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Via Electronic Transmission: dufficy.craig@epa.gov

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Office of Resource Conservation and Recovery (5304P)
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
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Re: Revisions to the criteria for MSW landfills to address advances in liquids management
ANPRM – EPA-HQ-RCRA-2015-0354

On behalf of the solid waste industry, the National Waste & Recycling Association (NWRA) and the Solid Waste Association of North America (SWANA) are pleased to submit these comments to the Advanced Notice of Proposed Rulemaking related to the Revisions to the Criteria for Municipal Solid Waste Landfills to Address Advances in Liquids Management (83 FR 66210) (ANPRM). The NWRA and SWANA represent companies, municipalities and professionals in the solid waste industry. The NWRA is a not-for-profit trade association representing private solid waste and recycling collection, processing, and management companies that operate in all fifty states. SWANA is a not-for-profit professional association in the solid waste management field with more than 10,000 members from both the private and public sectors across North America.

Introduction

The Environmental Protection Agency (EPA) is considering whether to propose revisions to the criteria for Municipal Solid Waste Landfills (MSWLFs) to support advances in effective liquids management. To this end, EPA is seeking information relating to whether to remove the following prohibition on the addition of bulk liquids to MSWLFs.

"§ 258.28 Liquids restrictions.

(a) Bulk or non-containerized liquid waste may not be placed in MSWLF units unless:

- (1) The waste is household waste other than septic waste;
 - (2) The waste is leachate or gas condensate derived from the MSWLF unit and the MSWLF unit, whether it is a new or existing MSWLF, or lateral expansion, is designed with a composite liner and leachate collection system as described in § 258.40(a)(2) of this part. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record; or
 - (3) The MSWLF unit is a Project XL MSWLF and meets the applicable requirements of § 258.41. The owner or operator must place documentation of the landfill design in the operating record and notify the State Director that it has been placed in the operating record.
- (b) Containers holding liquid waste may not be placed in a MSWLF unit unless:
- (1) The container is a small container similar in size to that normally found in household waste;
 - (2) The container is designed to hold liquids for use other than storage; or
 - (3) The waste is household waste.”

To respond to this request, NWRA and SWANA members considered the rationale to support or oppose this change. A brief discussion of the Subtitle D implementation, historical context of the liquids restriction, and the industry’s initial recommendation regarding removing the liquids restriction are provided below.

Success of Subtitle D

The overall regulatory framework provided by the Resource Conservation and Recovery Act (RCRA) Subtitle D Part 258, Criteria for Municipal Solid Waste Landfills (hereinafter Subtitle D) has been very successful in achieving the goal of dramatically improving the design and operation of MSWLFs. The EPA’s successful implementation of Subtitle D has resulted in MSWLFs that provide numerous safeguards that are in-place to protect human health and the environment.

One of the hallmarks of the success of Subtitle D is the protection afforded to groundwater. To our knowledge, no landfill constructed and operated in compliance with Subtitle D has had any breaches of the containment system that resulted in groundwater impacts. This includes when leachate has been recirculated.

Furthermore, the Subtitle D established a framework that set minimum standards for protecting human health and the environment. It provided flexibility to allow state and local regulatory oversight to implement the program. If states did not develop an approved plan, they did not have the regulatory flexibility to consider alternatives. When EPA promulgated Subtitle D, they utilized this to motivate states to seek approval. This method has been successful in ensuring that states that allow deviations from the prescriptive requirements of Subtitle D do so deliberately and with care.

The original location restrictions established by EPA required landfill owners to conduct substantial geological investigations to demonstrate compliance. These restrictions significantly limited where landfills could be sited. However, ultimately, this has ensured protection for human health and the environment.

Finally, Subtitle D's operating requirements ensure protective liquids management practices. The design criteria includes a requirement for a leachate collection system that is designed and constructed to maintain less than 30-cm depth of leachate of the liner. This requirement further supports the protection provided by the liner system by limiting the hydraulic pressure on the liner and supporting landfill stability. With all the safeguards provided by the existing Subtitle D regulations, MSW landfills have a track record of environmental protection that successfully demonstrates the protections provided by these rules.

For these reasons, the 40 CFR Part 258 criteria for liquids management has proven appropriately protective and broad changes are not warranted to address liquids management practices. However, the industry does recognize a need for narrowly tailored rulemaking that establishes a regulatory pathway for RD&D bulk liquids addition projects to continue operations.

Existing Subtitle D Bulk Liquids Restriction Approach

EPA originally restricted containerized and non-containerized bulk liquids to minimize the amount of liquid in a landfill to “reduce the possibility of groundwater contamination resulting from the leakage of leachate; reduce the possible damage to the liner and final cover of the unit resulting from waste subsidence; and reduce the buildup of hydrostatic pressure on the liner due to the ‘bathtub’ effect.” At the time 40 CFR Part 258 was adopted, EPA did not have sufficient data on the benefits of introducing liquids to stabilize the waste mass to counter the potential problems and increased risks identified above.

Bulk Liquids Addition

The Research, Development, and Demonstration (RD&D) permits issued pursuant to the RD&D rule promulgated in 2004 were intended to promote innovative landfill technologies within Subtitle D, including the addition of bulk liquids and alternative covers, to demonstrate that such variances will not increase risk to human health and the environment relative to standard permit conditions for the landfill. The RD&D rule was intended to provide the opportunity to analyze bioreactor technology. The concept was to supplement leachate recirculation with the addition of bulk liquids in an effort to reduce potential future risks posed by landfills by encouraging better biological and chemical stabilization during the active life of the landfill, during which the liner, leachate, and landfill gas systems are newer, the landfill is operational, and personnel are on site that can monitor systems more closely. According to the EPA, as of

March 2014, about 40 bioreactor projects were reported, including 30 active RD&D projects in 10 approved states and one project on tribal lands.¹

Since promulgation, only 16 of 50 (32%) states have adopted the RD&D Rule. The most common reason cited for not pursuing the RD&D rule was a general lack of interest by landfills in those states and the desire to avoid incurring additional permitting, operational costs, and operational complexity associated with enhanced liquids addition through the RD&D permit. Exceptions have been states such as Wisconsin that adopted the RD&D rule to support an initiative of achieving stabilization within the post closure care period without mandating full scale bioreactor technology.

Operators with RD&D permits have integrated innovative engineering controls in order to effectively manage accelerated gas production and other ancillary effects related to the addition of liquids. For example, some RD&D permits require that landfill gas systems be installed before beginning liquids addition and that leachate collection system design be enhanced to improve liquid conveyance and removal.

Although there are potential benefits to bulk liquids additions when it comes to landfill closure, there are also risks. Given these risks, any exemptions to the bulk liquids addition restriction should be carefully considered.

The general consensus of the industry is that given that risks of bulk liquids addition, it should only be allowed on a very site specific, case-by-case, basis under an RD&D or RD&D-like program. It is also a general consensus that future changes should address how landfills operating under current RD&D permits that allow controlled liquids addition will be allowed to continue operations.

RD&D rule limitations

Based on the industry understanding, the initial permits granted to RD&D facilities will expire in 2025. EPA is considering what modifications, if any, should be made to the Subtitle D rules to allow these facilities to continue bulk liquids addition. To underpin its decision on whether to ease the bulk liquids restriction in order to promote accelerated biodegradation of the waste, EPA has requested information and responses to questions raised in the ANPRM.

These questions have resulted in lengthy discussion within the industry. Ultimately, the resulting consensus was that there were too many variables to consider a one size fits all approach. Instead, these decisions need to be made on a site-specific, individualized basis rather than be included as a blanket allowance in the rulemaking.

¹https://search.epa.gov/epasearch/?querytext=RD%26D+Rule&areaname=&areacontacts=&areasearchurl=&typeofsearch=epa&result_template=2col.ftl#/

Recommendation – Bulk Liquids Restriction

The current regulatory framework provided by Subtitle D has been very effective. While the industry recommends that the bulk liquids restrictions should remain in-place, we would endorse special exemptions for: (1) sites that have existing RD&D permits or authorizations for bulk liquids addition; (2) sites that operate within states with an existing regulatory structure (e.g., Wisconsin) that requires the addition of bulk liquids; or (3) sites that operate within states that adopt specific design and operating criteria for controlled bulk liquids addition for purposes of accelerated biodegradation that are as protective as the standard permit conditions in the RD&D program permits.

In regards to the third special exemption, we recommend that the EPA compile the results from the facilities that have adopted enhanced engineering controls in order to manage bulk liquid addition through RD&D permit program to document and better understand the advantages and challenges associated with liquids addition. Such a study would provide significant insight in advance of future potential rule changes regarding the controlled disposal of bulk liquids for purposes of accelerated biodegradation and would identify minimum design and operating criteria states must adopt in order to allow for bulk liquids addition. Such criteria may include, but not be limited to: limiting liquids to surface application at working face or via open infiltration trenches only – no subsurface application; maintaining a minimum distance from outboard slopes; establishing a minimum waste thickness prior to liquid addition; installing the landfill gas collection and control system before commencing liquids addition; and establishing minimum permeability requirements for leachate collection systems.

Recommendation – “Wet landfill” definition

Industry has carefully considered EPA’s request to define “wet landfills” and finds that a classification of wet landfills to be unnecessary. In light of our recommendation to maintain the bulk liquids restriction, we do not favor a separate “wet landfill” classification or definition.

Defining a “wet landfills” is a complex matter. Many factors contribute to the moisture content of the waste at a given site and it is constantly in flux. While climate is a consideration, the open acres, slope, stormwater features, use of temporary geomembrane covers and incoming tonnage typically have a large impact on leachate generation. Because leachate management is the largest operational cost for most landfills, leachate minimization practices that include open acres minimization, use of rain flaps and temporary geomembrane covers have become commonplace in the industry. Thus, there are too many factors at play to derive a simple workable definition. Further, given the aforementioned record of successful operation of Subtitle D landfills across all climates, a wet landfill definition is not needed. As previously stated, Part 258 provides a protective framework for normal landfill operations including landfills located in wet climates and those practicing leachate recirculation. For example, the design and operating requirement for the leachate collection system to maintain less than a 30-centimeter depth of leachate on the liner has been highly effective and protective. Therefore

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EPA should focus on narrowly tailoring the rule to include limited exemptions to the bulk liquids restriction only.

NWRA and SWANA appreciate your consideration of our request. Should you have any questions about these comments, please call Anne Germain, VP of Technical & Regulatory Affairs for NWRA, at 202-364-3724 or e-mail her at agermain@wasterecycling.org. You may also call Jesse Maxwell, Advocacy & Safety Manager for SWANA, at 240-494-2237 or e-mail him at jmaxwell@swana.org.

Very truly yours,



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