

Scott Cave

Please see my comment letter on behalf of Carole DeGrave and Friends of Rocky Top attached.

This comment letter was submitted via email to:

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Subject: Comments on Chapter 173-408 WAC, Landfill Methane Emissions

On behalf of Carole DeGrave and Friends of Rocky Top (FORT), I appreciate the opportunity to comment on the proposed Chapter 173-408 WAC, Landfill Methane Emissions Rule for Municipal Solid Waste (MSW) landfills. FORT is a group of neighbors and concerned citizens seeking to protect the land, air, and water resources around the Rocky Top area from further environmental degradation from DTG's limited purpose landfill (LPL) and associated facilities. FORT is a CascadiaNOW! fiscally sponsored project: <https://www.cascadianow.org/friends-of-rocky-top>.

General comment

Observations from around the globe confirm climate change is occurring and rapidly intensifying. Rigorous scientific research concludes greenhouse gases (GHG) emitted by human activities are the primary driver. To reduce the risk of the most severe impacts, GHG emissions must be substantially reduced. Consequently, I strongly urge the state to adopt methane emission rules and standards for solid waste facilities that incentivize surface emission monitoring (SEM), improve methane recording and recordkeeping, advanced gas collection and control systems, and minimize the active landfill working face, as noted in instructive comments during informal rulemaking by Suellen Mele, Heather Trim and David Barron. The generation of more robust field data is critical to regulate emissions at solid waste landfills and the state should investigate SEM technologies and require them to improve landfill methane detection, including at limited purpose landfills.

A patchwork of state, county, and city regulations governs the construction and demolition recycling industry, and these regulations vary in consistency and scope. Some counties, like Snohomish and King, require that any residual waste collected within their jurisdiction be disposed at the County-designated municipal solid waste landfill, referred to as "flow control," intended to ensure that residual waste disposal fee revenue stays within the local system. Because DTG moves collected material among its facilities across county lines, tracking materials and residuals for enforcement of local regulations can be challenging. Nonetheless, DTG has still been cited for violating relevant ordinances. In 2021, Snohomish County issued a Notice of Violation to DTG for having hauled a load of residual waste from its MRF in Woodinville and disposing of it at the Yakima landfill.

The state-level regulatory landscape is fragmented, with Ecology and the Utilities and Transportation Commission (UTC) each playing a role. Ecology requires annual reporting of recycling rates for each type of construction and demolition material but has no means for validating the information in these reports, while the UTC regulates the transportation of solid waste, requiring any firms hauling

garbage in the state to obtain a specific permit. However, because DTG presents itself as a recycling company, it is not required to, and has not, obtained a permit for transporting solid waste. The UTC currently has only one investigator for suspected solid waste transportation violations, making it difficult to catch unpermitted companies in the act of illicitly hauling garbage.

I. Proposed rule excludes Limited Purpose Landfills

I greatly appreciate and strongly support the comments of Suellen Mele and Department of Ecology on this proposed rule that highlight the problematic nature of excluding LPLs since they are allowed to accept and dispose of feedstock in combinations that can generate methane, as well as other greenhouse gases (GHG), and push back on the presumption that only MSW landfills are generating methane at levels of concern. The exclusion assumes LPLs will always generate less methane and other GHGs than comparative MSW landfills, primarily because LPLs don't accept MSW, and accept both inert and non-inert waste, which when disposed, is expected to generate minimal methane.

A. GHG emissions are generated by Yakima LPLs

In fact, concerning levels of methane, hydrogen sulfide, carbon dioxide and other GHG emissions have been confirmed at DTG's privately owned and operated LPL on Rocky Top, Yakima County, that imported significant volumes of largely unregulated construction and demolition waste from Western Washington and Canada (*where gypsum is banned from landfilling*) for many years. DTG's disposal and operations resulted in horrendous gases, prompting odor complaints and site investigations that detected volatile organic compounds (VOCs) in ambient air and in landfill gas in December 2021 and confirmed in July 2022. Benzene and naphthalene were detected in ambient air at concentrations 40-50 times higher than the USEPA's default concentrations for MSW landfills (USEPA, AP-42, Section 2.4, October, 2008) which exceeded outdoor air quality standards under the state Model Toxics Control Act (MTCA), see Anderson Landfill, Facility Site ID: 79747294 <https://apps.ecology.wa.gov/cleanupsearch/site/11537#site-documents>. DTG's landfill fire remains unremediated and continues to pause the MTCA cleanup process.

Comment: This facility demonstrates how current LPL waste acceptance and state and local solid waste rules create a multi-jurisdictional regulatory system that has allowed a so-called recycling company to flow huge volumes of largely unregulated material to Rocky Top, not for recovery but primarily disposal, and how this disposal created harmful, dangerous air pollutants, including methane, that triggered a MTCA site determination. Ignoring LPLs in the proposed rule raises doubt about the agency's effort to reduce landfill methane and achieve its goal to reduce GHG emissions by 95% by 2050. Underreported sources of methane, like LPLs, are contributors that should be recognized along with MSW facilities as generators of GHG gases.

Both the DTG LPL and the Caton LPL are privately owned and operated and have received significant volumes of waste from outside of Yakima County, primarily Westside counties and gypsum-based waste from Canada. Both LPLs represent significant unknown environmental and regulatory challenges, and highlight the difficulty for state and local regulators in coordinating oversight across multiple jurisdictions to ensure compliance and site management that arguably would have prevented the current crises at these two Yakima LPLs

(visit FORT’s website for media and critical documents and communications:
<https://www.cascadianow.org/friends-of-rocky-top>).

B. Address ambiguity in state law that put LPLs in ‘no man’s land’

Because LPLs accept *both* inert and non-inert waste, they contain the feedstock to generate methane and other gases. As such LPL’s are left out of the applicable statute’s list of landfills excluded from inclusion:

RCW [70A.540.020](#):

Application of chapter—Rules.

(1) This chapter applies to all municipal solid waste landfills that received solid waste after January 1, 1992, except as provided in subsection (2) of this section.

(2) This chapter does not apply to the following landfills:

(a) Landfills that receive only hazardous waste, or are currently regulated under the comprehensive environmental response, compensation, and liability act, 42 U.S.C. chapter 103; and

(b) Landfills that receive only inert waste or nondecomposable wastes.

(3) The department must adopt rules to implement this chapter. The rules adopted by the department must be informed by landfill methane regulations adopted by the California air resources board, the Oregon environmental quality commission, and the United States environmental protection agency.

[[2022 c 179 § 2](#).]

Comment: The agency should acknowledge the methane/GHG polluting threat of some LPLs, including DTG’s in Yakima, and reconsider the blanket exclusion of all LPLs in the proposed rule. I believe an agency review would reveal many permitted LPLs qualify for the same exemption as MSW landfills, and would identify the more critical methane emission sources that threaten the health of landfill workers, neighbors and communities. This category would include review of facilities with suspected or confirmed violations of air emission standards, and/or operating under an Agreed Order via the MTCA process, like DTG’s Rocky Top LPL: <https://apps.ecology.wa.gov/cleanupsearch/site/11537#document-repos>.

As noted, DTG’s landfill fire remains challenging to remediate and has delayed the MTCA site investigation. Ecology expects to restart the process to assess the threat, determine the size and scope of potential contamination, and as needed, determine infrastructure, and cleanup and required remediation implementation schedule. LPLs that are known threats to air quality should qualify as GHG point sources and monitoring under the proposed landfill methane rule.

C. LPLs need recordkeeping for excavated and moved waste

The proposed rule recordkeeping requirement for excavated and moved waste should apply to LPLs like DTGs on Rocky Top. DTG is required to move all of the waste DTG placed in the conditional fill approval area (Cell 2), dispose of this waste in a lined cell, and line Cell 2 prior to disposal (see DTG letter to Steven Newchurch, Yakima Health District, re Document Submittal Request from YHD, 10/31/2022). According to conversations with the YHD, the volume of estimated waste disposed in Cell 2 is estimated to be between 700,000 cy and 1,000,000 cy. Consequently, DTGs waste that needs to be excavated and removed would qualify for recordkeeping under (1)(a)(xii)(C), and (1)(a)(xiv) – see yellow highlight:

Section WAC 173-408-160 Recordkeeping requirements.

(1) The owner or operator of a MSW landfill must maintain records as prescribed in this subsection. The records must be provided by the owner or operator to the department or local authority within five business days of a request. Records described in this subsection must be retained in the operating record required by WAC 173-351-200 (10)(a).

(a) An owner or operator must maintain the following records for at least five years:

(xii) Records describing the mitigation measures taken to prevent the release of methane or other emissions into the ambient air:

(A) When solid waste was brought to the surface during the installation or preparation of wells, piping, or other equipment;

(B) During repairs or the temporary shutdown of gas collection system components; or

(C) When solid waste was excavated and moved.

(xiv) Records of any actions involving disturbance or removal of areas of the landfill surface where the landfill cover material has been removed for the purpose of installing, expanding, replacing, or repairing components of the landfill cover system, the landfill gas collection and control system, the leachate collection and removal system, or a landfill gas condensate collection and removal system. The records must contain the following information:

(A) A description of the actions being taken, the areas of the MSW landfill that will be affected by these actions, the reason the actions are required, and any landfill gas collection system components that will be affected by these actions.

(B) Disturbance or removal start and finish dates, projected equipment installation dates, and projected shut down times for individual gas collection system components.

(C) A description of the mitigation measures taken to minimize methane emissions and other potential air quality impacts.

The YHD approved the DTG/Anderson LPL's alternative liner in 2007 & 2015, in place of the standard prescriptive system of a composite liner consisting of a two-foot layer of compacted soil with a hydraulic conductivity no greater than 1×10^{-7} cm/sec overlying a high-density polyethylene (HDPE) geomembrane. The alternative liner is the Vantage Interbed, a well-recognized natural soil layer of the Columbia River Basin Basalt Group. In addition, regulators permitted the LPL with a two-well groundwater monitoring system based on questionable site characterization that has since proven to be flawed.

Comment: DTG's Rocky Top LPL has no protective liner or gas collection system for either Cell 1 (MTCA site) or Cell 2, where Ecology found the company created air space during an approved conditional fill expansion by illegally excavating the Vantage Interbed, the approved alternative landfill liner. This engineering feat should have been detected by regulators during construction, and the company required to repair the natural liner system prior to disposal. Instead, regulators allowed DTG to dump between 700,000 and 1.0 million cy of waste on this suspect, unlined surface, that the company is required to remove and redispense in a lined cell, either at this location or some other landfill. State regulations should not reward landfill operators for egregious engineering but hold them publicly accountable by recognizing the real threat LPLs represent and include them in the proposed rule.

II. LPL methane monitoring is ineffective and unreliable

As has been reported and acknowledged by US EPA, solid waste landfill methane emissions have been woefully under-detected, and therefore underreported. Bottom-up measurements are essential to identify actual sources of methane pollution, which have been and continue to be missed and underestimated in local, state and federal emission projections.

LPLs often produce methane at slower rates than MSW landfills but can produce similar total methane emissions over their lifetime. As noted, DTG's Rocky Top LPL received inert and non-inert waste, has two landfill fires, and is a MTCA designated cleanup site working under an Agreed Order to restart site investigation, and implement to be determined cleanup and remediation work.

Importantly, review of DTG's quarterly methane monitoring system with a hand wand flipped on for a few seconds at four or five locations around the landfill perimeter, four times a year reveal no noticeable methane emissions, implying the facility is compliant for air quality, and does not present a health threat to its workers or neighbors. As neighbors registered complaints of horrible, eye-watering odors at DTG's landfill in the summer of 2020, regulators and DTG pointed to quarterly methane monitoring that never detected any methane level of concern. After another year of complaints, regulators investigated and required independent air quality sampling. The rest is history: independent ambient air and soil gas sampling by Freestone Environmental in December 2021, and confirmed in July 2022 by Parametrix found toxic gases and the likely presence of a landfill fire. The fact that the permit approved and state required monitoring system failed to detect any problem at this toxic landfill is a flashing warning sign for the state that can be addressed by including LPLs to the proposed rule.

Closing Observations

- 1) Methane detection monitoring at LPLs is ineffective and unreliable. LPLs produce GHG including methane and need the same rigorous upgrade in monitoring technology, reporting, recordkeeping, gas control systems etc., as required for MSW facilities in the proposed rule.
- 2) Without the inclusion of methane emitting LPLs in our state, the agency will need to reconsider the claim that it will achieve a 95% reduction of landfill methane emissions just by focusing on MSW landfills.
- 3) Limited public funds and resources are dedicated to the regulation and enforcement of solid waste rules, including jurisdictional coordination, standardized facility inspections, annual or quarterly monitoring of waste flow across jurisdiction. Without sufficient staff and resources on these, this situation will likely continue.
- 4) The neighbors of solid waste facilities bear the unconscionable burden of needing to be aware and knowledgeable of solid waste permit conditions and local rules and regulations because they are the unsupported front-line workers that inform facility regulators through filing complaints of suspect facility non-compliance or permit violations. They receive no state or local support for this public burden. Shouldn't the state/local governments recognize and value these citizens by providing some level of support?
- 5) Consider banning gypsum products from LPL and MSW disposal to reduce hydrogen sulfide gas production. Gypsum can be recovered for new wallboard and as a soil amendment for agriculture (hops, apples & others).
- 6) Rethink the C&D market and focus on incentivizing recycling and recovery, not landfilling.