



State of Oregon Department of Environmental Quality
Landfill Gas Emissions Rulemaking 2021
Discussion Questions

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The Landfill Gas Emissions rulemaking will limit and reduce greenhouse gas emissions from landfills in Oregon. DEQ has developed draft rules that are at least as stringent as the California Landfill Methane Regulations and include operational requirements in EPA rules regarding landfill gas emissions. DEQ combined elements of the California rules with existing state and federal requirements so landfill owners and operations will have only one set of Air Quality rules regarding greenhouse gas emissions to comply with.

Overview

Below are some initial discussion questions and requests for input for RAC members to consider before the Feb. 25, 2021 rulemaking advisory committee meeting. Discussion topics, questions, and comments are not limited to these questions. These questions are provided in advance to support advisory committee and public engagement.

Question	Applicable section (OAR 340-239-)
DEQ is not proposing to allow alternative compliance pathways such as promoting food waste reduction or waste reduction efforts. These mechanisms are being explored by DEQ’s Materials Management Program. Additionally, decreased organics in waste has the inherent benefit of either postponing the requirement to install a landfill gas collection and control system or decreasing the required size of a GCCS. Does the RAC have any input on this?	NA
Does the RAC have any input on landfill ages included? <ul style="list-style-type: none"> • The draft rules currently include all landfills going back to January 1, 1977. This is based on the California rules. • The federal rules include Municipal Solid Waste landfills going back to 1984. 	0010(1)
The list of potentially affected landfills is based on data from DEQ’s Materials Management Program which issues solid waste disposal site permits. However, the data on waste received only goes back to 1990 so there may be additional landfills that exceed the 450,000 tons of waste in place. To account for this, DEQ is proposing to require actual waste in place amounts from all landfills that currently have a solid waste disposal site permit through DEQ’s Materials Management Program. <ul style="list-style-type: none"> • Does the RAC have any concerns with this? • Does the RAC have any thoughts on alternative methods to determine all the landfills that would be subject to the new rules? • For landfills that have less than 450,000 tons of waste-in-place and are closed, but still have a DEQ solid waste closed landfill permit, should DEQ require one waste-in-place report to verify the amount? 	NA – see figure/table

<p>The California rules use a threshold of 3 MM Btu/hr. This is a conversion from the methane generation rate. To simplify the calculations, DEQ chose to use the methane generation rate of 664 metric tons per year; which is equal to 3 MM Btu/hr but will require fewer conversions.</p> <ul style="list-style-type: none"> • Does the RAC have any concerns with using the 664 metric tons per year? 	0105(3) and throughout the rules
<p>The draft rules phase out open flares except under certain situations.</p> <ul style="list-style-type: none"> • Are there other situations where an open flare would be necessary? One example is a landfill that uses most of its gas in a different control system but has excess gas occasionally that the control device can't handle; that excess gas is routed to an open flare. 	0110(2)(c)(D)
<p>Occasionally the gas control system will need to be shut down temporarily. This can be due to pre-planned activities (maintenance) or unplanned activities (loss of power, earthquake, other catastrophic event).</p> <ul style="list-style-type: none"> • Are there other reasons the Gas Control Conveyance System would need to be temporarily shut down that should be covered in the rules? 	0110(5)
<p>DEQ proposes to add a requirement to conduct surface emission monitoring after shutdown of the GCCS. DEQ included this requirement to verify the landfill gas emissions remain below thresholds and to allow for confirmation that no leaks are present on the landfill surface or locations where the GCCS system was shutdown and/or removed.</p> <ul style="list-style-type: none"> • Does the RAC have any input on this additional requirement? • Does the requirement for 8 consecutive quarters with no emissions above 200 ppmv seem reasonable? 	0400
<p>The methane generation rate formula uses the formula from EPA's Greenhouse Gas Reporting Program regulations (40 CFR Part 98, Subpart HH [MSW landfills] and Subpart TT [Industrial waste landfills])</p> <ul style="list-style-type: none"> • Does the RAC have any input on how landfill owners or operators will implement these calculations? • There are a variety of versions of these calculations, does the RAC have input on if other versions of the calculations are preferable? Potential alternative versions are found in the following: <ul style="list-style-type: none"> • California's LMR provide equations. Allows site specific waste composition. • 40 CFR Part 60 Subpart Cf, 40 CFR Part 60 Subpart XXX, 40 CFR Part 63 Subpart AAAA. Allows removal of non-decomposing waste volumes and varying site-specific information based on the Tier. Can use EPA's LANDGEM model for Tier 1 calculations. 	0800
<ul style="list-style-type: none"> • DEQ is looking for inputs on implementation timelines. Table 1 provides some of the key timelines in the rules. • The new rules will likely require new permit types for landfills. Table 2 summarizes the key tiers of requirements and the potential permit types. We will discuss this table in more detail (including permit fees) during the fiscal analysis advisory committee meeting. 	Throughout, see tables below

Table 1: Implementation timeline summary:

Activity	Proposed Compliance date	CA	NSPS/NESHAPS/EG (most stringent)	Other rationale
All applicable landfills: Submit initial reports	July 1, 2022 (1-year after effective date)	90 days after effective date	NA – already required	Existing landfills with AQ permits will still need to meet those permit requirements. Gives newly regulated landfills time to pull together information.
Active landfill: Install and operate a GCCS	18 months after becoming subject to GCCS requirements	18 months after approval of Design Plan	Design plan within 1 year Installation within 30 months (2.5 years)	
Closed landfill: Install and operate a GCCS	30 months after becoming subject to GCCS requirements	30 months after approval of Design Plan	Design plan within 1 year Installation within 30 months (2.5 years)	
Begin quarterly SEM monitoring in lieu of GCCS installation	90 days after calculated methane generation rate exceeds 664 metric tons.			Start the following quarter
Notification of temporary shutdown due to catastrophic event or landfill fire	10 days after the event			Sufficient time to fix issue and prepare notification
Surface emission instantaneous and integrated limits must be monitored	Beginning August 1, 2022, or 90 days after the methane generation rate calculation is greater or equal to 664 metric tons	January 1, 2011 (approximately one year after rules adopted)		
GCCS component leak repair	10 days after exceedance	10 days after exceedance		
Extend GCCS system to new area	60 days after new area subject to rules	60 days after new area subject to rules	60 days after initial solid waste in place for 5 years or more if active landfill, 2 years or more if landfill is closed/at final grade	

Timeline for shutting down open flares	January 1, 2024	An open flare installed and operating prior to August 1, 2008, may operate until January 1, 2018 (approximately 8 to 18 years after rule adoption)	None	
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Table 2: Potential permit types:

Site types	General requirements	Permit type
Active landfills less than 450,000 tons waste-in-place.	Submit annual waste-in-place reports	Registration with no fees (Division 210) Basic ACDP (Division 216, Table 1)
Active landfills above than 450,000 tons waste-in-place but (a) below methane generation rate or (b) below SEM threshold.	(a) Annual report on methane generation rate or (b) Annual report with methane generation rate and SEM results	(a) Basic ACDP (b) Simple ACDP
Above 450,000 tons WIP, above methane generation rate or SEM threshold	Install/operate GCCS	Title V (if otherwise required) or Standard ACDP

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.