

Landfill Gas Emissions 2021 Rulemaking

Summary

Advisory Committee Meeting #2

Thursday, Feb. 25, 2021, 9 a.m. – 12:30 p.m. (originally scheduled until 1 p.m.)
Web-based meeting

List of RAC member attendees

Michael Guebert	Metro
Patrick S. Sullivan	SCS Engineers
Amelia Schlusser	Green Energy Institute
Jennifer Stuber	Oregon Refuse & Recycling Association
Jesse Berger	Lane County
Damon Motz-Storey	Oregon Physicians for Social Responsibility
Tori Heroux	Neighbors for Clean Air

Note: Commissioner Kramer did not attend.

List of DEQ team attendees

Heather Kuoppamaki	DEQ team
Michael Orman	DEQ team
Daniel Defehr	DEQ team
Karen Williams	DEQ team
Matt Steele	DEQ team
Elizabeth Elbel	DEQ team
Lauren Slawsky	DEQ team
Nicole Singh	DEQ team

List of handouts and presentation notes

- Table and Figure
- Draft Rules
- Rule Compilation Summary
- Discussion Prompts

Time	Topic
9 a.m.	Meeting Commencement
9:15 a.m.	Review and Discuss Previous Meeting Materials
9:45 a.m.	Rule Review and Discussion
12:30 p.m.	Public Input
12:45 p.m.	Review Next Steps
1 p.m.	Adjourn Meeting



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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

Meeting Summary

Jamie Damon, lead facilitator welcomed the RAC members and shared the purpose of the meeting. She provided a brief overview of the webinar functions and informed the attendees that public comment will be accepted verbally at the end of the meeting as well as in written format submitted to Heather Kuoppamaki.

Jamie reviewed the following agenda items, 1) Review and Discuss Previous Meeting Materials, 2) Rule Review and Discussion, 3) Break, 4) Continued Discussion, 5) Public Input, 6) Review Next Steps.

Heather Kuoppamaki shared a list of the meeting materials from the 1/19 RAC #1 meeting. She then listed the materials for the 2/25 RAC #2. All the RAC members shared that they had received all of the relevant materials.

Heather shared that DEQ will be updating rules regarding landfill gas emissions, Air Containment Discharge Permits, and Enforcement Procedure and Civil Penalties, but that the RAC will be focusing on the new landfill gas emissions rules.

Heather provided an overview of the Draft Rule Review process, which includes an introduction to the rule text, an overview of key issues, and topics for RAC comments.

OAR 340-239-0010 Applicability

Heather shared that the new rules only apply to solid waste landfills that have received waste since 1977 with the following exclusions: Landfills on tribal or federal lands, hazardous waste landfills, CERCLA landfills, landfills that only receive non decomposable waste, and closed landfills with less than 450,000 tons of waste-in-place. She shared that the key issue associated with this rule is that many more landfills will fall under regulation with the new rules. Heather then opened the discussion to the RAC members and requested feedback on the age of landfills and other exclusions.

The RAC members provided the following comments:

- We are 12+ years behind the California Rulemaking; 1977 may not be the appropriate comparison to use.
- Will the provision for one time reporting be changed?
- Many of the facilities in Oregon have been closed for 30 years now, we may not have good data to use. The 1990 limit would be more agreeable.
- If closed landfills have new requirements and fiscal impacts, but no funds for monitoring, that could be a challenge.

Heather shared the map of potentially applicable landfills. A RAC member shared clarification that California ended up regulating industrial landfills on a case-by-case basis. They informed the group that in the case of California, some landfill's gas emissions were over estimated. Several RAC members shared their appreciation for this consideration in the rule.

A RAC member requested information on the waste-in-place landfills that have under 450,000 tons at their site. They requested context for the smaller landfills in eastern Oregon. Heather shared that they are what are defined as "very small landfills", and that they serve communities with no other adjacent waste disposal options.

A RAC member requested information regarding the origin of the 450,000 ton threshold for waste-in-place. A RAC member shared that the number was picked by California as the most stringent threshold in any California jurisdiction. They suggested that DEQ go through an economic analysis to determine the most effective threshold. A RAC member shared their support for regulating landfills that are under the 450,000 ton threshold but producing gas above the threshold.

A RAC member shared their interest in looking at cumulative effects as well. They shared the importance of looking at the cumulative data around the smaller landfills. Heather shared that DEQ does not have data that is specific to the type of waste collected at the smaller landfills.

-0015 Definitions

Heather opened the conversation to discuss definitions found in the draft rules. She asked the RAC members to offer feedback on any missing definitions, any definitions that appear incorrect or incomplete, and/or any unnecessary definitions.

The RAC members provided the following comments:

- An error was noted in the document where a gas collection and control system was referred to as a gas collection and conveyance system.
- A recommendation was made to go back and revisit the definitions once the rules have been finalized.

-0100 Landfills with Less than 450,000 Tons of Waste-in-Place

Heather thanked the RAC for their discussion regarding the threshold for waste-in-place and asked the RAC members to comment on what they think smaller landfills should be required to submit. She shared that DEQ will investigate determining the threshold.

The RAC members provided the following comments:

- It would be good to collect more data on age, type of waste, and tonnage at landfills.
- Ask smaller landfills to provide more data.
- Recommendation to add a “sub threshold” that triggers a data collection component.
- For active larger landfills it is not a problem to gather and report data, for closed landfills this is an issue because there are no staff on site or funds for data reporting at closed landfills below 450,000 tons.
- Having a different size threshold for smaller sized landfills seems useful. This would also help provide data to capture progress on GHG reduction goals.
- It would be helpful to gather data from smaller landfills to better understand the cumulative impacts, level of emissions, and rate of emissions.
- Need to be aware of the increase in cost of reporting if a sub threshold is implemented. Costs can vary based on necessary equipment, training, and method of monitoring.
- There is equipment for landfill gas monitoring that can be rented which can keep monitoring costs lower for smaller landfills.
- A subset of monitoring should not be looked at this step in the rule, but instead at the gas generation step of the rule.
- Some above threshold landfills can reduce their emissions simply by repairing cracks in the landfill. Exceedances can often be circumstantial, and the cost associated with installing a monitoring system can be unnecessary.
- For landfills that are less than the 450,000 ton threshold, there seems to be an opportunity to encourage the reduction of high emission waste at the site.

-0105 Landfills with Greater than or Equal to 450,000 Tons of Waste-in-Place

Heather addressed the rule that focused on general requirements for landfills with greater than, or equal to 450,000 tons of waste-in-place. She shared that the key issues include the tiered requirements for larger landfills around calculating methane emissions, performing surface emission monitoring, and installing gas collection and control systems (GCCS). Heather then opened the discussion and asked the RAC members to comment on the annual requirements and the threshold for methane generation (661`4 metric tons/year).

The RAC members provided the following comments:

- Clarification that if you trigger the rule in California, you will trigger the rule in Oregon based on these thresholds. The hourly requirement in California matches the hourly requirement in Oregon. This calculation is based on a 75% recovery rate.
- A community member provided comment that encouraging landfills to receive lower emission waste as a method to lower emissions, where meeting the rules may not be possible, should be a consideration for DEQ.

-0110 Gas Collection and Control System Requirements

Heather addressed the rule that focused on general requirements for landfill gas collection and control systems (GCCS). She shared that the rule aims to ensure that GCCS are designed, installed, operated, and monitored effectively. Heather then opened the discussion and asked for the RAC members to comment on open flares, the proposal to reduce where they are allowed, and the proposal for temporary shutdowns of GCCS and notification.

The RAC members provided the following comments:

- Encourage DEQ to minimize when the open flare is allowed. Concern that DEQ does not require notifications for shutdowns due to emergencies. Encourage notifications of any shutdowns due to emergencies.
- Often, shutdowns due to emergencies are unavoidable and there are safety concerns that are more pressing than notifying DEQ immediately.
- Landfills are required to report/track any shutdowns where monitoring is down for over an hour, and a collections system is down for more than 5 days.
- Do not think DEQ can monitor or track shutdowns on a day-to-day basis. The current process requires reporting shutdowns in the annual report which is appropriate. Longer shutdowns should require more immediate DEQ notification.
- Flares are often used as a back-up to dissipate gas when needed and can be used when the power goes down – sometimes longer than expected. We want to make sure the rules account for that.
- Sometimes a backup flare is not really a backup when it is regularly used for low quality gas.
- The California rules set reasonable restrictions on use of flares and encourage DEQ consider California rules.
- Sometimes there is not another method for control that is viable considering low flow rate or low-quality gas.
- An open flare has a larger range of BTU needed to operate. The use of an open flare is an important tool for management. If a closed flare cannot operate, gas doesn't get collected and sometimes more costly/less effective measures are implemented.
- An example of when DEQ would not want a report every time a flare is used, is for landfills that have flares on a timer that automatically turn on when there is not enough gas to collect.

-0200 Compliance Standards

Heather addressed the rule on compliance standards. She shared that the key issue is determining how DEQ can ensure that landfills are staying below the methane emission limits. Heather asked the RAC members to provide comments on any missing standards.

The RAC members provided the following comments:

- Penetration monitoring is costly and does not necessarily need to be done quarterly. Often when exceedances are fixed, they stay fixed.
- As many snapshots as possible are helpful to understand total emissions.
- Might be good to think about what data is not helpful to collect and what new data would be.
- The reduced spacing for surface emissions monitoring in California from 100ft to 25ft poses a considerable need for increased staffing at smaller or closed landfills. The Oregon proposed rules currently identify 25 ft spacing – suggest a larger emissions monitoring spacing, or a modified approach for closed/smaller landfills.
- Temperature is often not a good measure of methane emission. If we are trying to treat as much methane as possible, temperature is not the best guide due to the inconsistency of the correlation between temperature and emissions.

-0300 Construction Activities

Heather addressed the rule on construction activities. She shared that sometimes waste will need to be exposed, which can increase emissions. Heather asked the RAC members to provide comment on any other situations where emissions can increase, as well as any ways to limit those situations without impacting landfill operations.

The RAC members provided the following comments:

- We usually only enter the landfill for wells, or a “special request” from law enforcement. Operators do not voluntarily open landfills often.
- The rule is somewhat vague, but that seems consistent with the uncommon nature of the subject.

-0400 Permanent Shutdown

Heather addressed the rule on the permanent shutdown of landfills. Heather shared that there were some Oregon specific pieces of this landfill rule. She shared that the key issue lies around the reduced emissions at landfills over time, and the challenge of effectively monitoring landfills prior to, and after shutdown and/or removal of the GCCS. Heather asked the RAC members to share their thoughts on the 15-year timeline in addition to their perspective on post-shutdown surface emission monitoring.

The RAC members provided the following comments:

- Comment that a RAC member currently manages two landfills that are over 30 years old and still producing at a rate that requires monitoring. DEQ needs additional guidelines about how to remove systems that are reducing emissions at a slower rate than expected. The time limit is not a good measure due to the variance in emissions over time between landfills.
- A phased removal of GCCS is a good idea. Reopening closed wells is not easy. It is important to note that these closed landfills are not generating any income.
- How much surface migration occurs over time on the older landfills? Because we do not have that data, this may not be the best area to place our focus.
- Suggestion to operate under the “precautionary principle” and keep monitoring until you know that the emissions have dropped.
- The 25 ft surface monitoring goal is challenging for very large landfills, as some require staff to walk long distances (up to 60 miles).

-0500 Alternative Compliance Options

Heather addressed the rule on alternative compliance options and explained that the rule states that permittees may request to use alternatives to 0110, 0600, or 0800. Permittees must show that alternatives provide the same methane control, and that off site migration is still being controlled. She shared that this rule gives some flexibility and asked the RAC members to comment on the methods to show compliance using alternative methods.

The RAC members provided the following comments:

- It makes sense to include flexibility so long as the flexibility controls emissions to the same level. There is some concern about the level of subjectiveness of this section, and the difficulty of monitoring.
- Safety is a serious concern in the solid waste field. Do not want to put in any rules that can be taken advantage of, but want to be sure that we are being practical.

-0600 Monitoring Requirements

Heather addressed the rule on monitoring requirements, sharing that the rule focuses on the monitoring of landfill surfaces and GCCS to show compliance. Heather informed the group that the surface emission monitoring is based on the California standards. Heather shared that the key issue is to address the question of how DEQ can ensure that landfills are staying below the methane emission limits. She asked the RAC members to provide recommendations for additional monitoring.

The RAC members provided the following comments:

- Refer to the earlier comments about the spacing requirements.
- It is important to consider that the slopes at the sides of landfills are 3:1 and can be difficult to walk for inspections.
- Keep in mind emerging technologies for monitoring.
- A lot of the facilities do not fall under these rules because they are smaller. Be mindful that we are asking the “middle ground” landfills to monitor/invest in data collection.

-0700 Recordkeeping Requirements

Heather addressed the rule on recordkeeping requirements and shared that the rule focuses on applicable landfills that must submit record keeping, semiannual reporting, and other reporting electronically to EPA. She asked the RAC members to provide comment on any missing recordkeeping/reporting requirements as well as any comments on implementation.

The RAC members provided the following comments:

- The rule requires record keeping for 5 years. It might be good to keep records for longer in certain cases.
- Supportive of the longer record keeping but want to make sure that there is not disciplinary action or fines associated with data loss due to circumstances beyond an operator’s control.

-0800 Test Methods and Procedures

Heather shared the test methods and procedures rule. She informed the group that the test methods and procedures are used to determine compliance with the rules, and that the methane generation rate is from the EPA GHG reporting regulations. Heather asked the RAC members to provide comment on any missing test methods or procedures, as well as any feedback on other test methods or procedures that are available.

The RAC member provided the following comments:

- Thank you for trying to make this a uniform process for reporting.

- Appreciate the flexibility to adjust and modify as needed given the influx of different materials. Landfills experienced a large influx of debris from wildfires.
- Regardless of where the landfill gas is, it is important that we track the emission impact.
- There was a question as to whether there will be any incentive for using landfill gas as renewable energy.

Compliance Timelines

Heather shared an overview of the compliance timelines laid out in the rule. She shared that the initial compliance date is set for July 1, 2022 (1 year after the effective date of the rules), notification of any unplanned temporary shutdown will be required 10 days after the event, and the timeline to shutdown any open flares is by January 1, 2024.

The RAC members provided the following comments:

- Recommendation to bump up the timeline for when it is feasible to install a gas control system in less than 18 months.
- It is important to recognize that in some cases 18 months is already a tight timeline. Depending on what needs to be done, a phased approach may be a good option.
- Sometimes it is not a time constraint, but a funding constraint for the smaller facilities.
- Need more clarity around what constitutes a “temporary” shut down. There was discussion around this topic earlier.

Permitting

Heather shared an overview of the general permitting requirements for the different levels of landfills. She shared general requirements as well as necessary permits for the following site types.

- Active landfills less than 450,000 tons waste-in-place
- Active landfills above 450,000 tons waste-in-place and;
 - Below methane generation rate or
 - Below SEM threshold
- Above 450,000 tons waste-in-place, above methane generation rate or SEM threshold

A RAC member requested information regarding whether the administrative permits will trigger the need for additional evaluation through Clean Air Oregon. Heather shared that she would follow up on that point.

A RAC member requested clarity on the rate of methane generated on site. Heather shared that there is a calculation based on the GHG reporting rules.

Heather provided an overview of the implementation of these rules. She informed the group that the focus is to determine how to ensure effective, efficient, and equitable implementation of the rules. Heather shared that goals include quantifying methane reductions from the rules, measuring impacts to small business, considering equity/environmental justice, and considering timelines, outreach, and permitting approaches. Heather asked the RAC members to provide comment on how best to implement the rules, while considering implementation through an equity and environmental justice lens.

The RAC members provided the following comments:

- Any way that the rule can incentivize renewable electricity production as well as offset transportation emissions by using a portion of renewable gas will be helpful.
- Prioritizing the reduction of emissions at sites adjacent to environmental justice communities is important.
- Hiring/training specifically from environmental justice communities should be a priority.

- Need to be mindful of the air quality impacts of venting and flaring and how that is combined with data for air quality impacts around environmental justice communities.
- There was a suggestion to set a goal that outlines a certain amount of work hours set aside for apprentices, women, BIPOC community members, etc.

A RAC member shared the importance of allowing landfill operators to modify the gas system without seeking DEQ approval. Heather thanked the member for their comment and shared that it would be considered.

Jamie Damon opened the discussion for public comments. No attendees shared public comment.

Heather shared the next steps for the rulemaking process. She shared that the Fiscal Impact meeting will be coming up in late March or early April, Notice of Rulemaking will take place in late April or early May, and then public comment will be open for one month. Heather reminded the attendees that the DEQ rulemaking process can be followed by signing up for GovDelivery and invited community members to provide any additional comment to her via email.

Jamie thanked the RAC members and attendees. The meeting was adjourned at 12:30 pm

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.