

To whom it may concern,

[Windfall Bio](#) is a San Mateo, California based methane-to-value biotech company that harnesses the power of methanotrophs to mitigate methane emissions and transform methane to fertilizer. We are actively collaborating with industry and academic partners to oversee biofilter and biocover field trials at municipal solid waste landfills in both the U.S. and abroad.

Windfall Bio commends CARB's continued efforts to strengthen landfill methane monitoring and control, including the consideration of improved gas collection and control system (GCCS) protocols and advanced leak detection technologies. These reactive measures are essential for identifying and reducing emissions.

However, we remain concerned that CARB is not exploring more proactive methane and odorous gas mitigation practices, particularly those related to daily, intermediate and final cover. Colorado's proposed [Landfill Methane Regulation](#) offers a strong model, requiring biocovers for intermediate cover lasting over 180 days. These biocovers must include a permeable gas distribution layer and meet specific criteria to support methanotrophic activity. The proposed rule language is below for reference:

*PART F Cover Requirements*

*I. Intermediate and Final Cover Requirements*

*I.A. The owner or operator of an active or inactive MSW landfill with or without a gas collection and control system must use a biocover or a cover that incorporates a biocover for intermediate cover that is or will be in place for longer than 180 calendar days at the landfill subject to approval as an alternative cover by the Colorado Hazardous Materials and Waste Management Division.*

*I.A.1. The intermediate cover containing or incorporating a biocover must also include a permeable gas distribution layer, such as gravel, sand, or crushed stone, below the biocover or methane oxidation layer subject to approval by the Colorado Hazardous Materials and Waste Management Division.*

*I.A.2. The request to use or include a biocover as intermediate cover submitted to the Colorado Hazardous Materials and Waste Management Division must address requirements necessary for the growth of methanotrophs and methanotrophic activity in the biocover, such as but not limited to oxygen requirements, permeability, temperature, moisture management, and biocover maintenance and replacement as necessary, which must be followed by the owner or operator when installing and operating the biocover upon approval from the Colorado Hazardous Materials and Waste Management Division.*

*I.B. The owner or operator of an MSW landfill is prohibited from using petroleum contaminated soils or soils containing volatile organic compounds for intermediate or final cover at the landfill.*

Windfall Bio has demonstrated the effectiveness of methanotrophic biocovers at mitigating both methane emissions and degrading odorous compounds through [field trials at Sunshine Canyon Landfill](#). The full results of this trial will be presented at a South Coast Air Quality Management District hearing this fall.

Importantly, methanotrophic biocover are commercially viable today. Landfills equipped with GCCS can install on-site fully enclosed biofilters to produce methanotrophic biomass from captured landfill gas. This biomass can be applied as biocover and excess material sold as organic fertilizer creating a new monetization pathway for landfill gas.

We appreciate CARB's engagement with landfill operators and methane mitigation experts and encourage the inclusion of proactive cover-based strategies in future rulemaking.

Sincerely,

McKenzie Wilson, Director of Regulatory Affairs & Sustainability, Windfall Bio