



Department of Natural Resources and Parks

Solid Waste Division

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Bill Flagg
Department of Ecology
Air Quality Program
P.O. Box 47600
Olympia, WA 98504-7600

December 11, 2023

Dear Bill Flagg:

The purpose of the letter is to transmit comments by the King County Solid Waste Division on the proposed new rule, Chapter 173-408 WAC, Landfill Methane Emissions, implementing Chapter 70A.540 RCW, Landfills – Methane Emissions. We appreciate the opportunity to review and provide input on the proposed rule.

King County is committed to reducing its greenhouse gas (GHG) emissions and has ambitious goals and commitments toward that end in its Strategic Climate Action Plan (SCAP). Strategy GHG 3.20 of the SCAP highlights the need to reduce landfill gas (LFG) emissions through improvements in LFG collection and control at the Cedar Hills Regional Landfill (CHRLF); a reduction in fugitive emissions not captured by the LFG collection system; and design improvements at closed landfills.

An example of recent efforts to further capture LFG at CHRLF includes the installation of 20 new LFG vertical collection wells in 2024, and installation of 58 or more additional wells in 2026-2027. A real-time LFG well monitoring system has also been installed on select wells to allow for adjustments to improve gas collection based on operating conditions.

The Solid Waste Division has also undertaken multiple initiatives to reduce the amount of recyclable and re-useable materials coming to the landfill and has taken numerous additional steps to enhance our ability to manage, collect, and monitor gas generated at the landfill.

In March 2022, the Governor signed House Bill (HB) 1799, requiring diversion of organic materials away from landfill disposal and towards food rescue programs and organics management facilities. In collaboration with the County's Wastewater Treatment Division, the Solid Waste Division is engaged in planning and alternatives analysis to process and treat food waste with municipal sewage sludge in a method called co-digestion. This project would help

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diversify our region's organics management portfolio, address new requirements established in HB 1799, and reduce greenhouse gas emission by efficiently capturing methane.

King County strongly supports the goals embodied in the landfill methane emissions legislation and in this rulemaking process. The Solid Waste Division offers these comments to improve clarity of the requirements for the benefit of all stakeholders, including regulated entities, regulatory agencies, and communities, and to ensure Chapter 173-408 WAC establishes a regulatory framework that prioritizes actions that will produce the greatest environmental benefits.

In alignment with the authorizing statute, Chapter 70A.540 RCW, Chapter 173-408 WAC seeks to reduce methane emissions from municipal solid waste landfills in Washington State. This will primarily be achieved by expanding the number of landfills in Washington that have gas collection and control systems (GCCSs), therefore, mitigating the uncontrolled release of methane. The rule also proposes additional requirements for controlling methane at Washington landfills already equipped with GCCSs. While this should further reduce methane emissions overall, the actual benefit from these landfills to the overall goal of the rule is expected to be small relative to newly controlled landfills. Despite that, the administrative burden posed by Chapter 173-408 WAC, as proposed, is disproportionately high as compared with the environmental benefit. As written, Chapter 173-408 WAC largely parallels existing federal requirements for controlling emissions from landfills but does so in a way that does not build upon those federal regulations. Instead, it recreates the foundational requirements using alternate terms and structure. The effective result for landfills already subject to the federal standards is the need to administer two separate compliance programs to demonstrate compliance with both state and federal requirements, despite those requirements being very similar. This approach is inefficient and introduces the potential for unnecessary confusion for operators of landfills subject to state and federal requirements for GCCSs. King County strongly encourages the Department of Ecology (Ecology) to reframe Chapter 173-408 WAC such that it mirrors existing federal regulations and builds upon them, as directed by statute, to implement a more stringent rule. This could be accomplished in several ways, as articulated in greater detail, below.

Ecology has stated throughout the rulemaking process that it intends to minimize the burden of complying with Chapter 173-408 WAC on landfills already subject to corresponding federal regulations. However, this intention is not reflected in the proposed rule language. King County recommends applying *one or more* of the following approaches to Chapter 173-408 WAC to avoid promulgating a rule that imposes a large administrative burden for minimal environmental benefit:

- i. Remove provisions in Chapter 173-408 WAC that are substantively similar to existing requirements in federal regulations and, instead, refer to the corresponding federal requirements;

and/or

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- ii. Replace provisions in Chapter 173-408 WAC that are substantively similar to existing requirements in federal regulations with *the exact language* used in corresponding federal regulations;

and/or

- iii. Exempt select landfills from portions of Chapter 173-408 WAC if those landfills are subject to corresponding requirements under federal regulations;

and/or

- iv. Revise rule language to explicitly identify each provision of Chapter 173-408 WAC that is satisfied by compliance with corresponding requirements under federal regulations.

Detailed examples illustrating each of the approaches suggested above are provided in the attached comment table (see Comment No. 1). King County encourages Ecology to make comprehensive revisions throughout the proposed rule, as applicable.

An additional area of concern for King County is the apparent inclusion of select *closed* landfills within the definition of “*active* municipal solid waste (MSW) landfills” [emphasis added]. The proposed definition for that term in Chapter 173-408-020 WAC is:

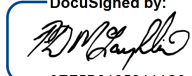
“Active municipal solid waste (MSW) landfill” means a municipal solid waste landfill that has accepted or is accepting solid waste for disposal and has not been closed in accordance with the requirements set forth in WAC 173-351-500 as it existed on January 10, 2022.

The proposed definition for “closed municipal solid waste landfill” is similarly limited to landfills closed under Chapter 173-351 WAC. As required by Chapter 70A.540 RCW, Chapter 173-408 applies to all MSW landfills that received waste after January 1, 1992, while Chapter 173-351 WAC did not take effect until November 26, 1993. Therefore, there was an approximately 23-month period during which a landfill subject to this proposed rule could have closed under a previous regulation (Chapter 173-304 WAC) rather than Chapter 173-351 WAC. Under the proposed definitions in Chapter 173-408 WAC, those *closed* landfills would be considered *active* landfills and would be subject to requirements in this rule for *active* landfills. This detail is counterintuitive, at best, and only becomes apparent after careful review and consideration of Chapters 173-408, -351, and -304 WAC. The level of effort and knowledge required to ascertain that select *closed* landfills would be subject to requirements in this rule specified for *active* landfills is unreasonable. King County strongly recommends revisions to language in this proposed rule to clearly and transparently articulate requirements in a way that can be reasonably understood by interested parties.

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These and other comments are further detailed in the attached table. Again, we thank you for this opportunity to comment on the proposed rule. If you have any questions, please contact Jennifer Keune at Jennifer.Keune@kingcounty.gov.

Sincerely,

DocuSigned by:

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Pat D. McLaughlin
Division Director

Enclosure

cc: Glynda Steiner, PE, CCM, Special Projects Manager, Solid Waste Division (SWD)
Theresa Thurlow, PE, Section Manager, SWD
Mark Monteiro, Operations Manager, SWD
Jennifer Keune, Supervisor, SWD
Laura Belt, PE, Supervising Engineer, SWD



**COMMENTS ON
PROPOSED CHAPTER 173-408 WAC, LANDFILL METHANE EMISSIONS**

PREPARED BY

KING COUNTY SOLID WASTE DIVISION

No.	Rule Section	Subsection	Comment
1	General	--	<p><i>Comment 1 is also included in the comment letter submitted by King County. Illustrative examples are included here rather than in the letter.</i></p> <p>King County recommends applying <u>one or more</u> of the following approaches to Chapter 173-408 WAC to avoid promulgating a rule that imposes a large administrative burden for minimal environmental benefit:</p> <ul style="list-style-type: none"> i. Remove provisions in Chapter 173-408 WAC that are substantively similar to existing requirements in federal regulations and, instead, refer to the corresponding federal requirements. <ul style="list-style-type: none"> Example: <ul style="list-style-type: none"> a. “Enclosed combustor means an enclosed flare, steam generating boiler, internal combustion engine, or gas turbine the same as defined in 40 CFR 60.761.” <p><u>and/or</u></p> <ul style="list-style-type: none"> ii. Replace provisions in Chapter 173-408 WAC that are substantively similar to existing requirements in federal regulations with <i>the exact language</i> used in corresponding federal regulations. <ul style="list-style-type: none"> Examples: <ul style="list-style-type: none"> a. “Enclosed combustor means an enclosed flare, steam generating boiler, internal combustion engine, or gas turbine <u>an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.</u>” (verbatim from 40 CFR 60.761) b. Revise WAC 173-408-090 (1) to exactly match 40 CFR 60.762(b)(2)(v)(B): “The gas collection and control system has been in operation for at least 15 years, or the owner or operator demonstrates to the satisfaction of the department or local authority that, due to declining methane production rates, the MSW landfill will be unable to operate the gas collection and control system for a 15-year period; <u>The collection and control system has been in operation a minimum of 15 years or the landfill owner or operator demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flow.</u>” c. Revise WAC 173-408-110(1)(c)(ii)(A) to exactly match 40 CFR 62.16720(c)(4)(iii): “<u>If the re-monitoring of the location shows a second exceedance, additional corrective action must be taken, and the location must be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in paragraph (c)(4)(v) of this section must be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v) of this section has been taken.</u>” <p><u>and/or</u></p> <ul style="list-style-type: none"> iii. Exempt select landfills from portions of Chapter 173-408 WAC if those landfills are subject to corresponding requirements under federal regulations. <ul style="list-style-type: none"> Examples: <ul style="list-style-type: none"> a. Exempt landfills subject to 40 CFR 60.766 (Monitoring of operations.) from WAC 173-408-110 (Monitoring.) b. Exempt landfills subject to 40 CFR 60.767 (Reporting requirements.) from WAC 173-408-170 (Reporting requirements.)



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No.	Rule Section	Subsection	Comment
1 (cont.)	General	--	<p style="text-align: center;"><i>and/or</i></p> <p>iv. Revise rule language to explicitly identify each provision of 173-408 that is satisfied by compliance with corresponding requirements under Federal regulations.</p> <p>Examples: a. Append the following language to WAC 173-408-110(1) "Compliance with 40 CFR 60.765(c)(3) satisfies this requirement." b. Append the following language to WAC 173-408-110(3) "Compliance with 40 CFR 60.766(a)(1) satisfies this requirement."</p>
2	173-408-020 Definitions	--	To promote consistency where it is intended, and to highlight distinctions where they exist, King County recommends referencing existing regulatory definitions for terms defined elsewhere, to the maximum extent possible. For example, the definitions of "air pollution" and "emission" refer to "air contaminants" but Chapter 173-408-020 WAC does not include a definition for "air contaminants." Recommend defining that term consistent with the existing definition in Chapter 173-400 WAC.
3	173-408-030 Applicability	4(b)(ii)	Proposed subsection (b)(ii) suggests that open flares may not operate after January 31, 2032, even if they meet NSPS flare requirements in 40 CFR 60.18. Language should be revised to exempt existing open flares that meet 40 CFR 60.18 performance specifications, when those open flares are used for gas collected from older areas of a landfill that is reclaiming higher quality landfill gas for renewable natural gas production.
4	173-408-080 Gas collection and control systems	(9)	Recommend the following <u>revision</u> : "Repairs and temporary shutdown of gas collection system components: The requirements of subsections (3)(a) and (b) and (7) of this section do not apply to individual landfill gas collection system components that must be temporarily shut down to repair or modify components of the gas collection system, to connect new landfill gas collection system components to the existing system, to <u>prevent or</u> extinguish landfill fires, or if the MSW landfill engages in construction, active mining, or law enforcement activities..."
5	173-408-100 Methane concentration limits	(2)(b)	The proposed rule requires "integrated surface emissions monitoring" but that term is not defined. Recommend adding a definition for this term and more specificity related to the required monitoring and data analysis, including the methodology for calculating the average methane concentration of the grid based on gathered measurements.
6	173-408-110 Monitoring	(2)	Reporting within two days of conducting a corrective action for an individual exceedance during the multi-day monitoring process is a very tight turnaround, would require additional staffing, and would divert attention away from addressing the exceedance itself. There is no corresponding short-term reporting requirement in NSPS Subpart XXX. This short-term reporting requirement should be removed and reporting of exceedances/ corrective actions should be required as part of the annual report.



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No.	Rule Section	Subsection	Comment
7	173-408-120 Monitoring	(3)(a)(ii)(A)	<p>The proposed rule allows for the monitoring spacing to be adjusted from 25-foot to 100- foot spacing intervals if no exceedances have been detected in four (4) consecutive quarterly monitoring periods. Since the monitoring is conducted on a grid-by-grid basis, this adjustment should also be available on a grid-by-grid basis. In other words, if no exceedances are detected in a given grid for four (4) consecutive quarterly monitoring periods, the monitoring spacing for that grid is adjusted to 100-foot spacing intervals.</p> <p>Request the following <u>revision</u>:</p> <p style="padding-left: 40px;">“If the owner or operator measures no exceedances of the limits specified in WAC 173-408-100(2) <u>in a grid established per WAC 173-408-120(3)(a)</u>, after any four consecutive quarterly monitoring periods, the walking pattern spacing may be increased to 100-foot intervals <u>in that grid</u>. The owner or operator must return to a 25-foot spacing interval <u>in that grid</u> upon detection of any exceedances of the limits specified in WAC 173-408-100(2) that cannot be remediated within 10 calendar days or upon any exceedances detected during a compliance inspection.”</p> <p>Without offering this grid-by-grid adjustment, the purpose of establishing 50,000 square foot grids is unclear for landfills monitored using instantaneous surface emissions monitoring.</p>
8	173-408-180 Civil Penalty	--	<p>The proposed rule appears to presume that a reading above the surface methane limit is a violation of the regulations. To be consistent with the federal regulations, this provision should be revised to clarify that an exceedance of the surface methane limit is not a violation if the owner/operator is complying with the corrective action requirements.</p> <p>See 40 CFR 60.765(c)(4):</p> <p style="padding-left: 40px;">“Any reading of 500 parts per million or more above background at any location must be recorded as a monitored exceedance and the actions specified in paragraphs (c)(4)(i) through (v) of this section must be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of § 60.763(d).”</p>