitigated. The means by which the occurrence is remedied should be left to the facility operator as long as the threshold exceedance has been remedied. Incorporating prescriptive provisions of the nature contained within these subsections may not be plausible given on-site material sources and spatial expanses that a cover integrity assessment could involve. Additionally, adhering to the testing criteria outlined in this section is not practical on the scale under consideration.

Based on the above, we request that the prescriptive cover requirements should be removed from the rule. Instead, if CARB is concerned about cover integrity under certain circumstances, it could require that the frequency of cover integrity inspections be increased in the areas of concern as well as direct the landfill operator, in consultation with the professional engineer, to make improvements to cover based on site-specific conditions and considerations.

**Wellhead Requirements:**
The draft rule includes new wellhead temperature and oxygen monitoring, limits, and corrective action requirements, including enhanced monitoring, from the federal NESHAP combined with requirements contemplated in Assembly Bill 28. Proposed requirements are contained within Section 95469[e] and include an extensive revision to the current rule, which has no wellhead temperature or oxygen requirements.

CARB's intent is to have the revised LMR contain enhanced monitoring and assessment as well as prompt initiation of correct measures. While we can be supportive of this approach, it is imperative that the remedies associated with exceedances of certain thresholds do not conflict with one another. Additionally, the follow-on actions proposed in the revised rule are comprehensive and should not be required to be implemented in the event of the occurrence of a single high temperature reading.

Intermittent high temperature readings may occur sporadically at any facility. Our consultant has evaluated data for 118 California landfills and almost 14,000 active gas wells, and approximately 7% of the wells (over 900) and 35% of the landfills (over 40) have had wells with readings over 131 F. Some wells simply operate at higher temperatures, have for years, and this has not resulted in any adverse consequences at the landfill. U.S. EPA studied the wellhead temperature issue during the rulemaking for the NESHAP rule and elected to establish a 145° F wellhead temperature limit. This limit is intended to replace the 131° F limits found in earlier New Source Performance Standard

(NSPS) and Emission Guideline (EG) rules. As such, we request that CARB change the proposed rule such that wellhead temperatures of 131° F do not require any corrective action, but instead can trigger an increase in the monitoring of the specific well and adjacent wells. Only at 145° F should corrective action be triggered.

The current draft of the revised LMR would appear to require an operator to initiate corrective actions, cover integrity assessments and collection system assessments immediately following the occurrence of single elevated temperature reading (i.e., greater than 131° F and 145° F as noted in Section 95464(e)(3) and (4)). We would suggest that all follow-on actions be required only if an elevated temperature reading occurs consistently over 60 days for any temperature threshold versus detection with a single reading. This would essentially encompass three (3) monthly readings and initiation of follow-up actions would be based on gathering of some statistically significant data.

Similarly, it is very common for landfills to have wells with oxygen over 5% oxygen. Data suggest that almost 52% of the wells (over 7,000) and almost 96% of the landfills (over 110) have had oxygen readings over 5%. For example, it is very common for perimeter wells used for gas migration control; surface collectors, such as horizontal wells; and wells installed in low gas production areas (e.g., newer waste areas, older waste areas with declining gas production, areas with large quantities of non-degradable waste, very dry climate landfills, etc.) to have elevated oxygen. This is a normal occurrence and does not represent an operational or design issue. This is particularly relevant to L and D, which is a Construction and Demolition site, with no putrescible fraction in the waste stream.

Oxygen limits were removed from the original NSPS in subsequent rule revisions by U.S. EPA because it was demonstrated that adjusting wells to artificially meet an arbitrary 5% oxygen standard did not reduce the number or frequency of subsurface landfill fires but did result in a reduction in LFG recovery and an increase in surface emissions and subsurface gas migration. This is because wells are arbitrarily tuned down to reduce oxygen levels, which reduces their ability to extract gas. As such, we request that the specific oxygen limits be removed from the rule; instead, like the federal NSPS and NESHAPs rules, oxygen would be monitored monthly and used as a parameter in well adjustments, but without the arbitrary limit.

Additionally, the time frames in which remediation of an elevated temperature or oxygen content reading is to be addressed should be re-assessed. While some elevated readings can be mitigated in a short period of time, others may take an extended period due to location, access issues at certain times of the year and subcontractor availability. The regulation does not allow for the request for additional time in the event of a single temperature reading that exceeds 131° F (either instantaneous or over a 60-day period) if that threshold is kept in the rule. It is allowed for temperature readings above 145° F (Section 95464(e)(4)D). Our request is that provisions to request additional time be added in text referencing corrective actions related to an exceedance of the 131° F temperature threshold. While the provisions contained within Section 95468 – Alternative Compliance Options would appear to allow for this request, we believe a specific

reference such as the text included for corrective actions associated with temperatures above 145° F should be included in Section 95464(e)(3), as recent industry experience has been that districts and CARB are rejecting all requests for alternatives.

It is also important to note that the balance between oxygen, carbon monoxide content and temperature (and other variables) is such that attempting to mitigate one variable could cause the other to move in a negative direction. As such, mitigating all the parameters being considered within the 60-calendar day period noted above may not be practical or achievable. To that end, we request that an operator be given the opportunity to provide an alternative compliance approach to a specific situation versus being bound to mitigate the situation in its entirety within a 60-calendar day period.

**Limits on GCCS and Well Downtime:**
The draft regulation places new limits on GCCS downtime as well as individual well downtime (Section 95464(b)(1)(A)). These are generally lifted from Bay Area Air District's (BAAD) Rule 8-34. However, CARB has made the GCCS downtime limit 50% of the 240 hours in the BAAD rule, only allowing 120 hours per year, which is even more restrictive. CARB has not supplied scientific justification for the 120-hour limit, especially since the current rule does not have a numeric hour limit. Further, with many landfills experiencing power outages, including power safety shutdowns for fire prevention, which can last multiple days, 120 hours for a year is not reasonable limit. Additionally, there is no indication as to whether this threshold is net of any uncontrollable circumstances such as earthquakes, fires, floods, or other disaster-type events. Also, the rule should clarify that this should only be applied to downtime of the entire GCCS, not just a single control device, as many landfills have redundant control system and multiple control devices that can act as back-up. Finally, it must allow us to include both planned and unplanned events under the downtime allotment in the rule.

The exclusions allowed in subsection (e) refer only to "individual components" and not an entire system shutdown due to these occurrences. We believe the text should be edited to clearly reflect this threshold is reflective of total system downtime and that it does not include uncontrollable circumstances as outlined herein. Additionally, we request that the time frame be extended to 240 hours, to be consistent with the BAAD Rule 8-34 limit, which is the most stringent of its kind in the state.

In terms of well downtime, there are limits on the number wells that can be offline at one time, which also derived from BAAD Rule 8-34 (Section 95464[e]). These proposed requirements limit the amount of well downtime to no more than five wells or five percent of the total number of wells at the MSW landfill, whichever is greater, except in cases where wells are being shut down to prevent or extinguish fire. There are additional requirements if wells cannot be brought back online within five days. This can be problematic for active landfills, with ongoing active face operations, which are also undergoing on-site construction, so we request an additional exemption from the well downtime limit during construction activities (such as phased closures) at active landfills.

**Semi-Continuous Operation/Conditional Permanent Shutdown Criteria/Permanent Shutdown Approval:**
Under Section 95467, CARB added extensive requirements that must be met for both semi-continuous operation as well as for permanent shutdown. The collective process would make it much more difficult, time-consuming, and costly for a closed landfill to achieve the noted statuses. In some instances, it may prove impossible for a closed landfill to ever meet these criteria. We request that CARB first evaluate the ability of closed landfills to actually meet these requirements before imposing such draconian criteria for permanent shutdown.

**Alternative Compliance Options:**
Under Section 95468, CARB has proposed to remove multiple options for alternative compliance options (ACOs), made others more stringent, and added a requirement that mandates landfills resubmit previously approved ACOs, allowing CARB or the districts to take them away after the fact despite past regulatory approval. CARB has also proposed taking away the timeline when ACO's would be automatically approved if CARB or the districts did not respond in a certain amount of time. Under the proposed rule, ACOs could only be implemented if approved in advance, regardless of how long it takes an agency to review and approve them.

The proposed changes are very unreasonable in light of the reality of current regulatory situation with ACOs under the LMR. This will almost guarantee that no other alternatives will ever be granted, and existing approved ones will be rescinded. In fact, which appears to be what CARB is trying to accomplish here. To begin with, CARB and the districts can take months and even years to review and act on ACO requests. Without a deadline by which they must act, ACO requests will be ignored, leaving landfills in a state of limbo with respect to their need for an AOC to achieve compliance and the agencies' unwillingness or inability to respond in a timely manner. Further, in light of the fact that CARB and the districts have rejected almost all recent ACO requests, even those with strong justification, this suggests that the provision to allow reconsideration of past ACO approvals will lead to those being rescinded.

Since the ACO process is difficult enough as it is, we request that CARB not change these ACO provisions, and instead establish a committee within CARB, and possibly including key air districts, who will be responsible for timely review and approval/disapproval of ACO requests.

**Unsafe to Walk Areas:**
Under the current rule, unsafe to walk areas are exempt from monitoring for the period of time that they remain "dangerous." Under the proposed rule (Sections 95469(a), 95471(d), and 95475(a)(40)), these areas are only exempt from standard SEM if they are unsafe to walk during the entire quarterly period of monitoring. And even if this requirement is met, the area is still required to be monitored by alternative means as described in (Sections 95469(a)).

While we are generally supportive of the requirement to make sure all areas are monitored each quarter, there are limitations due to safety, access, and availability of technology, which may prevent these screening technologies from being deployed in the same quarter when an area was unsafe. As such, we request that the rule provide an allowance that based on site conditions and/or availability, that a landfill be allowed to monitor an unsafe to walk area within the same or subsequent quarter, as long as all reasonable efforts were made to conduct screening in the same quarter.

**Remote Plume Monitoring:**
The draft rule adds a completely new requirement for Remotely Detected Emission Plumes (Sections 95469(b)(2)-(4)). Previously, CARB had been requesting that landfills conduct this assessment on a voluntary basis. The new rule would make this a requirement. In general, we find this condition acceptable; however, we would request an allowance, as described above, for unsafe to walk areas, which would allow flexibility if the area in question from the remote monitoring data is also in an unsafe to walk area.

Separately, we have serious issue with the requirement that landfill not even subject to the full LMR requirements yet (or ever) must conduct any monitoring in response to a remotely detected plume. We request that provision be removed from the rule, and, instead, CARB should make that requirement voluntary for those uncontrolled MSW landfills, as has been done in the past. It seems unfair for a landfill that meets exemption requirements for a rule be required to comply with SEM provisions in that rule.

**Pressure Exceedances including Recurring Exceedances:**
For pressure exceedances, CARB has added in the federal requirements for enhanced monitoring and corrective action as well as included additional very stringent requirements for recurring pressure exceedances. Additionally, CARB has added requirements for "recurring pressure exceedances" which require a Collection System Assessment and an increase in monitoring frequency to weekly (Section 95469[e](2)).

The recurring pressure exceedance requirements are triggered if, within any 12-month period, there are three positive pressure readings in the monthly monitoring at a particular well, excluding any months during which corrective action was being taken. Many wells, especially those that have been tuned down to meet temperature or oxygen requirements, or are used for migration control or shallow collection, are required to be maintained at low vacuum settings. Thus, it is not common during, for example, barometric pressure changes that these wells will go positive. We do not think these short-term pressure exceedances should be counted toward the three-event threshold as long as they can be corrected on the same day of exceedance with a simple valve adjustment. Furthermore, the requirement to install a continuous pressure monitor in the well based on 15% positive pressure readings should also exclude these same short-term exceedances that can be easily corrected on the same day. Finally, continuously monitoring pressure is not going to solve any of the underlying reasons why wells sometimes exhibit positive pressure.

**Wellhead Trend Analysis**

Section 95469[e](7) of the draft rule now includes a requirement for a monthly Wellhead Parameter Trend Analysis, whereby the owner shall examine monthly records for each well and take the following actions:

> If the temperature at a well increases by more than 20° F compared to prior monthly measurement, begin enhanced monitoring and downwell temperature monitoring within seven calendar days.
>
> If the oxygen content at a well increases by more than 2% compared to the previous reading, perform a collection system assessment and cover integrity assessment in a 200-foot radius around the well within 30 days.
>
> When, at a particular well, the difference between the monthly parameter value and average parameter value within a rolling 12-month period is greater than the following values, report the cause of the change in the Annual GCCS System Report:

| Wellhead Parameter | Condition |
|---|---|
| Gauge pressure | Changes by more than 2" w.c. at a well with average vacuum of 10" w.c. or less, or changes by more than 20% at a well with an average vacuum of > 10" w.c. |
| Methane % | Changes by more than 5% at a well with a 12-month average of > 30% methane, or changes by more than 10% at a well with a 12-month average of ≤ 30% methane |
| Ratio of methane to carbon dioxide | Decreases by more than 10%, or falls below 1.0 |
| Landfill gas flow rate | Changes by more than 30% |

The values prescribed in this rule section seem particularly arbitrary with no scientific basis as to why these specific values were selected, how it was determined that those values are relevant to proper wellfield operations and maintenance (O&M), and how these prescriptive numbers will improve compliance.

For example, if a well temperature increases by 20° but the well is still under the compliance threshold in the rule, then no action should be required. Operators can be required to focus more on readings like that or possibly increase the frequency of monitoring at that well, to confirm if the trend continues; however, enhanced monitoring and corrective action should not be required unless a temperature limit has been exceeded. The same applies to changes in wellhead oxygen. As written, a 2% change could be a very small value, for example, 2% of a value of 2% would be a change from 2% to 2.04% oxygen. Even if the rule language intended to imply a 2-percentage point change (from for example 2% to 4%), the language is unclear, and a 2-percentage point

change is very common. The same goes for all of the other arbitrary values prescribed for pressure, methane, methane/carbon dioxide ratio, and flow rate.

Further, it is very common to get erroneous readings in one month that are ultimately determined to be invalid due to instrument error or other issues. Flow rate data at a wellhead can be very inaccurate and uncertain. As written, such a reading would still trigger extensive additional actions even when the reading was not real in the first place. Therefore, any such actions as part of the Wellhead Parameter Trend Analysis must be based on valid readings, both the current reading as well as for the reading from the previous monitoring period to which the new reading is being compared. Further, the actions should only be triggered after 60 days of confirmed readings, which would cover three consecutive monitoring events, which would confirm the trend is real and ongoing.

Finally, we do not think short-term changes in these parameters should be counted toward the triggering criteria in this rule as long as they can be corrected on the same day of the exceedance with a simple valve adjustment. Also, wells that are under corrective action for other wellhead parameters should also not be subject to the thresholds in this section, as it is very common that adjustments to address one parameter can affect others. For example, tuning a well down to reduce oxygen can also reduce its gas flow.

**Additional SEM Requirements:**
Under Section 95469(a), CARB has made various components of the SEM requirements more stringent. This includes:

Only allowing active areas to be exempt from monitoring for 180 days once first waste is accepted there.
Shortened the period to begin correction action to three days.

Adding additional criteria and tight timeline for seeking alternative remedies for SEM exceedances beyond new or replacement gas wells.

Adding additional requirements for Recurring SEM exceedances areas as detailed below:

Recurring Surface Exceedances (95469(a)(4)): The owner or operator of a MSW landfill that experiences either five initial (i.e., not including re-monitoring) instantaneous exceedances or three initial integrated exceedances within a single grid over a rolling 12 month period, including exceedances detected during monitoring pursuant to section 95469(a)(1) and (2) and compliance inspections, shall do the following in the grid that exceeded the threshold and all adjacent grids (i.e., grids that share an edge or corner):

Complete a collection system assessment as described in section 95471(j) and a cover integrity assessment as described in section 95471(k) within 30 calendar days after reaching the threshold in section 95469(a)(4) and correct any issues

identified in the assessments that could be contributing factors to the surface exceedances within 60 calendar days after reaching the threshold.

Increase the frequency of surface emissions monitoring performed pursuant to section 95469(a) to monthly. The first monthly monitoring shall occur within 30 calendar days of reaching the threshold in section 95469(a)(4). The frequency can be reverted to quarterly after six consecutive monthly monitoring periods show no exceedances in the area in which the monitoring frequency was increased.

The requirement in Section 95469(a)(4) to assess the condition of the collection system and perform monthly surface emissions monitoring in the grids adjacent to a grid with recurring surface emissions exceedances is onerous and unreasonable, especially since by definition grids that are adjacent to the grid with recurring surface emissions exceedances would not themselves have had recurring surface emissions exceedances. Surface emissions are a local condition that are remediated by adjusting the wells closest to the exceedance and/or repairing the cover at the location of the exceedance. The requirement to include the adjacent grids simply takes the focus (and labor) away from the actual location of the exceedance.

**Recordkeeping and Reporting Requirements:**
Section 95470, Subsection (a)(1)(H) could be read to infer that the tools used to monitor surface emissions in unsafe-to-walk areas are capable of measuring methane volumetric or column concentration. Discussions to date on this topic have centered upon use of these tools as directional and not necessarily as quantitative measurement devices. Our view is that these tools are not capable of accurately measuring methane volume or concentrations and as such we would request that this text be adjusted to reflect that.

A more appropriate approach would be to simply require that follow-on-surface emissions monitoring using conventional handheld equipment be employed within a suitable timeframe of emission detection via drone or stationary laser equipment.

**Section 95469(f) - Monitoring Requirements (Semiannual Well Liquid Level Monitoring):**
It is unclear what the purpose of the well liquid level monitoring and, if required, liquid pumping is. Generally speaking, the only reason to pump liquids from LFG wells is to increase LFG extraction from the well in response to surface emissions or LFG migration exceedances. Absent either of those occurrences, there is no reason to pump liquids from LFG wells – if the focus is on air quality or controlling LFG migration. We ask that the requirement for well liquid monitoring and pumping be removed from the rule or revised to only be required when there have been surface emissions exceedances in the area of the well in question that could not be corrected by other means.

California Air Resources Board
November 10, 2025

L and D appreciates the opportunity to provide these comments on the proposed changes in the LMR. We encourage CARB staff to engage with industry in the drafting of the final regulation and address what we think are some significant challenges with the rule.

Feel free to contact me if you have any questions regarding our comments or need any further information on how these rules would potentially impact L and D.

Thank you.

Sincerely,

Jeffrey T. Mills
Authorized Signer
L and D Landfill Limited Partnership

JTM/ac
cc: Pat Sullivan, SCS Engineers
Mike Lien
Taylor Lien