



## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 268

[EPA-HQ-OLEM-2023-0372; FRL 11026-02-OLEM]

### Department of Energy Hanford Mixed Radioactive Waste Land Disposal Restrictions

#### Variance

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The United States Environmental Protection Agency (EPA) is granting a treatment variance, requested by the U.S. Department of Energy (DOE) in an August 1, 2023, petition, from the Land Disposal Restrictions (LDR) treatment standards for approximately 2,000 gallons of mixed hazardous low-activity radioactive waste from DOE's Test Bed Initiative (TBI) for the Hanford Site in Washington State. The petition requested approval for DOE to treat the TBI waste to the LDR technology standard of stabilization (STABL) with verification of meeting LDR concentration-based and Toxicity Characteristic Leaching Procedure-based standards as applicable for the relevant waste codes.

**DATES:** This final rule is effective on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** The EPA has established a docket for this action under Docket ID No. EPA-HQ-OLEM-2023-0372. All documents in the docket are listed on the <http://www.regulations.gov> web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through <http://www.regulations.gov>.

**FOR FURTHER INFORMATION CONTACT:** Bethany Russell, Waste Characterization

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## **I. General Information**

### ***A. Does this action apply to me?***

This action applies only to DOE's Hanford facility located in Richland, Washington.

### ***B. What action is the Agency taking?***

The EPA is finalizing the variance from the LDR treatment standards for approximately 2,000 gallons of mixed hazardous low-activity radioactive waste from DOE's TBI requested by DOE in an August 1, 2023, petition, for the Hanford Site in Washington State. The EPA is finalizing the variance without alteration and codifying the proposed modification to Table 1 to paragraph (o) of 40 CFR 268.44 for the TBI demonstration petition for the reasons stated in the preamble to the November 28, 2023, proposal and in the Agency's responses to the comments received on the proposal.

### ***C. What is the Agency's authority for taking this action?***

Sections 3004(d) through (g) of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6294(d)-(g), prohibit the land disposal of hazardous wastes unless such wastes meet the LDR treatment standards (or treatment standards) established by EPA (or the Agency). Section 3004(m) of RCRA, 42 U.S.C. 6924(m), requires EPA to set levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized. EPA has established treatment standards for all hazardous wastes.

However, when facilities generate hazardous wastes which cannot be treated to the specified levels, or when it is technically inappropriate for such wastes to undergo the prescribed

treatment, they can apply for a variance from a treatment standard.<sup>1</sup> The requirements for a treatment variance are found at 40 CFR 268.44. An applicant for a treatment variance may demonstrate that it is inappropriate to require a waste to be treated to the level or by the method specified as the treatment standard, even though such treatment is technically possible. This is the criterion pertinent to this action.<sup>2</sup> The petitioner must also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste.

## **II. Background**

### ***A. The Petition***

On August 2, 2023, the EPA received a petition from the DOE requesting a variance from a treatment standard of the LDR of 40 CFR 268.40 for disposal of approximately 2,000 gallons of hazardous wastes generated from DOE's TBI.

On November 28, 2023, the EPA solicited public comments on a draft approval of the petition (88 FR 83065). The public comment period ended December 28, 2023. The EPA received thirteen (13) comments on the proposed rulemaking. The full text of the comments is in the Docket (EPA-HQ-OLEM-2023-0372). The EPA appreciates all the comments and has provided a brief summary, below, of common themes found in the comments and the EPA's responses. The EPA has provided comprehensive responses to all the comments in a document titled "Responses to Comments on November 28, 2023, Proposed RCRA Land Disposal Restrictions Treatment Variance for Hanford Test Bed Initiative Wastes," which is in the Docket. The agency carefully considered all the points raised and has concluded that the comments do not provide reason for the EPA to deny the petition or to modify the approval as it was proposed.

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<sup>1</sup> See 51 FR 40605-40606 (November 7, 1986); see also 62 FR 64504 (December 5, 1997).

<sup>2</sup> According to 40 CFR 268.44(a)(2), a petitioner may obtain a variance from an applicable treatment standard if it is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, as applicable here, the petitioner must demonstrate that treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media).

***B. Brief Summary of Common Themes in Comments Received and the EPA's Responses.***

Most commenters agreed that the EPA should approve a treatment variance for the TBI waste.

Several commenters opined that the EPA should approve a broader variance applicable to a larger quantity of waste. Some commenters took issue with proposed approval for DOE to stabilize and dispose of the waste at only the two off-site facilities requested by DOE. Several commenters specifically took issue with the proposed approval for DOE to transport pretreated TBI waste in liquid form for treatment at the two facilities – located in Texas and Utah -- expressing concern about the risks of transporting liquid waste over long distances and requesting that the EPA require that the treatment be conducted at or near the Hanford site.

One commenter questioned the desirability and efficacy of grouting for Hanford tank waste.

The comments, EPA's fuller summaries, and the EPA's full responses are included in the docket for this rule. The EPA very briefly summarizes some overarching points from its responses below.

This rule approves the petition that DOE submitted because the EPA has determined that the variance meets the two applicable criteria in 40 CFR 268.44(a): vitrification of the 2000 gallons of TBI waste would be technically inappropriate in view of the conditions specified in the variance, and the treatment authorized by the variance will minimize threats to human health and the environment posed by land disposal of the waste. Although several commenters argued that other approaches to treating and disposing of the waste would be preferable, the EPA's approval is not based on the overall desirability of the requested approach as compared to other possible approaches that DOE did not request. Rather, the EPA's approval is based on and limited to its assessment of the petition that DOE submitted.

In this regard, it is important to recognize the EPA's limited role in the TBI. The EPA supports the TBI as a vehicle to evaluate the regulatory pathways for stabilization of some portion of Hanford tank waste and supports making progress on the Hanford tank waste mission. Moreover, the EPA believes the TBI aligns with the overall recommendations in a number of federally

funded research and development center reports commissioned by Congress, National Academies of Sciences reports, and reports by the General Accountability Office. However, the EPA did not design the TBI. Within the Federal Government, DOE is primarily responsible for determining treatment and disposal approaches for Hanford waste within the appropriate regulatory frameworks. The variance does not compel the TBI; it simply provides for TBI-specific LDR standards that will apply to the subject waste.

Finally, the EPA emphasizes that the variance is limited to the specific 2000 gallons of TBI waste that DOE requested receive an LDR variance, and that the EPA evaluated. The EPA expresses no view as to the appropriateness of any variances DOE may request in the future for any other Hanford waste.

#### **List of Subjects in 40 CFR Part 268**

Environmental protection, Hazardous waste, Mixed waste and variances.

**Barry N. Breen,**  
*Principal Deputy Assistant Administrator,*  
*Office of Land and Emergency Management.*

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

#### **PART 268—LAND DISPOSAL RESTRICTIONS**

1. The authority citation for part 268 continues to read as follows:

**Authority:** 42 U.S.C. 6905, 6912(a), 6921, and 6924.

2. In § 268.44, the table in paragraph (o) is amended by adding in alphabetical order an

entry for “United States Department of Energy (Energy), Richland, WA,” and adding

four footnotes “17”, “18”, “19”, and “20” in numerical order to read as follows:

**§ 268.44 Variance from a treatment standard.**

\* \* \* \* \*

(o) \* \* \*

TABLE—Wastes Excluded From the Treatment Standards Under § 268.40

Facility name <sup>1</sup> and address	Waste code	See also	Regulated hazardous constituent	Wastewaters		Nonwastewaters	
				Concentration (mg/L)	Notes	Concentration (mg/kg)	Notes
* * * * *							
United States Department of Energy (Energy), Richland, WA <sup>17</sup>	F001-F005 D001-D011, D018, D019, D022, D028-D030, D033-D036, D038-D041, and D043 <sup>18</sup>	NA	For waste codes F001-F005, the constituents are limited to those associated with spent solvent activities at the Facility documented through process knowledge.  For constituents, as applicable, associated with D waste codes under the “Waste Code” column, see 40 CFR 268.40.	NA	NA	STABL <sup>19, 20</sup>	NA
* * * * *							

(1) A facility may certify compliance with these treatment standards according to provisions in 40 CFR 268.7.

\* \* \* \* \*

(17) – The STABL treatment standard applies to the separated and pretreated tank waste under the 2,000-gallon TBI Demonstration.

(18) – The waste codes included in this column are those identified on the current version of the Dangerous Waste Permit Application Part A form for the Hanford Double Shell Tank System, Rev. 04 (December 14, 2009), except for F039 which has not been accepted into the Double Shell Tanks.

(19) – Sampling after treatment will be conducted at the treatment facility for the purpose of assessing the extent of treatment performance against the NWW numerical standards at 40 CFR 268.40 and, as applicable, at 40 CFR 268.48. Waste treated using STABL may not be land disposed until LDR constituents are below the non-wastewater numerical standards at 40 CFR 268.40 and 268.48.

(20) – Treatment using the STABL treatment method shall be performed, and the treated waste shall be disposed of, at *EnergySolutions* in Clive, Utah, and/or Waste Control Specialists in Andrews County, Texas.

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