



ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OLEM-2020-0689; FRL-10018-16-OLEM]

Hazardous and Solid Waste Management System: Land Disposal Restrictions; Information for Petitioners Seeking a No-Migration Variance Under the RCRA Land Disposal Restrictions for Temporary Placement of Treated Hazardous Waste within a Permitted Subtitle C Landfill

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency (EPA) is requesting comment on guidance on petitions for a No Migration Variance (NMV) under the Land Disposal Restrictions (LDRs) pursuant to the Resource Conservation and Recovery Act (RCRA). Under existing regulations, persons may apply for an NMV to allow for the land placement (e.g., landfill, impoundment, waste pile) of hazardous waste that, if approved, would allow for the placement of hazardous waste in such a unit where the waste does not meet applicable LDR treatment standards. This guidance provides information to persons applying for an NMV for a waste pile temporarily located within a RCRA-permitted landfill cell.

DATES: Comments must be received on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: You may send comments, identified by Docket ID No.

EPA-HQ-OLEM-2020-0689, by any of the following methods:

- Federal eRulemaking Portal: <https://www.regulations.gov/> (our preferred method).
Follow the online instructions for submitting comments.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Office of Land and Emergency Management Docket, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

- Hand Delivery / Courier: EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m. – 4:30 p.m., Monday – Friday (except Federal Holidays).

Instructions: All submissions received must include the Docket ID No. for this notice.

Comments received may be posted without change to <https://www.regulations.gov/>, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the “Public Participation” heading of the **SUPPLEMENTARY INFORMATION** section of this notice.

FOR FURTHER INFORMATION CONTACT: Bethany Russell, Waste Characterization Branch, Materials Recovery and Waste Management Division, Office of Resource Conservation and Recovery (5304P), Environmental Protection Agency, 1200 Pennsylvania Ave, NW, Washington, D.C., 20460; telephone number: 404-562-8542; email address: russell.bethany@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Public Participation

A. Docket

EPA has established a docket for this action under Docket ID No. EPA-HQ-OLEM-2020-0689.

All documents in the docket are listed in the <https://www.regulations.gov> index. Publicly available docket materials are available either electronically at <https://www.regulations.gov> or in hard copy at the EPA Docket Center. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

EPA is temporarily suspending its Docket Center and Reading Room for public visitors, with limited exceptions, to reduce the risk of transmitting COVID-19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. We encourage the

public to submit comments via <https://www.regulations.gov/> as there may be a delay in processing mail. Hand deliveries or couriers will be received by scheduled appointment only. For further information and updates on EPA Docket Center services, please visit us online at <https://www.epa.gov/dockets>.

EPA continues to carefully and continuously monitor information from the Centers for Disease Control and Prevention (CDC), local area health departments, and our Federal partners so that we can respond rapidly as conditions change regarding COVID-19.

B. Written Comments

Submit your comments, identified by Docket ID No. EPA-HQ-OLEM-2020-0689, at <https://www.regulations.gov> (our preferred method), or the other methods identified in the **ADDRESSES** section. Once submitted, comments cannot be edited or removed from the docket. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

C. Submitting CBI

Do not submit information that you consider to be CBI electronically through <https://www.regulations.gov> or email. Send or deliver information identified as CBI to only the

following address: ORCR Document Control Officer, Mail Code 5305-P, Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; Attn: Docket ID No. EPA-HQ-OLEM-2020-0689.

Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD-ROM that you mail to EPA, mark the outside of the disk or CD-ROM as CBI and then identify electronically within the disk or CD-ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. If you submit a CD-ROM or disk that does not contain CBI, mark the outside of the disk or CD-ROM clearly that it does not contain CBI. Information marked as CBI will not be disclosed except in accordance with procedures set forth in Title 40 of the Code of Federal Regulations (CFR) Part 2.

II. General Information

A. Purpose of this Notice

The Land Disposal Restrictions (LDRs) are a key part of the hazardous waste regulatory program under the Resource Conservation and Recovery Act (RCRA) and require that hazardous wastes meet certain treatment standards prior to land disposal. If these standards are not met, land disposal of the waste is prohibited. The RCRA statute and implementing regulations allow land disposal of hazardous waste not meeting applicable treatment standards where a No Migration Variance (NMV) is approved by EPA. An NMV is a formal decision that can be rendered by EPA in response to a petition filed with the Agency, to allow the land disposal at a particular facility of specific prohibited waste, i.e., a waste not meeting the applicable LDR treatment standards. In Section III of this notice, EPA is providing information for persons who may wish to apply for an NMV for one or more temporary waste piles, where treated hazardous waste that

is expected to meet LDR standards is temporarily stored within the boundary of a hazardous waste landfill prior to moving that waste within the landfill to its final disposal or removing it for further treatment.

B. Background

The regulatory requirements for an NMV under the RCRA LDRs were first established in 1986,¹ and in 1992, EPA issued guidance on these requirements.² The 1992 guidance is applicable to landfills, surface impoundments, and waste piles, and also acknowledges temporary placement of waste under an approved NMV; however, the guidance did not address the specific situation identified in this notice where temporary piles of treated waste are placed within the boundary of a RCRA-permitted hazardous waste landfill.

Some commercial hazardous waste landfill facilities offer services for treating hazardous waste in addition to providing landfill disposal. In determining the appropriate treatment, facilities evaluate the incoming waste streams to identify the best treatment strategy (e.g., type and quantity of reagents, mixing times). Facilities rely on information in waste profiles provided by generators, waste characterization conducted by the facility (including characterization specified in their Waste Analyses Plan or WAP), as well as familiarity with waste streams (e.g., if a waste stream is received on a routine basis from the same source). Once treated, facilities may store the treated (e.g., stabilized) waste temporarily in units such as tanks, containers or containment buildings to allow the treated waste to “cure” and/or to confirm that the treated waste meets the applicable LDR standards. The treated waste is then moved into the landfill for disposal.

EPA is aware that some facilities have established procedures whereby a pile of treated

¹ 51 FR 40572, November 7, 1986.

² *No Migration Variances to the Hazardous Waste Land Disposal Prohibitions: A Guidance Manual for Petitioners*, EPA Office of Solid Waste, July 1992, EPA-530-R92-023.

hazardous waste is temporarily staged within the boundaries of the permitted subtitle C landfill while awaiting confirmation by the facility through testing results that the treatment program is performing as expected and that the treated waste meets the applicable LDR standards. Where the treated waste is confirmed to meet the LDR standards, the pile is moved to the “working face” of the landfill for final disposal. If there is an exceedance of an LDR standard, the pile is picked up and returned to the treatment process for further treatment. Any instance where a pile does not meet the applicable LDR standards and has not been granted an NMV would be a violation of the LDR requirements - the hazardous waste must either meet the LDR standards, or an approved NMV must be in place.³

C. The NMV Process

The NMV petition submittal and decision process is found in 40 CFR 268.6. Review and approval of an NMV petition is delegated to the EPA Regional Administrator for the EPA Region in which the waste management unit is located. EPA does not authorize states to implement the NMV authority. As part of the petition process, EPA may request additional information from the petitioner to evaluate the demonstration. EPA will provide notice in the *Federal Register* of the intent to approve or deny the NMV petition with an opportunity for public comment. The final decision is to be published in the *Federal Register*, and petitions to renew must undergo notice and comment procedures as well. An NMV that has been issued can be revoked for cause, including if migration occurs. Once approved, the term of an NMV shall be no longer than the term of the RCRA subtitle C permit for a permitted disposal unit, and no longer than 10 years for a unit operating under interim status. The 1992 guidance should be considered a resource for preparation of any submittal, in addition to the considerations described here for which EPA is requesting comment.

³ Memorandum from Barnes Johnson to EPA Regional Division Directors, April 11, 2014; <https://rcrapublic.epa.gov/files/14843.pdf>

III. NMV for Temporary Waste Piles within a Subtitle C Landfill

EPA is requesting comment on the information provided below. The contents of the guidance document do not have the force and effect of law and the Agency does not bind the public in any way and intends only to provide clarity to the public regarding existing requirements under the law or Agency policies, except as authorized by law or as incorporated into a contract. This information is not a substitute for compliance with 40 CFR 268.6, but provides additional information in the specific situation where hazardous waste is treated and then is temporarily stored in piles within a permitted subtitle C landfill, prior to either transfer to the working face of the landfill, or removal for retreatment if necessary.

A. Demonstration Addressed by this Guidance

This guidance addresses how to make a demonstration that the treated waste and constituents will not migrate beyond the temporary waste pile. The RCRA statutory language requires a demonstration “to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the waste remains hazardous” (RCRA § 3004(d)(1)). EPA has interpreted this language to mean that it must be demonstrated, to a reasonable degree of certainty, that hazardous constituents will not exceed Agency-approved health-based levels (or environmentally protective levels, if they are appropriate) beyond the boundary of the disposal unit. While it is EPA’s interpretation that man-made barriers or engineered systems (e.g., liner systems) alone generally will not meet the “no migration” standard, this is not the case for temporary land-based storage of treated waste as is being considered in this document. The containment of hazardous waste within engineered barriers can be considered in making the “no migration” demonstration for waste awaiting the results of verification sampling after treatment, provided that wastes are to be removed after a reasonably short storage period that may be conservatively projected to be well before the failure of the

engineered barrier system.⁴

B. Information to be Submitted to EPA

EPA expects that petitioners will be able to take advantage of existing facility information (e.g., existing monitoring, inspections, engineered barriers, waste analyses), where appropriate, as part of any demonstration. In developing an NMV petition, a petitioner must satisfy the no migration criteria set forth in 40 CFR 268.6, and petitioners should describe any and all controls that will be applied to the temporary waste pile to prevent the migration of hazardous constituents from the pile, and, the monitoring that will be used to detect migration at the earliest practicable time. For example, the use of temporary barriers, such as plastic covers above and below the piles; visual monitoring and prompt responses to possible releases; and generally good housekeeping practices that ensure the treated waste remains in the pile during the temporary storage period would be elements to consider. Attributes of the permitted landfill cell (e.g., design, existing controls, monitoring) in which the pile or piles are located should also be taken into account to the extent that they support the demonstration criteria being applied to the piles themselves. In other words, if a particular control or requirement is in place for the landfill cell, and can prevent potential releases from the pile or piles, it should be described in the petition (and petitioners should specify how that control or requirement prevents migration from the boundary of the temporary waste pile).

The regulations in 40 CFR 268.6(a) describe the components of what a demonstration must address; § 268.6(b) specifies certain criteria that must be satisfied for that demonstration, and § 268.6(c) describes the monitoring program that will be used to verify that the conditions of the NMV are being met. The components for an NMV demonstration outlined in § 268.6(a) are:

⁴ *No Migration Variances to the Hazardous Waste Land Disposal Prohibitions: A Guidance Manual for Petitioners*, EPA Office of Solid Waste, July 1992, EPA-530-R92-023.

- Descriptions of the specific waste(s) and specific unit for which the demonstration will be made;
- Waste analysis describing the chemical and physical characteristics of the waste;
- Comprehensive characterization of the disposal unit site, including air, soil, and water quality;
- Monitoring plan to detect migration at the earliest practicable time;
- Sufficient information to assure EPA that the owner/operator of the unit receiving the wastes will comply with other applicable federal, state, and local laws.

Below are some considerations regarding these components with respect to NMV petition submittals for piles temporarily storing waste within a subtitle C landfill that has been treated with the expectation that it meets the applicable LDR standards for permanent disposal in the landfill.

Facility Description - The NMV petition should include a description of the hazardous waste management facility where the waste will be treated, temporarily stored, and permanently disposed in sufficient detail to familiarize the reviewer with its overall operation. This type of information and level of detail will be similar to those included in the facility's RCRA permit application. The facility name, mailing address, and physical location should be provided, together with information on a point of contact for correspondence concerning the petition. Detailed design, layout, and operating plans should be provided for the unit covered by the petition. Unit descriptions should focus on waste isolation capabilities of the unit.

Unit(s) Covered by the NMV – While the temporary waste piles addressed in this document are located within the boundaries of the RCRA-permitted landfill cell, the unit to which the variance applies, as envisioned in this guidance, is the pile itself. The information presented here is for a demonstration that the treated waste and constituents will not migrate beyond the temporary

waste pile. Where different piles containing different types of treated hazardous waste are simultaneously staged within the landfill cell, each pile should be described and will be evaluated, as necessary, individually by EPA in order to properly assess potential releases when evaluating petitions, and for evaluating the monitoring that will be part of implementing any approved variance. Where multiple piles contain the same or similar wastes, the petition can address these units as a group. For example, where two or more piles are similar in terms of the nature and concentration of constituents, treatment used, waste matrices, etc., the petition need not separately specify or discuss such information for each individual pile where such piles are effectively being managed as a single unit. Similarly, where the design, inspection, and monitoring of the pile coverings and liners that will be used to prevent releases from the piles are the same for multiple piles, such information on each individual pile need not be specified. In other words, a successful petition could include several categories of treated waste piles, but sufficient information must be included so that the potential for releases, and proposed inspection and monitoring, can be evaluated by EPA.

While the unit(s) to be evaluated under this guidance are the temporary waste piles, petitioners should also submit information related to the landfill to the extent the information aids in any demonstration that hazardous constituents will not migrate beyond the boundary of the temporary waste pile. For example, hazardous waste landfill design and operating requirements (40 CFR 264.301) include run-on and run-off controls that may be important in any demonstration that hazardous waste will not migrate from the pile. The specific location of where the temporary waste piles will be placed within the landfill cell should be identified in the petition, together with any pertinent information as to why this location was selected and how it will prevent the migration of hazardous constituents from the pile. These locations will be identified as part of any approved variance.

This document only applies where wastes managed in the temporary waste piles have been treated with the expectation that the waste meets the applicable LDR standards for permanent disposal in the landfill. A facility should include information about what types and quantities of waste are to be managed in the temporary waste piles and what treatment standards apply. Most of this information is presumed to already be available as part of the facility's WAP and associated program for sampling and monitoring for compliance with the LDRs.

Duration of Temporary Storage – The NMV is necessary to ensure that any temporary storage of treated hazardous waste complies with the stringent statutory and regulatory standards in those instances where the hazardous waste that was treated and placed in a temporary waste pile does not meet LDRs. The approach described in this document is conditioned upon the temporary nature of the storage of treated hazardous waste within the landfill, and is intended for situations where the temporary waste piles are used as part of an overall strategy to confirm consistent and compliant treatment that meets the applicable LDR treatment standards.

The petition should include a description of the length of time the waste is managed in the pile before either transfer to the working face of the landfill, or removal for retreatment, if necessary. A range of time may be provided, but EPA emphasizes that the temporary nature of the pile must be clearly characterized in the petition, such as through maximum storage times or other procedures described in the application, that may become part of the conditions established in an approved variance.

However, if any particular staging location *routinely* receives treated waste that does not meet applicable LDR standards, then the “temporary” aspect of storage for a given location may be called into question, which could affect the ability for EPA to grant the NMV. This also raises the separate question of whether the overall treatment process is operating as well as it should.

Therefore, it is important for the petition to describe in sufficient detail the procedures used to treat, test, and confirm that wastes meet LDR standards, and how this information will be used to determine when a pile will be removed either for retreatment, or for final disposal. Such information should be available as part of the facility's WAP and may include:

- Number and type (e.g., random grab) of samples taken after treatment for LDR compliance;
- Methodology used to select number and type of samples;
- Level of confidence that all waste is treated to LDR treatment standards (level of confidence related to number of samples achieving LDRs);
- List of regulated constituents (suite of metals, selected organics, cyanide).

Monitoring Plan – 40 CFR 268.6(a)(4) requires a petition to include a monitoring plan to verify continued compliance with the conditions of the no migration variance. Pursuant to 40 CFR 268.6(a)(4), the monitoring plan must be designed to detect migration "at the earliest practicable time." 40 CFR 268.6(c) lays out the specific information required in the monitoring plan. In addition to these requirements, the monitoring plan should also describe the sampling and analysis of the treated waste that determines *when* the temporary waste pile will be moved to the working face of the landfill for final disposal. The demonstration should allow EPA to understand the process and timing of LDR treatment and confirmation that LDRs are met; this is fundamental to defining the scope and duration of storing treated waste temporarily.

Peter Wright,

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